

## Pantheon Report

Generated at 2018-01-02 02:46:48 (UTC).

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

Repeated the test of 14 congestion control schemes 10 times.

Each test lasted for 30 seconds running 1 flow.

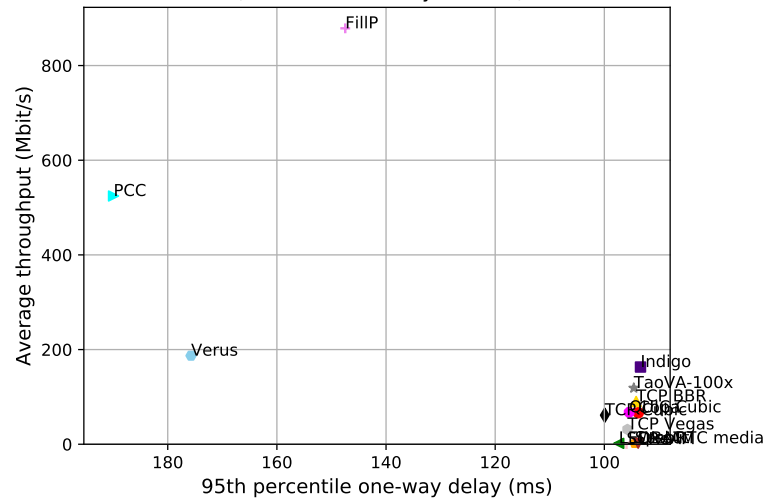
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

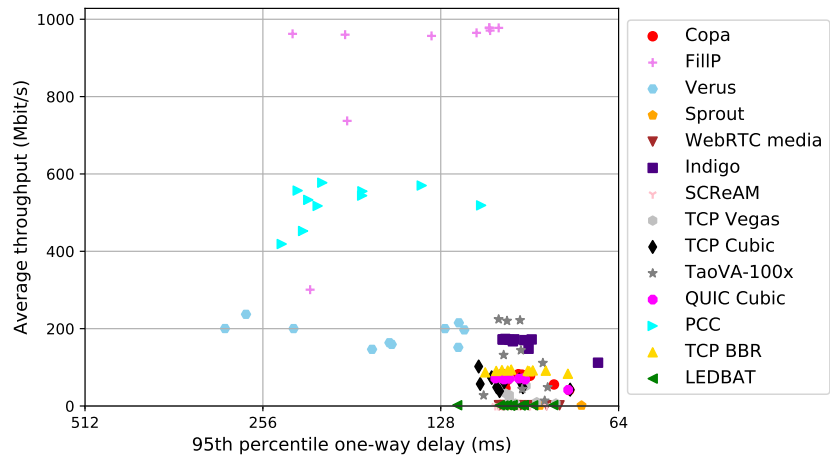
Git summary:

```
branch: 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 @ f1a14bffe749737437f61b1eaaeb30b267cde681
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 Tokyo Ethernet to GCE London Ethernet, 10 runs of 30s each per scheme  
(mean of all runs by scheme)



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



| scheme       | # runs | mean avg tput (Mbit/s)<br>flow 1 | mean 95th-%ile delay (ms)<br>flow 1 | mean loss rate (%)<br>flow 1 |
|--------------|--------|----------------------------------|-------------------------------------|------------------------------|
| TCP BBR      | 10     | 90.44                            | 94.17                               | 0.93                         |
| TCP Cubic    | 10     | 61.34                            | 99.92                               | 0.98                         |
| LEDBAT       | 10     | 1.85                             | 97.36                               | 1.35                         |
| PCC          | 10     | 524.41                           | 189.93                              | 3.50                         |
| QUIC Cubic   | 9      | 67.37                            | 95.46                               | 0.99                         |
| SCReAM       | 9      | 0.22                             | 95.94                               | 0.70                         |
| WebRTC media | 10     | 2.13                             | 93.80                               | 0.92                         |
| Sprout       | 10     | 2.29                             | 94.40                               | 1.85                         |
| TaoVA-100x   | 10     | 118.76                           | 94.61                               | 1.38                         |
| TCP Vegas    | 10     | 31.25                            | 95.77                               | 1.38                         |
| Verus        | 10     | 187.07                           | 175.73                              | 3.08                         |
| Copa         | 10     | 66.54                            | 93.77                               | 0.53                         |
| FillP        | 10     | 878.63                           | 147.48                              | 2.75                         |
| Indigo       | 10     | 163.10                           | 93.37                               | 0.89                         |

Run 1: Statistics of TCP BBR

Start at: 2018-01-01 21:36:45

End at: 2018-01-01 21:37:15

# Below is generated by plot.py at 2018-01-02 01:47:22

# Datalink statistics

-- Total of 1 flow:

Average throughput: 87.05 Mbit/s

95th percentile per-packet one-way delay: 107.622 ms

Loss rate: 1.46%

-- Flow 1:

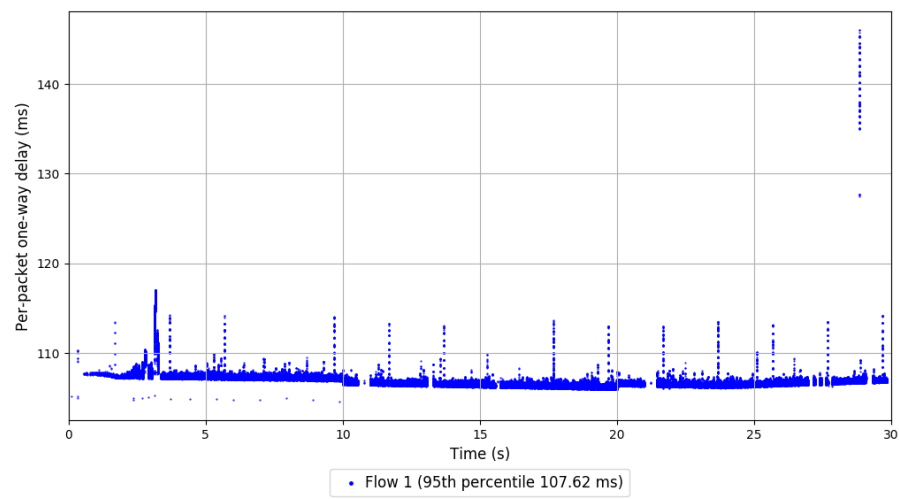
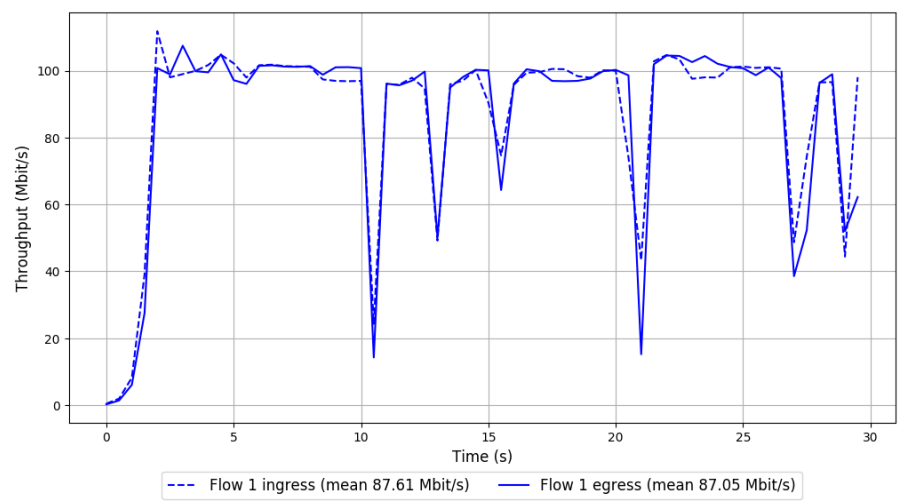
Average throughput: 87.05 Mbit/s

95th percentile per-packet one-way delay: 107.622 ms

Loss rate: 1.46%



Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-01-01 21:49:04

End at: 2018-01-01 21:49:34

# Below is generated by plot.py at 2018-01-02 01:47:22

# Datalink statistics

-- Total of 1 flow:

Average throughput: 83.44 Mbit/s

95th percentile per-packet one-way delay: 77.992 ms

Loss rate: 1.19%

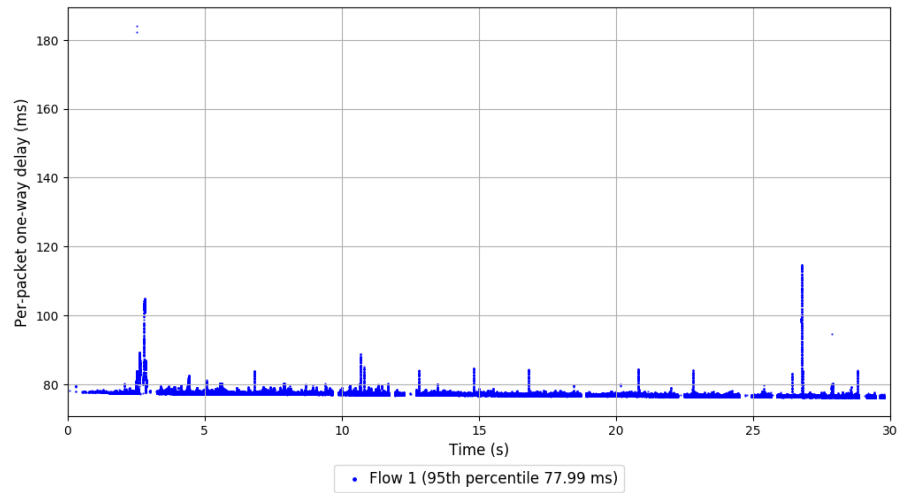
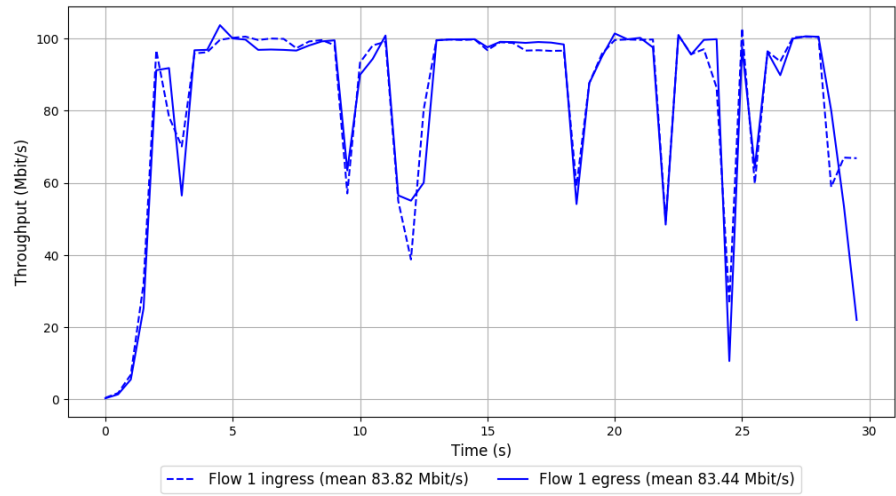
-- Flow 1:

Average throughput: 83.44 Mbit/s

95th percentile per-packet one-way delay: 77.992 ms

Loss rate: 1.19%

## Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-01-01 22:01:20

End at: 2018-01-01 22:01:50

# Below is generated by plot.py at 2018-01-02 01:47:26

# Datalink statistics

-- Total of 1 flow:

Average throughput: 91.36 Mbit/s

95th percentile per-packet one-way delay: 85.005 ms

Loss rate: 0.83%

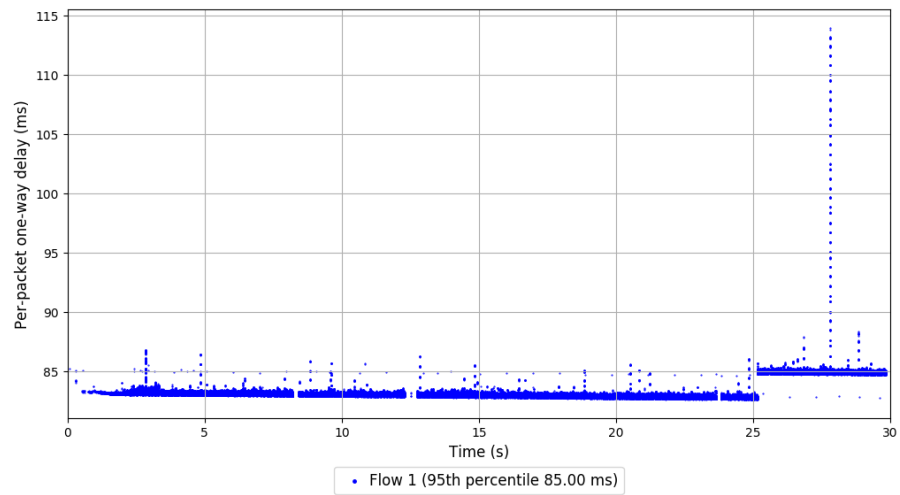
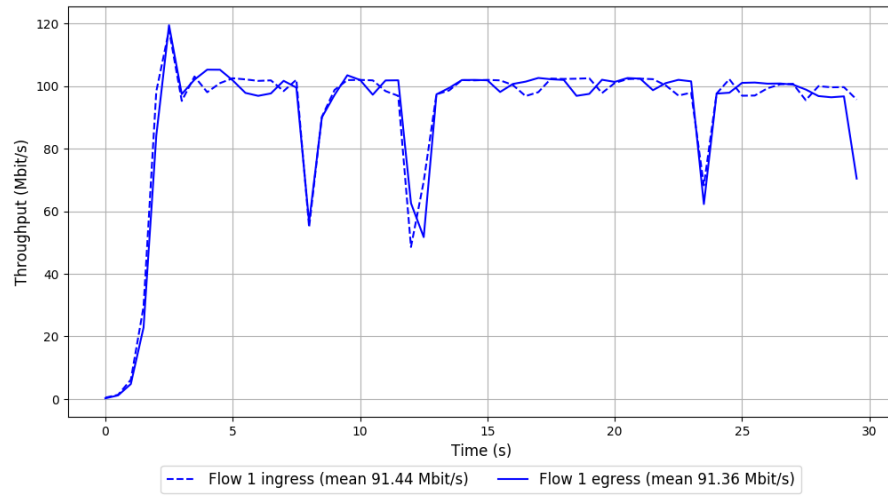
-- Flow 1:

Average throughput: 91.36 Mbit/s

95th percentile per-packet one-way delay: 85.005 ms

Loss rate: 0.83%

### Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-01-01 22:13:51

End at: 2018-01-01 22:14:21

# Below is generated by plot.py at 2018-01-02 01:47:27

# Datalink statistics

-- Total of 1 flow:

Average throughput: 92.11 Mbit/s

95th percentile per-packet one-way delay: 89.432 ms

Loss rate: 0.84%

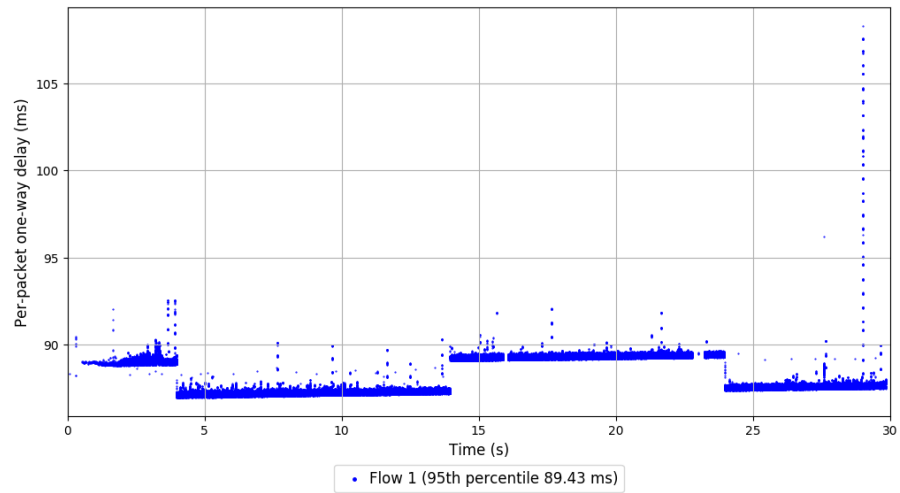
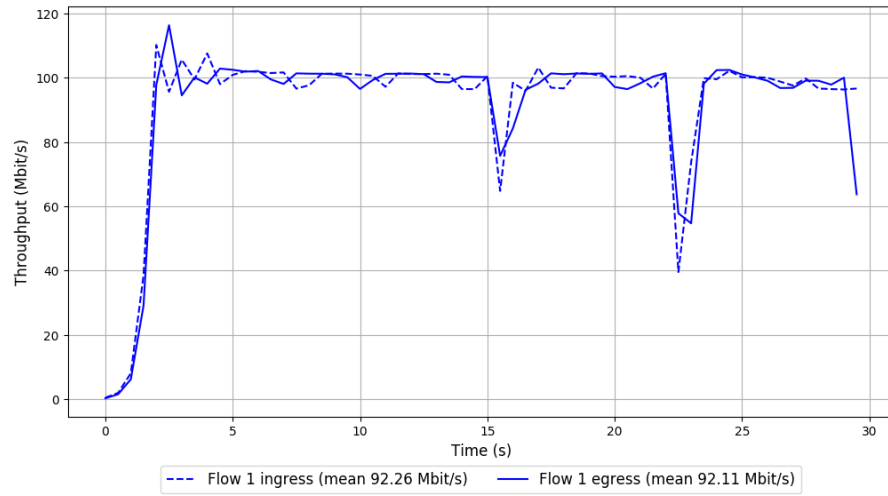
-- Flow 1:

Average throughput: 92.11 Mbit/s

95th percentile per-packet one-way delay: 89.432 ms

Loss rate: 0.84%

#### Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-01-01 22:26:31

End at: 2018-01-01 22:27:01

# Below is generated by plot.py at 2018-01-02 01:47:27

# Datalink statistics

-- Total of 1 flow:

Average throughput: 90.74 Mbit/s

95th percentile per-packet one-way delay: 103.112 ms

Loss rate: 0.87%

-- Flow 1:

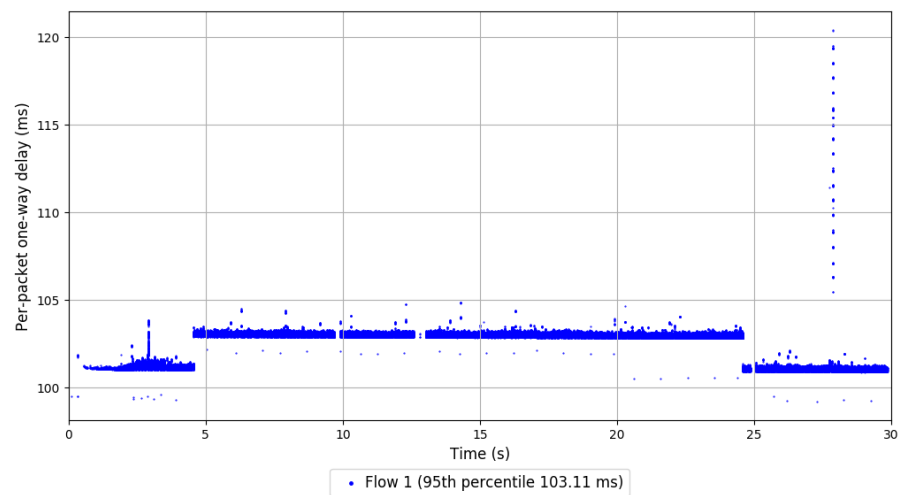
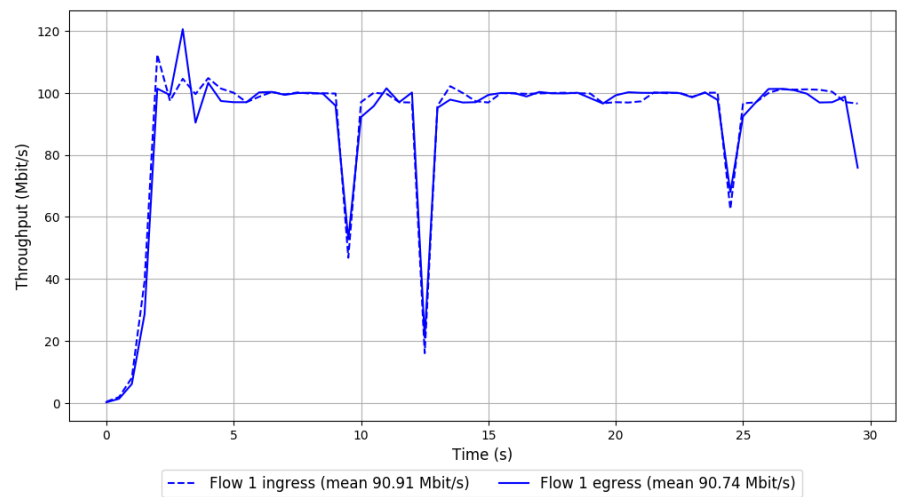
Average throughput: 90.74 Mbit/s

95th percentile per-packet one-way delay: 103.112 ms

Loss rate: 0.87%



Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2018-01-01 22:39:06

End at: 2018-01-01 22:39:36

# Below is generated by plot.py at 2018-01-02 01:47:30

# Datalink statistics

-- Total of 1 flow:

Average throughput: 94.15 Mbit/s

95th percentile per-packet one-way delay: 97.267 ms

Loss rate: 0.77%

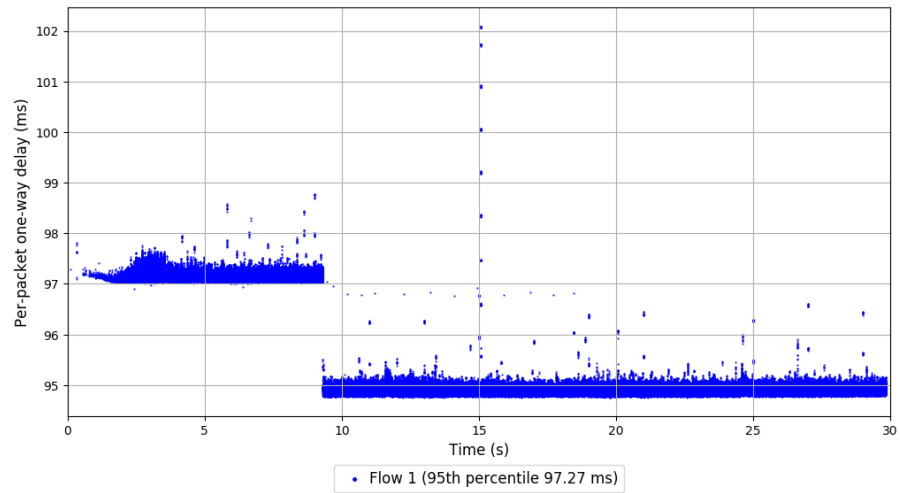
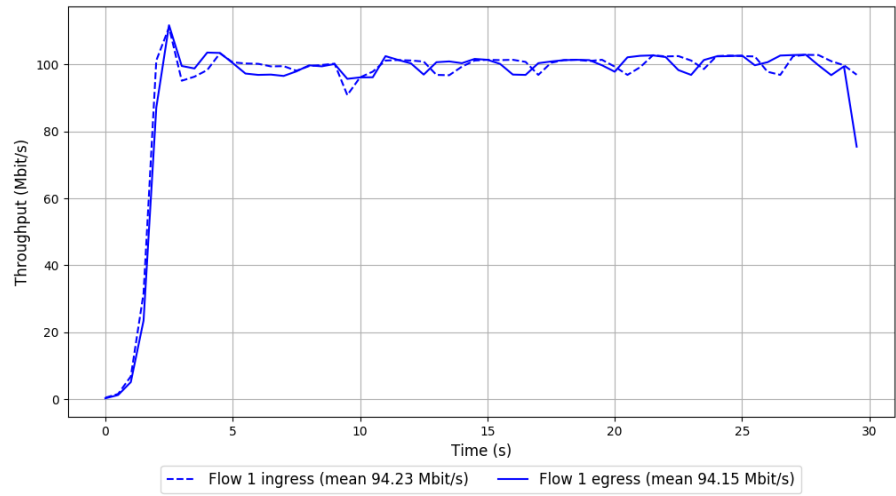
-- Flow 1:

Average throughput: 94.15 Mbit/s

95th percentile per-packet one-way delay: 97.267 ms

Loss rate: 0.77%

## Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2018-01-01 22:51:32

End at: 2018-01-01 22:52:02

# Below is generated by plot.py at 2018-01-02 01:47:30

# Datalink statistics

-- Total of 1 flow:

Average throughput: 91.25 Mbit/s

95th percentile per-packet one-way delay: 91.204 ms

Loss rate: 0.79%

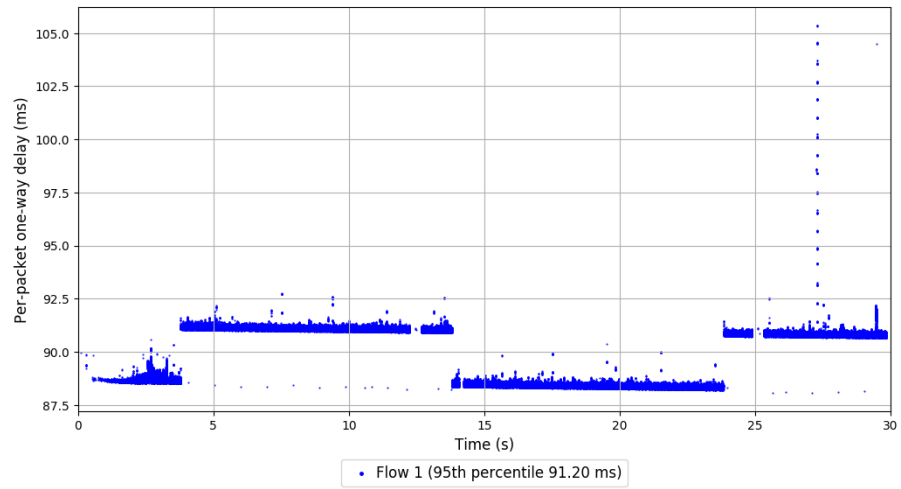
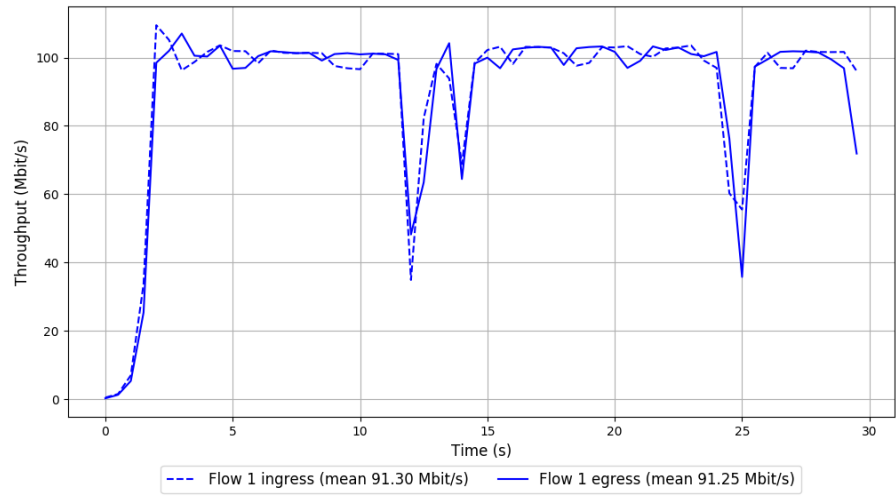
-- Flow 1:

Average throughput: 91.25 Mbit/s

95th percentile per-packet one-way delay: 91.204 ms

Loss rate: 0.79%

## Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2018-01-01 23:03:49

End at: 2018-01-01 23:04:19

# Below is generated by plot.py at 2018-01-02 01:47:30

# Datalink statistics

-- Total of 1 flow:

Average throughput: 89.78 Mbit/s

95th percentile per-packet one-way delay: 90.610 ms

Loss rate: 1.00%

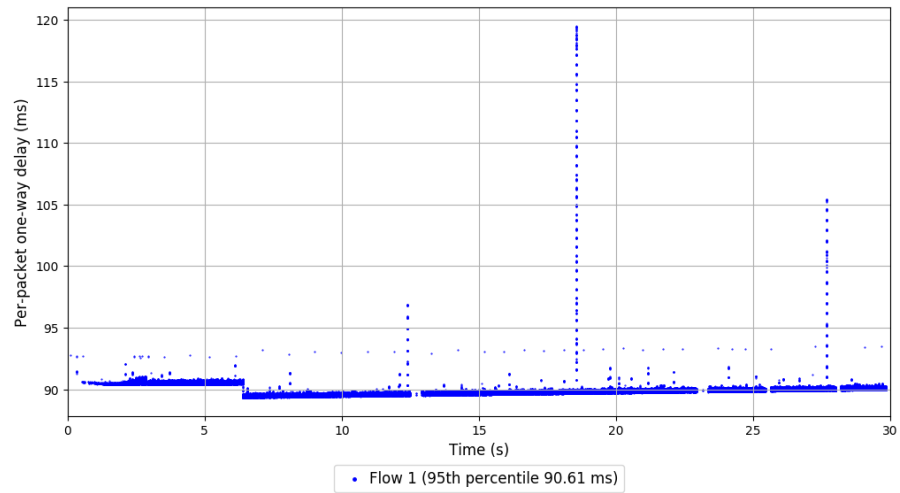
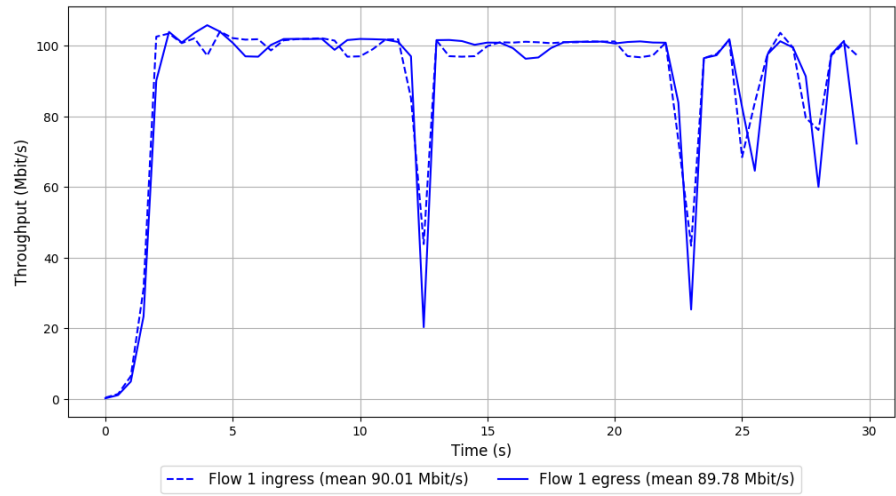
-- Flow 1:

Average throughput: 89.78 Mbit/s

95th percentile per-packet one-way delay: 90.610 ms

Loss rate: 1.00%

# Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2018-01-01 23:16:25

End at: 2018-01-01 23:16:55

# Below is generated by plot.py at 2018-01-02 01:48:52

# Datalink statistics

-- Total of 1 flow:

Average throughput: 91.75 Mbit/s

95th percentile per-packet one-way delay: 98.612 ms

Loss rate: 0.79%

-- Flow 1:

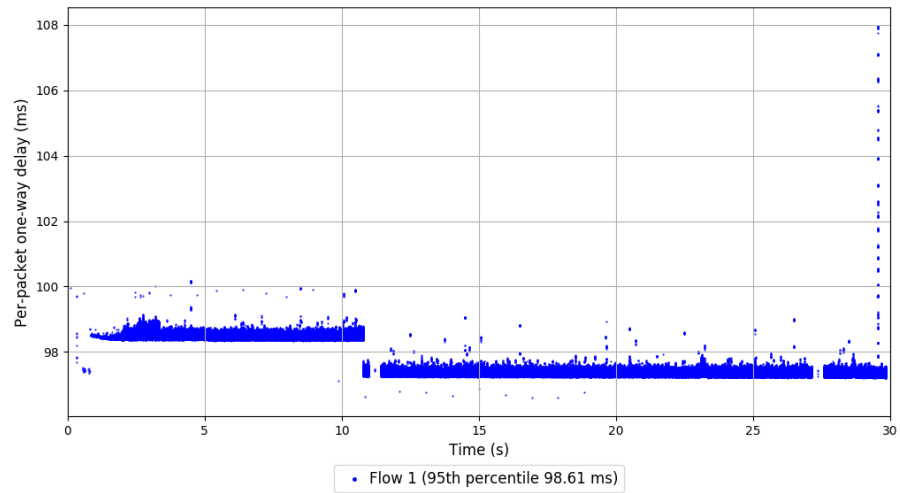
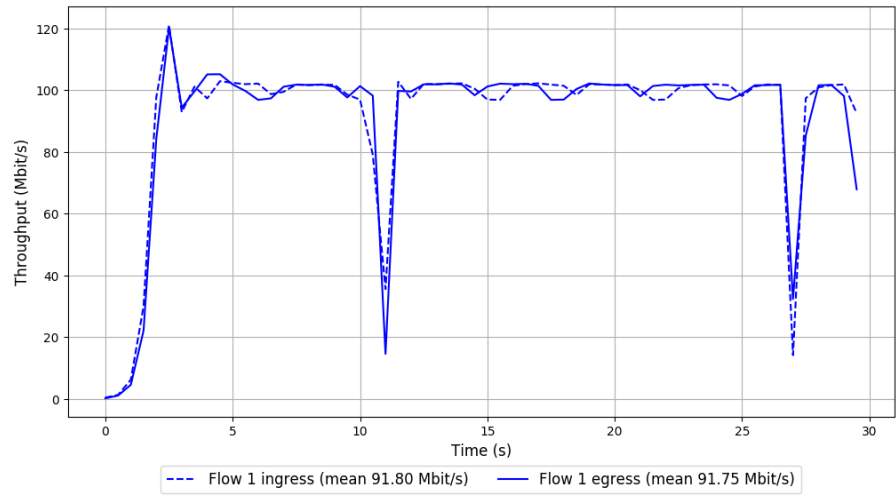
Average throughput: 91.75 Mbit/s

95th percentile per-packet one-way delay: 98.612 ms

Loss rate: 0.79%



### Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2018-01-01 23:28:55

End at: 2018-01-01 23:29:25

# Below is generated by plot.py at 2018-01-02 01:48:55

# Datalink statistics

-- Total of 1 flow:

Average throughput: 92.80 Mbit/s

95th percentile per-packet one-way delay: 100.842 ms

Loss rate: 0.78%

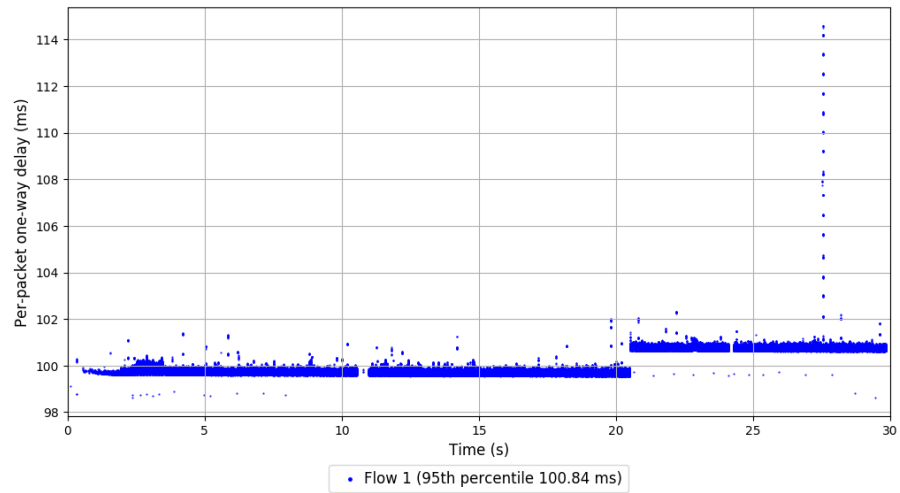
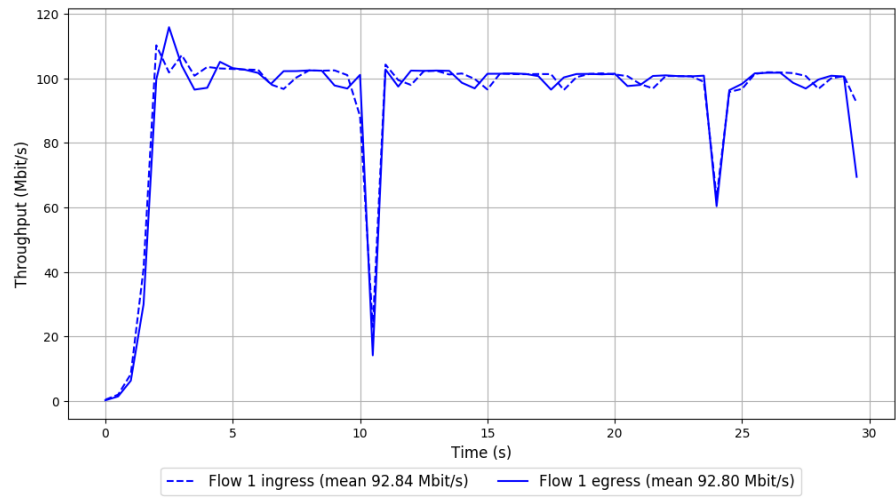
-- Flow 1:

Average throughput: 92.80 Mbit/s

95th percentile per-packet one-way delay: 100.842 ms

Loss rate: 0.78%

# Run 10: Report of TCP BBR — Data Link

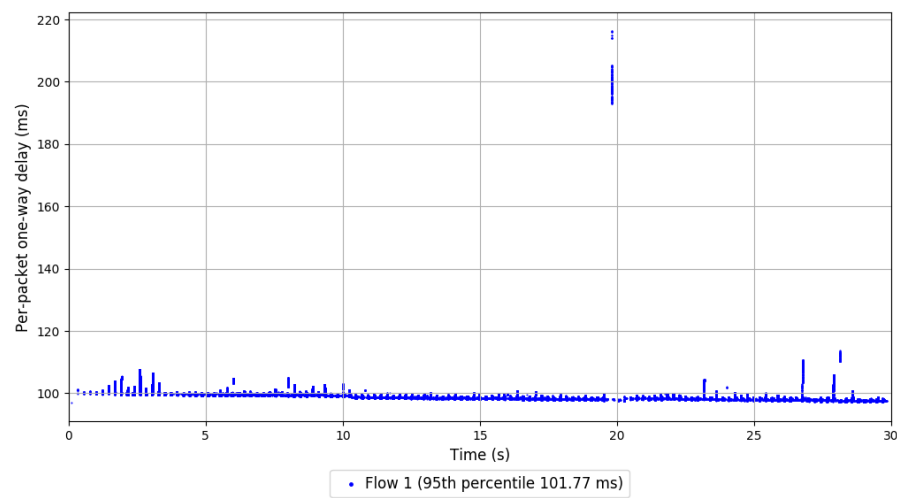
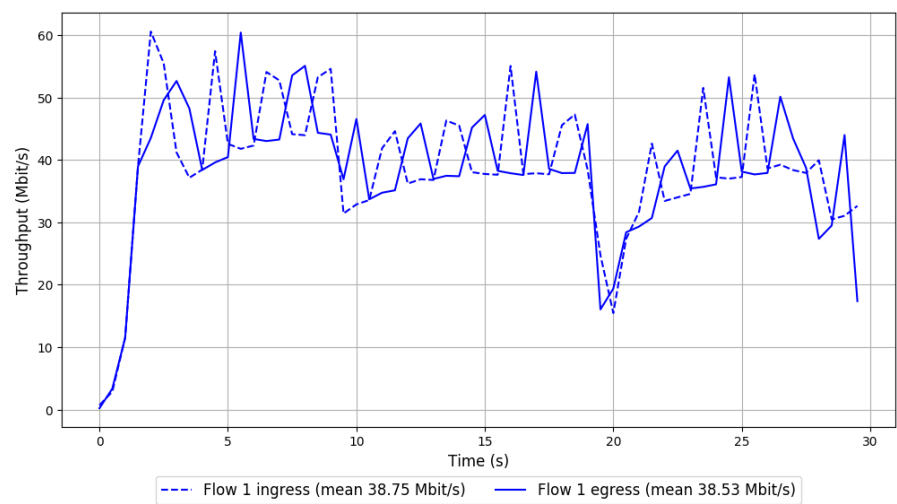


```
Run 1: Statistics of TCP Cubic

Start at: 2018-01-01 21:39:15
End at: 2018-01-01 21:39:45

# Below is generated by plot.py at 2018-01-02 01:48:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 38.53 Mbit/s
95th percentile per-packet one-way delay: 101.773 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 38.53 Mbit/s
95th percentile per-packet one-way delay: 101.773 ms
Loss rate: 1.32%
```

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-01-01 21:51:34

End at: 2018-01-01 21:52:04

# Below is generated by plot.py at 2018-01-02 01:48:55

# Datalink statistics

-- Total of 1 flow:

Average throughput: 42.27 Mbit/s

95th percentile per-packet one-way delay: 77.294 ms

Loss rate: 0.66%

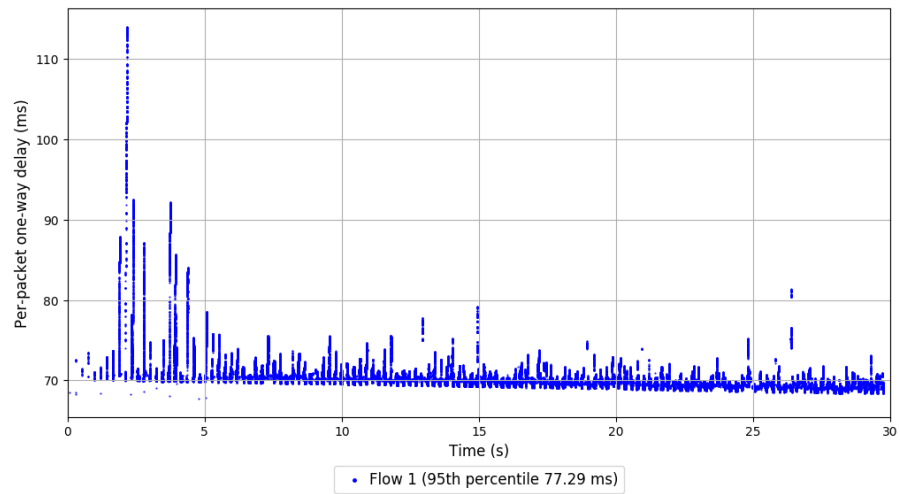
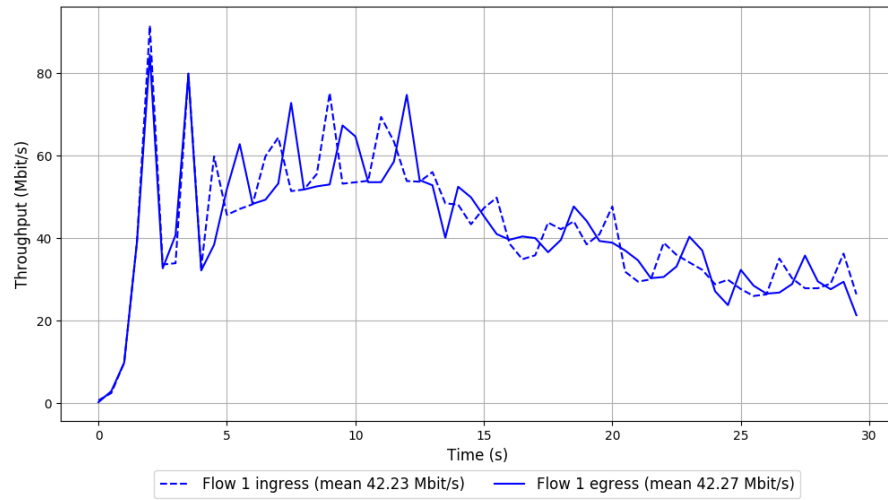
-- Flow 1:

Average throughput: 42.27 Mbit/s

95th percentile per-packet one-way delay: 77.294 ms

Loss rate: 0.66%

## Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-01-01 22:03:49

End at: 2018-01-01 22:04:19

# Below is generated by plot.py at 2018-01-02 01:48:55

# Datalink statistics

-- Total of 1 flow:

Average throughput: 68.39 Mbit/s

95th percentile per-packet one-way delay: 94.243 ms

Loss rate: 0.62%

-- Flow 1:

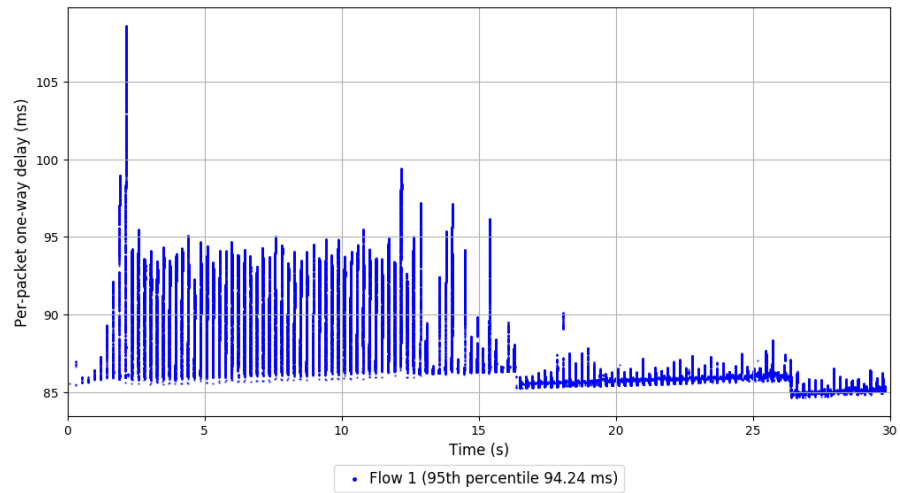
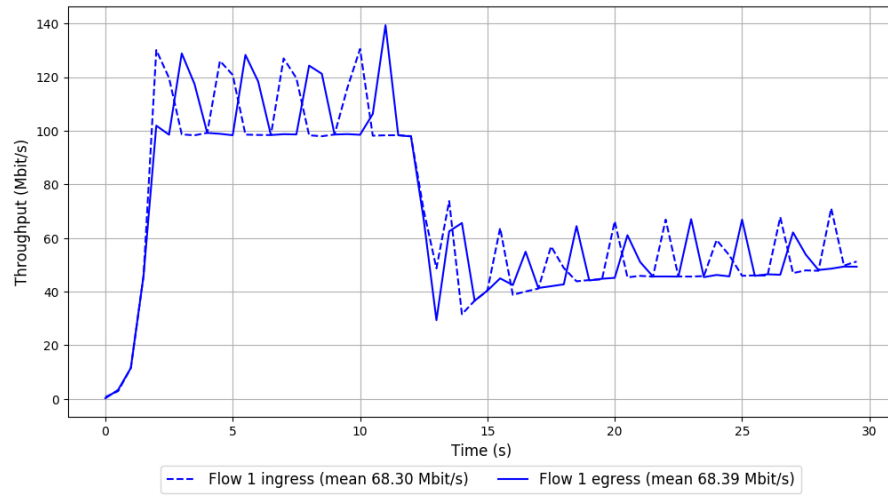
Average throughput: 68.39 Mbit/s

95th percentile per-packet one-way delay: 94.243 ms

Loss rate: 0.62%



### Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-01-01 22:16:21

End at: 2018-01-01 22:16:51

# Below is generated by plot.py at 2018-01-02 01:48:55

# Datalink statistics

-- Total of 1 flow:

Average throughput: 61.57 Mbit/s

95th percentile per-packet one-way delay: 99.966 ms

Loss rate: 0.33%

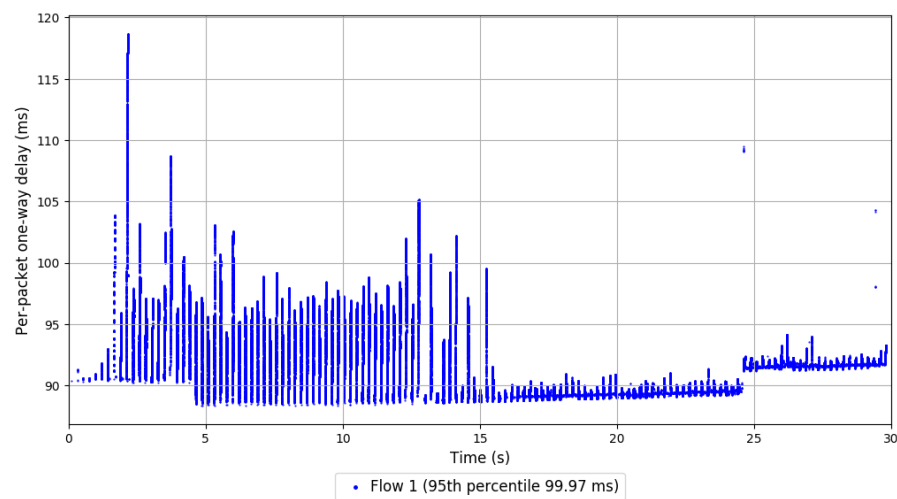
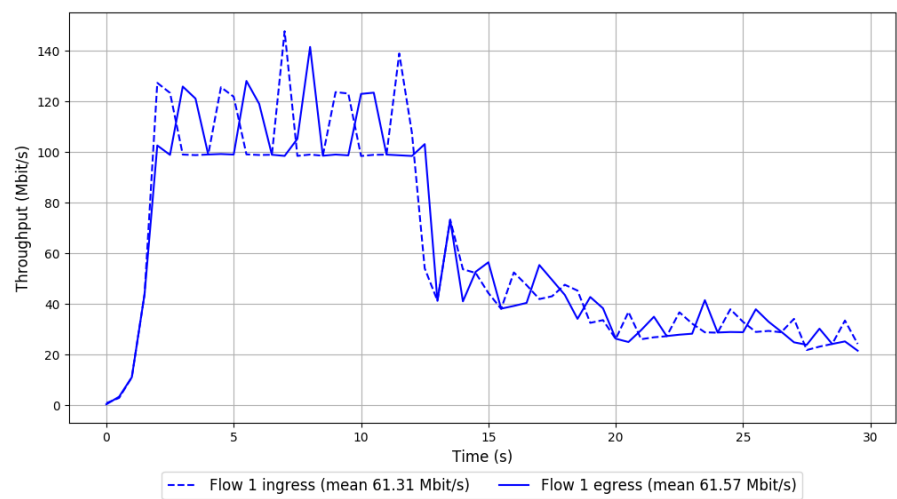
-- Flow 1:

Average throughput: 61.57 Mbit/s

95th percentile per-packet one-way delay: 99.966 ms

Loss rate: 0.33%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-01-01 22:29:00

End at: 2018-01-01 22:29:30

# Below is generated by plot.py at 2018-01-02 01:48:55

# Datalink statistics

-- Total of 1 flow:

Average throughput: 56.95 Mbit/s

95th percentile per-packet one-way delay: 109.738 ms

Loss rate: 0.88%

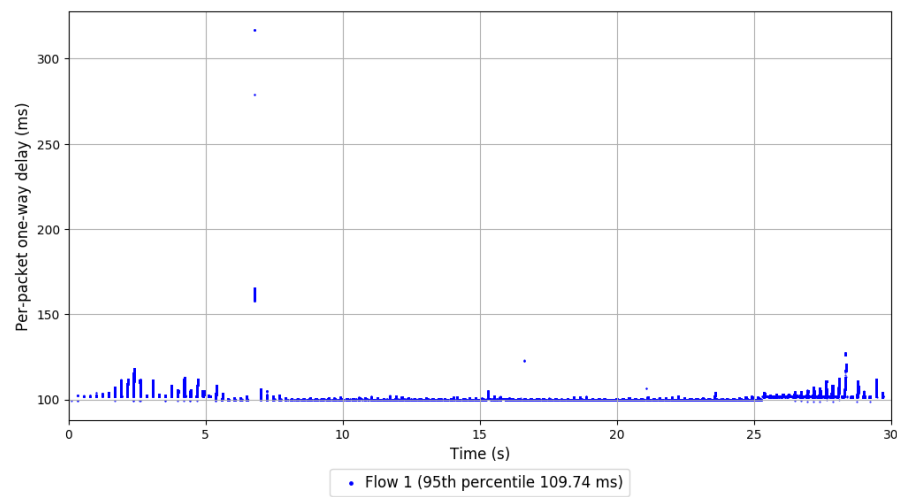
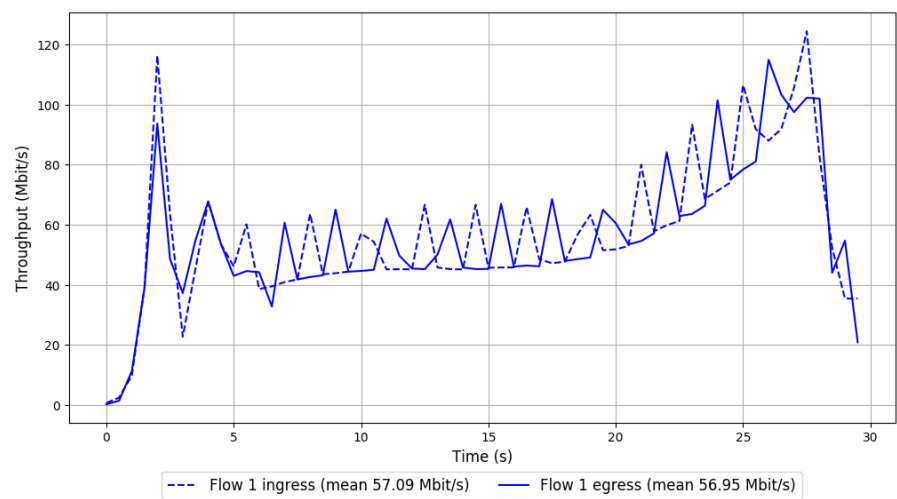
-- Flow 1:

Average throughput: 56.95 Mbit/s

95th percentile per-packet one-way delay: 109.738 ms

Loss rate: 0.88%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2018-01-01 22:41:36

End at: 2018-01-01 22:42:06

# Below is generated by plot.py at 2018-01-02 01:48:55

# Datalink statistics

-- Total of 1 flow:

Average throughput: 72.47 Mbit/s

95th percentile per-packet one-way delay: 104.941 ms

Loss rate: 0.94%

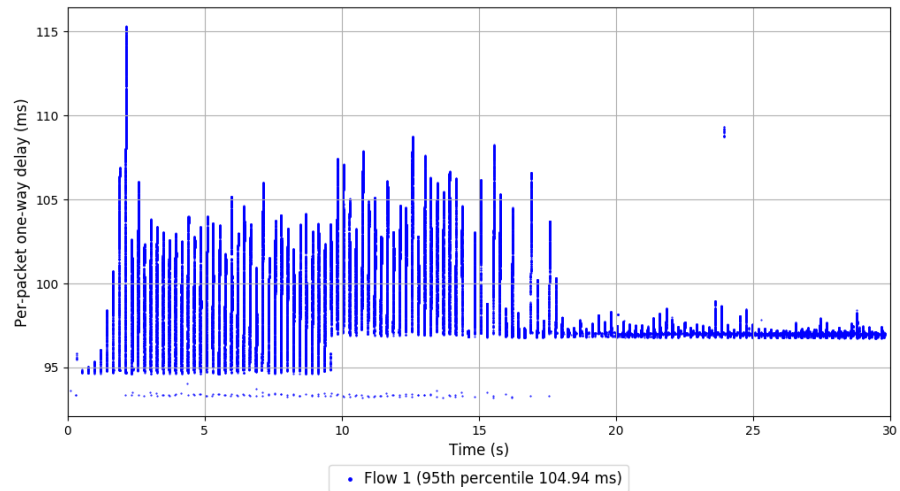
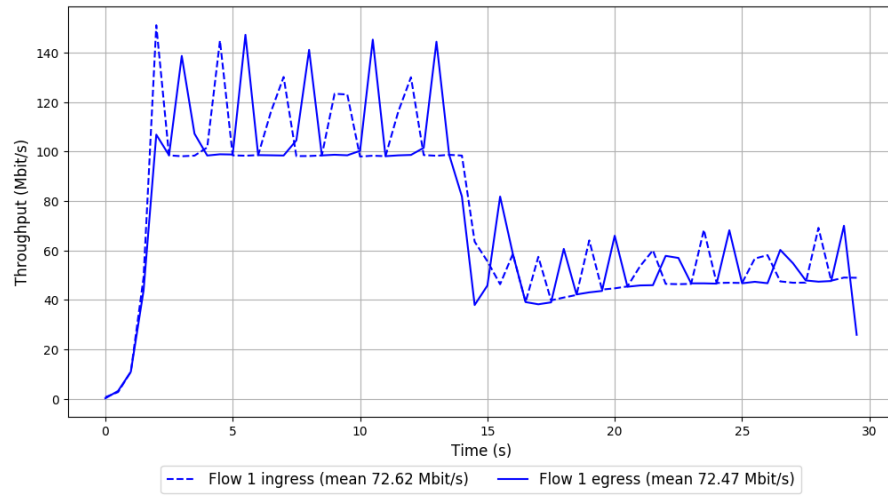
-- Flow 1:

Average throughput: 72.47 Mbit/s

95th percentile per-packet one-way delay: 104.941 ms

Loss rate: 0.94%

## Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2018-01-01 22:54:02

End at: 2018-01-01 22:54:32

# Below is generated by plot.py at 2018-01-02 01:48:55

# Datalink statistics

-- Total of 1 flow:

Average throughput: 48.51 Mbit/s

95th percentile per-packet one-way delay: 92.941 ms

Loss rate: 2.08%

-- Flow 1:

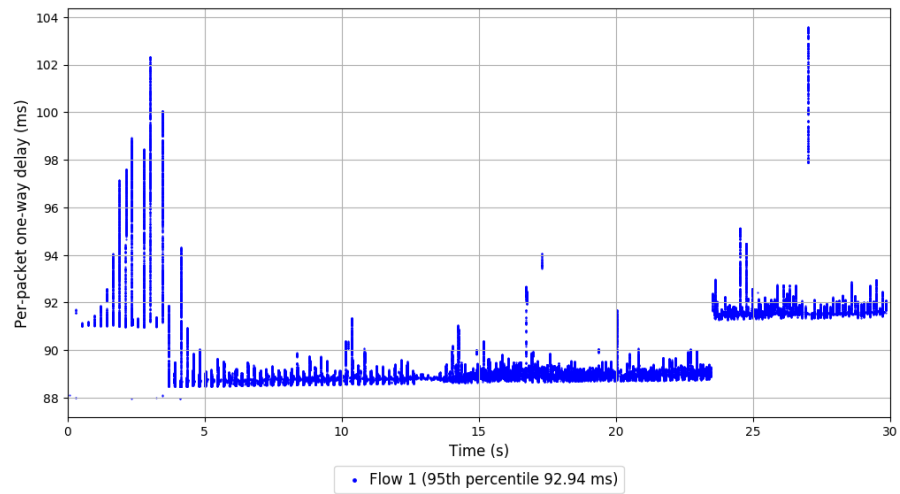
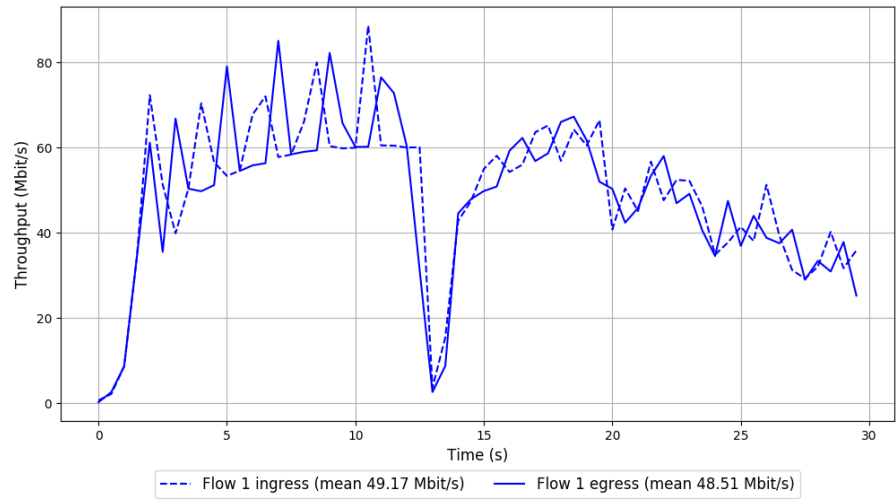
Average throughput: 48.51 Mbit/s

95th percentile per-packet one-way delay: 92.941 ms

Loss rate: 2.08%



## Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2018-01-01 23:06:18

End at: 2018-01-01 23:06:48

# Below is generated by plot.py at 2018-01-02 01:49:22

# Datalink statistics

-- Total of 1 flow:

Average throughput: 74.14 Mbit/s

95th percentile per-packet one-way delay: 104.975 ms

Loss rate: 1.07%

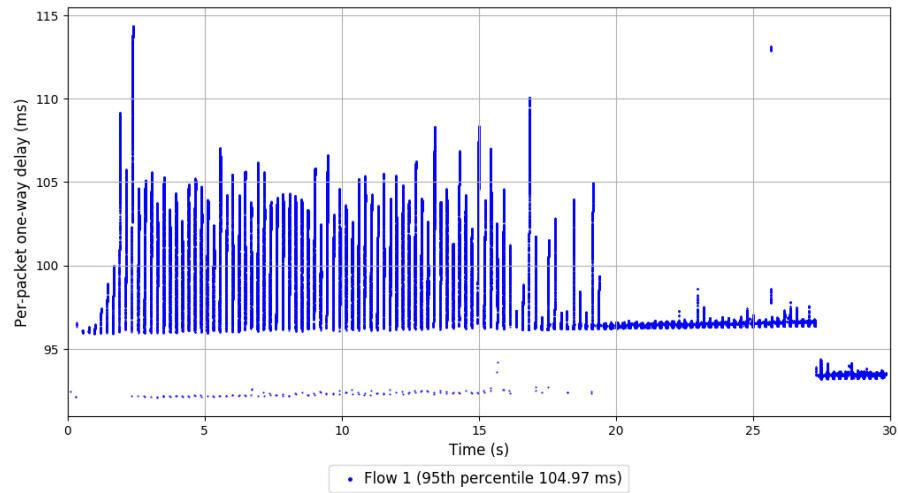
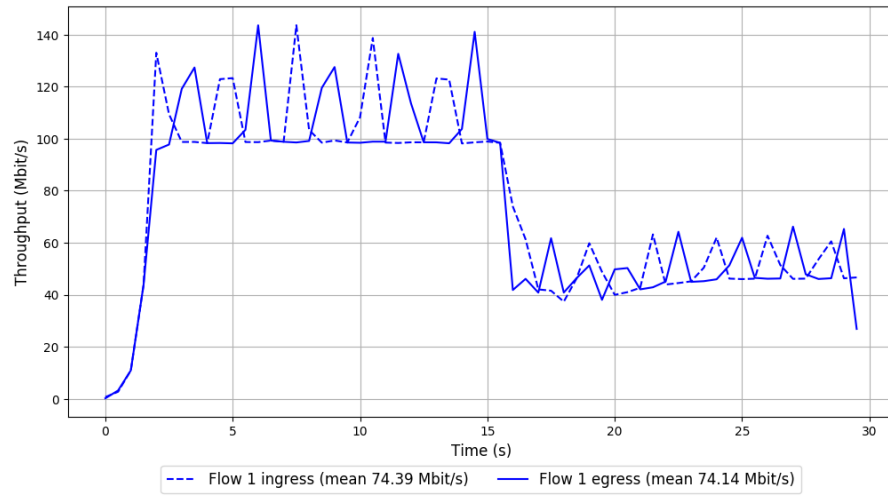
-- Flow 1:

Average throughput: 74.14 Mbit/s

95th percentile per-packet one-way delay: 104.975 ms

Loss rate: 1.07%

### Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2018-01-01 23:18:54

End at: 2018-01-01 23:19:24

# Below is generated by plot.py at 2018-01-02 01:49:22

# Datalink statistics

-- Total of 1 flow:

Average throughput: 48.49 Mbit/s

95th percentile per-packet one-way delay: 102.932 ms

Loss rate: 1.13%

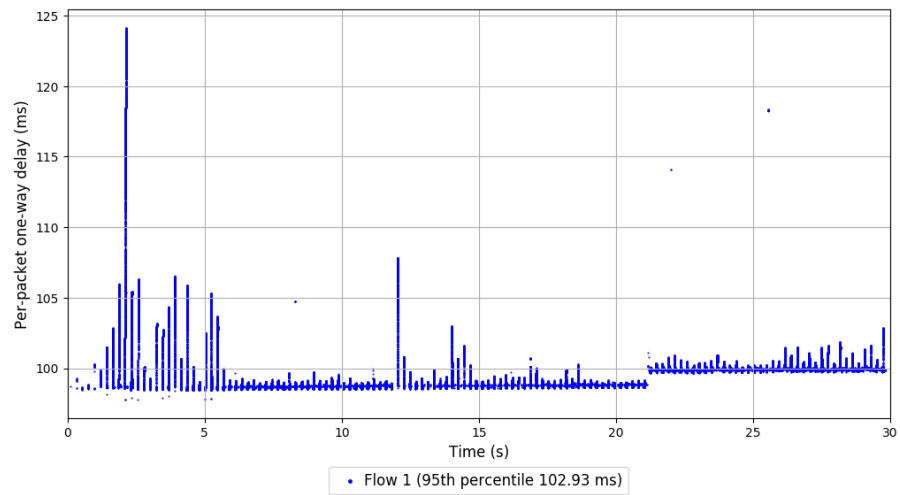
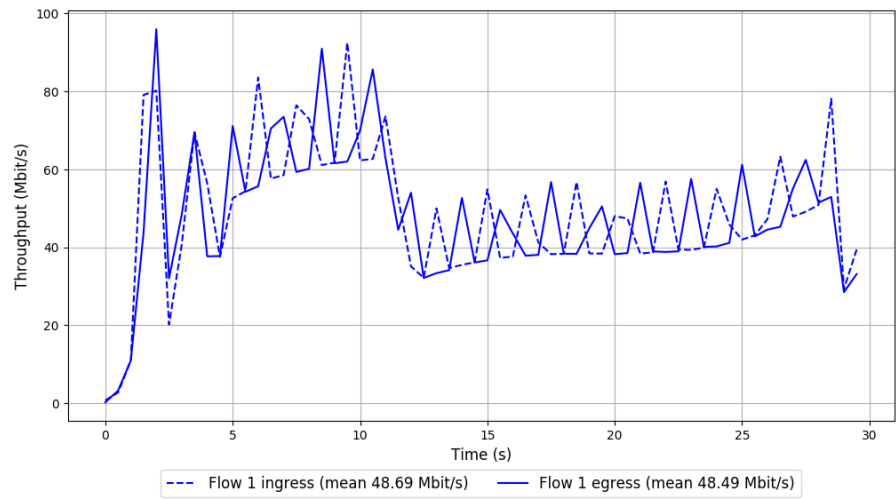
-- Flow 1:

Average throughput: 48.49 Mbit/s

95th percentile per-packet one-way delay: 102.932 ms

Loss rate: 1.13%

### Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2018-01-01 23:31:23

End at: 2018-01-01 23:31:53

# Below is generated by plot.py at 2018-01-02 01:50:00

# Datalink statistics

-- Total of 1 flow:

Average throughput: 102.10 Mbit/s

95th percentile per-packet one-way delay: 110.419 ms

Loss rate: 0.80%

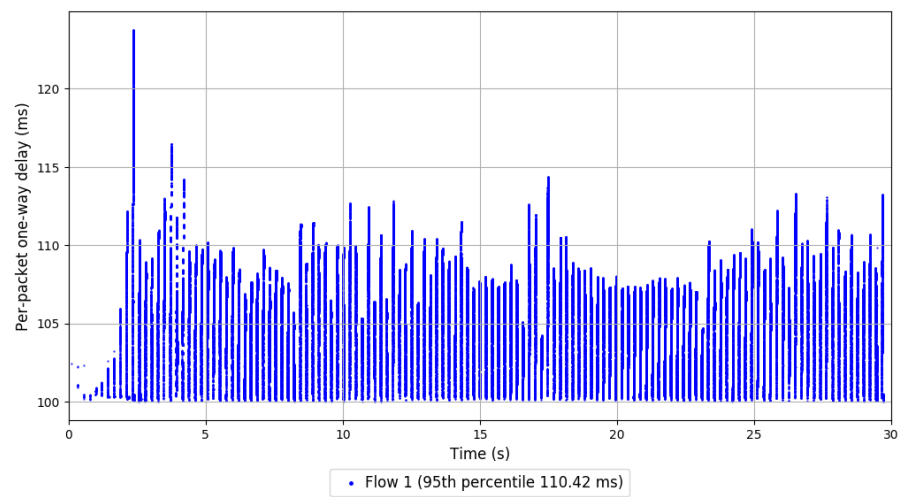
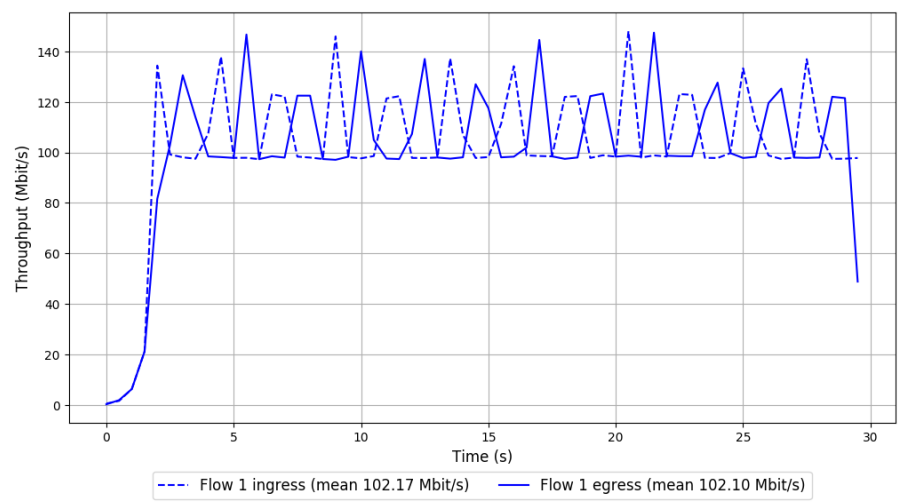
-- Flow 1:

Average throughput: 102.10 Mbit/s

95th percentile per-packet one-way delay: 110.419 ms

Loss rate: 0.80%

Run 10: Report of TCP Cubic — Data Link



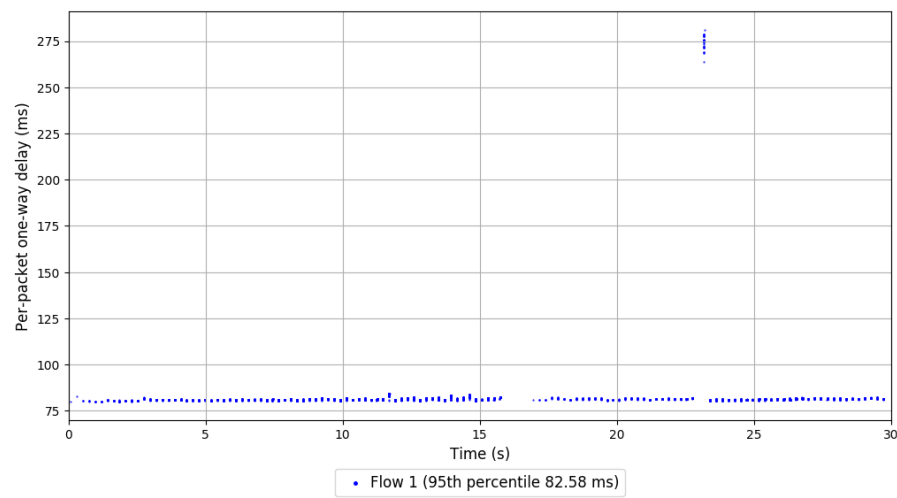
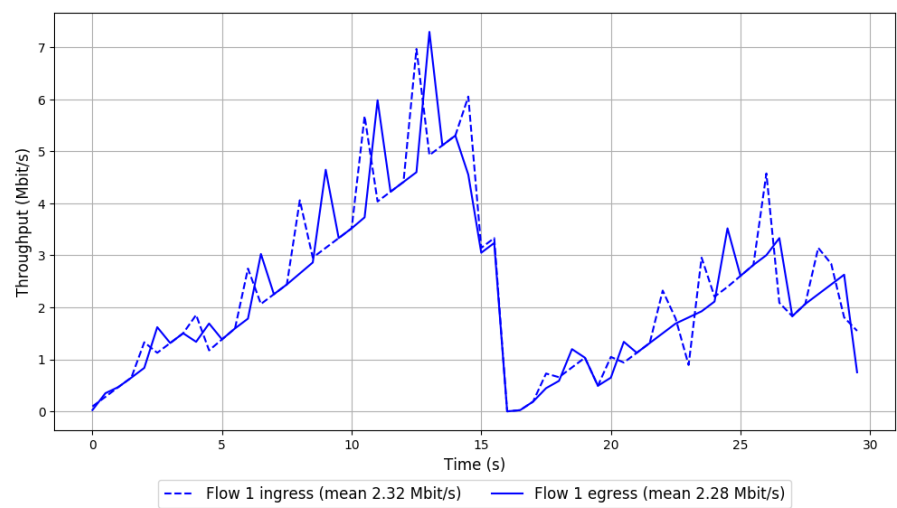
```
Run 1: Statistics of LEDBAT

