Pantheon Report

Generated at 2018-01-31 07:04:08 (UTC).

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

Repeated the test of 17 congestion control schemes 10 times.

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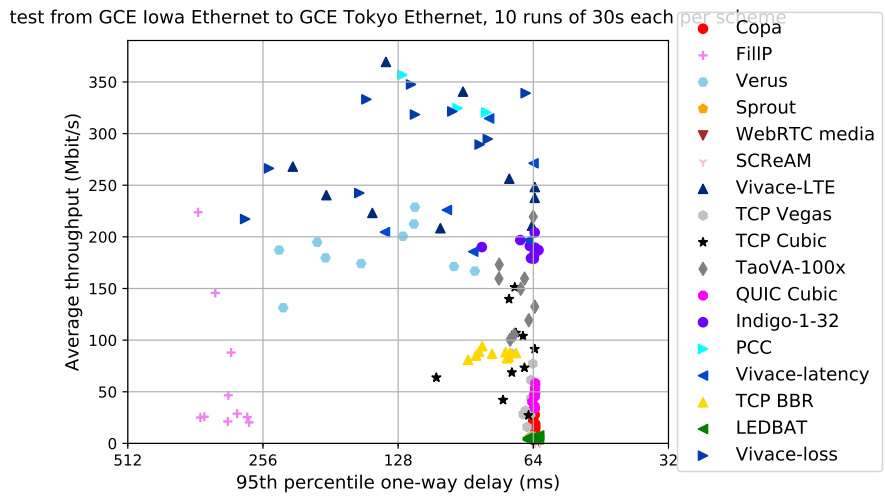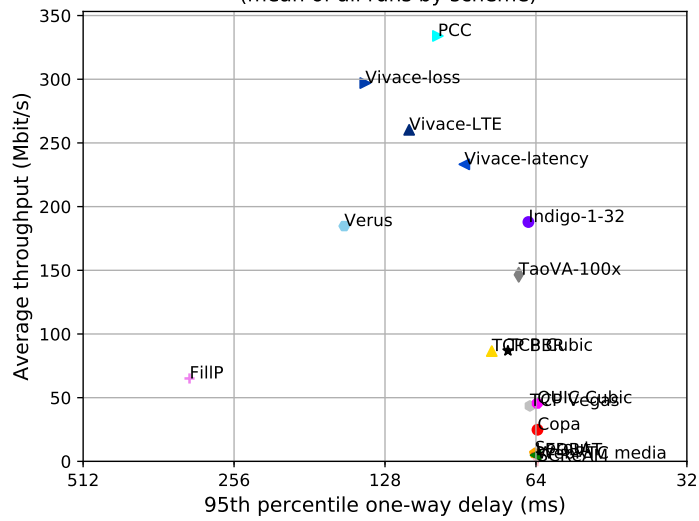
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

```
Git summary:
branch: master @ 70217998b3c9a7166a95460a70c0854d1326e100
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
 M datagrump/sender.cc
third_party/fillp @ fb9c9ab842e5614ad52911a76fb9bd1c1b0dca86
third_party/genericCC @ 80b516c448f795fd6e9675f7177b69c622f07da8
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 Tokyo Ethernet, 10 runs of 30s each per scheme
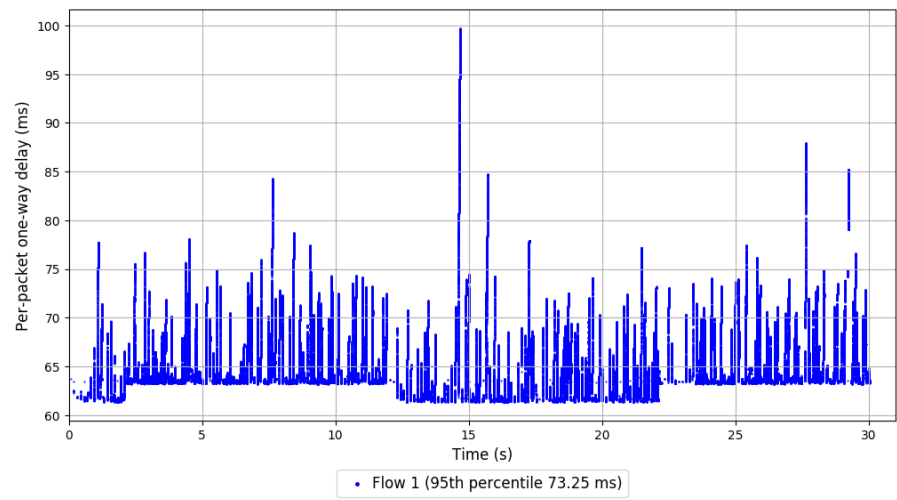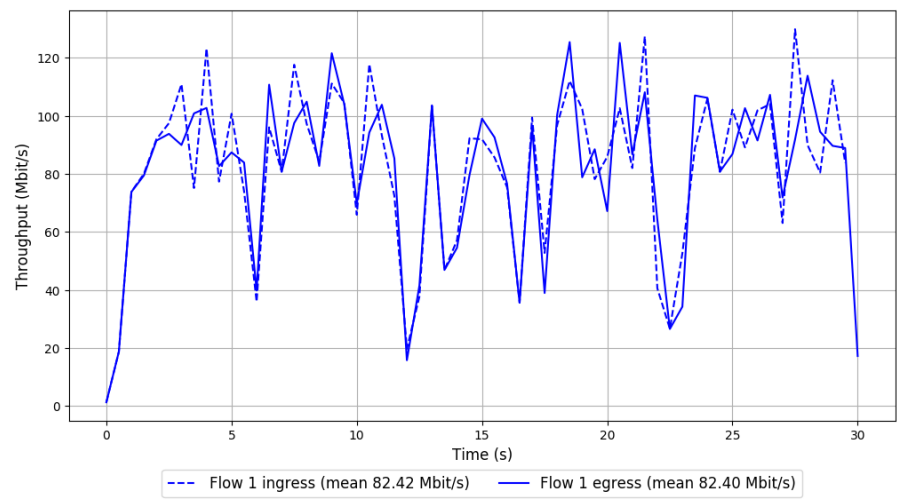(mean of all runs by scheme)

test from GCE Iowa Ethernet to GCE Tokyo 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	86.58	78.39	0.37
TCP Cubic	10	86.83	72.78	0.09
LEDBAT	10	4.80	64.12	0.69
PCC	3	333.97	100.39	0.07
QUIC Cubic	10	45.64	63.61	0.00
SCReAM	10	0.22	63.60	0.01
WebRTC media	10	2.21	63.67	0.00
Sprout	10	6.34	64.39	0.64
TaoVA-100x	9	146.52	69.27	0.00
TCP Vegas	10	43.53	65.81	0.22
Verus	10	184.72	154.35	0.81
Copa	9	24.81	63.55	0.00
FillP	10	65.09	314.08	8.09
Indigo-1-32	10	187.90	66.25	0.03
Vivace-latency	6	233.18	88.93	0.01
Vivace-loss	10	296.98	140.14	0.70
Vivace-LTE	10	260.31	114.57	0.36

3

```
Run 1: Statistics of TCP BBR

Start at: 2018-01-31 03:06:02
End at: 2018-01-31 03:06:32

# Below is generated by plot.py at 2018-01-31 06:17:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 82.40 Mbit/s
95th percentile per-packet one-way delay: 73.254 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 82.40 Mbit/s
95th percentile per-packet one-way delay: 73.254 ms
Loss rate: 0.02%
```
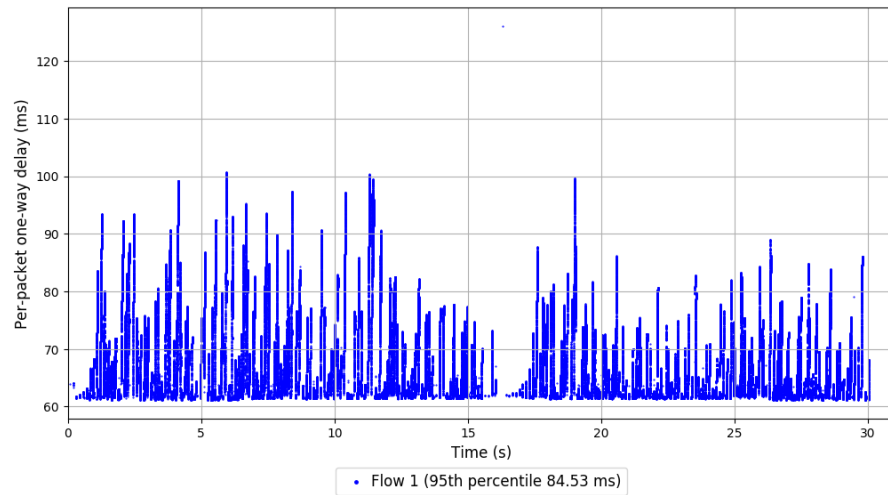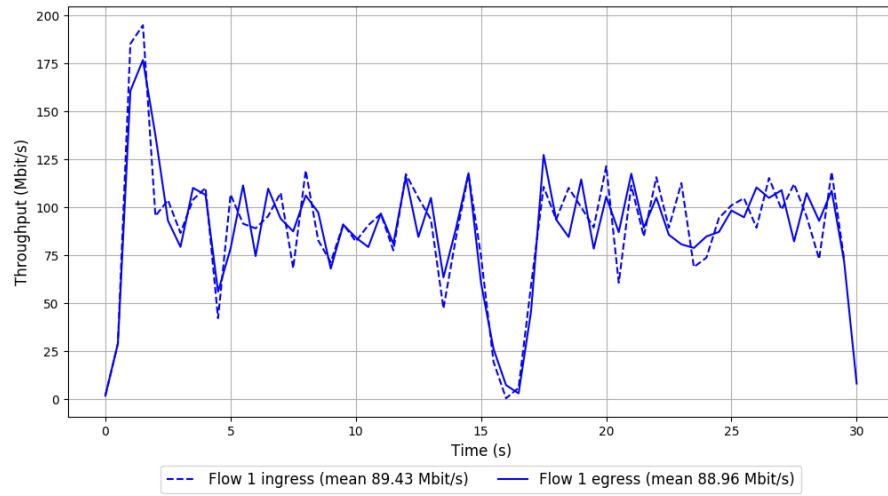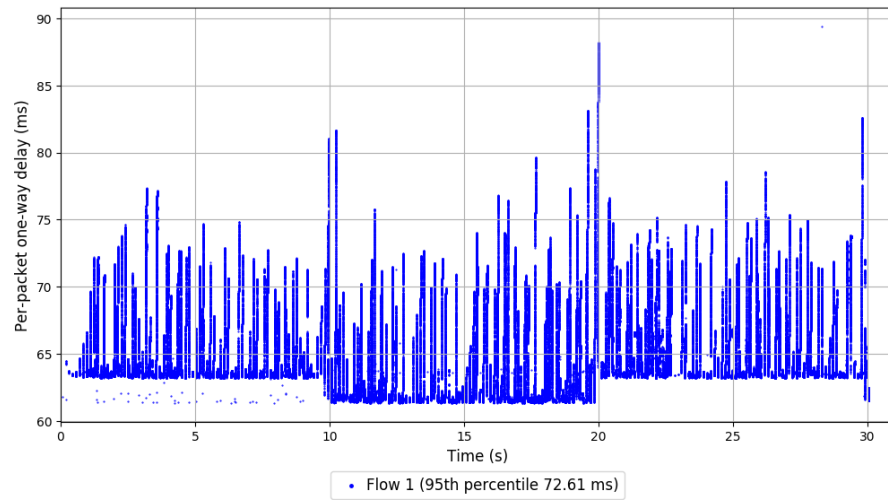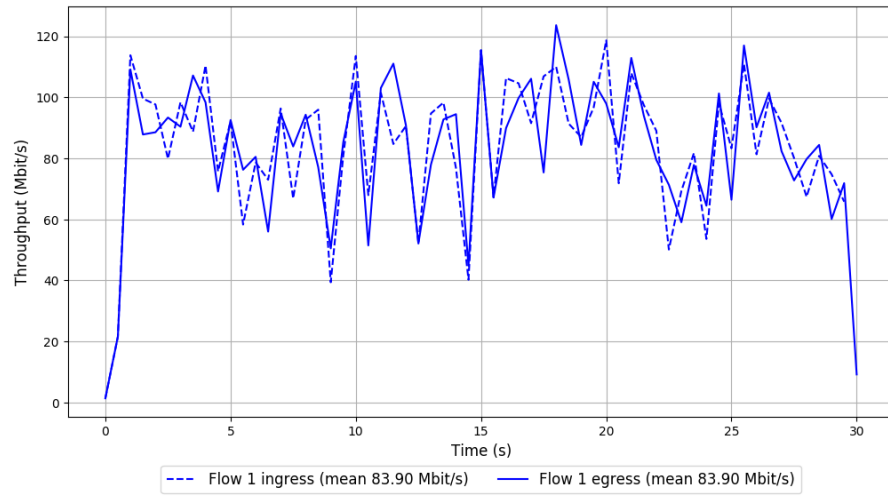
Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2018-01-31 03:19:17
End at: 2018-01-31 03:19:47

# Below is generated by plot.py at 2018-01-31 06:17:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.96 Mbit/s
95th percentile per-packet one-way delay: 84.527 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 88.96 Mbit/s
95th percentile per-packet one-way delay: 84.527 ms
Loss rate: 0.52%
```
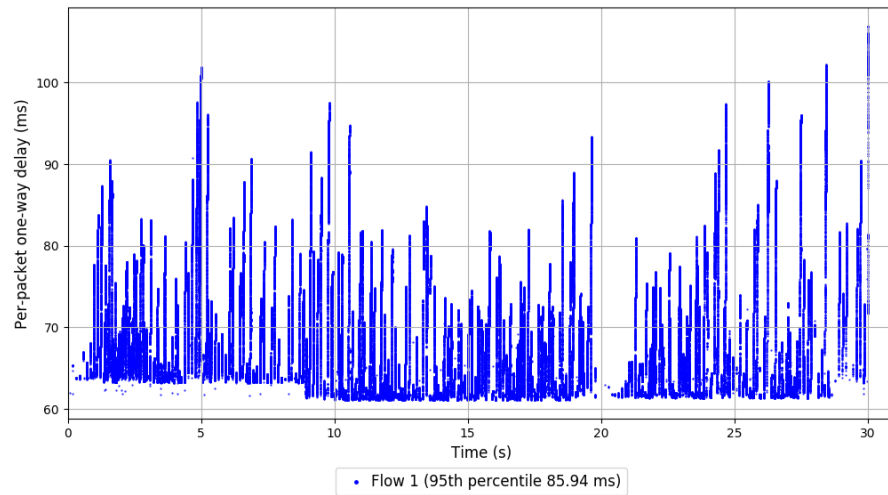
Run 2: Report of TCP BBR — Data Link

```
Run 3: Statistics of TCP BBR

Start at: 2018-01-31 03:32:54
End at: 2018-01-31 03:33:24

# Below is generated by plot.py at 2018-01-31 06:17:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 83.90 Mbit/s
95th percentile per-packet one-way delay: 72.613 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 83.90 Mbit/s
95th percentile per-packet one-way delay: 72.613 ms
Loss rate: 0.00%
```
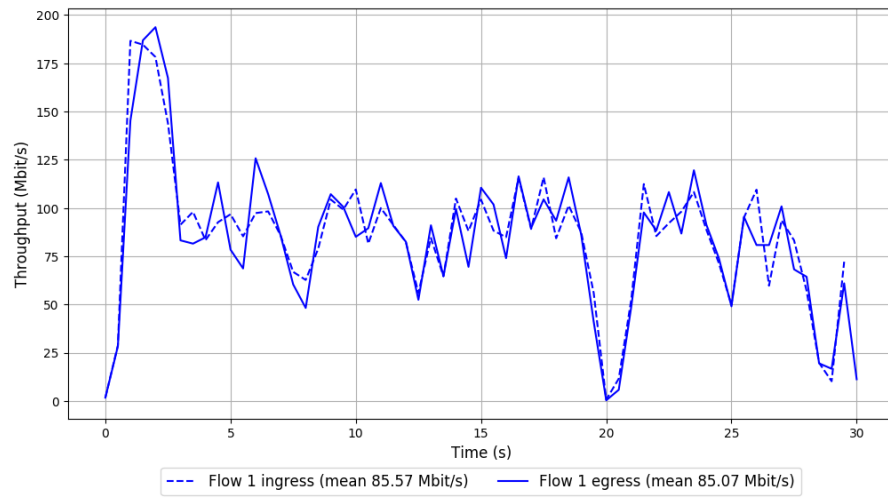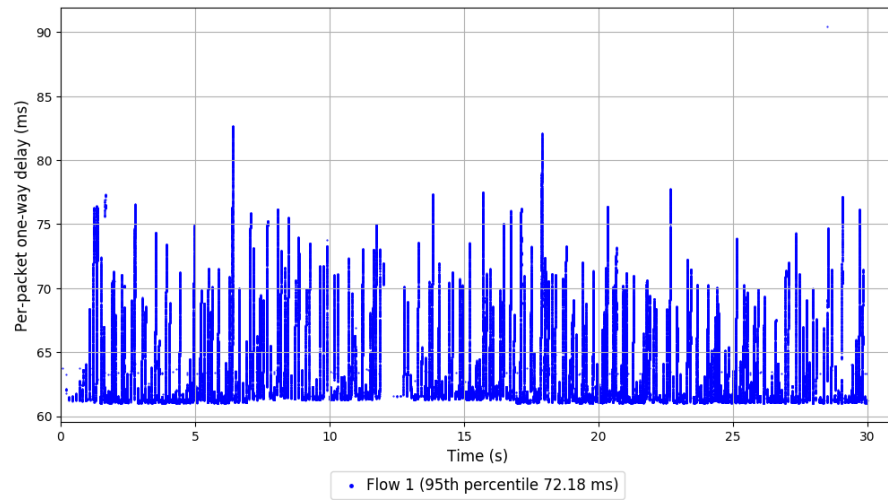
Run 3: Report of TCP BBR — Data Link

```
Run 4: Statistics of TCP BBR

Start at: 2018-01-31 03:46:25
End at: 2018-01-31 03:46:55

# Below is generated by plot.py at 2018-01-31 06:17:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 85.07 Mbit/s
95th percentile per-packet one-way delay: 85.936 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 85.07 Mbit/s
95th percentile per-packet one-way delay: 85.936 ms
Loss rate: 0.54%
```
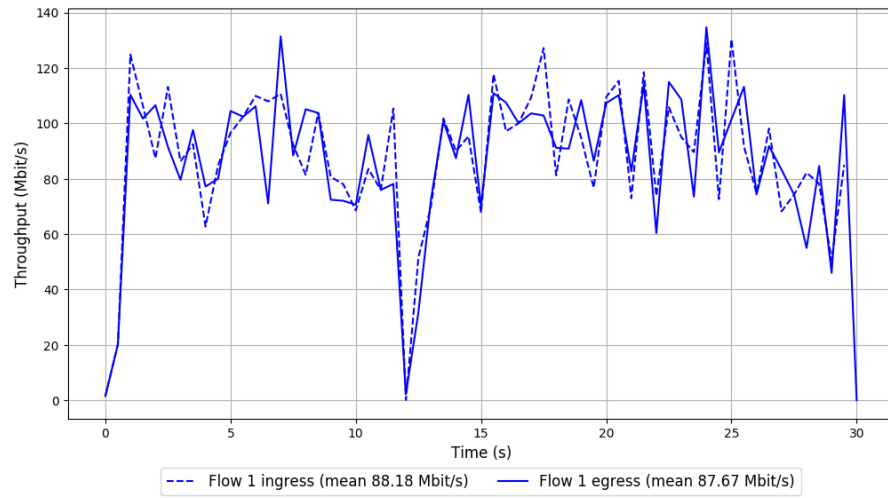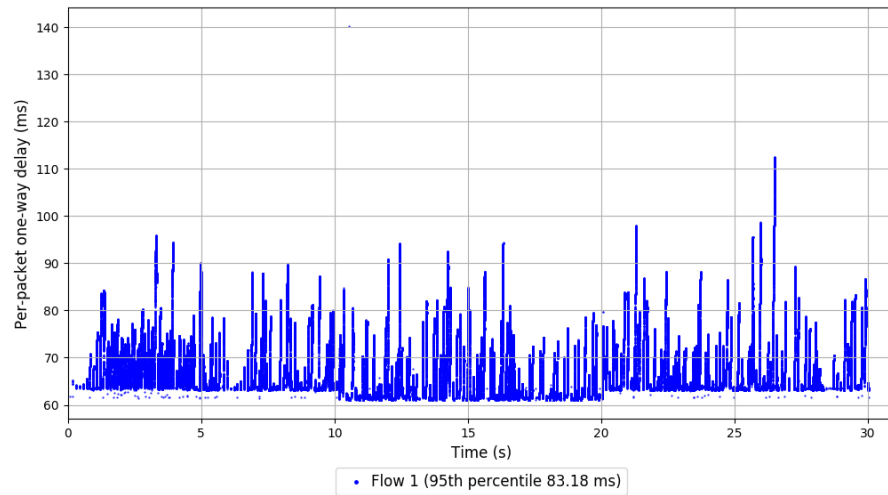
Run 4: Report of TCP BBR — Data Link

Flow 1 ingress (mean 85.57 Mbit/s)   Flow 1 egress (mean 85.07 Mbit/s)

Flow 1 (95th percentile 85.94 ms)

```
Run 5: Statistics of TCP BBR

Start at: 2018-01-31 03:59:37
End at: 2018-01-31 04:00:07

# Below is generated by plot.py at 2018-01-31 06:17:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.67 Mbit/s
95th percentile per-packet one-way delay: 72.184 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 87.67 Mbit/s
95th percentile per-packet one-way delay: 72.184 ms
Loss rate: 0.59%
```
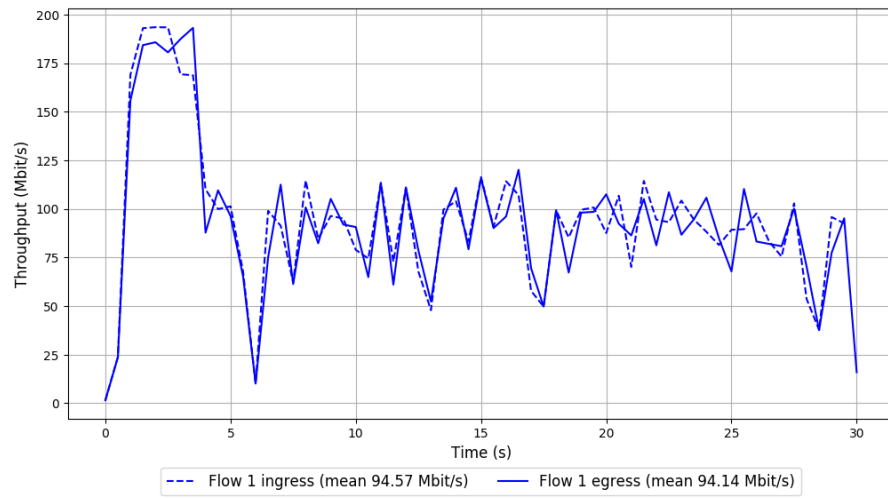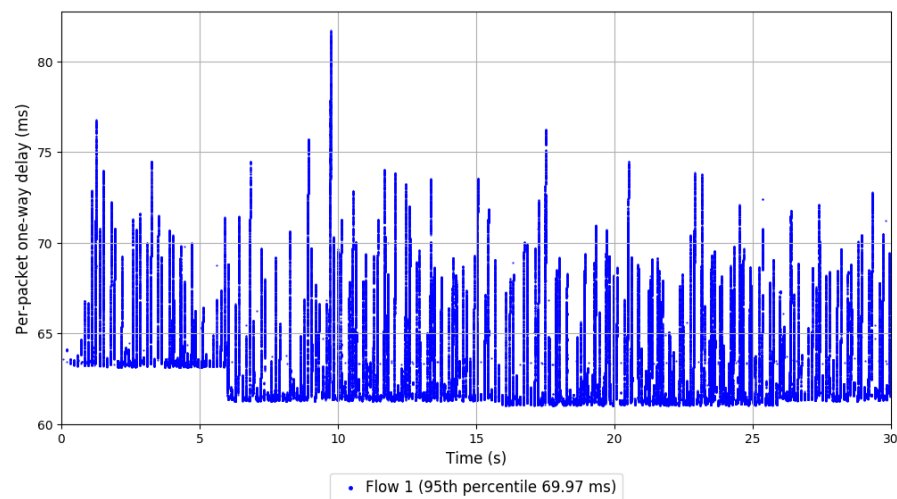
Run 5: Report of TCP BBR — Data Link

Flow 1 ingress (mean 88.18 Mbit/s)   Flow 1 egress (mean 87.67 Mbit/s)

• Flow 1 (95th percentile 72.18 ms)

```
Run 6: Statistics of TCP BBR

Start at: 2018-01-31 04:12:54
End at: 2018-01-31 04:13:24

# Below is generated by plot.py at 2018-01-31 06:17:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.14 Mbit/s
95th percentile per-packet one-way delay: 83.181 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 94.14 Mbit/s
95th percentile per-packet one-way delay: 83.181 ms
Loss rate: 0.45%
```
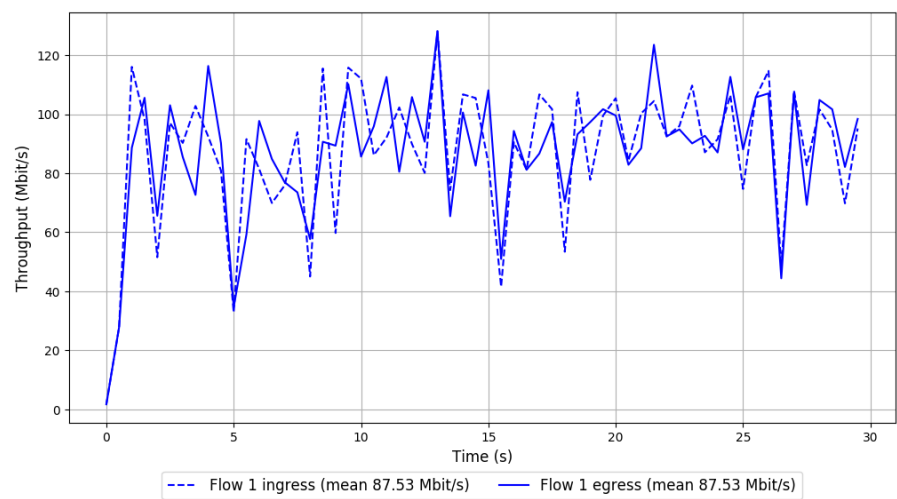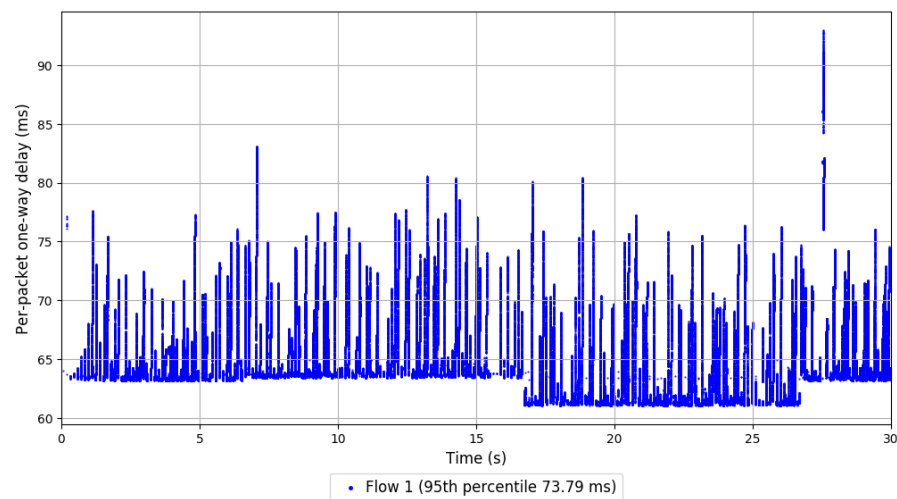
Run 6: Report of TCP BBR — Data Link

```
Run 7: Statistics of TCP BBR

Start at: 2018-01-31 04:25:58
End at: 2018-01-31 04:26:28

# Below is generated by plot.py at 2018-01-31 06:17:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.53 Mbit/s
95th percentile per-packet one-way delay: 69.970 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 87.53 Mbit/s
95th percentile per-packet one-way delay: 69.970 ms
Loss rate: 0.00%
```
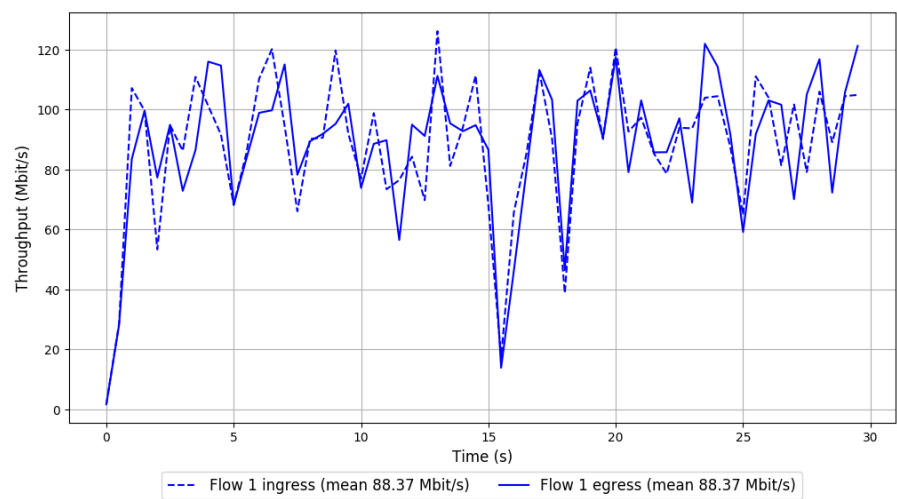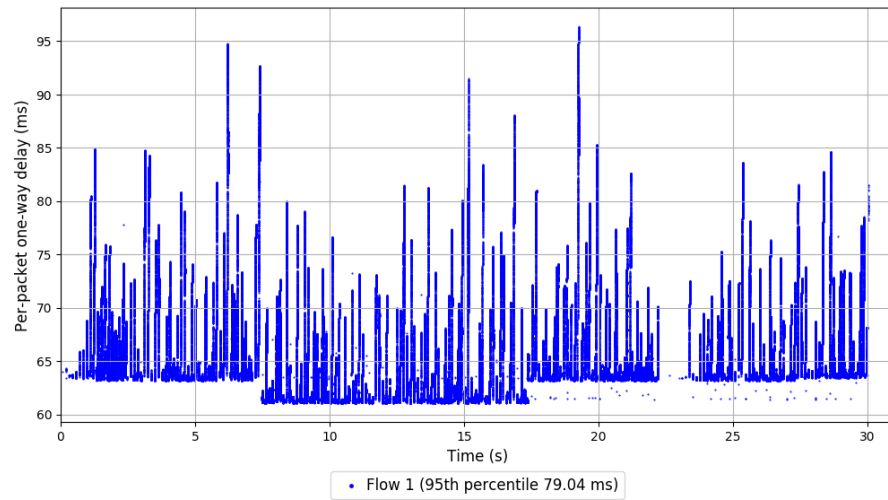
Run 7: Report of TCP BBR — Data Link

```
Run 8: Statistics of TCP BBR

Start at: 2018-01-31 04:39:27
End at: 2018-01-31 04:39:57

# Below is generated by plot.py at 2018-01-31 06:17:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.37 Mbit/s
95th percentile per-packet one-way delay: 73.790 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 88.37 Mbit/s
95th percentile per-packet one-way delay: 73.790 ms
Loss rate: 0.00%
```
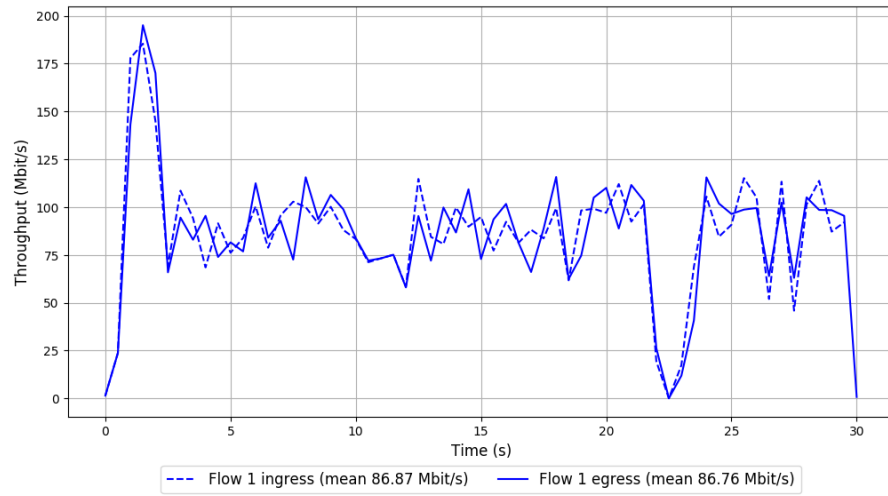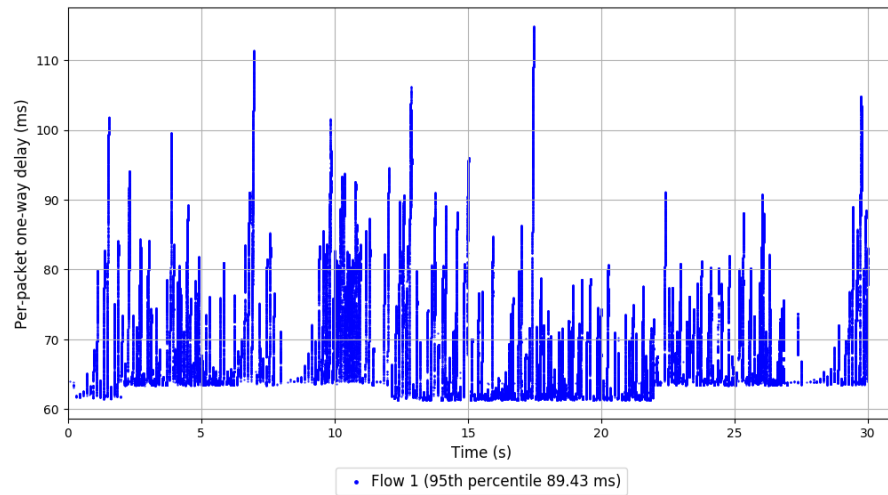
Run 8: Report of TCP BBR — Data Link

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

• Flow 1 (95th percentile 73.79 ms)

```
Run 9: Statistics of TCP BBR

Start at: 2018-01-31 04:53:06
End at: 2018-01-31 04:53:36

# Below is generated by plot.py at 2018-01-31 06:18:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.76 Mbit/s
95th percentile per-packet one-way delay: 79.044 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 86.76 Mbit/s
95th percentile per-packet one-way delay: 79.044 ms
Loss rate: 0.08%
```
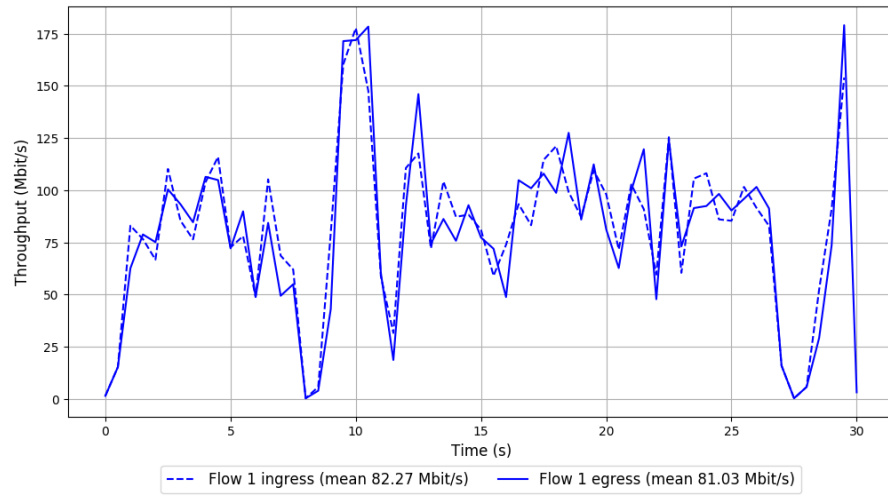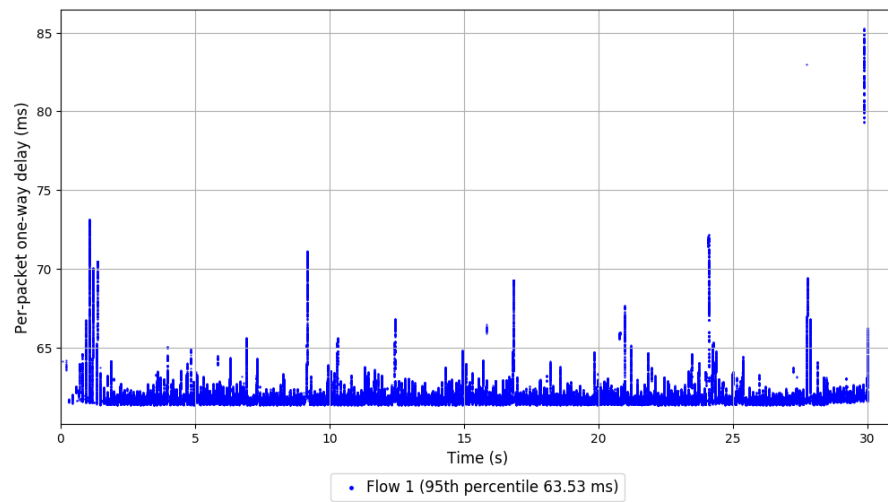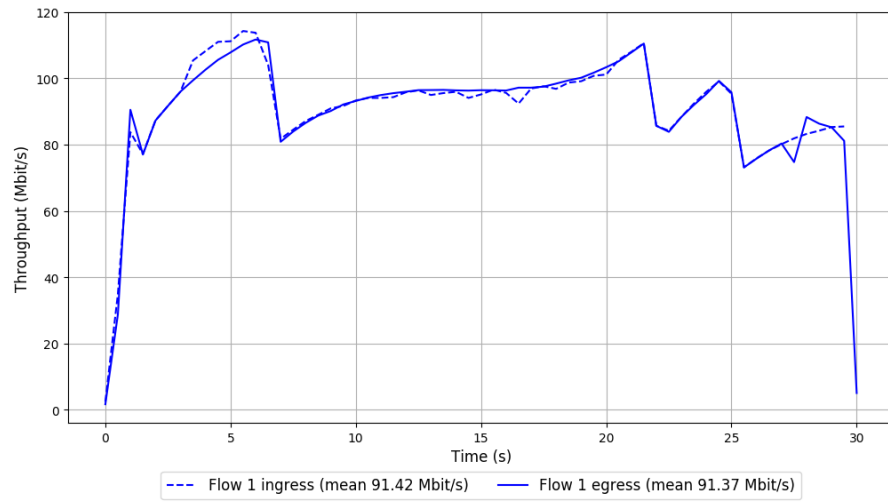
Run 9: Report of TCP BBR — Data Link

Flow 1 ingress (mean 86.87 Mbit/s)   Flow 1 egress (mean 86.76 Mbit/s)

Flow 1 (95th percentile 79.04 ms)

```
Run 10: Statistics of TCP BBR

Start at: 2018-01-31 05:06:32
End at: 2018-01-31 05:07:02

# Below is generated by plot.py at 2018-01-31 06:18:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 81.03 Mbit/s
95th percentile per-packet one-way delay: 89.433 ms
Loss rate: 1.46%
-- Flow 1:
Average throughput: 81.03 Mbit/s
95th percentile per-packet one-way delay: 89.433 ms
Loss rate: 1.46%
```
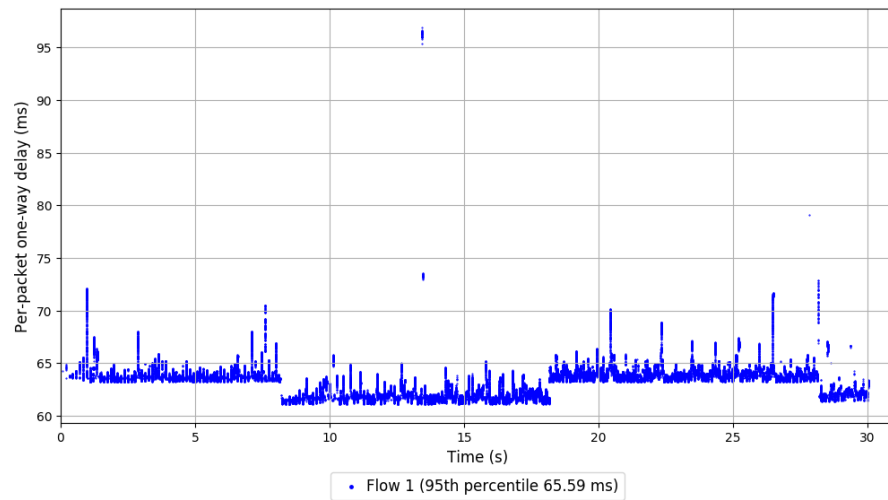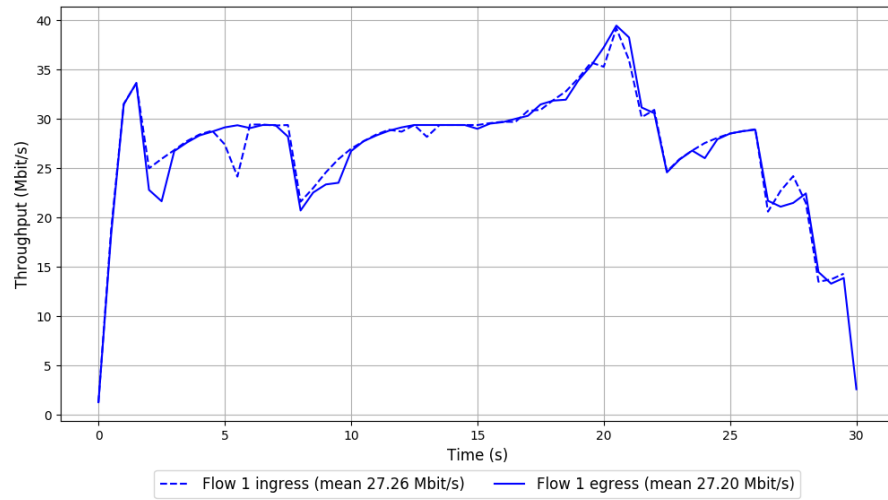
Run 10: Report of TCP BBR — Data Link

Flow 1 ingress (mean 82.27 Mbit/s)   Flow 1 egress (mean 81.03 Mbit/s)

Flow 1 (95th percentile 89.43 ms)

```
Run 1: Statistics of TCP Cubic

Start at: 2018-01-31 02:58:45
End at: 2018-01-31 02:59:15

# Below is generated by plot.py at 2018-01-31 06:19:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.37 Mbit/s
95th percentile per-packet one-way delay: 63.533 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 91.37 Mbit/s
95th percentile per-packet one-way delay: 63.533 ms
Loss rate: 0.05%
```
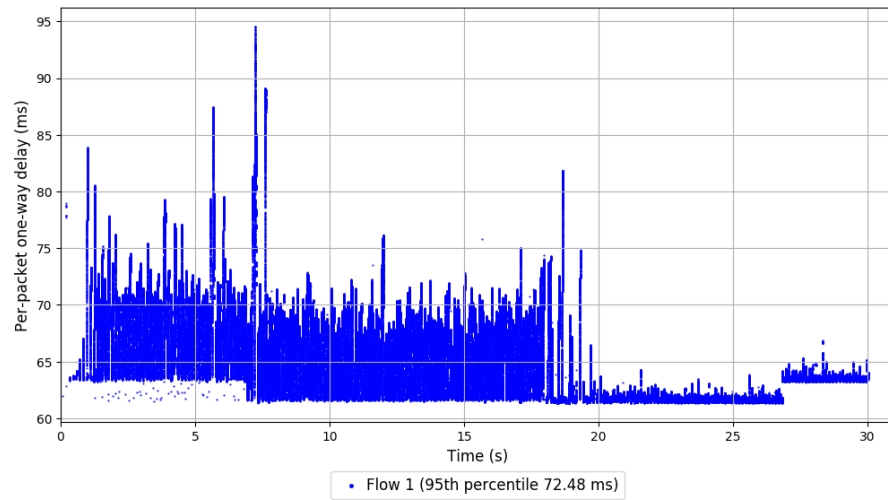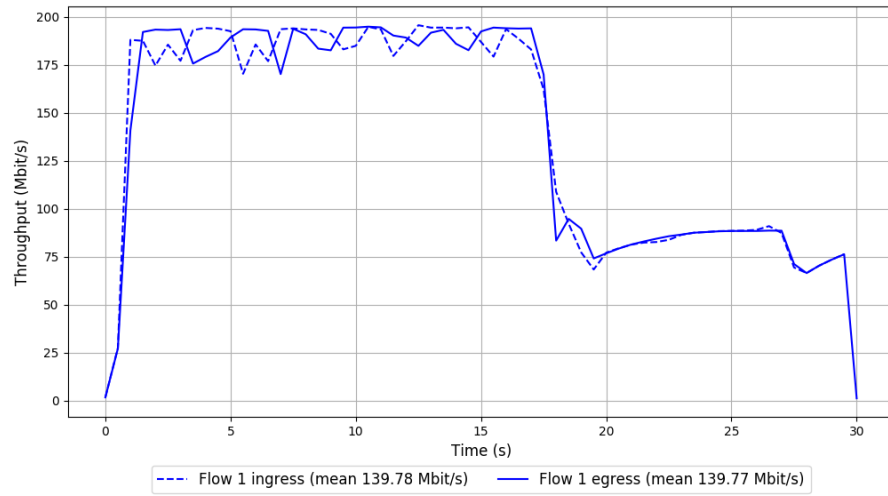
Run 1: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 91.42 Mbit/s)   Flow 1 egress (mean 91.37 Mbit/s)

Flow 1 (95th percentile 63.53 ms)

```
Run 2: Statistics of TCP Cubic

Start at: 2018-01-31 03:12:26
End at: 2018-01-31 03:12:56

# Below is generated by plot.py at 2018-01-31 06:19:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 27.20 Mbit/s
95th percentile per-packet one-way delay: 65.591 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 27.20 Mbit/s
95th percentile per-packet one-way delay: 65.591 ms
Loss rate: 0.22%
```
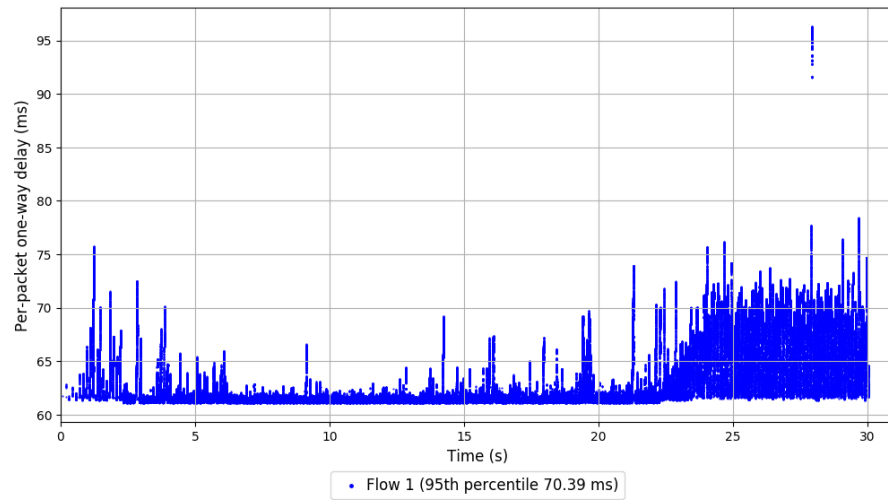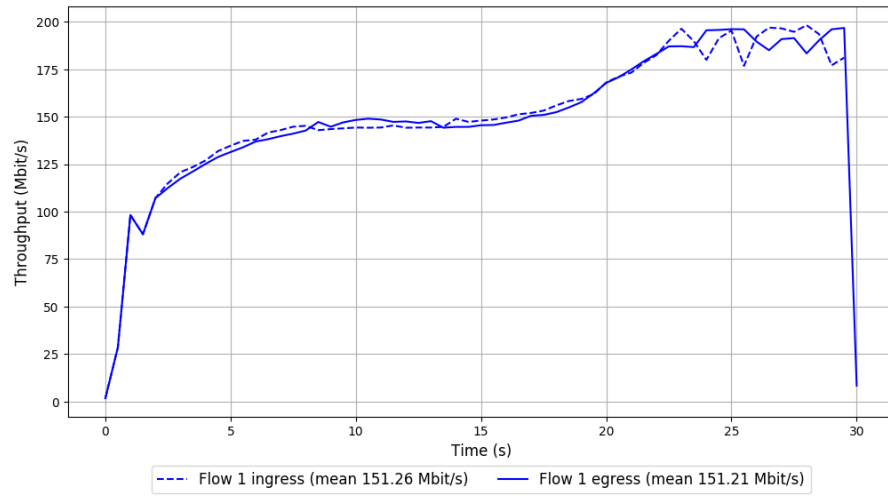
Run 2: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 27.26 Mbit/s) ——— Flow 1 egress (mean 27.20 Mbit/s)

• Flow 1 (95th percentile 65.59 ms)

```
Run 3: Statistics of TCP Cubic

Start at: 2018-01-31 03:25:37
End at: 2018-01-31 03:26:07


# Below is generated by plot.py at 2018-01-31 06:20:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 139.77 Mbit/s
95th percentile per-packet one-way delay: 72.482 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 139.77 Mbit/s
95th percentile per-packet one-way delay: 72.482 ms
Loss rate: 0.00%
```
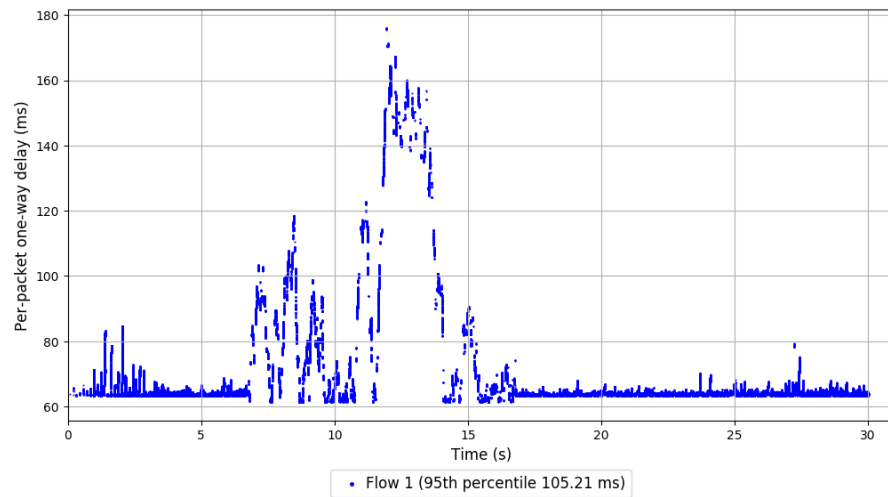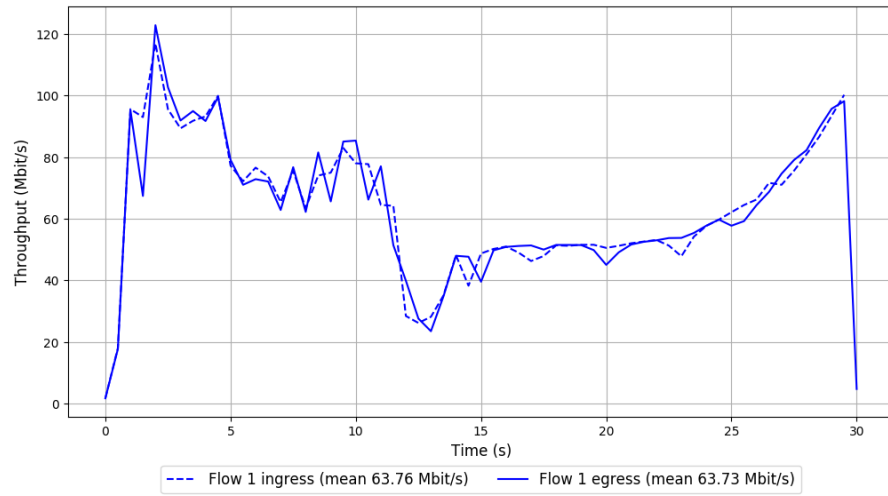
Run 3: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 139.78 Mbit/s)   Flow 1 egress (mean 139.77 Mbit/s)

Flow 1 (95th percentile 72.48 ms)

```
Run 4: Statistics of TCP Cubic

Start at: 2018-01-31 03:39:22
End at: 2018-01-31 03:39:52

# Below is generated by plot.py at 2018-01-31 06:20:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 151.21 Mbit/s
95th percentile per-packet one-way delay: 70.389 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 151.21 Mbit/s
95th percentile per-packet one-way delay: 70.389 ms
Loss rate: 0.03%
```
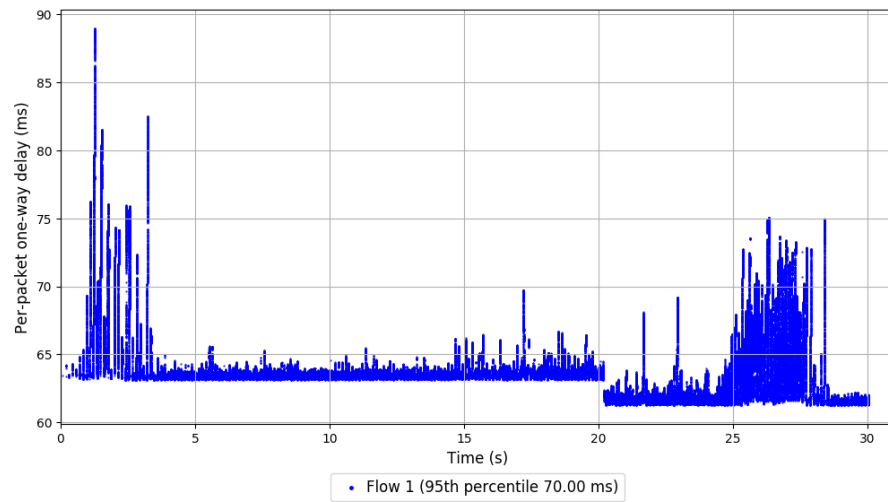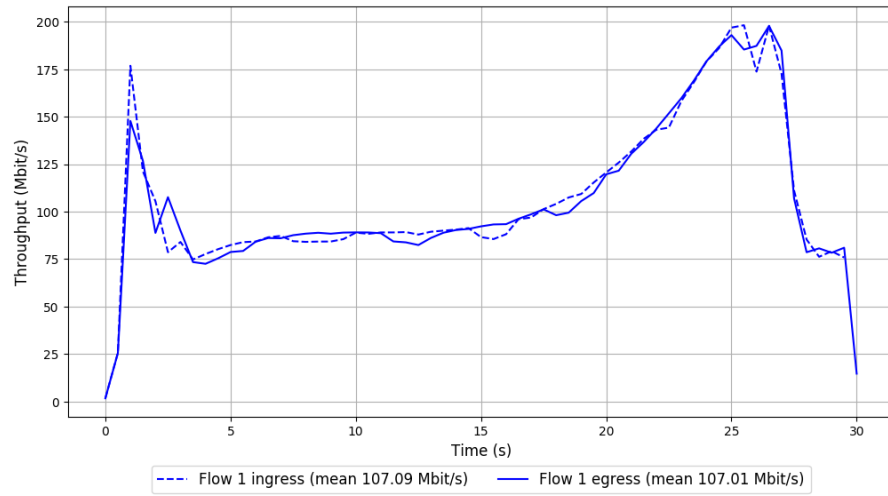
Run 4: Report of TCP Cubic — Data Link

```
Run 5: Statistics of TCP Cubic

Start at: 2018-01-31 03:52:47
End at: 2018-01-31 03:53:17

# Below is generated by plot.py at 2018-01-31 06:20:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 63.73 Mbit/s
95th percentile per-packet one-way delay: 105.211 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 63.73 Mbit/s
95th percentile per-packet one-way delay: 105.211 ms
Loss rate: 0.06%
```
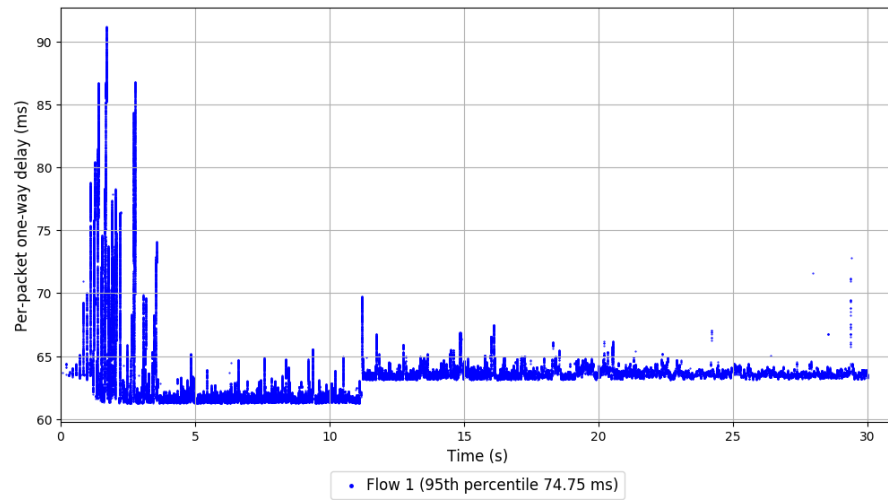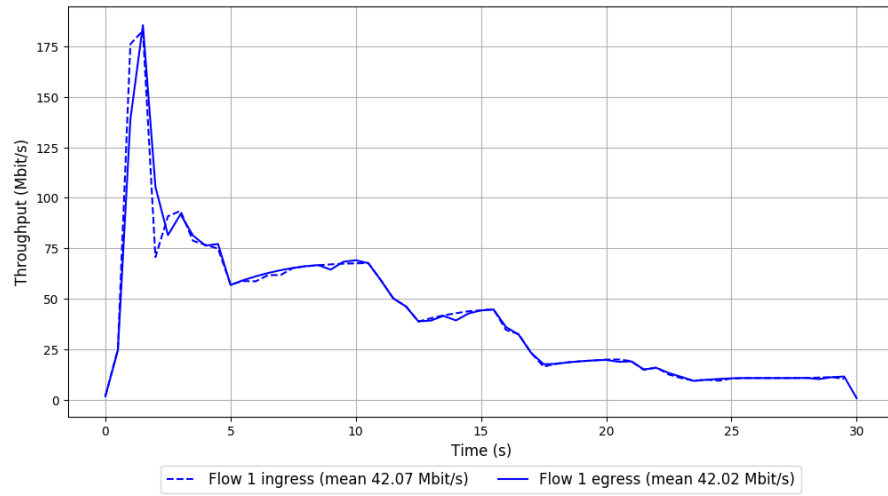
Run 5: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 63.76 Mbit/s)   Flow 1 egress (mean 63.73 Mbit/s)

Flow 1 (95th percentile 105.21 ms)

```
Run 6: Statistics of TCP Cubic

Start at: 2018-01-31 04:06:04
End at: 2018-01-31 04:06:34


# Below is generated by plot.py at 2018-01-31 06:20:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 107.01 Mbit/s
95th percentile per-packet one-way delay: 70.000 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 107.01 Mbit/s
95th percentile per-packet one-way delay: 70.000 ms
Loss rate: 0.08%
```
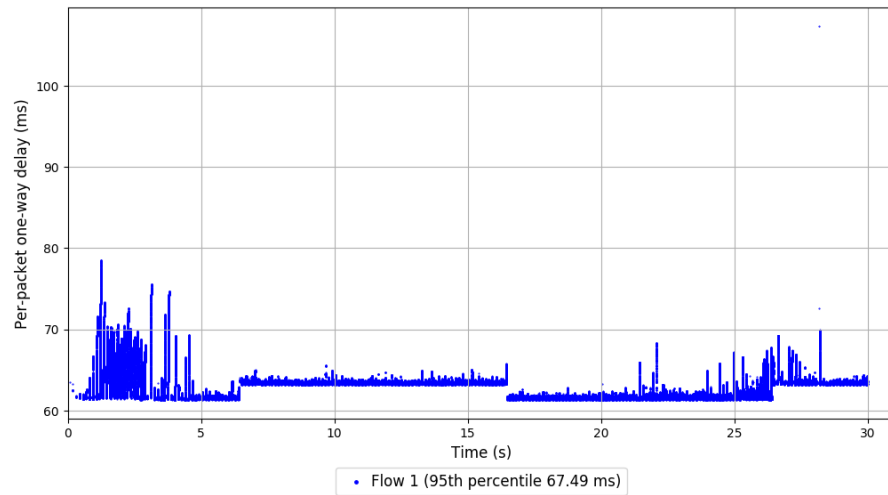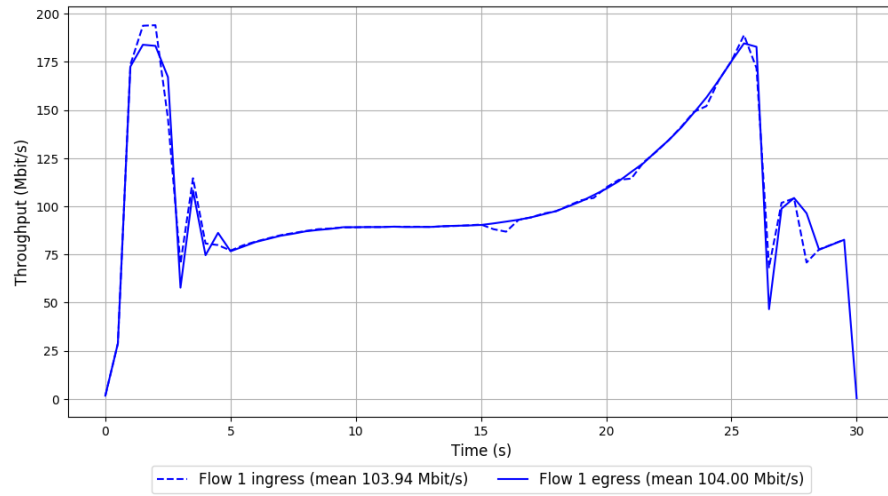
Run 6: Report of TCP Cubic — Data Link

```
Run 7: Statistics of TCP Cubic

Start at: 2018-01-31 04:19:23
End at: 2018-01-31 04:19:53

# Below is generated by plot.py at 2018-01-31 06:20:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 42.02 Mbit/s
95th percentile per-packet one-way delay: 74.746 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 42.02 Mbit/s
95th percentile per-packet one-way delay: 74.746 ms
Loss rate: 0.12%
```
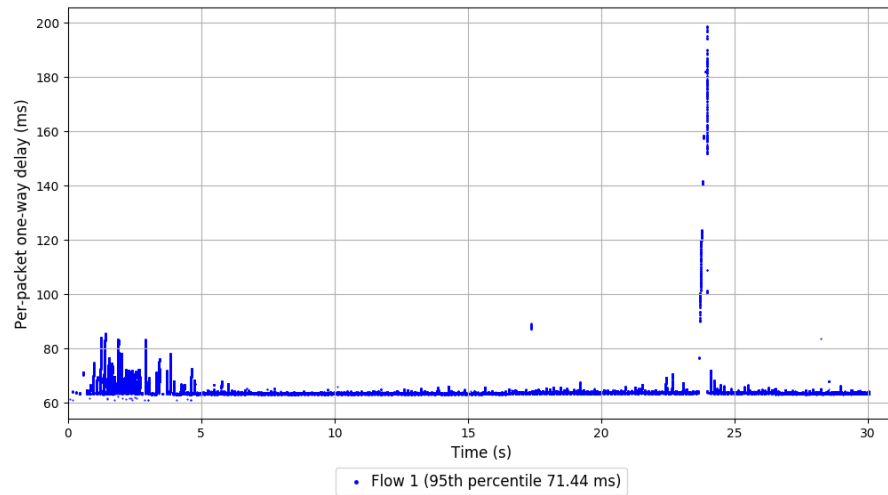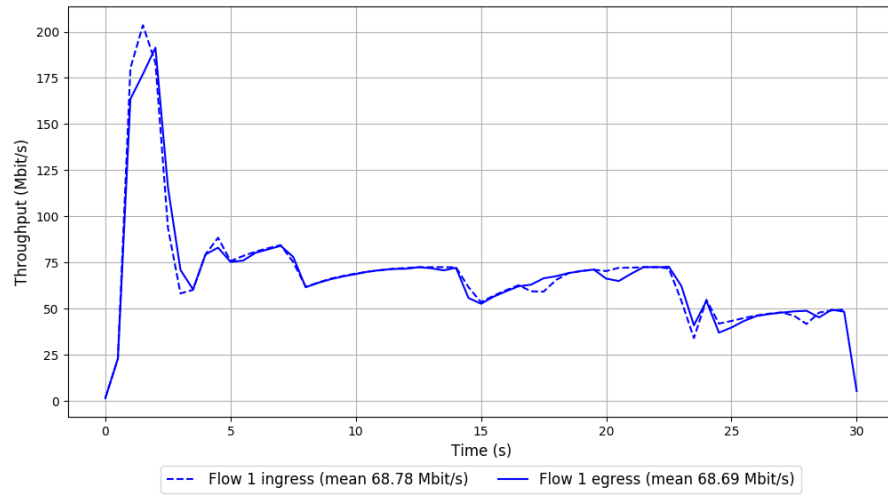
Run 7: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 42.07 Mbit/s) — — — Flow 1 egress (mean 42.02 Mbit/s)

• Flow 1 (95th percentile 74.75 ms)

```
Run 8: Statistics of TCP Cubic

Start at: 2018-01-31 04:32:37
End at: 2018-01-31 04:33:07

# Below is generated by plot.py at 2018-01-31 06:20:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 104.00 Mbit/s
95th percentile per-packet one-way delay: 67.491 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 104.00 Mbit/s
95th percentile per-packet one-way delay: 67.491 ms
Loss rate: 0.00%
```
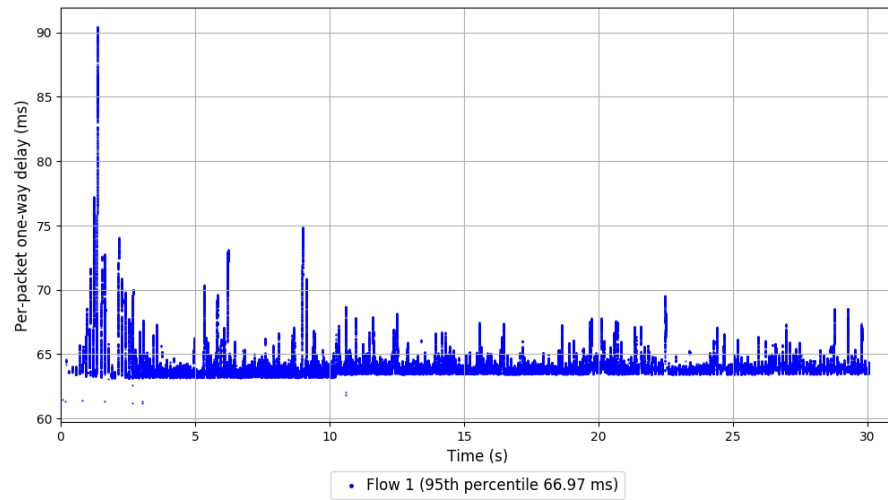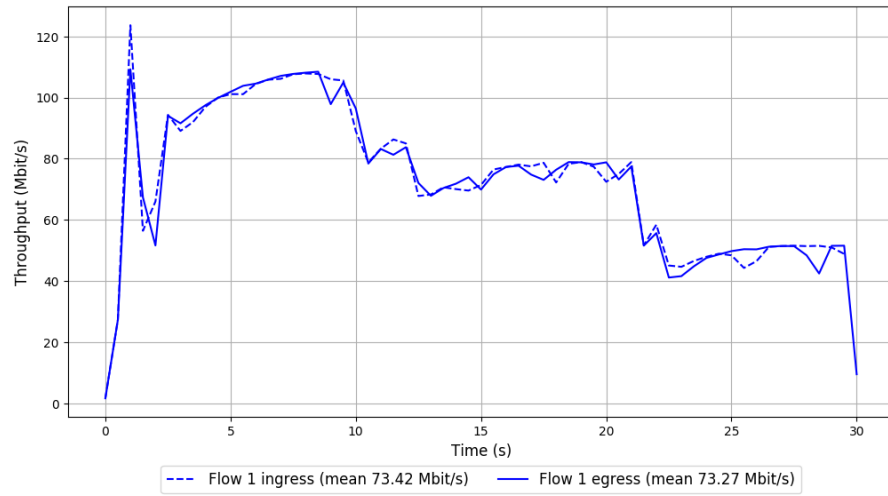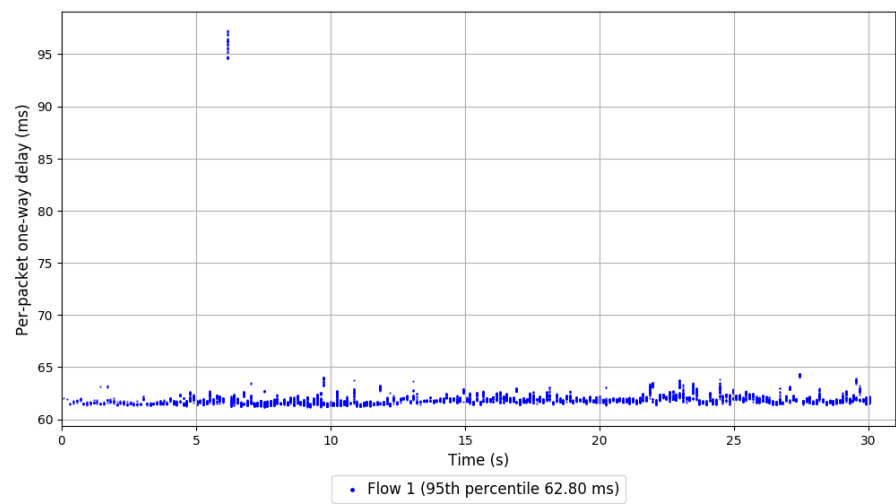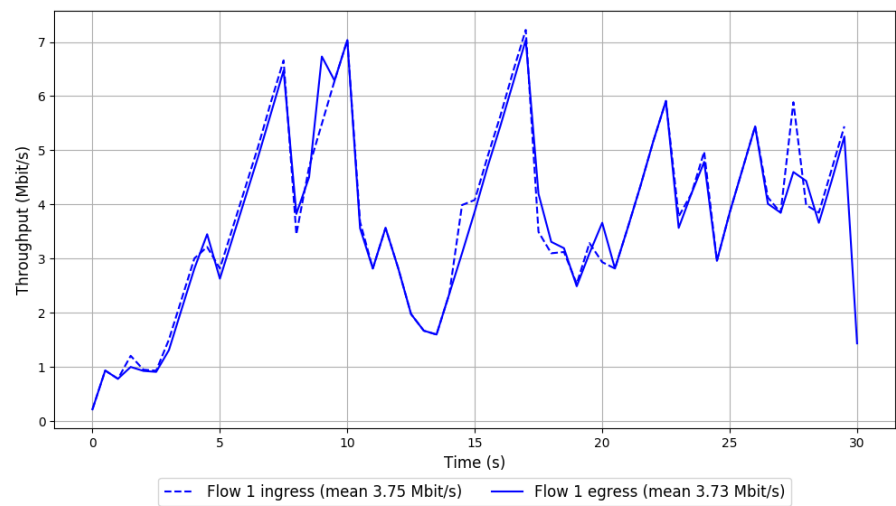
Run 8: Report of TCP Cubic — Data Link

```
Run 9: Statistics of TCP Cubic

Start at: 2018-01-31 04:45:57
End at: 2018-01-31 04:46:27

# Below is generated by plot.py at 2018-01-31 06:20:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 68.69 Mbit/s
95th percentile per-packet one-way delay: 71.438 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 68.69 Mbit/s
95th percentile per-packet one-way delay: 71.438 ms
Loss rate: 0.14%
```

