Pantheon Report

Generated at 2017-09-21 13:39:40 (UTC).

Data path: GCE Sydney 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.
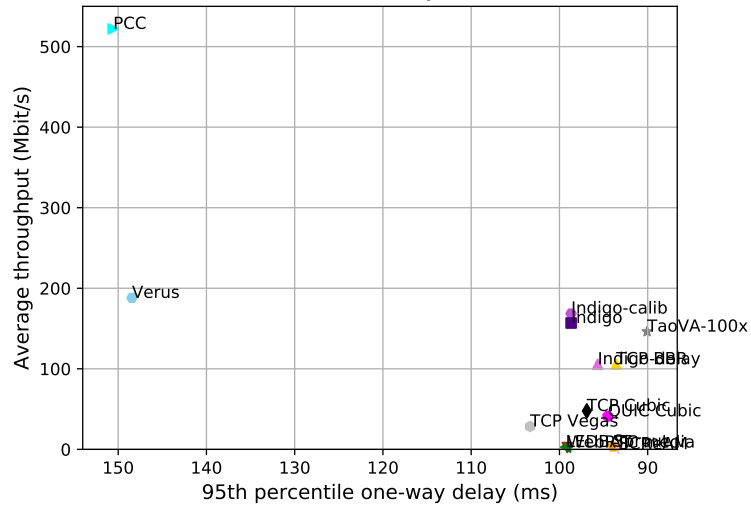
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

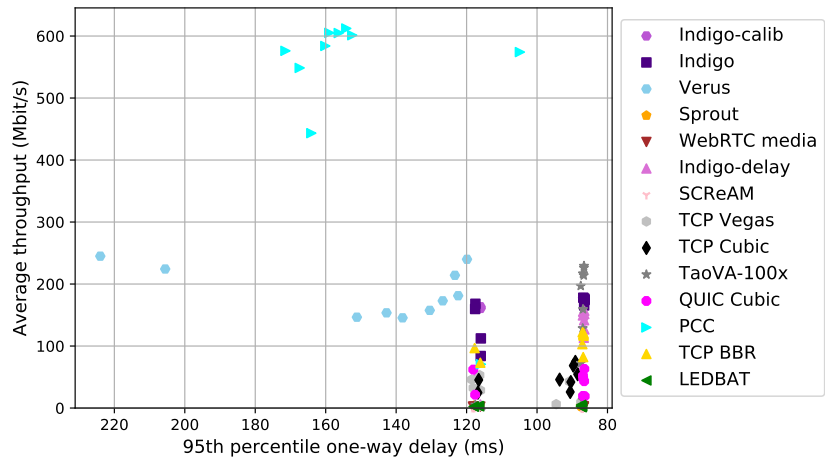Tested BBR with qdisc of Fair Queuing (`fq`), and other schemes with the default Linux qdisc (`pfifo_fast`).

```
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 Sydney Ethernet to GCE Iowa Ethernet, 10 runs of 30s each per scheme
(mean of all runs by scheme)

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

scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	9	105.76	93.57	0.71
TCP Cubic	8	47.64	96.90	0.77
LEDBAT	10	2.78	99.30	0.67
PCC	10	522.02	150.56	1.97
QUIC Cubic	8	41.03	94.52	0.75
SCReAM	10	0.21	93.33	0.63
WebRTC media	10	2.25	99.11	0.74
Sprout	9	3.37	93.91	1.05
TaoVA-100x	10	146.16	90.06	0.90
TCP Vegas	10	28.38	103.33	0.41
Verus	10	188.04	148.44	1.71
Indigo	10	156.83	98.68	0.58
Indigo-calib	10	168.60	98.68	0.67
Indigo-delay	10	105.66	95.67	0.60

```
Run 1: Statistics of TCP BBR

Start at: 2017-09-21 09:21:47
End at: 2017-09-21 09:22:17

# Below is generated by plot.py at 2017-09-21 13:03:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 82.17 Mbit/s
95th percentile per-packet one-way delay: 86.895 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 82.17 Mbit/s
95th percentile per-packet one-way delay: 86.895 ms
Loss rate: 0.60%
```
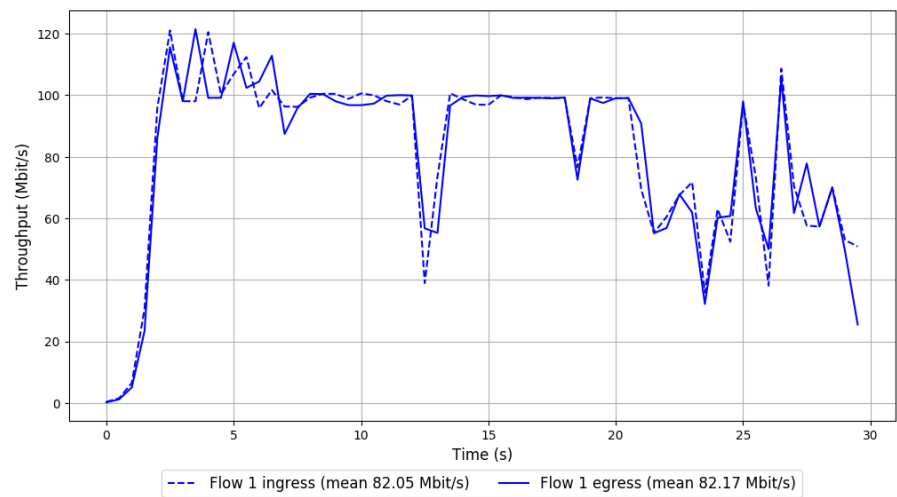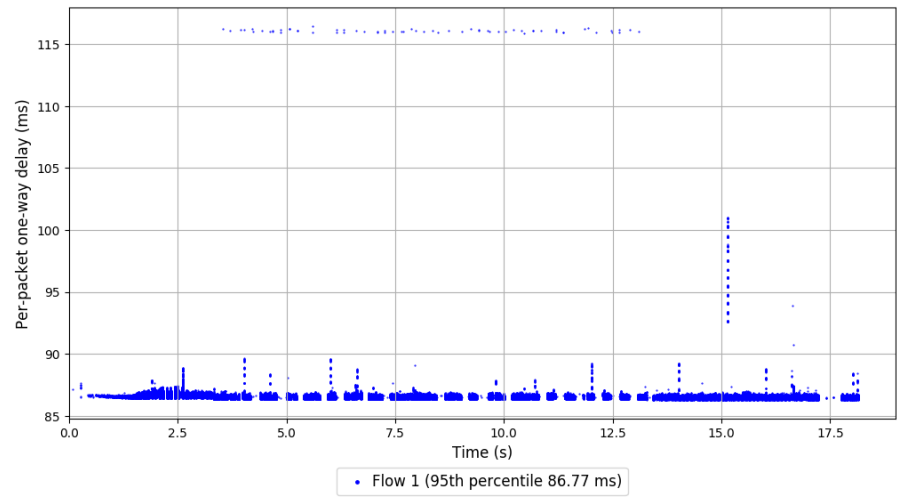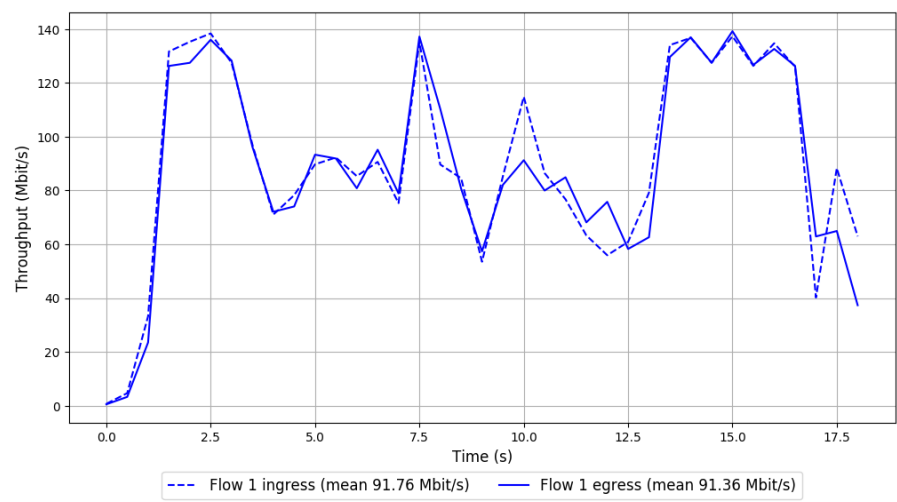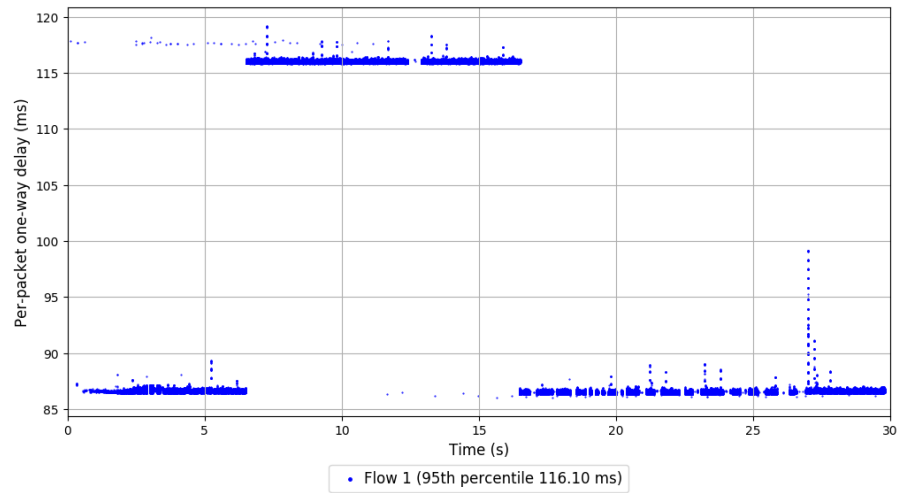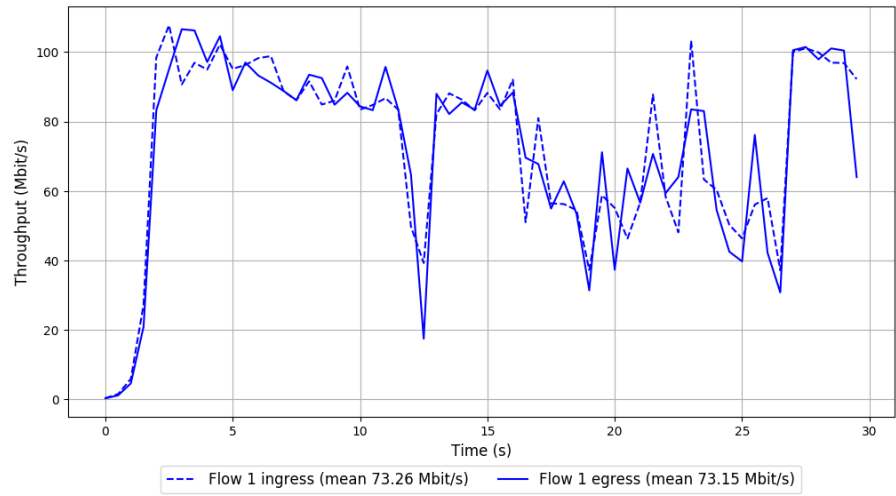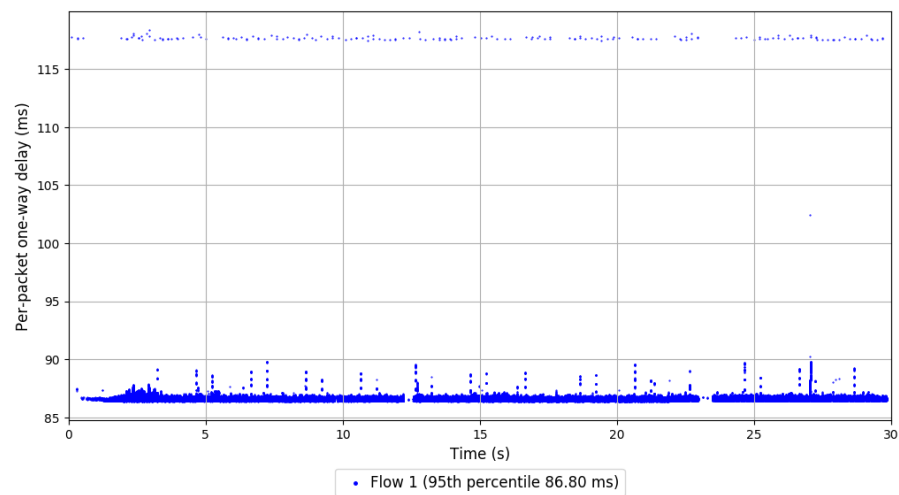
Run 1: Report of TCP BBR — Data Link

Run 2: Statistics of TCP BBR

Start at: 2017-09-21 09:33:13
End at: 2017-09-21 09:33:43

Run 2: Report of TCP BBR — Data Link

Flow 1 ingress (mean 91.76 Mbit/s) --- Flow 1 egress (mean 91.36 Mbit/s)

• Flow 1 (95th percentile 86.77 ms)

```
Run 3: Statistics of TCP BBR

Start at: 2017-09-21 09:44:31
End at: 2017-09-21 09:45:01

# Below is generated by plot.py at 2017-09-21 13:03:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 73.15 Mbit/s
95th percentile per-packet one-way delay: 116.097 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 73.15 Mbit/s
95th percentile per-packet one-way delay: 116.097 ms
Loss rate: 1.01%
```

Run 3: Report of TCP BBR — Data Link

Flow 1 ingress (mean 73.26 Mbit/s) — Flow 1 egress (mean 73.15 Mbit/s)

· Flow 1 (95th percentile 116.10 ms)

```
Run 4: Statistics of TCP BBR

Start at: 2017-09-21 09:54:56
End at: 2017-09-21 09:55:26

# Below is generated by plot.py at 2017-09-21 13:03:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 118.47 Mbit/s
95th percentile per-packet one-way delay: 86.800 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 118.47 Mbit/s
95th percentile per-packet one-way delay: 86.800 ms
Loss rate: 0.75%
```
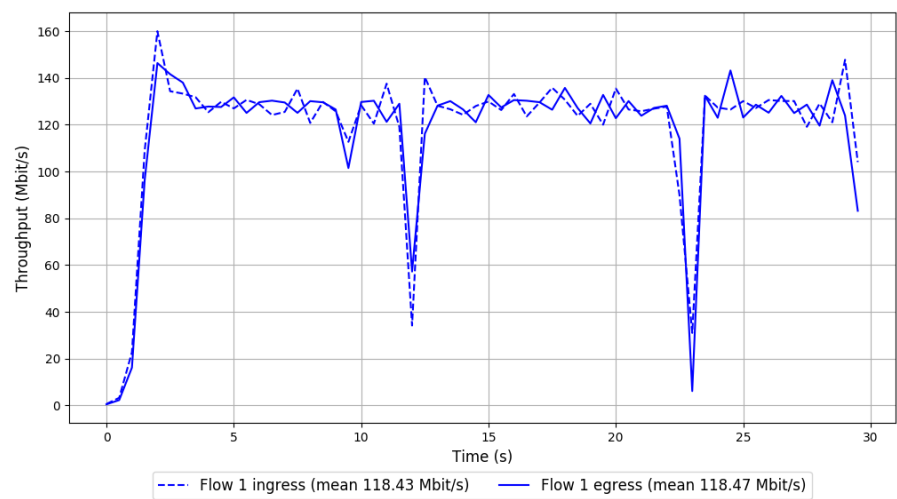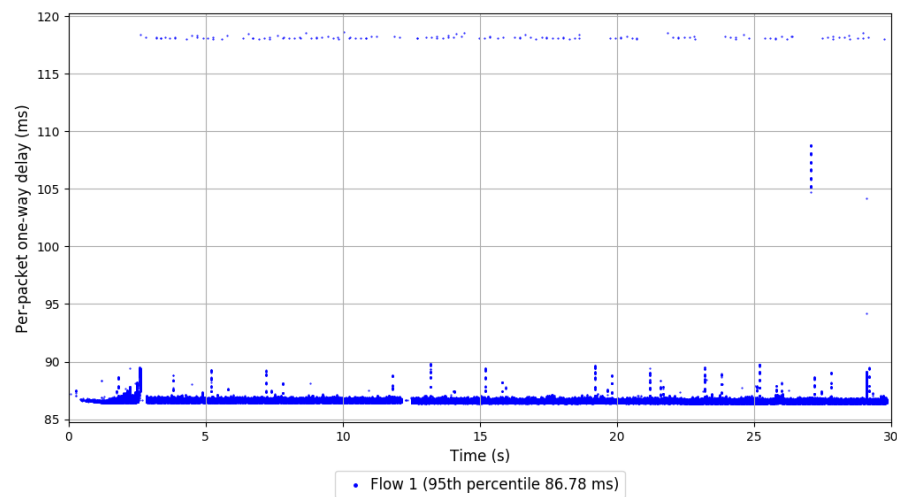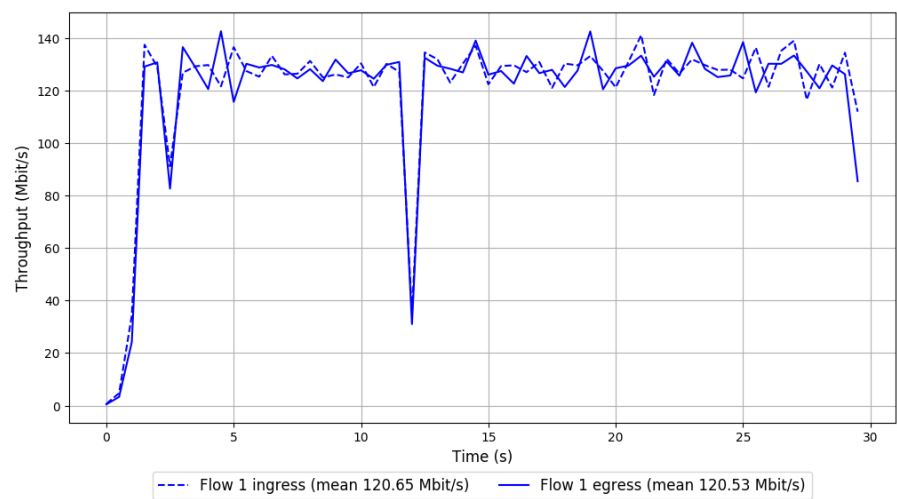
Run 4: Report of TCP BBR — Data Link

```
Run 5: Statistics of TCP BBR

Start at: 2017-09-21 10:06:05
End at: 2017-09-21 10:06:36

# Below is generated by plot.py at 2017-09-21 13:03:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 120.53 Mbit/s
95th percentile per-packet one-way delay: 86.775 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 120.53 Mbit/s
95th percentile per-packet one-way delay: 86.775 ms
Loss rate: 0.74%
```
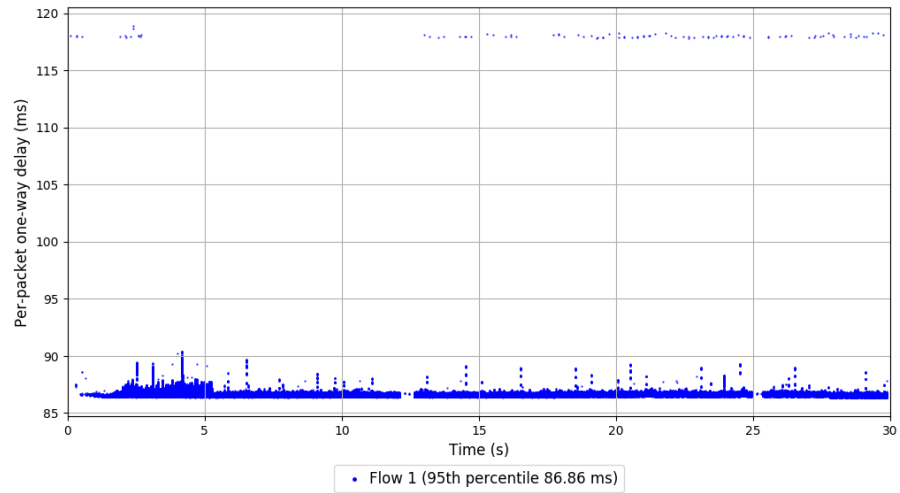
Run 5: Report of TCP BBR — Data Link

```
Run 6: Statistics of TCP BBR

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

# Below is generated by plot.py at 2017-09-21 13:03:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 118.80 Mbit/s
95th percentile per-packet one-way delay: 86.865 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 118.80 Mbit/s
95th percentile per-packet one-way delay: 86.865 ms
Loss rate: 0.61%
```
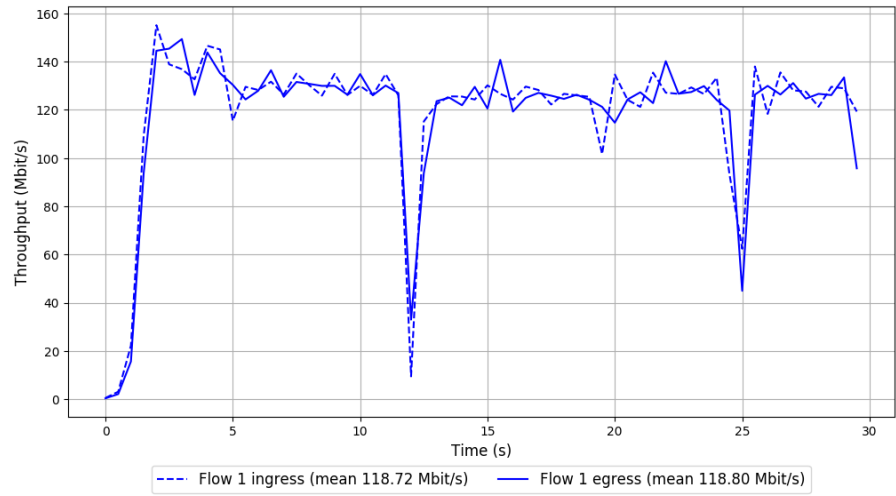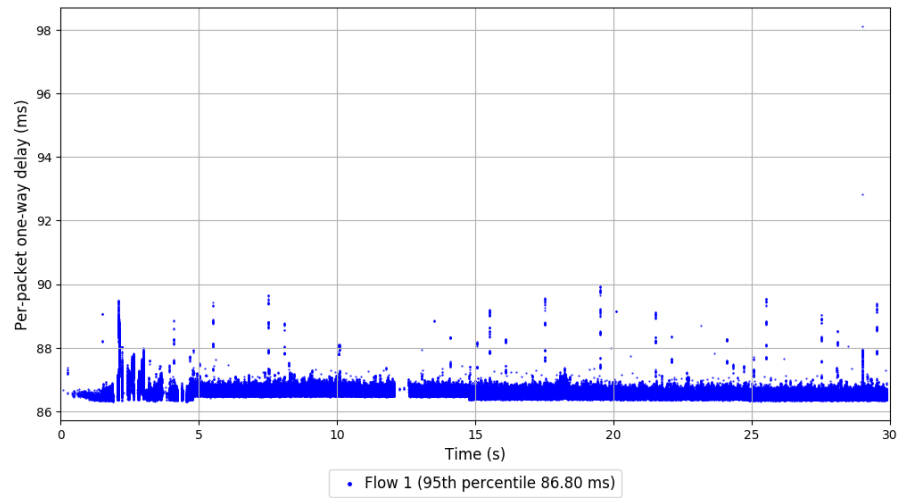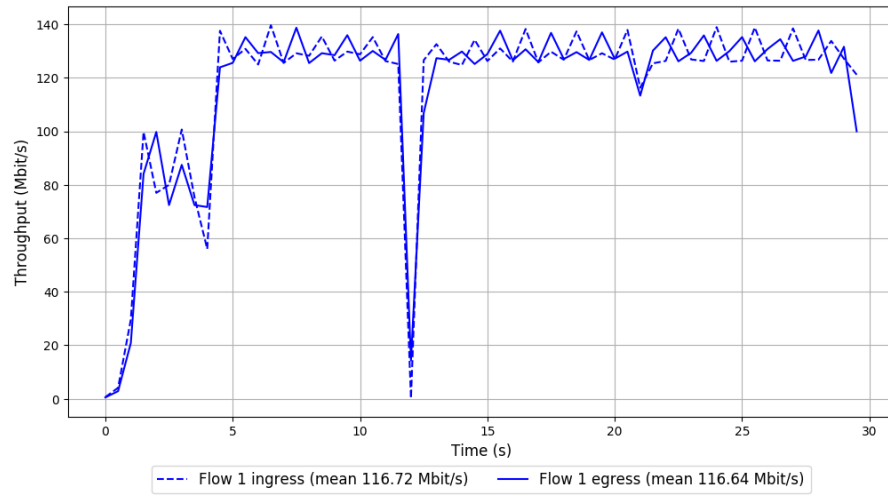
Run 6: Report of TCP BBR — Data Link

```
Run 7: Statistics of TCP BBR

Start at: 2017-09-21 10:28:13
End at: 2017-09-21 10:28:43

# Below is generated by plot.py at 2017-09-21 13:03:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 116.64 Mbit/s
95th percentile per-packet one-way delay: 86.799 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 116.64 Mbit/s
95th percentile per-packet one-way delay: 86.799 ms
Loss rate: 0.64%
```

Run 7: Report of TCP BBR — Data Link

Flow 1 ingress (mean 116.72 Mbit/s) --- Flow 1 egress (mean 116.64 Mbit/s)

• Flow 1 (95th percentile 86.80 ms)

```
Run 8: Statistics of TCP BBR

Start at: 2017-09-21 10:39:13
End at: 2017-09-21 10:39:43

# Below is generated by plot.py at 2017-09-21 13:03:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 122.40 Mbit/s
95th percentile per-packet one-way delay: 87.061 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 122.40 Mbit/s
95th percentile per-packet one-way delay: 87.061 ms
Loss rate: 0.61%
```
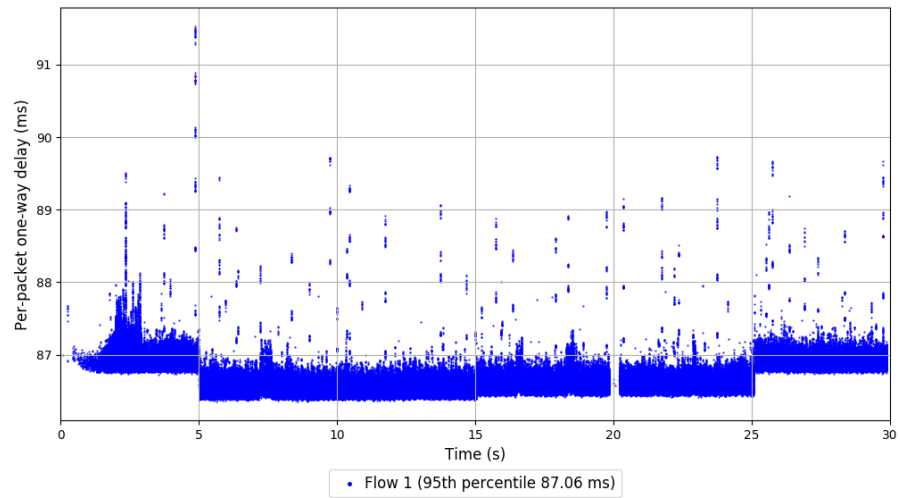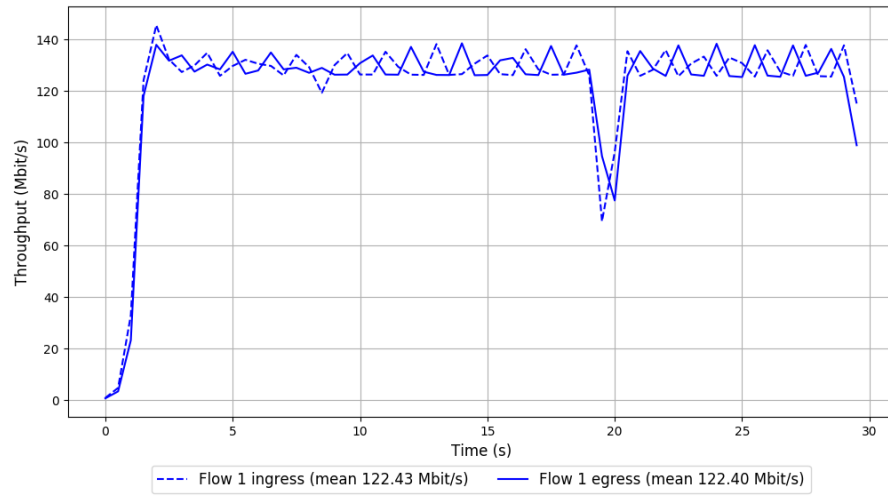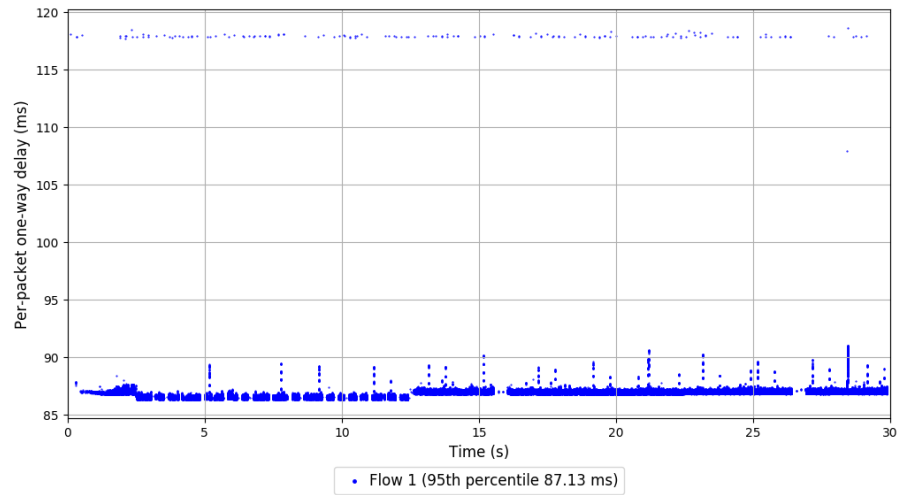
Run 8: Report of TCP BBR — Data Link

Flow 1 ingress (mean 122.43 Mbit/s)   Flow 1 egress (mean 122.40 Mbit/s)

Flow 1 (95th percentile 87.06 ms)

```
Run 9: Statistics of TCP BBR

Start at: 2017-09-21 10:49:56
End at: 2017-09-21 10:50:26

# Below is generated by plot.py at 2017-09-21 13:04:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 103.01 Mbit/s
95th percentile per-packet one-way delay: 87.129 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 103.01 Mbit/s
95th percentile per-packet one-way delay: 87.129 ms
Loss rate: 0.67%
```
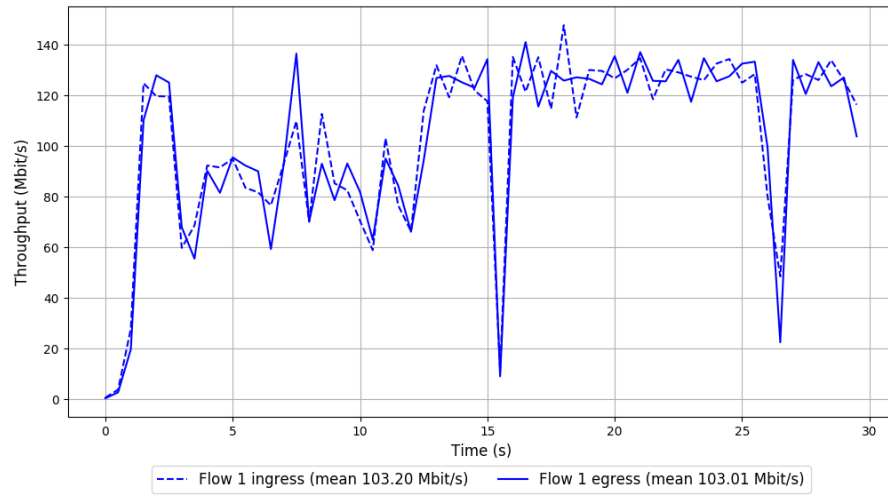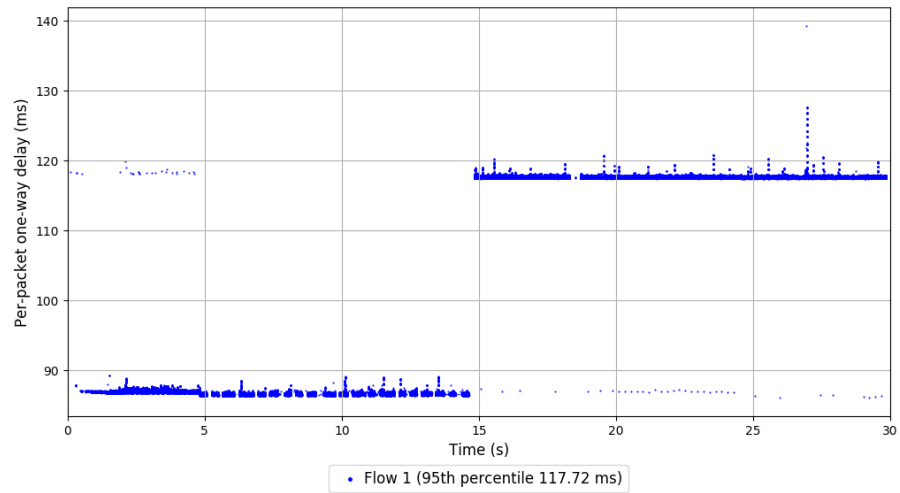
Run 9: Report of TCP BBR — Data Link

Flow 1 ingress (mean 103.20 Mbit/s) ----   Flow 1 egress (mean 103.01 Mbit/s) ——

Flow 1 (95th percentile 87.13 ms)

```
Run 10: Statistics of TCP BBR

Start at: 2017-09-21 11:00:53
End at: 2017-09-21 11:01:23

# Below is generated by plot.py at 2017-09-21 13:04:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.71 Mbit/s
95th percentile per-packet one-way delay: 117.720 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 96.71 Mbit/s
95th percentile per-packet one-way delay: 117.720 ms
Loss rate: 0.78%
```
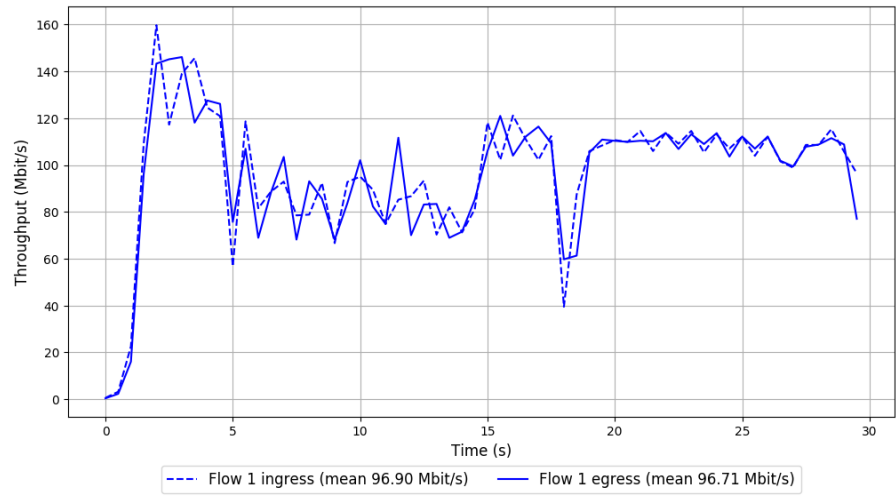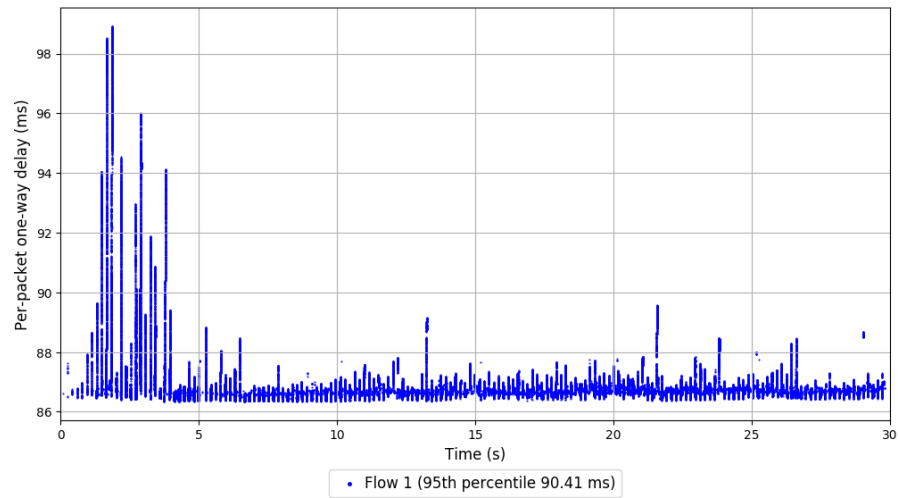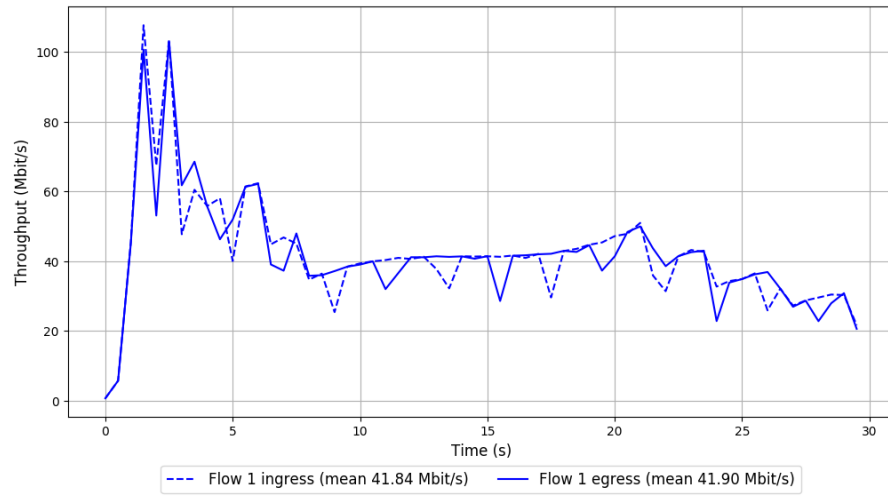
Run 10: Report of TCP BBR — Data Link

Flow 1 ingress (mean 96.90 Mbit/s)   Flow 1 egress (mean 96.71 Mbit/s)

Flow 1 (95th percentile 117.72 ms)

```
Run 1: Statistics of TCP Cubic

Start at: 2017-09-21 09:27:14
End at: 2017-09-21 09:27:44

# Below is generated by plot.py at 2017-09-21 13:04:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 41.90 Mbit/s
95th percentile per-packet one-way delay: 90.405 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 41.90 Mbit/s
95th percentile per-packet one-way delay: 90.405 ms
Loss rate: 0.44%
```
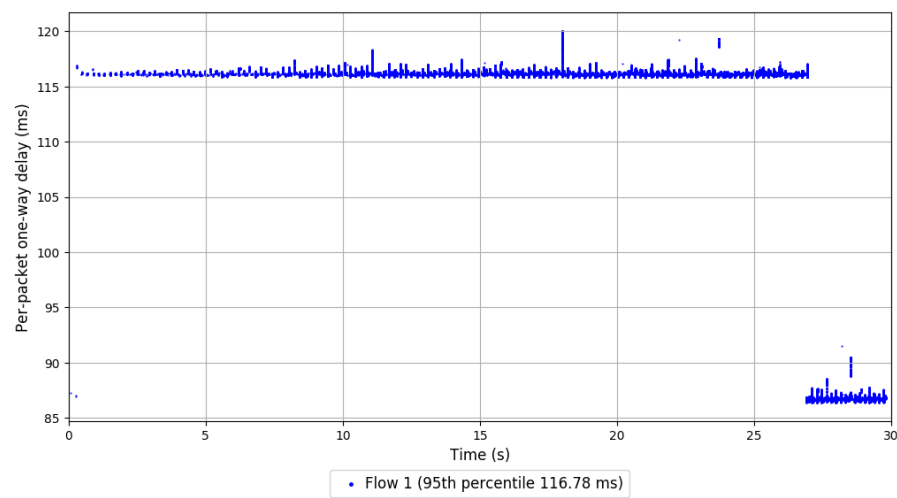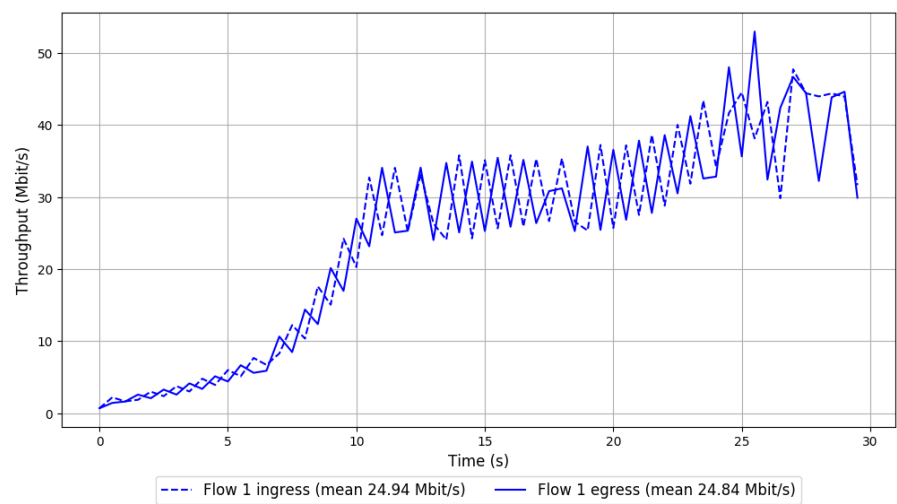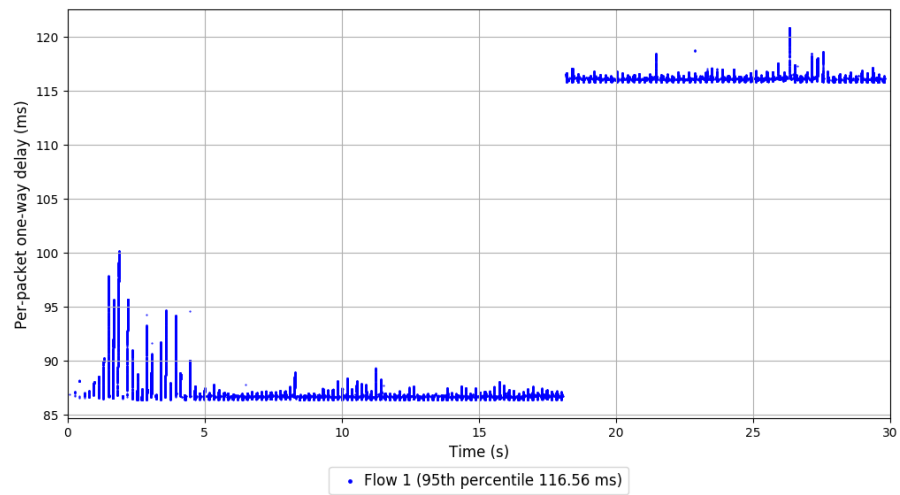
Run 1: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 41.84 Mbit/s)   Flow 1 egress (mean 41.90 Mbit/s)

· Flow 1 (95th percentile 90.41 ms)

```
Run 2: Statistics of TCP Cubic

Start at: 2017-09-21 09:38:41
End at: 2017-09-21 09:39:11

# Below is generated by plot.py at 2017-09-21 13:04:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 24.84 Mbit/s
95th percentile per-packet one-way delay: 116.779 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 24.84 Mbit/s
95th percentile per-packet one-way delay: 116.779 ms
Loss rate: 1.01%
```
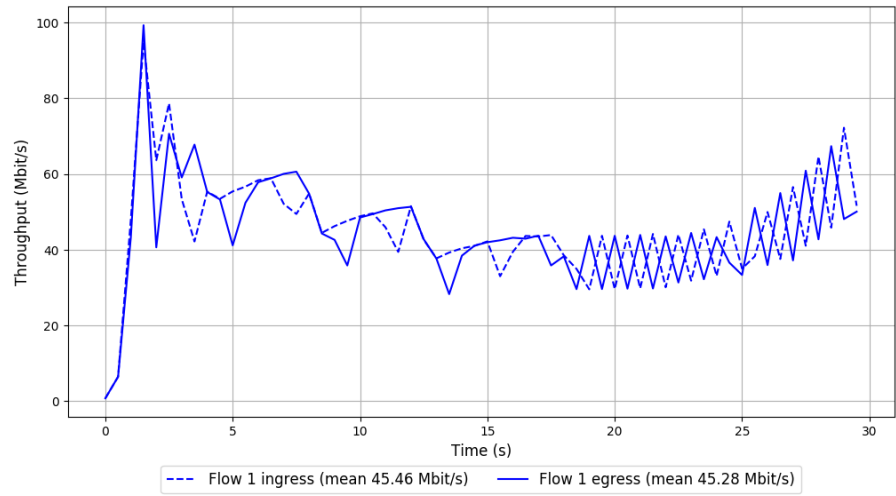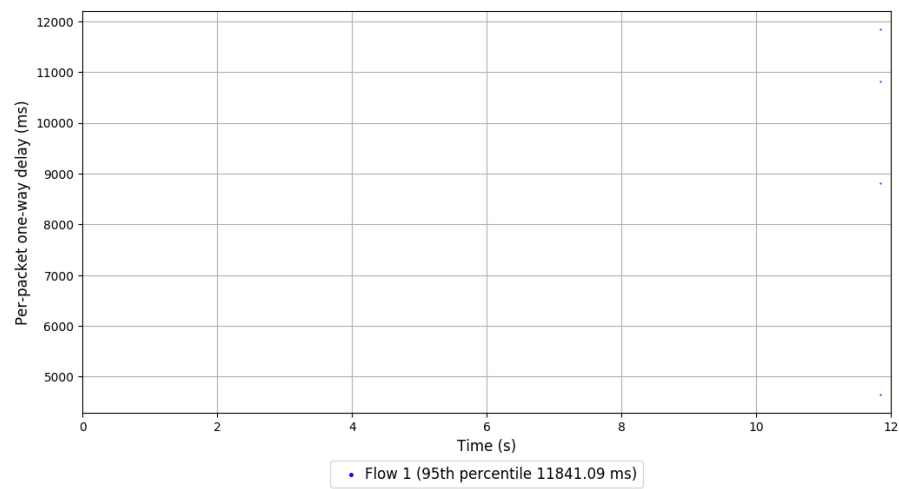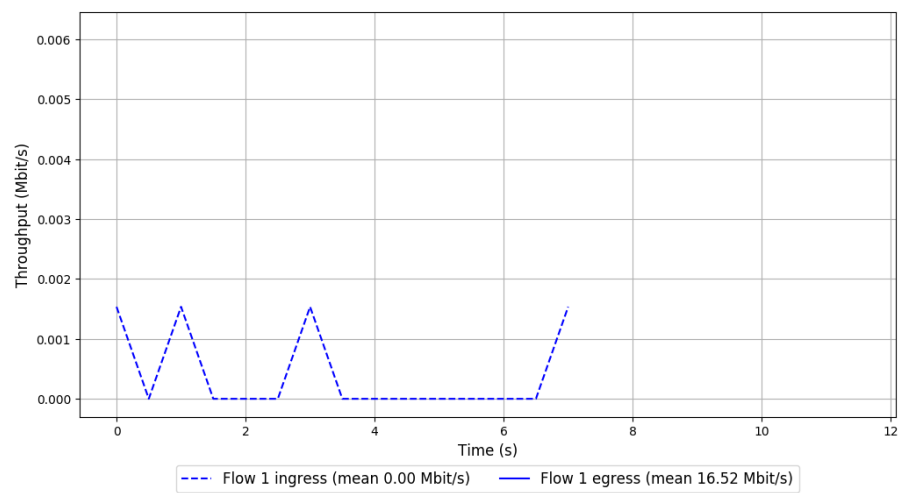
Run 2: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 24.94 Mbit/s)   —— Flow 1 egress (mean 24.84 Mbit/s)

• Flow 1 (95th percentile 116.78 ms)

```
Run 3: Statistics of TCP Cubic

Start at: 2017-09-21 09:49:20
End at: 2017-09-21 09:49:50

# Below is generated by plot.py at 2017-09-21 13:04:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 45.28 Mbit/s
95th percentile per-packet one-way delay: 116.557 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 45.28 Mbit/s
95th percentile per-packet one-way delay: 116.557 ms
Loss rate: 0.96%
```
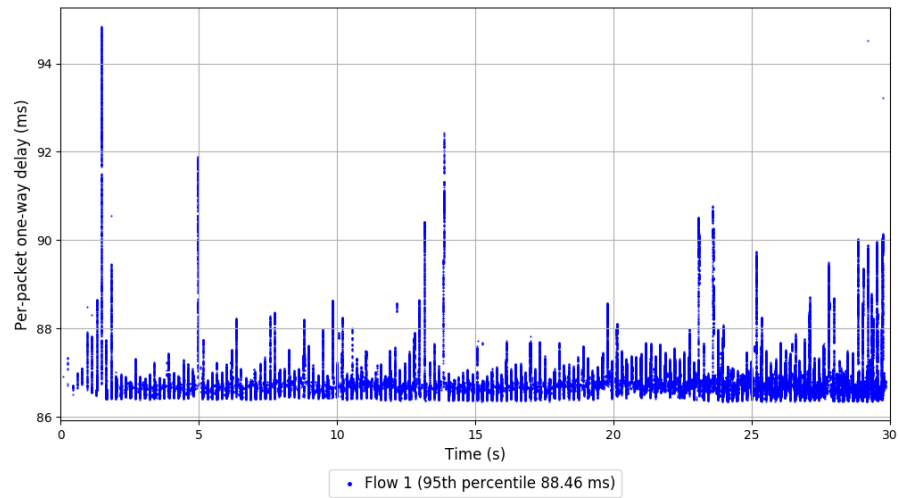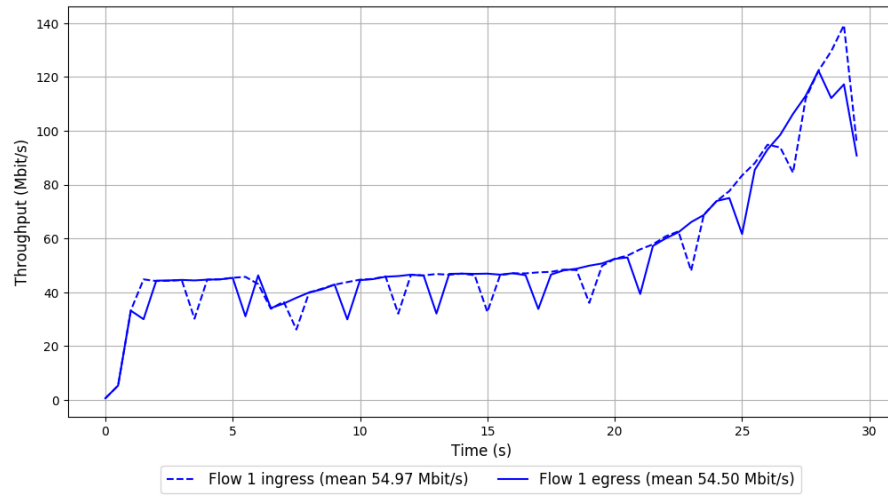
Run 3: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 45.46 Mbit/s) ——— Flow 1 egress (mean 45.28 Mbit/s)

• Flow 1 (95th percentile 116.56 ms)

Run 4: Statistics of TCP Cubic

Start at: 2017-09-21 10:00:08
End at: 2017-09-21 10:00:38

Run 4: Report of TCP Cubic — Data Link

```
Run 5: Statistics of TCP Cubic

Start at: 2017-09-21 10:11:37
End at: 2017-09-21 10:12:07

# Below is generated by plot.py at 2017-09-21 13:04:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 54.50 Mbit/s
95th percentile per-packet one-way delay: 88.463 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 54.50 Mbit/s
95th percentile per-packet one-way delay: 88.463 ms
Loss rate: 1.43%
```
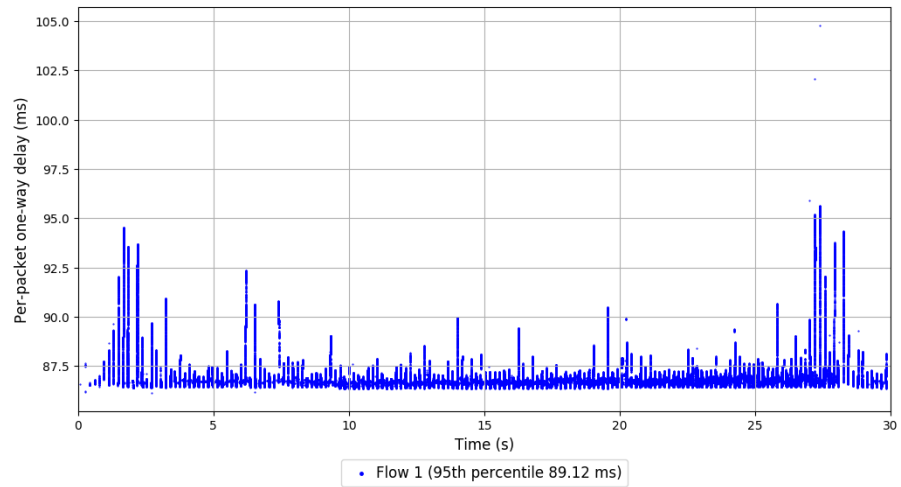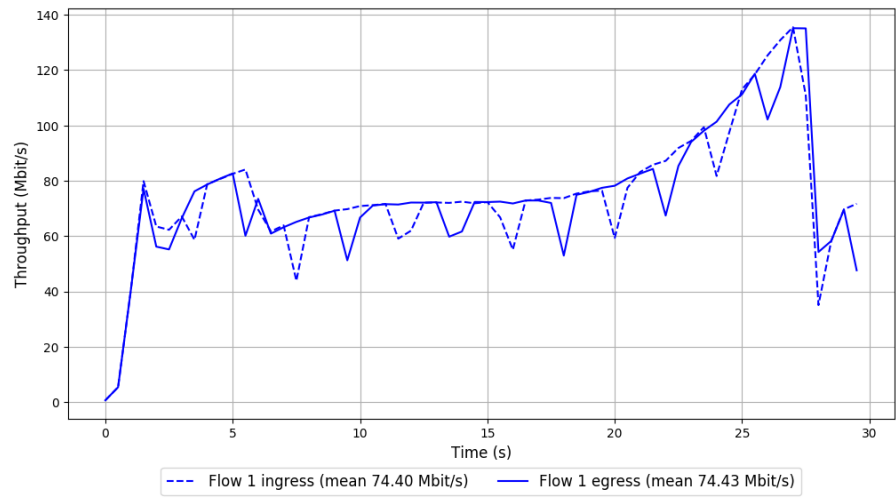
Run 5: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 54.97 Mbit/s) —— Flow 1 egress (mean 54.50 Mbit/s)

• Flow 1 (95th percentile 88.46 ms)

```
Run 6: Statistics of TCP Cubic

Start at: 2017-09-21 10:22:28
End at: 2017-09-21 10:22:59

# Below is generated by plot.py at 2017-09-21 13:05:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 74.43 Mbit/s
95th percentile per-packet one-way delay: 89.118 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 74.43 Mbit/s
95th percentile per-packet one-way delay: 89.118 ms
Loss rate: 0.55%
```
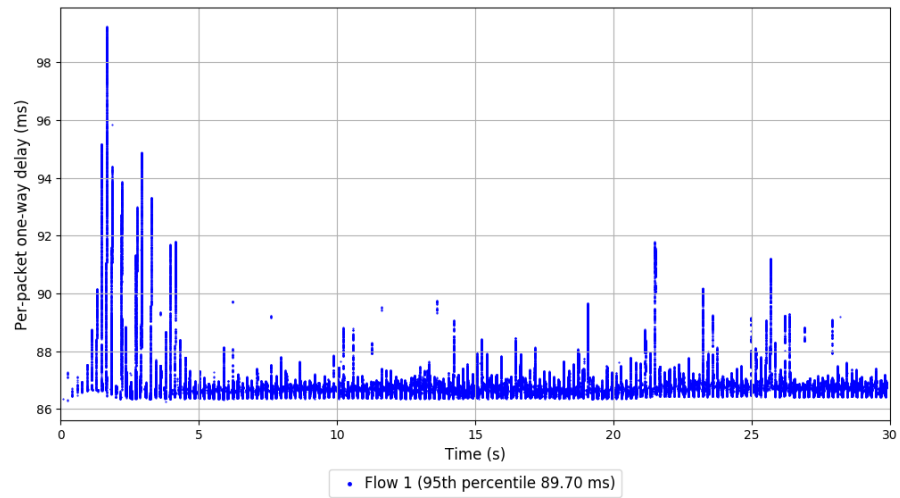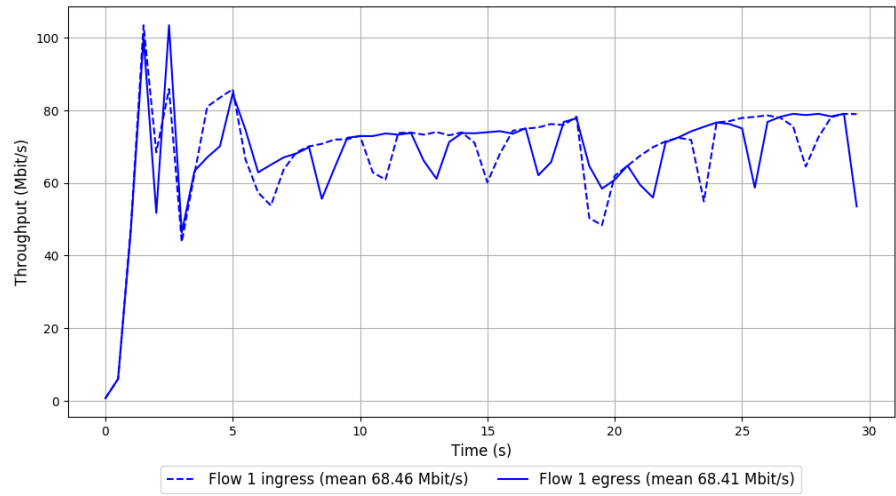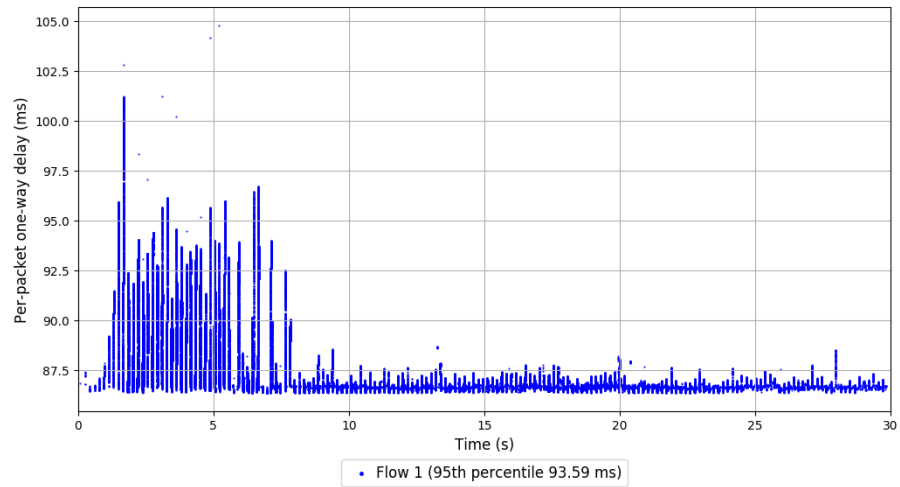
Run 6: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 74.40 Mbit/s)   Flow 1 egress (mean 74.43 Mbit/s)

• Flow 1 (95th percentile 89.12 ms)

