Pantheon Report

Generated at 2017-09-21 18:51:03 (UTC).

Data path: GCE London Ethernet (*remote*) →GCE Iowa Ethernet (*local*).

Repeated the test of 14 congestion control schemes 10 times.

Each test lasted for 30 seconds running 1 flow.
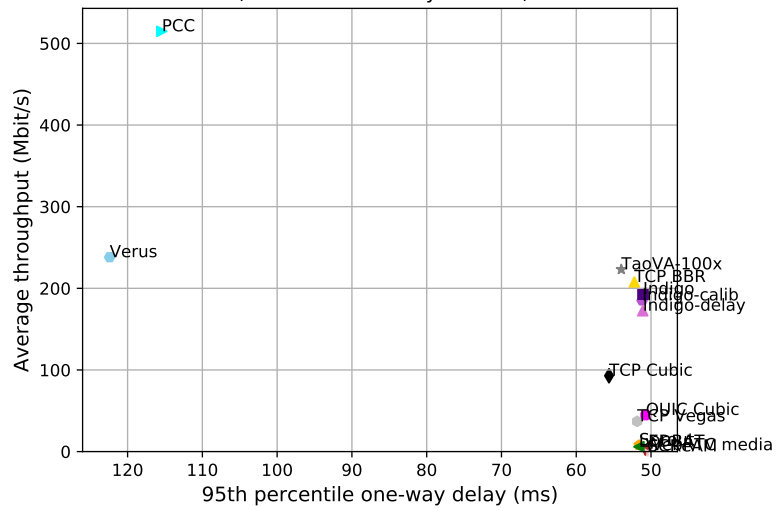
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

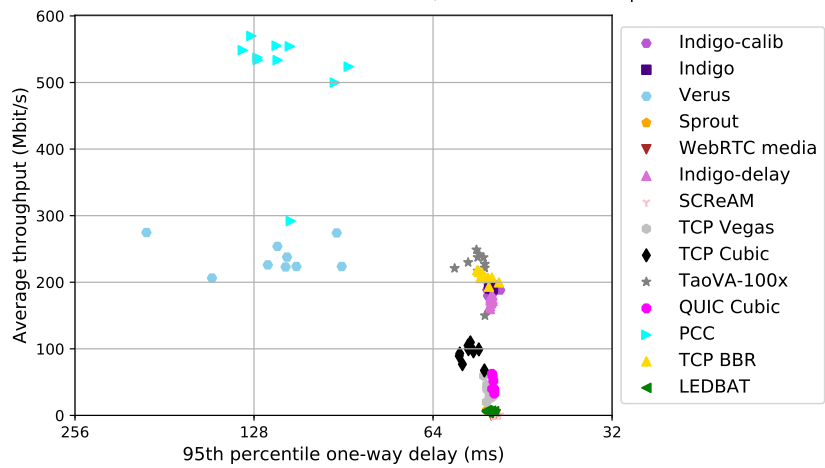Tested BBR with qdisc of Fair Queuing (`fq`), and other schemes with the default Linux qdisc (`pfifo_fast`).

```
Git summary:
branch: indigos @ 46c7c812d4acb71eea4f5fb0b03b3657cea3062f
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
 M datagrump/sender.cc
third_party/genericCC @ f7ca42f251bf49b432bb71de6d13fa903515c366
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 GCE London Ethernet to GCE Iowa Ethernet, 10 runs of 30s each per scheme (mean of all runs by scheme)

test from GCE London Ethernet to GCE Iowa Ethernet, 10 runs of 30s each per scheme

2

scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	10	207.73	52.23	0.39
TCP Cubic	9	92.90	55.62	0.25
LEDBAT	10	5.96	51.62	0.77
PCC	10	514.83	115.42	1.35
QUIC Cubic	9	44.91	50.69	0.60
SCReAM	9	0.22	50.47	0.38
WebRTC media	7	1.72	50.75	0.39
Sprout	10	7.92	51.60	0.47
TaoVA-100x	10	223.20	53.97	0.39
TCP Vegas	7	37.05	51.85	0.29
Verus	9	238.13	122.40	2.52
Indigo	10	192.82	51.07	0.35
Indigo-calib	10	185.17	51.19	0.33
Indigo-delay	10	172.57	51.11	0.36

```
Run 1: Statistics of TCP BBR

Start at: 2017-09-21 14:31:37
End at: 2017-09-21 14:32:07

# Below is generated by plot.py at 2017-09-21 18:03:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 199.83 Mbit/s
95th percentile per-packet one-way delay: 49.586 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 199.83 Mbit/s
95th percentile per-packet one-way delay: 49.586 ms
Loss rate: 0.40%
```
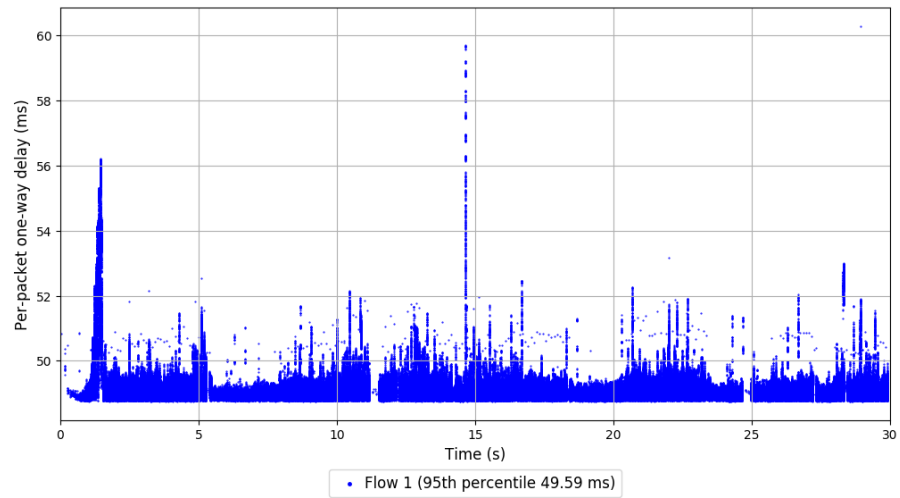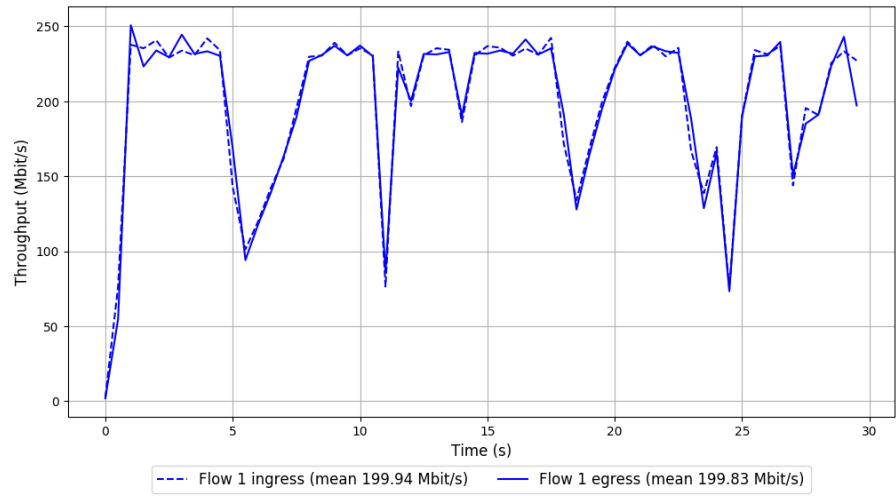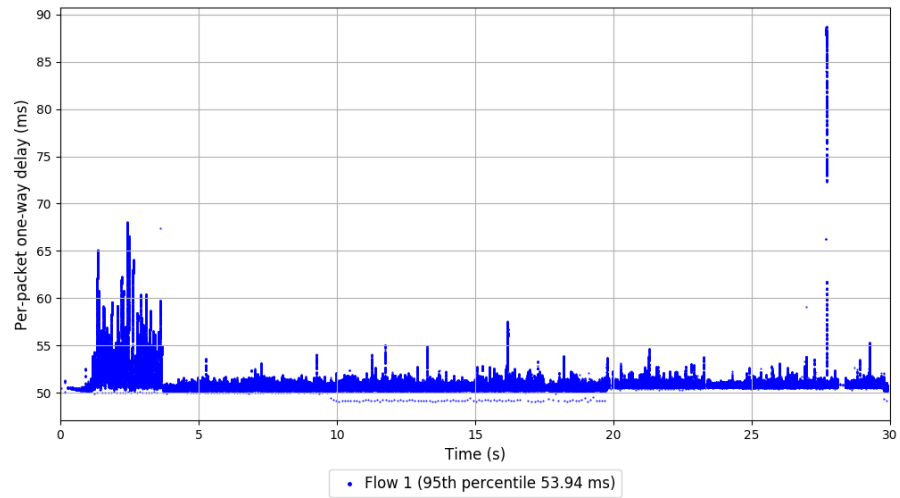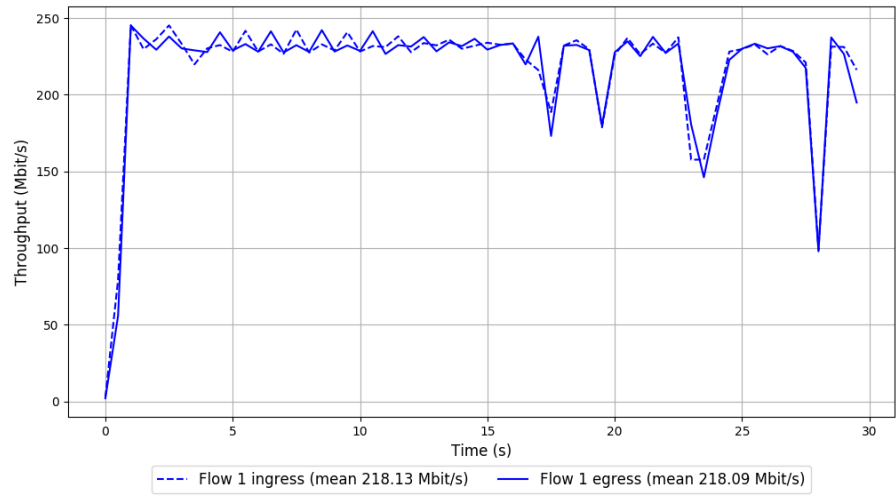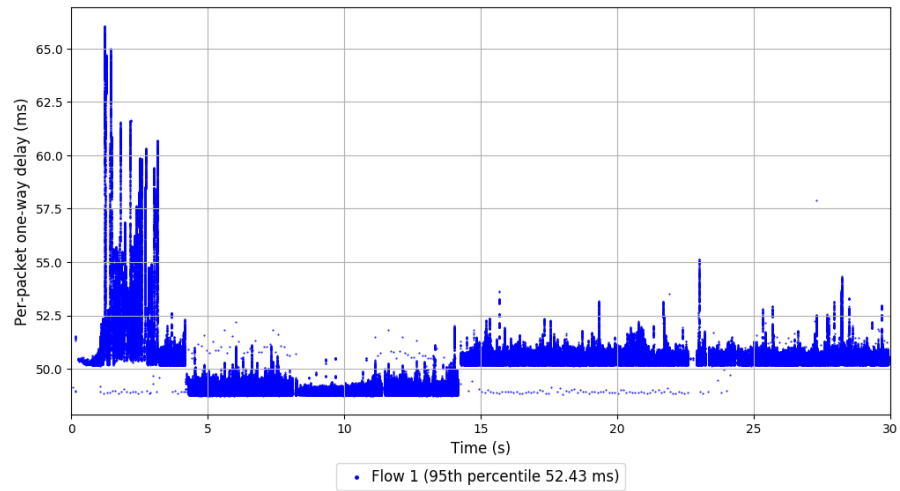
Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2017-09-21 14:42:04
End at: 2017-09-21 14:42:34

# Below is generated by plot.py at 2017-09-21 18:03:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 218.09 Mbit/s
95th percentile per-packet one-way delay: 53.938 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 218.09 Mbit/s
95th percentile per-packet one-way delay: 53.938 ms
Loss rate: 0.35%
```
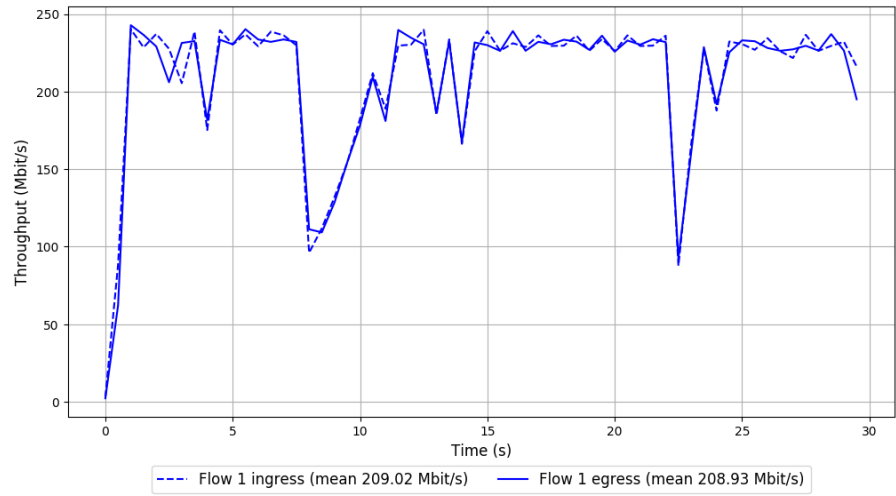
Run 2: Report of TCP BBR — Data Link

```
Run 3: Statistics of TCP BBR

Start at: 2017-09-21 14:52:50
End at: 2017-09-21 14:53:20

# Below is generated by plot.py at 2017-09-21 18:03:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 208.93 Mbit/s
95th percentile per-packet one-way delay: 52.427 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 208.93 Mbit/s
95th percentile per-packet one-way delay: 52.427 ms
Loss rate: 0.37%
```
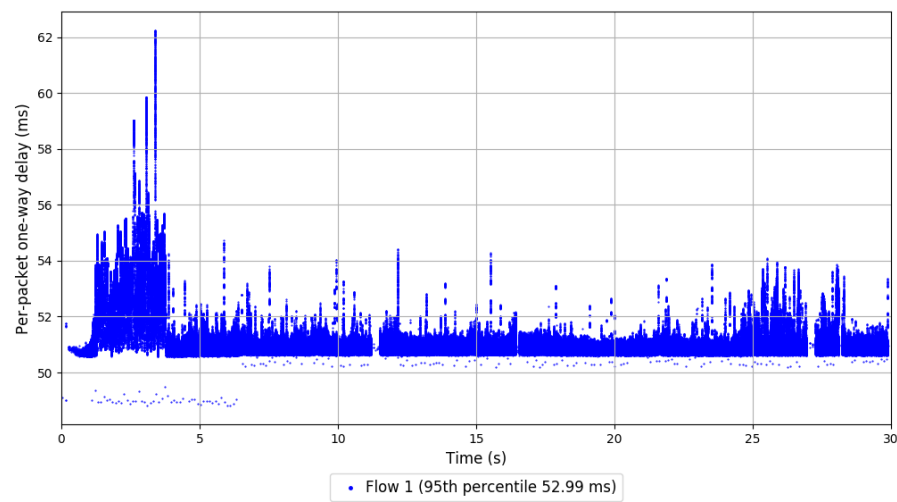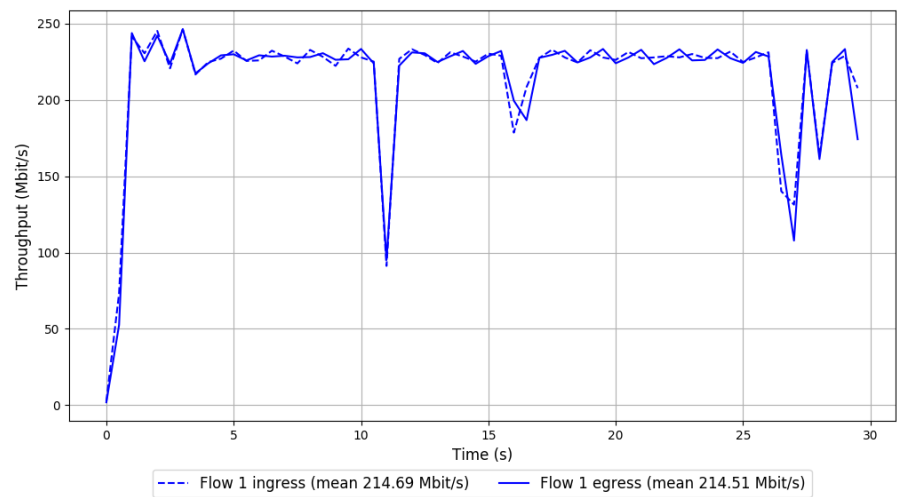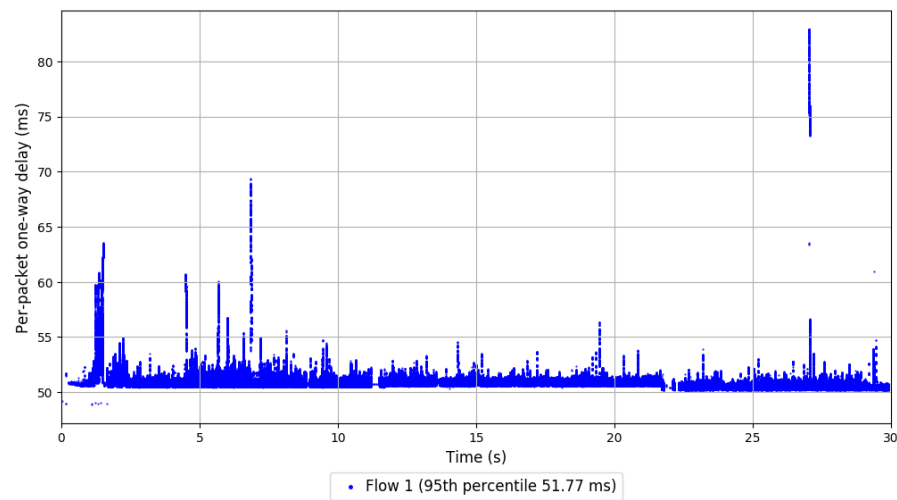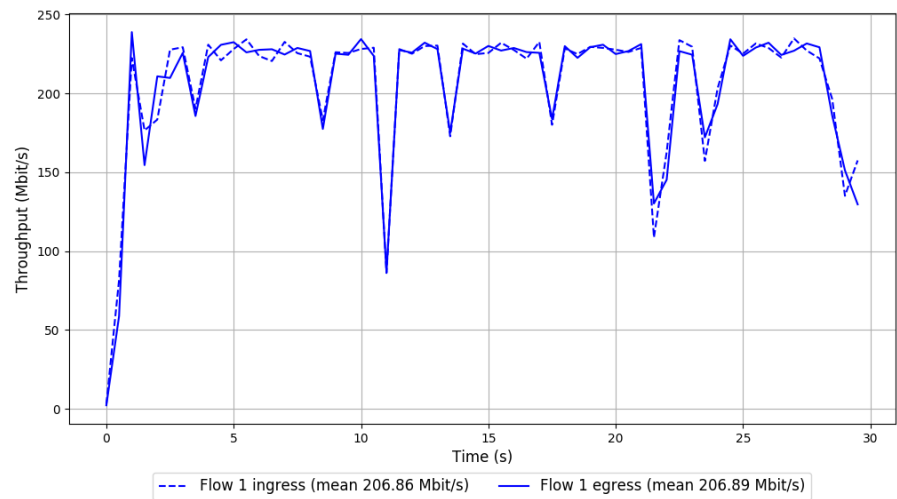
Run 3: Report of TCP BBR — Data Link

```
Run 4: Statistics of TCP BBR

Start at: 2017-09-21 15:03:28
End at: 2017-09-21 15:03:58

# Below is generated by plot.py at 2017-09-21 18:03:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 214.51 Mbit/s
95th percentile per-packet one-way delay: 52.987 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 214.51 Mbit/s
95th percentile per-packet one-way delay: 52.987 ms
Loss rate: 0.42%
```

Run 4: Report of TCP BBR — Data Link

Flow 1 ingress (mean 214.69 Mbit/s)   Flow 1 egress (mean 214.51 Mbit/s)

• Flow 1 (95th percentile 52.99 ms)

```
Run 5: Statistics of TCP BBR

Start at: 2017-09-21 15:14:12
End at: 2017-09-21 15:14:42

# Below is generated by plot.py at 2017-09-21 18:03:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 206.89 Mbit/s
95th percentile per-packet one-way delay: 51.770 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 206.89 Mbit/s
95th percentile per-packet one-way delay: 51.770 ms
Loss rate: 0.32%
```
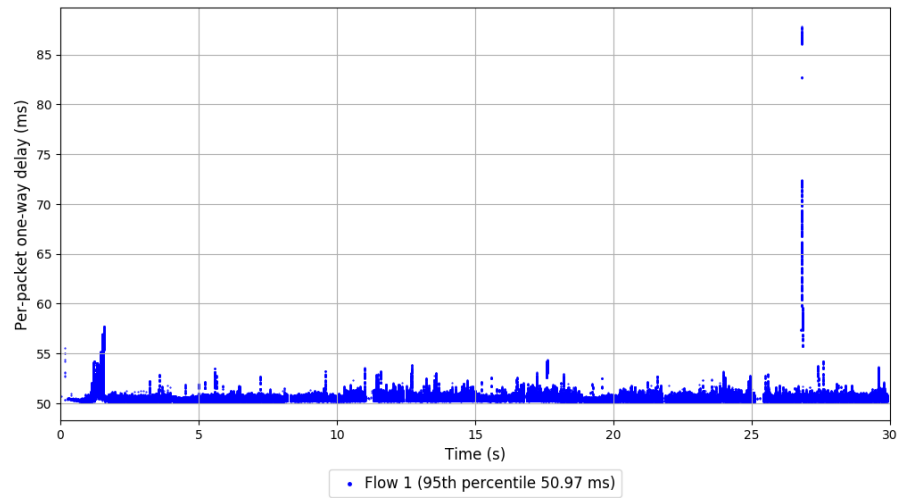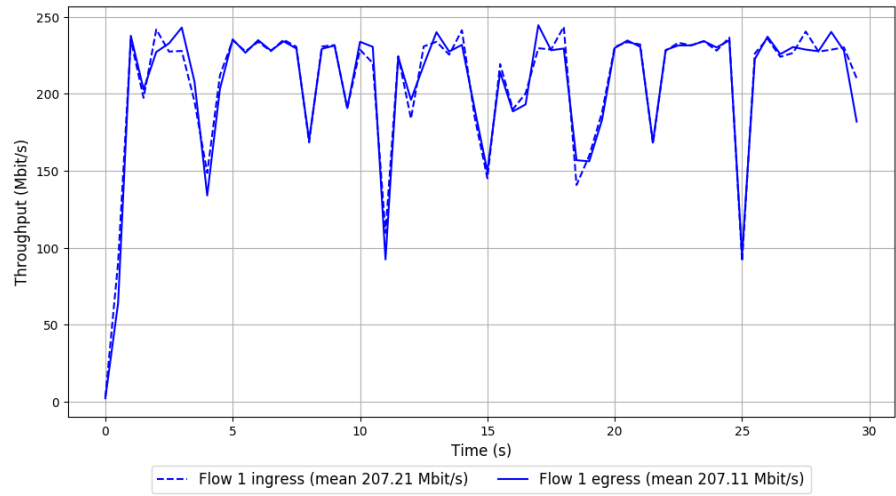
Run 5: Report of TCP BBR — Data Link

Flow 1 ingress (mean 206.86 Mbit/s) —— Flow 1 egress (mean 206.89 Mbit/s)

• Flow 1 (95th percentile 51.77 ms)

13

```
Run 6: Statistics of TCP BBR

Start at: 2017-09-21 15:24:36
End at: 2017-09-21 15:25:06

# Below is generated by plot.py at 2017-09-21 18:03:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 207.11 Mbit/s
95th percentile per-packet one-way delay: 50.972 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 207.11 Mbit/s
95th percentile per-packet one-way delay: 50.972 ms
Loss rate: 0.39%
```
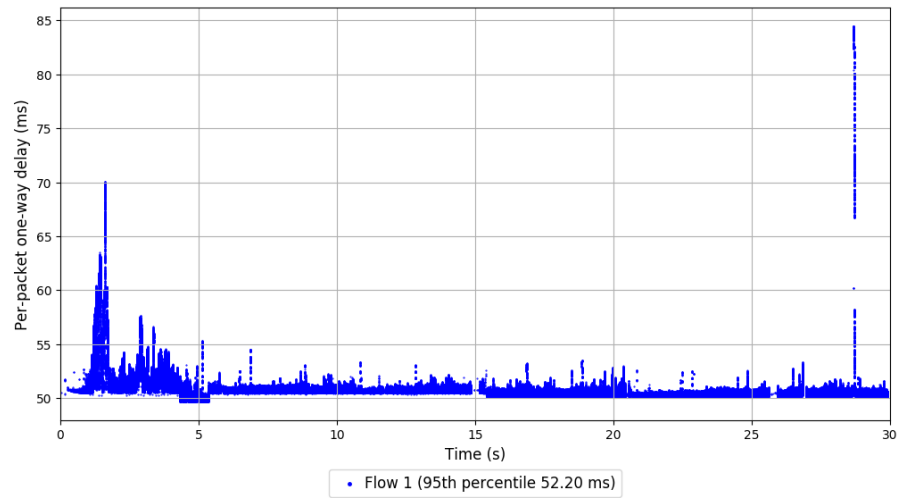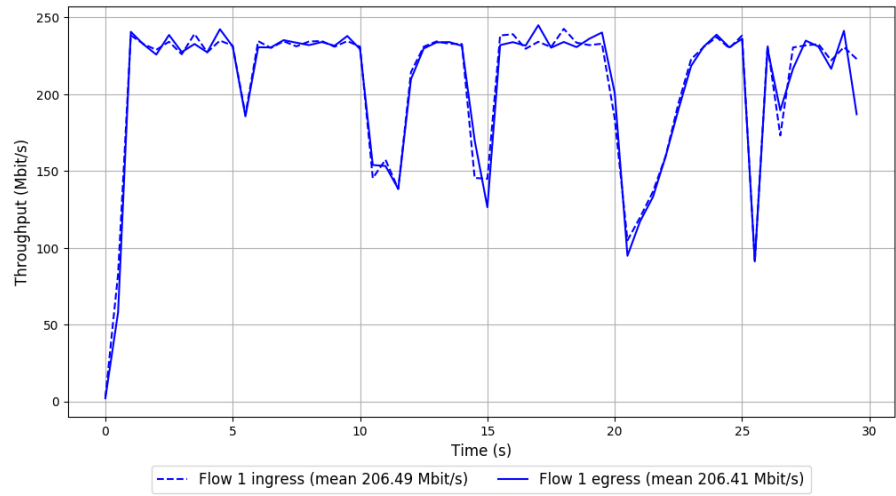
Run 6: Report of TCP BBR — Data Link

Flow 1 ingress (mean 207.21 Mbit/s) Flow 1 egress (mean 207.11 Mbit/s)

Flow 1 (95th percentile 50.97 ms)

```
Run 7: Statistics of TCP BBR

Start at: 2017-09-21 15:35:19
End at: 2017-09-21 15:35:49


# Below is generated by plot.py at 2017-09-21 18:03:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 206.41 Mbit/s
95th percentile per-packet one-way delay: 52.197 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 206.41 Mbit/s
95th percentile per-packet one-way delay: 52.197 ms
Loss rate: 0.44%
```
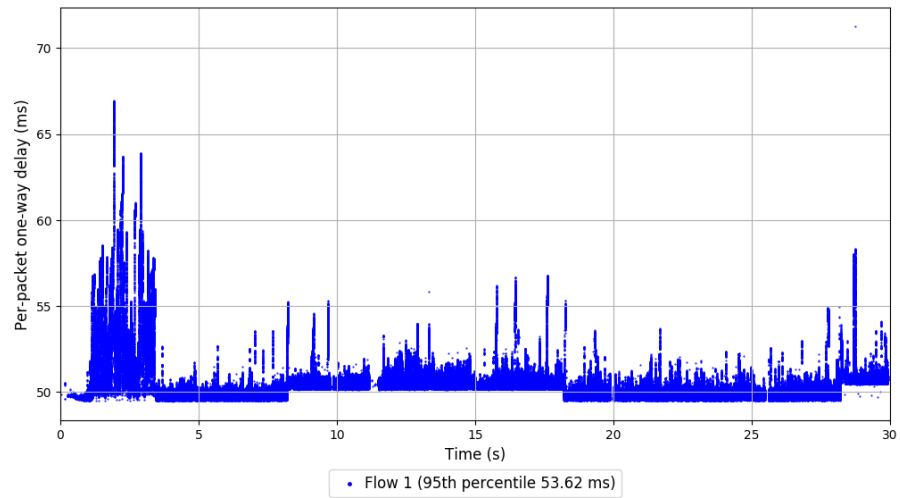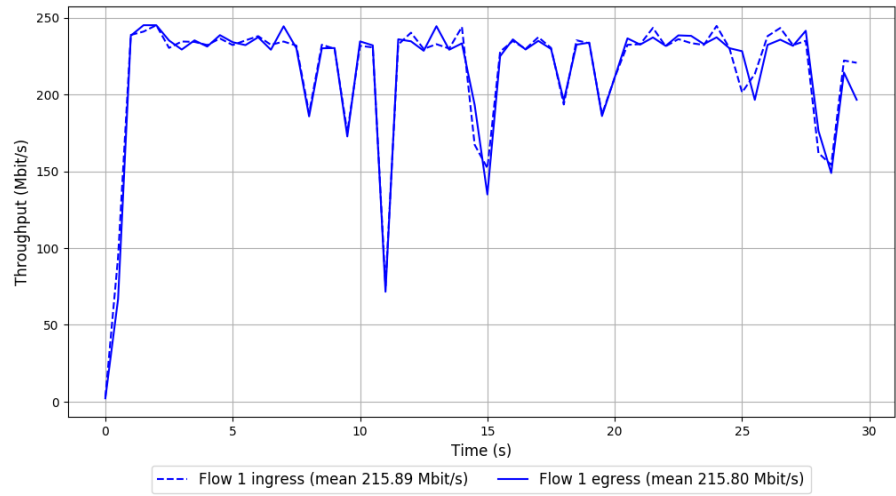
Run 7: Report of TCP BBR — Data Link

Flow 1 ingress (mean 206.49 Mbit/s)   Flow 1 egress (mean 206.41 Mbit/s)

Flow 1 (95th percentile 52.20 ms)

```
Run 8: Statistics of TCP BBR

Start at: 2017-09-21 15:45:56
End at: 2017-09-21 15:46:26


# Below is generated by plot.py at 2017-09-21 18:03:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 215.80 Mbit/s
95th percentile per-packet one-way delay: 53.623 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 215.80 Mbit/s
95th percentile per-packet one-way delay: 53.623 ms
Loss rate: 0.37%
```
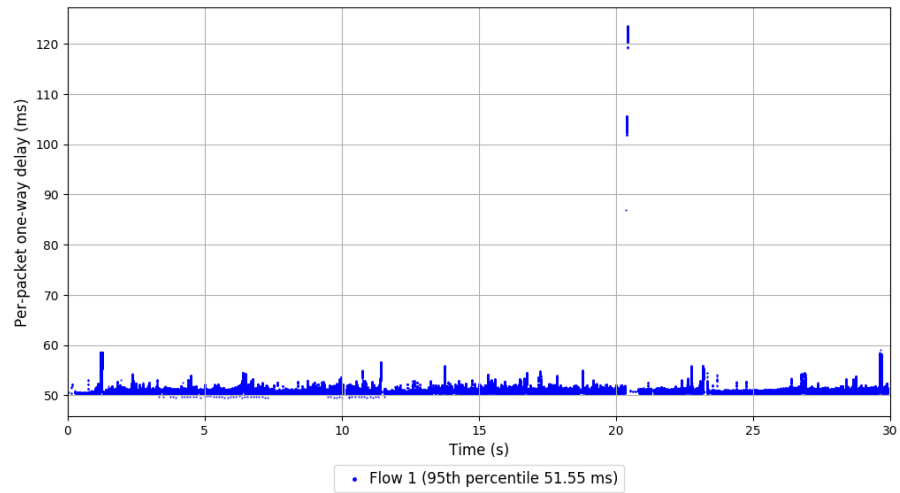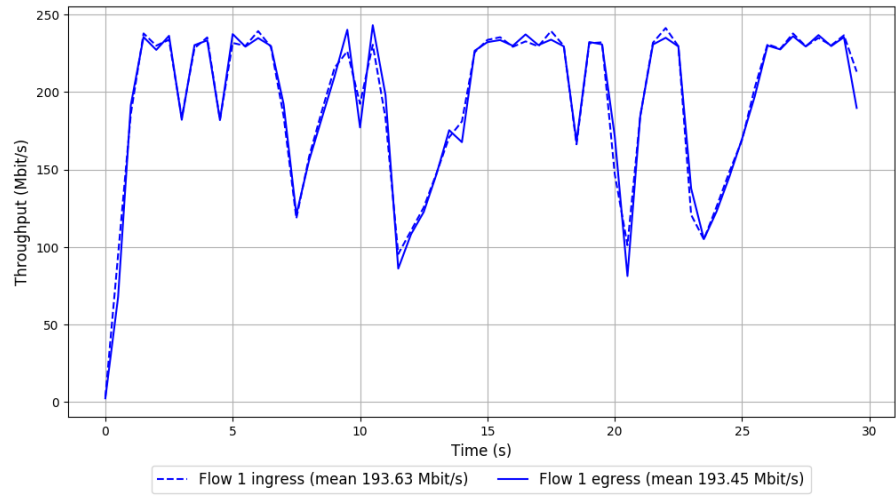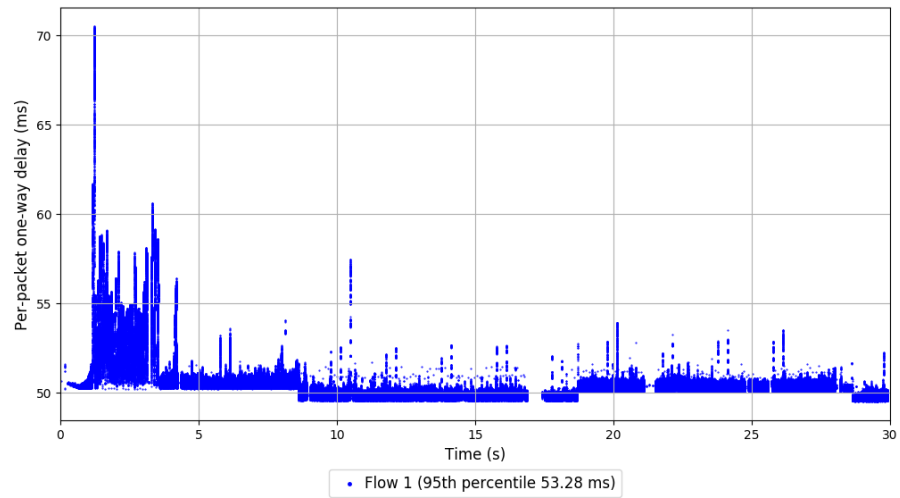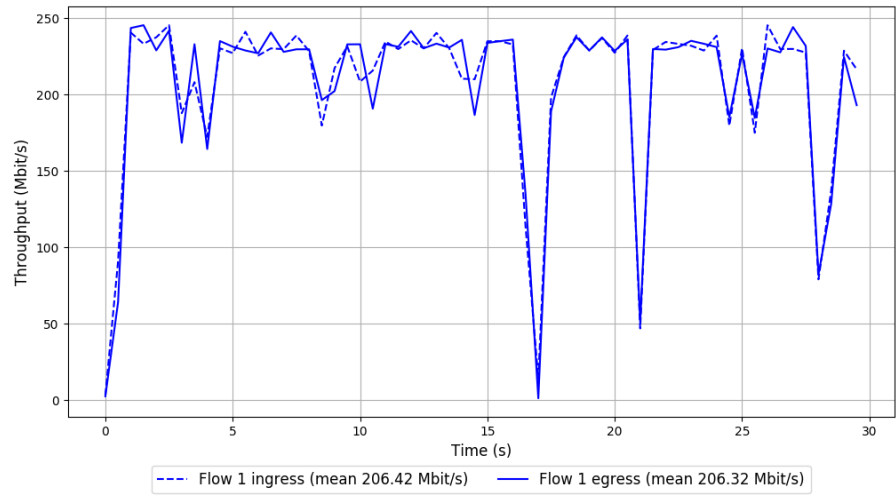
Run 8: Report of TCP BBR — Data Link

Flow 1 ingress (mean 215.89 Mbit/s)   Flow 1 egress (mean 215.80 Mbit/s)

Flow 1 (95th percentile 53.62 ms)

```
Run 9: Statistics of TCP BBR

Start at: 2017-09-21 15:56:41
End at: 2017-09-21 15:57:11


# Below is generated by plot.py at 2017-09-21 18:07:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 193.45 Mbit/s
95th percentile per-packet one-way delay: 51.553 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 193.45 Mbit/s
95th percentile per-packet one-way delay: 51.553 ms
Loss rate: 0.43%
```
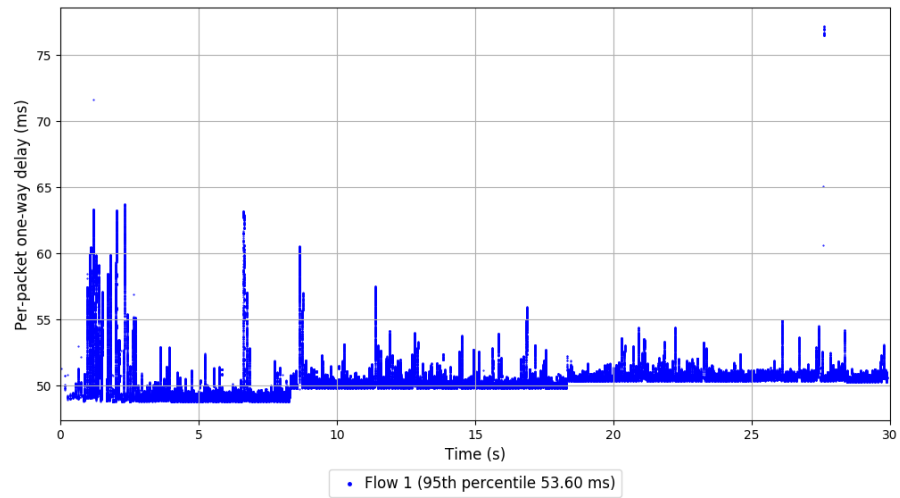
Run 9: Report of TCP BBR — Data Link

Flow 1 ingress (mean 193.63 Mbit/s) ----- Flow 1 egress (mean 193.45 Mbit/s)

Flow 1 (95th percentile 51.55 ms)

```
Run 10: Statistics of TCP BBR

Start at: 2017-09-21 16:07:25
End at: 2017-09-21 16:07:55

# Below is generated by plot.py at 2017-09-21 18:07:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 206.32 Mbit/s
95th percentile per-packet one-way delay: 53.279 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 206.32 Mbit/s
95th percentile per-packet one-way delay: 53.279 ms
Loss rate: 0.39%
```
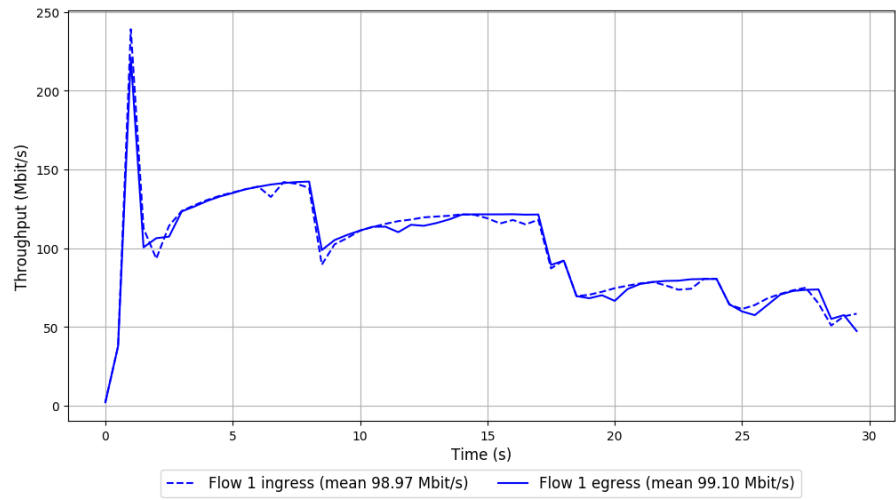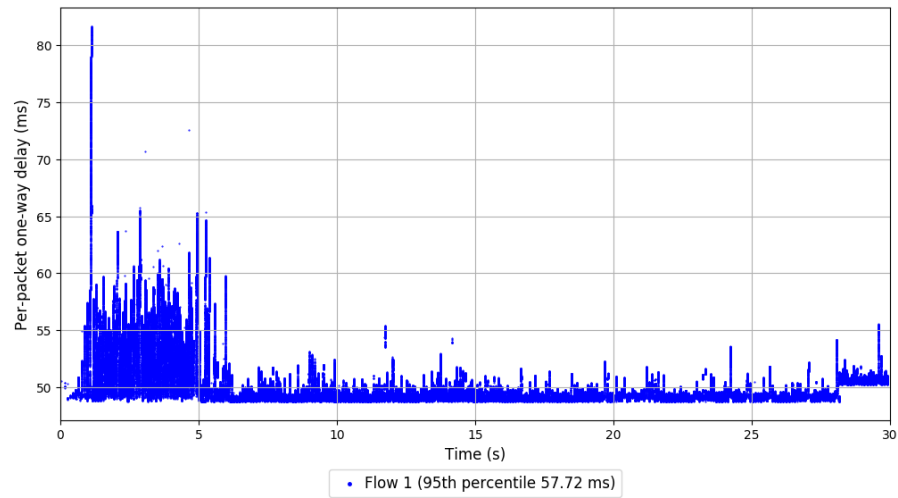
Run 10: Report of TCP BBR — Data Link

```
Run 1: Statistics of TCP Cubic

Start at: 2017-09-21 14:25:16
End at: 2017-09-21 14:25:46

# Below is generated by plot.py at 2017-09-21 18:07:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 99.10 Mbit/s
95th percentile per-packet one-way delay: 53.605 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 99.10 Mbit/s
95th percentile per-packet one-way delay: 53.605 ms
Loss rate: 0.21%
```
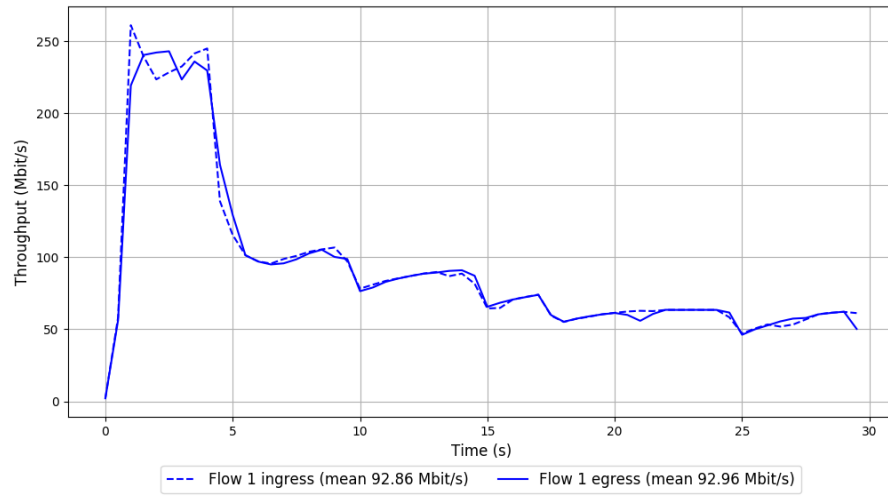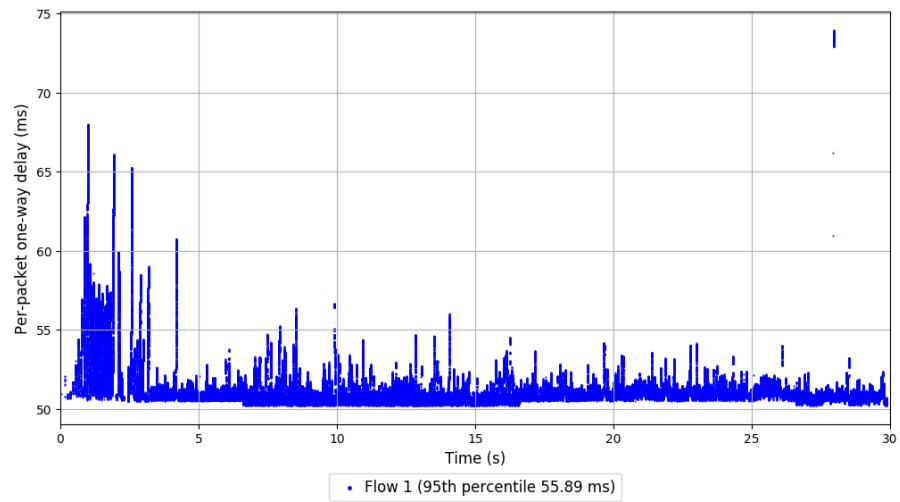
Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2017-09-21 14:35:36
End at: 2017-09-21 14:36:06

# Below is generated by plot.py at 2017-09-21 18:07:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.96 Mbit/s
95th percentile per-packet one-way delay: 57.716 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 92.96 Mbit/s
95th percentile per-packet one-way delay: 57.716 ms
Loss rate: 0.24%
```
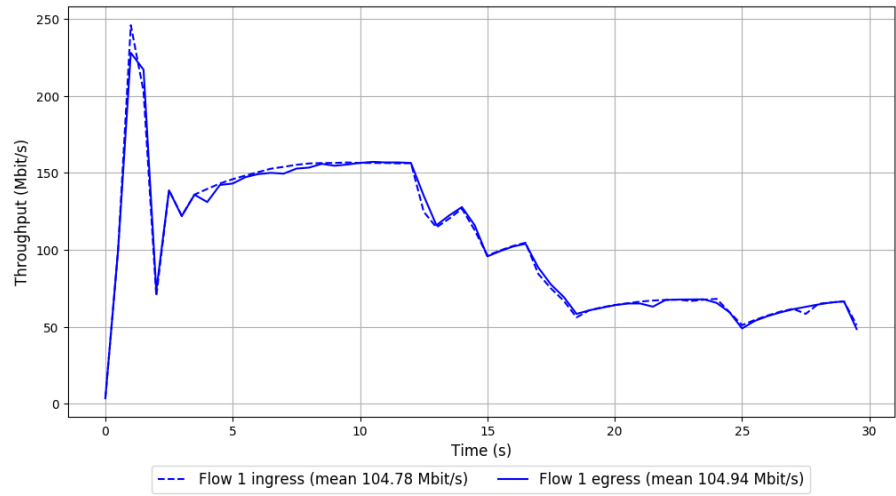
Run 2: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 92.86 Mbit/s) — — — Flow 1 egress (mean 92.96 Mbit/s)

• Flow 1 (95th percentile 57.72 ms)

```
Run 3: Statistics of TCP Cubic

Start at: 2017-09-21 14:46:17
End at: 2017-09-21 14:46:47

# Below is generated by plot.py at 2017-09-21 18:07:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 104.94 Mbit/s
95th percentile per-packet one-way delay: 55.892 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 104.94 Mbit/s
95th percentile per-packet one-way delay: 55.892 ms
Loss rate: 0.18%
```
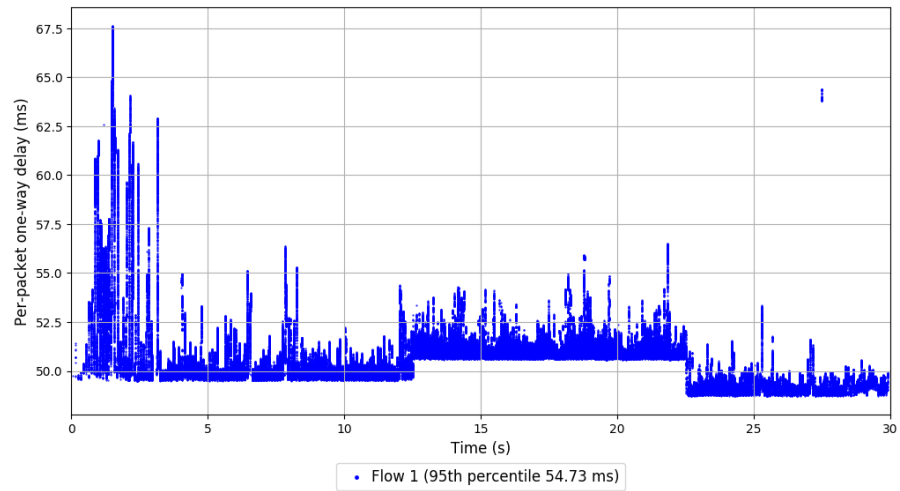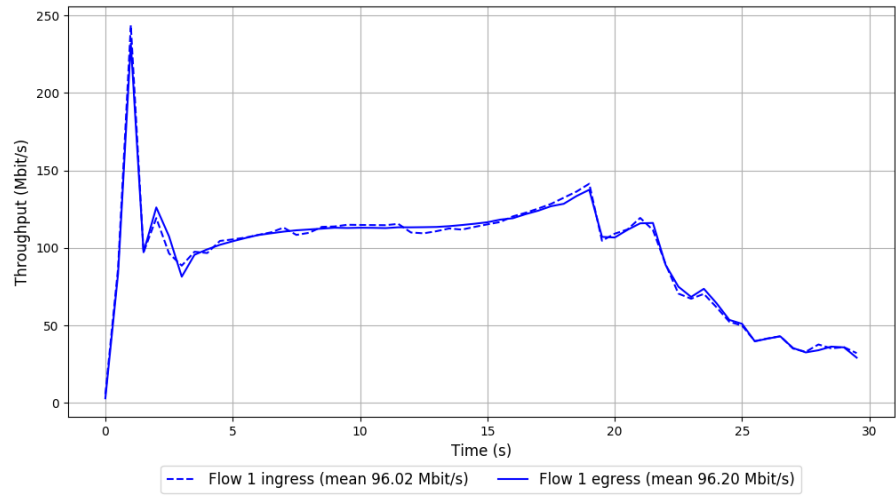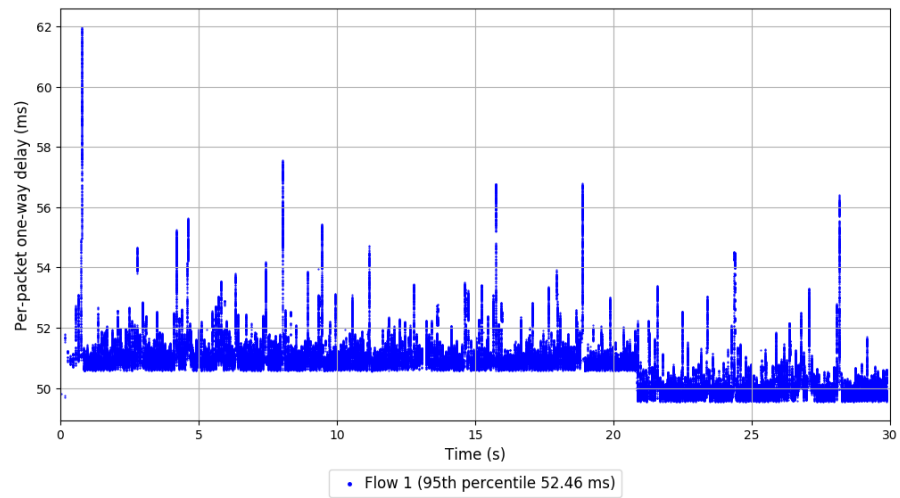
Run 3: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 104.78 Mbit/s) — — — Flow 1 egress (mean 104.94 Mbit/s)

Flow 1 (95th percentile 55.89 ms)

```
Run 4: Statistics of TCP Cubic

Start at: 2017-09-21 14:57:01
End at: 2017-09-21 14:57:31

# Below is generated by plot.py at 2017-09-21 18:07:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.20 Mbit/s
95th percentile per-packet one-way delay: 54.731 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 96.20 Mbit/s
95th percentile per-packet one-way delay: 54.731 ms
Loss rate: 0.15%
```
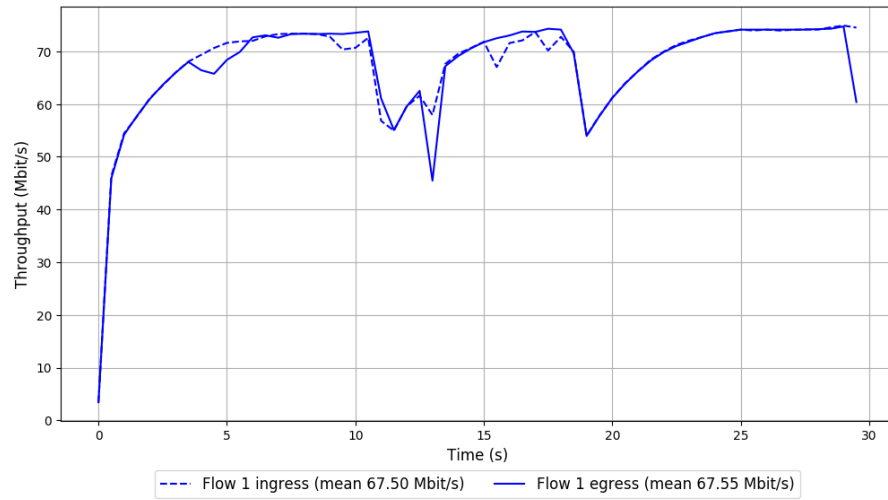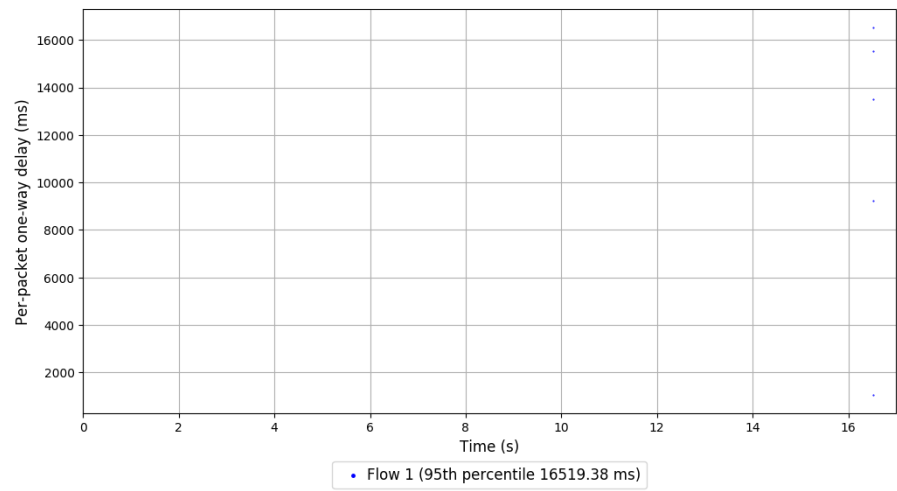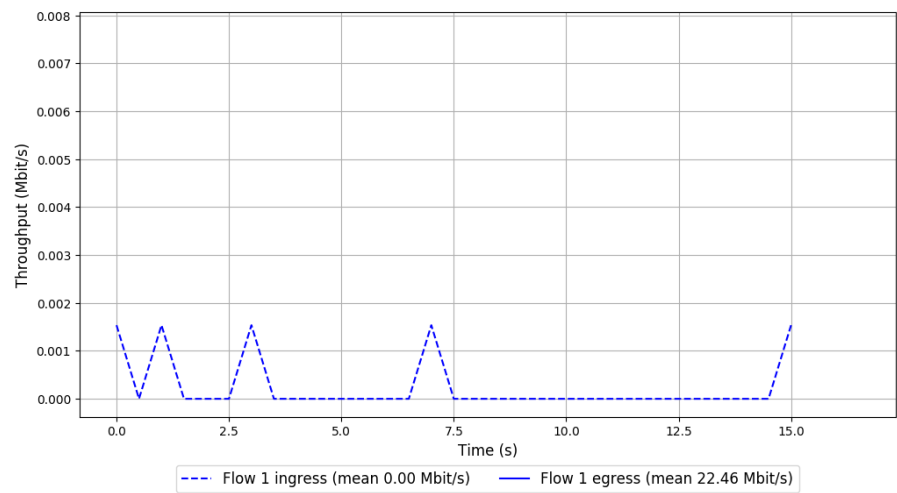
Run 4: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 96.02 Mbit/s) — — —   Flow 1 egress (mean 96.20 Mbit/s) ———

Flow 1 (95th percentile 54.73 ms)