Run 9: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 68.78 Mbit/s) --- Flow 1 egress (mean 68.69 Mbit/s)

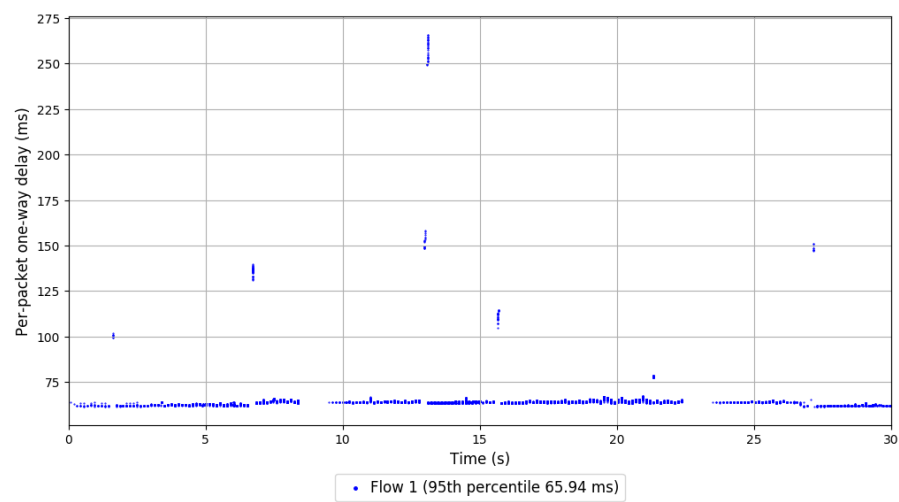

Flow 1 (95th percentile 71.44 ms)

```
Run 10: Statistics of TCP Cubic

Start at: 2018-01-31 04:59:44
End at: 2018-01-31 05:00:14


# Below is generated by plot.py at 2018-01-31 06:20:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 73.27 Mbit/s
95th percentile per-packet one-way delay: 66.969 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 73.27 Mbit/s
95th percentile per-packet one-way delay: 66.969 ms
Loss rate: 0.20%
```
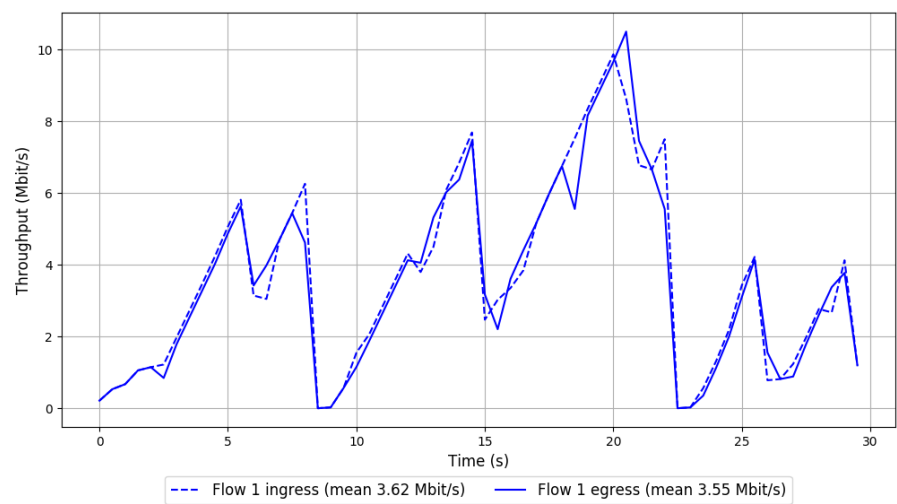
Run 10: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 73.42 Mbit/s)   Flow 1 egress (mean 73.27 Mbit/s)

Flow 1 (95th percentile 66.97 ms)

```
Run 1: Statistics of LEDBAT

Start at: 2018-01-31 03:08:01
End at: 2018-01-31 03:08:32

# Below is generated by plot.py at 2018-01-31 06:20:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 3.73 Mbit/s
95th percentile per-packet one-way delay: 62.796 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 3.73 Mbit/s
95th percentile per-packet one-way delay: 62.796 ms
Loss rate: 0.59%
```
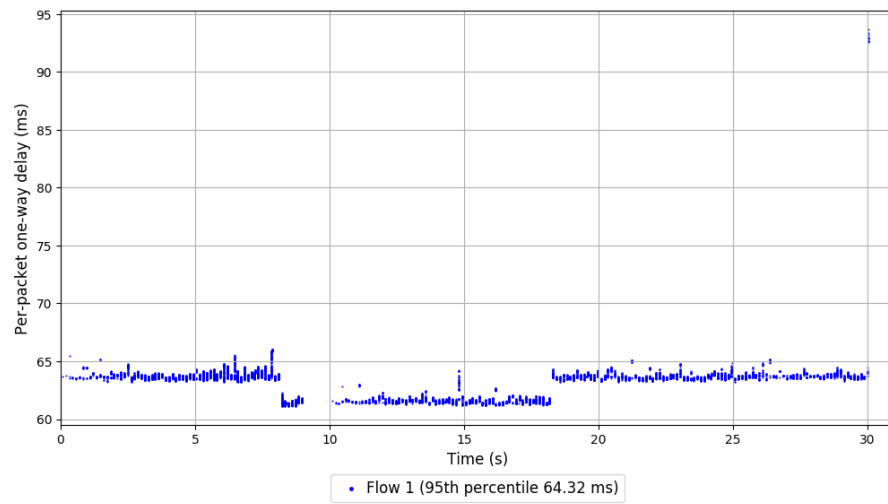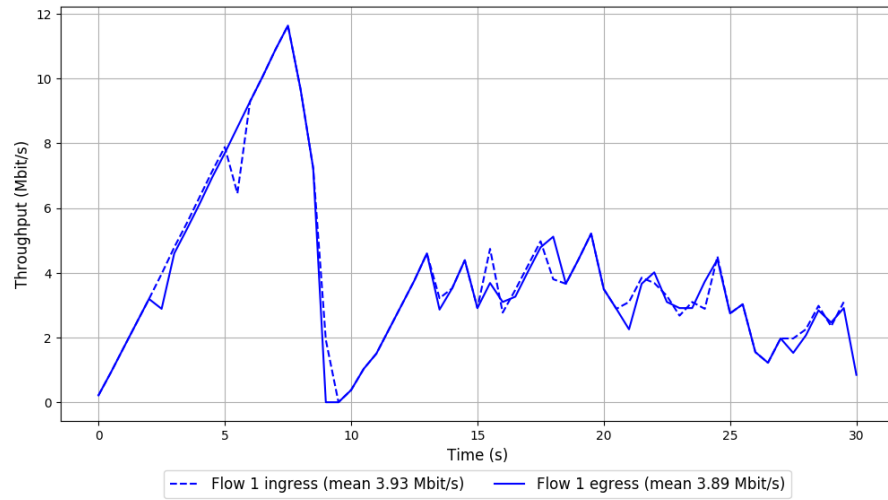
Run 1: Report of LEDBAT — Data Link

Flow 1 ingress (mean 3.75 Mbit/s) --- Flow 1 egress (mean 3.73 Mbit/s)

• Flow 1 (95th percentile 62.80 ms)

```
Run 2: Statistics of LEDBAT

Start at: 2018-01-31 03:21:17
End at: 2018-01-31 03:21:47

# Below is generated by plot.py at 2018-01-31 06:20:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 3.55 Mbit/s
95th percentile per-packet one-way delay: 65.941 ms
Loss rate: 2.12%
-- Flow 1:
Average throughput: 3.55 Mbit/s
95th percentile per-packet one-way delay: 65.941 ms
Loss rate: 2.12%
```
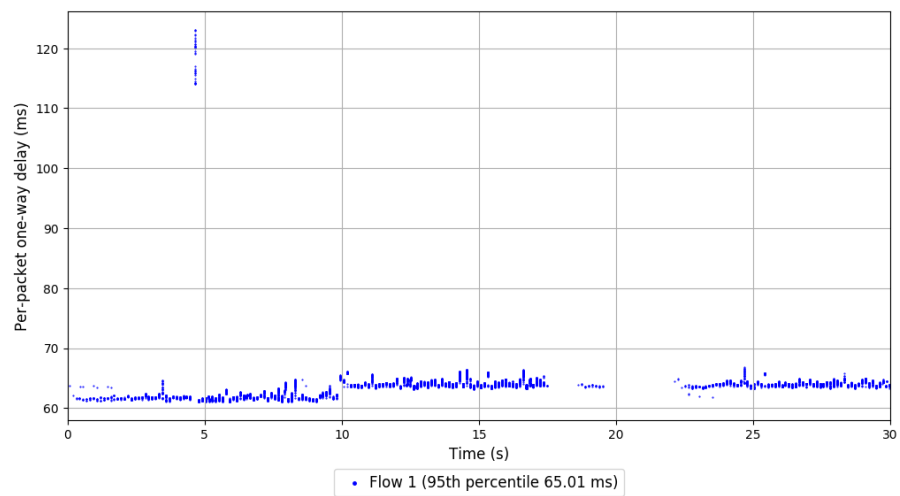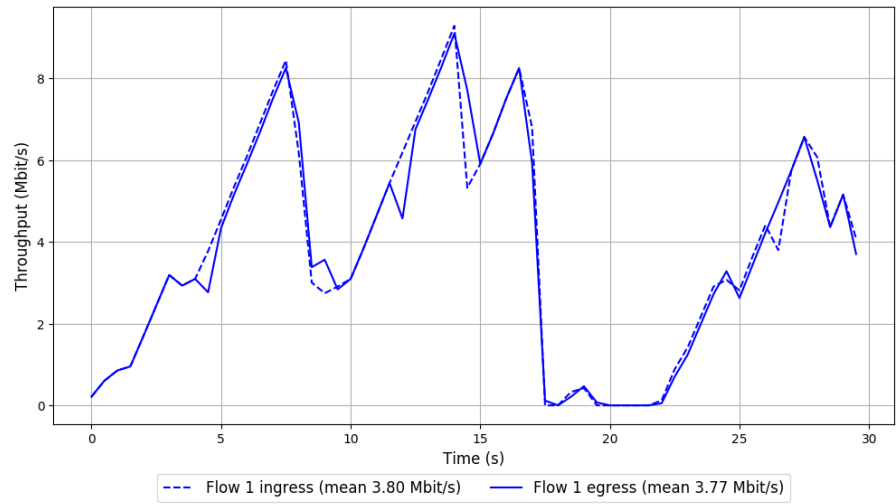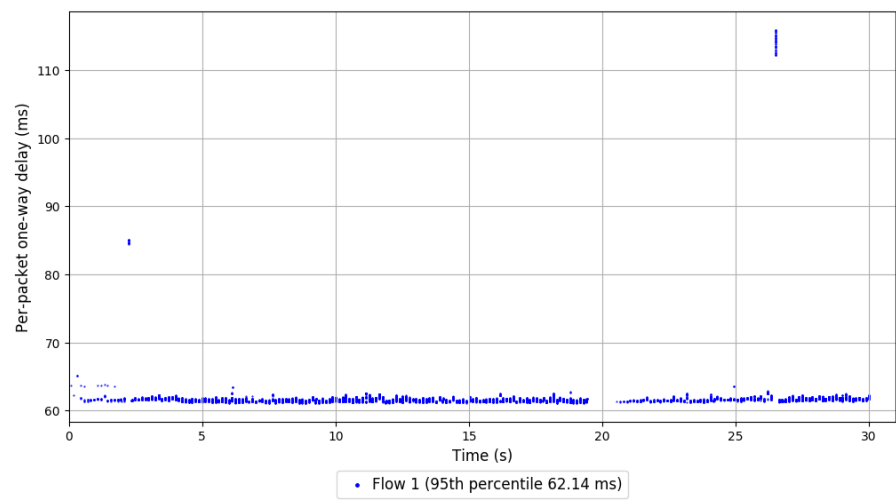
Run 2: Report of LEDBAT — Data Link

Flow 1 ingress (mean 3.62 Mbit/s) — — — Flow 1 egress (mean 3.55 Mbit/s)

Flow 1 (95th percentile 65.94 ms)

```
Run 3: Statistics of LEDBAT

Start at: 2018-01-31 03:34:56
End at: 2018-01-31 03:35:26

# Below is generated by plot.py at 2018-01-31 06:20:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 3.89 Mbit/s
95th percentile per-packet one-way delay: 64.316 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 3.89 Mbit/s
95th percentile per-packet one-way delay: 64.316 ms
Loss rate: 1.01%
```
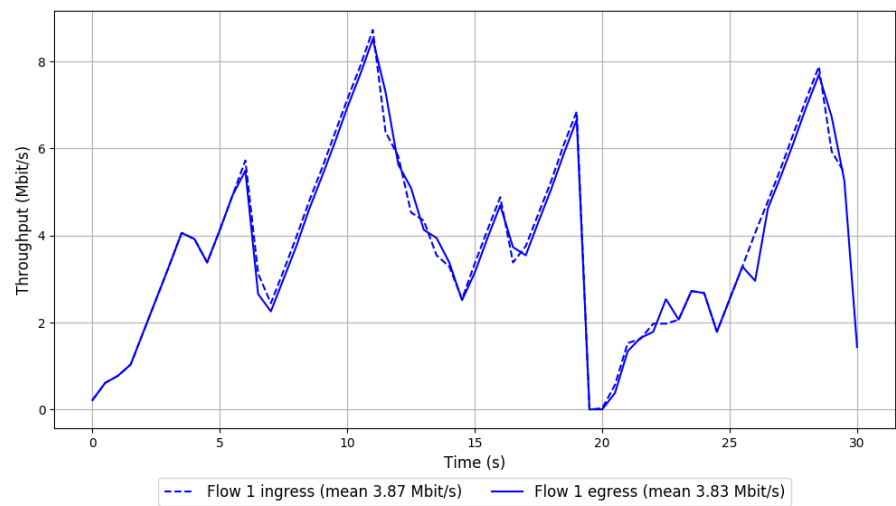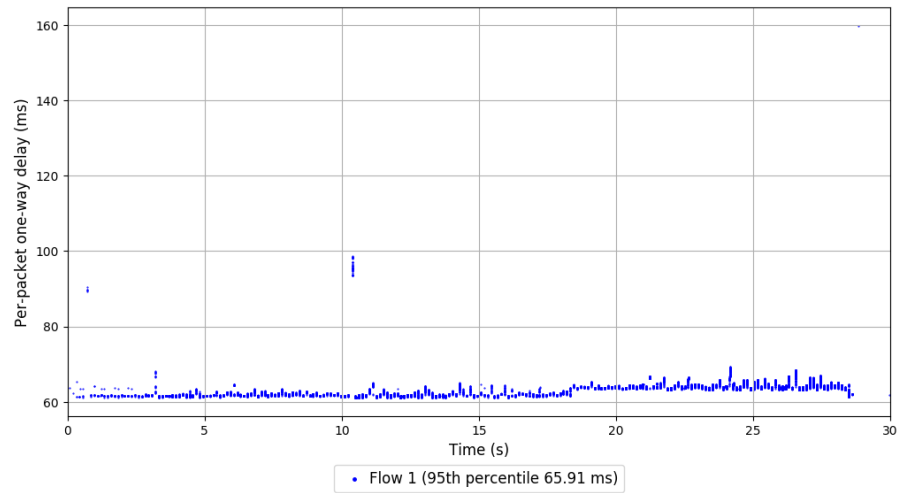
Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2018-01-31 03:48:24
End at: 2018-01-31 03:48:54

# Below is generated by plot.py at 2018-01-31 06:20:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 3.77 Mbit/s
95th percentile per-packet one-way delay: 65.009 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 3.77 Mbit/s
95th percentile per-packet one-way delay: 65.009 ms
Loss rate: 0.88%
```
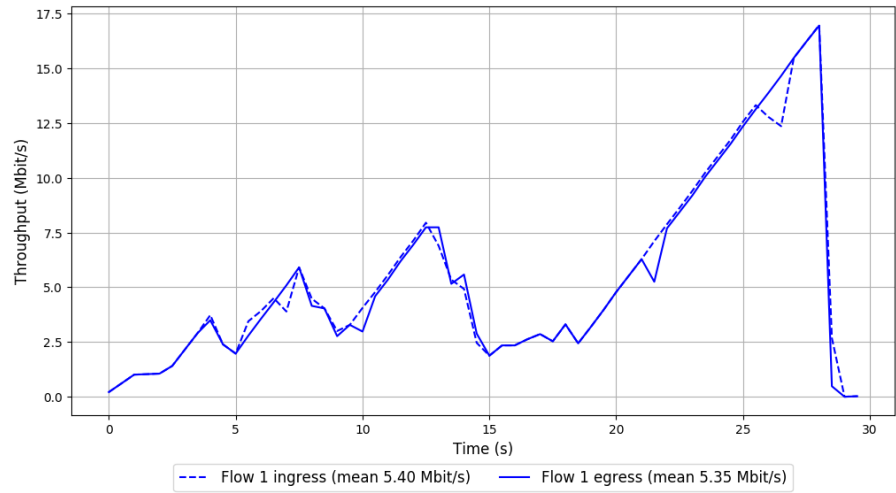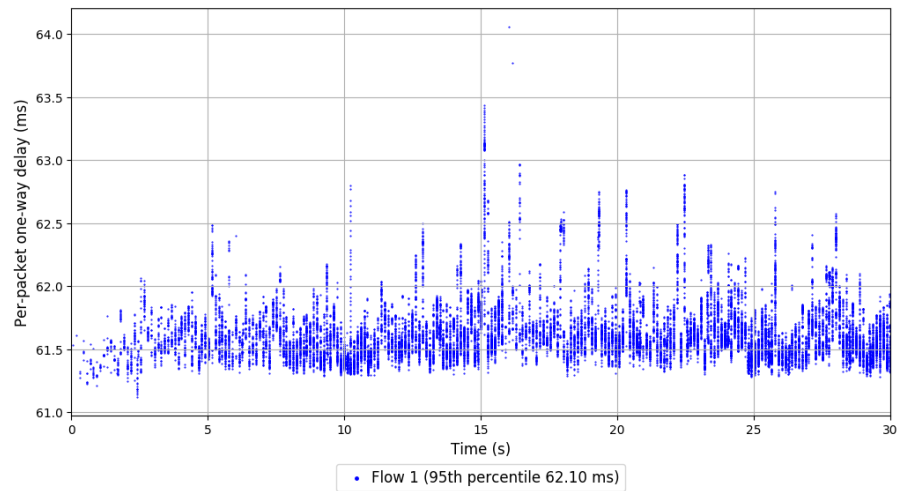
Run 4: Report of LEDBAT — Data Link

Flow 1 ingress (mean 3.80 Mbit/s) --- Flow 1 egress (mean 3.77 Mbit/s)

Flow 1 (95th percentile 65.01 ms)

```
Run 5: Statistics of LEDBAT

Start at: 2018-01-31 04:01:40
End at: 2018-01-31 04:02:10

# Below is generated by plot.py at 2018-01-31 06:20:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 3.83 Mbit/s
95th percentile per-packet one-way delay: 62.144 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 3.83 Mbit/s
95th percentile per-packet one-way delay: 62.144 ms
Loss rate: 0.92%
```
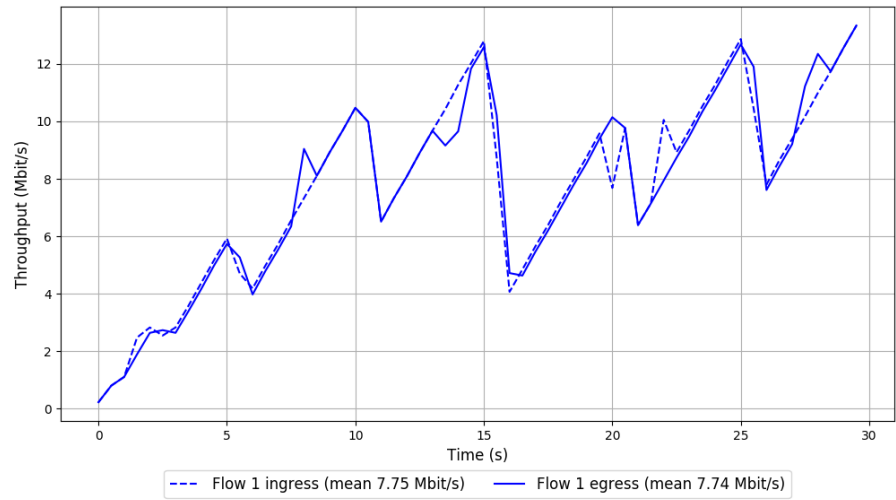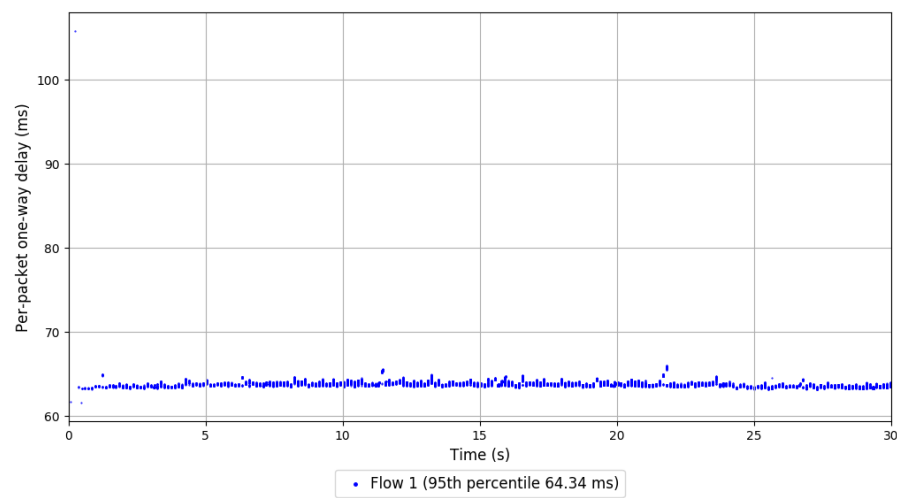
Run 5: Report of LEDBAT — Data Link

Flow 1 ingress (mean 3.87 Mbit/s)   Flow 1 egress (mean 3.83 Mbit/s)

Flow 1 (95th percentile 62.14 ms)

```
Run 6: Statistics of LEDBAT

Start at: 2018-01-31 04:14:55
End at: 2018-01-31 04:15:25

# Below is generated by plot.py at 2018-01-31 06:20:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.35 Mbit/s
95th percentile per-packet one-way delay: 65.909 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 5.35 Mbit/s
95th percentile per-packet one-way delay: 65.909 ms
Loss rate: 1.04%
```
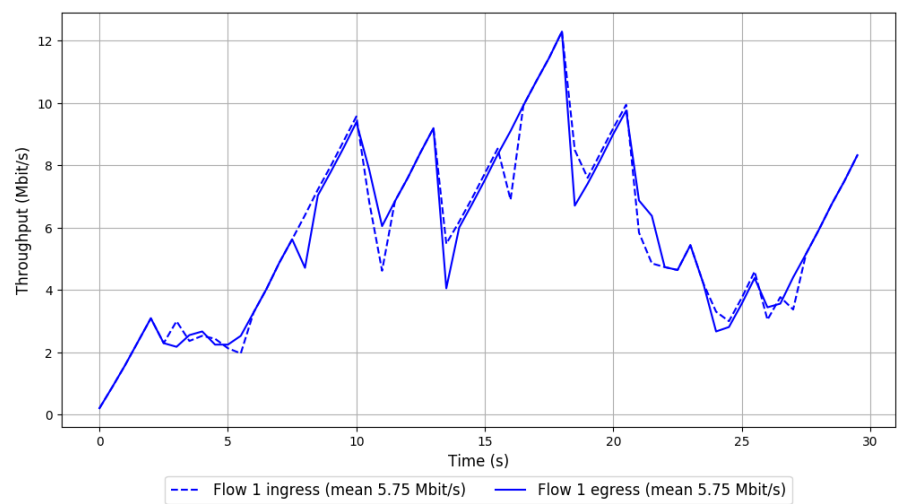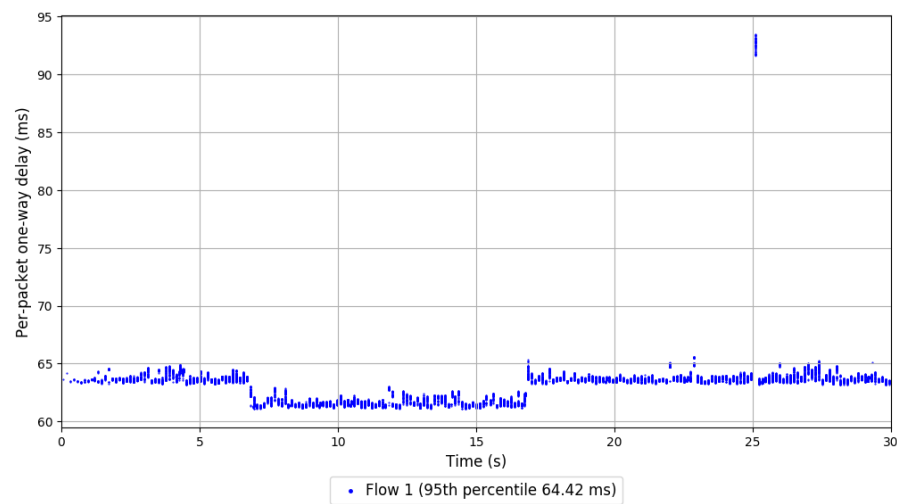
Run 6: Report of LEDBAT — Data Link

```
Run 7: Statistics of LEDBAT

Start at: 2018-01-31 04:28:01
End at: 2018-01-31 04:28:31

# Below is generated by plot.py at 2018-01-31 06:20:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.74 Mbit/s
95th percentile per-packet one-way delay: 62.098 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 7.74 Mbit/s
95th percentile per-packet one-way delay: 62.098 ms
Loss rate: 0.03%
```
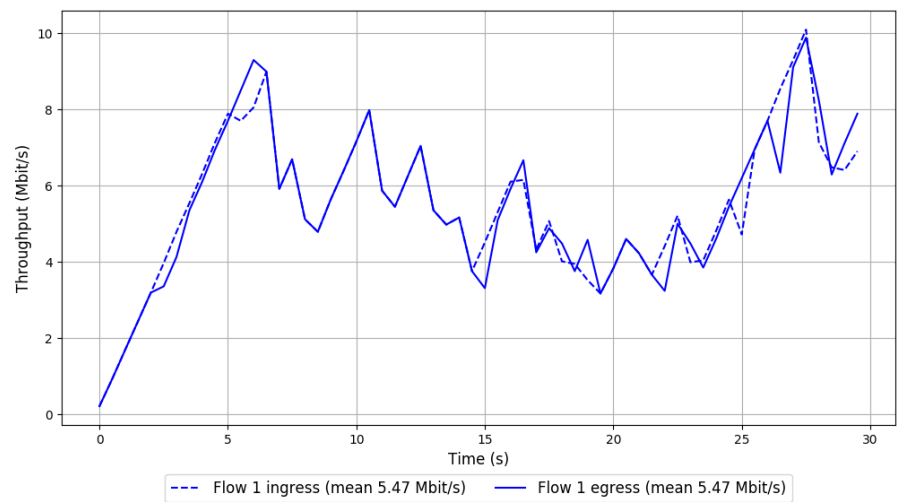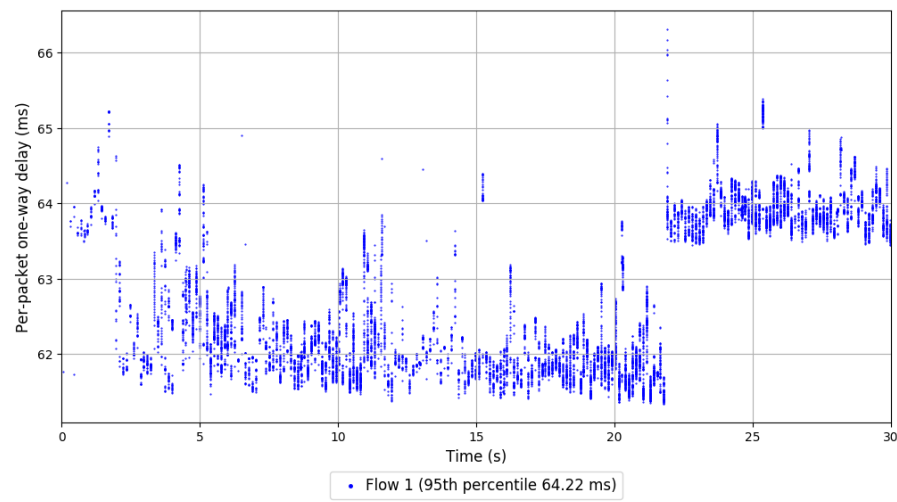
Run 7: Report of LEDBAT — Data Link

Flow 1 ingress (mean 7.75 Mbit/s) --- Flow 1 egress (mean 7.74 Mbit/s)

Flow 1 (95th percentile 62.10 ms)

```
Run 8: Statistics of LEDBAT

Start at: 2018-01-31 04:41:30
End at: 2018-01-31 04:42:00

# Below is generated by plot.py at 2018-01-31 06:20:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.75 Mbit/s
95th percentile per-packet one-way delay: 64.339 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 5.75 Mbit/s
95th percentile per-packet one-way delay: 64.339 ms
Loss rate: 0.00%
```
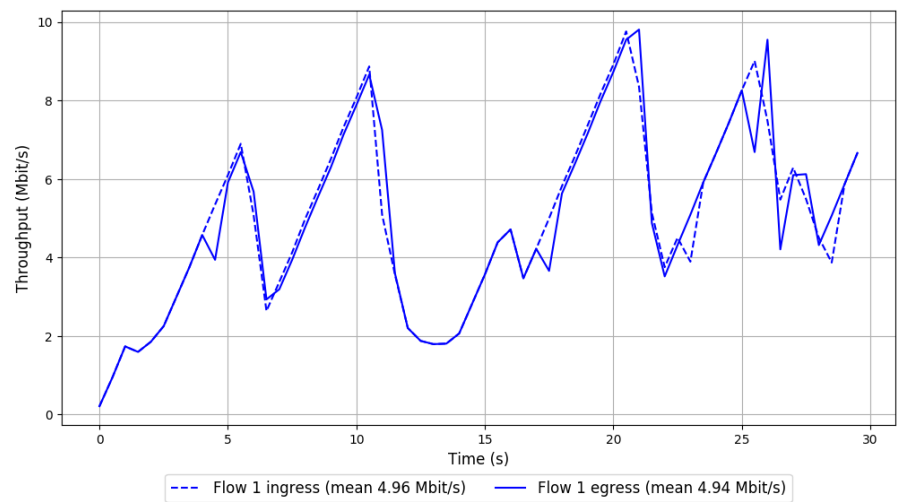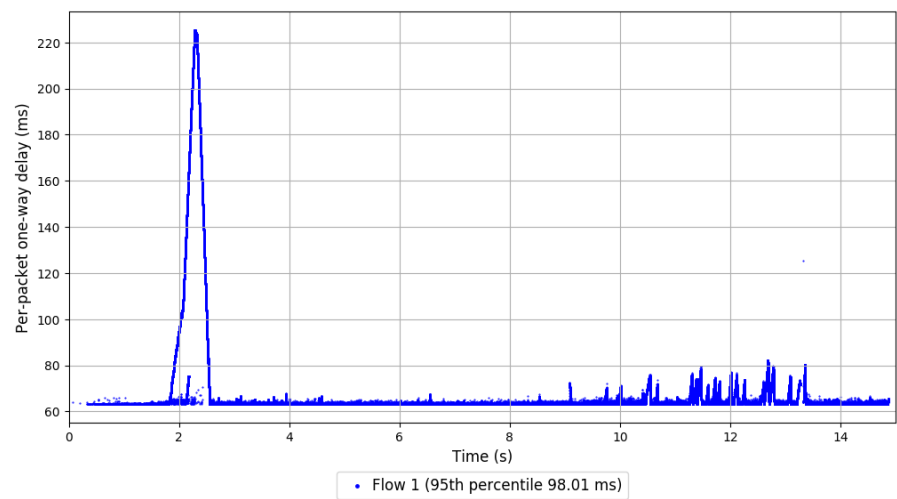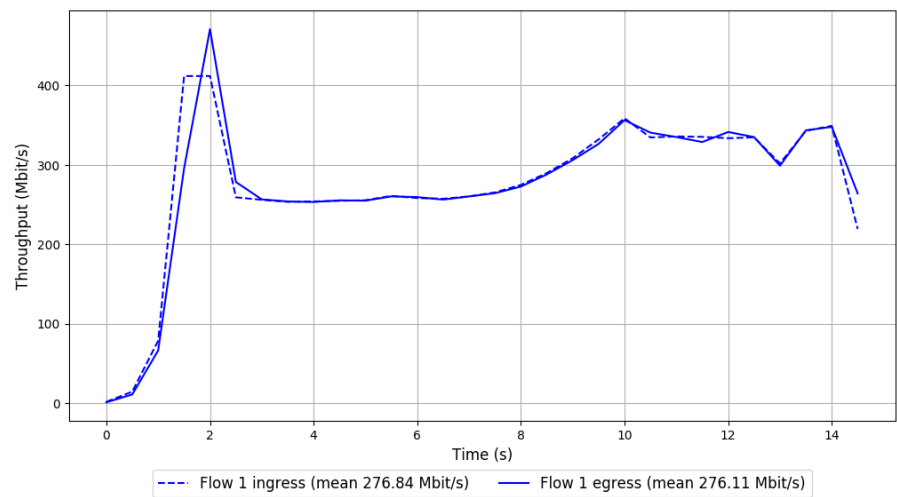
Run 8: Report of LEDBAT — Data Link

```
Run 9: Statistics of LEDBAT

Start at: 2018-01-31 04:55:07
End at: 2018-01-31 04:55:37

# Below is generated by plot.py at 2018-01-31 06:20:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.47 Mbit/s
95th percentile per-packet one-way delay: 64.421 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 5.47 Mbit/s
95th percentile per-packet one-way delay: 64.421 ms
Loss rate: 0.00%
```

Run 9: Report of LEDBAT — Data Link

```
Run 10: Statistics of LEDBAT

Start at: 2018-01-31 05:08:32
End at: 2018-01-31 05:09:02

# Below is generated by plot.py at 2018-01-31 06:20:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.94 Mbit/s
95th percentile per-packet one-way delay: 64.224 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 4.94 Mbit/s
95th percentile per-packet one-way delay: 64.224 ms
Loss rate: 0.31%
```

Run 10: Report of LEDBAT — Data Link

Flow 1 ingress (mean 4.96 Mbit/s)   Flow 1 egress (mean 4.94 Mbit/s)

Flow 1 (95th percentile 64.22 ms)

```
Run 1: Statistics of PCC

Start at: 2018-01-31 03:09:36
End at: 2018-01-31 03:10:06
```

Run 1: Report of PCC — Data Link

Run 2: Statistics of PCC

Start at: 2018-01-31 03:22:48
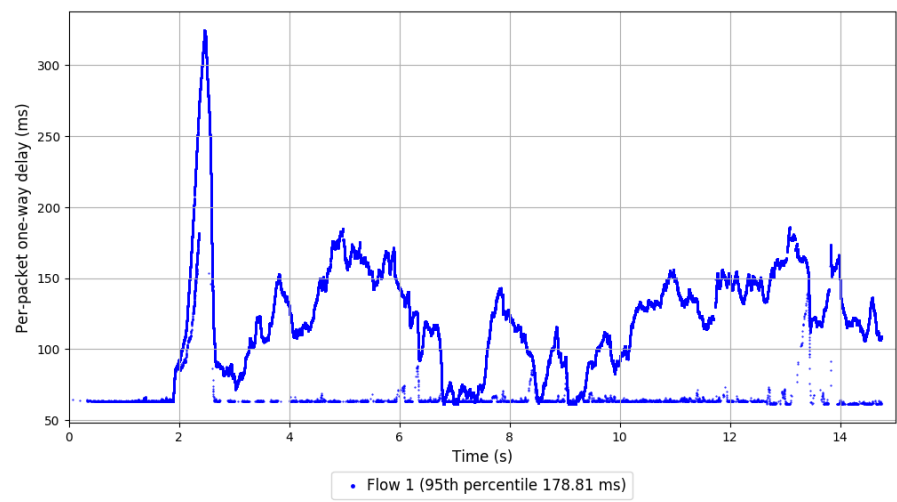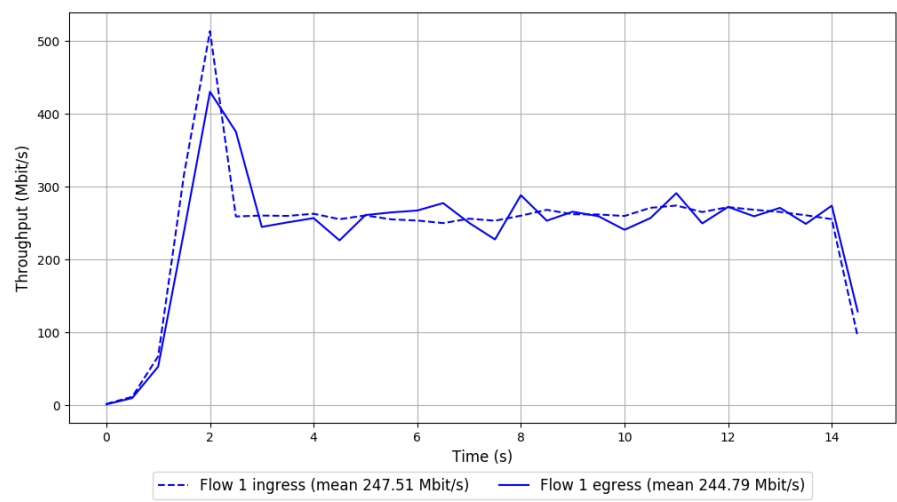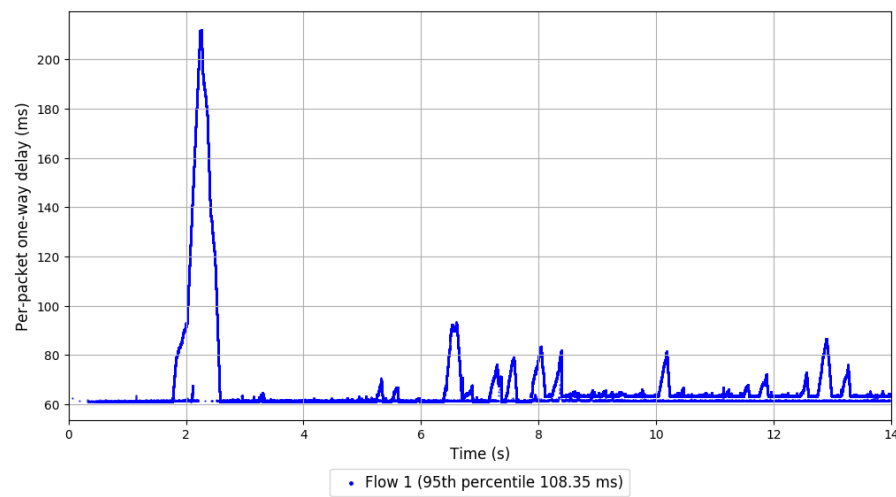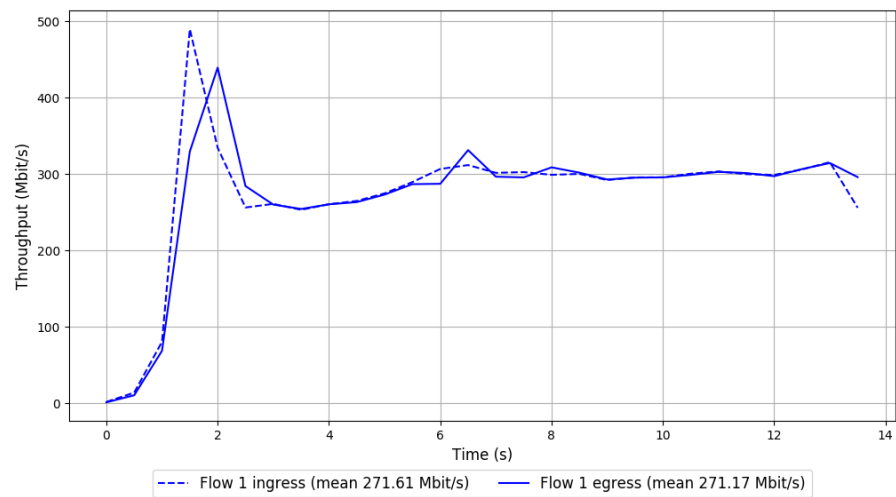End at: 2018-01-31 03:23:18

Run 2: Report of PCC — Data Link

Flow 1 ingress (mean 248.03 Mbit/s) ----- Flow 1 egress (mean 247.53 Mbit/s)

Flow 1 (95th percentile 139.11 ms)

67

```
Run 3: Statistics of PCC

Start at: 2018-01-31 03:36:29
End at: 2018-01-31 03:36:59
```

Run 3: Report of PCC — Data Link

Flow 1 ingress (mean 453.67 Mbit/s)　　Flow 1 egress (mean 433.74 Mbit/s)

Flow 1 (95th percentile 229.90 ms)

69

Run 4: Statistics of PCC

Start at: 2018-01-31 03:49:56
End at: 2018-01-31 03:50:26

Run 4: Report of PCC — Data Link

Flow 1 ingress (mean 247.51 Mbit/s) — Flow 1 egress (mean 244.79 Mbit/s)

Flow 1 (95th percentile 178.81 ms)

Run 5: Statistics of PCC

Start at: 2018-01-31 04:03:10
End at: 2018-01-31 04:03:40

Run 5: Report of PCC — Data Link

```
Run 6: Statistics of PCC

Start at: 2018-01-31 04:16:26
End at: 2018-01-31 04:16:56

# Below is generated by plot.py at 2018-01-31 06:27:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 324.53 Mbit/s
95th percentile per-packet one-way delay: 94.378 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 324.53 Mbit/s
95th percentile per-packet one-way delay: 94.378 ms
Loss rate: 0.12%
```
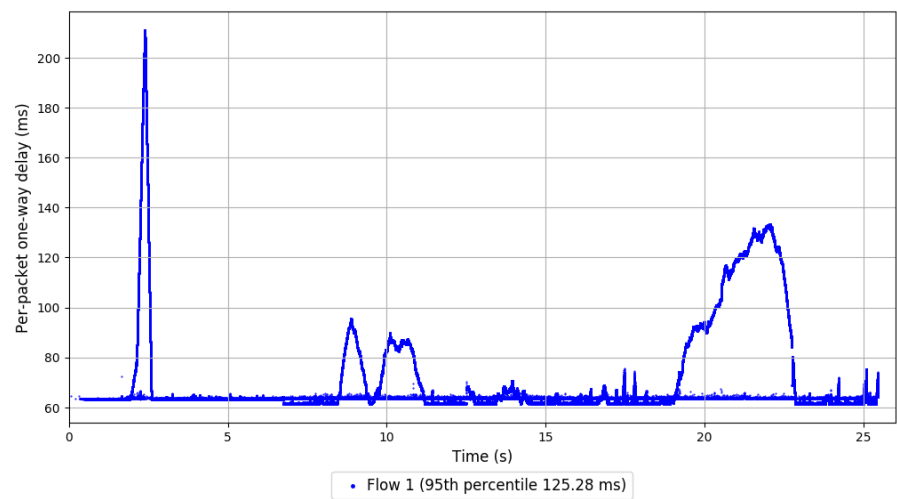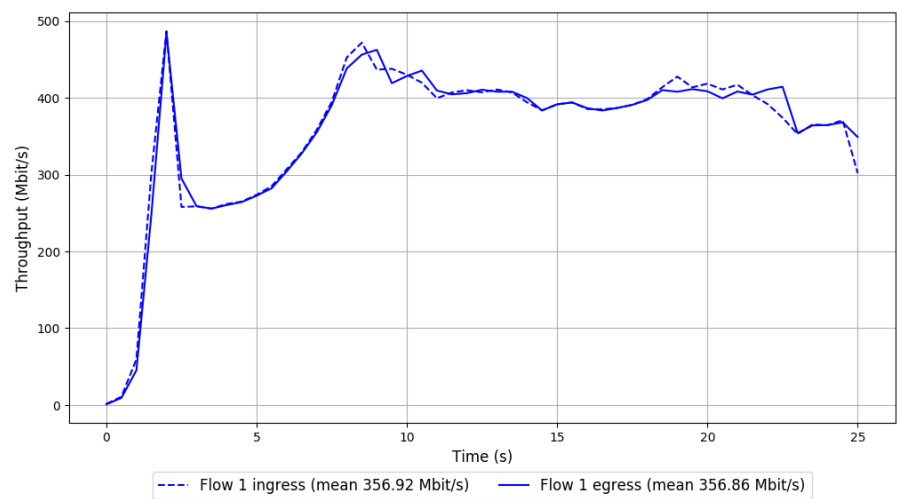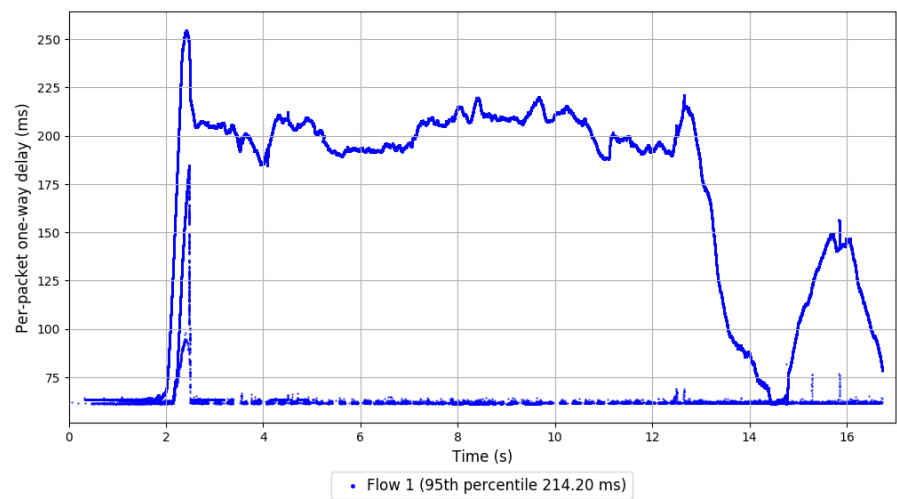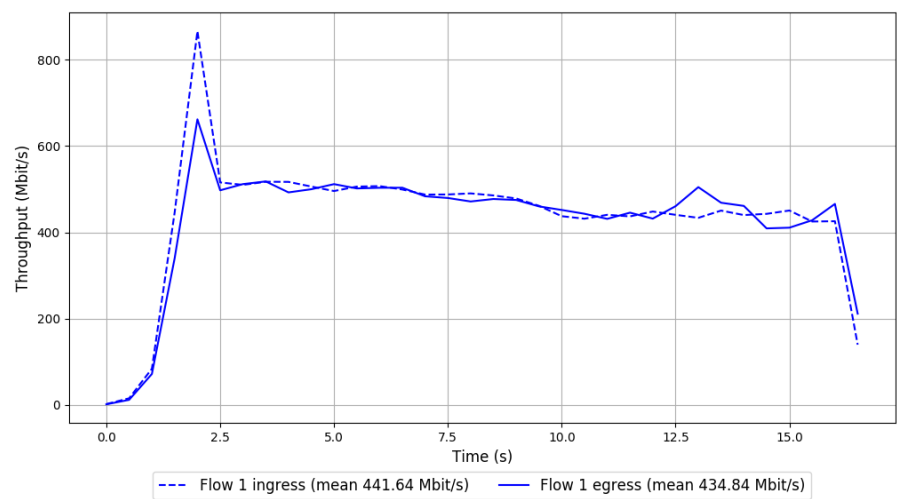
Run 6: Report of PCC — Data Link

Flow 1 ingress (mean 324.90 Mbit/s) ---- Flow 1 egress (mean 324.53 Mbit/s) ——

Flow 1 (95th percentile 94.38 ms)

```
Run 7: Statistics of PCC

Start at: 2018-01-31 04:29:43
End at: 2018-01-31 04:30:13

# Below is generated by plot.py at 2018-01-31 06:27:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 356.86 Mbit/s
95th percentile per-packet one-way delay: 125.285 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 356.86 Mbit/s
95th percentile per-packet one-way delay: 125.285 ms
Loss rate: 0.03%
```
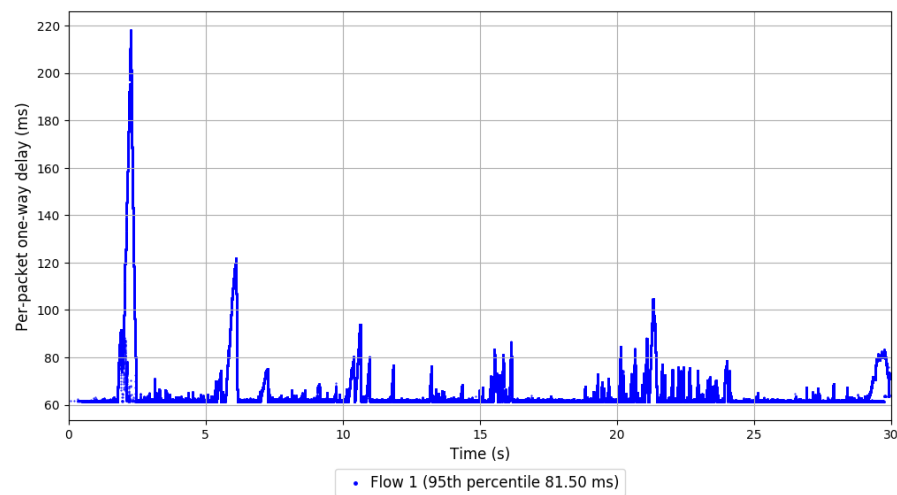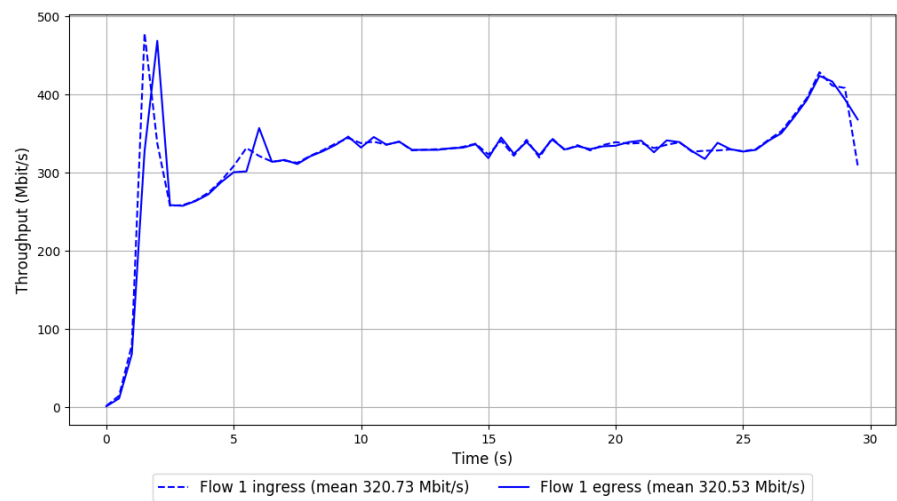
Run 7: Report of PCC — Data Link

Flow 1 ingress (mean 356.92 Mbit/s)   Flow 1 egress (mean 356.86 Mbit/s)

Flow 1 (95th percentile 125.28 ms)

Run 8: Statistics of PCC

Start at: 2018-01-31 04:43:03
End at: 2018-01-31 04:43:33

Run 8: Report of PCC — Data Link

Flow 1 ingress (mean 441.64 Mbit/s)   Flow 1 egress (mean 434.84 Mbit/s)

• Flow 1 (95th percentile 214.20 ms)

Run 9: Statistics of PCC

Start at: 2018-01-31 04:56:47
End at: 2018-01-31 04:57:17

Run 9: Report of PCC — Data Link

Flow 1 ingress (mean 464.09 Mbit/s) --- Flow 1 egress (mean 460.47 Mbit/s)
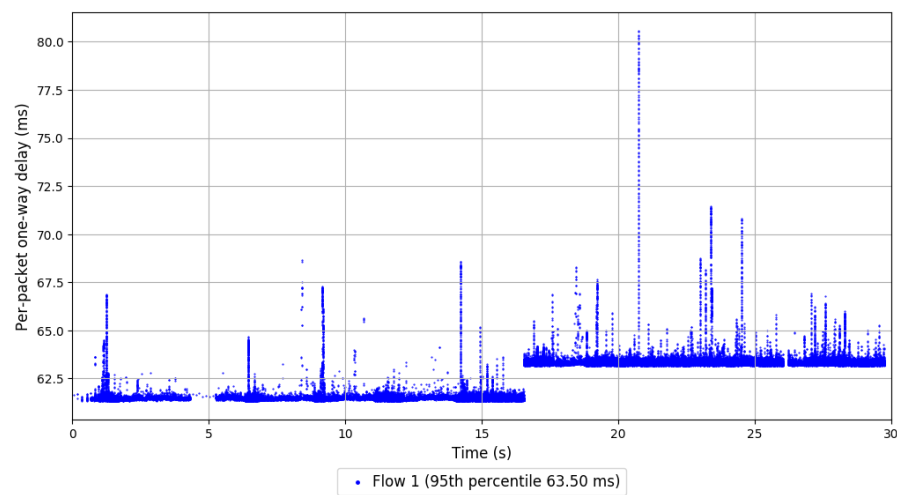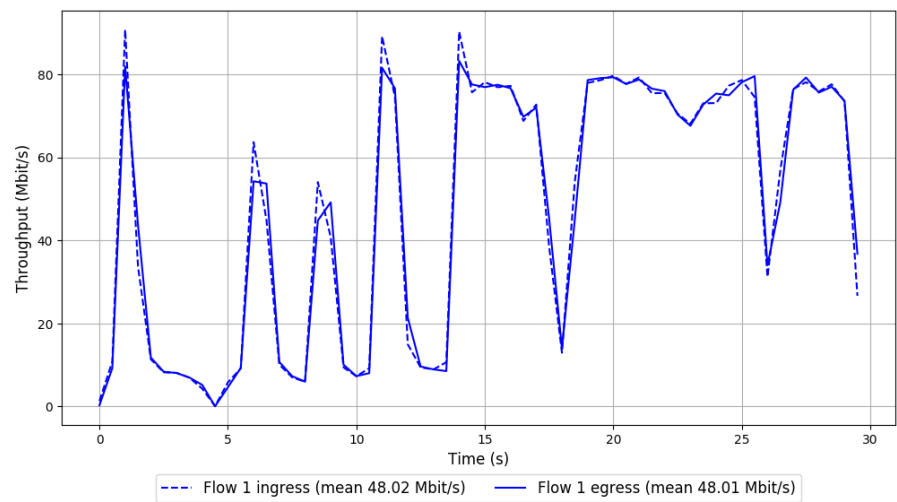

Flow 1 (95th percentile 205.26 ms)

```
Run 10: Statistics of PCC

Start at: 2018-01-31 05:10:04
End at: 2018-01-31 05:10:34

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 320.53 Mbit/s
95th percentile per-packet one-way delay: 81.503 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 320.53 Mbit/s
95th percentile per-packet one-way delay: 81.503 ms
Loss rate: 0.05%
```

Run 10: Report of PCC — Data Link

```
Run 1: Statistics of QUIC Cubic

Start at: 2018-01-31 03:01:17
End at: 2018-01-31 03:01:47


# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 48.01 Mbit/s
95th percentile per-packet one-way delay: 63.504 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 48.01 Mbit/s
95th percentile per-packet one-way delay: 63.504 ms
Loss rate: 0.00%
```
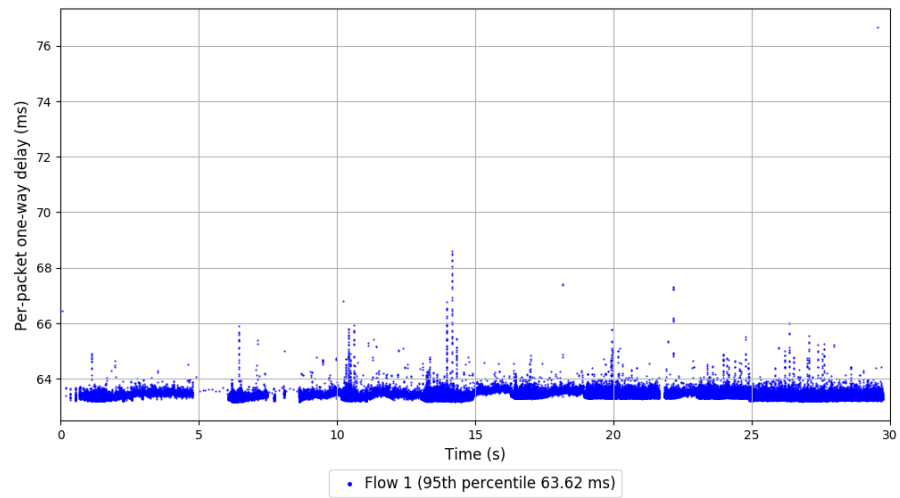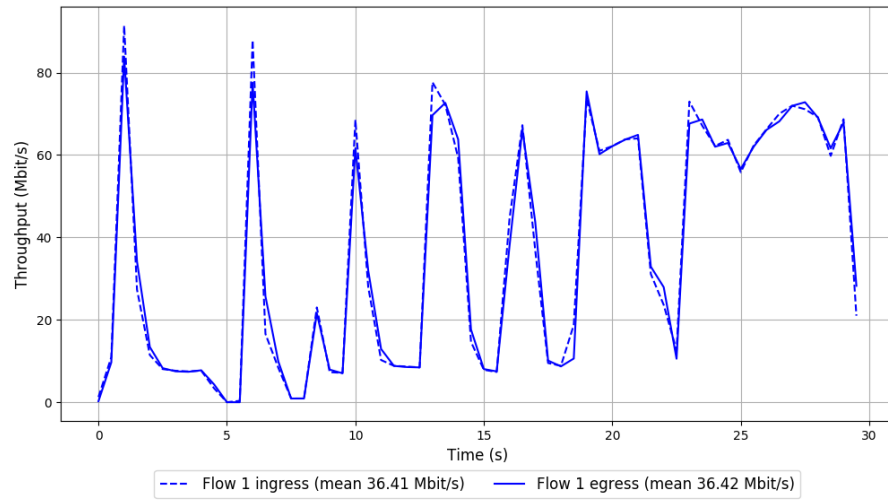
Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2018-01-31 03:14:49
End at: 2018-01-31 03:15:19


# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 36.42 Mbit/s
95th percentile per-packet one-way delay: 63.623 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 36.42 Mbit/s
95th percentile per-packet one-way delay: 63.623 ms
Loss rate: 0.00%
```
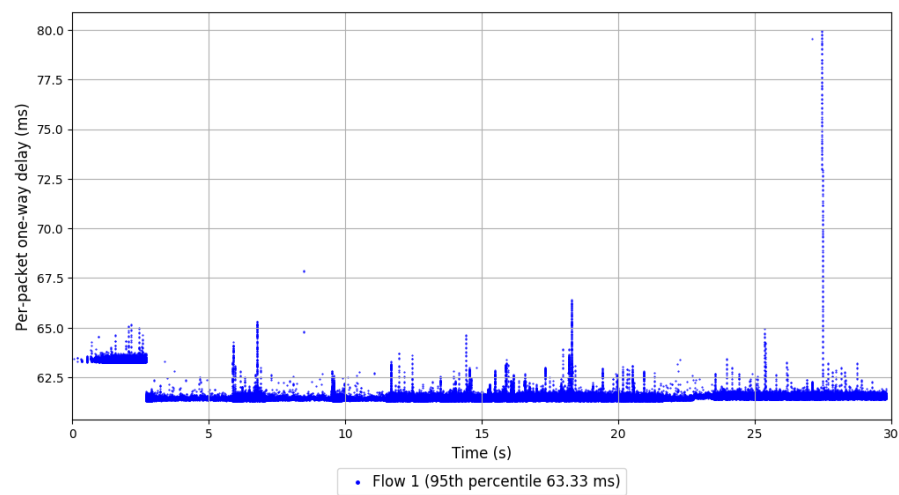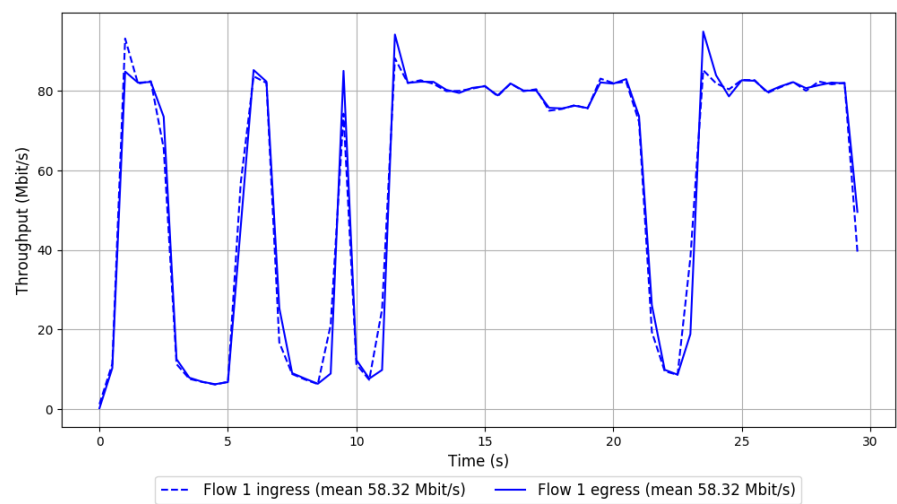
Run 2: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 36.41 Mbit/s) --- Flow 1 egress (mean 36.42 Mbit/s)

Flow 1 (95th percentile 63.62 ms)

```
Run 3: Statistics of QUIC Cubic

Start at: 2018-01-31 03:28:11
End at: 2018-01-31 03:28:41

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 58.32 Mbit/s
95th percentile per-packet one-way delay: 63.332 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 58.32 Mbit/s
95th percentile per-packet one-way delay: 63.332 ms
Loss rate: 0.00%
```
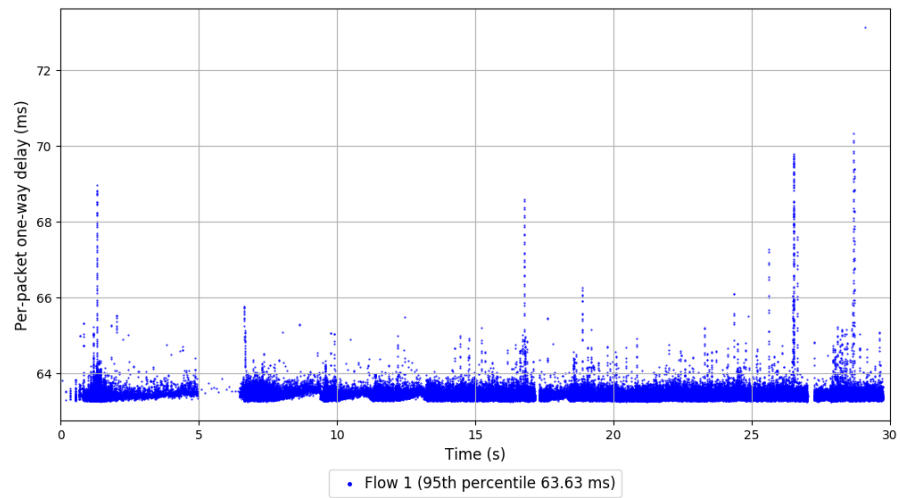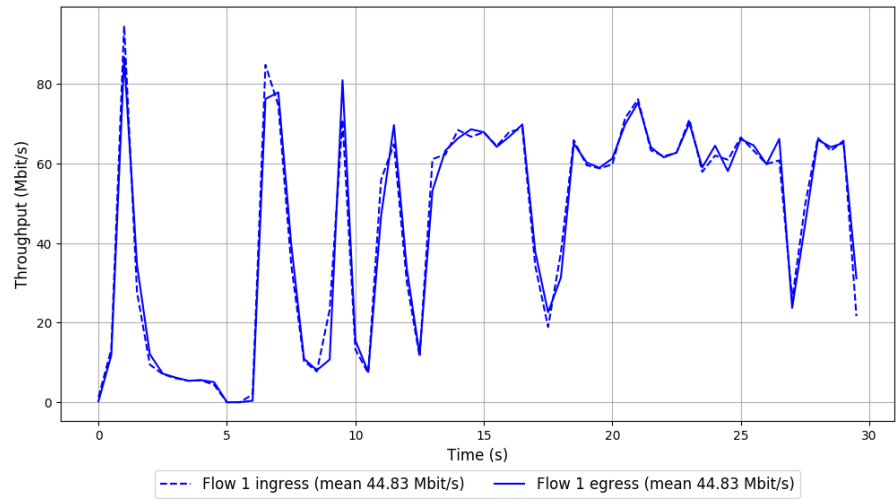
Run 3: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 58.32 Mbit/s) --- Flow 1 egress (mean 58.32 Mbit/s)

