

## Pantheon Report

Generated at 2019-01-02 21:23:27 (UTC).

Data path: AWS Brazil 2 on `ens5` (*local*) → Colombia on `p4p1` (*remote*).

Repeated the test of 19 congestion control schemes 5 times.

Each test lasted for 30 seconds running 1 flow.

NTP offsets were measured against `gps.ntp.br` and have been applied to correct the timestamps in logs.

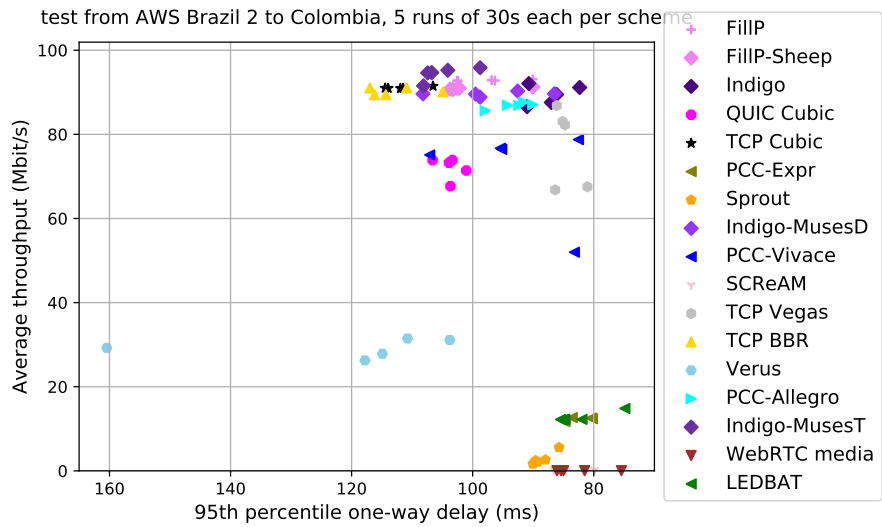
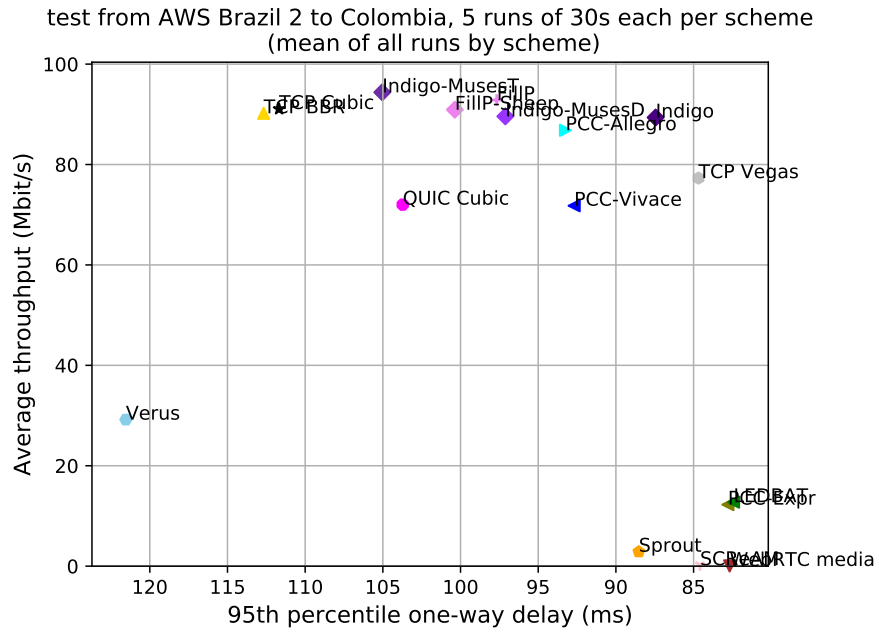
### System info:

```
Linux 4.15.0-1029-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

### Git summary:

```
branch: muses @ c654af0b7d59d4ef4b914cfac404e1fc2e96dc68
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfc58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a
third_party/muses-refactored @ 31f8f0ba8ef8b1da76c2bc0cd0a7850c33ff64fb
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
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/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
```

third\_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4  
third\_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851



| 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       | 5      | 90.21                            | 112.67                              | 2.99                         |
| Copa          | 0      | N/A                              | N/A                                 | N/A                          |
| TCP Cubic     | 5      | 91.06                            | 111.68                              | 0.45                         |
| FillP         | 5      | 92.85                            | 97.67                               | 0.98                         |
| FillP-Sheep   | 5      | 90.92                            | 100.37                              | 1.00                         |
| Indigo        | 5      | 89.37                            | 87.44                               | 0.90                         |
| Indigo-MusesD | 5      | 89.59                            | 97.12                               | 2.46                         |
| Indigo-MusesT | 5      | 94.38                            | 105.04                              | 1.20                         |
| LEDBAT        | 5      | 12.75                            | 82.43                               | 0.00                         |