```
Run 7: Statistics of TCP Cubic

Start at: 2017-09-21 10:33:27
End at: 2017-09-21 10:33:57

# Below is generated by plot.py at 2017-09-21 13:05:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 68.41 Mbit/s
95th percentile per-packet one-way delay: 89.702 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 68.41 Mbit/s
95th percentile per-packet one-way delay: 89.702 ms
Loss rate: 0.65%
```
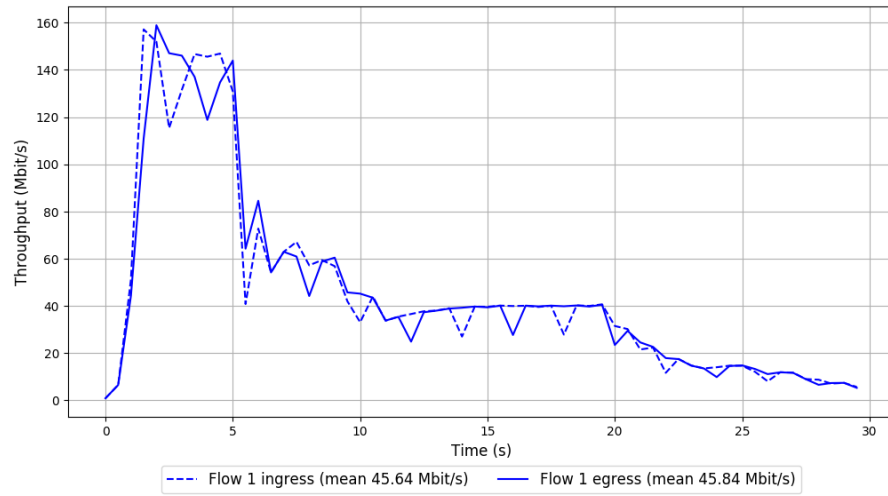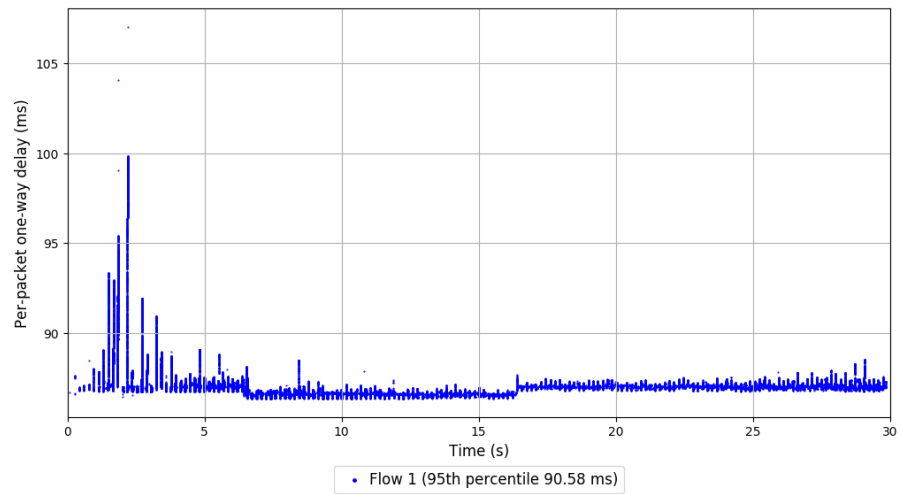
Run 7: Report of TCP Cubic — Data Link

```
Run 8: Statistics of TCP Cubic

Start at: 2017-09-21 10:44:18
End at: 2017-09-21 10:44:48

# Below is generated by plot.py at 2017-09-21 13:05:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 45.84 Mbit/s
95th percentile per-packet one-way delay: 93.589 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 45.84 Mbit/s
95th percentile per-packet one-way delay: 93.589 ms
Loss rate: 0.14%
```
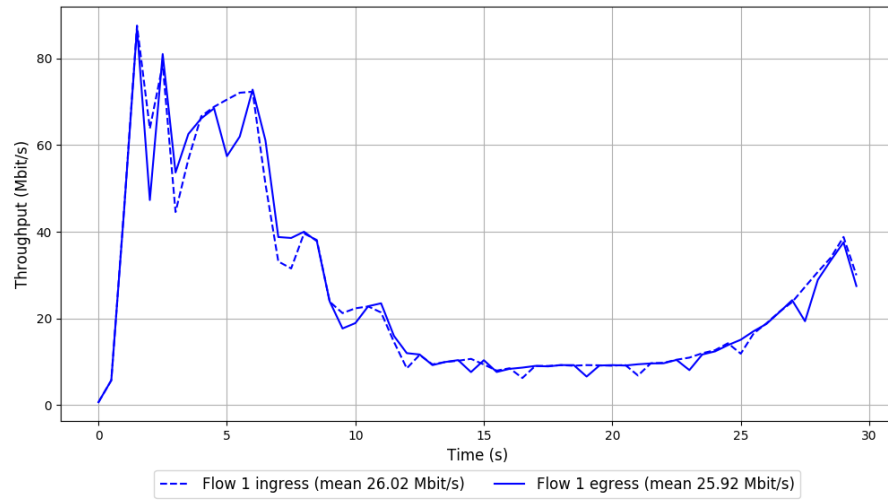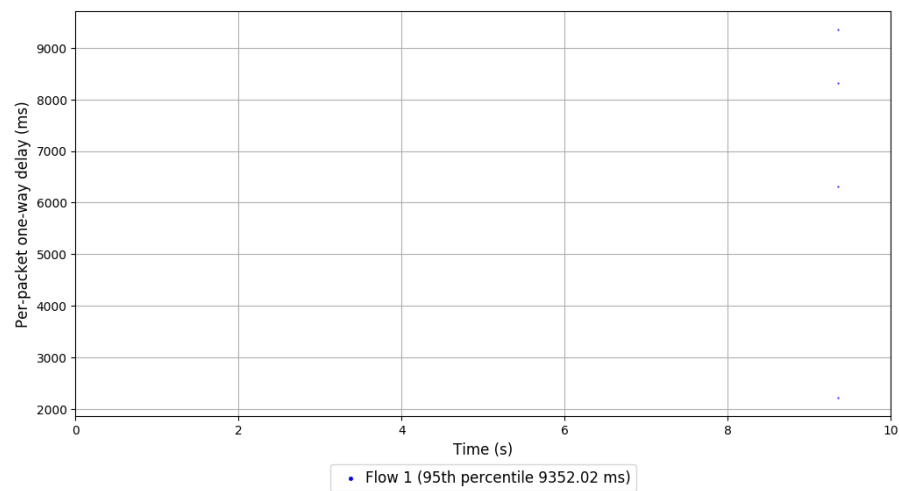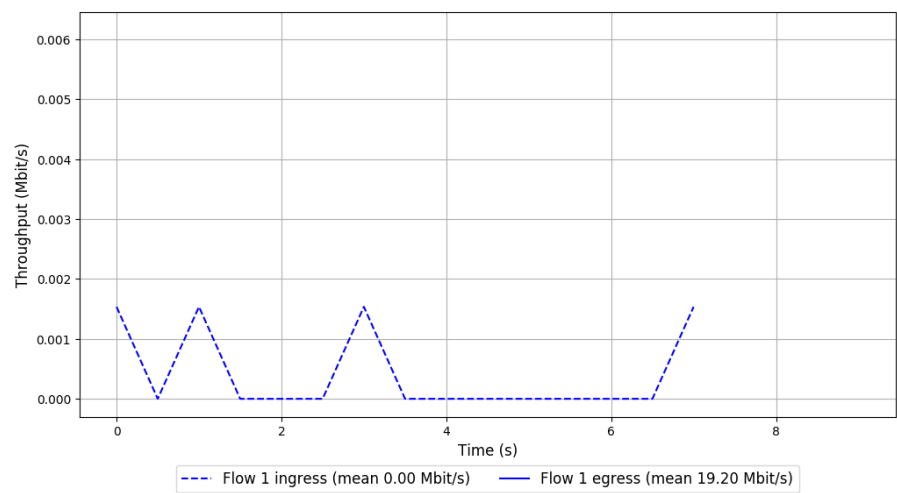
Run 8: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 45.64 Mbit/s)   —— Flow 1 egress (mean 45.84 Mbit/s)
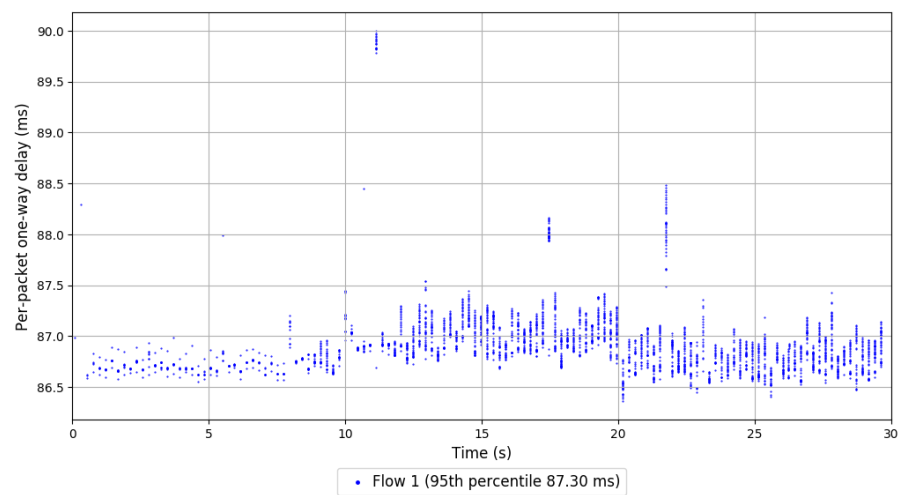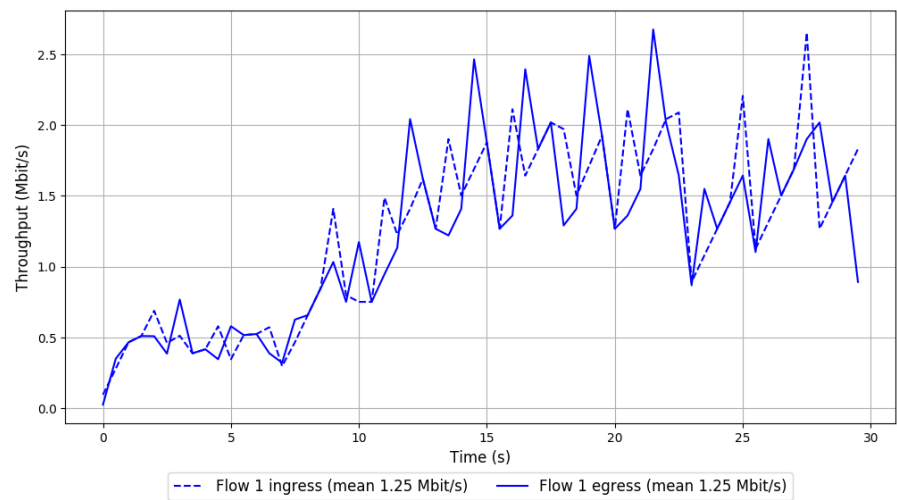
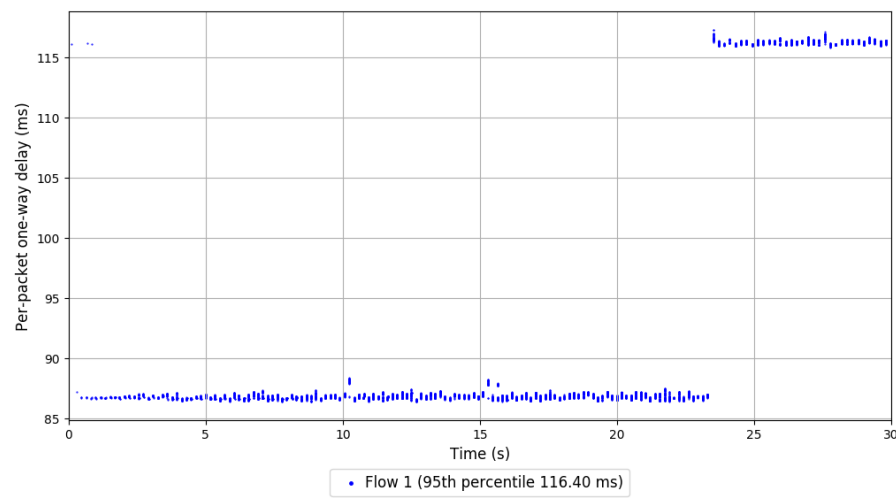

· Flow 1 (95th percentile 93.59 ms)

```
Run 9: Statistics of TCP Cubic

Start at: 2017-09-21 10:55:12
End at: 2017-09-21 10:55:42

# Below is generated by plot.py at 2017-09-21 13:05:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 25.92 Mbit/s
95th percentile per-packet one-way delay: 90.577 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 25.92 Mbit/s
95th percentile per-packet one-way delay: 90.577 ms
Loss rate: 0.96%
```

Run 9: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 26.02 Mbit/s)   Flow 1 egress (mean 25.92 Mbit/s)

Flow 1 (95th percentile 90.58 ms)

Run 10: Statistics of TCP Cubic

Start at: 2017-09-21 11:06:13
End at: 2017-09-21 11:06:43

Run 10: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 0.00 Mbit/s)   —— Flow 1 egress (mean 19.20 Mbit/s)
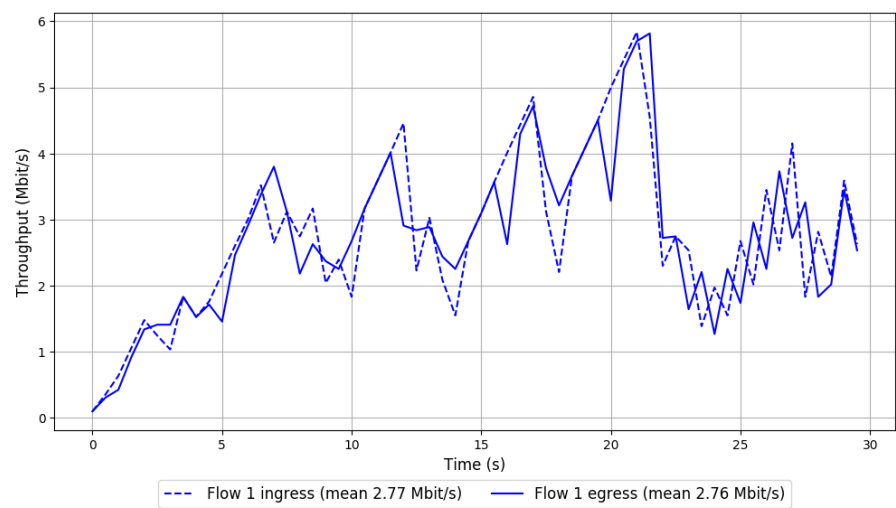

• Flow 1 (95th percentile 9352.02 ms)

```
Run 1: Statistics of LEDBAT

Start at: 2017-09-21 09:27:58
End at: 2017-09-21 09:28:28

# Below is generated by plot.py at 2017-09-21 13:05:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.25 Mbit/s
95th percentile per-packet one-way delay: 87.303 ms
Loss rate: 1.29%
-- Flow 1:
Average throughput: 1.25 Mbit/s
95th percentile per-packet one-way delay: 87.303 ms
Loss rate: 1.29%
```
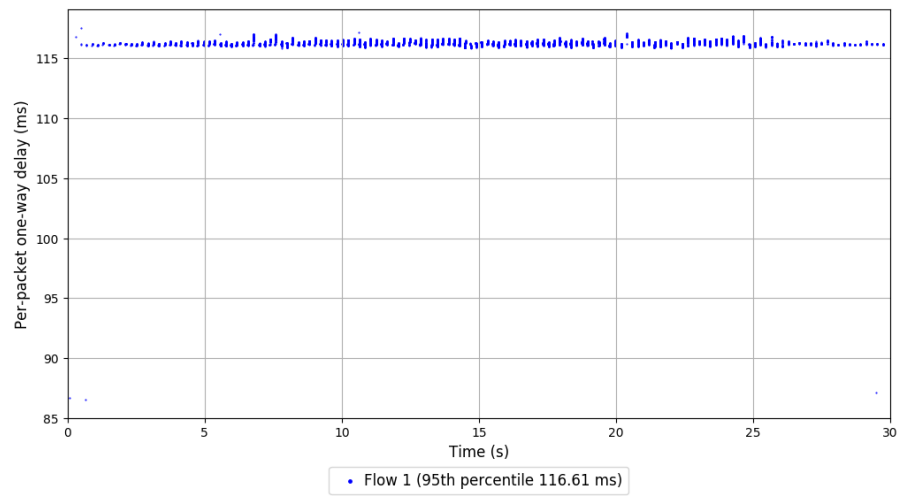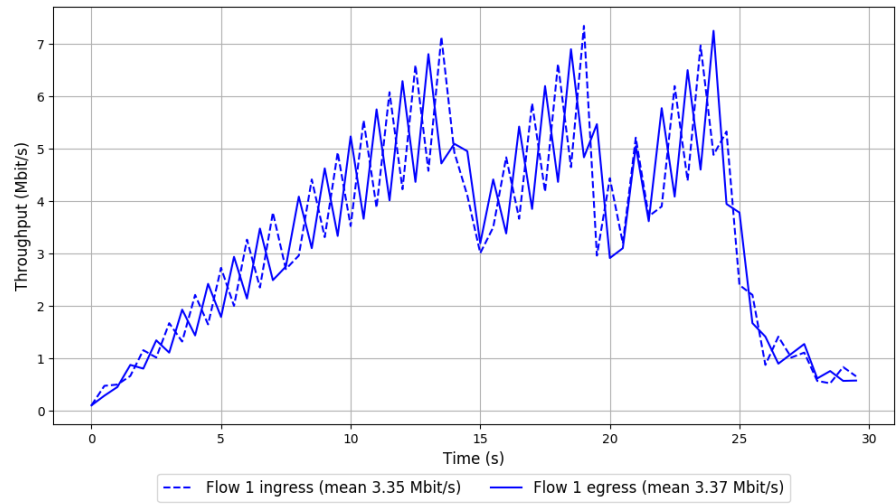
Run 1: Report of LEDBAT — Data Link

Flow 1 ingress (mean 1.25 Mbit/s) --- Flow 1 egress (mean 1.25 Mbit/s) ———

Flow 1 (95th percentile 87.30 ms)

```
Run 2: Statistics of LEDBAT

Start at: 2017-09-21 09:39:25
End at: 2017-09-21 09:39:55

# Below is generated by plot.py at 2017-09-21 13:05:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.76 Mbit/s
95th percentile per-packet one-way delay: 116.397 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 2.76 Mbit/s
95th percentile per-packet one-way delay: 116.397 ms
Loss rate: 1.09%
```
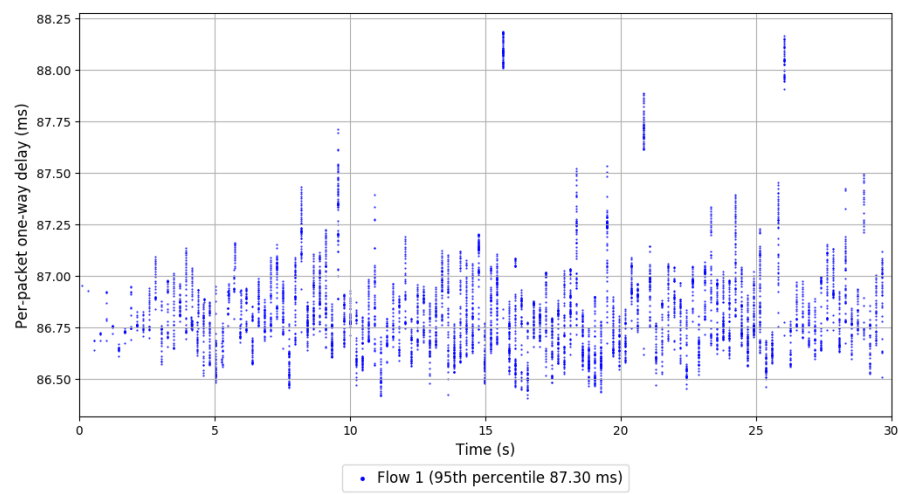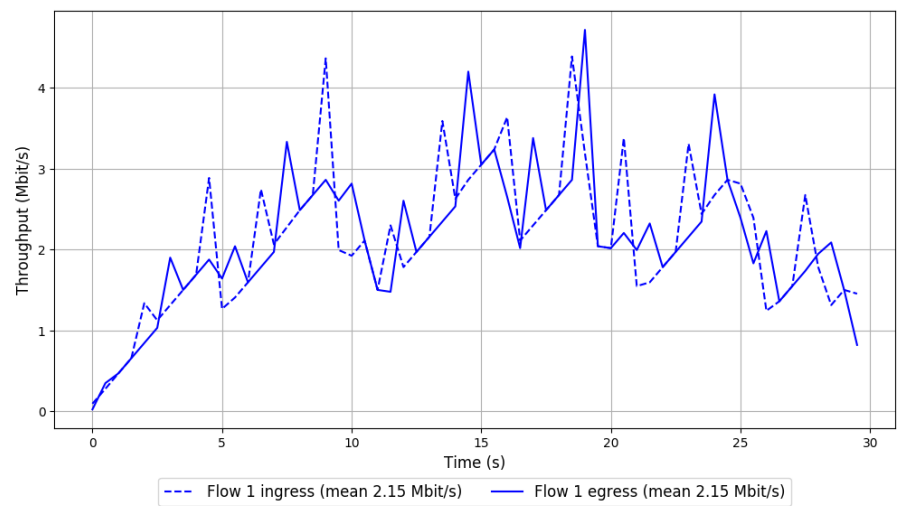
Run 2: Report of LEDBAT — Data Link

Flow 1 ingress (mean 2.77 Mbit/s)   Flow 1 egress (mean 2.76 Mbit/s)

• Flow 1 (95th percentile 116.40 ms)

```
Run 3: Statistics of LEDBAT

Start at: 2017-09-21 09:50:04
End at: 2017-09-21 09:50:34

# Below is generated by plot.py at 2017-09-21 13:05:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 3.37 Mbit/s
95th percentile per-packet one-way delay: 116.612 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 3.37 Mbit/s
95th percentile per-packet one-way delay: 116.612 ms
Loss rate: 0.17%
```
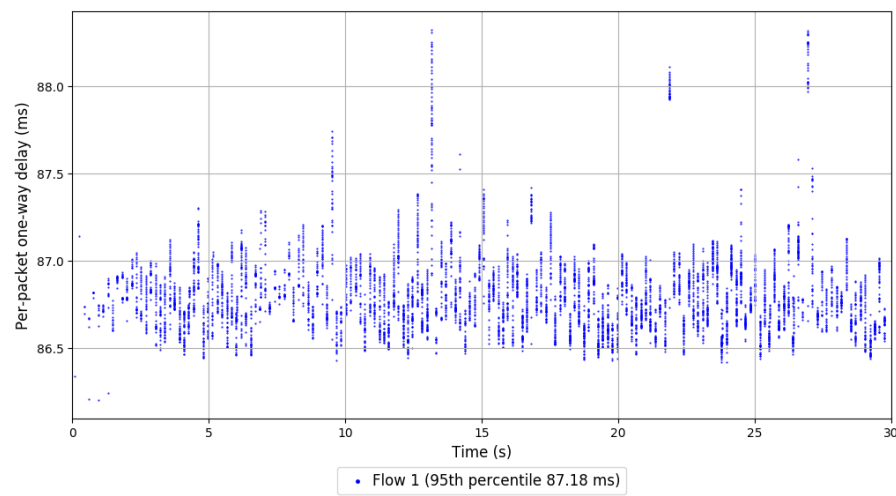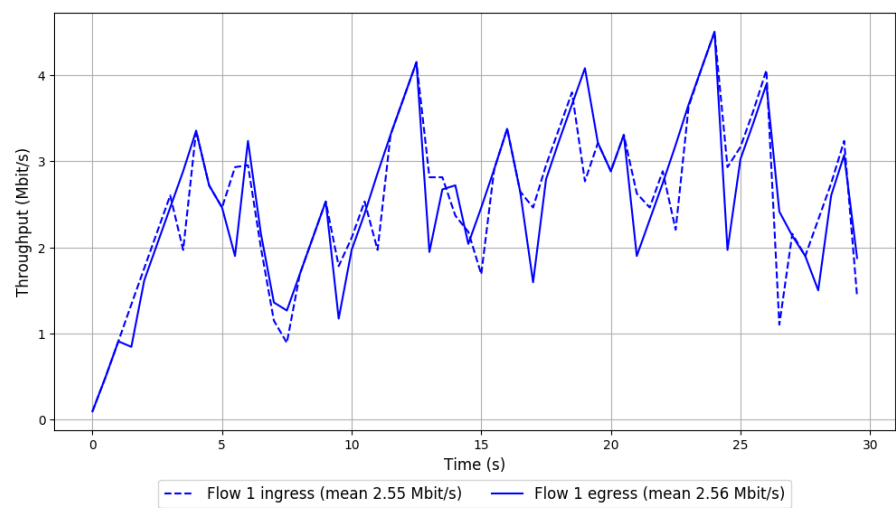
Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2017-09-21 10:00:48
End at: 2017-09-21 10:01:19

# Below is generated by plot.py at 2017-09-21 13:05:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.15 Mbit/s
95th percentile per-packet one-way delay: 87.297 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 2.15 Mbit/s
95th percentile per-packet one-way delay: 87.297 ms
Loss rate: 0.50%
```
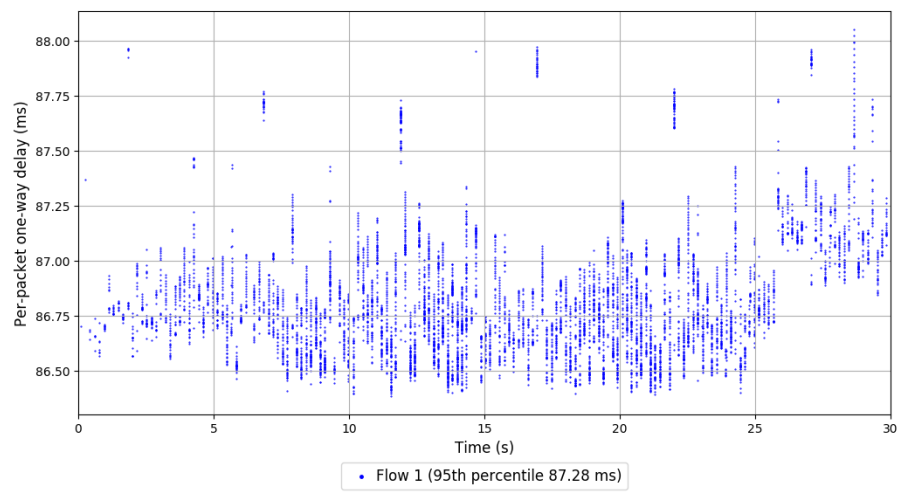
Run 4: Report of LEDBAT — Data Link

```
Run 5: Statistics of LEDBAT

Start at: 2017-09-21 10:12:21
End at: 2017-09-21 10:12:51

# Below is generated by plot.py at 2017-09-21 13:05:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.56 Mbit/s
95th percentile per-packet one-way delay: 87.176 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 2.56 Mbit/s
95th percentile per-packet one-way delay: 87.176 ms
Loss rate: 0.54%
```
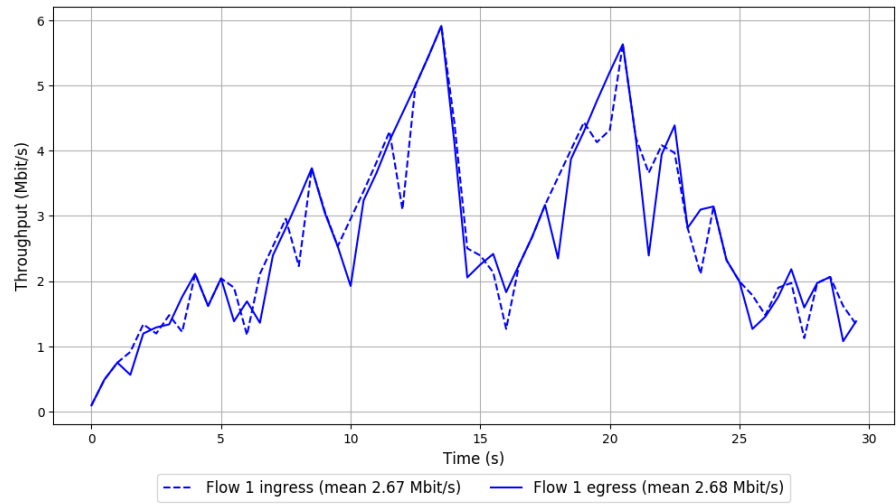
Run 5: Report of LEDBAT — Data Link

```
Run 6: Statistics of LEDBAT

Start at: 2017-09-21 10:23:12
End at: 2017-09-21 10:23:42

# Below is generated by plot.py at 2017-09-21 13:05:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.68 Mbit/s
95th percentile per-packet one-way delay: 87.280 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 2.68 Mbit/s
95th percentile per-packet one-way delay: 87.280 ms
Loss rate: 0.35%
```
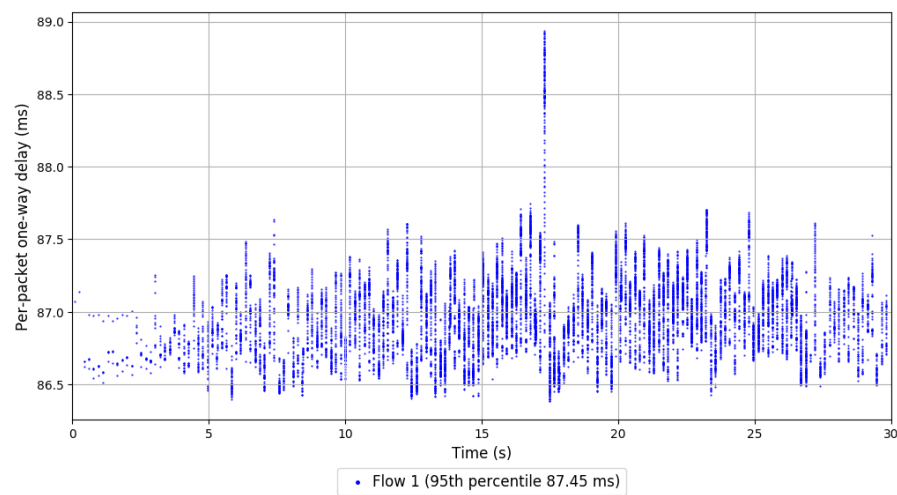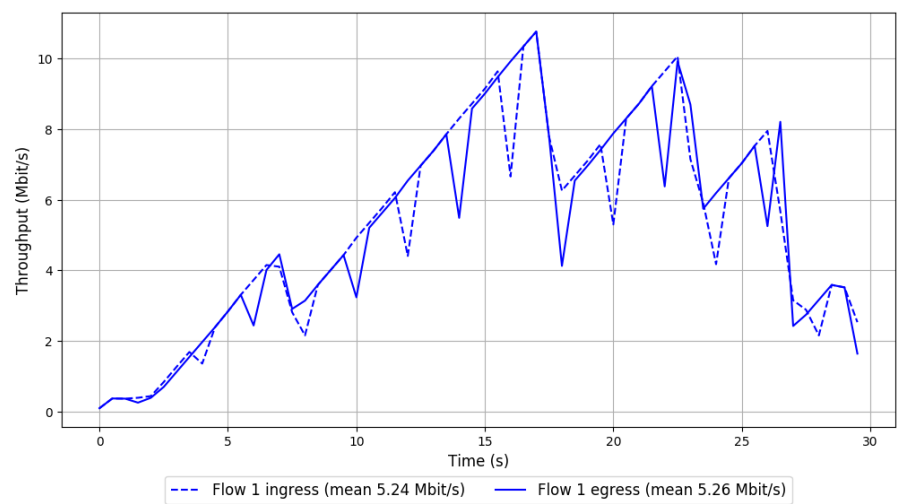
Run 6: Report of LEDBAT — Data Link

Flow 1 ingress (mean 2.67 Mbit/s)   Flow 1 egress (mean 2.68 Mbit/s)

Flow 1 (95th percentile 87.28 ms)

```
Run 7: Statistics of LEDBAT

Start at: 2017-09-21 10:34:11
End at: 2017-09-21 10:34:41

# Below is generated by plot.py at 2017-09-21 13:05:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.26 Mbit/s
95th percentile per-packet one-way delay: 87.452 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 5.26 Mbit/s
95th percentile per-packet one-way delay: 87.452 ms
Loss rate: 0.29%
```
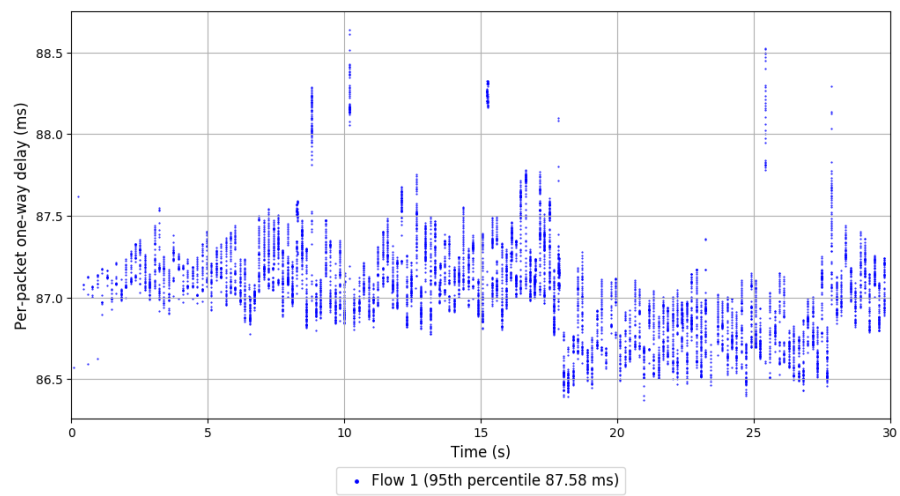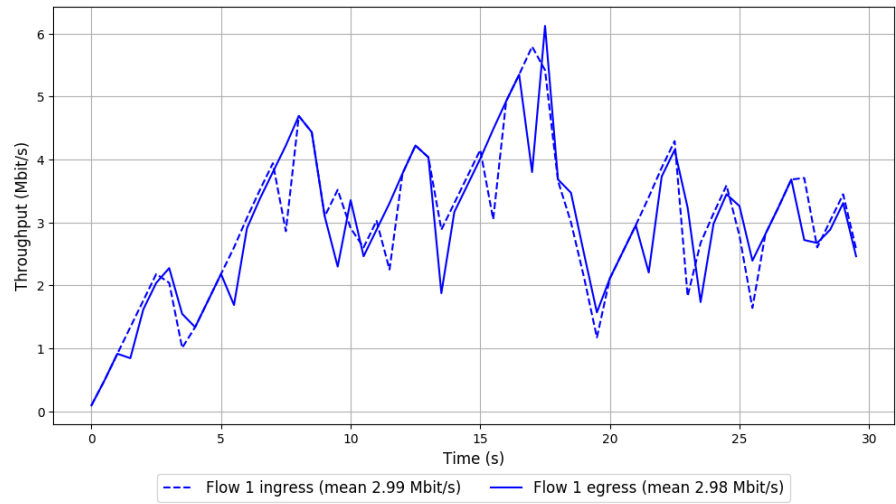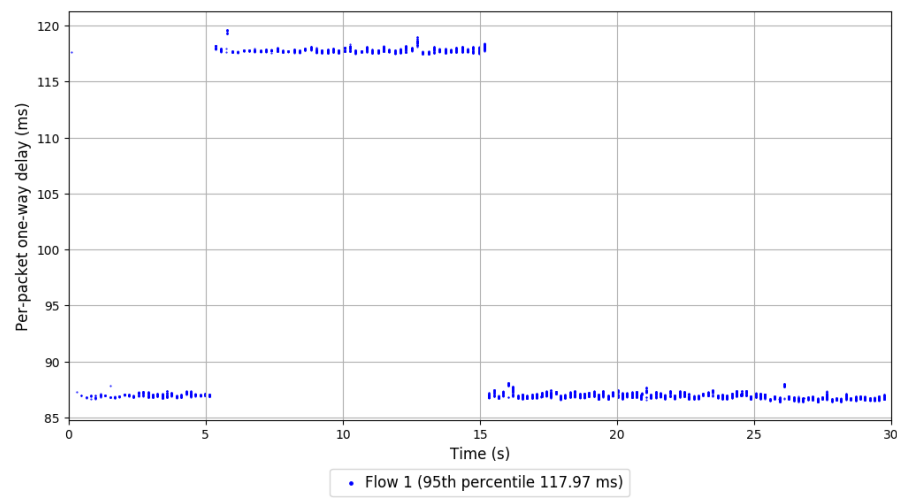
Run 7: Report of LEDBAT — Data Link

Flow 1 ingress (mean 5.24 Mbit/s)   Flow 1 egress (mean 5.26 Mbit/s)

Flow 1 (95th percentile 87.45 ms)

```
Run 8: Statistics of LEDBAT

Start at: 2017-09-21 10:45:00
End at: 2017-09-21 10:45:30

# Below is generated by plot.py at 2017-09-21 13:05:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.98 Mbit/s
95th percentile per-packet one-way delay: 87.575 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 2.98 Mbit/s
95th percentile per-packet one-way delay: 87.575 ms
Loss rate: 0.80%
```
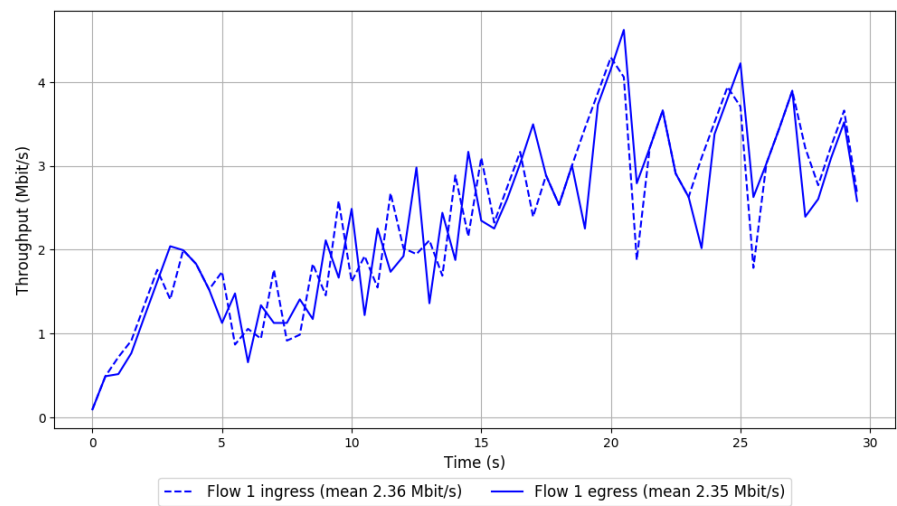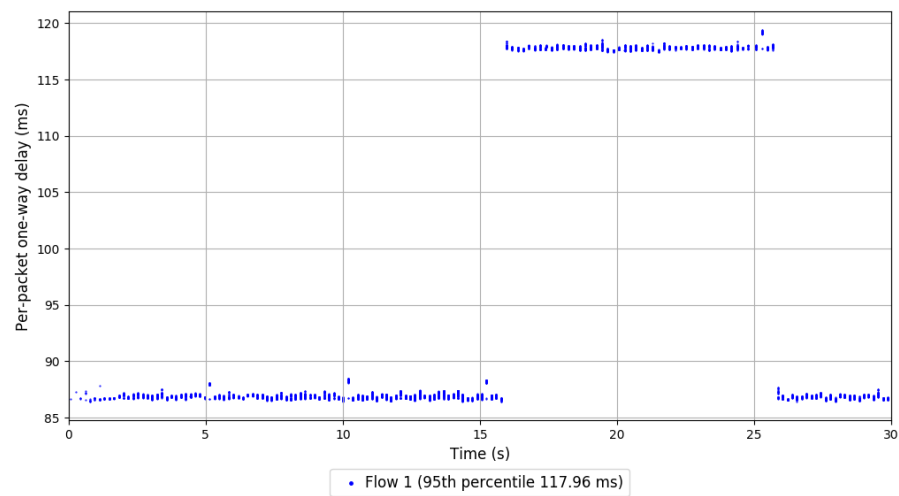
Run 8: Report of LEDBAT — Data Link

Flow 1 ingress (mean 2.99 Mbit/s) ---- Flow 1 egress (mean 2.98 Mbit/s)

Flow 1 (95th percentile 87.58 ms)

```
Run 9: Statistics of LEDBAT

Start at: 2017-09-21 10:55:53
End at: 2017-09-21 10:56:23

# Below is generated by plot.py at 2017-09-21 13:05:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 117.970 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 117.970 ms
Loss rate: 1.00%
```
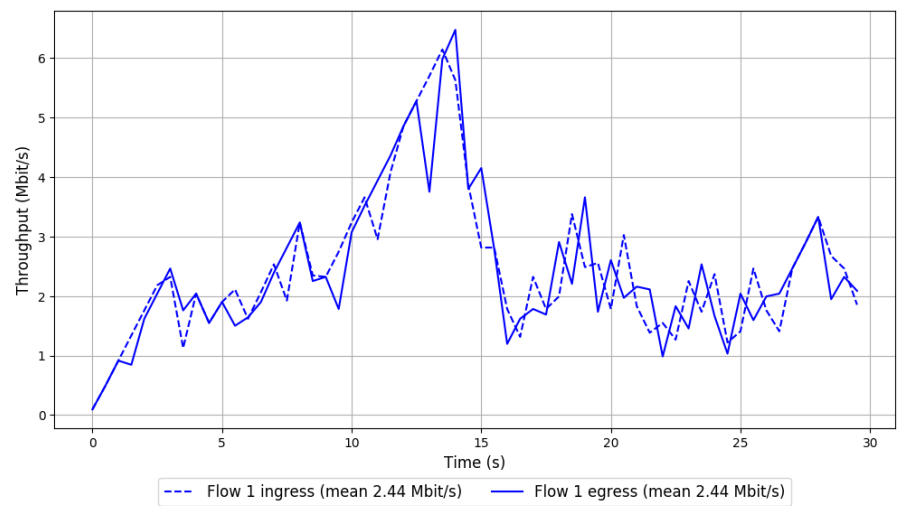
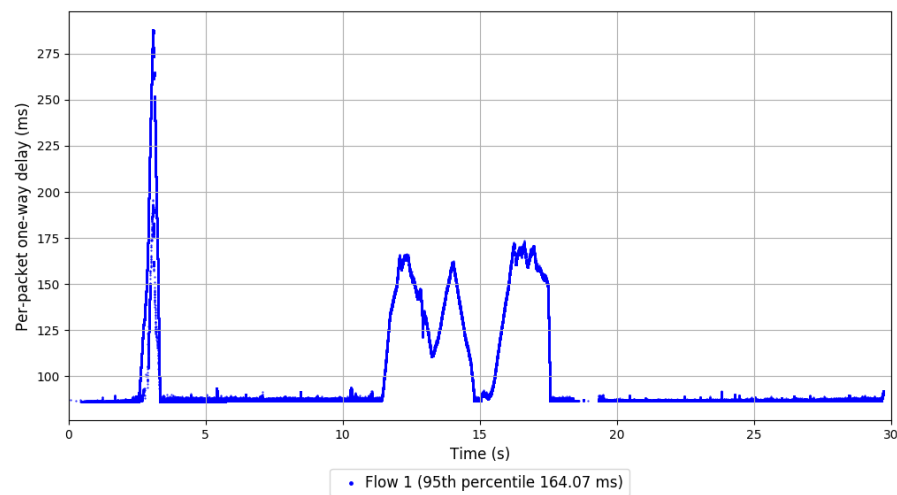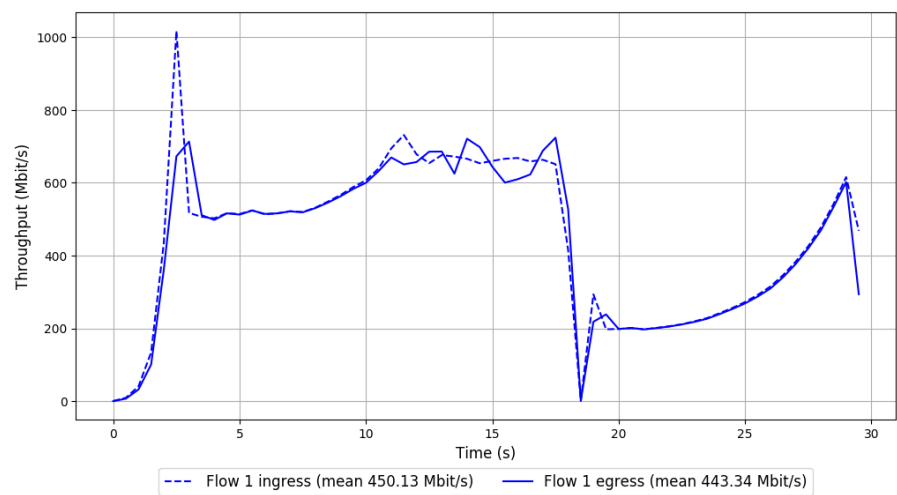## Run 9: Report of LEDBAT — Data Link

Flow 1 ingress (mean 2.36 Mbit/s) --- Flow 1 egress (mean 2.35 Mbit/s)

Flow 1 (95th percentile 117.97 ms)

```
Run 10: Statistics of LEDBAT

Start at: 2017-09-21 11:06:52
End at: 2017-09-21 11:07:22

# Below is generated by plot.py at 2017-09-21 13:05:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.44 Mbit/s
95th percentile per-packet one-way delay: 117.956 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 2.44 Mbit/s
95th percentile per-packet one-way delay: 117.956 ms
Loss rate: 0.69%
```
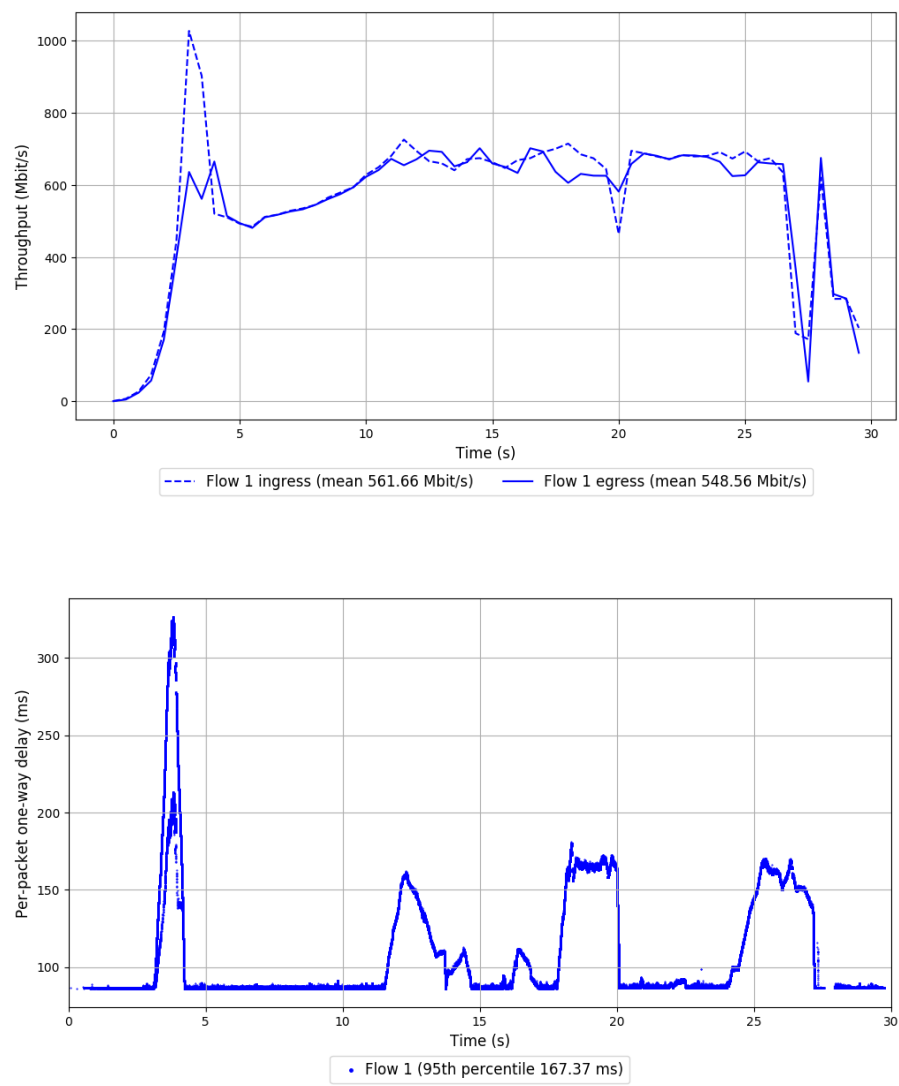
Run 10: Report of LEDBAT — Data Link

Flow 1 ingress (mean 2.44 Mbit/s)   Flow 1 egress (mean 2.44 Mbit/s)

• Flow 1 (95th percentile 117.96 ms)

```
Run 1: Statistics of PCC

Start at: 2017-09-21 09:25:22
End at: 2017-09-21 09:25:52

# Below is generated by plot.py at 2017-09-21 13:14:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 443.34 Mbit/s
95th percentile per-packet one-way delay: 164.075 ms
Loss rate: 2.14%
-- Flow 1:
Average throughput: 443.34 Mbit/s
95th percentile per-packet one-way delay: 164.075 ms
Loss rate: 2.14%
```
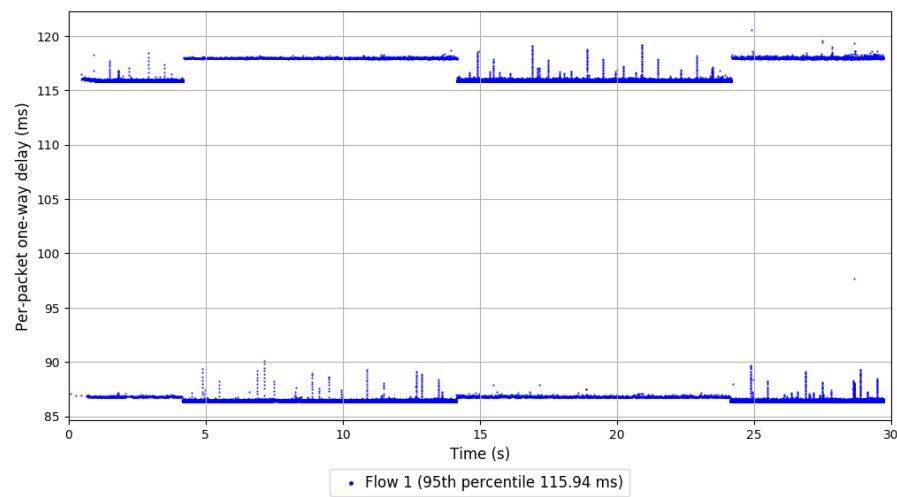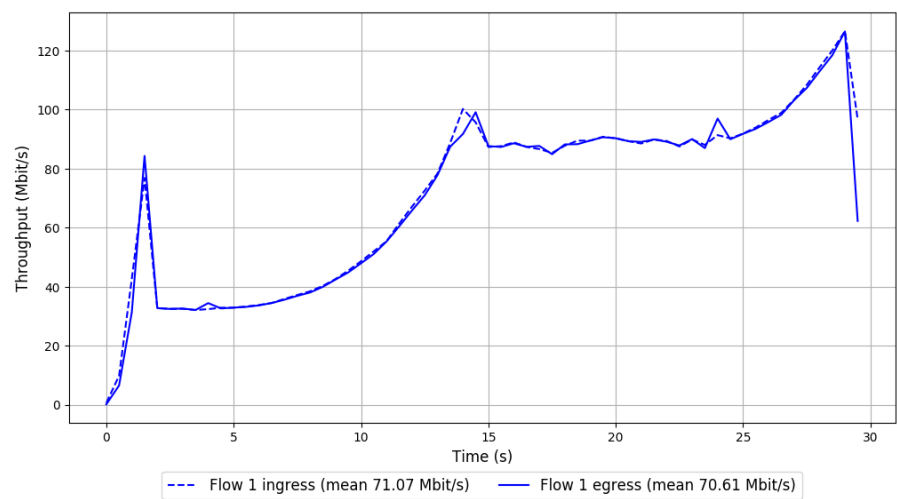
Run 1: Report of PCC — Data Link

Flow 1 ingress (mean 450.13 Mbit/s) ----   Flow 1 egress (mean 443.34 Mbit/s) ———

