Pantheon Report

Generated at 2017-12-11 18:02:56 (UTC).

Data path: AWS Brazil 2 Ethernet (*local*) →Colombia Ethernet (*remote*).

Repeated the test of 14 congestion control schemes 10 times.

Each test lasted for 30 seconds running 1 flow.

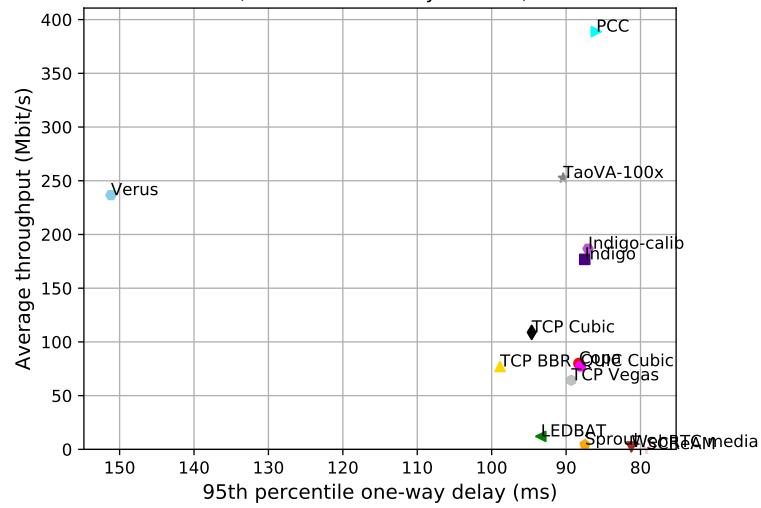Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

Tested BBR with qdisc of Fair Queuing (`fq`), and other schemes with the default Linux qdisc (`pfifo_fast`).

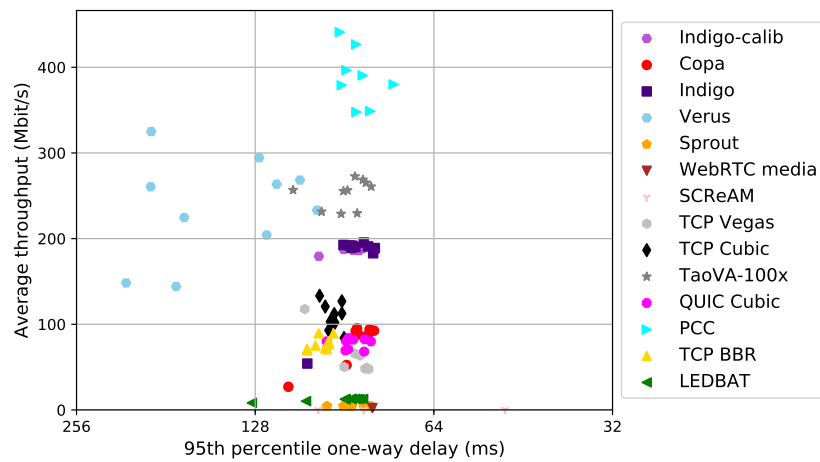NTP offsets were measured against `gps.ntp.br` and have been applied to correct the timestamps in logs.

```
Git summary:
branch: indigos @ e3a57ad5ac5cfcaca0e3f983c8dd4cc3509e0262
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
 M datagrump/sender.cc
third_party/genericCC @ b5b7c38e8391001927dc41c6cfa2627d03dde737
third_party/indigo @ b19f3730105f9aa95452552af924e3719b03cc55
third_party/indigo-cellular @ aee99e8eb842cb053f8c9a80e28cd256a930bbc2
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/indigo-no-cwnd @ 3e58442c04028a11d7b02456e137604633ba2d6c
third_party/indigo-no-delivery-rate @ 57caa40858b964906edff4876d5a7e5bfff666c5
third_party/indigo-no-queuing-delay @ 03455460fd1a8ffbdad86fabb936fdca204b80db
third_party/indigo-no-send-rate @ b39dfa6b2c5f19cb7cd89626cb4f5bb81f9fecda
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
 M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ baf443516dea3eeddeccaf9b916cc313273ca4f4
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/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaeeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
 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/webrtc @ a488197ddd041ace68a42849b2540ad834825f42
```

test from AWS Brazil 2 Ethernet to Colombia Ethernet, 10 runs of 30s each per scheme
(mean of all runs by scheme)

test from AWS Brazil 2 Ethernet to Colombia Ethernet, 10 runs of 30s each per scheme

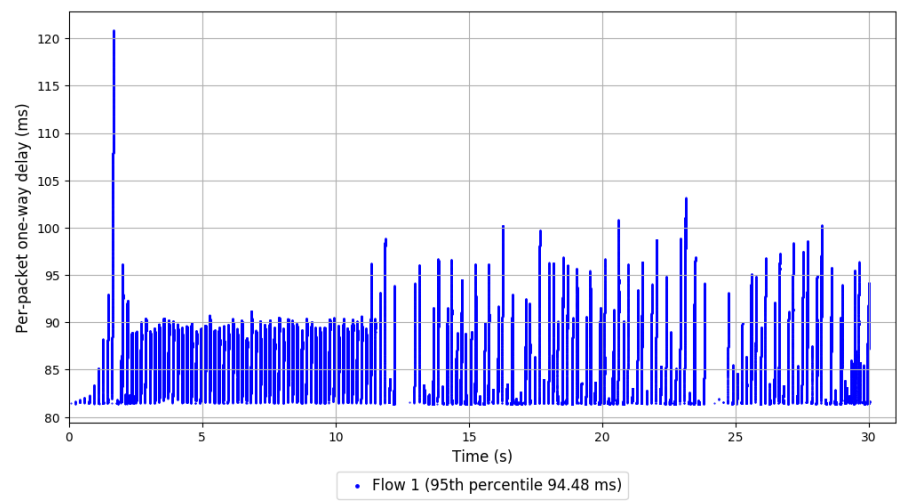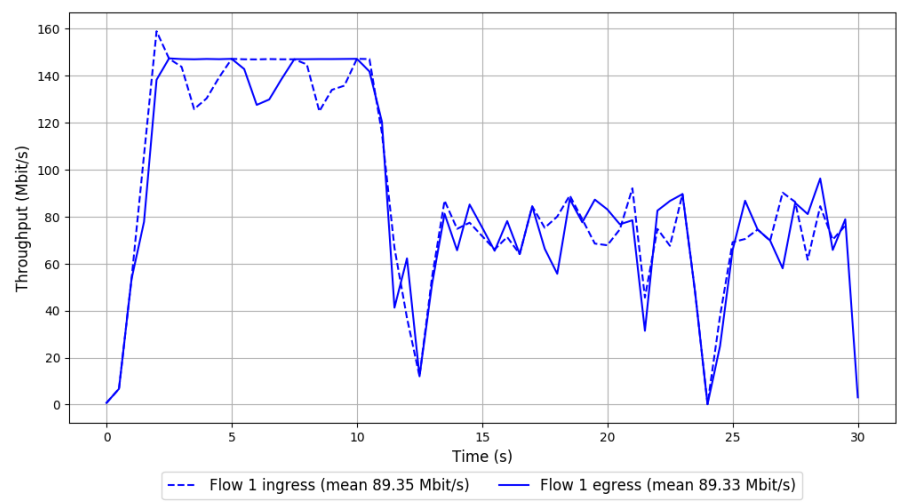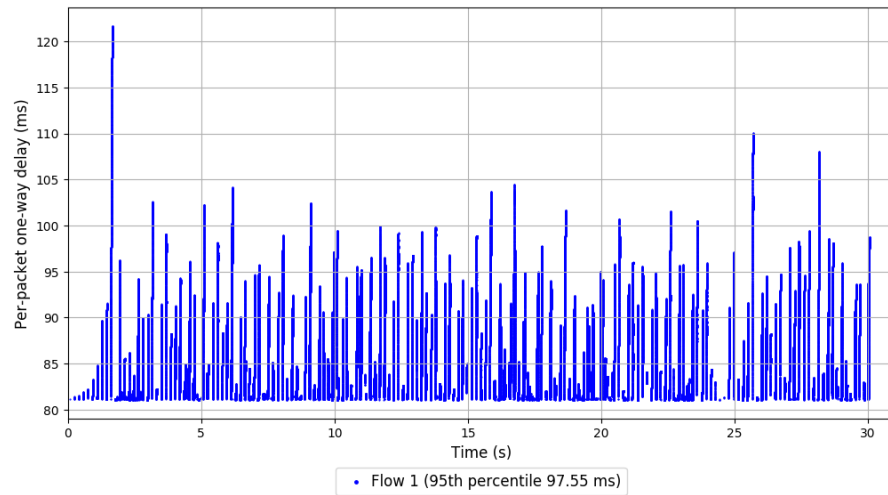| scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	10	77.10	98.87	0.09
TCP Cubic	10	108.88	94.63	0.01
LEDBAT	10	12.05	93.40	0.01
PCC	8	388.79	85.95	5.79
QUIC Cubic	9	77.46	88.05	0.00
SCReAM	4	0.22	79.21	0.00
WebRTC media	1	2.19	81.23	0.00
Sprout	10	4.38	87.47	0.00
TaoVA-100x	10	252.59	90.38	0.17
TCP Vegas	8	64.29	89.31	0.00
Verus	10	236.63	151.17	1.62
Copa	10	79.94	88.27	0.00
Indigo	10	176.83	87.50	0.00
Indigo-calib	10	186.75	87.05	0.00

```
Run 1: Statistics of TCP BBR

Start at: 2017-12-11 14:01:42
End at: 2017-12-11 14:02:12
Local clock offset: -0.344 ms
Remote clock offset: -0.159 ms


# Below is generated by plot.py at 2017-12-11 17:30:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 69.47 Mbit/s
95th percentile per-packet one-way delay: 104.531 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 69.47 Mbit/s
95th percentile per-packet one-way delay: 104.531 ms
Loss rate: 0.13%
```
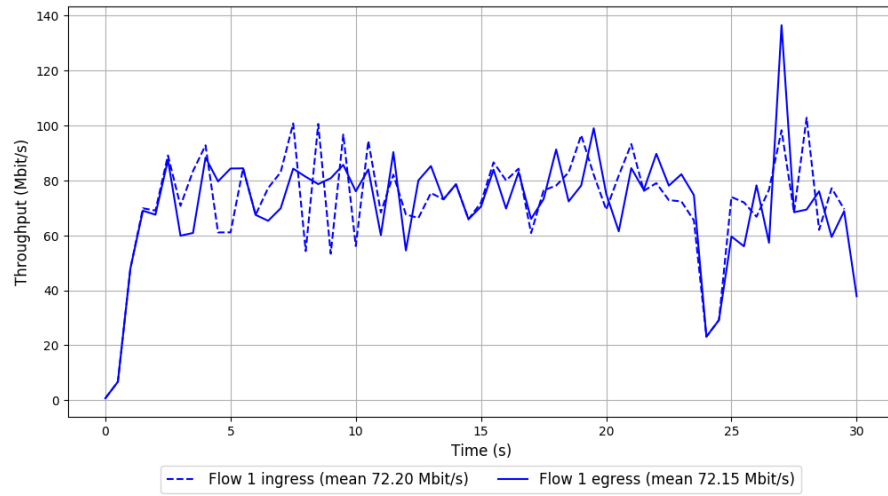
Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2017-12-11 14:19:48
End at: 2017-12-11 14:20:18
Local clock offset: -0.394 ms
Remote clock offset: -4.966 ms


# Below is generated by plot.py at 2017-12-11 17:31:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.33 Mbit/s
95th percentile per-packet one-way delay: 94.485 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 89.33 Mbit/s
95th percentile per-packet one-way delay: 94.485 ms
Loss rate: 0.02%
```

Run 2: Report of TCP BBR — Data Link

```
Run 3: Statistics of TCP BBR

Start at: 2017-12-11 14:37:40
End at: 2017-12-11 14:38:10
Local clock offset: -0.421 ms
Remote clock offset: -4.412 ms


# Below is generated by plot.py at 2017-12-11 17:31:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 72.15 Mbit/s
95th percentile per-packet one-way delay: 97.549 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 72.15 Mbit/s
95th percentile per-packet one-way delay: 97.549 ms
Loss rate: 0.01%
```
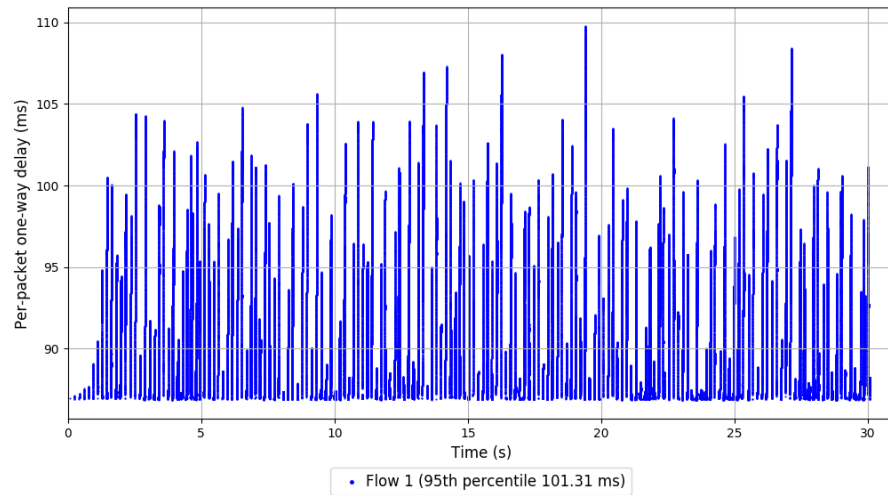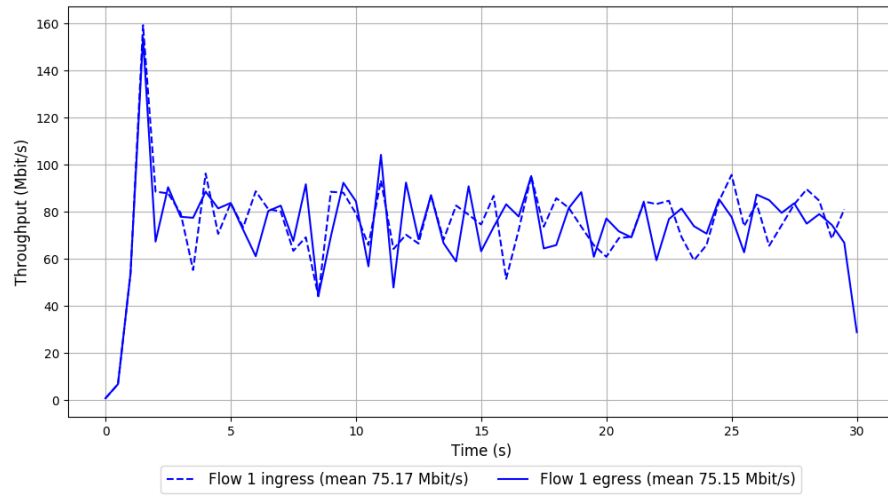
Run 3: Report of TCP BBR — Data Link

Flow 1 ingress (mean 72.20 Mbit/s)   Flow 1 egress (mean 72.15 Mbit/s)

• Flow 1 (95th percentile 97.55 ms)

```
Run 4: Statistics of TCP BBR

Start at: 2017-12-11 14:55:25
End at: 2017-12-11 14:55:55
Local clock offset: -0.463 ms
Remote clock offset: 1.047 ms


# Below is generated by plot.py at 2017-12-11 17:31:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 75.15 Mbit/s
95th percentile per-packet one-way delay: 101.310 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 75.15 Mbit/s
95th percentile per-packet one-way delay: 101.310 ms
Loss rate: 0.02%
```
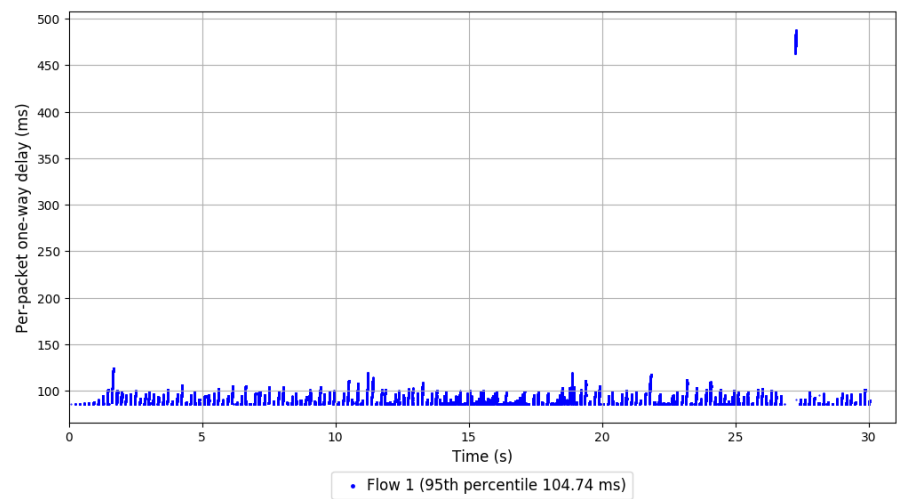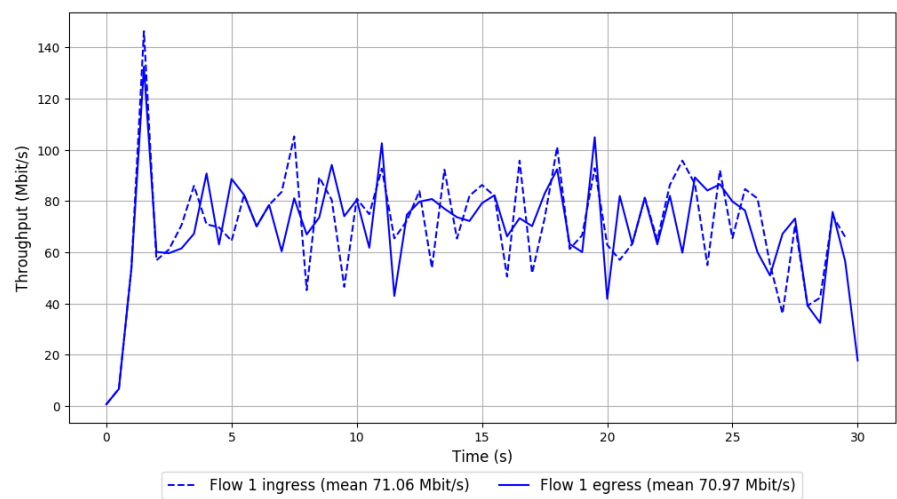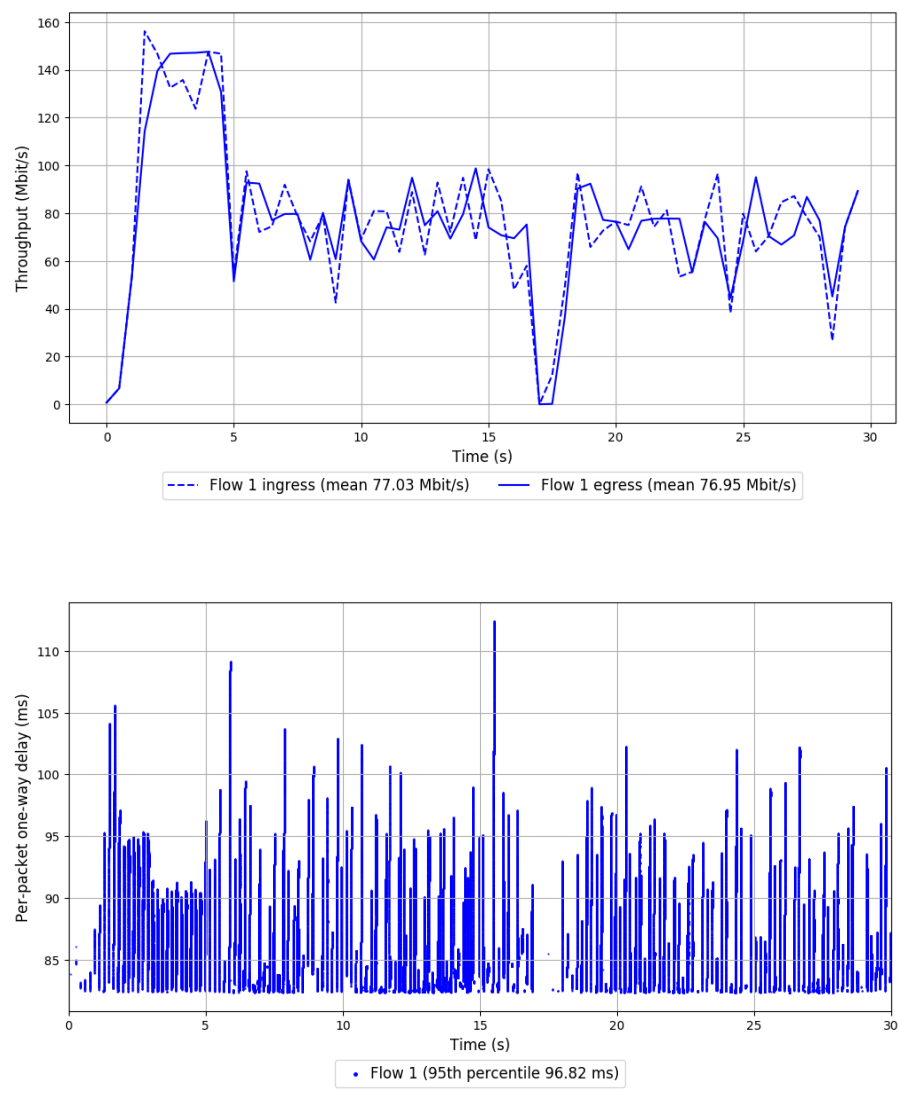
Run 4: Report of TCP BBR — Data Link

Flow 1 ingress (mean 75.17 Mbit/s)   Flow 1 egress (mean 75.15 Mbit/s)
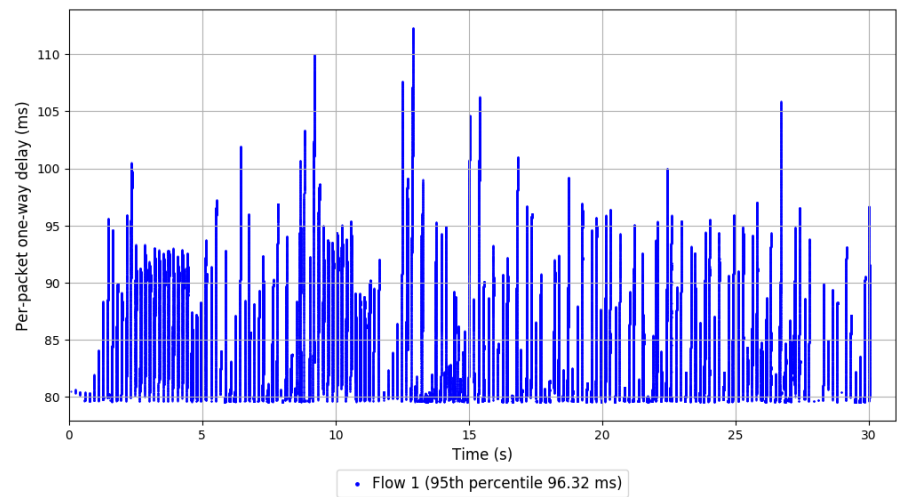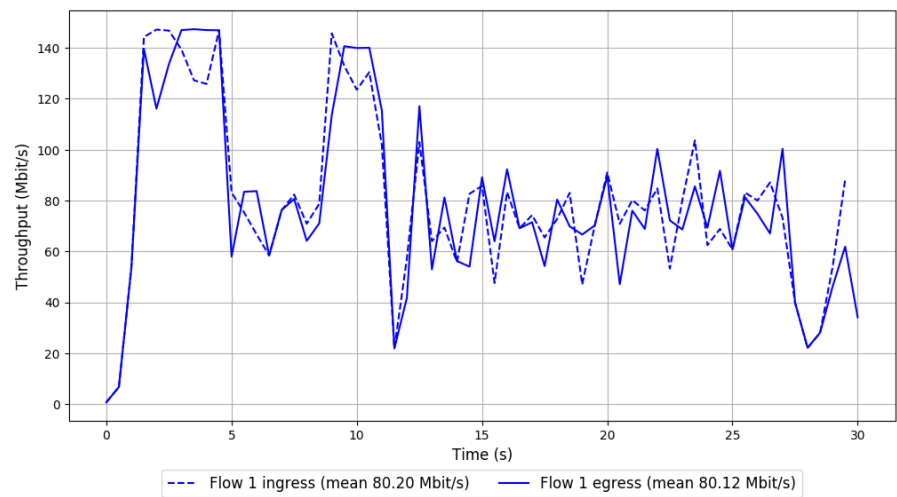

Flow 1 (95th percentile 101.31 ms)

```
Run 5: Statistics of TCP BBR

Start at: 2017-12-11 15:13:33
End at: 2017-12-11 15:14:03
Local clock offset: -0.461 ms
Remote clock offset: 0.462 ms


# Below is generated by plot.py at 2017-12-11 17:31:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 70.97 Mbit/s
95th percentile per-packet one-way delay: 104.739 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 70.97 Mbit/s
95th percentile per-packet one-way delay: 104.739 ms
Loss rate: 0.10%
```

Run 5: Report of TCP BBR — Data Link

Flow 1 ingress (mean 71.06 Mbit/s) — — — Flow 1 egress (mean 70.97 Mbit/s)

· Flow 1 (95th percentile 104.74 ms)

```
Run 6: Statistics of TCP BBR

Start at: 2017-12-11 15:31:10
End at: 2017-12-11 15:31:40
Local clock offset: -0.48 ms
Remote clock offset: -4.549 ms


# Below is generated by plot.py at 2017-12-11 17:31:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 76.95 Mbit/s
95th percentile per-packet one-way delay: 96.816 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 76.95 Mbit/s
95th percentile per-packet one-way delay: 96.816 ms
Loss rate: 0.10%
```

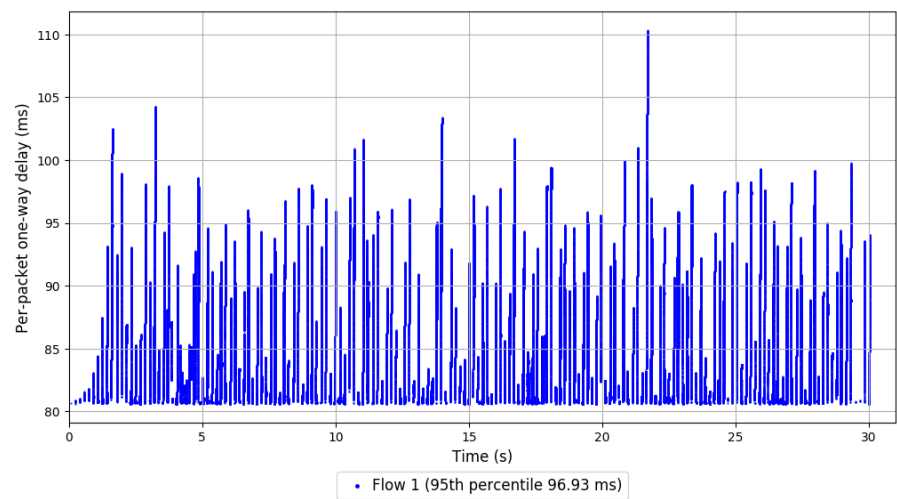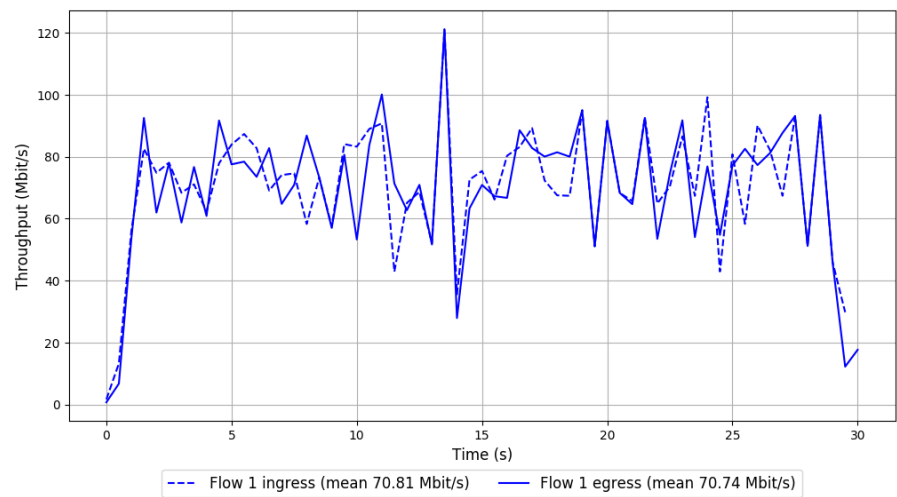Run 6: Report of TCP BBR — Data Link

```
Run 7: Statistics of TCP BBR

Start at: 2017-12-11 15:48:57
End at: 2017-12-11 15:49:27
Local clock offset: -0.458 ms
Remote clock offset: -6.897 ms


# Below is generated by plot.py at 2017-12-11 17:31:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 80.12 Mbit/s
95th percentile per-packet one-way delay: 96.317 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 80.12 Mbit/s
95th percentile per-packet one-way delay: 96.317 ms
Loss rate: 0.07%
```
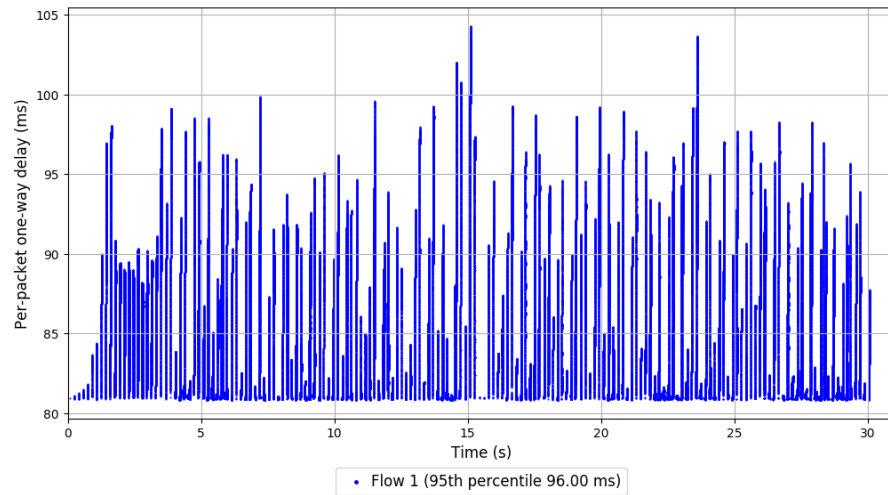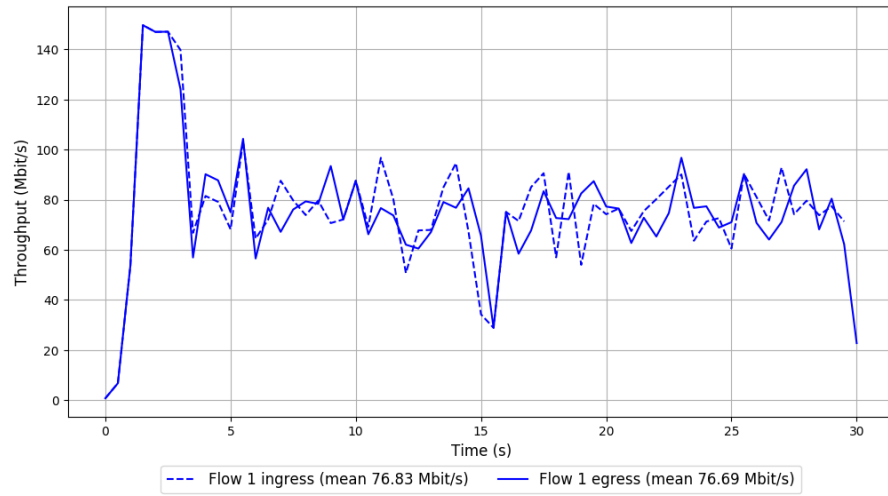
Run 7: Report of TCP BBR — Data Link

Flow 1 ingress (mean 80.20 Mbit/s) ----- Flow 1 egress (mean 80.12 Mbit/s) ———

Flow 1 (95th percentile 96.32 ms)

```
Run 8: Statistics of TCP BBR

Start at: 2017-12-11 16:07:12
End at: 2017-12-11 16:07:42
Local clock offset: -0.465 ms
Remote clock offset: -4.184 ms


# Below is generated by plot.py at 2017-12-11 17:31:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 70.74 Mbit/s
95th percentile per-packet one-way delay: 96.931 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 70.74 Mbit/s
95th percentile per-packet one-way delay: 96.931 ms
Loss rate: 0.06%
```
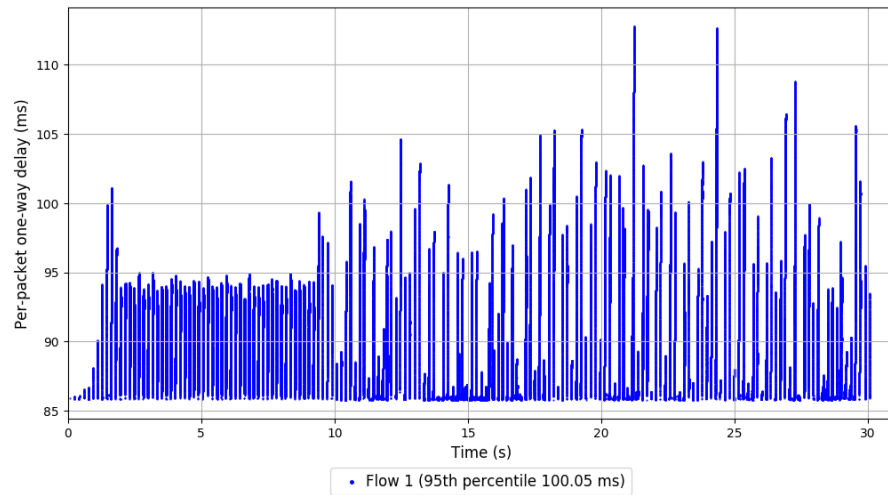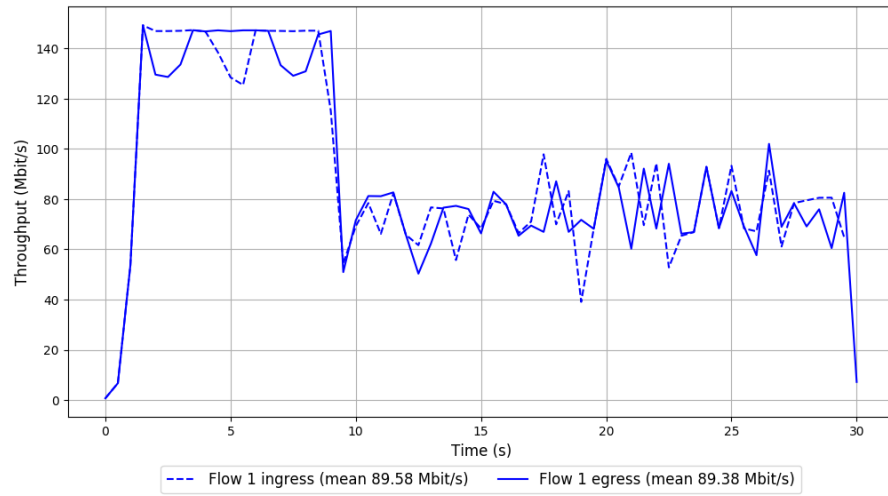
Run 8: Report of TCP BBR — Data Link

```
Run 9: Statistics of TCP BBR

Start at: 2017-12-11 16:25:21
End at: 2017-12-11 16:25:51
Local clock offset: -0.402 ms
Remote clock offset: -4.072 ms


# Below is generated by plot.py at 2017-12-11 17:31:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 76.69 Mbit/s
95th percentile per-packet one-way delay: 96.001 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 76.69 Mbit/s
95th percentile per-packet one-way delay: 96.001 ms
Loss rate: 0.16%
```
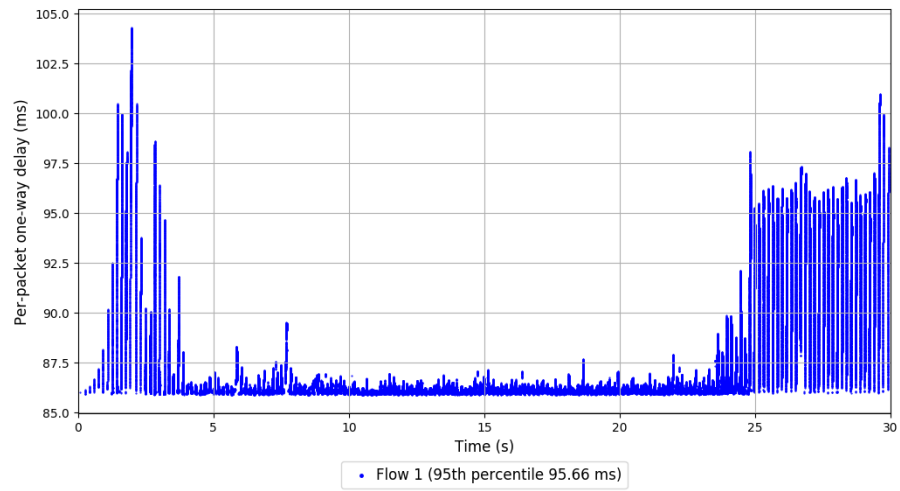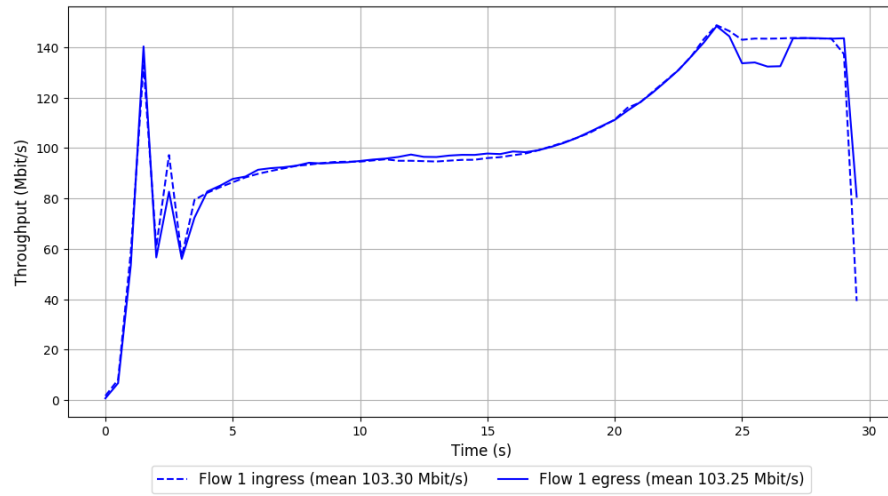
Run 9: Report of TCP BBR — Data Link

```
Run 10: Statistics of TCP BBR

Start at: 2017-12-11 16:43:21
End at: 2017-12-11 16:43:51
Local clock offset: -0.37 ms
Remote clock offset: -0.572 ms


# Below is generated by plot.py at 2017-12-11 17:32:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.38 Mbit/s
95th percentile per-packet one-way delay: 100.052 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 89.38 Mbit/s
95th percentile per-packet one-way delay: 100.052 ms
Loss rate: 0.21%
```
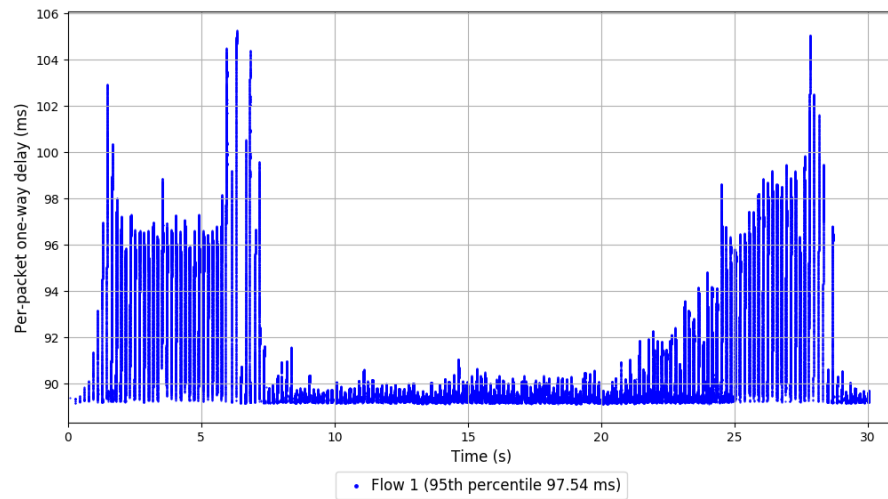
Run 10: Report of TCP BBR — Data Link

```
Run 1: Statistics of TCP Cubic

Start at: 2017-12-11 14:05:19
End at: 2017-12-11 14:05:49
Local clock offset: -0.368 ms
Remote clock offset: -0.585 ms


# Below is generated by plot.py at 2017-12-11 17:32:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 103.25 Mbit/s
95th percentile per-packet one-way delay: 95.662 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 103.25 Mbit/s
95th percentile per-packet one-way delay: 95.662 ms
Loss rate: 0.01%
```
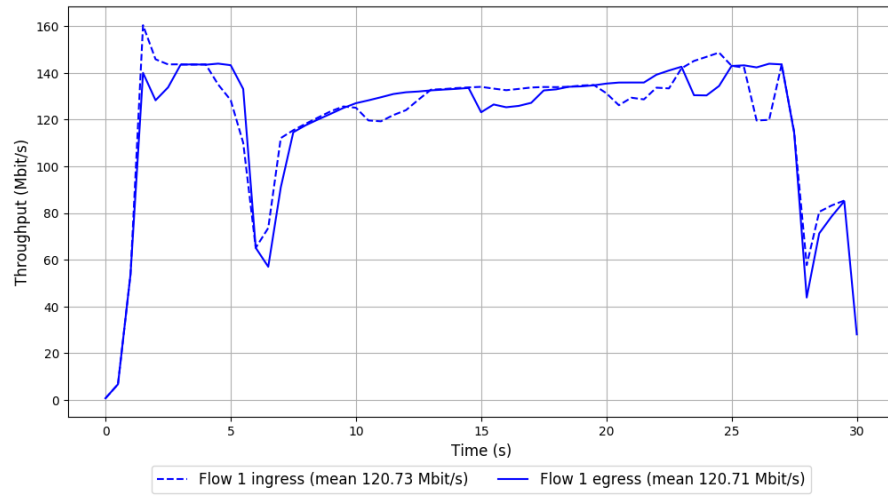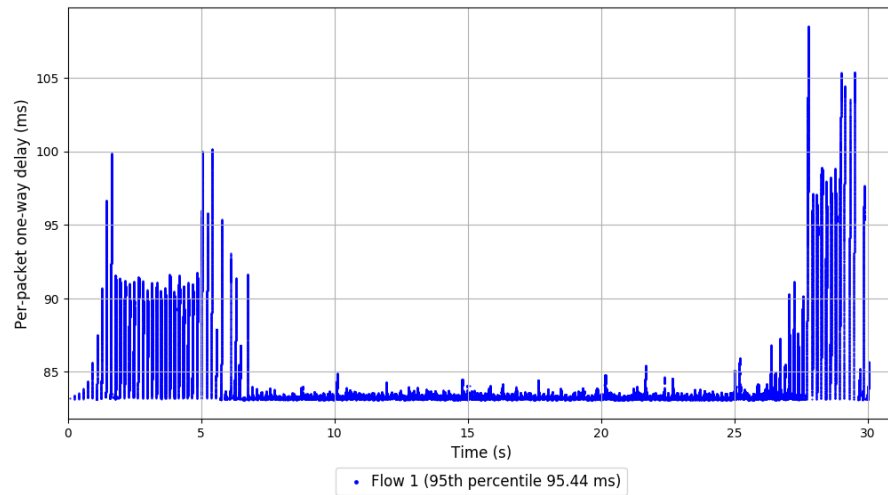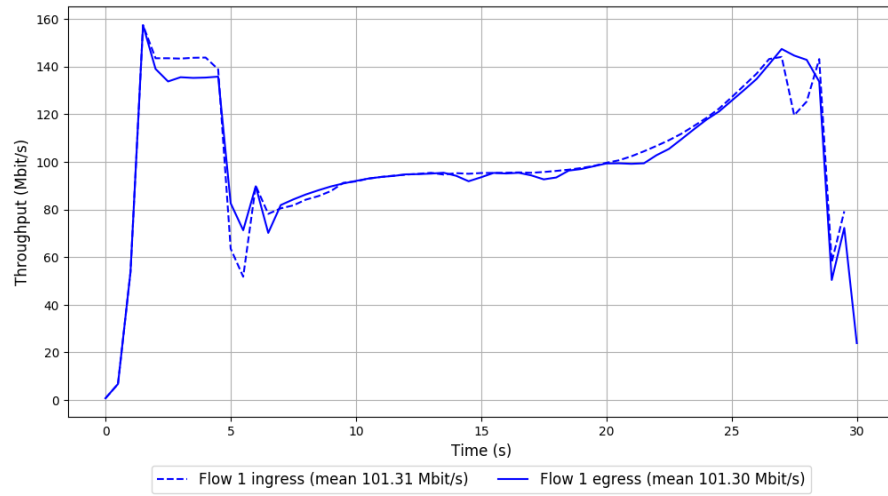
Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2017-12-11 14:23:23
End at: 2017-12-11 14:23:53
Local clock offset: -0.413 ms
Remote clock offset: 1.247 ms


# Below is generated by plot.py at 2017-12-11 17:32:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 120.71 Mbit/s
95th percentile per-packet one-way delay: 97.542 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 120.71 Mbit/s
95th percentile per-packet one-way delay: 97.542 ms
Loss rate: 0.02%
```

Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2017-12-11 14:41:15
End at: 2017-12-11 14:41:45
Local clock offset: -0.436 ms
Remote clock offset: -4.388 ms


# Below is generated by plot.py at 2017-12-11 17:32:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 101.30 Mbit/s
95th percentile per-packet one-way delay: 95.442 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 101.30 Mbit/s
95th percentile per-packet one-way delay: 95.442 ms
Loss rate: 0.00%
```
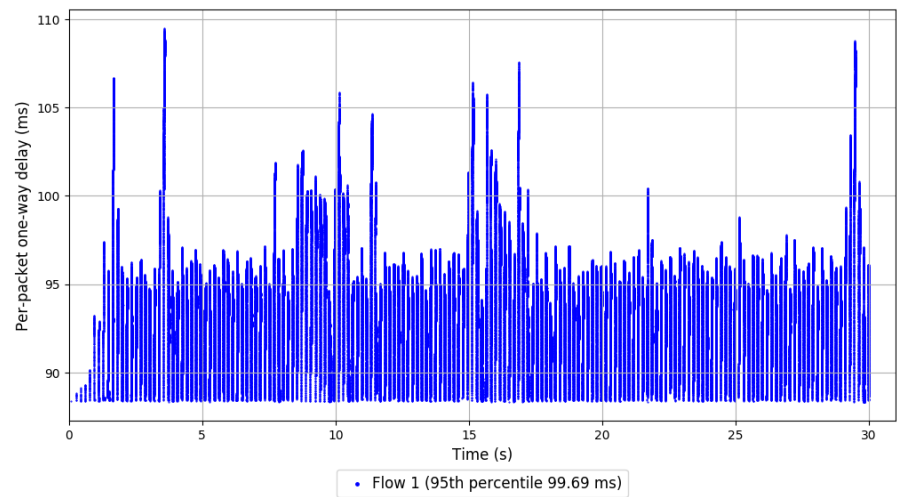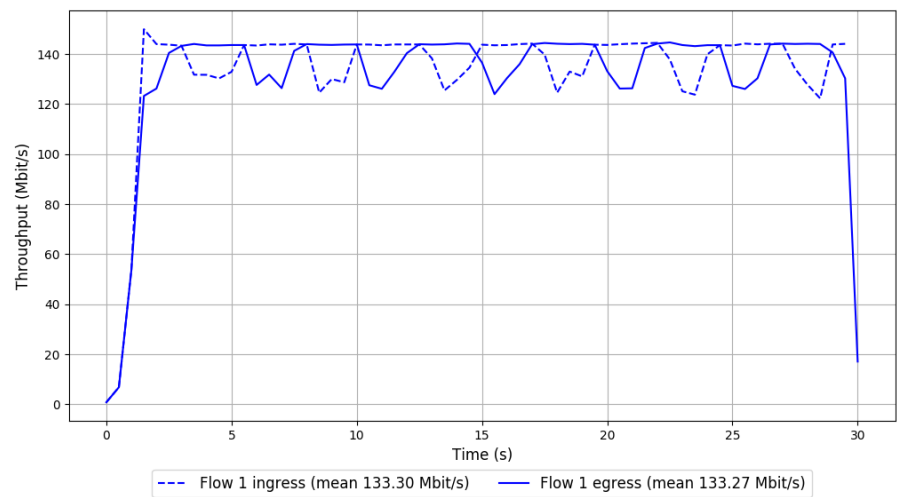
Run 3: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 101.31 Mbit/s)   Flow 1 egress (mean 101.30 Mbit/s)

Flow 1 (95th percentile 95.44 ms)

```
Run 4: Statistics of TCP Cubic

Start at: 2017-12-11 14:59:00
End at: 2017-12-11 14:59:30
Local clock offset: -0.531 ms
Remote clock offset: 0.751 ms

# Below is generated by plot.py at 2017-12-11 17:32:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 133.27 Mbit/s
95th percentile per-packet one-way delay: 99.695 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 133.27 Mbit/s
95th percentile per-packet one-way delay: 99.695 ms
Loss rate: 0.00%
```
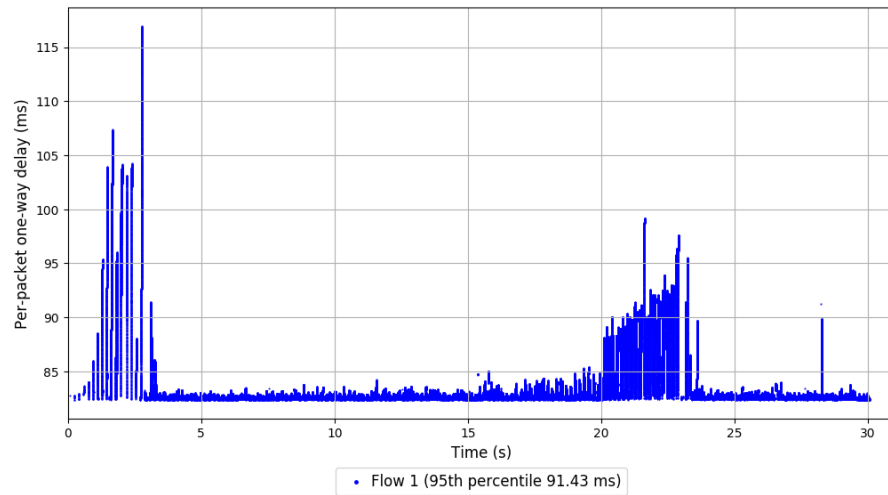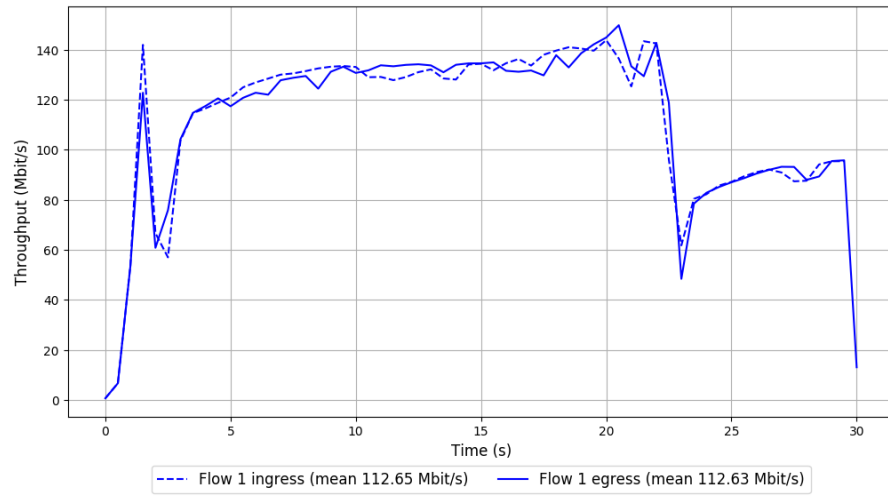
Run 4: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 133.30 Mbit/s)   Flow 1 egress (mean 133.27 Mbit/s)

Flow 1 (95th percentile 99.69 ms)

```
Run 5: Statistics of TCP Cubic

Start at: 2017-12-11 15:17:08
End at: 2017-12-11 15:17:38
Local clock offset: -0.472 ms
Remote clock offset: -4.72 ms


# Below is generated by plot.py at 2017-12-11 17:32:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 112.63 Mbit/s
95th percentile per-packet one-way delay: 91.429 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 112.63 Mbit/s
95th percentile per-packet one-way delay: 91.429 ms
Loss rate: 0.02%
```
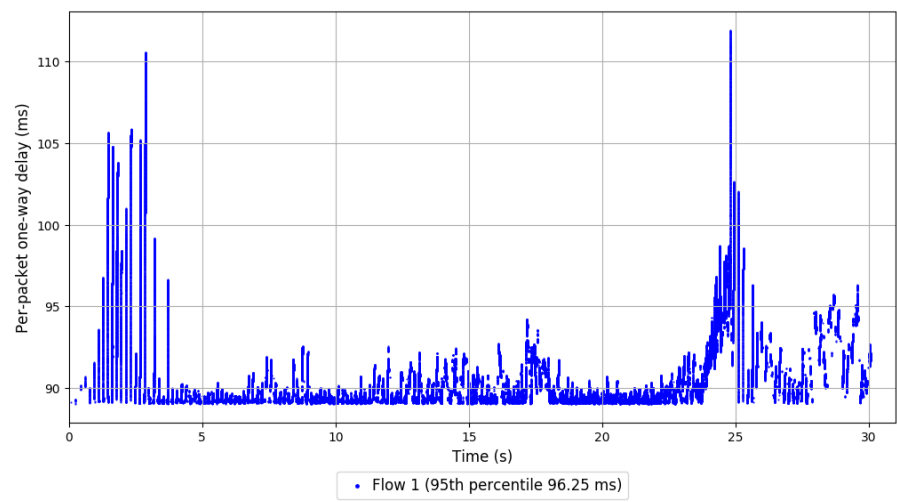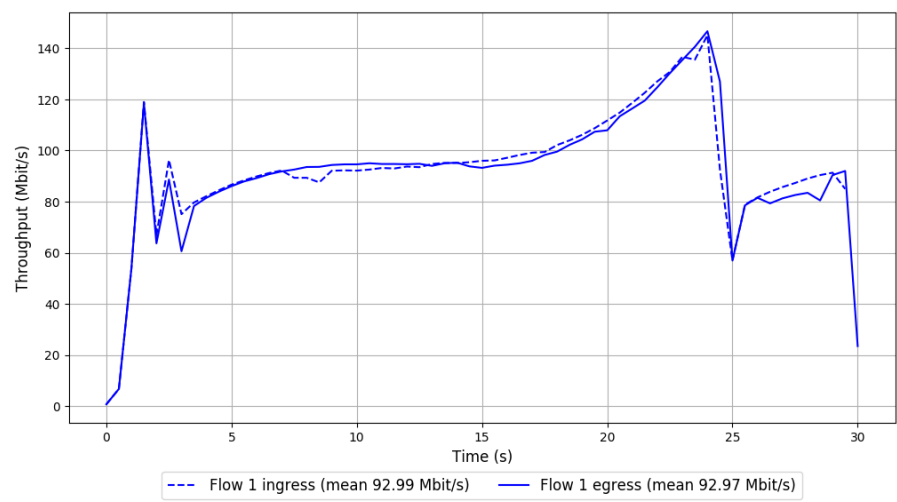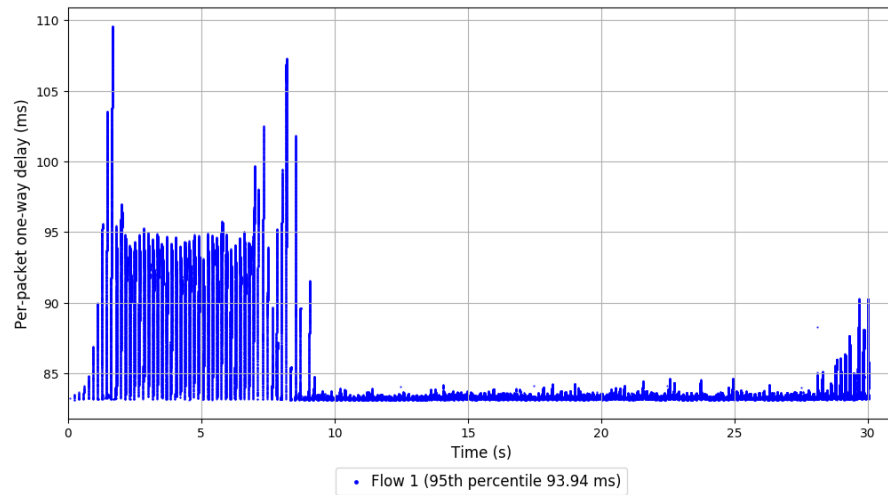
Run 5: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 112.65 Mbit/s)   Flow 1 egress (mean 112.63 Mbit/s)
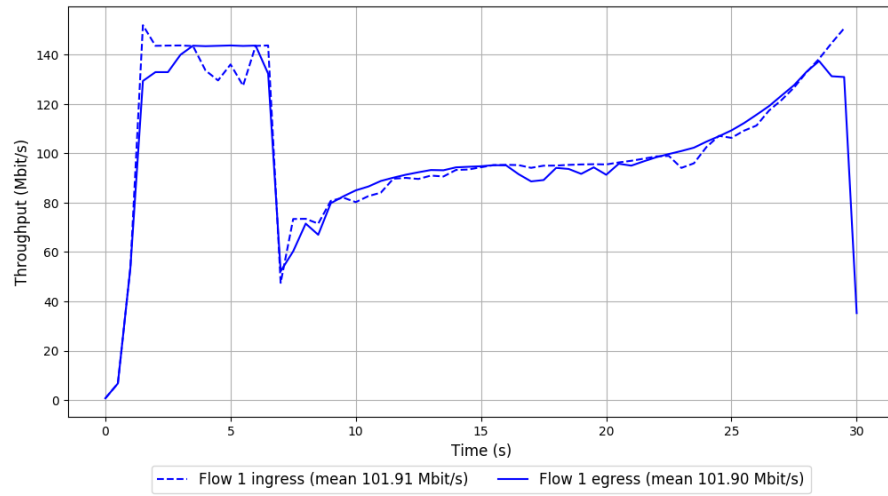

Flow 1 (95th percentile 91.43 ms)