Flow 1 (95th percentile 63.33 ms)

```
Run 4: Statistics of QUIC Cubic

Start at: 2018-01-31 03:41:54
End at: 2018-01-31 03:42:24

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 44.83 Mbit/s
95th percentile per-packet one-way delay: 63.634 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 44.83 Mbit/s
95th percentile per-packet one-way delay: 63.634 ms
Loss rate: 0.00%
```
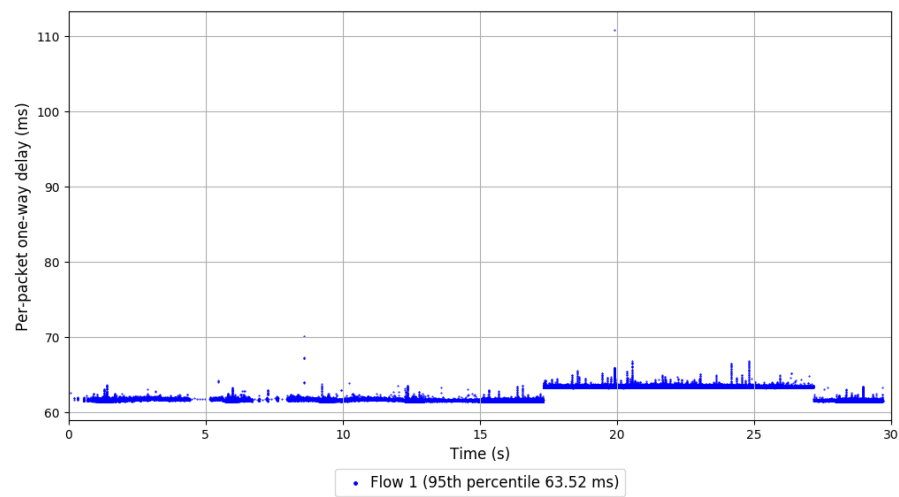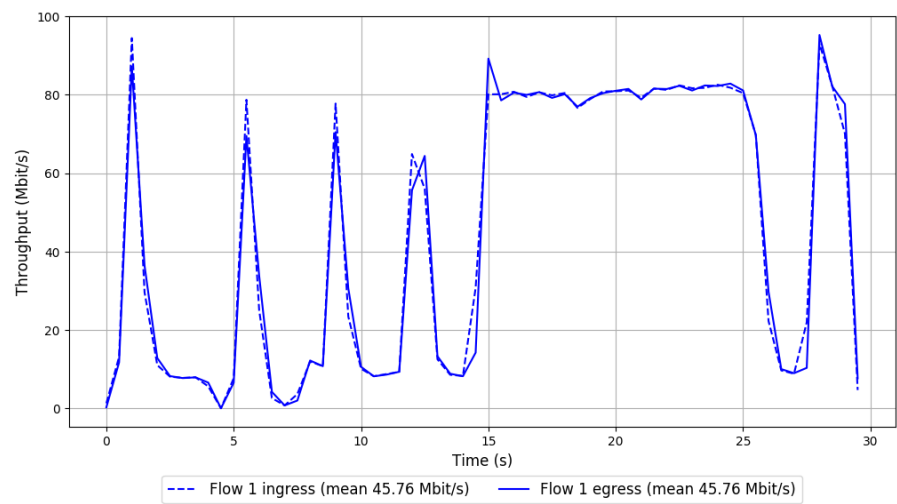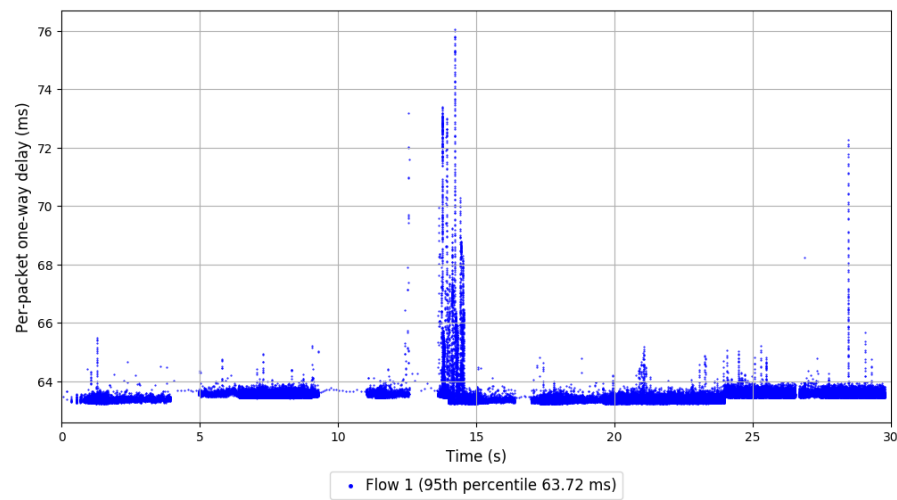
Run 4: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 44.83 Mbit/s)   Flow 1 egress (mean 44.83 Mbit/s)

Flow 1 (95th percentile 63.63 ms)

```
Run 5: Statistics of QUIC Cubic

Start at: 2018-01-31 03:55:06
End at: 2018-01-31 03:55:36

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 45.76 Mbit/s
95th percentile per-packet one-way delay: 63.519 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 45.76 Mbit/s
95th percentile per-packet one-way delay: 63.519 ms
Loss rate: 0.00%
```
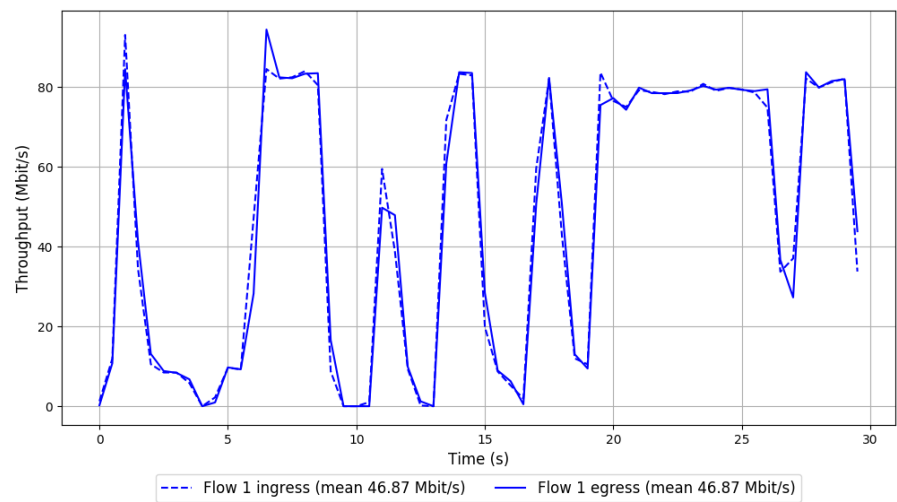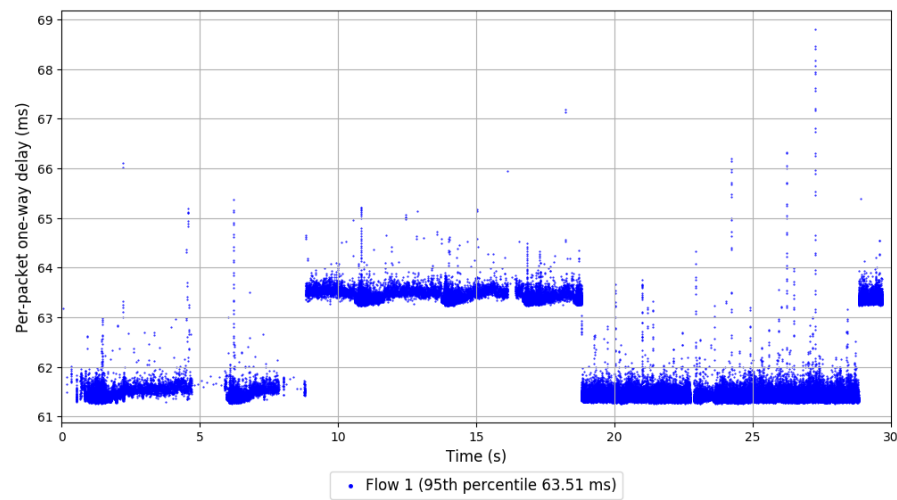
Run 5: Report of QUIC Cubic — Data Link

```
Run 6: Statistics of QUIC Cubic

Start at: 2018-01-31 04:08:40
End at: 2018-01-31 04:09:10

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 46.87 Mbit/s
95th percentile per-packet one-way delay: 63.722 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 46.87 Mbit/s
95th percentile per-packet one-way delay: 63.722 ms
Loss rate: 0.01%
```
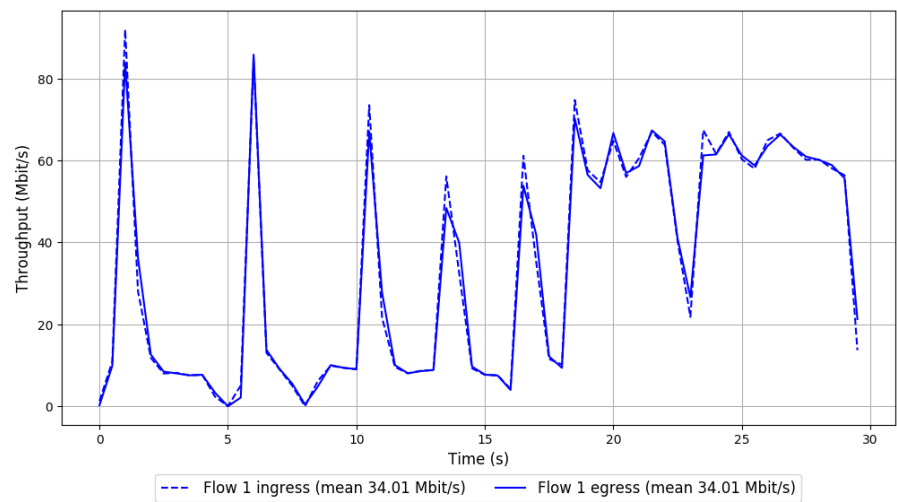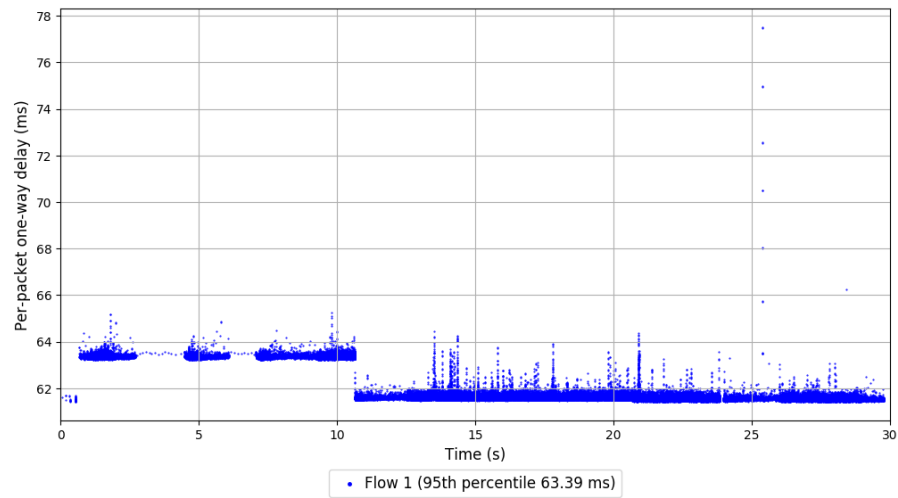
Run 6: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 46.87 Mbit/s) ----- Flow 1 egress (mean 46.87 Mbit/s)

Flow 1 (95th percentile 63.72 ms)

```
Run 7: Statistics of QUIC Cubic

Start at: 2018-01-31 04:21:45
End at: 2018-01-31 04:22:15

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 34.01 Mbit/s
95th percentile per-packet one-way delay: 63.510 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 34.01 Mbit/s
95th percentile per-packet one-way delay: 63.510 ms
Loss rate: 0.00%
```
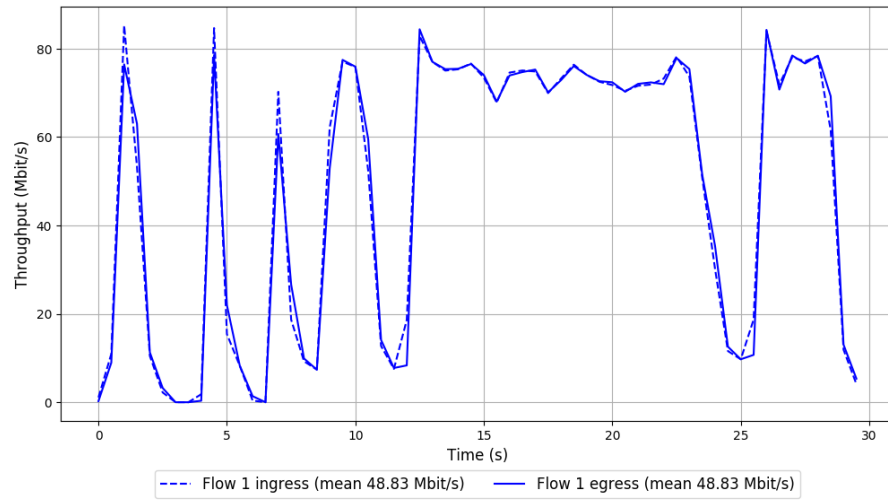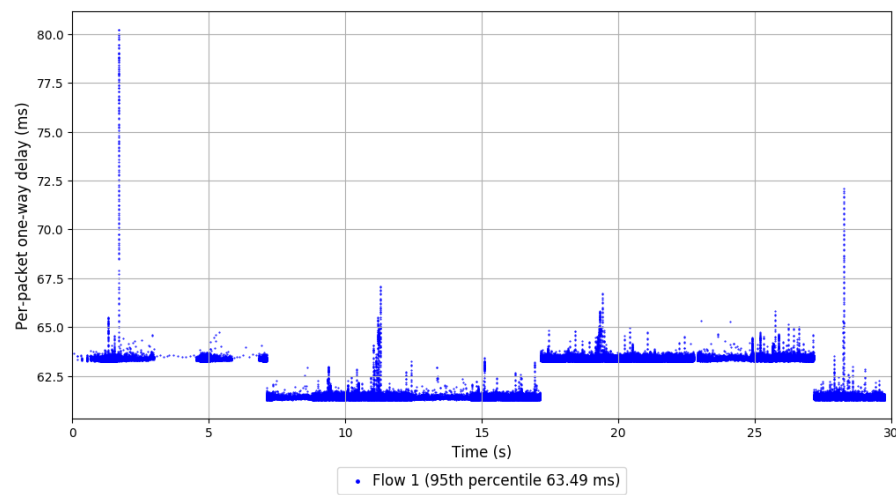
Run 7: Report of QUIC Cubic — Data Link

```
Run 8: Statistics of QUIC Cubic

Start at: 2018-01-31 04:35:13
End at: 2018-01-31 04:35:43

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 48.83 Mbit/s
95th percentile per-packet one-way delay: 63.389 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 48.83 Mbit/s
95th percentile per-packet one-way delay: 63.389 ms
Loss rate: 0.00%
```
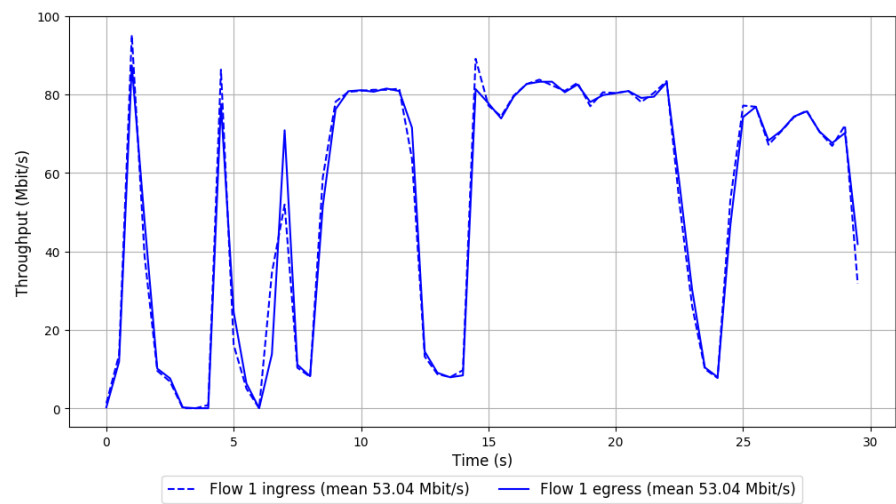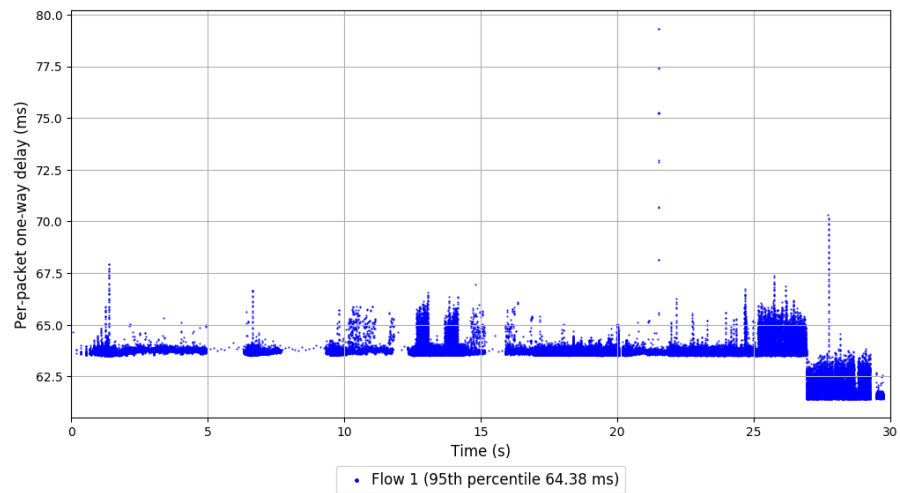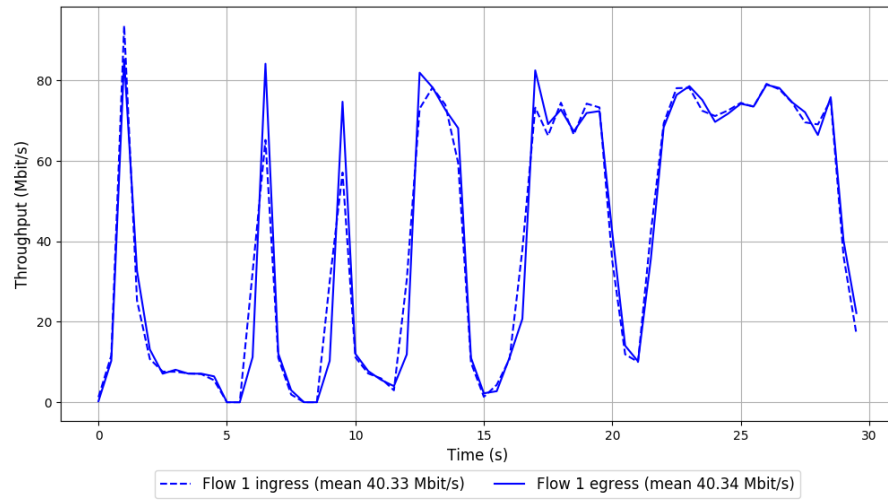
Run 8: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 48.83 Mbit/s)   Flow 1 egress (mean 48.83 Mbit/s)

Flow 1 (95th percentile 63.39 ms)

```
Run 9: Statistics of QUIC Cubic

Start at: 2018-01-31 04:48:37
End at: 2018-01-31 04:49:07

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 53.04 Mbit/s
95th percentile per-packet one-way delay: 63.488 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 53.04 Mbit/s
95th percentile per-packet one-way delay: 63.488 ms
Loss rate: 0.00%
```
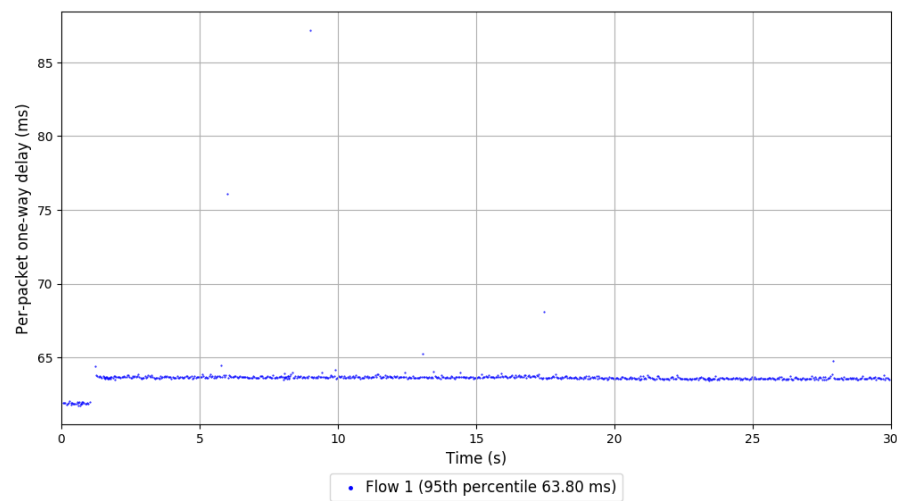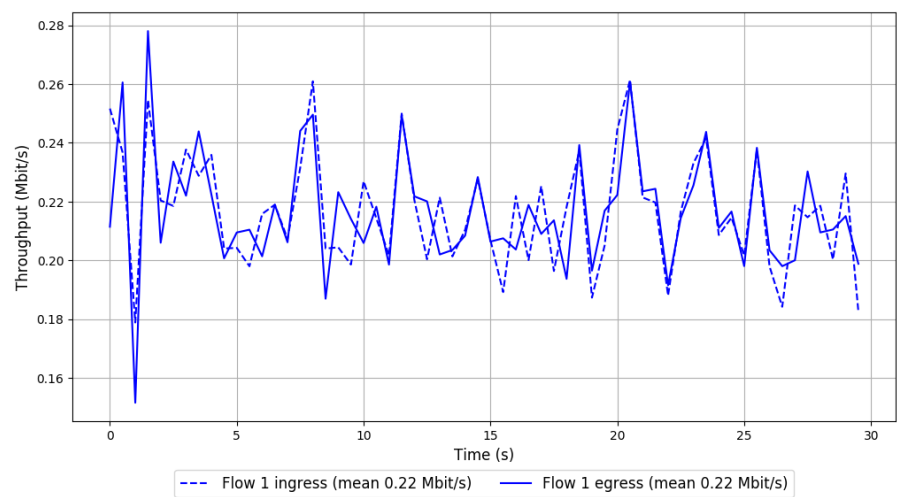
Run 9: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 53.04 Mbit/s)   Flow 1 egress (mean 53.04 Mbit/s)

Flow 1 (95th percentile 63.49 ms)

```
Run 10: Statistics of QUIC Cubic

Start at: 2018-01-31 05:02:17
End at: 2018-01-31 05:02:47

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 40.34 Mbit/s
95th percentile per-packet one-way delay: 64.377 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 40.34 Mbit/s
95th percentile per-packet one-way delay: 64.377 ms
Loss rate: 0.00%
```

Run 10: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 40.33 Mbit/s) — Flow 1 egress (mean 40.34 Mbit/s)

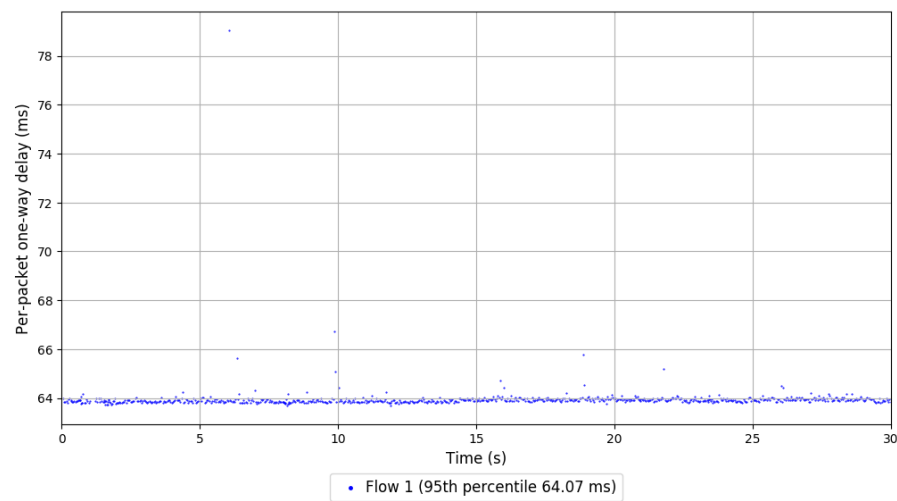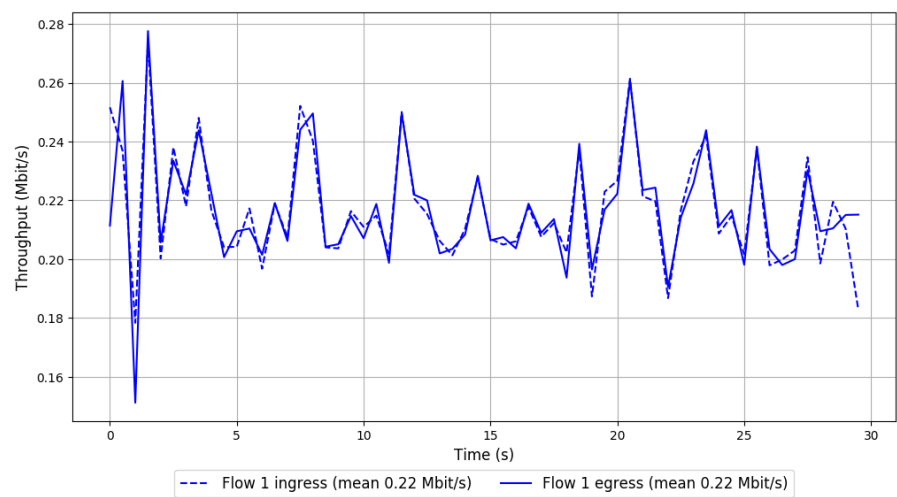
Flow 1 (95th percentile 64.38 ms)

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```
Run 1: Statistics of SCReAM

Start at: 2018-01-31 03:04:33
End at: 2018-01-31 03:05:03

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.796 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.796 ms
Loss rate: 0.13%
```
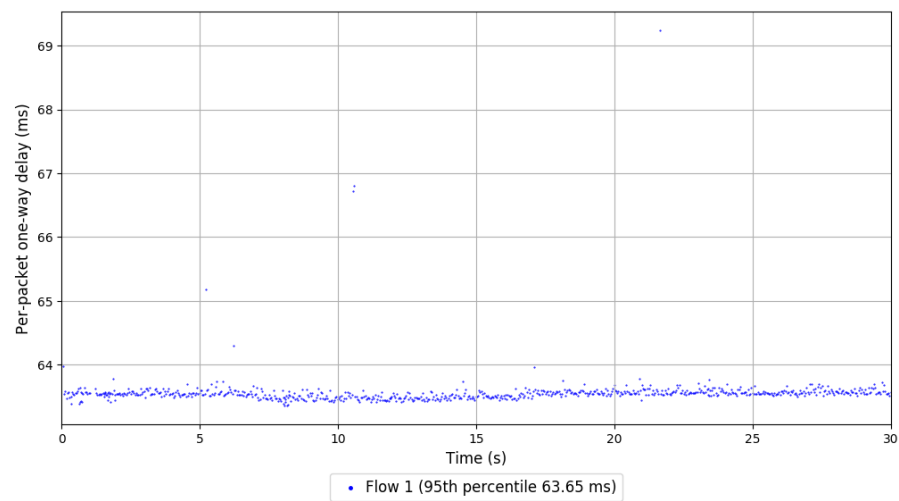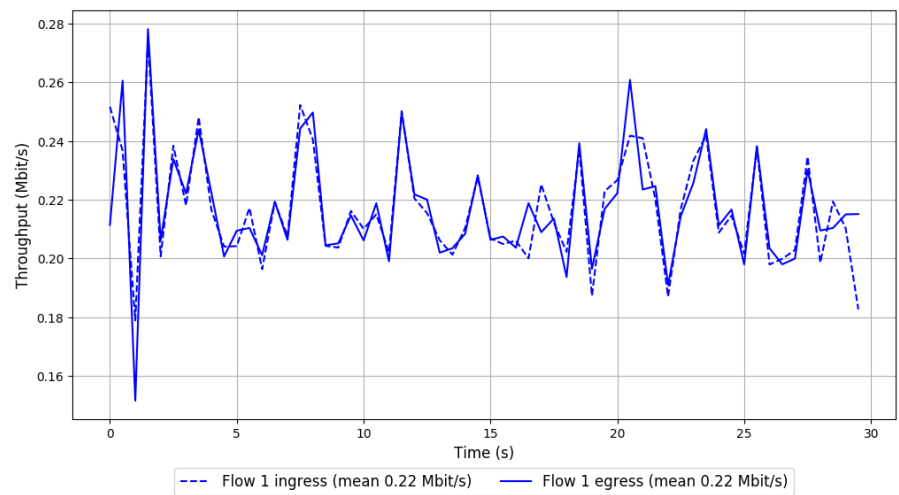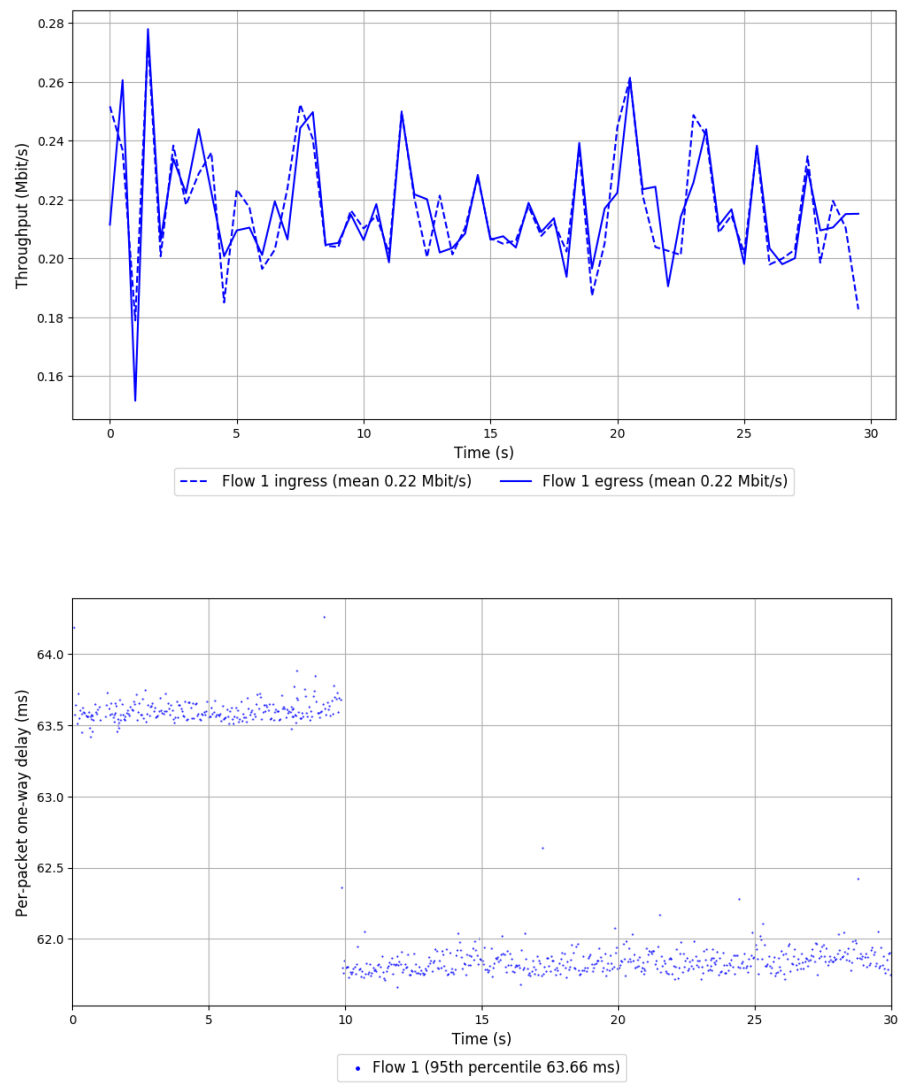
Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2018-01-31 03:17:48
End at: 2018-01-31 03:18:18

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 64.073 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 64.073 ms
Loss rate: 0.00%
```

Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2018-01-31 03:31:17
End at: 2018-01-31 03:31:47

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.654 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.654 ms
Loss rate: 0.00%
```
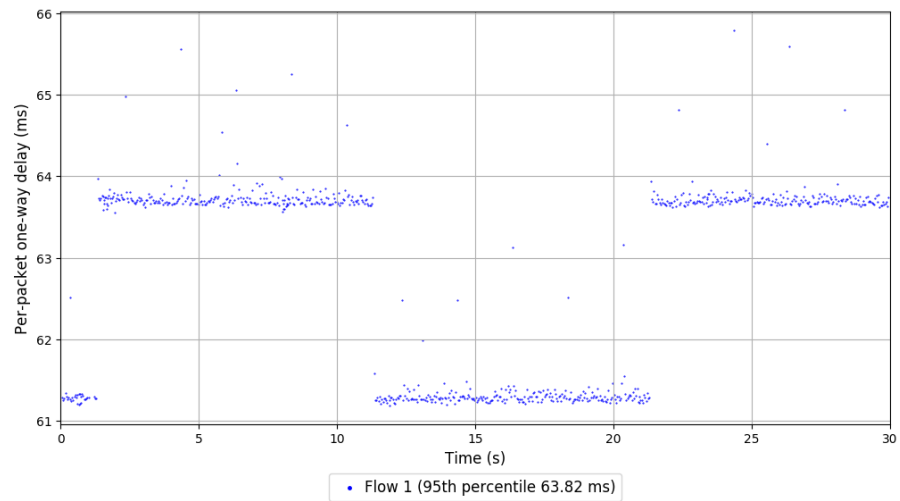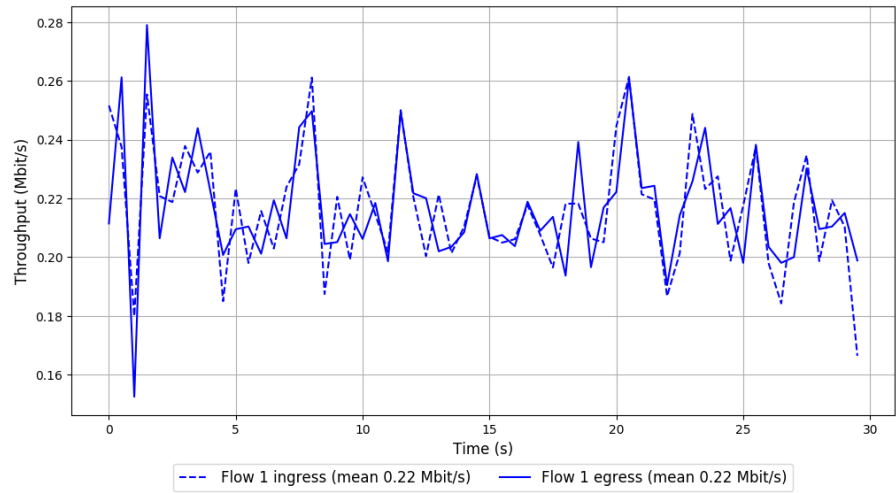
Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2018-01-31 03:44:54
End at: 2018-01-31 03:45:24

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.660 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.660 ms
Loss rate: 0.00%
```
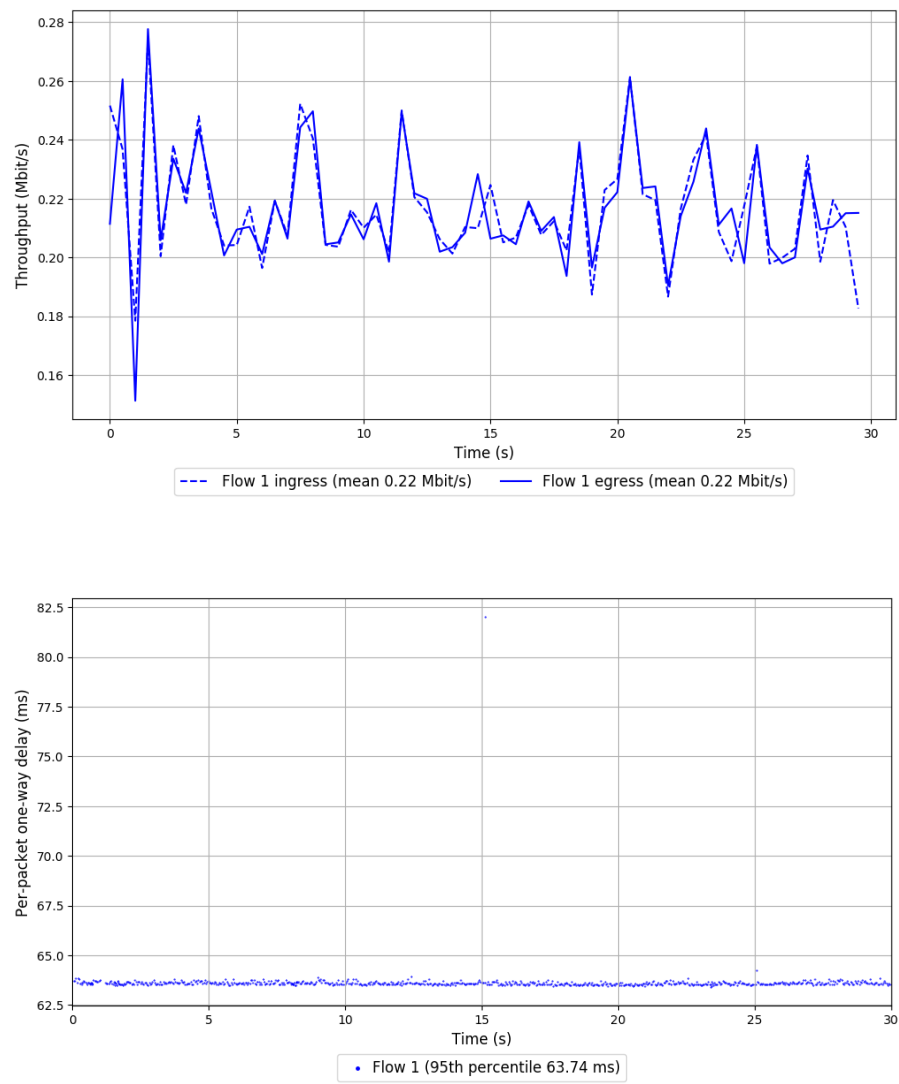
Run 4: Report of SCReAM — Data Link

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

Flow 1 (95th percentile 63.66 ms)

```
Run 5: Statistics of SCReAM

Start at: 2018-01-31 03:58:03
End at: 2018-01-31 03:58:33

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.818 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.818 ms
Loss rate: 0.00%
```
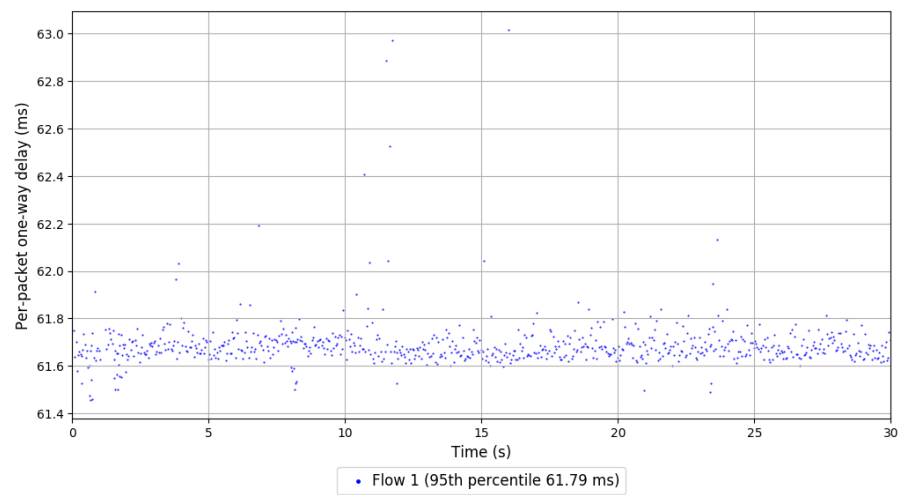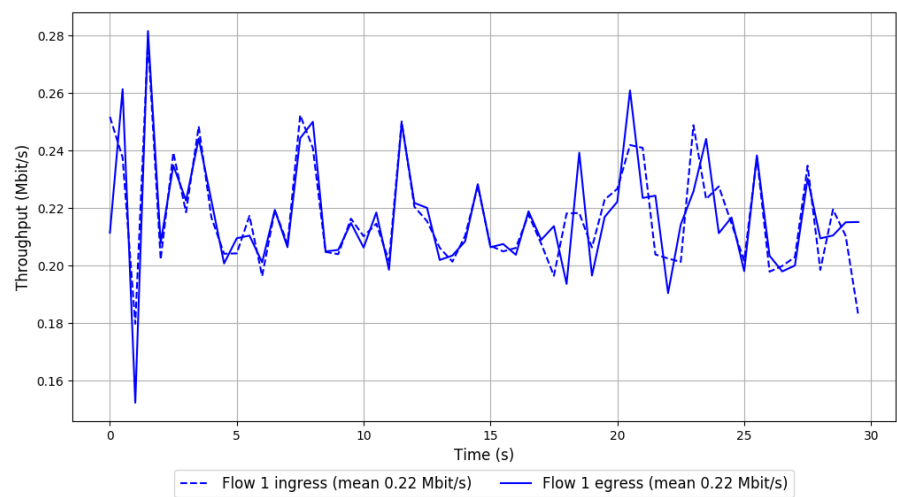
Run 5: Report of SCReAM — Data Link

```
Run 6: Statistics of SCReAM

Start at: 2018-01-31 04:11:39
End at: 2018-01-31 04:12:09

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.744 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.744 ms
Loss rate: 0.00%
```
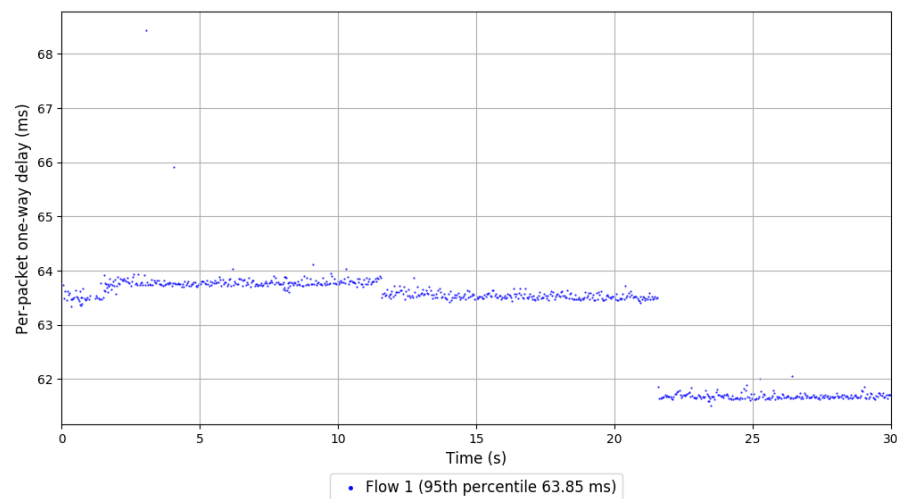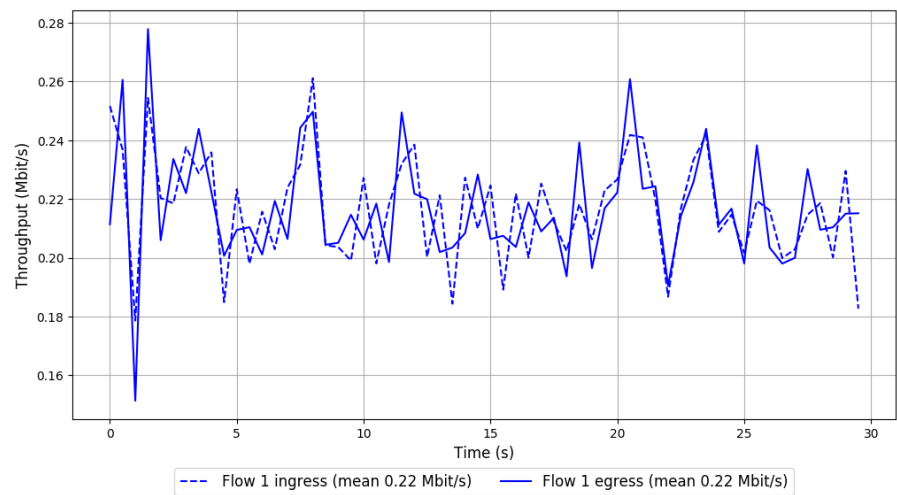
Run 6: Report of SCReAM — Data Link

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

Flow 1 (95th percentile 63.74 ms)

```
Run 7: Statistics of SCReAM

Start at: 2018-01-31 04:24:43
End at: 2018-01-31 04:25:13

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.789 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.789 ms
Loss rate: 0.00%
```
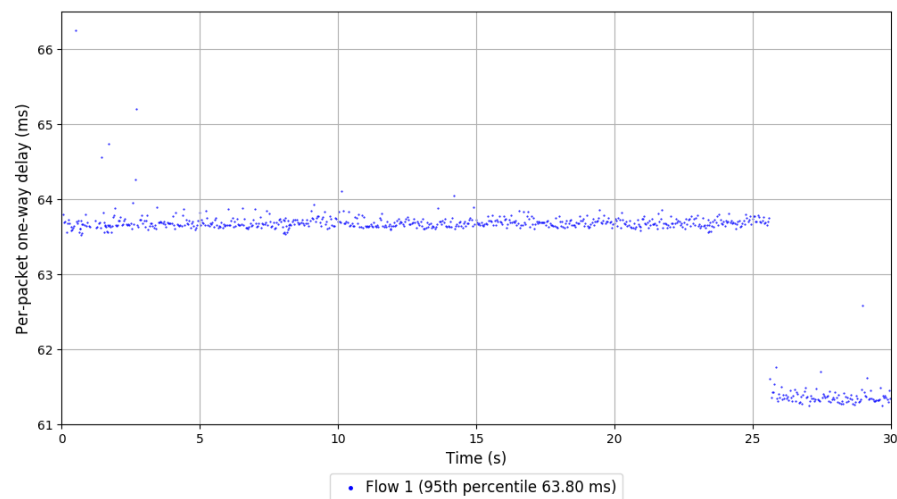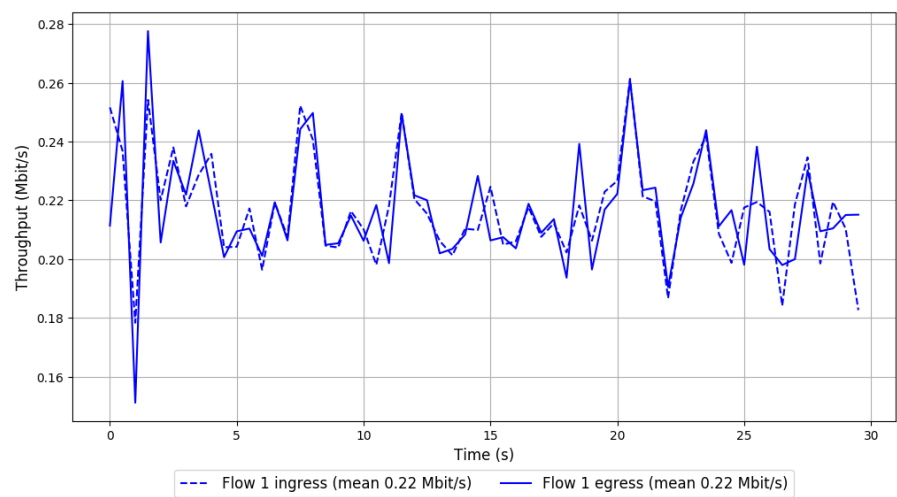
Run 7: Report of SCReAM — Data Link

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

Flow 1 (95th percentile 61.79 ms)

```
Run 8: Statistics of SCReAM

Start at: 2018-01-31 04:38:12
End at: 2018-01-31 04:38:42

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.847 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.847 ms
Loss rate: 0.00%
```
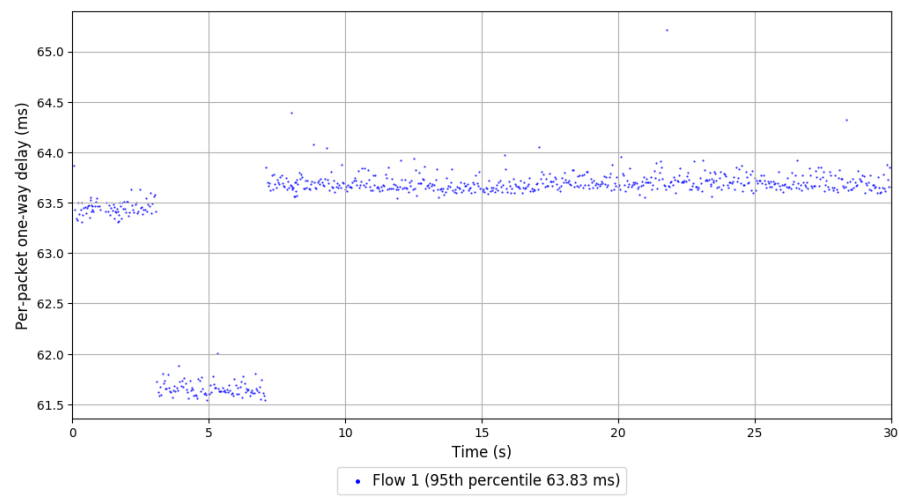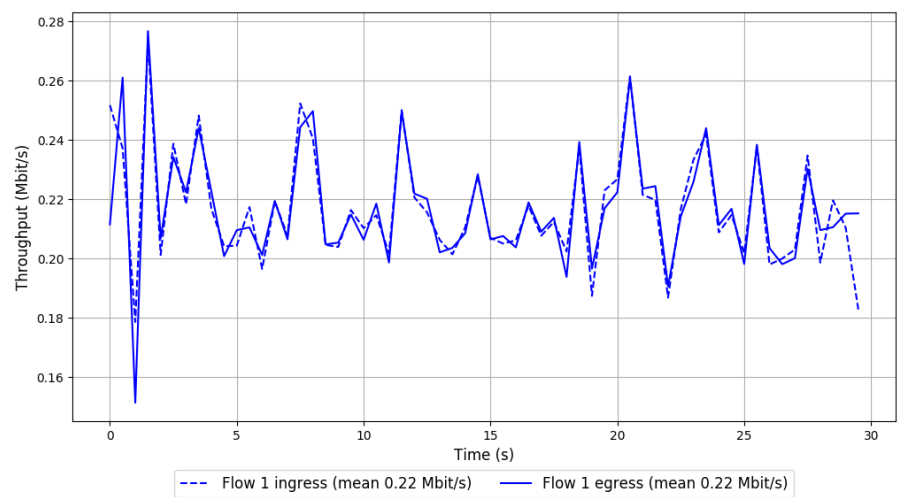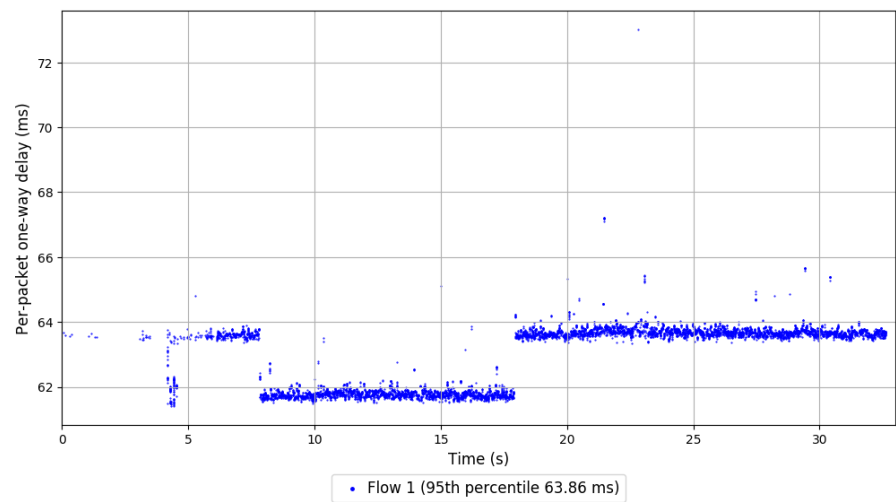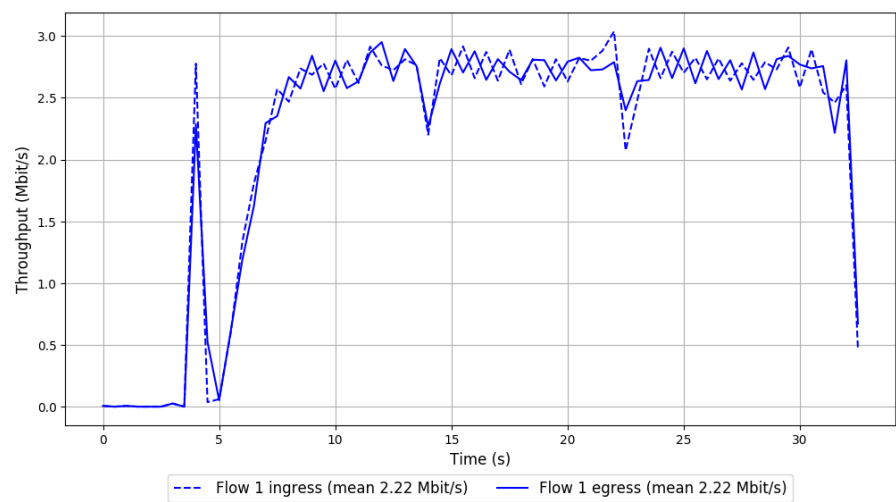
Run 8: Report of SCReAM — Data Link

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

Flow 1 (95th percentile 63.85 ms)

```
Run 9: Statistics of SCReAM

Start at: 2018-01-31 04:51:38
End at: 2018-01-31 04:52:08

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.803 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.803 ms
Loss rate: 0.00%
```
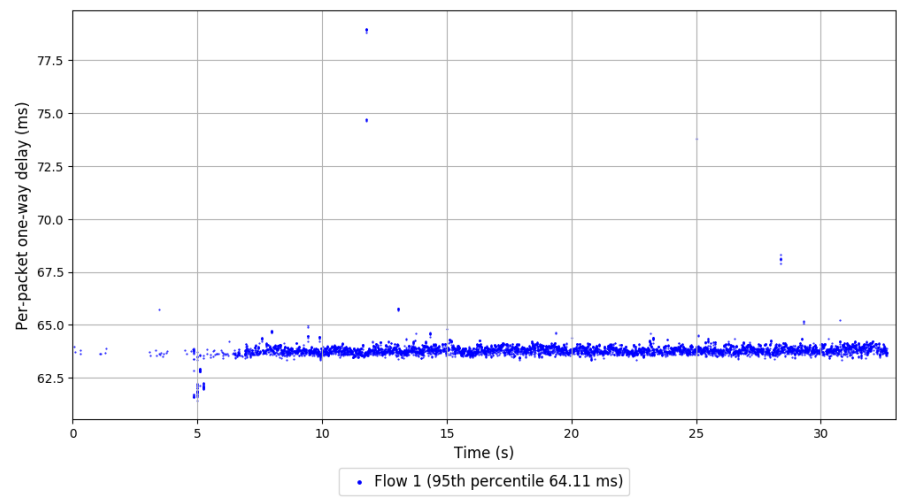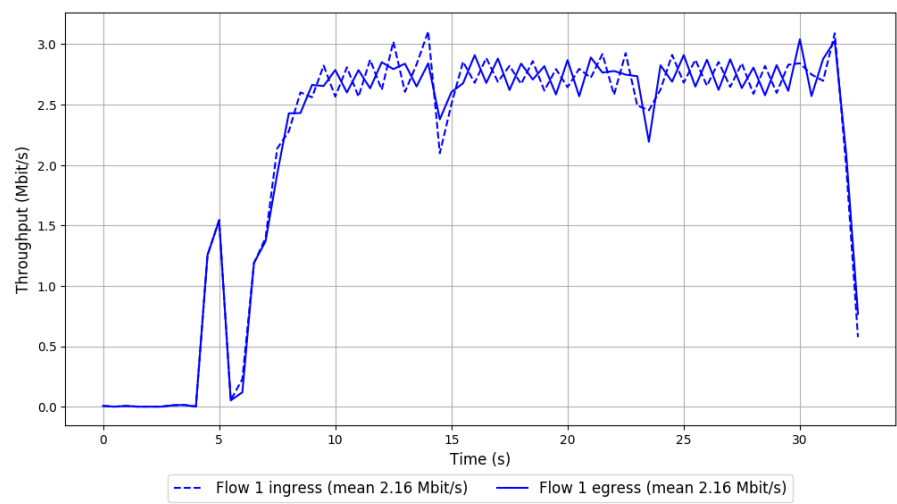
Run 9: Report of SCReAM — Data Link

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

Flow 1 (95th percentile 63.80 ms)

```
Run 10: Statistics of SCReAM

Start at: 2018-01-31 05:05:17
End at: 2018-01-31 05:05:47

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.826 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.826 ms
Loss rate: 0.00%
```

Run 10: Report of SCReAM — Data Link

```
Run 1: Statistics of WebRTC media

Start at: 2018-01-31 03:10:19
End at: 2018-01-31 03:10:49

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.22 Mbit/s
95th percentile per-packet one-way delay: 63.858 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.22 Mbit/s
95th percentile per-packet one-way delay: 63.858 ms
Loss rate: 0.00%
```
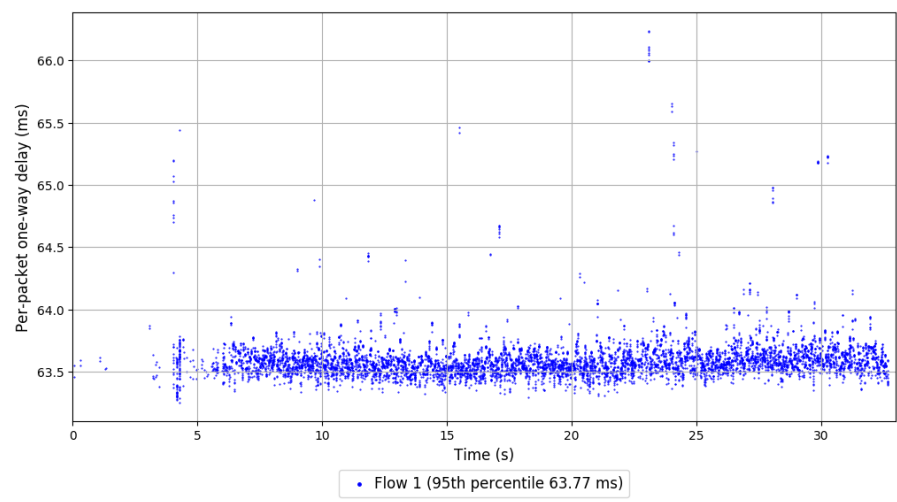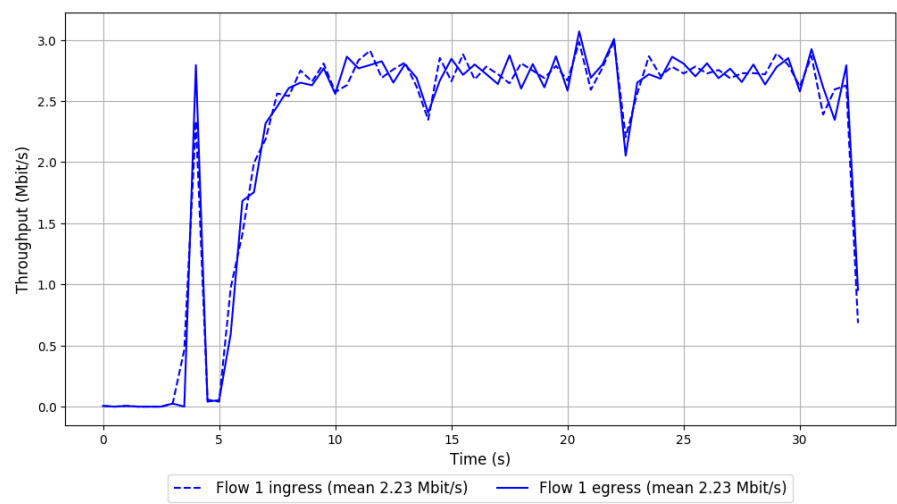
Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2018-01-31 03:23:29
End at: 2018-01-31 03:23:59

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.16 Mbit/s
95th percentile per-packet one-way delay: 64.113 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.16 Mbit/s
95th percentile per-packet one-way delay: 64.113 ms
Loss rate: 0.00%
```
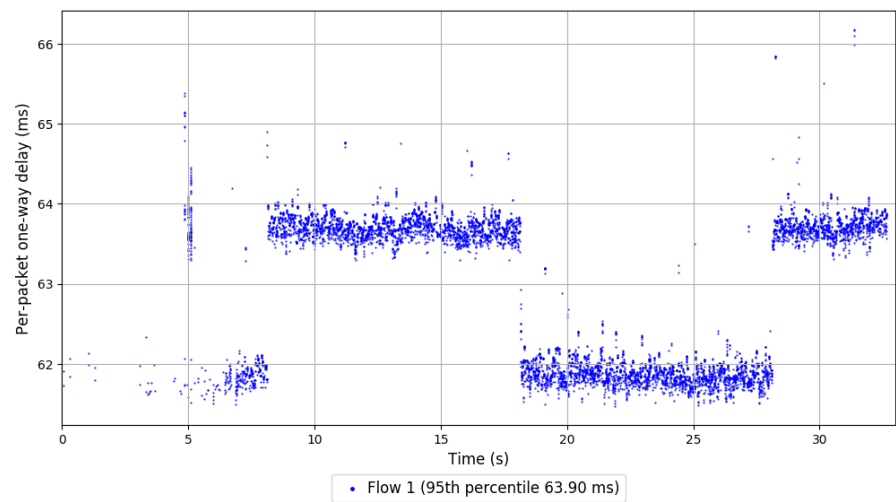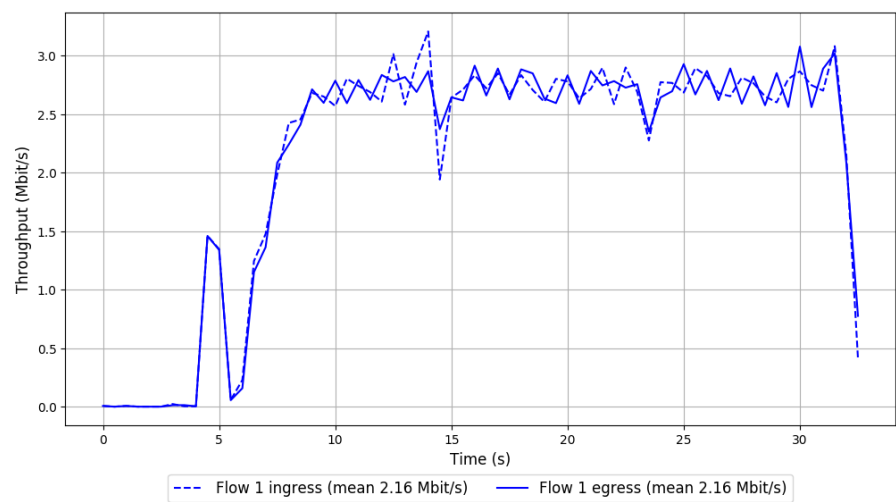
Run 2: Report of WebRTC media — Data Link

Flow 1 ingress (mean 2.16 Mbit/s)   Flow 1 egress (mean 2.16 Mbit/s)

Flow 1 (95th percentile 64.11 ms)

```
Run 3: Statistics of WebRTC media

Start at: 2018-01-31 03:37:15
End at: 2018-01-31 03:37:45

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 63.775 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 63.775 ms
Loss rate: 0.00%
```
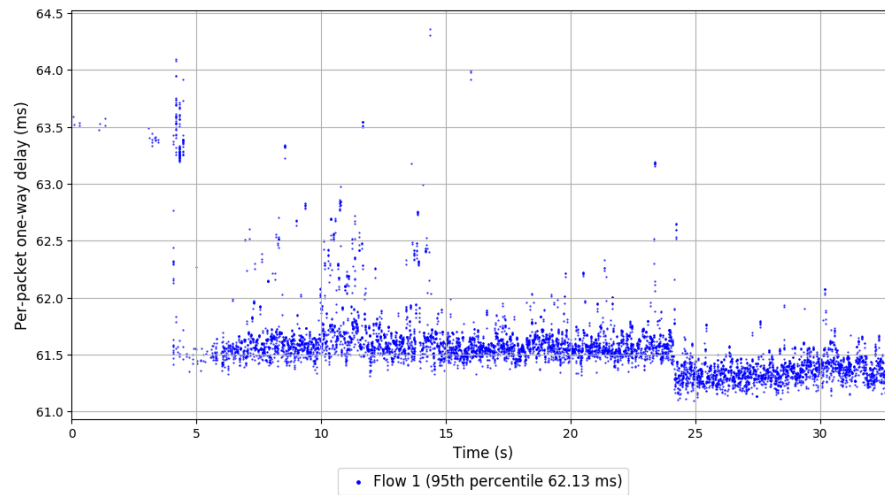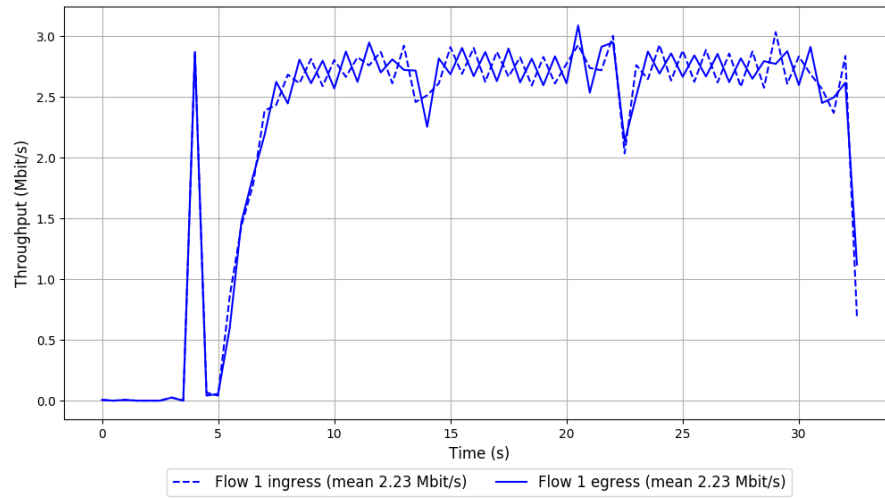
Run 3: Report of WebRTC media — Data Link

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

• Flow 1 (95th percentile 63.77 ms)

```
Run 4: Statistics of WebRTC media

Start at: 2018-01-31 03:50:38
End at: 2018-01-31 03:51:08

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.16 Mbit/s
95th percentile per-packet one-way delay: 63.903 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.16 Mbit/s
95th percentile per-packet one-way delay: 63.903 ms
Loss rate: 0.00%
```
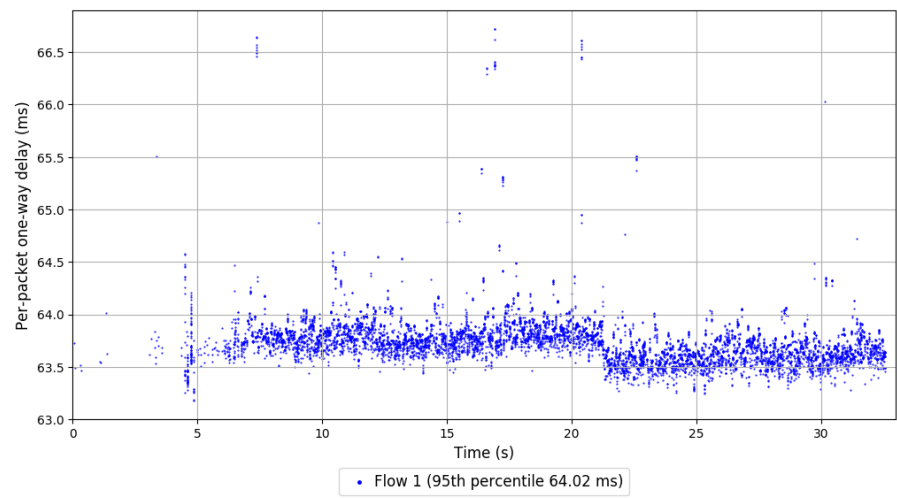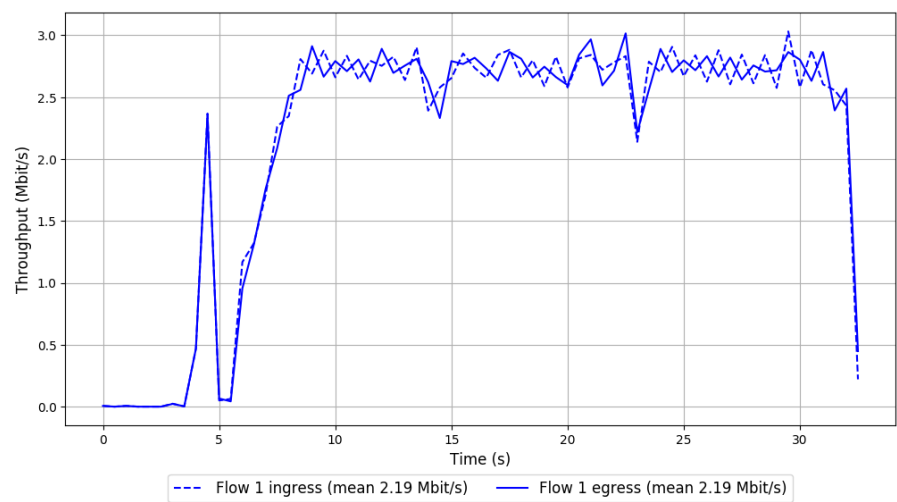
Run 4: Report of WebRTC media — Data Link

Flow 1 ingress (mean 2.16 Mbit/s) Flow 1 egress (mean 2.16 Mbit/s)

Flow 1 (95th percentile 63.90 ms)

