Pantheon Report

Generated at 2018-02-20 00:46:00 (UTC).

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

Repeated the test of 17 congestion control schemes 10 times.
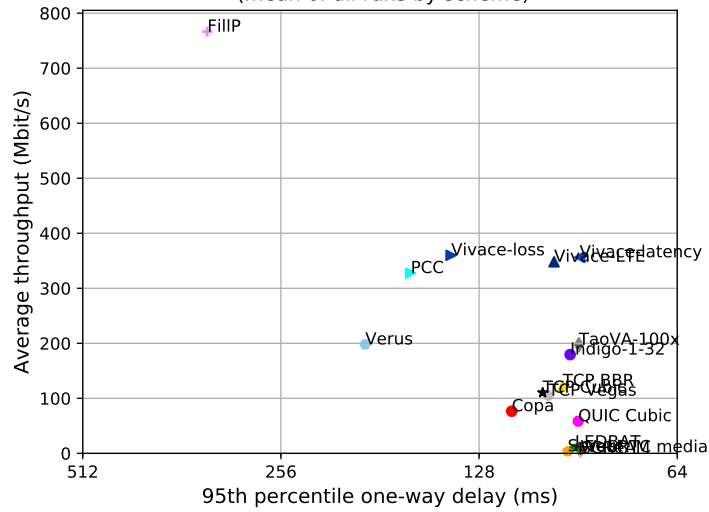
Each test lasted for 30 seconds running 1 flow.

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

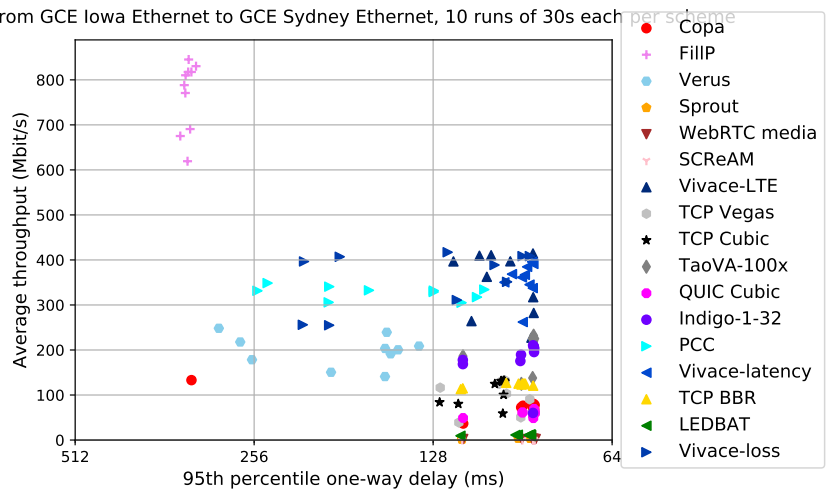Tested BBR with qdisc of Fair Queuing (`fq`), and other schemes with the default Linux qdisc (`pfifo_fast`).

```
Git summary:
branch: master @ f12c42a2c63fdd9a862eefa0468859bf379b6623
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
 M datagrump/sender.cc
third_party/fillp @ 828bbf95fd4941149b5cec90f281d1c69ae1a5c6
third_party/genericCC @ 9249eea3238475c4d8cca1443d28df70bff6c4a2
third_party/indigo @ a9b2060d39e4da2e8987e893e3eca2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ce8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd3505939528e2a5f
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
 M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
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/vivace @ 7a4ba531e75b4a6f66f5c4580192120401784ce3
third_party/webrtc @ a488197ddd041ace68a42849b2540ad834825f42
```

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

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

scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	10	122.47	95.54	0.01
TCP Cubic	10	110.25	102.48	0.03
LEDBAT	10	11.00	91.55	0.00
PCC	10	327.66	162.59	0.48
QUIC Cubic	9	58.46	90.50	0.00
SCReAM	10	0.22	89.82	0.01
WebRTC media	10	2.19	89.82	0.00
Sprout	10	3.60	93.91	0.03
TaoVA-100x	9	197.27	90.30	0.00
TCP Vegas	10	104.85	100.45	0.01
Verus	10	197.94	190.61	1.15
Copa	10	76.58	114.19	2.92
FillP	10	766.49	331.10	6.96
Indigo-1-32	10	179.48	93.08	0.01
Vivace-latency	10	356.32	90.07	0.02
Vivace-loss	10	359.99	141.15	0.29
Vivace-LTE	10	348.20	98.48	0.10

```
Run 1: Statistics of TCP BBR

Start at: 2018-02-19 19:23:11
End at: 2018-02-19 19:23:41

# Below is generated by plot.py at 2018-02-19 23:31:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 125.35 Mbit/s
95th percentile per-packet one-way delay: 91.962 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 125.35 Mbit/s
95th percentile per-packet one-way delay: 91.962 ms
Loss rate: 0.00%
```
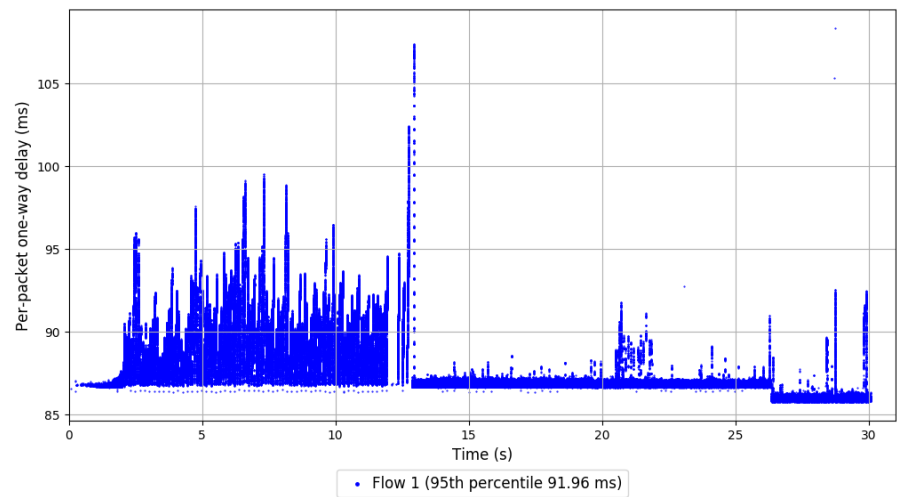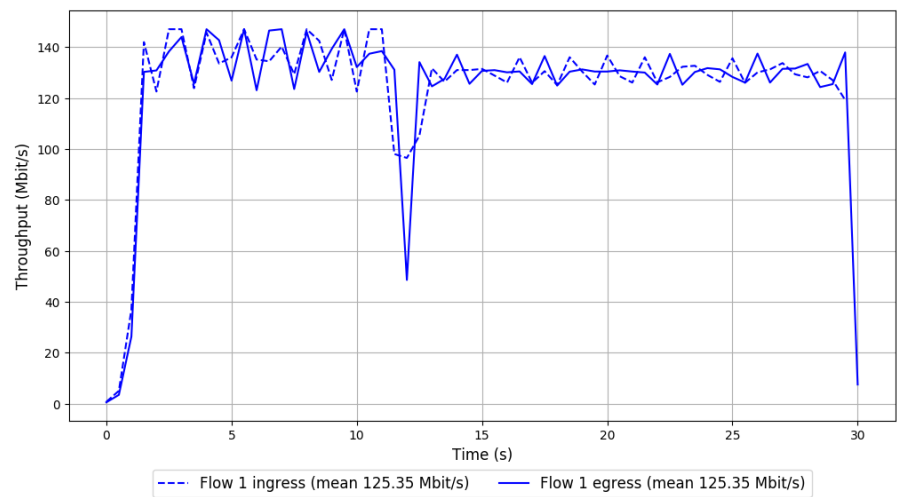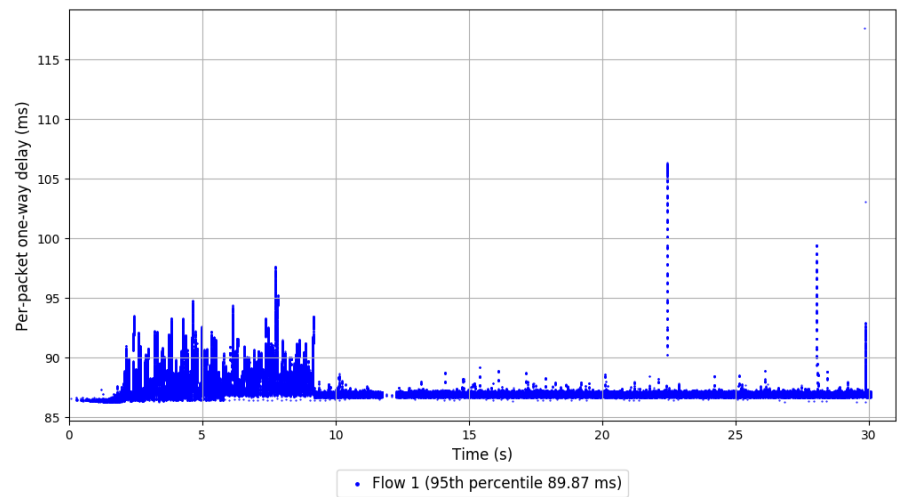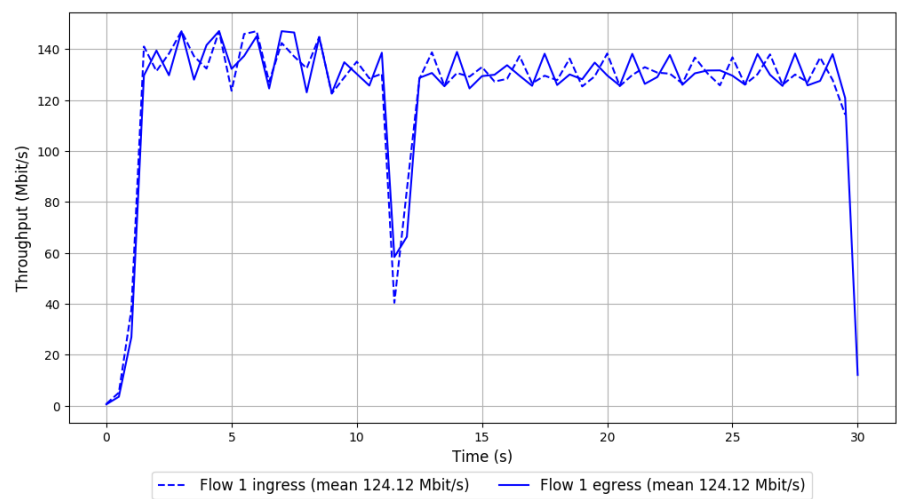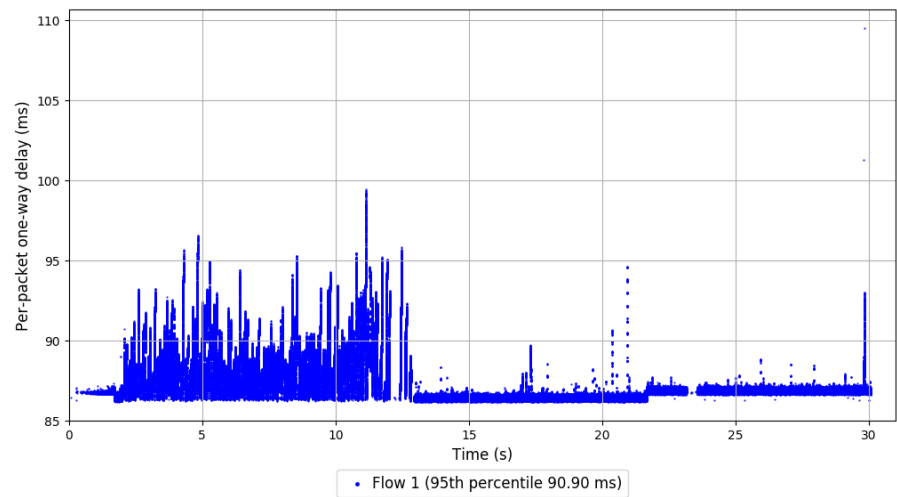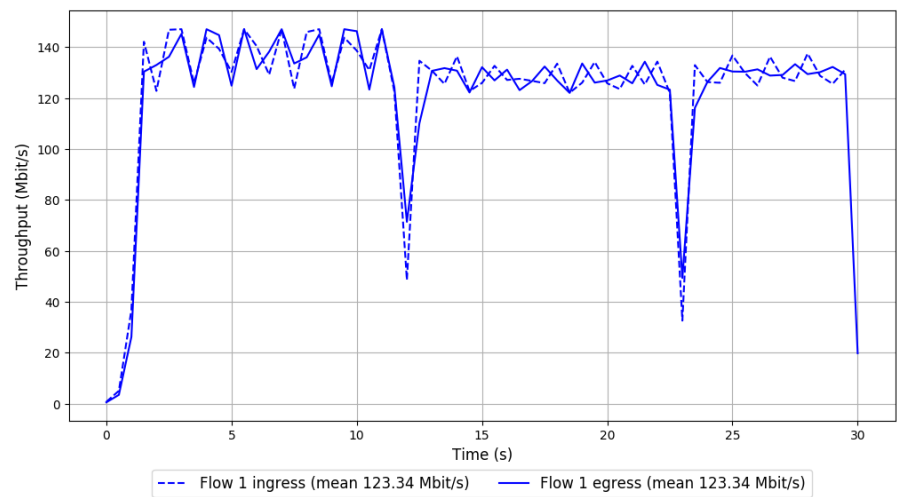
Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2018-02-19 19:38:02
End at: 2018-02-19 19:38:32

# Below is generated by plot.py at 2018-02-19 23:31:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 124.12 Mbit/s
95th percentile per-packet one-way delay: 89.868 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 124.12 Mbit/s
95th percentile per-packet one-way delay: 89.868 ms
Loss rate: 0.00%
```
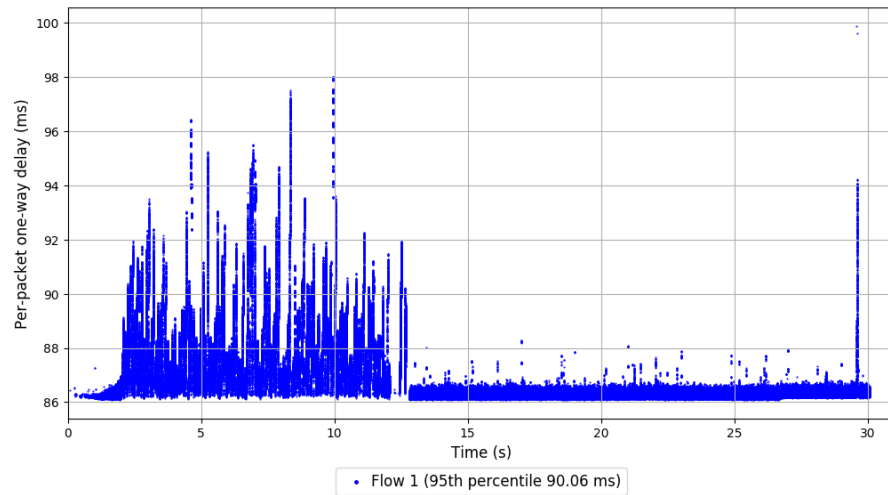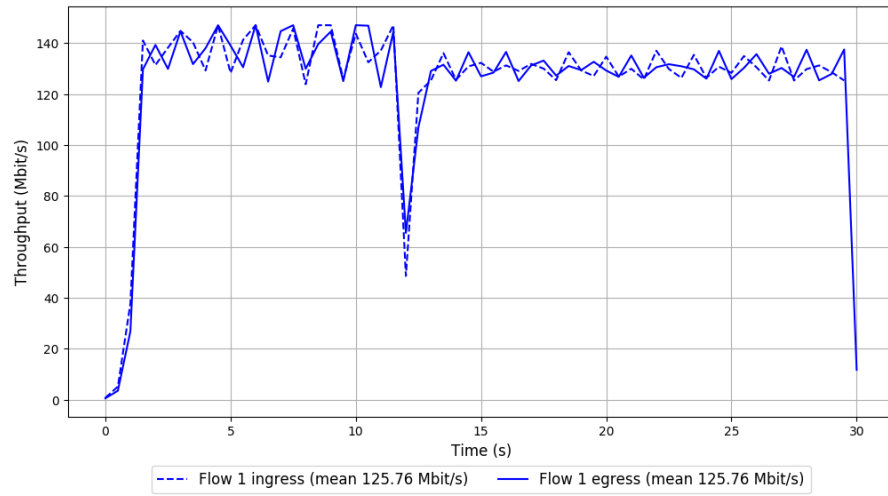
Run 2: Report of TCP BBR — Data Link

Flow 1 ingress (mean 124.12 Mbit/s) — Flow 1 egress (mean 124.12 Mbit/s)

Flow 1 (95th percentile 89.87 ms)

```
Run 3: Statistics of TCP BBR

Start at: 2018-02-19 19:53:16
End at: 2018-02-19 19:53:46

# Below is generated by plot.py at 2018-02-19 23:31:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 123.34 Mbit/s
95th percentile per-packet one-way delay: 90.900 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 123.34 Mbit/s
95th percentile per-packet one-way delay: 90.900 ms
Loss rate: 0.00%
```
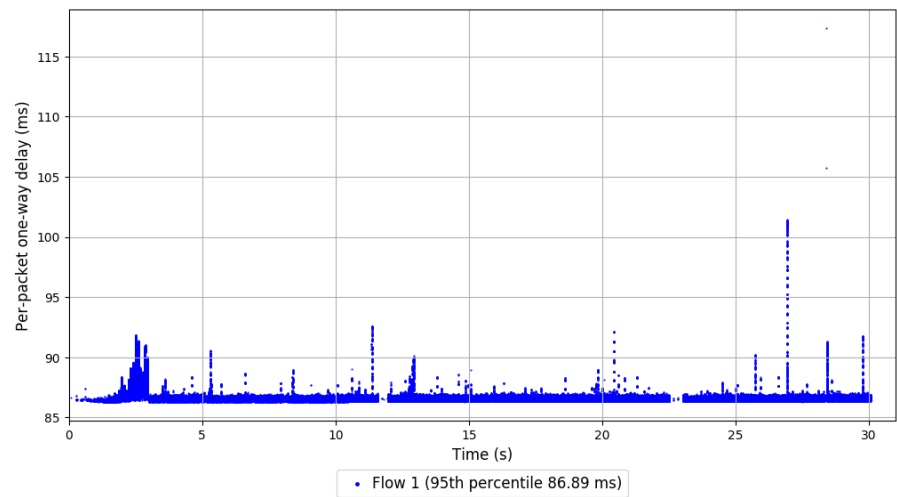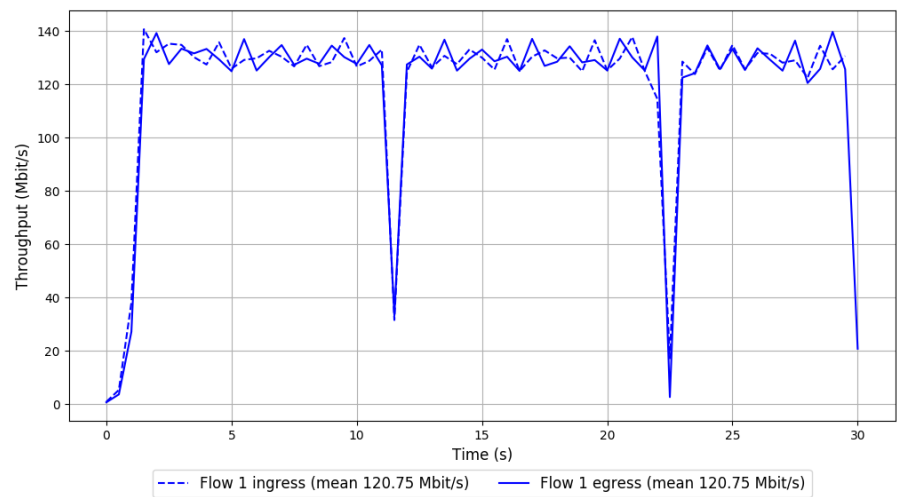
Run 3: Report of TCP BBR — Data Link

Flow 1 ingress (mean 123.34 Mbit/s)   Flow 1 egress (mean 123.34 Mbit/s)

Flow 1 (95th percentile 90.90 ms)

```
Run 4: Statistics of TCP BBR

Start at: 2018-02-19 20:08:31
End at: 2018-02-19 20:09:01


# Below is generated by plot.py at 2018-02-19 23:31:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 125.76 Mbit/s
95th percentile per-packet one-way delay: 90.055 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 125.76 Mbit/s
95th percentile per-packet one-way delay: 90.055 ms
Loss rate: 0.00%
```
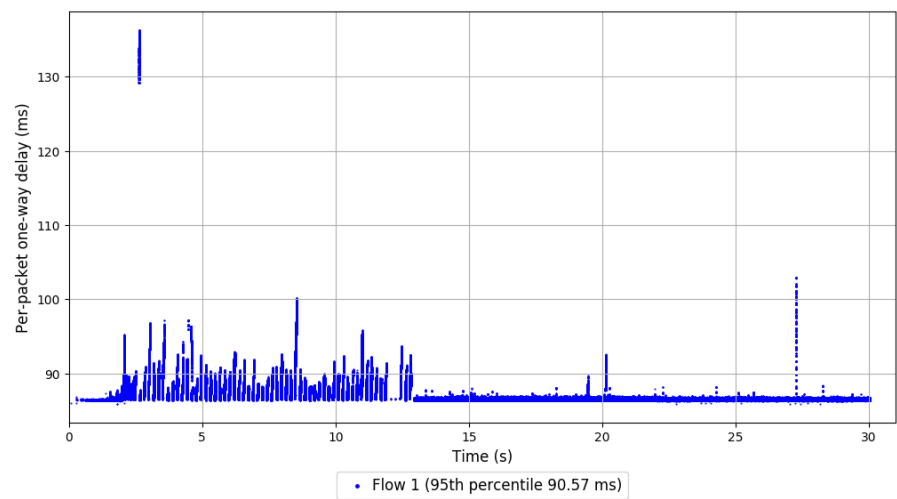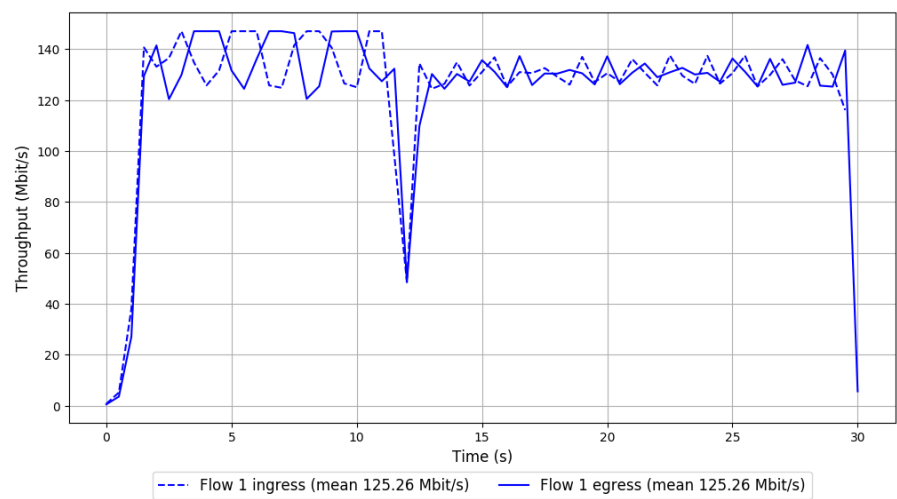
Run 4: Report of TCP BBR — Data Link

Flow 1 ingress (mean 125.76 Mbit/s)   Flow 1 egress (mean 125.76 Mbit/s)

Flow 1 (95th percentile 90.06 ms)

```
Run 5: Statistics of TCP BBR

Start at: 2018-02-19 20:23:57
End at: 2018-02-19 20:24:27


# Below is generated by plot.py at 2018-02-19 23:31:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 120.75 Mbit/s
95th percentile per-packet one-way delay: 86.885 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 120.75 Mbit/s
95th percentile per-packet one-way delay: 86.885 ms
Loss rate: 0.00%
```
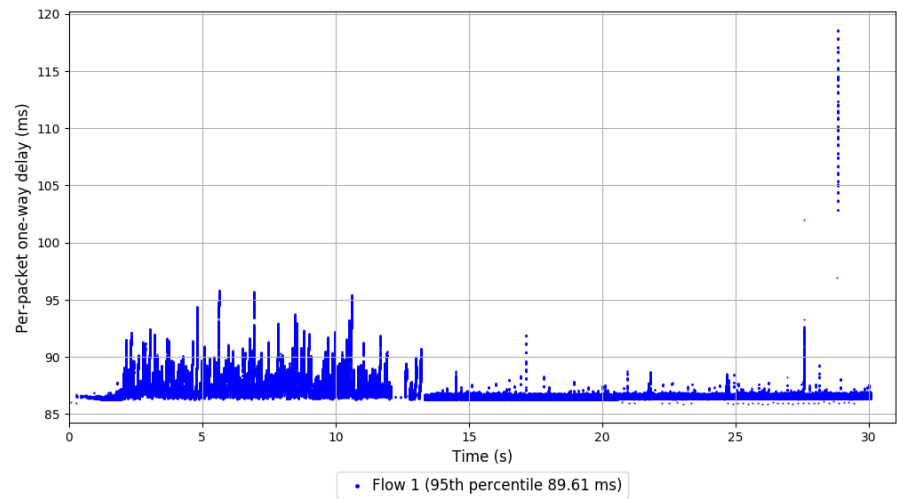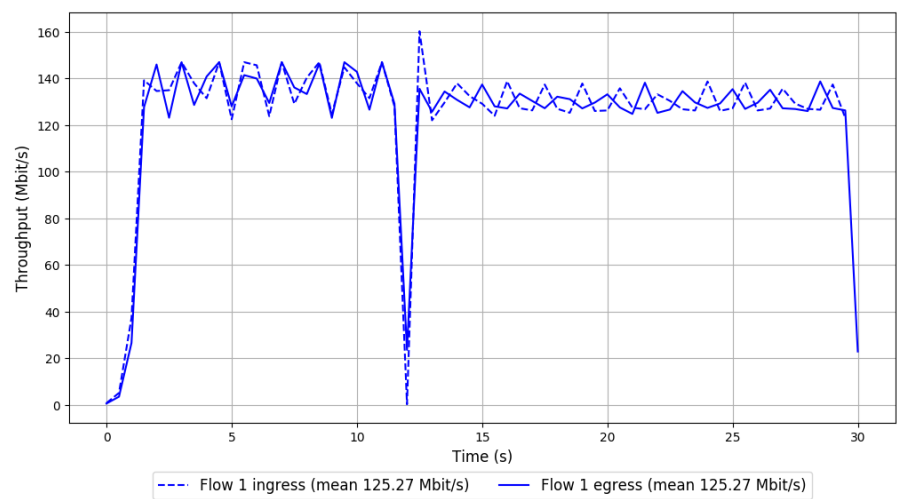
Run 5: Report of TCP BBR — Data Link

Flow 1 ingress (mean 120.75 Mbit/s) — — — — Flow 1 egress (mean 120.75 Mbit/s)

• Flow 1 (95th percentile 86.89 ms)

```
Run 6: Statistics of TCP BBR

Start at: 2018-02-19 20:39:26
End at: 2018-02-19 20:39:56


# Below is generated by plot.py at 2018-02-19 23:31:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 125.26 Mbit/s
95th percentile per-packet one-way delay: 90.574 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 125.26 Mbit/s
95th percentile per-packet one-way delay: 90.574 ms
Loss rate: 0.00%
```
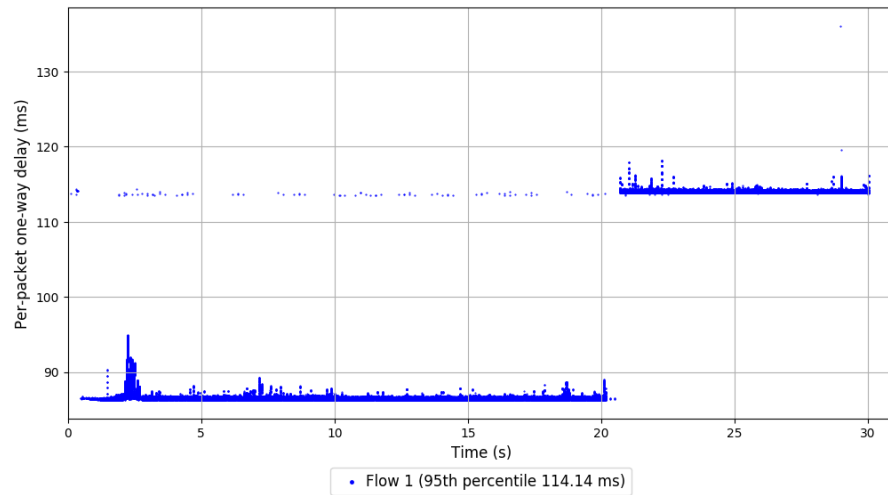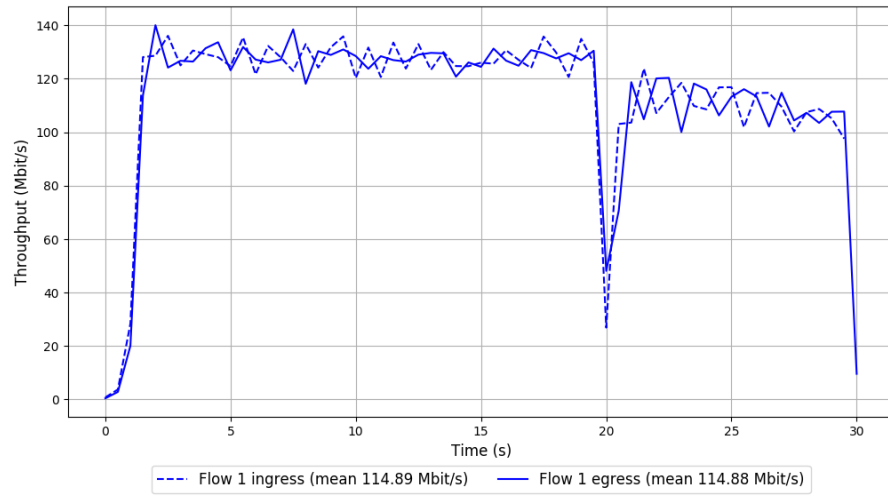
Run 6: Report of TCP BBR — Data Link

Flow 1 ingress (mean 125.26 Mbit/s)   Flow 1 egress (mean 125.26 Mbit/s)

Flow 1 (95th percentile 90.57 ms)

```
Run 7: Statistics of TCP BBR

Start at: 2018-02-19 20:54:37
End at: 2018-02-19 20:55:07

# Below is generated by plot.py at 2018-02-19 23:31:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 125.27 Mbit/s
95th percentile per-packet one-way delay: 89.605 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 125.27 Mbit/s
95th percentile per-packet one-way delay: 89.605 ms
Loss rate: 0.00%
```
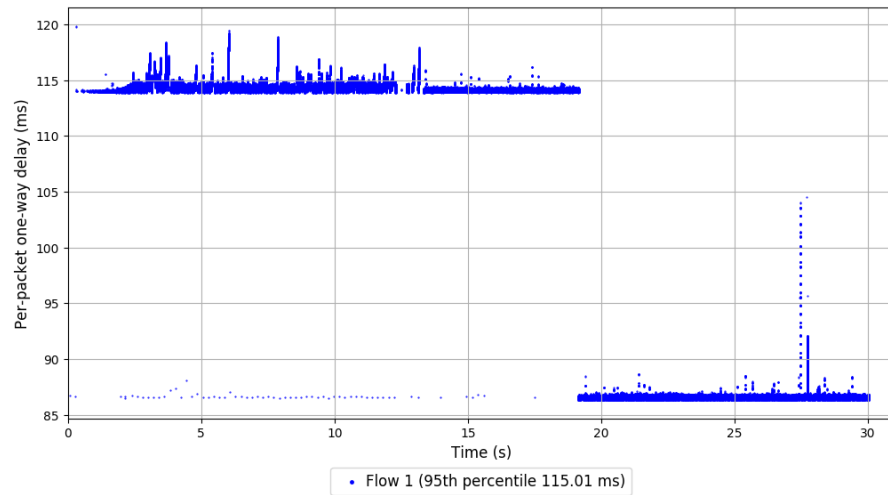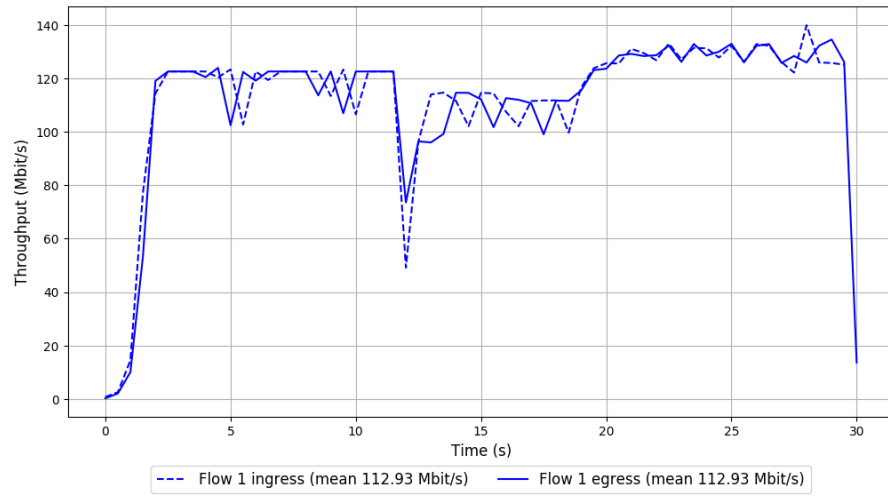
Run 7: Report of TCP BBR — Data Link

Flow 1 ingress (mean 125.27 Mbit/s)   Flow 1 egress (mean 125.27 Mbit/s)

Flow 1 (95th percentile 89.61 ms)

```
Run 8: Statistics of TCP BBR

Start at: 2018-02-19 21:09:37
End at: 2018-02-19 21:10:07

# Below is generated by plot.py at 2018-02-19 23:31:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 114.88 Mbit/s
95th percentile per-packet one-way delay: 114.135 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 114.88 Mbit/s
95th percentile per-packet one-way delay: 114.135 ms
Loss rate: 0.10%
```
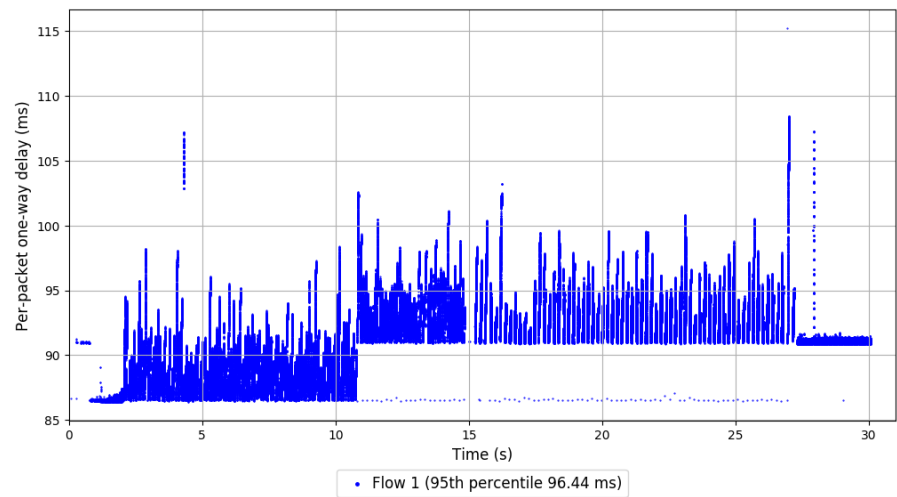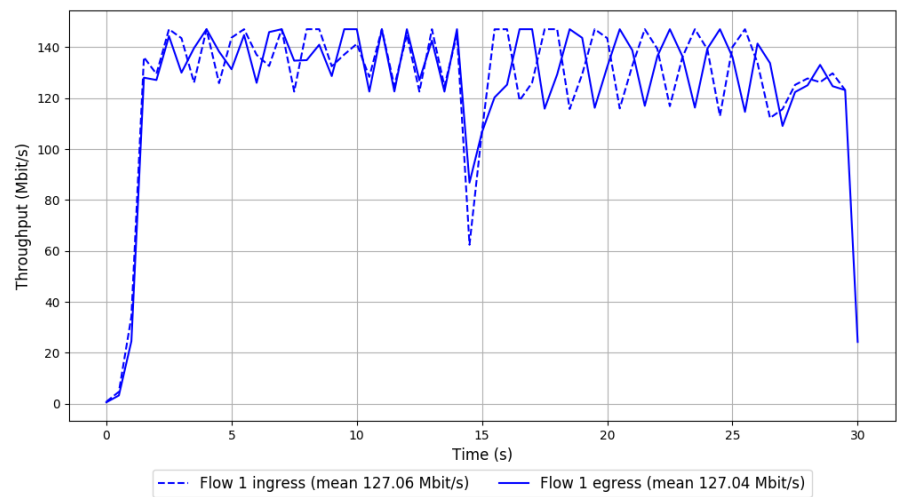
Run 8: Report of TCP BBR — Data Link

```
Run 9: Statistics of TCP BBR

Start at: 2018-02-19 21:24:49
End at: 2018-02-19 21:25:19


# Below is generated by plot.py at 2018-02-19 23:33:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 112.93 Mbit/s
95th percentile per-packet one-way delay: 115.010 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 112.93 Mbit/s
95th percentile per-packet one-way delay: 115.010 ms
Loss rate: 0.00%
```
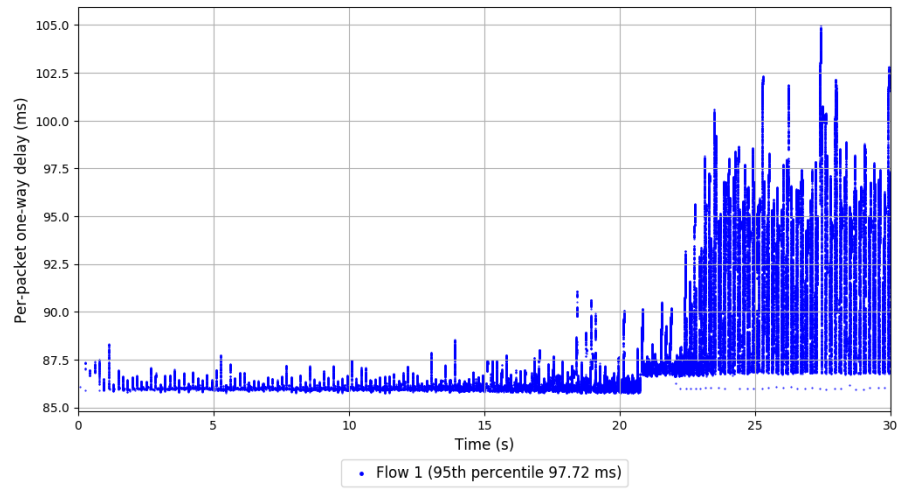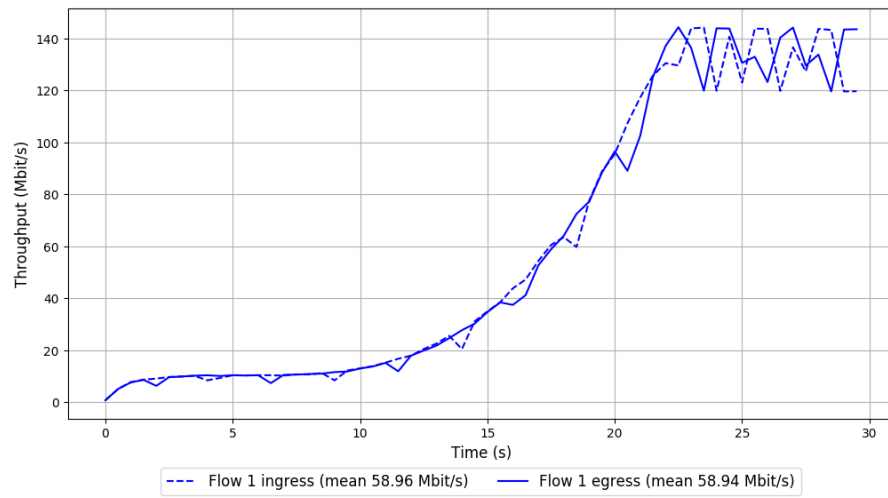
Run 9: Report of TCP BBR — Data Link

Flow 1 ingress (mean 112.93 Mbit/s) ----   Flow 1 egress (mean 112.93 Mbit/s) ——

Flow 1 (95th percentile 115.01 ms)

```
Run 10: Statistics of TCP BBR

Start at: 2018-02-19 21:39:47
End at: 2018-02-19 21:40:17

# Below is generated by plot.py at 2018-02-19 23:33:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 127.04 Mbit/s
95th percentile per-packet one-way delay: 96.442 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 127.04 Mbit/s
95th percentile per-packet one-way delay: 96.442 ms
Loss rate: 0.01%
```
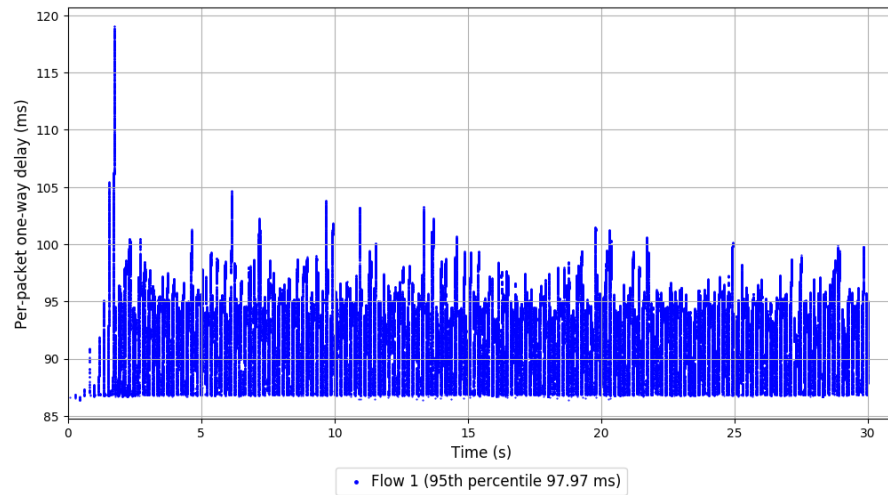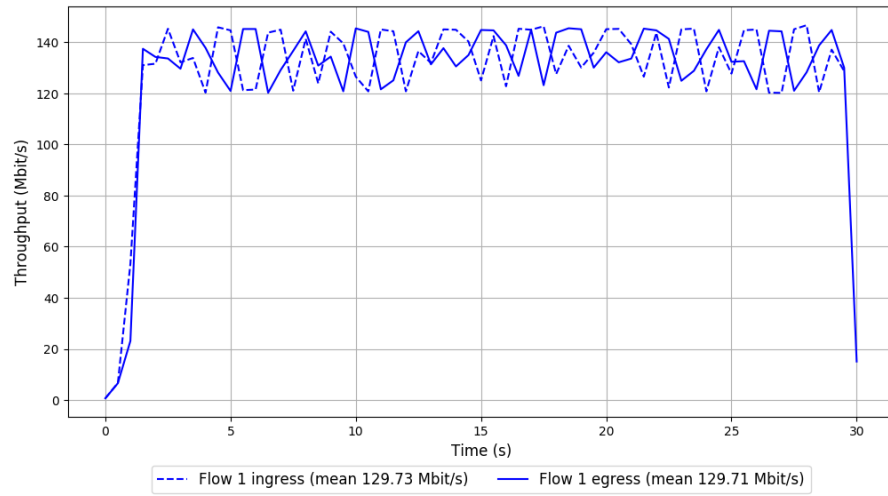
Run 10: Report of TCP BBR — Data Link

```
Run 1: Statistics of TCP Cubic

Start at: 2018-02-19 19:23:57
End at: 2018-02-19 19:24:27

# Below is generated by plot.py at 2018-02-19 23:33:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 58.94 Mbit/s
95th percentile per-packet one-way delay: 97.725 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 58.94 Mbit/s
95th percentile per-packet one-way delay: 97.725 ms
Loss rate: 0.00%
```
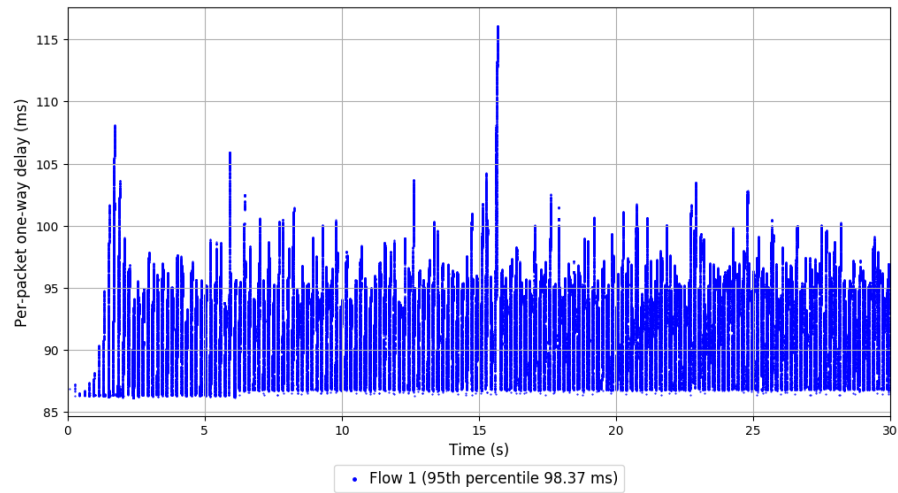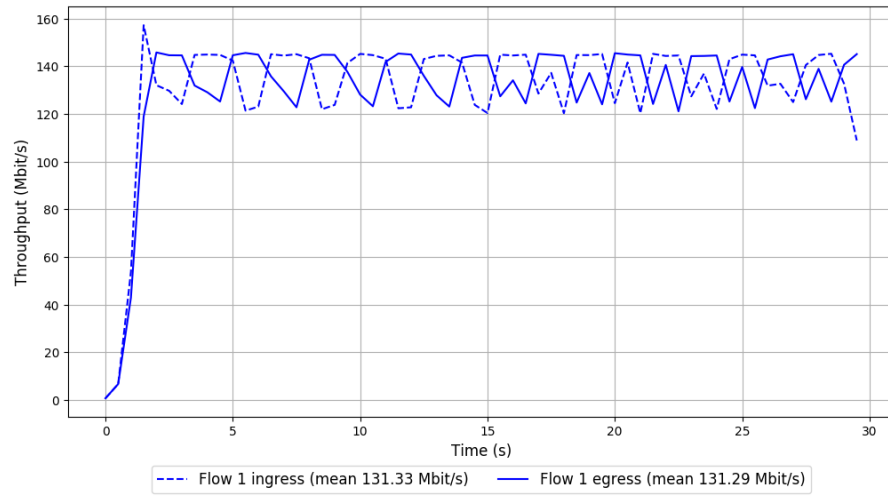
Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2018-02-19 19:38:47
End at: 2018-02-19 19:39:17


# Below is generated by plot.py at 2018-02-19 23:33:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 129.71 Mbit/s
95th percentile per-packet one-way delay: 97.972 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 129.71 Mbit/s
95th percentile per-packet one-way delay: 97.972 ms
Loss rate: 0.00%
```
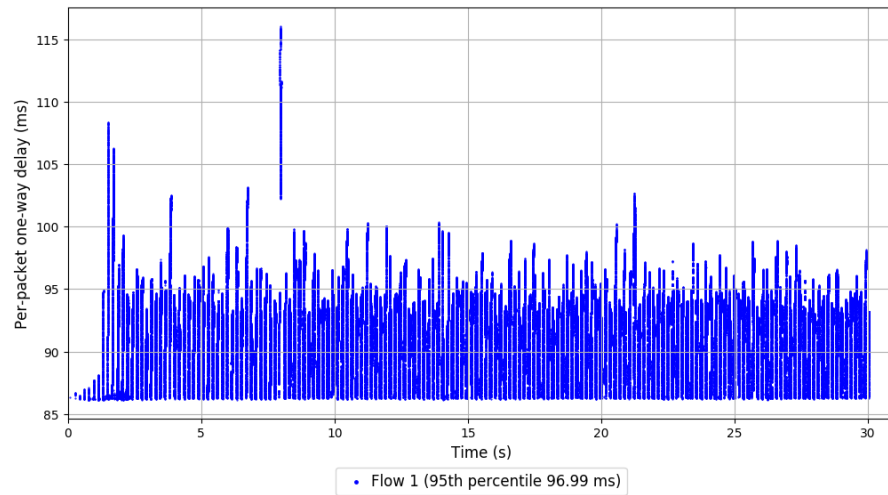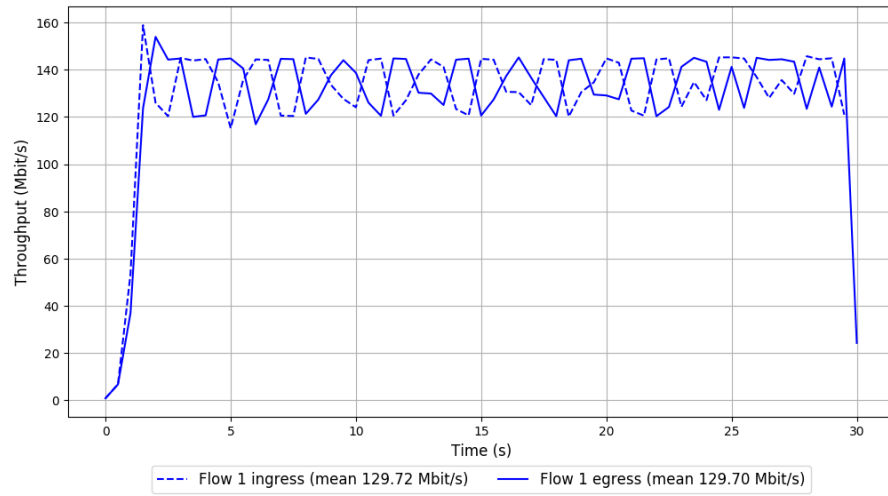
Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2018-02-19 19:54:02
End at: 2018-02-19 19:54:32

# Below is generated by plot.py at 2018-02-19 23:33:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 131.29 Mbit/s
95th percentile per-packet one-way delay: 98.373 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 131.29 Mbit/s
95th percentile per-packet one-way delay: 98.373 ms
Loss rate: 0.00%
```
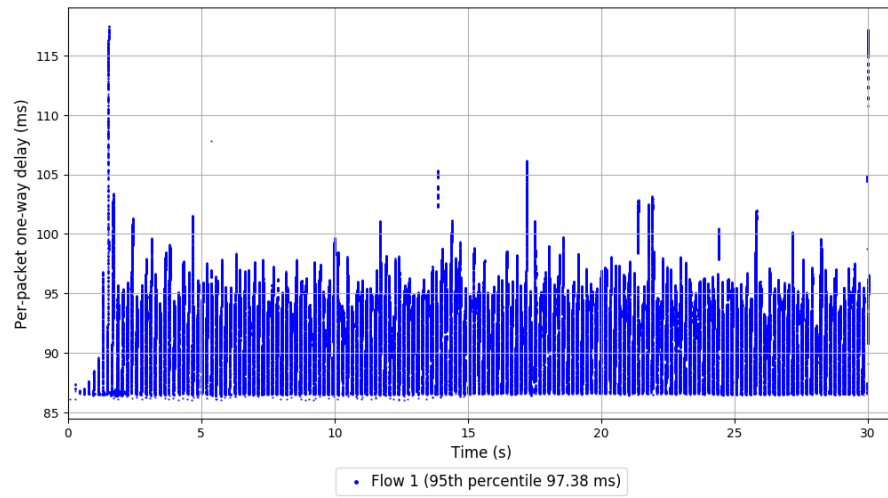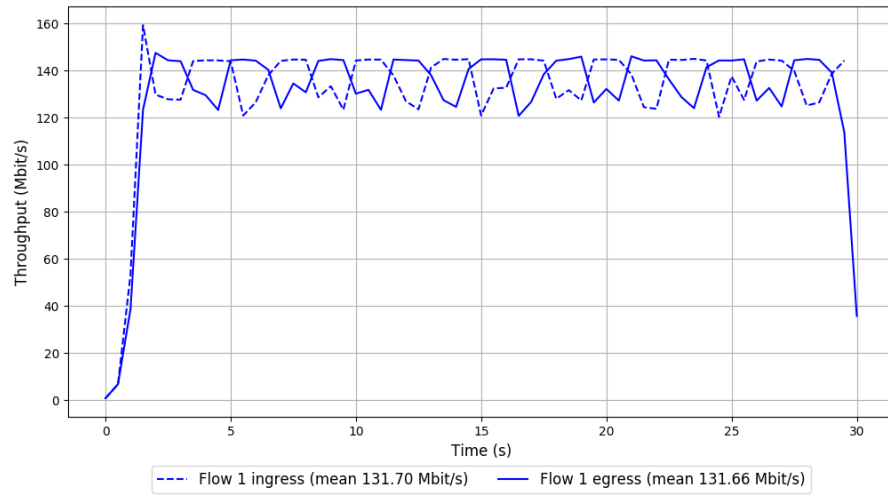
Run 3: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 131.33 Mbit/s)   Flow 1 egress (mean 131.29 Mbit/s)

Flow 1 (95th percentile 98.37 ms)

```
Run 4: Statistics of TCP Cubic

Start at: 2018-02-19 20:09:16
End at: 2018-02-19 20:09:46

# Below is generated by plot.py at 2018-02-19 23:33:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 129.70 Mbit/s
95th percentile per-packet one-way delay: 96.989 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 129.70 Mbit/s
95th percentile per-packet one-way delay: 96.989 ms
Loss rate: 0.00%
```
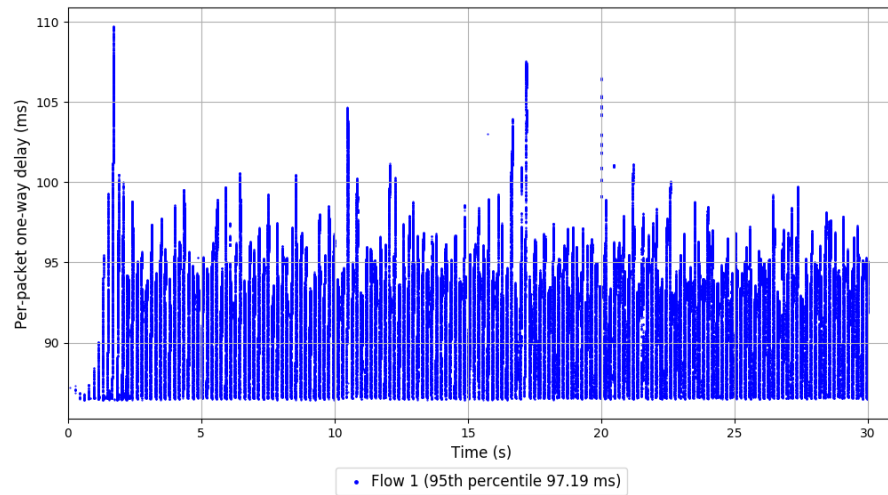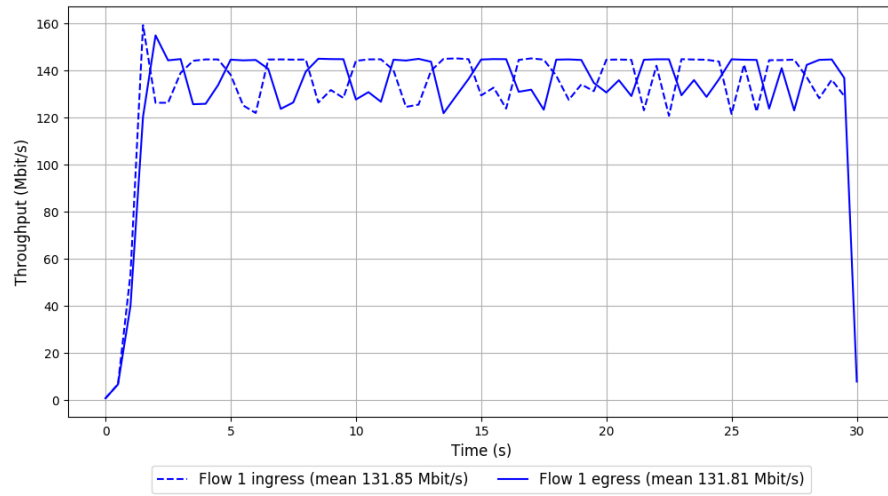
Run 4: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 129.72 Mbit/s) --- Flow 1 egress (mean 129.70 Mbit/s)

• Flow 1 (95th percentile 96.99 ms)

```
Run 5: Statistics of TCP Cubic

Start at: 2018-02-19 20:24:43
End at: 2018-02-19 20:25:13

# Below is generated by plot.py at 2018-02-19 23:33:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 131.66 Mbit/s
95th percentile per-packet one-way delay: 97.383 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 131.66 Mbit/s
95th percentile per-packet one-way delay: 97.383 ms
Loss rate: 0.00%
```
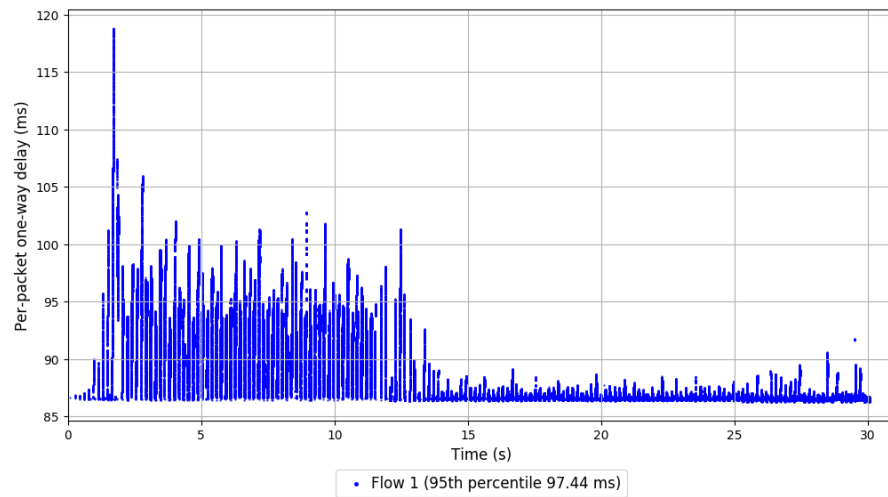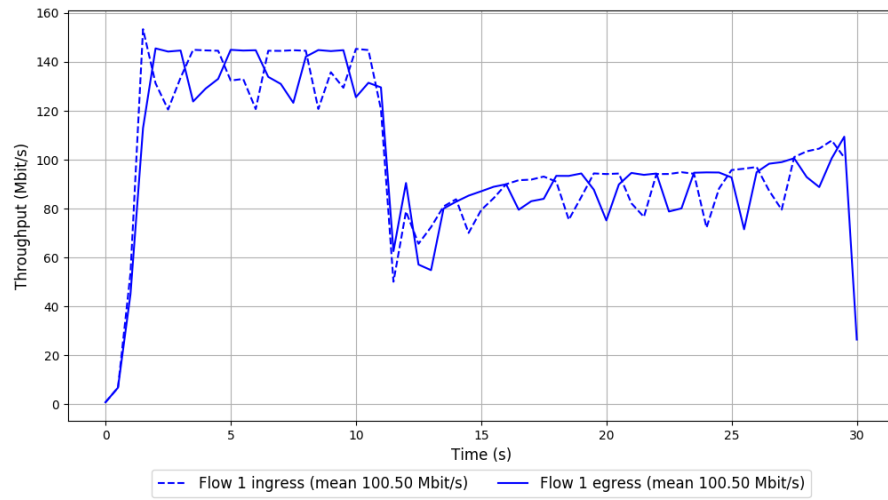
Run 5: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 131.70 Mbit/s)   Flow 1 egress (mean 131.66 Mbit/s)

Flow 1 (95th percentile 97.38 ms)

```
Run 6: Statistics of TCP Cubic

Start at: 2018-02-19 20:40:11
End at: 2018-02-19 20:40:41


# Below is generated by plot.py at 2018-02-19 23:33:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 131.81 Mbit/s
95th percentile per-packet one-way delay: 97.190 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 131.81 Mbit/s
95th percentile per-packet one-way delay: 97.190 ms
Loss rate: 0.00%
```
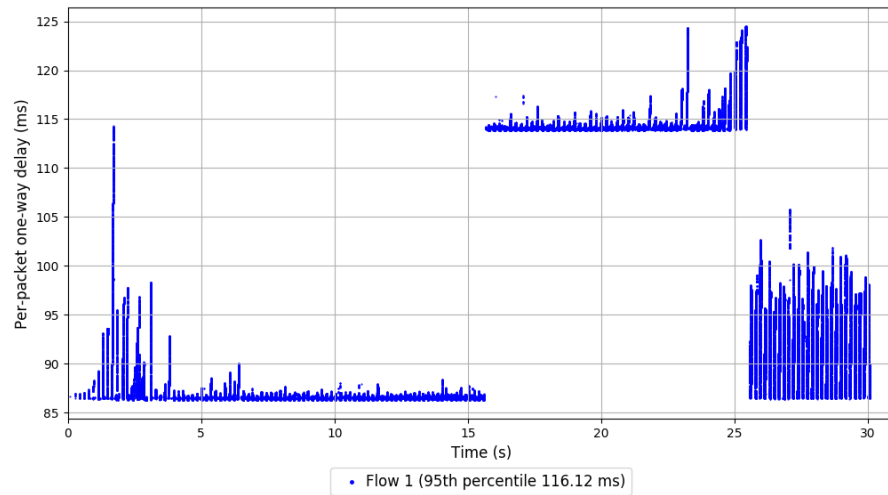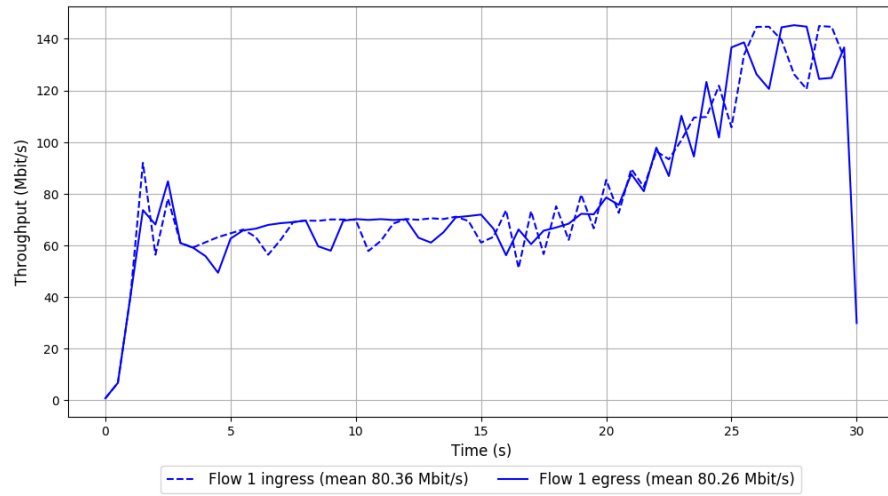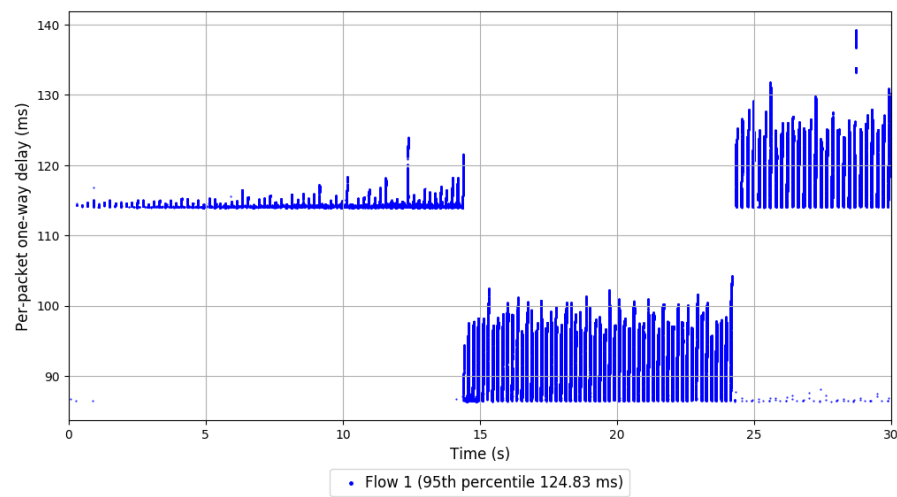
Run 6: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 131.85 Mbit/s)   Flow 1 egress (mean 131.81 Mbit/s)

Flow 1 (95th percentile 97.19 ms)

```
Run 7: Statistics of TCP Cubic

Start at: 2018-02-19 20:55:23
End at: 2018-02-19 20:55:53

# Below is generated by plot.py at 2018-02-19 23:34:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 100.50 Mbit/s
95th percentile per-packet one-way delay: 97.442 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 100.50 Mbit/s
95th percentile per-packet one-way delay: 97.442 ms
Loss rate: 0.00%
```
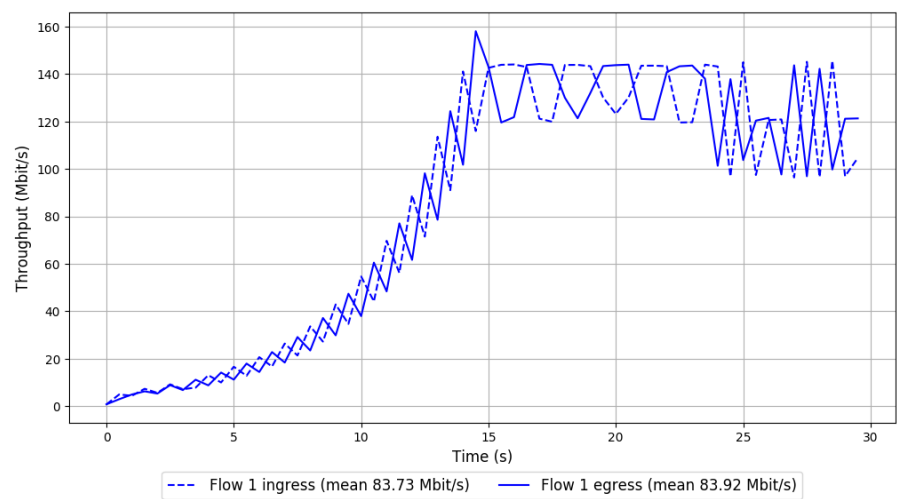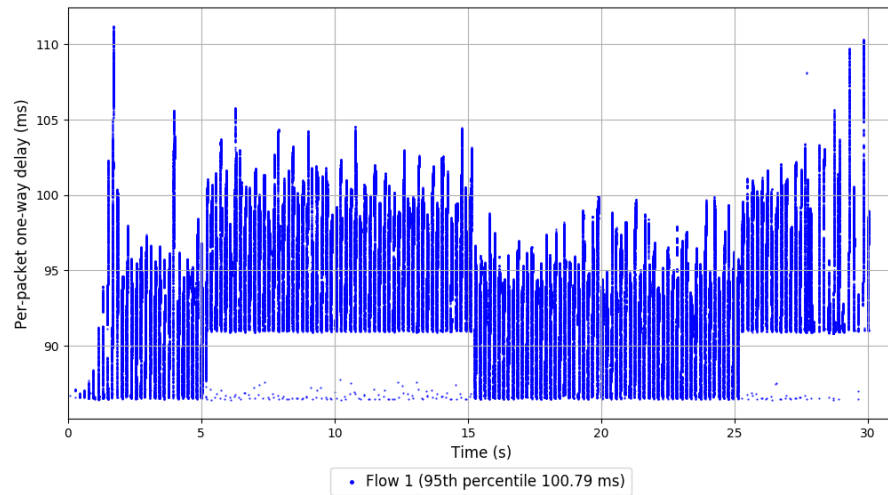
Run 7: Report of TCP Cubic — Data Link