| PCC-Allegro   | 5      | 86.82                            | 93.24                               | 1.46                         |
| PCC-Expr      | 5      | 12.26                            | 82.79                               | 41.37                        |
| QUIC Cubic    | 5      | 72.01                            | 103.72                              | 0.37                         |
| SCReAM        | 5      | 0.21                             | 84.58                               | 0.22                         |
| Sprout        | 5      | 2.87                             | 88.53                               | 0.46                         |
| TaoVA-100x    | 0      | N/A                              | N/A                                 | N/A                          |
| TCP Vegas     | 5      | 77.29                            | 84.68                               | 0.47                         |
| Verus         | 5      | 29.18                            | 121.54                              | 21.15                        |
| PCC-Vivace    | 5      | 71.79                            | 92.69                               | 0.07                         |
| WebRTC media  | 5      | 0.05                             | 82.68                               | 0.00                         |

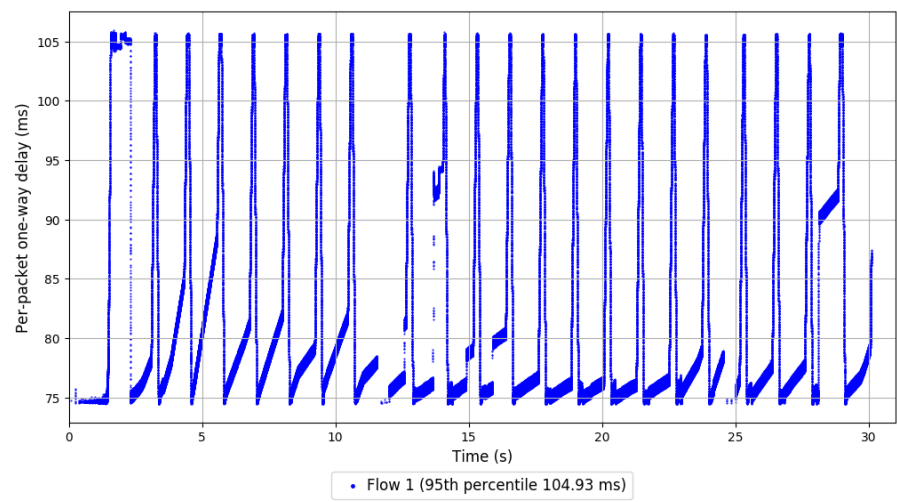
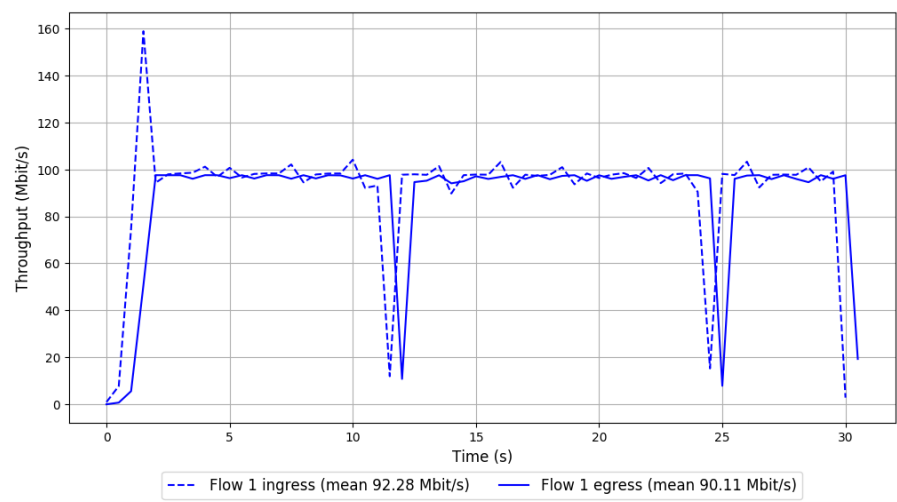


Run 1: Statistics of TCP BBR

Start at: 2019-01-02 19:32:47  
End at: 2019-01-02 19:33:17  
Local clock offset: -4.362 ms  
Remote clock offset: -11.946 ms

# Below is generated by plot.py at 2019-01-02 21:16:39  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 90.11 Mbit/s  
95th percentile per-packet one-way delay: 104.932 ms  
Loss rate: 2.31%  
-- Flow 1:  
Average throughput: 90.11 Mbit/s  
95th percentile per-packet one-way delay: 104.932 ms  
Loss rate: 2.31%

Run 1: Report of TCP BBR — Data Link

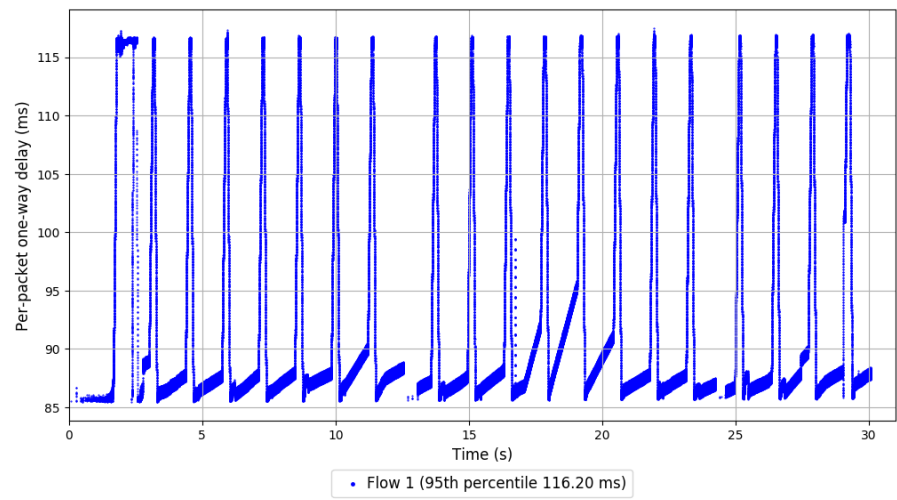
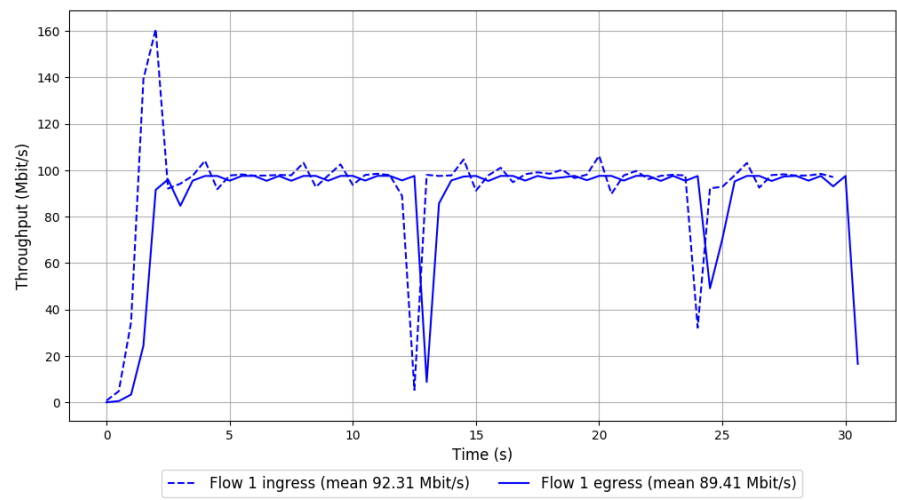


Run 2: Statistics of TCP BBR

Start at: 2019-01-02 19:55:29  
End at: 2019-01-02 19:55:59  
Local clock offset: -5.901 ms  
Remote clock offset: -17.104 ms

# Below is generated by plot.py at 2019-01-02 21:16:39  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 89.41 Mbit/s  
95th percentile per-packet one-way delay: 116.201 ms  
Loss rate: 3.13%  
-- Flow 1:  