```
Run 5: Statistics of WebRTC media

Start at: 2018-01-31 04:03:52
End at: 2018-01-31 04:04:22

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 62.127 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 62.127 ms
Loss rate: 0.00%
```
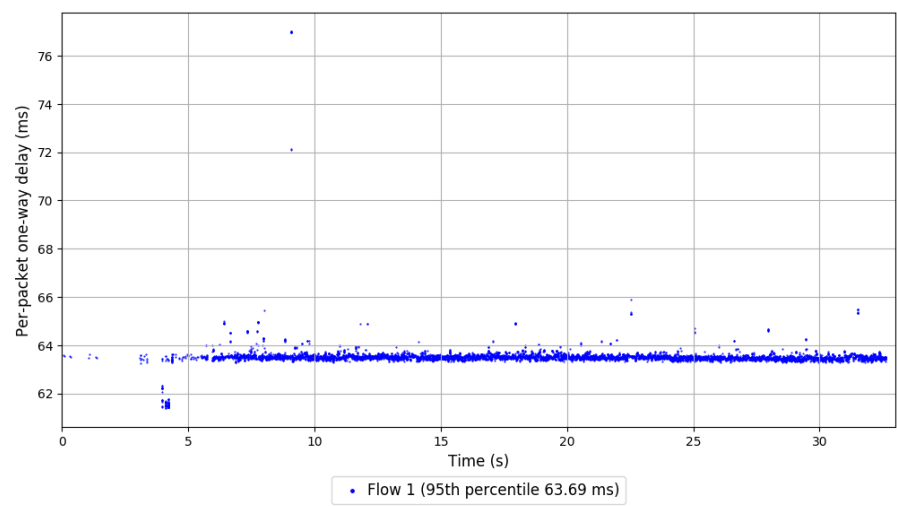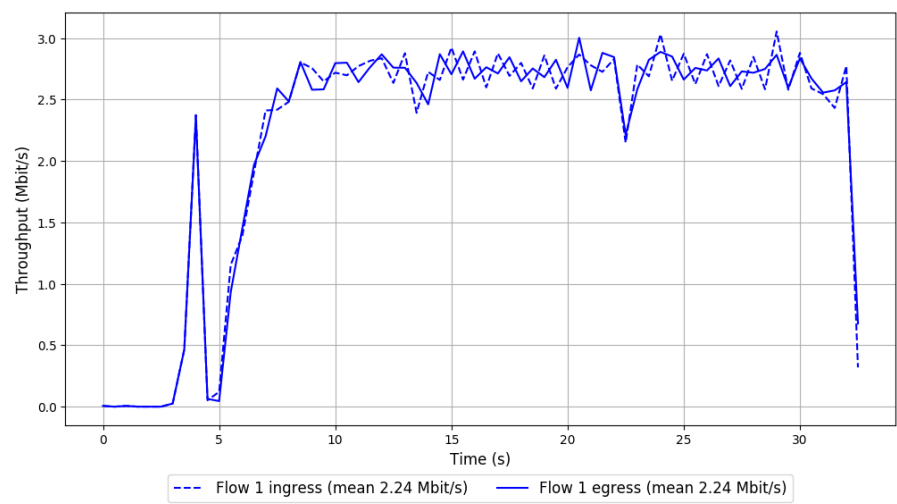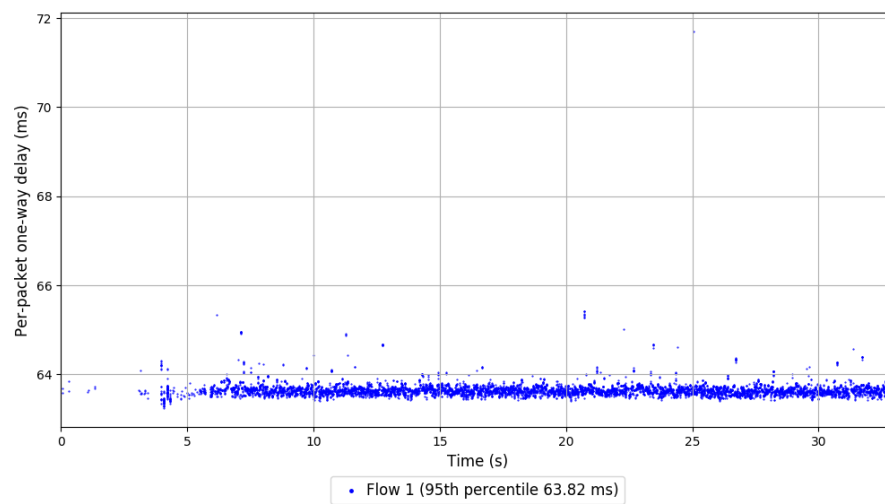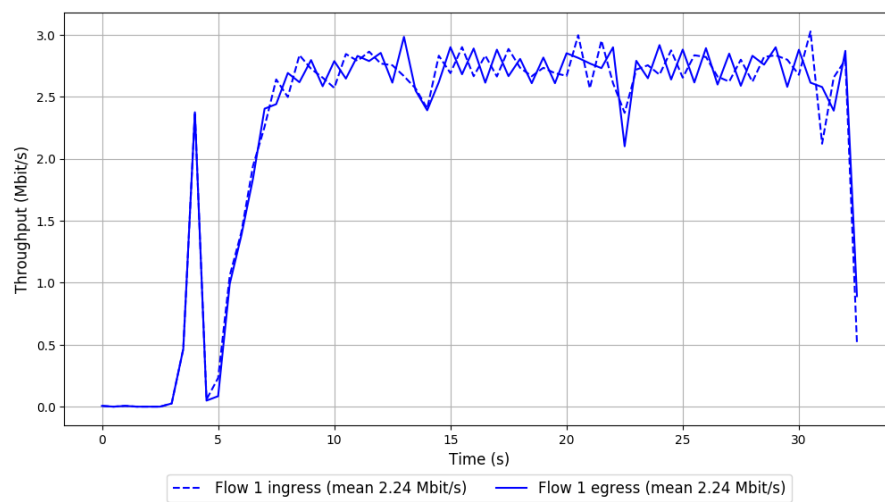
Run 5: Report of WebRTC media — Data Link

```
Run 6: Statistics of WebRTC media

Start at: 2018-01-31 04:17:15
End at: 2018-01-31 04:17:45

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.19 Mbit/s
95th percentile per-packet one-way delay: 64.022 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.19 Mbit/s
95th percentile per-packet one-way delay: 64.022 ms
Loss rate: 0.00%
```
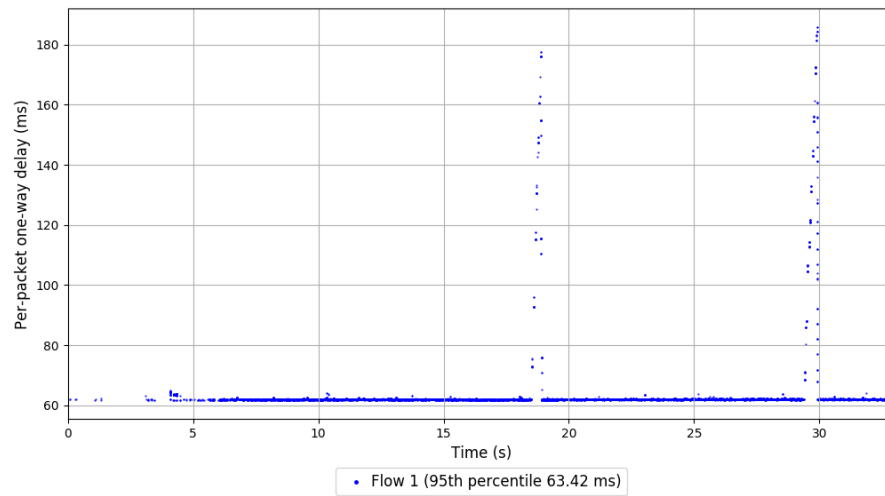
Run 6: Report of WebRTC media — Data Link

```
Run 7: Statistics of WebRTC media

Start at: 2018-01-31 04:30:32
End at: 2018-01-31 04:31:02

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.24 Mbit/s
95th percentile per-packet one-way delay: 63.691 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.24 Mbit/s
95th percentile per-packet one-way delay: 63.691 ms
Loss rate: 0.00%
```
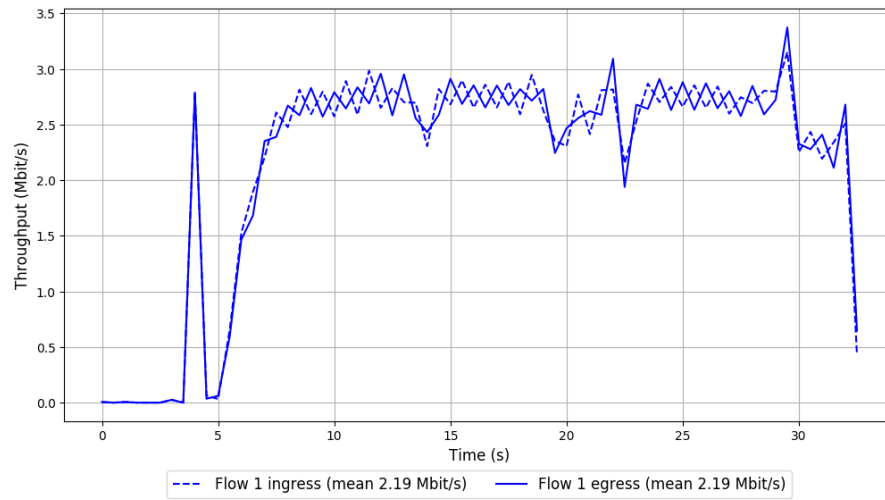
Run 7: Report of WebRTC media — Data Link

Flow 1 ingress (mean 2.24 Mbit/s) --- Flow 1 egress (mean 2.24 Mbit/s)

Flow 1 (95th percentile 63.69 ms)

```
Run 8: Statistics of WebRTC media

Start at: 2018-01-31 04:43:49
End at: 2018-01-31 04:44:19

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.24 Mbit/s
95th percentile per-packet one-way delay: 63.817 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.24 Mbit/s
95th percentile per-packet one-way delay: 63.817 ms
Loss rate: 0.00%
```
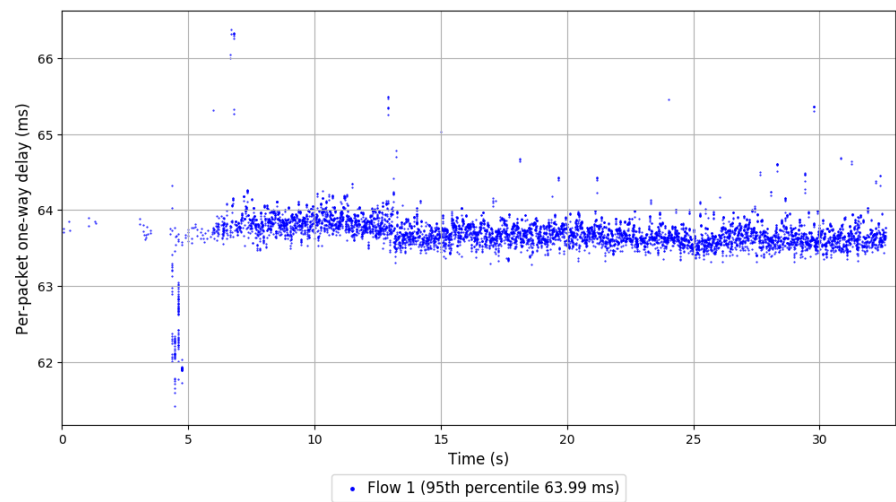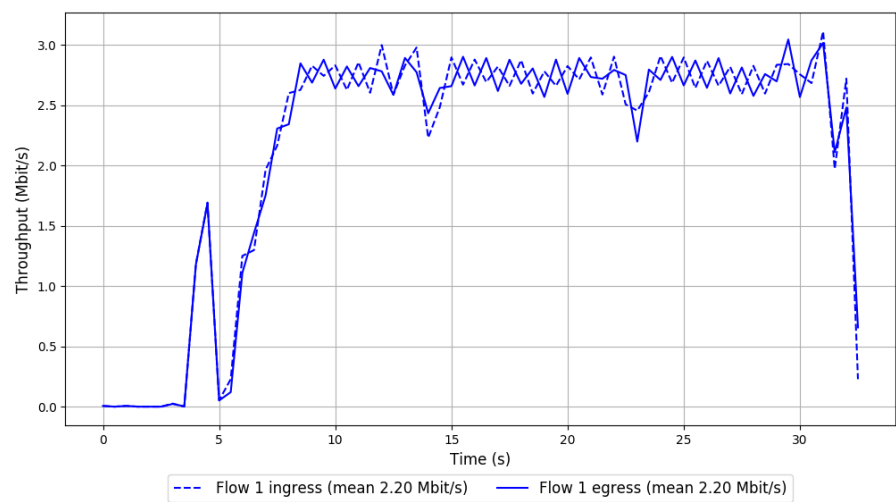
Run 8: Report of WebRTC media — Data Link

```
Run 9: Statistics of WebRTC media

Start at: 2018-01-31 04:57:36
End at: 2018-01-31 04:58:06


# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.19 Mbit/s
95th percentile per-packet one-way delay: 63.422 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.19 Mbit/s
95th percentile per-packet one-way delay: 63.422 ms
Loss rate: 0.00%
```
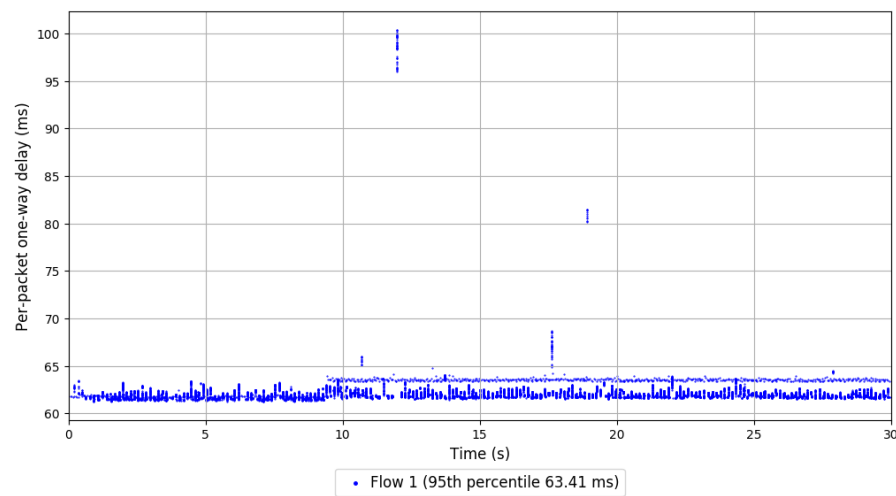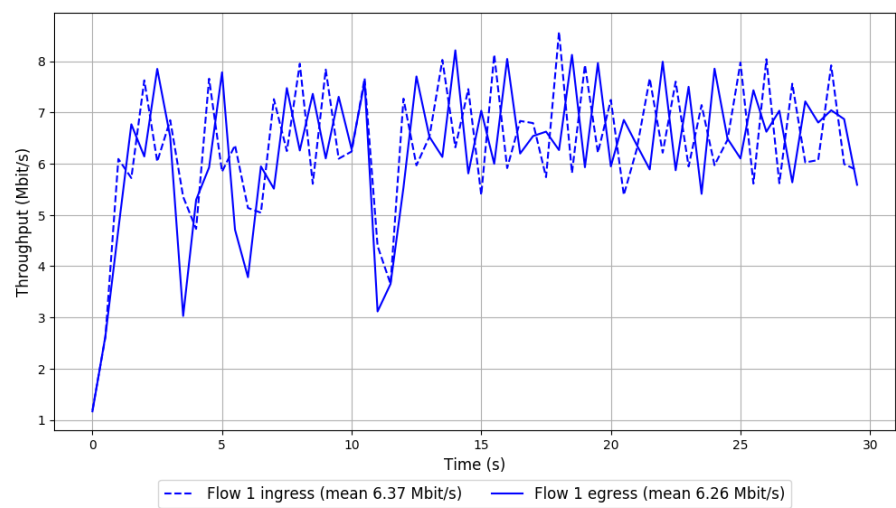
Run 9: Report of WebRTC media — Data Link

```
Run 10: Statistics of WebRTC media

Start at: 2018-01-31 05:10:53
End at: 2018-01-31 05:11:23

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.20 Mbit/s
95th percentile per-packet one-way delay: 63.993 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.20 Mbit/s
95th percentile per-packet one-way delay: 63.993 ms
Loss rate: 0.00%
```
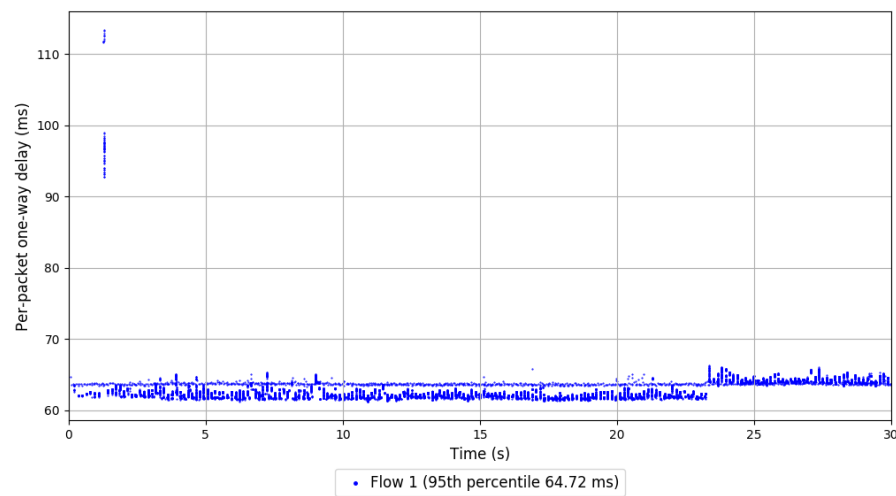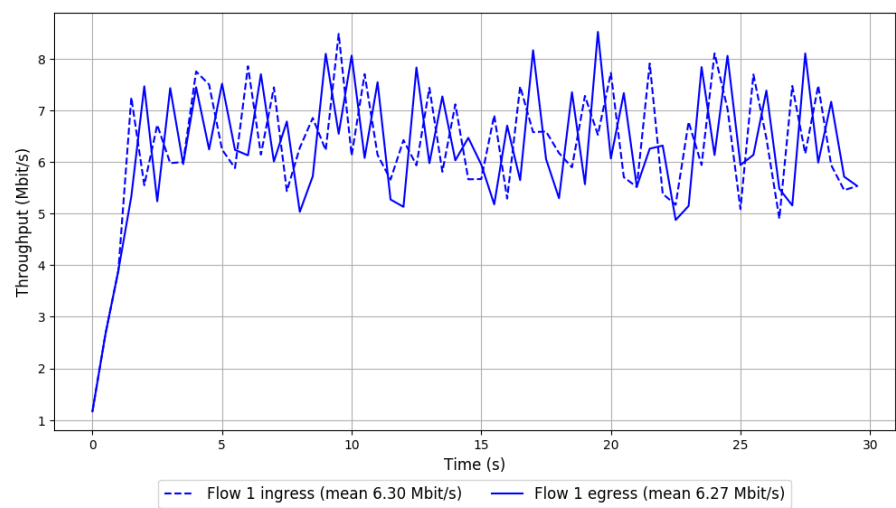
Run 10: Report of WebRTC media — Data Link

```
Run 1: Statistics of Sprout

Start at: 2018-01-31 03:06:44
End at: 2018-01-31 03:07:14

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.26 Mbit/s
95th percentile per-packet one-way delay: 63.410 ms
Loss rate: 1.73%
-- Flow 1:
Average throughput: 6.26 Mbit/s
95th percentile per-packet one-way delay: 63.410 ms
Loss rate: 1.73%
```
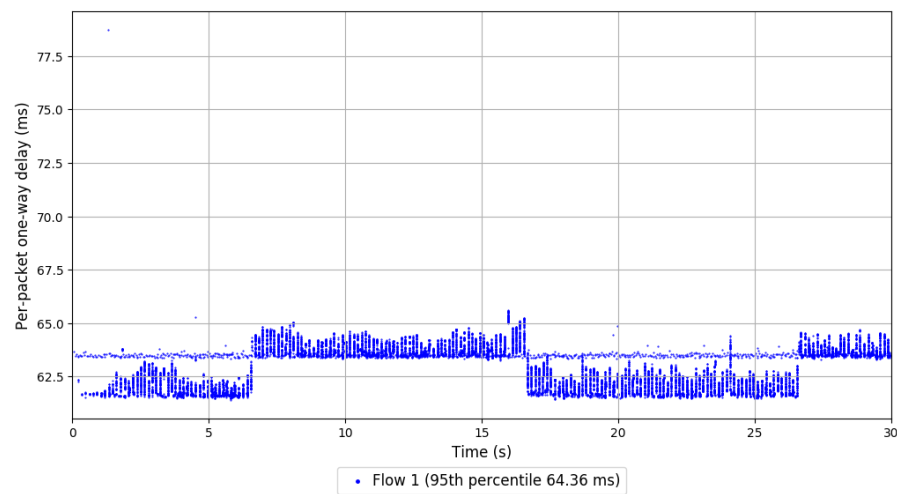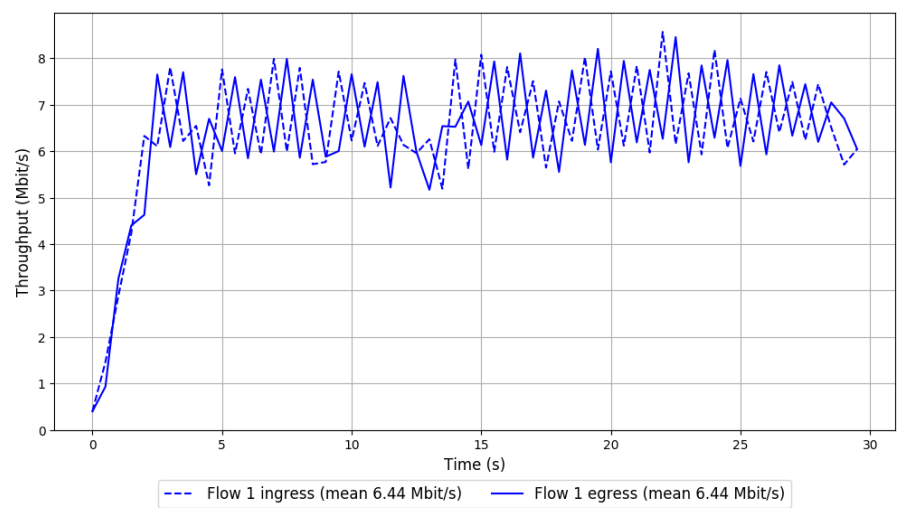
Run 1: Report of Sprout — Data Link

Flow 1 ingress (mean 6.37 Mbit/s) ---- Flow 1 egress (mean 6.26 Mbit/s) ——

Flow 1 (95th percentile 63.41 ms)

```
Run 2: Statistics of Sprout

Start at: 2018-01-31 03:20:00
End at: 2018-01-31 03:20:30

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.27 Mbit/s
95th percentile per-packet one-way delay: 64.721 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 6.27 Mbit/s
95th percentile per-packet one-way delay: 64.721 ms
Loss rate: 0.60%
```
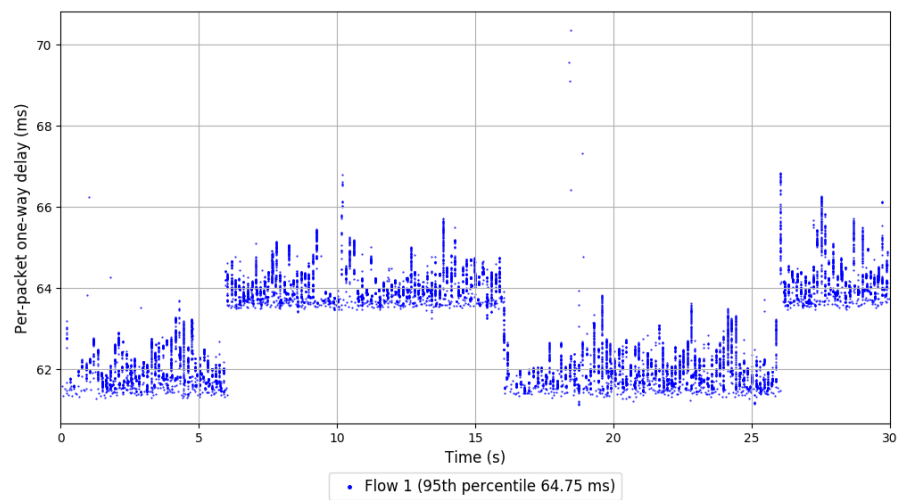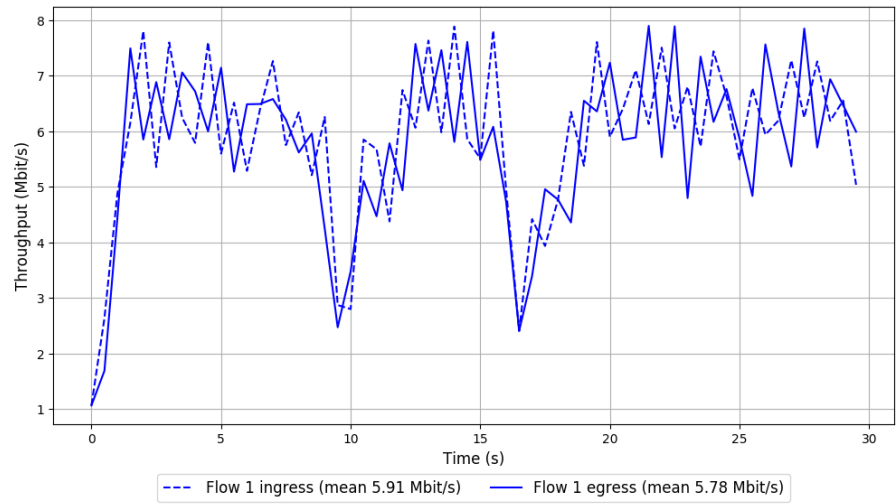
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2018-01-31 03:33:37
End at: 2018-01-31 03:34:07


# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.44 Mbit/s
95th percentile per-packet one-way delay: 64.358 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.44 Mbit/s
95th percentile per-packet one-way delay: 64.358 ms
Loss rate: 0.00%
```
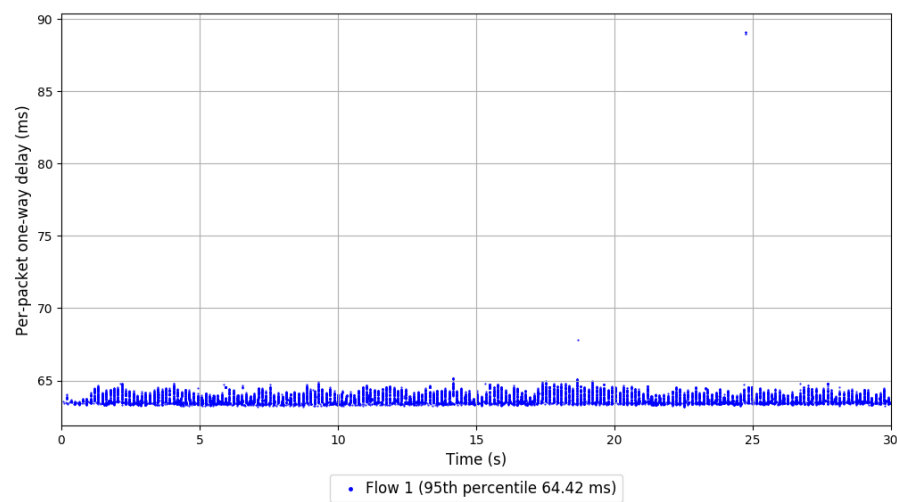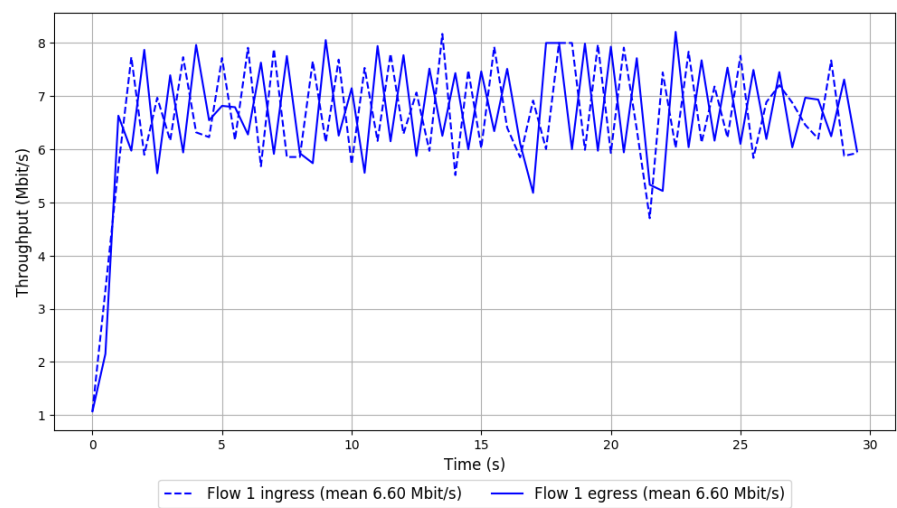
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2018-01-31 03:47:08
End at: 2018-01-31 03:47:38


# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.78 Mbit/s
95th percentile per-packet one-way delay: 64.750 ms
Loss rate: 2.19%
-- Flow 1:
Average throughput: 5.78 Mbit/s
95th percentile per-packet one-way delay: 64.750 ms
Loss rate: 2.19%
```
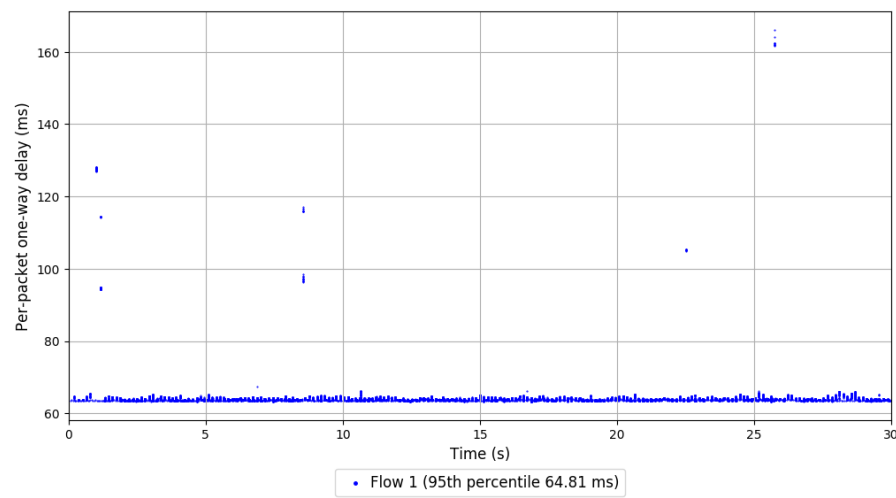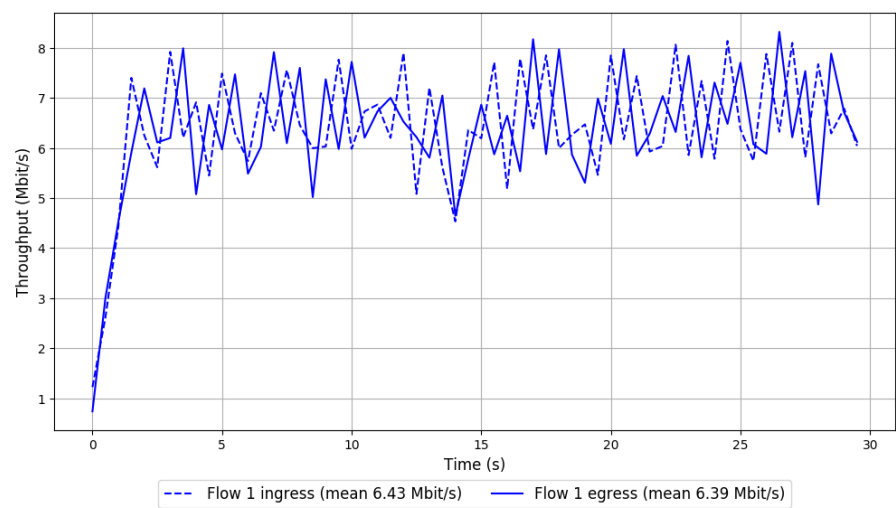
Run 4: Report of Sprout — Data Link

Flow 1 ingress (mean 5.91 Mbit/s) ---- Flow 1 egress (mean 5.78 Mbit/s) ——

• Flow 1 (95th percentile 64.75 ms)

```
Run 5: Statistics of Sprout

Start at: 2018-01-31 04:00:20
End at: 2018-01-31 04:00:50

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.60 Mbit/s
95th percentile per-packet one-way delay: 64.418 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.60 Mbit/s
95th percentile per-packet one-way delay: 64.418 ms
Loss rate: 0.00%
```
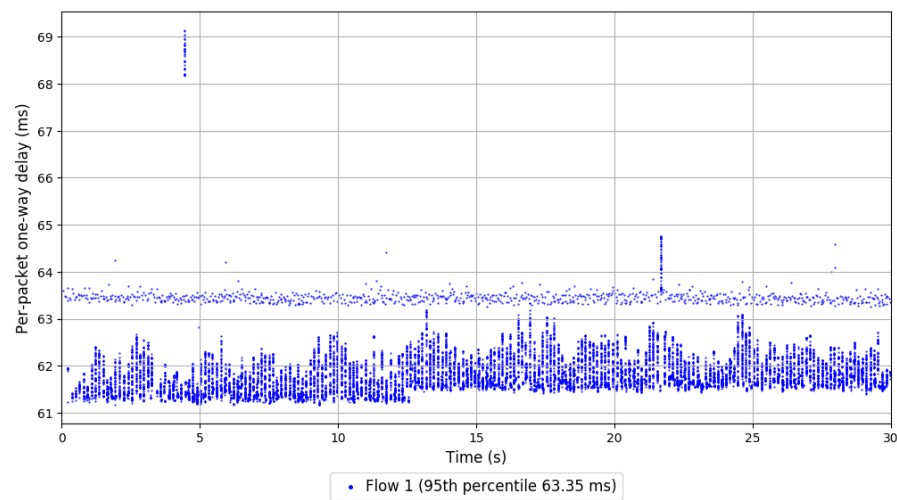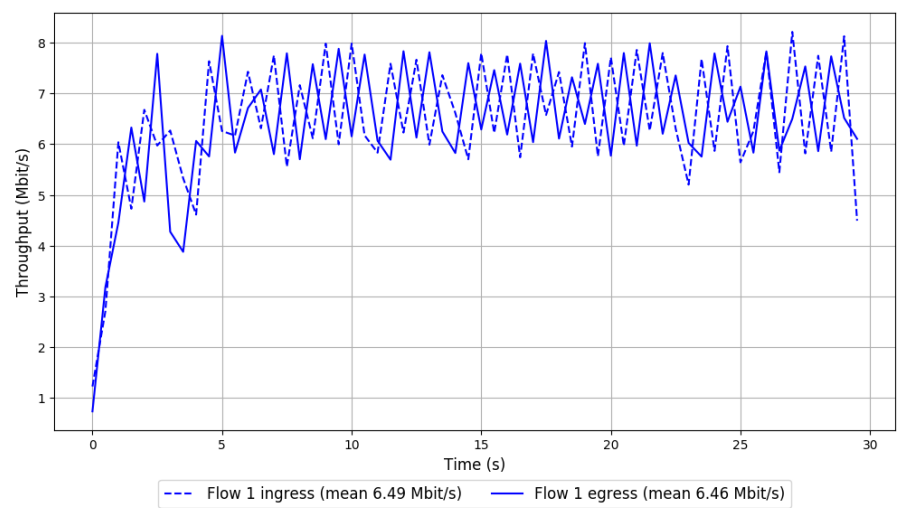
Run 5: Report of Sprout — Data Link

```
Run 6: Statistics of Sprout

Start at: 2018-01-31 04:13:38
End at: 2018-01-31 04:14:08

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.39 Mbit/s
95th percentile per-packet one-way delay: 64.808 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 6.39 Mbit/s
95th percentile per-packet one-way delay: 64.808 ms
Loss rate: 0.67%
```
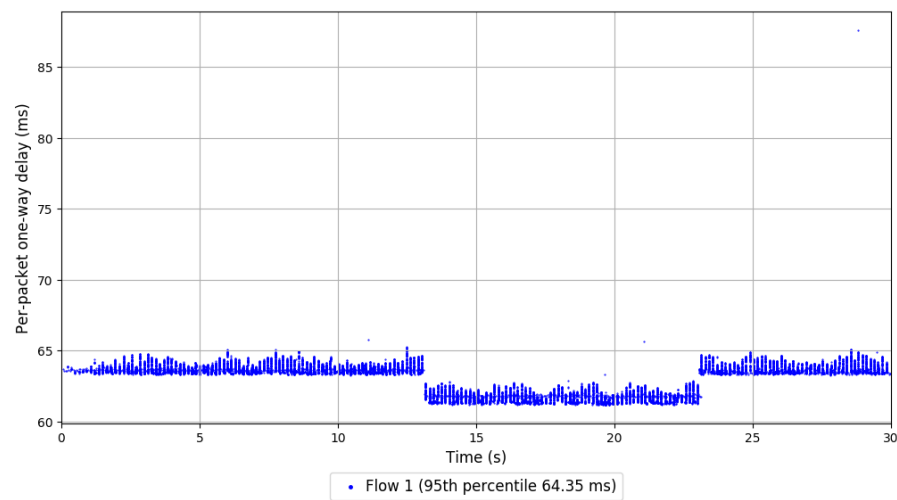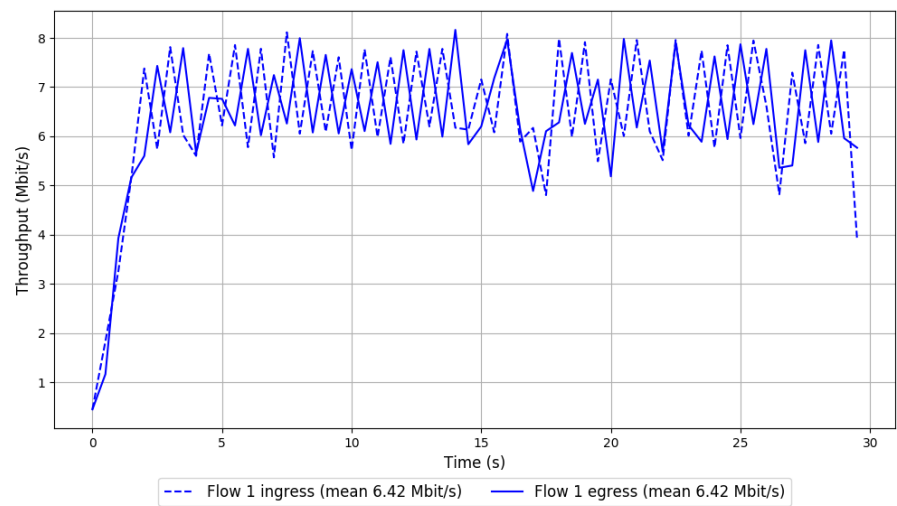
Run 6: Report of Sprout — Data Link

Flow 1 ingress (mean 6.43 Mbit/s) — Flow 1 egress (mean 6.39 Mbit/s)

• Flow 1 (95th percentile 64.81 ms)

```
Run 7: Statistics of Sprout

Start at: 2018-01-31 04:26:41
End at: 2018-01-31 04:27:11


# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.46 Mbit/s
95th percentile per-packet one-way delay: 63.351 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 6.46 Mbit/s
95th percentile per-packet one-way delay: 63.351 ms
Loss rate: 0.51%
```
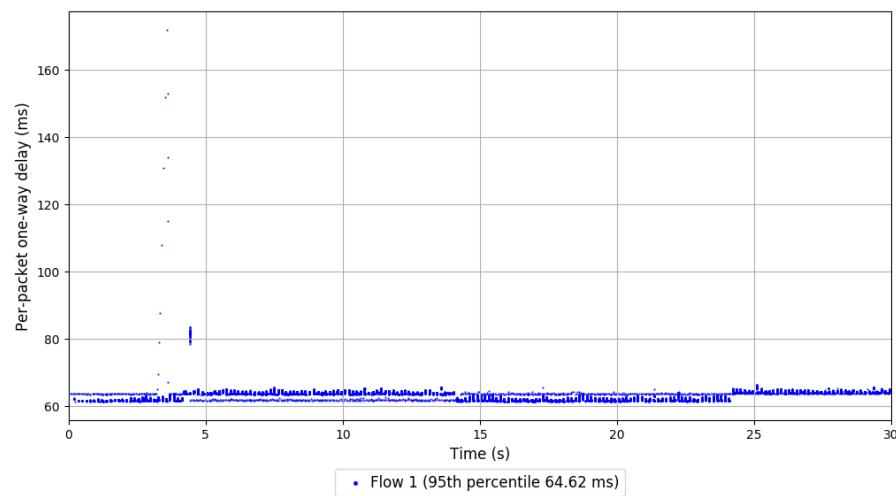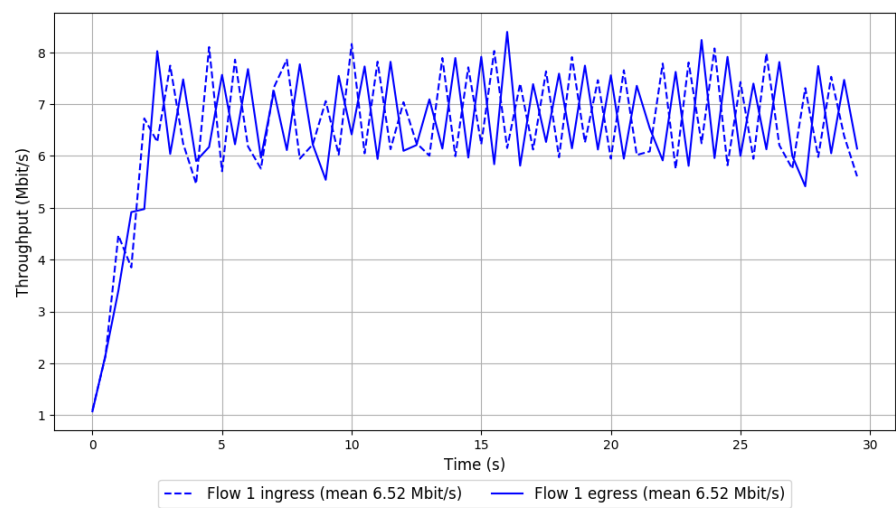
Run 7: Report of Sprout — Data Link

```
Run 8: Statistics of Sprout

Start at: 2018-01-31 04:40:11
End at: 2018-01-31 04:40:41


# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.42 Mbit/s
95th percentile per-packet one-way delay: 64.348 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.42 Mbit/s
95th percentile per-packet one-way delay: 64.348 ms
Loss rate: 0.00%
```
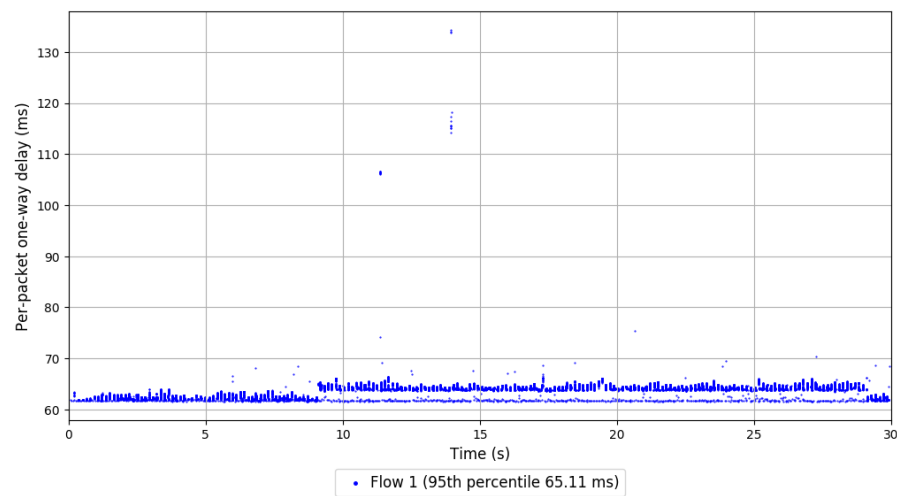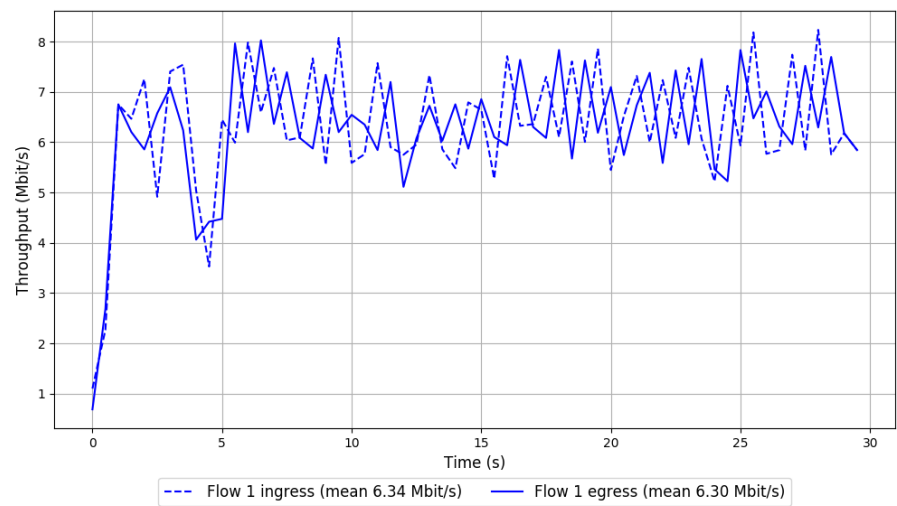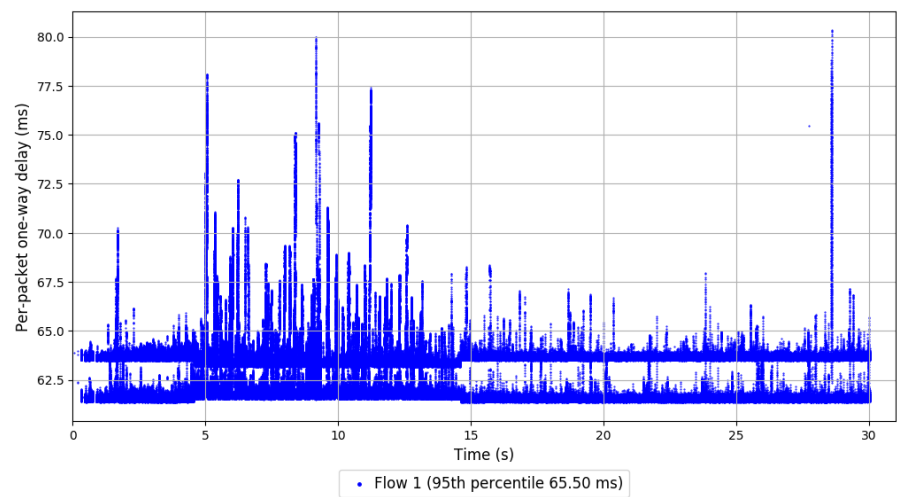
Run 8: Report of Sprout — Data Link

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```
Run 9: Statistics of Sprout

Start at: 2018-01-31 04:53:50
End at: 2018-01-31 04:54:20

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.52 Mbit/s
95th percentile per-packet one-way delay: 64.625 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 6.52 Mbit/s
95th percentile per-packet one-way delay: 64.625 ms
Loss rate: 0.01%
```
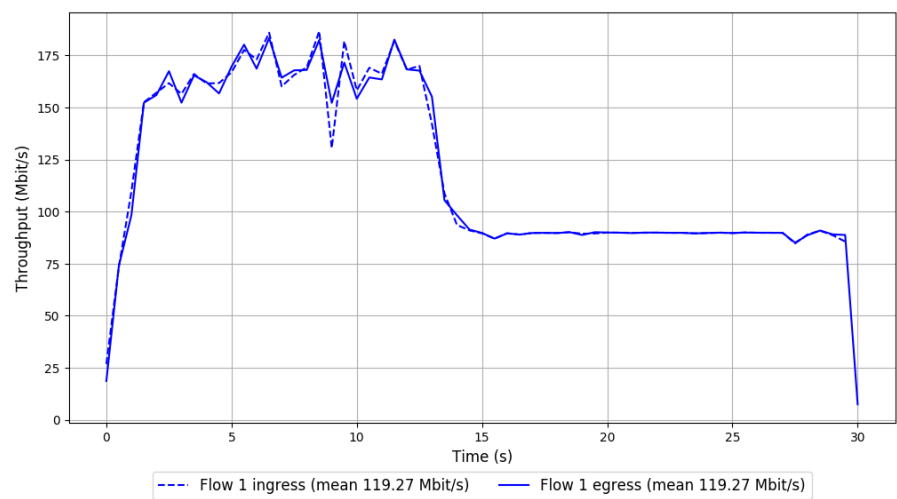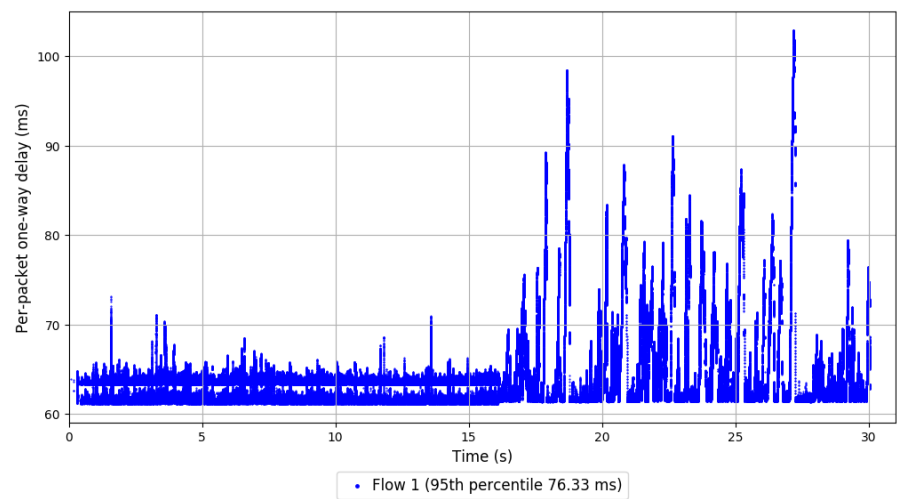
Run 9: Report of Sprout — Data Link

Flow 1 ingress (mean 6.52 Mbit/s) ——— Flow 1 egress (mean 6.52 Mbit/s)

Flow 1 (95th percentile 64.62 ms)

```
Run 10: Statistics of Sprout

Start at: 2018-01-31 05:07:15
End at: 2018-01-31 05:07:45

# Below is generated by plot.py at 2018-01-31 06:29:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.30 Mbit/s
95th percentile per-packet one-way delay: 65.107 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 6.30 Mbit/s
95th percentile per-packet one-way delay: 65.107 ms
Loss rate: 0.68%
```

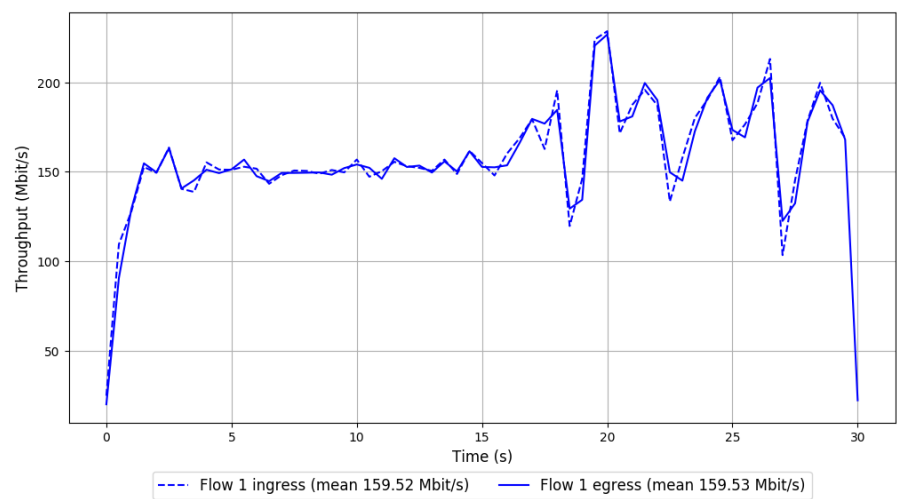Run 10: Report of Sprout — Data Link

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

Start at: 2018-01-31 03:00:29
End at: 2018-01-31 03:00:59

# Below is generated by plot.py at 2018-01-31 06:31:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 119.27 Mbit/s
95th percentile per-packet one-way delay: 65.500 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 119.27 Mbit/s
95th percentile per-packet one-way delay: 65.500 ms
Loss rate: 0.00%
```
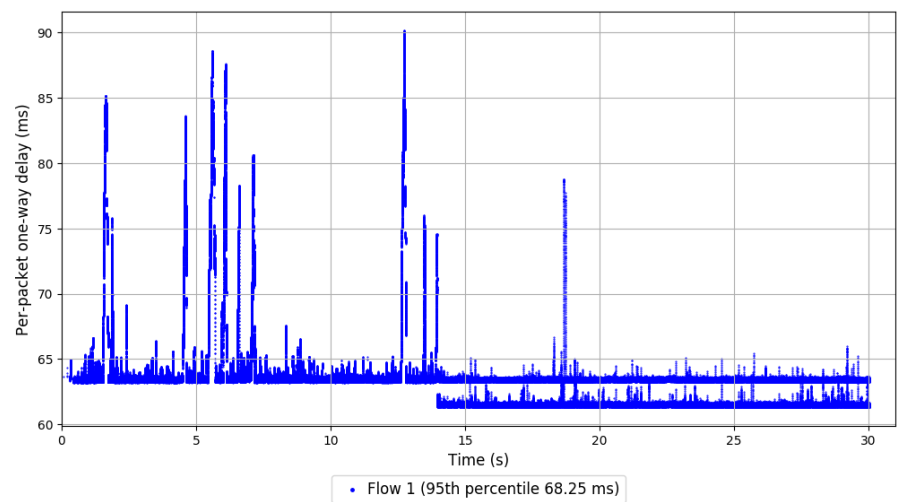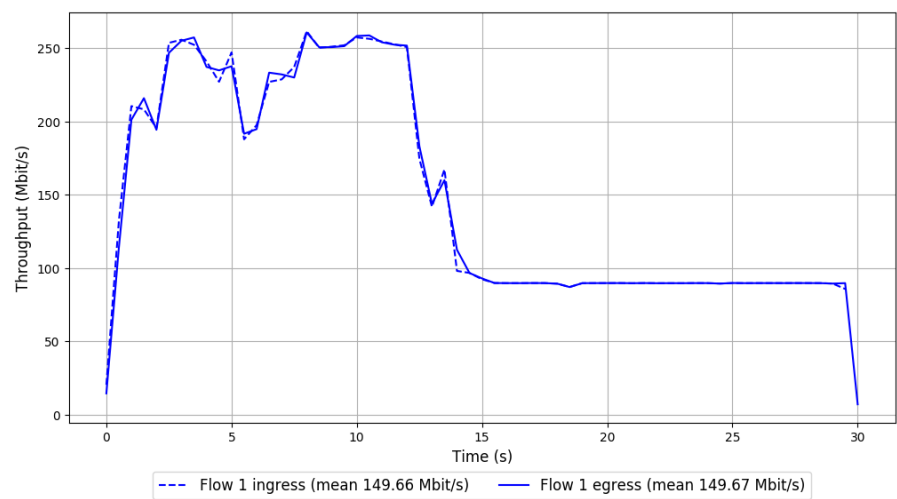
Run 1: Report of TaoVA-100x — Data Link

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

Start at: 2018-01-31 03:13:58
End at: 2018-01-31 03:14:28

# Below is generated by plot.py at 2018-01-31 06:32:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 159.53 Mbit/s
95th percentile per-packet one-way delay: 76.333 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 159.53 Mbit/s
95th percentile per-packet one-way delay: 76.333 ms
Loss rate: 0.00%
```
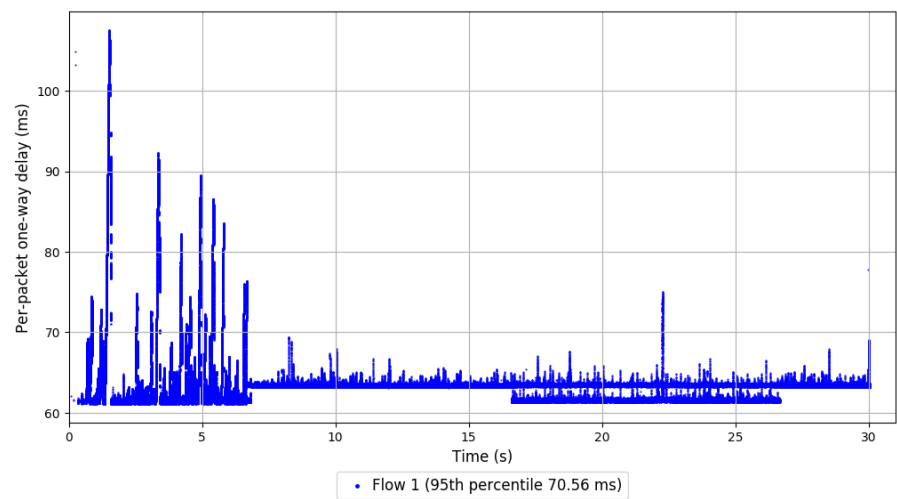
Run 2: Report of TaoVA-100x — Data Link

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

Start at: 2018-01-31 03:27:20
End at: 2018-01-31 03:27:50

# Below is generated by plot.py at 2018-01-31 06:32:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 149.67 Mbit/s
95th percentile per-packet one-way delay: 68.251 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 149.67 Mbit/s
95th percentile per-packet one-way delay: 68.251 ms
Loss rate: 0.00%
```
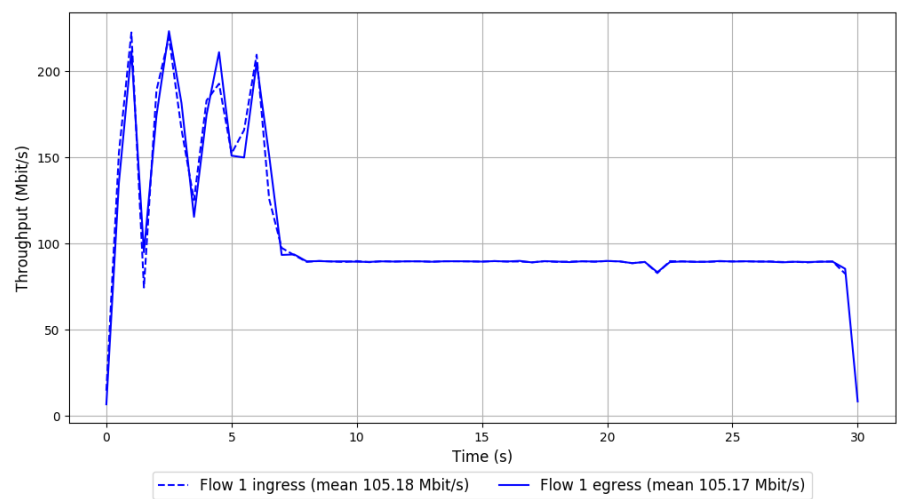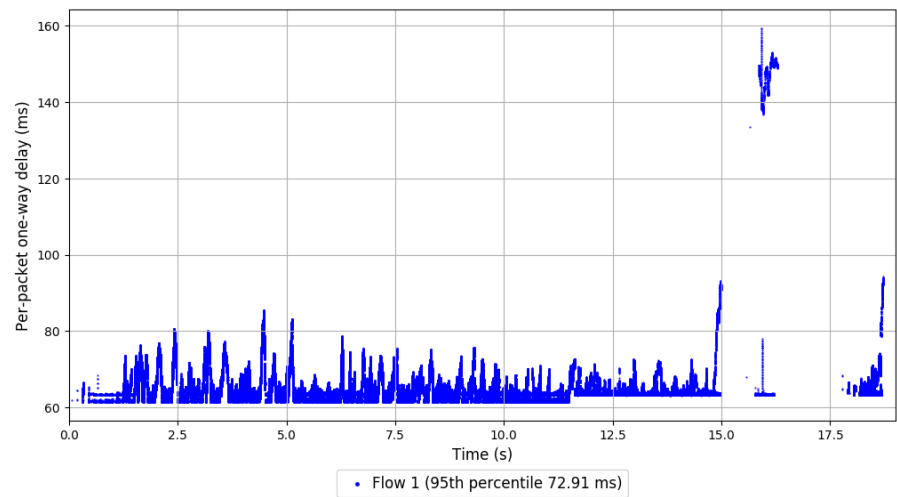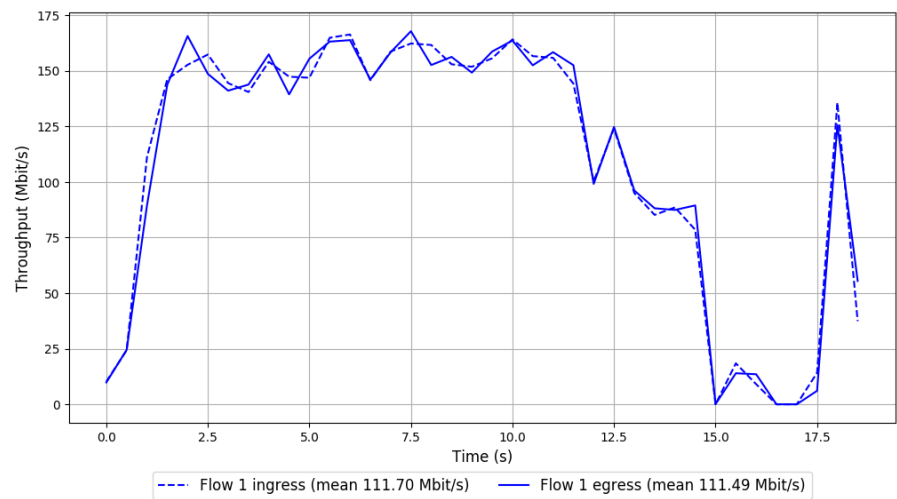
Run 3: Report of TaoVA-100x — Data Link

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

Start at: 2018-01-31 03:41:07
End at: 2018-01-31 03:41:37

# Below is generated by plot.py at 2018-01-31 06:32:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 105.17 Mbit/s
95th percentile per-packet one-way delay: 70.561 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 105.17 Mbit/s
95th percentile per-packet one-way delay: 70.561 ms
Loss rate: 0.00%
```
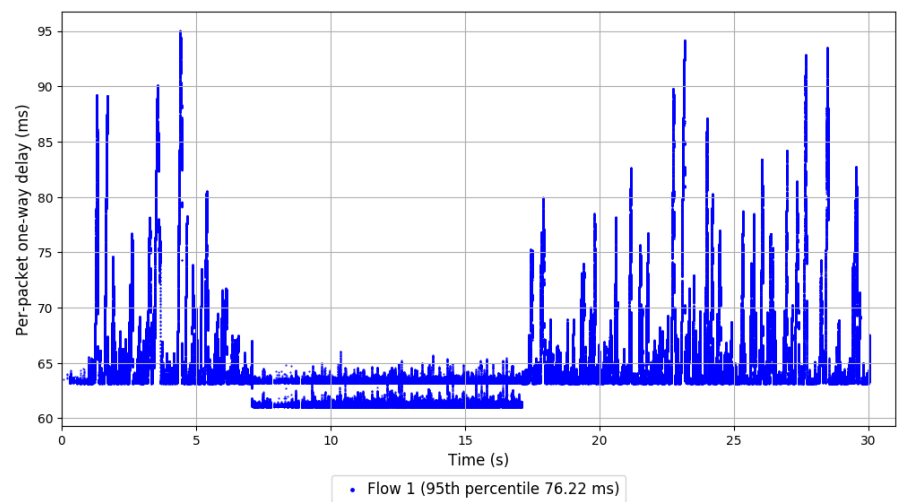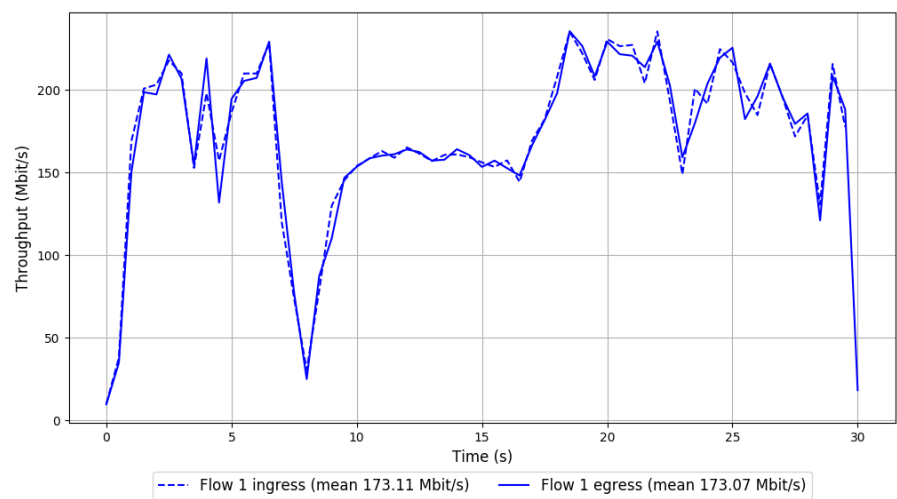
Run 4: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 105.18 Mbit/s) — — —   Flow 1 egress (mean 105.17 Mbit/s) ———

Flow 1 (95th percentile 70.56 ms)