```
Run 6: Statistics of TCP Cubic

Start at: 2017-12-11 15:34:46
End at: 2017-12-11 15:35:16
Local clock offset: -0.463 ms
Remote clock offset: 2.198 ms

# Below is generated by plot.py at 2017-12-11 17:32:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.97 Mbit/s
95th percentile per-packet one-way delay: 96.253 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 92.97 Mbit/s
95th percentile per-packet one-way delay: 96.253 ms
Loss rate: 0.01%
```
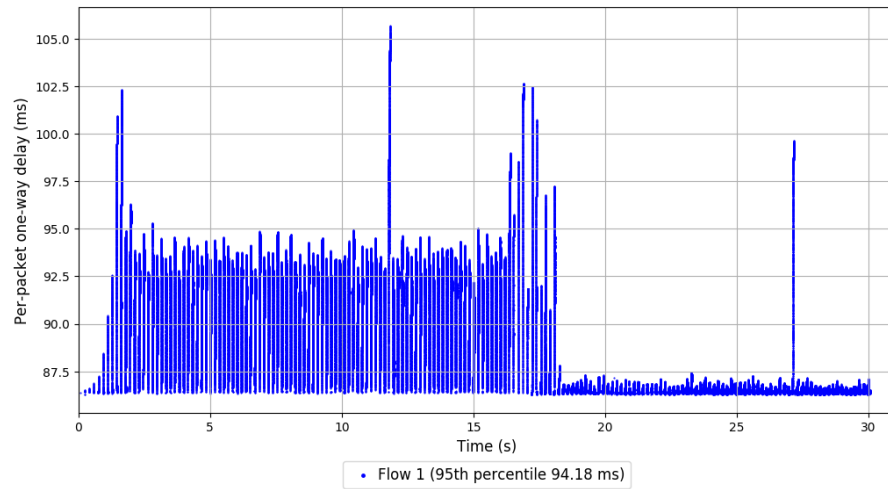
Run 6: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 92.99 Mbit/s)   Flow 1 egress (mean 92.97 Mbit/s)

Flow 1 (95th percentile 96.25 ms)

```
Run 7: Statistics of TCP Cubic

Start at: 2017-12-11 15:52:35
End at: 2017-12-11 15:53:05
Local clock offset: -0.439 ms
Remote clock offset: -3.293 ms


# Below is generated by plot.py at 2017-12-11 17:33:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 101.90 Mbit/s
95th percentile per-packet one-way delay: 93.938 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 101.90 Mbit/s
95th percentile per-packet one-way delay: 93.938 ms
Loss rate: 0.00%
```
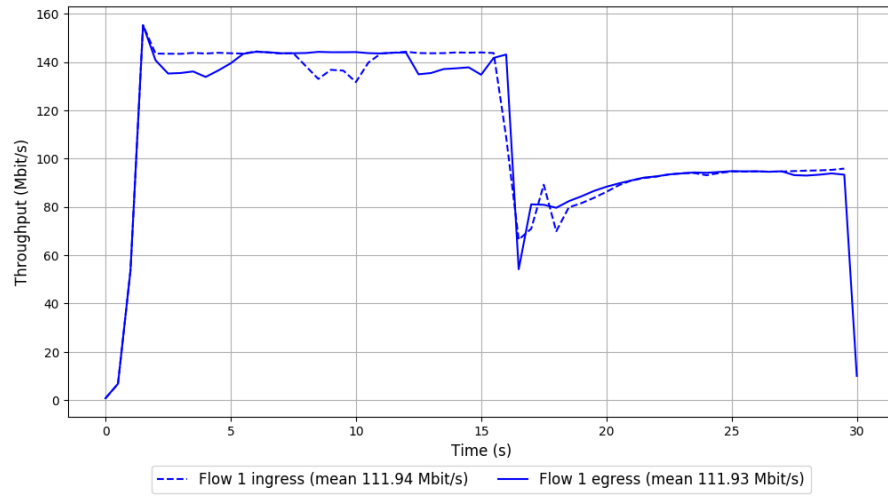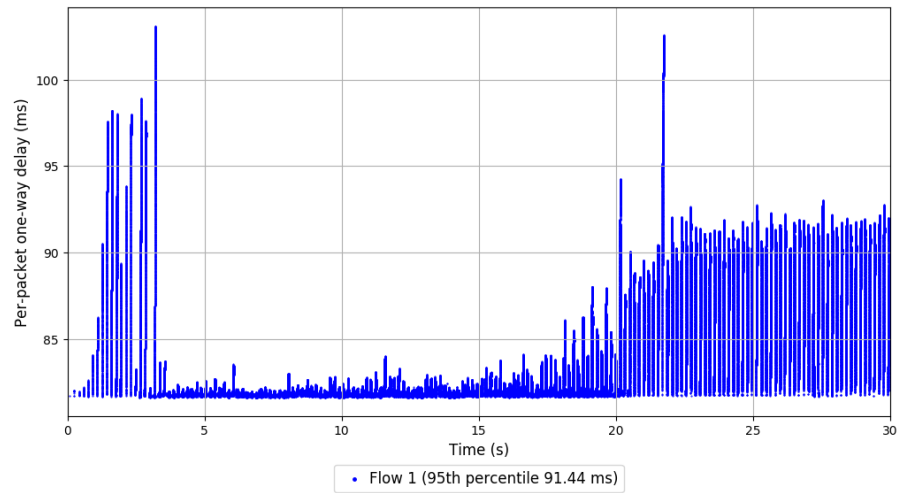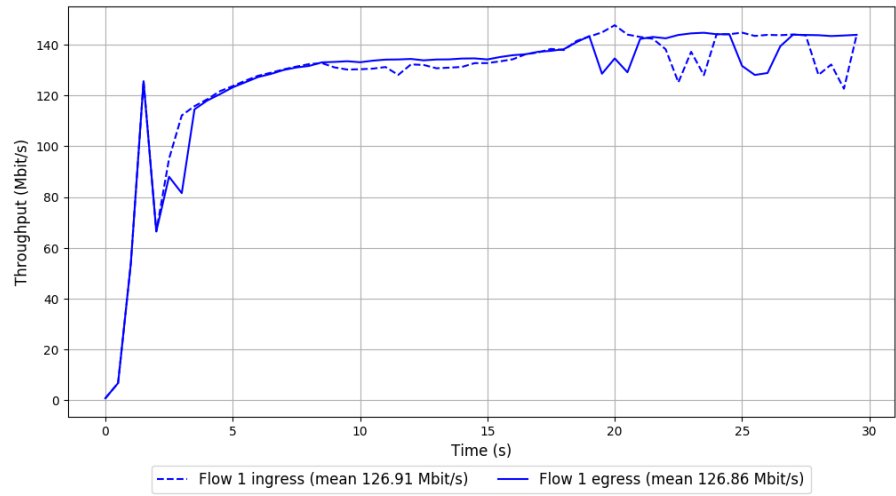
Run 7: Report of TCP Cubic — Data Link

```
Run 8: Statistics of TCP Cubic

Start at: 2017-12-11 16:10:49
End at: 2017-12-11 16:11:19
Local clock offset: -0.551 ms
Remote clock offset: 1.179 ms


# Below is generated by plot.py at 2017-12-11 17:33:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 111.93 Mbit/s
95th percentile per-packet one-way delay: 94.180 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 111.93 Mbit/s
95th percentile per-packet one-way delay: 94.180 ms
Loss rate: 0.01%
```
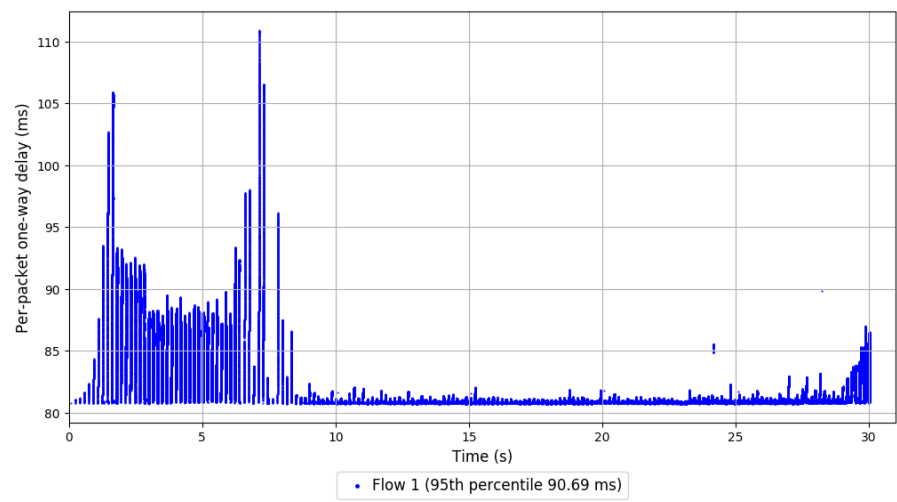
Run 8: Report of TCP Cubic — Data Link

```
Run 9: Statistics of TCP Cubic

Start at: 2017-12-11 16:28:58
End at: 2017-12-11 16:29:28
Local clock offset: -0.507 ms
Remote clock offset: -3.203 ms


# Below is generated by plot.py at 2017-12-11 17:34:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 126.86 Mbit/s
95th percentile per-packet one-way delay: 91.437 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 126.86 Mbit/s
95th percentile per-packet one-way delay: 91.437 ms
Loss rate: 0.01%
```
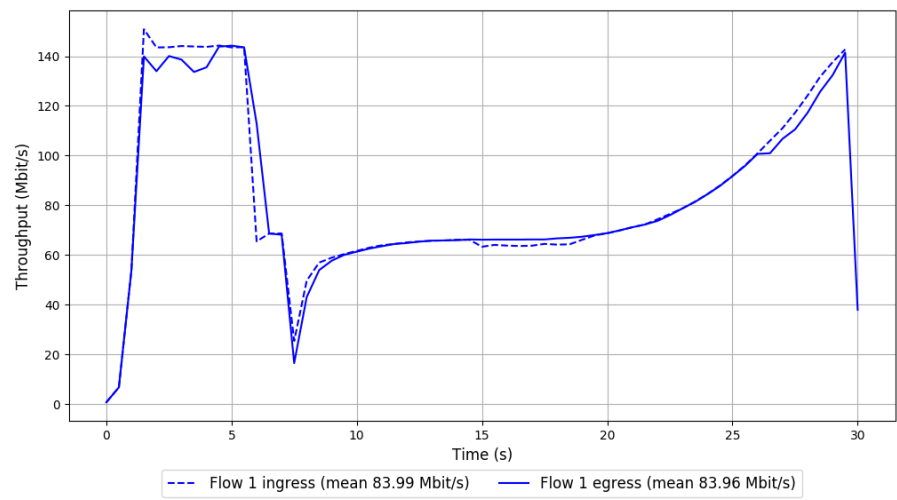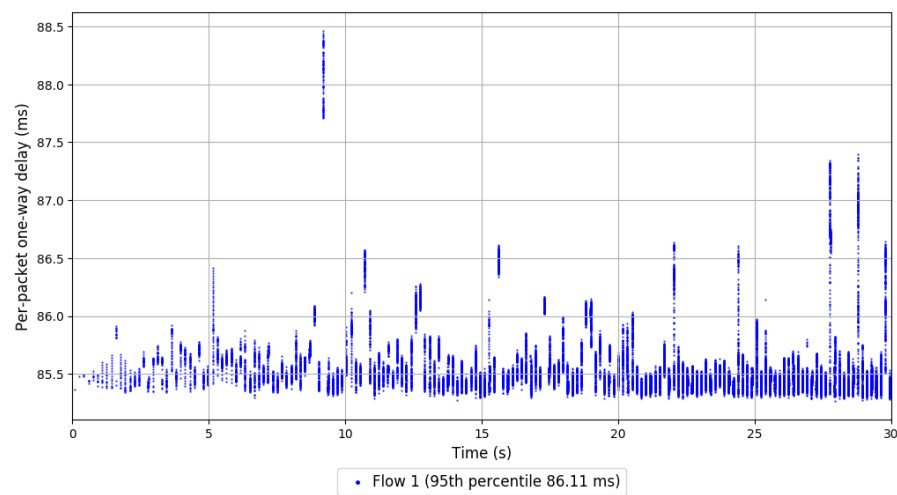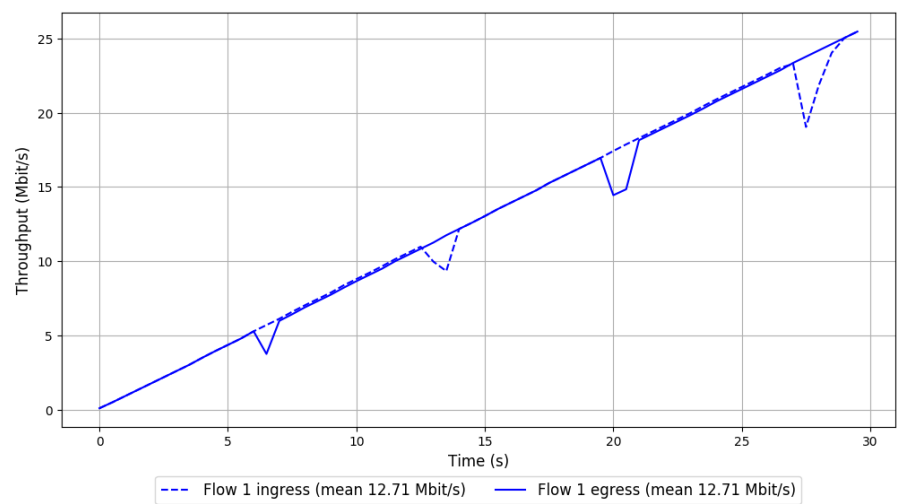
Run 9: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 126.91 Mbit/s) ——— Flow 1 egress (mean 126.86 Mbit/s)

• Flow 1 (95th percentile 91.44 ms)

```
Run 10: Statistics of TCP Cubic

Start at: 2017-12-11 16:46:58
End at: 2017-12-11 16:47:28
Local clock offset: -0.403 ms
Remote clock offset: -5.382 ms


# Below is generated by plot.py at 2017-12-11 17:34:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 83.96 Mbit/s
95th percentile per-packet one-way delay: 90.687 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 83.96 Mbit/s
95th percentile per-packet one-way delay: 90.687 ms
Loss rate: 0.02%
```

Run 10: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 83.99 Mbit/s)   Flow 1 egress (mean 83.96 Mbit/s)
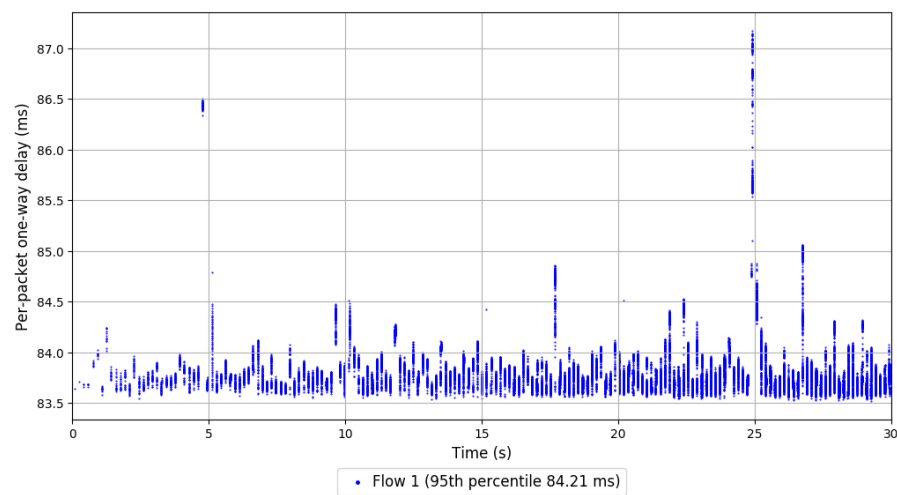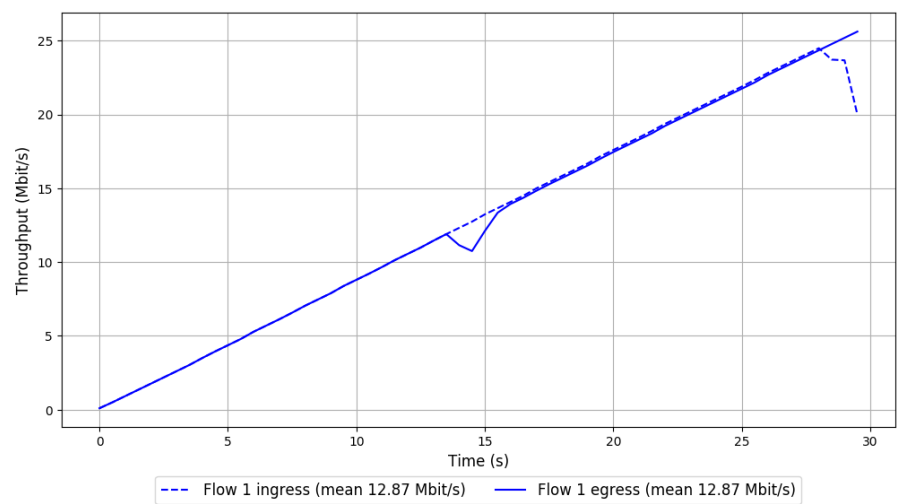

Flow 1 (95th percentile 90.69 ms)

```
Run 1: Statistics of LEDBAT

Start at: 2017-12-11 14:02:57
End at: 2017-12-11 14:03:27
Local clock offset: -0.333 ms
Remote clock offset: -1.082 ms


# Below is generated by plot.py at 2017-12-11 17:34:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.71 Mbit/s
95th percentile per-packet one-way delay: 86.114 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.71 Mbit/s
95th percentile per-packet one-way delay: 86.114 ms
Loss rate: 0.00%
```
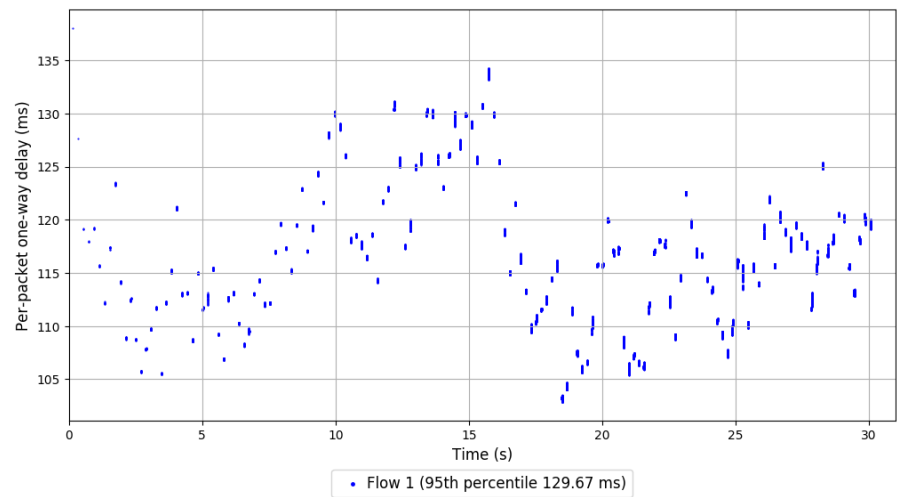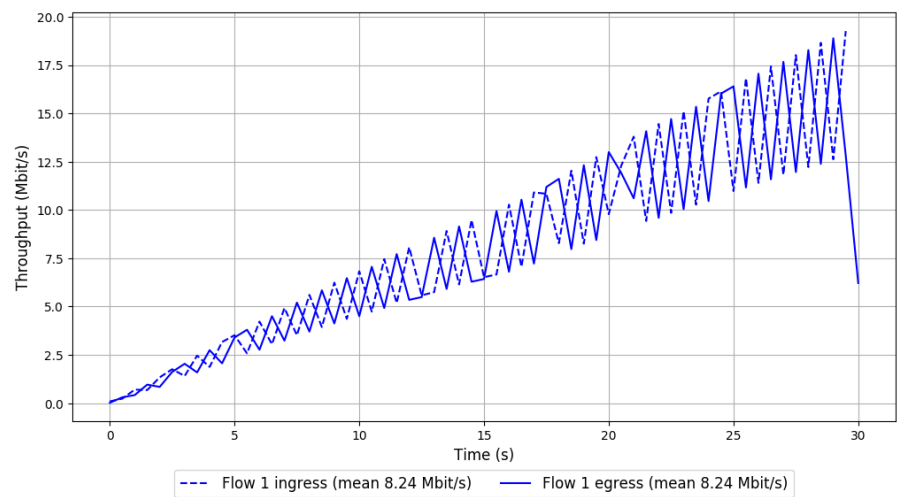
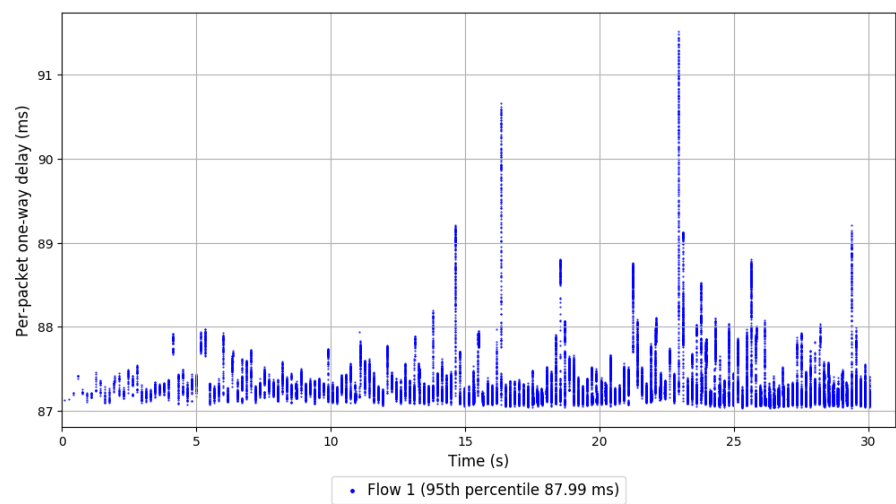# Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2017-12-11 14:21:02
End at: 2017-12-11 14:21:32
Local clock offset: -0.379 ms
Remote clock offset: -4.439 ms


# Below is generated by plot.py at 2017-12-11 17:34:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.87 Mbit/s
95th percentile per-packet one-way delay: 84.210 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.87 Mbit/s
95th percentile per-packet one-way delay: 84.210 ms
Loss rate: 0.00%
```
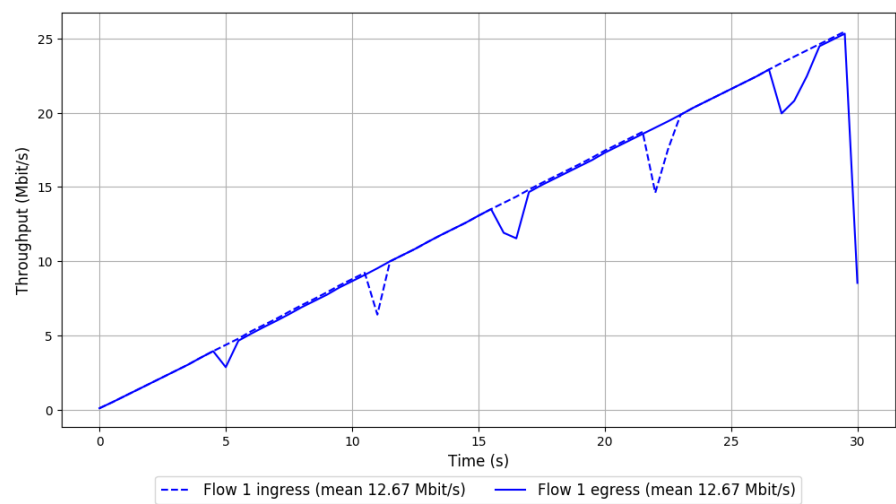
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2017-12-11 14:38:55
End at: 2017-12-11 14:39:25
Local clock offset: -0.436 ms
Remote clock offset: 1.078 ms


# Below is generated by plot.py at 2017-12-11 17:34:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.24 Mbit/s
95th percentile per-packet one-way delay: 129.668 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 8.24 Mbit/s
95th percentile per-packet one-way delay: 129.668 ms
Loss rate: 0.05%
```
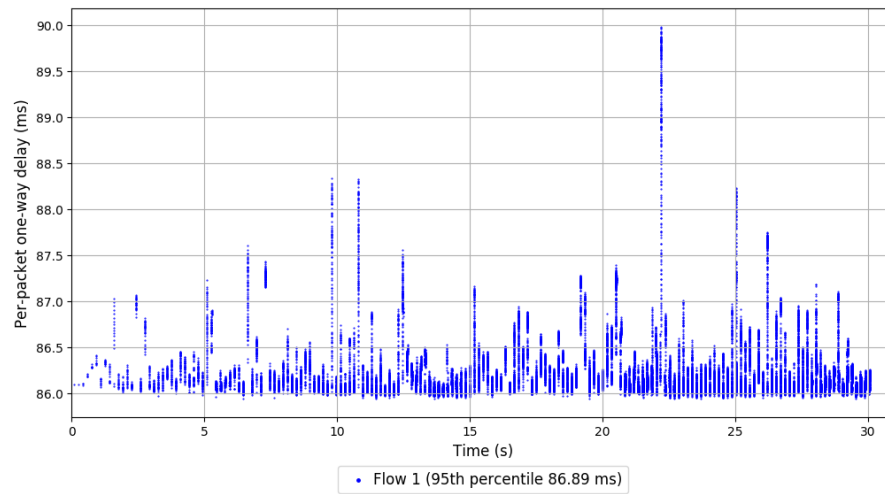
Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2017-12-11 14:56:39
End at: 2017-12-11 14:57:09
Local clock offset: -0.438 ms
Remote clock offset: -0.171 ms


# Below is generated by plot.py at 2017-12-11 17:34:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.67 Mbit/s
95th percentile per-packet one-way delay: 87.990 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.67 Mbit/s
95th percentile per-packet one-way delay: 87.990 ms
Loss rate: 0.00%
```
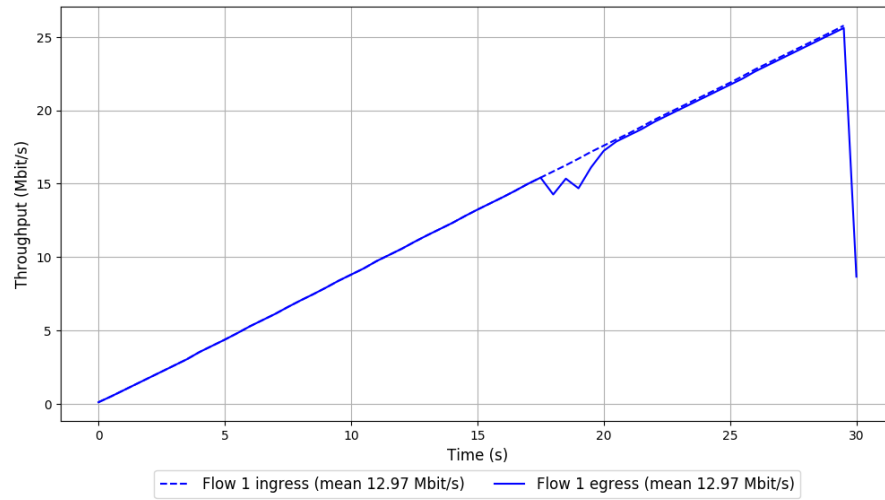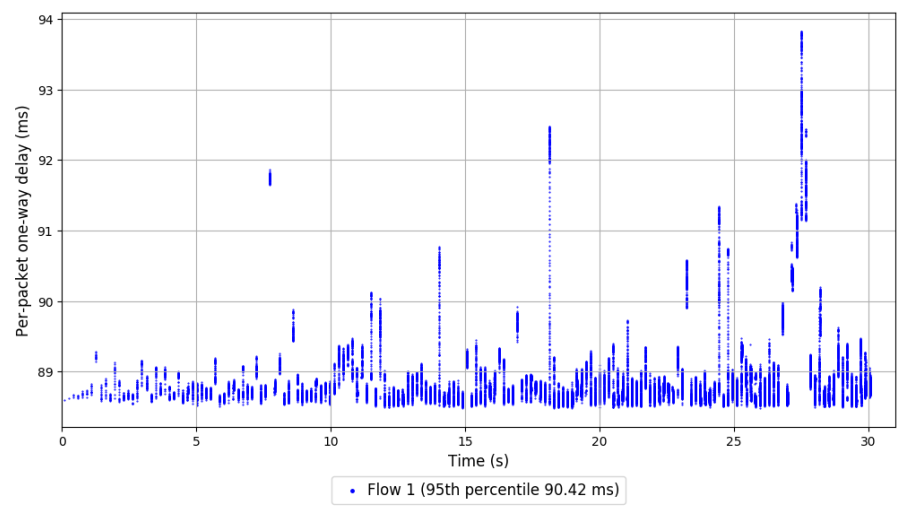
Run 4: Report of LEDBAT — Data Link

Flow 1 ingress (mean 12.67 Mbit/s) --- Flow 1 egress (mean 12.67 Mbit/s)

Flow 1 (95th percentile 87.99 ms)

```
Run 5: Statistics of LEDBAT

Start at: 2017-12-11 15:14:47
End at: 2017-12-11 15:15:17
Local clock offset: -0.533 ms
Remote clock offset: 0.885 ms


# Below is generated by plot.py at 2017-12-11 17:34:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.97 Mbit/s
95th percentile per-packet one-way delay: 86.890 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.97 Mbit/s
95th percentile per-packet one-way delay: 86.890 ms
Loss rate: 0.00%
```
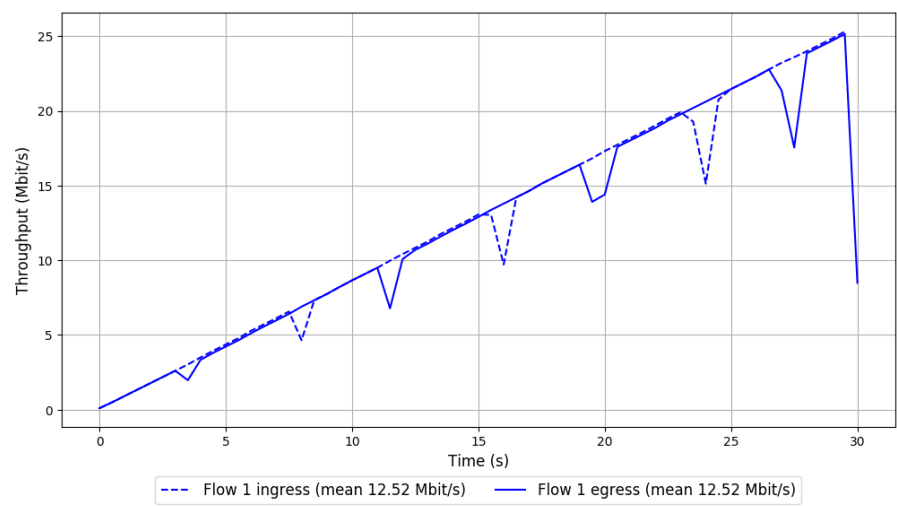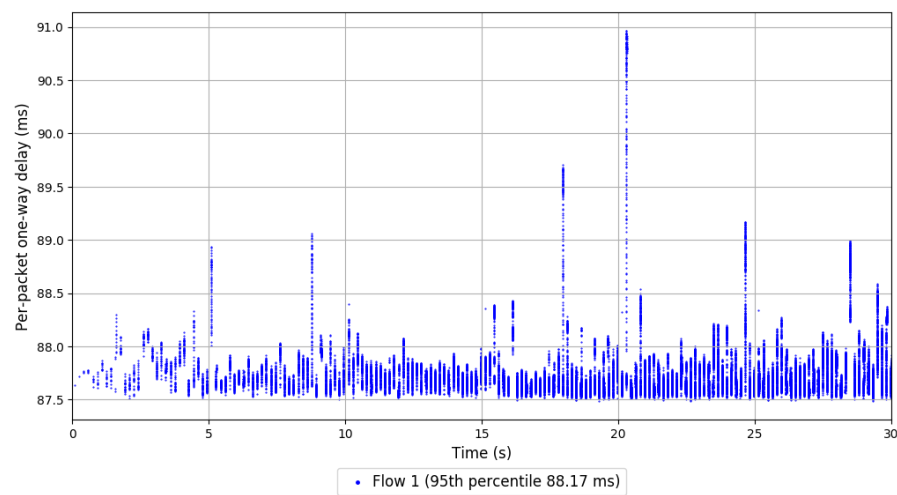
Run 5: Report of LEDBAT — Data Link

Flow 1 ingress (mean 12.97 Mbit/s)   ——— Flow 1 egress (mean 12.97 Mbit/s)

• Flow 1 (95th percentile 86.89 ms)

53

```
Run 6: Statistics of LEDBAT

Start at: 2017-12-11 15:32:25
End at: 2017-12-11 15:32:55
Local clock offset: -0.489 ms
Remote clock offset: 1.858 ms


# Below is generated by plot.py at 2017-12-11 17:34:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.52 Mbit/s
95th percentile per-packet one-way delay: 90.423 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.52 Mbit/s
95th percentile per-packet one-way delay: 90.423 ms
Loss rate: 0.00%
```
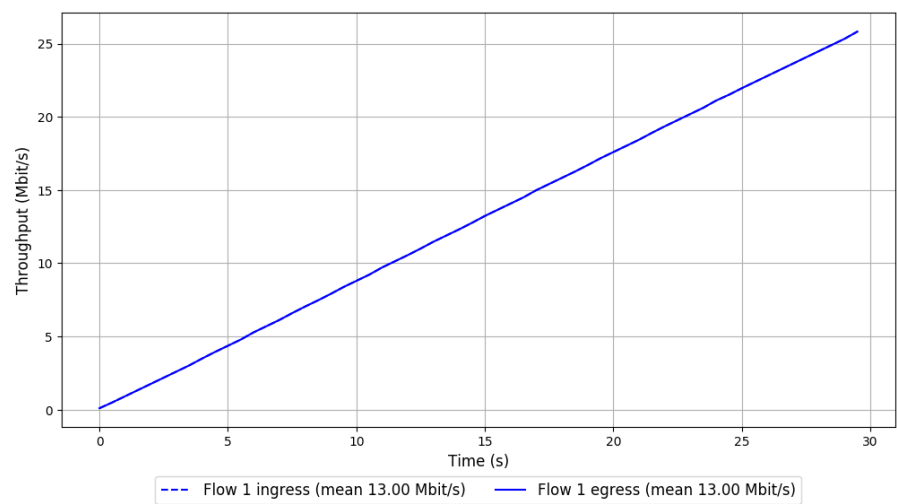
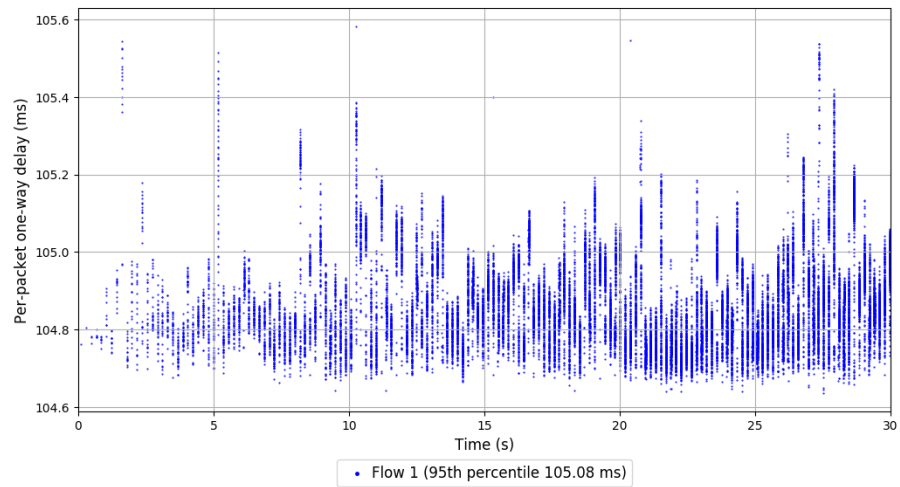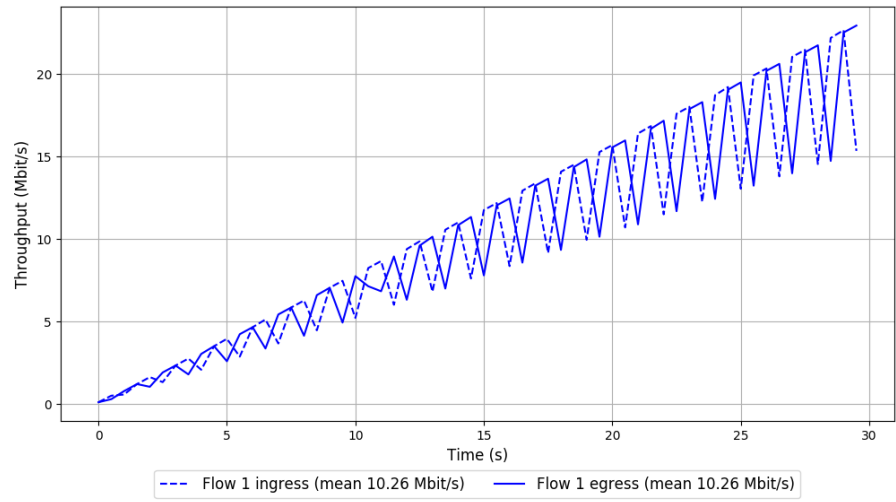# Run 6: Report of LEDBAT — Data Link

Flow 1 ingress (mean 12.52 Mbit/s) --- Flow 1 egress (mean 12.52 Mbit/s)

Flow 1 (95th percentile 90.42 ms)

```
Run 7: Statistics of LEDBAT

Start at: 2017-12-11 15:50:12
End at: 2017-12-11 15:50:43
Local clock offset: -0.531 ms
Remote clock offset: 2.381 ms

# Below is generated by plot.py at 2017-12-11 17:34:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 13.00 Mbit/s
95th percentile per-packet one-way delay: 88.172 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 13.00 Mbit/s
95th percentile per-packet one-way delay: 88.172 ms
Loss rate: 0.00%
```
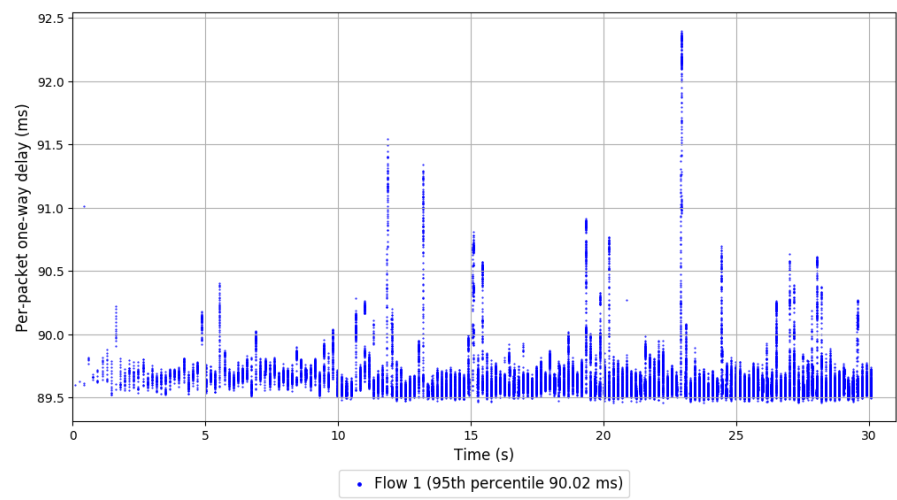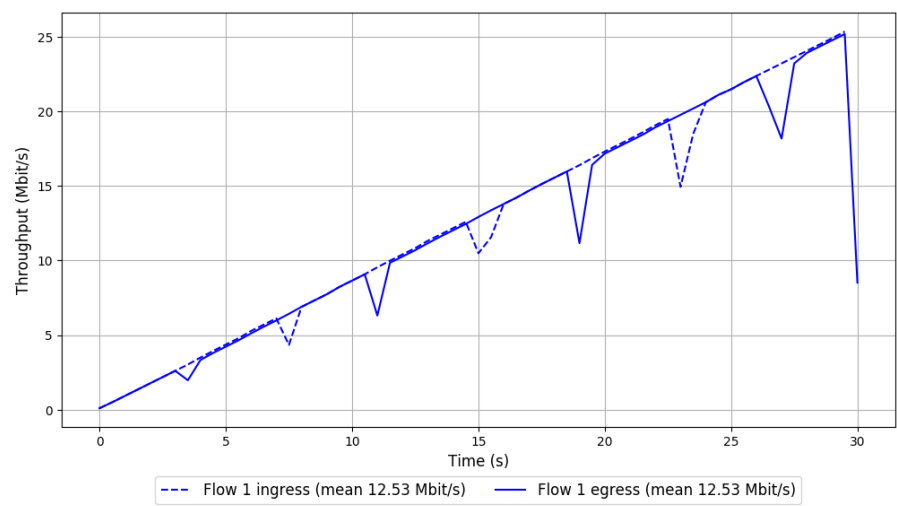
Run 7: Report of LEDBAT — Data Link

```
Run 8: Statistics of LEDBAT

Start at: 2017-12-11 16:08:27
End at: 2017-12-11 16:08:57
Local clock offset: -0.465 ms
Remote clock offset: -0.635 ms


# Below is generated by plot.py at 2017-12-11 17:34:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 10.26 Mbit/s
95th percentile per-packet one-way delay: 105.084 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 10.26 Mbit/s
95th percentile per-packet one-way delay: 105.084 ms
Loss rate: 0.00%
```
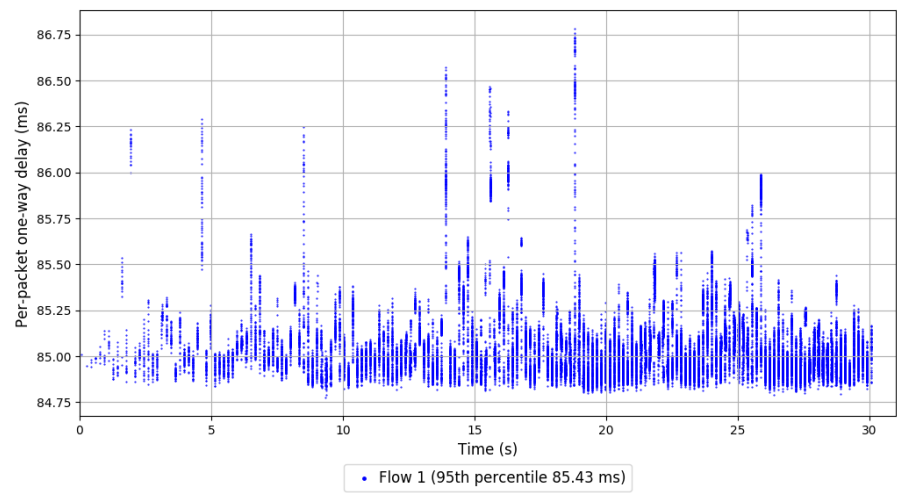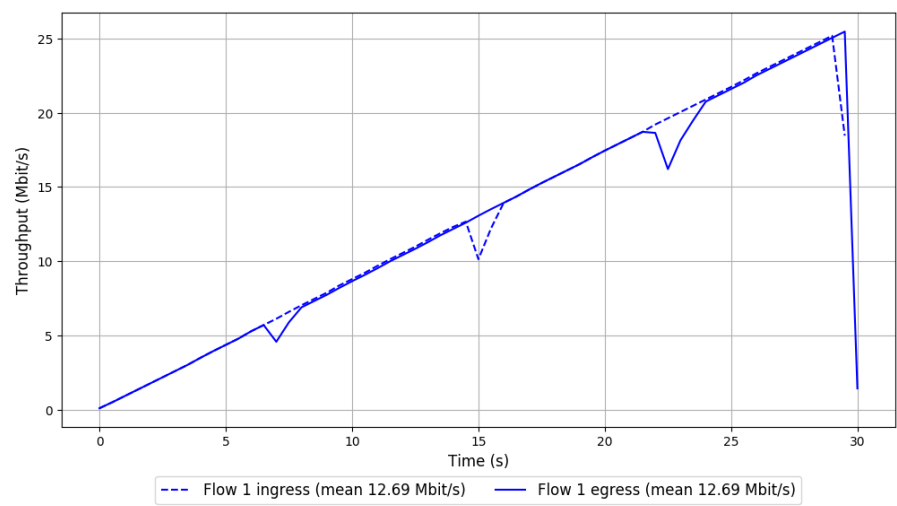
Run 8: Report of LEDBAT — Data Link

Flow 1 ingress (mean 10.26 Mbit/s)   Flow 1 egress (mean 10.26 Mbit/s)

Flow 1 (95th percentile 105.08 ms)

```
Run 9: Statistics of LEDBAT

Start at: 2017-12-11 16:26:36
End at: 2017-12-11 16:27:06
Local clock offset: -0.376 ms
Remote clock offset: 2.947 ms


# Below is generated by plot.py at 2017-12-11 17:34:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.53 Mbit/s
95th percentile per-packet one-way delay: 90.024 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.53 Mbit/s
95th percentile per-packet one-way delay: 90.024 ms
Loss rate: 0.00%
```

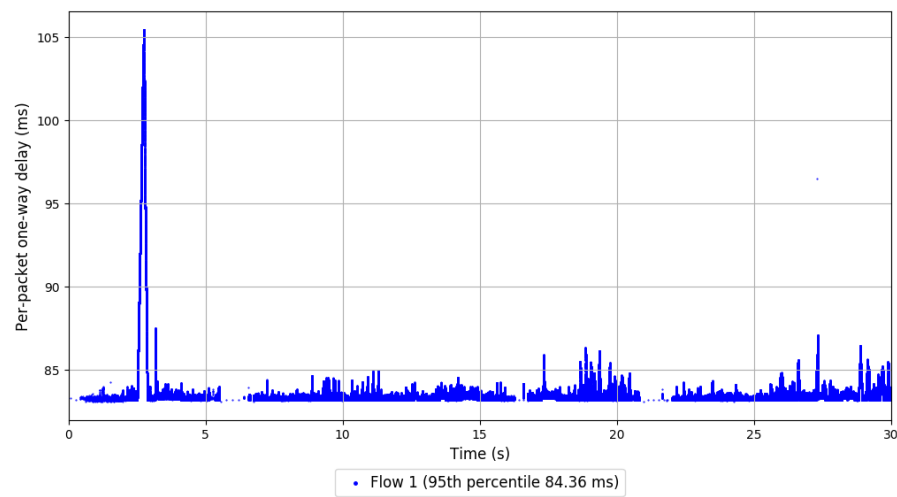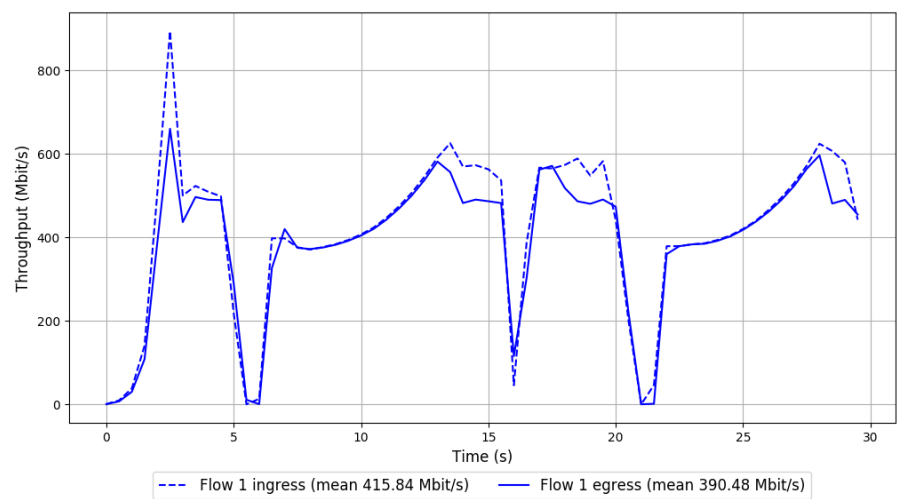## Run 9: Report of LEDBAT — Data Link

```
Run 10: Statistics of LEDBAT

Start at: 2017-12-11 16:44:36
End at: 2017-12-11 16:45:06
Local clock offset: -0.373 ms
Remote clock offset: 0.116 ms


# Below is generated by plot.py at 2017-12-11 17:34:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.69 Mbit/s
95th percentile per-packet one-way delay: 85.427 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.69 Mbit/s
95th percentile per-packet one-way delay: 85.427 ms
Loss rate: 0.00%
```
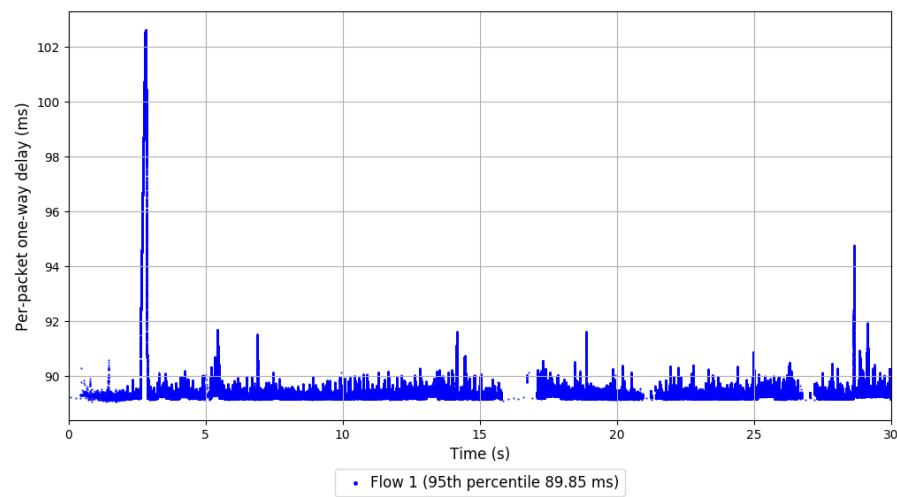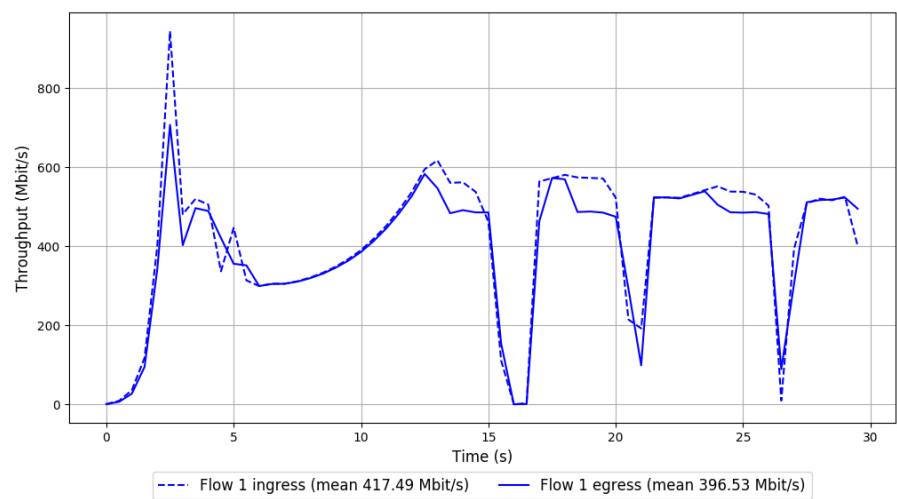
Run 10: Report of LEDBAT — Data Link

Flow 1 ingress (mean 12.69 Mbit/s)   Flow 1 egress (mean 12.69 Mbit/s)
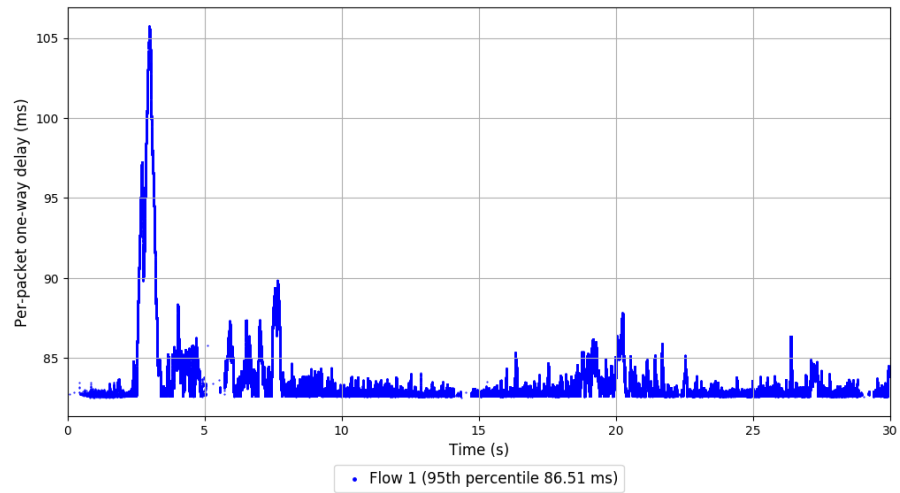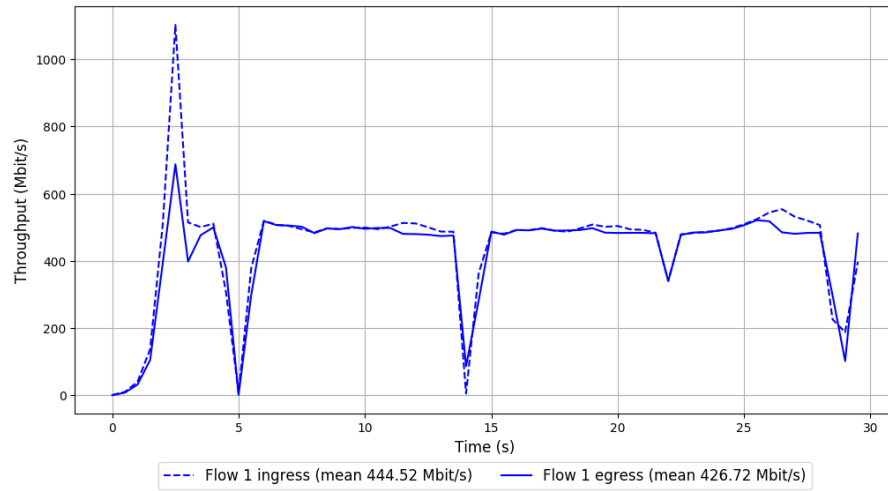