Start at: 2018-01-01 21:44:41
End at: 2018-01-01 21:45:11

# Below is generated by plot.py at 2018-01-02 01:50:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.28 Mbit/s
95th percentile per-packet one-way delay: 82.576 ms
Loss rate: 2.37%
-- Flow 1:
Average throughput: 2.28 Mbit/s
95th percentile per-packet one-way delay: 82.576 ms
Loss rate: 2.37%
```



Run 1: Report of LEDBAT — Data Link

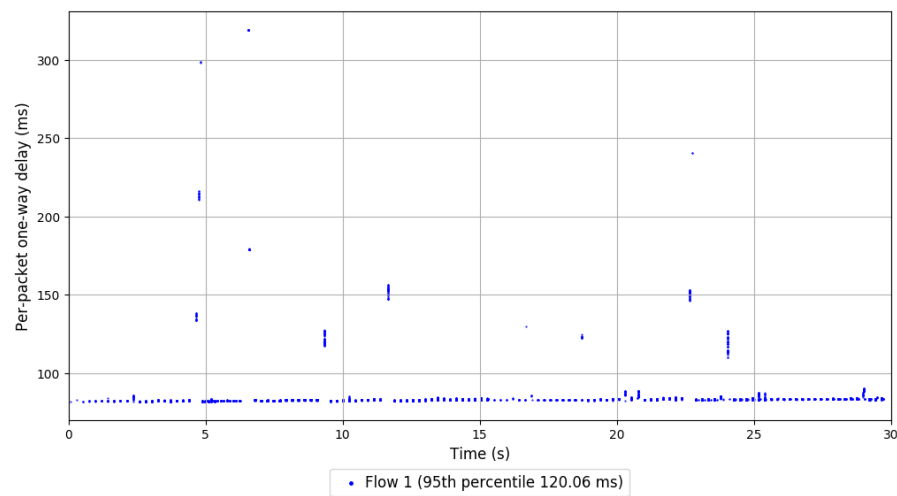
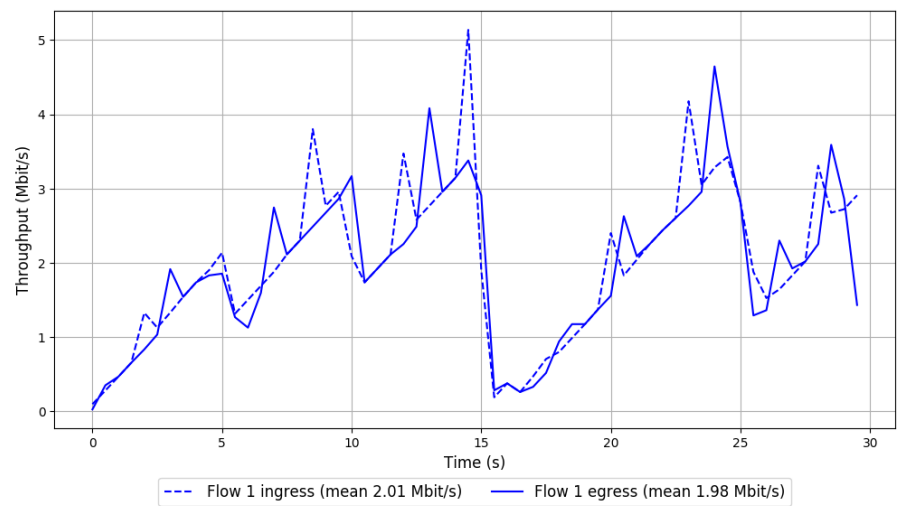


```
Run 2: Statistics of LEDBAT

Start at: 2018-01-01 21:57:00
End at: 2018-01-01 21:57:30

# Below is generated by plot.py at 2018-01-02 01:50:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 120.059 ms
Loss rate: 2.13%
-- Flow 1:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 120.059 ms
Loss rate: 2.13%
```

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-01-01 22:09:22

End at: 2018-01-01 22:09:52

# Below is generated by plot.py at 2018-01-02 01:50:00

# Datalink statistics

-- Total of 1 flow:

Average throughput: 1.72 Mbit/s

95th percentile per-packet one-way delay: 89.298 ms

Loss rate: 2.00%

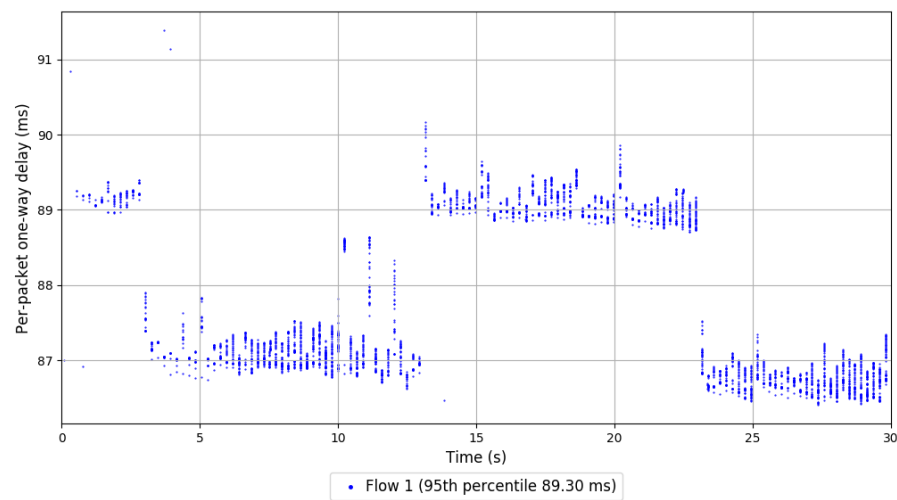
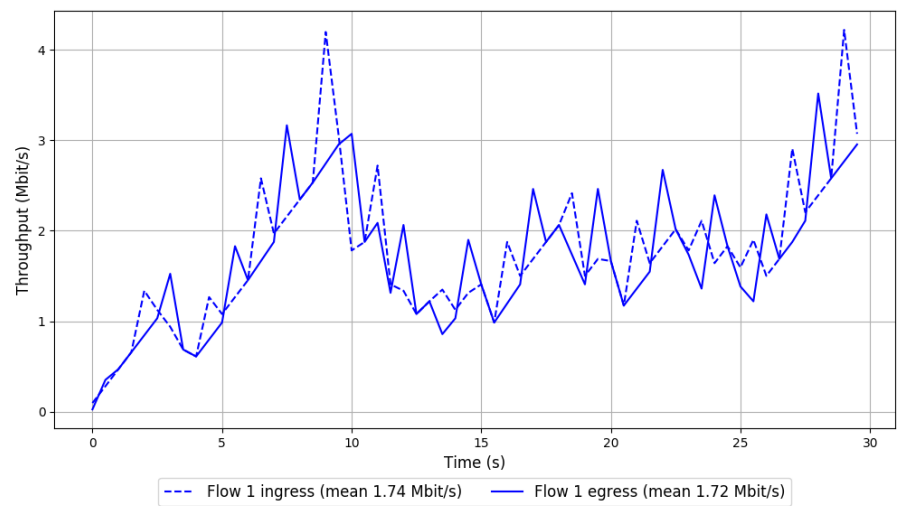
-- Flow 1:

Average throughput: 1.72 Mbit/s

95th percentile per-packet one-way delay: 89.298 ms

Loss rate: 2.00%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-01-01 22:21:54

End at: 2018-01-01 22:22:24

# Below is generated by plot.py at 2018-01-02 01:50:00

# Datalink statistics

-- Total of 1 flow:

Average throughput: 1.48 Mbit/s

95th percentile per-packet one-way delay: 100.248 ms

Loss rate: 1.21%

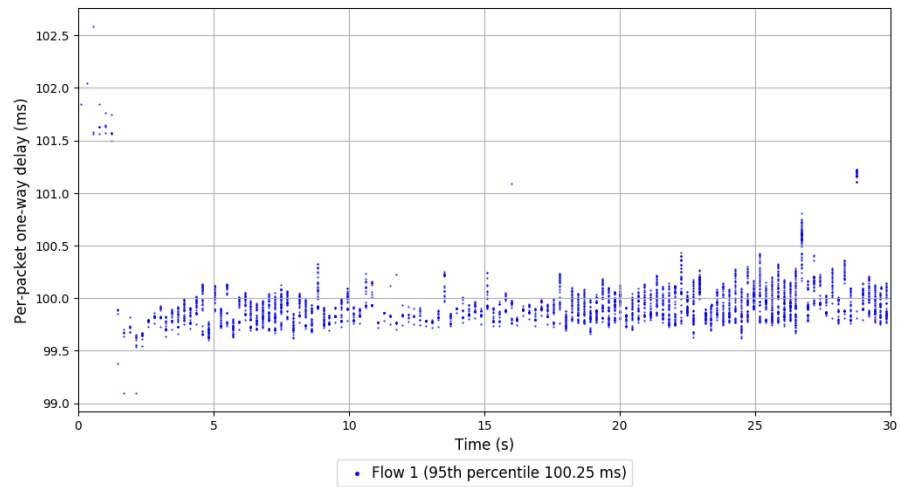
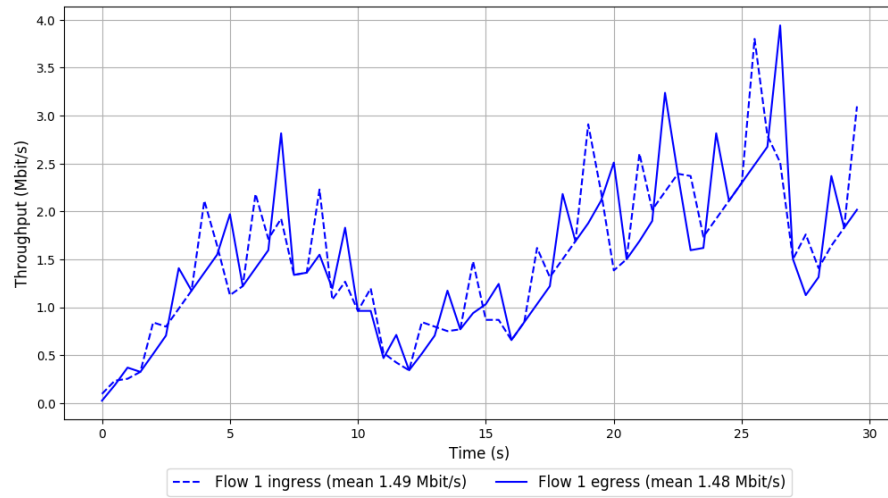
-- Flow 1:

Average throughput: 1.48 Mbit/s

95th percentile per-packet one-way delay: 100.248 ms

Loss rate: 1.21%

#### Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-01-01 22:34:29

End at: 2018-01-01 22:34:59

# Below is generated by plot.py at 2018-01-02 01:50:00

# Datalink statistics

-- Total of 1 flow:

Average throughput: 2.61 Mbit/s

95th percentile per-packet one-way delay: 96.739 ms

Loss rate: 0.74%

-- Flow 1:

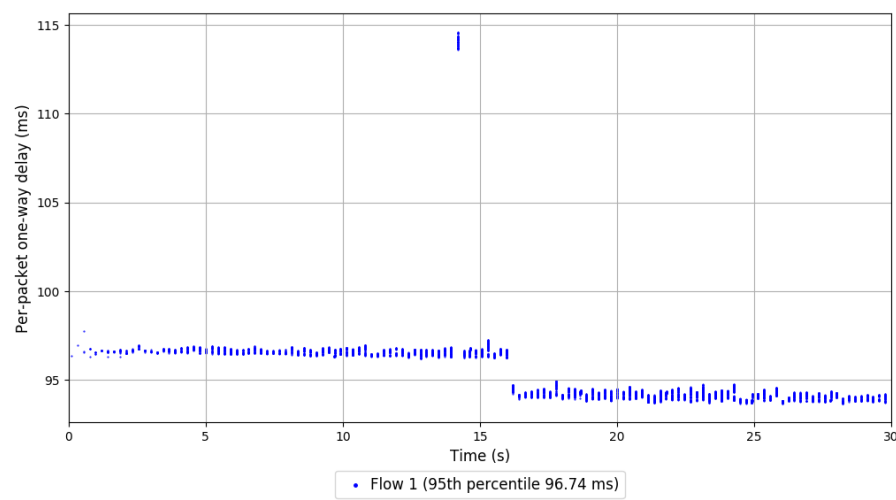
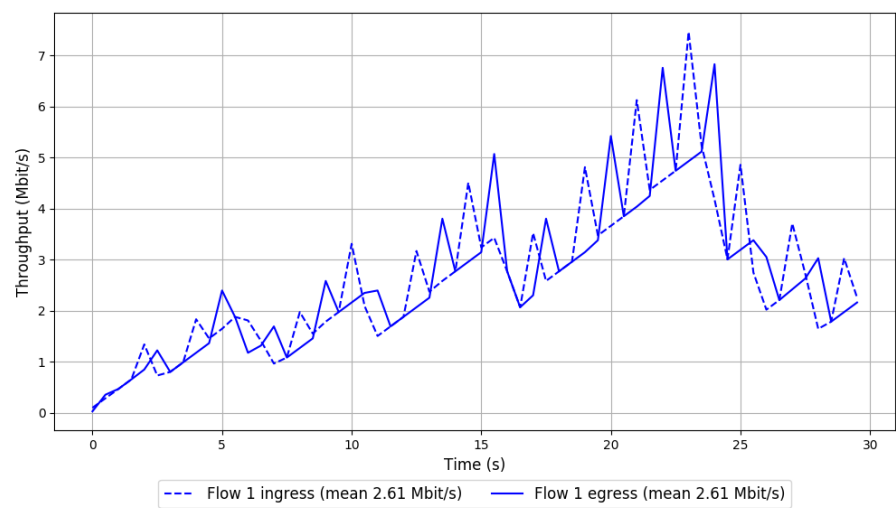
Average throughput: 2.61 Mbit/s

95th percentile per-packet one-way delay: 96.739 ms

Loss rate: 0.74%



Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2018-01-01 22:47:02

End at: 2018-01-01 22:47:32

# Below is generated by plot.py at 2018-01-02 01:50:00

# Datalink statistics

-- Total of 1 flow:

Average throughput: 2.27 Mbit/s

95th percentile per-packet one-way delay: 92.622 ms

Loss rate: 0.71%

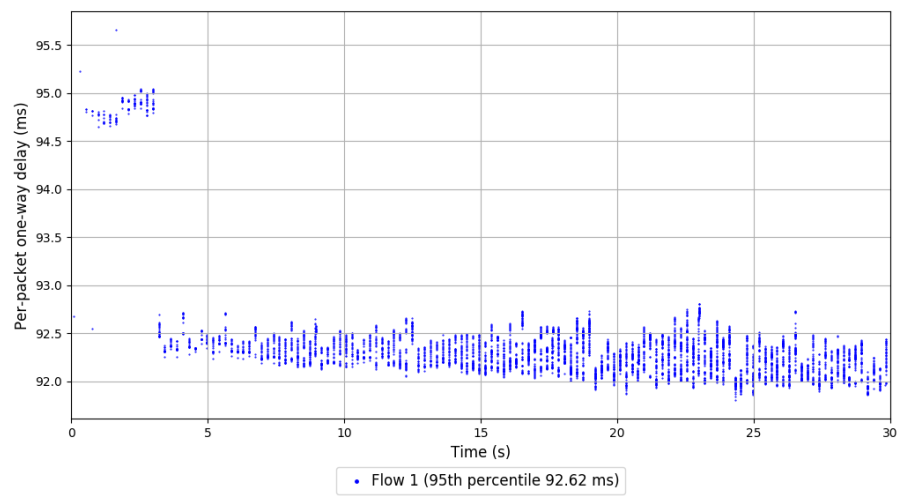
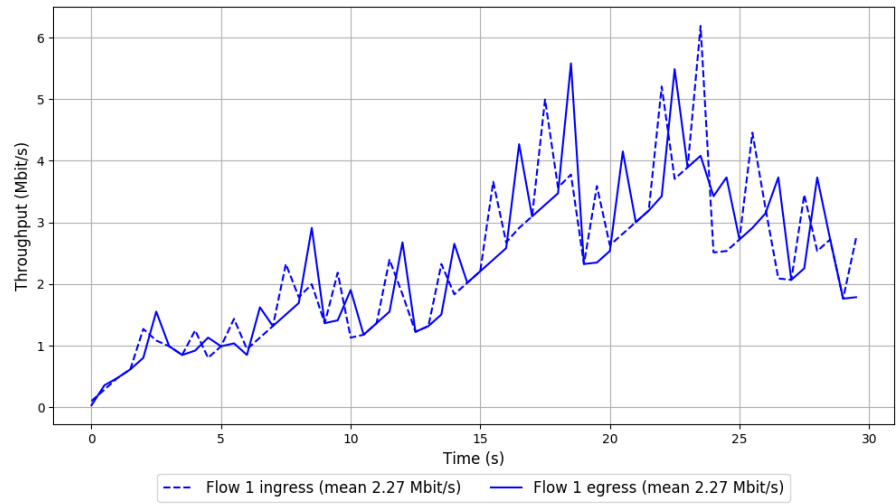
-- Flow 1:

Average throughput: 2.27 Mbit/s

95th percentile per-packet one-way delay: 92.622 ms

Loss rate: 0.71%

## Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2018-01-01 22:59:29

End at: 2018-01-01 22:59:59

# Below is generated by plot.py at 2018-01-02 01:50:00

# Datalink statistics

-- Total of 1 flow:

Average throughput: 1.21 Mbit/s

95th percentile per-packet one-way delay: 93.773 ms

Loss rate: 1.03%

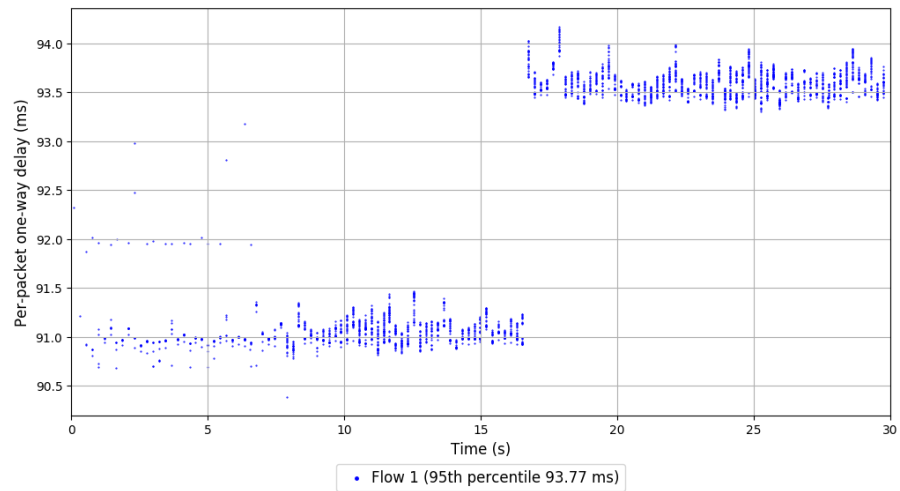
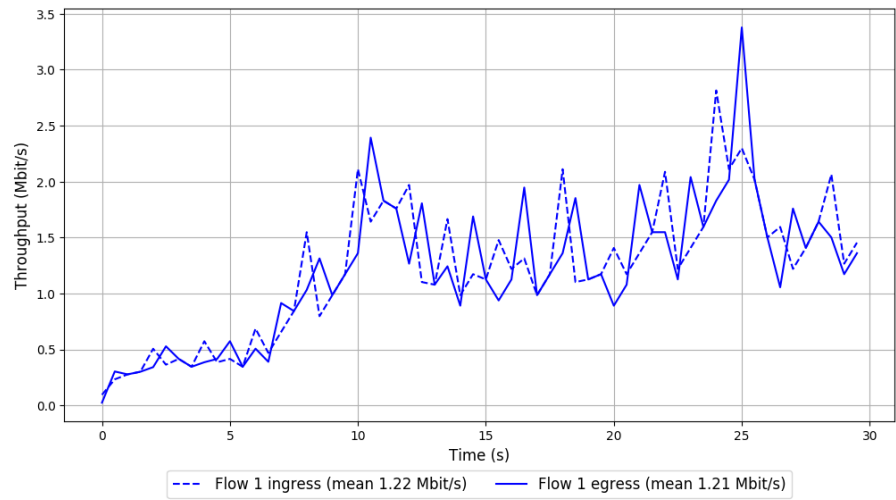
-- Flow 1:

Average throughput: 1.21 Mbit/s

95th percentile per-packet one-way delay: 93.773 ms

Loss rate: 1.03%

## Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2018-01-01 23:11:47

End at: 2018-01-01 23:12:18

# Below is generated by plot.py at 2018-01-02 01:50:00

# Datalink statistics

-- Total of 1 flow:

Average throughput: 0.70 Mbit/s

95th percentile per-packet one-way delay: 97.686 ms

Loss rate: 1.45%

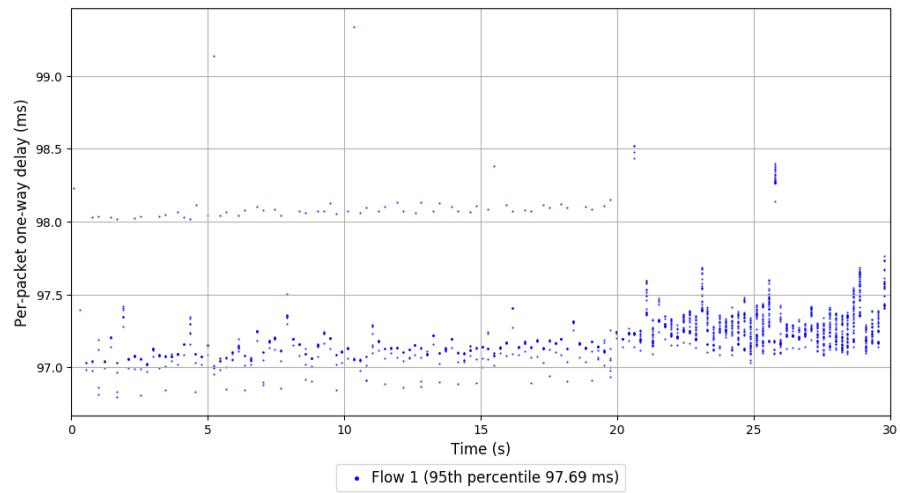
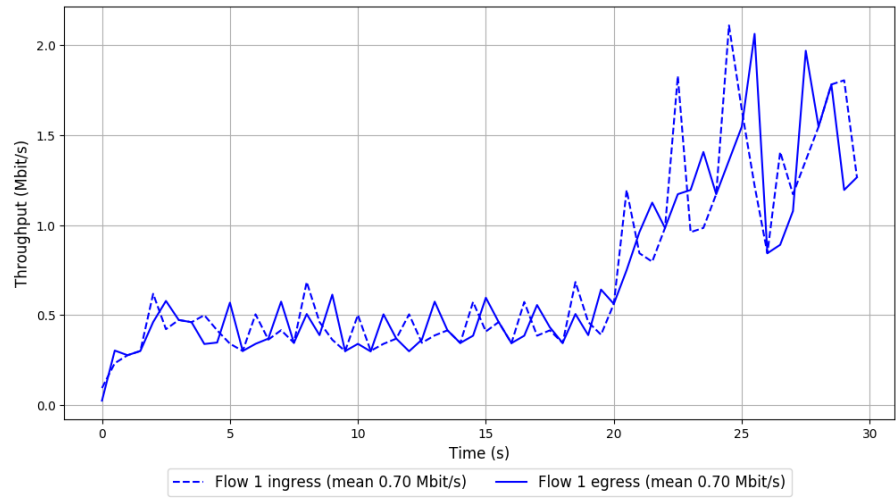
-- Flow 1:

Average throughput: 0.70 Mbit/s

95th percentile per-packet one-way delay: 97.686 ms

Loss rate: 1.45%

## Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2018-01-01 23:24:25

End at: 2018-01-01 23:24:55

# Below is generated by plot.py at 2018-01-02 01:50:00

# Datalink statistics

-- Total of 1 flow:

Average throughput: 1.86 Mbit/s

95th percentile per-packet one-way delay: 101.741 ms

Loss rate: 0.67%

-- Flow 1:

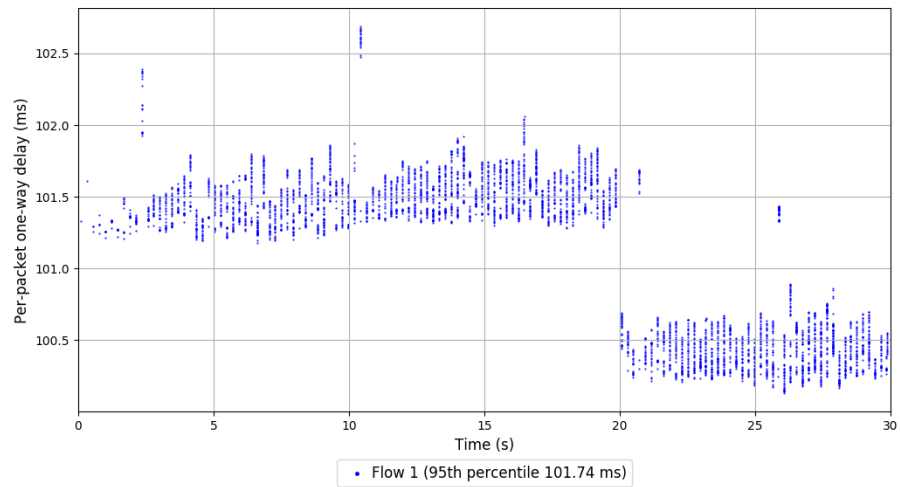
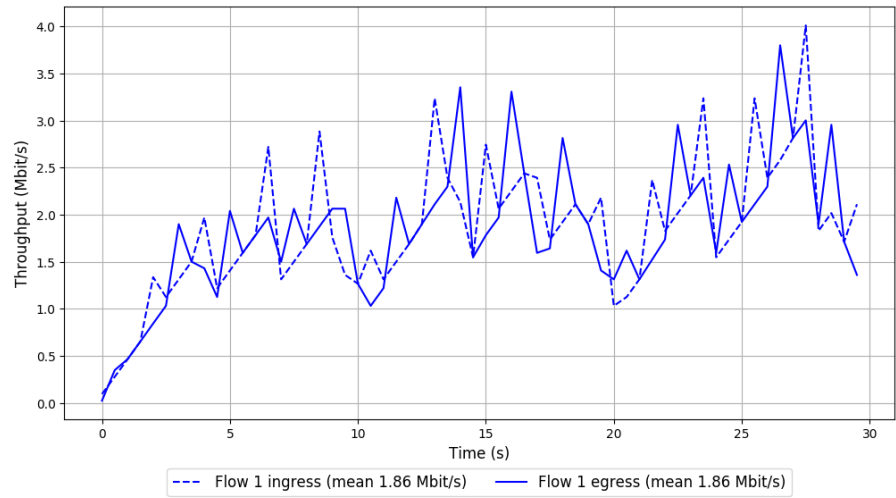
Average throughput: 1.86 Mbit/s

95th percentile per-packet one-way delay: 101.741 ms

Loss rate: 0.67%



### Run 9: Report of LEDBAT — Data Link

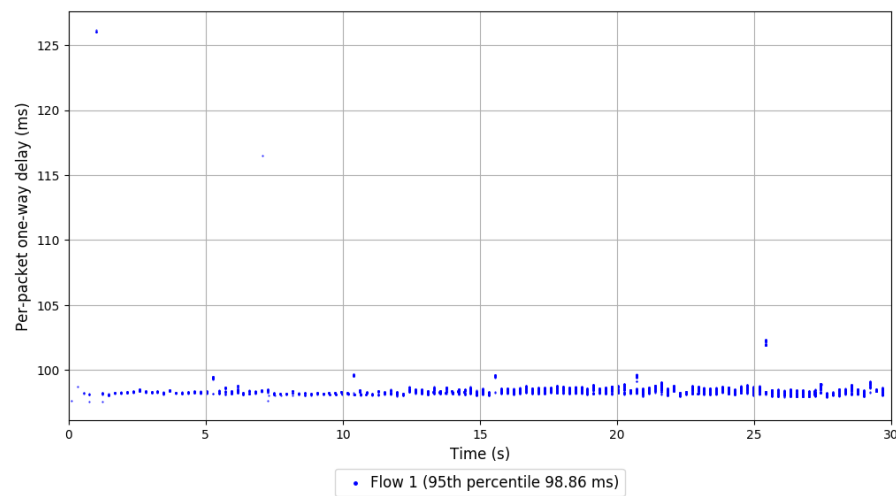
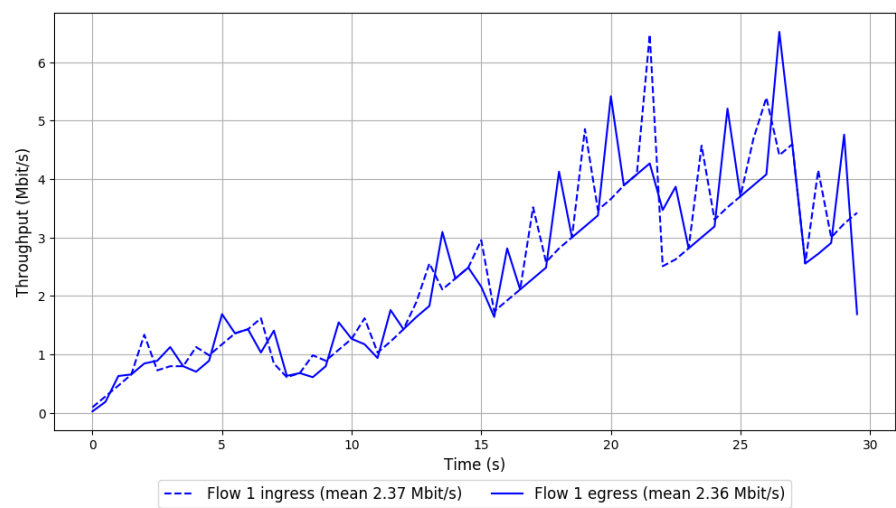


```
Run 10: Statistics of LEDBAT

Start at: 2018-01-01 23:36:53
End at: 2018-01-01 23:37:23

# Below is generated by plot.py at 2018-01-02 01:50:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.36 Mbit/s
95th percentile per-packet one-way delay: 98.859 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 2.36 Mbit/s
95th percentile per-packet one-way delay: 98.859 ms
Loss rate: 1.23%
```

Run 10: Report of LEDBAT — Data Link

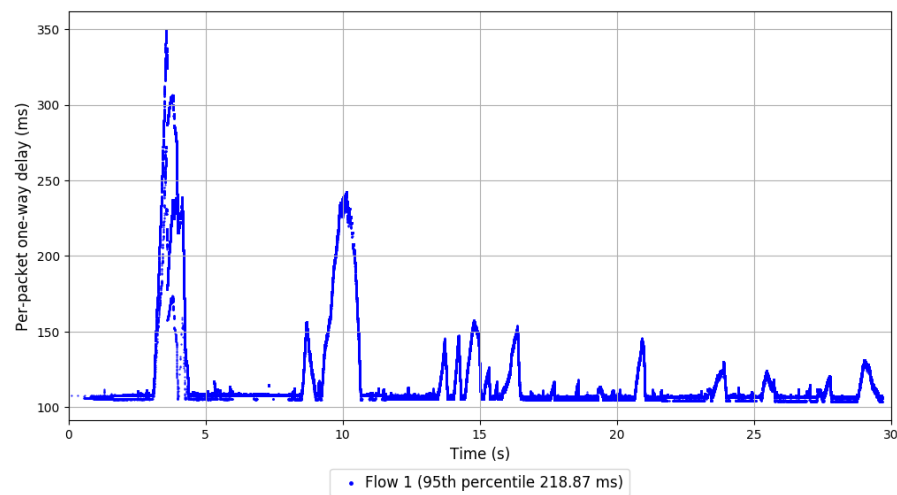
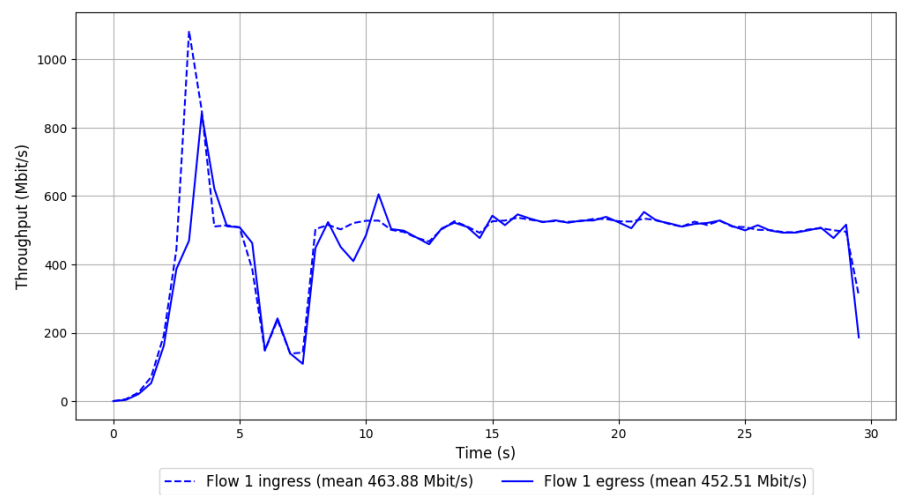


```
Run 1: Statistics of PCC

Start at: 2018-01-01 21:37:34
End at: 2018-01-01 21:38:04

# Below is generated by plot.py at 2018-01-02 01:56:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 452.51 Mbit/s
95th percentile per-packet one-way delay: 218.871 ms
Loss rate: 3.19%
-- Flow 1:
Average throughput: 452.51 Mbit/s
95th percentile per-packet one-way delay: 218.871 ms
Loss rate: 3.19%
```

Run 1: Report of PCC — Data Link

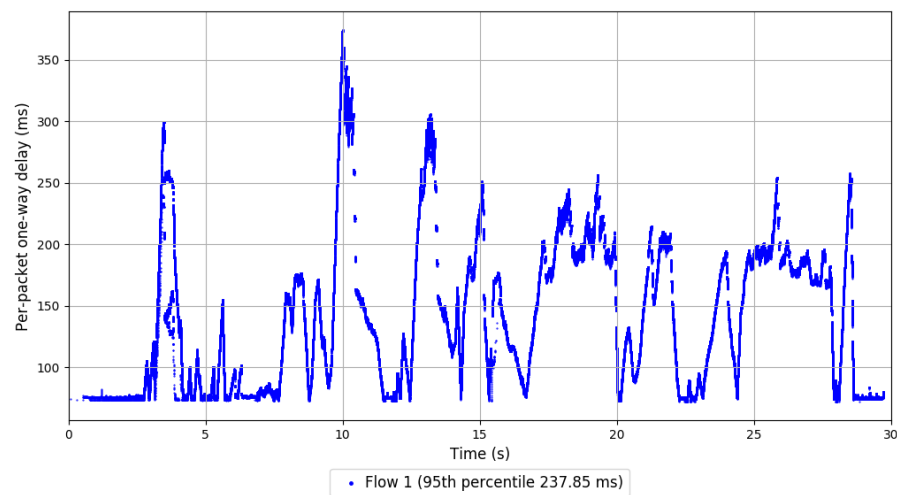
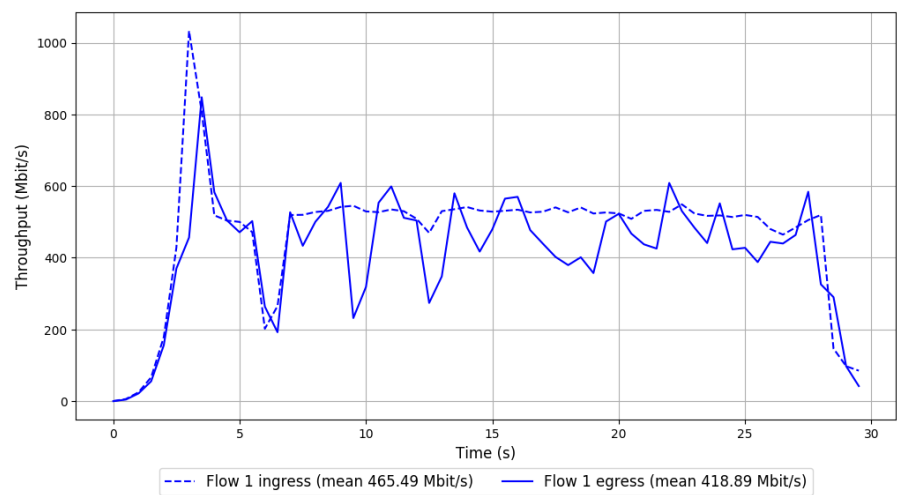