• Flow 1 (95th percentile 164.07 ms)

```
Run 2: Statistics of PCC

Start at: 2017-09-21 09:36:44
End at: 2017-09-21 09:37:14


# Below is generated by plot.py at 2017-09-21 13:15:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 548.56 Mbit/s
95th percentile per-packet one-way delay: 167.374 ms
Loss rate: 3.00%
-- Flow 1:
Average throughput: 548.56 Mbit/s
95th percentile per-packet one-way delay: 167.374 ms
Loss rate: 3.00%
```
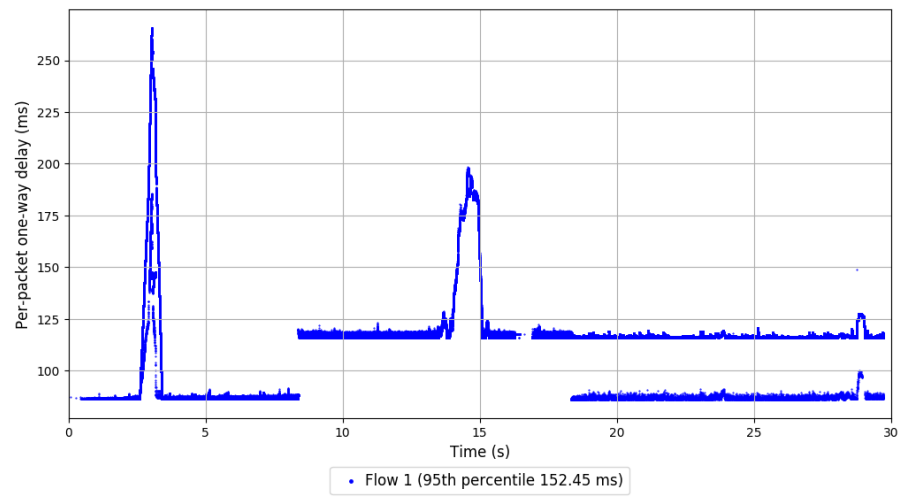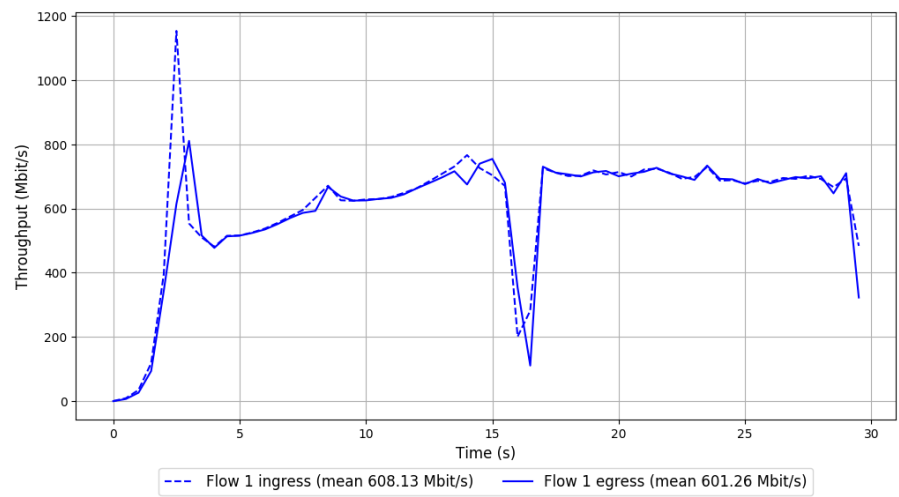
Run 2: Report of PCC — Data Link

```
Run 3: Statistics of PCC

Start at: 2017-09-21 09:47:54
End at: 2017-09-21 09:48:24

# Below is generated by plot.py at 2017-09-21 13:15:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 70.61 Mbit/s
95th percentile per-packet one-way delay: 115.937 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 70.61 Mbit/s
95th percentile per-packet one-way delay: 115.937 ms
Loss rate: 1.33%
```
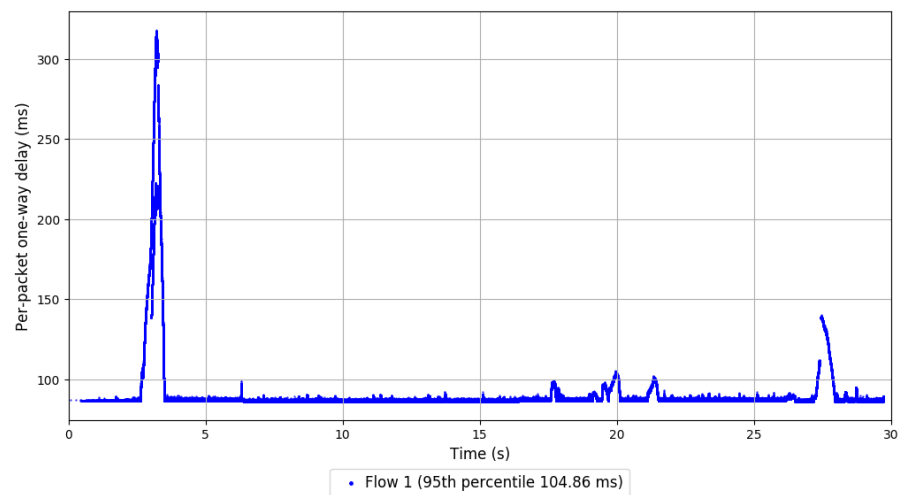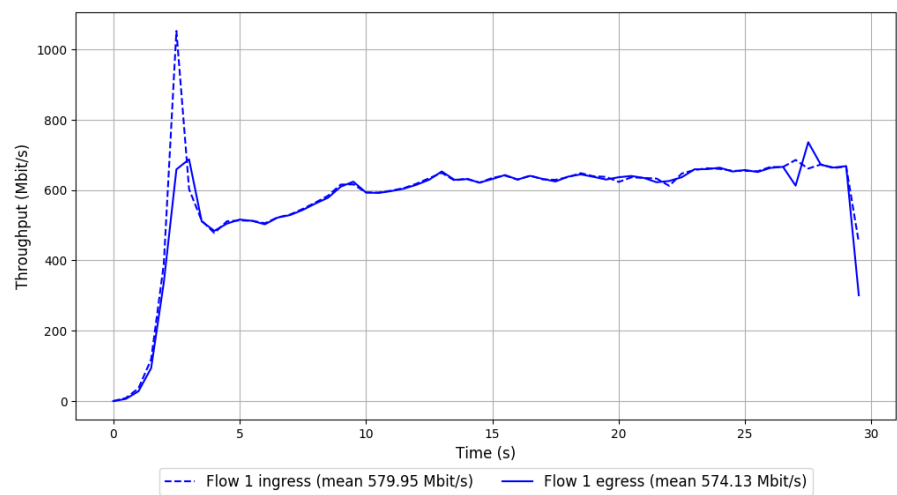
Run 3: Report of PCC — Data Link

Flow 1 ingress (mean 71.07 Mbit/s) — Flow 1 egress (mean 70.61 Mbit/s)

Flow 1 (95th percentile 115.94 ms)

69

```
Run 4: Statistics of PCC

Start at: 2017-09-21 09:58:20
End at: 2017-09-21 09:58:50

# Below is generated by plot.py at 2017-09-21 13:15:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 601.26 Mbit/s
95th percentile per-packet one-way delay: 152.450 ms
Loss rate: 1.80%
-- Flow 1:
Average throughput: 601.26 Mbit/s
95th percentile per-packet one-way delay: 152.450 ms
Loss rate: 1.80%
```
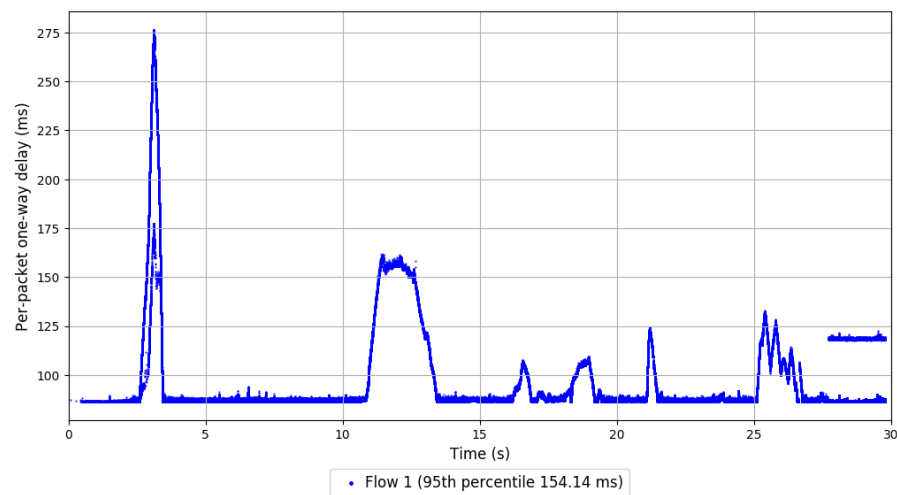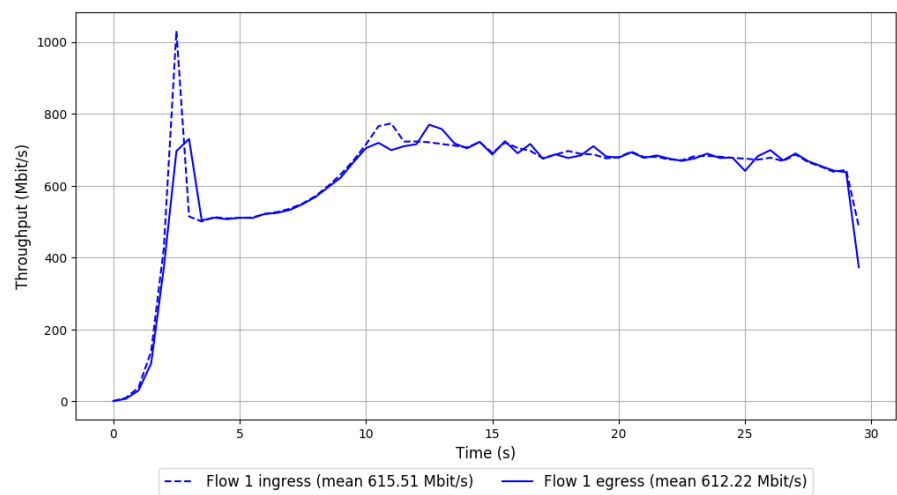
Run 4: Report of PCC — Data Link

71

```
Run 5: Statistics of PCC

Start at: 2017-09-21 10:09:41
End at: 2017-09-21 10:10:12

# Below is generated by plot.py at 2017-09-21 13:15:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 574.13 Mbit/s
95th percentile per-packet one-way delay: 104.865 ms
Loss rate: 1.66%
-- Flow 1:
Average throughput: 574.13 Mbit/s
95th percentile per-packet one-way delay: 104.865 ms
Loss rate: 1.66%
```
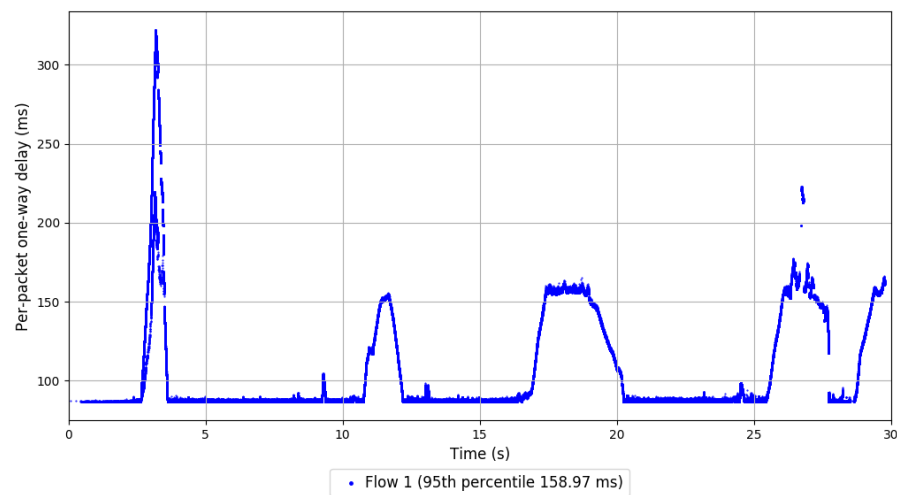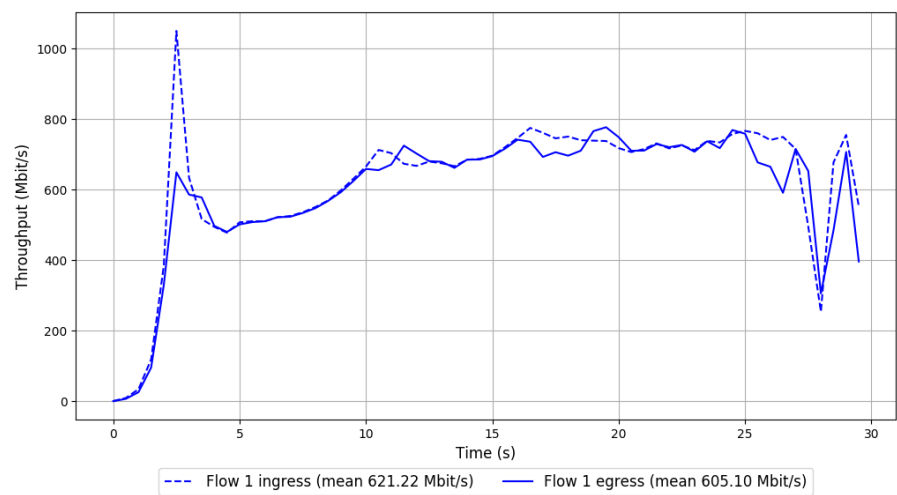
Run 5: Report of PCC — Data Link

Flow 1 ingress (mean 579.95 Mbit/s) — Flow 1 egress (mean 574.13 Mbit/s)

• Flow 1 (95th percentile 104.86 ms)

```
Run 6: Statistics of PCC

Start at: 2017-09-21 10:20:35
End at: 2017-09-21 10:21:05

# Below is generated by plot.py at 2017-09-21 13:16:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 612.22 Mbit/s
95th percentile per-packet one-way delay: 154.144 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 612.22 Mbit/s
95th percentile per-packet one-way delay: 154.144 ms
Loss rate: 1.12%
```
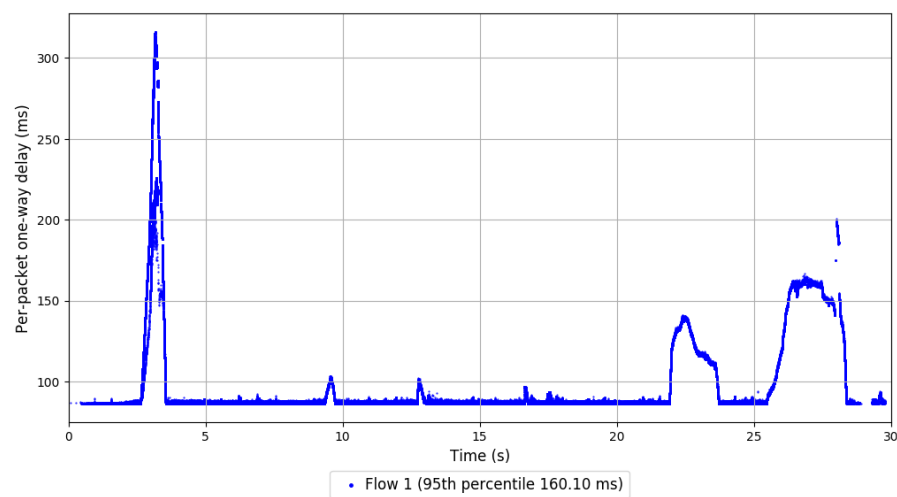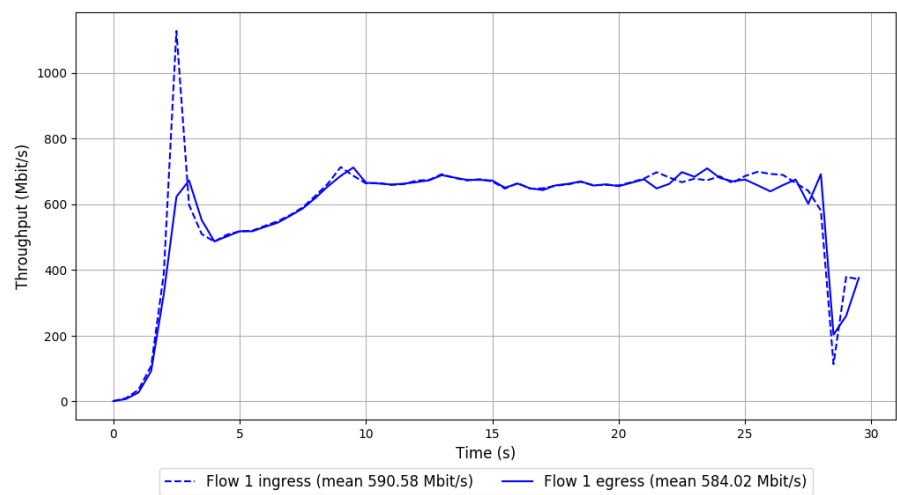
Run 6: Report of PCC — Data Link

```
Run 7: Statistics of PCC

Start at: 2017-09-21 10:31:34
End at: 2017-09-21 10:32:04

# Below is generated by plot.py at 2017-09-21 13:16:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 605.10 Mbit/s
95th percentile per-packet one-way delay: 158.970 ms
Loss rate: 3.16%
-- Flow 1:
Average throughput: 605.10 Mbit/s
95th percentile per-packet one-way delay: 158.970 ms
Loss rate: 3.16%
```
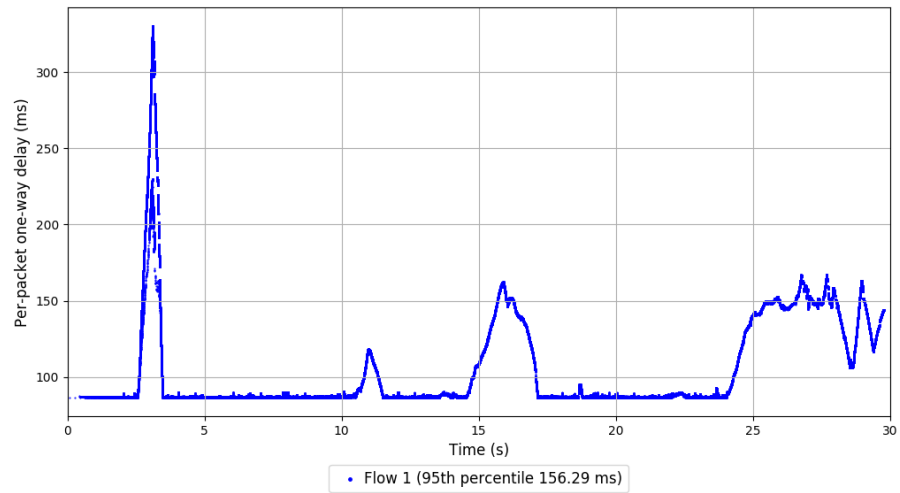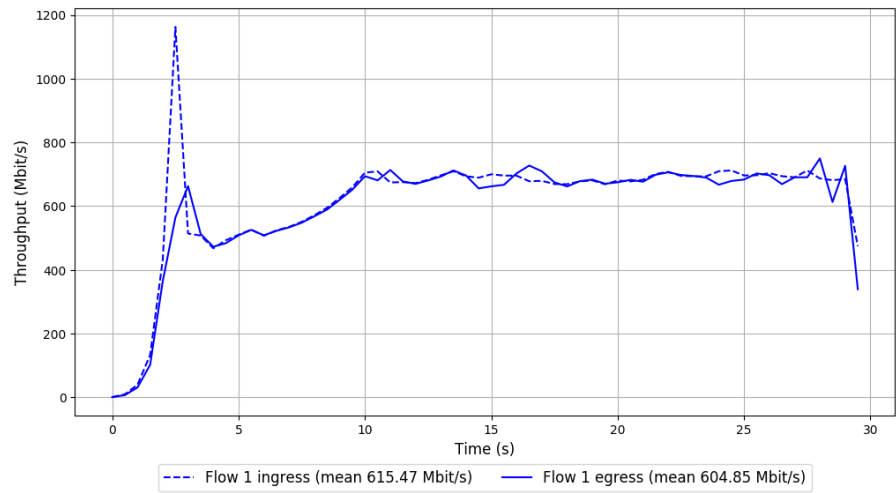
Run 7: Report of PCC — Data Link

Flow 1 ingress (mean 621.22 Mbit/s) --- Flow 1 egress (mean 605.10 Mbit/s)

• Flow 1 (95th percentile 158.97 ms)

```
Run 8: Statistics of PCC

Start at: 2017-09-21 10:42:32
End at: 2017-09-21 10:43:02

# Below is generated by plot.py at 2017-09-21 13:16:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 584.02 Mbit/s
95th percentile per-packet one-way delay: 160.098 ms
Loss rate: 1.69%
-- Flow 1:
Average throughput: 584.02 Mbit/s
95th percentile per-packet one-way delay: 160.098 ms
Loss rate: 1.69%
```
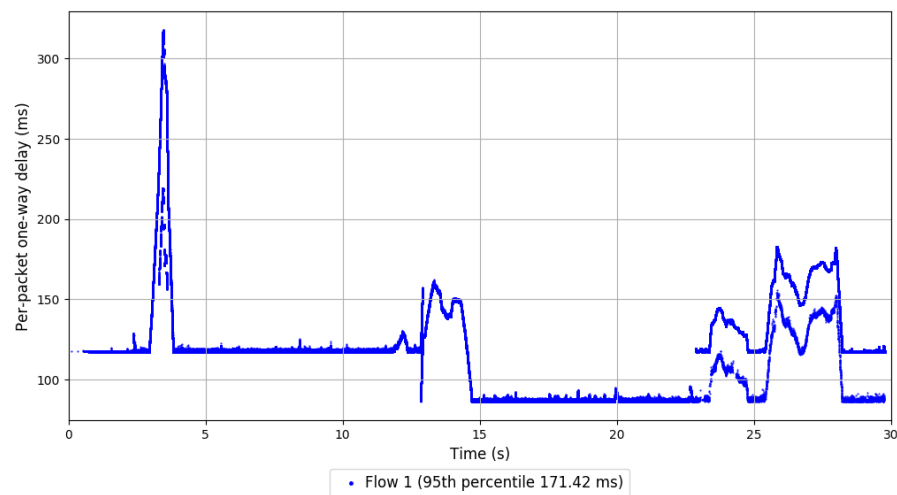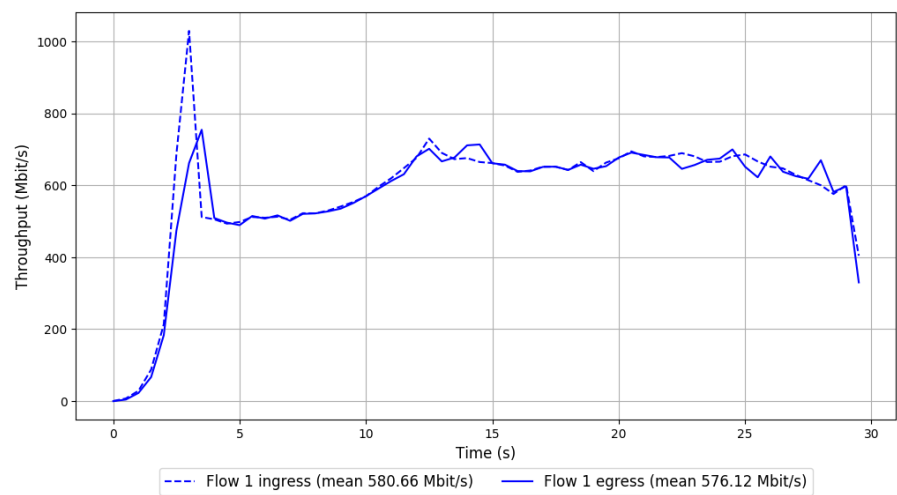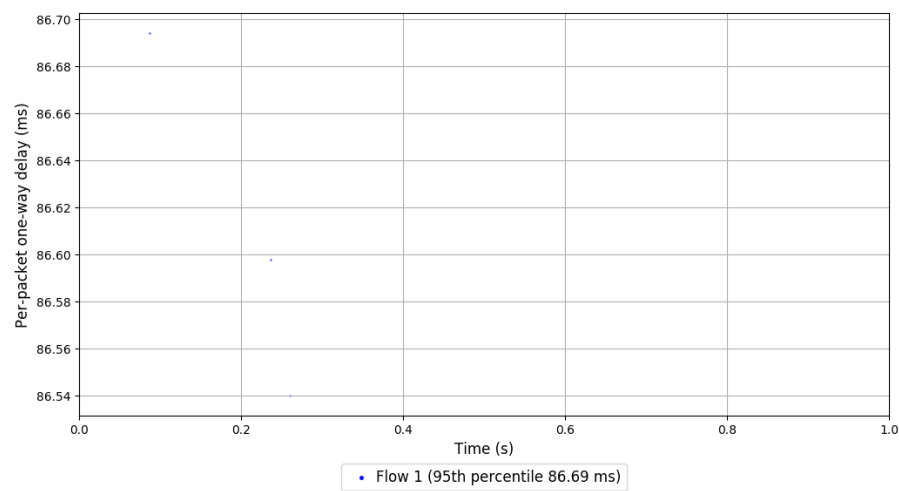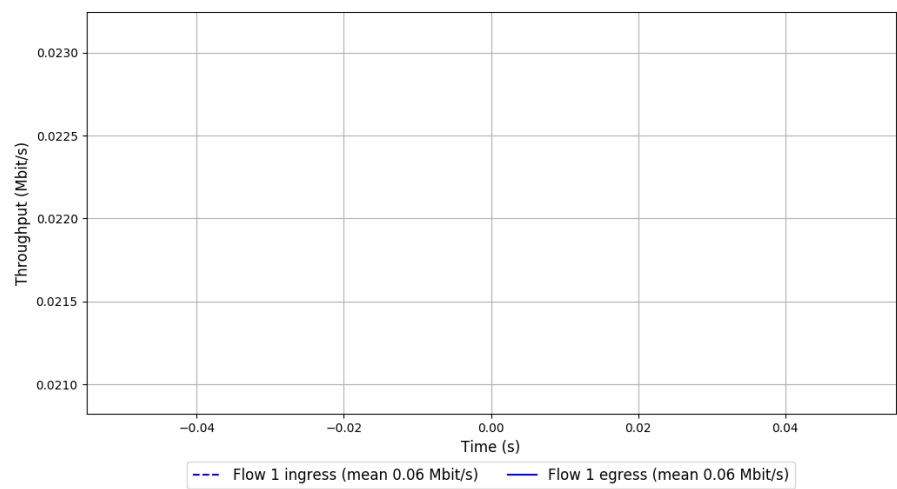
Run 8: Report of PCC — Data Link

Flow 1 ingress (mean 590.58 Mbit/s) —— Flow 1 egress (mean 584.02 Mbit/s)

• Flow 1 (95th percentile 160.10 ms)

79

```
Run 9: Statistics of PCC

Start at: 2017-09-21 10:53:17
End at: 2017-09-21 10:53:47

# Below is generated by plot.py at 2017-09-21 13:17:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 604.85 Mbit/s
95th percentile per-packet one-way delay: 156.294 ms
Loss rate: 2.30%
-- Flow 1:
Average throughput: 604.85 Mbit/s
95th percentile per-packet one-way delay: 156.294 ms
Loss rate: 2.30%
```

Run 9: Report of PCC — Data Link

```
Run 10: Statistics of PCC

Start at: 2017-09-21 11:04:15
End at: 2017-09-21 11:04:45


# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 576.12 Mbit/s
95th percentile per-packet one-way delay: 171.423 ms
Loss rate: 1.46%
-- Flow 1:
Average throughput: 576.12 Mbit/s
95th percentile per-packet one-way delay: 171.423 ms
Loss rate: 1.46%
```
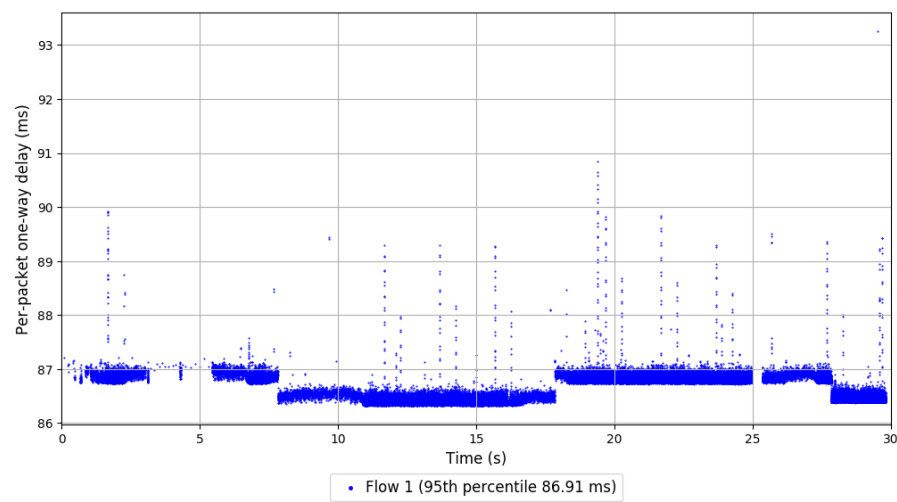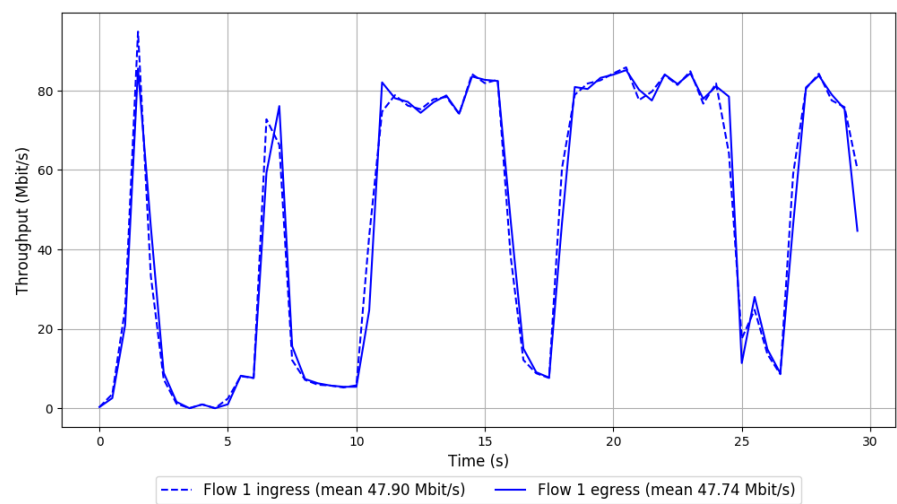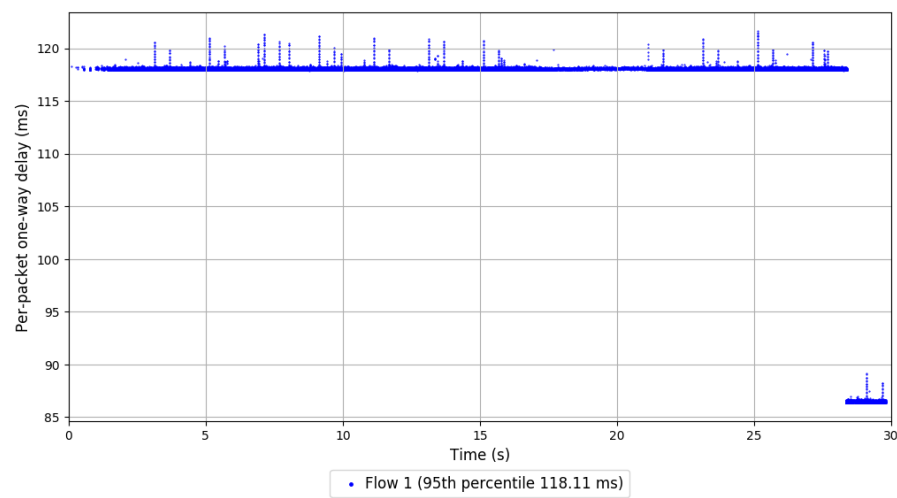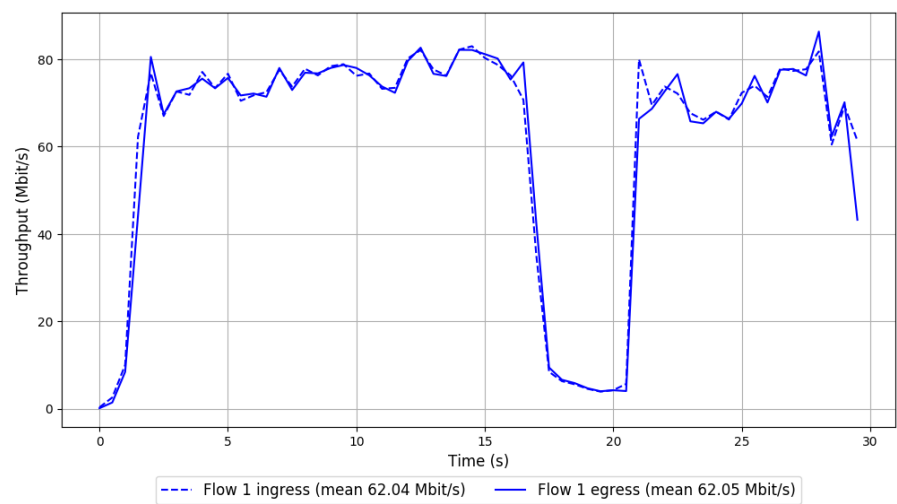
Run 10: Report of PCC — Data Link

Flow 1 ingress (mean 580.66 Mbit/s)   Flow 1 egress (mean 576.12 Mbit/s)

Flow 1 (95th percentile 171.42 ms)

Run 1: Statistics of QUIC Cubic

Start at: 2017-09-21 09:19:44
End at: 2017-09-21 09:20:14

Run 1: Report of QUIC Cubic — Data Link

Run 2: Statistics of QUIC Cubic

Start at: 2017-09-21 09:31:11
End at: 2017-09-21 09:31:41

Run 2: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 234.18 Mbit/s)   Flow 1 egress (mean 265.57 Mbit/s)

Flow 1 (95th percentile 87.38 ms)

```
Run 3: Statistics of QUIC Cubic

Start at: 2017-09-21 09:42:25
End at: 2017-09-21 09:42:55

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 47.74 Mbit/s
95th percentile per-packet one-way delay: 86.905 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 47.74 Mbit/s
95th percentile per-packet one-way delay: 86.905 ms
Loss rate: 1.01%
```
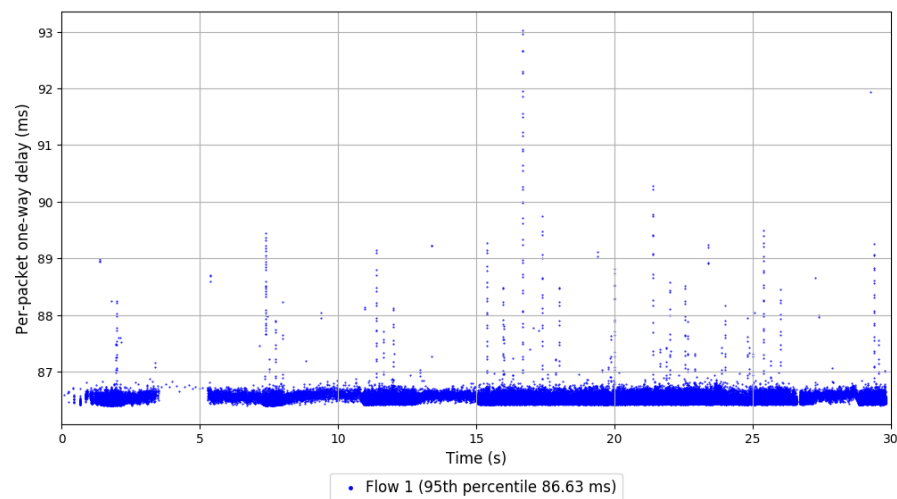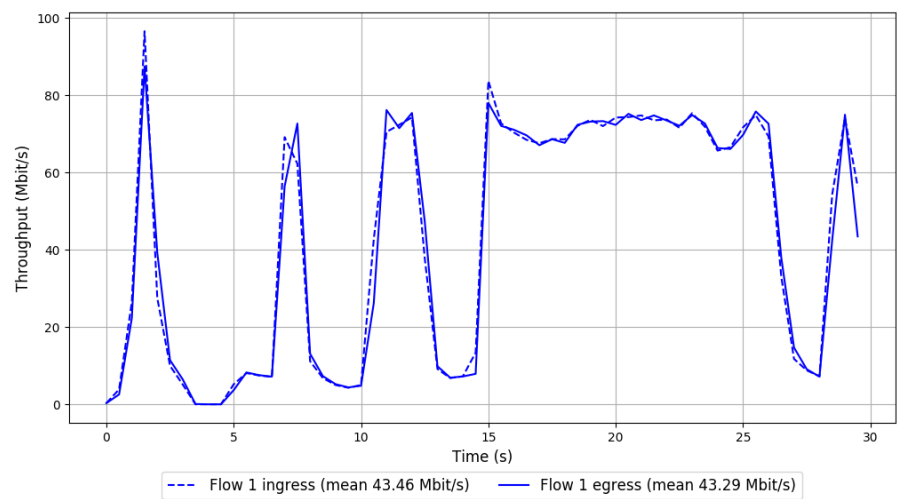
Run 3: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 47.90 Mbit/s) ----   Flow 1 egress (mean 47.74 Mbit/s) ——

Flow 1 (95th percentile 86.91 ms)

```
Run 4: Statistics of QUIC Cubic

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

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 62.05 Mbit/s
95th percentile per-packet one-way delay: 118.107 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 62.05 Mbit/s
95th percentile per-packet one-way delay: 118.107 ms
Loss rate: 0.80%
```
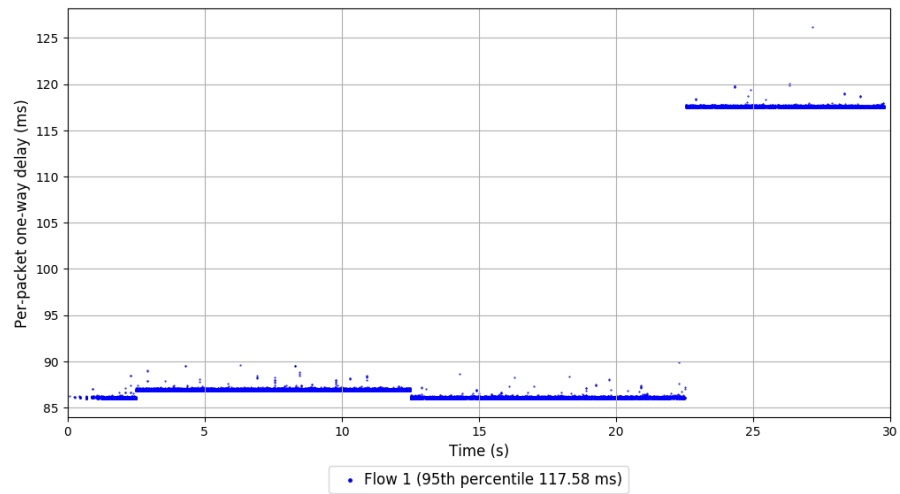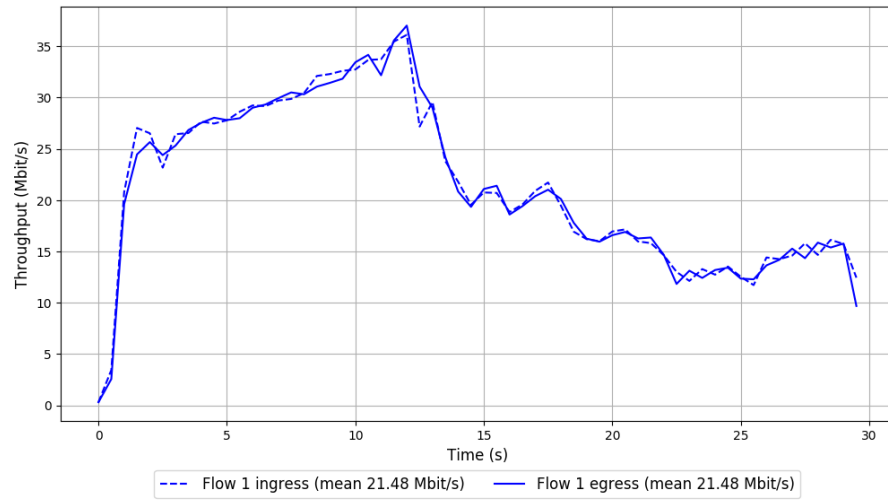
Run 4: Report of QUIC Cubic — Data Link

```
Run 5: Statistics of QUIC Cubic

Start at: 2017-09-21 10:03:57
End at: 2017-09-21 10:04:27

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 43.29 Mbit/s
95th percentile per-packet one-way delay: 86.626 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 43.29 Mbit/s
95th percentile per-packet one-way delay: 86.626 ms
Loss rate: 0.97%
```
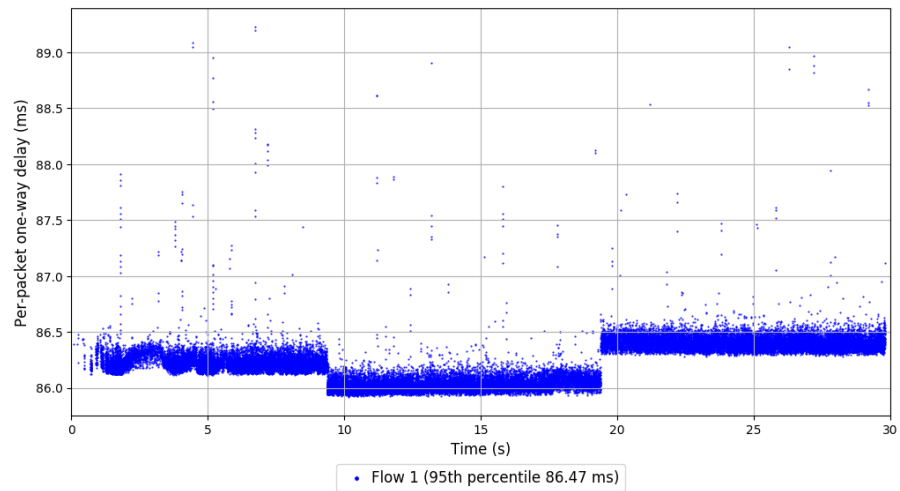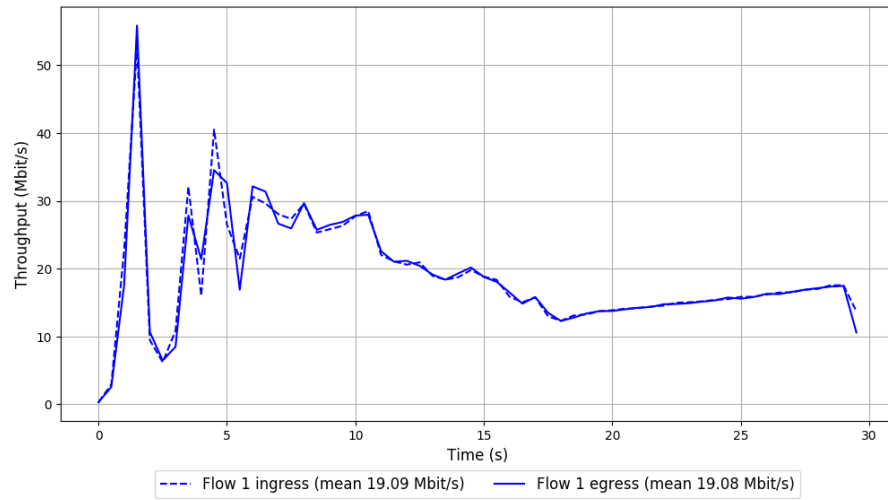
Run 5: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 43.46 Mbit/s) ----   Flow 1 egress (mean 43.29 Mbit/s) ——

• Flow 1 (95th percentile 86.63 ms)

```
Run 6: Statistics of QUIC Cubic

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


# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 21.48 Mbit/s
95th percentile per-packet one-way delay: 117.579 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 21.48 Mbit/s
95th percentile per-packet one-way delay: 117.579 ms
Loss rate: 0.55%
```
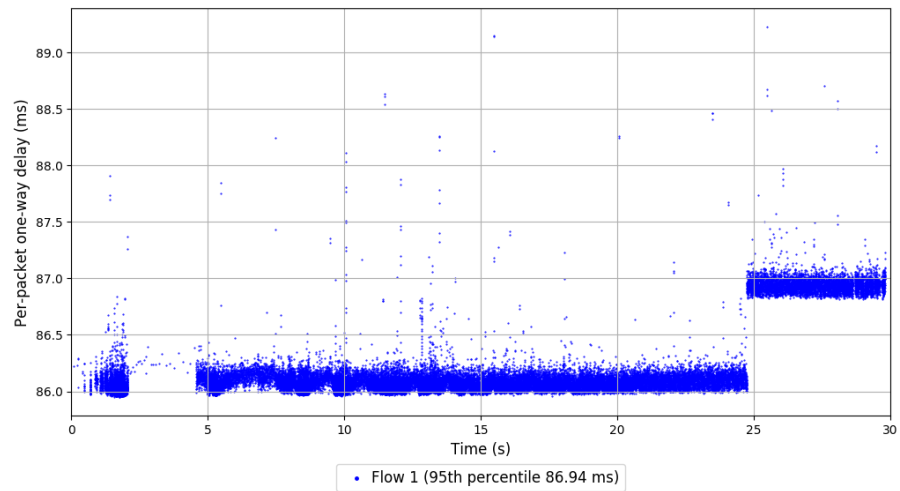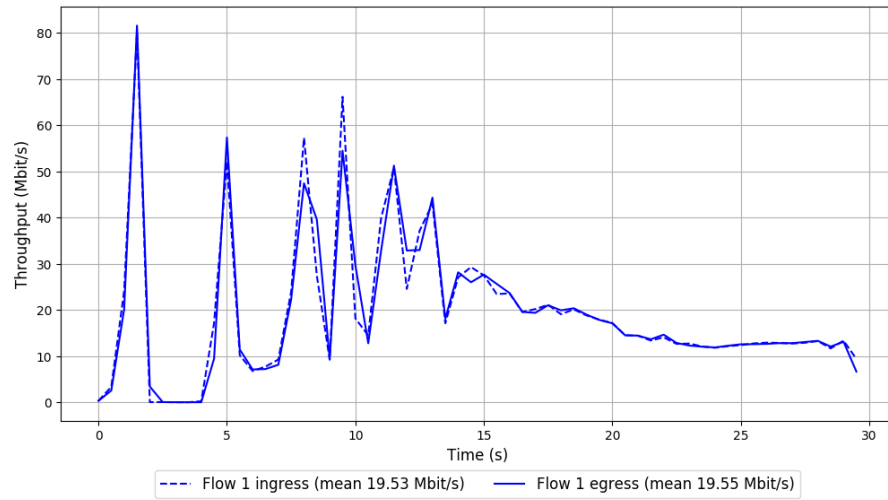
Run 6: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 21.48 Mbit/s) ----- Flow 1 egress (mean 21.48 Mbit/s)

Flow 1 (95th percentile 117.58 ms)

95

```
Run 7: Statistics of QUIC Cubic

Start at: 2017-09-21 10:26:13
End at: 2017-09-21 10:26:44

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 19.08 Mbit/s
95th percentile per-packet one-way delay: 86.465 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 19.08 Mbit/s
95th percentile per-packet one-way delay: 86.465 ms
Loss rate: 0.58%
```
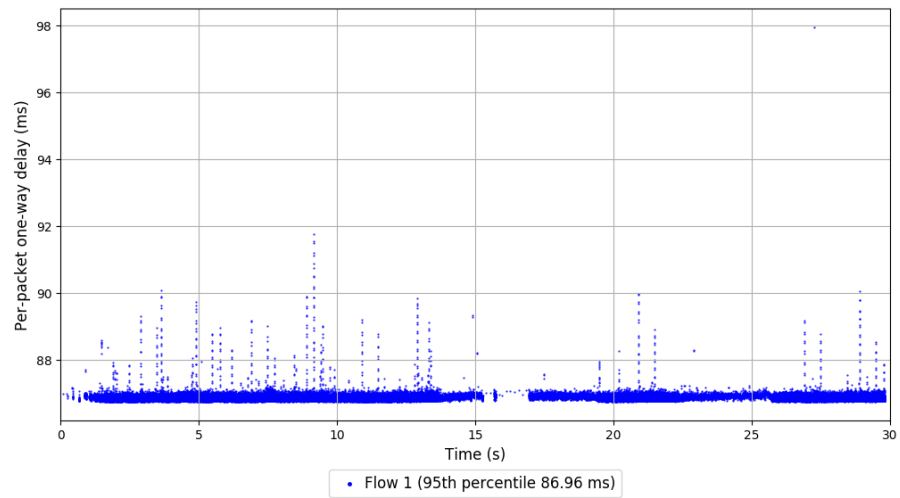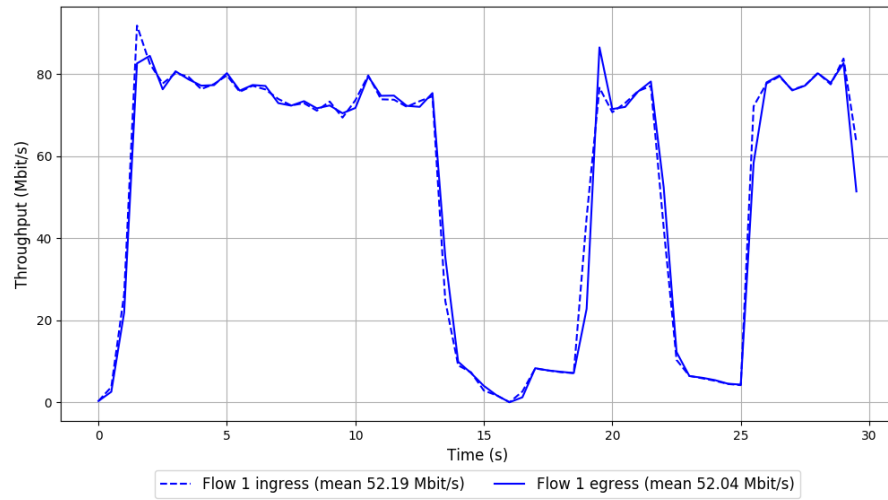
Run 7: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 19.09 Mbit/s)   Flow 1 egress (mean 19.08 Mbit/s)
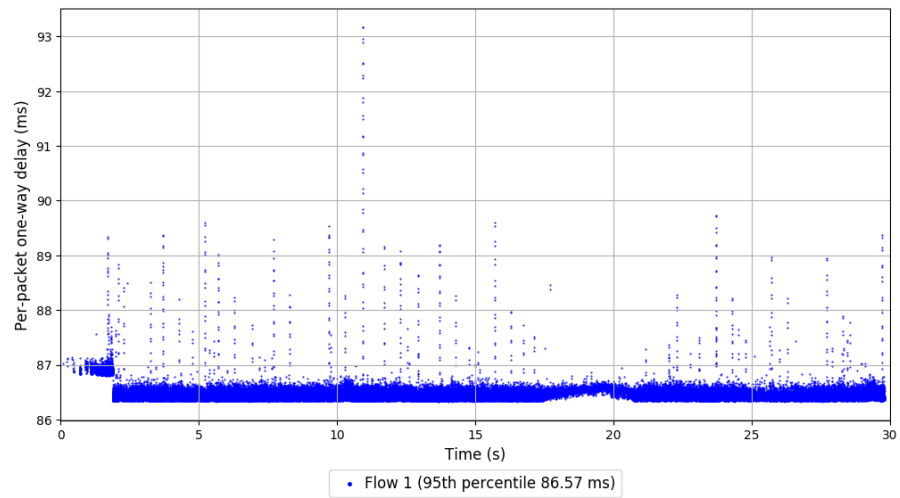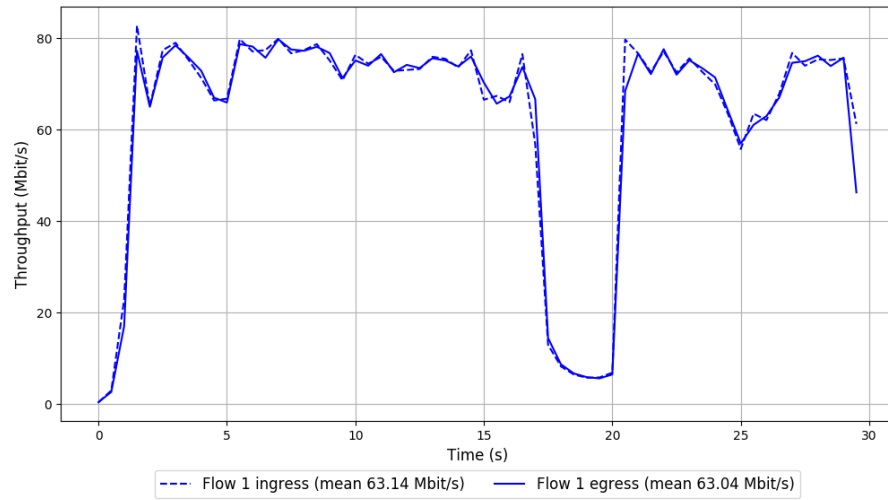

Flow 1 (95th percentile 86.47 ms)

```
Run 8: Statistics of QUIC Cubic

Start at: 2017-09-21 10:37:13
End at: 2017-09-21 10:37:43

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 19.55 Mbit/s
95th percentile per-packet one-way delay: 86.944 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 19.55 Mbit/s
95th percentile per-packet one-way delay: 86.944 ms
Loss rate: 0.46%
```
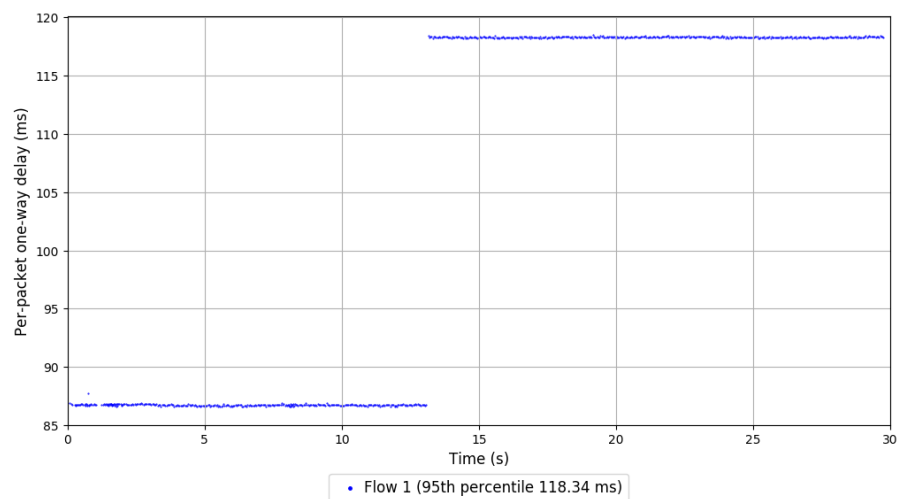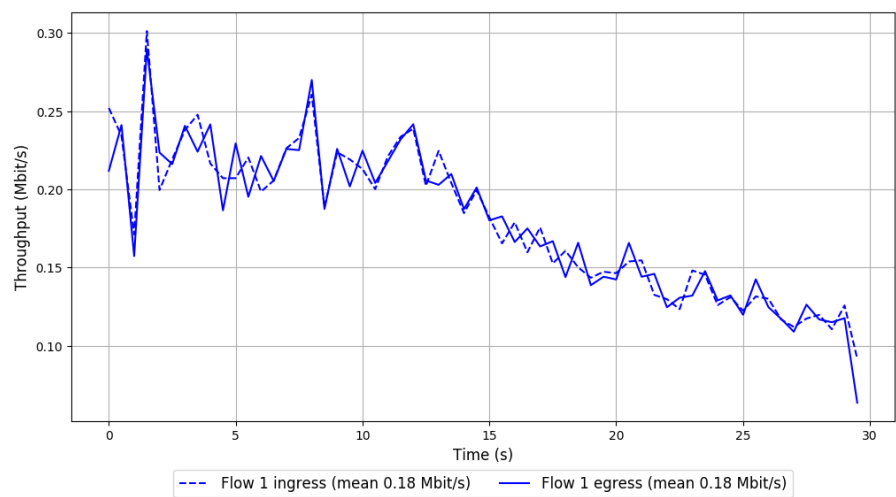
Run 8: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 19.53 Mbit/s)   Flow 1 egress (mean 19.55 Mbit/s)

Flow 1 (95th percentile 86.94 ms)

99

```
Run 9: Statistics of QUIC Cubic

Start at: 2017-09-21 10:47:54
End at: 2017-09-21 10:48:24

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 52.04 Mbit/s
95th percentile per-packet one-way delay: 86.958 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 52.04 Mbit/s
95th percentile per-packet one-way delay: 86.958 ms
Loss rate: 0.86%
```
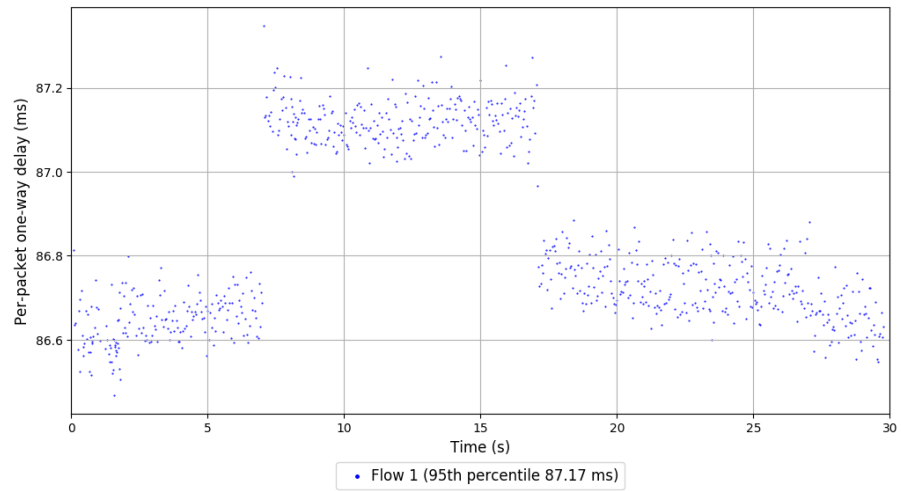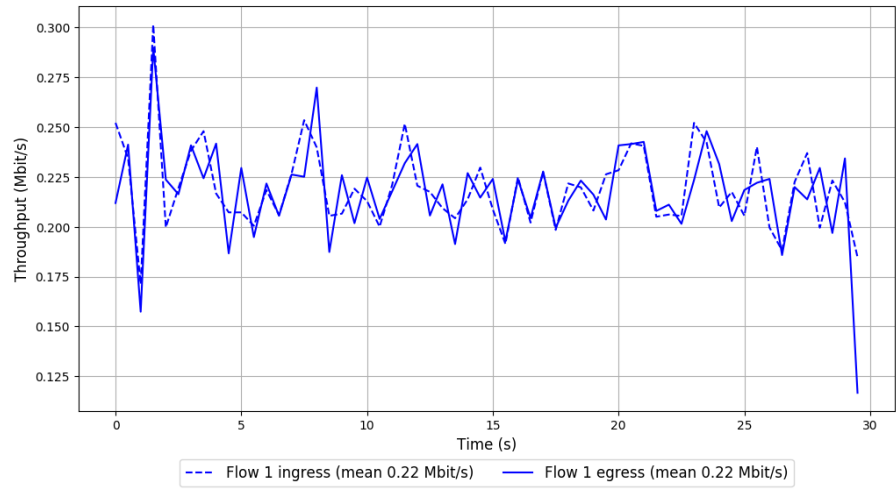
Run 9: Report of QUIC Cubic — Data Link

```
Run 10: Statistics of QUIC Cubic

Start at: 2017-09-21 10:58:51
End at: 2017-09-21 10:59:21


# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 63.04 Mbit/s
95th percentile per-packet one-way delay: 86.572 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 63.04 Mbit/s
95th percentile per-packet one-way delay: 86.572 ms
Loss rate: 0.75%
```