Flow 1 (95th percentile 85.43 ms)

```
Run 1: Statistics of PCC

Start at: 2017-12-11 13:57:36
End at: 2017-12-11 13:58:06
Local clock offset: -0.317 ms
Remote clock offset: -4.994 ms


# Below is generated by plot.py at 2017-12-11 17:38:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 390.48 Mbit/s
95th percentile per-packet one-way delay: 84.363 ms
Loss rate: 6.10%
-- Flow 1:
Average throughput: 390.48 Mbit/s
95th percentile per-packet one-way delay: 84.363 ms
Loss rate: 6.10%
```

Run 1: Report of PCC — Data Link

```
Run 2: Statistics of PCC

Start at: 2017-12-11 14:15:44
End at: 2017-12-11 14:16:14
Local clock offset: -0.388 ms
Remote clock offset: 1.125 ms


# Below is generated by plot.py at 2017-12-11 17:38:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 396.53 Mbit/s
95th percentile per-packet one-way delay: 89.850 ms
Loss rate: 5.02%
-- Flow 1:
Average throughput: 396.53 Mbit/s
95th percentile per-packet one-way delay: 89.850 ms
Loss rate: 5.02%
```

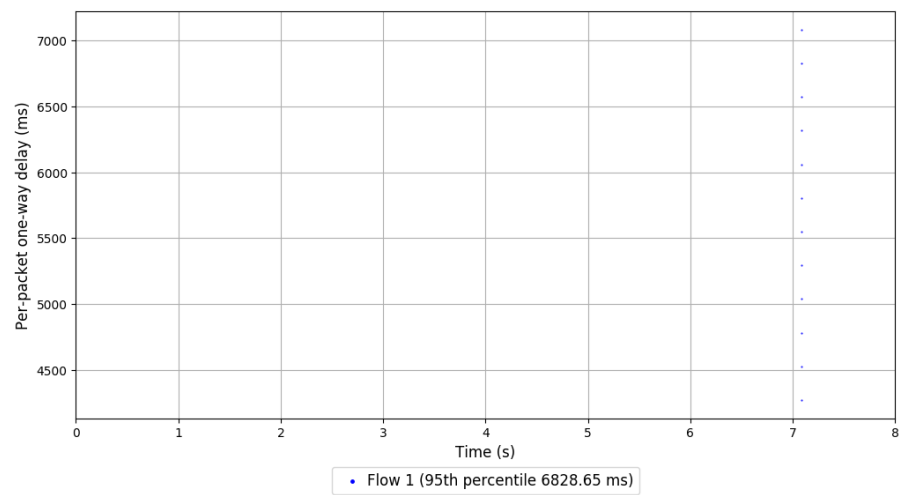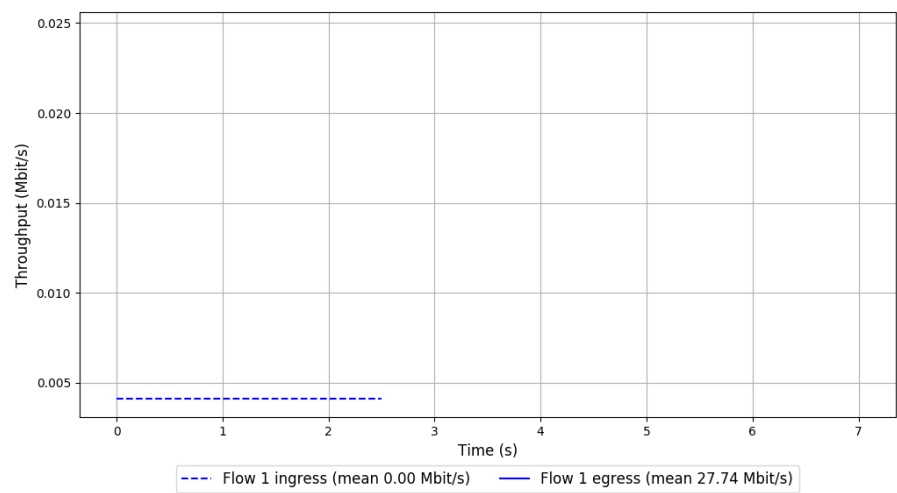# Run 2: Report of PCC — Data Link

```
Run 3: Statistics of PCC

Start at: 2017-12-11 14:33:36
End at: 2017-12-11 14:34:06
Local clock offset: -0.384 ms
Remote clock offset: -5.028 ms


# Below is generated by plot.py at 2017-12-11 17:39:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 426.72 Mbit/s
95th percentile per-packet one-way delay: 86.513 ms
Loss rate: 4.00%
-- Flow 1:
Average throughput: 426.72 Mbit/s
95th percentile per-packet one-way delay: 86.513 ms
Loss rate: 4.00%
```
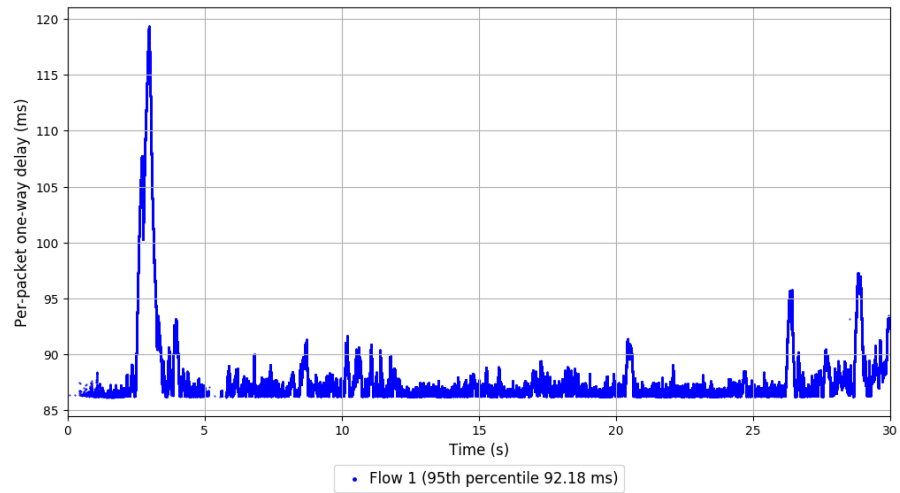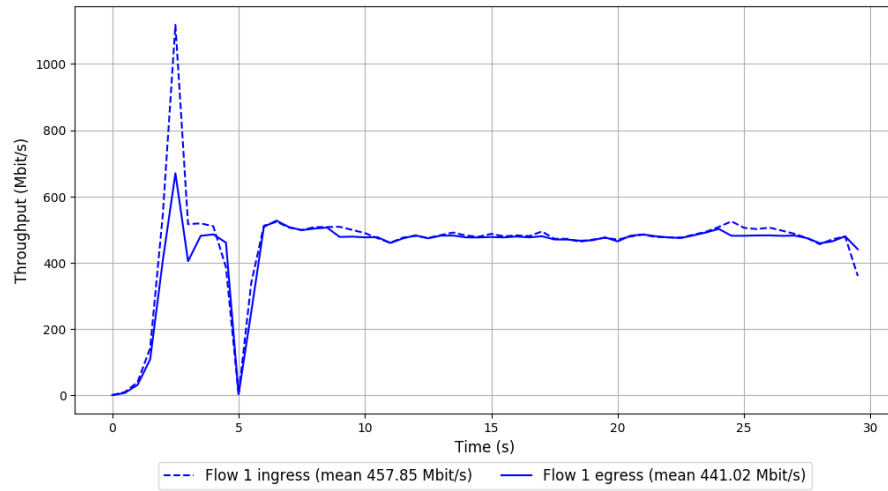
Run 3: Report of PCC — Data Link
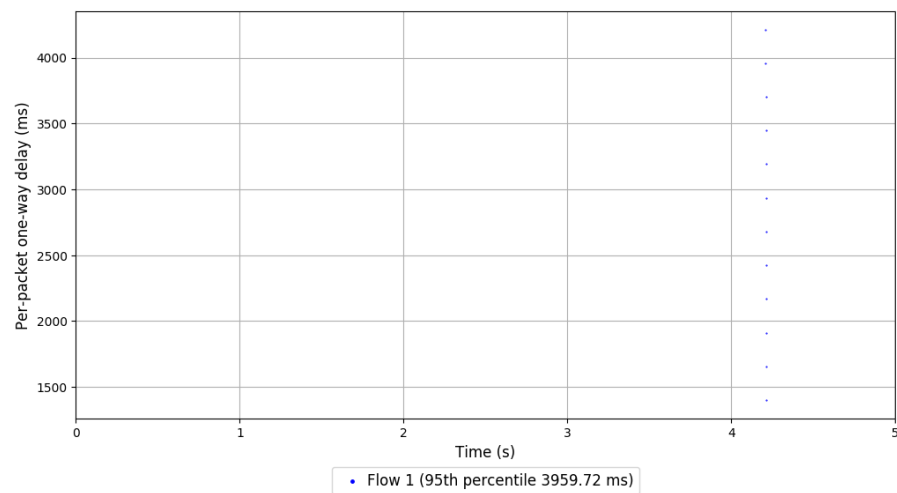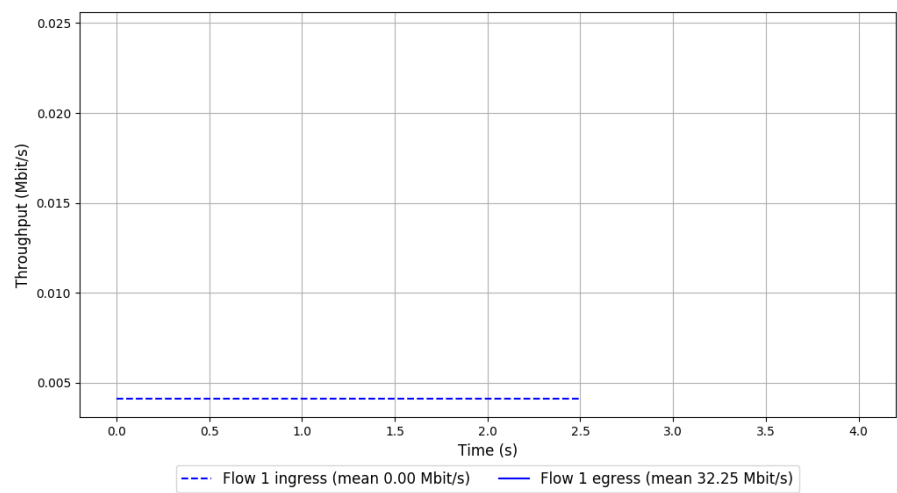
Run 4: Statistics of PCC

Start at: 2017-12-11 14:51:39
End at: 2017-12-11 14:52:09
Local clock offset: -0.455 ms
Remote clock offset: 0.644 ms

Run 4: Report of PCC — Data Link

Flow 1 ingress (mean 0.00 Mbit/s) —— Flow 1 egress (mean 27.74 Mbit/s)

• Flow 1 (95th percentile 6828.65 ms)

```
Run 5: Statistics of PCC

Start at: 2017-12-11 15:09:26
End at: 2017-12-11 15:09:56
Local clock offset: -0.532 ms
Remote clock offset: 0.845 ms


# Below is generated by plot.py at 2017-12-11 17:39:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 441.02 Mbit/s
95th percentile per-packet one-way delay: 92.180 ms
Loss rate: 3.67%
-- Flow 1:
Average throughput: 441.02 Mbit/s
95th percentile per-packet one-way delay: 92.180 ms
Loss rate: 3.67%
```
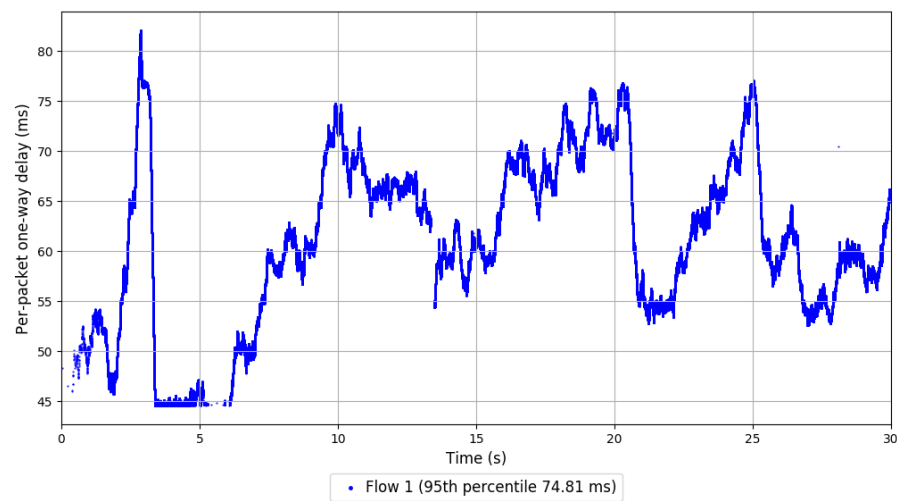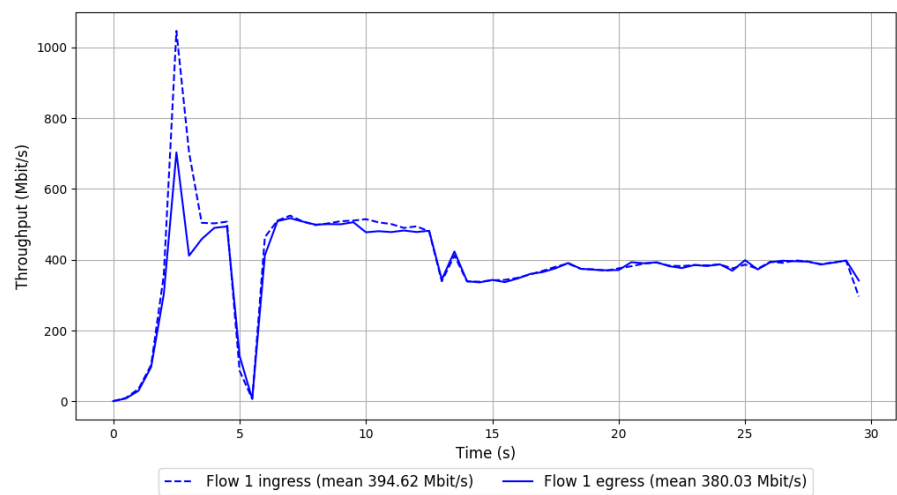
Run 5: Report of PCC — Data Link

```
Run 6: Statistics of PCC

Start at: 2017-12-11 15:27:26
End at: 2017-12-11 15:27:56
Local clock offset: -0.475 ms
Remote clock offset: -4.339 ms
```

Run 6: Report of PCC — Data Link

Flow 1 ingress (mean 0.00 Mbit/s) —— Flow 1 egress (mean 32.25 Mbit/s)

• Flow 1 (95th percentile 3959.72 ms)

75

```
Run 7: Statistics of PCC

Start at: 2017-12-11 15:44:51
End at: 2017-12-11 15:45:21
Local clock offset: -0.455 ms
Remote clock offset: -41.9 ms


# Below is generated by plot.py at 2017-12-11 17:39:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 380.03 Mbit/s
95th percentile per-packet one-way delay: 74.813 ms
Loss rate: 3.64%
-- Flow 1:
Average throughput: 380.03 Mbit/s
95th percentile per-packet one-way delay: 74.813 ms
Loss rate: 3.64%
```
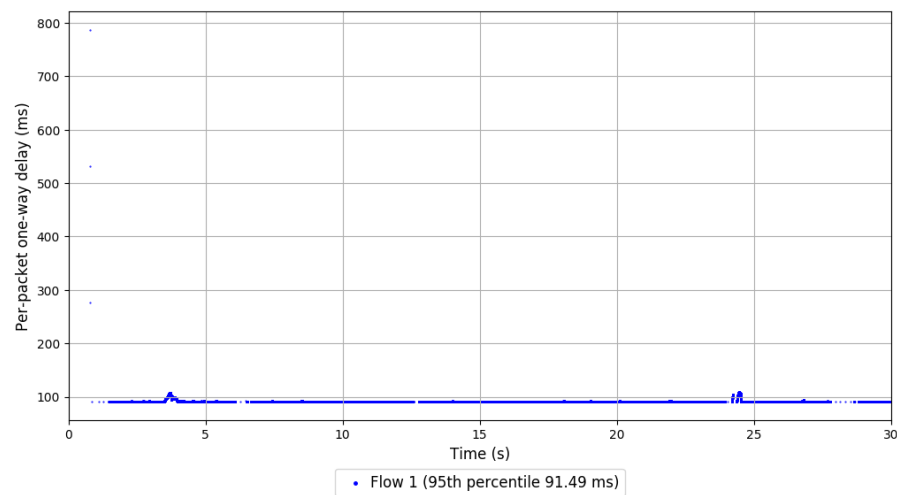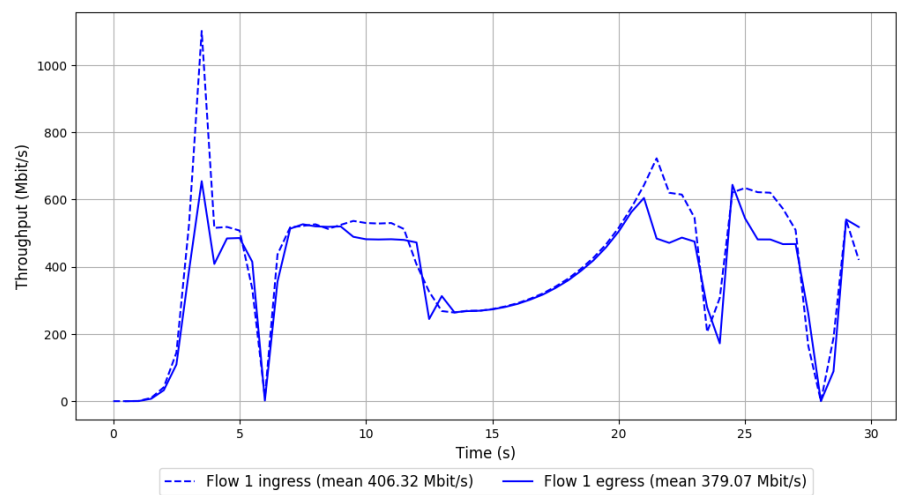
Run 7: Report of PCC — Data Link

Flow 1 ingress (mean 394.62 Mbit/s) --- Flow 1 egress (mean 380.03 Mbit/s)

Flow 1 (95th percentile 74.81 ms)

```
Run 8: Statistics of PCC

Start at: 2017-12-11 16:03:07
End at: 2017-12-11 16:03:37
Local clock offset: -0.473 ms
Remote clock offset: 4.078 ms


# Below is generated by plot.py at 2017-12-11 17:39:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 379.07 Mbit/s
95th percentile per-packet one-way delay: 91.494 ms
Loss rate: 8.88%
-- Flow 1:
Average throughput: 379.07 Mbit/s
95th percentile per-packet one-way delay: 91.494 ms
Loss rate: 8.88%
```
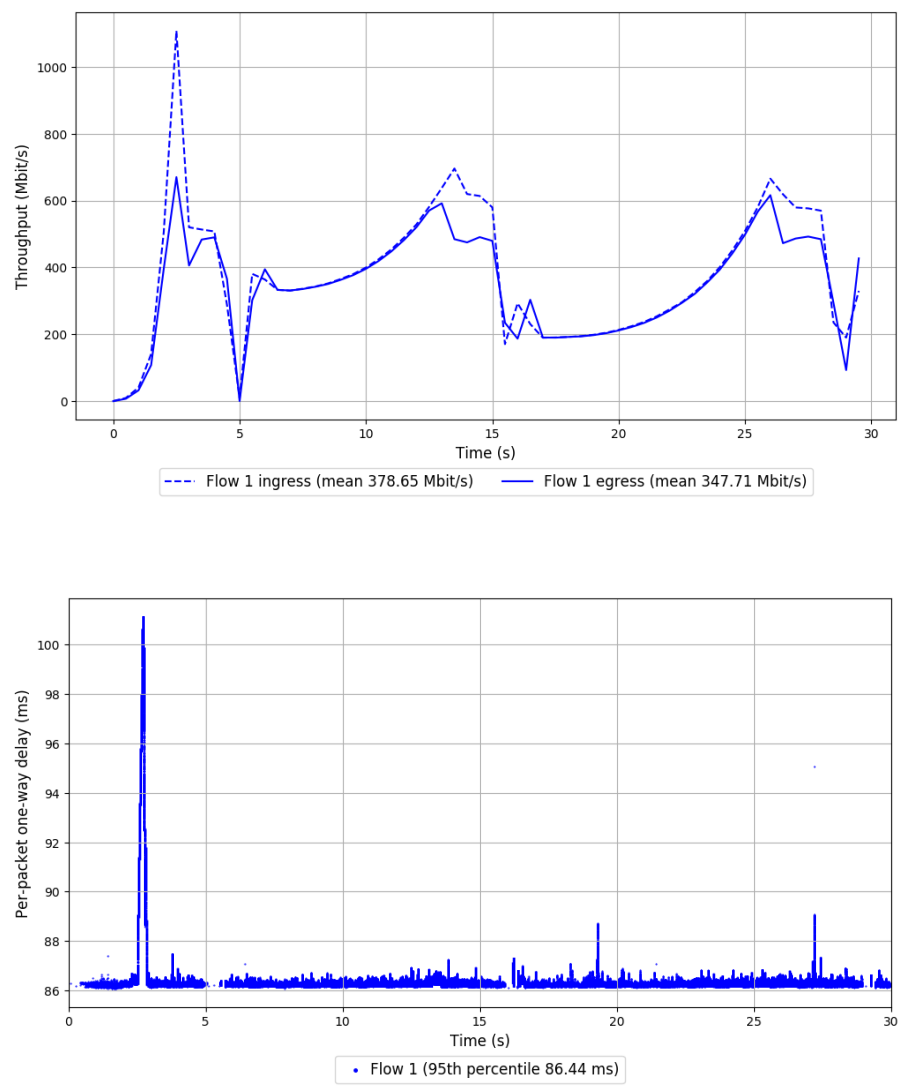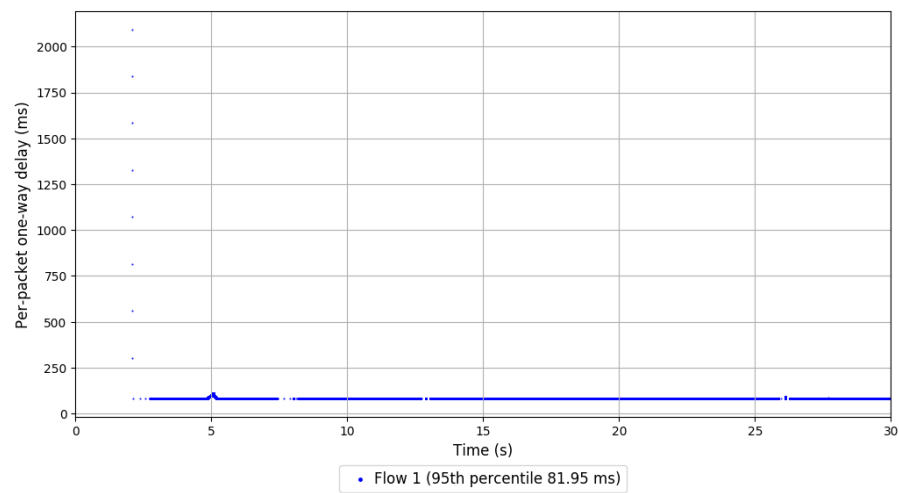
Run 8: Report of PCC — Data Link

```
Run 9: Statistics of PCC

Start at: 2017-12-11 16:21:17
End at: 2017-12-11 16:21:47
Local clock offset: -0.521 ms
Remote clock offset: -0.25 ms


# Below is generated by plot.py at 2017-12-11 17:39:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 347.71 Mbit/s
95th percentile per-packet one-way delay: 86.443 ms
Loss rate: 8.17%
-- Flow 1:
Average throughput: 347.71 Mbit/s
95th percentile per-packet one-way delay: 86.443 ms
Loss rate: 8.17%
```
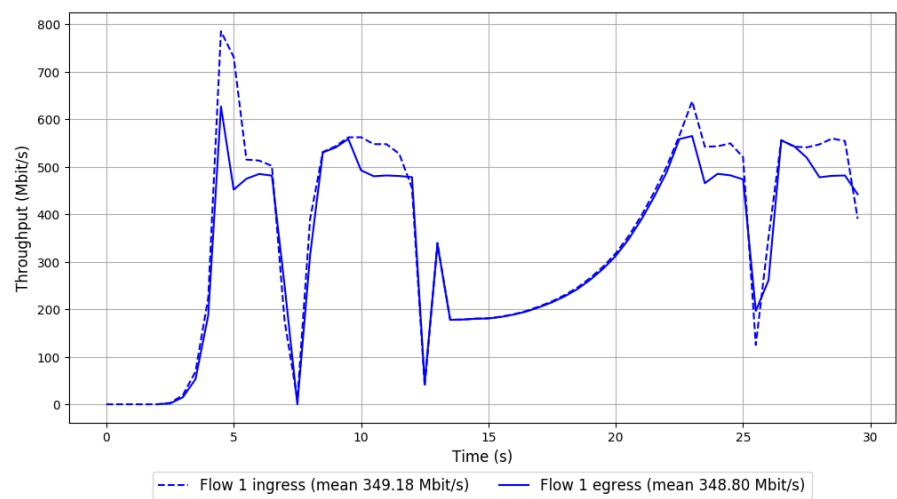
Run 9: Report of PCC — Data Link

```
Run 10: Statistics of PCC

Start at: 2017-12-11 16:39:18
End at: 2017-12-11 16:39:48
Local clock offset: -0.388 ms
Remote clock offset: -4.88 ms


# Below is generated by plot.py at 2017-12-11 17:39:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 348.80 Mbit/s
95th percentile per-packet one-way delay: 81.953 ms
Loss rate: 6.83%
-- Flow 1:
Average throughput: 348.80 Mbit/s
95th percentile per-packet one-way delay: 81.953 ms
Loss rate: 6.83%
```
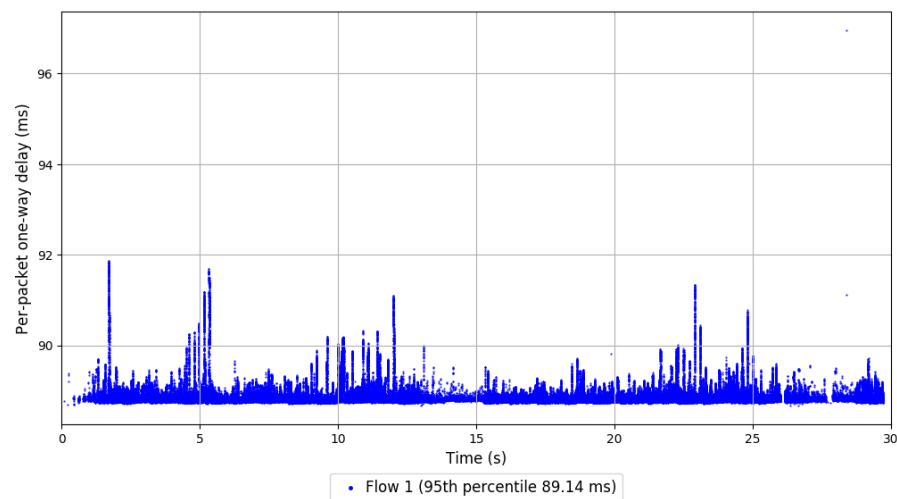
Run 10: Report of PCC — Data Link

```
Run 1: Statistics of QUIC Cubic

Start at: 2017-12-11 13:55:11
End at: 2017-12-11 13:55:41
Local clock offset: -0.302 ms
Remote clock offset: 0.742 ms


# Below is generated by plot.py at 2017-12-11 17:40:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 83.98 Mbit/s
95th percentile per-packet one-way delay: 89.140 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 83.98 Mbit/s
95th percentile per-packet one-way delay: 89.140 ms
Loss rate: 0.00%
```
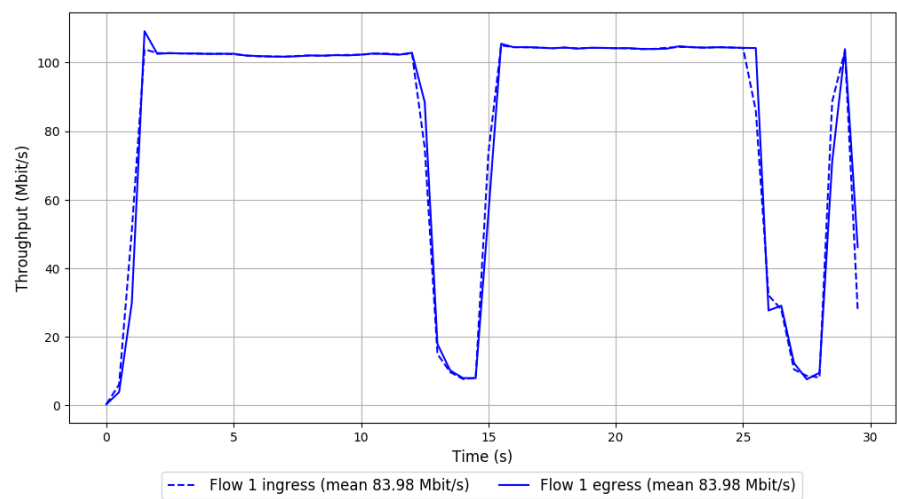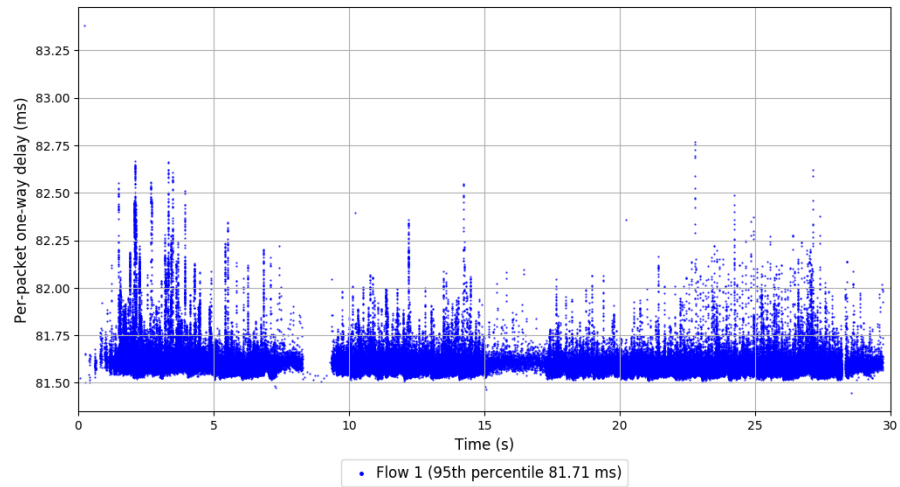
Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2017-12-11 14:13:19
End at: 2017-12-11 14:13:49
Local clock offset: -0.372 ms
Remote clock offset: -4.72 ms


# Below is generated by plot.py at 2017-12-11 17:40:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 80.05 Mbit/s
95th percentile per-packet one-way delay: 81.711 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 80.05 Mbit/s
95th percentile per-packet one-way delay: 81.711 ms
Loss rate: 0.00%
```
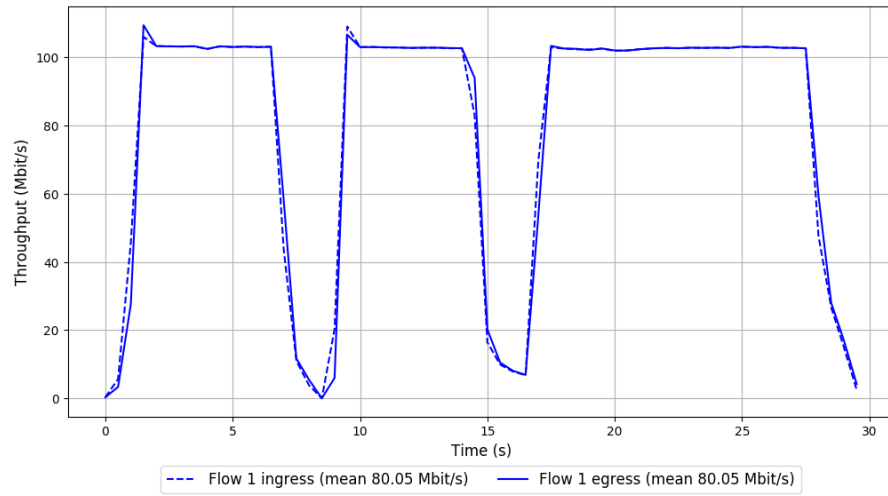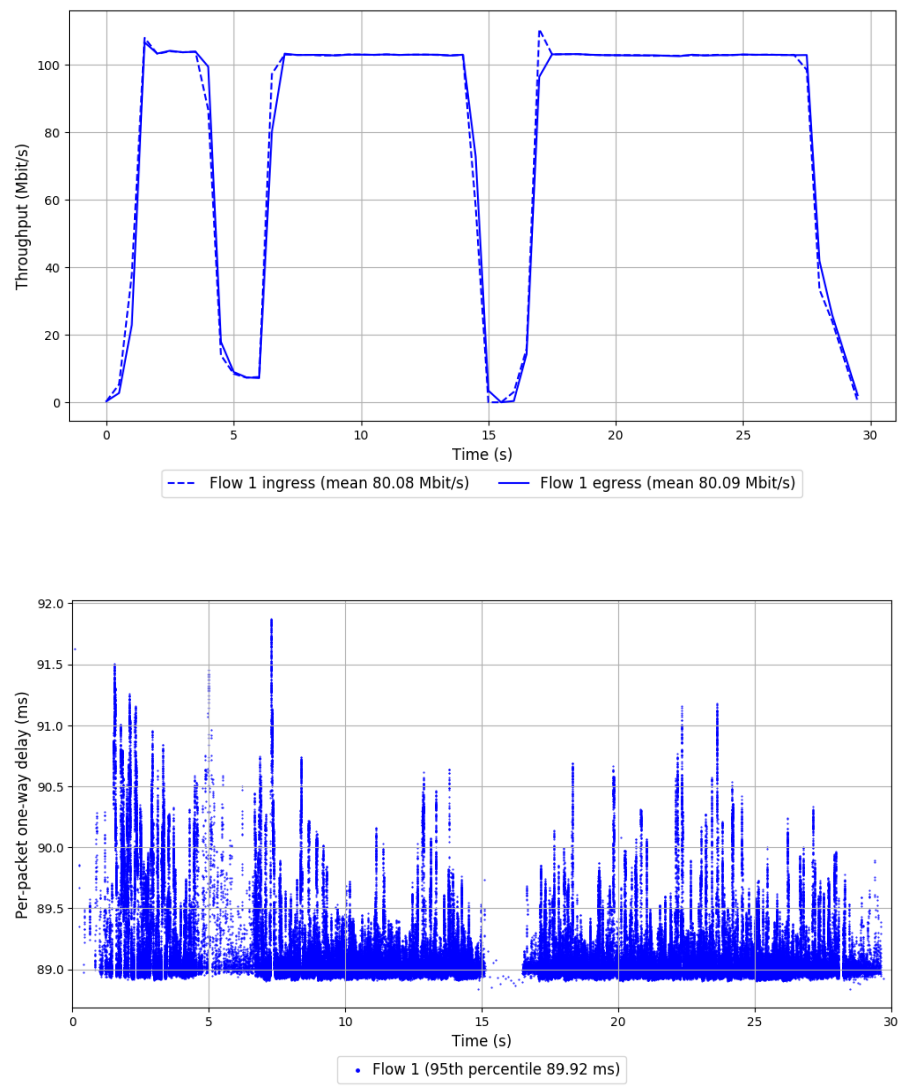
Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2017-12-11 14:31:12
End at: 2017-12-11 14:31:42
Local clock offset: -0.432 ms
Remote clock offset: 1.426 ms


# Below is generated by plot.py at 2017-12-11 17:40:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 80.09 Mbit/s
95th percentile per-packet one-way delay: 89.924 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 80.09 Mbit/s
95th percentile per-packet one-way delay: 89.924 ms
Loss rate: 0.00%
```
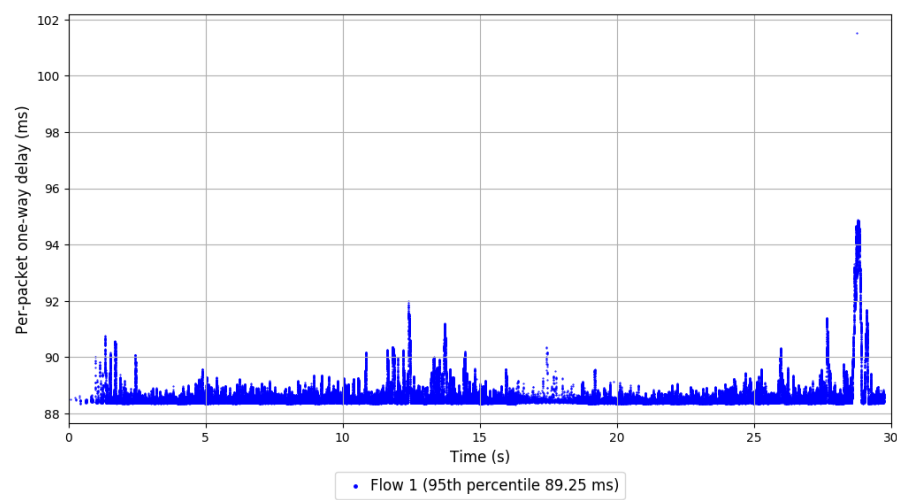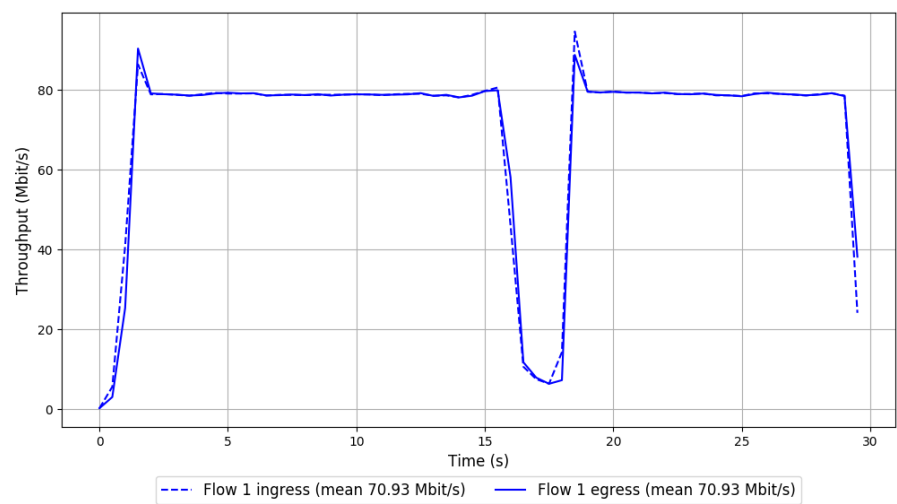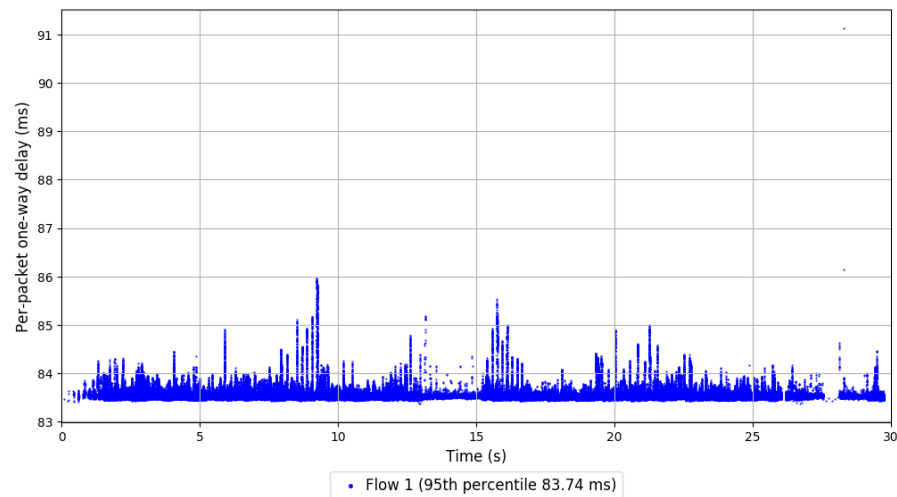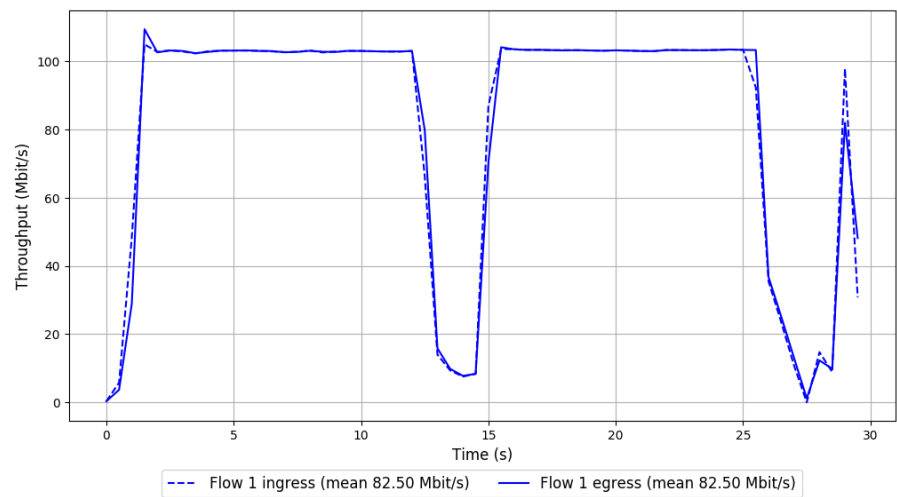
Run 3: Report of QUIC Cubic — Data Link

```
Run 4: Statistics of QUIC Cubic

Start at: 2017-12-11 14:49:16
End at: 2017-12-11 14:49:46
Local clock offset: -0.444 ms
Remote clock offset: 1.405 ms


# Below is generated by plot.py at 2017-12-11 17:40:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 70.93 Mbit/s
95th percentile per-packet one-way delay: 89.246 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 70.93 Mbit/s
95th percentile per-packet one-way delay: 89.246 ms
Loss rate: 0.00%
```

Run 4: Report of QUIC Cubic — Data Link

```
Run 5: Statistics of QUIC Cubic

Start at: 2017-12-11 15:07:03
End at: 2017-12-11 15:07:33
Local clock offset: -0.439 ms
Remote clock offset: -3.3 ms


# Below is generated by plot.py at 2017-12-11 17:40:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 82.50 Mbit/s
95th percentile per-packet one-way delay: 83.738 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 82.50 Mbit/s
95th percentile per-packet one-way delay: 83.738 ms
Loss rate: 0.00%
```
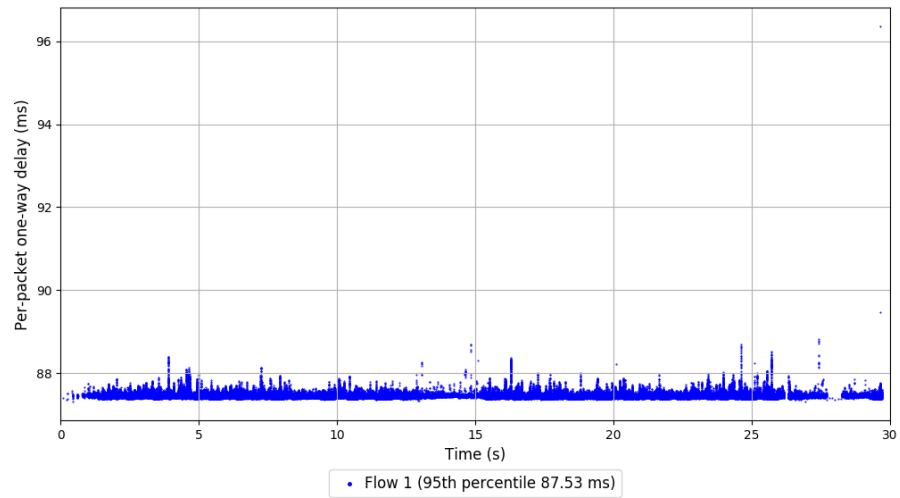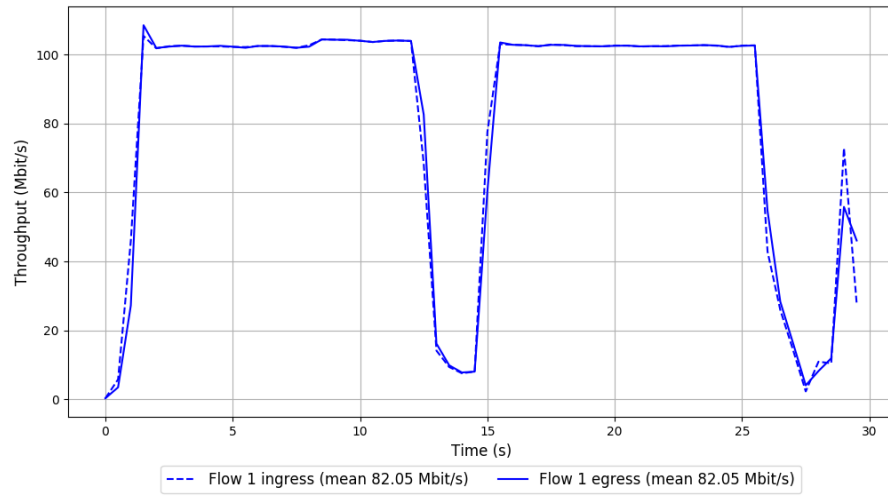
Run 5: Report of QUIC Cubic — Data Link

```
Run 6: Statistics of QUIC Cubic

Start at: 2017-12-11 15:25:03
End at: 2017-12-11 15:25:33
Local clock offset: -0.465 ms
Remote clock offset: 0.405 ms


# Below is generated by plot.py at 2017-12-11 17:40:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 82.05 Mbit/s
95th percentile per-packet one-way delay: 87.531 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 82.05 Mbit/s
95th percentile per-packet one-way delay: 87.531 ms
Loss rate: 0.00%
```

Run 6: Report of QUIC Cubic — Data Link

```
Run 7: Statistics of QUIC Cubic

Start at: 2017-12-11 15:42:25
End at: 2017-12-11 15:42:55
Local clock offset: -0.554 ms
Remote clock offset: -3.88 ms


# Below is generated by plot.py at 2017-12-11 17:40:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 69.38 Mbit/s
95th percentile per-packet one-way delay: 90.207 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 69.38 Mbit/s
95th percentile per-packet one-way delay: 90.207 ms
Loss rate: 0.00%
```
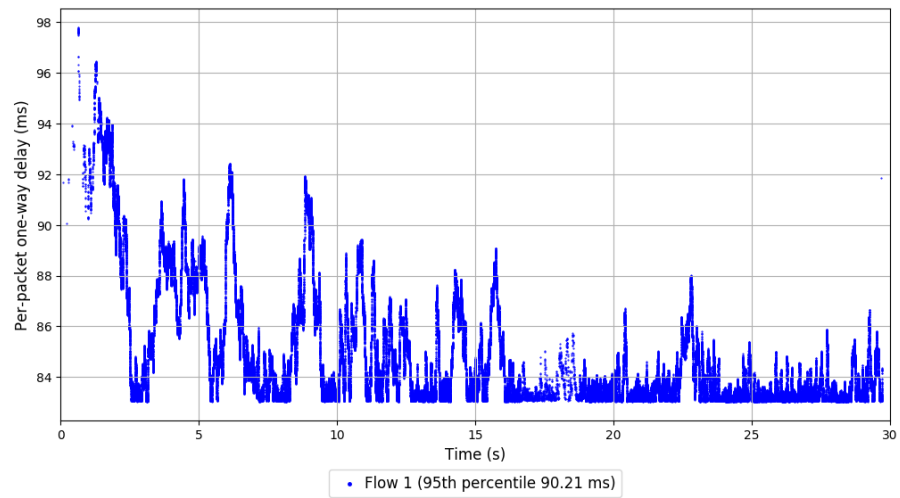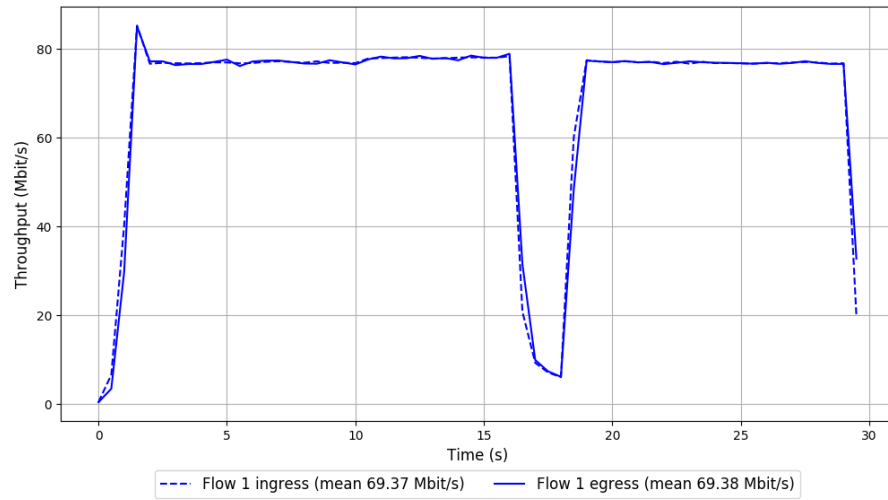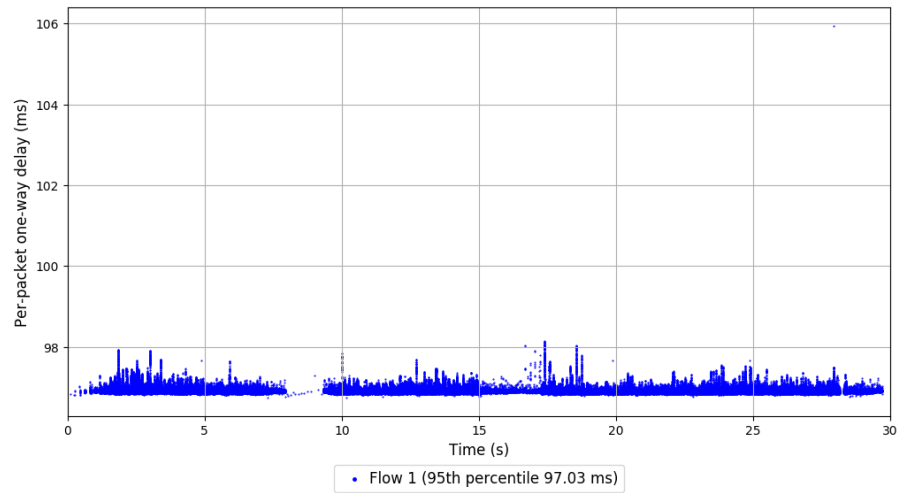
Run 7: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 69.37 Mbit/s) Flow 1 egress (mean 69.38 Mbit/s)

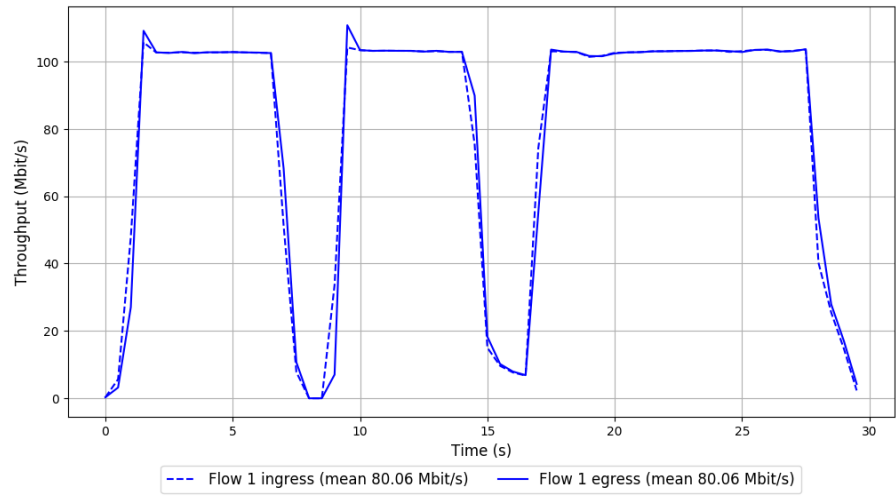• Flow 1 (95th percentile 90.21 ms)

```
Run 8: Statistics of QUIC Cubic

Start at: 2017-12-11 16:00:42
End at: 2017-12-11 16:01:12
Local clock offset: -0.516 ms
Remote clock offset: 11.673 ms


# Below is generated by plot.py at 2017-12-11 17:41:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 80.06 Mbit/s
95th percentile per-packet one-way delay: 97.031 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 80.06 Mbit/s
95th percentile per-packet one-way delay: 97.031 ms
Loss rate: 0.00%
```

Run 8: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 80.06 Mbit/s) —— Flow 1 egress (mean 80.06 Mbit/s)

• Flow 1 (95th percentile 97.03 ms)

```
Run 9: Statistics of QUIC Cubic

Start at: 2017-12-11 16:18:55
End at: 2017-12-11 16:19:25
Local clock offset: -0.408 ms
Remote clock offset: 4.208 ms
```
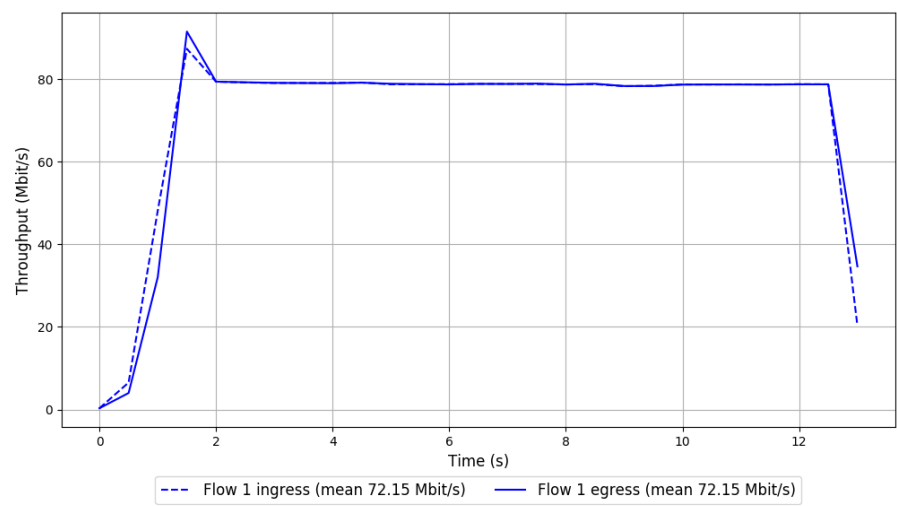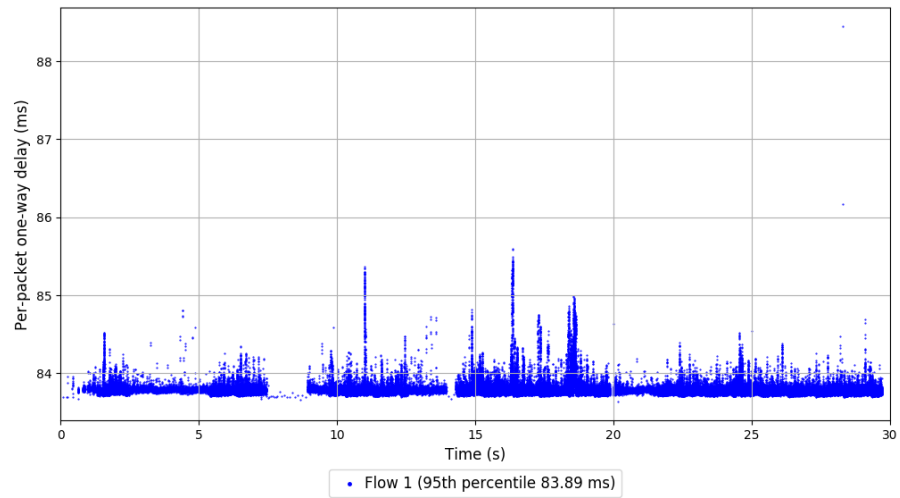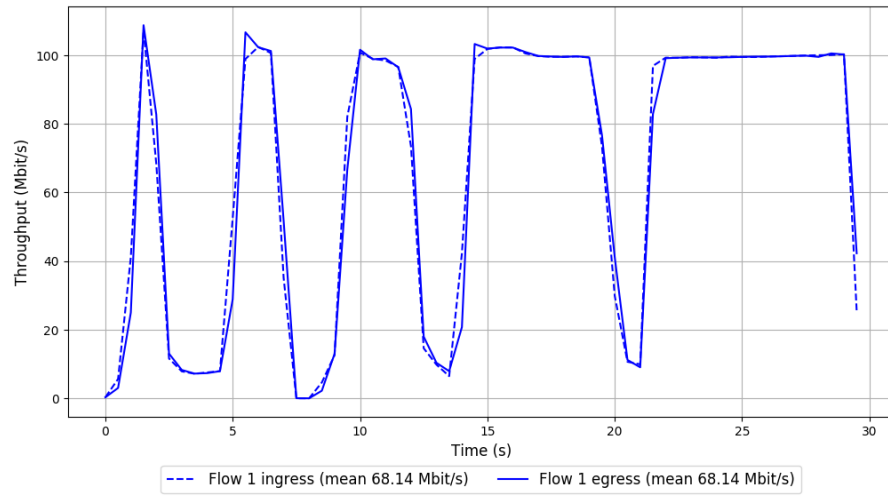
Run 9: Report of QUIC Cubic — Data Link

```
Run 10: Statistics of QUIC Cubic

Start at: 2017-12-11 16:36:53
End at: 2017-12-11 16:37:23
Local clock offset: -0.452 ms
Remote clock offset: -2.727 ms


# Below is generated by plot.py at 2017-12-11 17:41:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 68.14 Mbit/s
95th percentile per-packet one-way delay: 83.888 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 68.14 Mbit/s
95th percentile per-packet one-way delay: 83.888 ms
Loss rate: 0.00%
```