Average throughput: 89.41 Mbit/s  
95th percentile per-packet one-way delay: 116.201 ms  
Loss rate: 3.13%

Run 2: Report of TCP BBR — Data Link

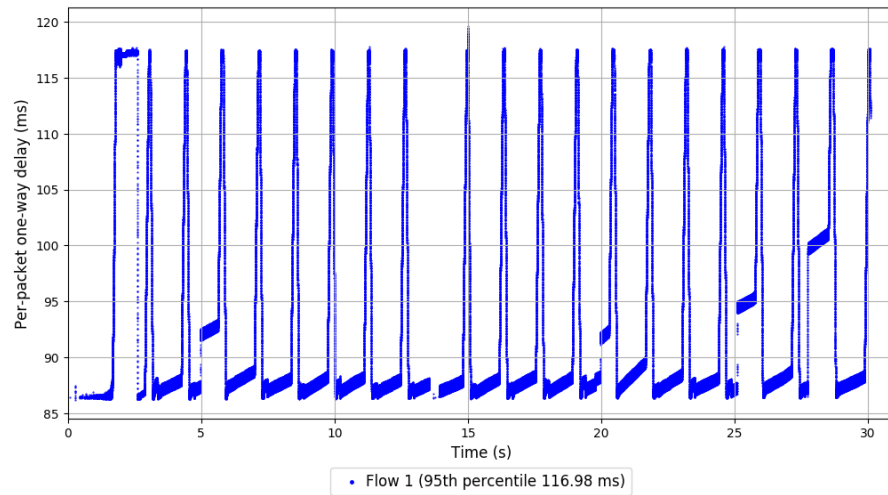
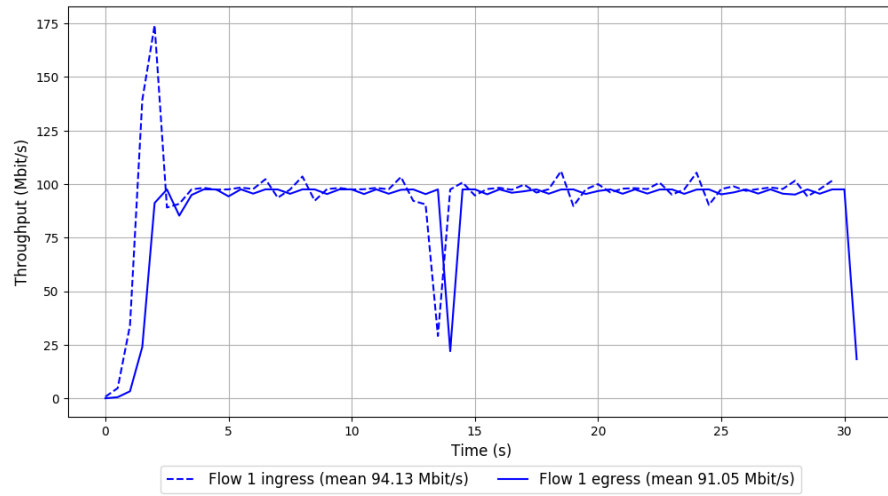


Run 3: Statistics of TCP BBR

Start at: 2019-01-02 20:17:51  
End at: 2019-01-02 20:18:21  
Local clock offset: -1.936 ms  
Remote clock offset: -22.208 ms

# Below is generated by plot.py at 2019-01-02 21:16:40  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 91.05 Mbit/s  
95th percentile per-packet one-way delay: 116.977 ms  
Loss rate: 3.19%  
-- Flow 1:  
Average throughput: 91.05 Mbit/s  
95th percentile per-packet one-way delay: 116.977 ms  
Loss rate: 3.19%

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

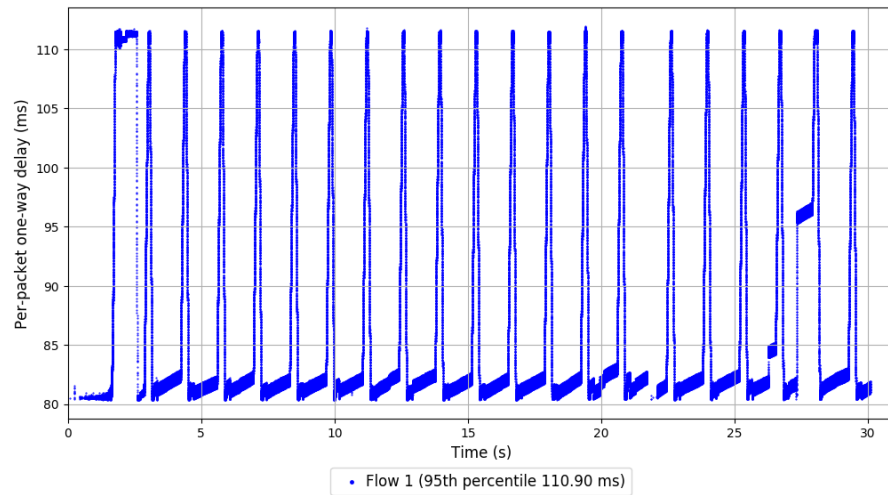
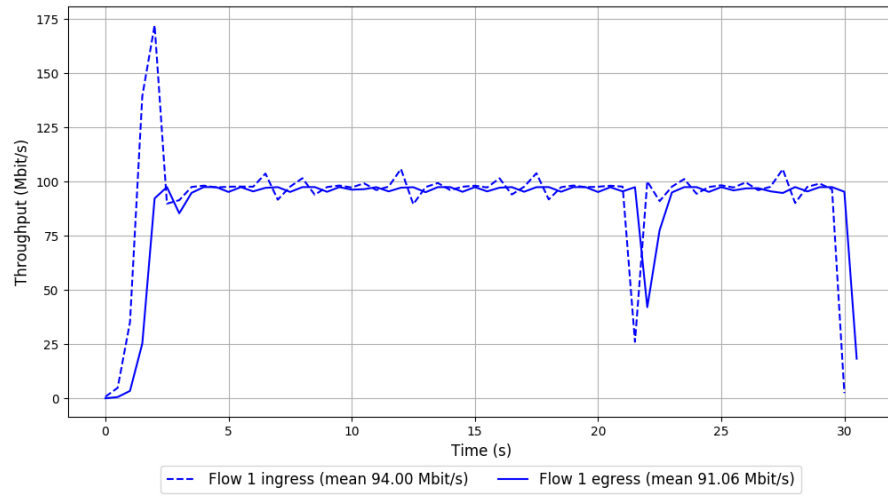


Run 4: Statistics of TCP BBR

Start at: 2019-01-02 20:40:03  
End at: 2019-01-02 20:40:33  
Local clock offset: -5.485 ms  
Remote clock offset: -30.789 ms

# Below is generated by plot.py at 2019-01-02 21:16:40  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 91.06 Mbit/s  
95th percentile per-packet one-way delay: 110.899 ms  
Loss rate: 3.12%  
-- Flow 1:  
Average throughput: 91.06 Mbit/s  
95th percentile per-packet one-way delay: 110.899 ms  
Loss rate: 3.12%

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



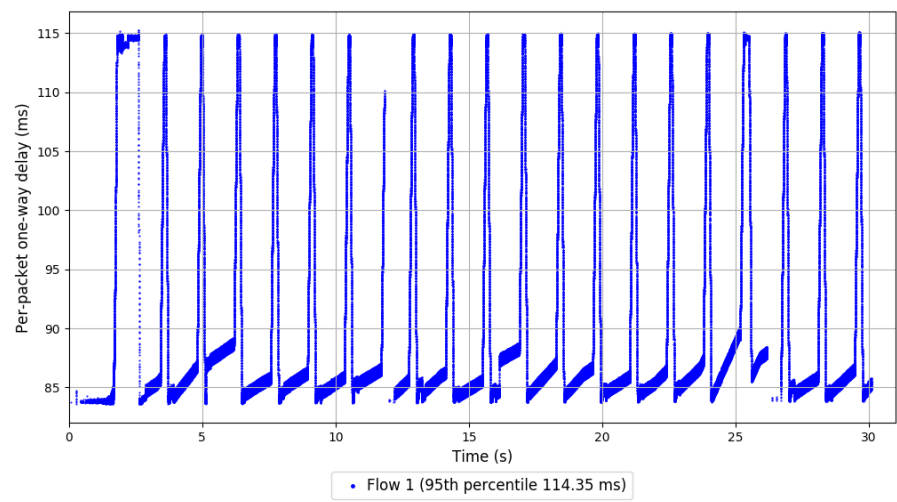
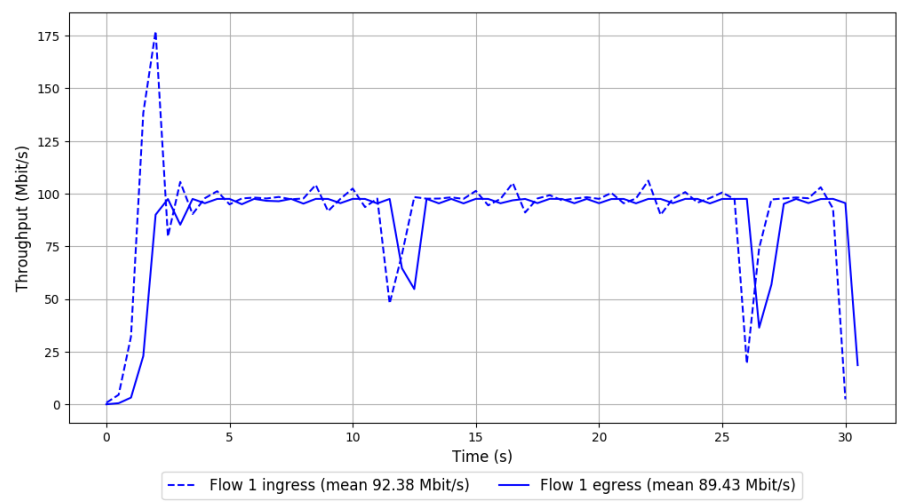


Run 5: Statistics of TCP BBR

Start at: 2019-01-02 21:02:16  
End at: 2019-01-02 21:02:46  
Local clock offset: -3.782 ms  
Remote clock offset: -35.837 ms

# Below is generated by plot.py at 2019-01-02 21:16:40  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 89.43 Mbit/s  
95th percentile per-packet one-way delay: 114.351 ms  
Loss rate: 3.19%  
-- Flow 1:  
Average throughput: 89.43 Mbit/s  
95th percentile per-packet one-way delay: 114.351 ms  
Loss rate: 3.19%

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

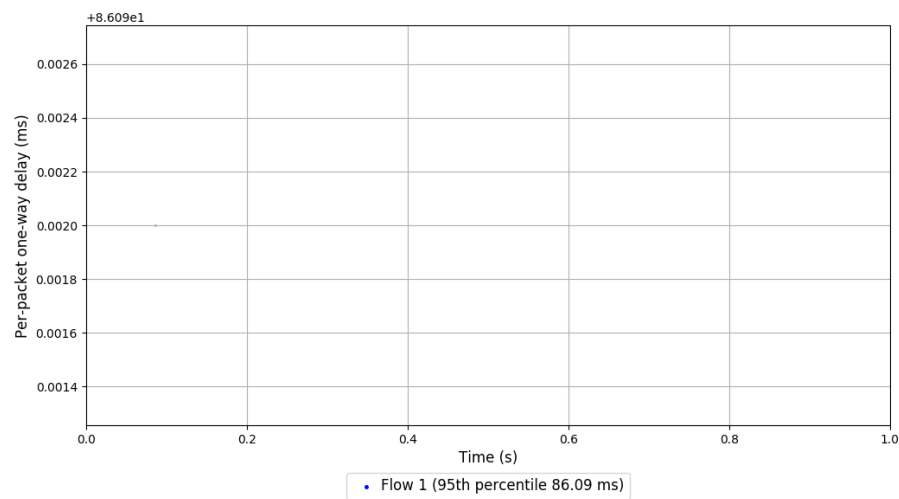
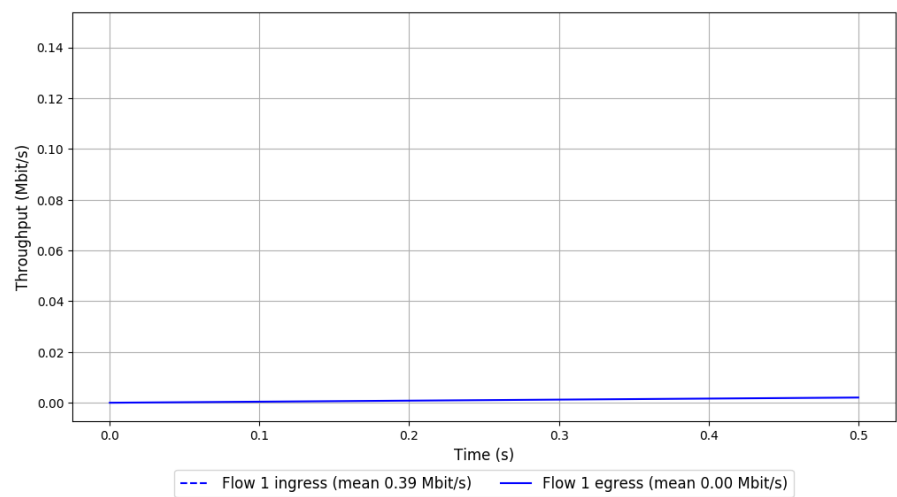
Start at: 2019-01-02 19:44:35

End at: 2019-01-02 19:45:05

Local clock offset: -5.953 ms

Remote clock offset: -14.97 ms

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

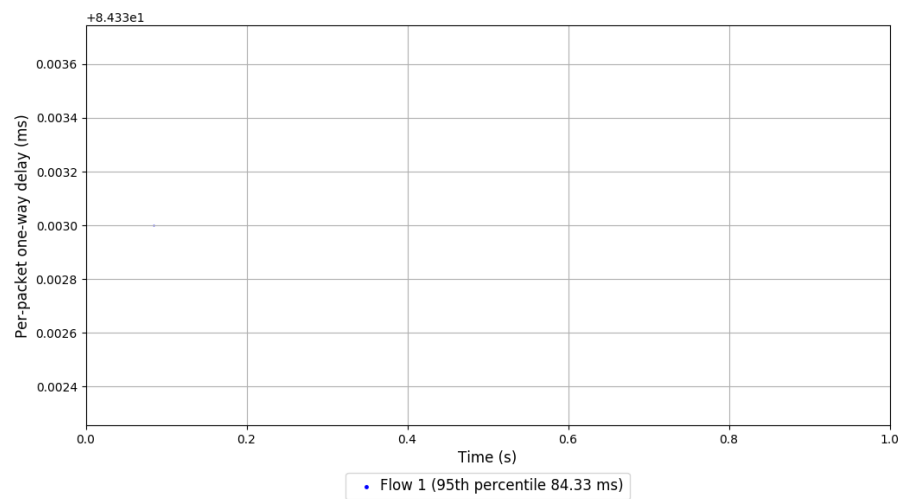
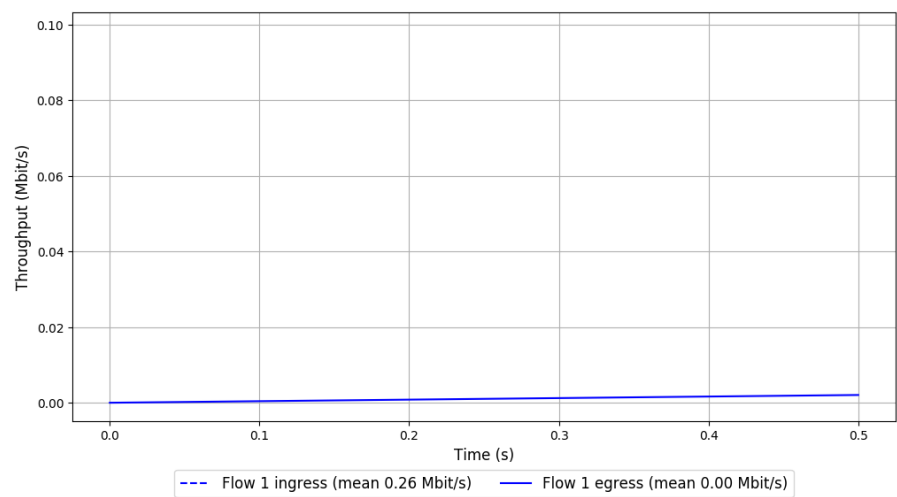
Start at: 2019-01-02 20:07:20