Run 10: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 63.14 Mbit/s) ---- Flow 1 egress (mean 63.04 Mbit/s) ——

Flow 1 (95th percentile 86.57 ms)

```
Run 1: Statistics of SCReAM

Start at: 2017-09-21 09:20:25
End at: 2017-09-21 09:20:55

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 118.336 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 118.336 ms
Loss rate: 0.51%
```
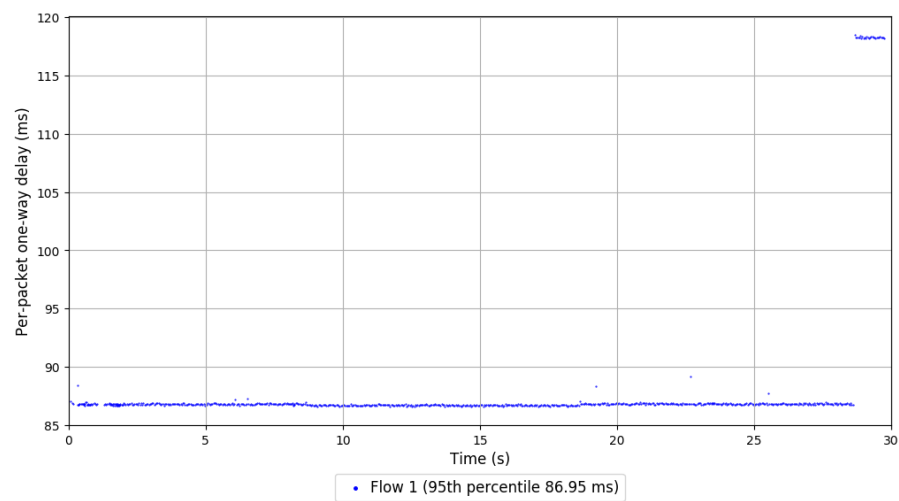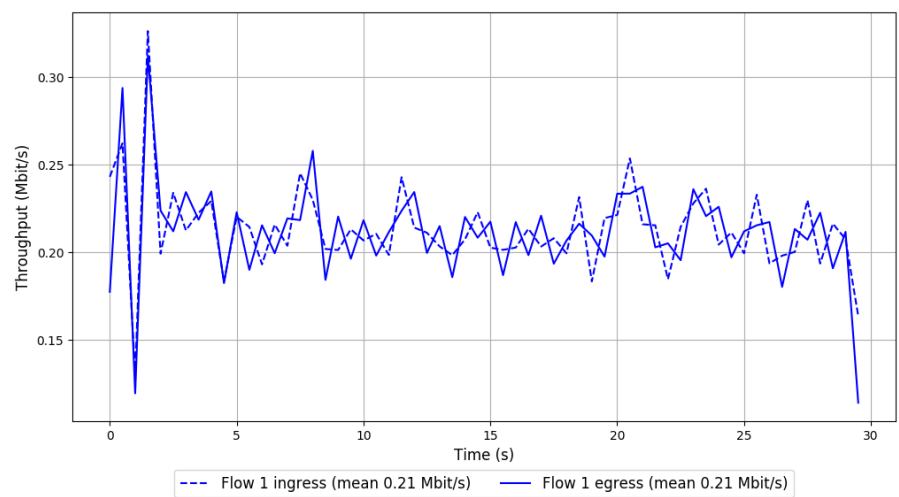
Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2017-09-21 09:31:51
End at: 2017-09-21 09:32:21

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.170 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.170 ms
Loss rate: 0.77%
```
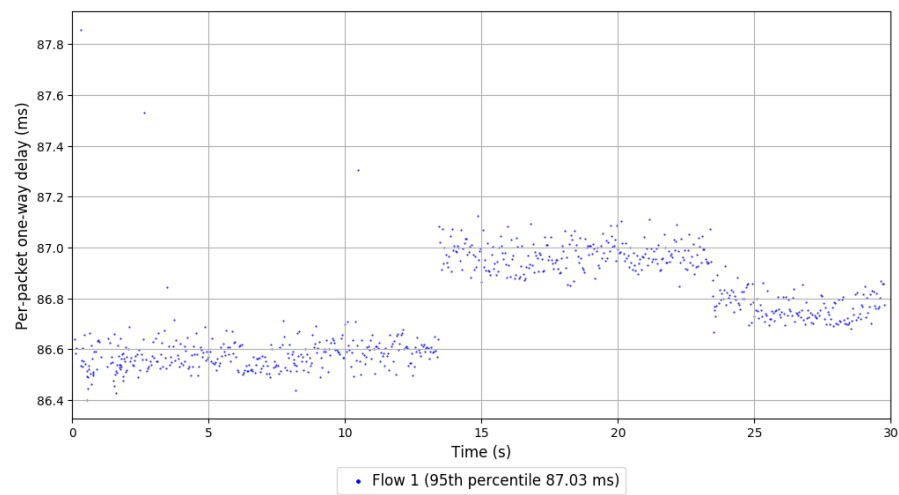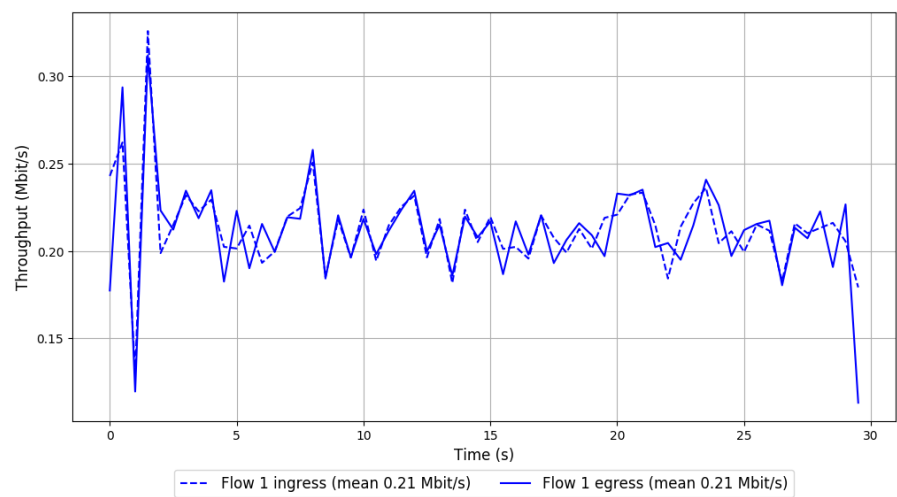
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

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

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 86.946 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 86.946 ms
Loss rate: 0.77%
```
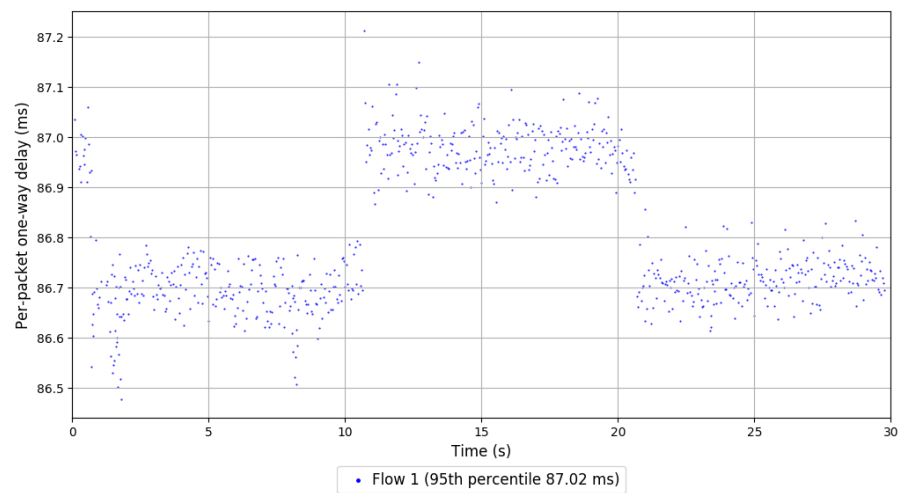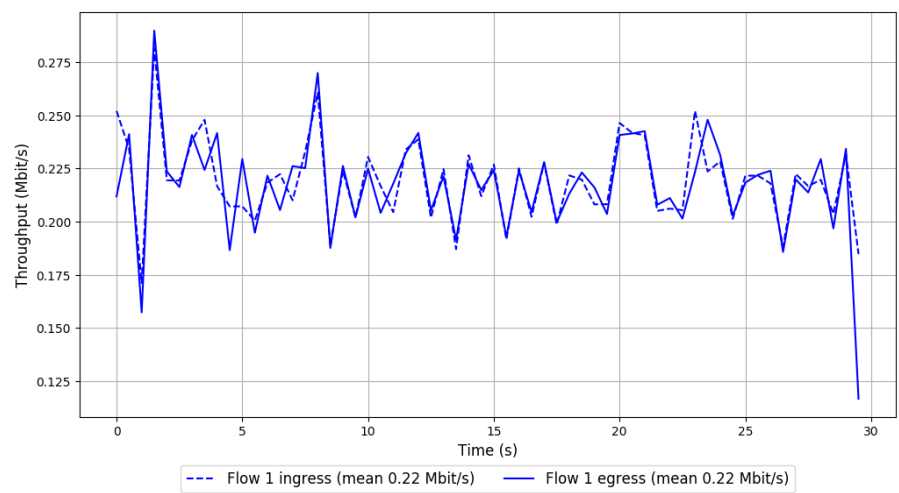
Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2017-09-21 09:53:34
End at: 2017-09-21 09:54:04

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 87.031 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 87.031 ms
Loss rate: 0.76%
```
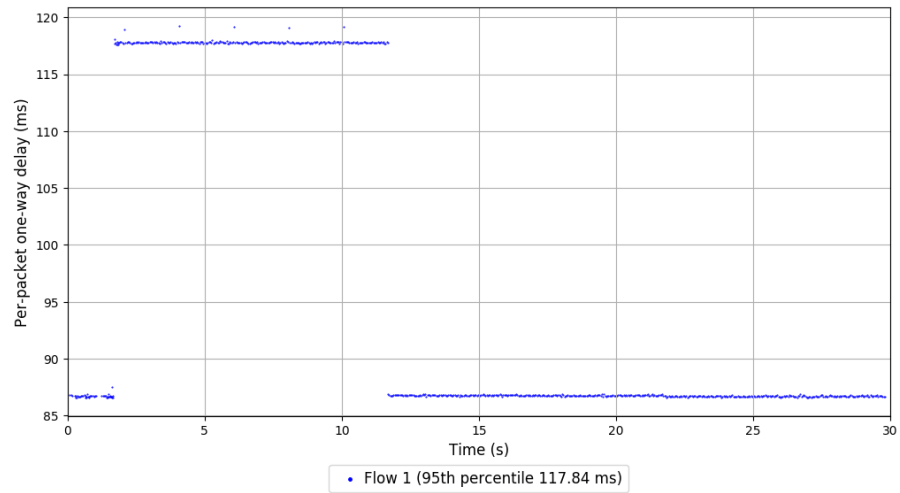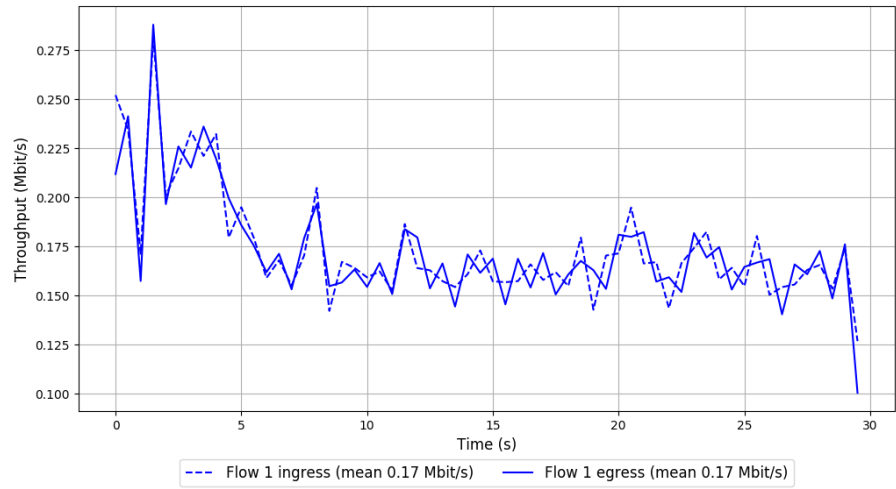
Run 4: Report of SCReAM — Data Link

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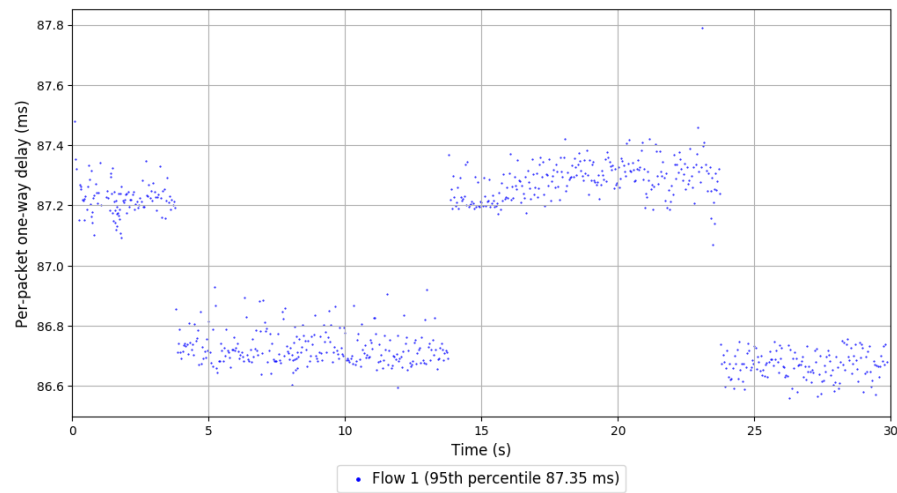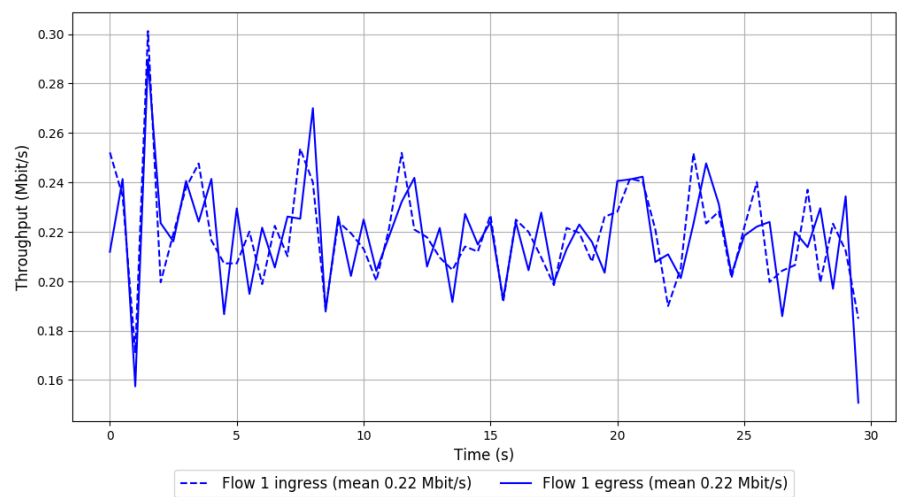

Flow 1 (95th percentile 87.03 ms)

```
Run 5: Statistics of SCReAM

Start at: 2017-09-21 10:04:42
End at: 2017-09-21 10:05:12

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.020 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.020 ms
Loss rate: 0.77%
```

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 87.02 ms)

```
Run 6: Statistics of SCReAM

Start at: 2017-09-21 10:15:51
End at: 2017-09-21 10:16:21

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 117.842 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 117.842 ms
Loss rate: 0.49%
```
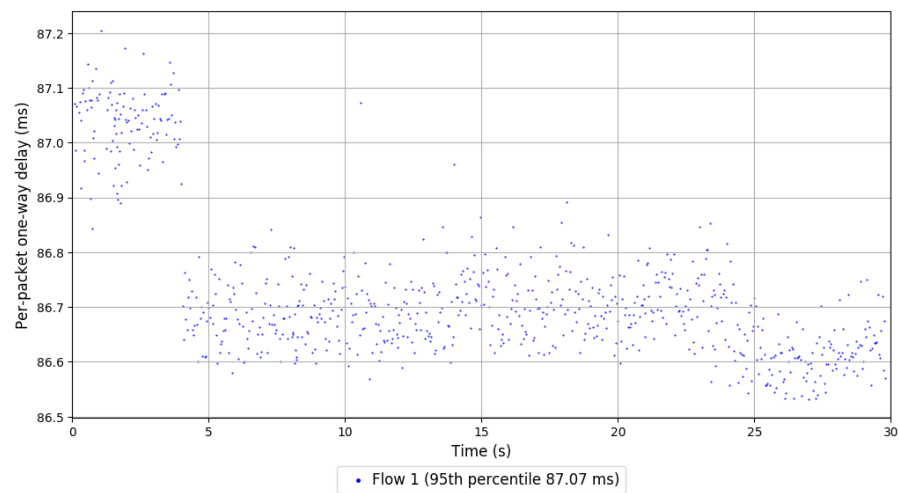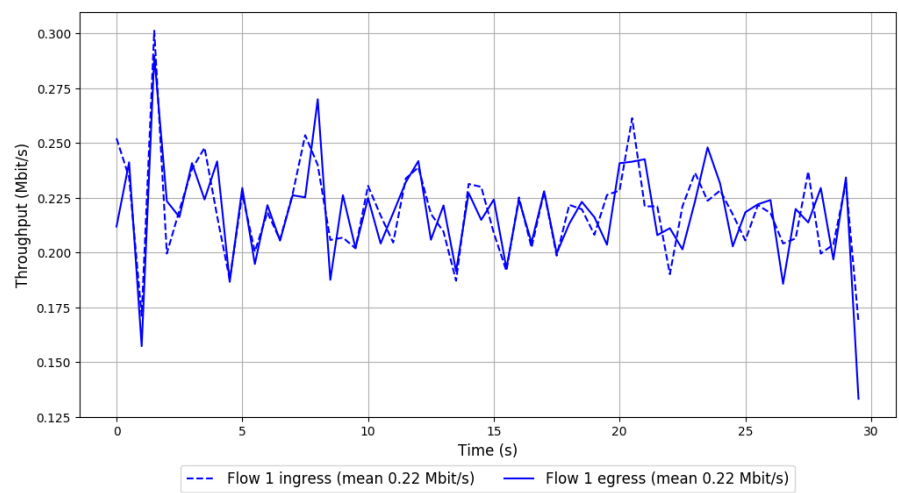
Run 6: Report of SCReAM — Data Link

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

• Flow 1 (95th percentile 117.84 ms)

```
Run 7: Statistics of SCReAM

Start at: 2017-09-21 10:26:54
End at: 2017-09-21 10:27:24


# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.349 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.349 ms
Loss rate: 0.51%
```
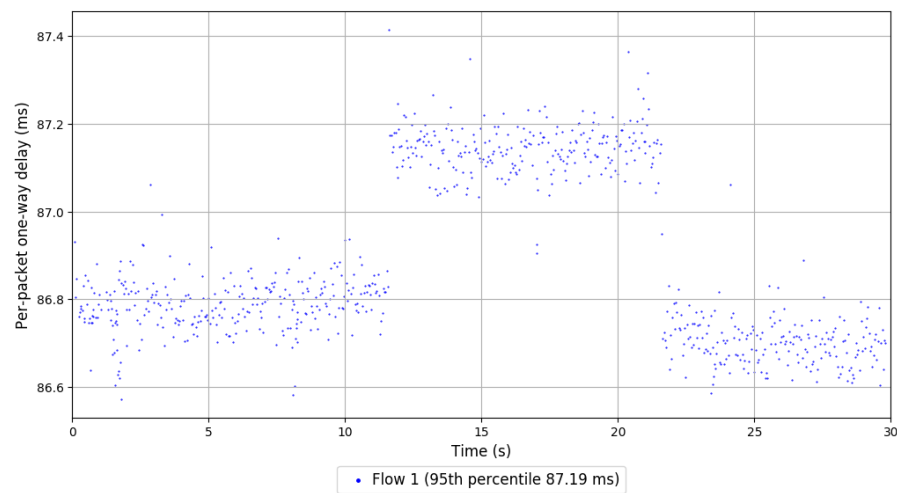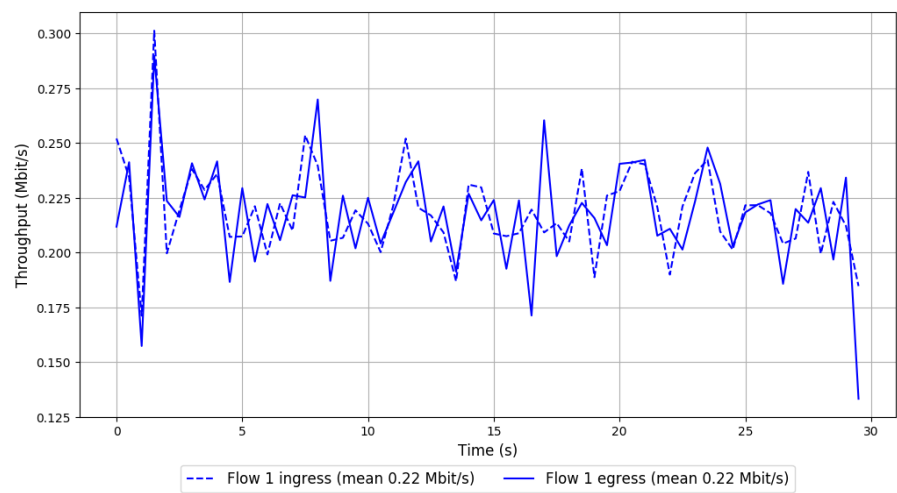
Run 7: Report of SCReAM — Data Link

```
Run 8: Statistics of SCReAM

Start at: 2017-09-21 10:37:54
End at: 2017-09-21 10:38:24

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.066 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.066 ms
Loss rate: 0.52%
```
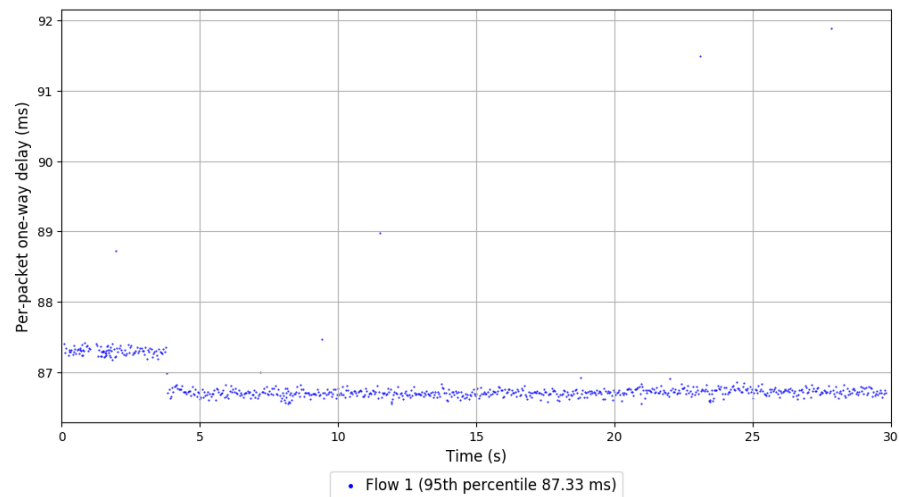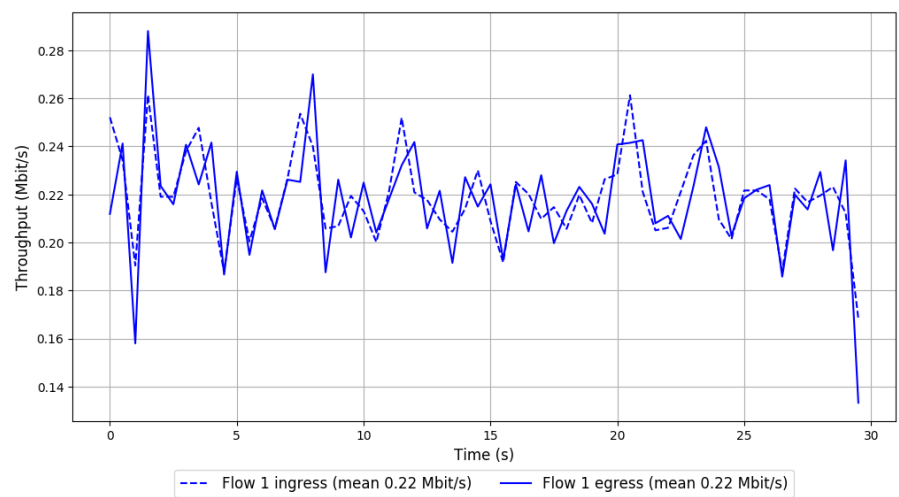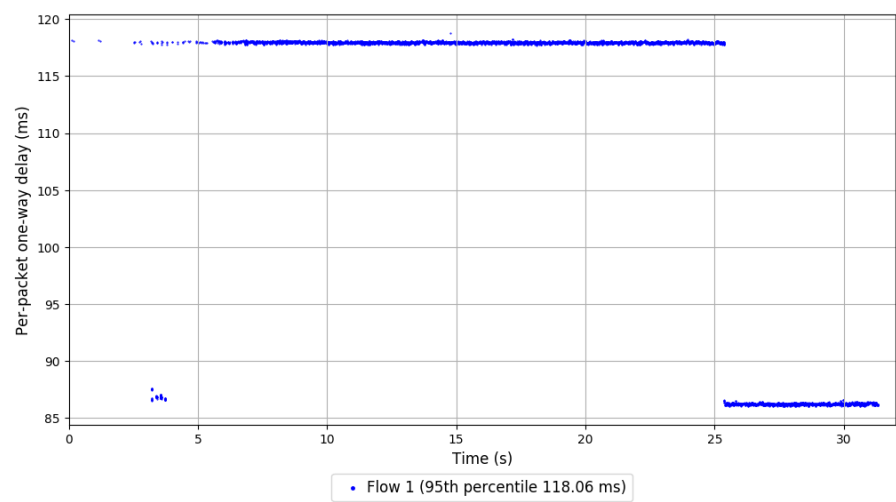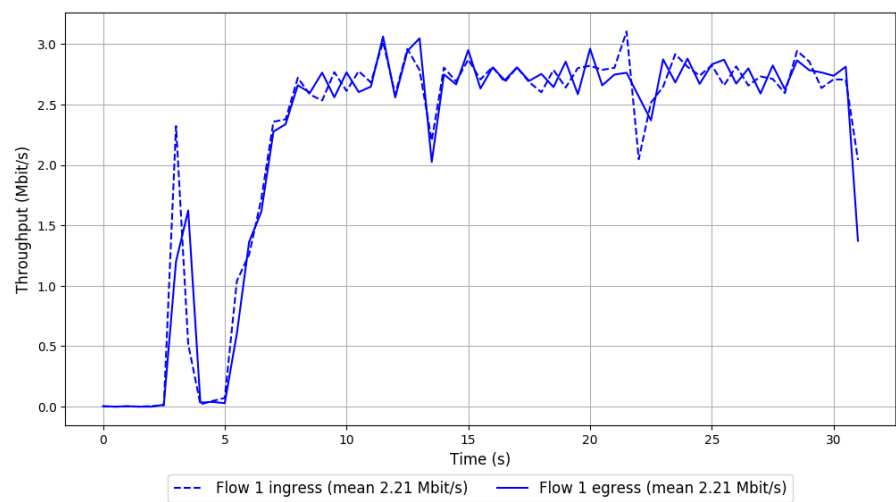
Run 8: Report of SCReAM — Data Link

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

Flow 1 (95th percentile 87.07 ms)

```
Run 9: Statistics of SCReAM

Start at: 2017-09-21 10:48:36
End at: 2017-09-21 10:49:06

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.191 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.191 ms
Loss rate: 0.64%
```

Run 9: Report of SCReAM — Data Link

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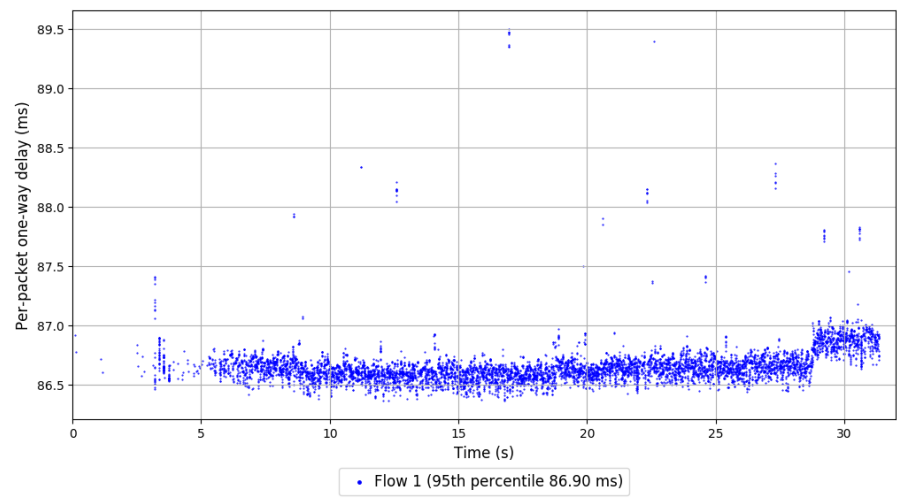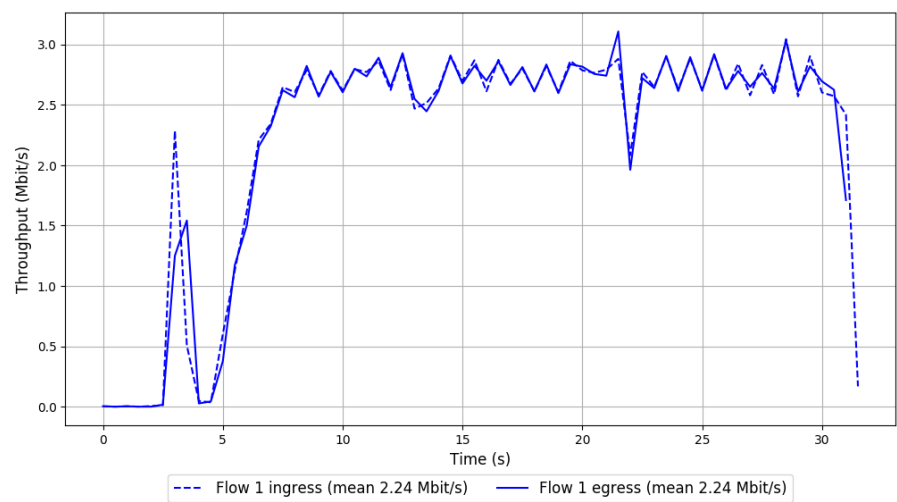

Flow 1 (95th percentile 87.19 ms)

```
Run 10: Statistics of SCReAM

Start at: 2017-09-21 10:59:34
End at: 2017-09-21 11:00:04

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.327 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.327 ms
Loss rate: 0.52%
```

Run 10: 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 87.33 ms)

123

```
Run 1: Statistics of WebRTC media

Start at: 2017-09-21 09:28:39
End at: 2017-09-21 09:29:09

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 118.062 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 118.062 ms
Loss rate: 0.72%
```
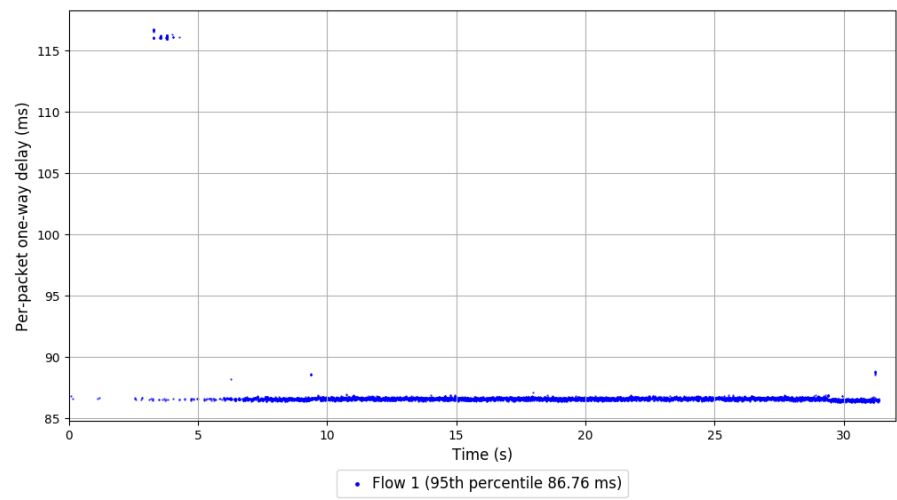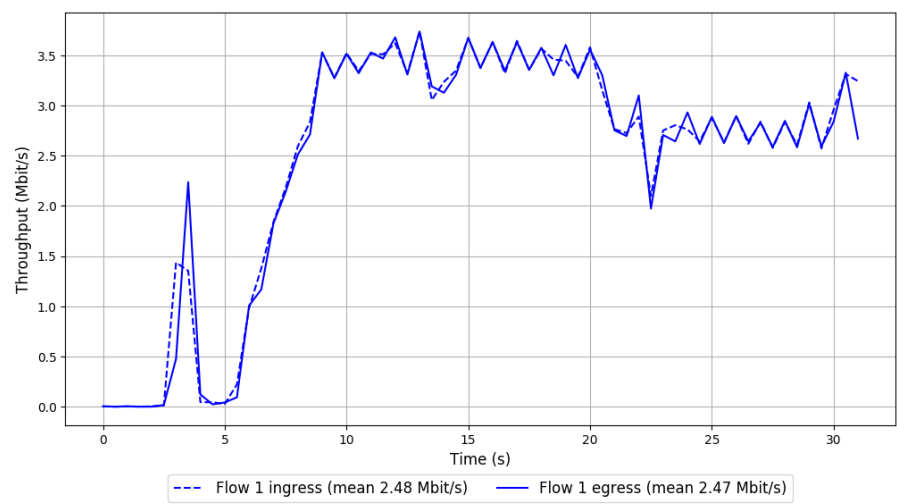
Run 1: Report of WebRTC media — Data Link

Flow 1 ingress (mean 2.21 Mbit/s)   Flow 1 egress (mean 2.21 Mbit/s)

Flow 1 (95th percentile 118.06 ms)

```
Run 2: Statistics of WebRTC media

Start at: 2017-09-21 09:40:06
End at: 2017-09-21 09:40:36

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.24 Mbit/s
95th percentile per-packet one-way delay: 86.898 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 2.24 Mbit/s
95th percentile per-packet one-way delay: 86.898 ms
Loss rate: 0.87%
```
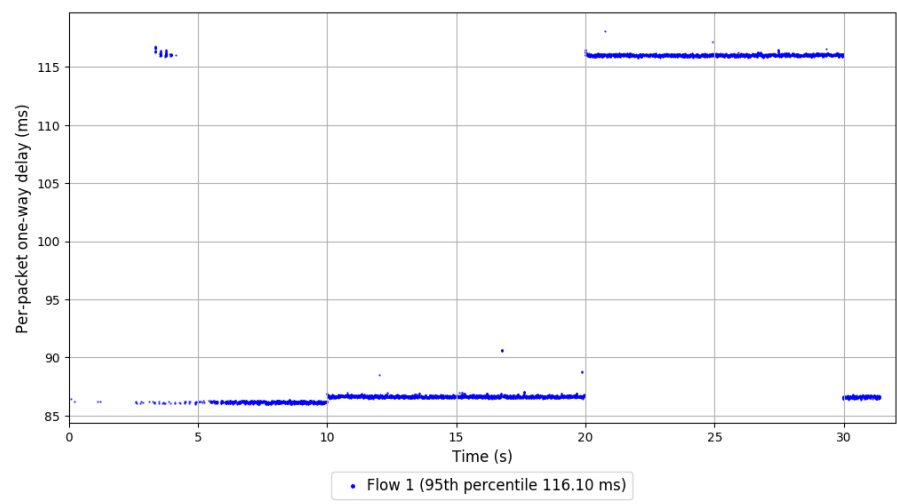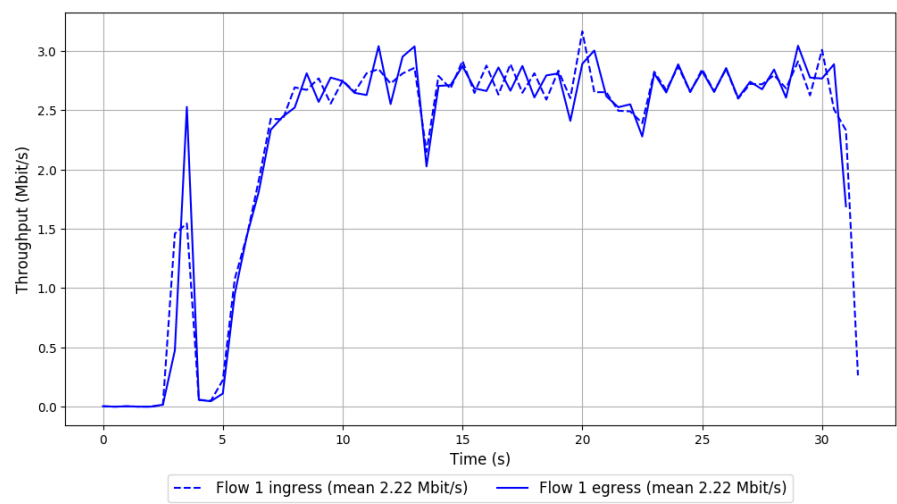
Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2017-09-21 09:50:45
End at: 2017-09-21 09:51:15

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.47 Mbit/s
95th percentile per-packet one-way delay: 86.756 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 2.47 Mbit/s
95th percentile per-packet one-way delay: 86.756 ms
Loss rate: 0.74%
```
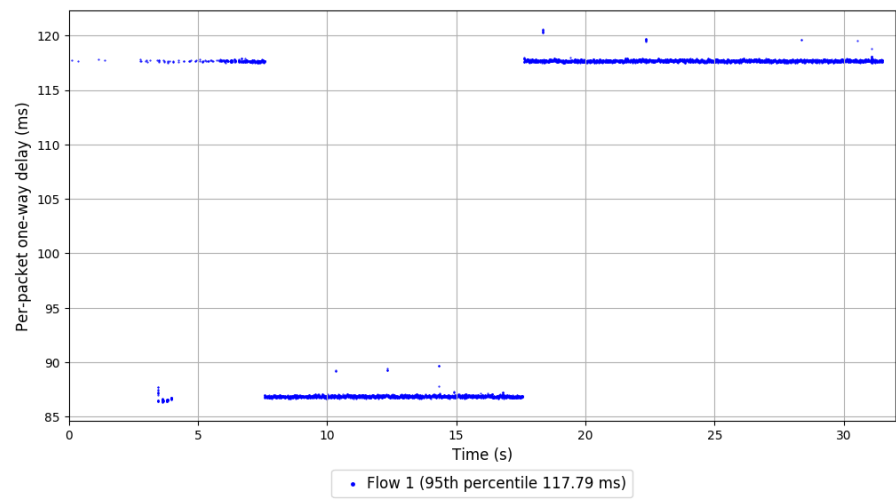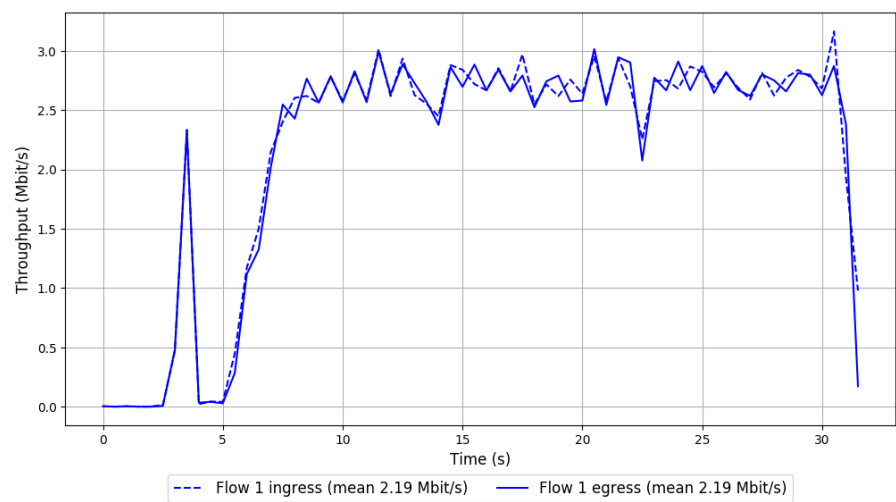
Run 3: Report of WebRTC media — Data Link

Flow 1 ingress (mean 2.48 Mbit/s)   Flow 1 egress (mean 2.47 Mbit/s)

Flow 1 (95th percentile 86.76 ms)

```
Run 4: Statistics of WebRTC media

Start at: 2017-09-21 10:01:30
End at: 2017-09-21 10:02:00

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.22 Mbit/s
95th percentile per-packet one-way delay: 116.098 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 2.22 Mbit/s
95th percentile per-packet one-way delay: 116.098 ms
Loss rate: 0.85%
```
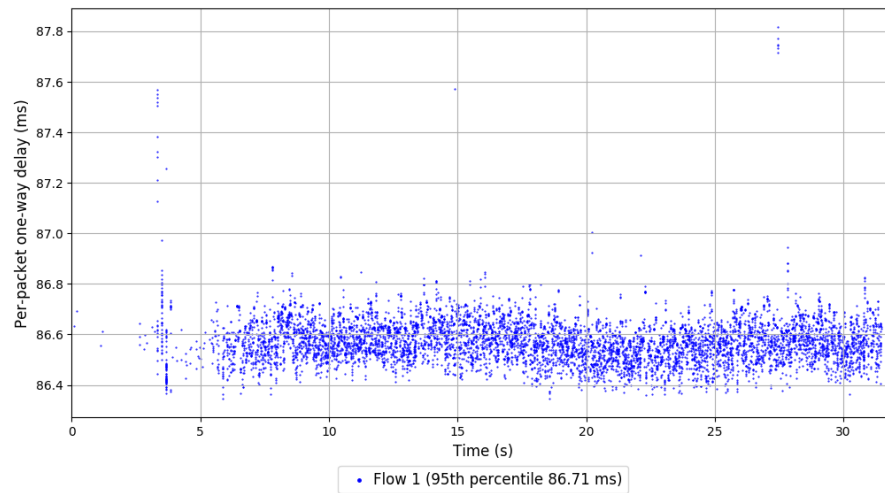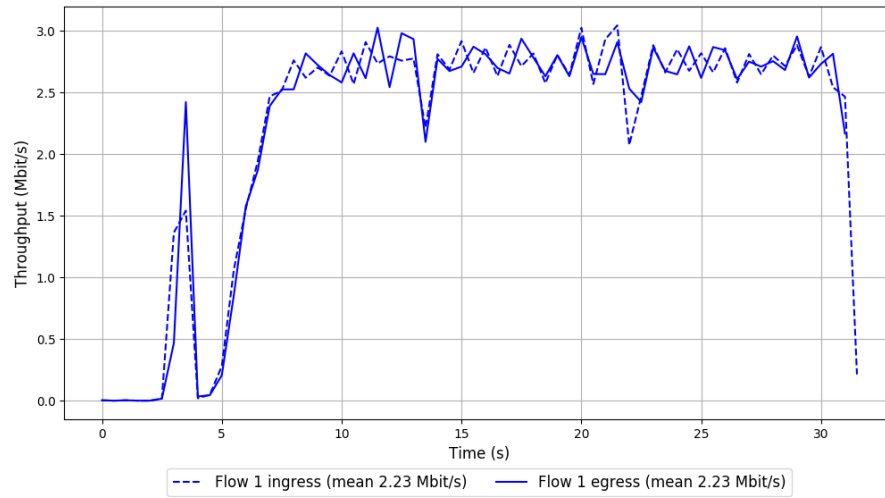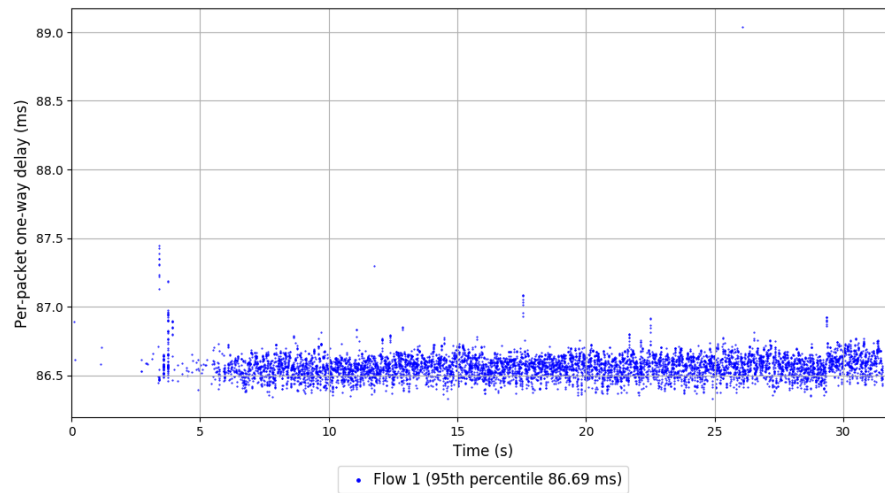
Run 4: Report of WebRTC media — Data Link

Flow 1 ingress (mean 2.22 Mbit/s)   Flow 1 egress (mean 2.22 Mbit/s)

Flow 1 (95th percentile 116.10 ms)

```
Run 5: Statistics of WebRTC media

Start at: 2017-09-21 10:13:02
End at: 2017-09-21 10:13:32

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.19 Mbit/s
95th percentile per-packet one-way delay: 117.788 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 2.19 Mbit/s
95th percentile per-packet one-way delay: 117.788 ms
Loss rate: 0.97%
```
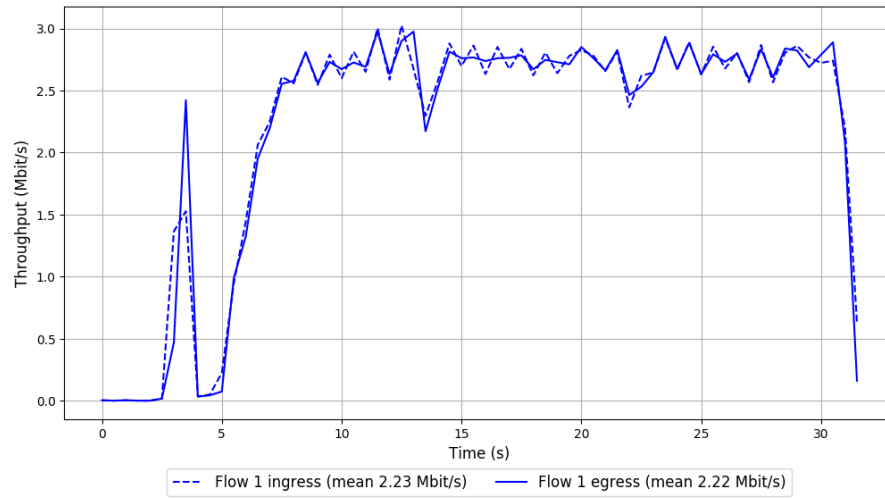
Run 5: Report of WebRTC media — Data Link

```
Run 6: Statistics of WebRTC media

Start at: 2017-09-21 10:23:52
End at: 2017-09-21 10:24:22


# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 86.706 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 86.706 ms
Loss rate: 0.59%
```
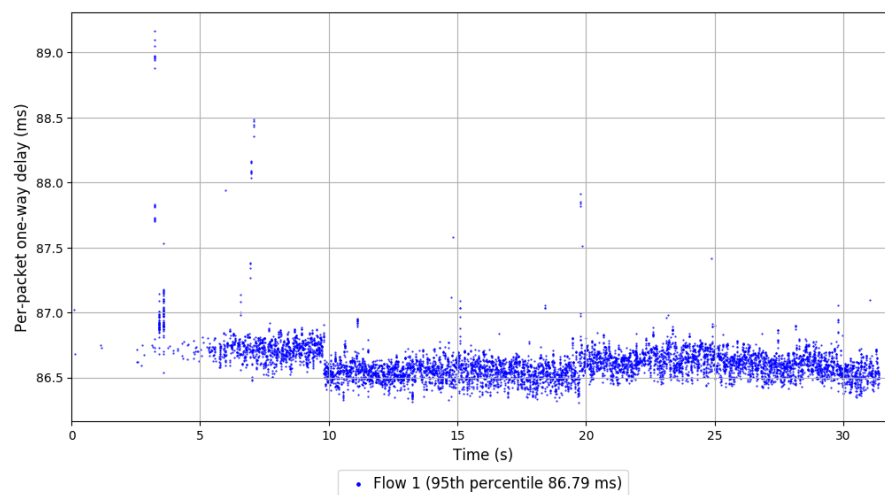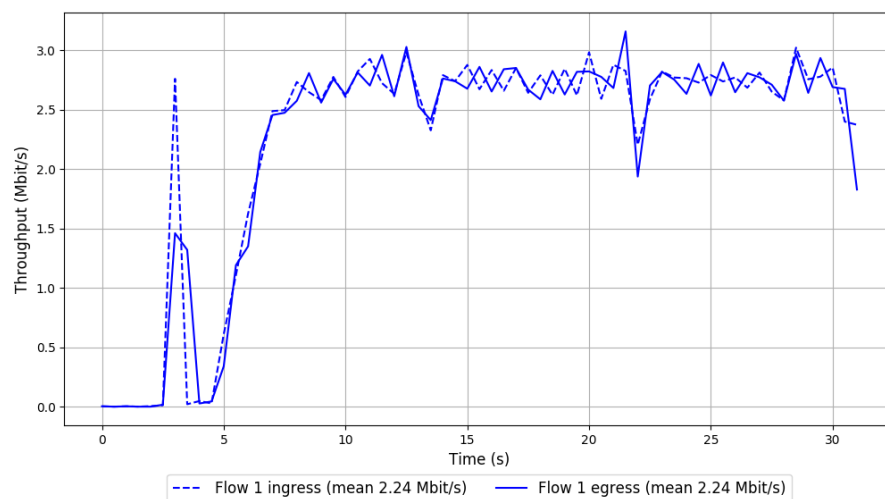
Run 6: Report of WebRTC media — Data Link

```
Run 7: Statistics of WebRTC media

Start at: 2017-09-21 10:34:50
End at: 2017-09-21 10:35:20

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.22 Mbit/s
95th percentile per-packet one-way delay: 86.691 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 2.22 Mbit/s
95th percentile per-packet one-way delay: 86.691 ms
Loss rate: 0.62%
```
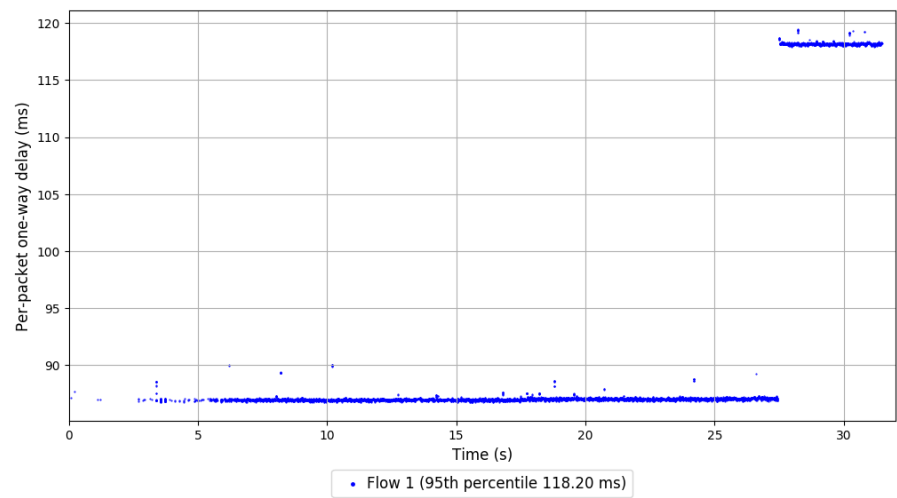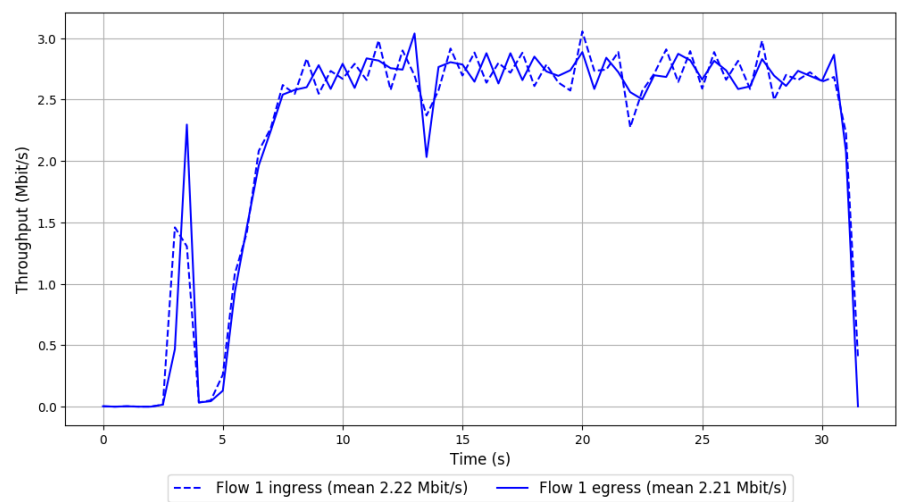
Run 7: Report of WebRTC media — Data Link

Flow 1 ingress (mean 2.23 Mbit/s)   Flow 1 egress (mean 2.22 Mbit/s)

Flow 1 (95th percentile 86.69 ms)

```
Run 8: Statistics of WebRTC media

Start at: 2017-09-21 10:45:40
End at: 2017-09-21 10:46:10

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.24 Mbit/s
95th percentile per-packet one-way delay: 86.793 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 2.24 Mbit/s
95th percentile per-packet one-way delay: 86.793 ms
Loss rate: 0.62%
```
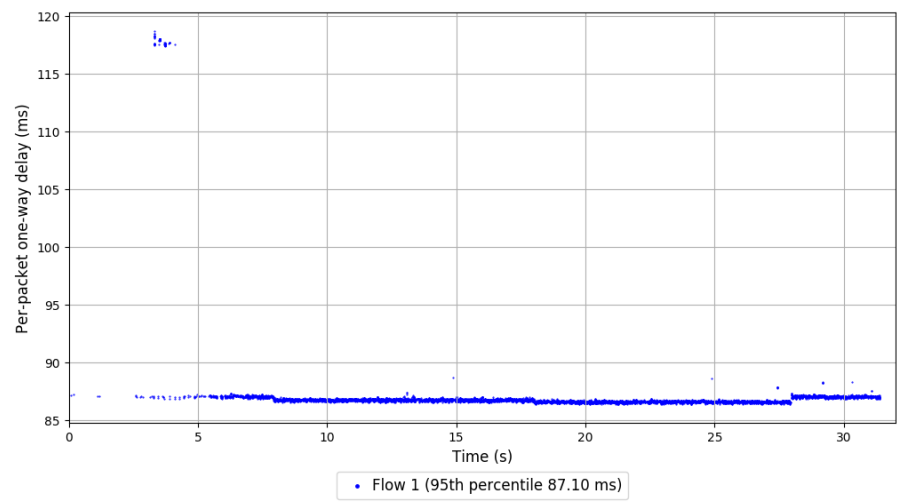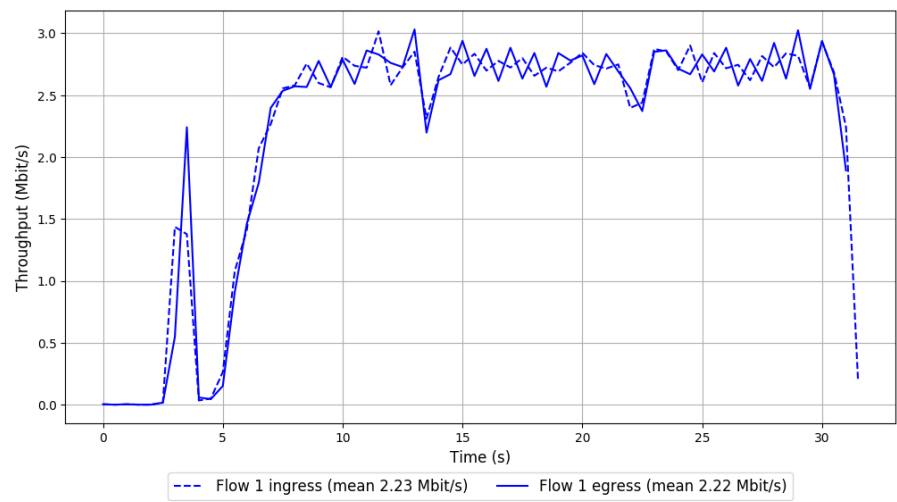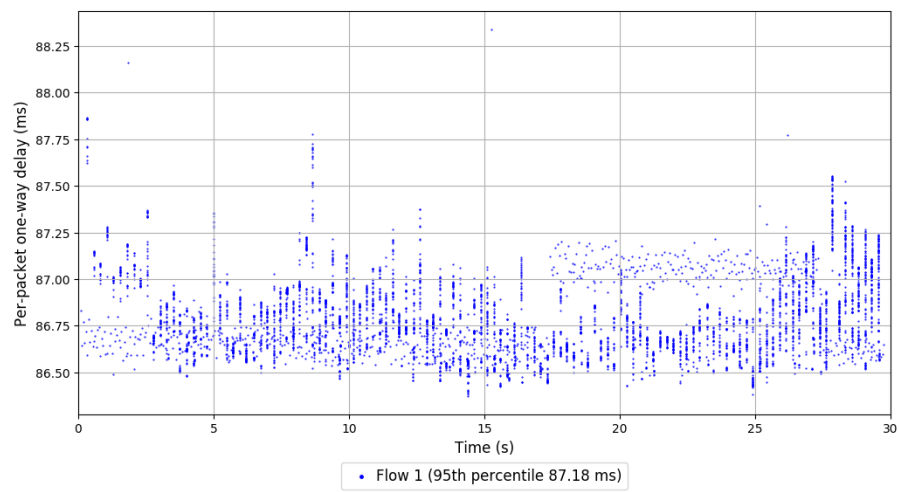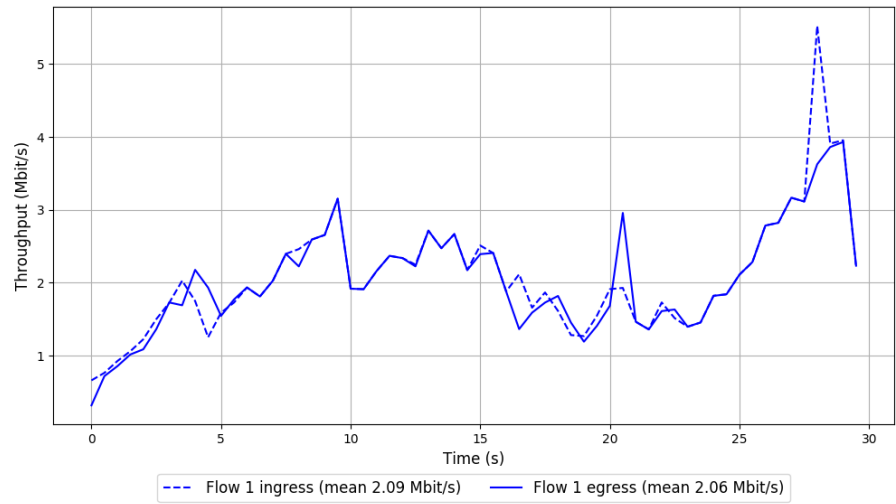
Run 8: Report of WebRTC media — Data Link

```
Run 9: Statistics of WebRTC media

Start at: 2017-09-21 10:56:32
End at: 2017-09-21 10:57:02

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 118.197 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 118.197 ms
Loss rate: 0.72%
```