Run 10: Report of QUIC Cubic — Data Link

```
Run 1: Statistics of SCReAM

Start at: 2017-12-11 13:56:26
End at: 2017-12-11 13:56:56
Local clock offset: -0.306 ms
Remote clock offset: 1.084 ms
```

Run 1: Report of SCReAM — Data Link

Figure is missing
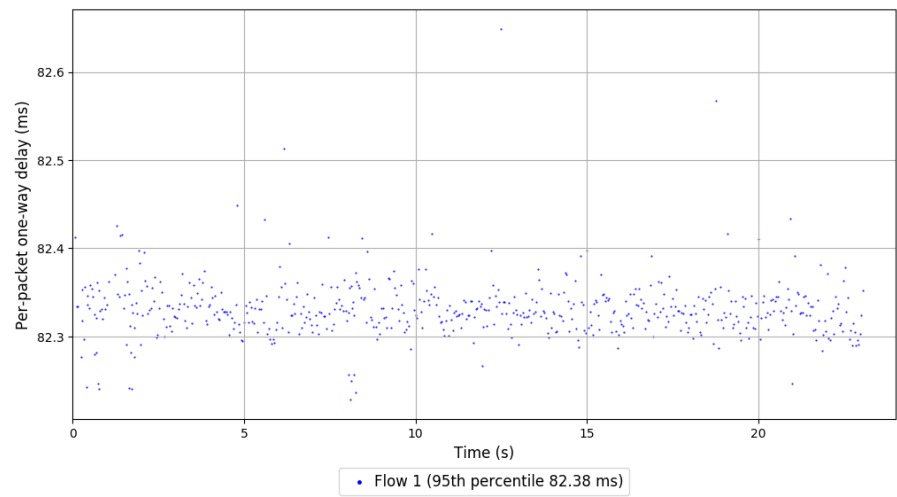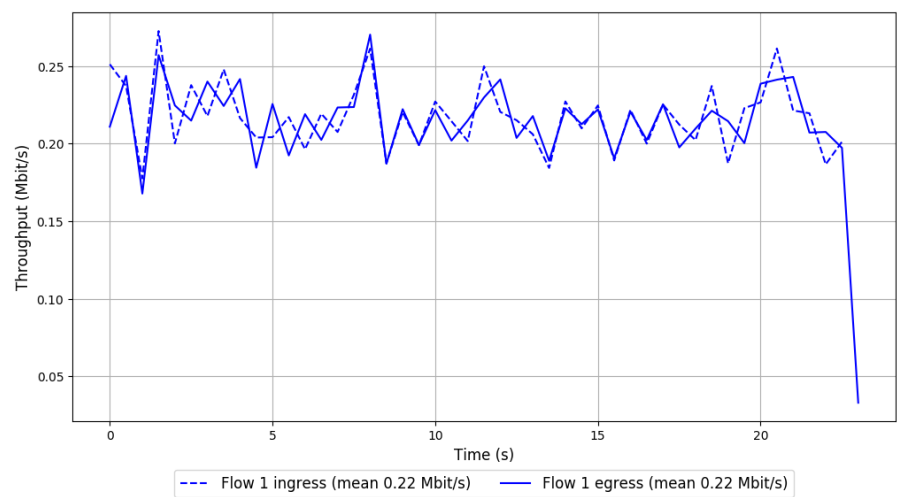
Figure is missing

```
Run 2: Statistics of SCReAM

Start at: 2017-12-11 14:14:34
End at: 2017-12-11 14:15:04
Local clock offset: -0.431 ms
Remote clock offset: -5.488 ms
```
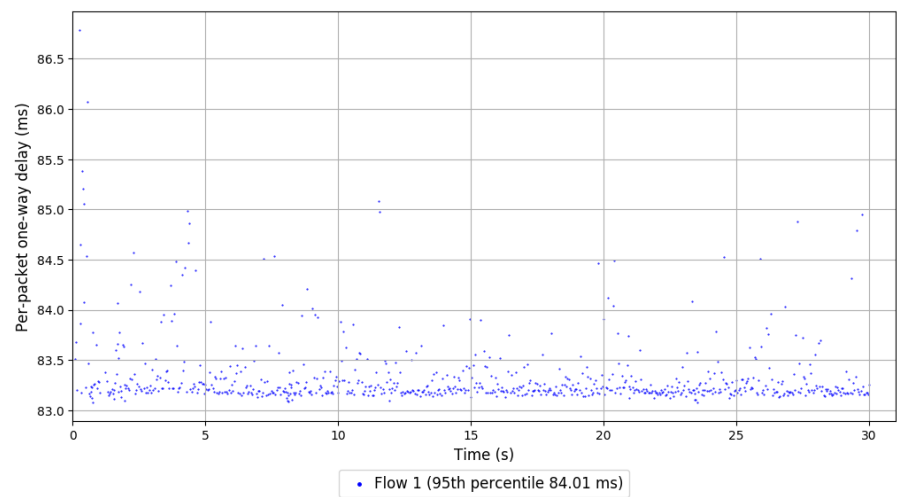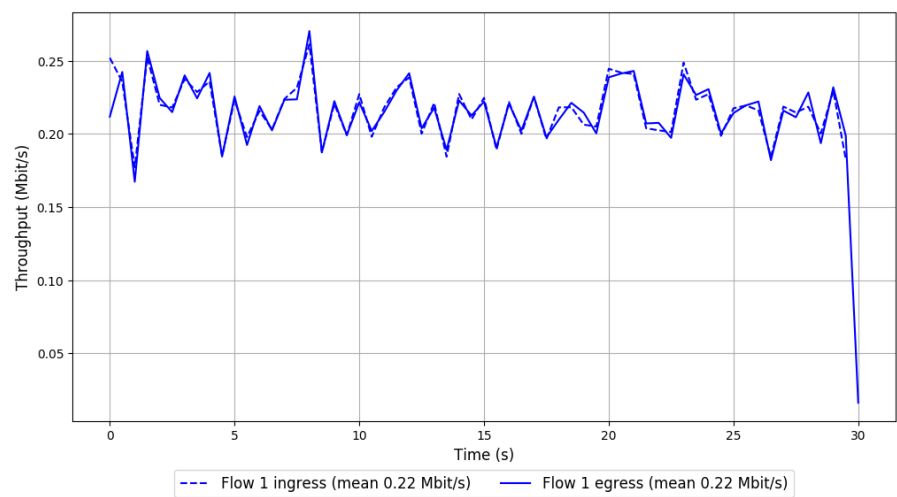
Run 2: Report of SCReAM — Data Link

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

• Flow 1 (95th percentile 82.38 ms)

```
Run 3: Statistics of SCReAM

Start at: 2017-12-11 14:32:26
End at: 2017-12-11 14:32:56
Local clock offset: -0.431 ms
Remote clock offset: -4.574 ms


# Below is generated by plot.py at 2017-12-11 17:41:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 84.014 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 84.014 ms
Loss rate: 0.00%
```
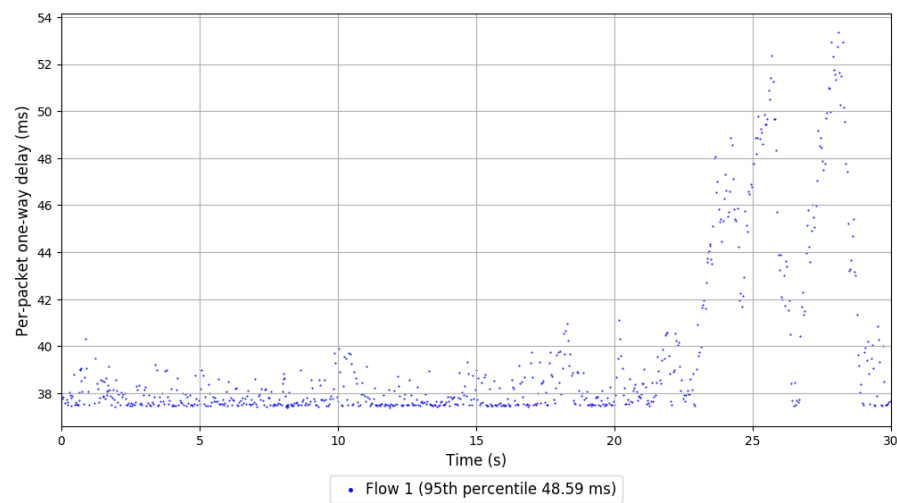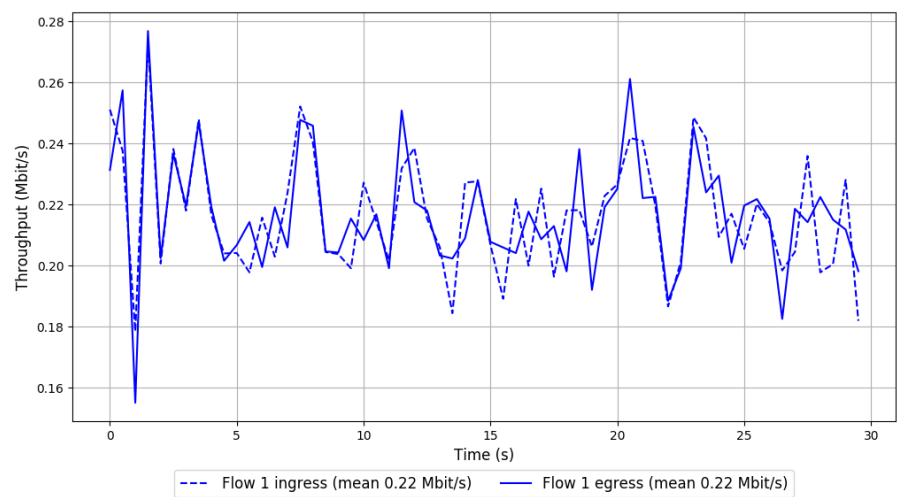
Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2017-12-11 14:50:30
End at: 2017-12-11 14:51:00
Local clock offset: -0.433 ms
Remote clock offset: -3.921 ms
```

Run 4: Report of SCReAM — Data Link

Figure is missing

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```
Run 5: Statistics of SCReAM

Start at: 2017-12-11 15:08:17
End at: 2017-12-11 15:08:47
Local clock offset: -0.445 ms
Remote clock offset: 1.547 ms
```

Run 5: Report of SCReAM — Data Link
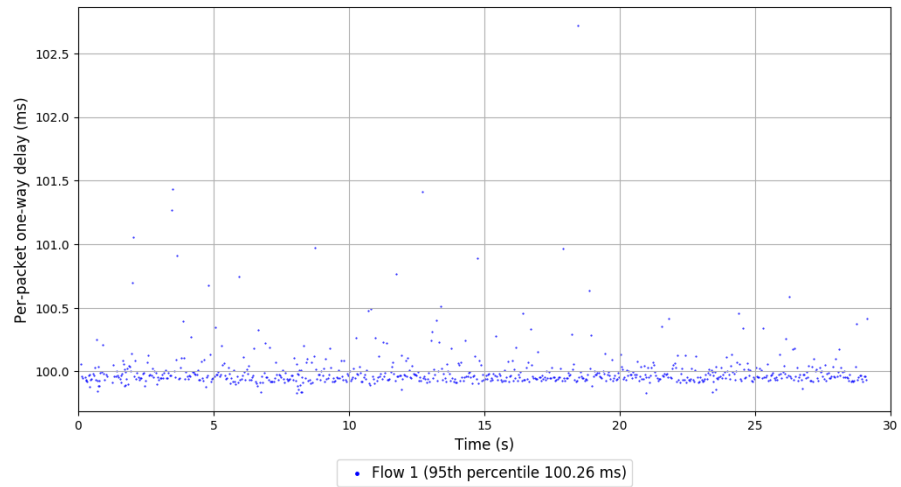
Figure is missing

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```
Run 6: Statistics of SCReAM

Start at: 2017-12-11 15:26:17
End at: 2017-12-11 15:26:47
Local clock offset: -0.503 ms
Remote clock offset: -4.764 ms
```

Run 6: Report of SCReAM — Data Link

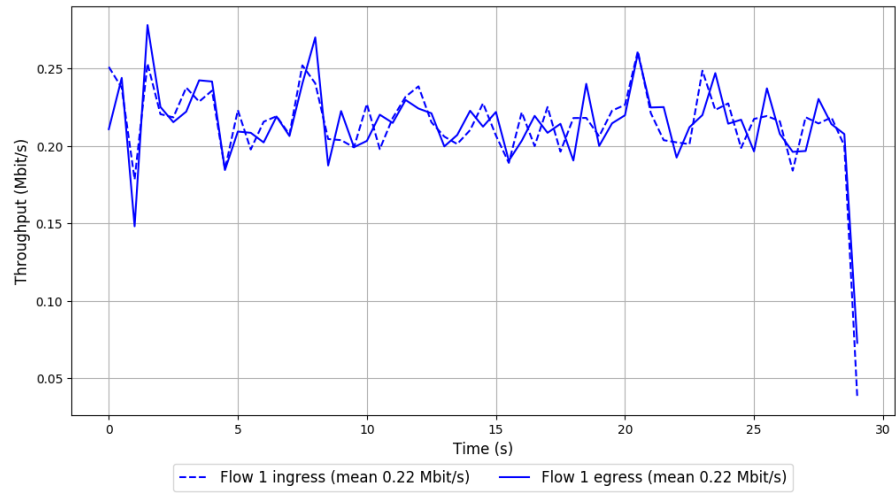Figure is missing

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```
Run 7: Statistics of SCReAM

Start at: 2017-12-11 15:43:40
End at: 2017-12-11 15:44:10
Local clock offset: -0.443 ms
Remote clock offset: -47.705 ms


# Below is generated by plot.py at 2017-12-11 17:41:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 48.586 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 48.586 ms
Loss rate: 0.00%
```

Run 7: Report of SCReAM — Data Link

```
Run 8: Statistics of SCReAM

Start at: 2017-12-11 16:01:56
End at: 2017-12-11 16:02:26
Local clock offset: -0.458 ms
Remote clock offset: 14.527 ms


# Below is generated by plot.py at 2017-12-11 17:41:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 100.262 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 100.262 ms
Loss rate: 0.00%
```

Run 8: Report of SCReAM — Data Link

Run 9: Statistics of SCReAM

Start at: 2017-12-11 16:20:07
End at: 2017-12-11 16:20:37
Local clock offset: -0.44 ms
Remote clock offset: -3.719 ms

Run 9: Report of SCReAM — Data Link
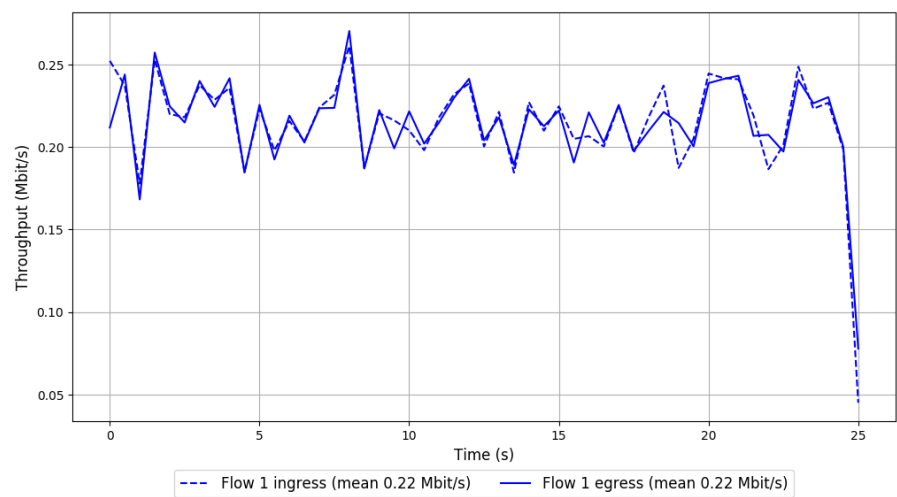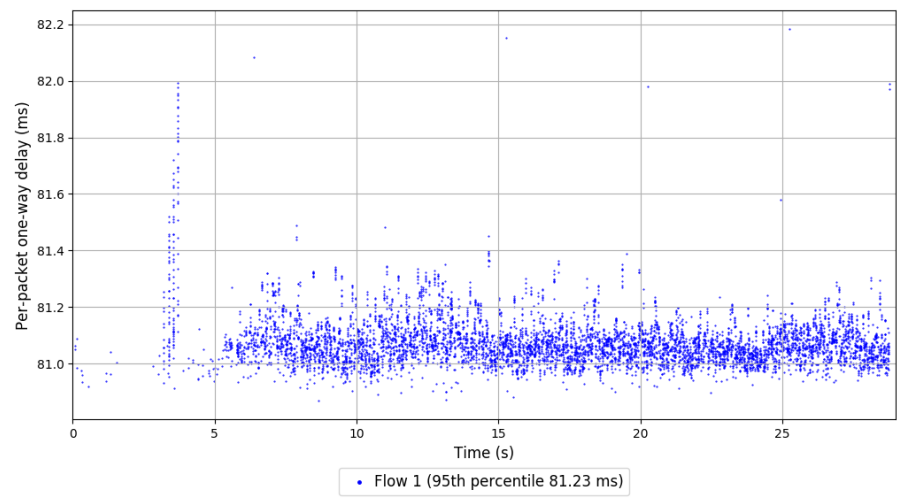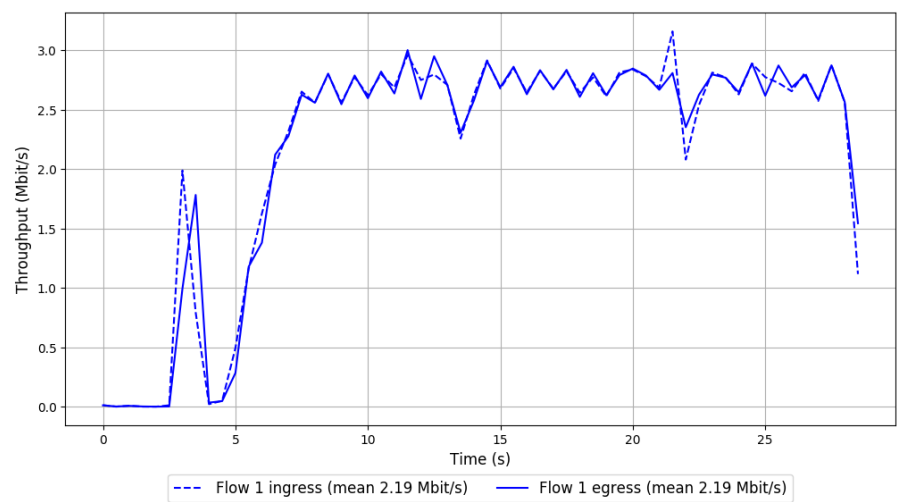
<center>Figure is missing</center>

<center>Figure is missing</center>

```
Run 10: Statistics of SCReAM

Start at: 2017-12-11 16:38:07
End at: 2017-12-11 16:38:37
Local clock offset: -0.371 ms
Remote clock offset: -2.662 ms


# Below is generated by plot.py at 2017-12-11 17:41:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 83.962 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 83.962 ms
Loss rate: 0.00%
```

Run 10: Report of SCReAM — Data Link
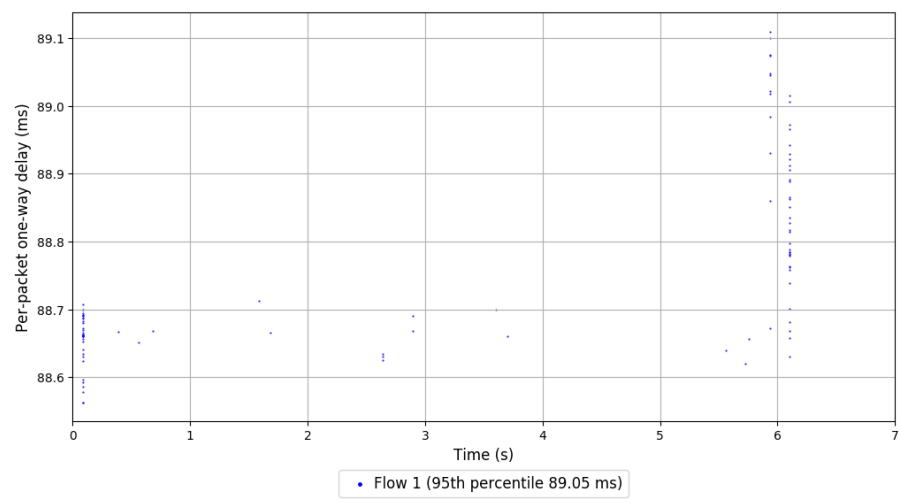
```
Run 1: Statistics of WebRTC media

Start at: 2017-12-11 13:51:17
End at: 2017-12-11 13:51:47
Local clock offset: -0.311 ms
Remote clock offset: -5.433 ms


# Below is generated by plot.py at 2017-12-11 17:41:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.19 Mbit/s
95th percentile per-packet one-way delay: 81.227 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.19 Mbit/s
95th percentile per-packet one-way delay: 81.227 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link

Flow 1 ingress (mean 2.19 Mbit/s) — — —   Flow 1 egress (mean 2.19 Mbit/s) ——

Flow 1 (95th percentile 81.23 ms) •
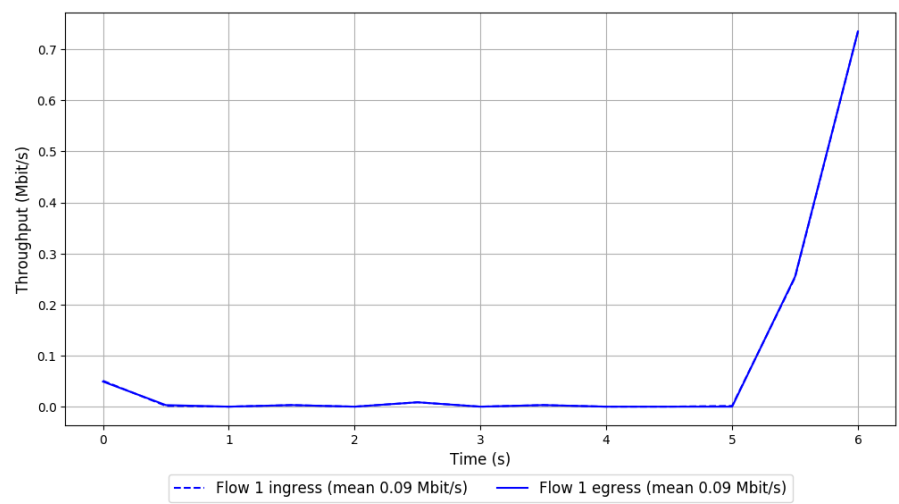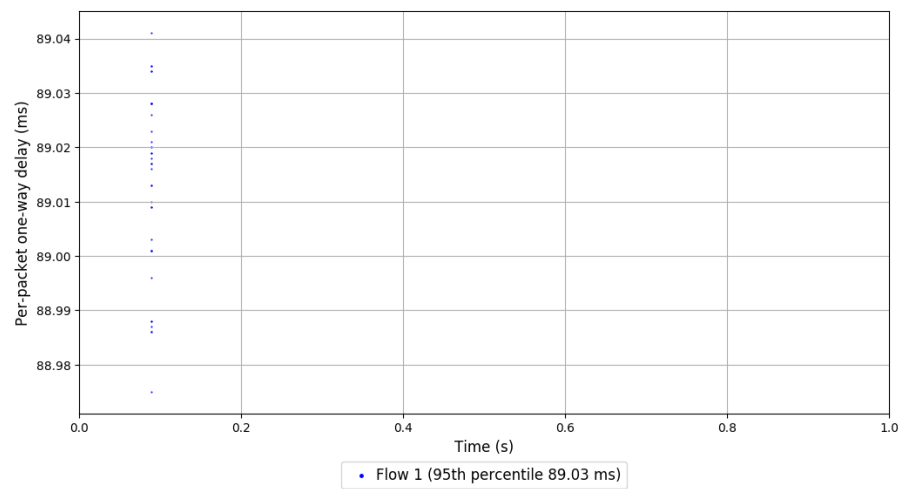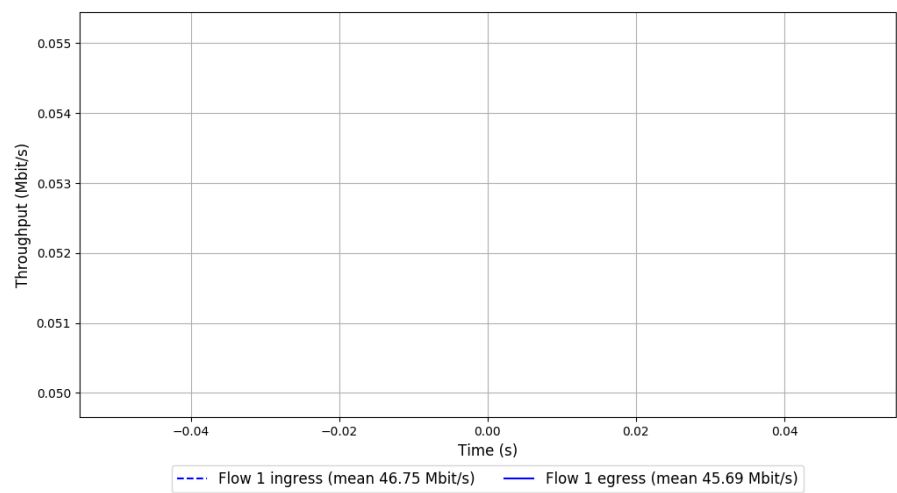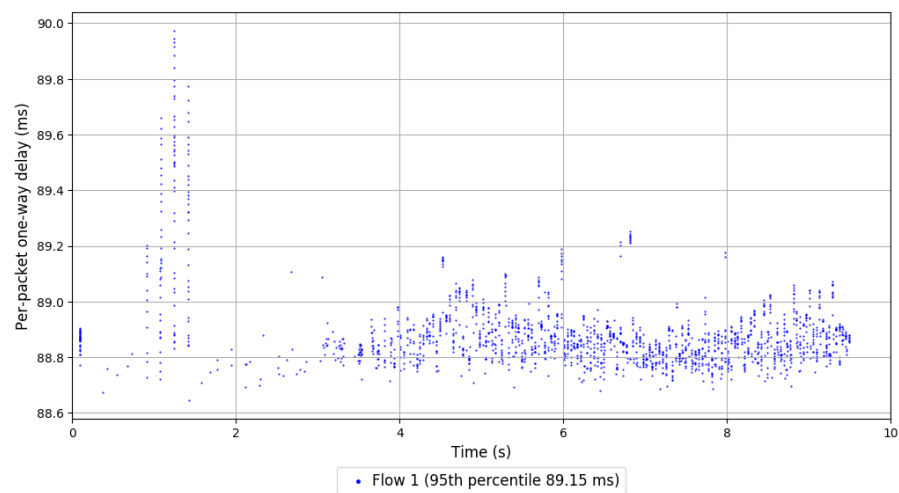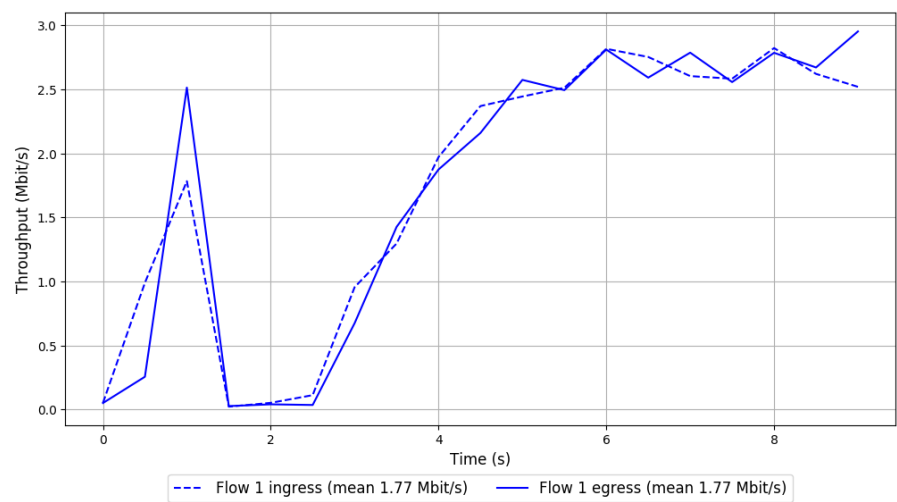
Run 2: Statistics of WebRTC media

Start at: 2017-12-11 14:09:24
End at: 2017-12-11 14:09:54
Local clock offset: -0.385 ms
Remote clock offset: 0.421 ms

Run 2: Report of WebRTC media — Data Link

Flow 1 ingress (mean 0.09 Mbit/s)   Flow 1 egress (mean 0.09 Mbit/s)

Flow 1 (95th percentile 89.05 ms)

```
Run 3: Statistics of WebRTC media

Start at: 2017-12-11 14:27:25
End at: 2017-12-11 14:27:55
Local clock offset: -0.456 ms
Remote clock offset: 1.411 ms
```

Run 3: Report of WebRTC media — Data Link

Flow 1 ingress (mean 46.75 Mbit/s)   Flow 1 egress (mean 45.69 Mbit/s)

• Flow 1 (95th percentile 89.03 ms)

Run 4: Statistics of WebRTC media

Start at: 2017-12-11 14:45:22
End at: 2017-12-11 14:45:52
Local clock offset: -0.415 ms
Remote clock offset: 1.739 ms

Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2017-12-11 15:03:09
End at: 2017-12-11 15:03:39
Local clock offset: -0.46 ms
Remote clock offset: 1.182 ms
```
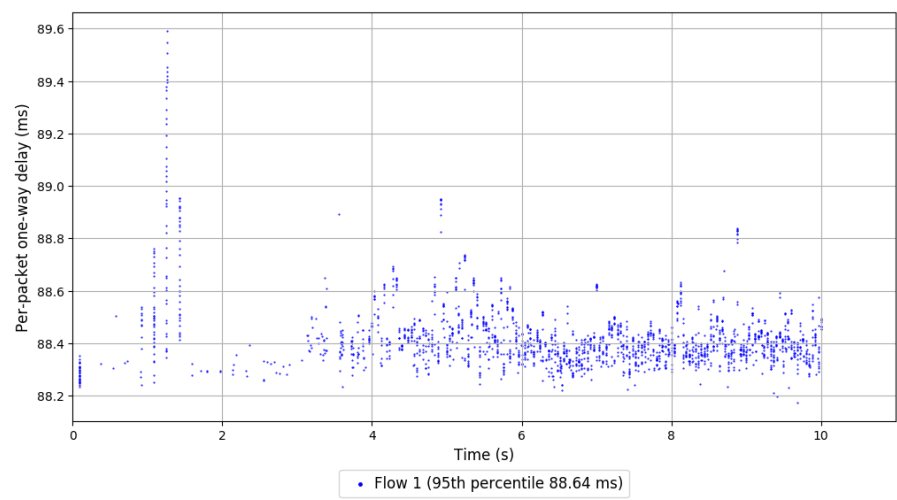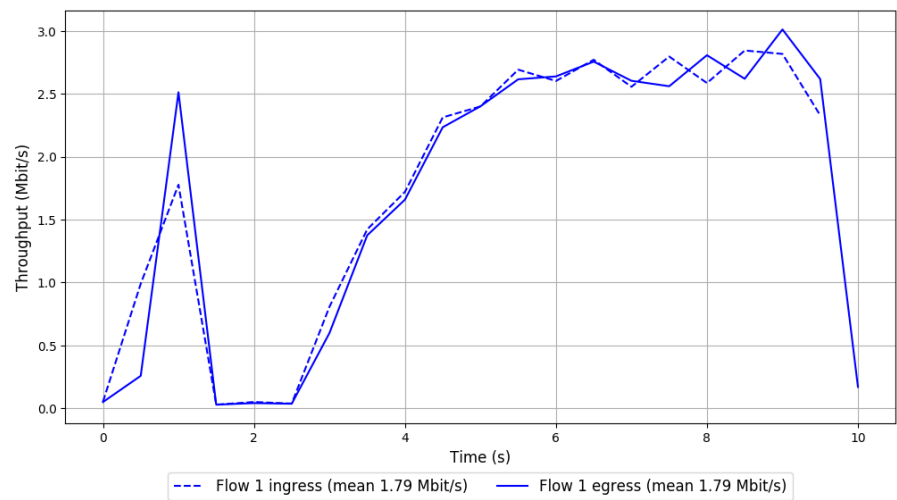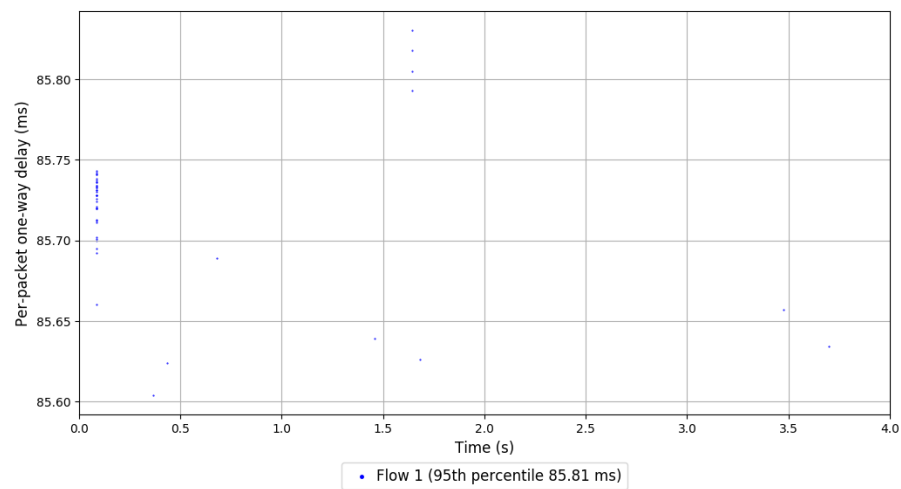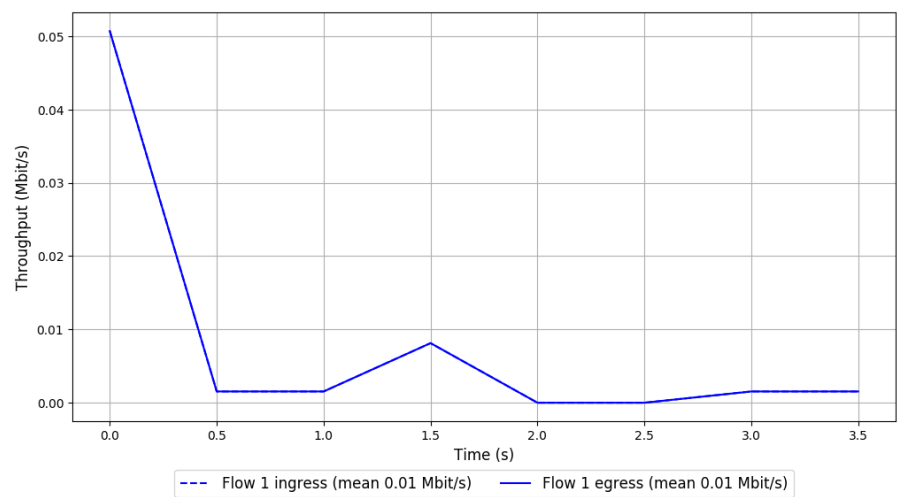
Run 5: Report of WebRTC media — Data Link

Flow 1 ingress (mean 1.79 Mbit/s) --- Flow 1 egress (mean 1.79 Mbit/s)

Flow 1 (95th percentile 88.64 ms)

```
Run 6: Statistics of WebRTC media

Start at: 2017-12-11 15:21:12
End at: 2017-12-11 15:21:42
Local clock offset: -0.552 ms
Remote clock offset: 0.404 ms
```

Run 6: Report of WebRTC media — Data Link

```
Run 7: Statistics of WebRTC media

Start at: 2017-12-11 15:38:37
End at: 2017-12-11 15:39:07
Local clock offset: -0.49 ms
Remote clock offset: 2.272 ms
```

Run 7: Report of WebRTC media — Data Link

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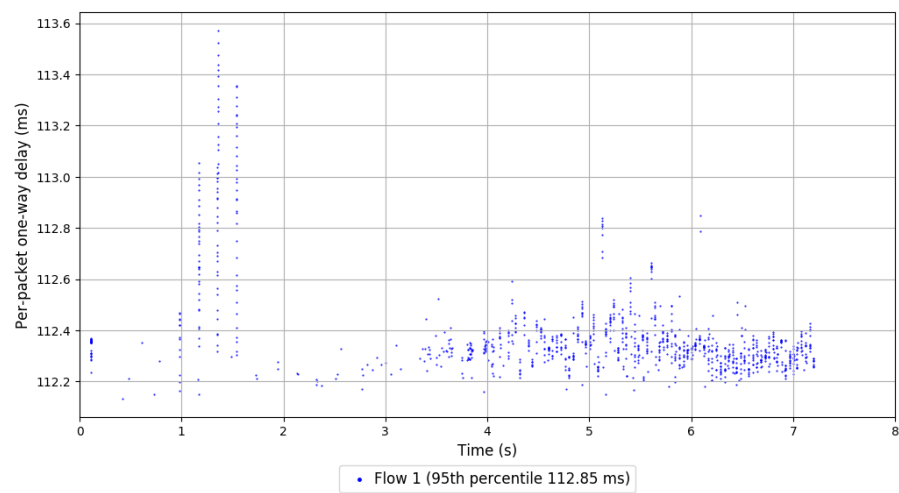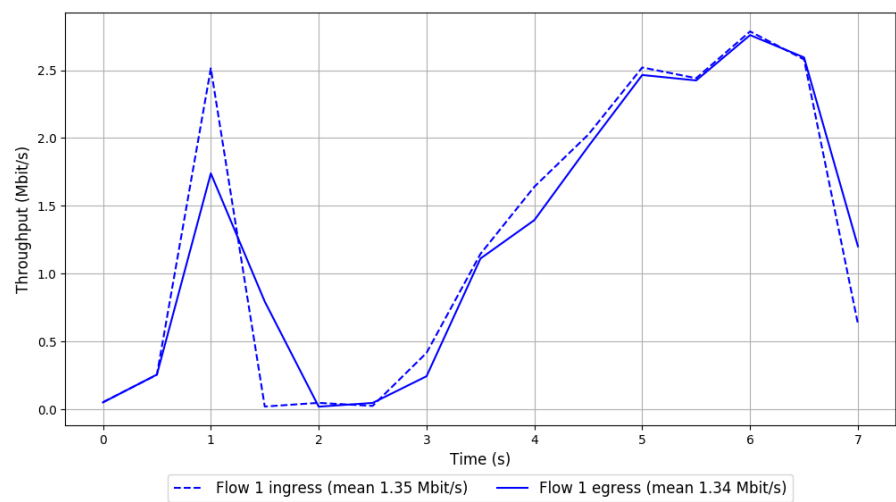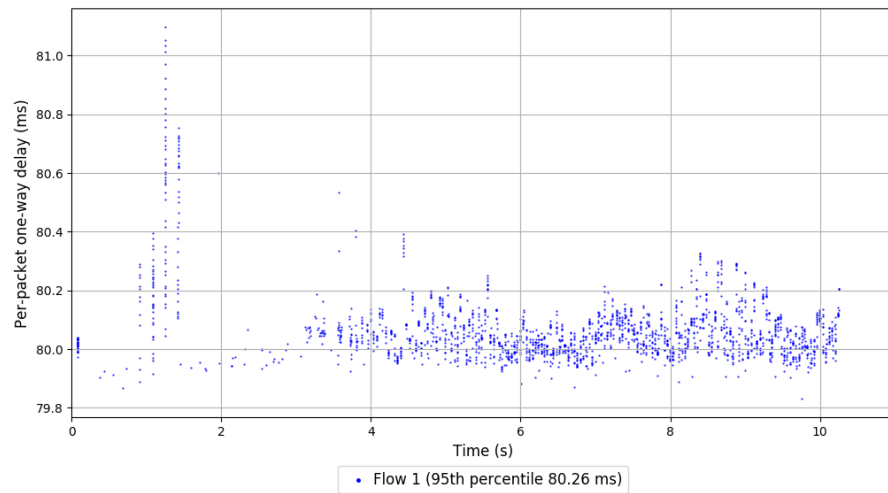
```
Run 8: Statistics of WebRTC media

Start at: 2017-12-11 15:56:42
End at: 2017-12-11 15:57:12
Local clock offset: -0.471 ms
Remote clock offset: 8.417 ms
```

Run 8: Report of WebRTC media — Data Link

Flow 1 ingress (mean 1.35 Mbit/s) — — —   Flow 1 egress (mean 1.34 Mbit/s) ——

• Flow 1 (95th percentile 112.85 ms)

```
Run 9: Statistics of WebRTC media

Start at: 2017-12-11 16:14:58
End at: 2017-12-11 16:15:28
Local clock offset: -0.503 ms
Remote clock offset: -6.808 ms
```
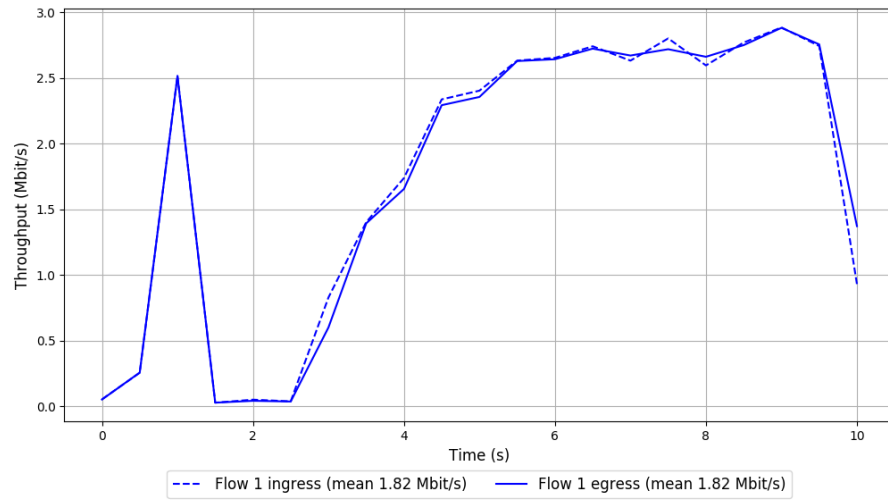
Run 9: Report of WebRTC media — Data Link

```
Run 10: Statistics of WebRTC media

Start at: 2017-12-11 16:32:57
End at: 2017-12-11 16:33:27
Local clock offset: -0.406 ms
Remote clock offset: -1.809 ms
```
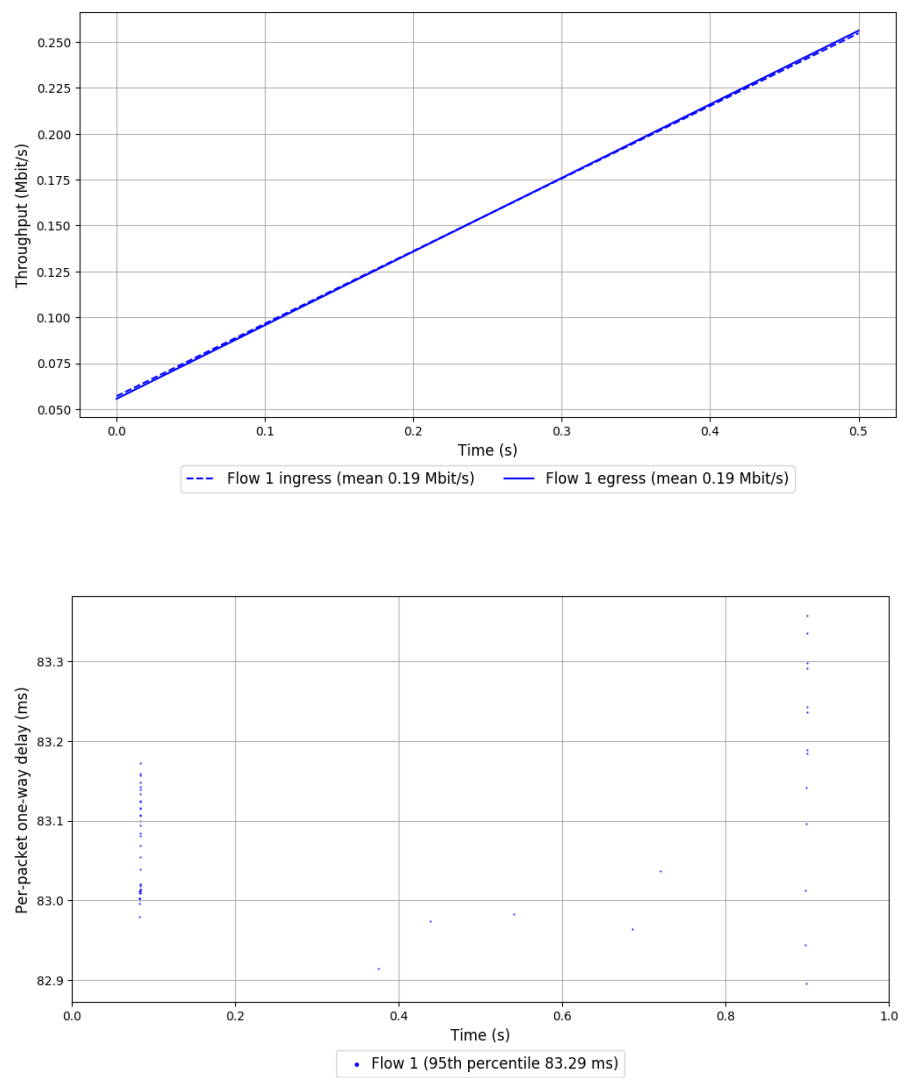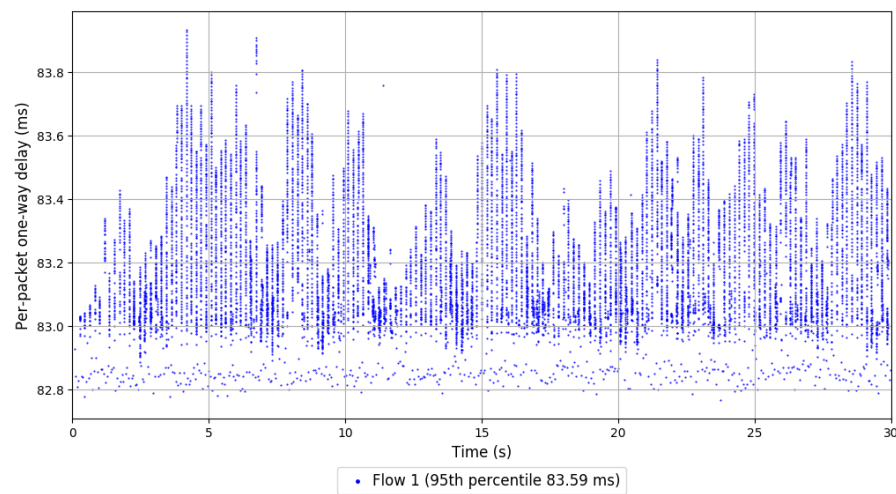
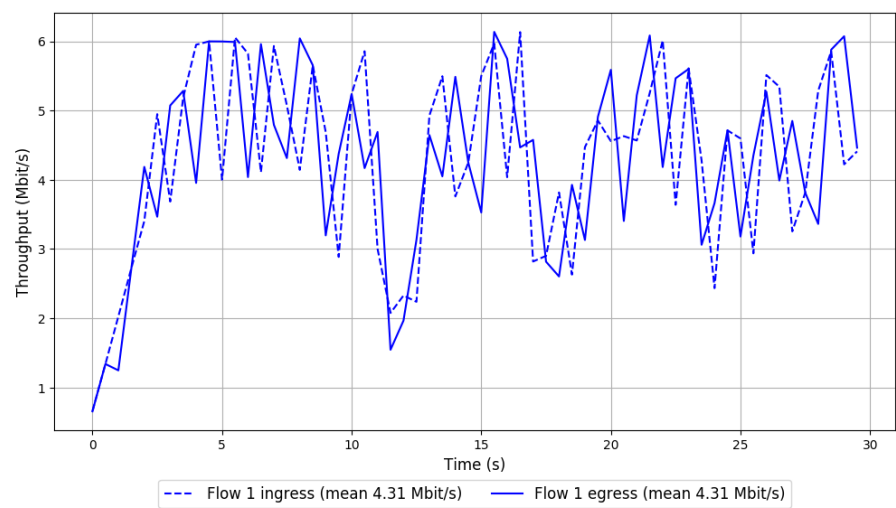# Run 10: Report of WebRTC media — Data Link

```
Run 1: Statistics of Sprout

Start at: 2017-12-11 14:04:08
End at: 2017-12-11 14:04:38
Local clock offset: -0.355 ms
Remote clock offset: -5.053 ms


# Below is generated by plot.py at 2017-12-11 17:41:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.31 Mbit/s
95th percentile per-packet one-way delay: 83.595 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.31 Mbit/s
95th percentile per-packet one-way delay: 83.595 ms
Loss rate: 0.00%
```

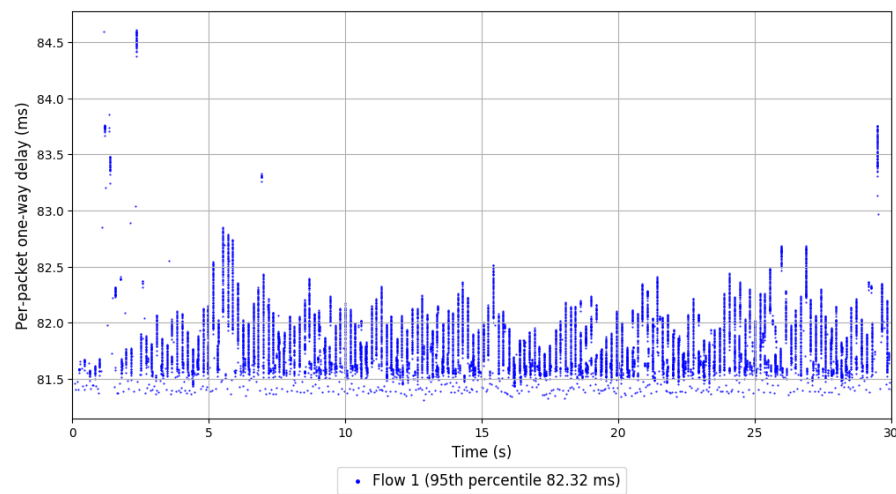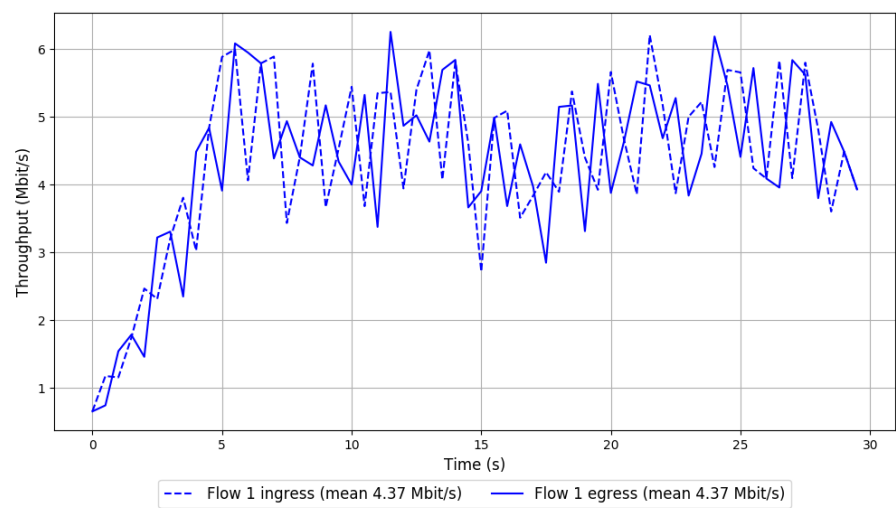Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2017-12-11 14:22:13
End at: 2017-12-11 14:22:43
Local clock offset: -0.445 ms
Remote clock offset: -4.936 ms