```
Run 2: Statistics of PCC

Start at: 2018-01-01 21:49:52
End at: 2018-01-01 21:50:22

# Below is generated by plot.py at 2018-01-02 01:56:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 418.89 Mbit/s
95th percentile per-packet one-way delay: 237.855 ms
Loss rate: 10.67%
-- Flow 1:
Average throughput: 418.89 Mbit/s
95th percentile per-packet one-way delay: 237.855 ms
Loss rate: 10.67%
```

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2018-01-01 22:02:07

End at: 2018-01-01 22:02:37

# Below is generated by plot.py at 2018-01-02 01:57:08

# Datalink statistics

-- Total of 1 flow:

Average throughput: 518.77 Mbit/s

95th percentile per-packet one-way delay: 109.351 ms

Loss rate: 2.30%

-- Flow 1:

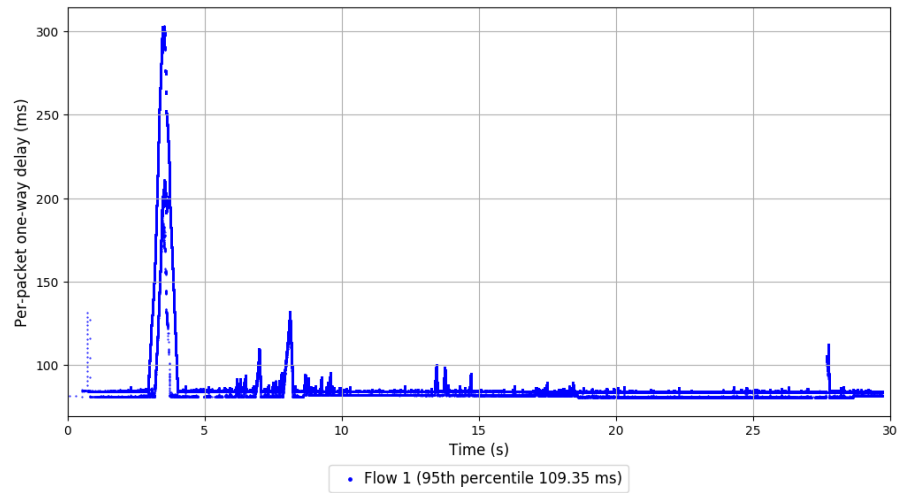
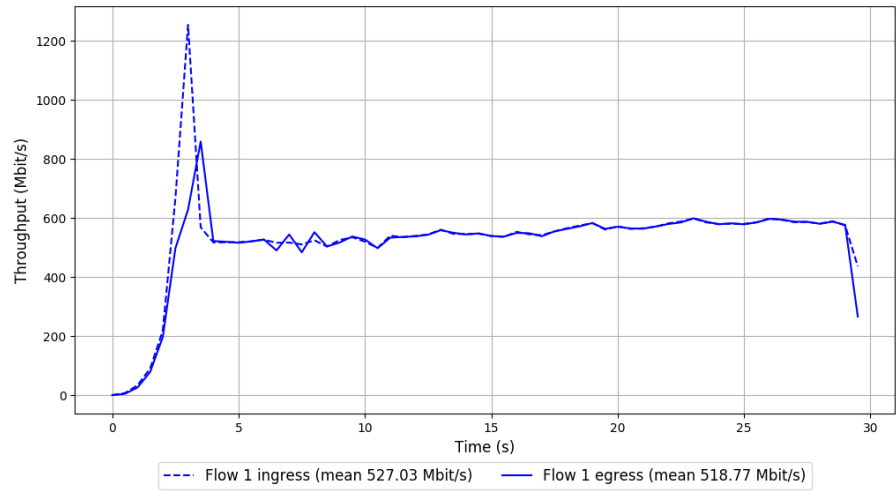
Average throughput: 518.77 Mbit/s

95th percentile per-packet one-way delay: 109.351 ms

Loss rate: 2.30%



### Run 3: Report of PCC — Data Link



Run 4: Statistics of PCC

Start at: 2018-01-01 22:14:38

End at: 2018-01-01 22:15:08

# Below is generated by plot.py at 2018-01-02 01:57:23

# Datalink statistics

-- Total of 1 flow:

Average throughput: 532.99 Mbit/s

95th percentile per-packet one-way delay: 214.506 ms

Loss rate: 4.10%

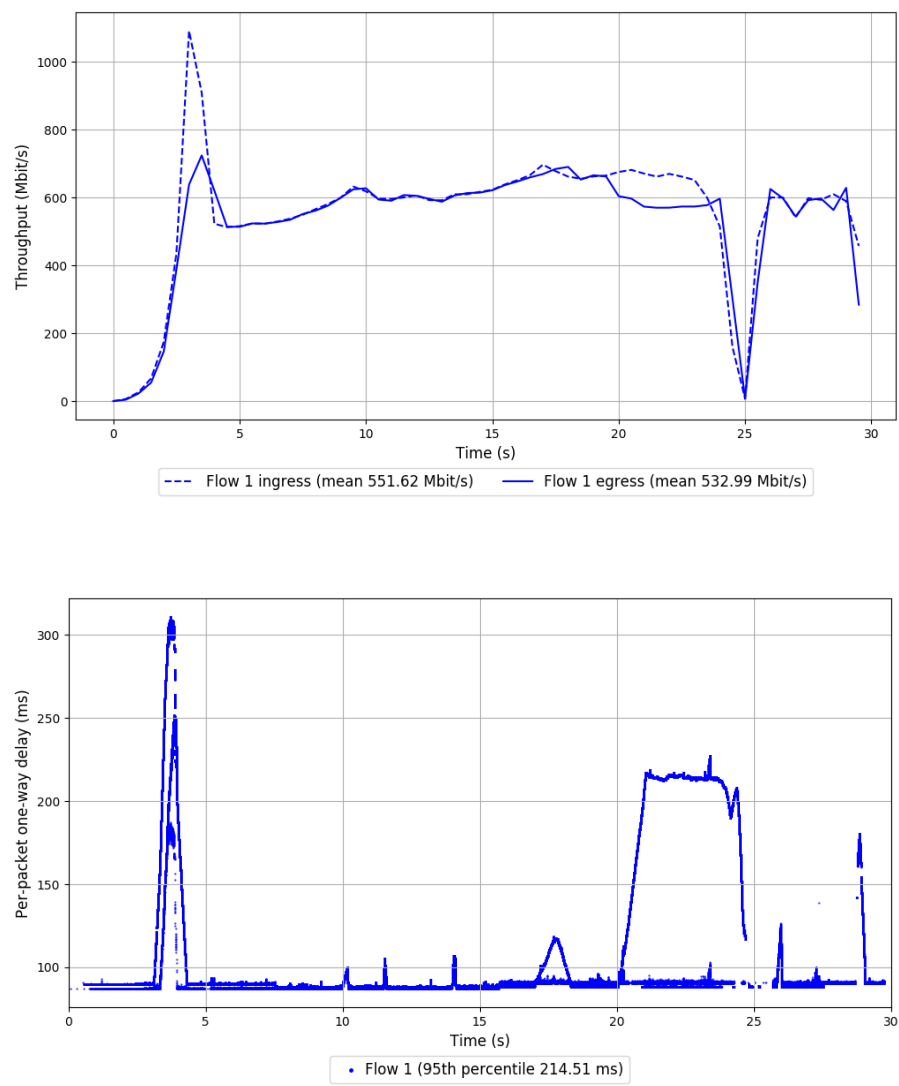
-- Flow 1:

Average throughput: 532.99 Mbit/s

95th percentile per-packet one-way delay: 214.506 ms

Loss rate: 4.10%

Run 4: Report of PCC — Data Link



Run 5: Statistics of PCC

Start at: 2018-01-01 22:27:17

End at: 2018-01-01 22:27:47

# Below is generated by plot.py at 2018-01-02 01:57:40

# Datalink statistics

-- Total of 1 flow:

Average throughput: 555.20 Mbit/s

95th percentile per-packet one-way delay: 173.678 ms

Loss rate: 1.92%

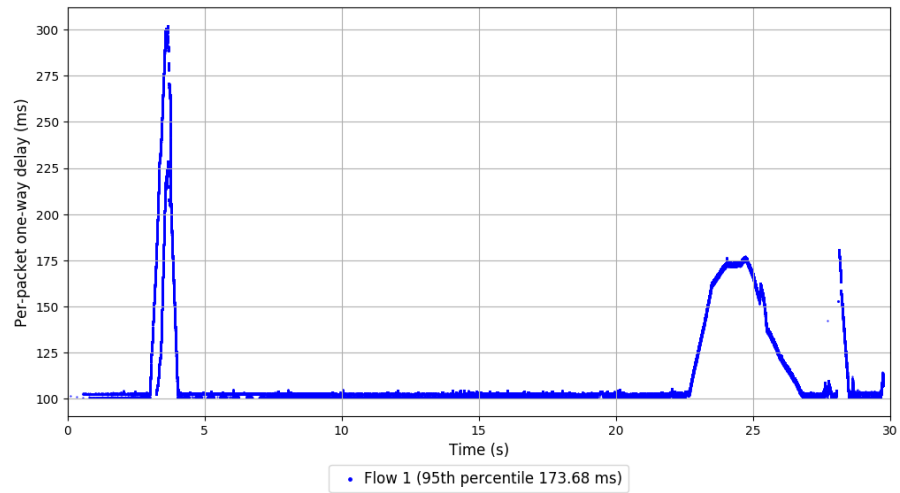
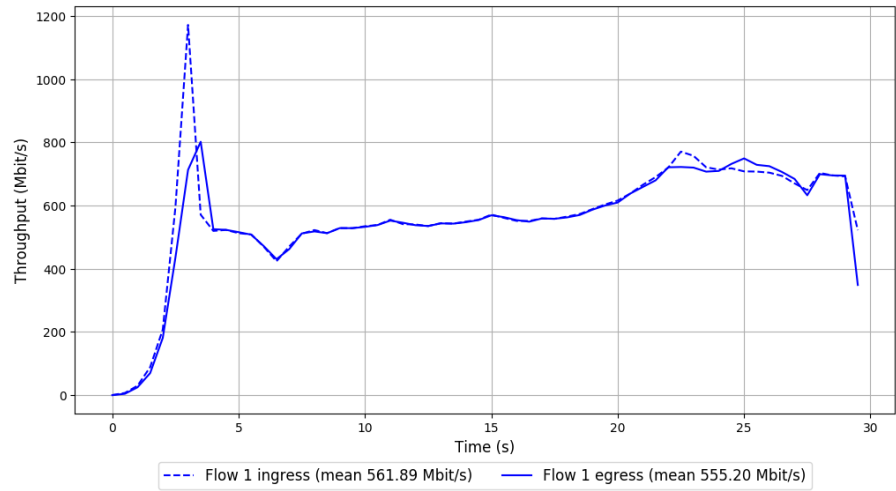
-- Flow 1:

Average throughput: 555.20 Mbit/s

95th percentile per-packet one-way delay: 173.678 ms

Loss rate: 1.92%

### Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2018-01-01 22:39:52

End at: 2018-01-01 22:40:22

# Below is generated by plot.py at 2018-01-02 01:57:58

# Datalink statistics

-- Total of 1 flow:

Average throughput: 557.00 Mbit/s

95th percentile per-packet one-way delay: 223.522 ms

Loss rate: 3.38%

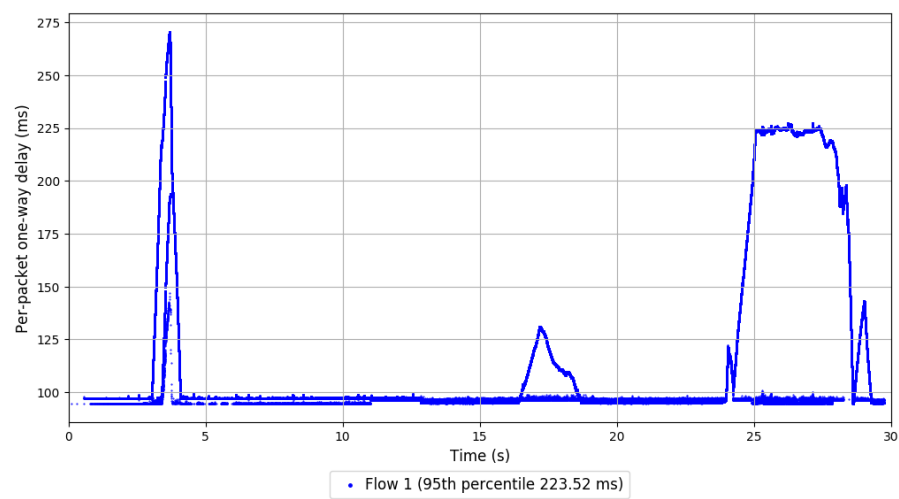
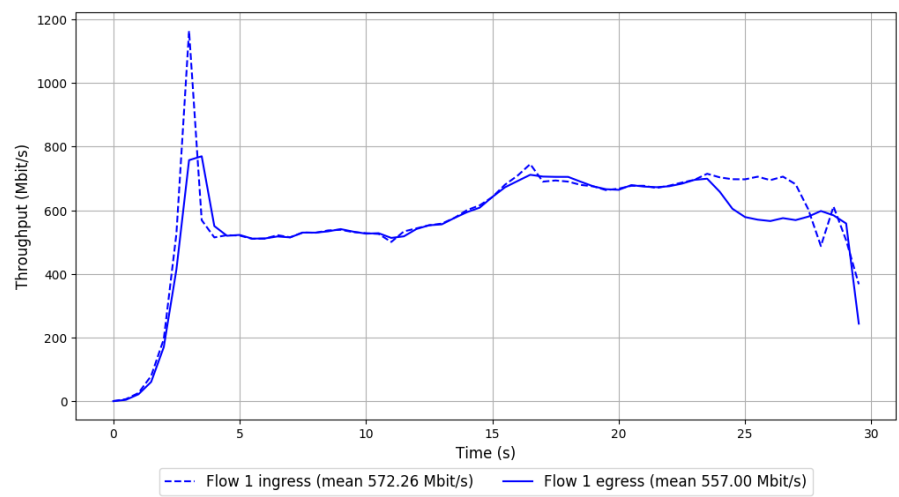
-- Flow 1:

Average throughput: 557.00 Mbit/s

95th percentile per-packet one-way delay: 223.522 ms

Loss rate: 3.38%

Run 6: Report of PCC — Data Link



Run 7: Statistics of PCC

Start at: 2018-01-01 22:52:18

End at: 2018-01-01 22:52:48

# Below is generated by plot.py at 2018-01-02 01:58:35

# Datalink statistics

-- Total of 1 flow:

Average throughput: 577.38 Mbit/s

95th percentile per-packet one-way delay: 203.083 ms

Loss rate: 2.54%

-- Flow 1:

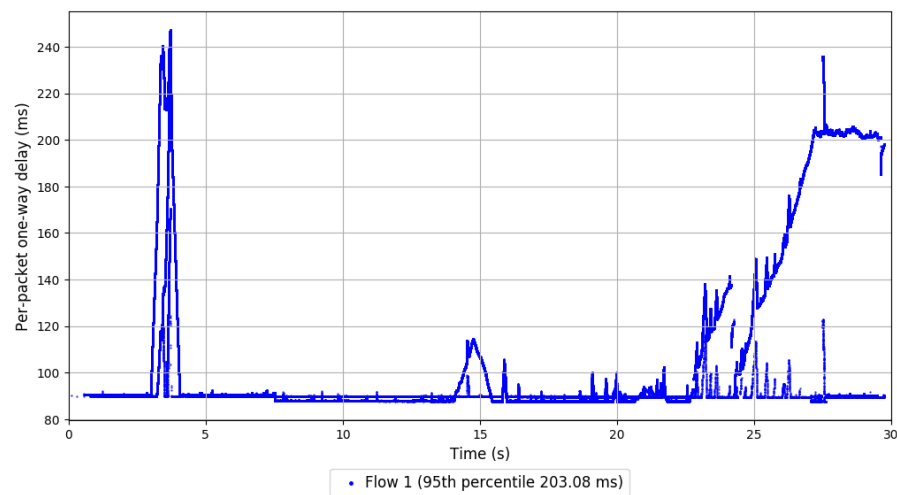
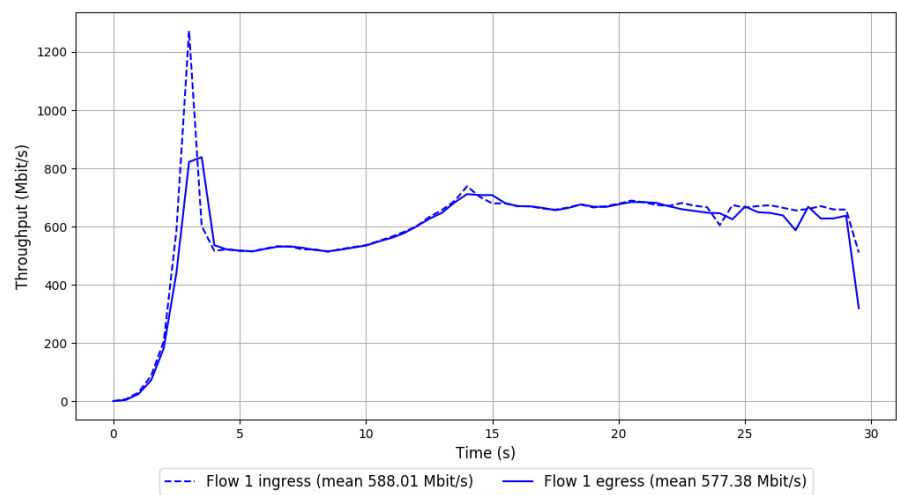
Average throughput: 577.38 Mbit/s

95th percentile per-packet one-way delay: 203.083 ms

Loss rate: 2.54%



Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2018-01-01 23:04:35

End at: 2018-01-01 23:05:05

# Below is generated by plot.py at 2018-01-02 01:58:58

# Datalink statistics

-- Total of 1 flow:

Average throughput: 543.96 Mbit/s

95th percentile per-packet one-way delay: 173.858 ms

Loss rate: 2.06%

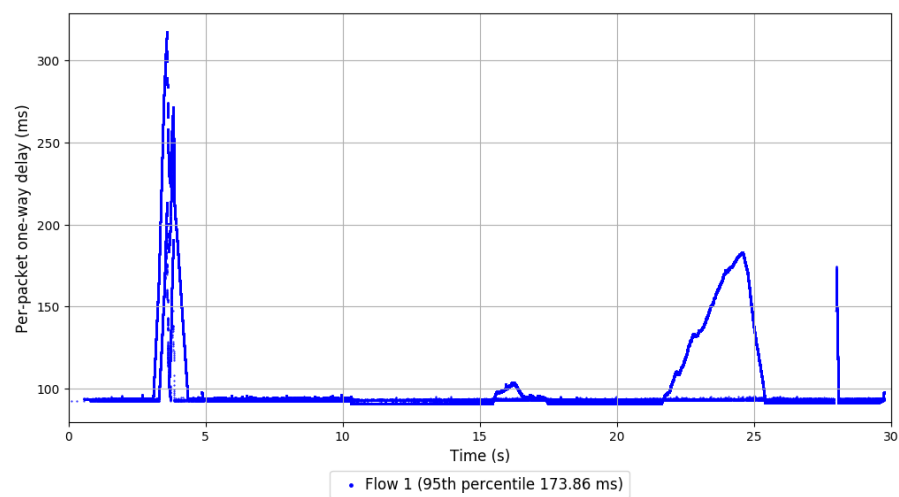
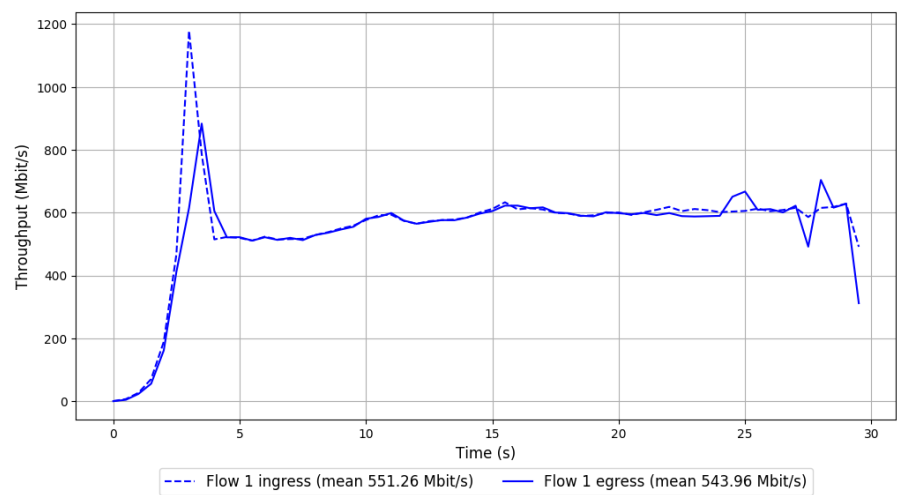
-- Flow 1:

Average throughput: 543.96 Mbit/s

95th percentile per-packet one-way delay: 173.858 ms

Loss rate: 2.06%

Run 8: Report of PCC — Data Link



Run 9: Statistics of PCC

Start at: 2018-01-01 23:17:11

End at: 2018-01-01 23:17:41

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 570.06 Mbit/s

95th percentile per-packet one-way delay: 137.841 ms

Loss rate: 2.73%

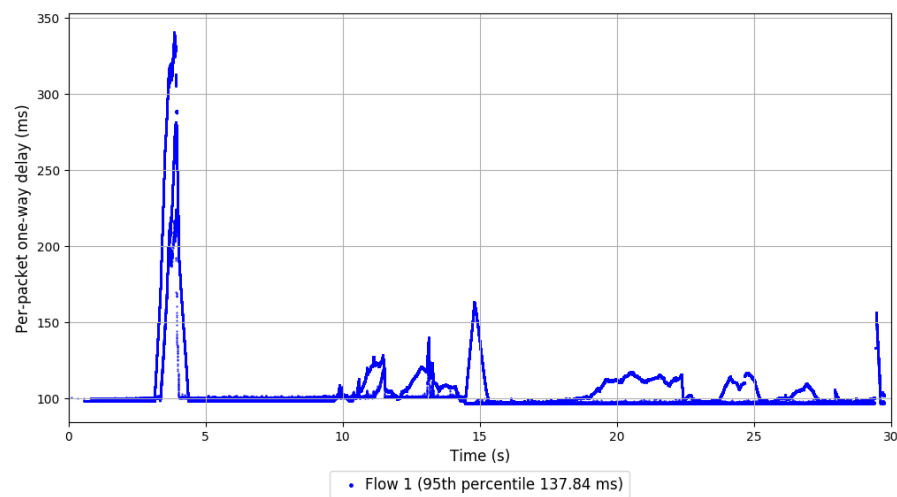
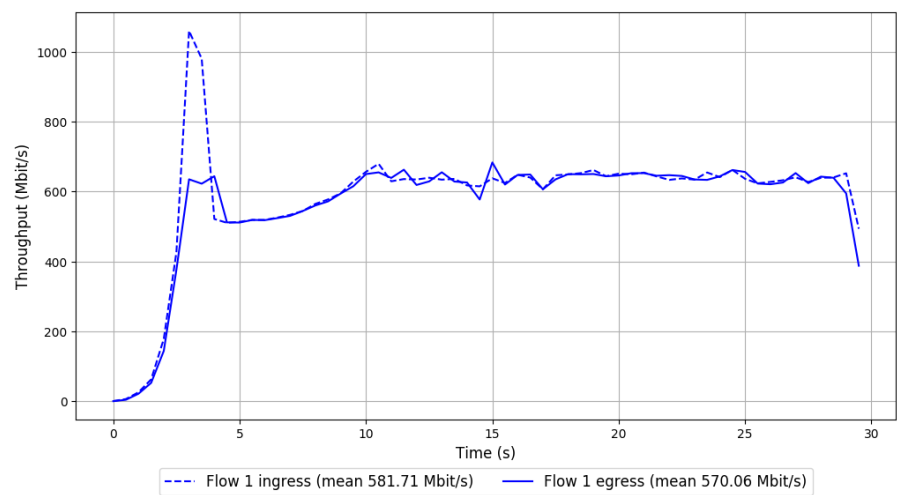
-- Flow 1:

Average throughput: 570.06 Mbit/s

95th percentile per-packet one-way delay: 137.841 ms

Loss rate: 2.73%

Run 9: Report of PCC — Data Link



Run 10: Statistics of PCC

Start at: 2018-01-01 23:29:41

End at: 2018-01-01 23:30:11

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 517.32 Mbit/s

95th percentile per-packet one-way delay: 206.780 ms

Loss rate: 2.09%

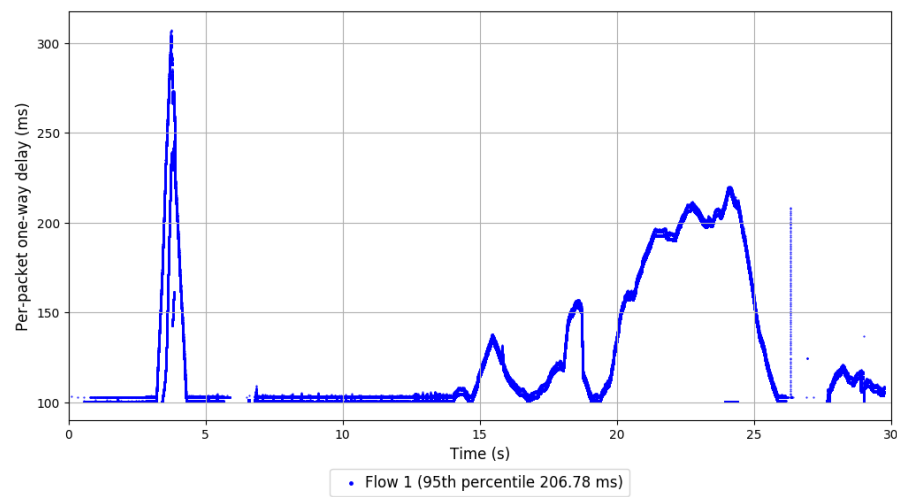
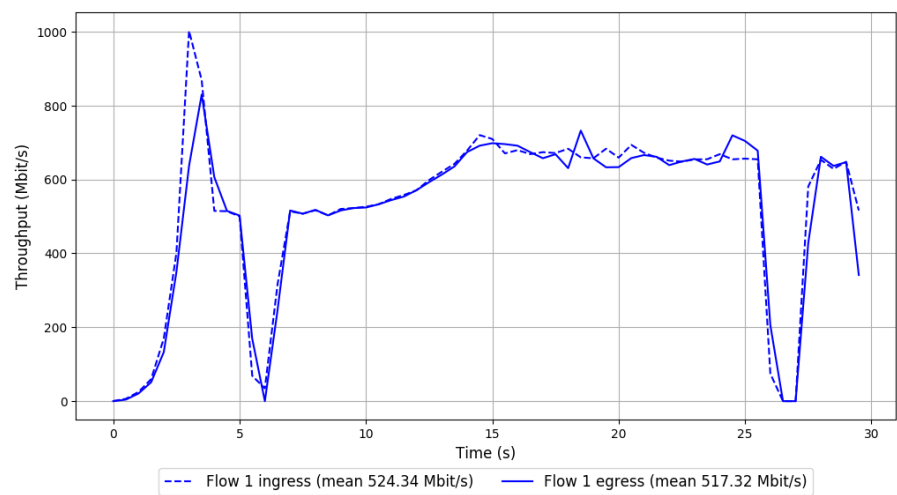
-- Flow 1:

Average throughput: 517.32 Mbit/s

95th percentile per-packet one-way delay: 206.780 ms

Loss rate: 2.09%

Run 10: Report of PCC — Data Link



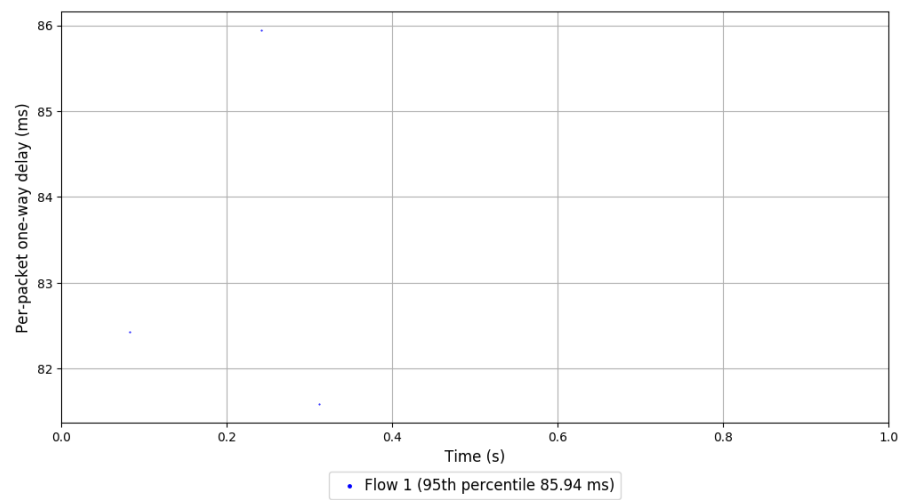
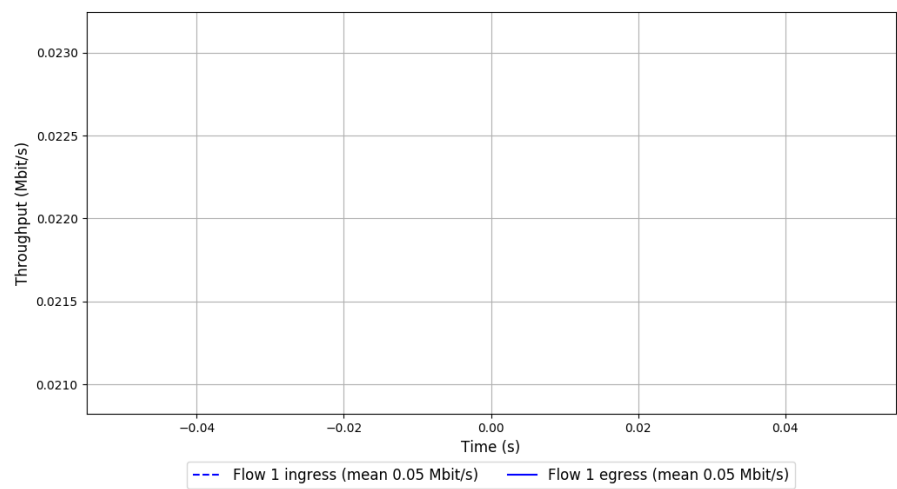
Run 1: Statistics of QUIC Cubic

Start at: 2018-01-01 21:43:18

End at: 2018-01-01 21:43:48



Run 1: Report of QUIC Cubic — Data Link

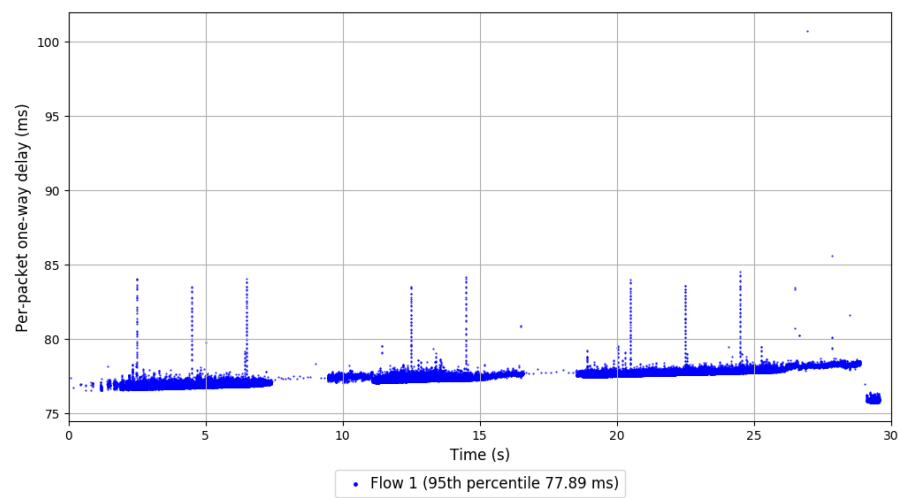
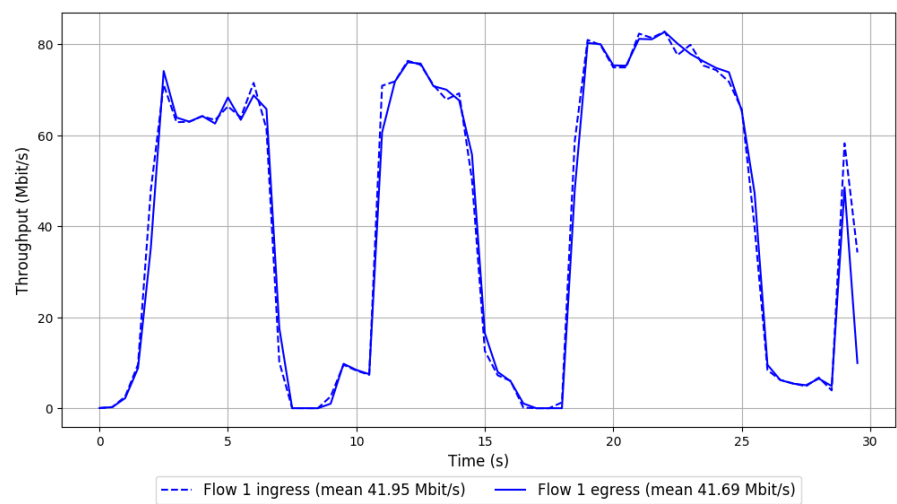


```
Run 2: Statistics of QUIC Cubic

Start at: 2018-01-01 21:55:34
End at: 2018-01-01 21:56:04

# Below is generated by plot.py at 2018-01-02 02:09:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 41.69 Mbit/s
95th percentile per-packet one-way delay: 77.891 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 41.69 Mbit/s
95th percentile per-packet one-way delay: 77.891 ms
Loss rate: 1.36%
```

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-01-01 22:07:53

End at: 2018-01-01 22:08:23

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 68.42 Mbit/s

95th percentile per-packet one-way delay: 92.137 ms

Loss rate: 0.99%

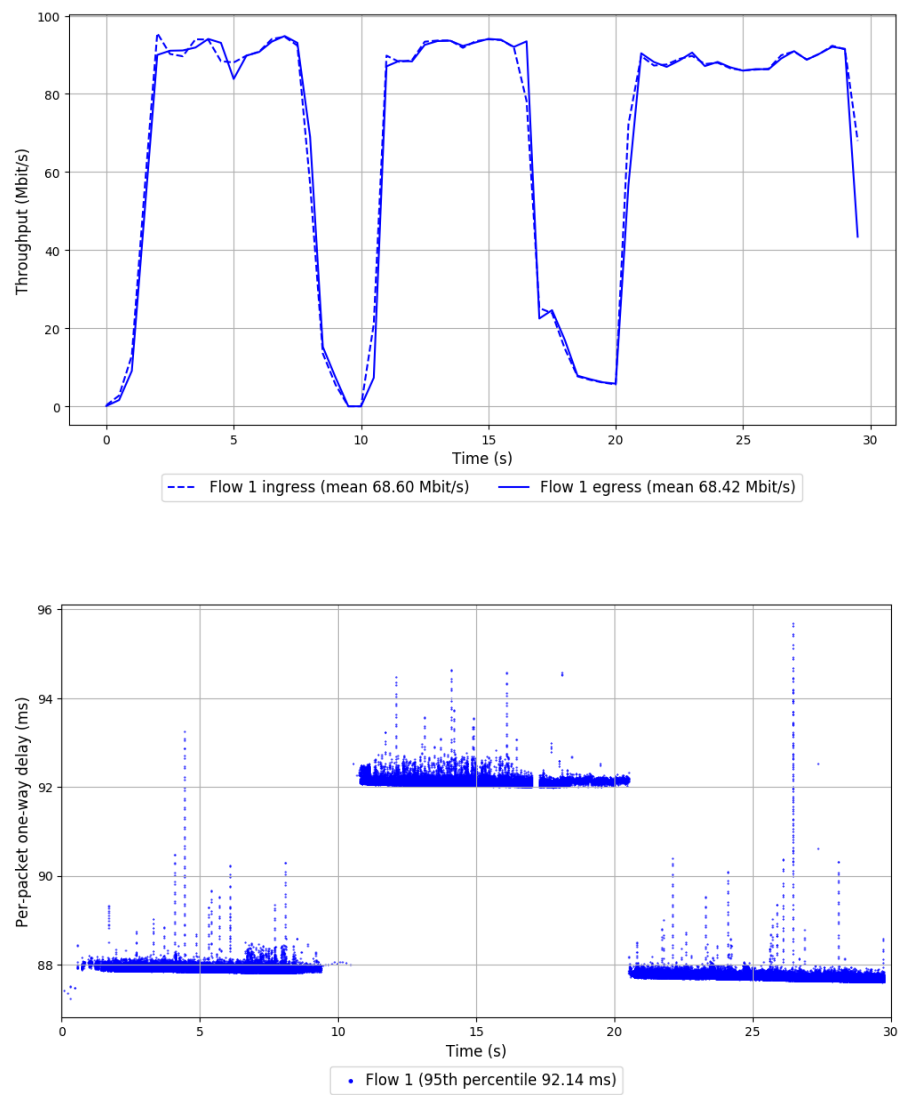
-- Flow 1:

Average throughput: 68.42 Mbit/s

95th percentile per-packet one-way delay: 92.137 ms

Loss rate: 0.99%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-01-01 22:20:24

End at: 2018-01-01 22:20:54

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 71.97 Mbit/s

95th percentile per-packet one-way delay: 99.708 ms

Loss rate: 0.96%

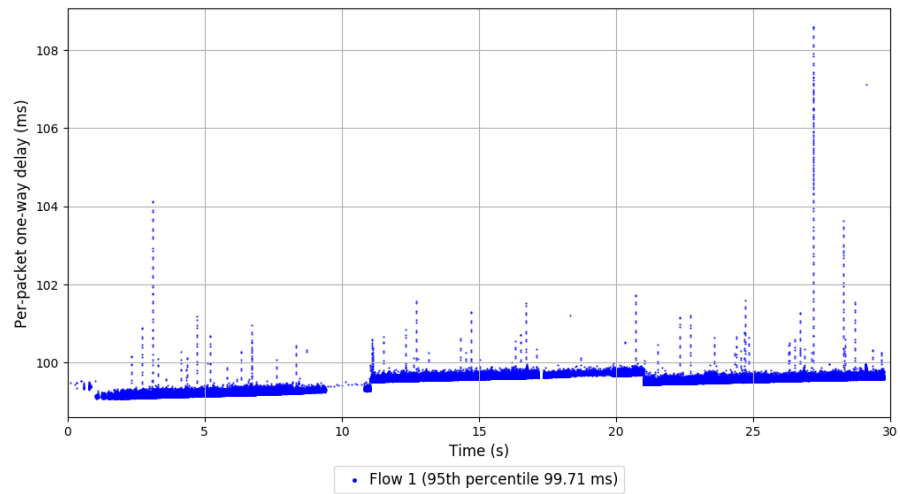
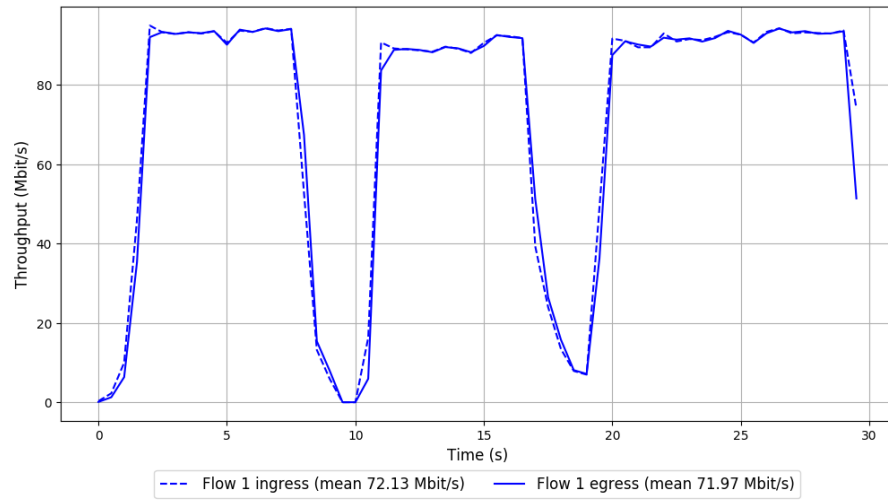
-- Flow 1:

Average throughput: 71.97 Mbit/s

95th percentile per-packet one-way delay: 99.708 ms

Loss rate: 0.96%

#### Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-01-01 22:33:02

End at: 2018-01-01 22:33:32

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 68.60 Mbit/s

95th percentile per-packet one-way delay: 99.971 ms

Loss rate: 0.86%

-- Flow 1:

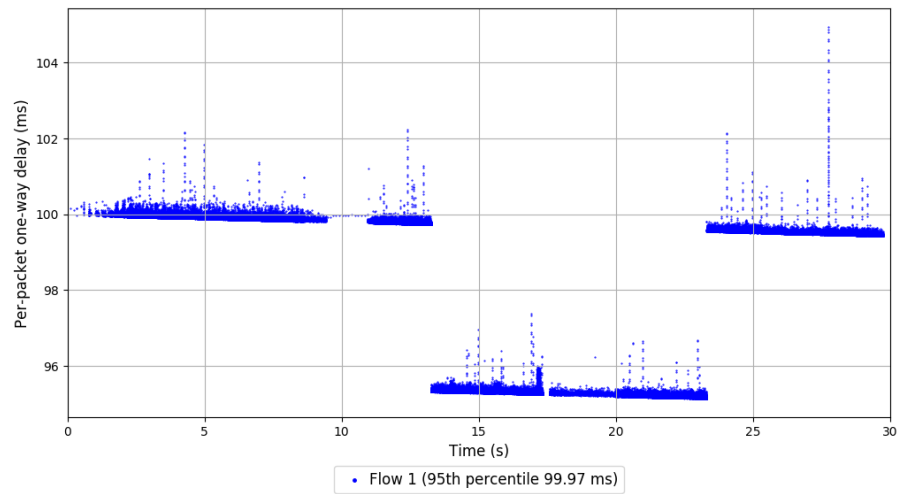
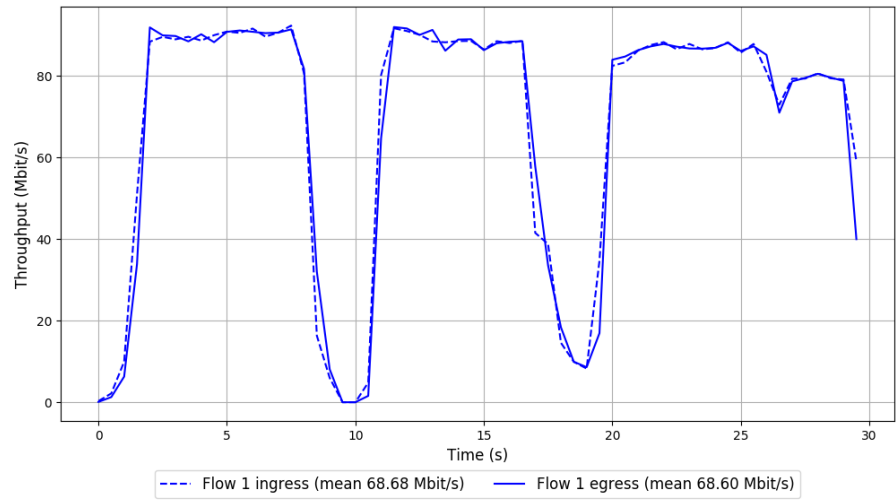
Average throughput: 68.60 Mbit/s

95th percentile per-packet one-way delay: 99.971 ms

Loss rate: 0.86%



### Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2018-01-01 22:45:36

End at: 2018-01-01 22:46:06

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 70.86 Mbit/s

95th percentile per-packet one-way delay: 94.347 ms

Loss rate: 0.92%

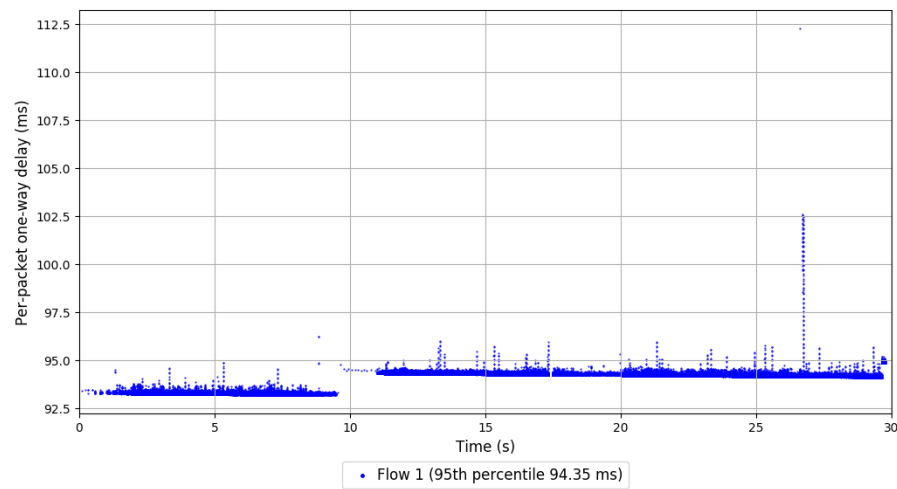
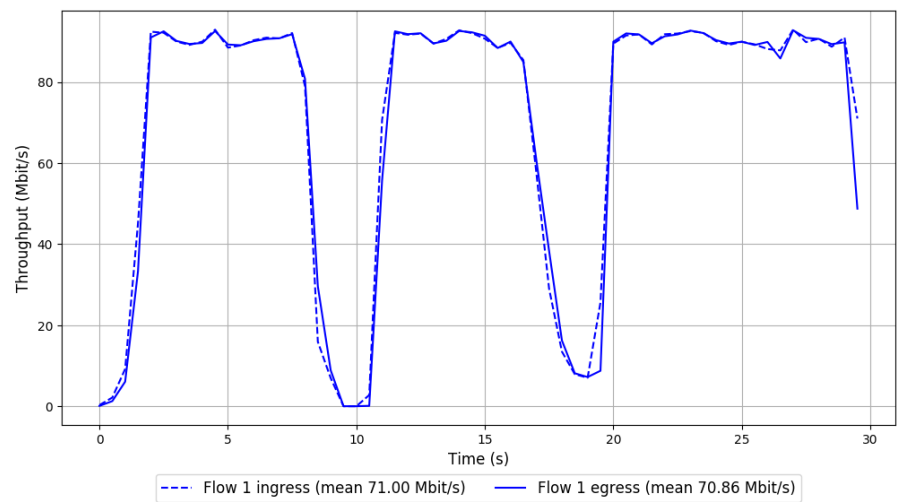
-- Flow 1:

Average throughput: 70.86 Mbit/s

95th percentile per-packet one-way delay: 94.347 ms

Loss rate: 0.92%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2018-01-01 22:57:59

End at: 2018-01-01 22:58:29

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 71.82 Mbit/s

95th percentile per-packet one-way delay: 92.584 ms

Loss rate: 0.98%

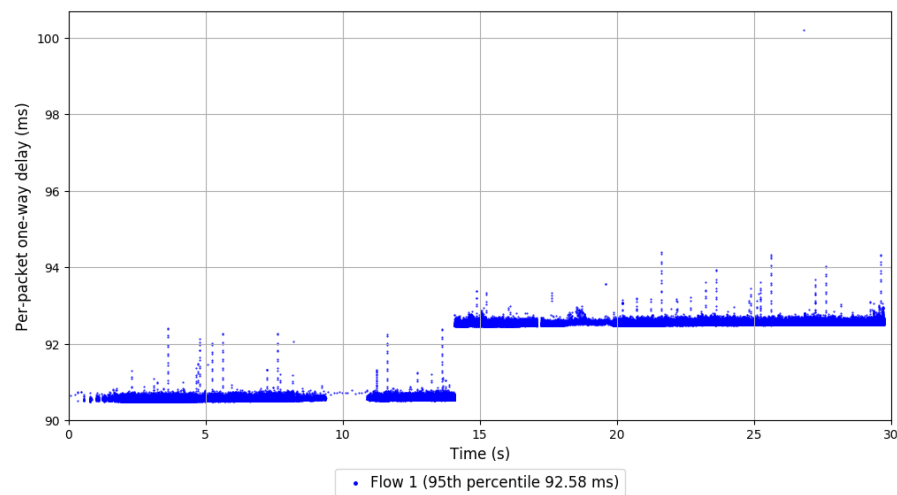
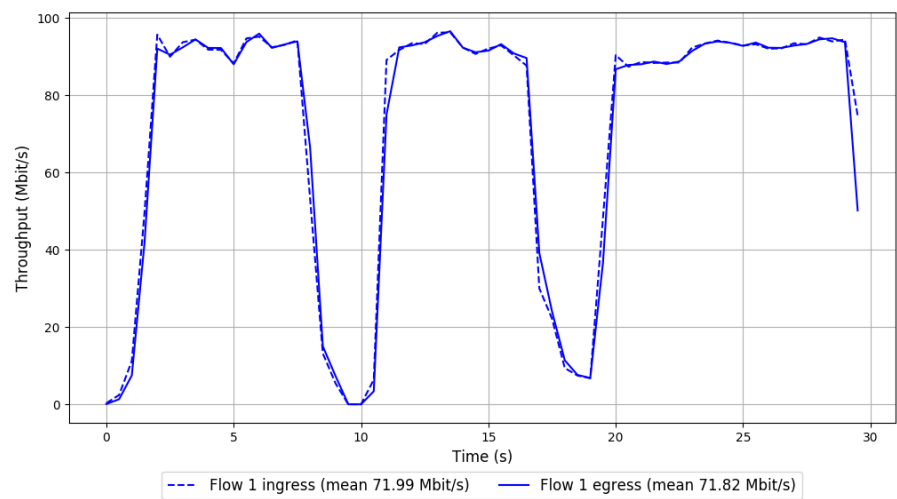
-- Flow 1:

Average throughput: 71.82 Mbit/s

95th percentile per-packet one-way delay: 92.584 ms

Loss rate: 0.98%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2018-01-01 23:10:20

End at: 2018-01-01 23:10:50

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 70.26 Mbit/s

95th percentile per-packet one-way delay: 97.988 ms

Loss rate: 0.90%

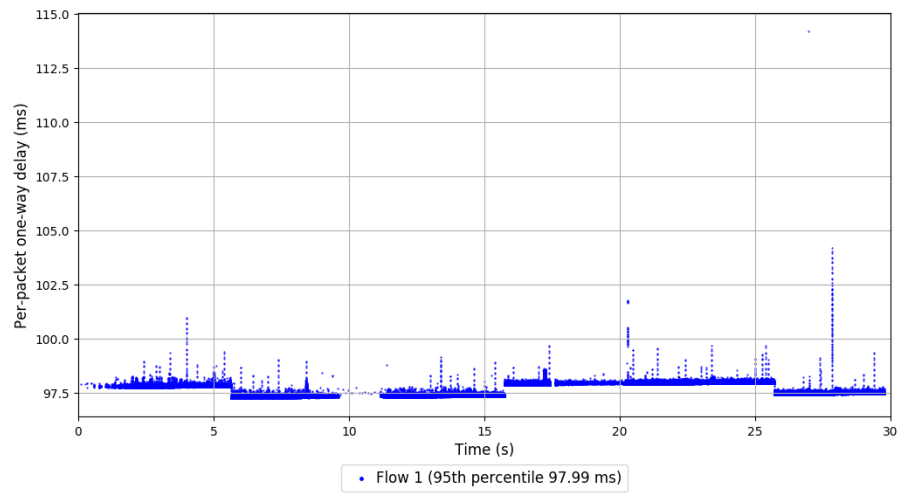
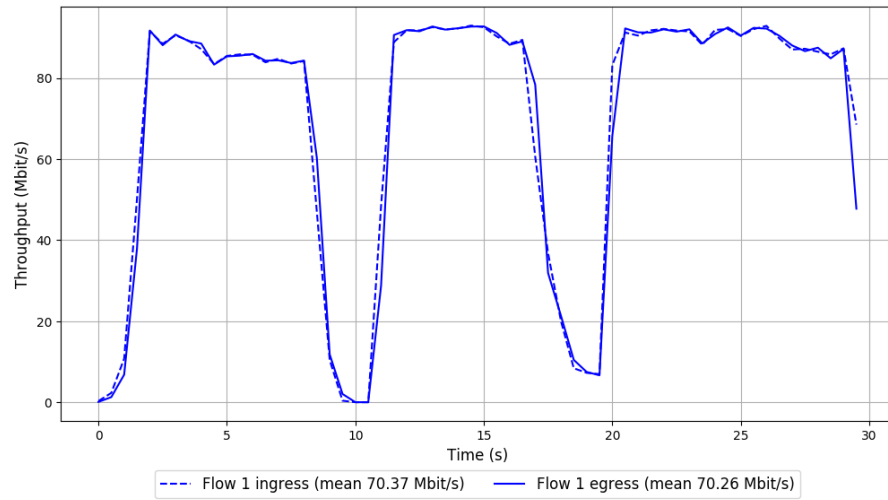
-- Flow 1:

Average throughput: 70.26 Mbit/s

95th percentile per-packet one-way delay: 97.988 ms

Loss rate: 0.90%

## Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2018-01-01 23:22:56

End at: 2018-01-01 23:23:26

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 71.16 Mbit/s

95th percentile per-packet one-way delay: 103.504 ms

Loss rate: 0.92%

-- Flow 1:

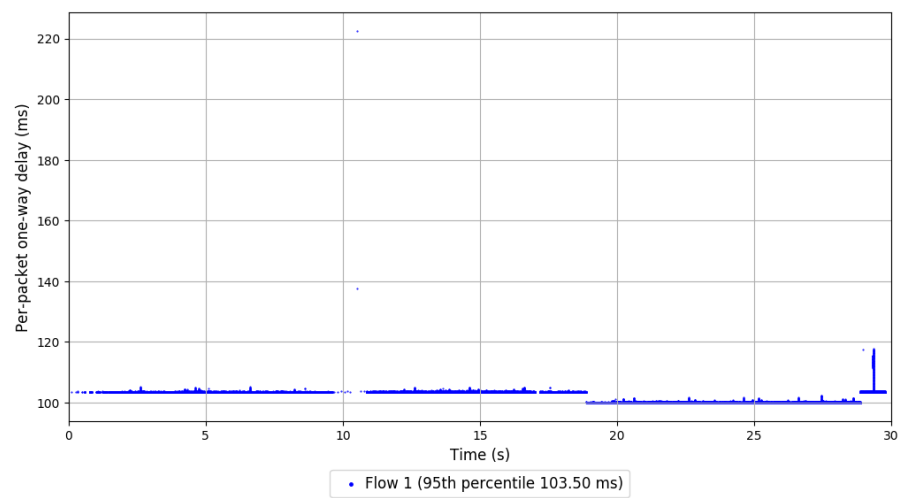
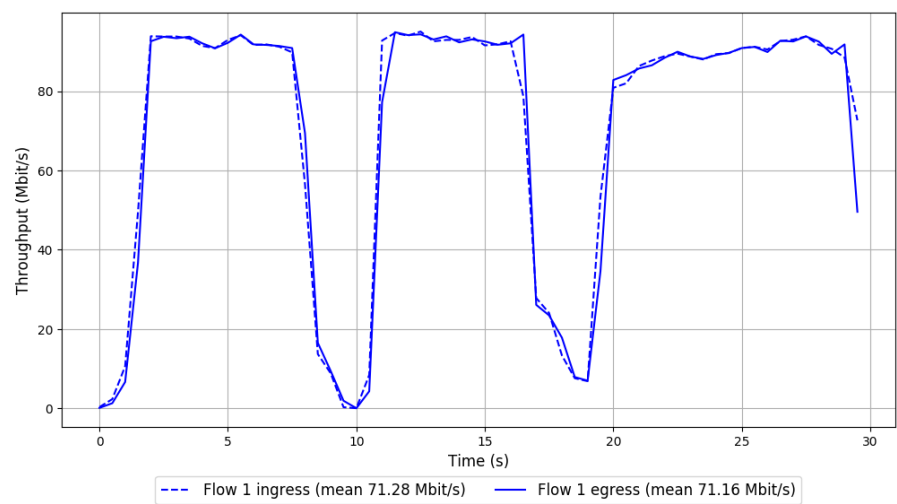
Average throughput: 71.16 Mbit/s

95th percentile per-packet one-way delay: 103.504 ms

Loss rate: 0.92%



Run 9: Report of QUIC Cubic — Data Link

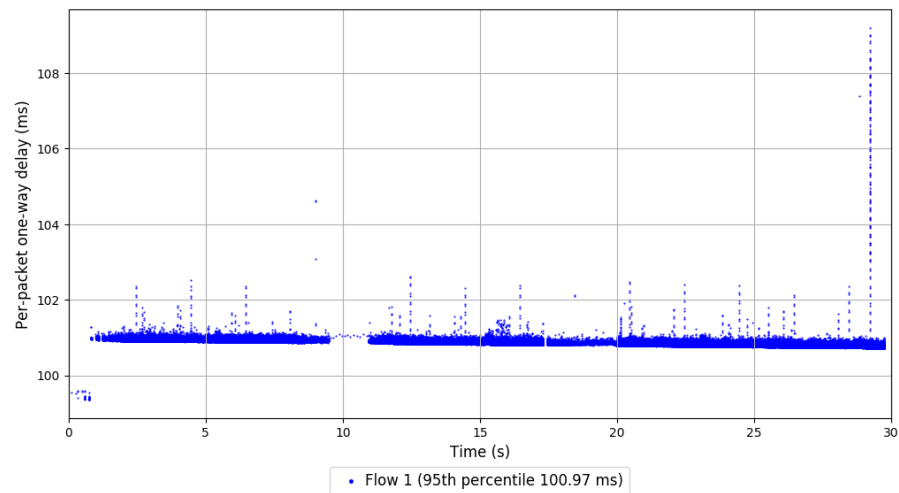
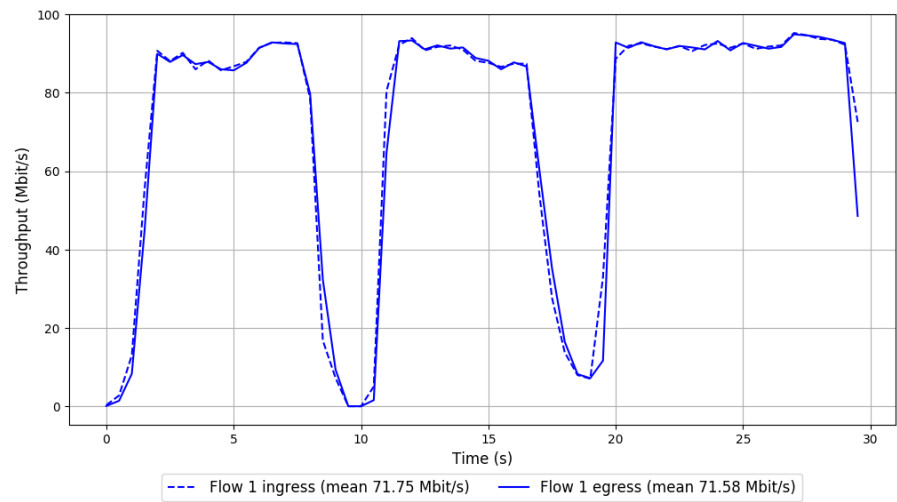


```
Run 10: Statistics of QUIC Cubic

Start at: 2018-01-01 23:35:25
End at: 2018-01-01 23:35:55

# Below is generated by plot.py at 2018-01-02 02:09:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 71.58 Mbit/s
95th percentile per-packet one-way delay: 100.967 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 71.58 Mbit/s
95th percentile per-packet one-way delay: 100.967 ms
Loss rate: 0.99%
```

Run 10: Report of QUIC Cubic — Data Link

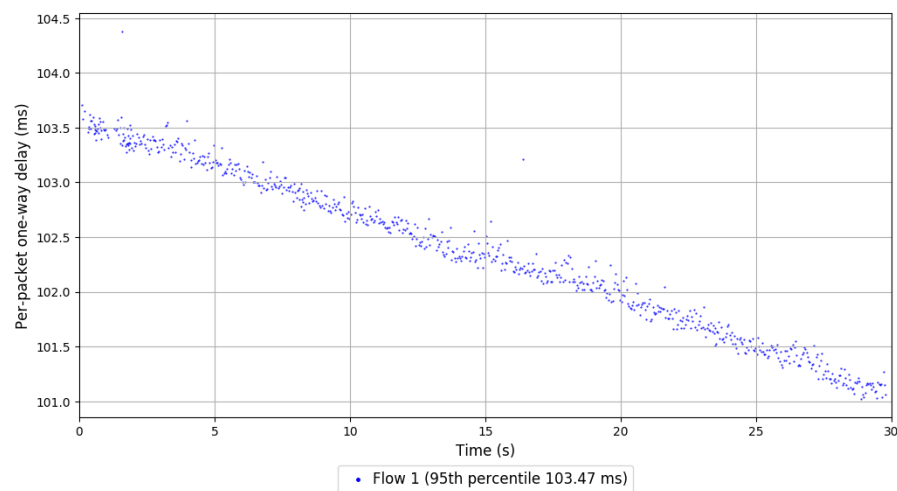
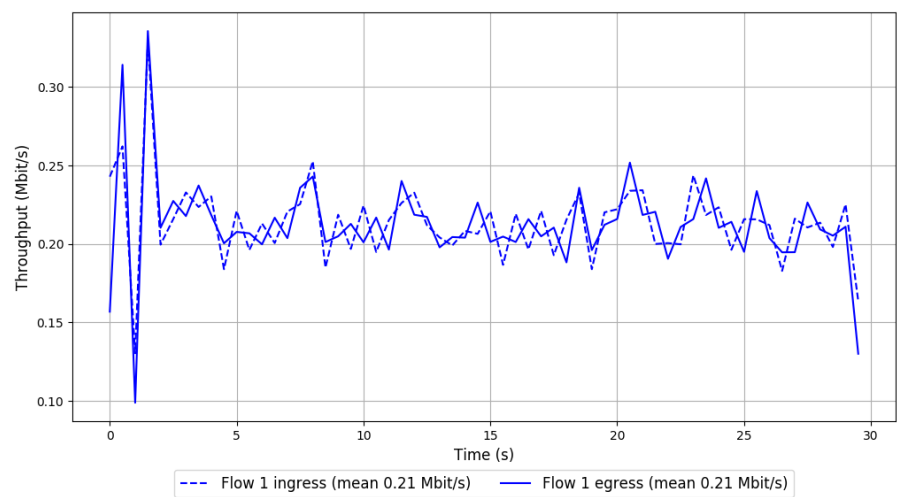