Run 9: Report of WebRTC media — Data Link

```
Run 10: Statistics of WebRTC media

Start at: 2017-09-21 11:07:32
End at: 2017-09-21 11:08:02

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.22 Mbit/s
95th percentile per-packet one-way delay: 87.101 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 2.22 Mbit/s
95th percentile per-packet one-way delay: 87.101 ms
Loss rate: 0.72%
```
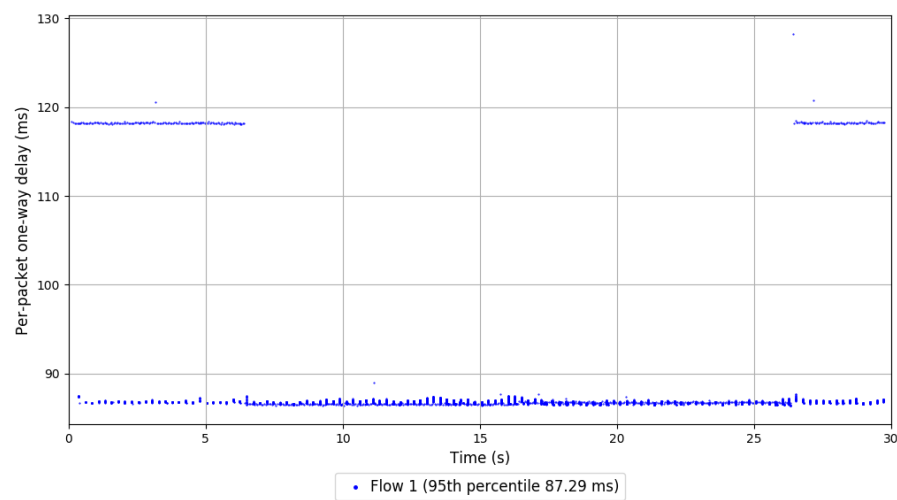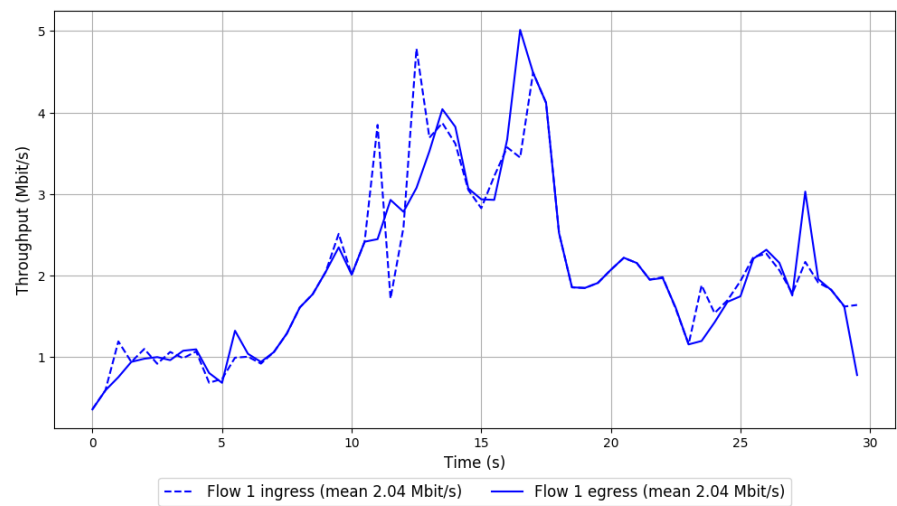
Run 10: Report of WebRTC media — Data Link

Flow 1 ingress (mean 2.23 Mbit/s) Flow 1 egress (mean 2.22 Mbit/s)

Flow 1 (95th percentile 87.10 ms)

```
Run 1: Statistics of Sprout

Start at: 2017-09-21 09:21:05
End at: 2017-09-21 09:21:35

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.06 Mbit/s
95th percentile per-packet one-way delay: 87.179 ms
Loss rate: 1.87%
-- Flow 1:
Average throughput: 2.06 Mbit/s
95th percentile per-packet one-way delay: 87.179 ms
Loss rate: 1.87%
```
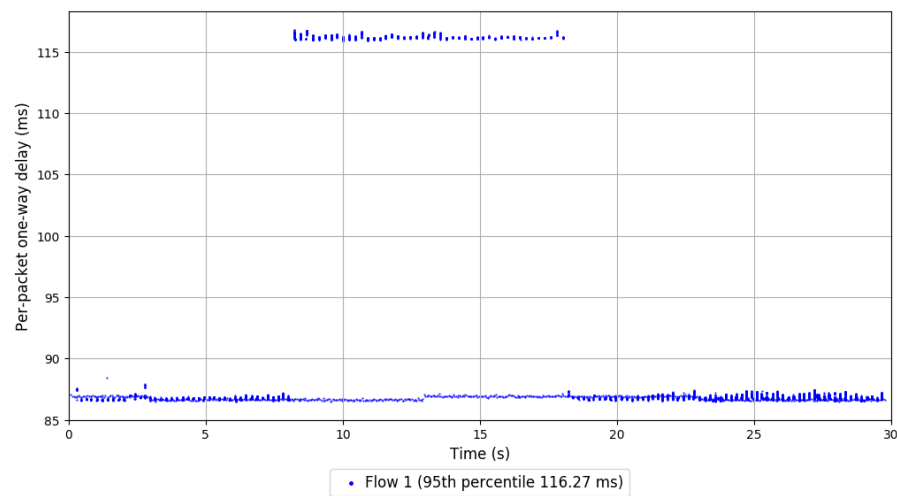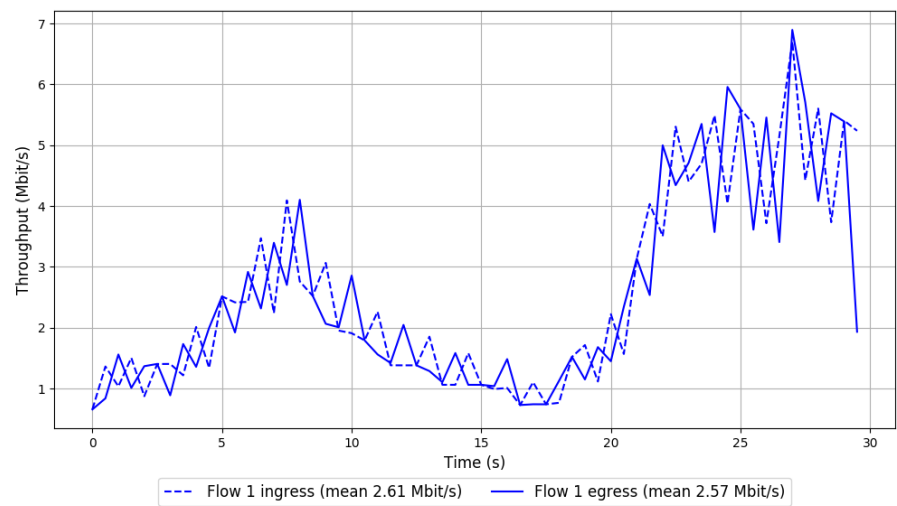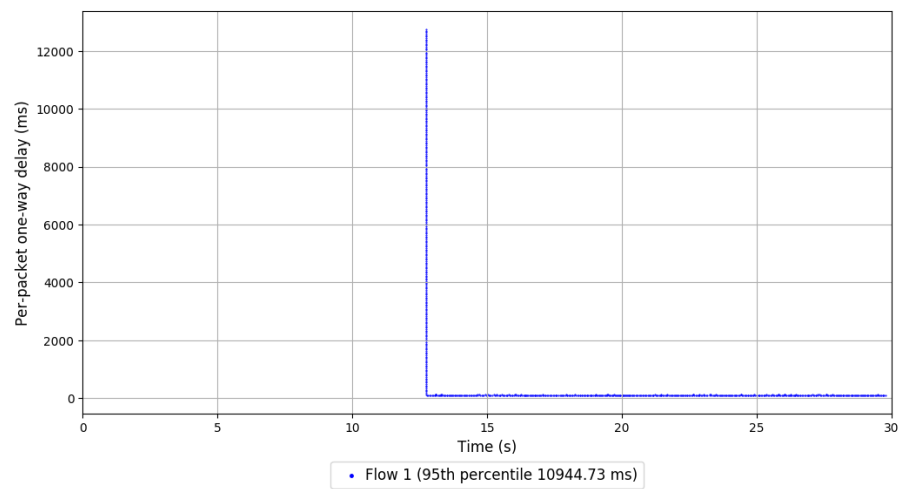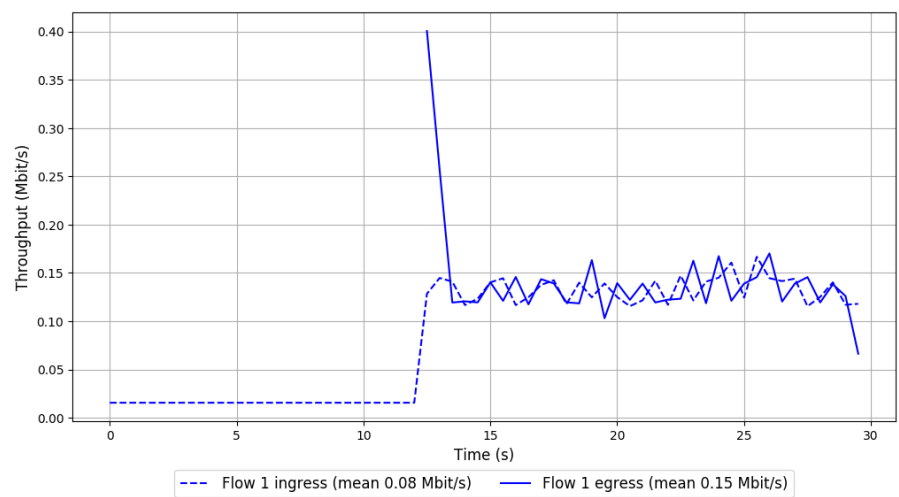
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2017-09-21 09:32:31
End at: 2017-09-21 09:33:02

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.04 Mbit/s
95th percentile per-packet one-way delay: 87.292 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 2.04 Mbit/s
95th percentile per-packet one-way delay: 87.292 ms
Loss rate: 0.85%
```

Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2017-09-21 09:43:50
End at: 2017-09-21 09:44:20

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.57 Mbit/s
95th percentile per-packet one-way delay: 116.270 ms
Loss rate: 2.16%
-- Flow 1:
Average throughput: 2.57 Mbit/s
95th percentile per-packet one-way delay: 116.270 ms
Loss rate: 2.16%
```
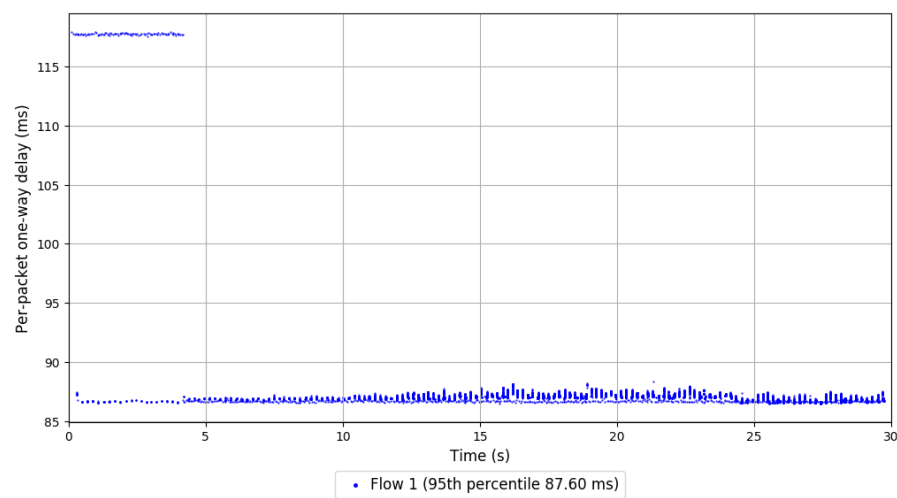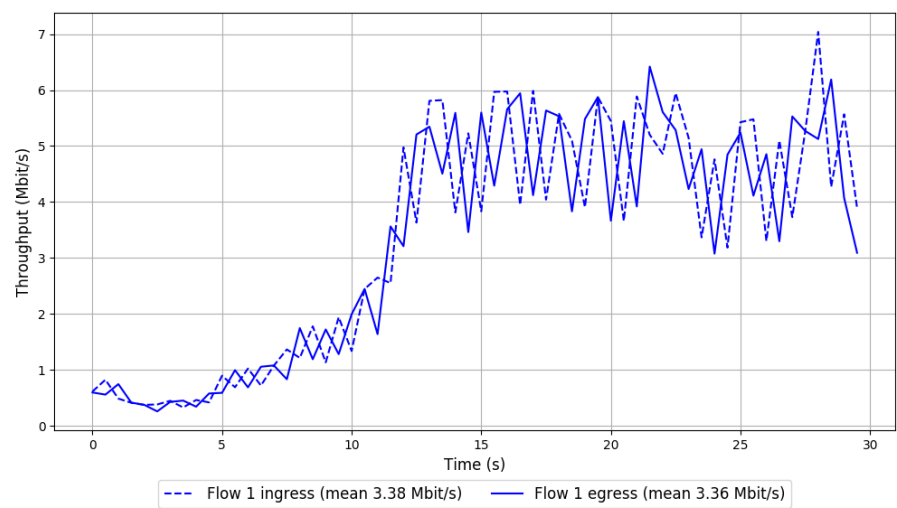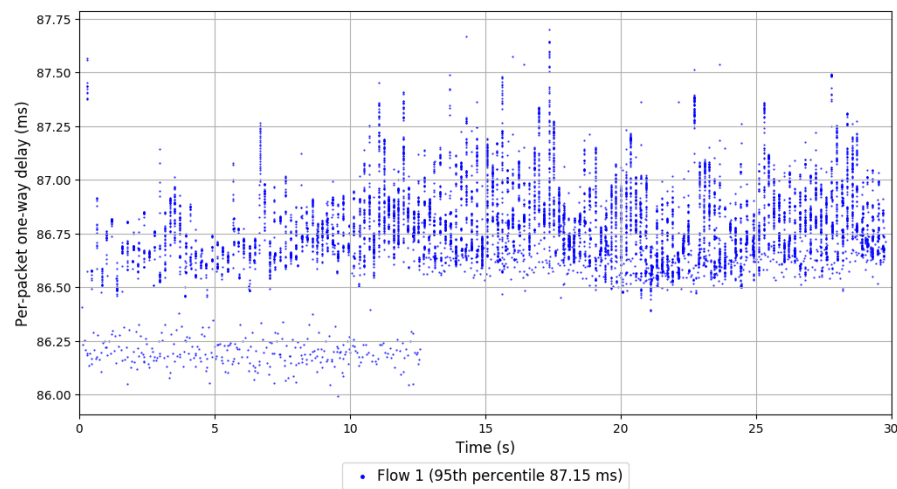
Run 3: Report of Sprout — Data Link

Flow 1 ingress (mean 2.61 Mbit/s)   Flow 1 egress (mean 2.57 Mbit/s)

Flow 1 (95th percentile 116.27 ms)

Run 4: Statistics of Sprout

Start at: 2017-09-21 09:54:15
End at: 2017-09-21 09:54:45

Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2017-09-21 10:05:24
End at: 2017-09-21 10:05:54


# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 3.36 Mbit/s
95th percentile per-packet one-way delay: 87.597 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 3.36 Mbit/s
95th percentile per-packet one-way delay: 87.597 ms
Loss rate: 1.24%
```
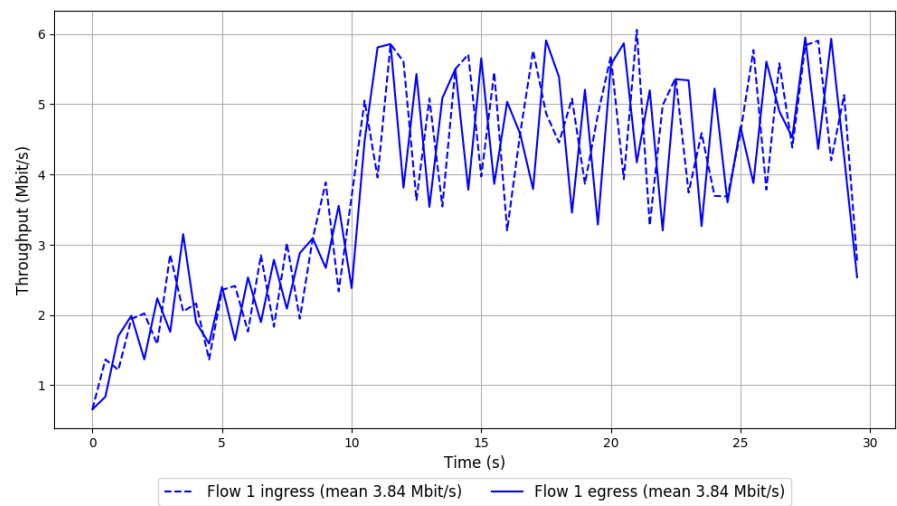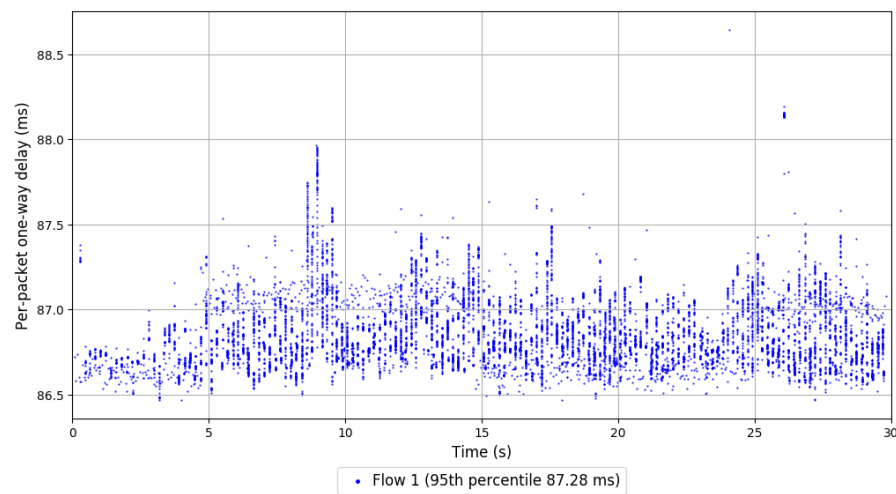
Run 5: Report of Sprout — Data Link

```
Run 6: Statistics of Sprout

Start at: 2017-09-21 10:16:30
End at: 2017-09-21 10:17:00

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 3.84 Mbit/s
95th percentile per-packet one-way delay: 87.147 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 3.84 Mbit/s
95th percentile per-packet one-way delay: 87.147 ms
Loss rate: 0.63%
```
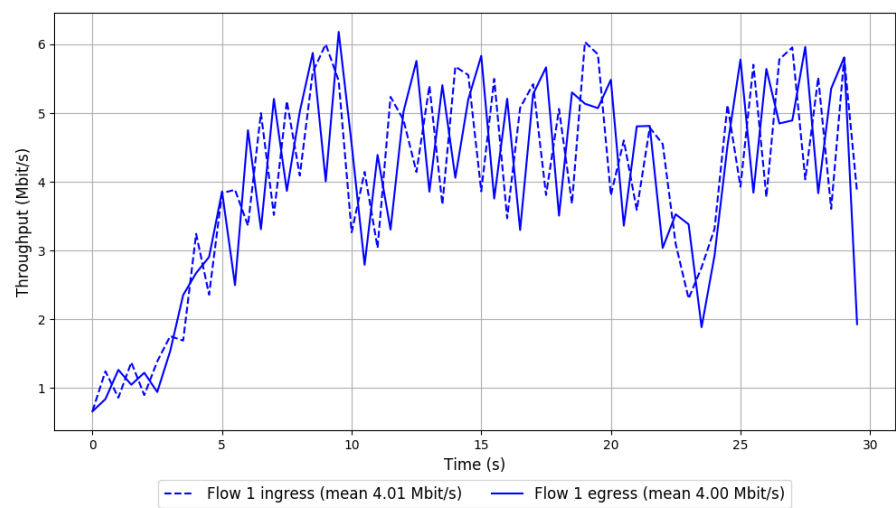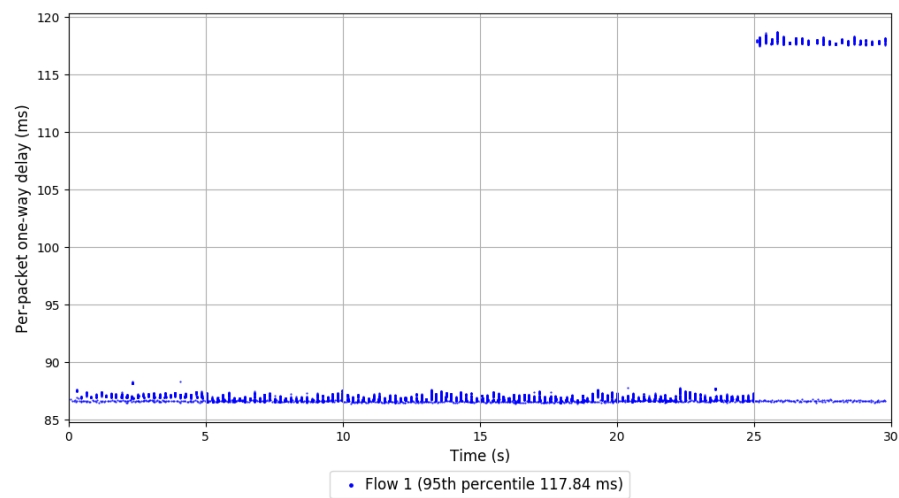
Run 6: Report of Sprout — Data Link

```
Run 7: Statistics of Sprout

Start at: 2017-09-21 10:27:33
End at: 2017-09-21 10:28:03

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.00 Mbit/s
95th percentile per-packet one-way delay: 87.278 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 4.00 Mbit/s
95th percentile per-packet one-way delay: 87.278 ms
Loss rate: 0.84%
```
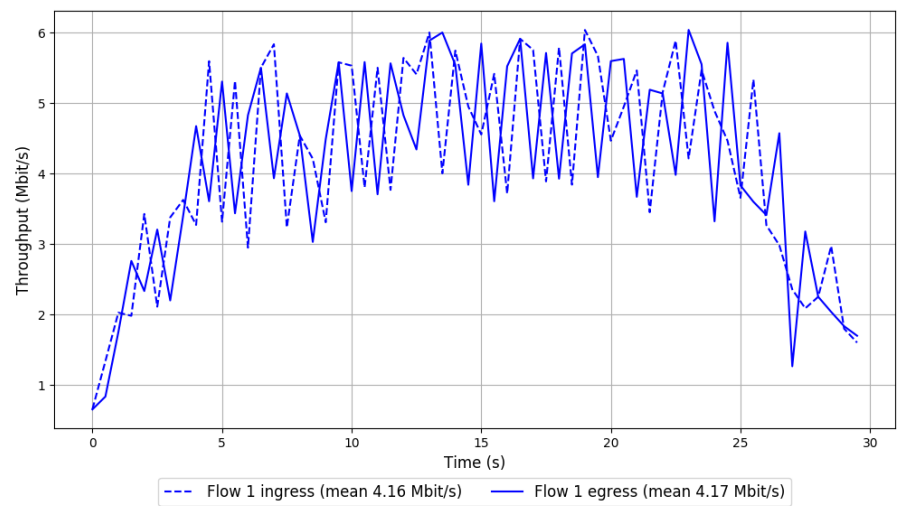
Run 7: Report of Sprout — Data Link

```
Run 8: Statistics of Sprout

Start at: 2017-09-21 10:38:33
End at: 2017-09-21 10:39:03

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.17 Mbit/s
95th percentile per-packet one-way delay: 117.842 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 4.17 Mbit/s
95th percentile per-packet one-way delay: 117.842 ms
Loss rate: 0.41%
```
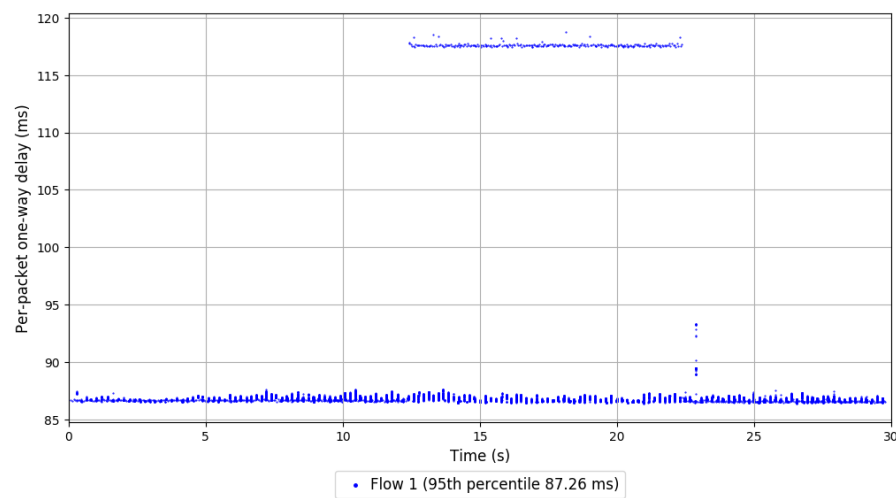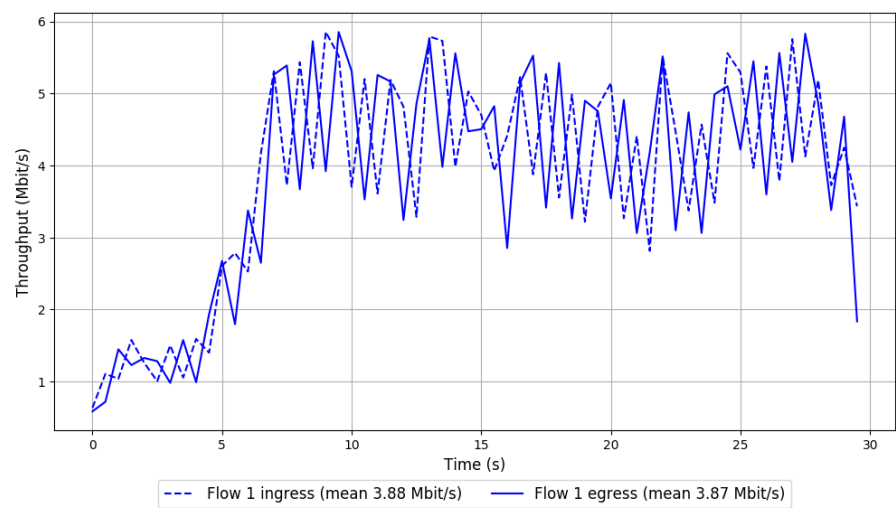
Run 8: Report of Sprout — Data Link

Flow 1 ingress (mean 4.16 Mbit/s) — — —   Flow 1 egress (mean 4.17 Mbit/s) ——

• Flow 1 (95th percentile 117.84 ms)

```
Run 9: Statistics of Sprout

Start at: 2017-09-21 10:49:16
End at: 2017-09-21 10:49:46


# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 3.87 Mbit/s
95th percentile per-packet one-way delay: 87.257 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 3.87 Mbit/s
95th percentile per-packet one-way delay: 87.257 ms
Loss rate: 0.90%
```
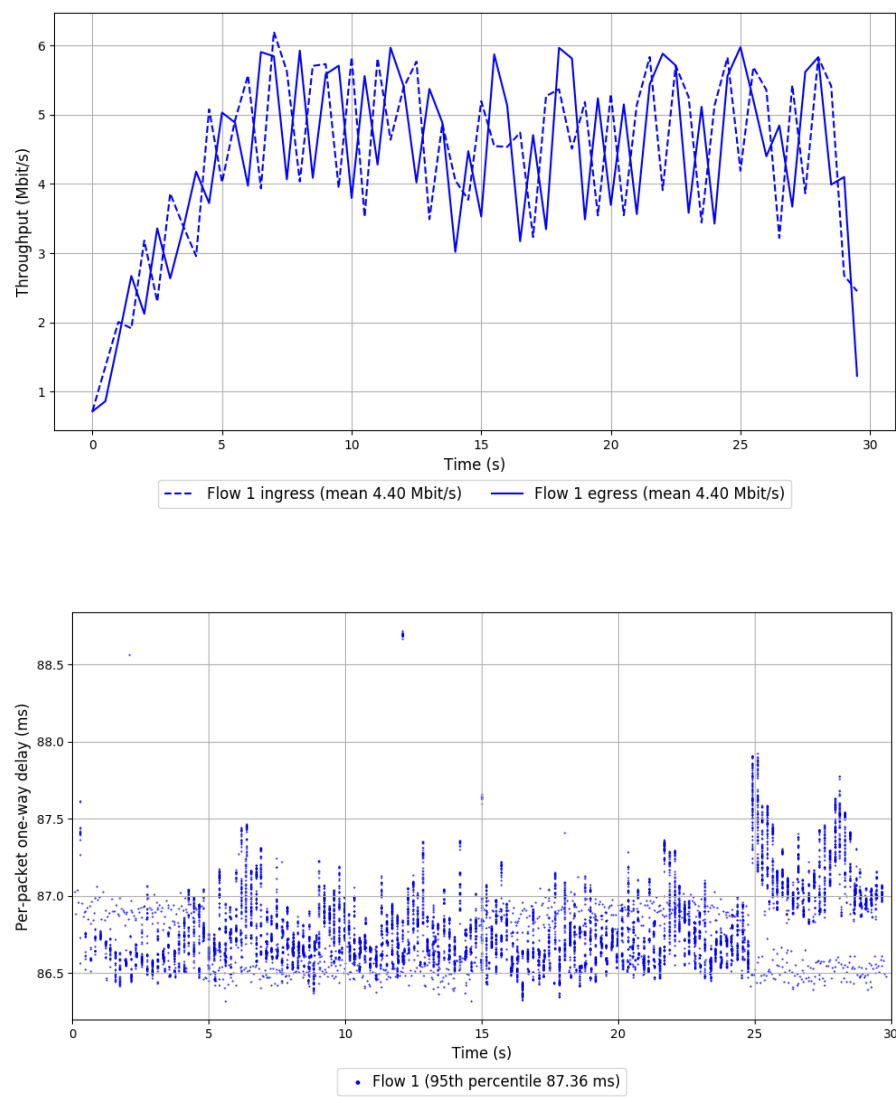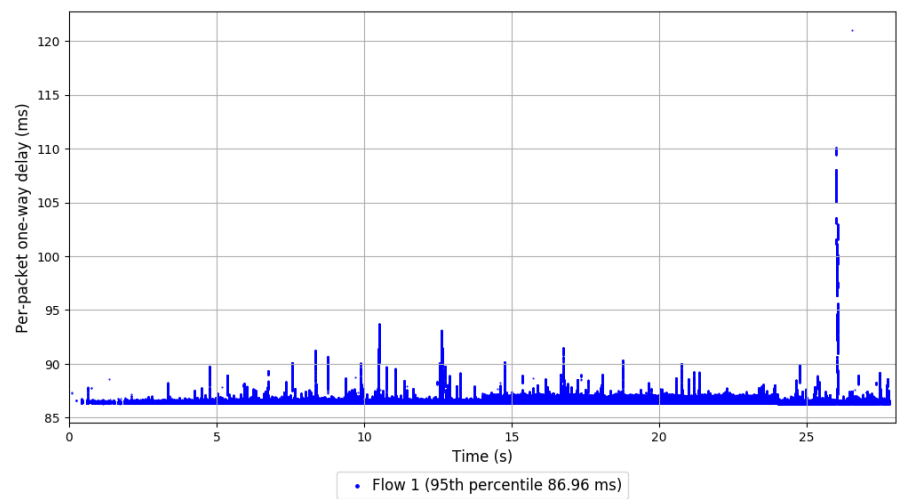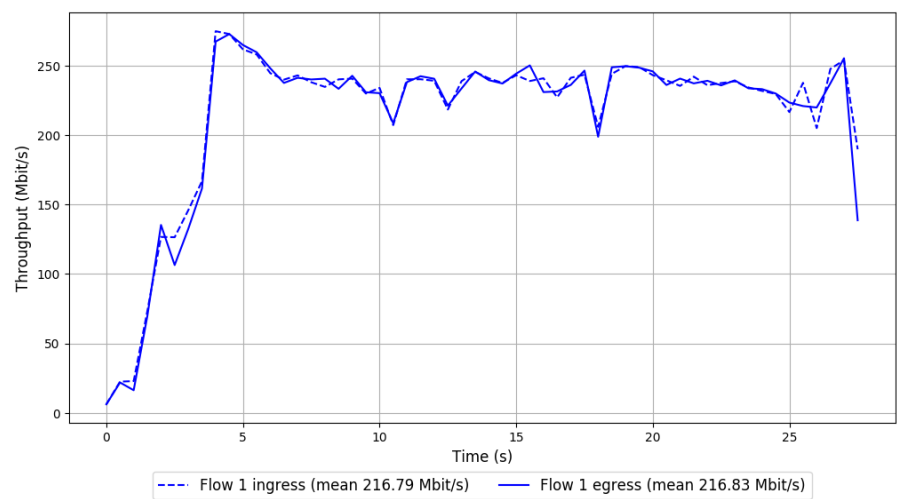
Run 9: Report of Sprout — Data Link

```
Run 10: Statistics of Sprout

Start at: 2017-09-21 11:00:13
End at: 2017-09-21 11:00:43

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.40 Mbit/s
95th percentile per-packet one-way delay: 87.356 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 4.40 Mbit/s
95th percentile per-packet one-way delay: 87.356 ms
Loss rate: 0.57%
```

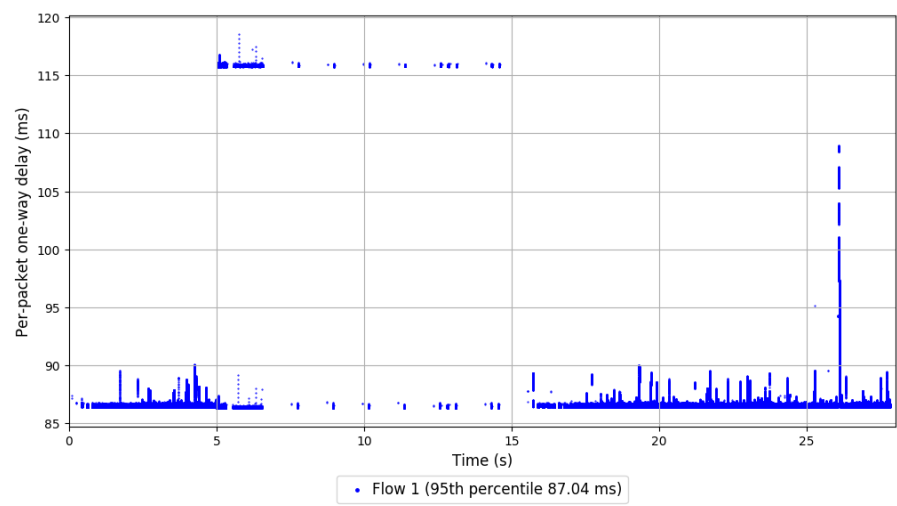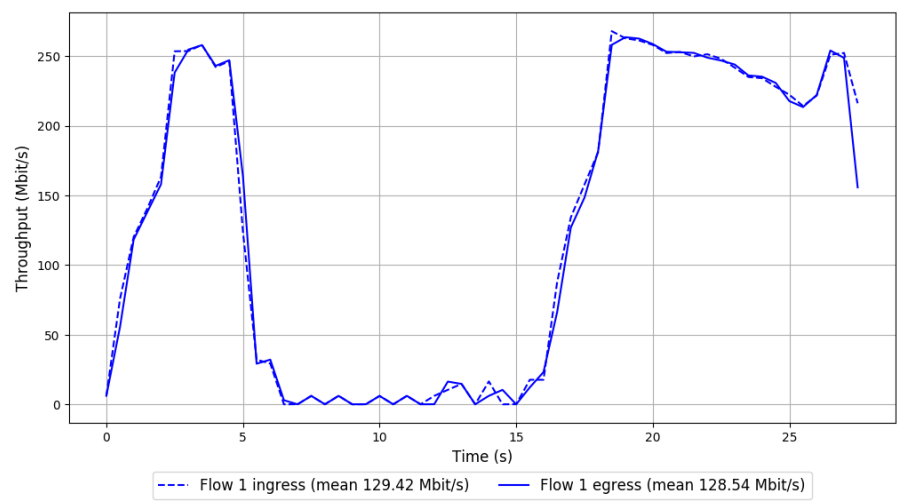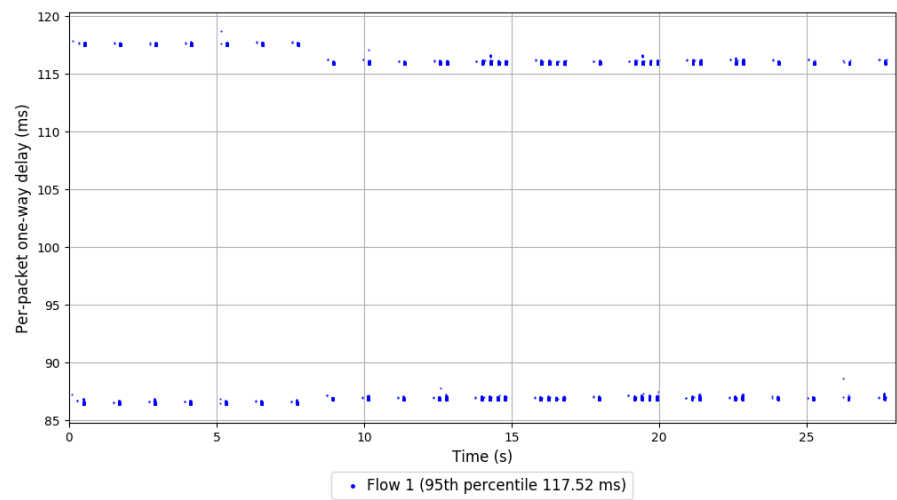Run 10: Report of Sprout — Data Link

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

Start at: 2017-09-21 09:30:02
End at: 2017-09-21 09:30:32

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 216.83 Mbit/s
95th percentile per-packet one-way delay: 86.963 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 216.83 Mbit/s
95th percentile per-packet one-way delay: 86.963 ms
Loss rate: 0.79%
```

Run 1: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 216.79 Mbit/s)   Flow 1 egress (mean 216.83 Mbit/s)
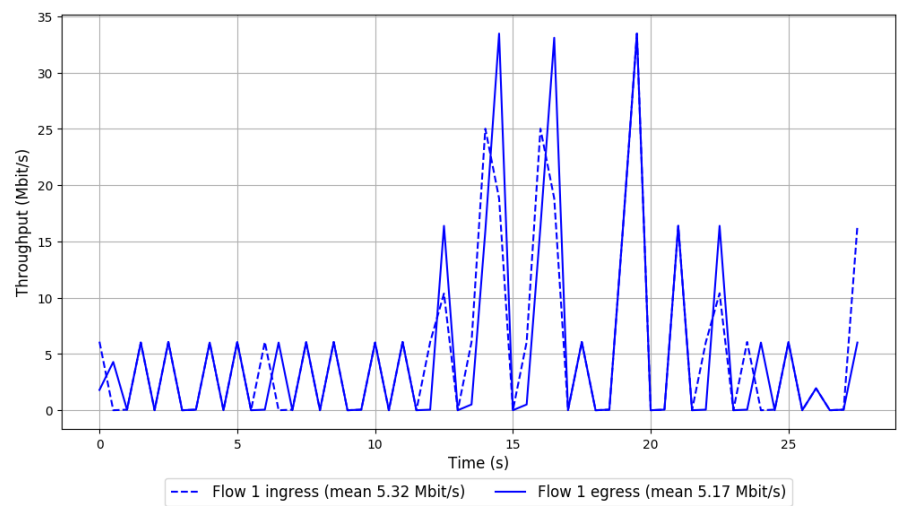

Flow 1 (95th percentile 86.96 ms)

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

Start at: 2017-09-21 09:41:31
End at: 2017-09-21 09:42:01

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 128.54 Mbit/s
95th percentile per-packet one-way delay: 87.037 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 128.54 Mbit/s
95th percentile per-packet one-way delay: 87.037 ms
Loss rate: 1.43%
```
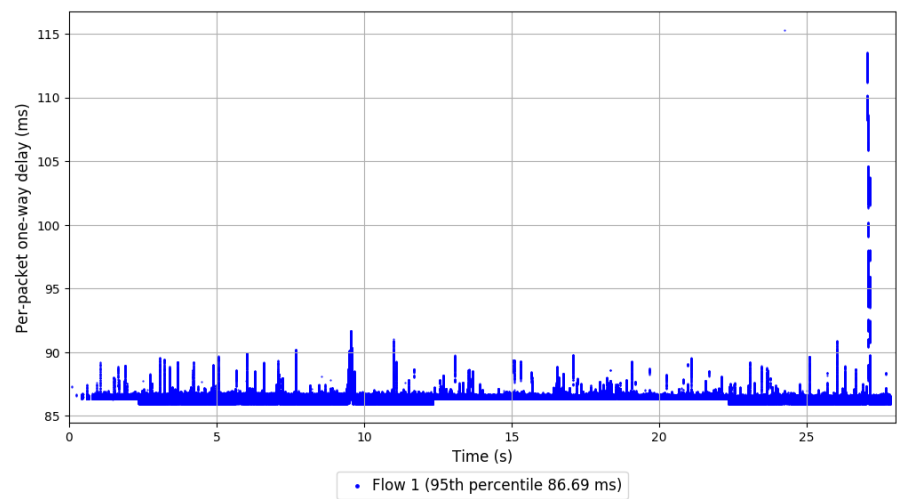
Run 2: Report of TaoVA-100x — Data Link

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

Start at: 2017-09-21 09:52:07
End at: 2017-09-21 09:52:37

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.17 Mbit/s
95th percentile per-packet one-way delay: 117.515 ms
Loss rate: 3.50%
-- Flow 1:
Average throughput: 5.17 Mbit/s
95th percentile per-packet one-way delay: 117.515 ms
Loss rate: 3.50%
```
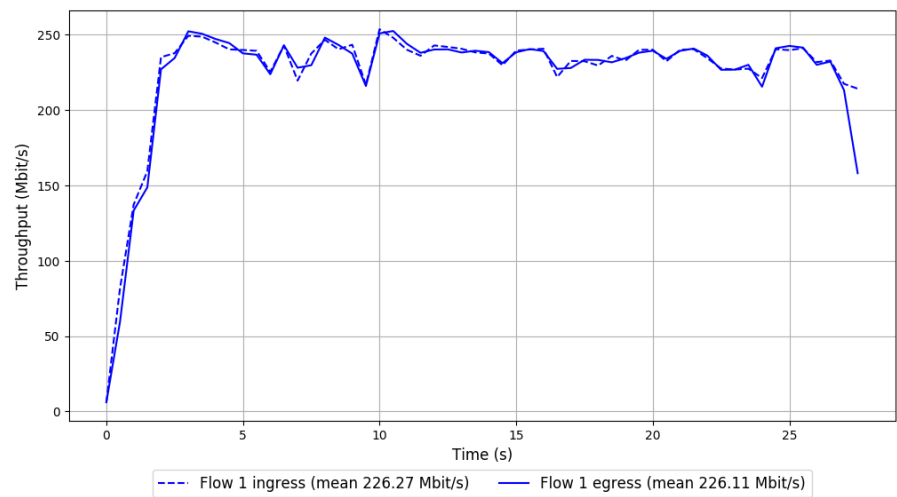
Run 3: Report of TaoVA-100x — Data Link

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

Start at: 2017-09-21 10:02:54
End at: 2017-09-21 10:03:24

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 226.11 Mbit/s
95th percentile per-packet one-way delay: 86.693 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 226.11 Mbit/s
95th percentile per-packet one-way delay: 86.693 ms
Loss rate: 0.81%
```
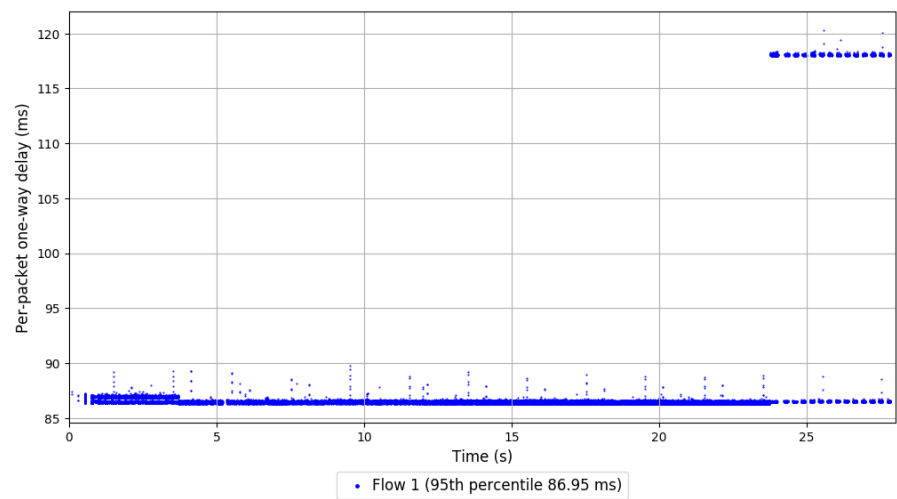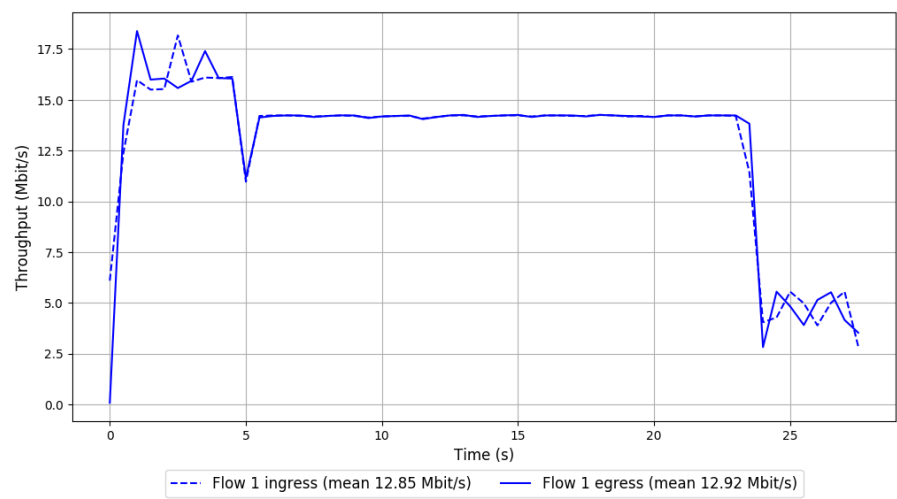
Run 4: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 226.27 Mbit/s) — Flow 1 egress (mean 226.11 Mbit/s)

Flow 1 (95th percentile 86.69 ms)

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

Start at: 2017-09-21 10:14:27
End at: 2017-09-21 10:14:57

# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.92 Mbit/s
95th percentile per-packet one-way delay: 86.951 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 12.92 Mbit/s
95th percentile per-packet one-way delay: 86.951 ms
Loss rate: 0.10%
```
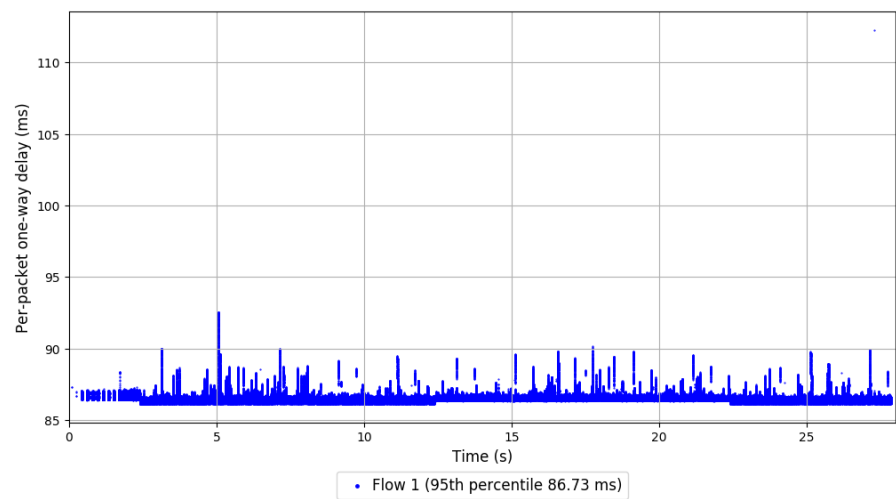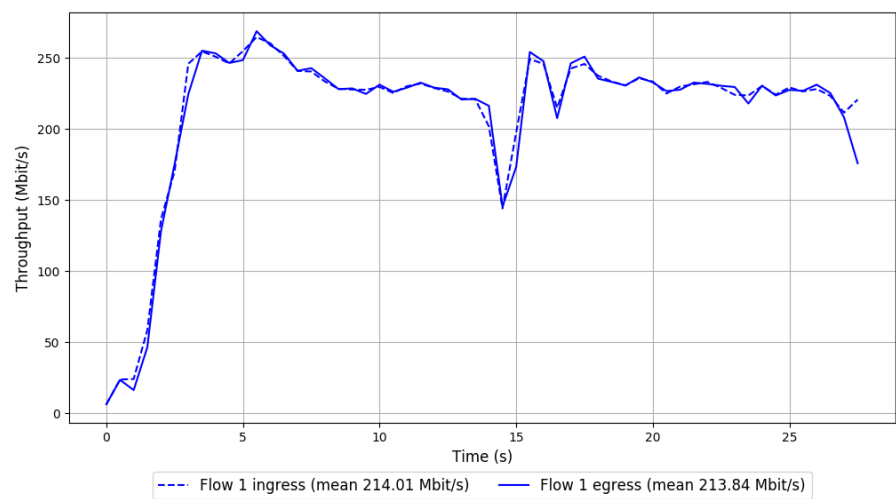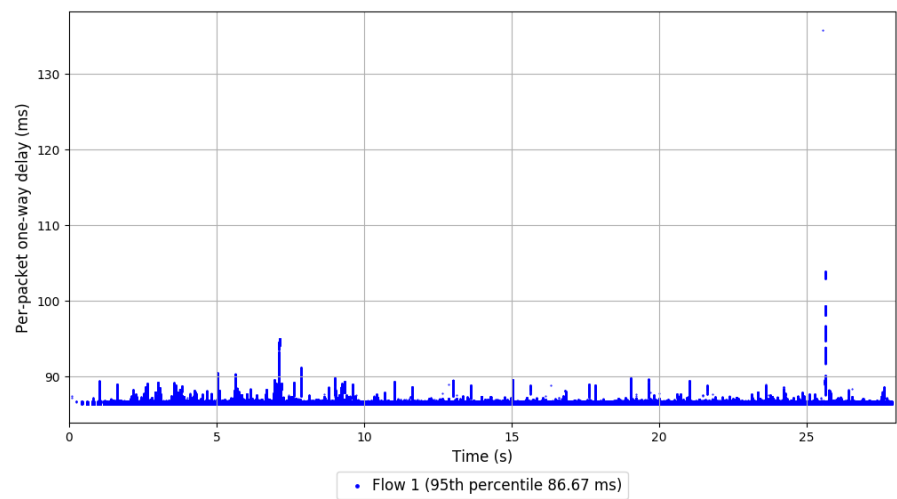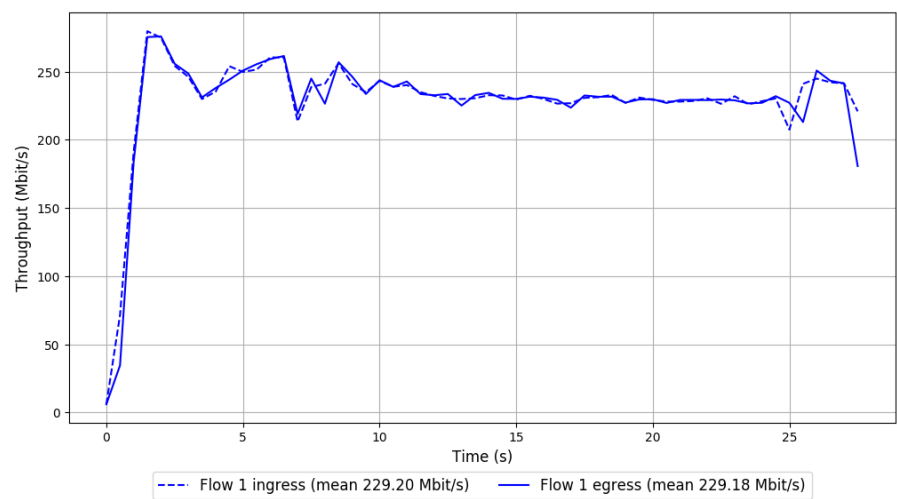
Run 5: Report of TaoVA-100x — Data Link

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

Start at: 2017-09-21 10:25:14
End at: 2017-09-21 10:25:44


# Below is generated by plot.py at 2017-09-21 13:25:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 213.84 Mbit/s
95th percentile per-packet one-way delay: 86.735 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 213.84 Mbit/s
95th percentile per-packet one-way delay: 86.735 ms
Loss rate: 0.71%
```

Run 6: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 214.01 Mbit/s) —— Flow 1 egress (mean 213.84 Mbit/s)

• Flow 1 (95th percentile 86.73 ms)

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

Start at: 2017-09-21 10:36:12
End at: 2017-09-21 10:36:42

# Below is generated by plot.py at 2017-09-21 13:25:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 229.18 Mbit/s
95th percentile per-packet one-way delay: 86.672 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 229.18 Mbit/s
95th percentile per-packet one-way delay: 86.672 ms
Loss rate: 0.63%
```
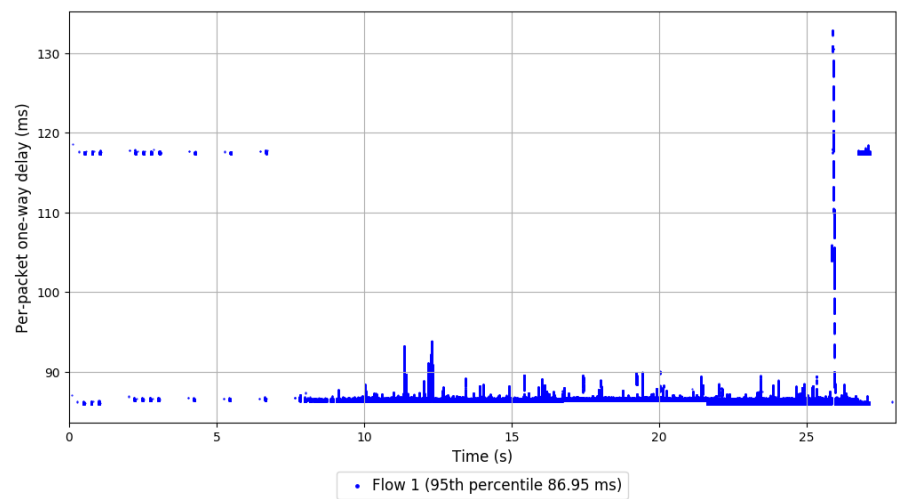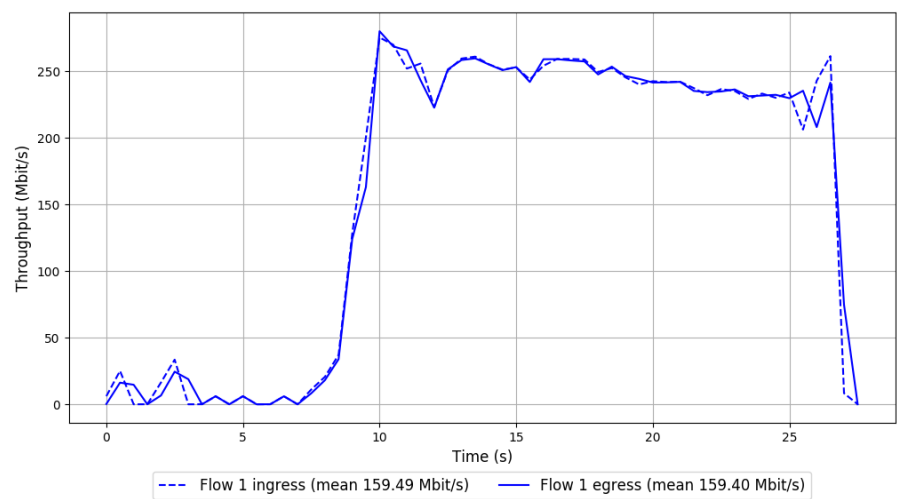
Run 7: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 229.20 Mbit/s)   Flow 1 egress (mean 229.18 Mbit/s)

