

Pantheon Report

Generated at 2017-12-20 01:04:50 (UTC).

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

Repeated the test of 14 congestion control schemes 10 times.

Each test lasted for 30 seconds running 1 flow.

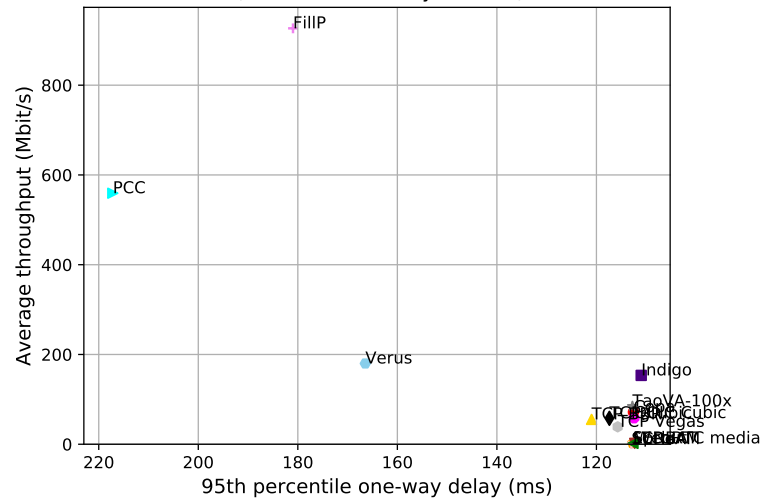
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

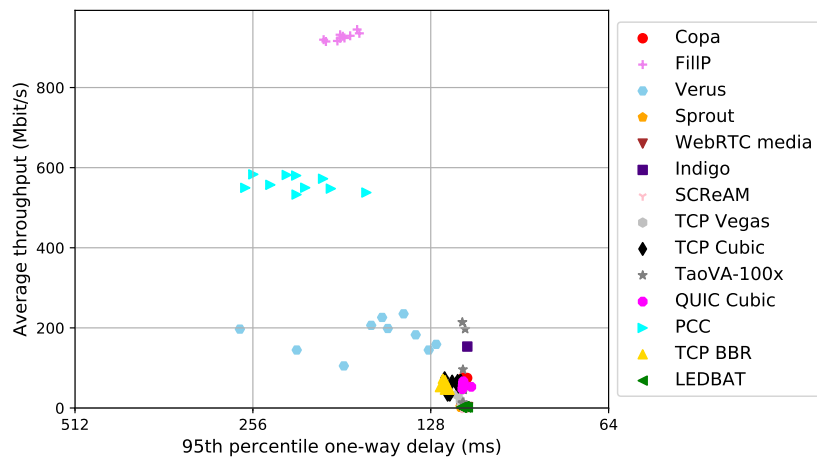
Git summary:

```
branch: master @ 904a5750834816b1e46a2c86405d707788d27c16
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/fillp @ dcaef6b00654e660f73f7ed679d2eab61ce08639
third_party/genericCC @ 80b516c448f795fd6e9675f7177b69c622f07da8
third_party/indigo @ b19f3730105f9aa95452552af924e3719b03cc55
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/webrtc @ a488197ddd041ace68a42849b2540ad834825f42
```

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



test from GCE London 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	55.35	120.98	0.32
TCP Cubic	10	57.72	117.39	0.34
LEDBAT	10	1.87	112.66	0.03
PCC	10	559.28	217.17	2.23
QUIC Cubic	9	58.35	112.43	0.00
SCReAM	10	0.22	112.97	0.00
WebRTC media	10	1.95	112.31	0.00
Sprout	10	2.26	112.74	0.33
TaoVA-100x	7	84.46	112.77	0.21
TCP Vegas	10	38.80	115.73	0.26
Verus	10	179.93	166.44	0.80
Copa	10	71.55	112.57	0.01
FillP	10	926.67	180.97	1.83
Indigo	1	153.40	111.00	0.00

Run 1: Statistics of TCP BBR

Start at: 2017-12-19 21:21:59

End at: 2017-12-19 21:22:29

Below is generated by plot.py at 2017-12-20 00:18:33

Datalink statistics

-- Total of 1 flow:

Average throughput: 65.78 Mbit/s

95th percentile per-packet one-way delay: 121.304 ms

Loss rate: 0.05%

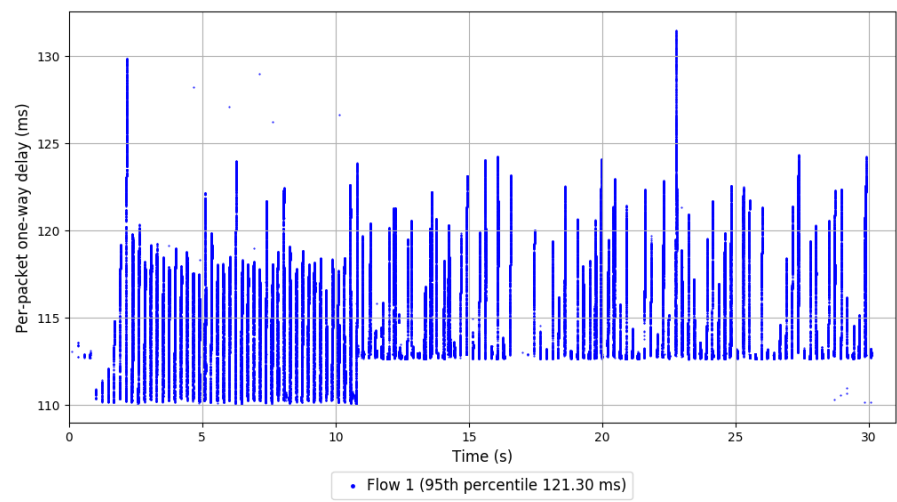
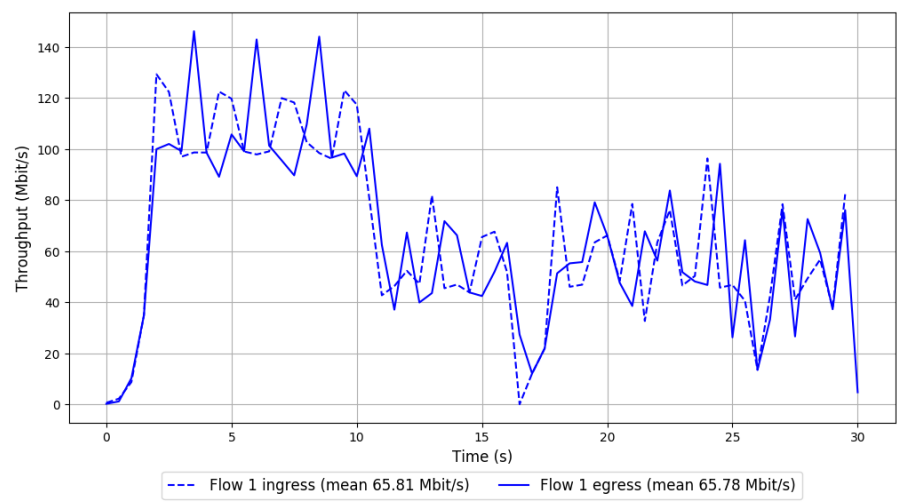
-- Flow 1:

Average throughput: 65.78 Mbit/s

95th percentile per-packet one-way delay: 121.304 ms

Loss rate: 0.05%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2017-12-19 21:34:04

End at: 2017-12-19 21:34:34

Below is generated by plot.py at 2017-12-20 00:18:34

Datalink statistics

-- Total of 1 flow:

Average throughput: 72.90 Mbit/s

95th percentile per-packet one-way delay: 122.107 ms

Loss rate: 0.00%

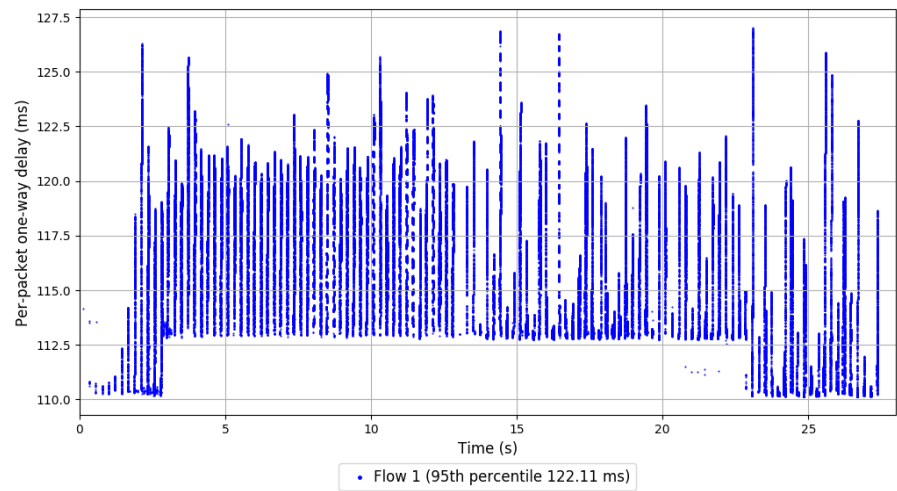
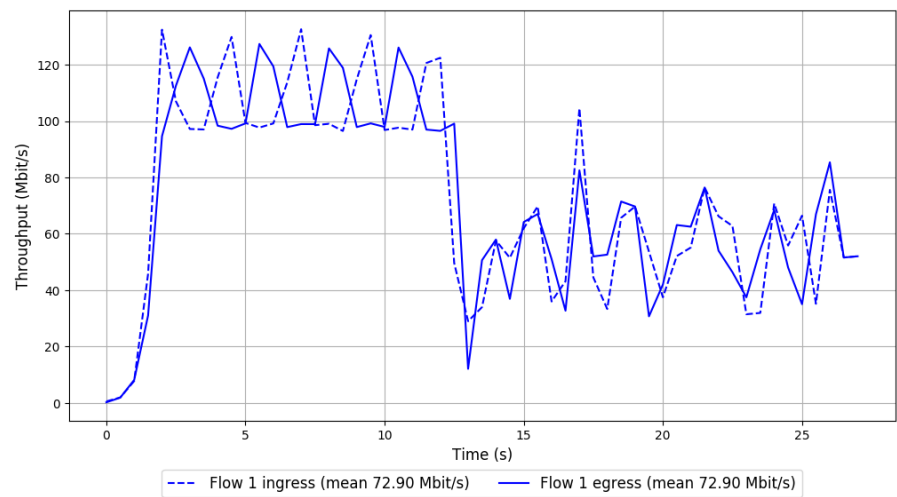
-- Flow 1:

Average throughput: 72.90 Mbit/s

95th percentile per-packet one-way delay: 122.107 ms

Loss rate: 0.00%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2017-12-19 21:46:03

End at: 2017-12-19 21:46:33

Below is generated by plot.py at 2017-12-20 00:18:39

Datalink statistics

-- Total of 1 flow:

Average throughput: 69.65 Mbit/s

95th percentile per-packet one-way delay: 121.100 ms

Loss rate: 0.00%

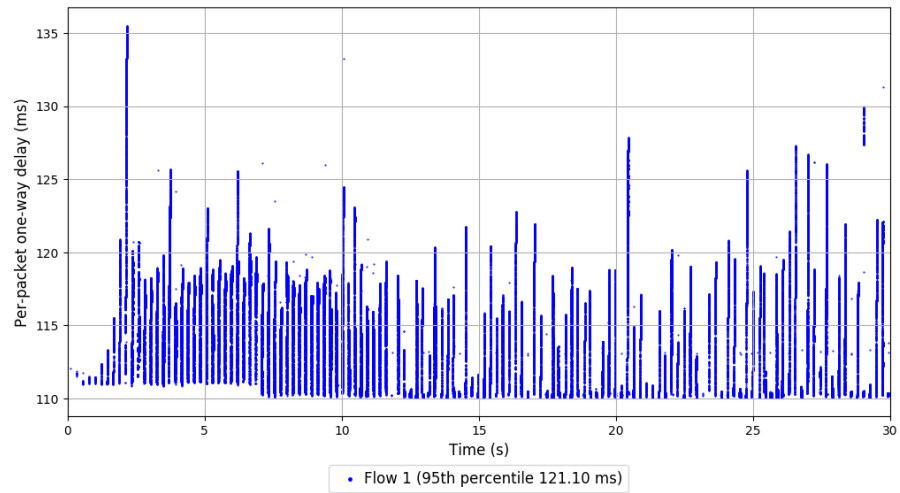
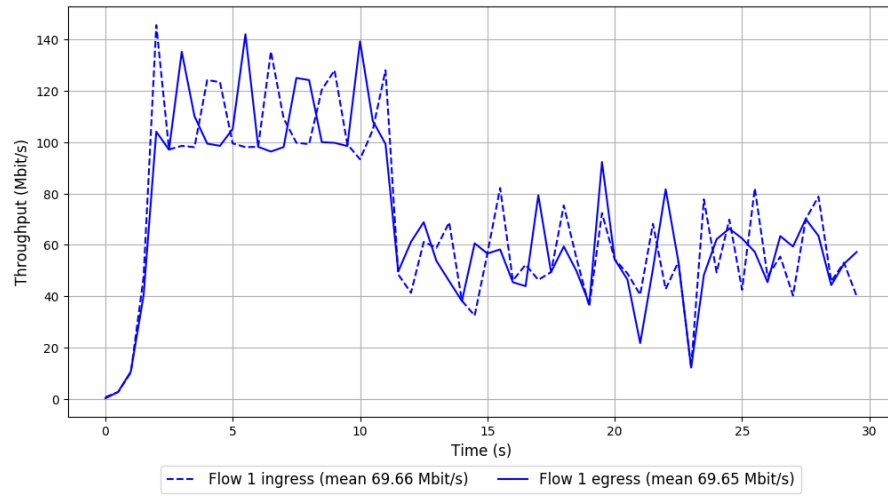
-- Flow 1:

Average throughput: 69.65 Mbit/s

95th percentile per-packet one-way delay: 121.100 ms

Loss rate: 0.00%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2017-12-19 21:58:20

End at: 2017-12-19 21:58:50

Below is generated by plot.py at 2017-12-20 00:18:39

Datalink statistics

-- Total of 1 flow:

Average throughput: 45.86 Mbit/s

95th percentile per-packet one-way delay: 121.131 ms

Loss rate: 2.31%

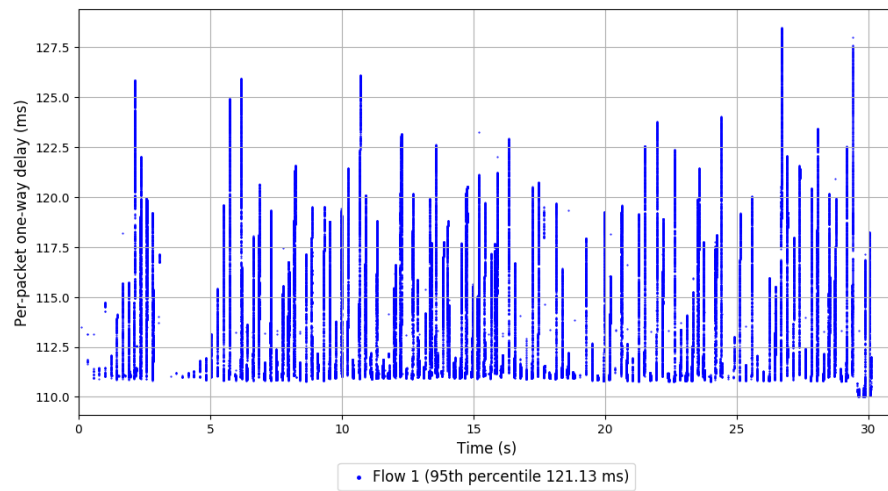
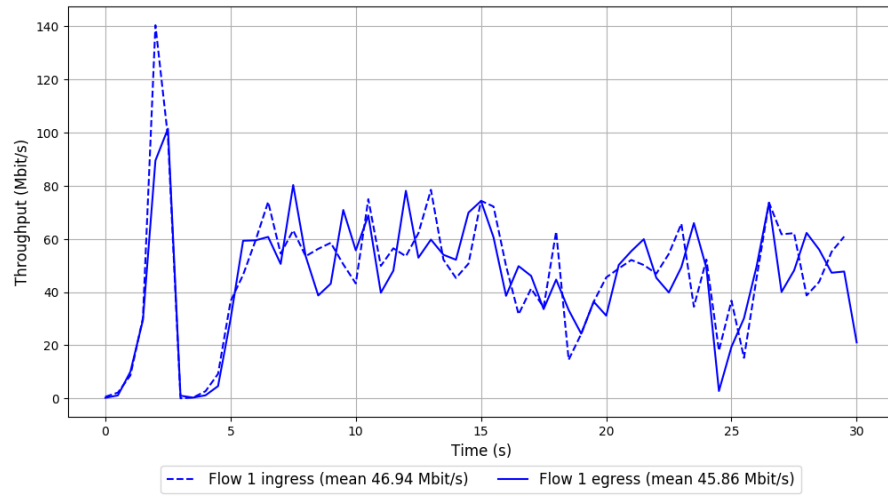
-- Flow 1:

Average throughput: 45.86 Mbit/s

95th percentile per-packet one-way delay: 121.131 ms

Loss rate: 2.31%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2017-12-19 22:10:32

End at: 2017-12-19 22:11:02

Below is generated by plot.py at 2017-12-20 00:18:39

Datalink statistics

-- Total of 1 flow:

Average throughput: 49.08 Mbit/s

95th percentile per-packet one-way delay: 120.726 ms

Loss rate: 0.40%

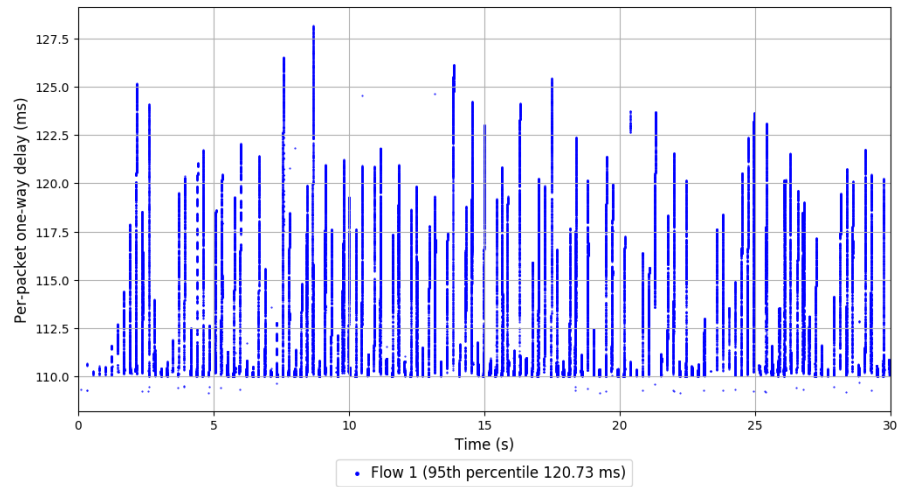
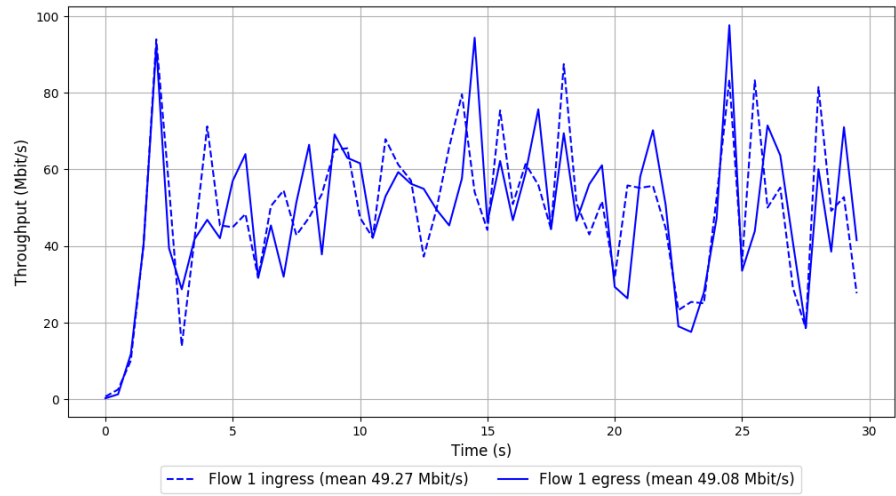
-- Flow 1:

Average throughput: 49.08 Mbit/s

95th percentile per-packet one-way delay: 120.726 ms

Loss rate: 0.40%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2017-12-19 22:23:11

End at: 2017-12-19 22:23:41

Below is generated by plot.py at 2017-12-20 00:18:39

Datalink statistics

-- Total of 1 flow:

Average throughput: 49.56 Mbit/s

95th percentile per-packet one-way delay: 119.578 ms

Loss rate: 0.00%

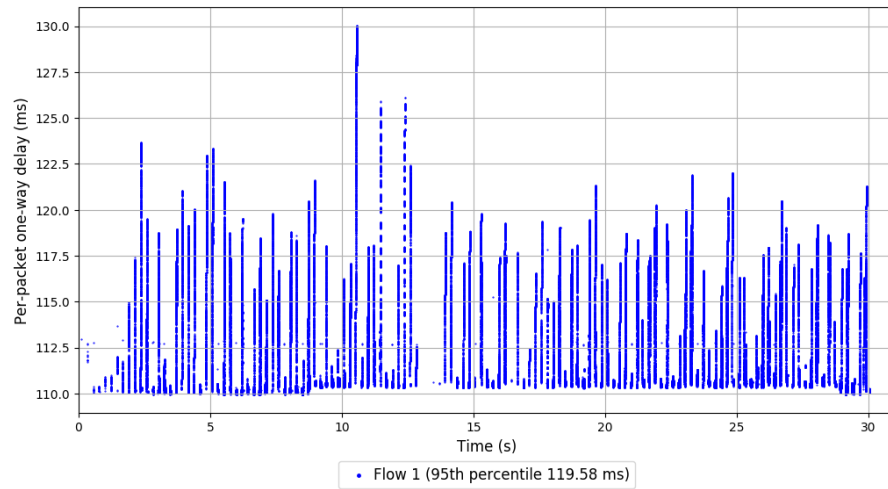
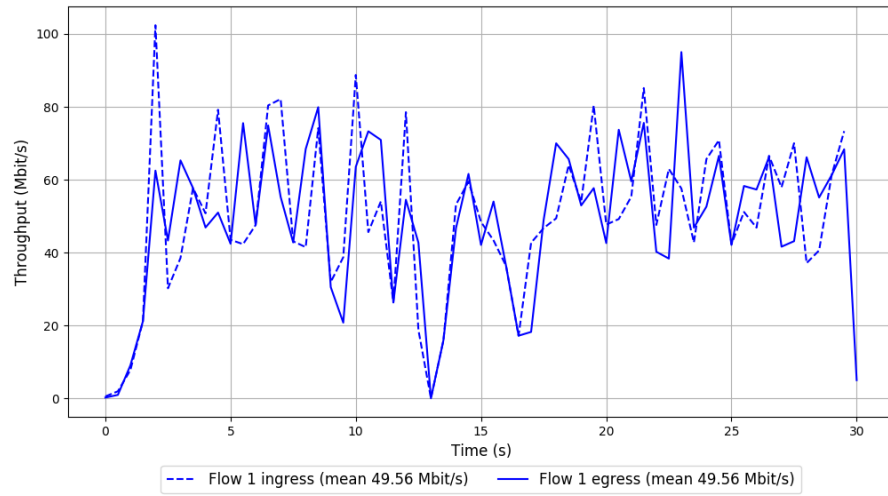
-- Flow 1:

Average throughput: 49.56 Mbit/s

95th percentile per-packet one-way delay: 119.578 ms

Loss rate: 0.00%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2017-12-19 22:35:38

End at: 2017-12-19 22:36:08

Below is generated by plot.py at 2017-12-20 00:18:39

Datalink statistics

-- Total of 1 flow:

Average throughput: 45.67 Mbit/s

95th percentile per-packet one-way delay: 118.898 ms

Loss rate: 0.35%

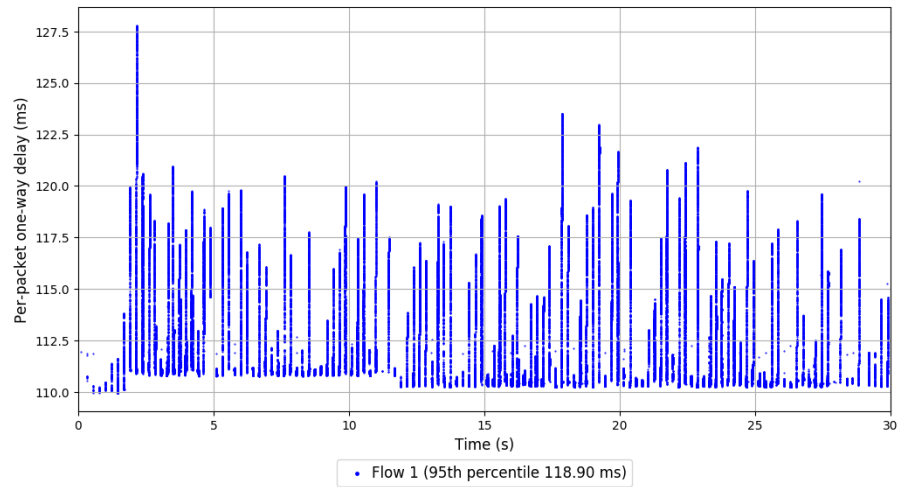
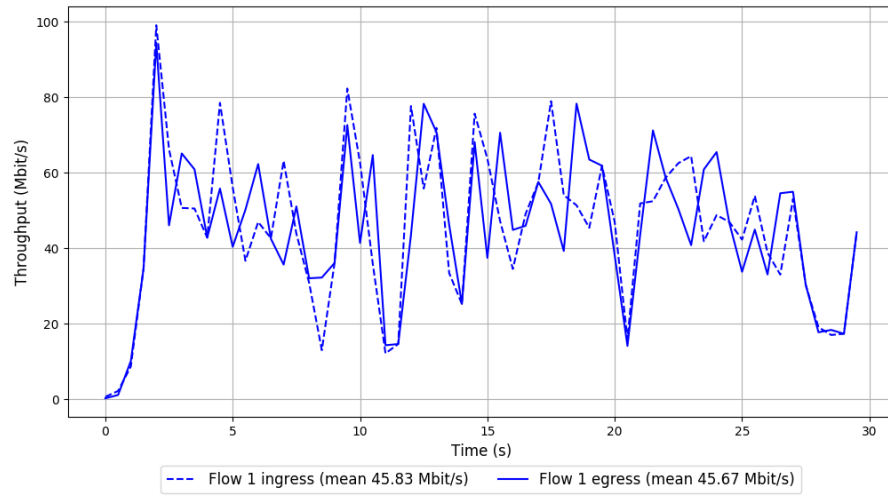
-- Flow 1:

Average throughput: 45.67 Mbit/s

95th percentile per-packet one-way delay: 118.898 ms

Loss rate: 0.35%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2017-12-19 22:48:19

End at: 2017-12-19 22:48:49

Below is generated by plot.py at 2017-12-20 00:18:39

Datalink statistics

-- Total of 1 flow:

Average throughput: 52.18 Mbit/s

95th percentile per-packet one-way delay: 123.503 ms

Loss rate: 0.02%

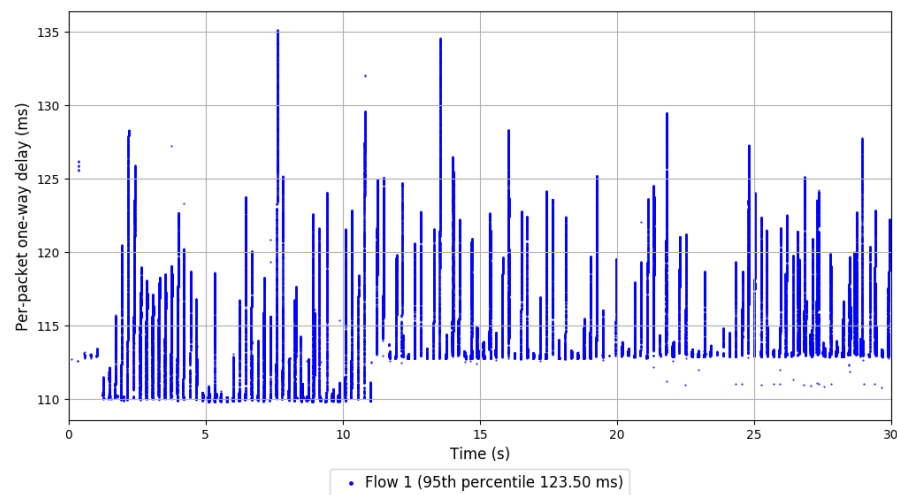
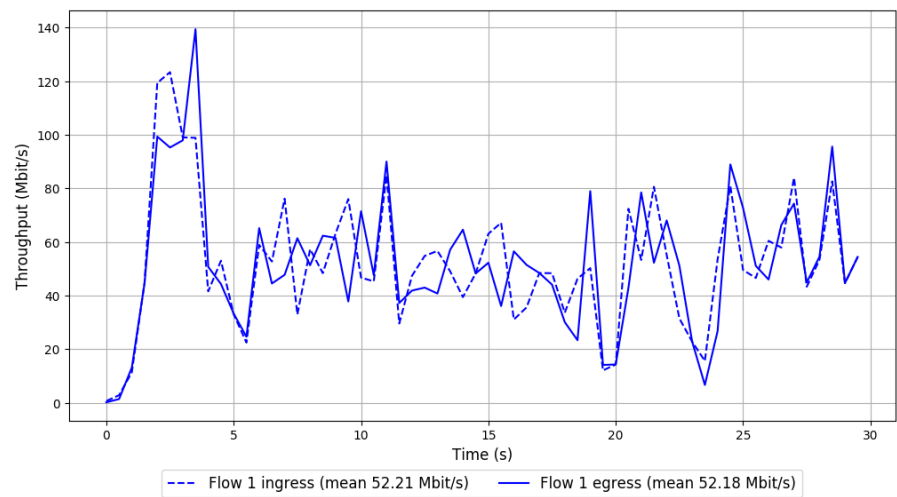
-- Flow 1:

Average throughput: 52.18 Mbit/s

95th percentile per-packet one-way delay: 123.503 ms

Loss rate: 0.02%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2017-12-19 23:00:24

End at: 2017-12-19 23:00:54

Below is generated by plot.py at 2017-12-20 00:19:13

Datalink statistics

-- Total of 1 flow:

Average throughput: 55.56 Mbit/s

95th percentile per-packet one-way delay: 121.619 ms

Loss rate: 0.00%

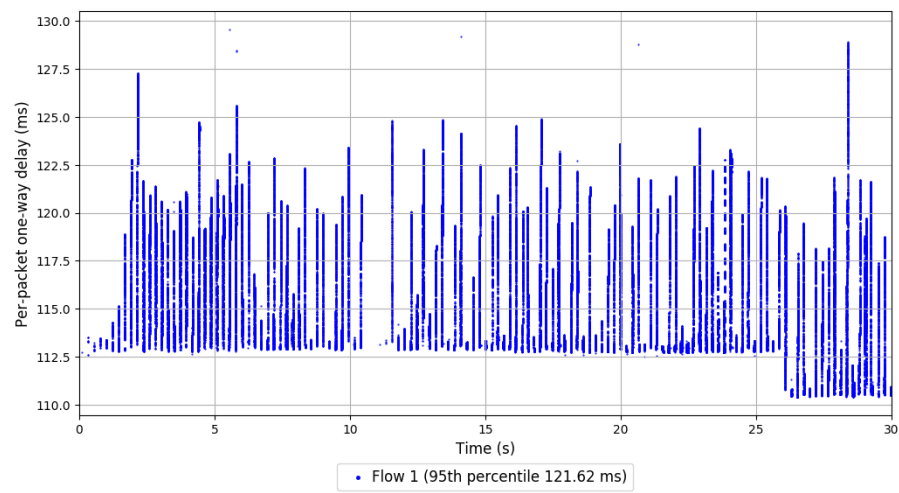
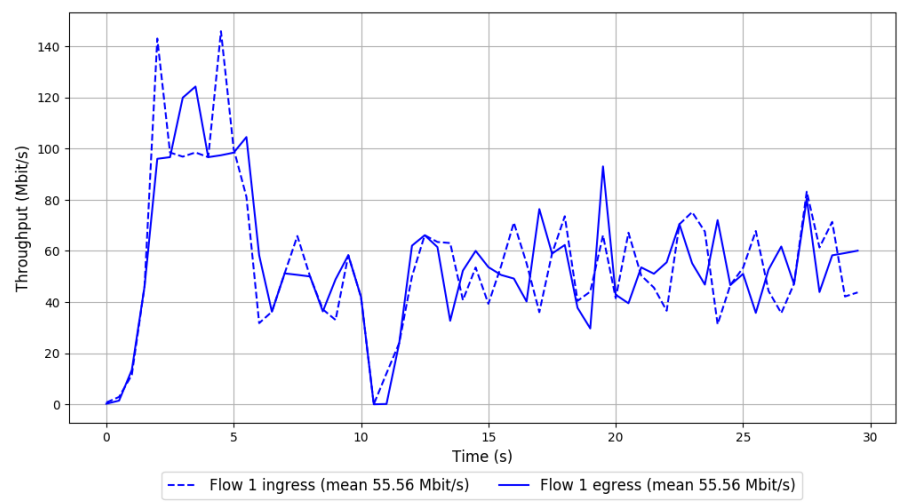
-- Flow 1:

Average throughput: 55.56 Mbit/s

95th percentile per-packet one-way delay: 121.619 ms

Loss rate: 0.00%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2017-12-19 23:12:36

End at: 2017-12-19 23:13:06

Below is generated by plot.py at 2017-12-20 00:19:13

Datalink statistics

-- Total of 1 flow:

Average throughput: 47.31 Mbit/s

95th percentile per-packet one-way delay: 119.799 ms

Loss rate: 0.02%

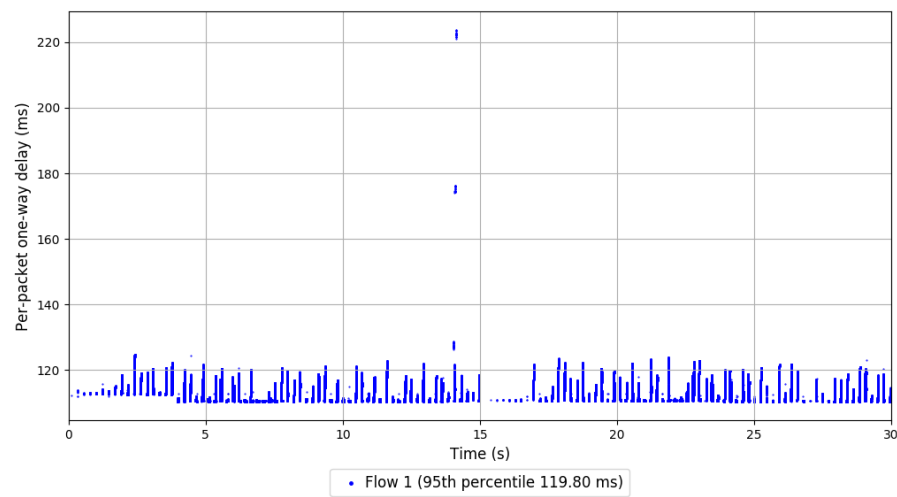
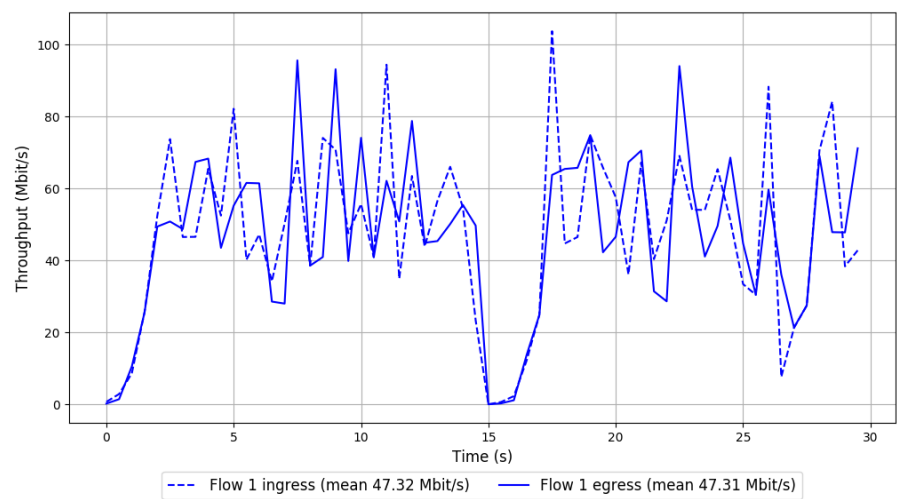
-- Flow 1:

Average throughput: 47.31 Mbit/s

95th percentile per-packet one-way delay: 119.799 ms

Loss rate: 0.02%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2017-12-19 21:19:10

End at: 2017-12-19 21:19:40

Below is generated by plot.py at 2017-12-20 00:19:44

Datalink statistics

-- Total of 1 flow:

Average throughput: 74.39 Mbit/s

95th percentile per-packet one-way delay: 121.271 ms

Loss rate: 0.98%

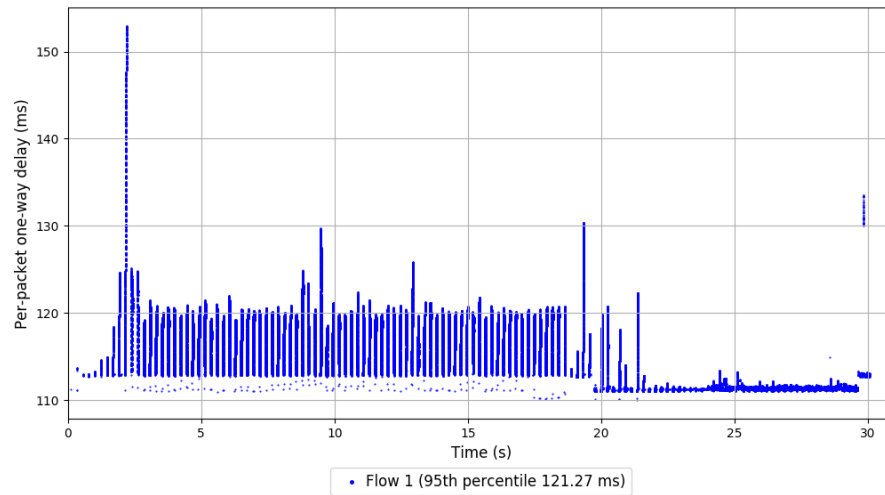
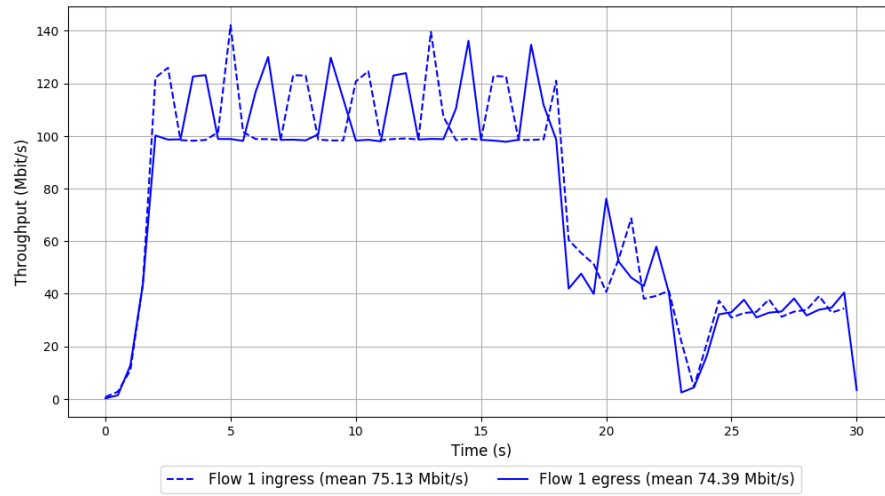
-- Flow 1:

Average throughput: 74.39 Mbit/s

95th percentile per-packet one-way delay: 121.271 ms

Loss rate: 0.98%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2017-12-19 21:31:19

End at: 2017-12-19 21:31:49

Below is generated by plot.py at 2017-12-20 00:19:44

Datalink statistics

-- Total of 1 flow:

Average throughput: 33.29 Mbit/s

95th percentile per-packet one-way delay: 118.845 ms

Loss rate: 0.00%

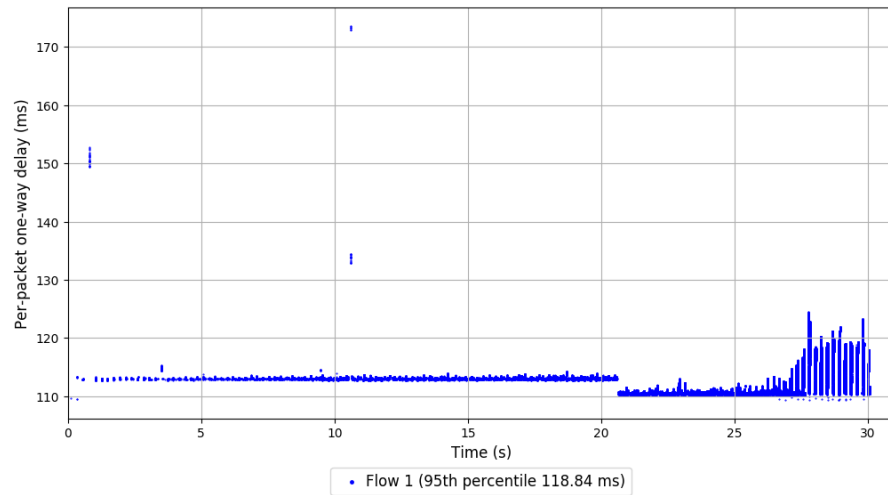
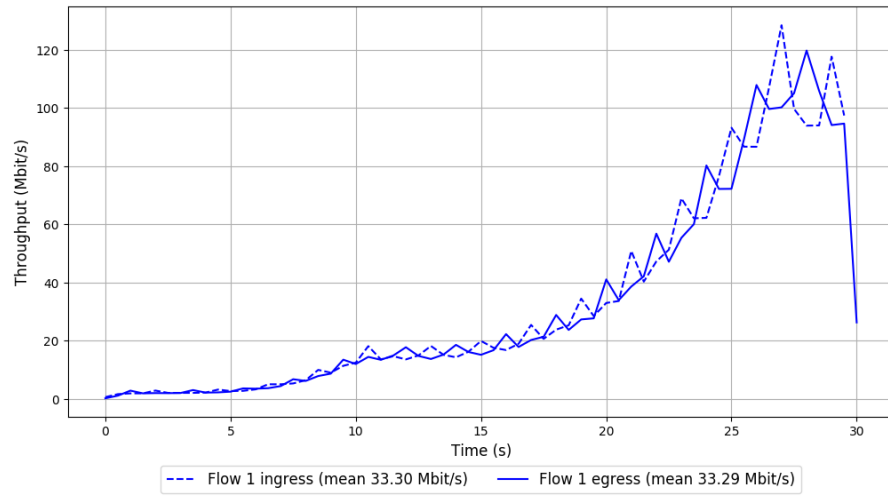
-- Flow 1:

Average throughput: 33.29 Mbit/s

95th percentile per-packet one-way delay: 118.845 ms

Loss rate: 0.00%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2017-12-19 21:43:18

End at: 2017-12-19 21:43:48

Below is generated by plot.py at 2017-12-20 00:19:44

Datalink statistics

-- Total of 1 flow:

Average throughput: 33.14 Mbit/s

95th percentile per-packet one-way delay: 119.836 ms

Loss rate: 0.89%

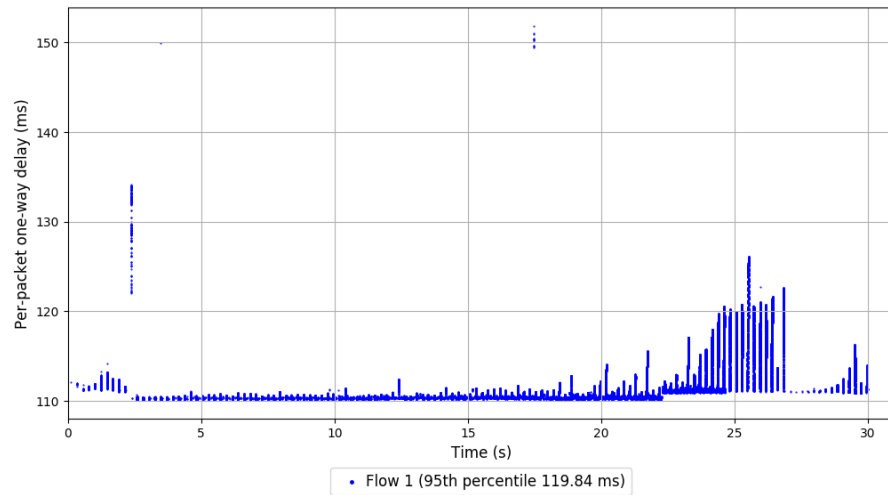
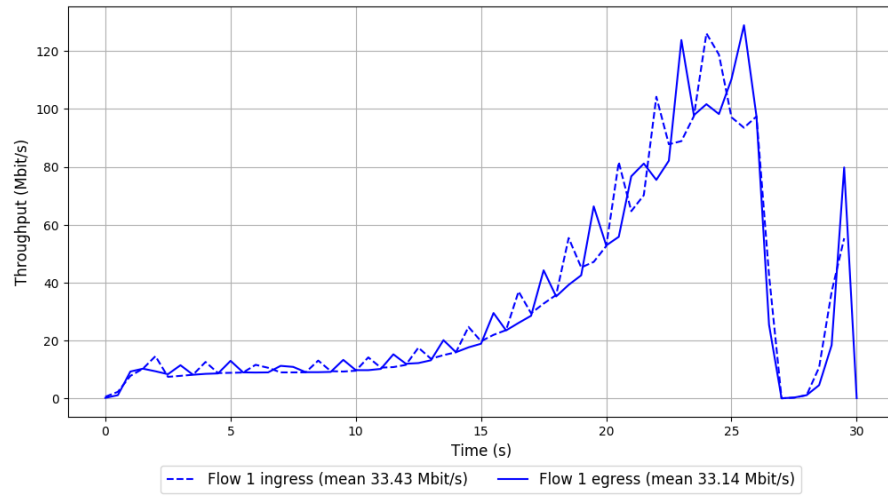
-- Flow 1:

Average throughput: 33.14 Mbit/s

95th percentile per-packet one-way delay: 119.836 ms

Loss rate: 0.89%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2017-12-19 21:55:32

End at: 2017-12-19 21:56:02

Below is generated by plot.py at 2017-12-20 00:19:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 61.84 Mbit/s

95th percentile per-packet one-way delay: 121.240 ms

Loss rate: 1.49%

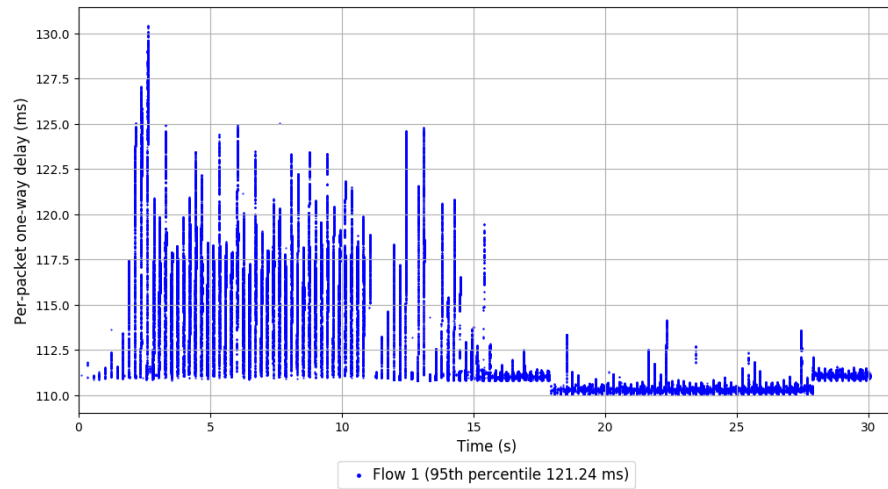
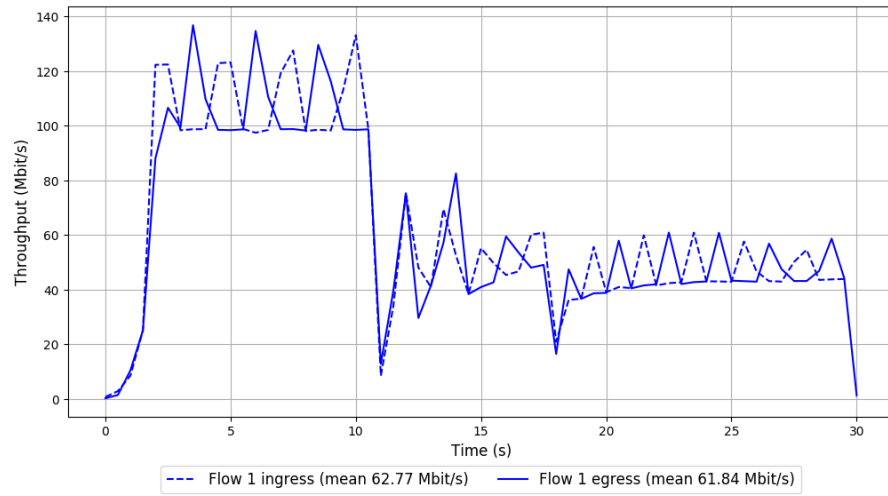
-- Flow 1:

Average throughput: 61.84 Mbit/s

95th percentile per-packet one-way delay: 121.240 ms

Loss rate: 1.49%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2017-12-19 22:07:44

End at: 2017-12-19 22:08:14

Below is generated by plot.py at 2017-12-20 00:19:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 68.35 Mbit/s

95th percentile per-packet one-way delay: 113.920 ms

Loss rate: 0.00%

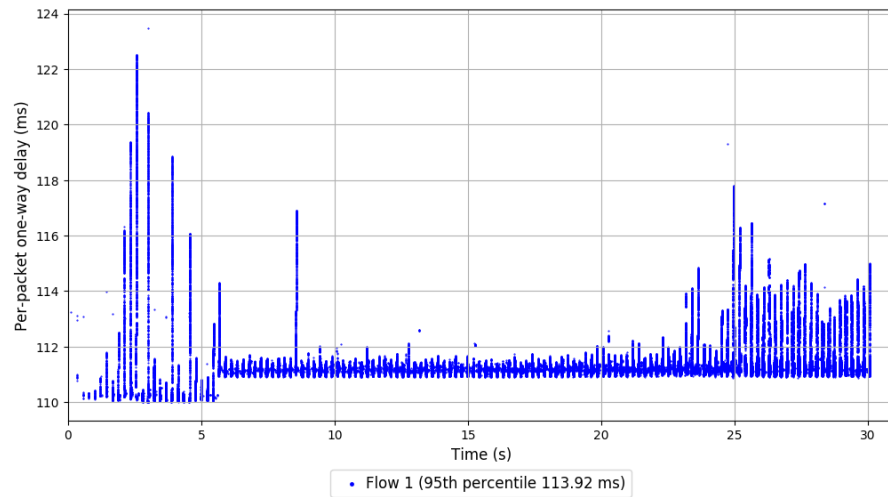
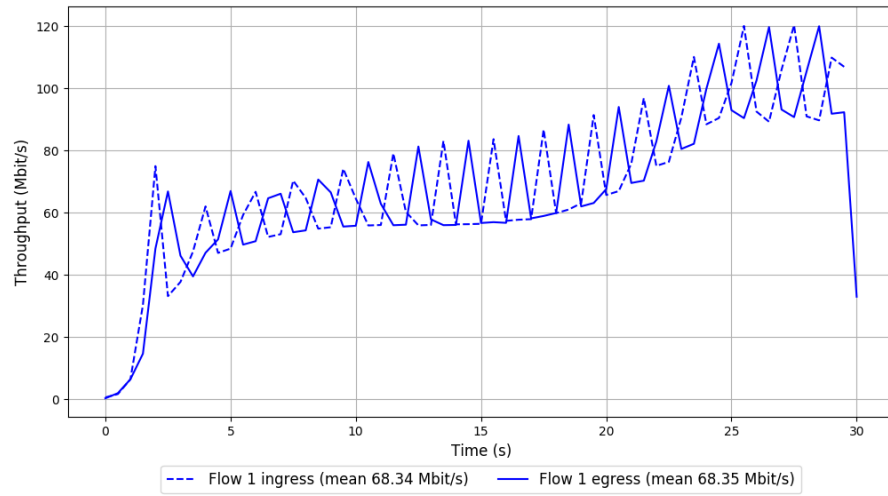
-- Flow 1:

Average throughput: 68.35 Mbit/s

95th percentile per-packet one-way delay: 113.920 ms

Loss rate: 0.00%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2017-12-19 22:20:21

End at: 2017-12-19 22:20:51

Below is generated by plot.py at 2017-12-20 00:19:58

Datalink statistics

-- Total of 1 flow:

Average throughput: 65.99 Mbit/s

95th percentile per-packet one-way delay: 117.734 ms

Loss rate: 0.00%

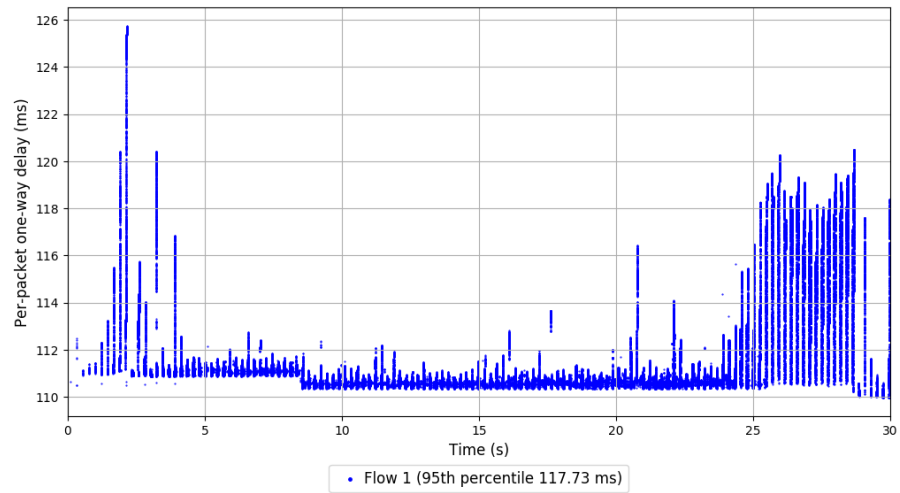
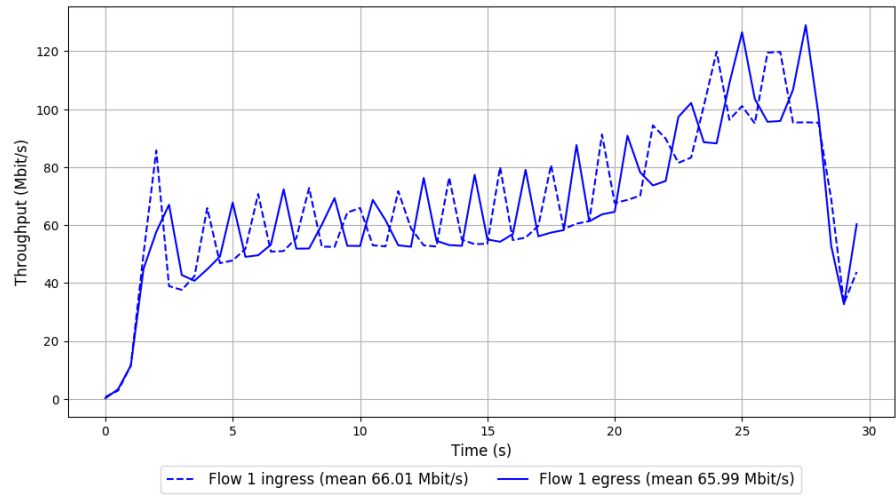
-- Flow 1:

Average throughput: 65.99 Mbit/s

95th percentile per-packet one-way delay: 117.734 ms

Loss rate: 0.00%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2017-12-19 22:32:49

End at: 2017-12-19 22:33:19

Below is generated by plot.py at 2017-12-20 00:20:11

Datalink statistics

-- Total of 1 flow:

Average throughput: 61.20 Mbit/s

95th percentile per-packet one-way delay: 115.894 ms

Loss rate: 0.00%

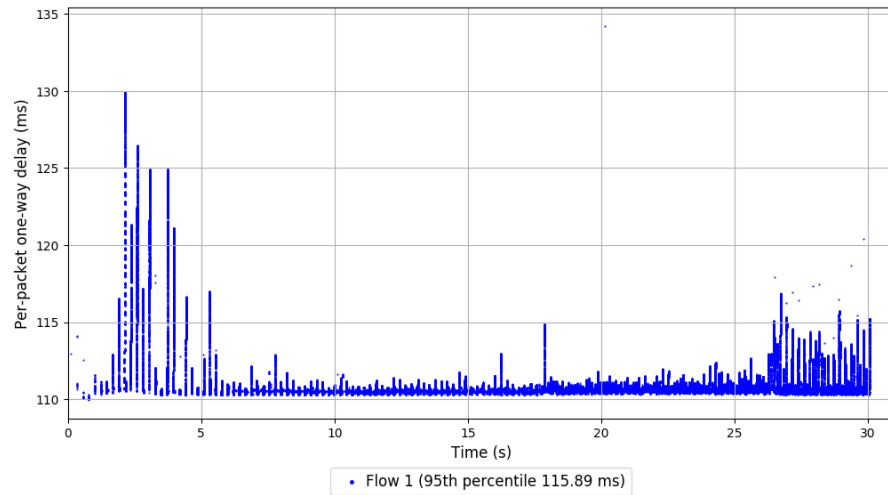
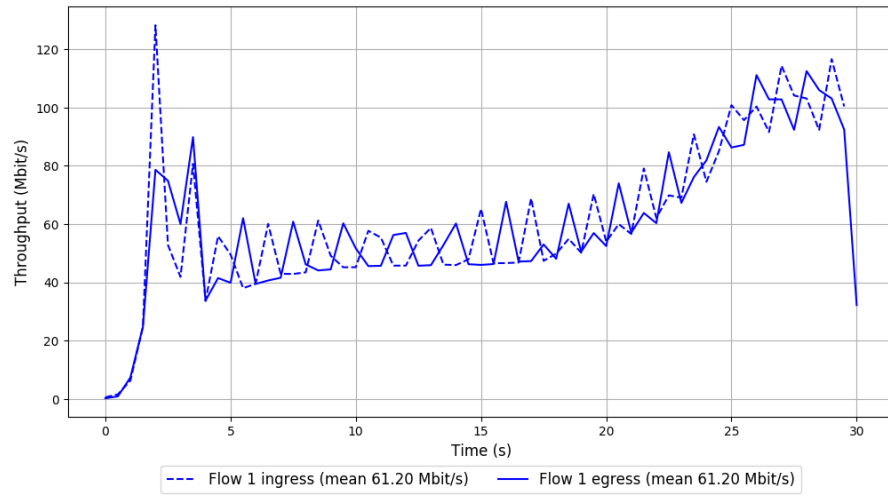
-- Flow 1:

Average throughput: 61.20 Mbit/s

95th percentile per-packet one-way delay: 115.894 ms

Loss rate: 0.00%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2017-12-19 22:45:32

End at: 2017-12-19 22:46:02

Below is generated by plot.py at 2017-12-20 00:20:11

Datalink statistics

-- Total of 1 flow:

Average throughput: 57.78 Mbit/s

95th percentile per-packet one-way delay: 115.065 ms

Loss rate: 0.00%

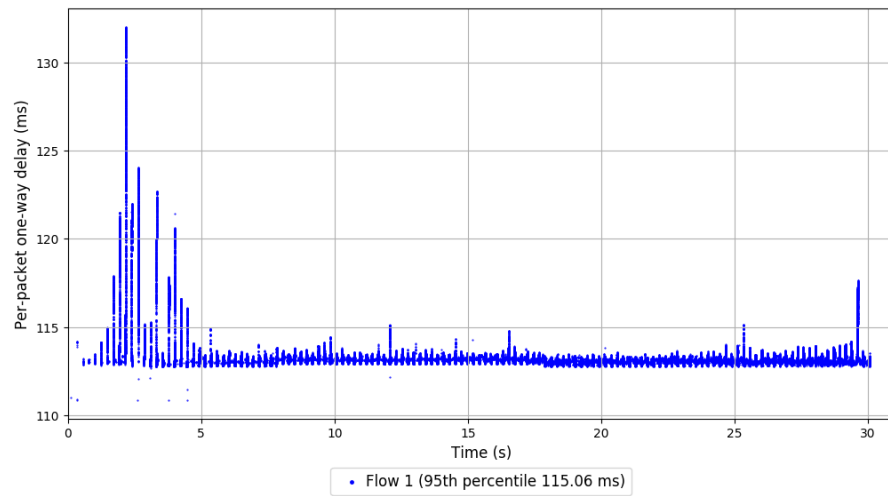
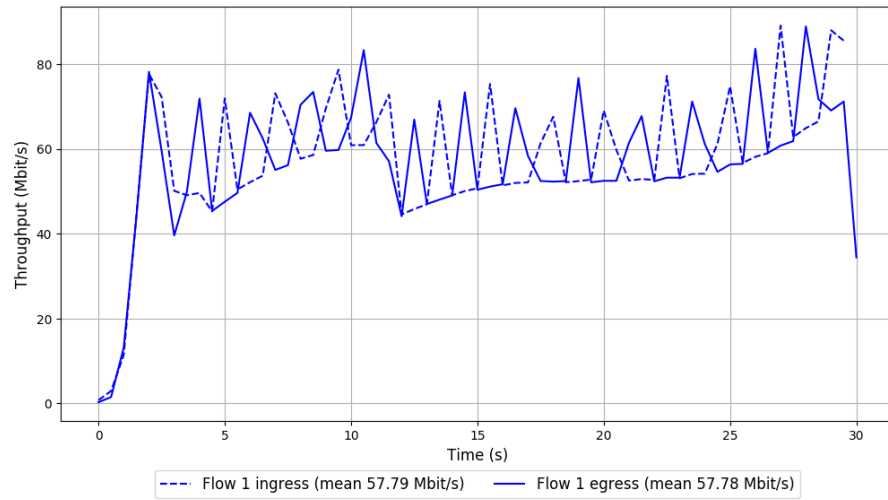
-- Flow 1:

Average throughput: 57.78 Mbit/s

95th percentile per-packet one-way delay: 115.065 ms

Loss rate: 0.00%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2017-12-19 22:57:35

End at: 2017-12-19 22:58:05

Below is generated by plot.py at 2017-12-20 00:20:26

Datalink statistics

-- Total of 1 flow:

Average throughput: 67.61 Mbit/s

95th percentile per-packet one-way delay: 115.254 ms

Loss rate: 0.00%

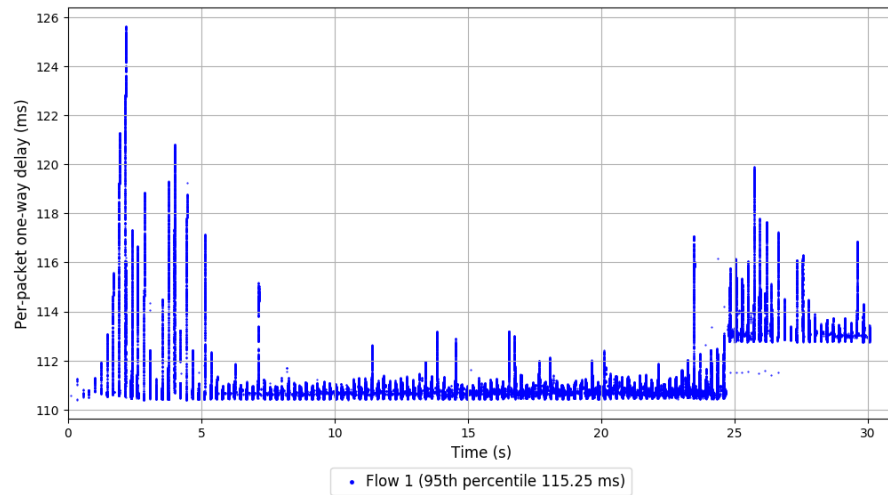
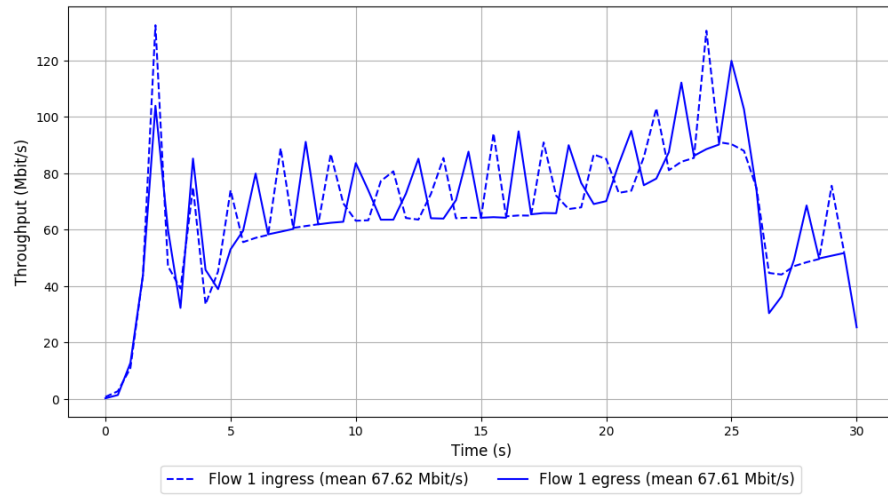
-- Flow 1:

Average throughput: 67.61 Mbit/s

95th percentile per-packet one-way delay: 115.254 ms

Loss rate: 0.00%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2017-12-19 23:09:46

End at: 2017-12-19 23:10:16

Below is generated by plot.py at 2017-12-20 00:20:26

Datalink statistics

-- Total of 1 flow:

Average throughput: 53.63 Mbit/s

95th percentile per-packet one-way delay: 114.878 ms

Loss rate: 0.06%

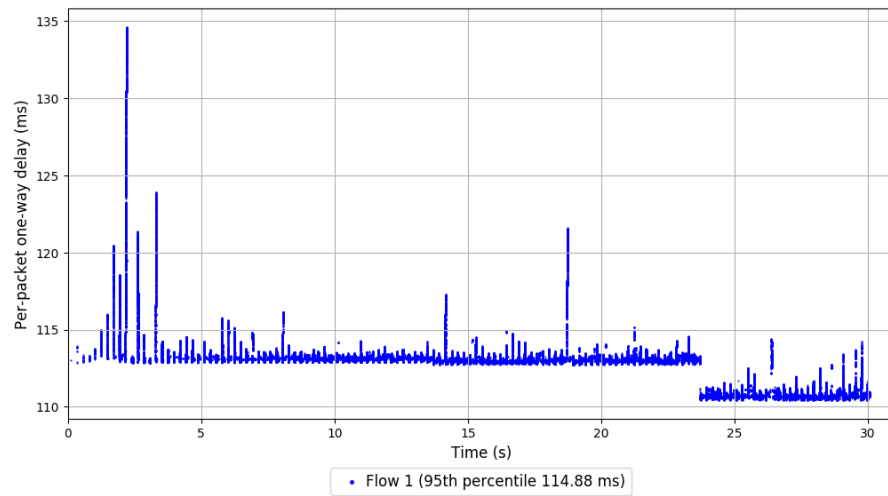
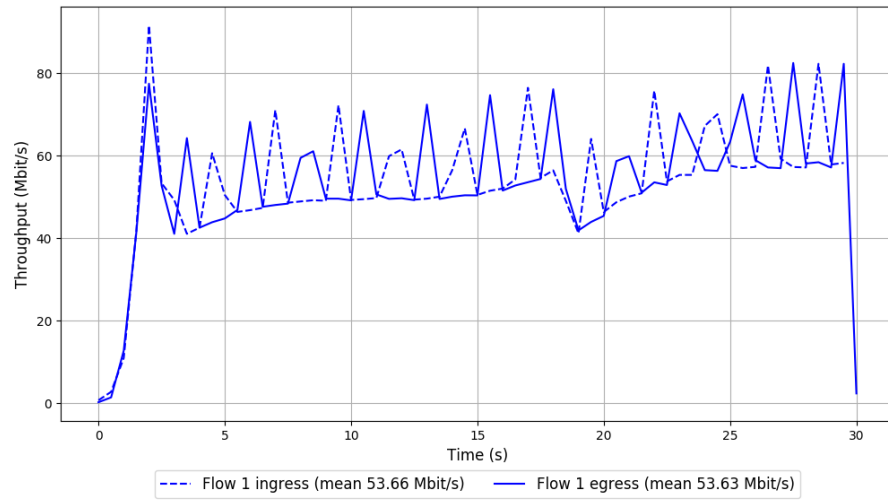
-- Flow 1:

Average throughput: 53.63 Mbit/s

95th percentile per-packet one-way delay: 114.878 ms

Loss rate: 0.06%

Run 10: Report of TCP Cubic — Data Link

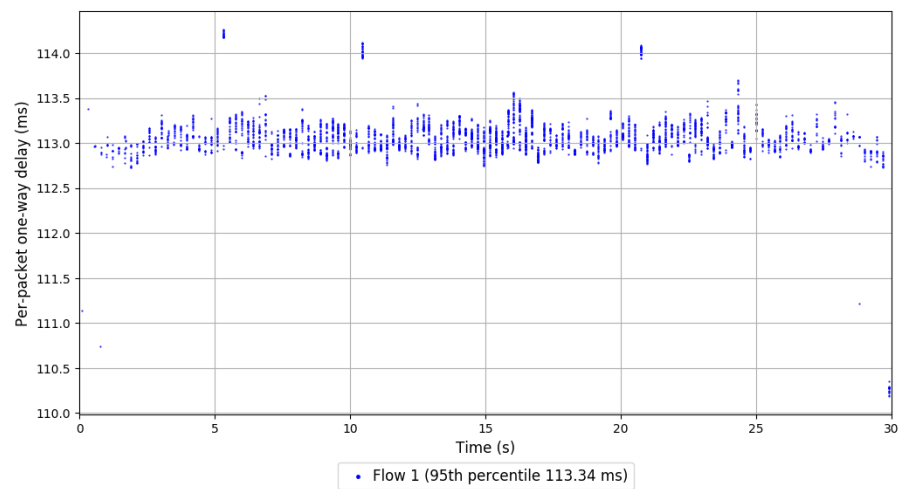
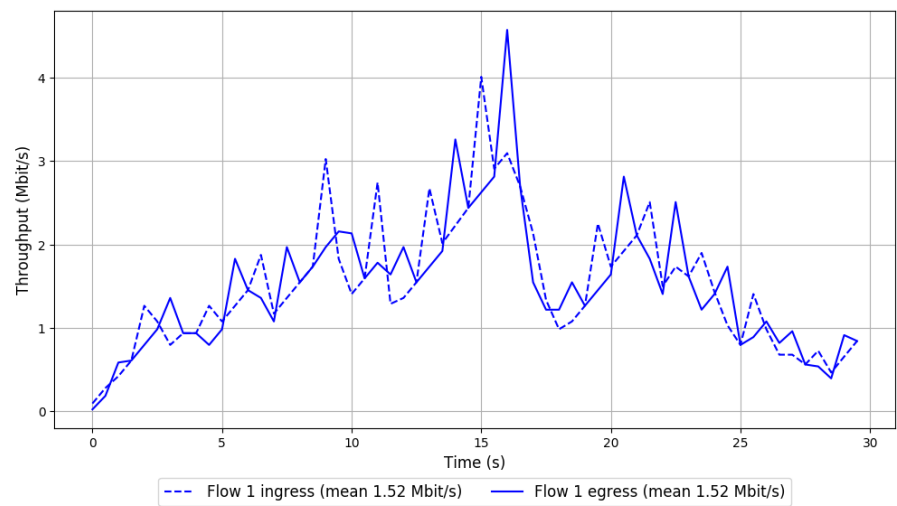


```
Run 1: Statistics of LEDBAT

Start at: 2017-12-19 21:26:50
End at: 2017-12-19 21:27:20

# Below is generated by plot.py at 2017-12-20 00:20:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.52 Mbit/s
95th percentile per-packet one-way delay: 113.344 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.52 Mbit/s
95th percentile per-packet one-way delay: 113.344 ms
Loss rate: 0.00%
```


Run 1: Report of LEDBAT — Data Link

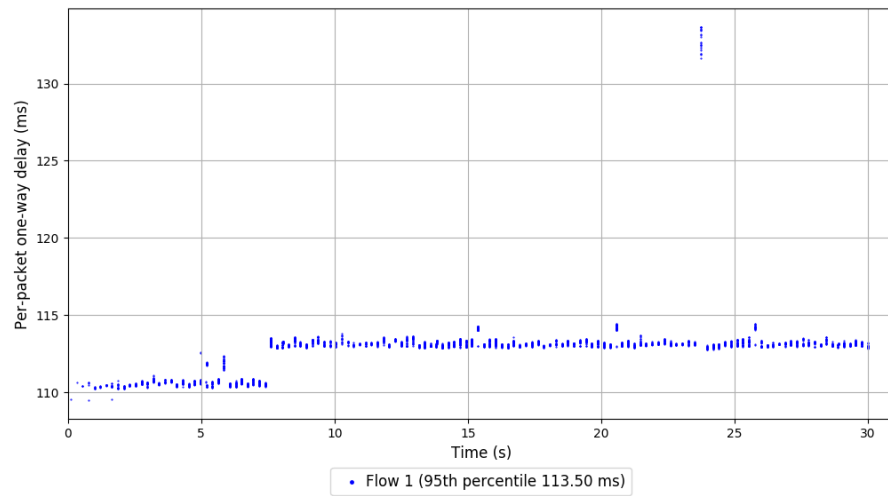
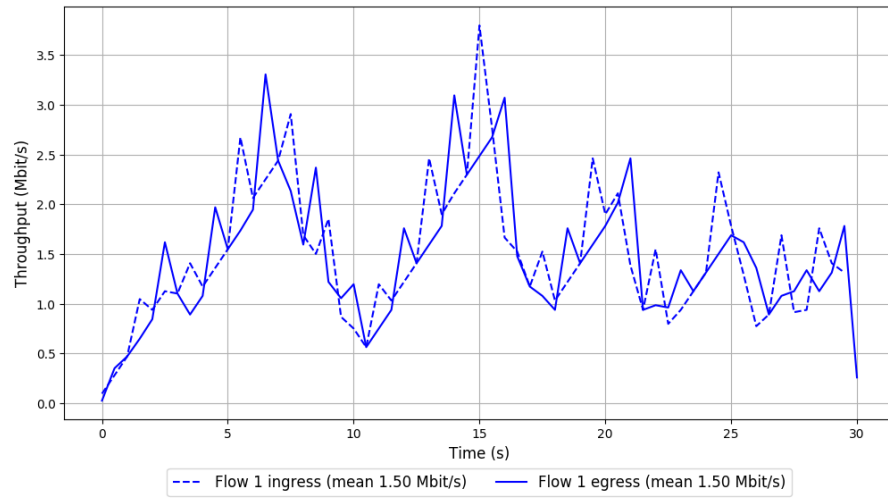


```
Run 2: Statistics of LEDBAT

Start at: 2017-12-19 21:38:52
End at: 2017-12-19 21:39:22

# Below is generated by plot.py at 2017-12-20 00:20:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.50 Mbit/s
95th percentile per-packet one-way delay: 113.503 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 1.50 Mbit/s
95th percentile per-packet one-way delay: 113.503 ms
Loss rate: 0.05%
```

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2017-12-19 21:50:56

End at: 2017-12-19 21:51:26

Below is generated by plot.py at 2017-12-20 00:20:26

Datalink statistics

-- Total of 1 flow:

Average throughput: 4.78 Mbit/s

95th percentile per-packet one-way delay: 112.176 ms

Loss rate: 0.03%

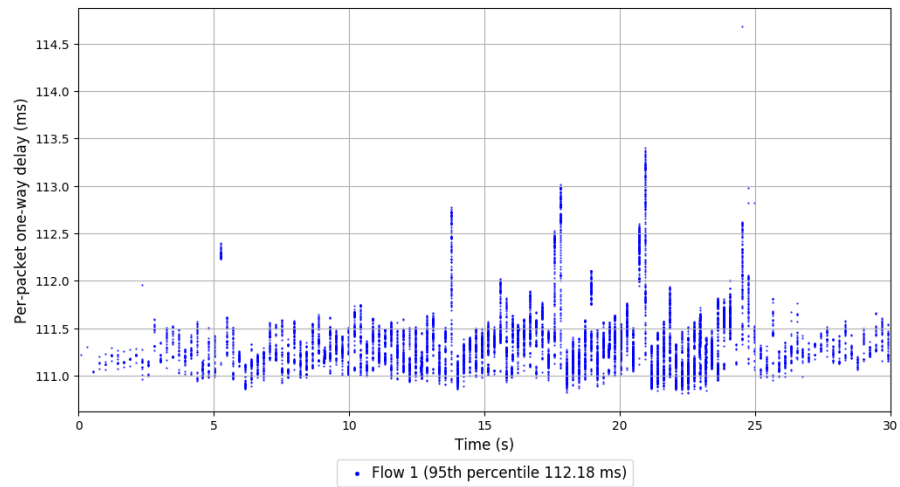
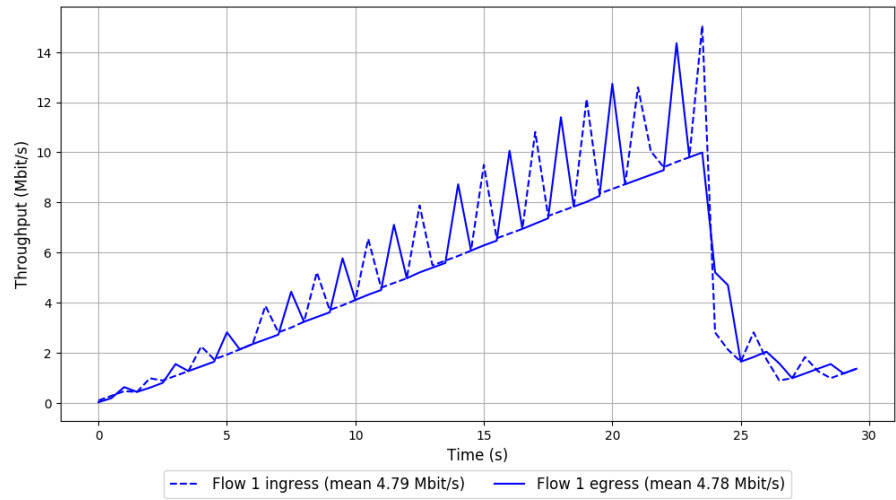
-- Flow 1:

Average throughput: 4.78 Mbit/s

95th percentile per-packet one-way delay: 112.176 ms

Loss rate: 0.03%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2017-12-19 22:03:16

End at: 2017-12-19 22:03:47

Below is generated by plot.py at 2017-12-20 00:20:26

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 111.477 ms

Loss rate: 0.00%

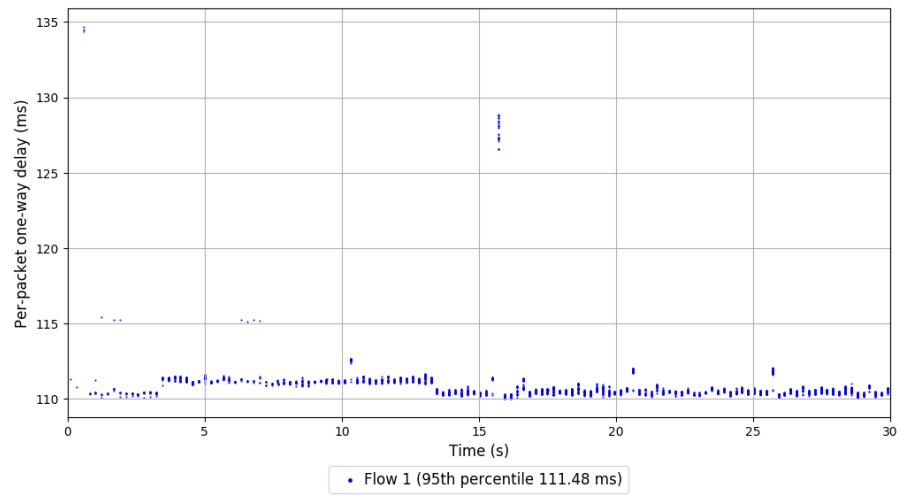
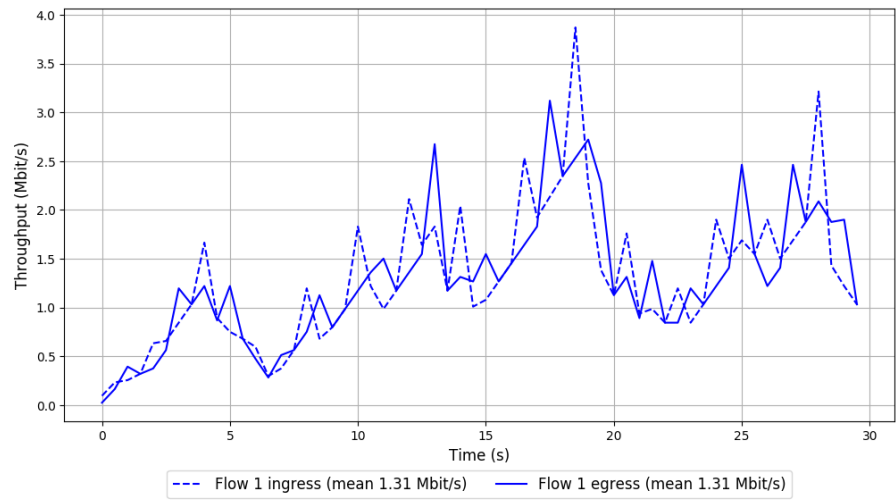
-- Flow 1:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 111.477 ms

Loss rate: 0.00%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2017-12-19 22:15:30

End at: 2017-12-19 22:16:00

Below is generated by plot.py at 2017-12-20 00:20:26

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 111.528 ms

Loss rate: 0.06%

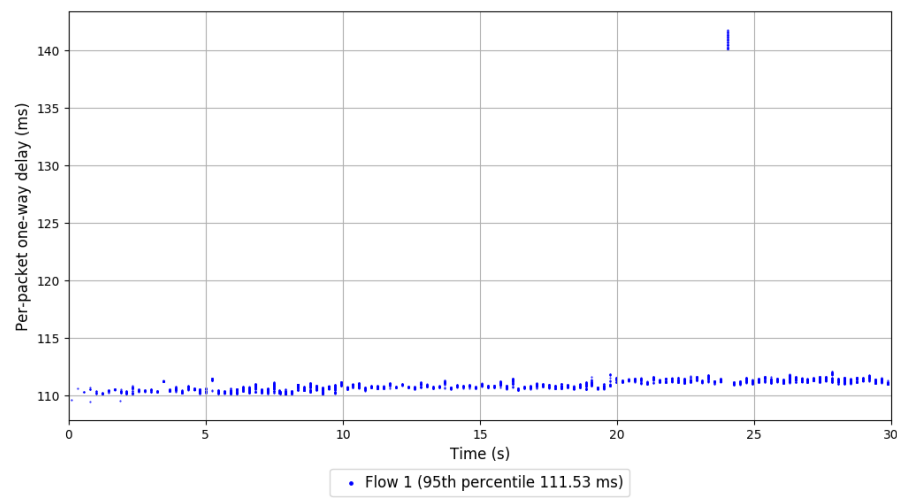
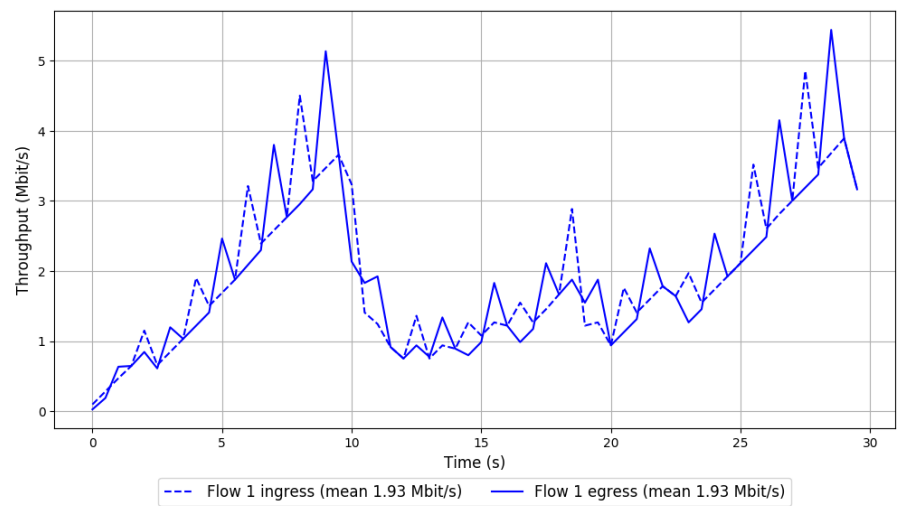
-- Flow 1:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 111.528 ms

Loss rate: 0.06%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2017-12-19 22:28:10

End at: 2017-12-19 22:28:40

Below is generated by plot.py at 2017-12-20 00:20:26

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.42 Mbit/s

95th percentile per-packet one-way delay: 110.764 ms

Loss rate: 0.00%

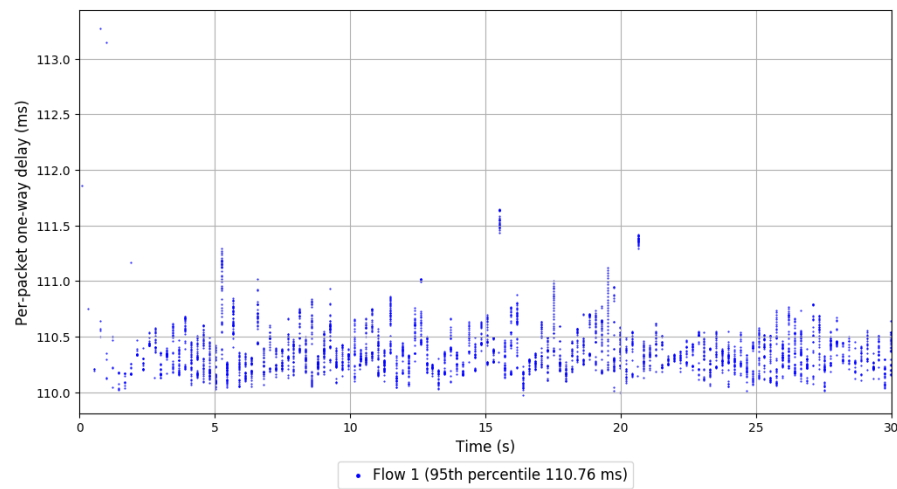
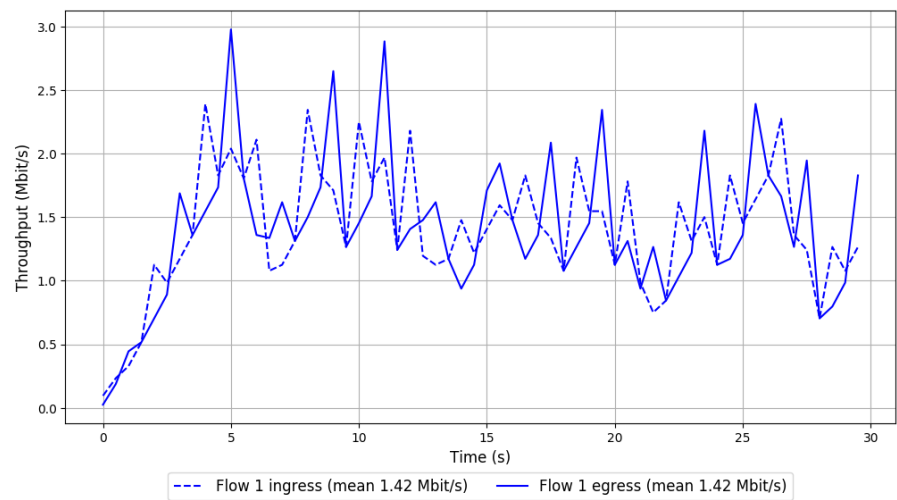
-- Flow 1:

Average throughput: 1.42 Mbit/s

95th percentile per-packet one-way delay: 110.764 ms

Loss rate: 0.00%

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2017-12-19 22:40:38

End at: 2017-12-19 22:41:08

Below is generated by plot.py at 2017-12-20 00:20:26

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.62 Mbit/s

95th percentile per-packet one-way delay: 113.441 ms

Loss rate: 0.00%

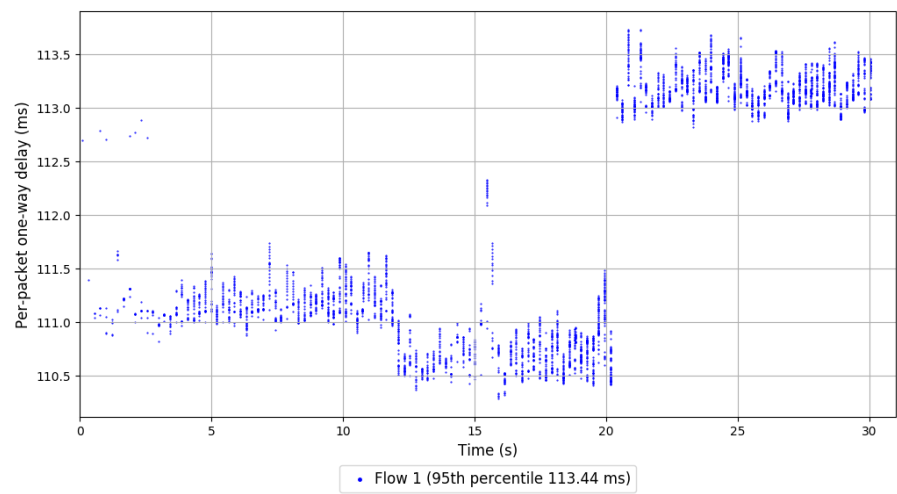
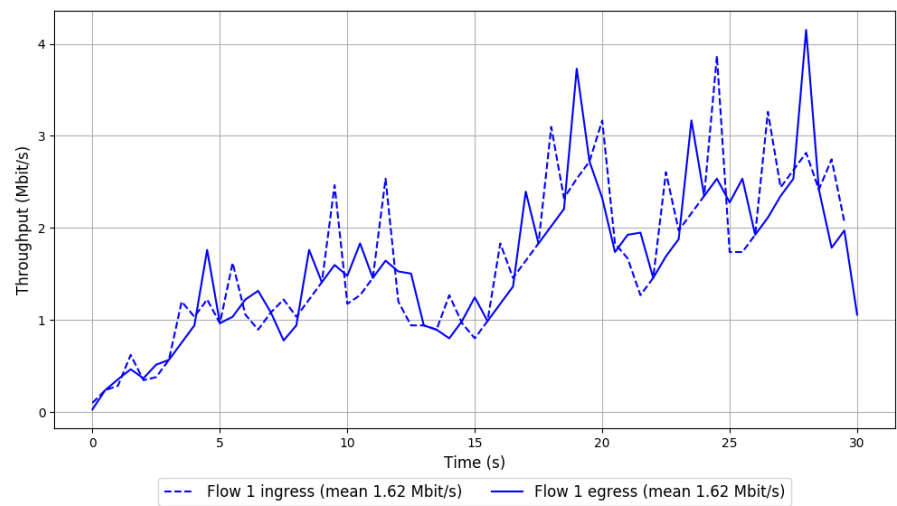
-- Flow 1:

Average throughput: 1.62 Mbit/s

95th percentile per-packet one-way delay: 113.441 ms

Loss rate: 0.00%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2017-12-19 22:53:13

End at: 2017-12-19 22:53:43

Below is generated by plot.py at 2017-12-20 00:20:26

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.62 Mbit/s

95th percentile per-packet one-way delay: 113.792 ms

Loss rate: 0.00%

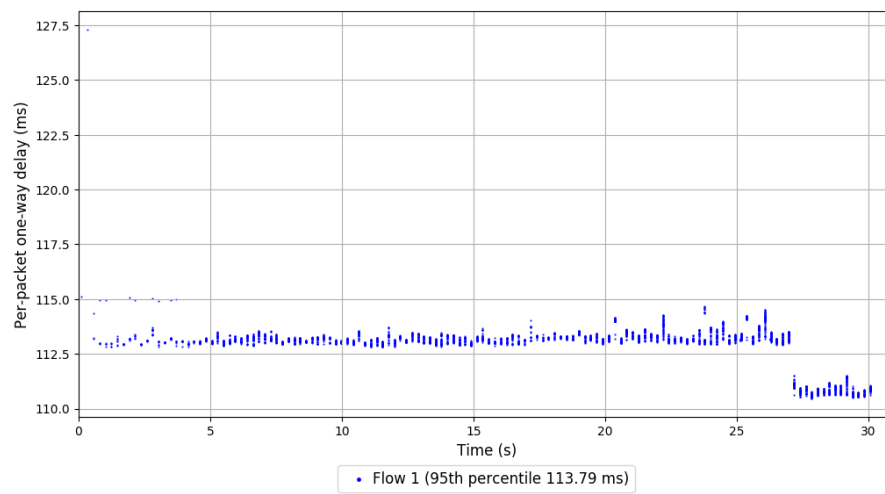
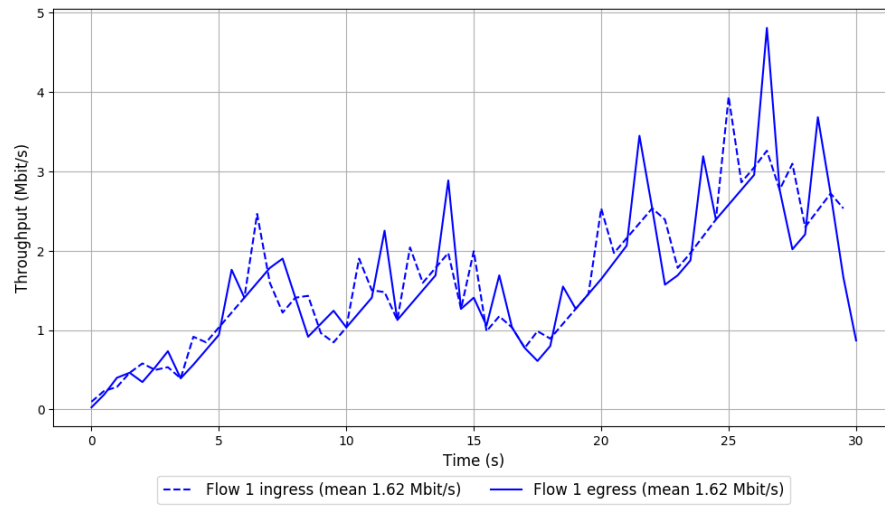
-- Flow 1:

Average throughput: 1.62 Mbit/s

95th percentile per-packet one-way delay: 113.792 ms

Loss rate: 0.00%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2017-12-19 23:05:19

End at: 2017-12-19 23:05:49

Below is generated by plot.py at 2017-12-20 00:20:26

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.43 Mbit/s

95th percentile per-packet one-way delay: 113.433 ms

Loss rate: 0.16%

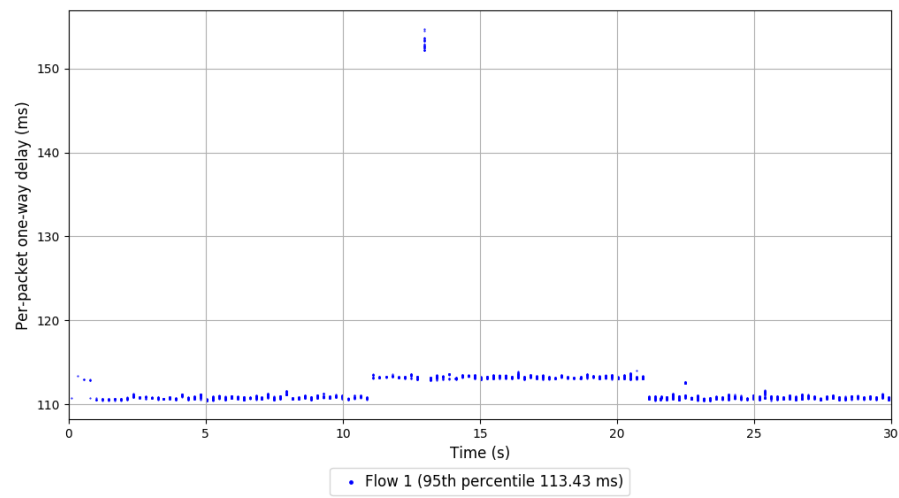
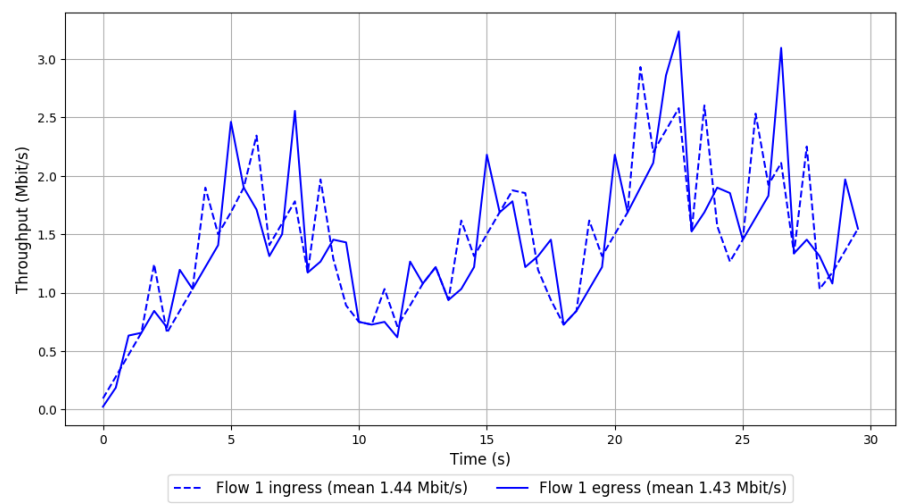
-- Flow 1:

Average throughput: 1.43 Mbit/s

95th percentile per-packet one-way delay: 113.433 ms

Loss rate: 0.16%

Run 9: Report of LEDBAT — Data Link



Run 10: Statistics of LEDBAT

Start at: 2017-12-19 23:17:28

End at: 2017-12-19 23:17:58

Below is generated by plot.py at 2017-12-20 00:20:26

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.54 Mbit/s

95th percentile per-packet one-way delay: 113.165 ms

Loss rate: 0.00%

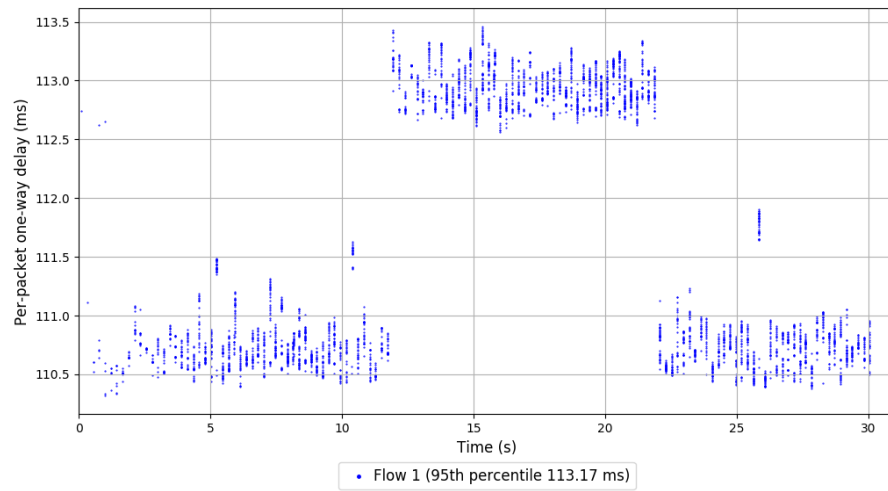
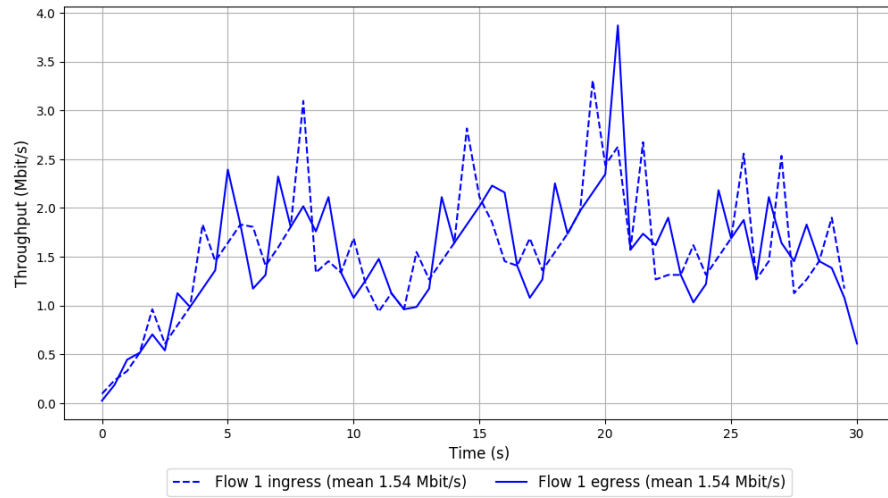
-- Flow 1:

Average throughput: 1.54 Mbit/s

95th percentile per-packet one-way delay: 113.165 ms

Loss rate: 0.00%

Run 10: Report of LEDBAT — Data Link

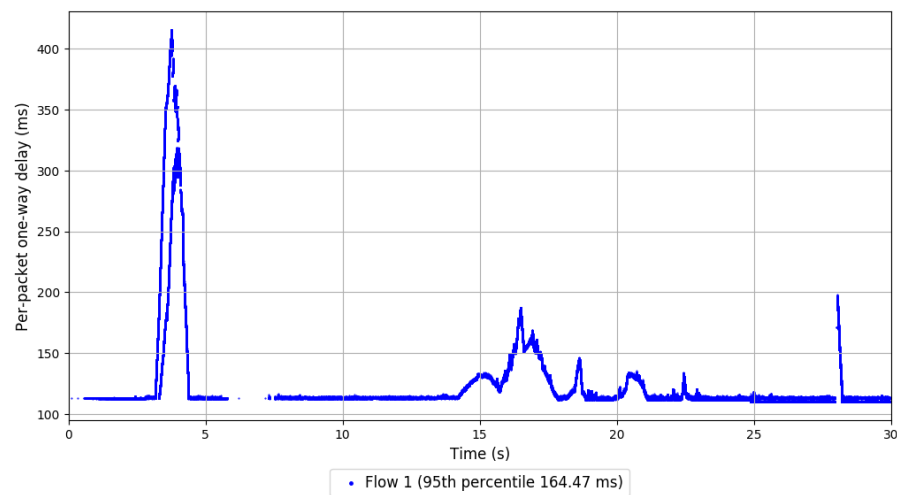
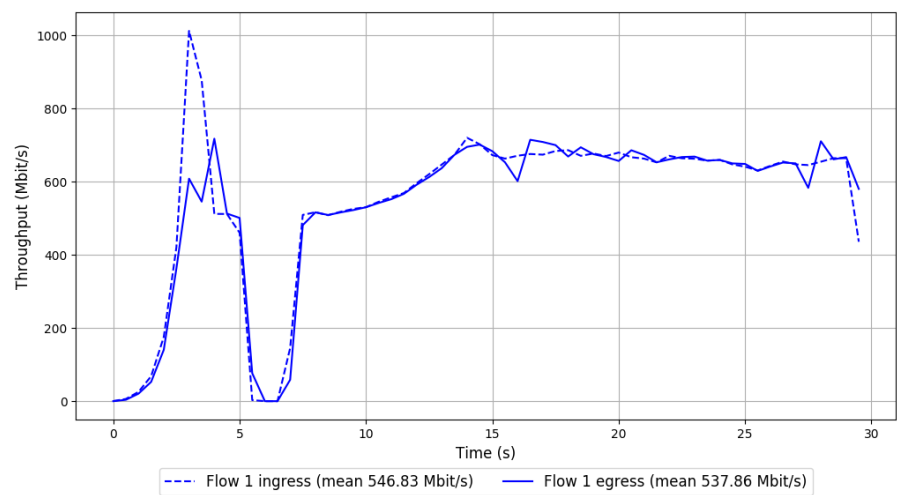


```
Run 1: Statistics of PCC

Start at: 2017-12-19 21:22:45
End at: 2017-12-19 21:23:15

# Below is generated by plot.py at 2017-12-20 00:29:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 537.86 Mbit/s
95th percentile per-packet one-way delay: 164.469 ms
Loss rate: 1.64%
-- Flow 1:
Average throughput: 537.86 Mbit/s
95th percentile per-packet one-way delay: 164.469 ms
Loss rate: 1.64%
```

Run 1: Report of PCC — Data Link



Run 2: Statistics of PCC

Start at: 2017-12-19 21:34:50

End at: 2017-12-19 21:35:20

Below is generated by plot.py at 2017-12-20 00:29:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 547.68 Mbit/s

95th percentile per-packet one-way delay: 188.914 ms

Loss rate: 1.53%

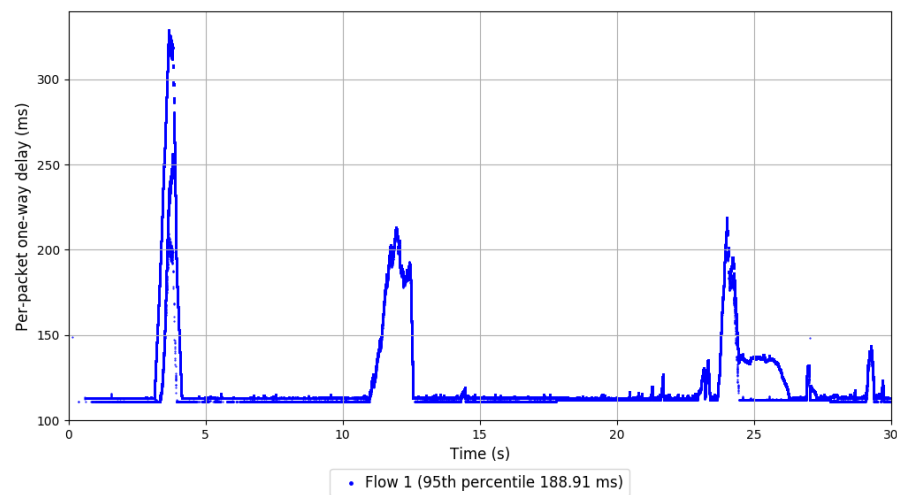
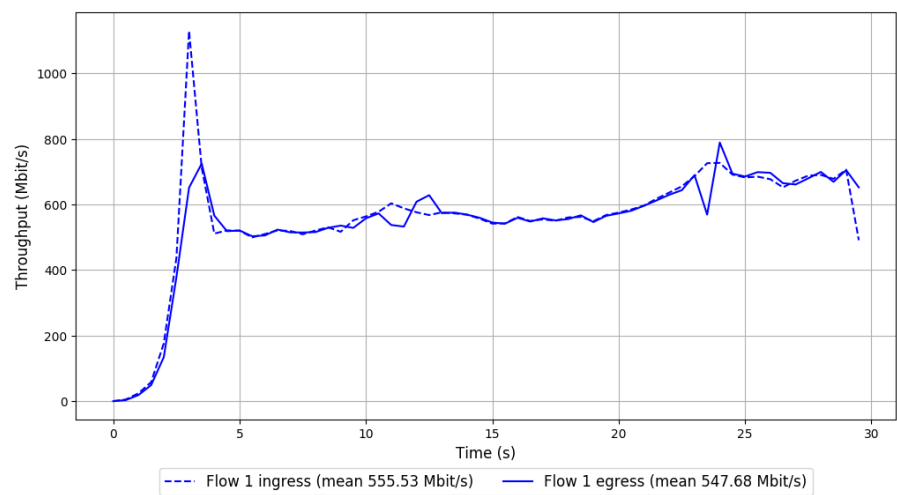
-- Flow 1:

Average throughput: 547.68 Mbit/s

95th percentile per-packet one-way delay: 188.914 ms

Loss rate: 1.53%

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2017-12-19 21:46:49

End at: 2017-12-19 21:47:19

Below is generated by plot.py at 2017-12-20 00:29:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 549.68 Mbit/s

95th percentile per-packet one-way delay: 263.662 ms

Loss rate: 2.62%

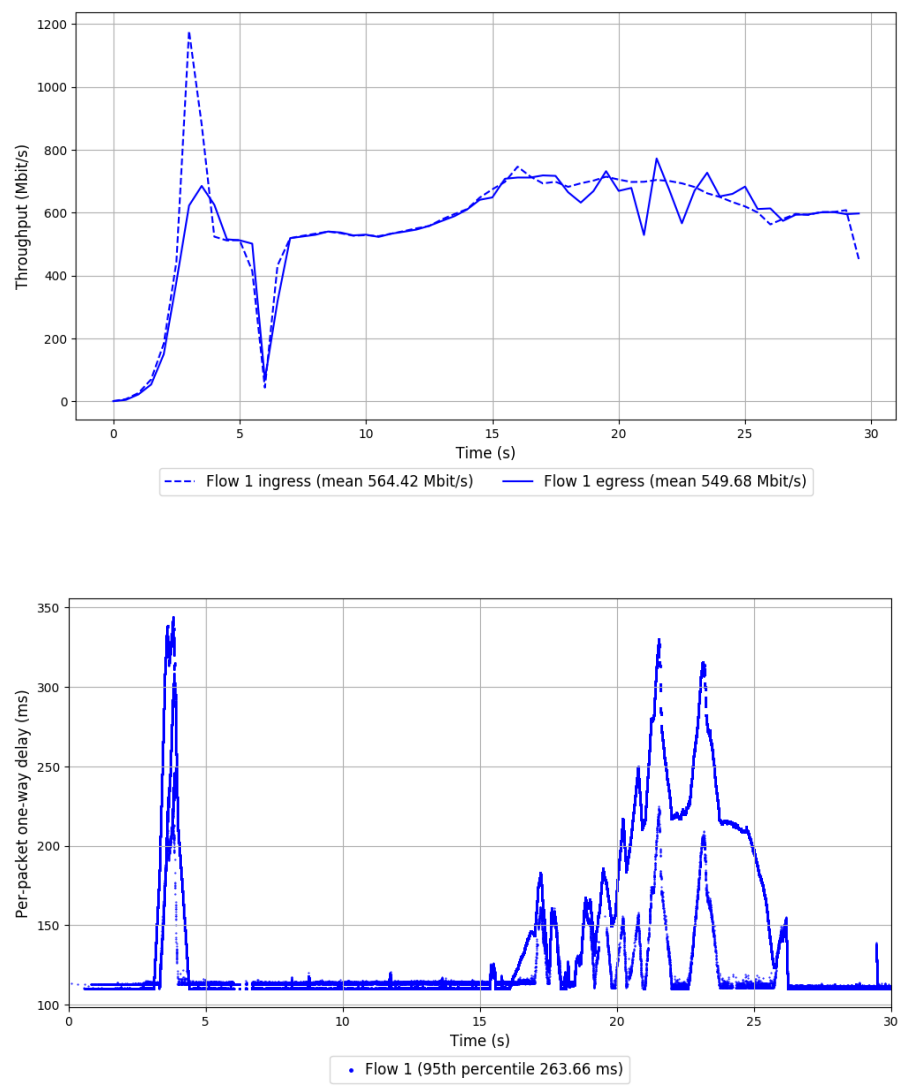
-- Flow 1:

Average throughput: 549.68 Mbit/s

95th percentile per-packet one-way delay: 263.662 ms

Loss rate: 2.62%

Run 3: Report of PCC — Data Link



Run 4: Statistics of PCC

Start at: 2017-12-19 21:59:05

End at: 2017-12-19 21:59:35

Below is generated by plot.py at 2017-12-20 00:29:40

Datalink statistics

-- Total of 1 flow:

Average throughput: 557.14 Mbit/s

95th percentile per-packet one-way delay: 239.136 ms

Loss rate: 3.83%

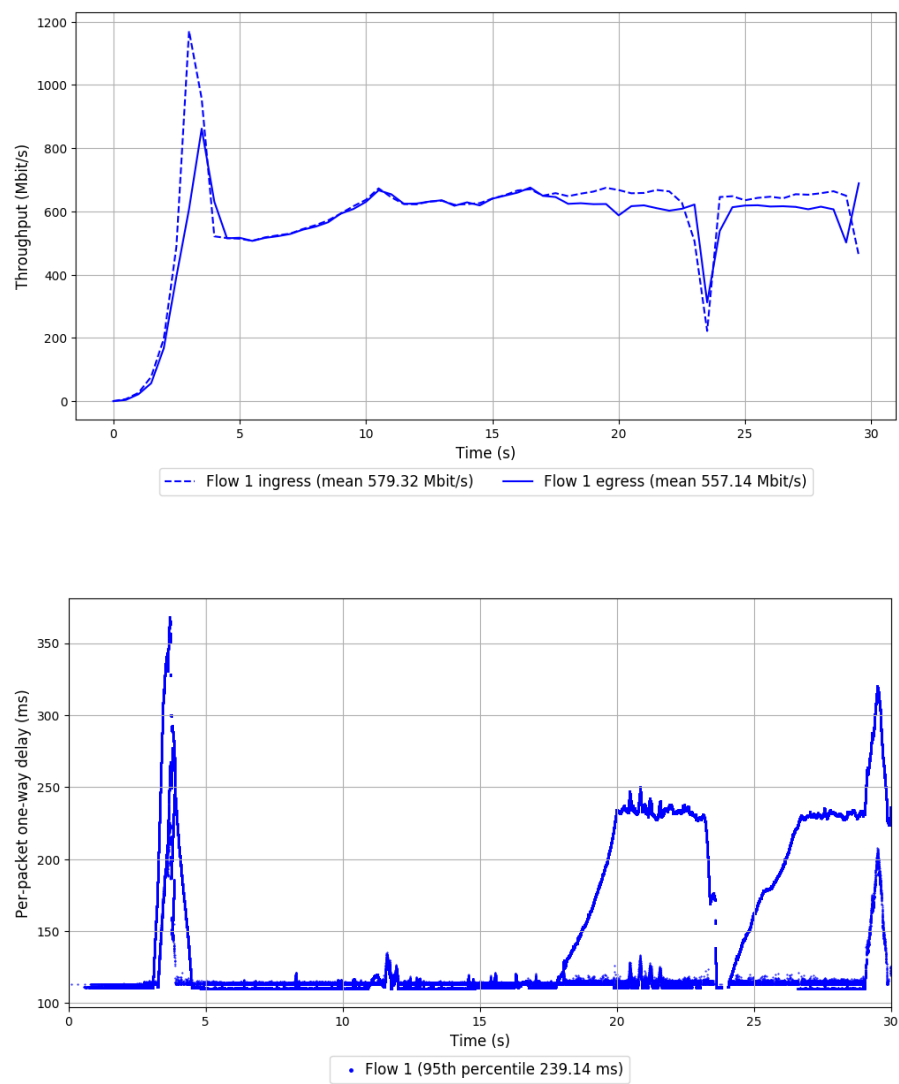
-- Flow 1:

Average throughput: 557.14 Mbit/s

95th percentile per-packet one-way delay: 239.136 ms

Loss rate: 3.83%

Run 4: Report of PCC — Data Link



Run 5: Statistics of PCC

Start at: 2017-12-19 22:11:16

End at: 2017-12-19 22:11:46

Below is generated by plot.py at 2017-12-20 00:29:57

Datalink statistics

-- Total of 1 flow:

Average throughput: 583.27 Mbit/s

95th percentile per-packet one-way delay: 255.536 ms

Loss rate: 2.65%

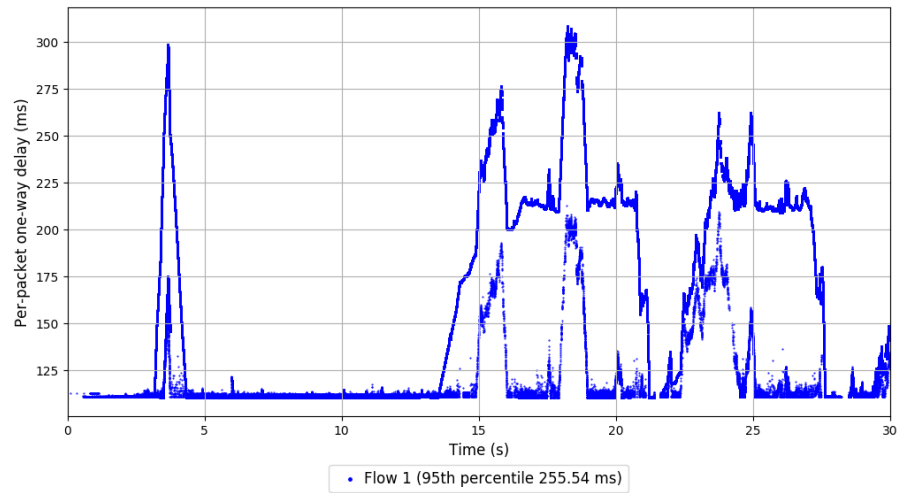
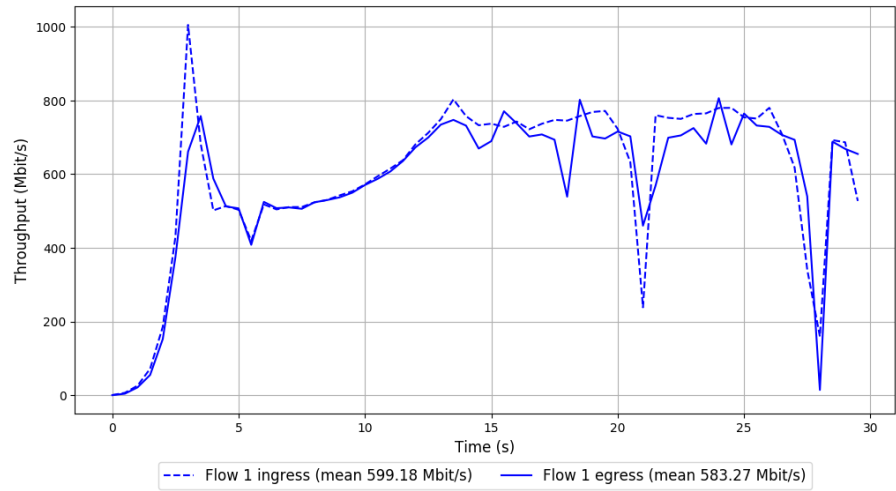
-- Flow 1:

Average throughput: 583.27 Mbit/s

95th percentile per-packet one-way delay: 255.536 ms

Loss rate: 2.65%

Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2017-12-19 22:23:56

End at: 2017-12-19 22:24:26

Below is generated by plot.py at 2017-12-20 00:29:57

Datalink statistics

-- Total of 1 flow:

Average throughput: 580.31 Mbit/s

95th percentile per-packet one-way delay: 216.238 ms

Loss rate: 1.89%

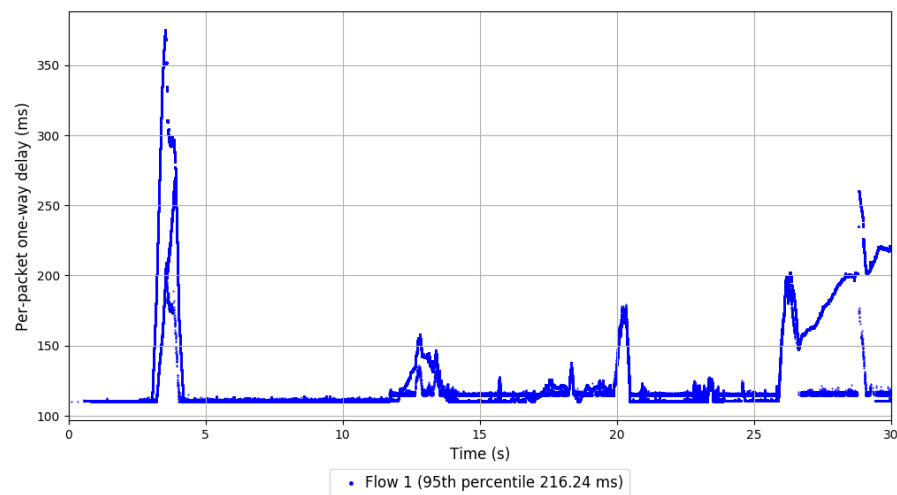
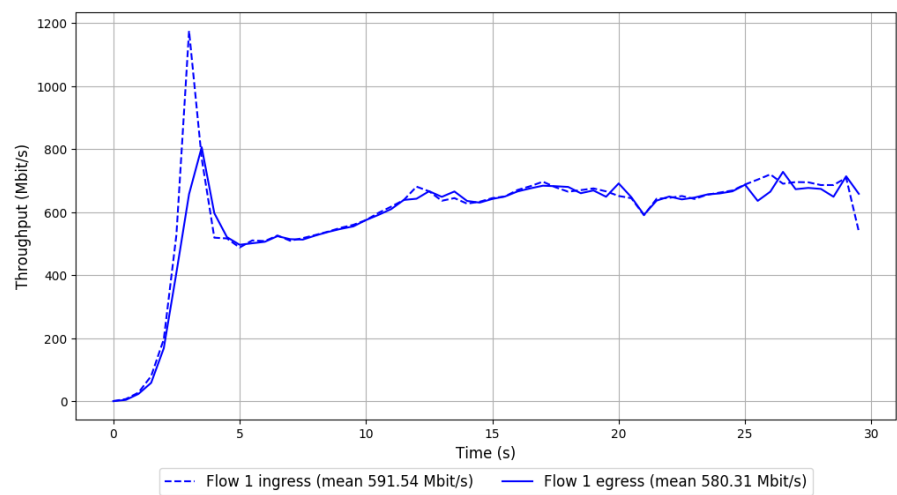
-- Flow 1:

Average throughput: 580.31 Mbit/s

95th percentile per-packet one-way delay: 216.238 ms

Loss rate: 1.89%

Run 6: Report of PCC — Data Link



Run 7: Statistics of PCC

Start at: 2017-12-19 22:36:23

End at: 2017-12-19 22:36:53

Below is generated by plot.py at 2017-12-20 00:30:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 572.35 Mbit/s

95th percentile per-packet one-way delay: 194.731 ms

Loss rate: 1.54%

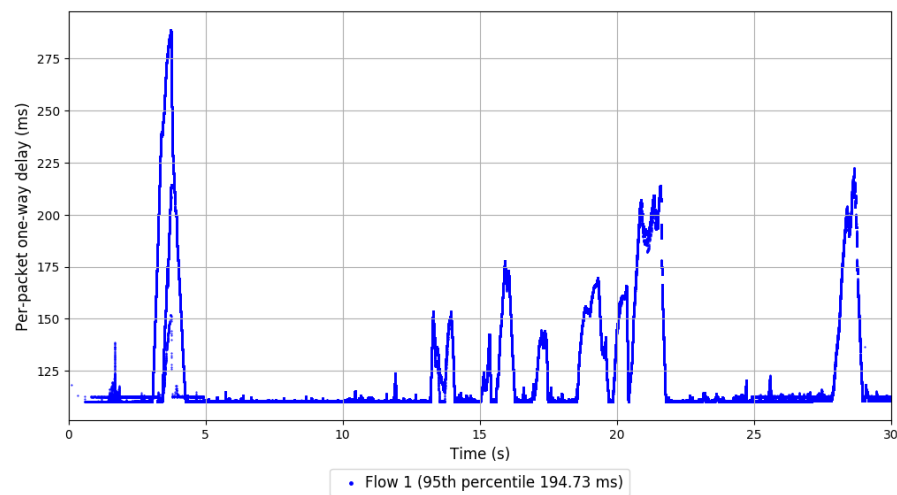
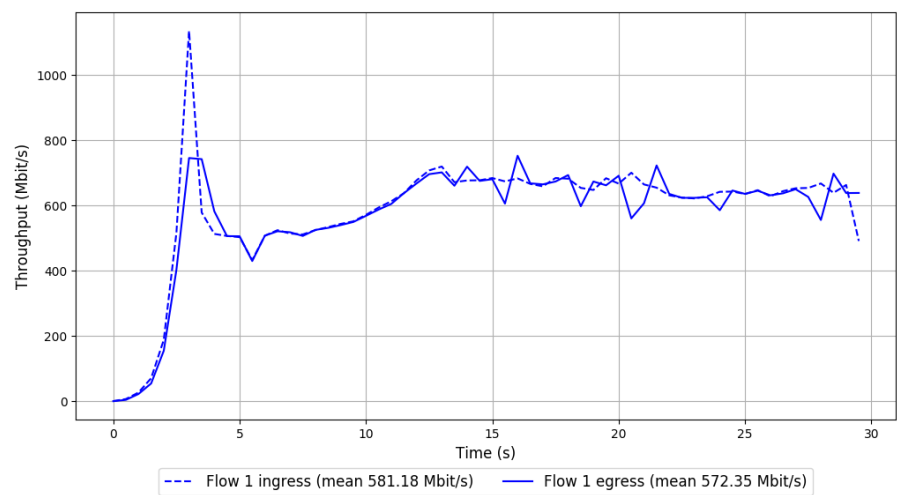
-- Flow 1:

Average throughput: 572.35 Mbit/s

95th percentile per-packet one-way delay: 194.731 ms

Loss rate: 1.54%

Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2017-12-19 22:49:04

End at: 2017-12-19 22:49:34

Below is generated by plot.py at 2017-12-20 00:30:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 581.72 Mbit/s

95th percentile per-packet one-way delay: 224.344 ms

Loss rate: 2.72%

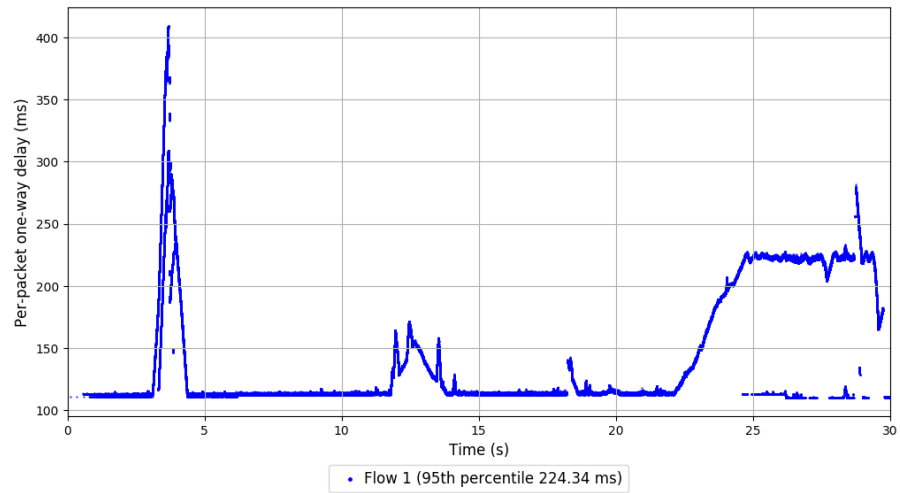
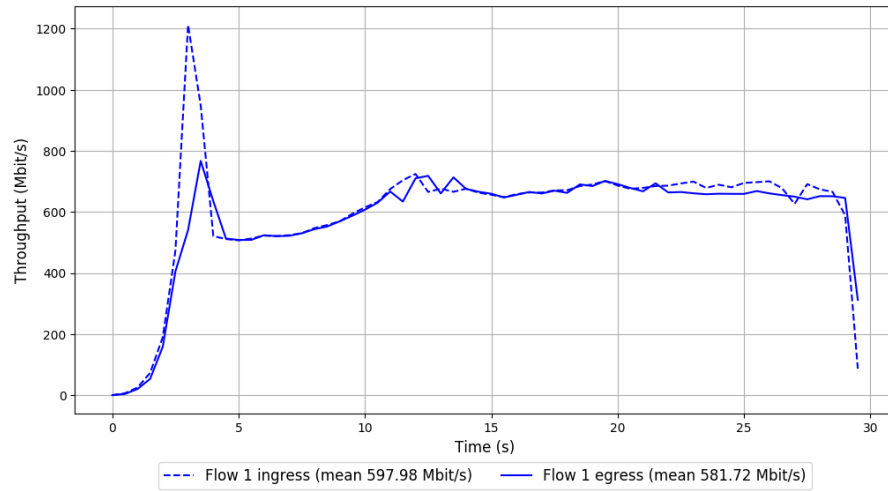
-- Flow 1:

Average throughput: 581.72 Mbit/s

95th percentile per-packet one-way delay: 224.344 ms

Loss rate: 2.72%

Run 8: Report of PCC — Data Link



Run 9: Statistics of PCC

Start at: 2017-12-19 23:01:09

End at: 2017-12-19 23:01:39

Below is generated by plot.py at 2017-12-20 00:39:10

Datalink statistics

-- Total of 1 flow:

Average throughput: 532.83 Mbit/s

95th percentile per-packet one-way delay: 215.914 ms

Loss rate: 1.39%

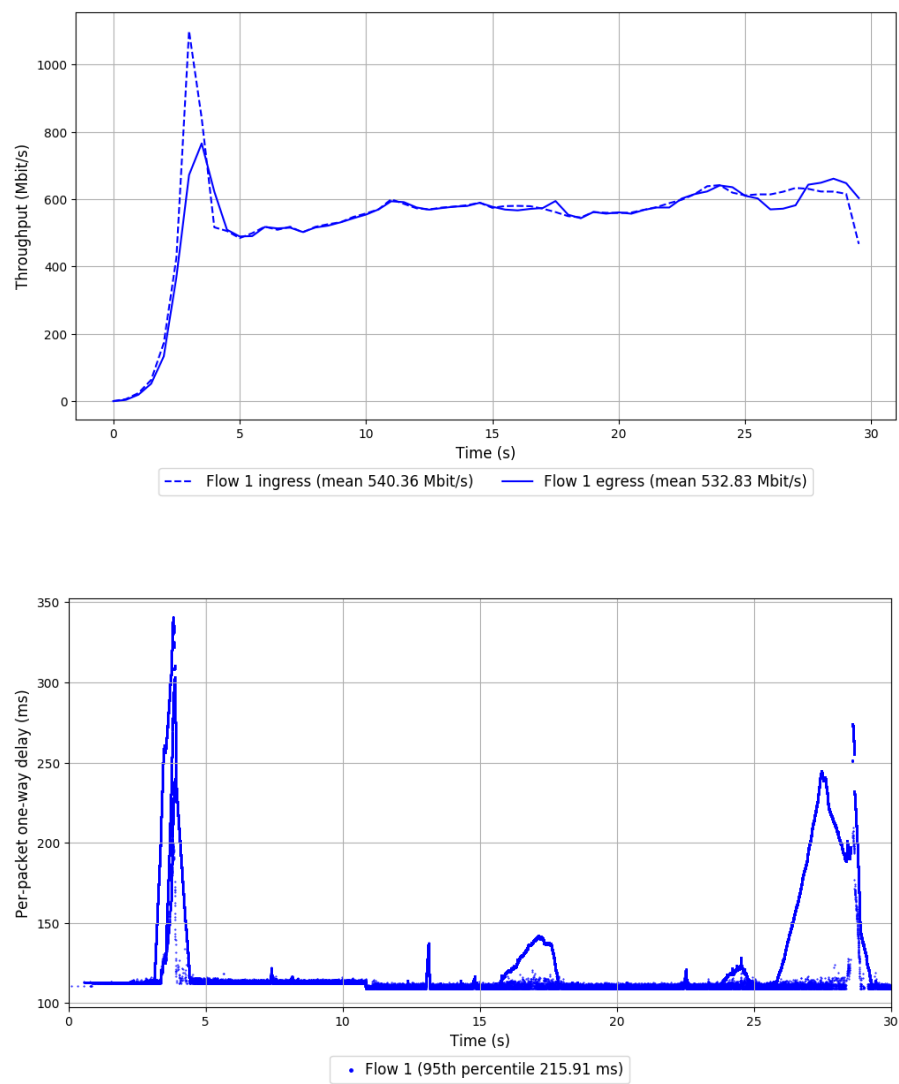
-- Flow 1:

Average throughput: 532.83 Mbit/s

95th percentile per-packet one-way delay: 215.914 ms

Loss rate: 1.39%

Run 9: Report of PCC — Data Link



Run 10: Statistics of PCC

Start at: 2017-12-19 23:13:21

End at: 2017-12-19 23:13:51

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 550.00 Mbit/s

95th percentile per-packet one-way delay: 208.753 ms

Loss rate: 2.44%

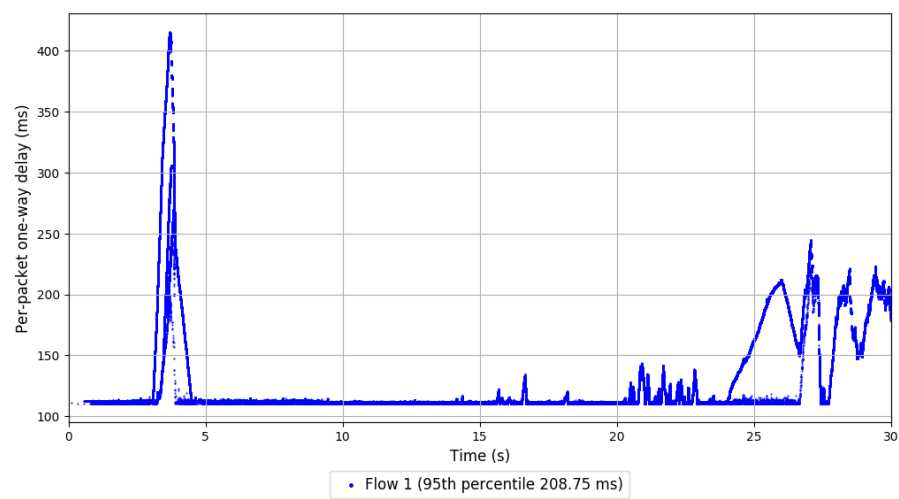
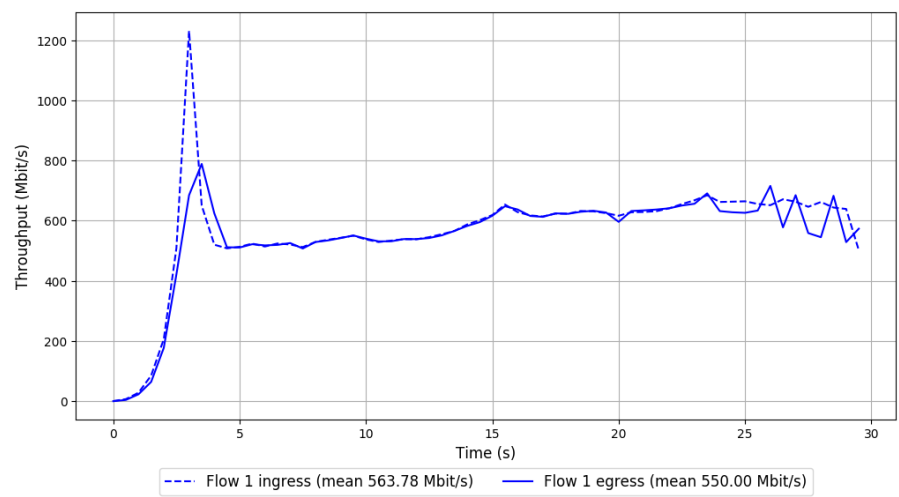
-- Flow 1:

Average throughput: 550.00 Mbit/s

95th percentile per-packet one-way delay: 208.753 ms

Loss rate: 2.44%

Run 10: Report of PCC — Data Link

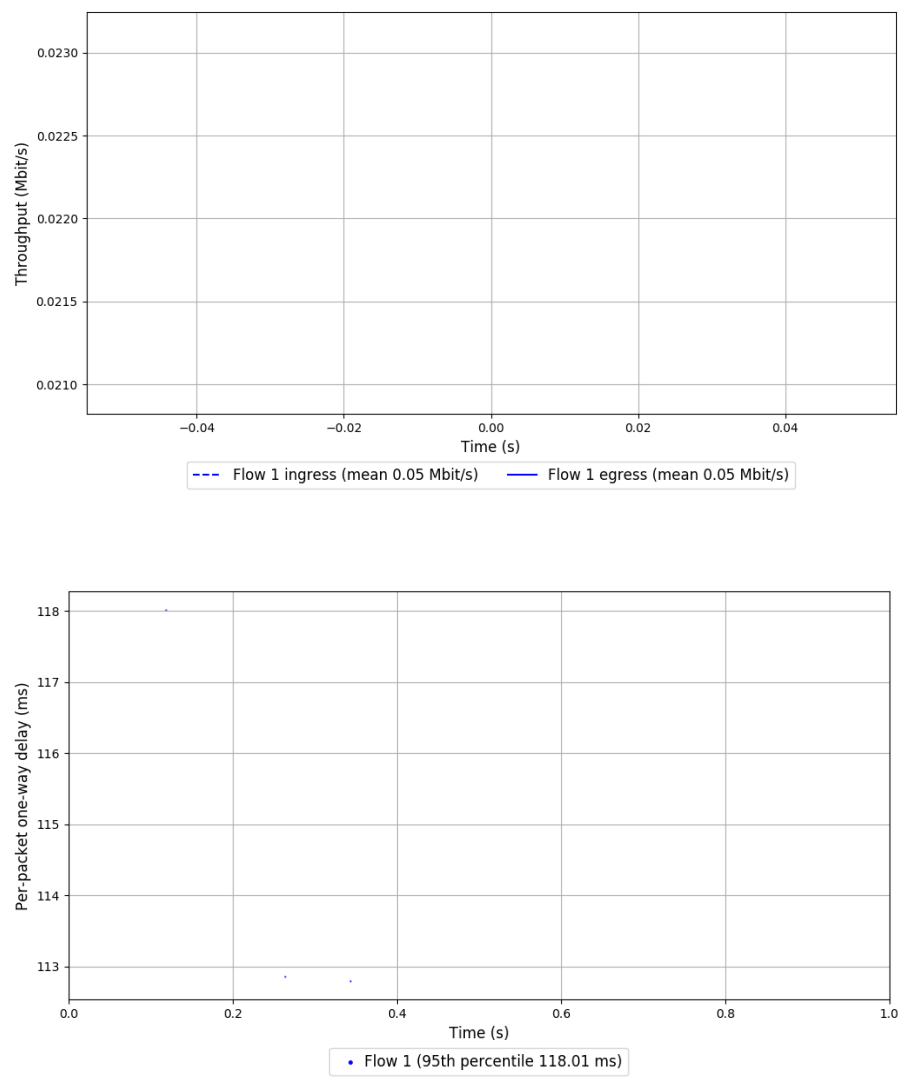


Run 1: Statistics of QUIC Cubic

Start at: 2017-12-19 21:28:14

End at: 2017-12-19 21:28:44

Run 1: Report of QUIC Cubic — Data Link

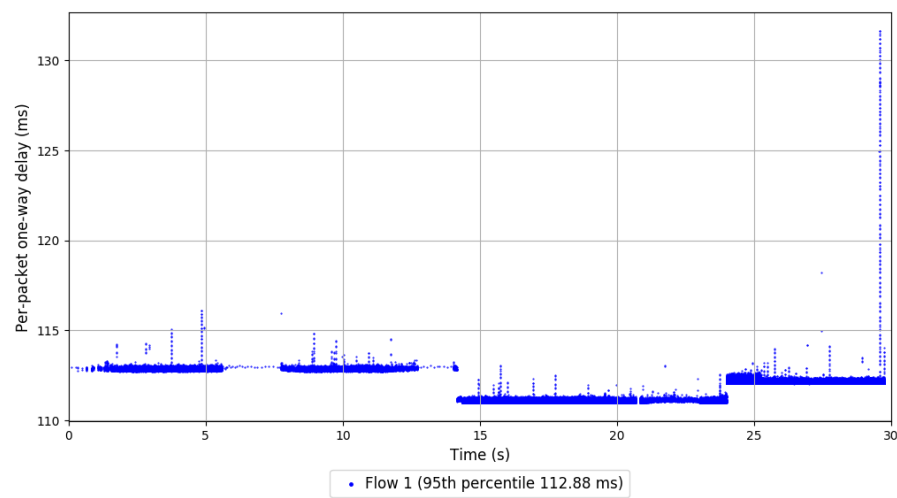
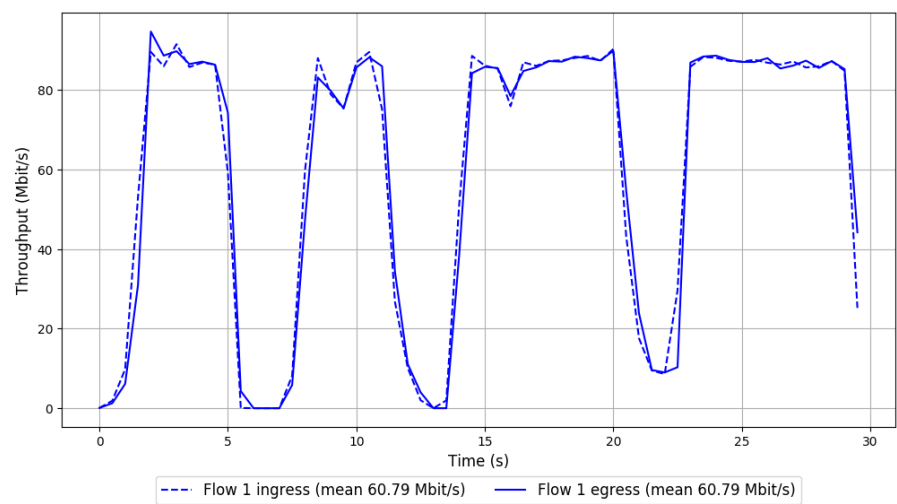


```
Run 2: Statistics of QUIC Cubic

Start at: 2017-12-19 21:40:13
End at: 2017-12-19 21:40:43

# Below is generated by plot.py at 2017-12-20 00:39:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 60.79 Mbit/s
95th percentile per-packet one-way delay: 112.877 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 60.79 Mbit/s
95th percentile per-packet one-way delay: 112.877 ms
Loss rate: 0.00%
```

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2017-12-19 21:52:17

End at: 2017-12-19 21:52:47

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 66.73 Mbit/s

95th percentile per-packet one-way delay: 112.757 ms

Loss rate: 0.00%

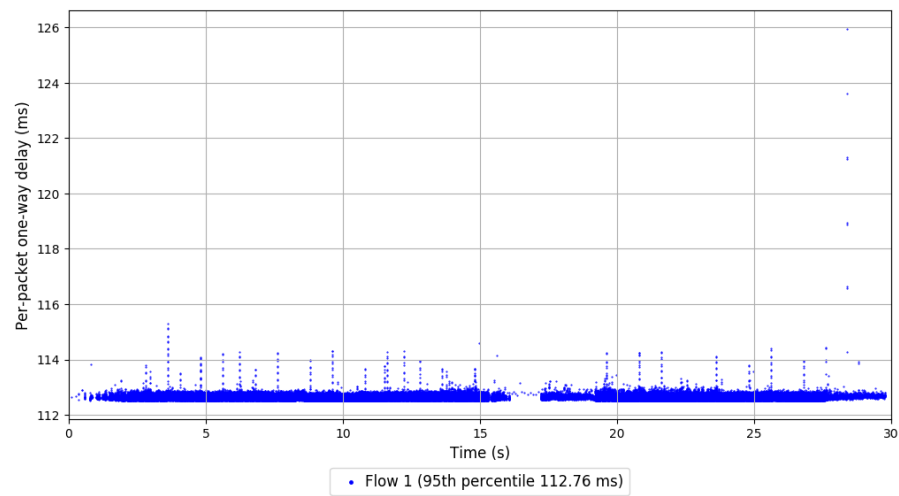
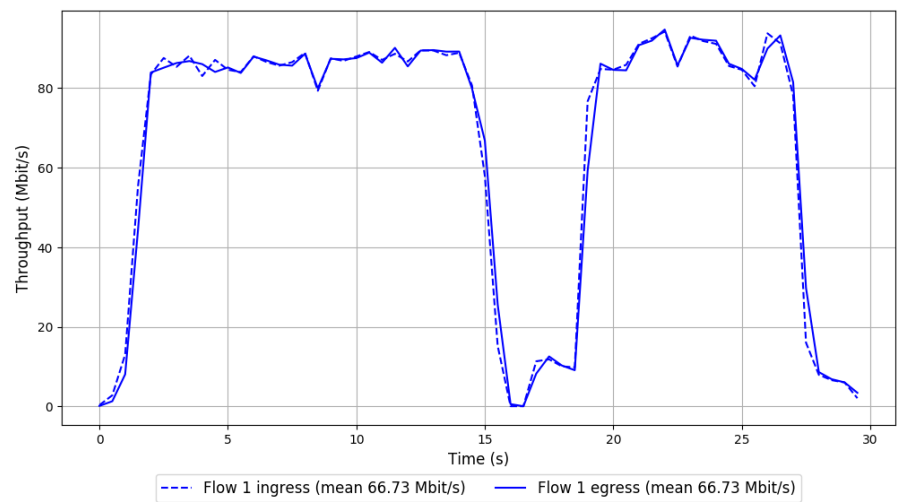
-- Flow 1:

Average throughput: 66.73 Mbit/s

95th percentile per-packet one-way delay: 112.757 ms

Loss rate: 0.00%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2017-12-19 22:04:41

End at: 2017-12-19 22:05:11

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 47.19 Mbit/s

95th percentile per-packet one-way delay: 113.176 ms

Loss rate: 0.00%

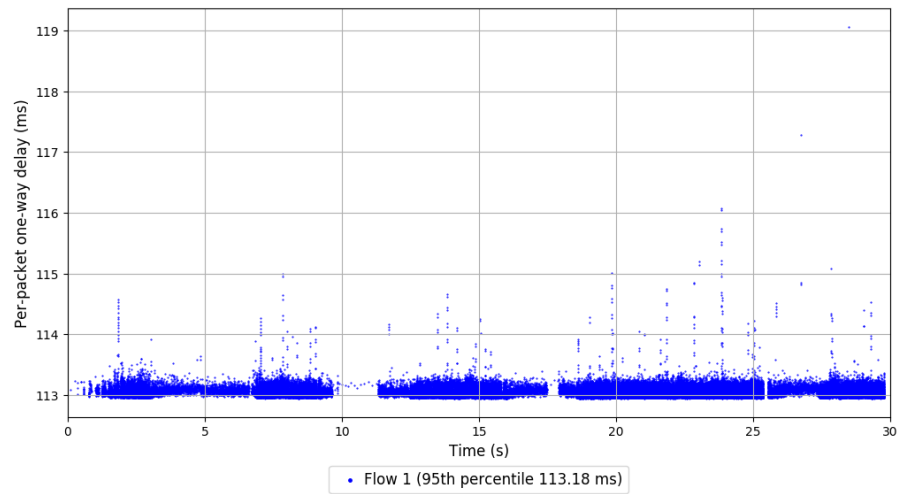
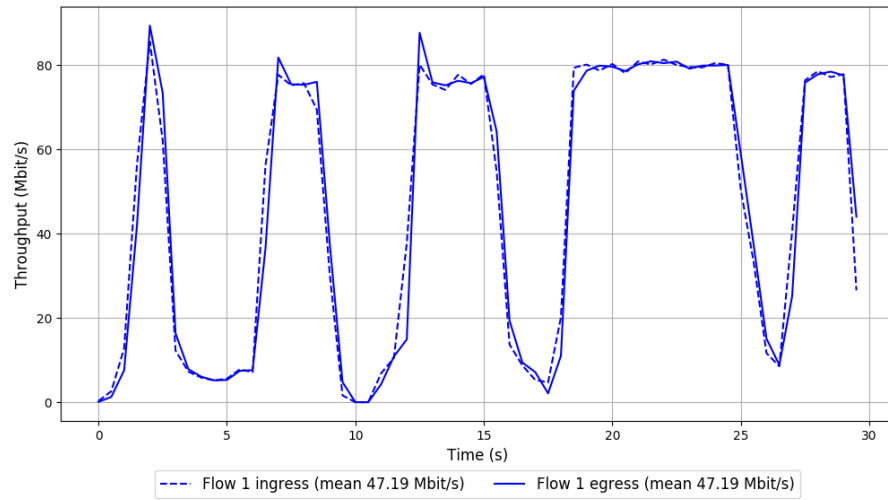
-- Flow 1:

Average throughput: 47.19 Mbit/s

95th percentile per-packet one-way delay: 113.176 ms

Loss rate: 0.00%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2017-12-19 22:17:00

End at: 2017-12-19 22:17:30

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 52.91 Mbit/s

95th percentile per-packet one-way delay: 109.308 ms

Loss rate: 0.00%

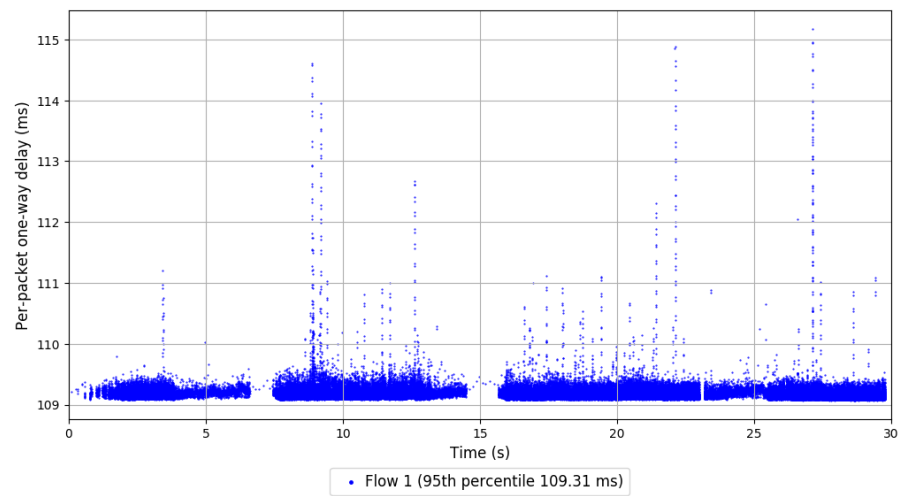
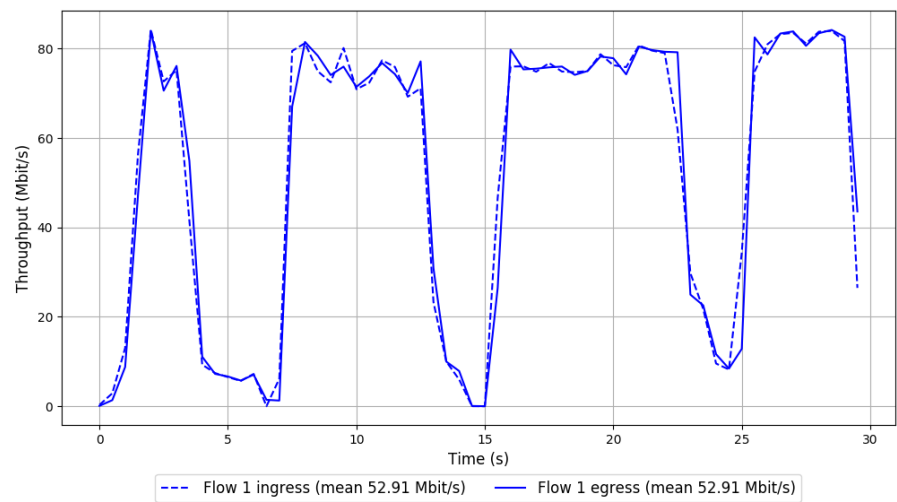
-- Flow 1:

Average throughput: 52.91 Mbit/s

95th percentile per-packet one-way delay: 109.308 ms

Loss rate: 0.00%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2017-12-19 22:29:43

End at: 2017-12-19 22:30:13

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 59.57 Mbit/s

95th percentile per-packet one-way delay: 112.645 ms

Loss rate: 0.00%

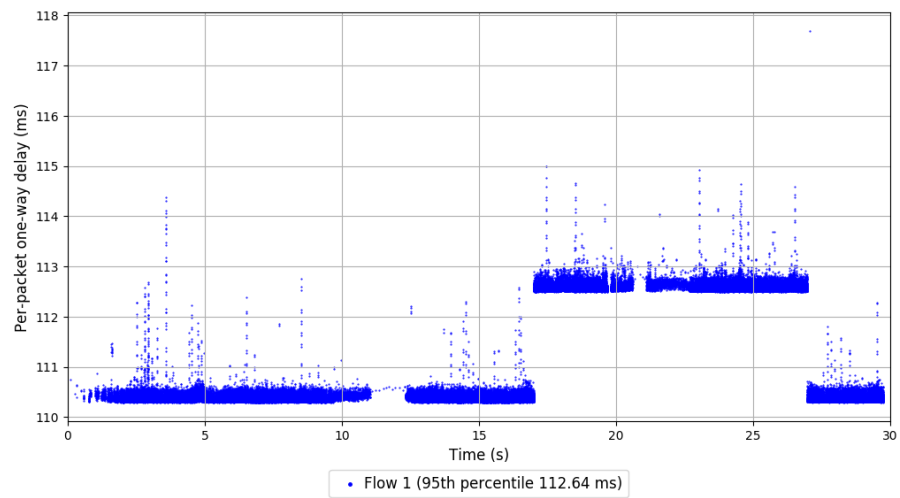
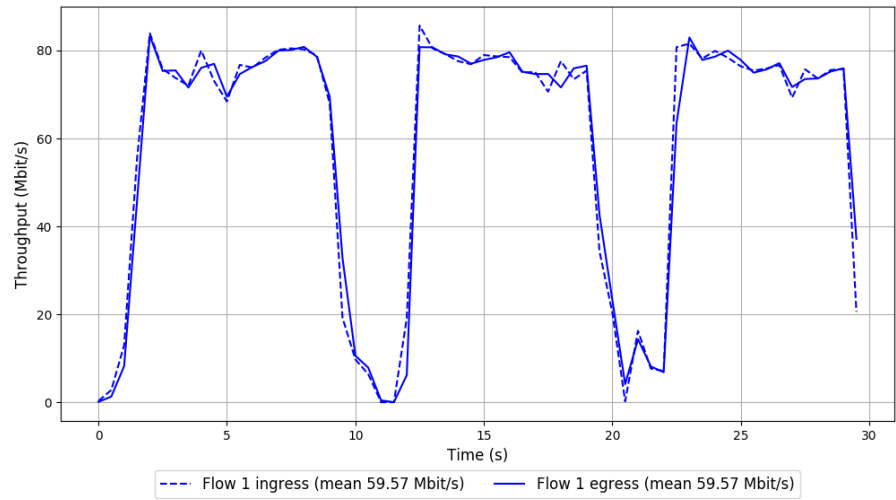
-- Flow 1:

Average throughput: 59.57 Mbit/s

95th percentile per-packet one-way delay: 112.645 ms

Loss rate: 0.00%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2017-12-19 22:42:08

End at: 2017-12-19 22:42:38

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 61.41 Mbit/s

95th percentile per-packet one-way delay: 112.928 ms

Loss rate: 0.01%

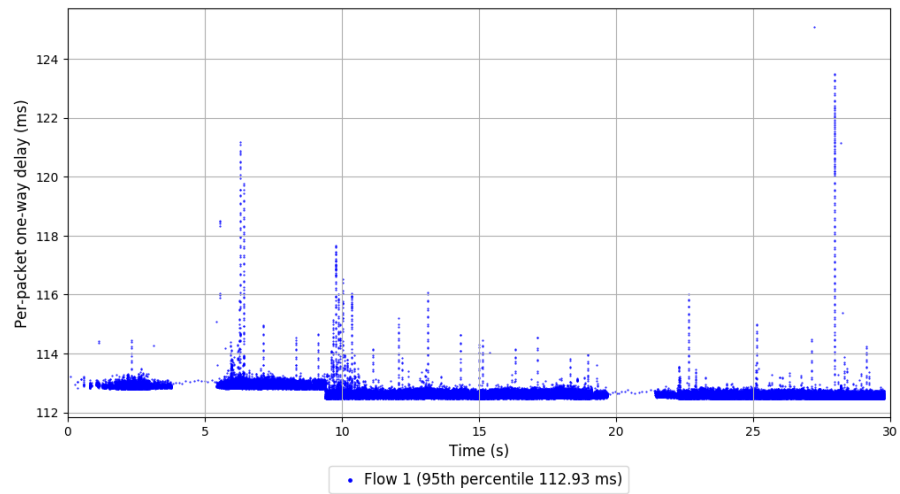
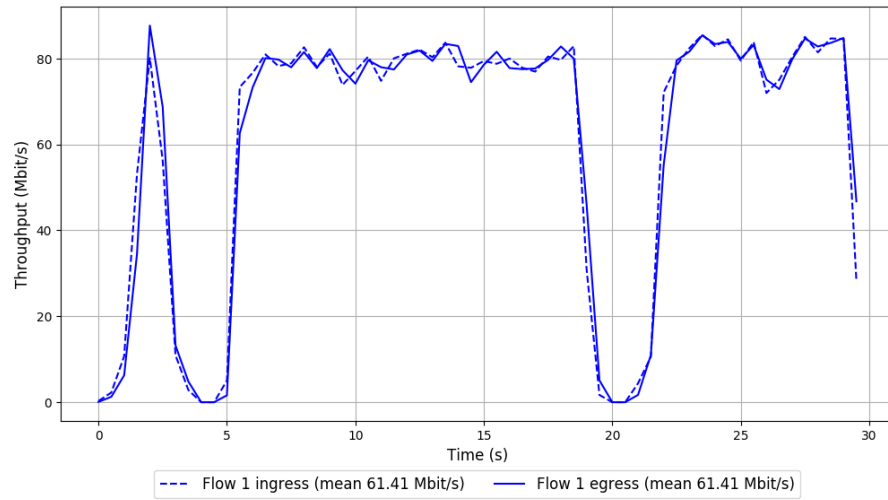
-- Flow 1:

Average throughput: 61.41 Mbit/s

95th percentile per-packet one-way delay: 112.928 ms

Loss rate: 0.01%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2017-12-19 22:54:34

End at: 2017-12-19 22:55:04

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 55.27 Mbit/s

95th percentile per-packet one-way delay: 113.013 ms

Loss rate: 0.01%

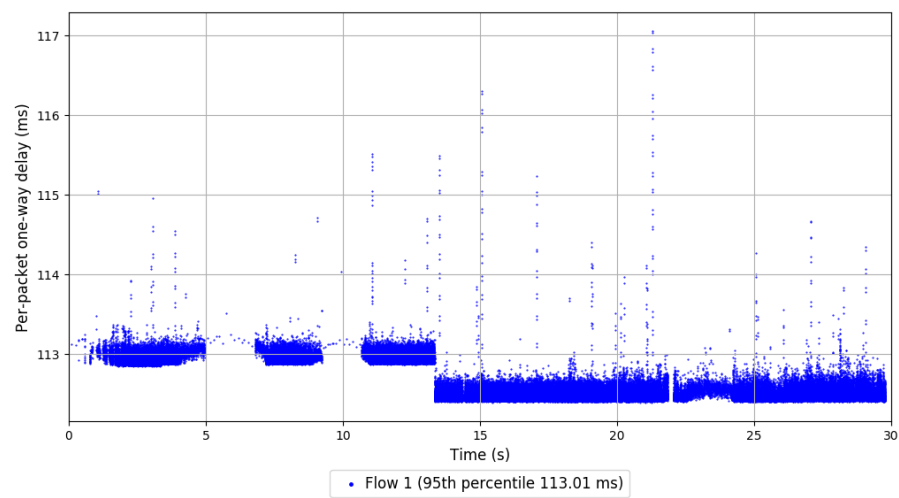
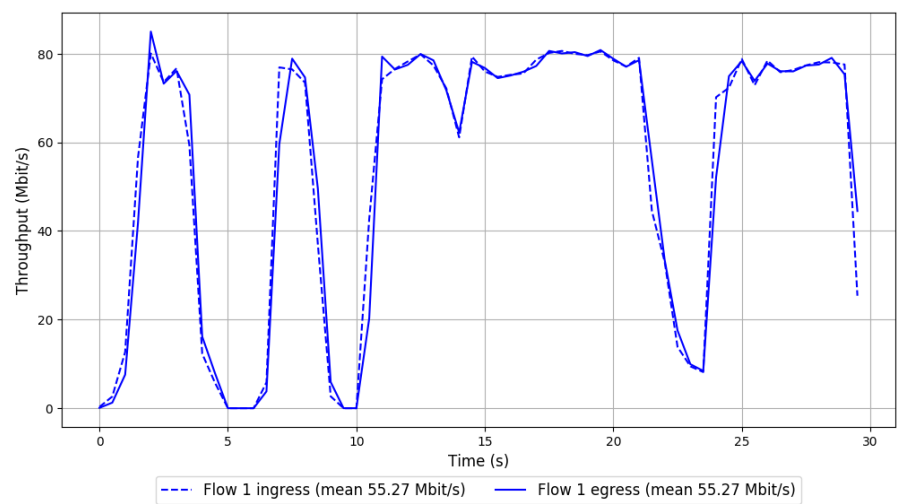
-- Flow 1:

Average throughput: 55.27 Mbit/s

95th percentile per-packet one-way delay: 113.013 ms

Loss rate: 0.01%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2017-12-19 23:06:42

End at: 2017-12-19 23:07:12

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 62.51 Mbit/s

95th percentile per-packet one-way delay: 112.582 ms

Loss rate: 0.01%

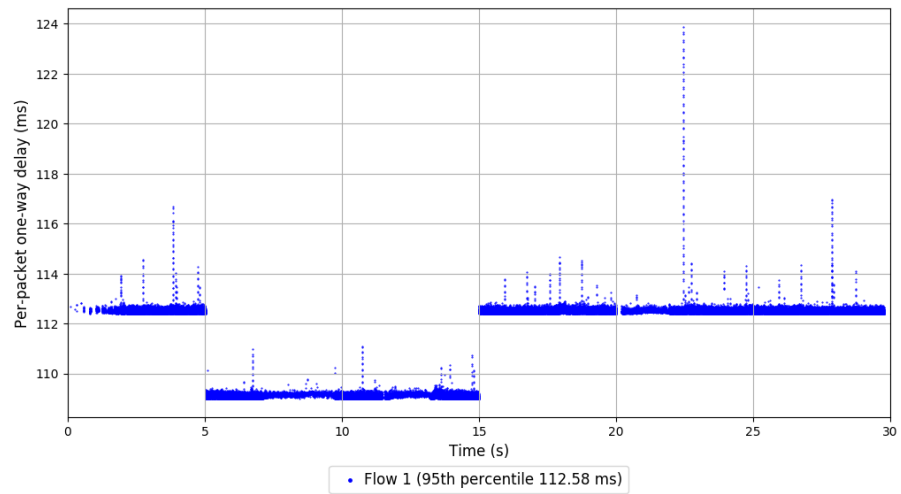
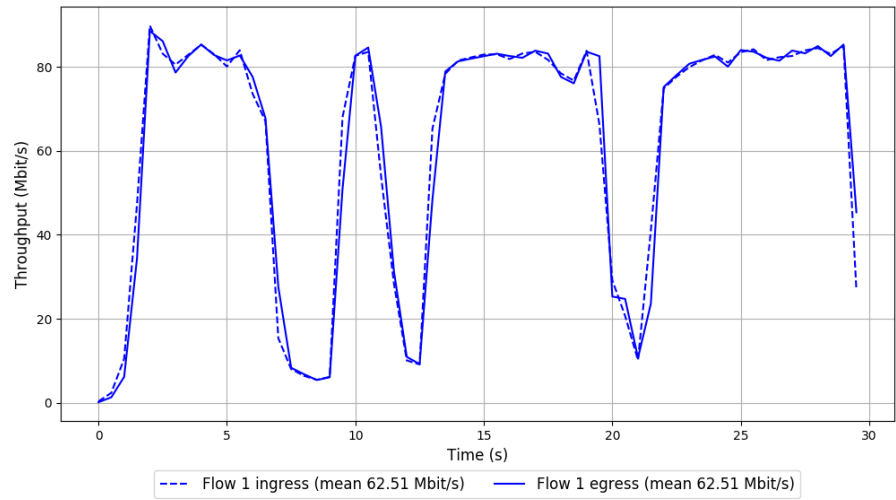
-- Flow 1:

Average throughput: 62.51 Mbit/s

95th percentile per-packet one-way delay: 112.582 ms

Loss rate: 0.01%

Run 9: Report of QUIC Cubic — Data Link



Run 10: Statistics of QUIC Cubic

Start at: 2017-12-19 23:18:54

End at: 2017-12-19 23:19:24

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 58.80 Mbit/s

95th percentile per-packet one-way delay: 112.600 ms

Loss rate: 0.00%

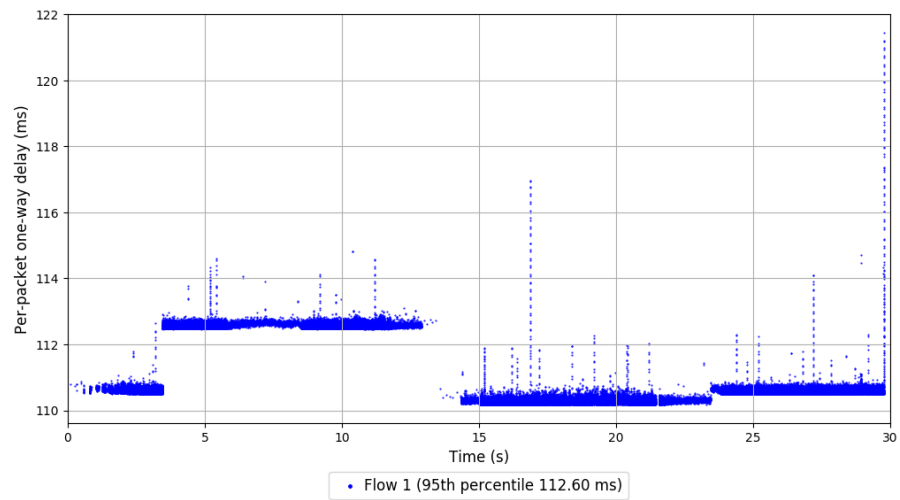
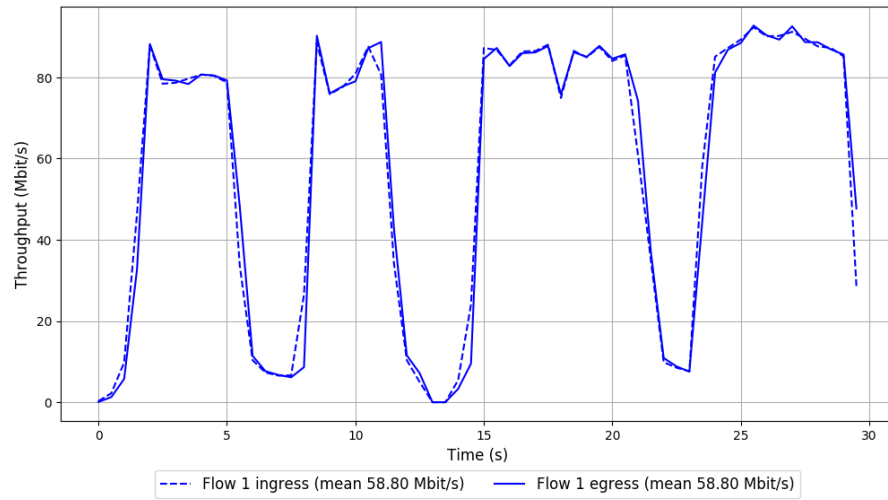
-- Flow 1:

Average throughput: 58.80 Mbit/s

95th percentile per-packet one-way delay: 112.600 ms

Loss rate: 0.00%

Run 10: Report of QUIC Cubic — Data Link

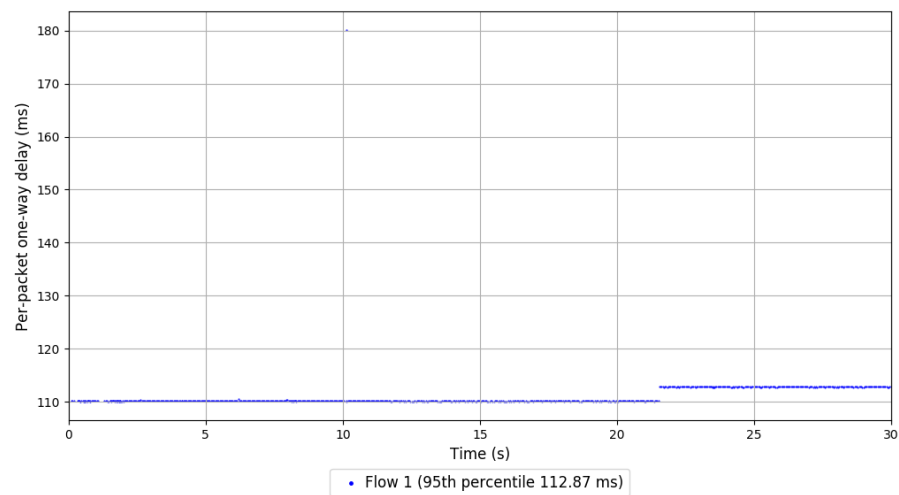
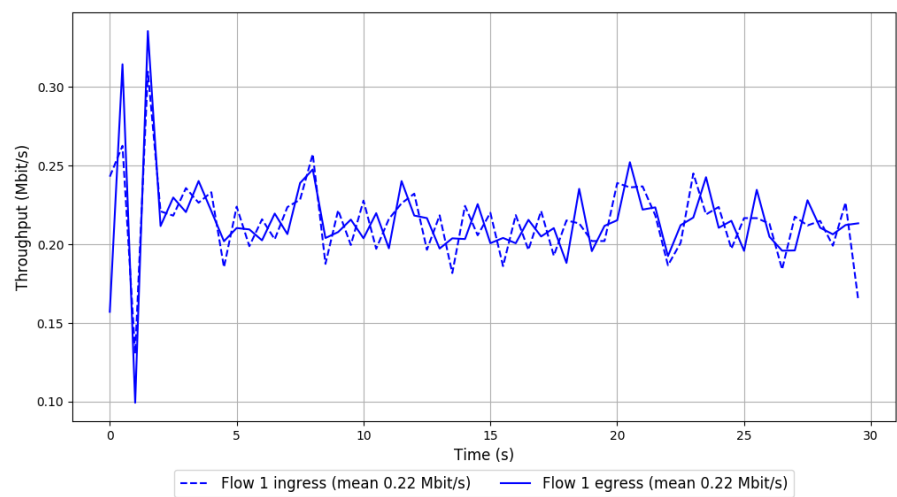


```
Run 1: Statistics of SCReAM

Start at: 2017-12-19 21:21:18
End at: 2017-12-19 21:21:48

# Below is generated by plot.py at 2017-12-20 00:39:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.868 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.868 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link

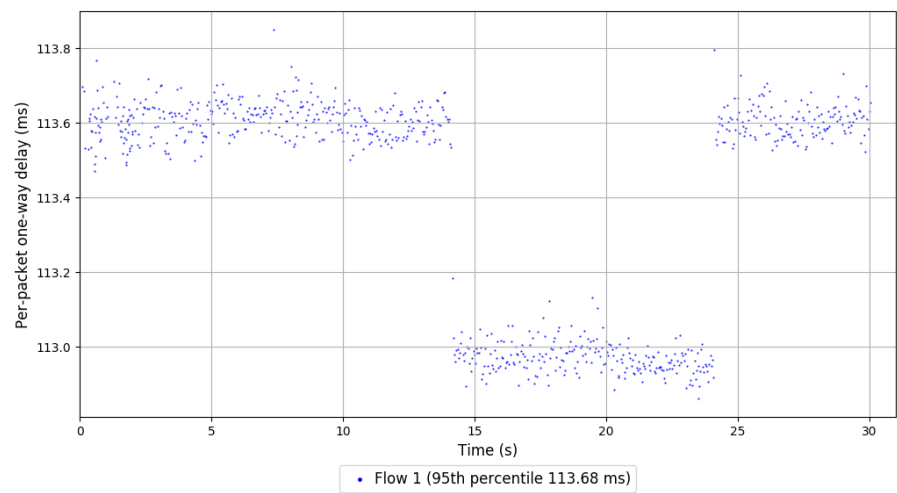
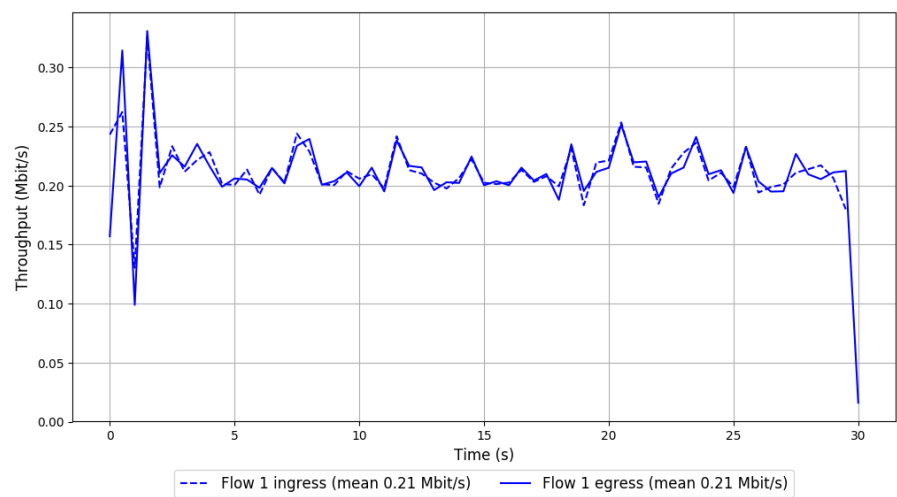


```
Run 2: Statistics of SCReAM

Start at: 2017-12-19 21:33:24
End at: 2017-12-19 21:33:54

# Below is generated by plot.py at 2017-12-20 00:39:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 113.677 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 113.677 ms
Loss rate: 0.00%
```

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2017-12-19 21:45:22

End at: 2017-12-19 21:45:52

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 113.263 ms

Loss rate: 0.00%

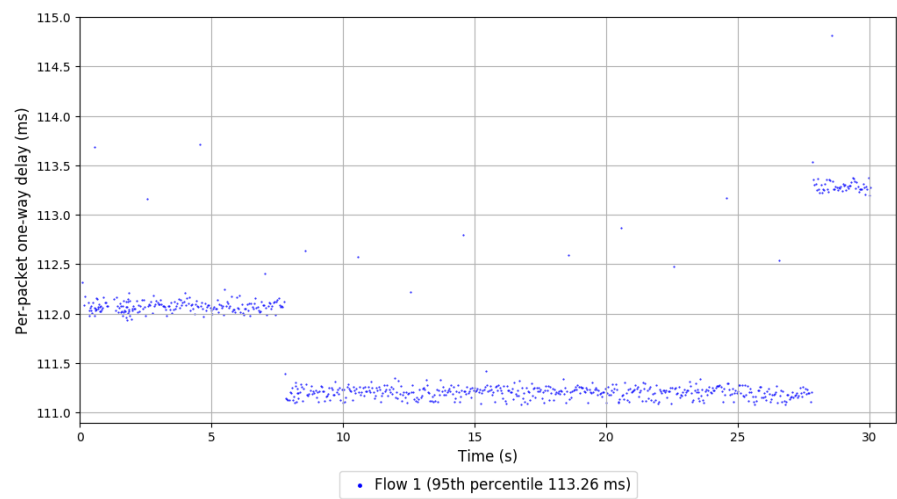
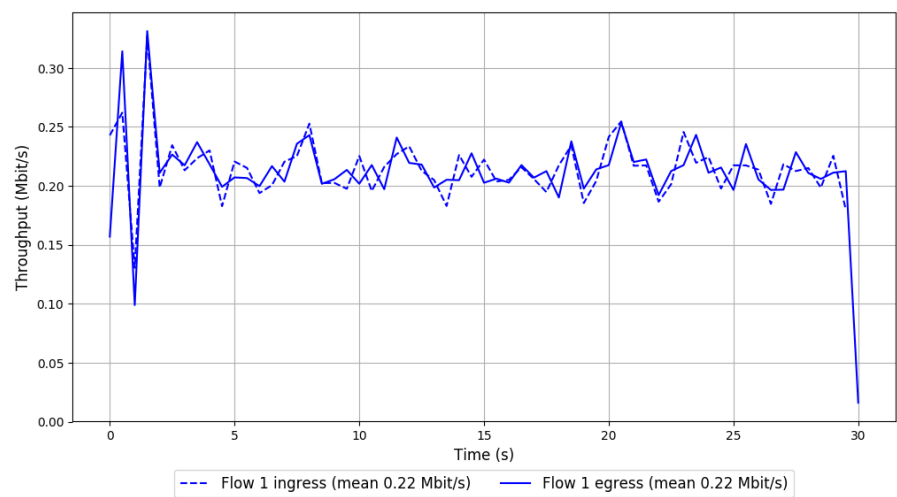
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 113.263 ms

Loss rate: 0.00%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2017-12-19 21:57:39

End at: 2017-12-19 21:58:09

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 113.387 ms

Loss rate: 0.00%

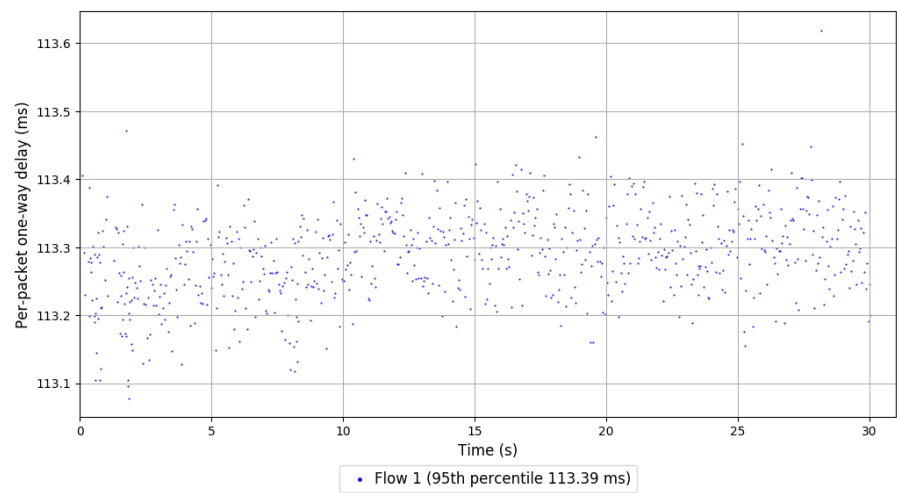
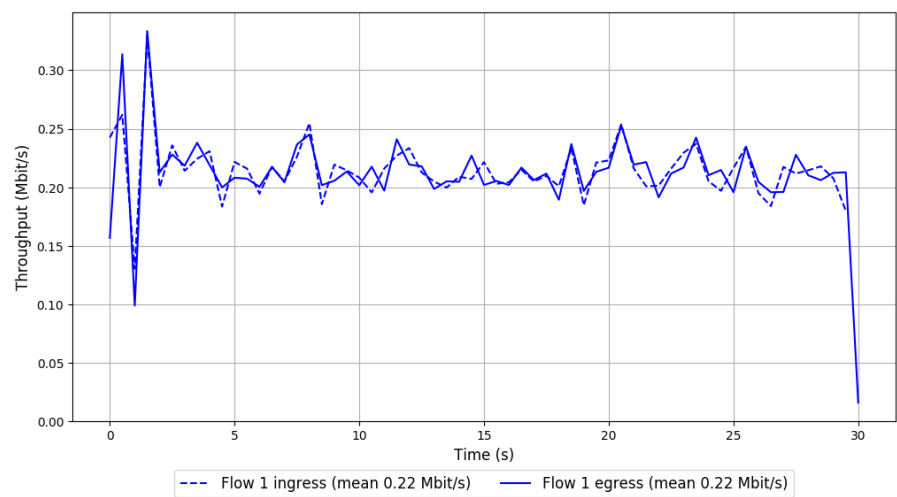
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 113.387 ms

Loss rate: 0.00%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2017-12-19 22:09:51

End at: 2017-12-19 22:10:21

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.354 ms

Loss rate: 0.00%

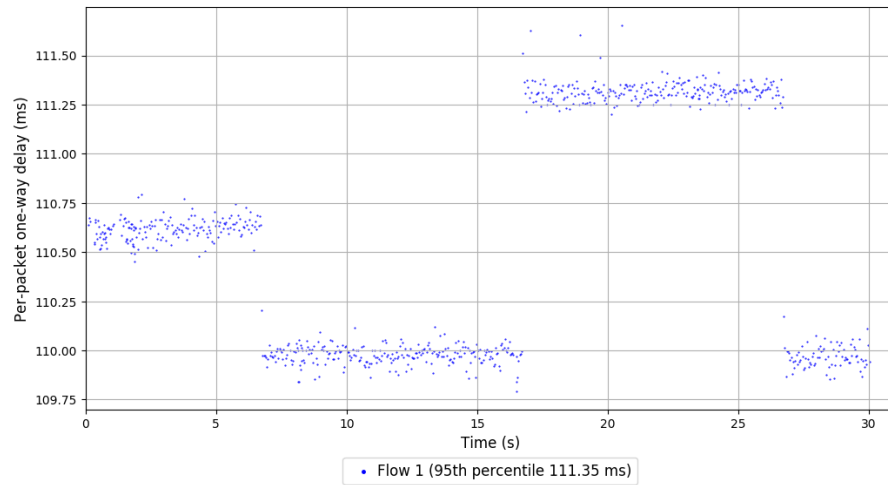
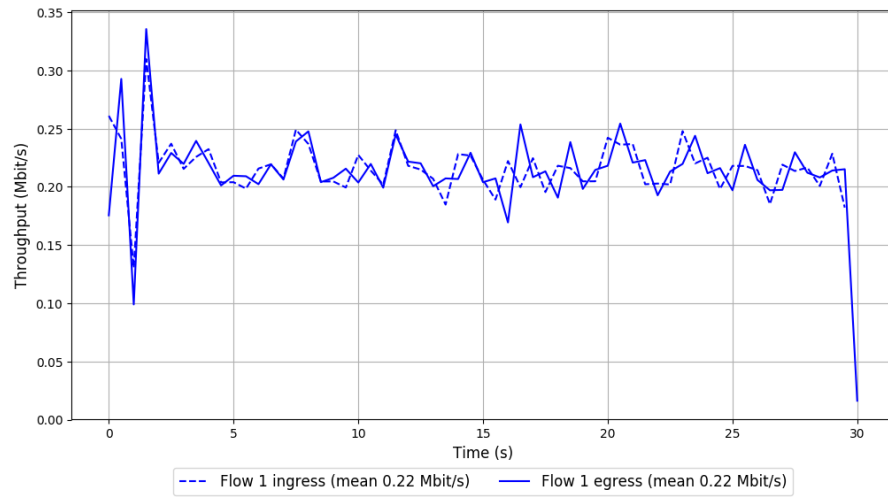
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.354 ms

Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SCReAM

Start at: 2017-12-19 22:22:30

End at: 2017-12-19 22:23:00

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 113.238 ms

Loss rate: 0.00%

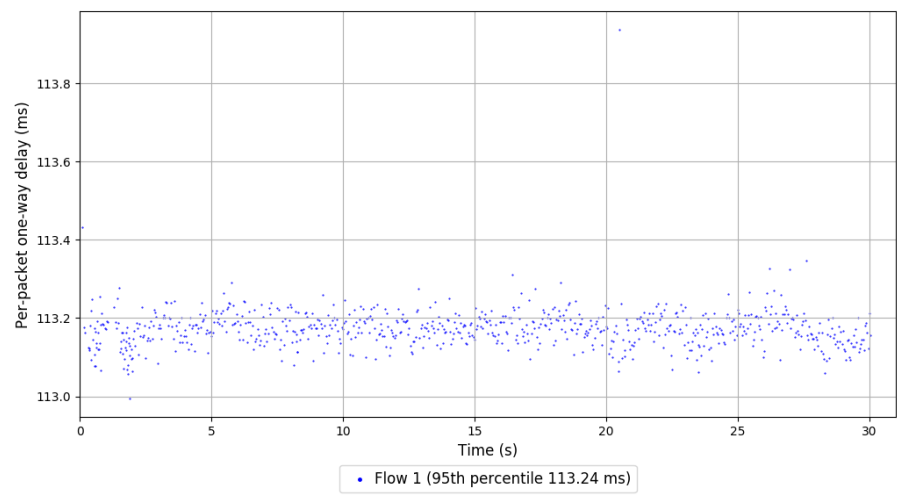
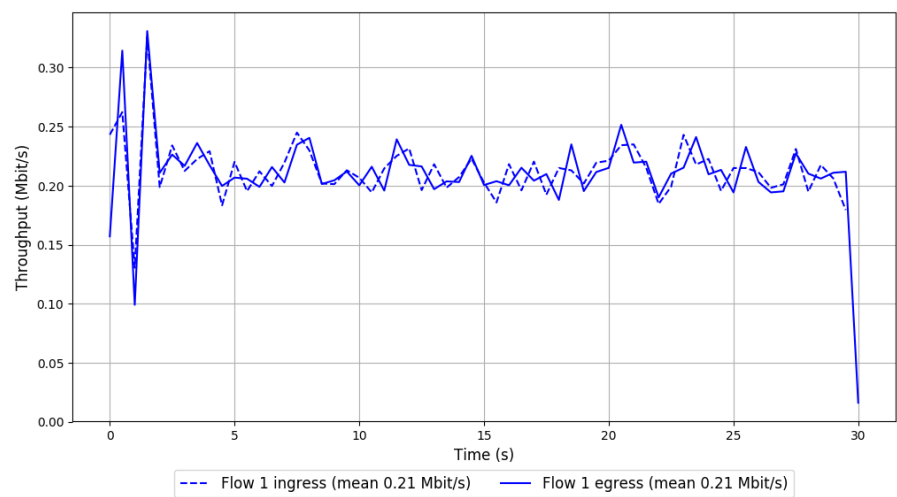
-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 113.238 ms

Loss rate: 0.00%

Run 6: Report of SReAM — Data Link



Run 7: Statistics of SCReAM

Start at: 2017-12-19 22:34:57

End at: 2017-12-19 22:35:27

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 112.767 ms

Loss rate: 0.00%

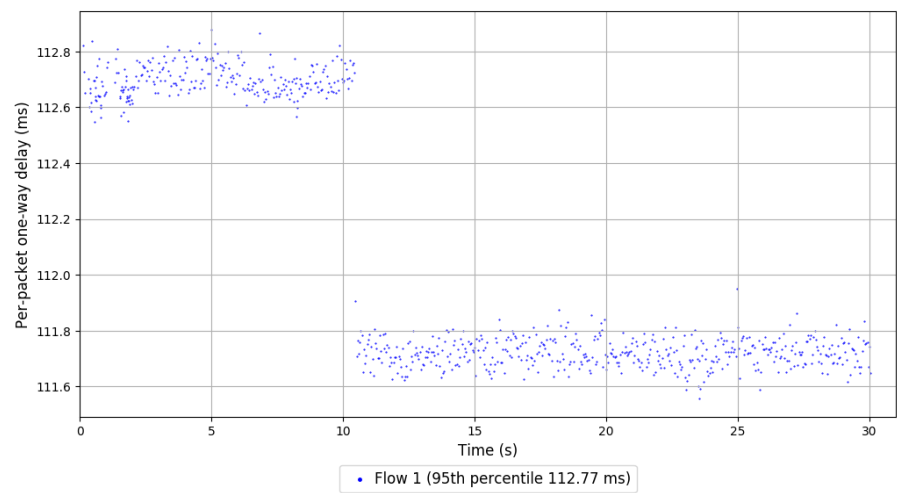
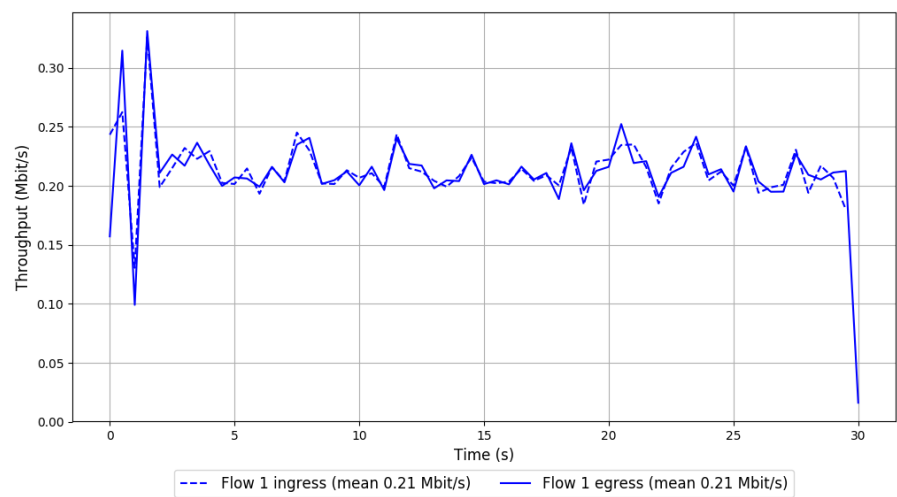
-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 112.767 ms

Loss rate: 0.00%

Run 7: Report of SReAM — Data Link



Run 8: Statistics of SCReAM

Start at: 2017-12-19 22:47:38

End at: 2017-12-19 22:48:08

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.853 ms

Loss rate: 0.00%

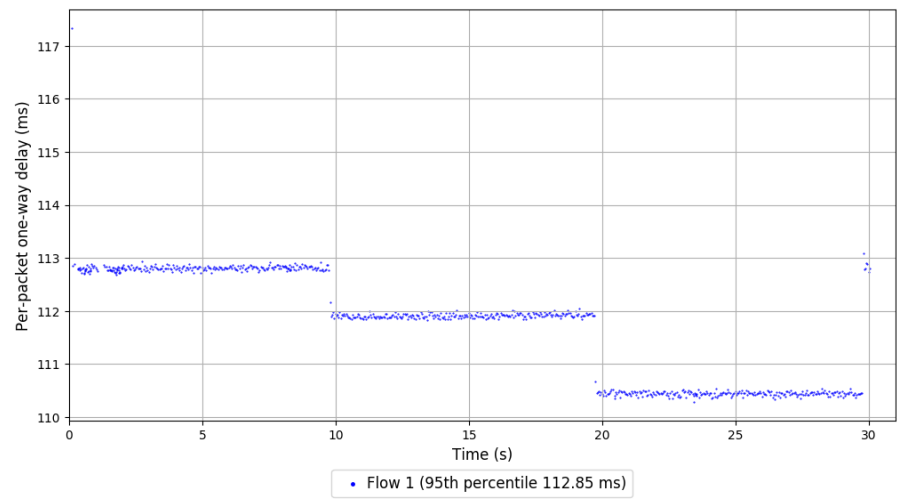
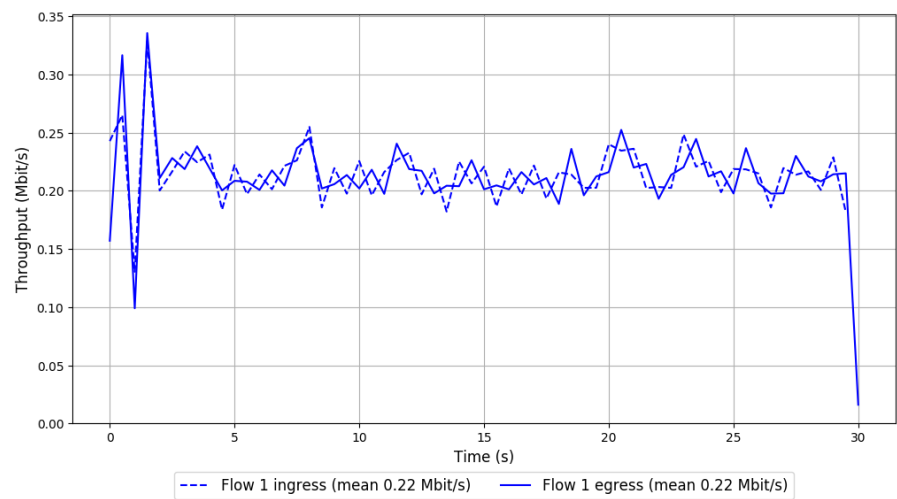
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.853 ms

Loss rate: 0.00%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SCReAM

Start at: 2017-12-19 22:59:43

End at: 2017-12-19 23:00:13

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 113.161 ms

Loss rate: 0.00%

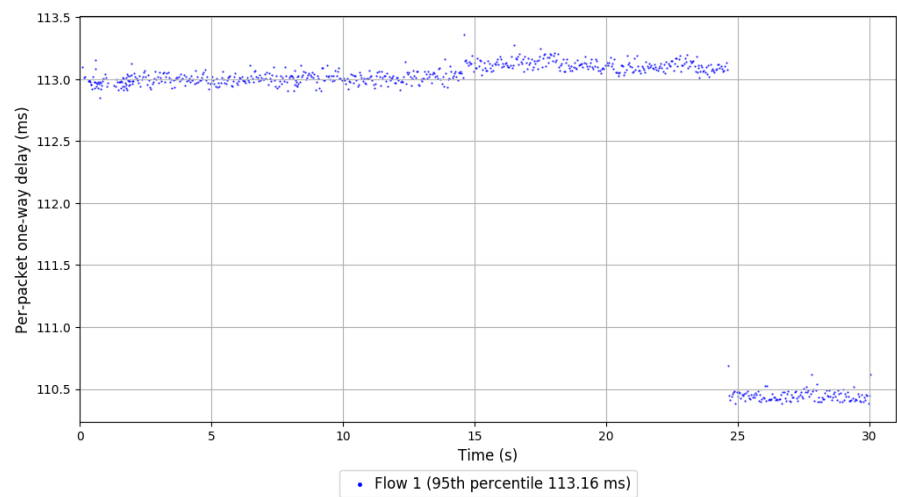
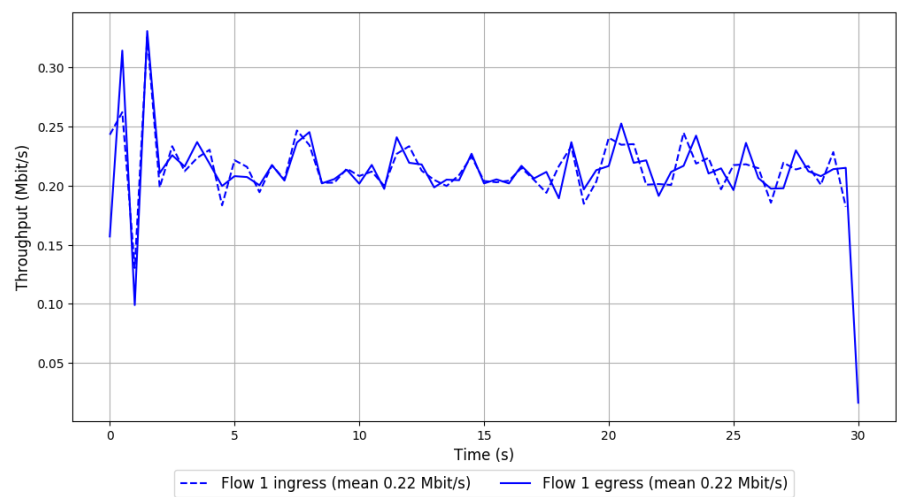
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 113.161 ms

Loss rate: 0.00%

Run 9: Report of SReAM — Data Link

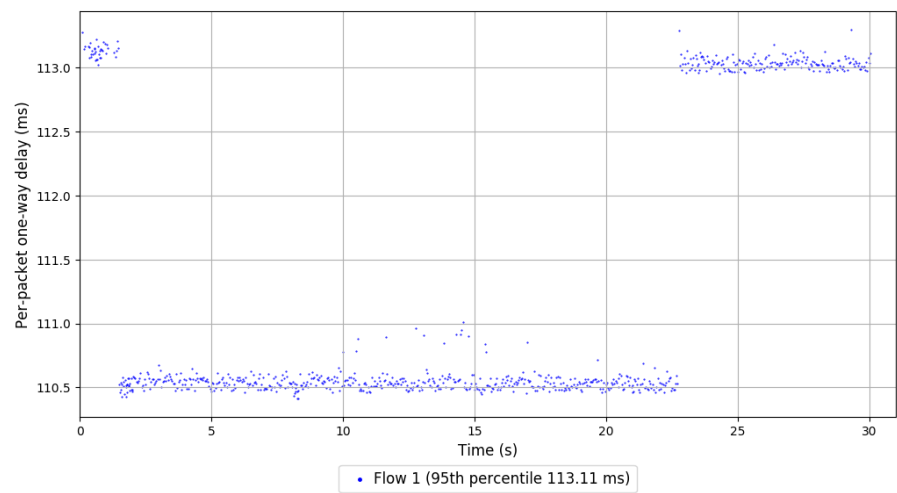
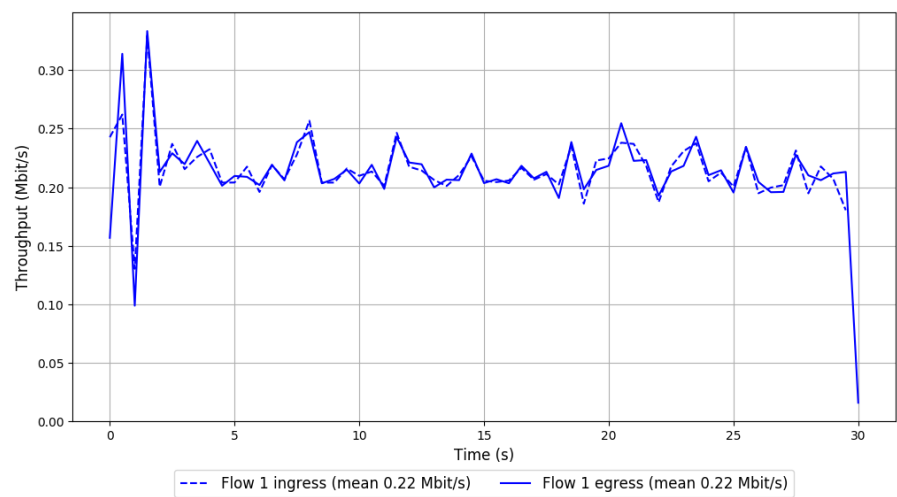


```
Run 10: Statistics of SReAM

Start at: 2017-12-19 23:11:55
End at: 2017-12-19 23:12:25

# Below is generated by plot.py at 2017-12-20 00:39:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 113.107 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 113.107 ms
Loss rate: 0.00%
```

Run 10: Report of SReAM — Data Link

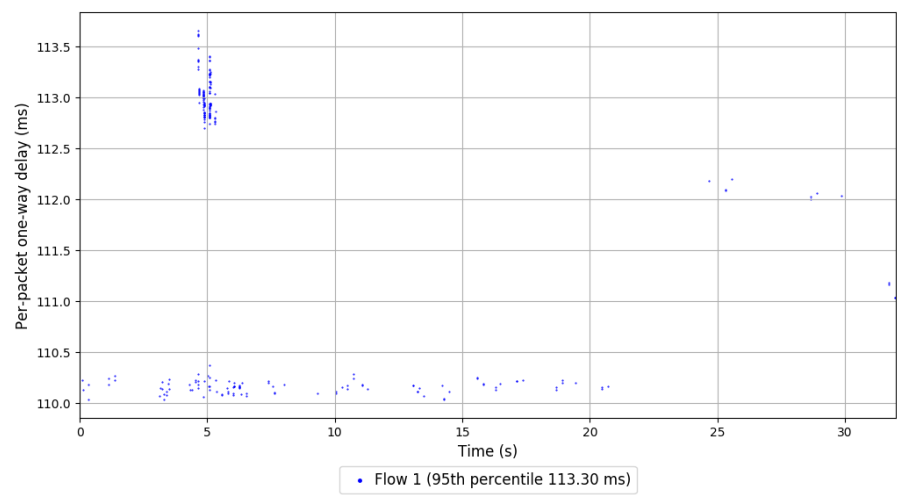
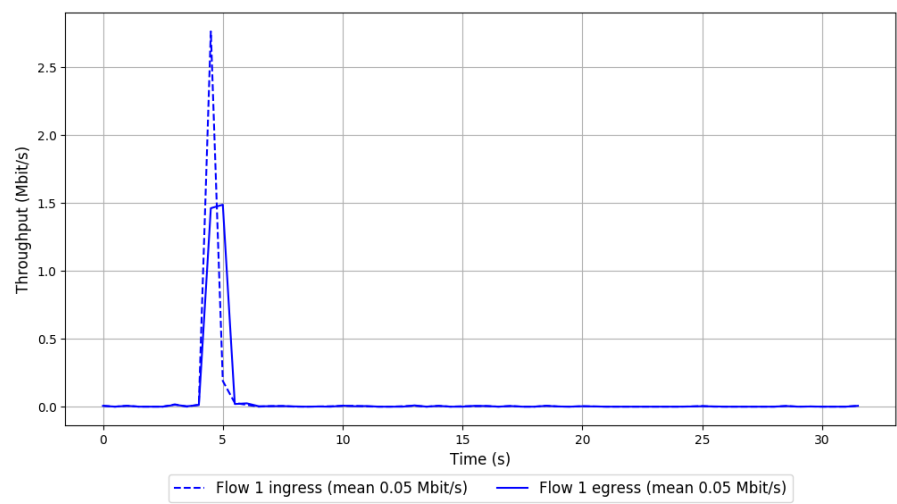


```
Run 1: Statistics of WebRTC media

Start at: 2017-12-19 21:23:49
End at: 2017-12-19 21:24:19

# Below is generated by plot.py at 2017-12-20 00:39:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 113.304 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 113.304 ms
Loss rate: 0.00%
```


Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2017-12-19 21:35:53

End at: 2017-12-19 21:36:23

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.17 Mbit/s

95th percentile per-packet one-way delay: 113.696 ms

Loss rate: 0.00%

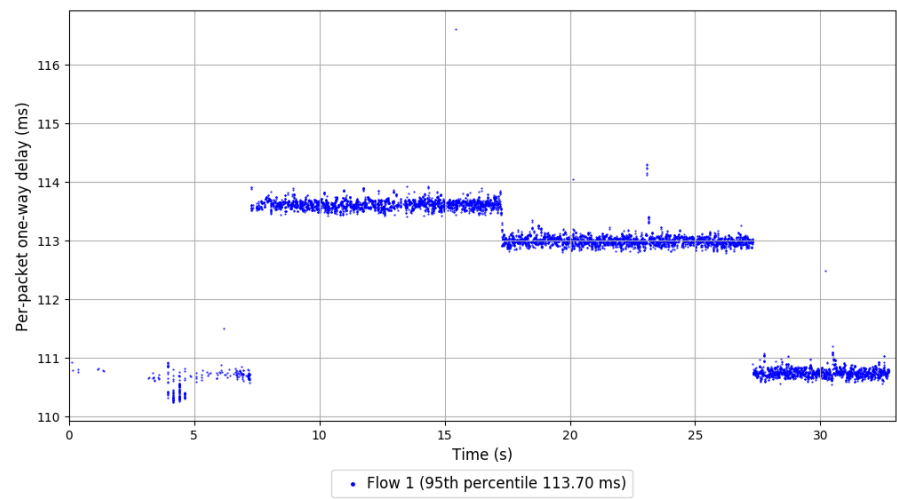
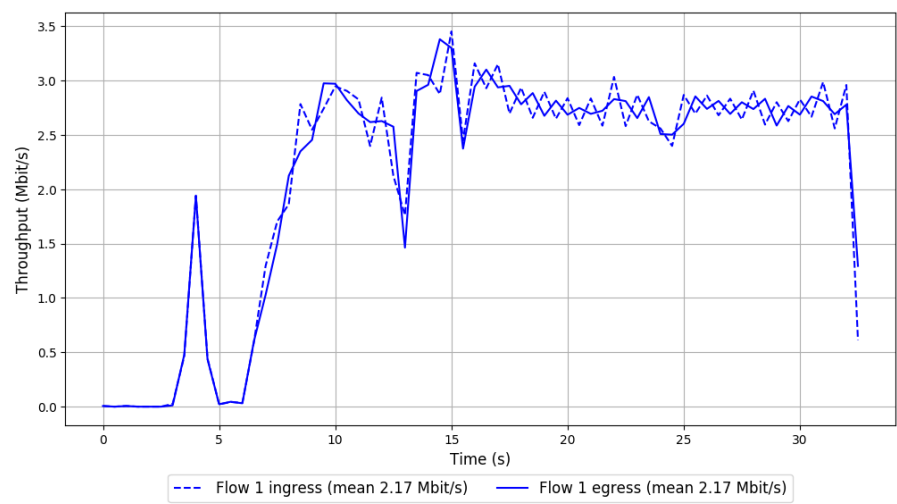
-- Flow 1:

Average throughput: 2.17 Mbit/s

95th percentile per-packet one-way delay: 113.696 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2017-12-19 21:47:52

End at: 2017-12-19 21:48:22

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.15 Mbit/s

95th percentile per-packet one-way delay: 113.293 ms

Loss rate: 0.00%

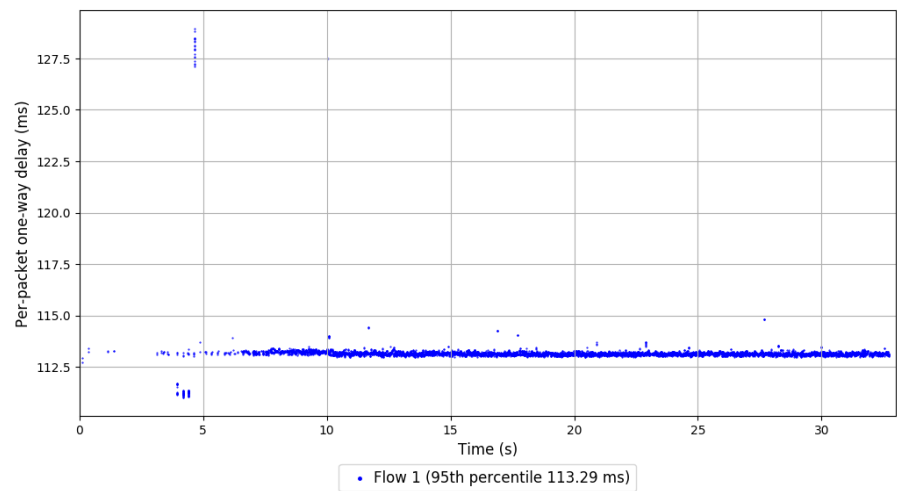
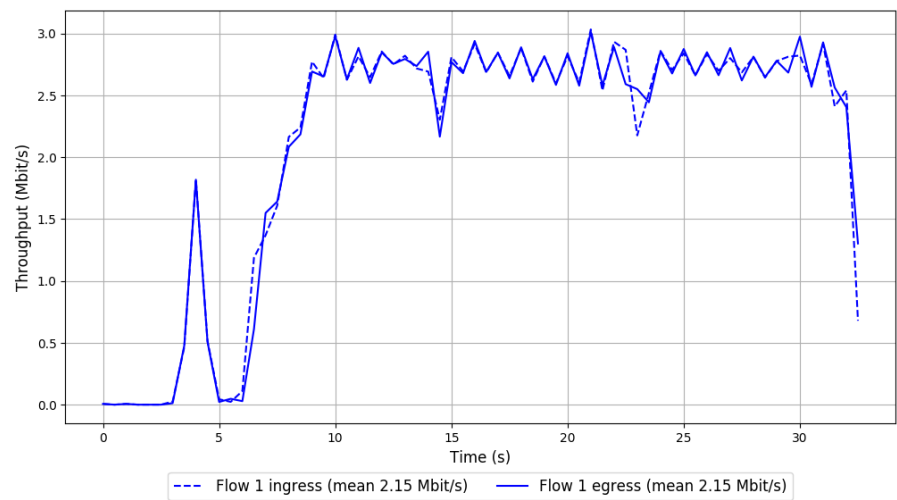
-- Flow 1:

Average throughput: 2.15 Mbit/s

95th percentile per-packet one-way delay: 113.293 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2017-12-19 22:00:10

End at: 2017-12-19 22:00:40

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.16 Mbit/s

95th percentile per-packet one-way delay: 113.138 ms

Loss rate: 0.00%

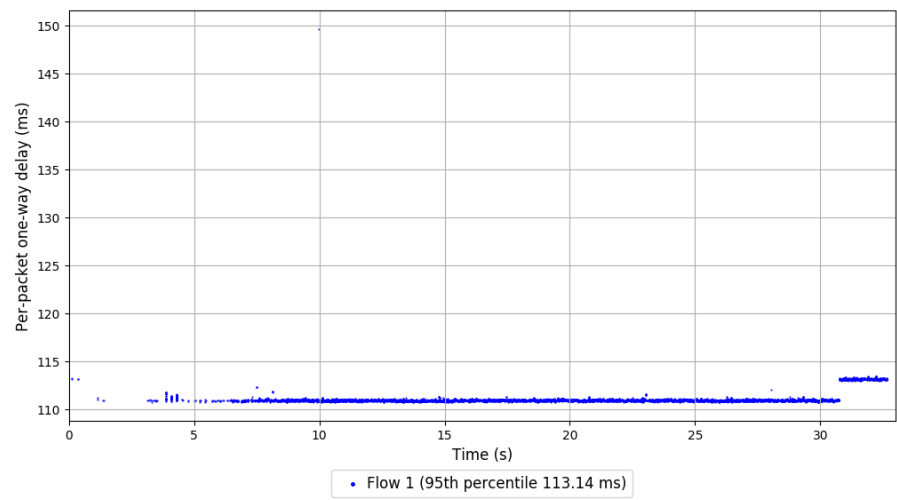
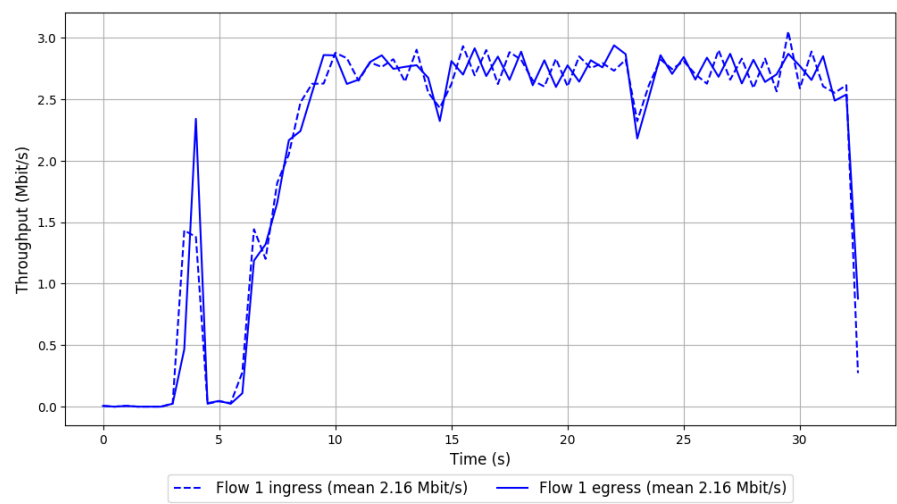
-- Flow 1:

Average throughput: 2.16 Mbit/s

95th percentile per-packet one-way delay: 113.138 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2017-12-19 22:12:22

End at: 2017-12-19 22:12:52

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.16 Mbit/s

95th percentile per-packet one-way delay: 110.754 ms

Loss rate: 0.00%

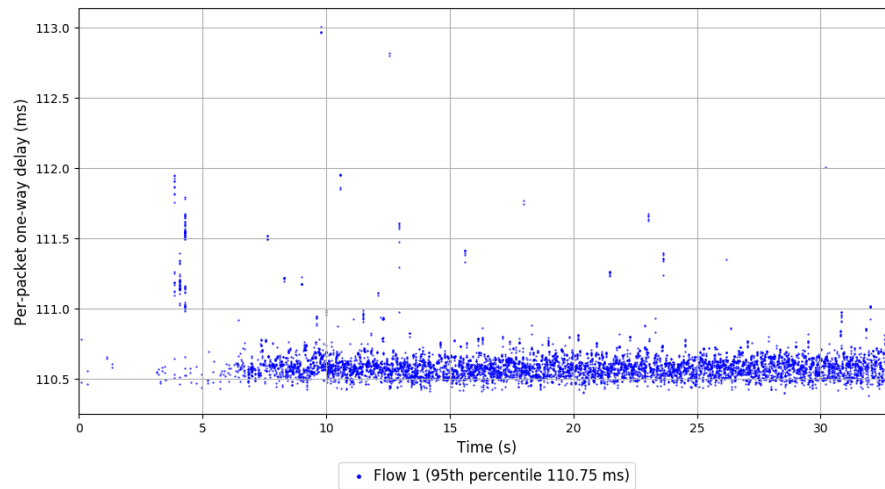
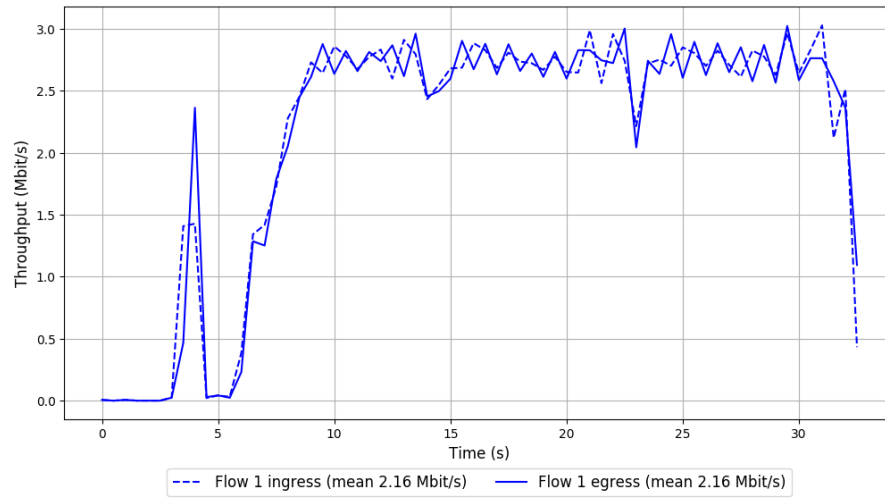
-- Flow 1:

Average throughput: 2.16 Mbit/s

95th percentile per-packet one-way delay: 110.754 ms

Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2017-12-19 22:25:01

End at: 2017-12-19 22:25:31

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.15 Mbit/s

95th percentile per-packet one-way delay: 110.659 ms

Loss rate: 0.00%

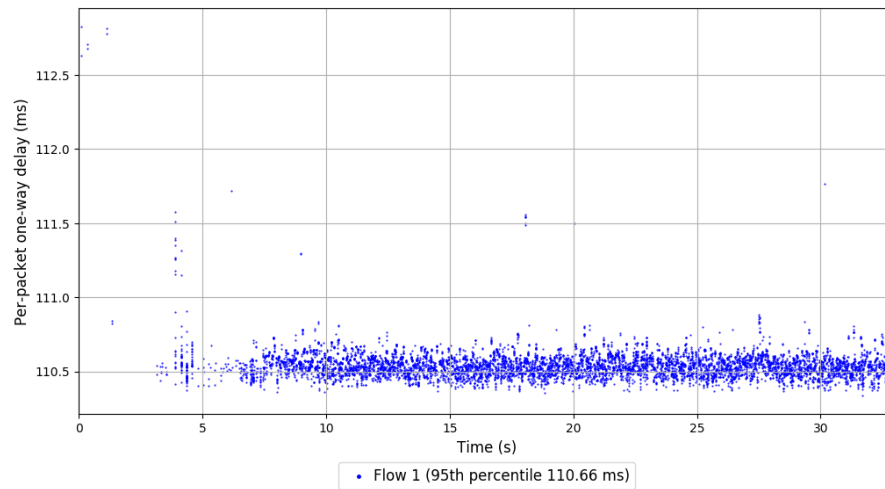
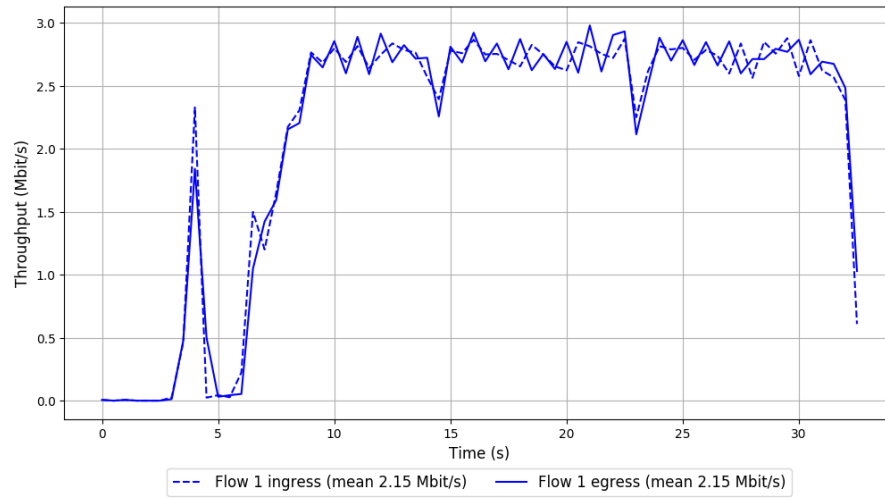
-- Flow 1:

Average throughput: 2.15 Mbit/s

95th percentile per-packet one-way delay: 110.659 ms

Loss rate: 0.00%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2017-12-19 22:37:28

End at: 2017-12-19 22:37:58

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.15 Mbit/s

95th percentile per-packet one-way delay: 112.712 ms

Loss rate: 0.00%

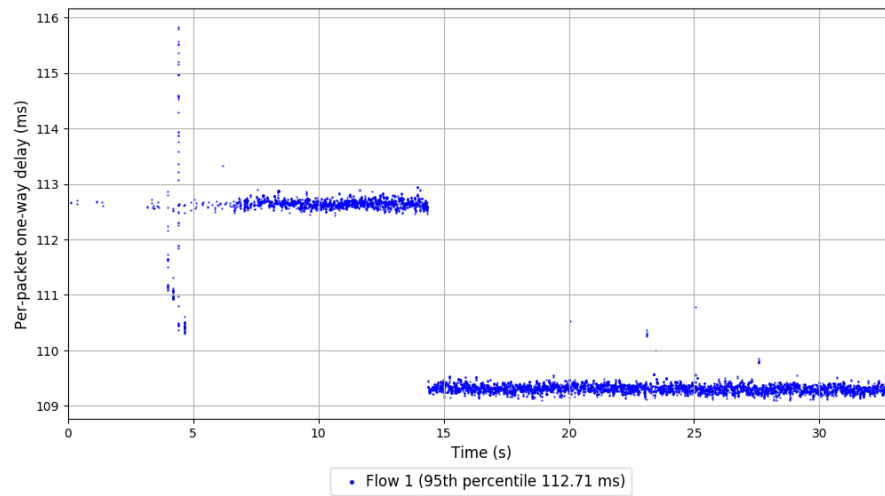
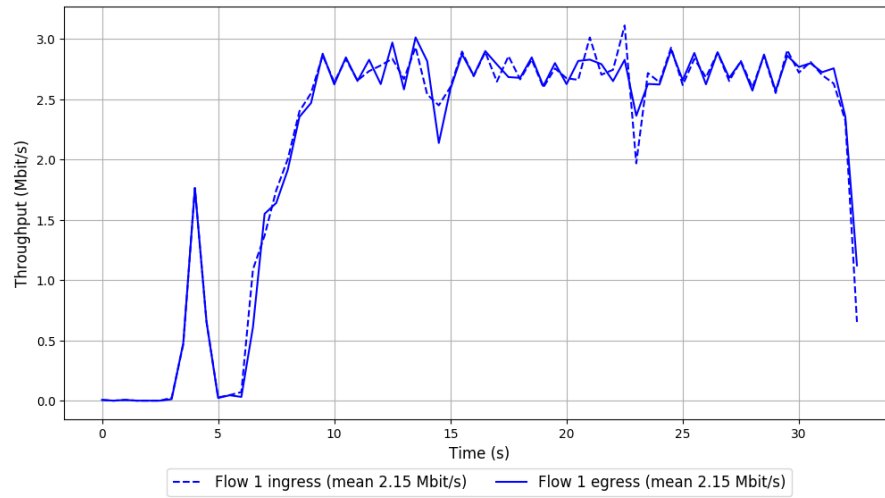
-- Flow 1:

Average throughput: 2.15 Mbit/s

95th percentile per-packet one-way delay: 112.712 ms

Loss rate: 0.00%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2017-12-19 22:50:09

End at: 2017-12-19 22:50:39

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.16 Mbit/s

95th percentile per-packet one-way delay: 110.912 ms

Loss rate: 0.00%

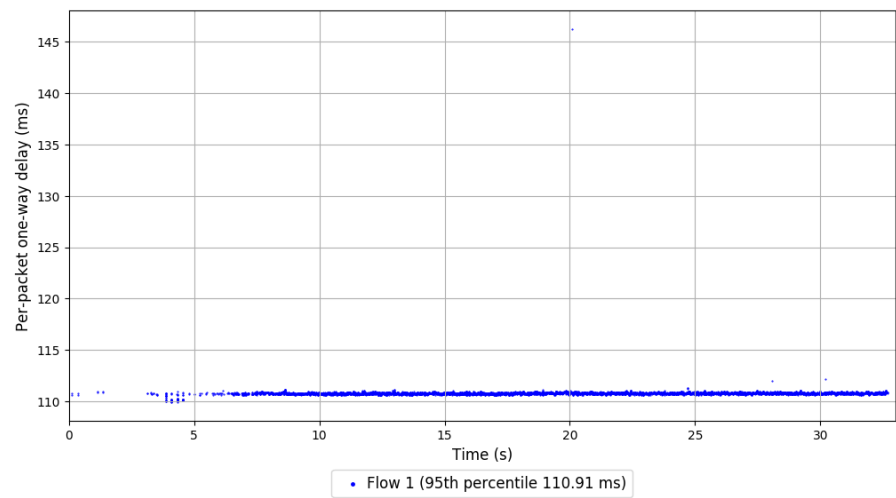
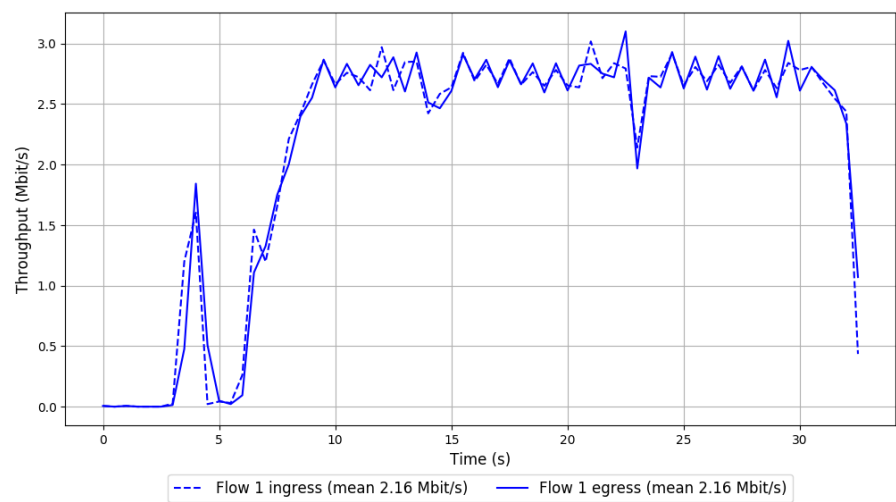
-- Flow 1:

Average throughput: 2.16 Mbit/s

95th percentile per-packet one-way delay: 110.912 ms

Loss rate: 0.00%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2017-12-19 23:02:12

End at: 2017-12-19 23:02:42

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.15 Mbit/s

95th percentile per-packet one-way delay: 111.911 ms

Loss rate: 0.00%

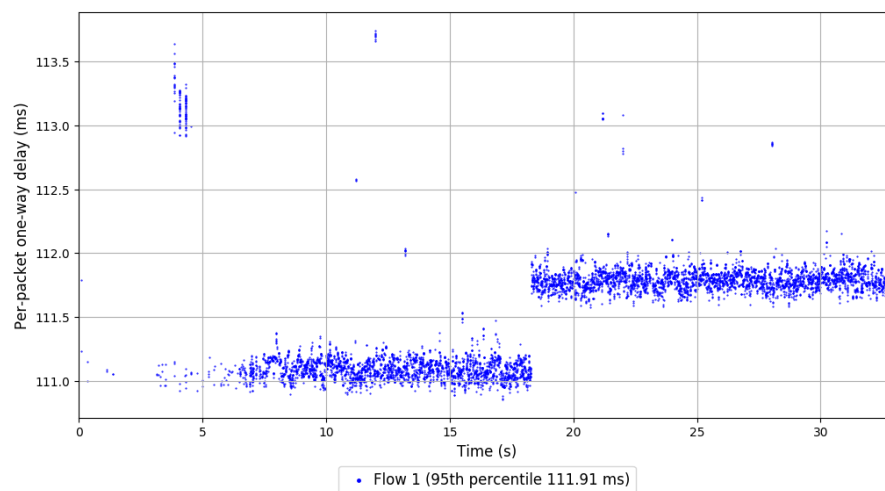
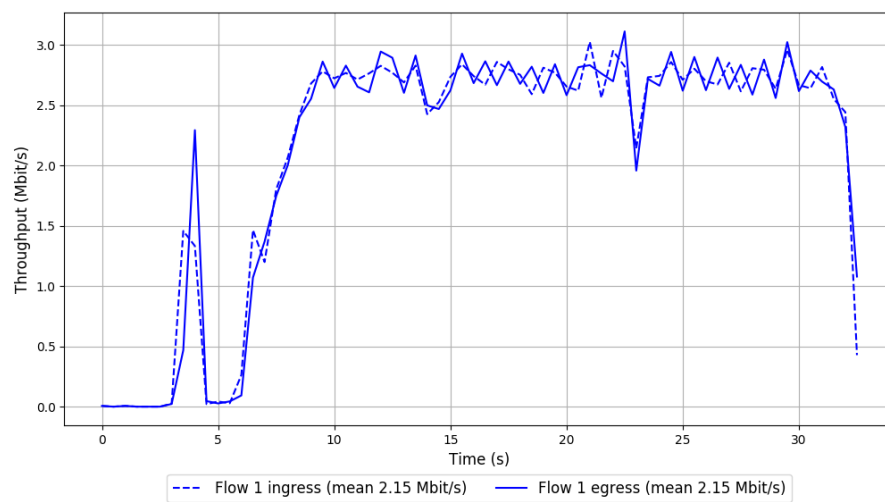
-- Flow 1:

Average throughput: 2.15 Mbit/s

95th percentile per-packet one-way delay: 111.911 ms

Loss rate: 0.00%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2017-12-19 23:14:25

End at: 2017-12-19 23:14:55

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.16 Mbit/s

95th percentile per-packet one-way delay: 112.759 ms

Loss rate: 0.00%

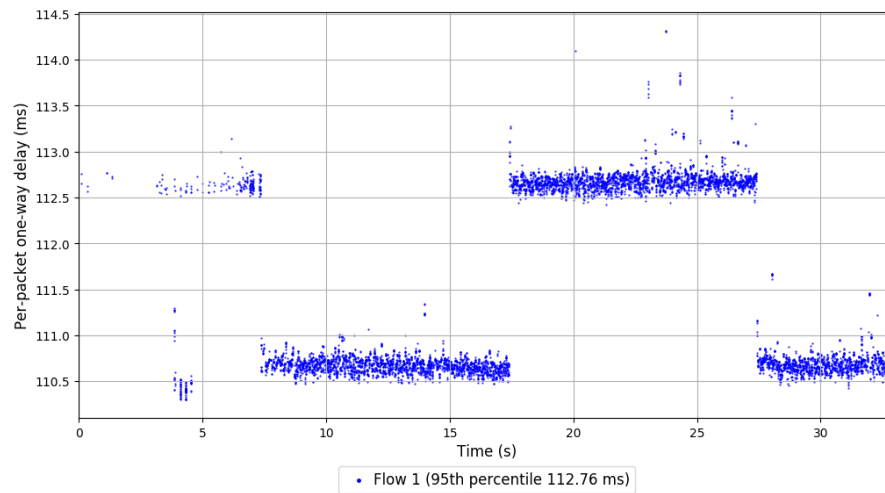
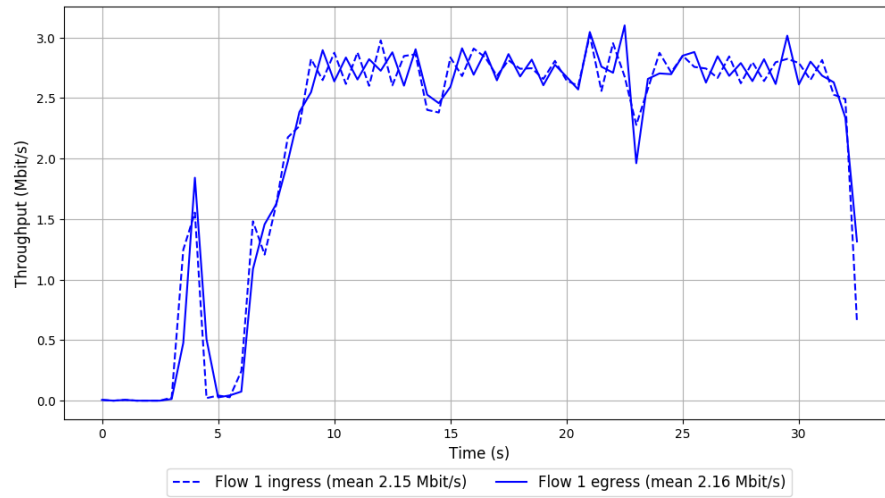
-- Flow 1:

Average throughput: 2.16 Mbit/s

95th percentile per-packet one-way delay: 112.759 ms

Loss rate: 0.00%

Run 10: Report of WebRTC media — Data Link

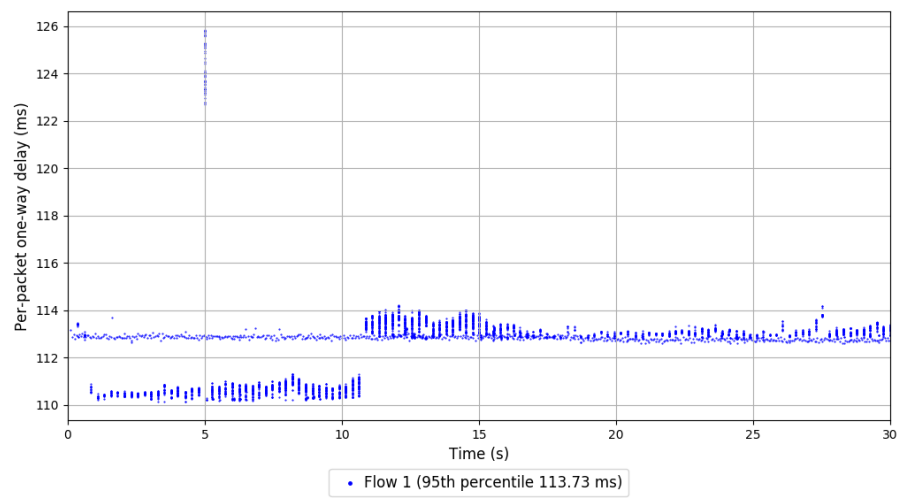
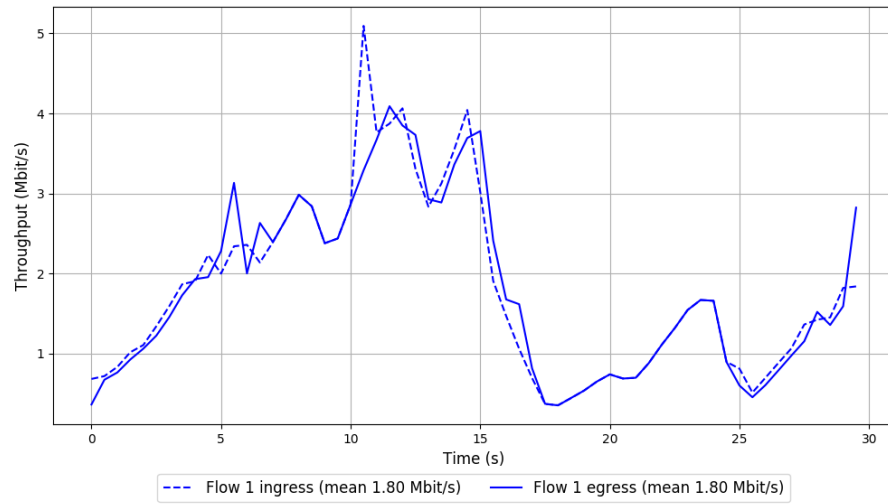