```
Run 1: Statistics of SCReAM

Start at: 2018-01-01 21:38:34
End at: 2018-01-01 21:39:04

# Below is generated by plot.py at 2018-01-02 02:09:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 103.472 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 103.472 ms
Loss rate: 0.64%
```

Run 1: Report of SReAM — Data Link

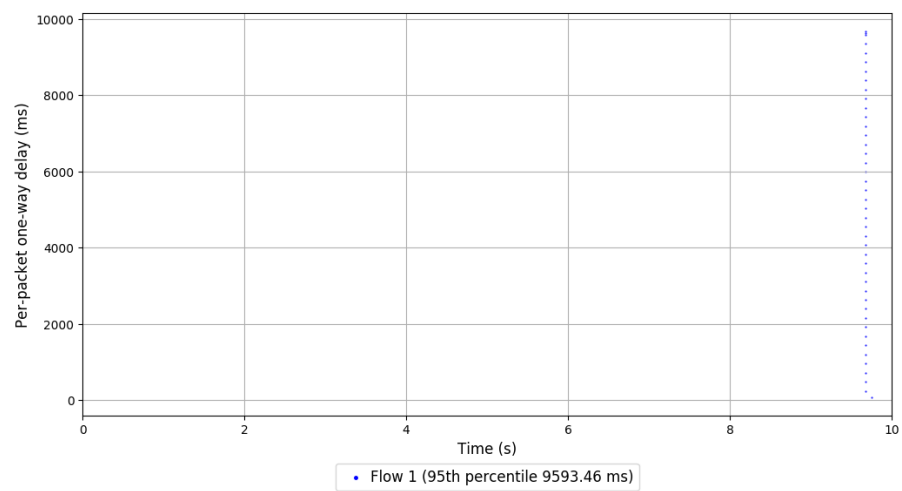
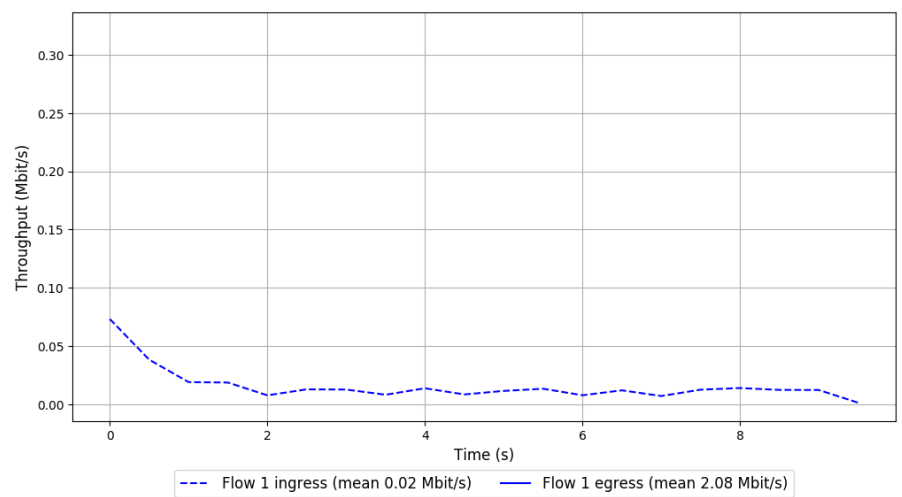


Run 2: Statistics of SReAM

Start at: 2018-01-01 21:50:53

End at: 2018-01-01 21:51:23

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2018-01-01 22:03:08

End at: 2018-01-01 22:03:39

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 84.659 ms

Loss rate: 0.76%

-- Flow 1:

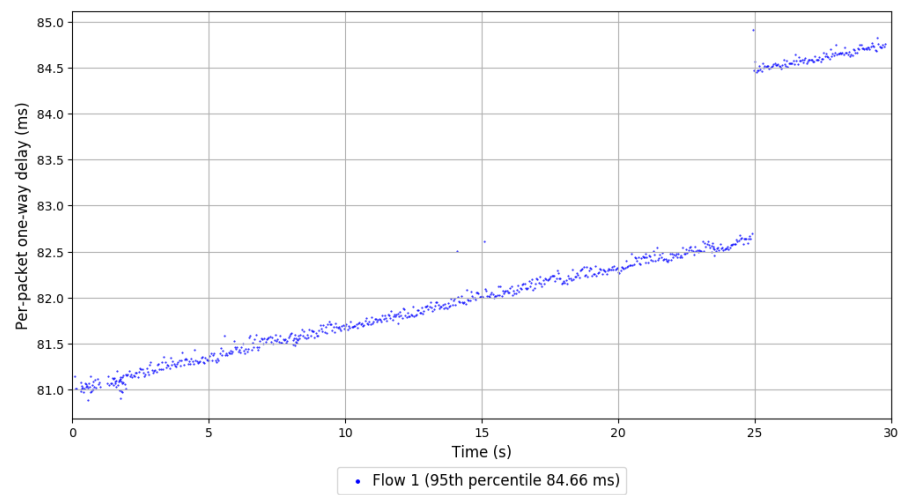
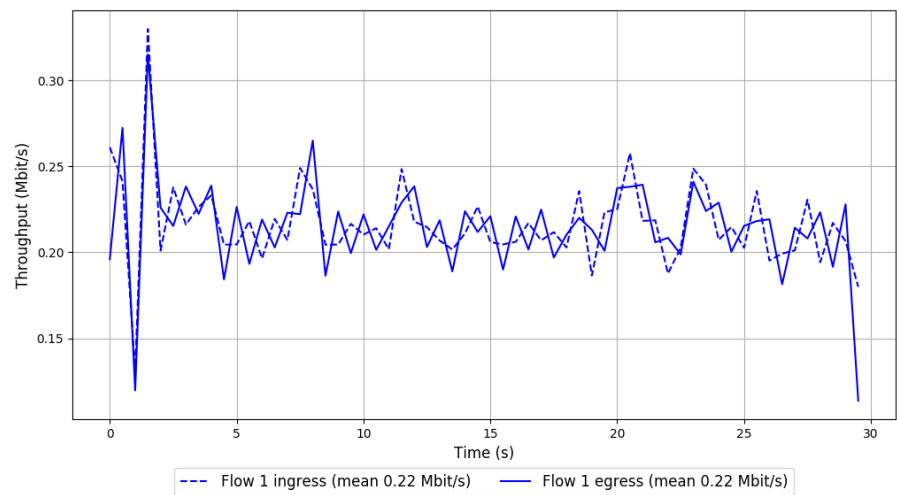
Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 84.659 ms

Loss rate: 0.76%



Run 3: Report of SReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2018-01-01 22:15:40

End at: 2018-01-01 22:16:10

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 90.383 ms

Loss rate: 0.76%

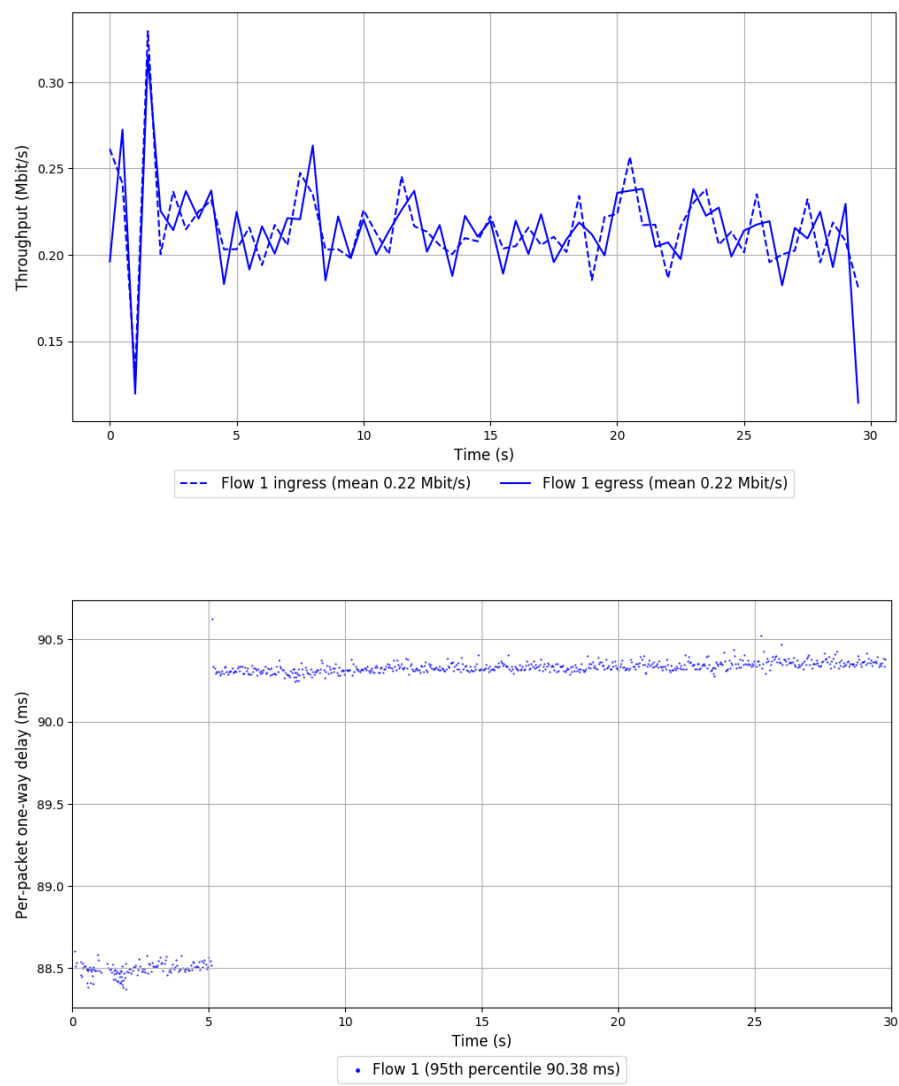
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 90.383 ms

Loss rate: 0.76%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2018-01-01 22:28:20

End at: 2018-01-01 22:28:50

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 102.267 ms

Loss rate: 0.64%

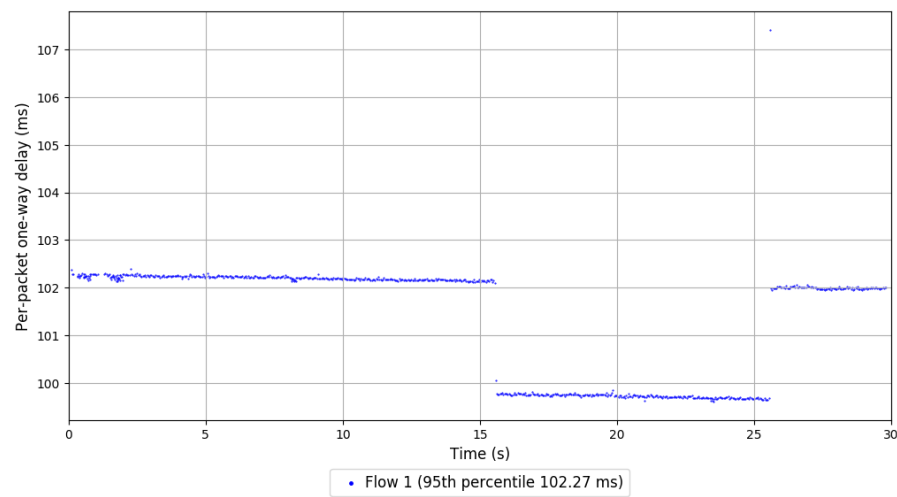
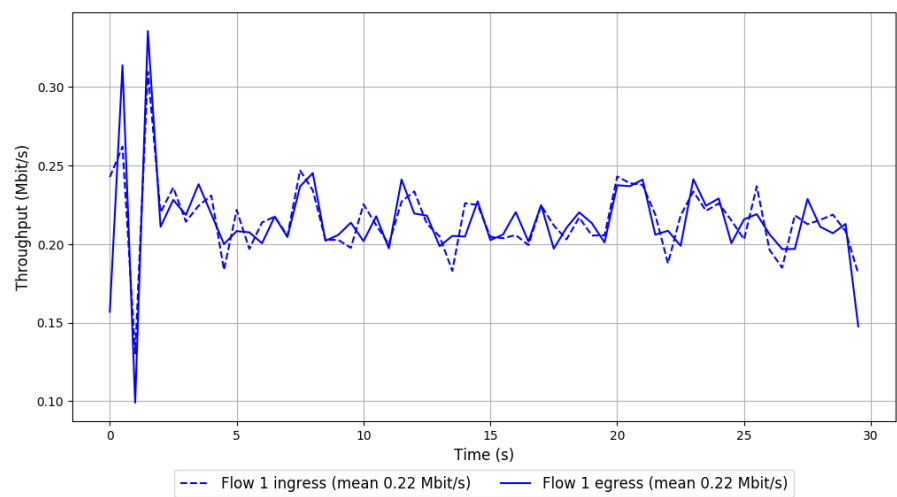
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 102.267 ms

Loss rate: 0.64%

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SCReAM

Start at: 2018-01-01 22:40:55

End at: 2018-01-01 22:41:25

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 97.210 ms

Loss rate: 0.64%

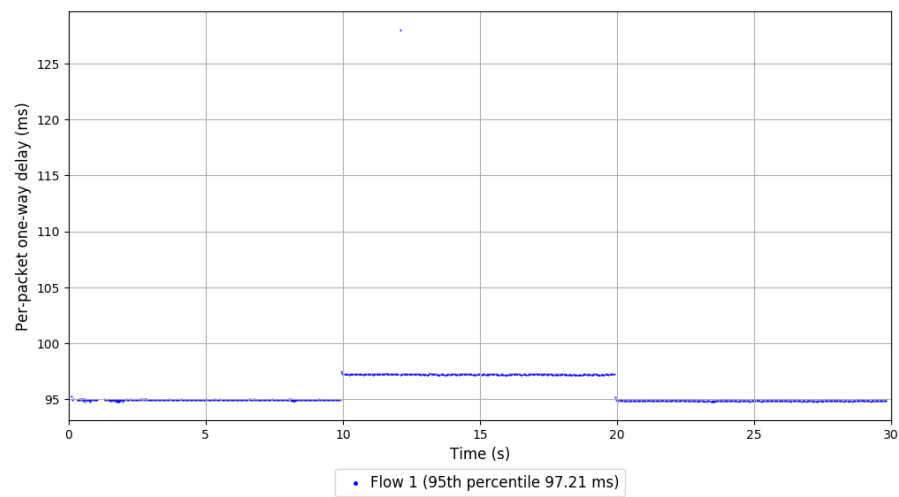
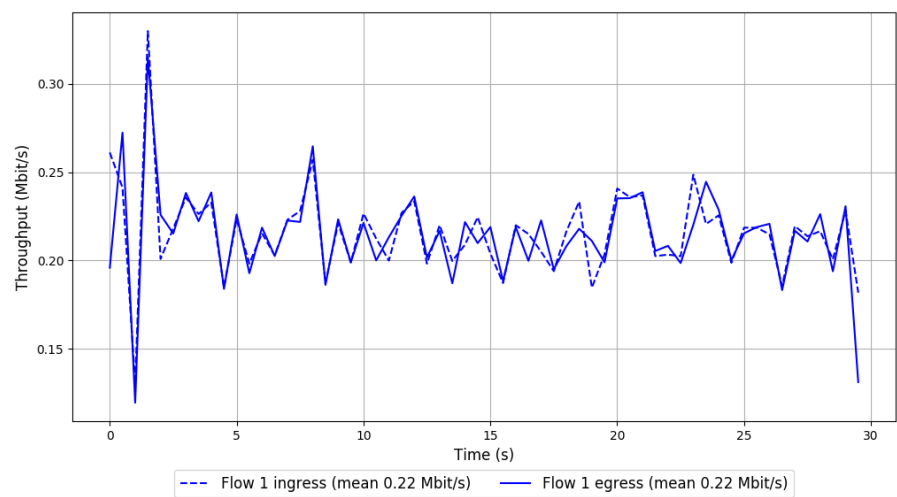
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 97.210 ms

Loss rate: 0.64%

Run 6: Report of SReAM — Data Link



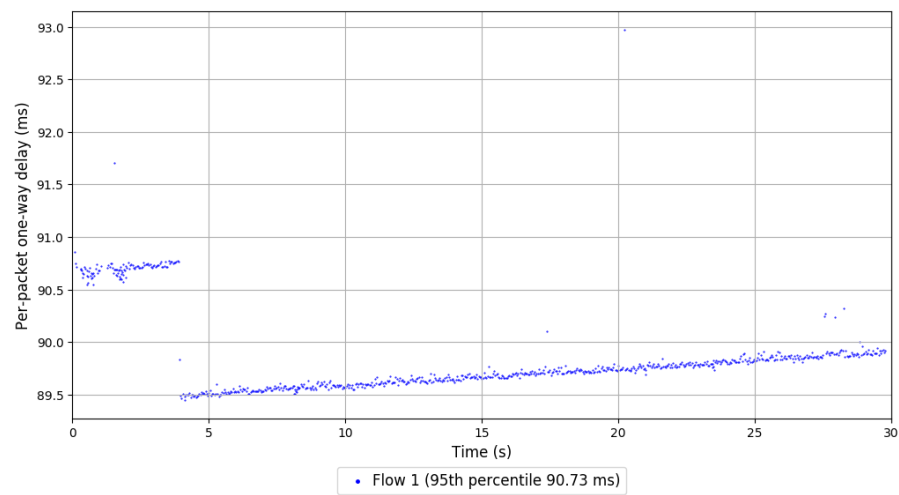
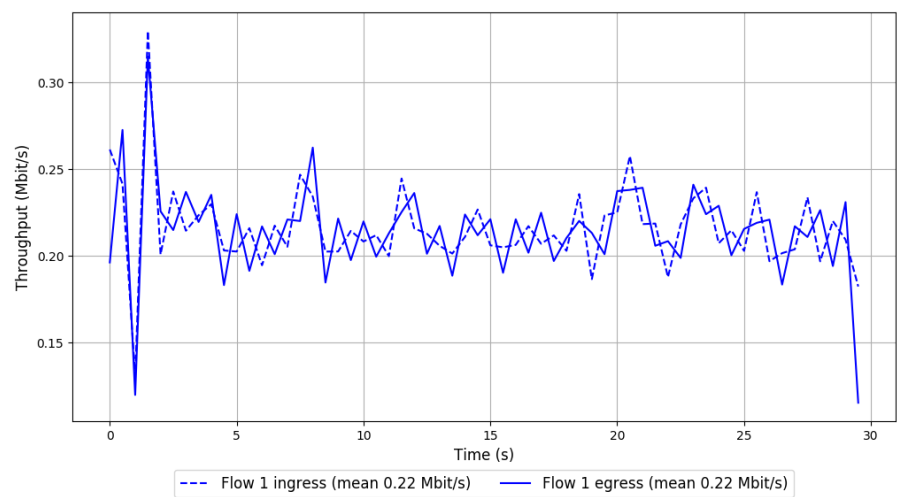
```
Run 7: Statistics of SCReAM

Start at: 2018-01-01 22:53:21
End at: 2018-01-01 22:53:51

# Below is generated by plot.py at 2018-01-02 02:09:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 90.727 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 90.727 ms
Loss rate: 0.77%
```



Run 7: Report of SReAM — Data Link



Run 8: Statistics of SCReAM

Start at: 2018-01-01 23:05:38

End at: 2018-01-01 23:06:08

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 94.457 ms

Loss rate: 0.77%

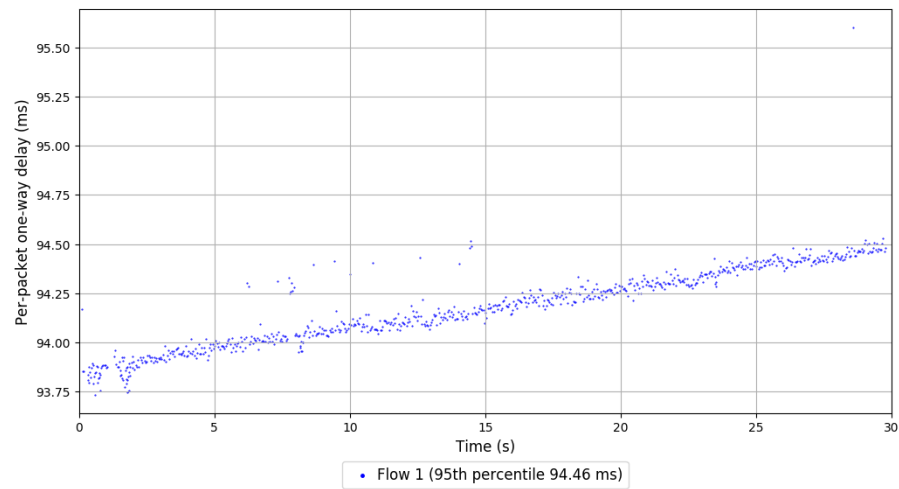
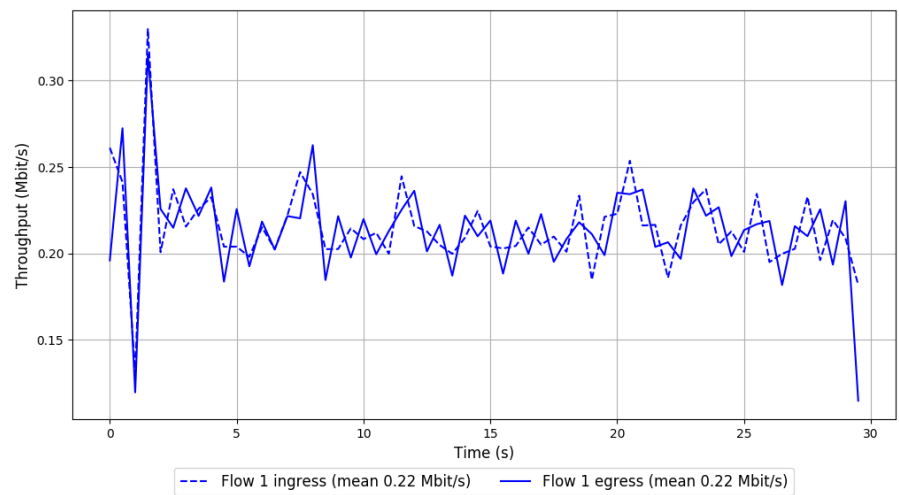
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 94.457 ms

Loss rate: 0.77%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SCReAM

Start at: 2018-01-01 23:18:14

End at: 2018-01-01 23:18:44

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 99.611 ms

Loss rate: 0.64%

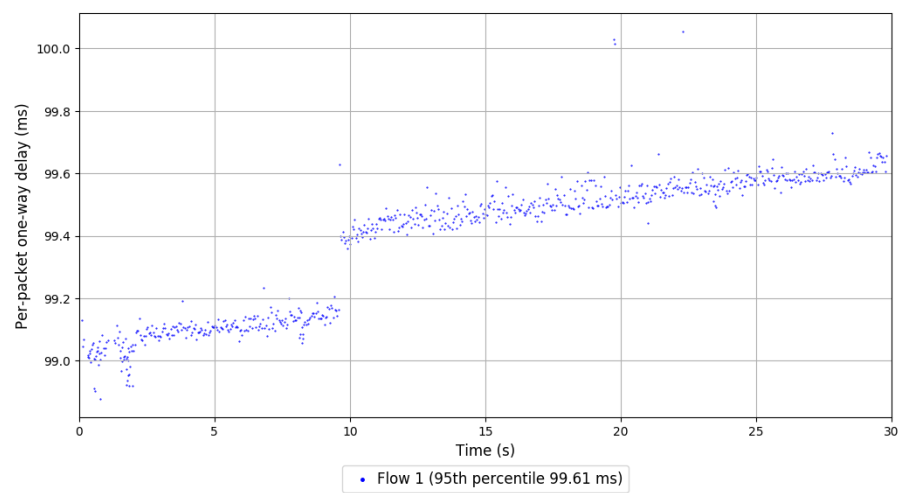
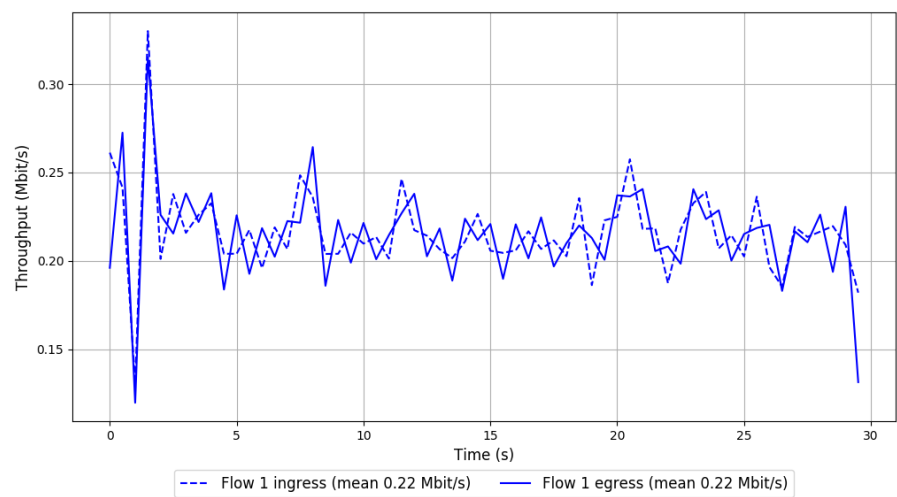
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 99.611 ms

Loss rate: 0.64%

Run 9: Report of SReAM — Data Link



Run 10: Statistics of SReAM

Start at: 2018-01-01 23:30:43

End at: 2018-01-01 23:31:13

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 100.668 ms

Loss rate: 0.64%

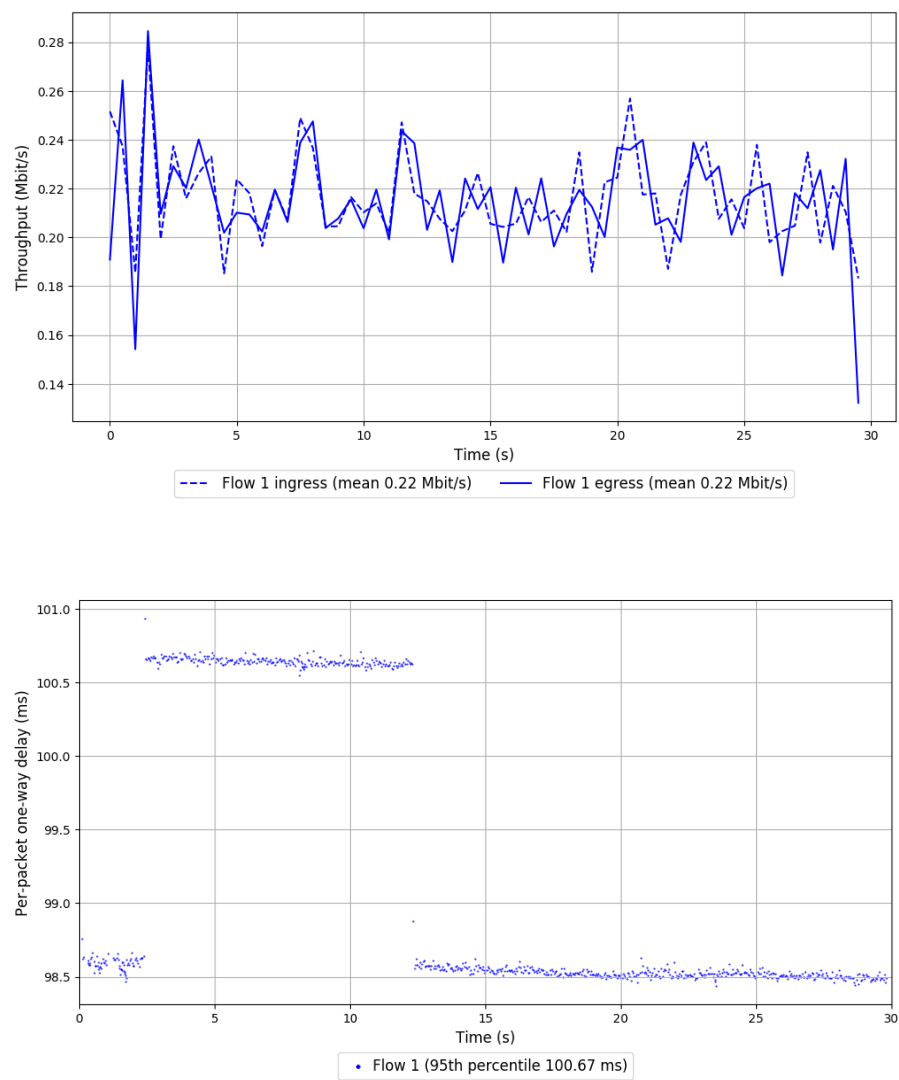
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 100.668 ms

Loss rate: 0.64%

Run 10: Report of SCRaM — Data Link



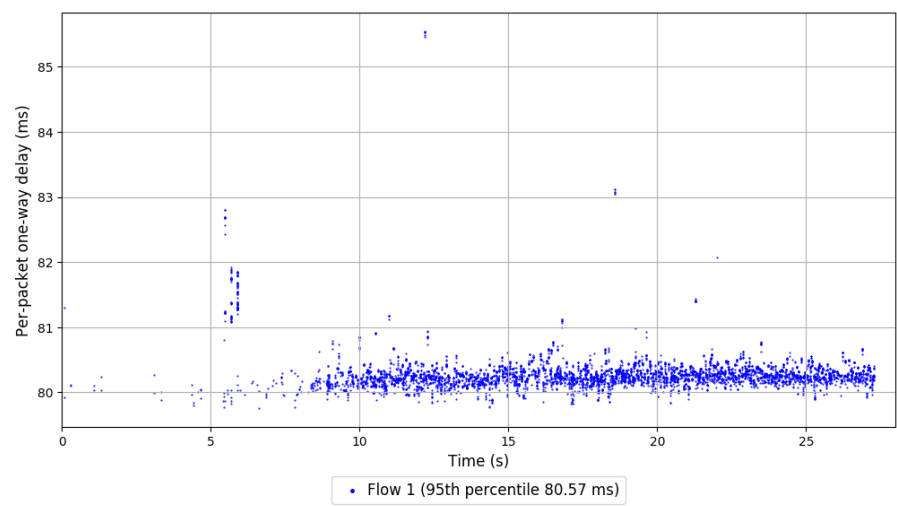
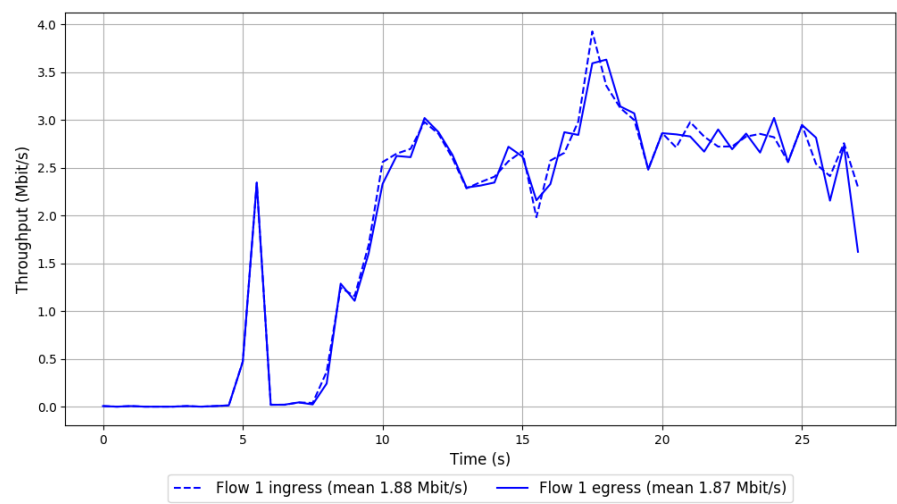
```
Run 1: Statistics of WebRTC media

Start at: 2018-01-01 21:45:22
End at: 2018-01-01 21:45:52

# Below is generated by plot.py at 2018-01-02 02:09:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 80.568 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 80.568 ms
Loss rate: 1.08%
```



Run 1: Report of WebRTC media — Data Link

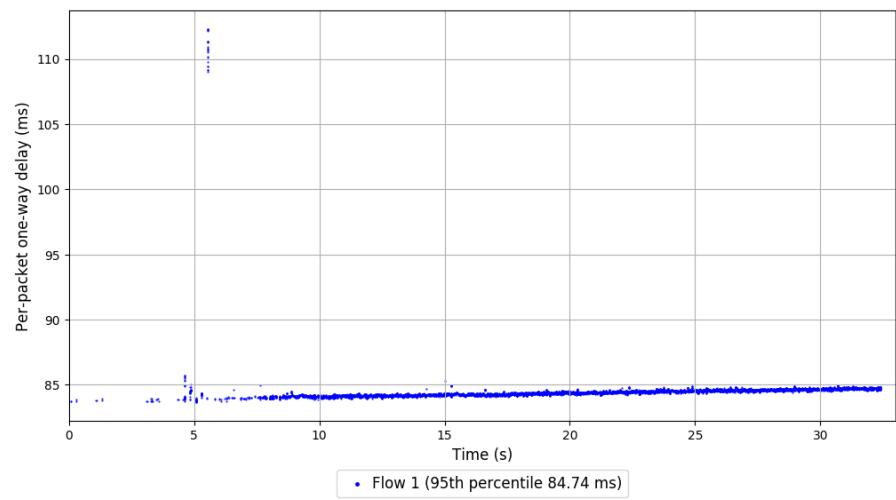
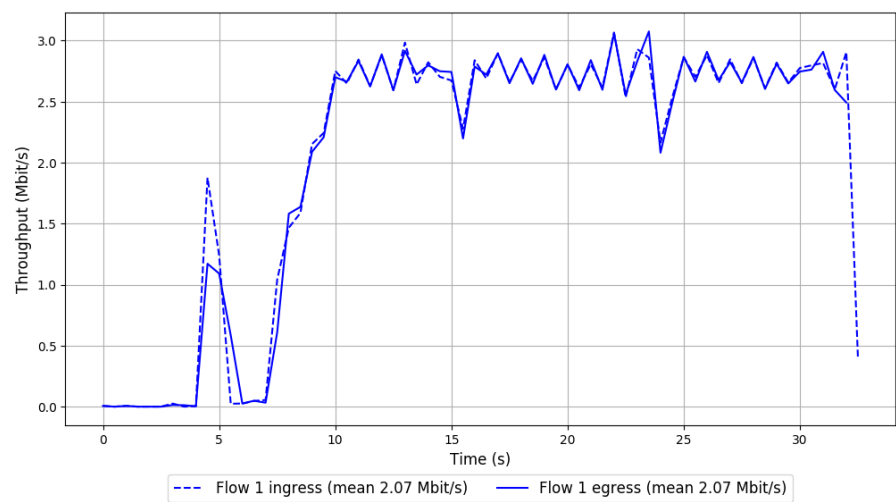


```
Run 2: Statistics of WebRTC media

Start at: 2018-01-01 21:57:41
End at: 2018-01-01 21:58:11

# Below is generated by plot.py at 2018-01-02 02:09:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.07 Mbit/s
95th percentile per-packet one-way delay: 84.741 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 2.07 Mbit/s
95th percentile per-packet one-way delay: 84.741 ms
Loss rate: 1.12%
```

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-01-01 22:10:03

End at: 2018-01-01 22:10:33

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 2.15 Mbit/s

95th percentile per-packet one-way delay: 88.276 ms

Loss rate: 0.92%

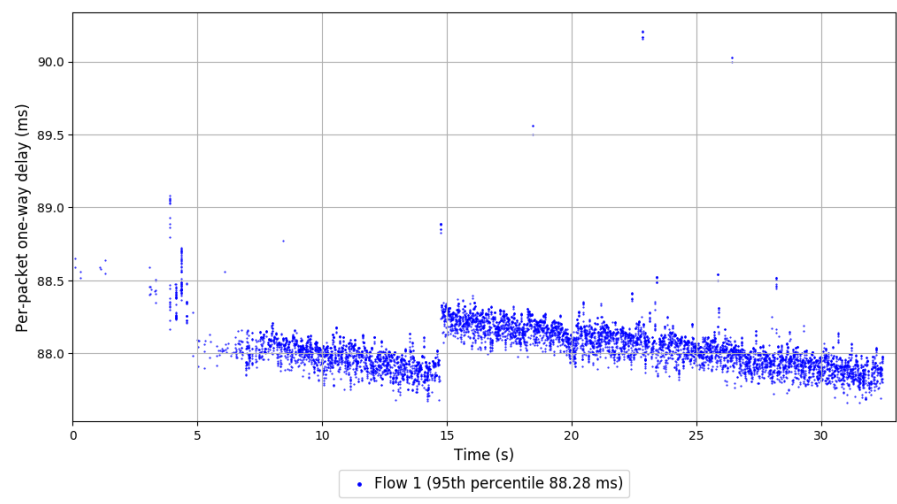
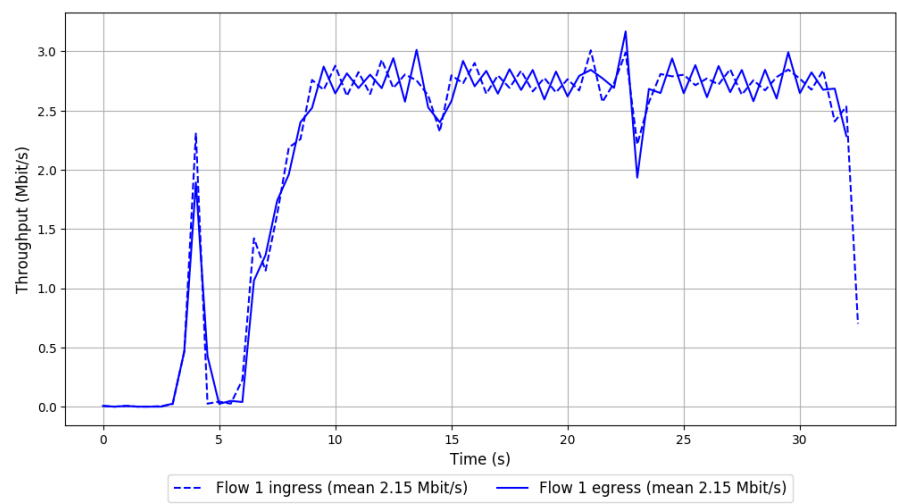
-- Flow 1:

Average throughput: 2.15 Mbit/s

95th percentile per-packet one-way delay: 88.276 ms

Loss rate: 0.92%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-01-01 22:22:35

End at: 2018-01-01 22:23:05

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 2.17 Mbit/s

95th percentile per-packet one-way delay: 101.761 ms

Loss rate: 0.81%

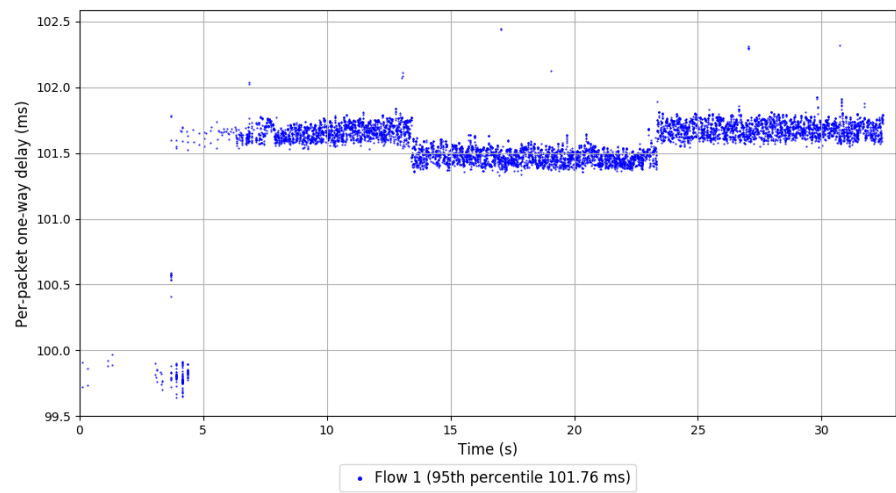
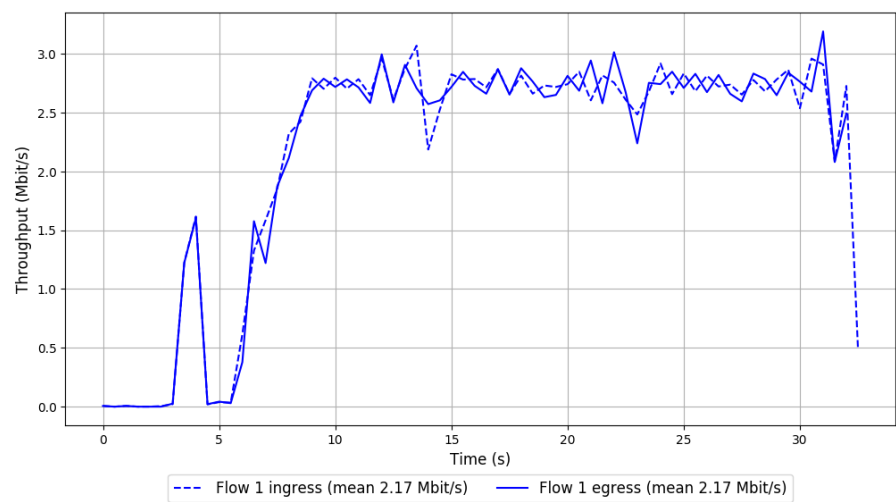
-- Flow 1:

Average throughput: 2.17 Mbit/s

95th percentile per-packet one-way delay: 101.761 ms

Loss rate: 0.81%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-01-01 22:35:10

End at: 2018-01-01 22:35:40

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 2.17 Mbit/s

95th percentile per-packet one-way delay: 95.583 ms

Loss rate: 0.78%

-- Flow 1:

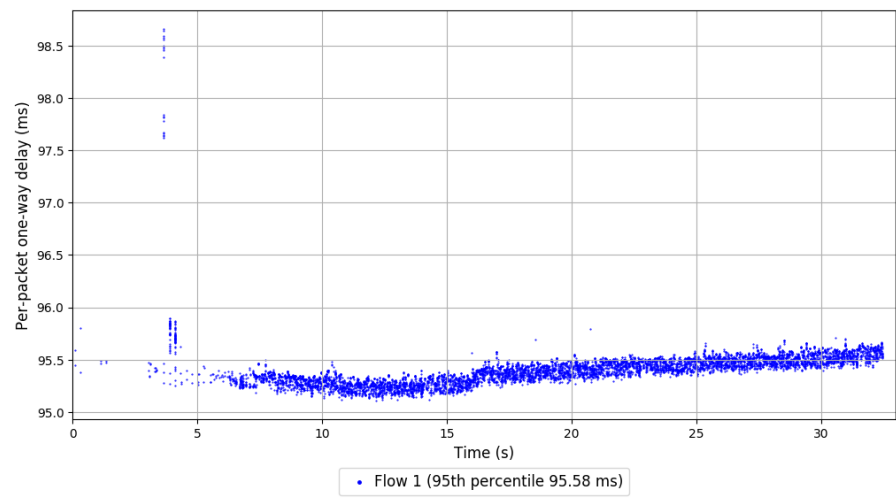
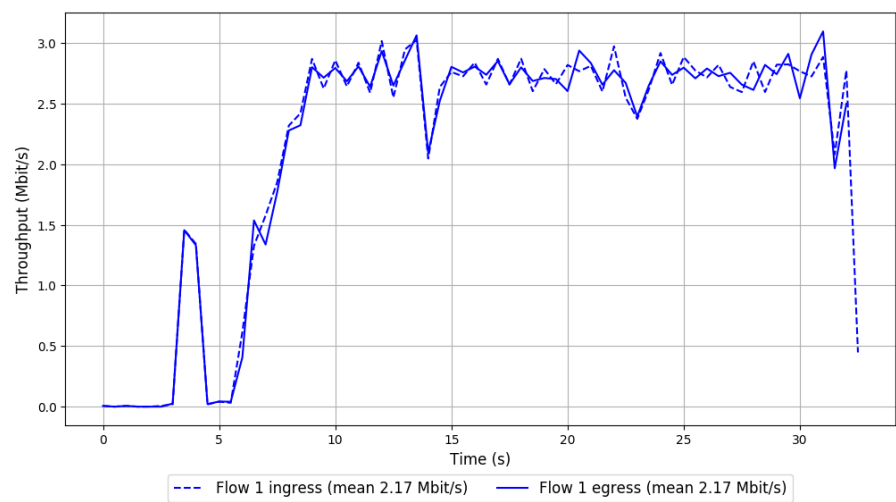
Average throughput: 2.17 Mbit/s

95th percentile per-packet one-way delay: 95.583 ms

Loss rate: 0.78%



Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2018-01-01 22:47:43

End at: 2018-01-01 22:48:13

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 2.17 Mbit/s

95th percentile per-packet one-way delay: 93.723 ms

Loss rate: 0.92%

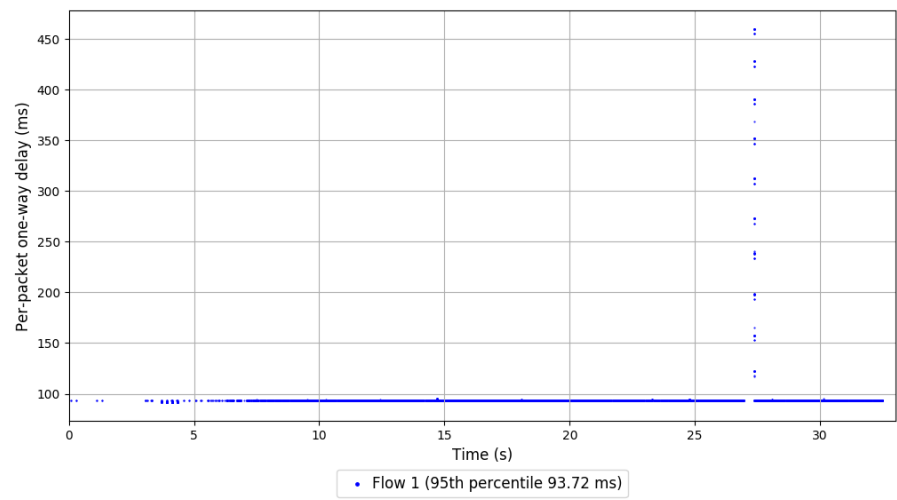
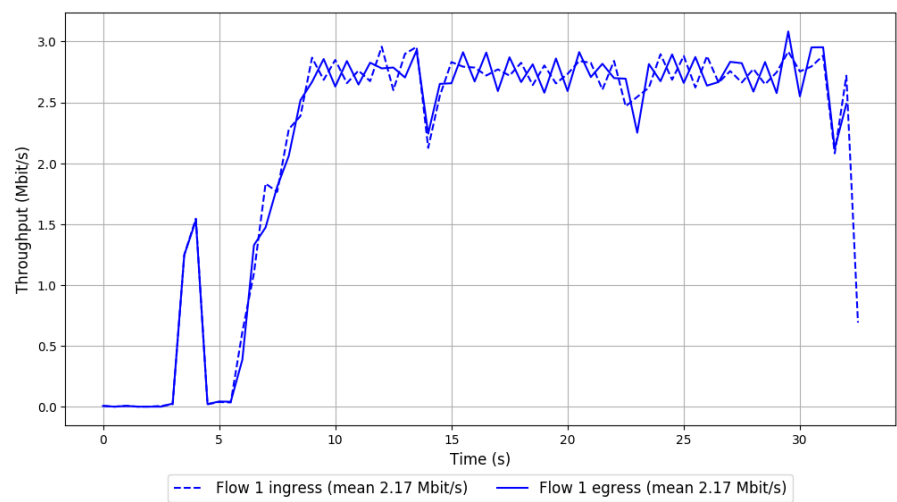
-- Flow 1:

Average throughput: 2.17 Mbit/s

95th percentile per-packet one-way delay: 93.723 ms

Loss rate: 0.92%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2018-01-01 23:00:09

End at: 2018-01-01 23:00:39

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 2.17 Mbit/s

95th percentile per-packet one-way delay: 90.576 ms

Loss rate: 0.91%

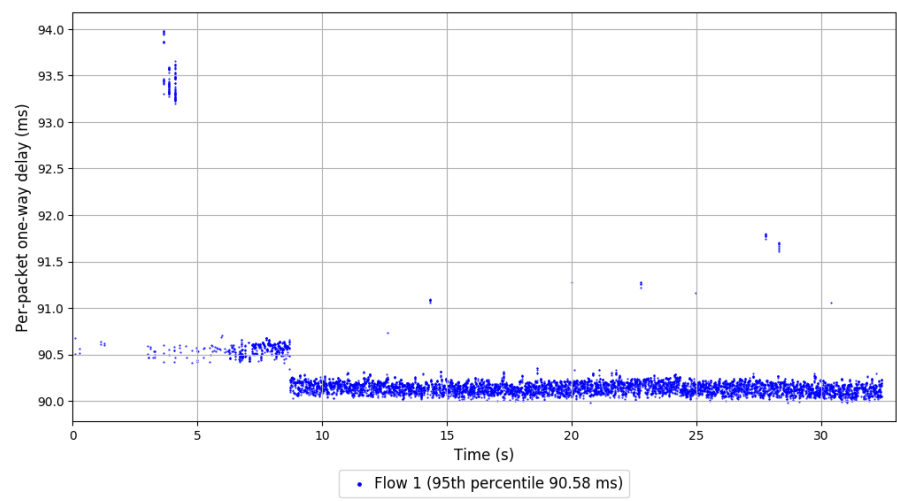
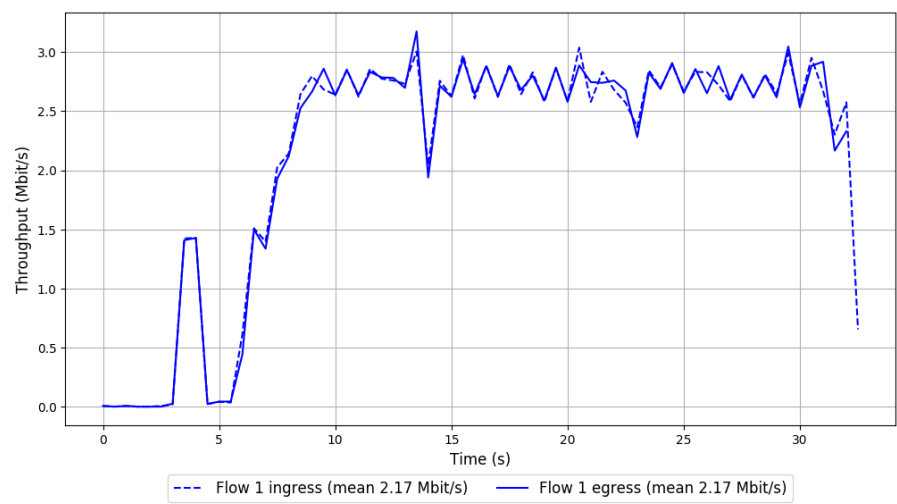
-- Flow 1:

Average throughput: 2.17 Mbit/s

95th percentile per-packet one-way delay: 90.576 ms

Loss rate: 0.91%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2018-01-01 23:12:28

End at: 2018-01-01 23:12:58

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 2.17 Mbit/s

95th percentile per-packet one-way delay: 100.605 ms

Loss rate: 0.77%

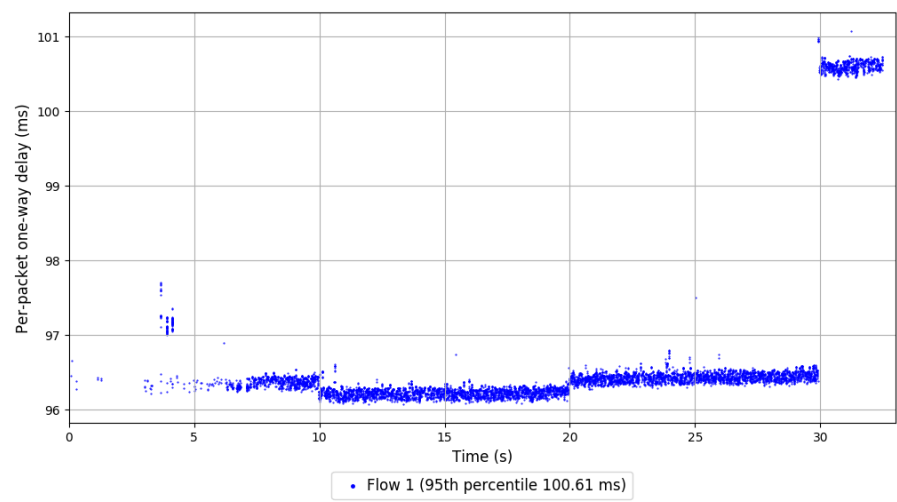
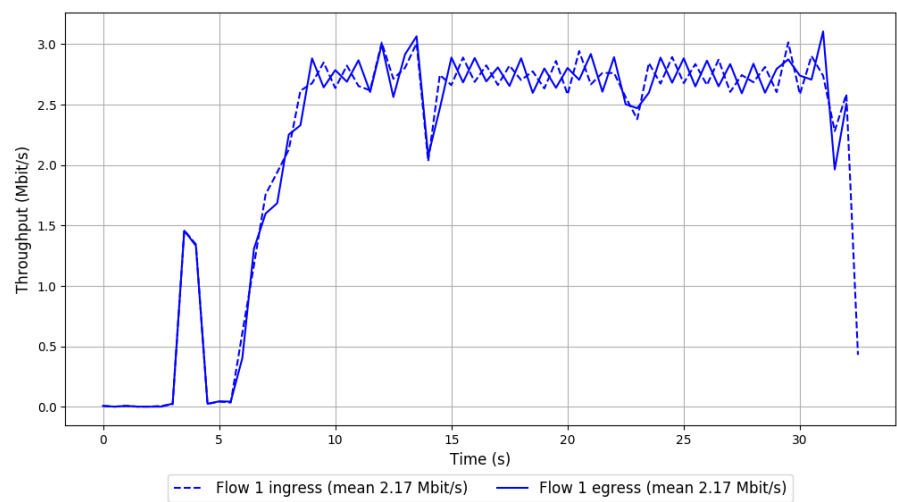
-- Flow 1:

Average throughput: 2.17 Mbit/s

95th percentile per-packet one-way delay: 100.605 ms

Loss rate: 0.77%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2018-01-01 23:25:06

End at: 2018-01-01 23:25:36

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 2.17 Mbit/s

95th percentile per-packet one-way delay: 102.025 ms

Loss rate: 0.93%

-- Flow 1:

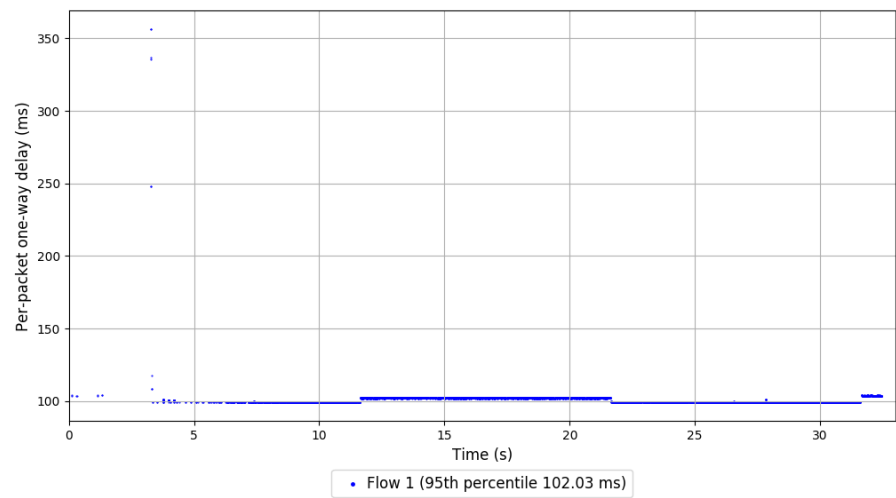
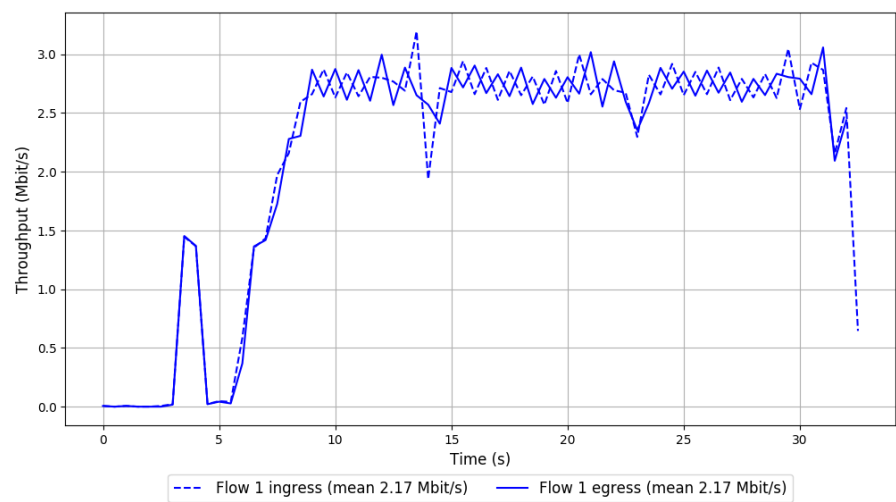
Average throughput: 2.17 Mbit/s

95th percentile per-packet one-way delay: 102.025 ms

Loss rate: 0.93%



Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2018-01-01 23:37:34

End at: 2018-01-01 23:38:04

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 2.16 Mbit/s

95th percentile per-packet one-way delay: 100.137 ms

Loss rate: 0.92%

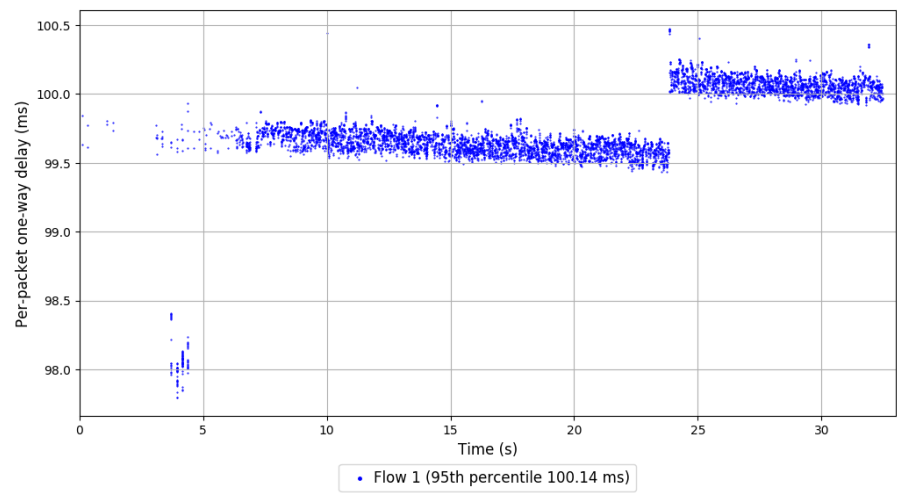
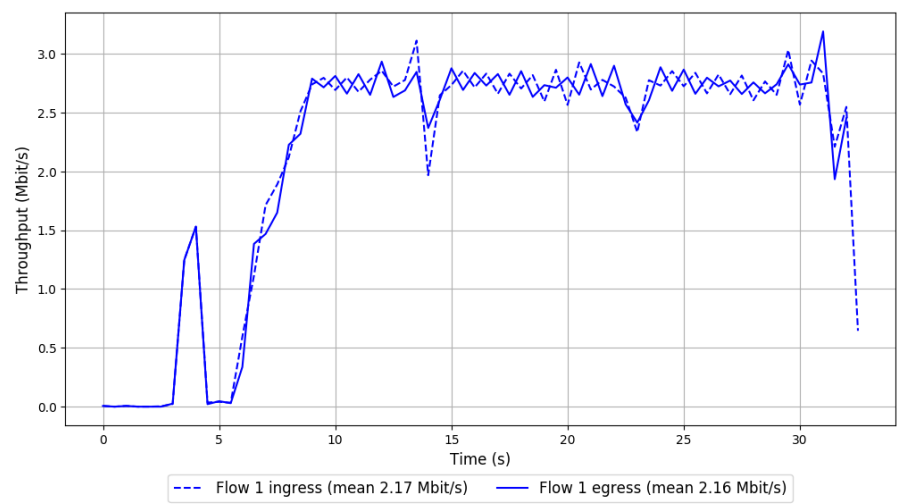
-- Flow 1:

Average throughput: 2.16 Mbit/s

95th percentile per-packet one-way delay: 100.137 ms

Loss rate: 0.92%

Run 10: Report of WebRTC media — Data Link

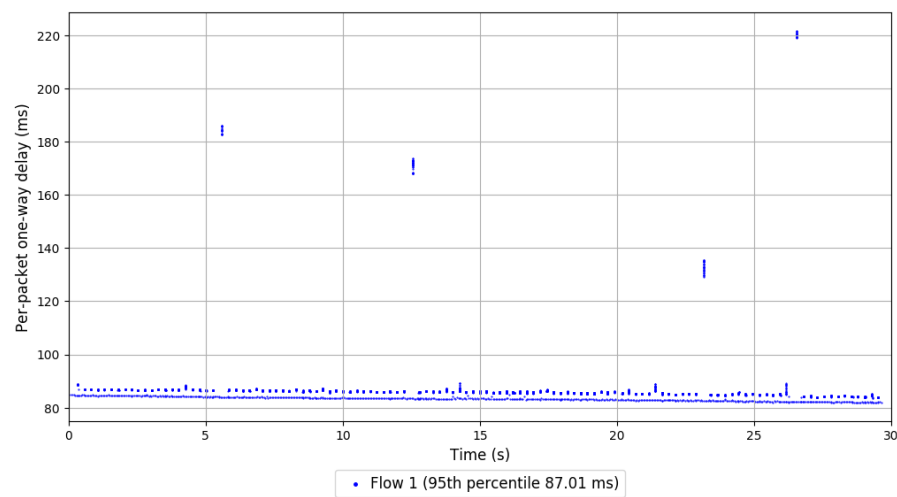
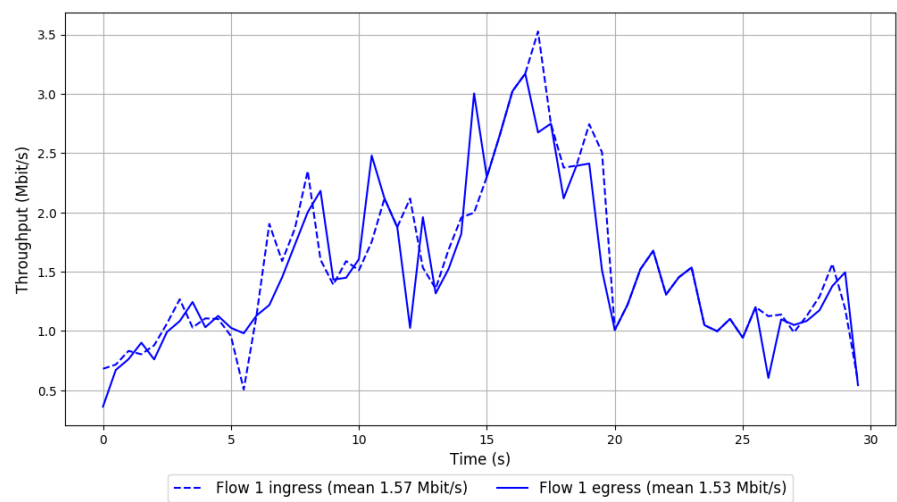