Flow 1 (95th percentile 86.67 ms)

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

Start at: 2017-09-21 10:46:59
End at: 2017-09-21 10:47:29

# Below is generated by plot.py at 2017-09-21 13:25:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 159.40 Mbit/s
95th percentile per-packet one-way delay: 86.950 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 159.40 Mbit/s
95th percentile per-packet one-way delay: 86.950 ms
Loss rate: 0.06%
```
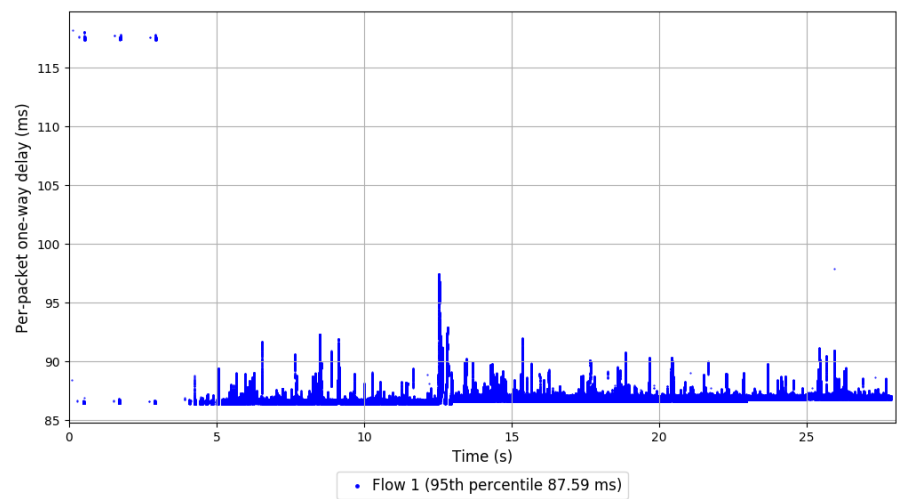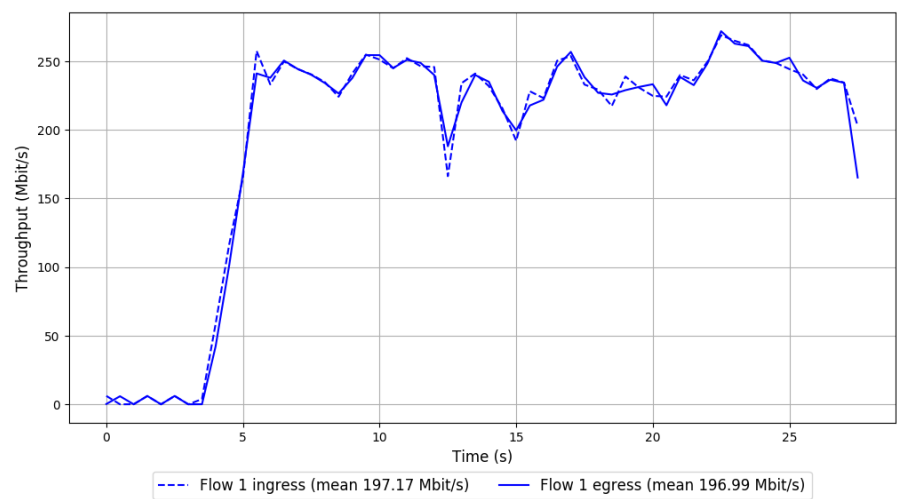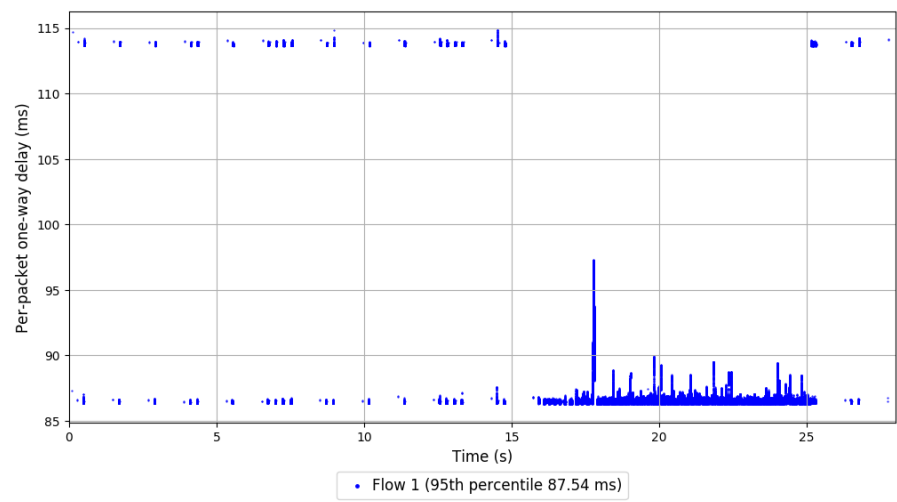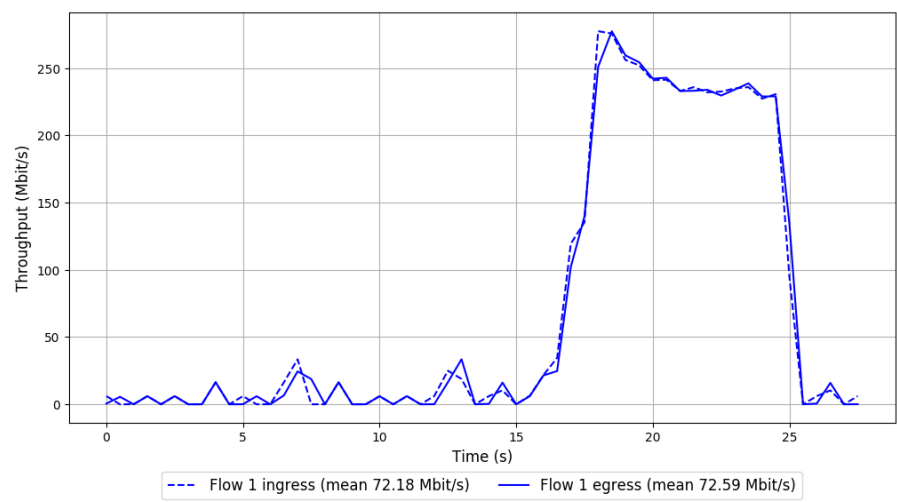
Run 8: Report of TaoVA-100x — Data Link

179

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

Start at: 2017-09-21 10:57:53
End at: 2017-09-21 10:58:23

# Below is generated by plot.py at 2017-09-21 13:25:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 196.99 Mbit/s
95th percentile per-packet one-way delay: 87.594 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 196.99 Mbit/s
95th percentile per-packet one-way delay: 87.594 ms
Loss rate: 0.72%
```
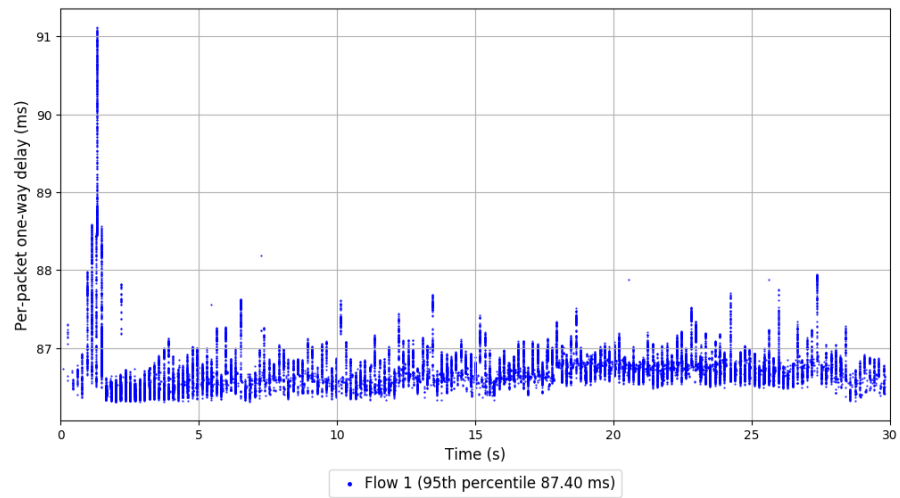
Run 9: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 197.17 Mbit/s) ---- Flow 1 egress (mean 196.99 Mbit/s) ——

Flow 1 (95th percentile 87.59 ms)

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

Start at: 2017-09-21 11:08:51
End at: 2017-09-21 11:09:21

# Below is generated by plot.py at 2017-09-21 13:25:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 72.59 Mbit/s
95th percentile per-packet one-way delay: 87.538 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 72.59 Mbit/s
95th percentile per-packet one-way delay: 87.538 ms
Loss rate: 0.20%
```
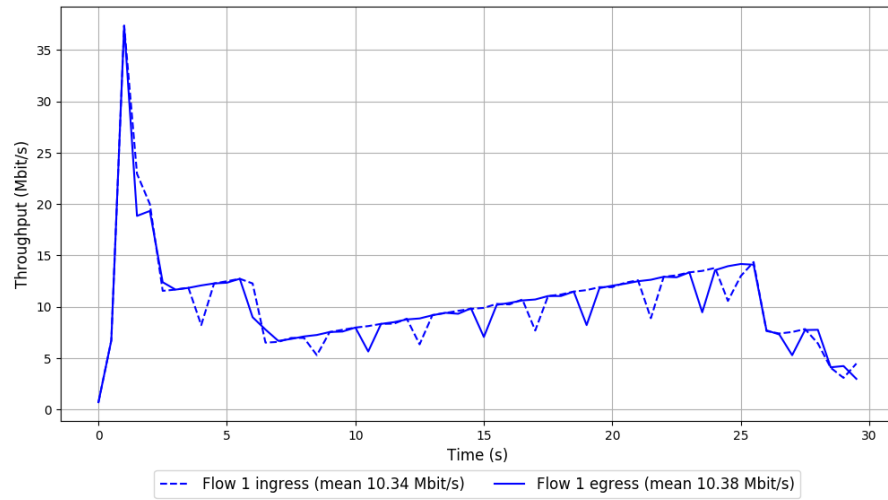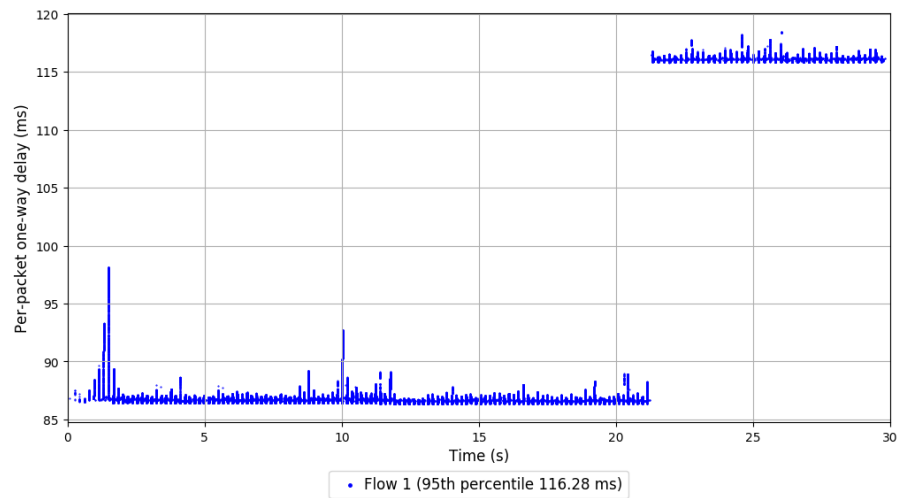
Run 10: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 72.18 Mbit/s) --- Flow 1 egress (mean 72.59 Mbit/s)

Flow 1 (95th percentile 87.54 ms)

```
Run 1: Statistics of TCP Vegas

Start at: 2017-09-21 09:29:20
End at: 2017-09-21 09:29:50

# Below is generated by plot.py at 2017-09-21 13:25:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 10.38 Mbit/s
95th percentile per-packet one-way delay: 87.404 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 10.38 Mbit/s
95th percentile per-packet one-way delay: 87.404 ms
Loss rate: 0.28%
```
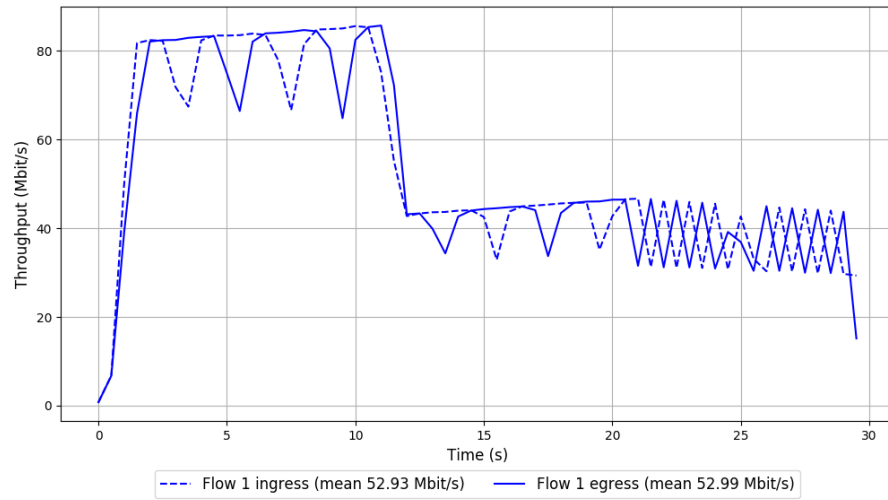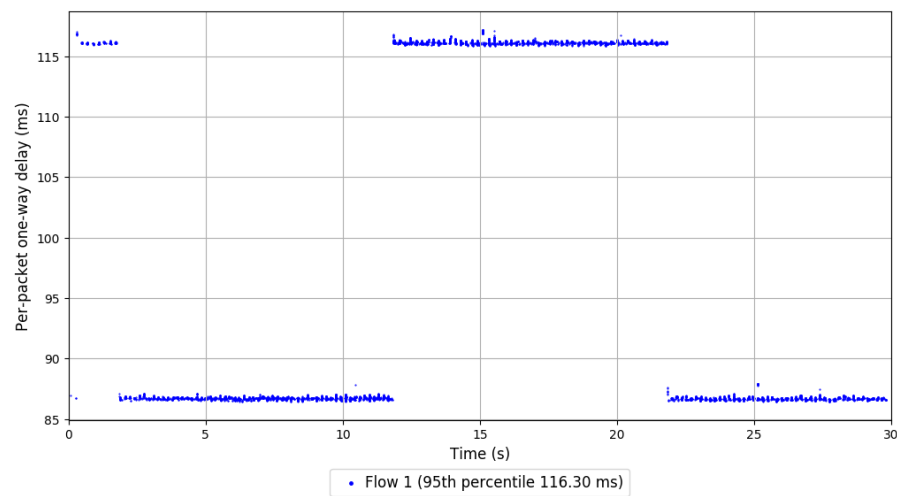
Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2017-09-21 09:40:47
End at: 2017-09-21 09:41:17

# Below is generated by plot.py at 2017-09-21 13:25:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 52.99 Mbit/s
95th percentile per-packet one-way delay: 116.278 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 52.99 Mbit/s
95th percentile per-packet one-way delay: 116.278 ms
Loss rate: 0.46%
```
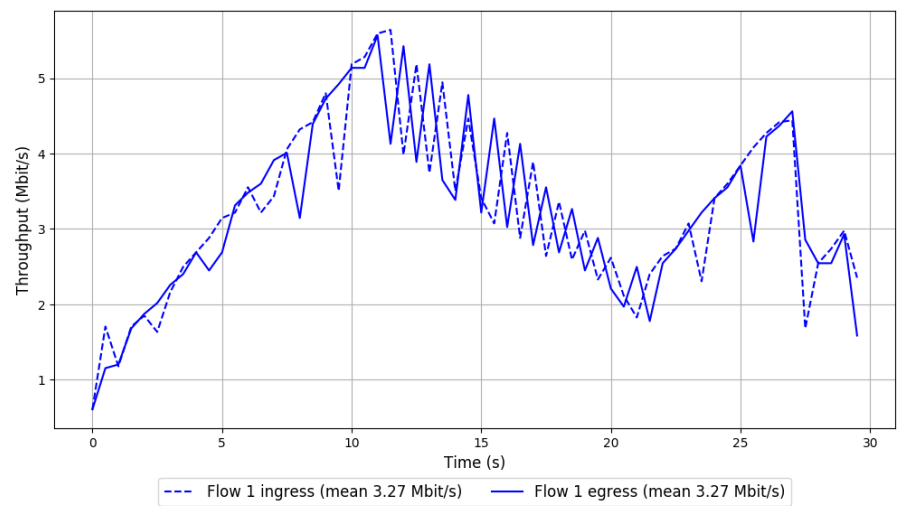
Run 2: Report of TCP Vegas — Data Link

Run 3: Statistics of TCP Vegas

Start at: 2017-09-21 09:51:26
End at: 2017-09-21 09:51:56

Below is generated by plot.py at 2017-09-21 13:25:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.27 Mbit/s
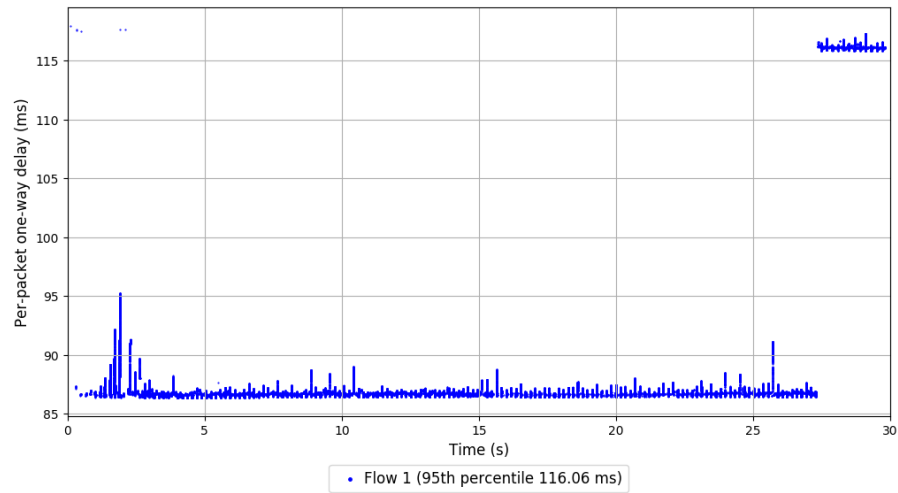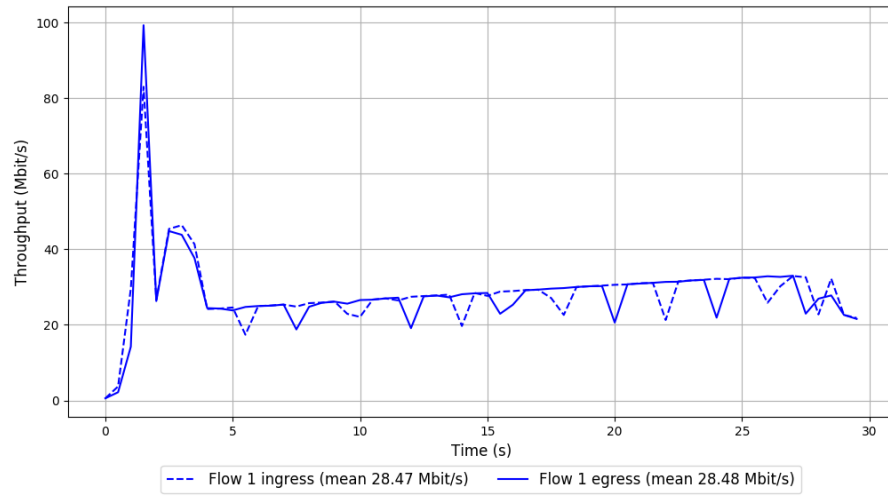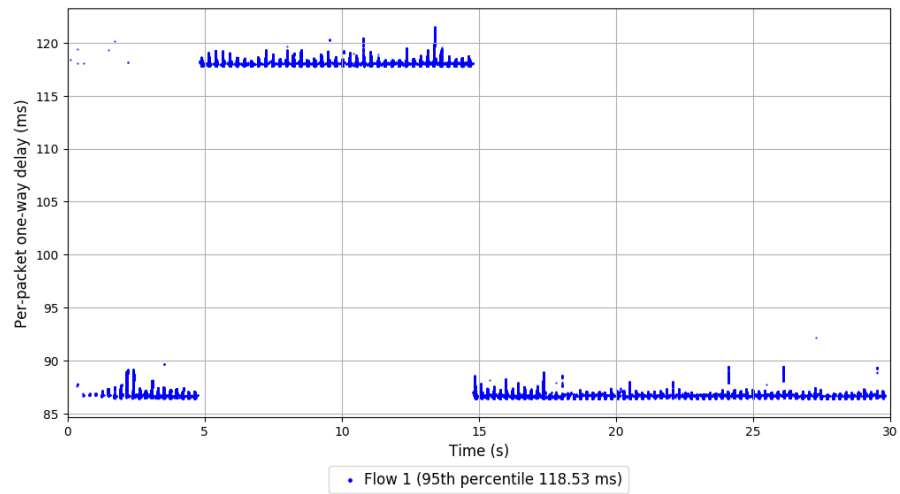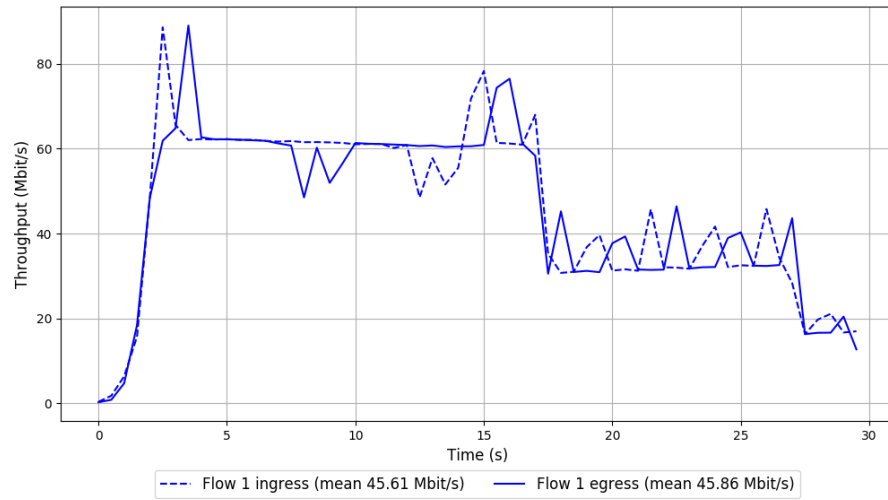95th percentile per-packet one-way delay: 116.303 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 3.27 Mbit/s
95th percentile per-packet one-way delay: 116.303 ms
Loss rate: 0.59%

Run 3: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 3.27 Mbit/s) --- Flow 1 egress (mean 3.27 Mbit/s)

• Flow 1 (95th percentile 116.30 ms)

```
Run 4: Statistics of TCP Vegas

Start at: 2017-09-21 10:02:11
End at: 2017-09-21 10:02:41

# Below is generated by plot.py at 2017-09-21 13:25:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 28.48 Mbit/s
95th percentile per-packet one-way delay: 116.063 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 28.48 Mbit/s
95th percentile per-packet one-way delay: 116.063 ms
Loss rate: 0.65%
```

Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2017-09-21 10:13:43
End at: 2017-09-21 10:14:13

# Below is generated by plot.py at 2017-09-21 13:25:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 45.86 Mbit/s
95th percentile per-packet one-way delay: 118.530 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 45.86 Mbit/s
95th percentile per-packet one-way delay: 118.530 ms
Loss rate: 0.31%
```
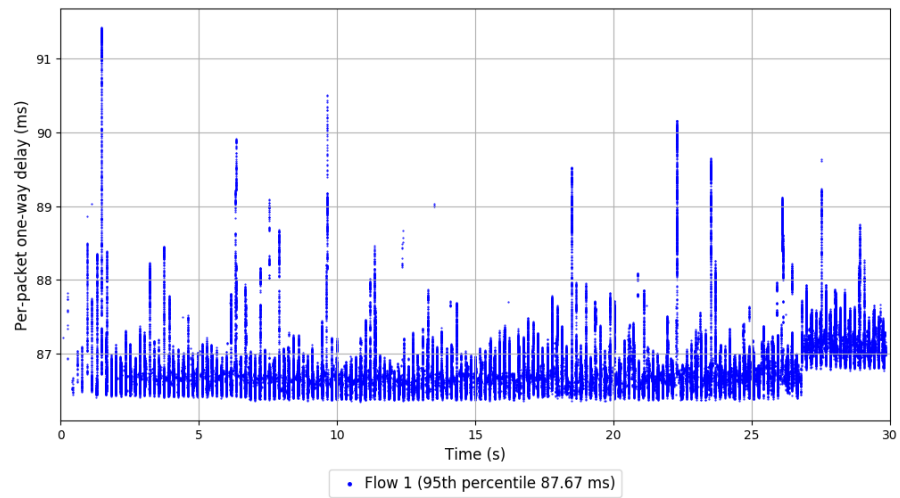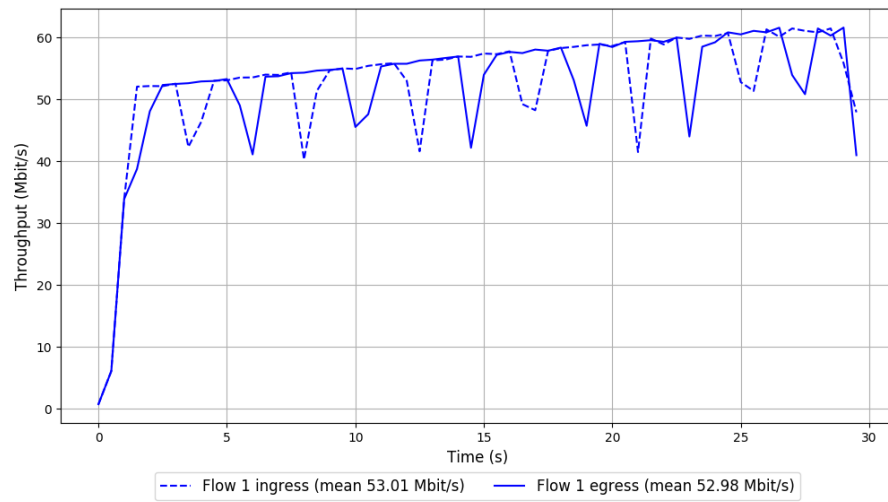
Run 5: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 45.61 Mbit/s) --- Flow 1 egress (mean 45.86 Mbit/s)

Flow 1 (95th percentile 118.53 ms)

193

```
Run 6: Statistics of TCP Vegas

Start at: 2017-09-21 10:24:31
End at: 2017-09-21 10:25:01

# Below is generated by plot.py at 2017-09-21 13:25:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 52.98 Mbit/s
95th percentile per-packet one-way delay: 87.674 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 52.98 Mbit/s
95th percentile per-packet one-way delay: 87.674 ms
Loss rate: 0.65%
```
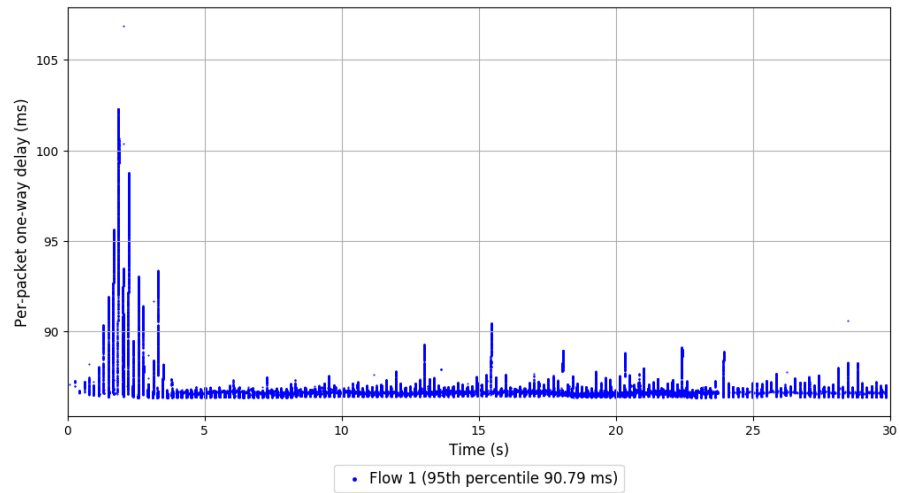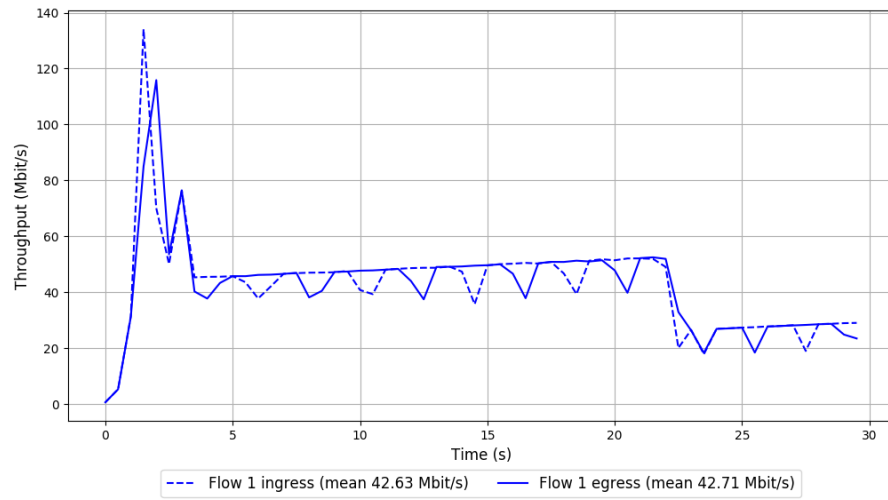
Run 6: Report of TCP Vegas — Data Link

```
Run 7: Statistics of TCP Vegas

Start at: 2017-09-21 10:35:30
End at: 2017-09-21 10:36:00

# Below is generated by plot.py at 2017-09-21 13:25:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 42.71 Mbit/s
95th percentile per-packet one-way delay: 90.787 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 42.71 Mbit/s
95th percentile per-packet one-way delay: 90.787 ms
Loss rate: 0.39%
```
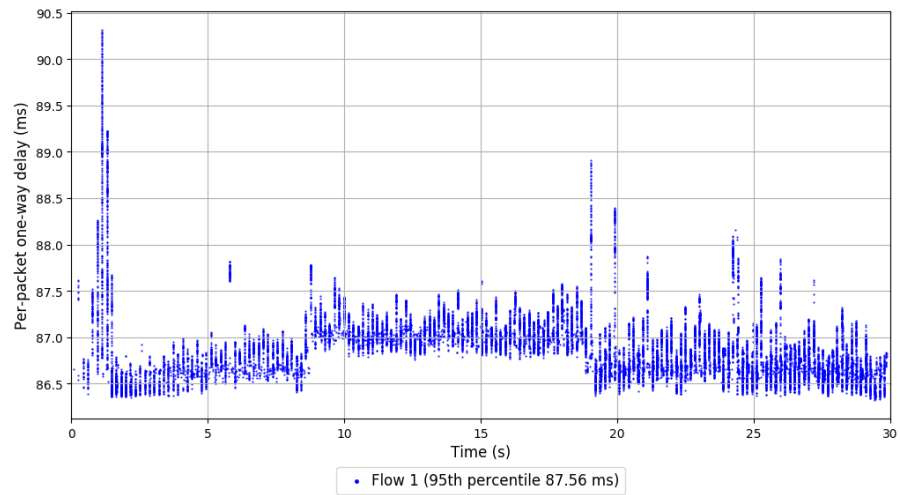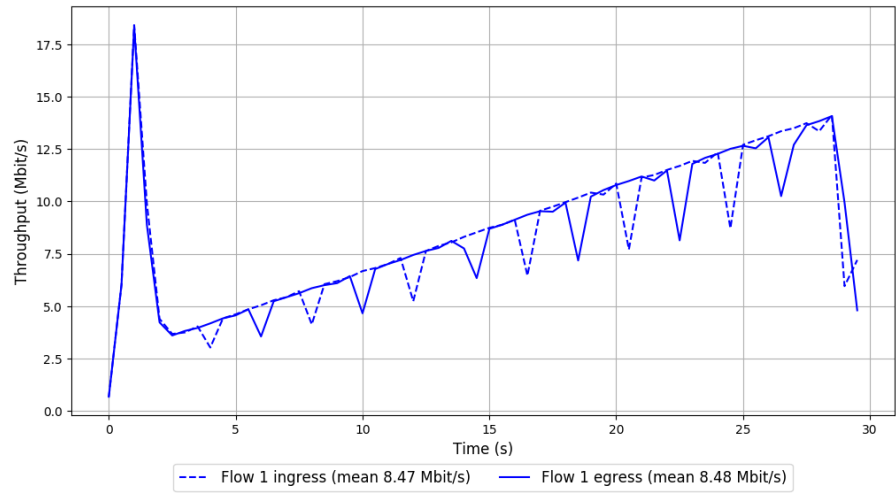
Run 7: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 42.63 Mbit/s)   Flow 1 egress (mean 42.71 Mbit/s)

Flow 1 (95th percentile 90.79 ms)

197

```
Run 8: Statistics of TCP Vegas

Start at: 2017-09-21 10:46:19
End at: 2017-09-21 10:46:49

# Below is generated by plot.py at 2017-09-21 13:25:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.48 Mbit/s
95th percentile per-packet one-way delay: 87.556 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 8.48 Mbit/s
95th percentile per-packet one-way delay: 87.556 ms
Loss rate: 0.51%
```
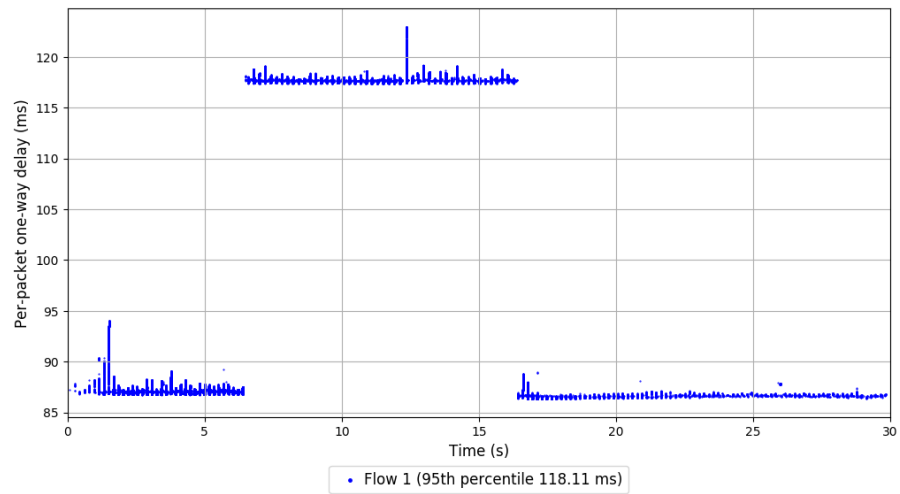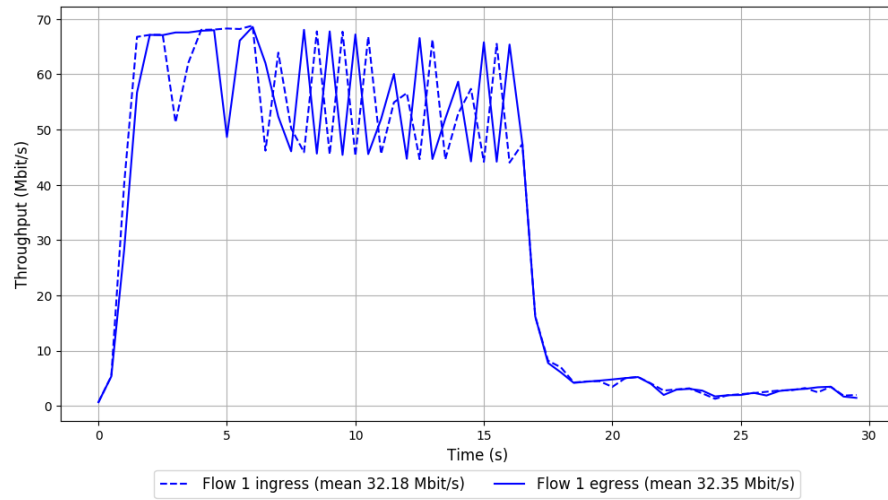
Run 8: Report of TCP Vegas — Data Link

```
Run 9: Statistics of TCP Vegas

Start at: 2017-09-21 10:57:12
End at: 2017-09-21 10:57:42

# Below is generated by plot.py at 2017-09-21 13:25:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 32.35 Mbit/s
95th percentile per-packet one-way delay: 118.112 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 32.35 Mbit/s
95th percentile per-packet one-way delay: 118.112 ms
Loss rate: 0.05%
```
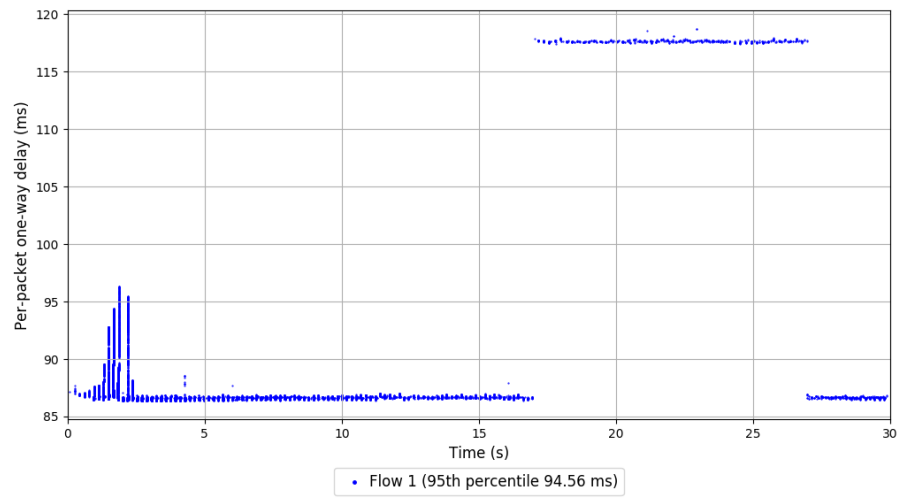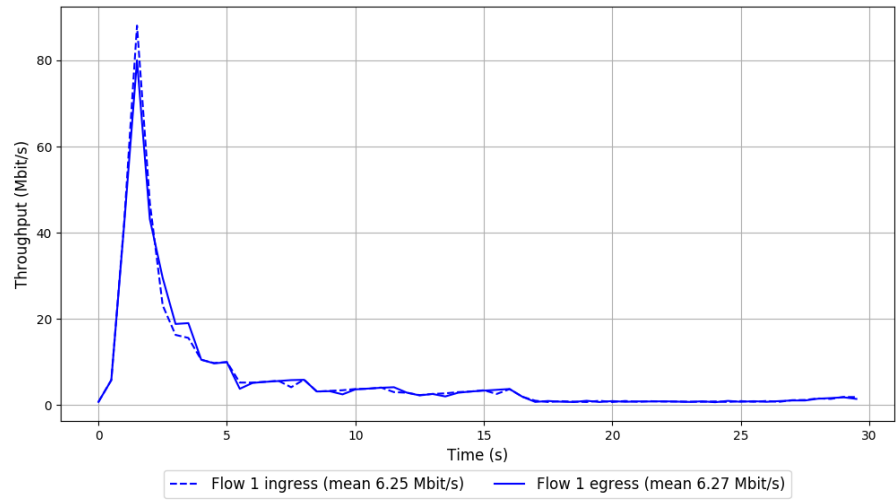
Run 9: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 32.18 Mbit/s) ----- Flow 1 egress (mean 32.35 Mbit/s) ——

· Flow 1 (95th percentile 118.11 ms)

```
Run 10: Statistics of TCP Vegas

Start at: 2017-09-21 11:08:11
End at: 2017-09-21 11:08:41

# Below is generated by plot.py at 2017-09-21 13:25:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.27 Mbit/s
95th percentile per-packet one-way delay: 94.561 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 6.27 Mbit/s
95th percentile per-packet one-way delay: 94.561 ms
Loss rate: 0.24%
```
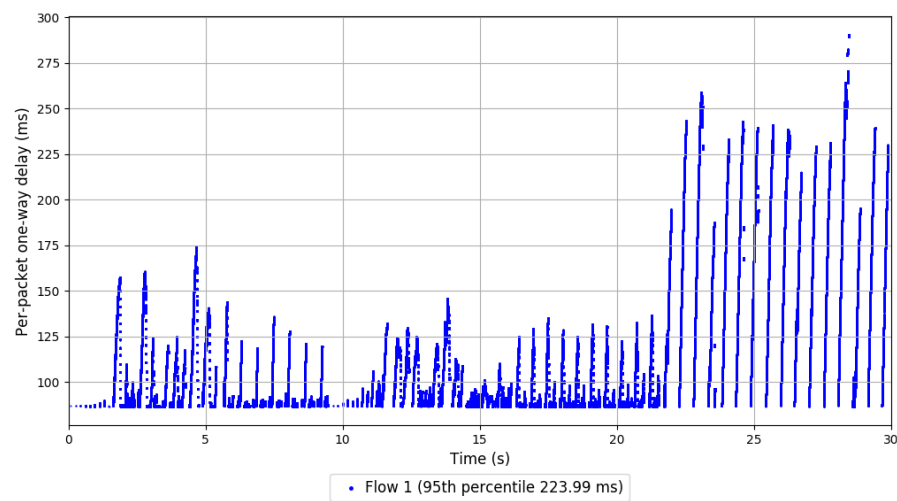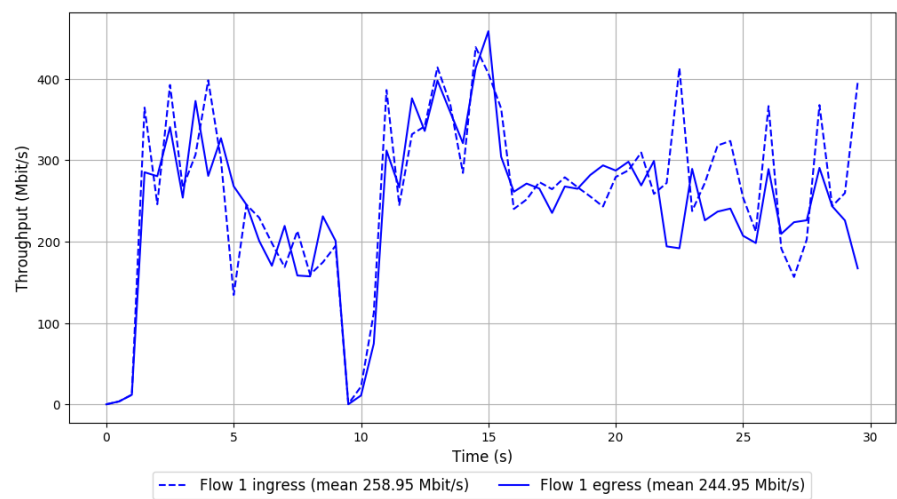
Run 10: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2017-09-21 09:22:34
End at: 2017-09-21 09:23:04

# Below is generated by plot.py at 2017-09-21 13:29:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 244.95 Mbit/s
95th percentile per-packet one-way delay: 223.992 ms
Loss rate: 5.36%
-- Flow 1:
Average throughput: 244.95 Mbit/s
95th percentile per-packet one-way delay: 223.992 ms
Loss rate: 5.36%
```
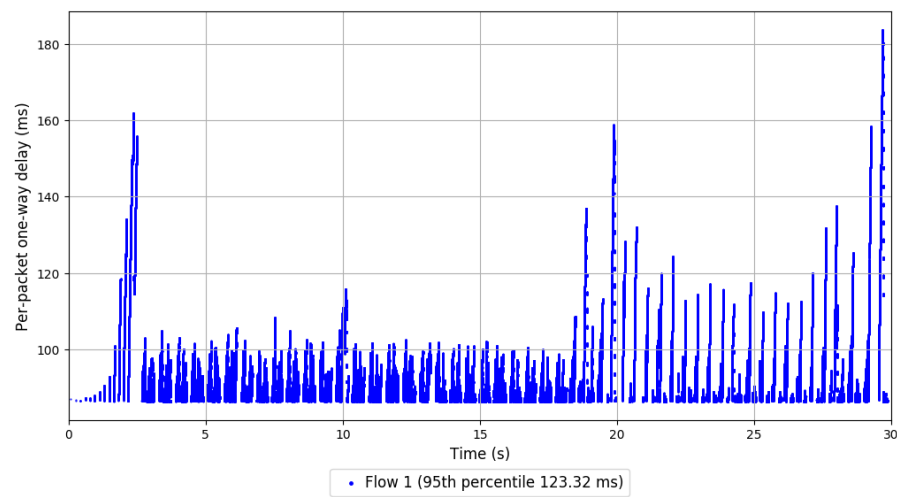
Run 1: Report of Verus — Data Link

Flow 1 ingress (mean 258.95 Mbit/s)   Flow 1 egress (mean 244.95 Mbit/s)

Flow 1 (95th percentile 223.99 ms)

```
Run 2: Statistics of Verus

Start at: 2017-09-21 09:33:58
End at: 2017-09-21 09:34:28

# Below is generated by plot.py at 2017-09-21 13:29:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 214.10 Mbit/s
95th percentile per-packet one-way delay: 123.316 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 214.10 Mbit/s
95th percentile per-packet one-way delay: 123.316 ms
Loss rate: 0.62%
```
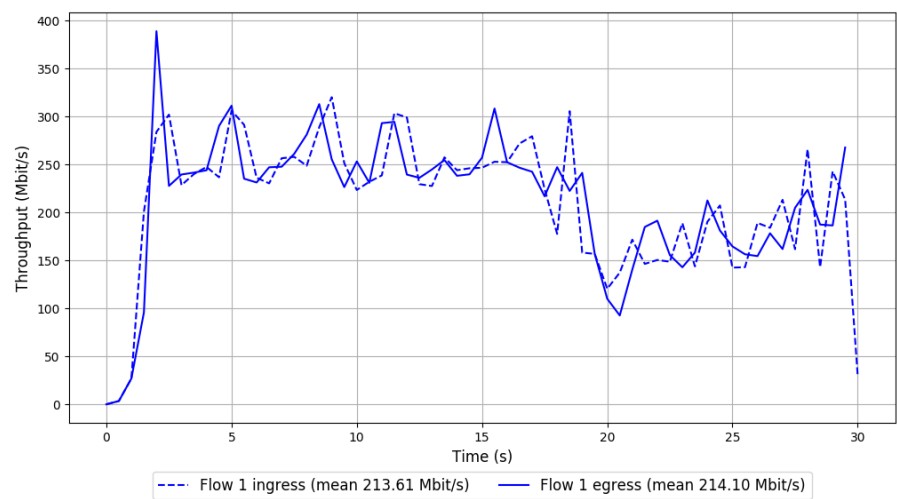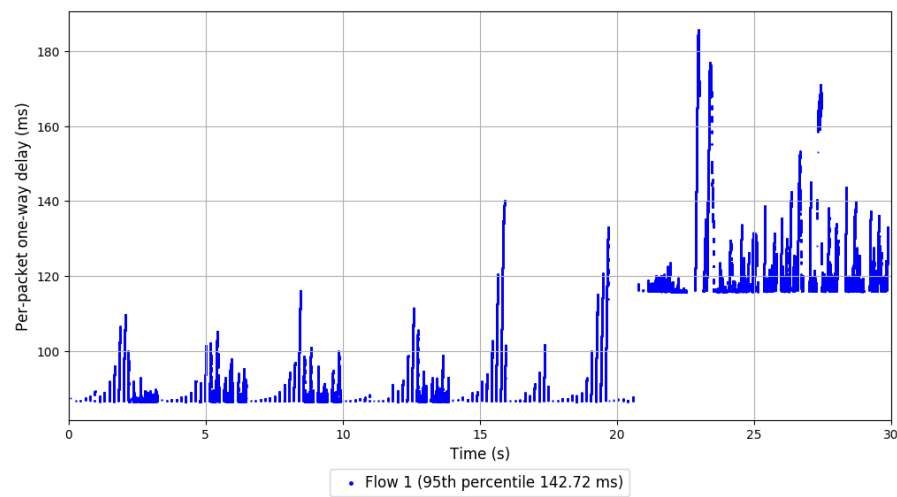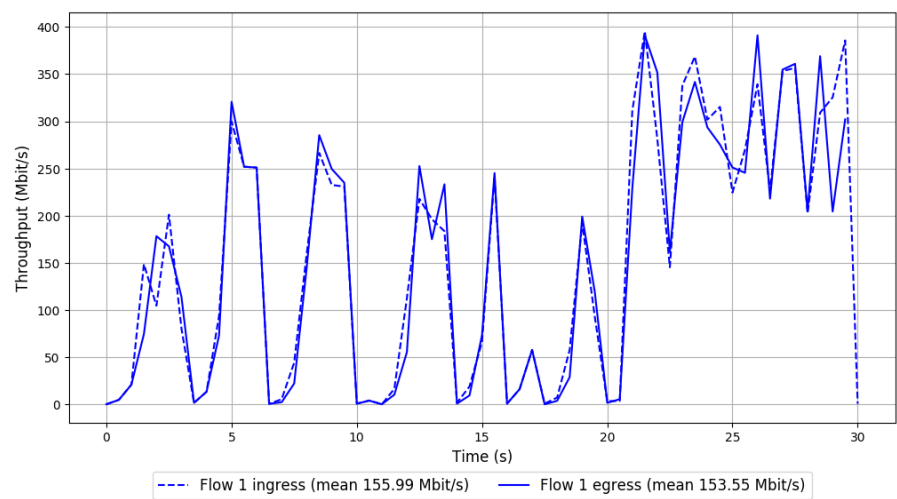
Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2017-09-21 09:45:17
End at: 2017-09-21 09:45:47

# Below is generated by plot.py at 2017-09-21 13:29:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 153.55 Mbit/s
95th percentile per-packet one-way delay: 142.724 ms
Loss rate: 2.20%
-- Flow 1:
Average throughput: 153.55 Mbit/s
95th percentile per-packet one-way delay: 142.724 ms
Loss rate: 2.20%
```
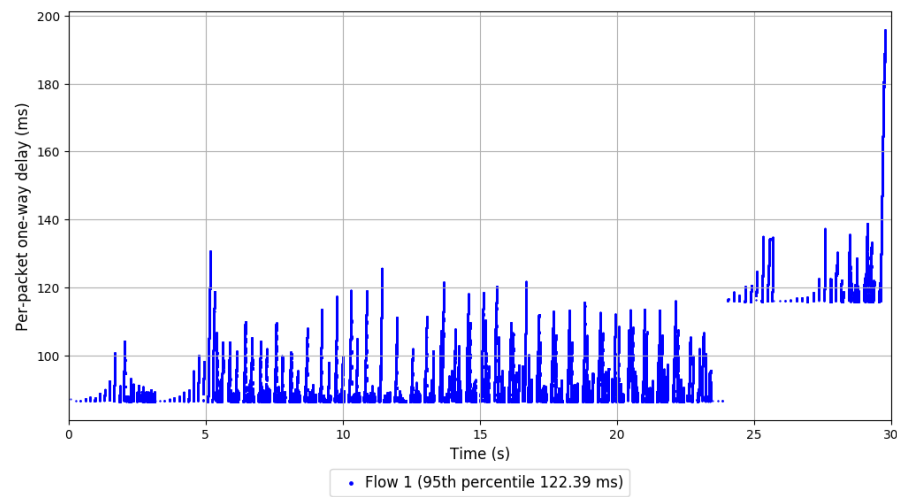
Run 3: Report of Verus — Data Link

```
Run 4: Statistics of Verus

Start at: 2017-09-21 09:55:44
End at: 2017-09-21 09:56:14

# Below is generated by plot.py at 2017-09-21 13:29:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 181.18 Mbit/s
95th percentile per-packet one-way delay: 122.390 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 181.18 Mbit/s
95th percentile per-packet one-way delay: 122.390 ms
Loss rate: 0.97%
```
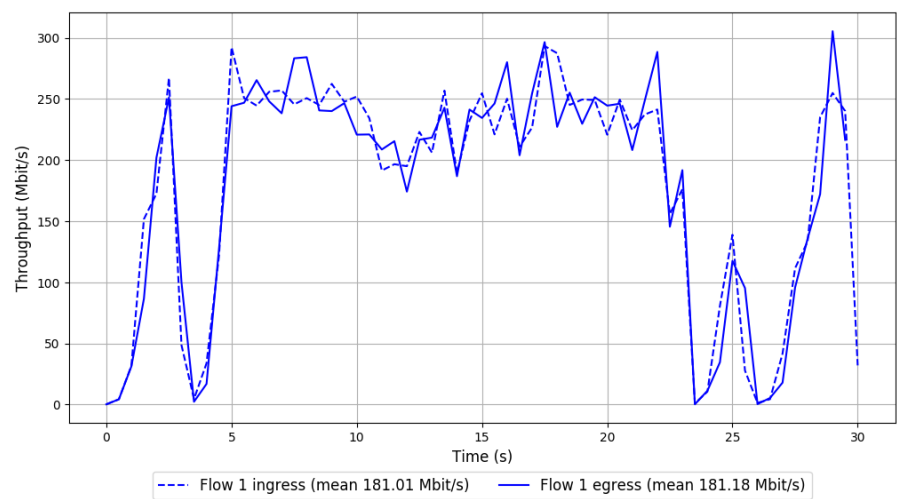
Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2017-09-21 10:06:54
End at: 2017-09-21 10:07:24

# Below is generated by plot.py at 2017-09-21 13:29:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 239.91 Mbit/s
95th percentile per-packet one-way delay: 119.880 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 239.91 Mbit/s
95th percentile per-packet one-way delay: 119.880 ms
Loss rate: 0.75%
```
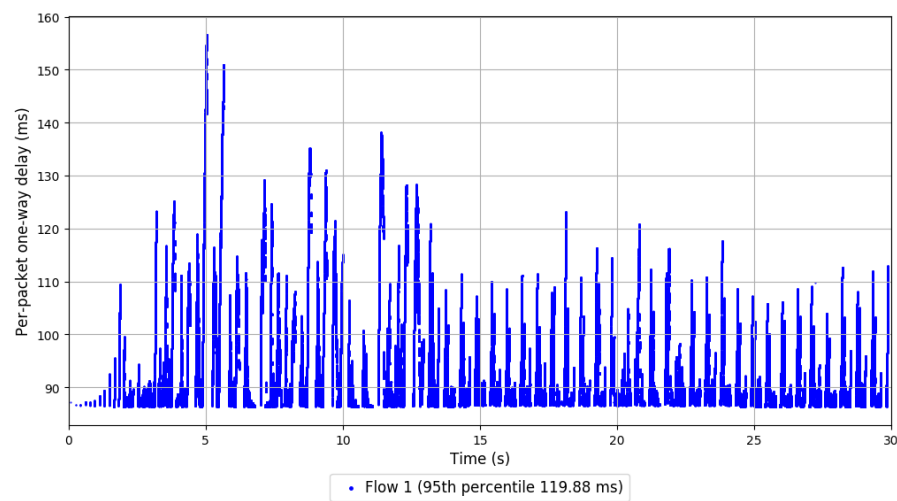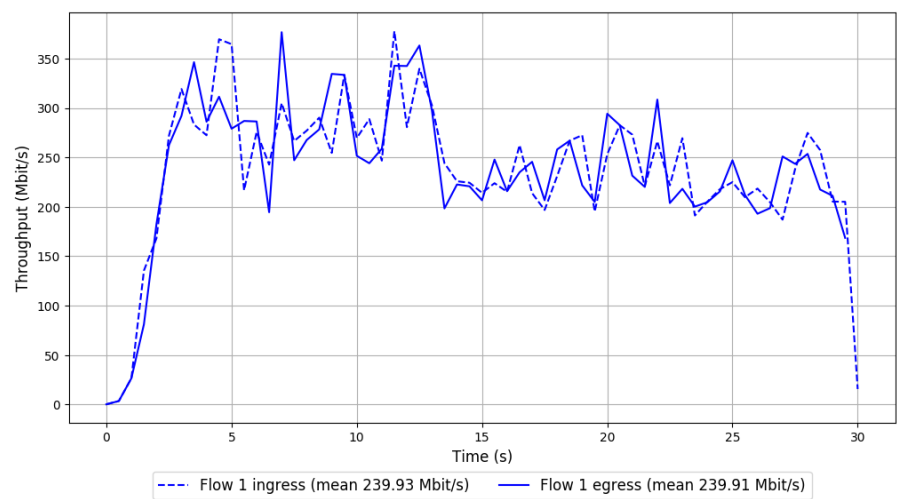
Run 5: Report of Verus — Data Link

```
Run 6: Statistics of Verus

Start at: 2017-09-21 10:17:57
End at: 2017-09-21 10:18:27

# Below is generated by plot.py at 2017-09-21 13:29:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 224.24 Mbit/s
95th percentile per-packet one-way delay: 205.563 ms
Loss rate: 4.11%
-- Flow 1:
Average throughput: 224.24 Mbit/s
95th percentile per-packet one-way delay: 205.563 ms
Loss rate: 4.11%
```
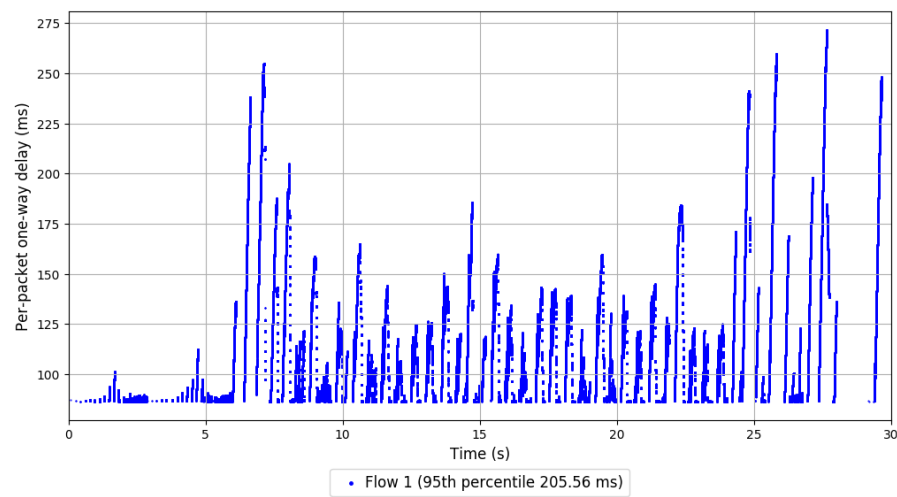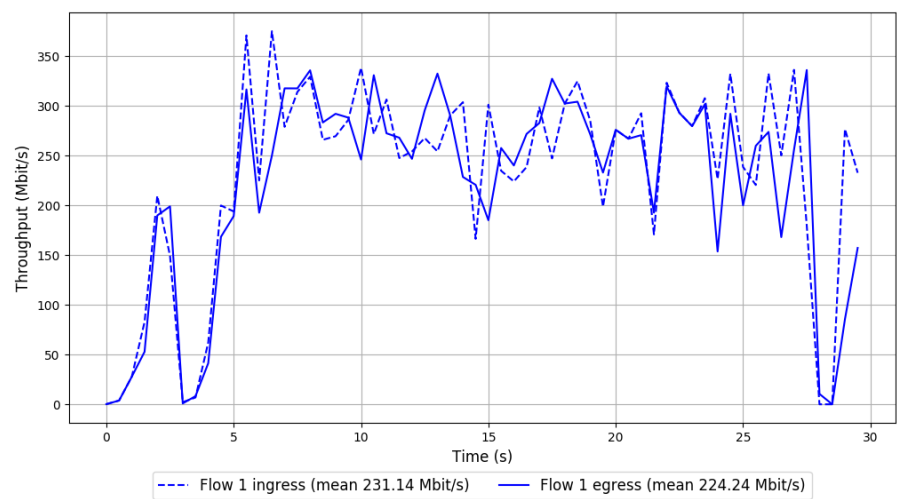
Run 6: Report of Verus — Data Link