```
Run 8: Statistics of TCP Cubic

Start at: 2018-02-19 21:10:22
End at: 2018-02-19 21:10:52


# Below is generated by plot.py at 2018-02-19 23:34:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 80.26 Mbit/s
95th percentile per-packet one-way delay: 116.117 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 80.26 Mbit/s
95th percentile per-packet one-way delay: 116.117 ms
Loss rate: 0.13%
```
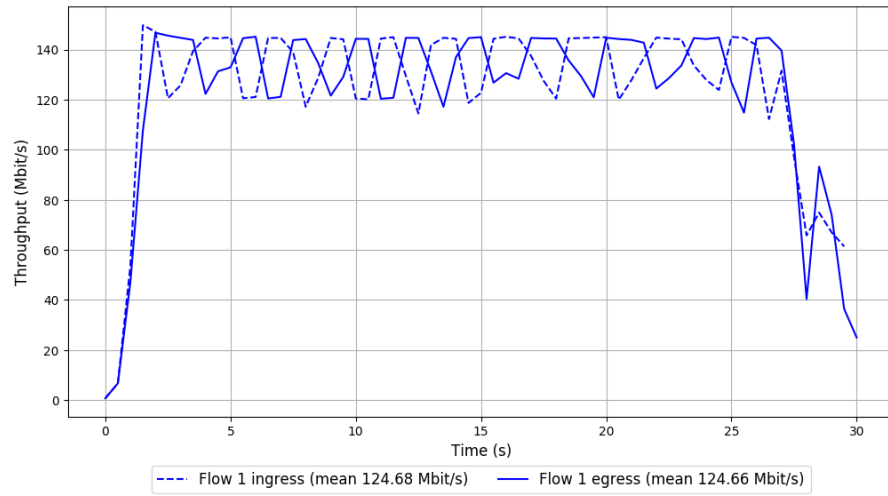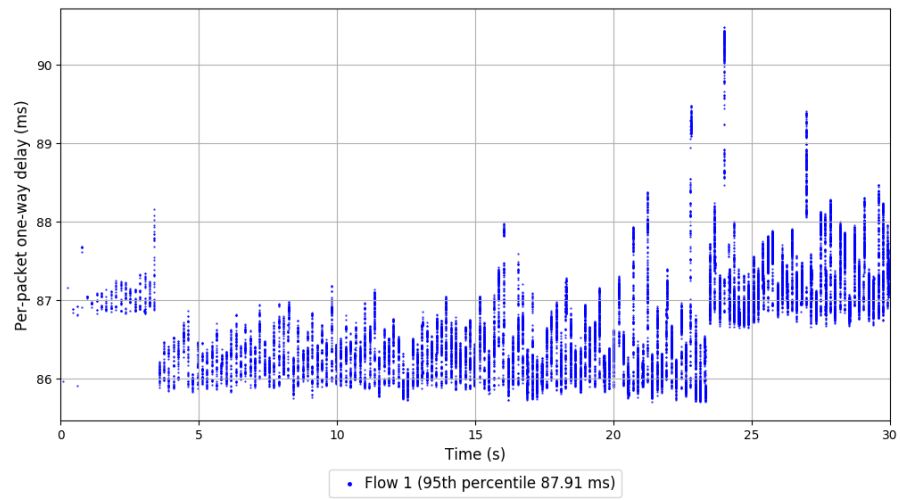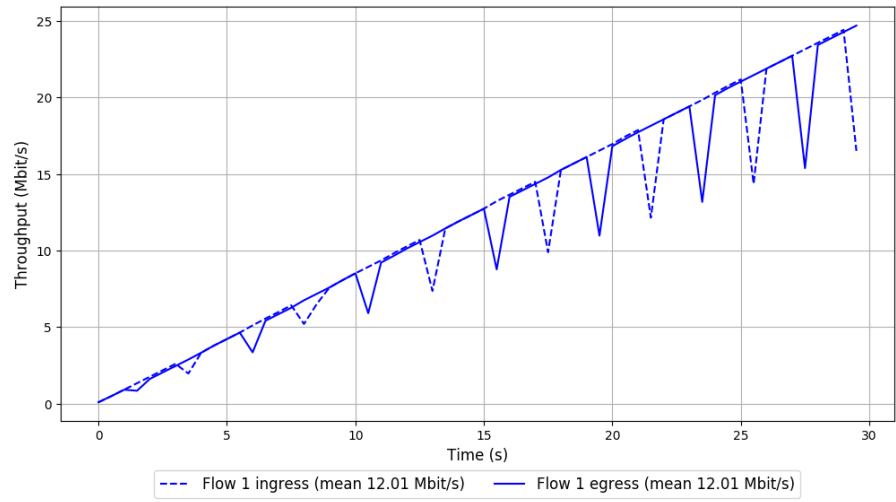
Run 8: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 80.36 Mbit/s)   Flow 1 egress (mean 80.26 Mbit/s)
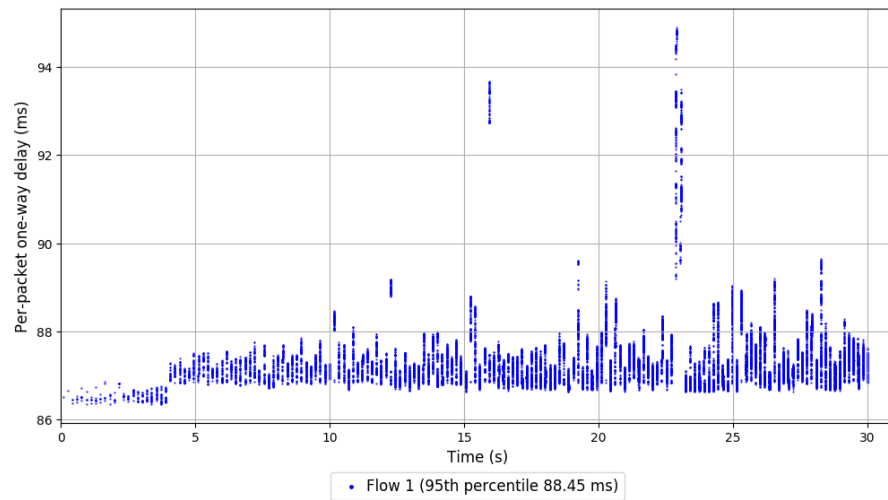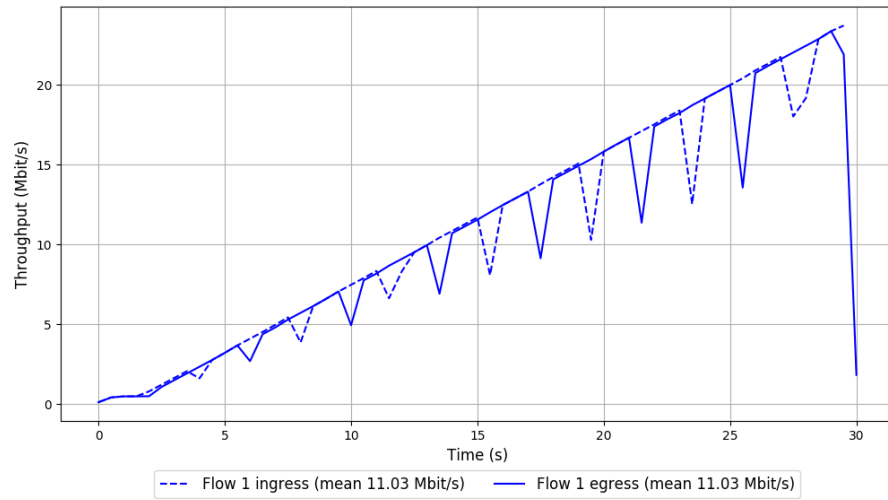

Flow 1 (95th percentile 116.12 ms)

```
Run 9: Statistics of TCP Cubic

Start at: 2018-02-19 21:25:34
End at: 2018-02-19 21:26:04


# Below is generated by plot.py at 2018-02-19 23:34:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 83.92 Mbit/s
95th percentile per-packet one-way delay: 124.829 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 83.92 Mbit/s
95th percentile per-packet one-way delay: 124.829 ms
Loss rate: 0.15%
```

Run 9: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 83.73 Mbit/s)   Flow 1 egress (mean 83.92 Mbit/s)

Flow 1 (95th percentile 124.83 ms)

```
Run 10: Statistics of TCP Cubic

Start at: 2018-02-19 21:40:33
End at: 2018-02-19 21:41:03

# Below is generated by plot.py at 2018-02-19 23:35:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 124.66 Mbit/s
95th percentile per-packet one-way delay: 100.794 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 124.66 Mbit/s
95th percentile per-packet one-way delay: 100.794 ms
Loss rate: 0.00%
```
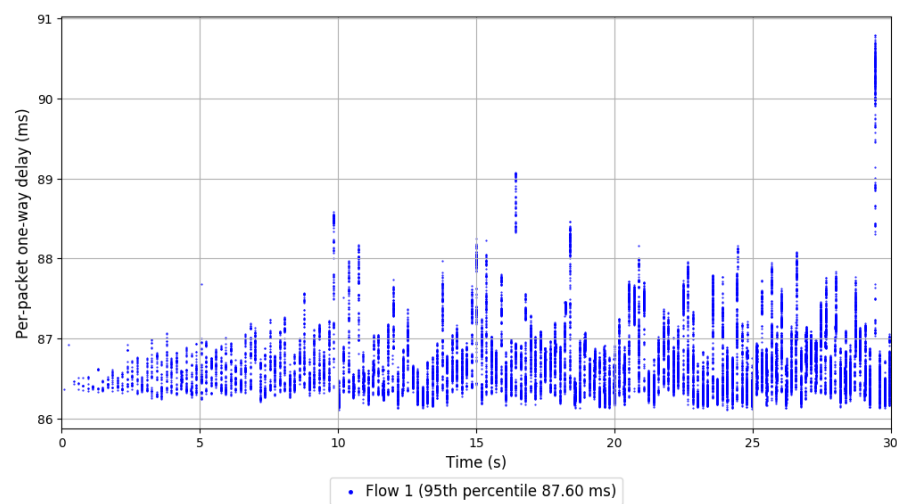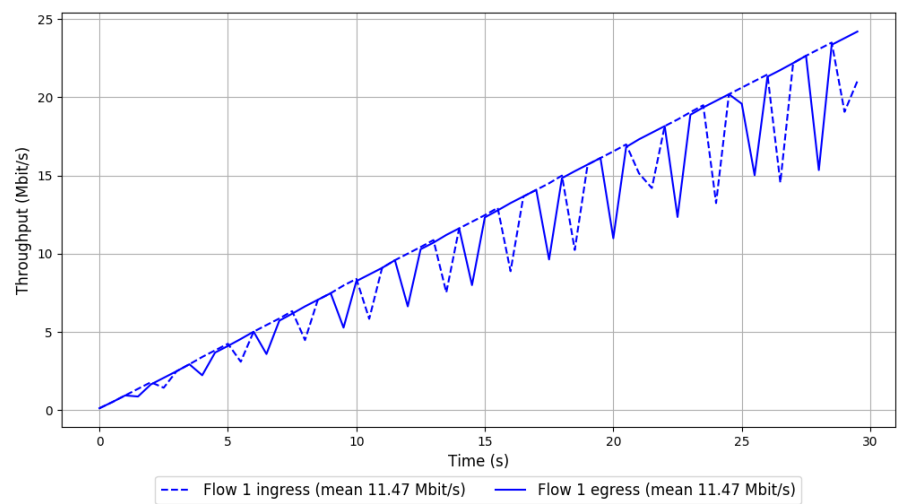
Run 10: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 124.68 Mbit/s)　　Flow 1 egress (mean 124.66 Mbit/s)

Flow 1 (95th percentile 100.79 ms)

```
Run 1: Statistics of LEDBAT

Start at: 2018-02-19 19:31:14
End at: 2018-02-19 19:31:44

# Below is generated by plot.py at 2018-02-19 23:35:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.01 Mbit/s
95th percentile per-packet one-way delay: 87.912 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.01 Mbit/s
95th percentile per-packet one-way delay: 87.912 ms
Loss rate: 0.00%
```
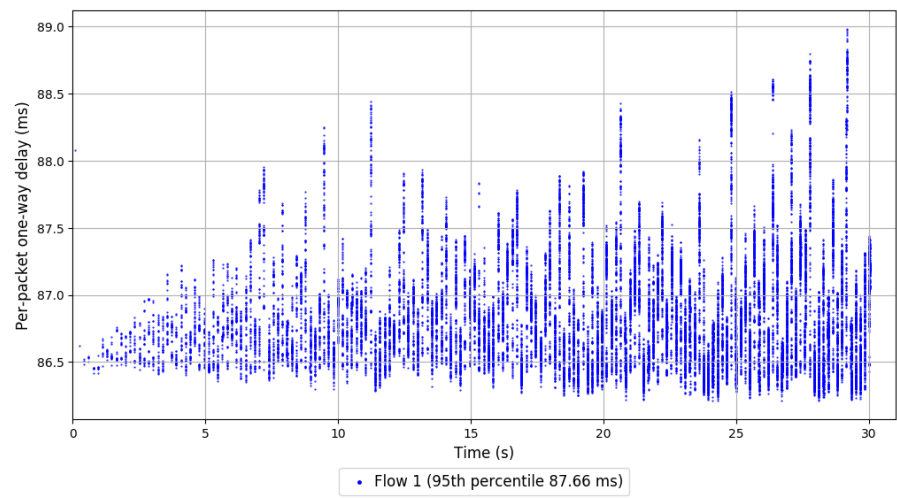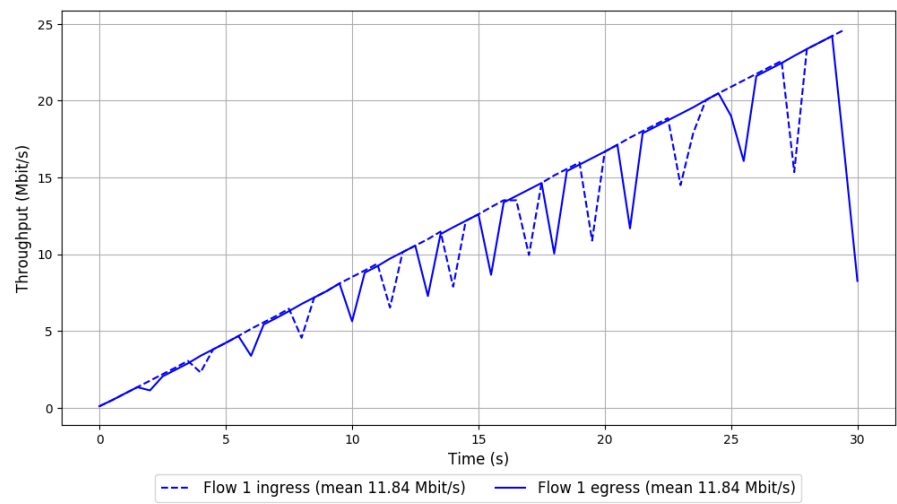
Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2018-02-19 19:46:34
End at: 2018-02-19 19:47:04

# Below is generated by plot.py at 2018-02-19 23:35:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 11.03 Mbit/s
95th percentile per-packet one-way delay: 88.449 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 11.03 Mbit/s
95th percentile per-packet one-way delay: 88.449 ms
Loss rate: 0.00%
```
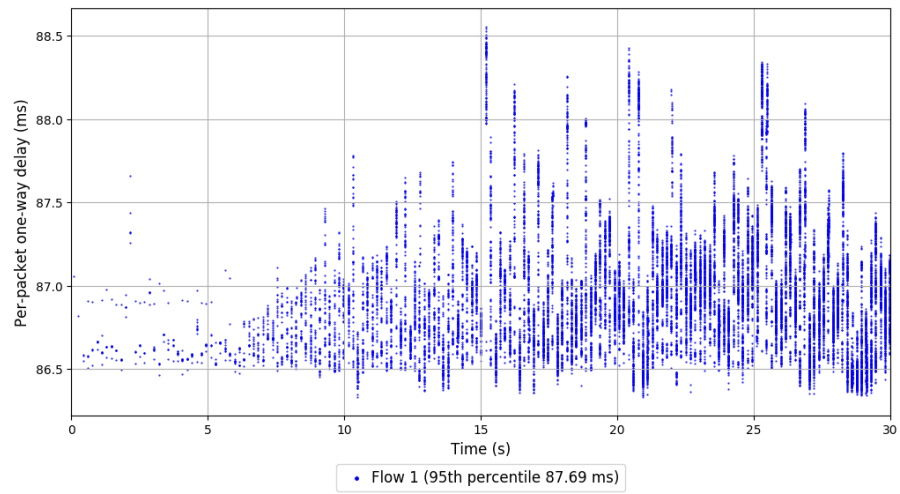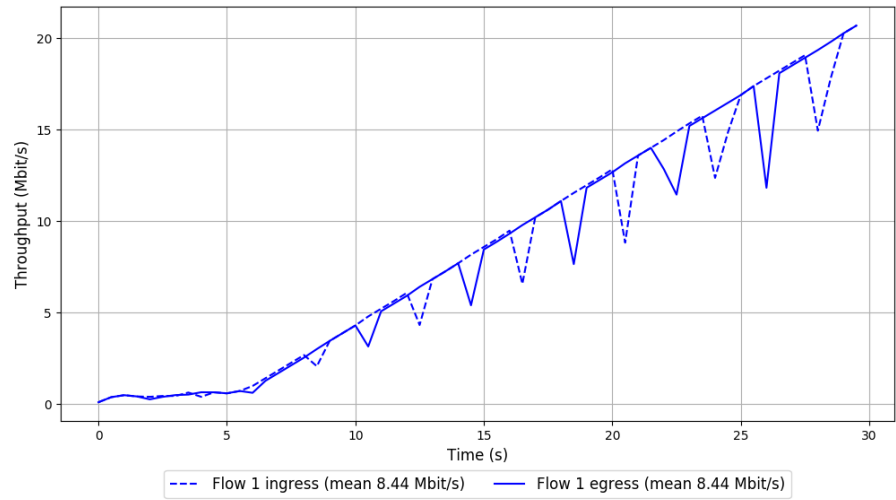
Run 2: Report of LEDBAT — Data Link

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

Flow 1 (95th percentile 88.45 ms)

```
Run 3: Statistics of LEDBAT

Start at: 2018-02-19 20:01:50
End at: 2018-02-19 20:02:20

# Below is generated by plot.py at 2018-02-19 23:35:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 11.47 Mbit/s
95th percentile per-packet one-way delay: 87.604 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 11.47 Mbit/s
95th percentile per-packet one-way delay: 87.604 ms
Loss rate: 0.00%
```
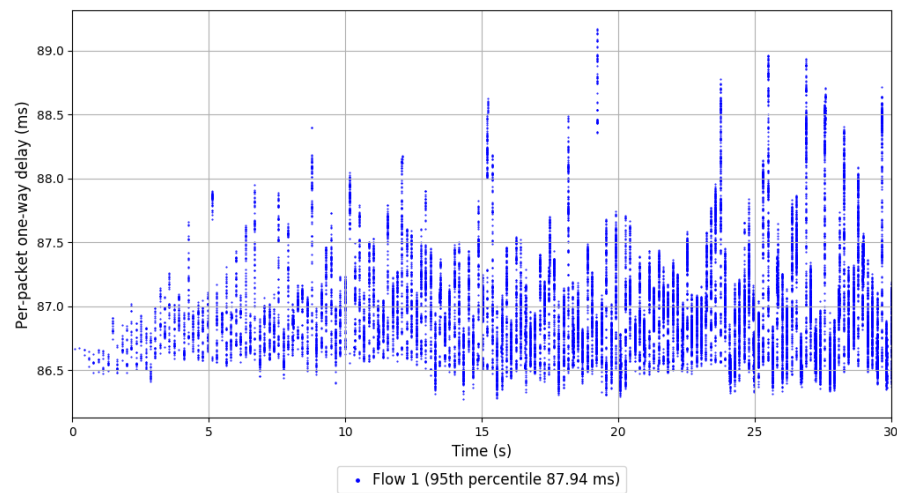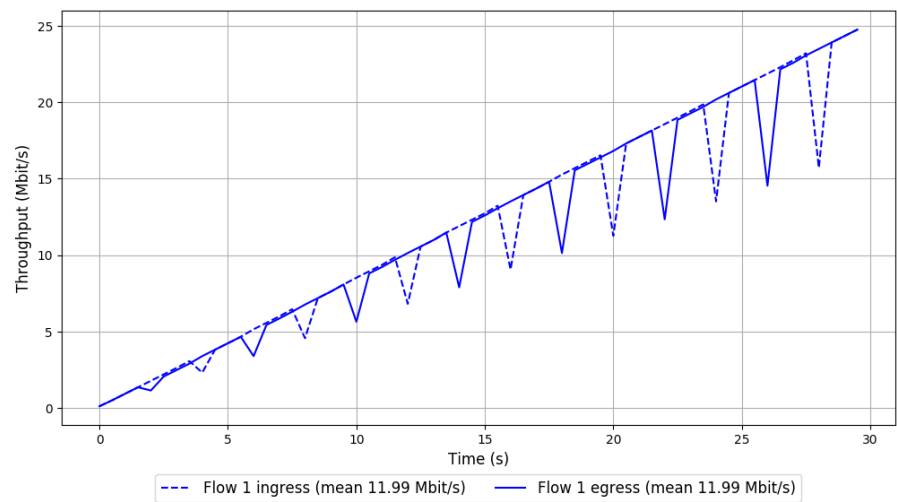
Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2018-02-19 20:17:00
End at: 2018-02-19 20:17:30

# Below is generated by plot.py at 2018-02-19 23:35:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 11.84 Mbit/s
95th percentile per-packet one-way delay: 87.663 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 11.84 Mbit/s
95th percentile per-packet one-way delay: 87.663 ms
Loss rate: 0.00%
```
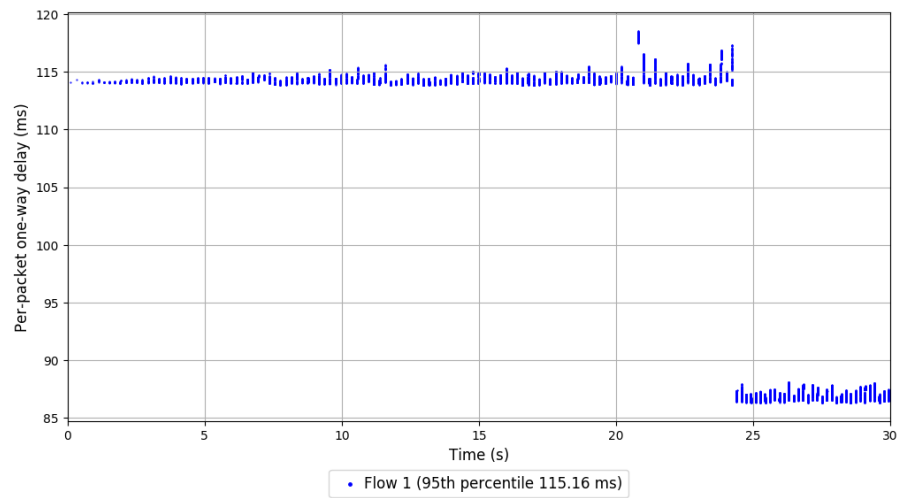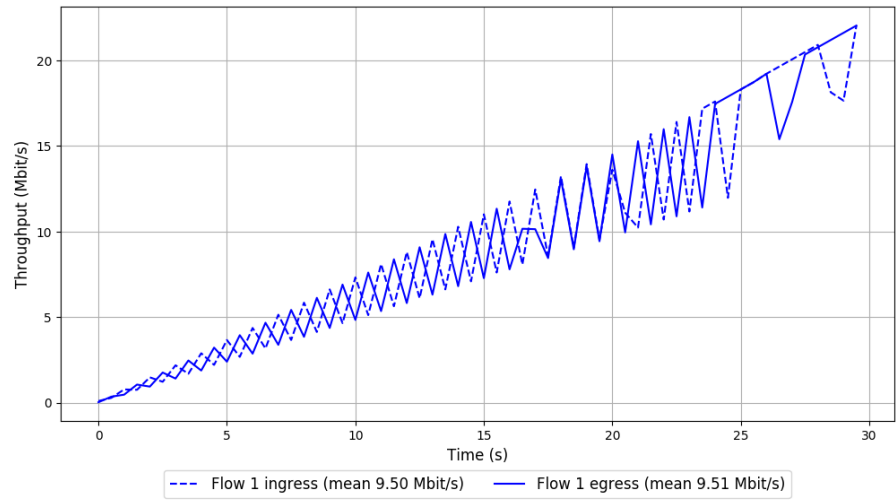
Run 4: Report of LEDBAT — Data Link

```
Run 5: Statistics of LEDBAT

Start at: 2018-02-19 20:32:35
End at: 2018-02-19 20:33:05

# Below is generated by plot.py at 2018-02-19 23:35:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.44 Mbit/s
95th percentile per-packet one-way delay: 87.690 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 8.44 Mbit/s
95th percentile per-packet one-way delay: 87.690 ms
Loss rate: 0.00%
```
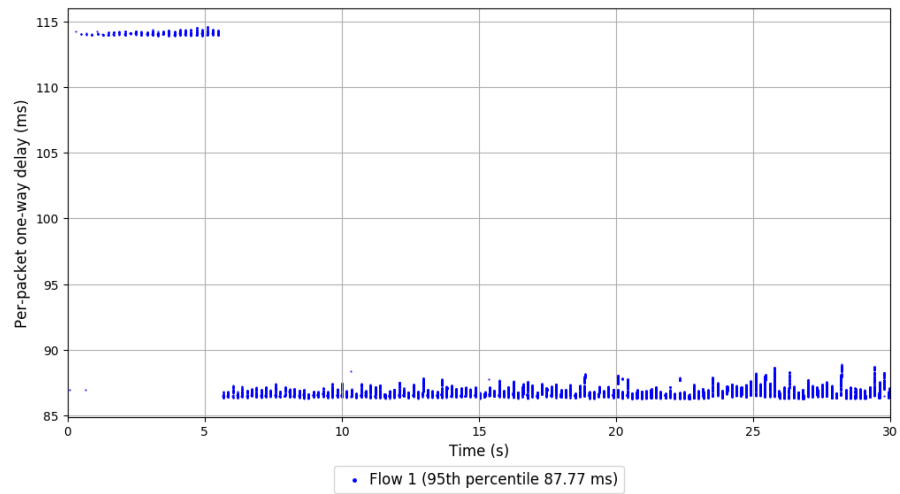
Run 5: Report of LEDBAT — Data Link

```
Run 6: Statistics of LEDBAT

Start at: 2018-02-19 20:47:45
End at: 2018-02-19 20:48:15

# Below is generated by plot.py at 2018-02-19 23:35:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 11.99 Mbit/s
95th percentile per-packet one-way delay: 87.935 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 11.99 Mbit/s
95th percentile per-packet one-way delay: 87.935 ms
Loss rate: 0.00%
```
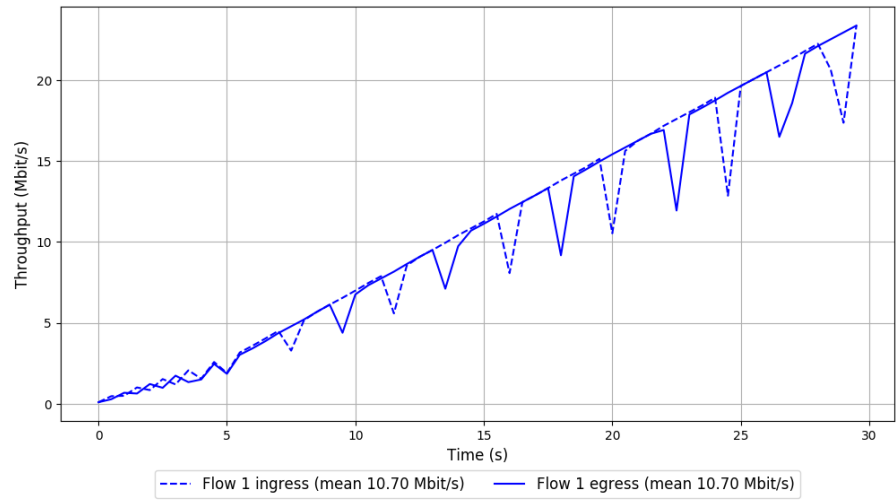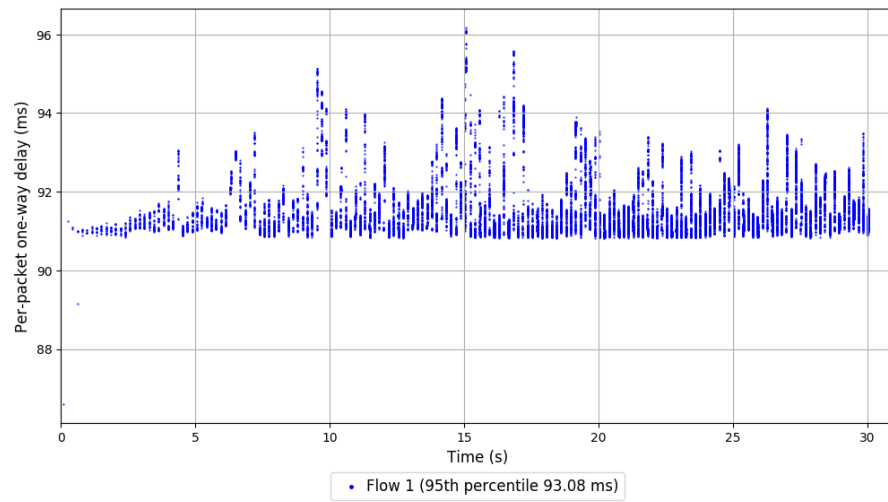
Run 6: Report of LEDBAT — Data Link

Flow 1 ingress (mean 11.99 Mbit/s) — Flow 1 egress (mean 11.99 Mbit/s)

Flow 1 (95th percentile 87.94 ms)

```
Run 7: Statistics of LEDBAT

Start at: 2018-02-19 21:03:04
End at: 2018-02-19 21:03:34

# Below is generated by plot.py at 2018-02-19 23:35:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.51 Mbit/s
95th percentile per-packet one-way delay: 115.158 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.51 Mbit/s
95th percentile per-packet one-way delay: 115.158 ms
Loss rate: 0.00%
```
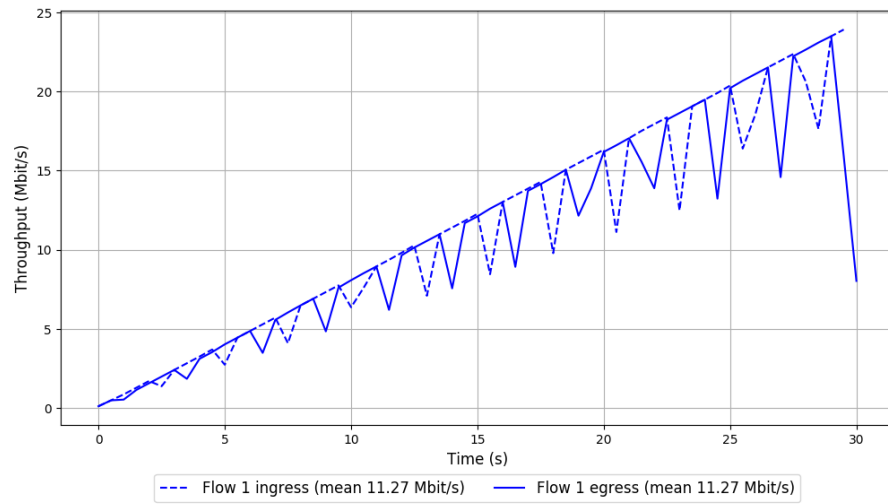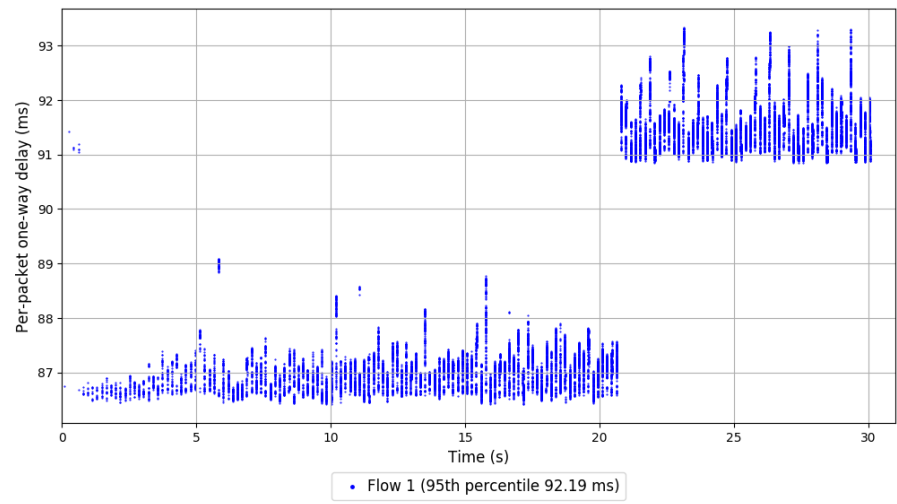
Run 7: Report of LEDBAT — Data Link

```
Run 8: Statistics of LEDBAT

Start at: 2018-02-19 21:18:02
End at: 2018-02-19 21:18:32

# Below is generated by plot.py at 2018-02-19 23:35:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 10.70 Mbit/s
95th percentile per-packet one-way delay: 87.772 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 10.70 Mbit/s
95th percentile per-packet one-way delay: 87.772 ms
Loss rate: 0.00%
```
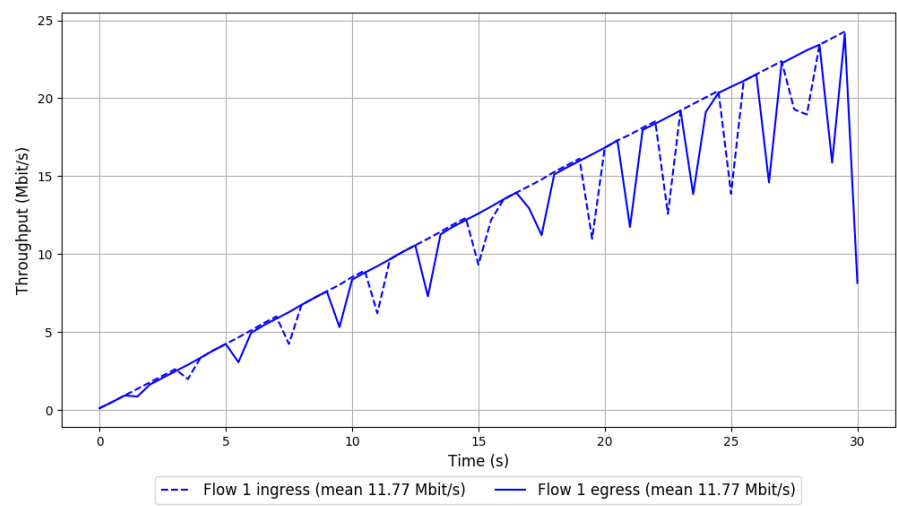
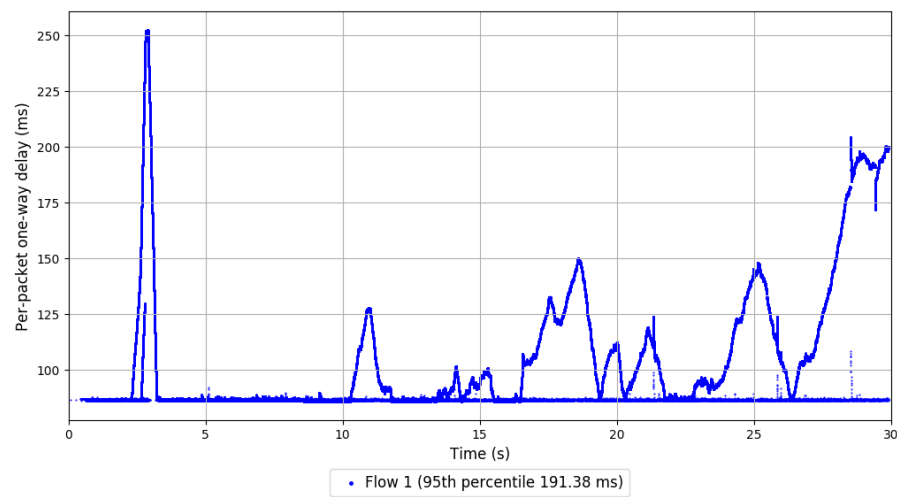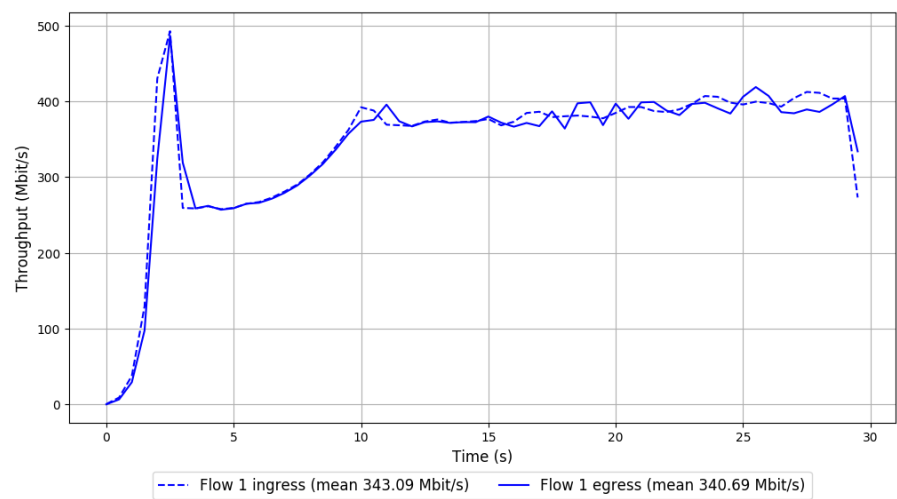Run 8: Report of LEDBAT — Data Link

Flow 1 ingress (mean 10.70 Mbit/s)   Flow 1 egress (mean 10.70 Mbit/s)

Flow 1 (95th percentile 87.77 ms)

```
Run 9: Statistics of LEDBAT

Start at: 2018-02-19 21:32:56
End at: 2018-02-19 21:33:26

# Below is generated by plot.py at 2018-02-19 23:35:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 11.27 Mbit/s
95th percentile per-packet one-way delay: 93.082 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 11.27 Mbit/s
95th percentile per-packet one-way delay: 93.082 ms
Loss rate: 0.00%
```
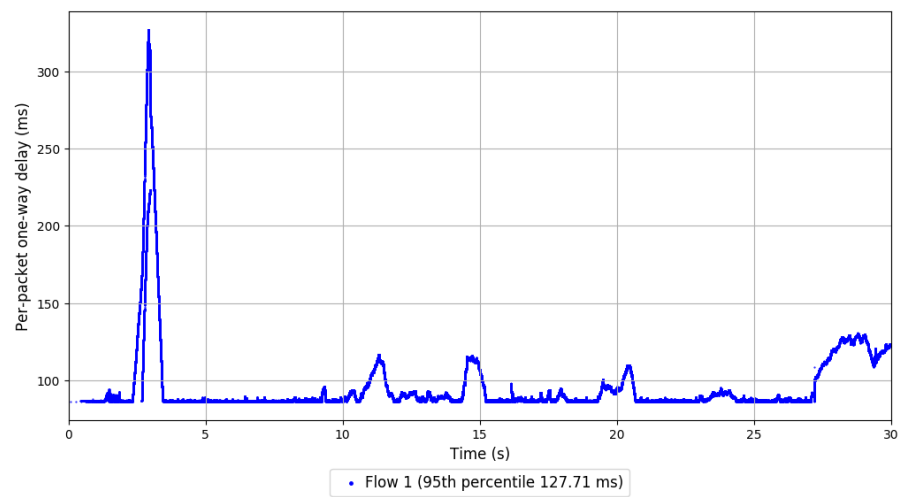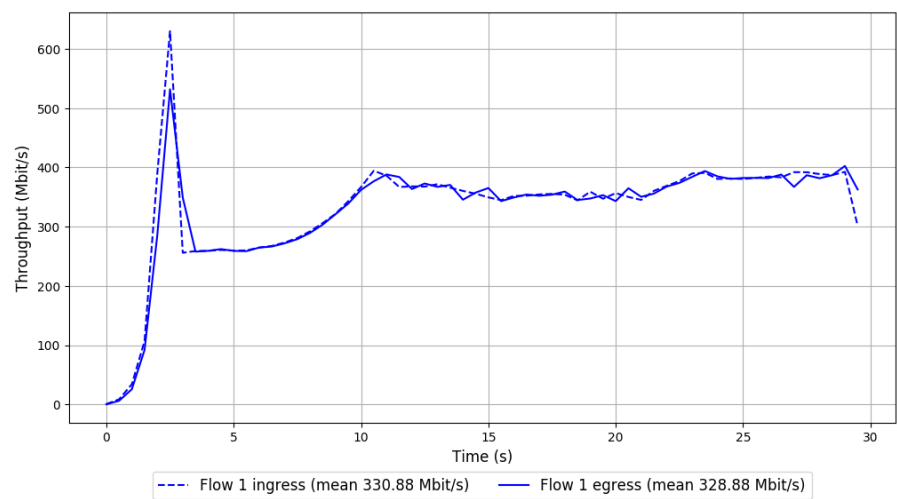
Run 9: Report of LEDBAT — Data Link

Flow 1 ingress (mean 11.27 Mbit/s) --- Flow 1 egress (mean 11.27 Mbit/s)

Flow 1 (95th percentile 93.08 ms)

```
Run 10: Statistics of LEDBAT

Start at: 2018-02-19 21:48:07
End at: 2018-02-19 21:48:37

# Below is generated by plot.py at 2018-02-19 23:35:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 11.77 Mbit/s
95th percentile per-packet one-way delay: 92.194 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 11.77 Mbit/s
95th percentile per-packet one-way delay: 92.194 ms
Loss rate: 0.00%
```
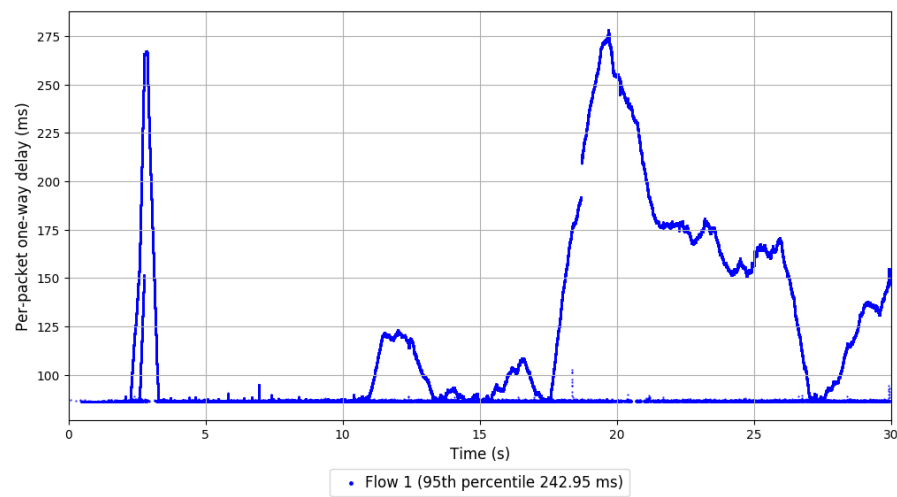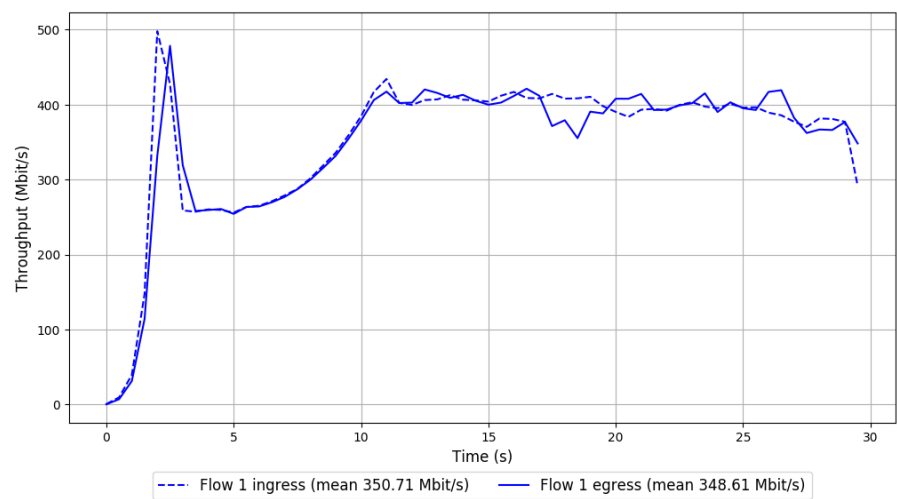
Run 10: Report of LEDBAT — Data Link

```
Run 1: Statistics of PCC

Start at: 2018-02-19 19:29:39
End at: 2018-02-19 19:30:09

# Below is generated by plot.py at 2018-02-19 23:39:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 340.69 Mbit/s
95th percentile per-packet one-way delay: 191.376 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 340.69 Mbit/s
95th percentile per-packet one-way delay: 191.376 ms
Loss rate: 0.70%
```
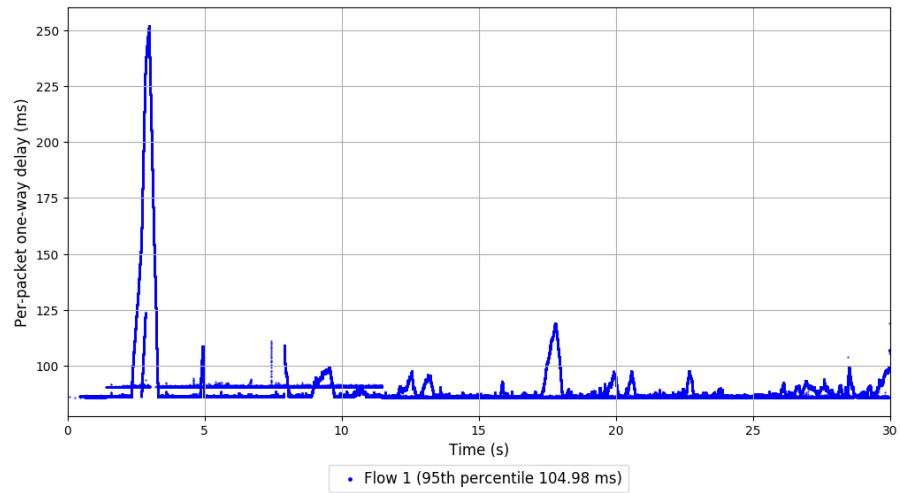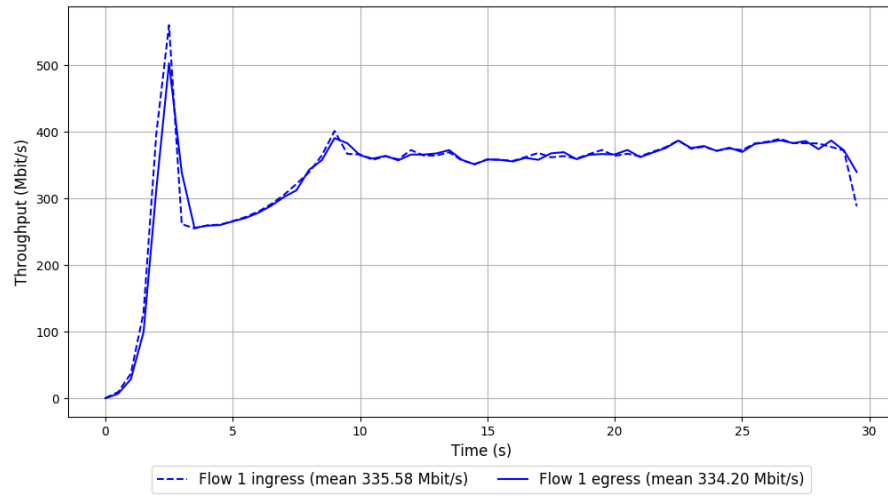
Run 1: Report of PCC — Data Link

Flow 1 ingress (mean 343.09 Mbit/s)   Flow 1 egress (mean 340.69 Mbit/s)

Flow 1 (95th percentile 191.38 ms)

```
Run 2: Statistics of PCC

Start at: 2018-02-19 19:44:49
End at: 2018-02-19 19:45:19

# Below is generated by plot.py at 2018-02-19 23:39:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 328.88 Mbit/s
95th percentile per-packet one-way delay: 127.706 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 328.88 Mbit/s
95th percentile per-packet one-way delay: 127.706 ms
Loss rate: 0.60%
```
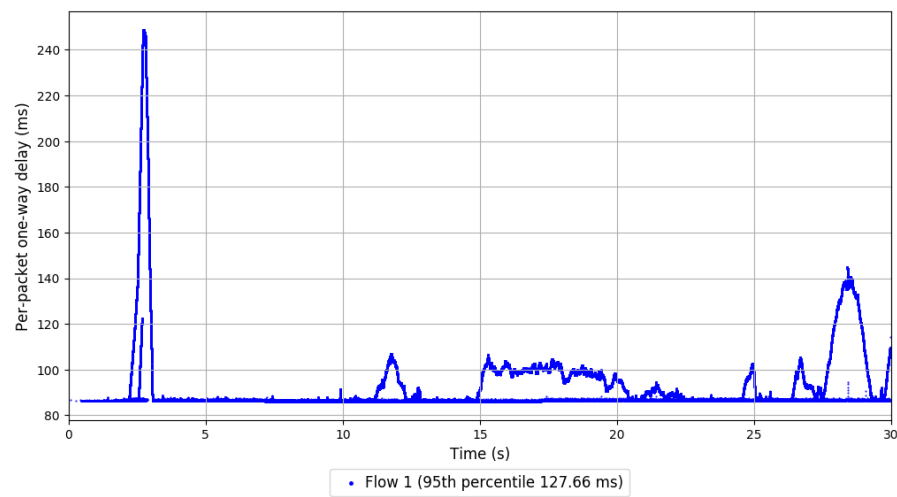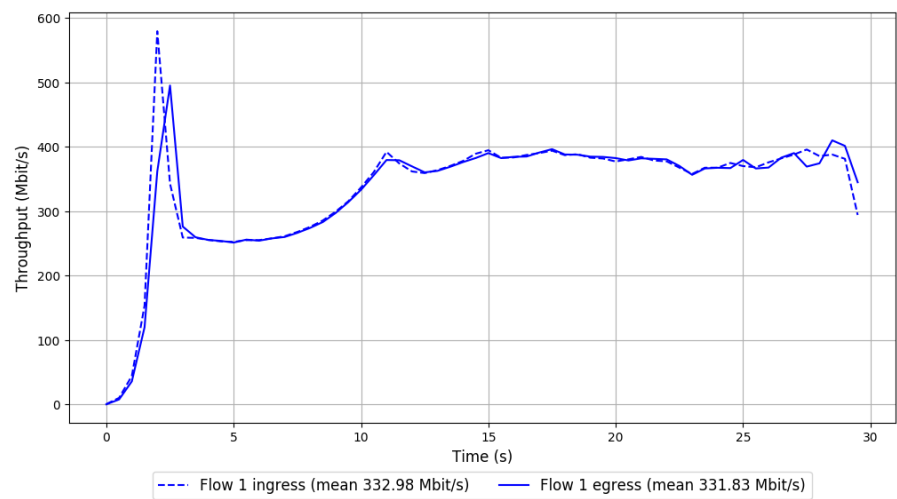
Run 2: Report of PCC — Data Link

```
Run 3: Statistics of PCC

Start at: 2018-02-19 20:00:06
End at: 2018-02-19 20:00:36

# Below is generated by plot.py at 2018-02-19 23:39:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 348.61 Mbit/s
95th percentile per-packet one-way delay: 242.949 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 348.61 Mbit/s
95th percentile per-packet one-way delay: 242.949 ms
Loss rate: 0.60%
```
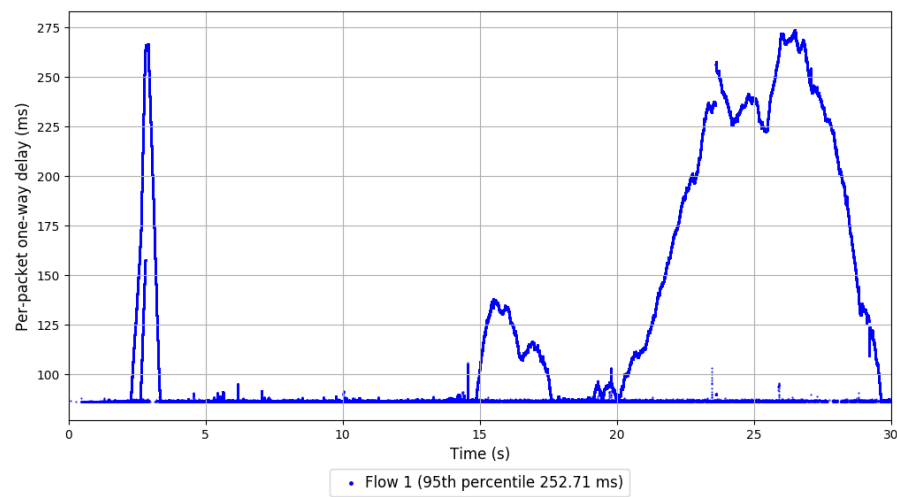
Run 3: Report of PCC — Data Link

```
Run 4: Statistics of PCC

Start at: 2018-02-19 20:15:16
End at: 2018-02-19 20:15:46

# Below is generated by plot.py at 2018-02-19 23:39:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 334.20 Mbit/s
95th percentile per-packet one-way delay: 104.983 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 334.20 Mbit/s
95th percentile per-packet one-way delay: 104.983 ms
Loss rate: 0.37%
```
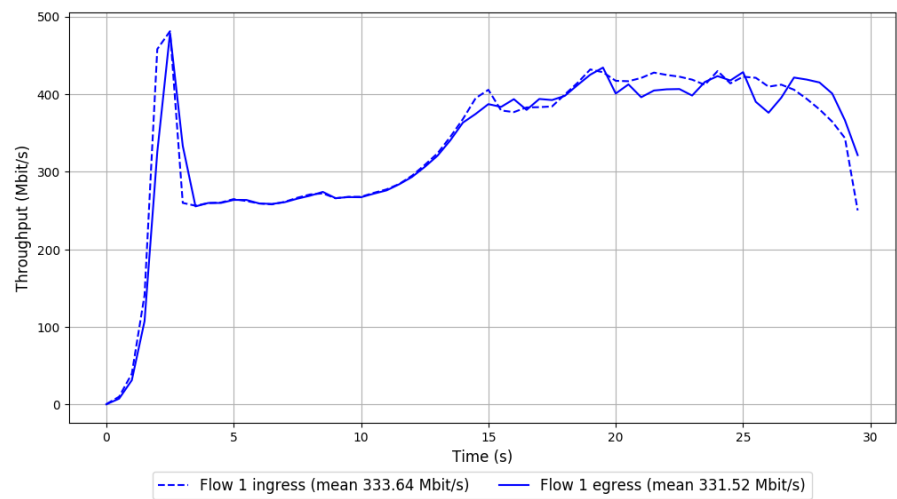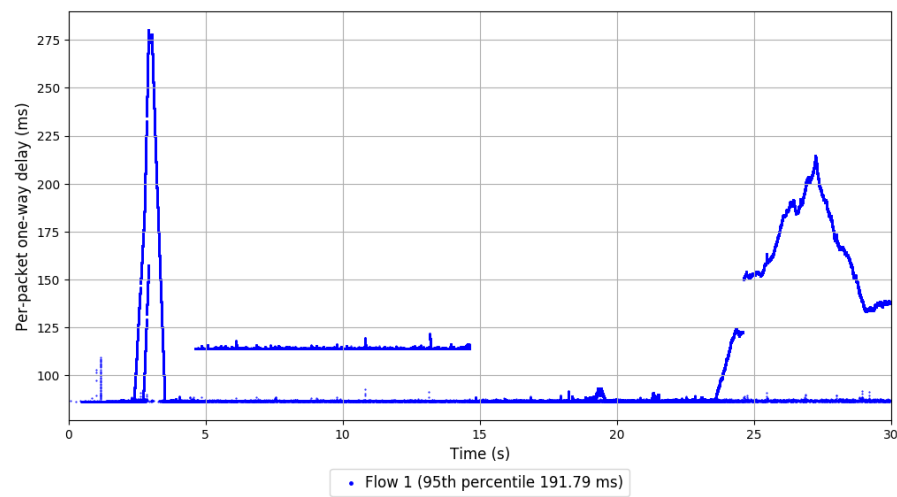
Run 4: Report of PCC — Data Link

Flow 1 ingress (mean 335.58 Mbit/s) — Flow 1 egress (mean 334.20 Mbit/s)

• Flow 1 (95th percentile 104.98 ms)

71

Run 5: Statistics of PCC

Start at: 2018-02-19 20:30:51
End at: 2018-02-19 20:31:21

Below is generated by plot.py at 2018-02-19 23:39:37
Datalink statistics
-- Total of 1 flow:
Average throughput: 331.83 Mbit/s
95th percentile per-packet one-way delay: 127.661 ms
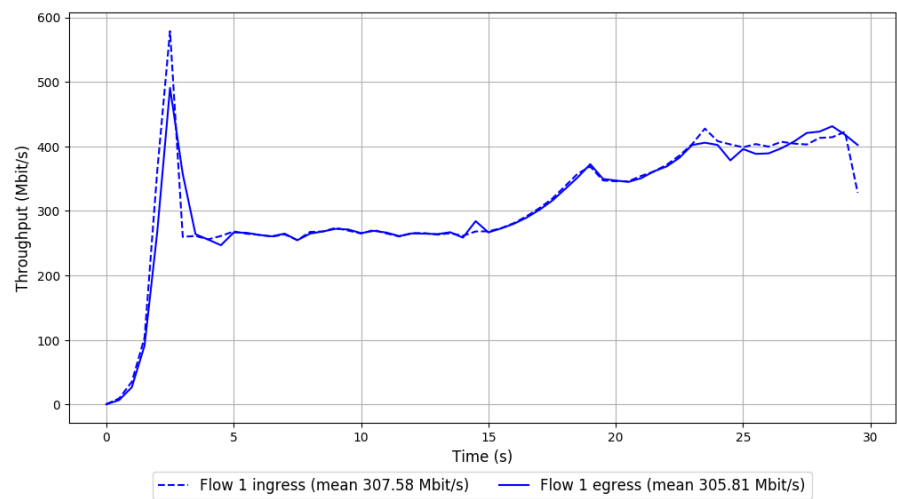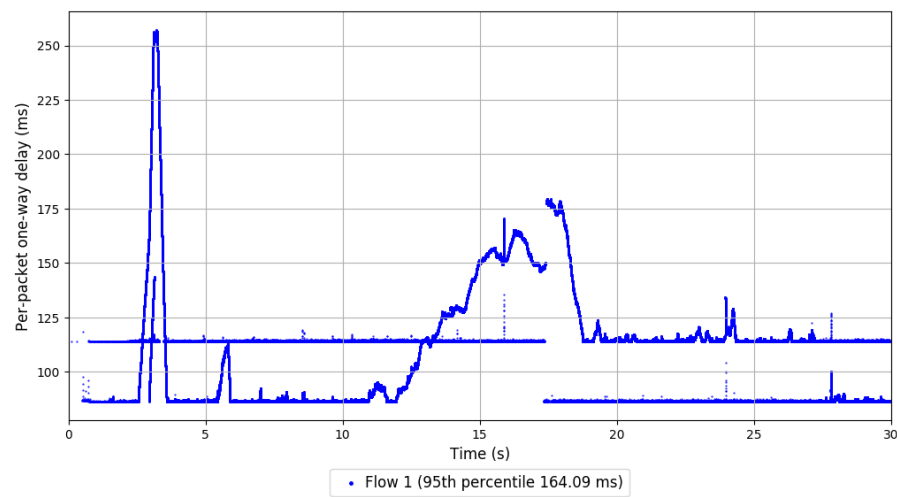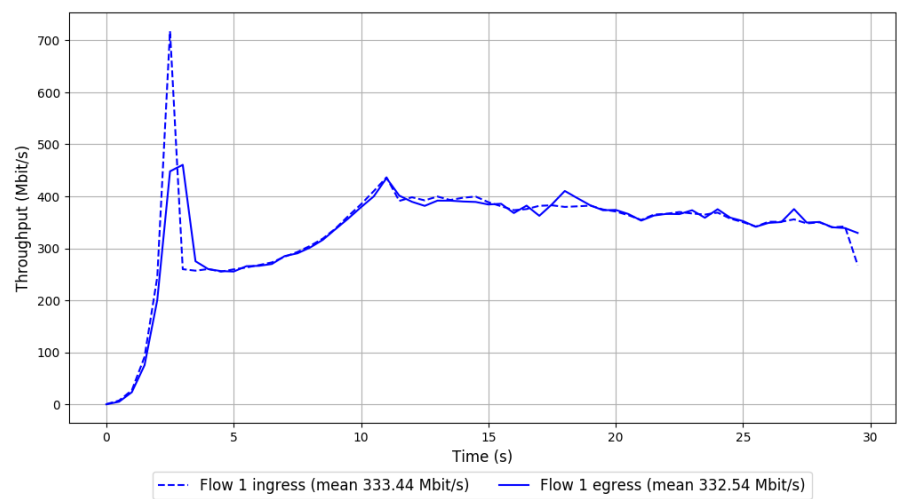Loss rate: 0.31%
-- Flow 1:
Average throughput: 331.83 Mbit/s
95th percentile per-packet one-way delay: 127.661 ms
Loss rate: 0.31%

Run 5: Report of PCC — Data Link

Flow 1 ingress (mean 332.98 Mbit/s) ----- Flow 1 egress (mean 331.83 Mbit/s)

• Flow 1 (95th percentile 127.66 ms)

73

```
Run 6: Statistics of PCC

Start at: 2018-02-19 20:46:01
End at: 2018-02-19 20:46:31


# Below is generated by plot.py at 2018-02-19 23:40:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 331.52 Mbit/s
95th percentile per-packet one-way delay: 252.712 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 331.52 Mbit/s
95th percentile per-packet one-way delay: 252.712 ms
Loss rate: 0.64%
```
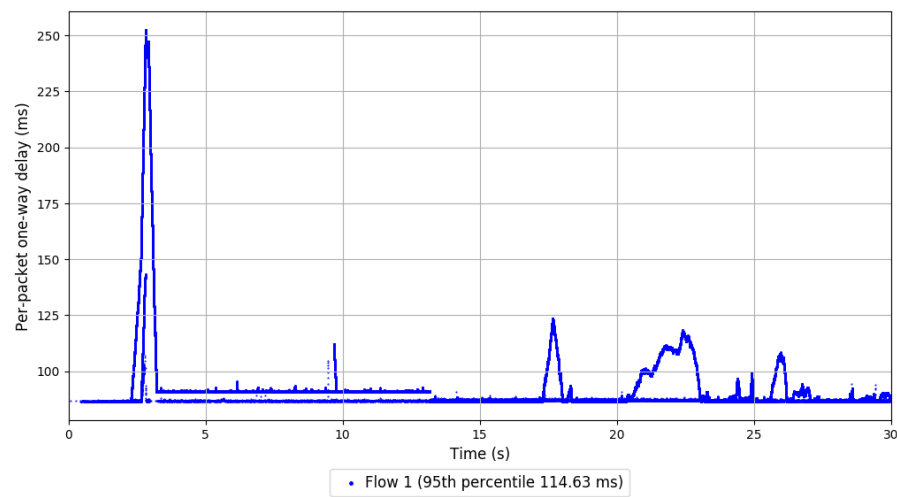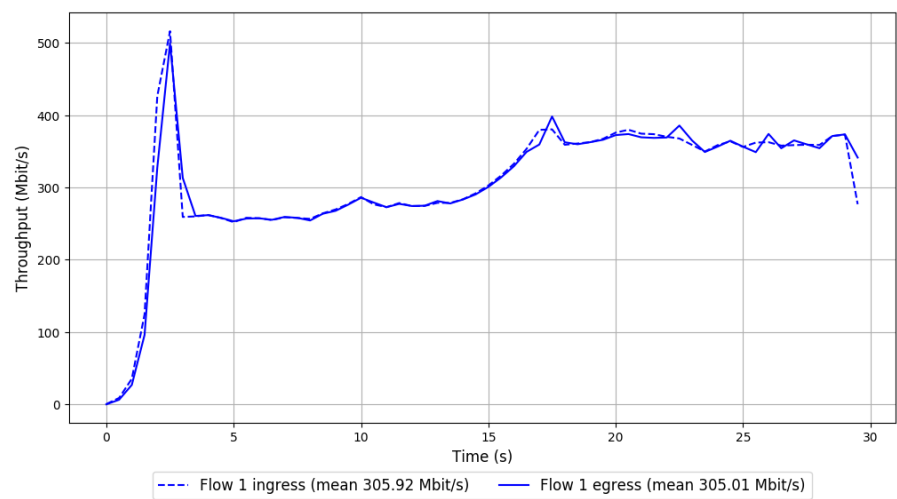
Run 6: Report of PCC — Data Link

75

```
Run 7: Statistics of PCC

Start at: 2018-02-19 21:01:23
End at: 2018-02-19 21:01:53

# Below is generated by plot.py at 2018-02-19 23:40:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 305.81 Mbit/s
95th percentile per-packet one-way delay: 191.789 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 305.81 Mbit/s
95th percentile per-packet one-way delay: 191.789 ms
Loss rate: 0.58%
```
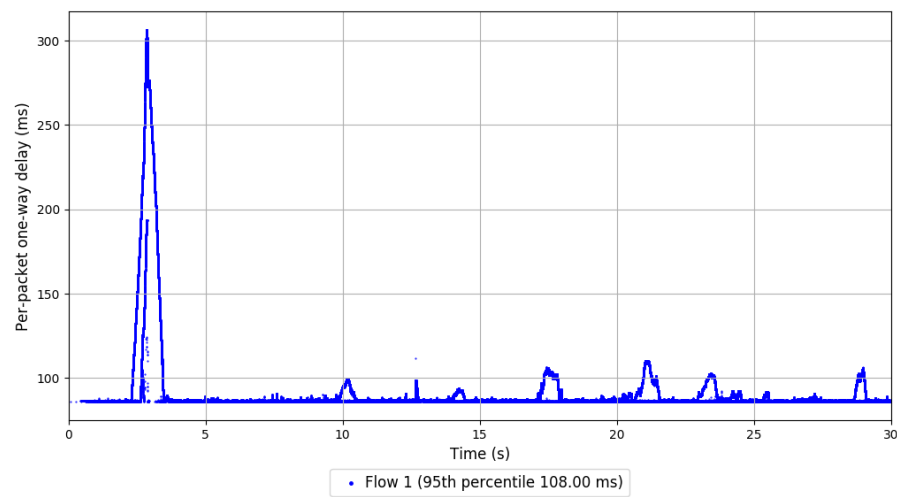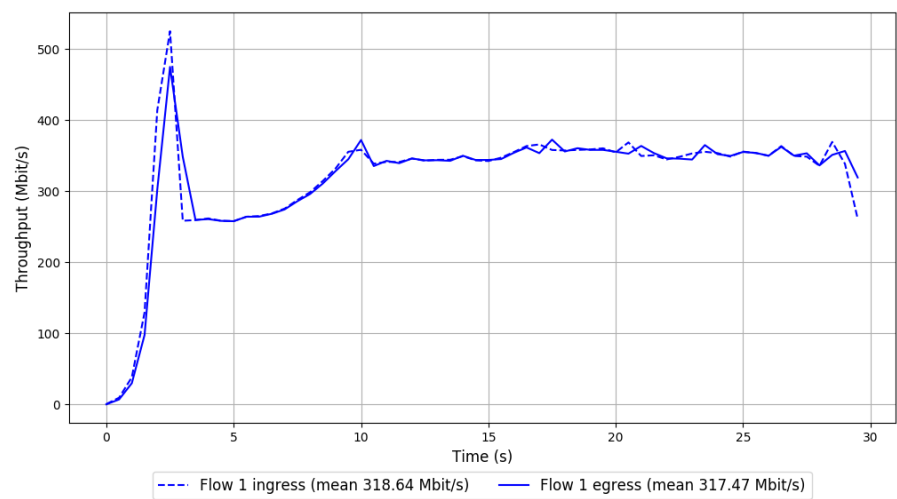
Run 7: Report of PCC — Data Link

Flow 1 ingress (mean 307.58 Mbit/s)   Flow 1 egress (mean 305.81 Mbit/s)

Flow 1 (95th percentile 191.79 ms)

```
Run 8: Statistics of PCC

Start at: 2018-02-19 21:16:20
End at: 2018-02-19 21:16:50

# Below is generated by plot.py at 2018-02-19 23:41:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 332.54 Mbit/s
95th percentile per-packet one-way delay: 164.086 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 332.54 Mbit/s
95th percentile per-packet one-way delay: 164.086 ms
Loss rate: 0.36%
```
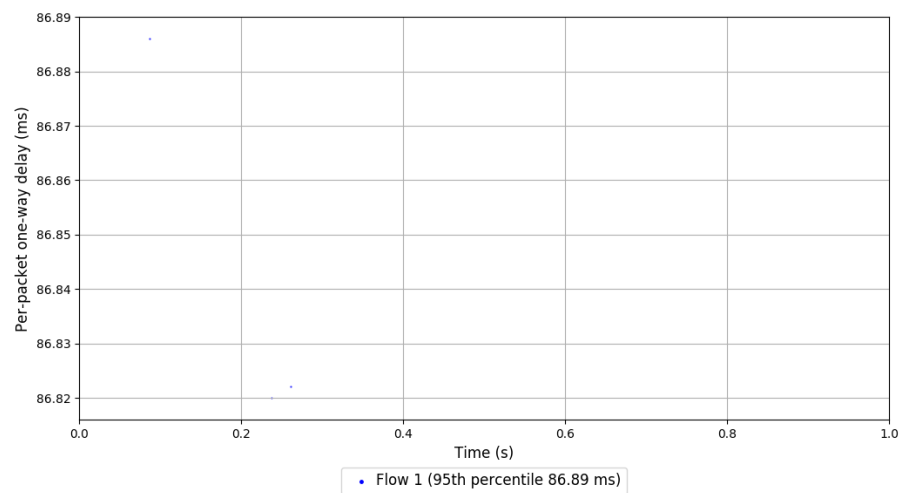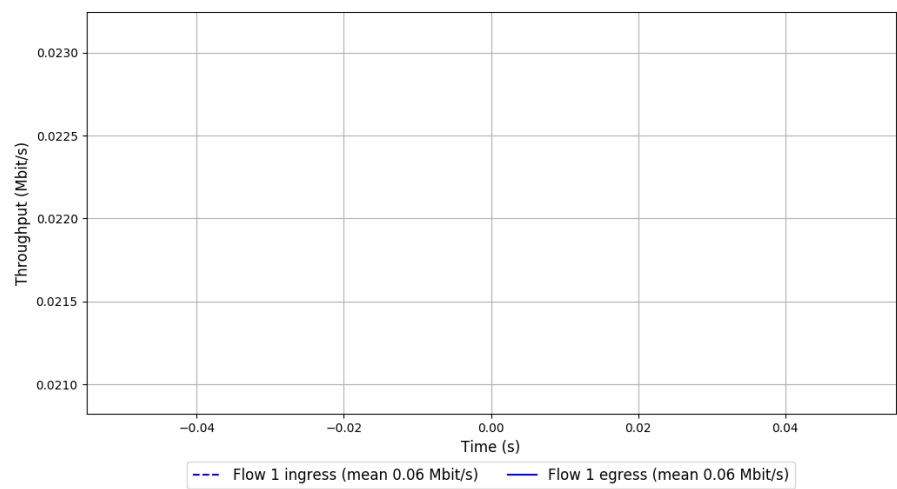
Run 8: Report of PCC — Data Link