```
Run 5: Statistics of TCP Cubic

Start at: 2017-09-21 15:07:43
End at: 2017-09-21 15:08:13

# Below is generated by plot.py at 2017-09-21 18:07:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 67.55 Mbit/s
95th percentile per-packet one-way delay: 52.458 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 67.55 Mbit/s
95th percentile per-packet one-way delay: 52.458 ms
Loss rate: 0.38%
```
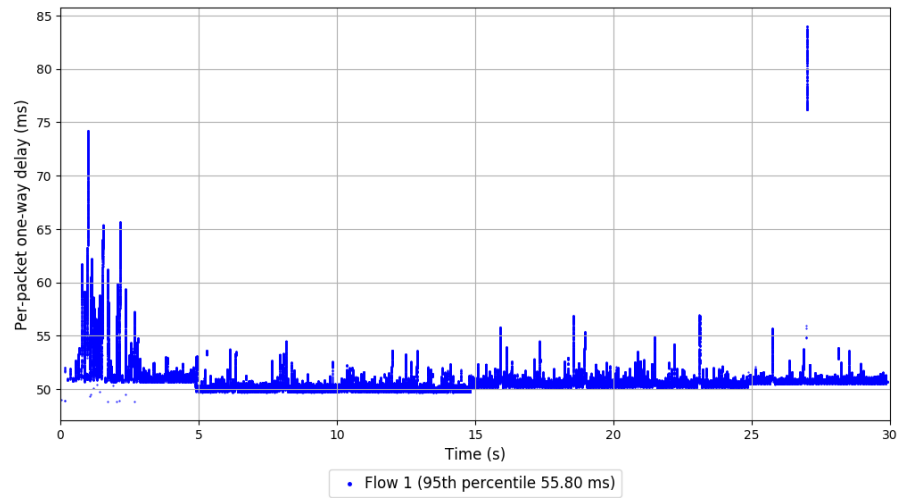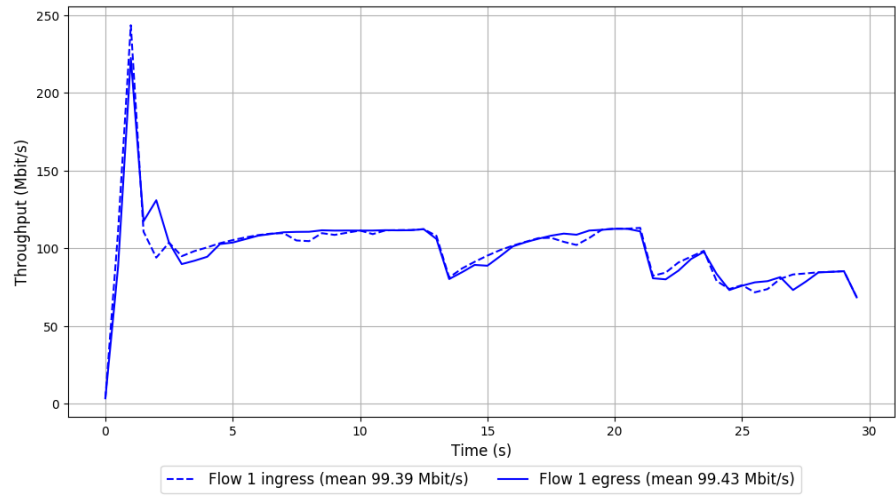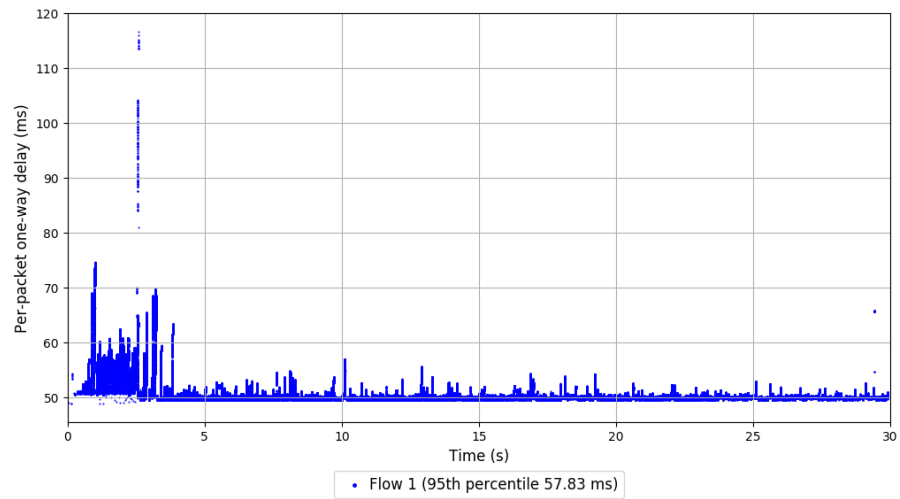
Run 5: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 67.50 Mbit/s) --- Flow 1 egress (mean 67.55 Mbit/s)

Flow 1 (95th percentile 52.46 ms)

```
Run 6: Statistics of TCP Cubic

Start at: 2017-09-21 15:18:13
End at: 2017-09-21 15:18:43
```

Run 6: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 0.00 Mbit/s)   Flow 1 egress (mean 22.46 Mbit/s)

• Flow 1 (95th percentile 16519.38 ms)

```
Run 7: Statistics of TCP Cubic

Start at: 2017-09-21 15:28:49
End at: 2017-09-21 15:29:19


# Below is generated by plot.py at 2017-09-21 18:07:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 99.43 Mbit/s
95th percentile per-packet one-way delay: 55.801 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 99.43 Mbit/s
95th percentile per-packet one-way delay: 55.801 ms
Loss rate: 0.29%
```
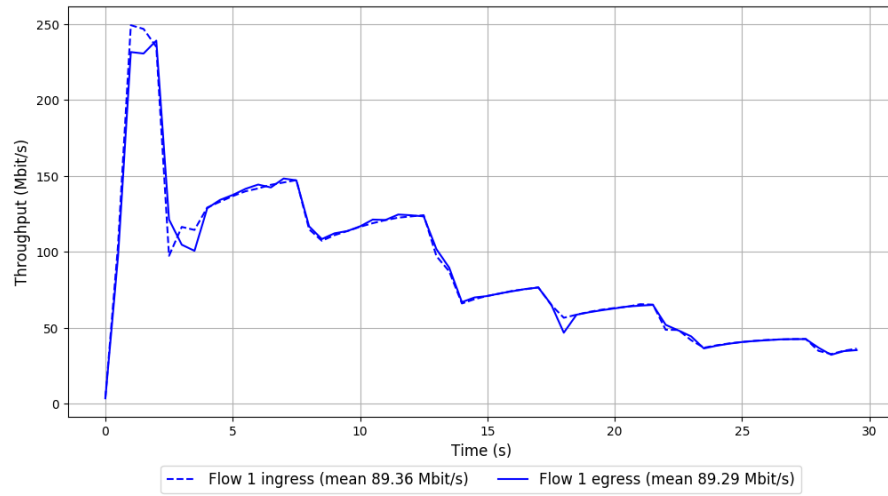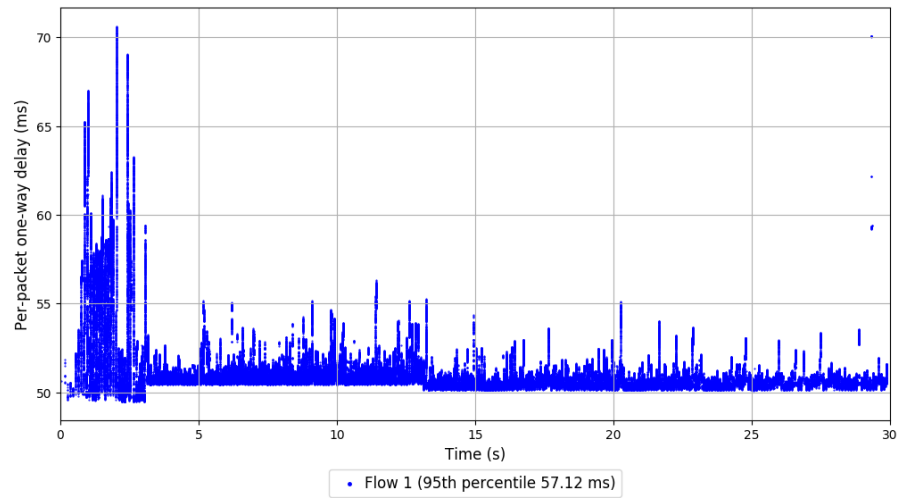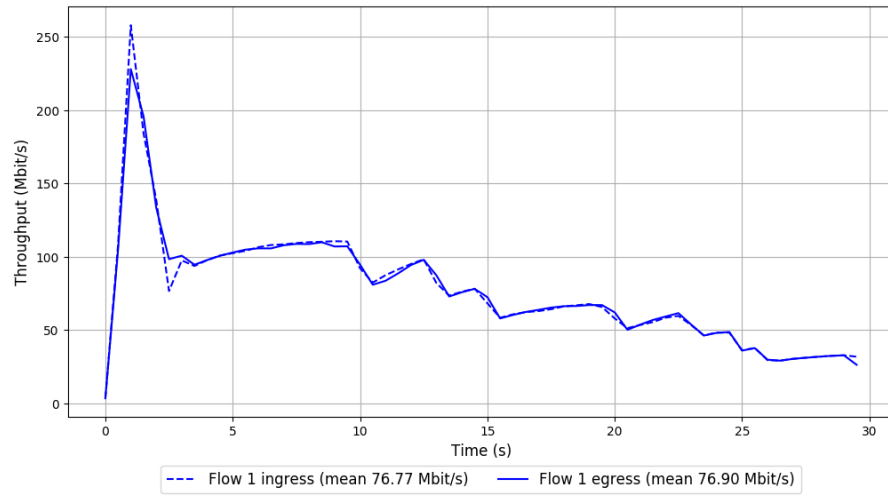
Run 7: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 99.39 Mbit/s)   Flow 1 egress (mean 99.43 Mbit/s)

• Flow 1 (95th percentile 55.80 ms)

```
Run 8: Statistics of TCP Cubic

Start at: 2017-09-21 15:39:31
End at: 2017-09-21 15:40:01

# Below is generated by plot.py at 2017-09-21 18:07:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.29 Mbit/s
95th percentile per-packet one-way delay: 57.830 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 89.29 Mbit/s
95th percentile per-packet one-way delay: 57.830 ms
Loss rate: 0.41%
```
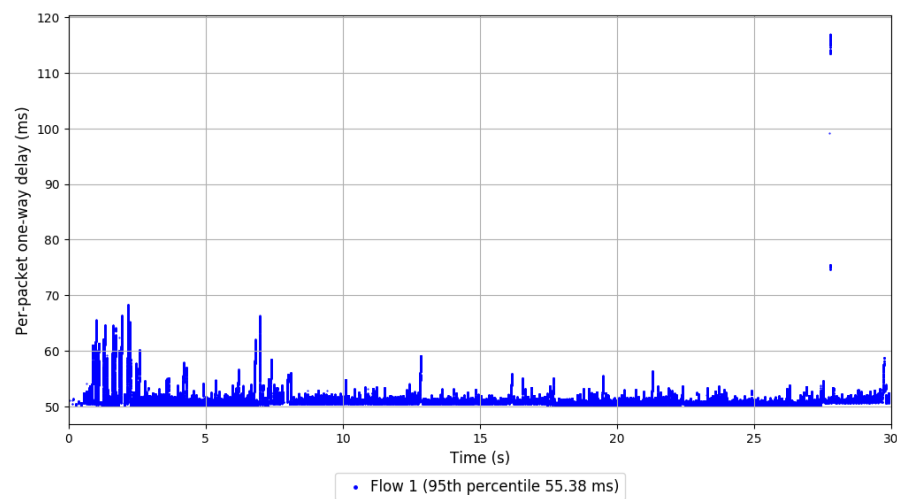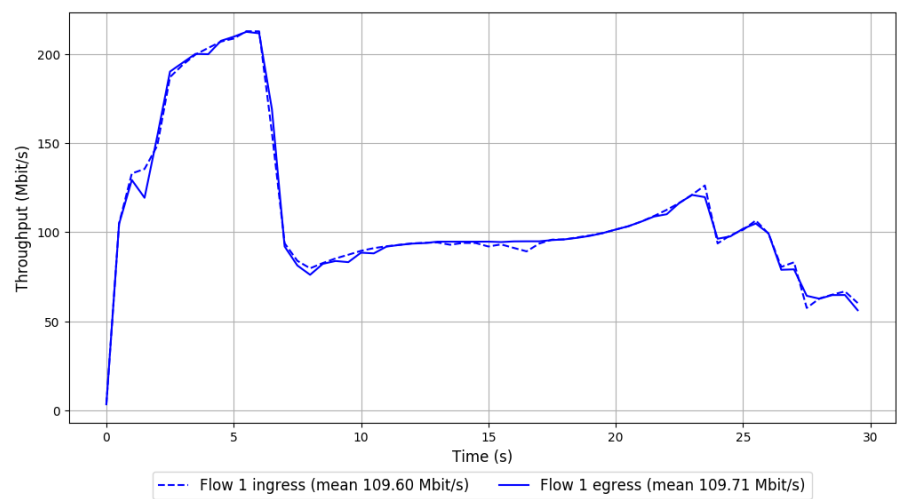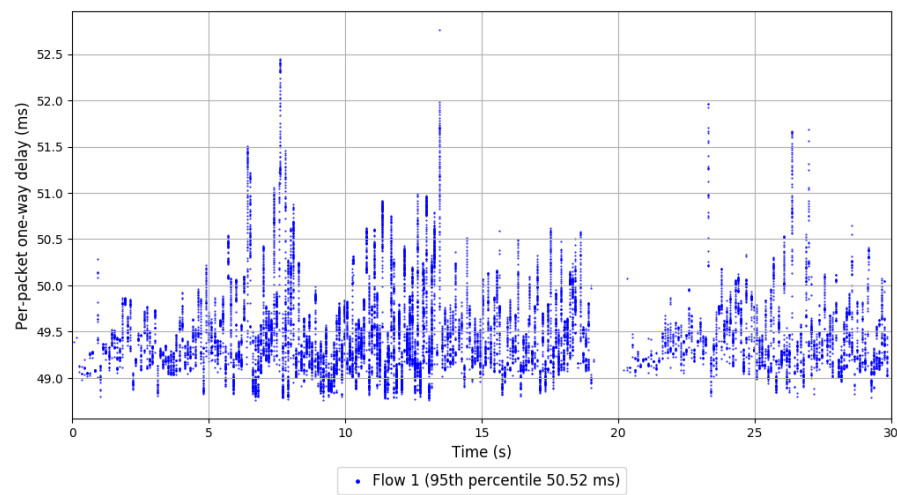
Run 8: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 89.36 Mbit/s) ——— Flow 1 egress (mean 89.29 Mbit/s)

• Flow 1 (95th percentile 57.83 ms)

```
Run 9: Statistics of TCP Cubic

Start at: 2017-09-21 15:50:11
End at: 2017-09-21 15:50:41


# Below is generated by plot.py at 2017-09-21 18:07:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 76.90 Mbit/s
95th percentile per-packet one-way delay: 57.122 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 76.90 Mbit/s
95th percentile per-packet one-way delay: 57.122 ms
Loss rate: 0.17%
```
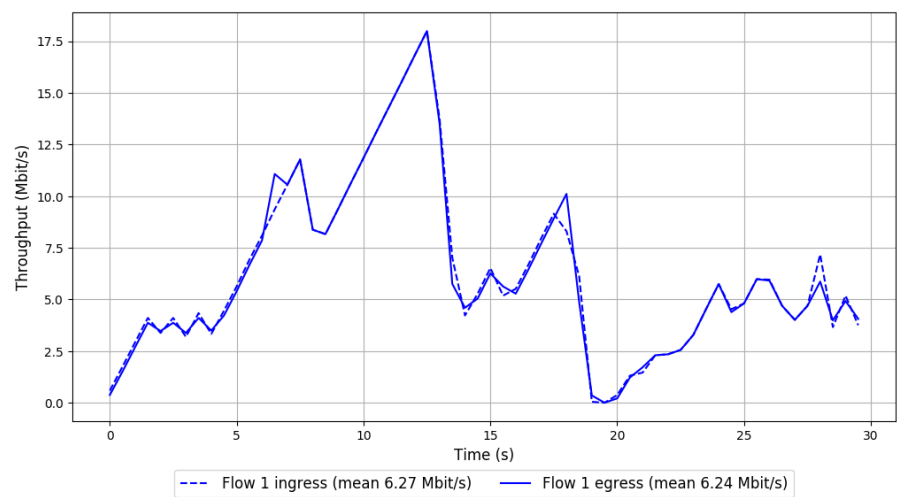
Run 9: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 76.77 Mbit/s)   Flow 1 egress (mean 76.90 Mbit/s)

· Flow 1 (95th percentile 57.12 ms)

```
Run 10: Statistics of TCP Cubic

Start at: 2017-09-21 16:00:56
End at: 2017-09-21 16:01:27

# Below is generated by plot.py at 2017-09-21 18:07:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 109.71 Mbit/s
95th percentile per-packet one-way delay: 55.384 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 109.71 Mbit/s
95th percentile per-packet one-way delay: 55.384 ms
Loss rate: 0.23%
```
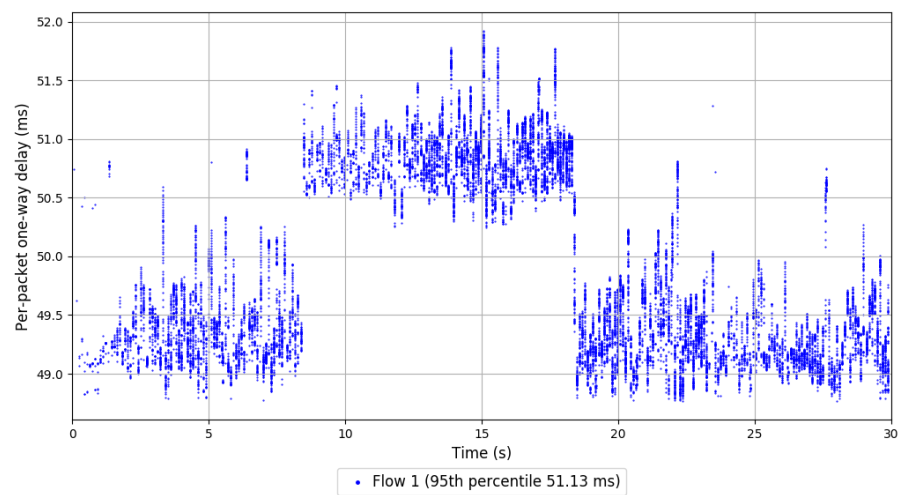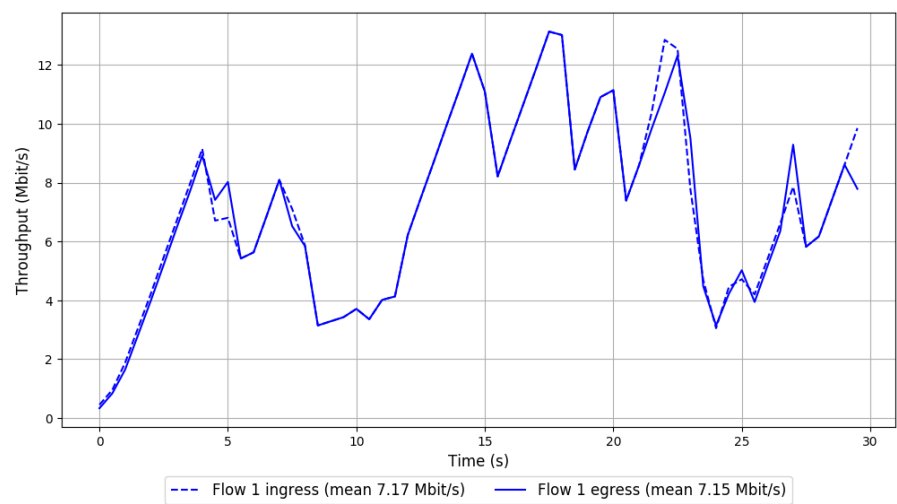
Run 10: Report of TCP Cubic — Data Link

```
Run 1: Statistics of LEDBAT

Start at: 2017-09-21 14:28:15
End at: 2017-09-21 14:28:45

# Below is generated by plot.py at 2017-09-21 18:07:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.24 Mbit/s
95th percentile per-packet one-way delay: 50.524 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 6.24 Mbit/s
95th percentile per-packet one-way delay: 50.524 ms
Loss rate: 0.69%
```
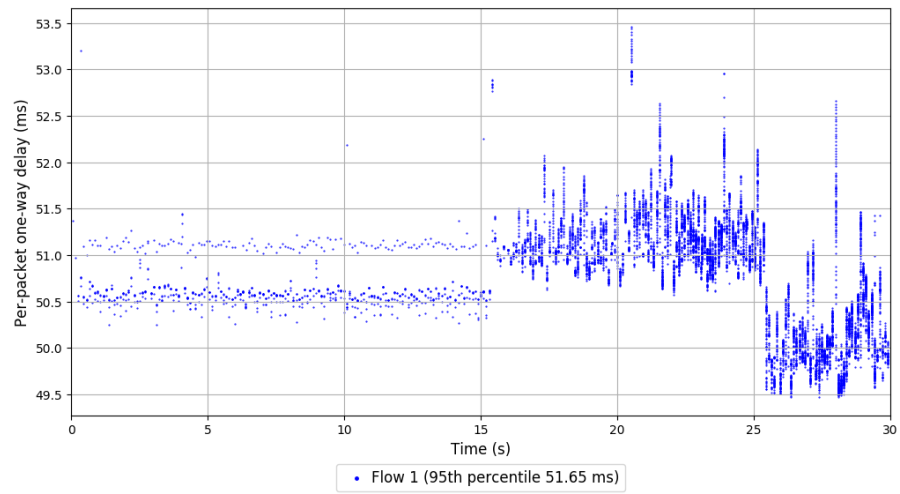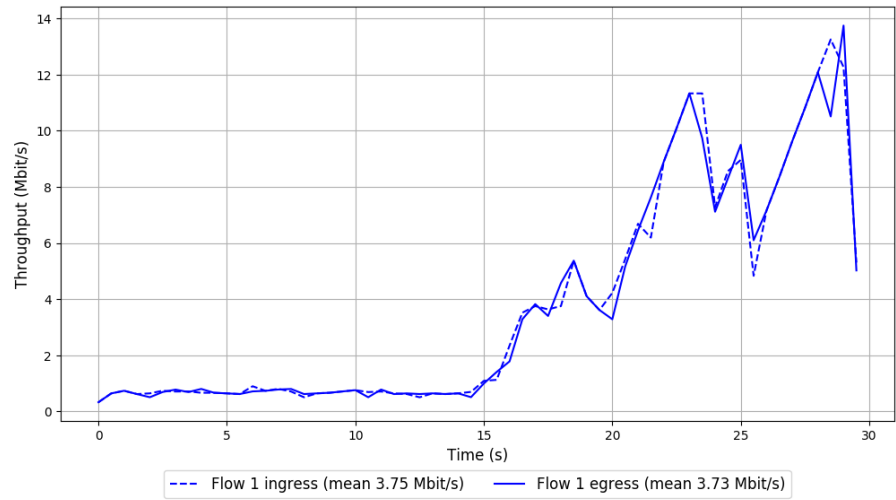
Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2017-09-21 14:38:36
End at: 2017-09-21 14:39:06

# Below is generated by plot.py at 2017-09-21 18:07:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.15 Mbit/s
95th percentile per-packet one-way delay: 51.127 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 7.15 Mbit/s
95th percentile per-packet one-way delay: 51.127 ms
Loss rate: 0.68%
```
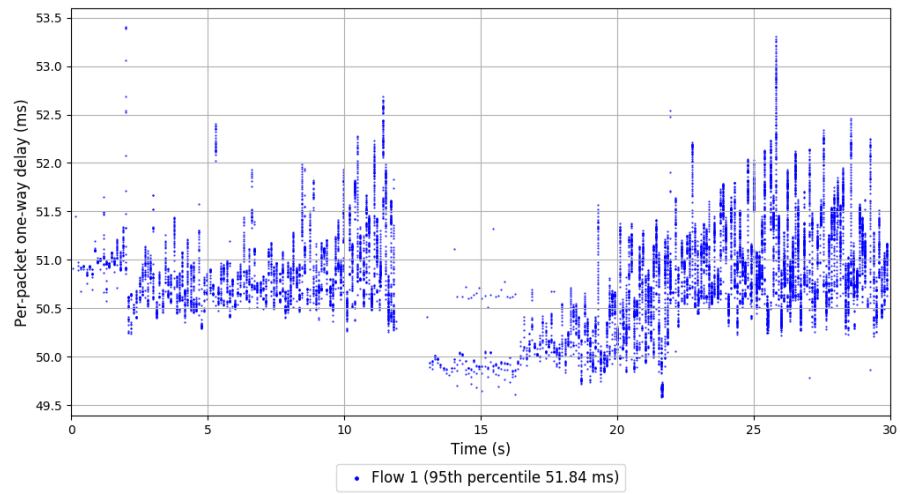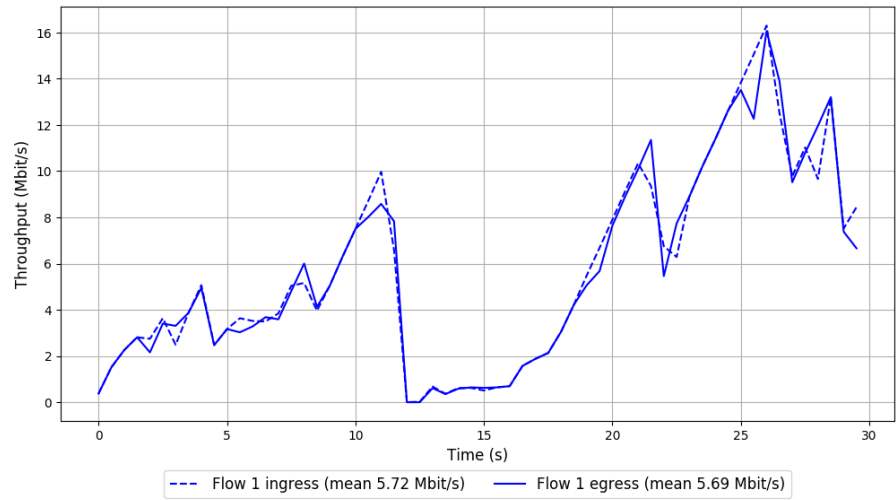
Run 2: Report of LEDBAT — Data Link

Flow 1 ingress (mean 7.17 Mbit/s) ---- Flow 1 egress (mean 7.15 Mbit/s)

Flow 1 (95th percentile 51.13 ms)

```
Run 3: Statistics of LEDBAT

Start at: 2017-09-21 14:49:19
End at: 2017-09-21 14:49:49

# Below is generated by plot.py at 2017-09-21 18:07:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 3.73 Mbit/s
95th percentile per-packet one-way delay: 51.647 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 3.73 Mbit/s
95th percentile per-packet one-way delay: 51.647 ms
Loss rate: 0.84%
```
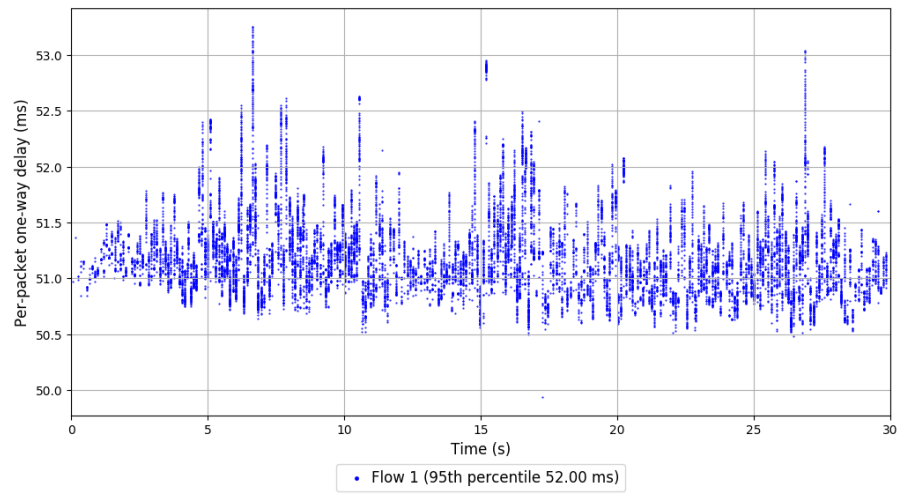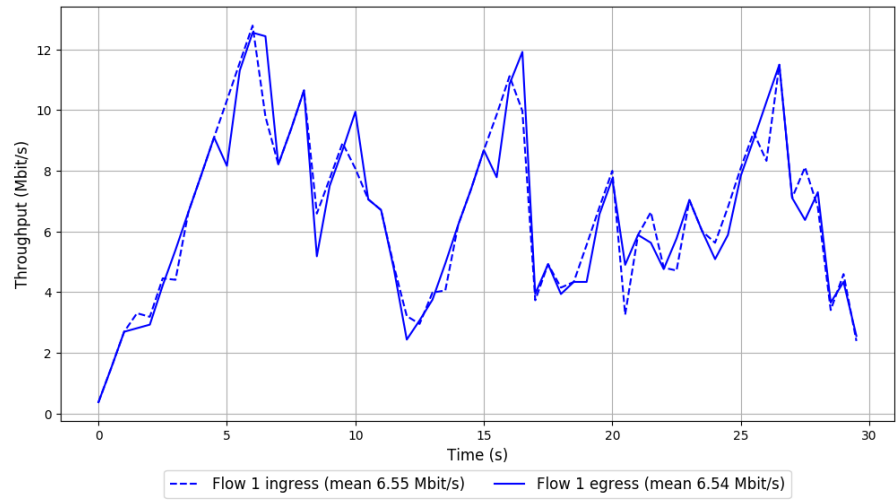
Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2017-09-21 15:00:02
End at: 2017-09-21 15:00:32

# Below is generated by plot.py at 2017-09-21 18:07:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.69 Mbit/s
95th percentile per-packet one-way delay: 51.838 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 5.69 Mbit/s
95th percentile per-packet one-way delay: 51.838 ms
Loss rate: 0.94%
```
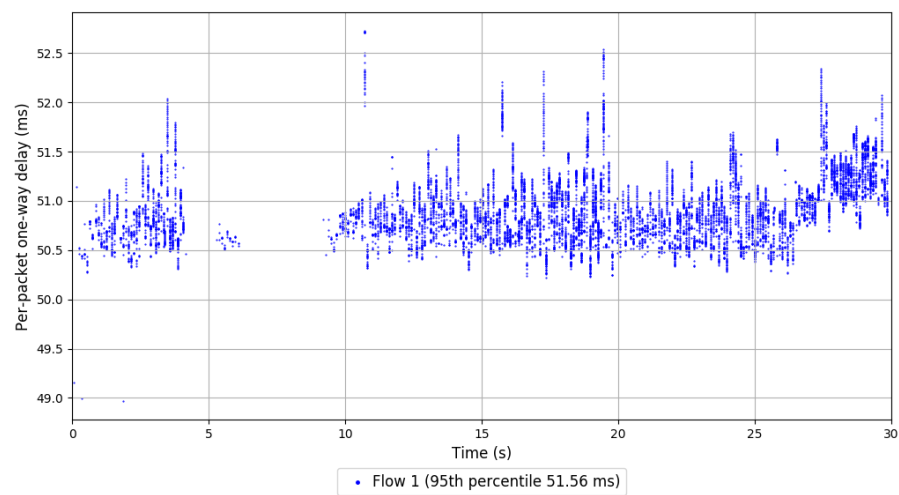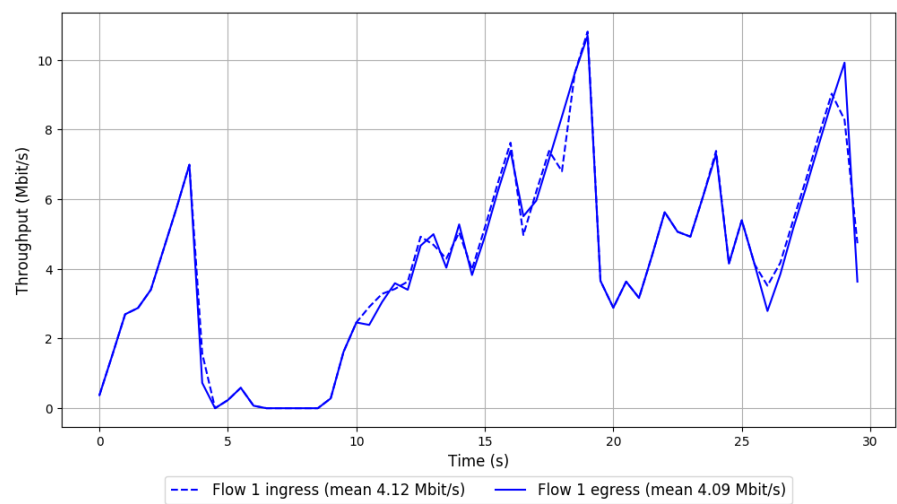
Run 4: Report of LEDBAT — Data Link

Flow 1 ingress (mean 5.72 Mbit/s) --- Flow 1 egress (mean 5.69 Mbit/s)

Flow 1 (95th percentile 51.84 ms)

```
Run 5: Statistics of LEDBAT

Start at: 2017-09-21 15:10:43
End at: 2017-09-21 15:11:13

# Below is generated by plot.py at 2017-09-21 18:07:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.54 Mbit/s
95th percentile per-packet one-way delay: 52.004 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 6.54 Mbit/s
95th percentile per-packet one-way delay: 52.004 ms
Loss rate: 0.41%
```
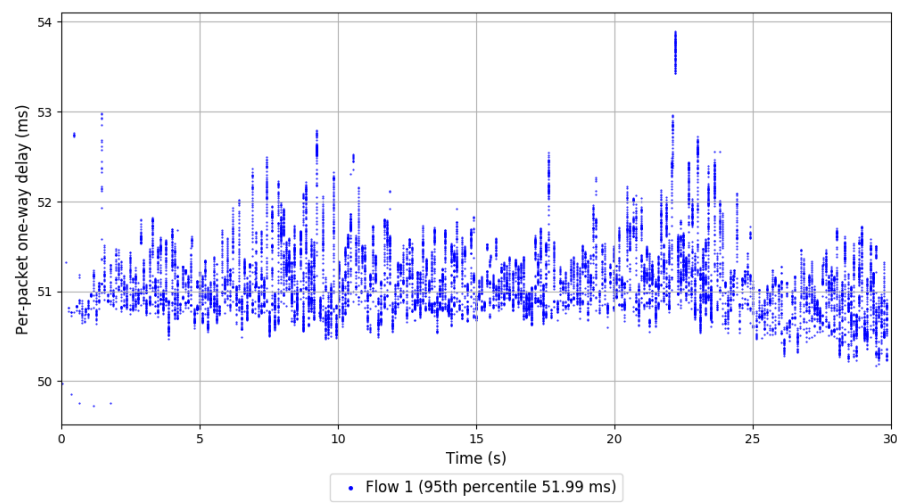
Run 5: Report of LEDBAT — Data Link

```
Run 6: Statistics of LEDBAT

Start at: 2017-09-21 15:21:07
End at: 2017-09-21 15:21:37

# Below is generated by plot.py at 2017-09-21 18:07:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.09 Mbit/s
95th percentile per-packet one-way delay: 51.559 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 4.09 Mbit/s
95th percentile per-packet one-way delay: 51.559 ms
Loss rate: 1.06%
```
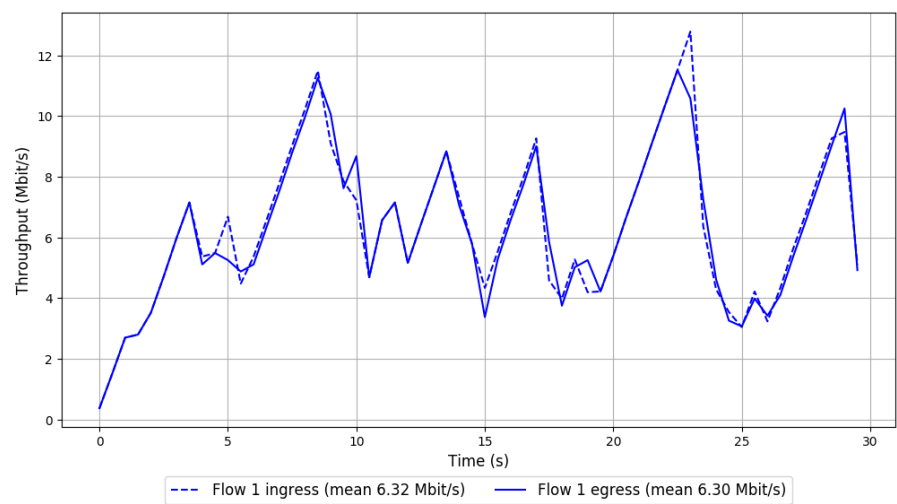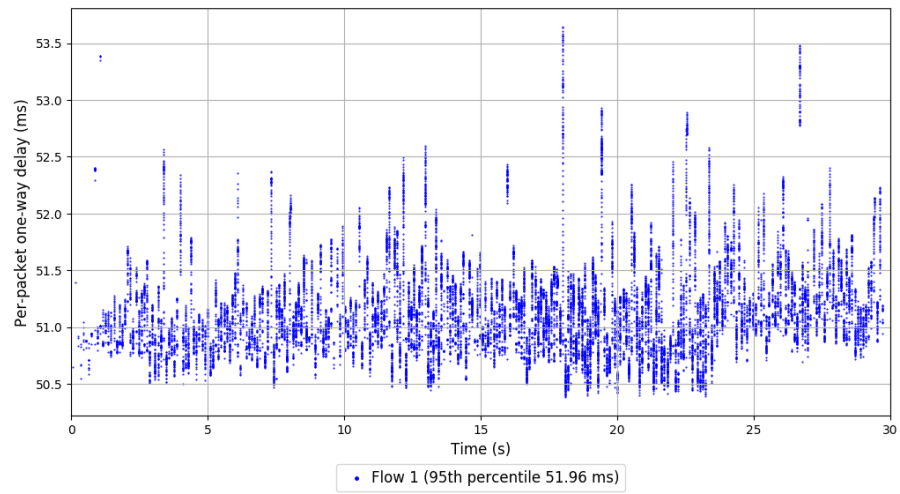
Run 6: Report of LEDBAT — Data Link

Flow 1 ingress (mean 4.12 Mbit/s) — Flow 1 egress (mean 4.09 Mbit/s)

Flow 1 (95th percentile 51.56 ms)

```
Run 7: Statistics of LEDBAT

Start at: 2017-09-21 15:31:49
End at: 2017-09-21 15:32:19

# Below is generated by plot.py at 2017-09-21 18:07:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.30 Mbit/s
95th percentile per-packet one-way delay: 51.991 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 6.30 Mbit/s
95th percentile per-packet one-way delay: 51.991 ms
Loss rate: 0.76%
```
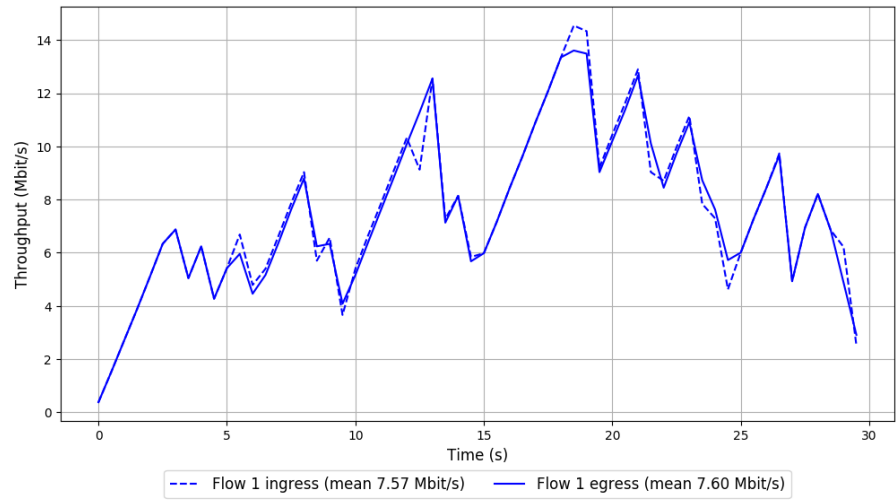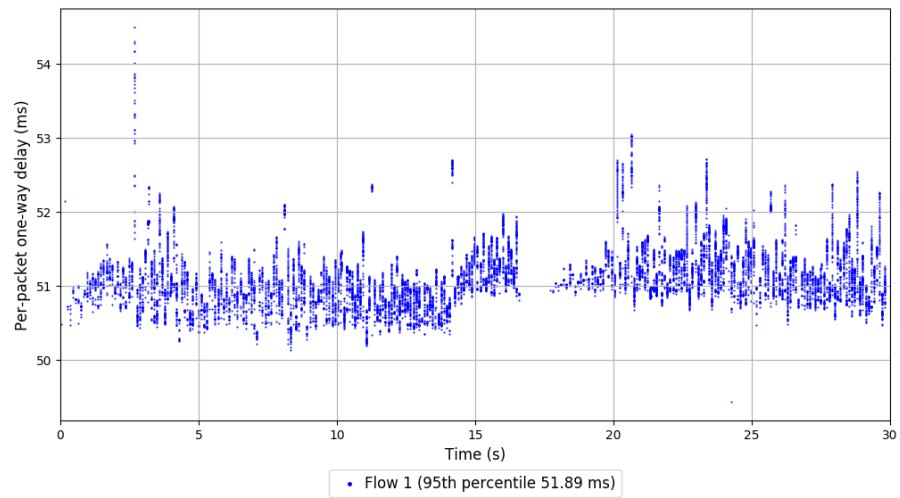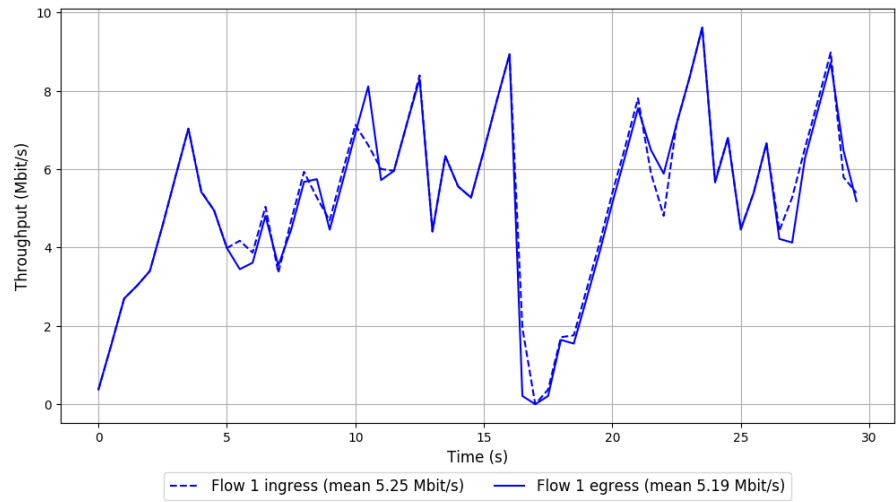
Run 7: Report of LEDBAT — Data Link

Flow 1 ingress (mean 6.32 Mbit/s)   Flow 1 egress (mean 6.30 Mbit/s)

Flow 1 (95th percentile 51.99 ms)

```
Run 8: Statistics of LEDBAT

Start at: 2017-09-21 15:42:30
End at: 2017-09-21 15:43:00

# Below is generated by plot.py at 2017-09-21 18:07:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.60 Mbit/s
95th percentile per-packet one-way delay: 51.963 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 7.60 Mbit/s
95th percentile per-packet one-way delay: 51.963 ms
Loss rate: 0.37%
```
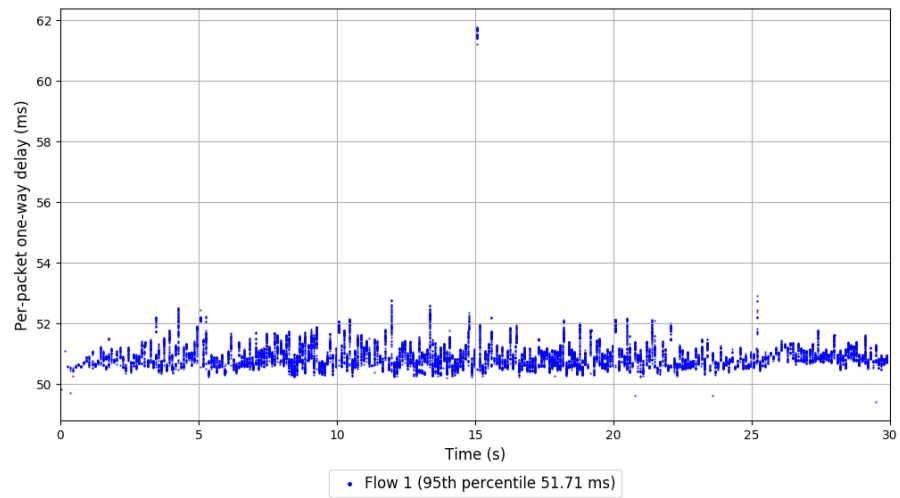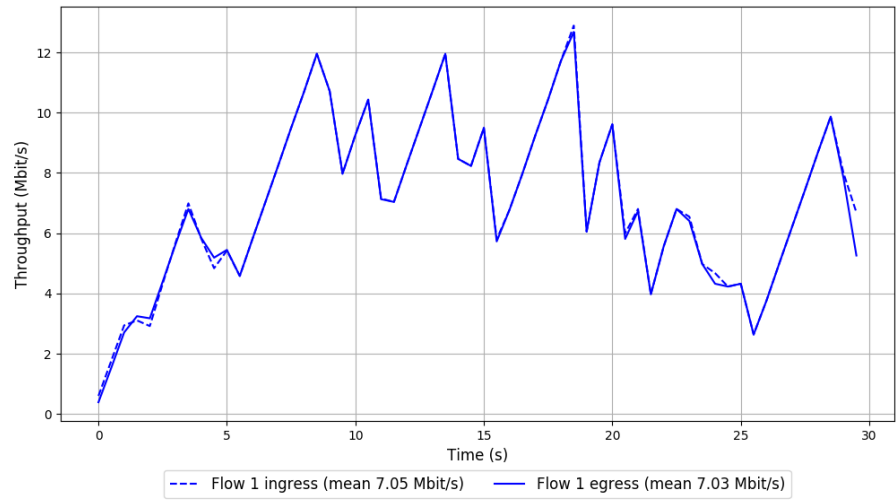
Run 8: Report of LEDBAT — Data Link

Flow 1 ingress (mean 7.57 Mbit/s)   Flow 1 egress (mean 7.60 Mbit/s)

Flow 1 (95th percentile 51.96 ms)

```
Run 9: Statistics of LEDBAT

Start at: 2017-09-21 15:53:10
End at: 2017-09-21 15:53:40

# Below is generated by plot.py at 2017-09-21 18:07:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.19 Mbit/s
95th percentile per-packet one-way delay: 51.889 ms
Loss rate: 1.31%
-- Flow 1:
Average throughput: 5.19 Mbit/s
95th percentile per-packet one-way delay: 51.889 ms
Loss rate: 1.31%
```
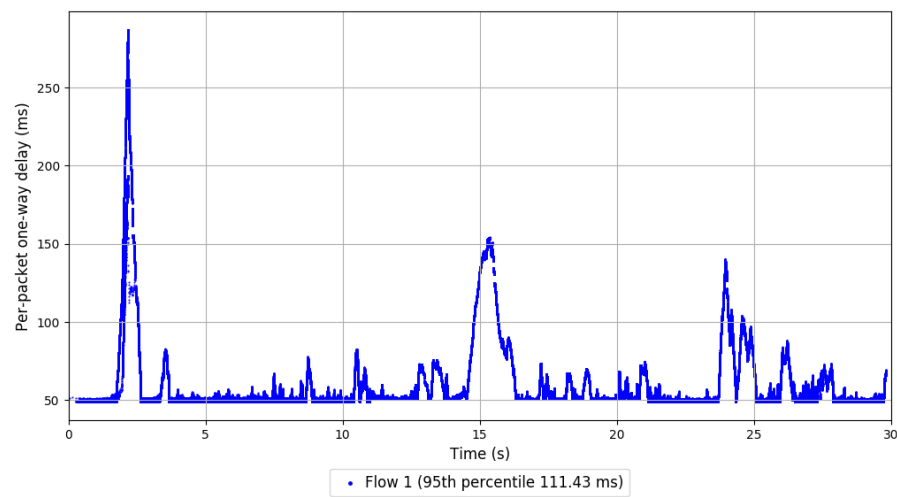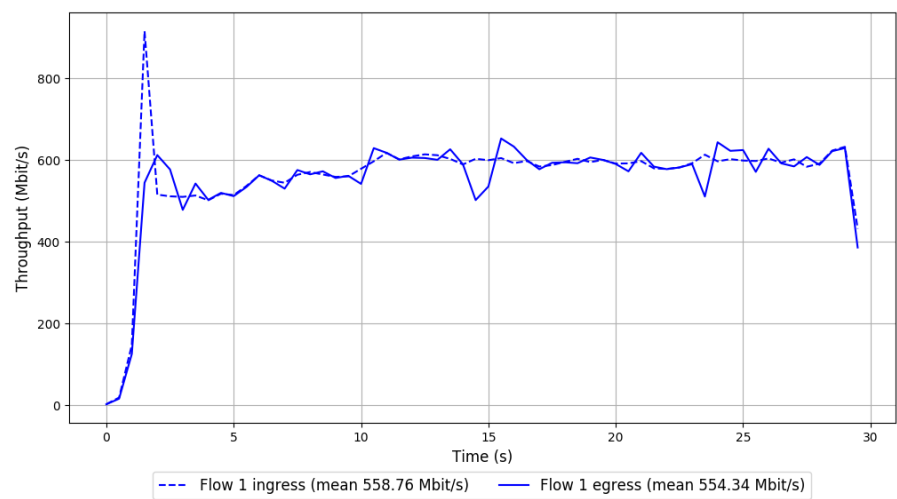
Run 9: Report of LEDBAT — Data Link

Flow 1 ingress (mean 5.25 Mbit/s) --- Flow 1 egress (mean 5.19 Mbit/s)

Flow 1 (95th percentile 51.89 ms)

```
Run 10: Statistics of LEDBAT

Start at: 2017-09-21 16:03:59
End at: 2017-09-21 16:04:29

# Below is generated by plot.py at 2017-09-21 18:07:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.03 Mbit/s
95th percentile per-packet one-way delay: 51.706 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 7.03 Mbit/s
95th percentile per-packet one-way delay: 51.706 ms
Loss rate: 0.64%
```
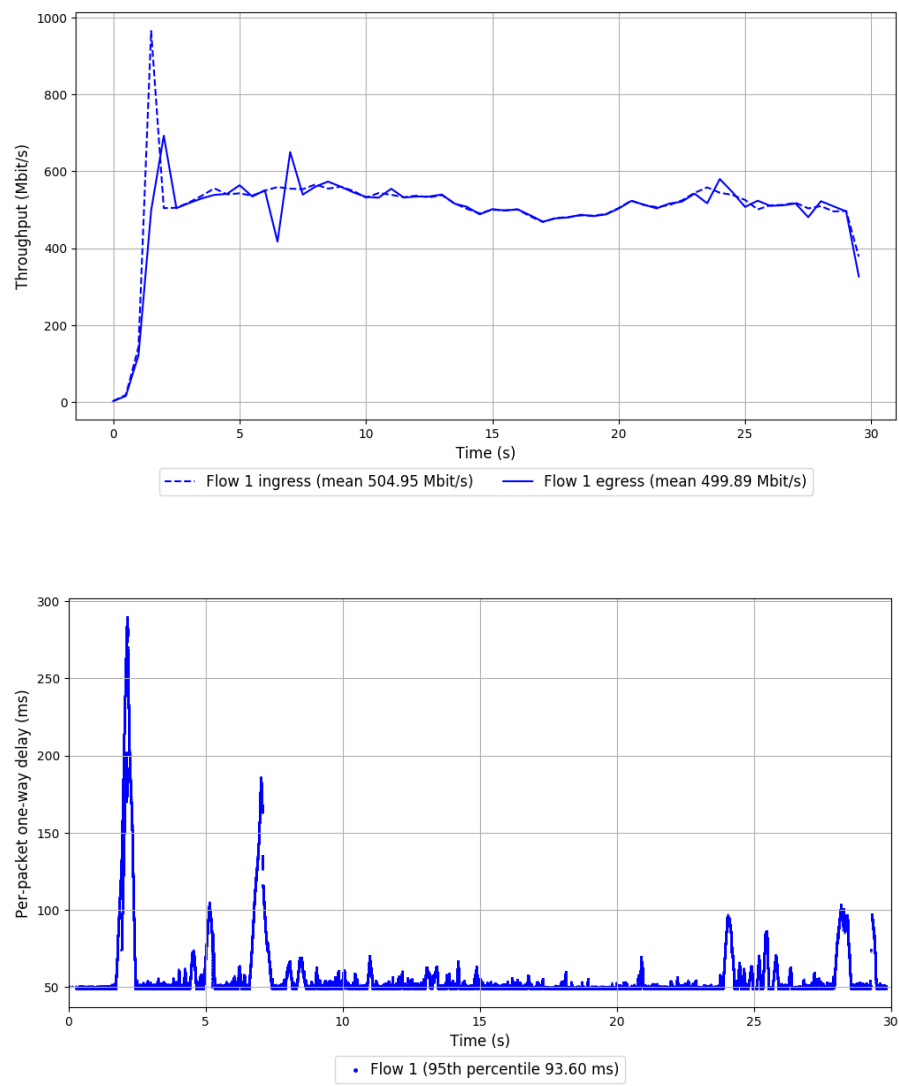
Run 10: Report of LEDBAT — Data Link

```
Run 1: Statistics of PCC

Start at: 2017-09-21 14:22:43
End at: 2017-09-21 14:23:13

# Below is generated by plot.py at 2017-09-21 18:17:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 554.34 Mbit/s
95th percentile per-packet one-way delay: 111.428 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 554.34 Mbit/s
95th percentile per-packet one-way delay: 111.428 ms
Loss rate: 1.14%
```
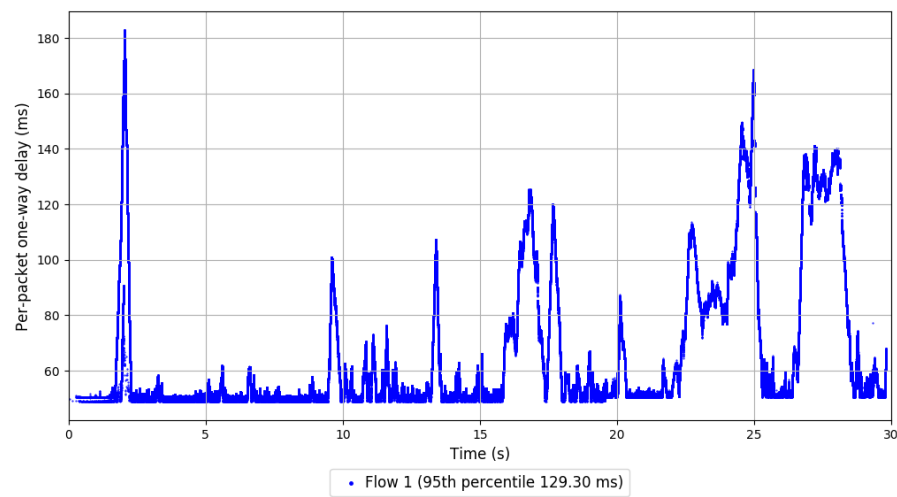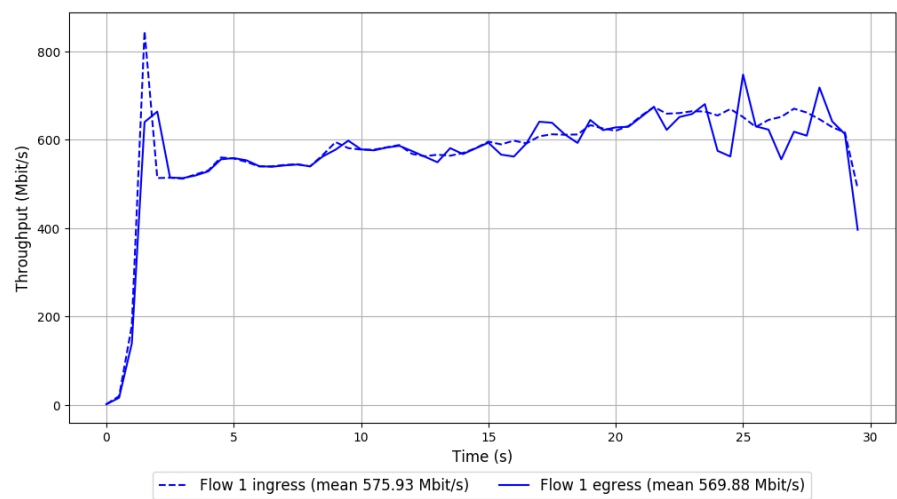
Run 1: Report of PCC — Data Link

Flow 1 ingress (mean 558.76 Mbit/s) --- Flow 1 egress (mean 554.34 Mbit/s)

• Flow 1 (95th percentile 111.43 ms)