Run 5: Statistics of TaoVA-100x

Start at: 2018-01-31 03:54:23
End at: 2018-01-31 03:54:53

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

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

Start at: 2018-01-31 04:07:47
End at: 2018-01-31 04:08:17

# Below is generated by plot.py at 2018-01-31 06:33:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 173.07 Mbit/s
95th percentile per-packet one-way delay: 76.217 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 173.07 Mbit/s
95th percentile per-packet one-way delay: 76.217 ms
Loss rate: 0.03%
```
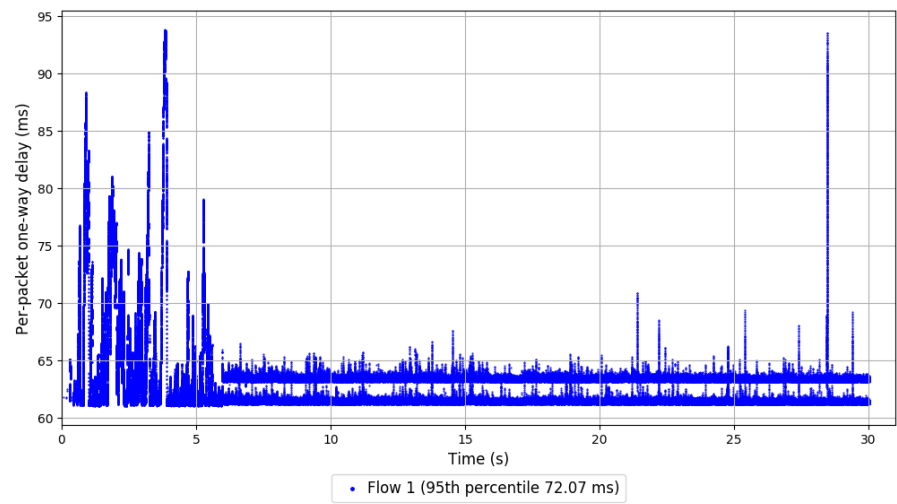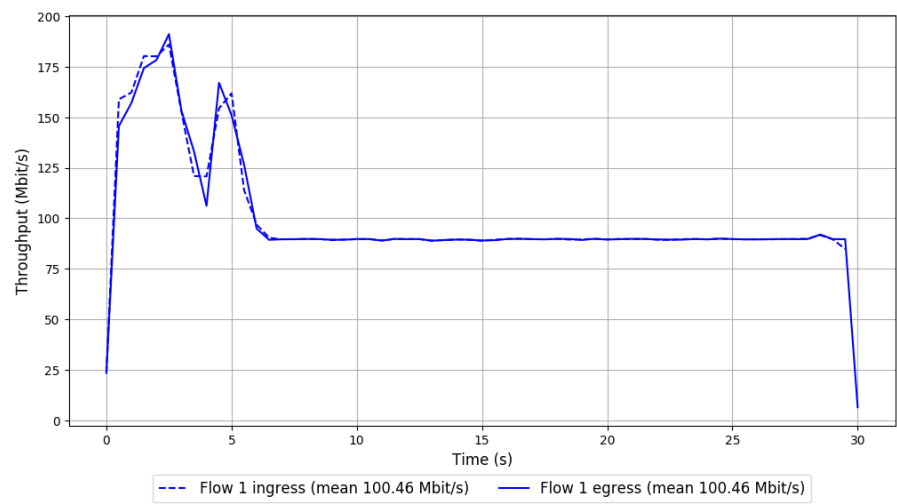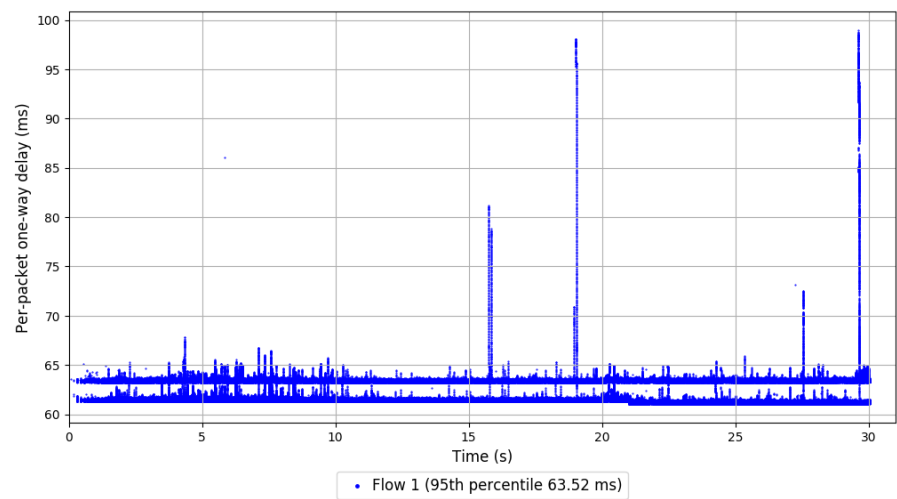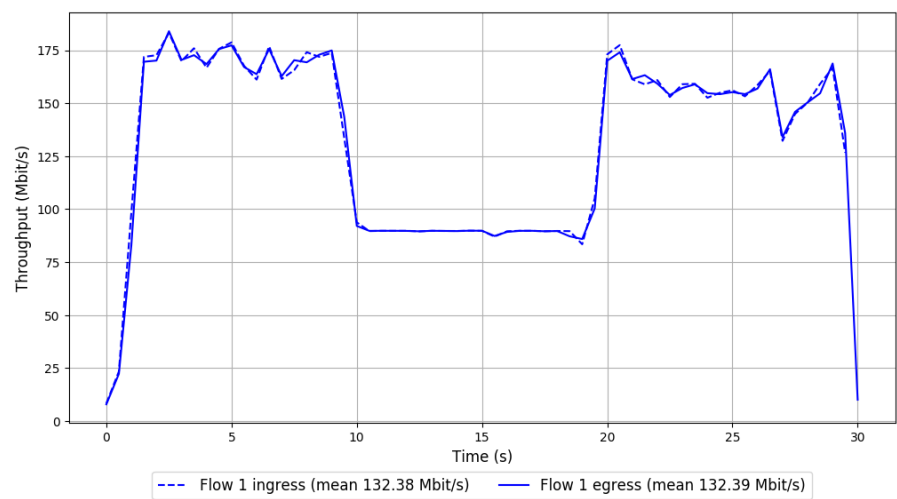
Run 6: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 173.11 Mbit/s)   Flow 1 egress (mean 173.07 Mbit/s)

• Flow 1 (95th percentile 76.22 ms)

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

Start at: 2018-01-31 04:20:58
End at: 2018-01-31 04:21:28

# Below is generated by plot.py at 2018-01-31 06:33:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 100.46 Mbit/s
95th percentile per-packet one-way delay: 72.074 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 100.46 Mbit/s
95th percentile per-packet one-way delay: 72.074 ms
Loss rate: 0.00%
```

Run 7: Report of TaoVA-100x — Data Link

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

Start at: 2018-01-31 04:34:23
End at: 2018-01-31 04:34:53

# Below is generated by plot.py at 2018-01-31 06:33:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 132.39 Mbit/s
95th percentile per-packet one-way delay: 63.517 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 132.39 Mbit/s
95th percentile per-packet one-way delay: 63.517 ms
Loss rate: 0.00%
```
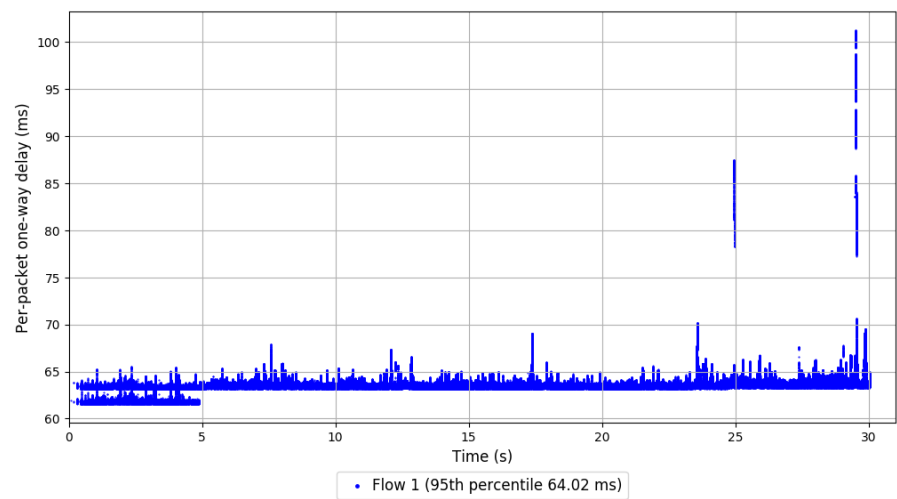
Run 8: Report of TaoVA-100x — Data Link

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

Start at: 2018-01-31 04:47:39
End at: 2018-01-31 04:48:09

# Below is generated by plot.py at 2018-01-31 06:37:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 219.50 Mbit/s
95th percentile per-packet one-way delay: 64.024 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 219.50 Mbit/s
95th percentile per-packet one-way delay: 64.024 ms
Loss rate: 0.00%
```
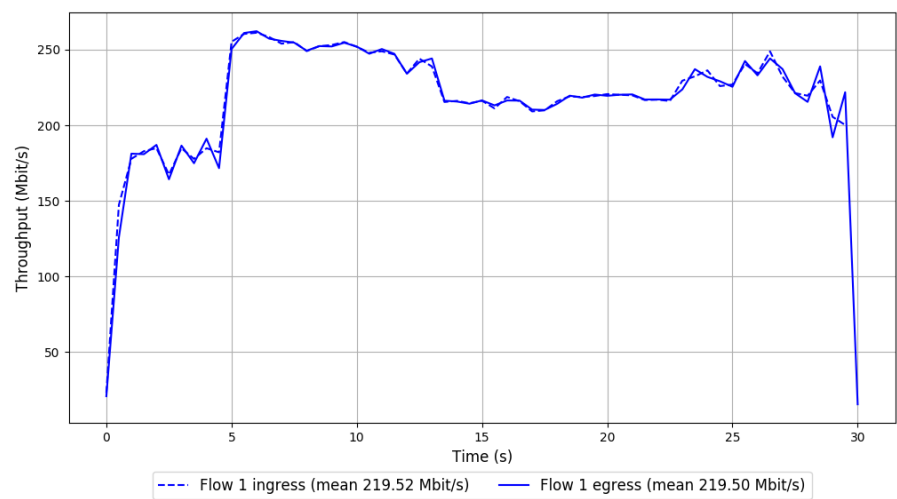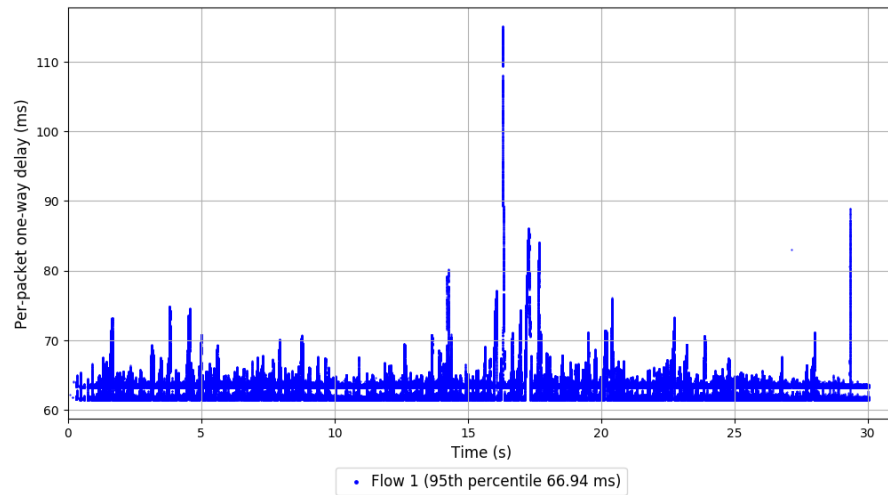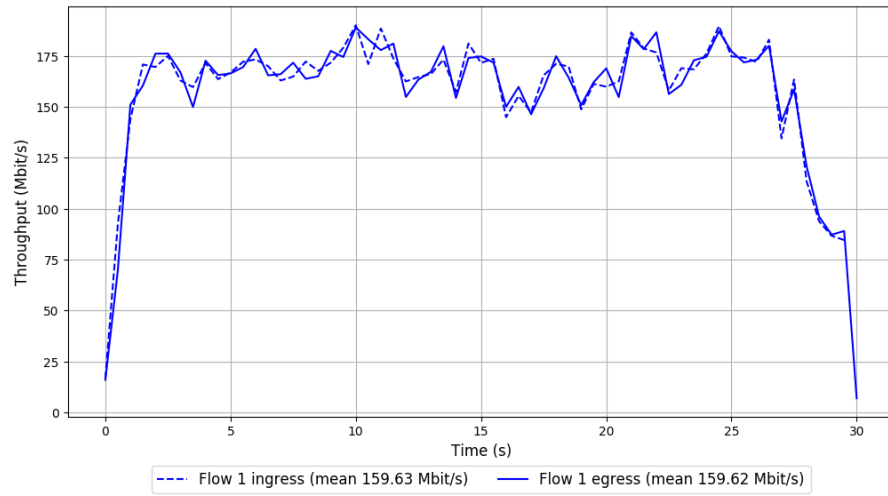
Run 9: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 219.52 Mbit/s) Flow 1 egress (mean 219.50 Mbit/s)

Flow 1 (95th percentile 64.02 ms)

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

Start at: 2018-01-31 05:01:24
End at: 2018-01-31 05:01:54

# Below is generated by plot.py at 2018-01-31 06:37:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 159.62 Mbit/s
95th percentile per-packet one-way delay: 66.945 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 159.62 Mbit/s
95th percentile per-packet one-way delay: 66.945 ms
Loss rate: 0.00%
```
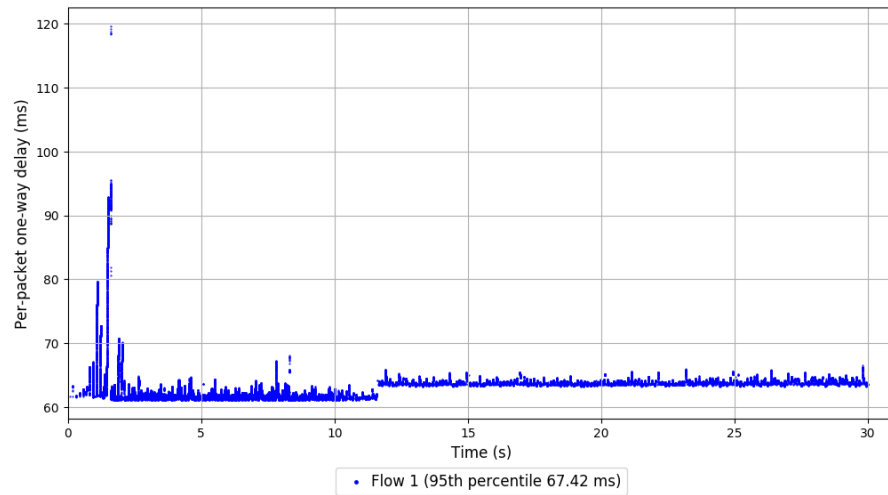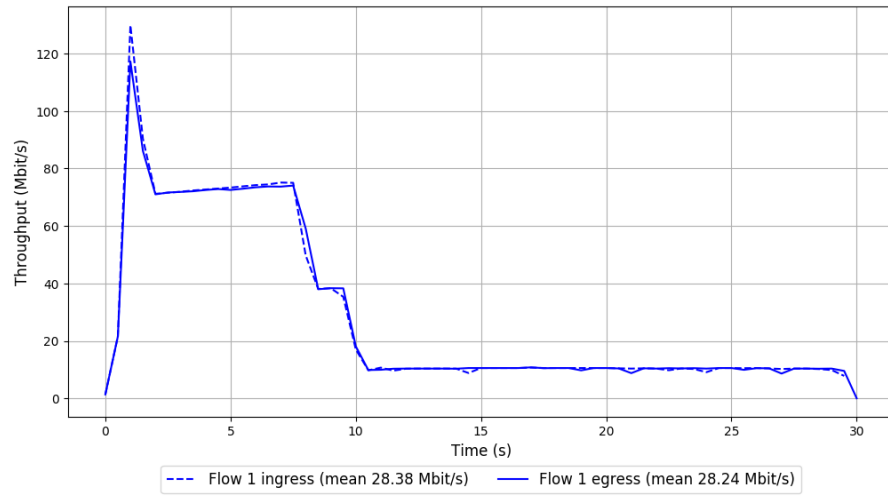
Run 10: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 159.63 Mbit/s)   Flow 1 egress (mean 159.62 Mbit/s)

Flow 1 (95th percentile 66.94 ms)

Run 1: Statistics of TCP Vegas

Start at: 2018-01-31 03:07:22
End at: 2018-01-31 03:07:52

Below is generated by plot.py at 2018-01-31 06:37:23
Datalink statistics
-- Total of 1 flow:
Average throughput: 28.24 Mbit/s
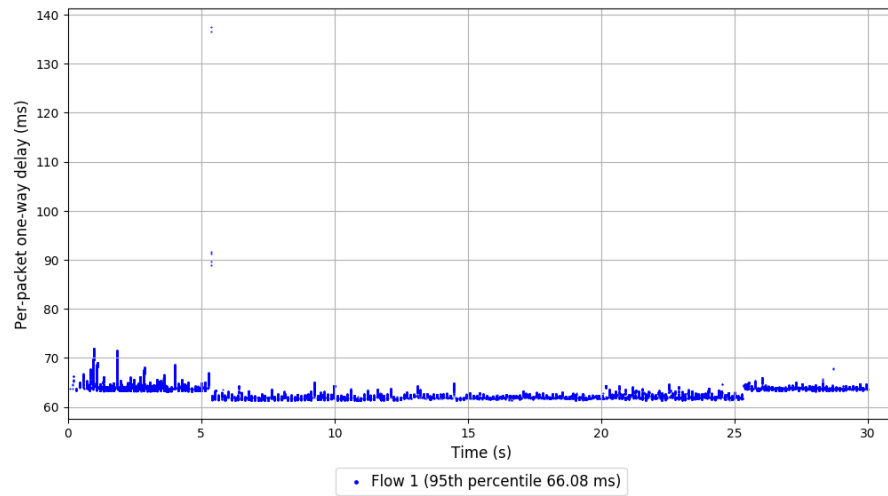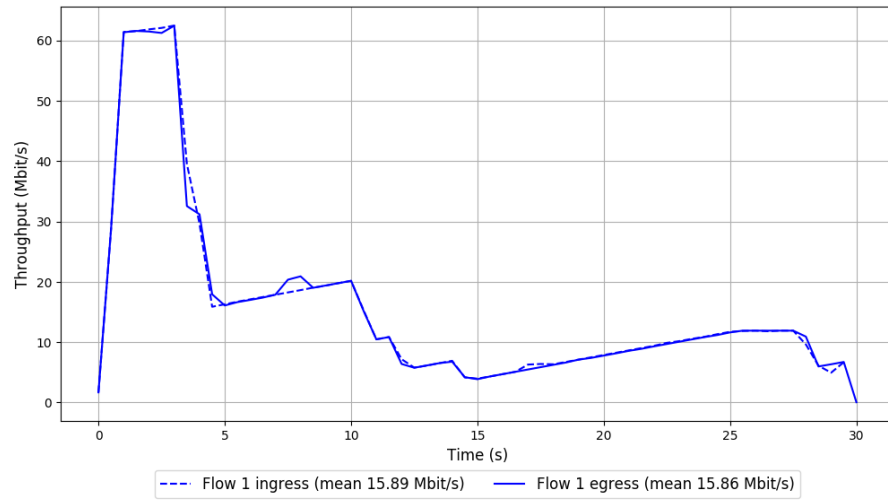95th percentile per-packet one-way delay: 67.417 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 28.24 Mbit/s
95th percentile per-packet one-way delay: 67.417 ms
Loss rate: 0.47%

Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2018-01-31 03:20:39
End at: 2018-01-31 03:21:09

# Below is generated by plot.py at 2018-01-31 06:37:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 15.86 Mbit/s
95th percentile per-packet one-way delay: 66.080 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 15.86 Mbit/s
95th percentile per-packet one-way delay: 66.080 ms
Loss rate: 0.18%
```
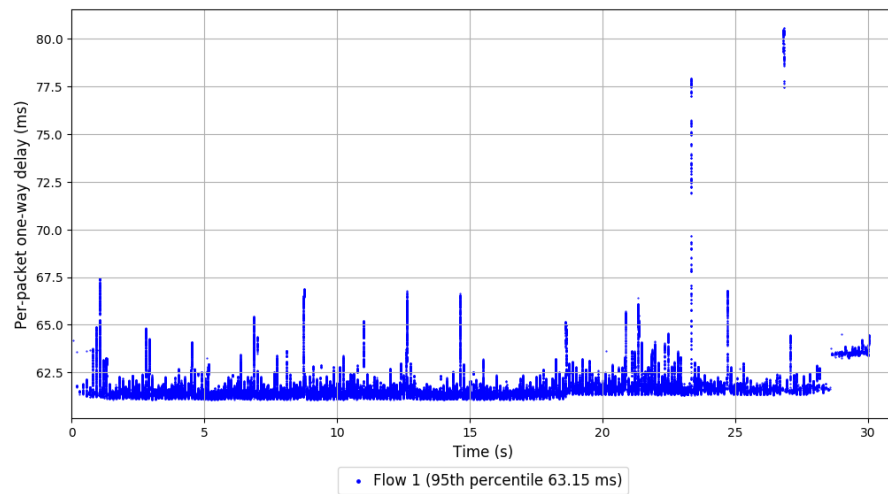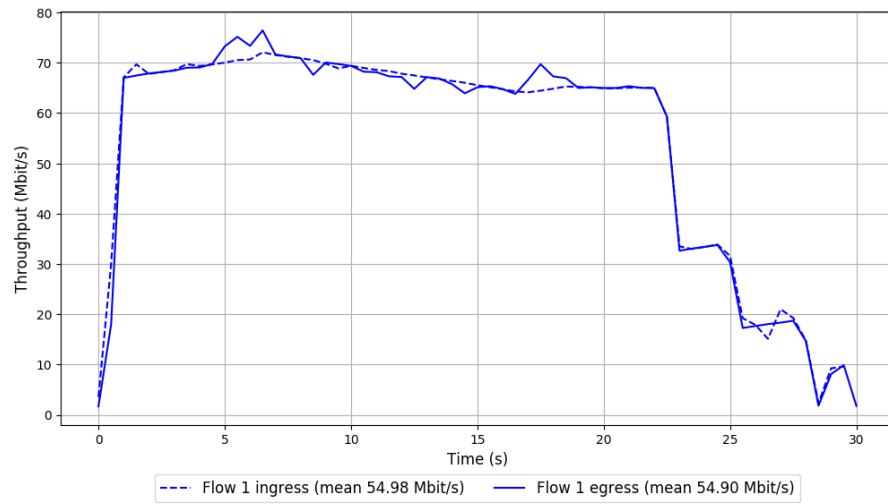
Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2018-01-31 03:34:15
End at: 2018-01-31 03:34:45

# Below is generated by plot.py at 2018-01-31 06:37:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 54.90 Mbit/s
95th percentile per-packet one-way delay: 63.150 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 54.90 Mbit/s
95th percentile per-packet one-way delay: 63.150 ms
Loss rate: 0.14%
```
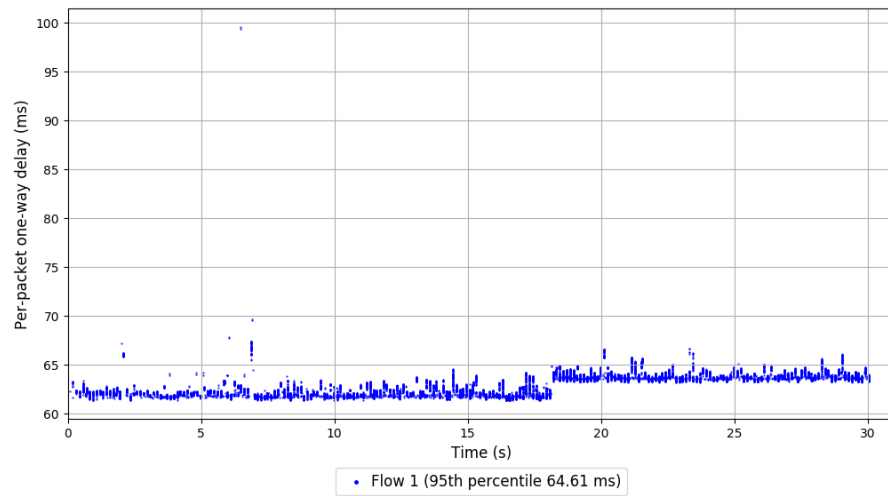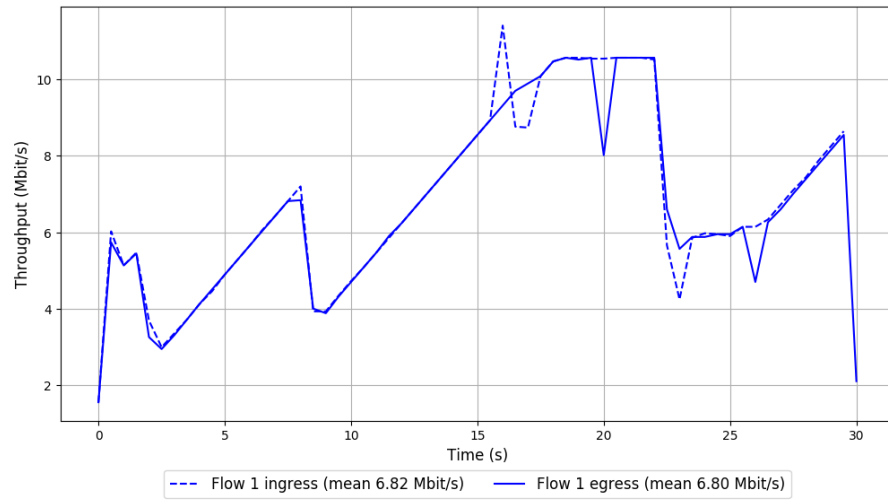
Run 3: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 54.98 Mbit/s) ----- Flow 1 egress (mean 54.90 Mbit/s)

Flow 1 (95th percentile 63.15 ms)

Run 4: Statistics of TCP Vegas

Start at: 2018-01-31 03:47:46
End at: 2018-01-31 03:48:16

Below is generated by plot.py at 2018-01-31 06:37:23
Datalink statistics
-- Total of 1 flow:
Average throughput: 6.80 Mbit/s
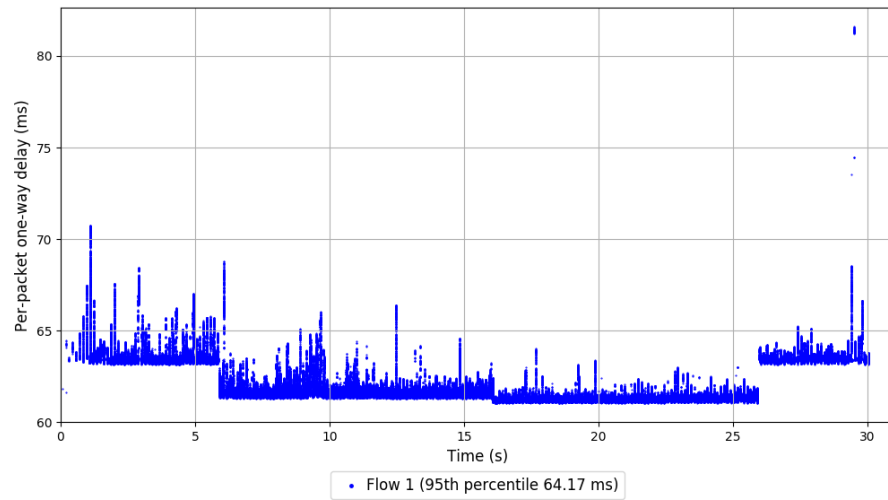95th percentile per-packet one-way delay: 64.615 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 6.80 Mbit/s
95th percentile per-packet one-way delay: 64.615 ms
Loss rate: 0.33%

Run 4: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 6.82 Mbit/s)   Flow 1 egress (mean 6.80 Mbit/s)

Flow 1 (95th percentile 64.61 ms)

191

```
Run 5: Statistics of TCP Vegas

Start at: 2018-01-31 04:00:58
End at: 2018-01-31 04:01:28


# Below is generated by plot.py at 2018-01-31 06:37:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 77.26 Mbit/s
95th percentile per-packet one-way delay: 64.168 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 77.26 Mbit/s
95th percentile per-packet one-way delay: 64.168 ms
Loss rate: 0.00%
```
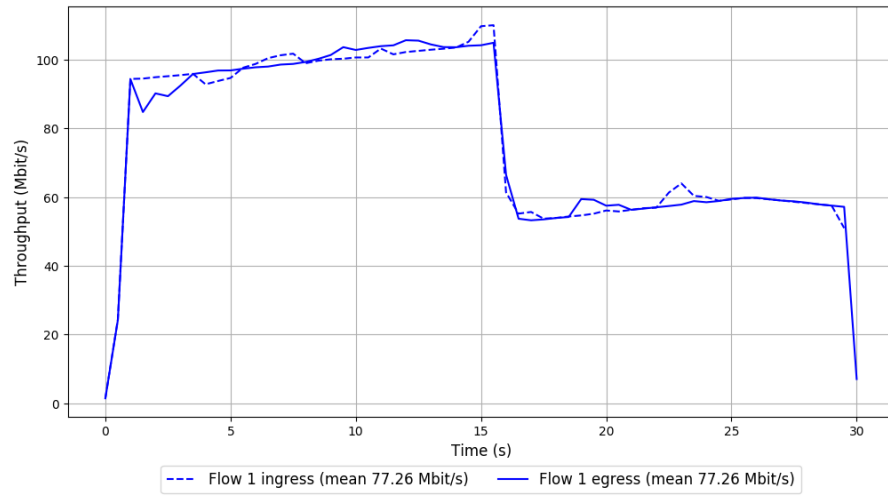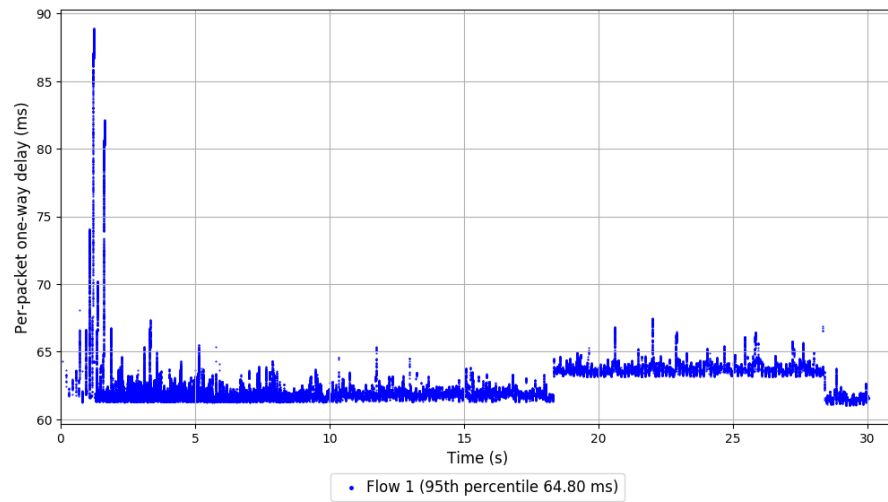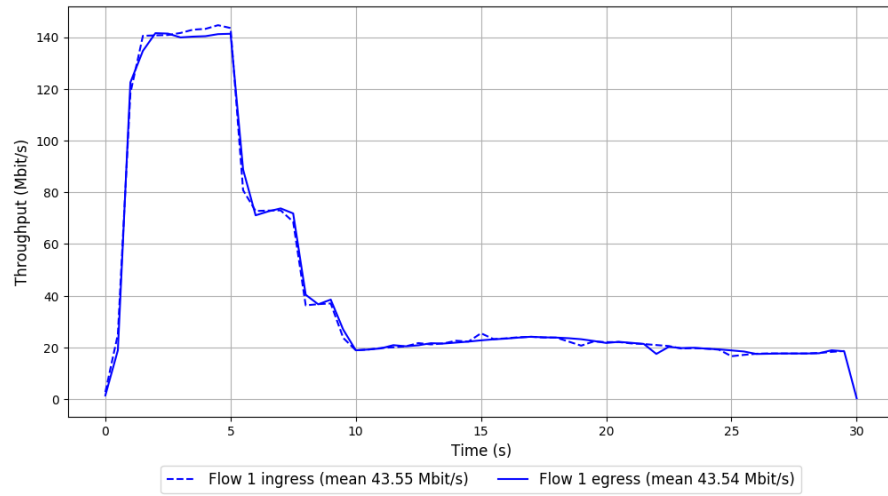
Run 5: Report of TCP Vegas — Data Link

```
Run 6: Statistics of TCP Vegas

Start at: 2018-01-31 04:14:15
End at: 2018-01-31 04:14:46

# Below is generated by plot.py at 2018-01-31 06:37:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 43.54 Mbit/s
95th percentile per-packet one-way delay: 64.796 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 43.54 Mbit/s
95th percentile per-packet one-way delay: 64.796 ms
Loss rate: 0.02%
```
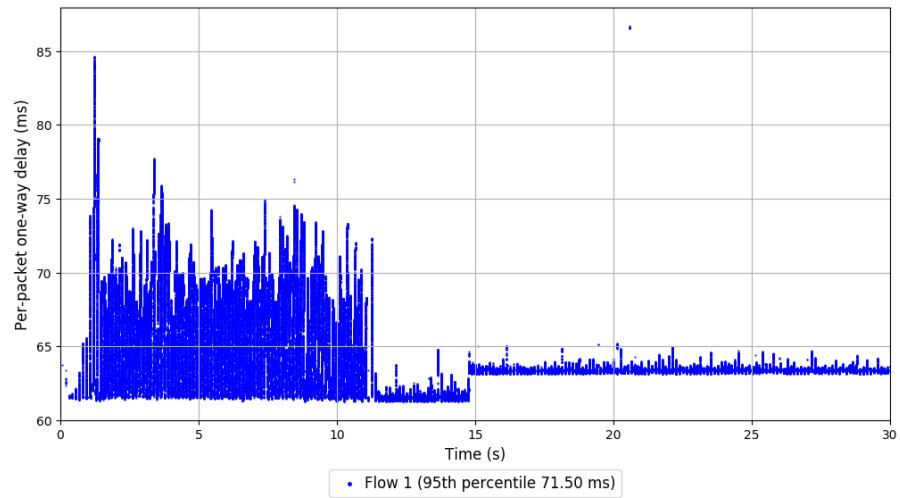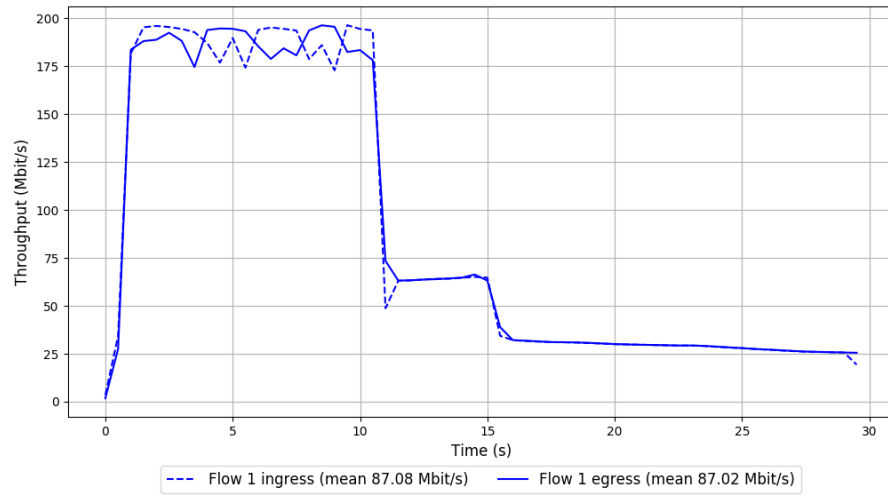
Run 6: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 43.55 Mbit/s) Flow 1 egress (mean 43.54 Mbit/s)

Flow 1 (95th percentile 64.80 ms)

```
Run 7: Statistics of TCP Vegas

Start at: 2018-01-31 04:27:19
End at: 2018-01-31 04:27:49

# Below is generated by plot.py at 2018-01-31 06:37:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.02 Mbit/s
95th percentile per-packet one-way delay: 71.498 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 87.02 Mbit/s
95th percentile per-packet one-way delay: 71.498 ms
Loss rate: 0.07%
```
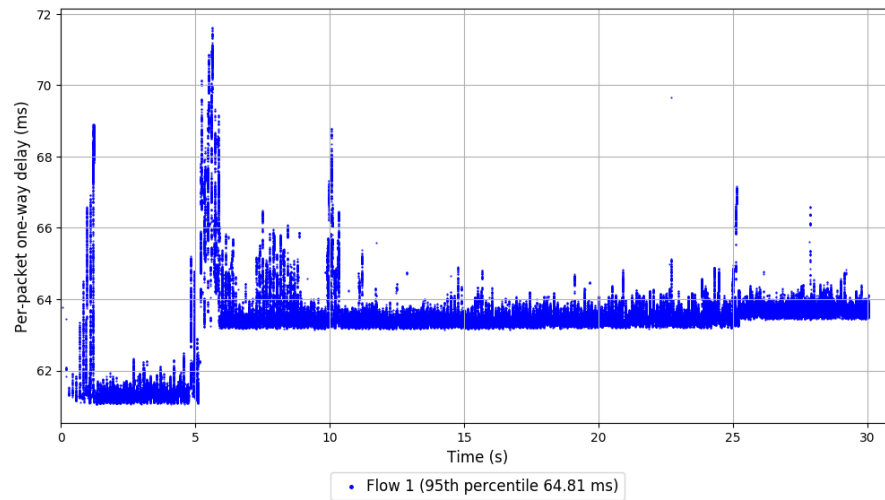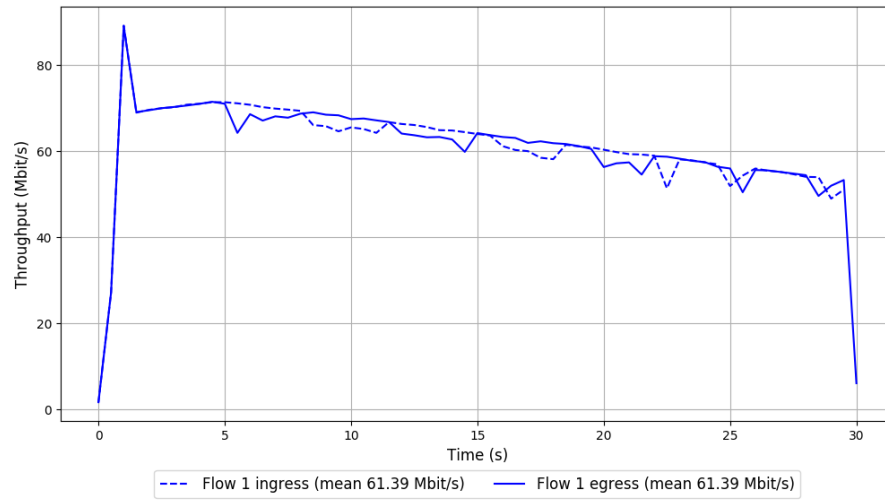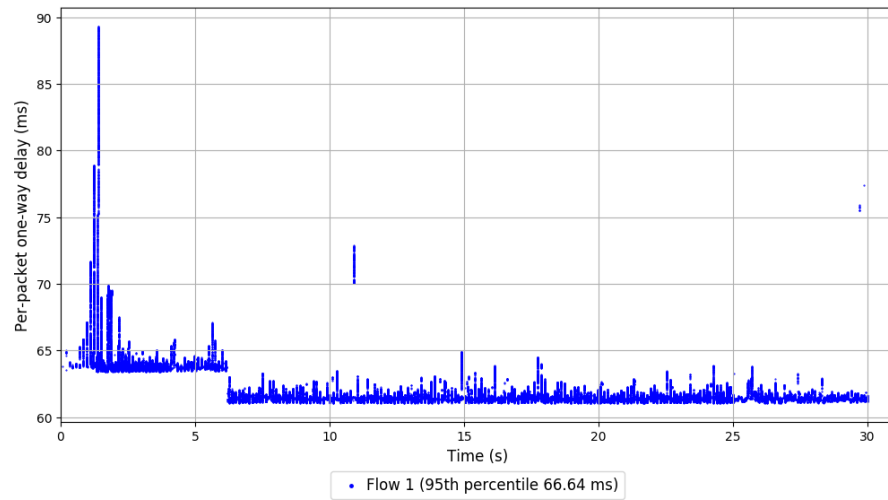
Run 7: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 87.08 Mbit/s) — Flow 1 egress (mean 87.02 Mbit/s)

• Flow 1 (95th percentile 71.50 ms)

```
Run 8: Statistics of TCP Vegas

Start at: 2018-01-31 04:40:49
End at: 2018-01-31 04:41:19

# Below is generated by plot.py at 2018-01-31 06:37:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 61.39 Mbit/s
95th percentile per-packet one-way delay: 64.813 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 61.39 Mbit/s
95th percentile per-packet one-way delay: 64.813 ms
Loss rate: 0.00%
```
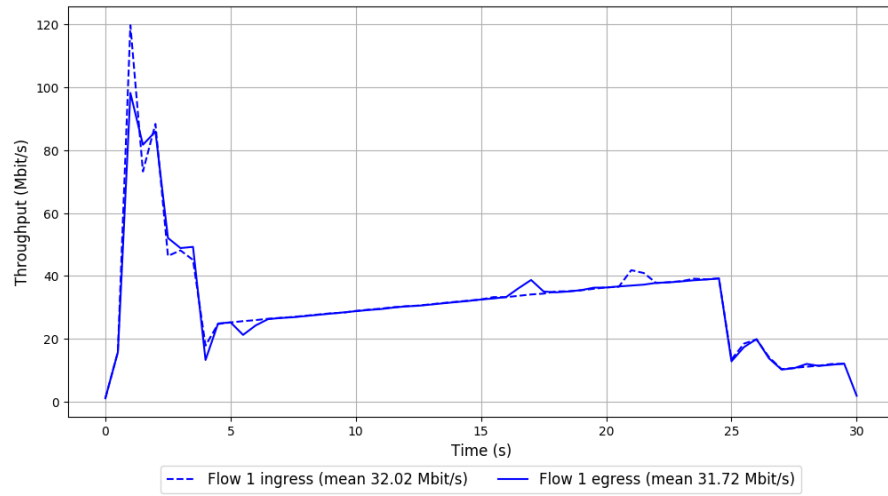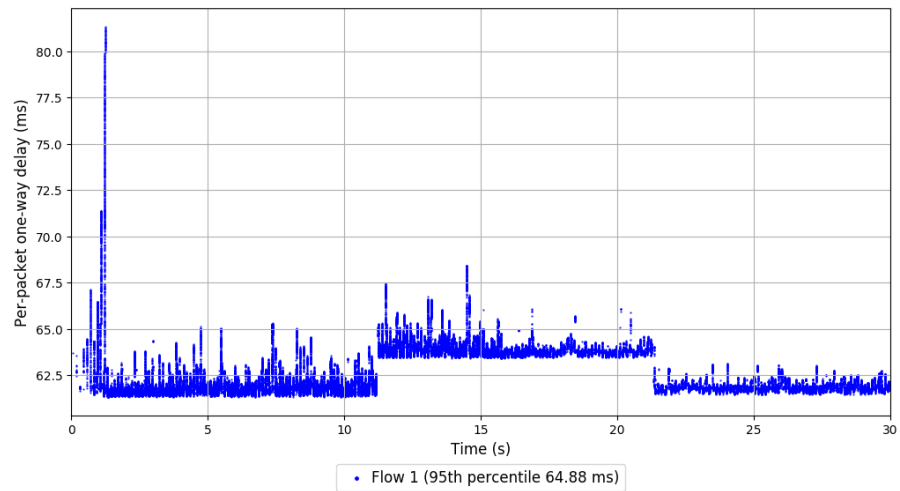
Run 8: Report of TCP Vegas — Data Link

```
Run 9: Statistics of TCP Vegas

Start at: 2018-01-31 04:54:28
End at: 2018-01-31 04:54:58

# Below is generated by plot.py at 2018-01-31 06:37:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 31.72 Mbit/s
95th percentile per-packet one-way delay: 66.639 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 31.72 Mbit/s
95th percentile per-packet one-way delay: 66.639 ms
Loss rate: 0.96%
```
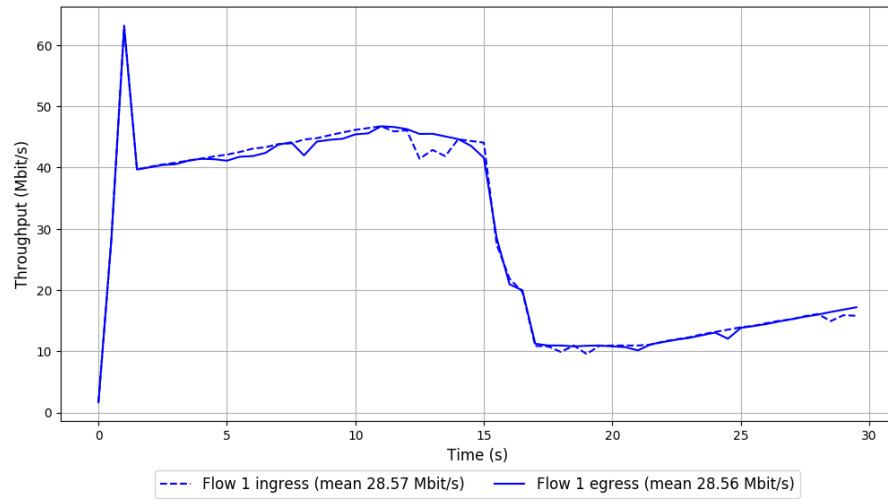
Run 9: Report of TCP Vegas — Data Link

```
Run 10: Statistics of TCP Vegas

Start at: 2018-01-31 05:07:53
End at: 2018-01-31 05:08:23

# Below is generated by plot.py at 2018-01-31 06:37:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 28.56 Mbit/s
95th percentile per-packet one-way delay: 64.876 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 28.56 Mbit/s
95th percentile per-packet one-way delay: 64.876 ms
Loss rate: 0.03%
```
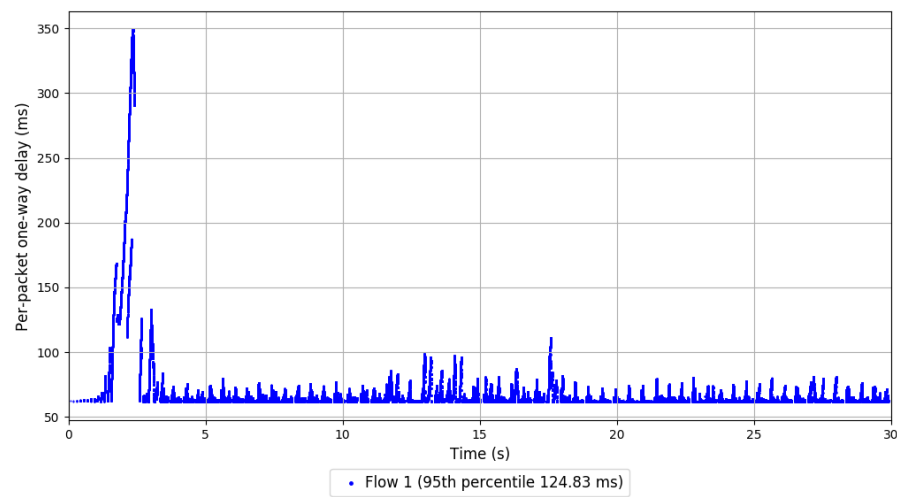
Run 10: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2018-01-31 03:01:58
End at: 2018-01-31 03:02:28

# Below is generated by plot.py at 2018-01-31 06:37:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 200.60 Mbit/s
95th percentile per-packet one-way delay: 124.834 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 200.60 Mbit/s
95th percentile per-packet one-way delay: 124.834 ms
Loss rate: 0.32%
```
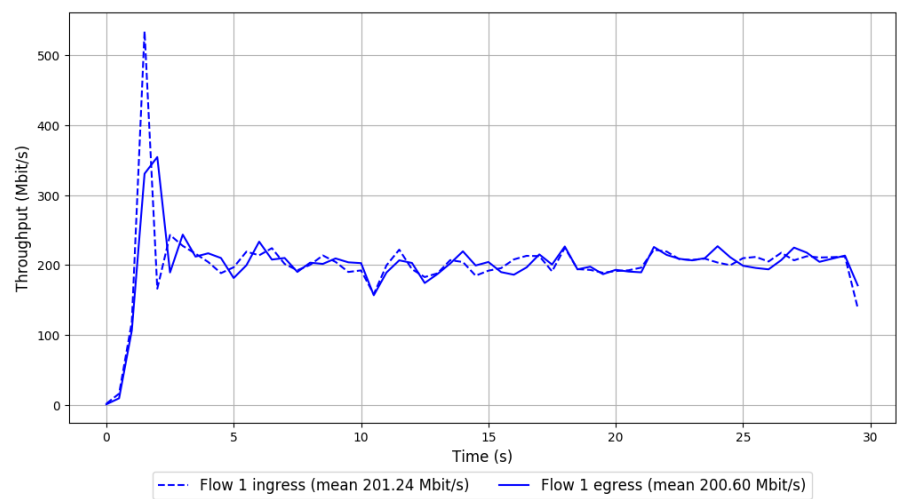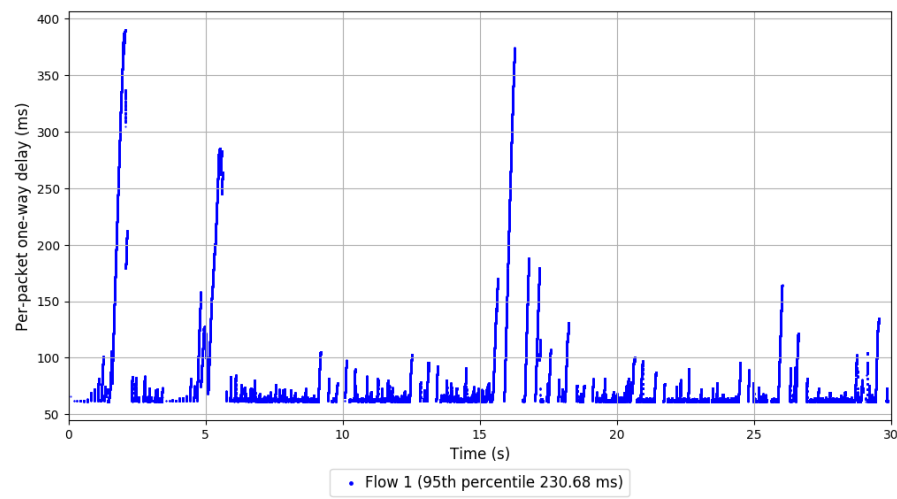
Run 1: Report of Verus — Data Link

Flow 1 ingress (mean 201.24 Mbit/s)   Flow 1 egress (mean 200.60 Mbit/s)

Flow 1 (95th percentile 124.83 ms)

```
Run 2: Statistics of Verus

Start at: 2018-01-31 03:15:28
End at: 2018-01-31 03:15:58

# Below is generated by plot.py at 2018-01-31 06:37:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 131.39 Mbit/s
95th percentile per-packet one-way delay: 230.680 ms
Loss rate: 2.51%
-- Flow 1:
Average throughput: 131.39 Mbit/s
95th percentile per-packet one-way delay: 230.680 ms
Loss rate: 2.51%
```
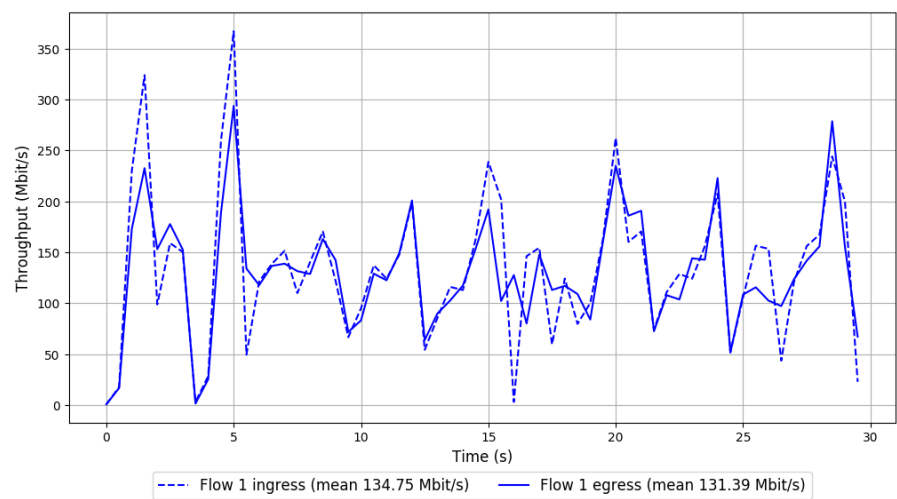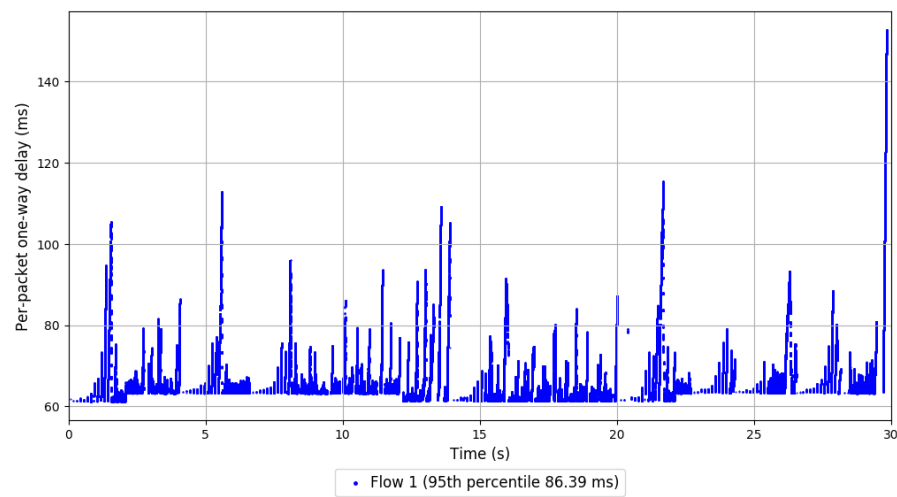
Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2018-01-31 03:28:52
End at: 2018-01-31 03:29:22

# Below is generated by plot.py at 2018-01-31 06:37:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 166.86 Mbit/s
95th percentile per-packet one-way delay: 86.388 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 166.86 Mbit/s
95th percentile per-packet one-way delay: 86.388 ms
Loss rate: 0.01%
```
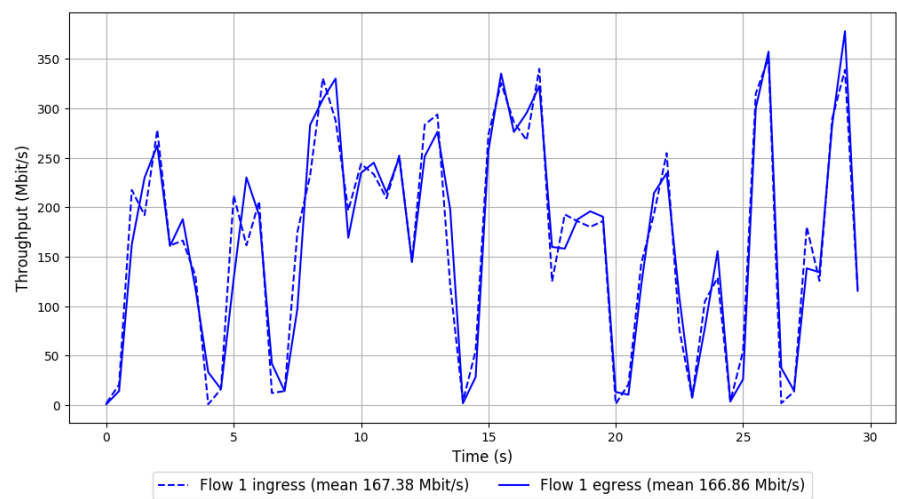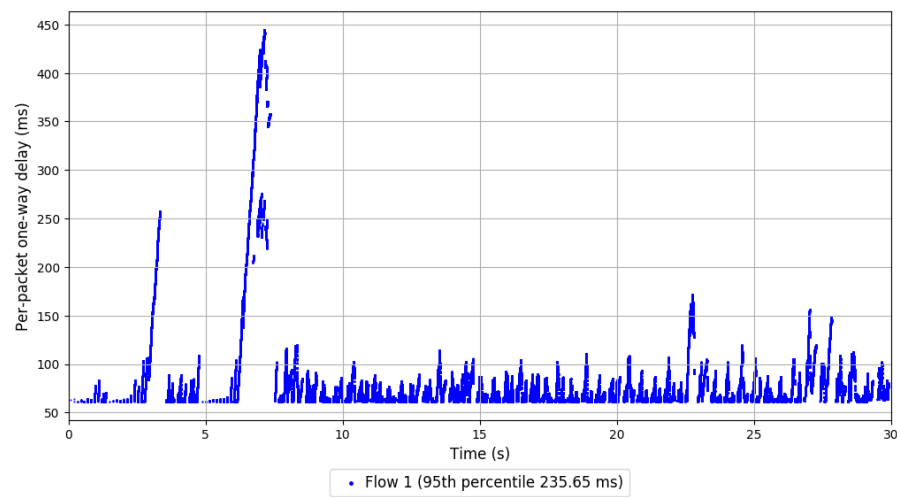
Run 3: Report of Verus — Data Link

Flow 1 ingress (mean 167.38 Mbit/s) —— Flow 1 egress (mean 166.86 Mbit/s)

• Flow 1 (95th percentile 86.39 ms)

209

```
Run 4: Statistics of Verus

Start at: 2018-01-31 03:42:35
End at: 2018-01-31 03:43:05

# Below is generated by plot.py at 2018-01-31 06:37:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 187.22 Mbit/s
95th percentile per-packet one-way delay: 235.646 ms
Loss rate: 3.38%
-- Flow 1:
Average throughput: 187.22 Mbit/s
95th percentile per-packet one-way delay: 235.646 ms
Loss rate: 3.38%
```
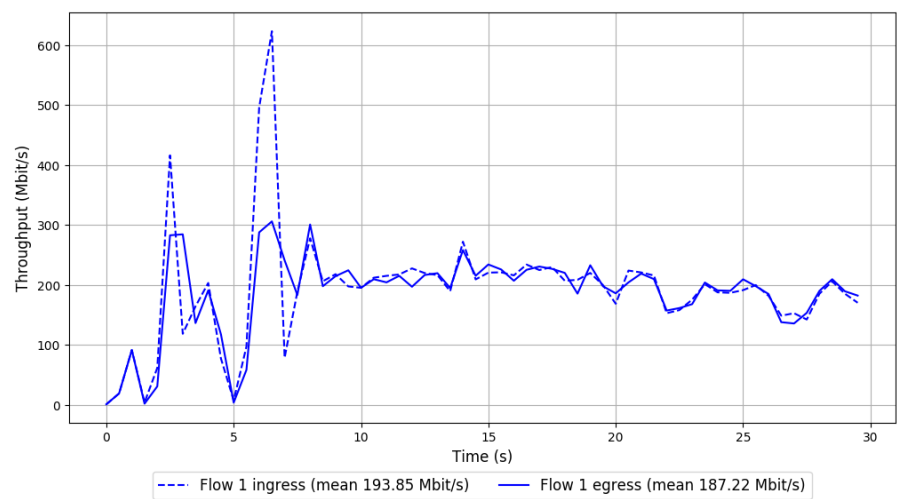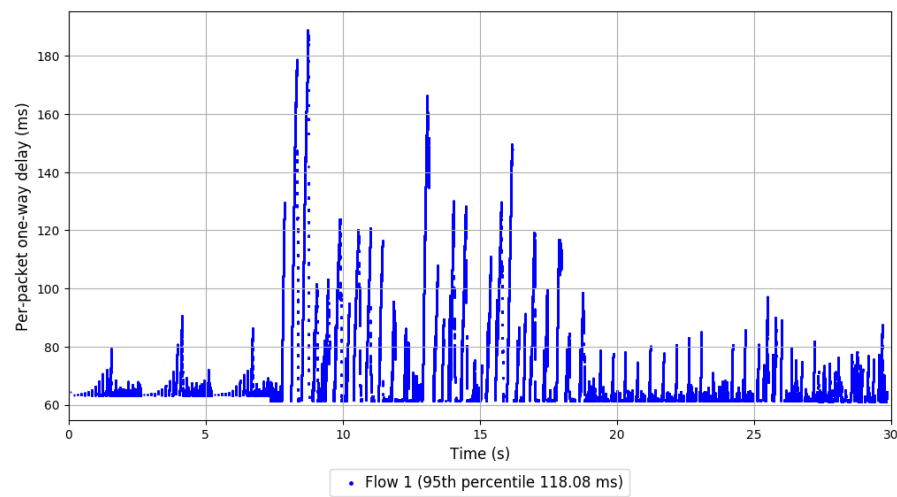
Run 4: Report of Verus — Data Link

Flow 1 ingress (mean 193.85 Mbit/s)   Flow 1 egress (mean 187.22 Mbit/s)

Flow 1 (95th percentile 235.65 ms)

```
Run 5: Statistics of Verus

Start at: 2018-01-31 03:55:46
End at: 2018-01-31 03:56:16

# Below is generated by plot.py at 2018-01-31 06:38:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 212.44 Mbit/s
95th percentile per-packet one-way delay: 118.081 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 212.44 Mbit/s
95th percentile per-packet one-way delay: 118.081 ms
Loss rate: 0.00%
```
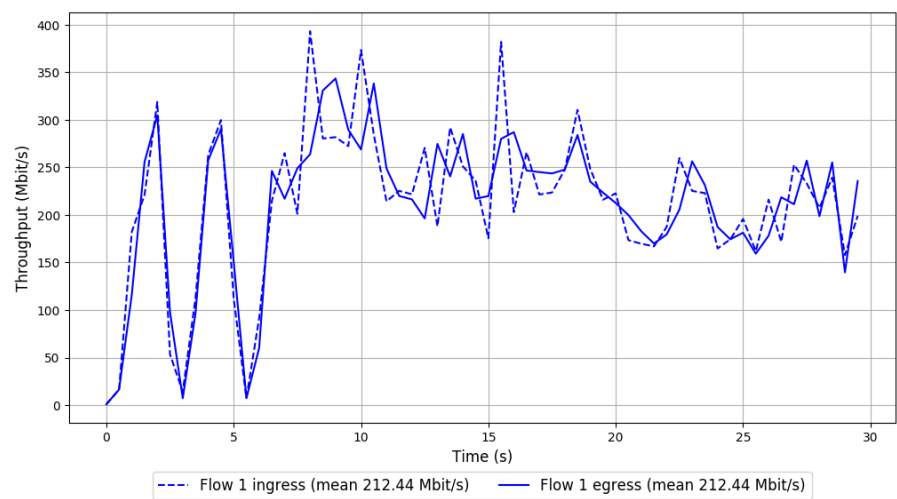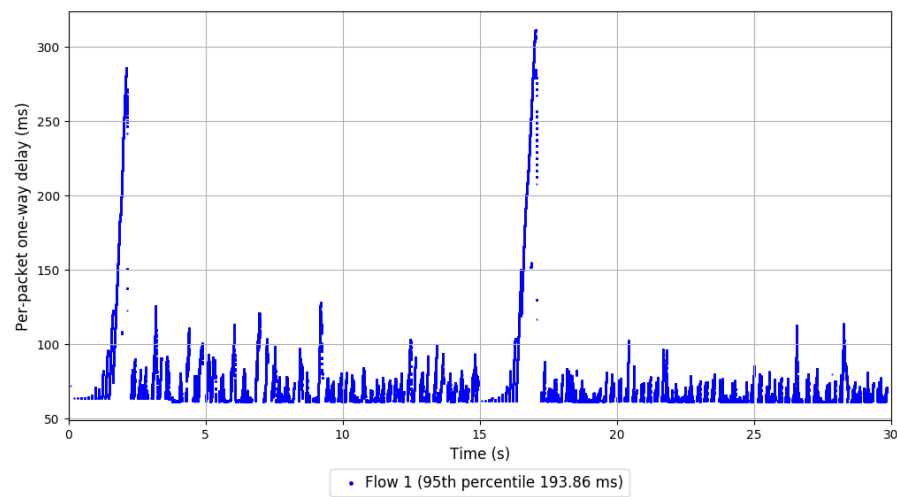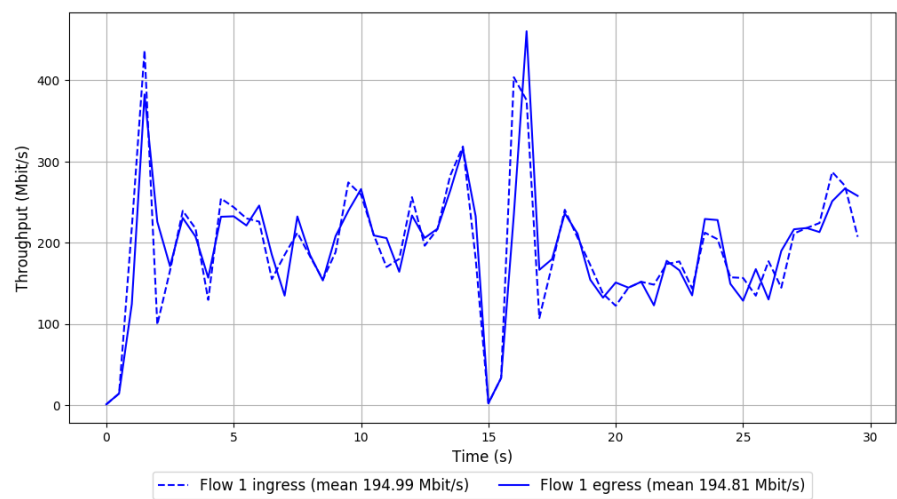
Run 5: Report of Verus — Data Link

```
Run 6: Statistics of Verus

Start at: 2018-01-31 04:09:20
End at: 2018-01-31 04:09:50

# Below is generated by plot.py at 2018-01-31 06:38:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 194.81 Mbit/s
95th percentile per-packet one-way delay: 193.860 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 194.81 Mbit/s
95th percentile per-packet one-way delay: 193.860 ms
Loss rate: 0.11%
```
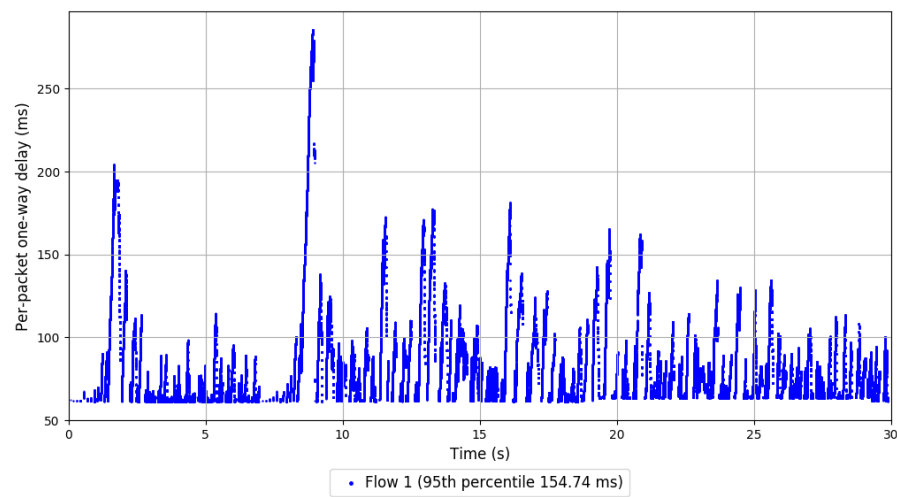
Run 6: Report of Verus — Data Link

```
Run 7: Statistics of Verus

Start at: 2018-01-31 04:22:24
End at: 2018-01-31 04:22:54

# Below is generated by plot.py at 2018-01-31 06:39:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 174.10 Mbit/s
95th percentile per-packet one-way delay: 154.740 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 174.10 Mbit/s
95th percentile per-packet one-way delay: 154.740 ms
Loss rate: 0.62%
```
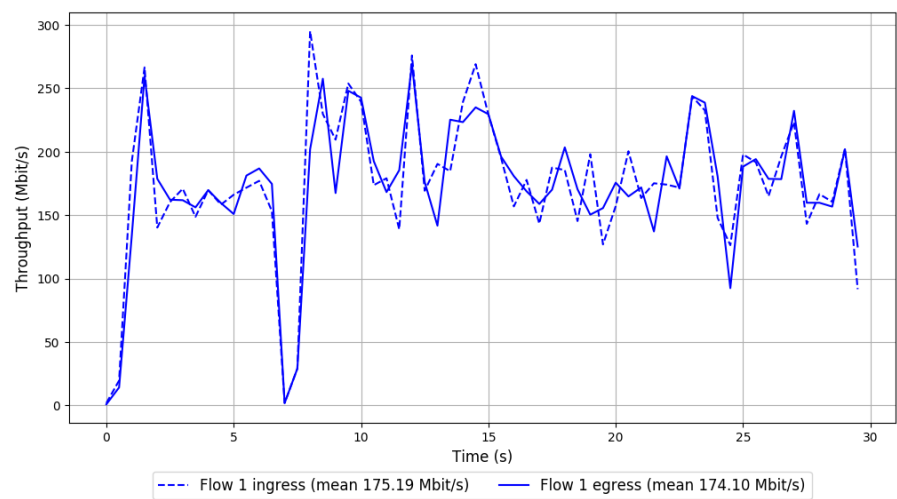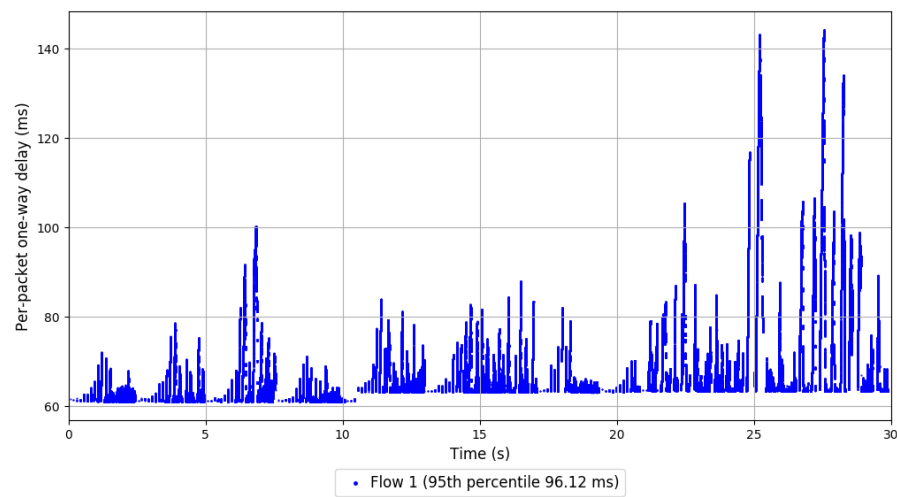
Run 7: Report of Verus — Data Link