# Below is generated by plot.py at 2017-12-11 17:41:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.37 Mbit/s
95th percentile per-packet one-way delay: 82.324 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.37 Mbit/s
95th percentile per-packet one-way delay: 82.324 ms
Loss rate: 0.00%
```

Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2017-12-11 14:40:05
End at: 2017-12-11 14:40:35
Local clock offset: -0.527 ms
Remote clock offset: 0.474 ms


# Below is generated by plot.py at 2017-12-11 17:41:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.34 Mbit/s
95th percentile per-packet one-way delay: 88.921 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.34 Mbit/s
95th percentile per-packet one-way delay: 88.921 ms
Loss rate: 0.00%
```
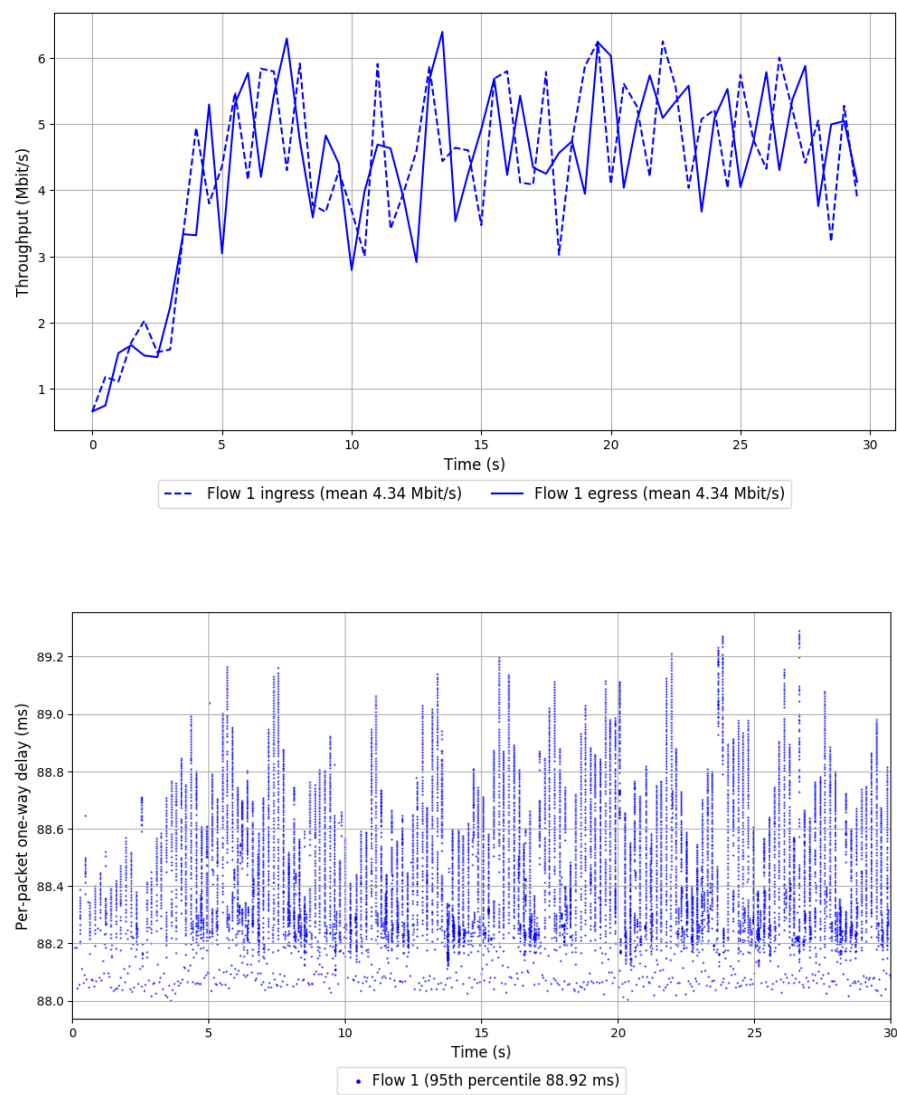
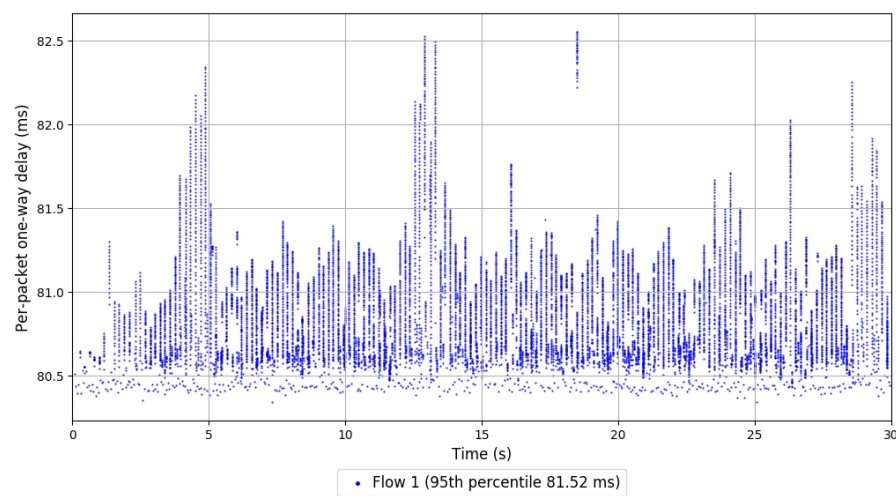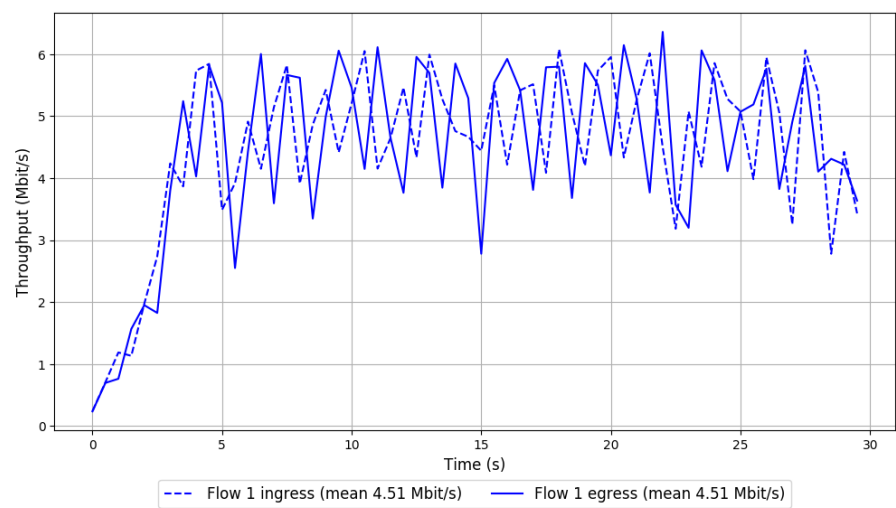Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2017-12-11 14:57:50
End at: 2017-12-11 14:58:20
Local clock offset: -0.459 ms
Remote clock offset: -4.991 ms


# Below is generated by plot.py at 2017-12-11 17:41:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.51 Mbit/s
95th percentile per-packet one-way delay: 81.518 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.51 Mbit/s
95th percentile per-packet one-way delay: 81.518 ms
Loss rate: 0.00%
```

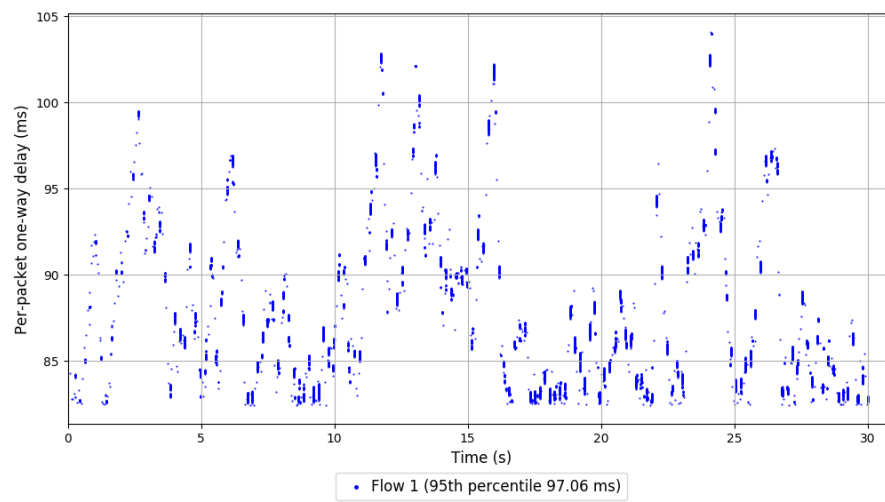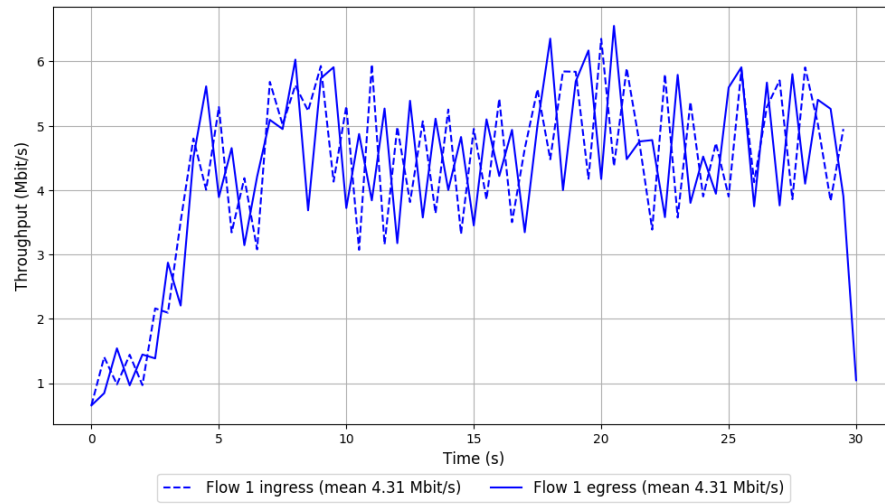Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2017-12-11 15:15:58
End at: 2017-12-11 15:16:28
Local clock offset: -0.467 ms
Remote clock offset: -4.322 ms


# Below is generated by plot.py at 2017-12-11 17:41:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.31 Mbit/s
95th percentile per-packet one-way delay: 97.057 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.31 Mbit/s
95th percentile per-packet one-way delay: 97.057 ms
Loss rate: 0.00%
```

Run 5: Report of Sprout — Data Link

Flow 1 ingress (mean 4.31 Mbit/s) --- Flow 1 egress (mean 4.31 Mbit/s)

Flow 1 (95th percentile 97.06 ms)

```
Run 6: Statistics of Sprout

Start at: 2017-12-11 15:33:36
End at: 2017-12-11 15:34:06
Local clock offset: -0.452 ms
Remote clock offset: 0.112 ms


# Below is generated by plot.py at 2017-12-11 17:41:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.44 Mbit/s
95th percentile per-packet one-way delay: 91.044 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.44 Mbit/s
95th percentile per-packet one-way delay: 91.044 ms
Loss rate: 0.00%
```
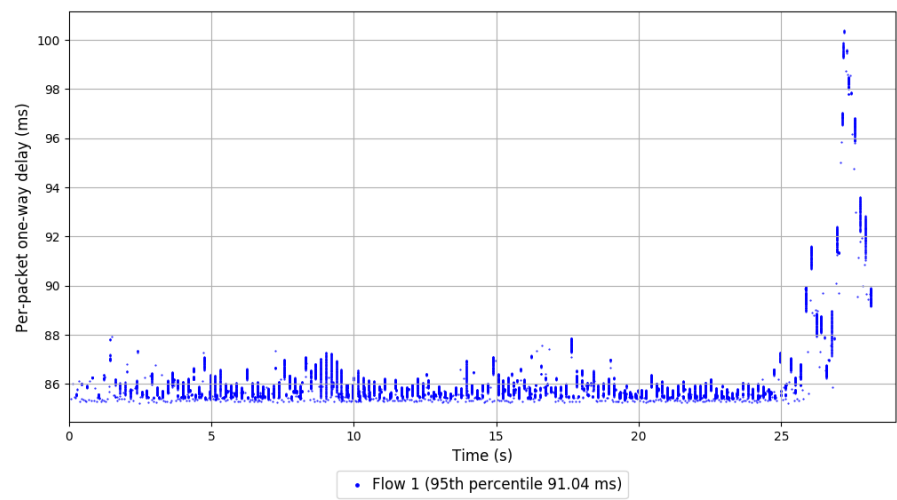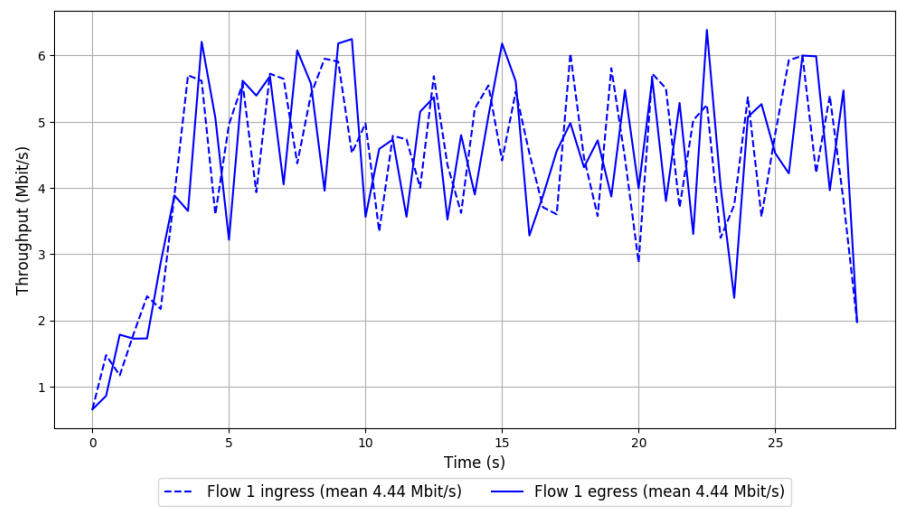
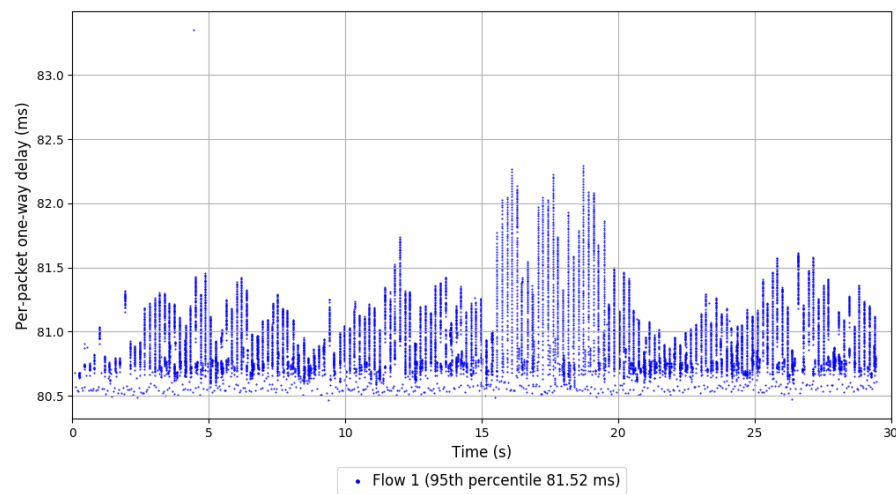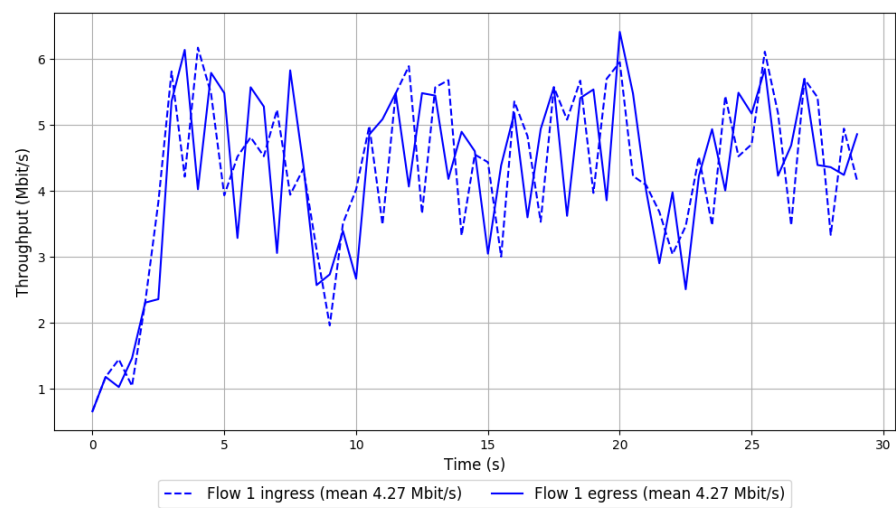Run 6: Report of Sprout — Data Link

```
Run 7: Statistics of Sprout

Start at: 2017-12-11 15:51:24
End at: 2017-12-11 15:51:54
Local clock offset: -0.477 ms
Remote clock offset: -4.142 ms


# Below is generated by plot.py at 2017-12-11 17:41:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.27 Mbit/s
95th percentile per-packet one-way delay: 81.518 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.27 Mbit/s
95th percentile per-packet one-way delay: 81.518 ms
Loss rate: 0.00%
```

Run 7: Report of Sprout — Data Link

```
Run 8: Statistics of Sprout

Start at: 2017-12-11 16:09:38
End at: 2017-12-11 16:10:08
Local clock offset: -0.467 ms
Remote clock offset: 9.193 ms


# Below is generated by plot.py at 2017-12-11 17:41:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.69 Mbit/s
95th percentile per-packet one-way delay: 96.749 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.69 Mbit/s
95th percentile per-packet one-way delay: 96.749 ms
Loss rate: 0.00%
```
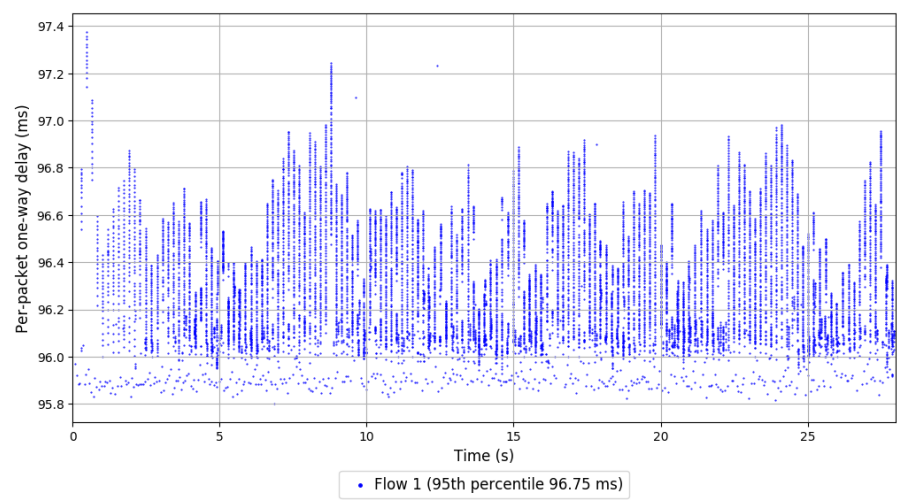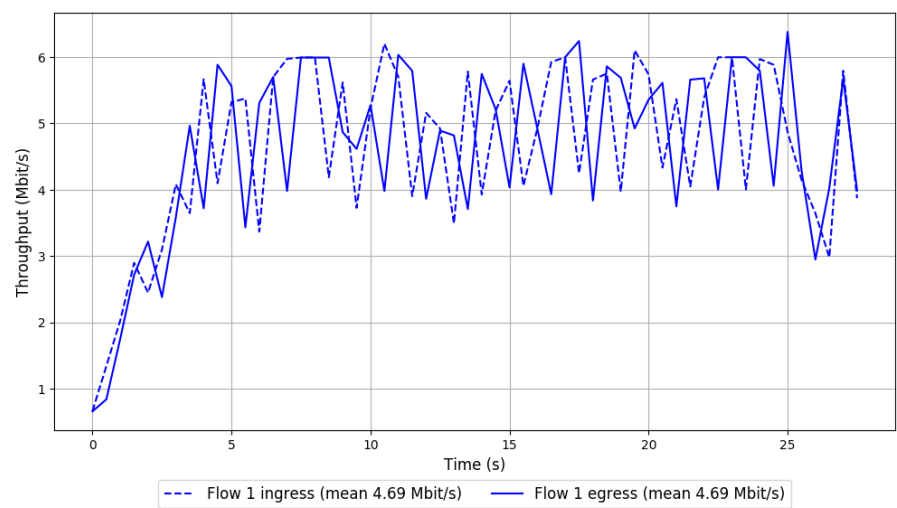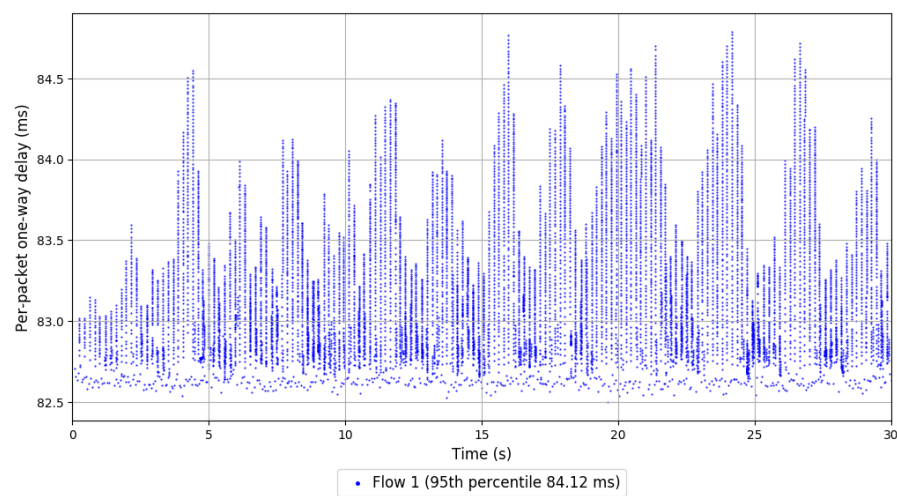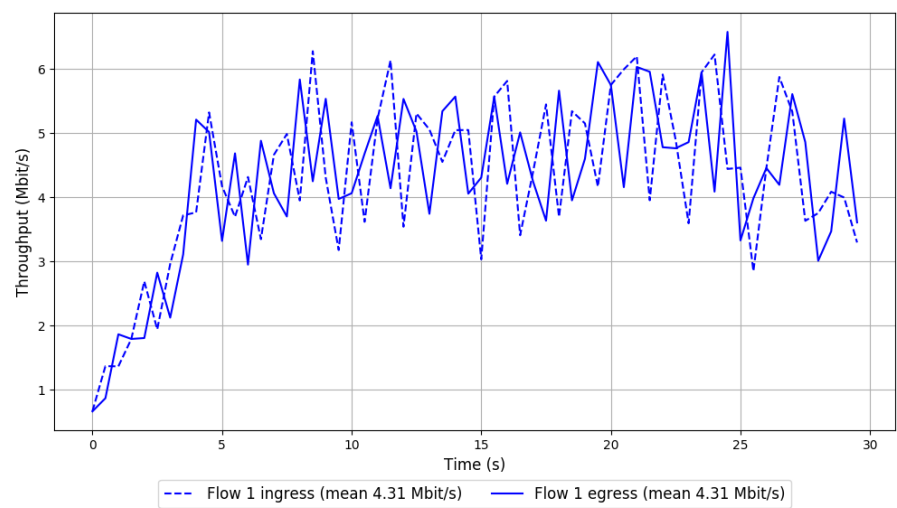
Run 8: Report of Sprout — Data Link

```
Run 9: Statistics of Sprout

Start at: 2017-12-11 16:27:47
End at: 2017-12-11 16:28:17
Local clock offset: -0.417 ms
Remote clock offset: -3.946 ms


# Below is generated by plot.py at 2017-12-11 17:41:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.31 Mbit/s
95th percentile per-packet one-way delay: 84.118 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.31 Mbit/s
95th percentile per-packet one-way delay: 84.118 ms
Loss rate: 0.00%
```

Run 9: Report of Sprout — Data Link

```
Run 10: Statistics of Sprout

Start at: 2017-12-11 16:45:47
End at: 2017-12-11 16:46:17
Local clock offset: -0.376 ms
Remote clock offset: 2.73 ms


# Below is generated by plot.py at 2017-12-11 17:41:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.26 Mbit/s
95th percentile per-packet one-way delay: 87.843 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.26 Mbit/s
95th percentile per-packet one-way delay: 87.843 ms
Loss rate: 0.00%
```
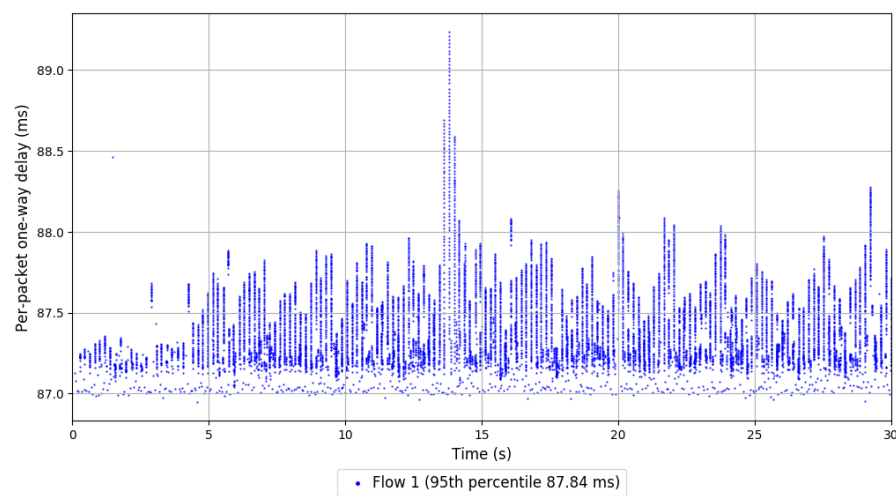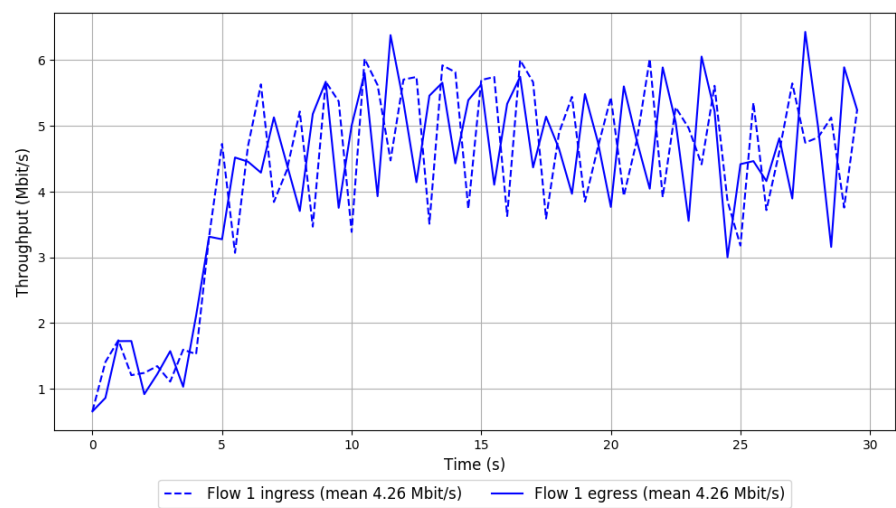
Run 10: Report of Sprout — Data Link

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

Start at: 2017-12-11 13:53:41
End at: 2017-12-11 13:54:11
Local clock offset: -0.377 ms
Remote clock offset: -4.93 ms


# Below is generated by plot.py at 2017-12-11 17:46:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 265.31 Mbit/s
95th percentile per-packet one-way delay: 83.300 ms
Loss rate: 1.65%
-- Flow 1:
Average throughput: 265.31 Mbit/s
95th percentile per-packet one-way delay: 83.300 ms
Loss rate: 1.65%
```
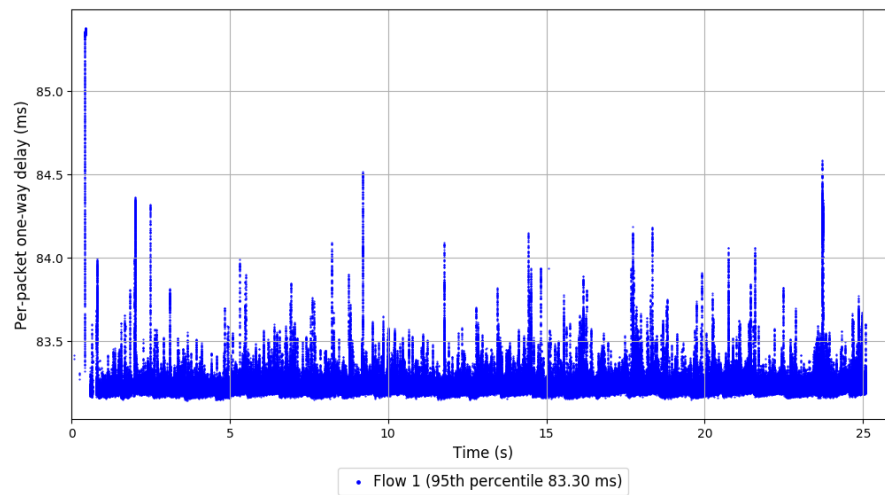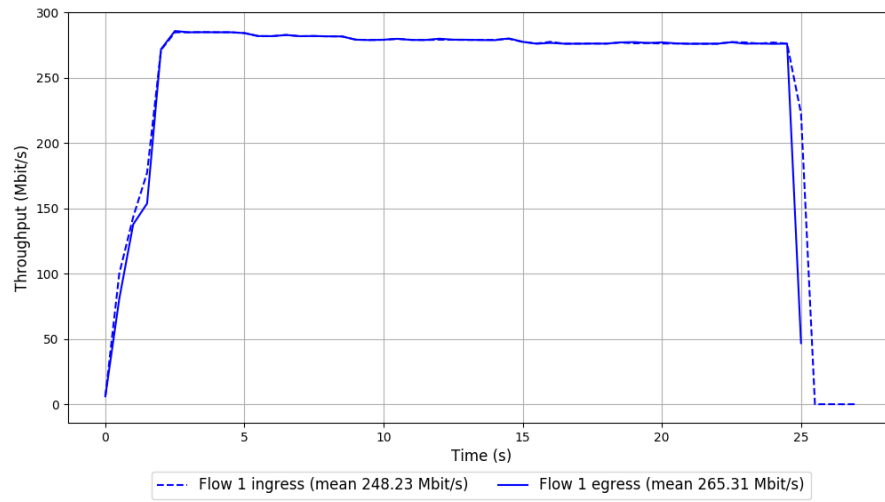
Run 1: Report of TaoVA-100x — Data Link

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

Start at: 2017-12-11 14:11:47
End at: 2017-12-11 14:12:17
Local clock offset: -0.427 ms
Remote clock offset: 0.151 ms


# Below is generated by plot.py at 2017-12-11 17:47:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 256.40 Mbit/s
95th percentile per-packet one-way delay: 89.483 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 256.40 Mbit/s
95th percentile per-packet one-way delay: 89.483 ms
Loss rate: 0.00%
```
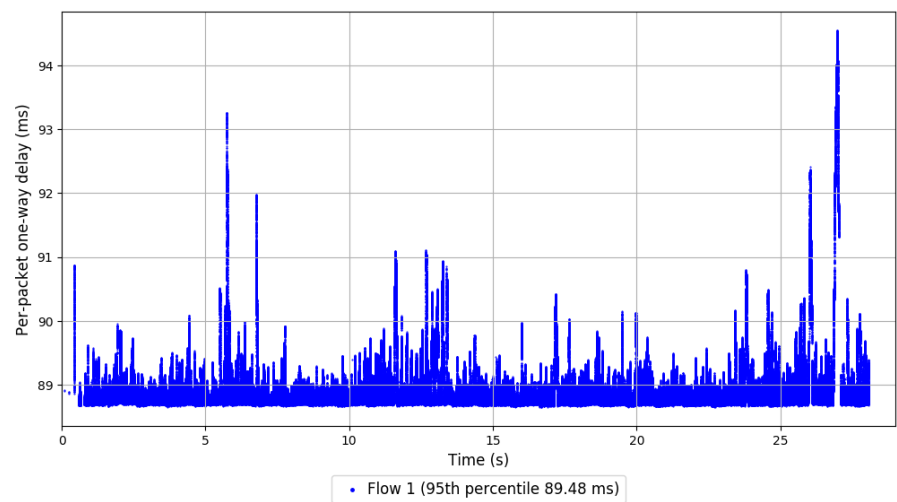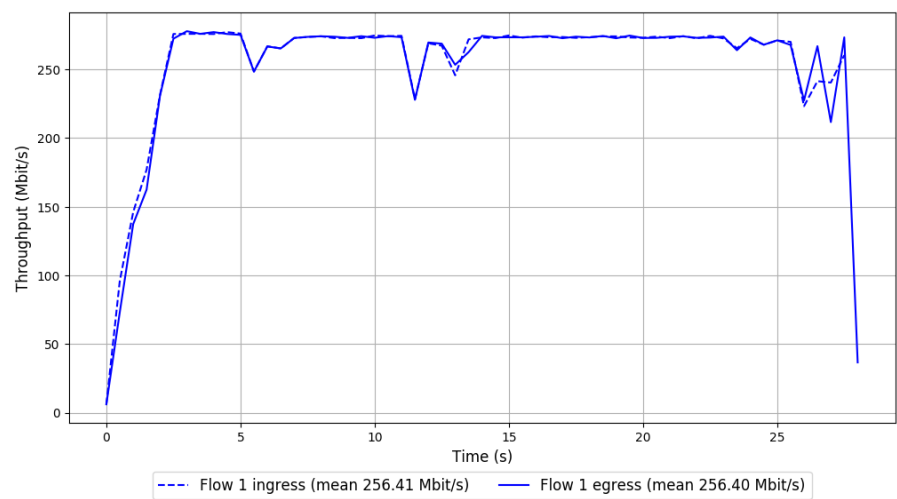
Run 2: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 256.41 Mbit/s)   Flow 1 egress (mean 256.40 Mbit/s)
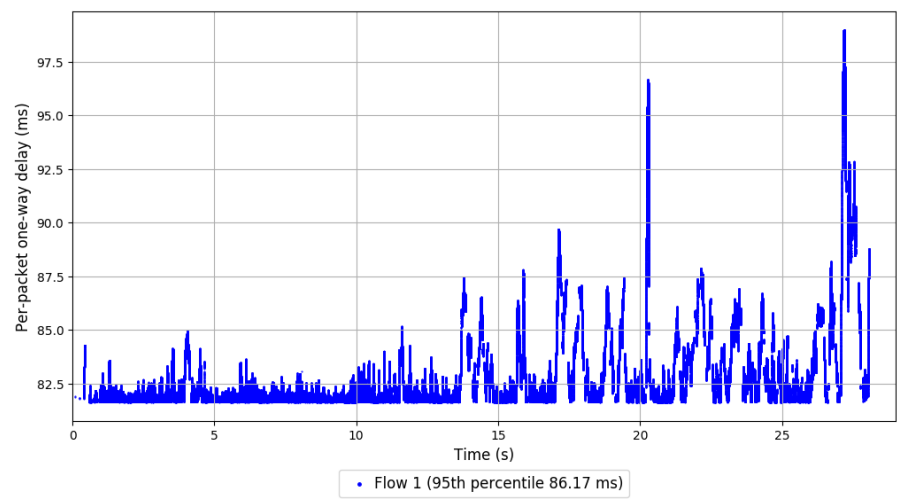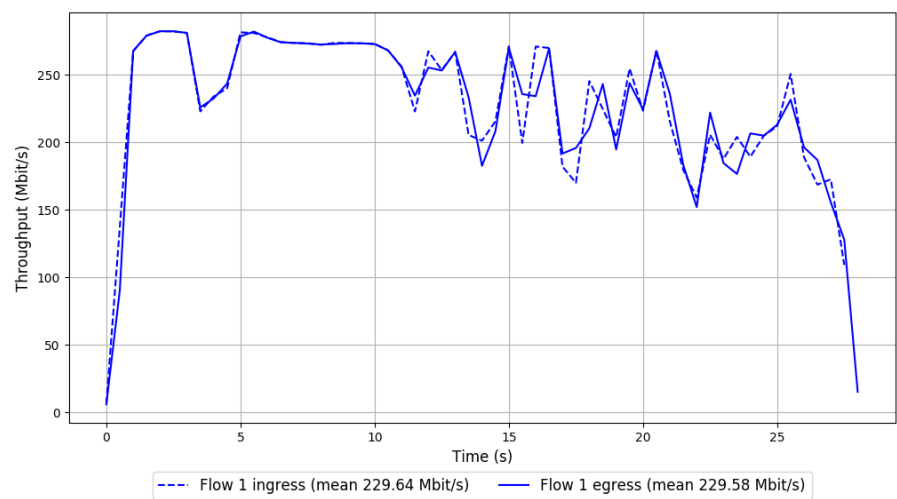

Flow 1 (95th percentile 89.48 ms)

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

Start at: 2017-12-11 14:29:44
End at: 2017-12-11 14:30:14
Local clock offset: -0.418 ms
Remote clock offset: -4.315 ms


# Below is generated by plot.py at 2017-12-11 17:47:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 229.58 Mbit/s
95th percentile per-packet one-way delay: 86.172 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 229.58 Mbit/s
95th percentile per-packet one-way delay: 86.172 ms
Loss rate: 0.02%
```

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

Flow 1 ingress (mean 229.64 Mbit/s) — — — Flow 1 egress (mean 229.58 Mbit/s)

Flow 1 (95th percentile 86.17 ms)

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

Start at: 2017-12-11 14:47:44
End at: 2017-12-11 14:48:14
Local clock offset: -0.432 ms
Remote clock offset: 0.88 ms


# Below is generated by plot.py at 2017-12-11 17:47:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 255.45 Mbit/s
95th percentile per-packet one-way delay: 90.870 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 255.45 Mbit/s
95th percentile per-packet one-way delay: 90.870 ms
Loss rate: 0.00%
```
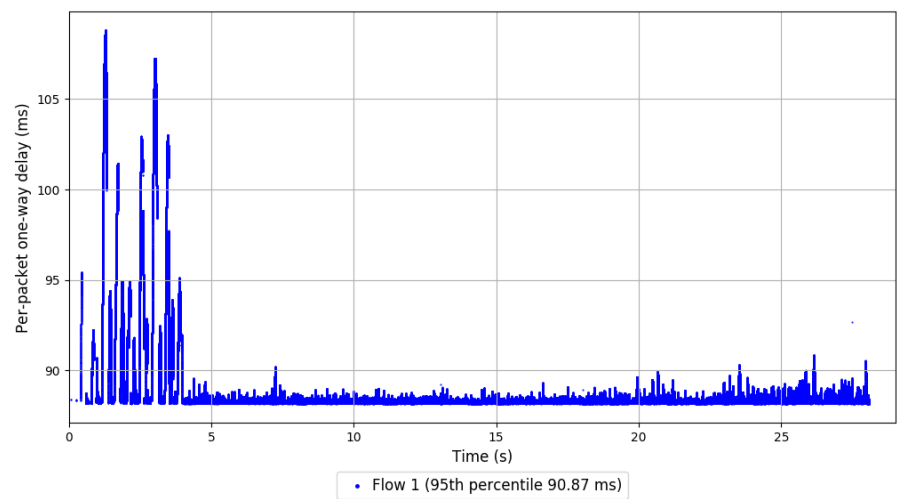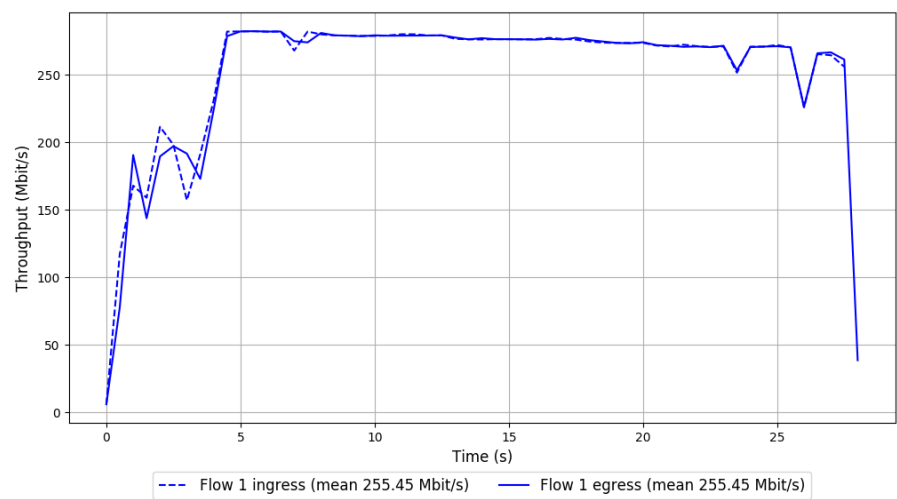
Run 4: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 255.45 Mbit/s)   Flow 1 egress (mean 255.45 Mbit/s)
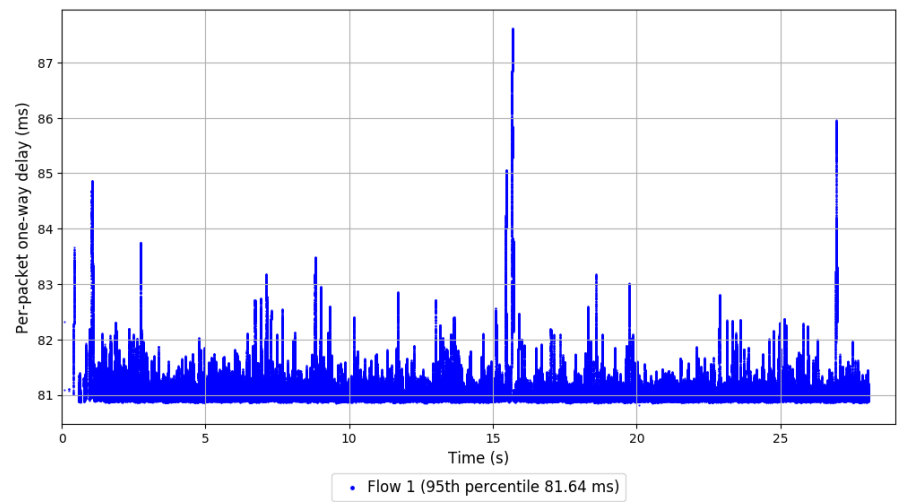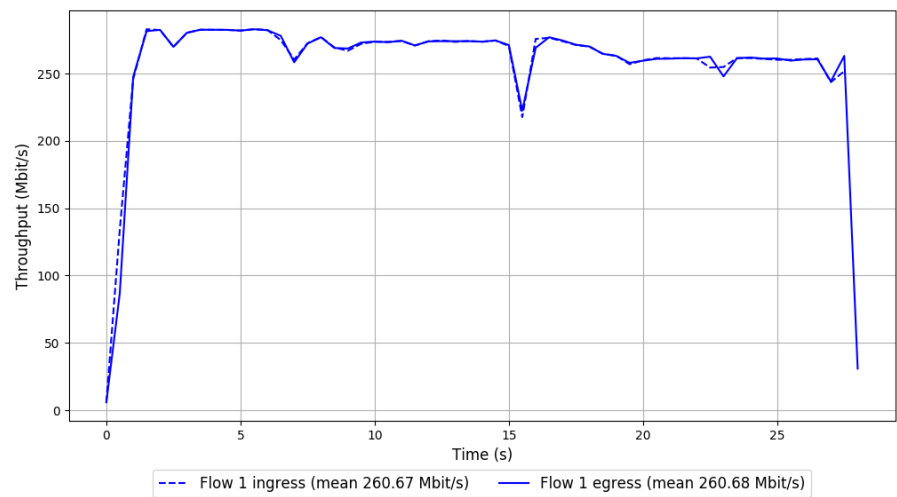

Flow 1 (95th percentile 90.87 ms)

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

Start at: 2017-12-11 15:05:31
End at: 2017-12-11 15:06:01
Local clock offset: -0.459 ms
Remote clock offset: -4.527 ms


# Below is generated by plot.py at 2017-12-11 17:47:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 260.68 Mbit/s
95th percentile per-packet one-way delay: 81.635 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 260.68 Mbit/s
95th percentile per-packet one-way delay: 81.635 ms
Loss rate: 0.00%
```

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

```
Run 6: Statistics of TaoVA-100x

Start at: 2017-12-11 15:23:33
End at: 2017-12-11 15:24:03
Local clock offset: -0.493 ms
Remote clock offset: 0.89 ms


# Below is generated by plot.py at 2017-12-11 17:47:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 231.47 Mbit/s
95th percentile per-packet one-way delay: 98.930 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 231.47 Mbit/s
95th percentile per-packet one-way delay: 98.930 ms
Loss rate: 0.04%
```
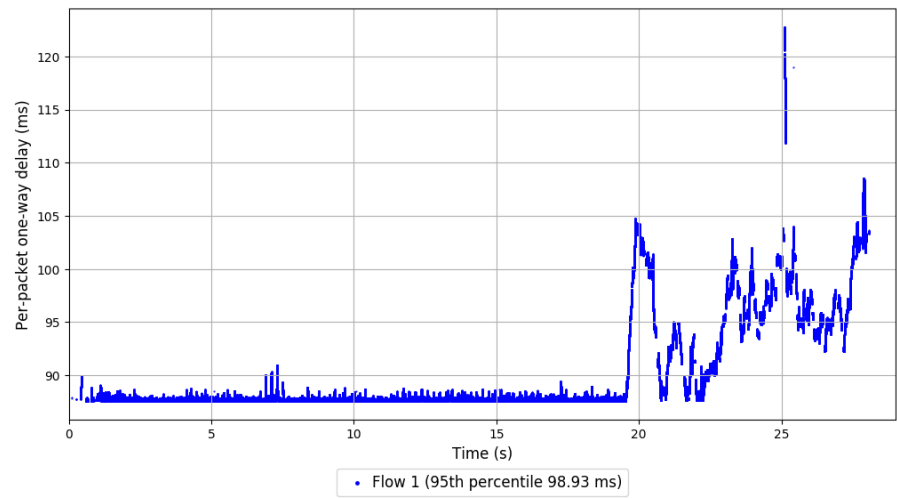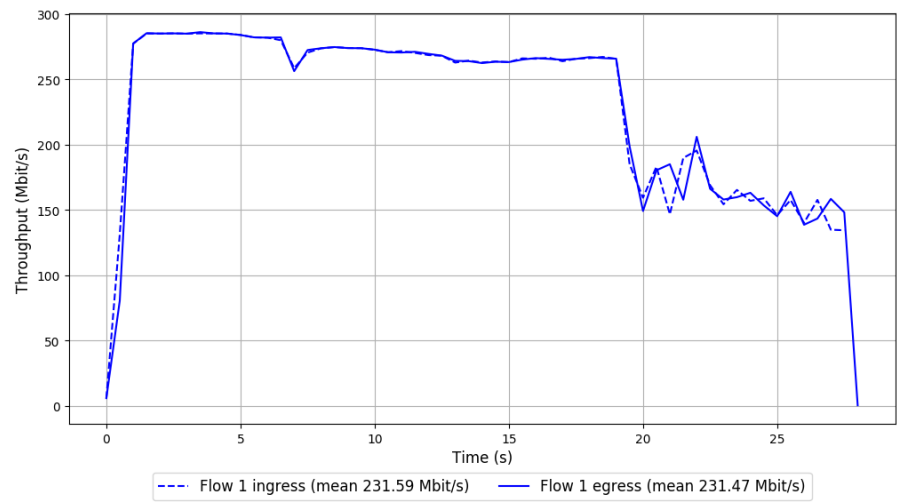
Run 6: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 231.59 Mbit/s) —— Flow 1 egress (mean 231.47 Mbit/s)

• Flow 1 (95th percentile 98.93 ms)

```
Run 7: Statistics of TaoVA-100x

Start at: 2017-12-11 15:40:56
End at: 2017-12-11 15:41:26
Local clock offset: -0.55 ms
Remote clock offset: 1.582 ms


# Below is generated by plot.py at 2017-12-11 17:47:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 228.97 Mbit/s
95th percentile per-packet one-way delay: 91.719 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 228.97 Mbit/s
95th percentile per-packet one-way delay: 91.719 ms
Loss rate: 0.00%
```
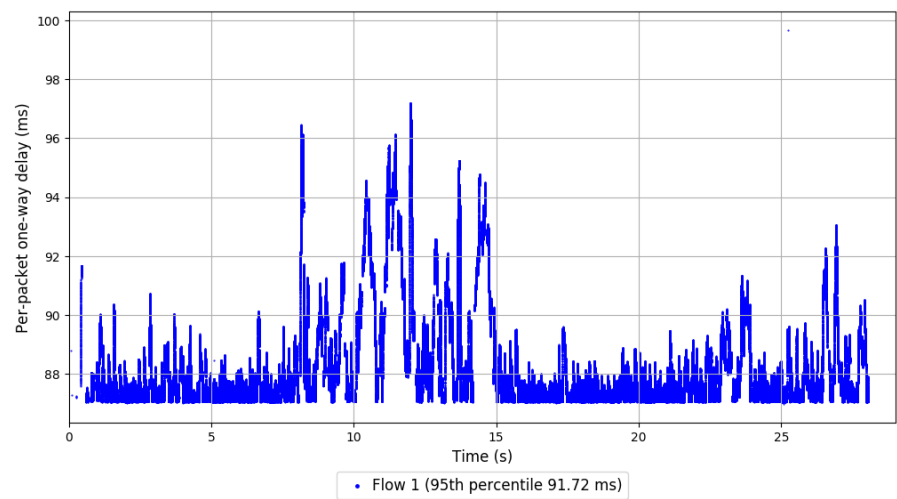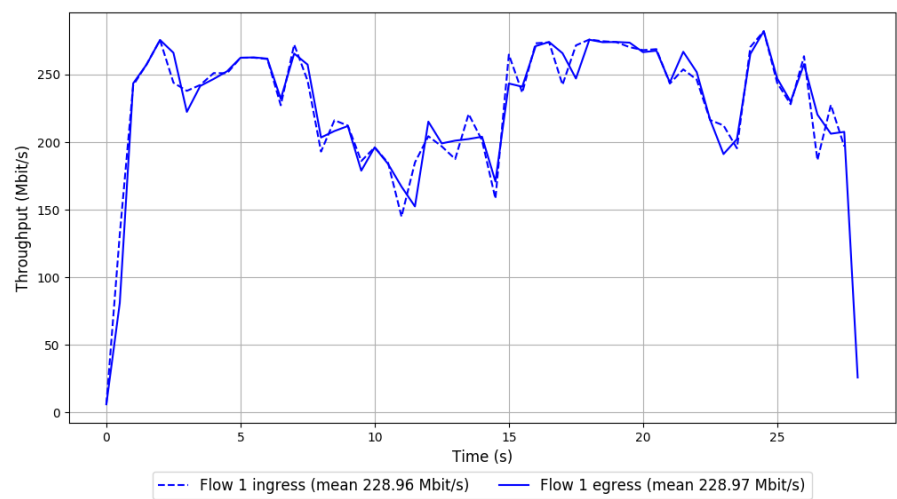
Run 7: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 228.96 Mbit/s) —— Flow 1 egress (mean 228.97 Mbit/s)

• Flow 1 (95th percentile 91.72 ms)

```
Run 8: Statistics of TaoVA-100x

Start at: 2017-12-11 15:59:08
End at: 2017-12-11 15:59:38
Local clock offset: -0.478 ms
Remote clock offset: 5.135 ms

# Below is generated by plot.py at 2017-12-11 17:47:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 256.80 Mbit/s
95th percentile per-packet one-way delay: 110.498 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 256.80 Mbit/s
95th percentile per-packet one-way delay: 110.498 ms
Loss rate: 0.00%
```
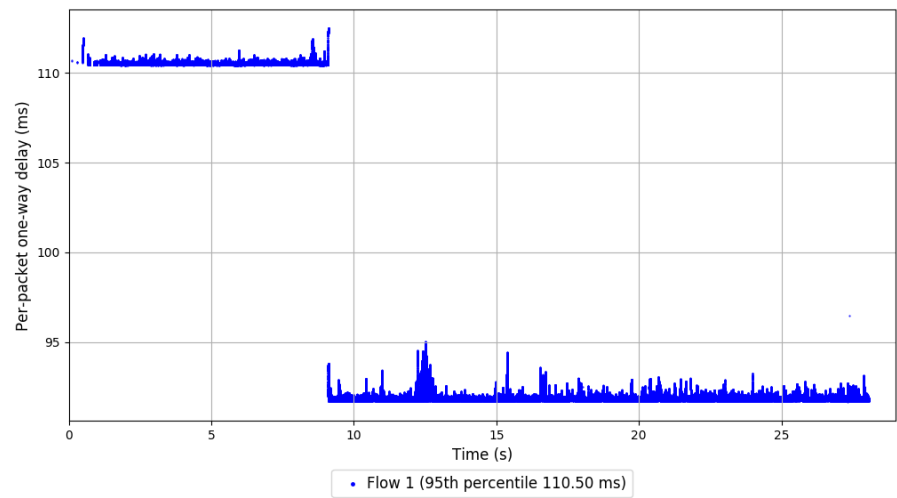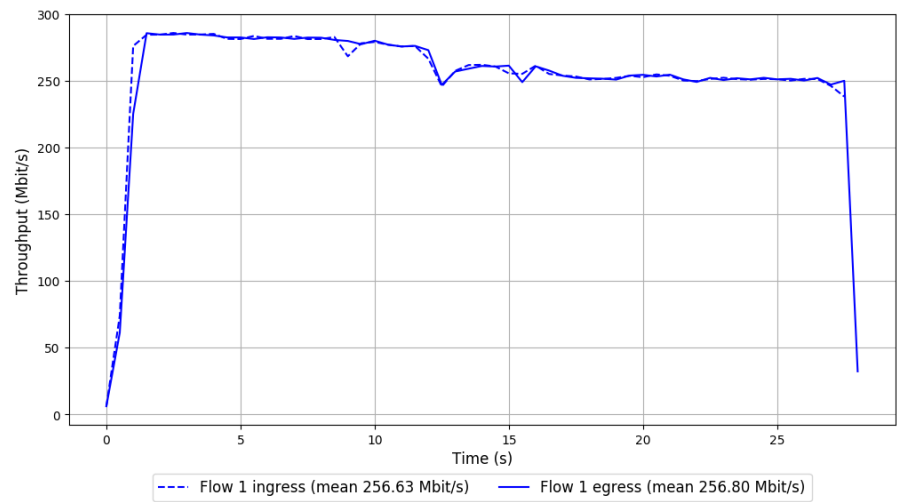
Run 8: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 256.63 Mbit/s)   ——— Flow 1 egress (mean 256.80 Mbit/s)

Flow 1 (95th percentile 110.50 ms)

```
Run 9: Statistics of TaoVA-100x

Start at: 2017-12-11 16:17:22
End at: 2017-12-11 16:17:52
Local clock offset: -0.503 ms
Remote clock offset: 1.645 ms


# Below is generated by plot.py at 2017-12-11 17:53:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 272.62 Mbit/s
95th percentile per-packet one-way delay: 86.913 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 272.62 Mbit/s
95th percentile per-packet one-way delay: 86.913 ms
Loss rate: 0.00%
```
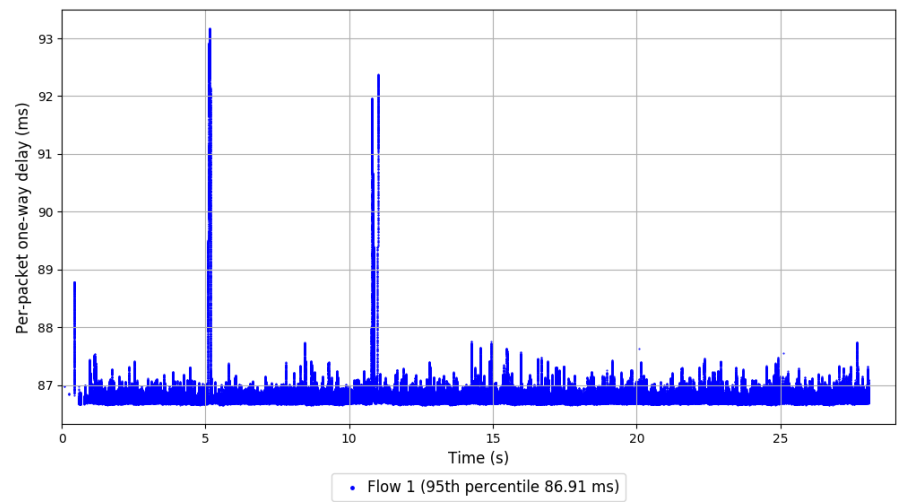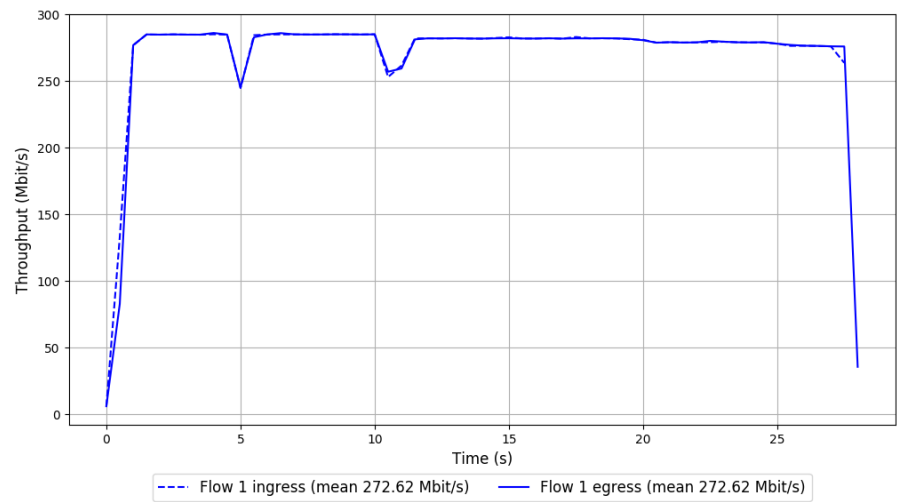
Run 9: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 272.62 Mbit/s) --- Flow 1 egress (mean 272.62 Mbit/s)
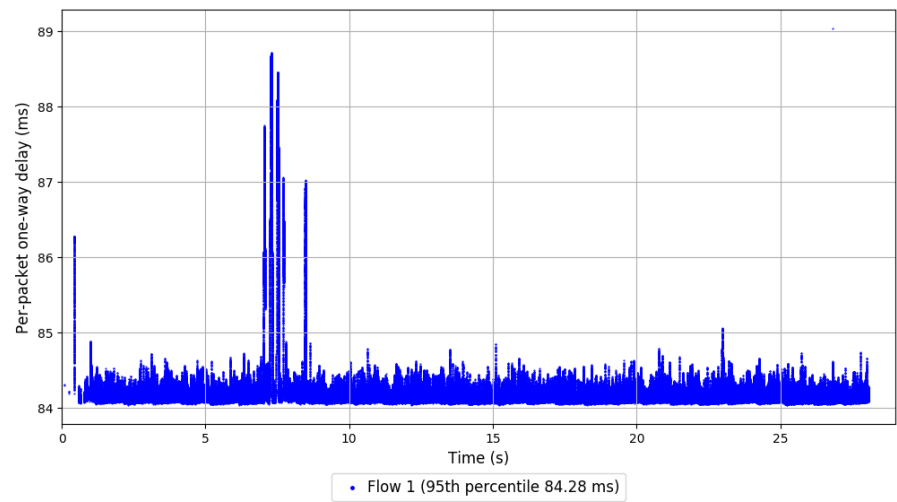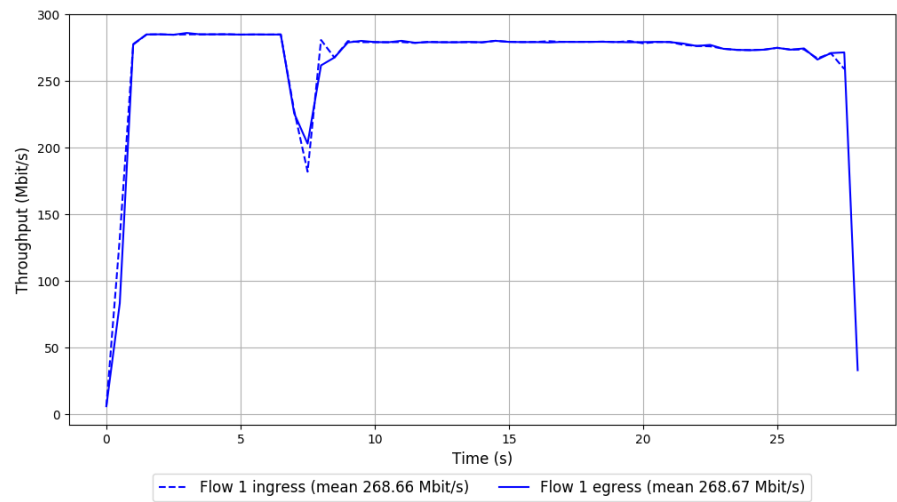

Flow 1 (95th percentile 86.91 ms)