End at: 2019-01-02 20:07:50

Local clock offset: -2.224 ms

Remote clock offset: -19.738 ms

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

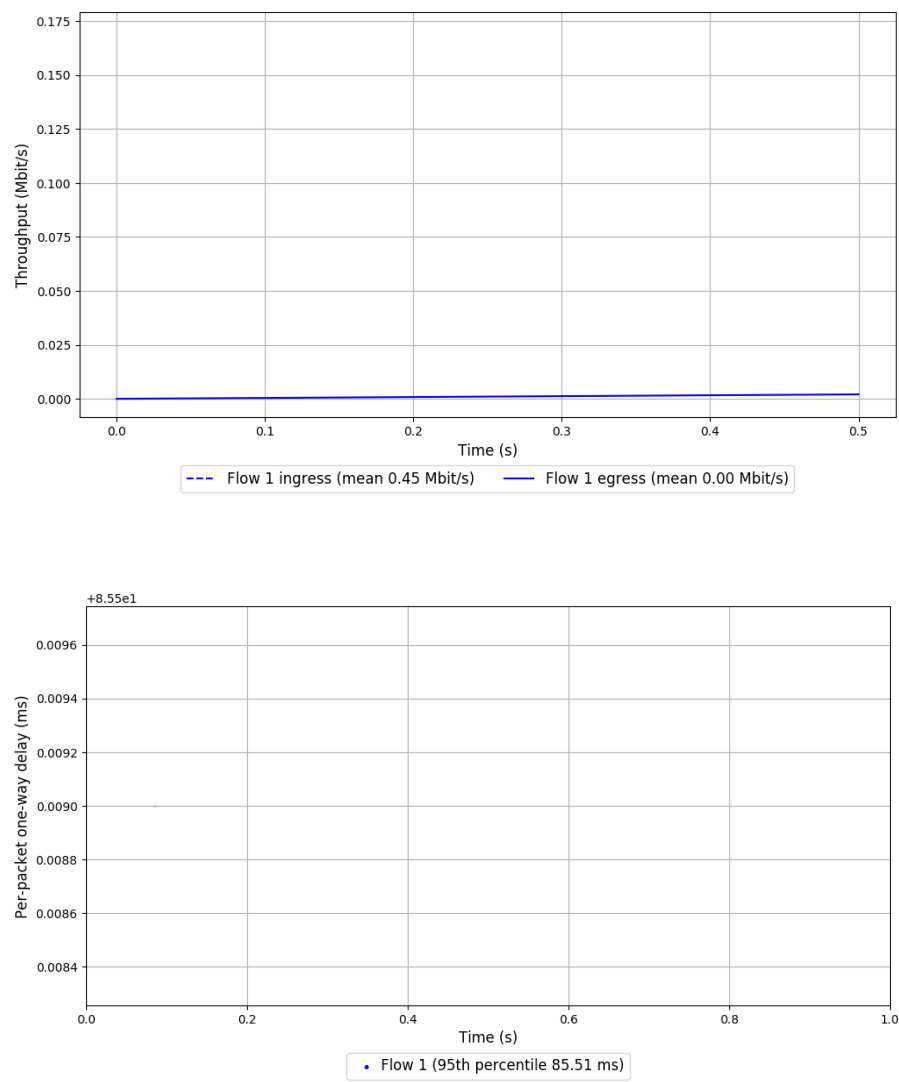
Start at: 2019-01-02 20:29:33

End at: 2019-01-02 20:30:03

Local clock offset: -3.175 ms

Remote clock offset: -24.804 ms

Run 3: Report of Copa — Data Link





Run 4: Statistics of Copa

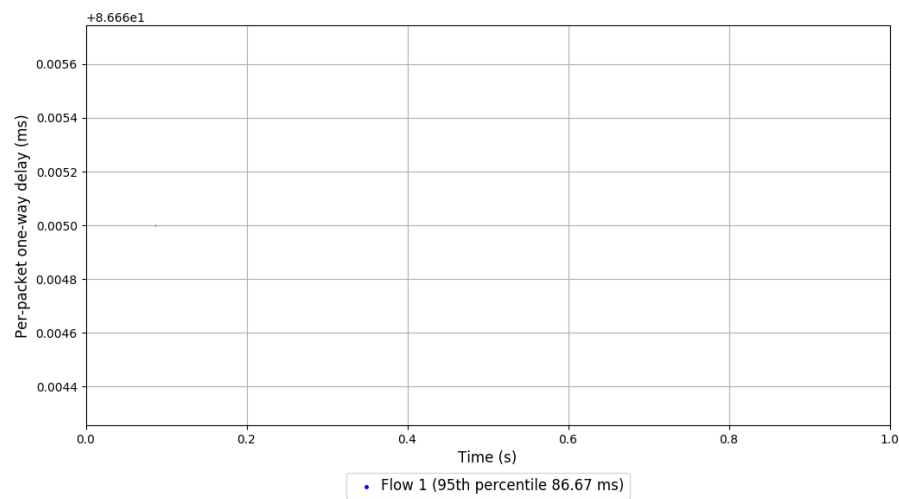
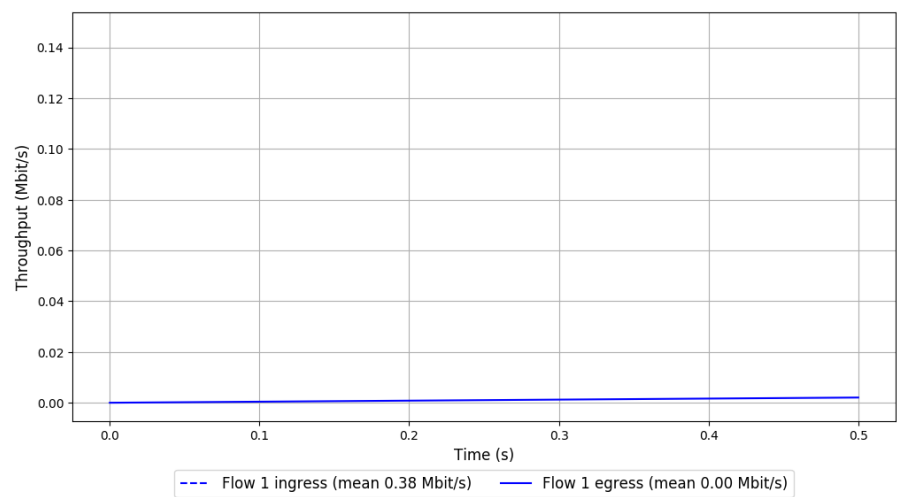
Start at: 2019-01-02 20:51:45

End at: 2019-01-02 20:52:15

Local clock offset: -7.171 ms

Remote clock offset: -29.78 ms

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

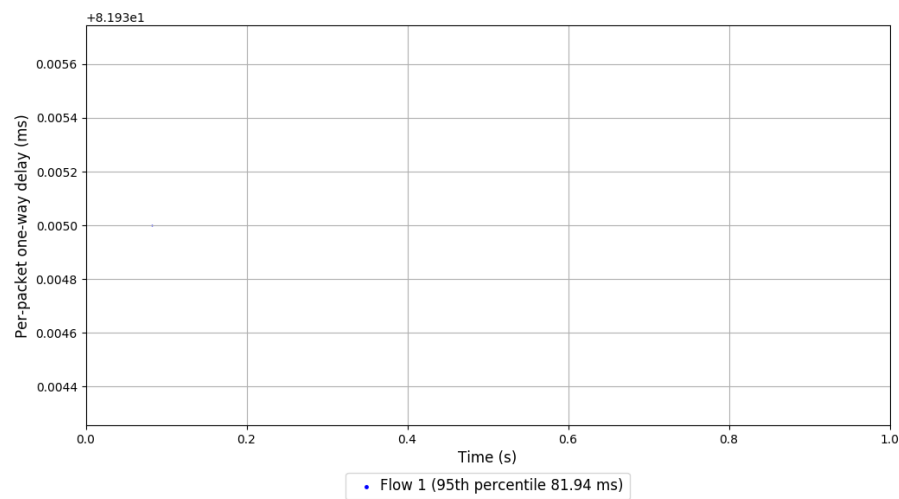
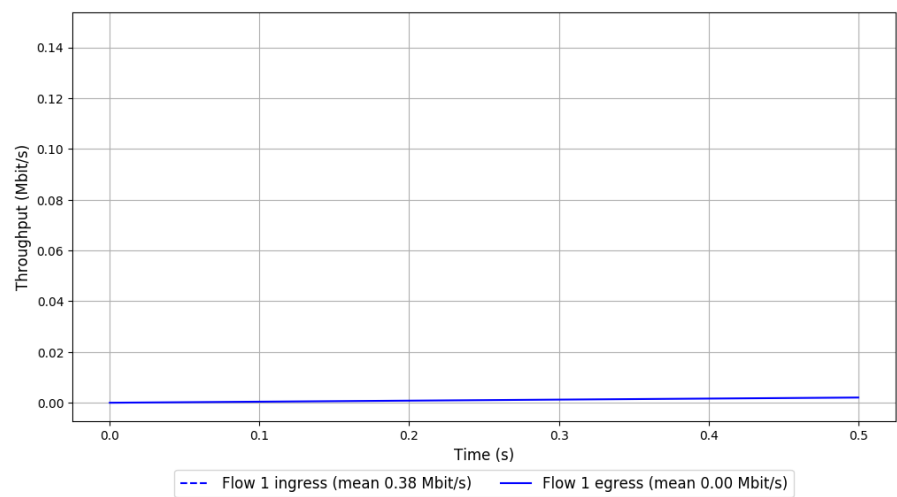
Start at: 2019-01-02 21:13:57

End at: 2019-01-02 21:14:27

Local clock offset: -0.763 ms

Remote clock offset: -38.489 ms

Run 5: Report of Copa — Data Link

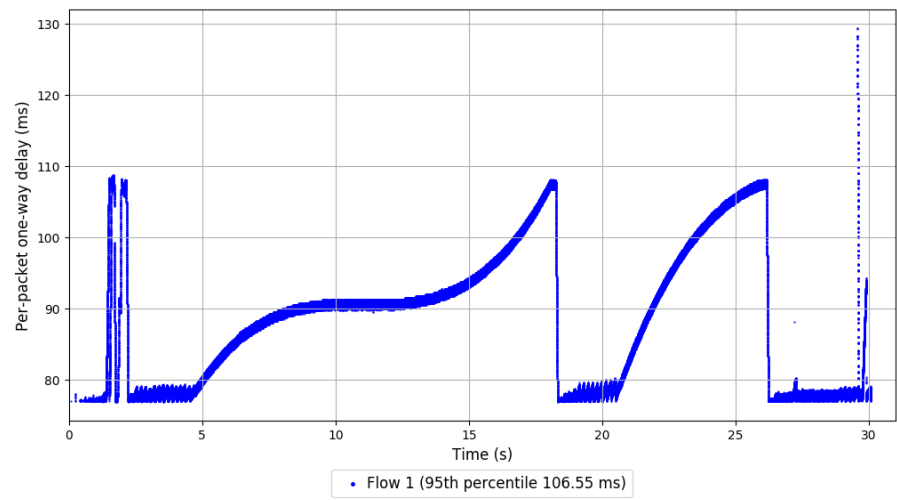
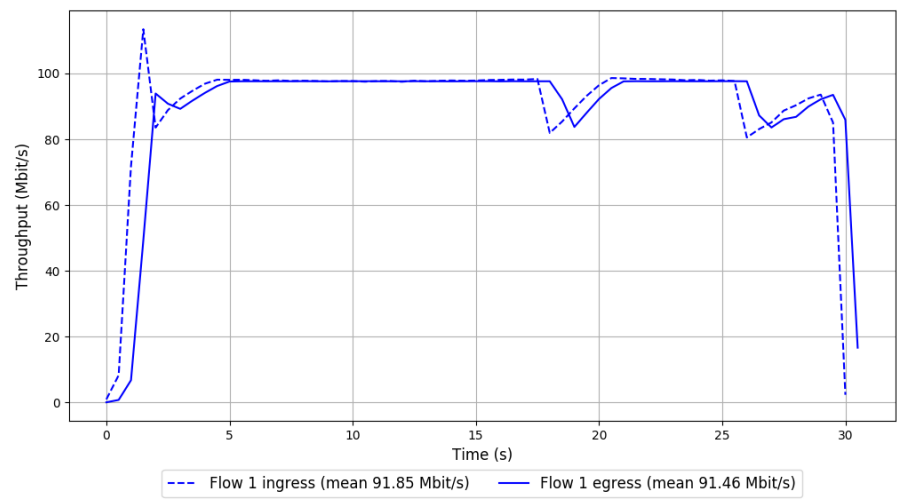


Run 1: Statistics of TCP Cubic

Start at: 2019-01-02 19:38:37  
End at: 2019-01-02 19:39:07  
Local clock offset: -4.608 ms  
Remote clock offset: -12.275 ms

# Below is generated by plot.py at 2019-01-02 21:16:41  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 91.46 Mbit/s  
95th percentile per-packet one-way delay: 106.550 ms  
Loss rate: 0.43%  
-- Flow 1:  
Average throughput: 91.46 Mbit/s  
95th percentile per-packet one-way delay: 106.550 ms  
Loss rate: 0.43%

Run 1: Report of TCP Cubic — Data Link

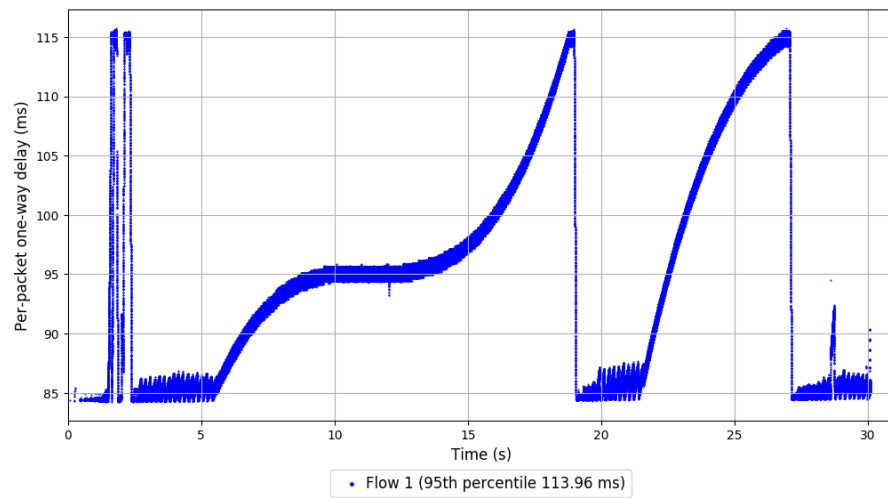
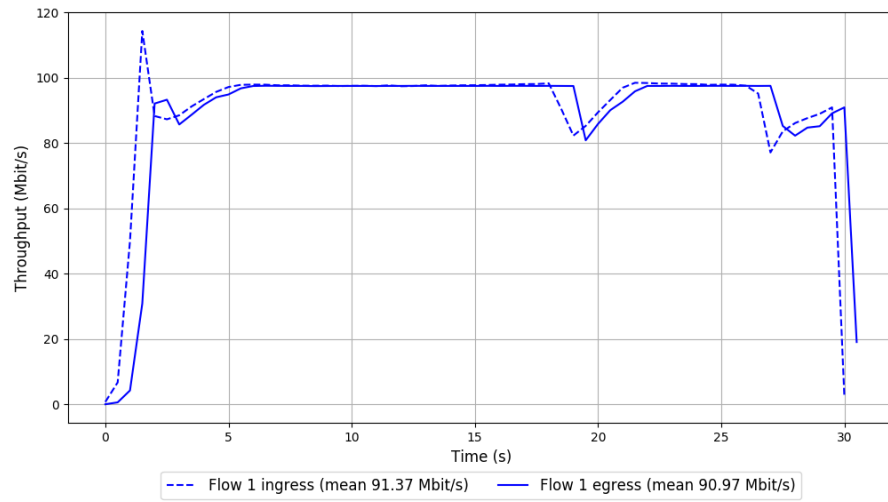


Run 2: Statistics of TCP Cubic

Start at: 2019-01-02 20:01:28  
End at: 2019-01-02 20:01:58  
Local clock offset: -3.267 ms  
Remote clock offset: -18.533 ms

# Below is generated by plot.py at 2019-01-02 21:16:41  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 90.97 Mbit/s  
95th percentile per-packet one-way delay: 113.958 ms  
Loss rate: 0.44%  
-- Flow 1:  
Average throughput: 90.97 Mbit/s  
95th percentile per-packet one-way delay: 113.958 ms  
Loss rate: 0.44%

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



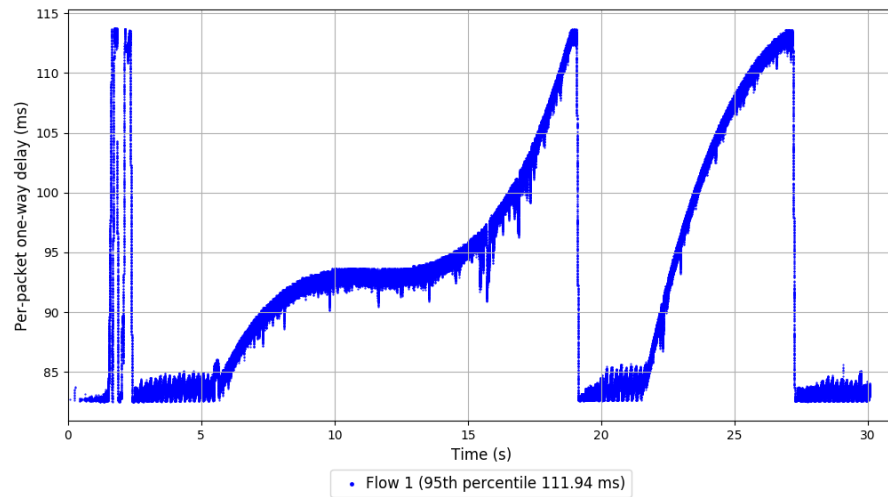
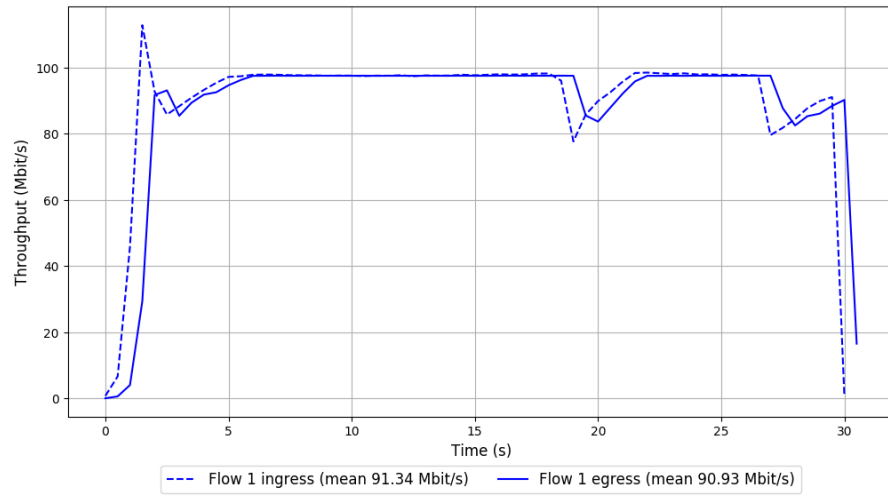


Run 3: Statistics of TCP Cubic

Start at: 2019-01-02 20:23:42  
End at: 2019-01-02 20:24:12  
Local clock offset: -1.526 ms  
Remote clock offset: -27.345 ms