```
Run 2: Statistics of PCC

Start at: 2017-09-21 14:33:17
End at: 2017-09-21 14:33:47

# Below is generated by plot.py at 2017-09-21 18:17:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 499.89 Mbit/s
95th percentile per-packet one-way delay: 93.596 ms
Loss rate: 1.34%
-- Flow 1:
Average throughput: 499.89 Mbit/s
95th percentile per-packet one-way delay: 93.596 ms
Loss rate: 1.34%
```
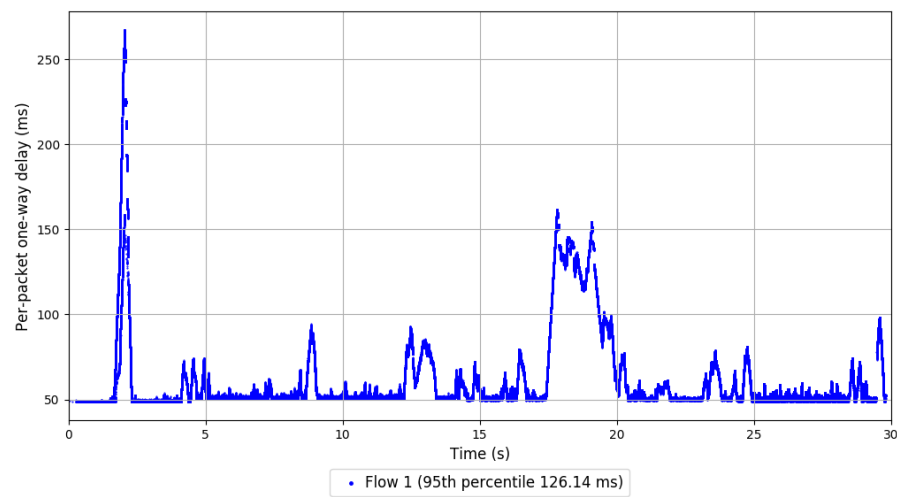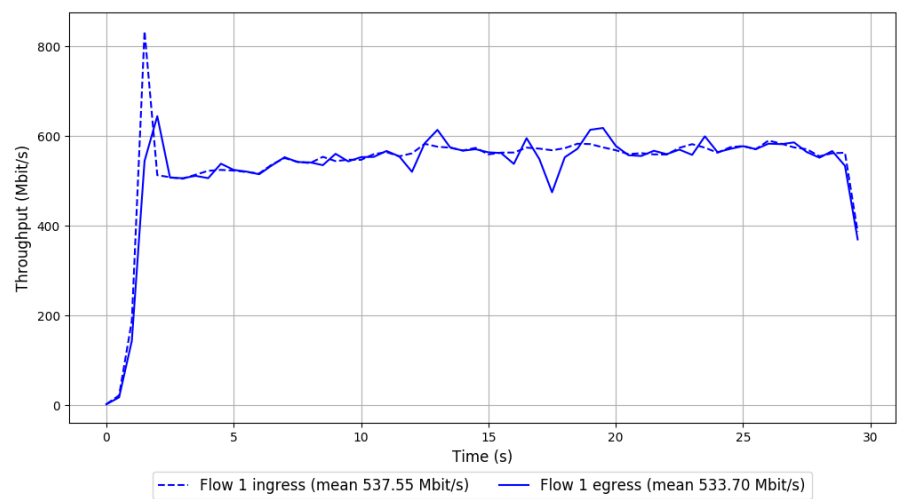
Run 2: Report of PCC — Data Link

Flow 1 ingress (mean 504.95 Mbit/s)   Flow 1 egress (mean 499.89 Mbit/s)

• Flow 1 (95th percentile 93.60 ms)

```
Run 3: Statistics of PCC

Start at: 2017-09-21 14:43:44
End at: 2017-09-21 14:44:14


# Below is generated by plot.py at 2017-09-21 18:17:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 569.88 Mbit/s
95th percentile per-packet one-way delay: 129.298 ms
Loss rate: 1.38%
-- Flow 1:
Average throughput: 569.88 Mbit/s
95th percentile per-packet one-way delay: 129.298 ms
Loss rate: 1.38%
```
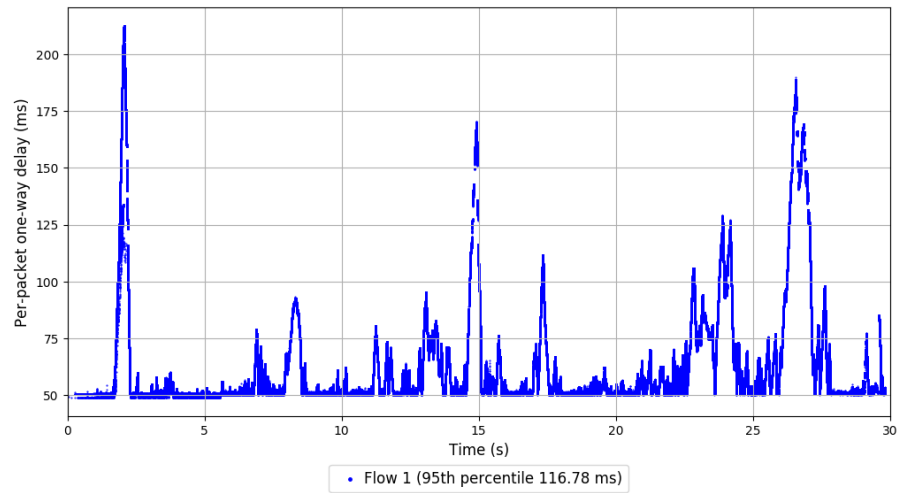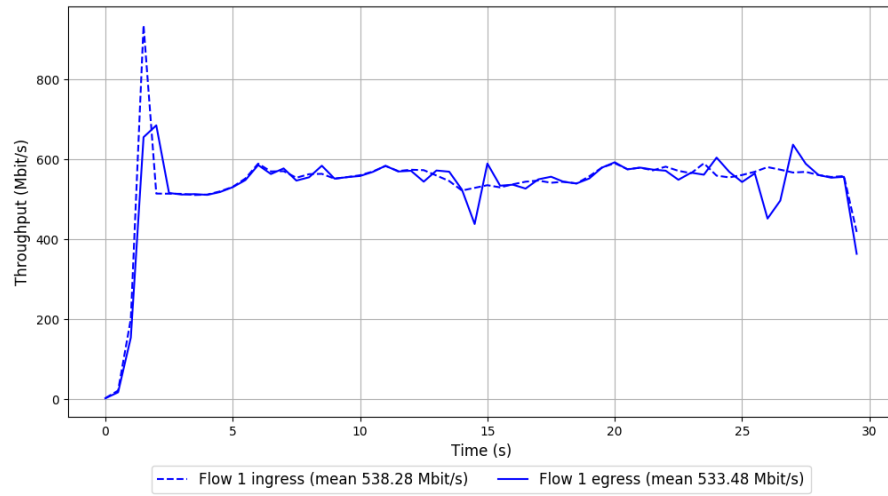
Run 3: Report of PCC — Data Link

Flow 1 ingress (mean 575.93 Mbit/s)   Flow 1 egress (mean 569.88 Mbit/s)

Flow 1 (95th percentile 129.30 ms)

```
Run 4: Statistics of PCC

Start at: 2017-09-21 14:54:29
End at: 2017-09-21 14:54:59

# Below is generated by plot.py at 2017-09-21 18:17:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 533.70 Mbit/s
95th percentile per-packet one-way delay: 126.141 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 533.70 Mbit/s
95th percentile per-packet one-way delay: 126.141 ms
Loss rate: 1.05%
```
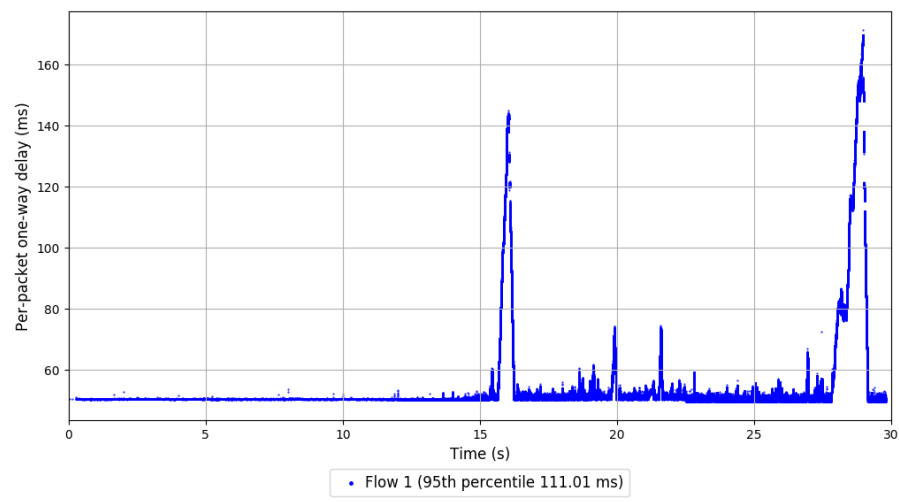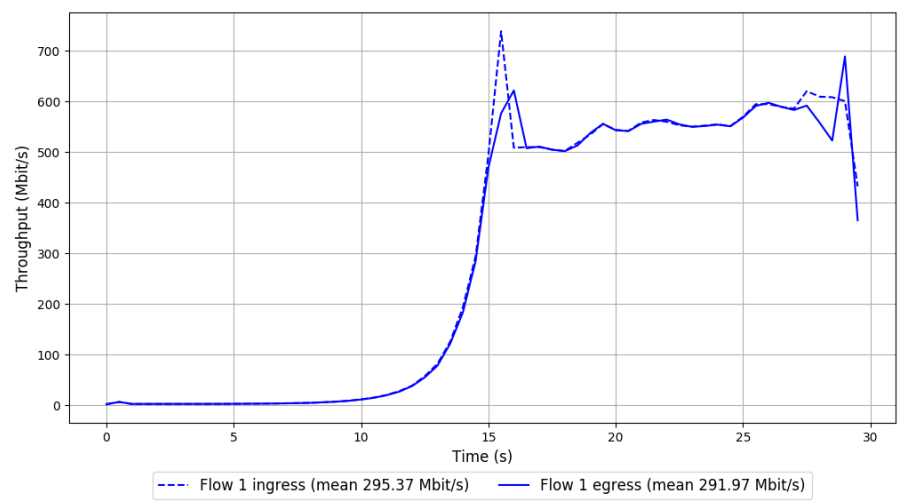
Run 4: Report of PCC — Data Link

Flow 1 ingress (mean 537.55 Mbit/s) ---- Flow 1 egress (mean 533.70 Mbit/s)

Flow 1 (95th percentile 126.14 ms)

```
Run 5: Statistics of PCC

Start at: 2017-09-21 15:05:08
End at: 2017-09-21 15:05:38

# Below is generated by plot.py at 2017-09-21 18:17:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 533.48 Mbit/s
95th percentile per-packet one-way delay: 116.782 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 533.48 Mbit/s
95th percentile per-packet one-way delay: 116.782 ms
Loss rate: 1.22%
```
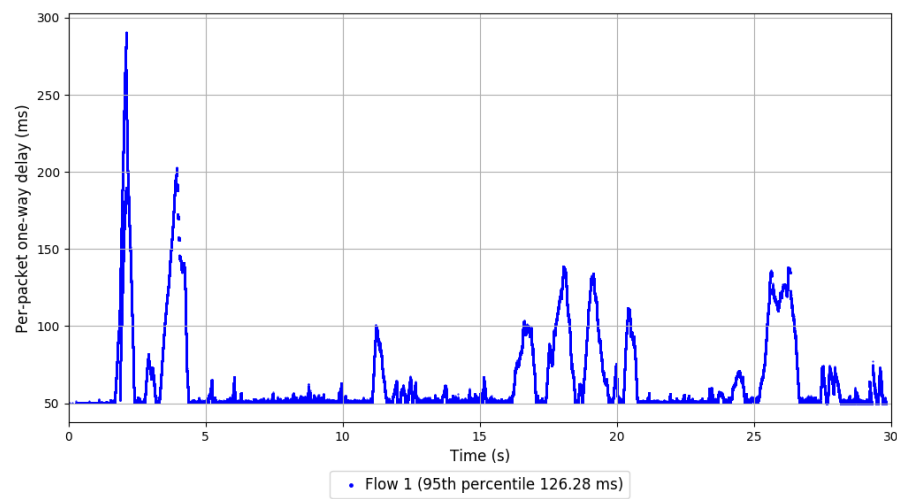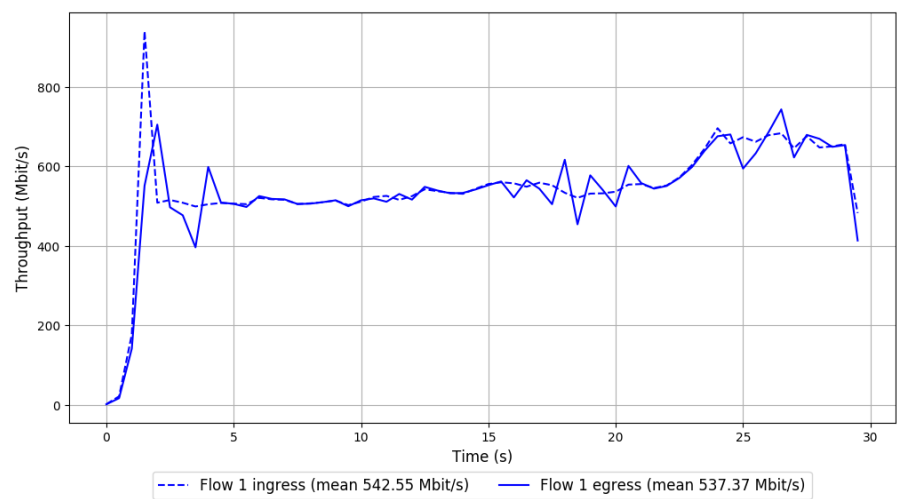
Run 5: Report of PCC — Data Link

```
Run 6: Statistics of PCC

Start at: 2017-09-21 15:15:51
End at: 2017-09-21 15:16:21

# Below is generated by plot.py at 2017-09-21 18:17:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 291.97 Mbit/s
95th percentile per-packet one-way delay: 111.009 ms
Loss rate: 1.49%
-- Flow 1:
Average throughput: 291.97 Mbit/s
95th percentile per-packet one-way delay: 111.009 ms
Loss rate: 1.49%
```
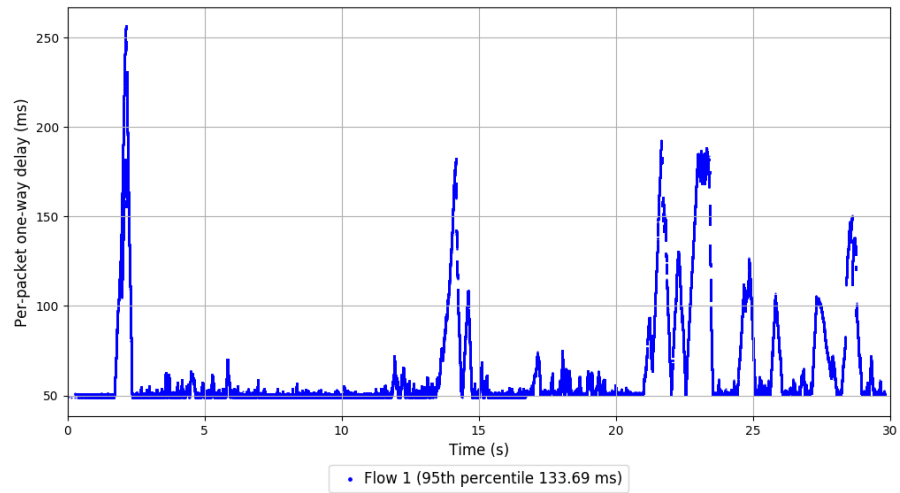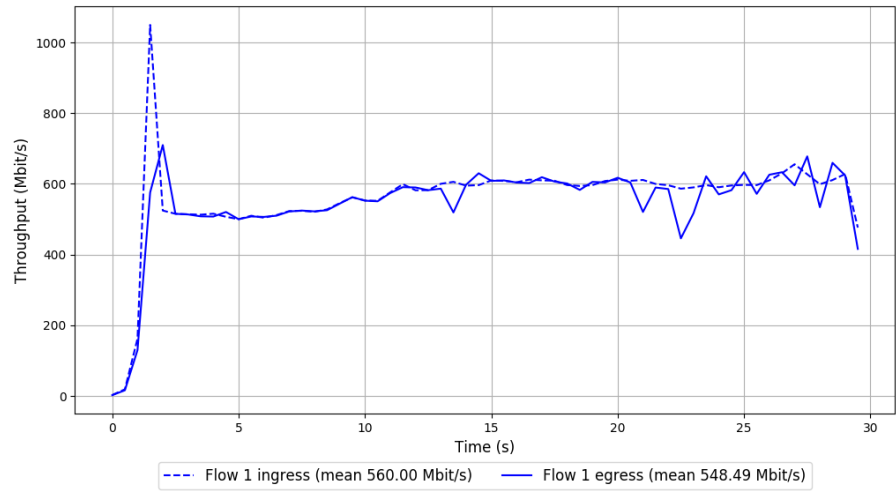
Run 6: Report of PCC — Data Link

Flow 1 ingress (mean 295.37 Mbit/s)   Flow 1 egress (mean 291.97 Mbit/s)

Flow 1 (95th percentile 111.01 ms)

```
Run 7: Statistics of PCC

Start at: 2017-09-21 15:26:16
End at: 2017-09-21 15:26:46

# Below is generated by plot.py at 2017-09-21 18:18:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 537.37 Mbit/s
95th percentile per-packet one-way delay: 126.280 ms
Loss rate: 1.29%
-- Flow 1:
Average throughput: 537.37 Mbit/s
95th percentile per-packet one-way delay: 126.280 ms
Loss rate: 1.29%
```
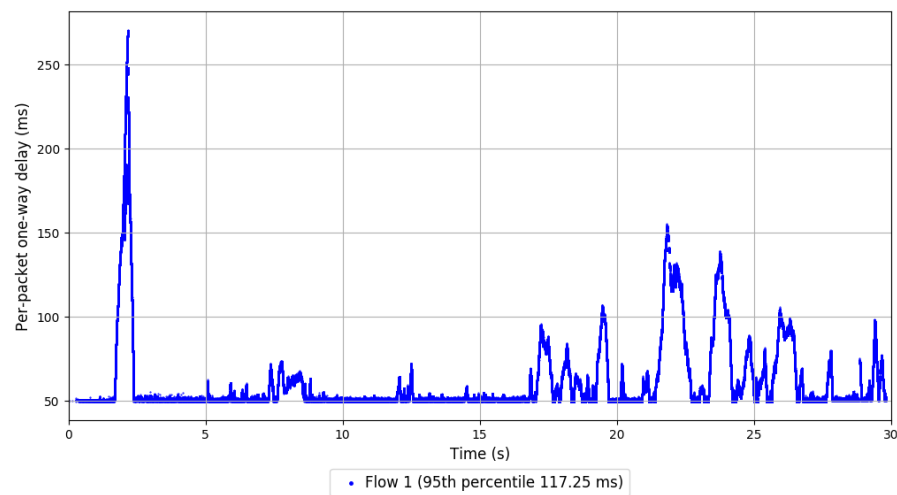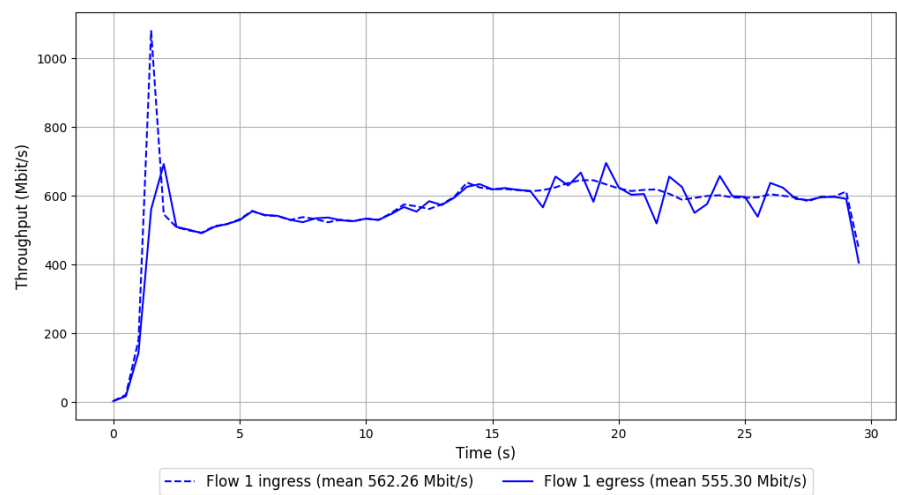
Run 7: Report of PCC — Data Link

Flow 1 ingress (mean 542.55 Mbit/s) Flow 1 egress (mean 537.37 Mbit/s)

Flow 1 (95th percentile 126.28 ms)

```
Run 8: Statistics of PCC

Start at: 2017-09-21 15:36:57
End at: 2017-09-21 15:37:27

# Below is generated by plot.py at 2017-09-21 18:18:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 548.49 Mbit/s
95th percentile per-packet one-way delay: 133.689 ms
Loss rate: 2.38%
-- Flow 1:
Average throughput: 548.49 Mbit/s
95th percentile per-packet one-way delay: 133.689 ms
Loss rate: 2.38%
```
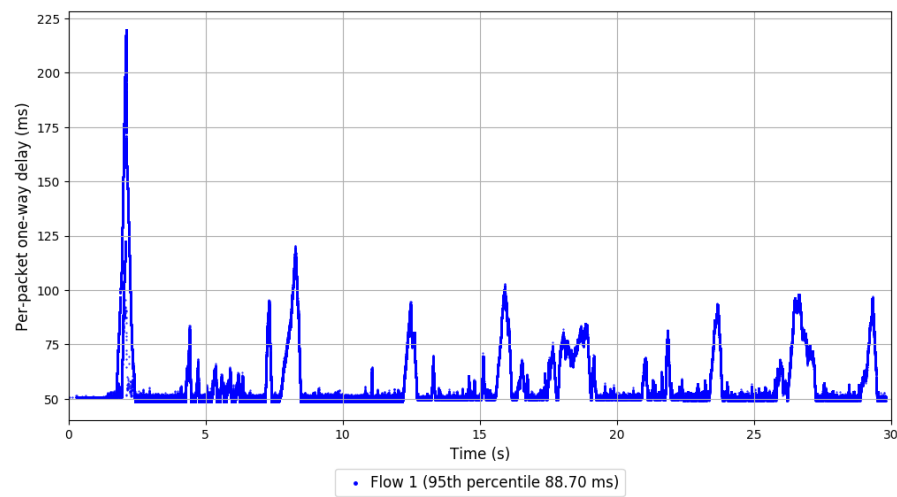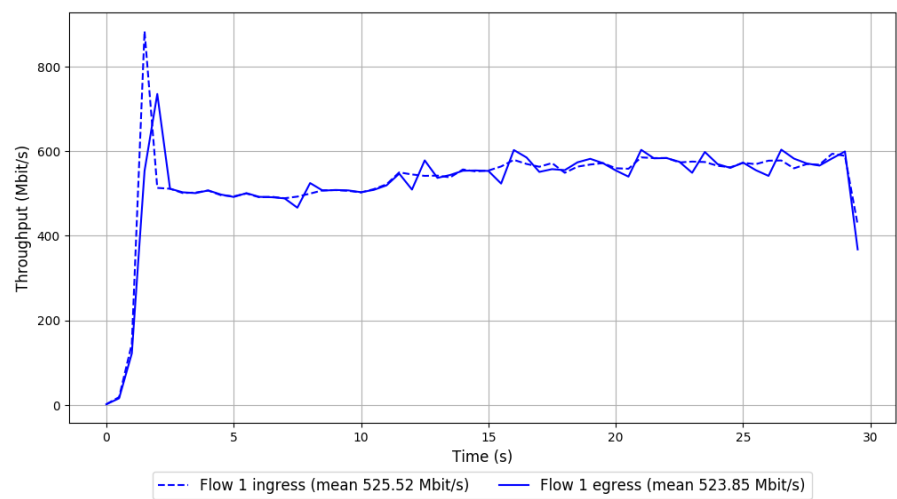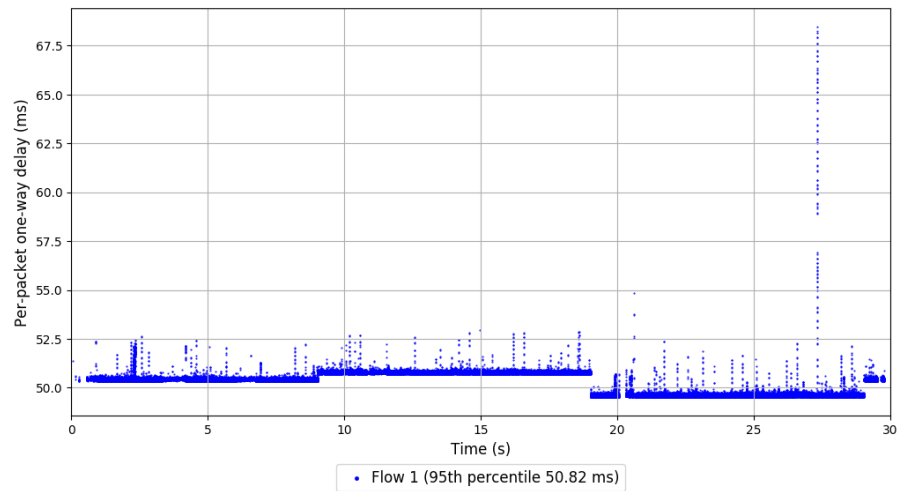
Run 8: Report of PCC — Data Link

Flow 1 ingress (mean 560.00 Mbit/s)   Flow 1 egress (mean 548.49 Mbit/s)
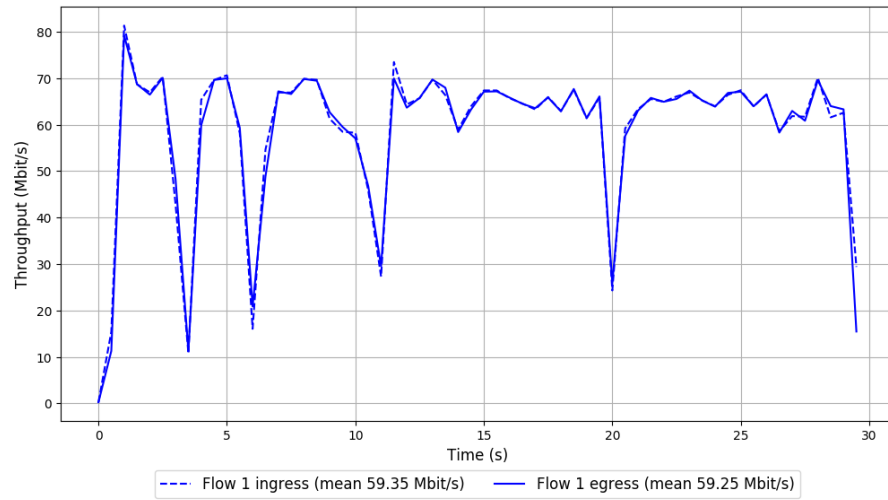

Flow 1 (95th percentile 133.69 ms)

79

```
Run 9: Statistics of PCC

Start at: 2017-09-21 15:47:36
End at: 2017-09-21 15:48:06

# Below is generated by plot.py at 2017-09-21 18:24:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 555.30 Mbit/s
95th percentile per-packet one-way delay: 117.247 ms
Loss rate: 1.57%
-- Flow 1:
Average throughput: 555.30 Mbit/s
95th percentile per-packet one-way delay: 117.247 ms
Loss rate: 1.57%
```

Run 9: Report of PCC — Data Link

```
Run 10: Statistics of PCC

Start at: 2017-09-21 15:58:21
End at: 2017-09-21 15:58:51

# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 523.85 Mbit/s
95th percentile per-packet one-way delay: 88.702 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 523.85 Mbit/s
95th percentile per-packet one-way delay: 88.702 ms
Loss rate: 0.65%
```
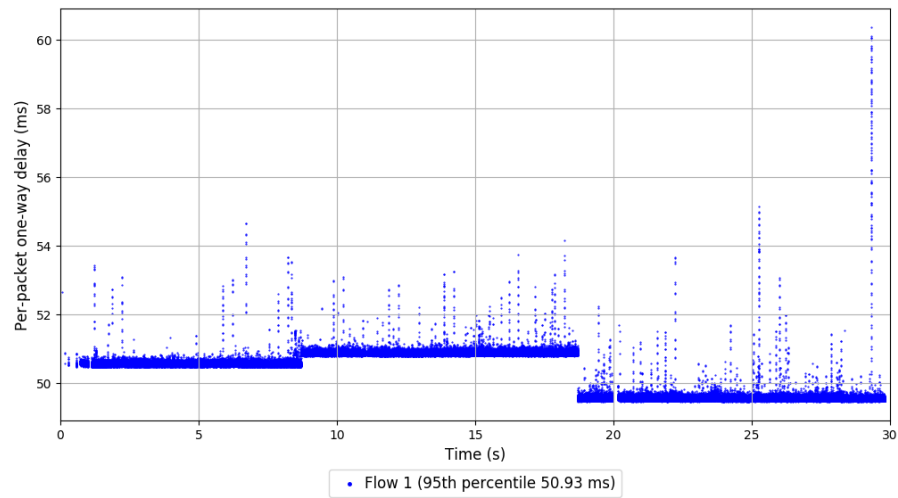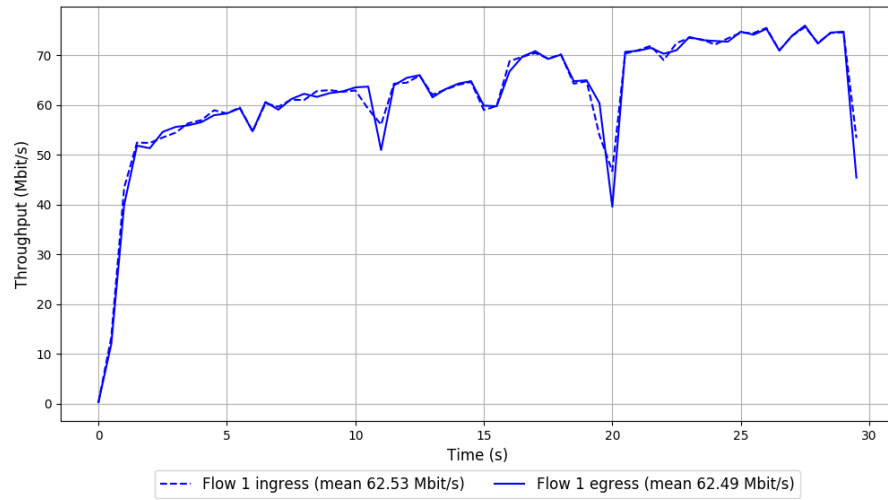
Run 10: Report of PCC — Data Link

```
Run 1: Statistics of QUIC Cubic

Start at: 2017-09-21 14:24:35
End at: 2017-09-21 14:25:05

# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 59.25 Mbit/s
95th percentile per-packet one-way delay: 50.822 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 59.25 Mbit/s
95th percentile per-packet one-way delay: 50.822 ms
Loss rate: 0.50%
```
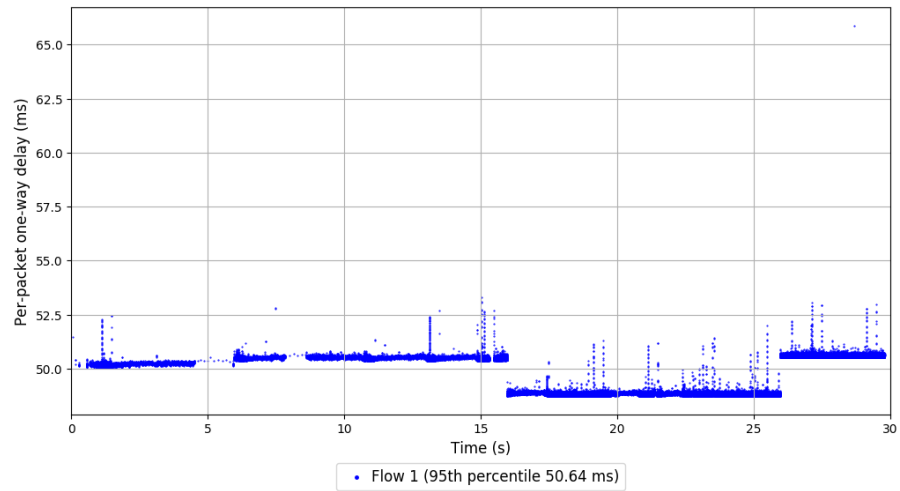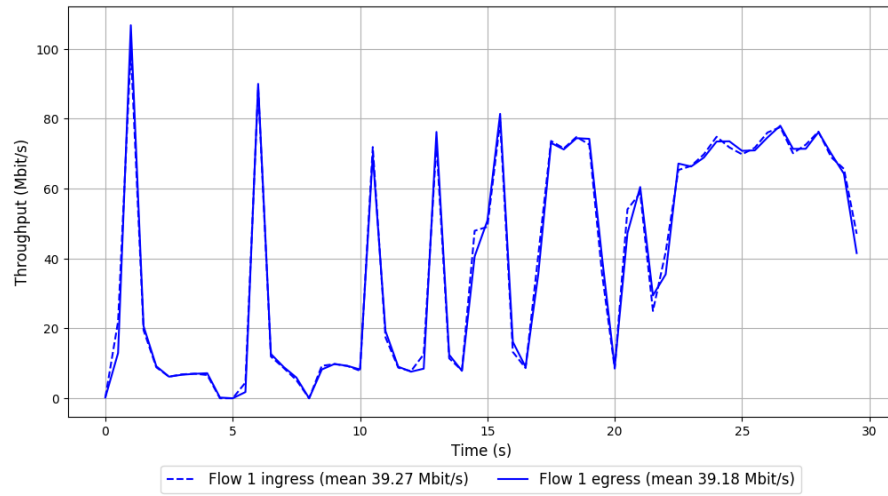
Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2017-09-21 14:34:55
End at: 2017-09-21 14:35:25


# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 62.49 Mbit/s
95th percentile per-packet one-way delay: 50.927 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 62.49 Mbit/s
95th percentile per-packet one-way delay: 50.927 ms
Loss rate: 0.41%
```
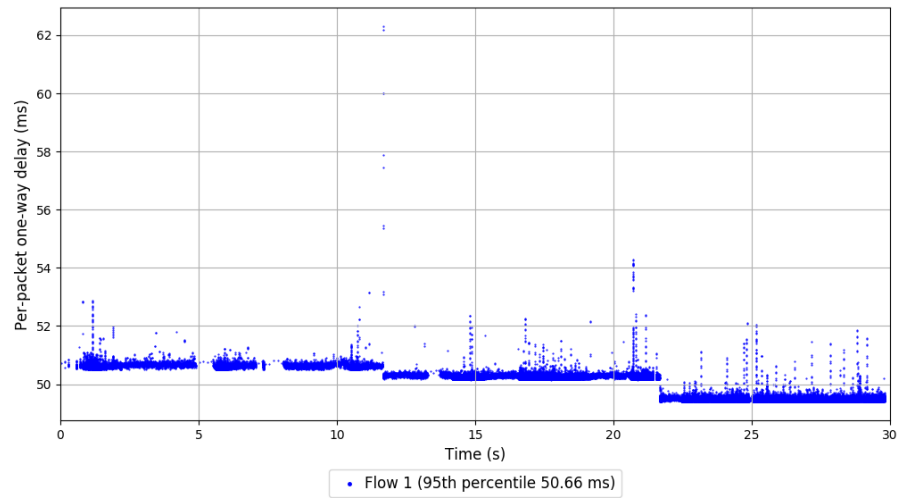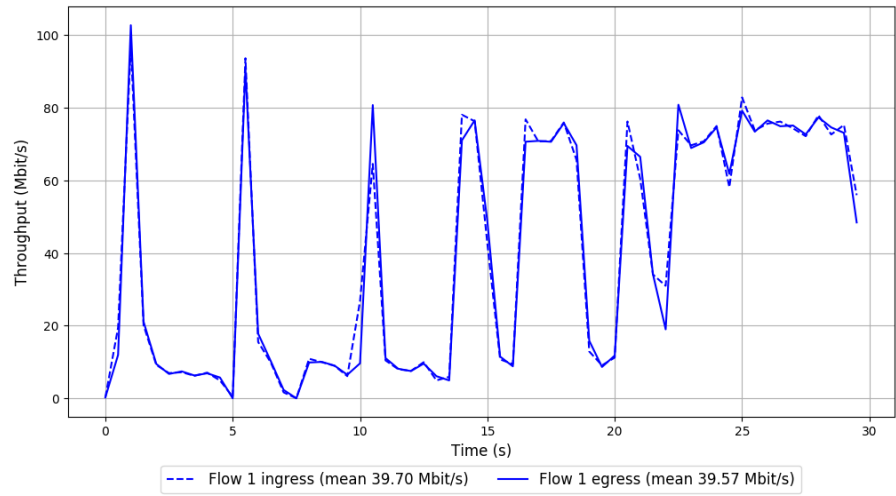
Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2017-09-21 14:45:38
End at: 2017-09-21 14:46:08

# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 39.18 Mbit/s
95th percentile per-packet one-way delay: 50.639 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 39.18 Mbit/s
95th percentile per-packet one-way delay: 50.639 ms
Loss rate: 0.57%
```
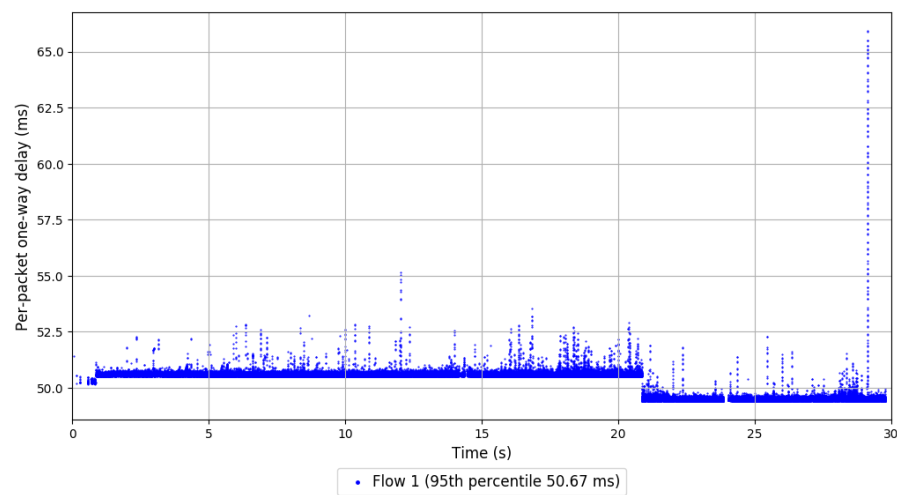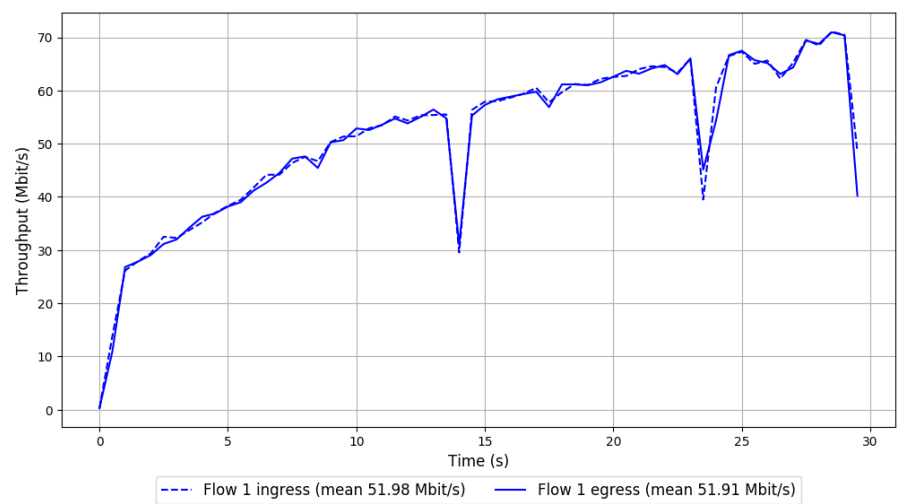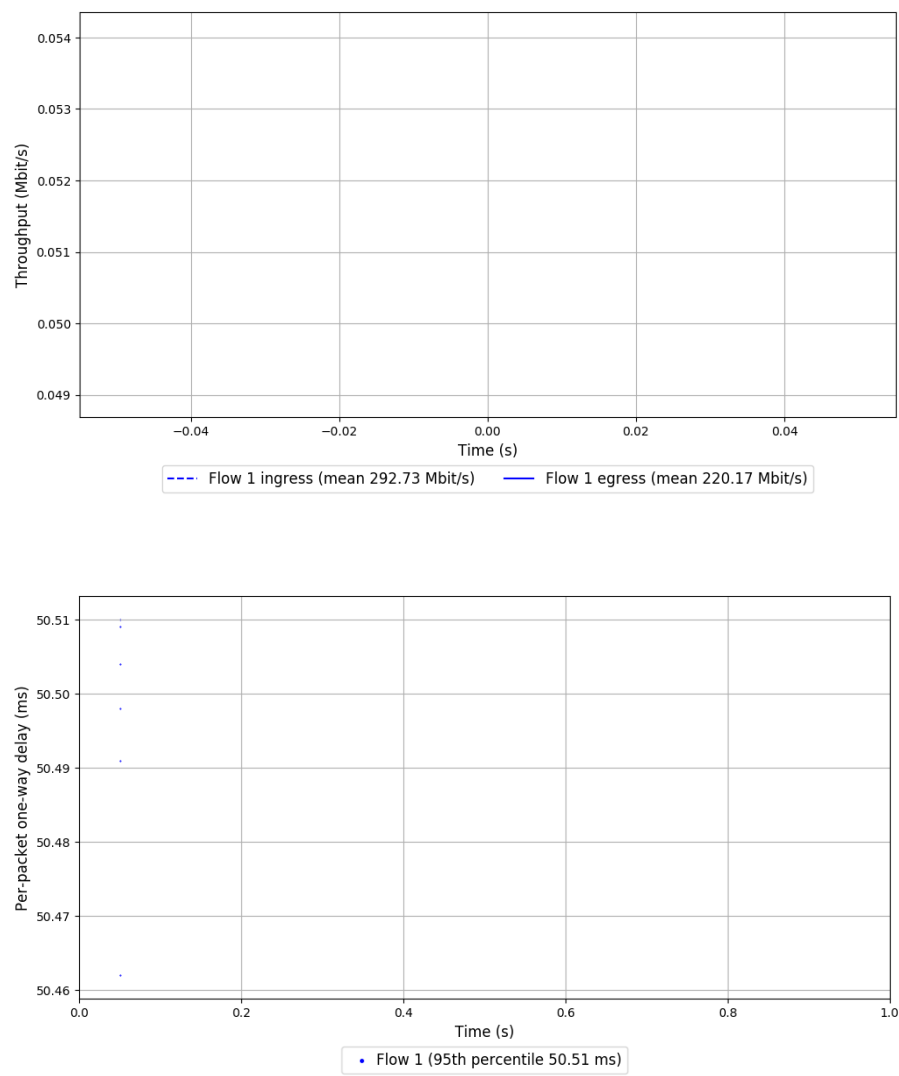
Run 3: Report of QUIC Cubic — Data Link

```
Run 4: Statistics of QUIC Cubic

Start at: 2017-09-21 14:56:22
End at: 2017-09-21 14:56:52

# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 39.57 Mbit/s
95th percentile per-packet one-way delay: 50.655 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 39.57 Mbit/s
95th percentile per-packet one-way delay: 50.655 ms
Loss rate: 0.65%
```
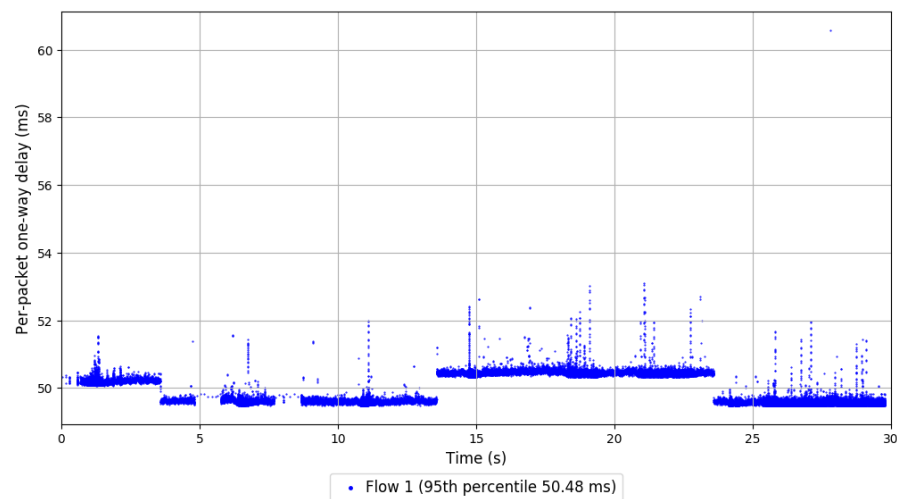
Run 4: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 39.70 Mbit/s)   Flow 1 egress (mean 39.57 Mbit/s)

• Flow 1 (95th percentile 50.66 ms)

```
Run 5: Statistics of QUIC Cubic

Start at: 2017-09-21 15:07:03
End at: 2017-09-21 15:07:33

# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 51.91 Mbit/s
95th percentile per-packet one-way delay: 50.672 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 51.91 Mbit/s
95th percentile per-packet one-way delay: 50.672 ms
Loss rate: 0.49%
```
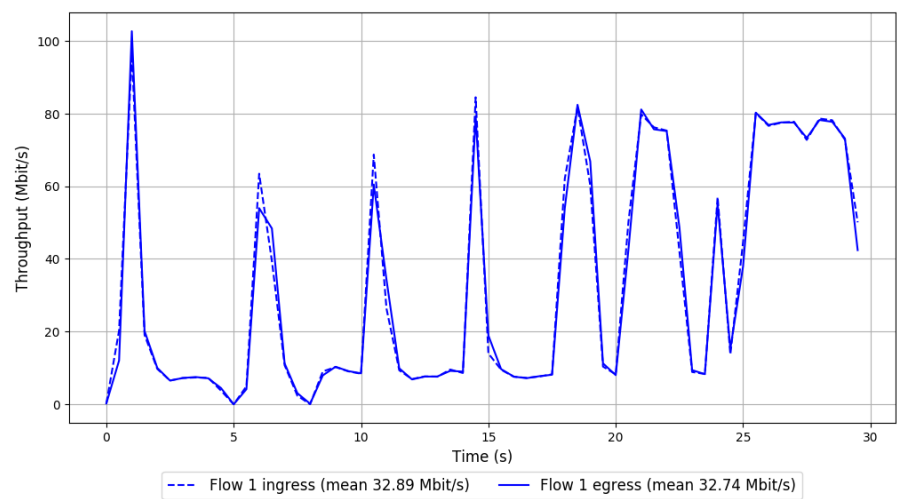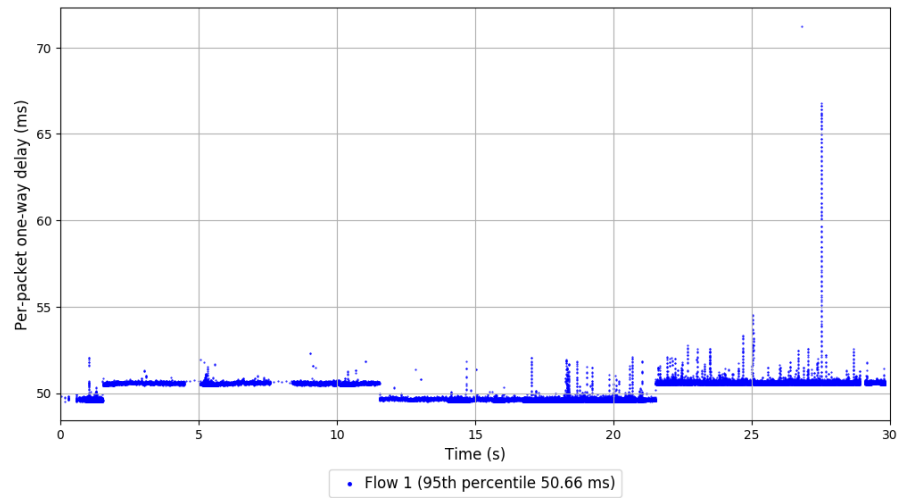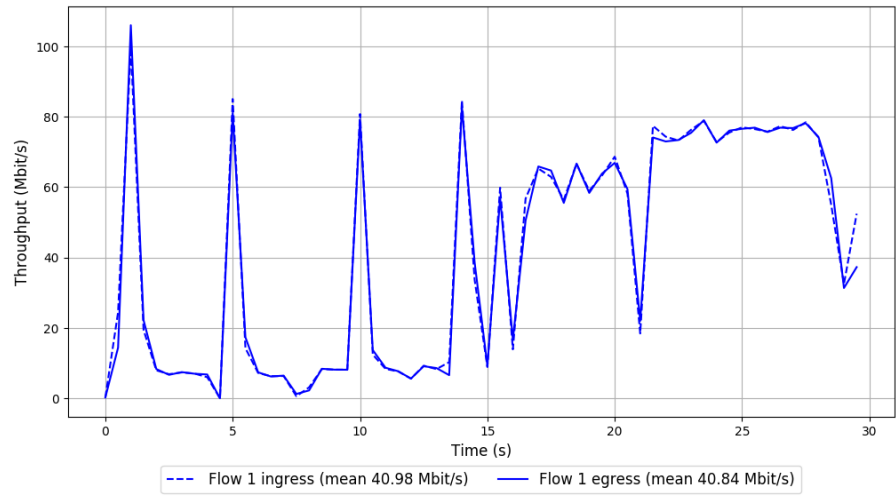
Run 5: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 51.98 Mbit/s)   Flow 1 egress (mean 51.91 Mbit/s)

Flow 1 (95th percentile 50.67 ms)

Run 6: Statistics of QUIC Cubic

Start at: 2017-09-21 15:17:36
End at: 2017-09-21 15:18:06

Run 6: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 292.73 Mbit/s) --- Flow 1 egress (mean 220.17 Mbit/s)

Flow 1 (95th percentile 50.51 ms)

```
Run 7: Statistics of QUIC Cubic

Start at: 2017-09-21 15:28:10
End at: 2017-09-21 15:28:40

# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 32.74 Mbit/s
95th percentile per-packet one-way delay: 50.483 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 32.74 Mbit/s
95th percentile per-packet one-way delay: 50.483 ms
Loss rate: 0.78%
```
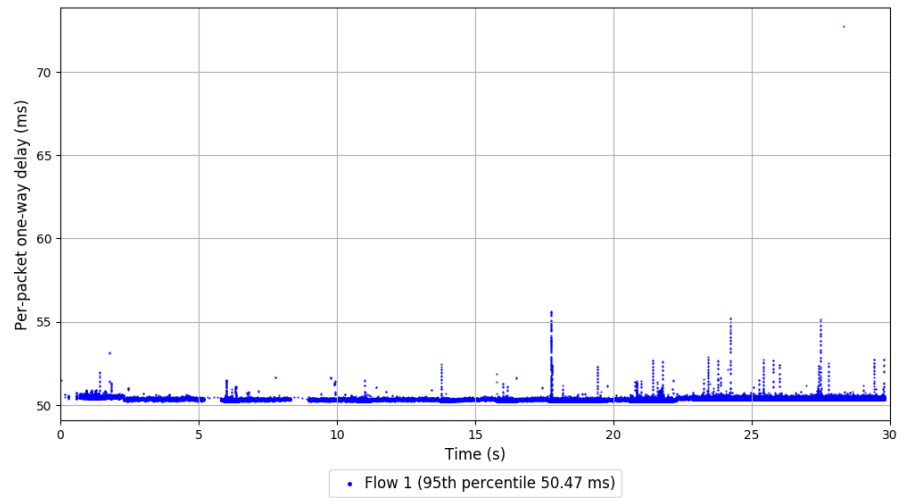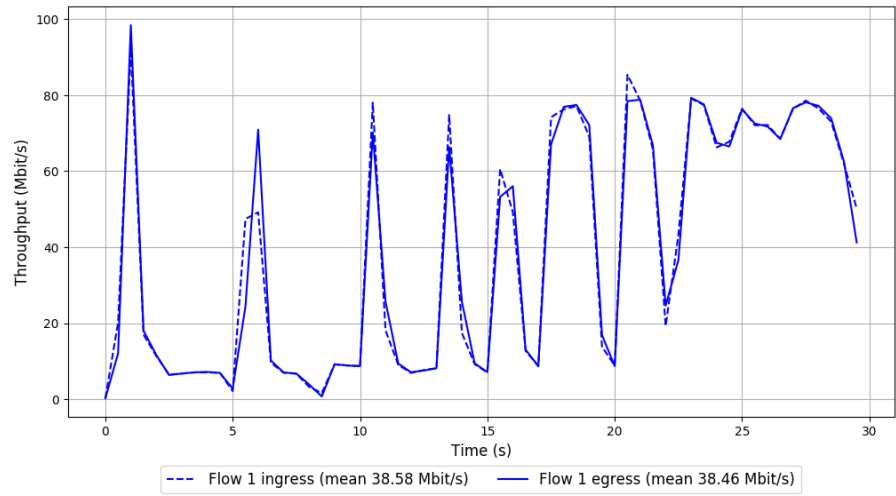
Run 7: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 32.89 Mbit/s)   Flow 1 egress (mean 32.74 Mbit/s)
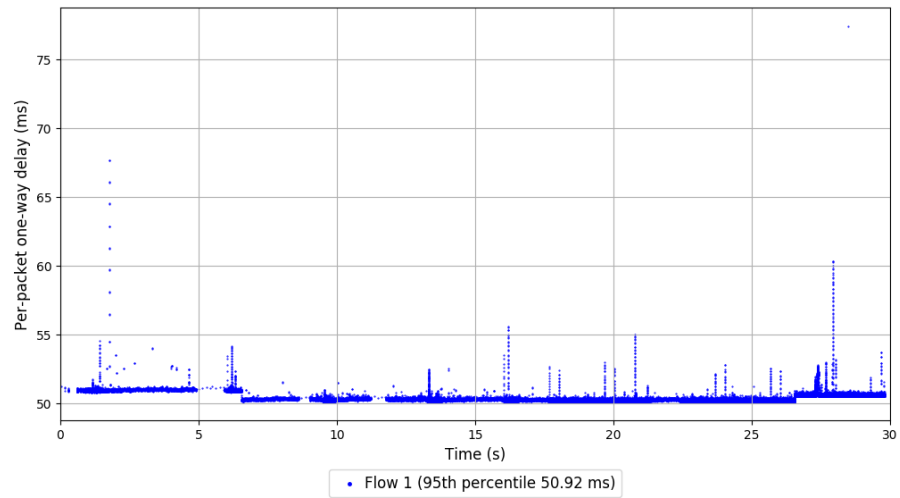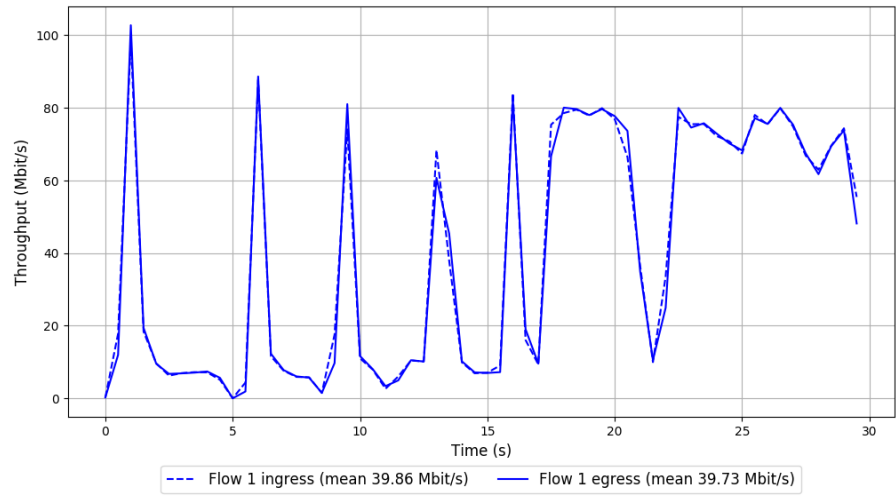

Flow 1 (95th percentile 50.48 ms)

```
Run 8: Statistics of QUIC Cubic

Start at: 2017-09-21 15:38:52
End at: 2017-09-21 15:39:22

# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 40.84 Mbit/s
95th percentile per-packet one-way delay: 50.660 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 40.84 Mbit/s
95th percentile per-packet one-way delay: 50.660 ms
Loss rate: 0.67%
```
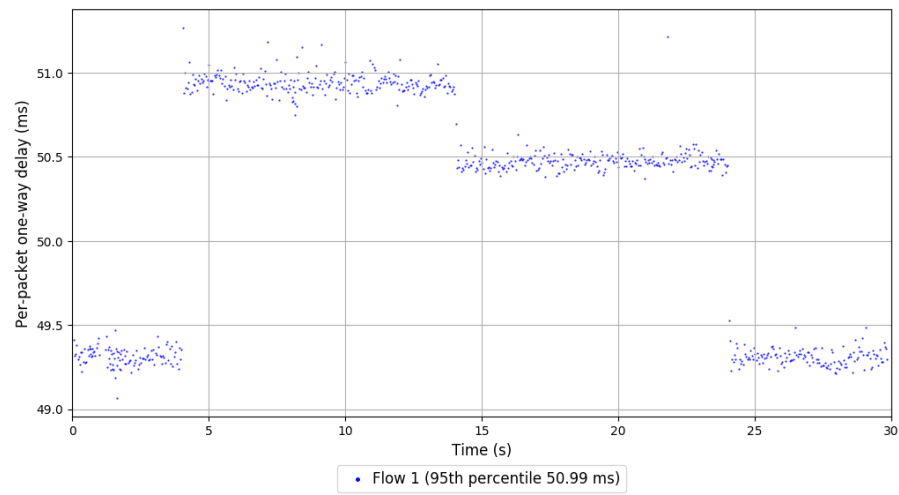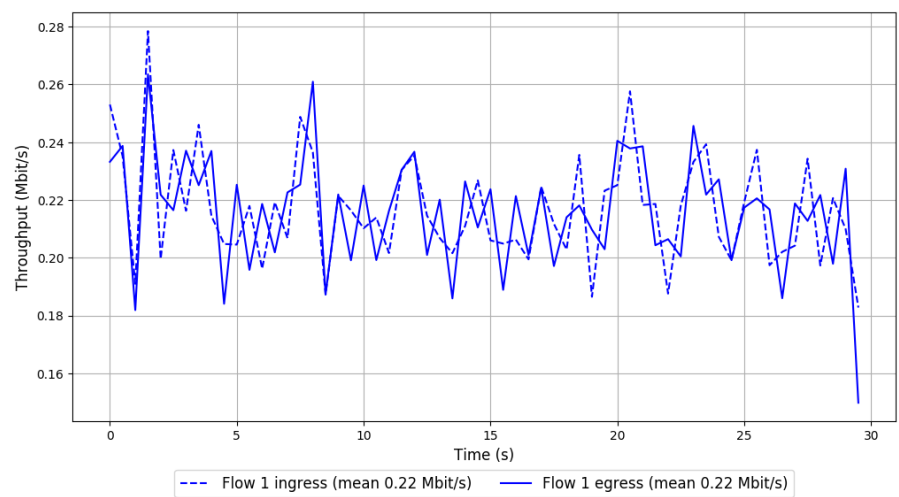
Run 8: Report of QUIC Cubic — Data Link