```
Run 8: Statistics of Verus

Start at: 2018-01-31 04:35:53
End at: 2018-01-31 04:36:23


# Below is generated by plot.py at 2018-01-31 06:39:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 171.32 Mbit/s
95th percentile per-packet one-way delay: 96.122 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 171.32 Mbit/s
95th percentile per-packet one-way delay: 96.122 ms
Loss rate: 0.20%
```
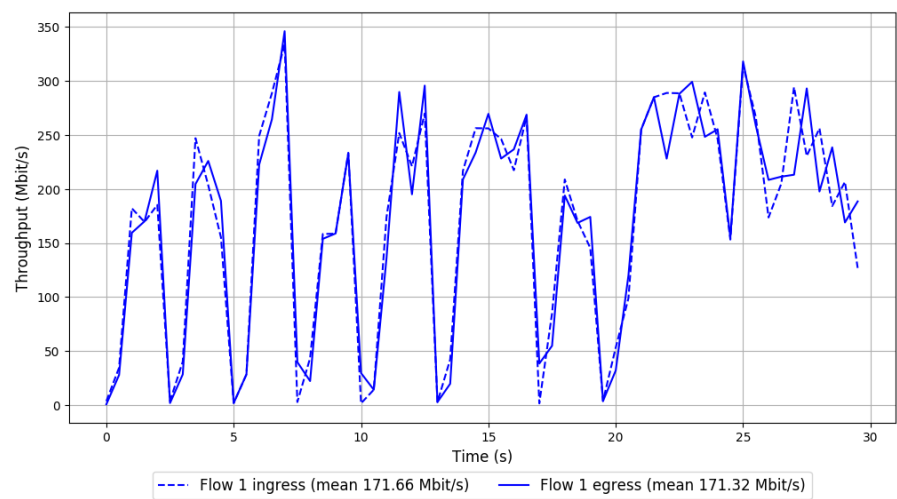
Run 8: Report of Verus — Data Link

```
Run 9: Statistics of Verus

Start at: 2018-01-31 04:49:17
End at: 2018-01-31 04:49:47

# Below is generated by plot.py at 2018-01-31 06:41:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 228.77 Mbit/s
95th percentile per-packet one-way delay: 117.411 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 228.77 Mbit/s
95th percentile per-packet one-way delay: 117.411 ms
Loss rate: 0.00%
```
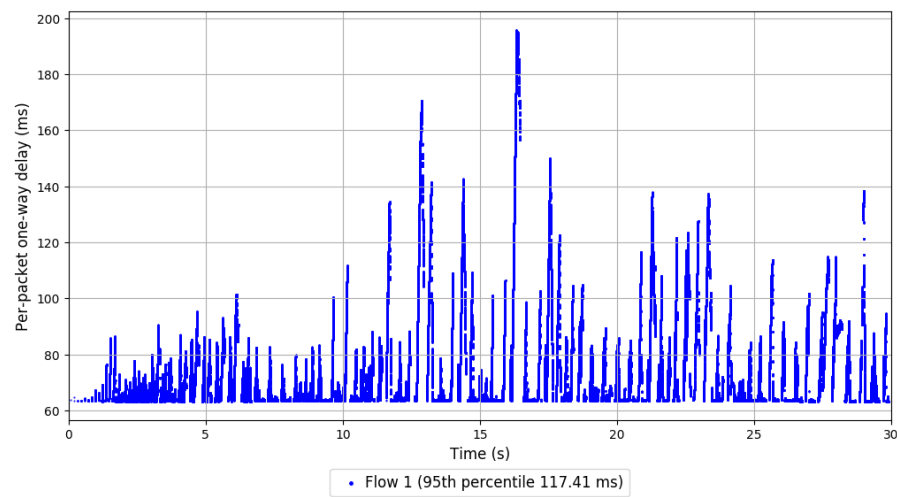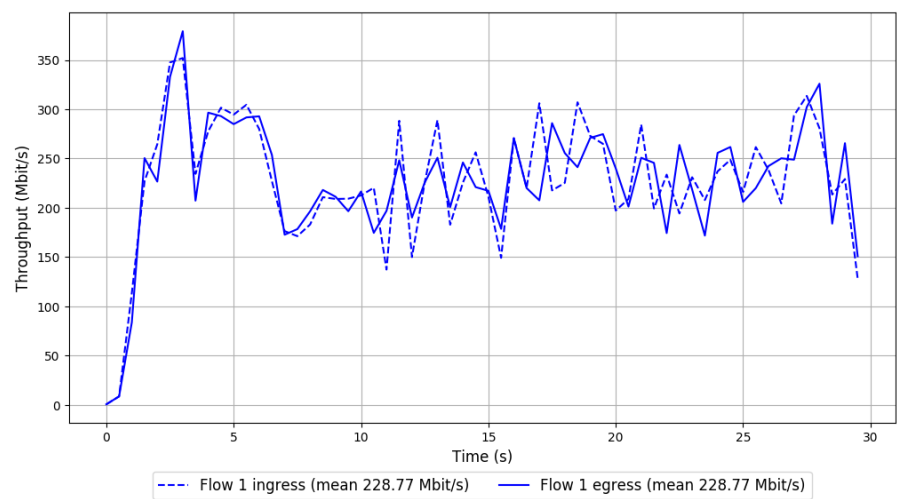
Run 9: Report of Verus — Data Link

Flow 1 ingress (mean 228.77 Mbit/s)   Flow 1 egress (mean 228.77 Mbit/s)

• Flow 1 (95th percentile 117.41 ms)

```
Run 10: Statistics of Verus

Start at: 2018-01-31 05:02:57
End at: 2018-01-31 05:03:27

# Below is generated by plot.py at 2018-01-31 06:41:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 179.68 Mbit/s
95th percentile per-packet one-way delay: 185.735 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 179.68 Mbit/s
95th percentile per-packet one-way delay: 185.735 ms
Loss rate: 0.92%
```
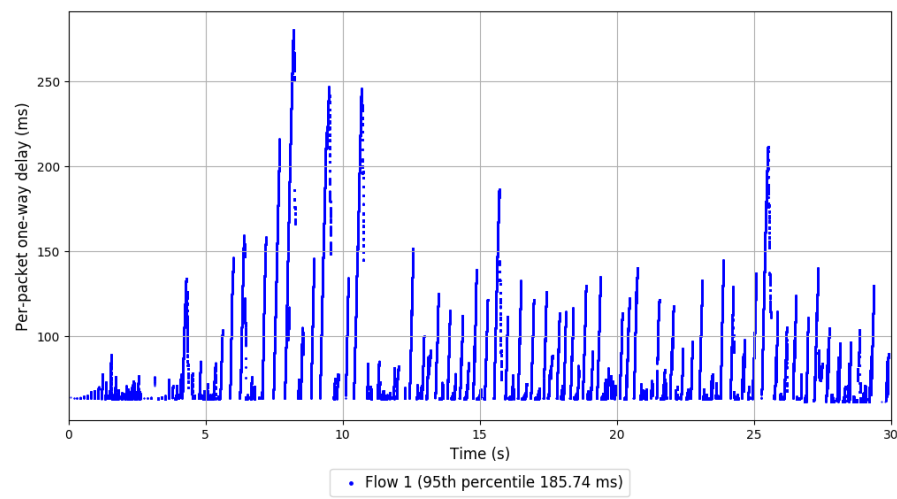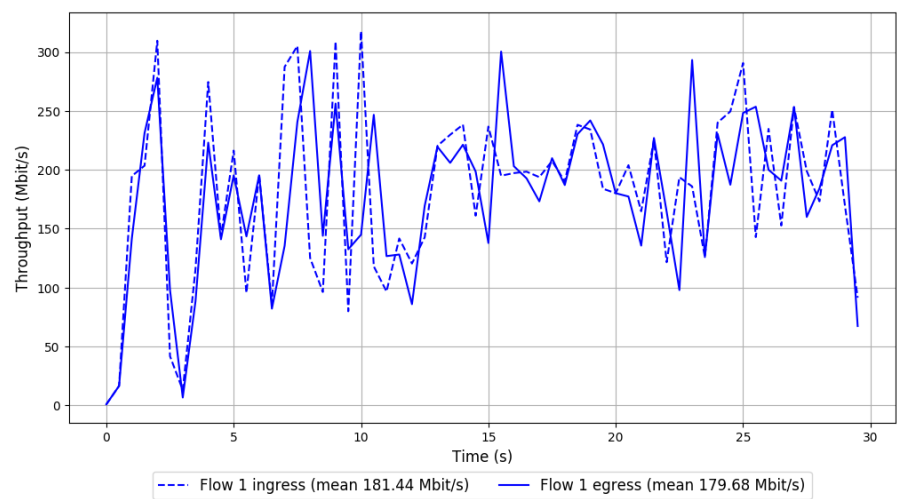
Run 10: Report of Verus — Data Link

```
Run 1: Statistics of Copa

Start at: 2018-01-31 03:11:46
End at: 2018-01-31 03:12:16

# Below is generated by plot.py at 2018-01-31 06:41:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.66 Mbit/s
95th percentile per-packet one-way delay: 63.427 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.66 Mbit/s
95th percentile per-packet one-way delay: 63.427 ms
Loss rate: 0.00%
```
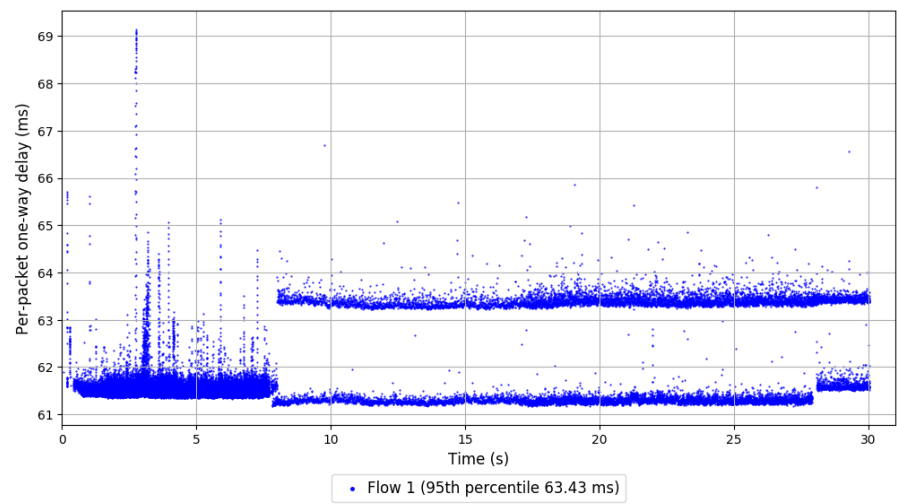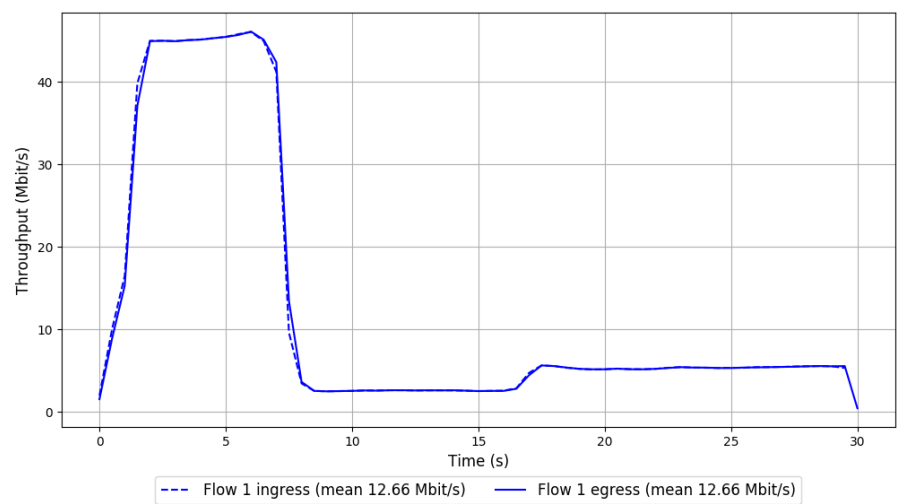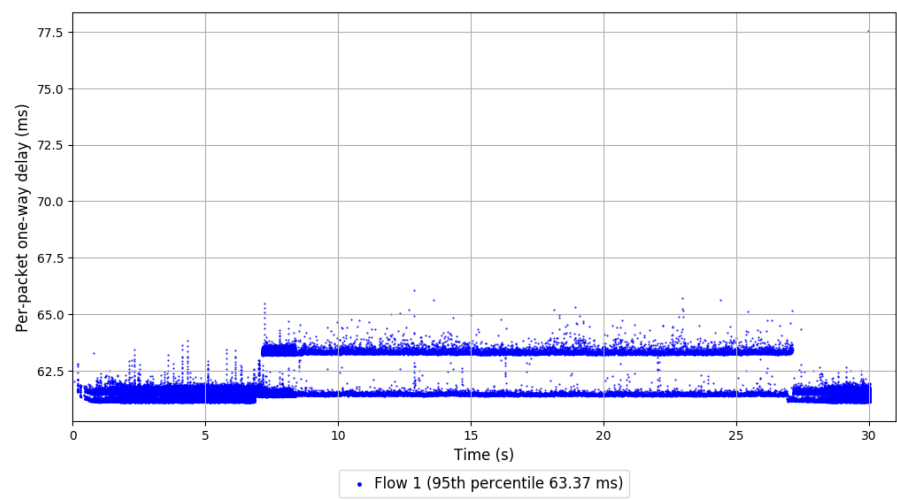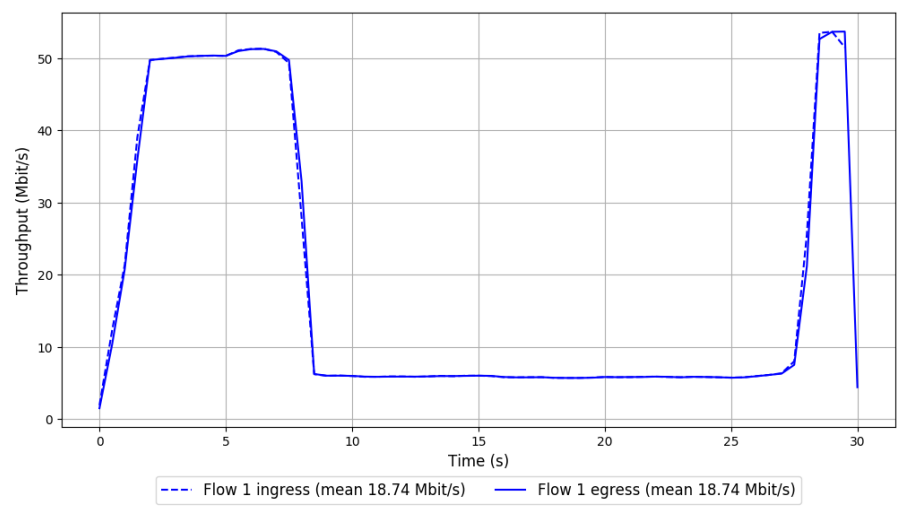
Run 1: Report of Copa — Data Link

```
Run 2: Statistics of Copa

Start at: 2018-01-31 03:24:57
End at: 2018-01-31 03:25:27

# Below is generated by plot.py at 2018-01-31 06:41:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 18.74 Mbit/s
95th percentile per-packet one-way delay: 63.371 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 18.74 Mbit/s
95th percentile per-packet one-way delay: 63.371 ms
Loss rate: 0.00%
```
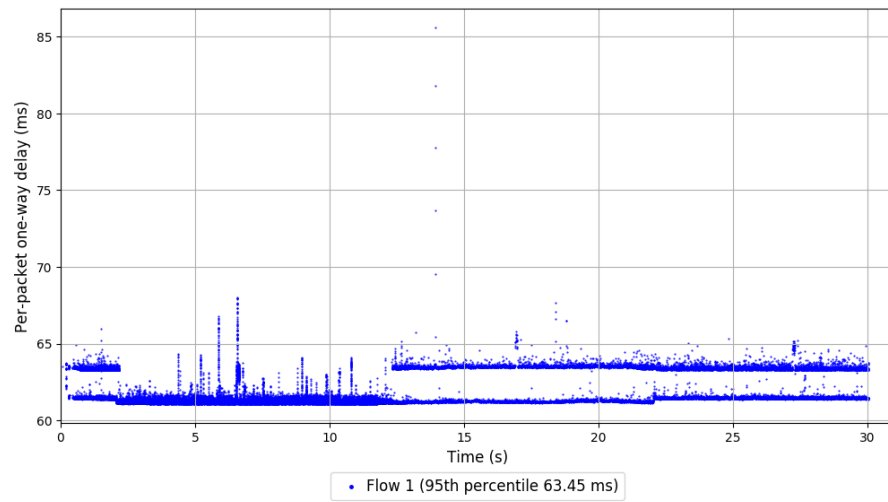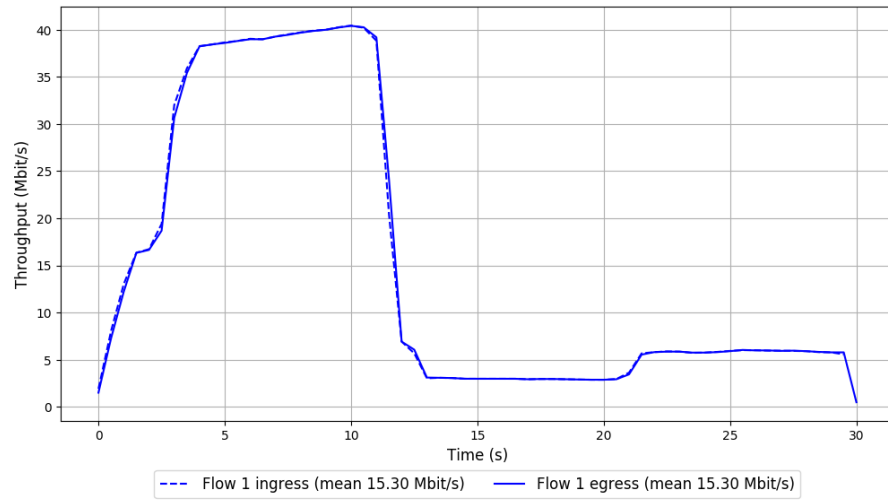
Run 2: Report of Copa — Data Link

Flow 1 ingress (mean 18.74 Mbit/s)   Flow 1 egress (mean 18.74 Mbit/s)

Flow 1 (95th percentile 63.37 ms)

```
Run 3: Statistics of Copa

Start at: 2018-01-31 03:38:42
End at: 2018-01-31 03:39:12

# Below is generated by plot.py at 2018-01-31 06:41:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 15.30 Mbit/s
95th percentile per-packet one-way delay: 63.449 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 15.30 Mbit/s
95th percentile per-packet one-way delay: 63.449 ms
Loss rate: 0.00%
```
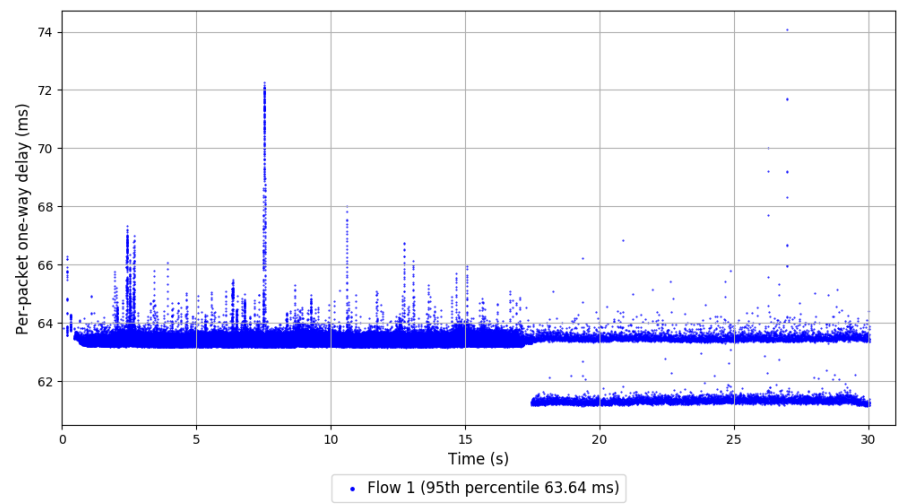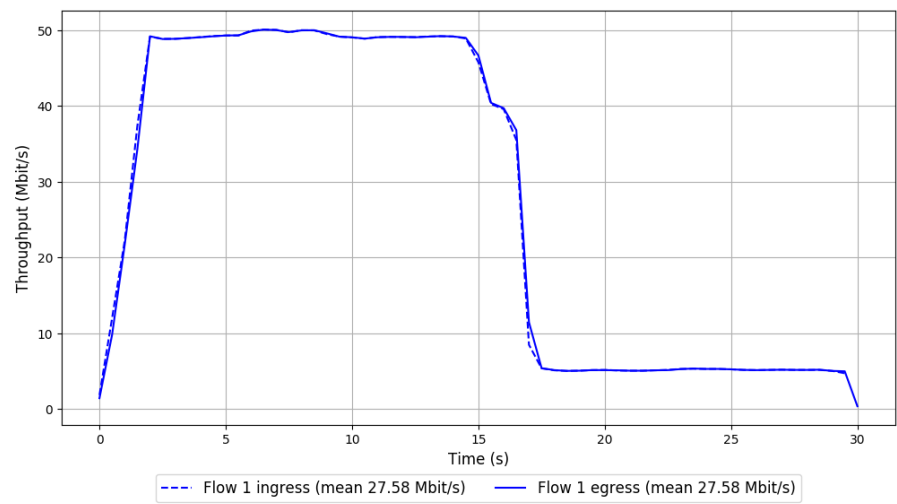
Run 3: Report of Copa — Data Link

```
Run 4: Statistics of Copa

Start at: 2018-01-31 03:52:06
End at: 2018-01-31 03:52:36

# Below is generated by plot.py at 2018-01-31 06:41:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 27.58 Mbit/s
95th percentile per-packet one-way delay: 63.641 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 27.58 Mbit/s
95th percentile per-packet one-way delay: 63.641 ms
Loss rate: 0.00%
```
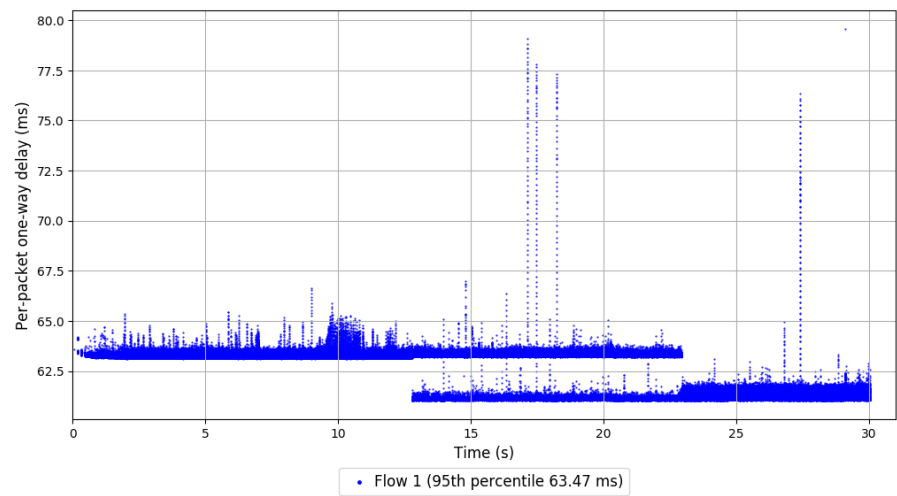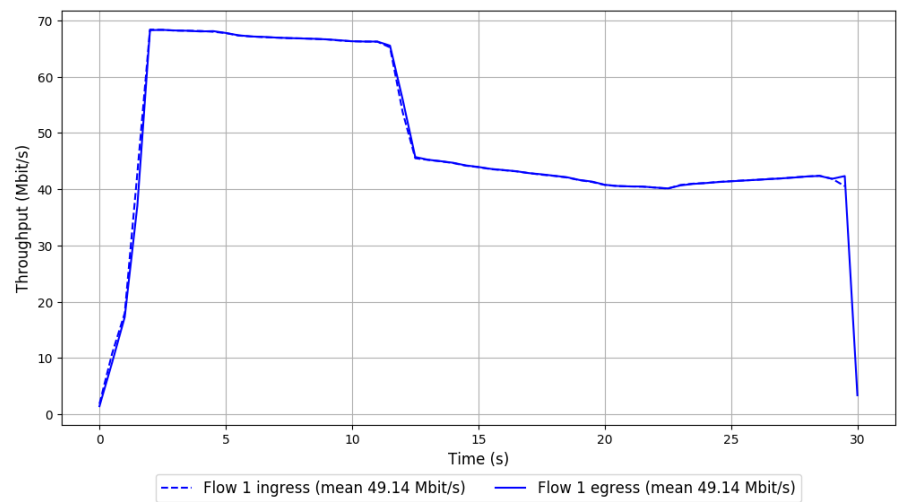
Run 4: Report of Copa — Data Link

Flow 1 ingress (mean 27.58 Mbit/s)   Flow 1 egress (mean 27.58 Mbit/s)

Flow 1 (95th percentile 63.64 ms)

```
Run 5: Statistics of Copa

Start at: 2018-01-31 04:05:21
End at: 2018-01-31 04:05:51

# Below is generated by plot.py at 2018-01-31 06:41:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 49.14 Mbit/s
95th percentile per-packet one-way delay: 63.474 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 49.14 Mbit/s
95th percentile per-packet one-way delay: 63.474 ms
Loss rate: 0.00%
```
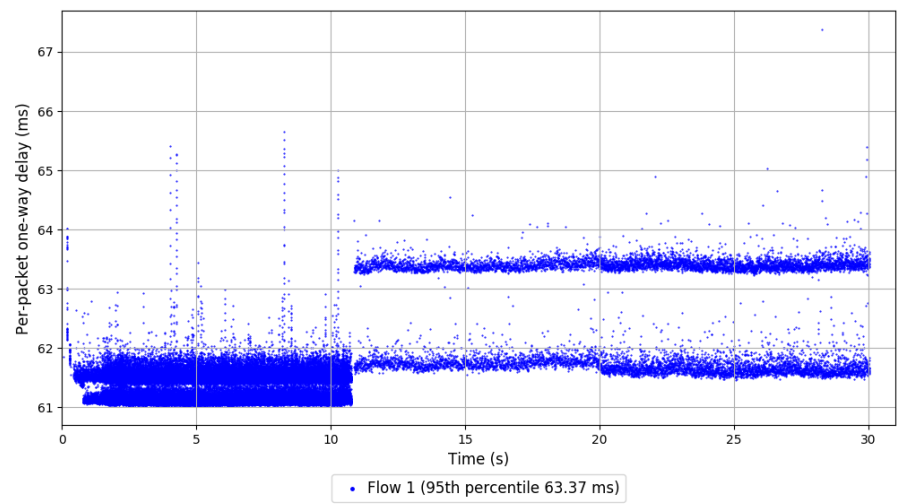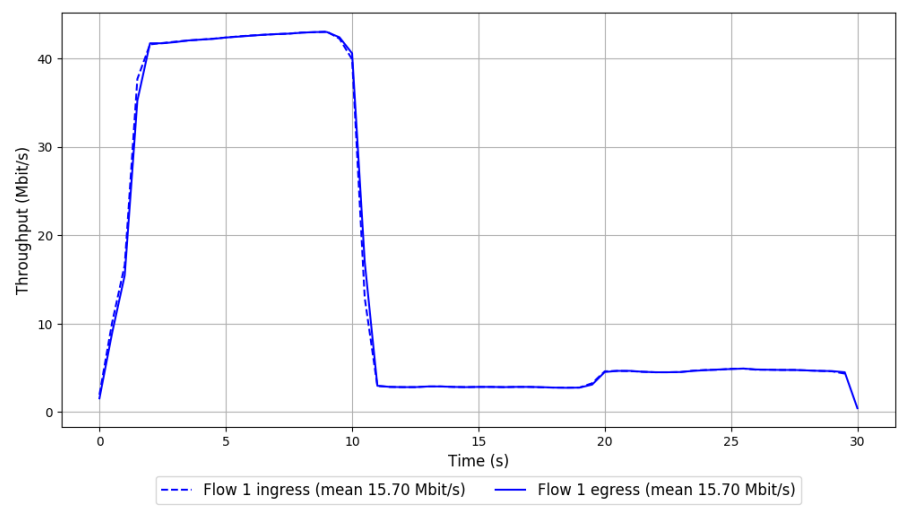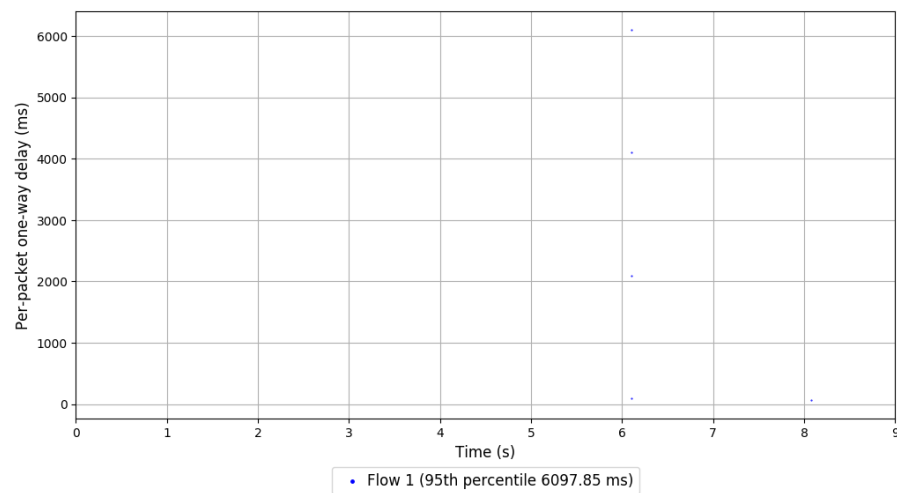
Run 5: Report of Copa — Data Link

```
Run 6: Statistics of Copa

Start at: 2018-01-31 04:18:43
End at: 2018-01-31 04:19:13


# Below is generated by plot.py at 2018-01-31 06:41:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 15.70 Mbit/s
95th percentile per-packet one-way delay: 63.374 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 15.70 Mbit/s
95th percentile per-packet one-way delay: 63.374 ms
Loss rate: 0.00%
```

Run 6: Report of Copa — Data Link

Flow 1 ingress (mean 15.70 Mbit/s) --- Flow 1 egress (mean 15.70 Mbit/s)

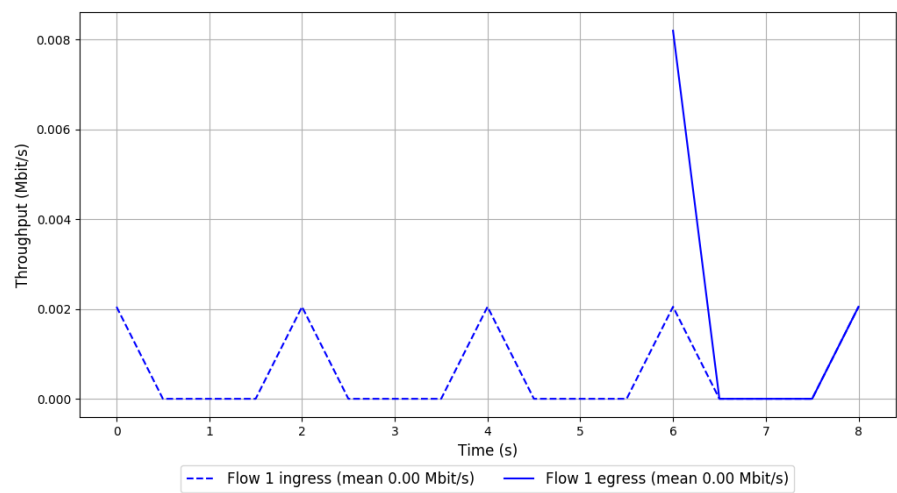• Flow 1 (95th percentile 63.37 ms)

Run 7: Statistics of Copa

Start at: 2018-01-31 04:32:00
End at: 2018-01-31 04:32:30

Run 7: Report of Copa — Data Link

```
Run 8: Statistics of Copa

Start at: 2018-01-31 04:45:17
End at: 2018-01-31 04:45:47


# Below is generated by plot.py at 2018-01-31 06:41:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 22.09 Mbit/s
95th percentile per-packet one-way delay: 64.056 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 22.09 Mbit/s
95th percentile per-packet one-way delay: 64.056 ms
Loss rate: 0.00%
```
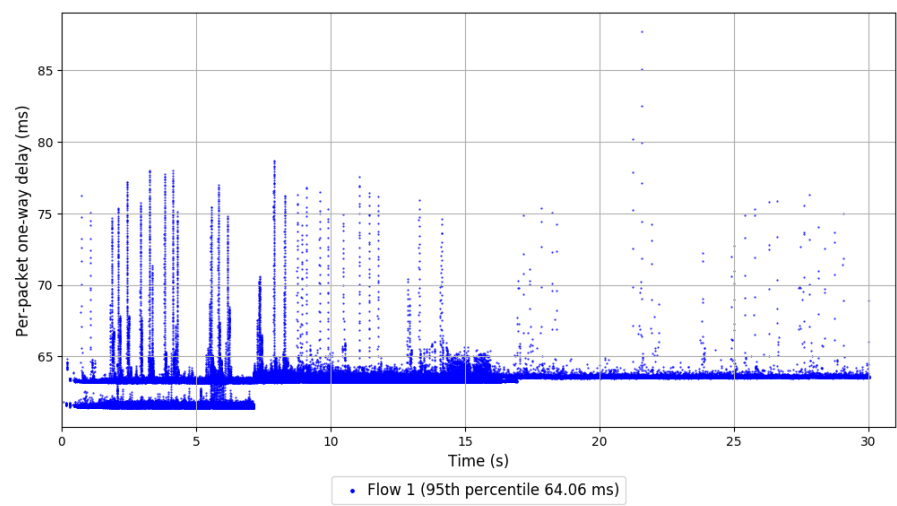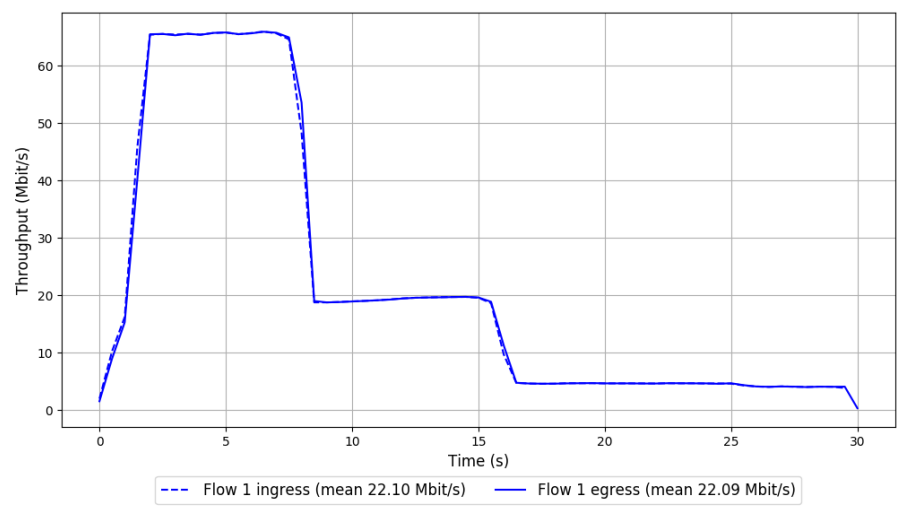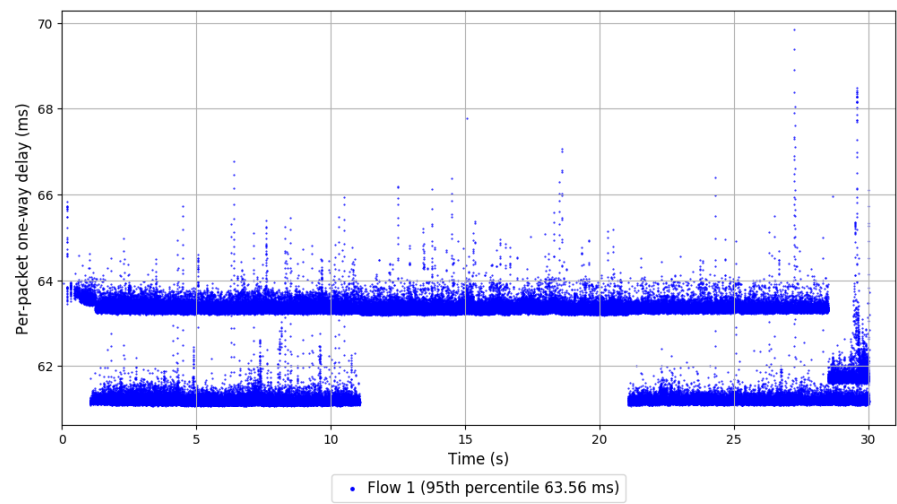
Run 8: Report of Copa — Data Link

```
Run 9: Statistics of Copa

Start at: 2018-01-31 04:59:03
End at: 2018-01-31 04:59:33

# Below is generated by plot.py at 2018-01-31 06:41:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 27.89 Mbit/s
95th percentile per-packet one-way delay: 63.557 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 27.89 Mbit/s
95th percentile per-packet one-way delay: 63.557 ms
Loss rate: 0.00%
```
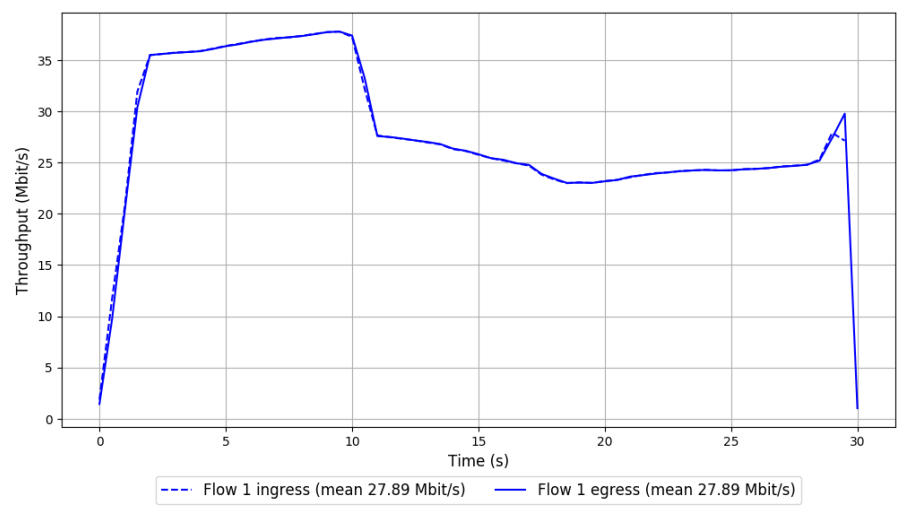
Run 9: Report of Copa — Data Link

```
Run 10: Statistics of Copa

Start at: 2018-01-31 05:12:22
End at: 2018-01-31 05:12:52

# Below is generated by plot.py at 2018-01-31 06:41:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 34.19 Mbit/s
95th percentile per-packet one-way delay: 63.621 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 34.19 Mbit/s
95th percentile per-packet one-way delay: 63.621 ms
Loss rate: 0.00%
```
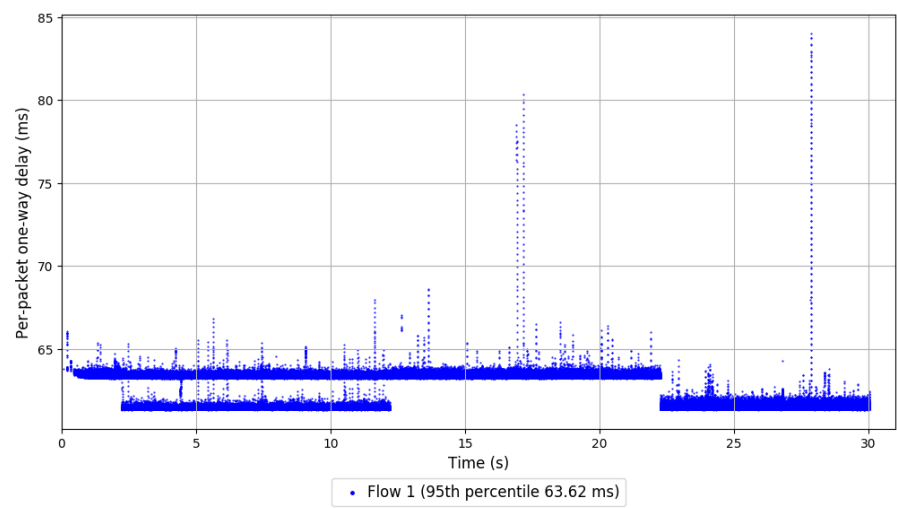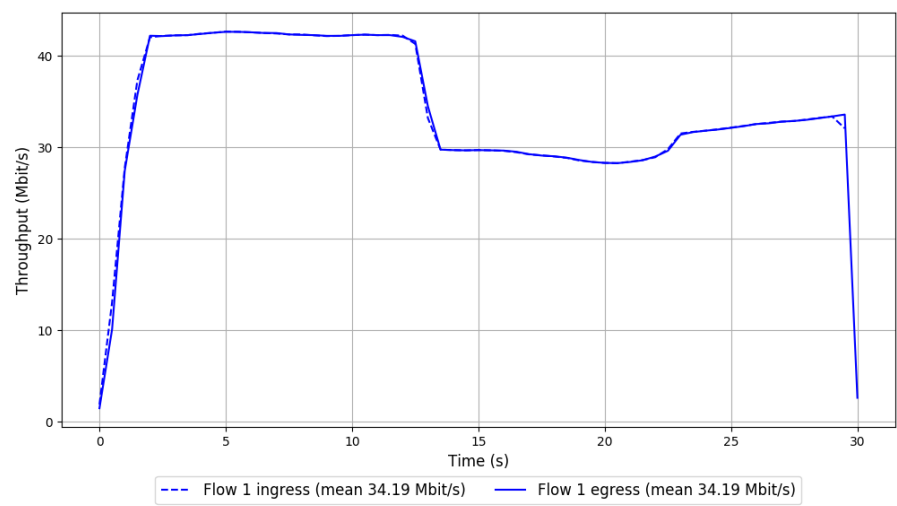
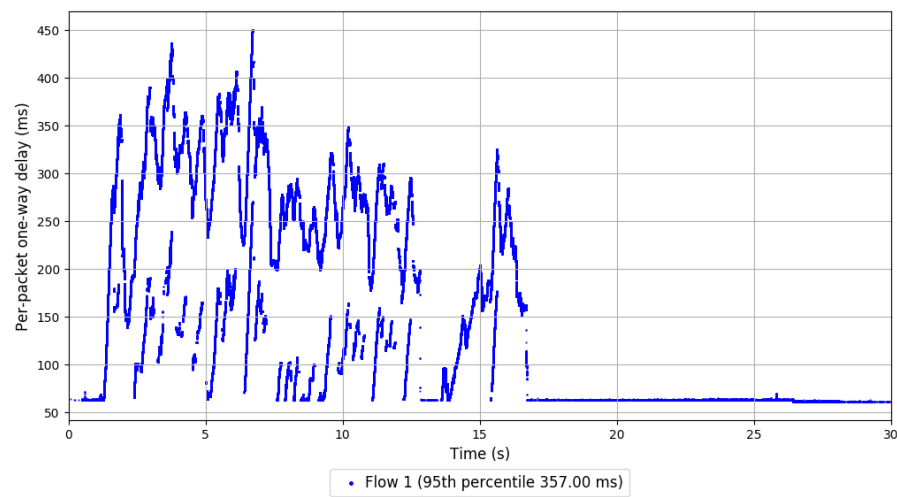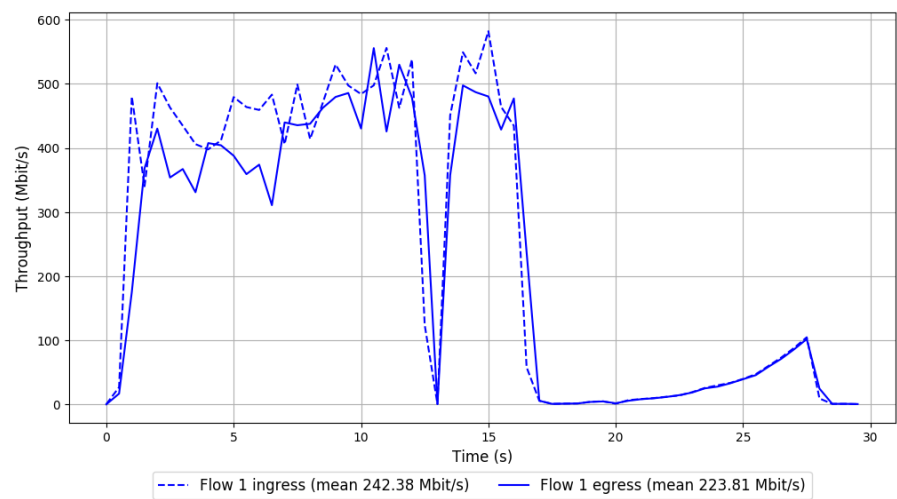Run 10: Report of Copa — Data Link

```
Run 1: Statistics of FillP

Start at: 2018-01-31 03:03:37
End at: 2018-01-31 03:04:07

# Below is generated by plot.py at 2018-01-31 06:47:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 223.81 Mbit/s
95th percentile per-packet one-way delay: 356.995 ms
Loss rate: 7.67%
-- Flow 1:
Average throughput: 223.81 Mbit/s
95th percentile per-packet one-way delay: 356.995 ms
Loss rate: 7.67%
```

Run 1: Report of FillP — Data Link

```
Run 2: Statistics of FillP

Start at: 2018-01-31 03:17:04
End at: 2018-01-31 03:17:34

# Below is generated by plot.py at 2018-01-31 06:47:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.97 Mbit/s
95th percentile per-packet one-way delay: 301.374 ms
Loss rate: 10.93%
-- Flow 1:
Average throughput: 87.97 Mbit/s
95th percentile per-packet one-way delay: 301.374 ms
Loss rate: 10.93%
```
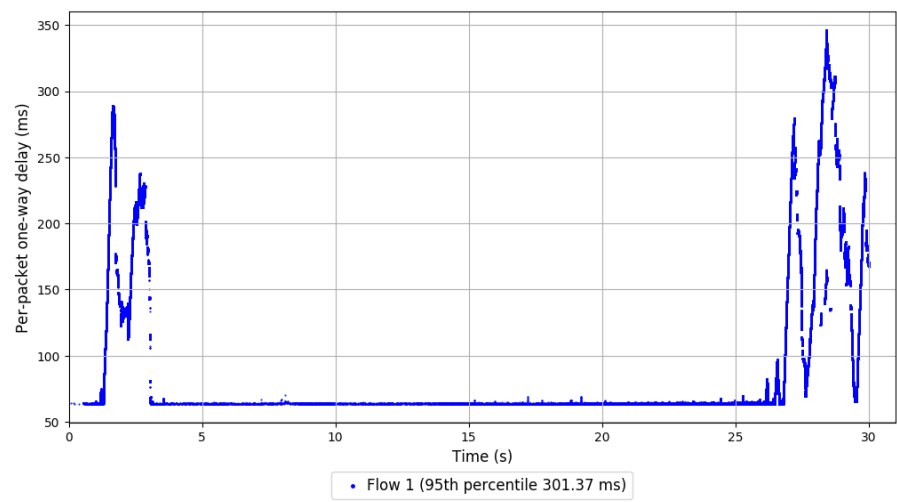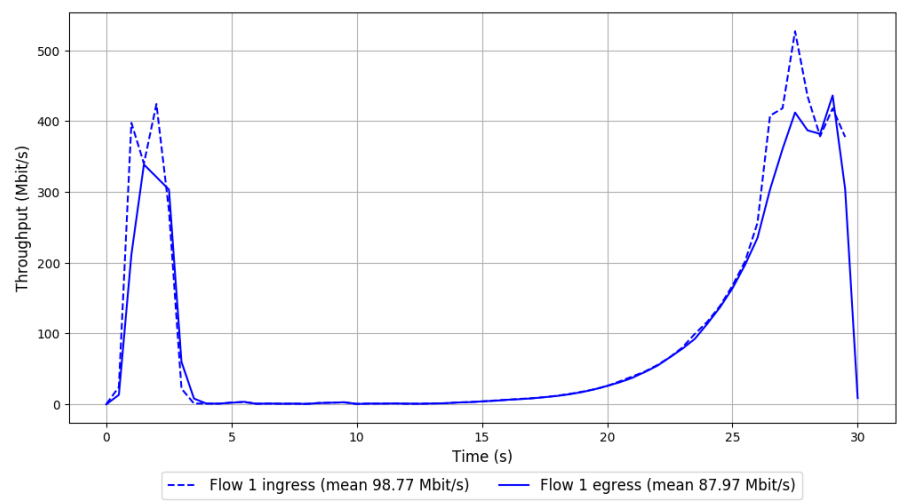
Run 2: Report of FillP — Data Link

Flow 1 ingress (mean 98.77 Mbit/s)   Flow 1 egress (mean 87.97 Mbit/s)

• Flow 1 (95th percentile 301.37 ms)

```
Run 3: Statistics of FillP

Start at: 2018-01-31 03:30:29
End at: 2018-01-31 03:30:59

# Below is generated by plot.py at 2018-01-31 06:47:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 145.68 Mbit/s
95th percentile per-packet one-way delay: 326.790 ms
Loss rate: 1.92%
-- Flow 1:
Average throughput: 145.68 Mbit/s
95th percentile per-packet one-way delay: 326.790 ms
Loss rate: 1.92%
```
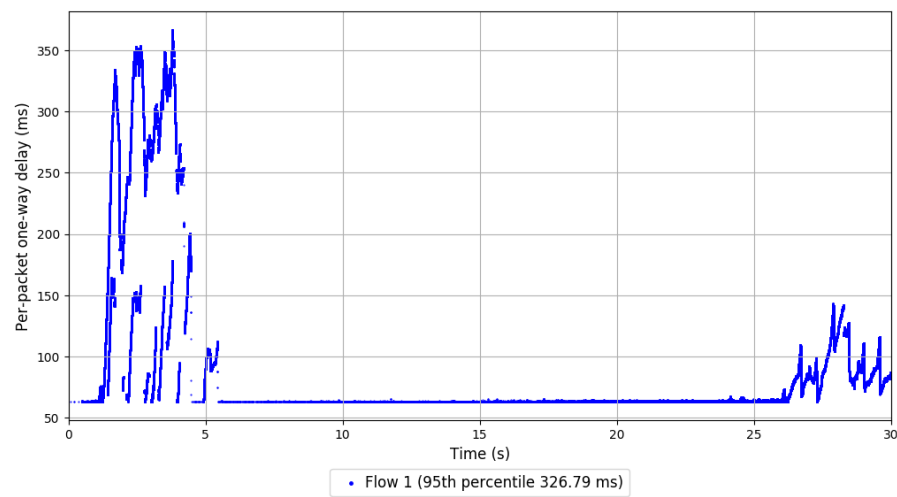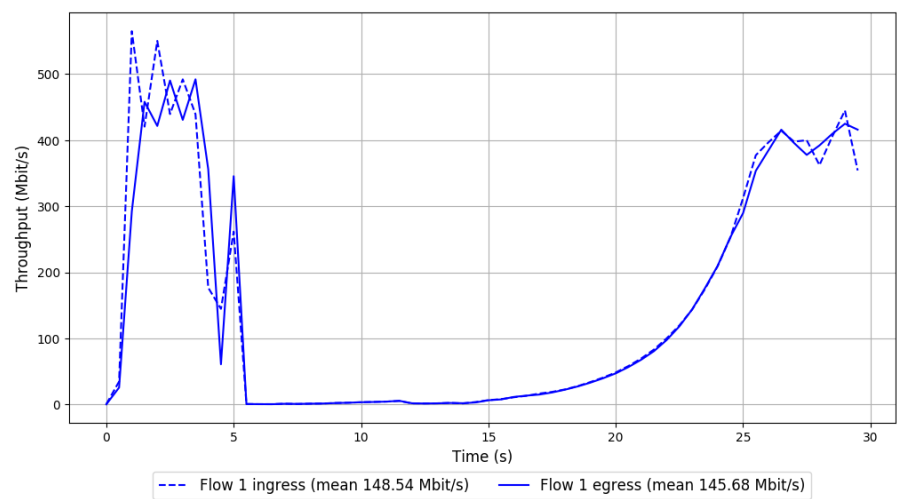
Run 3: Report of FillP — Data Link

```
Run 4: Statistics of FillP

Start at: 2018-01-31 03:44:14
End at: 2018-01-31 03:44:44

# Below is generated by plot.py at 2018-01-31 06:47:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 25.09 Mbit/s
95th percentile per-packet one-way delay: 352.857 ms
Loss rate: 10.97%
-- Flow 1:
Average throughput: 25.09 Mbit/s
95th percentile per-packet one-way delay: 352.857 ms
Loss rate: 10.97%
```
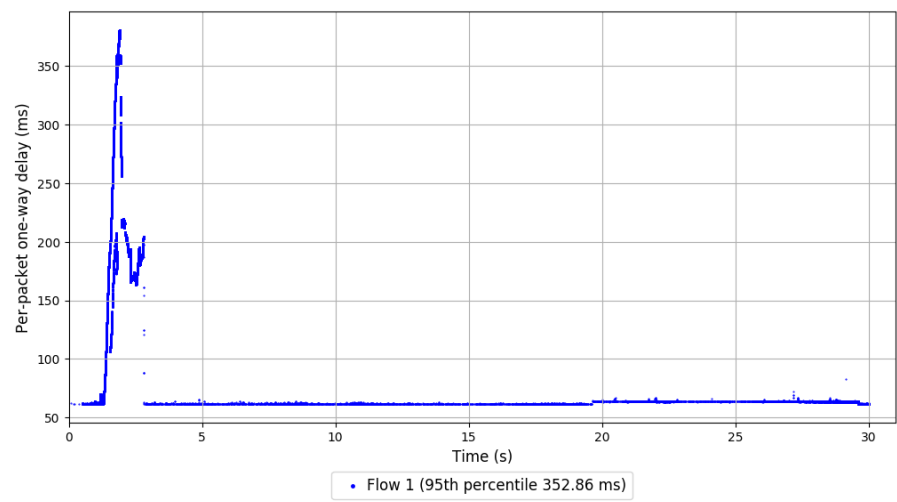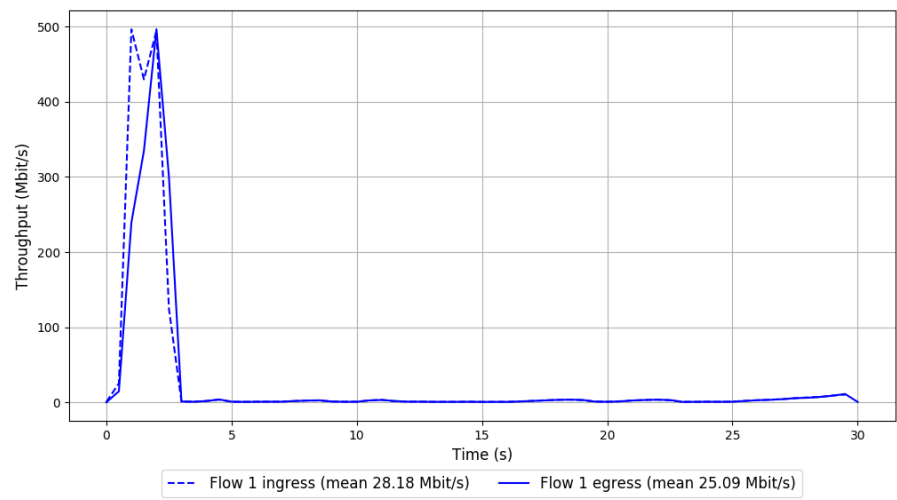
Run 4: Report of FillP — Data Link

```
Run 5: Statistics of FillP

Start at: 2018-01-31 03:57:21
End at: 2018-01-31 03:57:51

# Below is generated by plot.py at 2018-01-31 06:47:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 46.58 Mbit/s
95th percentile per-packet one-way delay: 305.748 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 46.58 Mbit/s
95th percentile per-packet one-way delay: 305.748 ms
Loss rate: 0.00%
```
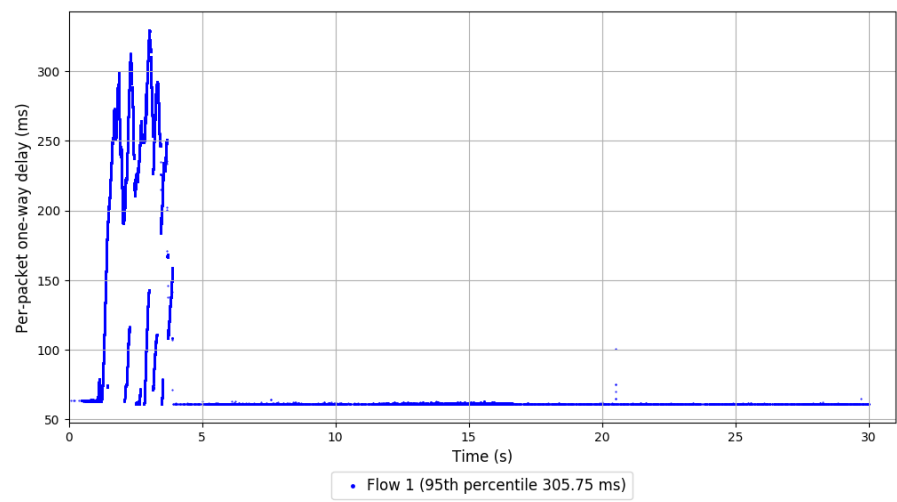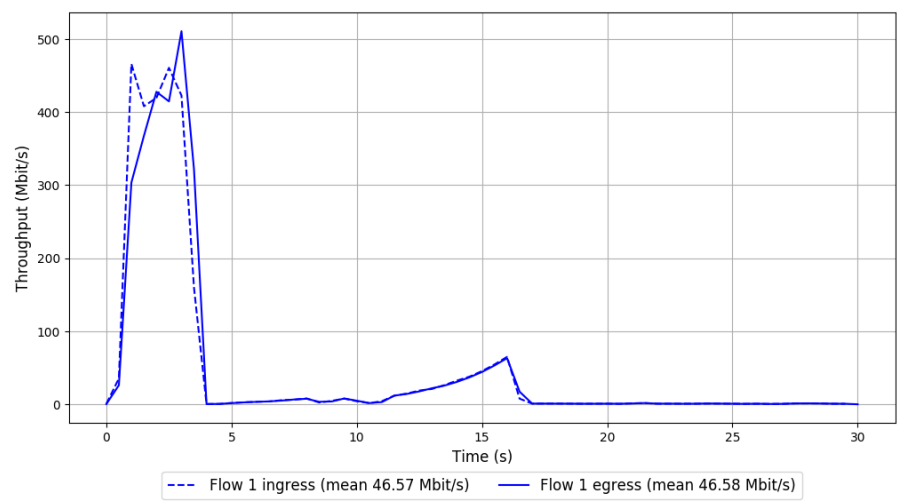
Run 5: Report of FillP — Data Link

Flow 1 ingress (mean 46.57 Mbit/s)   Flow 1 egress (mean 46.58 Mbit/s)

Flow 1 (95th percentile 305.75 ms)

```
Run 6: Statistics of FillP

Start at: 2018-01-31 04:10:59
End at: 2018-01-31 04:11:29

# Below is generated by plot.py at 2018-01-31 06:47:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 25.82 Mbit/s
95th percentile per-packet one-way delay: 345.880 ms
Loss rate: 11.91%
-- Flow 1:
Average throughput: 25.82 Mbit/s
95th percentile per-packet one-way delay: 345.880 ms
Loss rate: 11.91%
```
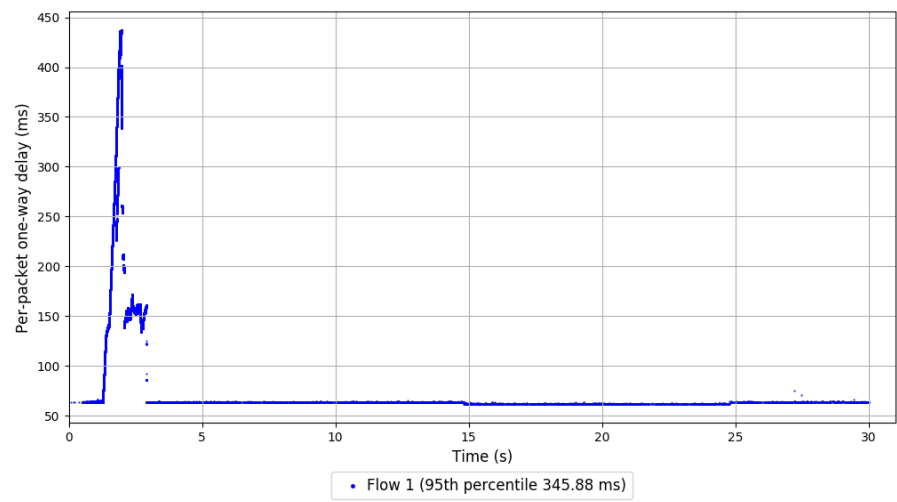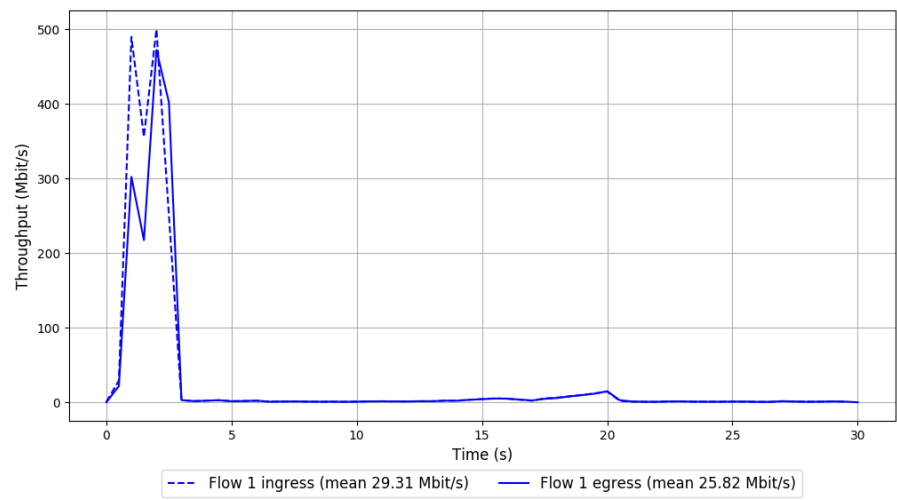
Run 6: Report of FillP — Data Link

```
Run 7: Statistics of FillP

Start at: 2018-01-31 04:24:03
End at: 2018-01-31 04:24:33

# Below is generated by plot.py at 2018-01-31 06:47:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 21.26 Mbit/s
95th percentile per-packet one-way delay: 306.572 ms
Loss rate: 11.81%
-- Flow 1:
Average throughput: 21.26 Mbit/s
95th percentile per-packet one-way delay: 306.572 ms
Loss rate: 11.81%
```
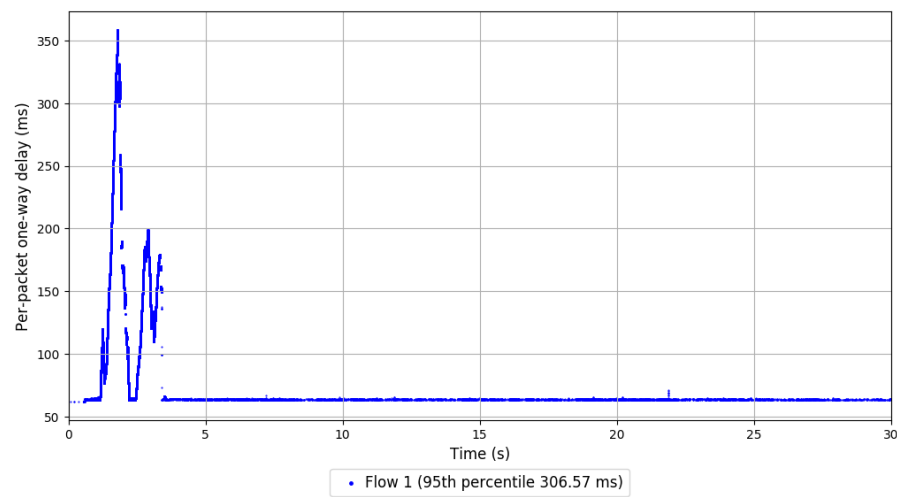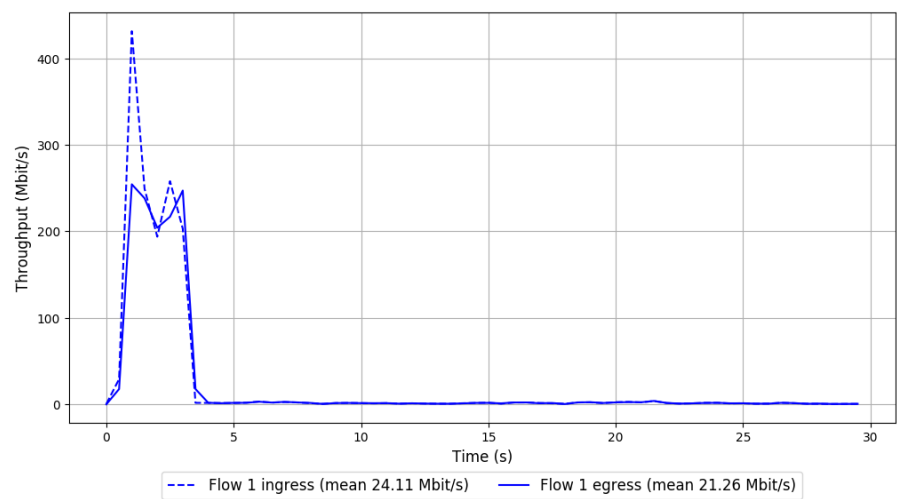
Run 7: Report of FillP — Data Link

Flow 1 ingress (mean 24.11 Mbit/s) --- Flow 1 egress (mean 21.26 Mbit/s)

• Flow 1 (95th percentile 306.57 ms)

257

```
Run 8: Statistics of FillP

Start at: 2018-01-31 04:37:32
End at: 2018-01-31 04:38:02

# Below is generated by plot.py at 2018-01-31 06:47:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 28.80 Mbit/s
95th percentile per-packet one-way delay: 292.246 ms
Loss rate: 3.95%
-- Flow 1:
Average throughput: 28.80 Mbit/s
95th percentile per-packet one-way delay: 292.246 ms
Loss rate: 3.95%
```
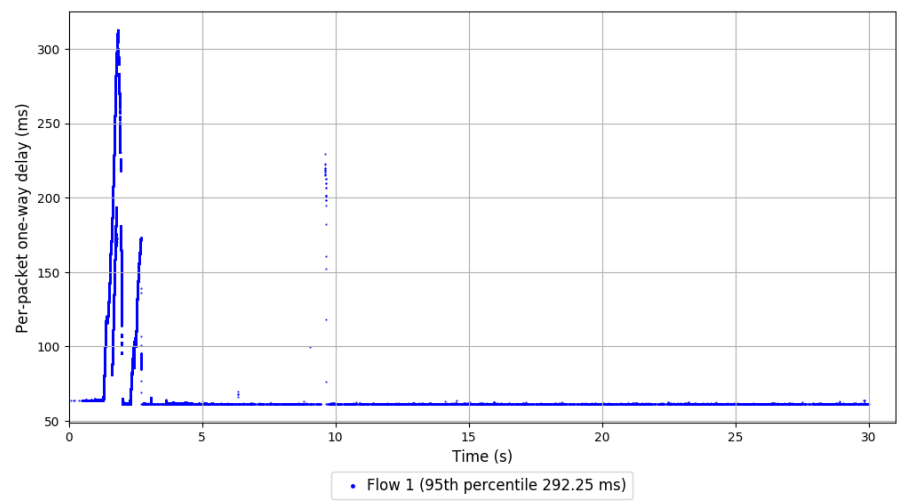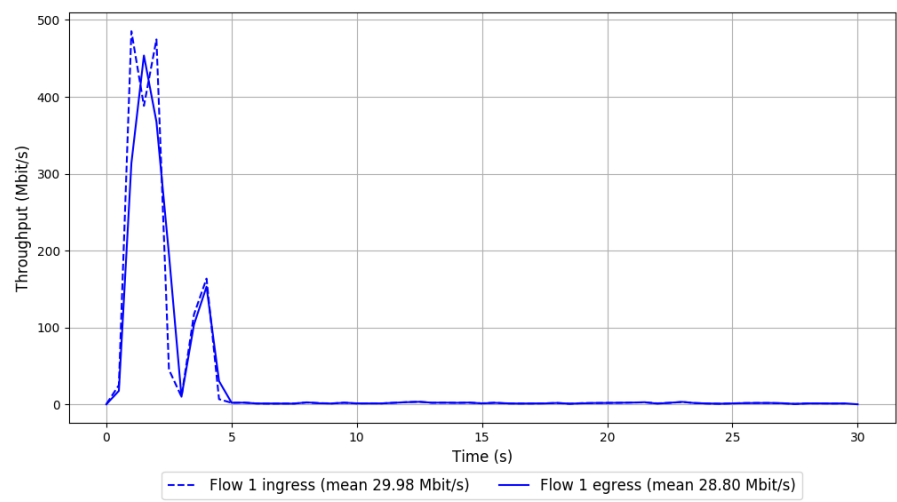
Run 8: Report of FillP — Data Link

Flow 1 ingress (mean 29.98 Mbit/s)   Flow 1 egress (mean 28.80 Mbit/s)

Flow 1 (95th percentile 292.25 ms)

259