# Below is generated by plot.py at 2019-01-02 21:16:41  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 90.93 Mbit/s  
95th percentile per-packet one-way delay: 111.938 ms  
Loss rate: 0.45%  
-- Flow 1:  
Average throughput: 90.93 Mbit/s  
95th percentile per-packet one-way delay: 111.938 ms  
Loss rate: 0.45%

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

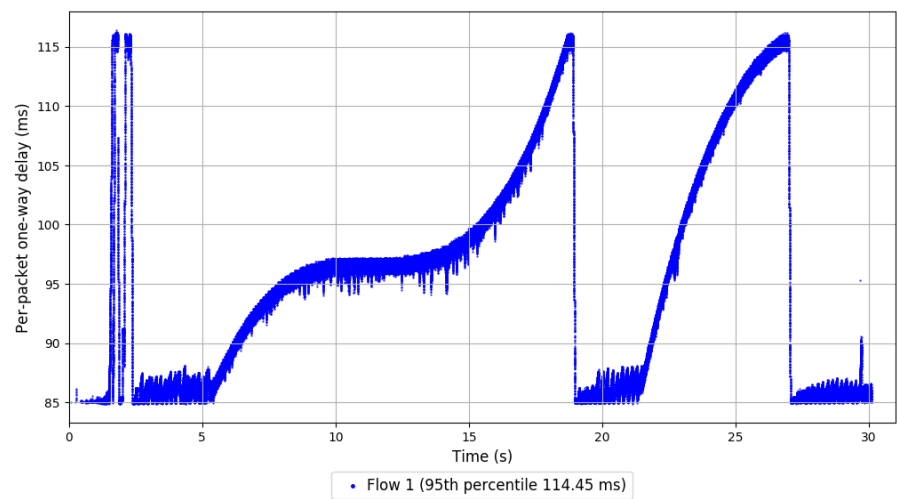
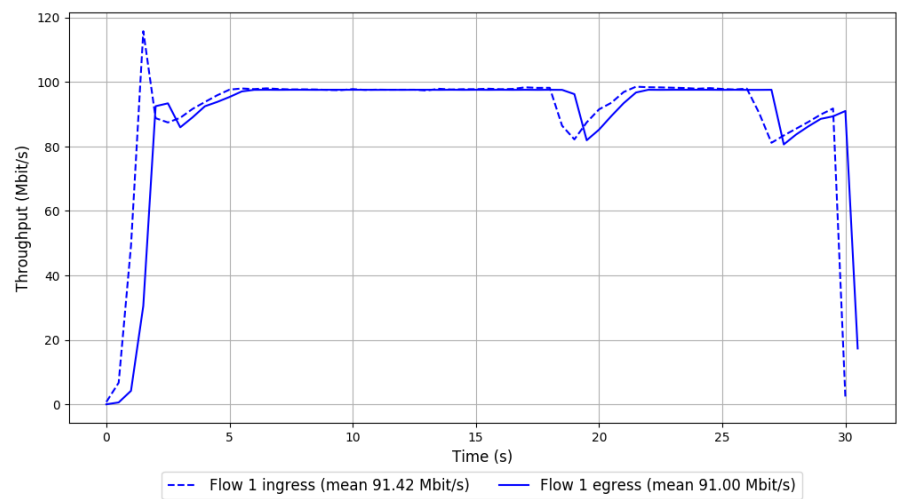


Run 4: Statistics of TCP Cubic

Start at: 2019-01-02 20:45:54  
End at: 2019-01-02 20:46:24  
Local clock offset: -6.808 ms  
Remote clock offset: -28.553 ms

# Below is generated by plot.py at 2019-01-02 21:17:44  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 91.00 Mbit/s  
95th percentile per-packet one-way delay: 114.447 ms  
Loss rate: 0.45%  
-- Flow 1:  
Average throughput: 91.00 Mbit/s  
95th percentile per-packet one-way delay: 114.447 ms  
Loss rate: 0.45%

Run 4: Report of TCP Cubic — Data Link

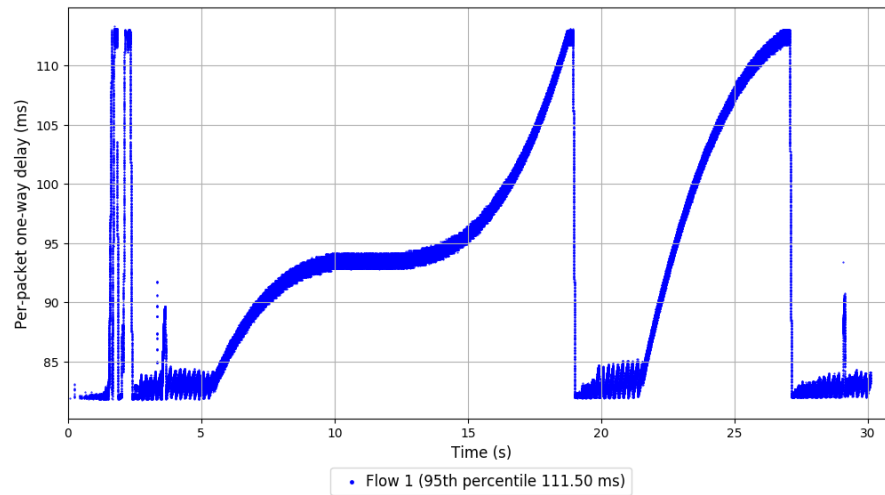
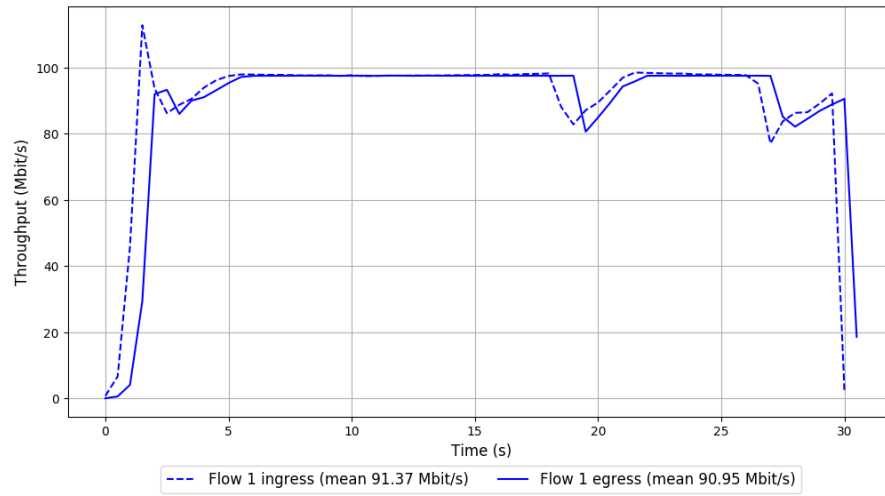


Run 5: Statistics of TCP Cubic

Start at: 2019-01-02 21:08:06  
End at: 2019-01-02 21:08:36  
Local clock offset: -1.569 ms  
Remote clock offset: -37.38 ms

# Below is generated by plot.py at 2019-01-02 21:17:44  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 90.95 Mbit/s  
95th percentile per-packet one-way delay: 111.499 ms  
Loss rate: 0.46%  
-- Flow 1:  
Average throughput: 90.95 Mbit/s  
95th percentile per-packet one-way delay: 111.499 ms  
Loss rate: 0.46%

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

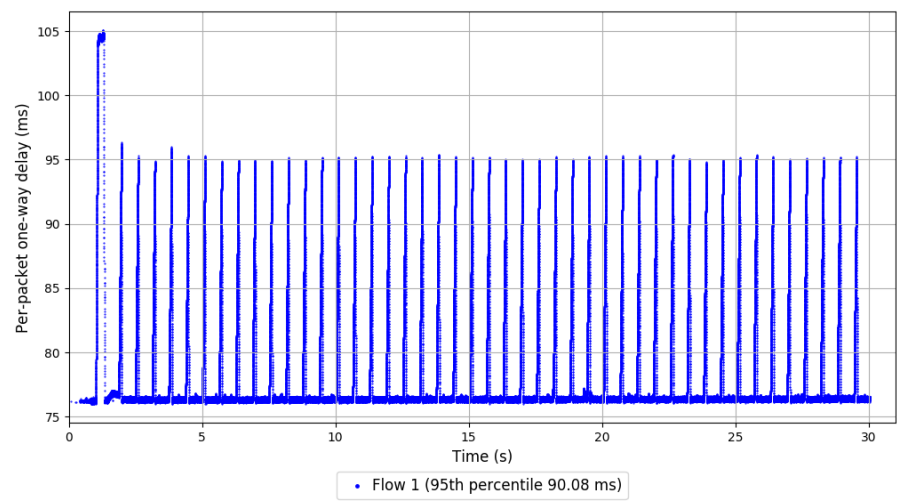
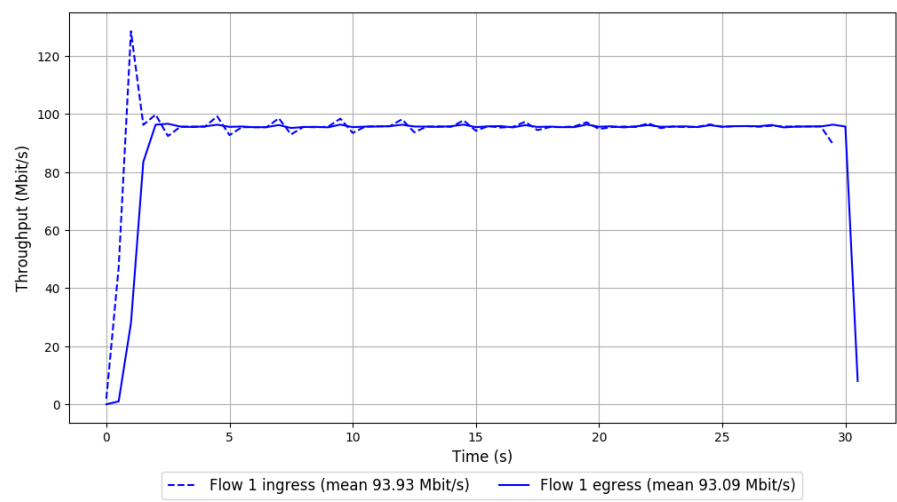


Run 1: Statistics of FillP

Start at: 2019-01-02 19:42:14  
End at: 2019-01-02 19:42:44  
Local clock offset: -4.99 ms  
Remote clock offset: -14.238 ms

# Below is generated by plot.py at 2019-01-02 21:17:55  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 93.09 Mbit/s  
95th percentile per-packet one-way delay: 90.081 ms  
Loss rate: 0.89%  
-- Flow 1:  
Average throughput: 93.09 Mbit/s  
95th percentile per-packet one-way delay: 90.081 ms  
Loss rate: 0.89%

Run 1: Report of FillP — Data Link



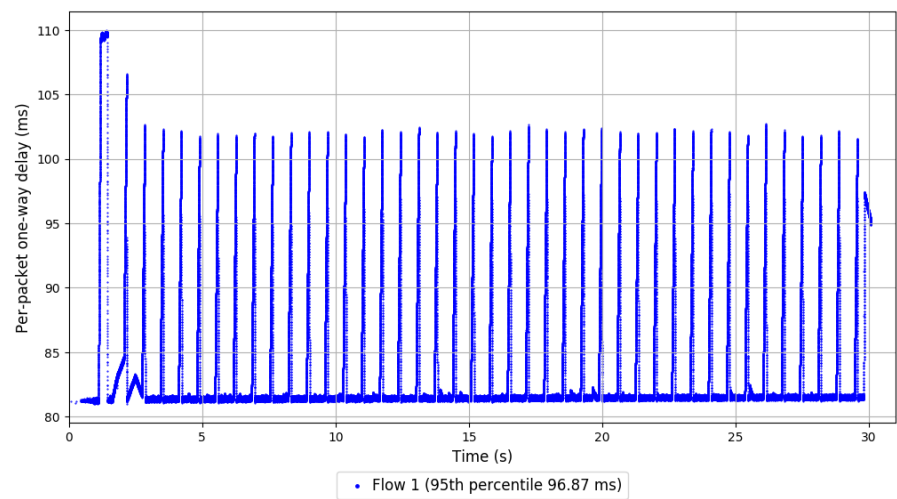
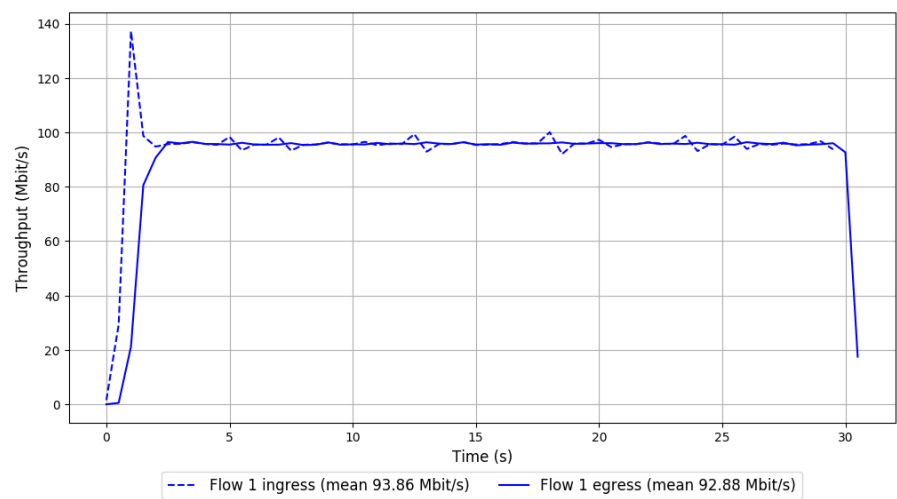


Run 2: Statistics of FillP

Start at: 2019-01-02 20:05:01  
End at: 2019-01-02 20:05:31  