```
Run 1: Statistics of Sprout

Start at: 2018-01-01 21:41:49
End at: 2018-01-01 21:42:19

# Below is generated by plot.py at 2018-01-02 02:09:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.53 Mbit/s
95th percentile per-packet one-way delay: 87.008 ms
Loss rate: 3.22%
-- Flow 1:
Average throughput: 1.53 Mbit/s
95th percentile per-packet one-way delay: 87.008 ms
Loss rate: 3.22%
```

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-01-01 21:54:07

End at: 2018-01-01 21:54:37

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 1.50 Mbit/s

95th percentile per-packet one-way delay: 73.952 ms

Loss rate: 0.62%

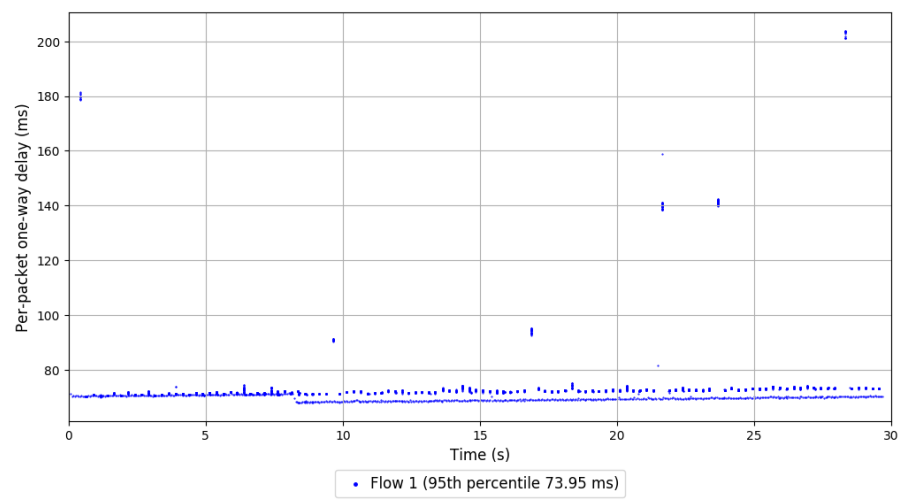
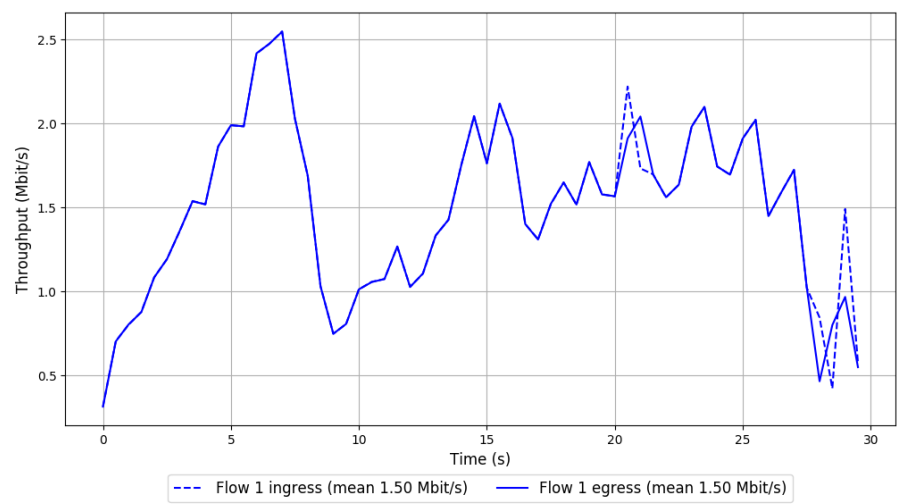
-- Flow 1:

Average throughput: 1.50 Mbit/s

95th percentile per-packet one-way delay: 73.952 ms

Loss rate: 0.62%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-01-01 22:06:23

End at: 2018-01-01 22:06:53

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 2.33 Mbit/s

95th percentile per-packet one-way delay: 91.438 ms

Loss rate: 1.46%

-- Flow 1:

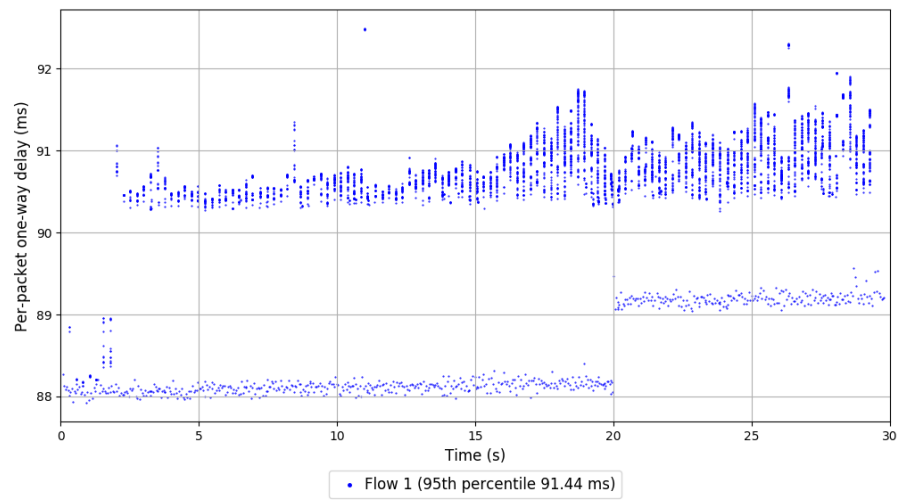
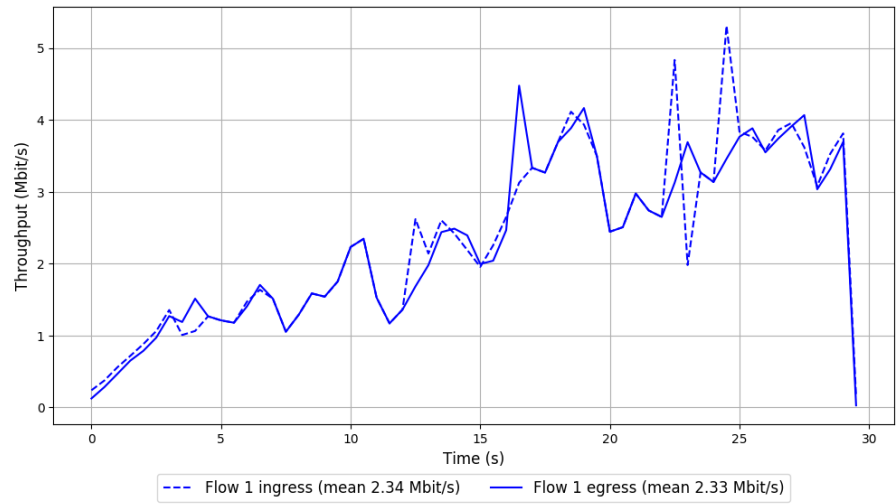
Average throughput: 2.33 Mbit/s

95th percentile per-packet one-way delay: 91.438 ms

Loss rate: 1.46%



### Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2018-01-01 22:18:58

End at: 2018-01-01 22:19:28

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 2.69 Mbit/s

95th percentile per-packet one-way delay: 99.218 ms

Loss rate: 2.12%

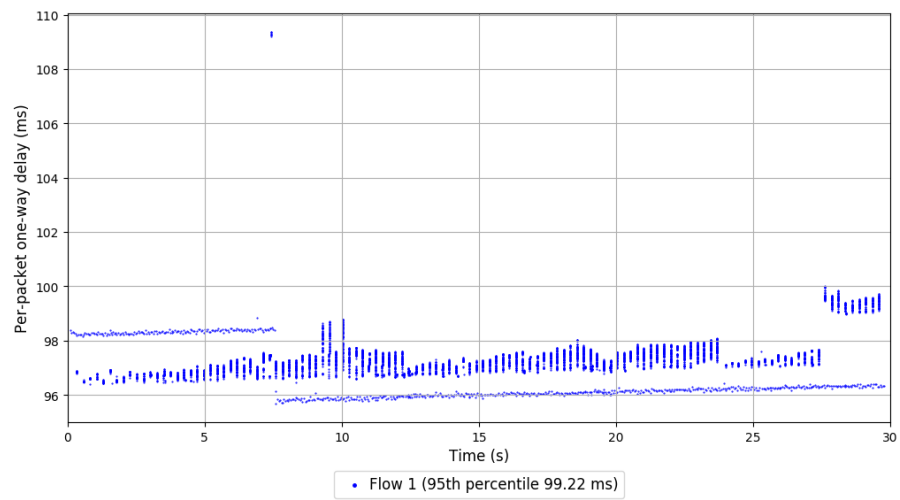
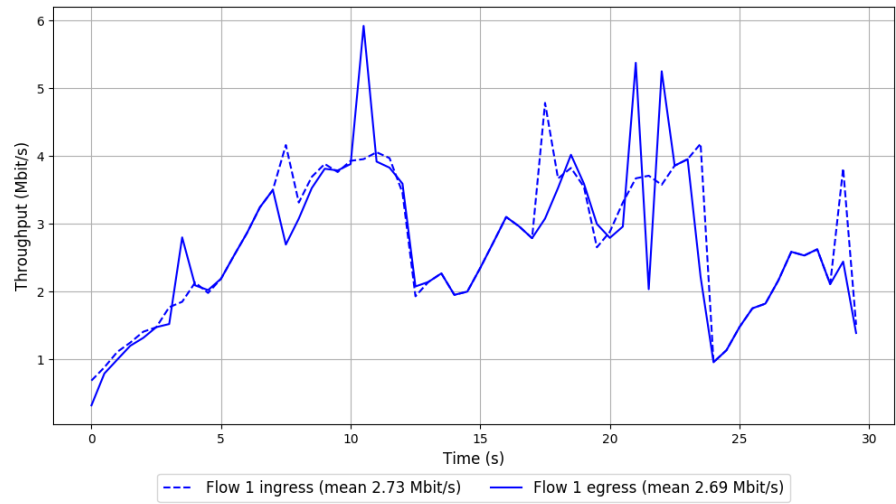
-- Flow 1:

Average throughput: 2.69 Mbit/s

95th percentile per-packet one-way delay: 99.218 ms

Loss rate: 2.12%

#### Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-01-01 22:31:34

End at: 2018-01-01 22:32:04

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 1.99 Mbit/s

95th percentile per-packet one-way delay: 100.234 ms

Loss rate: 2.82%

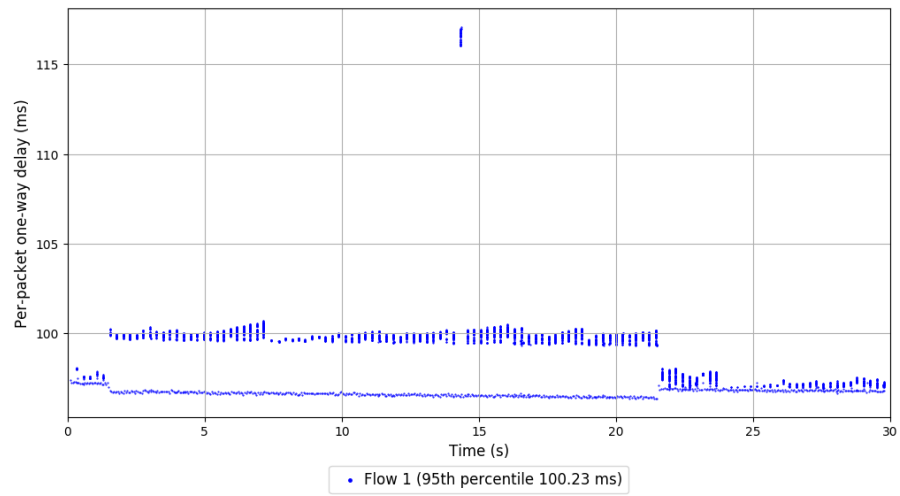
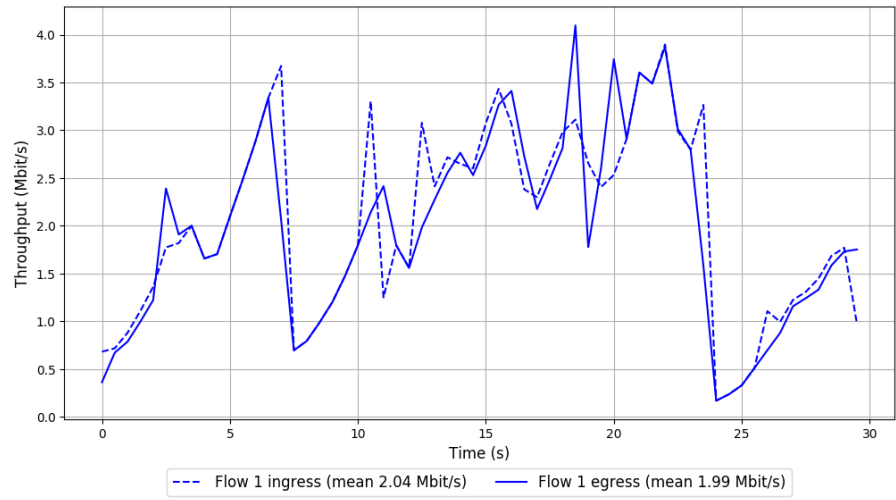
-- Flow 1:

Average throughput: 1.99 Mbit/s

95th percentile per-packet one-way delay: 100.234 ms

Loss rate: 2.82%

## Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2018-01-01 22:44:06

End at: 2018-01-01 22:44:36

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 2.73 Mbit/s

95th percentile per-packet one-way delay: 97.178 ms

Loss rate: 0.87%

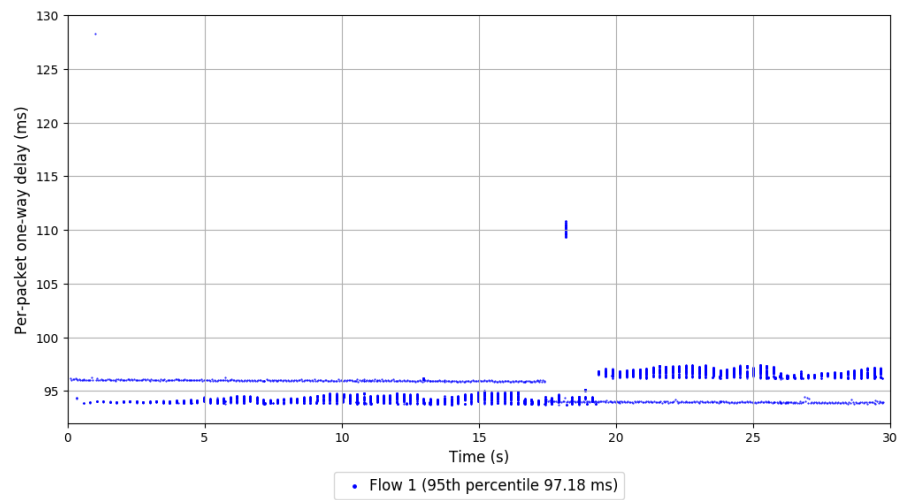
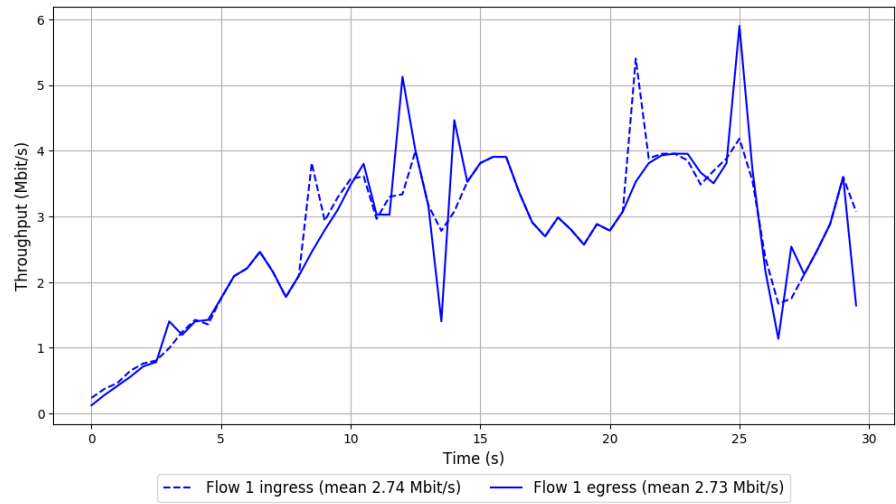
-- Flow 1:

Average throughput: 2.73 Mbit/s

95th percentile per-packet one-way delay: 97.178 ms

Loss rate: 0.87%

## Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2018-01-01 22:56:30

End at: 2018-01-01 22:57:00

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 2.76 Mbit/s

95th percentile per-packet one-way delay: 93.665 ms

Loss rate: 1.65%

-- Flow 1:

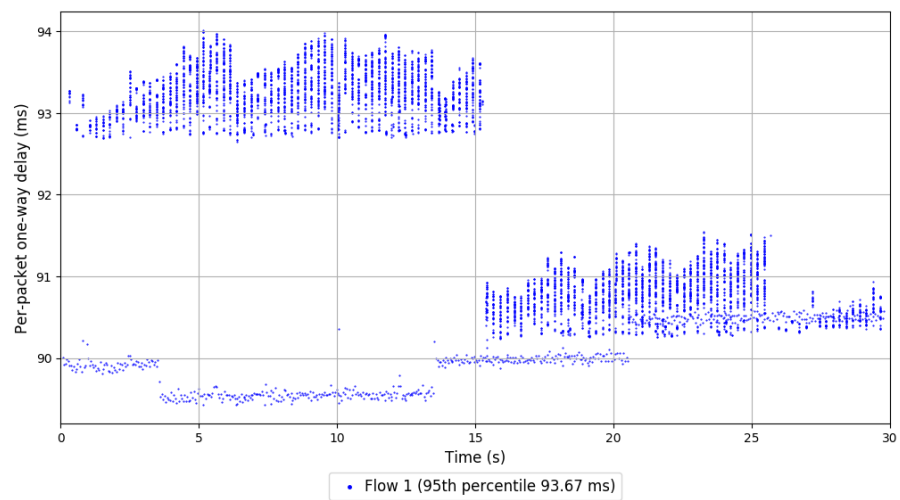
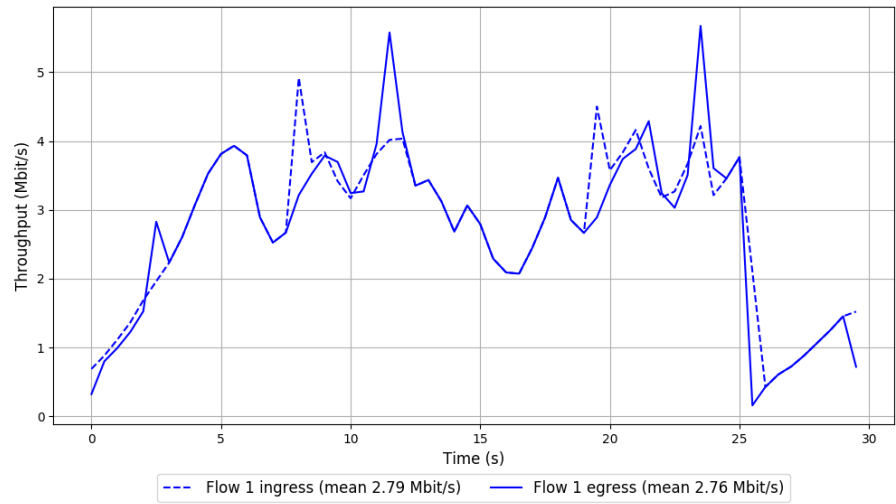
Average throughput: 2.76 Mbit/s

95th percentile per-packet one-way delay: 93.665 ms

Loss rate: 1.65%



## Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2018-01-01 23:08:52

End at: 2018-01-01 23:09:22

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 2.04 Mbit/s

95th percentile per-packet one-way delay: 99.065 ms

Loss rate: 2.46%

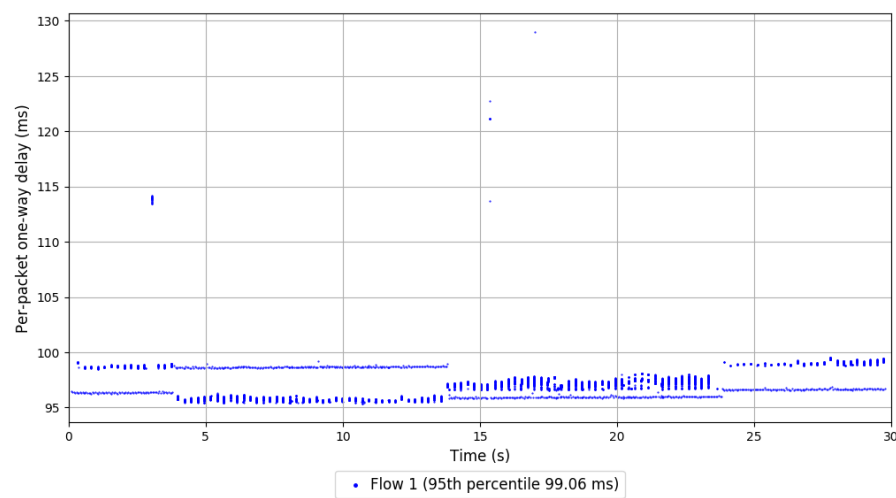
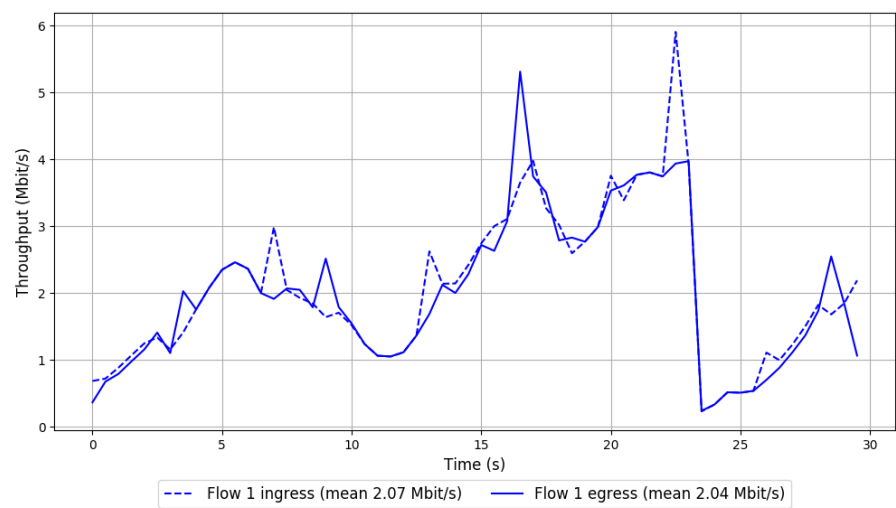
-- Flow 1:

Average throughput: 2.04 Mbit/s

95th percentile per-packet one-way delay: 99.065 ms

Loss rate: 2.46%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2018-01-01 23:21:27

End at: 2018-01-01 23:21:57

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 3.20 Mbit/s

95th percentile per-packet one-way delay: 101.444 ms

Loss rate: 0.88%

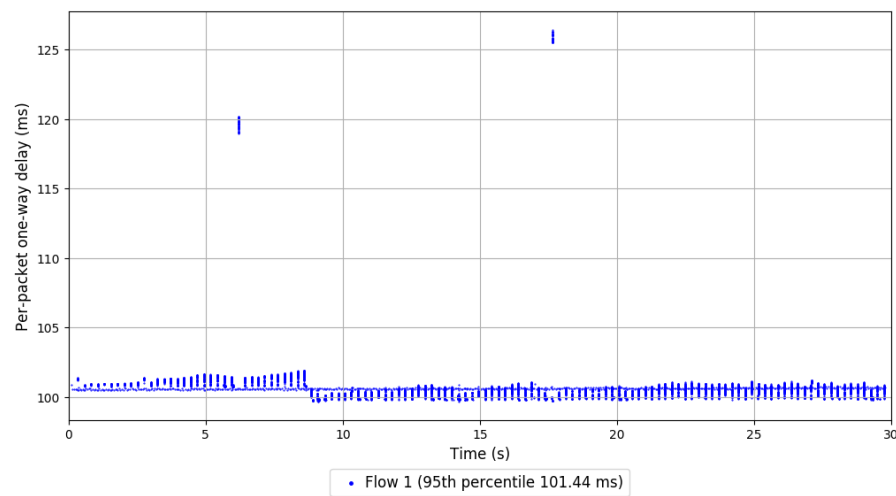
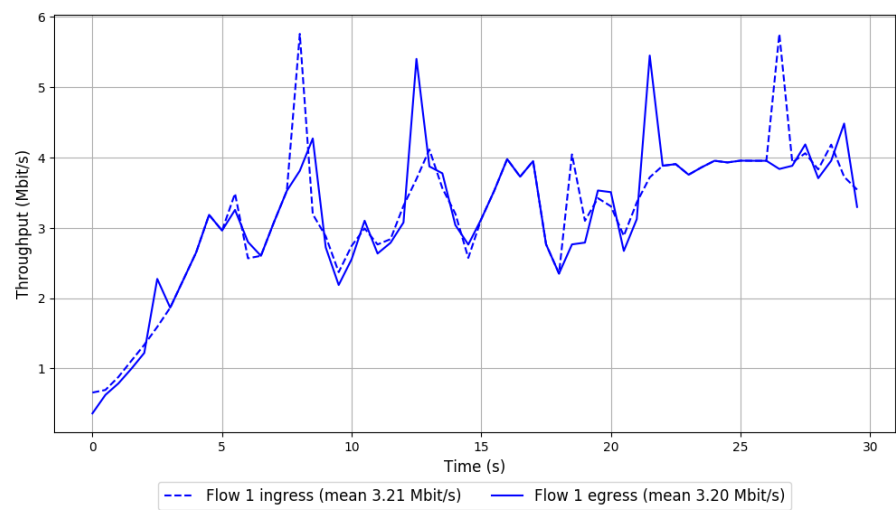
-- Flow 1:

Average throughput: 3.20 Mbit/s

95th percentile per-packet one-way delay: 101.444 ms

Loss rate: 0.88%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2018-01-01 23:33:56

End at: 2018-01-01 23:34:26

# Below is generated by plot.py at 2018-01-02 02:09:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 2.18 Mbit/s

95th percentile per-packet one-way delay: 100.774 ms

Loss rate: 2.41%

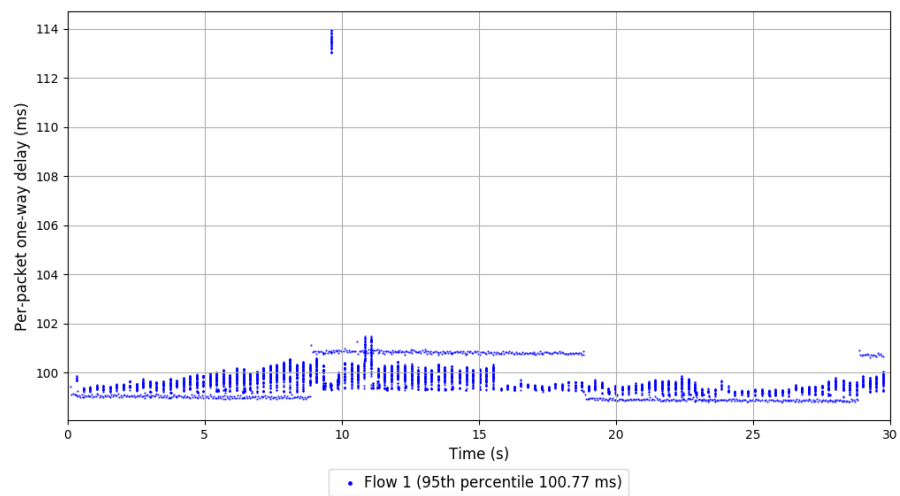
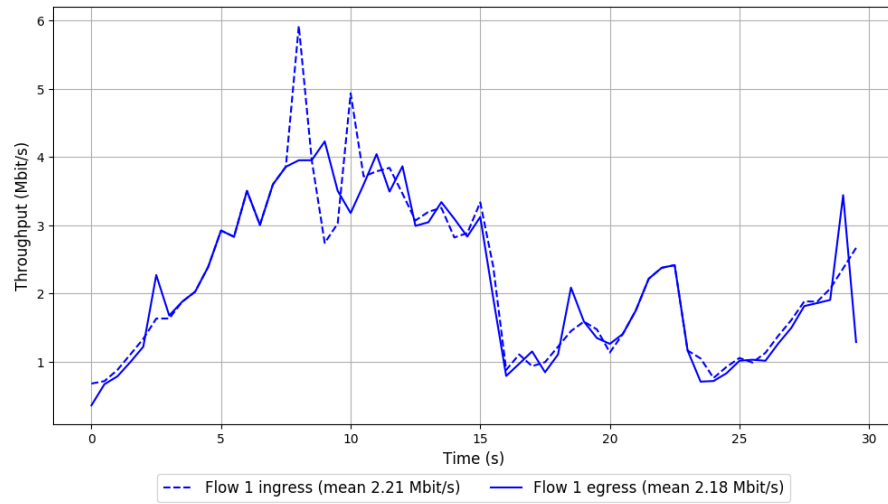
-- Flow 1:

Average throughput: 2.18 Mbit/s

95th percentile per-packet one-way delay: 100.774 ms

Loss rate: 2.41%

## Run 10: Report of Sprout — Data Link



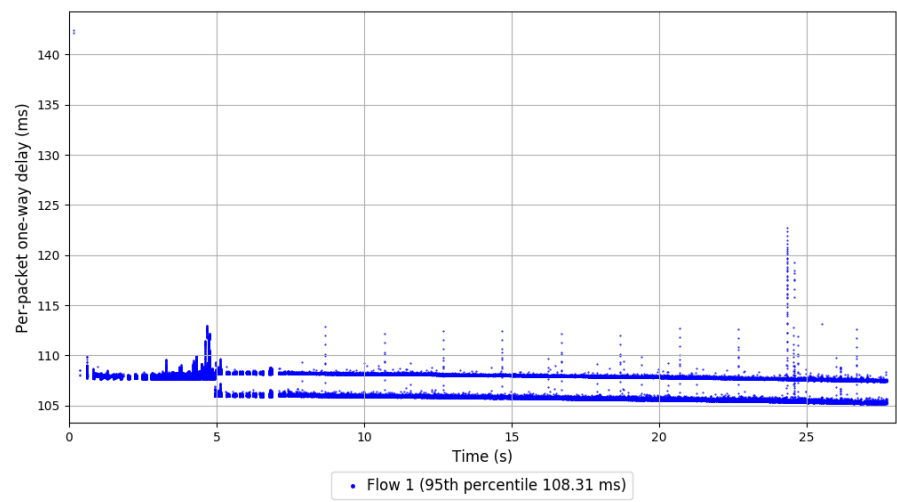
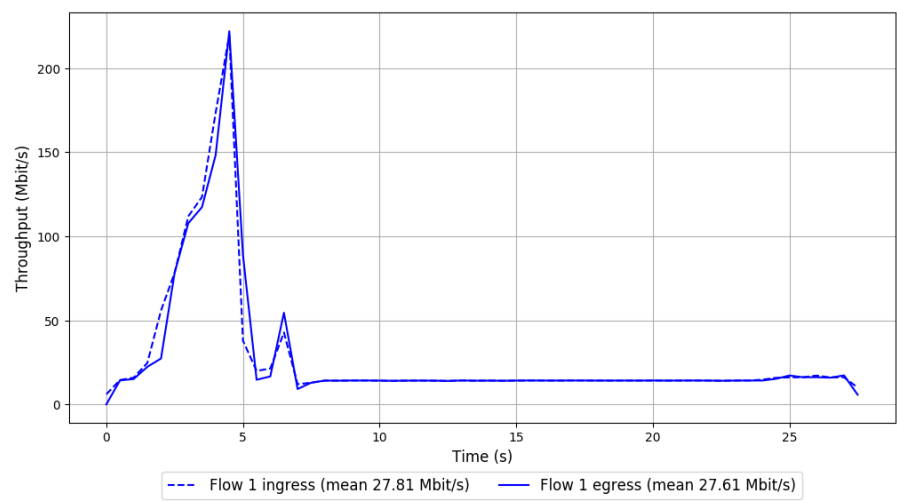
```
Run 1: Statistics of TaoVA-100x

Start at: 2018-01-01 21:34:08
End at: 2018-01-01 21:34:38

# Below is generated by plot.py at 2018-01-02 02:09:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 27.61 Mbit/s
95th percentile per-packet one-way delay: 108.312 ms
Loss rate: 1.62%
-- Flow 1:
Average throughput: 27.61 Mbit/s
95th percentile per-packet one-way delay: 108.312 ms
Loss rate: 1.62%
```



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

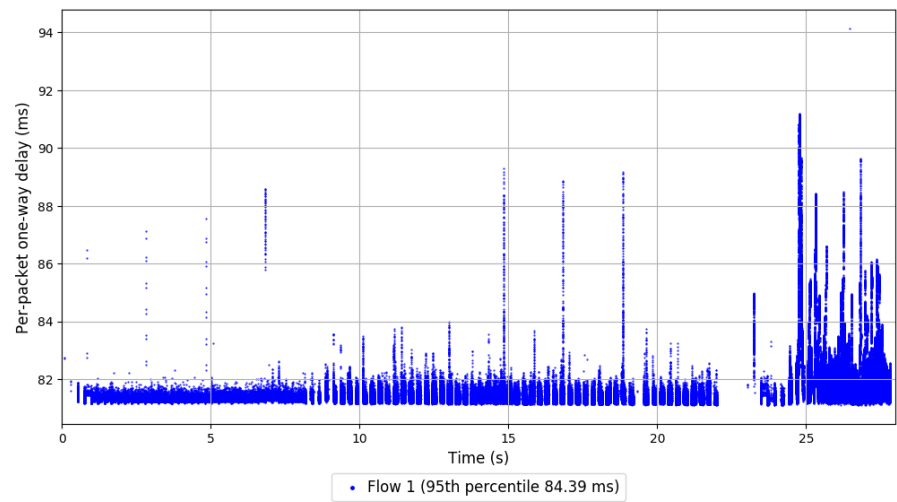
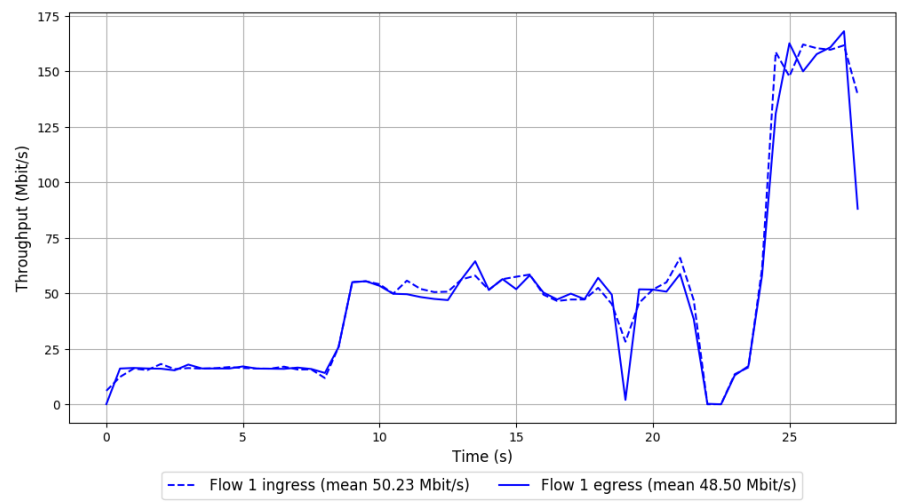


```
Run 2: Statistics of TaoVA-100x

Start at: 2018-01-01 21:46:04
End at: 2018-01-01 21:46:34

# Below is generated by plot.py at 2018-01-02 02:09:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 48.50 Mbit/s
95th percentile per-packet one-way delay: 84.387 ms
Loss rate: 4.20%
-- Flow 1:
Average throughput: 48.50 Mbit/s
95th percentile per-packet one-way delay: 84.387 ms
Loss rate: 4.20%
```

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

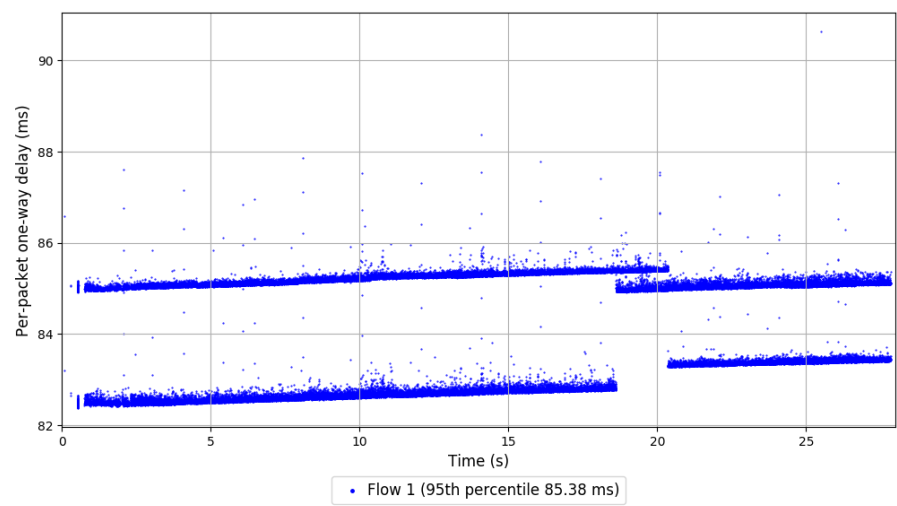
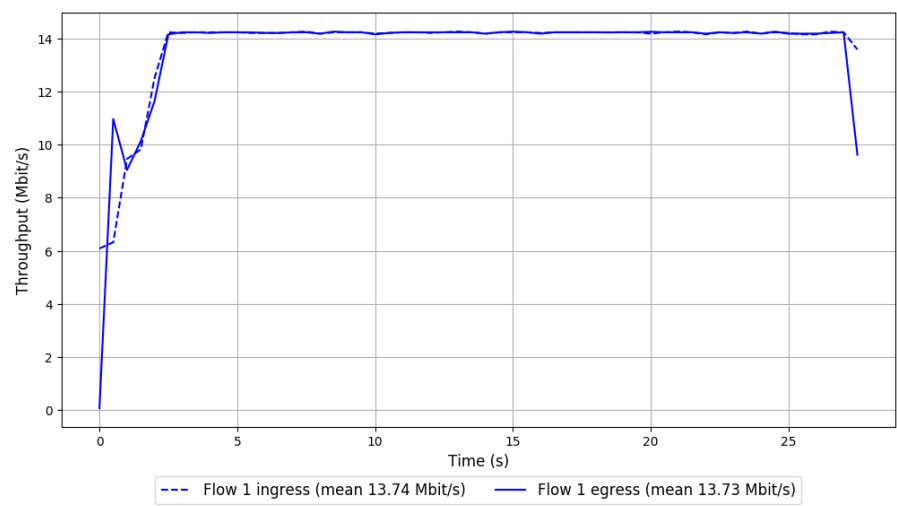


```
Run 3: Statistics of TaoVA-100x

Start at: 2018-01-01 21:58:23
End at: 2018-01-01 21:58:53

# Below is generated by plot.py at 2018-01-02 02:09:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 13.73 Mbit/s
95th percentile per-packet one-way delay: 85.375 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 13.73 Mbit/s
95th percentile per-packet one-way delay: 85.375 ms
Loss rate: 0.83%
```

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

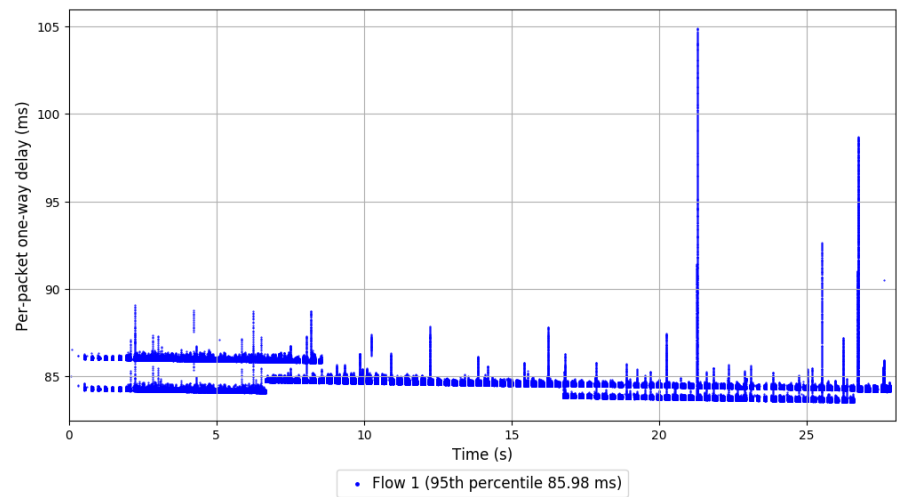
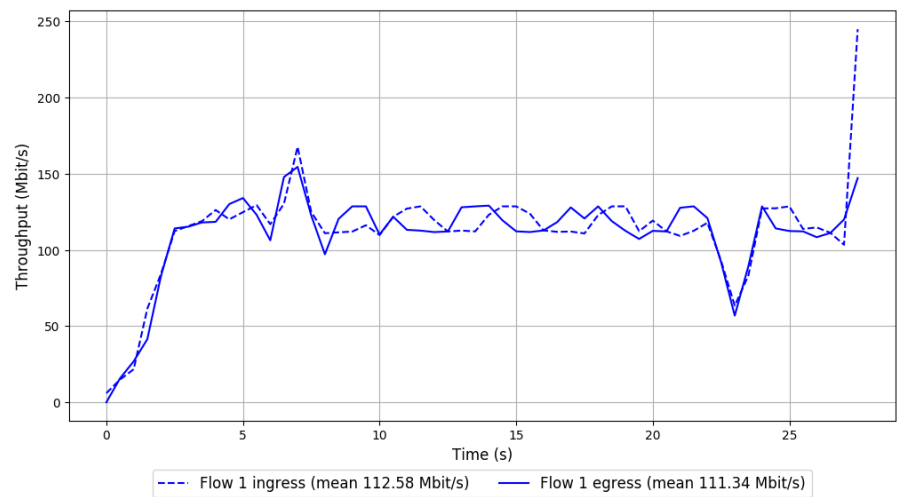


```
Run 4: Statistics of TaoVA-100x

Start at: 2018-01-01 22:10:45
End at: 2018-01-01 22:11:15

# Below is generated by plot.py at 2018-01-02 02:09:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 111.34 Mbit/s
95th percentile per-packet one-way delay: 85.977 ms
Loss rate: 1.88%
-- Flow 1:
Average throughput: 111.34 Mbit/s
95th percentile per-packet one-way delay: 85.977 ms
Loss rate: 1.88%
```

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-01-01 22:23:16

End at: 2018-01-01 22:23:46

# Below is generated by plot.py at 2018-01-02 02:12:15

# Datalink statistics

-- Total of 1 flow:

Average throughput: 224.24 Mbit/s

95th percentile per-packet one-way delay: 102.157 ms

Loss rate: 0.86%

-- Flow 1:

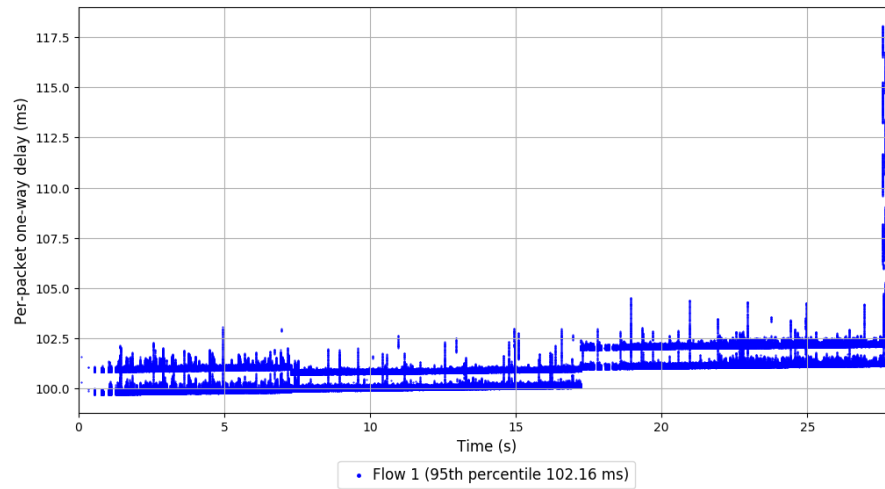
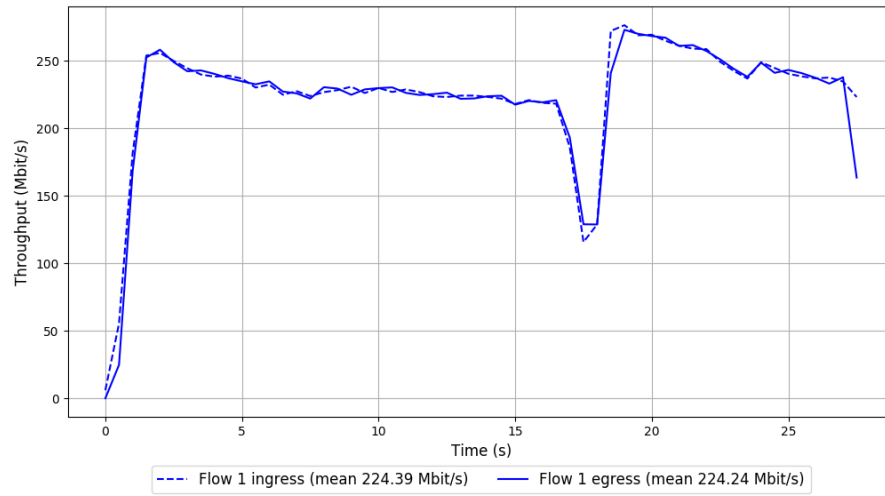
Average throughput: 224.24 Mbit/s

95th percentile per-packet one-way delay: 102.157 ms

Loss rate: 0.86%



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



Run 6: Statistics of TaoVA-100x

Start at: 2018-01-01 22:35:52

End at: 2018-01-01 22:36:22

# Below is generated by plot.py at 2018-01-02 02:12:15

# Datalink statistics

-- Total of 1 flow:

Average throughput: 221.87 Mbit/s

95th percentile per-packet one-way delay: 93.967 ms

Loss rate: 0.84%

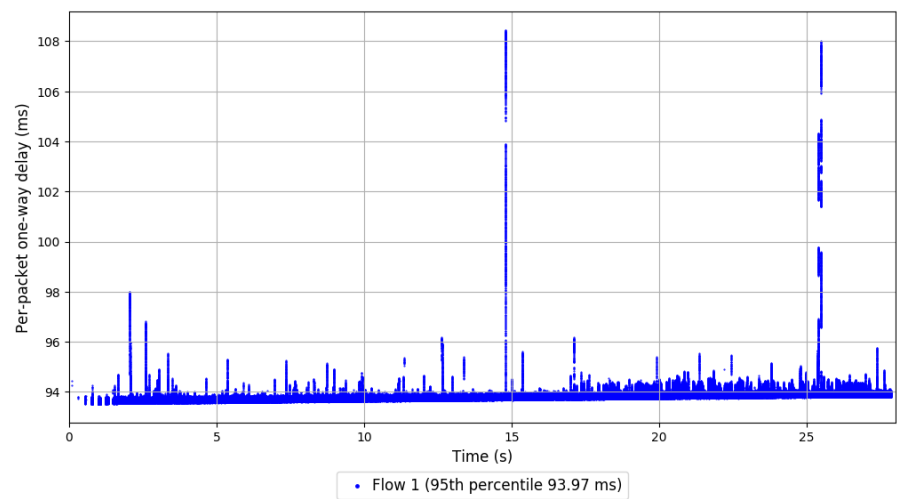
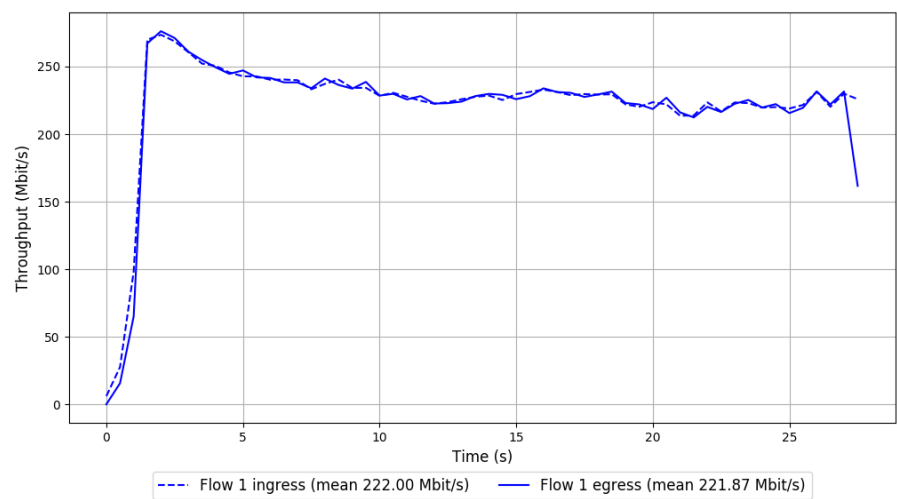
-- Flow 1:

Average throughput: 221.87 Mbit/s

95th percentile per-packet one-way delay: 93.967 ms

Loss rate: 0.84%

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

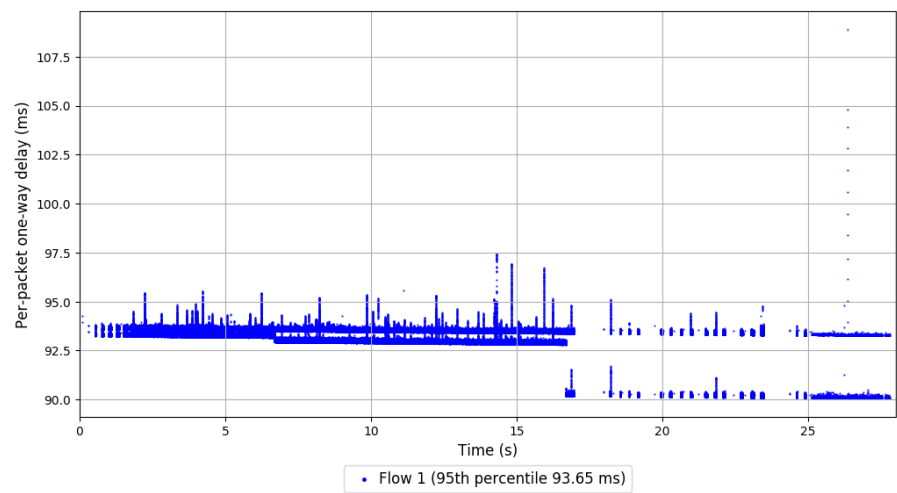
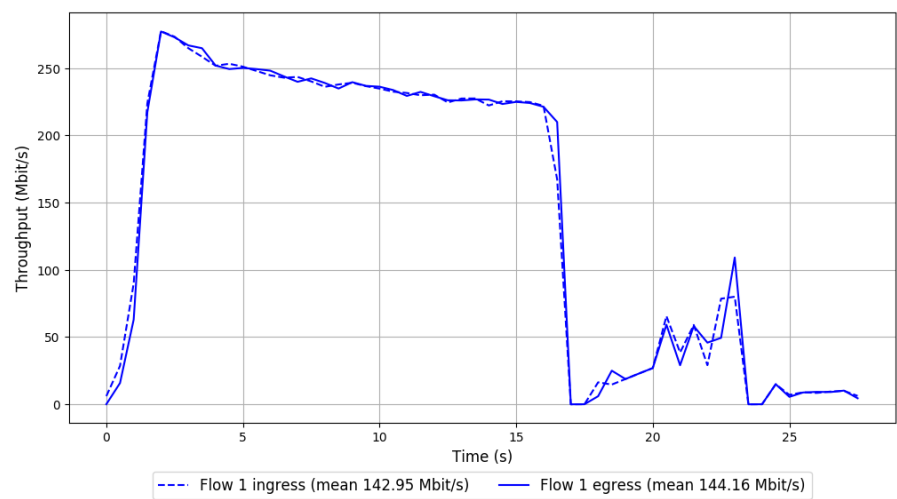