```
Run 9: Statistics of FillP

Start at: 2018-01-31 04:50:59
End at: 2018-01-31 04:51:29

# Below is generated by plot.py at 2018-01-31 06:47:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 20.33 Mbit/s
95th percentile per-packet one-way delay: 274.869 ms
Loss rate: 11.97%
-- Flow 1:
Average throughput: 20.33 Mbit/s
95th percentile per-packet one-way delay: 274.869 ms
Loss rate: 11.97%
```
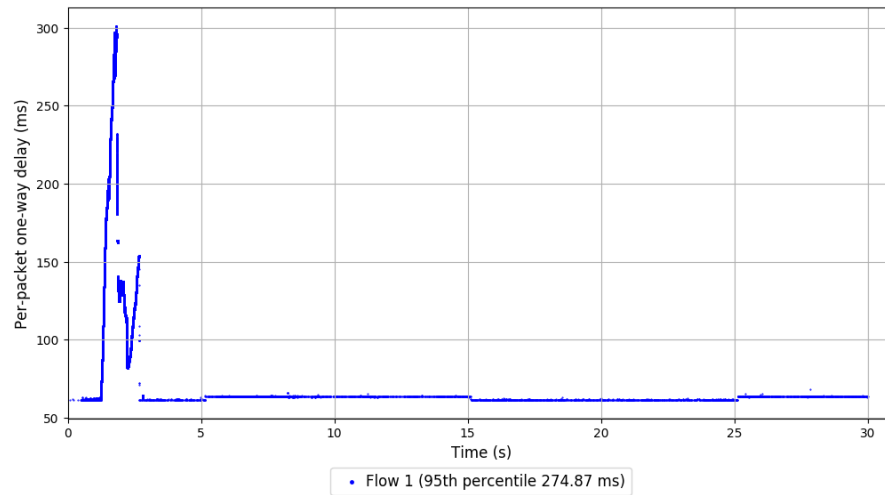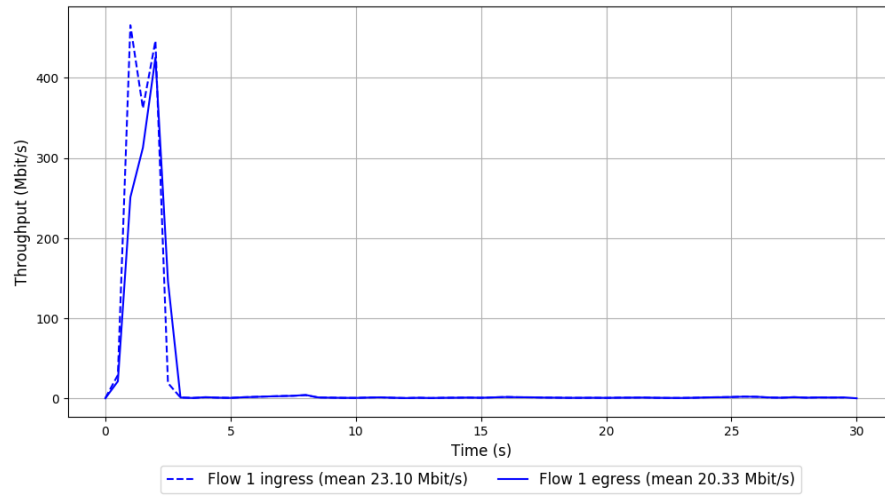
Run 9: Report of FillP — Data Link

Flow 1 ingress (mean 23.10 Mbit/s) — Flow 1 egress (mean 20.33 Mbit/s)

Flow 1 (95th percentile 274.87 ms)

```
Run 10: Statistics of FillP

Start at: 2018-01-31 05:04:37
End at: 2018-01-31 05:05:07

# Below is generated by plot.py at 2018-01-31 06:47:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 25.52 Mbit/s
95th percentile per-packet one-way delay: 277.499 ms
Loss rate: 9.76%
-- Flow 1:
Average throughput: 25.52 Mbit/s
95th percentile per-packet one-way delay: 277.499 ms
Loss rate: 9.76%
```
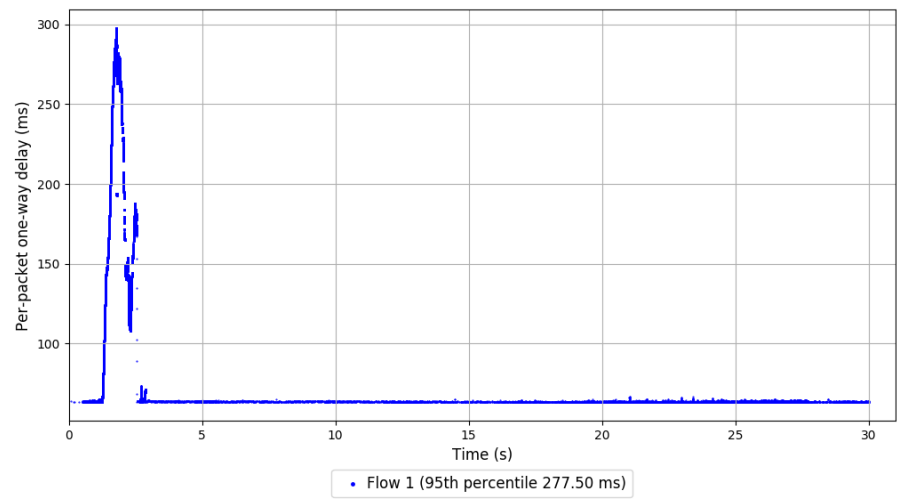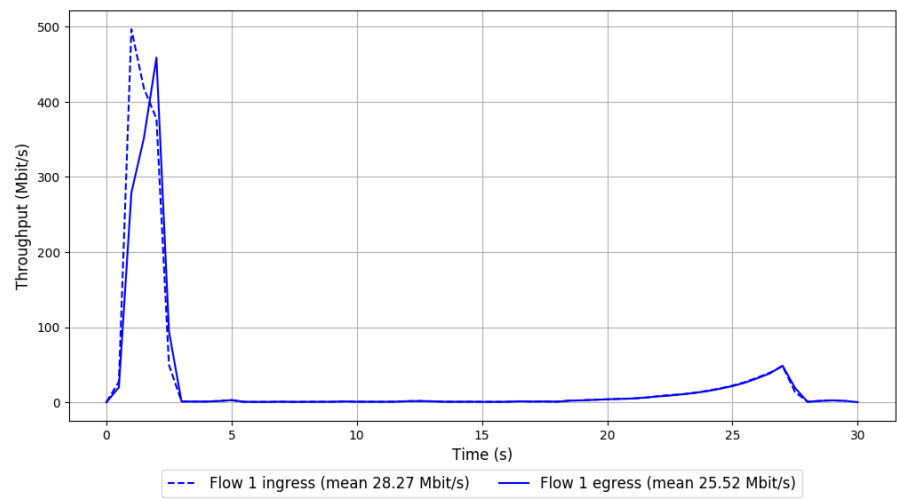
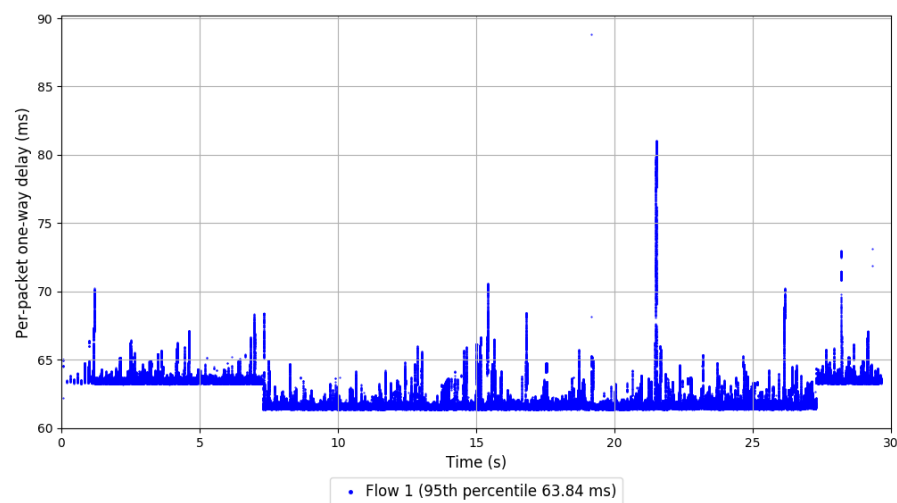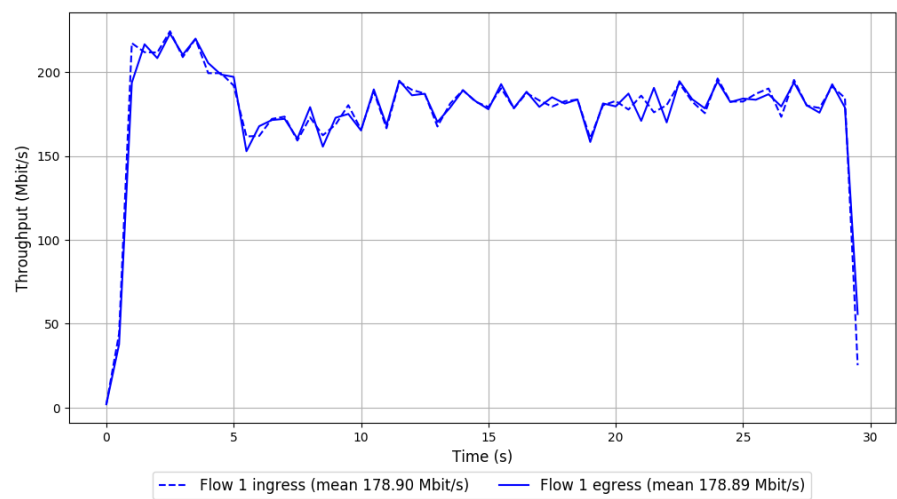Run 10: Report of FillP — Data Link

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

Start at: 2018-01-31 03:10:56
End at: 2018-01-31 03:11:26

# Below is generated by plot.py at 2018-01-31 06:47:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 178.89 Mbit/s
95th percentile per-packet one-way delay: 63.836 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 178.89 Mbit/s
95th percentile per-packet one-way delay: 63.836 ms
Loss rate: 0.00%
```
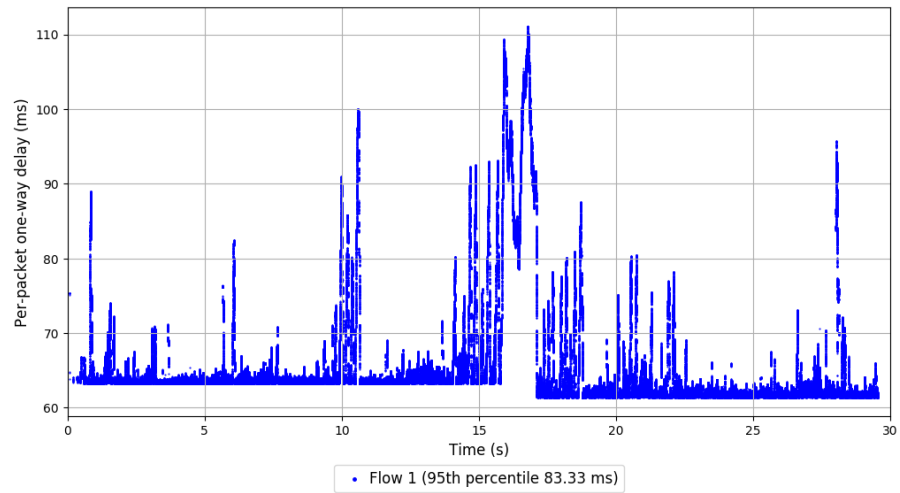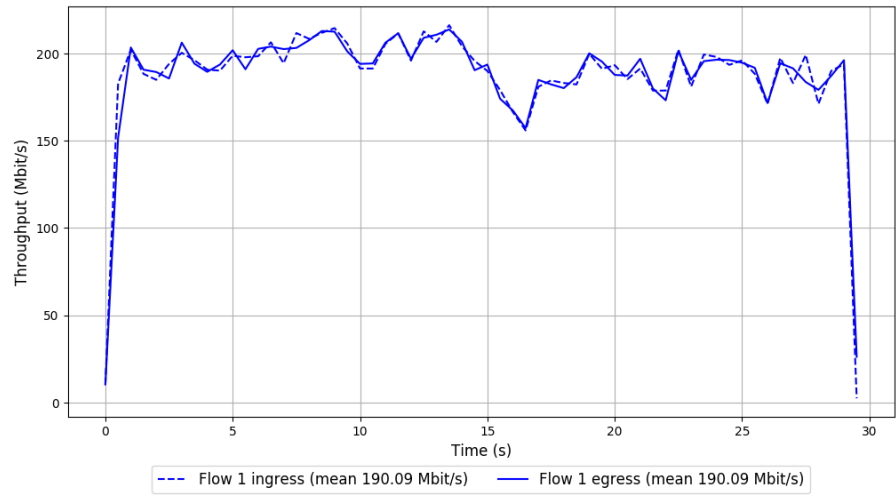
Run 1: Report of Indigo-1-32 — Data Link

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

Start at: 2018-01-31 03:24:07
End at: 2018-01-31 03:24:37

# Below is generated by plot.py at 2018-01-31 06:47:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 190.09 Mbit/s
95th percentile per-packet one-way delay: 83.334 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 190.09 Mbit/s
95th percentile per-packet one-way delay: 83.334 ms
Loss rate: 0.01%
```

Run 2: Report of Indigo-1-32 — Data Link

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

Start at: 2018-01-31 03:37:52
End at: 2018-01-31 03:38:22

# Below is generated by plot.py at 2018-01-31 06:47:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 179.27 Mbit/s
95th percentile per-packet one-way delay: 64.766 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 179.27 Mbit/s
95th percentile per-packet one-way delay: 64.766 ms
Loss rate: 0.00%
```
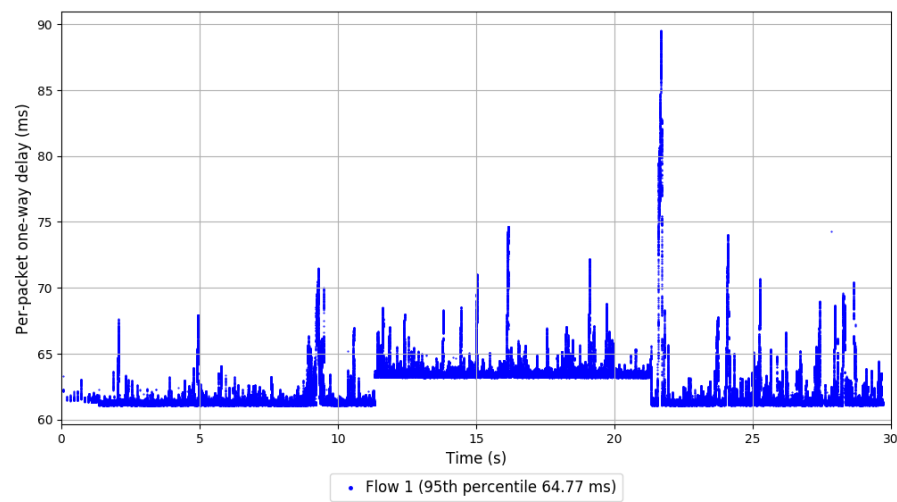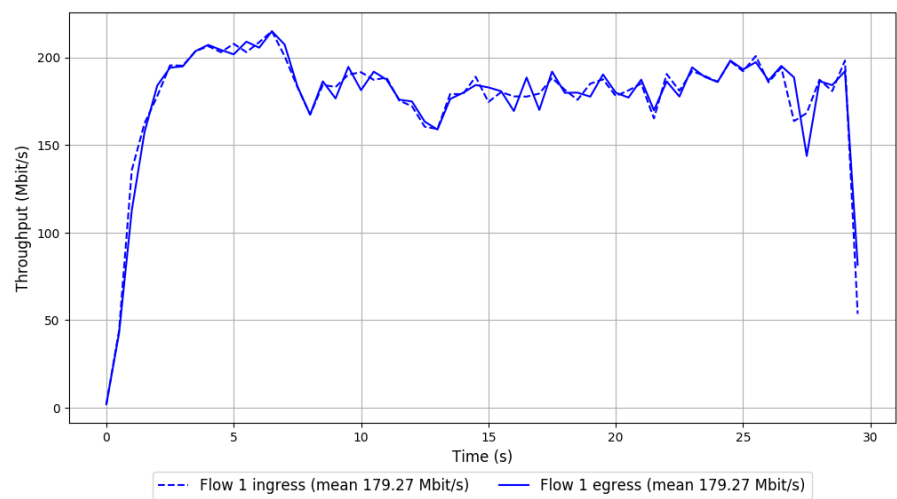
Run 3: Report of Indigo-1-32 — Data Link

Flow 1 ingress (mean 179.27 Mbit/s)   Flow 1 egress (mean 179.27 Mbit/s)

Flow 1 (95th percentile 64.77 ms)

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

Start at: 2018-01-31 03:51:16
End at: 2018-01-31 03:51:46

# Below is generated by plot.py at 2018-01-31 06:47:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 196.90 Mbit/s
95th percentile per-packet one-way delay: 68.412 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 196.90 Mbit/s
95th percentile per-packet one-way delay: 68.412 ms
Loss rate: 0.02%
```
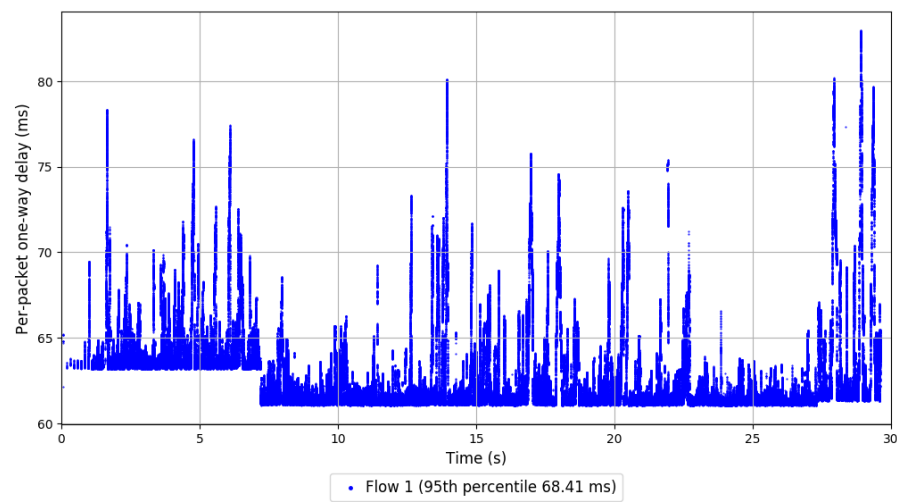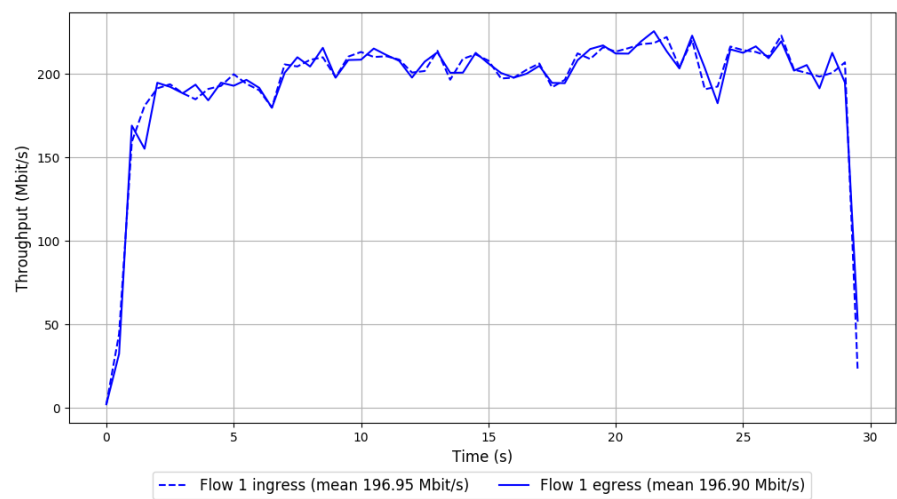
Run 4: Report of Indigo-1-32 — Data Link

Flow 1 ingress (mean 196.95 Mbit/s) — Flow 1 egress (mean 196.90 Mbit/s)

Flow 1 (95th percentile 68.41 ms)

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

Start at: 2018-01-31 04:04:30
End at: 2018-01-31 04:05:00

# Below is generated by plot.py at 2018-01-31 06:47:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 204.23 Mbit/s
95th percentile per-packet one-way delay: 63.553 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 204.23 Mbit/s
95th percentile per-packet one-way delay: 63.553 ms
Loss rate: 0.01%
```
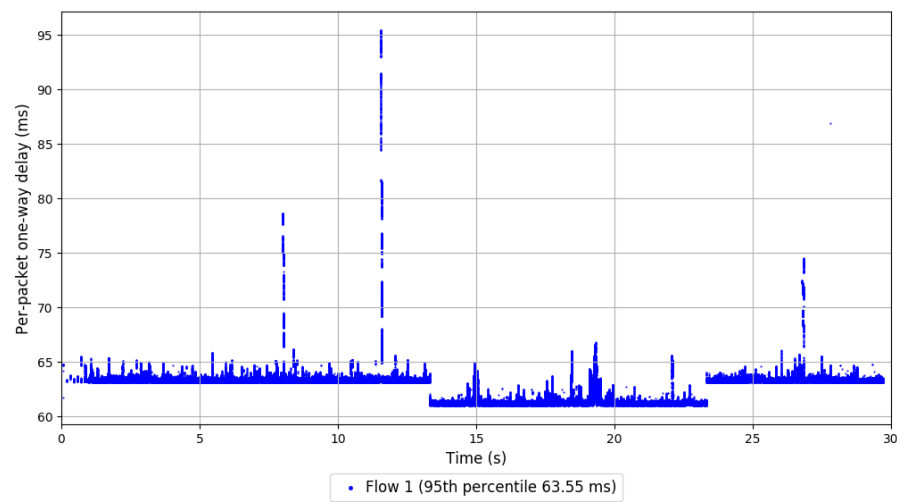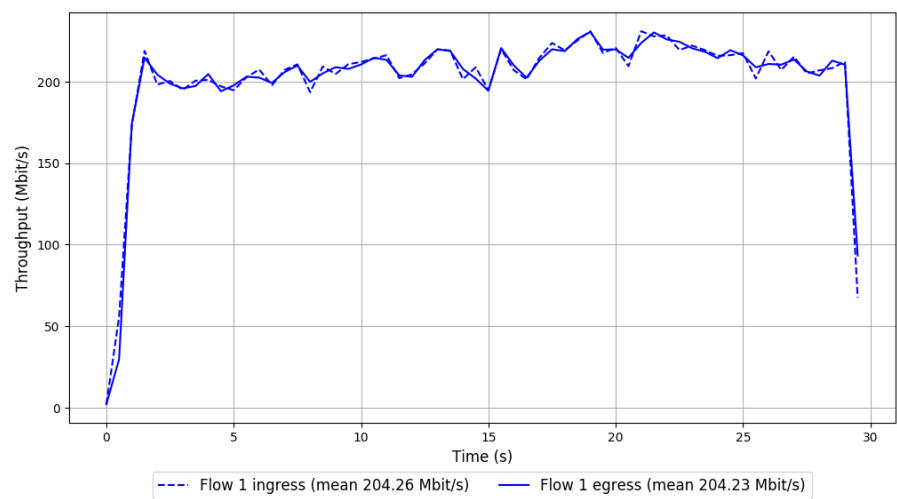
Run 5: Report of Indigo-1-32 — Data Link

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

Start at: 2018-01-31 04:17:53
End at: 2018-01-31 04:18:23

# Below is generated by plot.py at 2018-01-31 06:47:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 191.14 Mbit/s
95th percentile per-packet one-way delay: 65.159 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 191.14 Mbit/s
95th percentile per-packet one-way delay: 65.159 ms
Loss rate: 0.01%
```
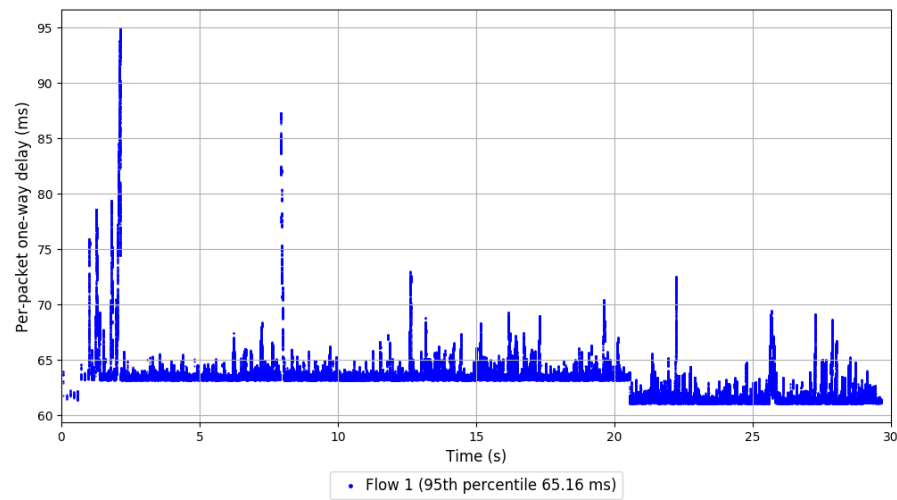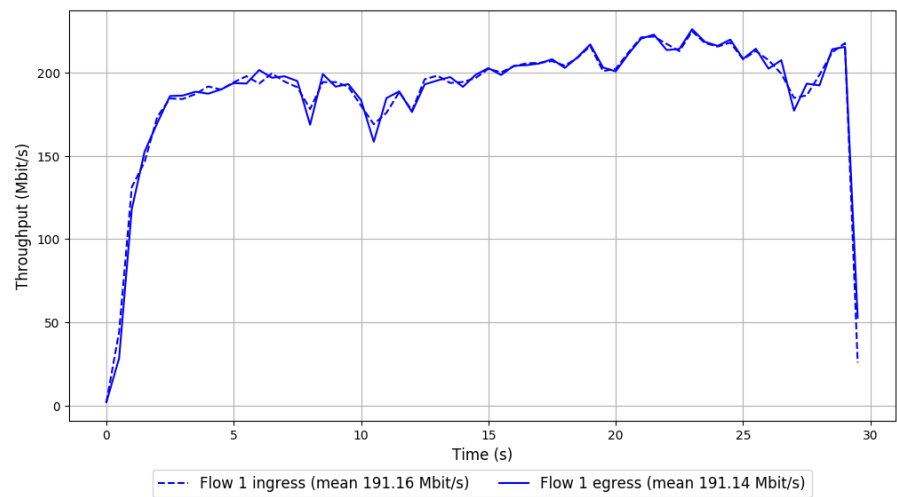
Run 6: Report of Indigo-1-32 — Data Link

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

Start at: 2018-01-31 04:31:10
End at: 2018-01-31 04:31:40

# Below is generated by plot.py at 2018-01-31 06:48:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 189.46 Mbit/s
95th percentile per-packet one-way delay: 63.456 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 189.46 Mbit/s
95th percentile per-packet one-way delay: 63.456 ms
Loss rate: 0.00%
```
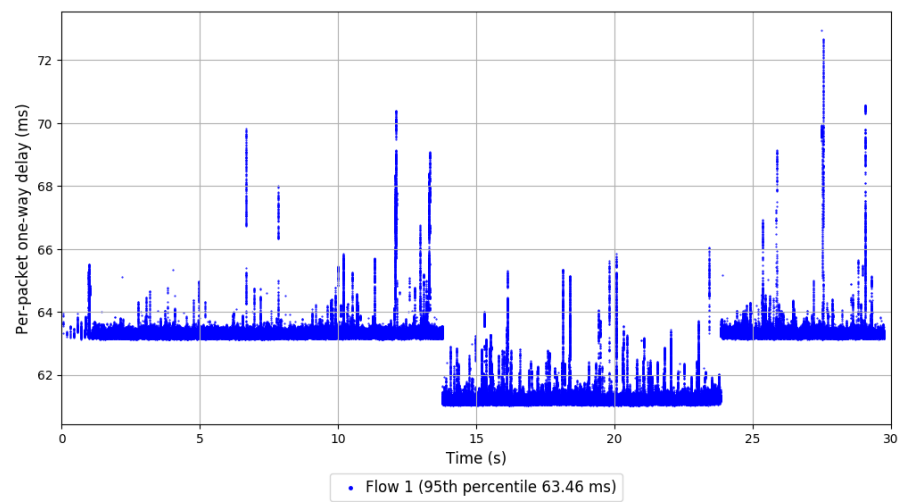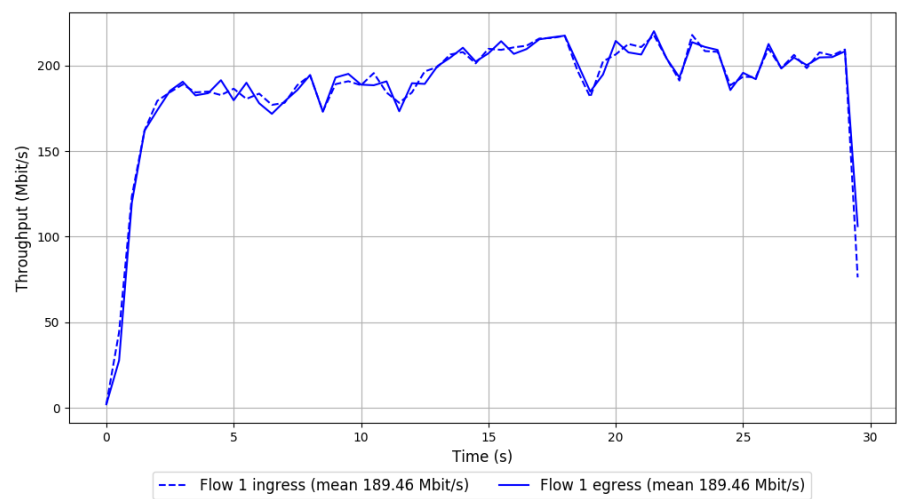
Run 7: Report of Indigo-1-32 — Data Link

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

Start at: 2018-01-31 04:44:27
End at: 2018-01-31 04:44:57

# Below is generated by plot.py at 2018-01-31 06:48:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 182.59 Mbit/s
95th percentile per-packet one-way delay: 63.710 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 182.59 Mbit/s
95th percentile per-packet one-way delay: 63.710 ms
Loss rate: 0.00%
```
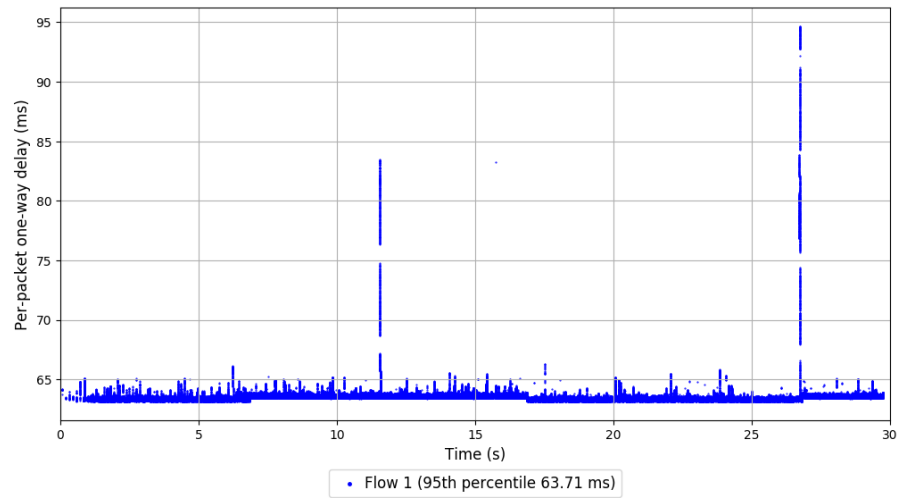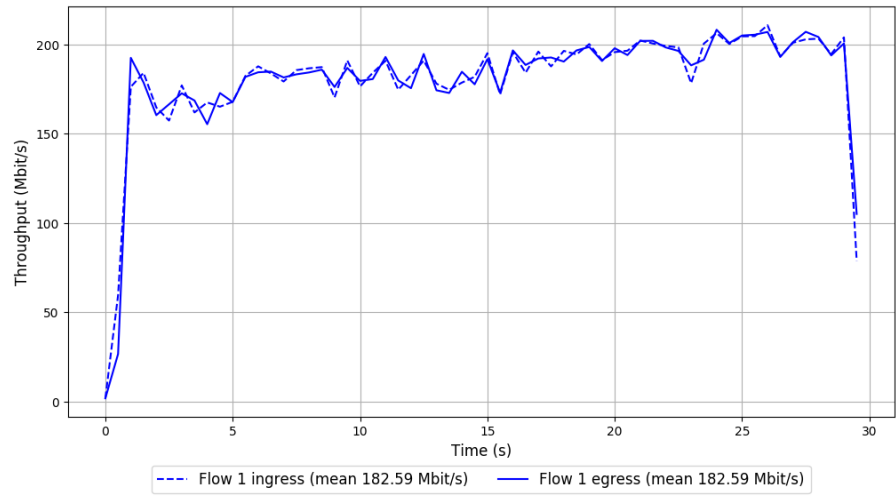
Run 8: Report of Indigo-1-32 — Data Link

Flow 1 ingress (mean 182.59 Mbit/s) ---- Flow 1 egress (mean 182.59 Mbit/s)

• Flow 1 (95th percentile 63.71 ms)

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

Start at: 2018-01-31 04:58:14
End at: 2018-01-31 04:58:44

# Below is generated by plot.py at 2018-01-31 06:48:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 179.29 Mbit/s
95th percentile per-packet one-way delay: 63.980 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 179.29 Mbit/s
95th percentile per-packet one-way delay: 63.980 ms
Loss rate: 0.22%
```
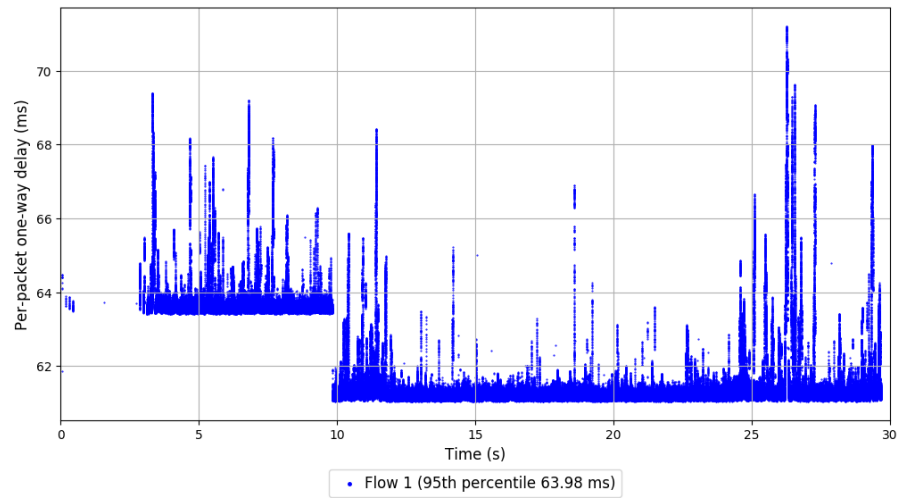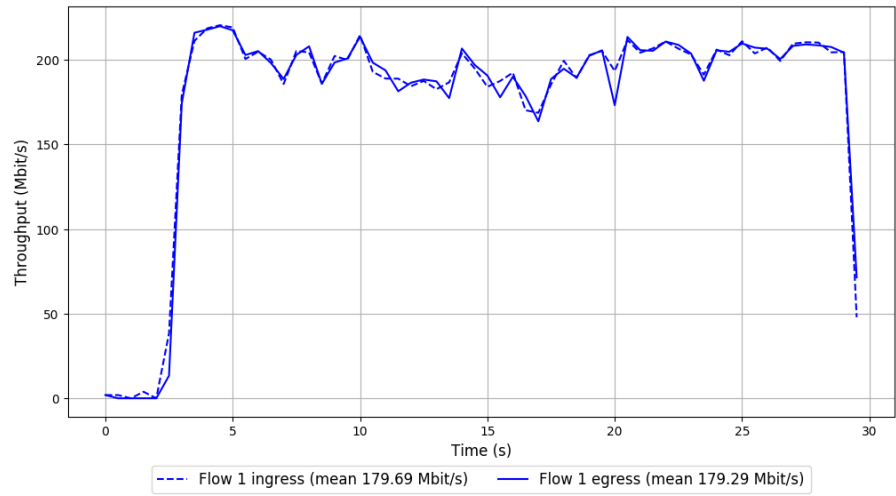
Run 9: Report of Indigo-1-32 — Data Link

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

Start at: 2018-01-31 05:11:31
End at: 2018-01-31 05:12:01

# Below is generated by plot.py at 2018-01-31 06:48:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 187.15 Mbit/s
95th percentile per-packet one-way delay: 62.318 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 187.15 Mbit/s
95th percentile per-packet one-way delay: 62.318 ms
Loss rate: 0.01%
```
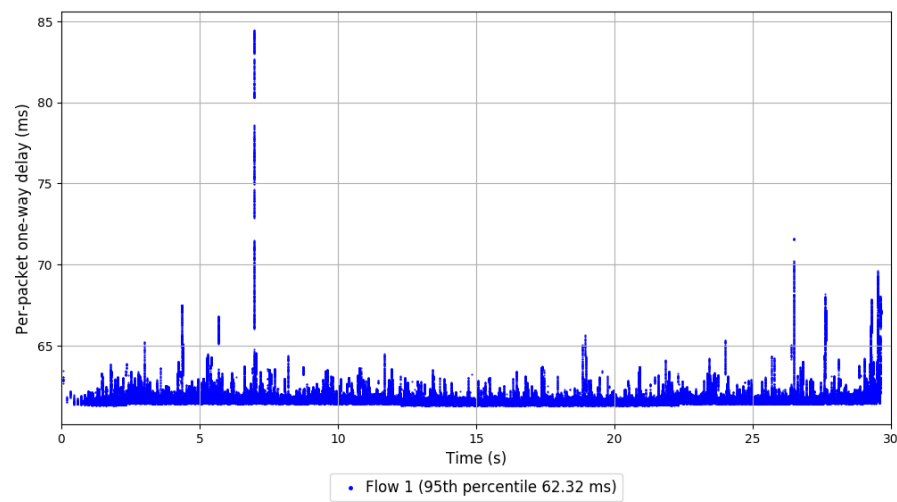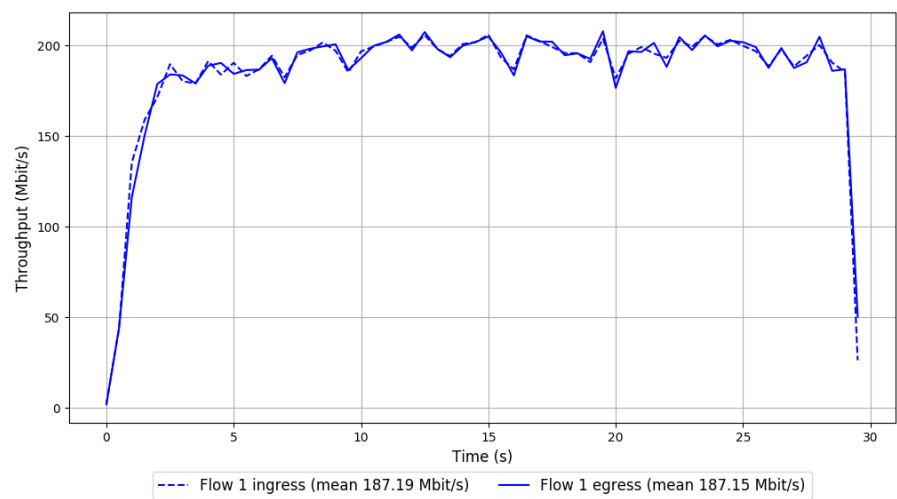
Run 10: Report of Indigo-1-32 — Data Link

```
Run 1: Statistics of Vivace-latency

Start at: 2018-01-31 03:05:10
End at: 2018-01-31 03:05:40

# Below is generated by plot.py at 2018-01-31 06:49:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 196.86 Mbit/s
95th percentile per-packet one-way delay: 65.619 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 196.86 Mbit/s
95th percentile per-packet one-way delay: 65.619 ms
Loss rate: 0.00%
```
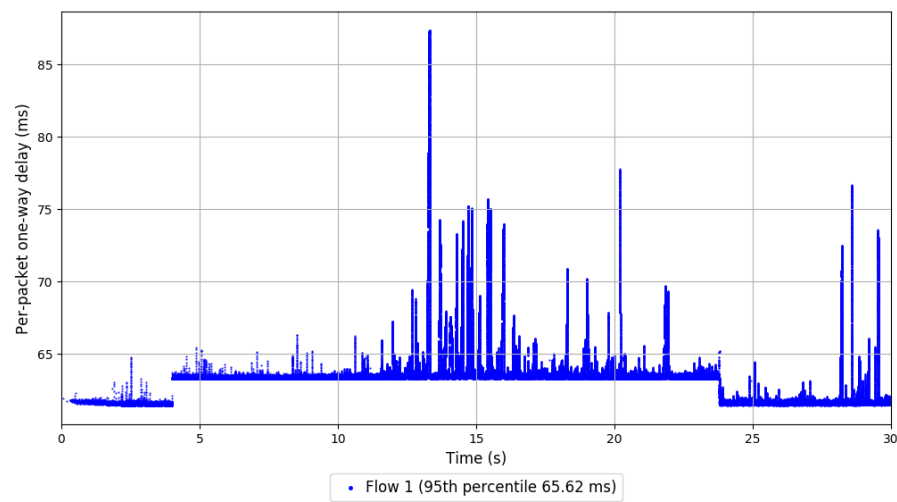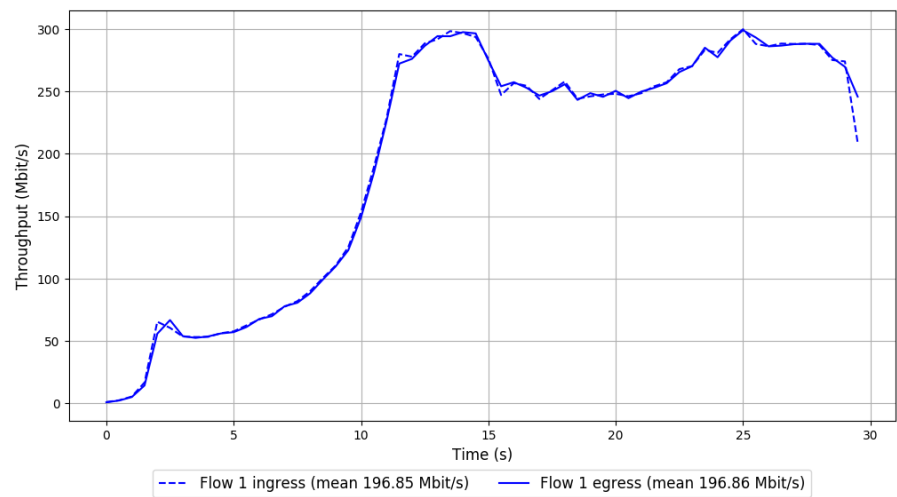
Run 1: Report of Vivace-latency — Data Link

```
Run 2: Statistics of Vivace-latency

Start at: 2018-01-31 03:18:25
End at: 2018-01-31 03:18:55

# Below is generated by plot.py at 2018-01-31 06:49:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 204.63 Mbit/s
95th percentile per-packet one-way delay: 136.965 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 204.63 Mbit/s
95th percentile per-packet one-way delay: 136.965 ms
Loss rate: 0.00%
```
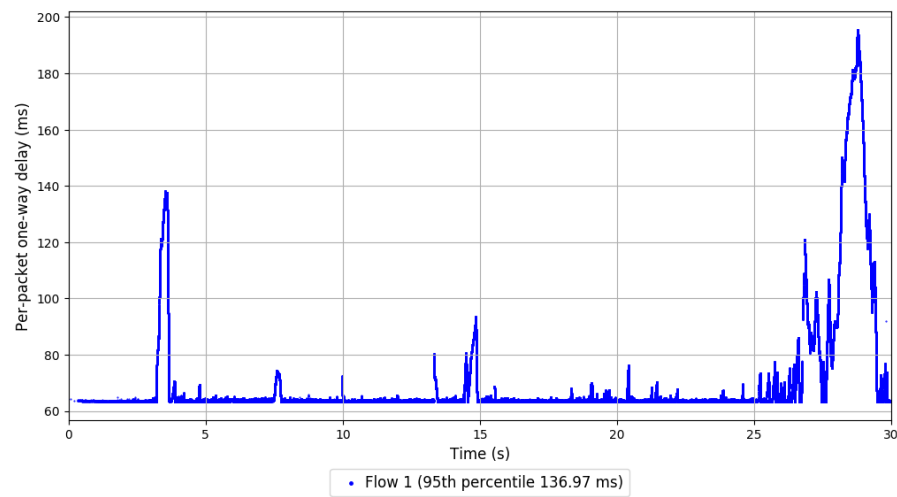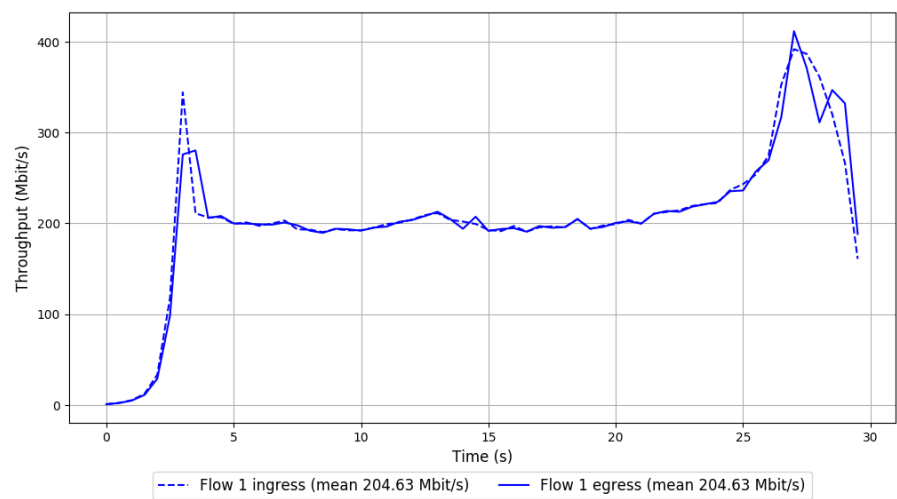
Run 2: Report of Vivace-latency — Data Link

```
Run 3: Statistics of Vivace-latency

Start at: 2018-01-31 03:31:54
End at: 2018-01-31 03:32:24

# Below is generated by plot.py at 2018-01-31 06:52:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 314.66 Mbit/s
95th percentile per-packet one-way delay: 80.280 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 314.66 Mbit/s
95th percentile per-packet one-way delay: 80.280 ms
Loss rate: 0.00%
```
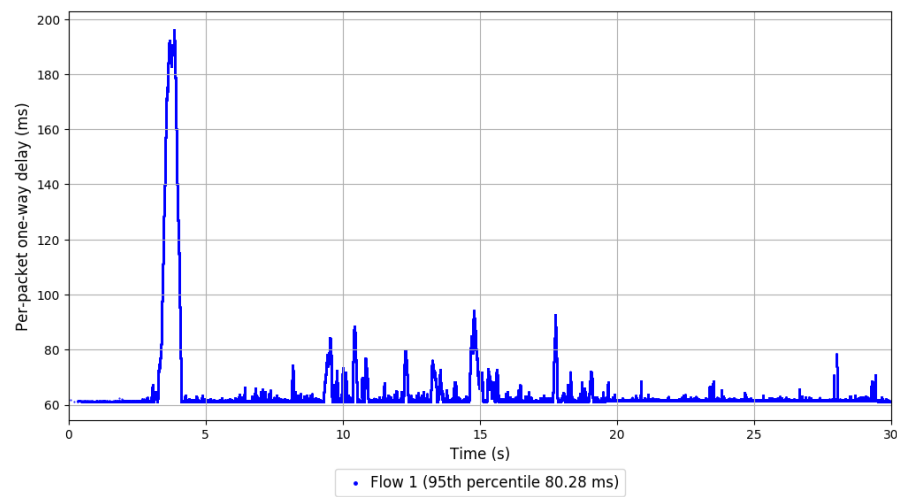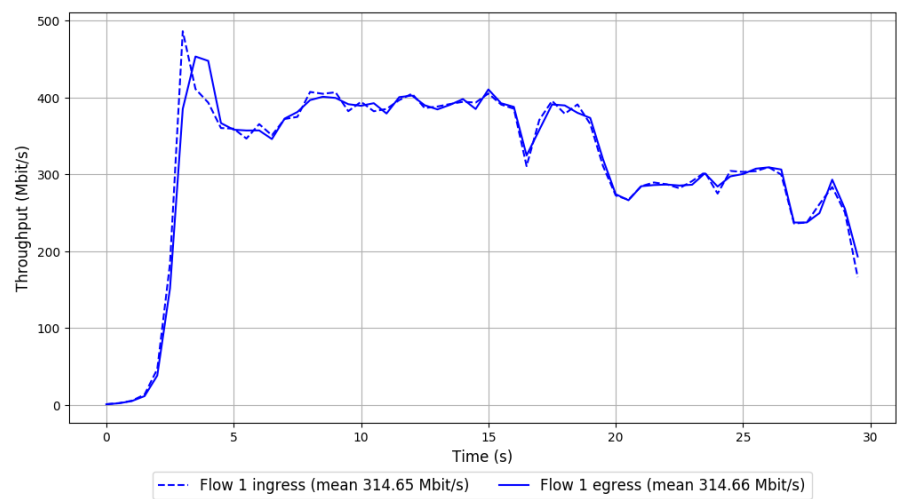
Run 3: Report of Vivace-latency — Data Link

```
Run 4: Statistics of Vivace-latency

Start at: 2018-01-31 03:45:31
End at: 2018-01-31 03:46:01


# Below is generated by plot.py at 2018-01-31 06:52:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 226.02 Mbit/s
95th percentile per-packet one-way delay: 99.682 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 226.02 Mbit/s
95th percentile per-packet one-way delay: 99.682 ms
Loss rate: 0.00%
```
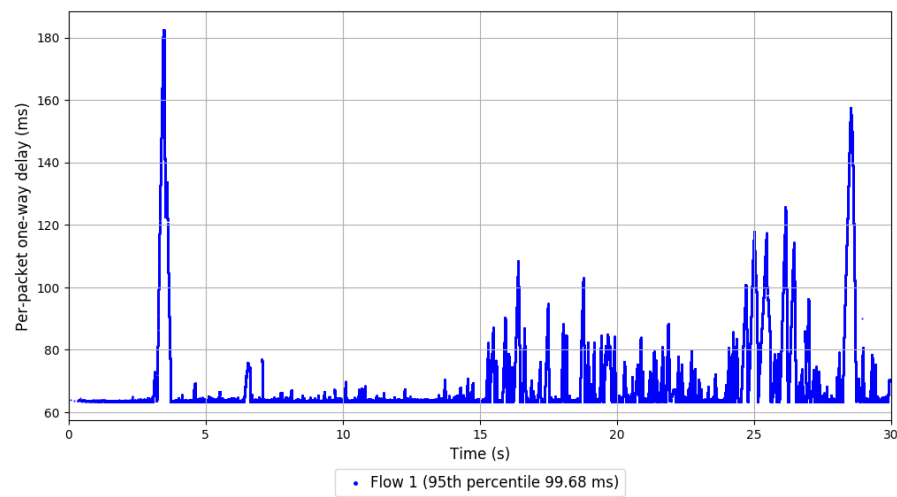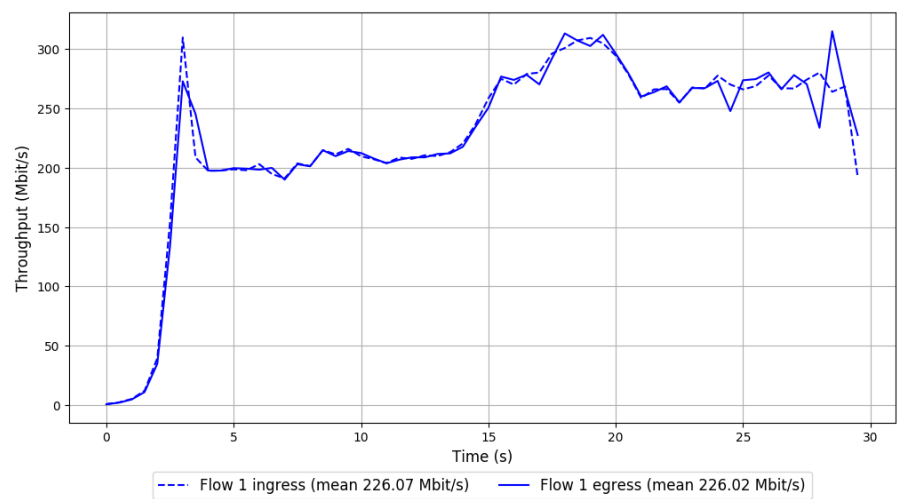
Run 4: Report of Vivace-latency — Data Link

Flow 1 ingress (mean 226.07 Mbit/s) --- Flow 1 egress (mean 226.02 Mbit/s)

Flow 1 (95th percentile 99.68 ms)

Run 5: Statistics of Vivace-latency

Start at: 2018-01-31 03:58:40
End at: 2018-01-31 03:59:10

Below is generated by plot.py at 2018-01-31 06:53:39
Datalink statistics
-- Total of 1 flow:
Average throughput: 271.24 Mbit/s
95th percentile per-packet one-way delay: 63.929 ms
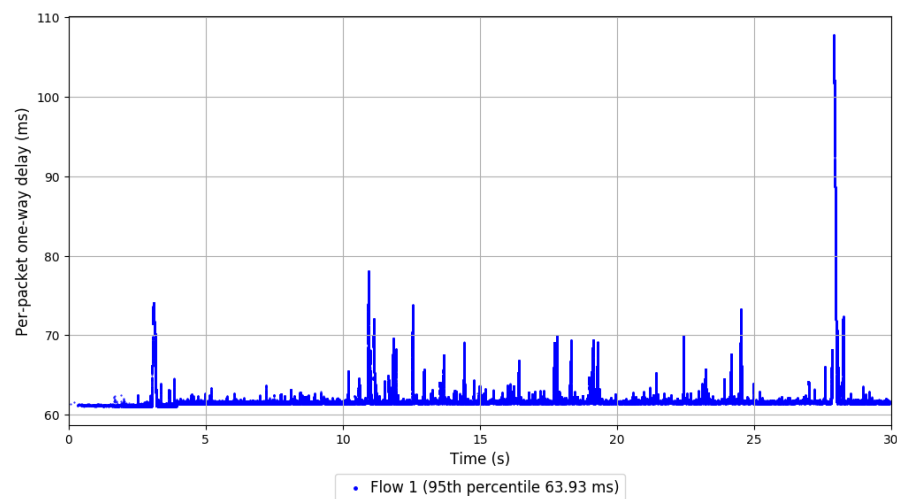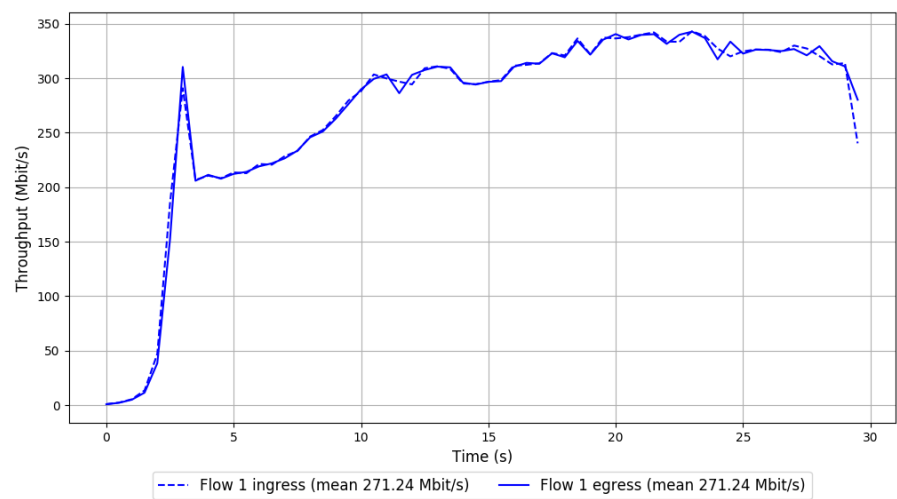Loss rate: 0.00%
-- Flow 1:
Average throughput: 271.24 Mbit/s
95th percentile per-packet one-way delay: 63.929 ms
Loss rate: 0.00%

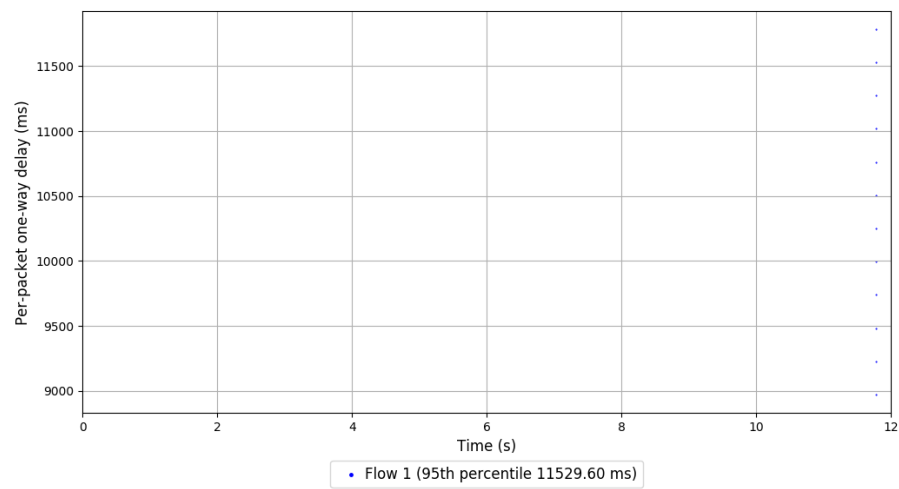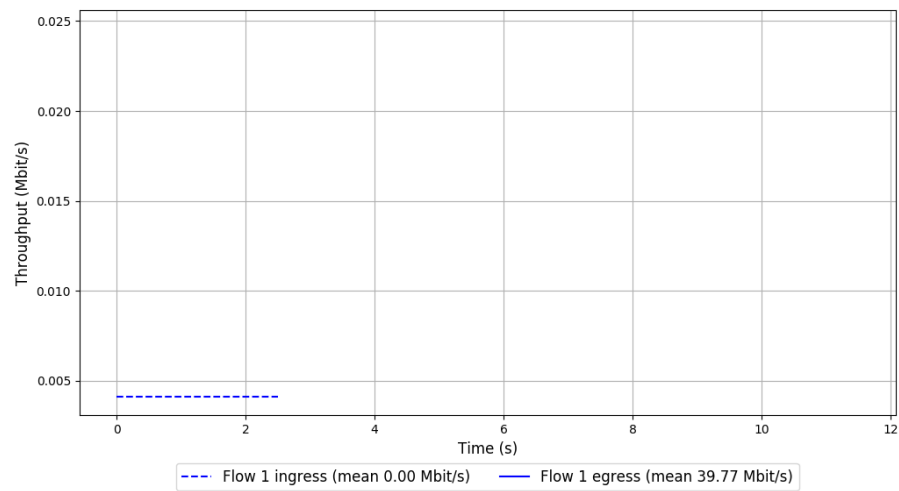Run 5: Report of Vivace-latency — Data Link

Run 6: Statistics of Vivace-latency

Start at: 2018-01-31 04:12:16
End at: 2018-01-31 04:12:46

Run 6: Report of Vivace-latency — Data Link

Flow 1 ingress (mean 0.00 Mbit/s)   Flow 1 egress (mean 39.77 Mbit/s)

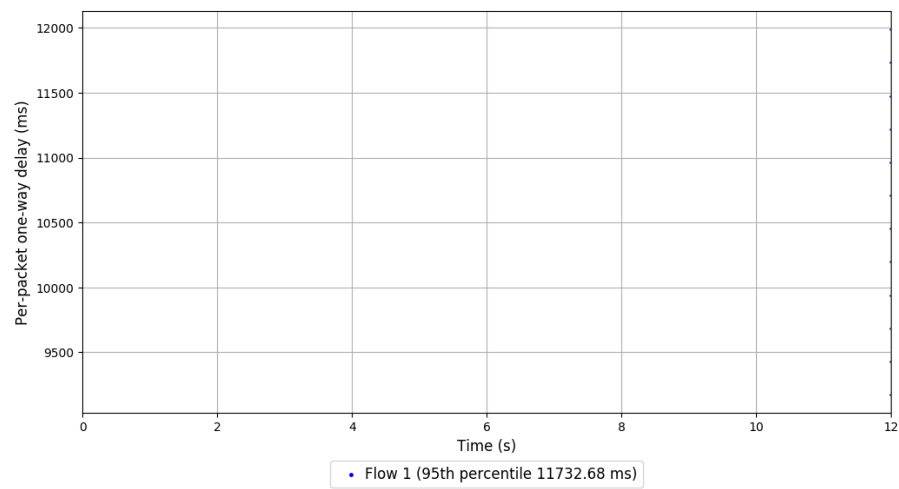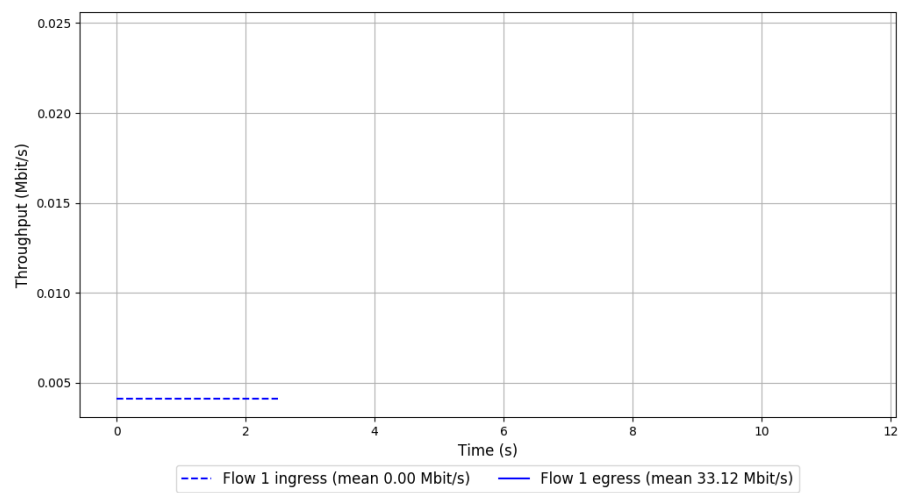• Flow 1 (95th percentile 11529.60 ms)

Run 7: Statistics of Vivace-latency

Start at: 2018-01-31 04:25:20
End at: 2018-01-31 04:25:50

Run 7: Report of Vivace-latency — Data Link

Flow 1 ingress (mean 0.00 Mbit/s)   Flow 1 egress (mean 33.12 Mbit/s)
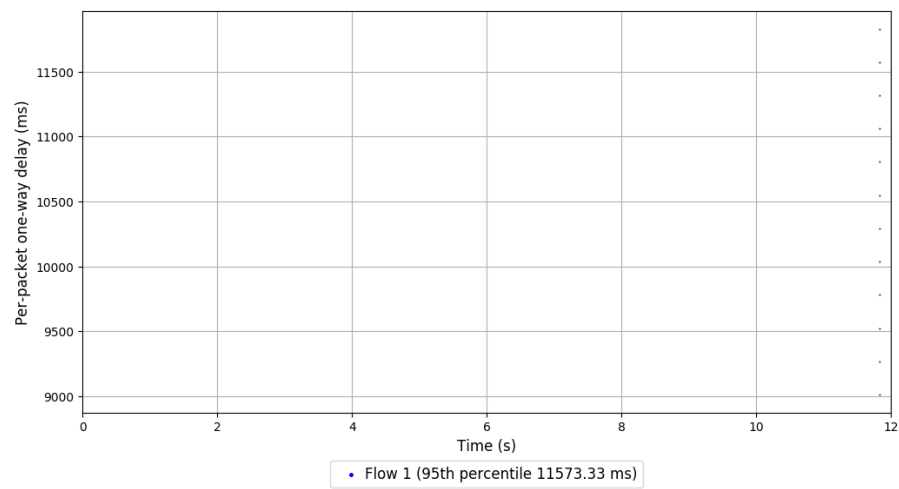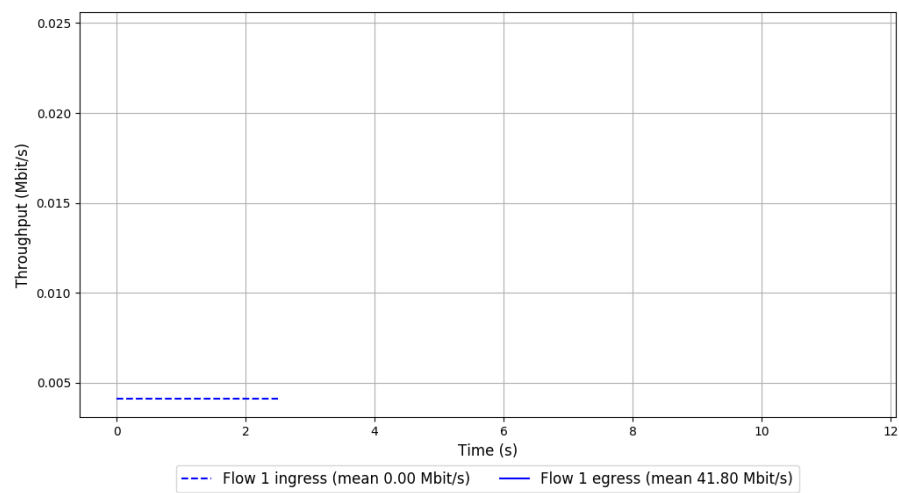

Flow 1 (95th percentile 11732.68 ms)

Run 8: Statistics of Vivace-latency

Start at: 2018-01-31 04:38:50
End at: 2018-01-31 04:39:20

Run 8: Report of Vivace-latency — Data Link

Flow 1 ingress (mean 0.00 Mbit/s)   Flow 1 egress (mean 41.80 Mbit/s)

• Flow 1 (95th percentile 11573.33 ms)