```
Run 9: Statistics of PCC

Start at: 2018-02-19 21:31:15
End at: 2018-02-19 21:31:45


# Below is generated by plot.py at 2018-02-19 23:44:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 305.01 Mbit/s
95th percentile per-packet one-way delay: 114.630 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 305.01 Mbit/s
95th percentile per-packet one-way delay: 114.630 ms
Loss rate: 0.29%
```
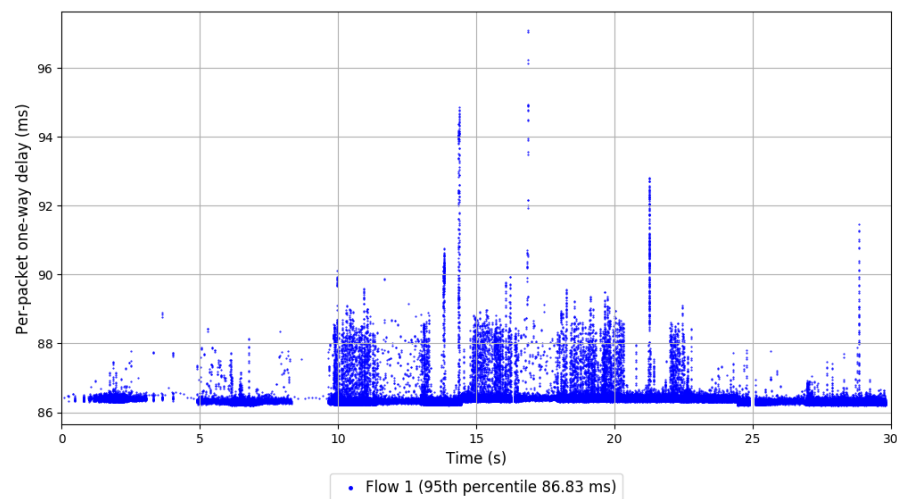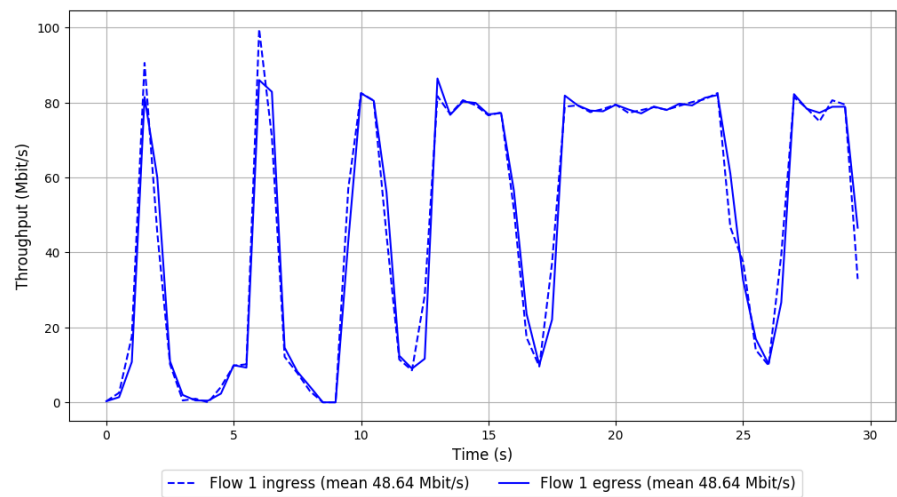
Run 9: Report of PCC — Data Link

Flow 1 ingress (mean 305.92 Mbit/s)   Flow 1 egress (mean 305.01 Mbit/s)

Flow 1 (95th percentile 114.63 ms)

```
Run 10: Statistics of PCC

Start at: 2018-02-19 21:46:25
End at: 2018-02-19 21:46:55

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 317.47 Mbit/s
95th percentile per-packet one-way delay: 108.003 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 317.47 Mbit/s
95th percentile per-packet one-way delay: 108.003 ms
Loss rate: 0.37%
```
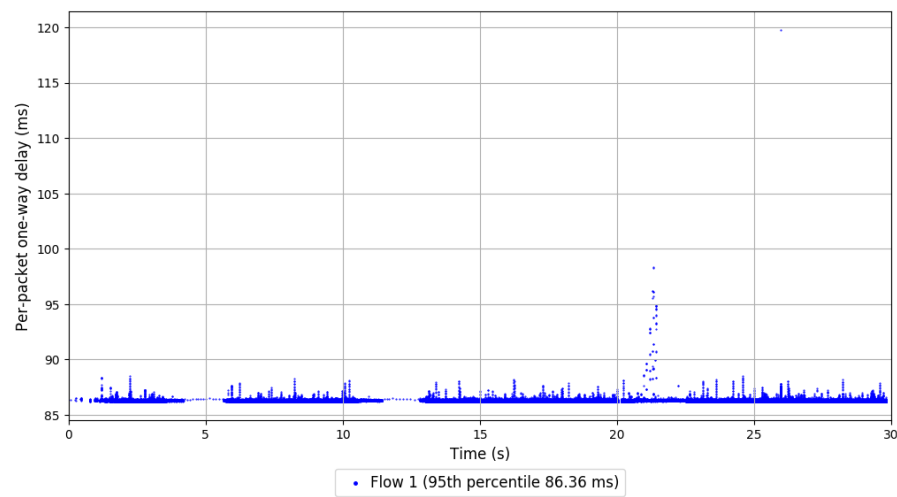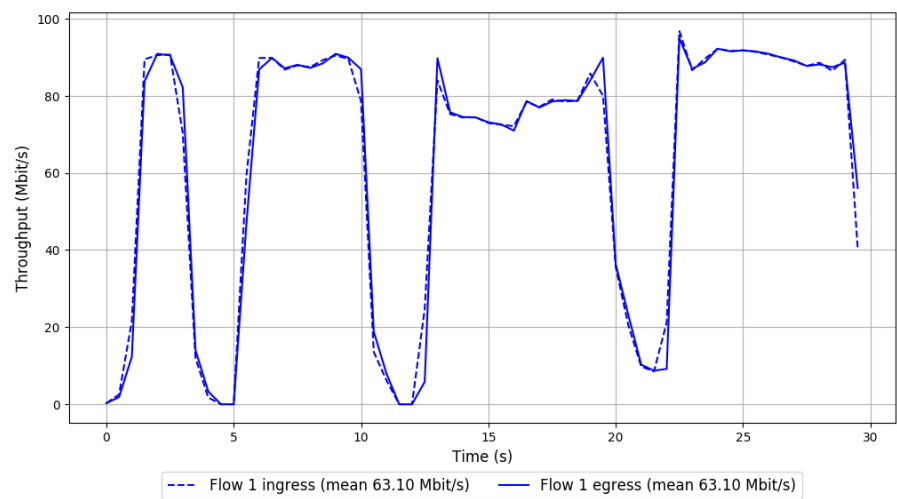
Run 10: Report of PCC — Data Link

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```
Run 1: Statistics of QUIC Cubic

Start at: 2018-02-19 19:24:39
End at: 2018-02-19 19:25:09
```

Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2018-02-19 19:39:33
End at: 2018-02-19 19:40:03

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 48.64 Mbit/s
95th percentile per-packet one-way delay: 86.834 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 48.64 Mbit/s
95th percentile per-packet one-way delay: 86.834 ms
Loss rate: 0.00%
```
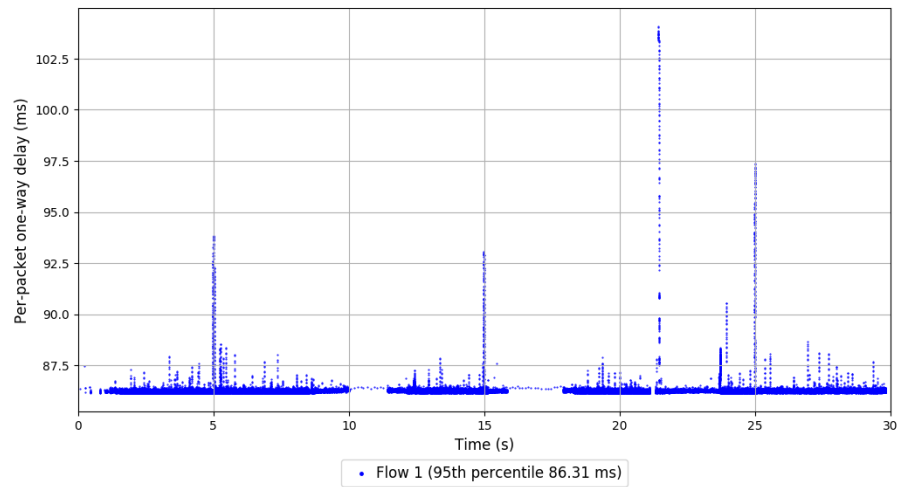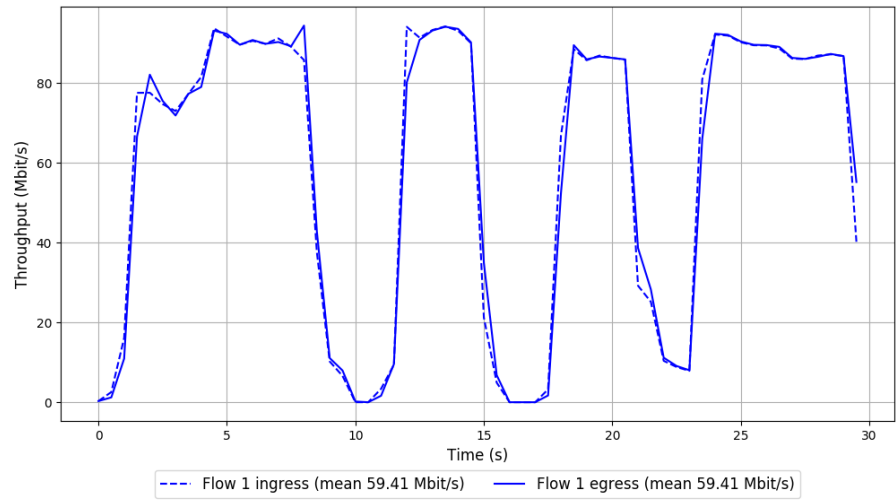
Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2018-02-19 19:54:48
End at: 2018-02-19 19:55:18

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 63.10 Mbit/s
95th percentile per-packet one-way delay: 86.364 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 63.10 Mbit/s
95th percentile per-packet one-way delay: 86.364 ms
Loss rate: 0.00%
```
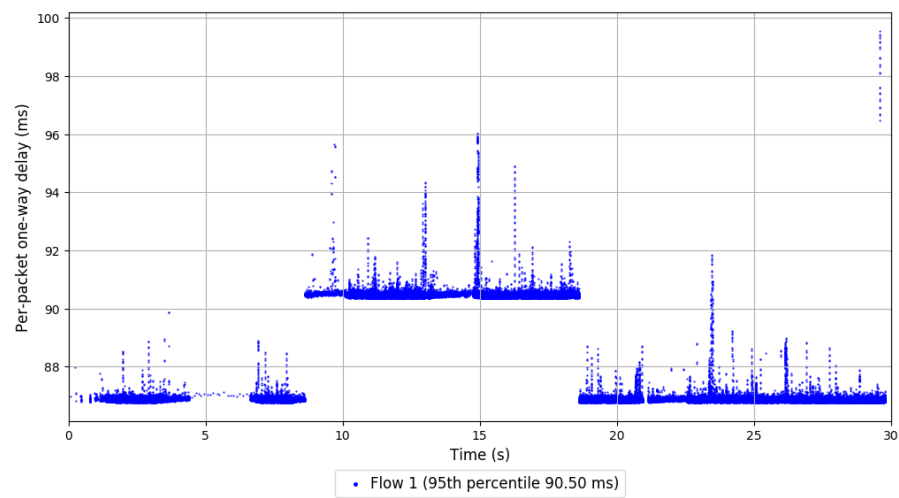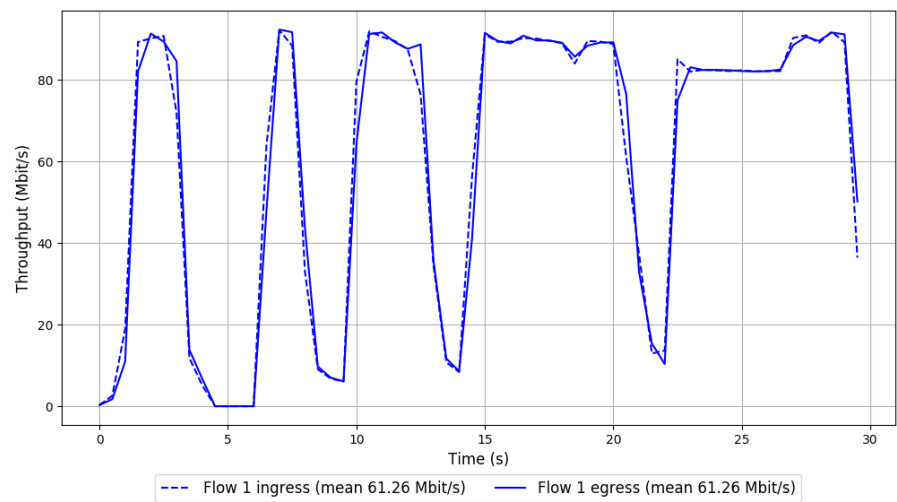
Run 3: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 63.10 Mbit/s)   Flow 1 egress (mean 63.10 Mbit/s)

Flow 1 (95th percentile 86.36 ms)

```
Run 4: Statistics of QUIC Cubic

Start at: 2018-02-19 20:10:02
End at: 2018-02-19 20:10:32

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 59.41 Mbit/s
95th percentile per-packet one-way delay: 86.306 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 59.41 Mbit/s
95th percentile per-packet one-way delay: 86.306 ms
Loss rate: 0.00%
```
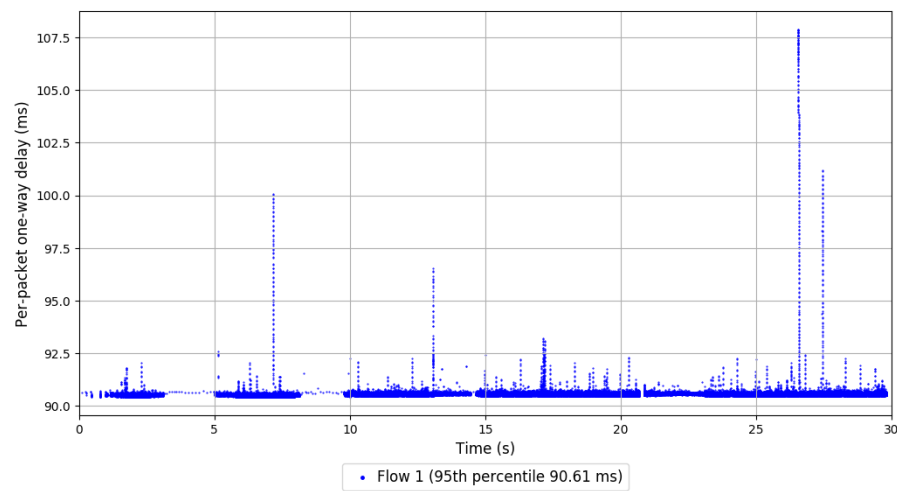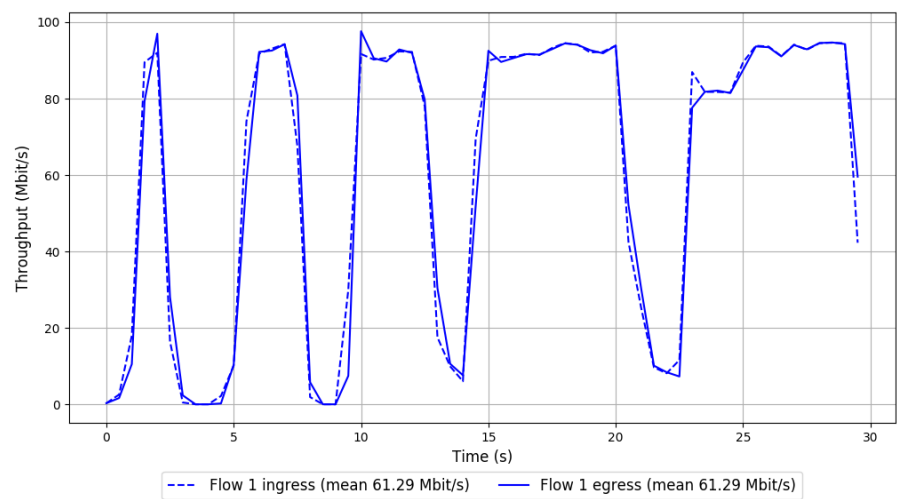
Run 4: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 59.41 Mbit/s)   Flow 1 egress (mean 59.41 Mbit/s)

Flow 1 (95th percentile 86.31 ms)

```
Run 5: Statistics of QUIC Cubic

Start at: 2018-02-19 20:25:29
End at: 2018-02-19 20:25:59

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 61.26 Mbit/s
95th percentile per-packet one-way delay: 90.499 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 61.26 Mbit/s
95th percentile per-packet one-way delay: 90.499 ms
Loss rate: 0.00%
```
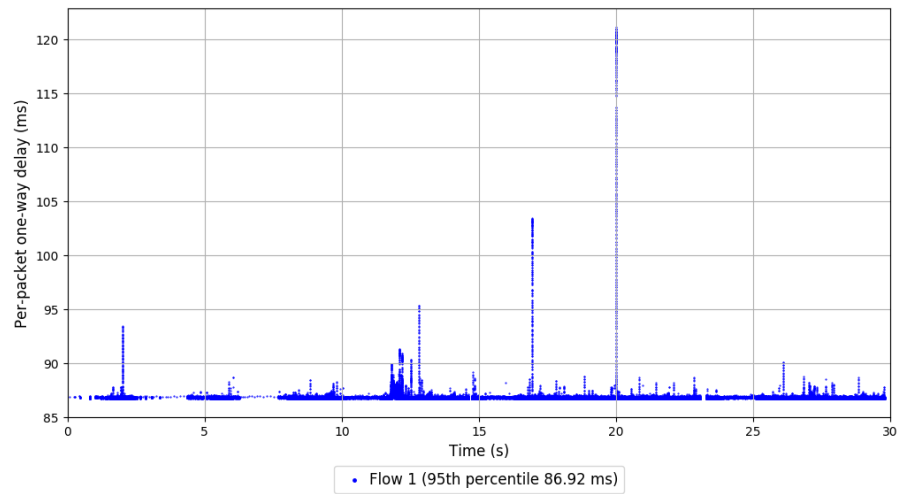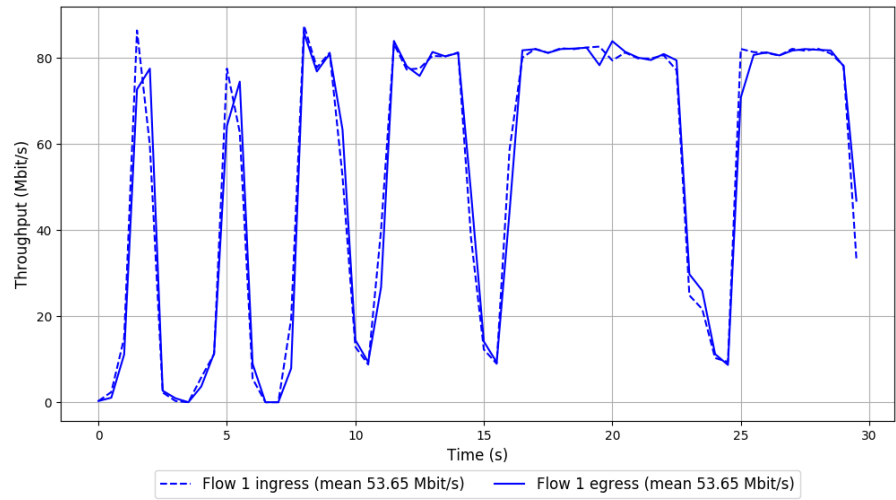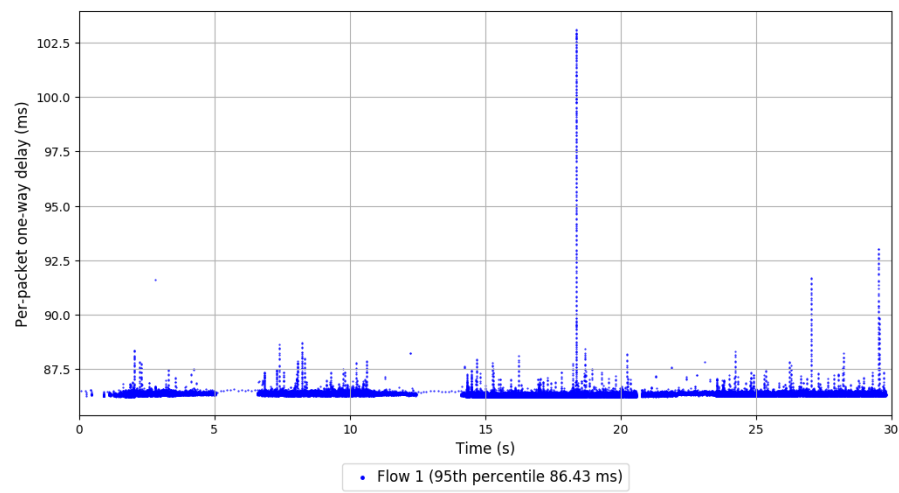
Run 5: Report of QUIC Cubic — Data Link

```
Run 6: Statistics of QUIC Cubic

Start at: 2018-02-19 20:40:58
End at: 2018-02-19 20:41:28

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 61.29 Mbit/s
95th percentile per-packet one-way delay: 90.612 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 61.29 Mbit/s
95th percentile per-packet one-way delay: 90.612 ms
Loss rate: 0.00%
```
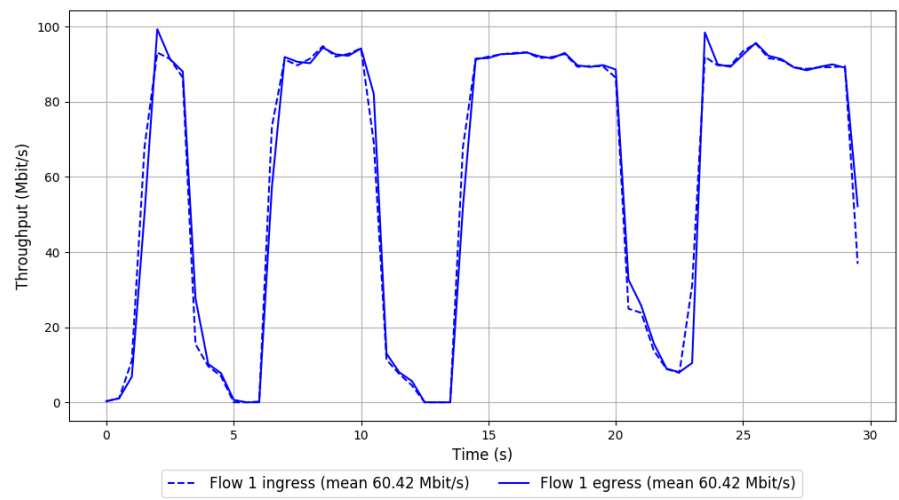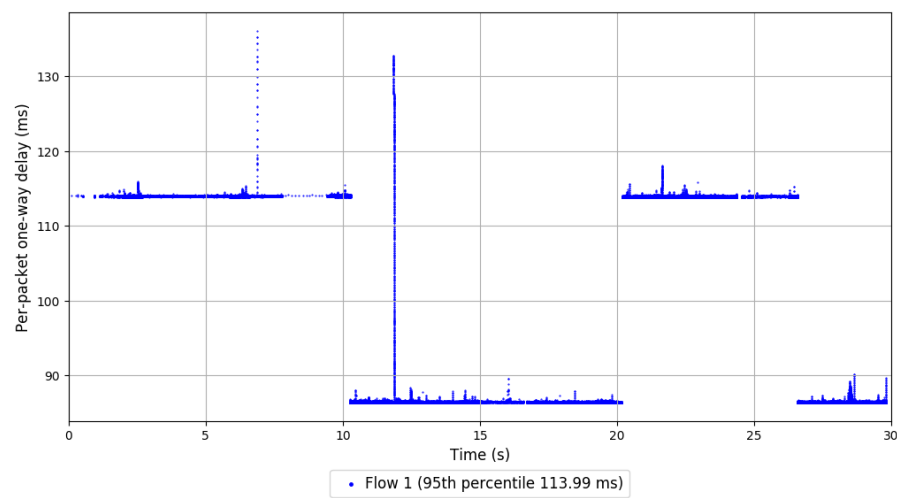
Run 6: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 61.29 Mbit/s)   Flow 1 egress (mean 61.29 Mbit/s)

Flow 1 (95th percentile 90.61 ms)

```
Run 7: Statistics of QUIC Cubic

Start at: 2018-02-19 20:56:07
End at: 2018-02-19 20:56:37

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 53.65 Mbit/s
95th percentile per-packet one-way delay: 86.924 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 53.65 Mbit/s
95th percentile per-packet one-way delay: 86.924 ms
Loss rate: 0.00%
```
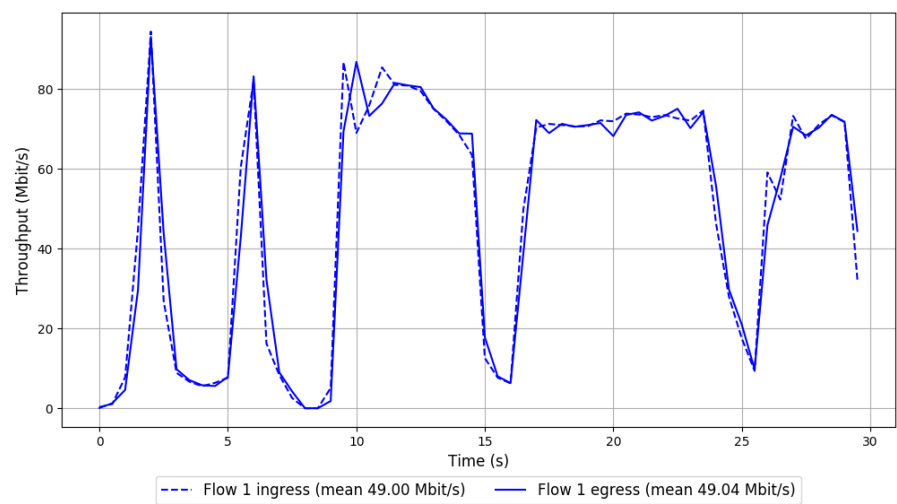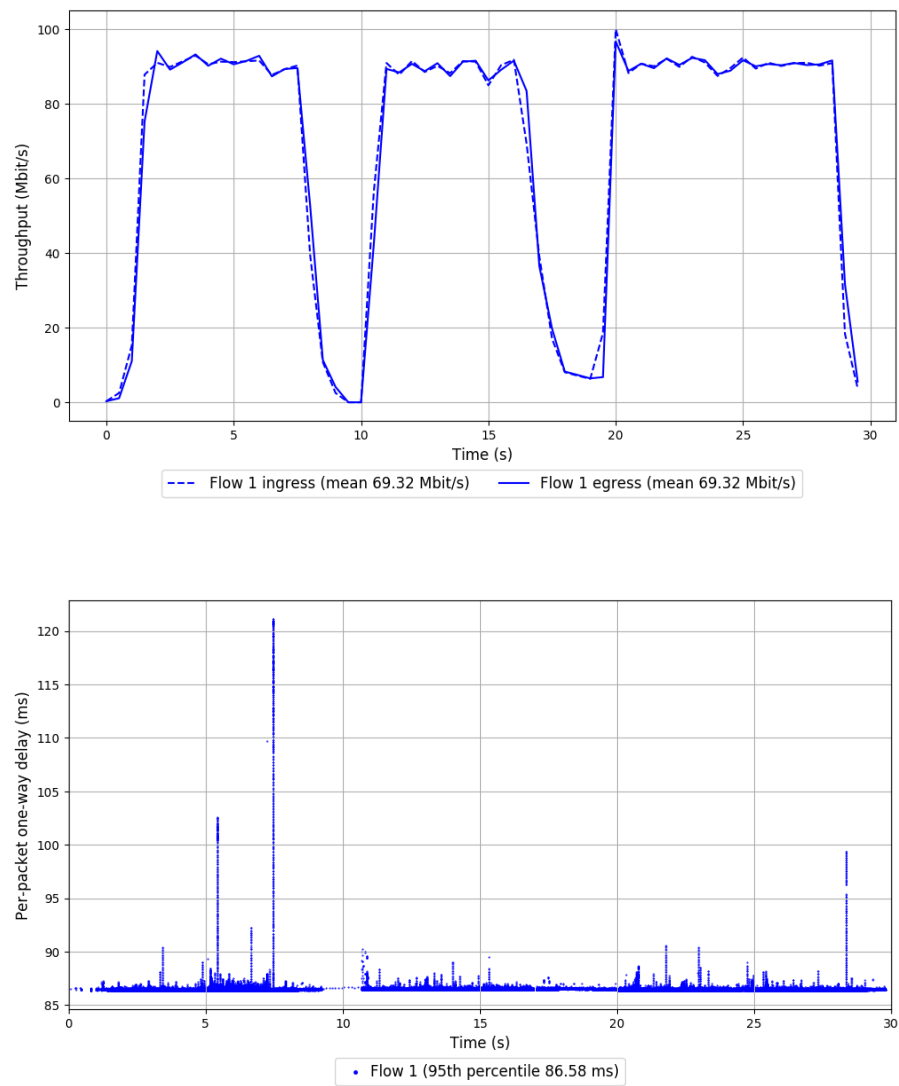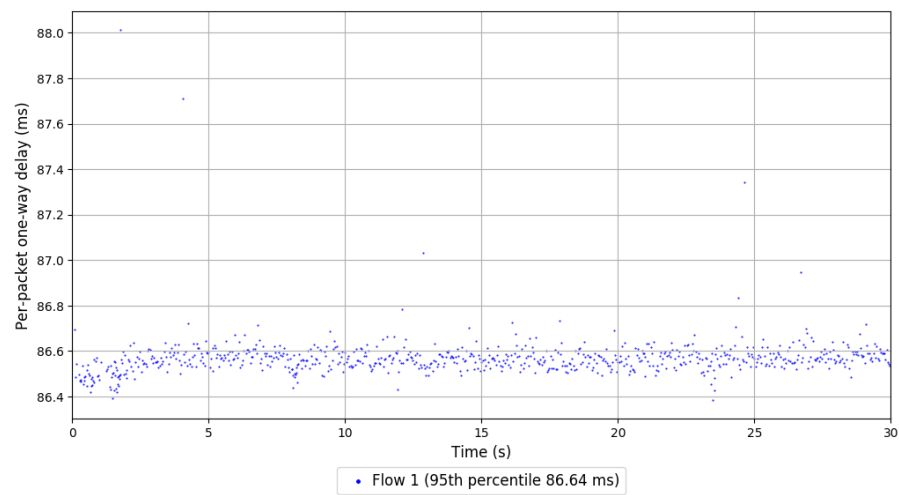
Run 7: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 53.65 Mbit/s)   Flow 1 egress (mean 53.65 Mbit/s)

Flow 1 (95th percentile 86.92 ms)

```
Run 8: Statistics of QUIC Cubic

Start at: 2018-02-19 21:11:06
End at: 2018-02-19 21:11:36

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 60.42 Mbit/s
95th percentile per-packet one-way delay: 86.432 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 60.42 Mbit/s
95th percentile per-packet one-way delay: 86.432 ms
Loss rate: 0.00%
```
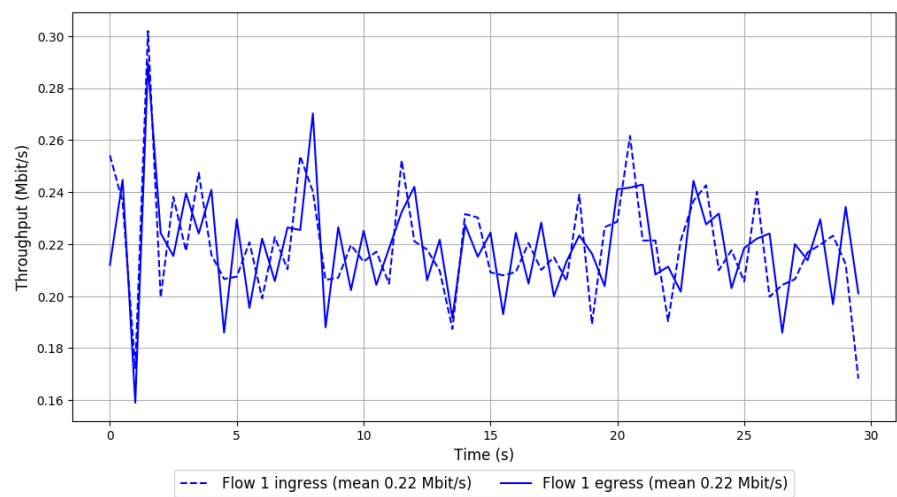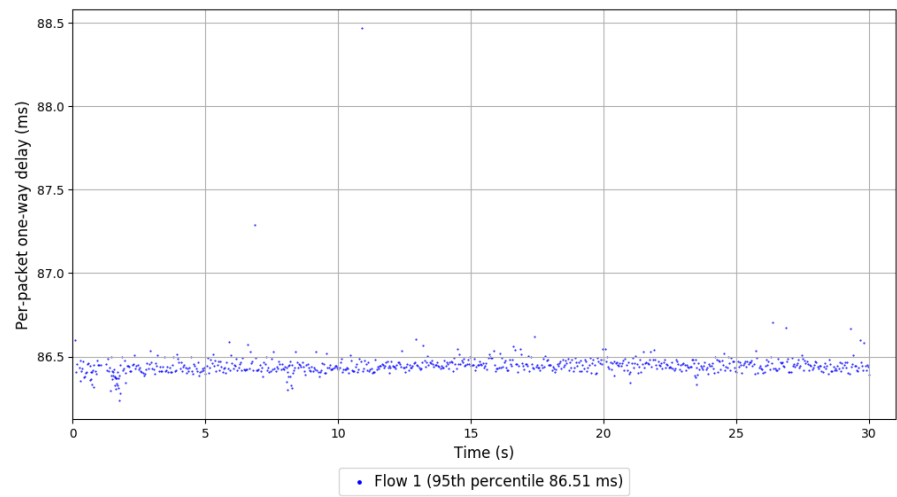
Run 8: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 60.42 Mbit/s)　　　Flow 1 egress (mean 60.42 Mbit/s)
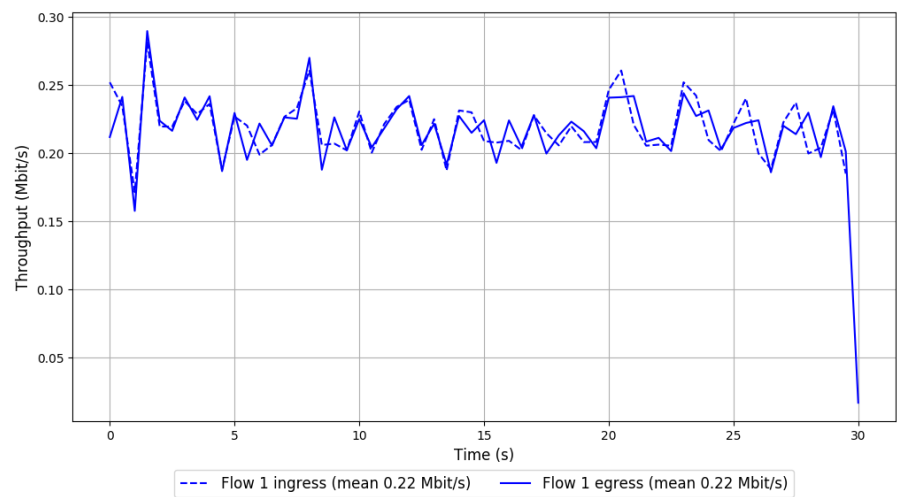

Flow 1 (95th percentile 86.43 ms)

```
Run 9: Statistics of QUIC Cubic

Start at: 2018-02-19 21:26:17
End at: 2018-02-19 21:26:47


# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 49.04 Mbit/s
95th percentile per-packet one-way delay: 113.992 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 49.04 Mbit/s
95th percentile per-packet one-way delay: 113.992 ms
Loss rate: 0.00%
```

Run 9: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 49.00 Mbit/s)   Flow 1 egress (mean 49.04 Mbit/s)

Flow 1 (95th percentile 113.99 ms)

```
Run 10: Statistics of QUIC Cubic

Start at: 2018-02-19 21:41:18
End at: 2018-02-19 21:41:48


# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 69.32 Mbit/s
95th percentile per-packet one-way delay: 86.578 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 69.32 Mbit/s
95th percentile per-packet one-way delay: 86.578 ms
Loss rate: 0.00%
```
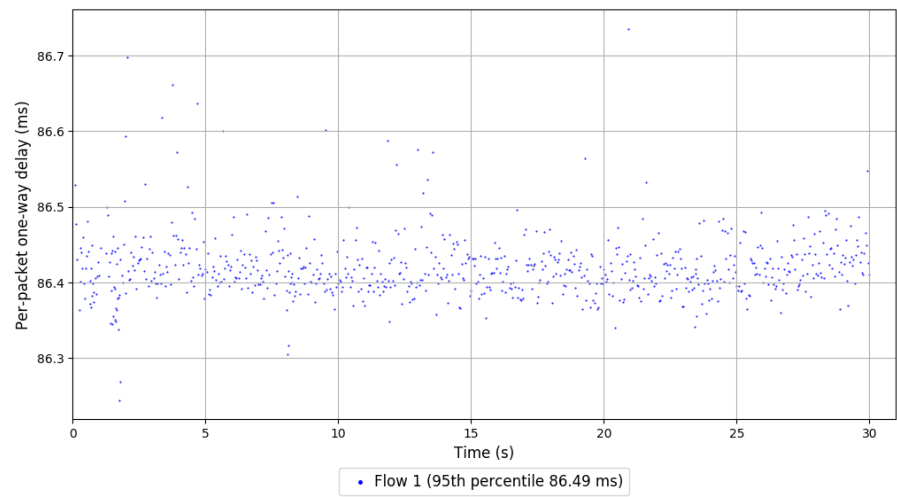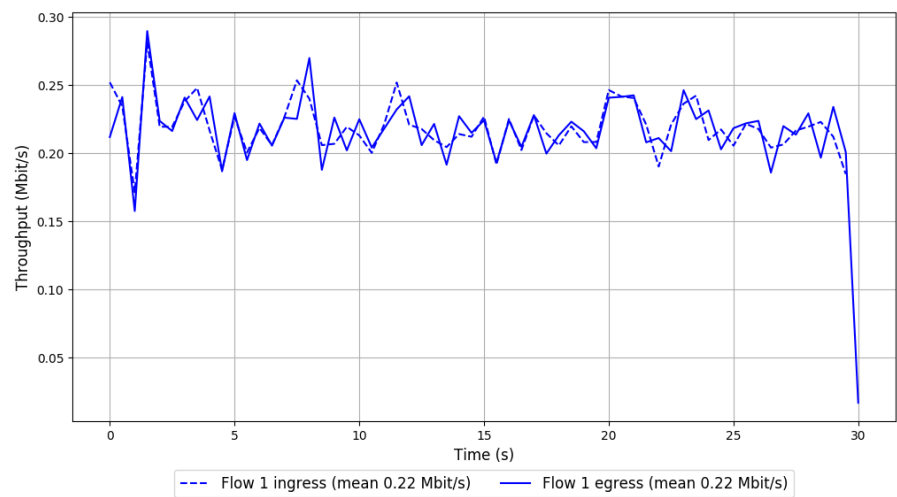
Run 10: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 69.32 Mbit/s) — Flow 1 egress (mean 69.32 Mbit/s)

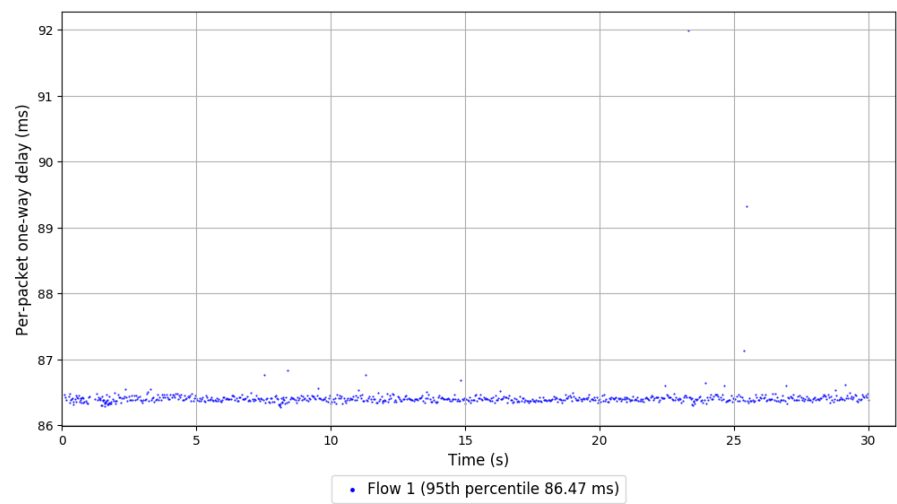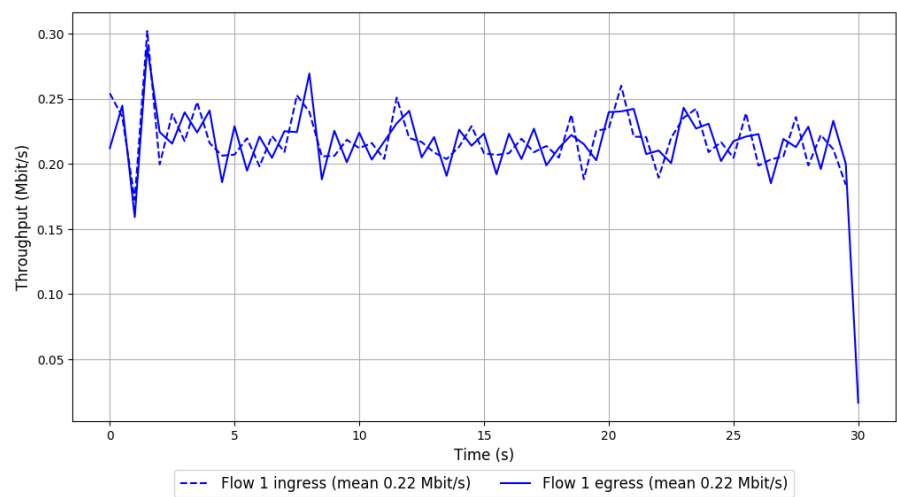

Flow 1 (95th percentile 86.58 ms)

```
Run 1: Statistics of SCReAM

Start at: 2018-02-19 19:20:36
End at: 2018-02-19 19:21:06

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.642 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.642 ms
Loss rate: 0.00%
```

Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2018-02-19 19:35:26
End at: 2018-02-19 19:35:56

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.510 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.510 ms
Loss rate: 0.00%
```
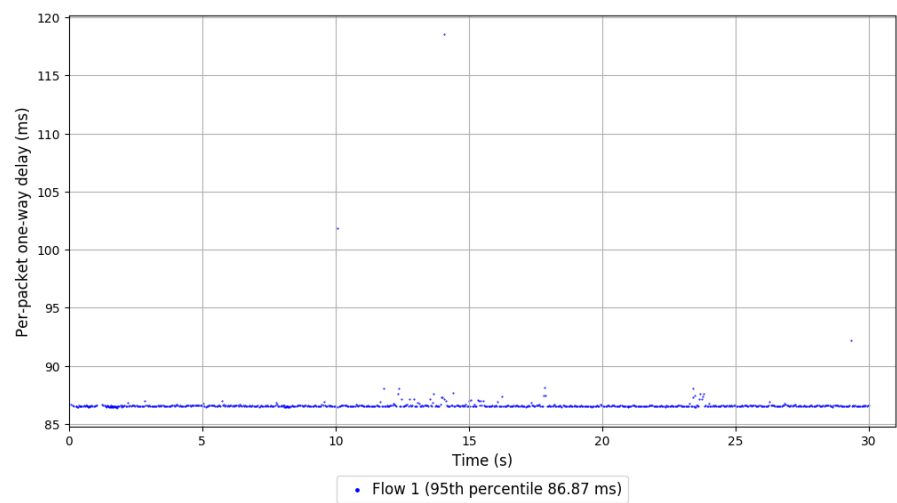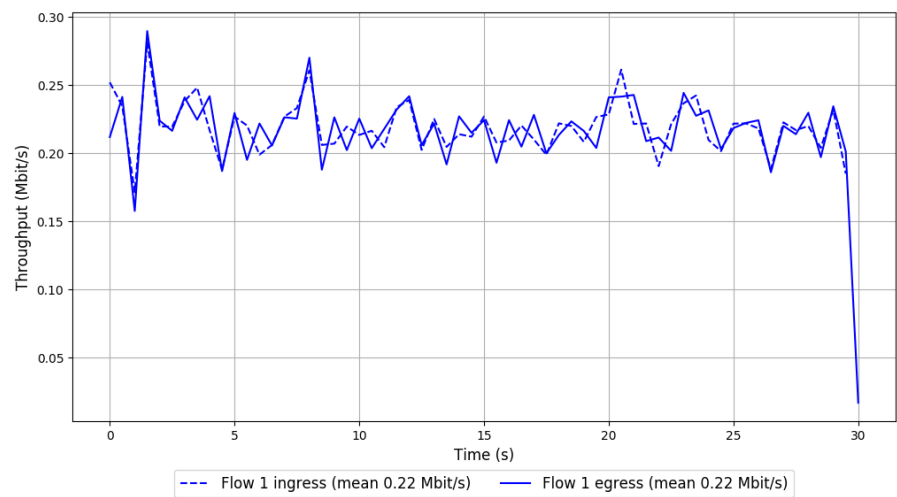
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2018-02-19 19:50:35
End at: 2018-02-19 19:51:05

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.487 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.487 ms
Loss rate: 0.00%
```
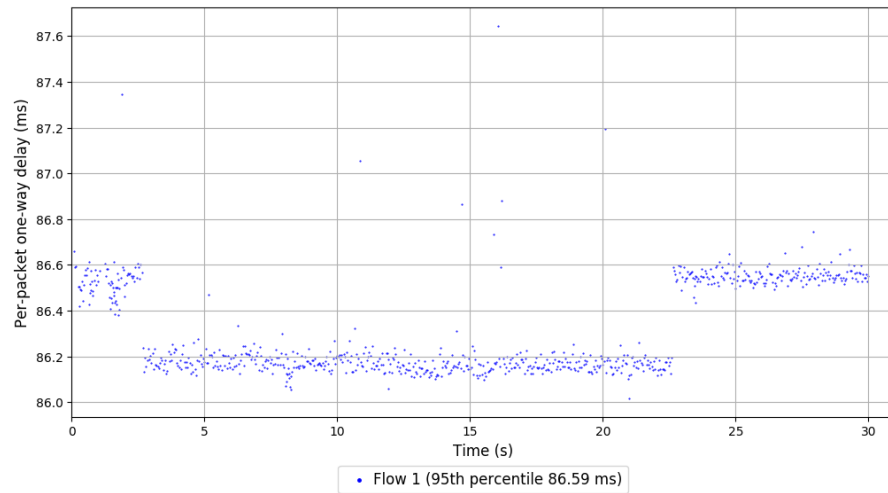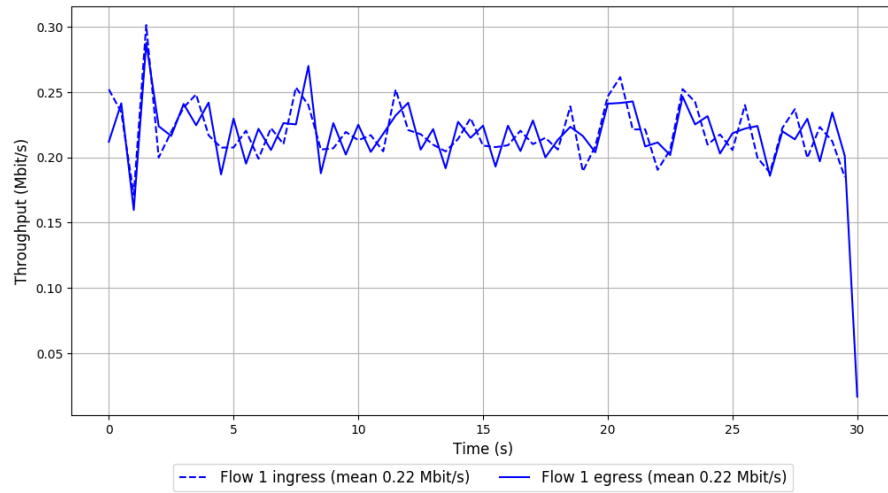
Run 3: Report of SCReAM — Data Link

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

Flow 1 (95th percentile 86.49 ms)

```
Run 4: Statistics of SCReAM

Start at: 2018-02-19 20:06:01
End at: 2018-02-19 20:06:31

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.475 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.475 ms
Loss rate: 0.00%
```
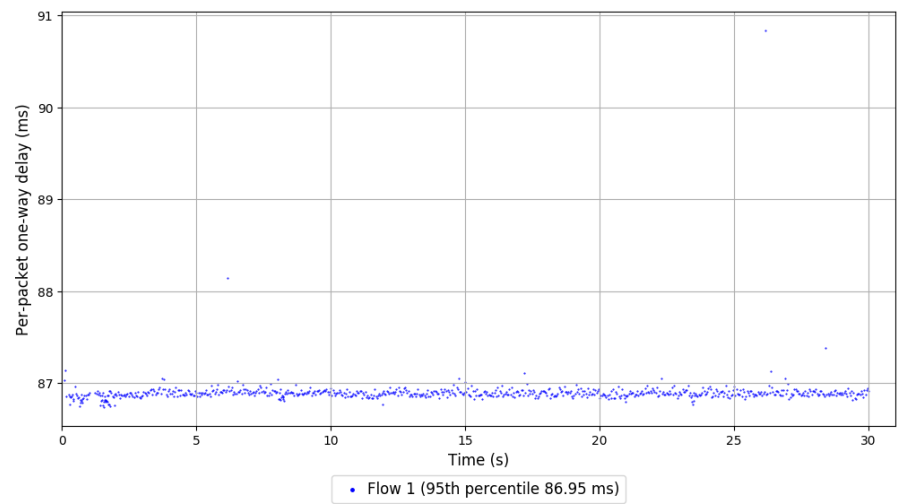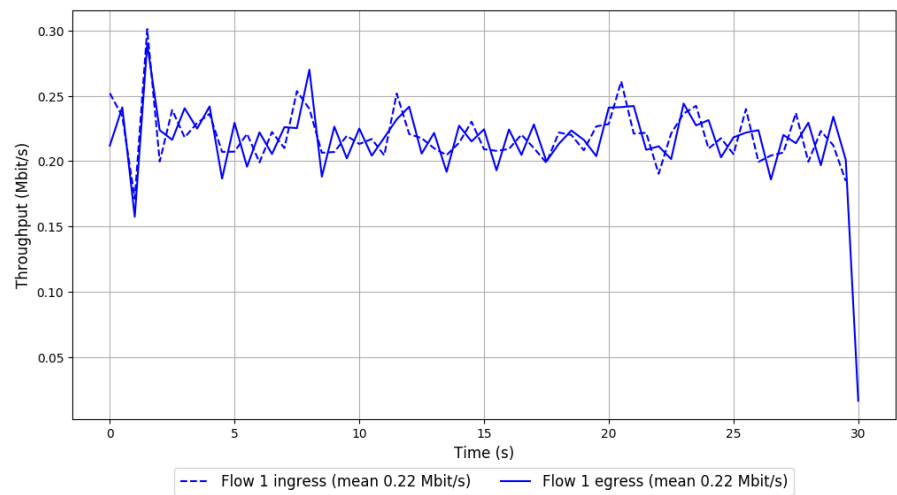
Run 4: Report of SCReAM — Data Link

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

Flow 1 (95th percentile 86.47 ms)

```
Run 5: Statistics of SCReAM

Start at: 2018-02-19 20:21:14
End at: 2018-02-19 20:21:44

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.869 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.869 ms
Loss rate: 0.00%
```
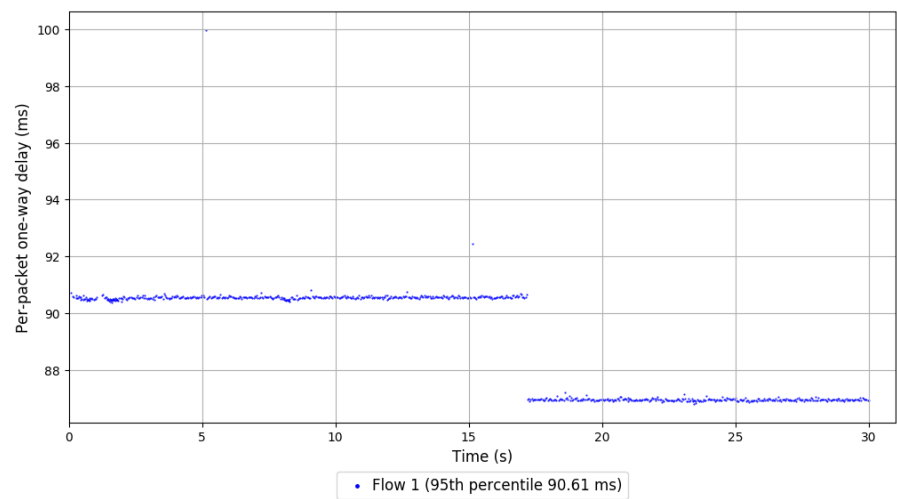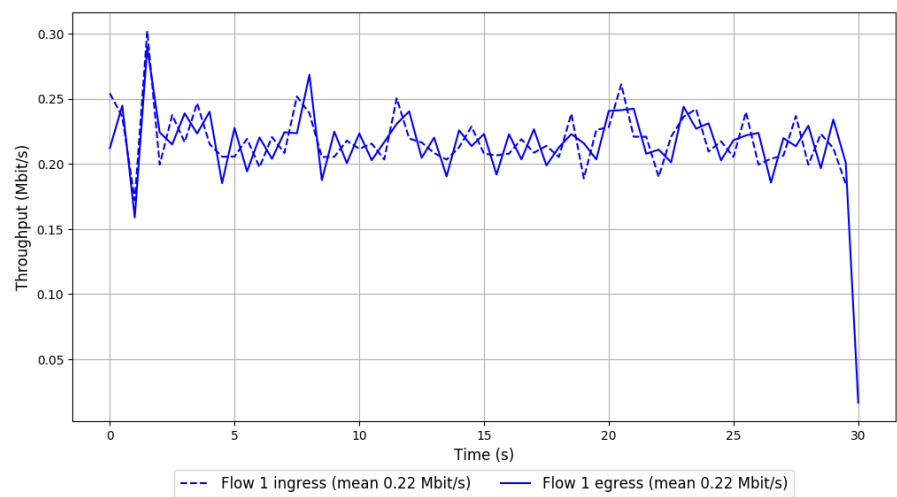
Run 5: Report of SCReAM — Data Link

```
Run 6: Statistics of SCReAM

Start at: 2018-02-19 20:36:45
End at: 2018-02-19 20:37:15

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.591 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.591 ms
Loss rate: 0.00%
```
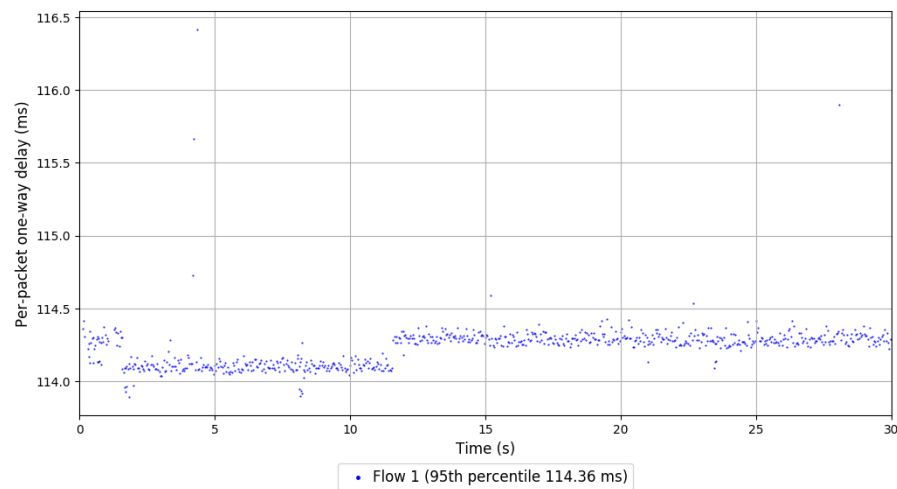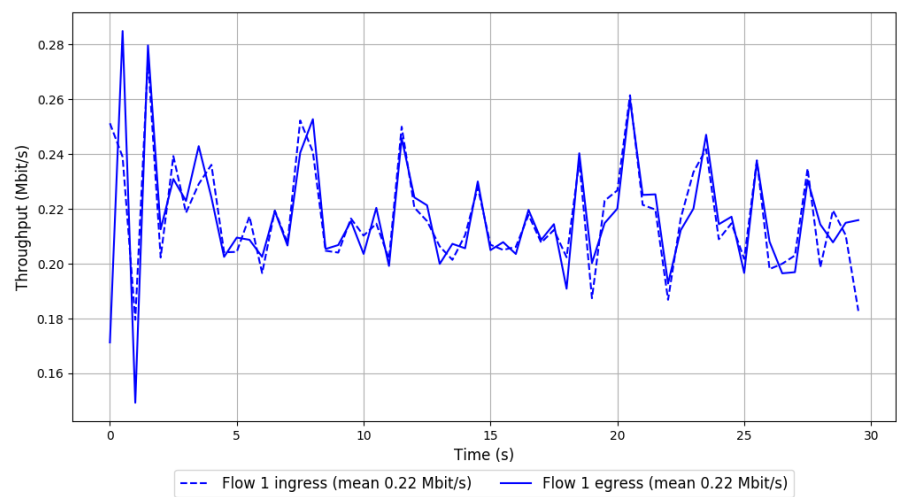
Run 6: Report of SCReAM — Data Link

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

Flow 1 (95th percentile 86.59 ms)

```
Run 7: Statistics of SCReAM

Start at: 2018-02-19 20:51:58
End at: 2018-02-19 20:52:28

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.954 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.954 ms
Loss rate: 0.00%
```
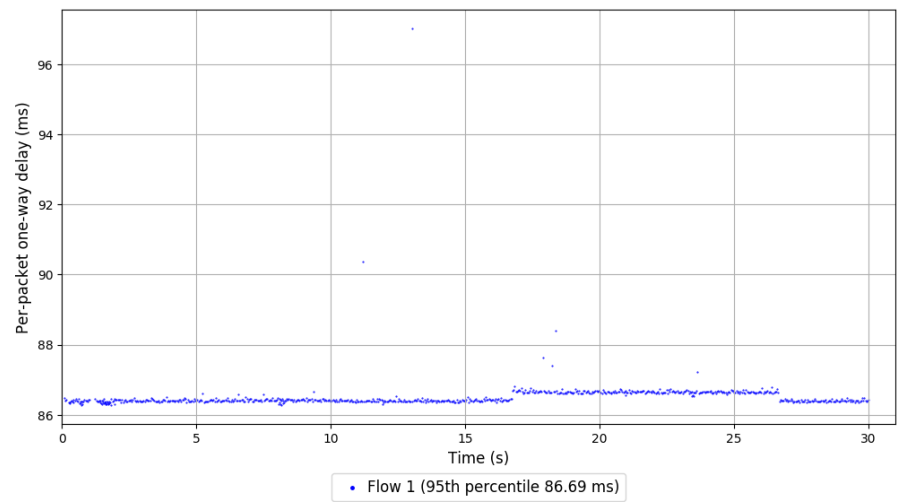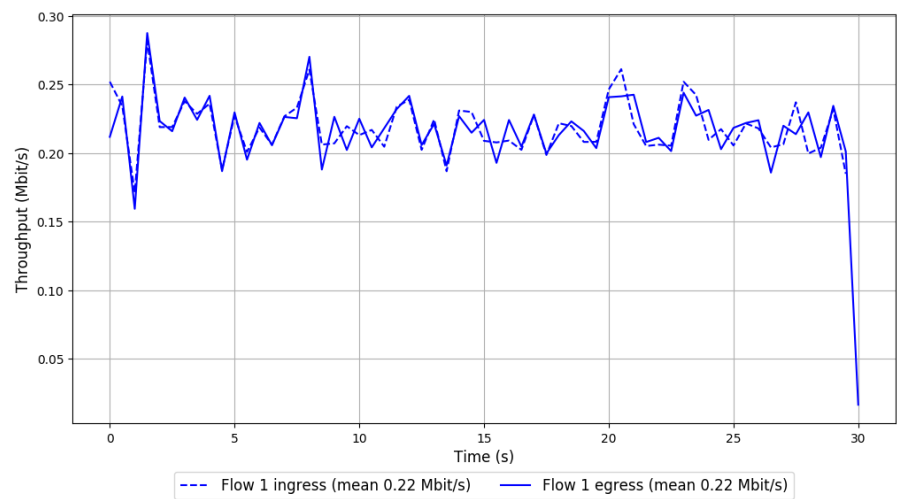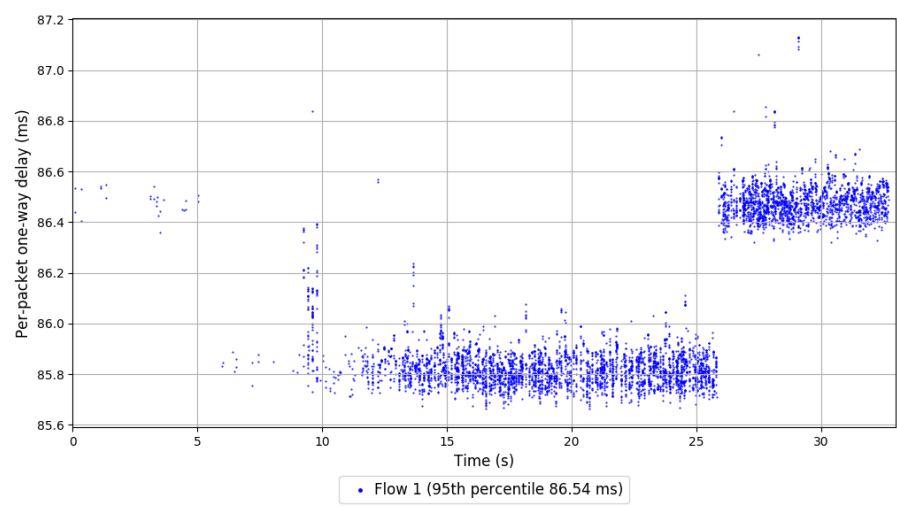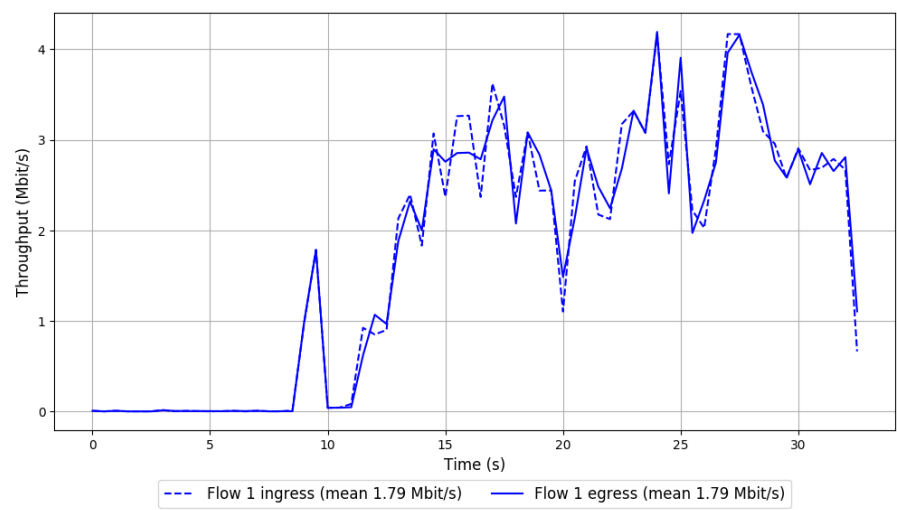
Run 7: Report of SCReAM — Data Link

```
Run 8: Statistics of SCReAM

Start at: 2018-02-19 21:07:01
End at: 2018-02-19 21:07:31

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 90.613 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 90.613 ms
Loss rate: 0.00%
```

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 90.61 ms)

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```
Run 9: Statistics of SCReAM

Start at: 2018-02-19 21:22:06
End at: 2018-02-19 21:22:36

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 114.360 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 114.360 ms
Loss rate: 0.13%
```
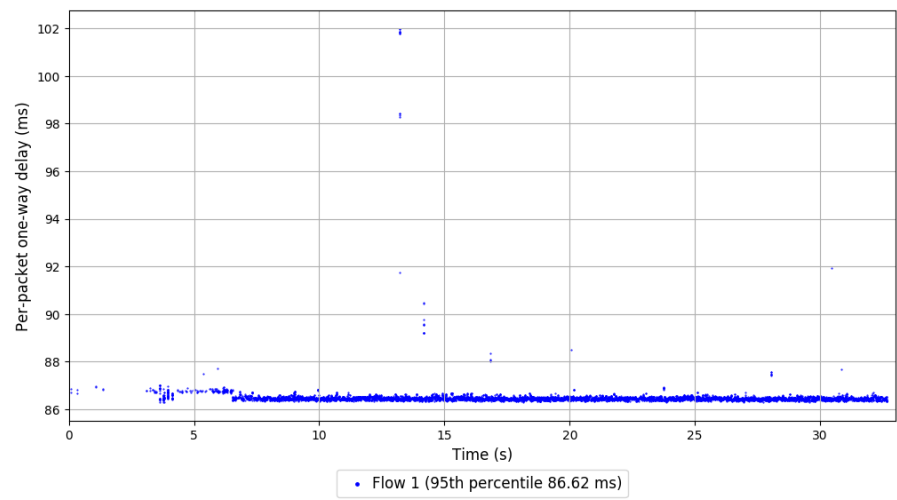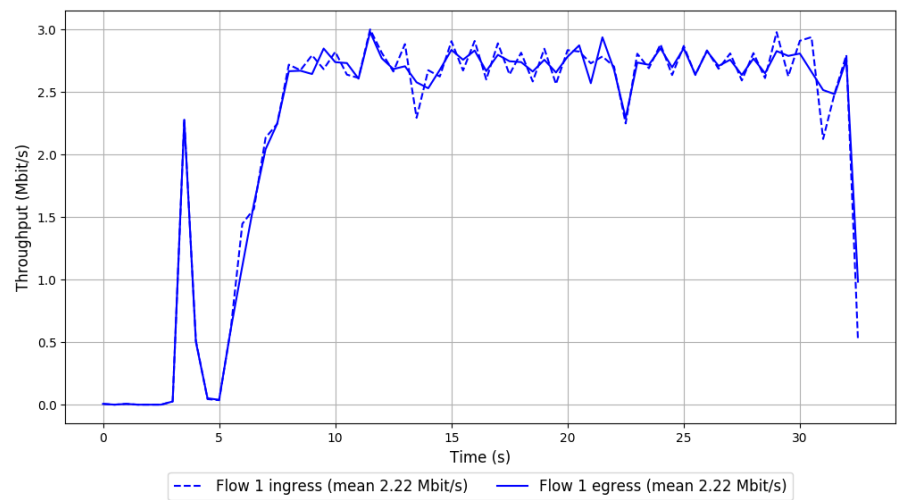
Run 9: Report of SCReAM — Data Link

```
Run 10: Statistics of SCReAM

Start at: 2018-02-19 21:37:11
End at: 2018-02-19 21:37:41

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.688 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.688 ms
Loss rate: 0.00%
```
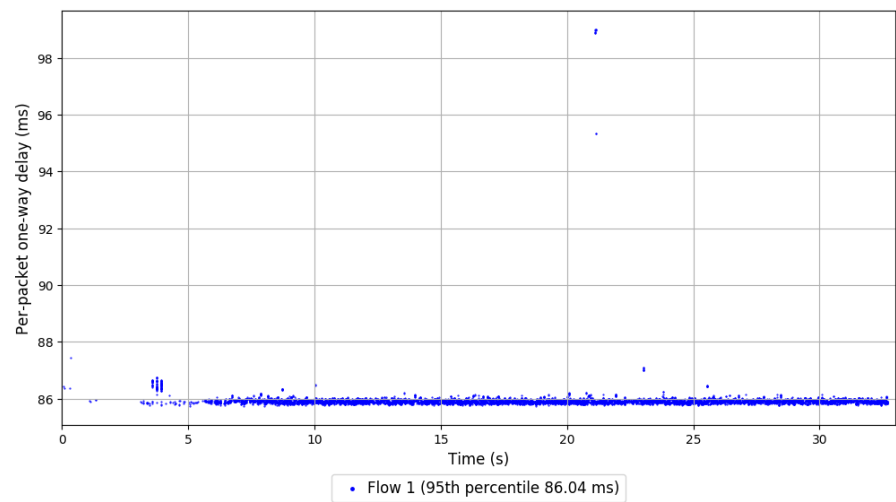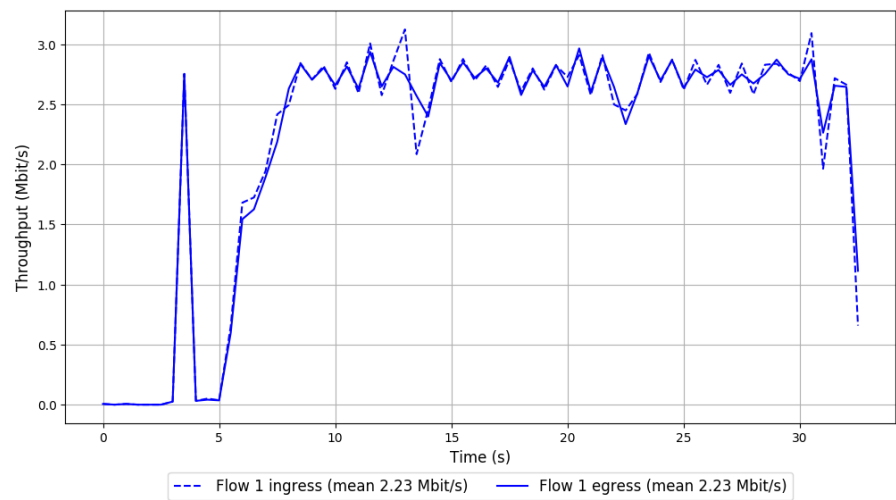
Run 10: Report of SCReAM — Data Link

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

• Flow 1 (95th percentile 86.69 ms)