Flow 1 ingress (mean 231.14 Mbit/s) Flow 1 egress (mean 224.24 Mbit/s)

Flow 1 (95th percentile 205.56 ms)

```
Run 7: Statistics of Verus

Start at: 2017-09-21 10:28:59
End at: 2017-09-21 10:29:29


# Below is generated by plot.py at 2017-09-21 13:29:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 157.56 Mbit/s
95th percentile per-packet one-way delay: 130.453 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 157.56 Mbit/s
95th percentile per-packet one-way delay: 130.453 ms
Loss rate: 0.44%
```
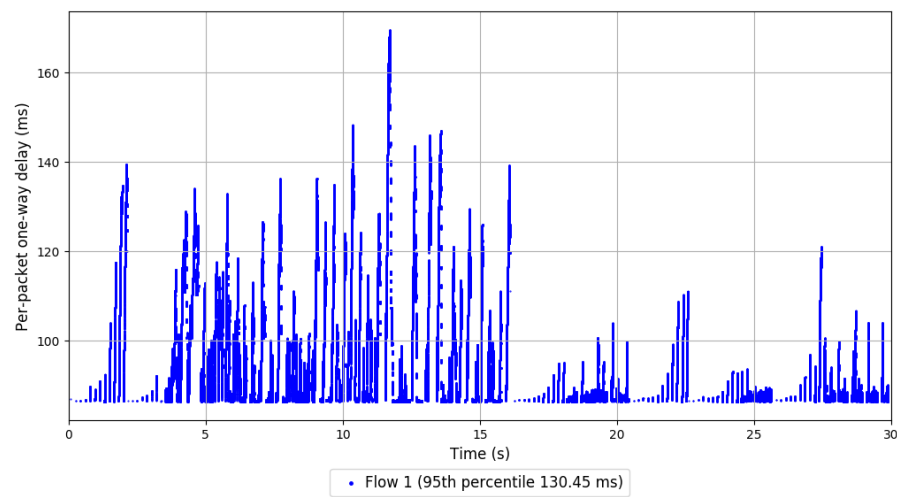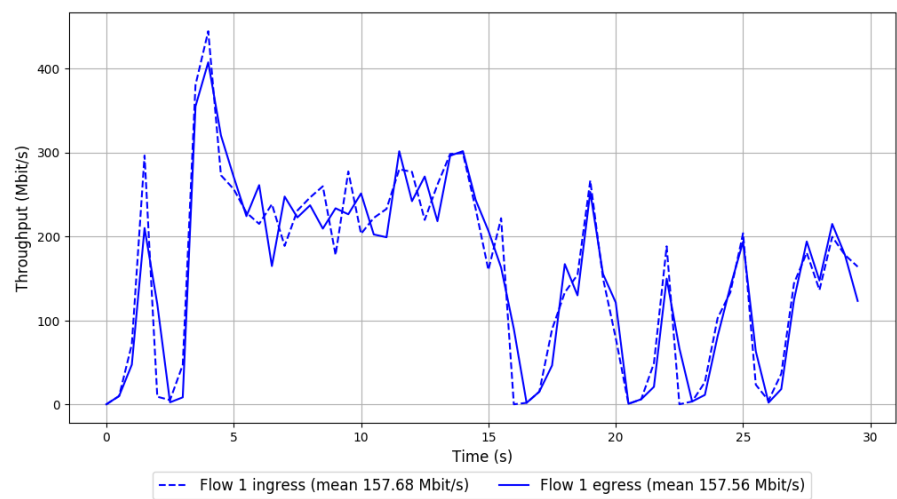
Run 7: Report of Verus — Data Link

```
Run 8: Statistics of Verus

Start at: 2017-09-21 10:39:59
End at: 2017-09-21 10:40:29

# Below is generated by plot.py at 2017-09-21 13:29:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 145.50 Mbit/s
95th percentile per-packet one-way delay: 138.170 ms
Loss rate: 1.28%
-- Flow 1:
Average throughput: 145.50 Mbit/s
95th percentile per-packet one-way delay: 138.170 ms
Loss rate: 1.28%
```
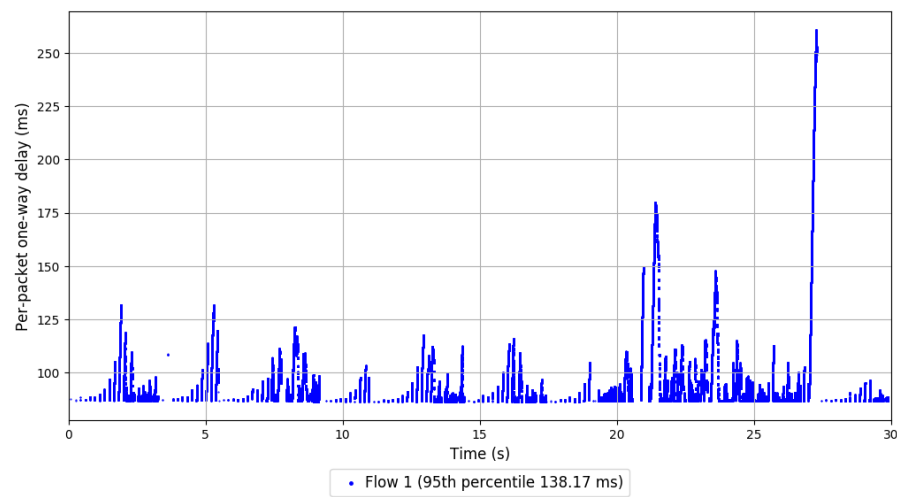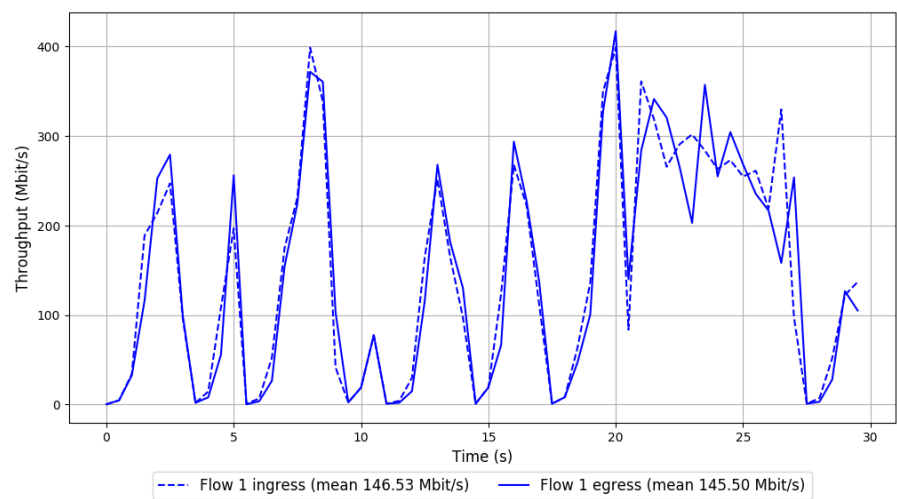
Run 8: Report of Verus — Data Link

Flow 1 ingress (mean 146.53 Mbit/s) ---- Flow 1 egress (mean 145.50 Mbit/s)

Flow 1 (95th percentile 138.17 ms)

```
Run 9: Statistics of Verus

Start at: 2017-09-21 10:50:41
End at: 2017-09-21 10:51:11


# Below is generated by plot.py at 2017-09-21 13:31:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 172.92 Mbit/s
95th percentile per-packet one-way delay: 126.770 ms
Loss rate: 1.13%
-- Flow 1:
Average throughput: 172.92 Mbit/s
95th percentile per-packet one-way delay: 126.770 ms
Loss rate: 1.13%
```
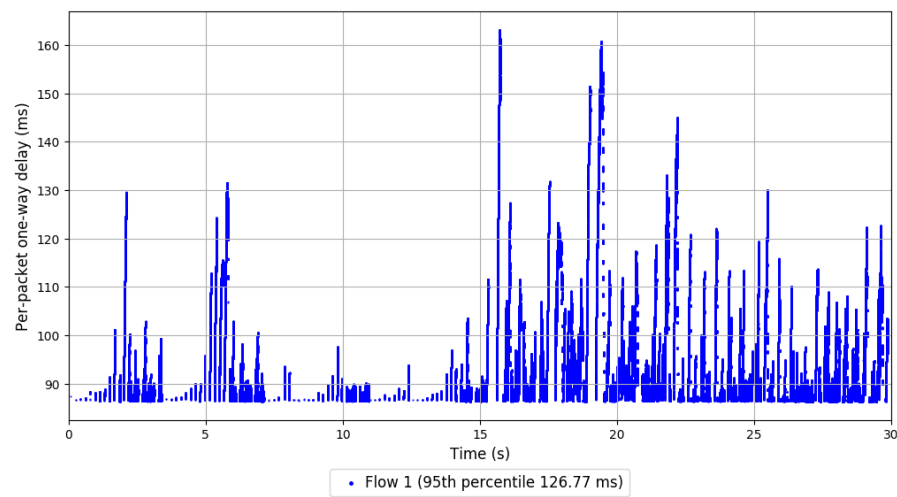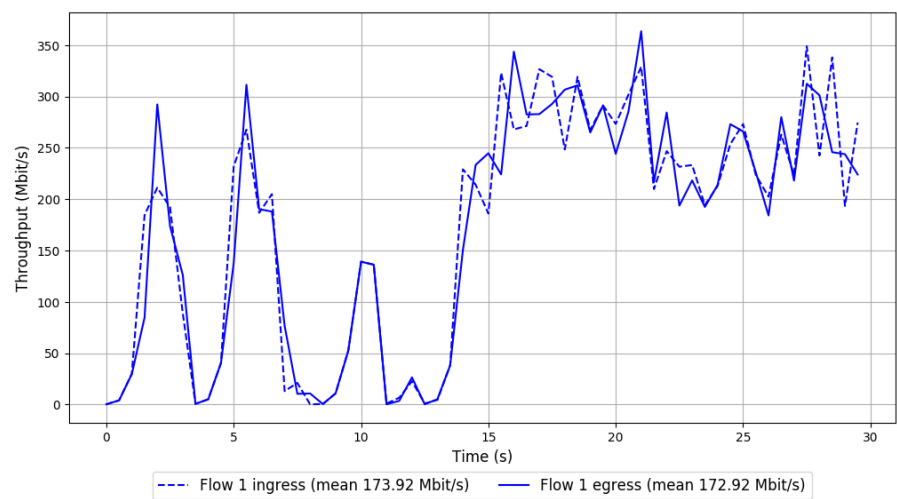
Run 9: Report of Verus — Data Link

```
Run 10: Statistics of Verus

Start at: 2017-09-21 11:01:38
End at: 2017-09-21 11:02:08

# Below is generated by plot.py at 2017-09-21 13:31:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 146.53 Mbit/s
95th percentile per-packet one-way delay: 151.145 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 146.53 Mbit/s
95th percentile per-packet one-way delay: 151.145 ms
Loss rate: 0.29%
```
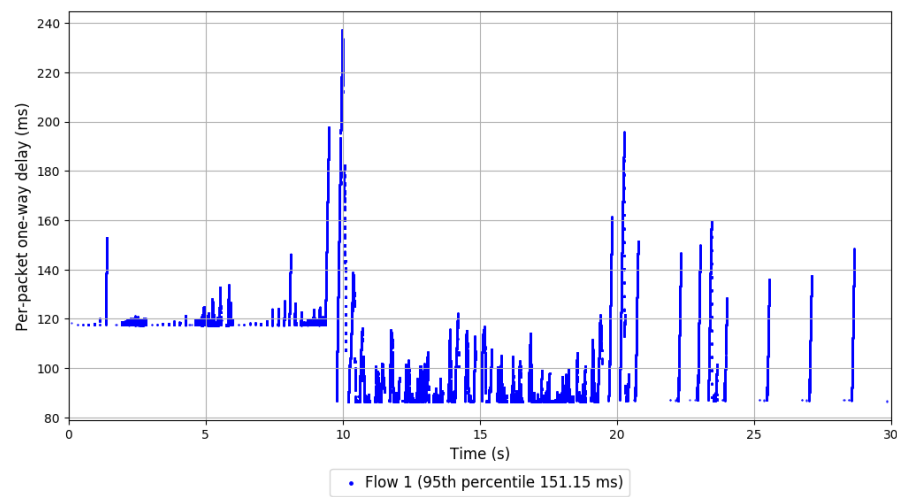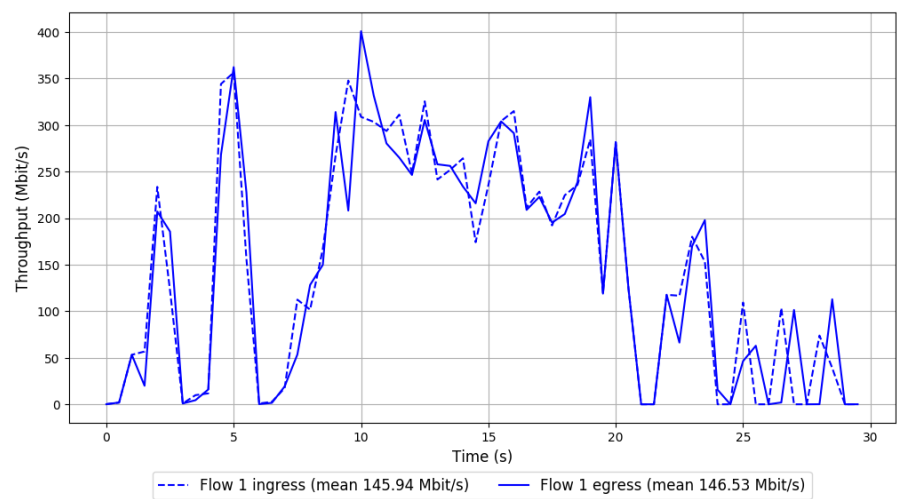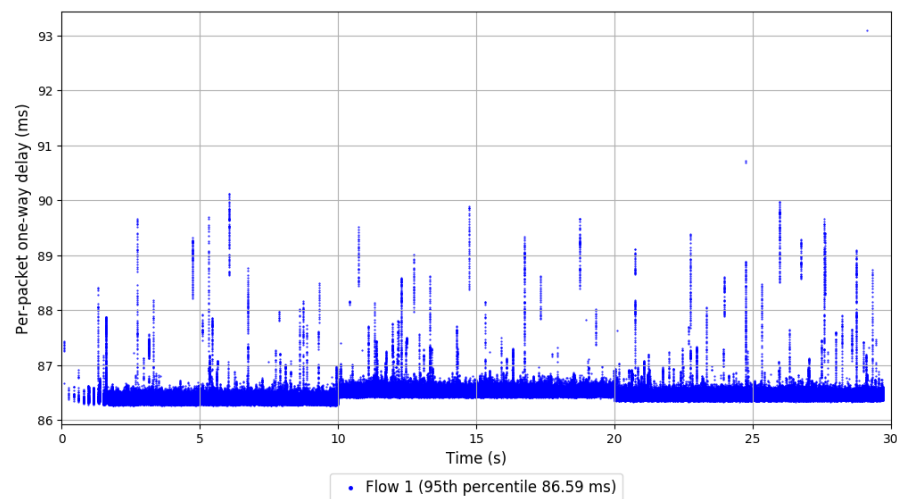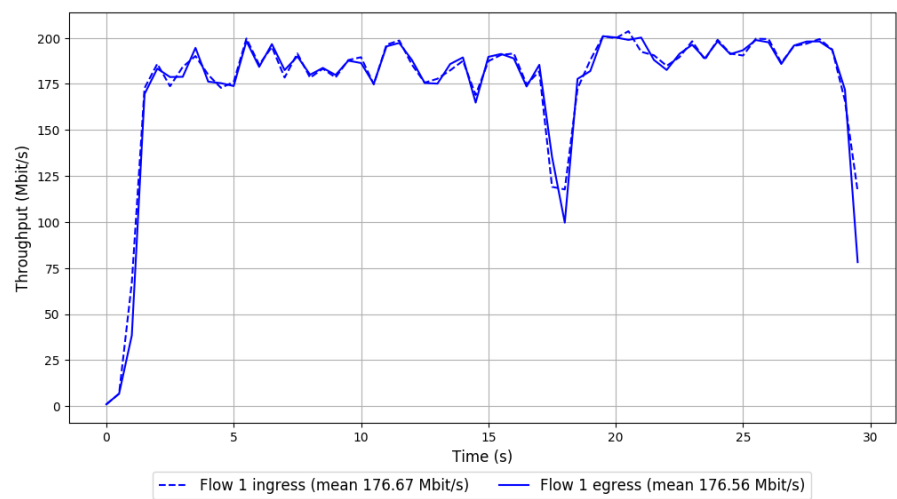
Run 10: Report of Verus — Data Link

```
Run 1: Statistics of Indigo

Start at: 2017-09-21 09:24:28
End at: 2017-09-21 09:24:58

# Below is generated by plot.py at 2017-09-21 13:31:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 176.56 Mbit/s
95th percentile per-packet one-way delay: 86.587 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 176.56 Mbit/s
95th percentile per-packet one-way delay: 86.587 ms
Loss rate: 0.65%
```
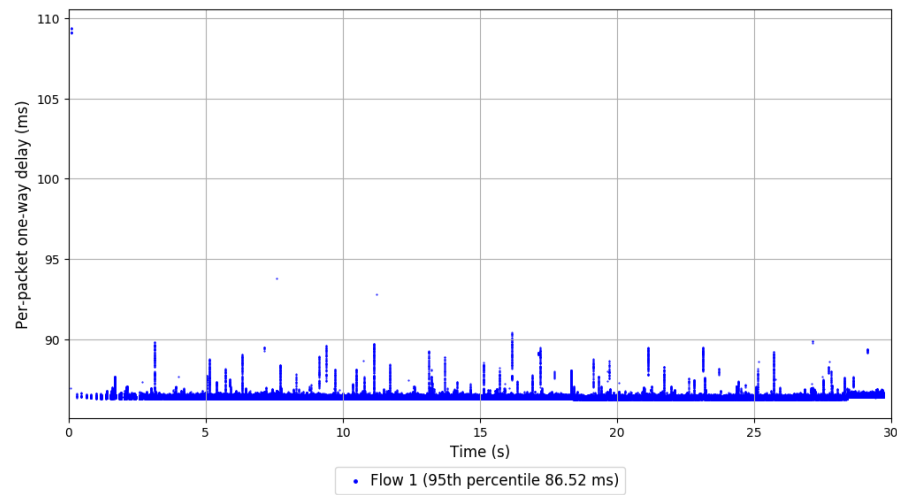
Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2017-09-21 09:35:49
End at: 2017-09-21 09:36:19

# Below is generated by plot.py at 2017-09-21 13:32:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 174.60 Mbit/s
95th percentile per-packet one-way delay: 86.523 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 174.60 Mbit/s
95th percentile per-packet one-way delay: 86.523 ms
Loss rate: 0.67%
```
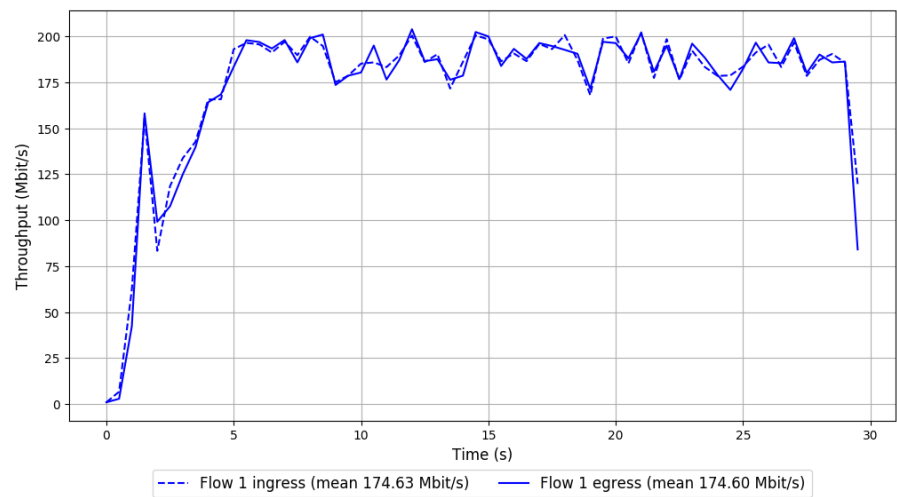
Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2017-09-21 09:47:04
End at: 2017-09-21 09:47:34

# Below is generated by plot.py at 2017-09-21 13:32:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 112.30 Mbit/s
95th percentile per-packet one-way delay: 115.956 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 112.30 Mbit/s
95th percentile per-packet one-way delay: 115.956 ms
Loss rate: 0.41%
```
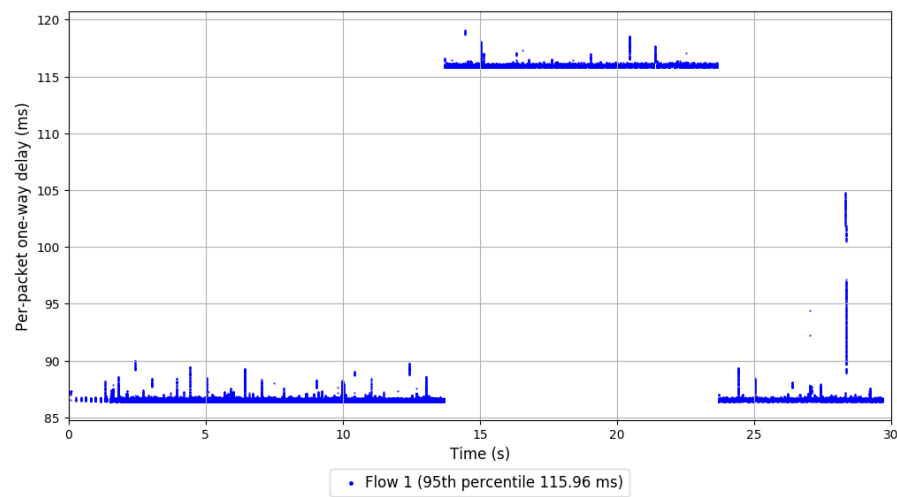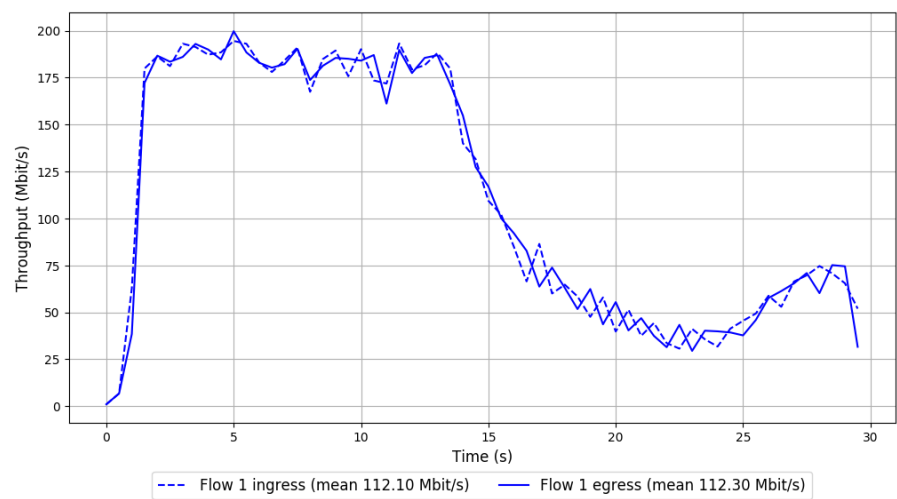
Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2017-09-21 09:57:32
End at: 2017-09-21 09:58:02

# Below is generated by plot.py at 2017-09-21 13:32:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 83.90 Mbit/s
95th percentile per-packet one-way delay: 115.989 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 83.90 Mbit/s
95th percentile per-packet one-way delay: 115.989 ms
Loss rate: 0.45%
```
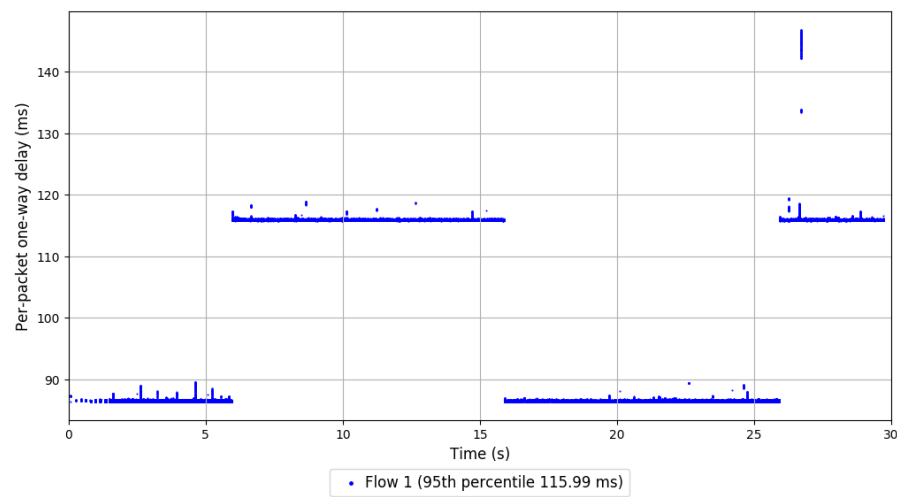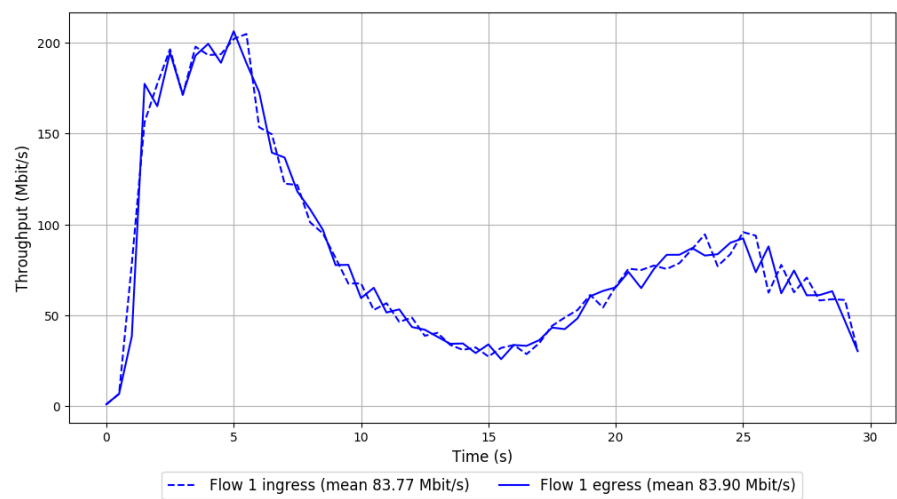
Run 4: Report of Indigo — Data Link

Flow 1 ingress (mean 83.77 Mbit/s) —— Flow 1 egress (mean 83.90 Mbit/s)

• Flow 1 (95th percentile 115.99 ms)

```
Run 5: Statistics of Indigo

Start at: 2017-09-21 10:08:47
End at: 2017-09-21 10:09:17

# Below is generated by plot.py at 2017-09-21 13:32:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 174.34 Mbit/s
95th percentile per-packet one-way delay: 86.567 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 174.34 Mbit/s
95th percentile per-packet one-way delay: 86.567 ms
Loss rate: 0.65%
```
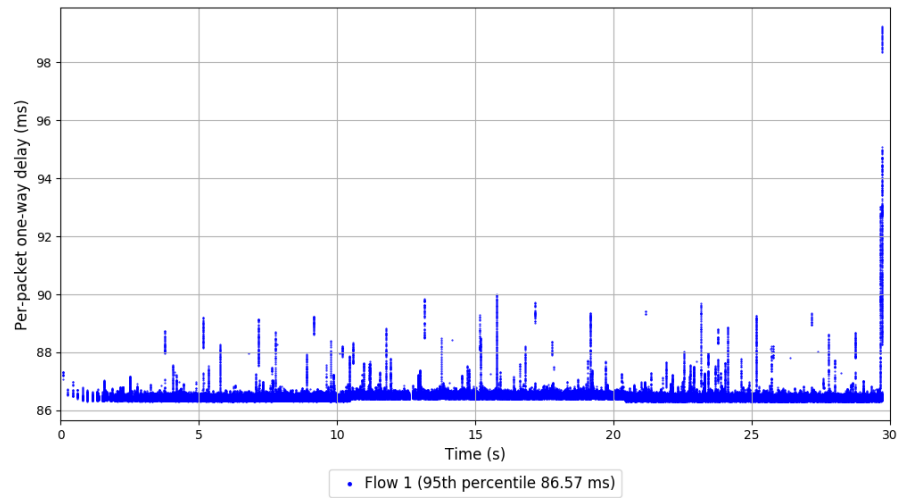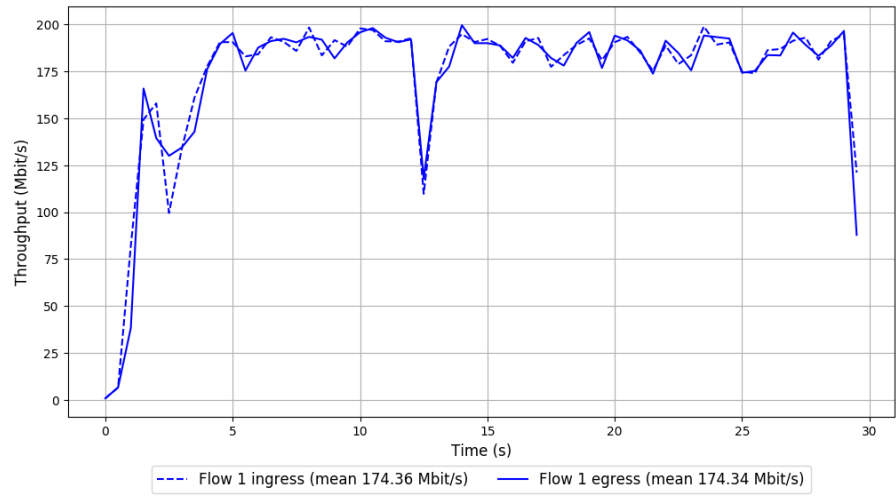
Run 5: Report of Indigo — Data Link

```
Run 6: Statistics of Indigo

Start at: 2017-09-21 10:19:44
End at: 2017-09-21 10:20:14

# Below is generated by plot.py at 2017-09-21 13:32:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 165.49 Mbit/s
95th percentile per-packet one-way delay: 86.629 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 165.49 Mbit/s
95th percentile per-packet one-way delay: 86.629 ms
Loss rate: 0.66%
```
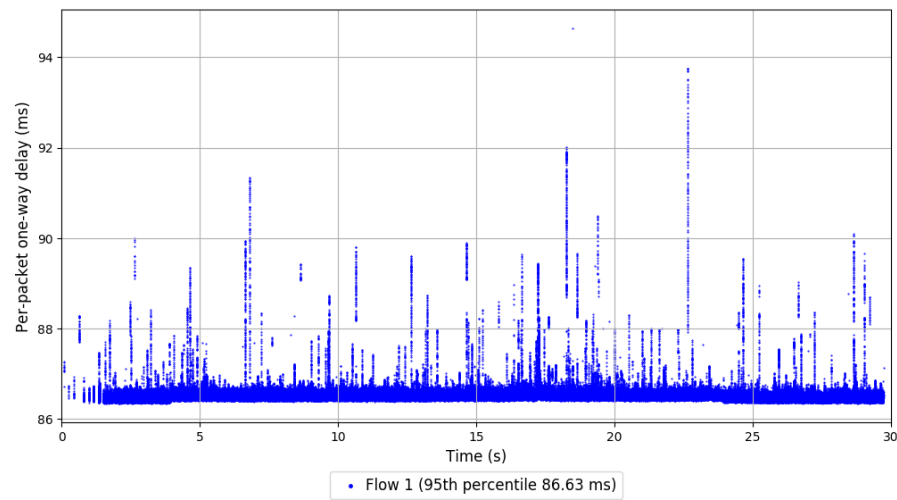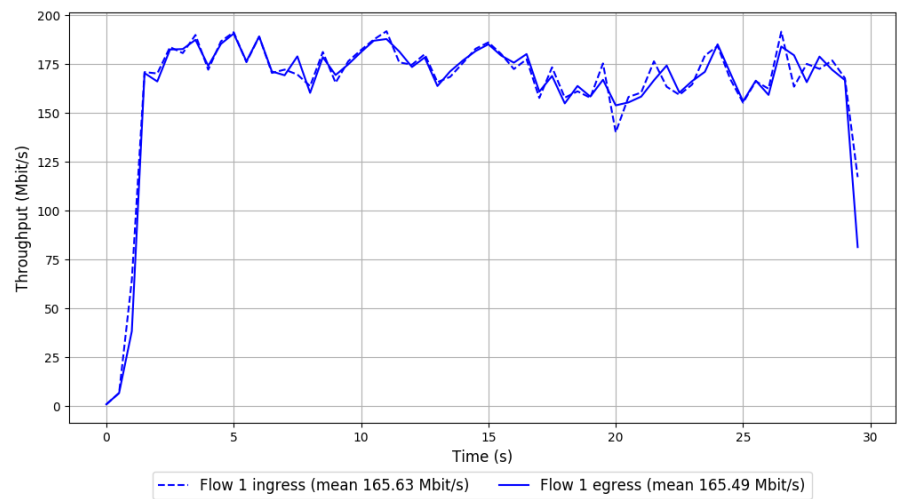
Run 6: Report of Indigo — Data Link

```
Run 7: Statistics of Indigo

Start at: 2017-09-21 10:30:42
End at: 2017-09-21 10:31:12

# Below is generated by plot.py at 2017-09-21 13:34:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 175.26 Mbit/s
95th percentile per-packet one-way delay: 86.593 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 175.26 Mbit/s
95th percentile per-packet one-way delay: 86.593 ms
Loss rate: 0.64%
```
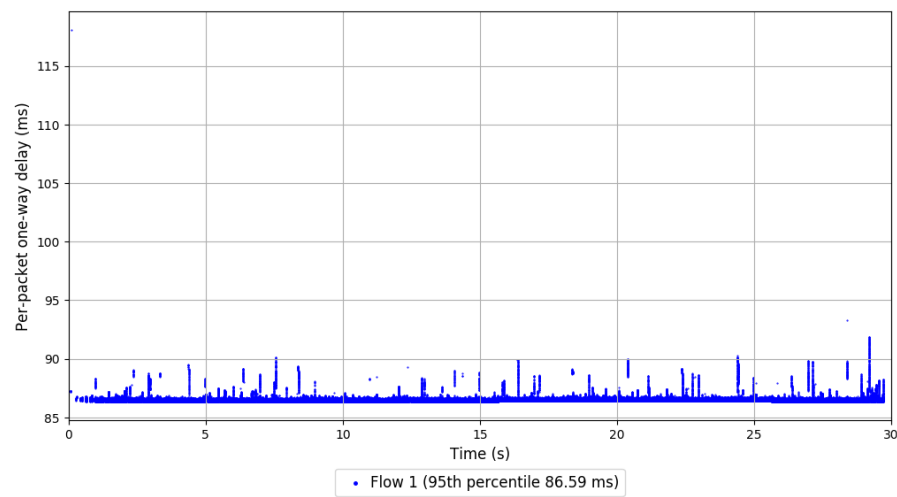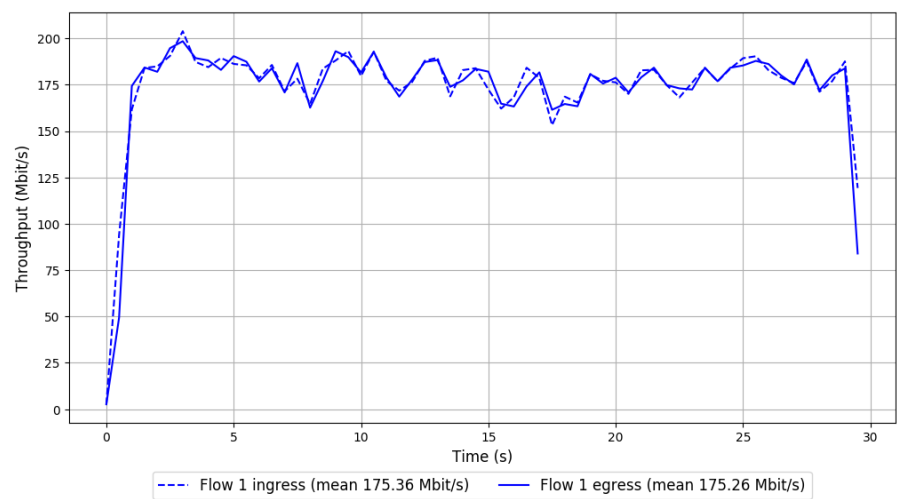
Run 7: Report of Indigo — Data Link

```
Run 8: Statistics of Indigo

Start at: 2017-09-21 10:41:40
End at: 2017-09-21 10:42:10

# Below is generated by plot.py at 2017-09-21 13:34:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 168.13 Mbit/s
95th percentile per-packet one-way delay: 117.501 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 168.13 Mbit/s
95th percentile per-packet one-way delay: 117.501 ms
Loss rate: 0.60%
```
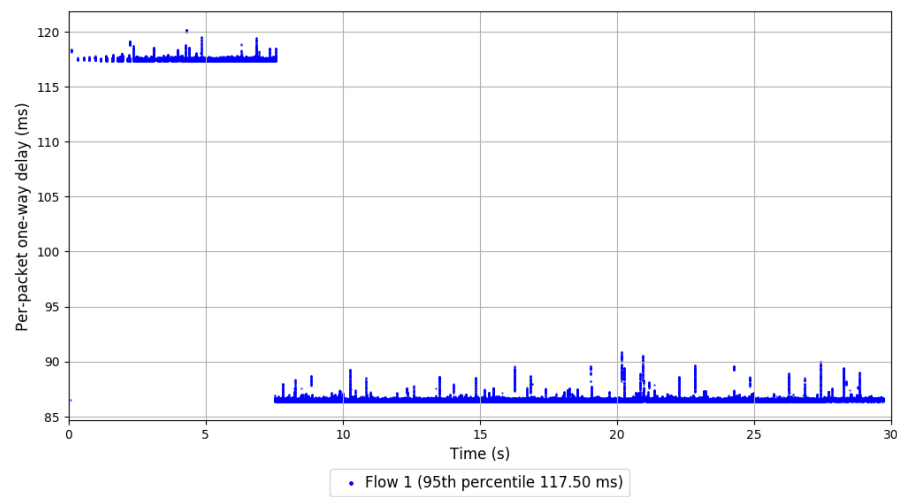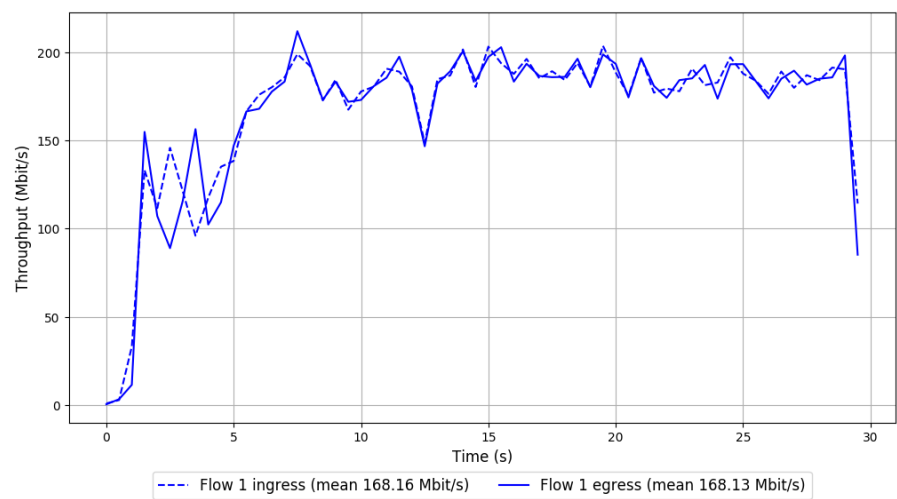
Run 8: Report of Indigo — Data Link

```
Run 9: Statistics of Indigo

Start at: 2017-09-21 10:52:25
End at: 2017-09-21 10:52:55

# Below is generated by plot.py at 2017-09-21 13:34:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 177.95 Mbit/s
95th percentile per-packet one-way delay: 86.875 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 177.95 Mbit/s
95th percentile per-packet one-way delay: 86.875 ms
Loss rate: 0.68%
```
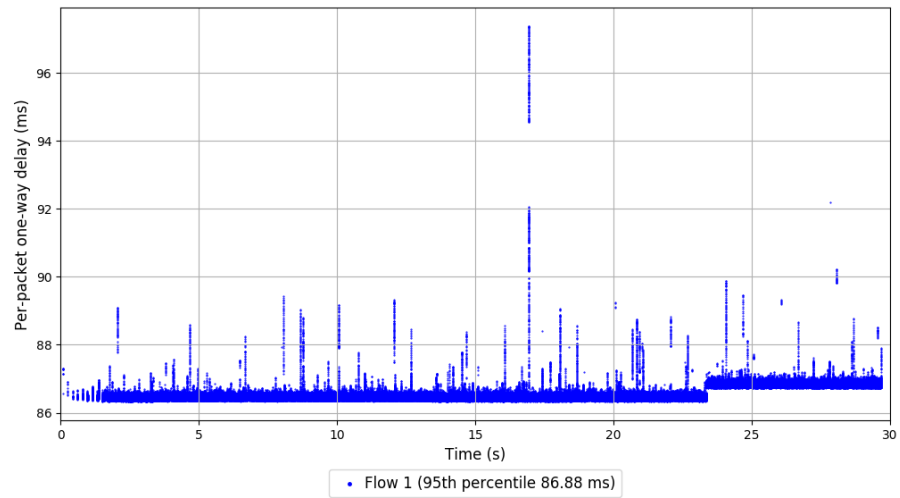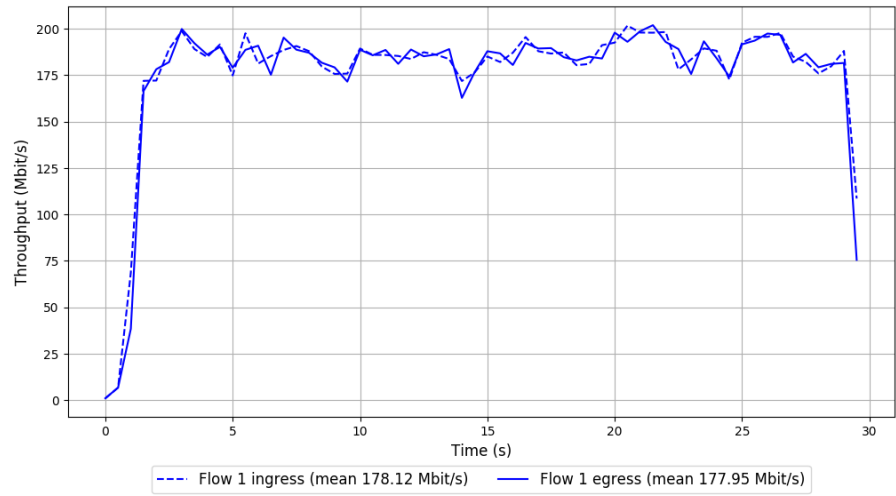
Run 9: Report of Indigo — Data Link

Flow 1 ingress (mean 178.12 Mbit/s) ---- Flow 1 egress (mean 177.95 Mbit/s)

• Flow 1 (95th percentile 86.88 ms)

```
Run 10: Statistics of Indigo

Start at: 2017-09-21 11:03:21
End at: 2017-09-21 11:03:51

# Below is generated by plot.py at 2017-09-21 13:34:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 159.75 Mbit/s
95th percentile per-packet one-way delay: 117.570 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 159.75 Mbit/s
95th percentile per-packet one-way delay: 117.570 ms
Loss rate: 0.40%
```
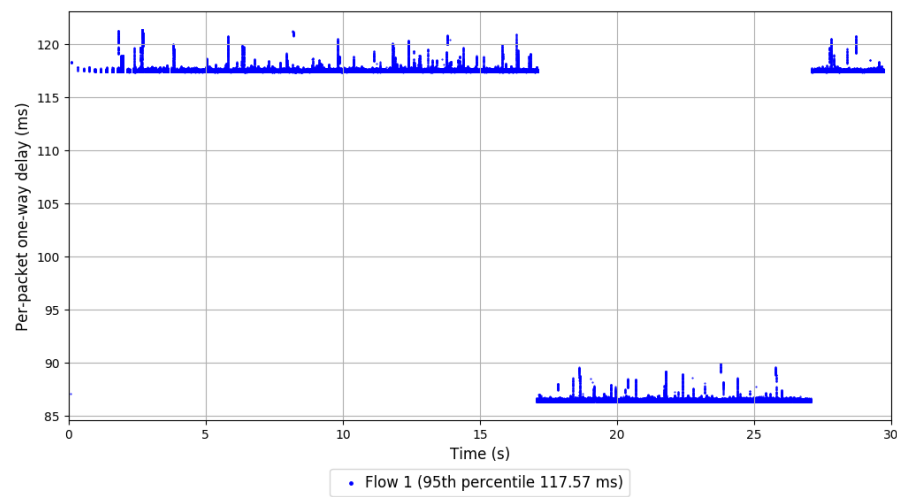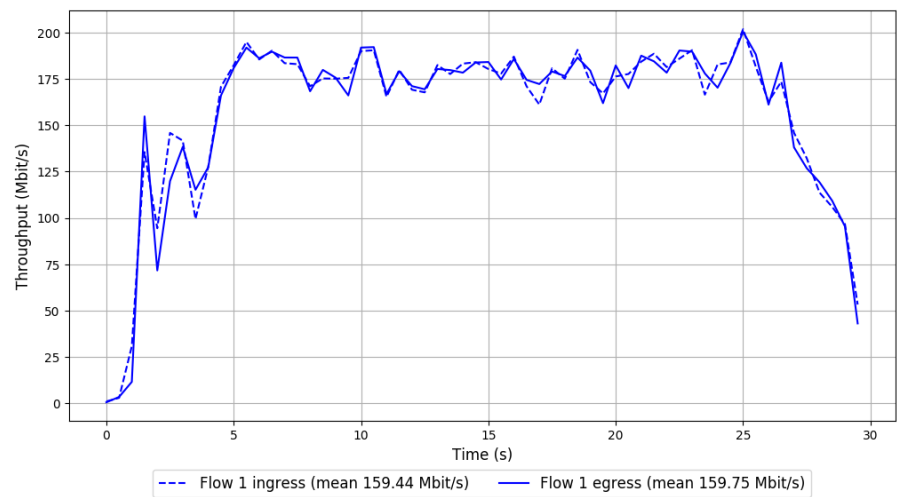
Run 10: Report of Indigo — Data Link

Flow 1 ingress (mean 159.44 Mbit/s)   Flow 1 egress (mean 159.75 Mbit/s)

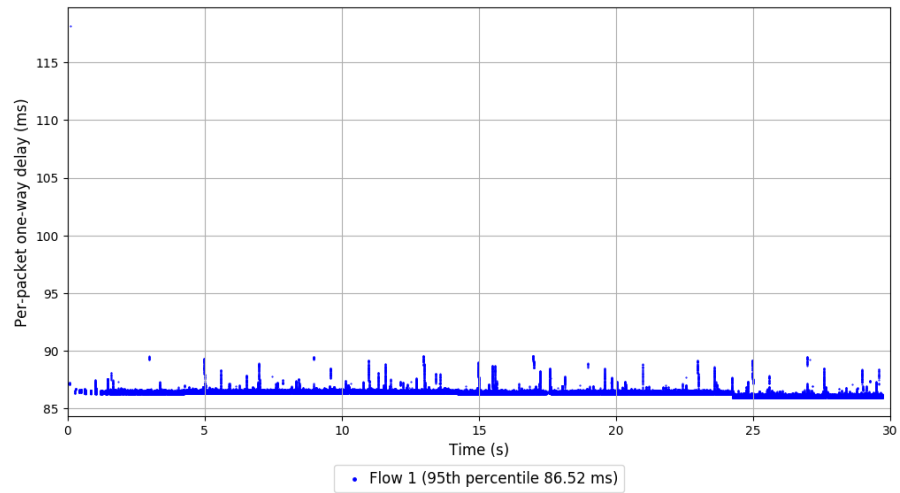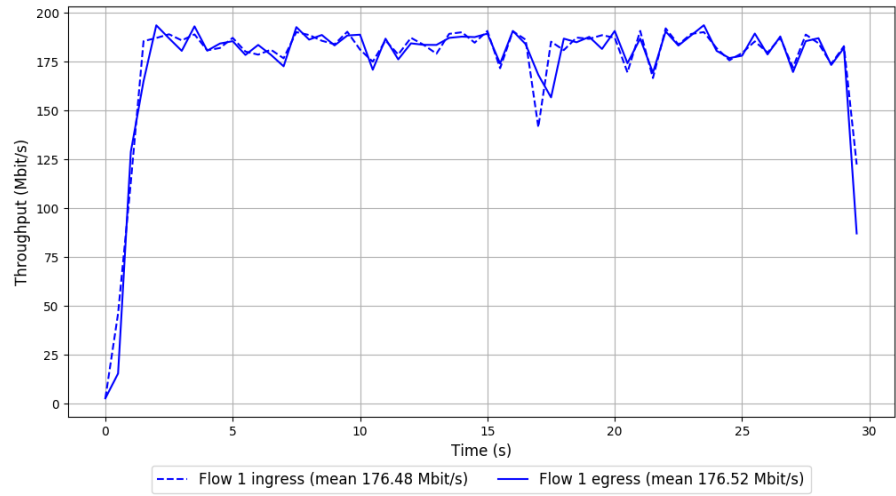Flow 1 (95th percentile 117.57 ms)

```
Run 1: Statistics of Indigo-calib

Start at: 2017-09-21 09:23:34
End at: 2017-09-21 09:24:04

# Below is generated by plot.py at 2017-09-21 13:34:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 176.52 Mbit/s
95th percentile per-packet one-way delay: 86.521 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 176.52 Mbit/s
95th percentile per-packet one-way delay: 86.521 ms
Loss rate: 0.65%
```
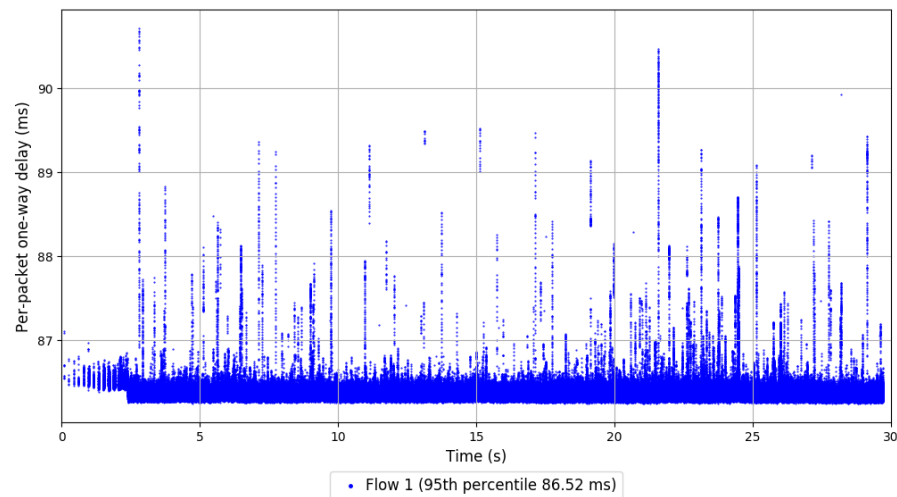
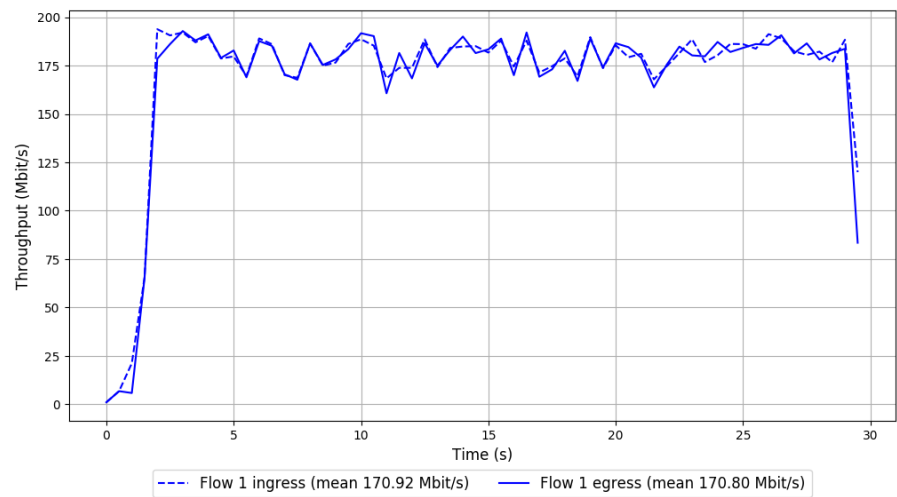# Run 1: Report of Indigo-calib — Data Link