```
Run 1: Statistics of Sprout

Start at: 2017-12-19 21:24:29
End at: 2017-12-19 21:24:59

# Below is generated by plot.py at 2017-12-20 00:39:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.80 Mbit/s
95th percentile per-packet one-way delay: 113.726 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.80 Mbit/s
95th percentile per-packet one-way delay: 113.726 ms
Loss rate: 0.00%
```

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2017-12-19 21:36:34

End at: 2017-12-19 21:37:04

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.95 Mbit/s

95th percentile per-packet one-way delay: 113.680 ms

Loss rate: 0.16%

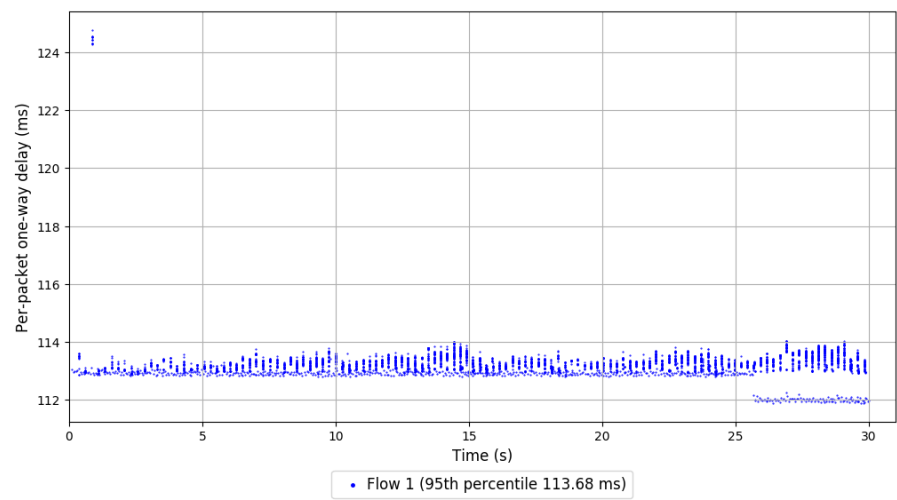
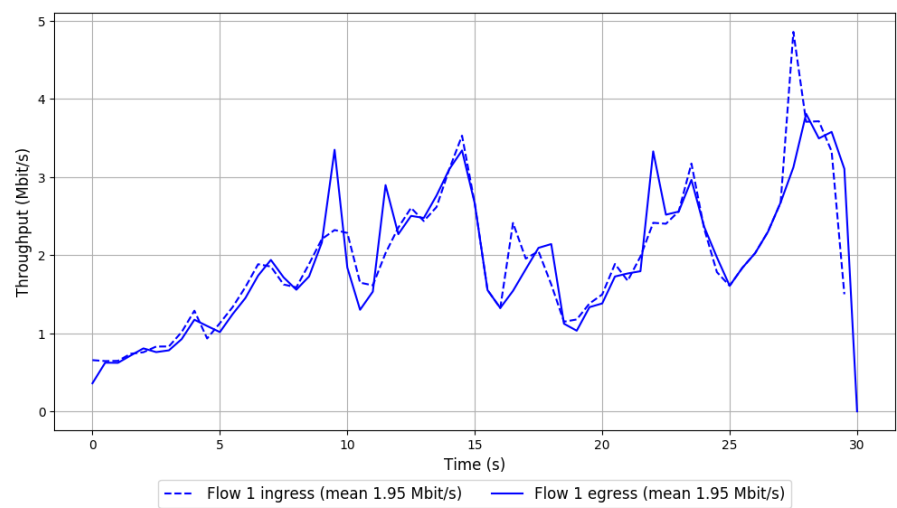
-- Flow 1:

Average throughput: 1.95 Mbit/s

95th percentile per-packet one-way delay: 113.680 ms

Loss rate: 0.16%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2017-12-19 21:48:33

End at: 2017-12-19 21:49:03

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.75 Mbit/s

95th percentile per-packet one-way delay: 113.239 ms

Loss rate: 1.81%

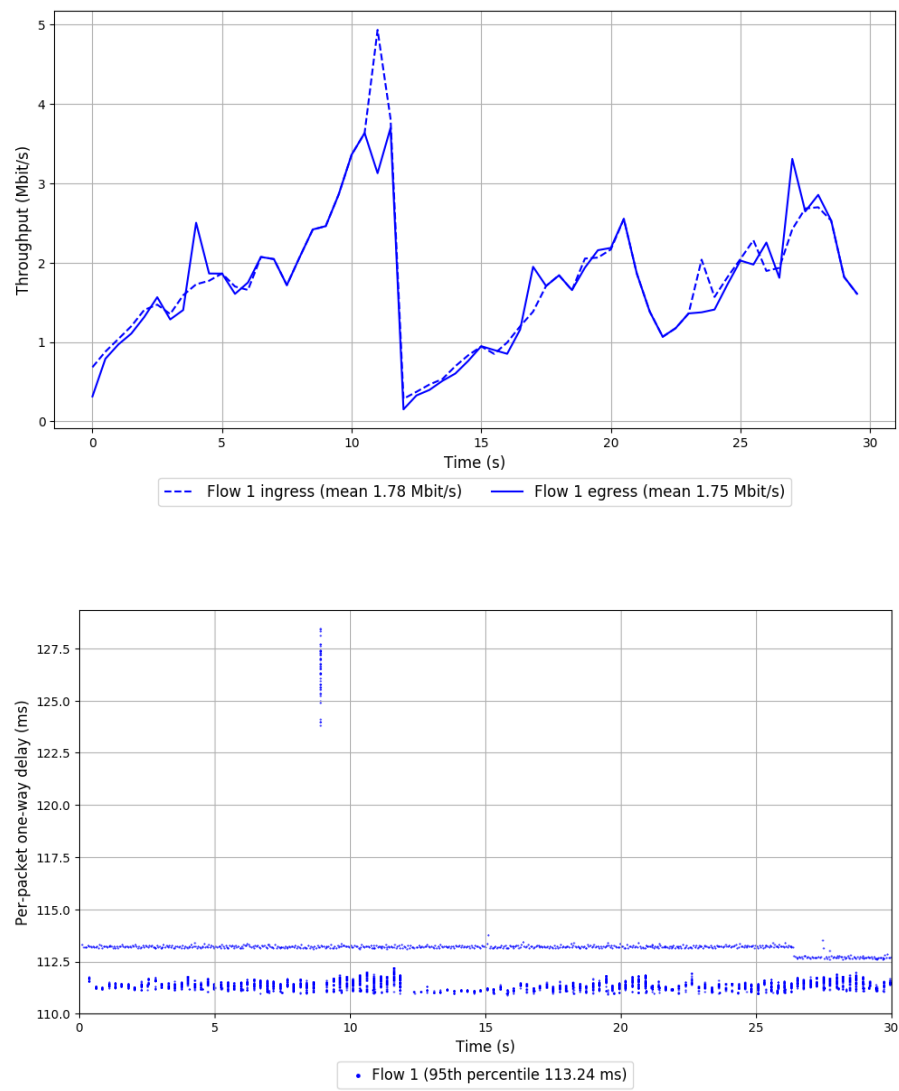
-- Flow 1:

Average throughput: 1.75 Mbit/s

95th percentile per-packet one-way delay: 113.239 ms

Loss rate: 1.81%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2017-12-19 22:00:51

End at: 2017-12-19 22:01:21

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.37 Mbit/s

95th percentile per-packet one-way delay: 111.985 ms

Loss rate: 1.26%

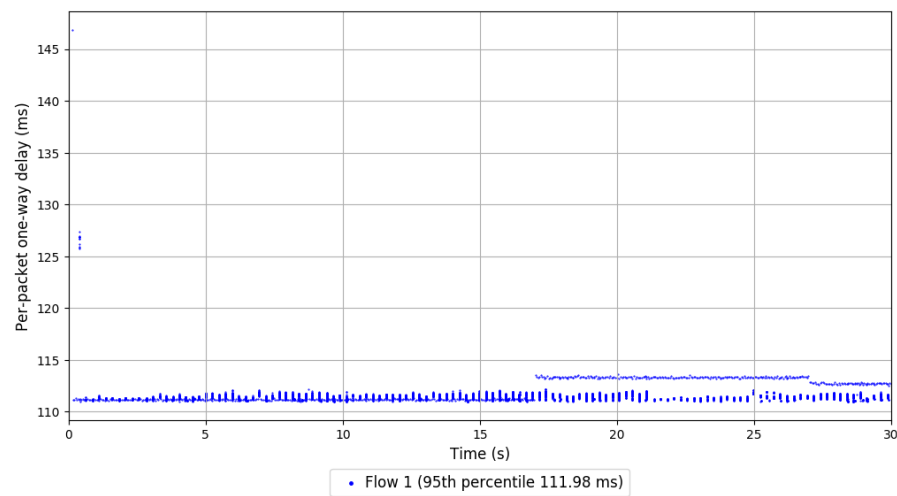
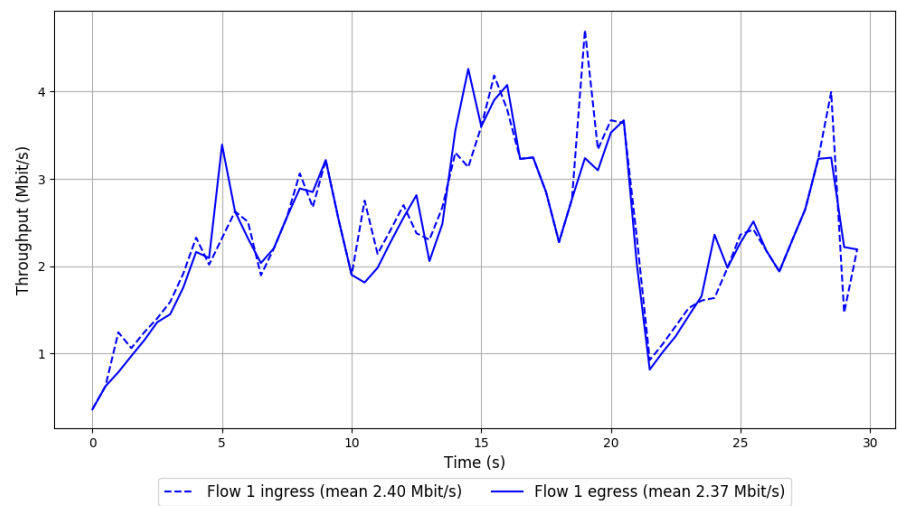
-- Flow 1:

Average throughput: 2.37 Mbit/s

95th percentile per-packet one-way delay: 111.985 ms

Loss rate: 1.26%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2017-12-19 22:13:03

End at: 2017-12-19 22:13:33

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.34 Mbit/s

95th percentile per-packet one-way delay: 111.557 ms

Loss rate: 0.00%

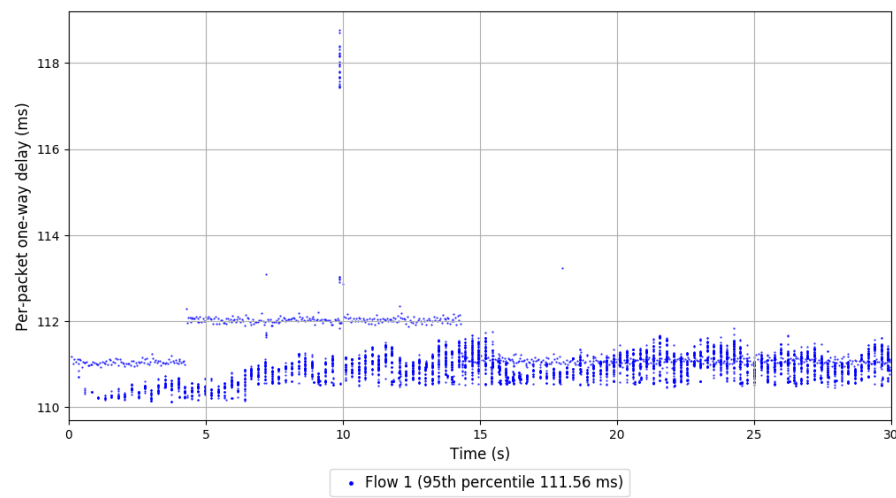
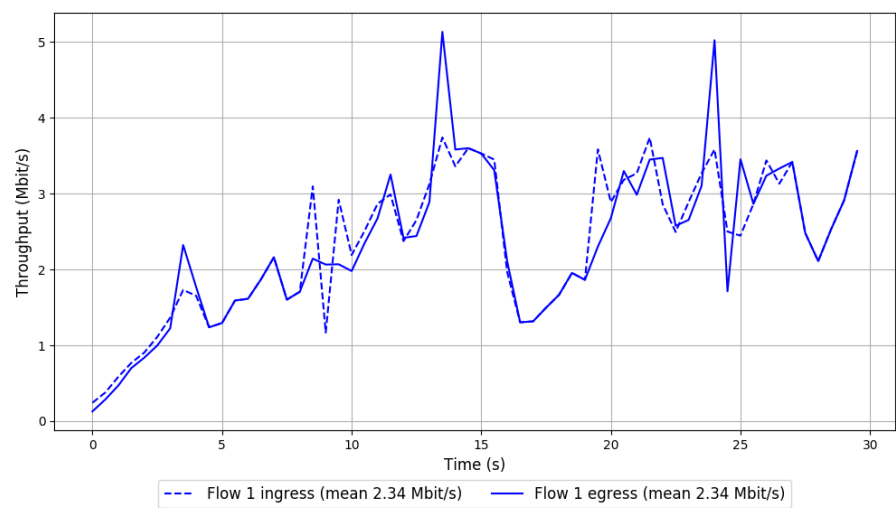
-- Flow 1:

Average throughput: 2.34 Mbit/s

95th percentile per-packet one-way delay: 111.557 ms

Loss rate: 0.00%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2017-12-19 22:25:42

End at: 2017-12-19 22:26:12

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.44 Mbit/s

95th percentile per-packet one-way delay: 112.603 ms

Loss rate: 0.00%

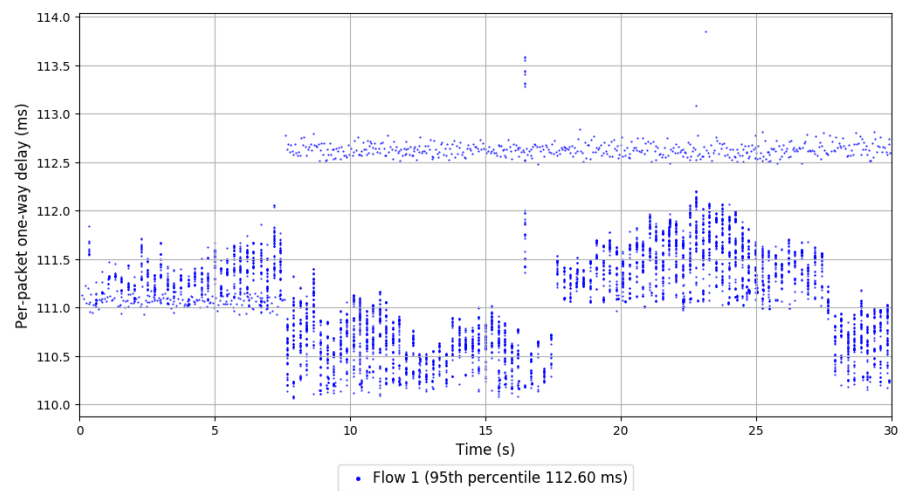
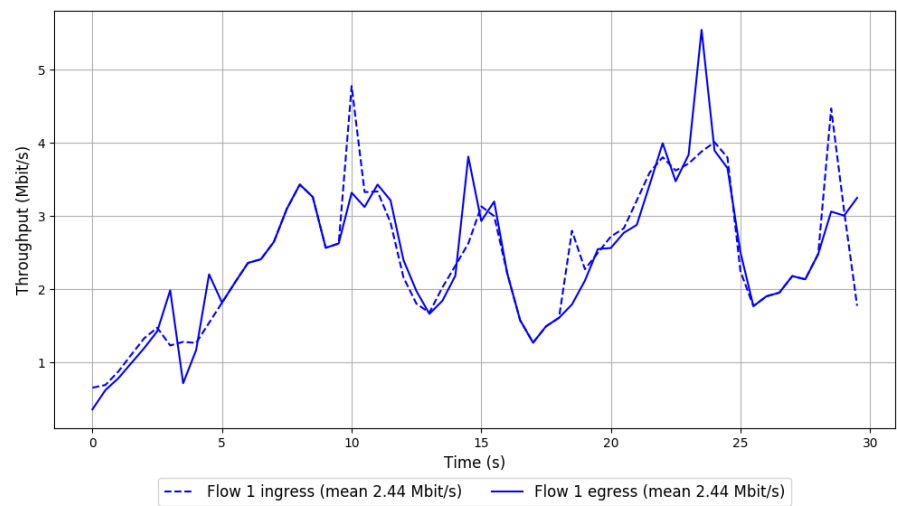
-- Flow 1:

Average throughput: 2.44 Mbit/s

95th percentile per-packet one-way delay: 112.603 ms

Loss rate: 0.00%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2017-12-19 22:38:09

End at: 2017-12-19 22:38:39

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.24 Mbit/s

95th percentile per-packet one-way delay: 111.401 ms

Loss rate: 0.04%

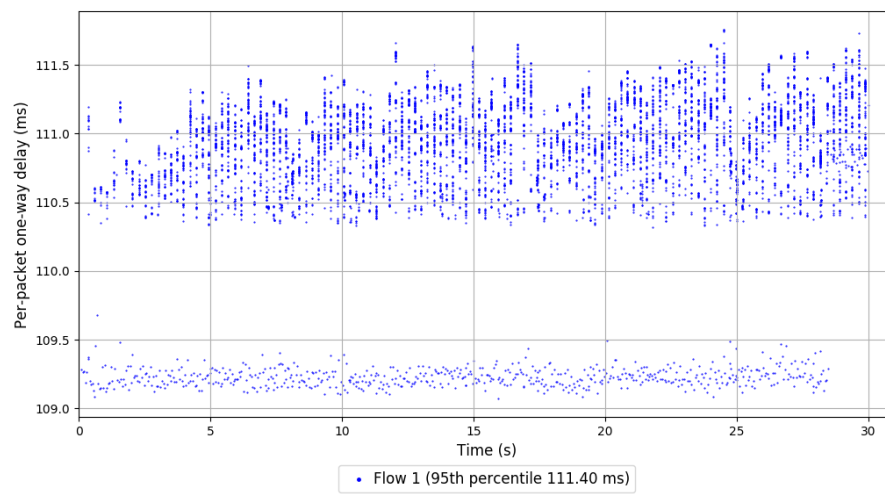
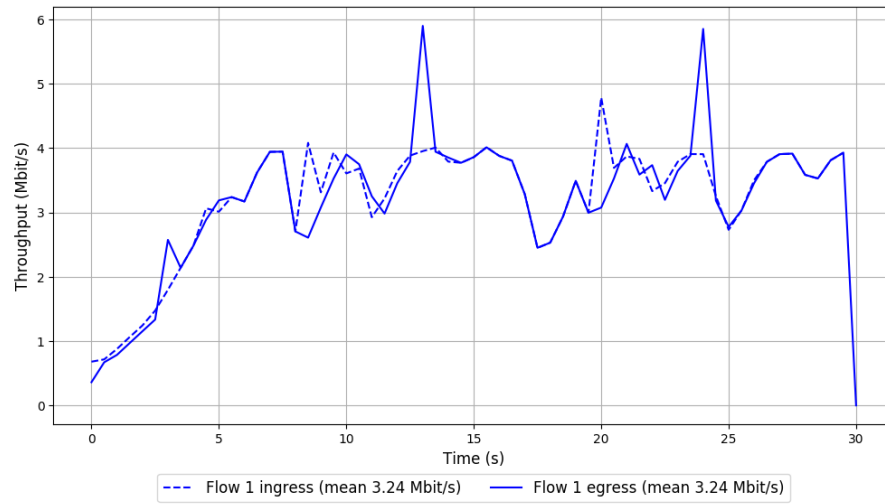
-- Flow 1:

Average throughput: 3.24 Mbit/s

95th percentile per-packet one-way delay: 111.401 ms

Loss rate: 0.04%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2017-12-19 22:50:50

End at: 2017-12-19 22:51:20

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.76 Mbit/s

95th percentile per-packet one-way delay: 114.070 ms

Loss rate: 0.01%

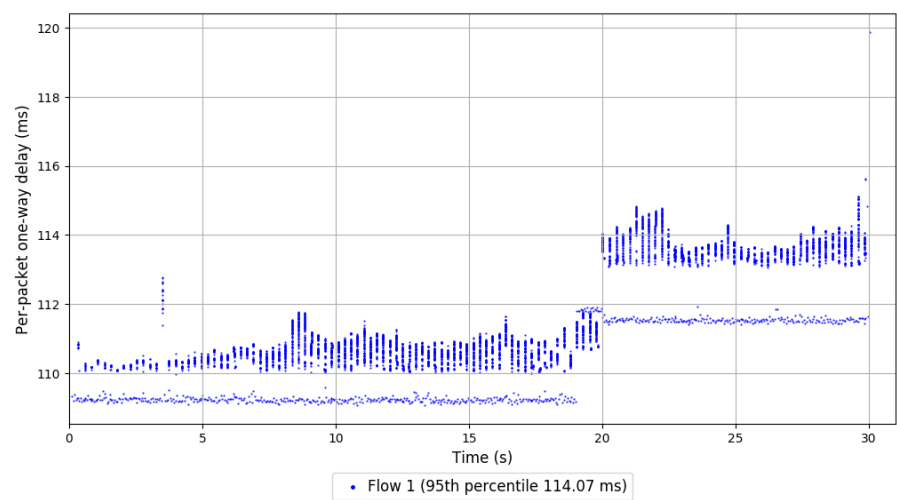
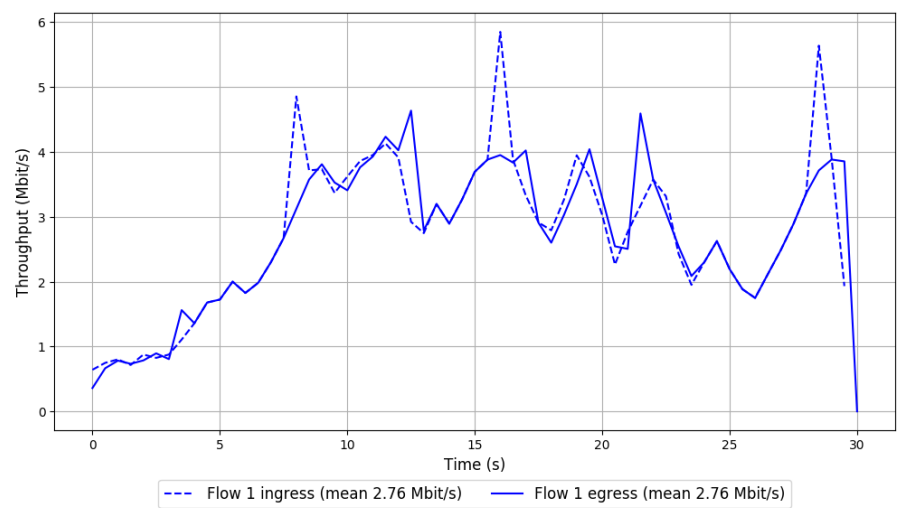
-- Flow 1:

Average throughput: 2.76 Mbit/s

95th percentile per-packet one-way delay: 114.070 ms

Loss rate: 0.01%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2017-12-19 23:02:53

End at: 2017-12-19 23:03:23

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.51 Mbit/s

95th percentile per-packet one-way delay: 113.557 ms

Loss rate: 0.00%

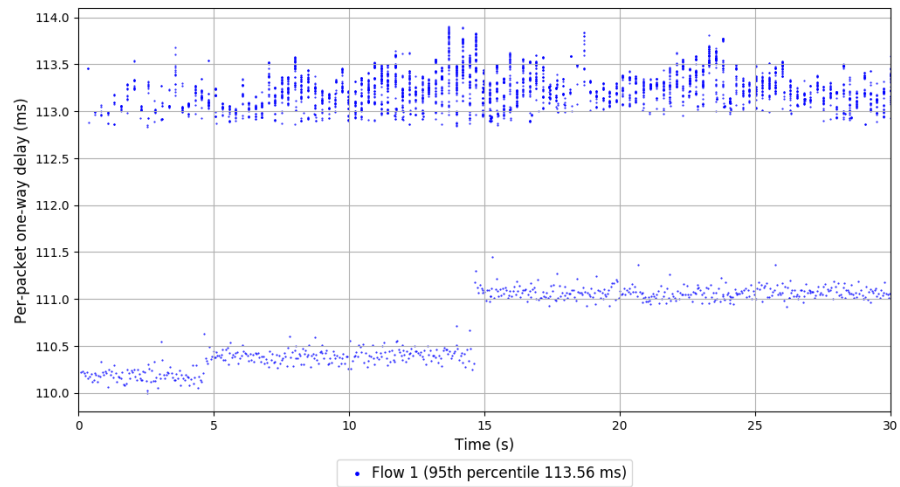
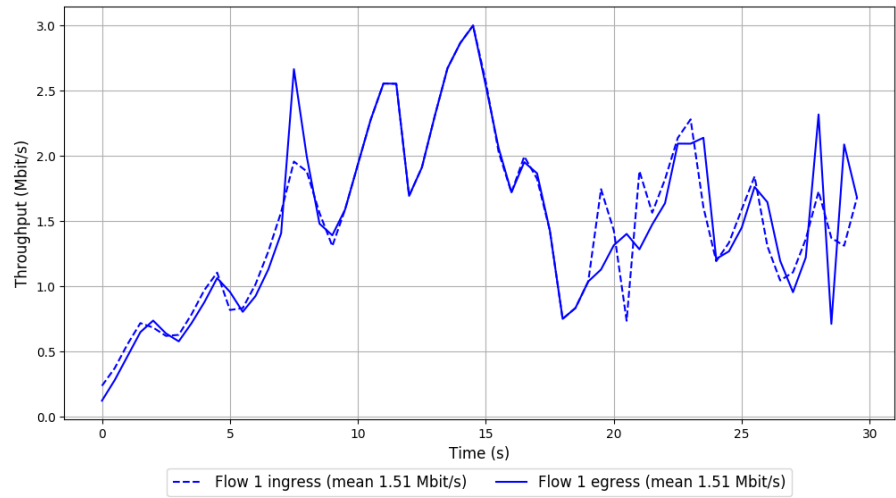
-- Flow 1:

Average throughput: 1.51 Mbit/s

95th percentile per-packet one-way delay: 113.557 ms

Loss rate: 0.00%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2017-12-19 23:15:06

End at: 2017-12-19 23:15:36

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.40 Mbit/s

95th percentile per-packet one-way delay: 111.569 ms

Loss rate: 0.00%

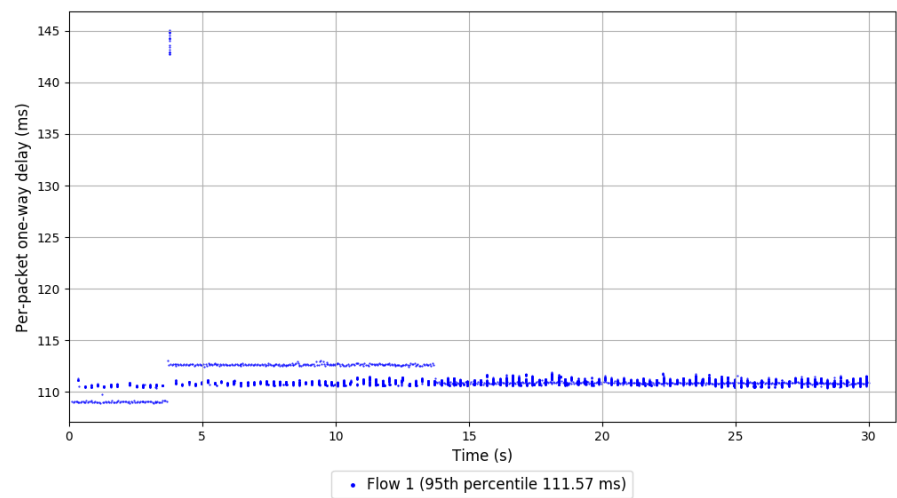
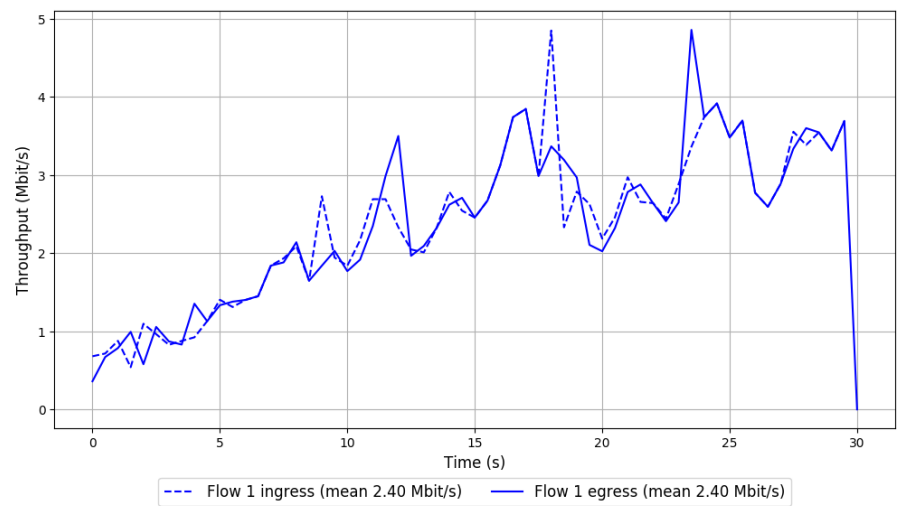
-- Flow 1:

Average throughput: 2.40 Mbit/s

95th percentile per-packet one-way delay: 111.569 ms

Loss rate: 0.00%

Run 10: Report of Sprout — Data Link

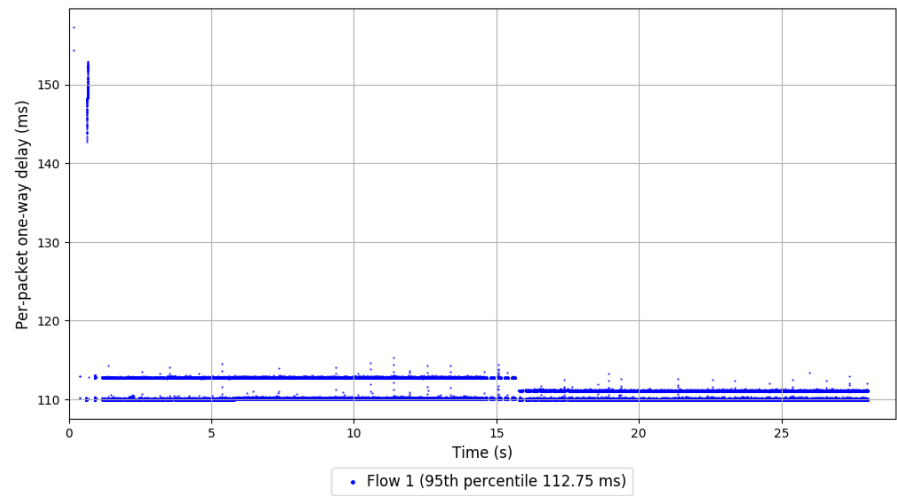
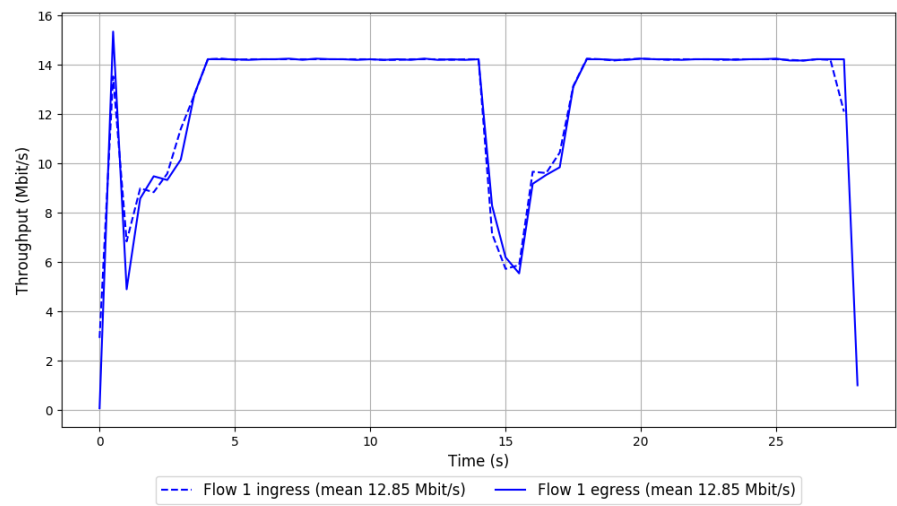


```
Run 1: Statistics of TaoVA-100x

Start at: 2017-12-19 21:16:52
End at: 2017-12-19 21:17:22

# Below is generated by plot.py at 2017-12-20 00:39:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.85 Mbit/s
95th percentile per-packet one-way delay: 112.745 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 12.85 Mbit/s
95th percentile per-packet one-way delay: 112.745 ms
Loss rate: 0.14%
```


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

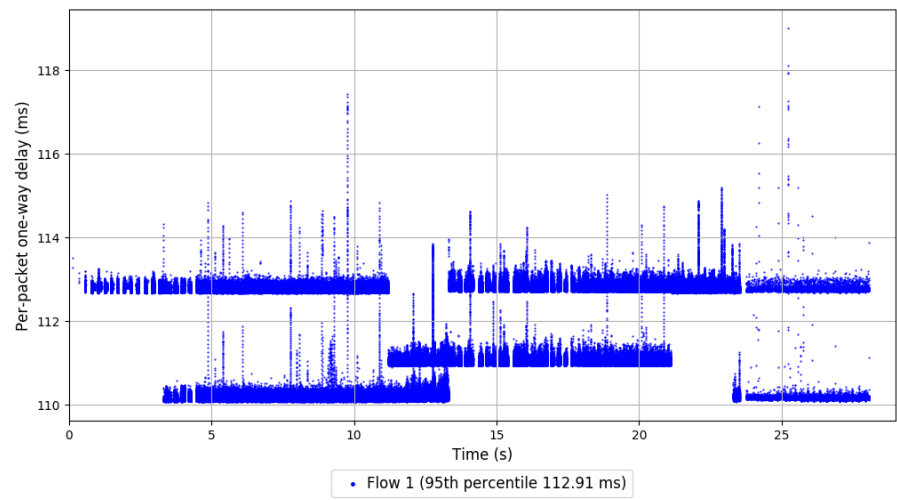
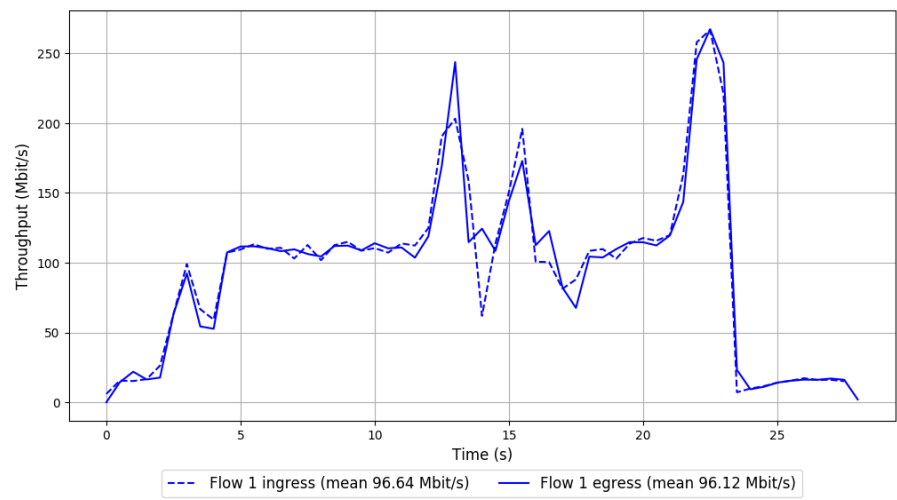