```
Run 1: Statistics of WebRTC media

Start at: 2018-02-19 19:31:55
End at: 2018-02-19 19:32:25

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.79 Mbit/s
95th percentile per-packet one-way delay: 86.541 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.79 Mbit/s
95th percentile per-packet one-way delay: 86.541 ms
Loss rate: 0.00%
```
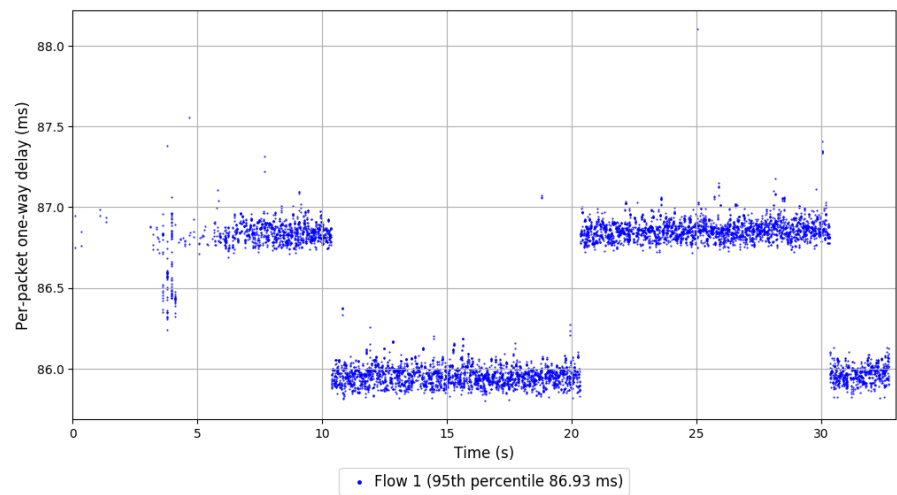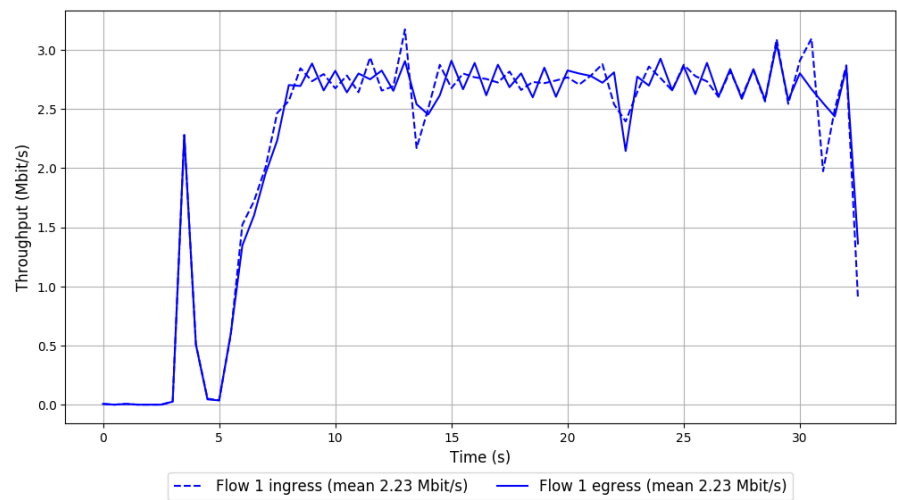
Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2018-02-19 19:47:14
End at: 2018-02-19 19:47:44

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.22 Mbit/s
95th percentile per-packet one-way delay: 86.616 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.22 Mbit/s
95th percentile per-packet one-way delay: 86.616 ms
Loss rate: 0.00%
```
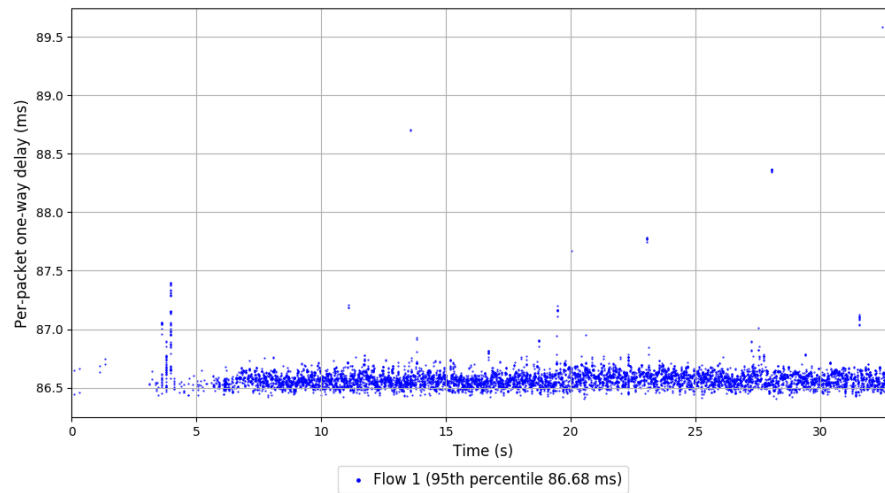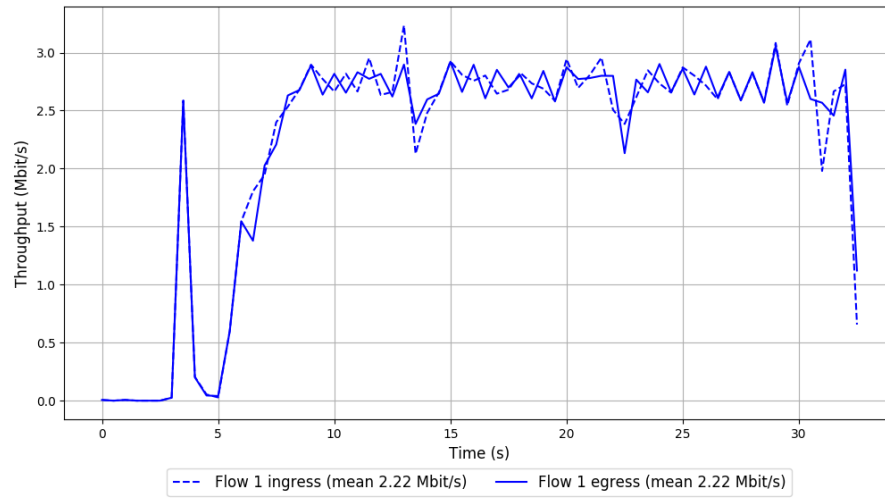
Run 2: Report of WebRTC media — Data Link

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

Flow 1 (95th percentile 86.62 ms)

```
Run 3: Statistics of WebRTC media

Start at: 2018-02-19 20:02:30
End at: 2018-02-19 20:03:00

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 86.039 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 86.039 ms
Loss rate: 0.00%
```
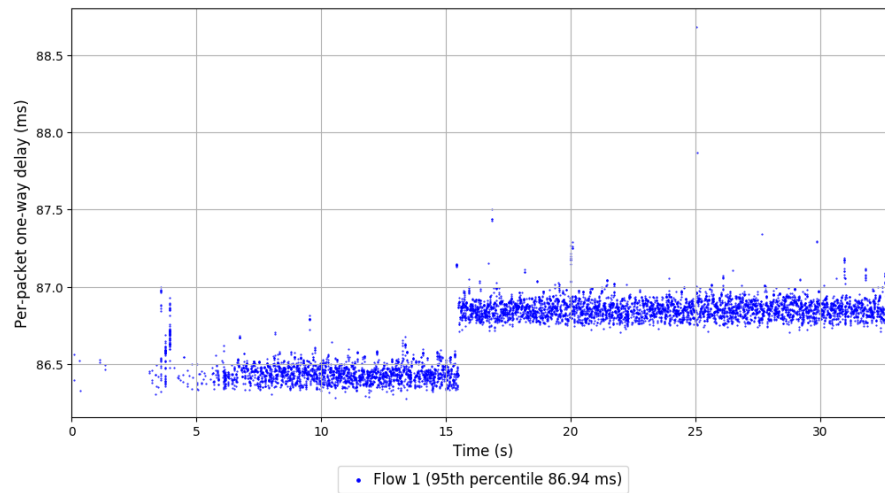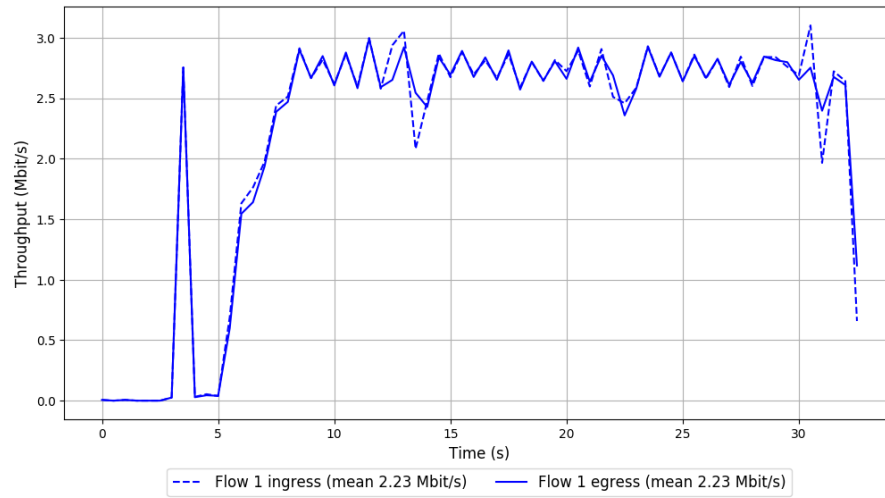
Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2018-02-19 20:17:40
End at: 2018-02-19 20:18:10

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 86.929 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 86.929 ms
Loss rate: 0.00%
```
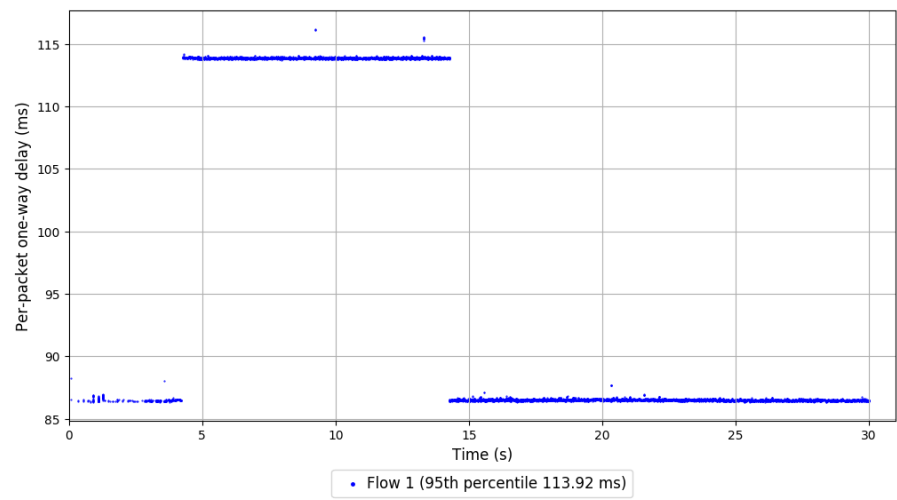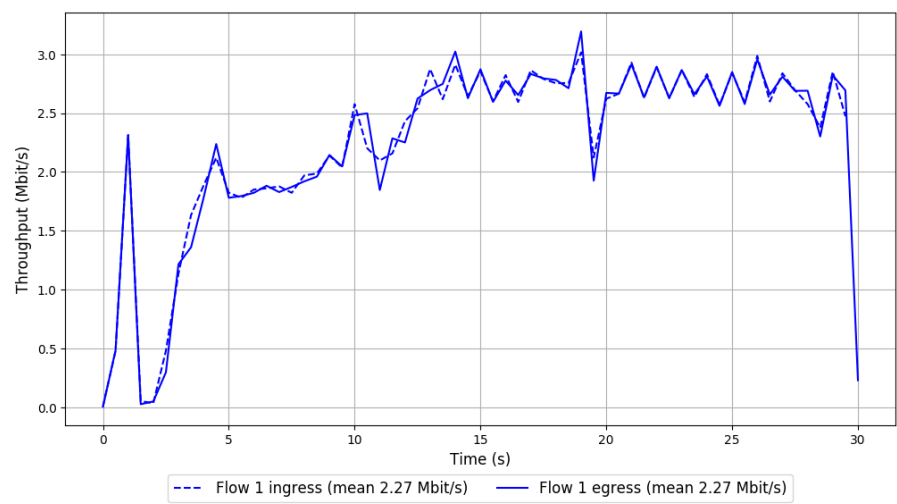
Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2018-02-19 20:33:15
End at: 2018-02-19 20:33:45

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.22 Mbit/s
95th percentile per-packet one-way delay: 86.683 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.22 Mbit/s
95th percentile per-packet one-way delay: 86.683 ms
Loss rate: 0.00%
```
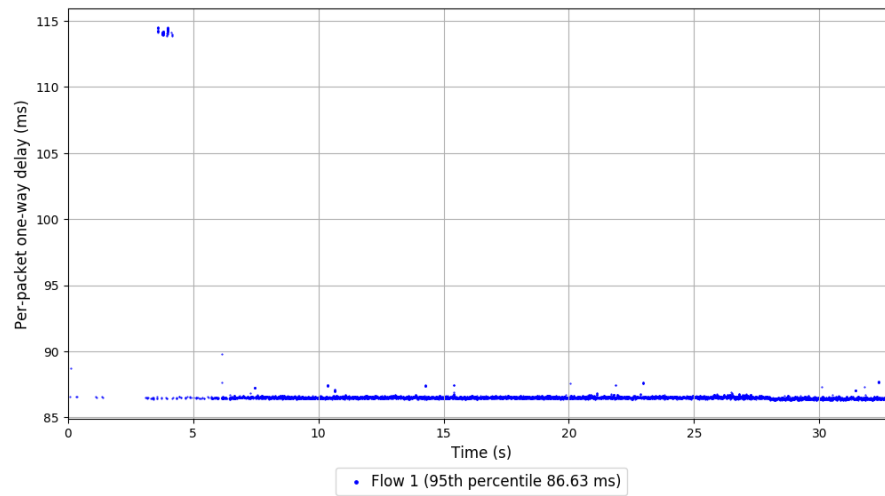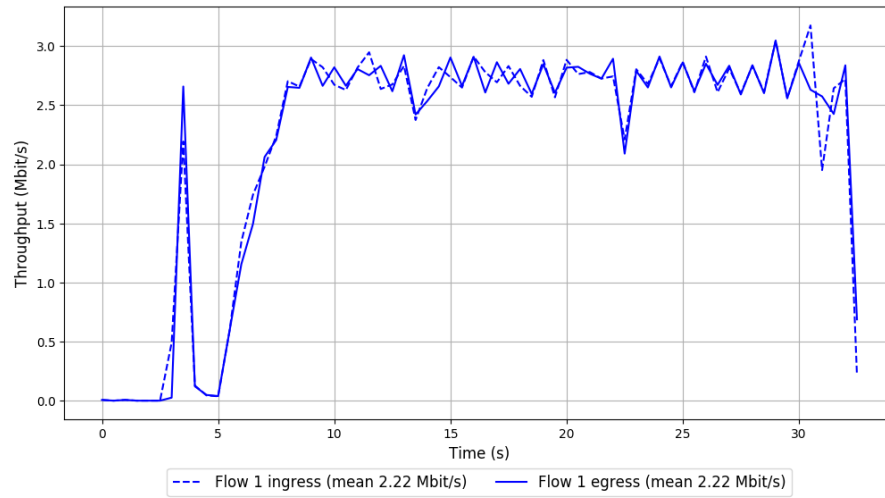
Run 5: Report of WebRTC media — Data Link

```
Run 6: Statistics of WebRTC media

Start at: 2018-02-19 20:48:25
End at: 2018-02-19 20:48:55


# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 86.939 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 86.939 ms
Loss rate: 0.00%
```
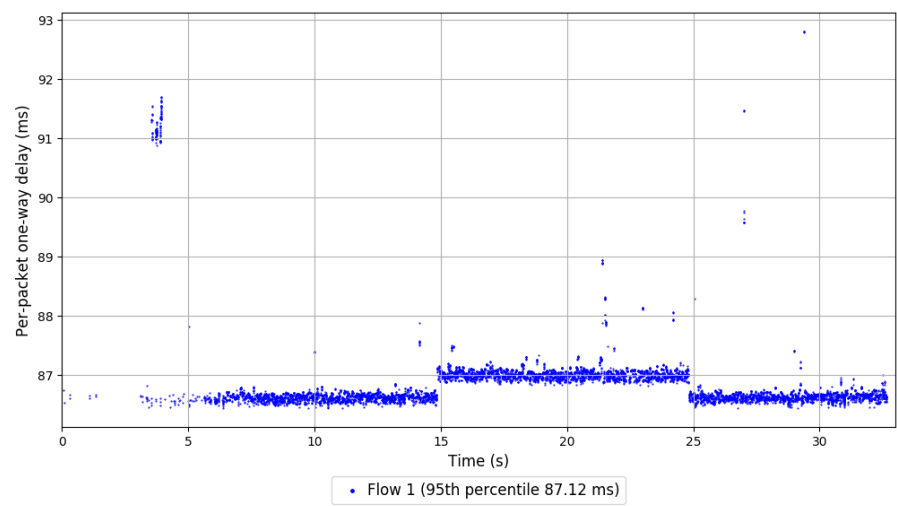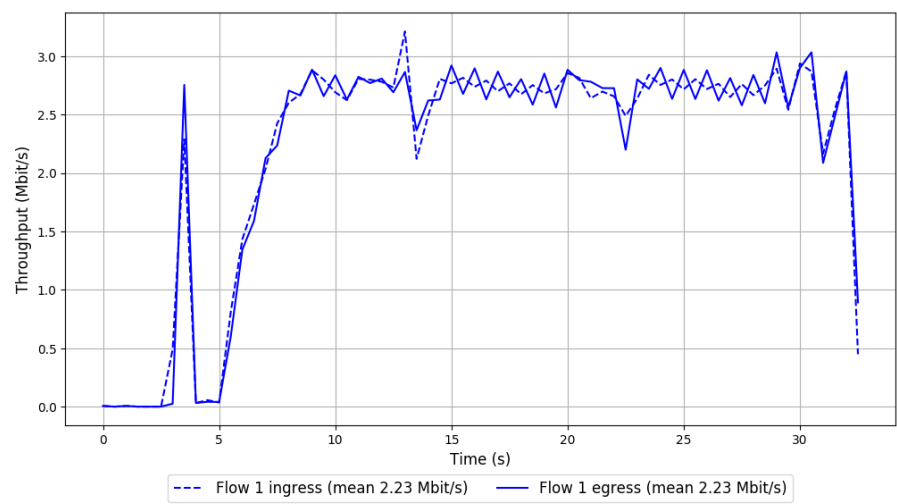
Run 6: Report of WebRTC media — Data Link

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

Flow 1 (95th percentile 86.94 ms)

```
Run 7: Statistics of WebRTC media

Start at: 2018-02-19 21:03:44
End at: 2018-02-19 21:04:14

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.27 Mbit/s
95th percentile per-packet one-way delay: 113.921 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.27 Mbit/s
95th percentile per-packet one-way delay: 113.921 ms
Loss rate: 0.00%
```
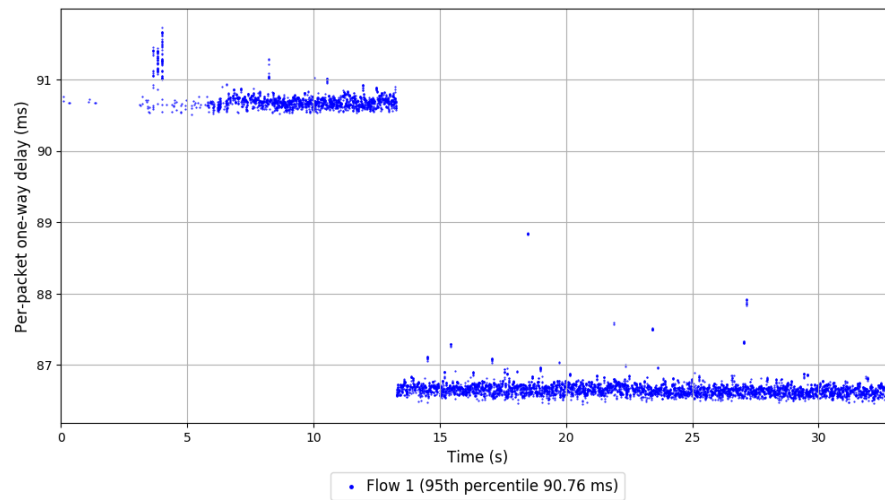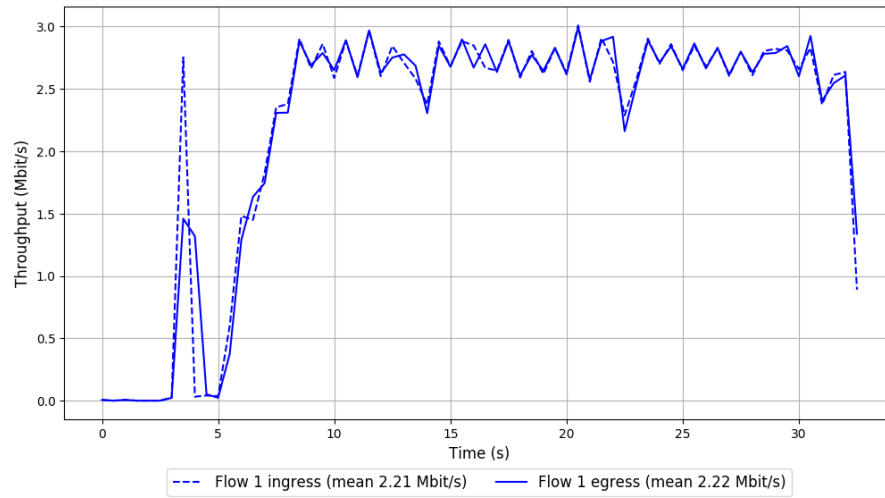
Run 7: Report of WebRTC media — Data Link

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

Flow 1 (95th percentile 113.92 ms)

```
Run 8: Statistics of WebRTC media

Start at: 2018-02-19 21:18:42
End at: 2018-02-19 21:19:12

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.22 Mbit/s
95th percentile per-packet one-way delay: 86.633 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.22 Mbit/s
95th percentile per-packet one-way delay: 86.633 ms
Loss rate: 0.00%
```
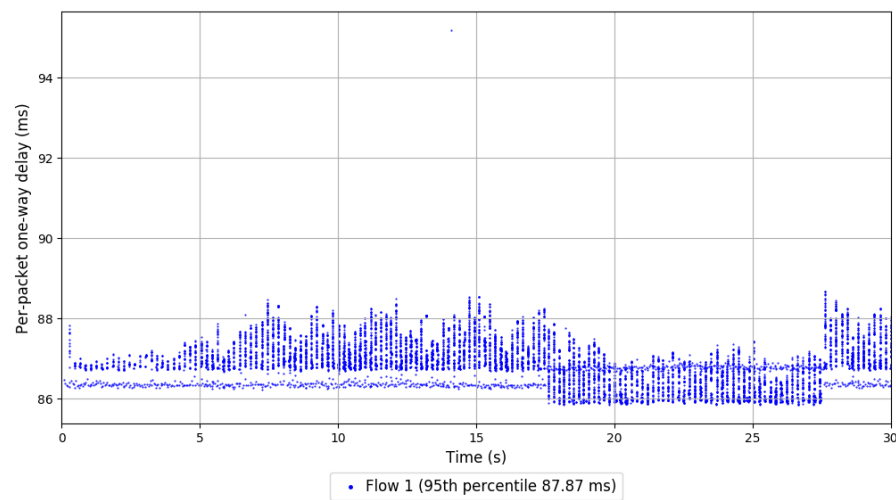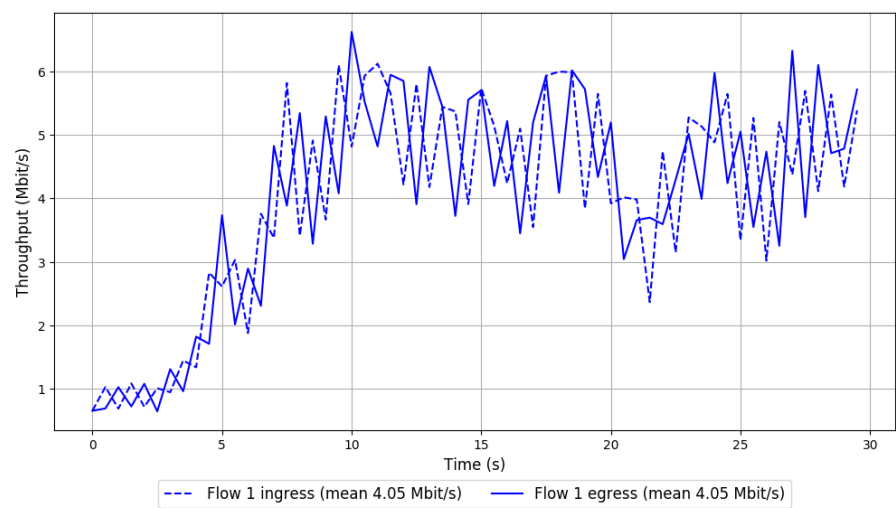
Run 8: Report of WebRTC media — Data Link

```
Run 9: Statistics of WebRTC media

Start at: 2018-02-19 21:33:36
End at: 2018-02-19 21:34:06

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 87.121 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 87.121 ms
Loss rate: 0.00%
```
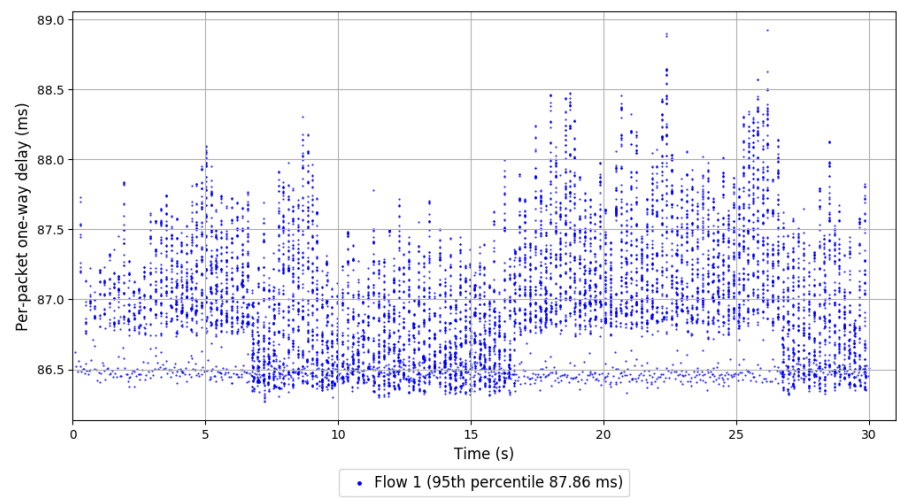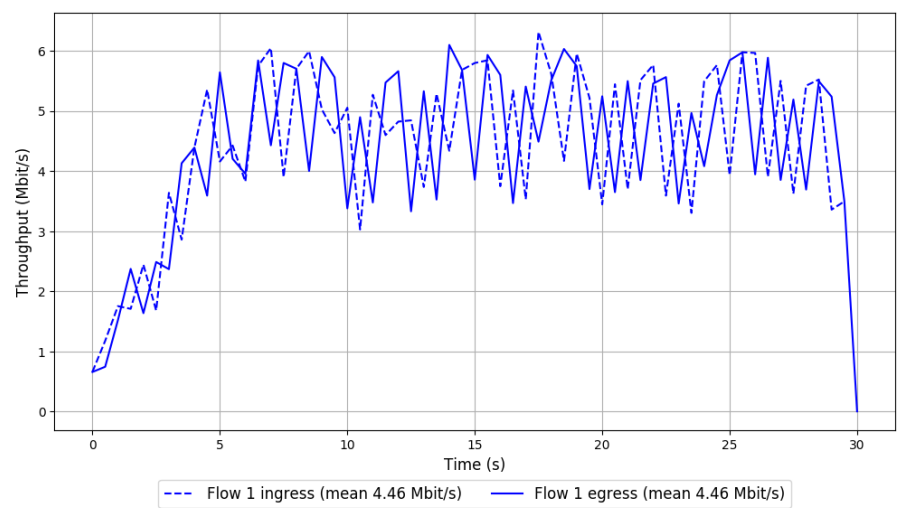
Run 9: Report of WebRTC media — Data Link

```
Run 10: Statistics of WebRTC media

Start at: 2018-02-19 21:48:47
End at: 2018-02-19 21:49:17

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.22 Mbit/s
95th percentile per-packet one-way delay: 90.756 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.22 Mbit/s
95th percentile per-packet one-way delay: 90.756 ms
Loss rate: 0.00%
```
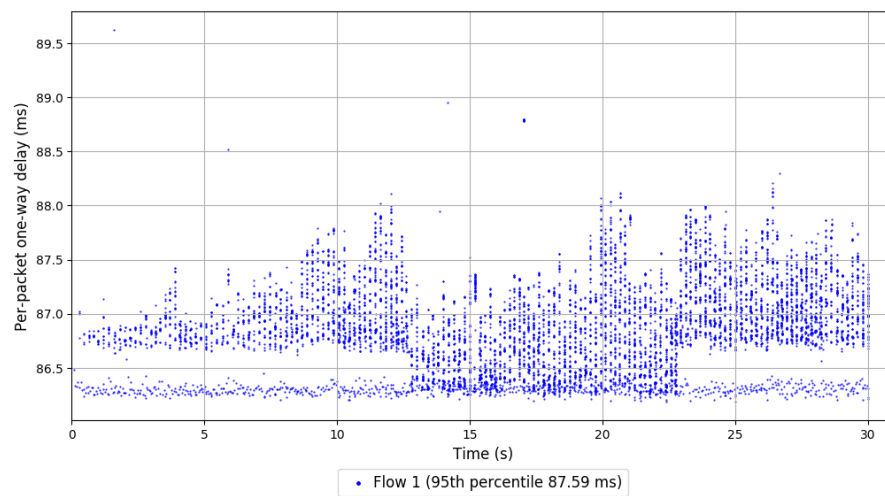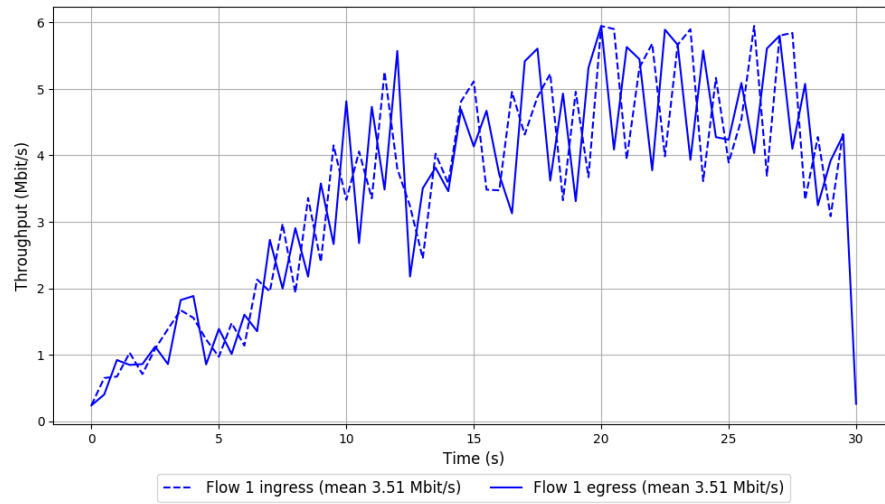
Run 10: Report of WebRTC media — Data Link

```
Run 1: Statistics of Sprout

Start at: 2018-02-19 19:27:10
End at: 2018-02-19 19:27:40

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.05 Mbit/s
95th percentile per-packet one-way delay: 87.874 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.05 Mbit/s
95th percentile per-packet one-way delay: 87.874 ms
Loss rate: 0.00%
```
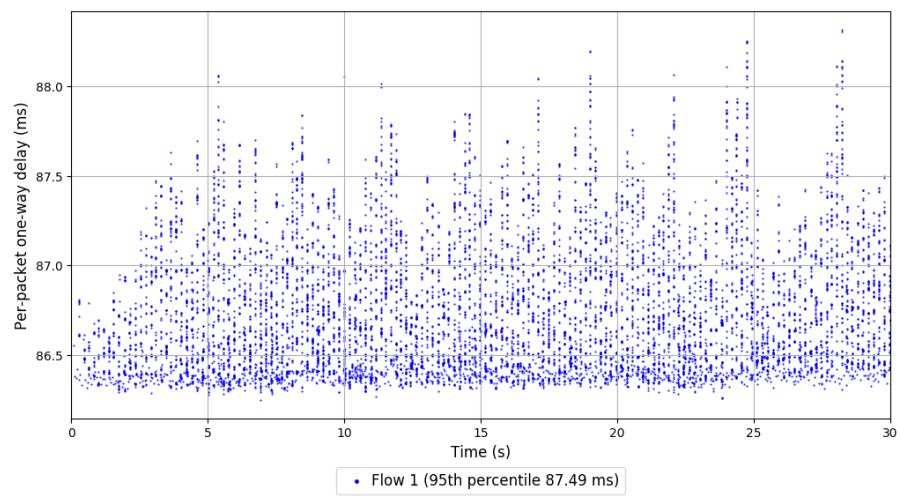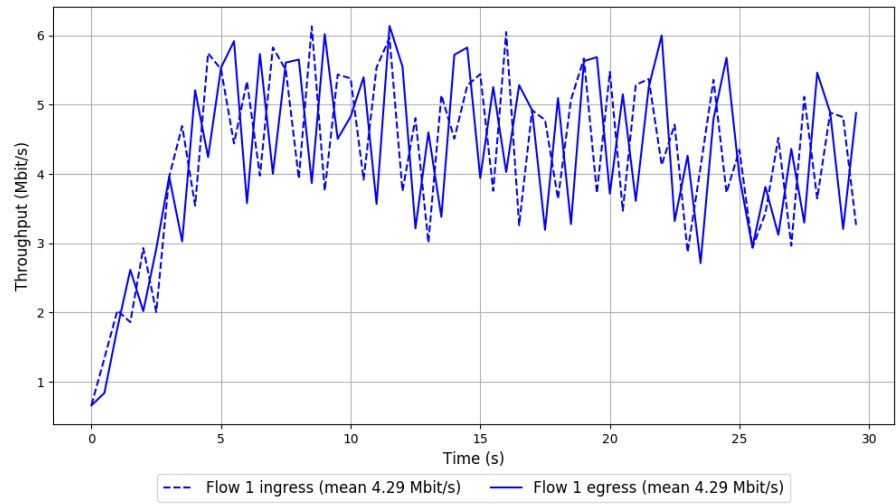
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2018-02-19 19:42:21
End at: 2018-02-19 19:42:51

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.46 Mbit/s
95th percentile per-packet one-way delay: 87.855 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.46 Mbit/s
95th percentile per-packet one-way delay: 87.855 ms
Loss rate: 0.00%
```
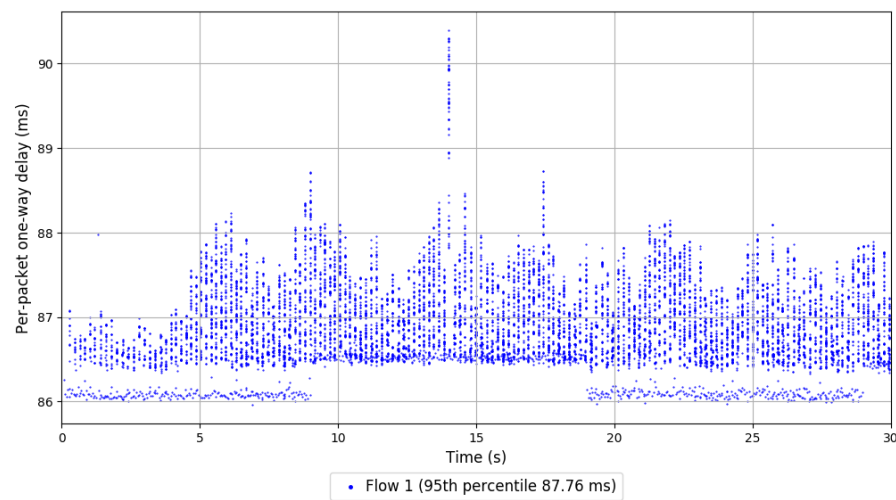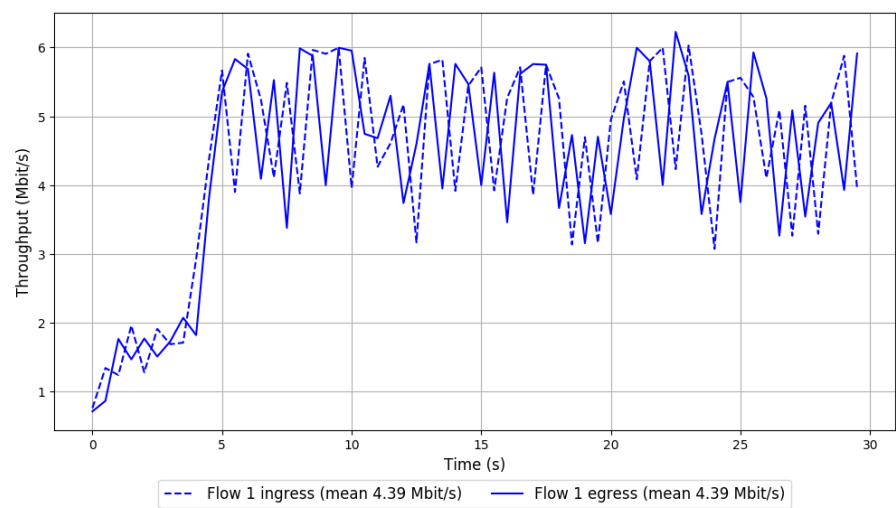
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2018-02-19 19:57:35
End at: 2018-02-19 19:58:05

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 3.51 Mbit/s
95th percentile per-packet one-way delay: 87.593 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 3.51 Mbit/s
95th percentile per-packet one-way delay: 87.593 ms
Loss rate: 0.00%
```
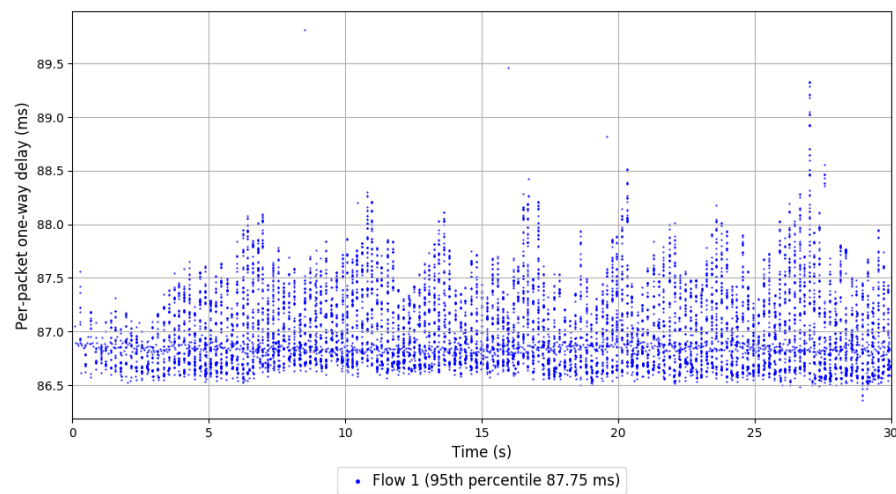
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2018-02-19 20:12:53
End at: 2018-02-19 20:13:23

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.29 Mbit/s
95th percentile per-packet one-way delay: 87.488 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.29 Mbit/s
95th percentile per-packet one-way delay: 87.488 ms
Loss rate: 0.00%
```
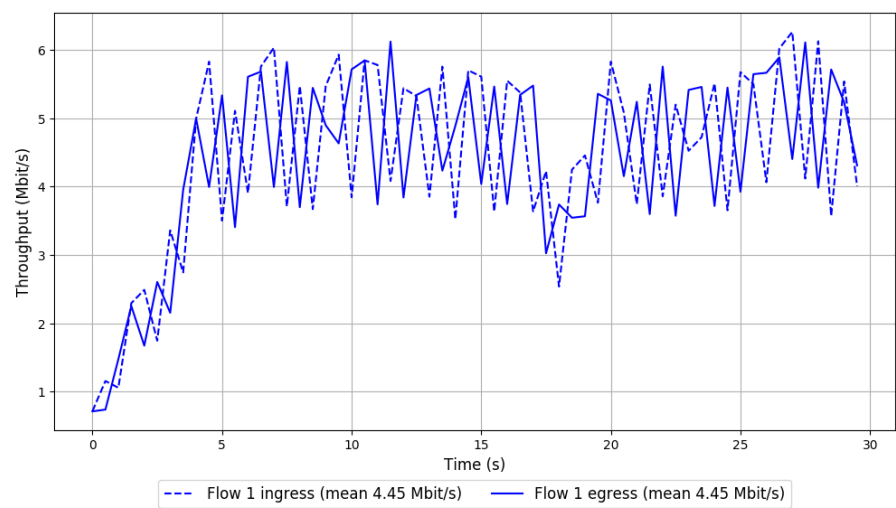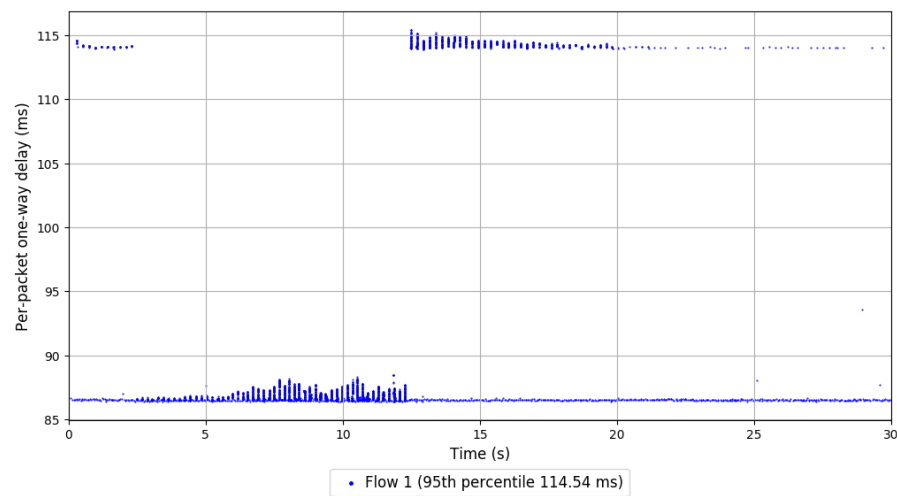
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2018-02-19 20:28:19
End at: 2018-02-19 20:28:49

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.39 Mbit/s
95th percentile per-packet one-way delay: 87.761 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.39 Mbit/s
95th percentile per-packet one-way delay: 87.761 ms
Loss rate: 0.00%
```
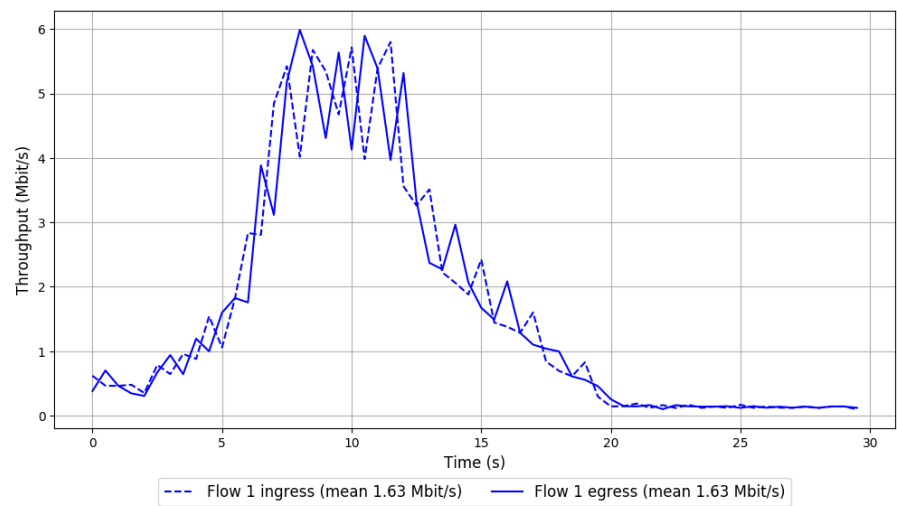
Run 5: Report of Sprout — Data Link

```
Run 6: Statistics of Sprout

Start at: 2018-02-19 20:43:31
End at: 2018-02-19 20:44:01

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.45 Mbit/s
95th percentile per-packet one-way delay: 87.746 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.45 Mbit/s
95th percentile per-packet one-way delay: 87.746 ms
Loss rate: 0.00%
```
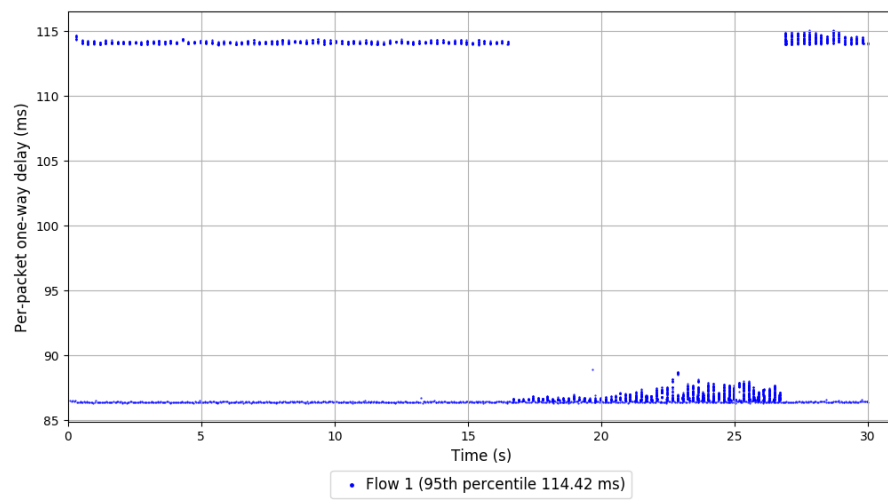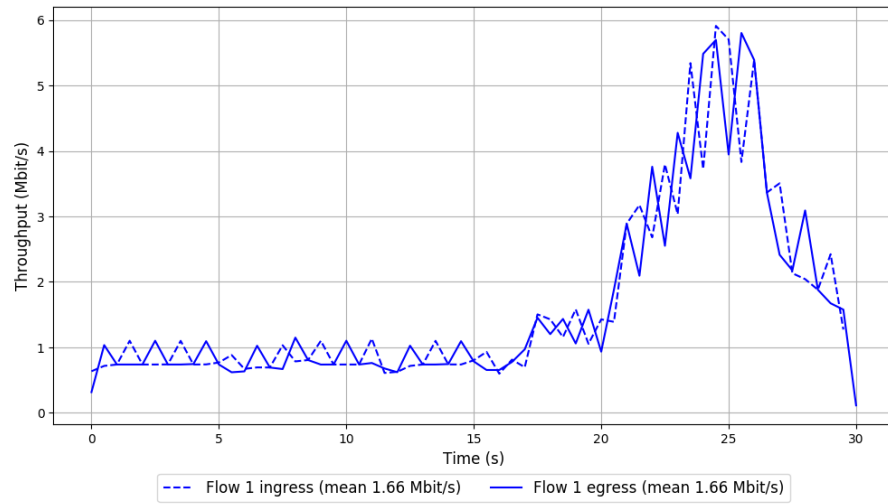
Run 6: Report of Sprout — Data Link

```
Run 7: Statistics of Sprout

Start at: 2018-02-19 20:58:55
End at: 2018-02-19 20:59:25

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.63 Mbit/s
95th percentile per-packet one-way delay: 114.537 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.63 Mbit/s
95th percentile per-packet one-way delay: 114.537 ms
Loss rate: 0.00%
```
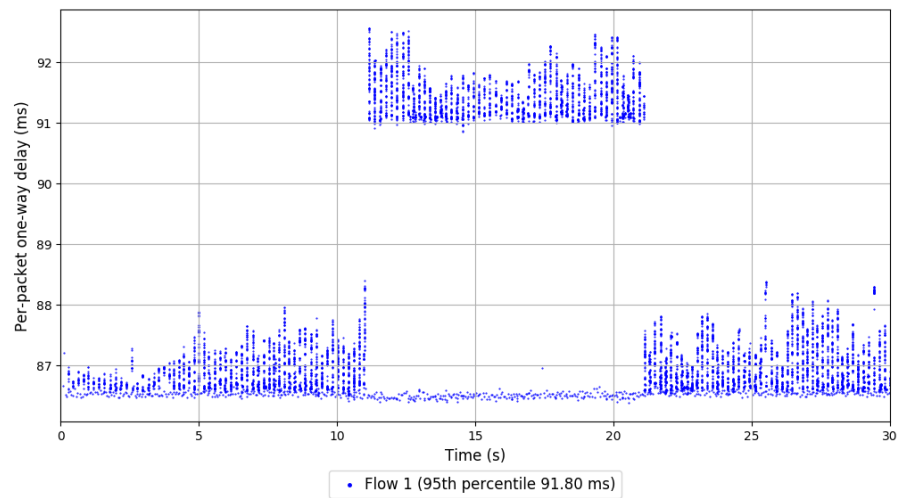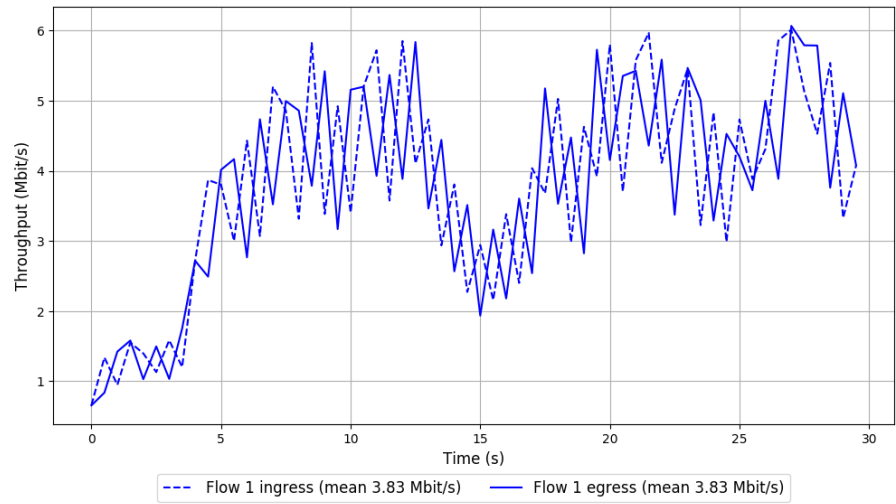
Run 7: Report of Sprout — Data Link

```
Run 8: Statistics of Sprout

Start at: 2018-02-19 21:13:51
End at: 2018-02-19 21:14:21


# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.66 Mbit/s
95th percentile per-packet one-way delay: 114.421 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 1.66 Mbit/s
95th percentile per-packet one-way delay: 114.421 ms
Loss rate: 0.33%
```
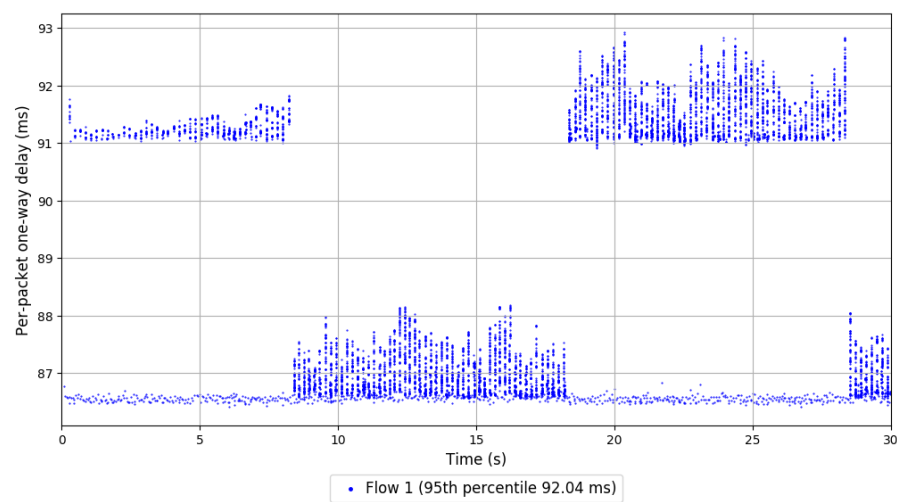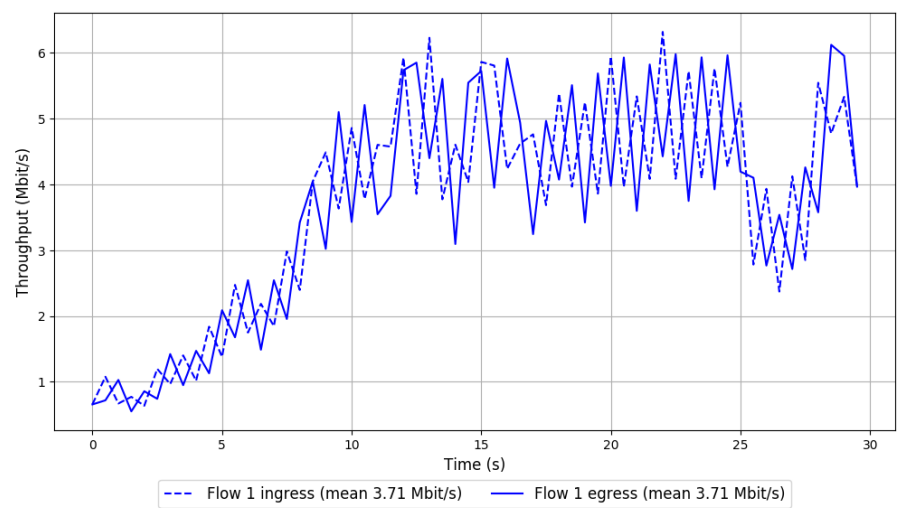
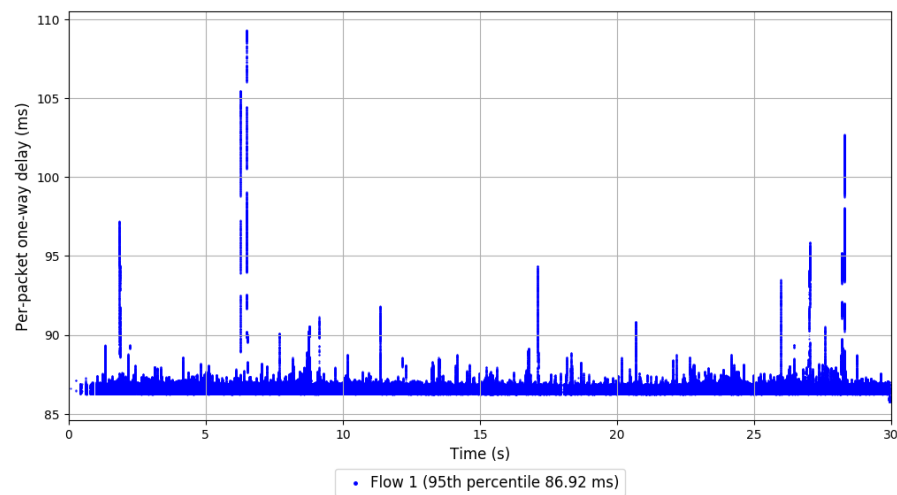## Run 8: Report of Sprout — Data Link

```
Run 9: Statistics of Sprout

Start at: 2018-02-19 21:28:47
End at: 2018-02-19 21:29:17

# Below is generated by plot.py at 2018-02-19 23:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 3.83 Mbit/s
95th percentile per-packet one-way delay: 91.800 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 3.83 Mbit/s
95th percentile per-packet one-way delay: 91.800 ms
Loss rate: 0.00%
```
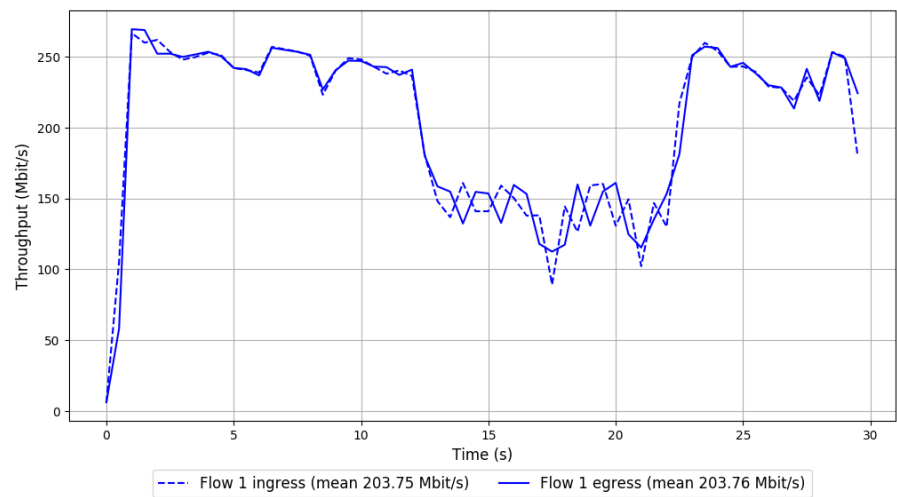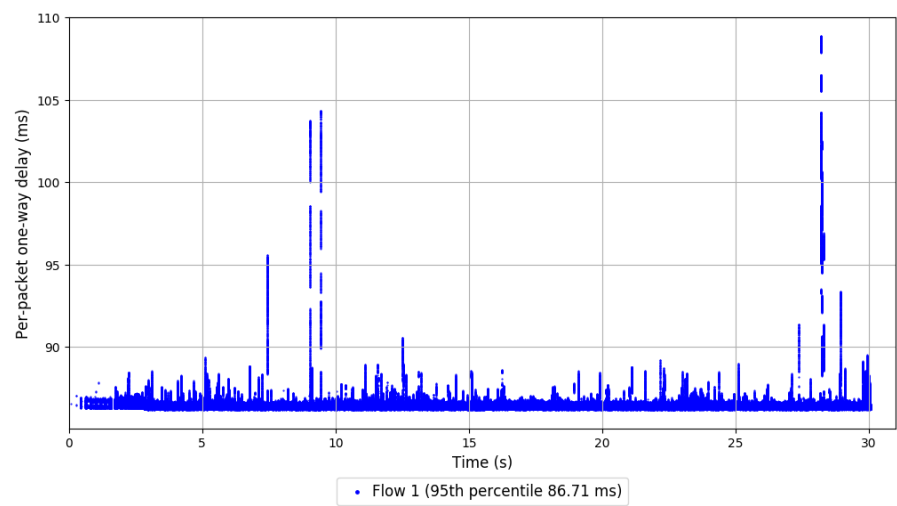
Run 9: Report of Sprout — Data Link

Run 10: Statistics of Sprout

Start at: 2018-02-19 21:43:49
End at: 2018-02-19 21:44:19

Below is generated by plot.py at 2018-02-19 23:44:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.71 Mbit/s
95th percentile per-packet one-way delay: 92.041 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 3.71 Mbit/s
95th percentile per-packet one-way delay: 92.041 ms
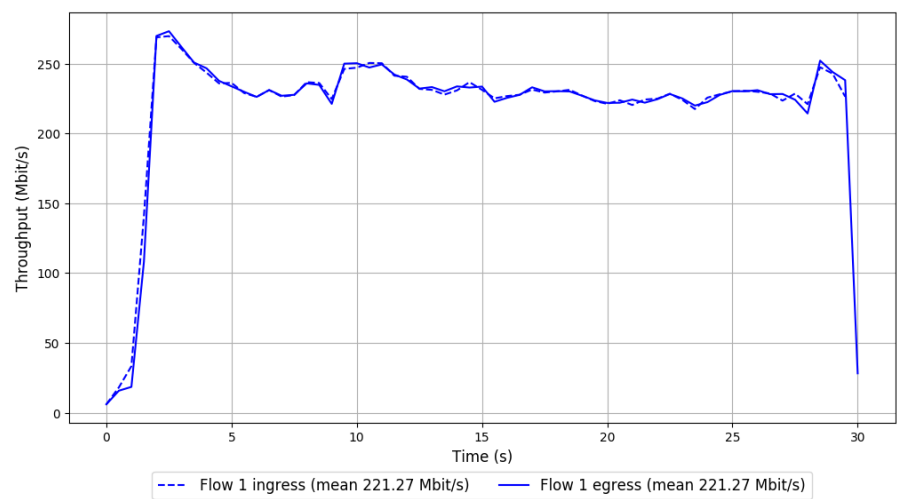Loss rate: 0.00%

Run 10: Report of Sprout — Data Link

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

Start at: 2018-02-19 19:25:18
End at: 2018-02-19 19:25:48

# Below is generated by plot.py at 2018-02-19 23:48:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 203.76 Mbit/s
95th percentile per-packet one-way delay: 86.918 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 203.76 Mbit/s
95th percentile per-packet one-way delay: 86.918 ms
Loss rate: 0.00%
```
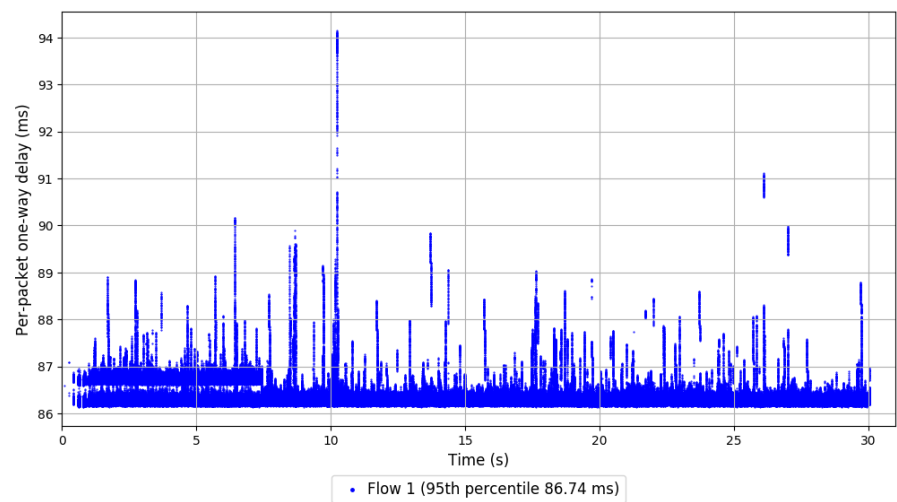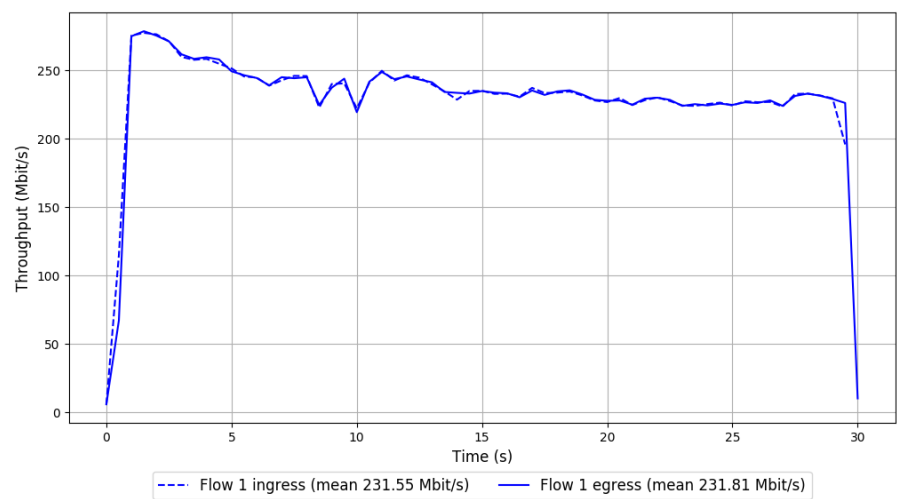
Run 1: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 203.75 Mbit/s) — Flow 1 egress (mean 203.76 Mbit/s)

Flow 1 (95th percentile 86.92 ms)

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

Start at: 2018-02-19 19:40:15
End at: 2018-02-19 19:40:45

# Below is generated by plot.py at 2018-02-19 23:48:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 221.27 Mbit/s
95th percentile per-packet one-way delay: 86.710 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 221.27 Mbit/s
95th percentile per-packet one-way delay: 86.710 ms
Loss rate: 0.00%
```
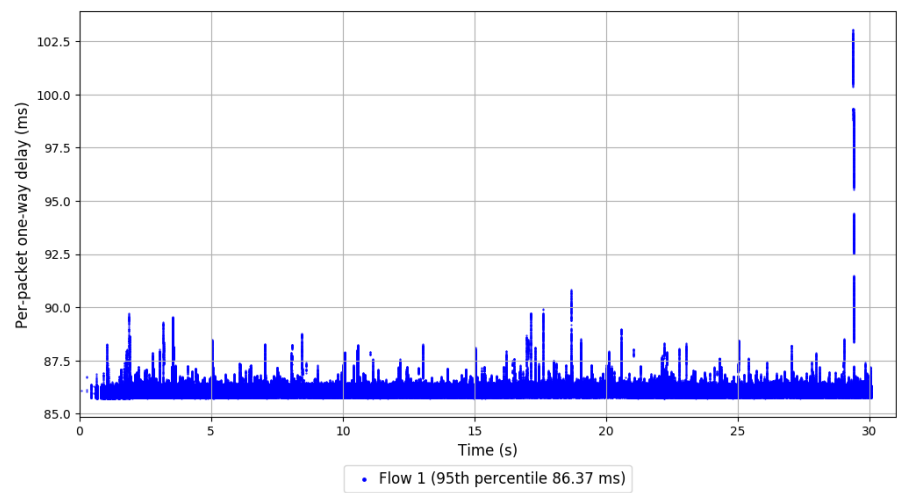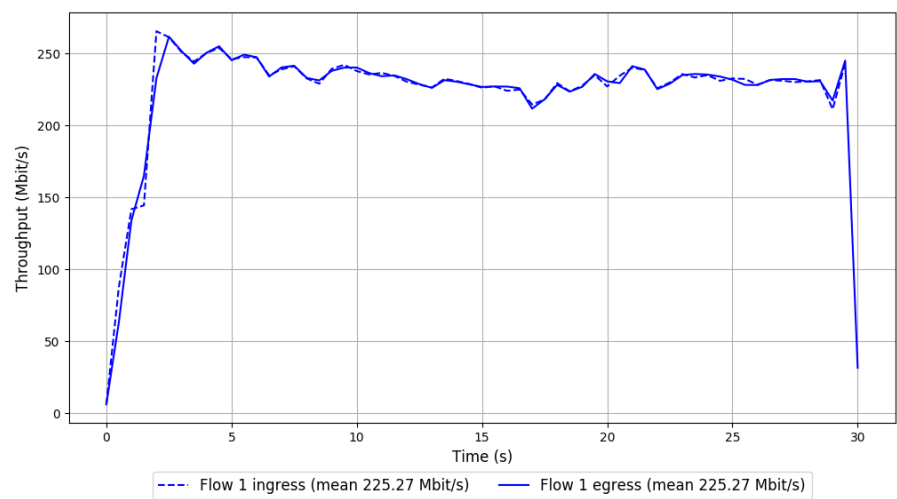
Run 2: Report of TaoVA-100x — Data Link

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

Start at: 2018-02-19 19:55:30
End at: 2018-02-19 19:56:00

# Below is generated by plot.py at 2018-02-19 23:49:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 231.81 Mbit/s
95th percentile per-packet one-way delay: 86.741 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 231.81 Mbit/s
95th percentile per-packet one-way delay: 86.741 ms
Loss rate: 0.00%
```
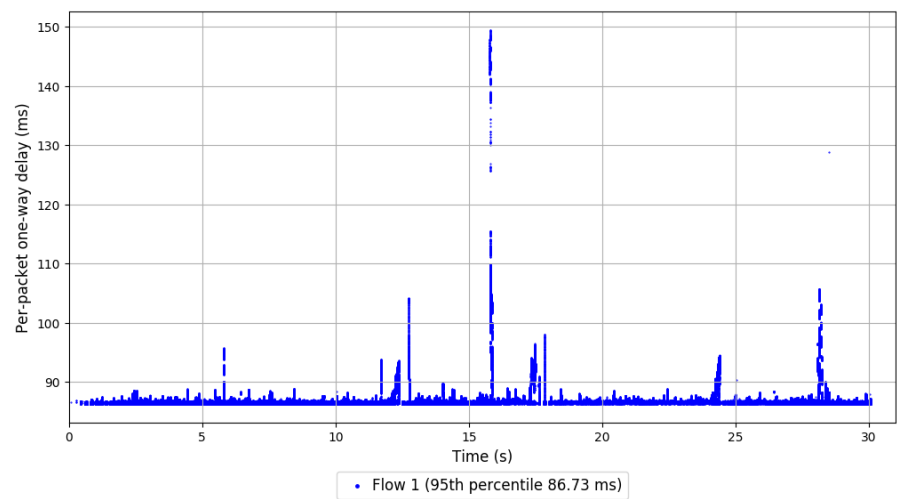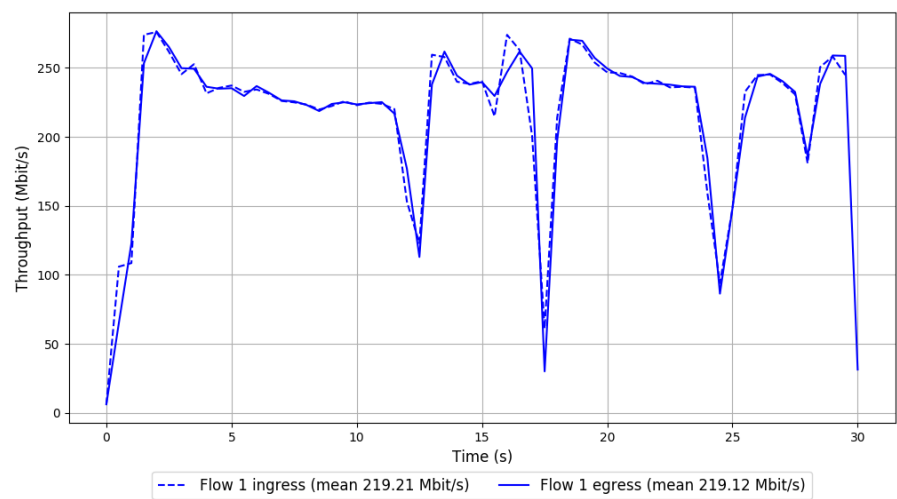
Run 3: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 231.55 Mbit/s)   Flow 1 egress (mean 231.81 Mbit/s)

Flow 1 (95th percentile 86.74 ms)

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

Start at: 2018-02-19 20:10:45
End at: 2018-02-19 20:11:15

# Below is generated by plot.py at 2018-02-19 23:49:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 225.27 Mbit/s
95th percentile per-packet one-way delay: 86.369 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 225.27 Mbit/s
95th percentile per-packet one-way delay: 86.369 ms
Loss rate: 0.00%
```
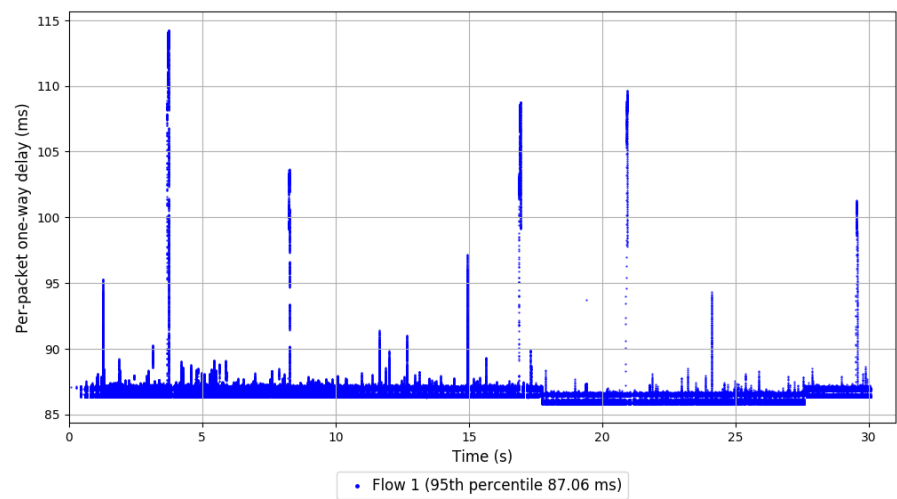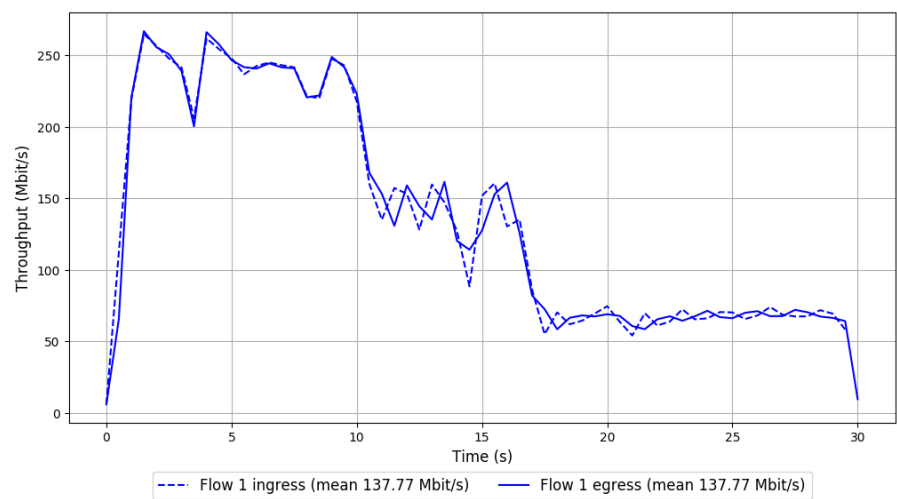
Run 4: Report of TaoVA-100x — Data Link