Local clock offset: -3.344 ms  
Remote clock offset: -23.035 ms

# Below is generated by plot.py at 2019-01-02 21:17:55  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 92.88 Mbit/s  
95th percentile per-packet one-way delay: 96.870 ms  
Loss rate: 0.99%  
-- Flow 1:  
Average throughput: 92.88 Mbit/s  
95th percentile per-packet one-way delay: 96.870 ms  
Loss rate: 0.99%

Run 2: Report of FillP — Data Link

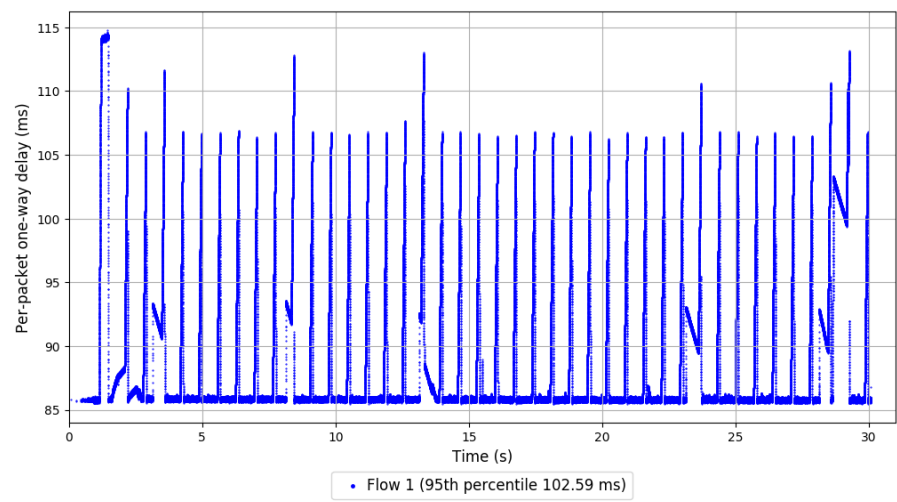
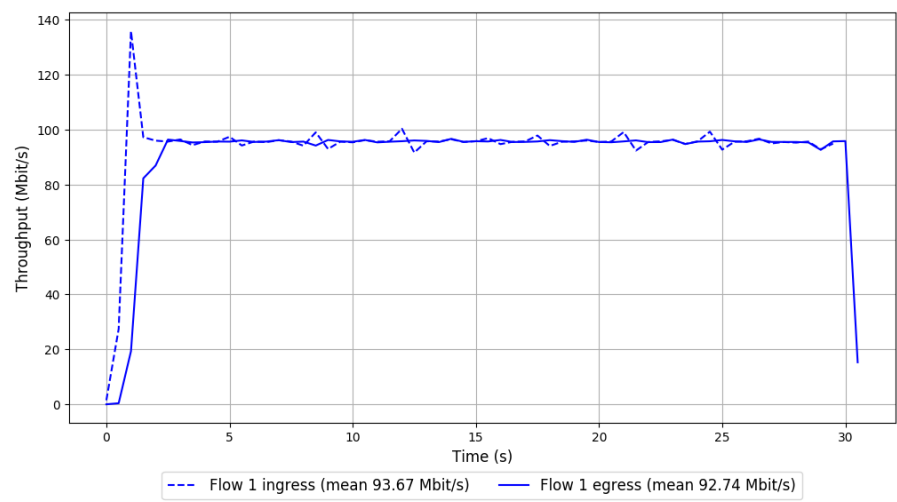


Run 3: Statistics of FillP

Start at: 2019-01-02 20:27:14  
End at: 2019-01-02 20:27:44  
Local clock offset: -2.169 ms  
Remote clock offset: -24.48 ms

# Below is generated by plot.py at 2019-01-02 21:17:55  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 92.74 Mbit/s  
95th percentile per-packet one-way delay: 102.588 ms  
Loss rate: 1.00%  
-- Flow 1:  
Average throughput: 92.74 Mbit/s  
95th percentile per-packet one-way delay: 102.588 ms  
Loss rate: 1.00%

Run 3: Report of FillP — Data Link

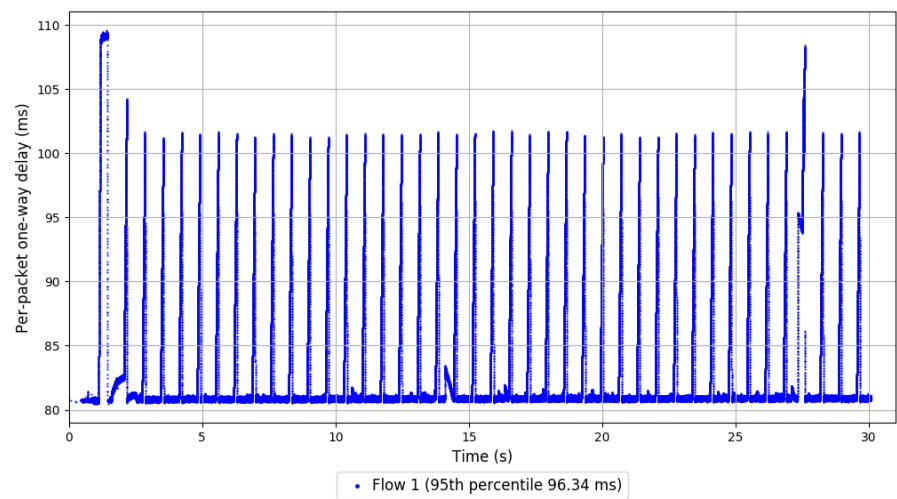
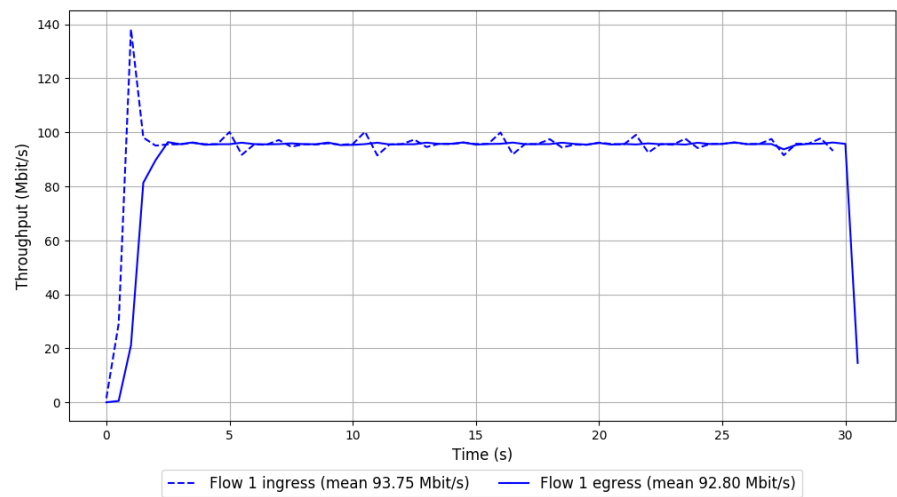


Run 4: Statistics of FillP

Start at: 2019-01-02 20:49:27  
End at: 2019-01-02 20:49:57  
Local clock offset: -7.066 ms  
Remote clock offset: -33.192 ms

# Below is generated by plot.py at 2019-01-02 21:17:56  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 92.80 Mbit/s  
95th percentile per-packet one-way delay: 96.337 ms  
Loss rate: 1.02%  
-- Flow 1:  
Average throughput: 92.80 Mbit/s  
95th percentile per-packet one-way delay: 96.337 ms  
Loss rate: 1.02%

Run 4: Report of FillP — Data Link

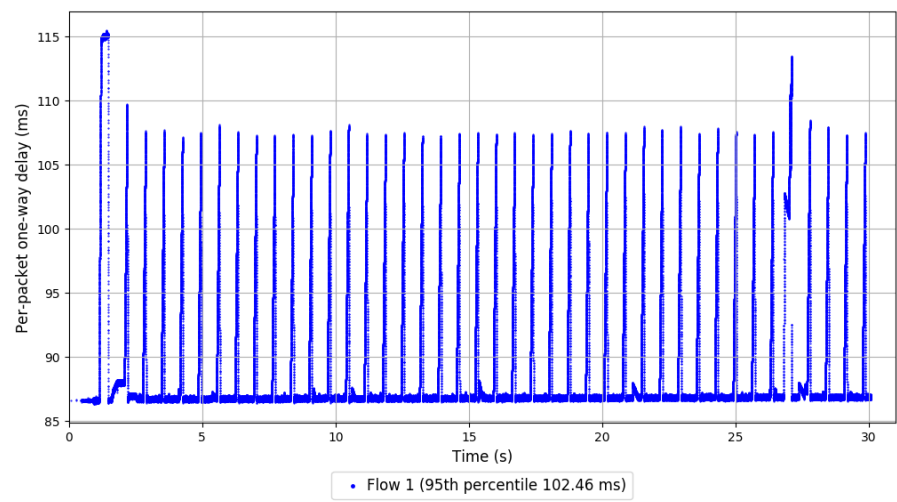
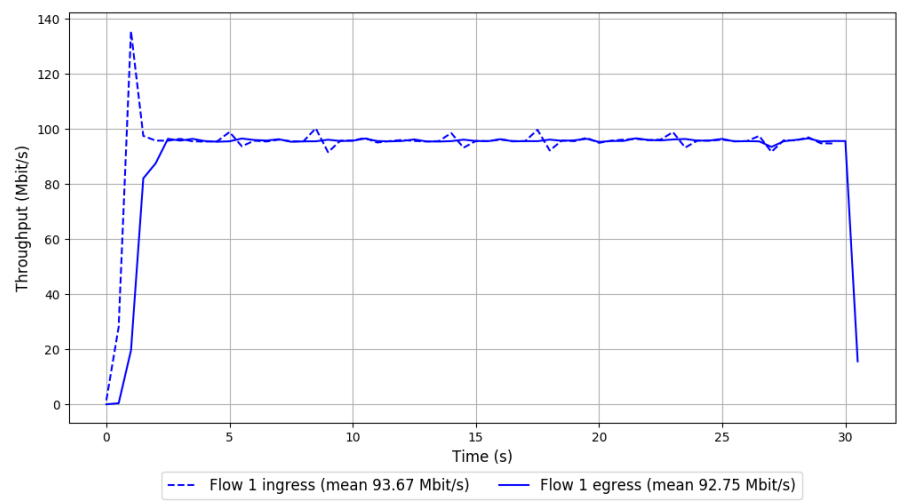


Run 5: Statistics of FillP

Start at: 2019-01-02 21:11:38  
End at: 2019-01-02 21:12:08  
Local clock offset: -1.906 ms  
Remote clock offset: -34.162 ms

# Below is generated by plot.py at 2019-01-02 21:17:56  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 92.75 Mbit/s  
95th percentile per-packet one-way delay: 102.460 ms  
Loss rate: 0.99%  
-- Flow 1:  
Average throughput: 92.75 Mbit/s  
95th percentile per-packet one-way delay: 102.460 ms  
Loss rate: 0.99%

Run 5: Report of FillP — Data Link



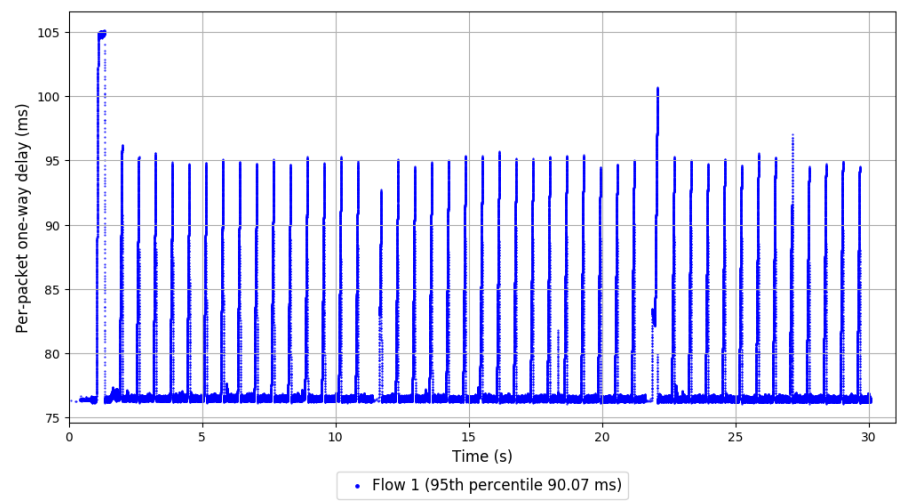
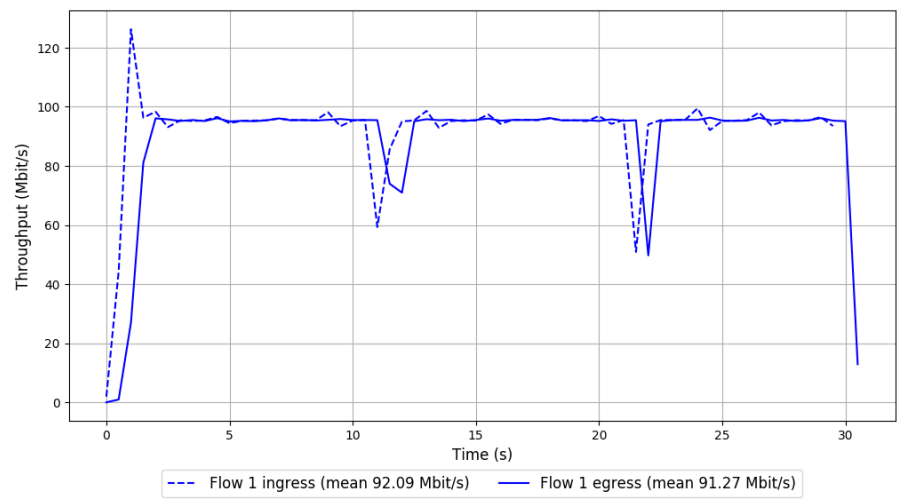


Run 1: Statistics of FillP-Sheep