```
Run 9: Statistics of QUIC Cubic

Start at: 2017-09-21 15:49:31
End at: 2017-09-21 15:50:02

# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 38.46 Mbit/s
95th percentile per-packet one-way delay: 50.472 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 38.46 Mbit/s
95th percentile per-packet one-way delay: 50.472 ms
Loss rate: 0.65%
```

Run 9: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 38.58 Mbit/s) — Flow 1 egress (mean 38.46 Mbit/s)

Flow 1 (95th percentile 50.47 ms)

```
Run 10: Statistics of QUIC Cubic

Start at: 2017-09-21 16:00:17
End at: 2017-09-21 16:00:47


# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 39.73 Mbit/s
95th percentile per-packet one-way delay: 50.920 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 39.73 Mbit/s
95th percentile per-packet one-way delay: 50.920 ms
Loss rate: 0.65%
```
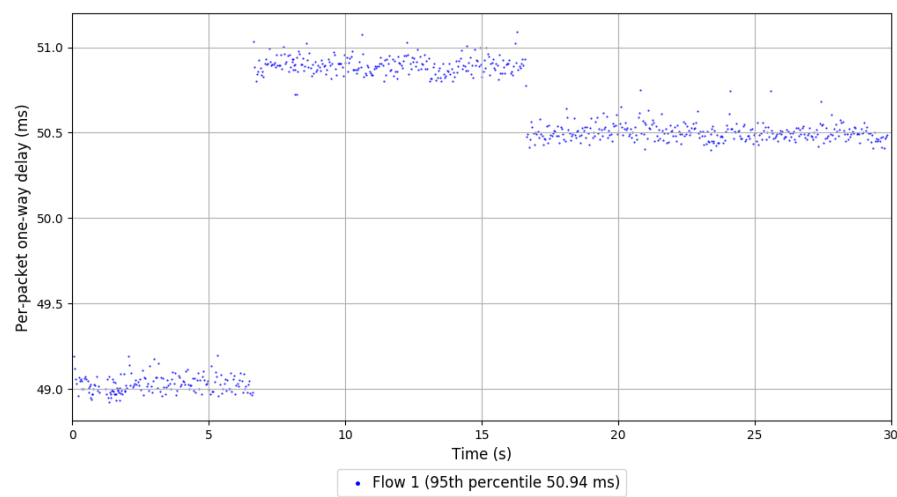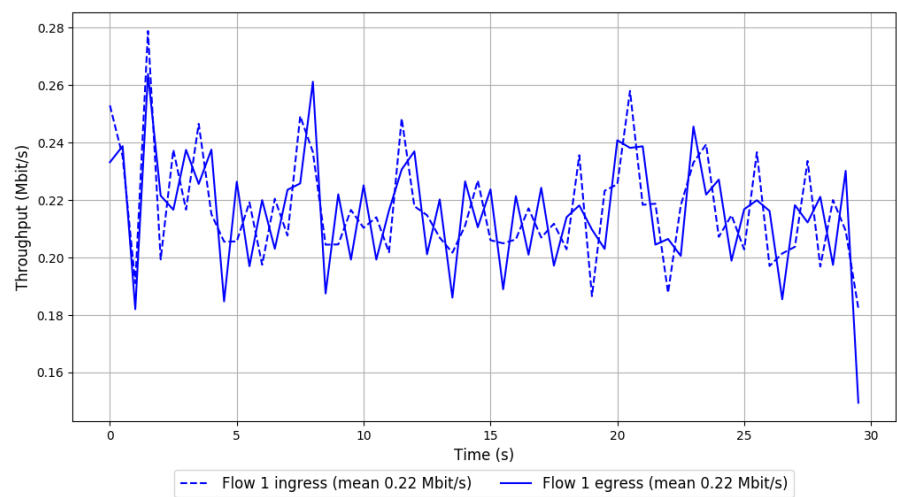
Run 10: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 39.86 Mbit/s)   Flow 1 egress (mean 39.73 Mbit/s)

• Flow 1 (95th percentile 50.92 ms)

```
Run 1: Statistics of SCReAM

Start at: 2017-09-21 14:31:00
End at: 2017-09-21 14:31:30

# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.988 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.988 ms
Loss rate: 0.38%
```
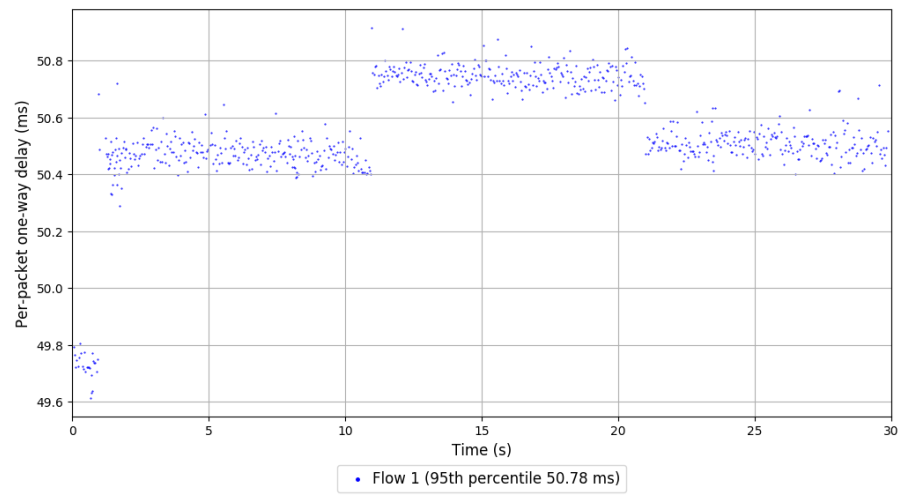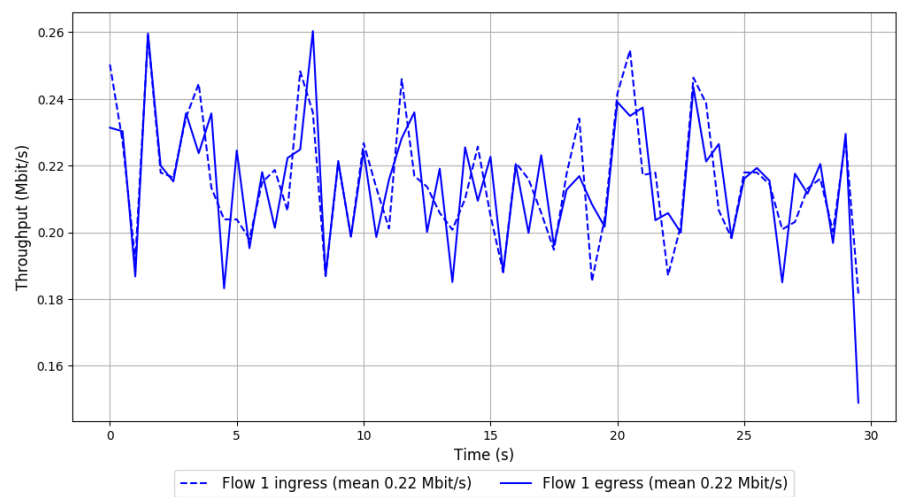
Run 1: Report of SCReAM — Data Link

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

Flow 1 (95th percentile 50.99 ms)

```
Run 2: Statistics of SCReAM

Start at: 2017-09-21 14:41:27
End at: 2017-09-21 14:41:57


# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.943 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.943 ms
Loss rate: 0.38%
```
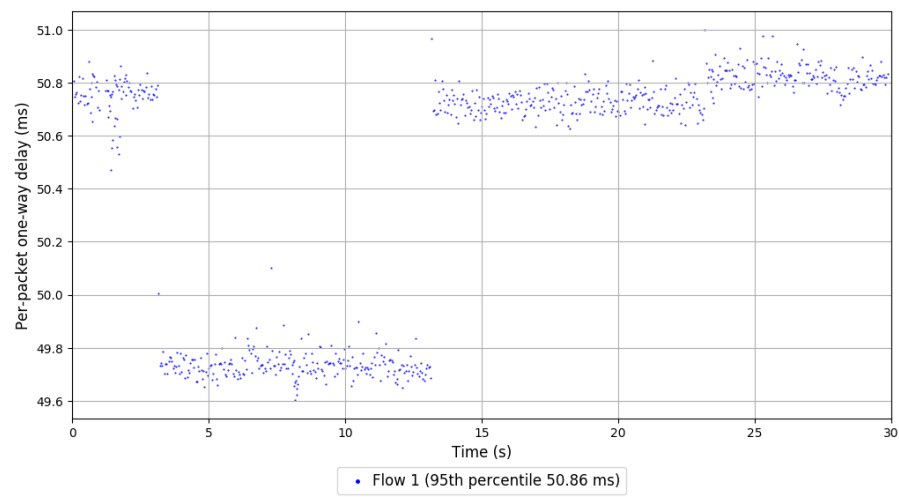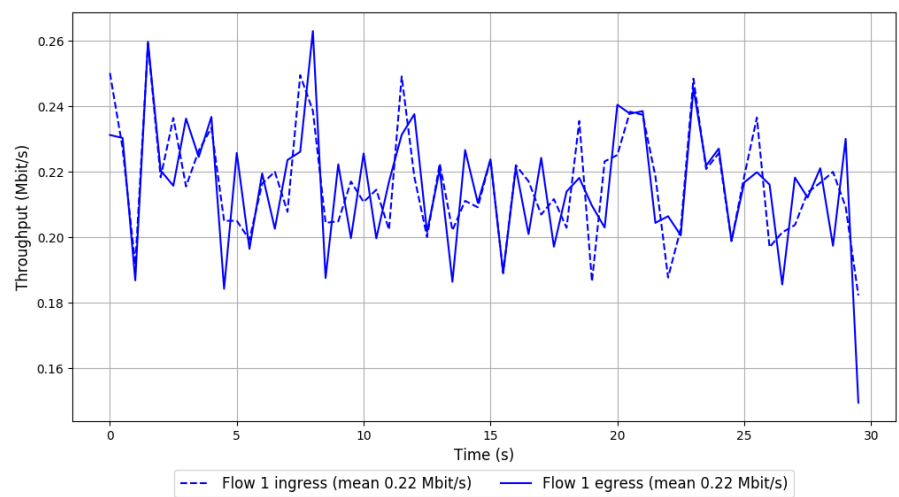
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2017-09-21 14:52:13
End at: 2017-09-21 14:52:43

# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.782 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.782 ms
Loss rate: 0.38%
```
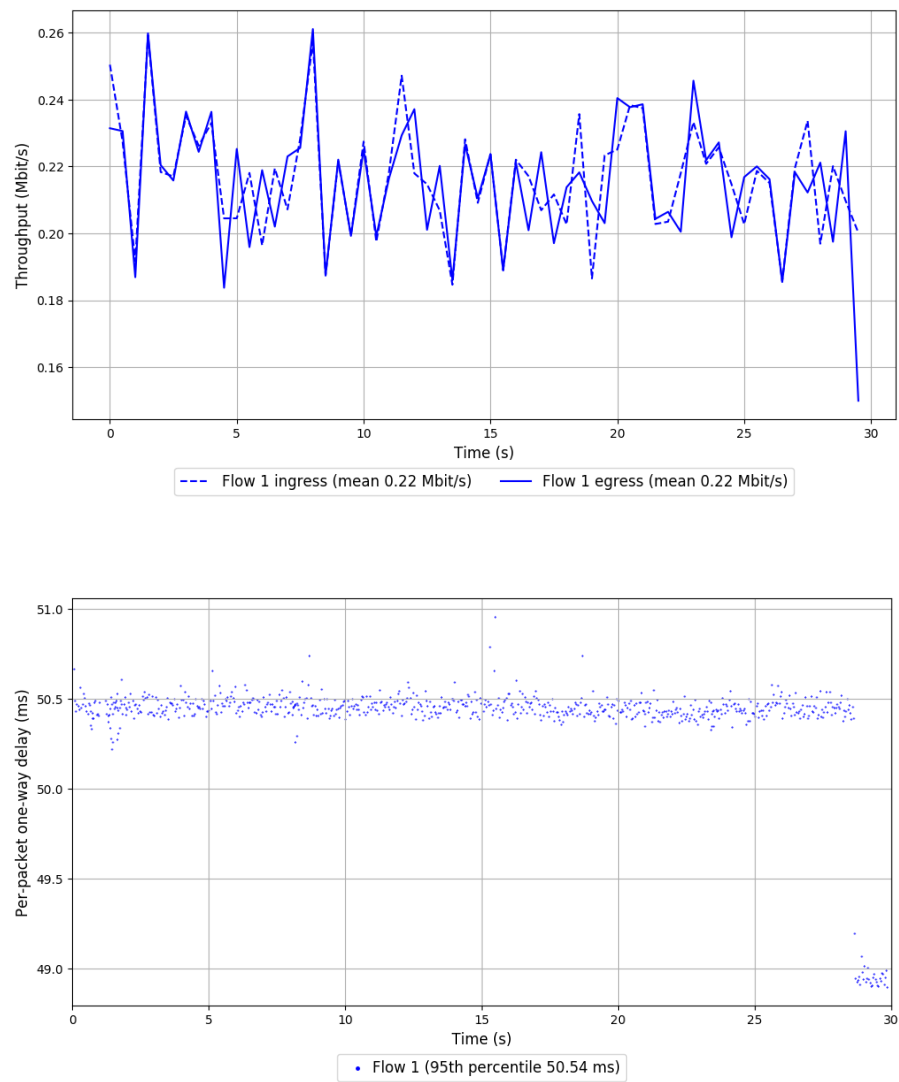
Run 3: Report of SCReAM — Data Link

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

Flow 1 (95th percentile 50.78 ms)

```
Run 4: Statistics of SCReAM

Start at: 2017-09-21 15:02:51
End at: 2017-09-21 15:03:21

# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.857 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.857 ms
Loss rate: 0.38%
```
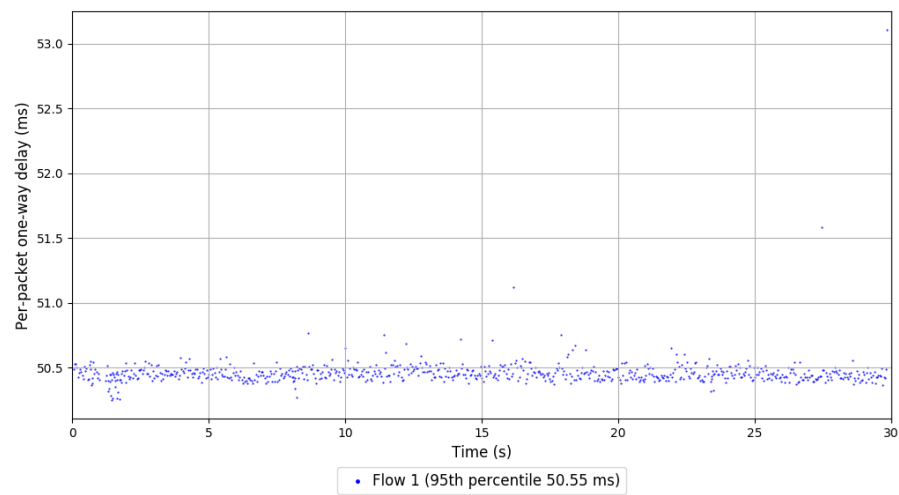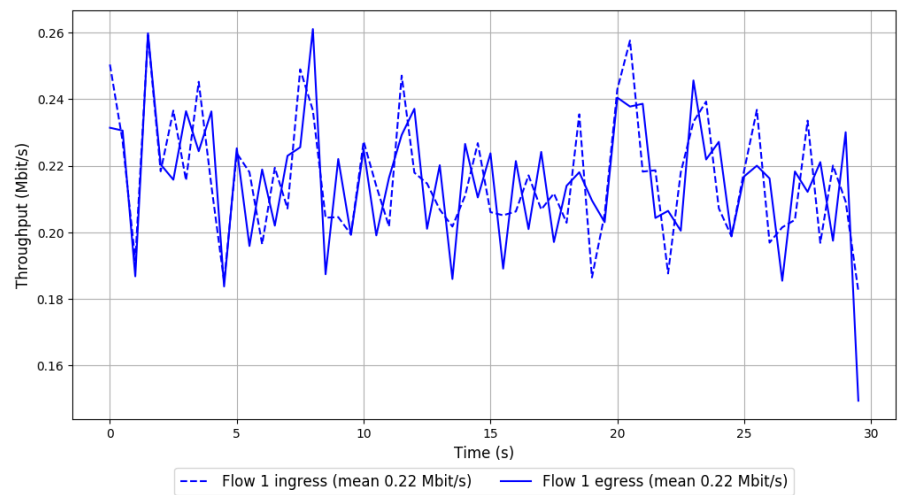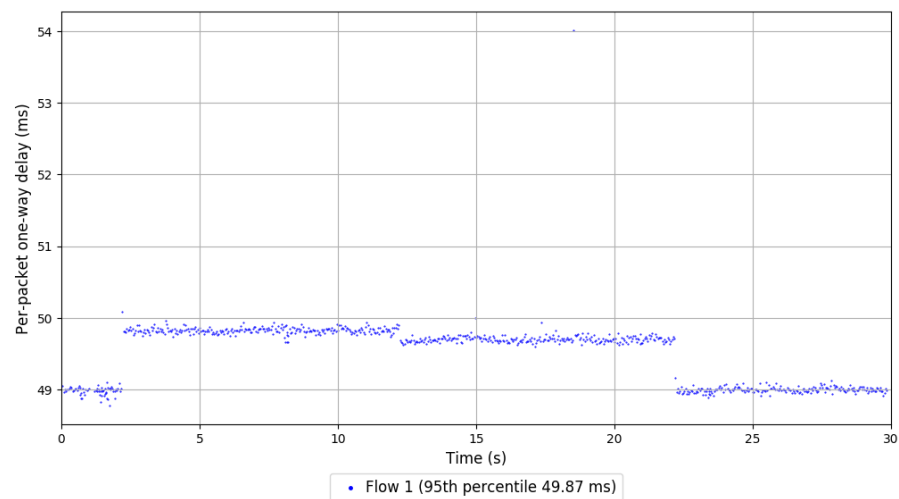
Run 4: Report of SCReAM — Data Link

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

Flow 1 (95th percentile 50.86 ms)

```
Run 5: Statistics of SCReAM

Start at: 2017-09-21 15:13:35
End at: 2017-09-21 15:14:05

# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.540 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.540 ms
Loss rate: 0.51%
```
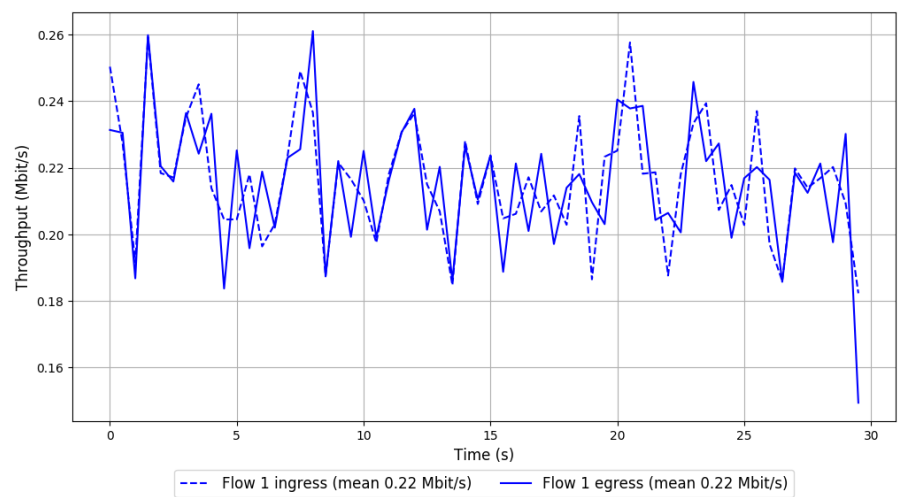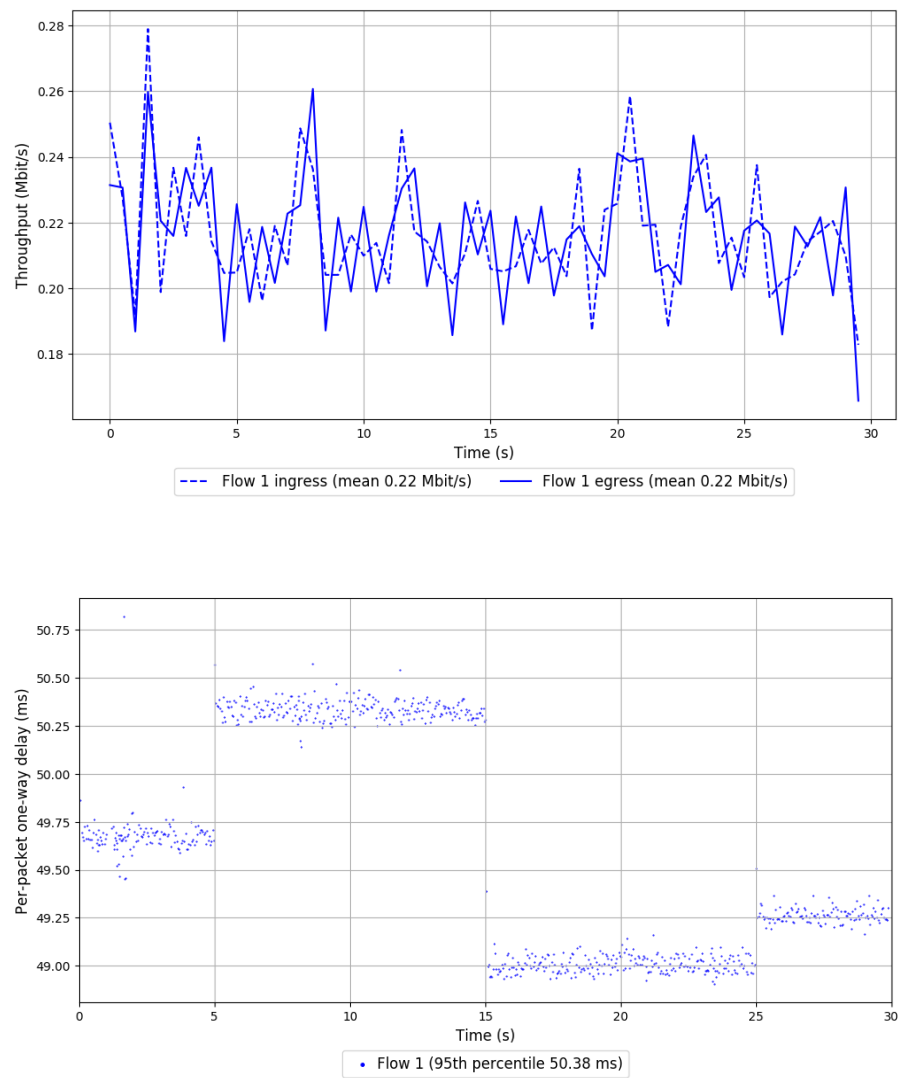
Run 5: Report of SCReAM — Data Link

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

Flow 1 (95th percentile 50.54 ms)

```
Run 6: Statistics of SCReAM

Start at: 2017-09-21 15:23:59
End at: 2017-09-21 15:24:29

# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.545 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.545 ms
Loss rate: 0.38%
```
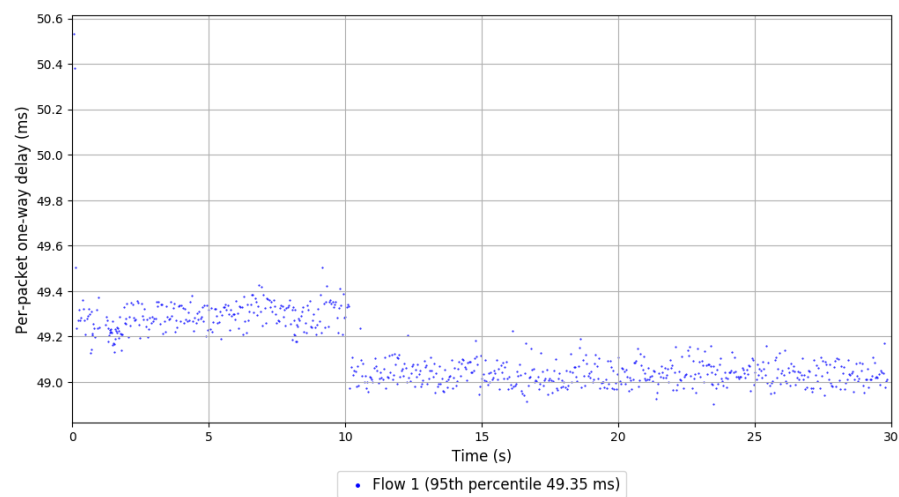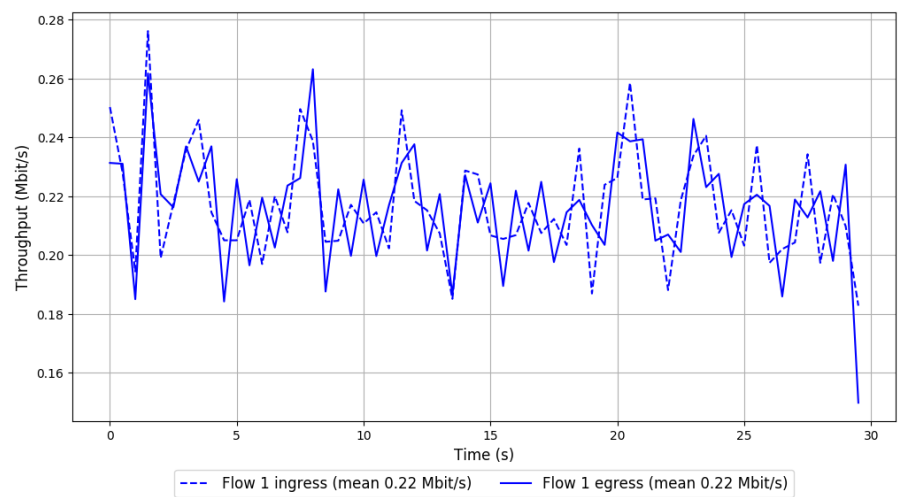
Run 6: Report of SCReAM — Data Link

```
Run 7: Statistics of SCReAM

Start at: 2017-09-21 15:34:42
End at: 2017-09-21 15:35:12

# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.867 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.867 ms
Loss rate: 0.38%
```
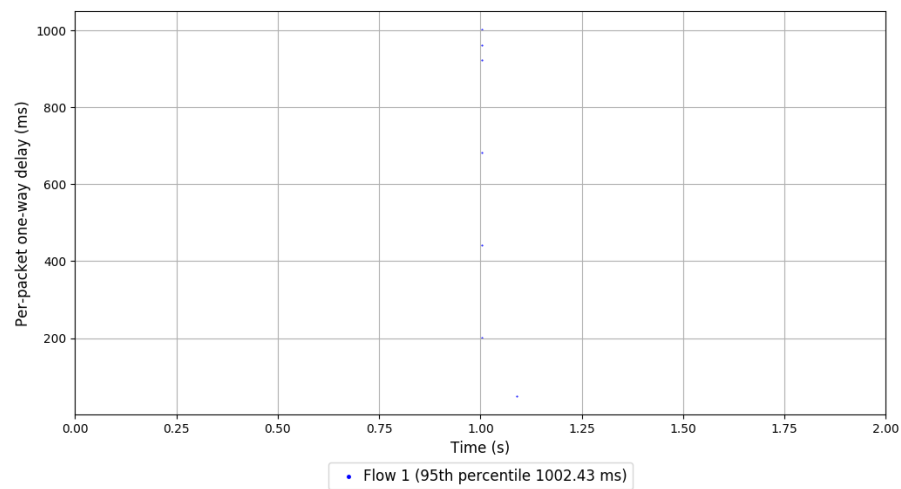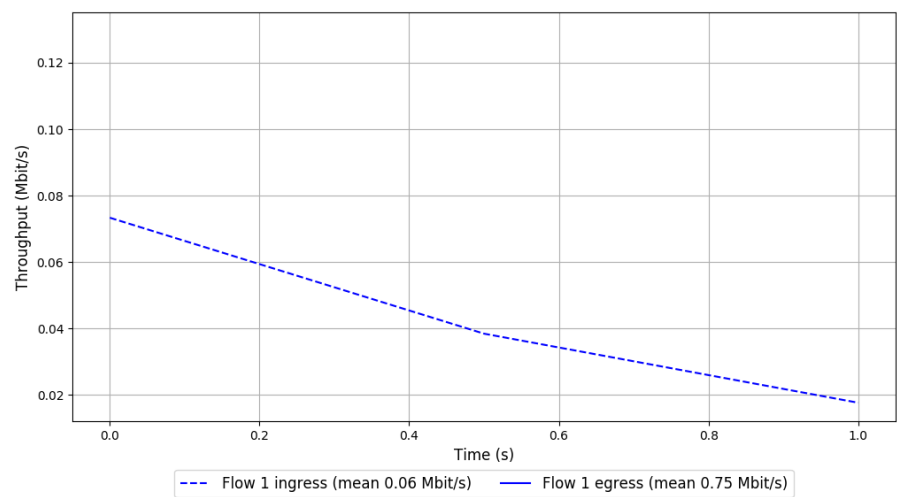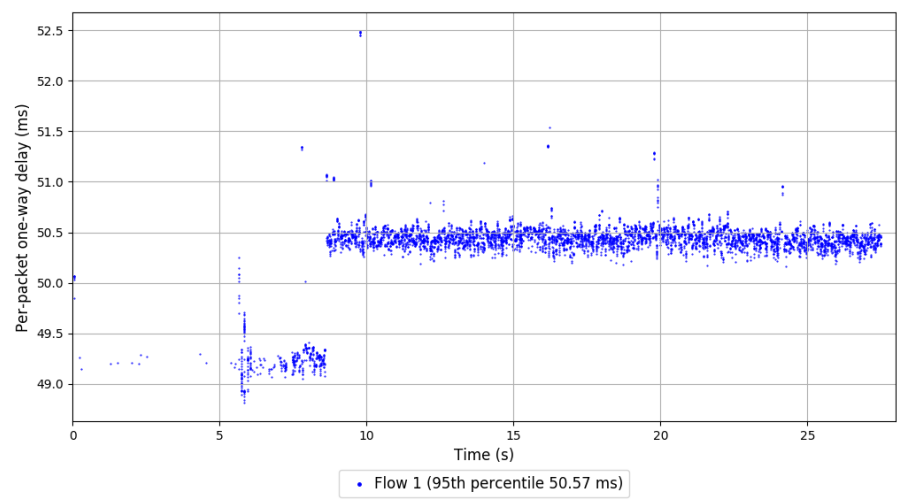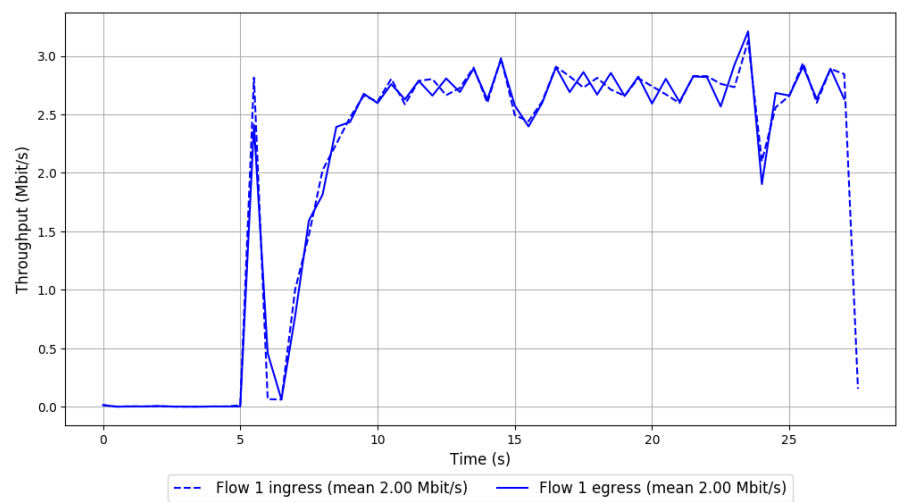
Run 7: Report of SCReAM — Data Link

```
Run 8: Statistics of SCReAM

Start at: 2017-09-21 15:45:19
End at: 2017-09-21 15:45:49

# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.383 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.383 ms
Loss rate: 0.26%
```

Run 8: 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 50.38 ms)

```
Run 9: Statistics of SCReAM

Start at: 2017-09-21 15:56:04
End at: 2017-09-21 15:56:34

# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.350 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.350 ms
Loss rate: 0.38%
```
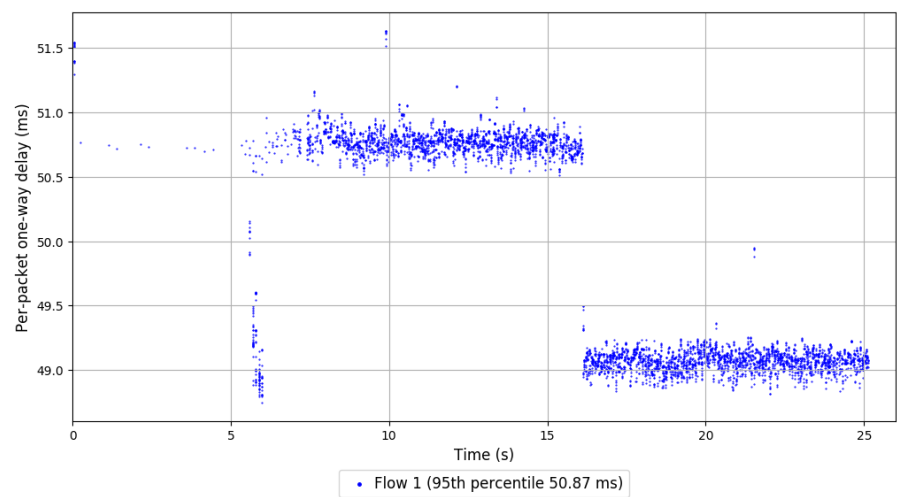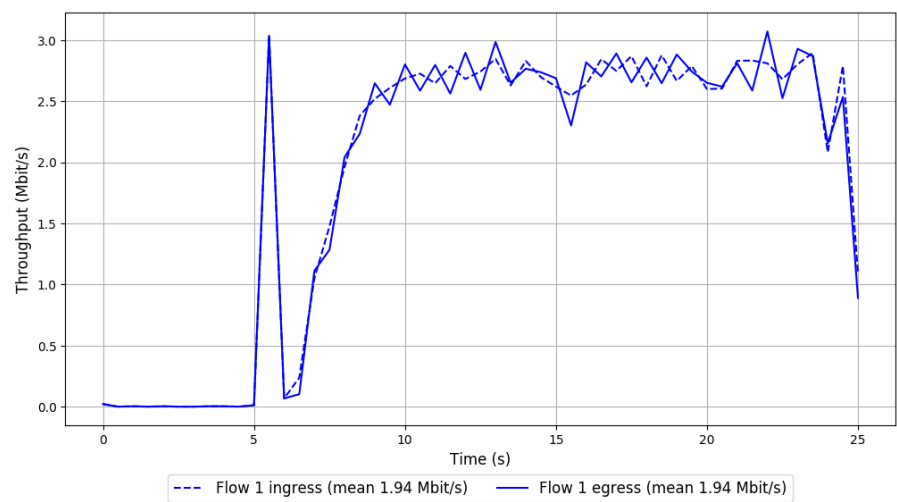
Run 9: Report of SCReAM — Data Link

Run 10: Statistics of SCReAM

Start at: 2017-09-21 16:06:48
End at: 2017-09-21 16:07:19

Run 10: Report of SCReAM — Data Link

Flow 1 ingress (mean 0.06 Mbit/s) --- Flow 1 egress (mean 0.75 Mbit/s)

• Flow 1 (95th percentile 1002.43 ms)

```
Run 1: Statistics of WebRTC media

Start at: 2017-09-21 14:28:53
End at: 2017-09-21 14:29:23

# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.00 Mbit/s
95th percentile per-packet one-way delay: 50.573 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 2.00 Mbit/s
95th percentile per-packet one-way delay: 50.573 ms
Loss rate: 0.53%
```
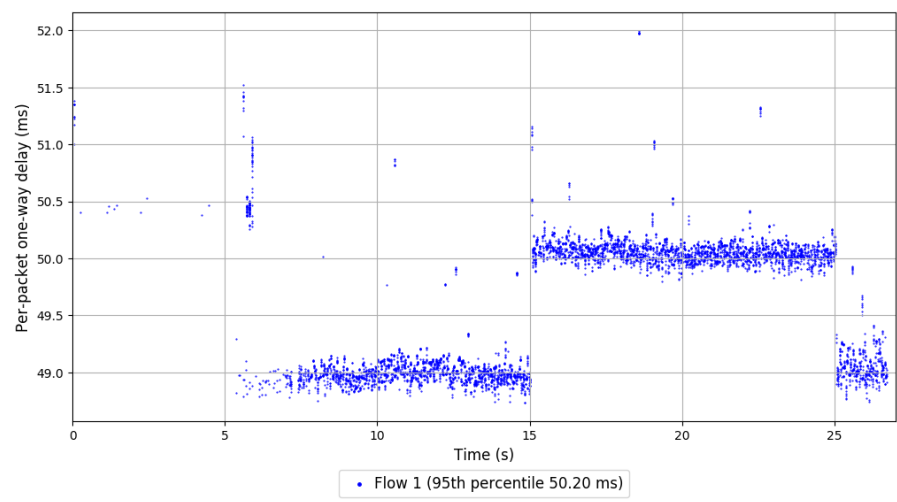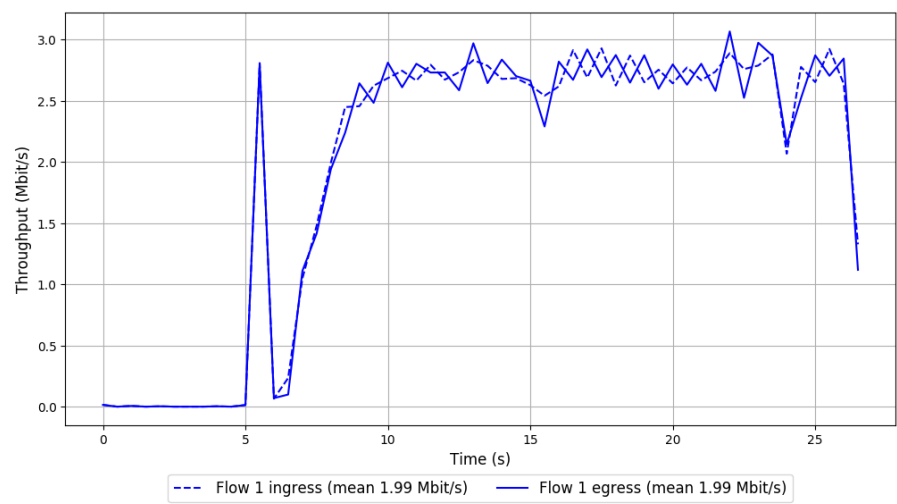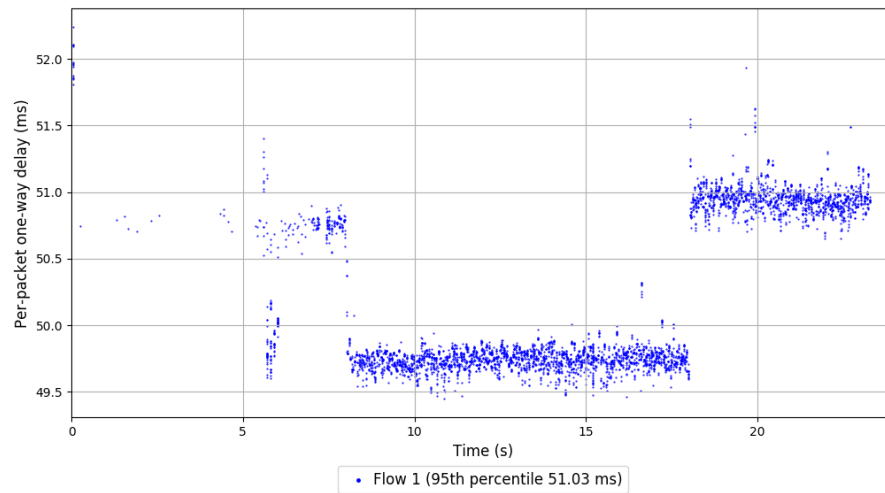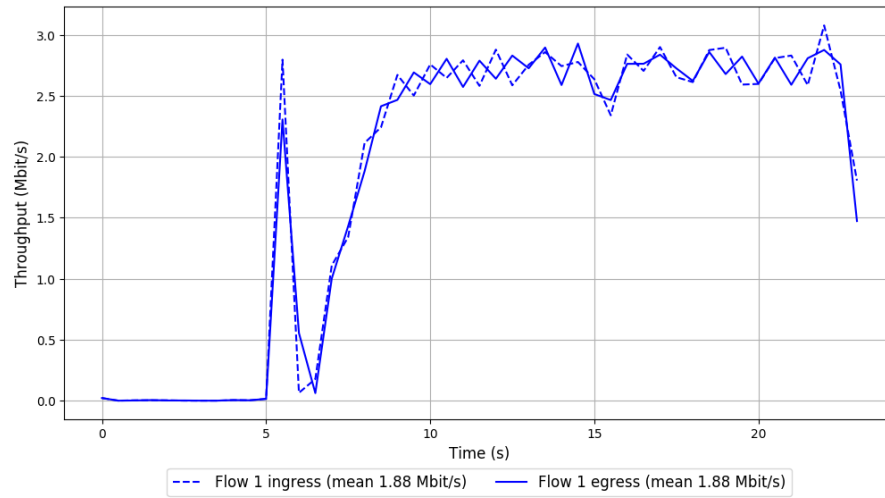
Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2017-09-21 14:39:13
End at: 2017-09-21 14:39:43

# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 50.868 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 50.868 ms
Loss rate: 0.66%
```

Run 2: Report of WebRTC media — Data Link

Flow 1 ingress (mean 1.94 Mbit/s)   Flow 1 egress (mean 1.94 Mbit/s)

Flow 1 (95th percentile 50.87 ms)

```
Run 3: Statistics of WebRTC media

Start at: 2017-09-21 14:49:56
End at: 2017-09-21 14:50:26

# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.99 Mbit/s
95th percentile per-packet one-way delay: 50.204 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 1.99 Mbit/s
95th percentile per-packet one-way delay: 50.204 ms
Loss rate: 0.42%
```
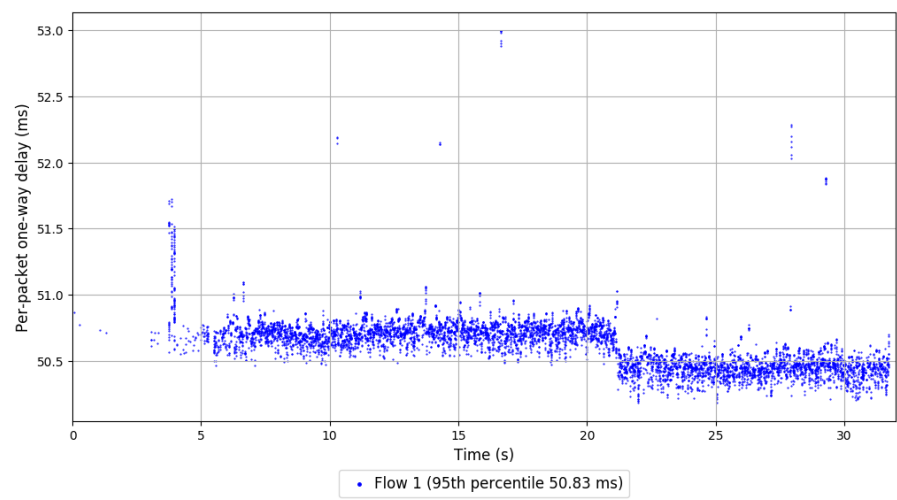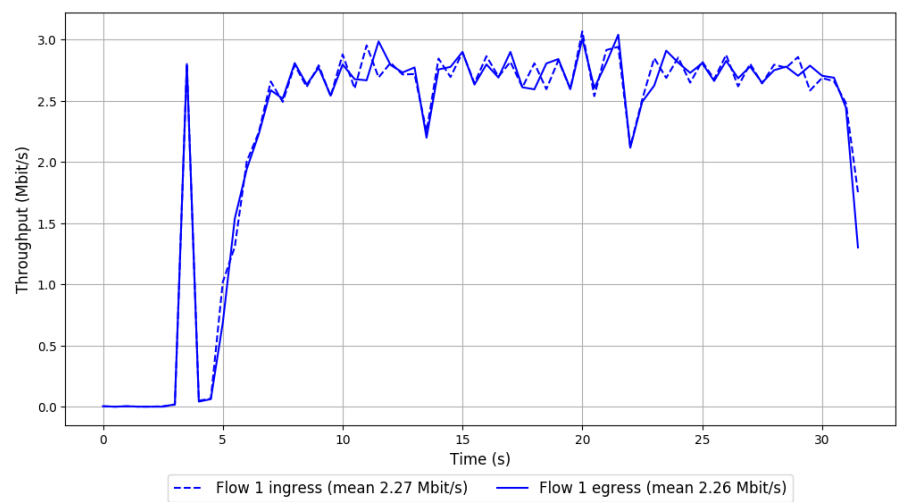
Run 3: Report of WebRTC media — Data Link

Flow 1 ingress (mean 1.99 Mbit/s)   Flow 1 egress (mean 1.99 Mbit/s)

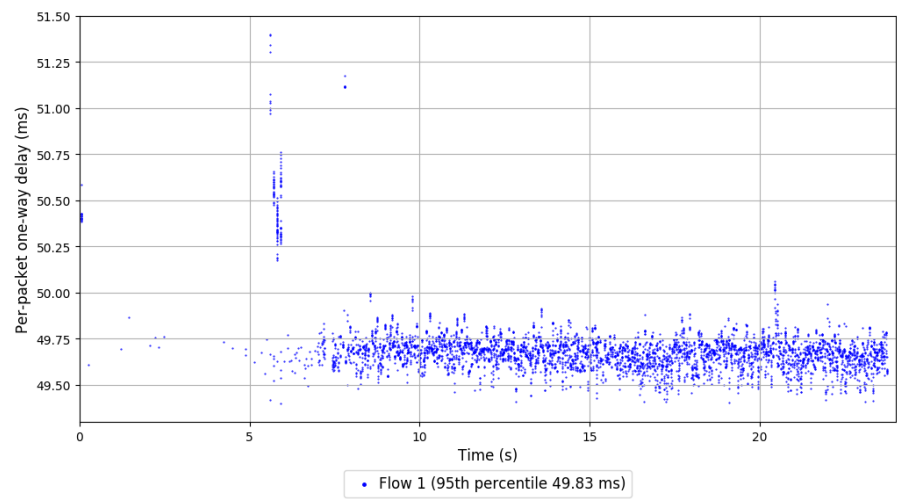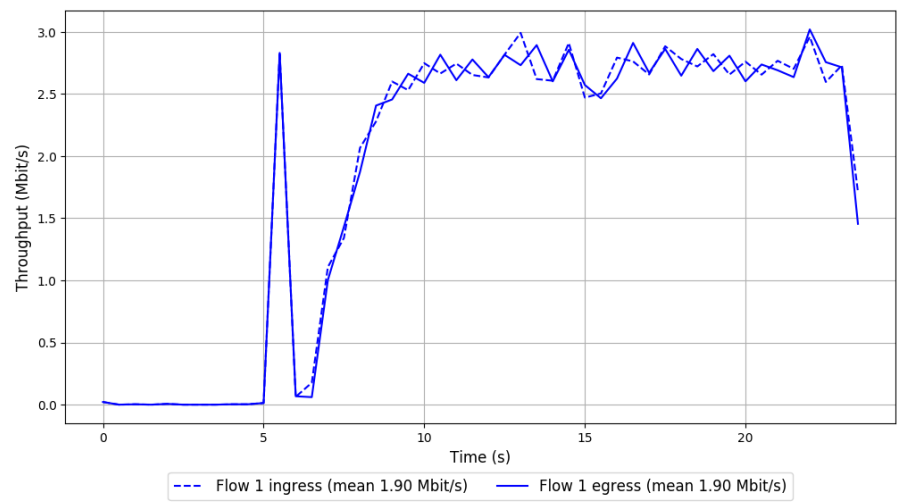Flow 1 (95th percentile 50.20 ms)

Run 4: Statistics of WebRTC media

Start at: 2017-09-21 15:00:39
End at: 2017-09-21 15:01:09

Run 4: Report of WebRTC media — Data Link

Run 5: Statistics of WebRTC media

Start at: 2017-09-21 15:11:21
End at: 2017-09-21 15:11:51

Run 5: Report of WebRTC media — Data Link

```
Run 6: Statistics of WebRTC media

Start at: 2017-09-21 15:21:45
End at: 2017-09-21 15:22:15


# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 50.827 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 50.827 ms
Loss rate: 0.45%
```
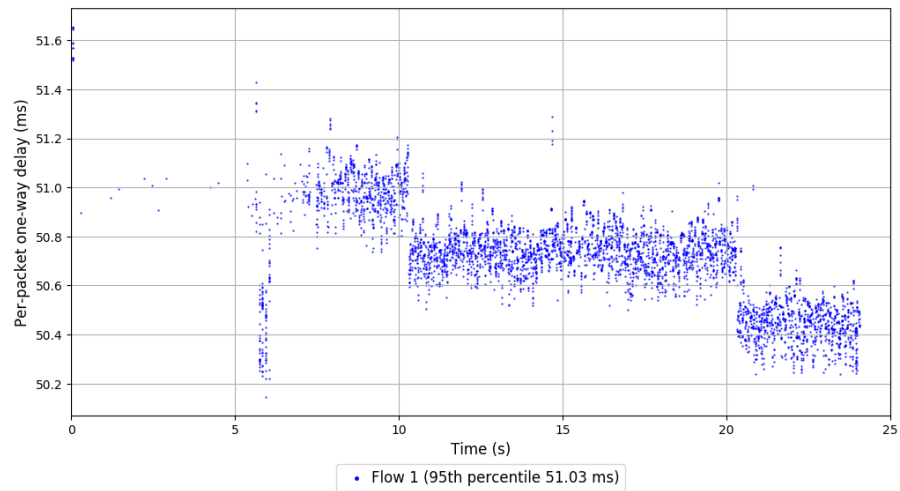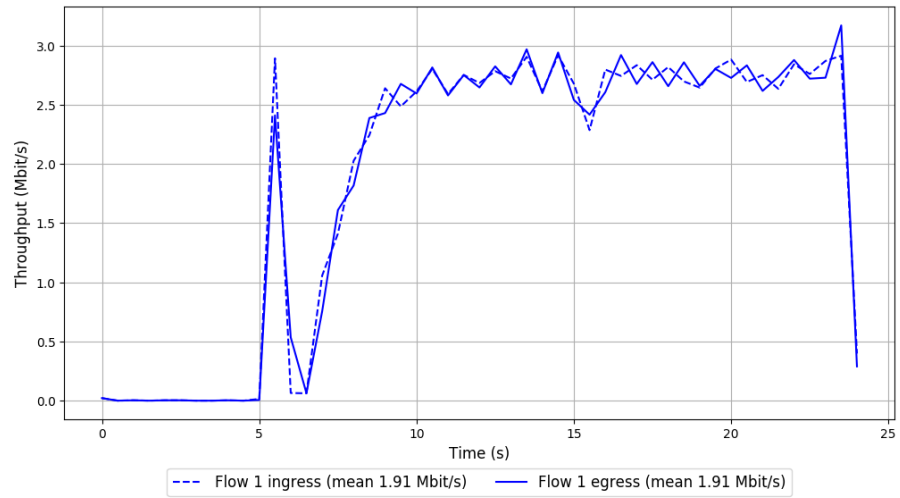
Run 6: Report of WebRTC media — Data Link

Flow 1 ingress (mean 2.27 Mbit/s)   Flow 1 egress (mean 2.26 Mbit/s)

Flow 1 (95th percentile 50.83 ms)

Run 7: Statistics of WebRTC media

Start at: 2017-09-21 15:32:26
End at: 2017-09-21 15:32:57

Run 7: Report of WebRTC media — Data Link

```
Run 8: Statistics of WebRTC media

Start at: 2017-09-21 15:43:08
End at: 2017-09-21 15:43:38

# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.91 Mbit/s
95th percentile per-packet one-way delay: 51.033 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 1.91 Mbit/s
95th percentile per-packet one-way delay: 51.033 ms
Loss rate: 0.29%
```
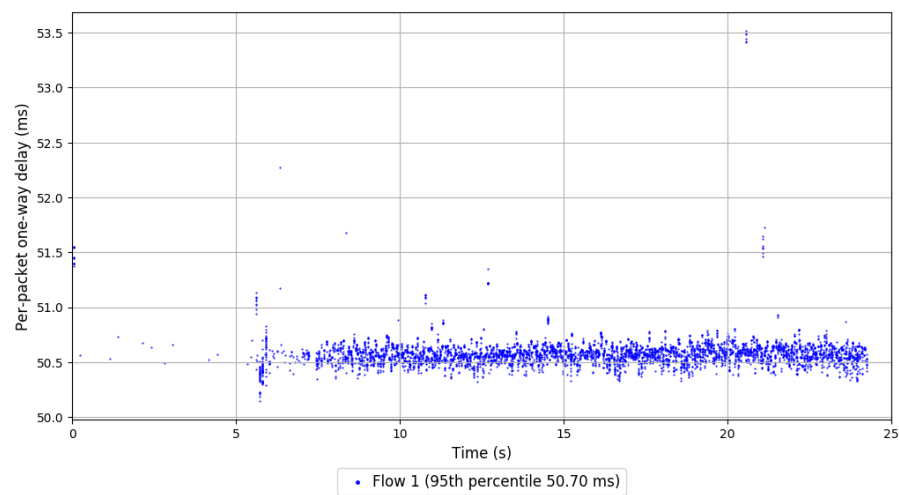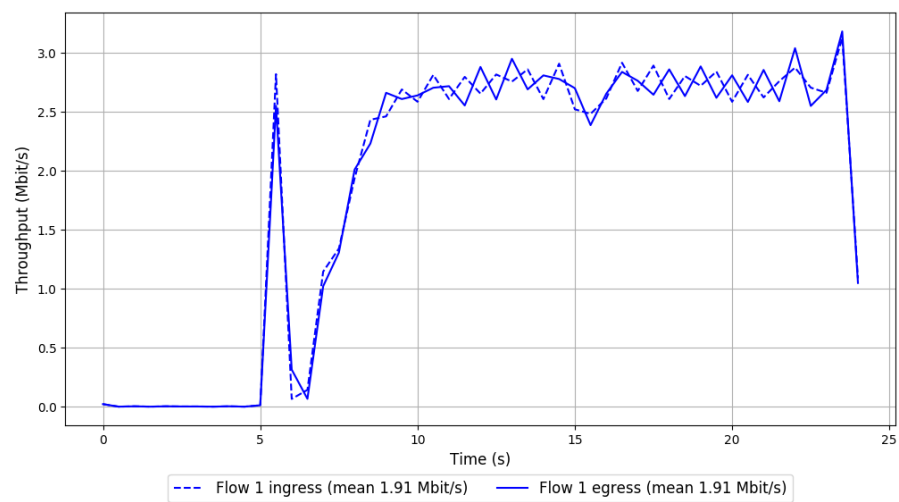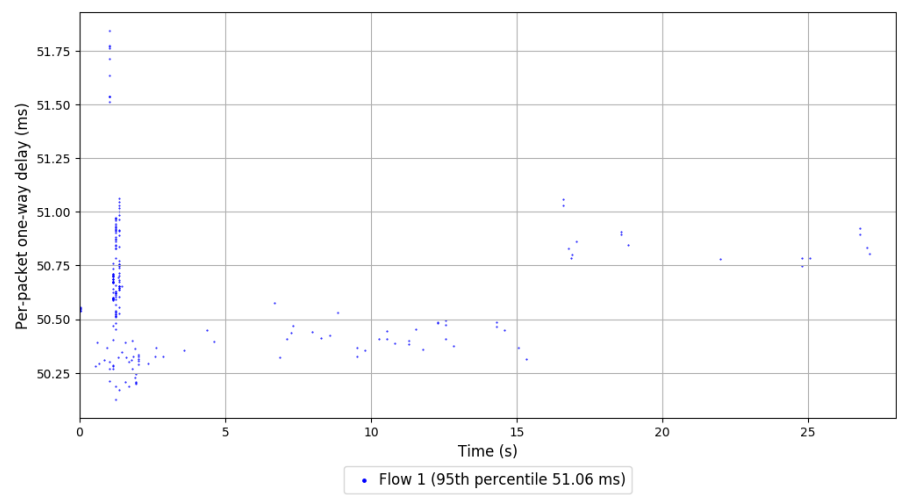
Run 8: Report of WebRTC media — Data Link

Flow 1 ingress (mean 1.91 Mbit/s) --- Flow 1 egress (mean 1.91 Mbit/s)

Flow 1 (95th percentile 51.03 ms)