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

Start at: 2018-02-19 20:26:12
End at: 2018-02-19 20:26:42

# Below is generated by plot.py at 2018-02-19 23:49:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 219.12 Mbit/s
95th percentile per-packet one-way delay: 86.727 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 219.12 Mbit/s
95th percentile per-packet one-way delay: 86.727 ms
Loss rate: 0.04%
```
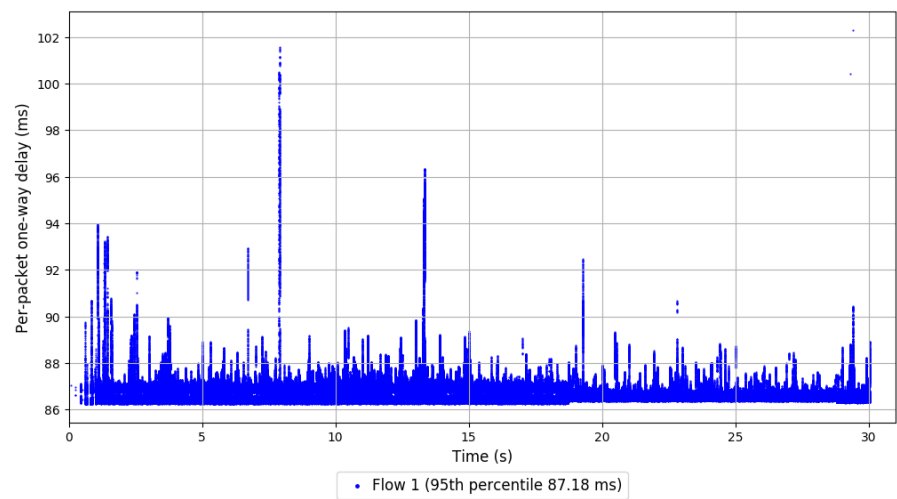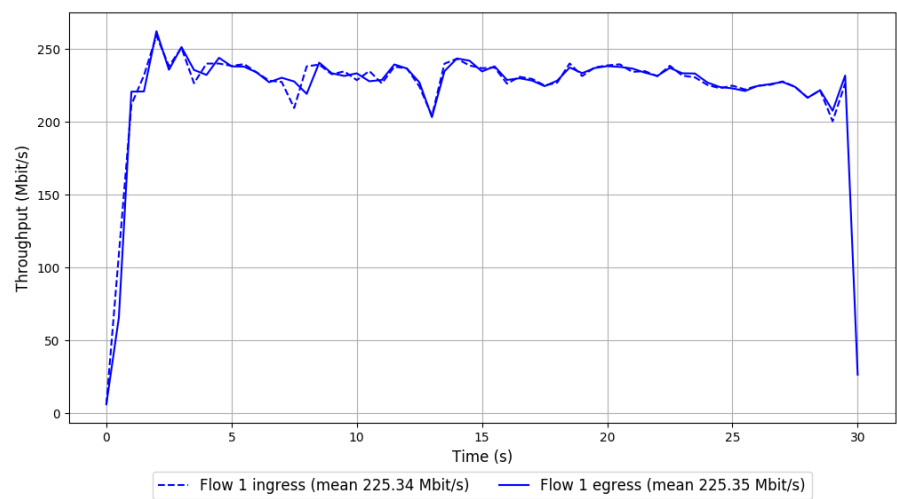
Run 5: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 219.21 Mbit/s) Flow 1 egress (mean 219.12 Mbit/s)

Flow 1 (95th percentile 86.73 ms)

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

Start at: 2018-02-19 20:41:40
End at: 2018-02-19 20:42:10

# Below is generated by plot.py at 2018-02-19 23:49:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 137.77 Mbit/s
95th percentile per-packet one-way delay: 87.064 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 137.77 Mbit/s
95th percentile per-packet one-way delay: 87.064 ms
Loss rate: 0.00%
```
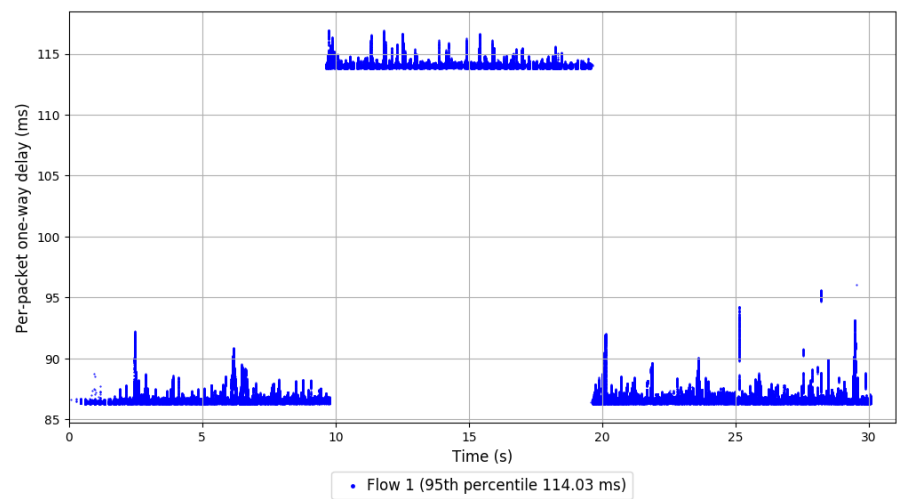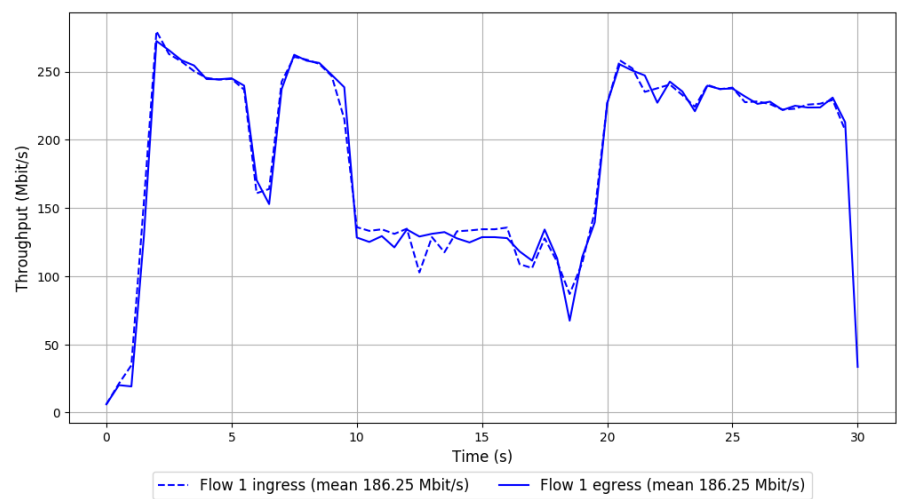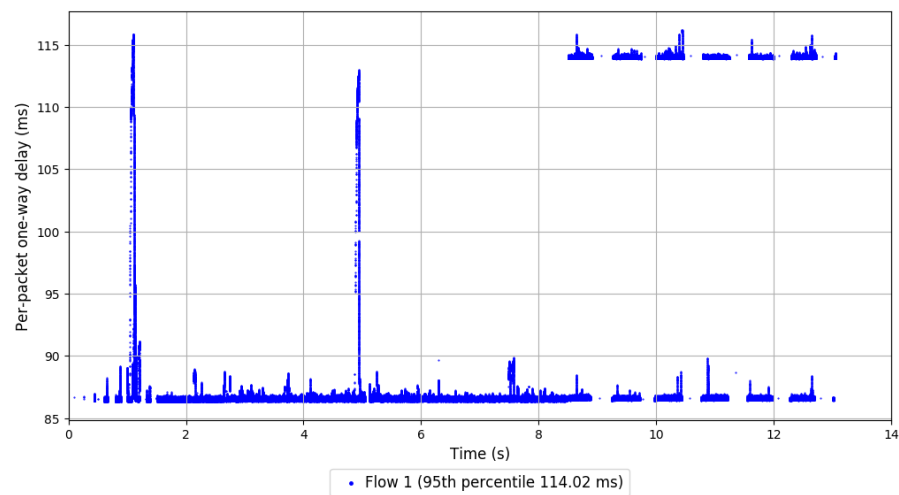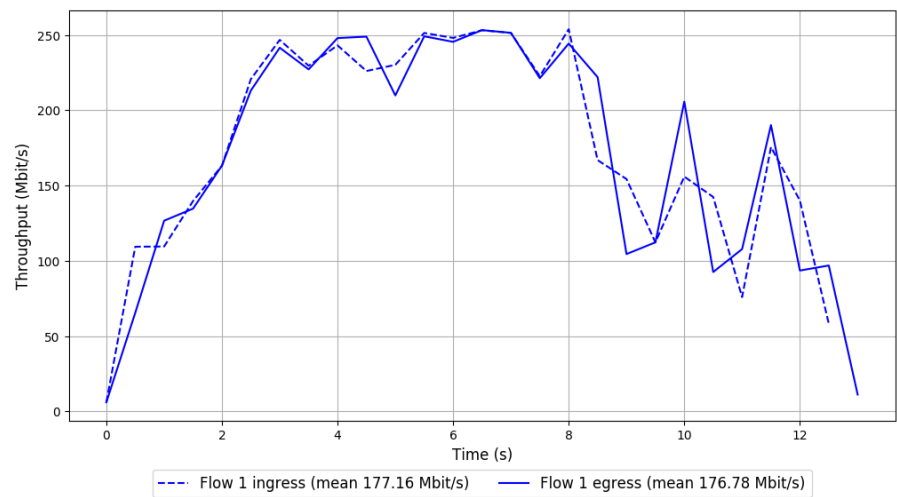
Run 6: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 137.77 Mbit/s)   Flow 1 egress (mean 137.77 Mbit/s)

Flow 1 (95th percentile 87.06 ms)

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

Start at: 2018-02-19 20:56:49
End at: 2018-02-19 20:57:19

# Below is generated by plot.py at 2018-02-19 23:52:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 225.35 Mbit/s
95th percentile per-packet one-way delay: 87.177 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 225.35 Mbit/s
95th percentile per-packet one-way delay: 87.177 ms
Loss rate: 0.00%
```
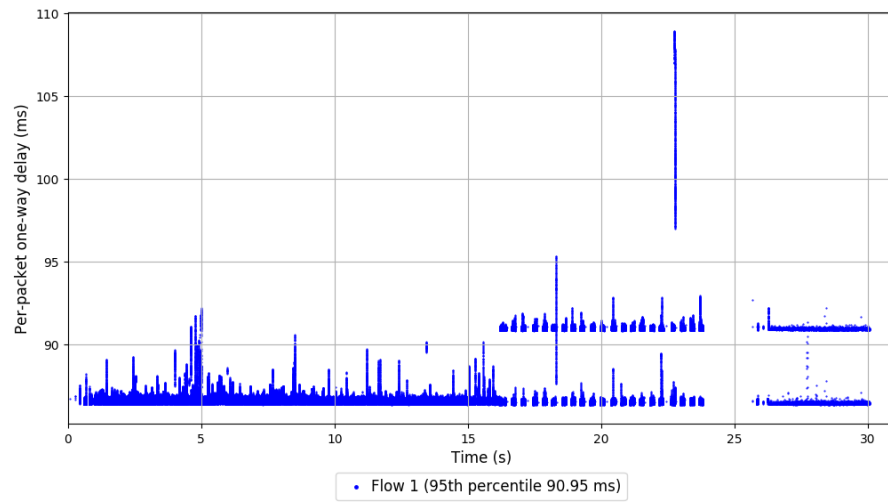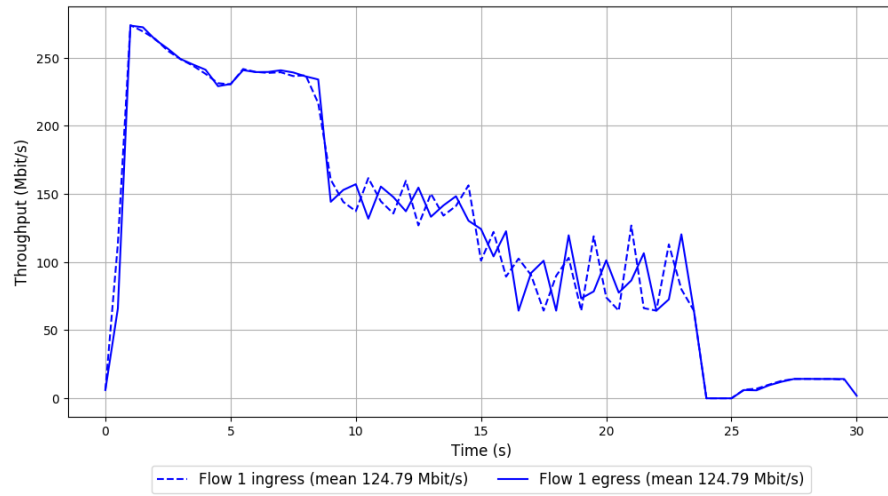
Run 7: Report of TaoVA-100x — Data Link

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

Start at: 2018-02-19 21:11:48
End at: 2018-02-19 21:12:18

# Below is generated by plot.py at 2018-02-19 23:52:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 186.25 Mbit/s
95th percentile per-packet one-way delay: 114.027 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 186.25 Mbit/s
95th percentile per-packet one-way delay: 114.027 ms
Loss rate: 0.00%
```
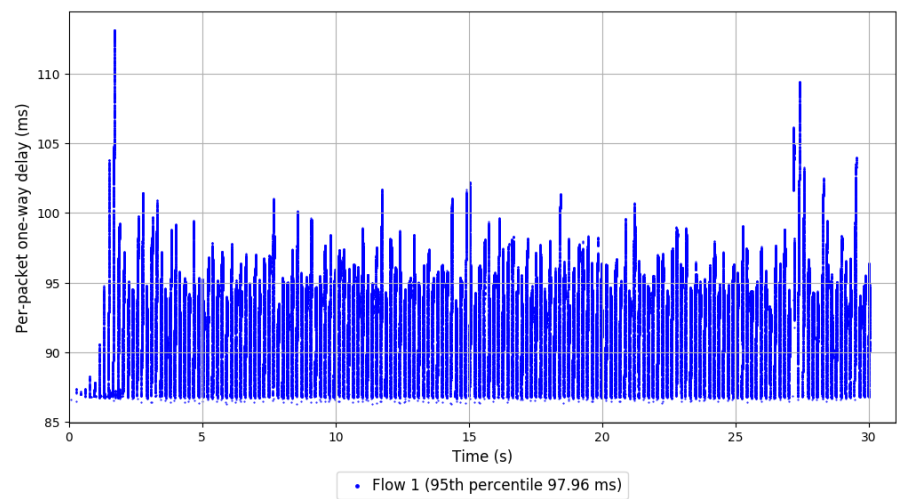
Run 8: Report of TaoVA-100x — Data Link

Run 9: Statistics of TaoVA-100x

Start at: 2018-02-19 21:26:59
End at: 2018-02-19 21:27:29

Run 9: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 177.16 Mbit/s)   Flow 1 egress (mean 176.78 Mbit/s)

Flow 1 (95th percentile 114.02 ms)

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

Start at: 2018-02-19 21:42:02
End at: 2018-02-19 21:42:32

# Below is generated by plot.py at 2018-02-19 23:52:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 124.79 Mbit/s
95th percentile per-packet one-way delay: 90.950 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 124.79 Mbit/s
95th percentile per-packet one-way delay: 90.950 ms
Loss rate: 0.00%
```
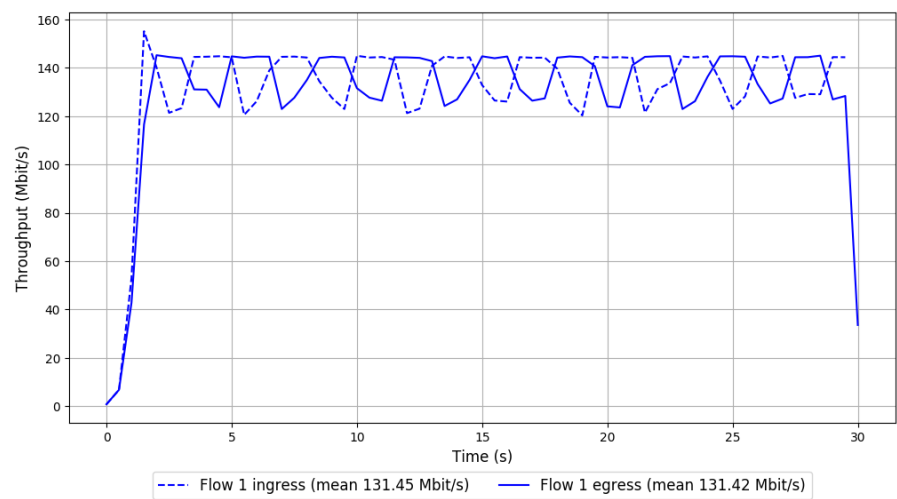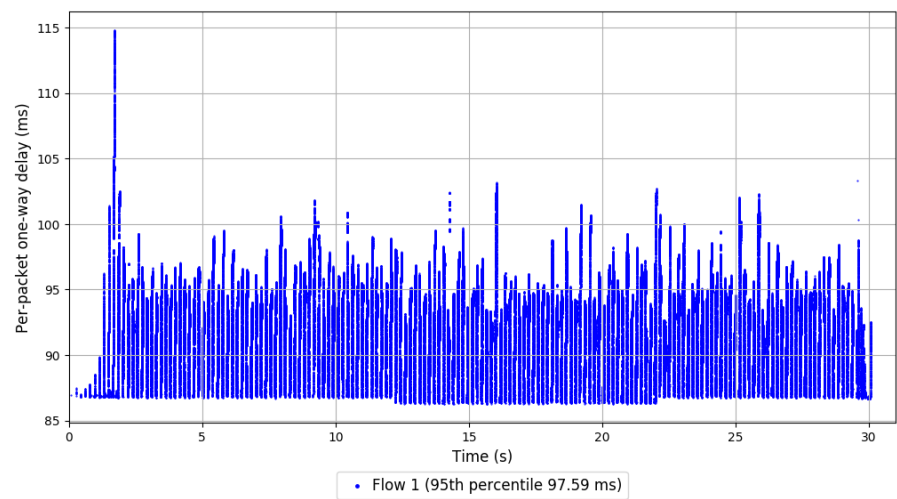
Run 10: Report of TaoVA-100x — Data Link

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Run 1: Statistics of TCP Vegas

Start at: 2018-02-19 19:22:25
End at: 2018-02-19 19:22:55

Below is generated by plot.py at 2018-02-19 23:52:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 131.42 Mbit/s
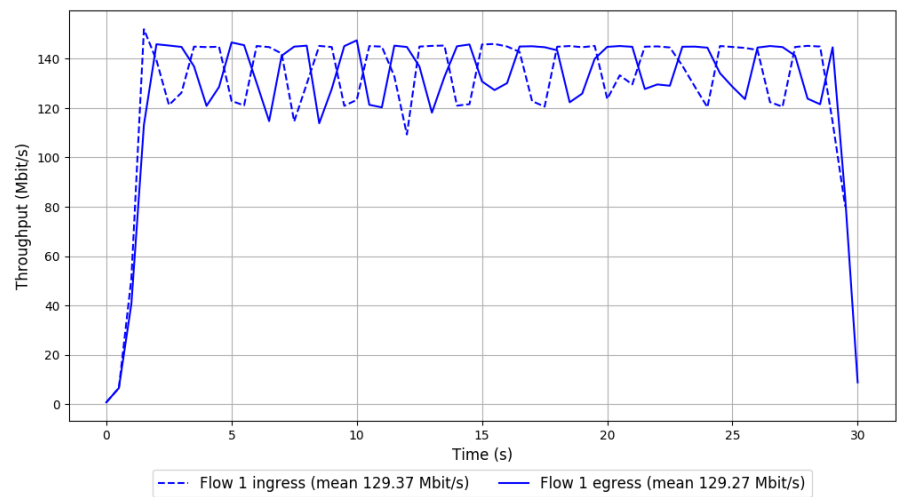95th percentile per-packet one-way delay: 97.959 ms
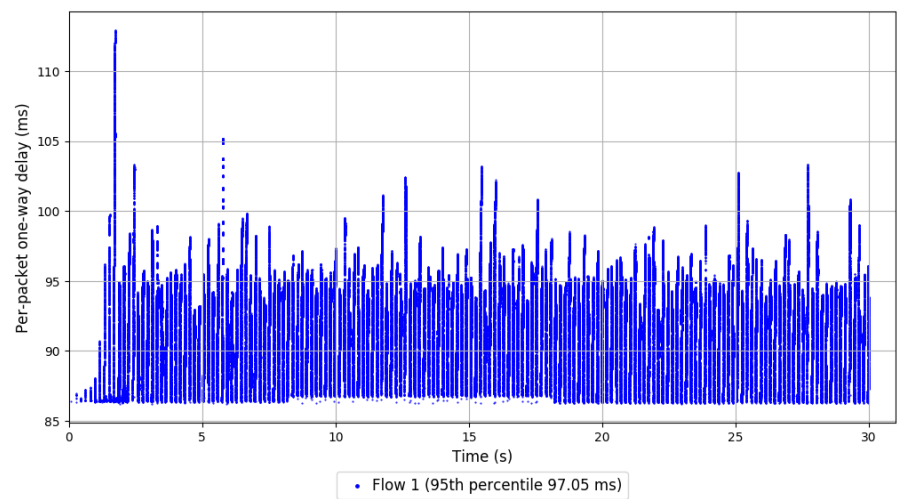Loss rate: 0.00%
-- Flow 1:
Average throughput: 131.42 Mbit/s
95th percentile per-packet one-way delay: 97.959 ms
Loss rate: 0.00%

Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2018-02-19 19:37:16
End at: 2018-02-19 19:37:46

# Below is generated by plot.py at 2018-02-19 23:52:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 129.27 Mbit/s
95th percentile per-packet one-way delay: 97.593 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 129.27 Mbit/s
95th percentile per-packet one-way delay: 97.593 ms
Loss rate: 0.07%
```
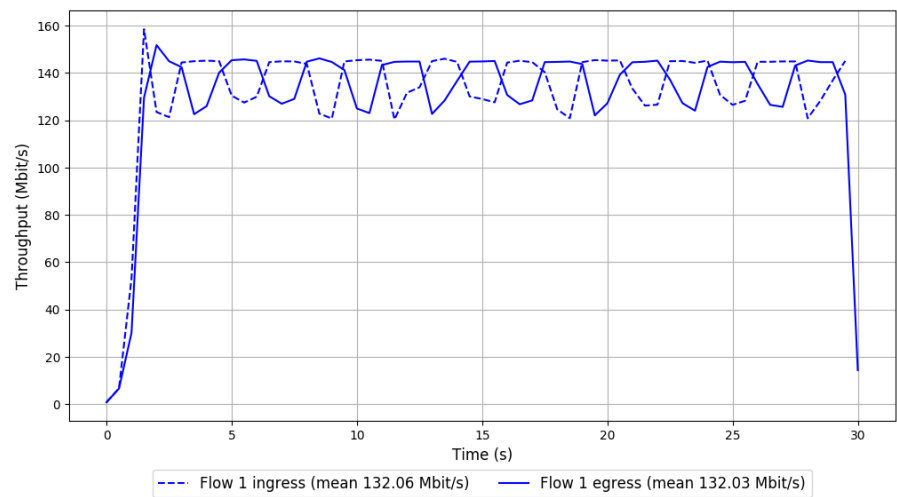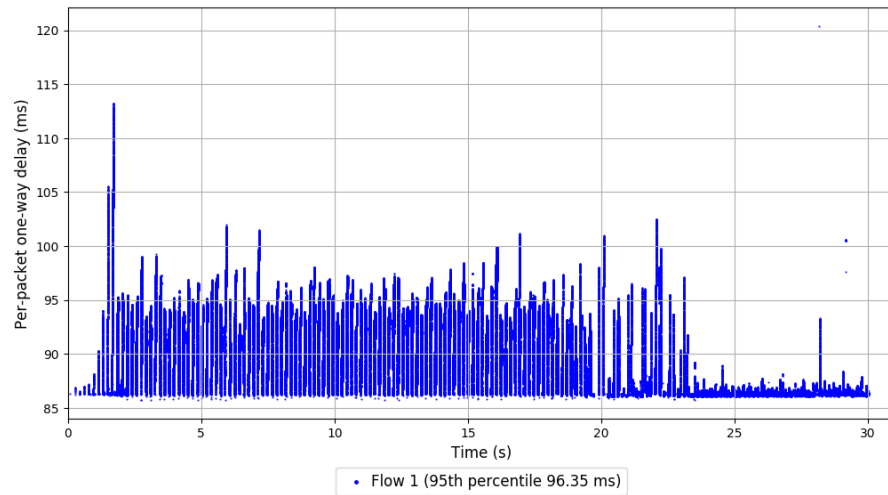
Run 2: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 129.37 Mbit/s) —— Flow 1 egress (mean 129.27 Mbit/s)

• Flow 1 (95th percentile 97.59 ms)

```
Run 3: Statistics of TCP Vegas

Start at: 2018-02-19 19:52:30
End at: 2018-02-19 19:53:00

# Below is generated by plot.py at 2018-02-19 23:52:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 132.03 Mbit/s
95th percentile per-packet one-way delay: 97.048 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 132.03 Mbit/s
95th percentile per-packet one-way delay: 97.048 ms
Loss rate: 0.00%
```
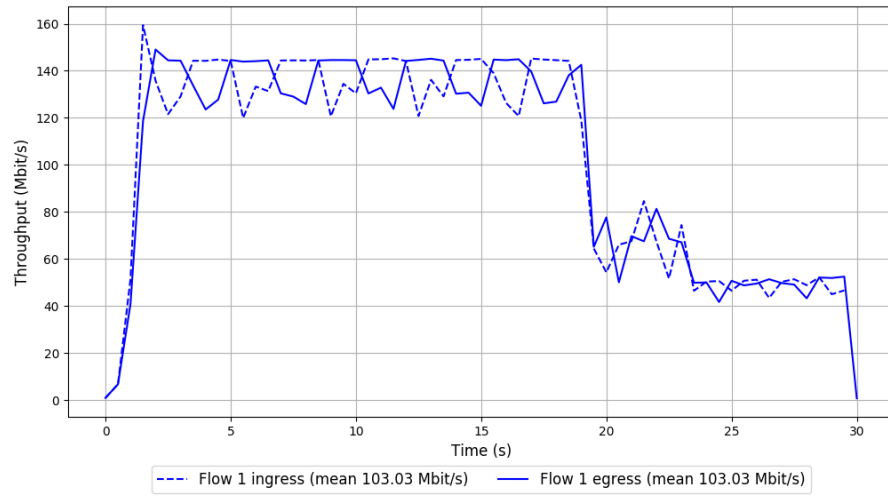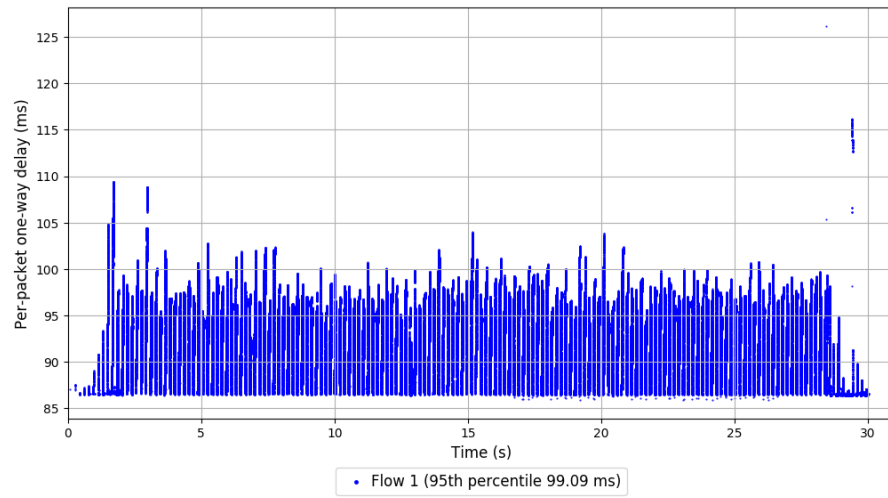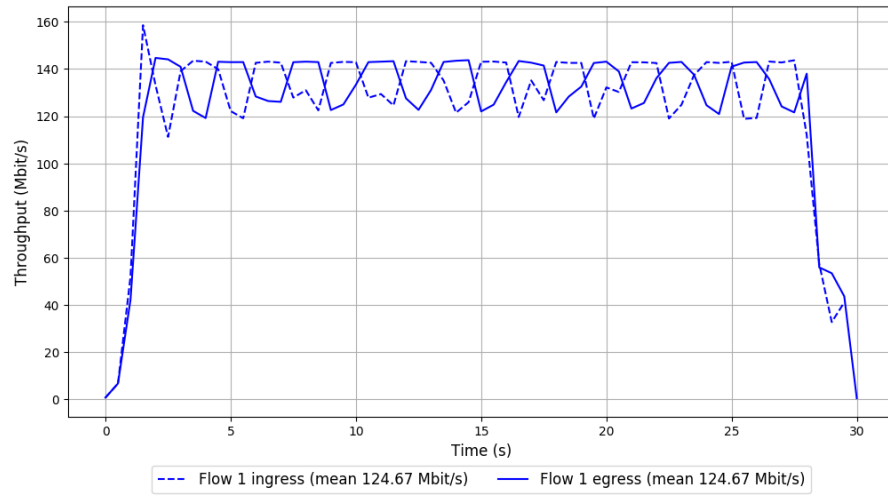
Run 3: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 132.06 Mbit/s) --- Flow 1 egress (mean 132.03 Mbit/s)

Flow 1 (95th percentile 97.05 ms)

```
Run 4: Statistics of TCP Vegas

Start at: 2018-02-19 20:07:46
End at: 2018-02-19 20:08:16

# Below is generated by plot.py at 2018-02-19 23:52:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 103.03 Mbit/s
95th percentile per-packet one-way delay: 96.349 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 103.03 Mbit/s
95th percentile per-packet one-way delay: 96.349 ms
Loss rate: 0.00%
```
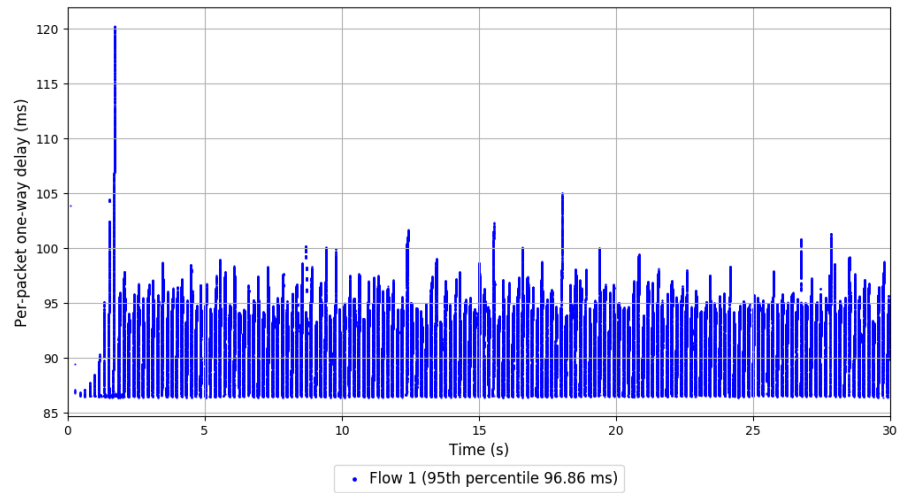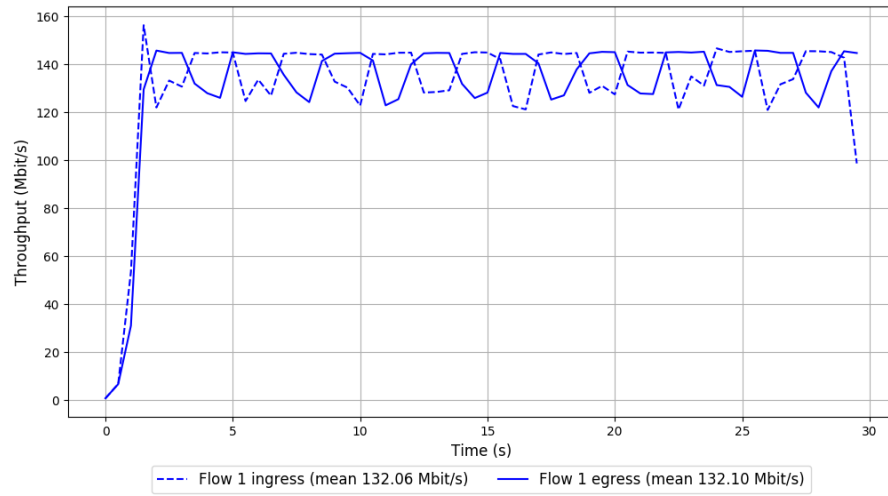
Run 4: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 103.03 Mbit/s) — Flow 1 egress (mean 103.03 Mbit/s)

Flow 1 (95th percentile 96.35 ms)

```
Run 5: Statistics of TCP Vegas

Start at: 2018-02-19 20:23:11
End at: 2018-02-19 20:23:41

# Below is generated by plot.py at 2018-02-19 23:52:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 124.67 Mbit/s
95th percentile per-packet one-way delay: 99.090 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 124.67 Mbit/s
95th percentile per-packet one-way delay: 99.090 ms
Loss rate: 0.00%
```
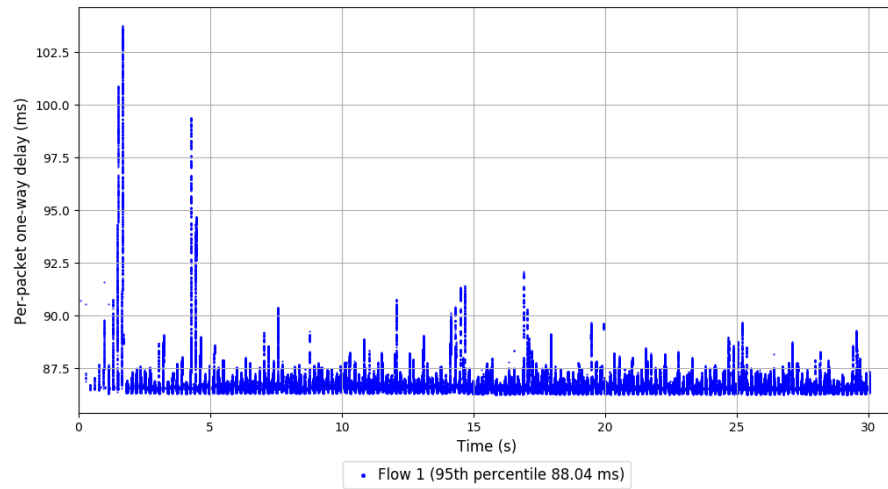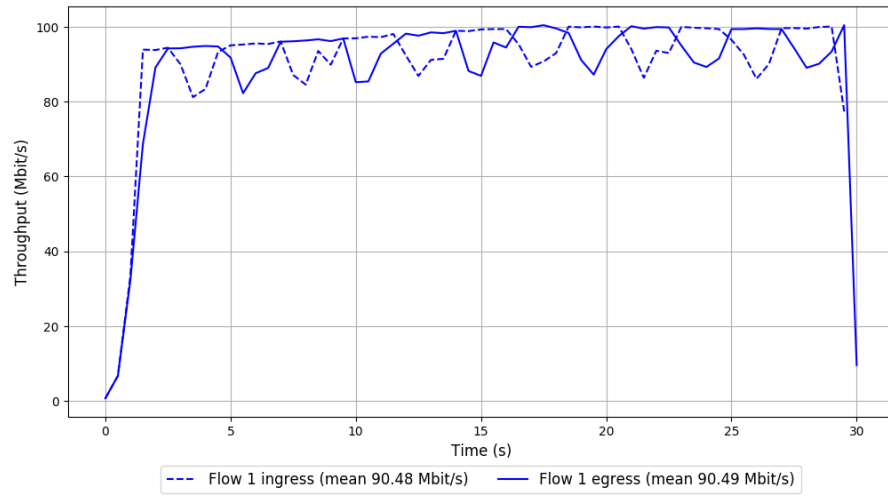
Run 5: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 124.67 Mbit/s)   Flow 1 egress (mean 124.67 Mbit/s)

Flow 1 (95th percentile 99.09 ms)

```
Run 6: Statistics of TCP Vegas

Start at: 2018-02-19 20:38:39
End at: 2018-02-19 20:39:09

# Below is generated by plot.py at 2018-02-19 23:53:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 132.10 Mbit/s
95th percentile per-packet one-way delay: 96.858 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 132.10 Mbit/s
95th percentile per-packet one-way delay: 96.858 ms
Loss rate: 0.00%
```
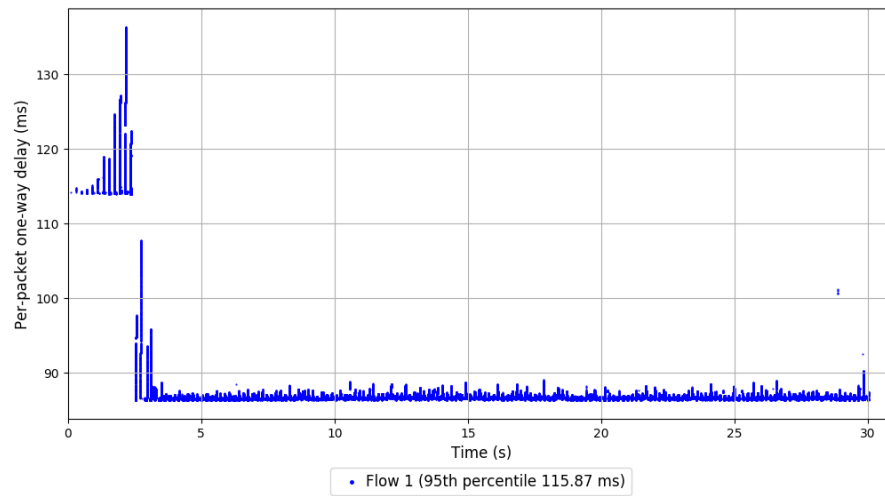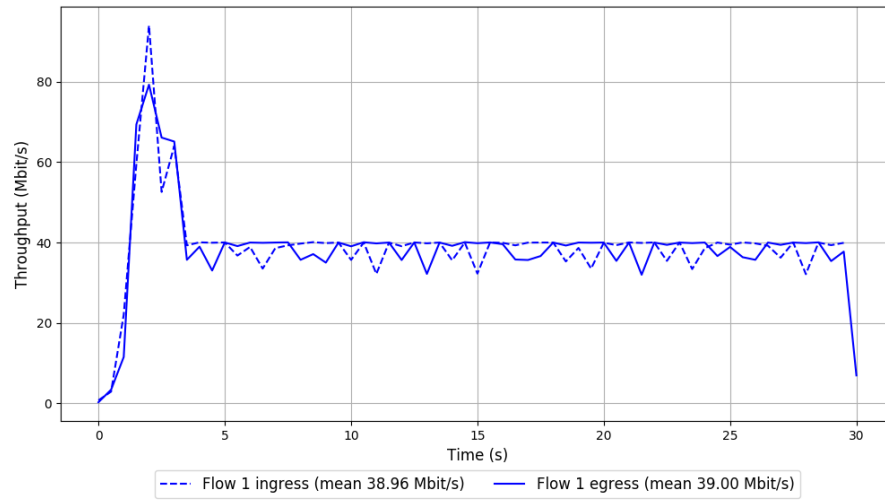
Run 6: Report of TCP Vegas — Data Link

```
Run 7: Statistics of TCP Vegas

Start at: 2018-02-19 20:53:53
End at: 2018-02-19 20:54:23

# Below is generated by plot.py at 2018-02-19 23:53:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.49 Mbit/s
95th percentile per-packet one-way delay: 88.040 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 90.49 Mbit/s
95th percentile per-packet one-way delay: 88.040 ms
Loss rate: 0.00%
```
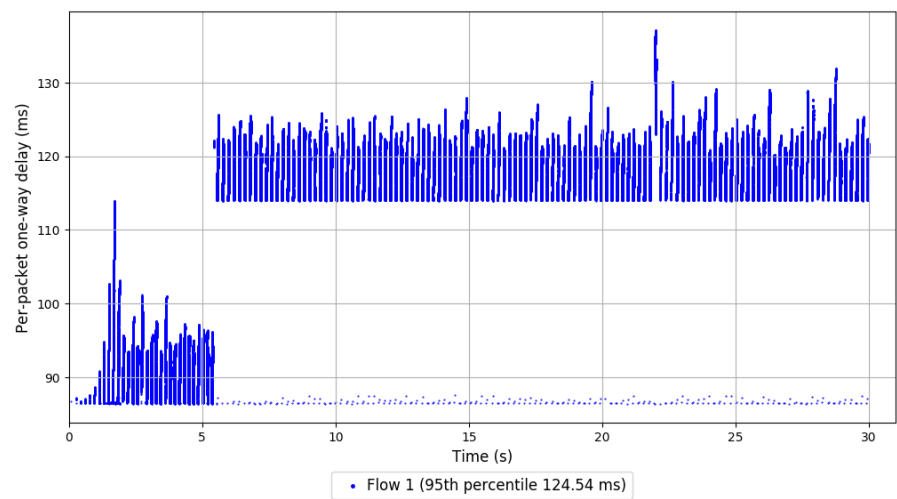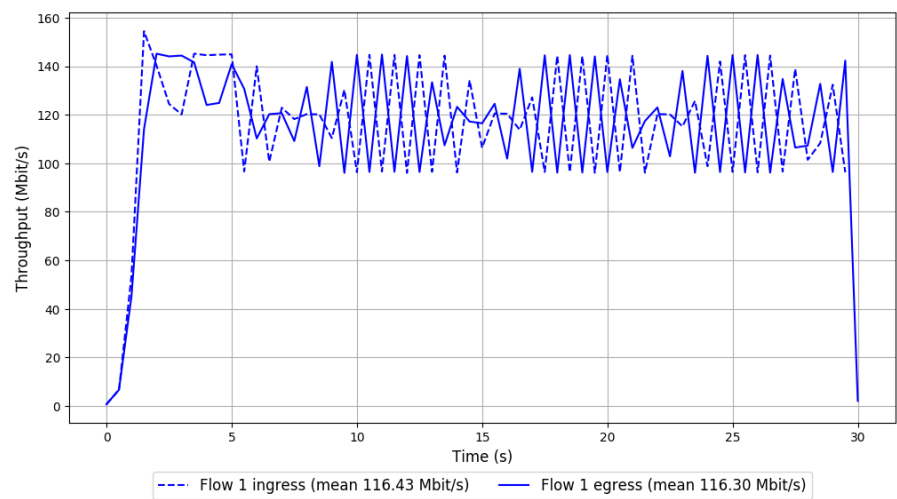
Run 7: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 90.48 Mbit/s)   Flow 1 egress (mean 90.49 Mbit/s)

Flow 1 (95th percentile 88.04 ms)

```
Run 8: Statistics of TCP Vegas

Start at: 2018-02-19 21:08:56
End at: 2018-02-19 21:09:26

# Below is generated by plot.py at 2018-02-19 23:53:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 39.00 Mbit/s
95th percentile per-packet one-way delay: 115.870 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 39.00 Mbit/s
95th percentile per-packet one-way delay: 115.870 ms
Loss rate: 0.00%
```
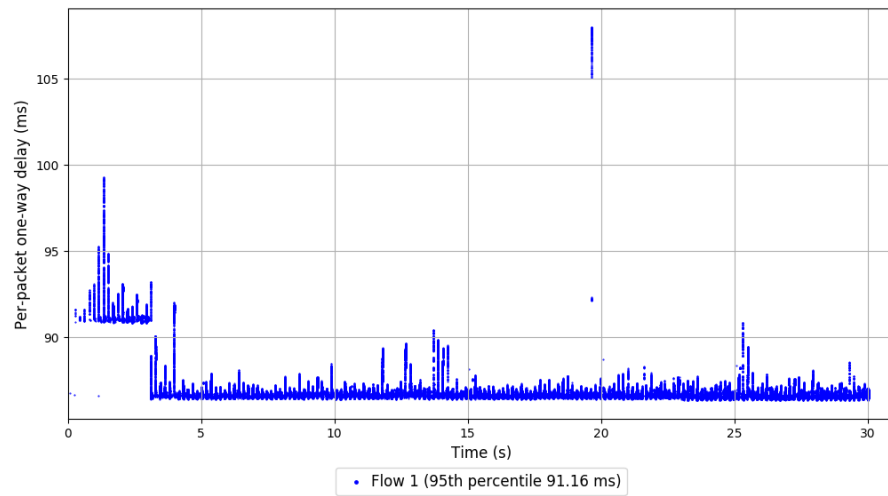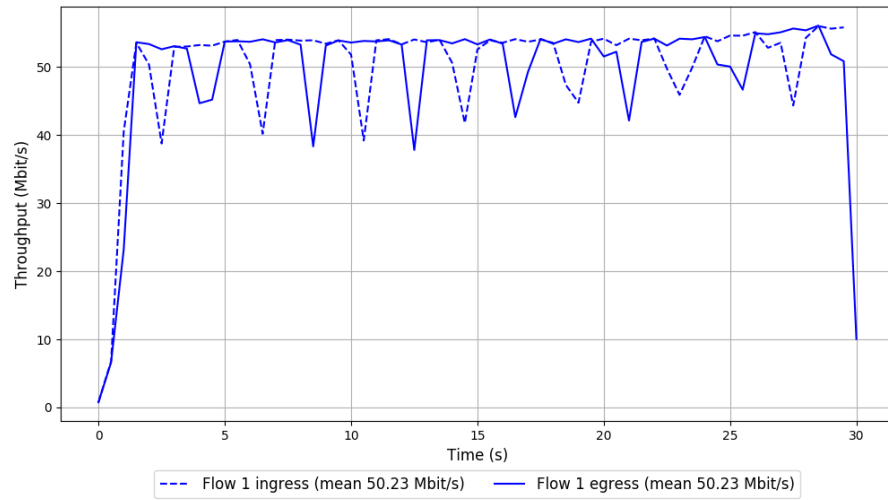
Run 8: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 38.96 Mbit/s) ----- Flow 1 egress (mean 39.00 Mbit/s)

Flow 1 (95th percentile 115.87 ms)

```
Run 9: Statistics of TCP Vegas

Start at: 2018-02-19 21:24:02
End at: 2018-02-19 21:24:32

# Below is generated by plot.py at 2018-02-19 23:53:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 116.30 Mbit/s
95th percentile per-packet one-way delay: 124.542 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 116.30 Mbit/s
95th percentile per-packet one-way delay: 124.542 ms
Loss rate: 0.00%
```
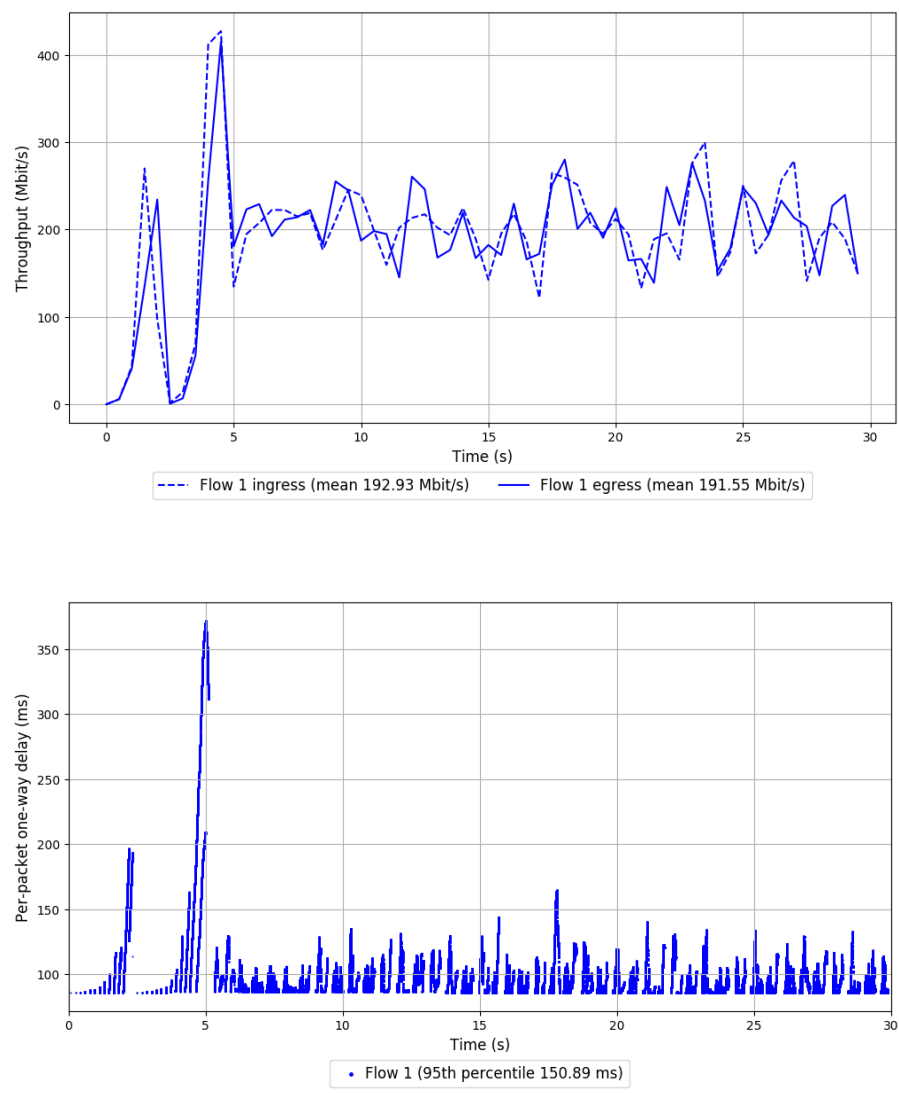
Run 9: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 116.43 Mbit/s)   Flow 1 egress (mean 116.30 Mbit/s)

Flow 1 (95th percentile 124.54 ms)

```
Run 10: Statistics of TCP Vegas

Start at: 2018-02-19 21:39:05
End at: 2018-02-19 21:39:35

# Below is generated by plot.py at 2018-02-19 23:53:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.23 Mbit/s
95th percentile per-packet one-way delay: 91.157 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.23 Mbit/s
95th percentile per-packet one-way delay: 91.157 ms
Loss rate: 0.00%
```
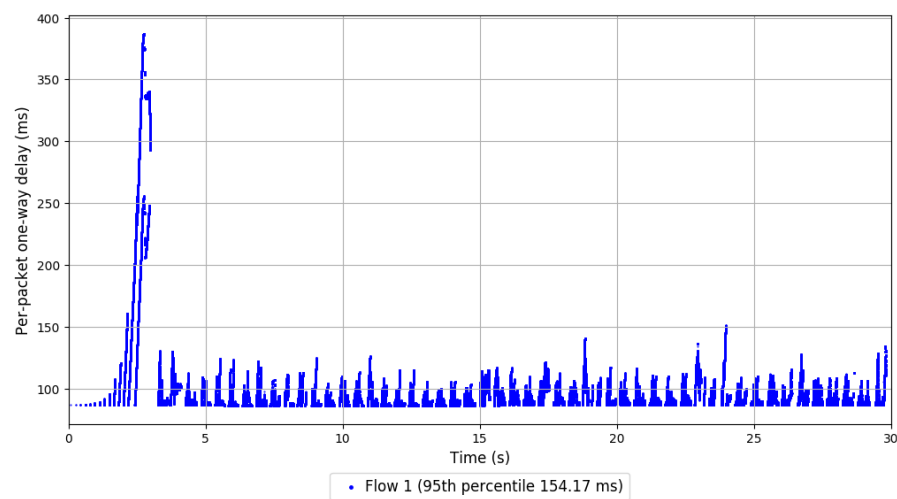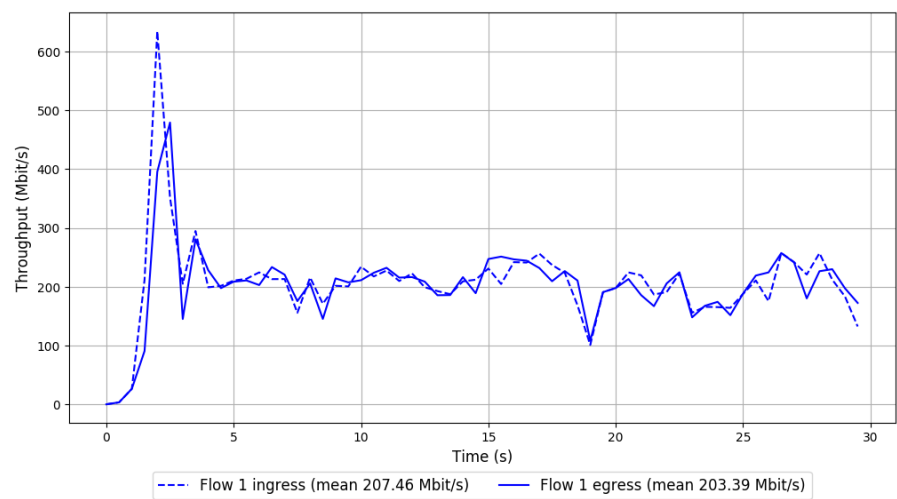
Run 10: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2018-02-19 19:34:34
End at: 2018-02-19 19:35:04

# Below is generated by plot.py at 2018-02-19 23:55:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 191.55 Mbit/s
95th percentile per-packet one-way delay: 150.894 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 191.55 Mbit/s
95th percentile per-packet one-way delay: 150.894 ms
Loss rate: 0.71%
```
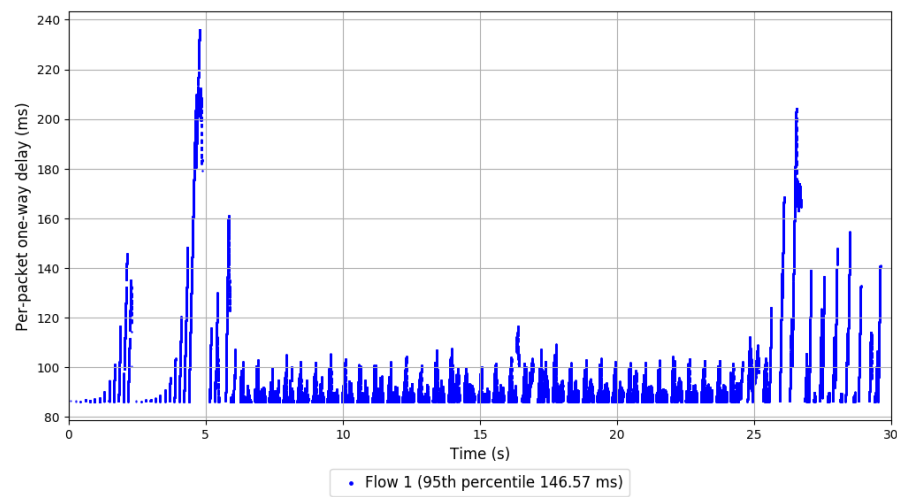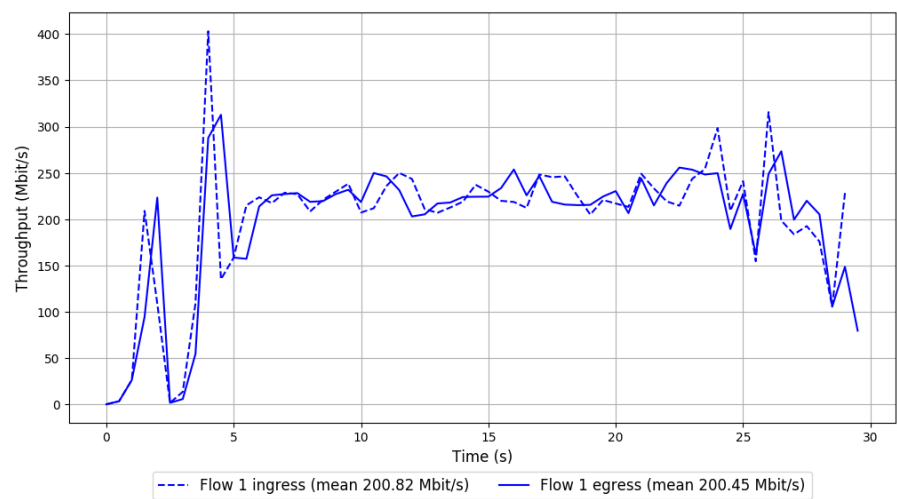
Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2018-02-19 19:49:42
End at: 2018-02-19 19:50:12

# Below is generated by plot.py at 2018-02-19 23:55:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 203.39 Mbit/s
95th percentile per-packet one-way delay: 154.169 ms
Loss rate: 1.89%
-- Flow 1:
Average throughput: 203.39 Mbit/s
95th percentile per-packet one-way delay: 154.169 ms
Loss rate: 1.89%
```
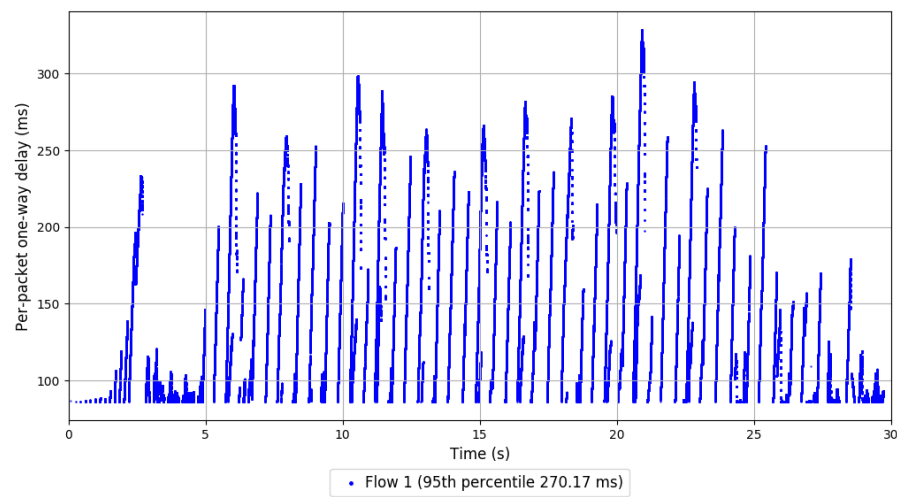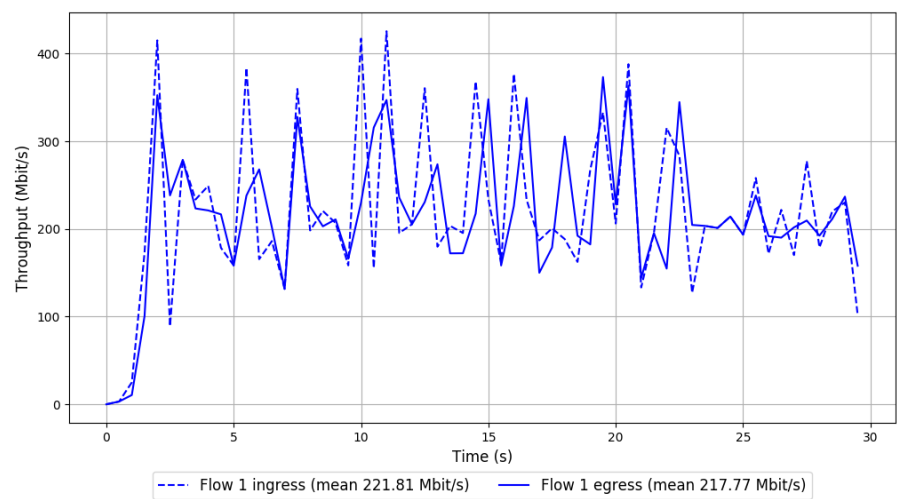
Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2018-02-19 20:05:08
End at: 2018-02-19 20:05:38

# Below is generated by plot.py at 2018-02-19 23:55:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 200.45 Mbit/s
95th percentile per-packet one-way delay: 146.572 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 200.45 Mbit/s
95th percentile per-packet one-way delay: 146.572 ms
Loss rate: 0.00%
```
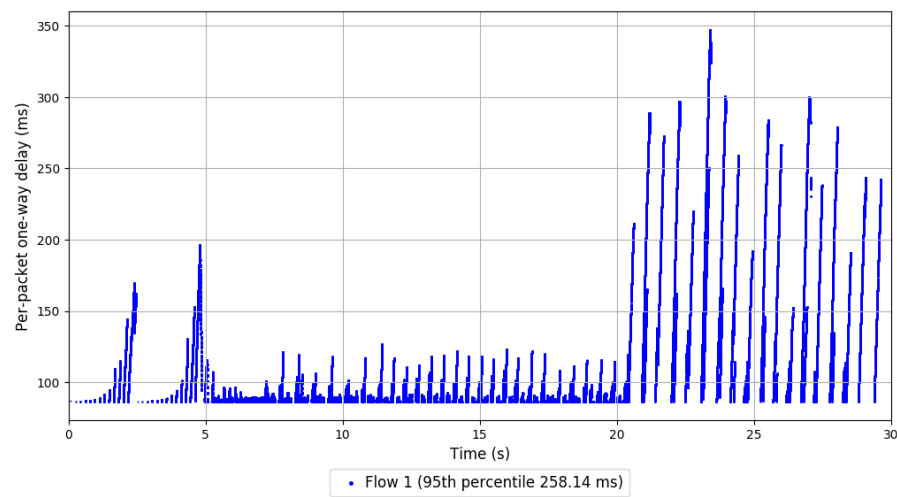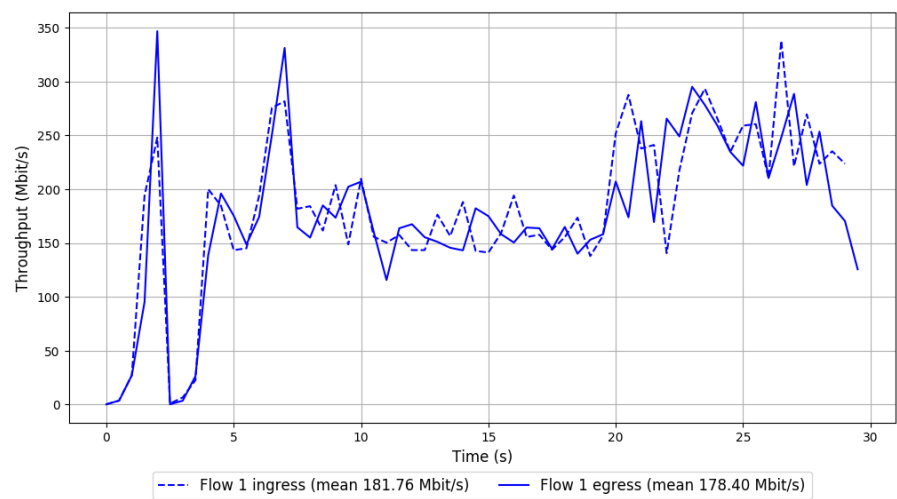
Run 3: Report of Verus — Data Link