```
Run 10: Statistics of TaoVA-100x

Start at: 2017-12-11 16:35:21
End at: 2017-12-11 16:35:51
Local clock offset: -0.452 ms
Remote clock offset: -1.042 ms


# Below is generated by plot.py at 2017-12-11 17:53:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 268.67 Mbit/s
95th percentile per-packet one-way delay: 84.284 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 268.67 Mbit/s
95th percentile per-packet one-way delay: 84.284 ms
Loss rate: 0.00%
```

Run 10: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 268.66 Mbit/s) — — —   Flow 1 egress (mean 268.67 Mbit/s) ———
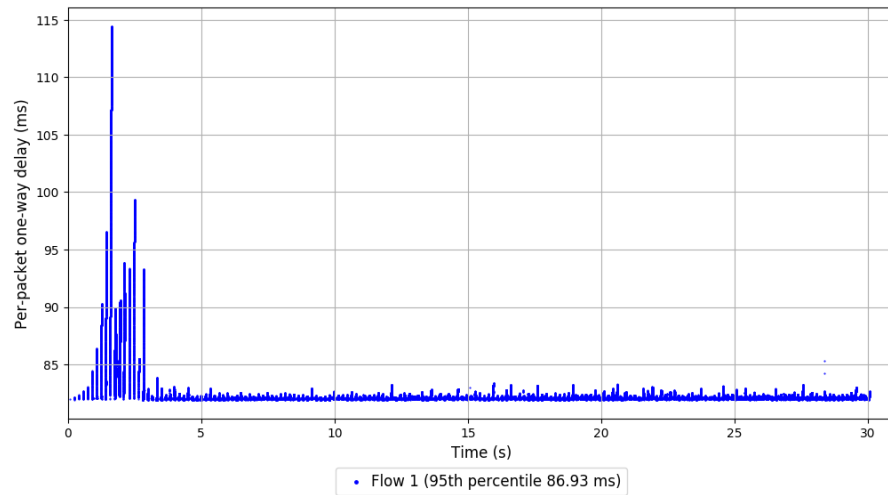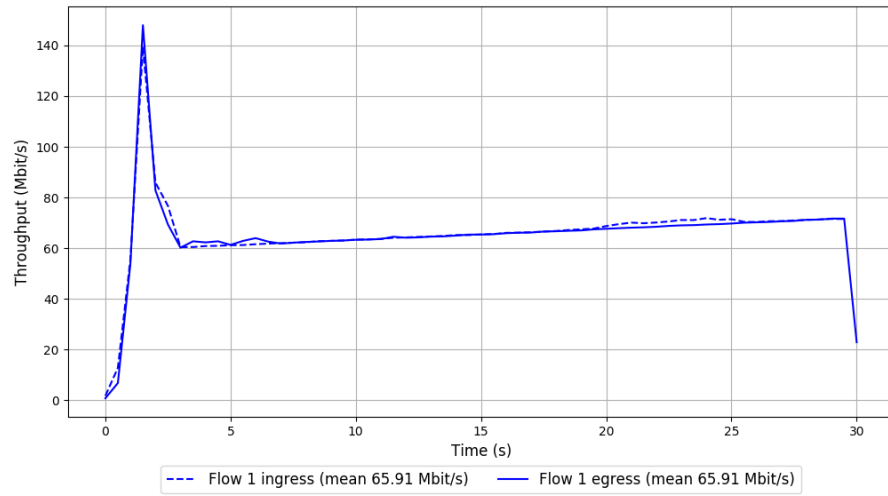

• Flow 1 (95th percentile 84.28 ms)

```
Run 1: Statistics of TCP Vegas

Start at: 2017-12-11 13:52:27
End at: 2017-12-11 13:52:57
Local clock offset: -0.317 ms
Remote clock offset: -4.576 ms


# Below is generated by plot.py at 2017-12-11 17:53:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 65.91 Mbit/s
95th percentile per-packet one-way delay: 86.931 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 65.91 Mbit/s
95th percentile per-packet one-way delay: 86.931 ms
Loss rate: 0.00%
```

Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2017-12-11 14:10:34
End at: 2017-12-11 14:11:04
Local clock offset: -0.402 ms
Remote clock offset: 0.991 ms


# Below is generated by plot.py at 2017-12-11 17:53:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.11 Mbit/s
95th percentile per-packet one-way delay: 90.638 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.11 Mbit/s
95th percentile per-packet one-way delay: 90.638 ms
Loss rate: 0.00%
```
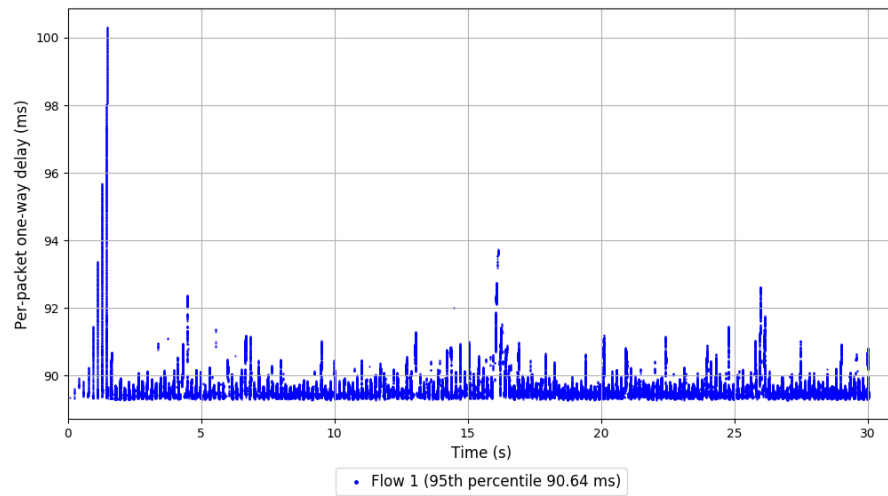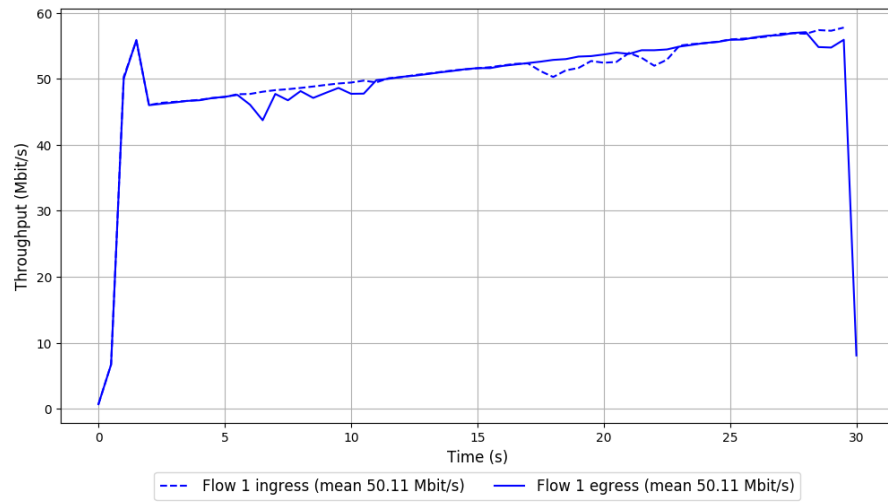
Run 2: Report of TCP Vegas — Data Link

Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2017-12-11 14:28:35
End at: 2017-12-11 14:29:05
Local clock offset: -0.375 ms
Remote clock offset: 1.388 ms
```
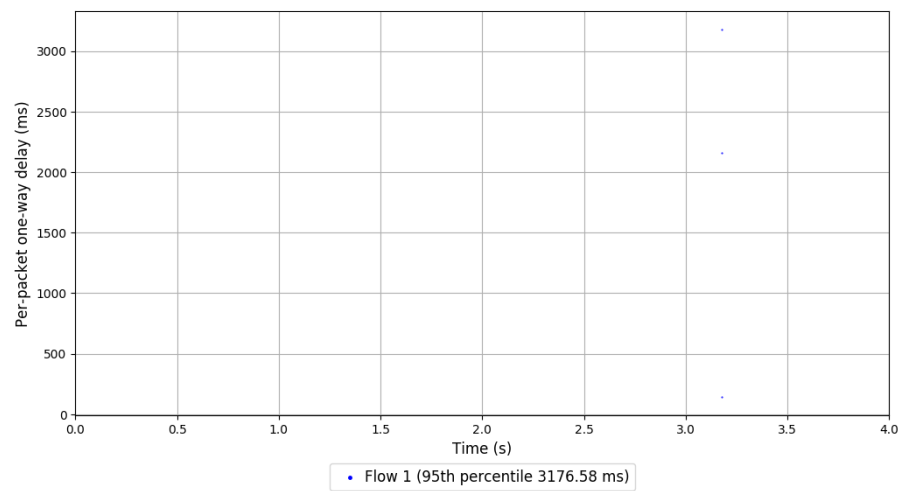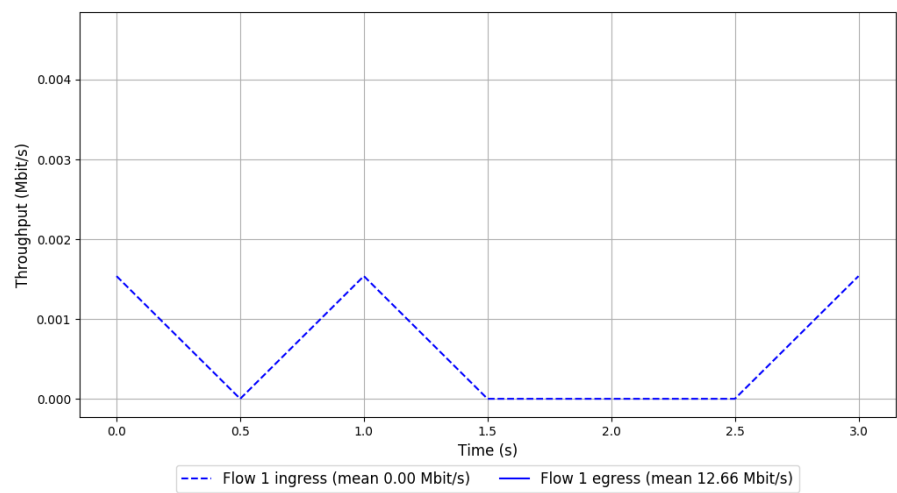
Run 3: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 0.00 Mbit/s)   Flow 1 egress (mean 12.66 Mbit/s)
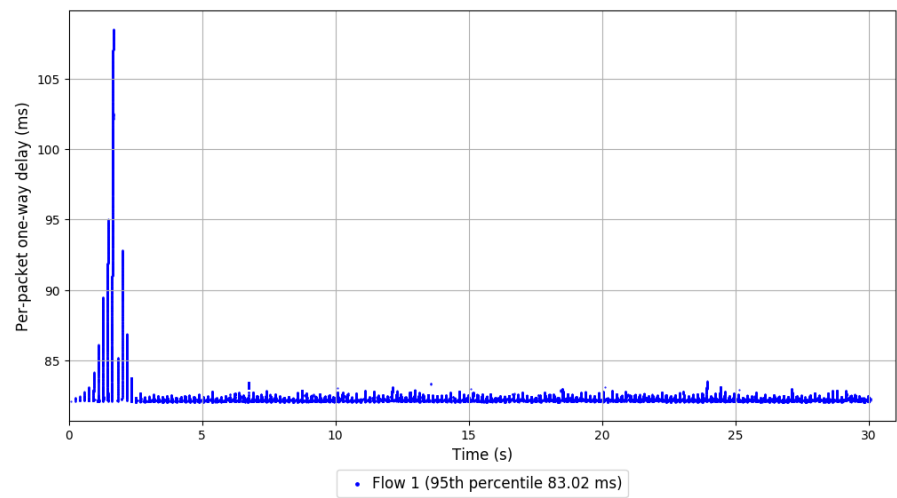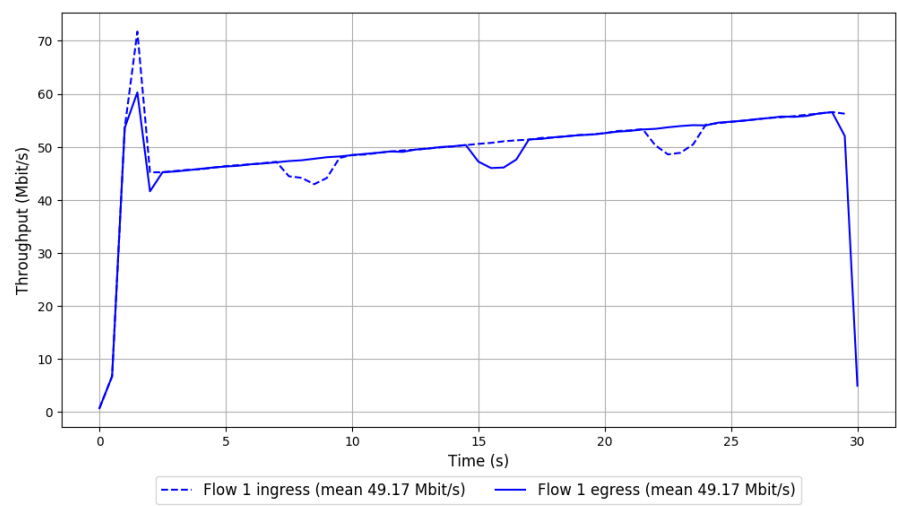

Flow 1 (95th percentile 3176.58 ms)

```
Run 4: Statistics of TCP Vegas

Start at: 2017-12-11 14:46:31
End at: 2017-12-11 14:47:01
Local clock offset: -0.449 ms
Remote clock offset: -3.623 ms

# Below is generated by plot.py at 2017-12-11 17:53:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 49.17 Mbit/s
95th percentile per-packet one-way delay: 83.018 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 49.17 Mbit/s
95th percentile per-packet one-way delay: 83.018 ms
Loss rate: 0.00%
```
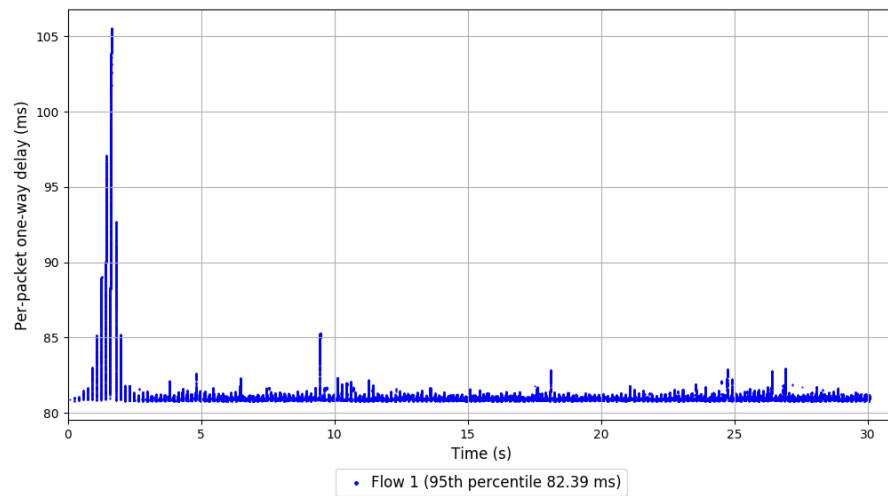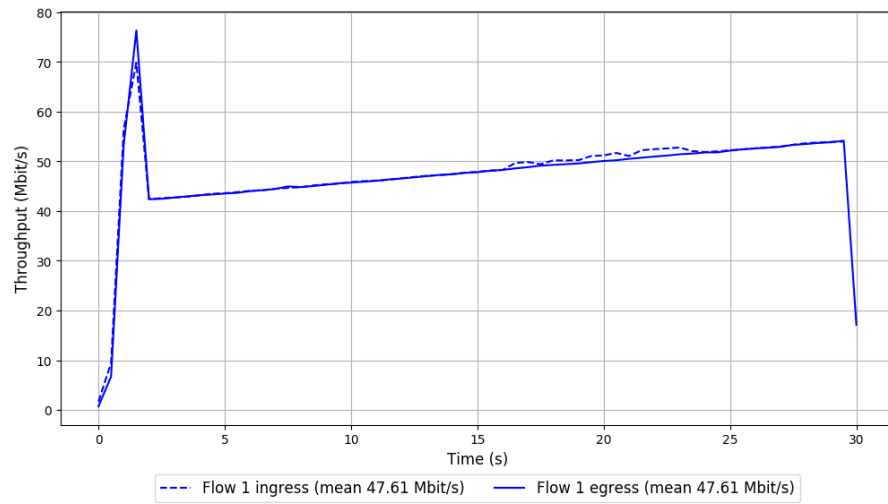
Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2017-12-11 15:04:19
End at: 2017-12-11 15:04:49
Local clock offset: -0.447 ms
Remote clock offset: -4.764 ms


# Below is generated by plot.py at 2017-12-11 17:53:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 47.61 Mbit/s
95th percentile per-packet one-way delay: 82.392 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 47.61 Mbit/s
95th percentile per-packet one-way delay: 82.392 ms
Loss rate: 0.01%
```

Run 5: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 47.61 Mbit/s)   Flow 1 egress (mean 47.61 Mbit/s)

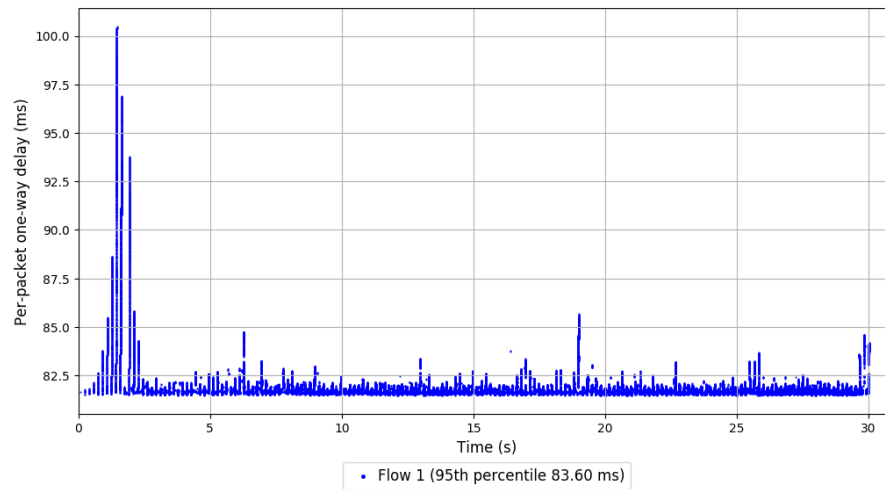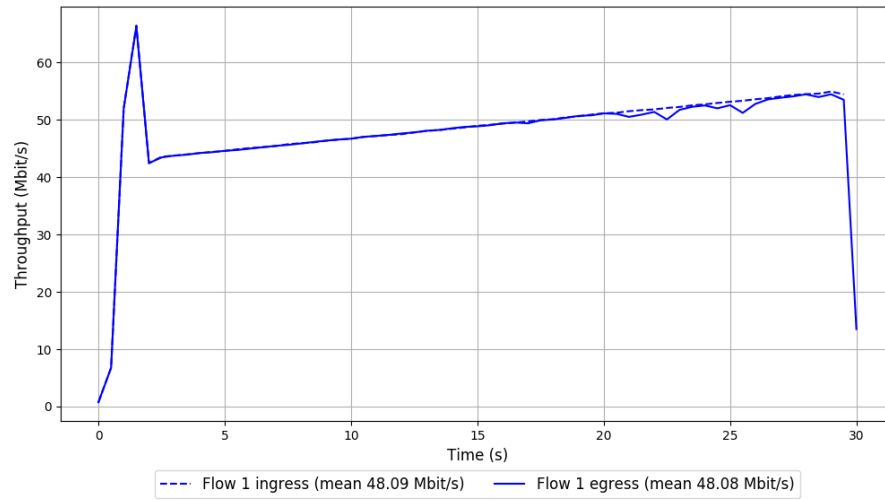Flow 1 (95th percentile 82.39 ms)

```
Run 6: Statistics of TCP Vegas

Start at: 2017-12-11 15:22:21
End at: 2017-12-11 15:22:51
Local clock offset: -0.469 ms
Remote clock offset: -3.835 ms

# Below is generated by plot.py at 2017-12-11 17:53:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 48.08 Mbit/s
95th percentile per-packet one-way delay: 83.598 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 48.08 Mbit/s
95th percentile per-packet one-way delay: 83.598 ms
Loss rate: 0.00%
```

Run 6: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 48.09 Mbit/s)   Flow 1 egress (mean 48.08 Mbit/s)

Flow 1 (95th percentile 83.60 ms)
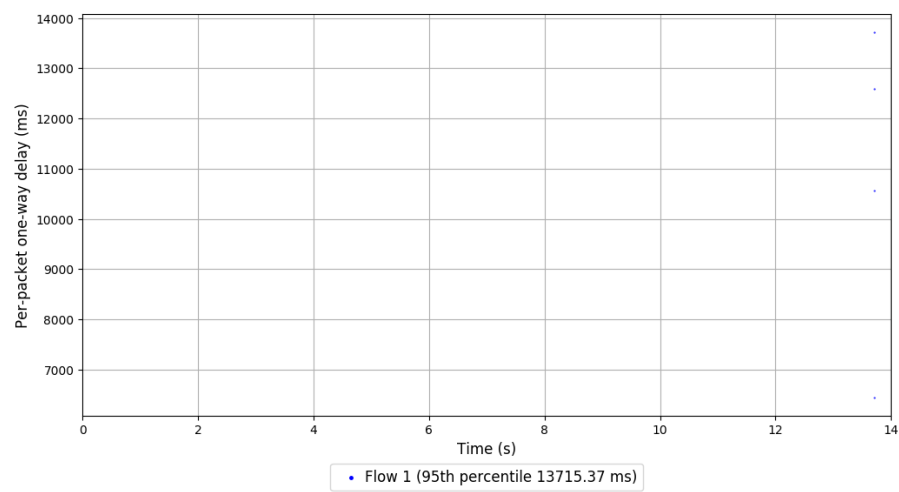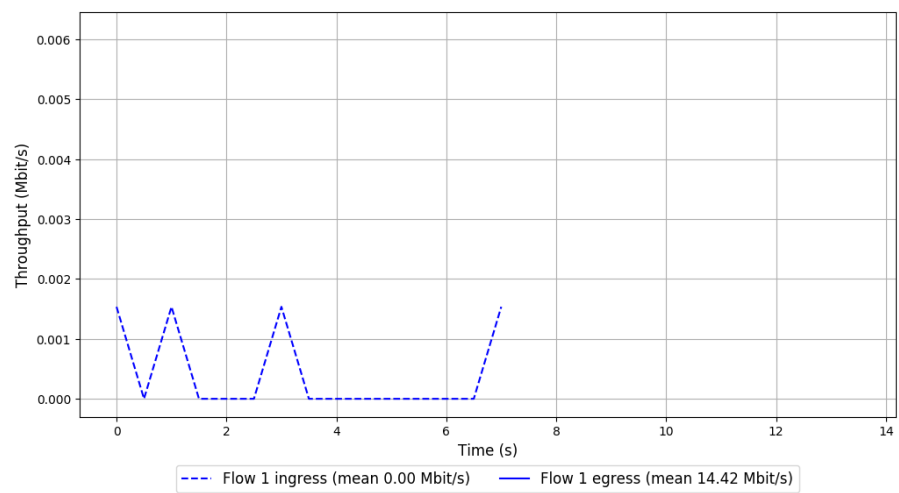
```
Run 7: Statistics of TCP Vegas

Start at: 2017-12-11 15:39:46
End at: 2017-12-11 15:40:17
Local clock offset: -0.462 ms
Remote clock offset: -3.379 ms
```

Run 7: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 0.00 Mbit/s) —— Flow 1 egress (mean 14.42 Mbit/s)

Flow 1 (95th percentile 13715.37 ms)

197

```
Run 8: Statistics of TCP Vegas

Start at: 2017-12-11 15:57:52
End at: 2017-12-11 15:58:22
Local clock offset: -0.489 ms
Remote clock offset: 7.195 ms


# Below is generated by plot.py at 2017-12-11 17:53:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 117.74 Mbit/s
95th percentile per-packet one-way delay: 105.594 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 117.74 Mbit/s
95th percentile per-packet one-way delay: 105.594 ms
Loss rate: 0.00%
```
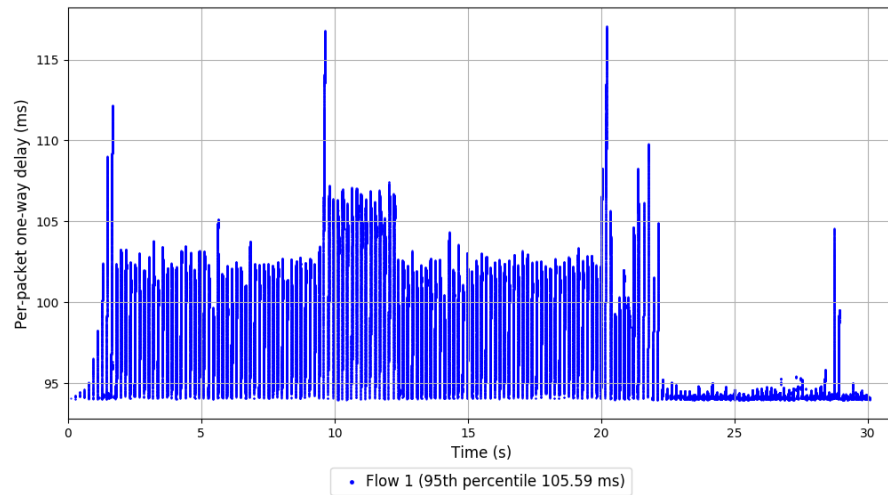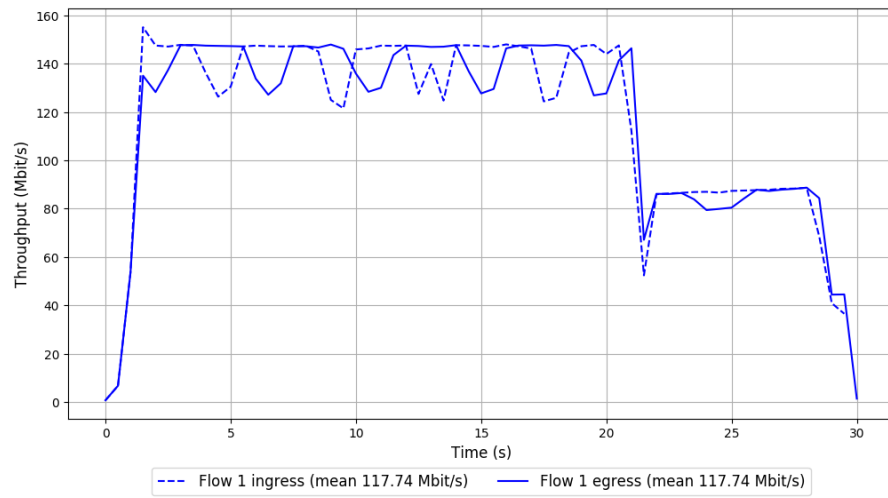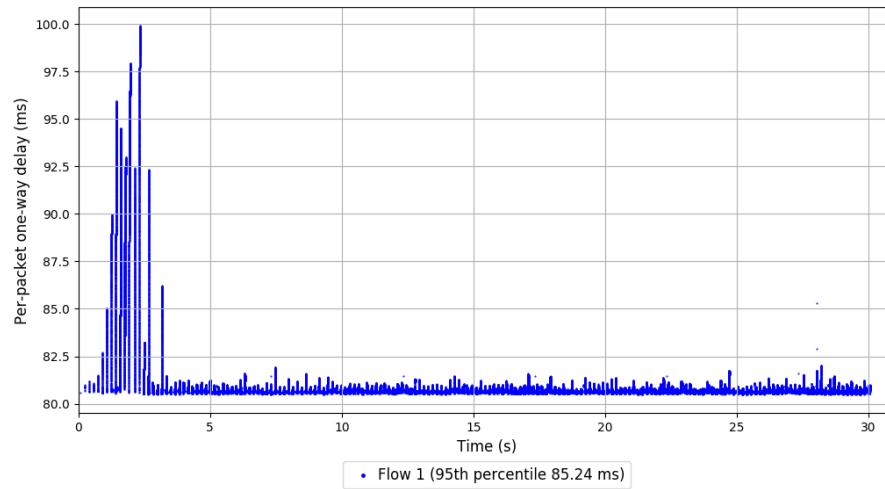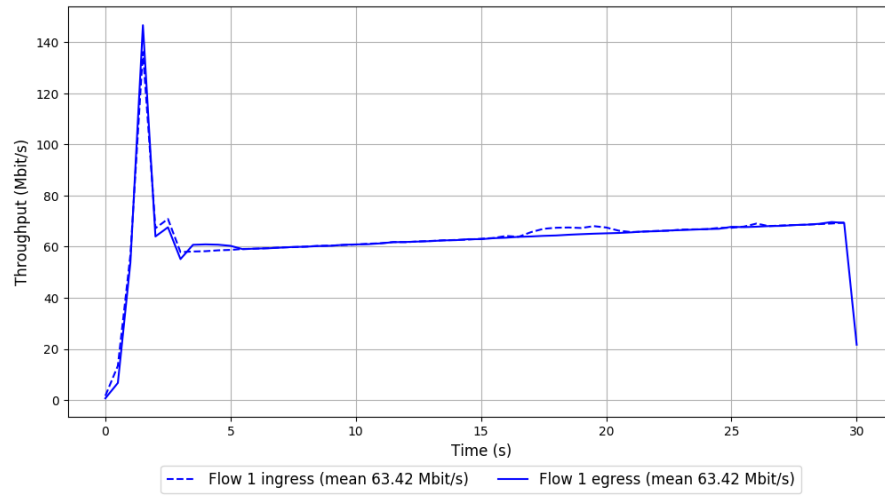
Run 8: Report of TCP Vegas — Data Link

```
Run 9: Statistics of TCP Vegas

Start at: 2017-12-11 16:16:09
End at: 2017-12-11 16:16:39
Local clock offset: -0.439 ms
Remote clock offset: -4.334 ms


# Below is generated by plot.py at 2017-12-11 17:53:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 63.42 Mbit/s
95th percentile per-packet one-way delay: 85.242 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 63.42 Mbit/s
95th percentile per-packet one-way delay: 85.242 ms
Loss rate: 0.01%
```

Run 9: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 63.42 Mbit/s) --- Flow 1 egress (mean 63.42 Mbit/s)

Flow 1 (95th percentile 85.24 ms)

```
Run 10: Statistics of TCP Vegas

Start at: 2017-12-11 16:34:07
End at: 2017-12-11 16:34:37
Local clock offset: -0.388 ms
Remote clock offset: 2.281 ms


# Below is generated by plot.py at 2017-12-11 17:53:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 72.25 Mbit/s
95th percentile per-packet one-way delay: 97.050 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 72.25 Mbit/s
95th percentile per-packet one-way delay: 97.050 ms
Loss rate: 0.00%
```
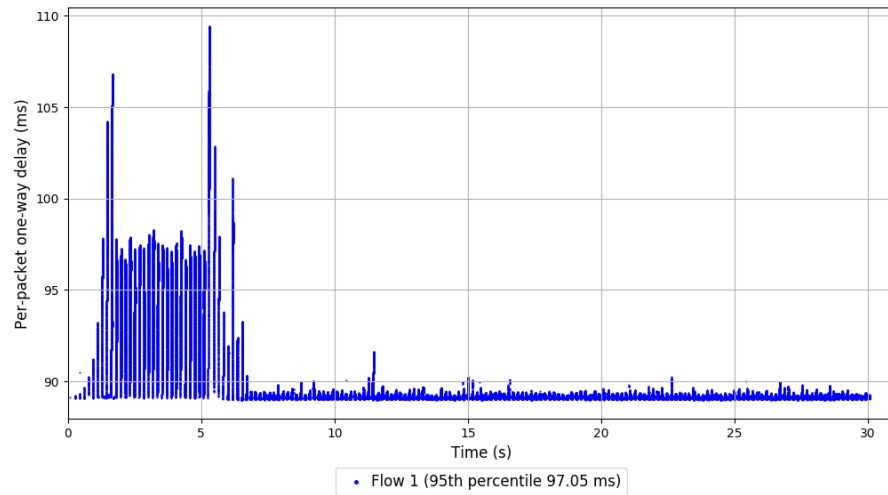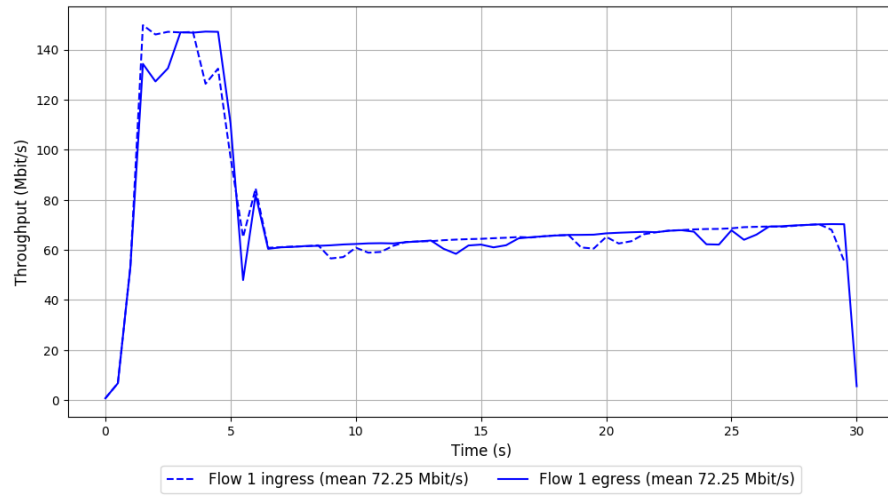
Run 10: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 72.25 Mbit/s)   Flow 1 egress (mean 72.25 Mbit/s)

Flow 1 (95th percentile 97.05 ms)

```
Run 1: Statistics of Verus

Start at: 2017-12-11 14:07:57
End at: 2017-12-11 14:08:27
Local clock offset: -0.435 ms
Remote clock offset: 1.362 ms


# Below is generated by plot.py at 2017-12-11 17:53:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 233.18 Mbit/s
95th percentile per-packet one-way delay: 100.710 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 233.18 Mbit/s
95th percentile per-packet one-way delay: 100.710 ms
Loss rate: 0.01%
```
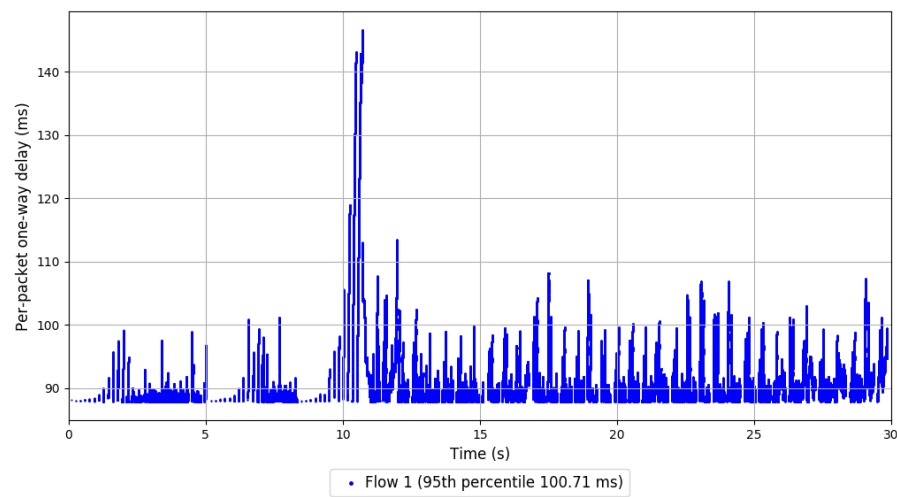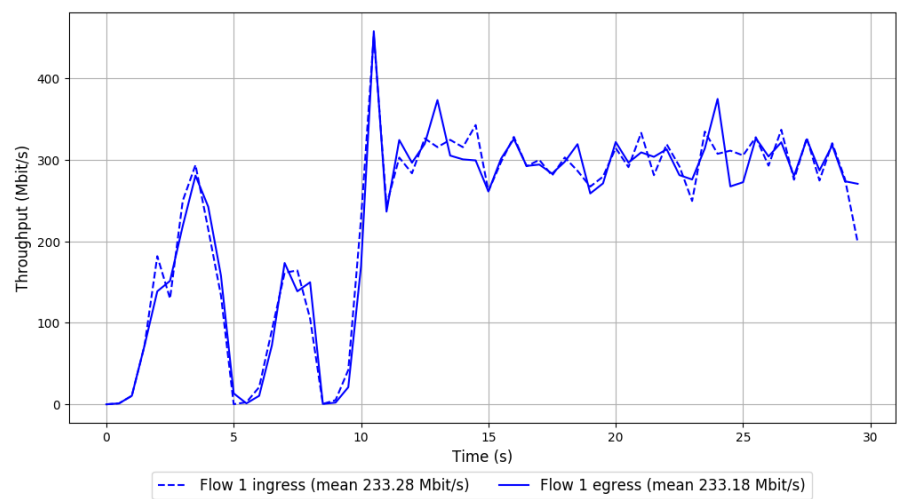
Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2017-12-11 14:26:06
End at: 2017-12-11 14:26:36
Local clock offset: -0.403 ms
Remote clock offset: 0.45 ms


# Below is generated by plot.py at 2017-12-11 17:53:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 148.26 Mbit/s
95th percentile per-packet one-way delay: 211.135 ms
Loss rate: 5.20%
-- Flow 1:
Average throughput: 148.26 Mbit/s
95th percentile per-packet one-way delay: 211.135 ms
Loss rate: 5.20%
```
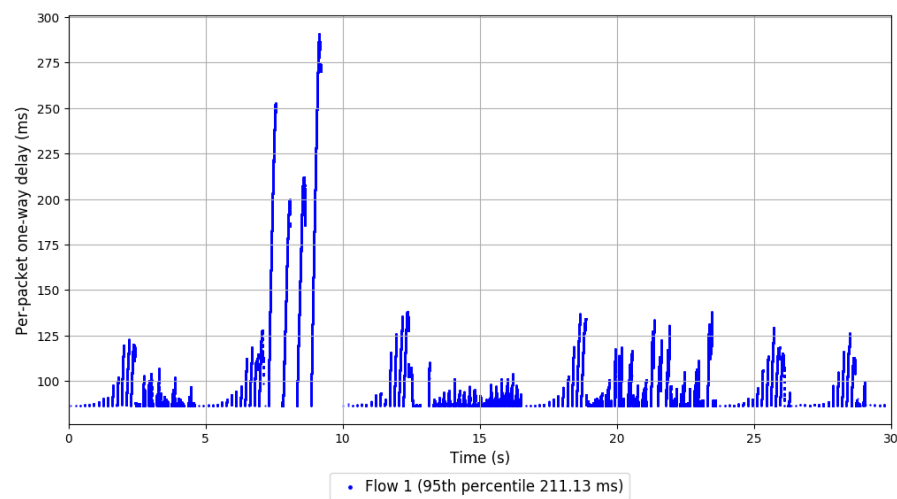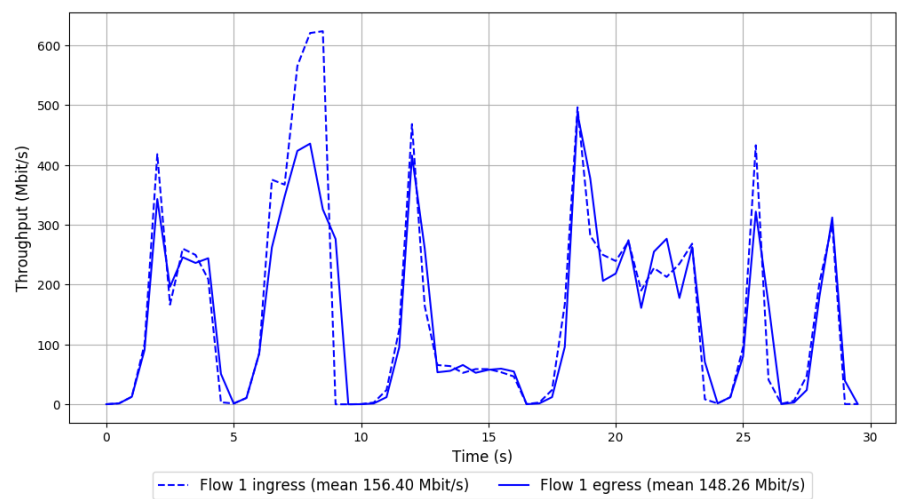
Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2017-12-11 14:43:53
End at: 2017-12-11 14:44:23
Local clock offset: -0.425 ms
Remote clock offset: 0.821 ms


# Below is generated by plot.py at 2017-12-11 17:53:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 263.55 Mbit/s
95th percentile per-packet one-way delay: 117.774 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 263.55 Mbit/s
95th percentile per-packet one-way delay: 117.774 ms
Loss rate: 0.23%
```
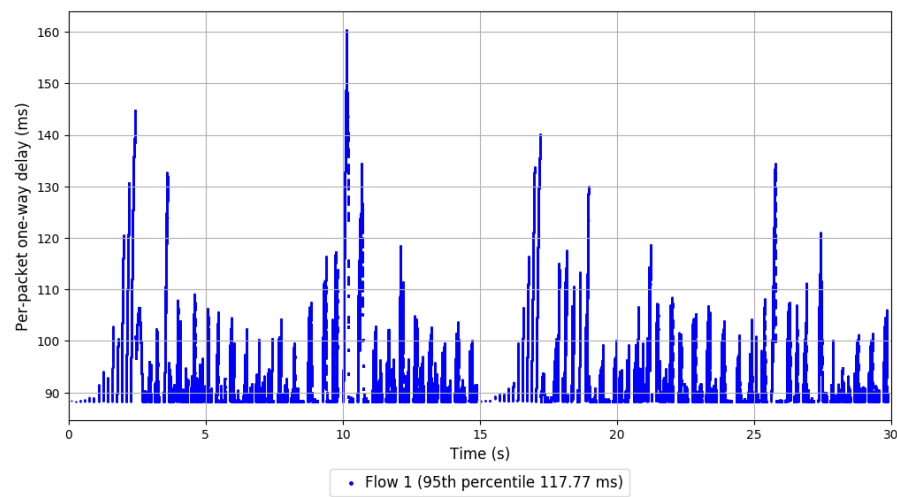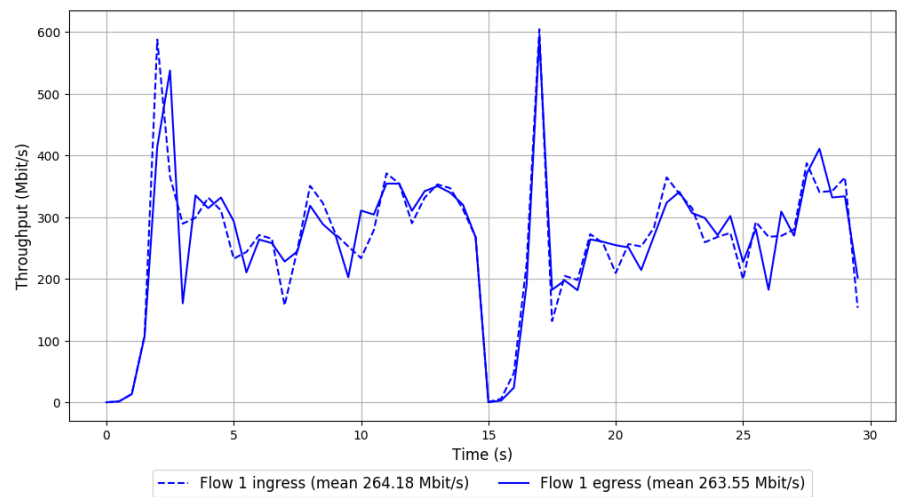
Run 3: Report of Verus — Data Link

Flow 1 ingress (mean 264.18 Mbit/s)   Flow 1 egress (mean 263.55 Mbit/s)

• Flow 1 (95th percentile 117.77 ms)

```
Run 4: Statistics of Verus

Start at: 2017-12-11 15:01:38
End at: 2017-12-11 15:02:09
Local clock offset: -0.475 ms
Remote clock offset: 0.35 ms


# Below is generated by plot.py at 2017-12-11 17:53:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 294.36 Mbit/s
95th percentile per-packet one-way delay: 125.998 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 294.36 Mbit/s
95th percentile per-packet one-way delay: 125.998 ms
Loss rate: 0.48%
```
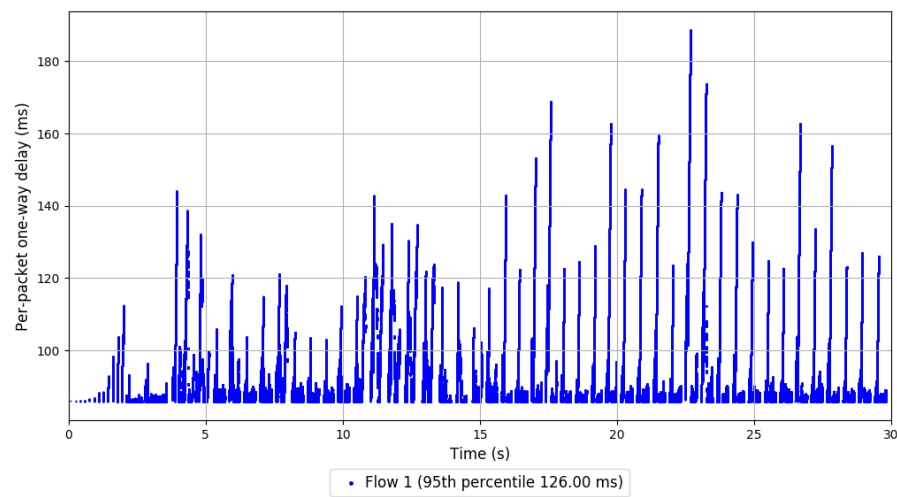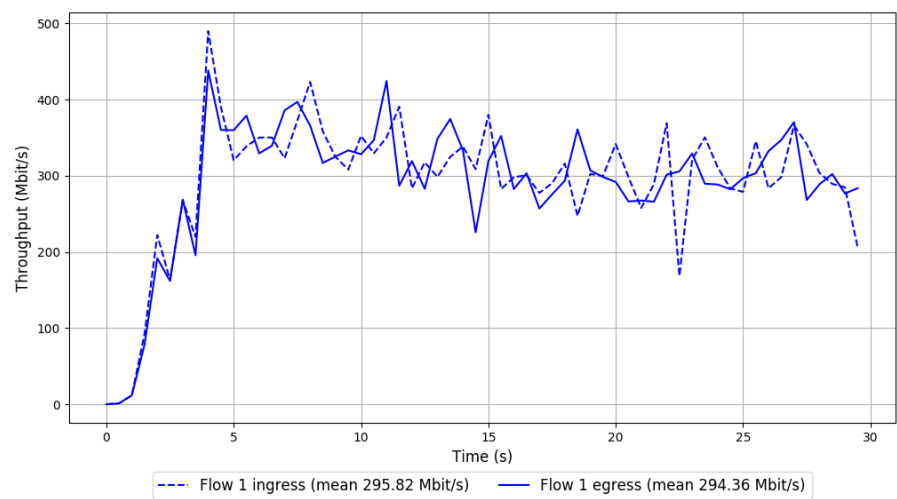
Run 4: Report of Verus — Data Link

Flow 1 ingress (mean 295.82 Mbit/s)   Flow 1 egress (mean 294.36 Mbit/s)

• Flow 1 (95th percentile 126.00 ms)

```
Run 5: Statistics of Verus

Start at: 2017-12-11 15:19:45
End at: 2017-12-11 15:20:15
Local clock offset: -0.461 ms
Remote clock offset: 1.347 ms


# Below is generated by plot.py at 2017-12-11 17:53:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 260.55 Mbit/s
95th percentile per-packet one-way delay: 191.978 ms
Loss rate: 2.51%
-- Flow 1:
Average throughput: 260.55 Mbit/s
95th percentile per-packet one-way delay: 191.978 ms
Loss rate: 2.51%
```
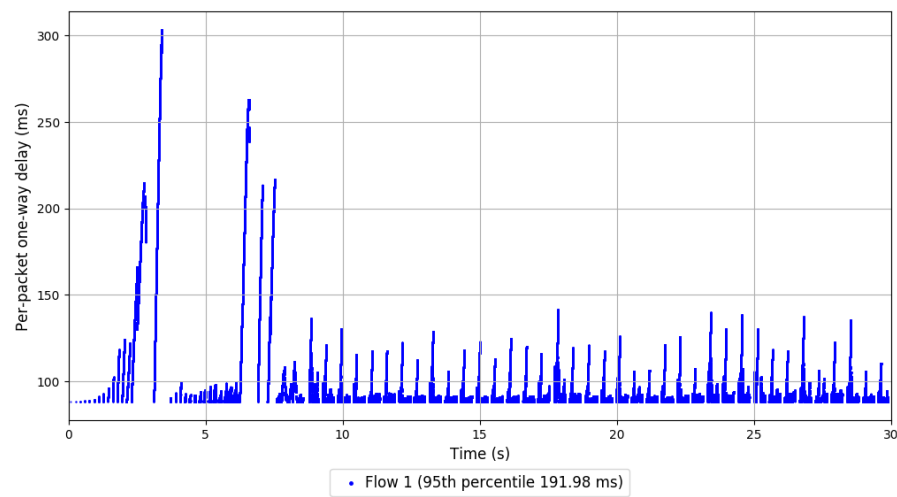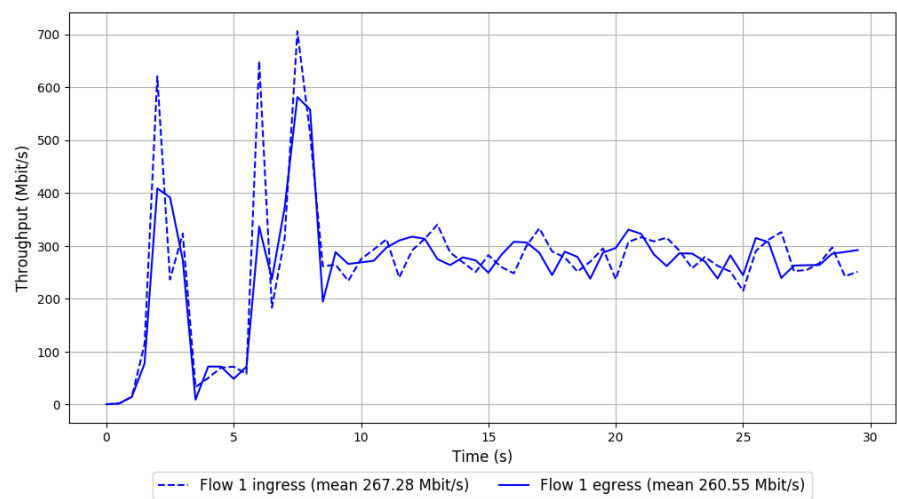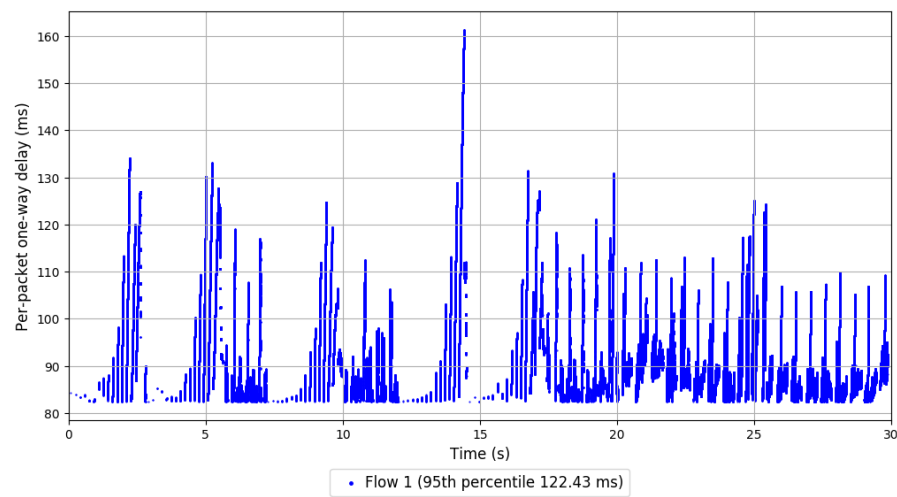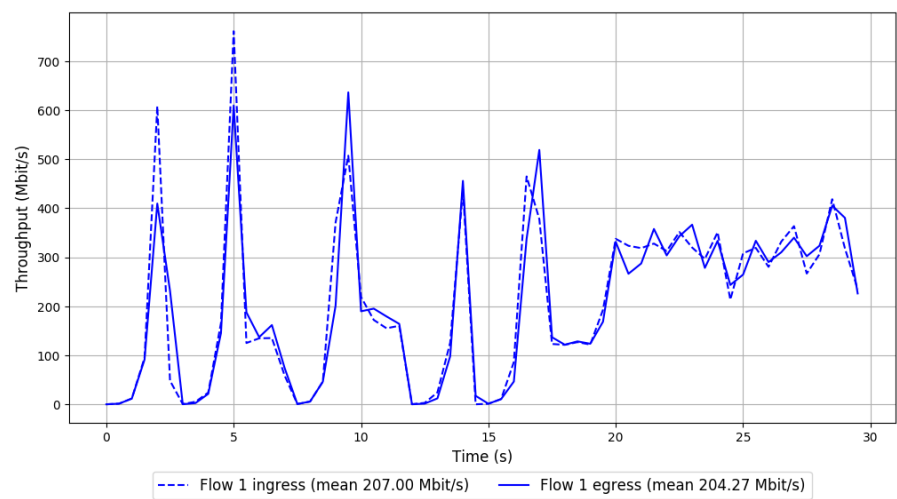
Run 5: Report of Verus — Data Link

```
Run 6: Statistics of Verus

Start at: 2017-12-11 15:37:14
End at: 2017-12-11 15:37:44
Local clock offset: -0.549 ms
Remote clock offset: -2.986 ms


# Below is generated by plot.py at 2017-12-11 17:53:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 204.27 Mbit/s
95th percentile per-packet one-way delay: 122.433 ms
Loss rate: 1.31%
-- Flow 1:
Average throughput: 204.27 Mbit/s
95th percentile per-packet one-way delay: 122.433 ms
Loss rate: 1.31%
```
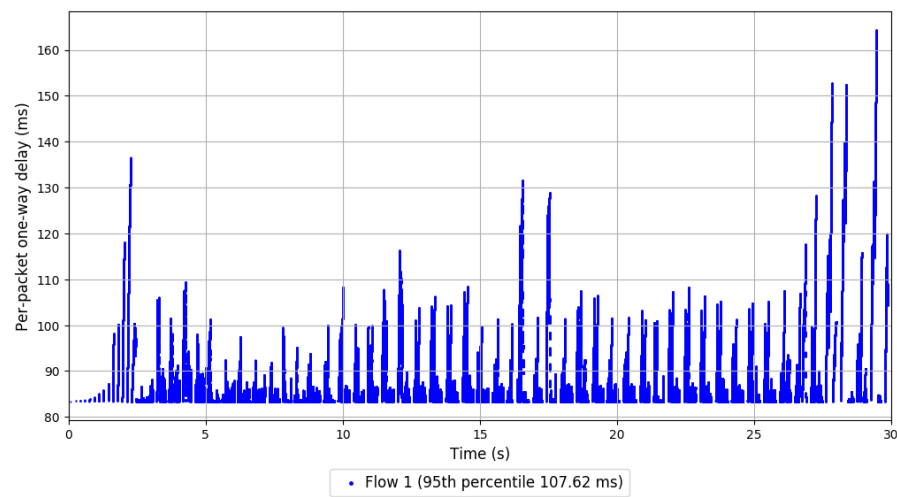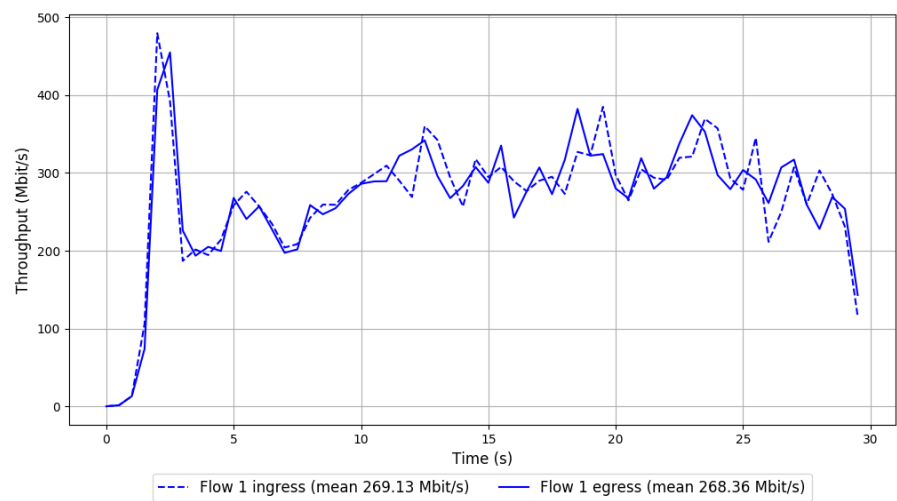
Run 6: Report of Verus — Data Link

```
Run 7: Statistics of Verus

Start at: 2017-12-11 15:55:14
End at: 2017-12-11 15:55:44
Local clock offset: -0.457 ms
Remote clock offset: -3.428 ms


# Below is generated by plot.py at 2017-12-11 17:53:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 268.36 Mbit/s
95th percentile per-packet one-way delay: 107.619 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 268.36 Mbit/s
95th percentile per-packet one-way delay: 107.619 ms
Loss rate: 0.27%
```