```
Run 9: Statistics of WebRTC media

Start at: 2017-09-21 15:53:47
End at: 2017-09-21 15:54:17

# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.91 Mbit/s
95th percentile per-packet one-way delay: 50.705 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 1.91 Mbit/s
95th percentile per-packet one-way delay: 50.705 ms
Loss rate: 0.36%
```
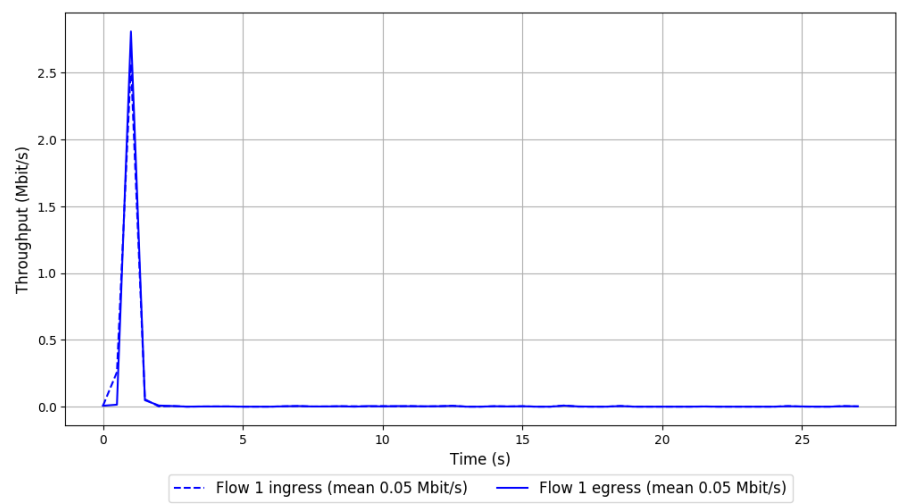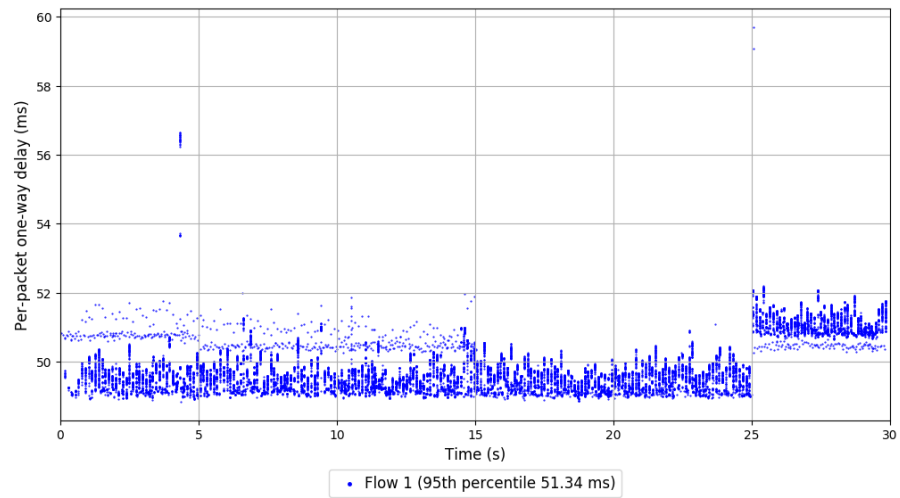
Run 9: Report of WebRTC media — Data Link

Flow 1 ingress (mean 1.91 Mbit/s) --- Flow 1 egress (mean 1.91 Mbit/s)

Flow 1 (95th percentile 50.70 ms)

```
Run 10: Statistics of WebRTC media

Start at: 2017-09-21 16:04:36
End at: 2017-09-21 16:05:06

# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 51.061 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 51.061 ms
Loss rate: 0.00%
```
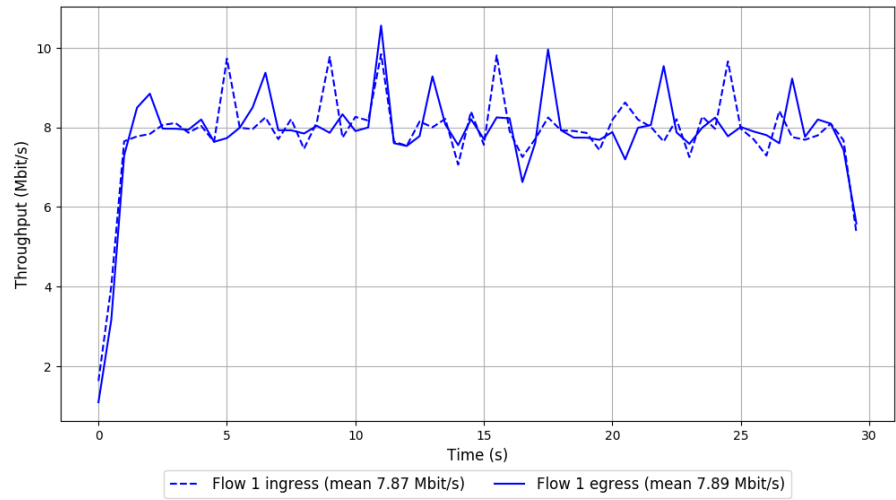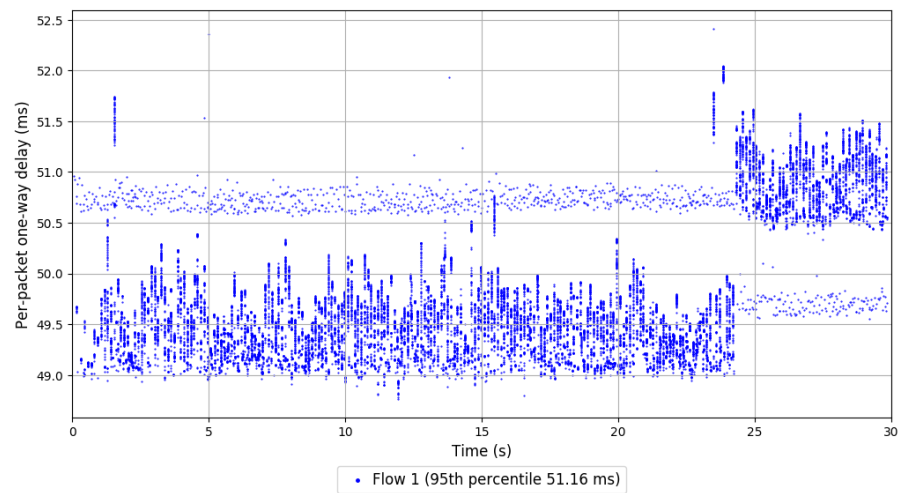
Run 10: Report of WebRTC media — Data Link

```
Run 1: Statistics of Sprout

Start at: 2017-09-21 14:26:49
End at: 2017-09-21 14:27:19

# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.89 Mbit/s
95th percentile per-packet one-way delay: 51.335 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 7.89 Mbit/s
95th percentile per-packet one-way delay: 51.335 ms
Loss rate: 0.07%
```
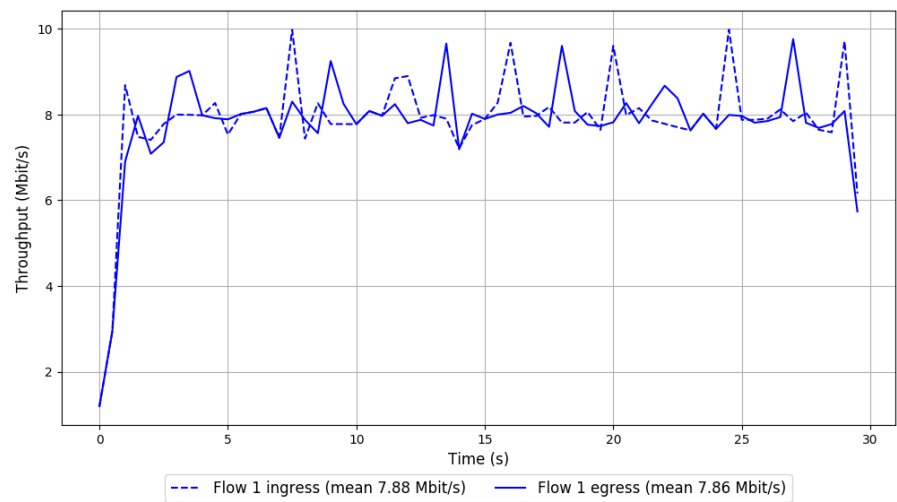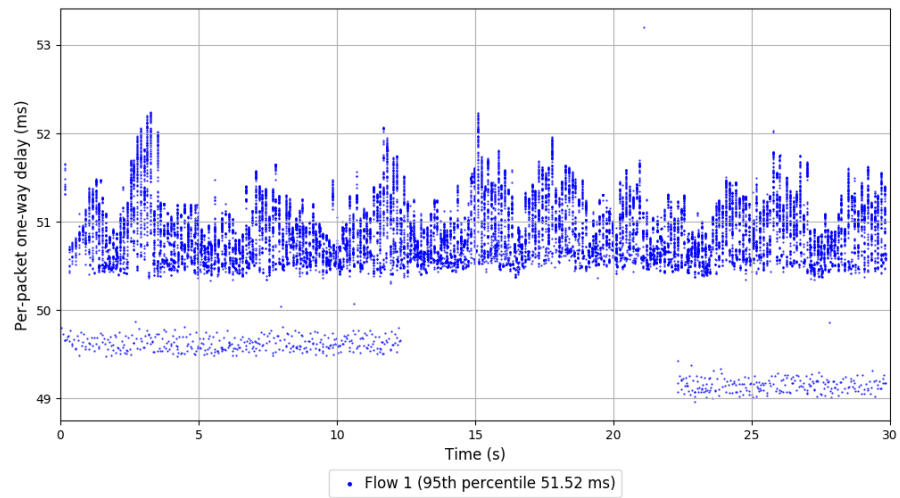
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2017-09-21 14:37:09
End at: 2017-09-21 14:37:40

# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.86 Mbit/s
95th percentile per-packet one-way delay: 51.156 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 7.86 Mbit/s
95th percentile per-packet one-way delay: 51.156 ms
Loss rate: 0.55%
```
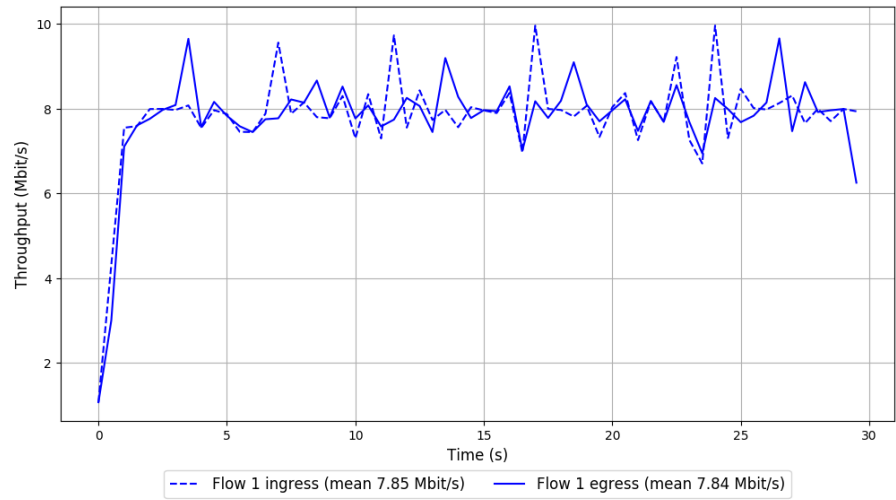
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2017-09-21 14:47:52
End at: 2017-09-21 14:48:22

# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.84 Mbit/s
95th percentile per-packet one-way delay: 51.517 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 7.84 Mbit/s
95th percentile per-packet one-way delay: 51.517 ms
Loss rate: 0.38%
```
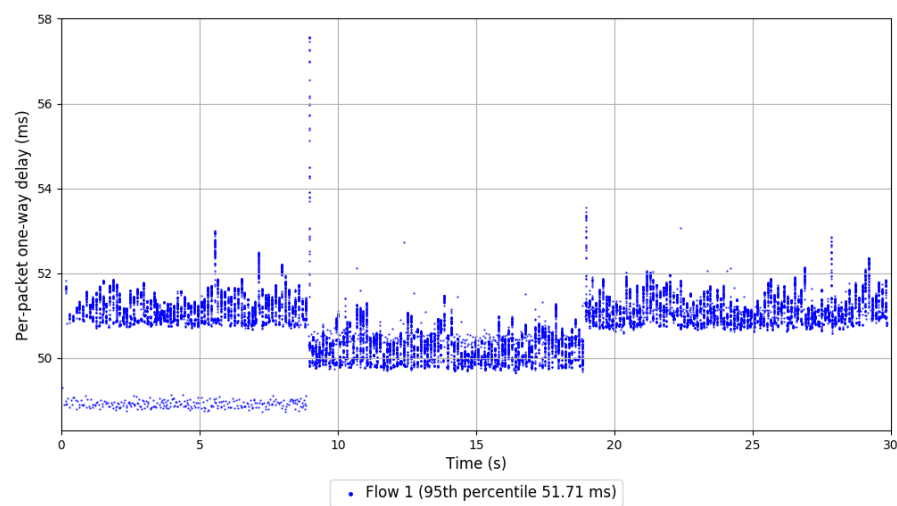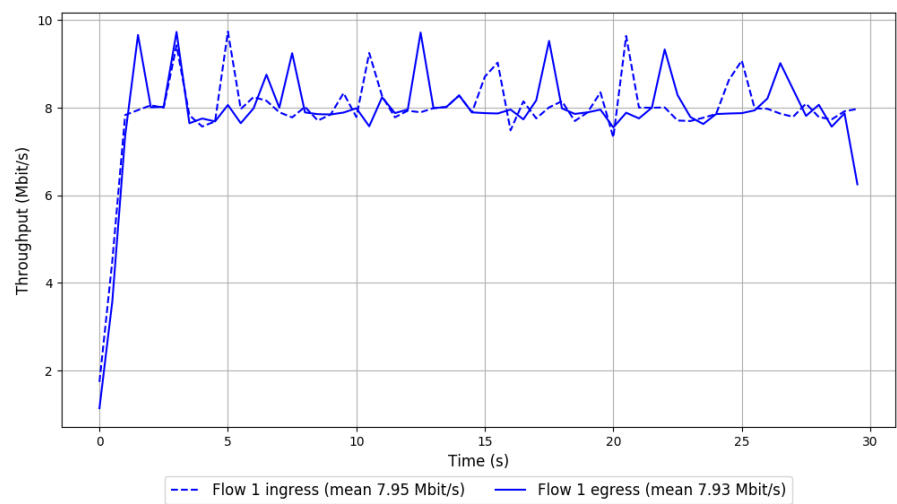
Run 3: Report of Sprout — Data Link

Flow 1 ingress (mean 7.85 Mbit/s)   Flow 1 egress (mean 7.84 Mbit/s)

Flow 1 (95th percentile 51.52 ms)

```
Run 4: Statistics of Sprout

Start at: 2017-09-21 14:58:35
End at: 2017-09-21 14:59:05

# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.93 Mbit/s
95th percentile per-packet one-way delay: 51.713 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 7.93 Mbit/s
95th percentile per-packet one-way delay: 51.713 ms
Loss rate: 0.49%
```
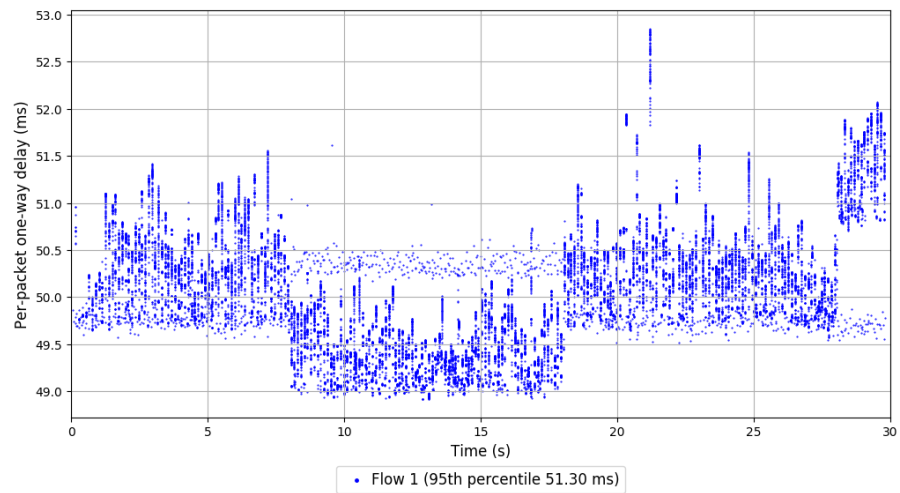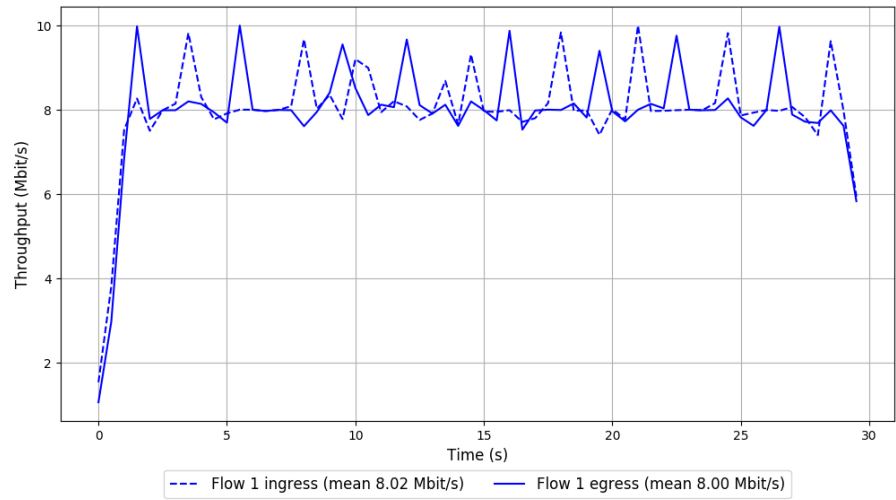
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2017-09-21 15:09:16
End at: 2017-09-21 15:09:46

# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.00 Mbit/s
95th percentile per-packet one-way delay: 51.302 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 8.00 Mbit/s
95th percentile per-packet one-way delay: 51.302 ms
Loss rate: 0.52%
```
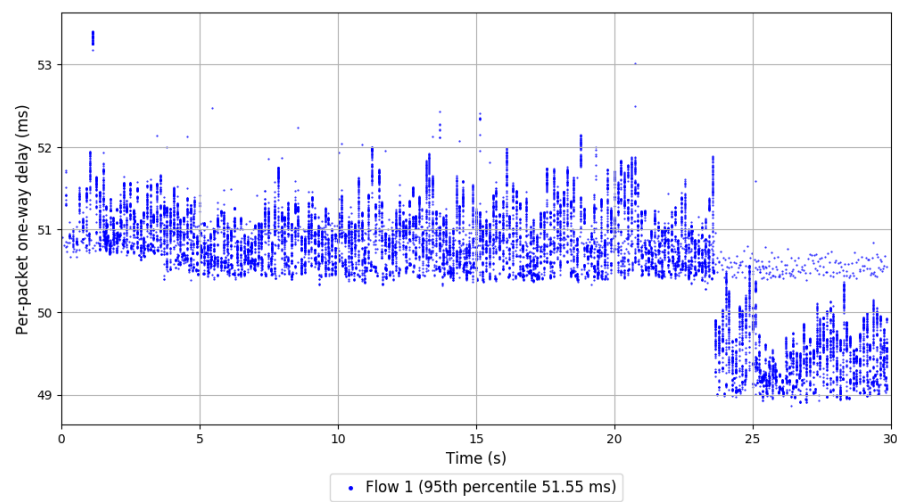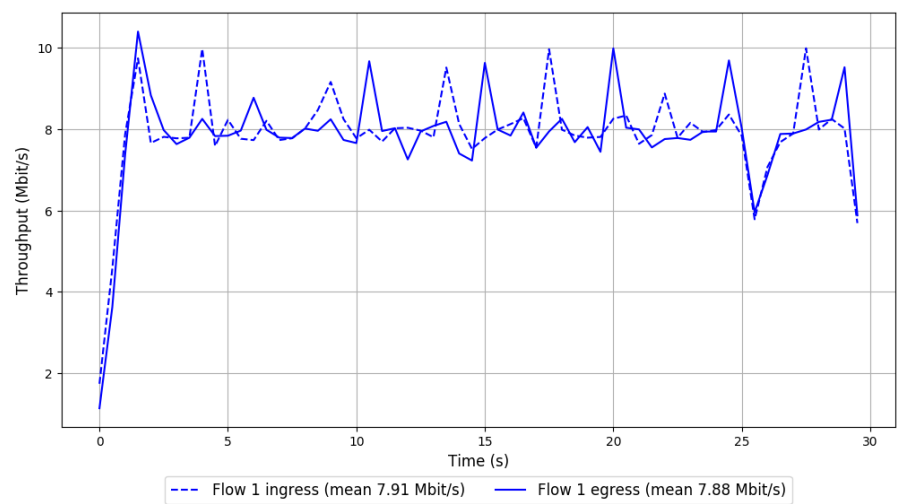
Run 5: Report of Sprout — Data Link

Flow 1 ingress (mean 8.02 Mbit/s)   Flow 1 egress (mean 8.00 Mbit/s)

Flow 1 (95th percentile 51.30 ms)

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```
Run 6: Statistics of Sprout

Start at: 2017-09-21 15:19:40
End at: 2017-09-21 15:20:10

# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.88 Mbit/s
95th percentile per-packet one-way delay: 51.548 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 7.88 Mbit/s
95th percentile per-packet one-way delay: 51.548 ms
Loss rate: 0.59%
```
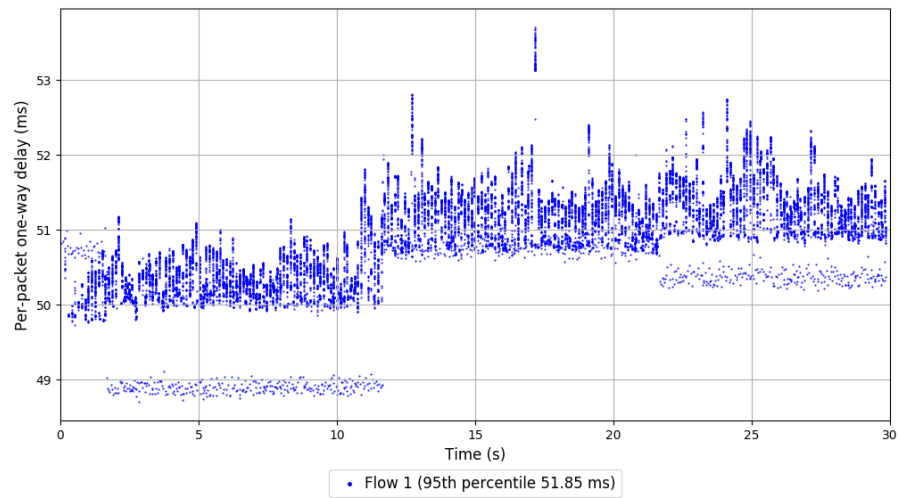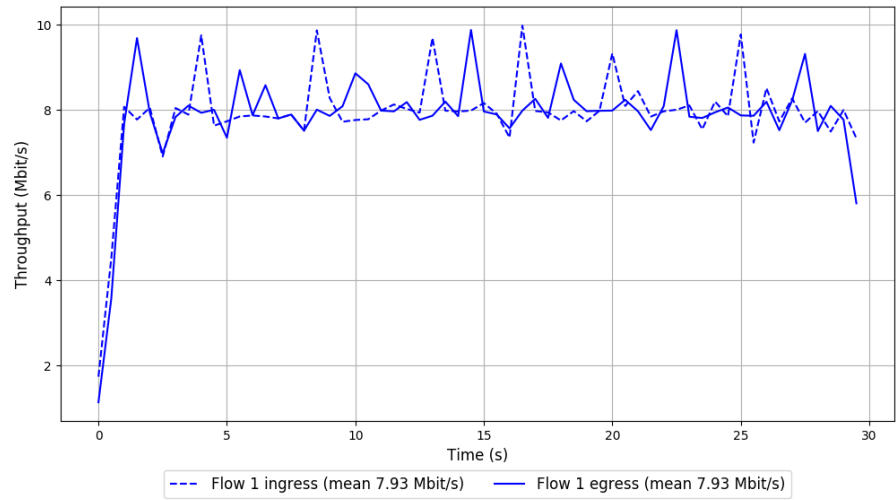
Run 6: Report of Sprout — Data Link

Flow 1 ingress (mean 7.91 Mbit/s)　　Flow 1 egress (mean 7.88 Mbit/s)

Flow 1 (95th percentile 51.55 ms)

```
Run 7: Statistics of Sprout

Start at: 2017-09-21 15:30:22
End at: 2017-09-21 15:30:52

# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.93 Mbit/s
95th percentile per-packet one-way delay: 51.846 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 7.93 Mbit/s
95th percentile per-packet one-way delay: 51.846 ms
Loss rate: 0.42%
```
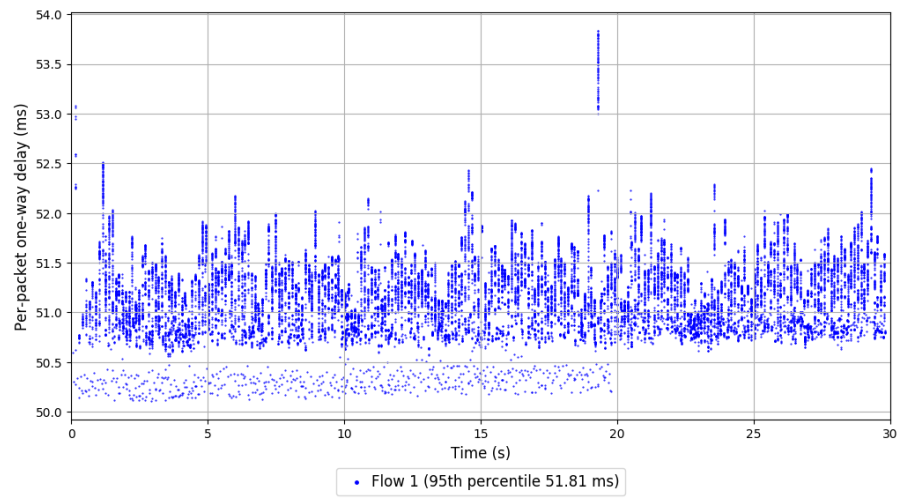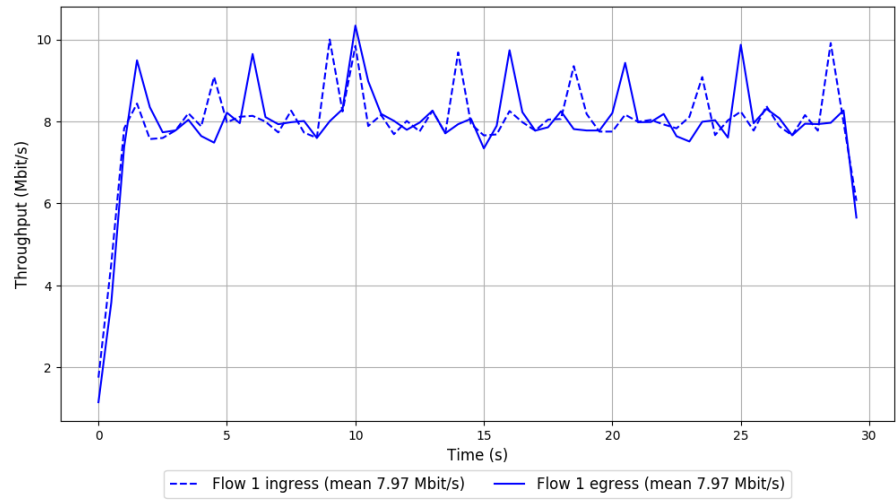
Run 7: Report of Sprout — Data Link

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

Flow 1 (95th percentile 51.85 ms)

```
Run 8: Statistics of Sprout

Start at: 2017-09-21 15:41:04
End at: 2017-09-21 15:41:34


# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.97 Mbit/s
95th percentile per-packet one-way delay: 51.809 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 7.97 Mbit/s
95th percentile per-packet one-way delay: 51.809 ms
Loss rate: 0.47%
```
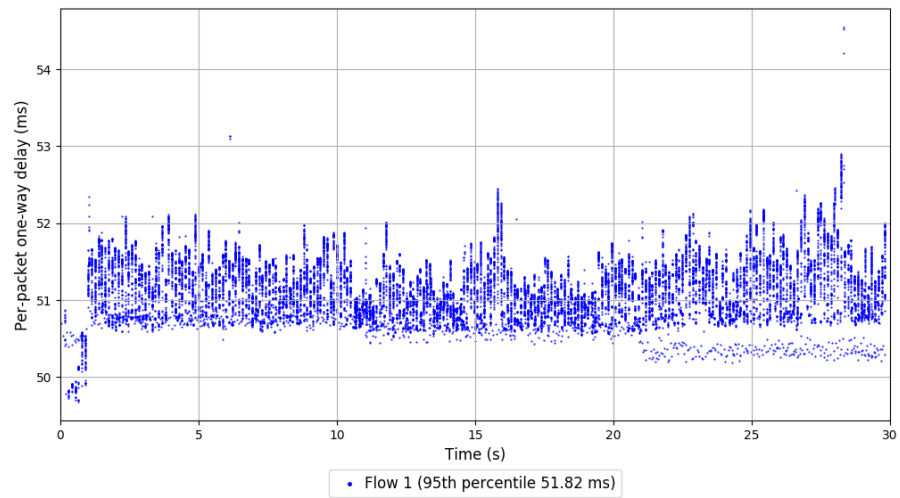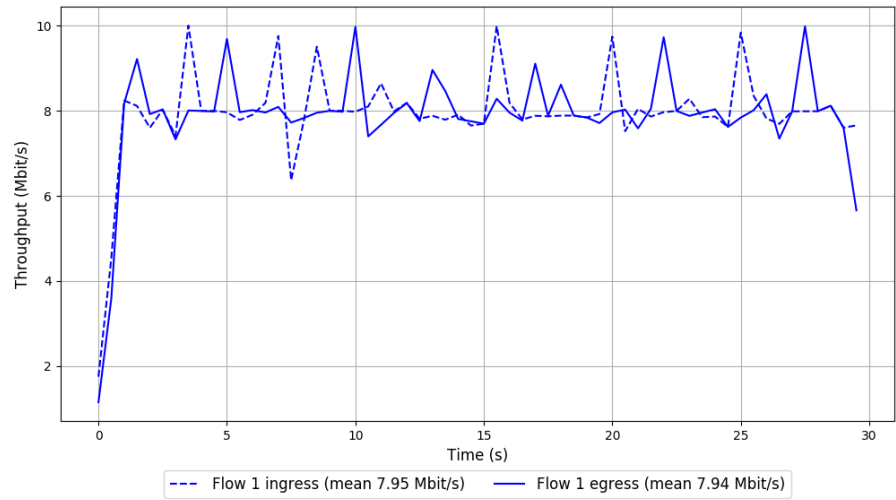
Run 8: Report of Sprout — Data Link

```
Run 9: Statistics of Sprout

Start at: 2017-09-21 15:51:43
End at: 2017-09-21 15:52:13

# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.94 Mbit/s
95th percentile per-packet one-way delay: 51.818 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 7.94 Mbit/s
95th percentile per-packet one-way delay: 51.818 ms
Loss rate: 0.55%
```
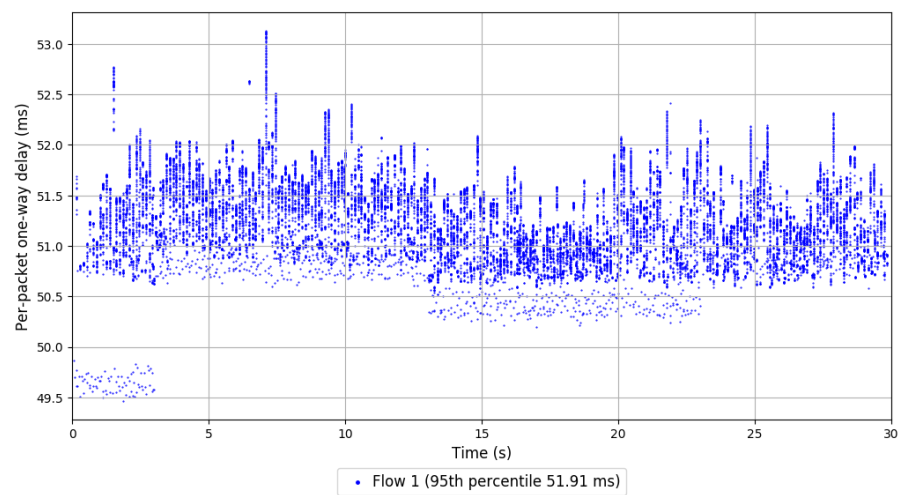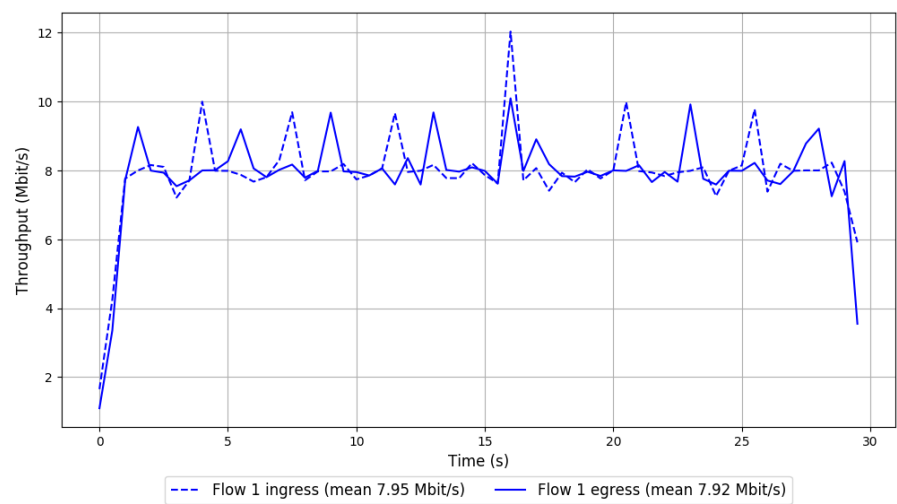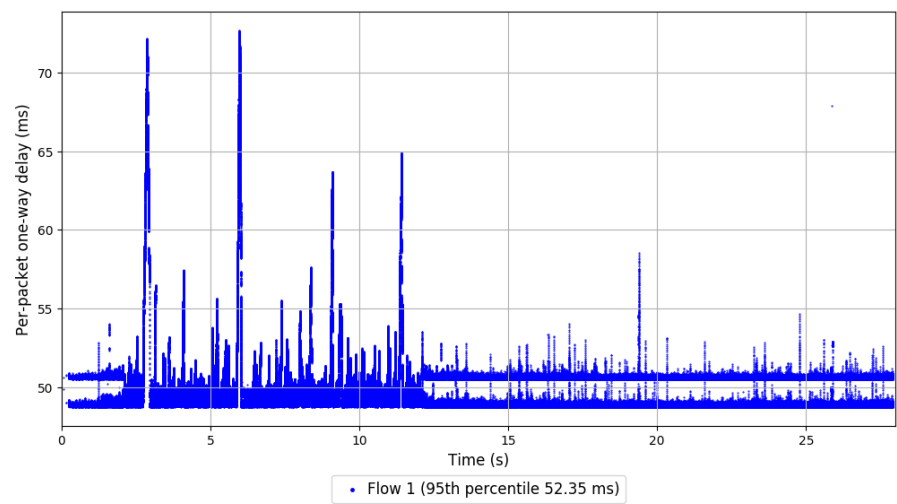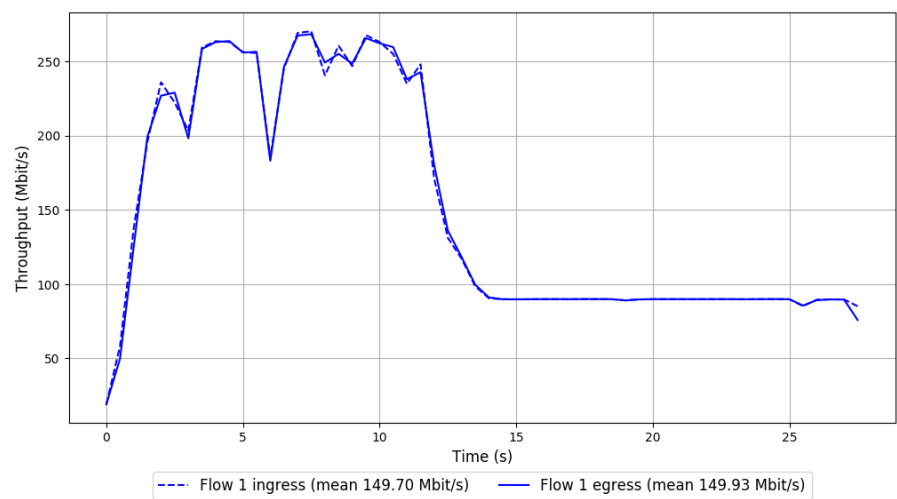
Run 9: Report of Sprout — Data Link

```
Run 10: Statistics of Sprout

Start at: 2017-09-21 16:02:31
End at: 2017-09-21 16:03:01

# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.92 Mbit/s
95th percentile per-packet one-way delay: 51.910 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 7.92 Mbit/s
95th percentile per-packet one-way delay: 51.910 ms
Loss rate: 0.66%
```

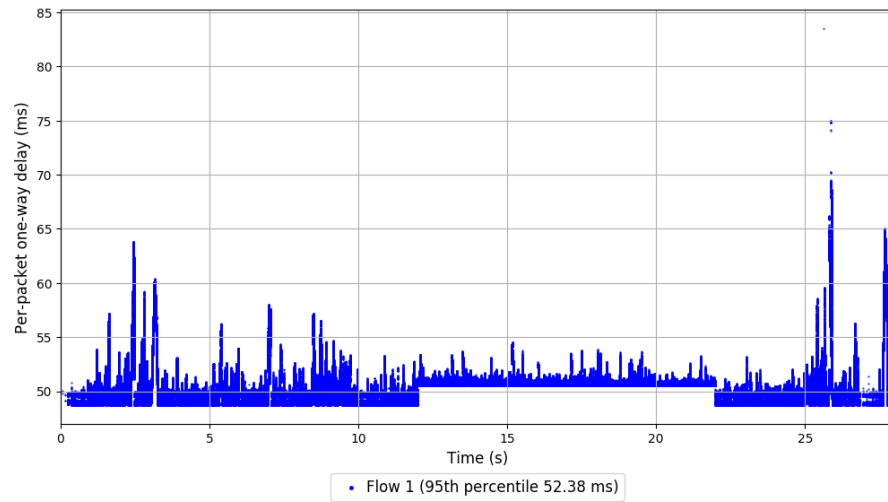Run 10: Report of Sprout — Data Link

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

Start at: 2017-09-21 14:29:30
End at: 2017-09-21 14:30:00

# Below is generated by plot.py at 2017-09-21 18:27:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 149.93 Mbit/s
95th percentile per-packet one-way delay: 52.346 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 149.93 Mbit/s
95th percentile per-packet one-way delay: 52.346 ms
Loss rate: 0.22%
```
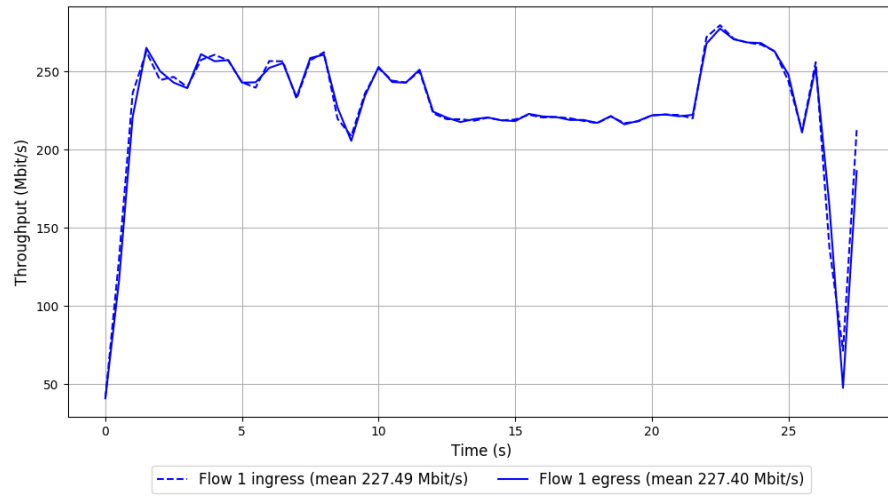
Run 1: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 149.70 Mbit/s)   Flow 1 egress (mean 149.93 Mbit/s)

• Flow 1 (95th percentile 52.35 ms)

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

Start at: 2017-09-21 14:39:50
End at: 2017-09-21 14:40:20

# Below is generated by plot.py at 2017-09-21 18:27:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 227.40 Mbit/s
95th percentile per-packet one-way delay: 52.380 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 227.40 Mbit/s
95th percentile per-packet one-way delay: 52.380 ms
Loss rate: 0.40%
```

Run 2: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 227.49 Mbit/s)   Flow 1 egress (mean 227.40 Mbit/s)

Flow 1 (95th percentile 52.38 ms)

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

Start at: 2017-09-21 14:50:33
End at: 2017-09-21 14:51:03

# Below is generated by plot.py at 2017-09-21 18:28:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 248.88 Mbit/s
95th percentile per-packet one-way delay: 54.099 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 248.88 Mbit/s
95th percentile per-packet one-way delay: 54.099 ms
Loss rate: 0.39%
```
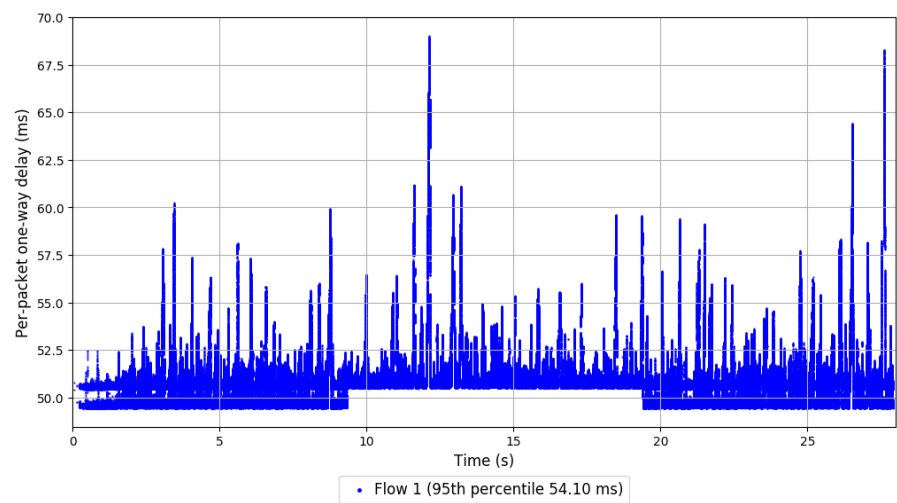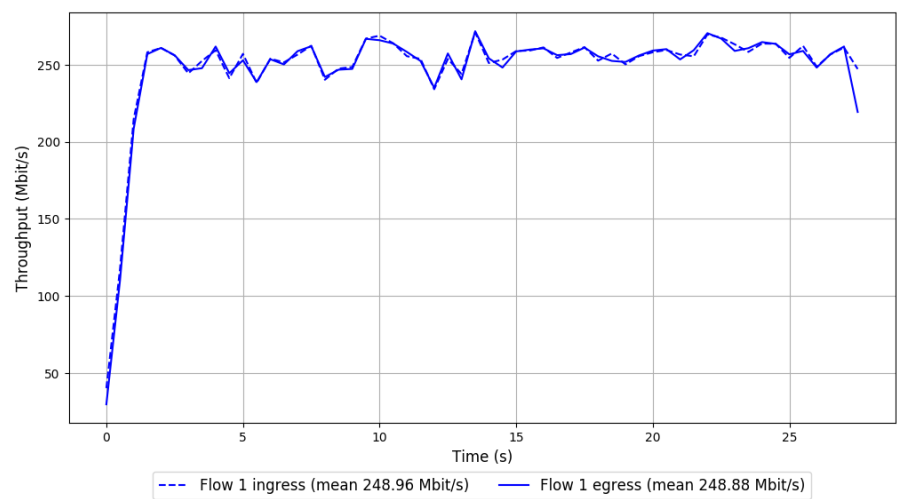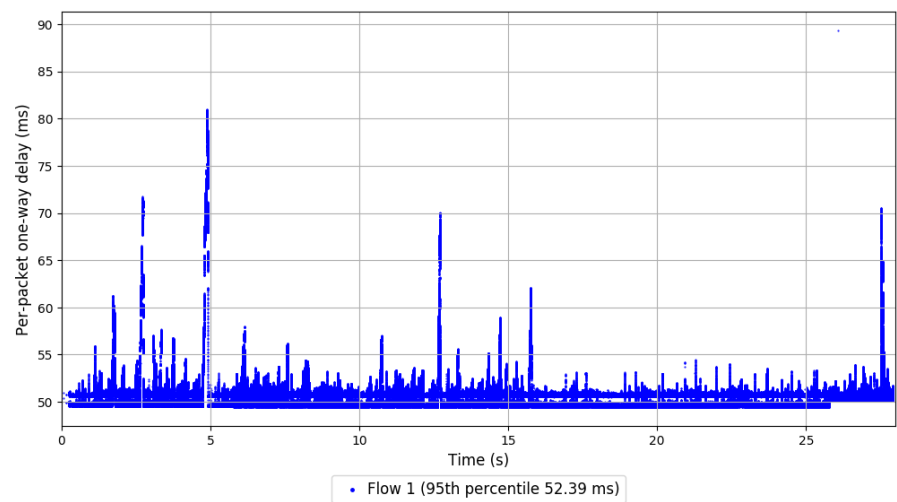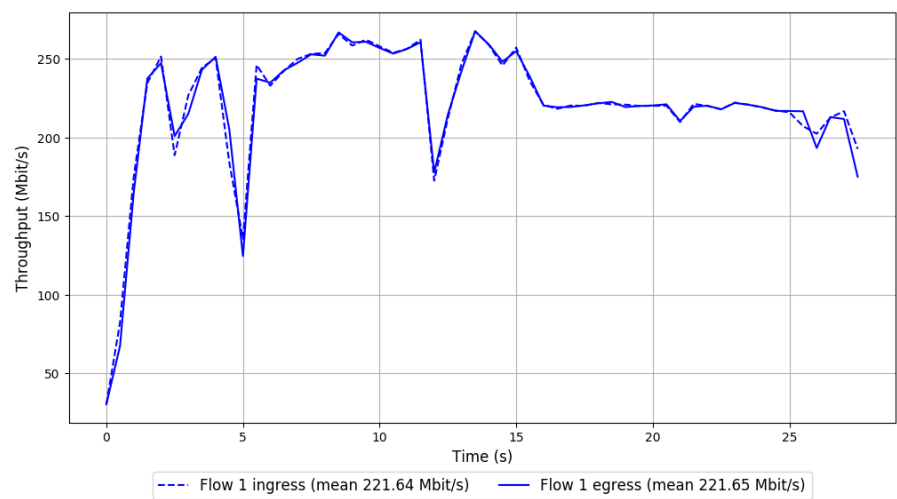
Run 3: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 248.96 Mbit/s)   Flow 1 egress (mean 248.88 Mbit/s)

Flow 1 (95th percentile 54.10 ms)

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

Start at: 2017-09-21 15:01:16
End at: 2017-09-21 15:01:46

# Below is generated by plot.py at 2017-09-21 18:28:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 221.65 Mbit/s
95th percentile per-packet one-way delay: 52.388 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 221.65 Mbit/s
95th percentile per-packet one-way delay: 52.388 ms
Loss rate: 0.36%
```
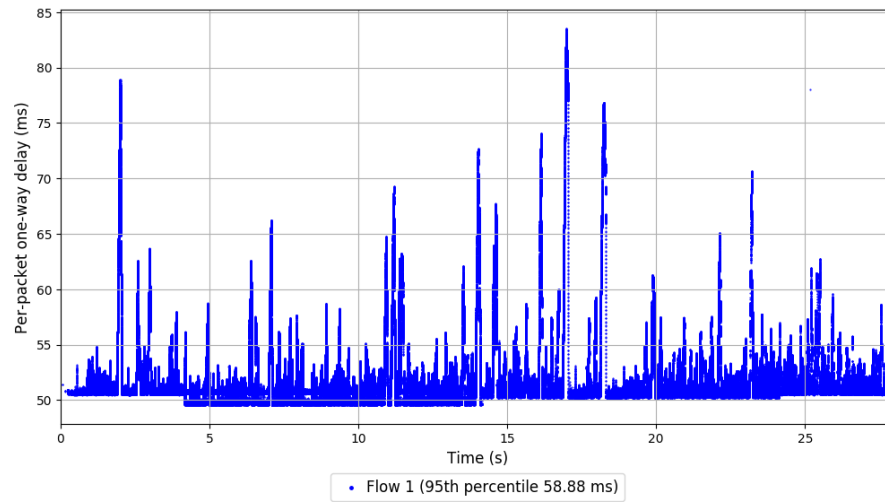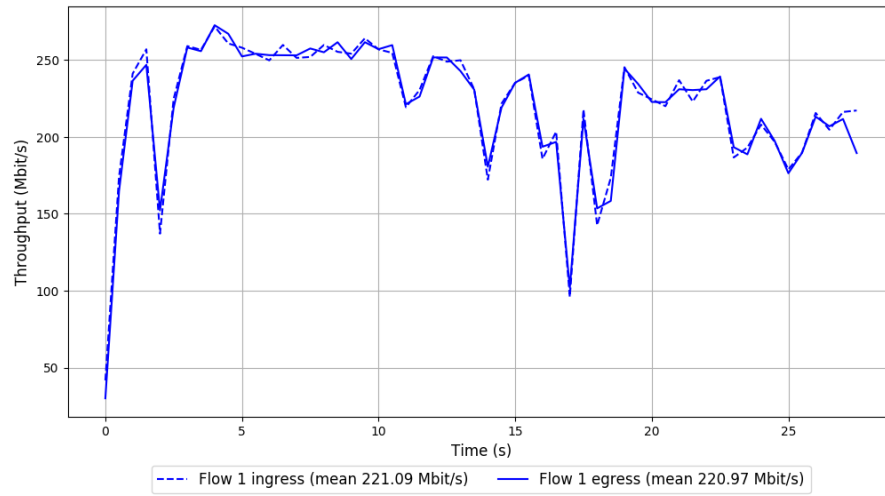
Run 4: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 221.64 Mbit/s) --- Flow 1 egress (mean 221.65 Mbit/s)

Flow 1 (95th percentile 52.39 ms)

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

Start at: 2017-09-21 15:11:58
End at: 2017-09-21 15:12:28

# Below is generated by plot.py at 2017-09-21 18:28:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 220.97 Mbit/s
95th percentile per-packet one-way delay: 58.875 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 220.97 Mbit/s
95th percentile per-packet one-way delay: 58.875 ms
Loss rate: 0.43%
```
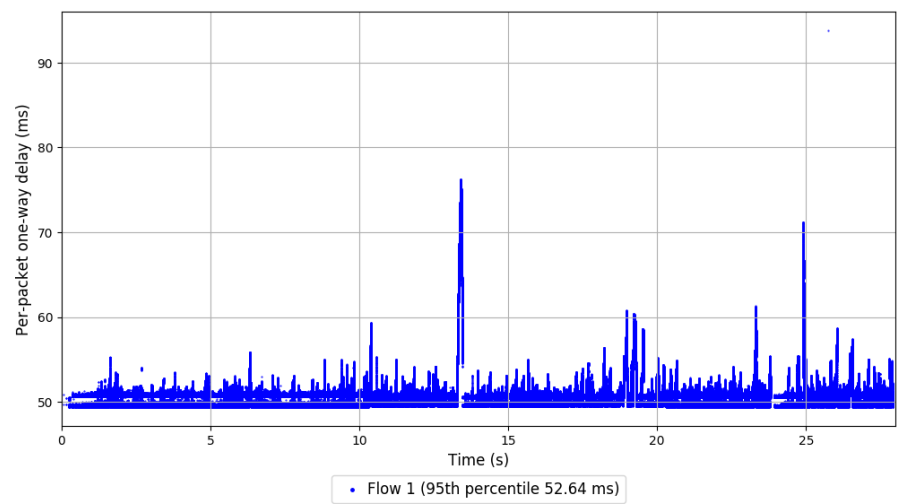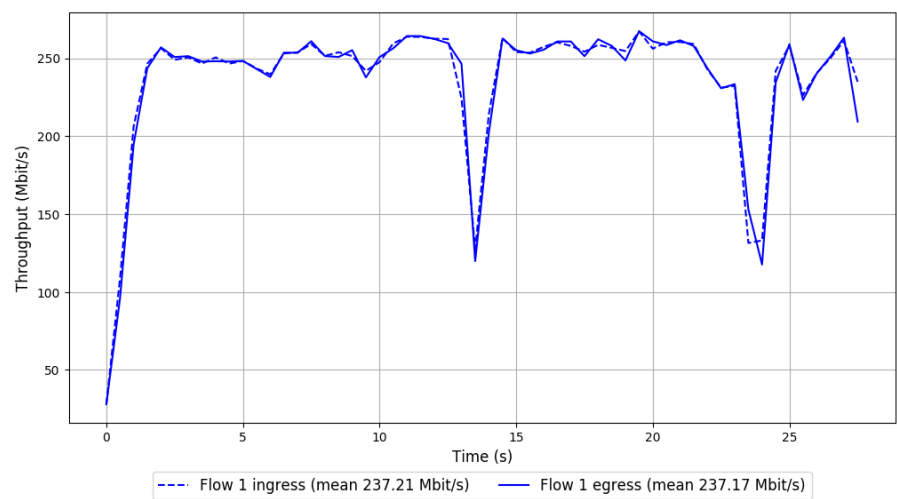
Run 5: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 221.09 Mbit/s)   Flow 1 egress (mean 220.97 Mbit/s)

Flow 1 (95th percentile 58.88 ms)