```
Run 7: Statistics of TaoVA-100x

Start at: 2018-01-01 22:48:25
End at: 2018-01-01 22:48:55

# Below is generated by plot.py at 2018-01-02 02:12:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 144.16 Mbit/s
95th percentile per-packet one-way delay: 93.652 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 144.16 Mbit/s
95th percentile per-packet one-way delay: 93.652 ms
Loss rate: 0.03%
```

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



Run 8: Statistics of TaoVA-100x

Start at: 2018-01-01 23:00:51

End at: 2018-01-01 23:01:21

# Below is generated by plot.py at 2018-01-02 02:12:15

# Datalink statistics

-- Total of 1 flow:

Average throughput: 43.93 Mbit/s

95th percentile per-packet one-way delay: 93.195 ms

Loss rate: 2.61%

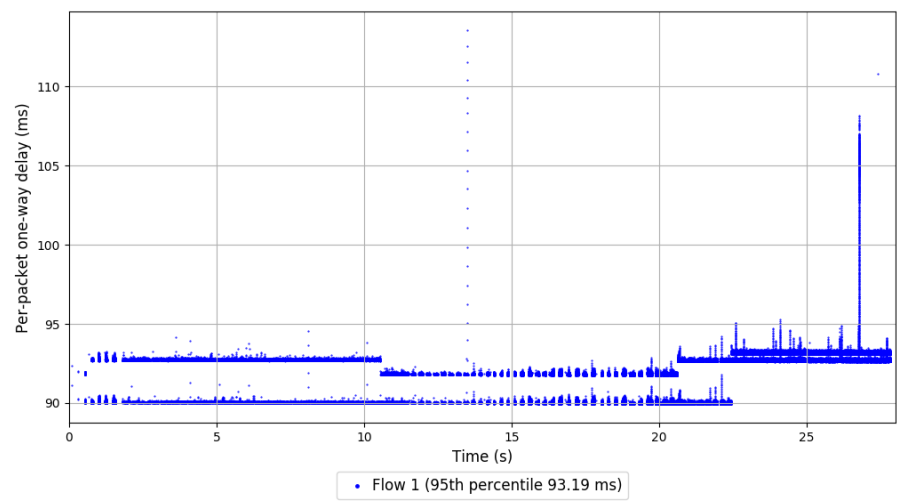
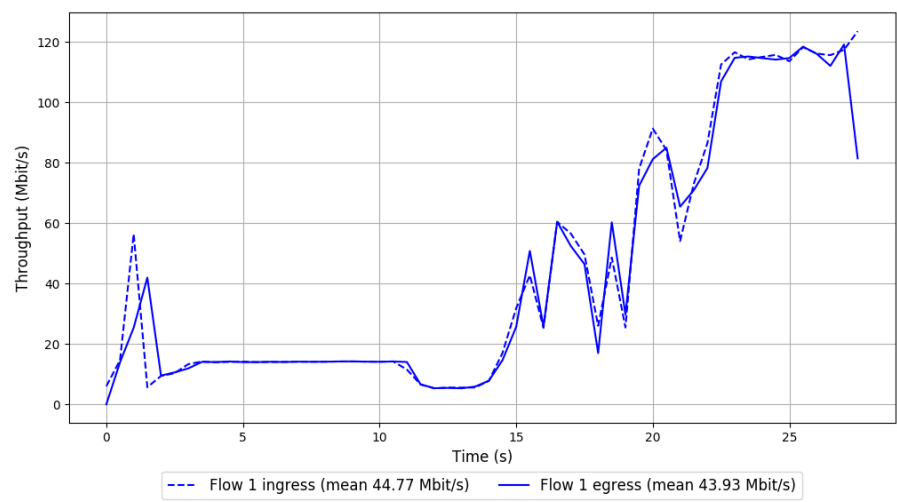
-- Flow 1:

Average throughput: 43.93 Mbit/s

95th percentile per-packet one-way delay: 93.195 ms

Loss rate: 2.61%

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



Run 9: Statistics of TaoVA-100x

Start at: 2018-01-01 23:13:10

End at: 2018-01-01 23:13:40

# Below is generated by plot.py at 2018-01-02 02:13:03

# Datalink statistics

-- Total of 1 flow:

Average throughput: 220.20 Mbit/s

95th percentile per-packet one-way delay: 98.862 ms

Loss rate: 0.81%

-- Flow 1:

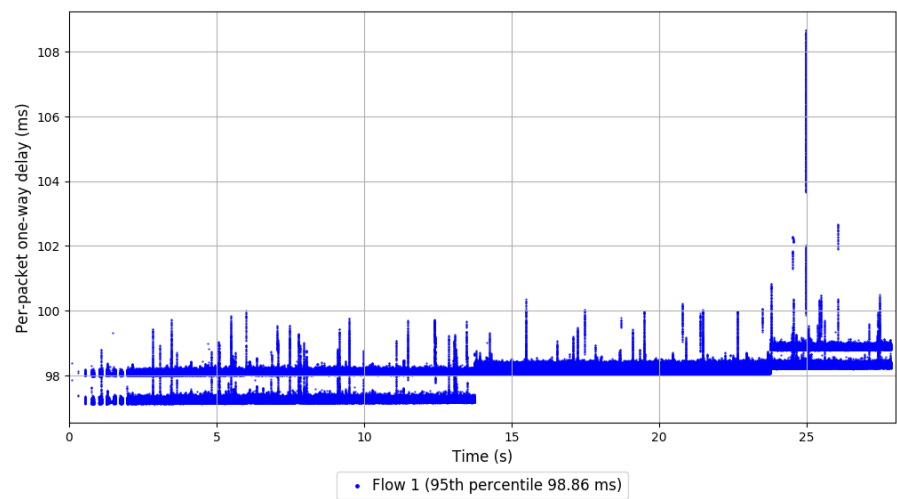
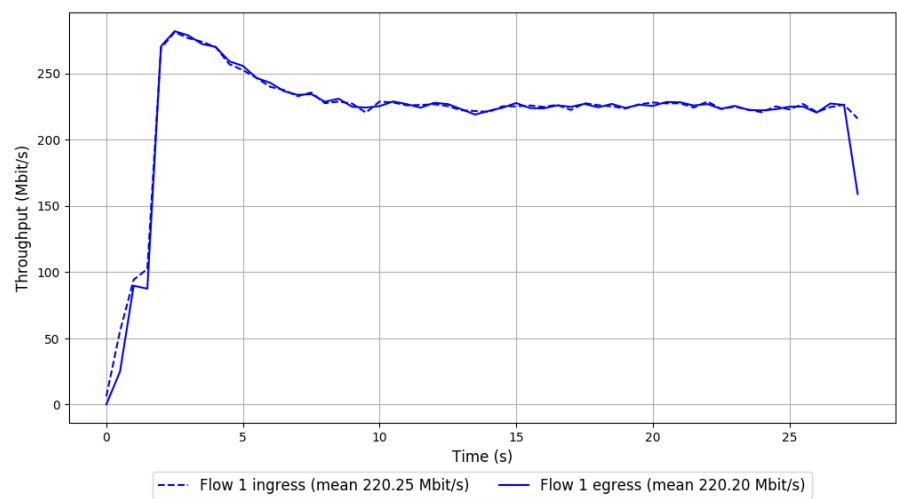
Average throughput: 220.20 Mbit/s

95th percentile per-packet one-way delay: 98.862 ms

Loss rate: 0.81%



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

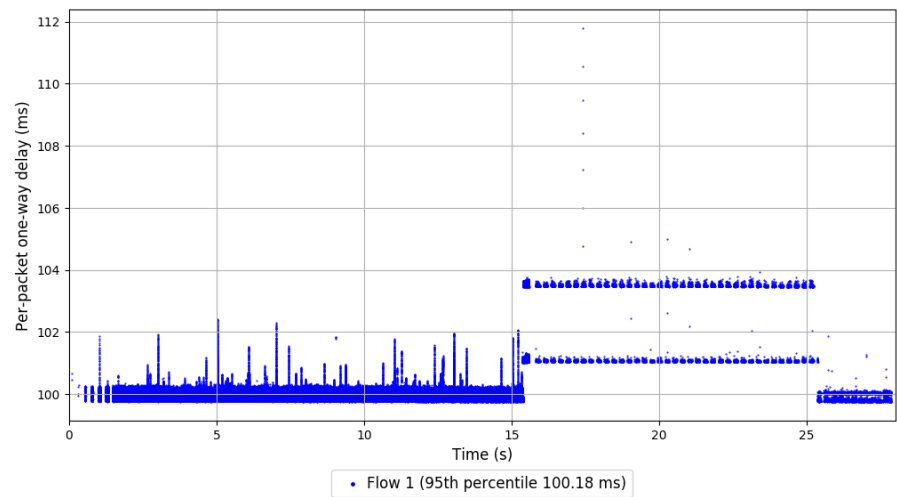
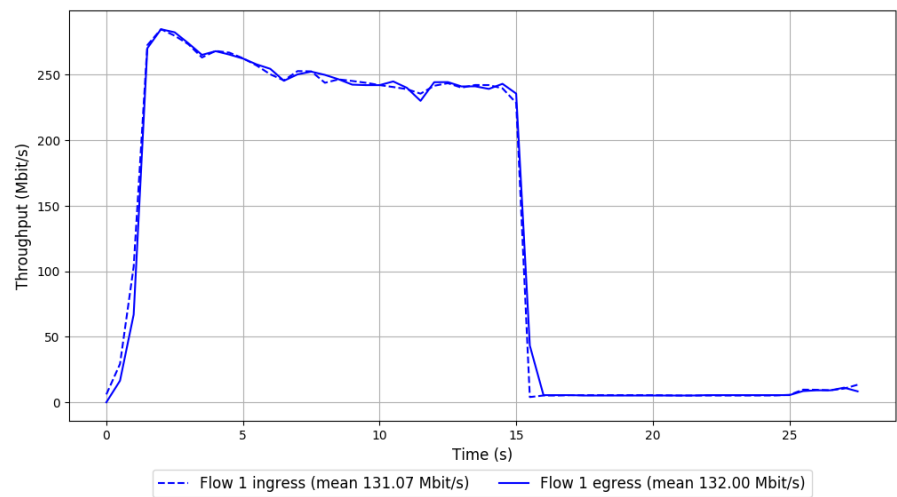


```
Run 10: Statistics of TaoVA-100x

Start at: 2018-01-01 23:25:48
End at: 2018-01-01 23:26:18

# Below is generated by plot.py at 2018-01-02 02:13:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 132.00 Mbit/s
95th percentile per-packet one-way delay: 100.182 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 132.00 Mbit/s
95th percentile per-packet one-way delay: 100.182 ms
Loss rate: 0.09%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2018-01-01 21:43:59

End at: 2018-01-01 21:44:29

# Below is generated by plot.py at 2018-01-02 02:13:03

# Datalink statistics

-- Total of 1 flow:

Average throughput: 9.84 Mbit/s

95th percentile per-packet one-way delay: 88.047 ms

Loss rate: 2.38%

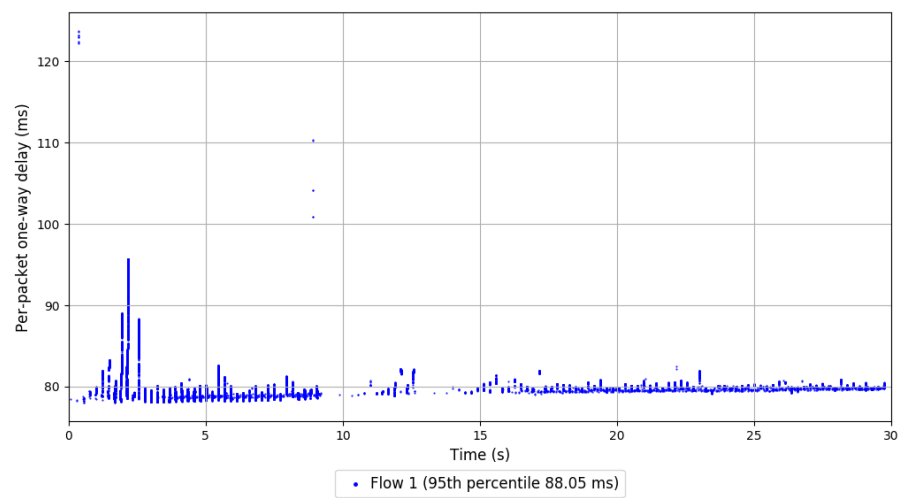
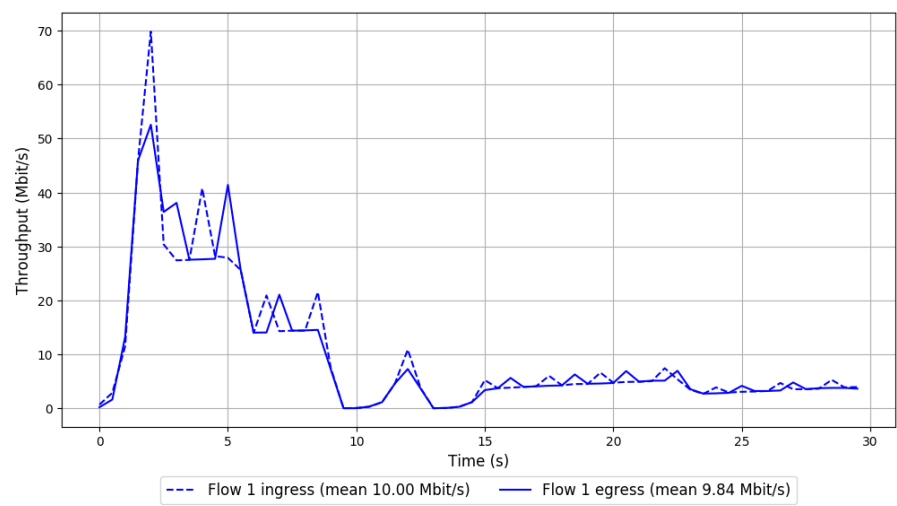
-- Flow 1:

Average throughput: 9.84 Mbit/s

95th percentile per-packet one-way delay: 88.047 ms

Loss rate: 2.38%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-01-01 21:56:18

End at: 2018-01-01 21:56:48

# Below is generated by plot.py at 2018-01-02 02:13:03

# Datalink statistics

-- Total of 1 flow:

Average throughput: 6.66 Mbit/s

95th percentile per-packet one-way delay: 81.720 ms

Loss rate: 2.48%

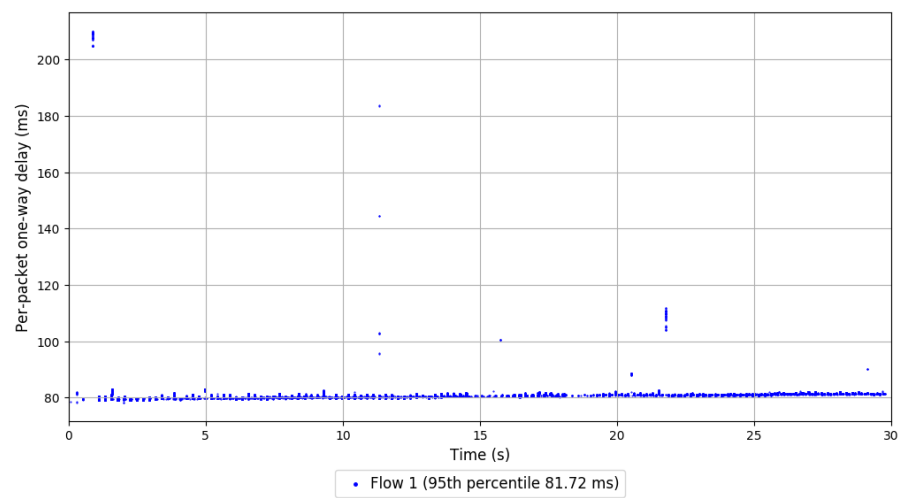
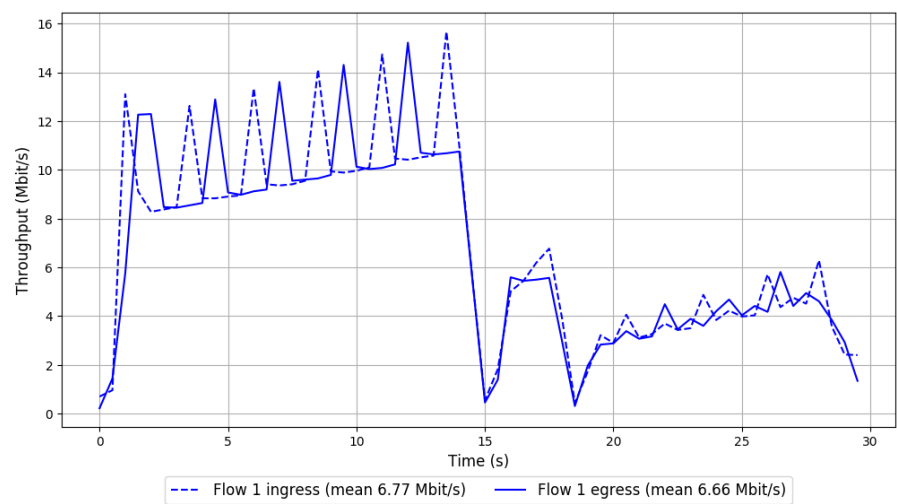
-- Flow 1:

Average throughput: 6.66 Mbit/s

95th percentile per-packet one-way delay: 81.720 ms

Loss rate: 2.48%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-01-01 22:08:38

End at: 2018-01-01 22:09:08

# Below is generated by plot.py at 2018-01-02 02:13:03

# Datalink statistics

-- Total of 1 flow:

Average throughput: 52.05 Mbit/s

95th percentile per-packet one-way delay: 91.801 ms

Loss rate: 0.22%

-- Flow 1:

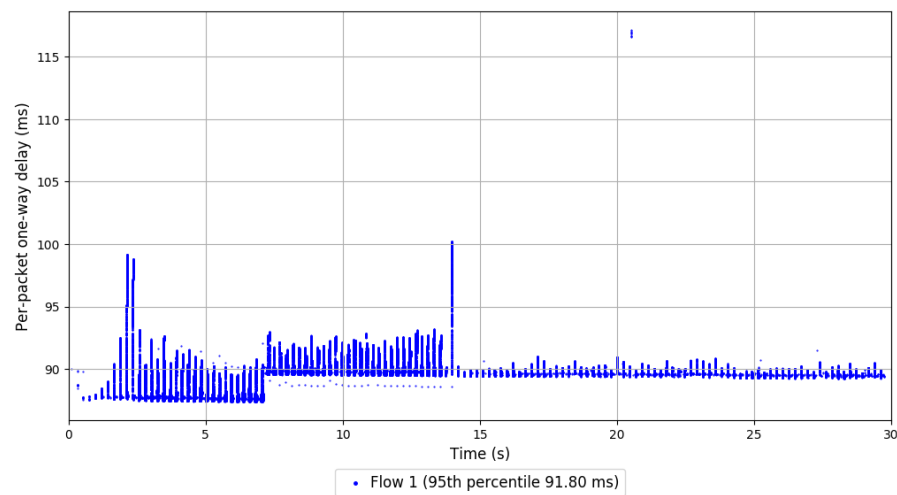
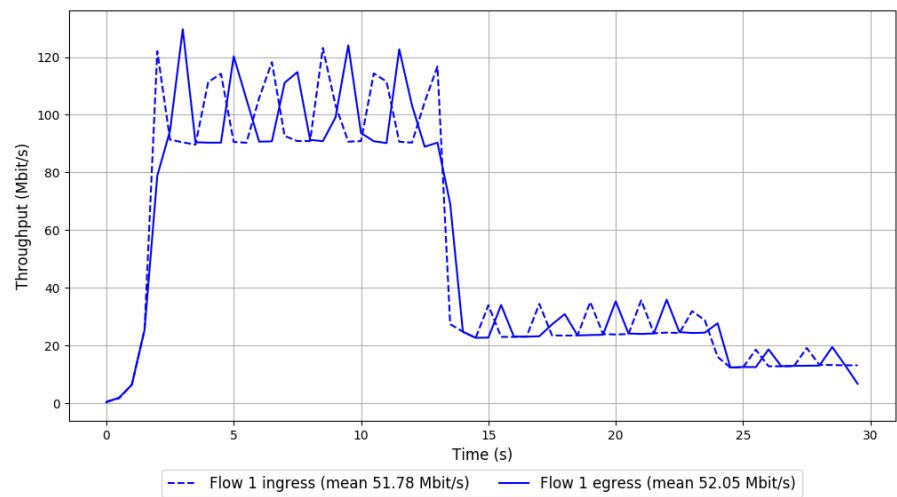
Average throughput: 52.05 Mbit/s

95th percentile per-packet one-way delay: 91.801 ms

Loss rate: 0.22%



Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2018-01-01 22:21:10

End at: 2018-01-01 22:21:40

# Below is generated by plot.py at 2018-01-02 02:13:03

# Datalink statistics

-- Total of 1 flow:

Average throughput: 60.13 Mbit/s

95th percentile per-packet one-way delay: 101.963 ms

Loss rate: 0.78%

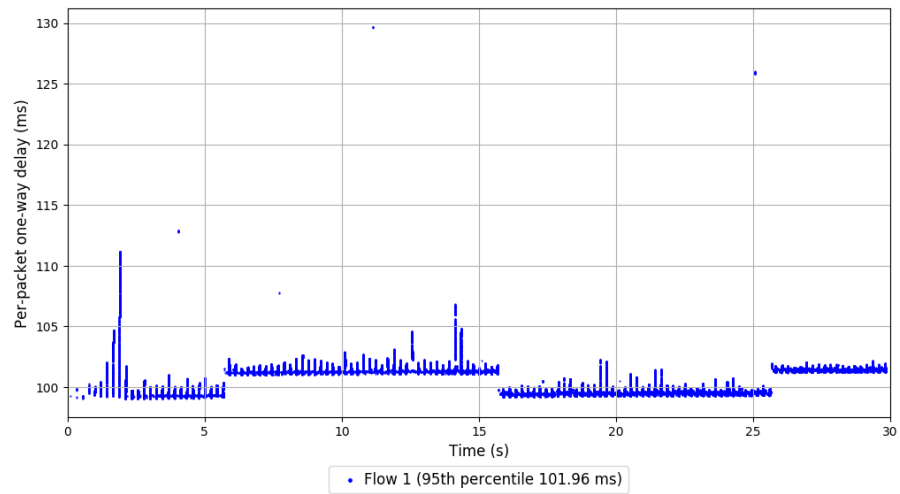
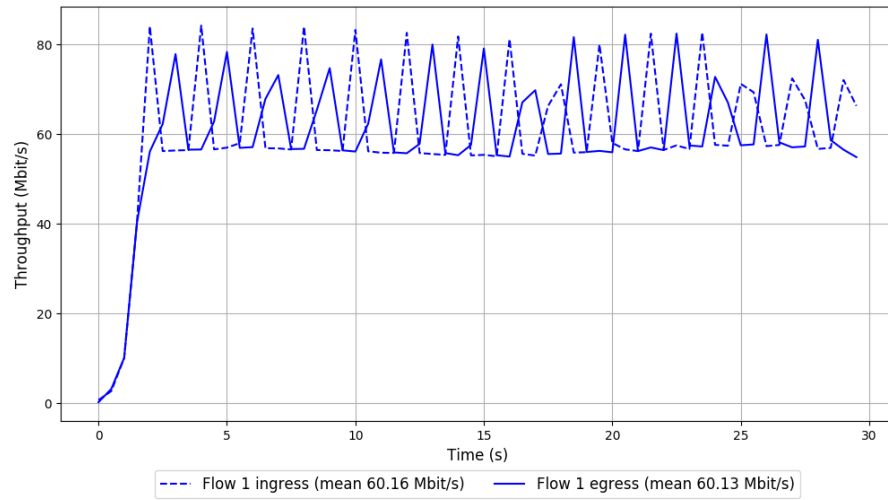
-- Flow 1:

Average throughput: 60.13 Mbit/s

95th percentile per-packet one-way delay: 101.963 ms

Loss rate: 0.78%

#### Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-01-01 22:33:47

End at: 2018-01-01 22:34:17

# Below is generated by plot.py at 2018-01-02 02:13:03

# Datalink statistics

-- Total of 1 flow:

Average throughput: 15.83 Mbit/s

95th percentile per-packet one-way delay: 97.997 ms

Loss rate: 1.46%

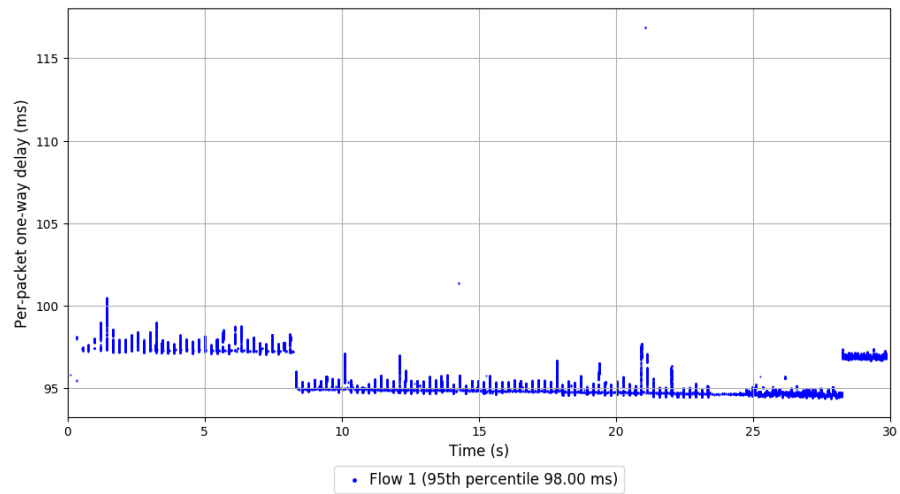
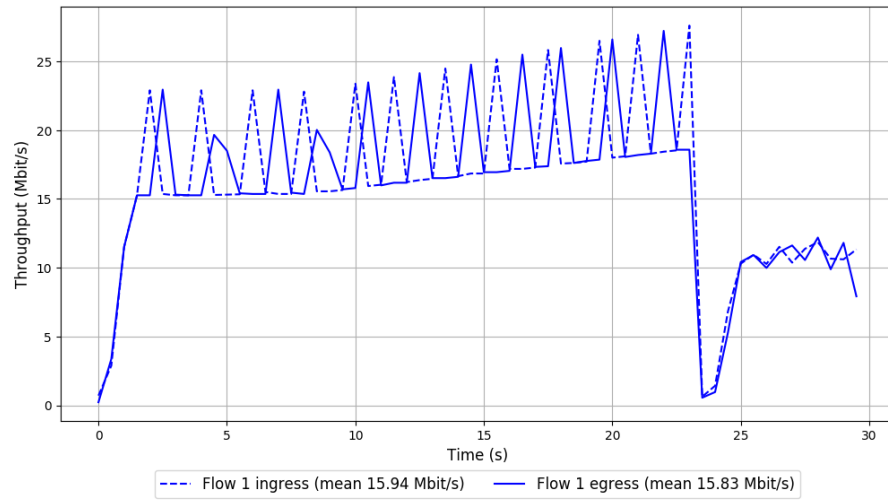
-- Flow 1:

Average throughput: 15.83 Mbit/s

95th percentile per-packet one-way delay: 97.997 ms

Loss rate: 1.46%

### Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2018-01-01 22:46:21

End at: 2018-01-01 22:46:51

# Below is generated by plot.py at 2018-01-02 02:13:03

# Datalink statistics

-- Total of 1 flow:

Average throughput: 6.29 Mbit/s

95th percentile per-packet one-way delay: 95.695 ms

Loss rate: 3.33%

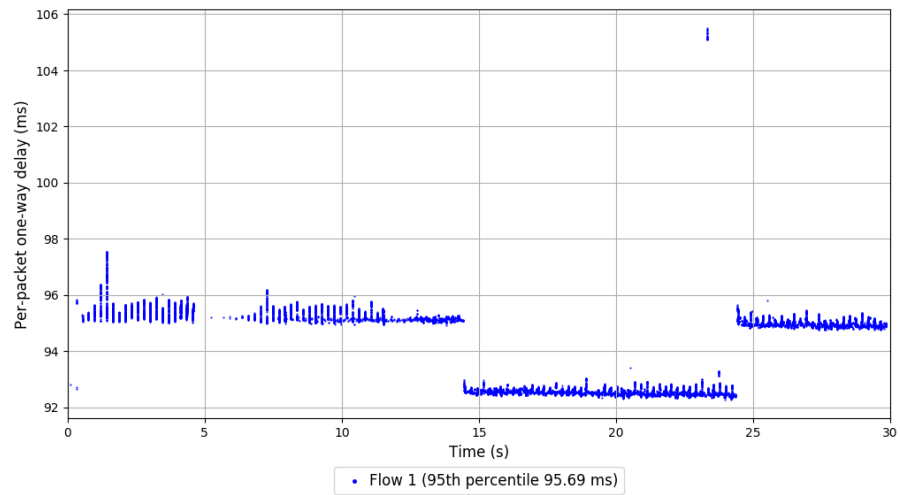
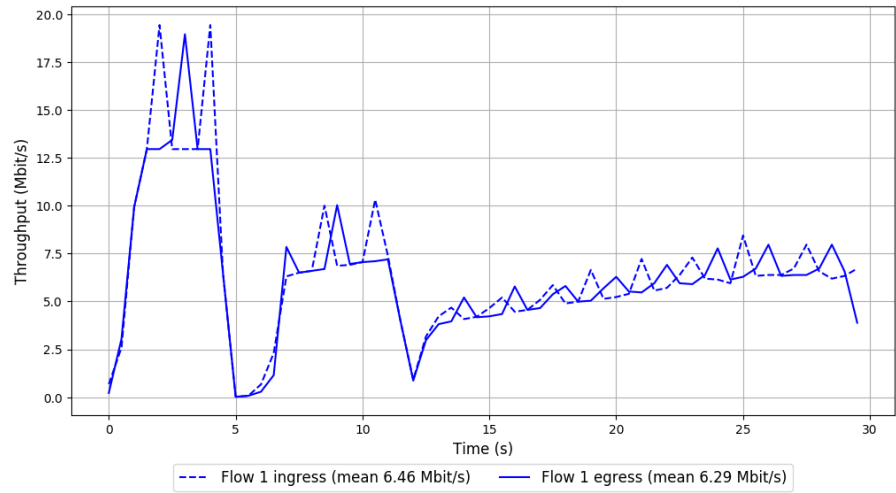
-- Flow 1:

Average throughput: 6.29 Mbit/s

95th percentile per-packet one-way delay: 95.695 ms

Loss rate: 3.33%

## Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2018-01-01 22:58:45

End at: 2018-01-01 22:59:15

# Below is generated by plot.py at 2018-01-02 02:13:03

# Datalink statistics

-- Total of 1 flow:

Average throughput: 53.26 Mbit/s

95th percentile per-packet one-way delay: 101.611 ms

Loss rate: 0.61%

-- Flow 1:

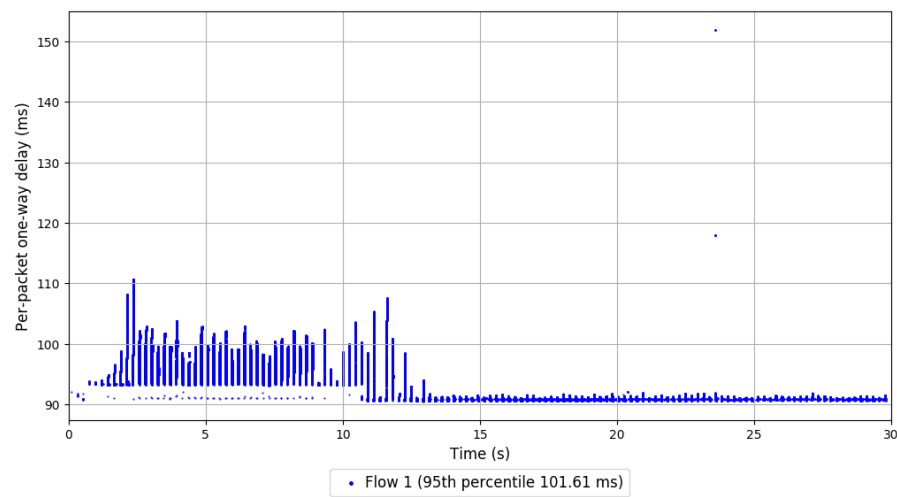
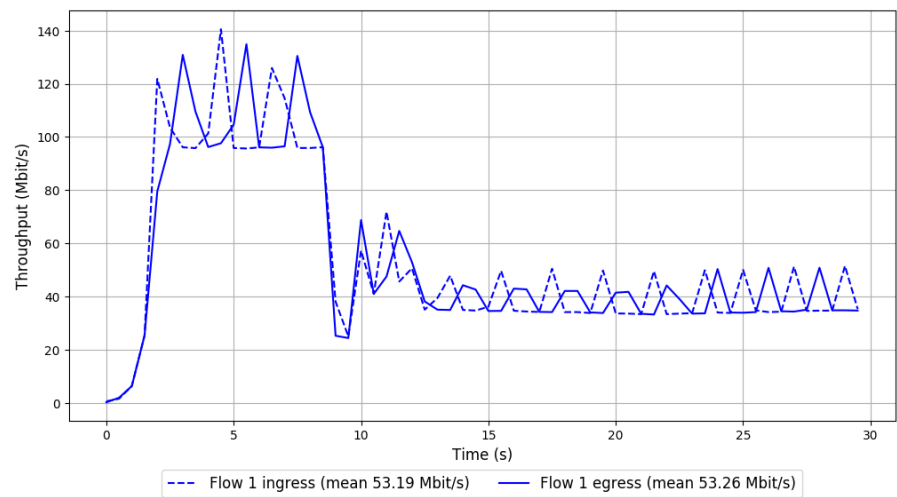
Average throughput: 53.26 Mbit/s

95th percentile per-packet one-way delay: 101.611 ms

Loss rate: 0.61%



Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2018-01-01 23:11:05

End at: 2018-01-01 23:11:35

# Below is generated by plot.py at 2018-01-02 02:13:03

# Datalink statistics

-- Total of 1 flow:

Average throughput: 28.70 Mbit/s

95th percentile per-packet one-way delay: 98.012 ms

Loss rate: 0.88%

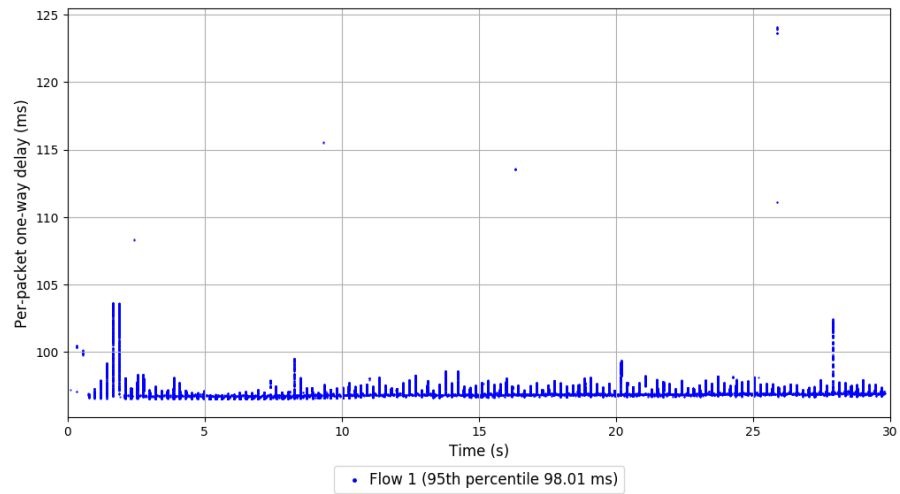
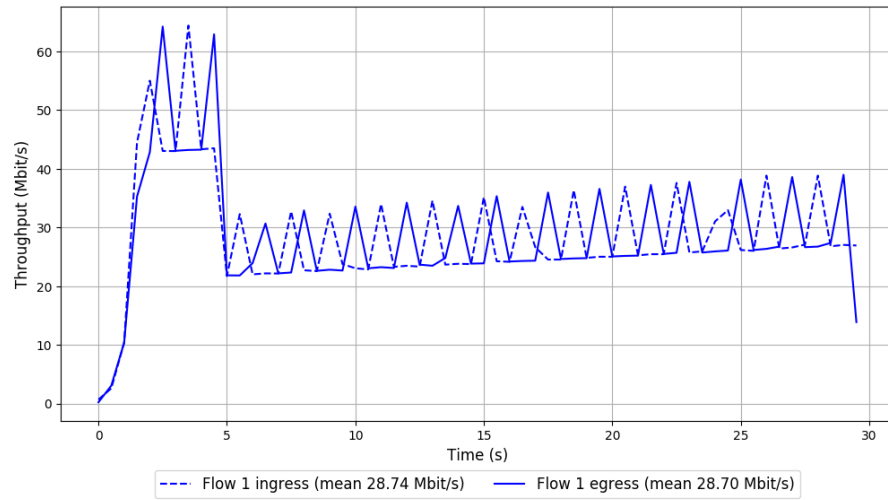
-- Flow 1:

Average throughput: 28.70 Mbit/s

95th percentile per-packet one-way delay: 98.012 ms

Loss rate: 0.88%

## Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2018-01-01 23:23:42

End at: 2018-01-01 23:24:12

# Below is generated by plot.py at 2018-01-02 02:13:03

# Datalink statistics

-- Total of 1 flow:

Average throughput: 47.53 Mbit/s

95th percentile per-packet one-way delay: 101.531 ms

Loss rate: 0.83%

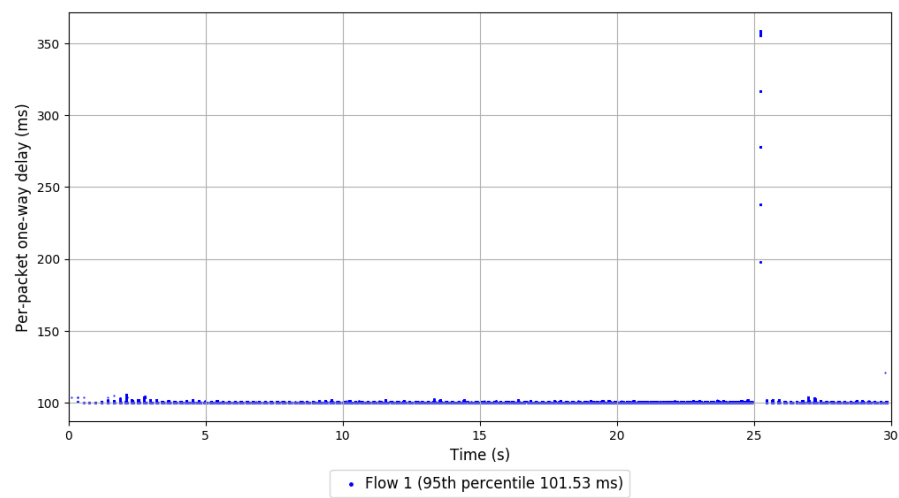
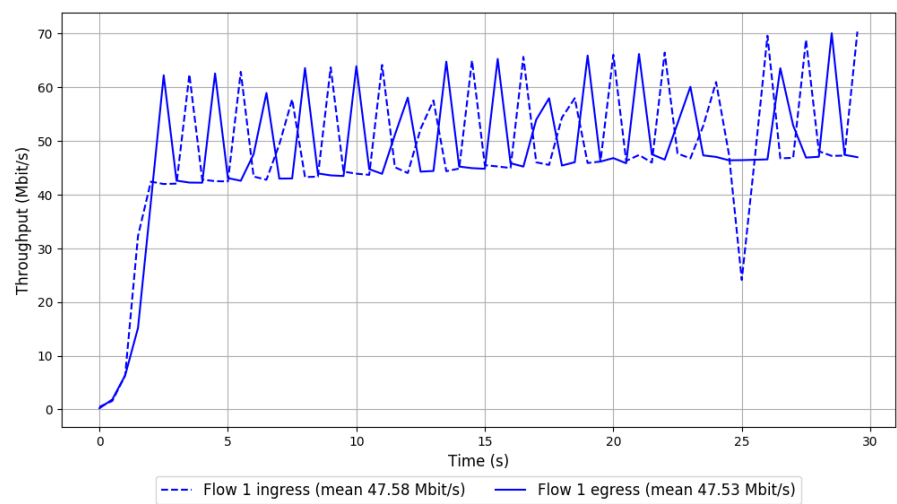
-- Flow 1:

Average throughput: 47.53 Mbit/s

95th percentile per-packet one-way delay: 101.531 ms

Loss rate: 0.83%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2018-01-01 23:36:10

End at: 2018-01-01 23:36:40

# Below is generated by plot.py at 2018-01-02 02:13:03

# Datalink statistics

-- Total of 1 flow:

Average throughput: 32.22 Mbit/s

95th percentile per-packet one-way delay: 99.338 ms

Loss rate: 0.80%

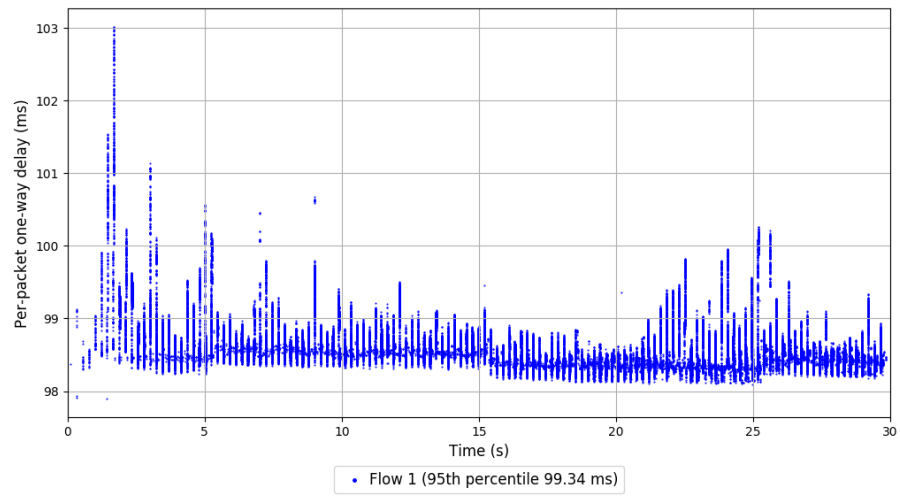
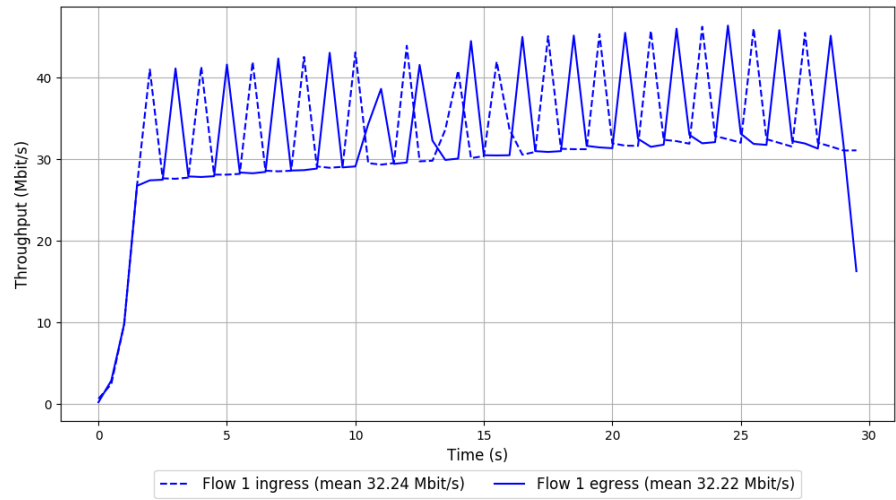
-- Flow 1:

Average throughput: 32.22 Mbit/s

95th percentile per-packet one-way delay: 99.338 ms

Loss rate: 0.80%

# Run 10: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2018-01-01 21:39:59

End at: 2018-01-01 21:40:29

# Below is generated by plot.py at 2018-01-02 02:14:39

# Datalink statistics

-- Total of 1 flow:

Average throughput: 200.30 Mbit/s

95th percentile per-packet one-way delay: 296.724 ms

Loss rate: 10.84%

-- Flow 1:

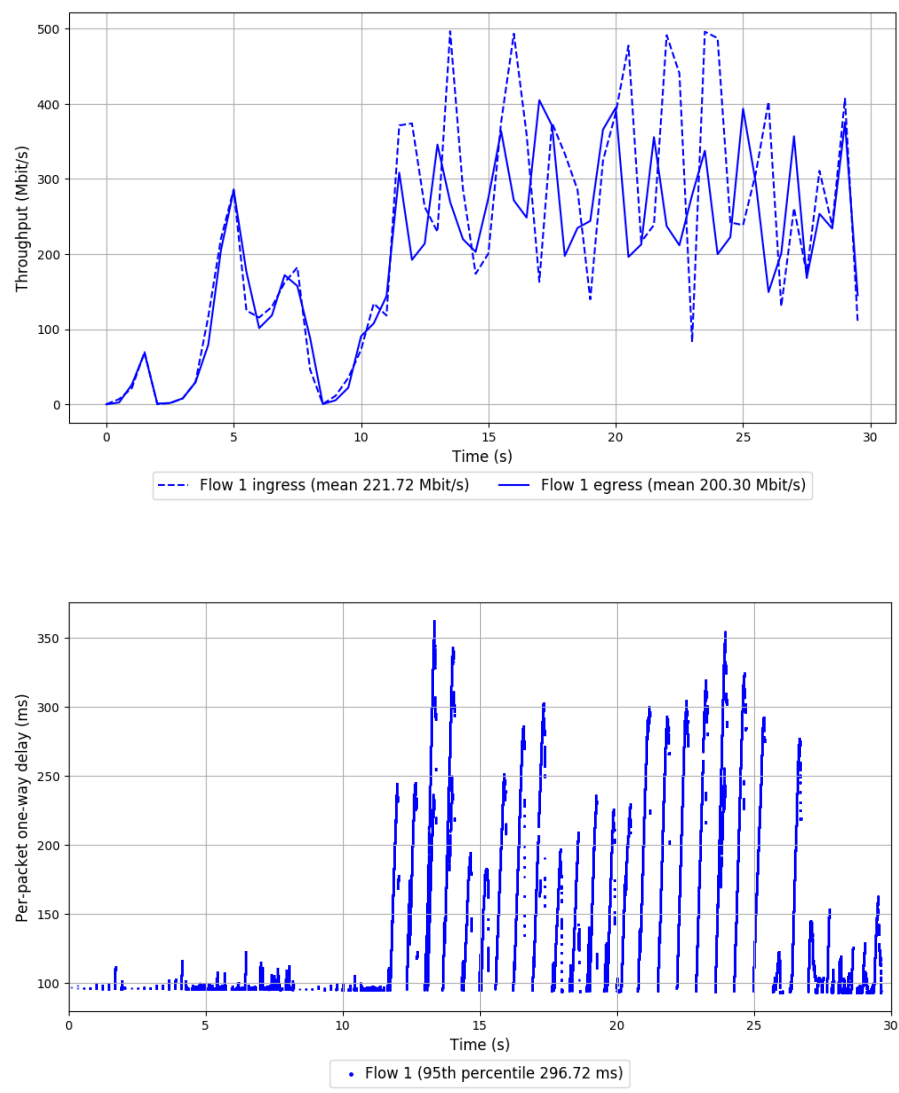
Average throughput: 200.30 Mbit/s

95th percentile per-packet one-way delay: 296.724 ms

Loss rate: 10.84%



Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-01-01 21:52:18

End at: 2018-01-01 21:52:48

# Below is generated by plot.py at 2018-01-02 02:14:39

# Datalink statistics

-- Total of 1 flow:

Average throughput: 163.60 Mbit/s

95th percentile per-packet one-way delay: 156.330 ms

Loss rate: 1.60%

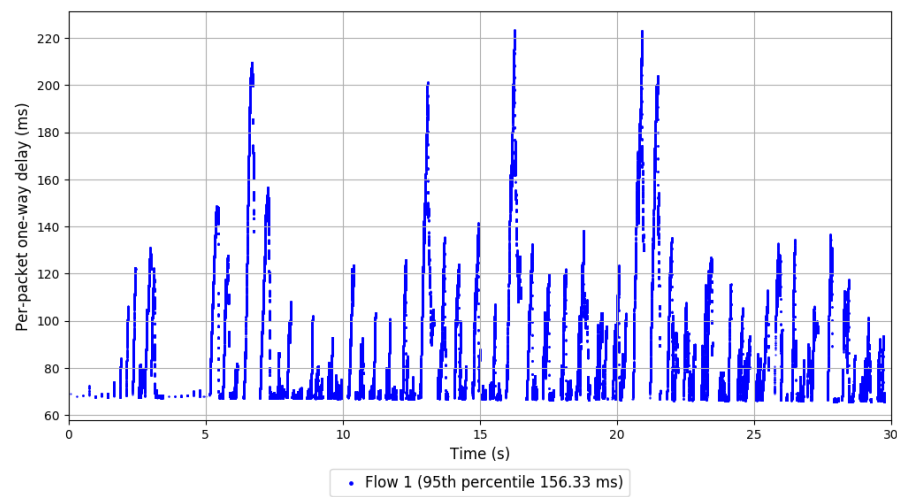
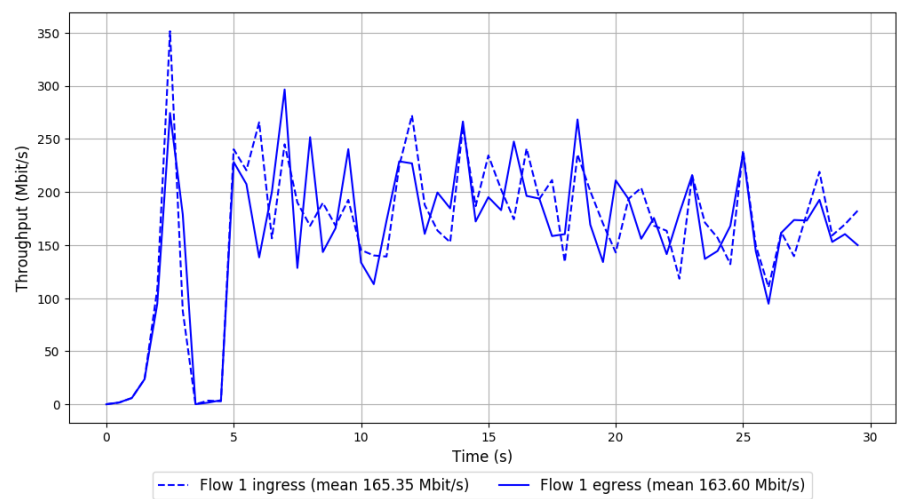
-- Flow 1:

Average throughput: 163.60 Mbit/s

95th percentile per-packet one-way delay: 156.330 ms

Loss rate: 1.60%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-01-01 22:04:34

End at: 2018-01-01 22:05:04

# Below is generated by plot.py at 2018-01-02 02:15:54

# Datalink statistics

-- Total of 1 flow:

Average throughput: 200.18 Mbit/s

95th percentile per-packet one-way delay: 227.126 ms

Loss rate: 2.05%

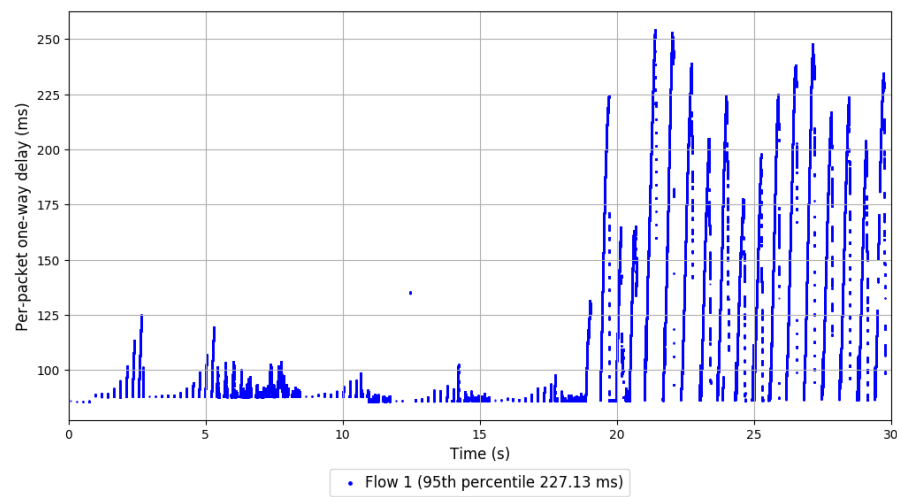
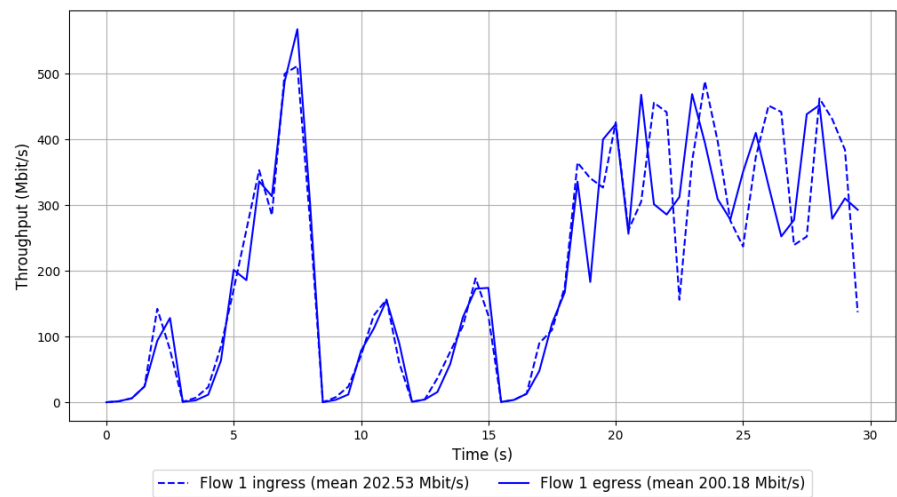
-- Flow 1:

Average throughput: 200.18 Mbit/s

95th percentile per-packet one-way delay: 227.126 ms

Loss rate: 2.05%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-01-01 22:17:06

End at: 2018-01-01 22:17:36

# Below is generated by plot.py at 2018-01-02 02:18:18

# Datalink statistics

-- Total of 1 flow:

Average throughput: 237.08 Mbit/s

95th percentile per-packet one-way delay: 273.389 ms

Loss rate: 9.74%

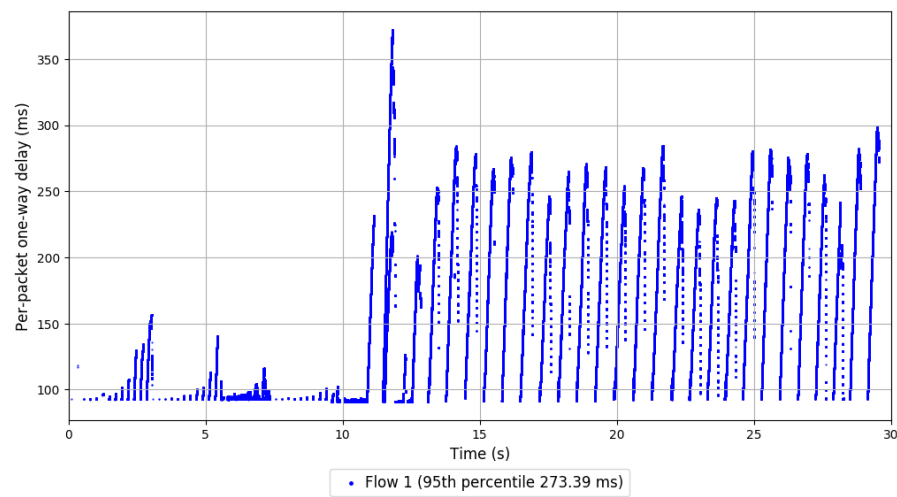
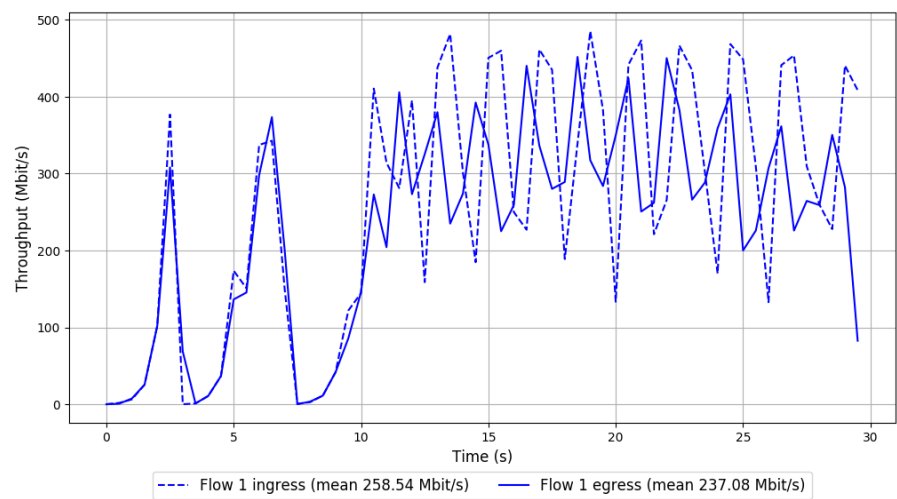
-- Flow 1:

Average throughput: 237.08 Mbit/s

95th percentile per-packet one-way delay: 273.389 ms

Loss rate: 9.74%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-01-01 22:29:44

End at: 2018-01-01 22:30:14

# Below is generated by plot.py at 2018-01-02 02:18:18

# Datalink statistics

-- Total of 1 flow:

Average throughput: 215.09 Mbit/s

95th percentile per-packet one-way delay: 119.284 ms

Loss rate: 0.76%

-- Flow 1:

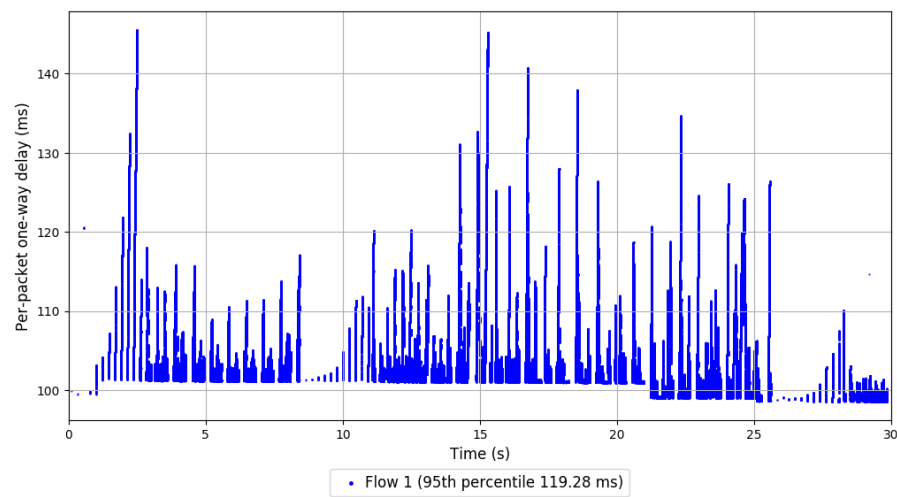
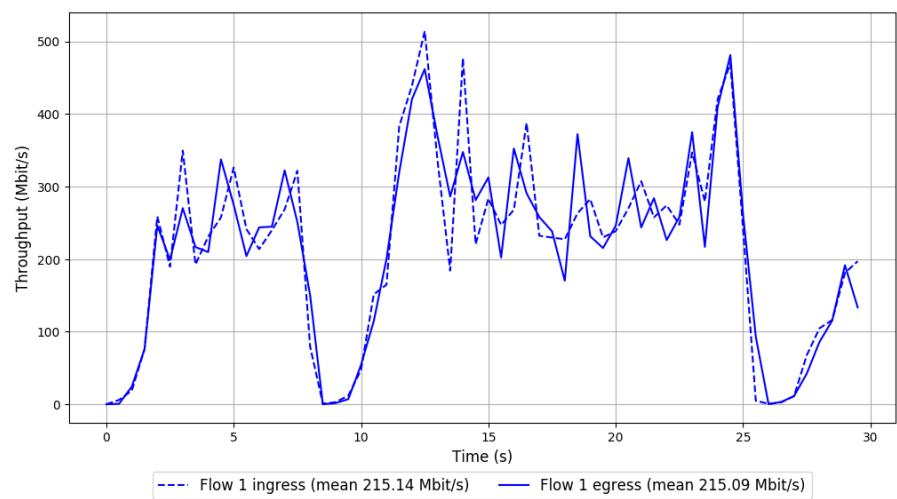
Average throughput: 215.09 Mbit/s