```
Run 2: Statistics of Indigo-calib

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

# Below is generated by plot.py at 2017-09-21 13:35:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 170.80 Mbit/s
95th percentile per-packet one-way delay: 86.523 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 170.80 Mbit/s
95th percentile per-packet one-way delay: 86.523 ms
Loss rate: 0.68%
```

Run 2: Report of Indigo-calib — Data Link

Flow 1 ingress (mean 170.92 Mbit/s)   Flow 1 egress (mean 170.80 Mbit/s)
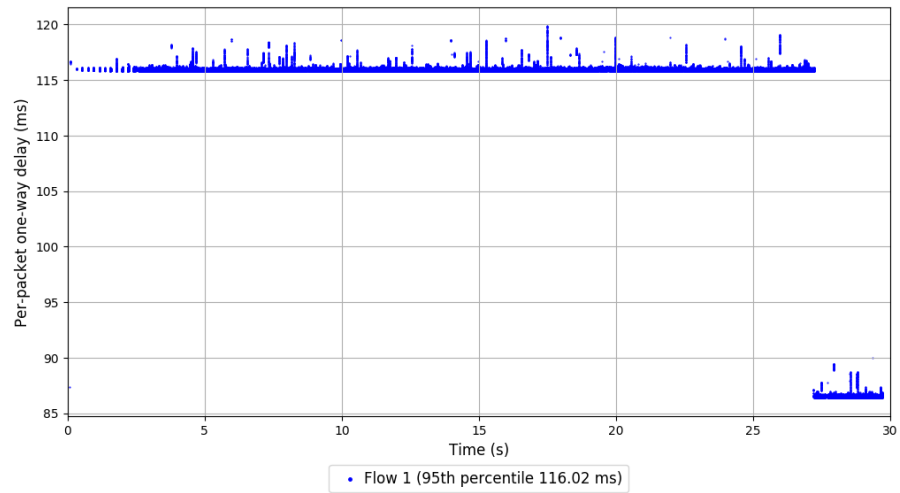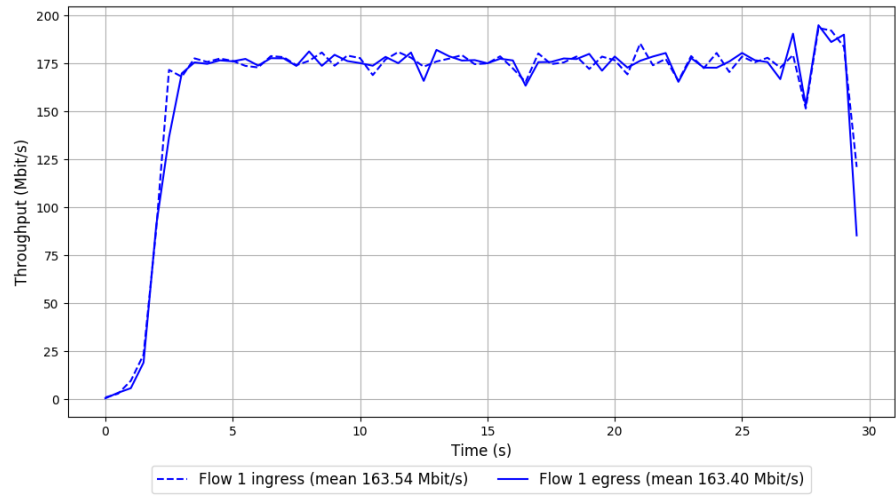

Flow 1 (95th percentile 86.52 ms)

```
Run 3: Statistics of Indigo-calib

Start at: 2017-09-21 09:46:11
End at: 2017-09-21 09:46:41

# Below is generated by plot.py at 2017-09-21 13:35:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 163.40 Mbit/s
95th percentile per-packet one-way delay: 116.016 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 163.40 Mbit/s
95th percentile per-packet one-way delay: 116.016 ms
Loss rate: 0.69%
```

Run 3: Report of Indigo-calib — Data Link

Flow 1 ingress (mean 163.54 Mbit/s)   Flow 1 egress (mean 163.40 Mbit/s)

Flow 1 (95th percentile 116.02 ms)

```
Run 4: Statistics of Indigo-calib

Start at: 2017-09-21 09:56:39
End at: 2017-09-21 09:57:09

# Below is generated by plot.py at 2017-09-21 13:35:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 160.69 Mbit/s
95th percentile per-packet one-way delay: 116.004 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 160.69 Mbit/s
95th percentile per-packet one-way delay: 116.004 ms
Loss rate: 0.69%
```
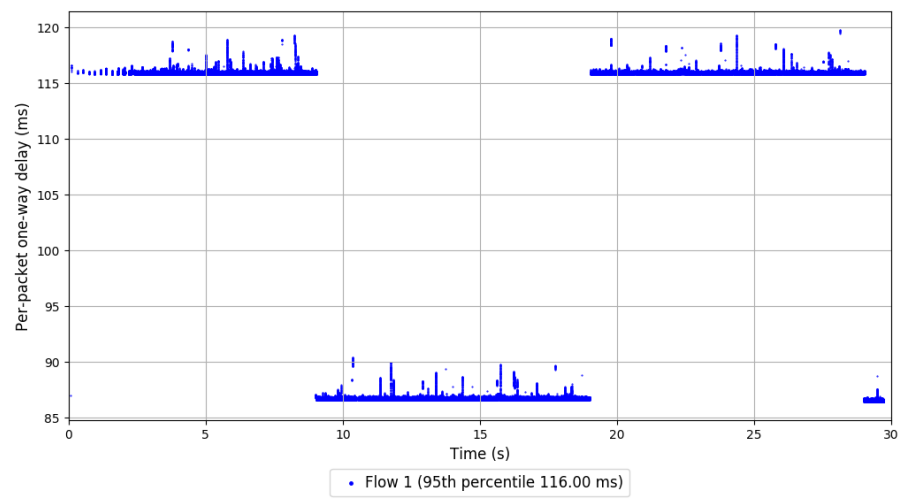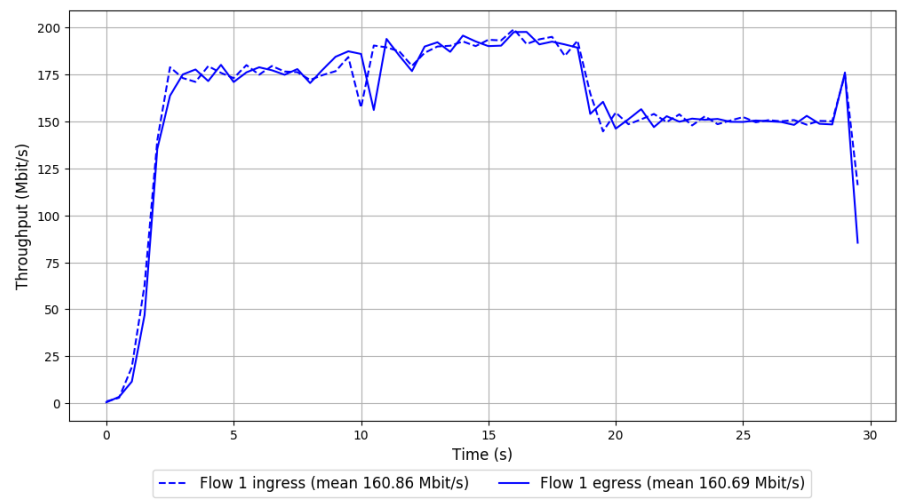
Run 4: Report of Indigo-calib — Data Link

```
Run 5: Statistics of Indigo-calib

Start at: 2017-09-21 10:07:53
End at: 2017-09-21 10:08:23

# Below is generated by plot.py at 2017-09-21 13:37:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 170.77 Mbit/s
95th percentile per-packet one-way delay: 86.596 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 170.77 Mbit/s
95th percentile per-packet one-way delay: 86.596 ms
Loss rate: 0.65%
```
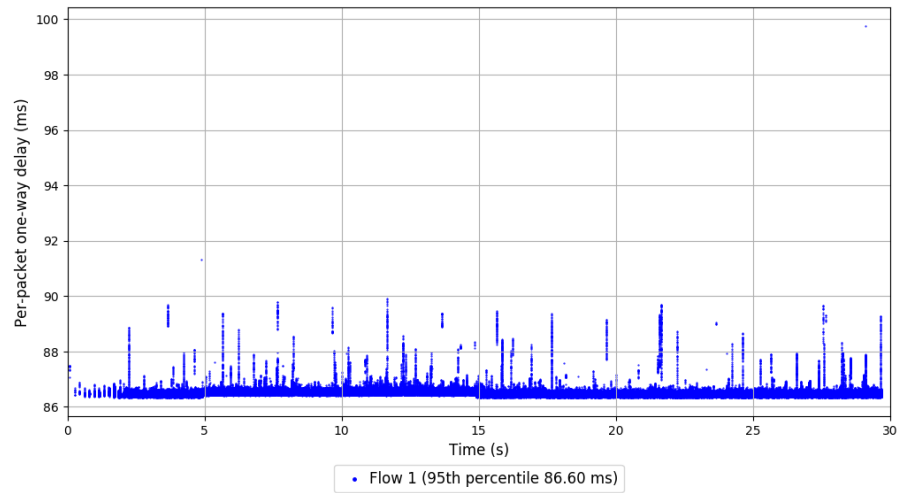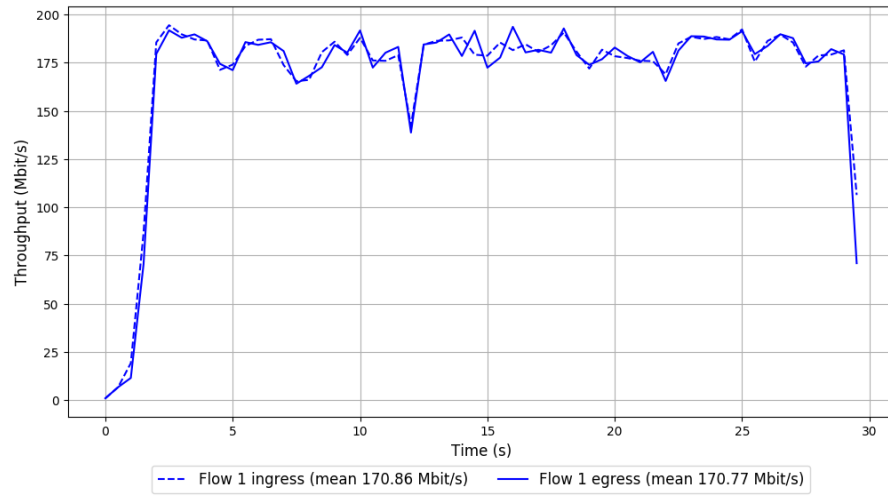
Run 5: Report of Indigo-calib — Data Link

```
Run 6: Statistics of Indigo-calib

Start at: 2017-09-21 10:18:52
End at: 2017-09-21 10:19:22

# Below is generated by plot.py at 2017-09-21 13:37:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 174.38 Mbit/s
95th percentile per-packet one-way delay: 86.548 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 174.38 Mbit/s
95th percentile per-packet one-way delay: 86.548 ms
Loss rate: 0.68%
```
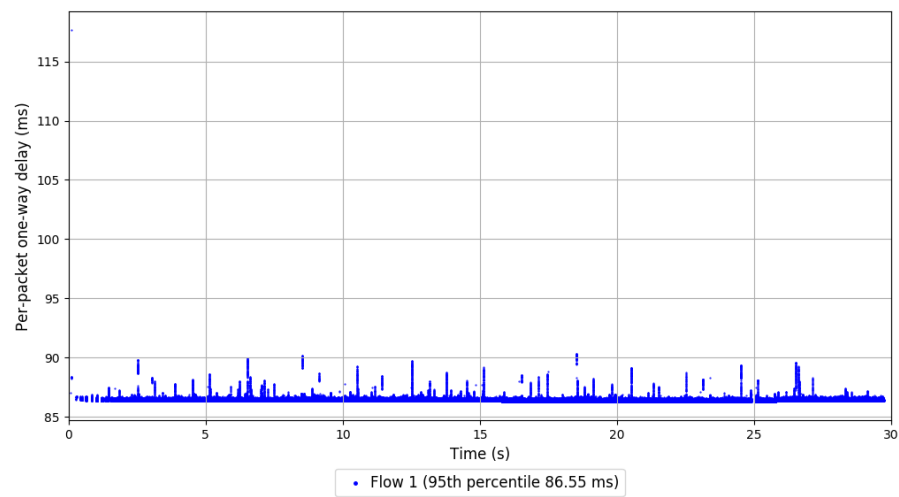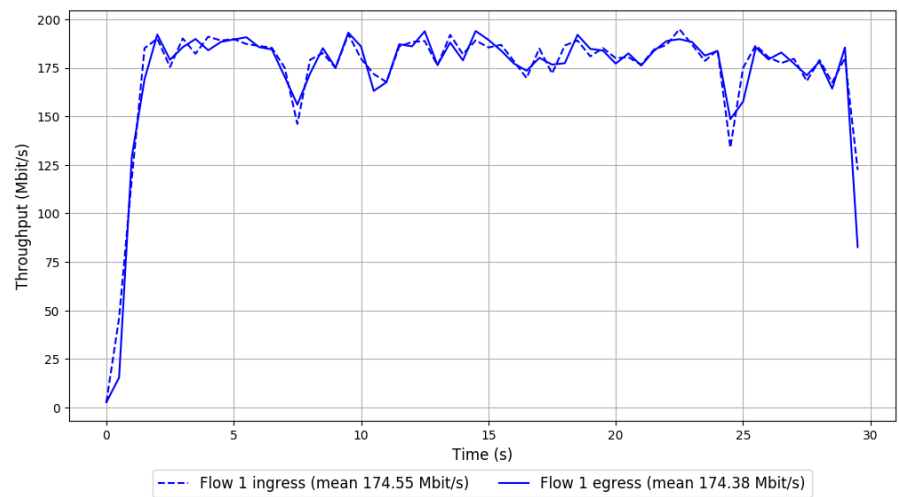
Run 6: Report of Indigo-calib — Data Link

Flow 1 ingress (mean 174.55 Mbit/s) — — — Flow 1 egress (mean 174.38 Mbit/s)

• Flow 1 (95th percentile 86.55 ms)

```
Run 7: Statistics of Indigo-calib

Start at: 2017-09-21 10:29:50
End at: 2017-09-21 10:30:20

# Below is generated by plot.py at 2017-09-21 13:37:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 178.27 Mbit/s
95th percentile per-packet one-way delay: 86.943 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 178.27 Mbit/s
95th percentile per-packet one-way delay: 86.943 ms
Loss rate: 0.65%
```
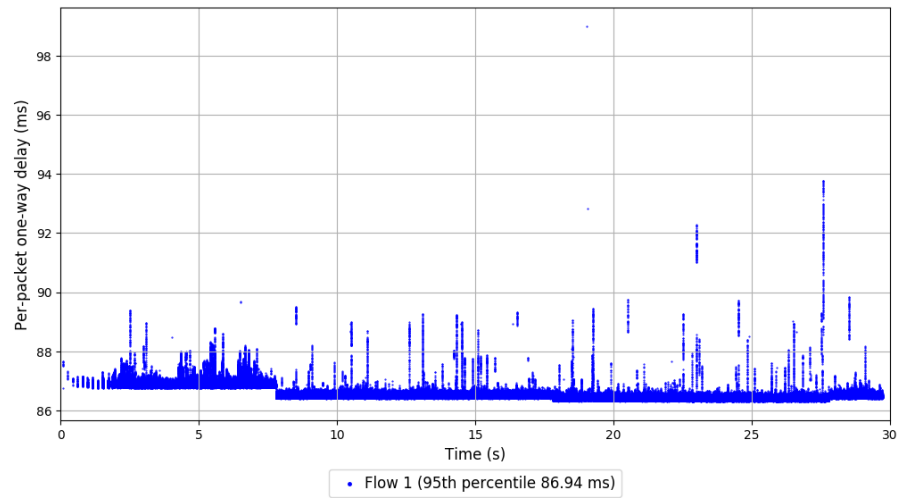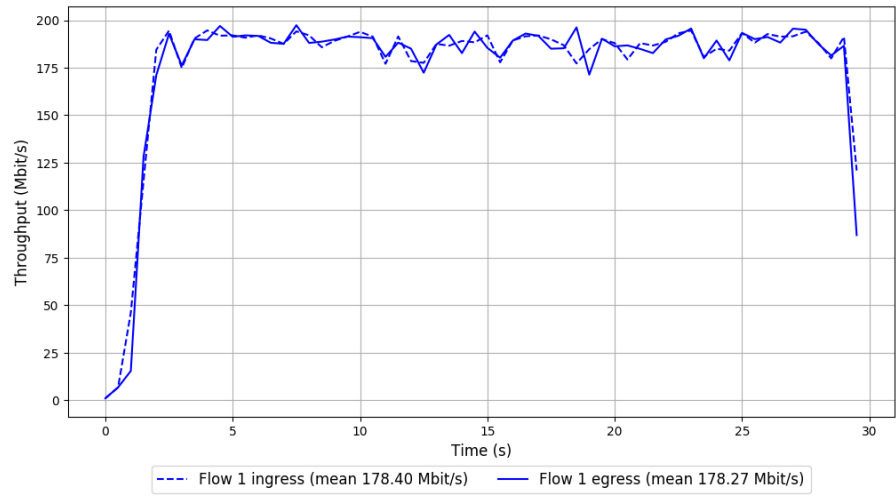
Run 7: Report of Indigo-calib — Data Link

```
Run 8: Statistics of Indigo-calib

Start at: 2017-09-21 10:40:49
End at: 2017-09-21 10:41:19


# Below is generated by plot.py at 2017-09-21 13:37:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 165.67 Mbit/s
95th percentile per-packet one-way delay: 86.627 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 165.67 Mbit/s
95th percentile per-packet one-way delay: 86.627 ms
Loss rate: 0.70%
```
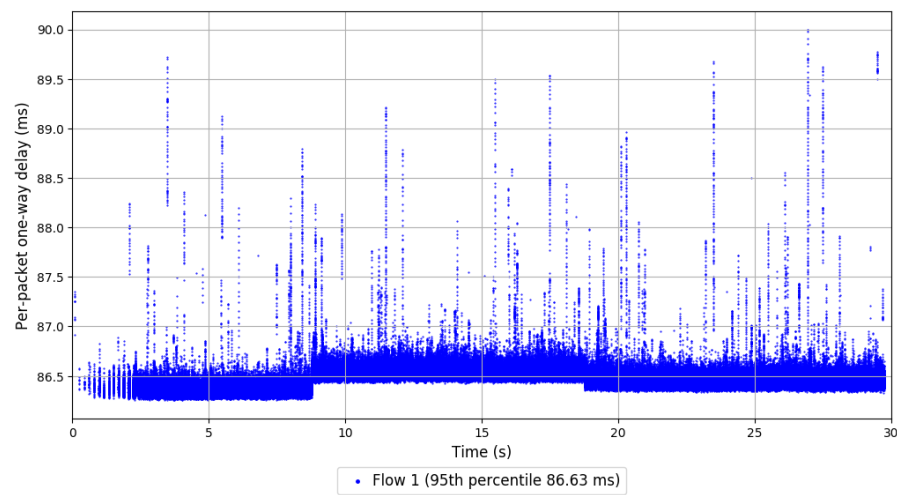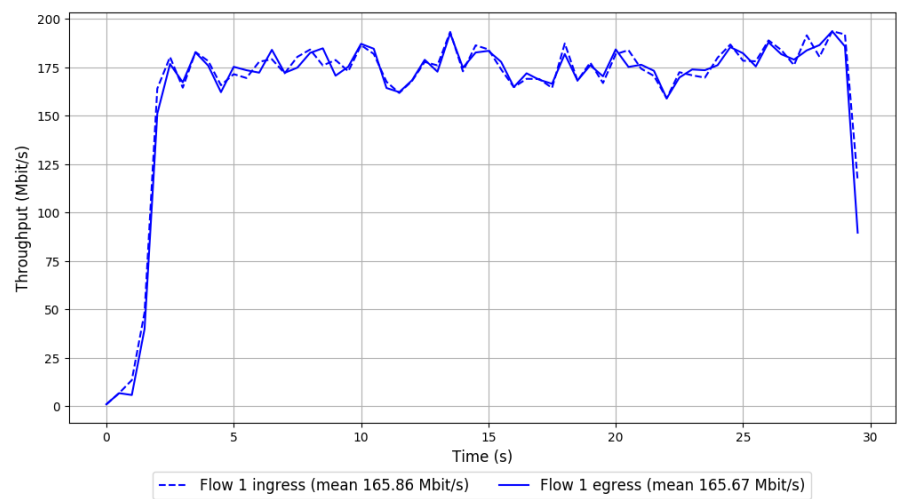
Run 8: Report of Indigo-calib — Data Link

Flow 1 ingress (mean 165.86 Mbit/s)   —— Flow 1 egress (mean 165.67 Mbit/s)

• Flow 1 (95th percentile 86.63 ms)

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```
Run 9: Statistics of Indigo-calib

Start at: 2017-09-21 10:51:33
End at: 2017-09-21 10:52:03

# Below is generated by plot.py at 2017-09-21 13:38:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 165.80 Mbit/s
95th percentile per-packet one-way delay: 117.490 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 165.80 Mbit/s
95th percentile per-packet one-way delay: 117.490 ms
Loss rate: 0.65%
```
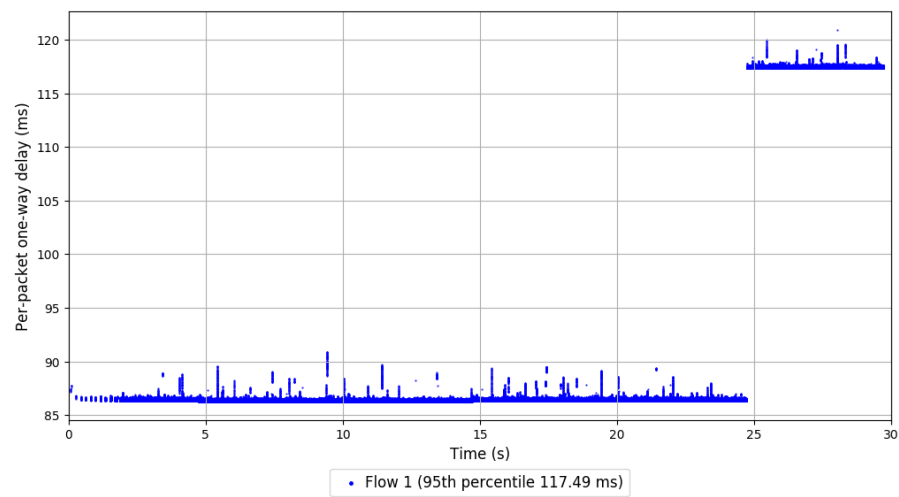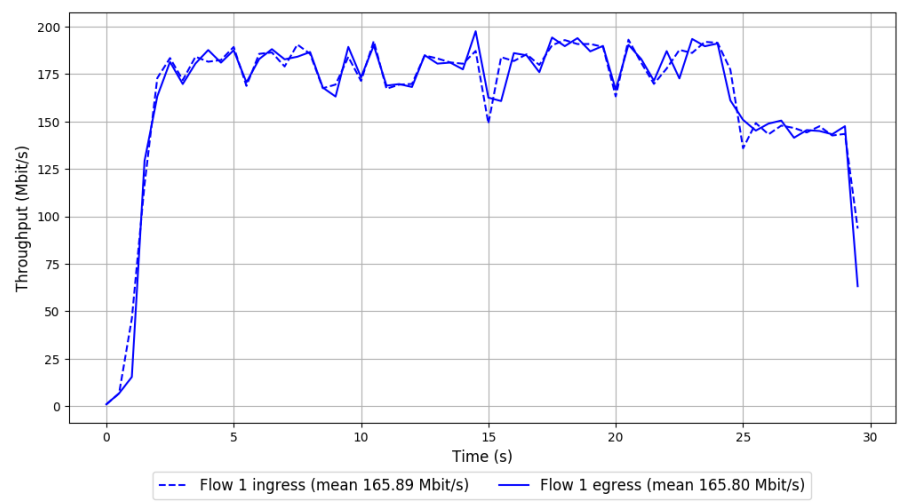
Run 9: Report of Indigo-calib — Data Link

Flow 1 ingress (mean 165.89 Mbit/s) Flow 1 egress (mean 165.80 Mbit/s)

Flow 1 (95th percentile 117.49 ms)

```
Run 10: Statistics of Indigo-calib

Start at: 2017-09-21 11:02:28
End at: 2017-09-21 11:02:58

# Below is generated by plot.py at 2017-09-21 13:38:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 159.66 Mbit/s
95th percentile per-packet one-way delay: 117.520 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 159.66 Mbit/s
95th percentile per-packet one-way delay: 117.520 ms
Loss rate: 0.62%
```
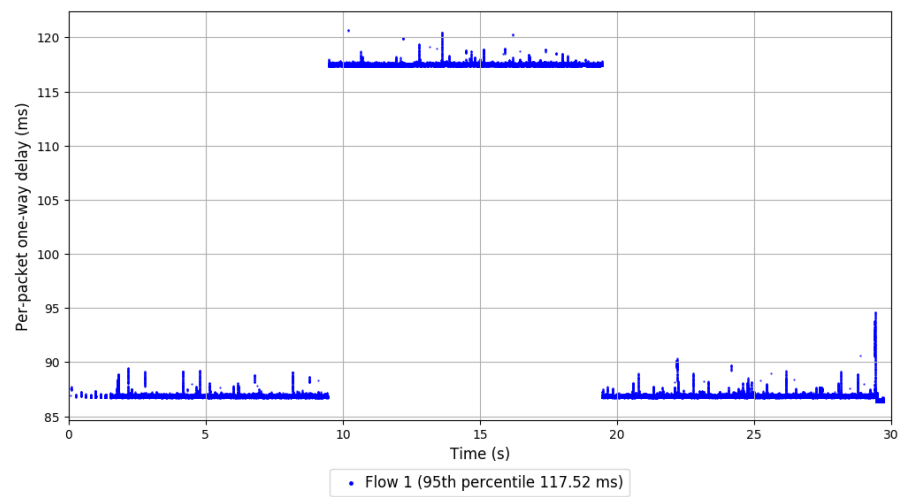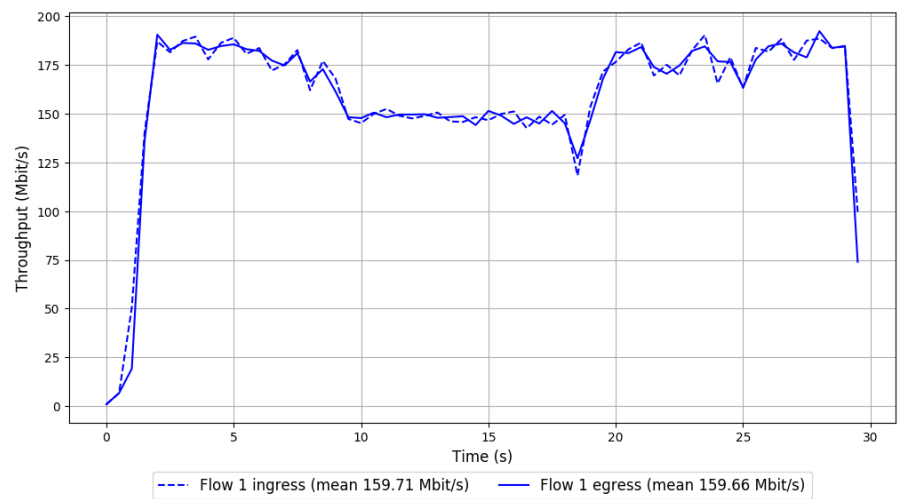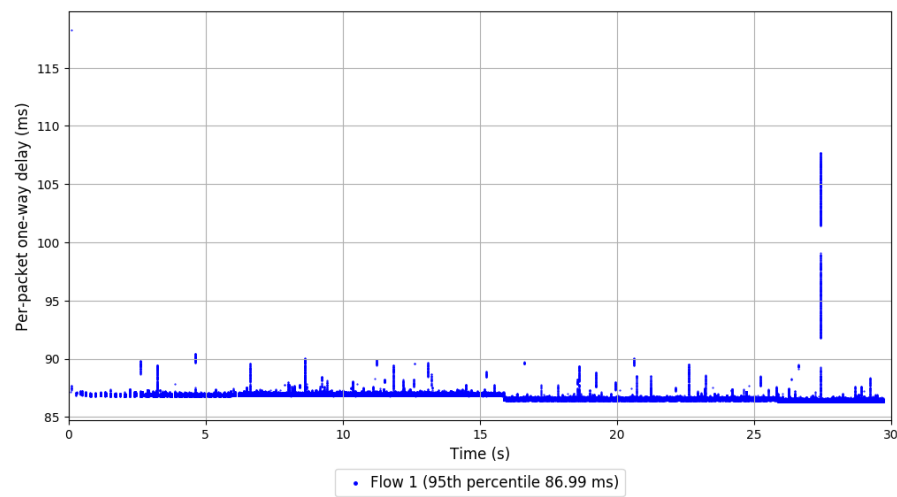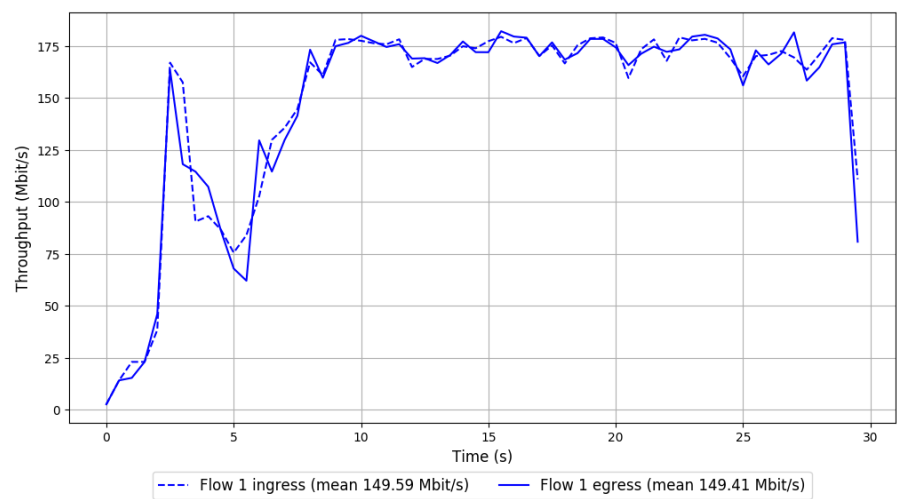
Run 10: Report of Indigo-calib — Data Link

```
Run 1: Statistics of Indigo-delay

Start at: 2017-09-21 09:26:22
End at: 2017-09-21 09:26:52

# Below is generated by plot.py at 2017-09-21 13:38:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 149.41 Mbit/s
95th percentile per-packet one-way delay: 86.988 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 149.41 Mbit/s
95th percentile per-packet one-way delay: 86.988 ms
Loss rate: 0.72%
```
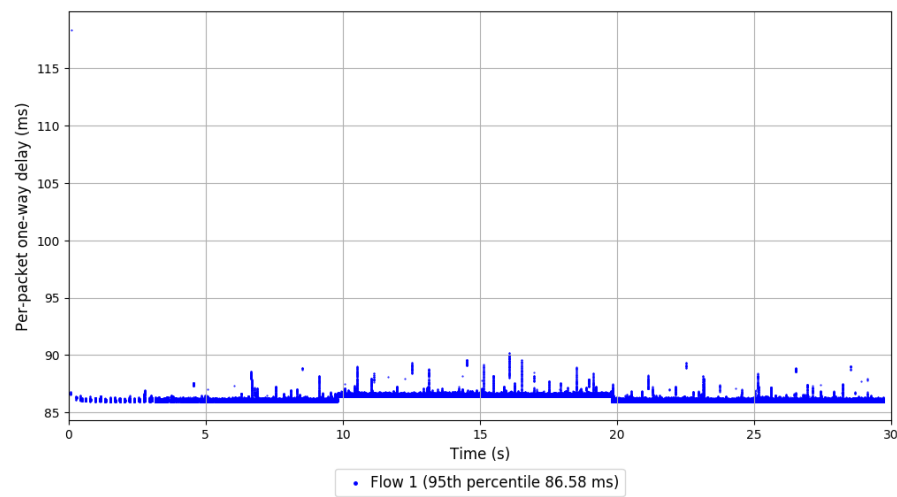
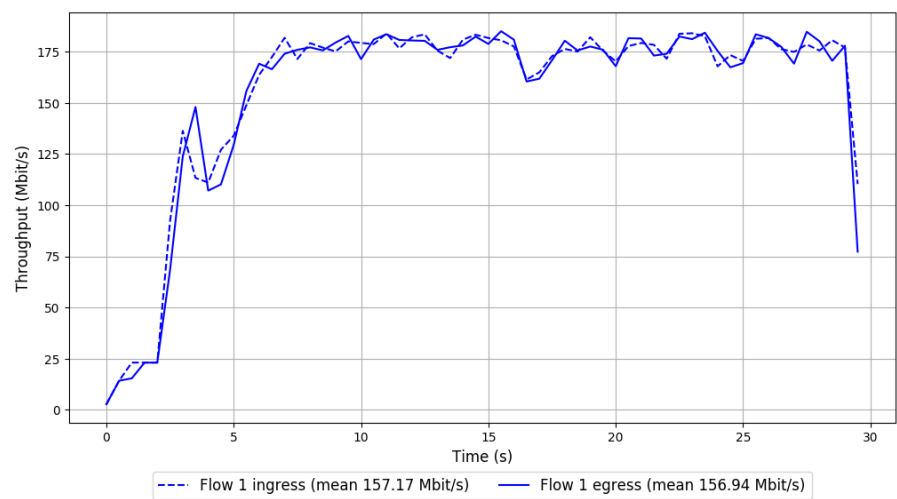Run 1: Report of Indigo-delay — Data Link

```
Run 2: Statistics of Indigo-delay

Start at: 2017-09-21 09:37:48
End at: 2017-09-21 09:38:18

# Below is generated by plot.py at 2017-09-21 13:38:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 156.94 Mbit/s
95th percentile per-packet one-way delay: 86.576 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 156.94 Mbit/s
95th percentile per-packet one-way delay: 86.576 ms
Loss rate: 0.74%
```

Run 2: Report of Indigo-delay — Data Link

```
Run 3: Statistics of Indigo-delay

Start at: 2017-09-21 09:48:38
End at: 2017-09-21 09:49:08

# Below is generated by plot.py at 2017-09-21 13:38:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.72 Mbit/s
95th percentile per-packet one-way delay: 116.075 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 5.72 Mbit/s
95th percentile per-packet one-way delay: 116.075 ms
Loss rate: 0.35%
```
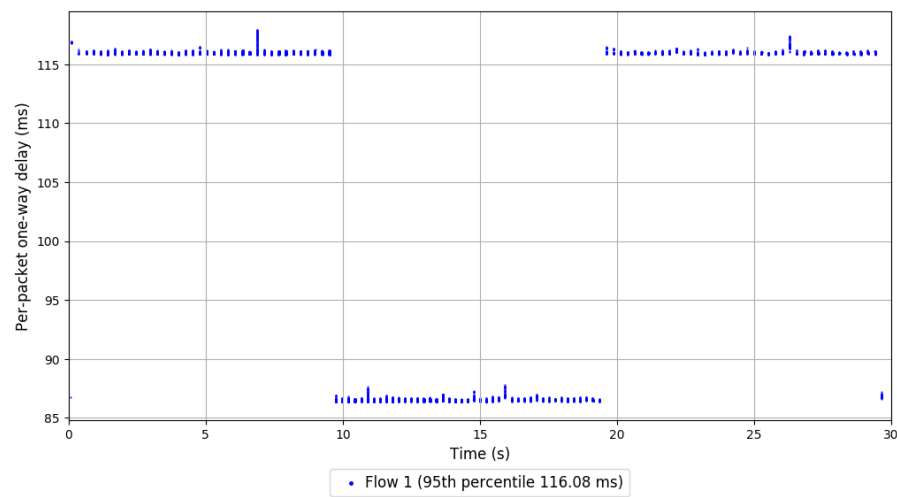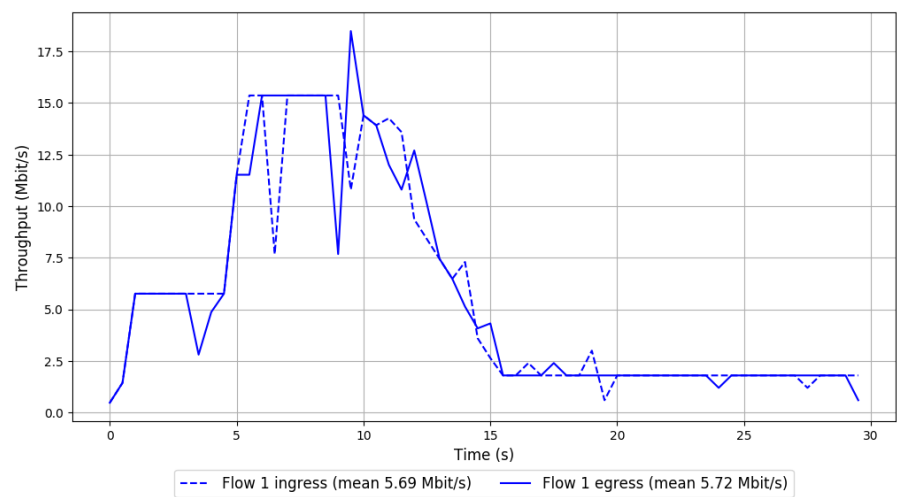
Run 3: Report of Indigo-delay — Data Link

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```
Run 4: Statistics of Indigo-delay

Start at: 2017-09-21 09:59:26
End at: 2017-09-21 09:59:56

# Below is generated by plot.py at 2017-09-21 13:38:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.89 Mbit/s
95th percentile per-packet one-way delay: 116.114 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 4.89 Mbit/s
95th percentile per-packet one-way delay: 116.114 ms
Loss rate: 0.11%
```
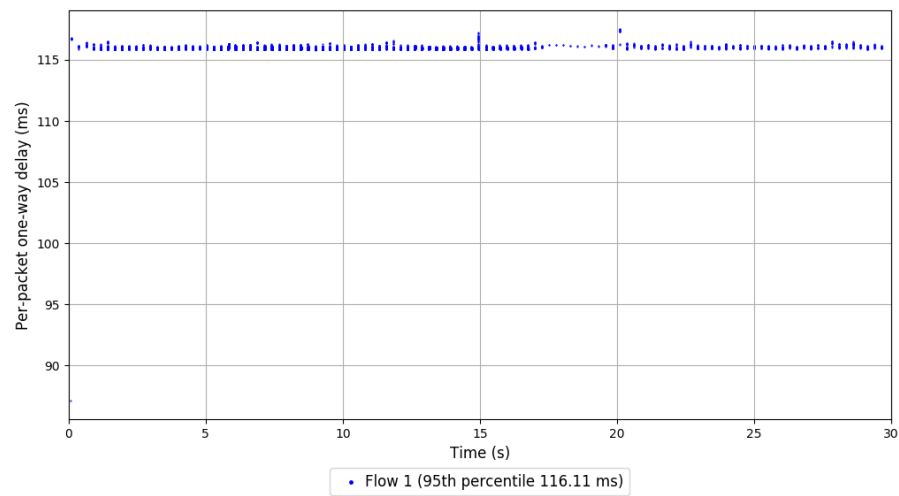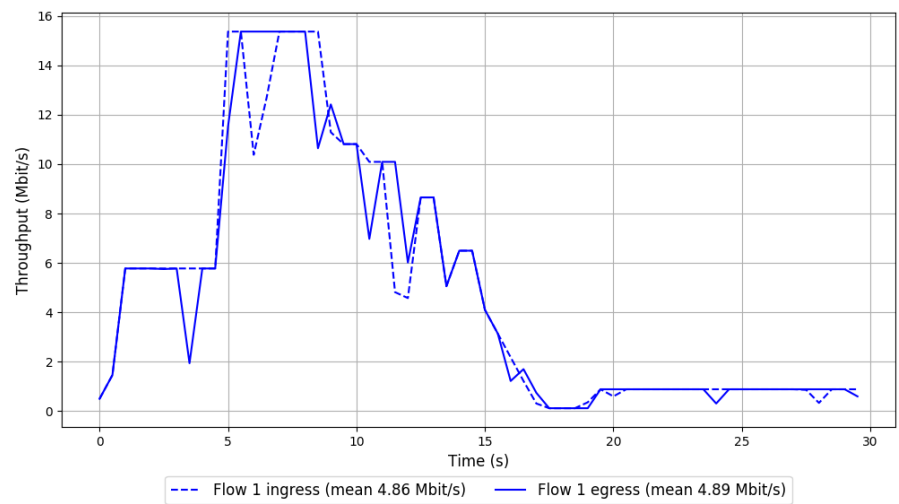
Run 4: Report of Indigo-delay — Data Link

```
Run 5: Statistics of Indigo-delay

Start at: 2017-09-21 10:10:47
End at: 2017-09-21 10:11:17


# Below is generated by plot.py at 2017-09-21 13:39:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 113.32 Mbit/s
95th percentile per-packet one-way delay: 86.730 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 113.32 Mbit/s
95th percentile per-packet one-way delay: 86.730 ms
Loss rate: 0.93%
```
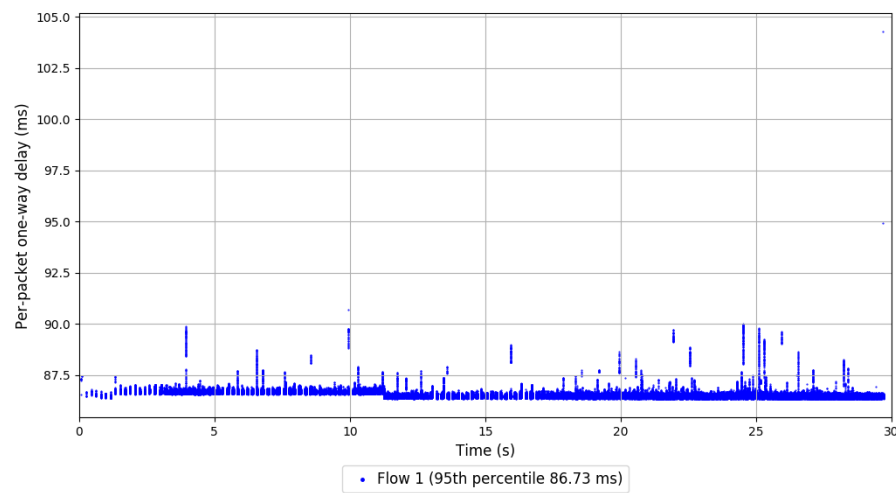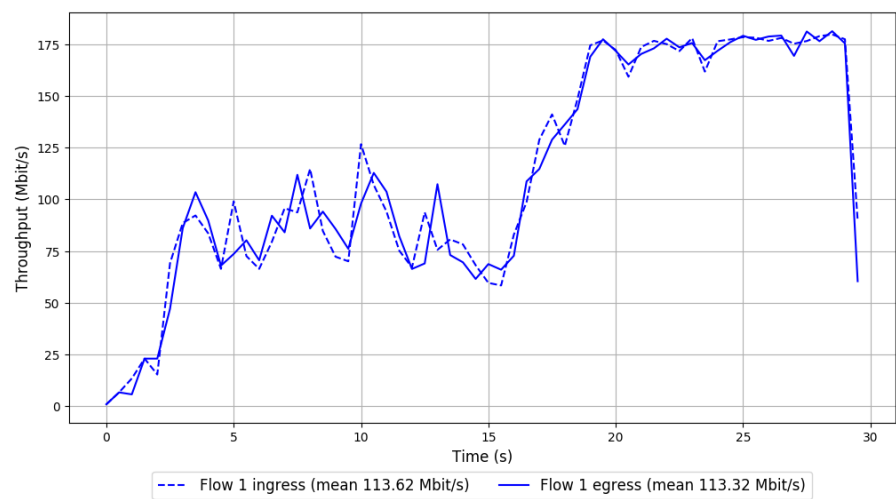
Run 5: Report of Indigo-delay — Data Link

```
Run 6: Statistics of Indigo-delay

Start at: 2017-09-21 10:21:39
End at: 2017-09-21 10:22:09

# Below is generated by plot.py at 2017-09-21 13:39:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 141.68 Mbit/s
95th percentile per-packet one-way delay: 86.641 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 141.68 Mbit/s
95th percentile per-packet one-way delay: 86.641 ms
Loss rate: 0.69%
```
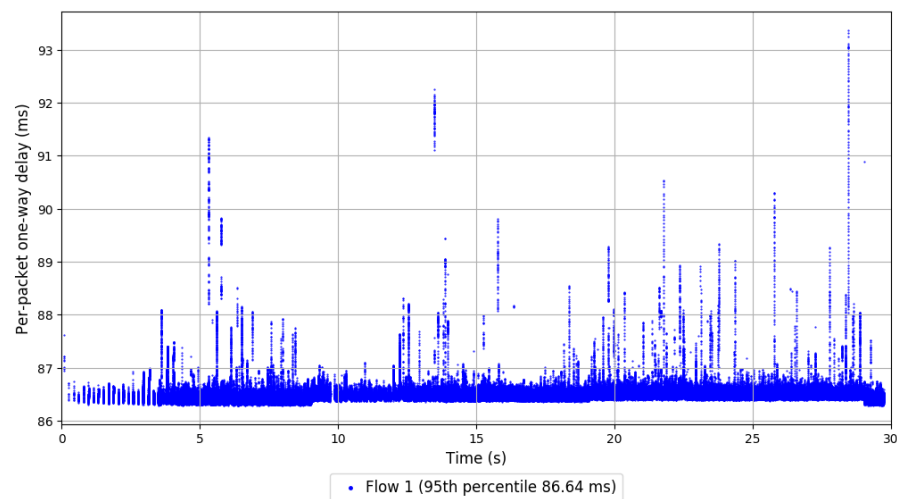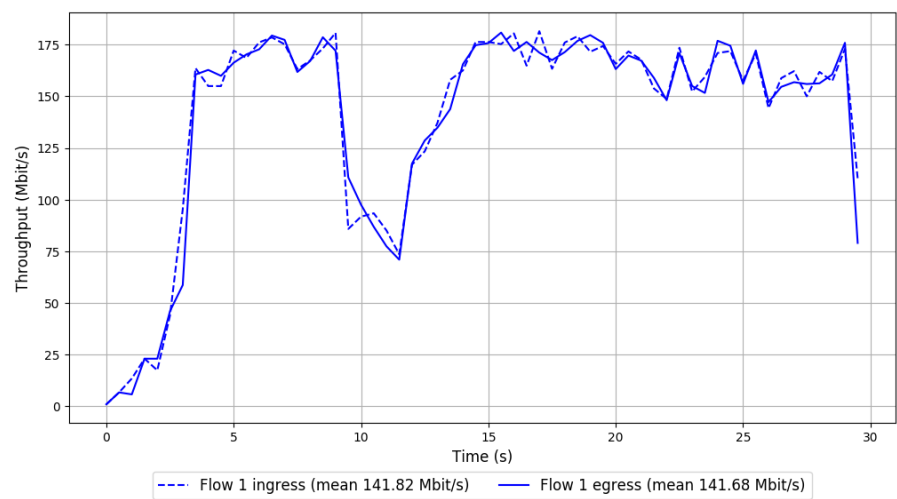
Run 6: Report of Indigo-delay — Data Link

Flow 1 ingress (mean 141.82 Mbit/s)   Flow 1 egress (mean 141.68 Mbit/s)

Flow 1 (95th percentile 86.64 ms)

```
Run 7: Statistics of Indigo-delay

Start at: 2017-09-21 10:32:39
End at: 2017-09-21 10:33:09

# Below is generated by plot.py at 2017-09-21 13:39:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 126.89 Mbit/s
95th percentile per-packet one-way delay: 86.551 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 126.89 Mbit/s
95th percentile per-packet one-way delay: 86.551 ms
Loss rate: 0.42%
```
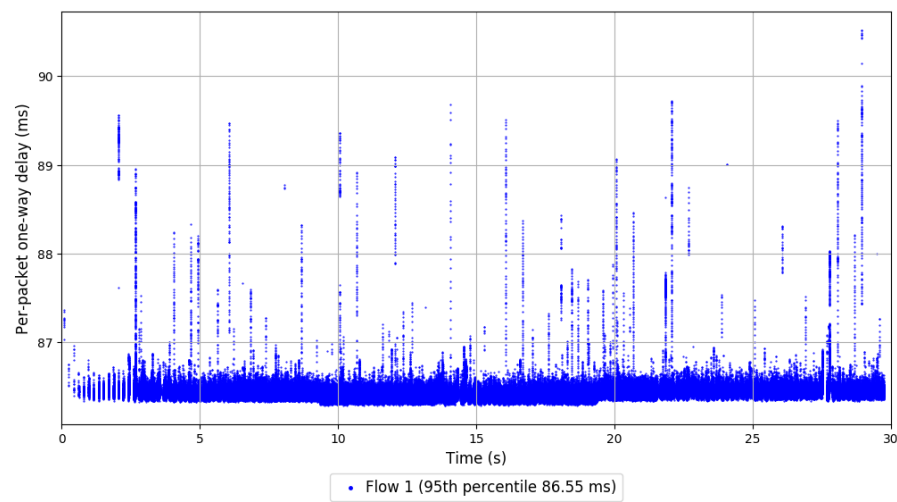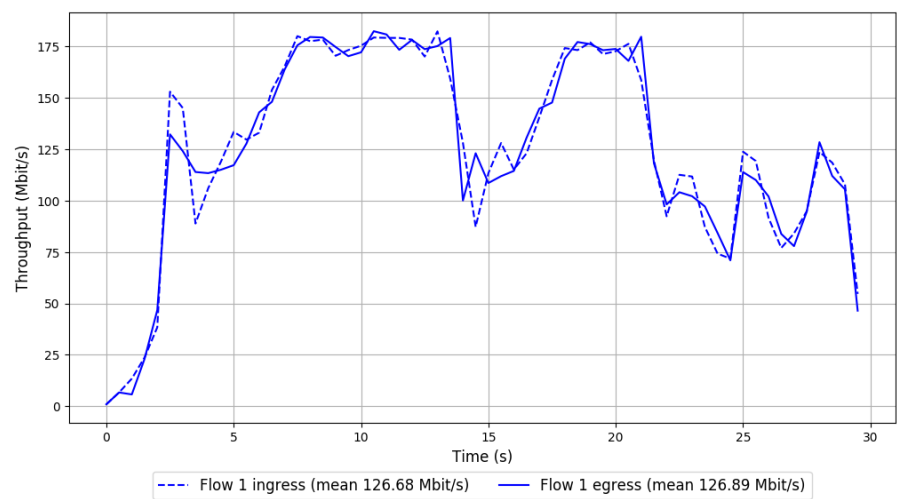
Run 7: Report of Indigo-delay — Data Link

```
Run 8: Statistics of Indigo-delay

Start at: 2017-09-21 10:43:35
End at: 2017-09-21 10:44:05

# Below is generated by plot.py at 2017-09-21 13:39:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.61 Mbit/s
95th percentile per-packet one-way delay: 117.546 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 50.61 Mbit/s
95th percentile per-packet one-way delay: 117.546 ms
Loss rate: 0.71%
```
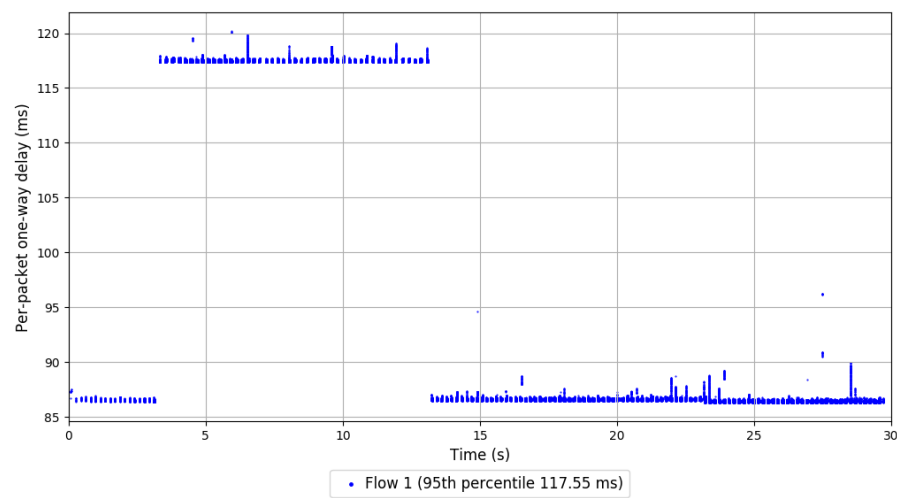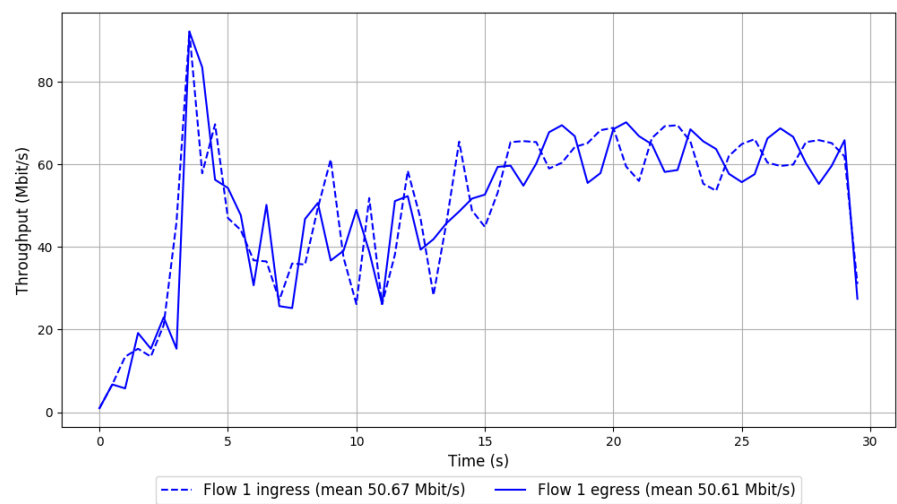
Run 8: Report of Indigo-delay — Data Link

```
Run 9: Statistics of Indigo-delay

Start at: 2017-09-21 10:54:21
End at: 2017-09-21 10:54:51

# Below is generated by plot.py at 2017-09-21 13:39:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 155.44 Mbit/s
95th percentile per-packet one-way delay: 86.913 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 155.44 Mbit/s
95th percentile per-packet one-way delay: 86.913 ms
Loss rate: 0.65%
```
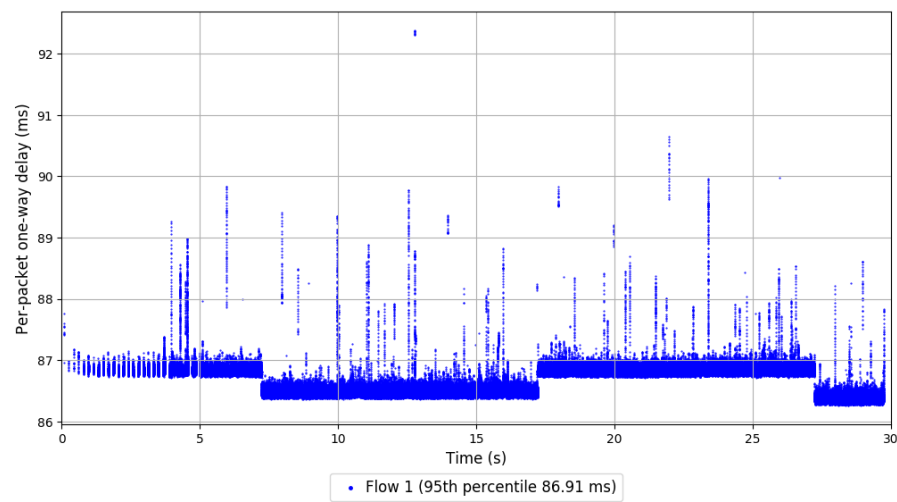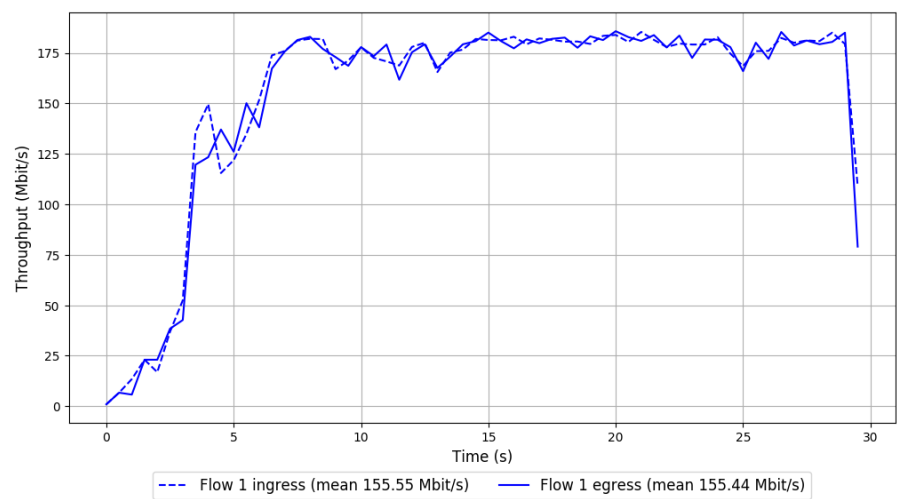
Run 9: Report of Indigo-delay — Data Link

Flow 1 ingress (mean 155.55 Mbit/s) — — — Flow 1 egress (mean 155.44 Mbit/s) ———

• Flow 1 (95th percentile 86.91 ms)

```
Run 10: Statistics of Indigo-delay

Start at: 2017-09-21 11:05:23
End at: 2017-09-21 11:05:53

# Below is generated by plot.py at 2017-09-21 13:39:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 151.68 Mbit/s
95th percentile per-packet one-way delay: 86.578 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 151.68 Mbit/s
95th percentile per-packet one-way delay: 86.578 ms
Loss rate: 0.70%
```

Run 10: Report of Indigo-delay — Data Link