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

Start at: 2017-09-21 15:22:22
End at: 2017-09-21 15:22:52

# Below is generated by plot.py at 2017-09-21 18:28:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 237.17 Mbit/s
95th percentile per-packet one-way delay: 52.640 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 237.17 Mbit/s
95th percentile per-packet one-way delay: 52.640 ms
Loss rate: 0.38%
```
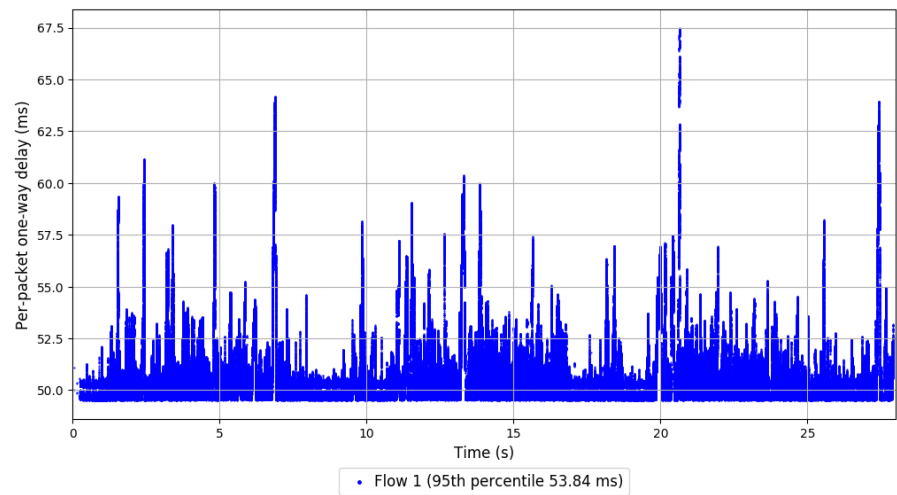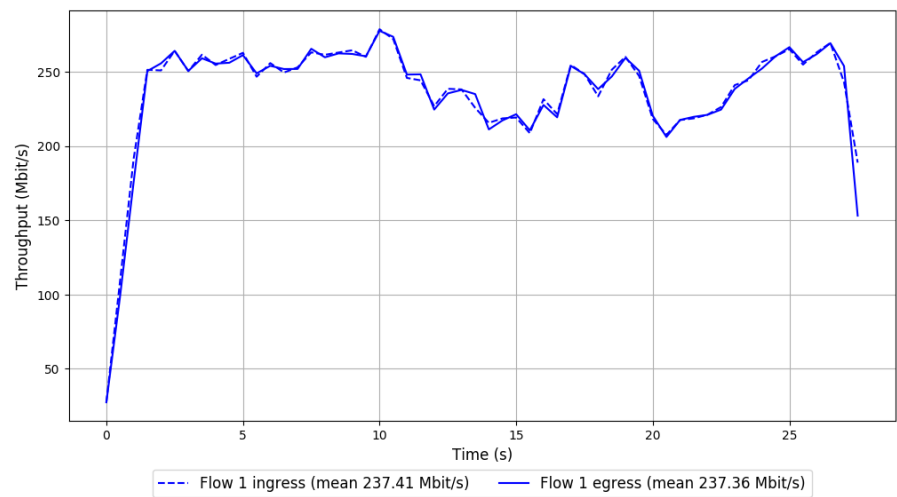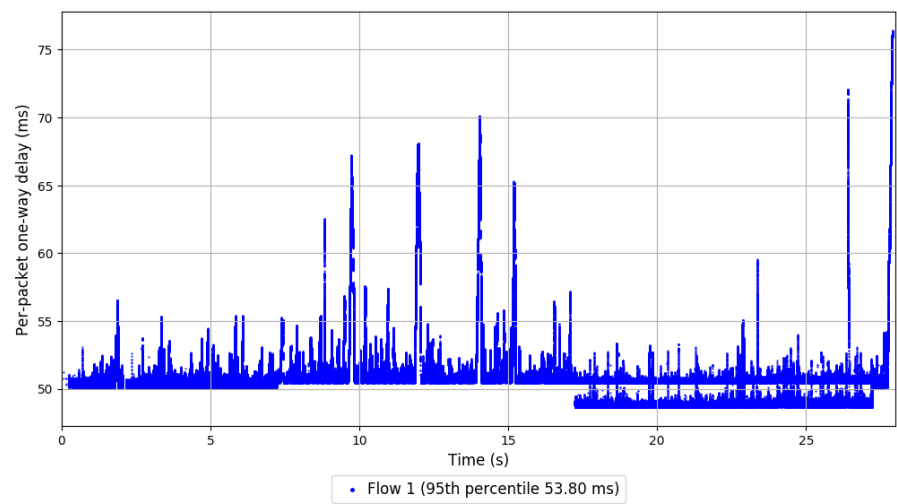
Run 6: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 237.21 Mbit/s) — — — Flow 1 egress (mean 237.17 Mbit/s)

Flow 1 (95th percentile 52.64 ms)

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

Start at: 2017-09-21 15:33:03
End at: 2017-09-21 15:33:33

# Below is generated by plot.py at 2017-09-21 18:33:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 237.36 Mbit/s
95th percentile per-packet one-way delay: 53.841 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 237.36 Mbit/s
95th percentile per-packet one-way delay: 53.841 ms
Loss rate: 0.39%
```
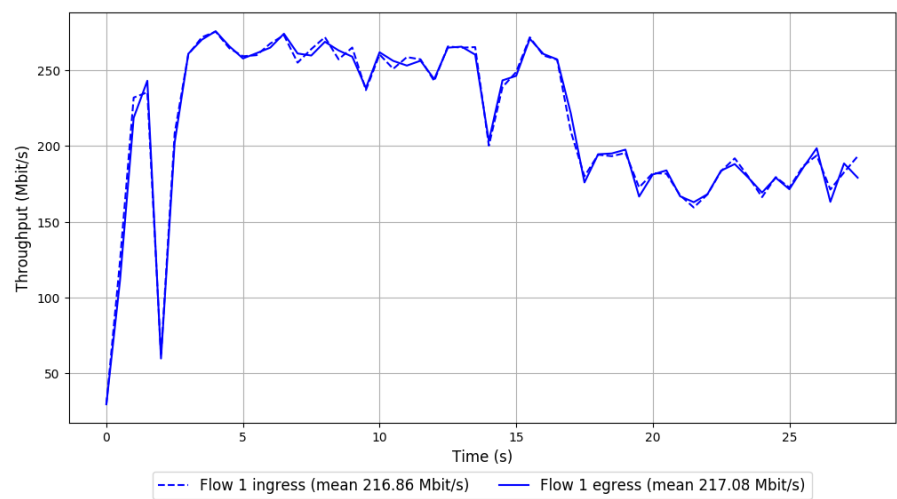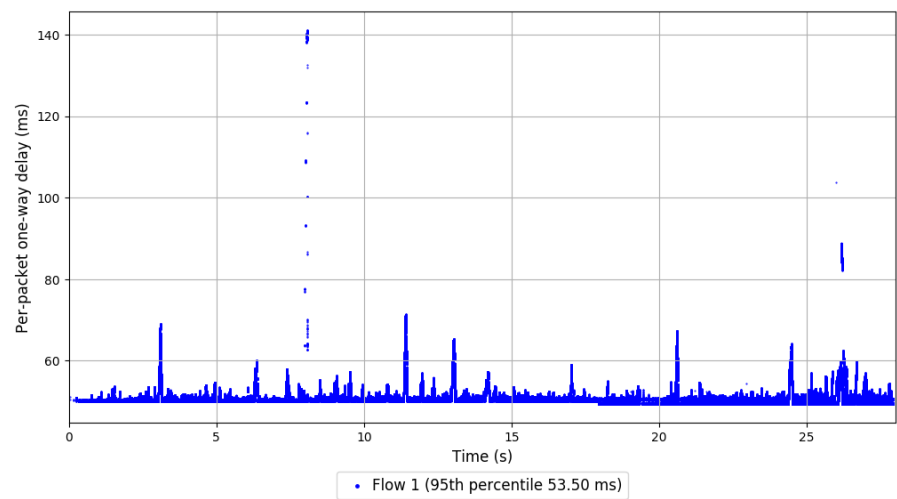
Run 7: Report of TaoVA-100x — Data Link

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

Start at: 2017-09-21 15:43:45
End at: 2017-09-21 15:44:15

# Below is generated by plot.py at 2017-09-21 18:33:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 217.08 Mbit/s
95th percentile per-packet one-way delay: 53.804 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 217.08 Mbit/s
95th percentile per-packet one-way delay: 53.804 ms
Loss rate: 0.26%
```
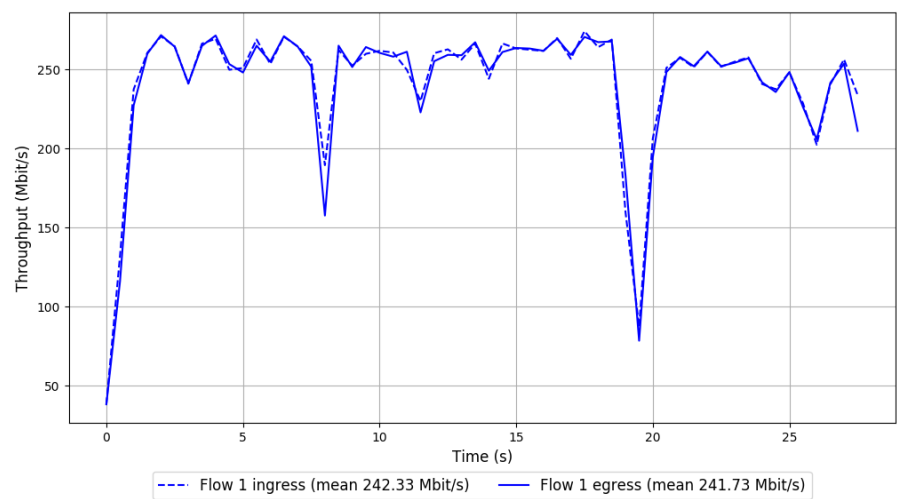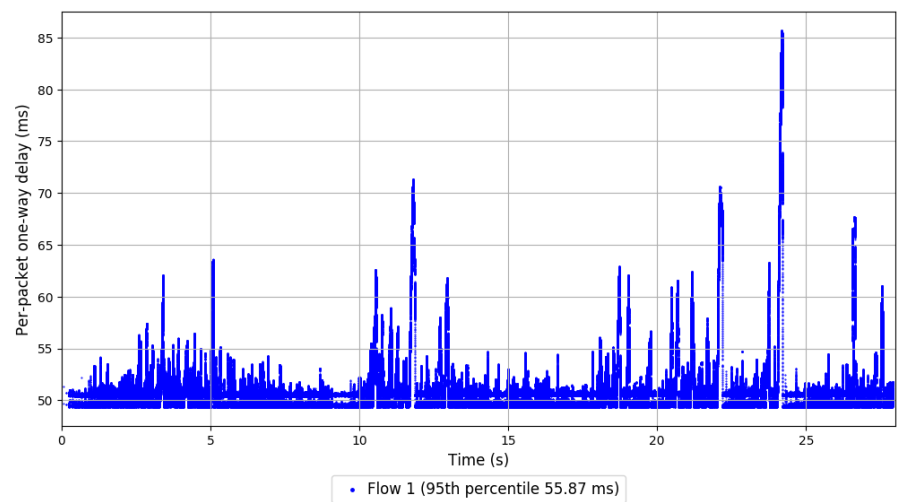
Run 8: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 216.86 Mbit/s) ---- Flow 1 egress (mean 217.08 Mbit/s) ——
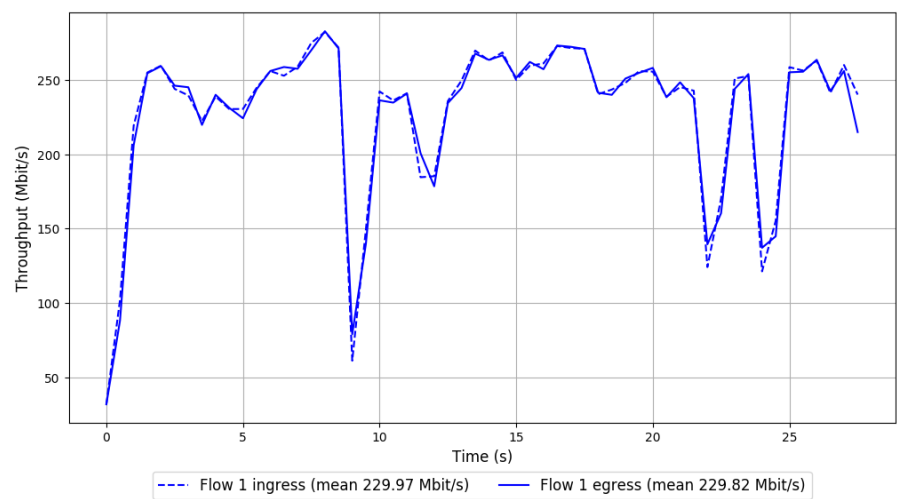

• Flow 1 (95th percentile 53.80 ms)

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

Start at: 2017-09-21 15:54:24
End at: 2017-09-21 15:54:54

# Below is generated by plot.py at 2017-09-21 18:35:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 241.73 Mbit/s
95th percentile per-packet one-way delay: 53.499 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 241.73 Mbit/s
95th percentile per-packet one-way delay: 53.499 ms
Loss rate: 0.61%
```
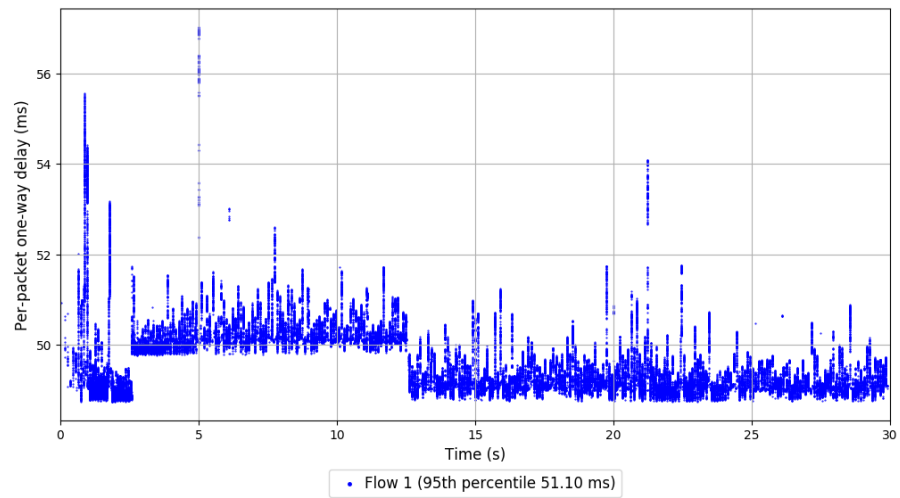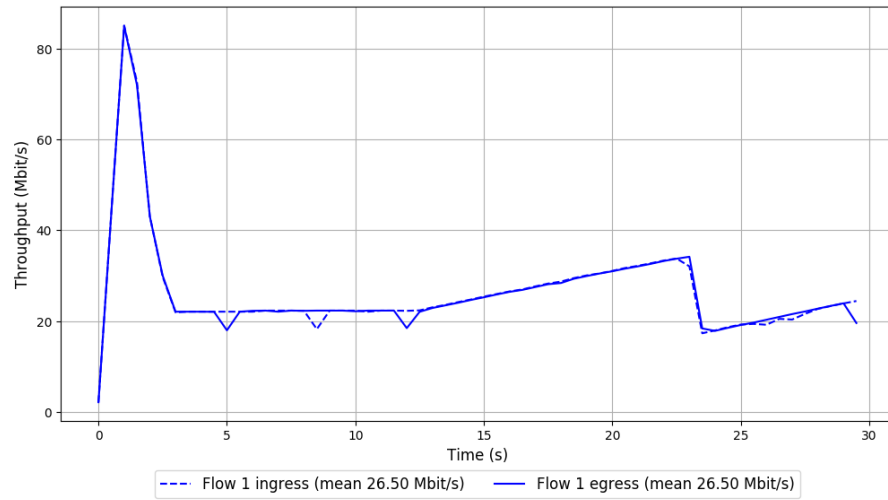
Run 9: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 242.33 Mbit/s) -----   Flow 1 egress (mean 241.73 Mbit/s) ——

• Flow 1 (95th percentile 53.50 ms)

181

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

Start at: 2017-09-21 16:05:13
End at: 2017-09-21 16:05:43

# Below is generated by plot.py at 2017-09-21 18:35:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 229.82 Mbit/s
95th percentile per-packet one-way delay: 55.869 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 229.82 Mbit/s
95th percentile per-packet one-way delay: 55.869 ms
Loss rate: 0.42%
```
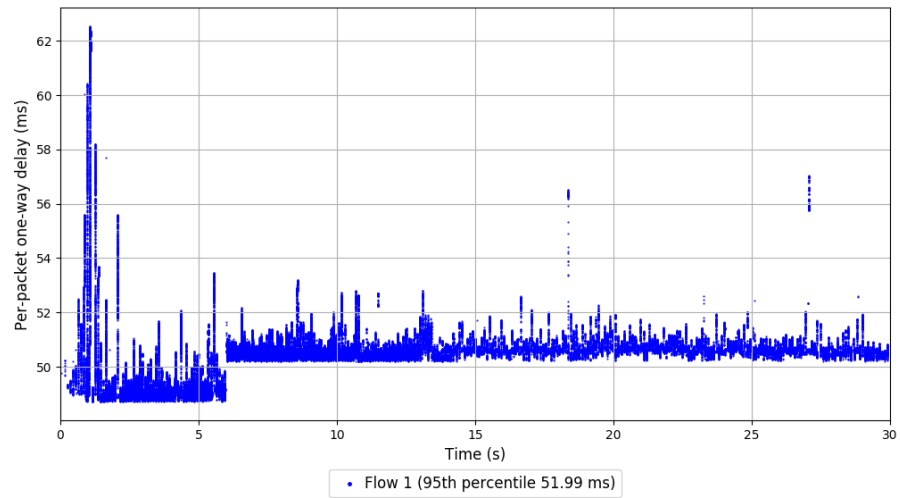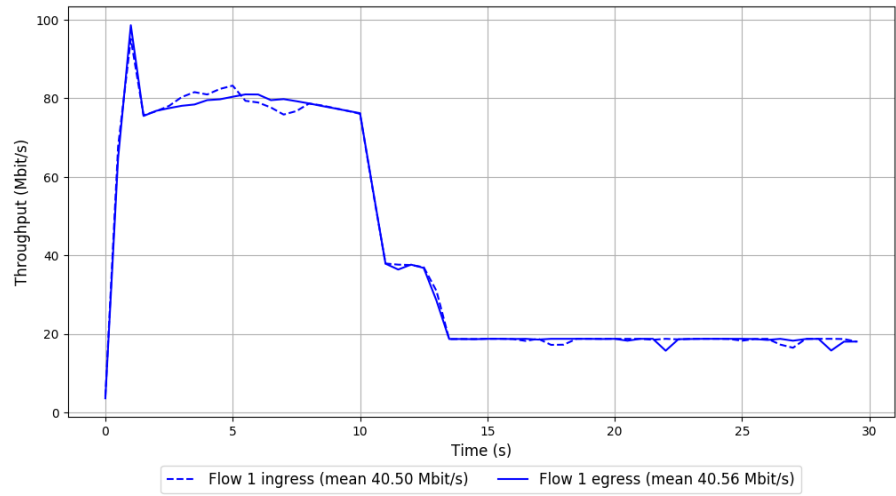
Run 10: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 229.97 Mbit/s)   Flow 1 egress (mean 229.82 Mbit/s)

Flow 1 (95th percentile 55.87 ms)

```
Run 1: Statistics of TCP Vegas

Start at: 2017-09-21 14:30:21
End at: 2017-09-21 14:30:51

# Below is generated by plot.py at 2017-09-21 18:35:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 26.50 Mbit/s
95th percentile per-packet one-way delay: 51.099 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 26.50 Mbit/s
95th percentile per-packet one-way delay: 51.099 ms
Loss rate: 0.33%
```
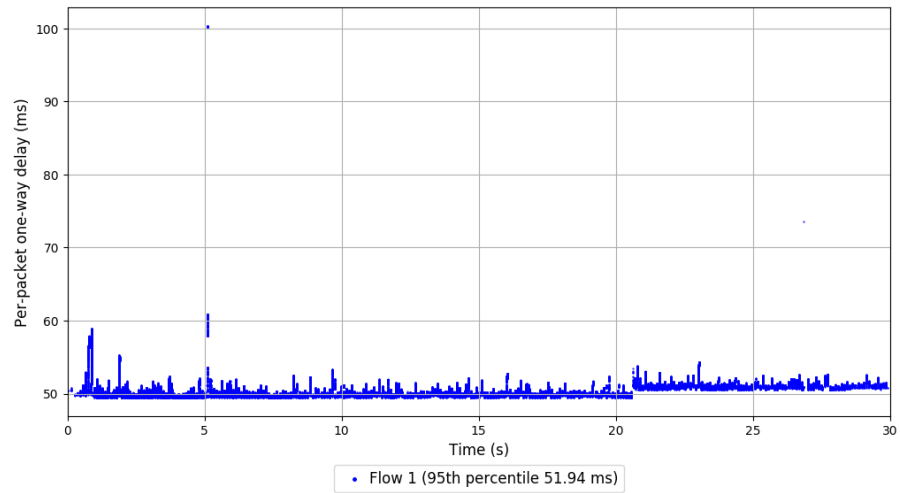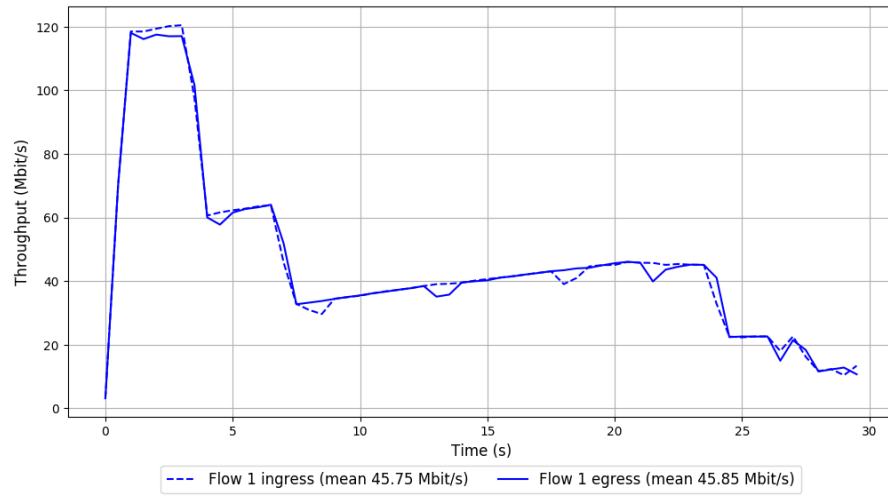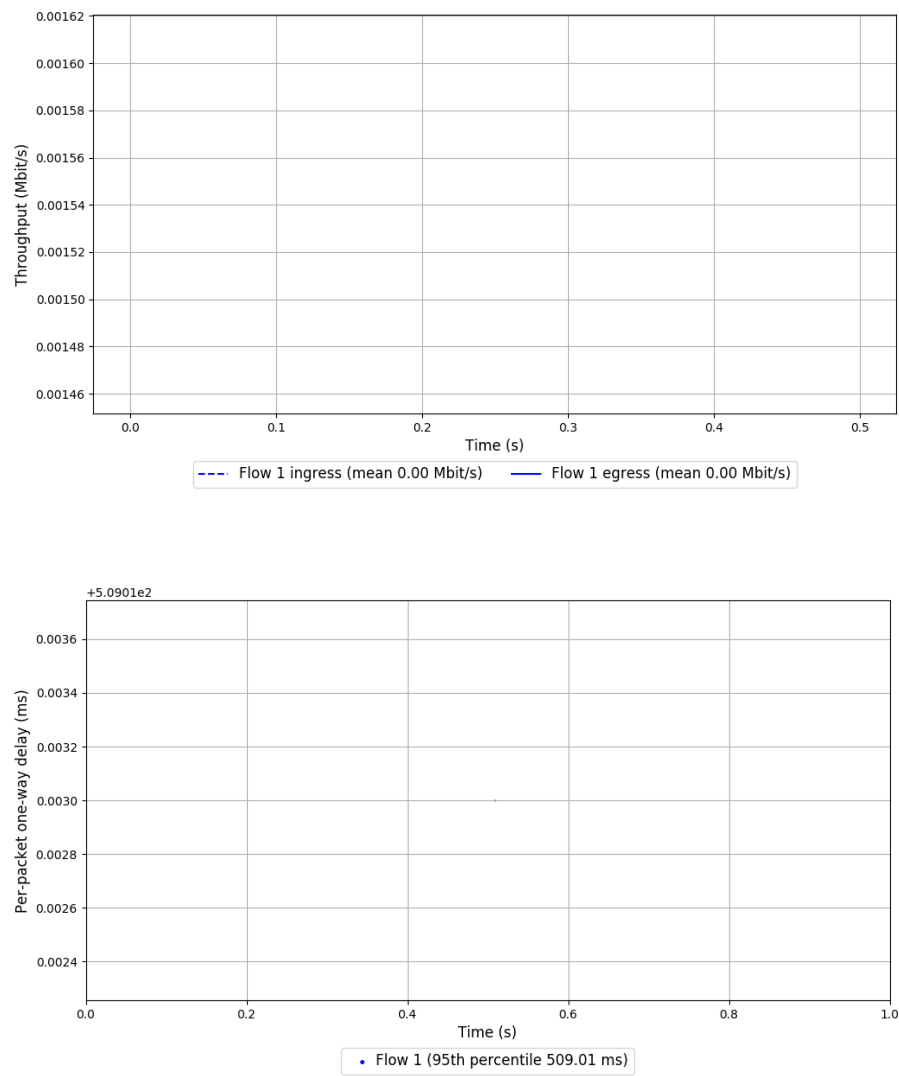
Run 1: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 26.50 Mbit/s) --- Flow 1 egress (mean 26.50 Mbit/s)

• Flow 1 (95th percentile 51.10 ms)

```
Run 2: Statistics of TCP Vegas

Start at: 2017-09-21 14:40:48
End at: 2017-09-21 14:41:18

# Below is generated by plot.py at 2017-09-21 18:35:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 40.56 Mbit/s
95th percentile per-packet one-way delay: 51.989 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 40.56 Mbit/s
95th percentile per-packet one-way delay: 51.989 ms
Loss rate: 0.19%
```

Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2017-09-21 14:51:33
End at: 2017-09-21 14:52:03

# Below is generated by plot.py at 2017-09-21 18:35:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 45.85 Mbit/s
95th percentile per-packet one-way delay: 51.944 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 45.85 Mbit/s
95th percentile per-packet one-way delay: 51.944 ms
Loss rate: 0.12%
```
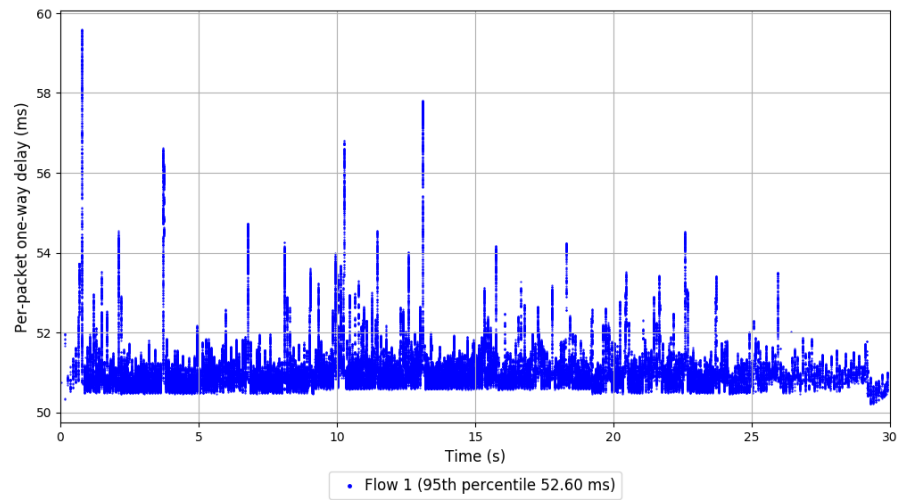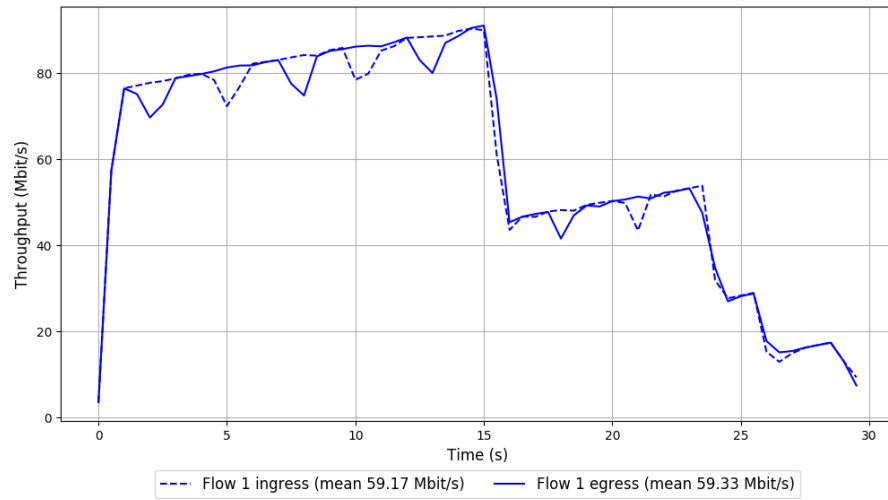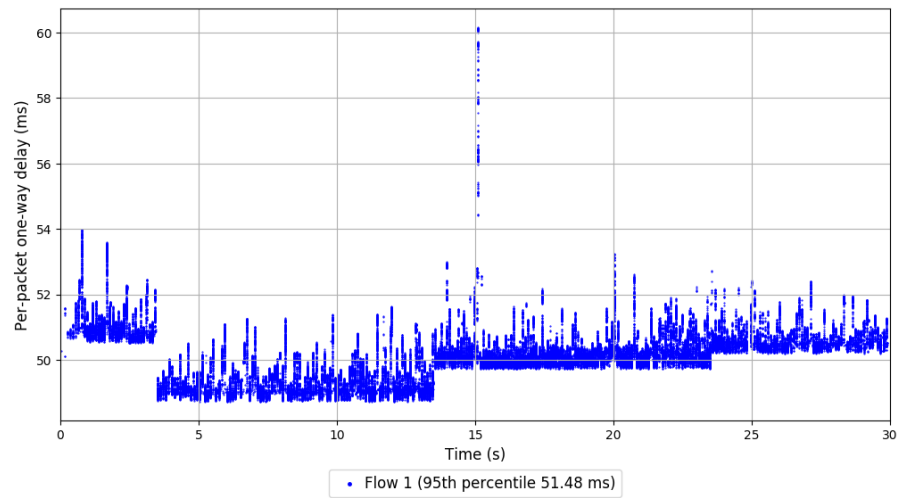
Run 3: Report of TCP Vegas — Data Link

Run 4: Statistics of TCP Vegas

Start at: 2017-09-21 15:02:14
End at: 2017-09-21 15:02:44

Run 4: Report of TCP Vegas — Data Link

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

Flow 1 (95th percentile 509.01 ms)

```
Run 5: Statistics of TCP Vegas

Start at: 2017-09-21 15:12:55
End at: 2017-09-21 15:13:25

# Below is generated by plot.py at 2017-09-21 18:35:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 59.33 Mbit/s
95th percentile per-packet one-way delay: 52.596 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 59.33 Mbit/s
95th percentile per-packet one-way delay: 52.596 ms
Loss rate: 0.06%
```
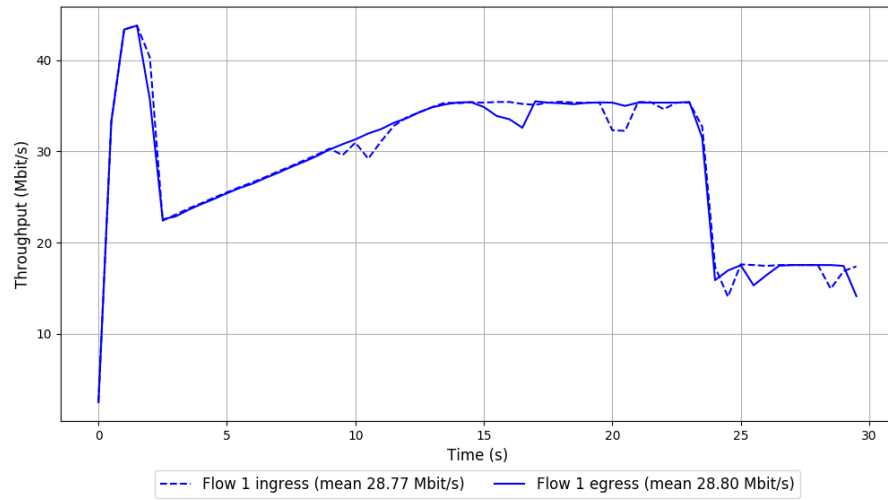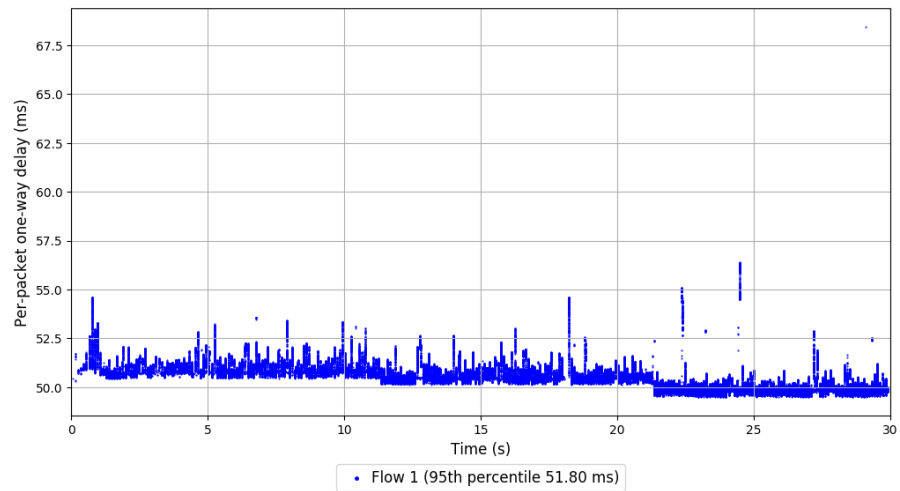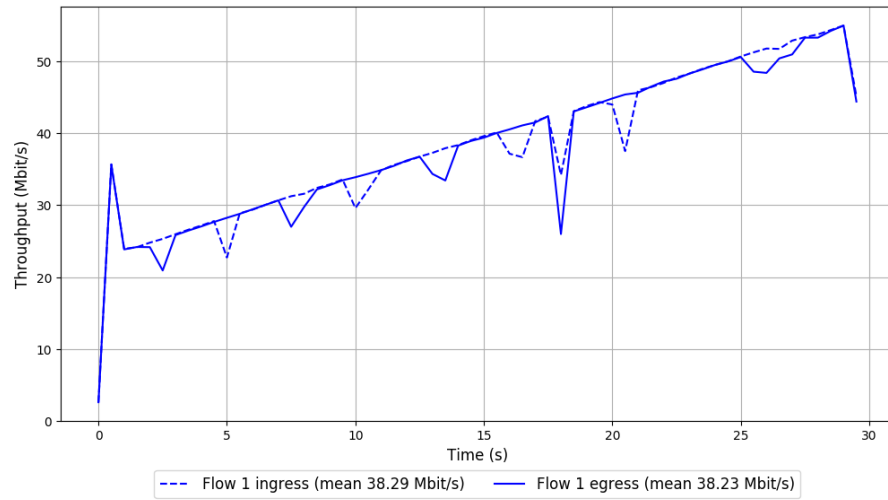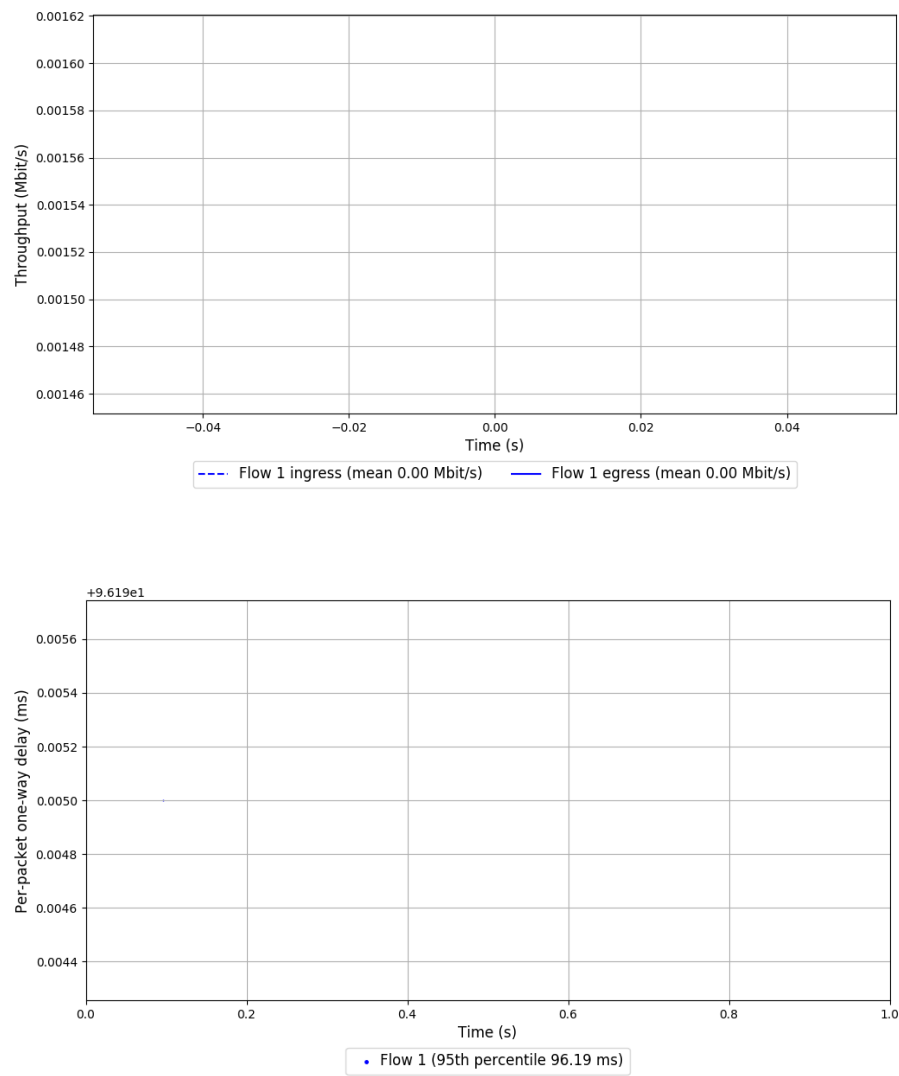
Run 5: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 59.17 Mbit/s) — — — Flow 1 egress (mean 59.33 Mbit/s)

Flow 1 (95th percentile 52.60 ms)

```
Run 6: Statistics of TCP Vegas

Start at: 2017-09-21 15:23:20
End at: 2017-09-21 15:23:50

# Below is generated by plot.py at 2017-09-21 18:35:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 28.80 Mbit/s
95th percentile per-packet one-way delay: 51.481 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 28.80 Mbit/s
95th percentile per-packet one-way delay: 51.481 ms
Loss rate: 0.21%
```

Run 6: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 28.77 Mbit/s)　　Flow 1 egress (mean 28.80 Mbit/s)

Flow 1 (95th percentile 51.48 ms)

```
Run 7: Statistics of TCP Vegas

Start at: 2017-09-21 15:34:03
End at: 2017-09-21 15:34:33

# Below is generated by plot.py at 2017-09-21 18:35:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 38.23 Mbit/s
95th percentile per-packet one-way delay: 51.802 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 38.23 Mbit/s
95th percentile per-packet one-way delay: 51.802 ms
Loss rate: 0.49%
```
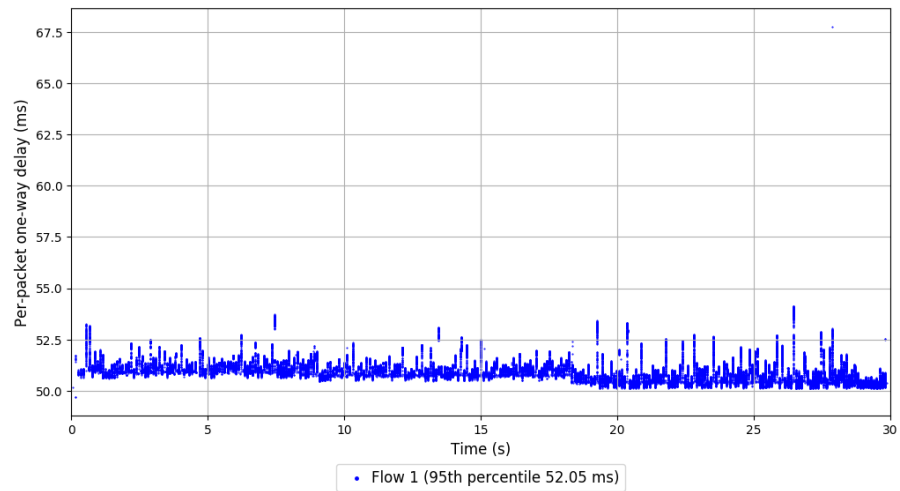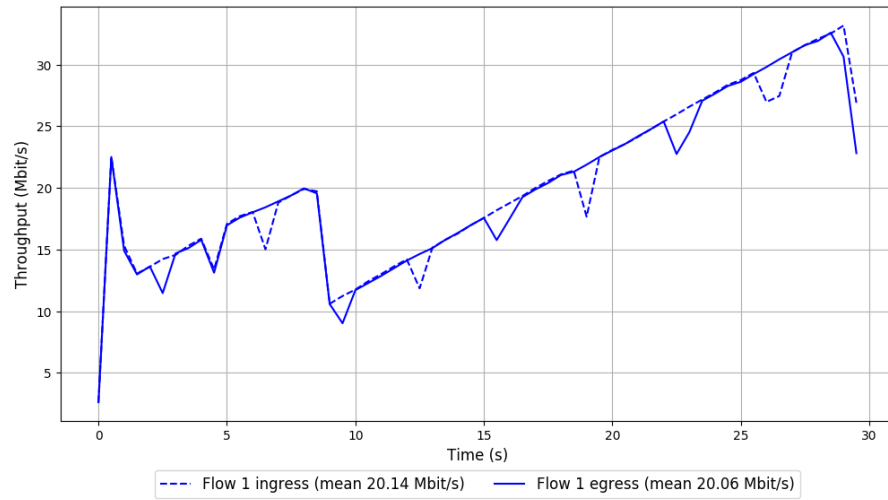
Run 7: Report of TCP Vegas — Data Link

Run 8: Statistics of TCP Vegas

Start at: 2017-09-21 15:44:42
End at: 2017-09-21 15:45:12
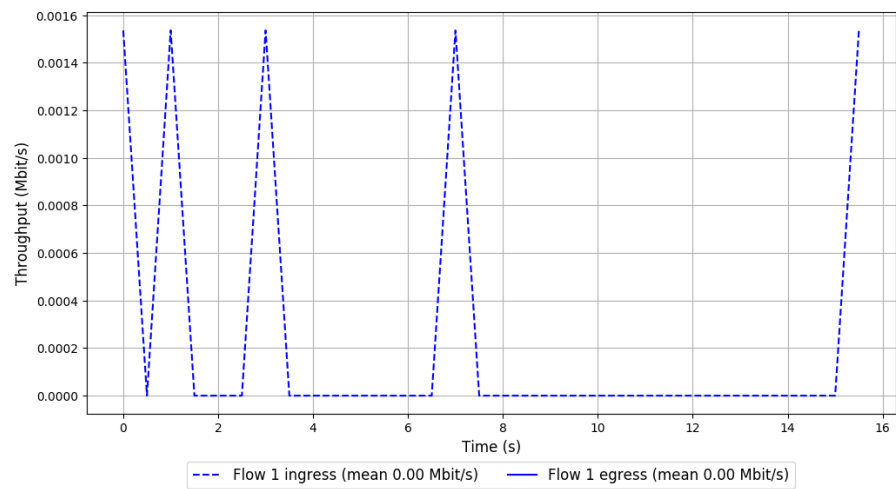
Run 8: Report of TCP Vegas — Data Link

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

Flow 1 (95th percentile 96.19 ms)

199

```
Run 9: Statistics of TCP Vegas

Start at: 2017-09-21 15:55:26
End at: 2017-09-21 15:55:56

# Below is generated by plot.py at 2017-09-21 18:35:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 20.06 Mbit/s
95th percentile per-packet one-way delay: 52.047 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 20.06 Mbit/s
95th percentile per-packet one-way delay: 52.047 ms
Loss rate: 0.60%
```
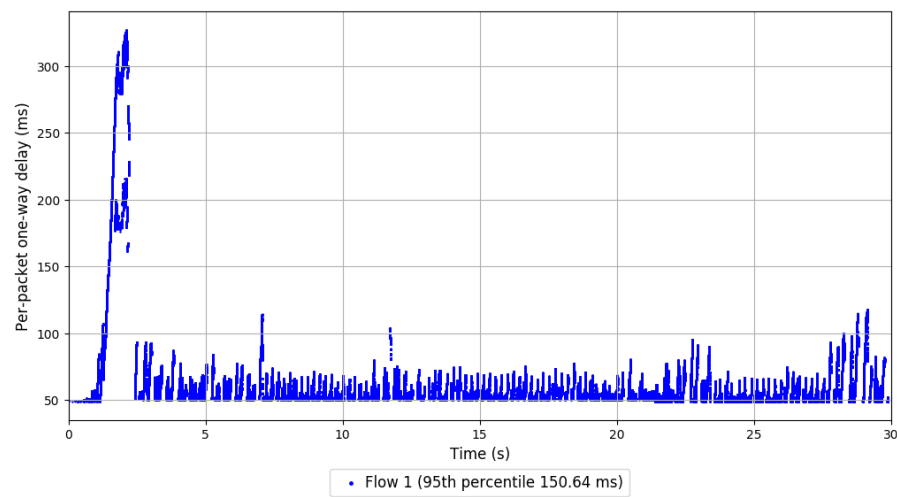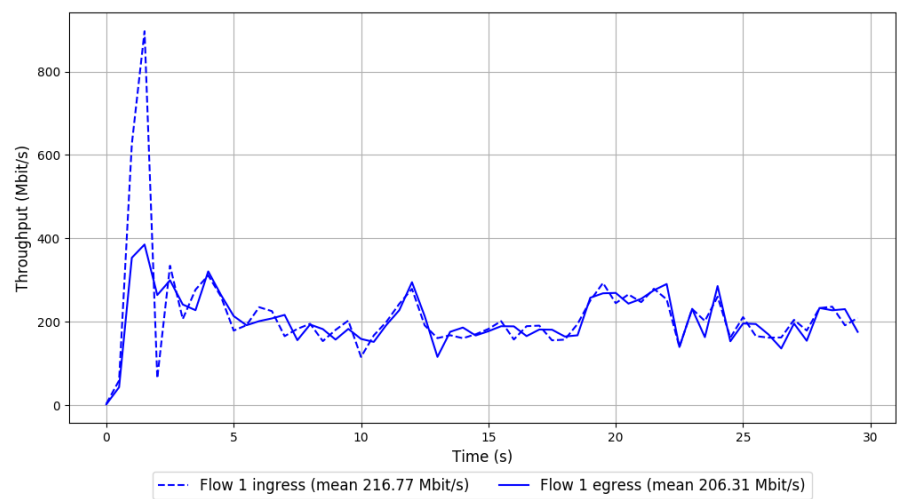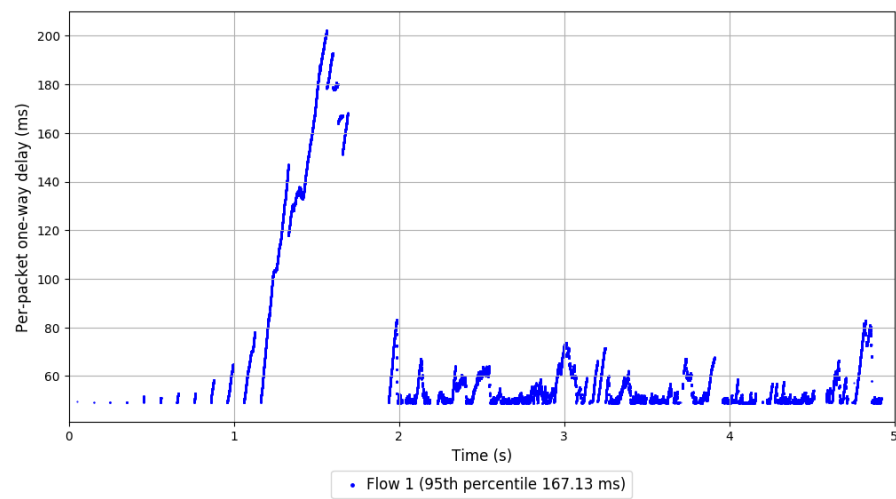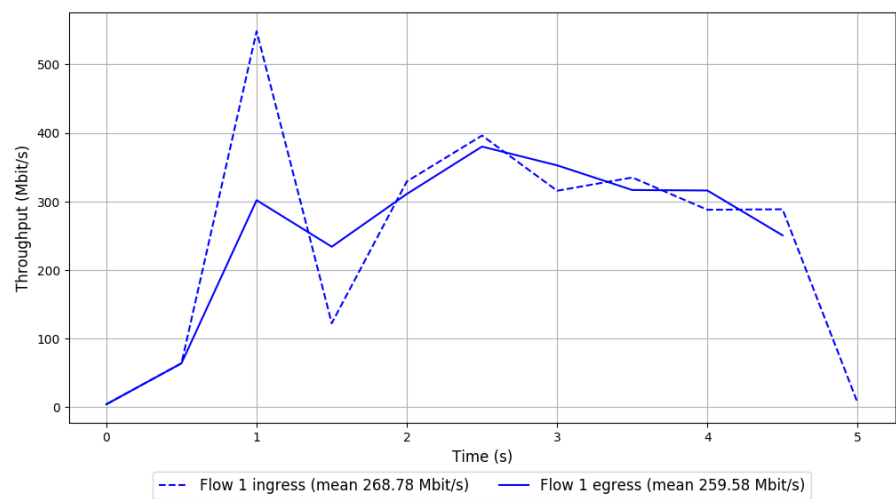
Run 9: Report of TCP Vegas — Data Link

Run 10: Statistics of TCP Vegas

Start at: 2017-09-21 16:06:12
End at: 2017-09-21 16:06:42

Run 10: Report of TCP Vegas — Data Link

Figure is missing

```
Run 1: Statistics of Verus

Start at: 2017-09-21 14:23:42
End at: 2017-09-21 14:24:12

# Below is generated by plot.py at 2017-09-21 18:35:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 206.31 Mbit/s
95th percentile per-packet one-way delay: 150.643 ms
Loss rate: 5.15%
-- Flow 1:
Average throughput: 206.31 Mbit/s
95th percentile per-packet one-way delay: 150.643 ms
Loss rate: 5.15%
```
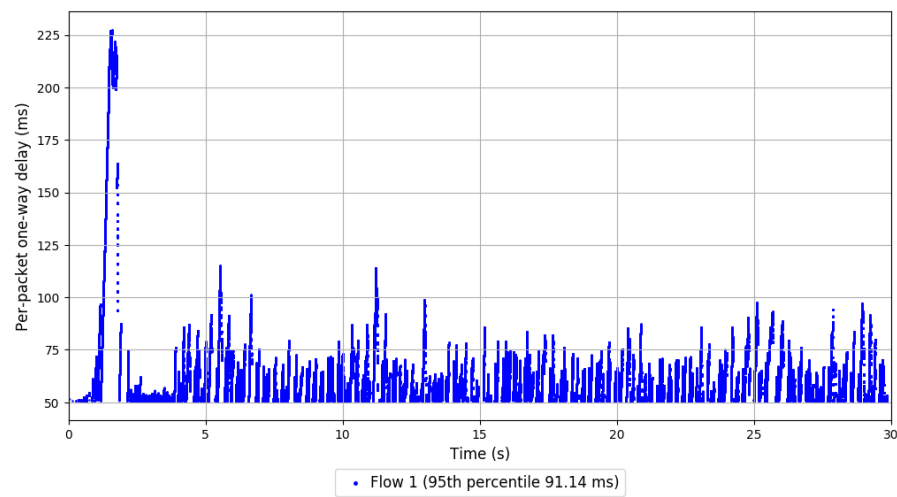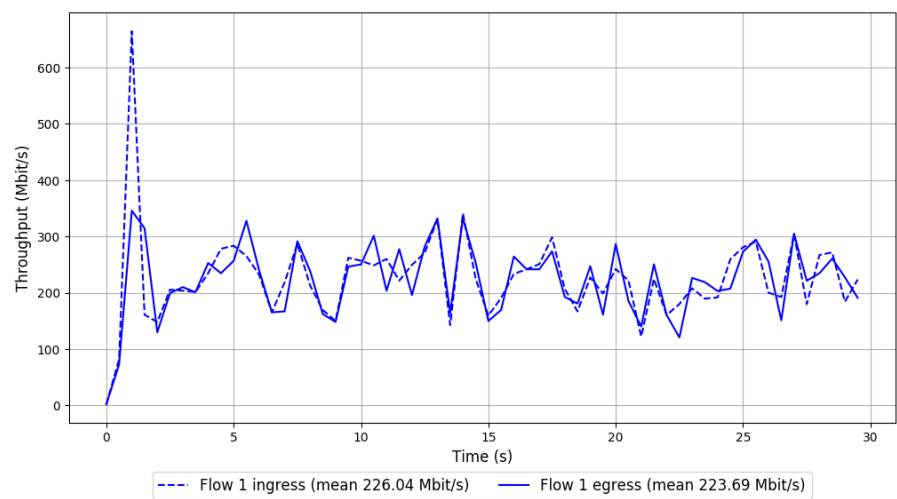
Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2017-09-21 14:34:15
End at: 2017-09-21 14:34:45
```

Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2017-09-21 14:44:45
End at: 2017-09-21 14:45:15

# Below is generated by plot.py at 2017-09-21 18:35:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 223.69 Mbit/s
95th percentile per-packet one-way delay: 91.144 ms
Loss rate: 1.54%
-- Flow 1:
Average throughput: 223.69 Mbit/s
95th percentile per-packet one-way delay: 91.144 ms
Loss rate: 1.54%
```
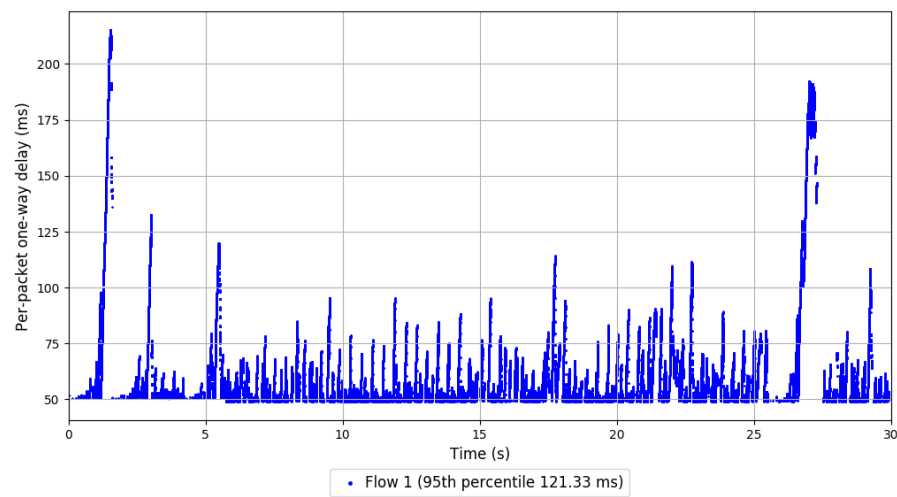
Run 3: Report of Verus — Data Link

```
Run 4: Statistics of Verus

Start at: 2017-09-21 14:55:28
End at: 2017-09-21 14:55:58

# Below is generated by plot.py at 2017-09-21 18:35:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 226.08 Mbit/s
95th percentile per-packet one-way delay: 121.331 ms
Loss rate: 3.25%
-- Flow 1:
Average throughput: 226.08 Mbit/s
95th percentile per-packet one-way delay: 121.331 ms
Loss rate: 3.25%
```
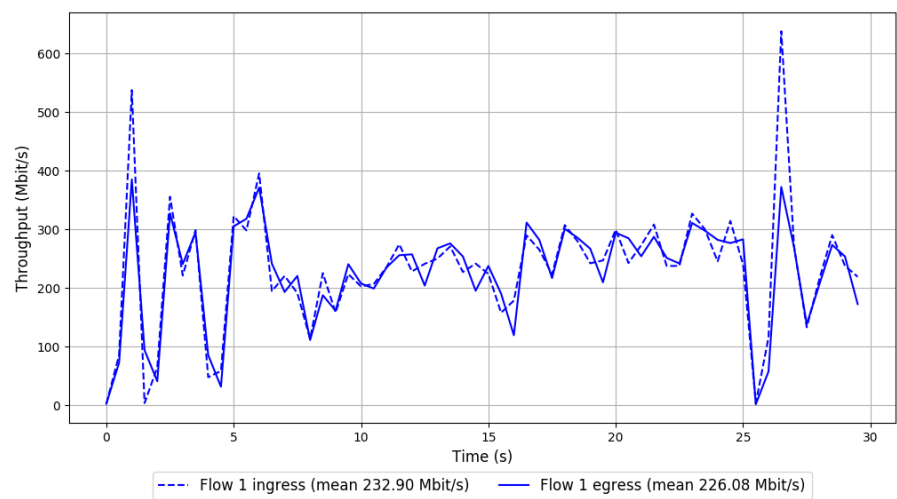
Run 4: Report of Verus — Data Link

Flow 1 ingress (mean 232.90 Mbit/s)   Flow 1 egress (mean 226.08 Mbit/s)