95th percentile per-packet one-way delay: 119.284 ms

Loss rate: 0.76%



Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2018-01-01 22:42:21

End at: 2018-01-01 22:42:51

# Below is generated by plot.py at 2018-01-02 02:18:18

# Datalink statistics

-- Total of 1 flow:

Average throughput: 151.62 Mbit/s

95th percentile per-packet one-way delay: 119.540 ms

Loss rate: 1.81%

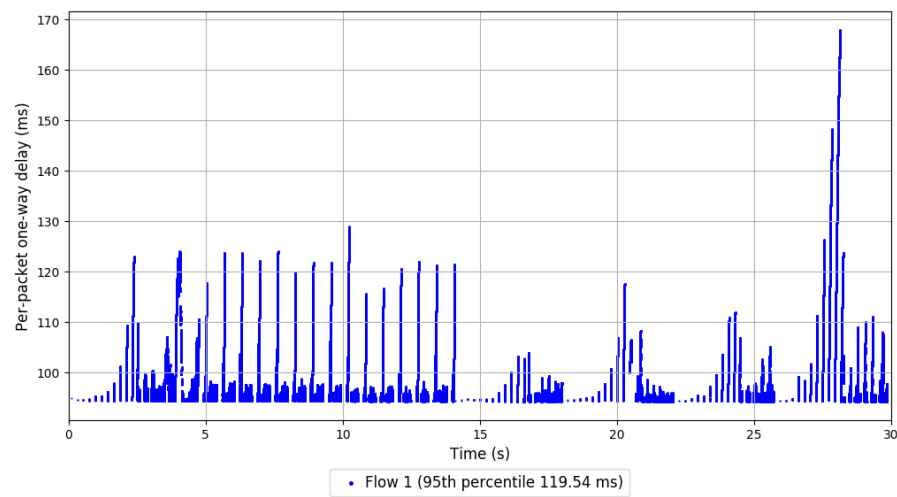
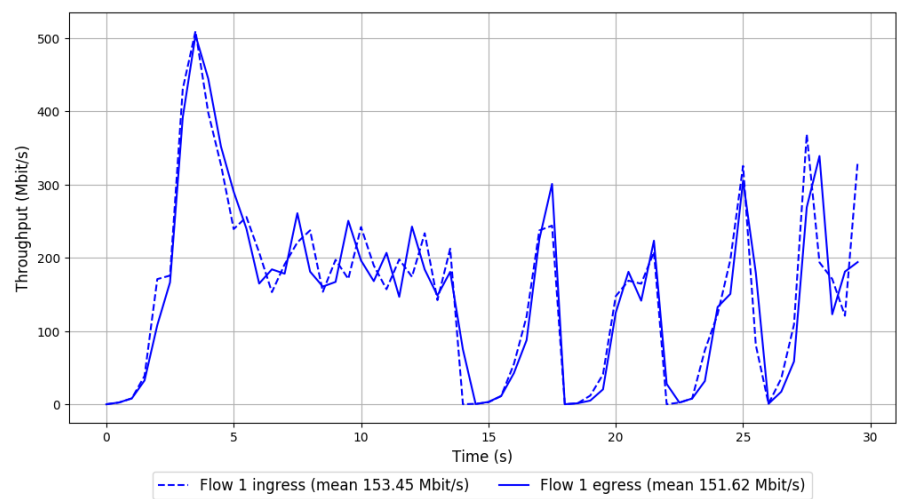
-- Flow 1:

Average throughput: 151.62 Mbit/s

95th percentile per-packet one-way delay: 119.540 ms

Loss rate: 1.81%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2018-01-01 22:54:46

End at: 2018-01-01 22:55:16

# Below is generated by plot.py at 2018-01-02 02:18:18

# Datalink statistics

-- Total of 1 flow:

Average throughput: 146.55 Mbit/s

95th percentile per-packet one-way delay: 167.292 ms

Loss rate: 0.65%

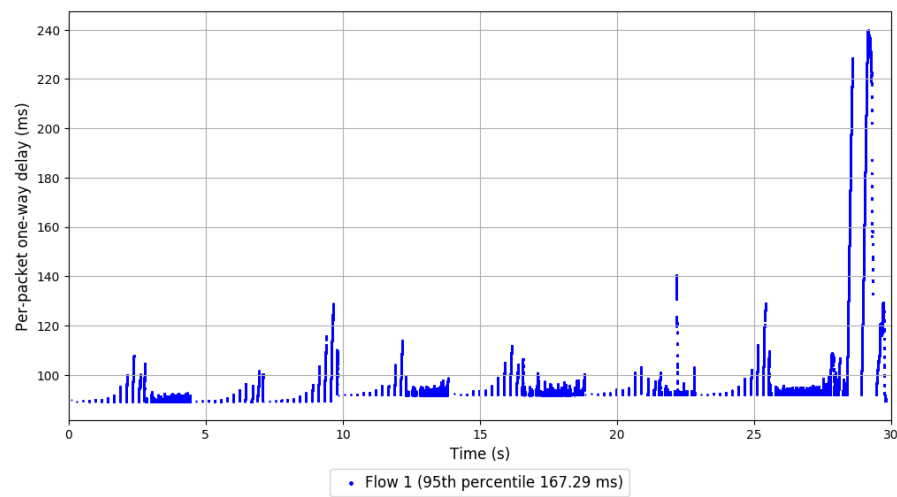
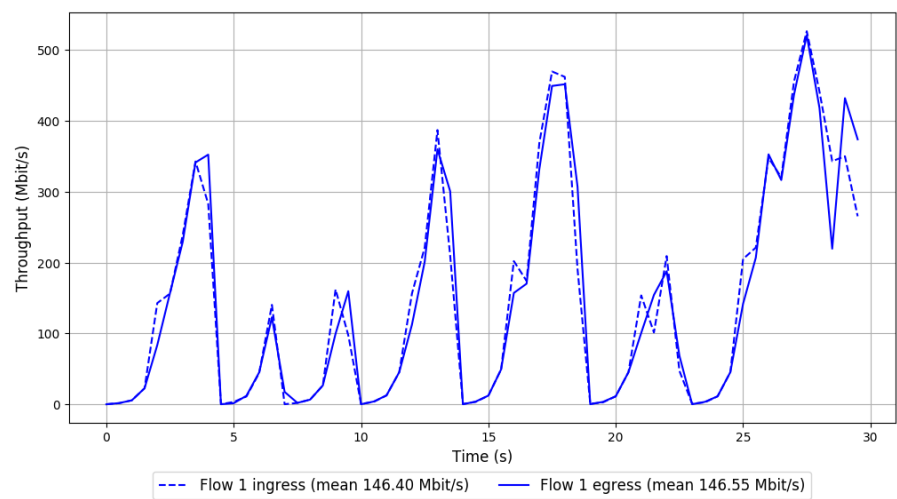
-- Flow 1:

Average throughput: 146.55 Mbit/s

95th percentile per-packet one-way delay: 167.292 ms

Loss rate: 0.65%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2018-01-01 23:07:04

End at: 2018-01-01 23:07:34

# Below is generated by plot.py at 2018-01-02 02:19:27

# Datalink statistics

-- Total of 1 flow:

Average throughput: 196.85 Mbit/s

95th percentile per-packet one-way delay: 116.777 ms

Loss rate: 0.79%

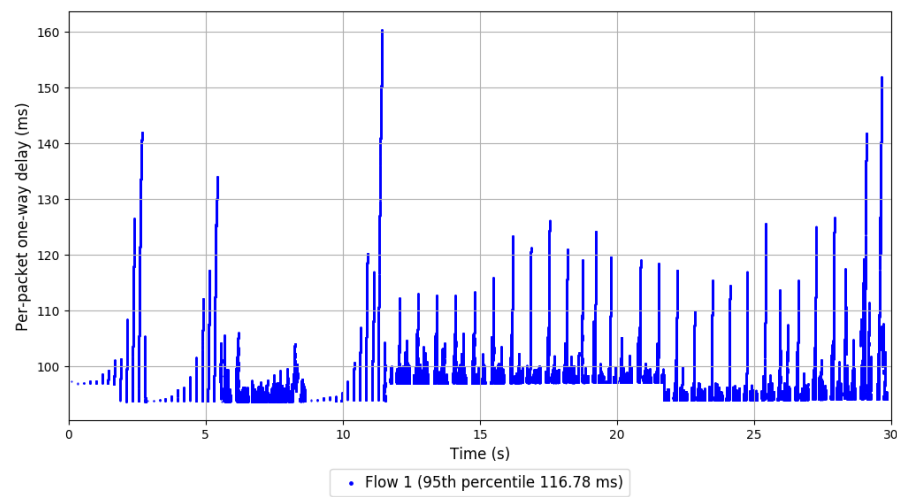
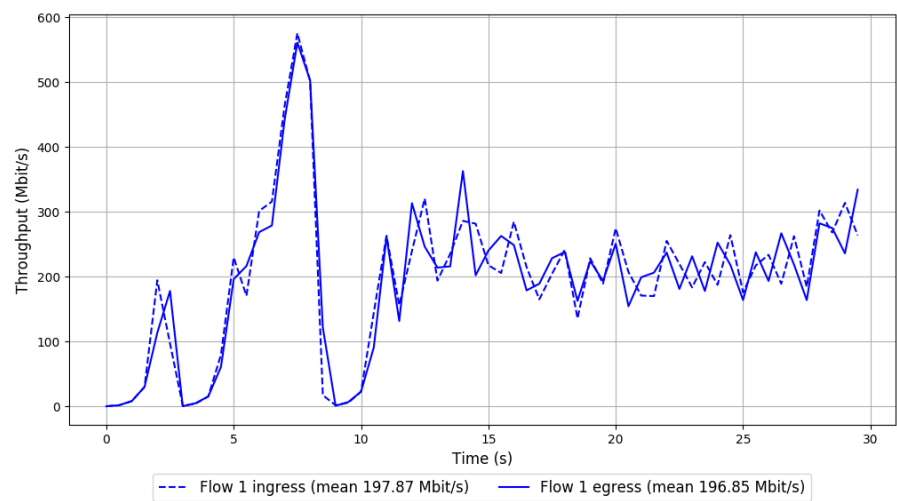
-- Flow 1:

Average throughput: 196.85 Mbit/s

95th percentile per-packet one-way delay: 116.777 ms

Loss rate: 0.79%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2018-01-01 23:19:38

End at: 2018-01-01 23:20:08

# Below is generated by plot.py at 2018-01-02 02:20:28

# Datalink statistics

-- Total of 1 flow:

Average throughput: 200.11 Mbit/s

95th percentile per-packet one-way delay: 125.928 ms

Loss rate: 0.88%

-- Flow 1:

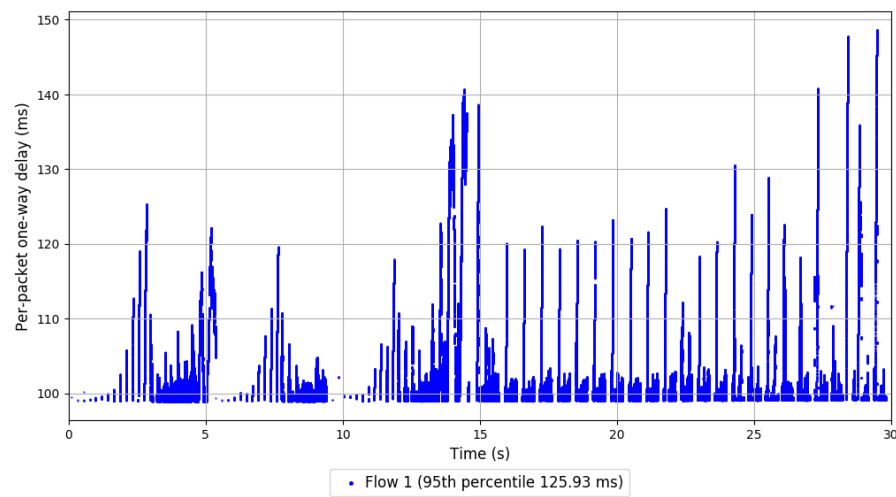
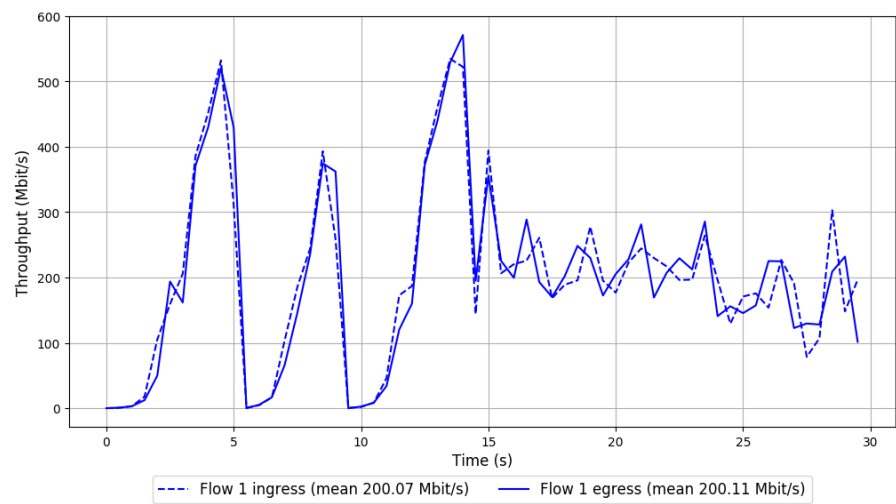
Average throughput: 200.11 Mbit/s

95th percentile per-packet one-way delay: 125.928 ms

Loss rate: 0.88%



Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2018-01-01 23:32:10

End at: 2018-01-01 23:32:40

# Below is generated by plot.py at 2018-01-02 02:20:28

# Datalink statistics

-- Total of 1 flow:

Average throughput: 159.35 Mbit/s

95th percentile per-packet one-way delay: 154.951 ms

Loss rate: 1.70%

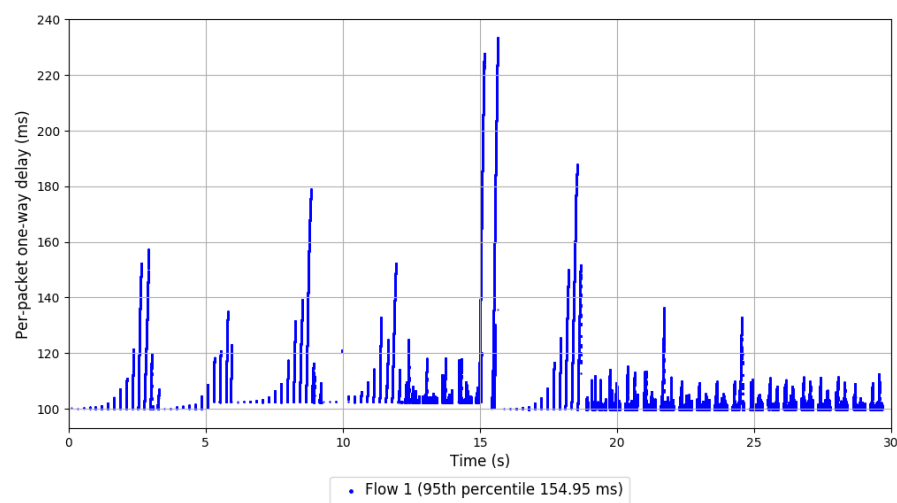
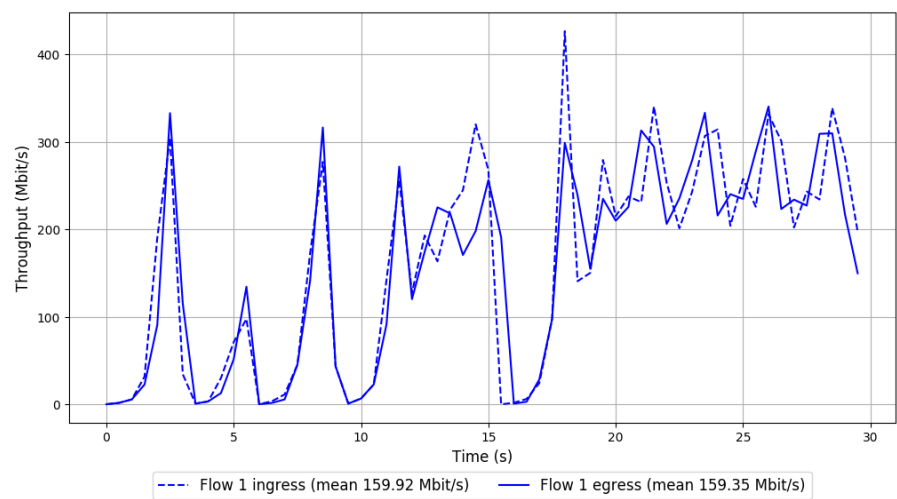
-- Flow 1:

Average throughput: 159.35 Mbit/s

95th percentile per-packet one-way delay: 154.951 ms

Loss rate: 1.70%

Run 10: Report of Verus — Data Link

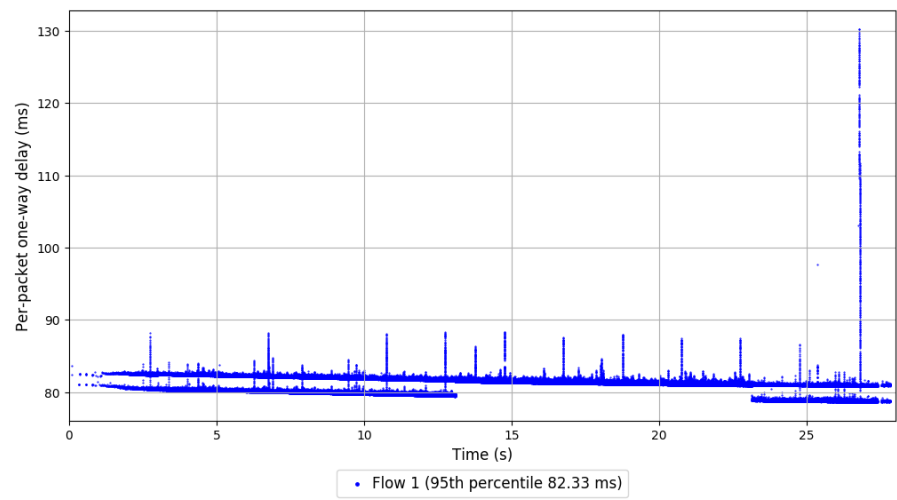
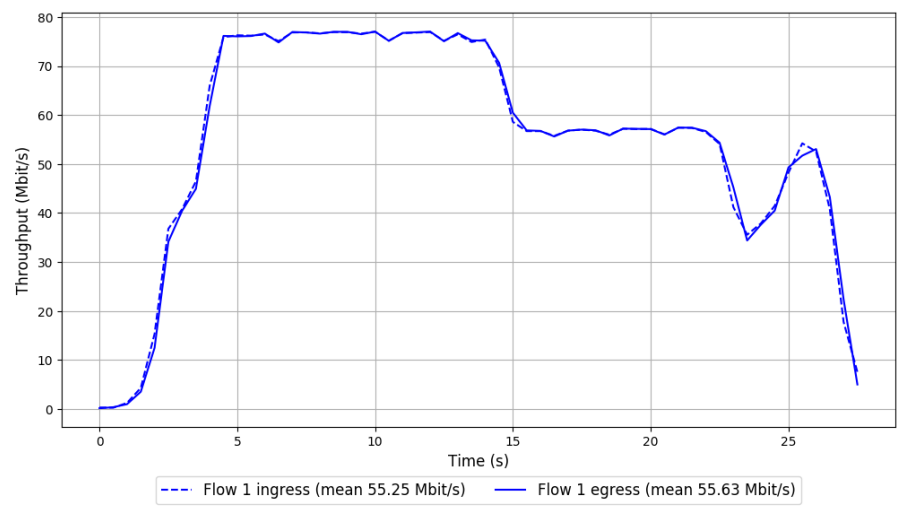


```
Run 1: Statistics of Copa

Start at: 2018-01-01 21:42:30
End at: 2018-01-01 21:43:00

# Below is generated by plot.py at 2018-01-02 02:20:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 55.63 Mbit/s
95th percentile per-packet one-way delay: 82.335 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 55.63 Mbit/s
95th percentile per-packet one-way delay: 82.335 ms
Loss rate: 0.12%
```

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-01-01 21:54:48

End at: 2018-01-01 21:55:18

# Below is generated by plot.py at 2018-01-02 02:20:28

# Datalink statistics

-- Total of 1 flow:

Average throughput: 41.01 Mbit/s

95th percentile per-packet one-way delay: 77.583 ms

Loss rate: 0.37%

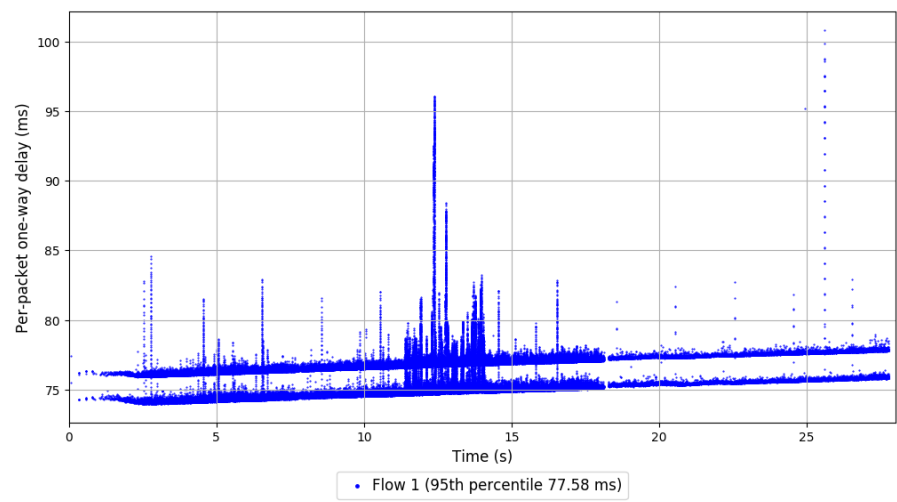
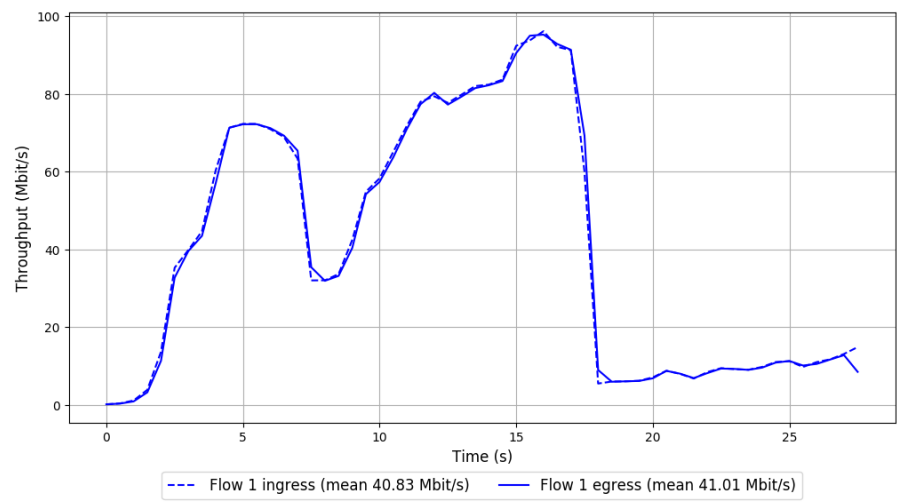
-- Flow 1:

Average throughput: 41.01 Mbit/s

95th percentile per-packet one-way delay: 77.583 ms

Loss rate: 0.37%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-01-01 22:07:04

End at: 2018-01-01 22:07:34

# Below is generated by plot.py at 2018-01-02 02:21:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 78.25 Mbit/s

95th percentile per-packet one-way delay: 90.377 ms

Loss rate: 0.91%

-- Flow 1:

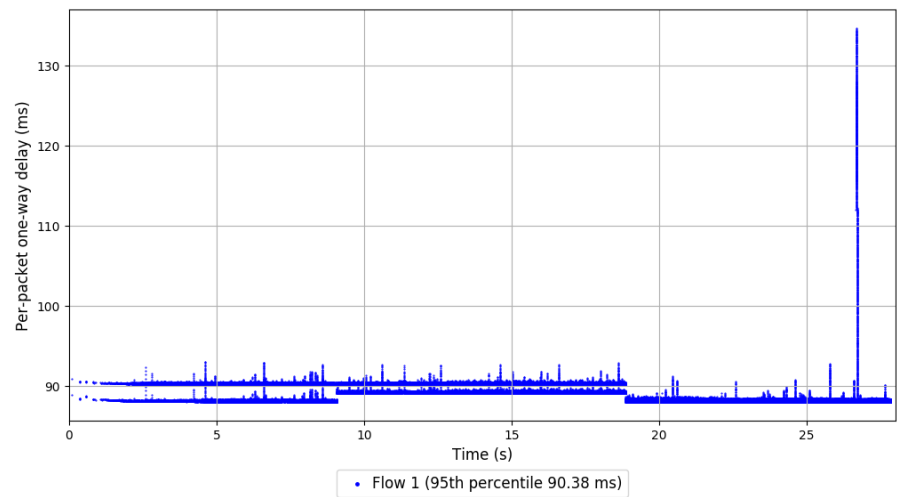
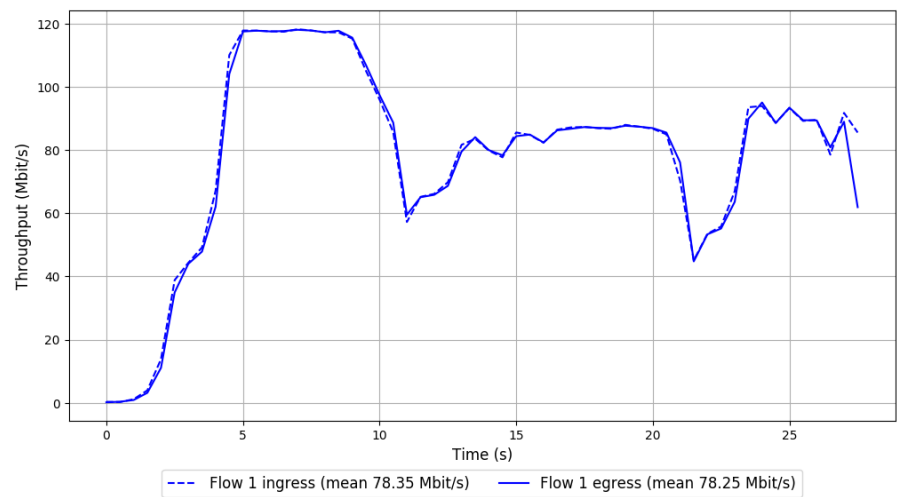
Average throughput: 78.25 Mbit/s

95th percentile per-packet one-way delay: 90.377 ms

Loss rate: 0.91%



Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2018-01-01 22:19:39

End at: 2018-01-01 22:20:09

# Below is generated by plot.py at 2018-01-02 02:21:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 46.18 Mbit/s

95th percentile per-packet one-way delay: 99.481 ms

Loss rate: 0.15%

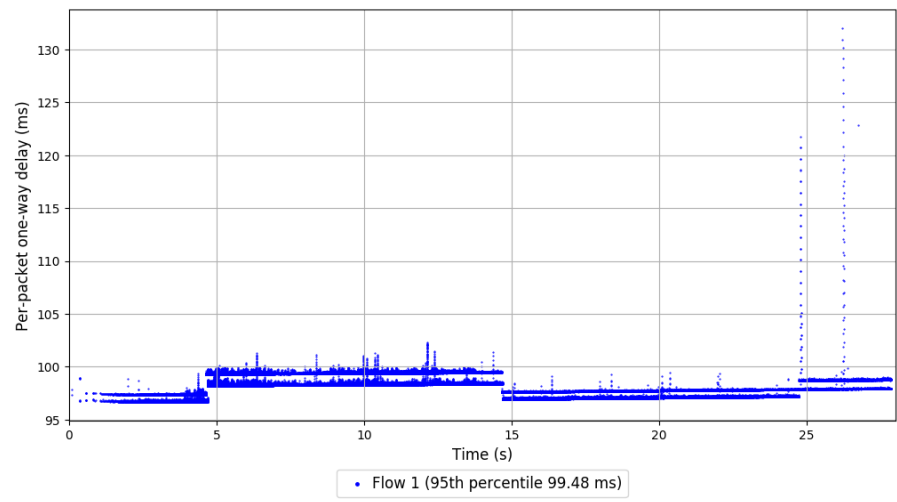
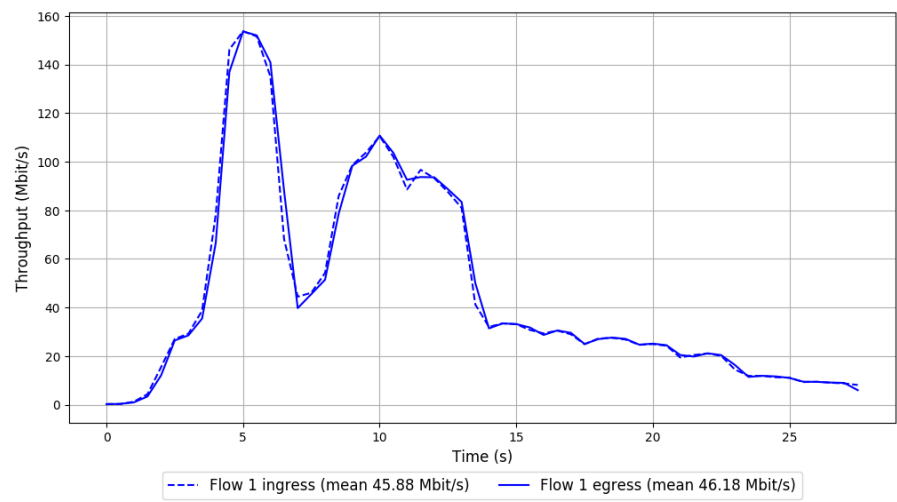
-- Flow 1:

Average throughput: 46.18 Mbit/s

95th percentile per-packet one-way delay: 99.481 ms

Loss rate: 0.15%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-01-01 22:32:15

End at: 2018-01-01 22:32:45

# Below is generated by plot.py at 2018-01-02 02:21:38

# Datalink statistics

-- Total of 1 flow:

Average throughput: 67.24 Mbit/s

95th percentile per-packet one-way delay: 98.799 ms

Loss rate: 0.31%

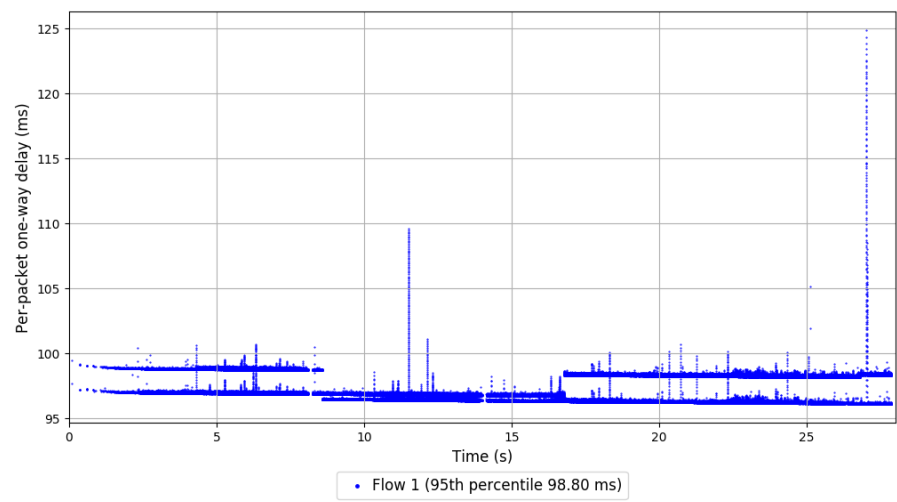
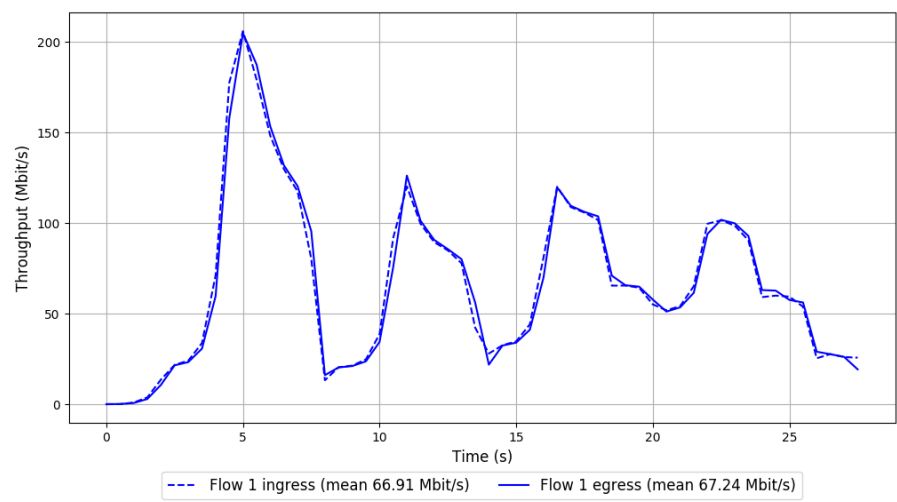
-- Flow 1:

Average throughput: 67.24 Mbit/s

95th percentile per-packet one-way delay: 98.799 ms

Loss rate: 0.31%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2018-01-01 22:44:47

End at: 2018-01-01 22:45:17

# Below is generated by plot.py at 2018-01-02 02:22:29

# Datalink statistics

-- Total of 1 flow:

Average throughput: 82.24 Mbit/s

95th percentile per-packet one-way delay: 94.583 ms

Loss rate: 0.65%

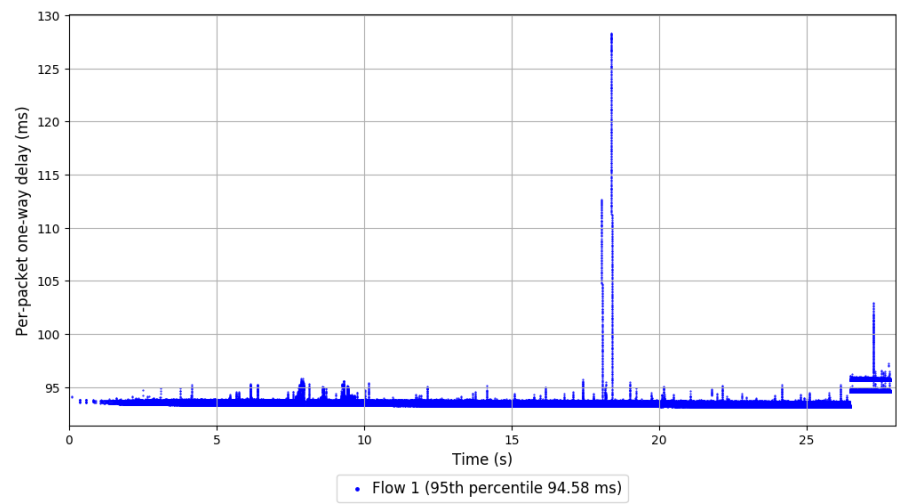
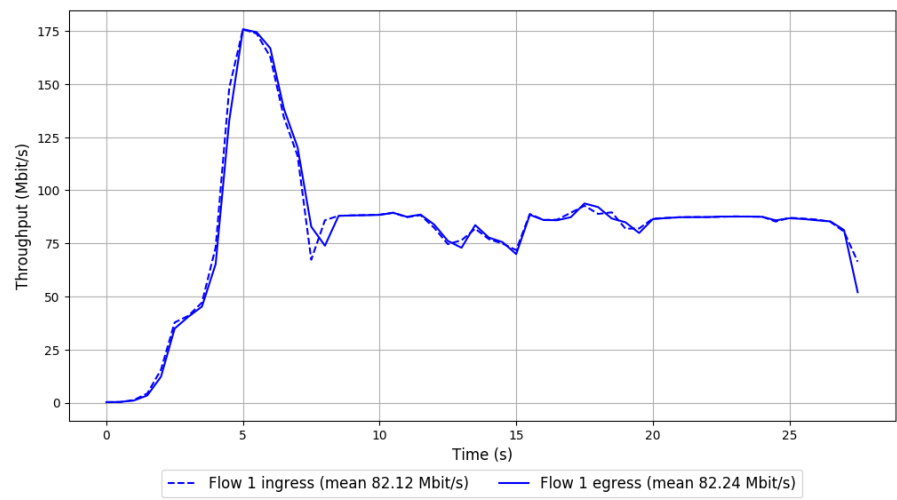
-- Flow 1:

Average throughput: 82.24 Mbit/s

95th percentile per-packet one-way delay: 94.583 ms

Loss rate: 0.65%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2018-01-01 22:57:11

End at: 2018-01-01 22:57:41

# Below is generated by plot.py at 2018-01-02 02:22:39

# Datalink statistics

-- Total of 1 flow:

Average throughput: 80.97 Mbit/s

95th percentile per-packet one-way delay: 93.198 ms

Loss rate: 0.84%

-- Flow 1:

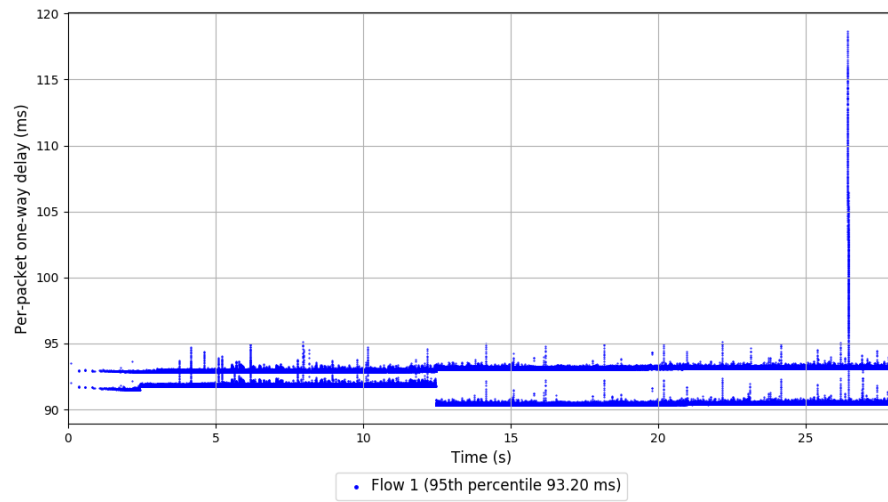
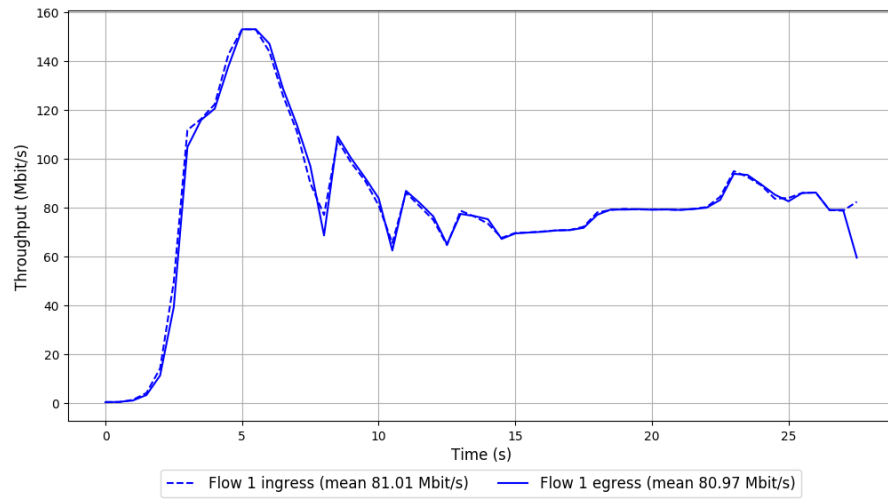
Average throughput: 80.97 Mbit/s

95th percentile per-packet one-way delay: 93.198 ms

Loss rate: 0.84%



### Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2018-01-01 23:09:32

End at: 2018-01-01 23:10:02

# Below is generated by plot.py at 2018-01-02 02:22:39

# Datalink statistics

-- Total of 1 flow:

Average throughput: 65.35 Mbit/s

95th percentile per-packet one-way delay: 99.167 ms

Loss rate: 1.11%

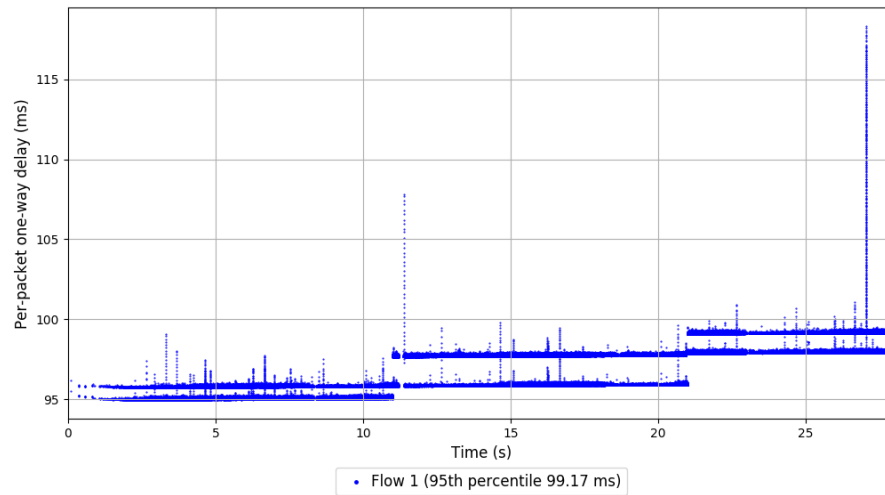
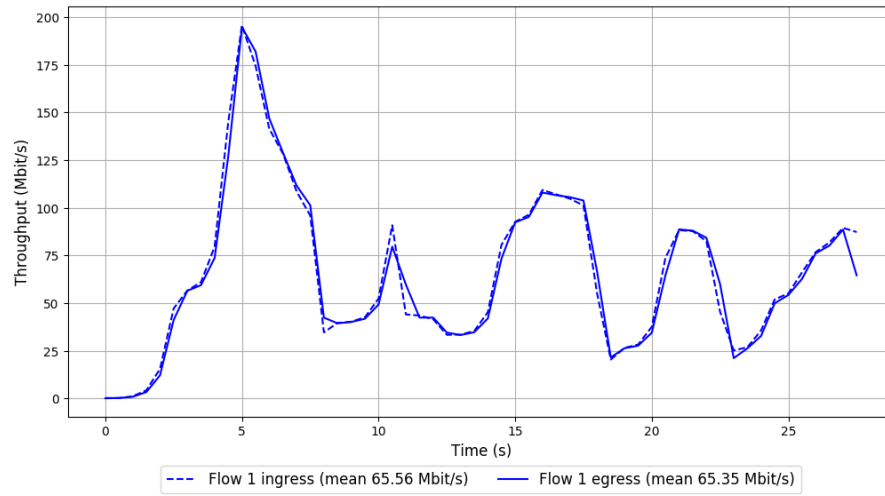
-- Flow 1:

Average throughput: 65.35 Mbit/s

95th percentile per-packet one-way delay: 99.167 ms

Loss rate: 1.11%

## Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2018-01-01 23:22:07

End at: 2018-01-01 23:22:37

# Below is generated by plot.py at 2018-01-02 02:23:04

# Datalink statistics

-- Total of 1 flow:

Average throughput: 83.45 Mbit/s

95th percentile per-packet one-way delay: 100.807 ms

Loss rate: 0.80%

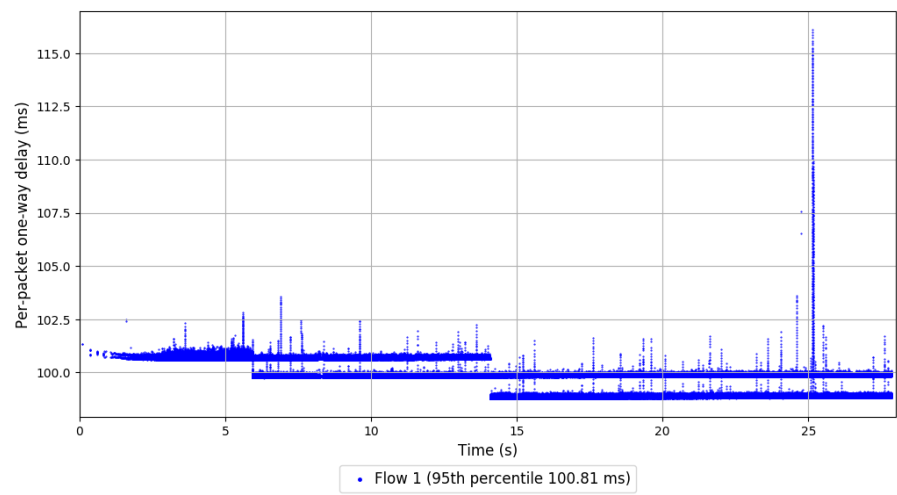
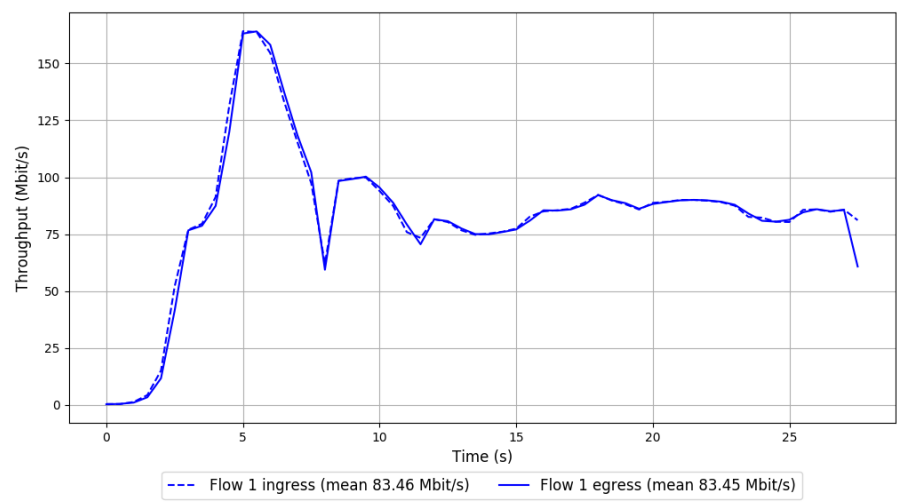
-- Flow 1:

Average throughput: 83.45 Mbit/s

95th percentile per-packet one-way delay: 100.807 ms

Loss rate: 0.80%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2018-01-01 23:34:37

End at: 2018-01-01 23:35:07

# Below is generated by plot.py at 2018-01-02 02:23:04

# Datalink statistics

-- Total of 1 flow:

Average throughput: 65.05 Mbit/s

95th percentile per-packet one-way delay: 101.370 ms

Loss rate: 0.00%

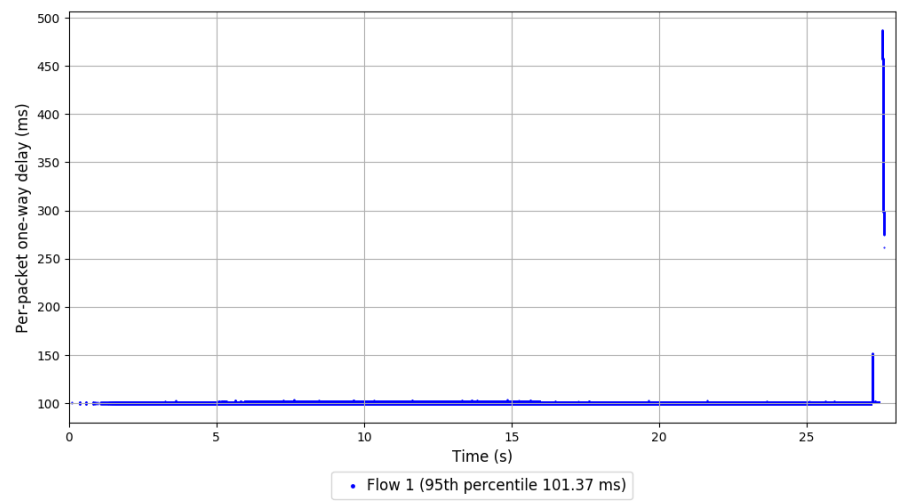
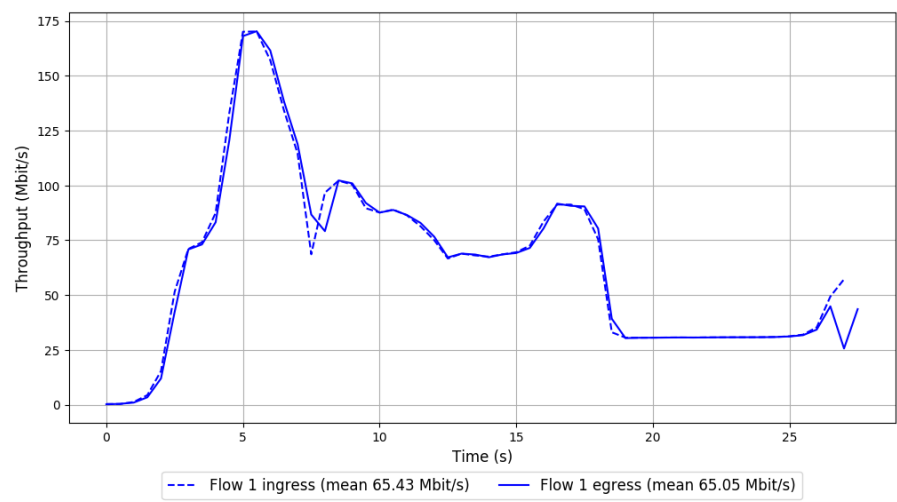
-- Flow 1:

Average throughput: 65.05 Mbit/s

95th percentile per-packet one-way delay: 101.370 ms

Loss rate: 0.00%

Run 10: Report of Copa — Data Link



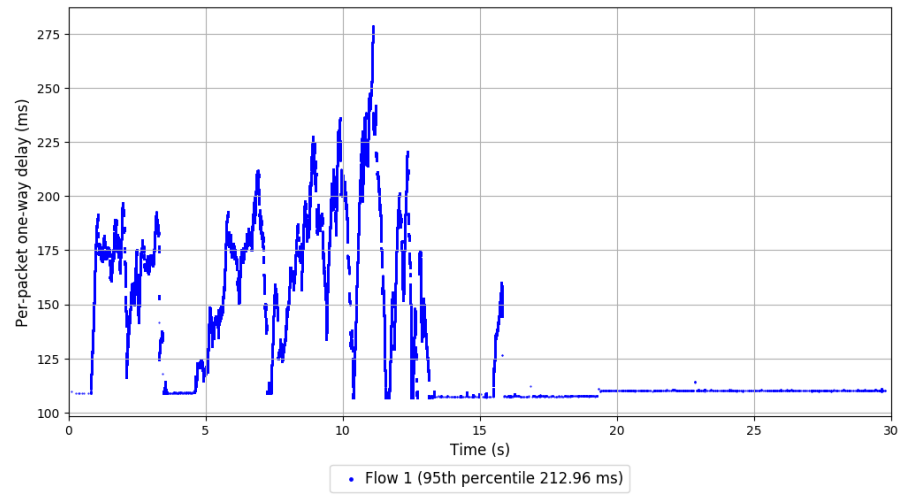
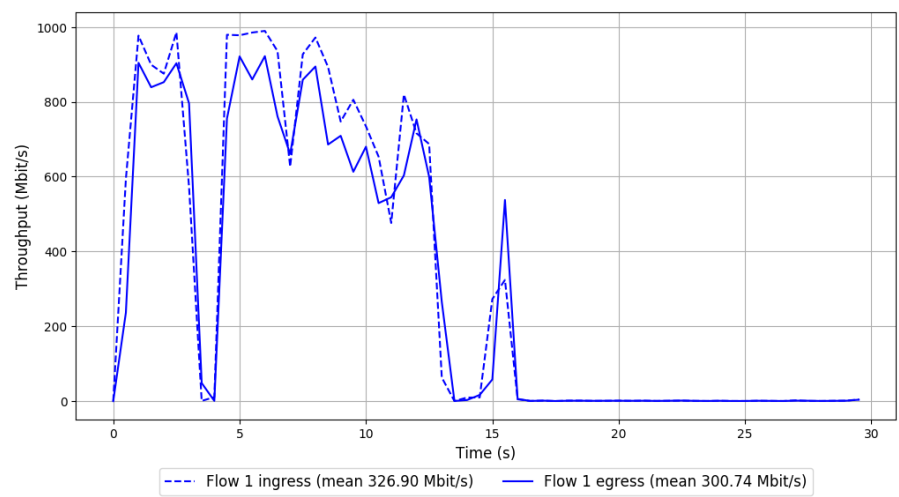
```
Run 1: Statistics of FillP

Start at: 2018-01-01 21:34:54
End at: 2018-01-01 21:35:24

# Below is generated by plot.py at 2018-01-02 02:26:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 300.74 Mbit/s
95th percentile per-packet one-way delay: 212.955 ms
Loss rate: 8.72%
-- Flow 1:
Average throughput: 300.74 Mbit/s
95th percentile per-packet one-way delay: 212.955 ms
Loss rate: 8.72%
```



Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-01-01 21:46:52

End at: 2018-01-01 21:47:22

# Below is generated by plot.py at 2018-01-02 02:39:17

# Datalink statistics

-- Total of 1 flow:

Average throughput: 737.22 Mbit/s

95th percentile per-packet one-way delay: 184.330 ms

Loss rate: 11.89%

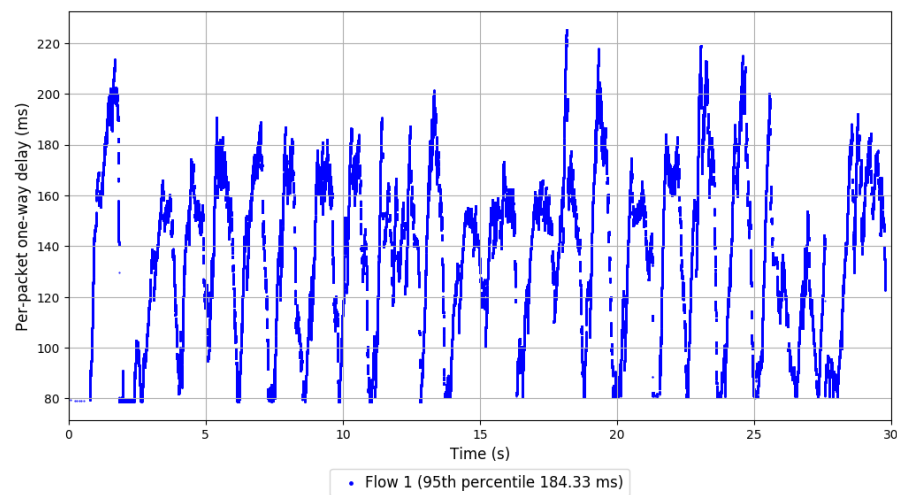
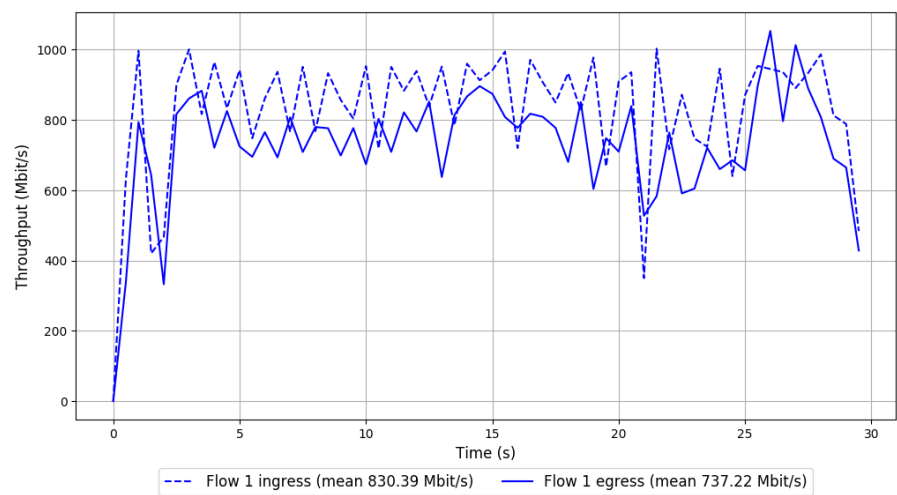
-- Flow 1:

Average throughput: 737.22 Mbit/s

95th percentile per-packet one-way delay: 184.330 ms

Loss rate: 11.89%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-01-01 21:59:07

End at: 2018-01-01 21:59:37

# Below is generated by plot.py at 2018-01-02 02:42:04

# Datalink statistics

-- Total of 1 flow:

Average throughput: 956.97 Mbit/s

95th percentile per-packet one-way delay: 132.683 ms

Loss rate: 0.84%

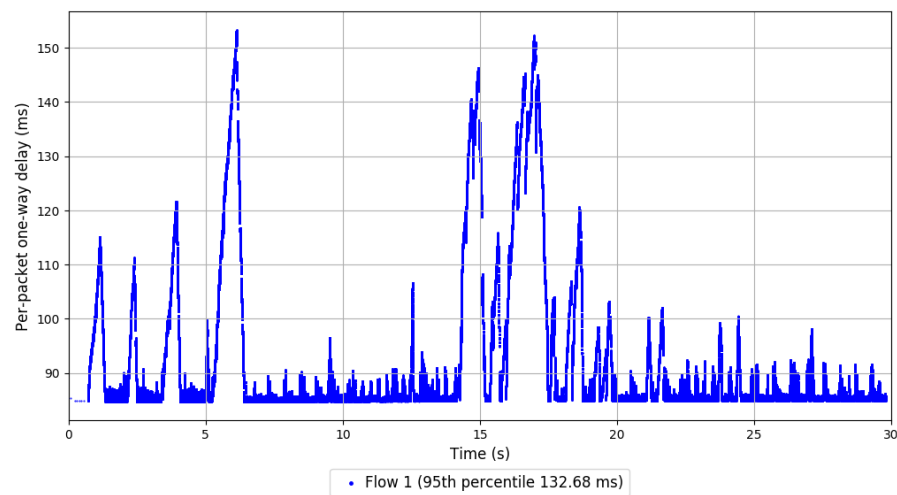
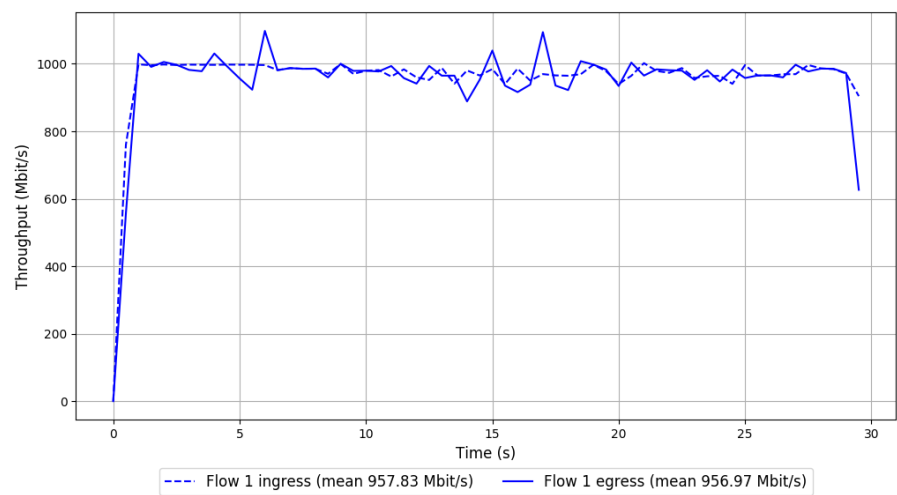
-- Flow 1:

Average throughput: 956.97 Mbit/s

95th percentile per-packet one-way delay: 132.683 ms

Loss rate: 0.84%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-01-01 22:11:37

End at: 2018-01-01 22:12:07

# Below is generated by plot.py at 2018-01-02 02:42:17

# Datalink statistics

-- Total of 1 flow:

Average throughput: 977.36 Mbit/s

95th percentile per-packet one-way delay: 105.949 ms

Loss rate: 0.77%

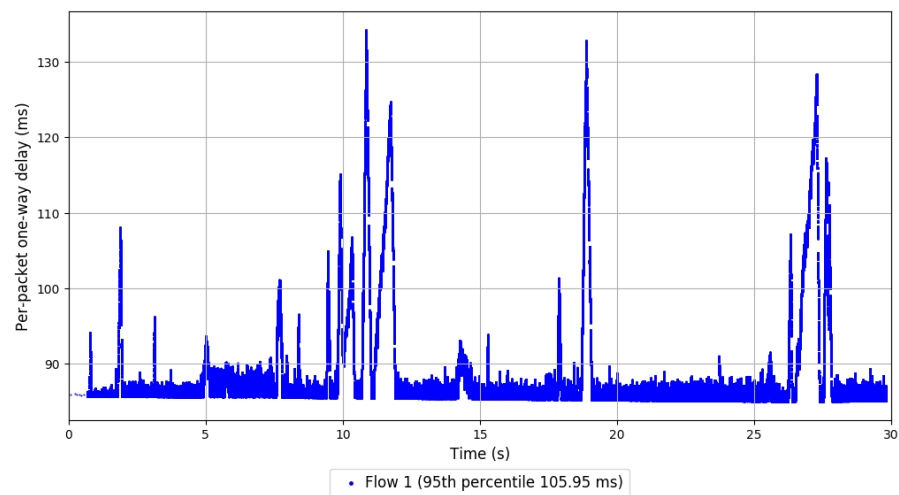
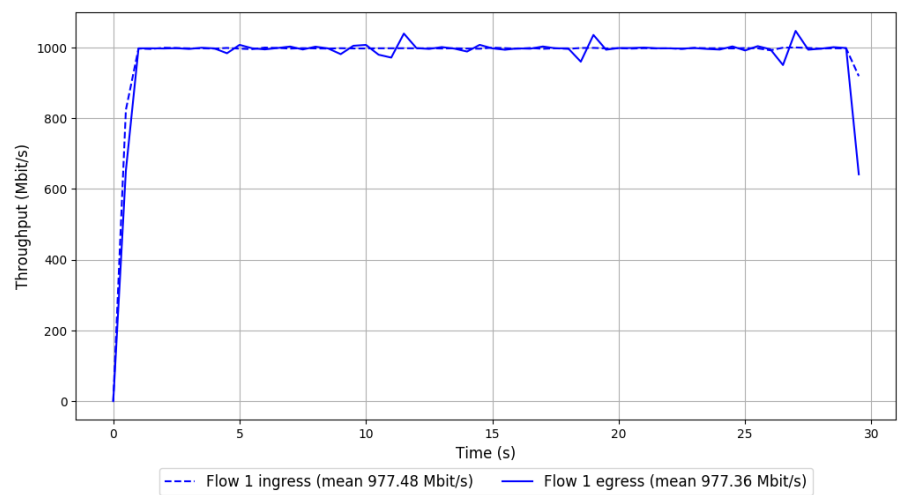
-- Flow 1:

Average throughput: 977.36 Mbit/s

95th percentile per-packet one-way delay: 105.949 ms

Loss rate: 0.77%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-01-01 22:24:18

End at: 2018-01-01 22:24:48

# Below is generated by plot.py at 2018-01-02 02:42:17

# Datalink statistics

-- Total of 1 flow:

Average throughput: 978.37 Mbit/s

95th percentile per-packet one-way delay: 105.939 ms

Loss rate: 0.76%

-- Flow 1:

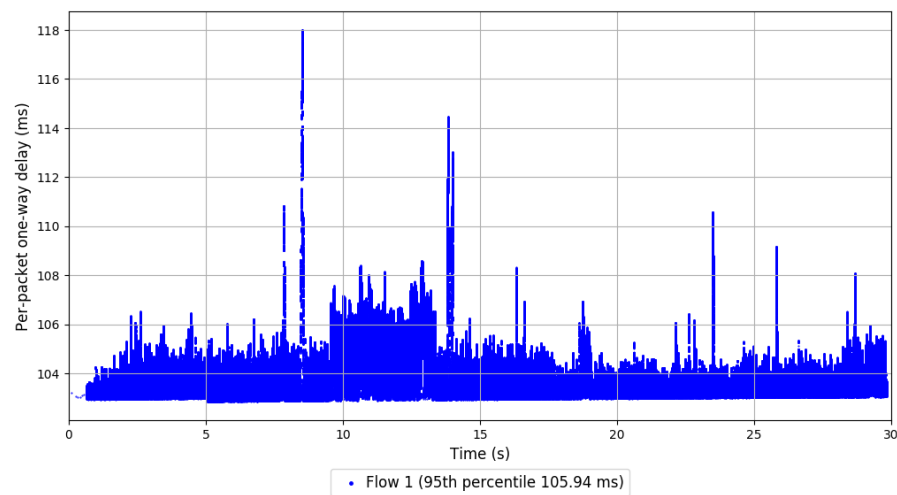
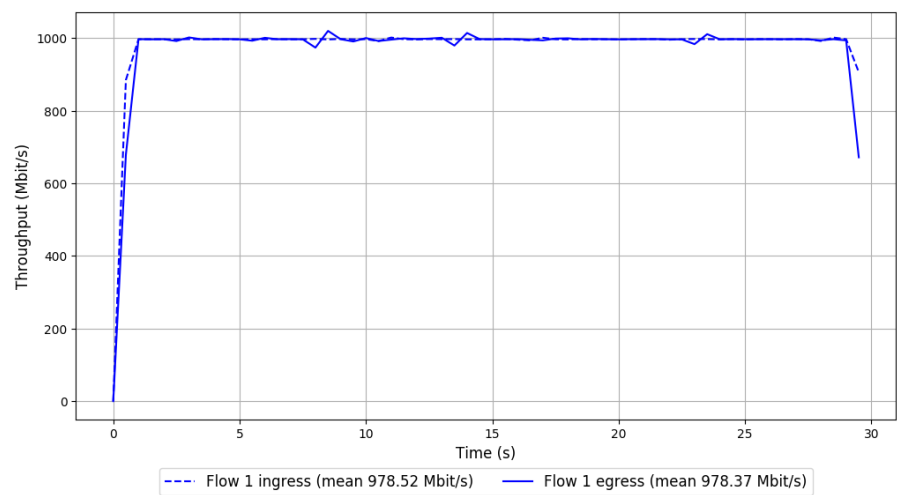
Average throughput: 978.37 Mbit/s

95th percentile per-packet one-way delay: 105.939 ms

Loss rate: 0.76%



Run 5: Report of FillP — Data Link



Run 6: Statistics of FillP

Start at: 2018-01-01 22:36:54

End at: 2018-01-01 22:37:24

# Below is generated by plot.py at 2018-01-02 02:42:17

# Datalink statistics

-- Total of 1 flow:

Average throughput: 960.10 Mbit/s

95th percentile per-packet one-way delay: 185.813 ms

Loss rate: 1.05%

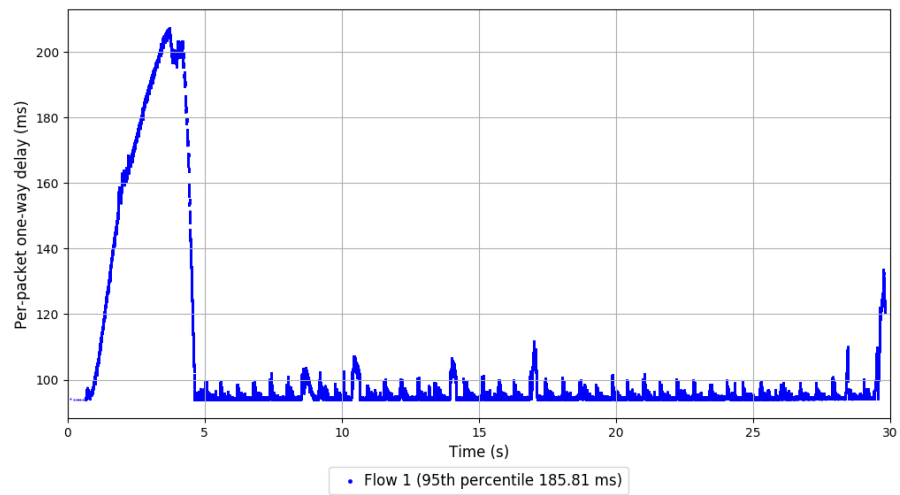
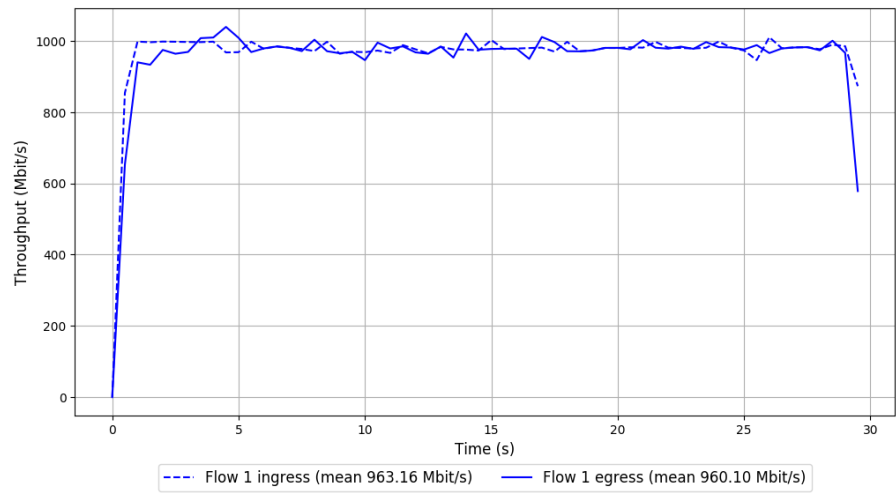
-- Flow 1:

Average throughput: 960.10 Mbit/s

95th percentile per-packet one-way delay: 185.813 ms

Loss rate: 1.05%

## Run 6: Report of FillP — Data Link



Run 7: Statistics of FillP

Start at: 2018-01-01 22:49:20

End at: 2018-01-01 22:49:50

# Below is generated by plot.py at 2018-01-02 02:42:36

# Datalink statistics

-- Total of 1 flow:

Average throughput: 970.72 Mbit/s

95th percentile per-packet one-way delay: 105.596 ms

Loss rate: 0.78%

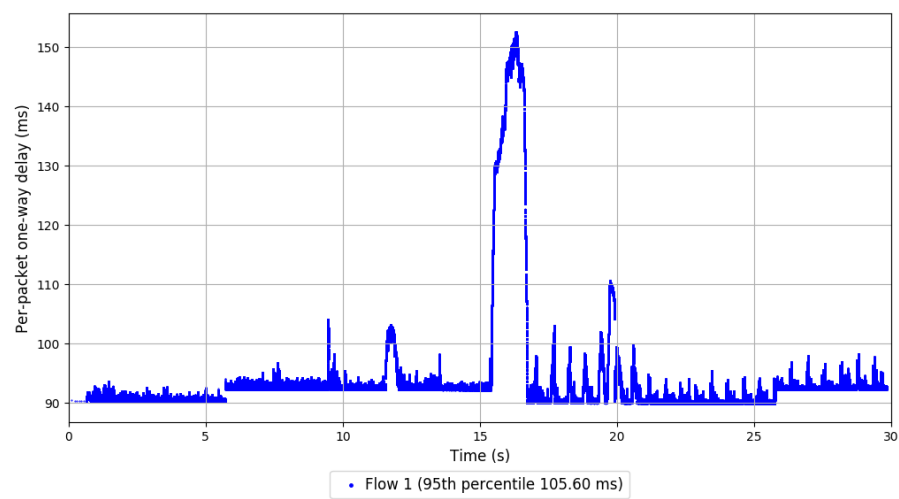
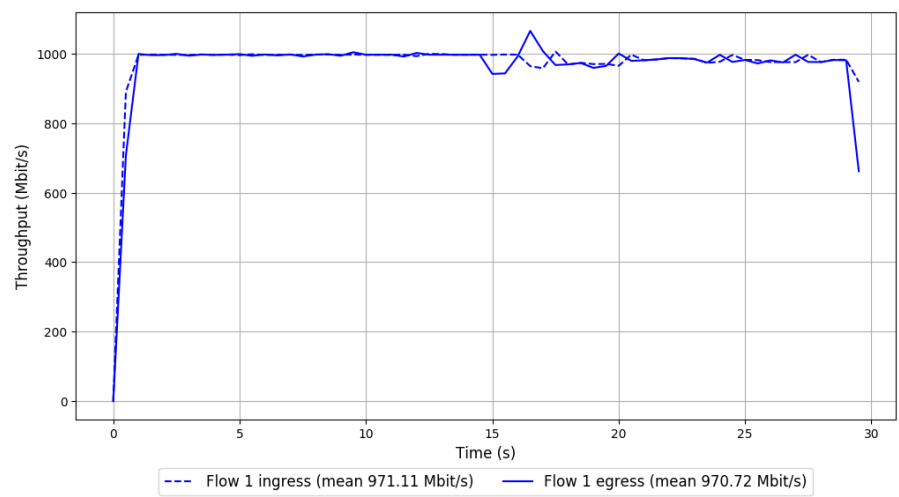
-- Flow 1:

Average throughput: 970.72 Mbit/s

95th percentile per-packet one-way delay: 105.596 ms

Loss rate: 0.78%

Run 7: Report of FillP — Data Link



Run 8: Statistics of FillP

Start at: 2018-01-01 23:01:37

End at: 2018-01-01 23:02:07

# Below is generated by plot.py at 2018-01-02 02:43:01

# Datalink statistics

-- Total of 1 flow:

Average throughput: 977.70 Mbit/s

95th percentile per-packet one-way delay: 102.137 ms

Loss rate: 0.68%

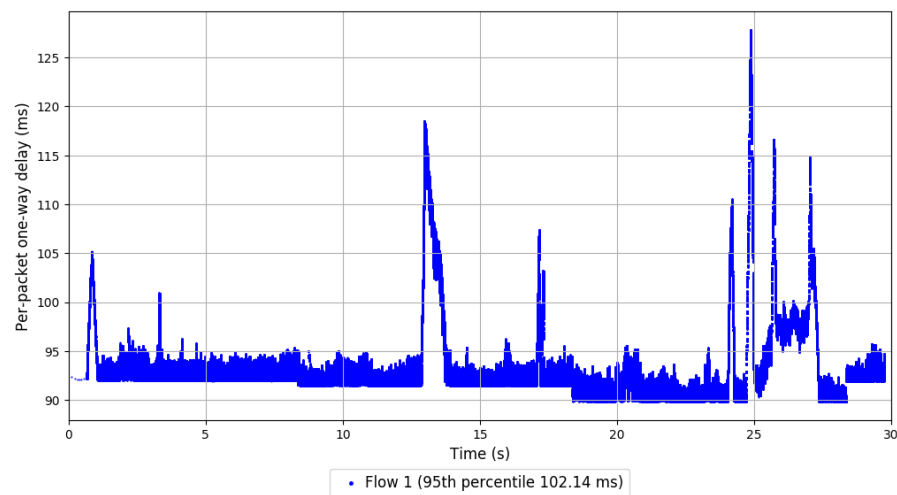
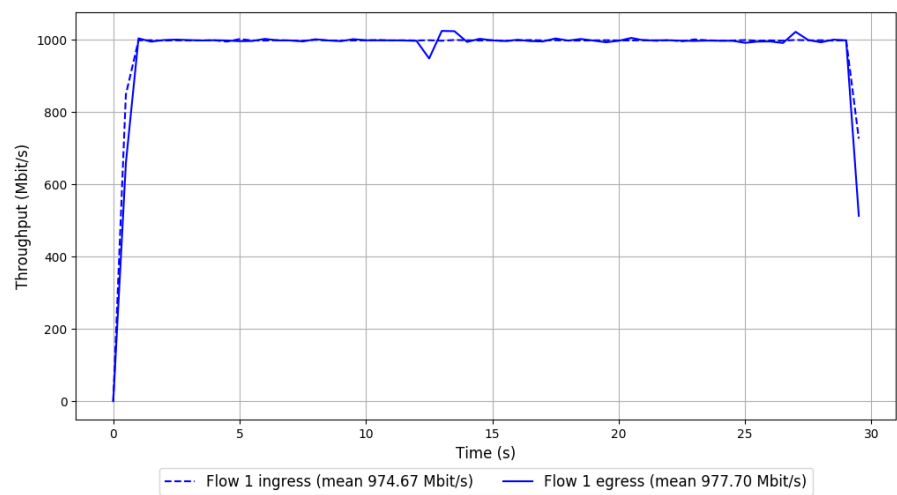
-- Flow 1:

Average throughput: 977.70 Mbit/s

95th percentile per-packet one-way delay: 102.137 ms

Loss rate: 0.68%

Run 8: Report of FillP — Data Link



Run 9: Statistics of FillP

Start at: 2018-01-01 23:14:12

End at: 2018-01-01 23:14:42

# Below is generated by plot.py at 2018-01-02 02:46:08

# Datalink statistics

-- Total of 1 flow:

Average throughput: 962.29 Mbit/s

95th percentile per-packet one-way delay: 228.028 ms

Loss rate: 1.12%

-- Flow 1:

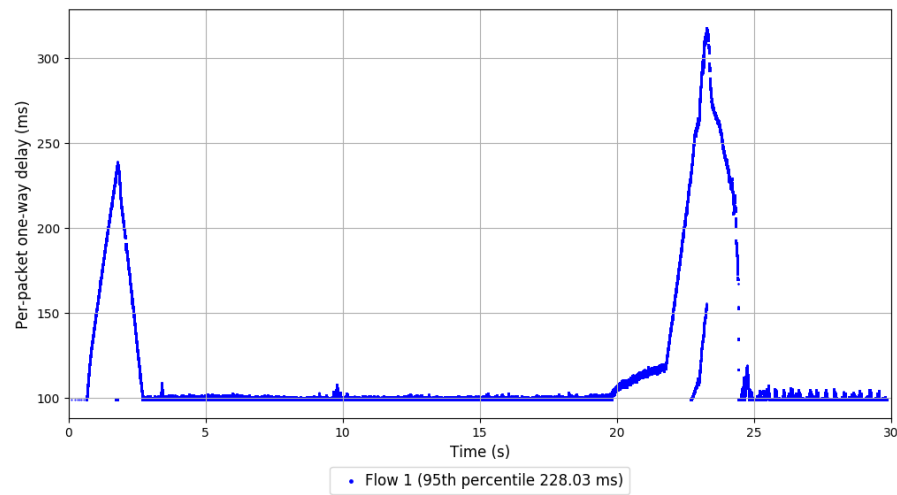
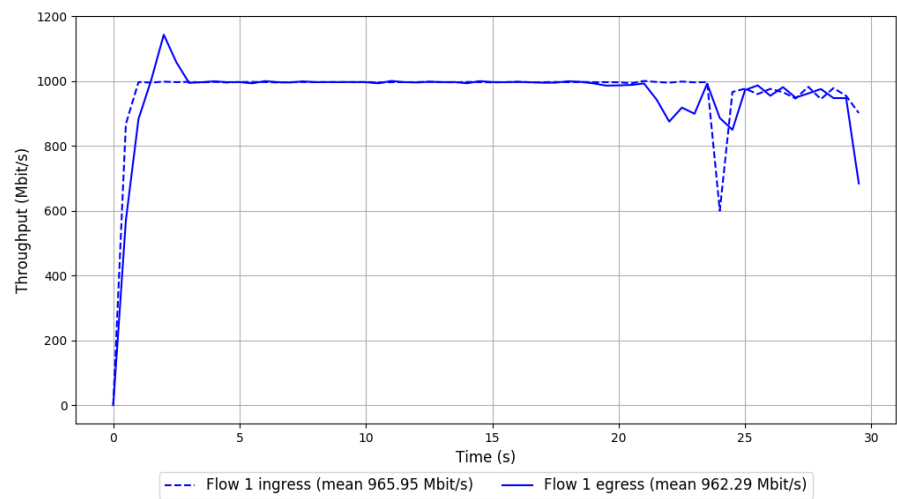
Average throughput: 962.29 Mbit/s

95th percentile per-packet one-way delay: 228.028 ms

Loss rate: 1.12%



Run 9: Report of FillP — Data Link



Run 10: Statistics of FillP

Start at: 2018-01-01 23:26:42

End at: 2018-01-01 23:27:12

# Below is generated by plot.py at 2018-01-02 02:46:46

# Datalink statistics

-- Total of 1 flow:

Average throughput: 964.87 Mbit/s

95th percentile per-packet one-way delay: 111.328 ms

Loss rate: 0.85%

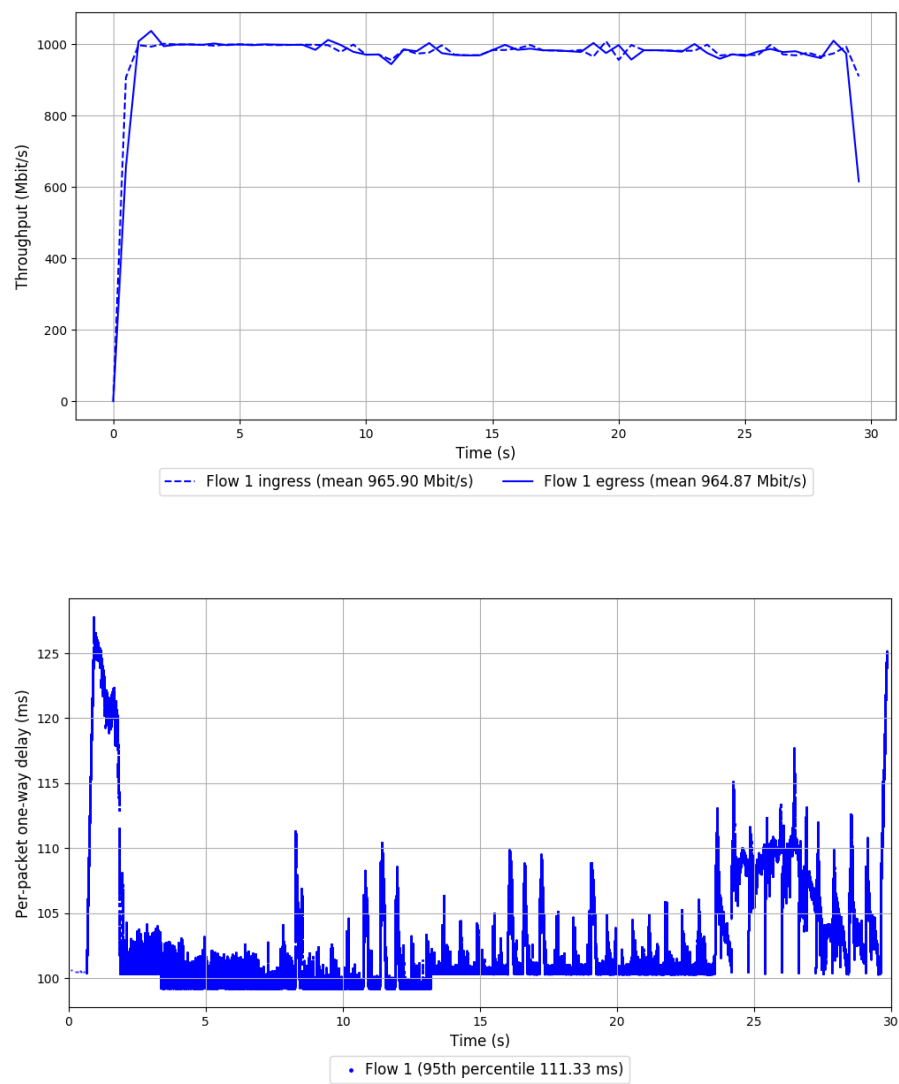
-- Flow 1:

Average throughput: 964.87 Mbit/s

95th percentile per-packet one-way delay: 111.328 ms

Loss rate: 0.85%

Run 10: Report of FillP — Data Link

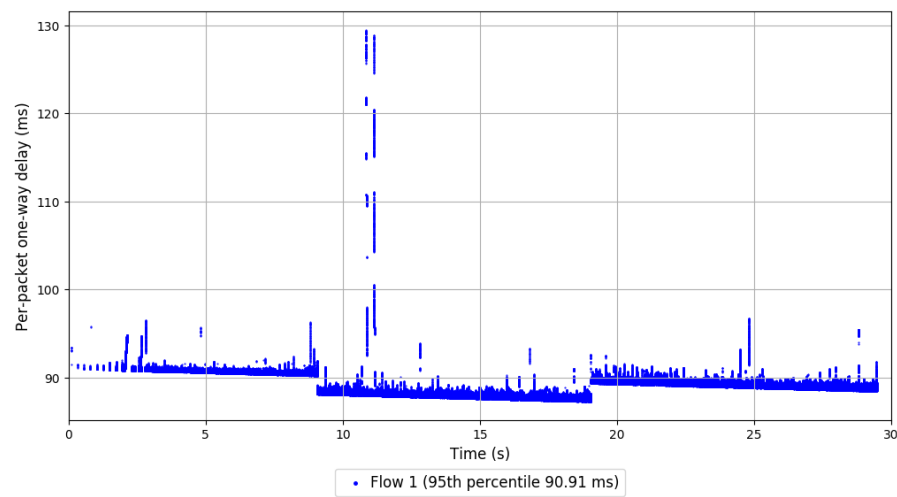
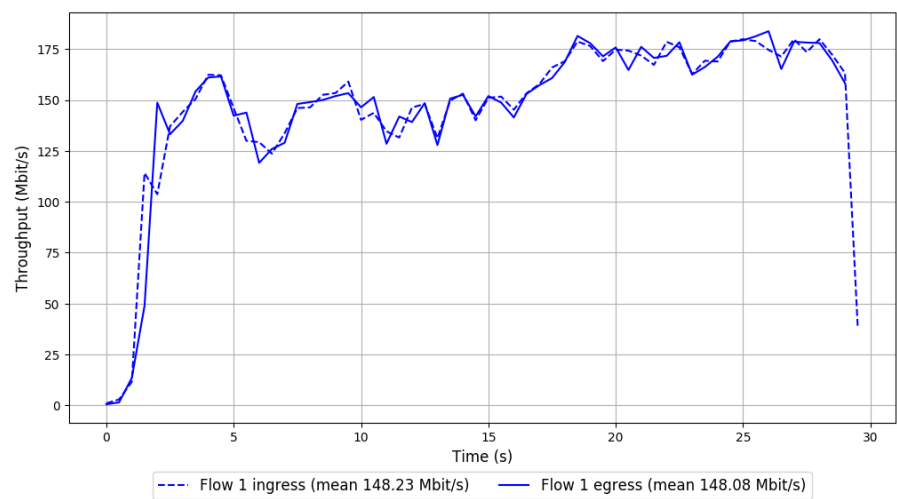


```
Run 1: Statistics of Indigo

Start at: 2018-01-01 21:40:56
End at: 2018-01-01 21:41:26

# Below is generated by plot.py at 2018-01-02 02:46:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 148.08 Mbit/s
95th percentile per-packet one-way delay: 90.906 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 148.08 Mbit/s
95th percentile per-packet one-way delay: 90.906 ms
Loss rate: 0.87%
```

Run 1: Report of Indigo — Data Link

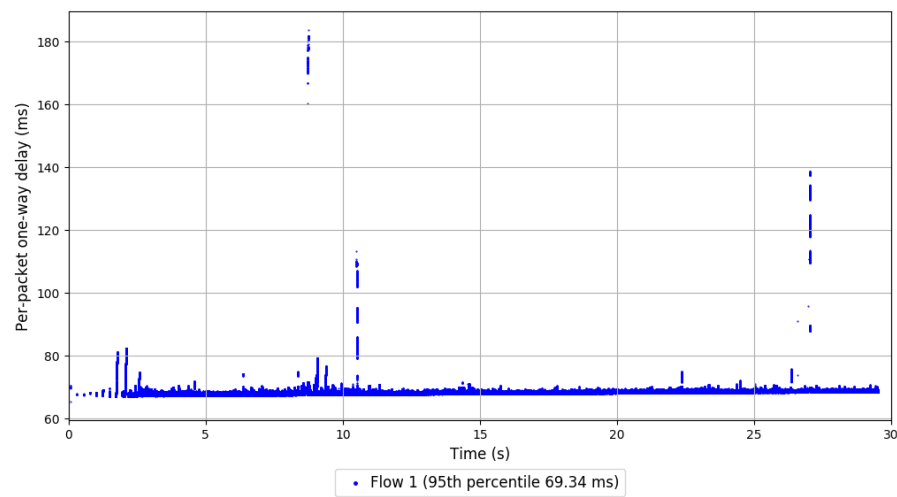
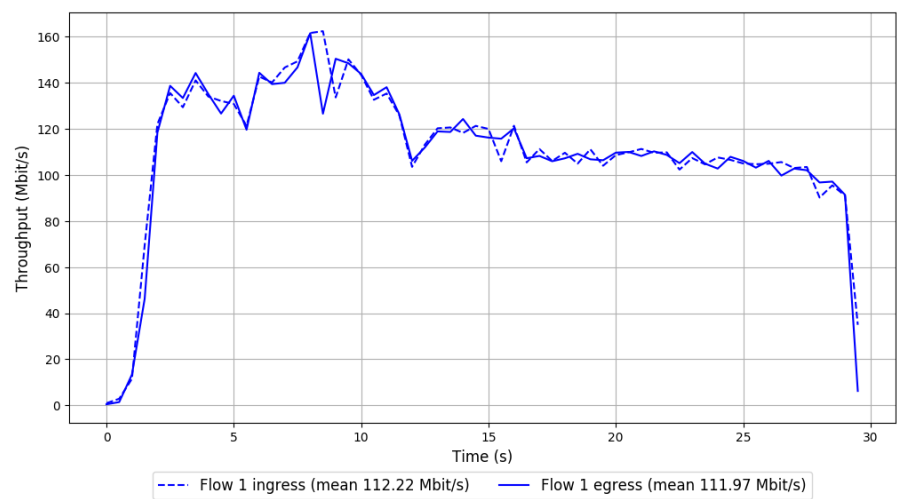


```
Run 2: Statistics of Indigo

Start at: 2018-01-01 21:53:16
End at: 2018-01-01 21:53:46

# Below is generated by plot.py at 2018-01-02 02:46:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 111.97 Mbit/s
95th percentile per-packet one-way delay: 69.344 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 111.97 Mbit/s
95th percentile per-packet one-way delay: 69.344 ms
Loss rate: 0.99%
```

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2018-01-01 22:05:30

End at: 2018-01-01 22:06:00

# Below is generated by plot.py at 2018-01-02 02:46:46

# Datalink statistics

-- Total of 1 flow:

Average throughput: 172.13 Mbit/s

95th percentile per-packet one-way delay: 89.816 ms

Loss rate: 0.81%

-- Flow 1:

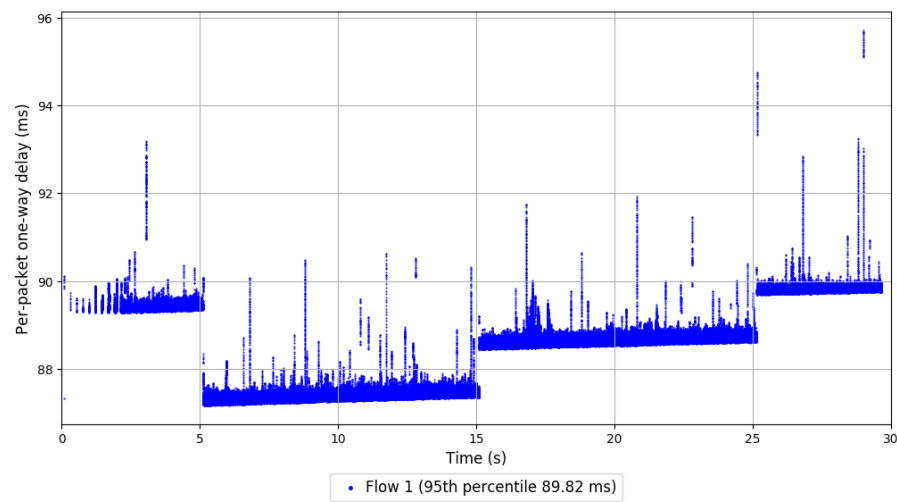
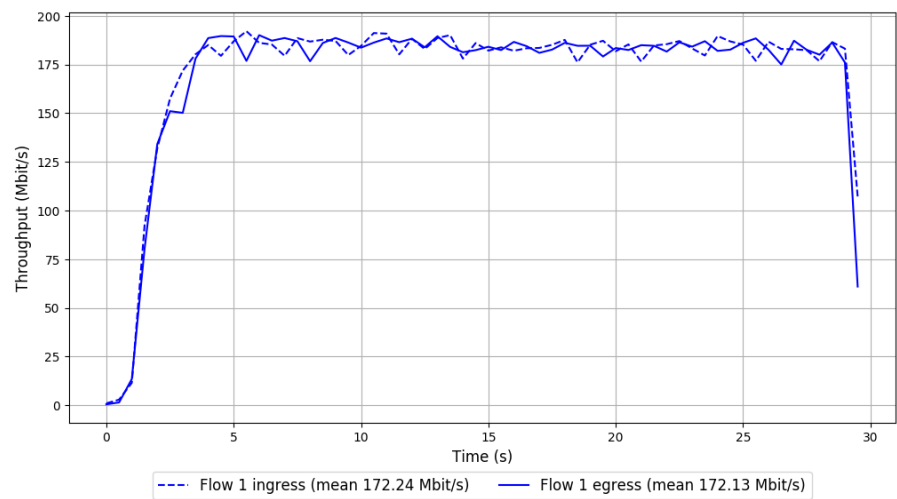
Average throughput: 172.13 Mbit/s

95th percentile per-packet one-way delay: 89.816 ms

Loss rate: 0.81%



Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2018-01-01 22:18:04

End at: 2018-01-01 22:18:34

# Below is generated by plot.py at 2018-01-02 02:46:46

# Datalink statistics

-- Total of 1 flow:

Average throughput: 172.33 Mbit/s

95th percentile per-packet one-way delay: 96.111 ms

Loss rate: 0.81%

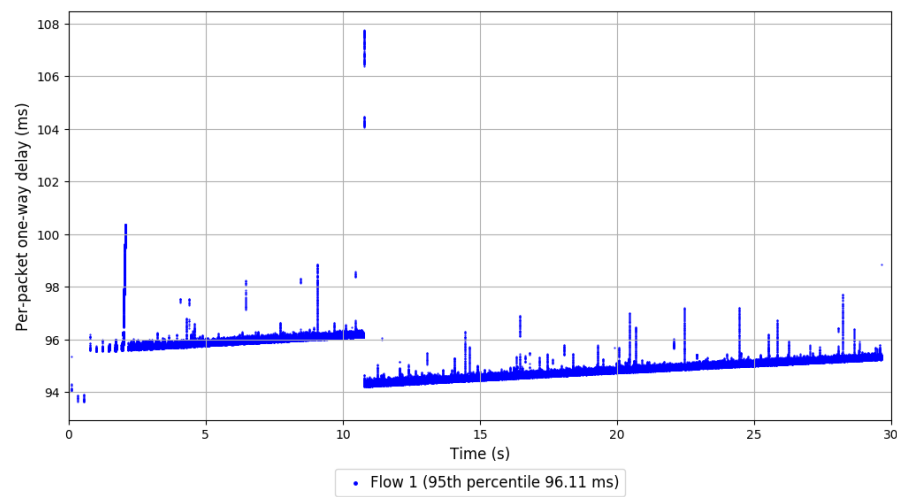
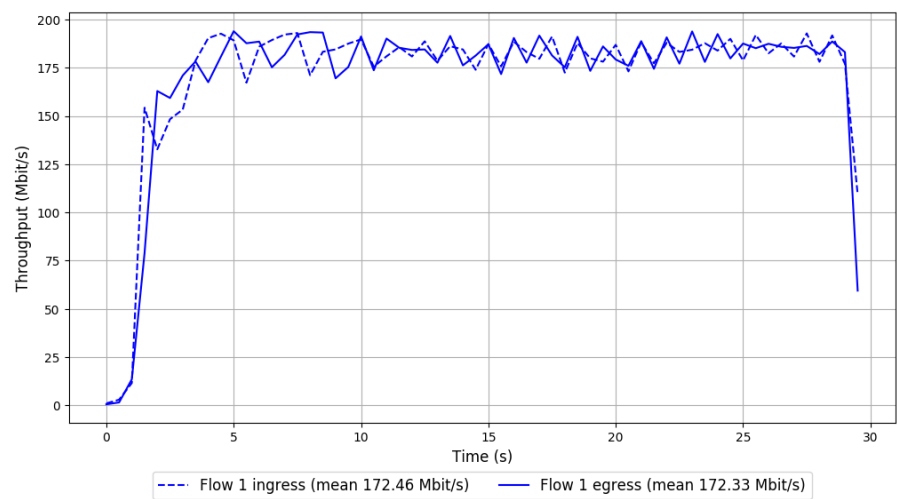
-- Flow 1:

Average throughput: 172.33 Mbit/s

95th percentile per-packet one-way delay: 96.111 ms

Loss rate: 0.81%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2018-01-01 22:30:41

End at: 2018-01-01 22:31:11

# Below is generated by plot.py at 2018-01-02 02:46:46

# Datalink statistics

-- Total of 1 flow:

Average throughput: 172.14 Mbit/s

95th percentile per-packet one-way delay: 100.420 ms

Loss rate: 0.92%

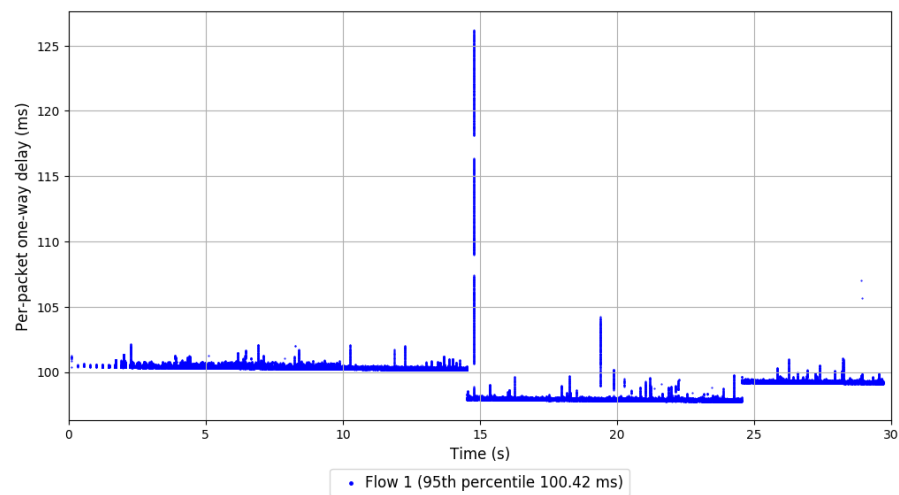
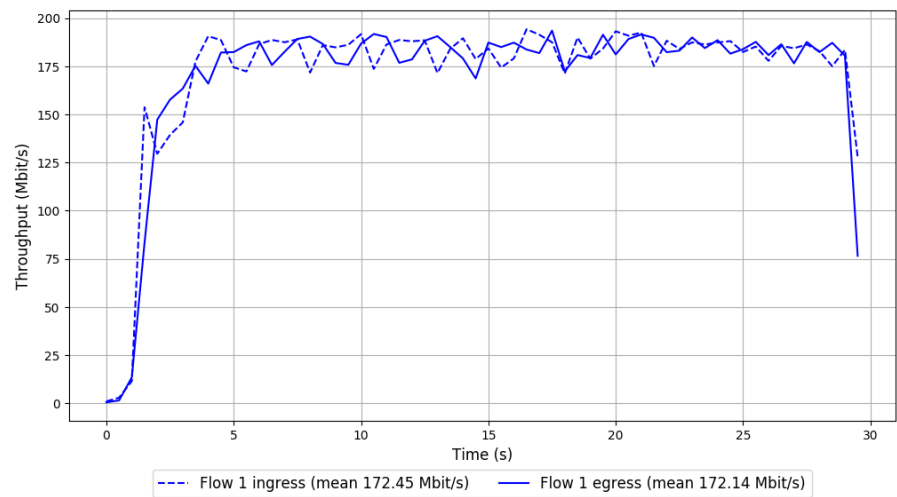
-- Flow 1:

Average throughput: 172.14 Mbit/s

95th percentile per-packet one-way delay: 100.420 ms

Loss rate: 0.92%

Run 5: Report of Indigo — Data Link



Run 6: Statistics of Indigo

Start at: 2018-01-01 22:43:13

End at: 2018-01-01 22:43:43

# Below is generated by plot.py at 2018-01-02 02:46:46

# Datalink statistics

-- Total of 1 flow:

Average throughput: 167.35 Mbit/s

95th percentile per-packet one-way delay: 96.635 ms

Loss rate: 0.78%

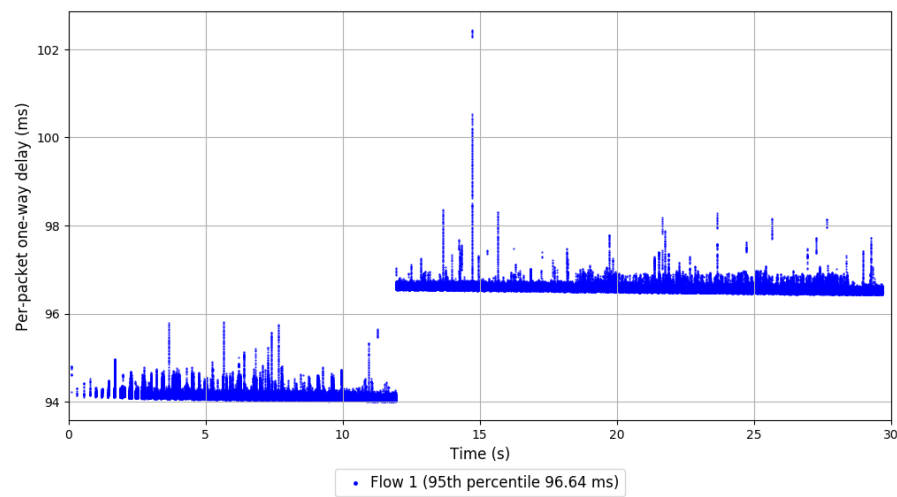
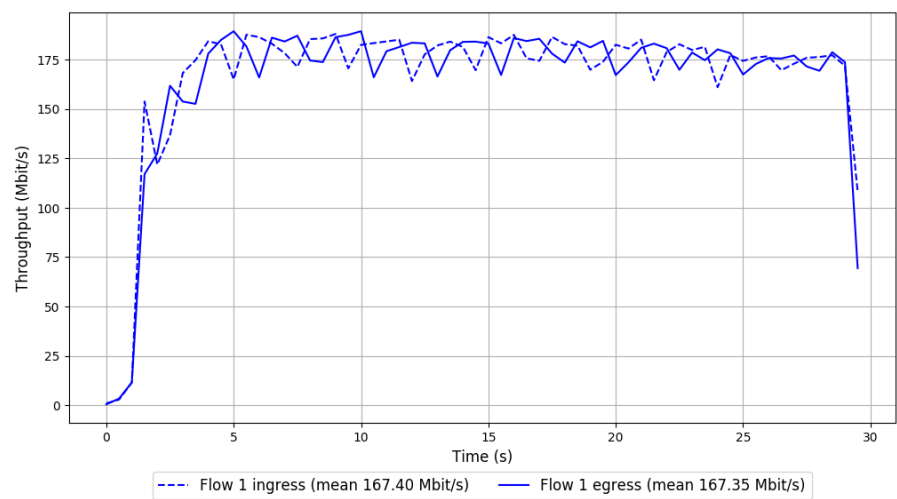
-- Flow 1:

Average throughput: 167.35 Mbit/s

95th percentile per-packet one-way delay: 96.635 ms

Loss rate: 0.78%

Run 6: Report of Indigo — Data Link



Run 7: Statistics of Indigo

Start at: 2018-01-01 22:55:37

End at: 2018-01-01 22:56:07

# Below is generated by plot.py at 2018-01-02 02:46:46

# Datalink statistics

-- Total of 1 flow:

Average throughput: 170.32 Mbit/s

95th percentile per-packet one-way delay: 92.420 ms

Loss rate: 0.94%

-- Flow 1:

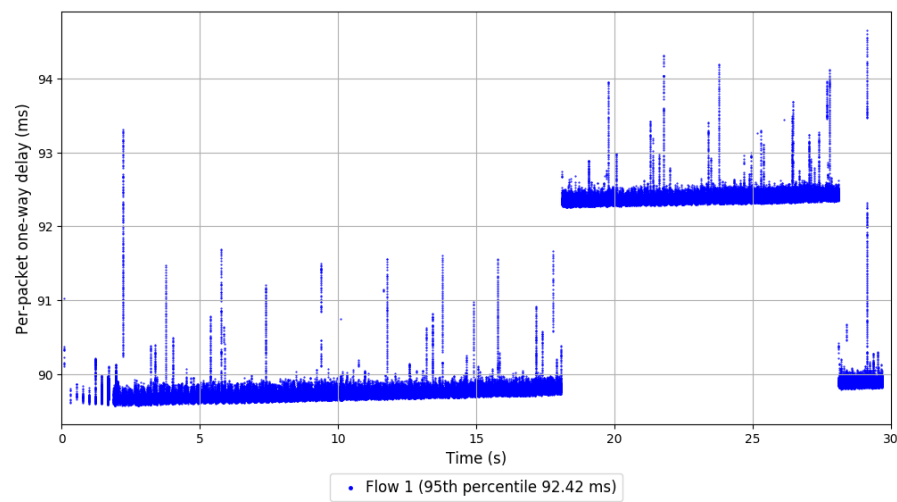
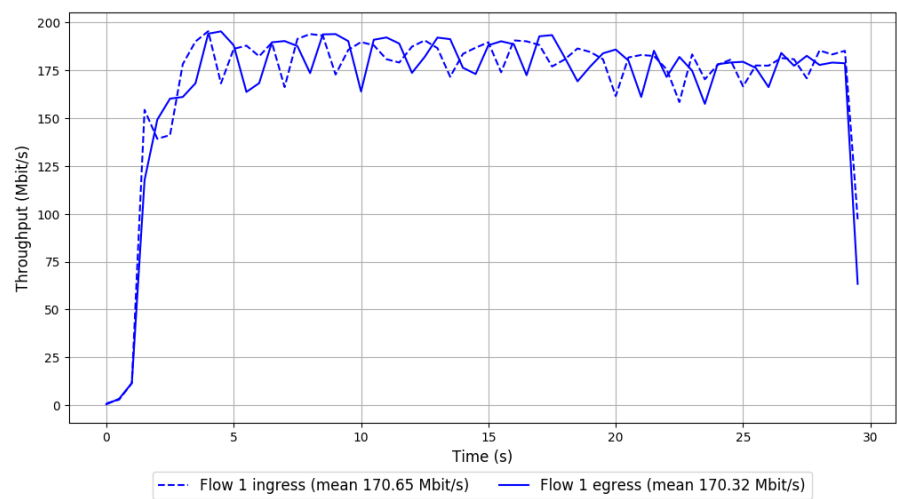
Average throughput: 170.32 Mbit/s

95th percentile per-packet one-way delay: 92.420 ms

Loss rate: 0.94%



Run 7: Report of Indigo — Data Link



Run 8: Statistics of Indigo

Start at: 2018-01-01 23:07:59

End at: 2018-01-01 23:08:29

# Below is generated by plot.py at 2018-01-02 02:46:46

# Datalink statistics

-- Total of 1 flow:

Average throughput: 171.20 Mbit/s

95th percentile per-packet one-way delay: 97.952 ms

Loss rate: 1.07%

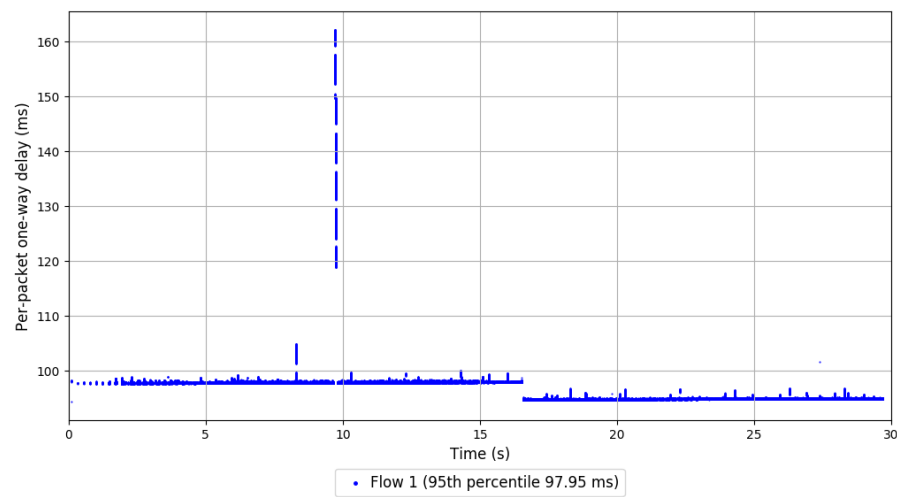
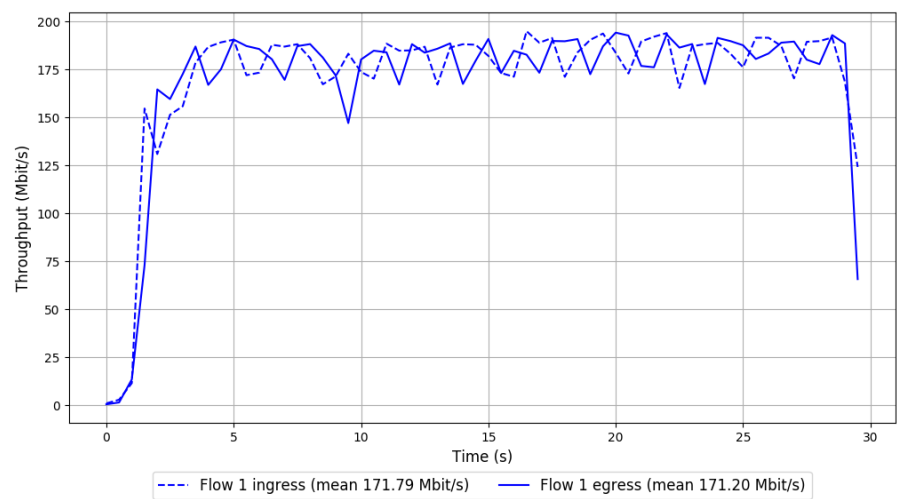
-- Flow 1:

Average throughput: 171.20 Mbit/s

95th percentile per-packet one-way delay: 97.952 ms

Loss rate: 1.07%

Run 8: Report of Indigo — Data Link



Run 9: Statistics of Indigo

Start at: 2018-01-01 23:20:33

End at: 2018-01-01 23:21:03

# Below is generated by plot.py at 2018-01-02 02:46:46

# Datalink statistics

-- Total of 1 flow:

Average throughput: 172.06 Mbit/s

95th percentile per-packet one-way delay: 100.589 ms

Loss rate: 0.80%

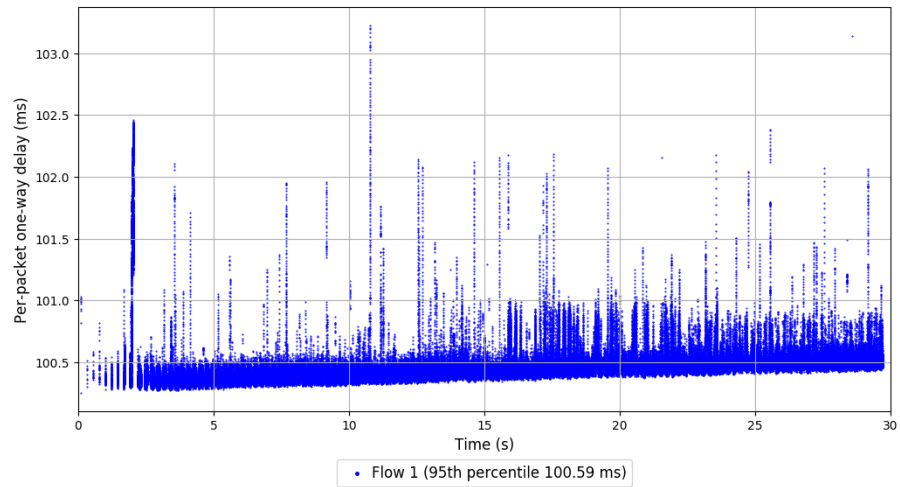
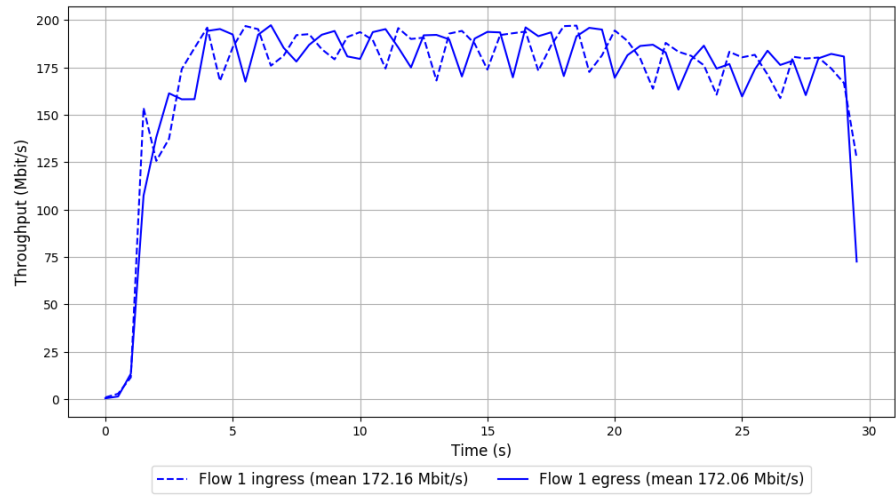
-- Flow 1:

Average throughput: 172.06 Mbit/s

95th percentile per-packet one-way delay: 100.589 ms

Loss rate: 0.80%

### Run 9: Report of Indigo — Data Link



Run 10: Statistics of Indigo

Start at: 2018-01-01 23:33:03

End at: 2018-01-01 23:33:33

# Below is generated by plot.py at 2018-01-02 02:46:46

# Datalink statistics

-- Total of 1 flow:

Average throughput: 173.46 Mbit/s

95th percentile per-packet one-way delay: 99.554 ms

Loss rate: 0.90%

-- Flow 1:

Average throughput: 173.46 Mbit/s

95th percentile per-packet one-way delay: 99.554 ms

Loss rate: 0.90%

Run 10: Report of Indigo — Data Link