```
Run 4: Statistics of Verus

Start at: 2018-02-19 20:20:19
End at: 2018-02-19 20:20:49


# Below is generated by plot.py at 2018-02-19 23:56:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 217.77 Mbit/s
95th percentile per-packet one-way delay: 270.173 ms
Loss rate: 1.80%
-- Flow 1:
Average throughput: 217.77 Mbit/s
95th percentile per-packet one-way delay: 270.173 ms
Loss rate: 1.80%
```
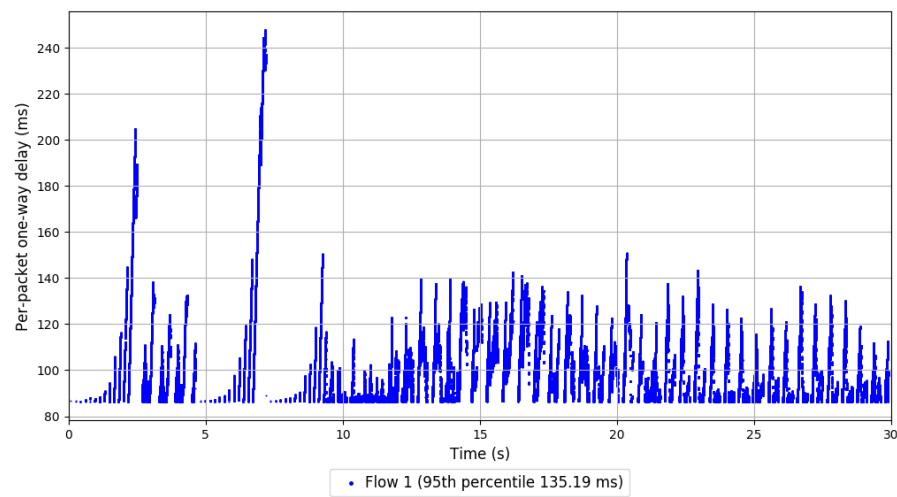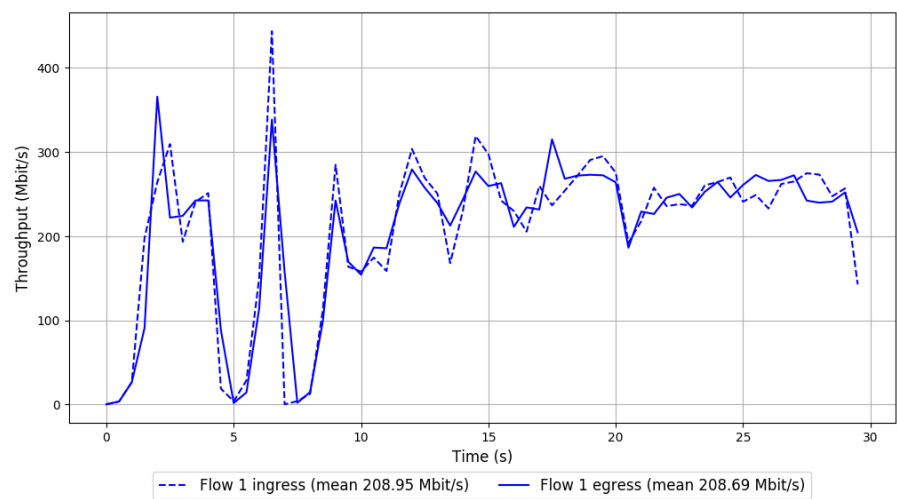
Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2018-02-19 20:35:53
End at: 2018-02-19 20:36:23

# Below is generated by plot.py at 2018-02-19 23:56:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 178.40 Mbit/s
95th percentile per-packet one-way delay: 258.140 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 178.40 Mbit/s
95th percentile per-packet one-way delay: 258.140 ms
Loss rate: 1.33%
```
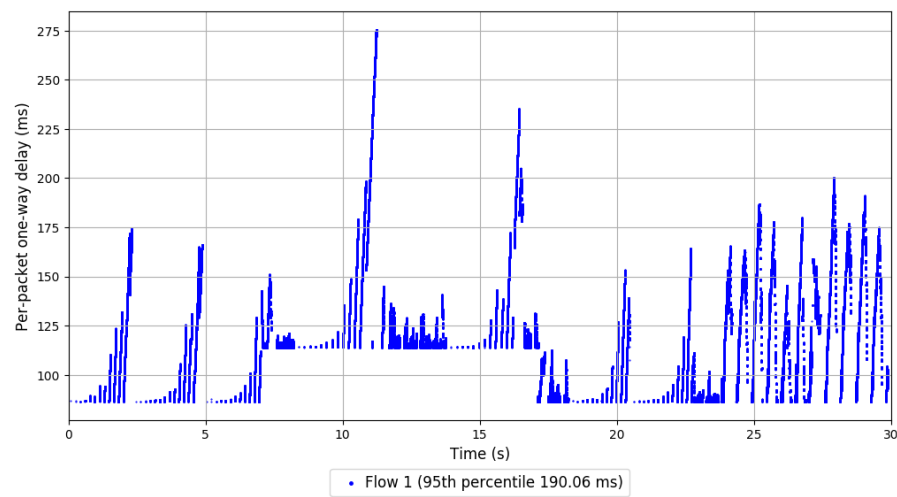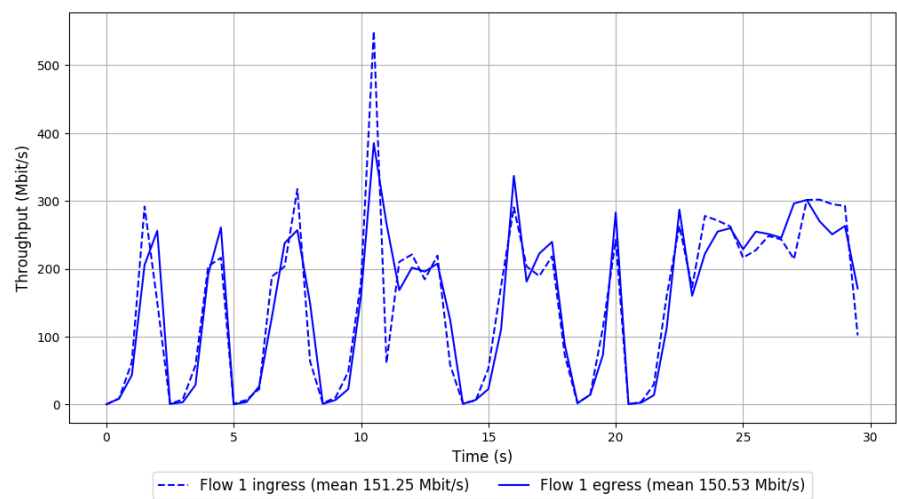
Run 5: Report of Verus — Data Link

```
Run 6: Statistics of Verus

Start at: 2018-02-19 20:51:04
End at: 2018-02-19 20:51:34

# Below is generated by plot.py at 2018-02-19 23:56:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 208.69 Mbit/s
95th percentile per-packet one-way delay: 135.185 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 208.69 Mbit/s
95th percentile per-packet one-way delay: 135.185 ms
Loss rate: 0.12%
```
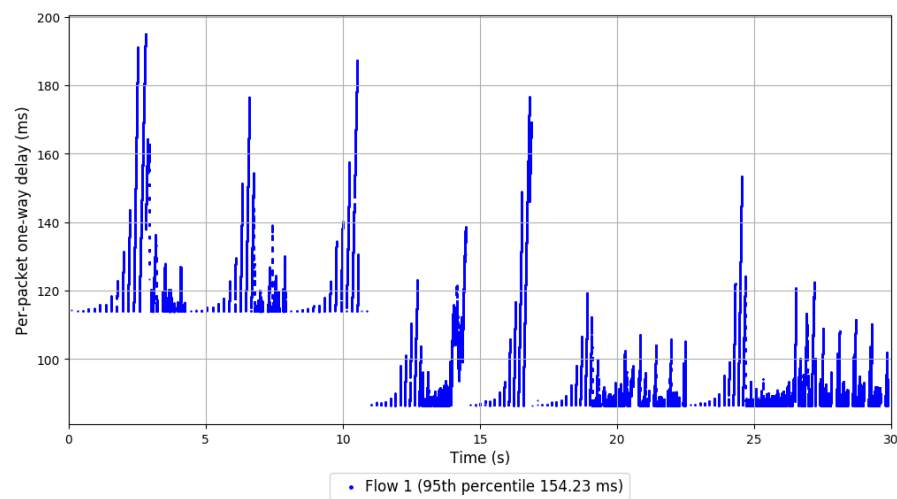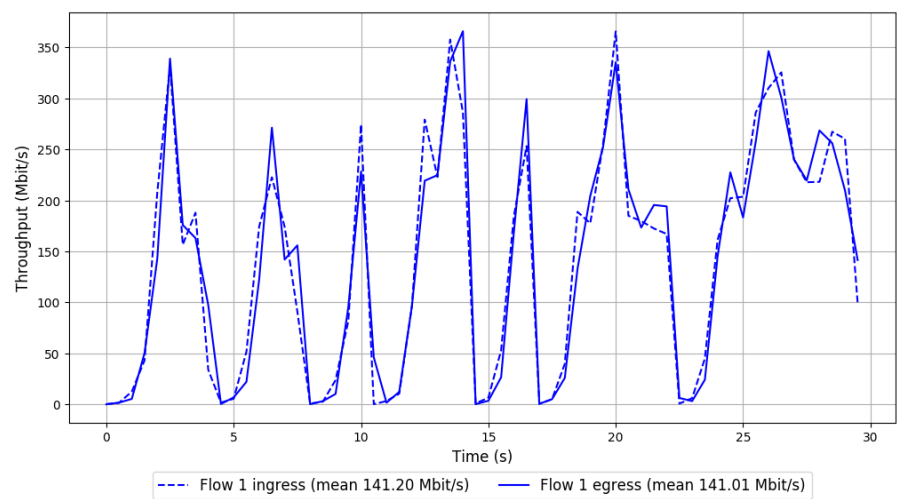
Run 6: Report of Verus — Data Link

```
Run 7: Statistics of Verus

Start at: 2018-02-19 21:06:11
End at: 2018-02-19 21:06:41

# Below is generated by plot.py at 2018-02-19 23:56:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 150.53 Mbit/s
95th percentile per-packet one-way delay: 190.056 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 150.53 Mbit/s
95th percentile per-packet one-way delay: 190.056 ms
Loss rate: 0.47%
```
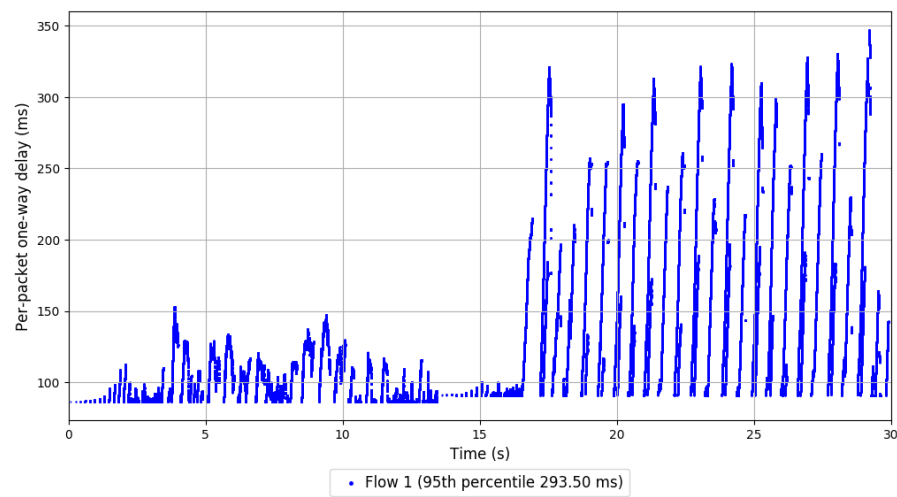
Run 7: Report of Verus — Data Link

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```
Run 8: Statistics of Verus

Start at: 2018-02-19 21:21:17
End at: 2018-02-19 21:21:47


# Below is generated by plot.py at 2018-02-19 23:56:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 141.01 Mbit/s
95th percentile per-packet one-way delay: 154.230 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 141.01 Mbit/s
95th percentile per-packet one-way delay: 154.230 ms
Loss rate: 0.23%
```
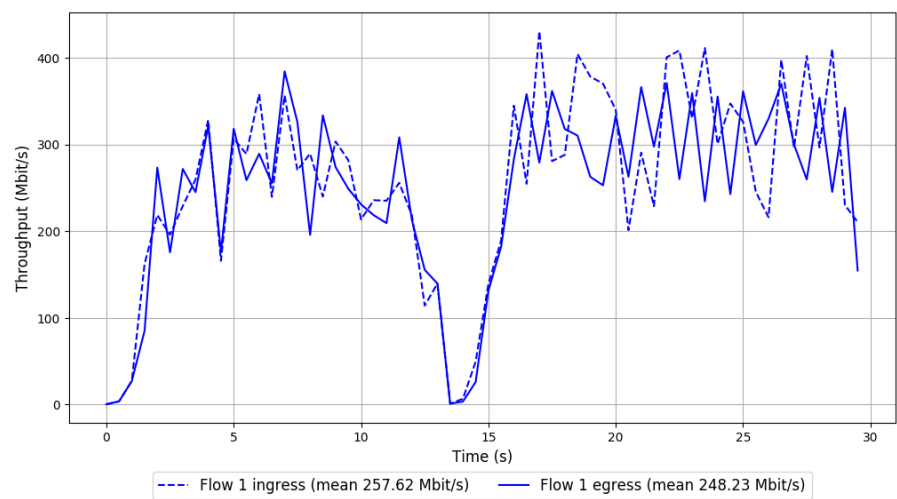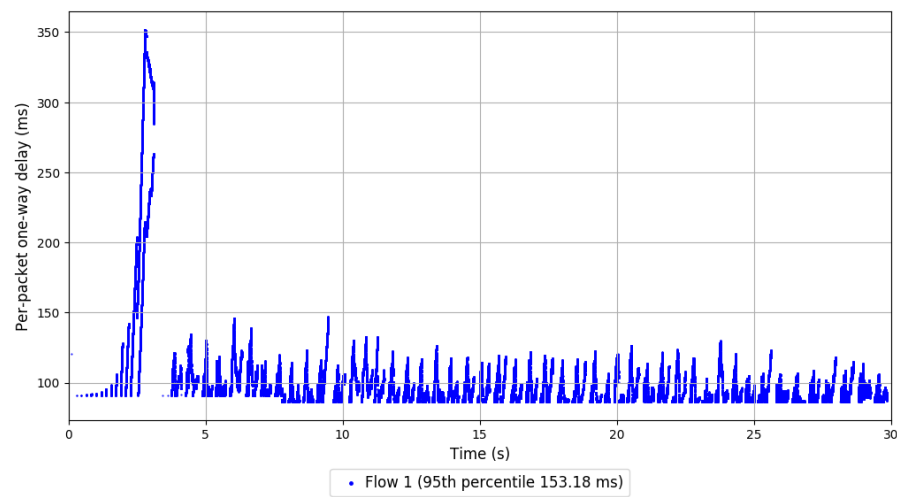
Run 8: Report of Verus — Data Link

```
Run 9: Statistics of Verus

Start at: 2018-02-19 21:36:14
End at: 2018-02-19 21:36:44

# Below is generated by plot.py at 2018-02-19 23:59:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 248.23 Mbit/s
95th percentile per-packet one-way delay: 293.498 ms
Loss rate: 3.64%
-- Flow 1:
Average throughput: 248.23 Mbit/s
95th percentile per-packet one-way delay: 293.498 ms
Loss rate: 3.64%
```
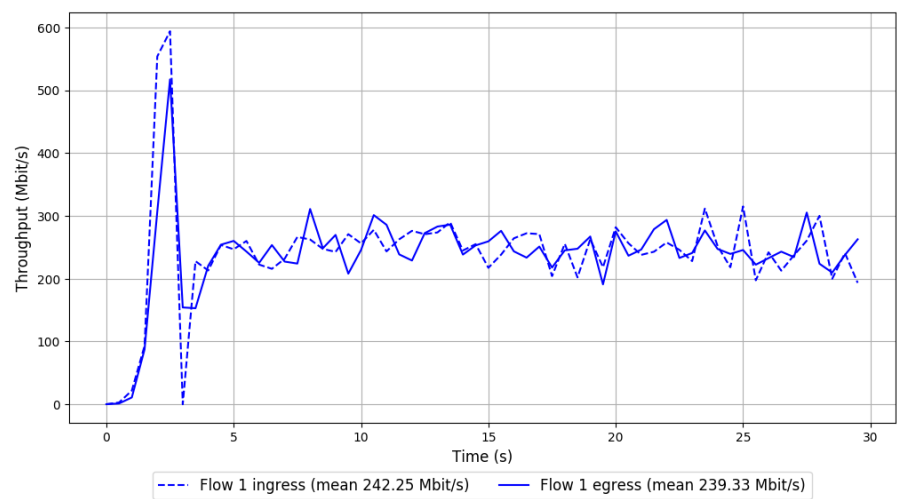
Run 9: Report of Verus — Data Link

```
Run 10: Statistics of Verus

Start at: 2018-02-19 21:51:20
End at: 2018-02-19 21:51:50

# Below is generated by plot.py at 2018-02-19 23:59:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 239.33 Mbit/s
95th percentile per-packet one-way delay: 153.175 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 239.33 Mbit/s
95th percentile per-packet one-way delay: 153.175 ms
Loss rate: 1.30%
```
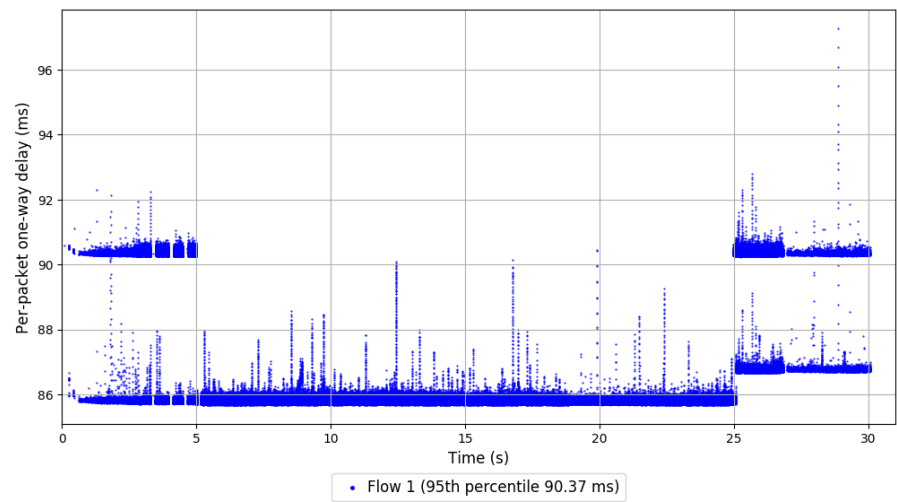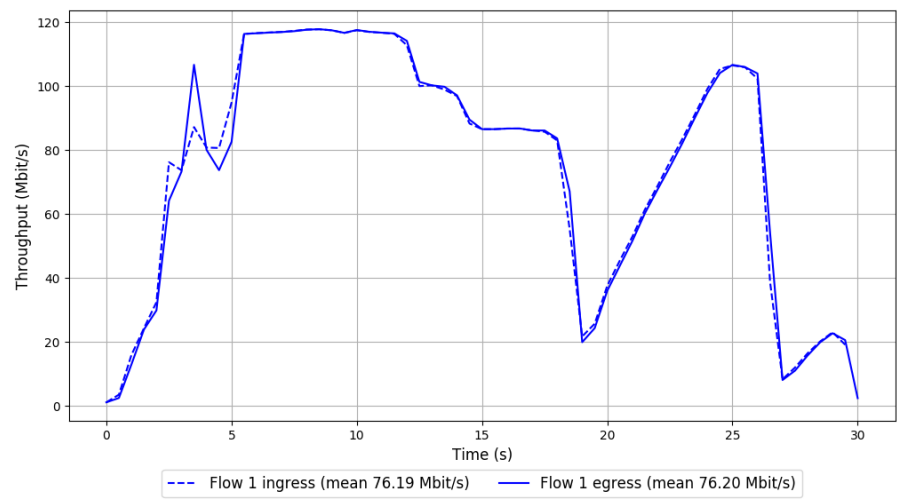
Run 10: Report of Verus — Data Link

```
Run 1: Statistics of Copa

Start at: 2018-02-19 19:28:53
End at: 2018-02-19 19:29:23


# Below is generated by plot.py at 2018-02-19 23:59:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 76.20 Mbit/s
95th percentile per-packet one-way delay: 90.373 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 76.20 Mbit/s
95th percentile per-packet one-way delay: 90.373 ms
Loss rate: 0.00%
```
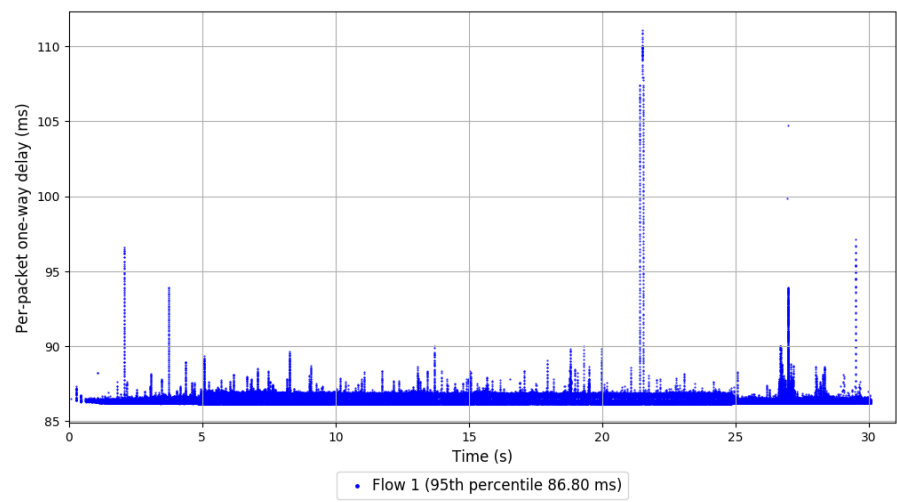
Run 1: Report of Copa — Data Link

Flow 1 ingress (mean 76.19 Mbit/s)   Flow 1 egress (mean 76.20 Mbit/s)

Flow 1 (95th percentile 90.37 ms)

```
Run 2: Statistics of Copa

Start at: 2018-02-19 19:44:03
End at: 2018-02-19 19:44:33

# Below is generated by plot.py at 2018-02-19 23:59:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 74.51 Mbit/s
95th percentile per-packet one-way delay: 86.796 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 74.51 Mbit/s
95th percentile per-packet one-way delay: 86.796 ms
Loss rate: 0.00%
```
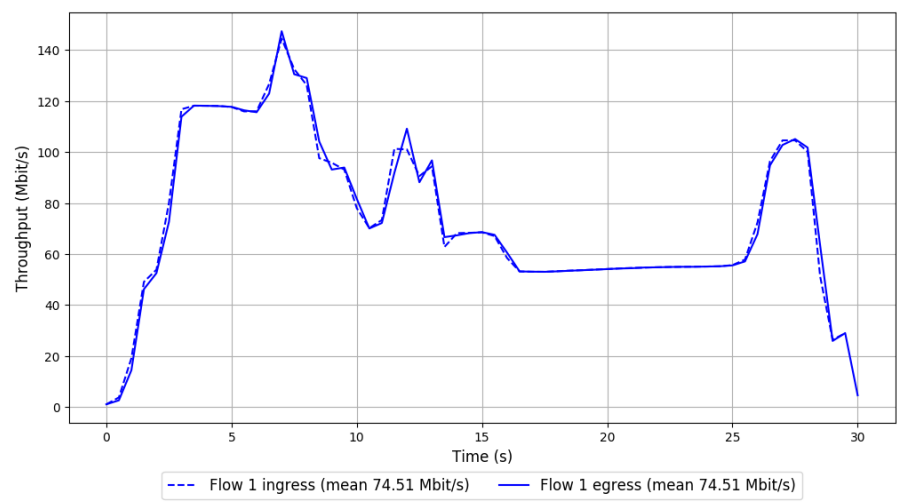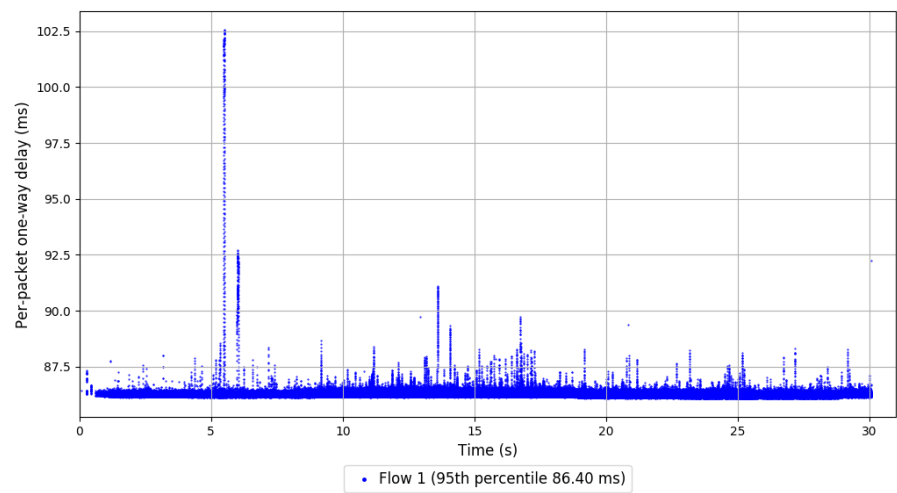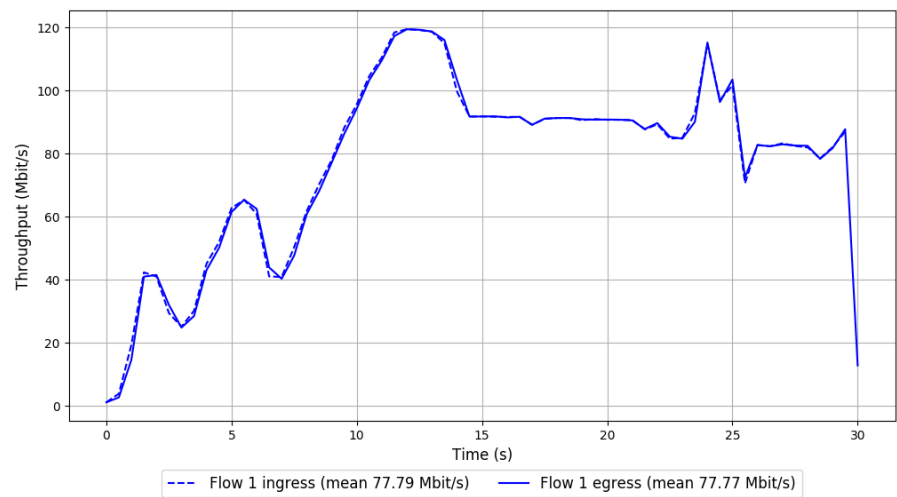
Run 2: Report of Copa — Data Link

```
Run 3: Statistics of Copa

Start at: 2018-02-19 19:59:19
End at: 2018-02-19 19:59:49

# Below is generated by plot.py at 2018-02-19 23:59:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 77.77 Mbit/s
95th percentile per-packet one-way delay: 86.401 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 77.77 Mbit/s
95th percentile per-packet one-way delay: 86.401 ms
Loss rate: 0.02%
```
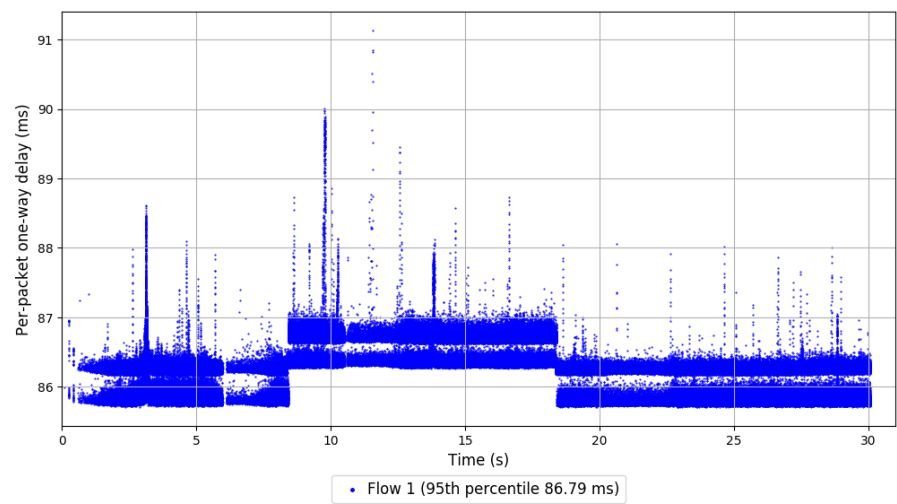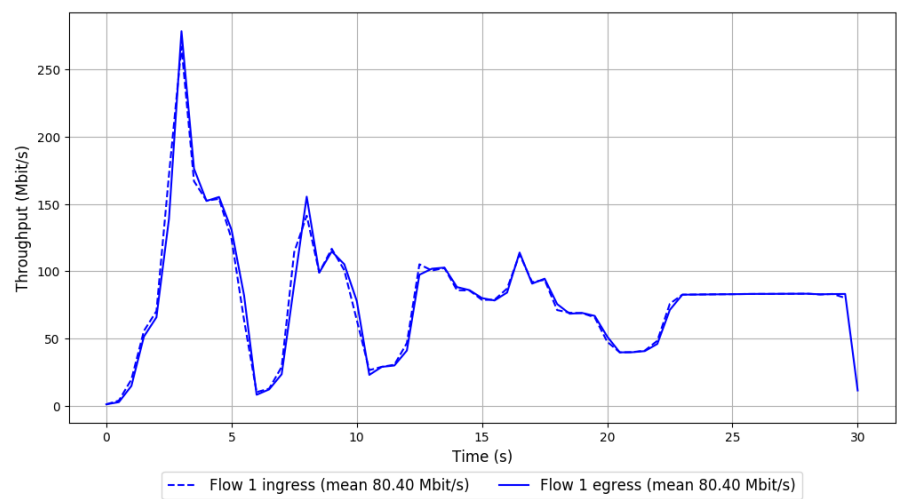
Run 3: Report of Copa — Data Link

Flow 1 ingress (mean 77.79 Mbit/s) ----   Flow 1 egress (mean 77.77 Mbit/s)

• Flow 1 (95th percentile 86.40 ms)

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```
Run 4: Statistics of Copa

Start at: 2018-02-19 20:14:29
End at: 2018-02-19 20:14:59

# Below is generated by plot.py at 2018-02-19 23:59:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 80.40 Mbit/s
95th percentile per-packet one-way delay: 86.786 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 80.40 Mbit/s
95th percentile per-packet one-way delay: 86.786 ms
Loss rate: 0.00%
```
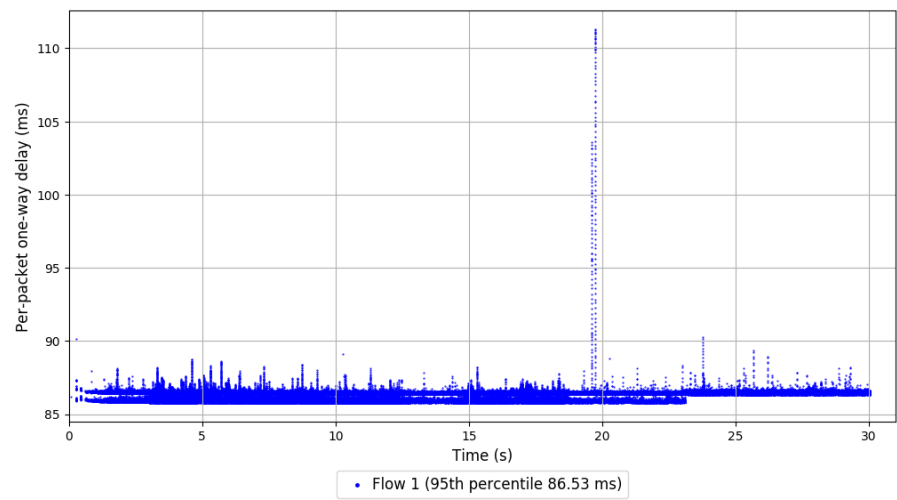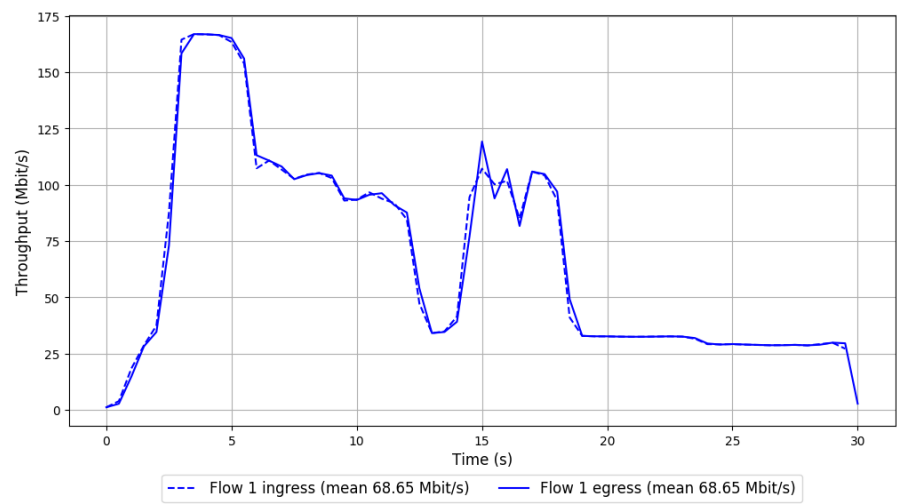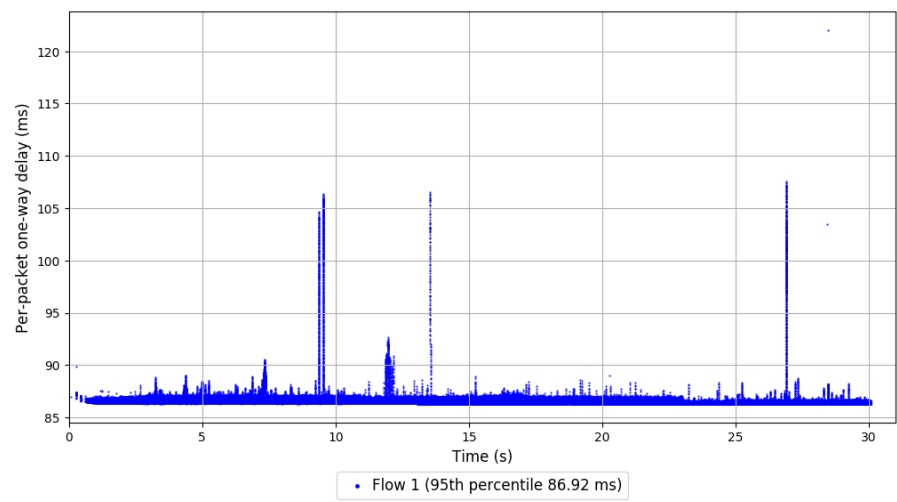
Run 4: Report of Copa — Data Link

Flow 1 ingress (mean 80.40 Mbit/s)   Flow 1 egress (mean 80.40 Mbit/s)

• Flow 1 (95th percentile 86.79 ms)

```
Run 5: Statistics of Copa

Start at: 2018-02-19 20:30:05
End at: 2018-02-19 20:30:35

# Below is generated by plot.py at 2018-02-19 23:59:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 68.65 Mbit/s
95th percentile per-packet one-way delay: 86.531 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 68.65 Mbit/s
95th percentile per-packet one-way delay: 86.531 ms
Loss rate: 0.00%
```
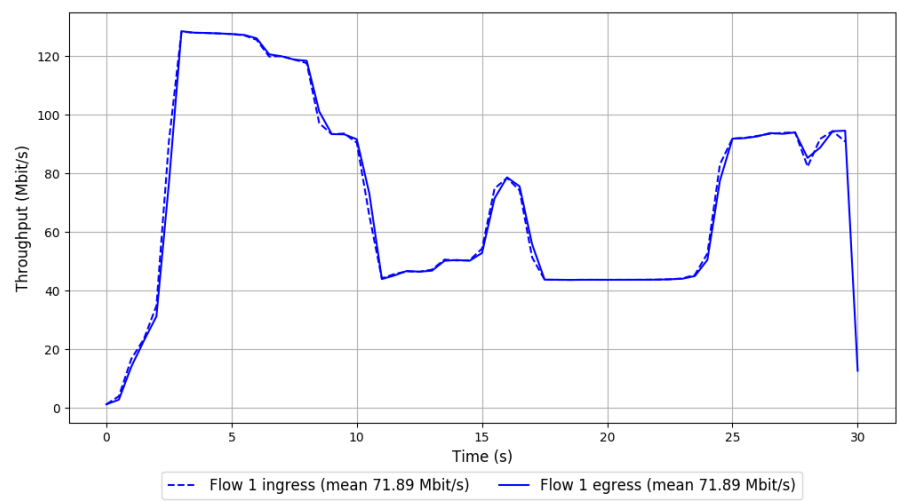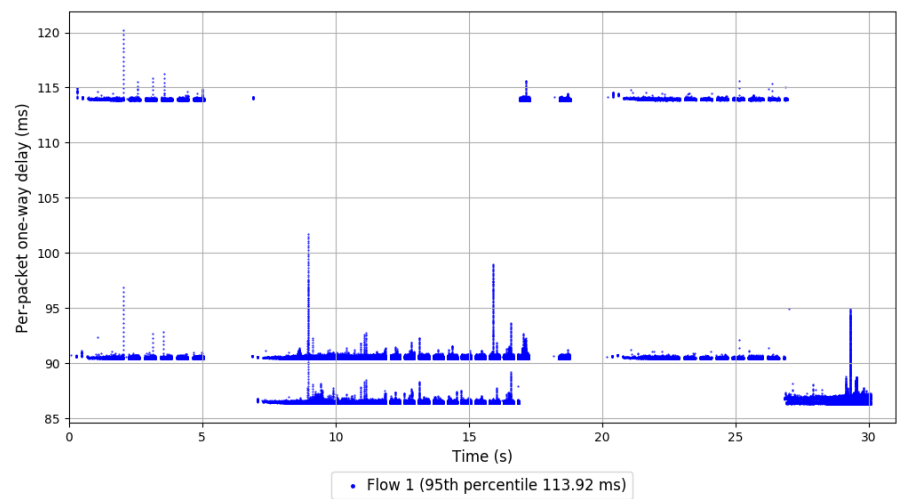
Run 5: Report of Copa — Data Link

```
Run 6: Statistics of Copa

Start at: 2018-02-19 20:45:15
End at: 2018-02-19 20:45:45

# Below is generated by plot.py at 2018-02-19 23:59:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 71.89 Mbit/s
95th percentile per-packet one-way delay: 86.922 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 71.89 Mbit/s
95th percentile per-packet one-way delay: 86.922 ms
Loss rate: 0.00%
```
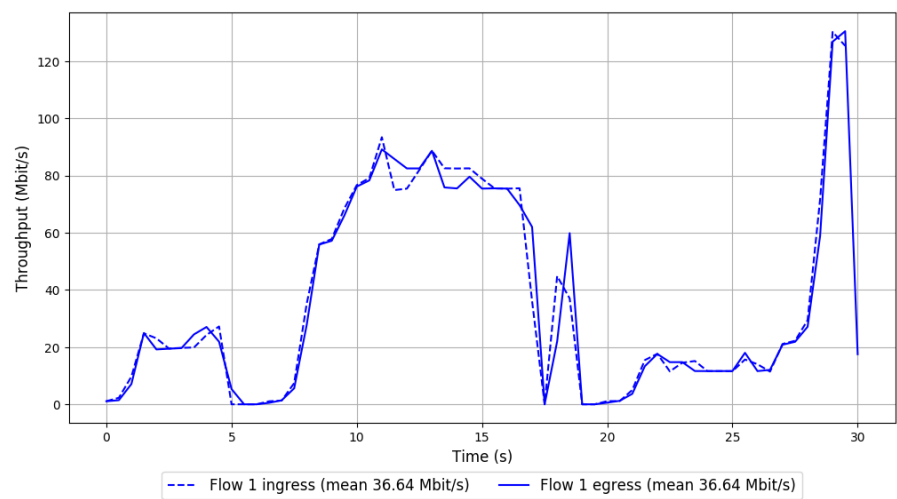
Run 6: Report of Copa — Data Link

```
Run 7: Statistics of Copa

Start at: 2018-02-19 21:00:41
End at: 2018-02-19 21:01:11

# Below is generated by plot.py at 2018-02-19 23:59:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 36.64 Mbit/s
95th percentile per-packet one-way delay: 113.925 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 36.64 Mbit/s
95th percentile per-packet one-way delay: 113.925 ms
Loss rate: 0.00%
```
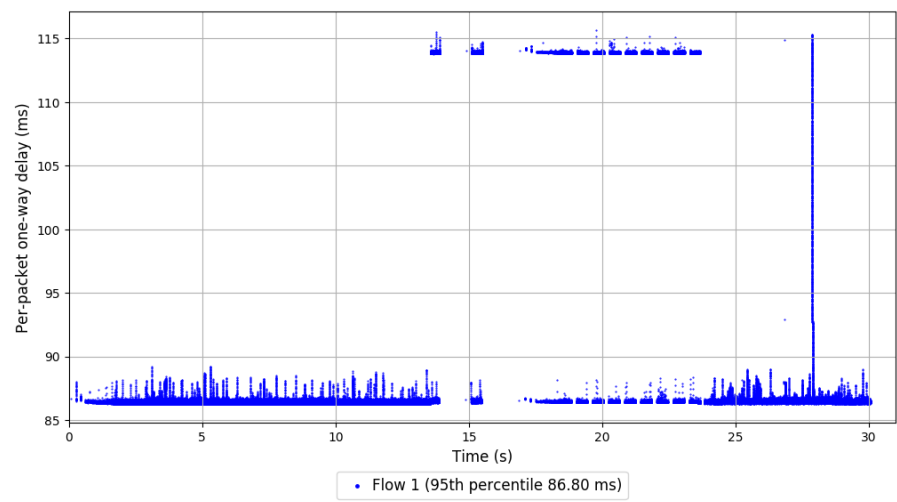
Run 7: Report of Copa — Data Link

```
Run 8: Statistics of Copa

Start at: 2018-02-19 21:15:34
End at: 2018-02-19 21:16:04

# Below is generated by plot.py at 2018-02-20 00:00:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 74.14 Mbit/s
95th percentile per-packet one-way delay: 86.795 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 74.14 Mbit/s
95th percentile per-packet one-way delay: 86.795 ms
Loss rate: 0.00%
```
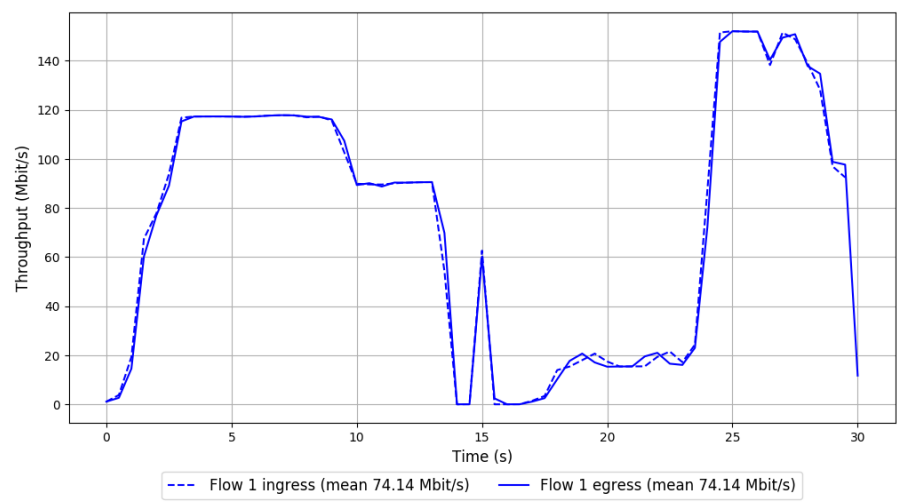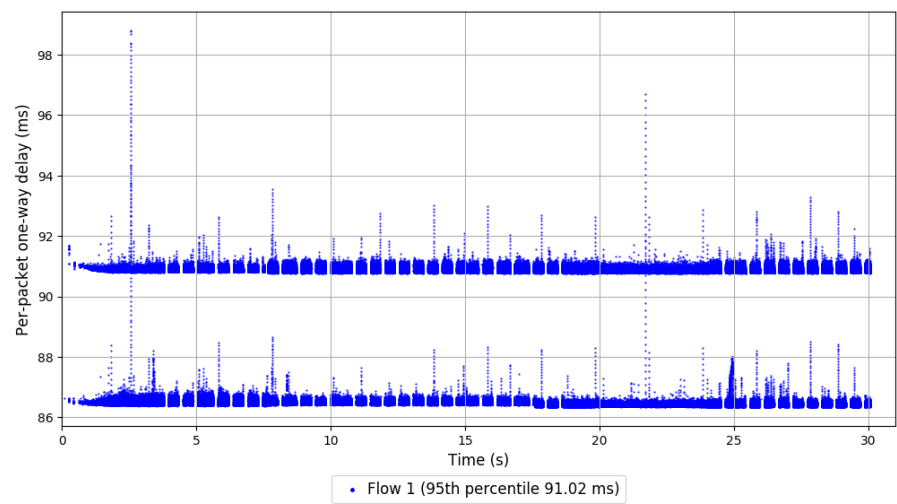
Run 8: Report of Copa — Data Link

```
Run 9: Statistics of Copa

Start at: 2018-02-19 21:30:30
End at: 2018-02-19 21:31:00

# Below is generated by plot.py at 2018-02-20 00:00:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 72.56 Mbit/s
95th percentile per-packet one-way delay: 91.017 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 72.56 Mbit/s
95th percentile per-packet one-way delay: 91.017 ms
Loss rate: 0.00%
```
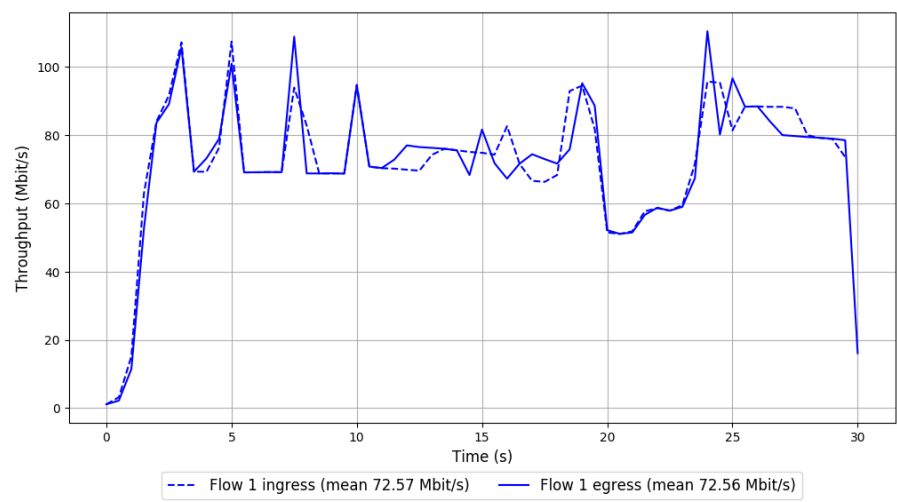
Run 9: Report of Copa — Data Link

```
Run 10: Statistics of Copa

Start at: 2018-02-19 21:45:35
End at: 2018-02-19 21:46:05

# Below is generated by plot.py at 2018-02-20 00:02:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 133.05 Mbit/s
95th percentile per-packet one-way delay: 326.333 ms
Loss rate: 29.14%
-- Flow 1:
Average throughput: 133.05 Mbit/s
95th percentile per-packet one-way delay: 326.333 ms
Loss rate: 29.14%
```
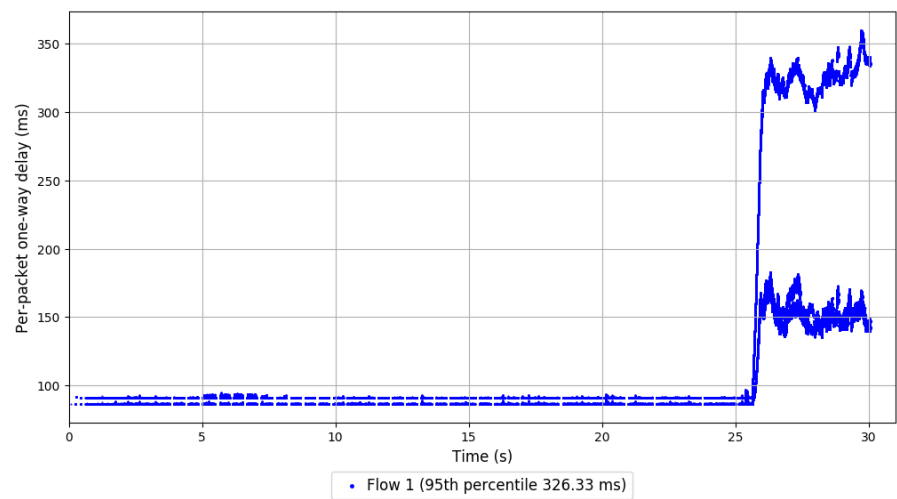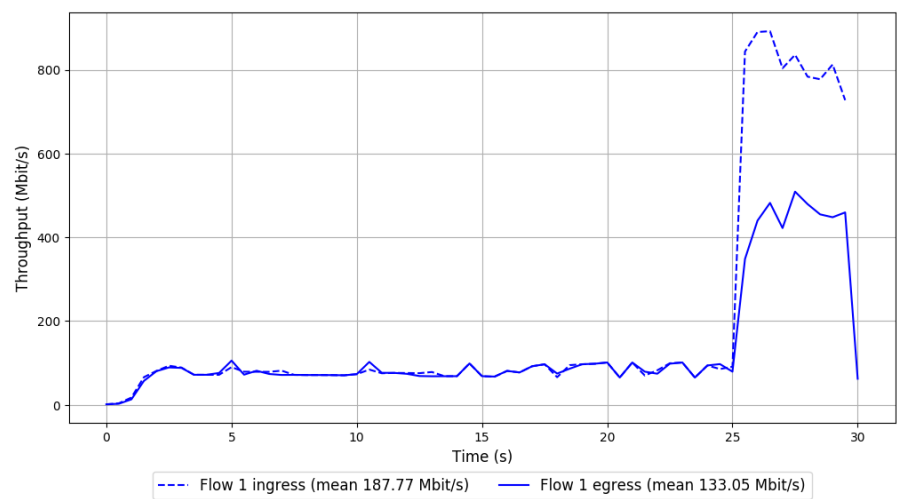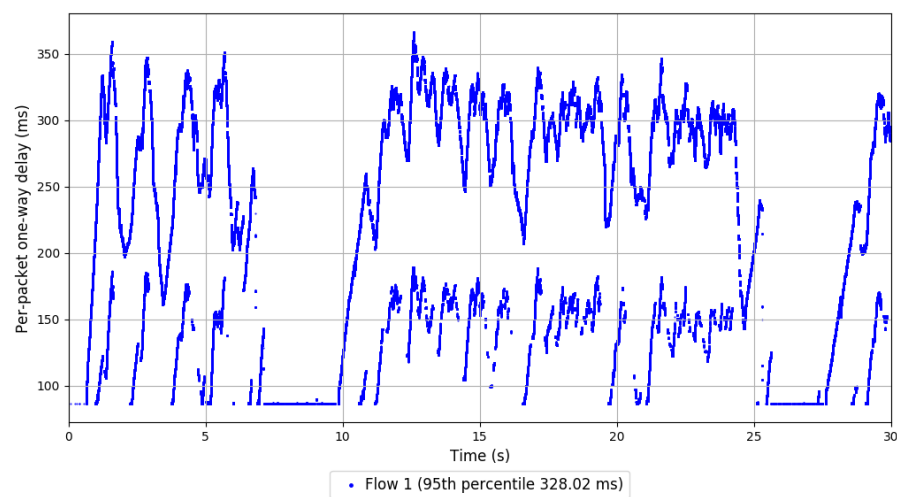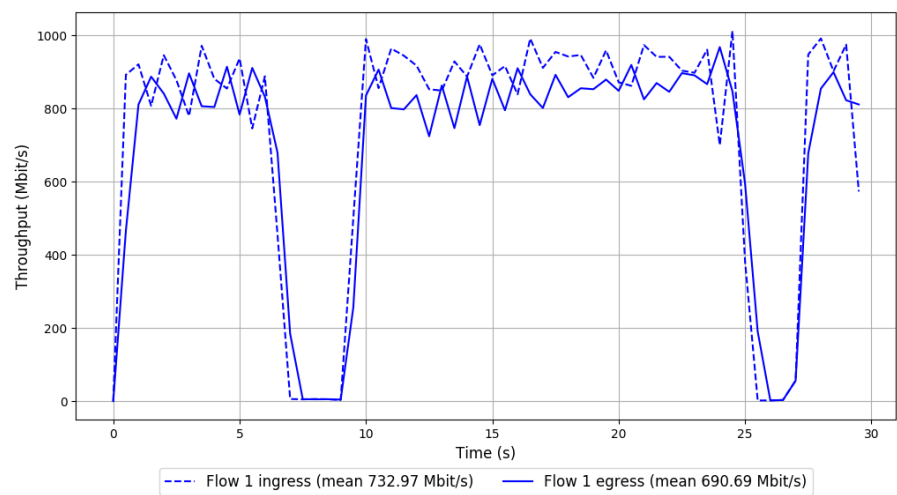
Run 10: Report of Copa — Data Link

```
Run 1: Statistics of FillP

Start at: 2018-02-19 19:21:15
End at: 2018-02-19 19:21:45

# Below is generated by plot.py at 2018-02-20 00:10:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 690.69 Mbit/s
95th percentile per-packet one-way delay: 328.020 ms
Loss rate: 5.79%
-- Flow 1:
Average throughput: 690.69 Mbit/s
95th percentile per-packet one-way delay: 328.020 ms
Loss rate: 5.79%
```

Run 1: Report of FillP — Data Link

```
Run 2: Statistics of FillP

Start at: 2018-02-19 19:36:05
End at: 2018-02-19 19:36:35

# Below is generated by plot.py at 2018-02-20 00:11:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 675.23 Mbit/s
95th percentile per-packet one-way delay: 340.775 ms
Loss rate: 11.72%
-- Flow 1:
Average throughput: 675.23 Mbit/s
95th percentile per-packet one-way delay: 340.775 ms
Loss rate: 11.72%
```
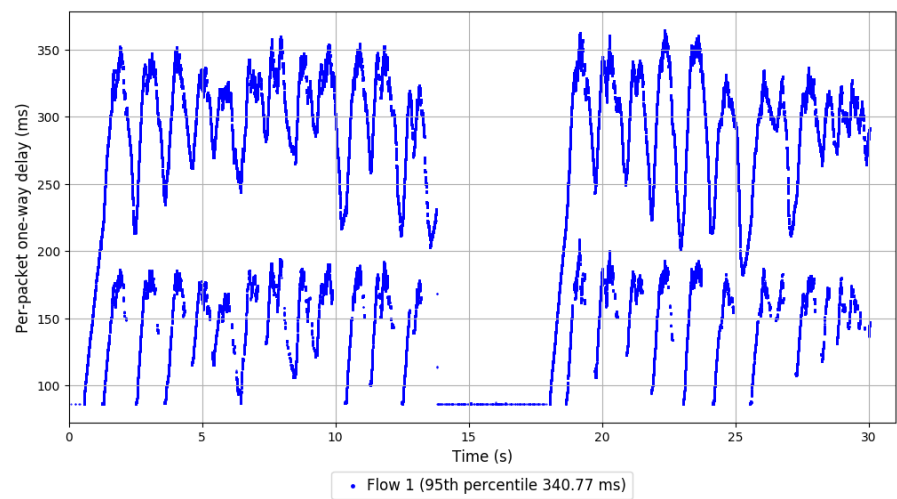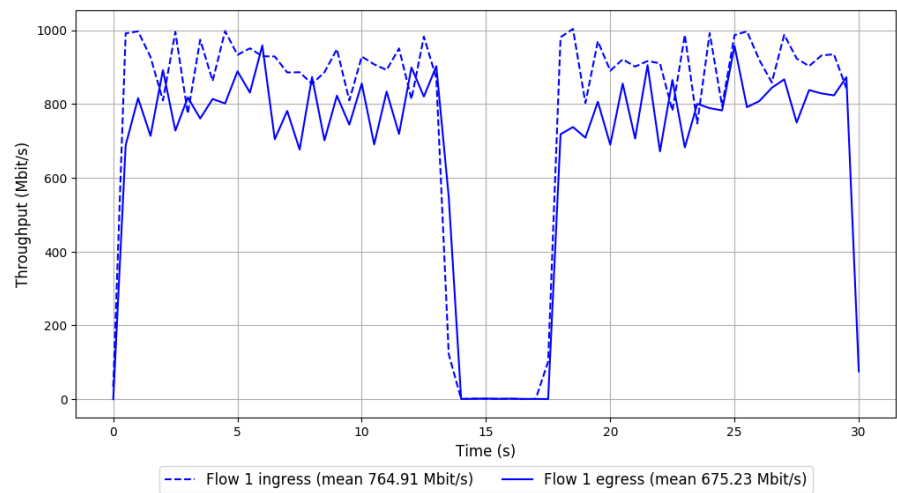
Run 2: Report of FillP — Data Link

```
Run 3: Statistics of FillP

Start at: 2018-02-19 19:51:14
End at: 2018-02-19 19:51:44

# Below is generated by plot.py at 2018-02-20 00:13:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 770.80 Mbit/s
95th percentile per-packet one-way delay: 334.159 ms
Loss rate: 7.85%
-- Flow 1:
Average throughput: 770.80 Mbit/s
95th percentile per-packet one-way delay: 334.159 ms
Loss rate: 7.85%
```
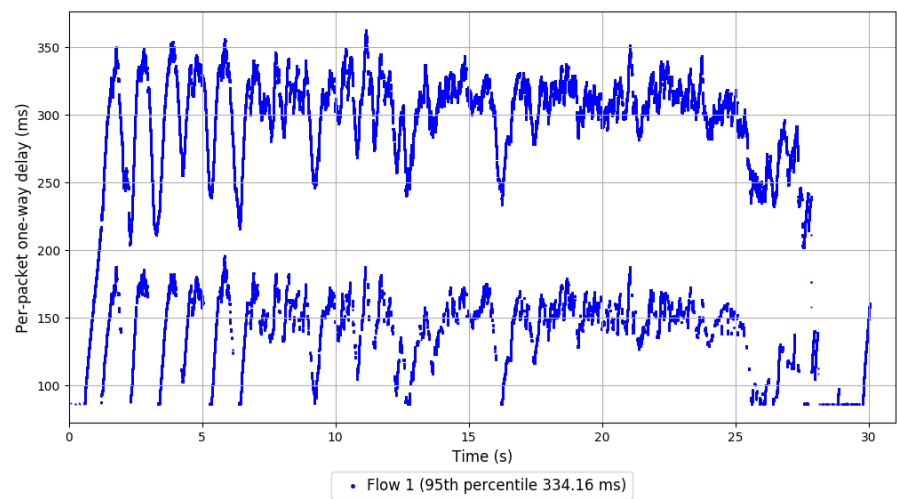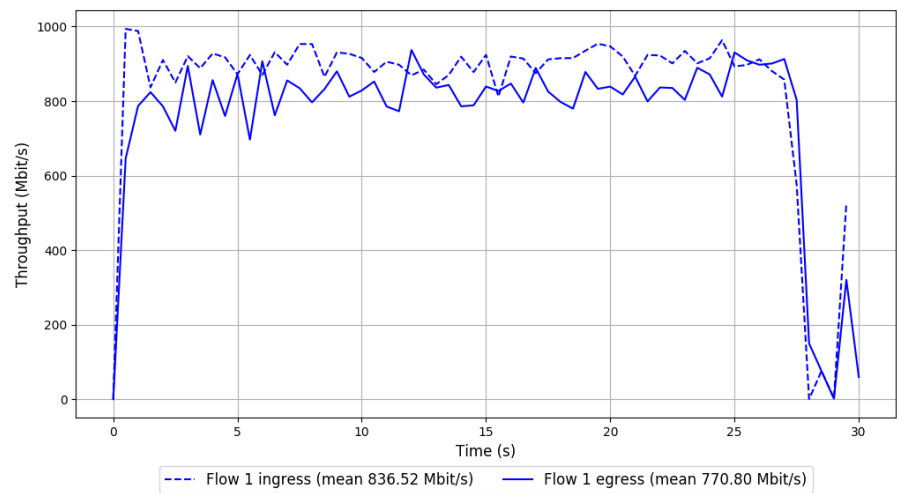
Run 3: Report of FillP — Data Link

Flow 1 ingress (mean 836.52 Mbit/s) ---- Flow 1 egress (mean 770.80 Mbit/s)

• Flow 1 (95th percentile 334.16 ms)

```
Run 4: Statistics of FillP

Start at: 2018-02-19 20:06:40
End at: 2018-02-19 20:07:10

# Below is generated by plot.py at 2018-02-20 00:13:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 619.28 Mbit/s
95th percentile per-packet one-way delay: 331.321 ms
Loss rate: 4.41%
-- Flow 1:
Average throughput: 619.28 Mbit/s
95th percentile per-packet one-way delay: 331.321 ms
Loss rate: 4.41%
```
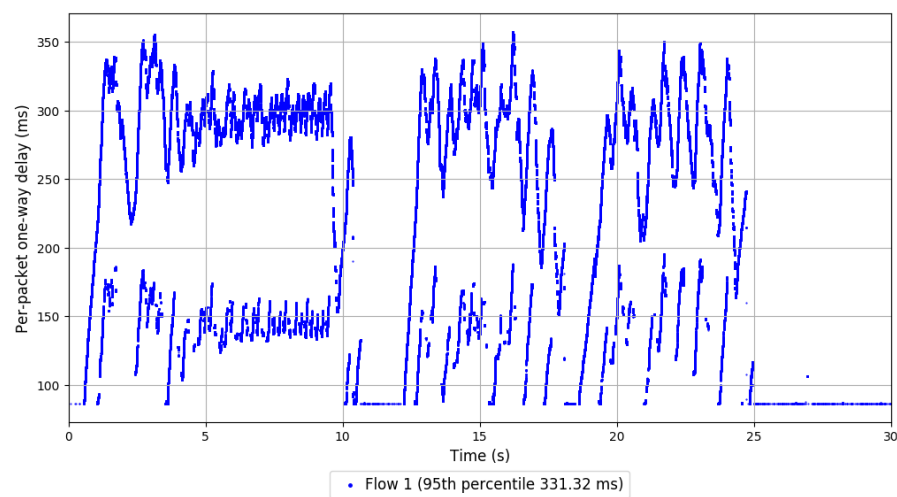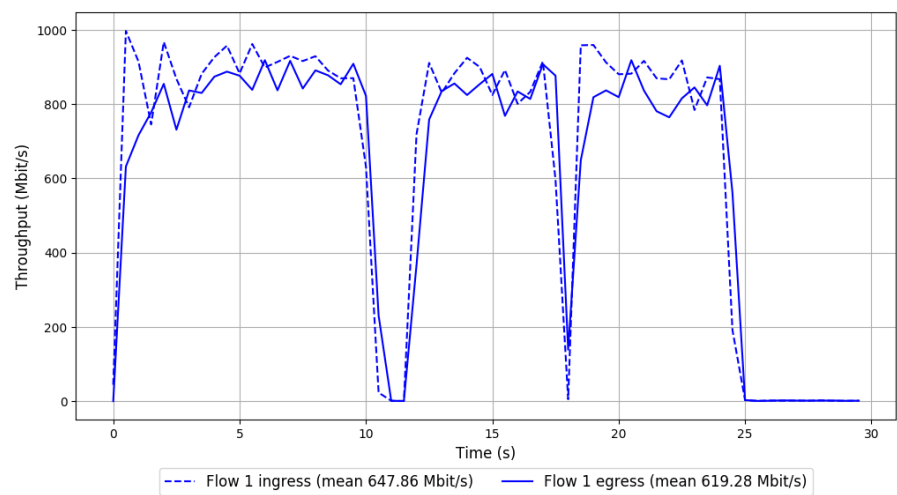
Run 4: Report of FillP — Data Link

```
Run 5: Statistics of FillP

Start at: 2018-02-19 20:21:53
End at: 2018-02-19 20:22:23

# Below is generated by plot.py at 2018-02-20 00:15:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 845.19 Mbit/s
95th percentile per-packet one-way delay: 329.880 ms
Loss rate: 3.95%
-- Flow 1:
Average throughput: 845.19 Mbit/s
95th percentile per-packet one-way delay: 329.880 ms
Loss rate: 3.95%
```
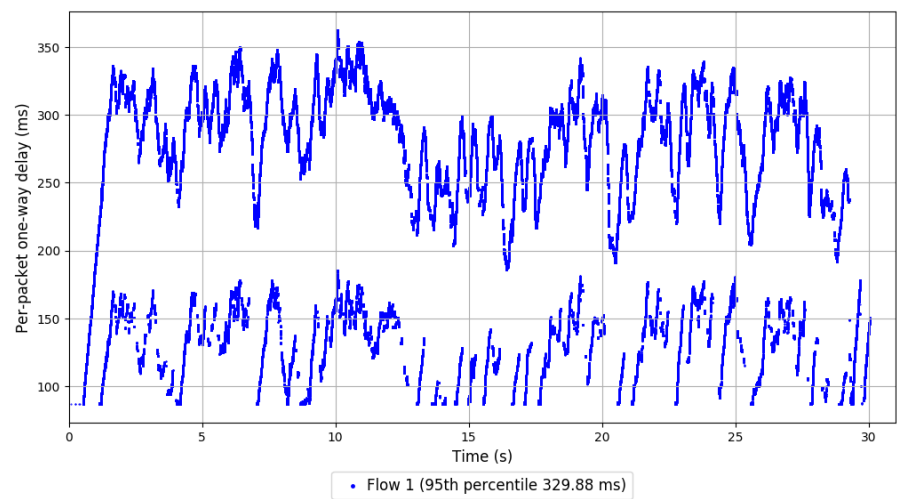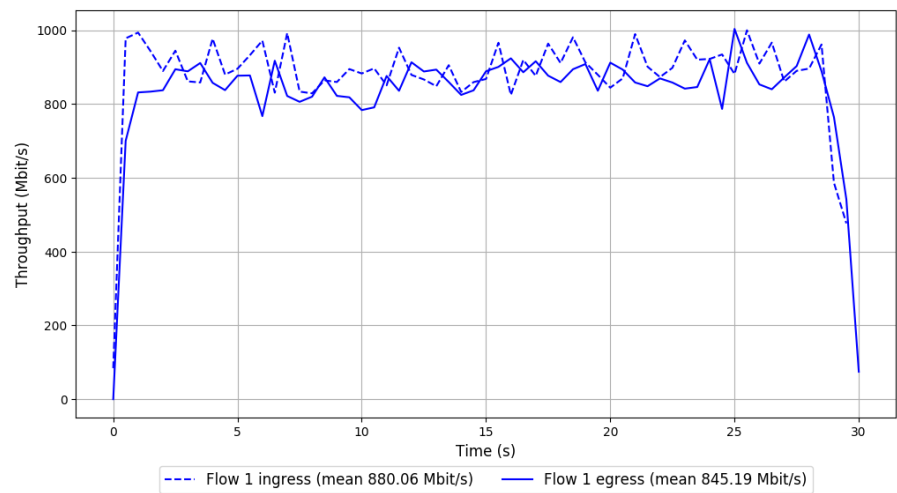
Run 5: Report of FillP — Data Link

```
Run 6: Statistics of FillP

Start at: 2018-02-19 20:37:24
End at: 2018-02-19 20:37:54

# Below is generated by plot.py at 2018-02-20 00:15:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 817.41 Mbit/s
95th percentile per-packet one-way delay: 330.496 ms
Loss rate: 8.91%
-- Flow 1:
Average throughput: 817.41 Mbit/s
95th percentile per-packet one-way delay: 330.496 ms
Loss rate: 8.91%
```
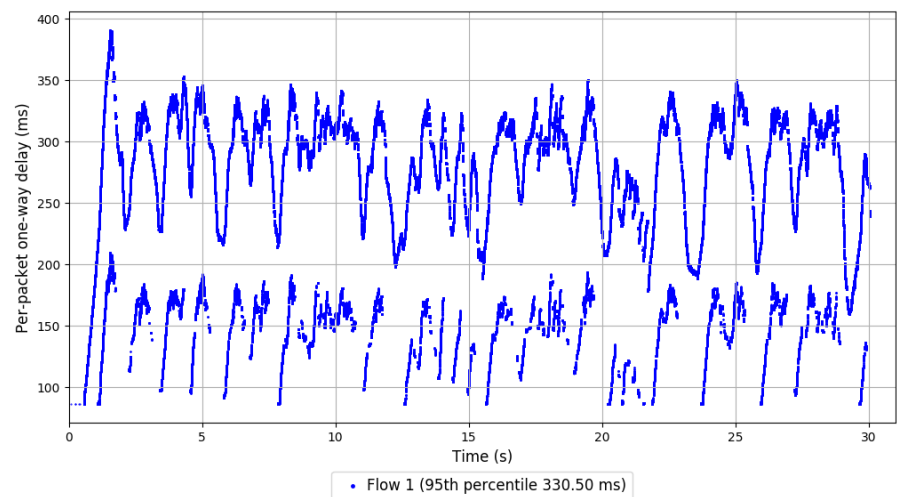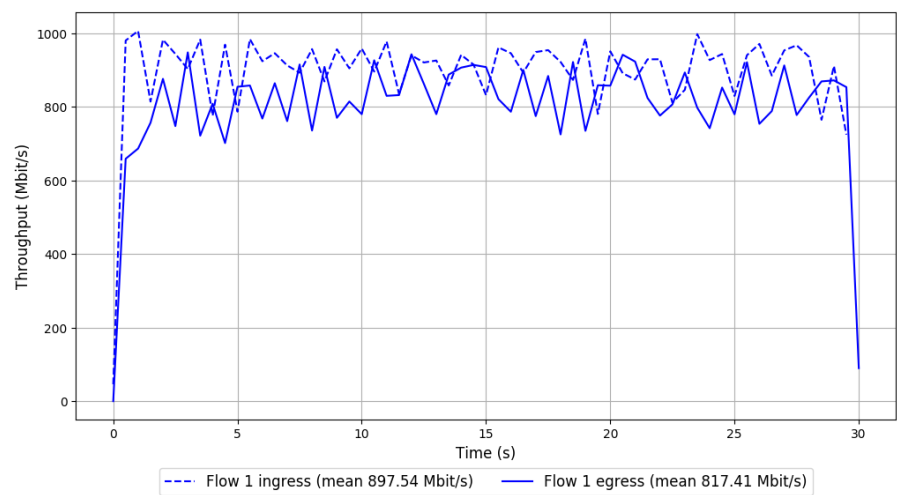
Run 6: Report of FillP — Data Link

Flow 1 ingress (mean 897.54 Mbit/s) --- Flow 1 egress (mean 817.41 Mbit/s)