• Flow 1 (95th percentile 121.33 ms)

```
Run 5: Statistics of Verus

Start at: 2017-09-21 15:06:07
End at: 2017-09-21 15:06:37


# Below is generated by plot.py at 2017-09-21 18:35:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 253.86 Mbit/s
95th percentile per-packet one-way delay: 116.911 ms
Loss rate: 2.03%
-- Flow 1:
Average throughput: 253.86 Mbit/s
95th percentile per-packet one-way delay: 116.911 ms
Loss rate: 2.03%
```
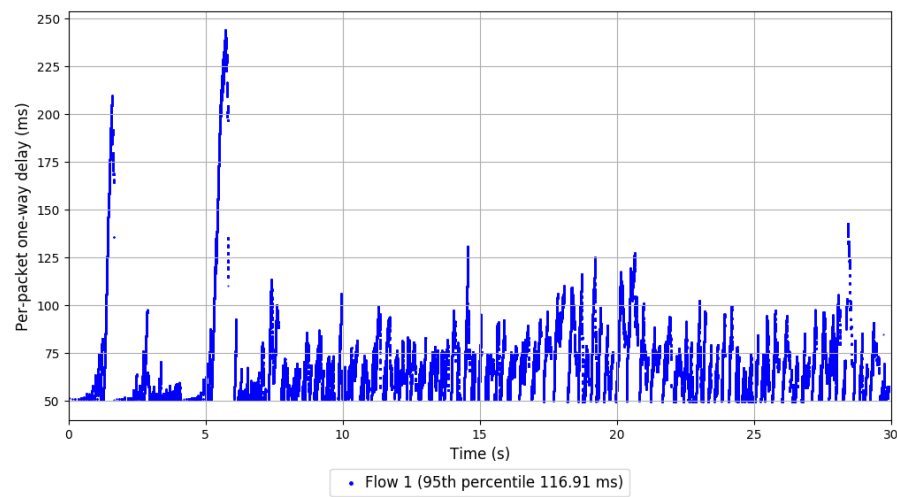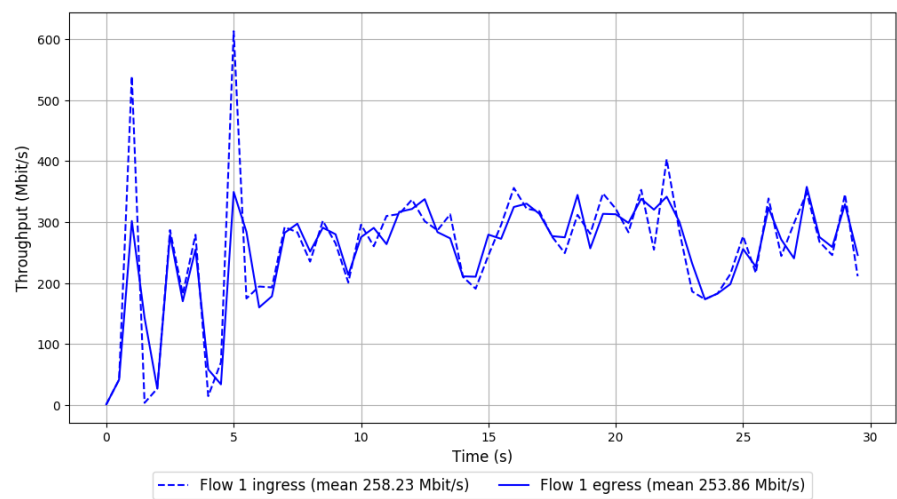
Run 5: Report of Verus — Data Link

```
Run 6: Statistics of Verus

Start at: 2017-09-21 15:16:40
End at: 2017-09-21 15:17:10

# Below is generated by plot.py at 2017-09-21 18:38:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 274.03 Mbit/s
95th percentile per-packet one-way delay: 92.929 ms
Loss rate: 2.45%
-- Flow 1:
Average throughput: 274.03 Mbit/s
95th percentile per-packet one-way delay: 92.929 ms
Loss rate: 2.45%
```
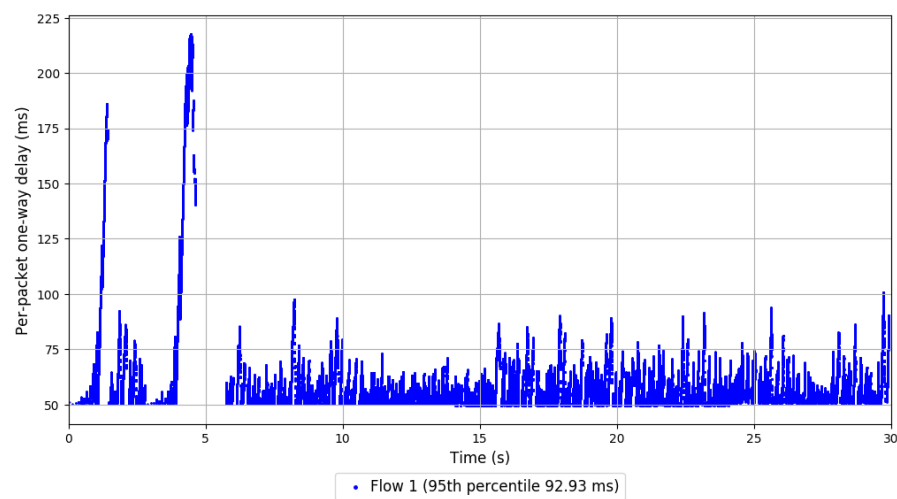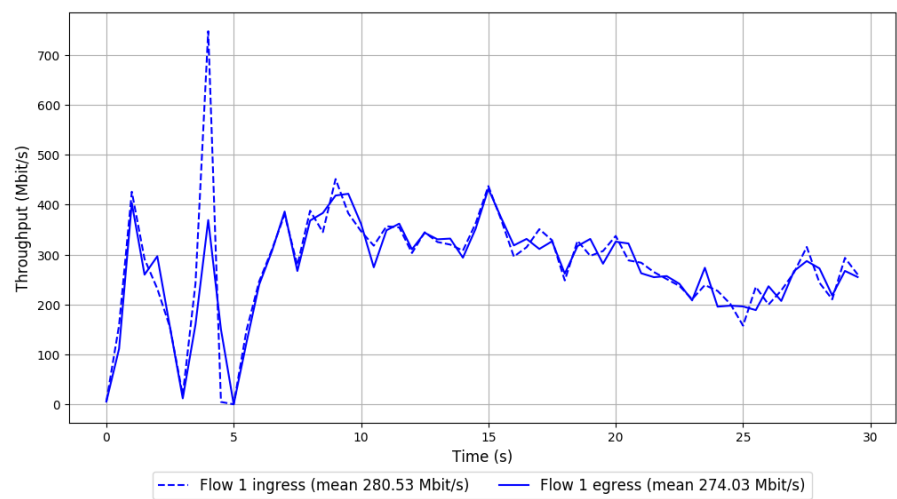
Run 6: Report of Verus — Data Link

```
Run 7: Statistics of Verus

Start at: 2017-09-21 15:27:15
End at: 2017-09-21 15:27:45

# Below is generated by plot.py at 2017-09-21 18:38:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 223.72 Mbit/s
95th percentile per-packet one-way delay: 108.624 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 223.72 Mbit/s
95th percentile per-packet one-way delay: 108.624 ms
Loss rate: 0.88%
```
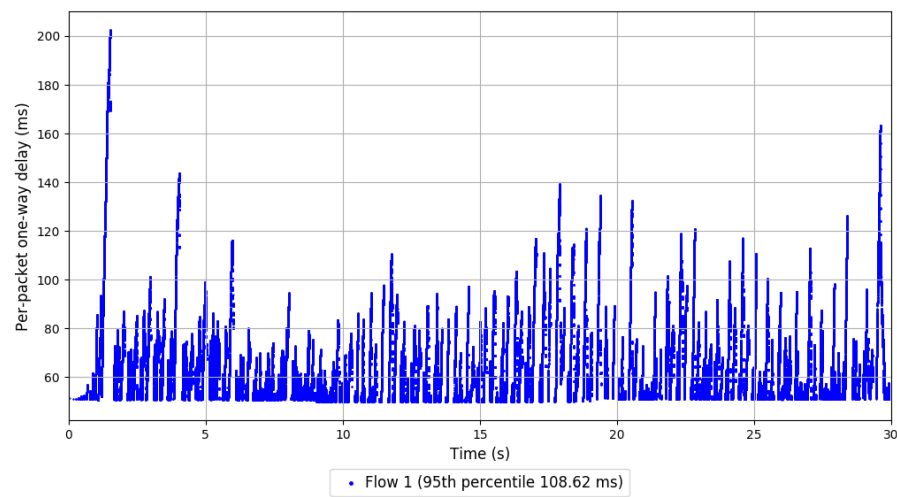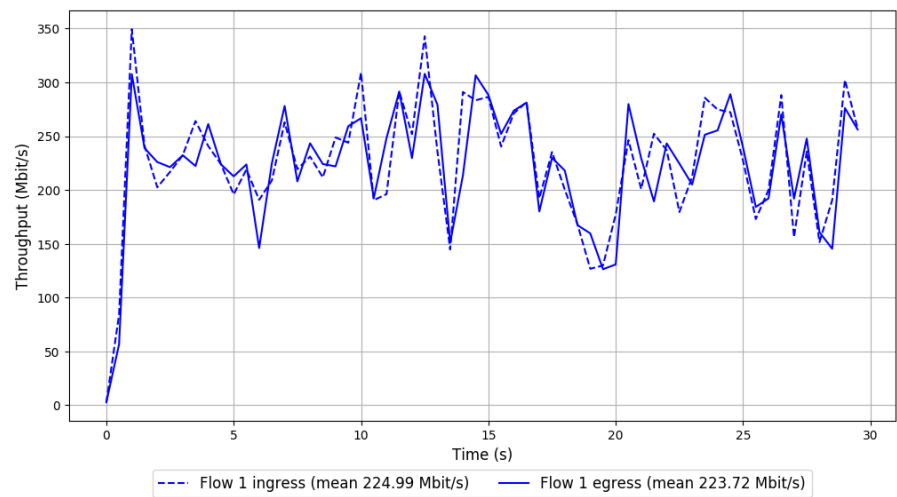
Run 7: Report of Verus — Data Link

Run 8: Statistics of Verus

Start at: 2017-09-21 15:37:55
End at: 2017-09-21 15:38:25

Below is generated by plot.py at 2017-09-21 18:39:06
Datalink statistics
-- Total of 1 flow:
Average throughput: 274.70 Mbit/s
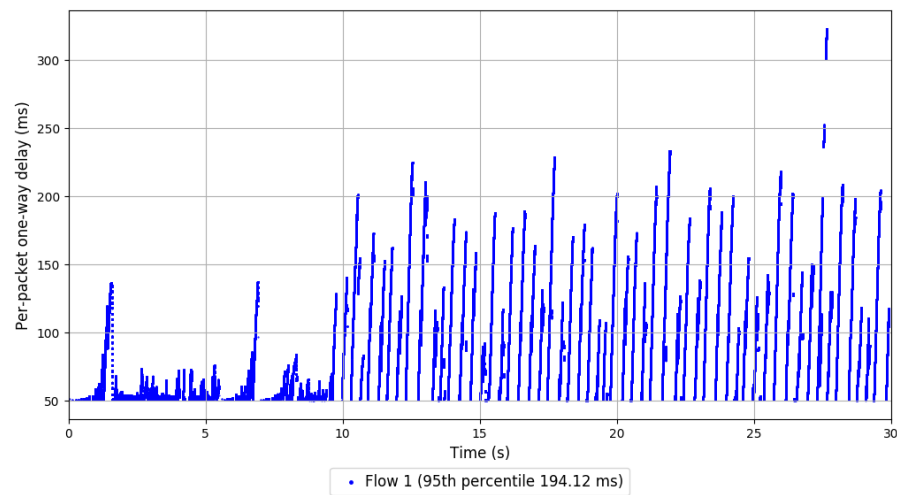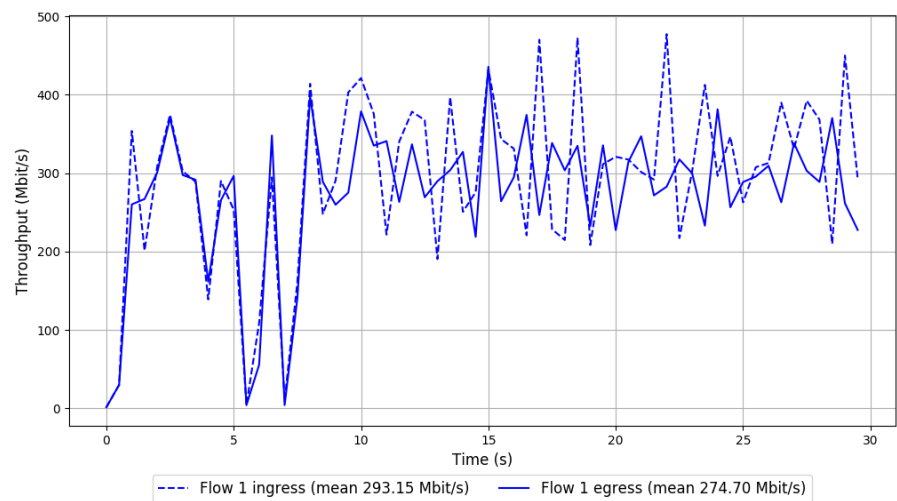95th percentile per-packet one-way delay: 194.116 ms
Loss rate: 6.36%
-- Flow 1:
Average throughput: 274.70 Mbit/s
95th percentile per-packet one-way delay: 194.116 ms
Loss rate: 6.36%

Run 8: Report of Verus — Data Link

```
Run 9: Statistics of Verus

Start at: 2017-09-21 15:48:37
End at: 2017-09-21 15:49:07

# Below is generated by plot.py at 2017-09-21 18:39:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 222.97 Mbit/s
95th percentile per-packet one-way delay: 113.269 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 222.97 Mbit/s
95th percentile per-packet one-way delay: 113.269 ms
Loss rate: 0.31%
```
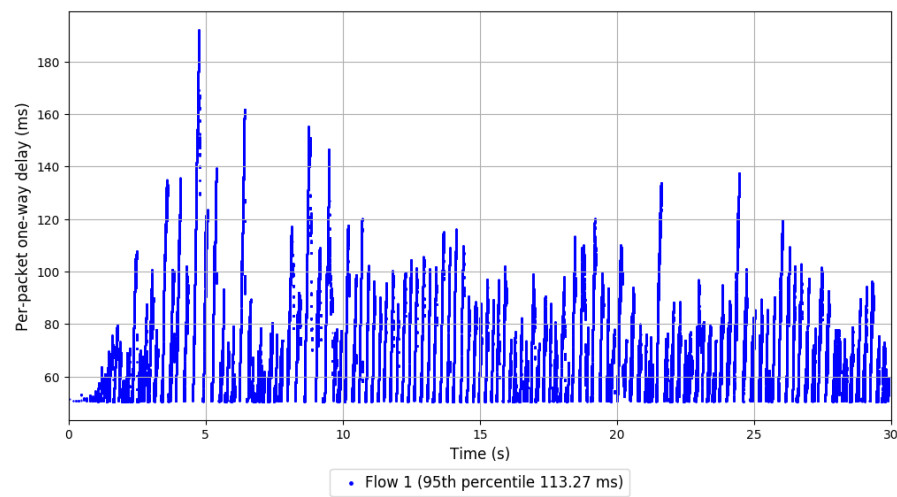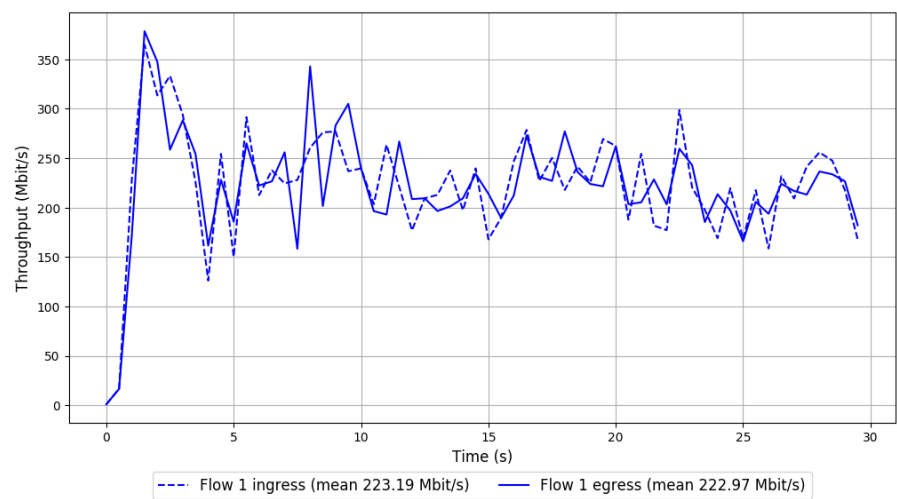
Run 9: Report of Verus — Data Link

Flow 1 ingress (mean 223.19 Mbit/s) ——— Flow 1 egress (mean 222.97 Mbit/s)

• Flow 1 (95th percentile 113.27 ms)

```
Run 10: Statistics of Verus

Start at: 2017-09-21 15:59:22
End at: 2017-09-21 15:59:52

# Below is generated by plot.py at 2017-09-21 18:39:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 237.78 Mbit/s
95th percentile per-packet one-way delay: 112.643 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 237.78 Mbit/s
95th percentile per-packet one-way delay: 112.643 ms
Loss rate: 0.68%
```
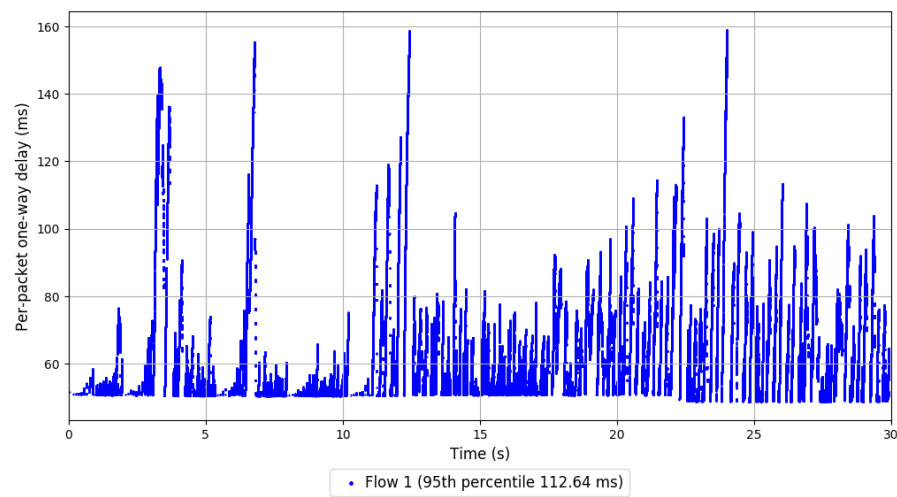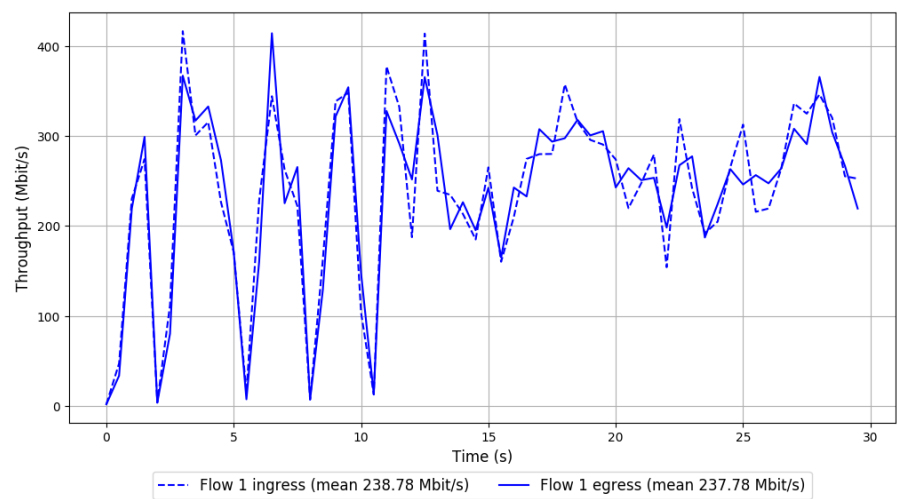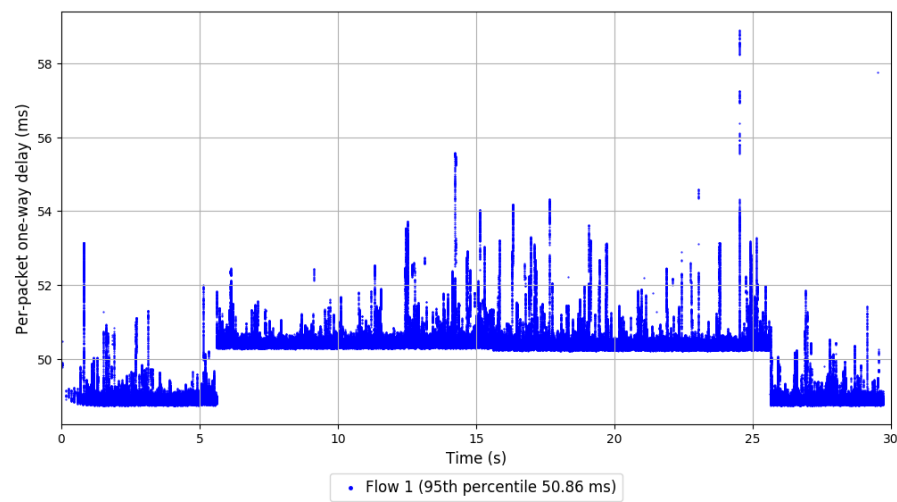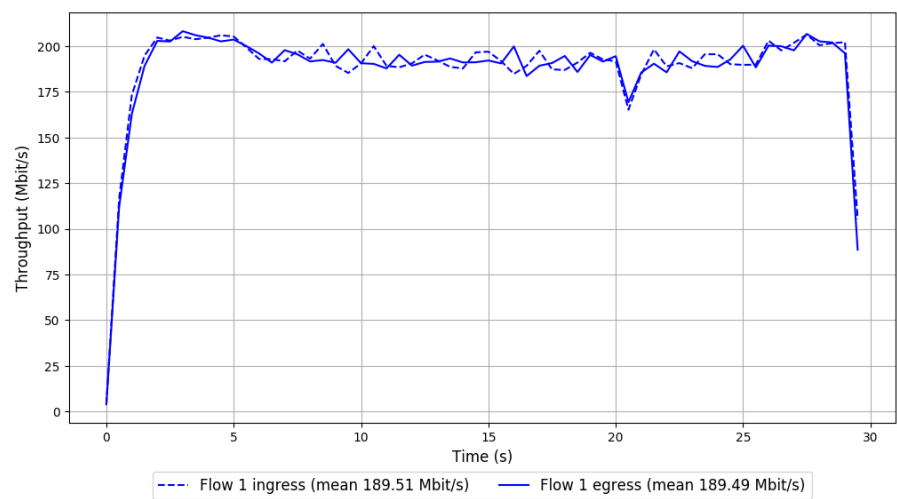
Run 10: Report of Verus — Data Link

```
Run 1: Statistics of Indigo

Start at: 2017-09-21 14:25:58
End at: 2017-09-21 14:26:28

# Below is generated by plot.py at 2017-09-21 18:39:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 189.49 Mbit/s
95th percentile per-packet one-way delay: 50.858 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 189.49 Mbit/s
95th percentile per-packet one-way delay: 50.858 ms
Loss rate: 0.36%
```

Run 1: Report of Indigo — Data Link

Flow 1 ingress (mean 189.51 Mbit/s)   Flow 1 egress (mean 189.49 Mbit/s)

Flow 1 (95th percentile 50.86 ms)

```
Run 2: Statistics of Indigo

Start at: 2017-09-21 14:36:18
End at: 2017-09-21 14:36:48

# Below is generated by plot.py at 2017-09-21 18:39:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 194.51 Mbit/s
95th percentile per-packet one-way delay: 50.797 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 194.51 Mbit/s
95th percentile per-packet one-way delay: 50.797 ms
Loss rate: 0.34%
```
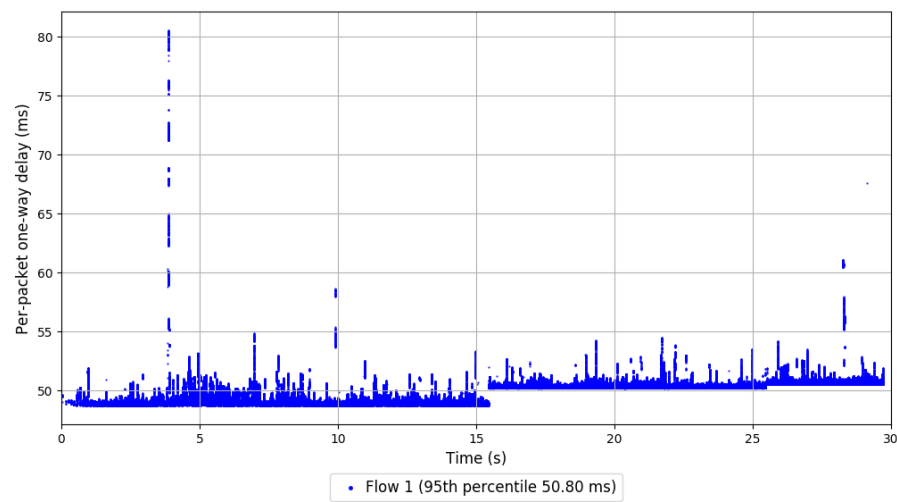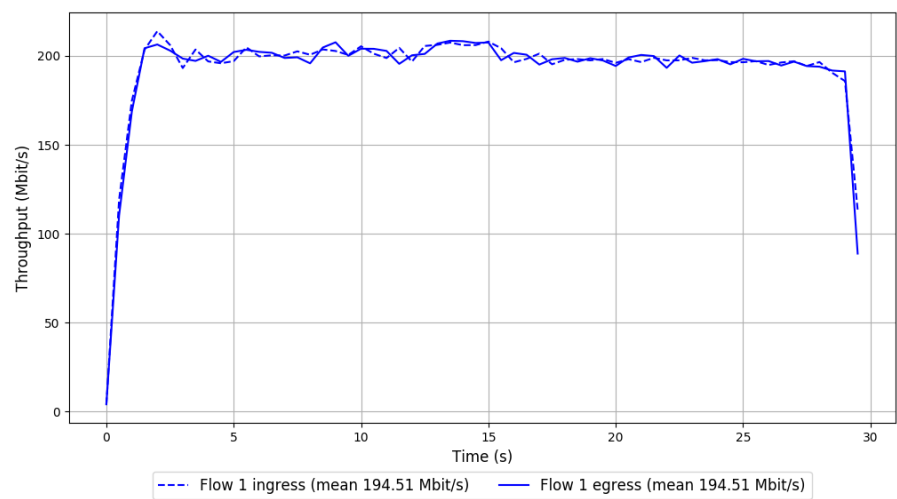
Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2017-09-21 14:47:00
End at: 2017-09-21 14:47:30

# Below is generated by plot.py at 2017-09-21 18:39:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 197.16 Mbit/s
95th percentile per-packet one-way delay: 51.320 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 197.16 Mbit/s
95th percentile per-packet one-way delay: 51.320 ms
Loss rate: 0.34%
```
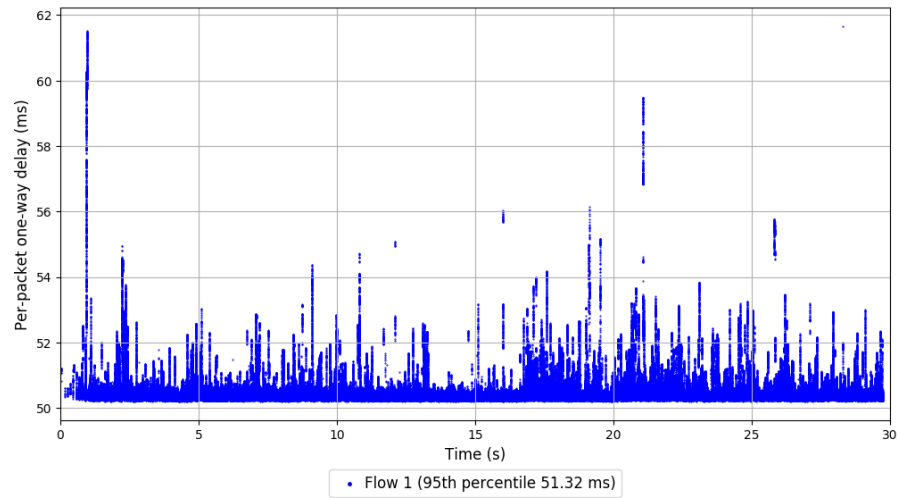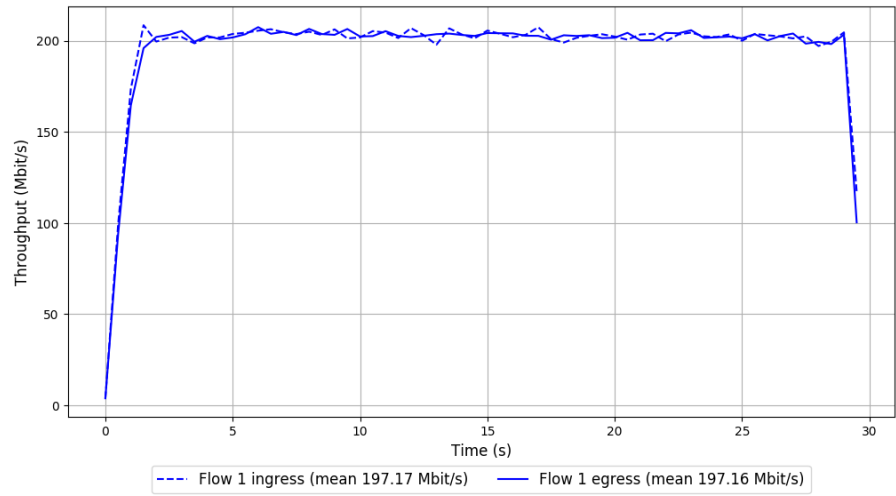
Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2017-09-21 14:57:44
End at: 2017-09-21 14:58:14

# Below is generated by plot.py at 2017-09-21 18:41:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 193.46 Mbit/s
95th percentile per-packet one-way delay: 51.519 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 193.46 Mbit/s
95th percentile per-packet one-way delay: 51.519 ms
Loss rate: 0.36%
```
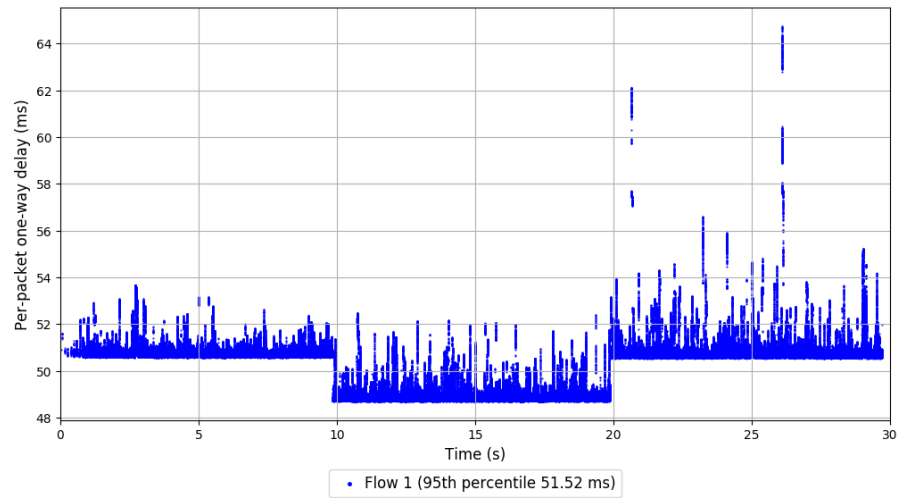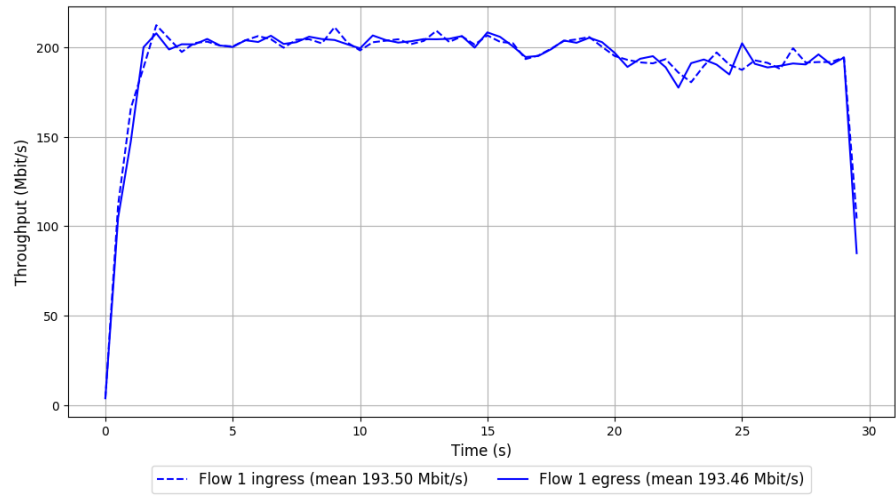
Run 4: Report of Indigo — Data Link

Flow 1 ingress (mean 193.50 Mbit/s)   Flow 1 egress (mean 193.46 Mbit/s)

Flow 1 (95th percentile 51.52 ms)

```
Run 5: Statistics of Indigo

Start at: 2017-09-21 15:08:24
End at: 2017-09-21 15:08:54

# Below is generated by plot.py at 2017-09-21 18:42:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 193.96 Mbit/s
95th percentile per-packet one-way delay: 51.347 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 193.96 Mbit/s
95th percentile per-packet one-way delay: 51.347 ms
Loss rate: 0.34%
```
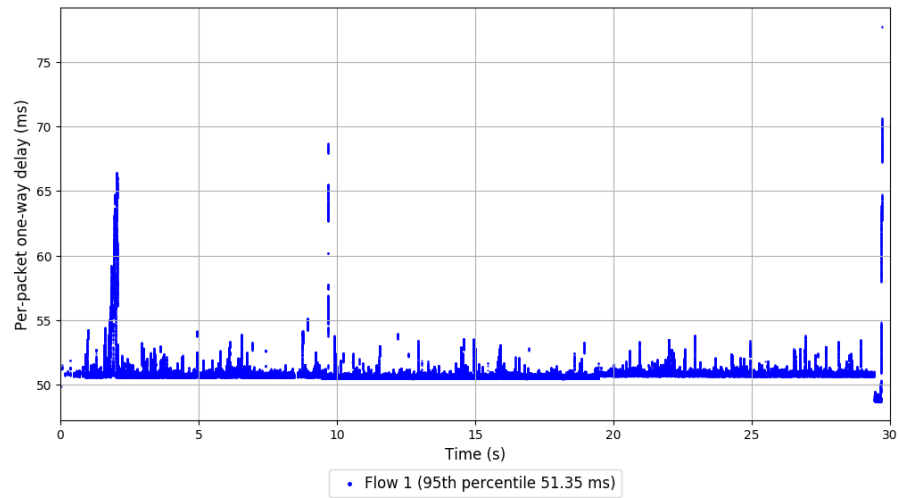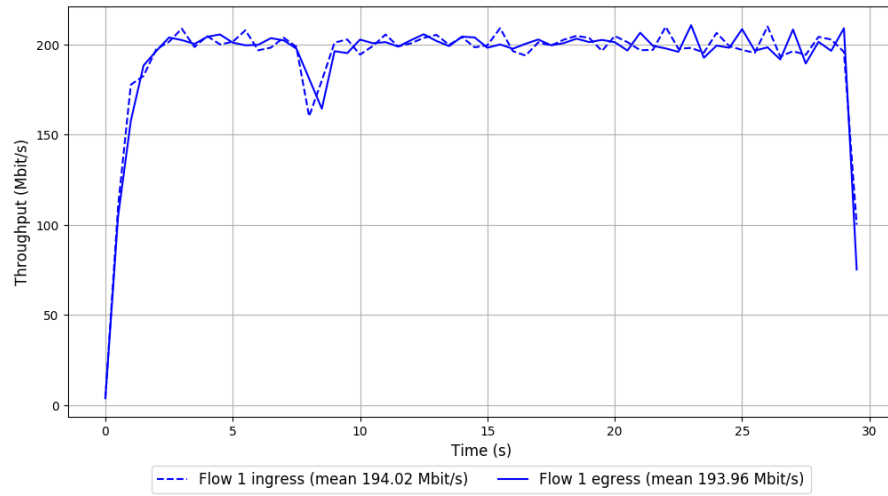
Run 5: Report of Indigo — Data Link

```
Run 6: Statistics of Indigo

Start at: 2017-09-21 15:18:50
End at: 2017-09-21 15:19:20

# Below is generated by plot.py at 2017-09-21 18:42:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 190.62 Mbit/s
95th percentile per-packet one-way delay: 51.289 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 190.62 Mbit/s
95th percentile per-packet one-way delay: 51.289 ms
Loss rate: 0.36%
```
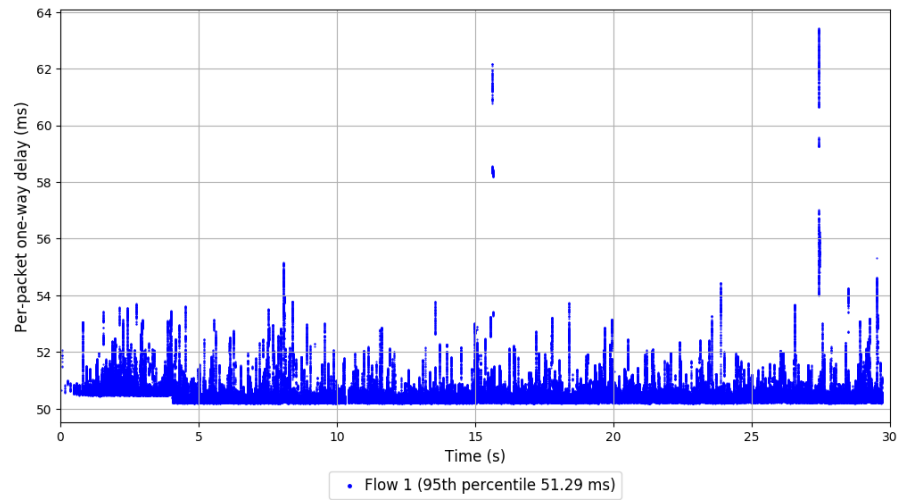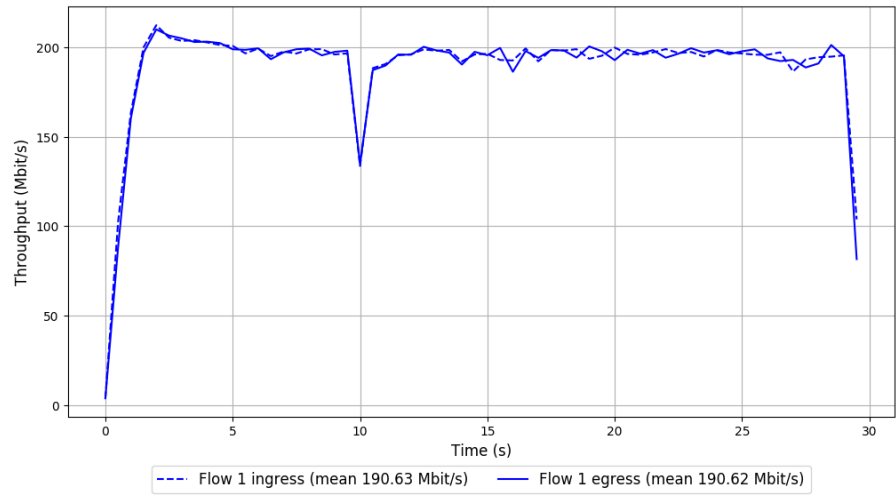
Run 6: Report of Indigo — Data Link

```
Run 7: Statistics of Indigo

Start at: 2017-09-21 15:29:31
End at: 2017-09-21 15:30:01


# Below is generated by plot.py at 2017-09-21 18:42:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 192.85 Mbit/s
95th percentile per-packet one-way delay: 51.030 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 192.85 Mbit/s
95th percentile per-packet one-way delay: 51.030 ms
Loss rate: 0.33%
```
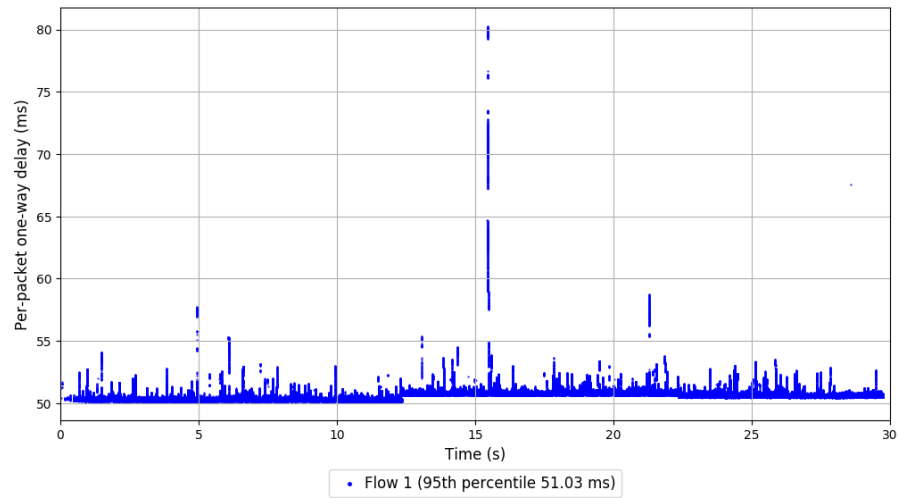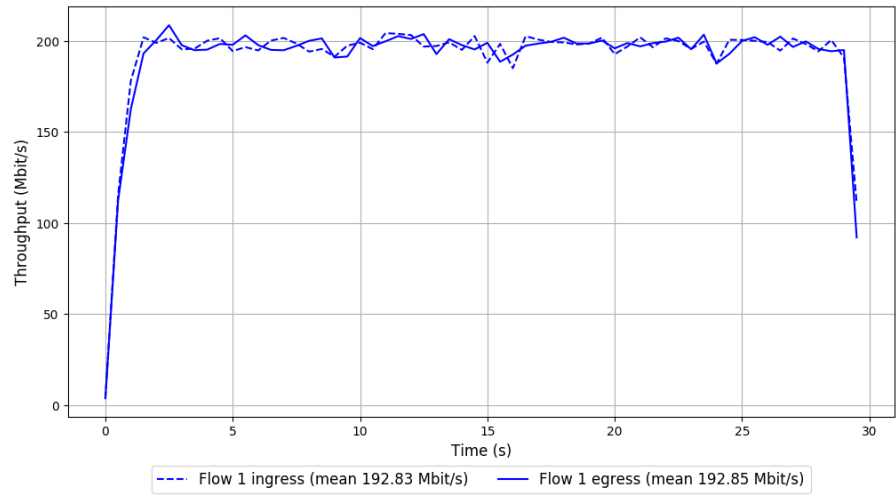
Run 7: Report of Indigo — Data Link

```
Run 8: Statistics of Indigo

Start at: 2017-09-21 15:40:13
End at: 2017-09-21 15:40:43

# Below is generated by plot.py at 2017-09-21 18:42:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 191.25 Mbit/s
95th percentile per-packet one-way delay: 50.775 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 191.25 Mbit/s
95th percentile per-packet one-way delay: 50.775 ms
Loss rate: 0.35%
```
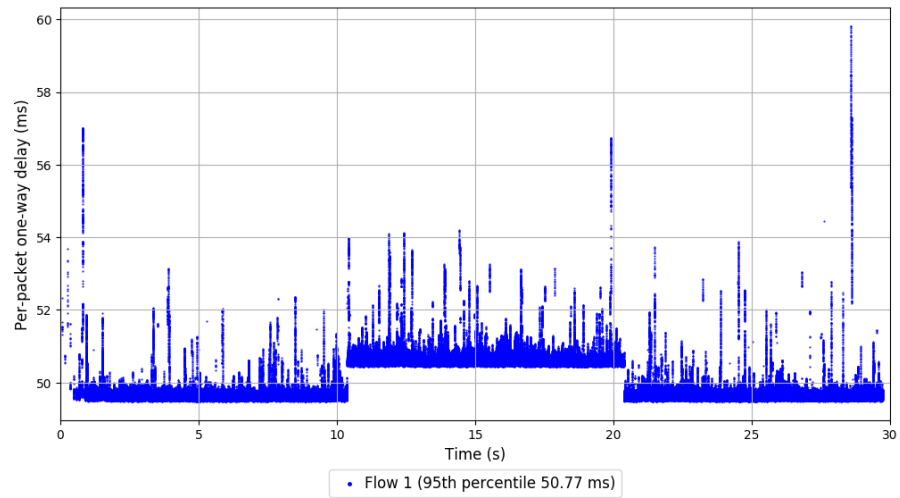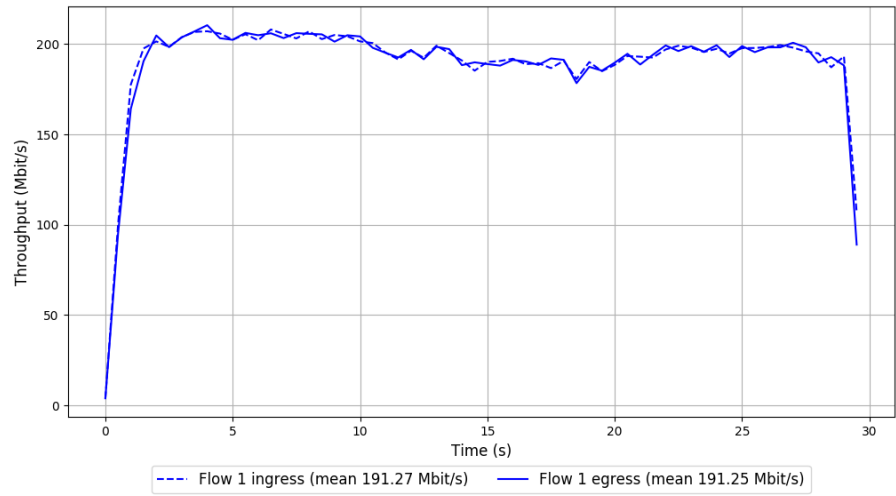
Run 8: Report of Indigo — Data Link

```
Run 9: Statistics of Indigo

Start at: 2017-09-21 15:50:53
End at: 2017-09-21 15:51:23

# Below is generated by plot.py at 2017-09-21 18:42:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 190.86 Mbit/s
95th percentile per-packet one-way delay: 50.980 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 190.86 Mbit/s
95th percentile per-packet one-way delay: 50.980 ms
Loss rate: 0.34%
```
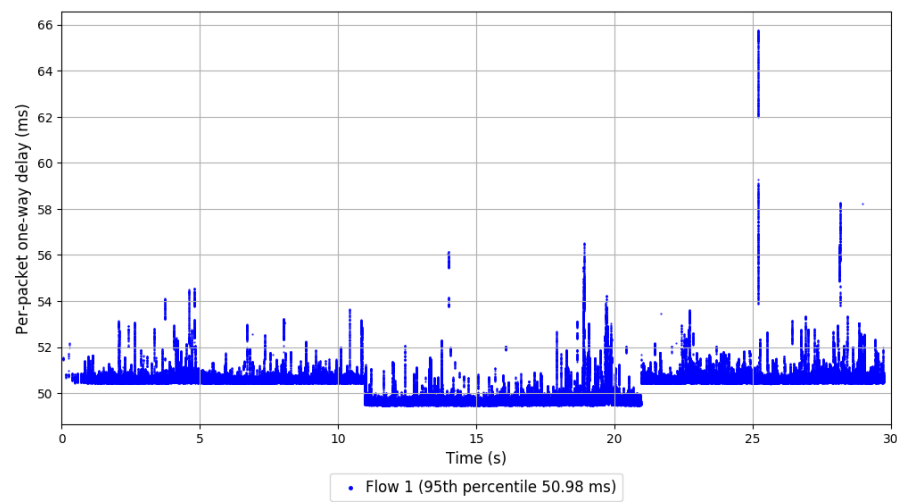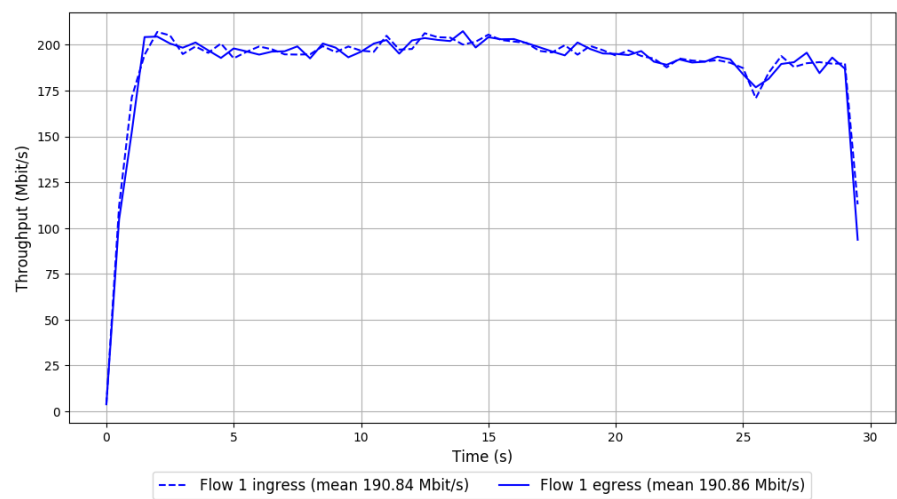
Run 9: Report of Indigo — Data Link

Run 10: Statistics of Indigo

Start at: 2017-09-21 16:01:40
End at: 2017-09-21 16:02:10

Below is generated by plot.py at 2017-09-21 18:43:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 194.03 Mbit/s
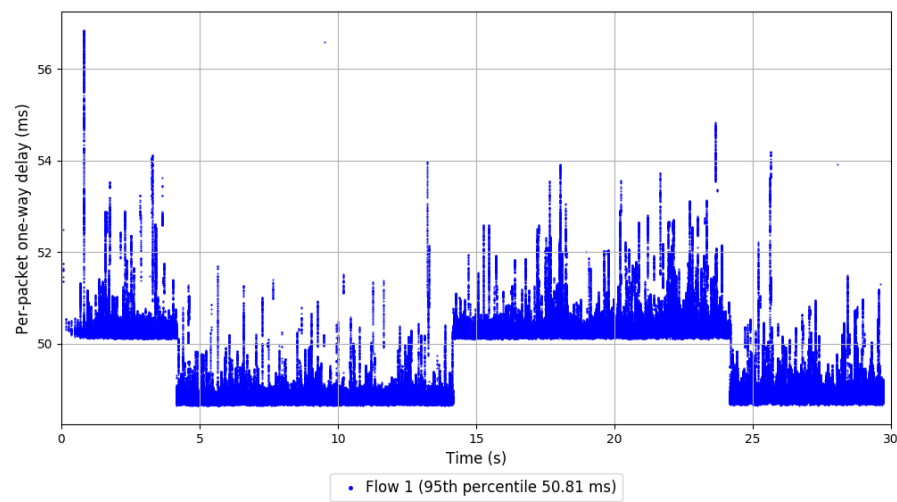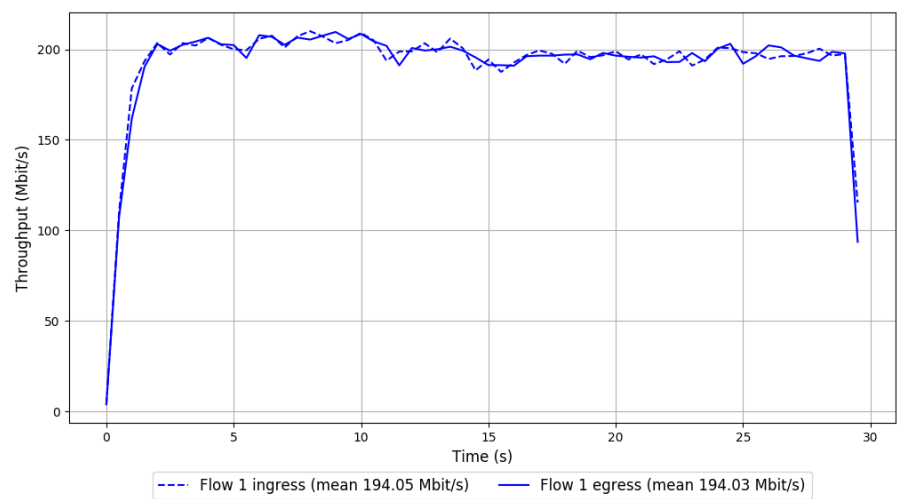95th percentile per-packet one-way delay: 50.810 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 194.03 Mbit/s
95th percentile per-packet one-way delay: 50.810 ms
Loss rate: 0.35%

Run 10: Report of Indigo — Data Link

Flow 1 ingress (mean 194.05 Mbit/s) --- Flow 1 egress (mean 194.03 Mbit/s)
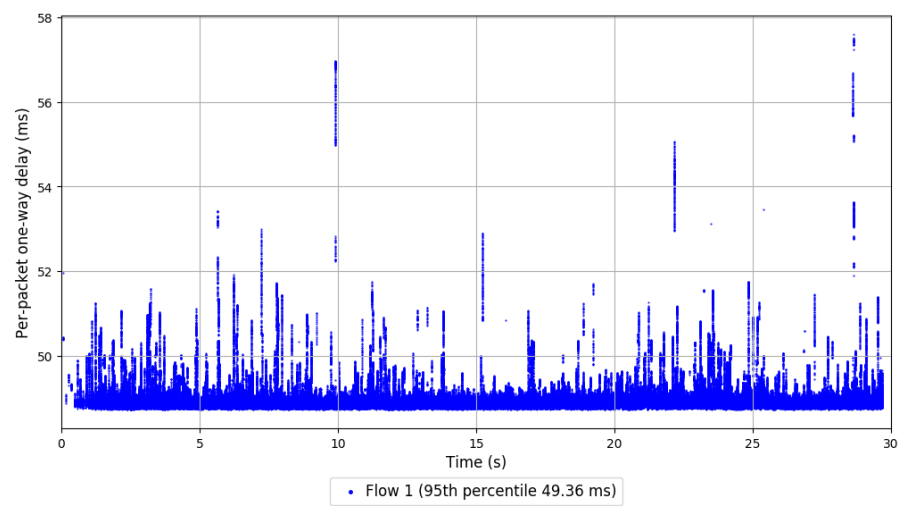
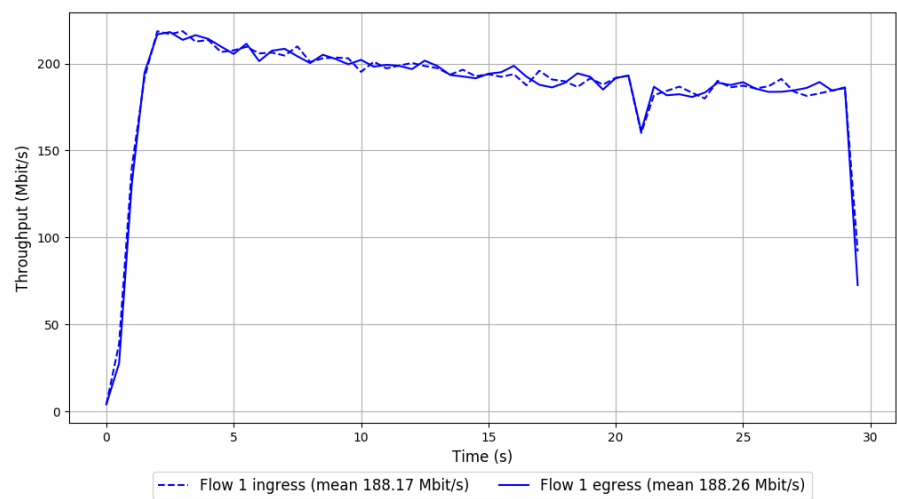

• Flow 1 (95th percentile 50.81 ms)

```
Run 1: Statistics of Indigo-calib

Start at: 2017-09-21 14:32:26
End at: 2017-09-21 14:32:56

# Below is generated by plot.py at 2017-09-21 18:43:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 188.26 Mbit/s
95th percentile per-packet one-way delay: 49.363 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 188.26 Mbit/s
95th percentile per-packet one-way delay: 49.363 ms
Loss rate: 0.30%
```

Run 1: Report of Indigo-calib — Data Link

Flow 1 ingress (mean 188.17 Mbit/s)   Flow 1 egress (mean 188.26 Mbit/s)
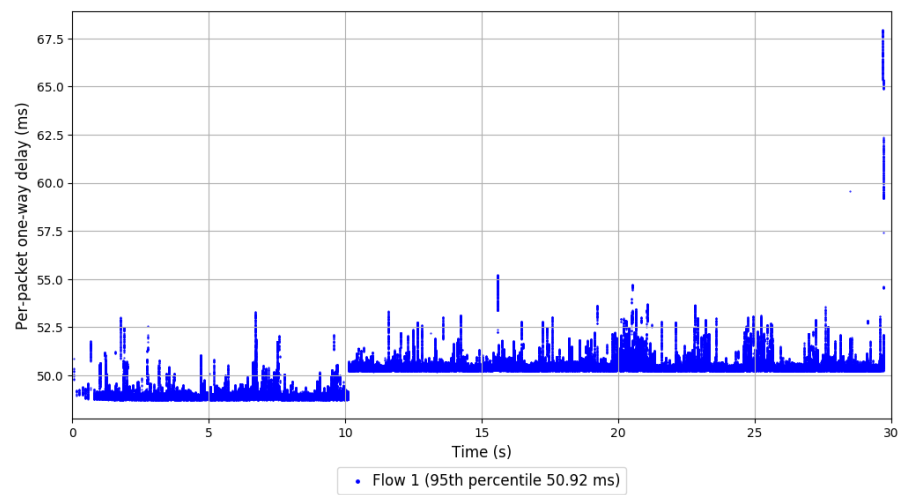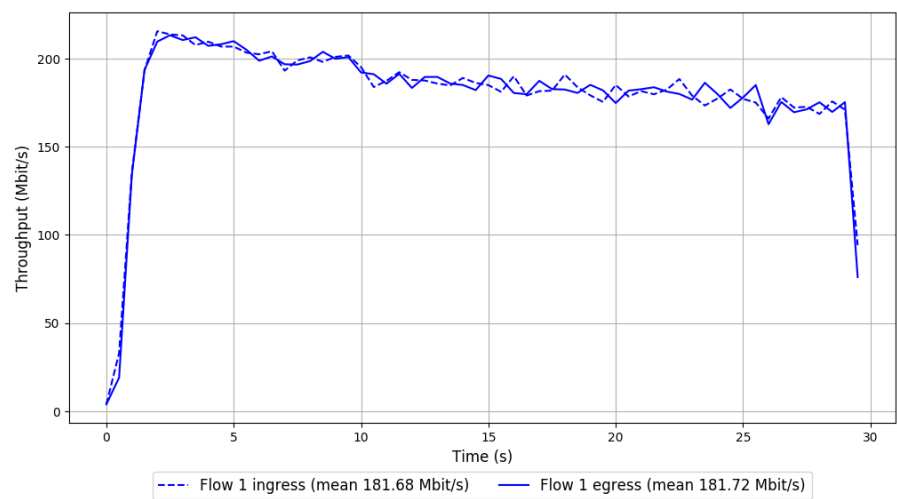

Flow 1 (95th percentile 49.36 ms)

```
Run 2: Statistics of Indigo-calib

Start at: 2017-09-21 14:42:54
End at: 2017-09-21 14:43:24

# Below is generated by plot.py at 2017-09-21 18:45:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 181.72 Mbit/s
95th percentile per-packet one-way delay: 50.925 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 181.72 Mbit/s
95th percentile per-packet one-way delay: 50.925 ms
Loss rate: 0.31%
```

Run 2: Report of Indigo-calib — Data Link

Flow 1 ingress (mean 181.68 Mbit/s)   —— Flow 1 egress (mean 181.72 Mbit/s)