```
Run 2: Statistics of TaoVA-100x

Start at: 2017-12-19 21:28:54
End at: 2017-12-19 21:29:25

# Below is generated by plot.py at 2017-12-20 00:39:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.12 Mbit/s
95th percentile per-packet one-way delay: 112.911 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 96.12 Mbit/s
95th percentile per-packet one-way delay: 112.911 ms
Loss rate: 0.54%
```

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

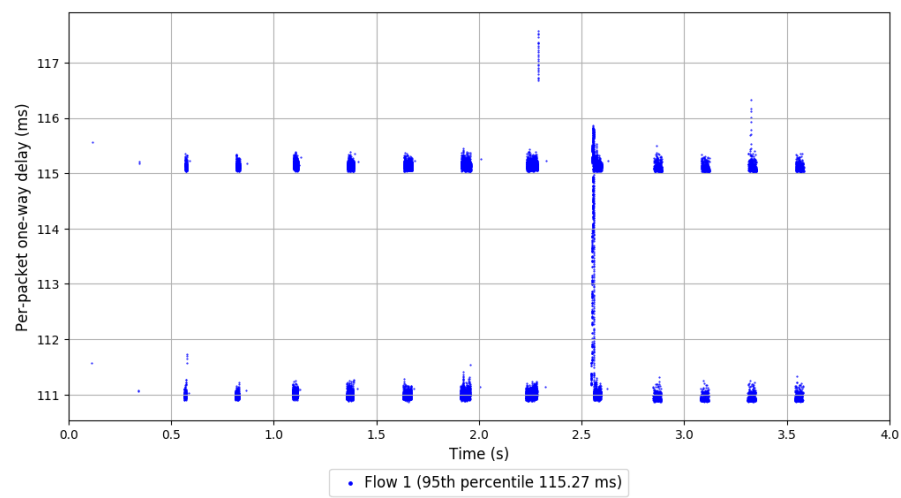
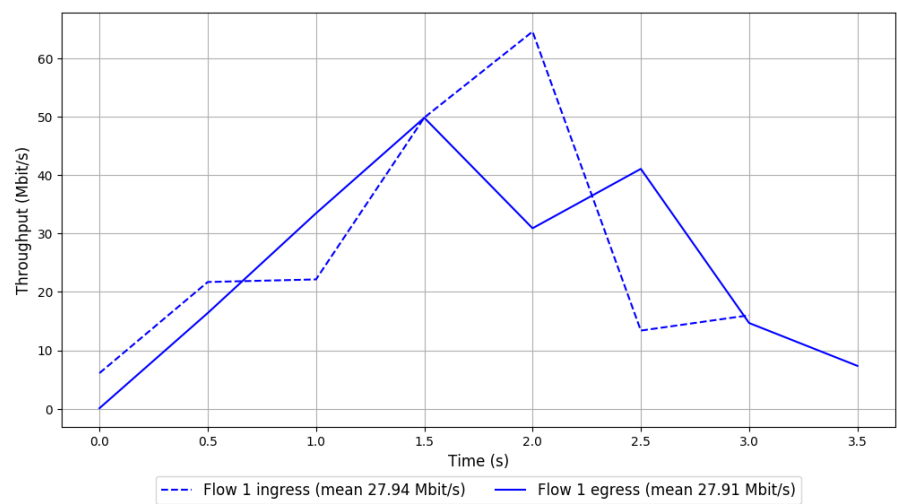


Run 3: Statistics of TaoVA-100x

Start at: 2017-12-19 21:40:59

End at: 2017-12-19 21:41:29

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

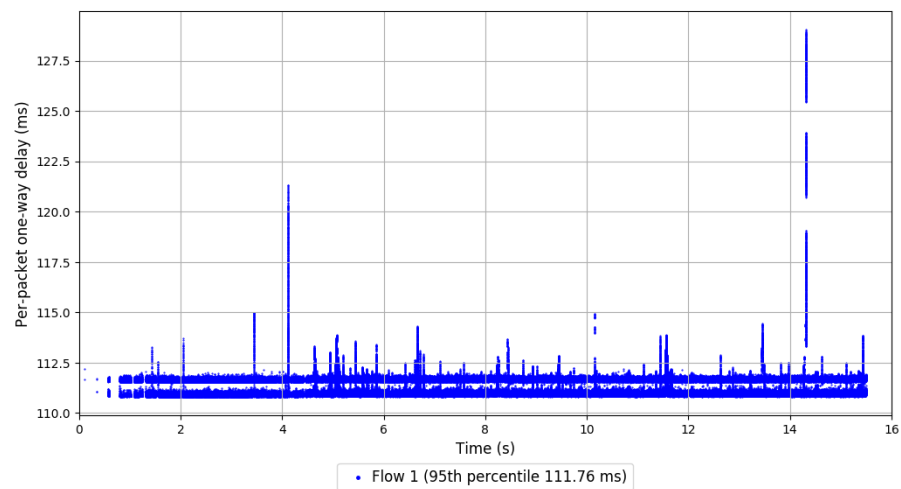
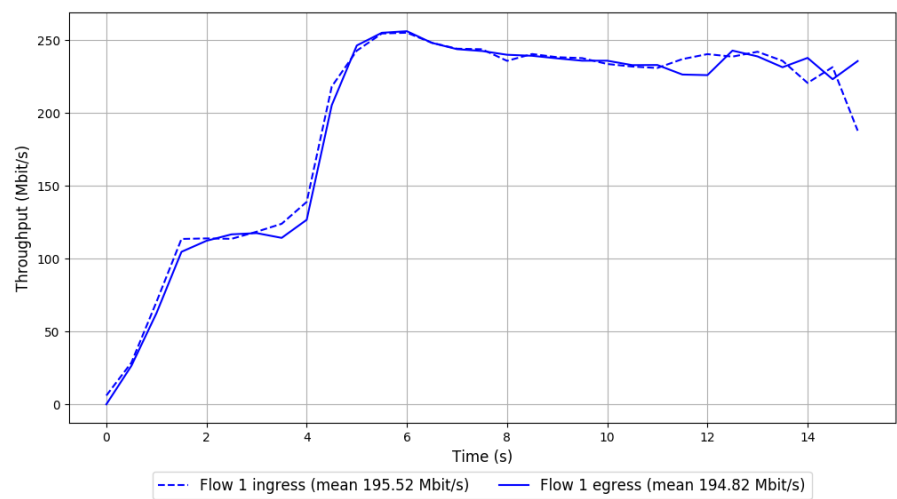


Run 4: Statistics of TaoVA-100x

Start at: 2017-12-19 21:53:03

End at: 2017-12-19 21:53:33

Run 4: Report of TaoVA-100x — Data Link



Run 5: Statistics of TaoVA-100x

Start at: 2017-12-19 22:05:26

End at: 2017-12-19 22:05:56

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 12.18 Mbit/s

95th percentile per-packet one-way delay: 113.085 ms

Loss rate: 0.00%

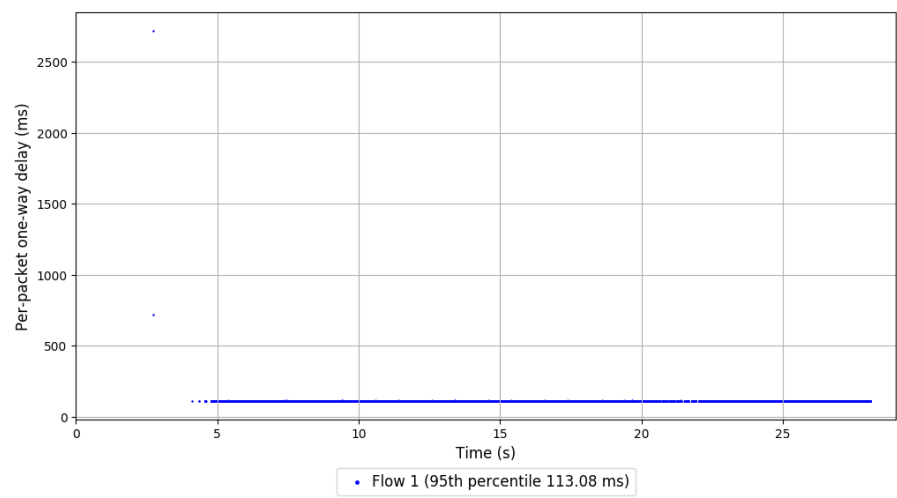
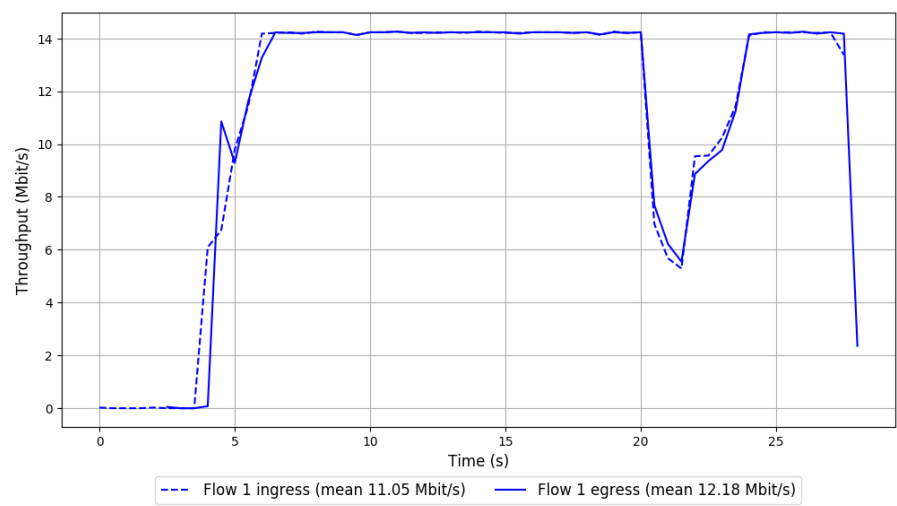
-- Flow 1:

Average throughput: 12.18 Mbit/s

95th percentile per-packet one-way delay: 113.085 ms

Loss rate: 0.00%

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



Run 6: Statistics of TaoVA-100x

Start at: 2017-12-19 22:17:45

End at: 2017-12-19 22:18:15

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 197.04 Mbit/s

95th percentile per-packet one-way delay: 111.926 ms

Loss rate: 0.00%

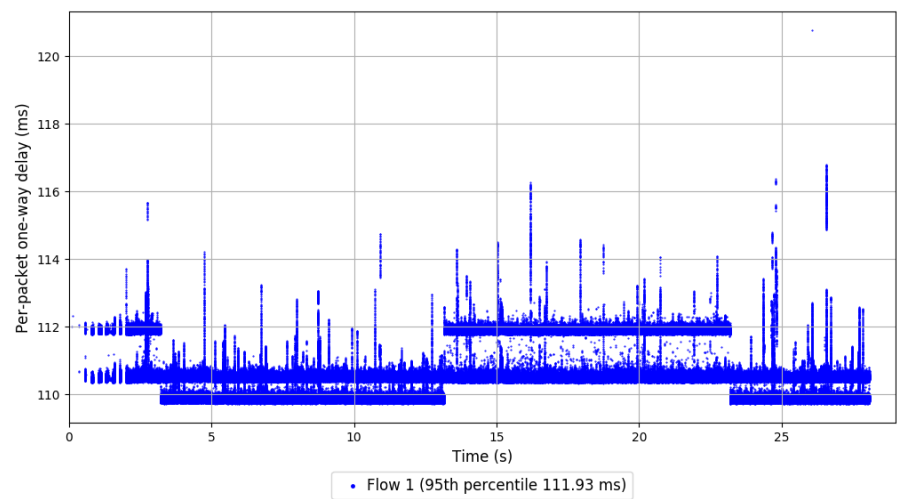
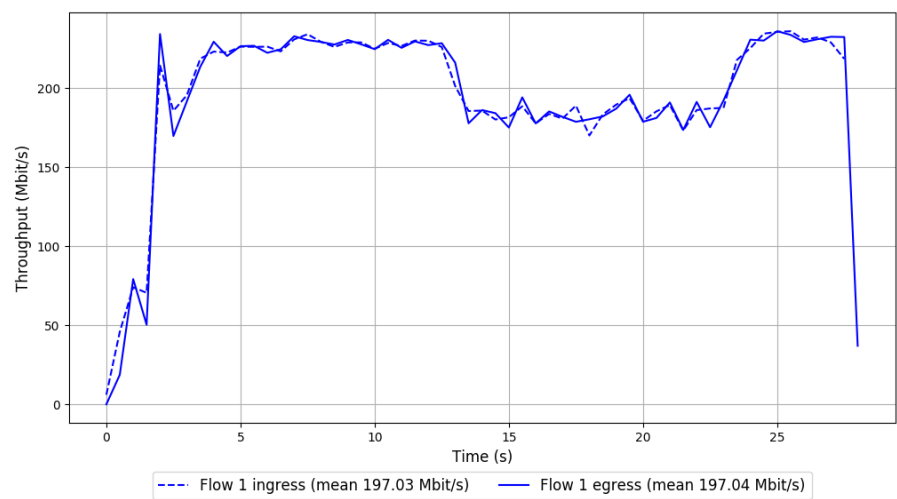
-- Flow 1:

Average throughput: 197.04 Mbit/s

95th percentile per-packet one-way delay: 111.926 ms

Loss rate: 0.00%

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



Run 7: Statistics of TaoVA-100x

Start at: 2017-12-19 22:30:28

End at: 2017-12-19 22:30:58

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 45.17 Mbit/s

95th percentile per-packet one-way delay: 112.556 ms

Loss rate: 0.75%

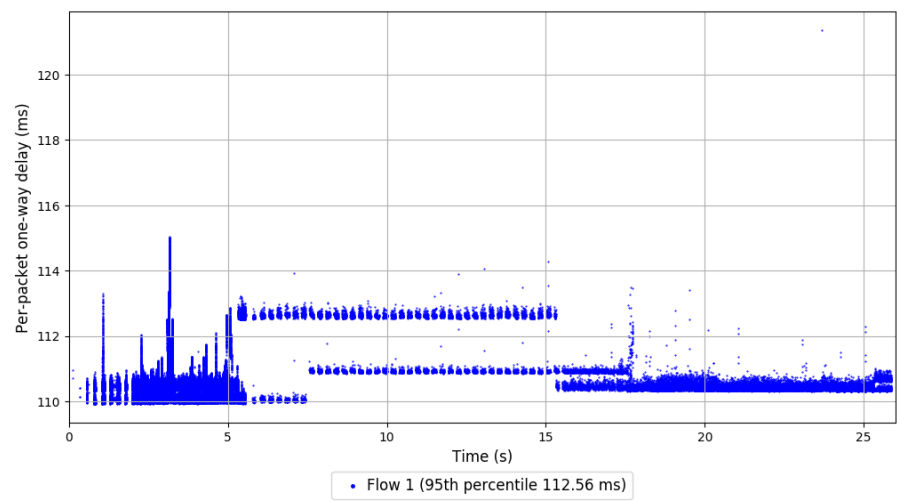
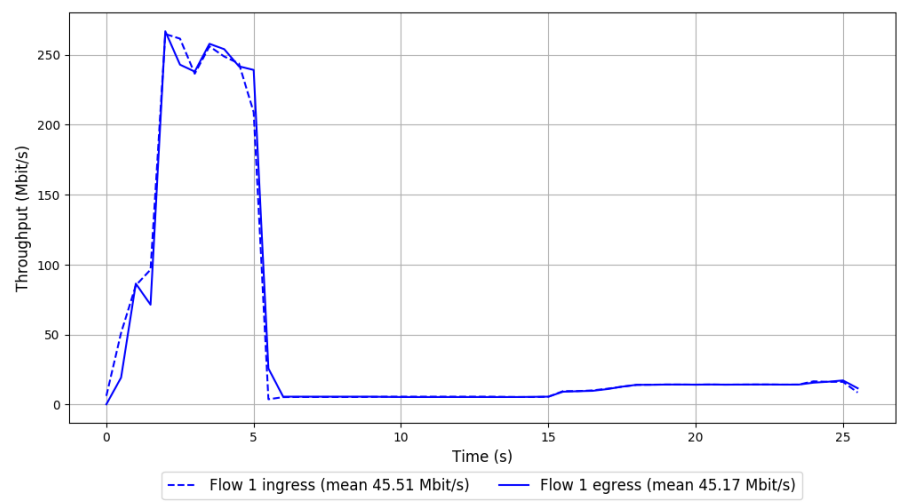
-- Flow 1:

Average throughput: 45.17 Mbit/s

95th percentile per-packet one-way delay: 112.556 ms

Loss rate: 0.75%

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



Run 8: Statistics of TaoVA-100x

Start at: 2017-12-19 22:42:53

End at: 2017-12-19 22:43:23

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 214.13 Mbit/s

95th percentile per-packet one-way delay: 113.164 ms

Loss rate: 0.00%

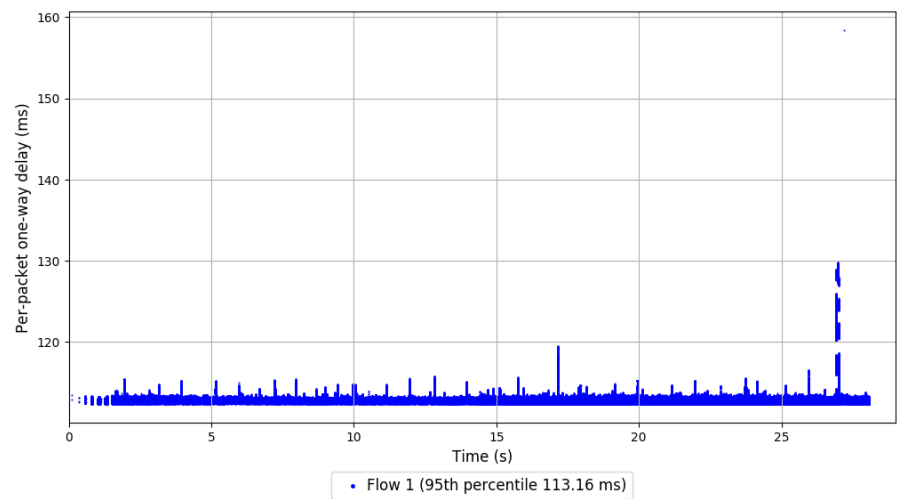
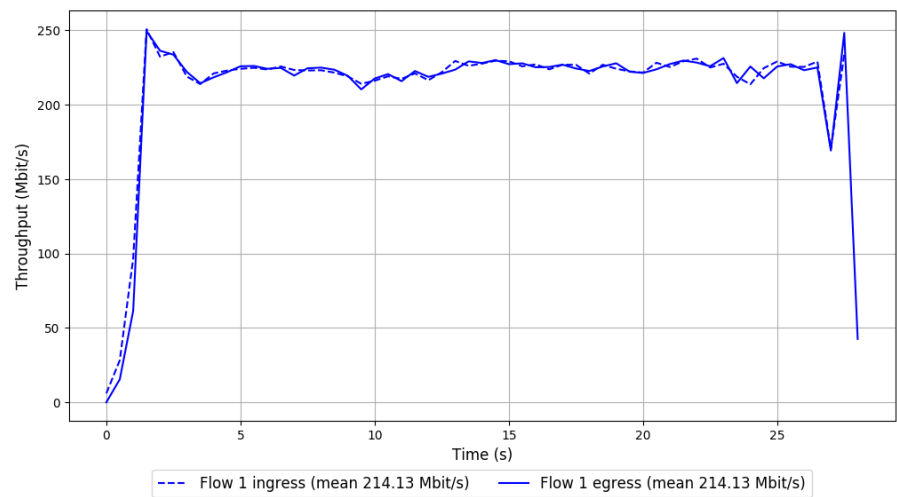
-- Flow 1:

Average throughput: 214.13 Mbit/s

95th percentile per-packet one-way delay: 113.164 ms

Loss rate: 0.00%

Run 8: Report of TaoVA-100x — Data Link

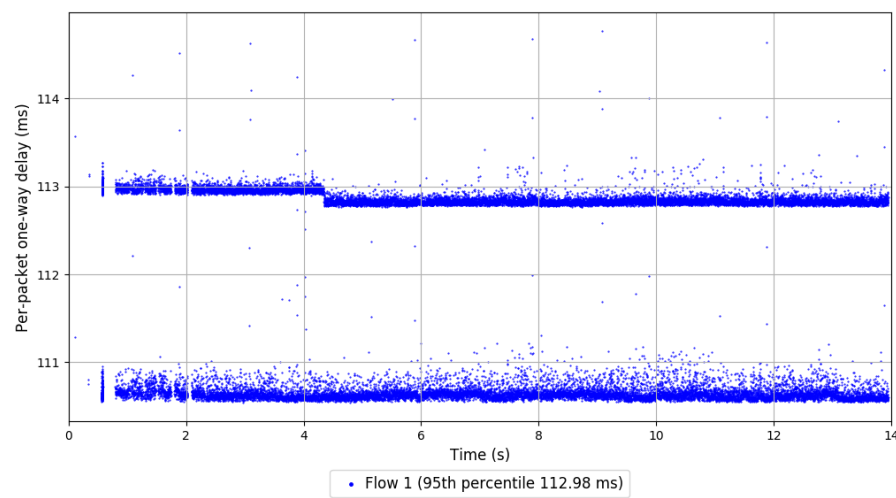
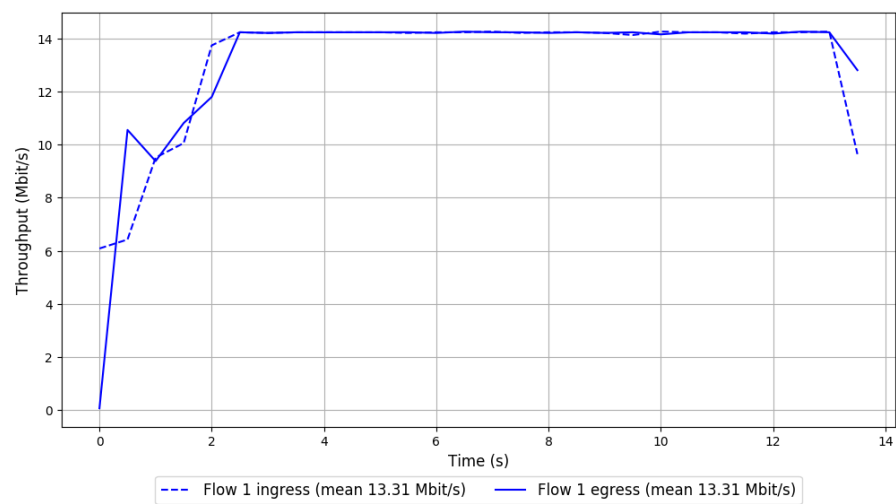


Run 9: Statistics of TaoVA-100x

Start at: 2017-12-19 22:55:19

End at: 2017-12-19 22:55:49

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

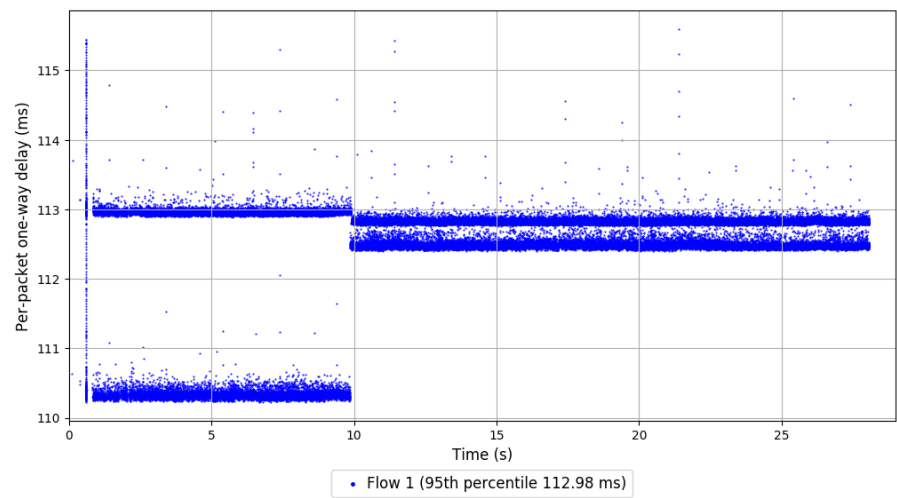
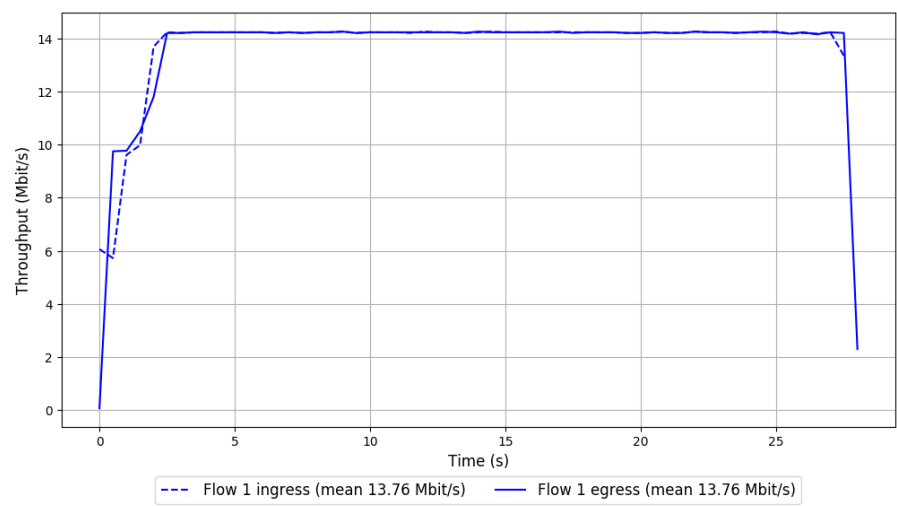


```
Run 10: Statistics of TaoVA-100x

Start at: 2017-12-19 23:07:28
End at: 2017-12-19 23:07:58

# Below is generated by plot.py at 2017-12-20 00:39:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 13.76 Mbit/s
95th percentile per-packet one-way delay: 112.978 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 13.76 Mbit/s
95th percentile per-packet one-way delay: 112.978 ms
Loss rate: 0.01%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2017-12-19 21:17:34

End at: 2017-12-19 21:18:05

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 52.13 Mbit/s

95th percentile per-packet one-way delay: 113.224 ms

Loss rate: 0.02%

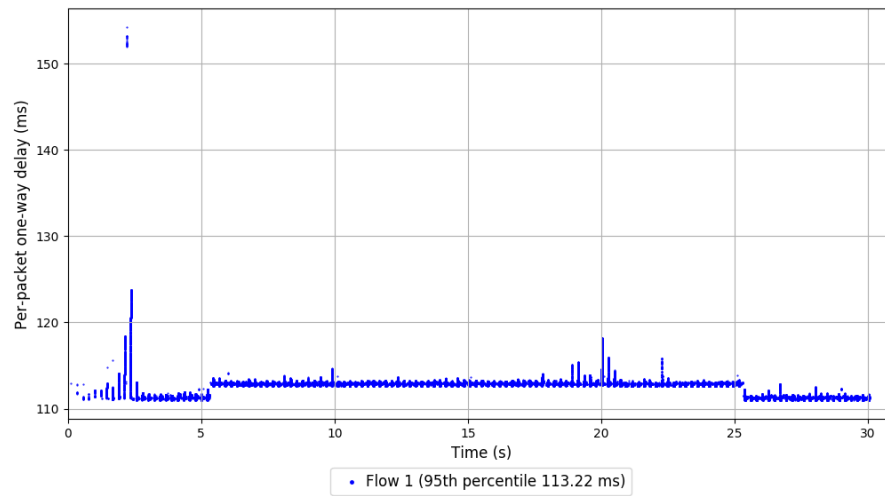
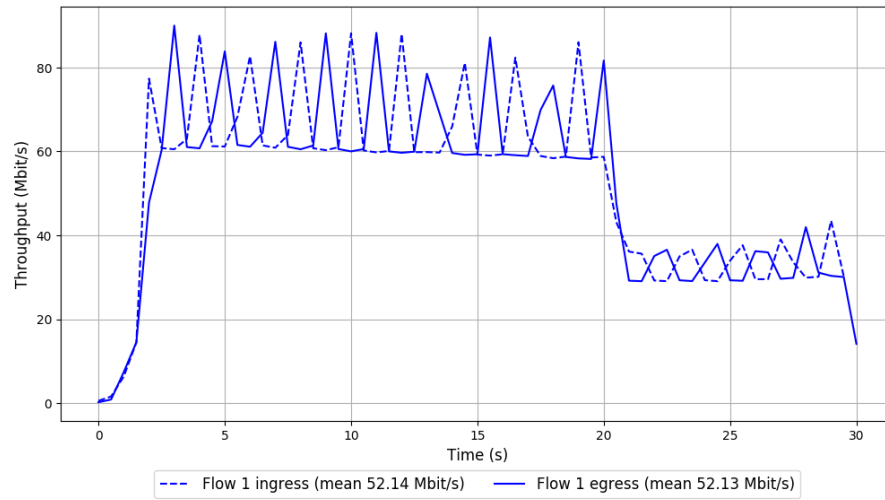
-- Flow 1:

Average throughput: 52.13 Mbit/s

95th percentile per-packet one-way delay: 113.224 ms

Loss rate: 0.02%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2017-12-19 21:29:44

End at: 2017-12-19 21:30:14

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 19.42 Mbit/s

95th percentile per-packet one-way delay: 114.048 ms

Loss rate: 1.39%

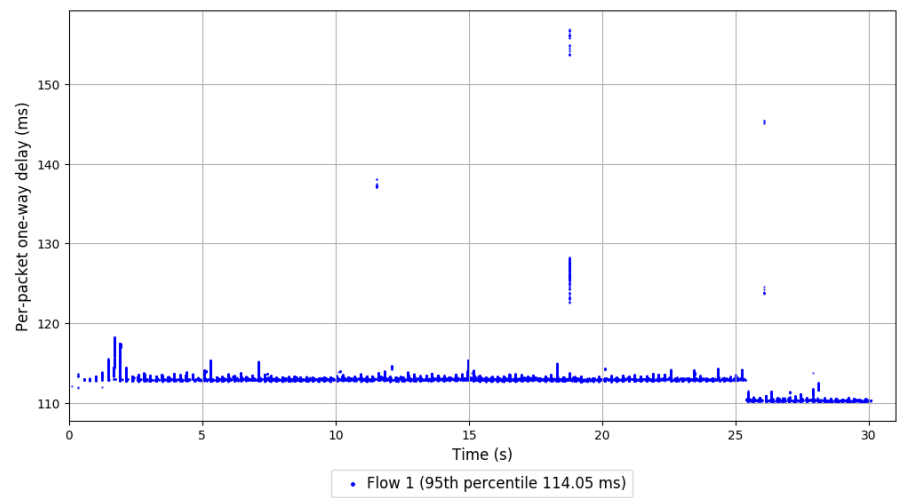
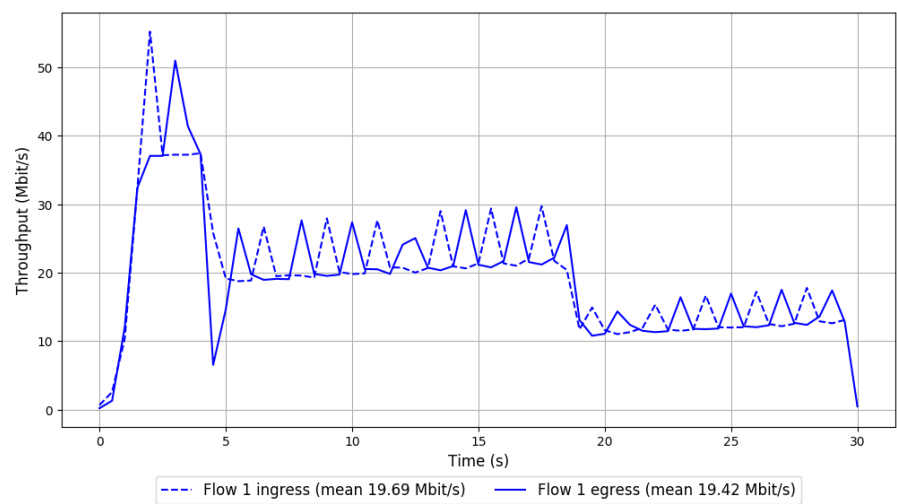
-- Flow 1:

Average throughput: 19.42 Mbit/s

95th percentile per-packet one-way delay: 114.048 ms

Loss rate: 1.39%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2017-12-19 21:41:40

End at: 2017-12-19 21:42:10

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 68.25 Mbit/s

95th percentile per-packet one-way delay: 120.390 ms

Loss rate: 0.43%

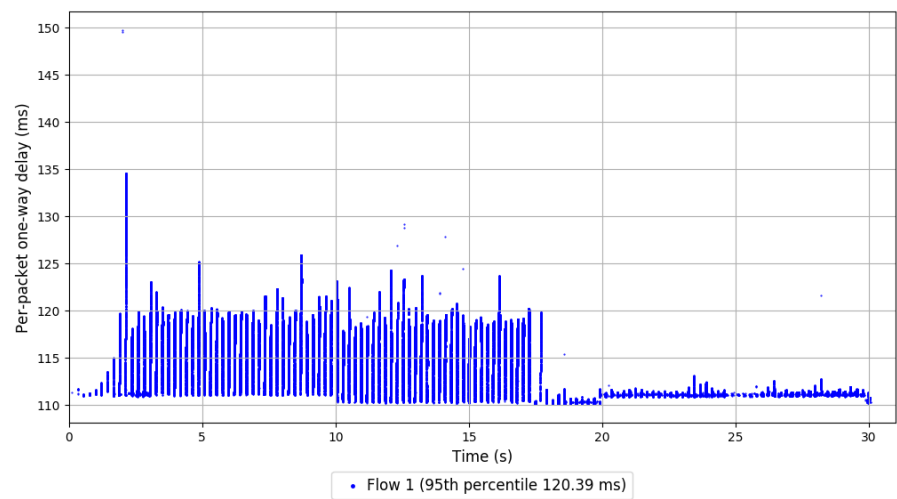
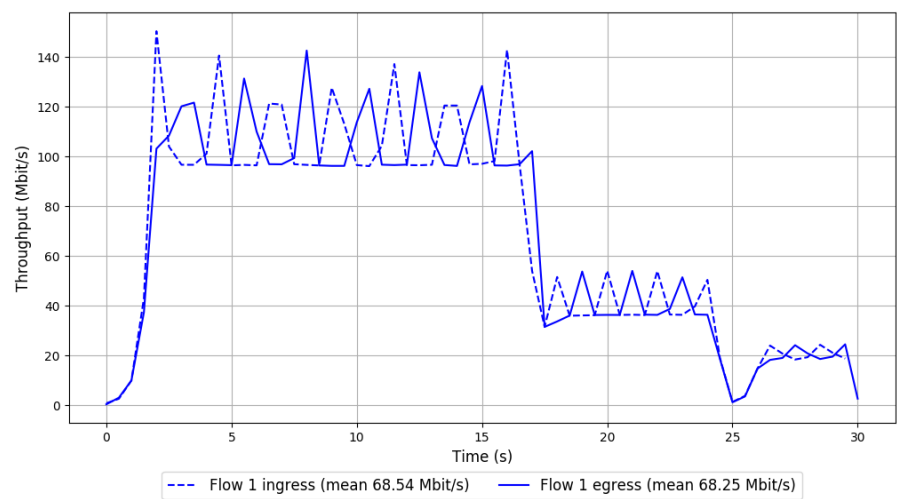
-- Flow 1:

Average throughput: 68.25 Mbit/s

95th percentile per-packet one-way delay: 120.390 ms

Loss rate: 0.43%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2017-12-19 21:53:55

End at: 2017-12-19 21:54:25

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 49.56 Mbit/s

95th percentile per-packet one-way delay: 119.366 ms

Loss rate: 0.00%

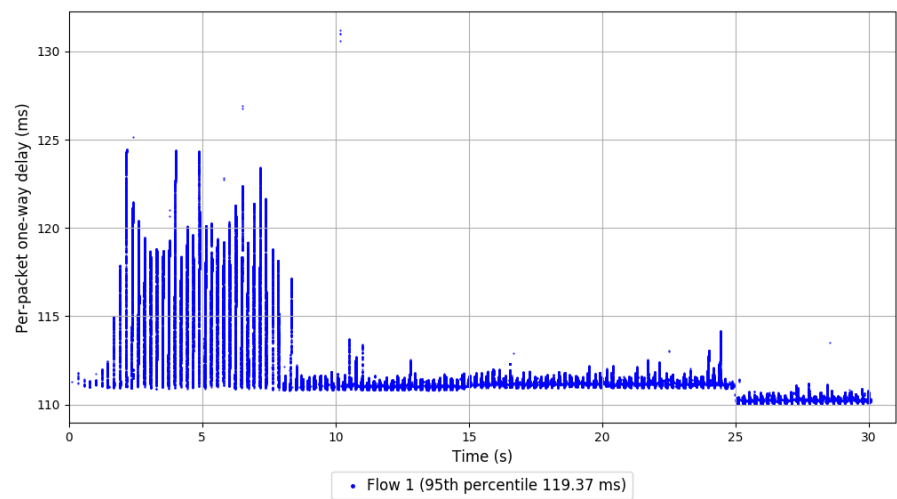
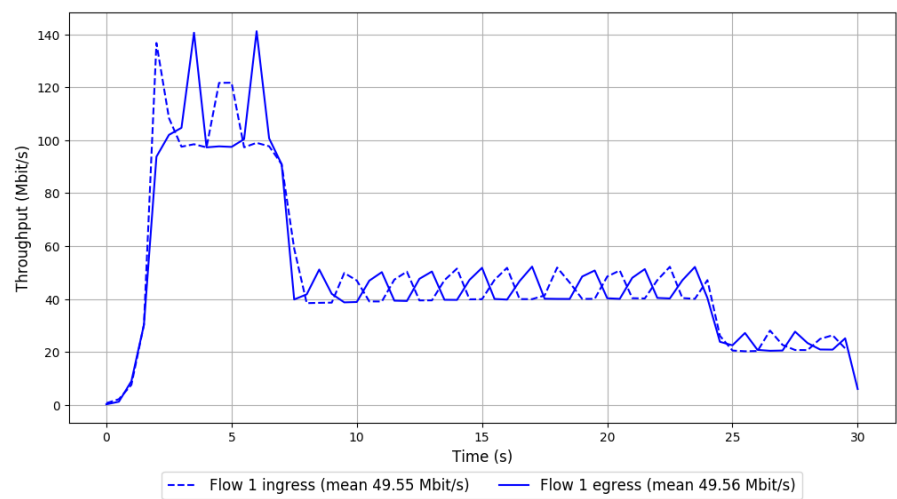
-- Flow 1:

Average throughput: 49.56 Mbit/s

95th percentile per-packet one-way delay: 119.366 ms

Loss rate: 0.00%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2017-12-19 22:06:08

End at: 2017-12-19 22:06:38

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 33.78 Mbit/s

95th percentile per-packet one-way delay: 119.070 ms

Loss rate: 0.69%

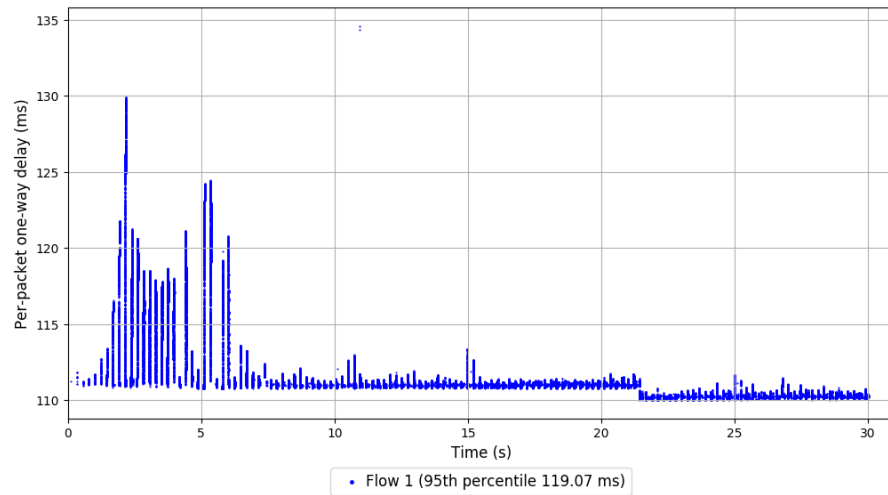
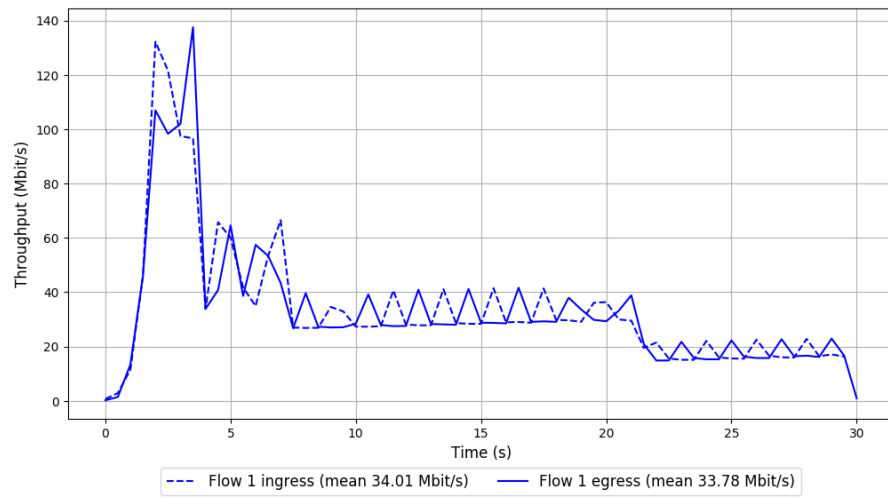
-- Flow 1:

Average throughput: 33.78 Mbit/s

95th percentile per-packet one-way delay: 119.070 ms

Loss rate: 0.69%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2017-12-19 22:18:44

End at: 2017-12-19 22:19:15

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 47.17 Mbit/s

95th percentile per-packet one-way delay: 112.916 ms

Loss rate: 0.00%

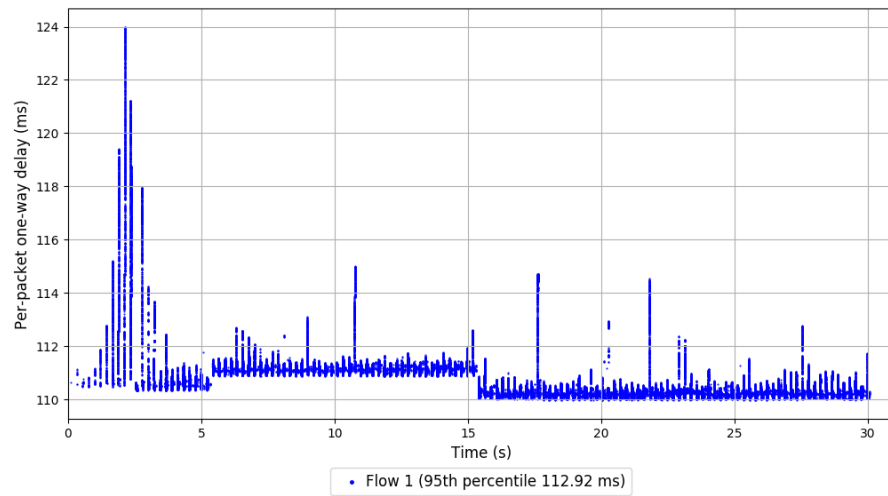
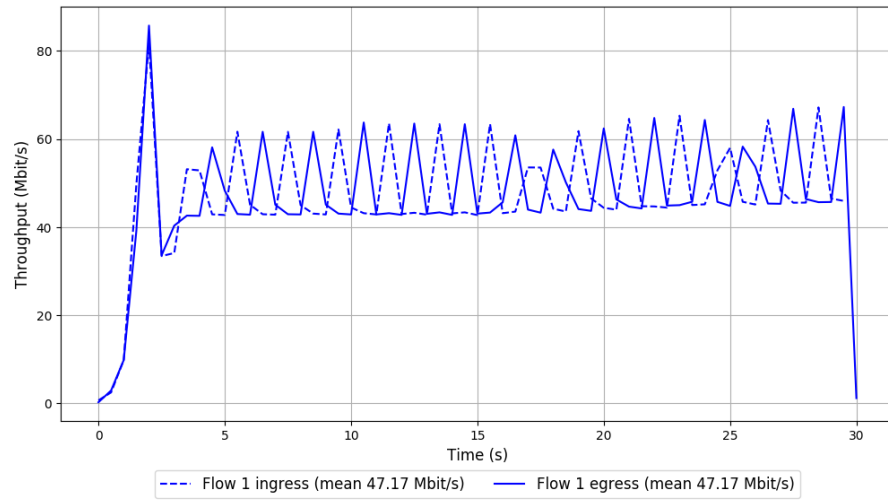
-- Flow 1:

Average throughput: 47.17 Mbit/s

95th percentile per-packet one-way delay: 112.916 ms

Loss rate: 0.00%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2017-12-19 22:31:13

End at: 2017-12-19 22:31:44

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 31.34 Mbit/s

95th percentile per-packet one-way delay: 115.108 ms

Loss rate: 0.01%

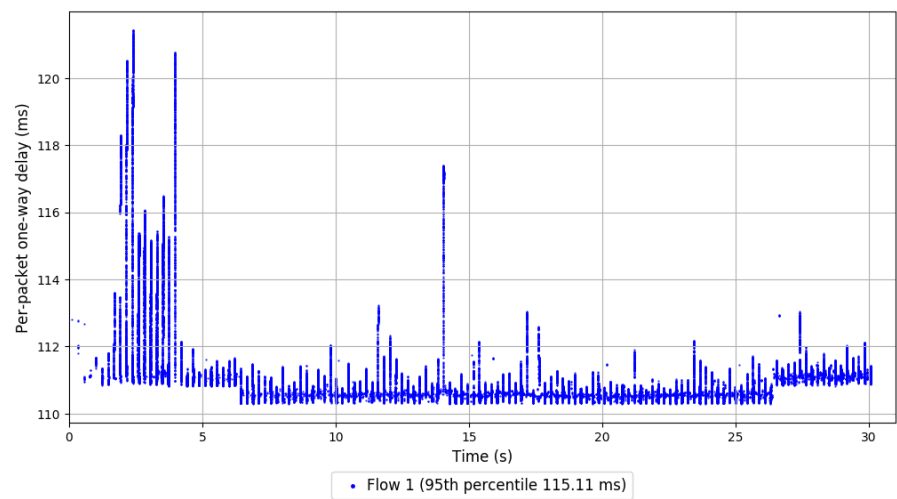
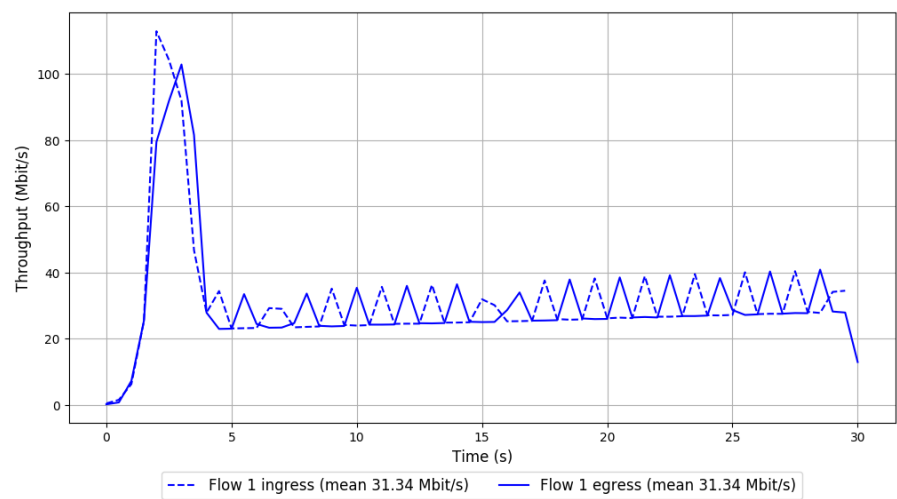
-- Flow 1:

Average throughput: 31.34 Mbit/s

95th percentile per-packet one-way delay: 115.108 ms

Loss rate: 0.01%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2017-12-19 22:43:55

End at: 2017-12-19 22:44:25

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 42.01 Mbit/s

95th percentile per-packet one-way delay: 114.190 ms

Loss rate: 0.00%

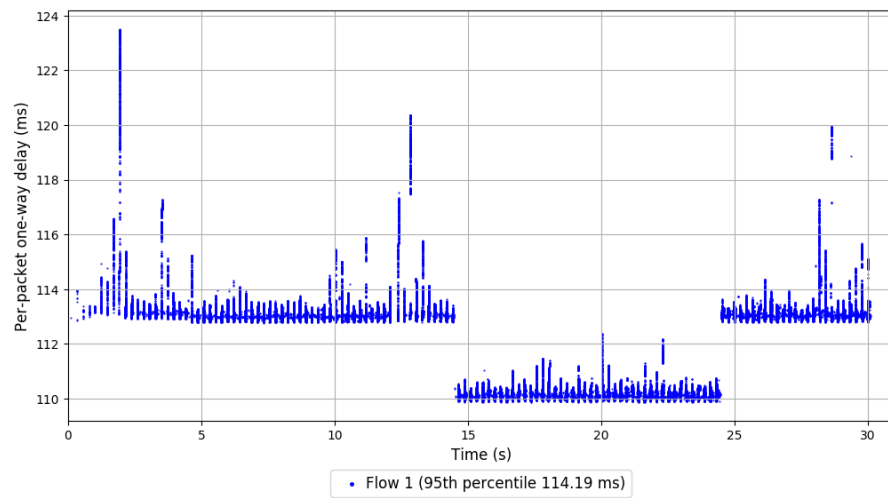
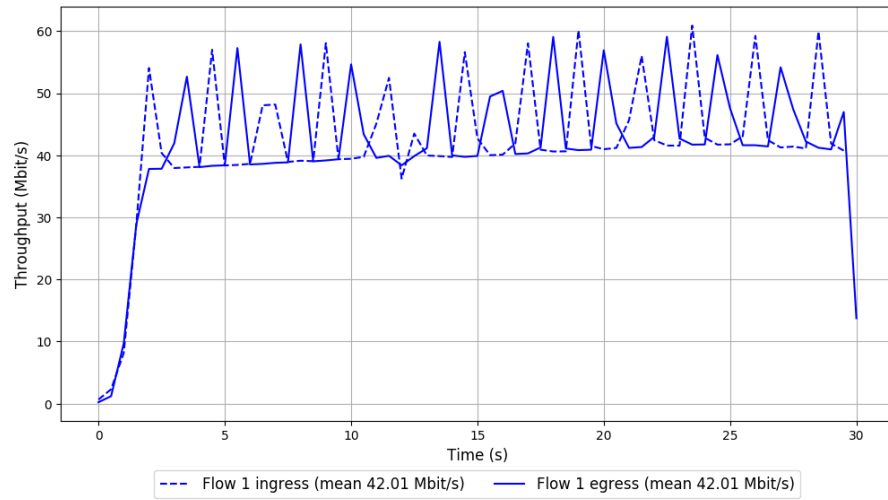
-- Flow 1:

Average throughput: 42.01 Mbit/s

95th percentile per-packet one-way delay: 114.190 ms

Loss rate: 0.00%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2017-12-19 22:56:01

End at: 2017-12-19 22:56:31

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 9.76 Mbit/s

95th percentile per-packet one-way delay: 113.628 ms

Loss rate: 0.02%

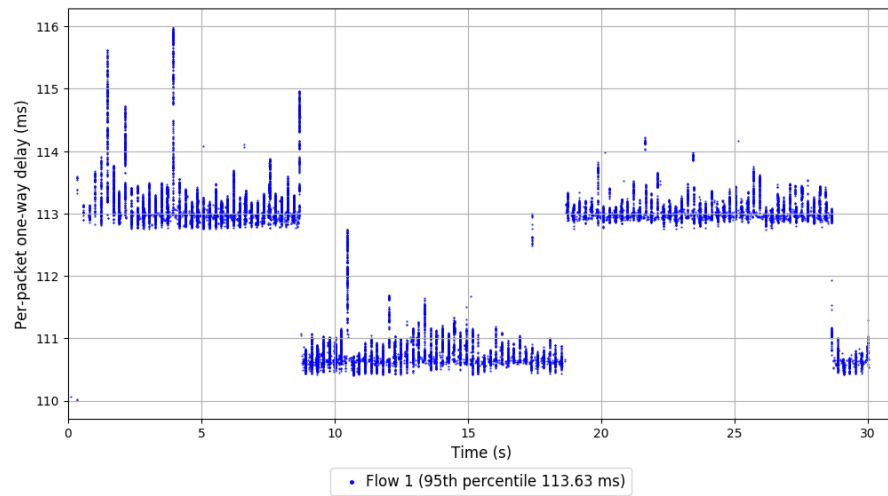
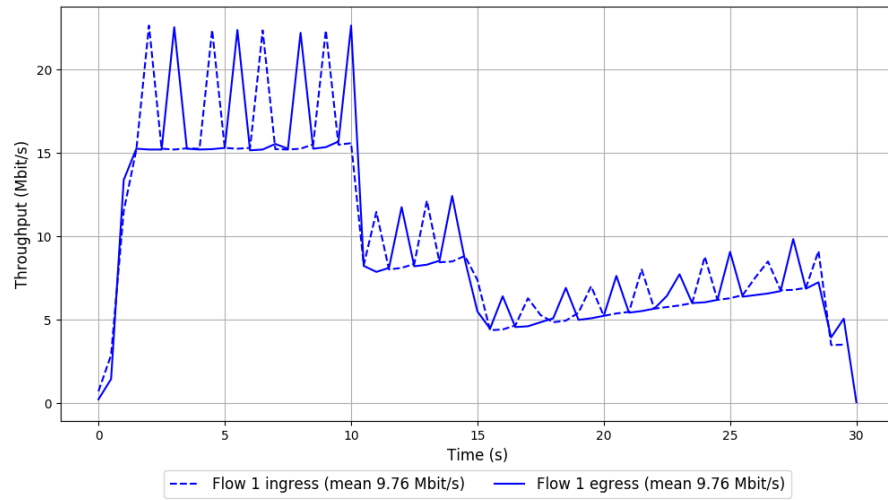
-- Flow 1:

Average throughput: 9.76 Mbit/s

95th percentile per-packet one-way delay: 113.628 ms

Loss rate: 0.02%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2017-12-19 23:08:11

End at: 2017-12-19 23:08:41

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 34.53 Mbit/s

95th percentile per-packet one-way delay: 115.361 ms

Loss rate: 0.00%

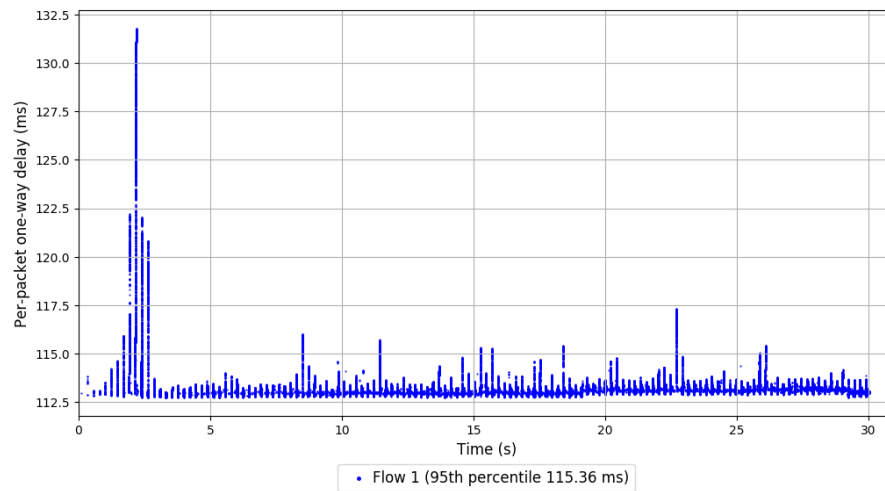
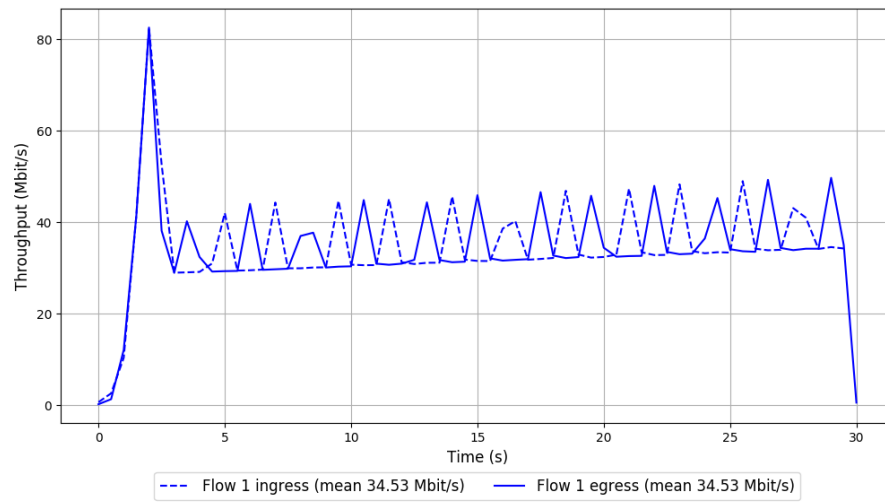
-- Flow 1:

Average throughput: 34.53 Mbit/s

95th percentile per-packet one-way delay: 115.361 ms

Loss rate: 0.00%

Run 10: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2017-12-19 21:25:10

End at: 2017-12-19 21:25:40

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 144.76 Mbit/s

95th percentile per-packet one-way delay: 215.774 ms

Loss rate: 2.10%

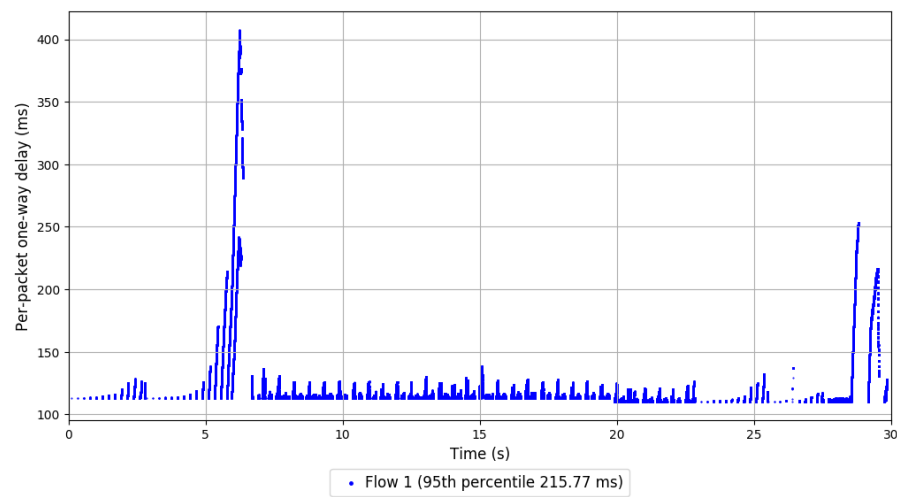
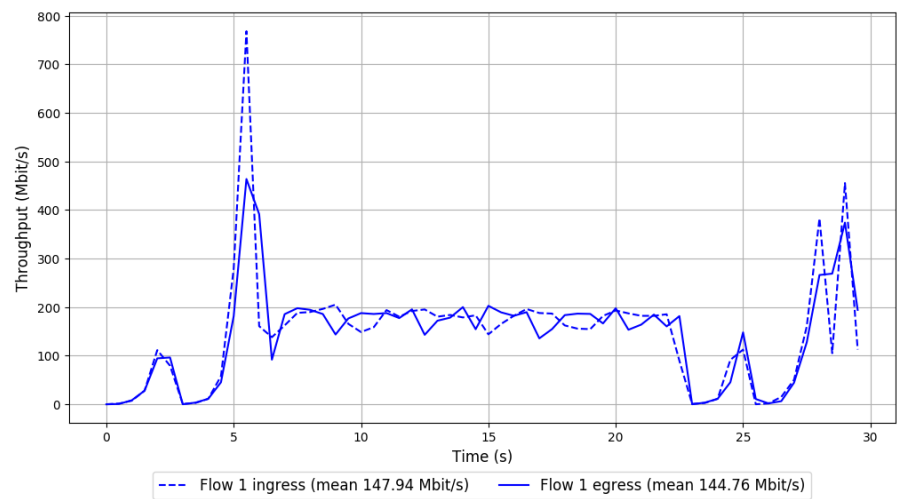
-- Flow 1:

Average throughput: 144.76 Mbit/s

95th percentile per-packet one-way delay: 215.774 ms

Loss rate: 2.10%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2017-12-19 21:37:15

End at: 2017-12-19 21:37:45

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 105.11 Mbit/s

95th percentile per-packet one-way delay: 179.585 ms

Loss rate: 2.54%

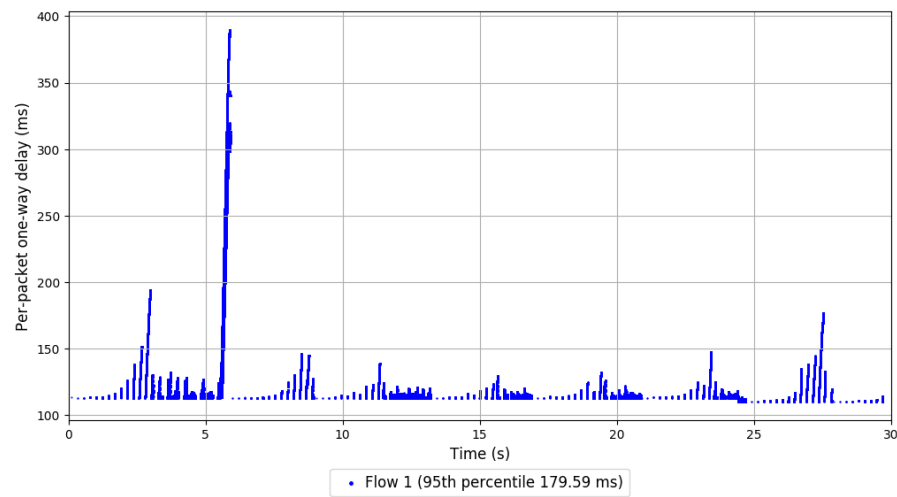
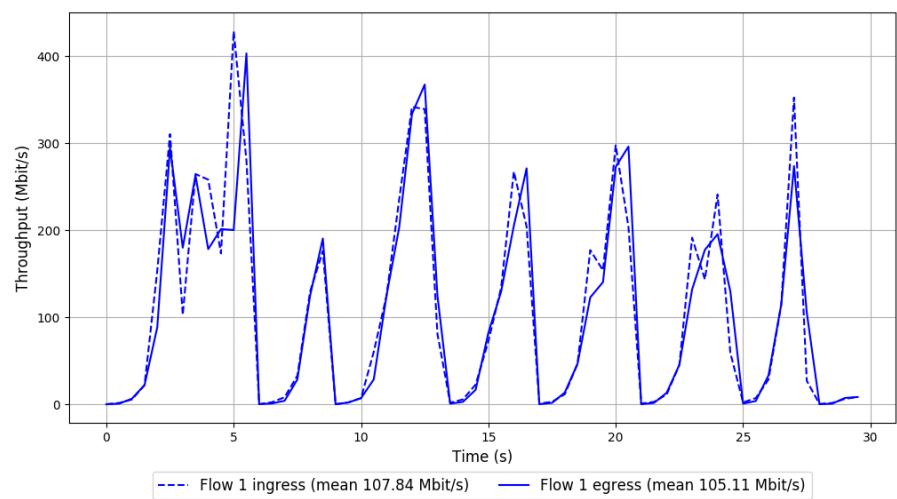
-- Flow 1:

Average throughput: 105.11 Mbit/s

95th percentile per-packet one-way delay: 179.585 ms

Loss rate: 2.54%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2017-12-19 21:49:14

End at: 2017-12-19 21:49:44

Below is generated by plot.py at 2017-12-20 00:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 158.93 Mbit/s

95th percentile per-packet one-way delay: 125.296 ms

Loss rate: 0.14%

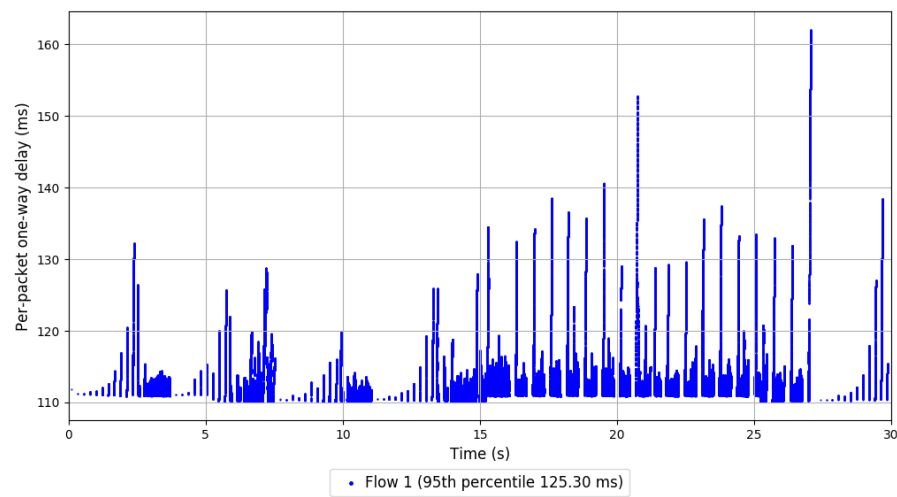
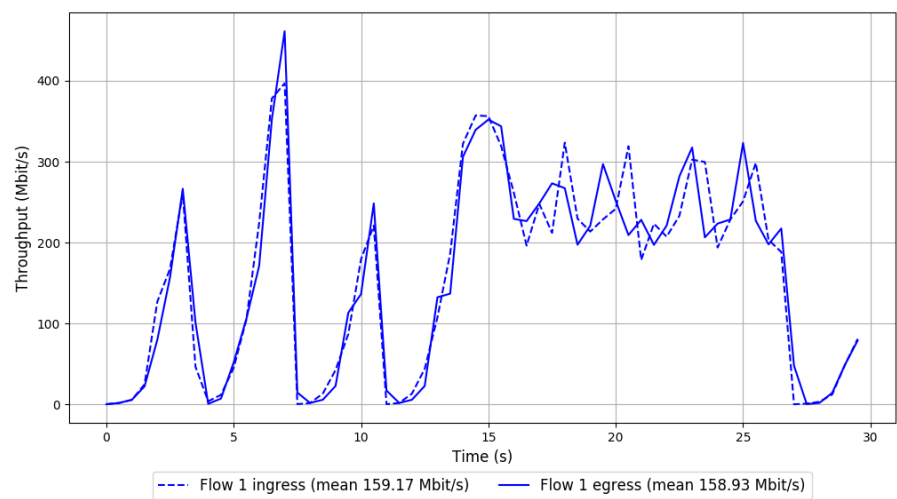
-- Flow 1:

Average throughput: 158.93 Mbit/s

95th percentile per-packet one-way delay: 125.296 ms

Loss rate: 0.14%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2017-12-19 22:01:32

End at: 2017-12-19 22:02:02

Below is generated by plot.py at 2017-12-20 00:39:39

Datalink statistics

-- Total of 1 flow:

Average throughput: 198.52 Mbit/s

95th percentile per-packet one-way delay: 151.314 ms

Loss rate: 0.10%

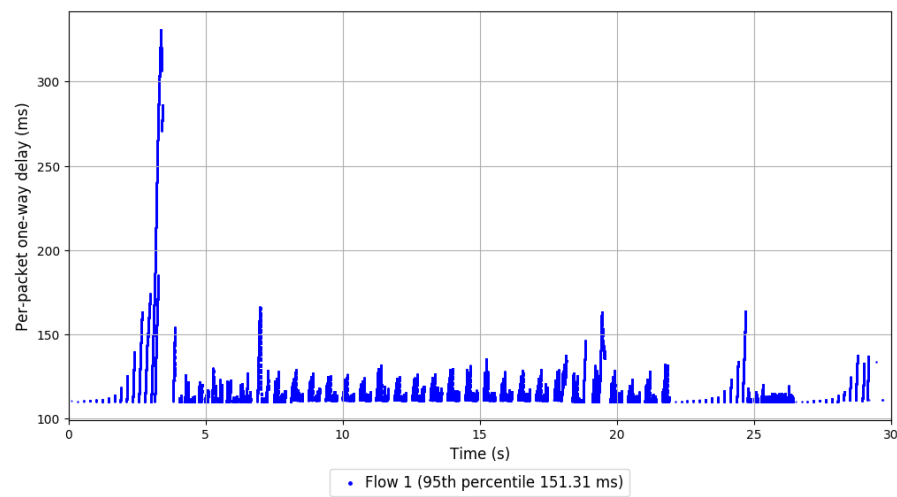
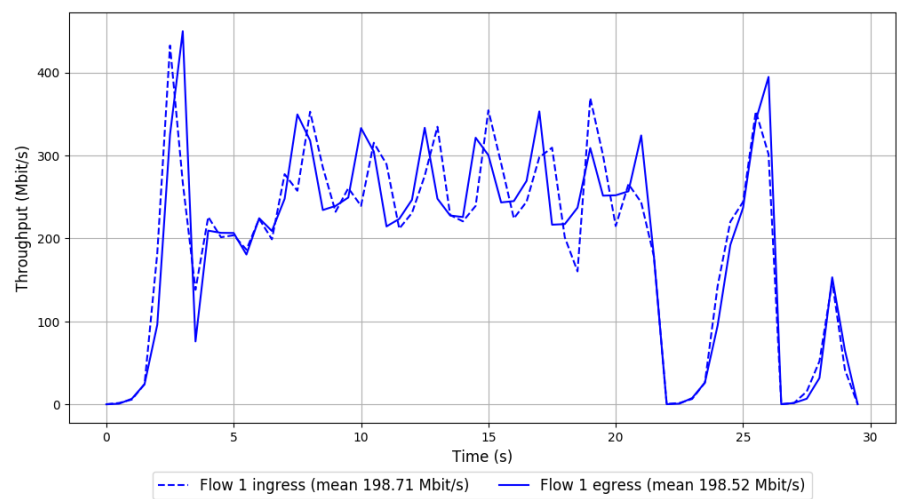
-- Flow 1:

Average throughput: 198.52 Mbit/s

95th percentile per-packet one-way delay: 151.314 ms

Loss rate: 0.10%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2017-12-19 22:13:44

End at: 2017-12-19 22:14:14

Below is generated by plot.py at 2017-12-20 00:41:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 206.39 Mbit/s

95th percentile per-packet one-way delay: 161.424 ms

Loss rate: 0.25%

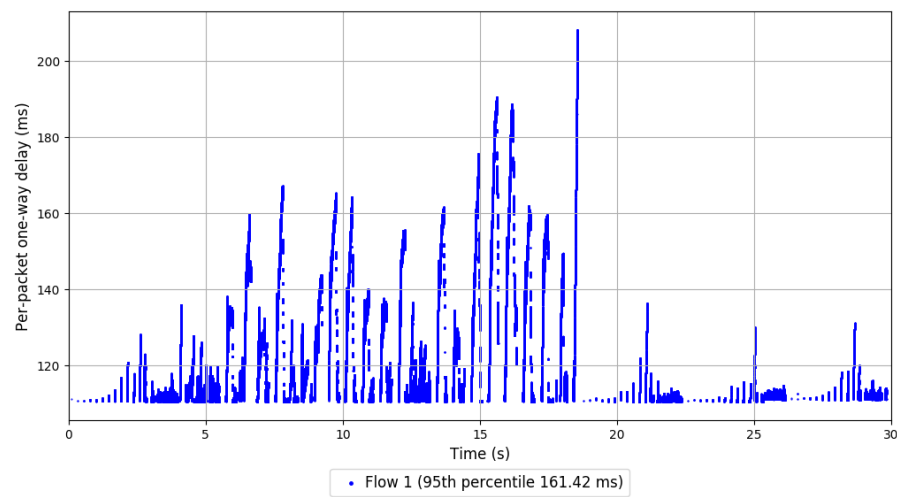
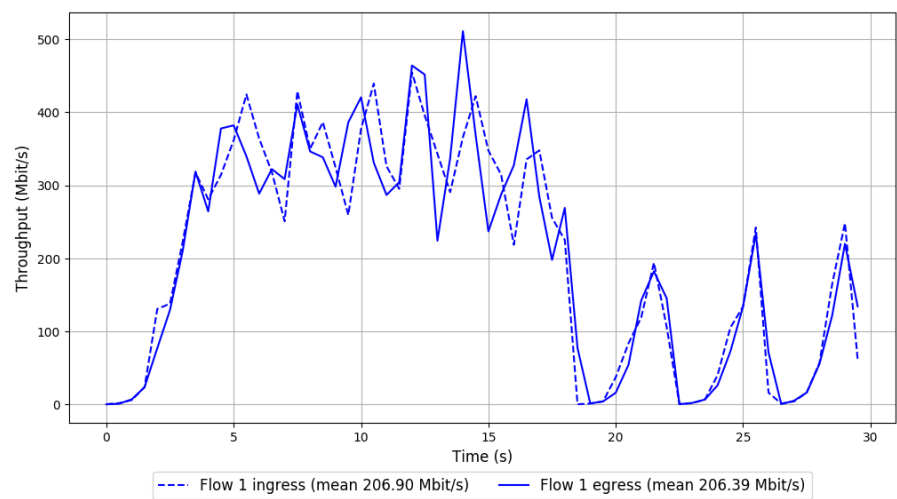
-- Flow 1:

Average throughput: 206.39 Mbit/s

95th percentile per-packet one-way delay: 161.424 ms

Loss rate: 0.25%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2017-12-19 22:26:23

End at: 2017-12-19 22:26:53

Below is generated by plot.py at 2017-12-20 00:42:07

Datalink statistics

-- Total of 1 flow:

Average throughput: 226.13 Mbit/s

95th percentile per-packet one-way delay: 154.710 ms

Loss rate: 0.00%

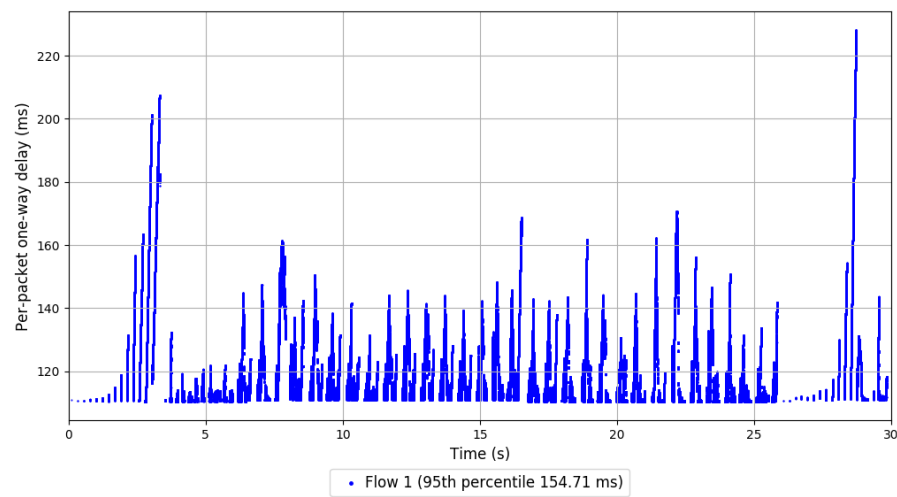
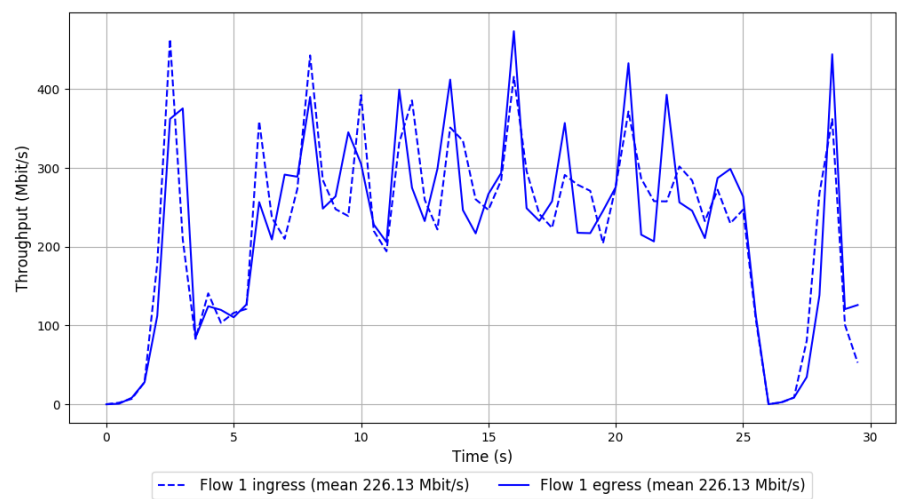
-- Flow 1:

Average throughput: 226.13 Mbit/s

95th percentile per-packet one-way delay: 154.710 ms

Loss rate: 0.00%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2017-12-19 22:38:50

End at: 2017-12-19 22:39:20

Below is generated by plot.py at 2017-12-20 00:42:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 235.11 Mbit/s

95th percentile per-packet one-way delay: 142.285 ms

Loss rate: 0.00%

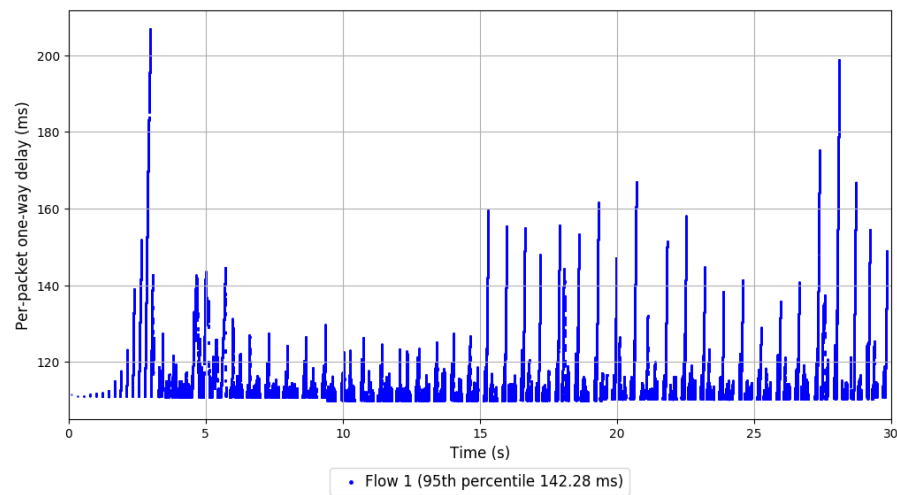
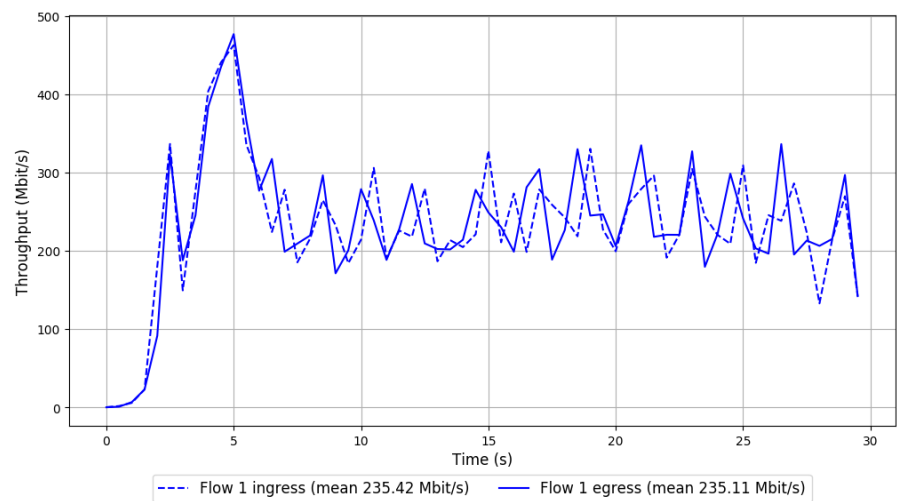
-- Flow 1:

Average throughput: 235.11 Mbit/s

95th percentile per-packet one-way delay: 142.285 ms

Loss rate: 0.00%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2017-12-19 22:51:31

End at: 2017-12-19 22:52:01

Below is generated by plot.py at 2017-12-20 00:42:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 182.71 Mbit/s

95th percentile per-packet one-way delay: 135.719 ms

Loss rate: 0.01%

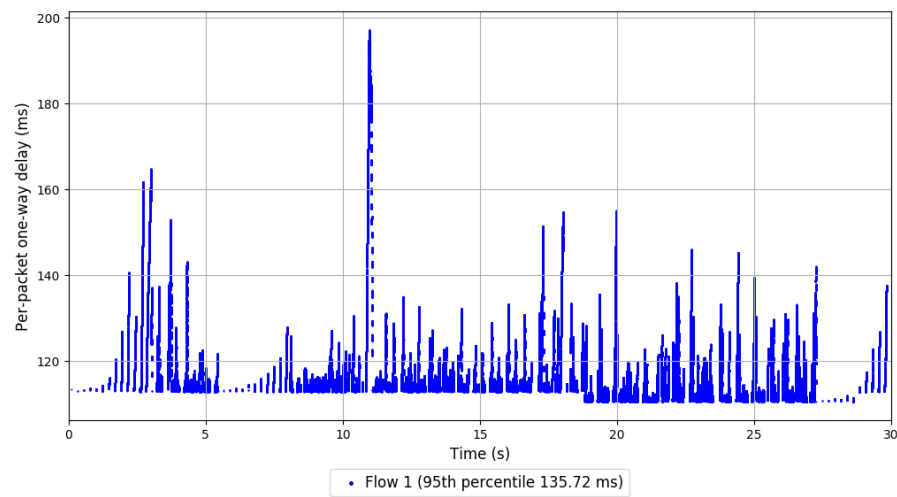
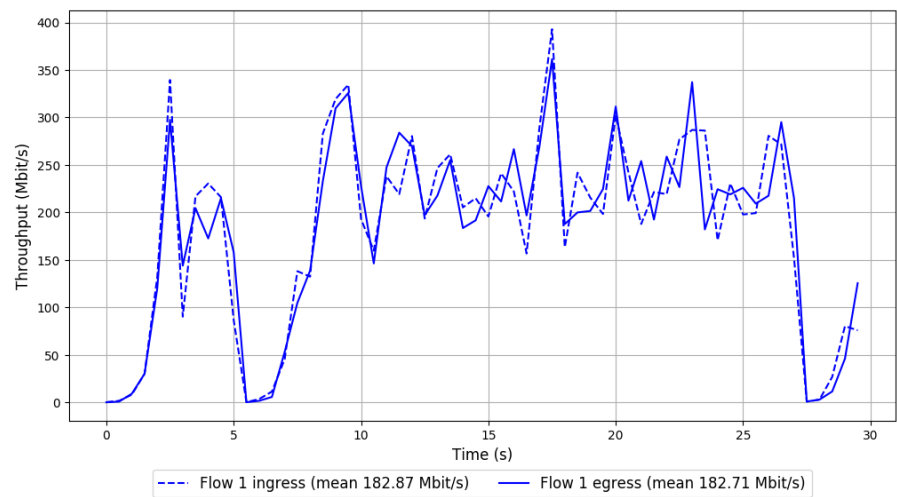
-- Flow 1:

Average throughput: 182.71 Mbit/s

95th percentile per-packet one-way delay: 135.719 ms

Loss rate: 0.01%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2017-12-19 23:03:34

End at: 2017-12-19 23:04:04

Below is generated by plot.py at 2017-12-20 00:42:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 196.95 Mbit/s

95th percentile per-packet one-way delay: 269.303 ms

Loss rate: 2.89%

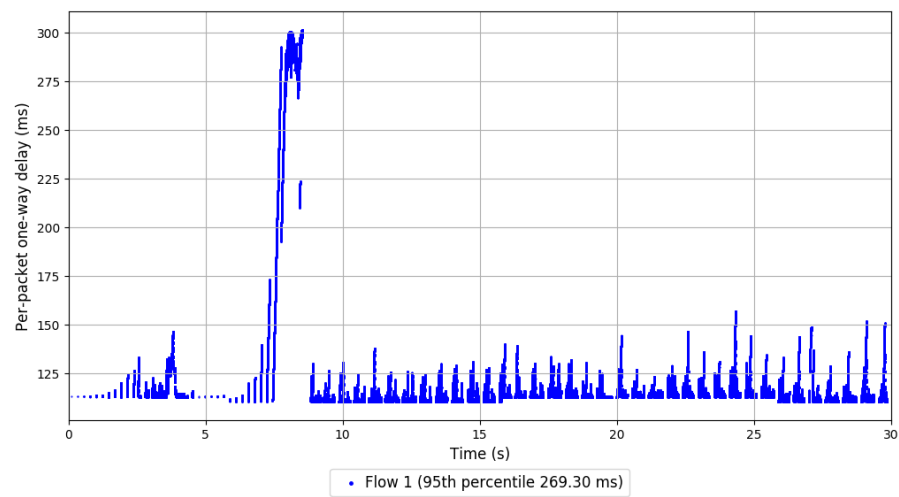
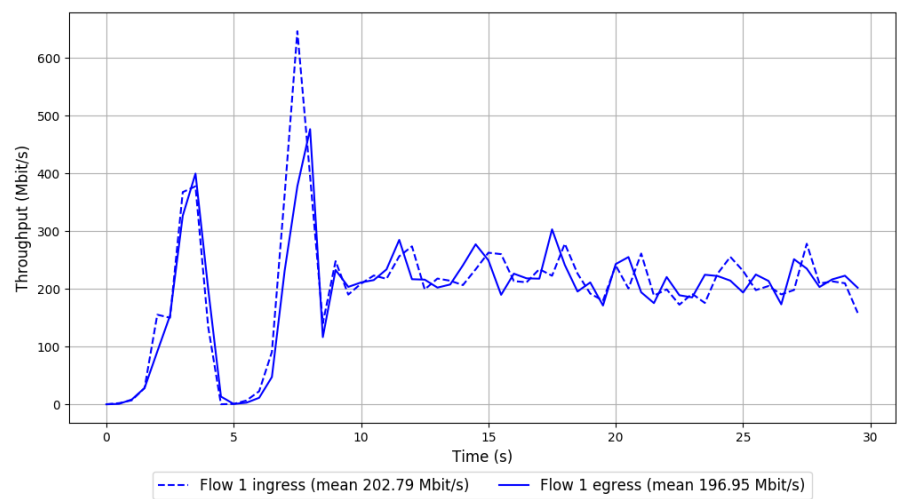
-- Flow 1:

Average throughput: 196.95 Mbit/s

95th percentile per-packet one-way delay: 269.303 ms

Loss rate: 2.89%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2017-12-19 23:15:47

End at: 2017-12-19 23:16:17

Below is generated by plot.py at 2017-12-20 00:42:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 144.72 Mbit/s

95th percentile per-packet one-way delay: 129.006 ms

Loss rate: 0.01%

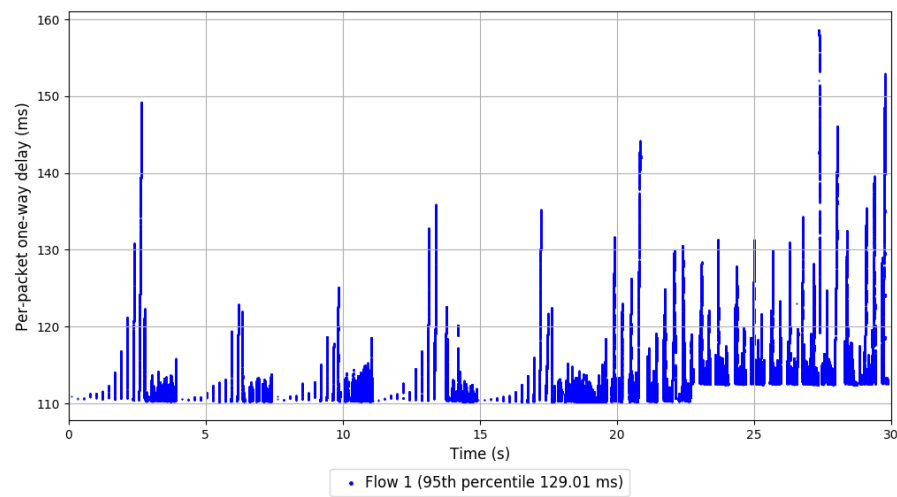
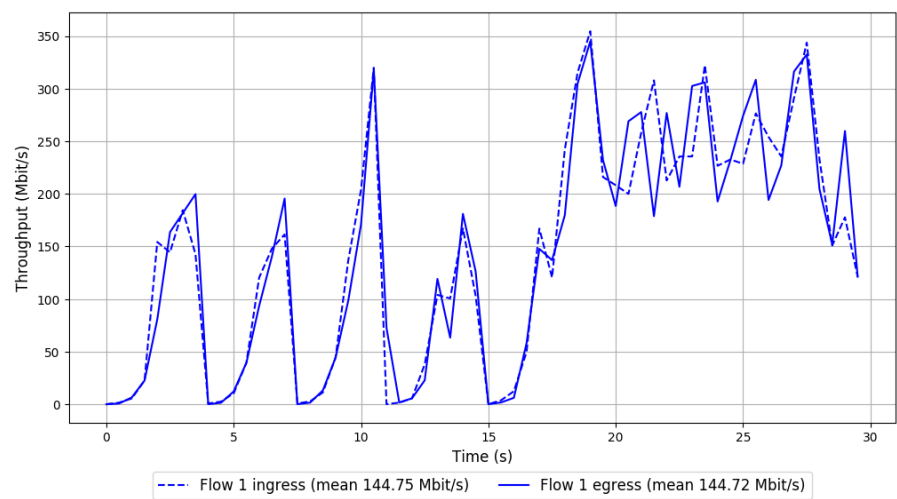
-- Flow 1:

Average throughput: 144.72 Mbit/s

95th percentile per-packet one-way delay: 129.006 ms

Loss rate: 0.01%

Run 10: Report of Verus — Data Link



Run 1: Statistics of Copa

Start at: 2017-12-19 21:26:02

End at: 2017-12-19 21:26:32

Below is generated by plot.py at 2017-12-20 00:42:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 71.12 Mbit/s

95th percentile per-packet one-way delay: 112.840 ms

Loss rate: 0.00%

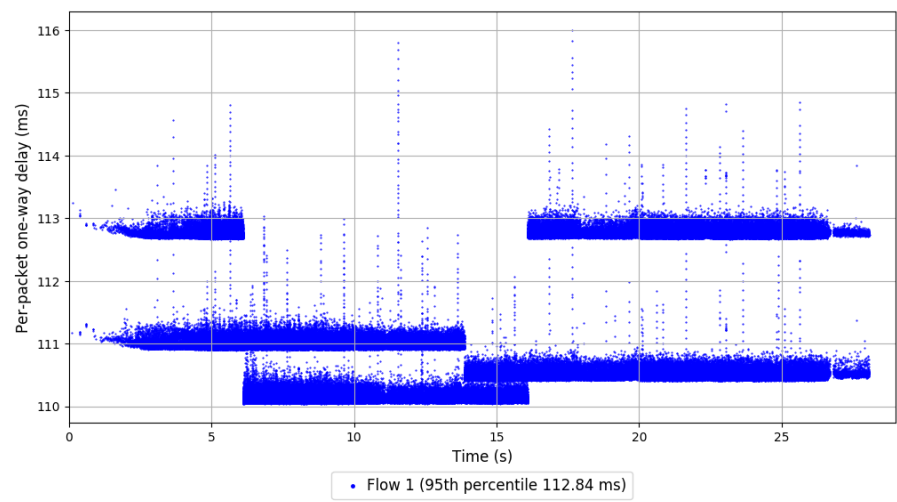
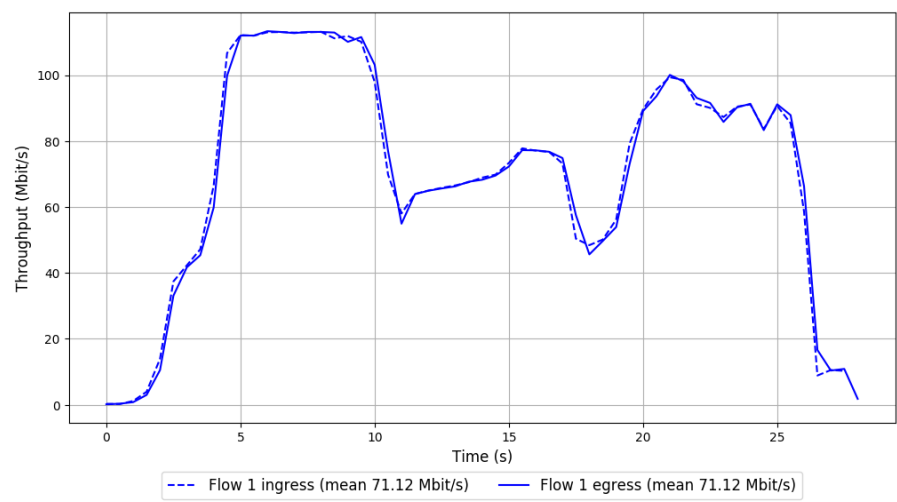
-- Flow 1:

Average throughput: 71.12 Mbit/s

95th percentile per-packet one-way delay: 112.840 ms

Loss rate: 0.00%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2017-12-19 21:38:04

End at: 2017-12-19 21:38:34

Below is generated by plot.py at 2017-12-20 00:42:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 71.99 Mbit/s

95th percentile per-packet one-way delay: 113.327 ms

Loss rate: 0.00%

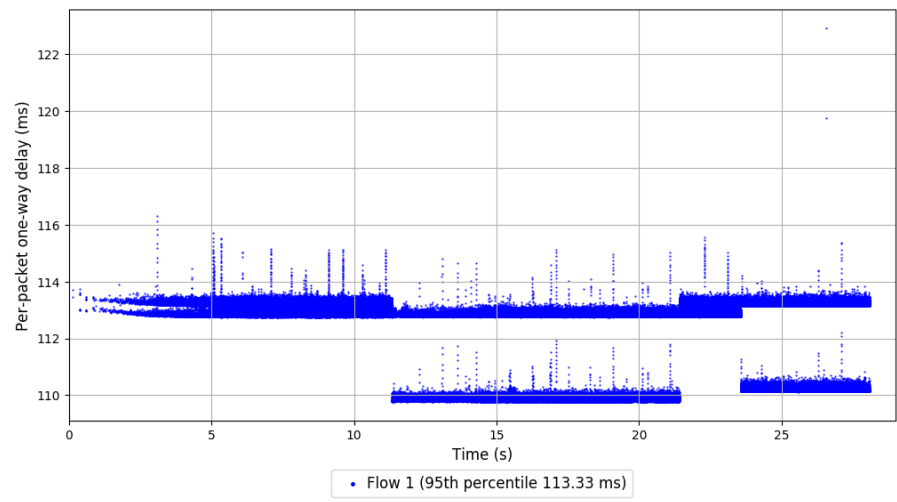
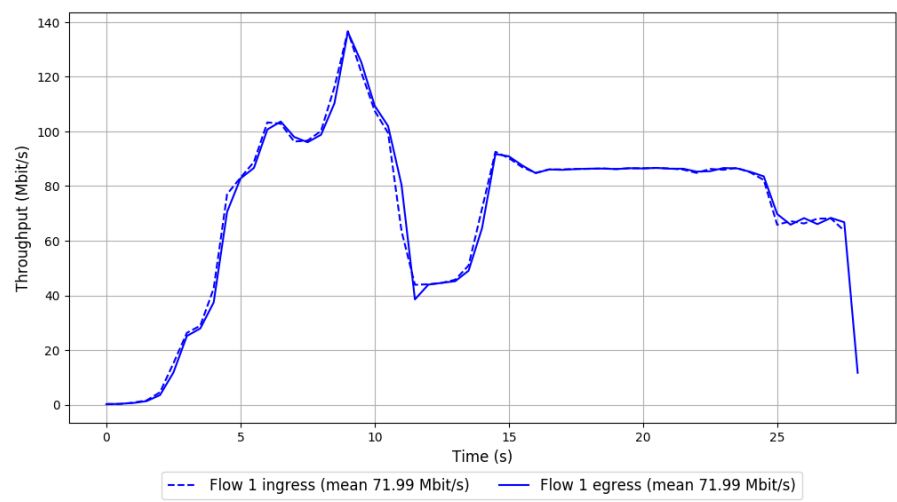
-- Flow 1:

Average throughput: 71.99 Mbit/s

95th percentile per-packet one-way delay: 113.327 ms

Loss rate: 0.00%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2017-12-19 21:50:07

End at: 2017-12-19 21:50:37

Below is generated by plot.py at 2017-12-20 00:43:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 75.00 Mbit/s

95th percentile per-packet one-way delay: 111.063 ms

Loss rate: 0.00%

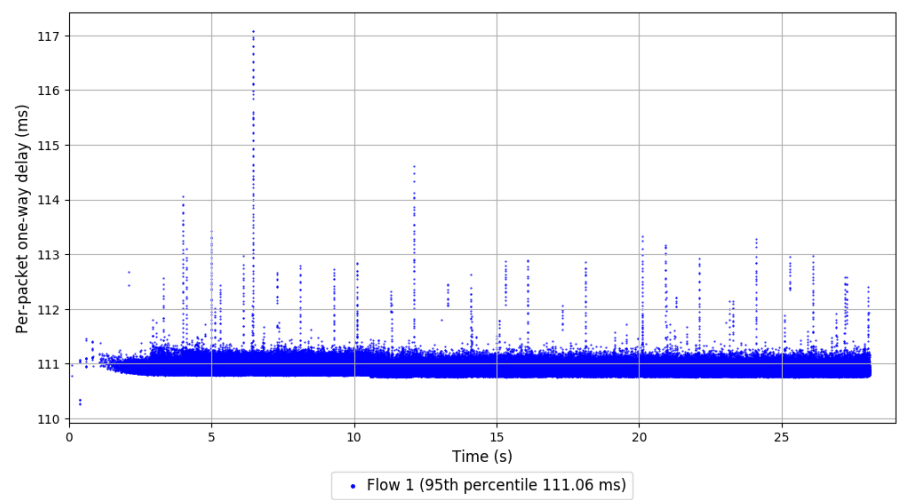
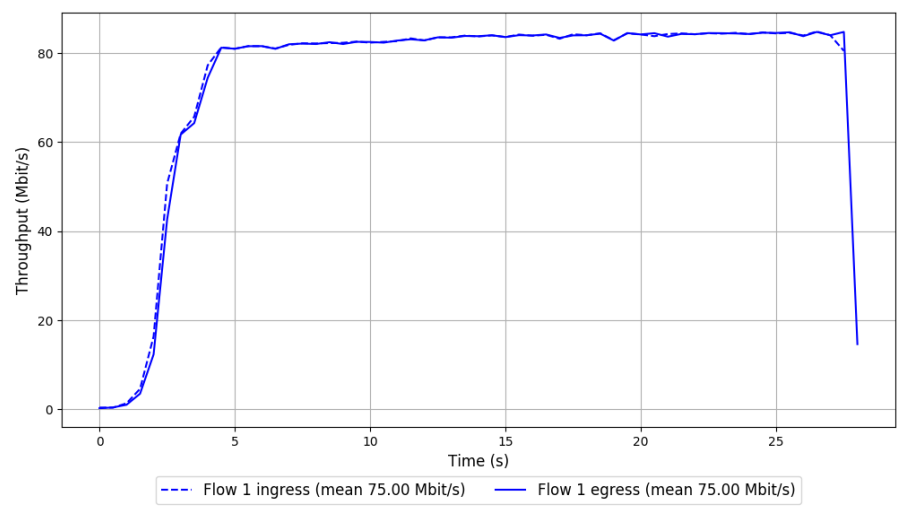
-- Flow 1:

Average throughput: 75.00 Mbit/s

95th percentile per-packet one-way delay: 111.063 ms

Loss rate: 0.00%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2017-12-19 22:02:28

End at: 2017-12-19 22:02:58

Below is generated by plot.py at 2017-12-20 00:44:00

Datalink statistics

-- Total of 1 flow:

Average throughput: 71.91 Mbit/s

95th percentile per-packet one-way delay: 112.583 ms

Loss rate: 0.00%

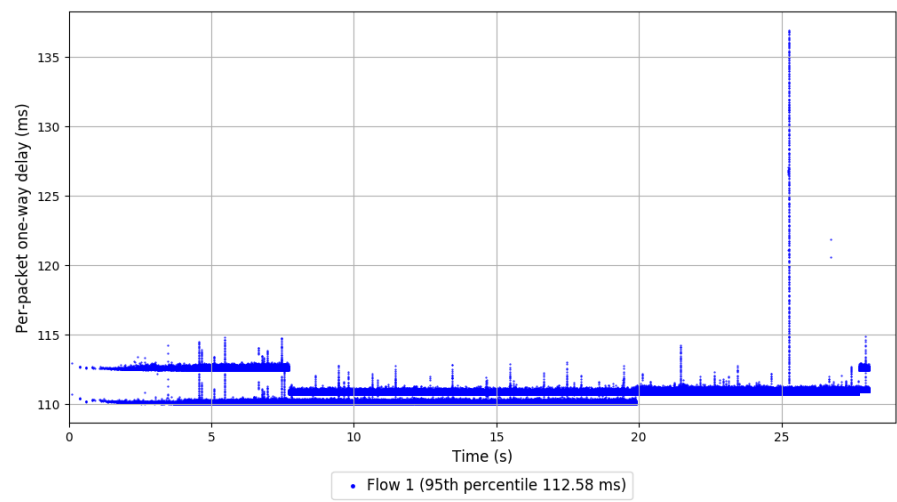
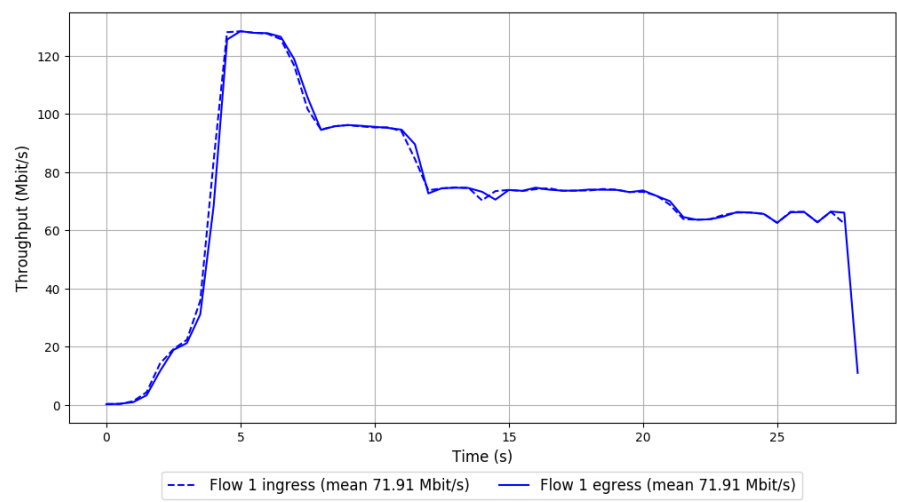
-- Flow 1:

Average throughput: 71.91 Mbit/s

95th percentile per-packet one-way delay: 112.583 ms

Loss rate: 0.00%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2017-12-19 22:14:41

End at: 2017-12-19 22:15:11

Below is generated by plot.py at 2017-12-20 00:44:06

Datalink statistics

-- Total of 1 flow:

Average throughput: 76.01 Mbit/s

95th percentile per-packet one-way delay: 112.751 ms

Loss rate: 0.00%

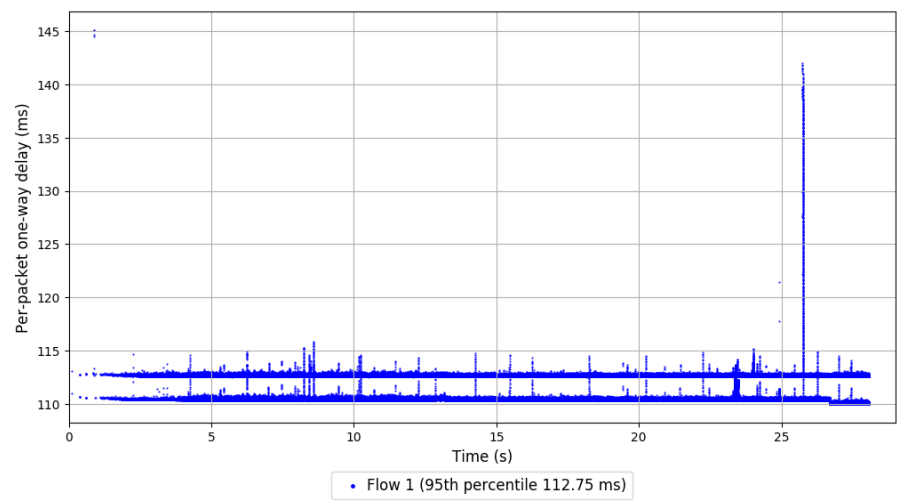
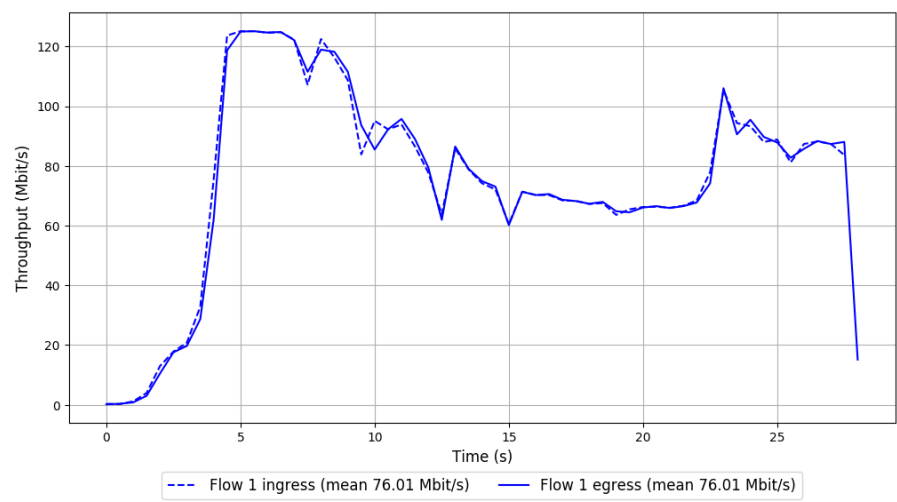
-- Flow 1:

Average throughput: 76.01 Mbit/s

95th percentile per-packet one-way delay: 112.751 ms

Loss rate: 0.00%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2017-12-19 22:27:21

End at: 2017-12-19 22:27:51

Below is generated by plot.py at 2017-12-20 00:44:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 72.40 Mbit/s

95th percentile per-packet one-way delay: 111.766 ms

Loss rate: 0.00%

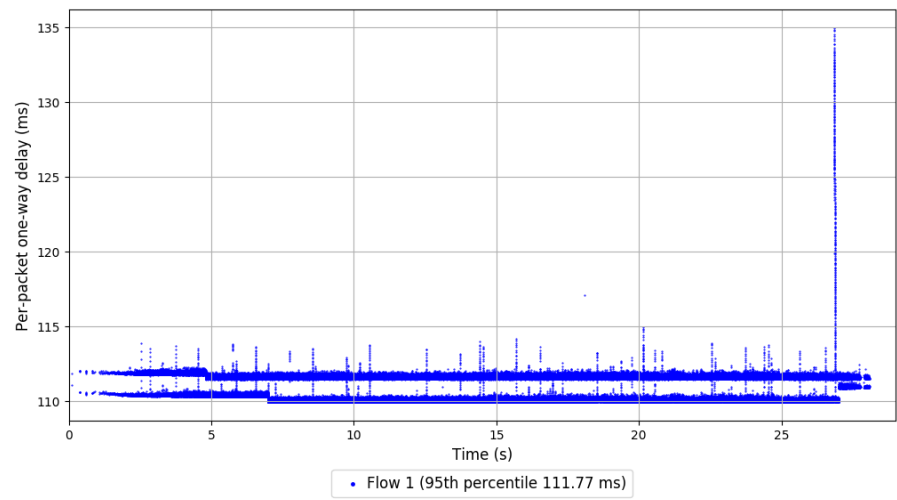
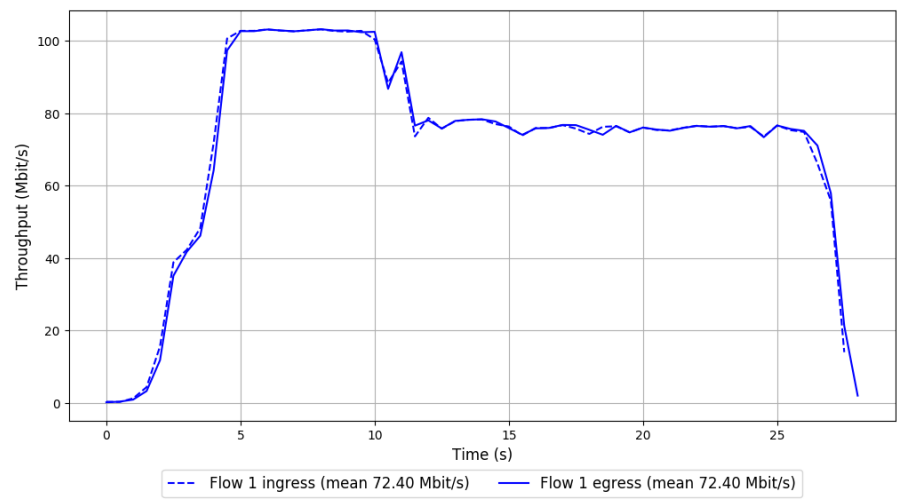
-- Flow 1:

Average throughput: 72.40 Mbit/s

95th percentile per-packet one-way delay: 111.766 ms

Loss rate: 0.00%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2017-12-19 22:39:49

End at: 2017-12-19 22:40:19

Below is generated by plot.py at 2017-12-20 00:44:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 74.05 Mbit/s

95th percentile per-packet one-way delay: 112.569 ms

Loss rate: 0.00%

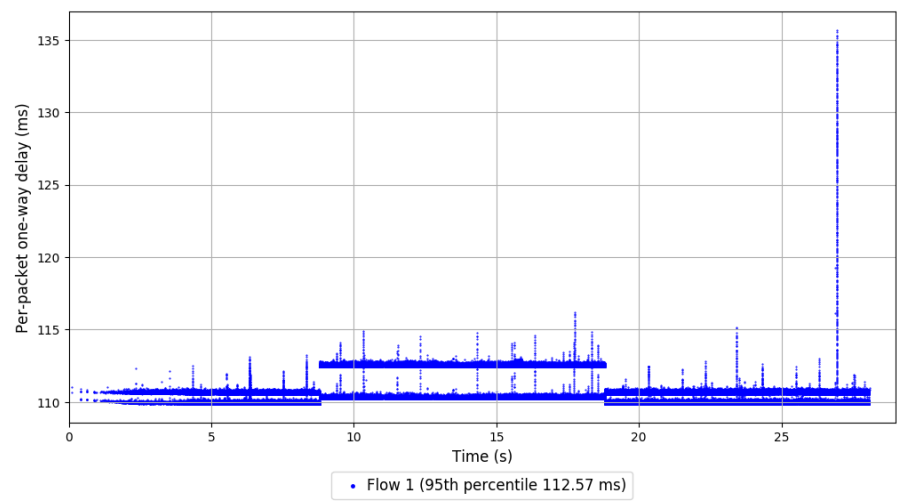
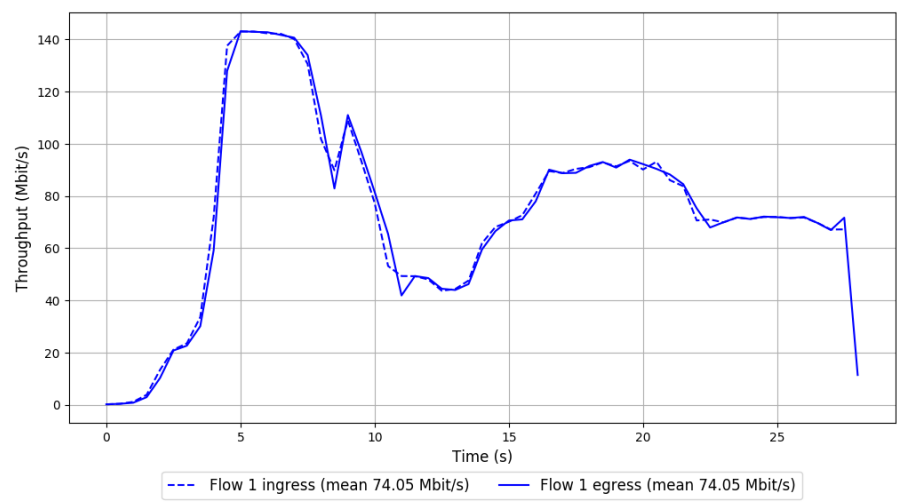
-- Flow 1:

Average throughput: 74.05 Mbit/s

95th percentile per-packet one-way delay: 112.569 ms

Loss rate: 0.00%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2017-12-19 22:52:25

End at: 2017-12-19 22:52:55

Below is generated by plot.py at 2017-12-20 00:44:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 61.40 Mbit/s

95th percentile per-packet one-way delay: 113.018 ms

Loss rate: 0.00%

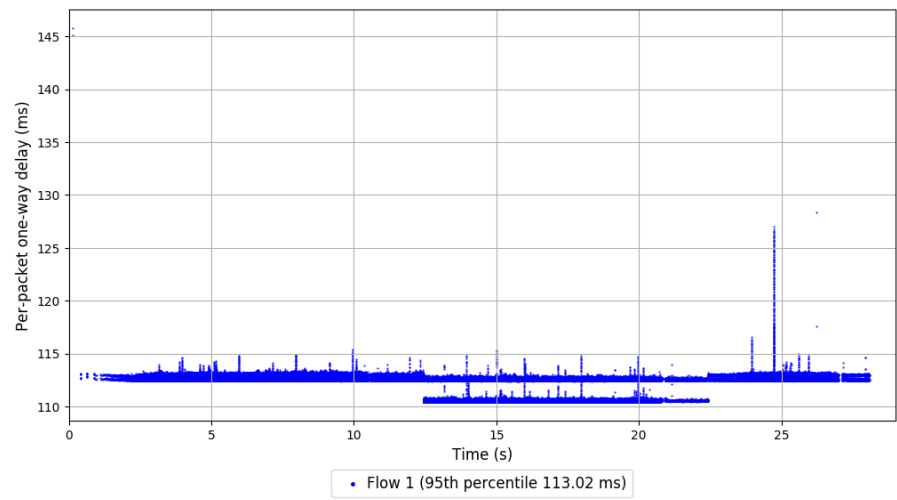
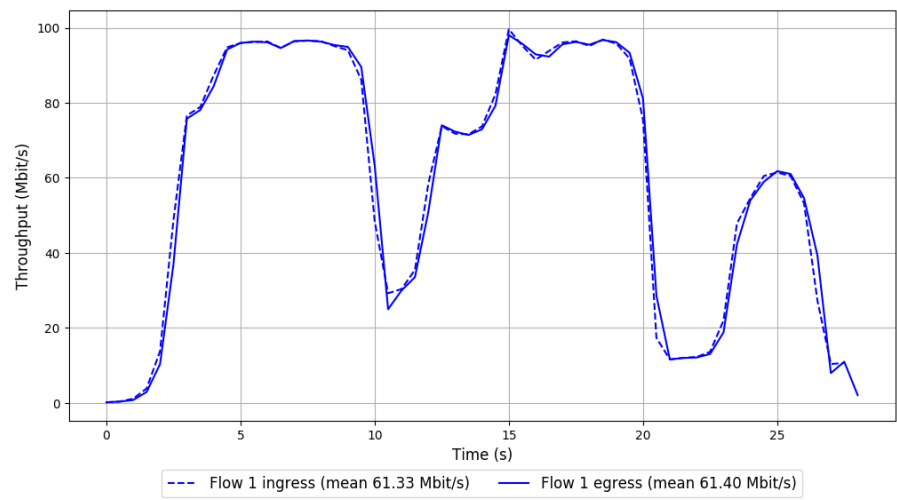
-- Flow 1:

Average throughput: 61.40 Mbit/s

95th percentile per-packet one-way delay: 113.018 ms

Loss rate: 0.00%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2017-12-19 23:04:30

End at: 2017-12-19 23:05:00

Below is generated by plot.py at 2017-12-20 00:44:24

Datalink statistics

-- Total of 1 flow:

Average throughput: 73.81 Mbit/s

95th percentile per-packet one-way delay: 113.057 ms

Loss rate: 0.12%

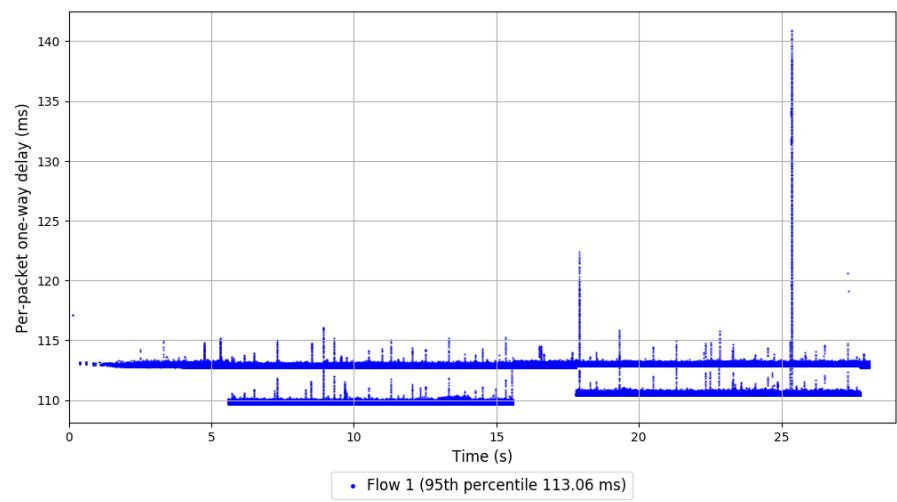
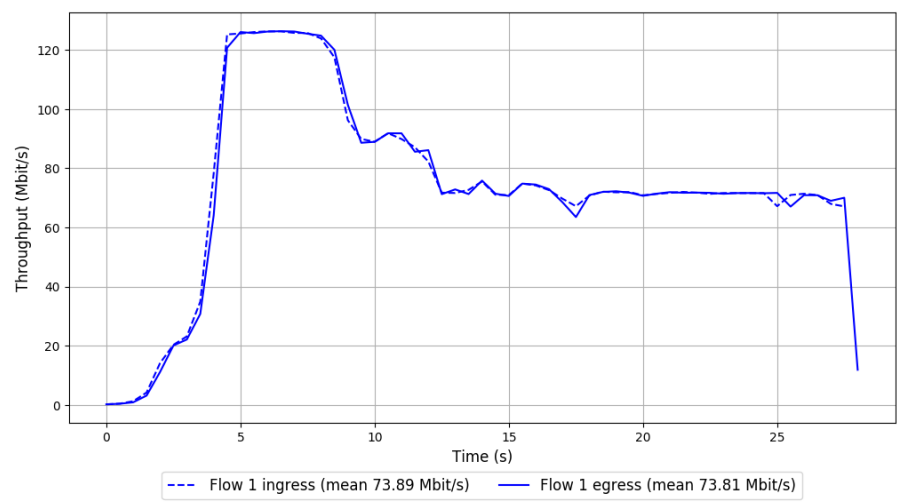
-- Flow 1:

Average throughput: 73.81 Mbit/s

95th percentile per-packet one-way delay: 113.057 ms

Loss rate: 0.12%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2017-12-19 23:16:40

End at: 2017-12-19 23:17:10

Below is generated by plot.py at 2017-12-20 00:44:24

Datalink statistics

-- Total of 1 flow:

Average throughput: 67.80 Mbit/s

95th percentile per-packet one-way delay: 112.682 ms

Loss rate: 0.01%

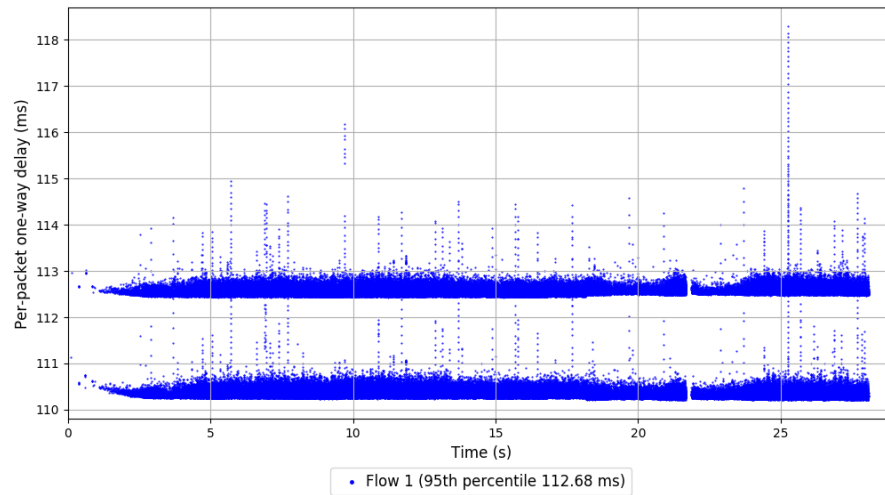
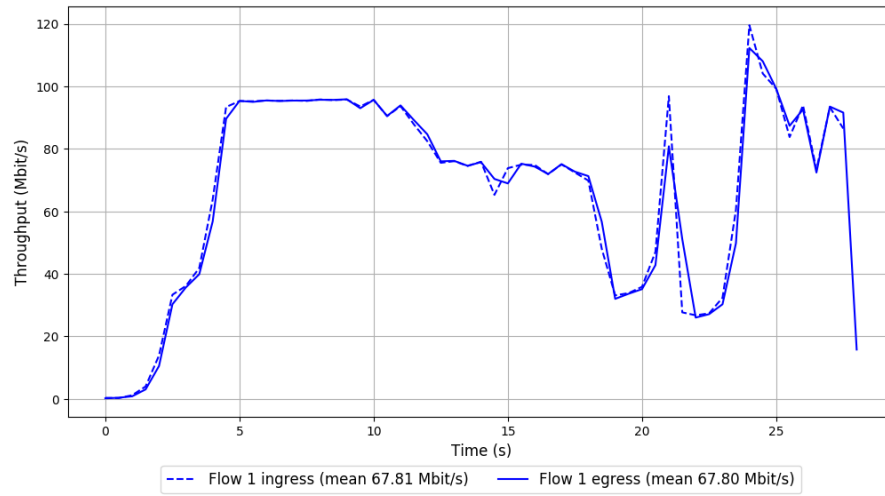
-- Flow 1:

Average throughput: 67.80 Mbit/s

95th percentile per-packet one-way delay: 112.682 ms

Loss rate: 0.01%

Run 10: Report of Copa — Data Link

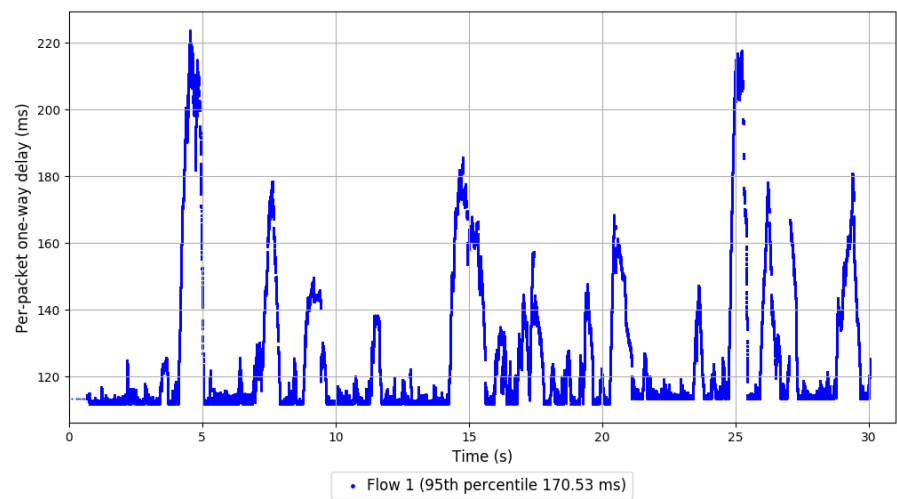
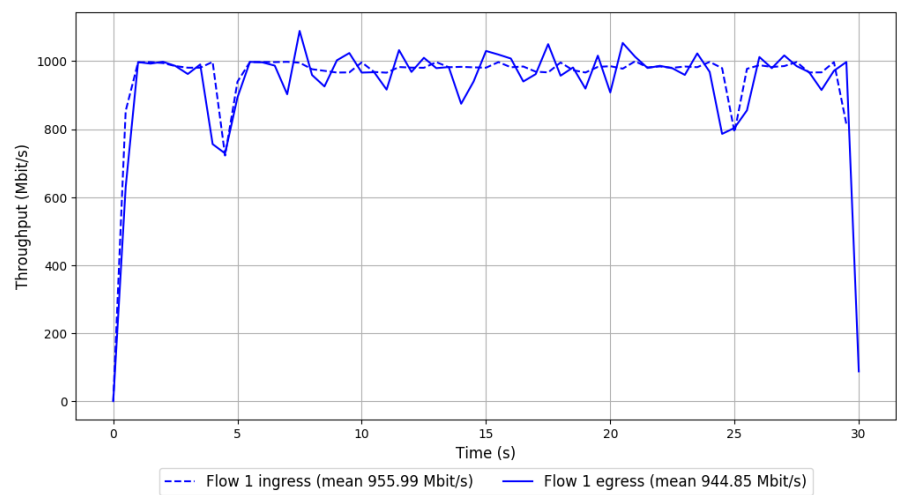


```
Run 1: Statistics of FillP

Start at: 2017-12-19 21:19:57
End at: 2017-12-19 21:20:27

# Below is generated by plot.py at 2017-12-20 01:00:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 944.85 Mbit/s
95th percentile per-packet one-way delay: 170.533 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 944.85 Mbit/s
95th percentile per-packet one-way delay: 170.533 ms
Loss rate: 1.17%
```


Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2017-12-19 21:32:03

End at: 2017-12-19 21:32:33

Below is generated by plot.py at 2017-12-20 01:00:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 923.70 Mbit/s

95th percentile per-packet one-way delay: 179.154 ms

Loss rate: 2.03%

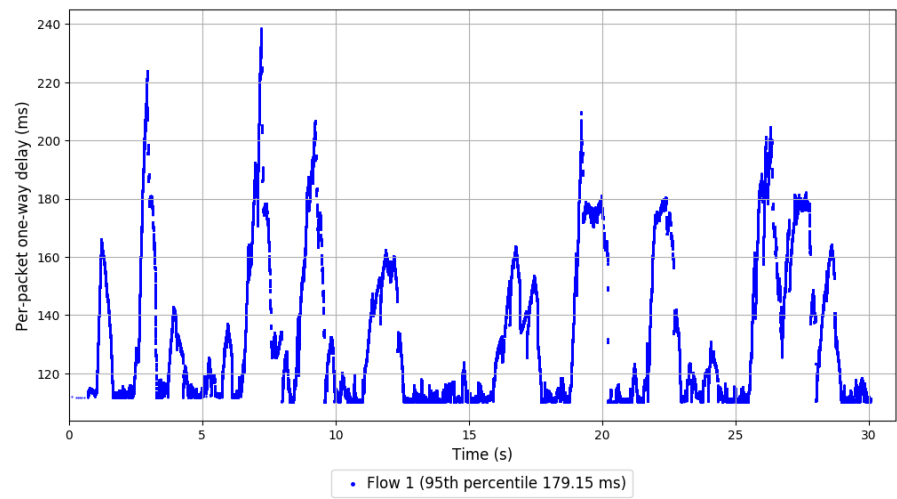
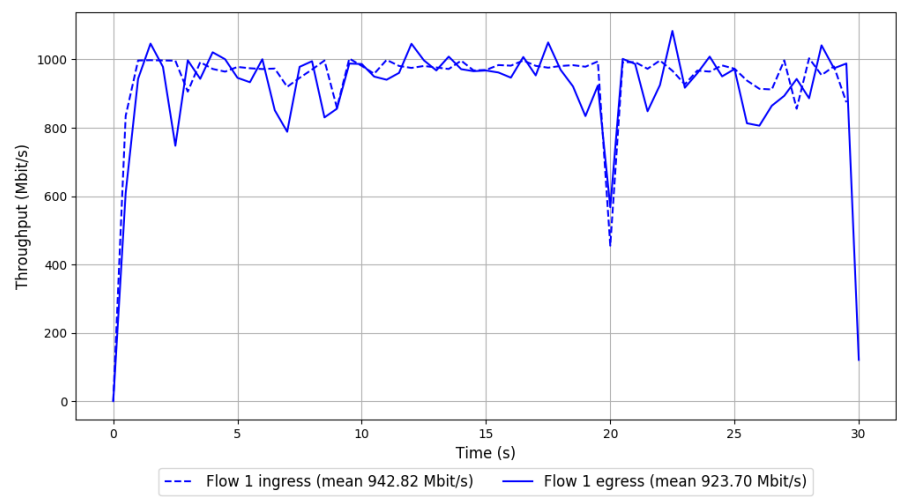
-- Flow 1:

Average throughput: 923.70 Mbit/s

95th percentile per-packet one-way delay: 179.154 ms

Loss rate: 2.03%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2017-12-19 21:44:02

End at: 2017-12-19 21:44:32

Below is generated by plot.py at 2017-12-20 01:00:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 916.33 Mbit/s

95th percentile per-packet one-way delay: 184.145 ms

Loss rate: 2.46%

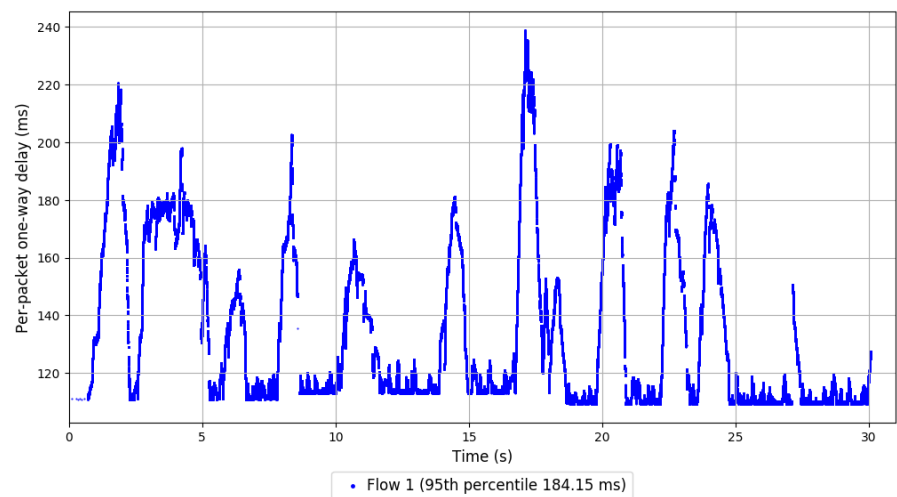
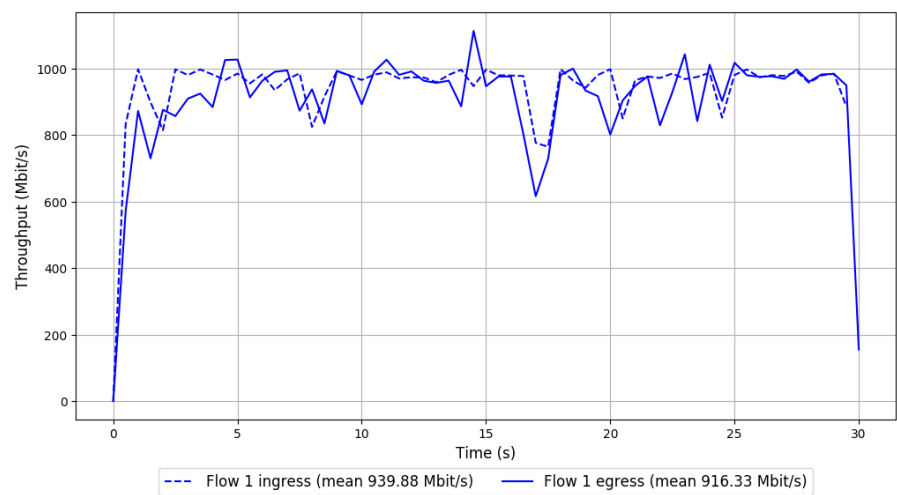
-- Flow 1:

Average throughput: 916.33 Mbit/s

95th percentile per-packet one-way delay: 184.145 ms

Loss rate: 2.46%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2017-12-19 21:56:18

End at: 2017-12-19 21:56:48

Below is generated by plot.py at 2017-12-20 01:01:03

Datalink statistics

-- Total of 1 flow:

Average throughput: 929.25 Mbit/s

95th percentile per-packet one-way delay: 175.222 ms

Loss rate: 1.07%

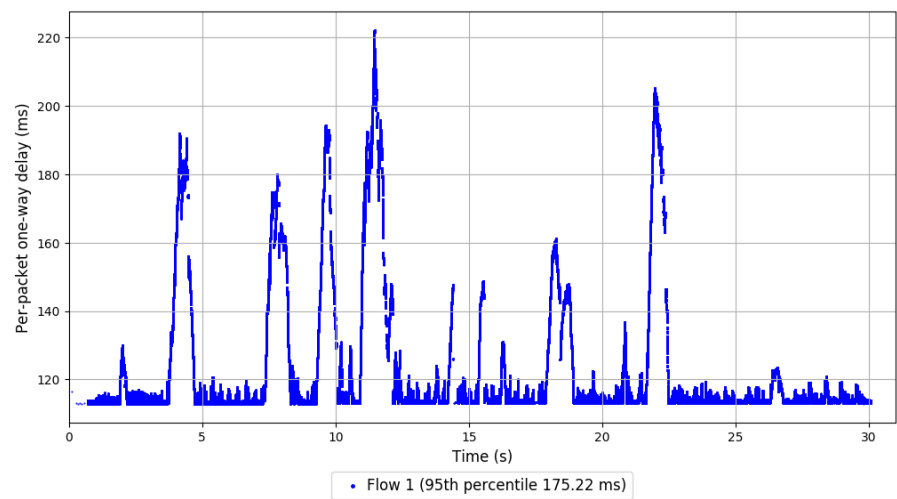
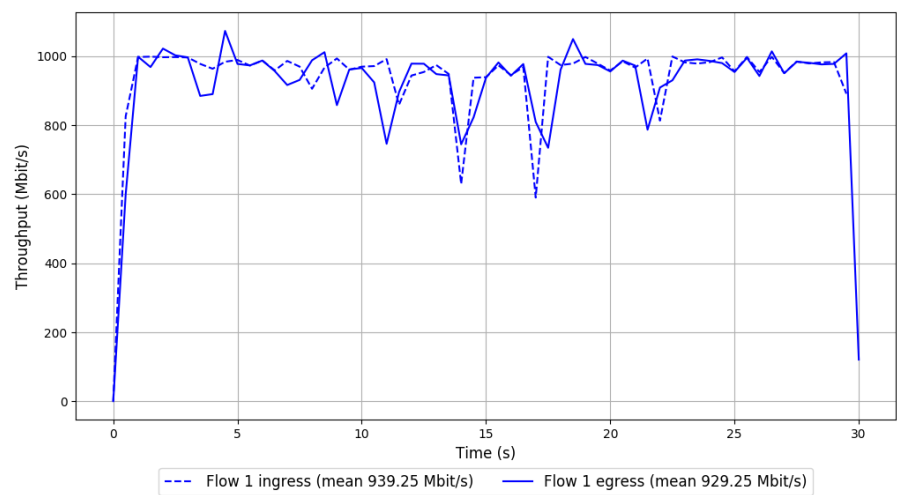
-- Flow 1:

Average throughput: 929.25 Mbit/s

95th percentile per-packet one-way delay: 175.222 ms

Loss rate: 1.07%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2017-12-19 22:08:30

End at: 2017-12-19 22:09:00

Below is generated by plot.py at 2017-12-20 01:01:14

Datalink statistics

-- Total of 1 flow:

Average throughput: 931.86 Mbit/s

95th percentile per-packet one-way delay: 182.216 ms

Loss rate: 1.91%

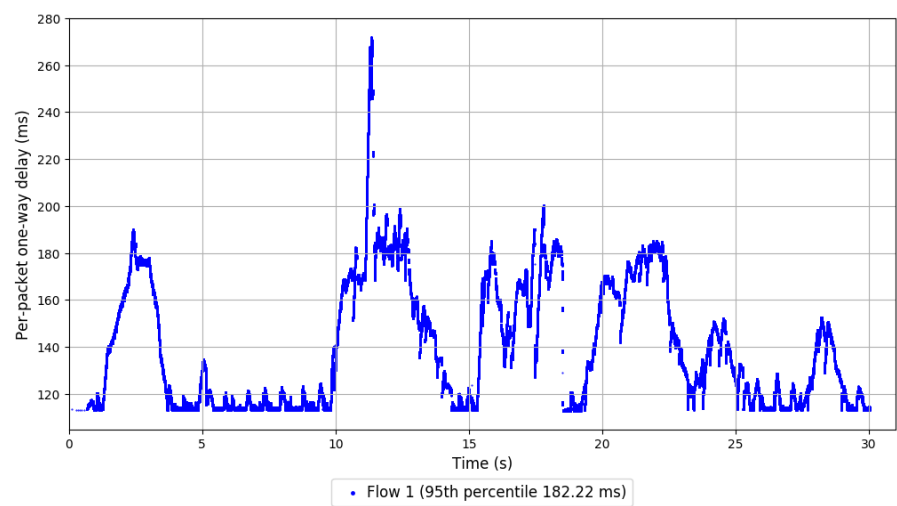
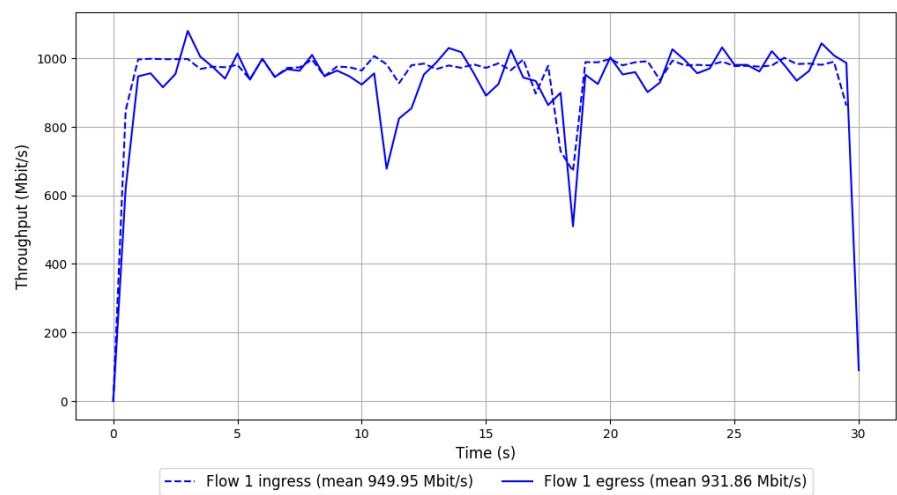
-- Flow 1:

Average throughput: 931.86 Mbit/s

95th percentile per-packet one-way delay: 182.216 ms

Loss rate: 1.91%

Run 5: Report of FillP — Data Link



Run 6: Statistics of FillP

Start at: 2017-12-19 22:21:07

End at: 2017-12-19 22:21:37

Below is generated by plot.py at 2017-12-20 01:01:14

Datalink statistics

-- Total of 1 flow:

Average throughput: 922.87 Mbit/s

95th percentile per-packet one-way delay: 182.140 ms

Loss rate: 1.69%

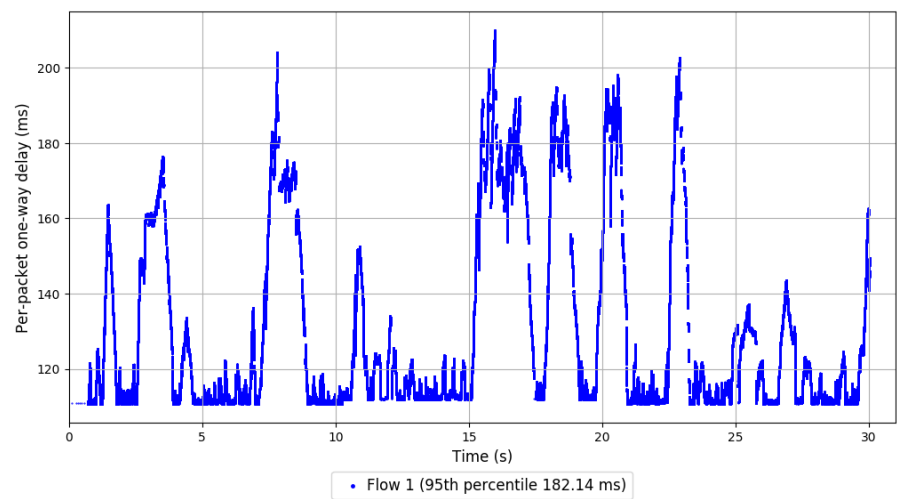
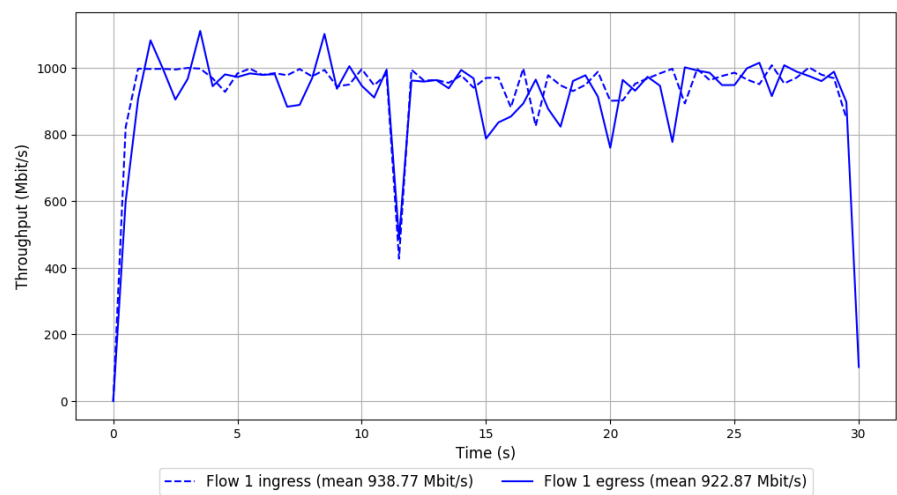
-- Flow 1:

Average throughput: 922.87 Mbit/s

95th percentile per-packet one-way delay: 182.140 ms

Loss rate: 1.69%

Run 6: Report of FillP — Data Link



Run 7: Statistics of FillP

Start at: 2017-12-19 22:33:35

End at: 2017-12-19 22:34:05

Below is generated by plot.py at 2017-12-20 01:01:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 935.34 Mbit/s

95th percentile per-packet one-way delay: 169.053 ms

Loss rate: 0.53%

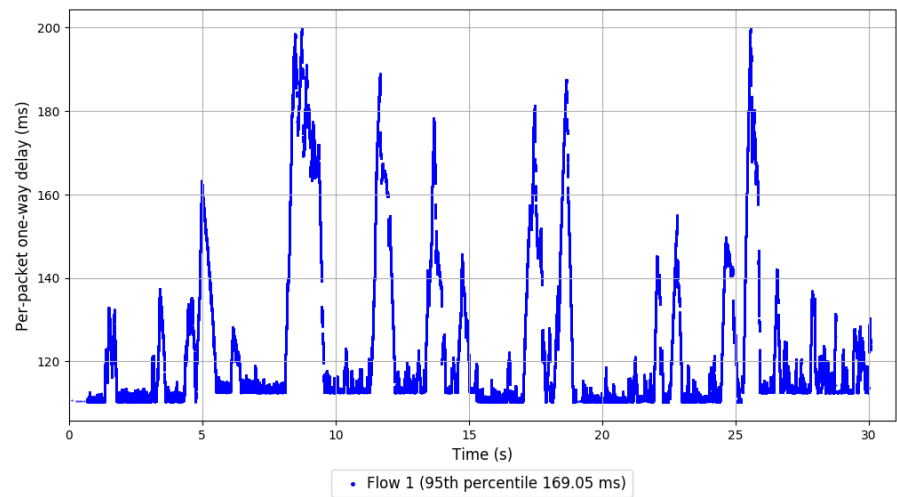
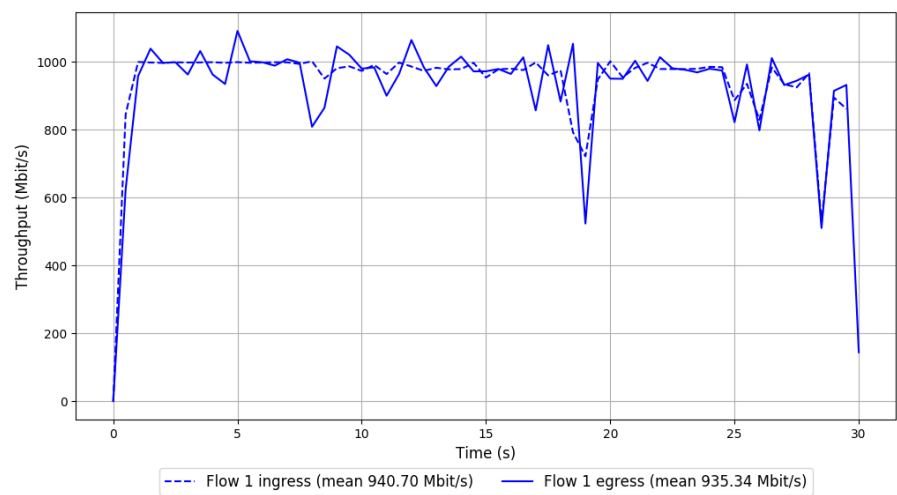
-- Flow 1:

Average throughput: 935.34 Mbit/s

95th percentile per-packet one-way delay: 169.053 ms

Loss rate: 0.53%

Run 7: Report of FillP — Data Link



Run 8: Statistics of FillP

Start at: 2017-12-19 22:46:17

End at: 2017-12-19 22:46:47

Below is generated by plot.py at 2017-12-20 01:01:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 914.98 Mbit/s

95th percentile per-packet one-way delay: 192.585 ms

Loss rate: 2.77%

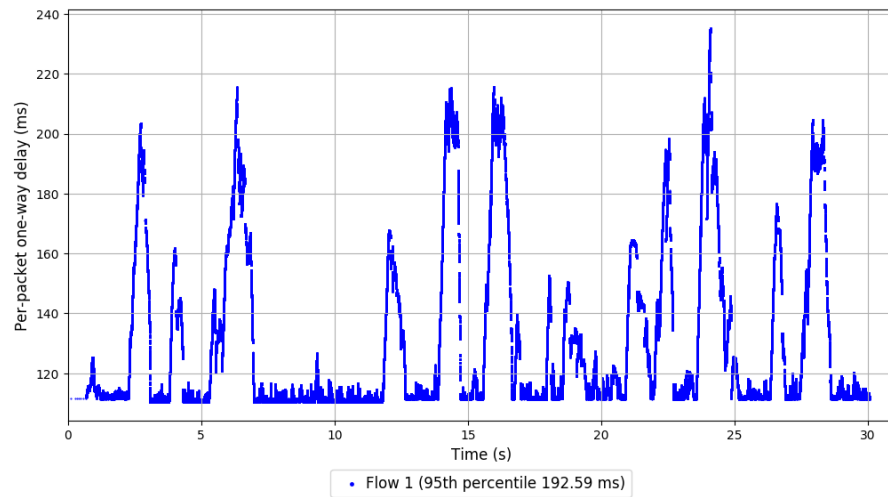
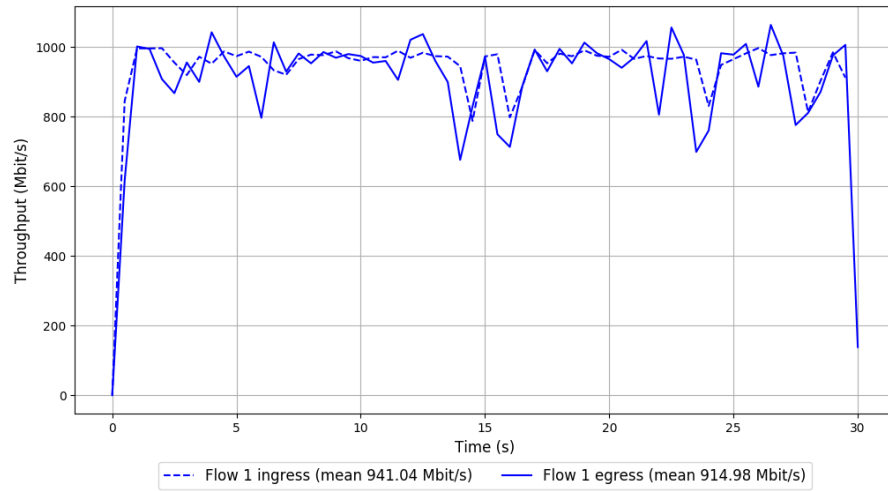
-- Flow 1:

Average throughput: 914.98 Mbit/s

95th percentile per-packet one-way delay: 192.585 ms

Loss rate: 2.77%

Run 8: Report of FillP — Data Link



Run 9: Statistics of FillP

Start at: 2017-12-19 22:58:22

End at: 2017-12-19 22:58:52

Below is generated by plot.py at 2017-12-20 01:04:48

Datalink statistics

-- Total of 1 flow:

Average throughput: 919.46 Mbit/s

95th percentile per-packet one-way delay: 194.309 ms

Loss rate: 3.14%

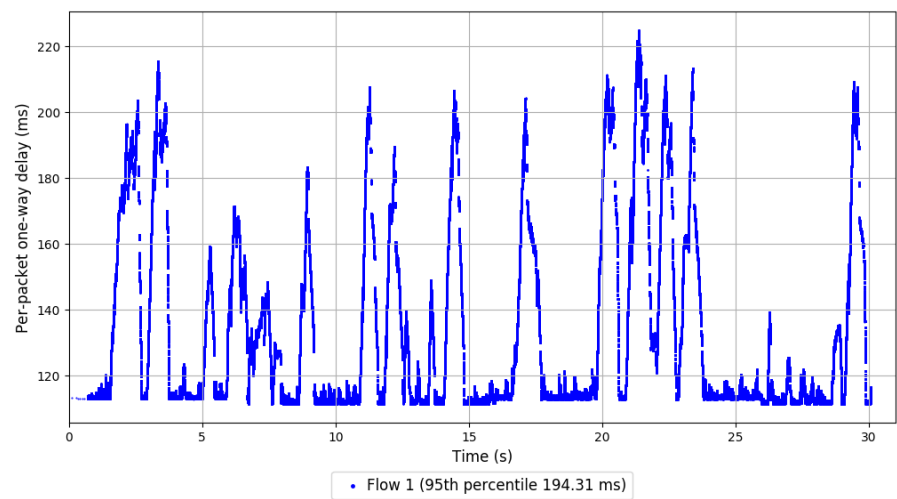
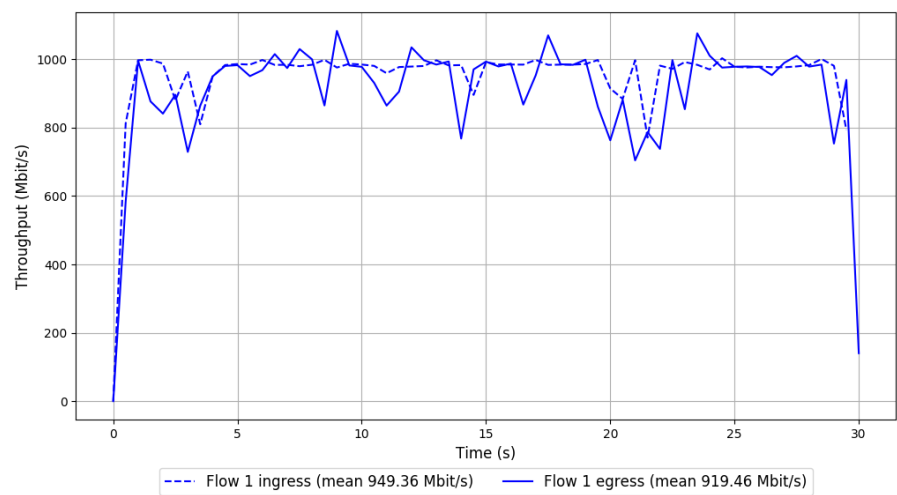
-- Flow 1:

Average throughput: 919.46 Mbit/s

95th percentile per-packet one-way delay: 194.309 ms

Loss rate: 3.14%

Run 9: Report of FillP — Data Link



Run 10: Statistics of FillP

Start at: 2017-12-19 23:10:32

End at: 2017-12-19 23:11:02

Below is generated by plot.py at 2017-12-20 01:04:48

Datalink statistics

-- Total of 1 flow:

Average throughput: 928.06 Mbit/s

95th percentile per-packet one-way delay: 180.337 ms

Loss rate: 1.51%

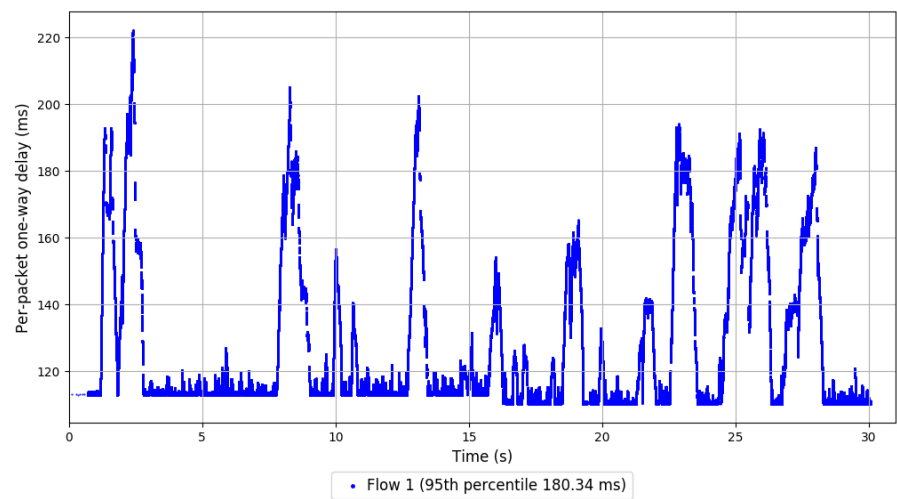
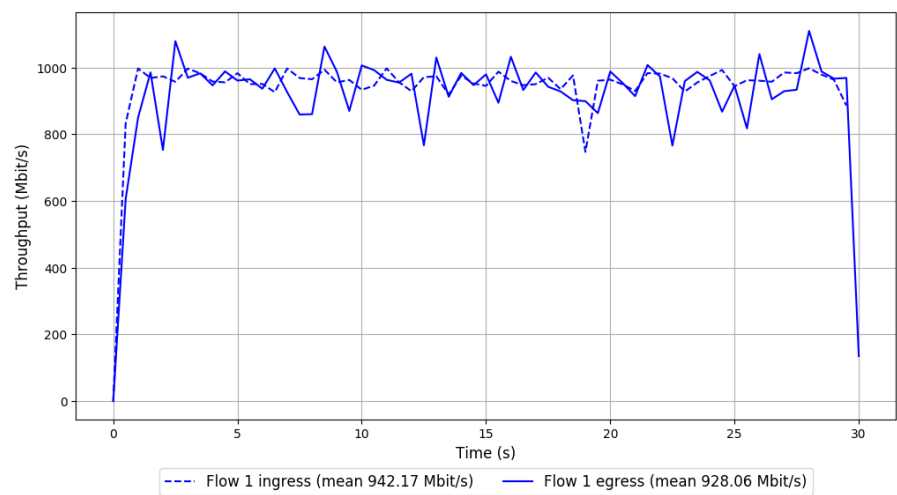
-- Flow 1:

Average throughput: 928.06 Mbit/s

95th percentile per-packet one-way delay: 180.337 ms

Loss rate: 1.51%

Run 10: Report of FillP — Data Link

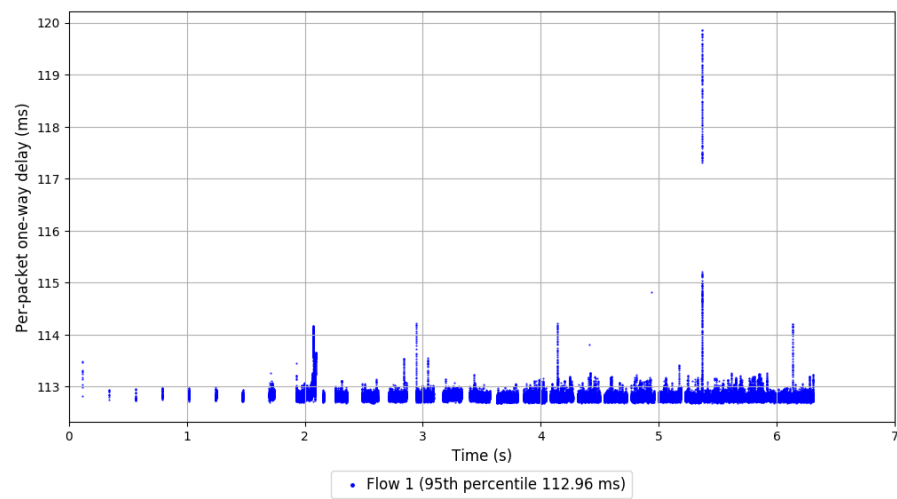
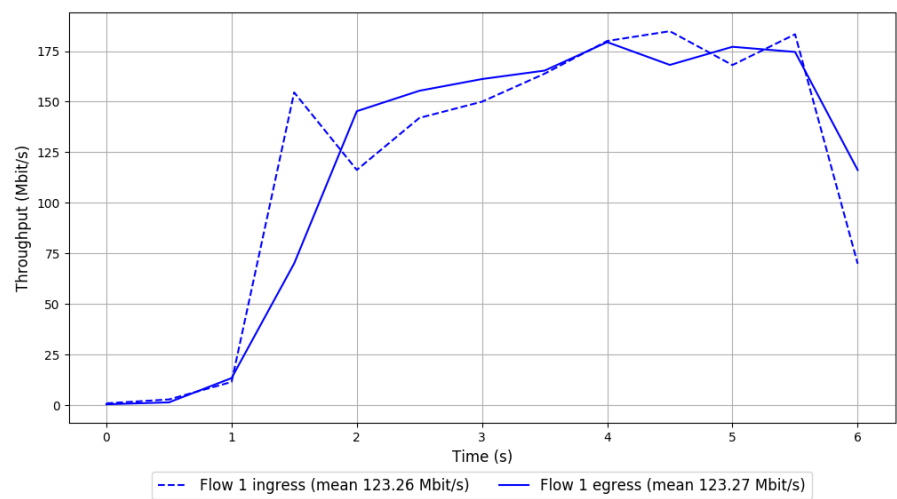


Run 1: Statistics of Indigo

Start at: 2017-12-19 21:27:31

End at: 2017-12-19 21:28:01

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2017-12-19 21:39:33

End at: 2017-12-19 21:40:03

Run 2: Report of Indigo — Data Link

Figure is missing

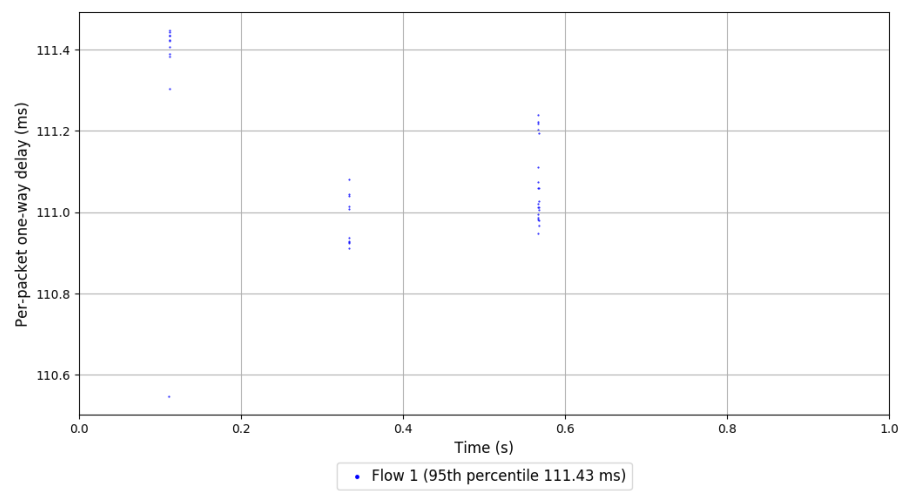
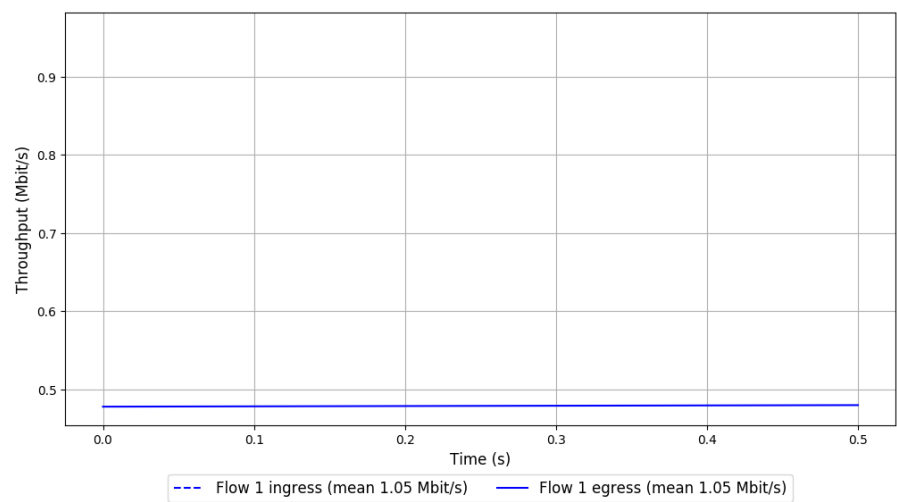
Figure is missing

Run 3: Statistics of Indigo

Start at: 2017-12-19 21:51:37

End at: 2017-12-19 21:52:07

Run 3: Report of Indigo — Data Link

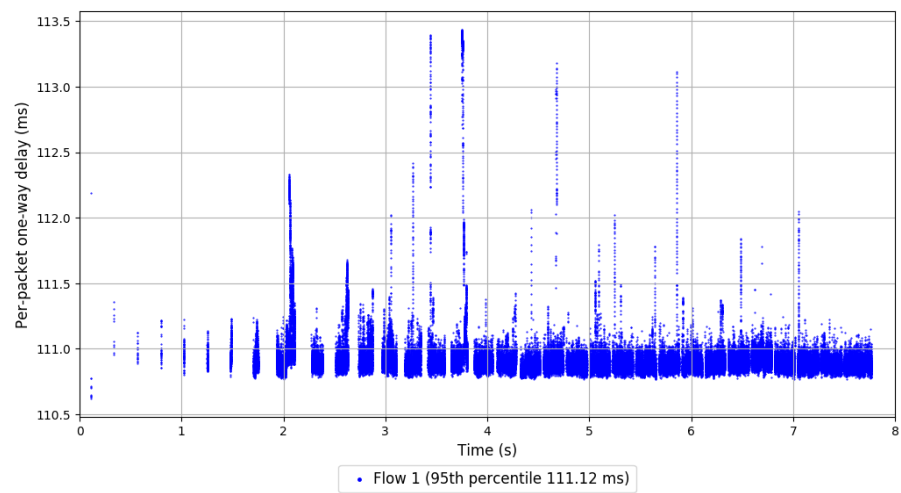
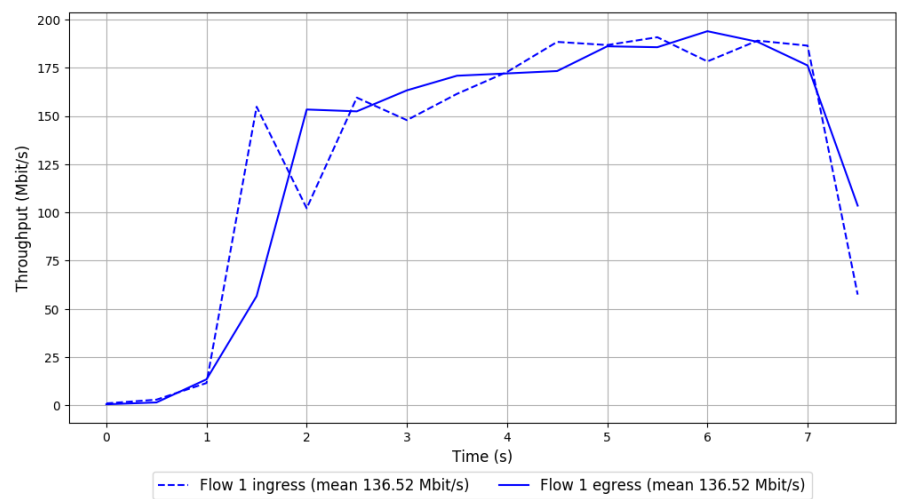


Run 4: Statistics of Indigo

Start at: 2017-12-19 22:03:57

End at: 2017-12-19 22:04:27

Run 4: Report of Indigo — Data Link

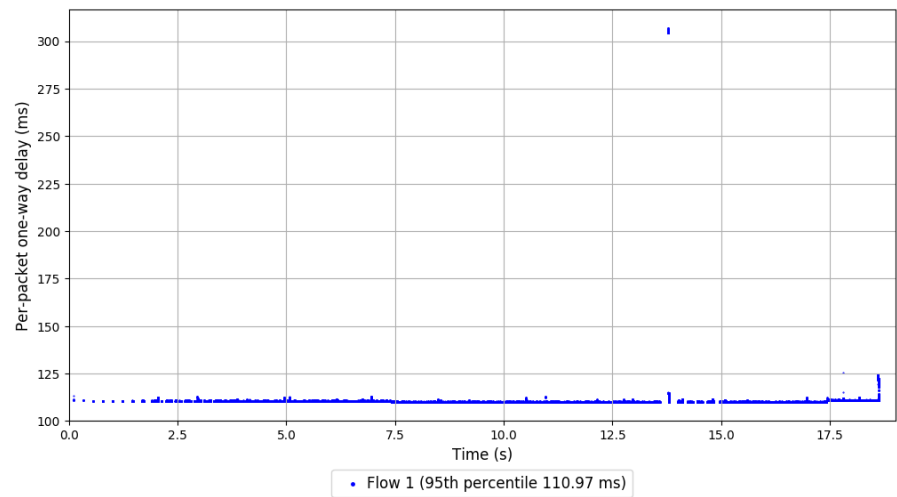
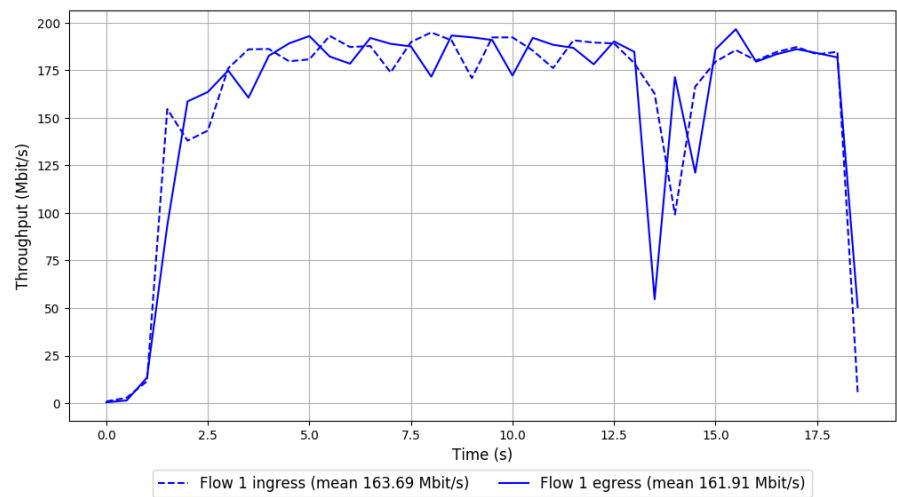


Run 5: Statistics of Indigo

Start at: 2017-12-19 22:16:11

End at: 2017-12-19 22:16:41

Run 5: Report of Indigo — Data Link



Run 6: Statistics of Indigo

Start at: 2017-12-19 22:28:50

End at: 2017-12-19 22:29:20

Below is generated by plot.py at 2017-12-20 01:04:48

Datalink statistics

-- Total of 1 flow:

Average throughput: 153.40 Mbit/s

95th percentile per-packet one-way delay: 111.002 ms

Loss rate: 0.00%

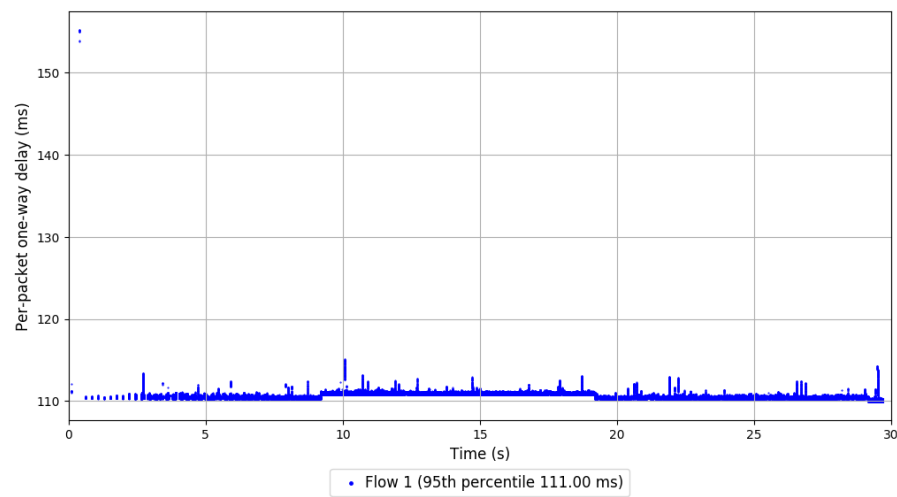
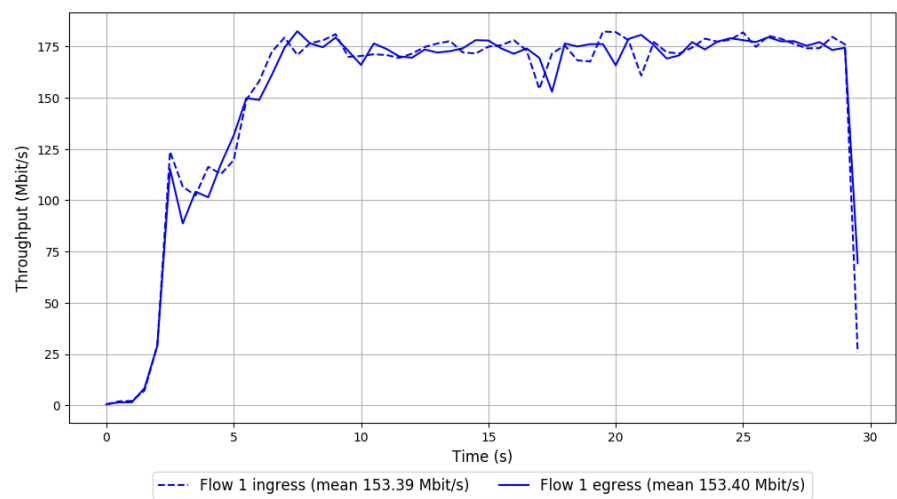
-- Flow 1:

Average throughput: 153.40 Mbit/s

95th percentile per-packet one-way delay: 111.002 ms

Loss rate: 0.00%

Run 6: Report of Indigo — Data Link

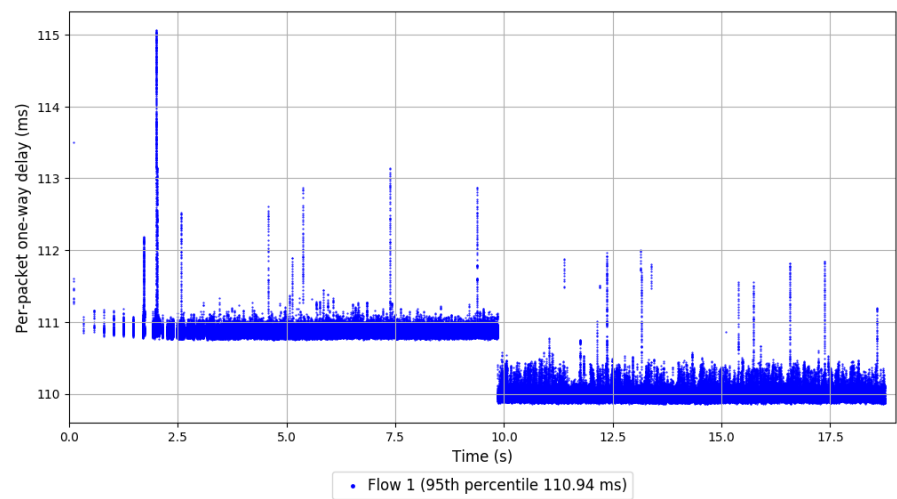
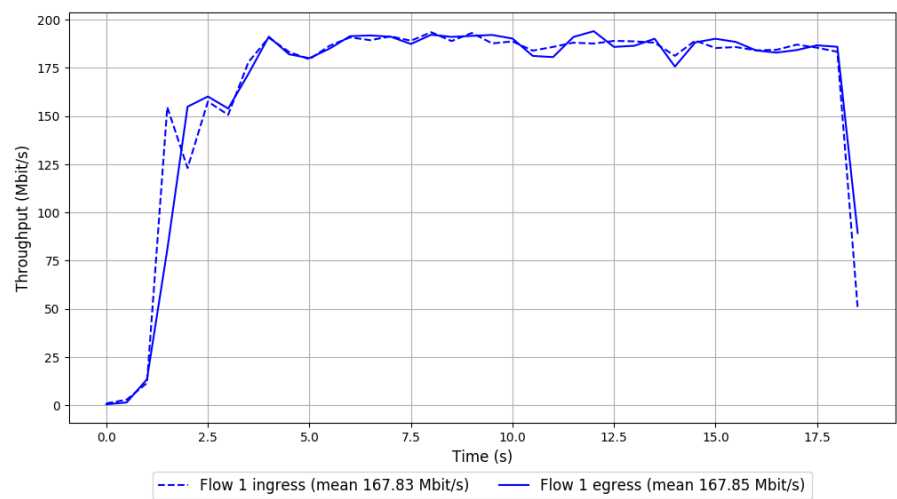


Run 7: Statistics of Indigo

Start at: 2017-12-19 22:41:19

End at: 2017-12-19 22:41:49

Run 7: Report of Indigo — Data Link

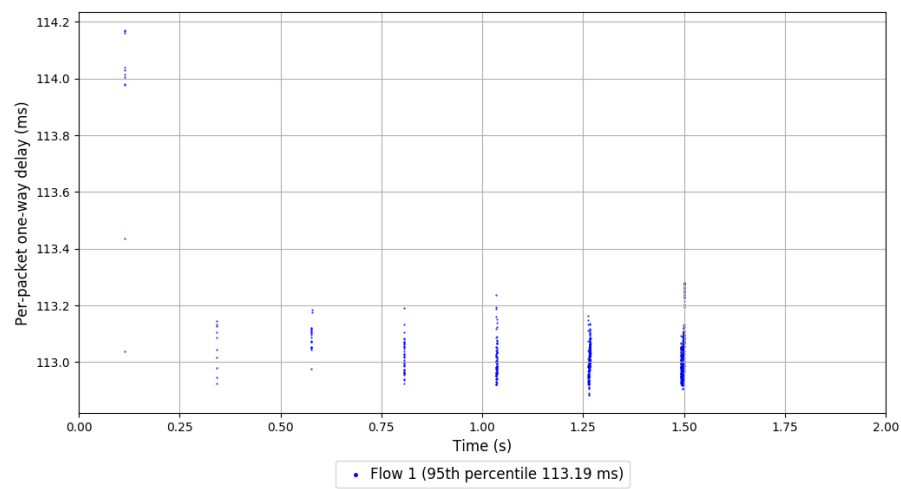
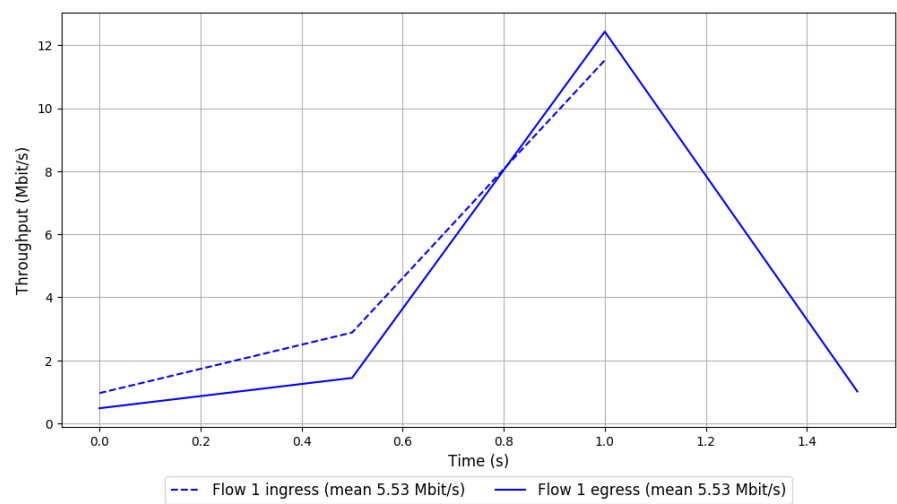


Run 8: Statistics of Indigo

Start at: 2017-12-19 22:53:54

End at: 2017-12-19 22:54:24

Run 8: Report of Indigo — Data Link

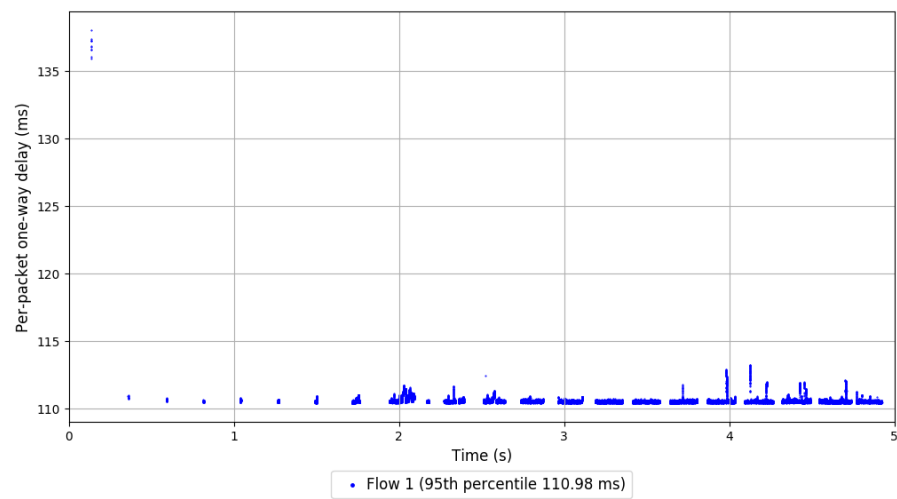
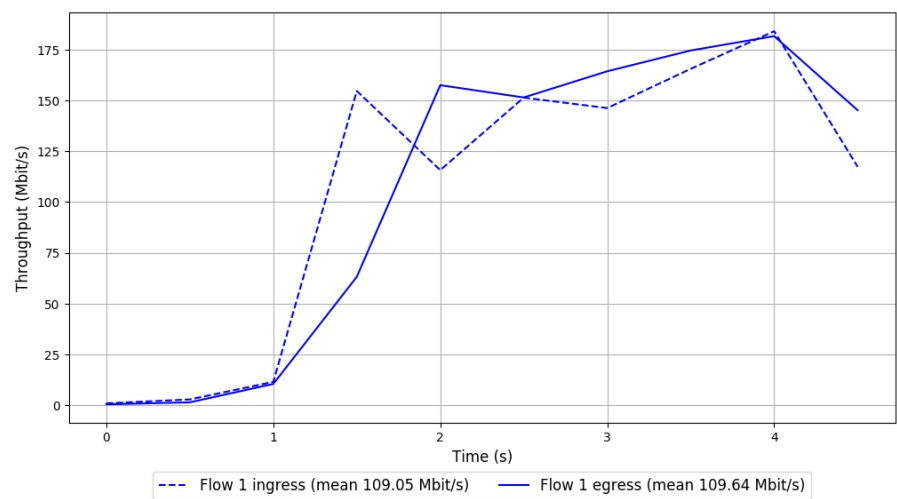


Run 9: Statistics of Indigo

Start at: 2017-12-19 23:06:00

End at: 2017-12-19 23:06:30

Run 9: Report of Indigo — Data Link



Run 10: Statistics of Indigo

Start at: 2017-12-19 23:18:09

End at: 2017-12-19 23:18:39

Run 10: Report of Indigo — Data Link