• Flow 1 (95th percentile 330.50 ms)

```
Run 7: Statistics of FillP

Start at: 2018-02-19 20:52:37
End at: 2018-02-19 20:53:07

# Below is generated by plot.py at 2018-02-20 00:16:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 817.47 Mbit/s
95th percentile per-packet one-way delay: 326.409 ms
Loss rate: 9.84%
-- Flow 1:
Average throughput: 817.47 Mbit/s
95th percentile per-packet one-way delay: 326.409 ms
Loss rate: 9.84%
```
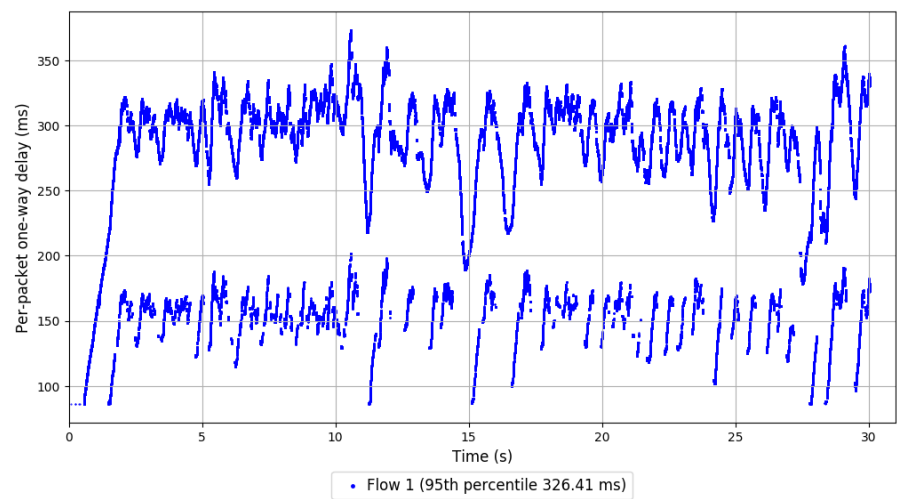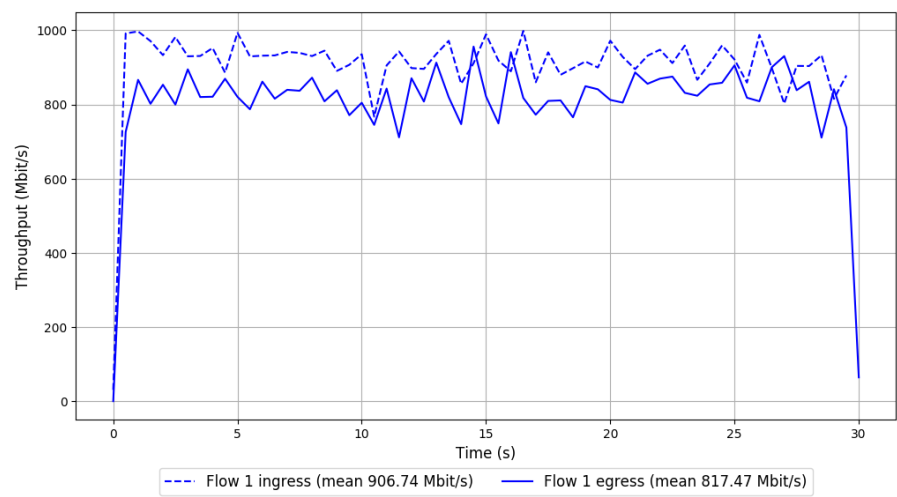
Run 7: Report of FillP — Data Link

```
Run 8: Statistics of FillP

Start at: 2018-02-19 21:07:39
End at: 2018-02-19 21:08:09

# Below is generated by plot.py at 2018-02-20 00:18:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 810.19 Mbit/s
95th percentile per-packet one-way delay: 333.791 ms
Loss rate: 4.17%
-- Flow 1:
Average throughput: 810.19 Mbit/s
95th percentile per-packet one-way delay: 333.791 ms
Loss rate: 4.17%
```
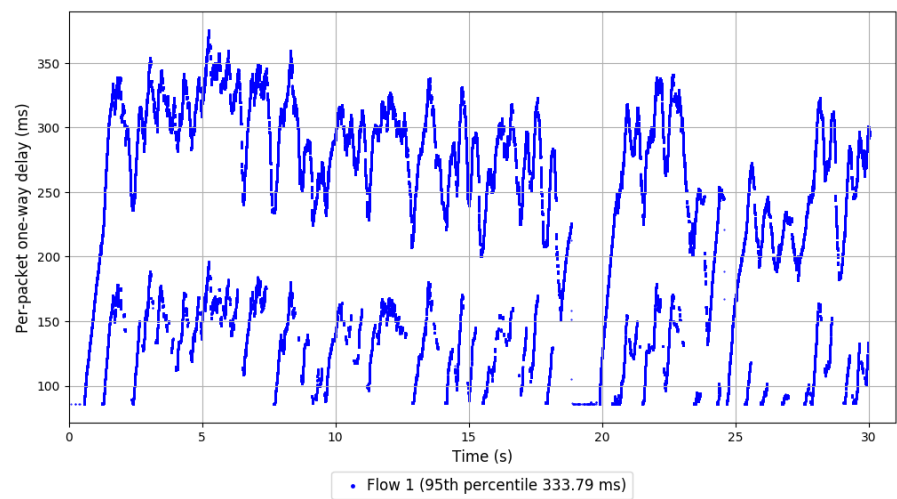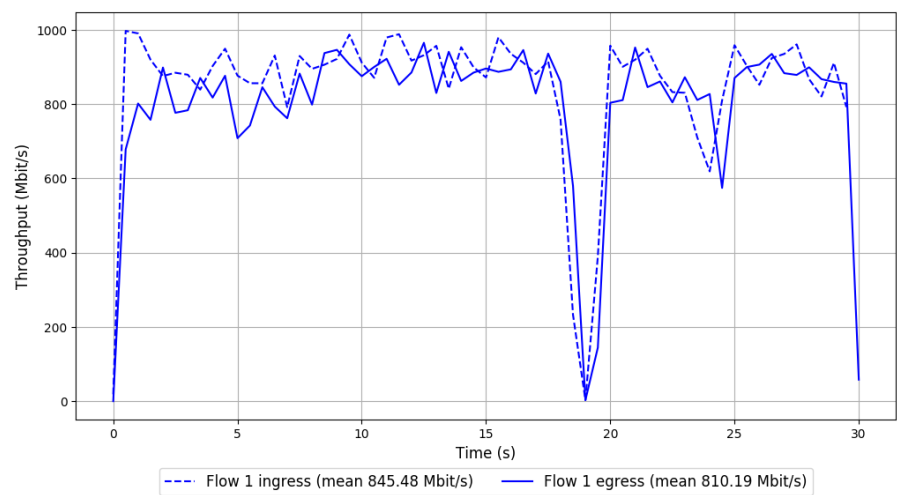
Run 8: Report of FillP — Data Link

```
Run 9: Statistics of FillP

Start at: 2018-02-19 21:22:45
End at: 2018-02-19 21:23:15

# Below is generated by plot.py at 2018-02-20 00:27:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 830.37 Mbit/s
95th percentile per-packet one-way delay: 320.601 ms
Loss rate: 4.39%
-- Flow 1:
Average throughput: 830.37 Mbit/s
95th percentile per-packet one-way delay: 320.601 ms
Loss rate: 4.39%
```
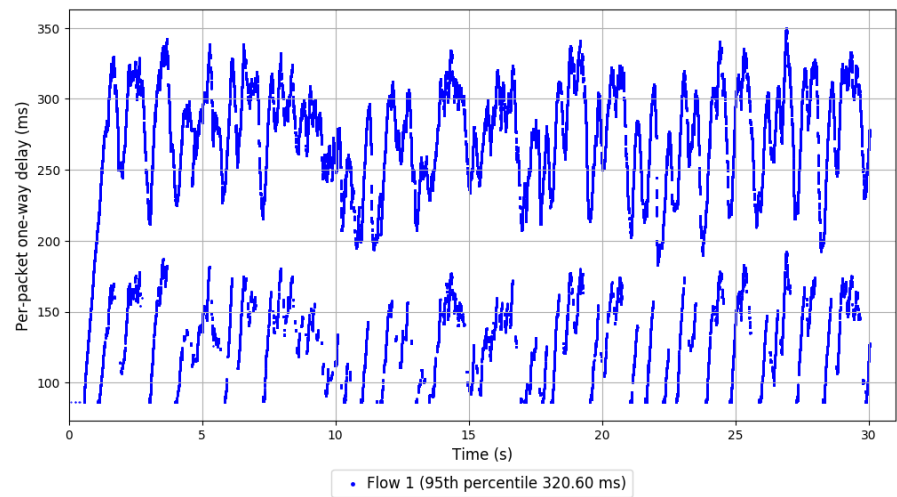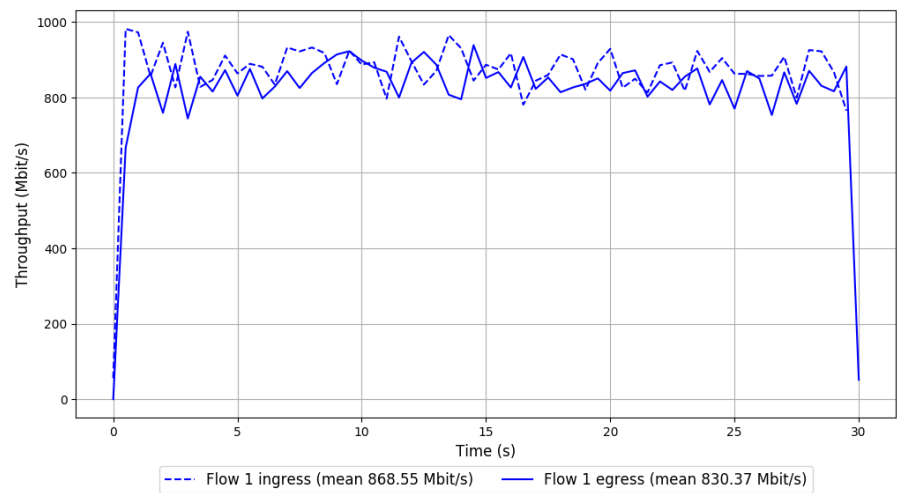
Run 9: Report of FillP — Data Link

```
Run 10: Statistics of FillP

Start at: 2018-02-19 21:37:50
End at: 2018-02-19 21:38:20

# Below is generated by plot.py at 2018-02-20 00:27:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 788.26 Mbit/s
95th percentile per-packet one-way delay: 335.533 ms
Loss rate: 8.53%
-- Flow 1:
Average throughput: 788.26 Mbit/s
95th percentile per-packet one-way delay: 335.533 ms
Loss rate: 8.53%
```
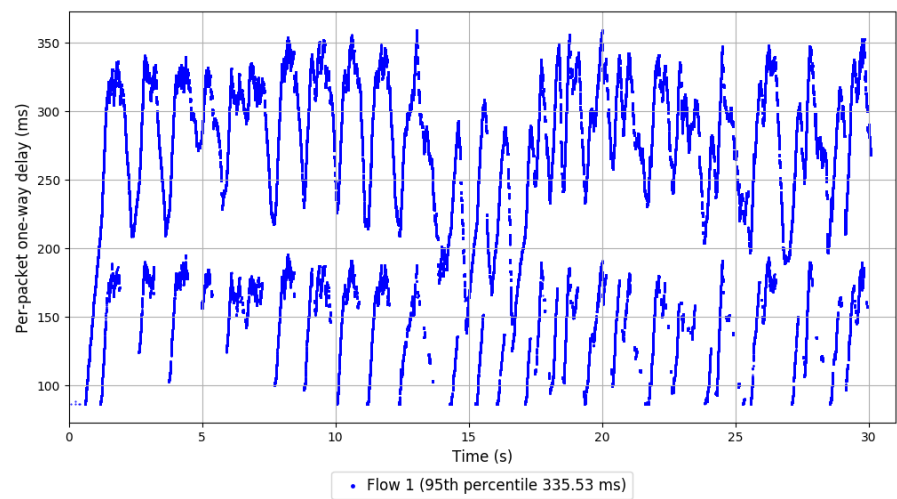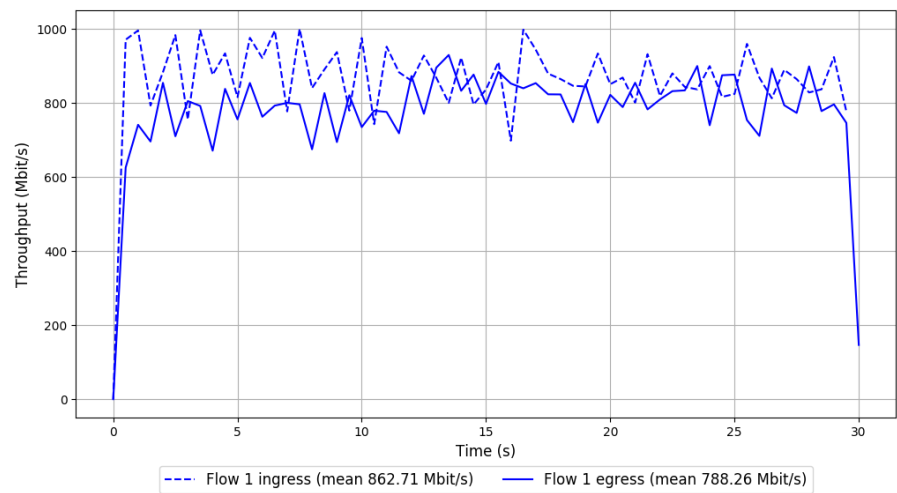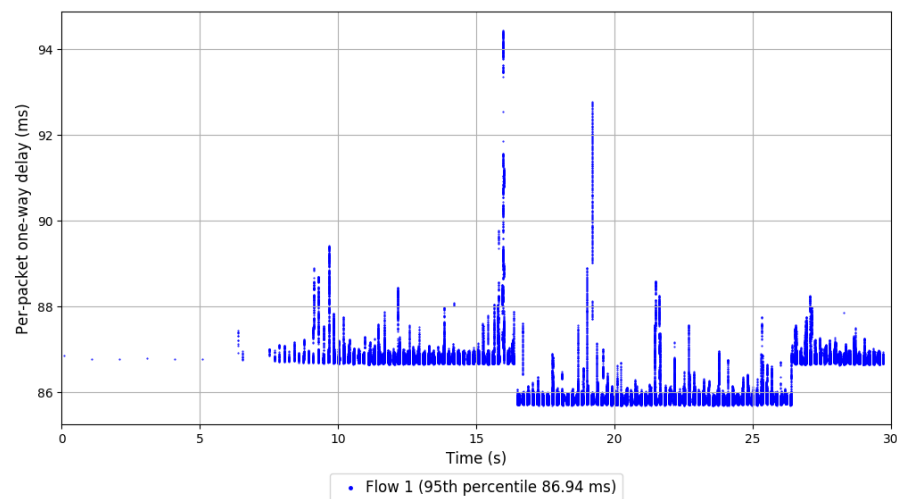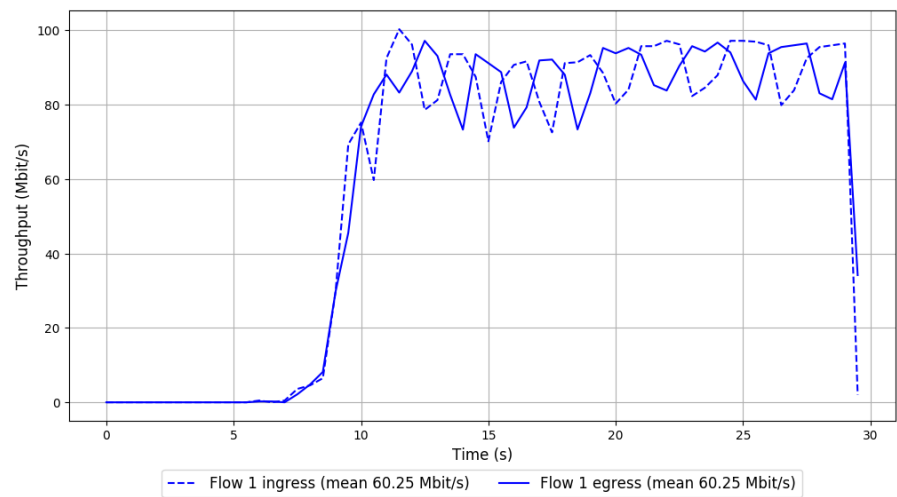
Run 10: Report of FillP — Data Link

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```
Run 1: Statistics of Indigo-1-32

Start at: 2018-02-19 19:30:31
End at: 2018-02-19 19:31:01

# Below is generated by plot.py at 2018-02-20 00:27:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 60.25 Mbit/s
95th percentile per-packet one-way delay: 86.938 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 60.25 Mbit/s
95th percentile per-packet one-way delay: 86.938 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo-1-32 — Data Link

```
Run 2: Statistics of Indigo-1-32

Start at: 2018-02-19 19:45:41
End at: 2018-02-19 19:46:11


# Below is generated by plot.py at 2018-02-20 00:27:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 210.49 Mbit/s
95th percentile per-packet one-way delay: 86.925 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 210.49 Mbit/s
95th percentile per-packet one-way delay: 86.925 ms
Loss rate: 0.00%
```
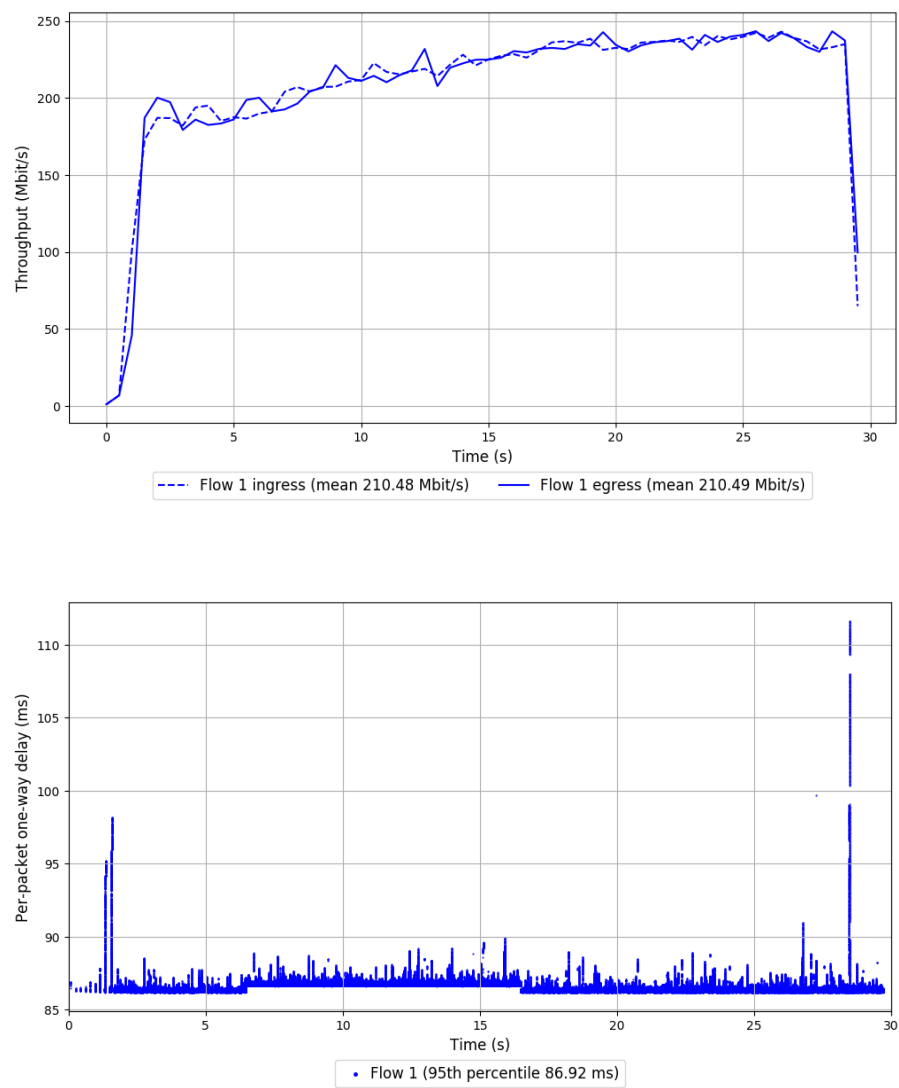
Run 2: Report of Indigo-1-32 — Data Link

```
Run 3: Statistics of Indigo-1-32

Start at: 2018-02-19 20:00:57
End at: 2018-02-19 20:01:28

# Below is generated by plot.py at 2018-02-20 00:27:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 202.77 Mbit/s
95th percentile per-packet one-way delay: 86.531 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 202.77 Mbit/s
95th percentile per-packet one-way delay: 86.531 ms
Loss rate: 0.00%
```
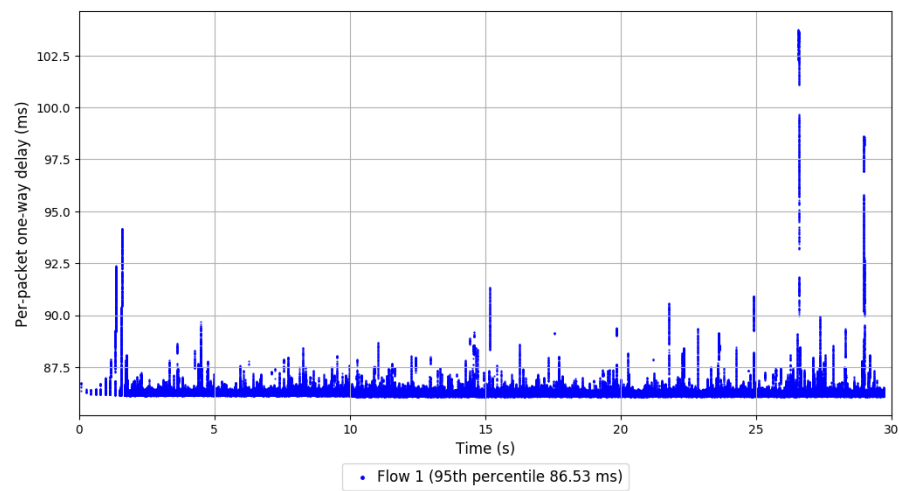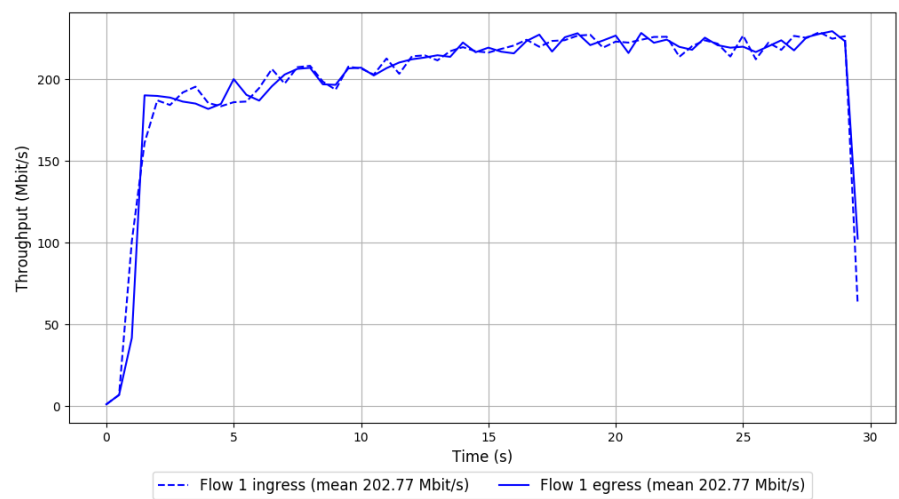
Run 3: Report of Indigo-1-32 — Data Link

```
Run 4: Statistics of Indigo-1-32

Start at: 2018-02-19 20:16:08
End at: 2018-02-19 20:16:38

# Below is generated by plot.py at 2018-02-20 00:27:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 195.38 Mbit/s
95th percentile per-packet one-way delay: 86.589 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 195.38 Mbit/s
95th percentile per-packet one-way delay: 86.589 ms
Loss rate: 0.00%
```
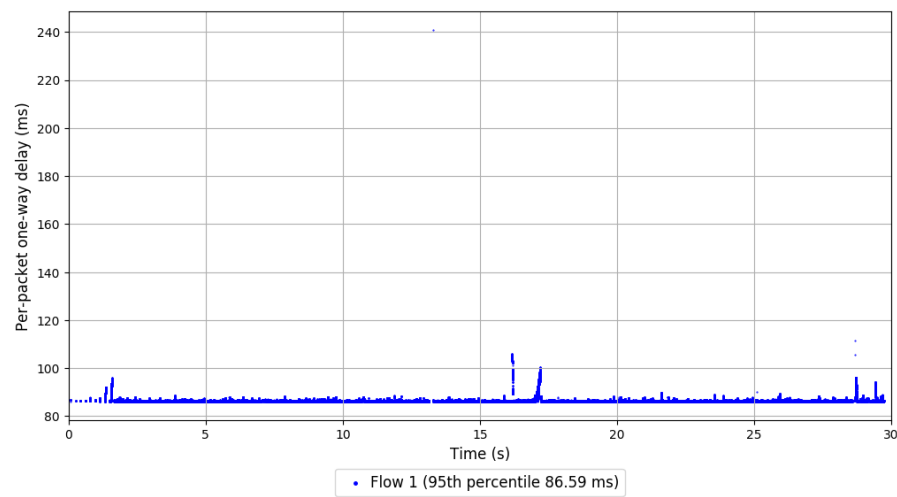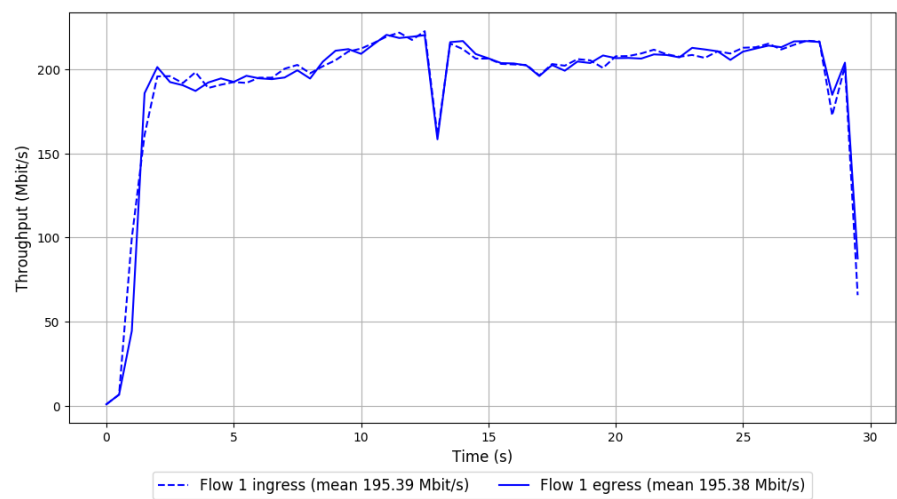
Run 4: Report of Indigo-1-32 — Data Link

```
Run 5: Statistics of Indigo-1-32

Start at: 2018-02-19 20:31:42
End at: 2018-02-19 20:32:12

# Below is generated by plot.py at 2018-02-20 00:27:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 206.25 Mbit/s
95th percentile per-packet one-way delay: 86.624 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 206.25 Mbit/s
95th percentile per-packet one-way delay: 86.624 ms
Loss rate: 0.00%
```
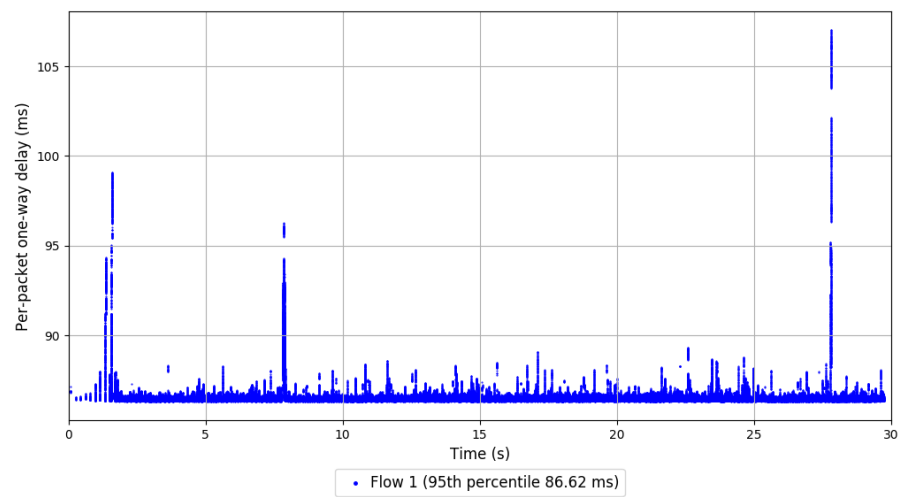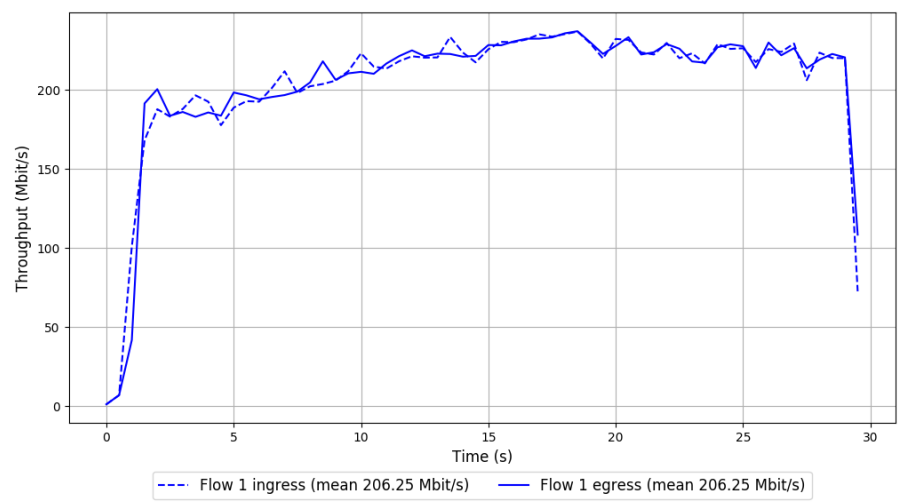
Run 5: Report of Indigo-1-32 — Data Link

Flow 1 ingress (mean 206.25 Mbit/s) --- Flow 1 egress (mean 206.25 Mbit/s)
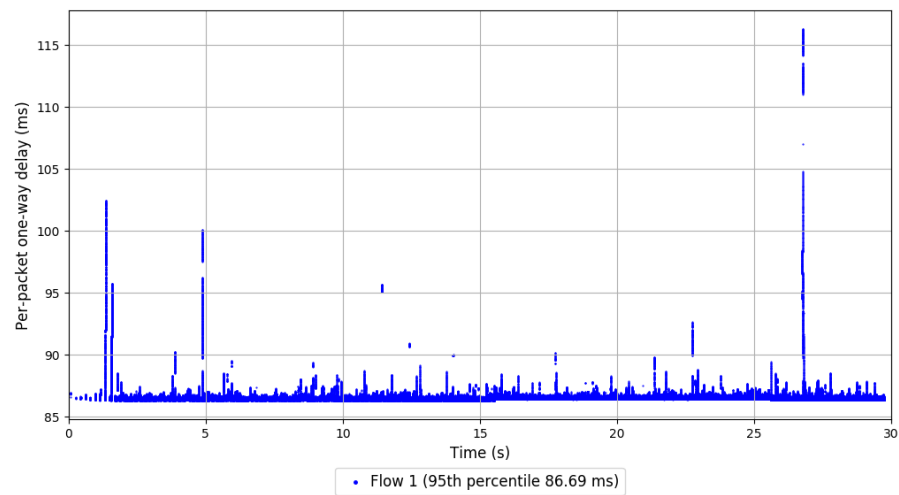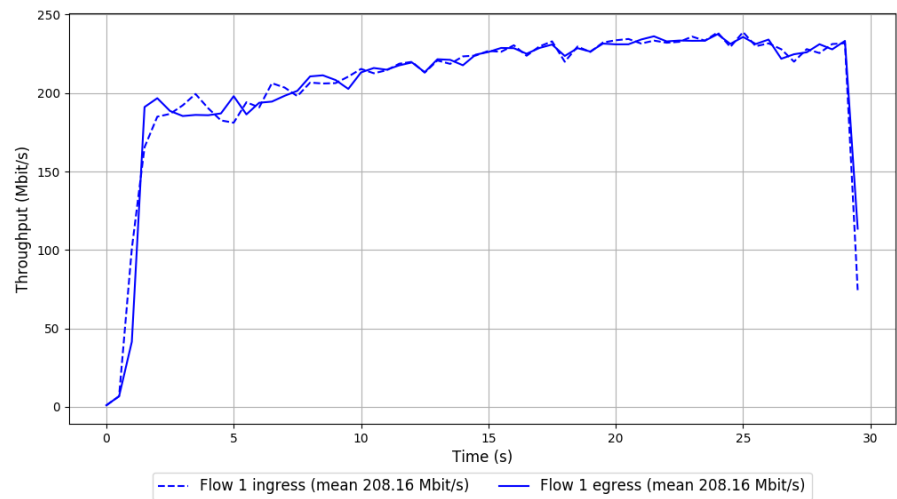

Flow 1 (95th percentile 86.62 ms)

273

```
Run 6: Statistics of Indigo-1-32

Start at: 2018-02-19 20:46:52
End at: 2018-02-19 20:47:22

# Below is generated by plot.py at 2018-02-20 00:27:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 208.16 Mbit/s
95th percentile per-packet one-way delay: 86.695 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 208.16 Mbit/s
95th percentile per-packet one-way delay: 86.695 ms
Loss rate: 0.00%
```

Run 6: Report of Indigo-1-32 — Data Link

```
Run 7: Statistics of Indigo-1-32

Start at: 2018-02-19 21:02:14
End at: 2018-02-19 21:02:44

# Below is generated by plot.py at 2018-02-20 00:27:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 168.58 Mbit/s
95th percentile per-packet one-way delay: 114.069 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 168.58 Mbit/s
95th percentile per-packet one-way delay: 114.069 ms
Loss rate: 0.00%
```
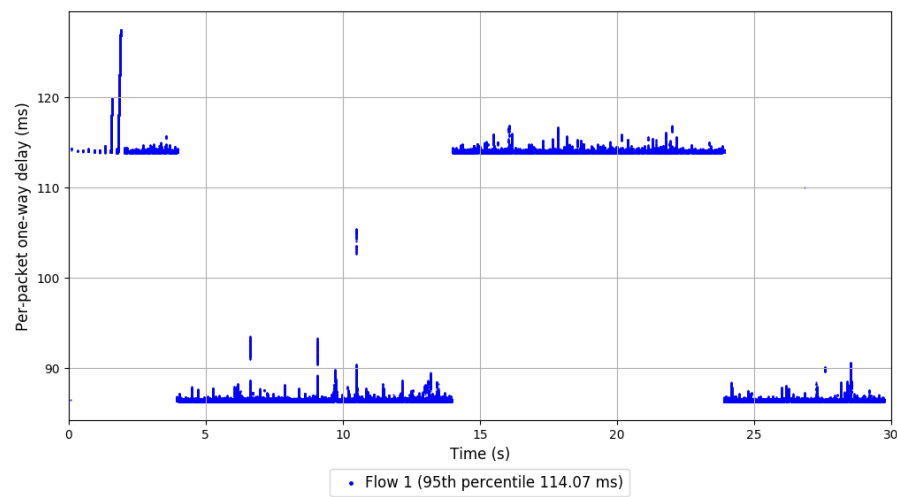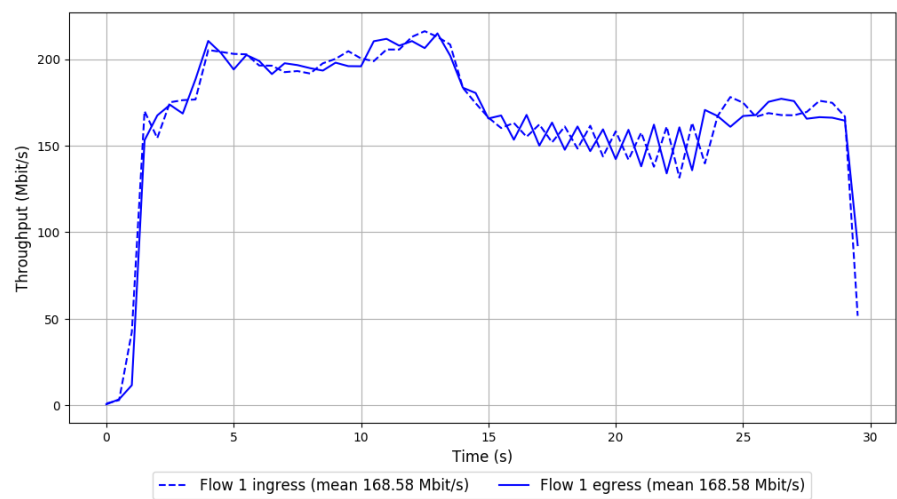
Run 7: Report of Indigo-1-32 — Data Link

```
Run 8: Statistics of Indigo-1-32

Start at: 2018-02-19 21:17:12
End at: 2018-02-19 21:17:42

# Below is generated by plot.py at 2018-02-20 00:27:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 177.87 Mbit/s
95th percentile per-packet one-way delay: 114.095 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 177.87 Mbit/s
95th percentile per-packet one-way delay: 114.095 ms
Loss rate: 0.06%
```
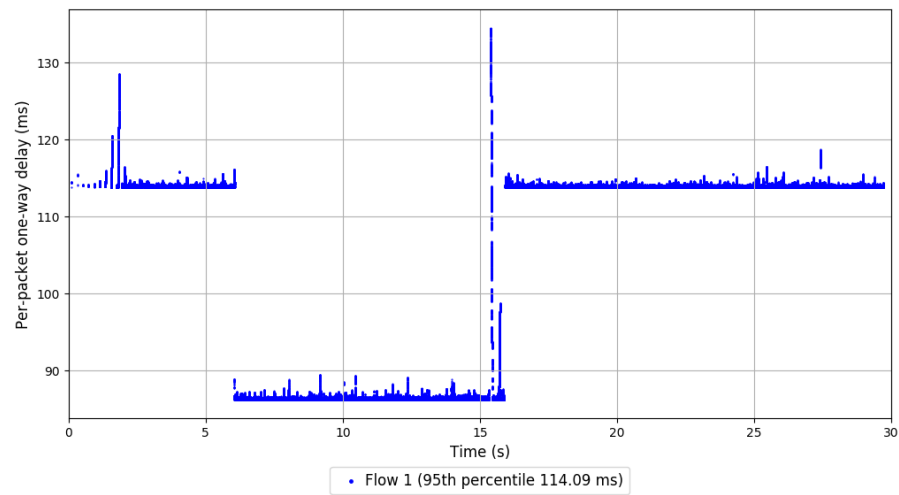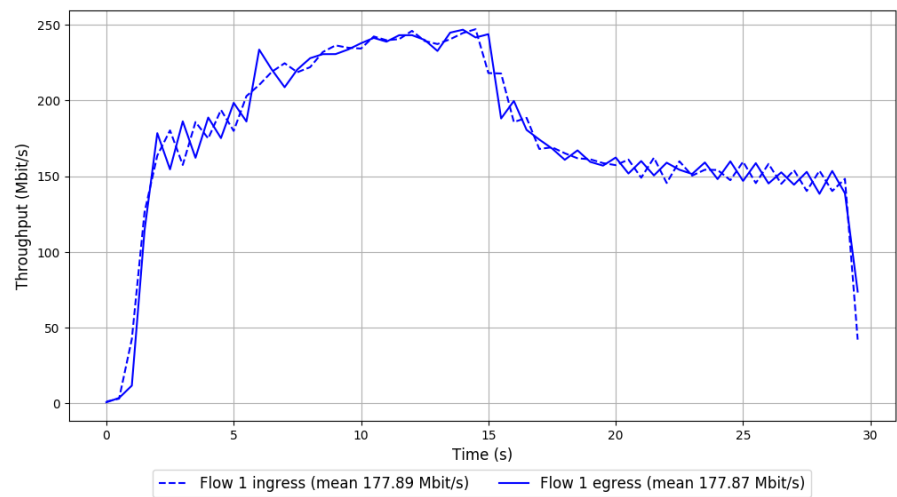
Run 8: Report of Indigo-1-32 — Data Link

Flow 1 ingress (mean 177.89 Mbit/s) ---- Flow 1 egress (mean 177.87 Mbit/s) ——

• Flow 1 (95th percentile 114.09 ms)

279

```
Run 9: Statistics of Indigo-1-32

Start at: 2018-02-19 21:32:05
End at: 2018-02-19 21:32:35

# Below is generated by plot.py at 2018-02-20 00:27:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 175.51 Mbit/s
95th percentile per-packet one-way delay: 91.305 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 175.51 Mbit/s
95th percentile per-packet one-way delay: 91.305 ms
Loss rate: 0.02%
```
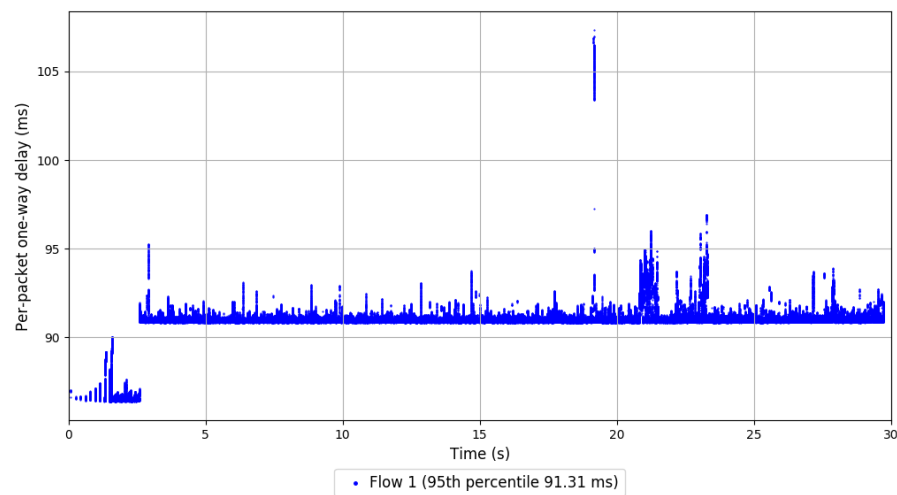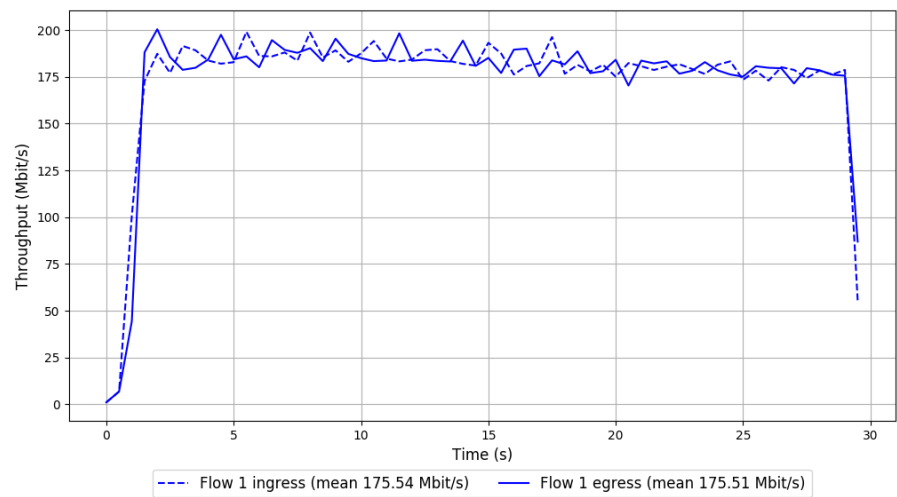
Run 9: Report of Indigo-1-32 — Data Link

```
Run 10: Statistics of Indigo-1-32

Start at: 2018-02-19 21:47:16
End at: 2018-02-19 21:47:46

# Below is generated by plot.py at 2018-02-20 00:27:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 189.53 Mbit/s
95th percentile per-packet one-way delay: 91.074 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 189.53 Mbit/s
95th percentile per-packet one-way delay: 91.074 ms
Loss rate: 0.00%
```
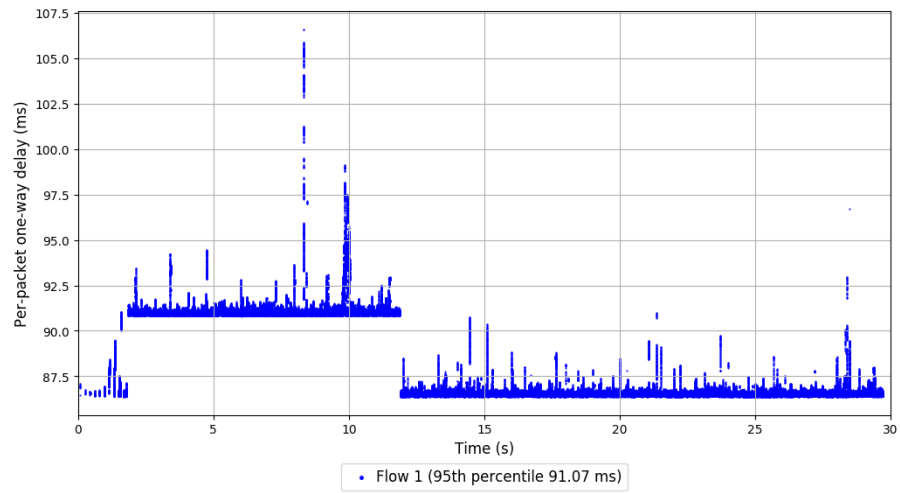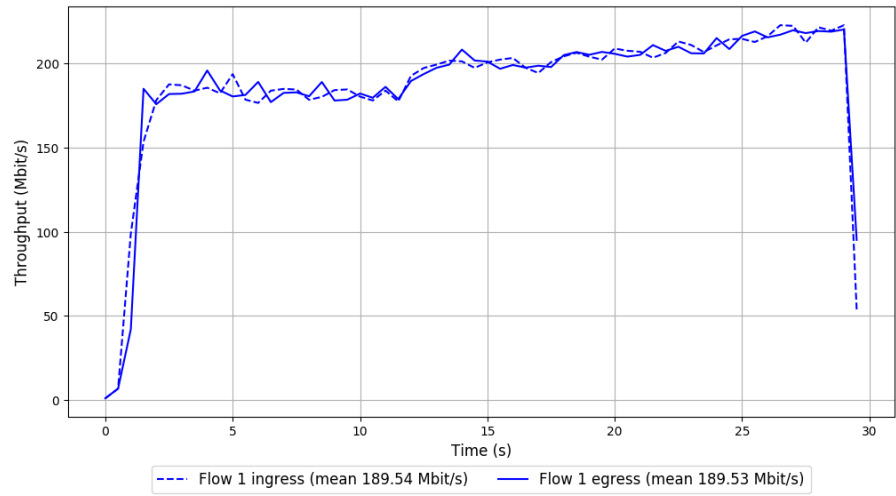
Run 10: Report of Indigo-1-32 — Data Link

Flow 1 ingress (mean 189.54 Mbit/s)   Flow 1 egress (mean 189.53 Mbit/s)

Flow 1 (95th percentile 91.07 ms)

```
Run 1: Statistics of Vivace-latency

Start at: 2018-02-19 19:27:50
End at: 2018-02-19 19:28:20

# Below is generated by plot.py at 2018-02-20 00:27:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 345.22 Mbit/s
95th percentile per-packet one-way delay: 88.141 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 345.22 Mbit/s
95th percentile per-packet one-way delay: 88.141 ms
Loss rate: 0.01%
```
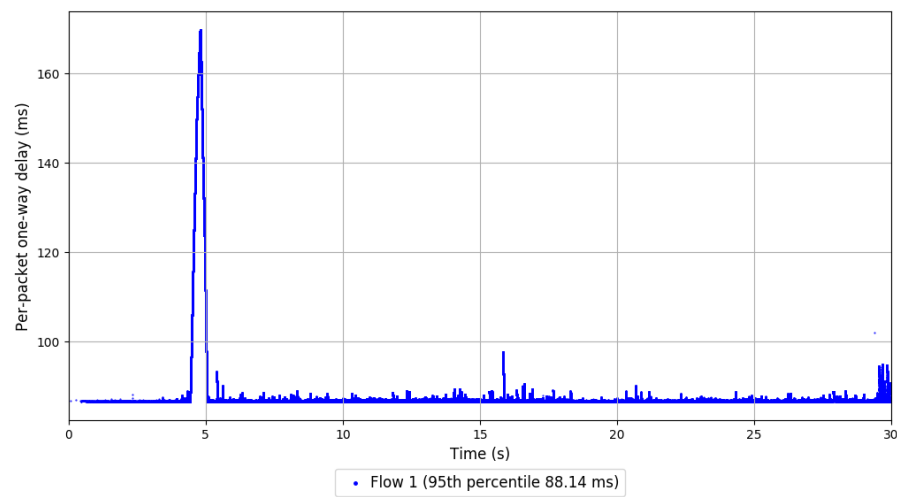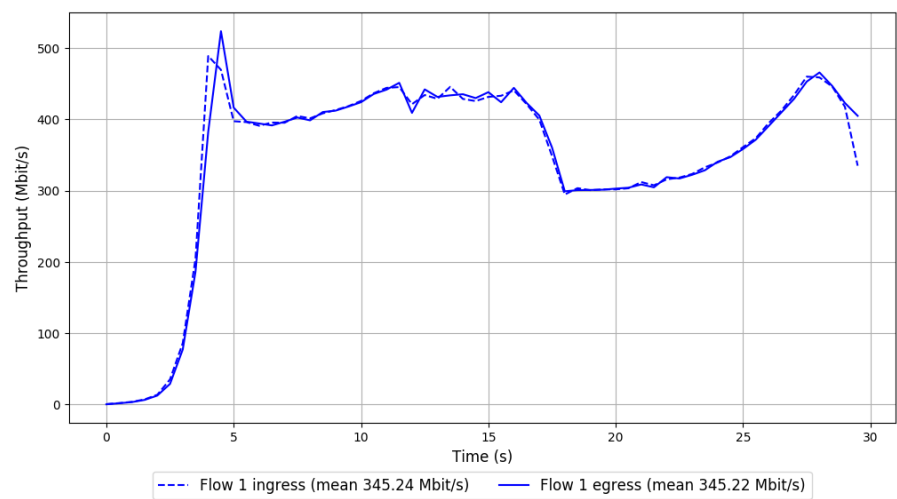
Run 1: Report of Vivace-latency — Data Link

```
Run 2: Statistics of Vivace-latency

Start at: 2018-02-19 19:43:01
End at: 2018-02-19 19:43:31


# Below is generated by plot.py at 2018-02-20 00:27:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 337.44 Mbit/s
95th percentile per-packet one-way delay: 87.035 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 337.44 Mbit/s
95th percentile per-packet one-way delay: 87.035 ms
Loss rate: 0.00%
```
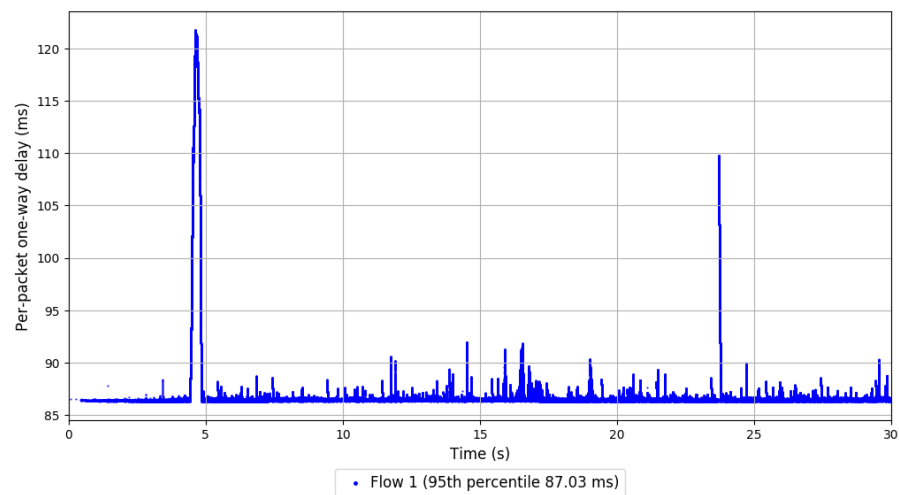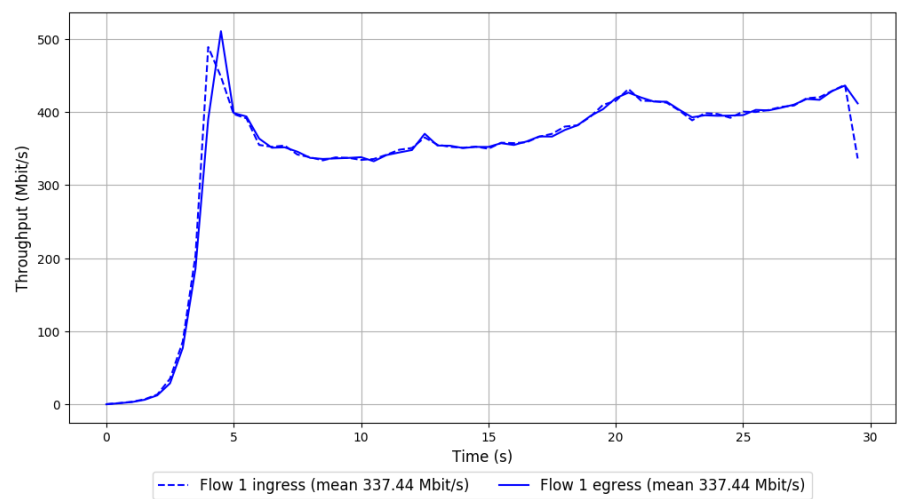
Run 2: Report of Vivace-latency — Data Link

```
Run 3: Statistics of Vivace-latency

Start at: 2018-02-19 19:58:14
End at: 2018-02-19 19:58:44

# Below is generated by plot.py at 2018-02-20 00:27:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 368.51 Mbit/s
95th percentile per-packet one-way delay: 94.327 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 368.51 Mbit/s
95th percentile per-packet one-way delay: 94.327 ms
Loss rate: 0.00%
```
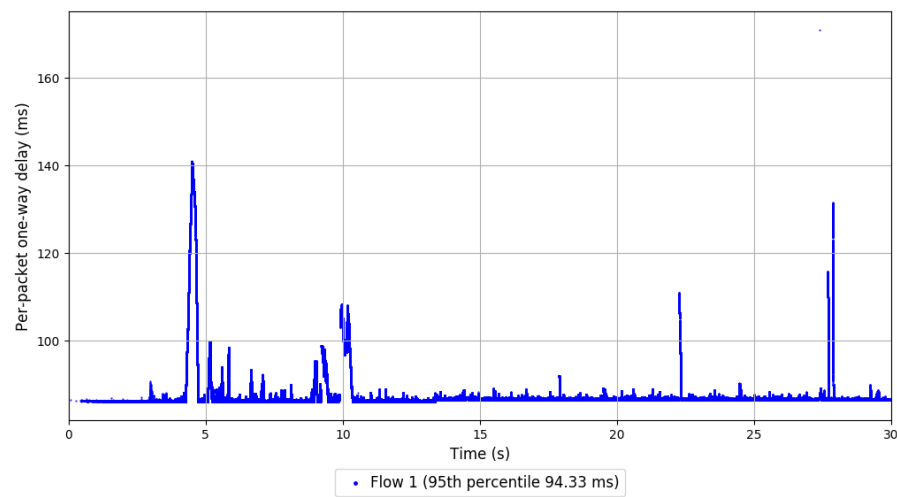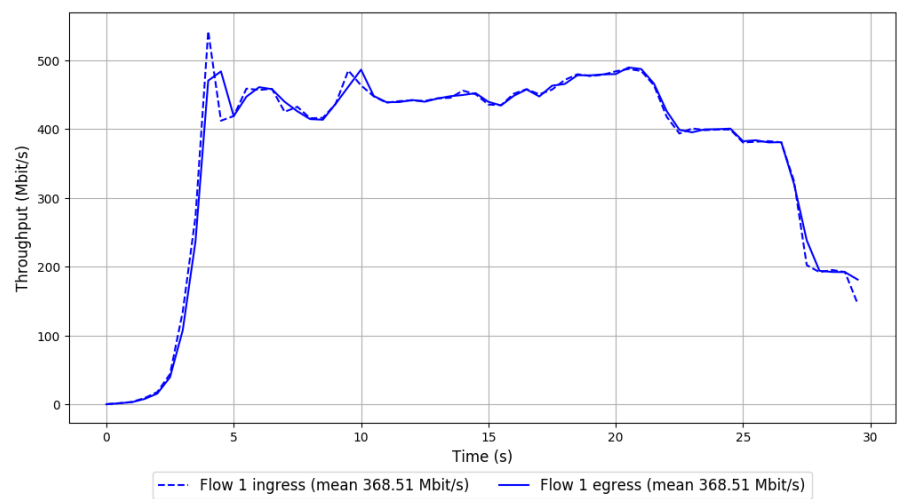
Run 3: Report of Vivace-latency — Data Link

```
Run 4: Statistics of Vivace-latency

Start at: 2018-02-19 20:13:32
End at: 2018-02-19 20:14:02

# Below is generated by plot.py at 2018-02-20 00:27:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 262.06 Mbit/s
95th percentile per-packet one-way delay: 90.473 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 262.06 Mbit/s
95th percentile per-packet one-way delay: 90.473 ms
Loss rate: 0.00%
```
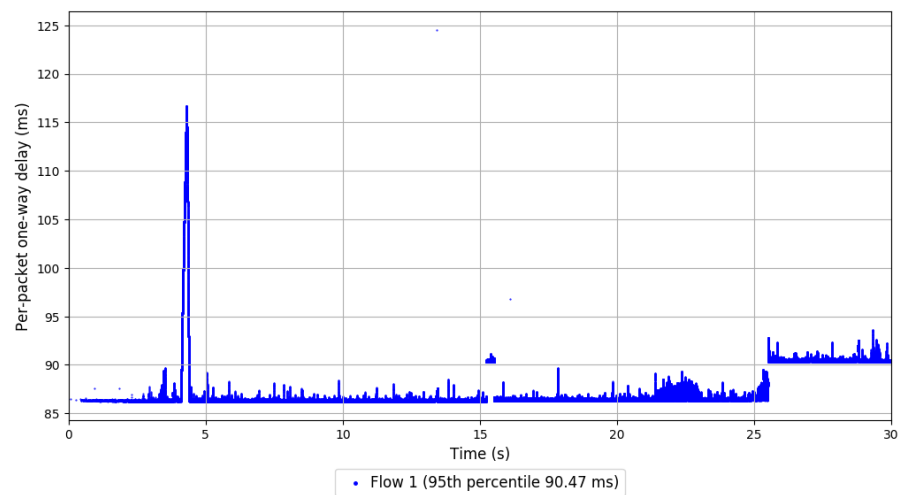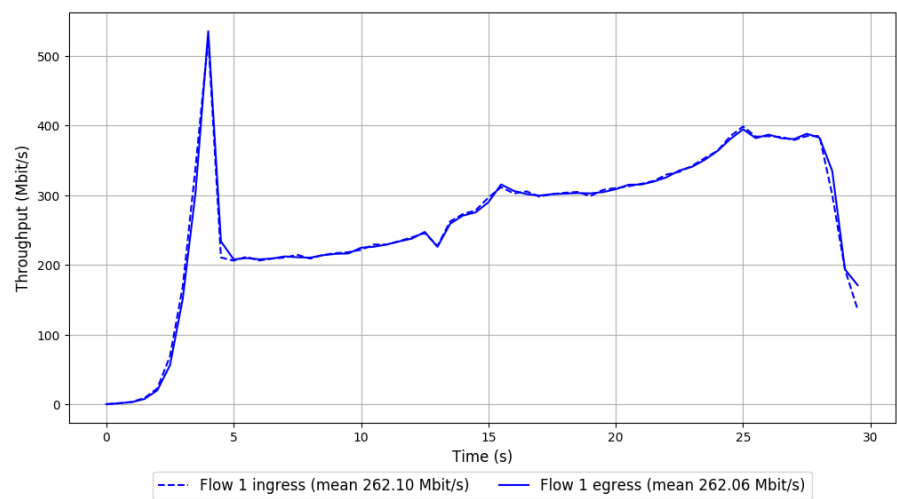
Run 4: Report of Vivace-latency — Data Link

Flow 1 ingress (mean 262.10 Mbit/s)   Flow 1 egress (mean 262.06 Mbit/s)

Flow 1 (95th percentile 90.47 ms)

```
Run 5: Statistics of Vivace-latency

Start at: 2018-02-19 20:28:58
End at: 2018-02-19 20:29:28

# Below is generated by plot.py at 2018-02-20 00:28:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 395.76 Mbit/s
95th percentile per-packet one-way delay: 87.271 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 395.76 Mbit/s
95th percentile per-packet one-way delay: 87.271 ms
Loss rate: 0.00%
```
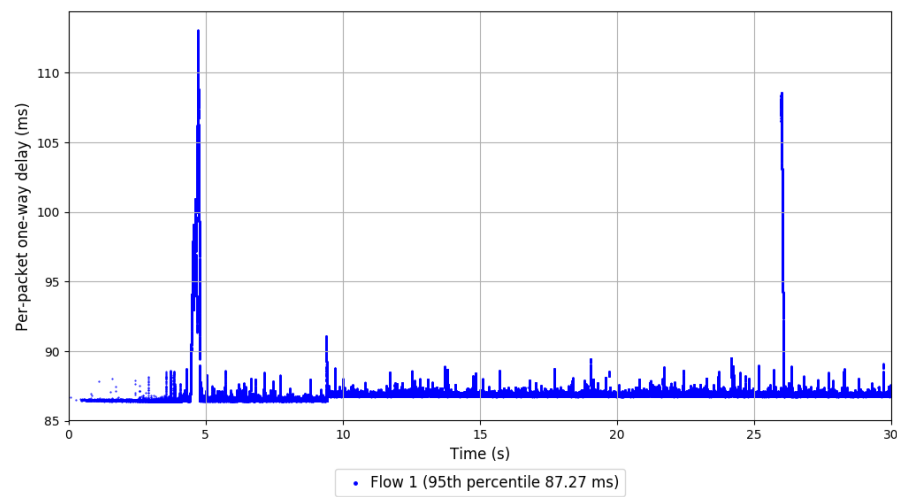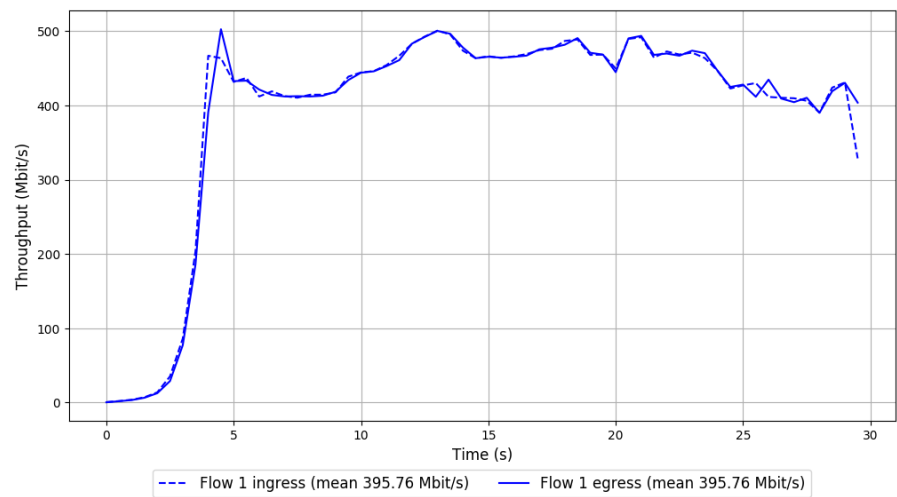
Run 5: Report of Vivace-latency — Data Link

```
Run 6: Statistics of Vivace-latency

Start at: 2018-02-19 20:44:10
End at: 2018-02-19 20:44:41

# Below is generated by plot.py at 2018-02-20 00:28:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 366.97 Mbit/s
95th percentile per-packet one-way delay: 89.737 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 366.97 Mbit/s
95th percentile per-packet one-way delay: 89.737 ms
Loss rate: 0.11%
```
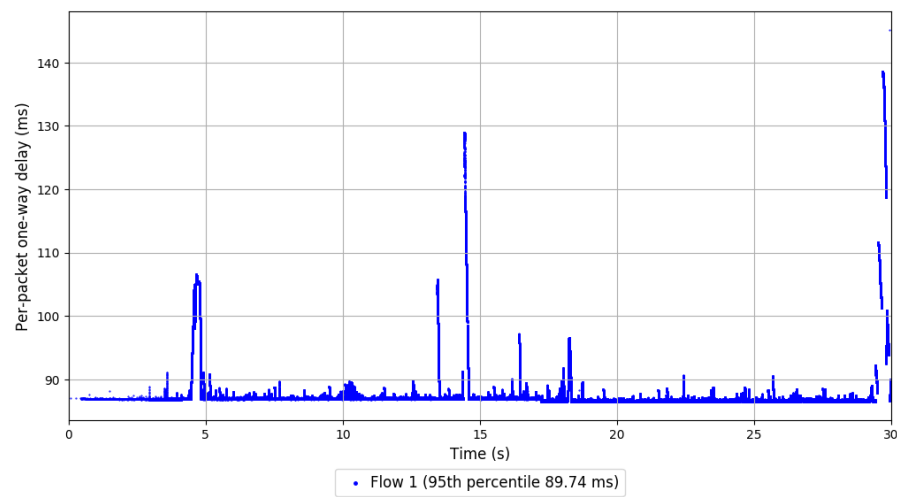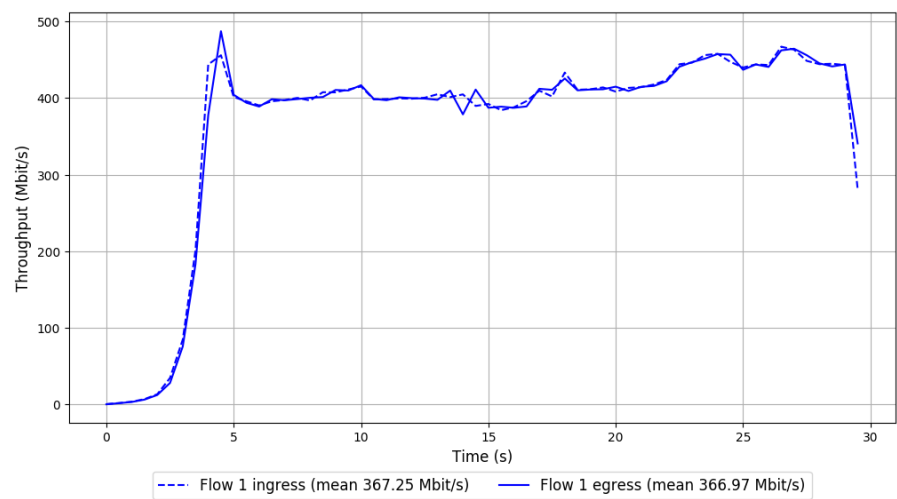
Run 6: Report of Vivace-latency — Data Link

```
Run 7: Statistics of Vivace-latency

Start at: 2018-02-19 20:59:35
End at: 2018-02-19 21:00:05


# Below is generated by plot.py at 2018-02-20 00:32:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 391.16 Mbit/s
95th percentile per-packet one-way delay: 86.820 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 391.16 Mbit/s
95th percentile per-packet one-way delay: 86.820 ms
Loss rate: 0.00%
```
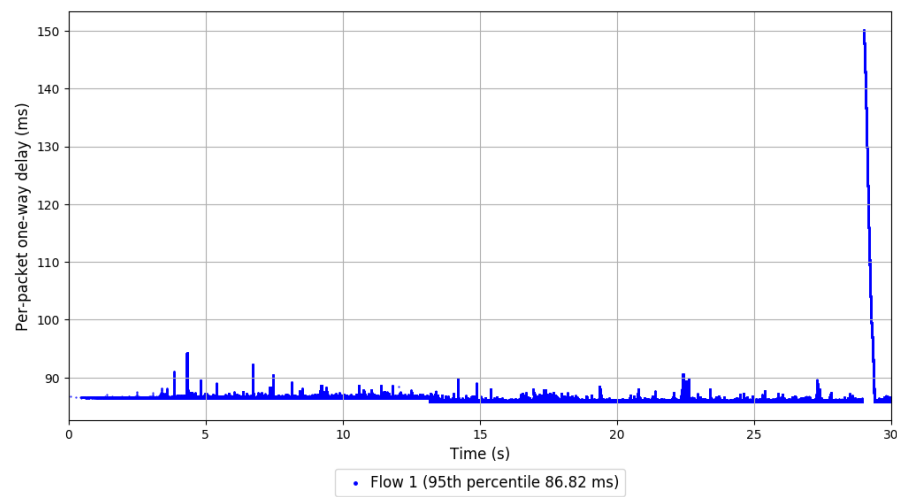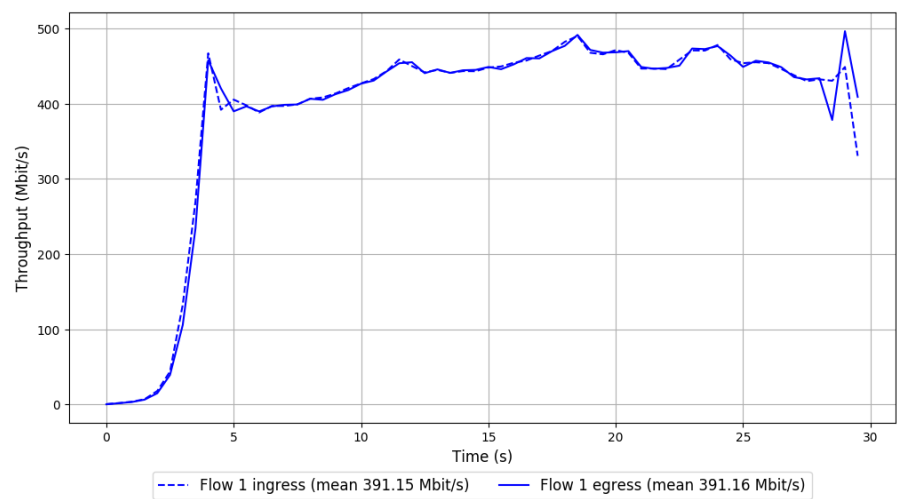
Run 7: Report of Vivace-latency — Data Link

```
Run 8: Statistics of Vivace-latency

Start at: 2018-02-19 21:14:30
End at: 2018-02-19 21:15:00

# Below is generated by plot.py at 2018-02-20 00:32:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 350.25 Mbit/s
95th percentile per-packet one-way delay: 97.147 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 350.25 Mbit/s
95th percentile per-packet one-way delay: 97.147 ms
Loss rate: 0.05%
```
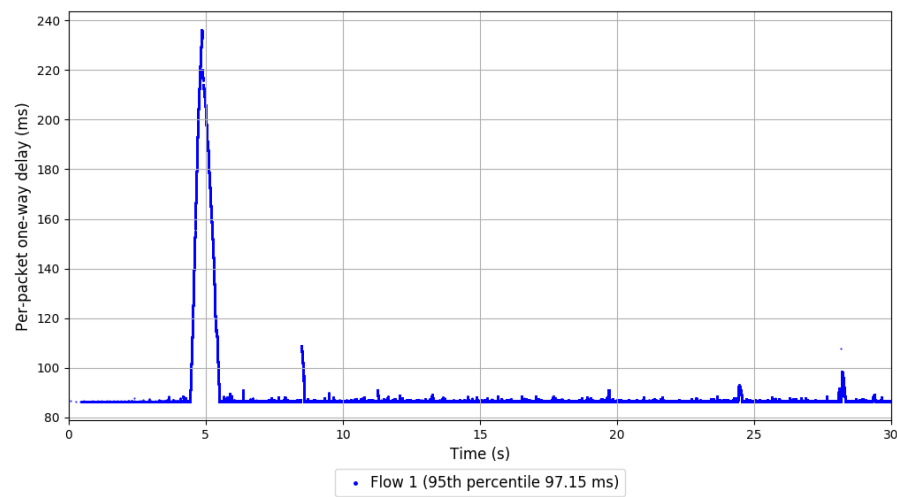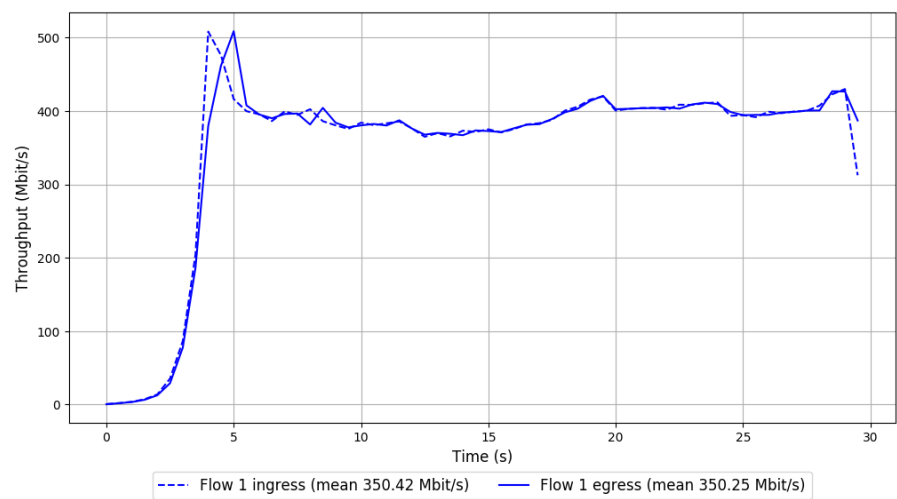
Run 8: Report of Vivace-latency — Data Link

```
Run 9: Statistics of Vivace-latency

Start at: 2018-02-19 21:29:26
End at: 2018-02-19 21:29:56

# Below is generated by plot.py at 2018-02-20 00:32:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 361.22 Mbit/s
95th percentile per-packet one-way delay: 90.767 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 361.22 Mbit/s
95th percentile per-packet one-way delay: 90.767 ms
Loss rate: 0.00%
```
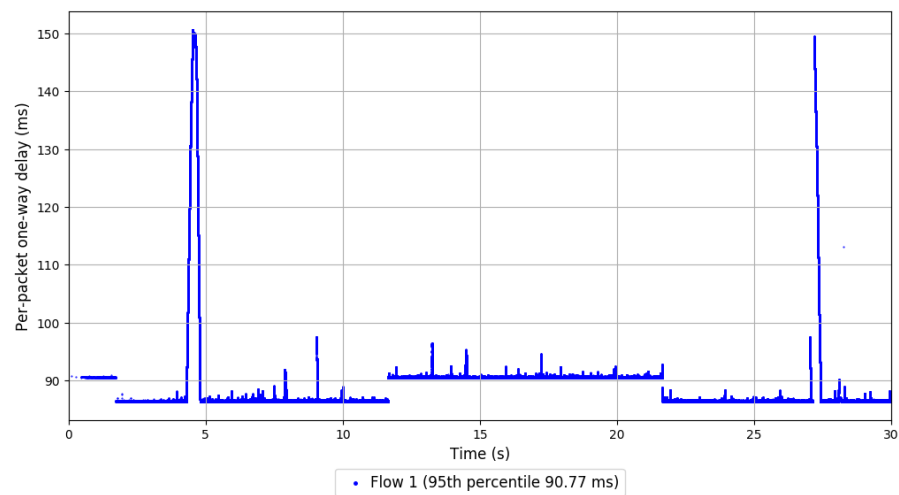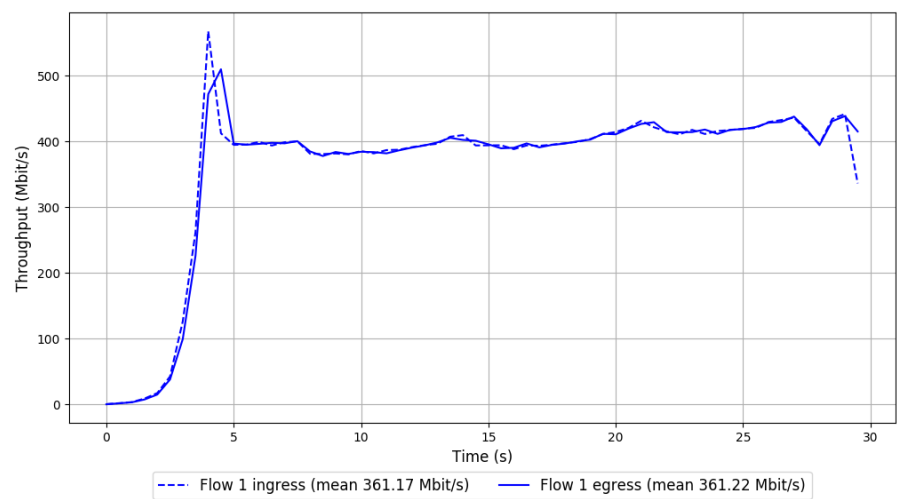
Run 9: Report of Vivace-latency — Data Link

```
Run 10: Statistics of Vivace-latency

Start at: 2018-02-19 21:44:29
End at: 2018-02-19 21:44:59

# Below is generated by plot.py at 2018-02-20 00:32:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 384.64 Mbit/s
95th percentile per-packet one-way delay: 88.953 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 384.64 Mbit/s
95th percentile per-packet one-way delay: 88.953 ms
Loss rate: 0.00%
```
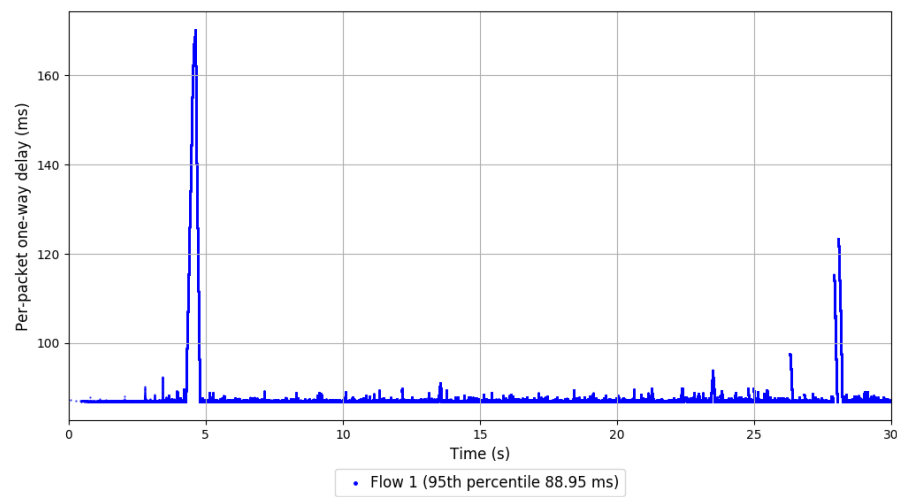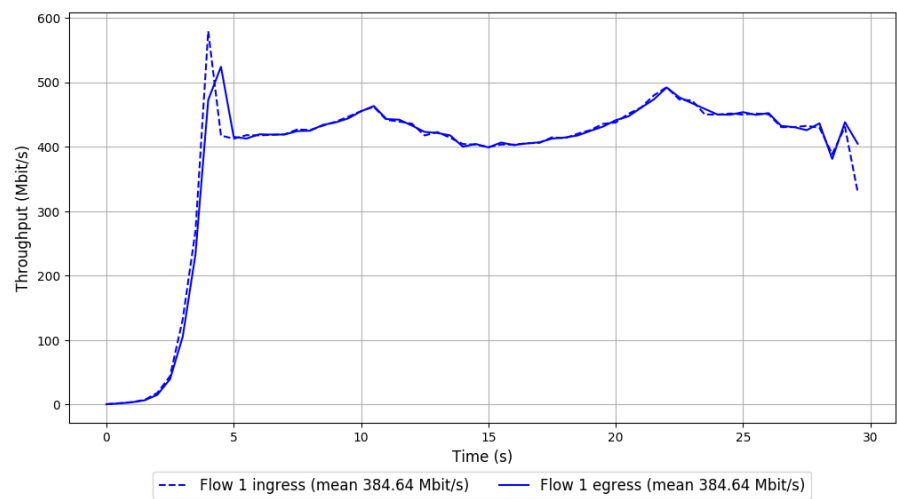
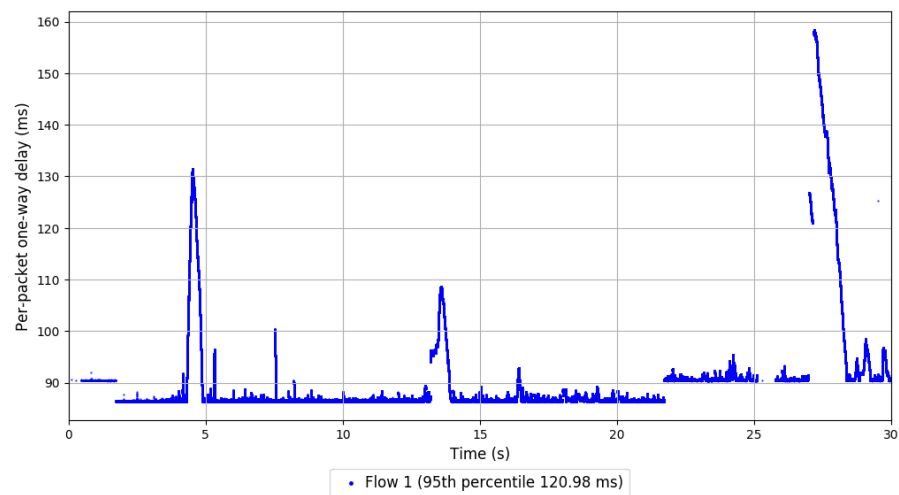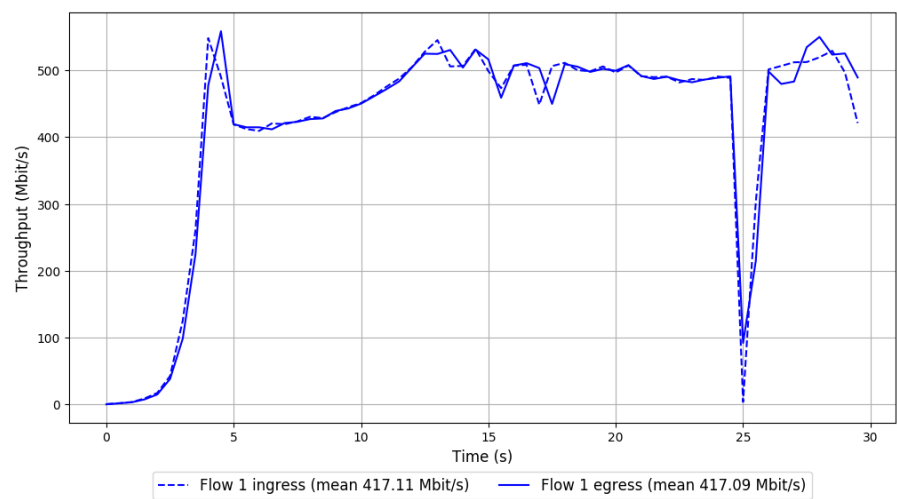Run 10: Report of Vivace-latency — Data Link

```
Run 1: Statistics of Vivace-loss

Start at: 2018-02-19 19:33:26
End at: 2018-02-19 19:33:56

# Below is generated by plot.py at 2018-02-20 00:34:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 417.09 Mbit/s
95th percentile per-packet one-way delay: 120.978 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 417.09 Mbit/s
95th percentile per-packet one-way delay: 120.978 ms
Loss rate: 0.02%
```