· Flow 1 (95th percentile 50.92 ms)

```
Run 3: Statistics of Indigo-calib

Start at: 2017-09-21 14:53:38
End at: 2017-09-21 14:54:08

# Below is generated by plot.py at 2017-09-21 18:46:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 185.45 Mbit/s
95th percentile per-packet one-way delay: 51.119 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 185.45 Mbit/s
95th percentile per-packet one-way delay: 51.119 ms
Loss rate: 0.35%
```
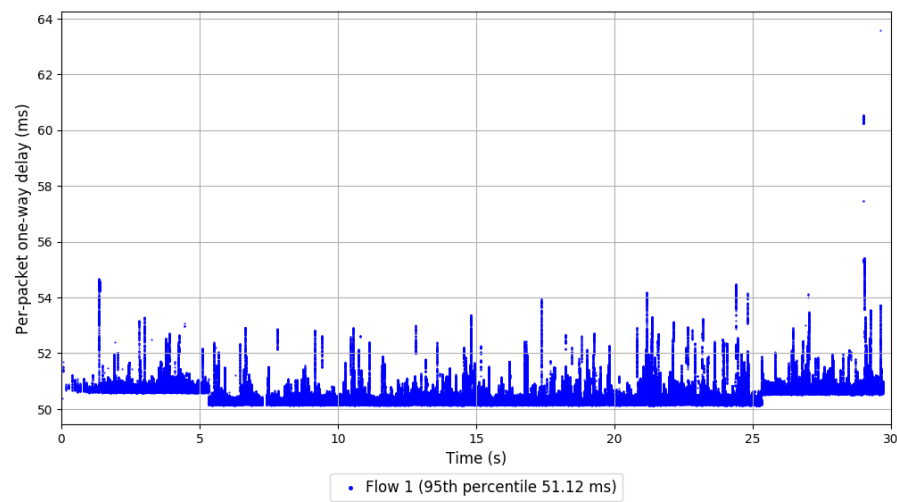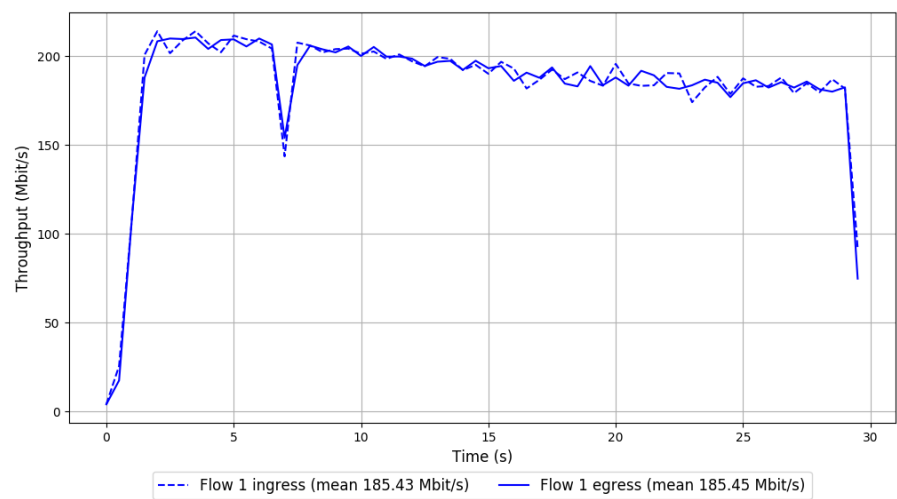
Run 3: Report of Indigo-calib — Data Link

```
Run 4: Statistics of Indigo-calib

Start at: 2017-09-21 15:04:17
End at: 2017-09-21 15:04:47

# Below is generated by plot.py at 2017-09-21 18:46:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 188.59 Mbit/s
95th percentile per-packet one-way delay: 51.782 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 188.59 Mbit/s
95th percentile per-packet one-way delay: 51.782 ms
Loss rate: 0.32%
```
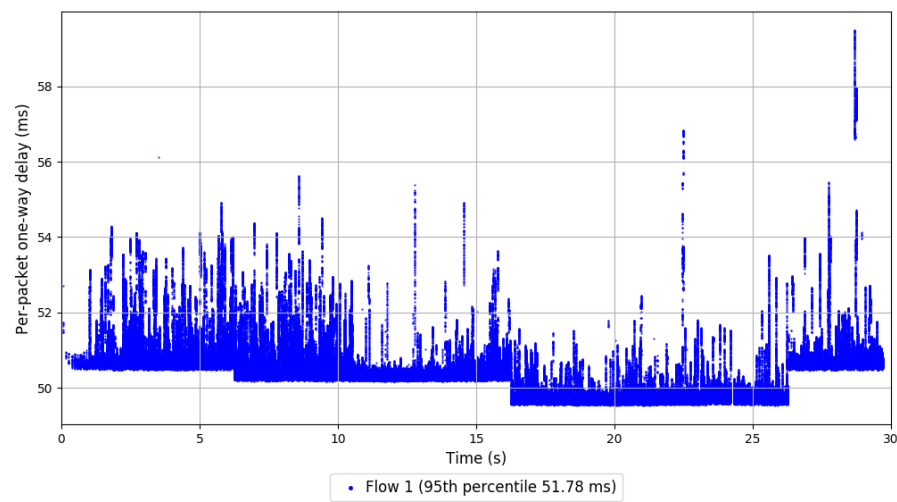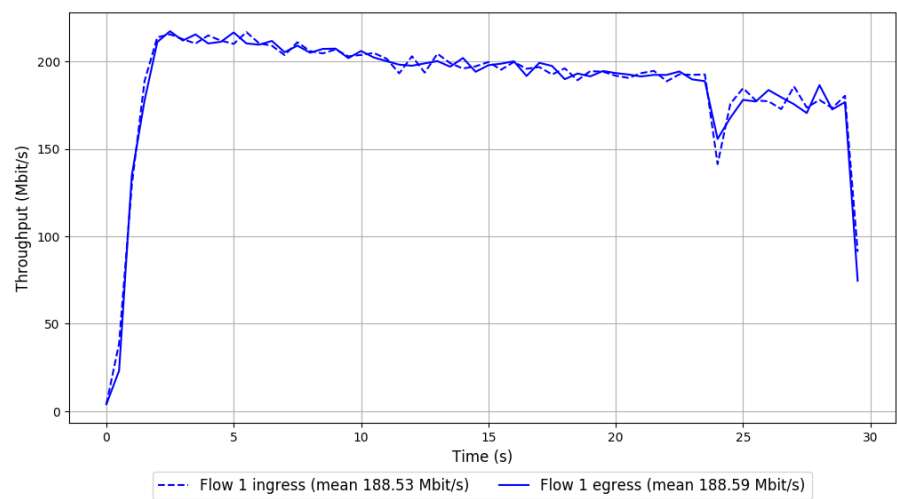
Run 4: Report of Indigo-calib — Data Link

Flow 1 ingress (mean 188.53 Mbit/s)   Flow 1 egress (mean 188.59 Mbit/s)

Flow 1 (95th percentile 51.78 ms)

```
Run 5: Statistics of Indigo-calib

Start at: 2017-09-21 15:15:01
End at: 2017-09-21 15:15:31


# Below is generated by plot.py at 2017-09-21 18:46:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 181.44 Mbit/s
95th percentile per-packet one-way delay: 51.599 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 181.44 Mbit/s
95th percentile per-packet one-way delay: 51.599 ms
Loss rate: 0.35%
```
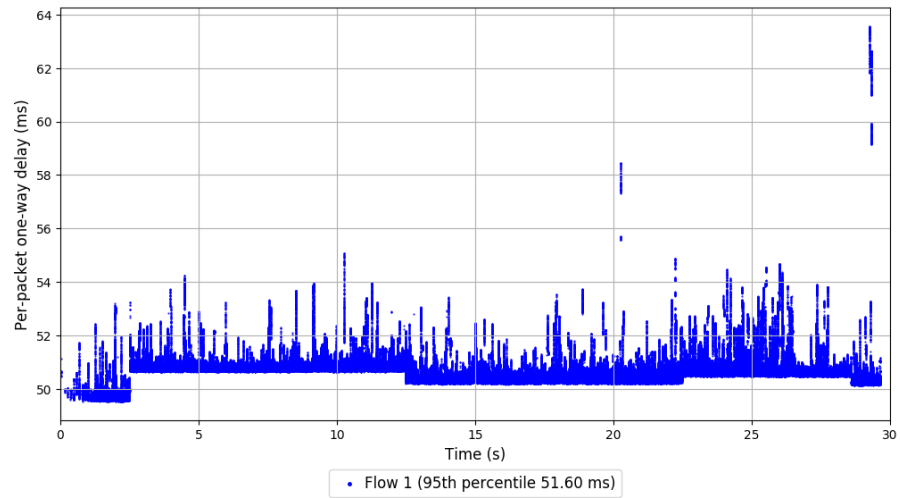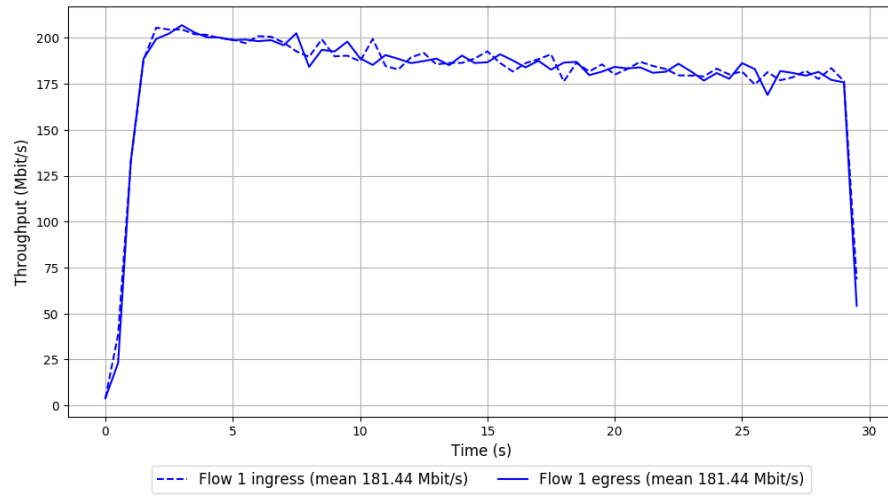
Run 5: Report of Indigo-calib — Data Link

```
Run 6: Statistics of Indigo-calib

Start at: 2017-09-21 15:25:25
End at: 2017-09-21 15:25:55

# Below is generated by plot.py at 2017-09-21 18:46:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 186.69 Mbit/s
95th percentile per-packet one-way delay: 51.196 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 186.69 Mbit/s
95th percentile per-packet one-way delay: 51.196 ms
Loss rate: 0.34%
```
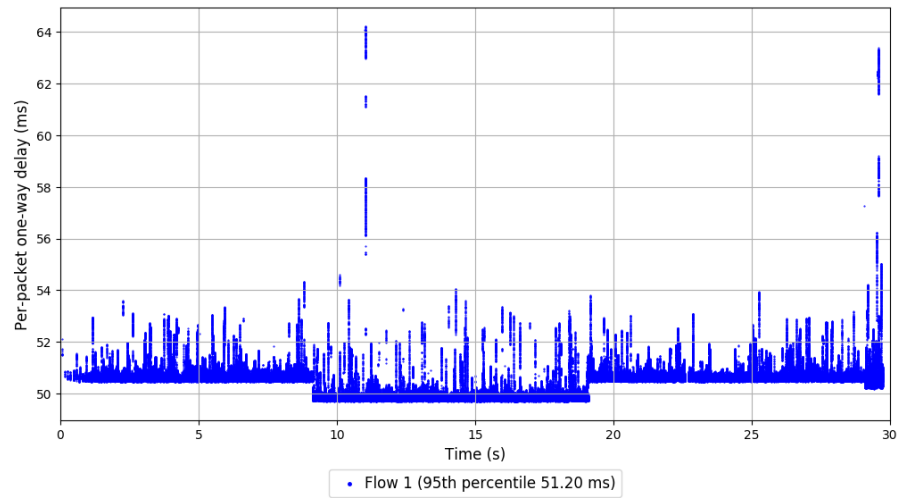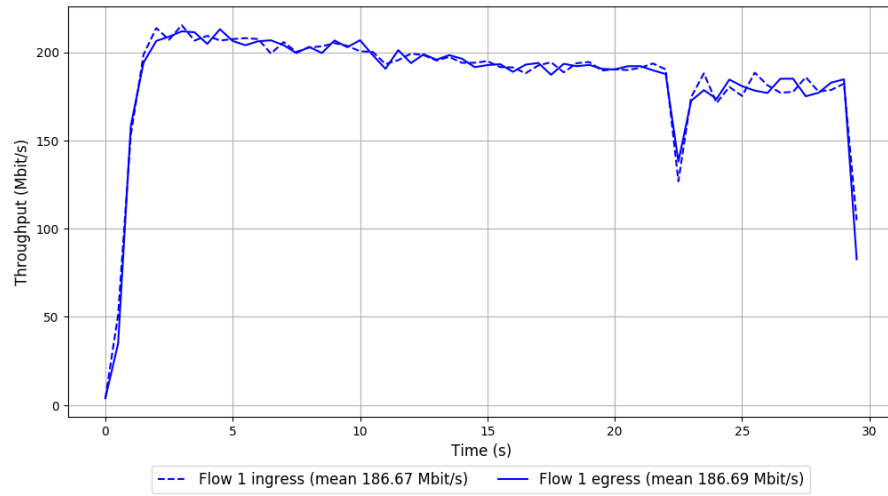
Run 6: Report of Indigo-calib — Data Link

```
Run 7: Statistics of Indigo-calib

Start at: 2017-09-21 15:36:06
End at: 2017-09-21 15:36:36

# Below is generated by plot.py at 2017-09-21 18:46:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 188.18 Mbit/s
95th percentile per-packet one-way delay: 51.378 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 188.18 Mbit/s
95th percentile per-packet one-way delay: 51.378 ms
Loss rate: 0.35%
```
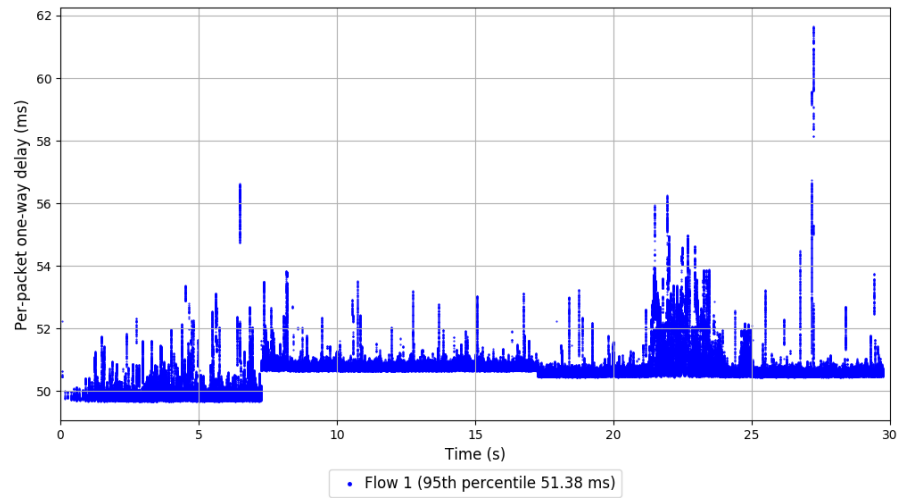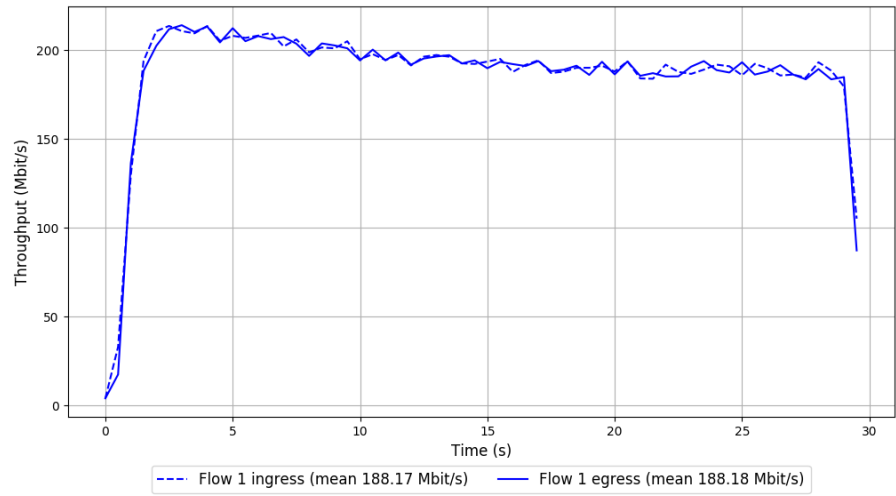
Run 7: Report of Indigo-calib — Data Link

Flow 1 ingress (mean 188.17 Mbit/s)   Flow 1 egress (mean 188.18 Mbit/s)

Flow 1 (95th percentile 51.38 ms)

```
Run 8: Statistics of Indigo-calib

Start at: 2017-09-21 15:46:45
End at: 2017-09-21 15:47:15

# Below is generated by plot.py at 2017-09-21 18:46:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 183.04 Mbit/s
95th percentile per-packet one-way delay: 50.991 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 183.04 Mbit/s
95th percentile per-packet one-way delay: 50.991 ms
Loss rate: 0.34%
```
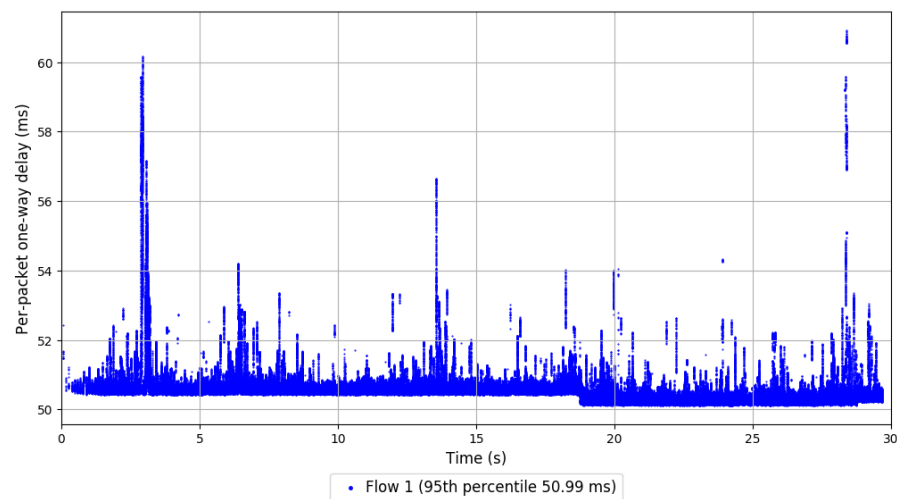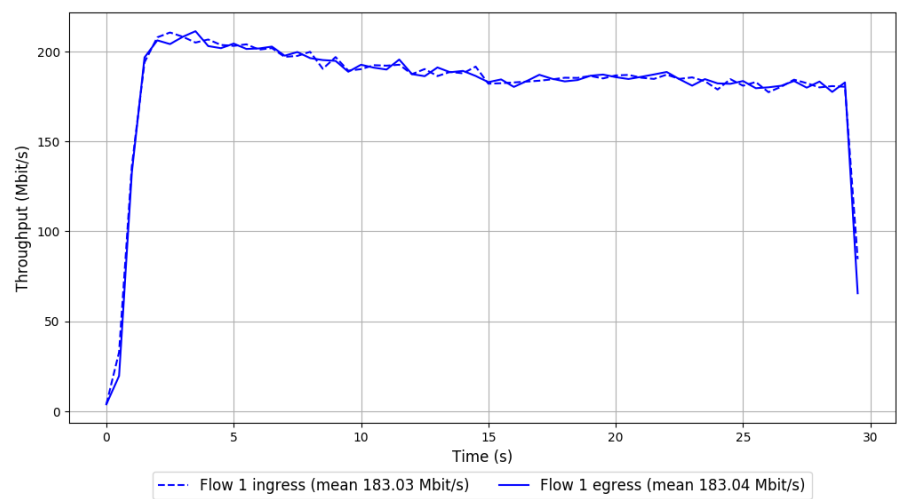
Run 8: Report of Indigo-calib — Data Link

```
Run 9: Statistics of Indigo-calib

Start at: 2017-09-21 15:57:29
End at: 2017-09-21 15:57:59

# Below is generated by plot.py at 2017-09-21 18:46:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 179.56 Mbit/s
95th percentile per-packet one-way delay: 51.714 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 179.56 Mbit/s
95th percentile per-packet one-way delay: 51.714 ms
Loss rate: 0.31%
```
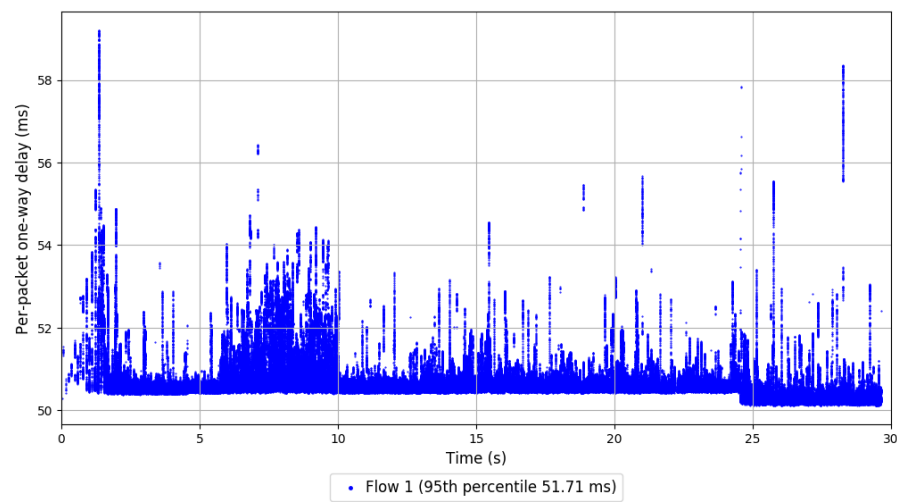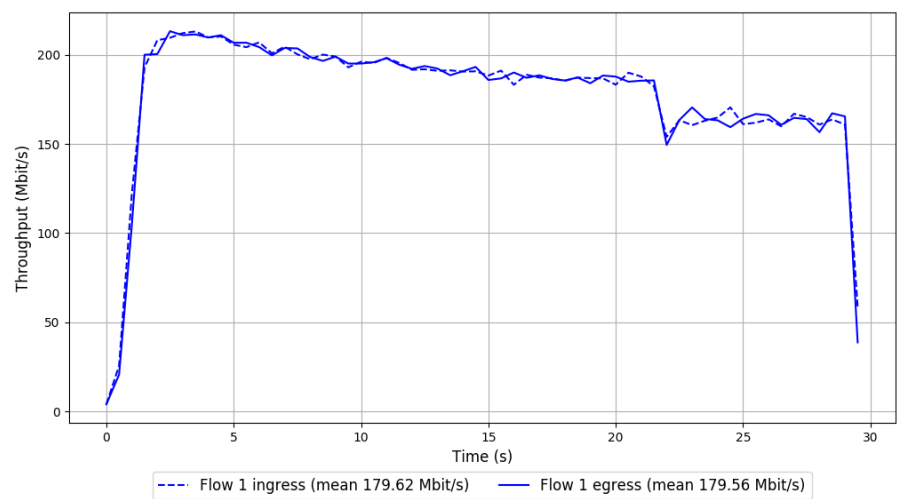
Run 9: Report of Indigo-calib — Data Link

Flow 1 ingress (mean 179.62 Mbit/s)   Flow 1 egress (mean 179.56 Mbit/s)

• Flow 1 (95th percentile 51.71 ms)

```
Run 10: Statistics of Indigo-calib

Start at: 2017-09-21 16:08:14
End at: 2017-09-21 16:08:44

# Below is generated by plot.py at 2017-09-21 18:49:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 188.76 Mbit/s
95th percentile per-packet one-way delay: 51.851 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 188.76 Mbit/s
95th percentile per-packet one-way delay: 51.851 ms
Loss rate: 0.33%
```
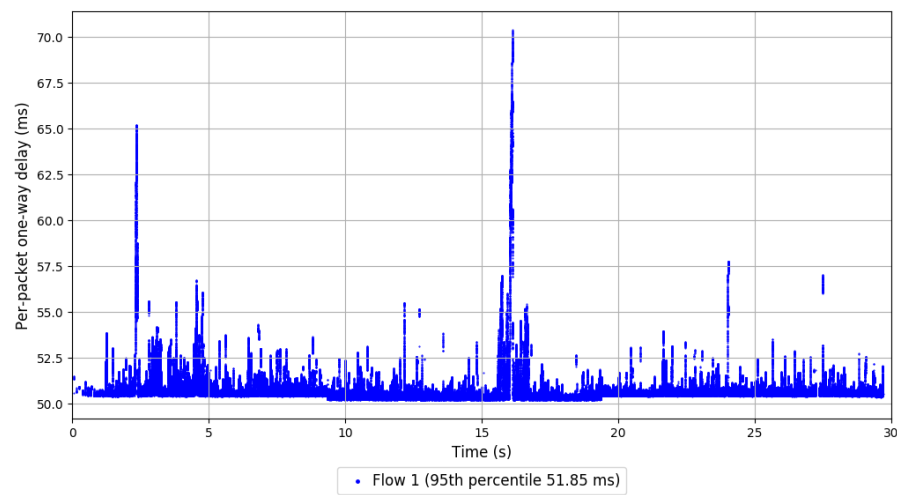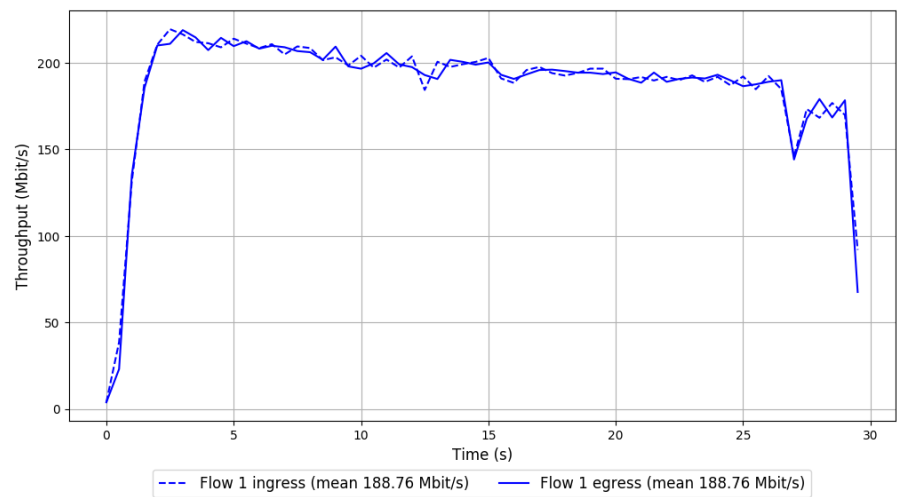
Run 10: Report of Indigo-calib — Data Link

Flow 1 ingress (mean 188.76 Mbit/s)　　　Flow 1 egress (mean 188.76 Mbit/s)
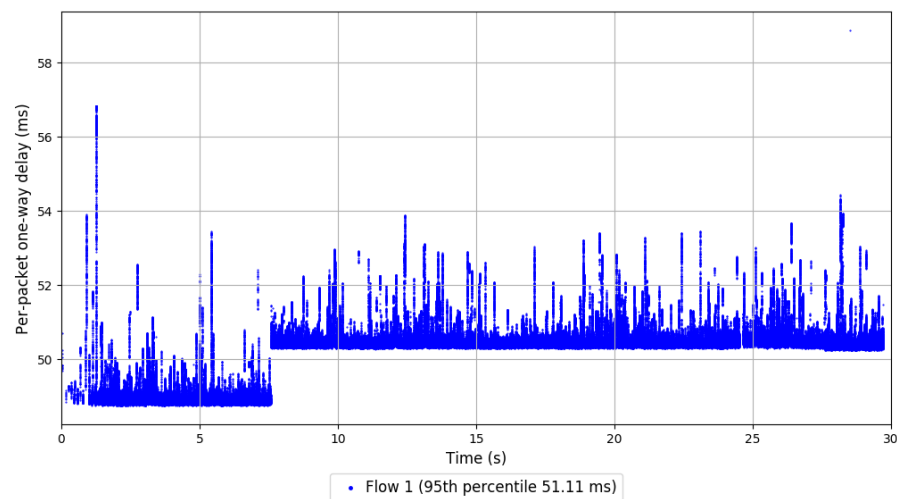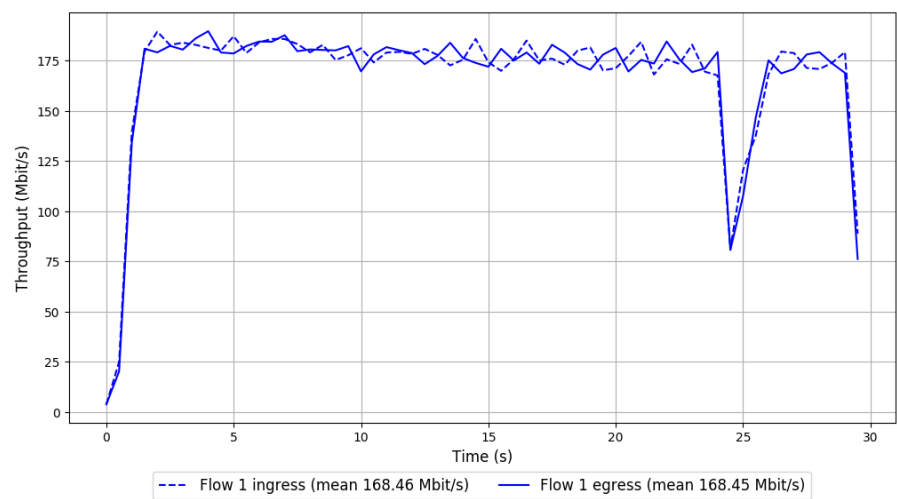

Flow 1 (95th percentile 51.85 ms)

```
Run 1: Statistics of Indigo-delay

Start at: 2017-09-21 14:27:26
End at: 2017-09-21 14:27:56

# Below is generated by plot.py at 2017-09-21 18:49:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 168.45 Mbit/s
95th percentile per-packet one-way delay: 51.108 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 168.45 Mbit/s
95th percentile per-packet one-way delay: 51.108 ms
Loss rate: 0.35%
```
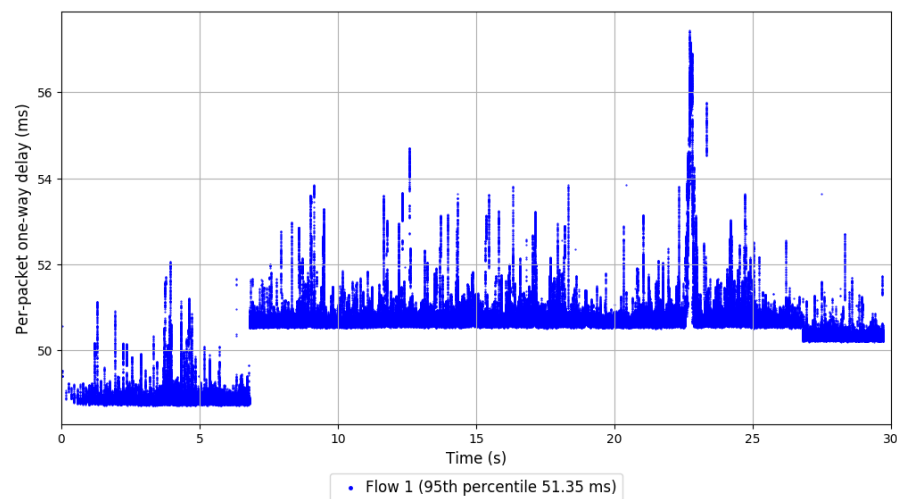
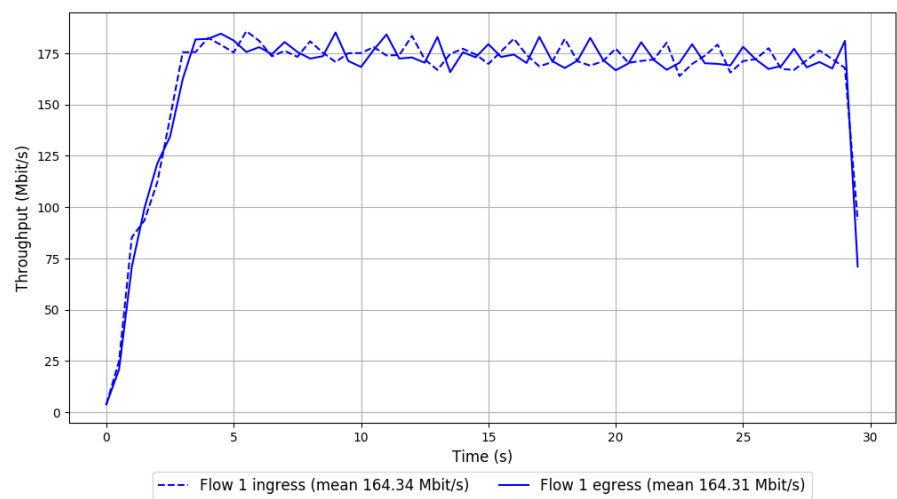Run 1: Report of Indigo-delay — Data Link

```
Run 2: Statistics of Indigo-delay

Start at: 2017-09-21 14:37:47
End at: 2017-09-21 14:38:17

# Below is generated by plot.py at 2017-09-21 18:49:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 164.31 Mbit/s
95th percentile per-packet one-way delay: 51.346 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 164.31 Mbit/s
95th percentile per-packet one-way delay: 51.346 ms
Loss rate: 0.35%
```

Run 2: Report of Indigo-delay — Data Link

Flow 1 ingress (mean 164.34 Mbit/s)   Flow 1 egress (mean 164.31 Mbit/s)
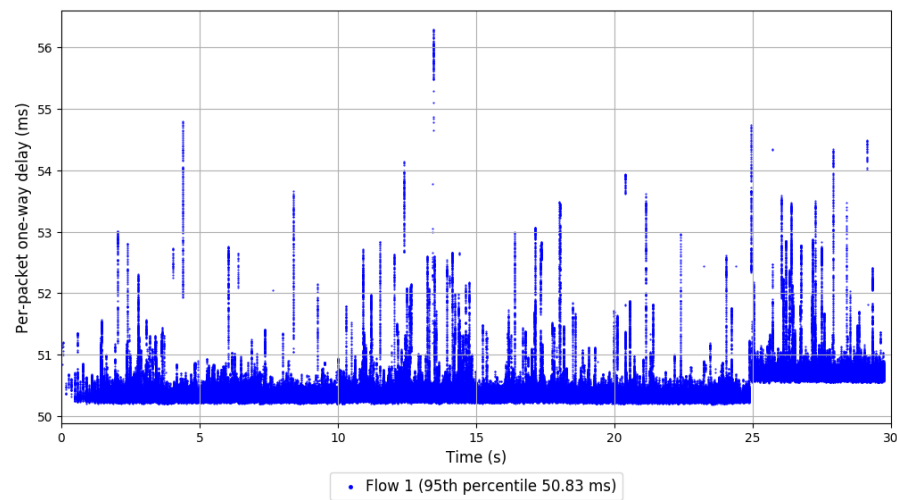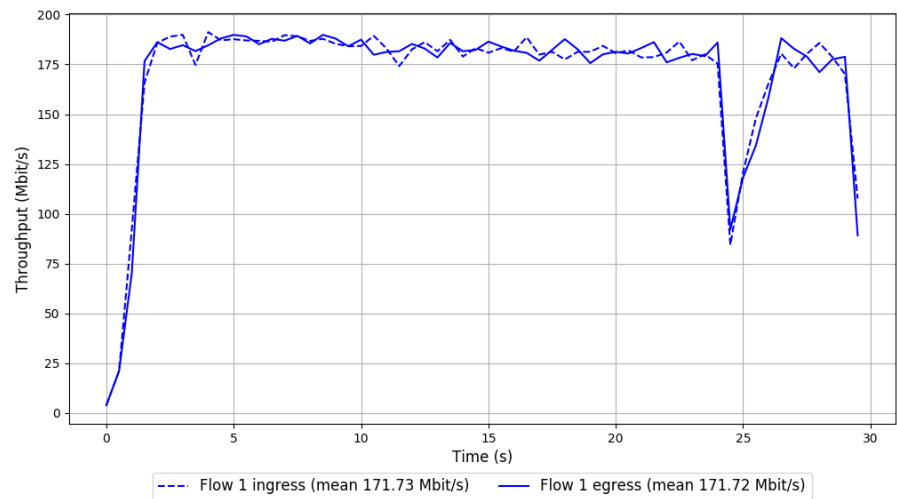

Flow 1 (95th percentile 51.35 ms)

```
Run 3: Statistics of Indigo-delay

Start at: 2017-09-21 14:48:29
End at: 2017-09-21 14:48:59


# Below is generated by plot.py at 2017-09-21 18:49:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 171.72 Mbit/s
95th percentile per-packet one-way delay: 50.831 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 171.72 Mbit/s
95th percentile per-packet one-way delay: 50.831 ms
Loss rate: 0.35%
```

Run 3: Report of Indigo-delay — Data Link

```
Run 4: Statistics of Indigo-delay

Start at: 2017-09-21 14:59:12
End at: 2017-09-21 14:59:42

# Below is generated by plot.py at 2017-09-21 18:50:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 178.43 Mbit/s
95th percentile per-packet one-way delay: 51.170 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 178.43 Mbit/s
95th percentile per-packet one-way delay: 51.170 ms
Loss rate: 0.35%
```
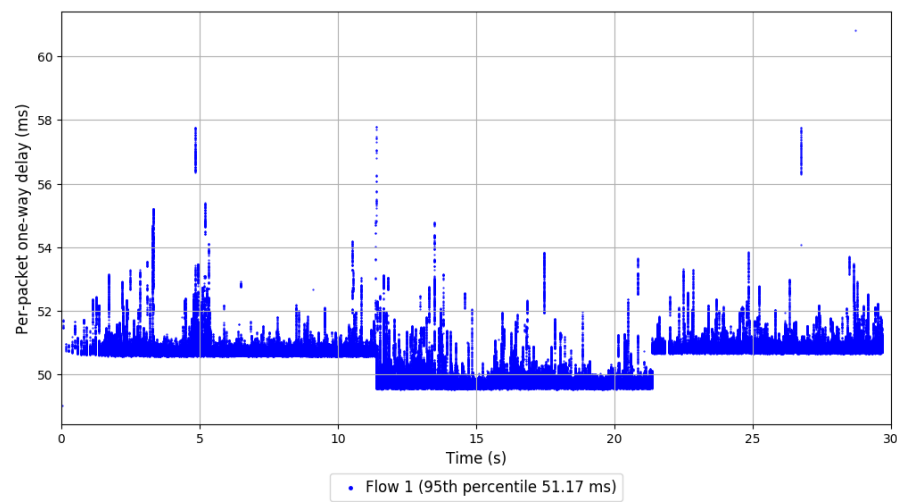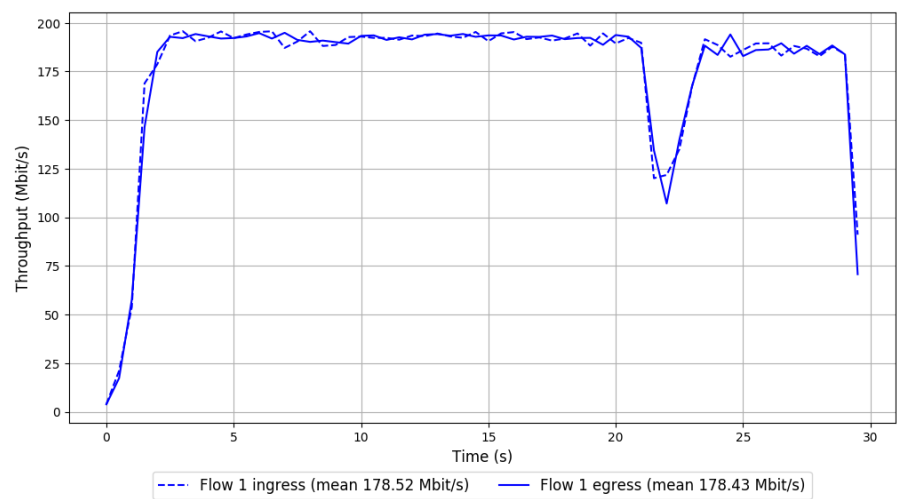
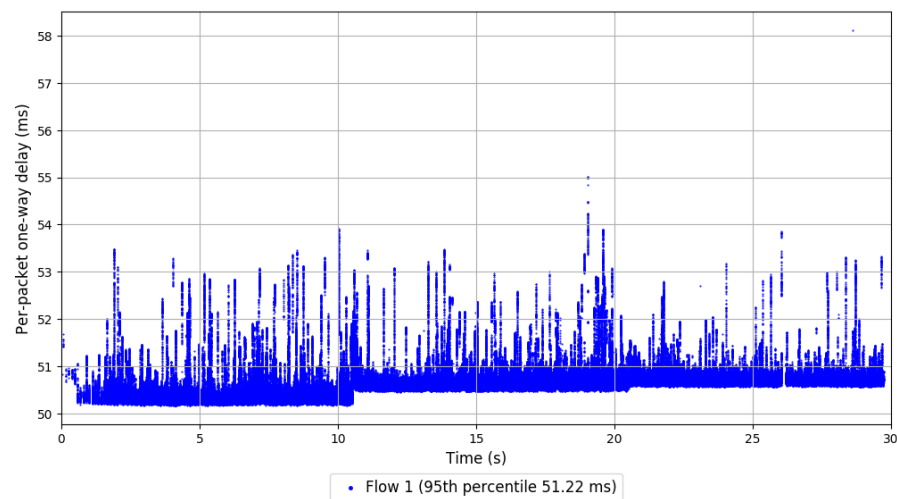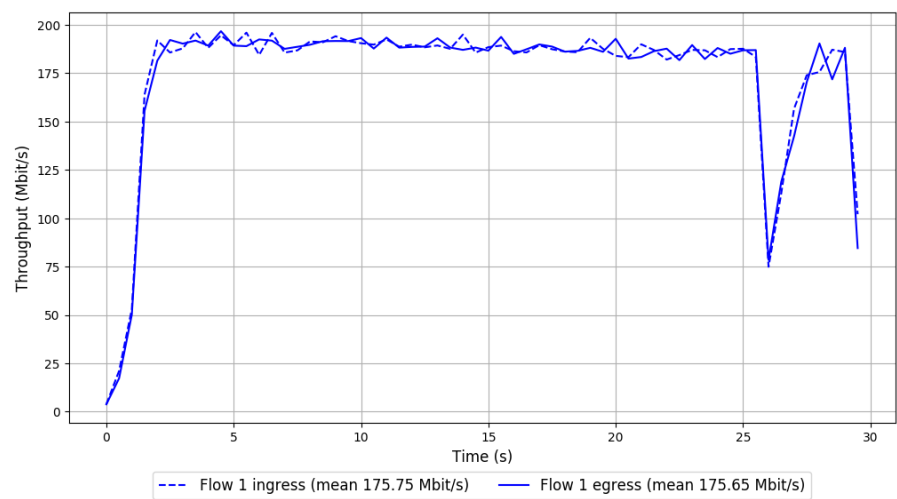Run 4: Report of Indigo-delay — Data Link

```
Run 5: Statistics of Indigo-delay

Start at: 2017-09-21 15:09:53
End at: 2017-09-21 15:10:23

# Below is generated by plot.py at 2017-09-21 18:50:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 175.65 Mbit/s
95th percentile per-packet one-way delay: 51.220 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 175.65 Mbit/s
95th percentile per-packet one-way delay: 51.220 ms
Loss rate: 0.38%
```

Run 5: Report of Indigo-delay — Data Link

```
Run 6: Statistics of Indigo-delay

Start at: 2017-09-21 15:20:18
End at: 2017-09-21 15:20:48

# Below is generated by plot.py at 2017-09-21 18:50:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 174.67 Mbit/s
95th percentile per-packet one-way delay: 50.860 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 174.67 Mbit/s
95th percentile per-packet one-way delay: 50.860 ms
Loss rate: 0.36%
```
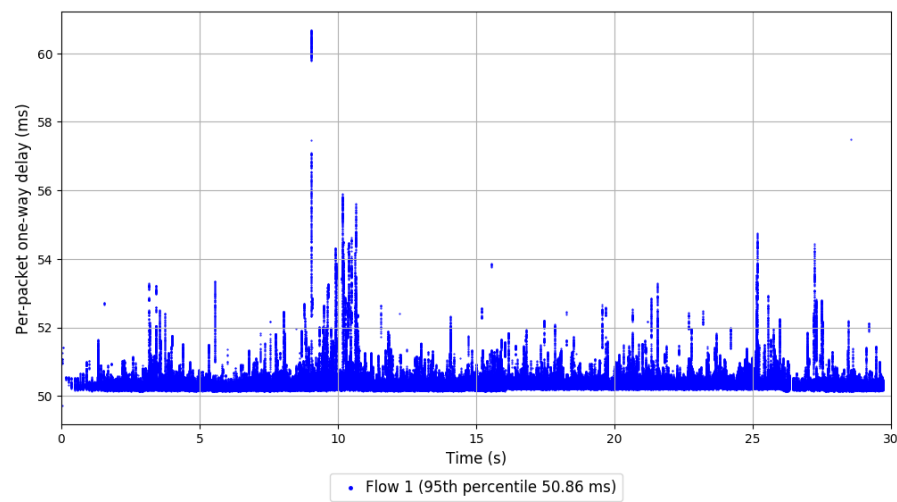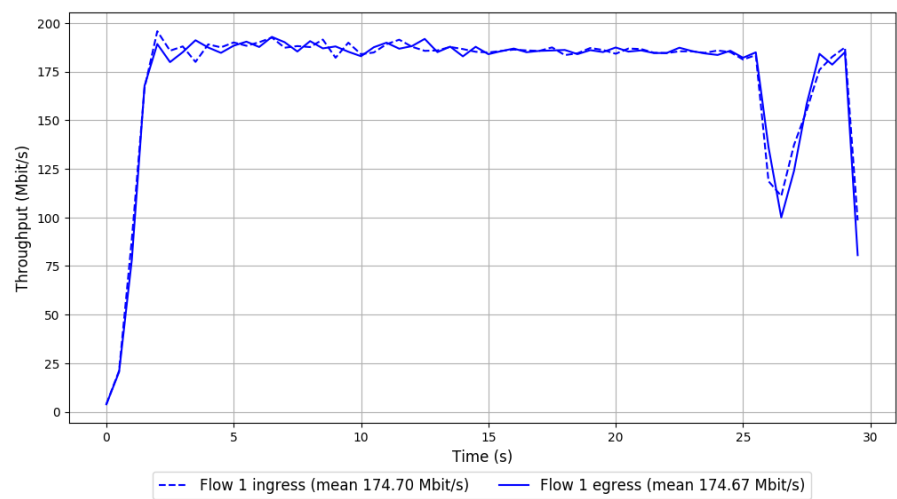
Run 6: Report of Indigo-delay — Data Link

```
Run 7: Statistics of Indigo-delay

Start at: 2017-09-21 15:31:00
End at: 2017-09-21 15:31:30

# Below is generated by plot.py at 2017-09-21 18:50:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 179.31 Mbit/s
95th percentile per-packet one-way delay: 51.081 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 179.31 Mbit/s
95th percentile per-packet one-way delay: 51.081 ms
Loss rate: 0.36%
```
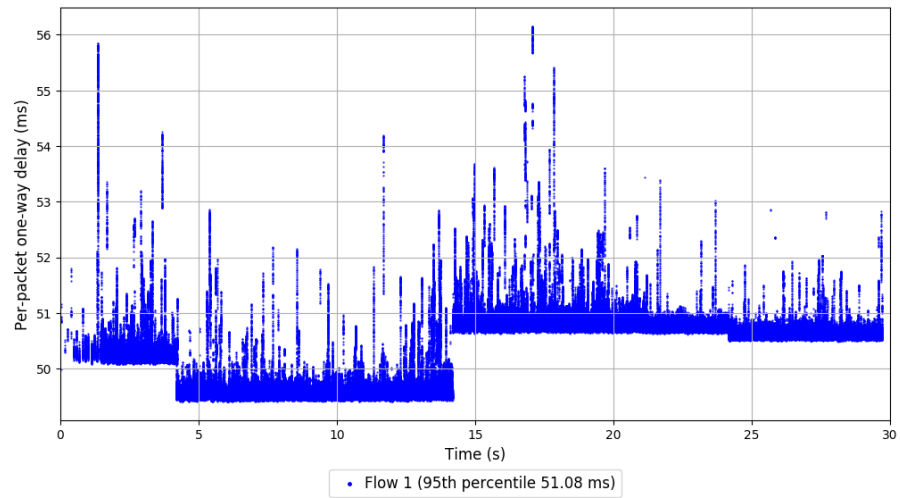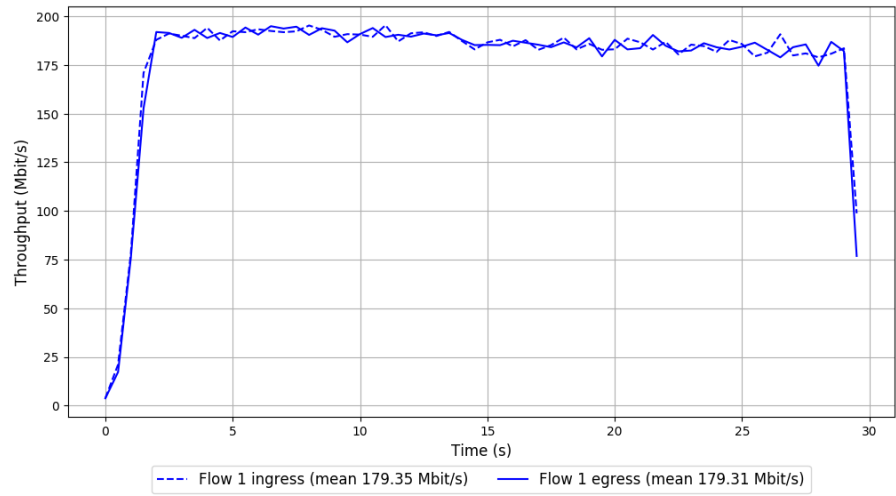
Run 7: Report of Indigo-delay — Data Link

```
Run 8: Statistics of Indigo-delay

Start at: 2017-09-21 15:41:41
End at: 2017-09-21 15:42:11

# Below is generated by plot.py at 2017-09-21 18:50:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 159.89 Mbit/s
95th percentile per-packet one-way delay: 51.378 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 159.89 Mbit/s
95th percentile per-packet one-way delay: 51.378 ms
Loss rate: 0.36%
```
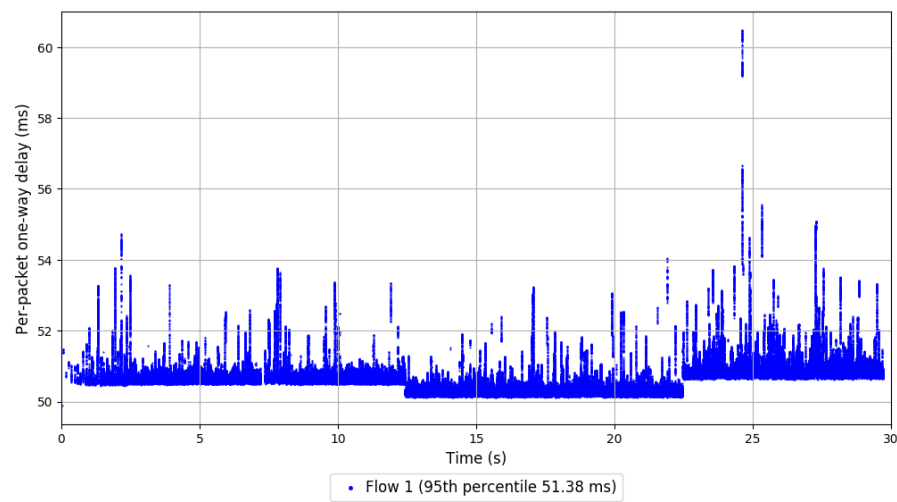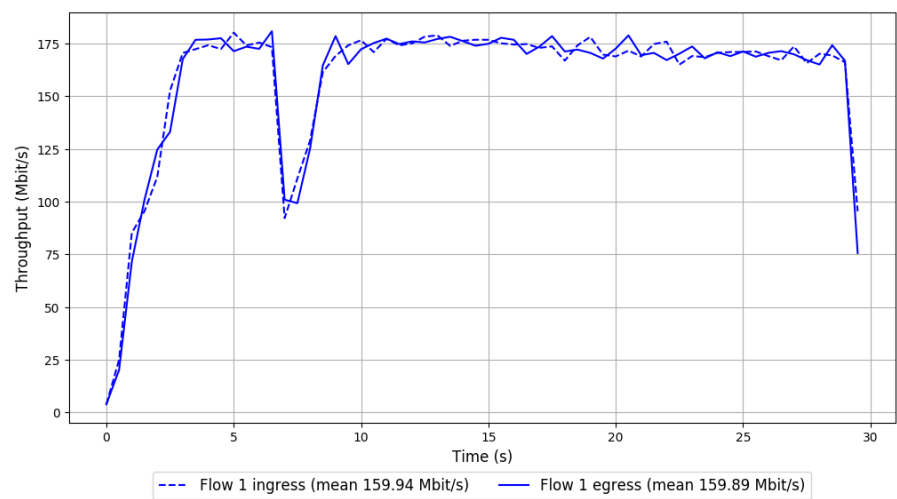
Run 8: Report of Indigo-delay — Data Link

Flow 1 ingress (mean 159.94 Mbit/s) --- Flow 1 egress (mean 159.89 Mbit/s)

• Flow 1 (95th percentile 51.38 ms)

```
Run 9: Statistics of Indigo-delay

Start at: 2017-09-21 15:52:20
End at: 2017-09-21 15:52:50

# Below is generated by plot.py at 2017-09-21 18:51:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 172.82 Mbit/s
95th percentile per-packet one-way delay: 51.207 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 172.82 Mbit/s
95th percentile per-packet one-way delay: 51.207 ms
Loss rate: 0.36%
```
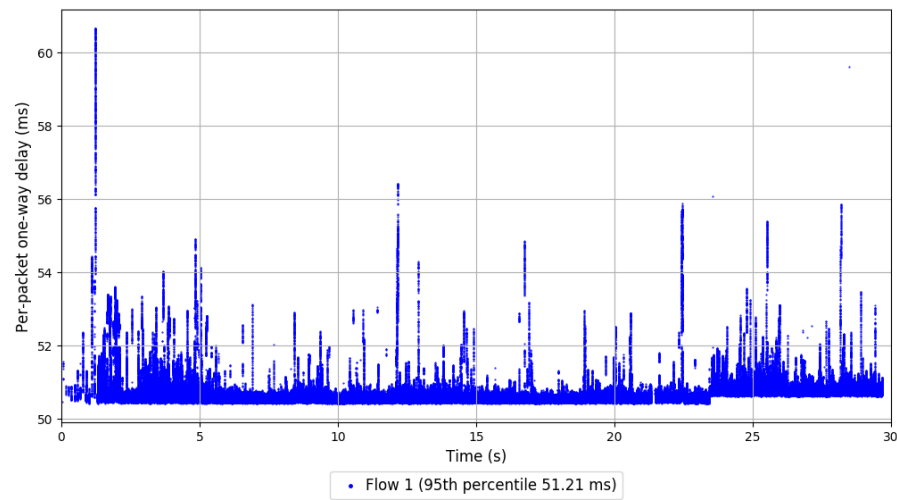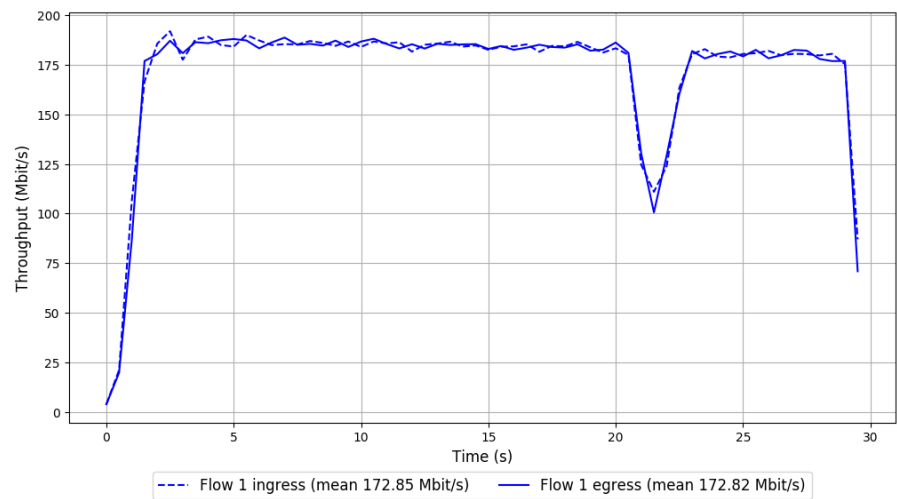
Run 9: Report of Indigo-delay — Data Link

```
Run 10: Statistics of Indigo-delay

Start at: 2017-09-21 16:03:08
End at: 2017-09-21 16:03:38


# Below is generated by plot.py at 2017-09-21 18:51:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 180.42 Mbit/s
95th percentile per-packet one-way delay: 50.854 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 180.42 Mbit/s
95th percentile per-packet one-way delay: 50.854 ms
Loss rate: 0.35%
```

Run 10: Report of Indigo-delay — Data Link

Flow 1 ingress (mean 180.46 Mbit/s) — Flow 1 egress (mean 180.42 Mbit/s)

• Flow 1 (95th percentile 50.85 ms)