Start at: 2019-01-02 19:28:07  
End at: 2019-01-02 19:28:37  
Local clock offset: -1.888 ms  
Remote clock offset: -12.127 ms

# Below is generated by plot.py at 2019-01-02 21:17:56  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 91.27 Mbit/s  
95th percentile per-packet one-way delay: 90.071 ms  
Loss rate: 0.91%  
-- Flow 1:  
Average throughput: 91.27 Mbit/s  
95th percentile per-packet one-way delay: 90.071 ms  
Loss rate: 0.91%

Run 1: Report of FillP-Sheep — Data Link

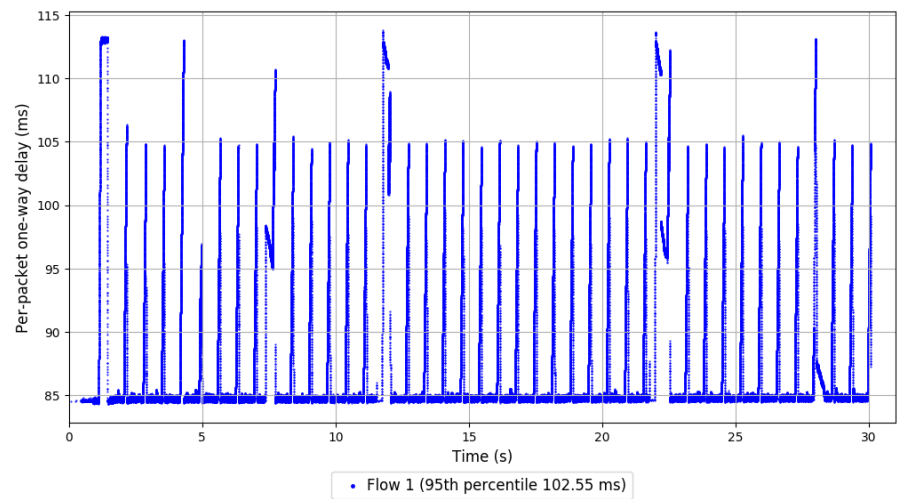
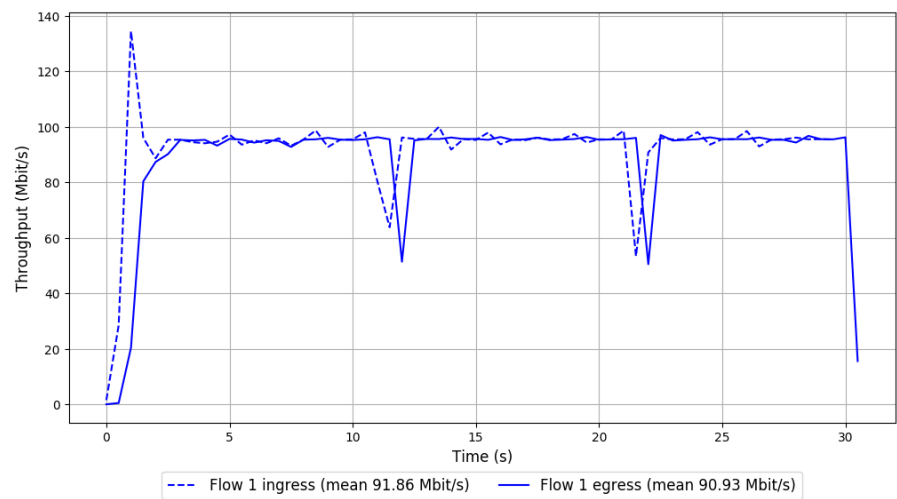


Run 2: Statistics of FillP-Sheep

Start at: 2019-01-02 19:50:28  
End at: 2019-01-02 19:50:58  
Local clock offset: -6.224 ms  
Remote clock offset: -16.015 ms

# Below is generated by plot.py at 2019-01-02 21:18:56  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 90.93 Mbit/s  
95th percentile per-packet one-way delay: 102.549 ms  
Loss rate: 1.00%  
-- Flow 1:  
Average throughput: 90.93 Mbit/s  
95th percentile per-packet one-way delay: 102.549 ms  
Loss rate: 1.00%

Run 2: Report of FillP-Sheep — Data Link

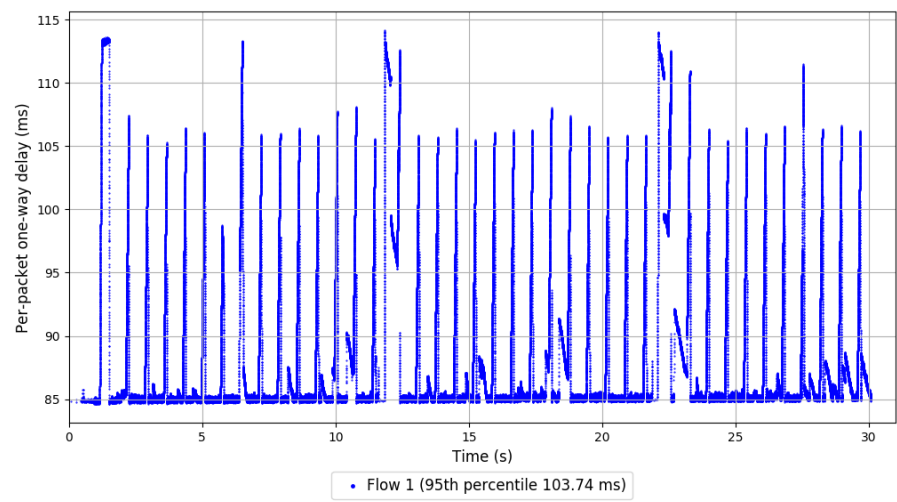
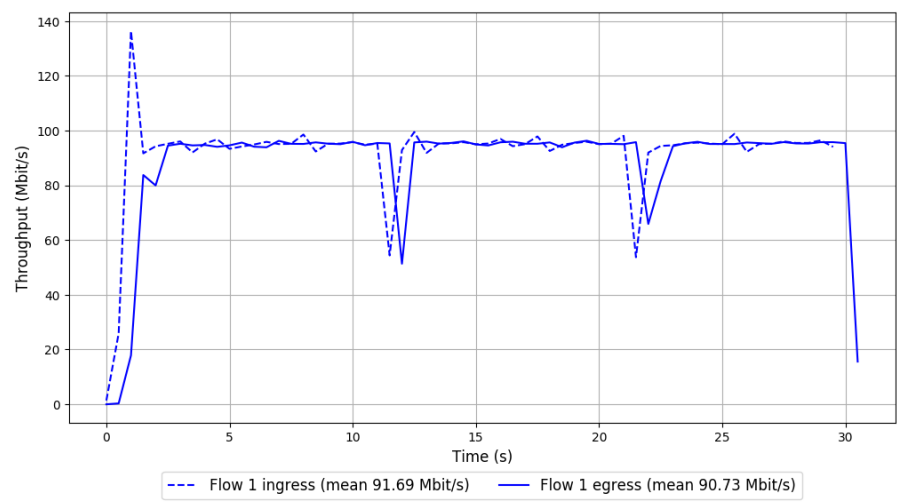


Run 3: Statistics of FillP-Sheep

Start at: 2019-01-02 20:13:10  
End at: 2019-01-02 20:13:40  
Local clock offset: -2.313 ms  
Remote clock offset: -21.154 ms

# Below is generated by plot.py at 2019-01-02 21:18:56  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 90.73 Mbit/s  
95th percentile per-packet one-way delay: 103.736 ms  
Loss rate: 1.05%  
-- Flow 1:  
Average throughput: 90.73 Mbit/s  
95th percentile per-packet one-way delay: 103.736 ms  
Loss rate: 1.05%

Run 3: Report of FillP-Sheep — Data Link

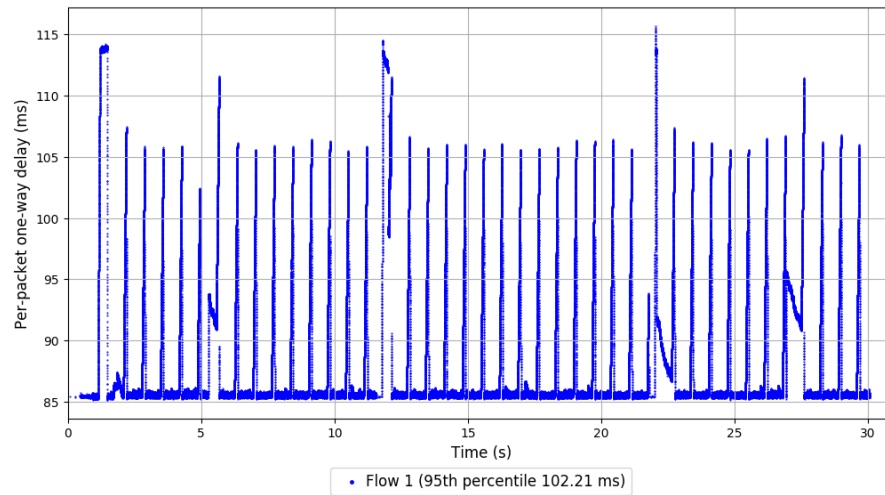
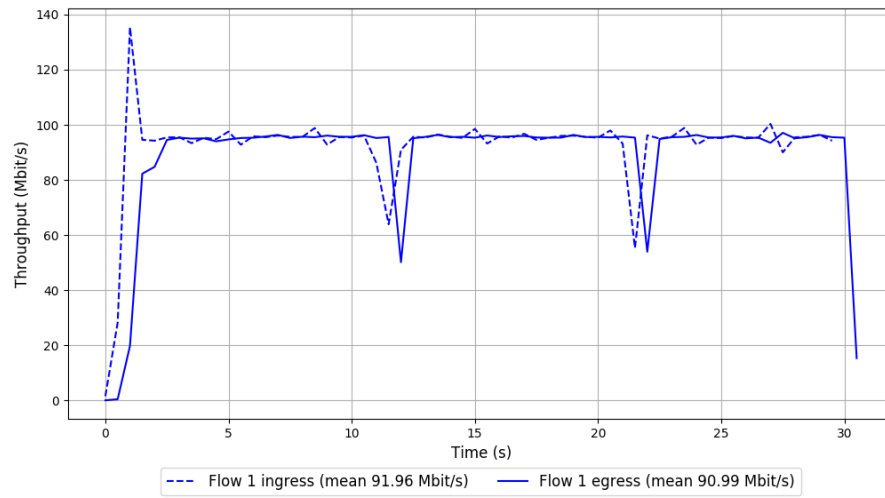


Run 4: Statistics of FillP-Sheep

Start at: 2019-01-02 20:35:22  
End at: 2019-01-02 20:35:52  
Local clock offset: -4.722 ms  
Remote clock offset: -26.206 ms

# Below is generated by plot.py at 2019-01-02 21:19:09  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 90.99 Mbit/s  
95th percentile per-packet one-way delay: 102.209 ms  
Loss rate: 1.06%  
-- Flow 1:  
Average throughput: 90.99 Mbit/s  
95th percentile per-packet one-way delay: 102.209 ms  
Loss rate: 1.06%

#### Run 4: Report of FillP-Sheep — Data Link



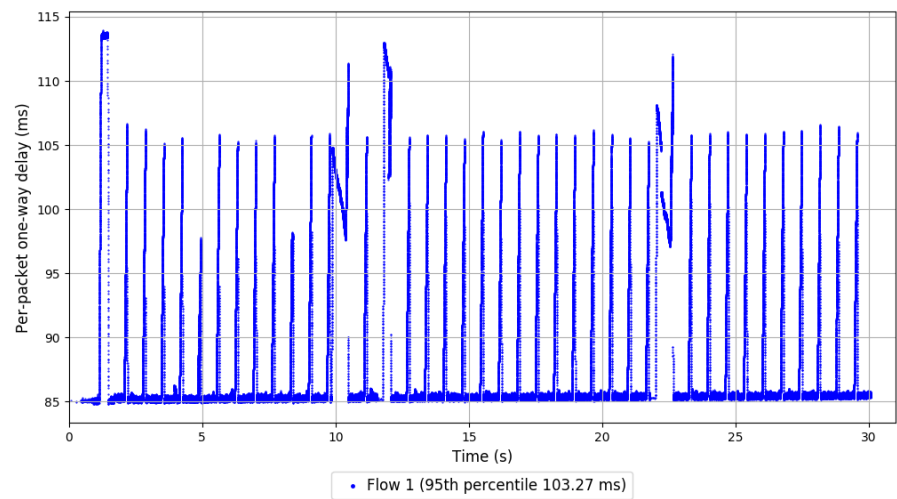