Run 1: Report of Vivace-loss — Data Link

Flow 1 ingress (mean 417.11 Mbit/s) --- Flow 1 egress (mean 417.09 Mbit/s)

• Flow 1 (95th percentile 120.98 ms)

```
Run 2: Statistics of Vivace-loss

Start at: 2018-02-19 19:48:45
End at: 2018-02-19 19:49:15

# Below is generated by plot.py at 2018-02-20 00:34:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 255.99 Mbit/s
95th percentile per-packet one-way delay: 212.000 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 255.99 Mbit/s
95th percentile per-packet one-way delay: 212.000 ms
Loss rate: 1.45%
```
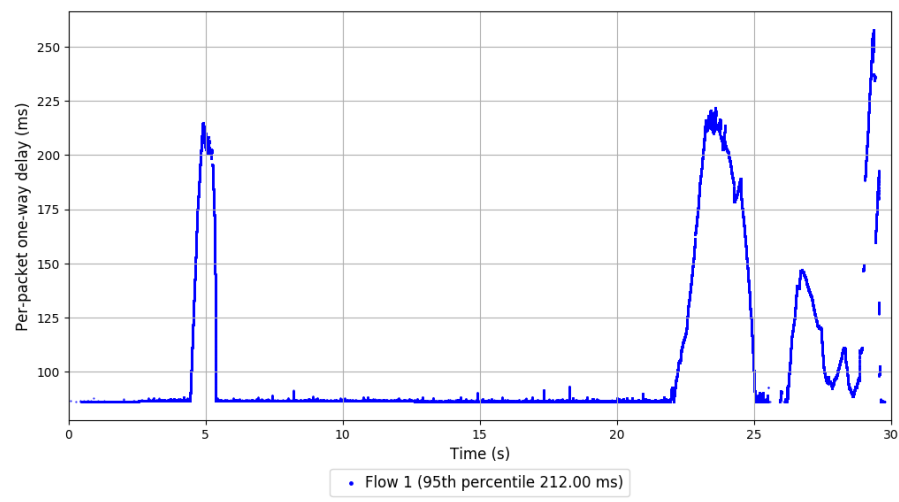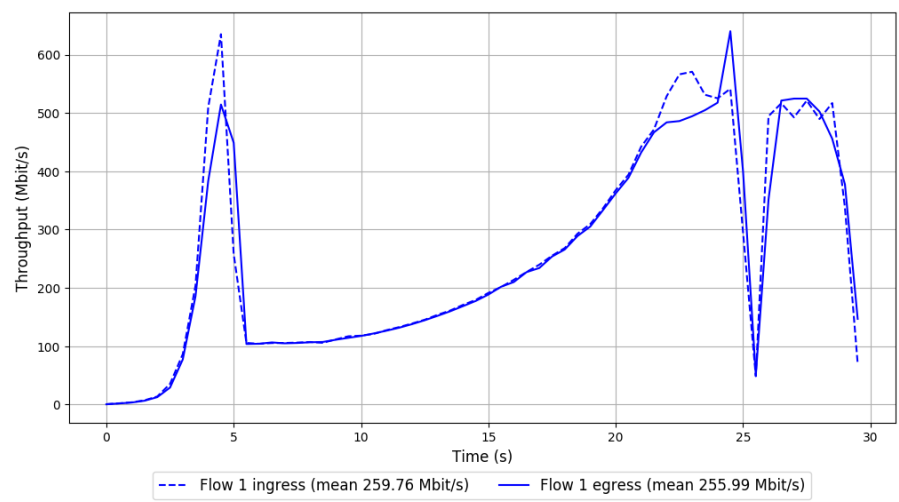
Run 2: Report of Vivace-loss — Data Link

```
Run 3: Statistics of Vivace-loss

Start at: 2018-02-19 20:04:01
End at: 2018-02-19 20:04:31

# Below is generated by plot.py at 2018-02-20 00:37:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 408.57 Mbit/s
95th percentile per-packet one-way delay: 88.007 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 408.57 Mbit/s
95th percentile per-packet one-way delay: 88.007 ms
Loss rate: 0.00%
```
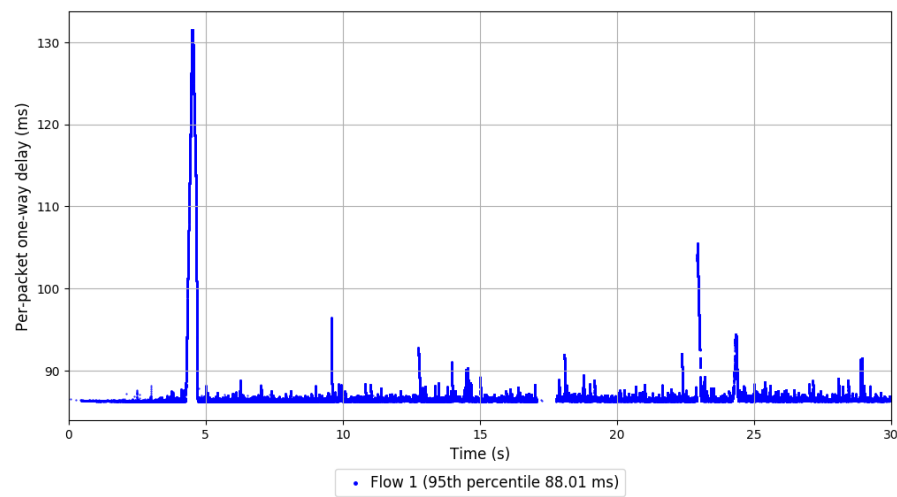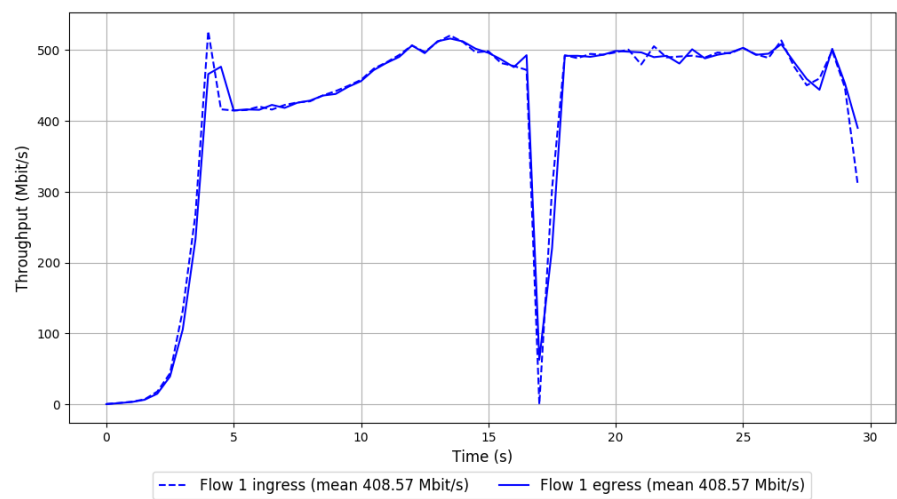
Run 3: Report of Vivace-loss — Data Link

309

```
Run 4: Statistics of Vivace-loss

Start at: 2018-02-19 20:19:12
End at: 2018-02-19 20:19:42


# Below is generated by plot.py at 2018-02-20 00:37:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 407.05 Mbit/s
95th percentile per-packet one-way delay: 183.755 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 407.05 Mbit/s
95th percentile per-packet one-way delay: 183.755 ms
Loss rate: 0.27%
```
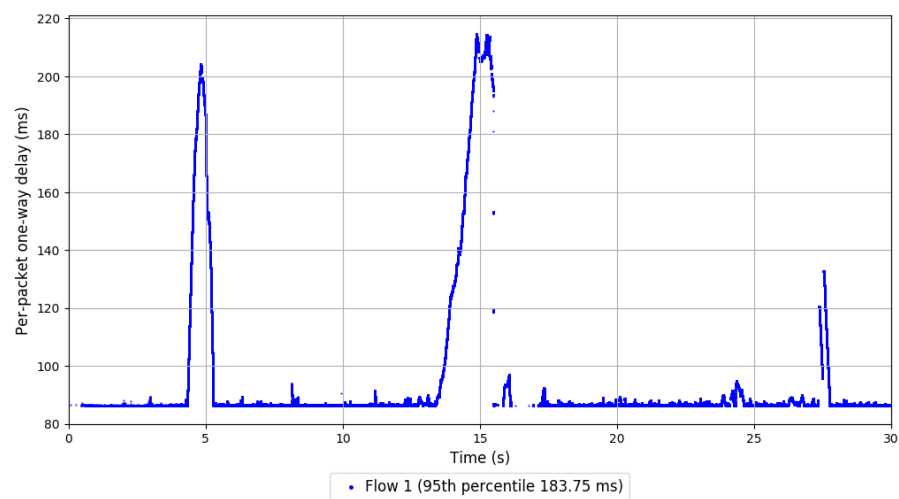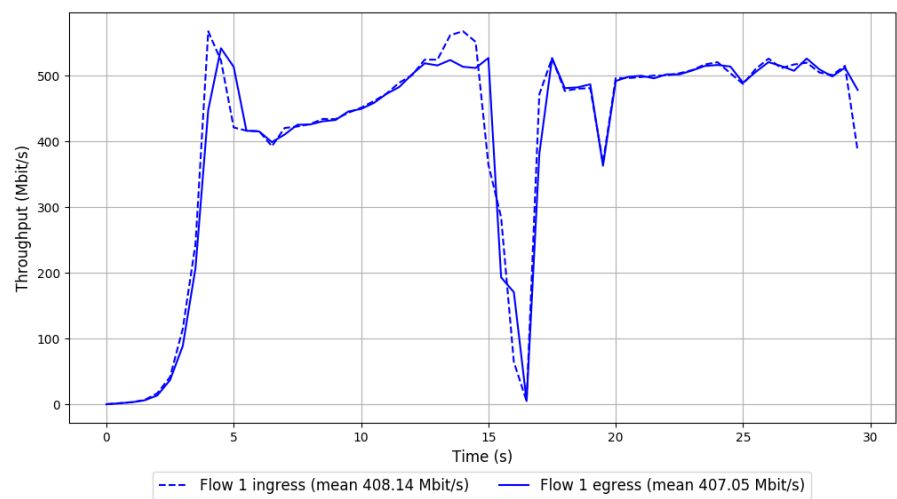
Run 4: Report of Vivace-loss — Data Link

Flow 1 ingress (mean 408.14 Mbit/s)   Flow 1 egress (mean 407.05 Mbit/s)

Flow 1 (95th percentile 183.75 ms)

```
Run 5: Statistics of Vivace-loss

Start at: 2018-02-19 20:34:46
End at: 2018-02-19 20:35:16

# Below is generated by plot.py at 2018-02-20 00:38:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 396.66 Mbit/s
95th percentile per-packet one-way delay: 211.004 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 396.66 Mbit/s
95th percentile per-packet one-way delay: 211.004 ms
Loss rate: 0.89%
```
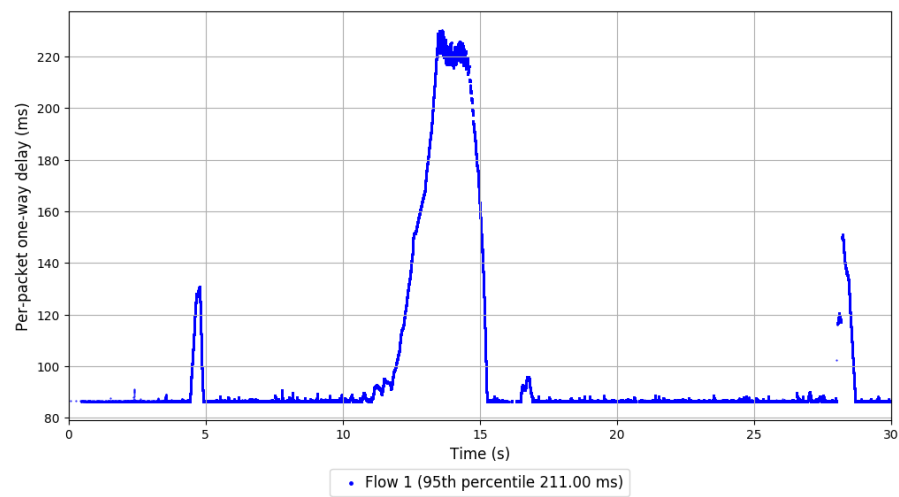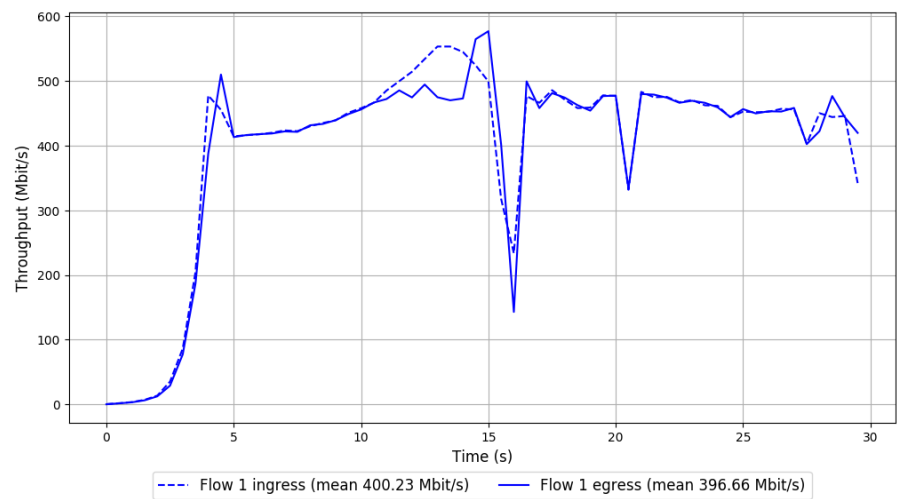
Run 5: Report of Vivace-loss — Data Link

Flow 1 ingress (mean 400.23 Mbit/s)   Flow 1 egress (mean 396.66 Mbit/s)

Flow 1 (95th percentile 211.00 ms)

313

```
Run 6: Statistics of Vivace-loss

Start at: 2018-02-19 20:49:56
End at: 2018-02-19 20:50:26

# Below is generated by plot.py at 2018-02-20 00:38:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 408.50 Mbit/s
95th percentile per-packet one-way delay: 90.528 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 408.50 Mbit/s
95th percentile per-packet one-way delay: 90.528 ms
Loss rate: 0.00%
```
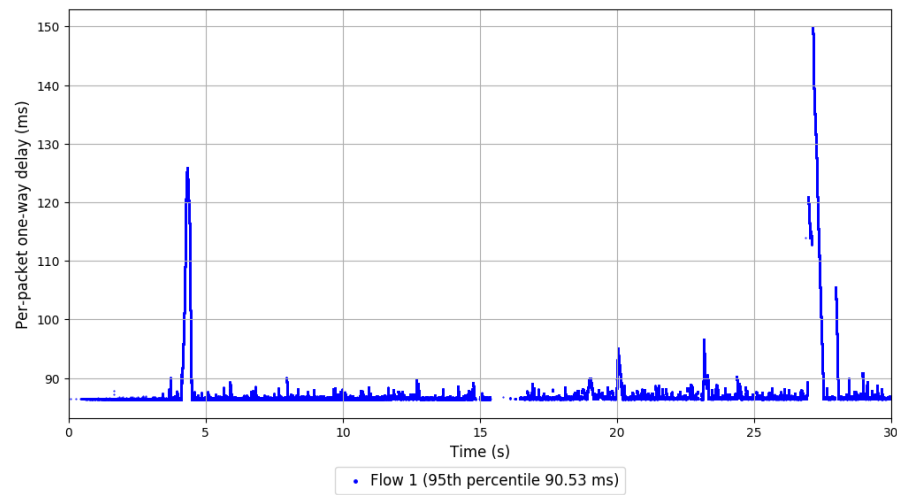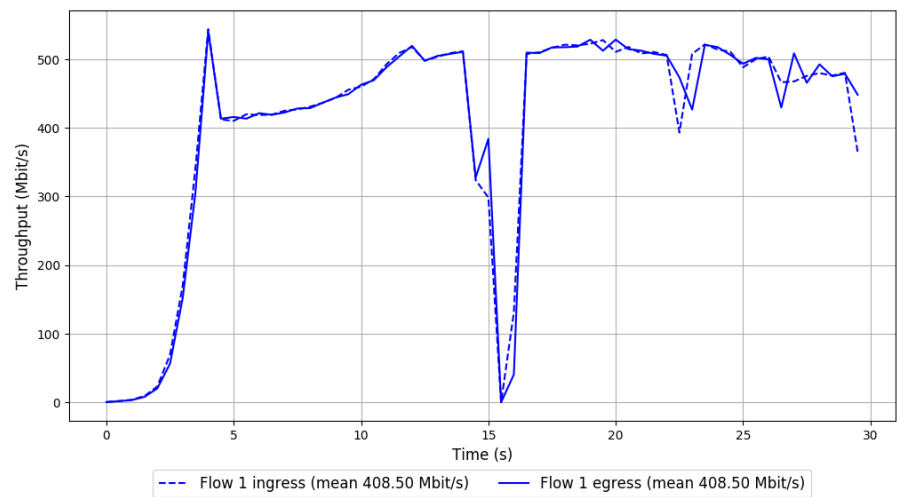
Run 6: Report of Vivace-loss — Data Link

315

```
Run 7: Statistics of Vivace-loss

Start at: 2018-02-19 21:05:14
End at: 2018-02-19 21:05:44

# Below is generated by plot.py at 2018-02-20 00:38:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 254.94 Mbit/s
95th percentile per-packet one-way delay: 191.437 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 254.94 Mbit/s
95th percentile per-packet one-way delay: 191.437 ms
Loss rate: 0.00%
```
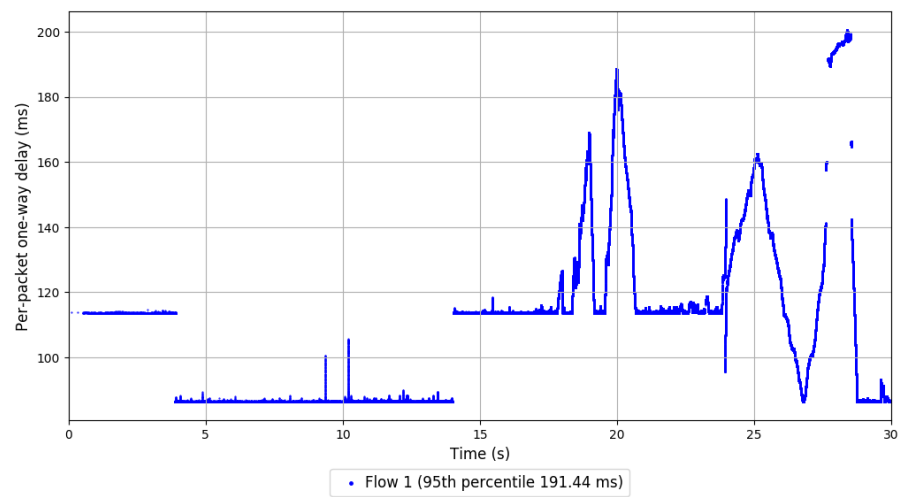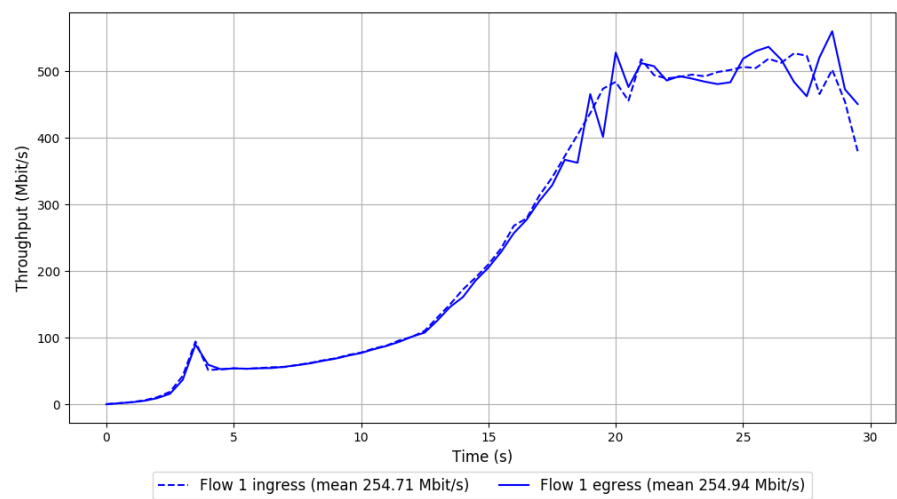
Run 7: Report of Vivace-loss — Data Link

Flow 1 ingress (mean 254.71 Mbit/s)   Flow 1 egress (mean 254.94 Mbit/s)

• Flow 1 (95th percentile 191.44 ms)

```
Run 8: Statistics of Vivace-loss

Start at: 2018-02-19 21:20:13
End at: 2018-02-19 21:20:43

# Below is generated by plot.py at 2018-02-20 00:38:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 351.36 Mbit/s
95th percentile per-packet one-way delay: 96.121 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 351.36 Mbit/s
95th percentile per-packet one-way delay: 96.121 ms
Loss rate: 0.00%
```
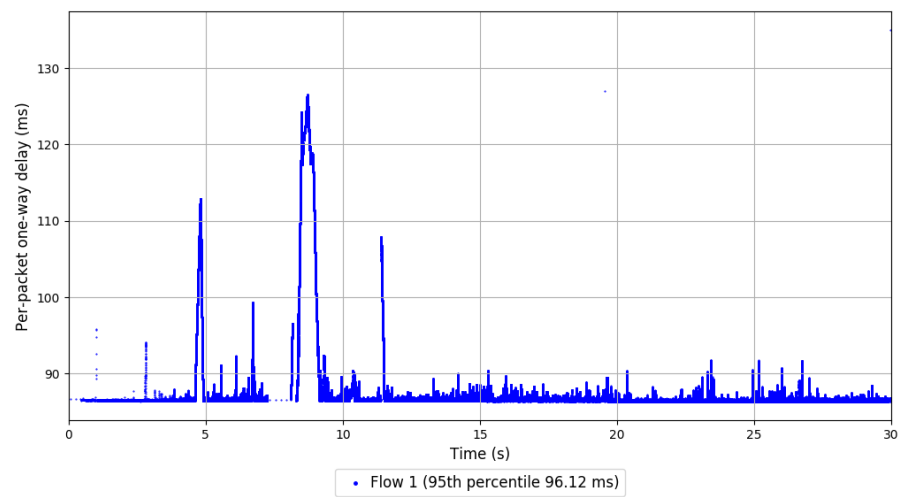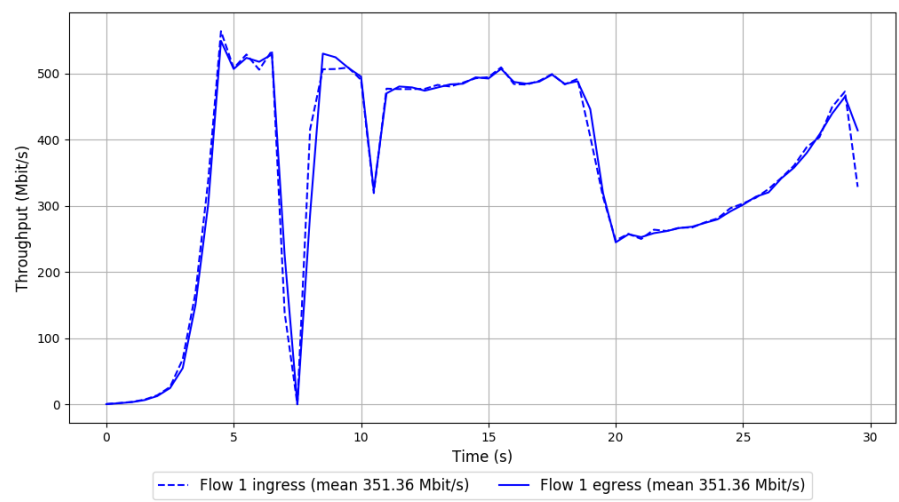
Run 8: Report of Vivace-loss — Data Link

Flow 1 ingress (mean 351.36 Mbit/s)   Flow 1 egress (mean 351.36 Mbit/s)

Flow 1 (95th percentile 96.12 ms)

319

```
Run 9: Statistics of Vivace-loss

Start at: 2018-02-19 21:35:07
End at: 2018-02-19 21:35:37

# Below is generated by plot.py at 2018-02-20 00:39:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 388.81 Mbit/s
95th percentile per-packet one-way delay: 100.895 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 388.81 Mbit/s
95th percentile per-packet one-way delay: 100.895 ms
Loss rate: 0.25%
```
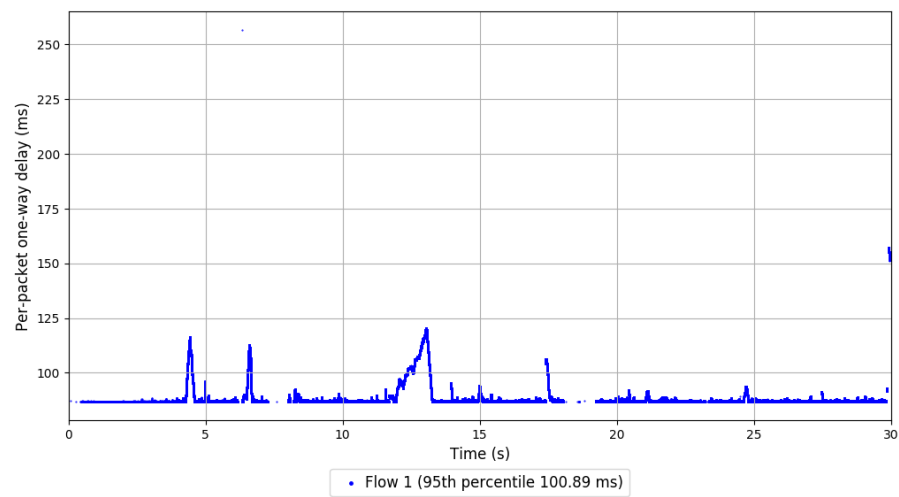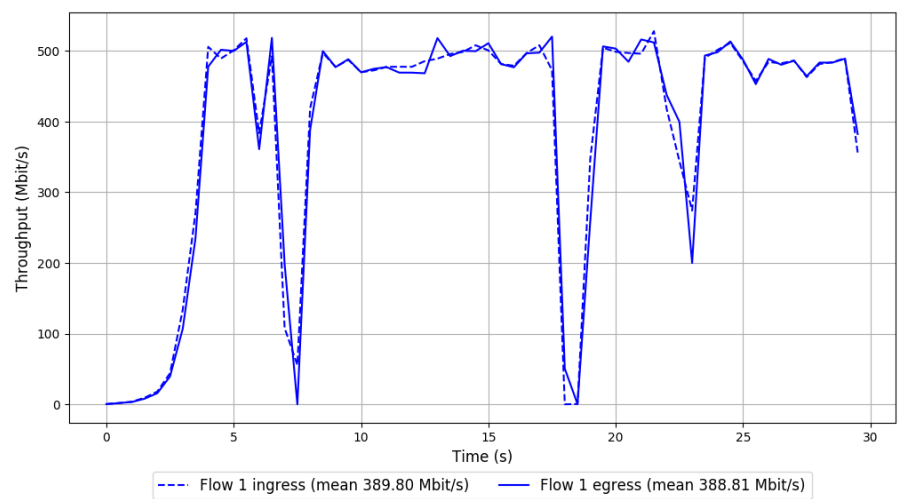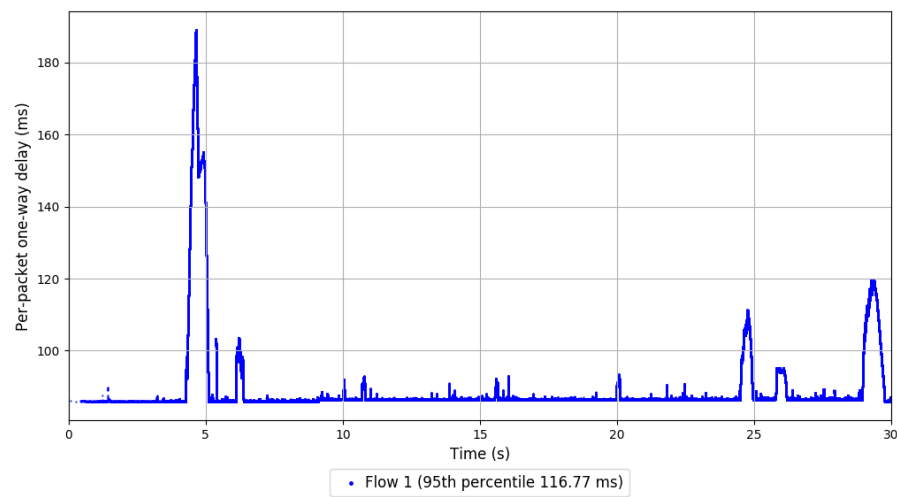
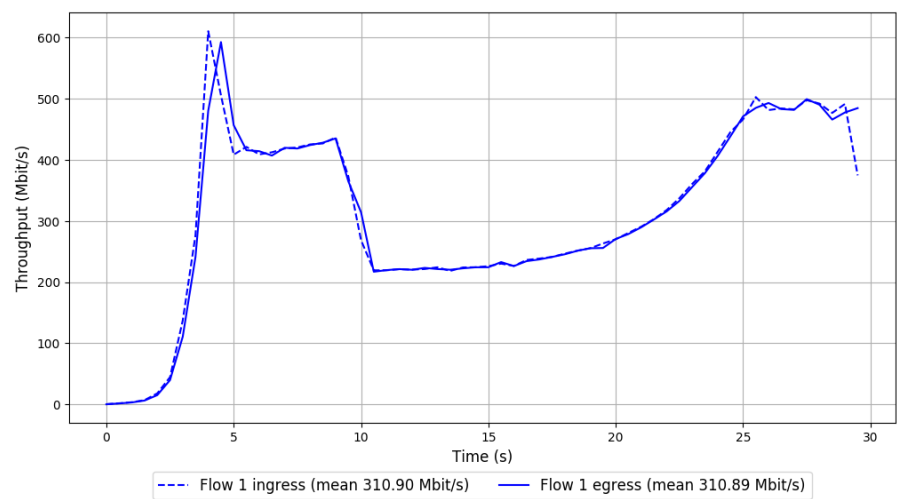Run 9: Report of Vivace-loss — Data Link

```
Run 10: Statistics of Vivace-loss

Start at: 2018-02-19 21:50:19
End at: 2018-02-19 21:50:49

# Below is generated by plot.py at 2018-02-20 00:39:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 310.89 Mbit/s
95th percentile per-packet one-way delay: 116.765 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 310.89 Mbit/s
95th percentile per-packet one-way delay: 116.765 ms
Loss rate: 0.00%
```

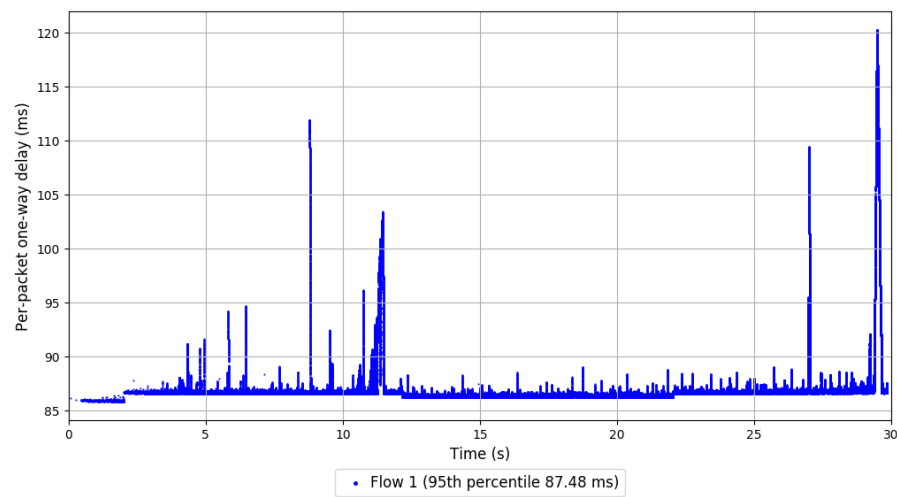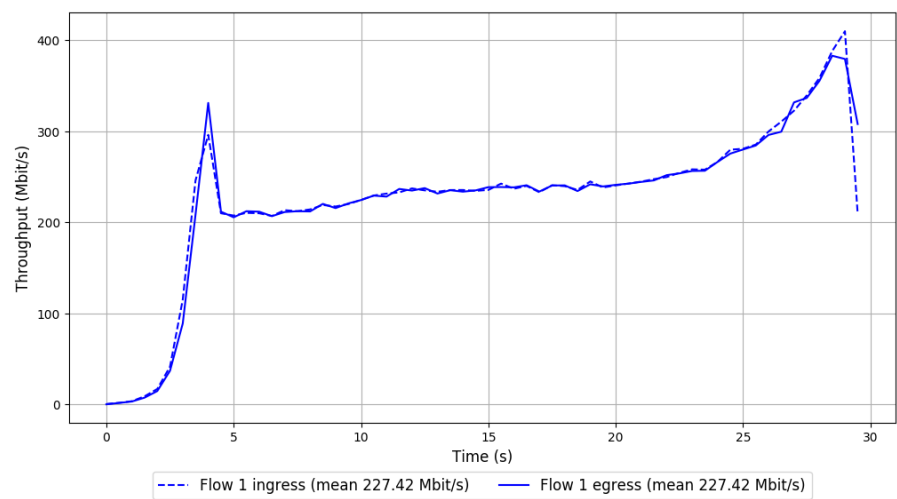Run 10: Report of Vivace-loss — Data Link

```
Run 1: Statistics of Vivace-LTE

Start at: 2018-02-19 19:26:15
End at: 2018-02-19 19:26:46

# Below is generated by plot.py at 2018-02-20 00:40:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 227.42 Mbit/s
95th percentile per-packet one-way delay: 87.482 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 227.42 Mbit/s
95th percentile per-packet one-way delay: 87.482 ms
Loss rate: 0.00%
```

Run 1: Report of Vivace-LTE — Data Link

```
Run 2: Statistics of Vivace-LTE

Start at: 2018-02-19 19:41:14
End at: 2018-02-19 19:41:44

# Below is generated by plot.py at 2018-02-20 00:44:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 410.56 Mbit/s
95th percentile per-packet one-way delay: 102.253 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 410.56 Mbit/s
95th percentile per-packet one-way delay: 102.253 ms
Loss rate: 0.10%
```
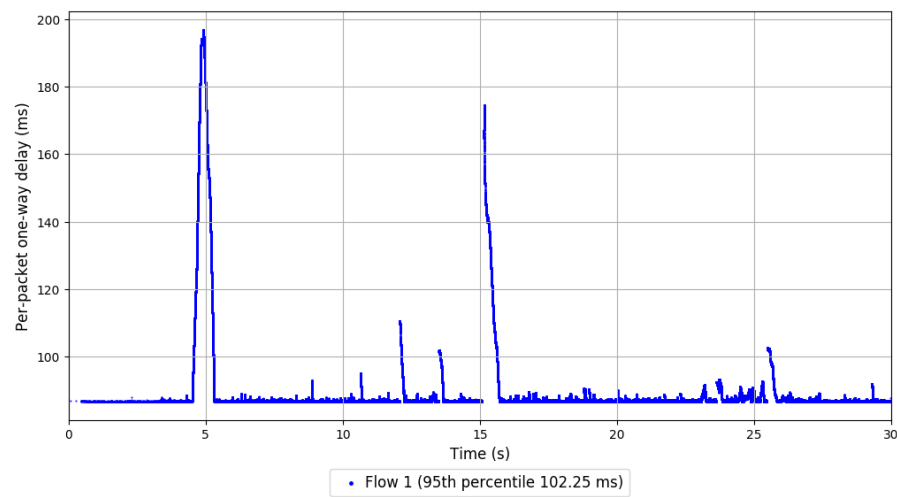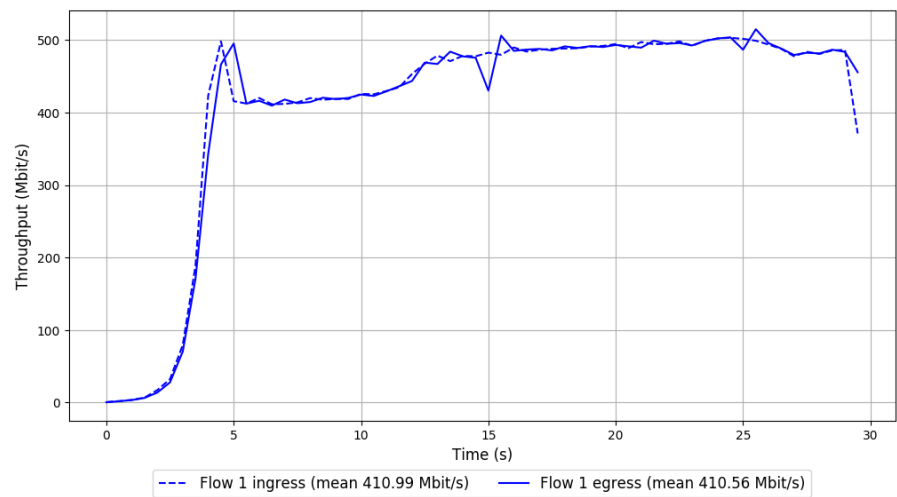
Run 2: Report of Vivace-LTE — Data Link

```
Run 3: Statistics of Vivace-LTE

Start at: 2018-02-19 19:56:30
End at: 2018-02-19 19:57:00

# Below is generated by plot.py at 2018-02-20 00:44:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 362.58 Mbit/s
95th percentile per-packet one-way delay: 103.983 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 362.58 Mbit/s
95th percentile per-packet one-way delay: 103.983 ms
Loss rate: 0.01%
```
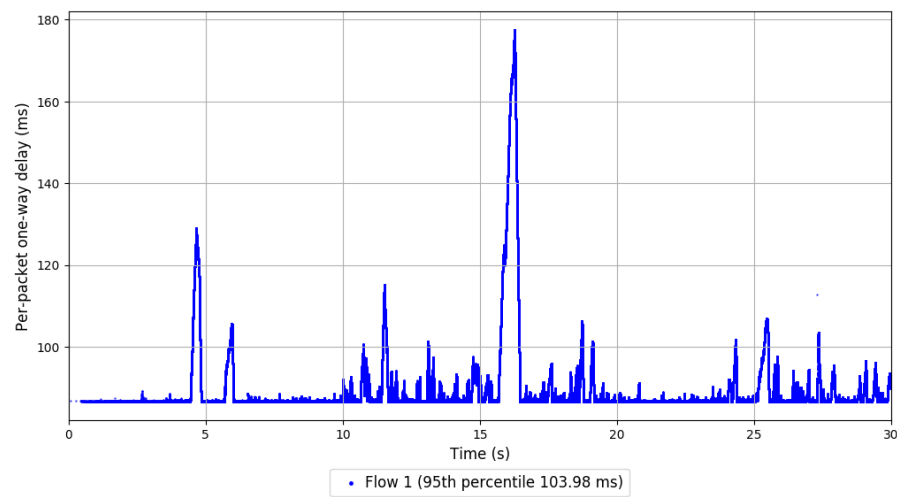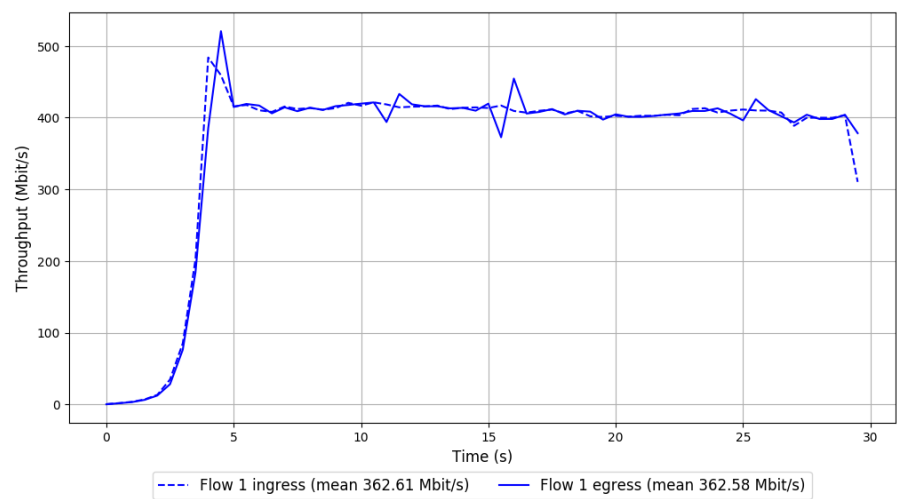
Run 3: Report of Vivace-LTE — Data Link

Flow 1 ingress (mean 362.61 Mbit/s) --- Flow 1 egress (mean 362.58 Mbit/s)

Flow 1 (95th percentile 103.98 ms)

```
Run 4: Statistics of Vivace-LTE

Start at: 2018-02-19 20:11:45
End at: 2018-02-19 20:12:15

# Below is generated by plot.py at 2018-02-20 00:45:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 414.46 Mbit/s
95th percentile per-packet one-way delay: 86.950 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 414.46 Mbit/s
95th percentile per-packet one-way delay: 86.950 ms
Loss rate: 0.00%
```
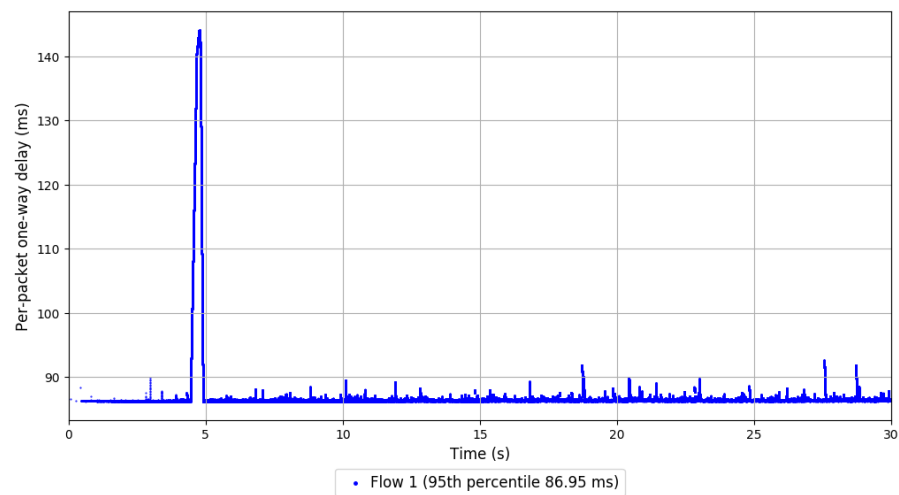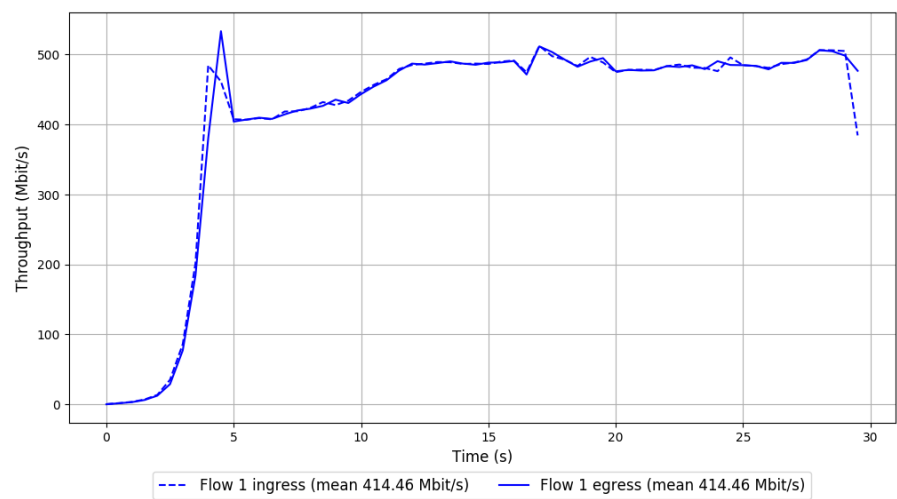
Run 4: Report of Vivace-LTE — Data Link

```
Run 5: Statistics of Vivace-LTE

Start at: 2018-02-19 20:27:11
End at: 2018-02-19 20:27:41


# Below is generated by plot.py at 2018-02-20 00:45:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 397.01 Mbit/s
95th percentile per-packet one-way delay: 94.924 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 397.01 Mbit/s
95th percentile per-packet one-way delay: 94.924 ms
Loss rate: 0.00%
```
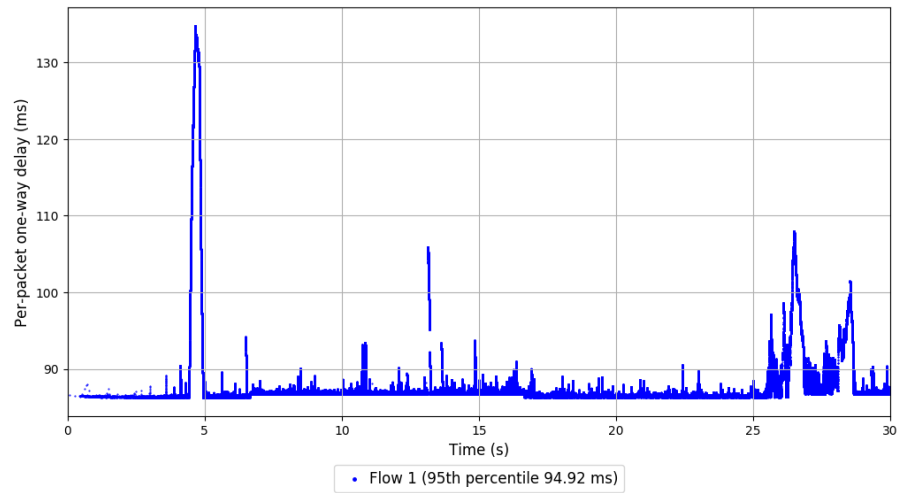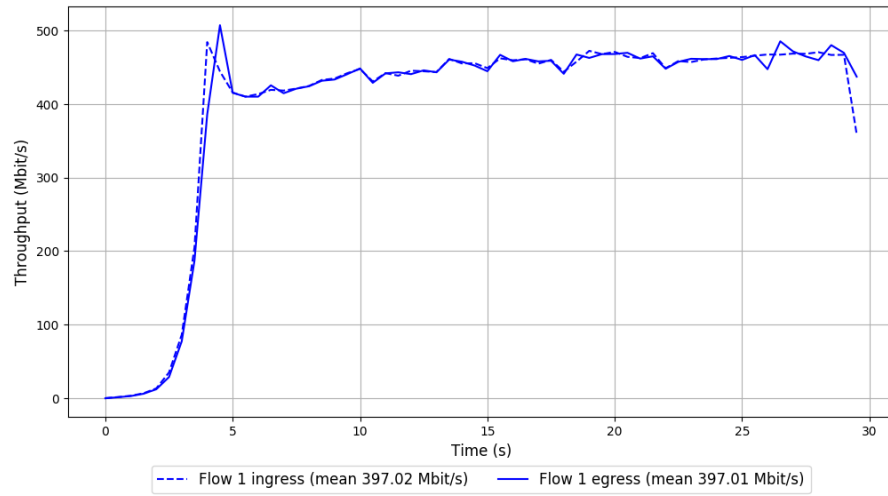
Run 5: Report of Vivace-LTE — Data Link

```
Run 6: Statistics of Vivace-LTE

Start at: 2018-02-19 20:42:32
End at: 2018-02-19 20:43:02

# Below is generated by plot.py at 2018-02-20 00:45:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 282.30 Mbit/s
95th percentile per-packet one-way delay: 86.715 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 282.30 Mbit/s
95th percentile per-packet one-way delay: 86.715 ms
Loss rate: 0.00%
```
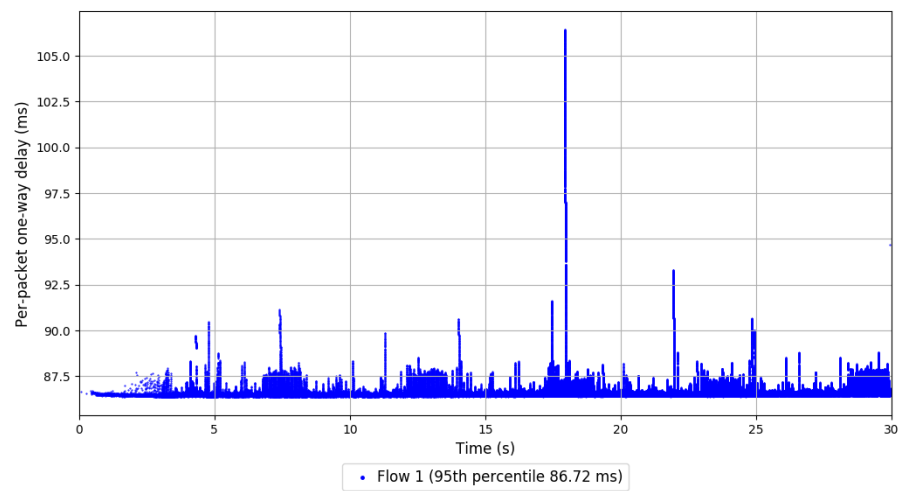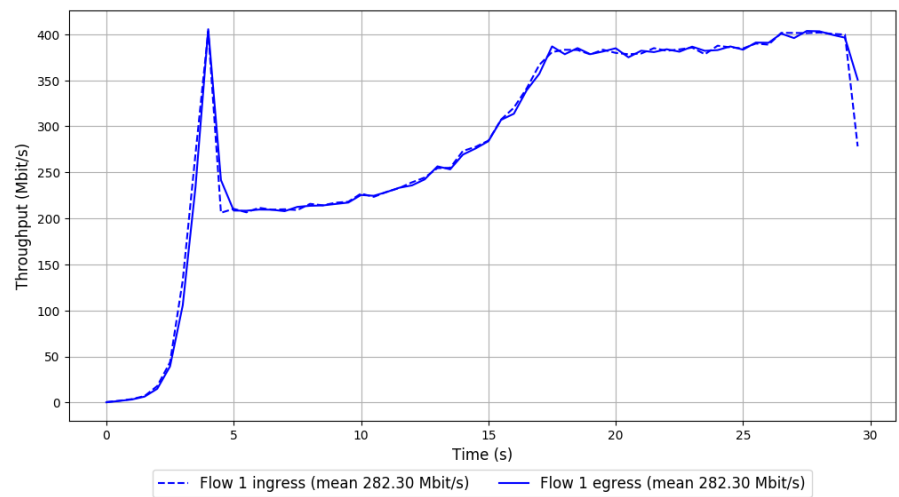
Run 6: Report of Vivace-LTE — Data Link

```
Run 7: Statistics of Vivace-LTE

Start at: 2018-02-19 20:57:49
End at: 2018-02-19 20:58:19

# Below is generated by plot.py at 2018-02-20 00:45:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 396.77 Mbit/s
95th percentile per-packet one-way delay: 118.322 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 396.77 Mbit/s
95th percentile per-packet one-way delay: 118.322 ms
Loss rate: 0.00%
```
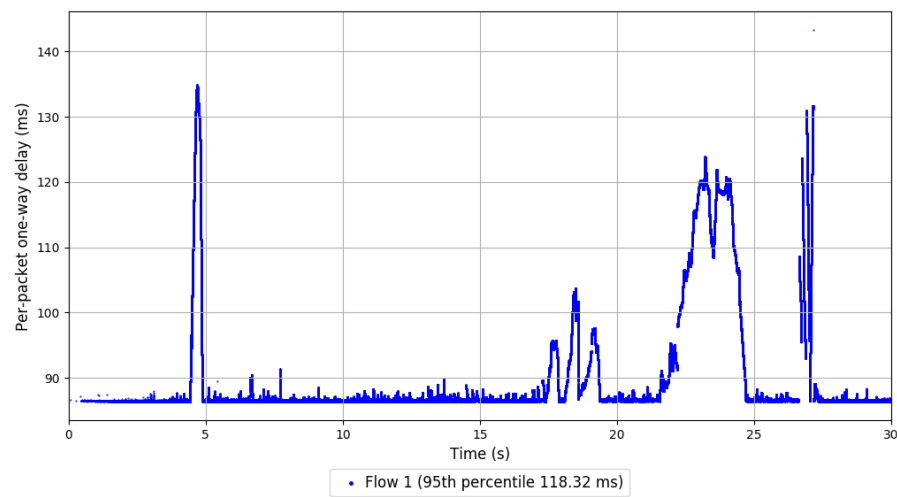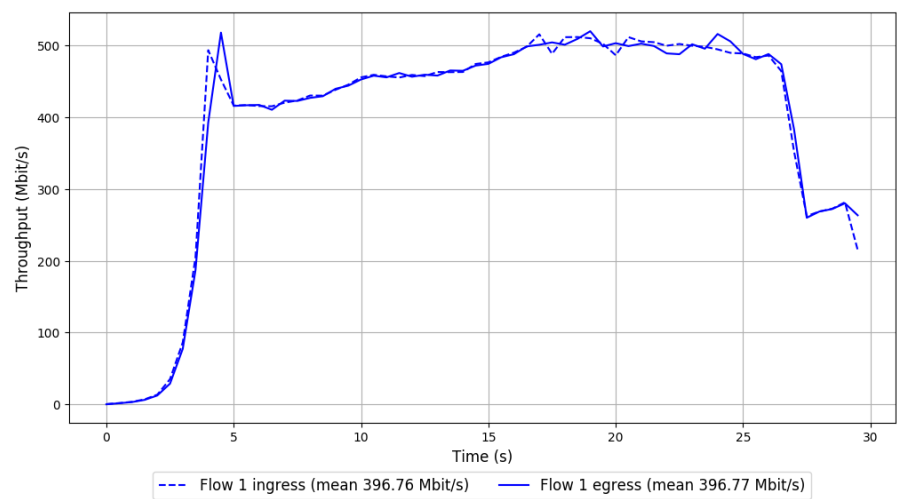
Run 7: Report of Vivace-LTE — Data Link

Flow 1 ingress (mean 396.76 Mbit/s) Flow 1 egress (mean 396.77 Mbit/s)

Flow 1 (95th percentile 118.32 ms)

```
Run 8: Statistics of Vivace-LTE

Start at: 2018-02-19 21:12:44
End at: 2018-02-19 21:13:14


# Below is generated by plot.py at 2018-02-20 00:45:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 409.45 Mbit/s
95th percentile per-packet one-way delay: 106.987 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 409.45 Mbit/s
95th percentile per-packet one-way delay: 106.987 ms
Loss rate: 0.00%
```
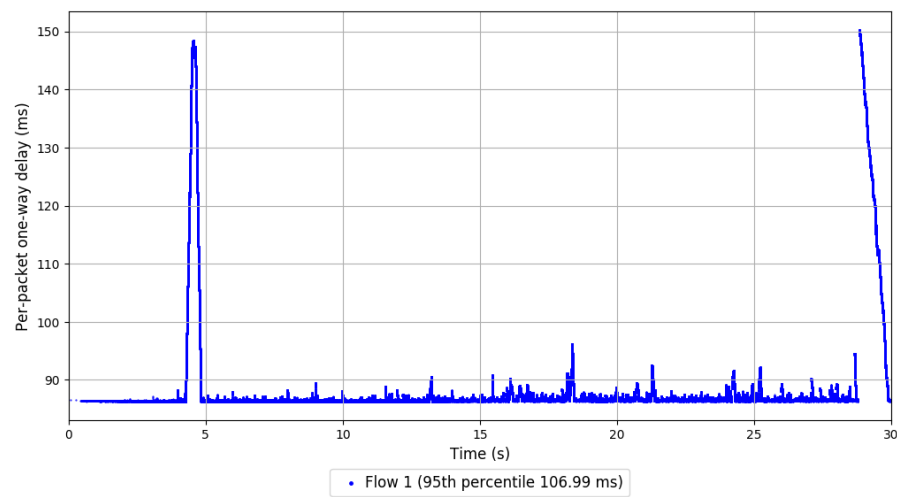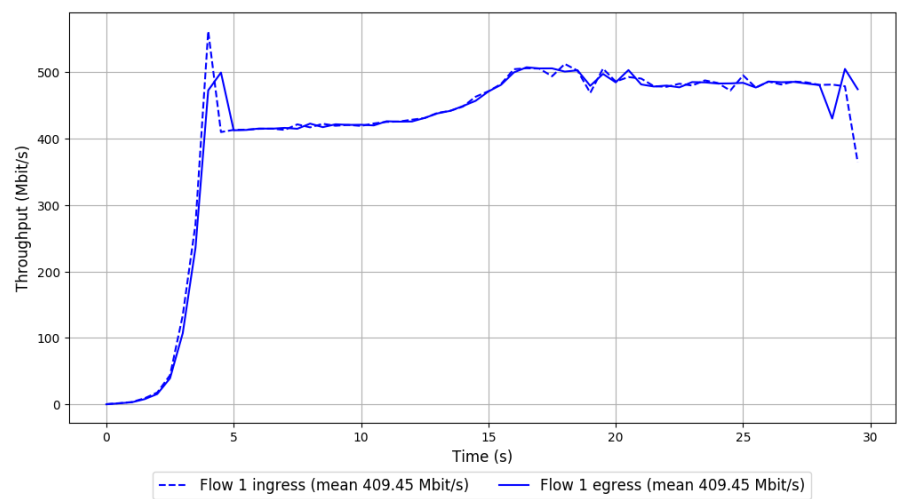
Run 8: Report of Vivace-LTE — Data Link

```
Run 9: Statistics of Vivace-LTE

Start at: 2018-02-19 21:27:45
End at: 2018-02-19 21:28:15

# Below is generated by plot.py at 2018-02-20 00:45:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 317.30 Mbit/s
95th percentile per-packet one-way delay: 86.872 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 317.30 Mbit/s
95th percentile per-packet one-way delay: 86.872 ms
Loss rate: 0.00%
```
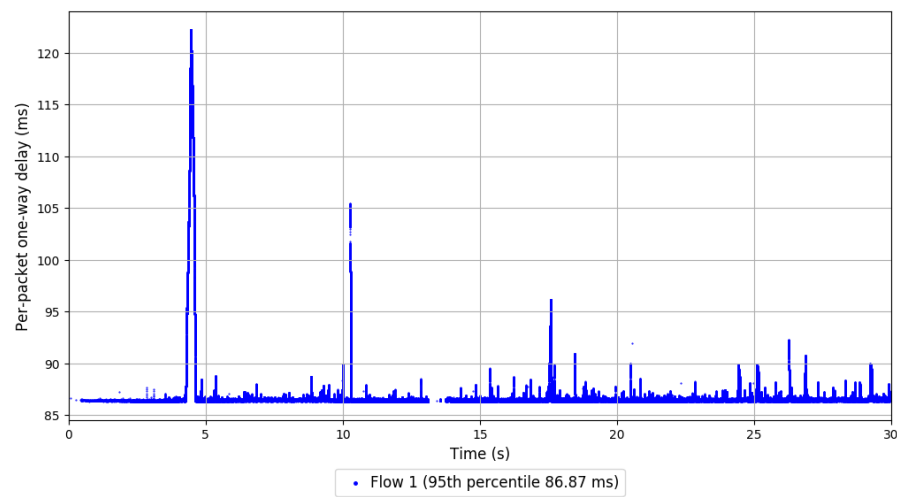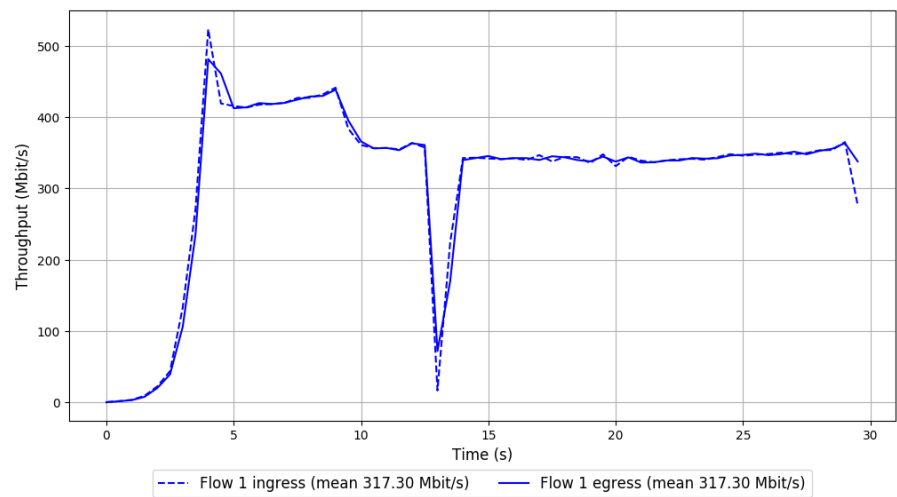
Run 9: Report of Vivace-LTE — Data Link

Flow 1 ingress (mean 317.30 Mbit/s) —— Flow 1 egress (mean 317.30 Mbit/s)

• Flow 1 (95th percentile 86.87 ms)

```
Run 10: Statistics of Vivace-LTE

Start at: 2018-02-19 21:42:52
End at: 2018-02-19 21:43:22

# Below is generated by plot.py at 2018-02-20 00:45:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 264.16 Mbit/s
95th percentile per-packet one-way delay: 110.336 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 264.16 Mbit/s
95th percentile per-packet one-way delay: 110.336 ms
Loss rate: 0.92%
```

Run 10: Report of Vivace-LTE — Data Link