Run 7: Report of Verus — Data Link

Flow 1 ingress (mean 269.13 Mbit/s) — Flow 1 egress (mean 268.36 Mbit/s)

Flow 1 (95th percentile 107.62 ms)

```
Run 8: Statistics of Verus

Start at: 2017-12-11 16:13:27
End at: 2017-12-11 16:13:57
Local clock offset: -0.452 ms
Remote clock offset: 1.926 ms


# Below is generated by plot.py at 2017-12-11 17:55:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 325.00 Mbit/s
95th percentile per-packet one-way delay: 191.580 ms
Loss rate: 1.82%
-- Flow 1:
Average throughput: 325.00 Mbit/s
95th percentile per-packet one-way delay: 191.580 ms
Loss rate: 1.82%
```
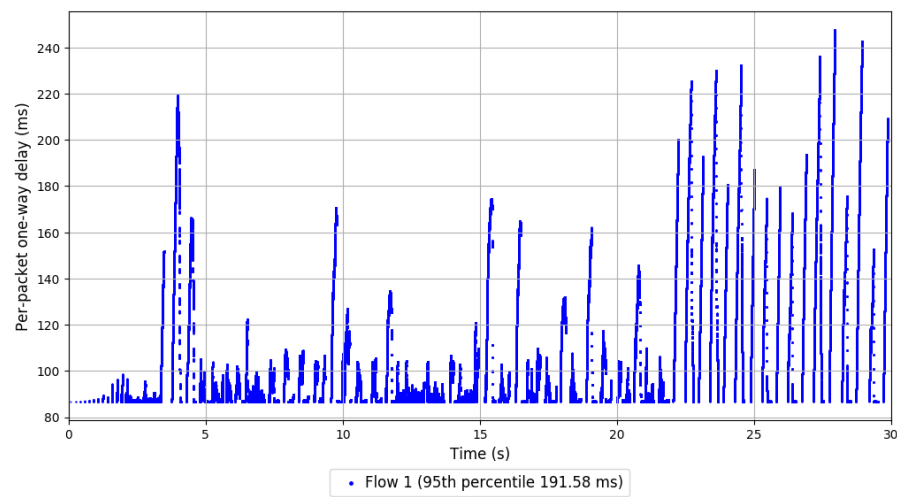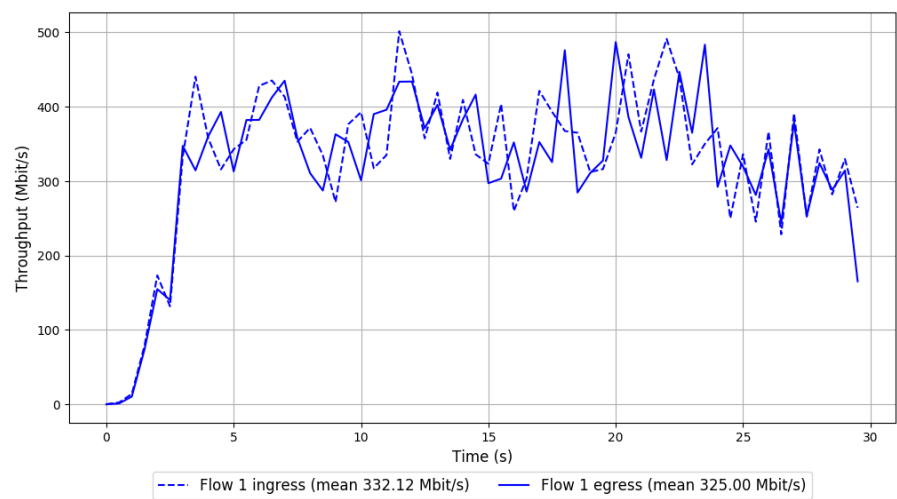
Run 8: Report of Verus — Data Link

Flow 1 ingress (mean 332.12 Mbit/s)   Flow 1 egress (mean 325.00 Mbit/s)

Flow 1 (95th percentile 191.58 ms)

219

```
Run 9: Statistics of Verus

Start at: 2017-12-11 16:31:37
End at: 2017-12-11 16:32:07
Local clock offset: -0.408 ms
Remote clock offset: 1.828 ms


# Below is generated by plot.py at 2017-12-11 17:55:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 144.16 Mbit/s
95th percentile per-packet one-way delay: 173.939 ms
Loss rate: 2.78%
-- Flow 1:
Average throughput: 144.16 Mbit/s
95th percentile per-packet one-way delay: 173.939 ms
Loss rate: 2.78%
```
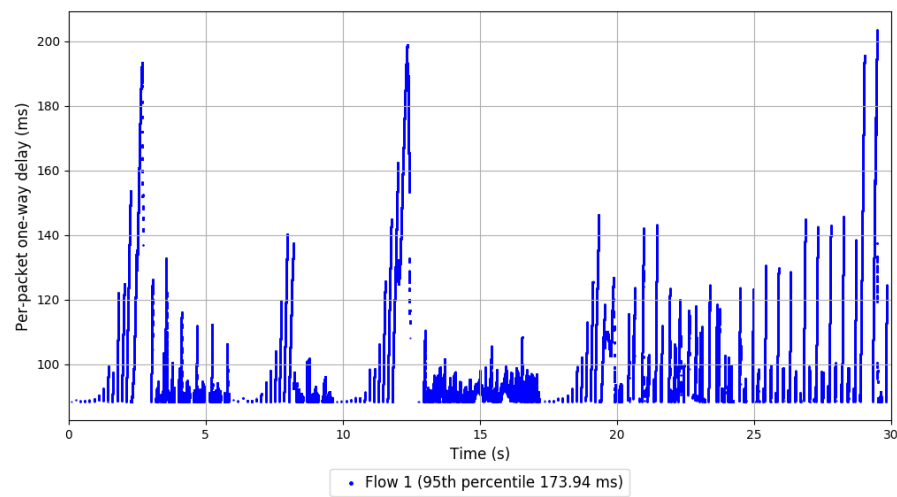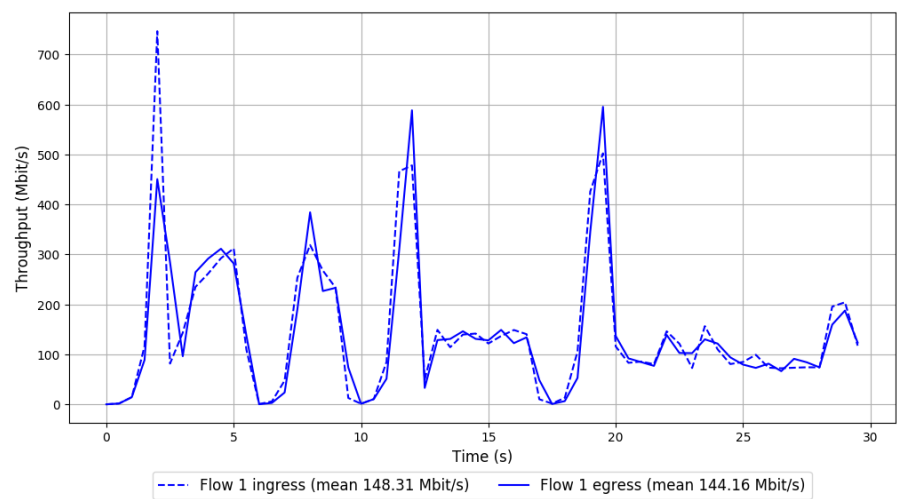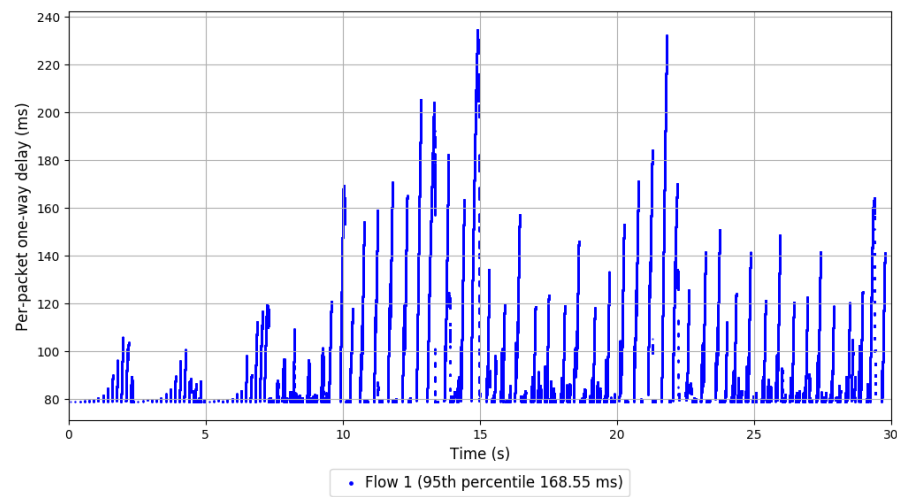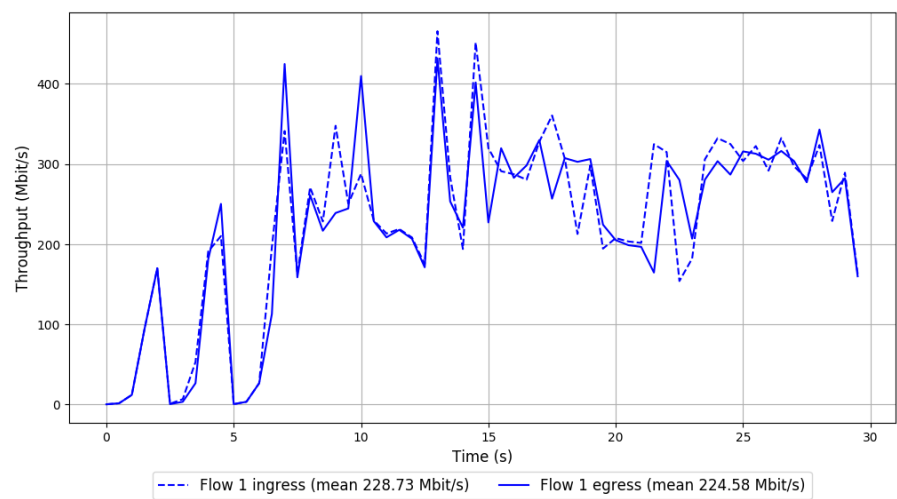
Run 9: Report of Verus — Data Link

```
Run 10: Statistics of Verus

Start at: 2017-12-11 16:49:35
End at: 2017-12-11 16:50:05
Local clock offset: -0.397 ms
Remote clock offset: -5.571 ms


# Below is generated by plot.py at 2017-12-11 17:55:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 224.58 Mbit/s
95th percentile per-packet one-way delay: 168.549 ms
Loss rate: 1.61%
-- Flow 1:
Average throughput: 224.58 Mbit/s
95th percentile per-packet one-way delay: 168.549 ms
Loss rate: 1.61%
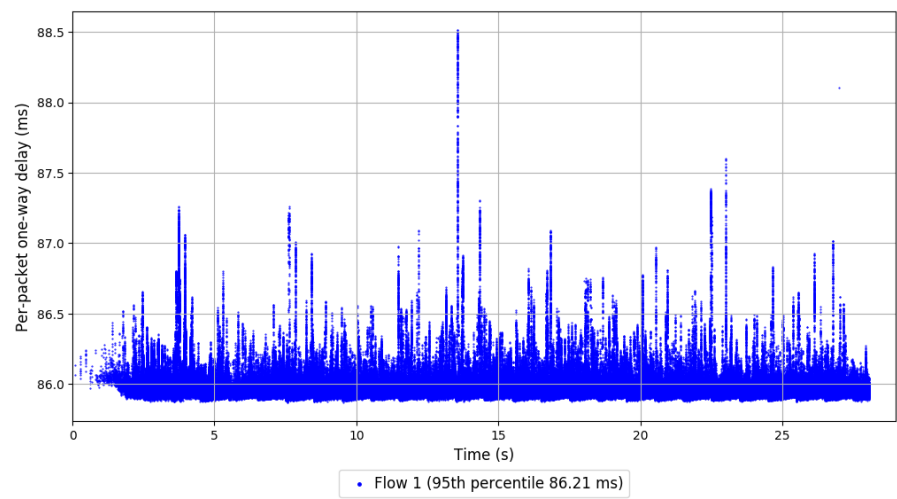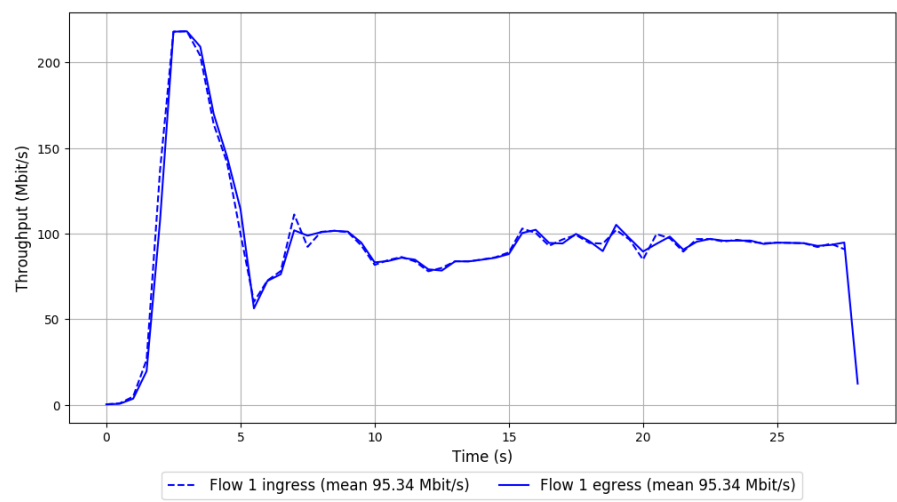```

Run 10: Report of Verus — Data Link

```
Run 1: Statistics of Copa

Start at: 2017-12-11 14:00:23
End at: 2017-12-11 14:00:53
Local clock offset: -0.352 ms
Remote clock offset: -0.144 ms


# Below is generated by plot.py at 2017-12-11 17:55:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.34 Mbit/s
95th percentile per-packet one-way delay: 86.206 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 95.34 Mbit/s
95th percentile per-packet one-way delay: 86.206 ms
Loss rate: 0.00%
```

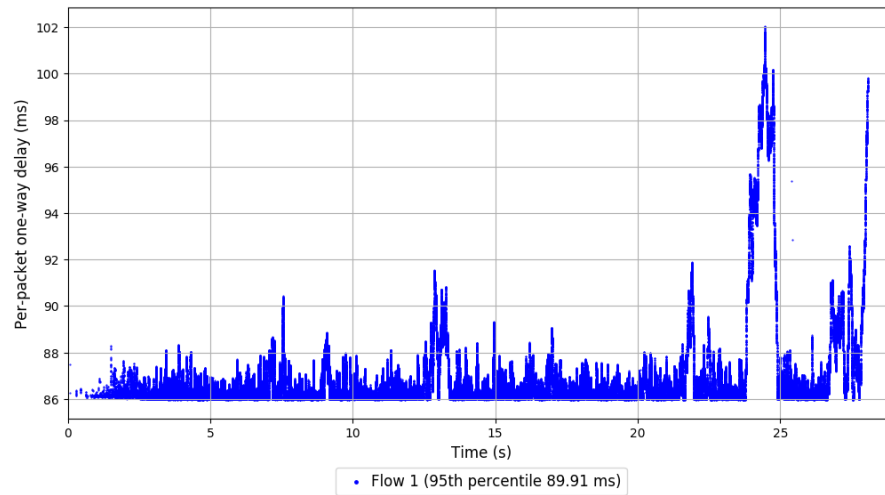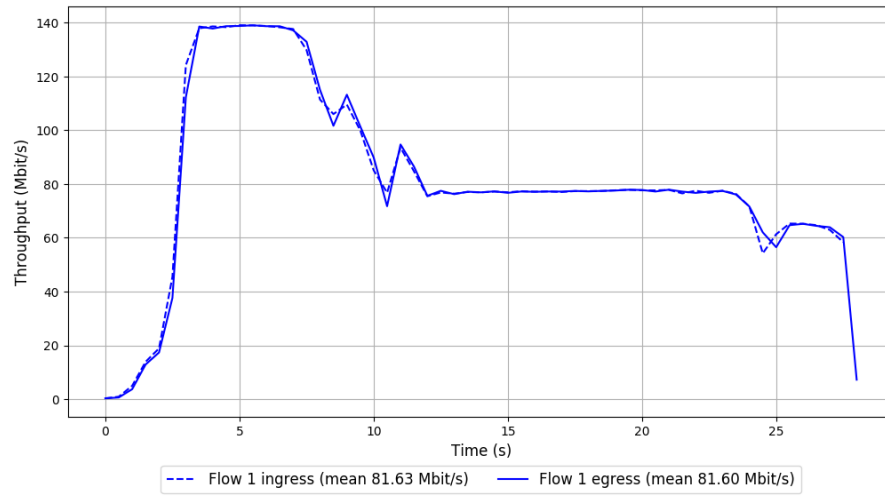Run 1: Report of Copa — Data Link

```
Run 2: Statistics of Copa

Start at: 2017-12-11 14:18:31
End at: 2017-12-11 14:19:01
Local clock offset: -0.388 ms
Remote clock offset: -0.489 ms


# Below is generated by plot.py at 2017-12-11 17:55:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 81.60 Mbit/s
95th percentile per-packet one-way delay: 89.907 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 81.60 Mbit/s
95th percentile per-packet one-way delay: 89.907 ms
Loss rate: 0.03%
```

Run 2: Report of Copa — Data Link

Flow 1 ingress (mean 81.63 Mbit/s) — — — Flow 1 egress (mean 81.60 Mbit/s)

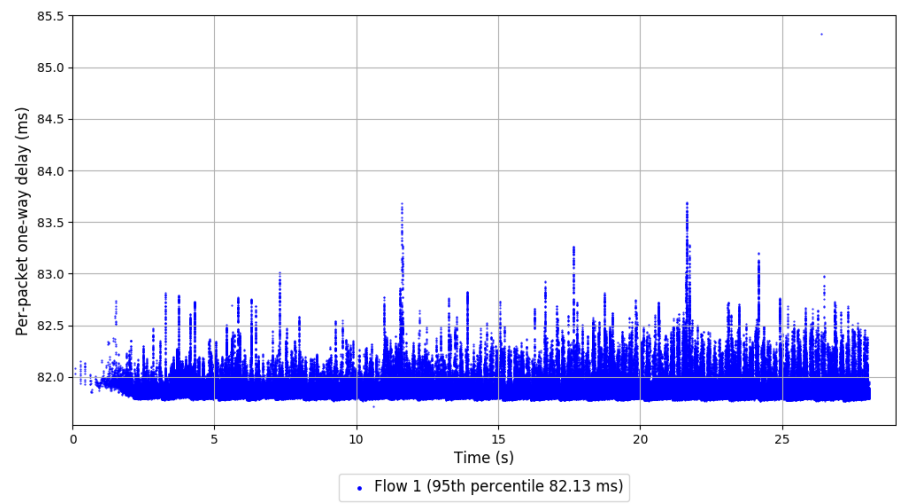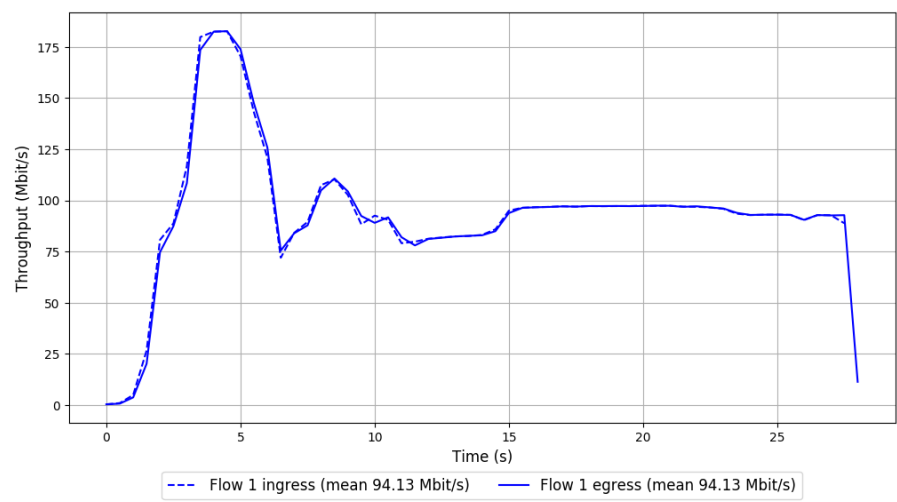Flow 1 (95th percentile 89.91 ms)

```
Run 3: Statistics of Copa

Start at: 2017-12-11 14:36:22
End at: 2017-12-11 14:36:52
Local clock offset: -0.437 ms
Remote clock offset: -3.759 ms


# Below is generated by plot.py at 2017-12-11 17:55:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.13 Mbit/s
95th percentile per-packet one-way delay: 82.127 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 94.13 Mbit/s
95th percentile per-packet one-way delay: 82.127 ms
Loss rate: 0.00%
```

Run 3: Report of Copa — Data Link

Flow 1 ingress (mean 94.13 Mbit/s) --- Flow 1 egress (mean 94.13 Mbit/s)

• Flow 1 (95th percentile 82.13 ms)

```
Run 4: Statistics of Copa

Start at: 2017-12-11 14:54:10
End at: 2017-12-11 14:54:40
Local clock offset: -0.429 ms
Remote clock offset: 1.582 ms


# Below is generated by plot.py at 2017-12-11 17:55:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 52.48 Mbit/s
95th percentile per-packet one-way delay: 89.778 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 52.48 Mbit/s
95th percentile per-packet one-way delay: 89.778 ms
Loss rate: 0.00%
```
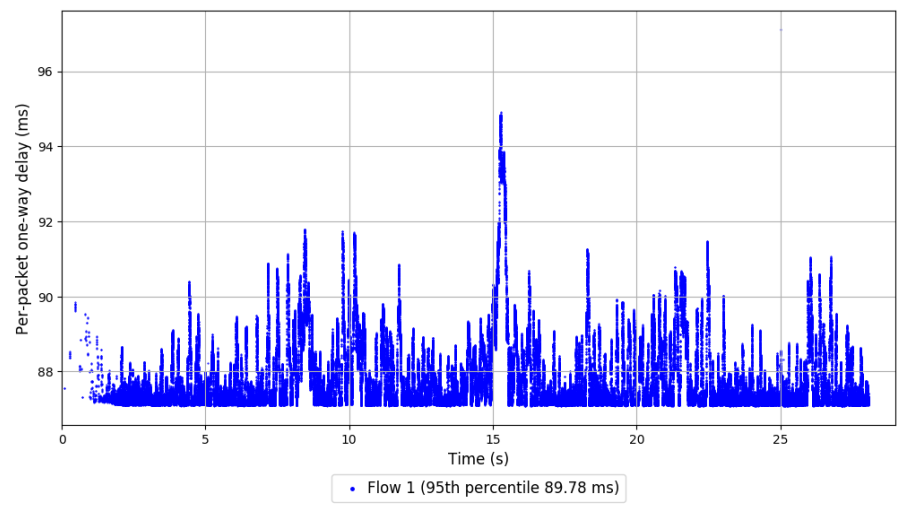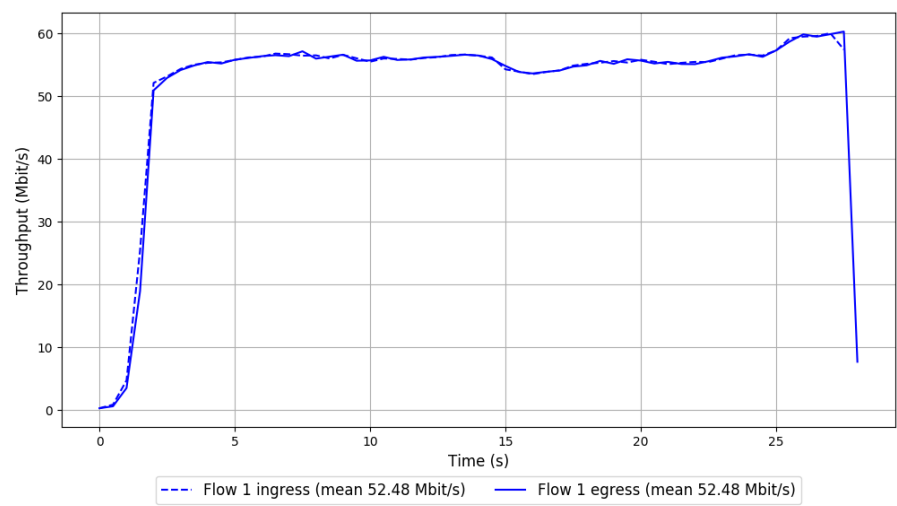
Run 4: Report of Copa — Data Link

Flow 1 ingress (mean 52.48 Mbit/s) ----   Flow 1 egress (mean 52.48 Mbit/s) ——

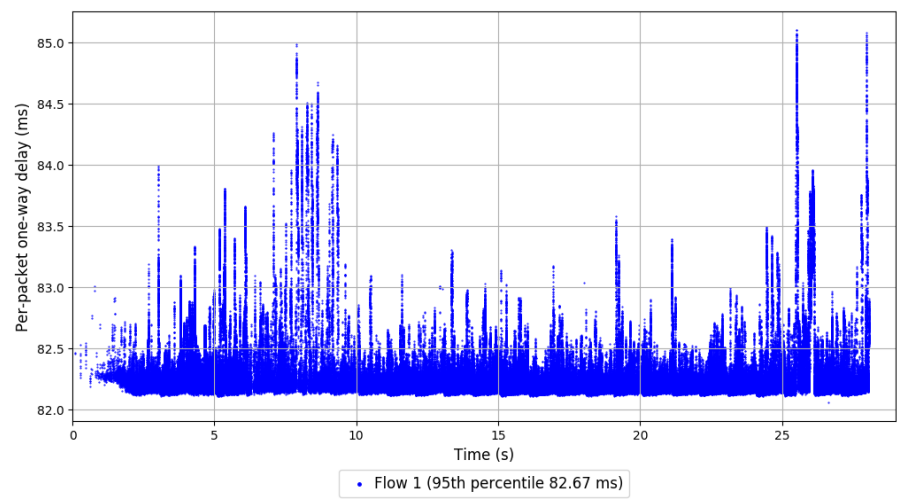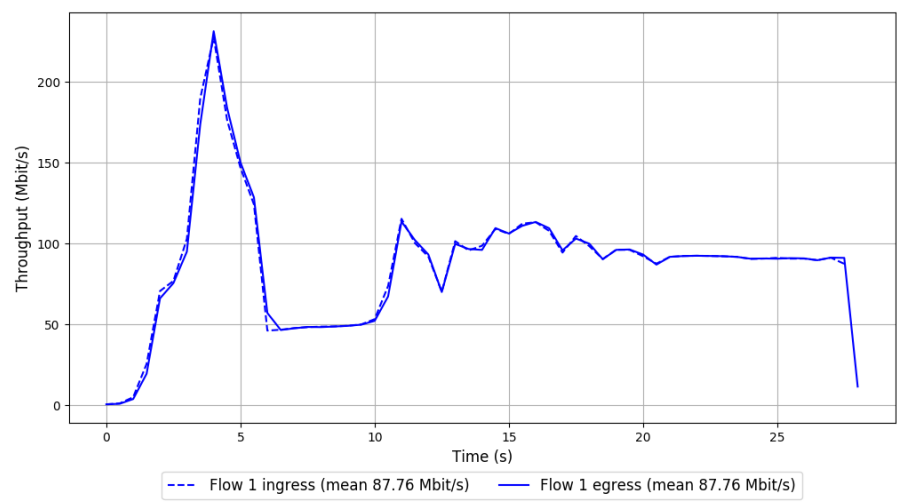• Flow 1 (95th percentile 89.78 ms)

```
Run 5: Statistics of Copa

Start at: 2017-12-11 15:12:16
End at: 2017-12-11 15:12:46
Local clock offset: -0.461 ms
Remote clock offset: -4.811 ms

# Below is generated by plot.py at 2017-12-11 17:56:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.76 Mbit/s
95th percentile per-packet one-way delay: 82.675 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 87.76 Mbit/s
95th percentile per-packet one-way delay: 82.675 ms
Loss rate: 0.00%
```

Run 5: Report of Copa — Data Link

```
Run 6: Statistics of Copa

Start at: 2017-12-11 15:29:58
End at: 2017-12-11 15:30:28
Local clock offset: -0.559 ms
Remote clock offset: 0.971 ms


# Below is generated by plot.py at 2017-12-11 17:56:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 27.00 Mbit/s
95th percentile per-packet one-way delay: 112.532 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 27.00 Mbit/s
95th percentile per-packet one-way delay: 112.532 ms
Loss rate: 0.00%
```
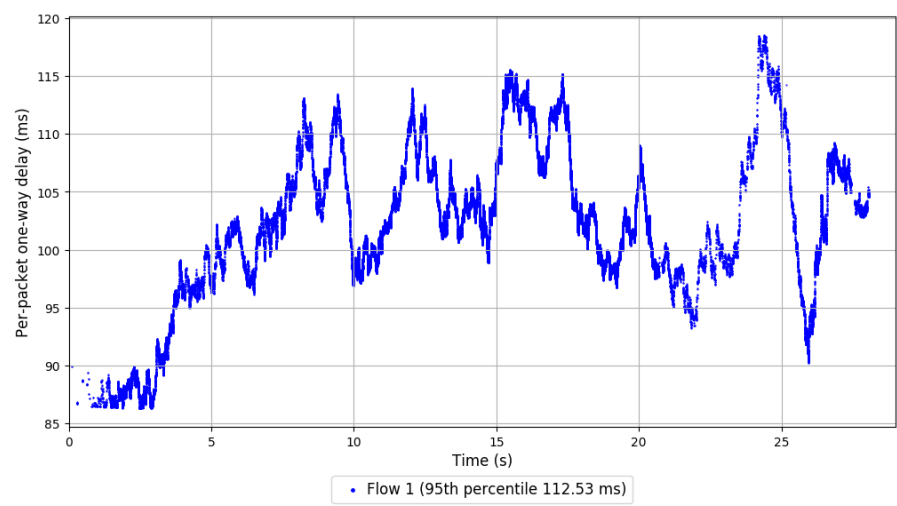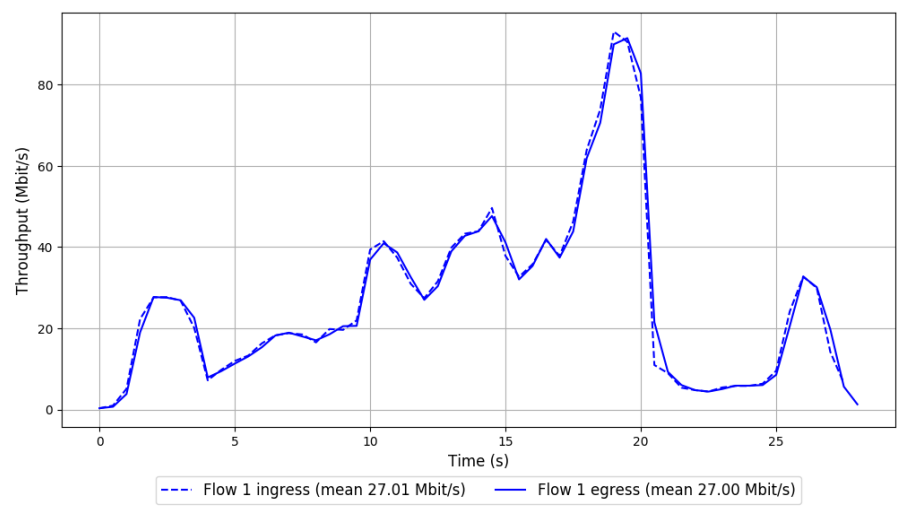
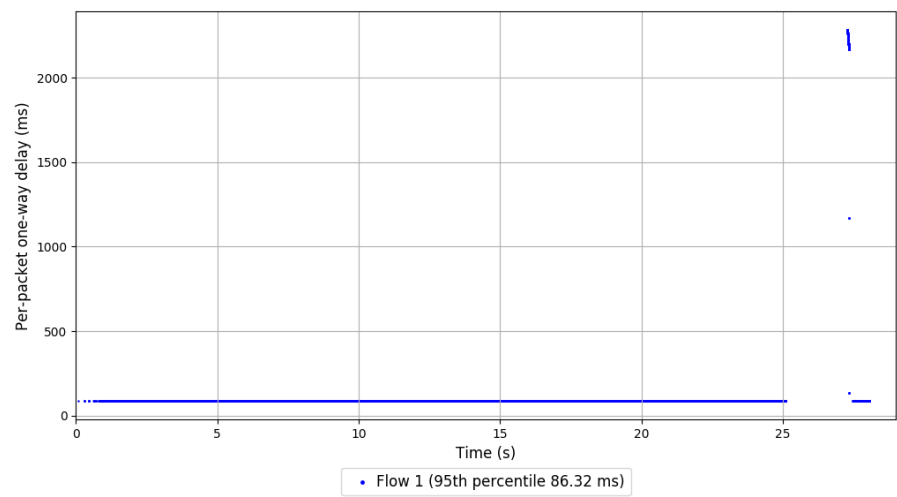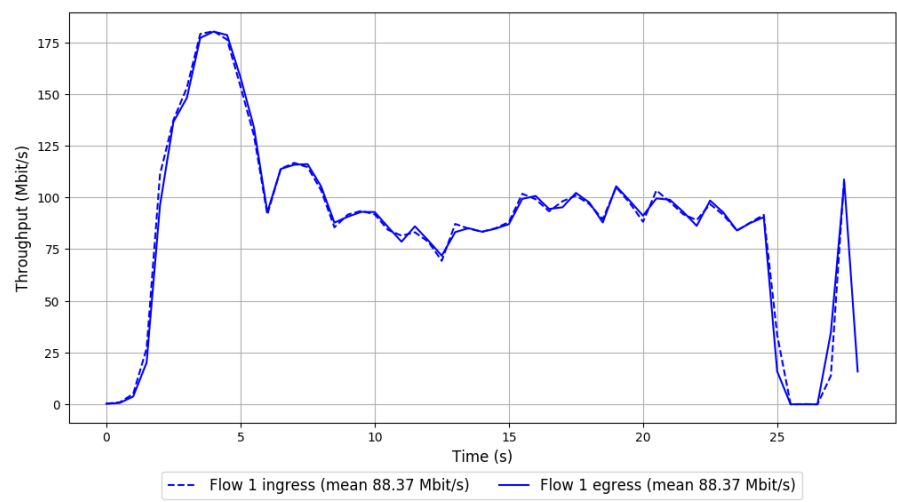Run 6: Report of Copa — Data Link

```
Run 7: Statistics of Copa

Start at: 2017-12-11 15:47:39
End at: 2017-12-11 15:48:09
Local clock offset: -0.471 ms
Remote clock offset: -0.632 ms


# Below is generated by plot.py at 2017-12-11 17:56:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.37 Mbit/s
95th percentile per-packet one-way delay: 86.320 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 88.37 Mbit/s
95th percentile per-packet one-way delay: 86.320 ms
Loss rate: 0.00%
```

Run 7: Report of Copa — Data Link

Flow 1 ingress (mean 88.37 Mbit/s) --- Flow 1 egress (mean 88.37 Mbit/s)

• Flow 1 (95th percentile 86.32 ms)

```
Run 8: Statistics of Copa

Start at: 2017-12-11 16:05:54
End at: 2017-12-11 16:06:24
Local clock offset: -0.466 ms
Remote clock offset: 1.545 ms


# Below is generated by plot.py at 2017-12-11 17:56:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.16 Mbit/s
95th percentile per-packet one-way delay: 86.674 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 92.16 Mbit/s
95th percentile per-packet one-way delay: 86.674 ms
Loss rate: 0.00%
```
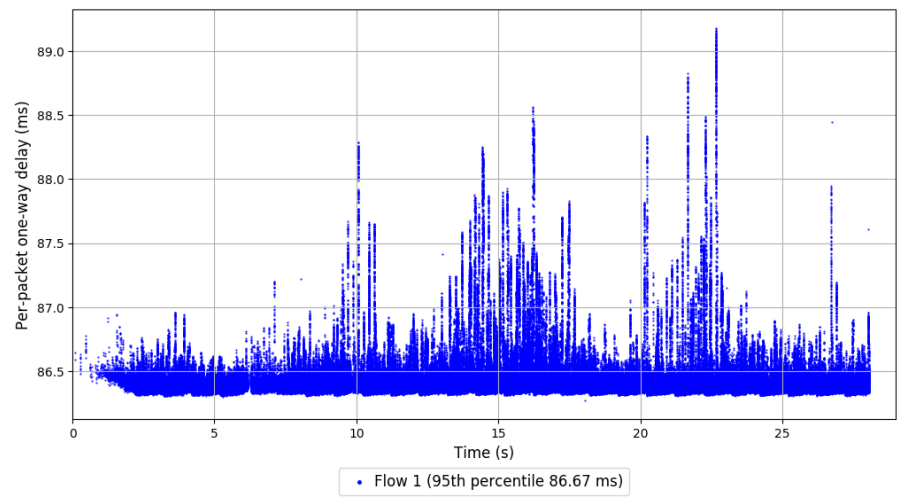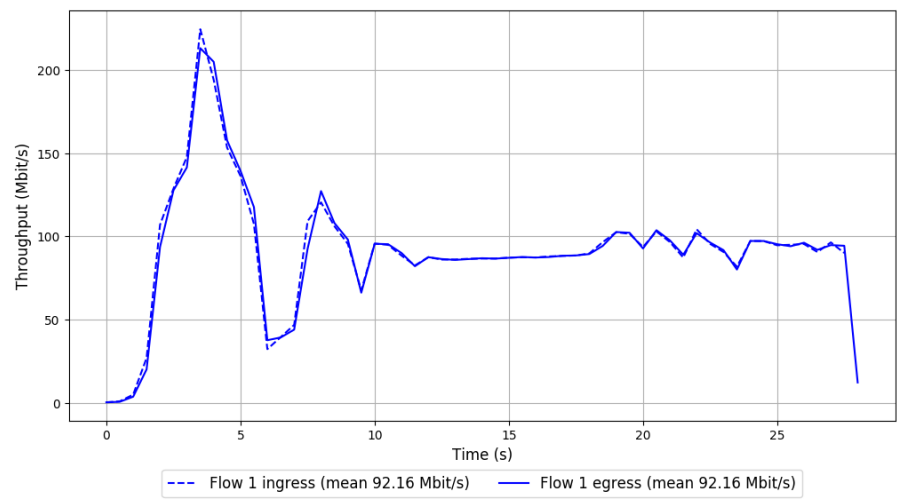
Run 8: Report of Copa — Data Link

```
Run 9: Statistics of Copa

Start at: 2017-12-11 16:24:03
End at: 2017-12-11 16:24:33
Local clock offset: -0.418 ms
Remote clock offset: 0.759 ms


# Below is generated by plot.py at 2017-12-11 17:57:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.10 Mbit/s
95th percentile per-packet one-way delay: 85.767 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 88.10 Mbit/s
95th percentile per-packet one-way delay: 85.767 ms
Loss rate: 0.00%
```
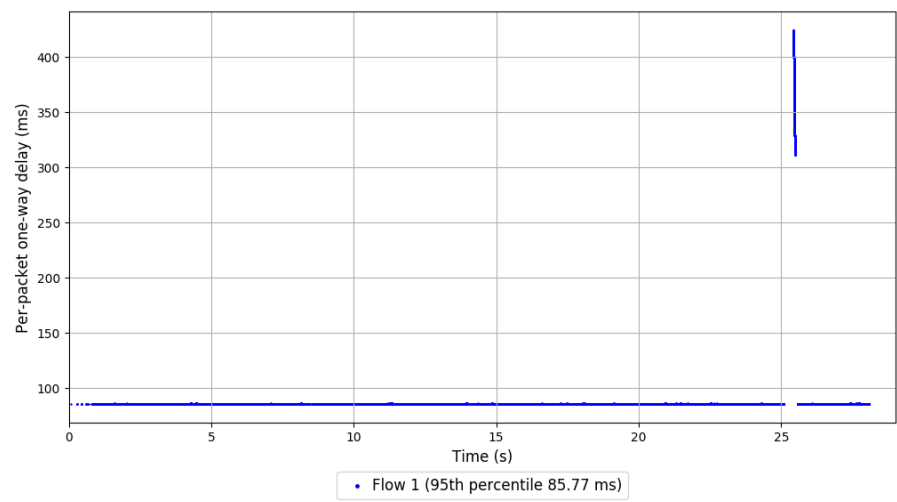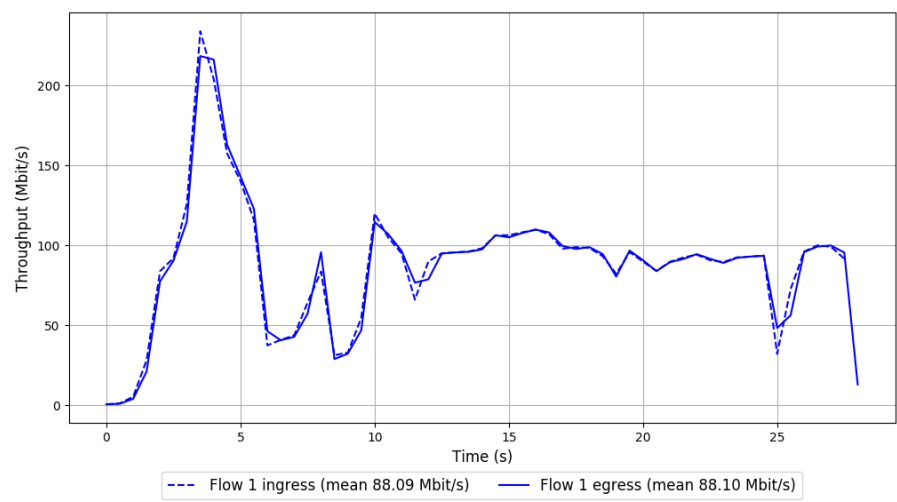
Run 9: Report of Copa — Data Link

Flow 1 ingress (mean 88.09 Mbit/s) ---- Flow 1 egress (mean 88.10 Mbit/s) ——

Flow 1 (95th percentile 85.77 ms)

```
Run 10: Statistics of Copa

Start at: 2017-12-11 16:42:02
End at: 2017-12-11 16:42:32
Local clock offset: -0.439 ms
Remote clock offset: -3.82 ms


# Below is generated by plot.py at 2017-12-11 17:57:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.49 Mbit/s
95th percentile per-packet one-way delay: 80.711 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 92.49 Mbit/s
95th percentile per-packet one-way delay: 80.711 ms
Loss rate: 0.00%
```
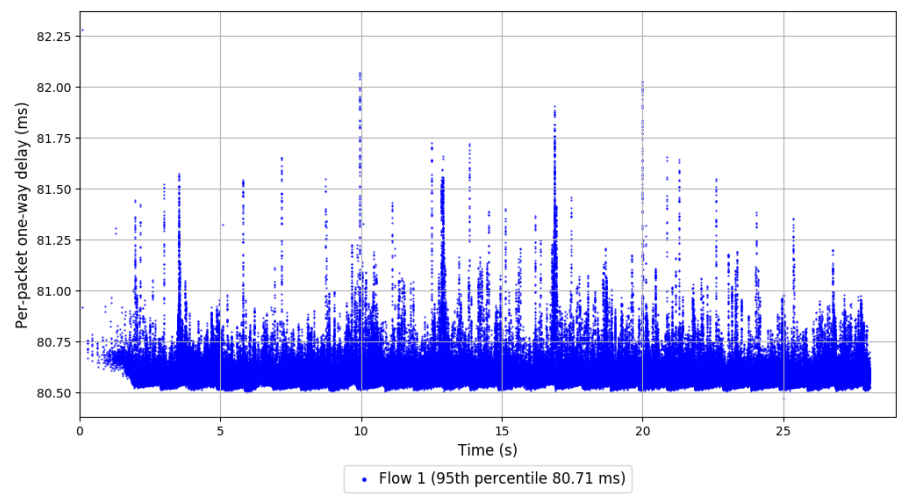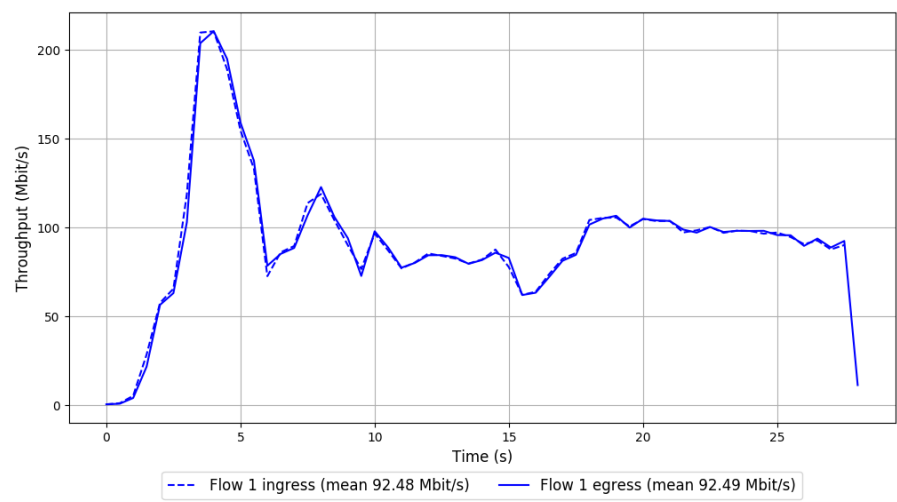
Run 10: Report of Copa — Data Link

Flow 1 ingress (mean 92.48 Mbit/s)   Flow 1 egress (mean 92.49 Mbit/s)
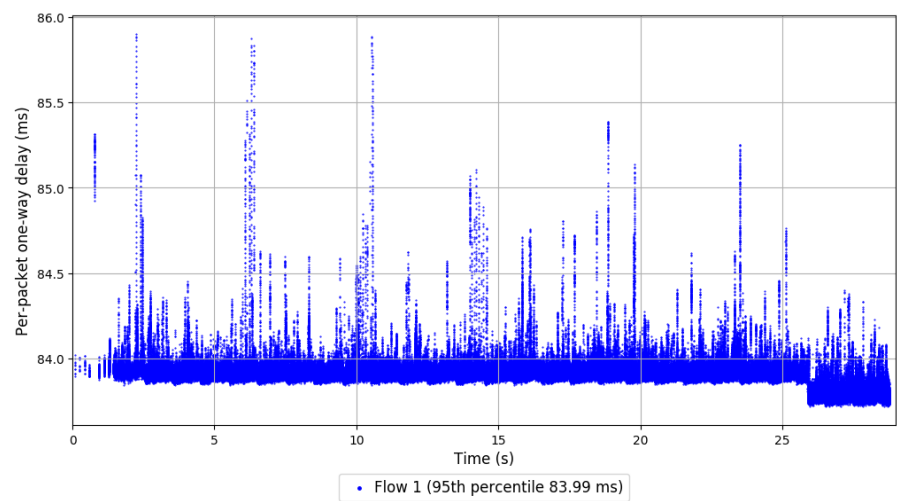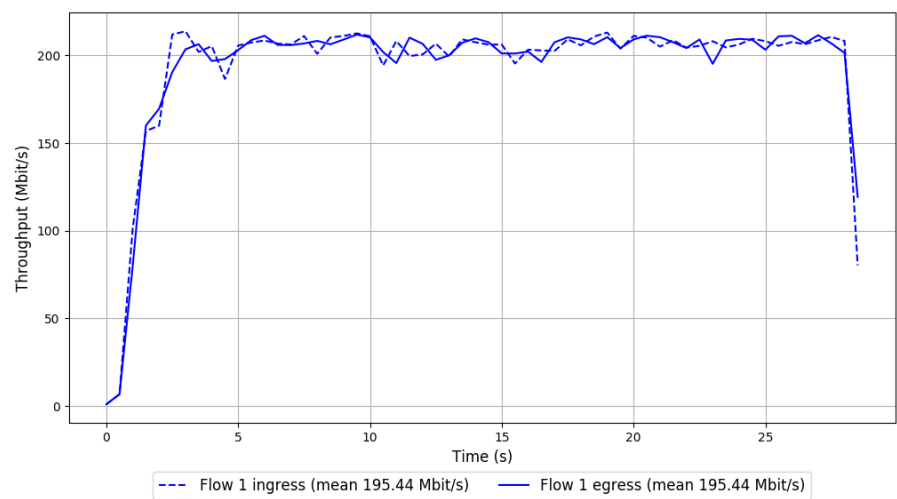

Flow 1 (95th percentile 80.71 ms)

```
Run 1: Statistics of Indigo

Start at: 2017-12-11 14:06:35
End at: 2017-12-11 14:07:05
Local clock offset: -0.402 ms
Remote clock offset: -4.44 ms


# Below is generated by plot.py at 2017-12-11 17:58:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 195.44 Mbit/s
95th percentile per-packet one-way delay: 83.987 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 195.44 Mbit/s
95th percentile per-packet one-way delay: 83.987 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2017-12-11 14:24:44
End at: 2017-12-11 14:25:14
Local clock offset: -0.394 ms
Remote clock offset: 0.463 ms


# Below is generated by plot.py at 2017-12-11 17:58:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 190.27 Mbit/s
95th percentile per-packet one-way delay: 86.805 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 190.27 Mbit/s
95th percentile per-packet one-way delay: 86.805 ms
Loss rate: 0.00%
```
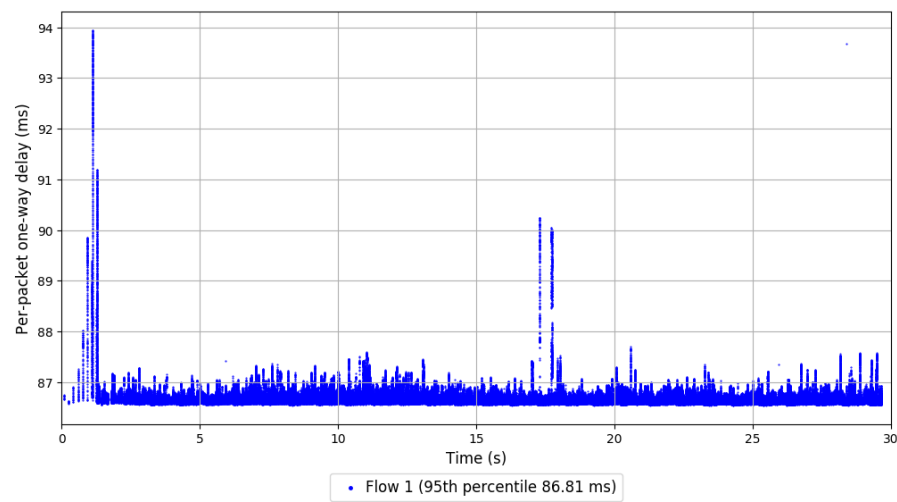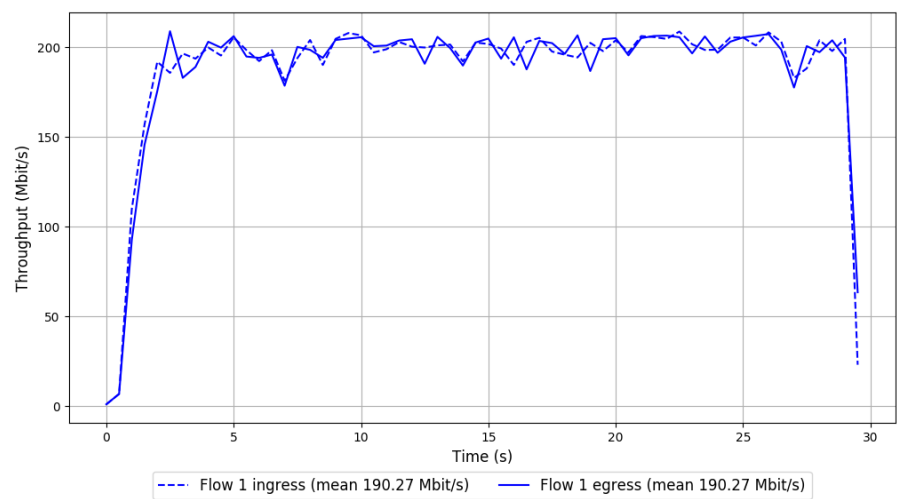
Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2017-12-11 14:42:30
End at: 2017-12-11 14:43:00
Local clock offset: -0.447 ms
Remote clock offset: 1.219 ms


# Below is generated by plot.py at 2017-12-11 17:58:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 192.00 Mbit/s
95th percentile per-packet one-way delay: 88.754 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 192.00 Mbit/s
95th percentile per-packet one-way delay: 88.754 ms
Loss rate: 0.00%
```
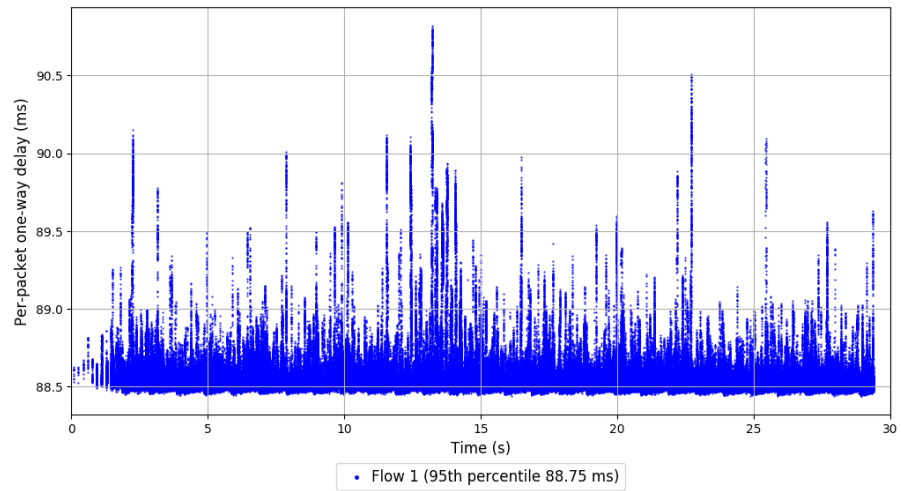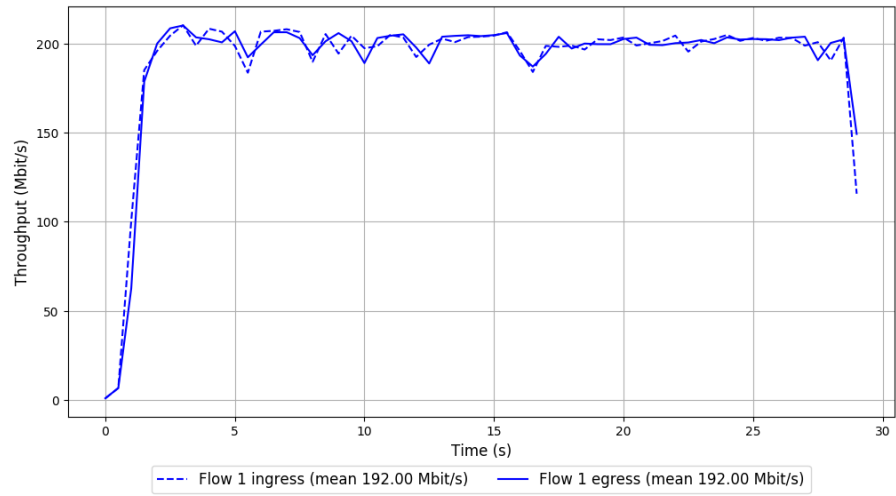
Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2017-12-11 15:00:16
End at: 2017-12-11 15:00:47
Local clock offset: -0.429 ms
Remote clock offset: 0.717 ms