```
Run 9: Statistics of Vivace-latency

Start at: 2018-01-31 04:52:16
End at: 2018-01-31 04:52:46

# Below is generated by plot.py at 2018-01-31 06:53:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 185.67 Mbit/s
95th percentile per-packet one-way delay: 87.081 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 185.67 Mbit/s
95th percentile per-packet one-way delay: 87.081 ms
Loss rate: 0.07%
```
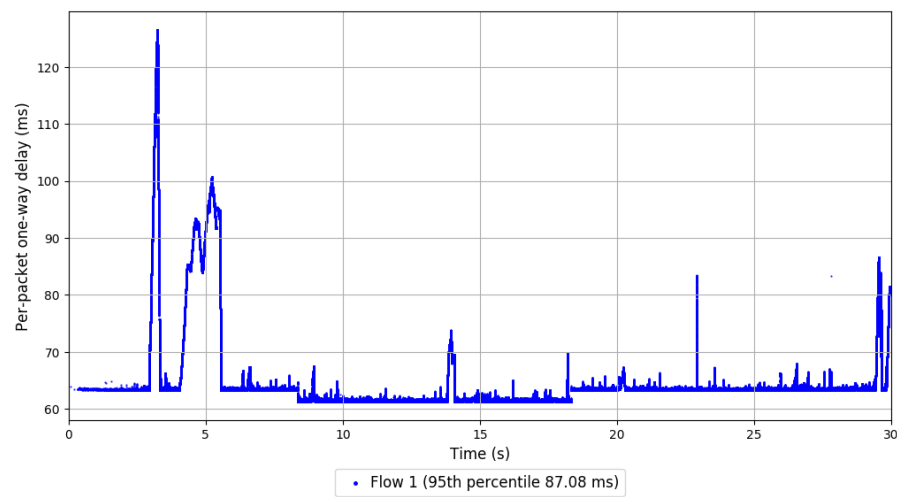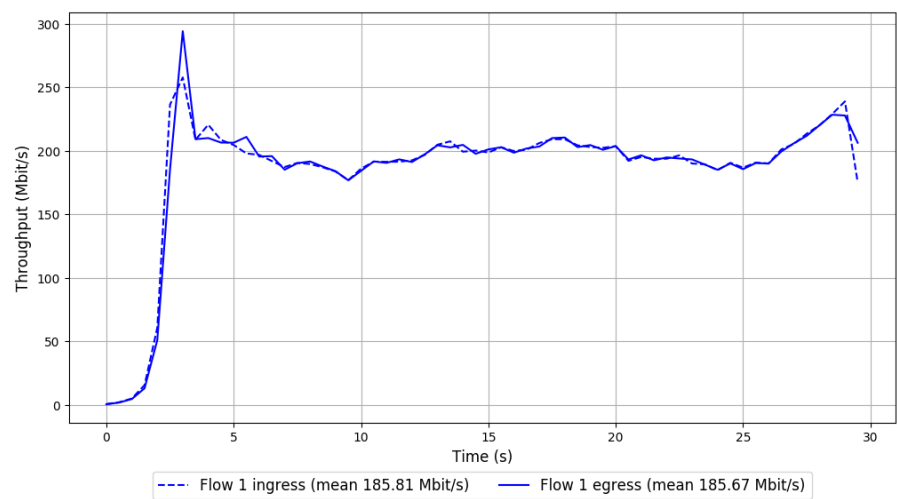
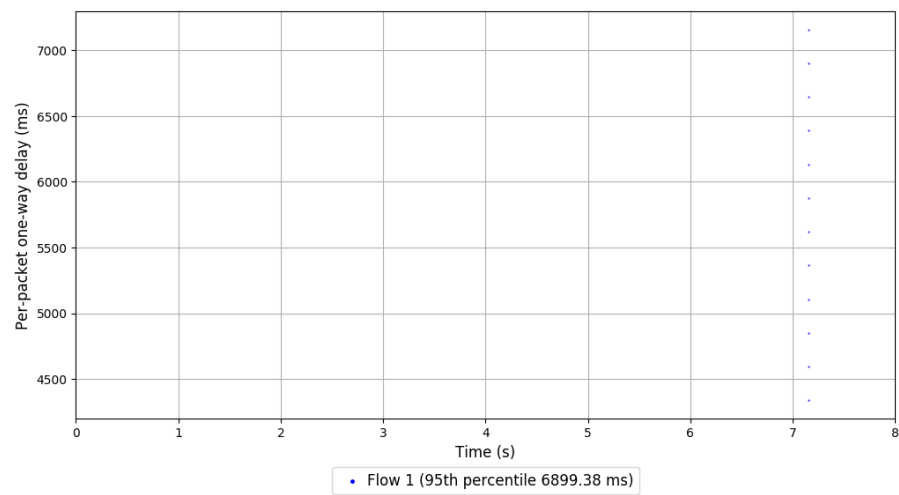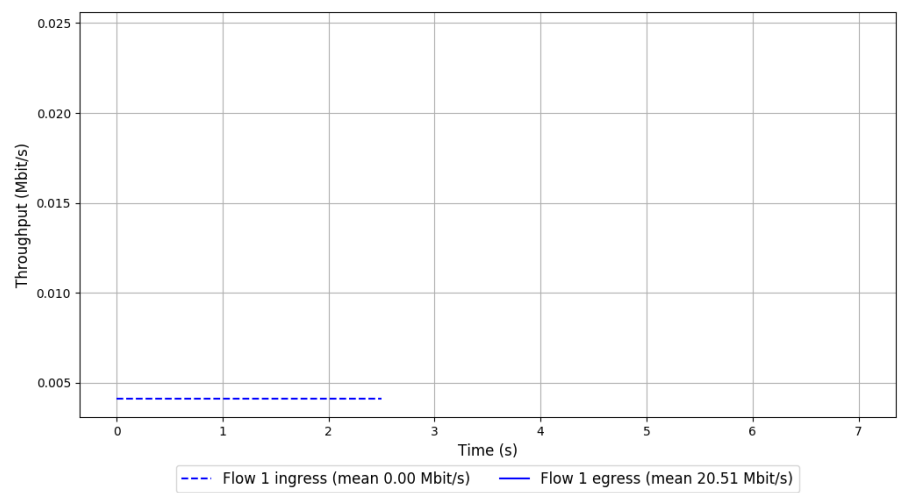## Run 9: Report of Vivace-latency — Data Link

Flow 1 ingress (mean 185.81 Mbit/s)   Flow 1 egress (mean 185.67 Mbit/s)

Flow 1 (95th percentile 87.08 ms)

```
Run 10: Statistics of Vivace-latency

Start at: 2018-01-31 05:05:54
End at: 2018-01-31 05:06:24
```

Run 10: Report of Vivace-latency — Data Link

Flow 1 ingress (mean 0.00 Mbit/s)   Flow 1 egress (mean 20.51 Mbit/s)

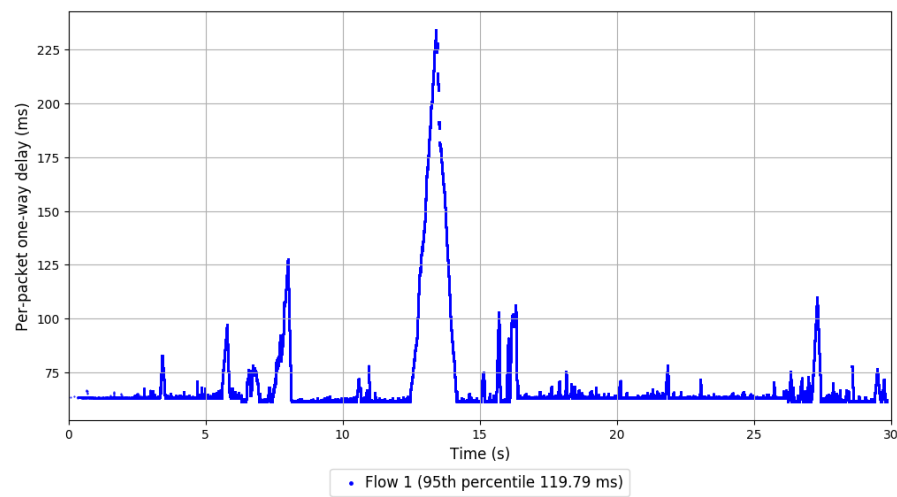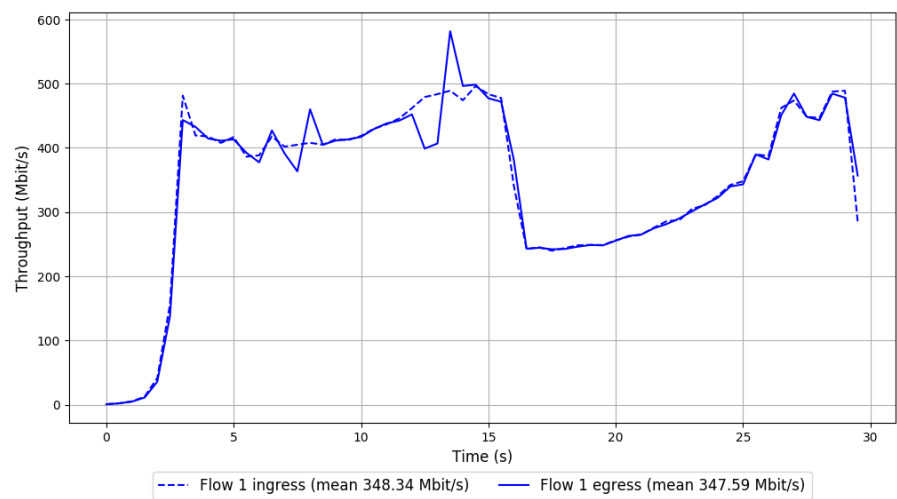Flow 1 (95th percentile 6899.38 ms)

303

```
Run 1: Statistics of Vivace-loss

Start at: 2018-01-31 02:59:28
End at: 2018-01-31 02:59:58

# Below is generated by plot.py at 2018-01-31 06:55:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 347.59 Mbit/s
95th percentile per-packet one-way delay: 119.790 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 347.59 Mbit/s
95th percentile per-packet one-way delay: 119.790 ms
Loss rate: 0.22%
```

Run 1: Report of Vivace-loss — Data Link

```
Run 2: Statistics of Vivace-loss

Start at: 2018-01-31 03:13:05
End at: 2018-01-31 03:13:35

# Below is generated by plot.py at 2018-01-31 06:55:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 217.25 Mbit/s
95th percentile per-packet one-way delay: 280.503 ms
Loss rate: 3.24%
-- Flow 1:
Average throughput: 217.25 Mbit/s
95th percentile per-packet one-way delay: 280.503 ms
Loss rate: 3.24%
```
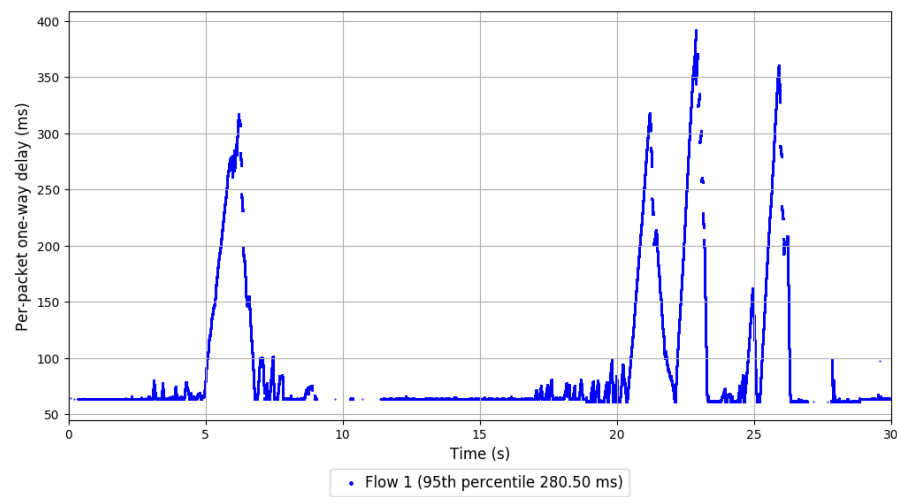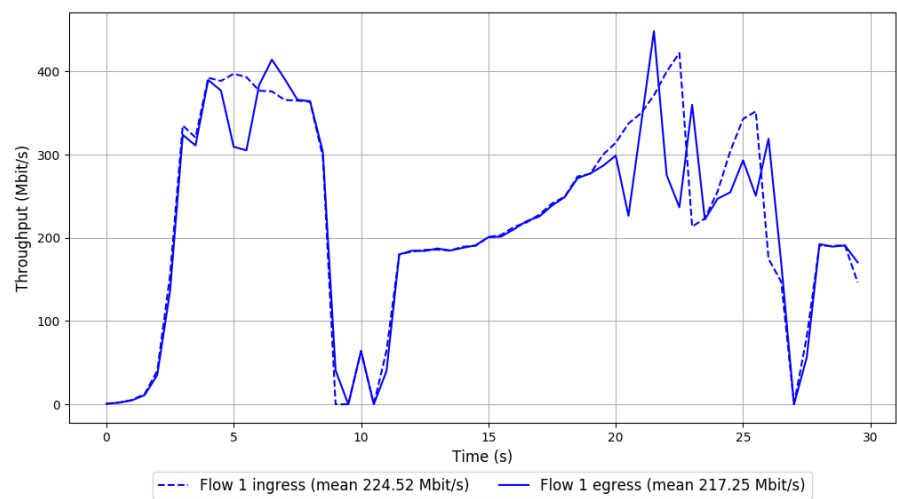
Run 2: Report of Vivace-loss — Data Link

```
Run 3: Statistics of Vivace-loss

Start at: 2018-01-31 03:26:22
End at: 2018-01-31 03:26:52

# Below is generated by plot.py at 2018-01-31 06:55:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 294.75 Mbit/s
95th percentile per-packet one-way delay: 80.814 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 294.75 Mbit/s
95th percentile per-packet one-way delay: 80.814 ms
Loss rate: 0.01%
```
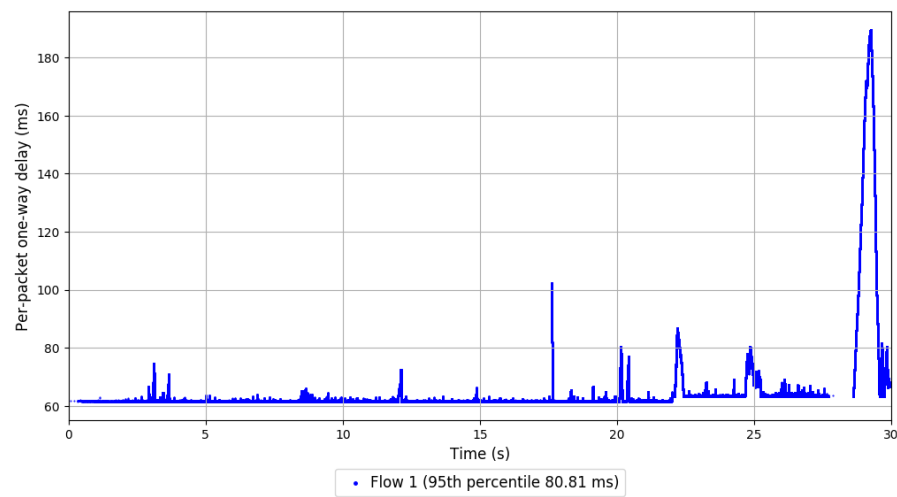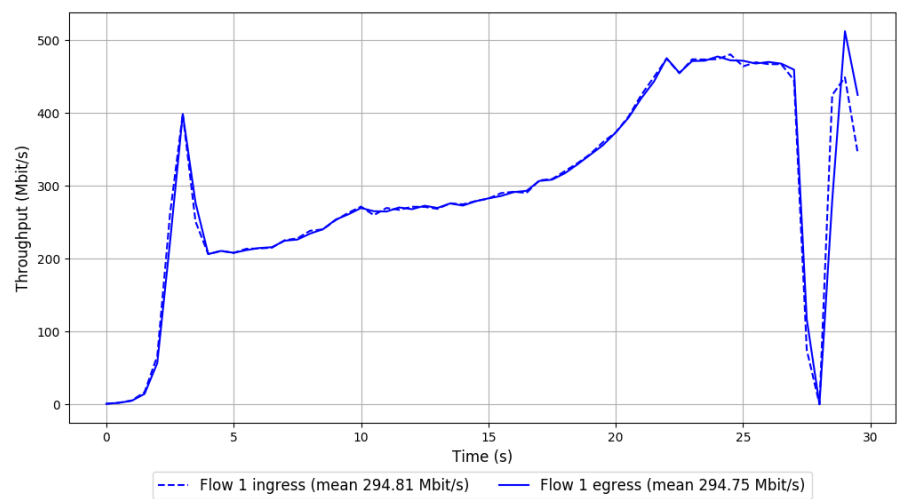
Run 3: Report of Vivace-loss — Data Link

Flow 1 ingress (mean 294.81 Mbit/s) — — — Flow 1 egress (mean 294.75 Mbit/s)

Flow 1 (95th percentile 80.81 ms)

```
Run 4: Statistics of Vivace-loss

Start at: 2018-01-31 03:40:07
End at: 2018-01-31 03:40:37


# Below is generated by plot.py at 2018-01-31 06:56:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 318.44 Mbit/s
95th percentile per-packet one-way delay: 117.414 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 318.44 Mbit/s
95th percentile per-packet one-way delay: 117.414 ms
Loss rate: 0.06%
```
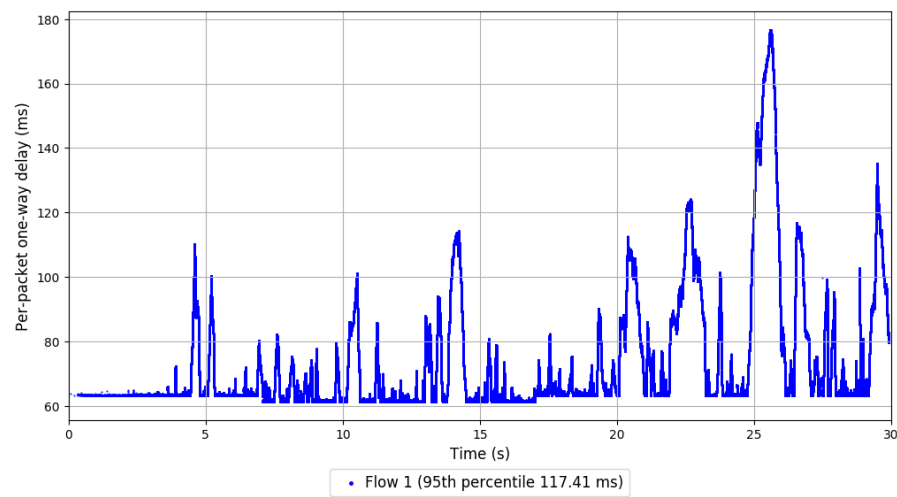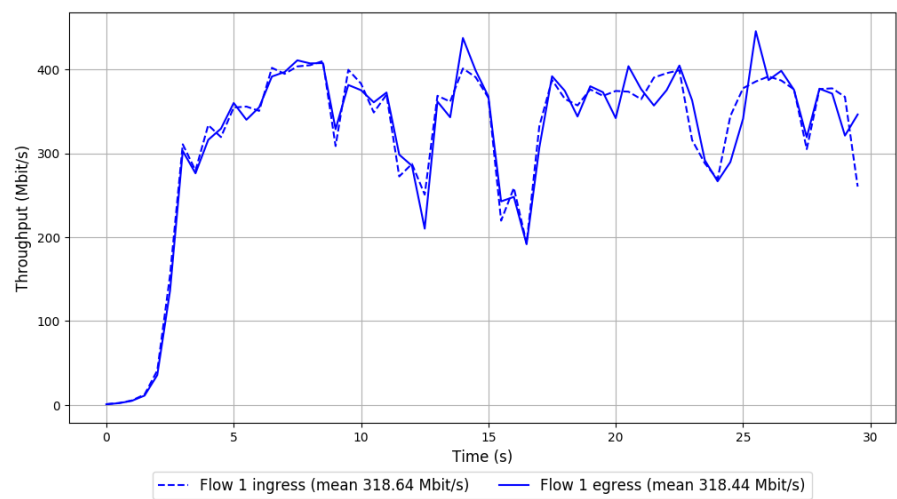
Run 4: Report of Vivace-loss — Data Link

Flow 1 ingress (mean 318.64 Mbit/s) — Flow 1 egress (mean 318.44 Mbit/s)

Flow 1 (95th percentile 117.41 ms)

```
Run 5: Statistics of Vivace-loss

Start at: 2018-01-31 03:53:28
End at: 2018-01-31 03:53:58

# Below is generated by plot.py at 2018-01-31 06:56:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 242.44 Mbit/s
95th percentile per-packet one-way delay: 156.188 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 242.44 Mbit/s
95th percentile per-packet one-way delay: 156.188 ms
Loss rate: 0.94%
```
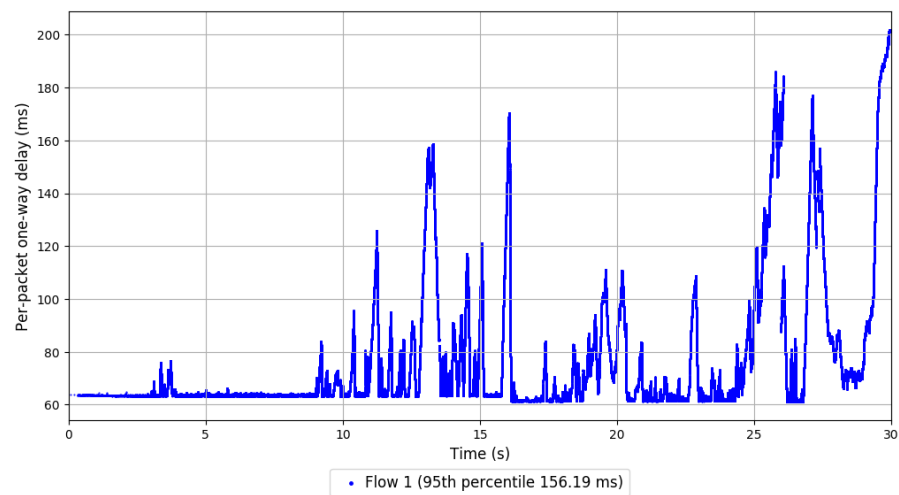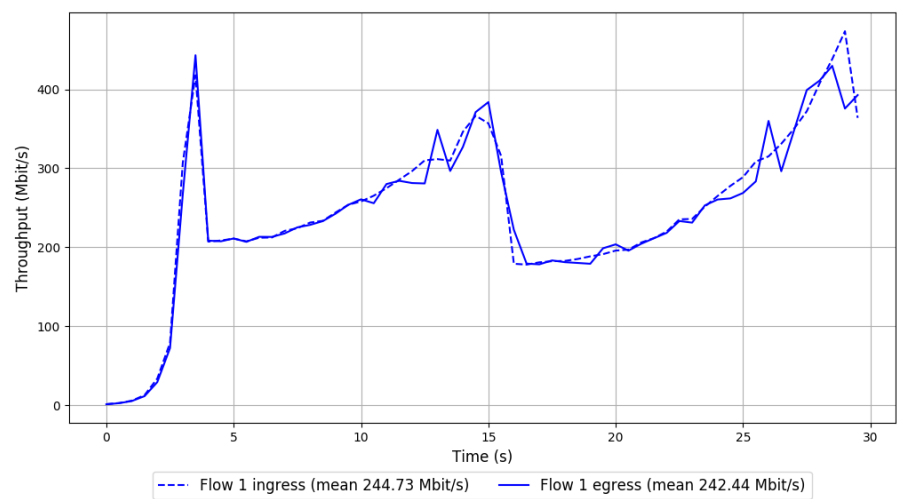
Run 5: Report of Vivace-loss — Data Link

```
Run 6: Statistics of Vivace-loss

Start at: 2018-01-31 04:06:46
End at: 2018-01-31 04:07:16


# Below is generated by plot.py at 2018-01-31 06:58:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 333.15 Mbit/s
95th percentile per-packet one-way delay: 150.620 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 333.15 Mbit/s
95th percentile per-packet one-way delay: 150.620 ms
Loss rate: 0.11%
```
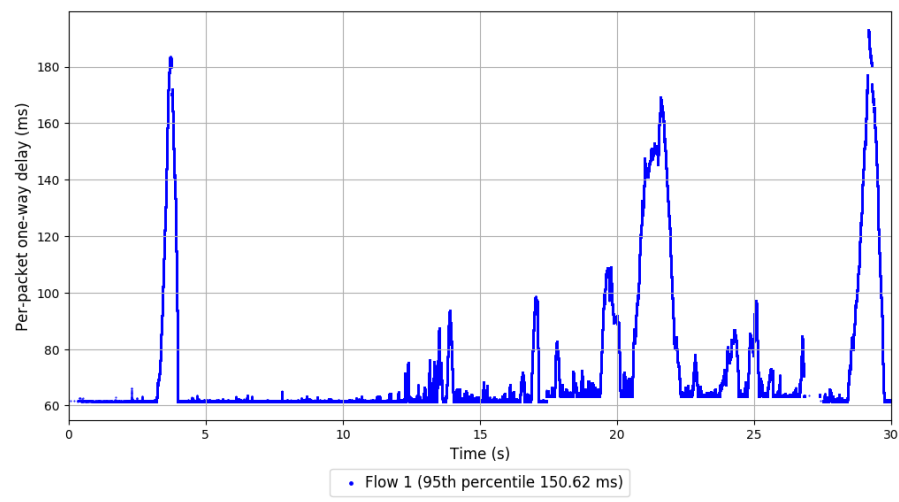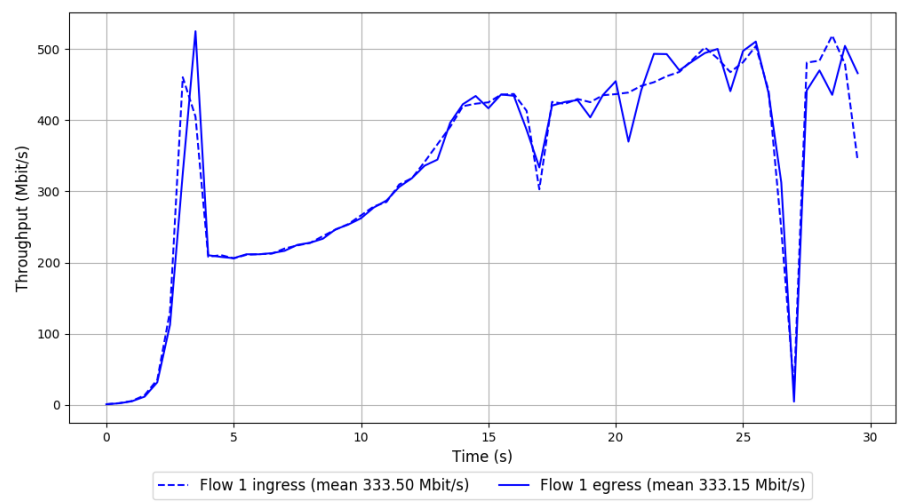
Run 6: Report of Vivace-loss — Data Link

Flow 1 ingress (mean 333.50 Mbit/s) --- Flow 1 egress (mean 333.15 Mbit/s)

• Flow 1 (95th percentile 150.62 ms)

```
Run 7: Statistics of Vivace-loss

Start at: 2018-01-31 04:20:03
End at: 2018-01-31 04:20:33


# Below is generated by plot.py at 2018-01-31 06:58:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 266.30 Mbit/s
95th percentile per-packet one-way delay: 248.219 ms
Loss rate: 2.33%
-- Flow 1:
Average throughput: 266.30 Mbit/s
95th percentile per-packet one-way delay: 248.219 ms
Loss rate: 2.33%
```
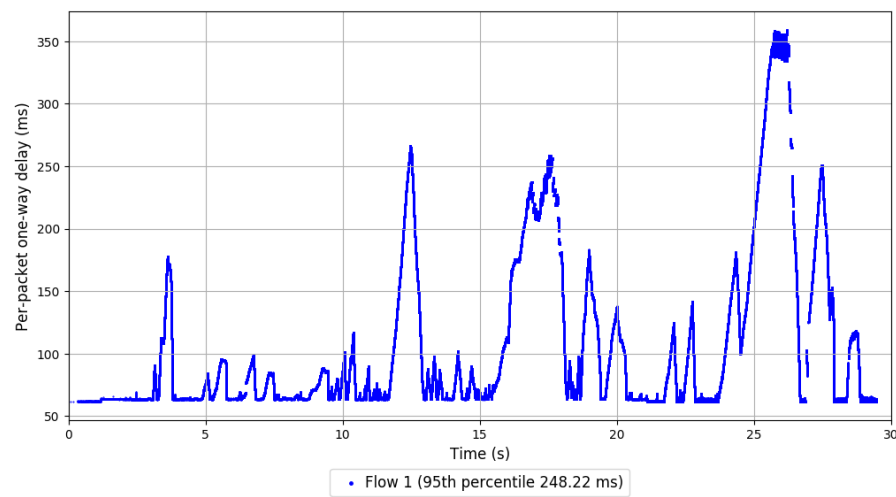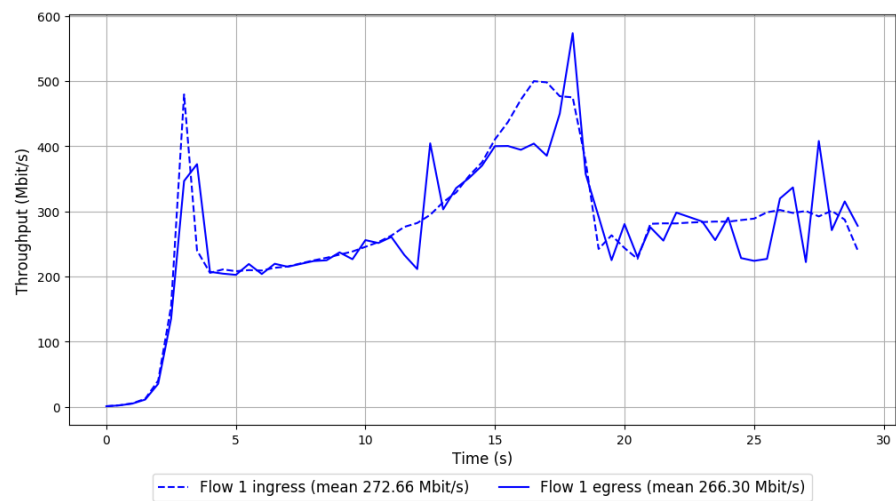
Run 7: Report of Vivace-loss — Data Link

Flow 1 ingress (mean 272.66 Mbit/s) — Flow 1 egress (mean 266.30 Mbit/s)

Flow 1 (95th percentile 248.22 ms)

```
Run 8: Statistics of Vivace-loss

Start at: 2018-01-31 04:33:21
End at: 2018-01-31 04:33:51


# Below is generated by plot.py at 2018-01-31 06:59:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 339.10 Mbit/s
95th percentile per-packet one-way delay: 66.556 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 339.10 Mbit/s
95th percentile per-packet one-way delay: 66.556 ms
Loss rate: 0.07%
```
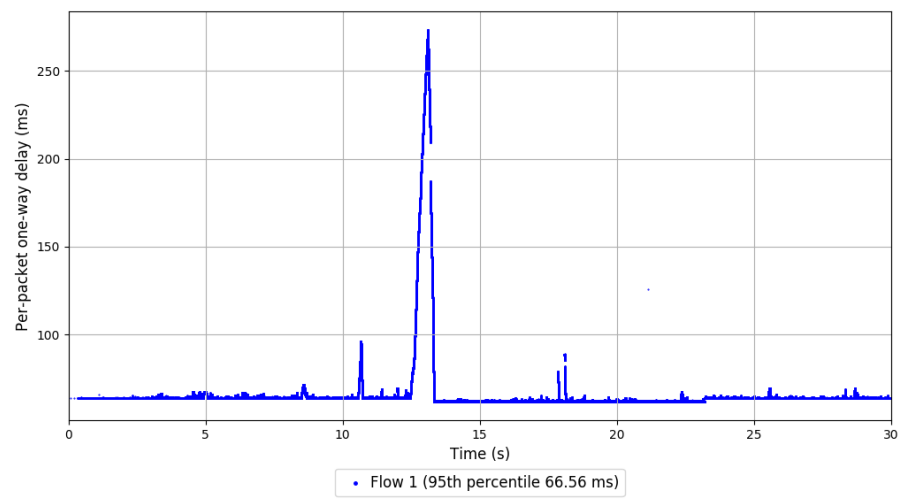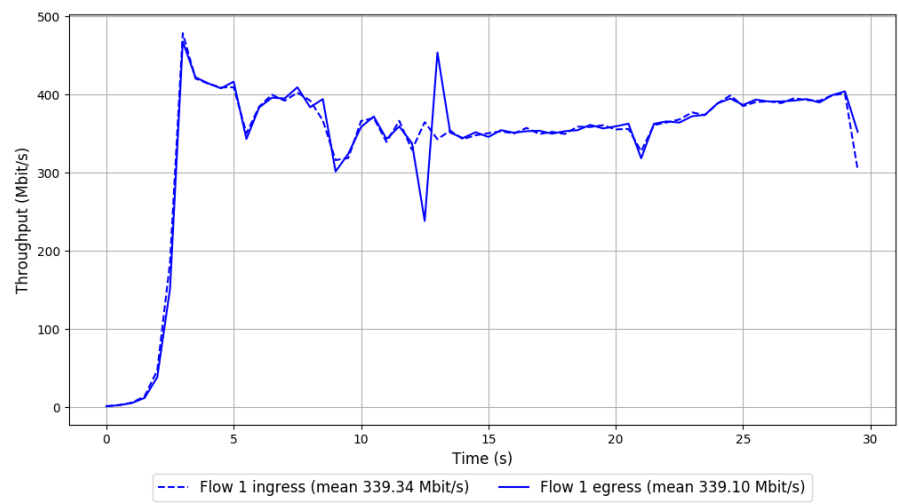
Run 8: Report of Vivace-loss — Data Link

Flow 1 ingress (mean 339.34 Mbit/s)   Flow 1 egress (mean 339.10 Mbit/s)

Flow 1 (95th percentile 66.56 ms)

```
Run 9: Statistics of Vivace-loss

Start at: 2018-01-31 04:46:39
End at: 2018-01-31 04:47:09

# Below is generated by plot.py at 2018-01-31 06:59:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 321.44 Mbit/s
95th percentile per-packet one-way delay: 96.977 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 321.44 Mbit/s
95th percentile per-packet one-way delay: 96.977 ms
Loss rate: 0.00%
```
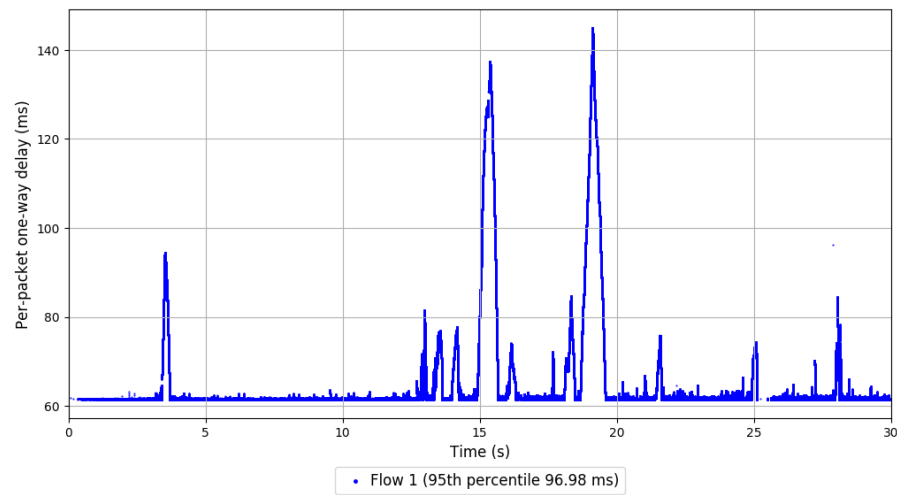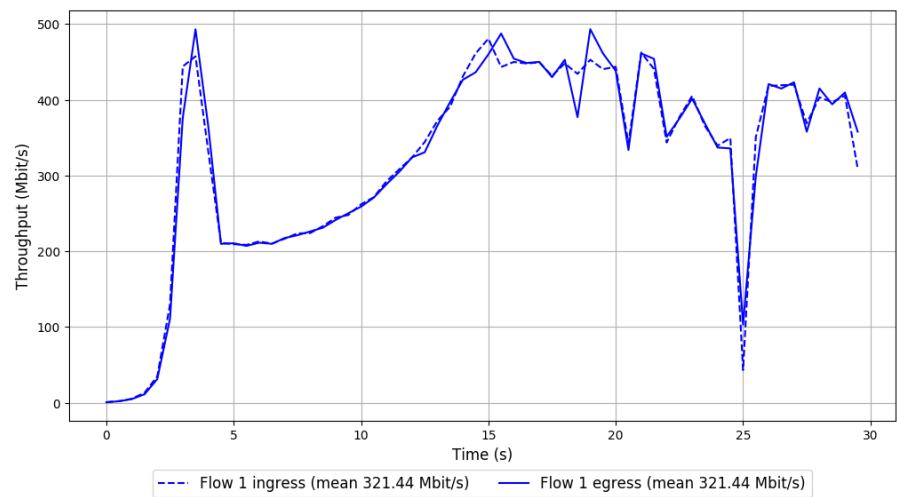
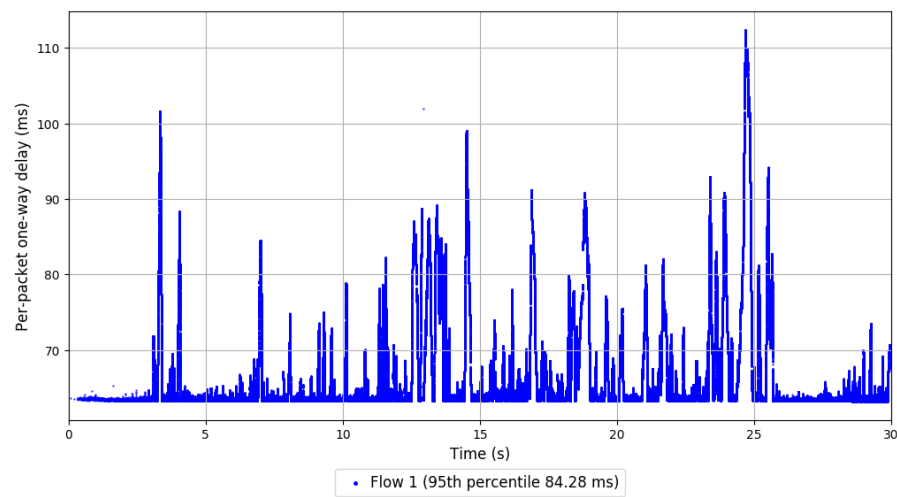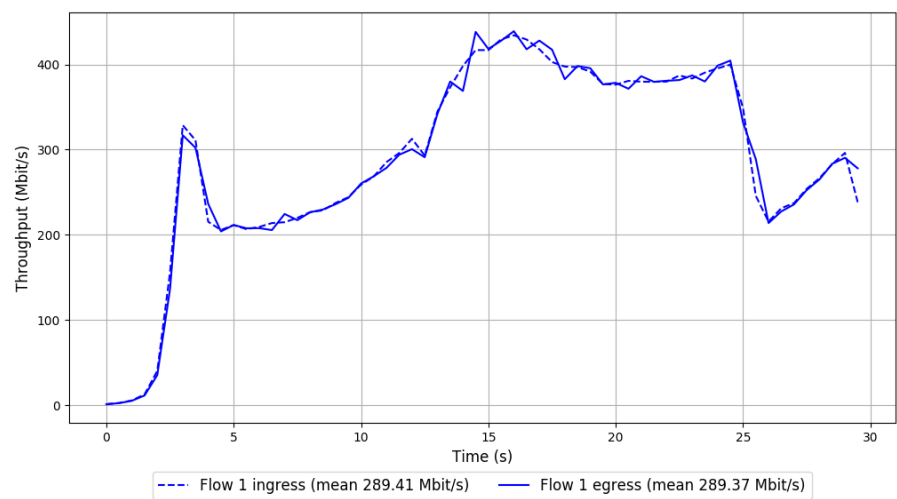## Run 9: Report of Vivace-loss — Data Link

```
Run 10: Statistics of Vivace-loss

Start at: 2018-01-31 05:00:25
End at: 2018-01-31 05:00:55

# Below is generated by plot.py at 2018-01-31 07:00:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 289.37 Mbit/s
95th percentile per-packet one-way delay: 84.277 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 289.37 Mbit/s
95th percentile per-packet one-way delay: 84.277 ms
Loss rate: 0.01%
```

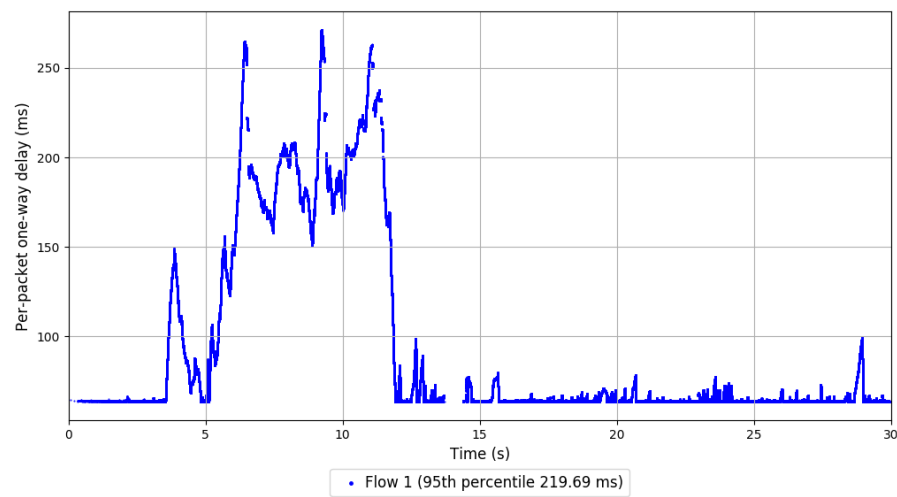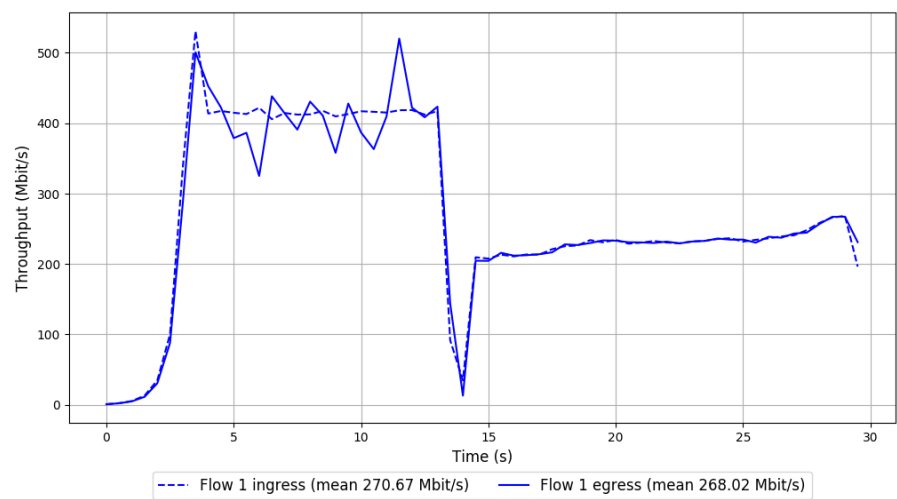Run 10: Report of Vivace-loss — Data Link

```
Run 1: Statistics of Vivace-LTE

Start at: 2018-01-31 03:08:39
End at: 2018-01-31 03:09:09

# Below is generated by plot.py at 2018-01-31 07:00:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 268.02 Mbit/s
95th percentile per-packet one-way delay: 219.688 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 268.02 Mbit/s
95th percentile per-packet one-way delay: 219.688 ms
Loss rate: 0.98%
```

Run 1: Report of Vivace-LTE — Data Link

Flow 1 ingress (mean 270.67 Mbit/s)   Flow 1 egress (mean 268.02 Mbit/s)

Flow 1 (95th percentile 219.69 ms)

```
Run 2: Statistics of Vivace-LTE

Start at: 2018-01-31 03:21:55
End at: 2018-01-31 03:22:25

# Below is generated by plot.py at 2018-01-31 07:00:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 223.19 Mbit/s
95th percentile per-packet one-way delay: 146.085 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 223.19 Mbit/s
95th percentile per-packet one-way delay: 146.085 ms
Loss rate: 0.00%
```
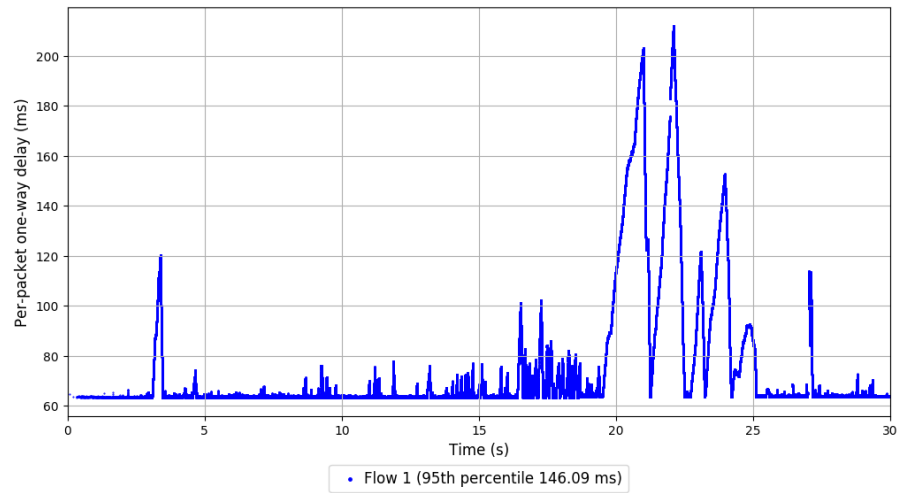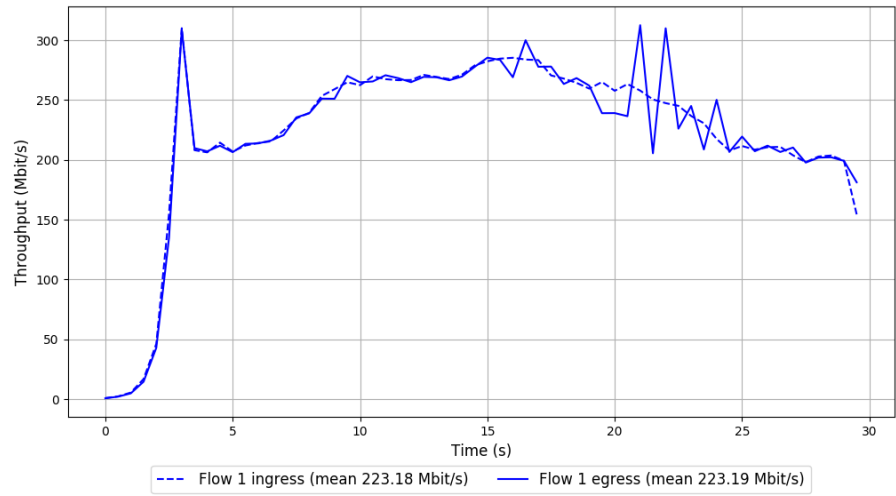
Run 2: Report of Vivace-LTE — Data Link

```
Run 3: Statistics of Vivace-LTE

Start at: 2018-01-31 03:35:34
End at: 2018-01-31 03:36:04

# Below is generated by plot.py at 2018-01-31 07:01:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 256.30 Mbit/s
95th percentile per-packet one-way delay: 72.385 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 256.30 Mbit/s
95th percentile per-packet one-way delay: 72.385 ms
Loss rate: 0.01%
```
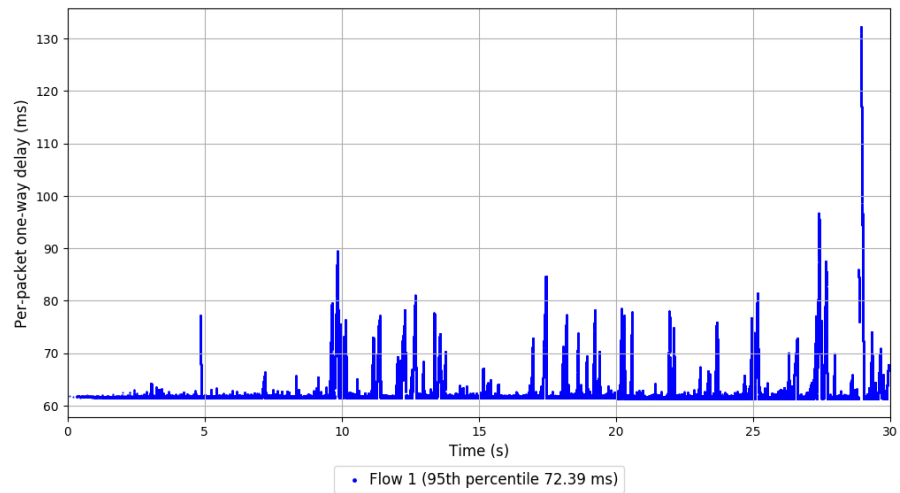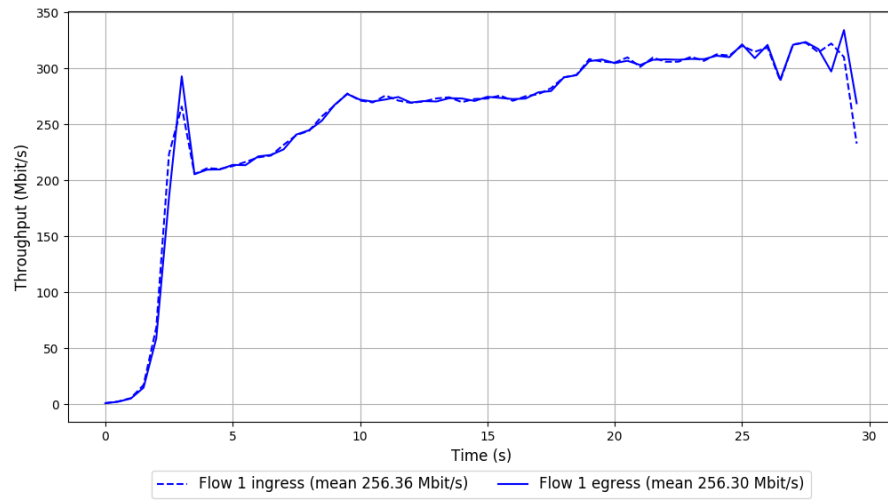
Run 3: Report of Vivace-LTE — Data Link

```
Run 4: Statistics of Vivace-LTE

Start at: 2018-01-31 03:49:02
End at: 2018-01-31 03:49:32

# Below is generated by plot.py at 2018-01-31 07:02:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 240.39 Mbit/s
95th percentile per-packet one-way delay: 184.961 ms
Loss rate: 1.87%
-- Flow 1:
Average throughput: 240.39 Mbit/s
95th percentile per-packet one-way delay: 184.961 ms
Loss rate: 1.87%
```
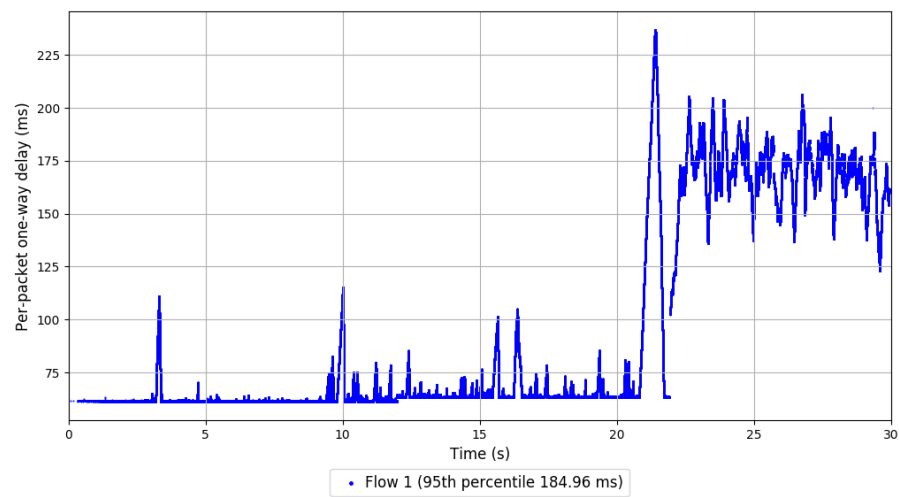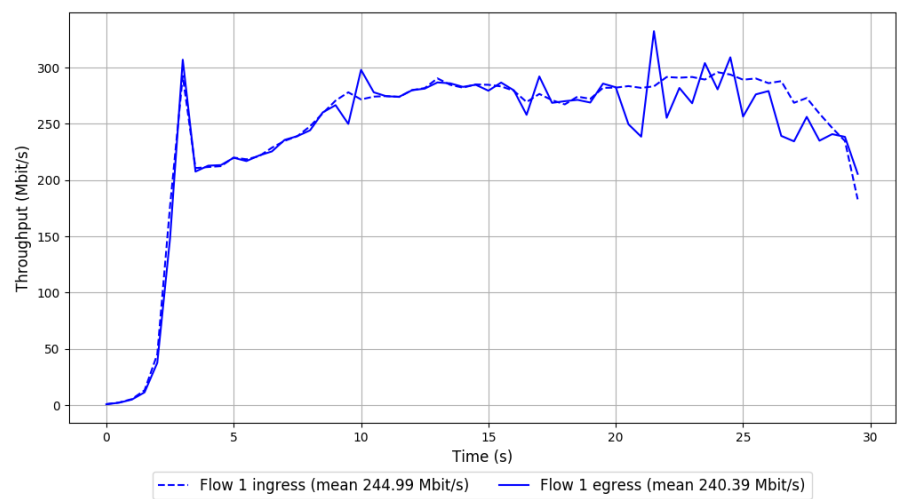
Run 4: Report of Vivace-LTE — Data Link

Flow 1 ingress (mean 244.99 Mbit/s) ---- Flow 1 egress (mean 240.39 Mbit/s)

• Flow 1 (95th percentile 184.96 ms)

```
Run 5: Statistics of Vivace-LTE

Start at: 2018-01-31 04:02:18
End at: 2018-01-31 04:02:48

# Below is generated by plot.py at 2018-01-31 07:02:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 210.80 Mbit/s
95th percentile per-packet one-way delay: 64.406 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 210.80 Mbit/s
95th percentile per-packet one-way delay: 64.406 ms
Loss rate: 0.01%
```
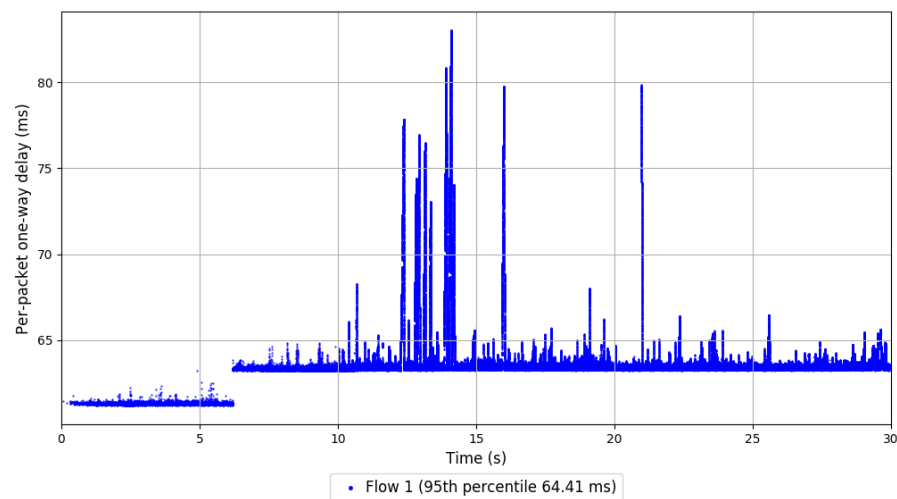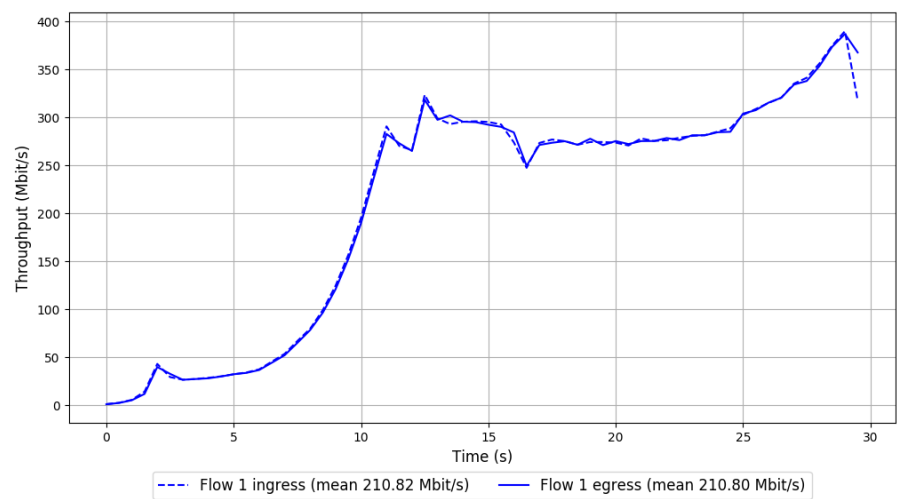
Run 5: Report of Vivace-LTE — Data Link

```
Run 6: Statistics of Vivace-LTE

Start at: 2018-01-31 04:15:34
End at: 2018-01-31 04:16:04

# Below is generated by plot.py at 2018-01-31 07:02:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 208.36 Mbit/s
95th percentile per-packet one-way delay: 103.067 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 208.36 Mbit/s
95th percentile per-packet one-way delay: 103.067 ms
Loss rate: 0.70%
```
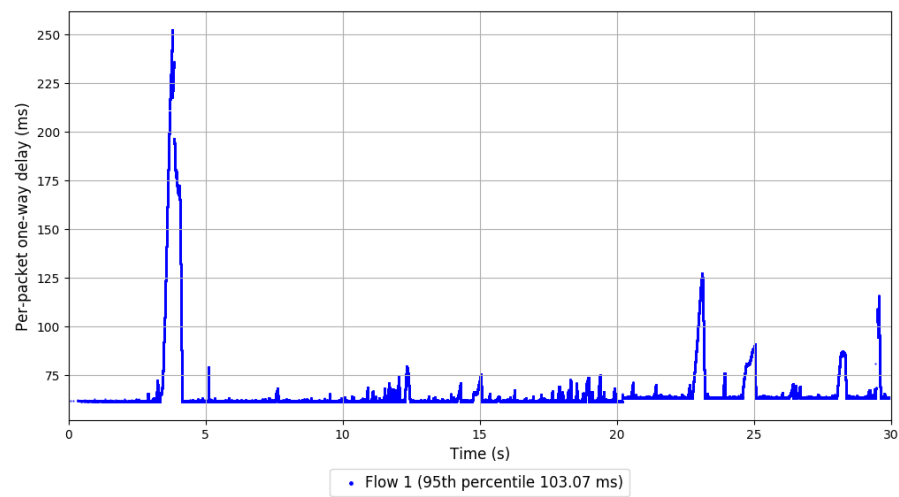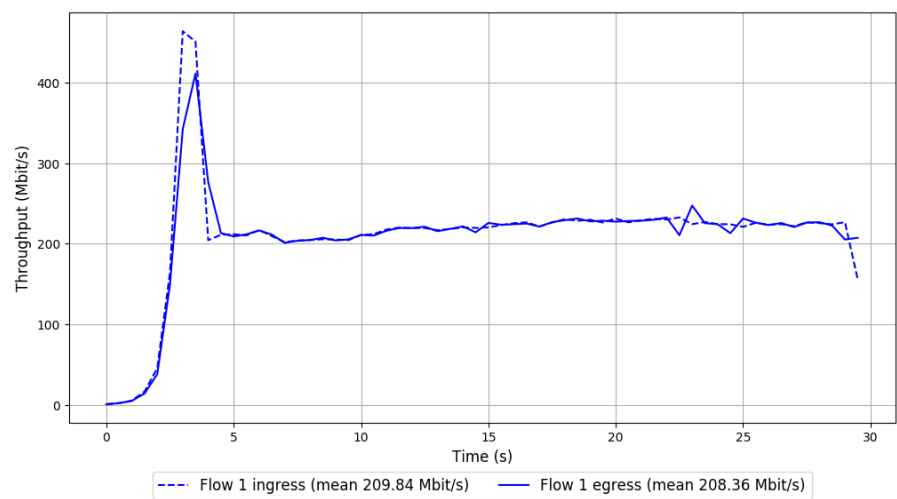
Run 6: Report of Vivace-LTE — Data Link

```
Run 7: Statistics of Vivace-LTE

Start at: 2018-01-31 04:28:39
End at: 2018-01-31 04:29:09

# Below is generated by plot.py at 2018-01-31 07:04:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 369.40 Mbit/s
95th percentile per-packet one-way delay: 136.258 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 369.40 Mbit/s
95th percentile per-packet one-way delay: 136.258 ms
Loss rate: 0.03%
```
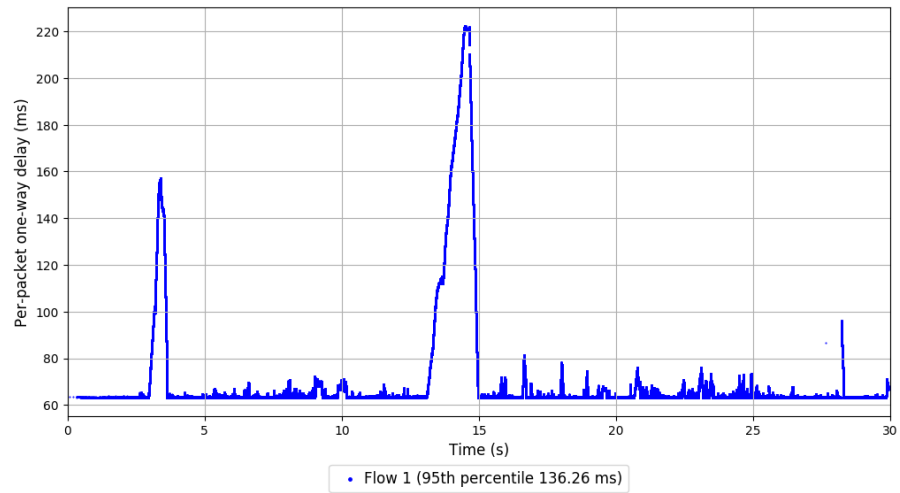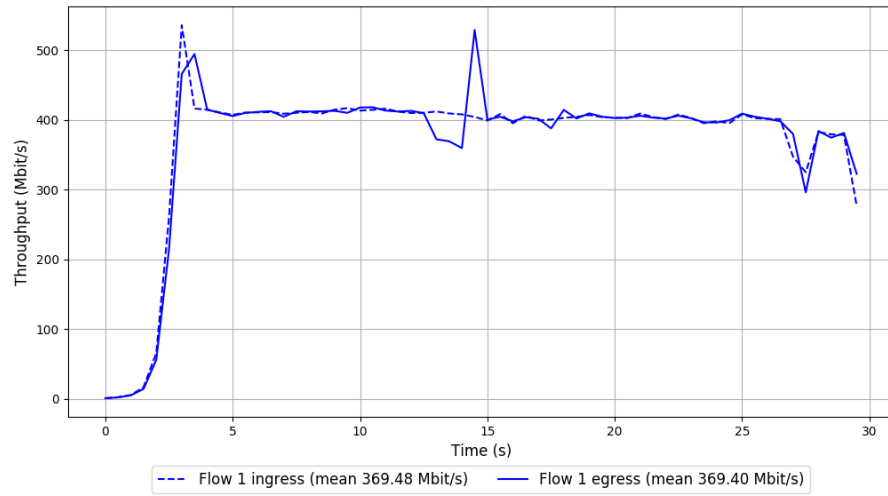
Run 7: Report of Vivace-LTE — Data Link

Flow 1 ingress (mean 369.48 Mbit/s) --- Flow 1 egress (mean 369.40 Mbit/s)

• Flow 1 (95th percentile 136.26 ms)

```
Run 8: Statistics of Vivace-LTE

Start at: 2018-01-31 04:42:08
End at: 2018-01-31 04:42:38

# Below is generated by plot.py at 2018-01-31 07:04:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 248.22 Mbit/s
95th percentile per-packet one-way delay: 63.505 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 248.22 Mbit/s
95th percentile per-packet one-way delay: 63.505 ms
Loss rate: 0.00%
```
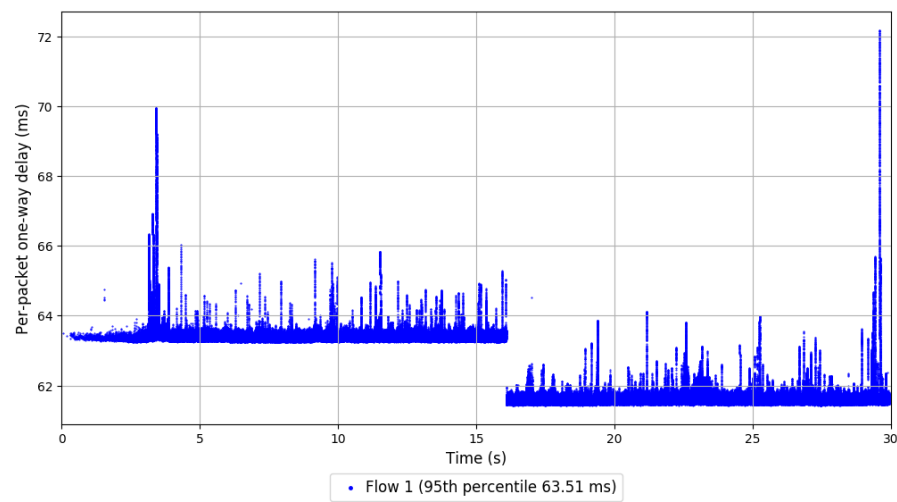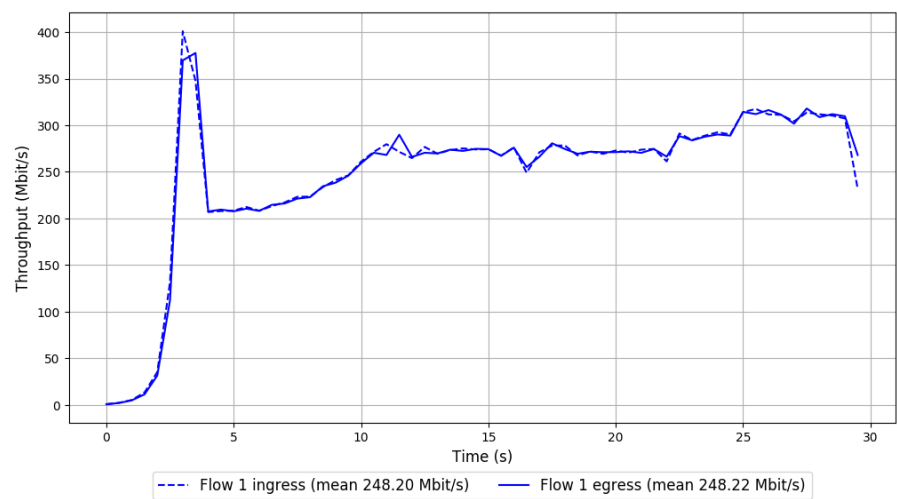
Run 8: Report of Vivace-LTE — Data Link

```
Run 9: Statistics of Vivace-LTE

Start at: 2018-01-31 04:55:45
End at: 2018-01-31 04:56:15


# Below is generated by plot.py at 2018-01-31 07:04:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 340.62 Mbit/s
95th percentile per-packet one-way delay: 91.776 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 340.62 Mbit/s
95th percentile per-packet one-way delay: 91.776 ms
Loss rate: 0.00%
```
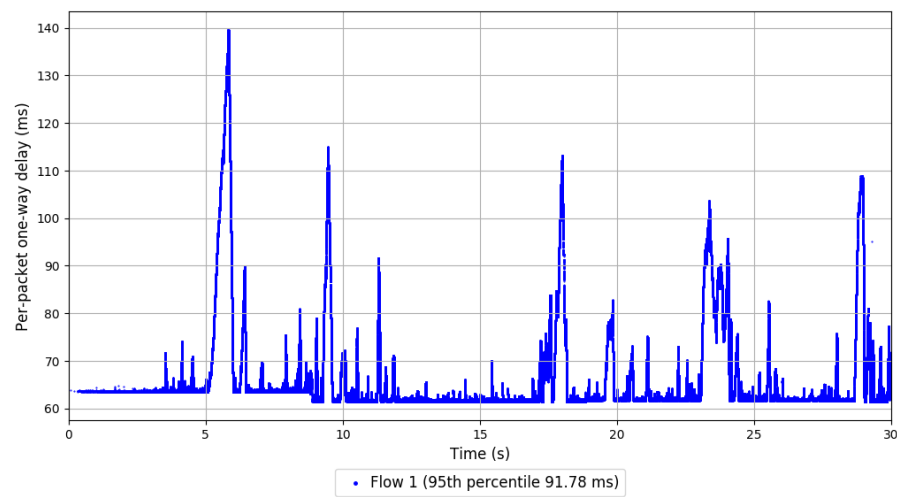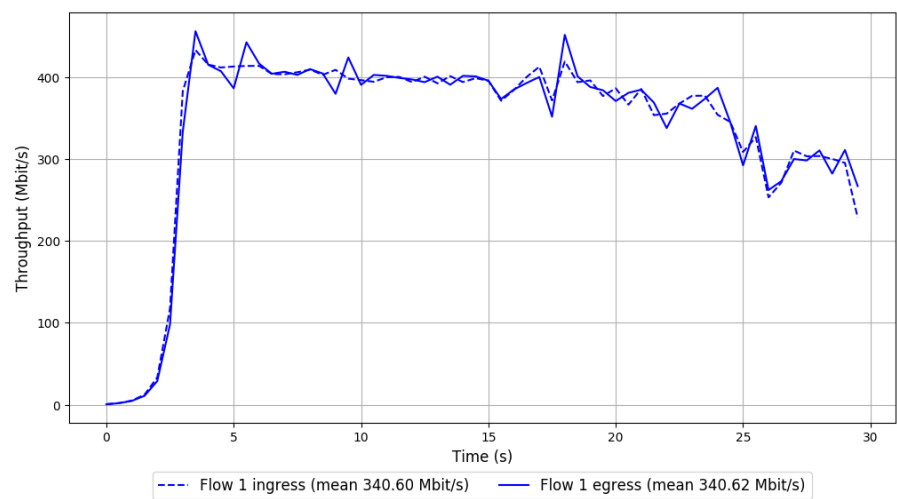
Run 9: Report of Vivace-LTE — Data Link

Flow 1 ingress (mean 340.60 Mbit/s)   Flow 1 egress (mean 340.62 Mbit/s)

Flow 1 (95th percentile 91.78 ms)

```
Run 10: Statistics of Vivace-LTE

Start at: 2018-01-31 05:09:10
End at: 2018-01-31 05:09:40

# Below is generated by plot.py at 2018-01-31 07:04:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 237.77 Mbit/s
95th percentile per-packet one-way delay: 63.545 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 237.77 Mbit/s
95th percentile per-packet one-way delay: 63.545 ms
Loss rate: 0.00%
```

Run 10: Report of Vivace-LTE — Data Link