# Below is generated by plot.py at 2017-12-11 17:58:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 192.66 Mbit/s
95th percentile per-packet one-way delay: 90.879 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 192.66 Mbit/s
95th percentile per-packet one-way delay: 90.879 ms
Loss rate: 0.00%
```
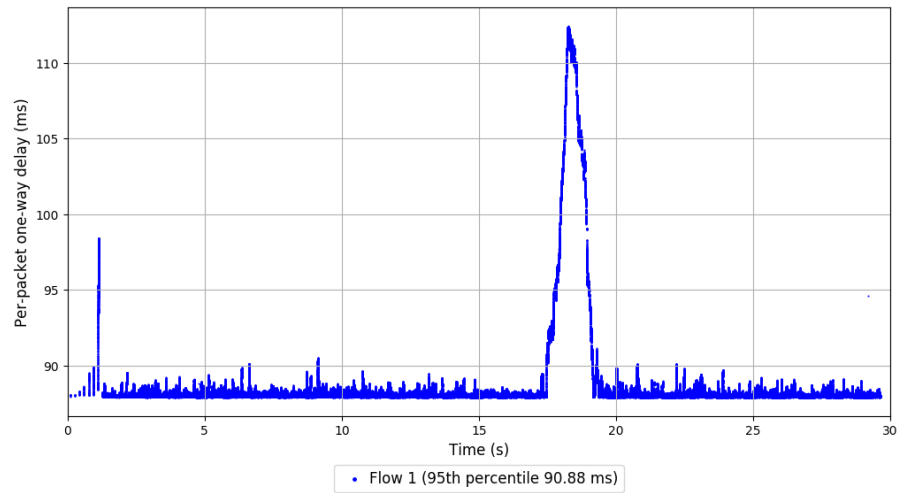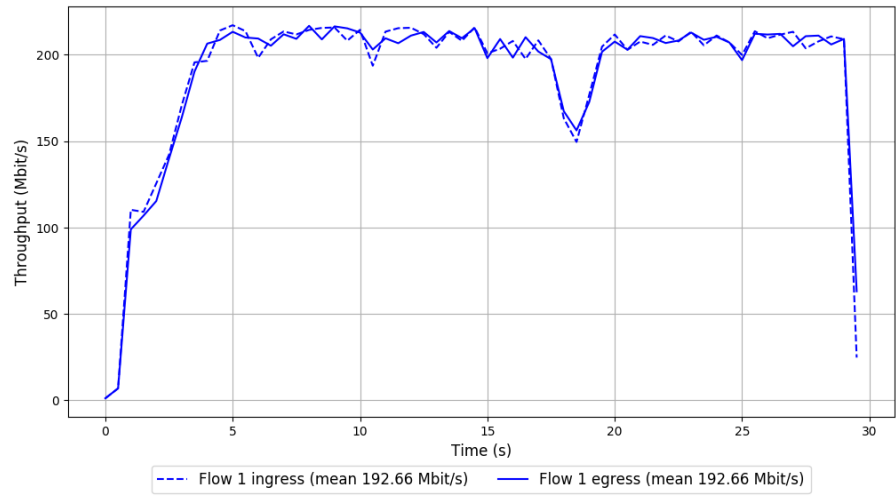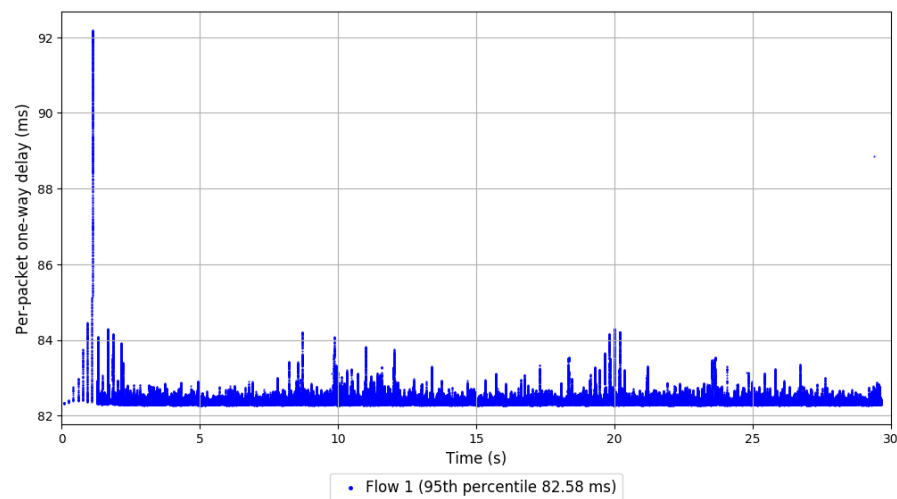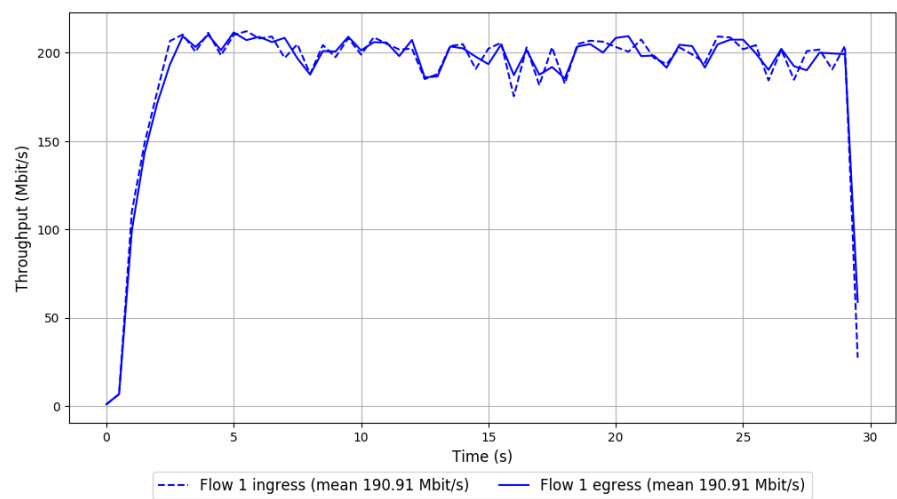
Run 4: Report of Indigo — Data Link

```
Run 5: Statistics of Indigo

Start at: 2017-12-11 15:18:23
End at: 2017-12-11 15:18:53
Local clock offset: -0.459 ms
Remote clock offset: -4.724 ms


# Below is generated by plot.py at 2017-12-11 17:59:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 190.91 Mbit/s
95th percentile per-packet one-way delay: 82.584 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 190.91 Mbit/s
95th percentile per-packet one-way delay: 82.584 ms
Loss rate: 0.00%
```
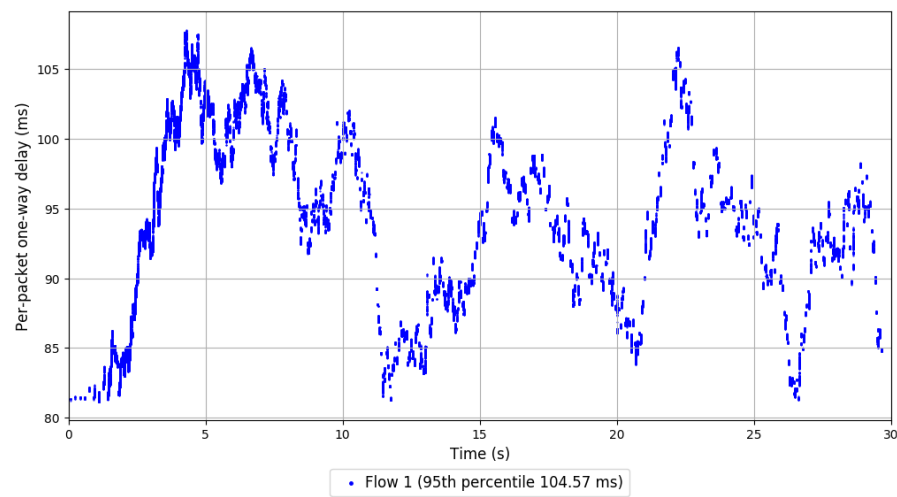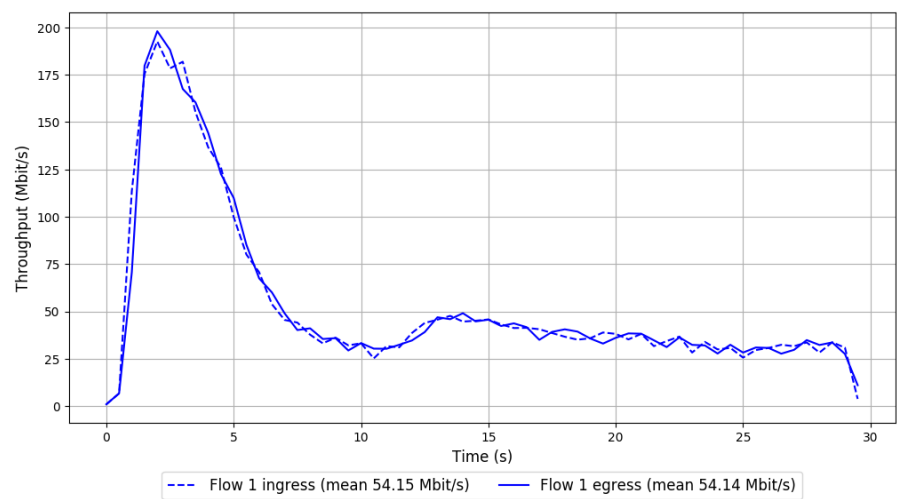
Run 5: Report of Indigo — Data Link

```
Run 6: Statistics of Indigo

Start at: 2017-12-11 15:36:01
End at: 2017-12-11 15:36:31
Local clock offset: -0.489 ms
Remote clock offset: -3.973 ms


# Below is generated by plot.py at 2017-12-11 17:59:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 54.14 Mbit/s
95th percentile per-packet one-way delay: 104.566 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 54.14 Mbit/s
95th percentile per-packet one-way delay: 104.566 ms
Loss rate: 0.00%
```

Run 6: Report of Indigo — Data Link

Flow 1 ingress (mean 54.15 Mbit/s) ----   Flow 1 egress (mean 54.14 Mbit/s) ——

• Flow 1 (95th percentile 104.57 ms)

```
Run 7: Statistics of Indigo

Start at: 2017-12-11 15:53:50
End at: 2017-12-11 15:54:20
Local clock offset: -0.488 ms
Remote clock offset: 1.432 ms


# Below is generated by plot.py at 2017-12-11 17:59:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 189.19 Mbit/s
95th percentile per-packet one-way delay: 88.131 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 189.19 Mbit/s
95th percentile per-packet one-way delay: 88.131 ms
Loss rate: 0.00%
```
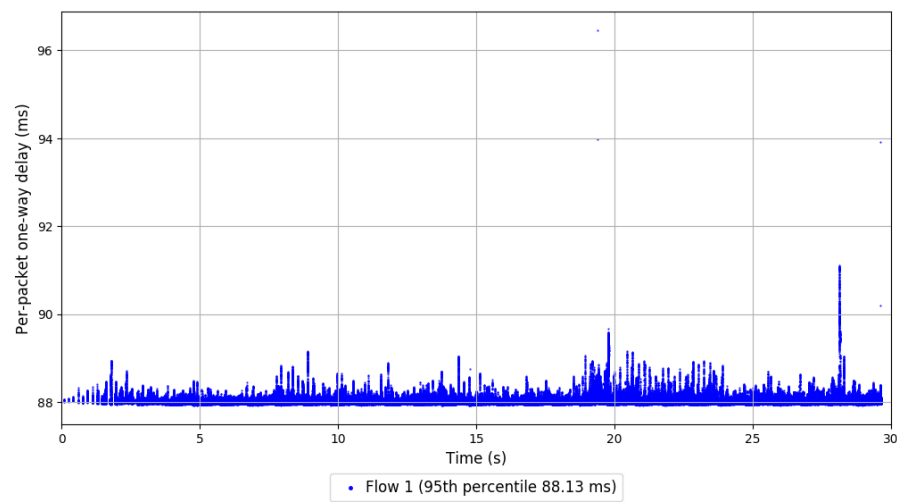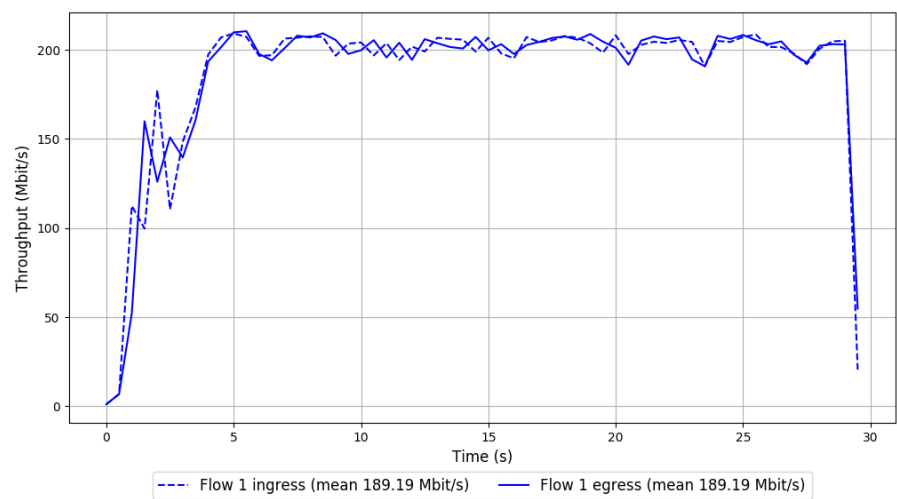
Run 7: Report of Indigo — Data Link

```
Run 8: Statistics of Indigo

Start at: 2017-12-11 16:12:05
End at: 2017-12-11 16:12:35
Local clock offset: -0.453 ms
Remote clock offset: 2.34 ms


# Below is generated by plot.py at 2017-12-11 17:59:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 191.80 Mbit/s
95th percentile per-packet one-way delay: 87.765 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 191.80 Mbit/s
95th percentile per-packet one-way delay: 87.765 ms
Loss rate: 0.00%
```
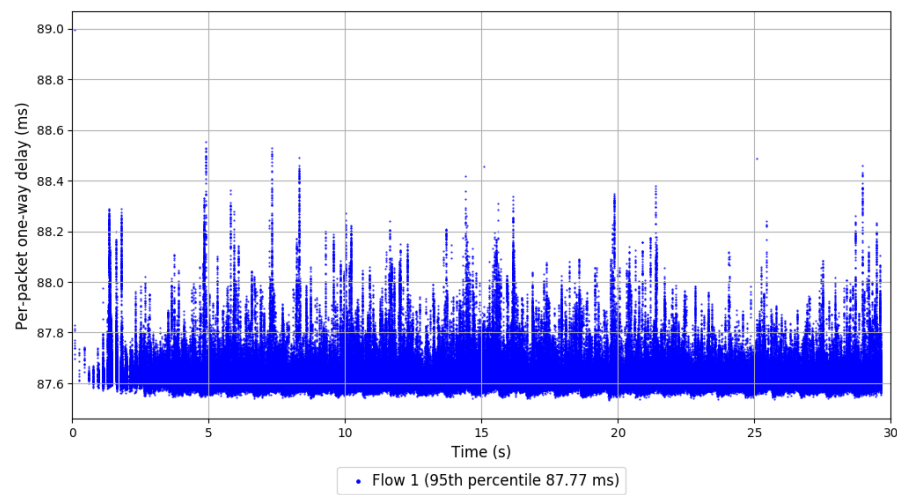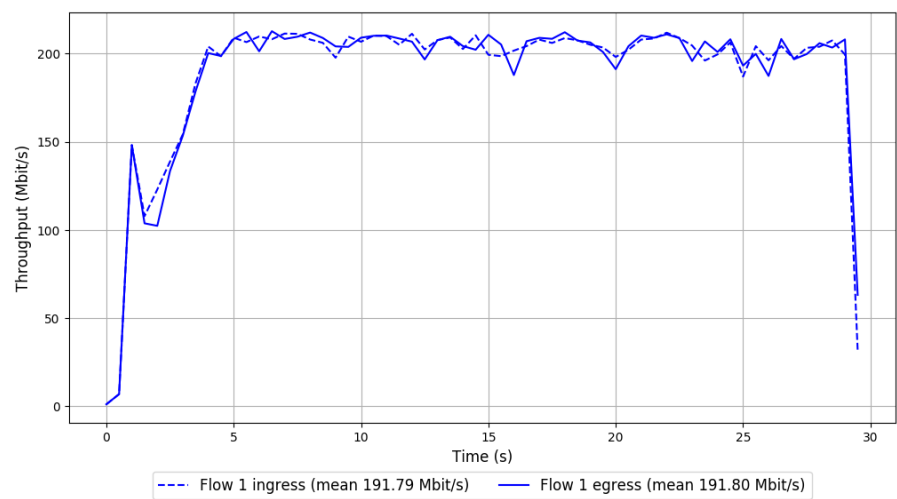
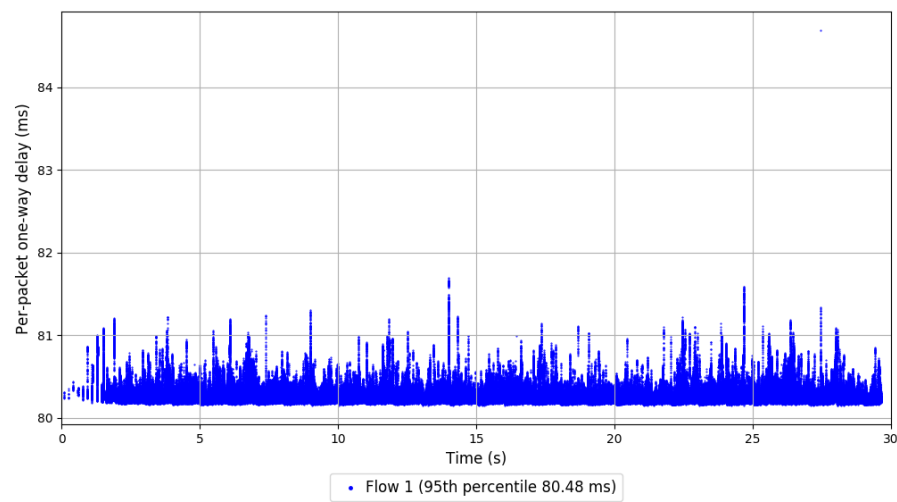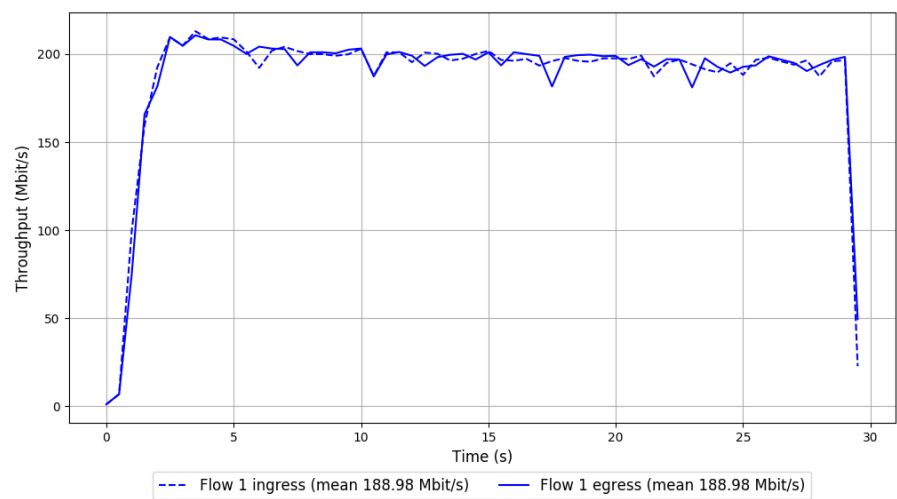## Run 8: Report of Indigo — Data Link

```
Run 9: Statistics of Indigo

Start at: 2017-12-11 16:30:14
End at: 2017-12-11 16:30:44
Local clock offset: -0.404 ms
Remote clock offset: -4.846 ms


# Below is generated by plot.py at 2017-12-11 18:00:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 188.98 Mbit/s
95th percentile per-packet one-way delay: 80.476 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 188.98 Mbit/s
95th percentile per-packet one-way delay: 80.476 ms
Loss rate: 0.00%
```
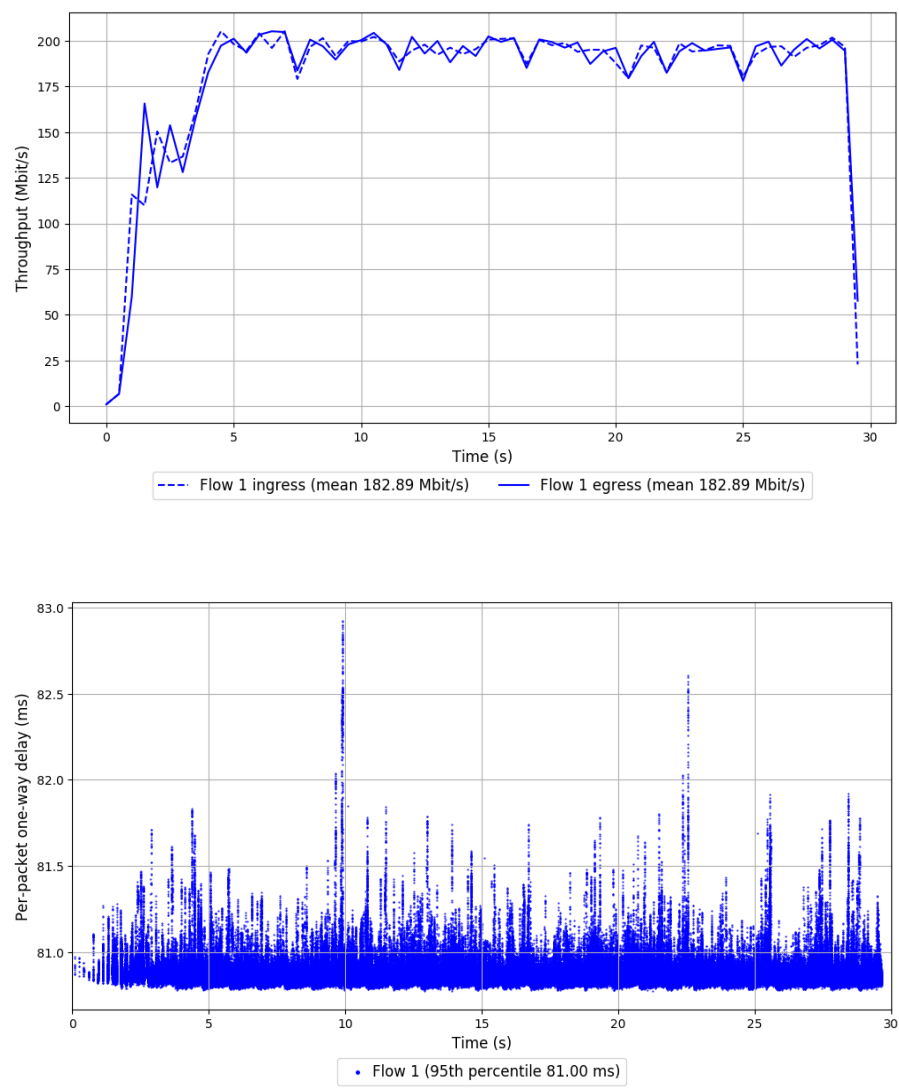
Run 9: Report of Indigo — Data Link

```
Run 10: Statistics of Indigo

Start at: 2017-12-11 16:48:13
End at: 2017-12-11 16:48:43
Local clock offset: -0.373 ms
Remote clock offset: -5.595 ms


# Below is generated by plot.py at 2017-12-11 18:00:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 182.89 Mbit/s
95th percentile per-packet one-way delay: 81.004 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 182.89 Mbit/s
95th percentile per-packet one-way delay: 81.004 ms
Loss rate: 0.00%
```
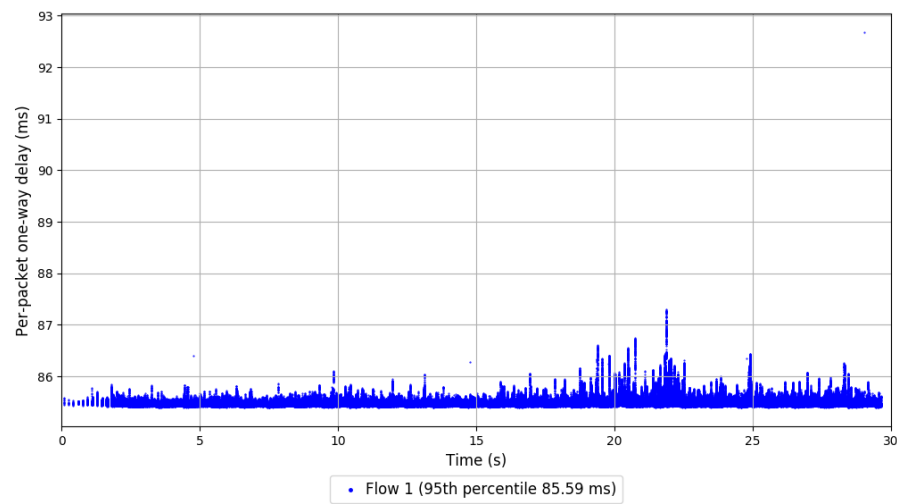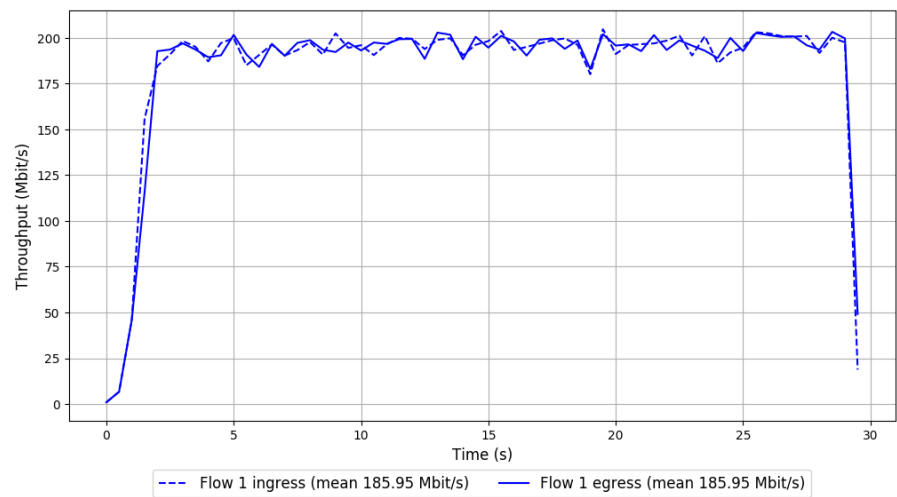
Run 10: Report of Indigo — Data Link

```
Run 1: Statistics of Indigo-calib

Start at: 2017-12-11 13:59:00
End at: 2017-12-11 13:59:31
Local clock offset: -0.401 ms
Remote clock offset: -1.005 ms


# Below is generated by plot.py at 2017-12-11 18:01:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 185.95 Mbit/s
95th percentile per-packet one-way delay: 85.587 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 185.95 Mbit/s
95th percentile per-packet one-way delay: 85.587 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo-calib — Data Link

```
Run 2: Statistics of Indigo-calib

Start at: 2017-12-11 14:17:08
End at: 2017-12-11 14:17:38
Local clock offset: -0.464 ms
Remote clock offset: 1.122 ms


# Below is generated by plot.py at 2017-12-11 18:01:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 187.45 Mbit/s
95th percentile per-packet one-way delay: 90.848 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 187.45 Mbit/s
95th percentile per-packet one-way delay: 90.848 ms
Loss rate: 0.02%
```
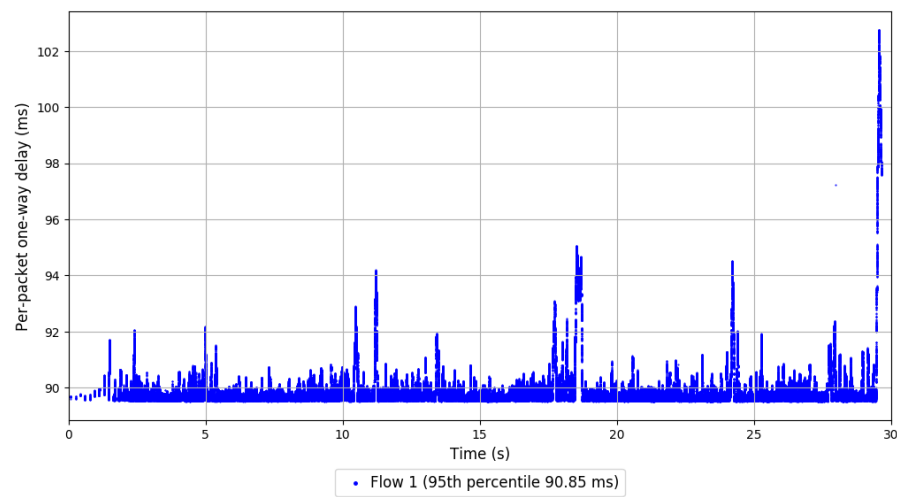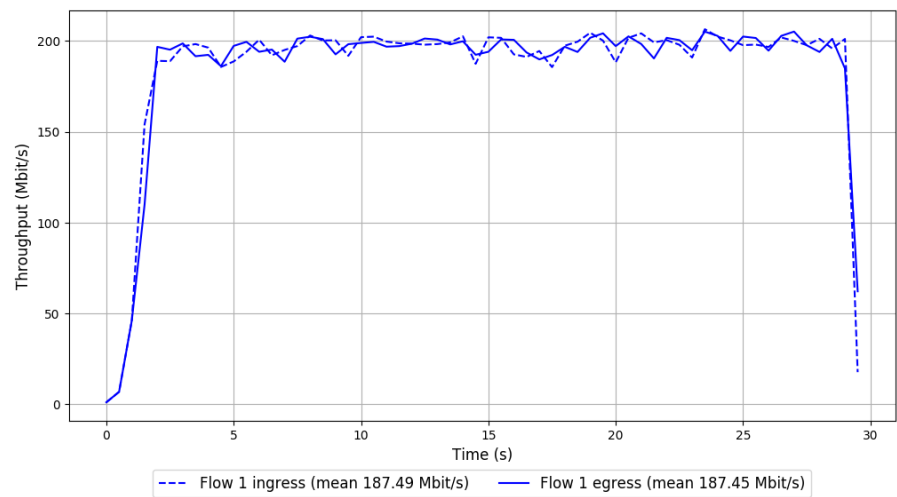
Run 2: Report of Indigo-calib — Data Link

Flow 1 ingress (mean 187.49 Mbit/s)   Flow 1 egress (mean 187.45 Mbit/s)
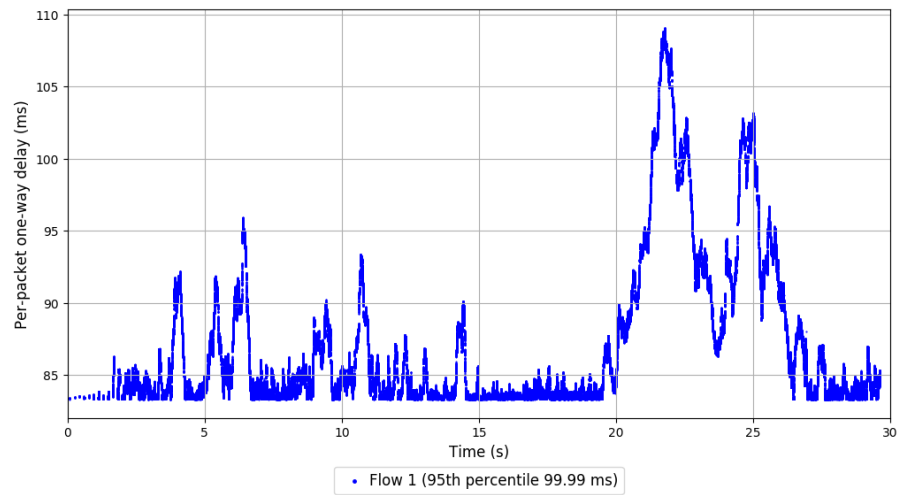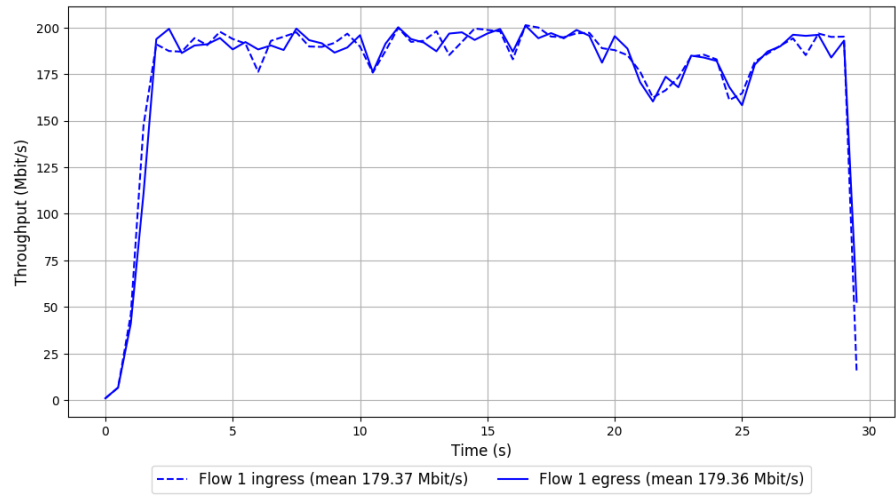

Flow 1 (95th percentile 90.85 ms)

```
Run 3: Statistics of Indigo-calib

Start at: 2017-12-11 14:35:01
End at: 2017-12-11 14:35:31
Local clock offset: -0.426 ms
Remote clock offset: -4.238 ms

# Below is generated by plot.py at 2017-12-11 18:01:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 179.36 Mbit/s
95th percentile per-packet one-way delay: 99.988 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 179.36 Mbit/s
95th percentile per-packet one-way delay: 99.988 ms
Loss rate: 0.00%
```

Run 3: Report of Indigo-calib — Data Link

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```
Run 4: Statistics of Indigo-calib

Start at: 2017-12-11 14:52:49
End at: 2017-12-11 14:53:19
Local clock offset: -0.426 ms
Remote clock offset: 0.712 ms


# Below is generated by plot.py at 2017-12-11 18:02:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 186.34 Mbit/s
95th percentile per-packet one-way delay: 87.570 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 186.34 Mbit/s
95th percentile per-packet one-way delay: 87.570 ms
Loss rate: 0.00%
```
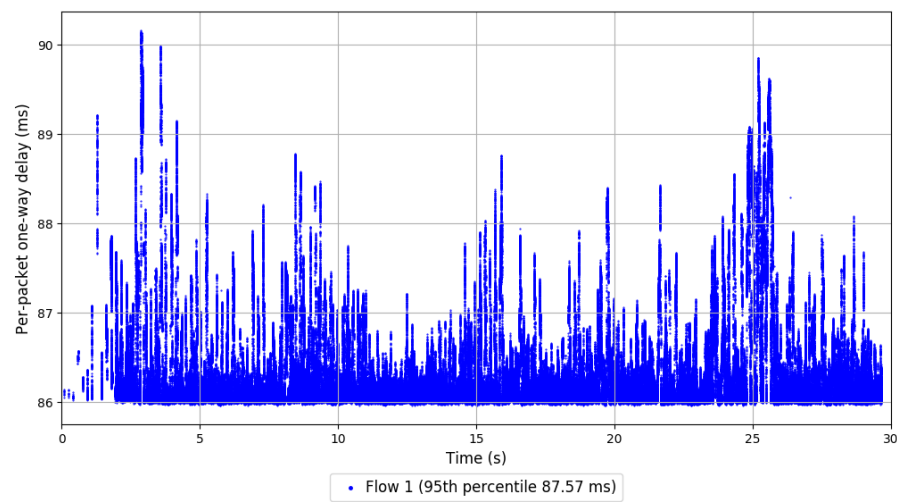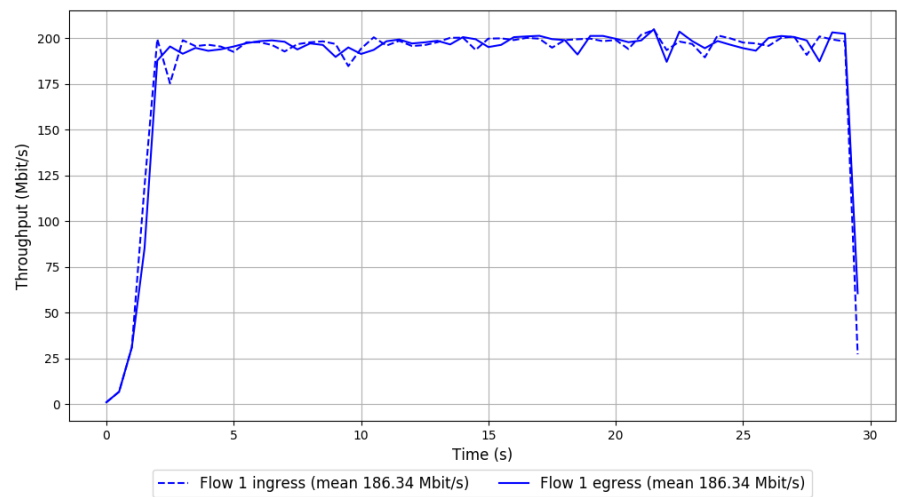
Run 4: Report of Indigo-calib — Data Link

```
Run 5: Statistics of Indigo-calib

Start at: 2017-12-11 15:10:54
End at: 2017-12-11 15:11:24
Local clock offset: -0.543 ms
Remote clock offset: -4.809 ms


# Below is generated by plot.py at 2017-12-11 18:02:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 188.62 Mbit/s
95th percentile per-packet one-way delay: 81.031 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 188.62 Mbit/s
95th percentile per-packet one-way delay: 81.031 ms
Loss rate: 0.00%
```
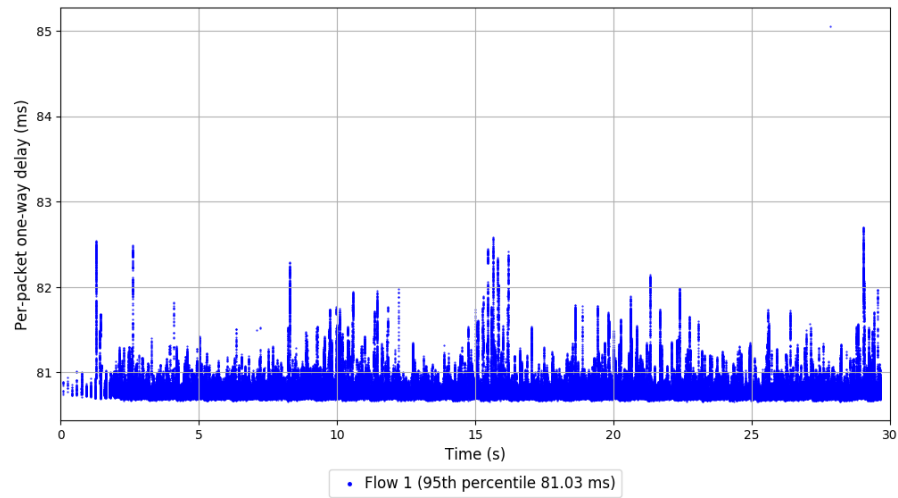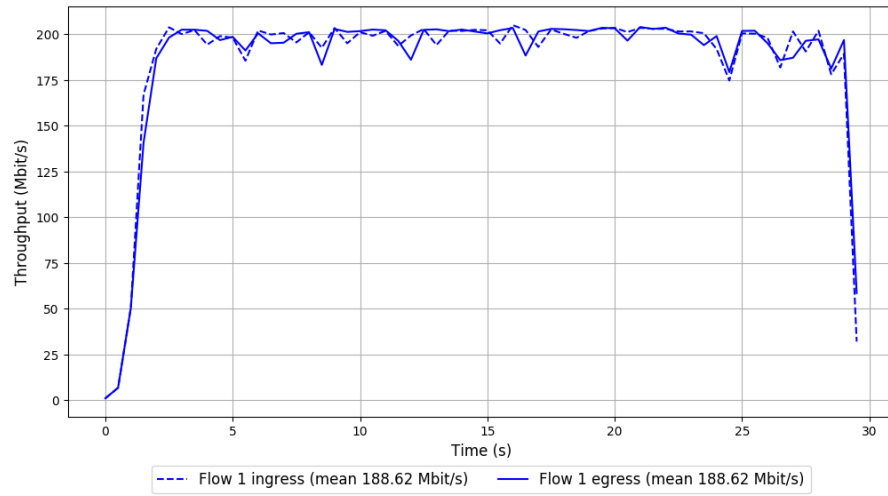
Run 5: Report of Indigo-calib — Data Link

```
Run 6: Statistics of Indigo-calib

Start at: 2017-12-11 15:28:36
End at: 2017-12-11 15:29:06
Local clock offset: -0.482 ms
Remote clock offset: 1.803 ms


# Below is generated by plot.py at 2017-12-11 18:02:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 189.45 Mbit/s
95th percentile per-packet one-way delay: 88.876 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 189.45 Mbit/s
95th percentile per-packet one-way delay: 88.876 ms
Loss rate: 0.00%
```
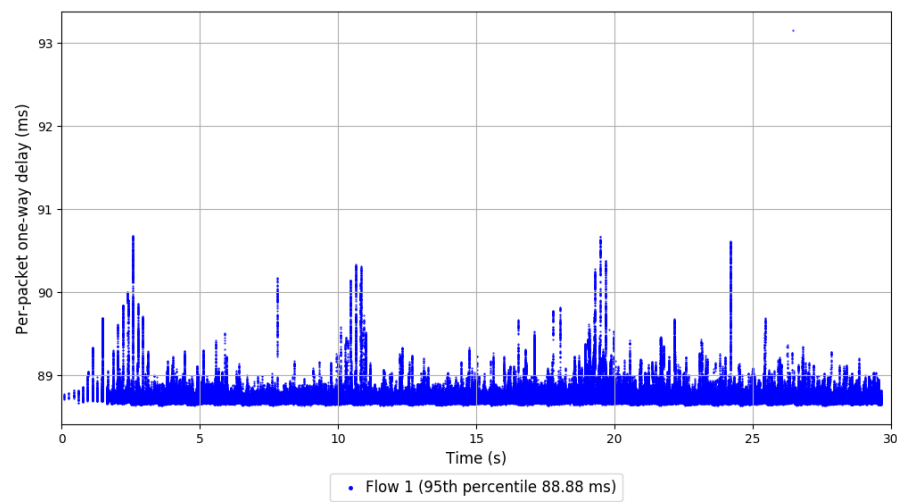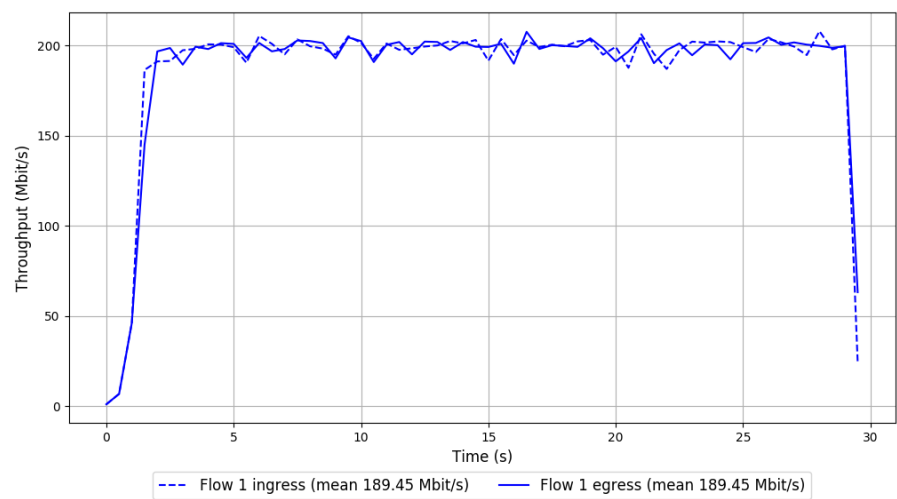
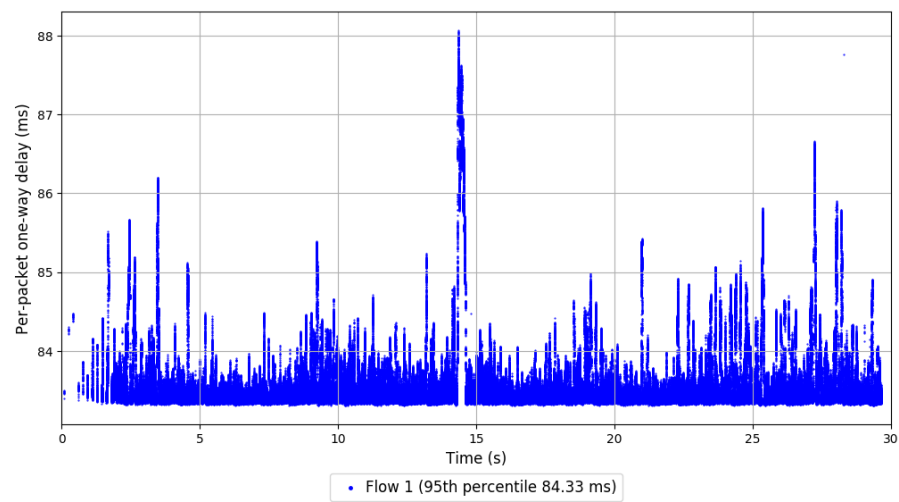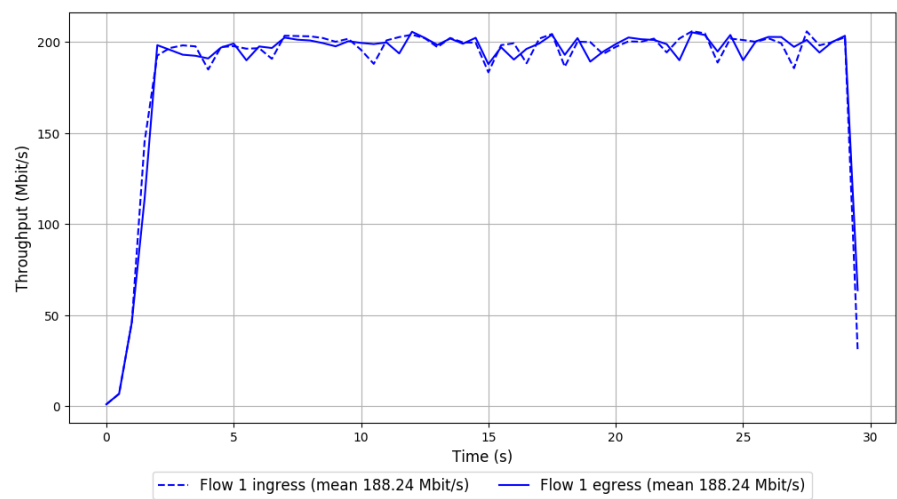## Run 6: Report of Indigo-calib — Data Link

```
Run 7: Statistics of Indigo-calib

Start at: 2017-12-11 15:46:17
End at: 2017-12-11 15:46:47
Local clock offset: -0.457 ms
Remote clock offset: -3.411 ms


# Below is generated by plot.py at 2017-12-11 18:02:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 188.24 Mbit/s
95th percentile per-packet one-way delay: 84.326 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 188.24 Mbit/s
95th percentile per-packet one-way delay: 84.326 ms
Loss rate: 0.00%
```

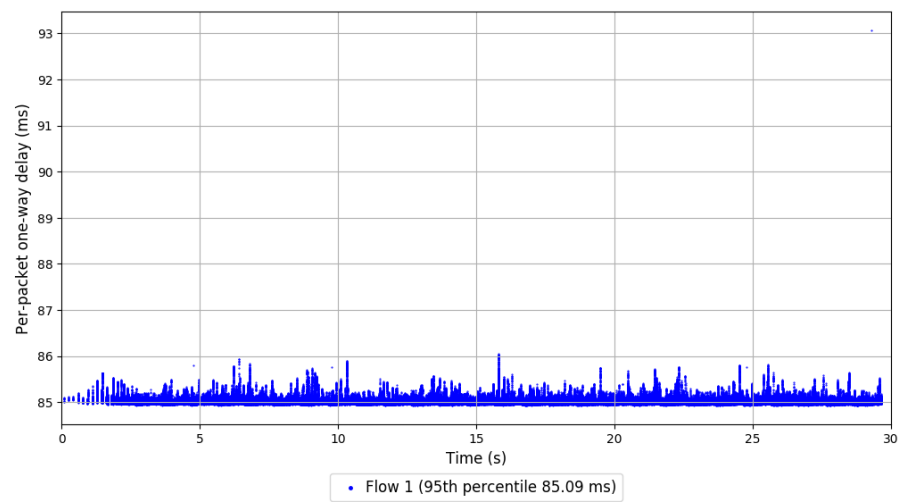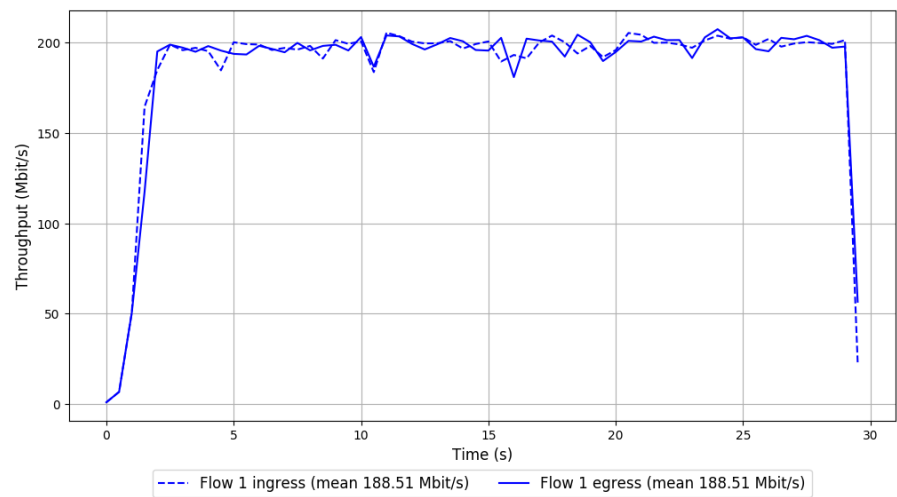Run 7: Report of Indigo-calib — Data Link

```
Run 8: Statistics of Indigo-calib

Start at: 2017-12-11 16:04:31
End at: 2017-12-11 16:05:01
Local clock offset: -0.501 ms
Remote clock offset: -1.844 ms


# Below is generated by plot.py at 2017-12-11 18:02:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 188.51 Mbit/s
95th percentile per-packet one-way delay: 85.093 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 188.51 Mbit/s
95th percentile per-packet one-way delay: 85.093 ms
Loss rate: 0.00%
```

Run 8: Report of Indigo-calib — Data Link

```
Run 9: Statistics of Indigo-calib

Start at: 2017-12-11 16:22:41
End at: 2017-12-11 16:23:11
Local clock offset: -0.396 ms
Remote clock offset: 1.514 ms


# Below is generated by plot.py at 2017-12-11 18:02:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 187.61 Mbit/s
95th percentile per-packet one-way delay: 86.788 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 187.61 Mbit/s
95th percentile per-packet one-way delay: 86.788 ms
Loss rate: 0.00%
```
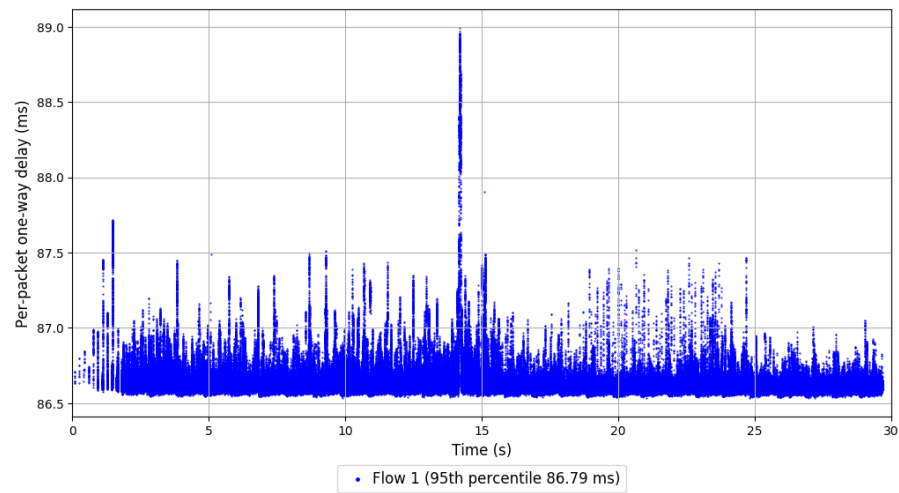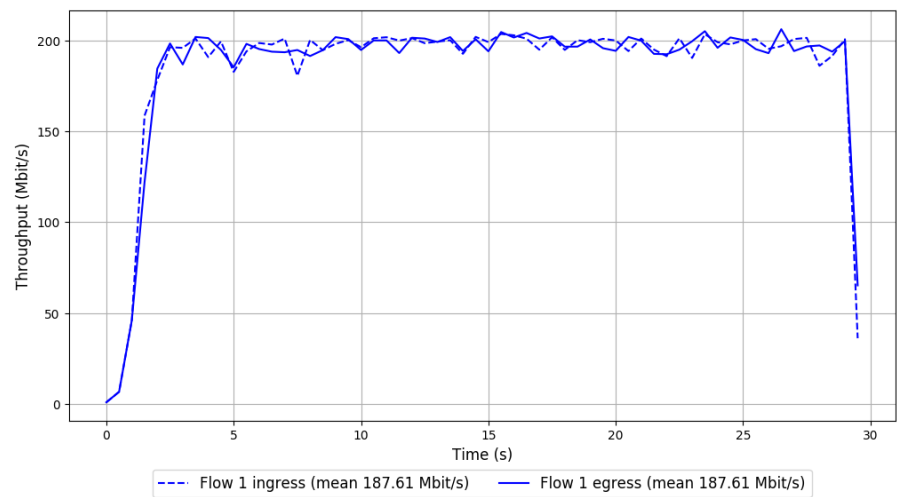
Run 9: Report of Indigo-calib — Data Link

Flow 1 ingress (mean 187.61 Mbit/s)   Flow 1 egress (mean 187.61 Mbit/s)

Flow 1 (95th percentile 86.79 ms)

```
Run 10: Statistics of Indigo-calib

Start at: 2017-12-11 16:40:40
End at: 2017-12-11 16:41:10
Local clock offset: -0.437 ms
Remote clock offset: -6.157 ms


# Below is generated by plot.py at 2017-12-11 18:02:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 185.92 Mbit/s
95th percentile per-packet one-way delay: 80.367 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 185.92 Mbit/s
95th percentile per-packet one-way delay: 80.367 ms
Loss rate: 0.00%
```

Run 10: Report of Indigo-calib — Data Link