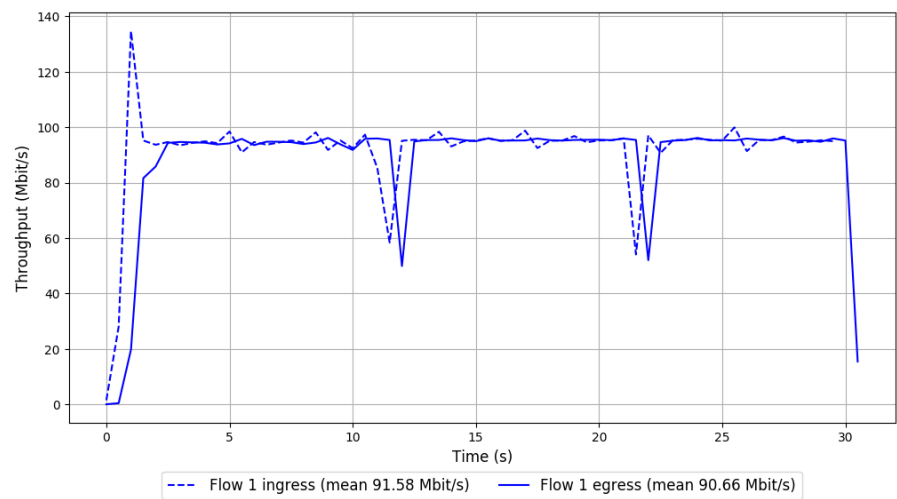


Run 5: Statistics of FillP-Sheep

Start at: 2019-01-02 20:57:35  
End at: 2019-01-02 20:58:05  
Local clock offset: -4.739 ms  
Remote clock offset: -31.085 ms

# Below is generated by plot.py at 2019-01-02 21:19:09  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 90.66 Mbit/s  
95th percentile per-packet one-way delay: 103.266 ms  
Loss rate: 1.00%  
-- Flow 1:  
Average throughput: 90.66 Mbit/s  
95th percentile per-packet one-way delay: 103.266 ms  
Loss rate: 1.00%

Run 5: Report of FillP-Sheep — Data Link

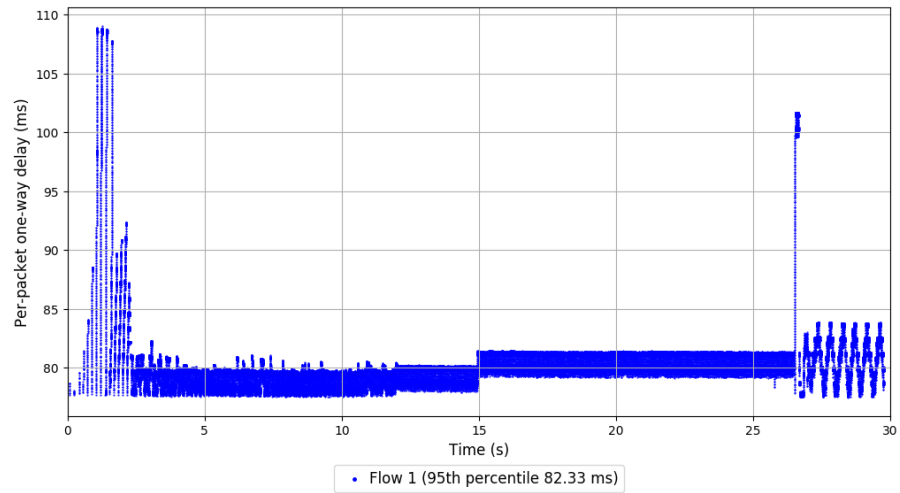
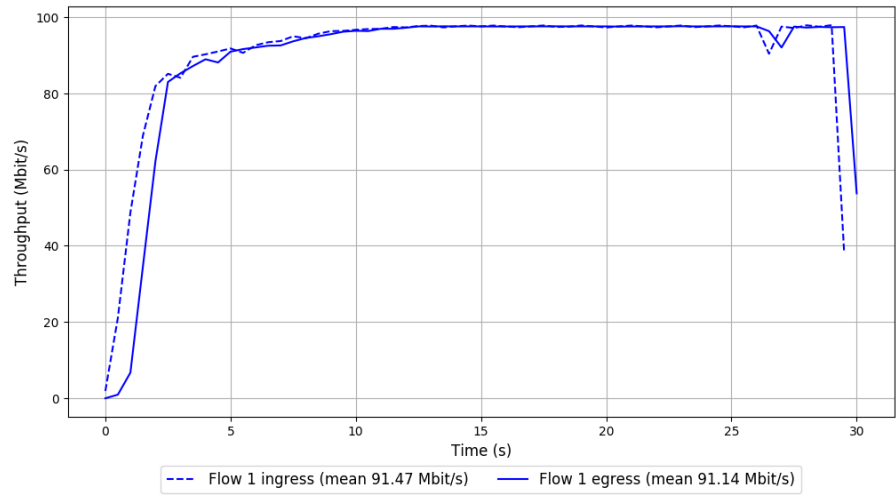


Run 1: Statistics of Indigo

Start at: 2019-01-02 19:25:44  
End at: 2019-01-02 19:26:14  
Local clock offset: -0.829 ms  
Remote clock offset: -10.369 ms

# Below is generated by plot.py at 2019-01-02 21:19:09  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 91.14 Mbit/s  
95th percentile per-packet one-way delay: 82.327 ms  
Loss rate: 0.37%  
-- Flow 1:  
Average throughput: 91.14 Mbit/s  
95th percentile per-packet one-way delay: 82.327 ms  
Loss rate: 0.37%

### Run 1: Report of Indigo — Data Link

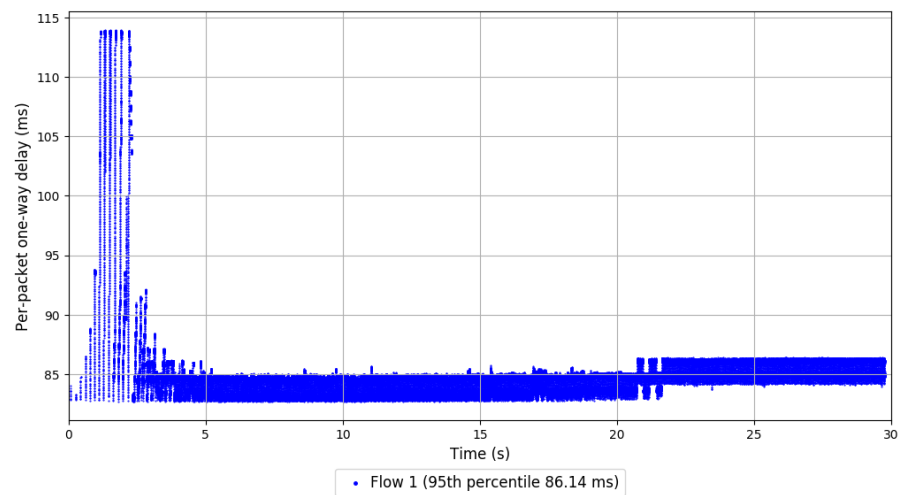
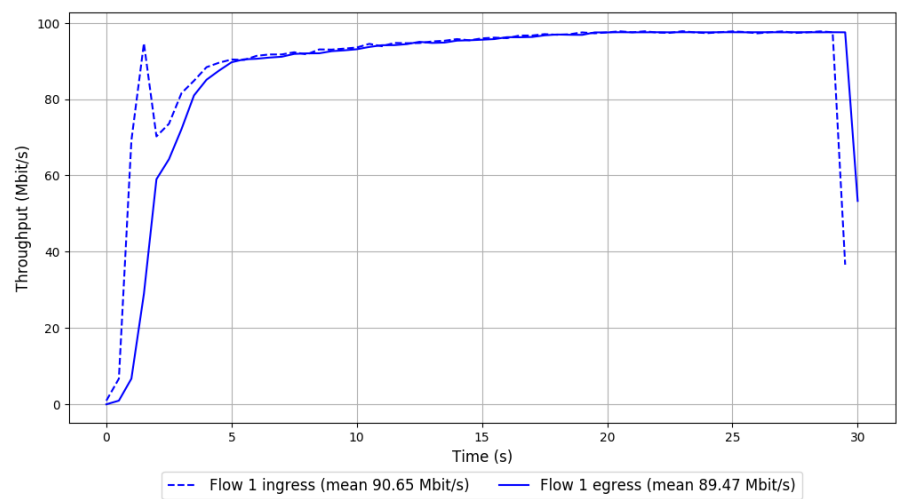


Run 2: Statistics of Indigo

Start at: 2019-01-02 19:48:02  
End at: 2019-01-02 19:48:32  
Local clock offset: -6.208 ms  
Remote clock offset: -19.191 ms

# Below is generated by plot.py at 2019-01-02 21:19:09  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 89.47 Mbit/s  
95th percentile per-packet one-way delay: 86.141 ms  
Loss rate: 1.30%  
-- Flow 1:  
Average throughput: 89.47 Mbit/s  
95th percentile per-packet one-way delay: 86.141 ms  
Loss rate: 1.30%

Run 2: Report of Indigo — Data Link

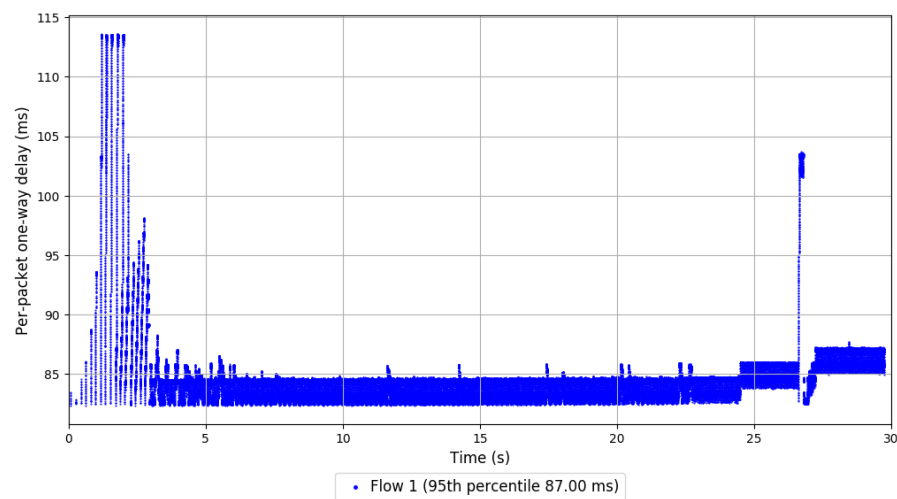
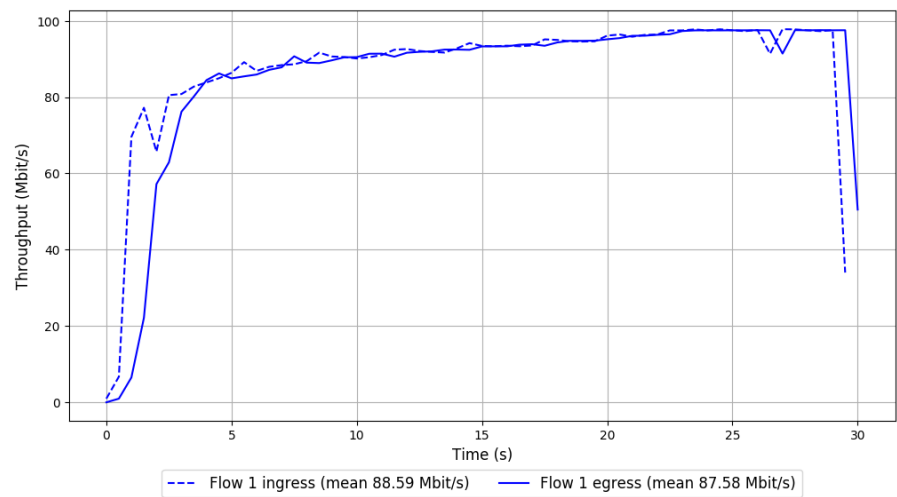


Run 3: Statistics of Indigo

Start at: 2019-01-02 20:10:47  
End at: 2019-01-02 20:11:17  
Local clock offset: -1.853 ms  
Remote clock offset: -24.543 ms

# Below is generated by plot.py at 2019-01-02 21:19:09  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 87.58 Mbit/s  
95th percentile per-packet one-way delay: 87.004 ms  
Loss rate: 1.13%  
-- Flow 1:  
Average throughput: 87.58 Mbit/s  
95th percentile per-packet one-way delay: 87.004 ms  
Loss rate: 1.13%

Run 3: Report of Indigo — Data Link



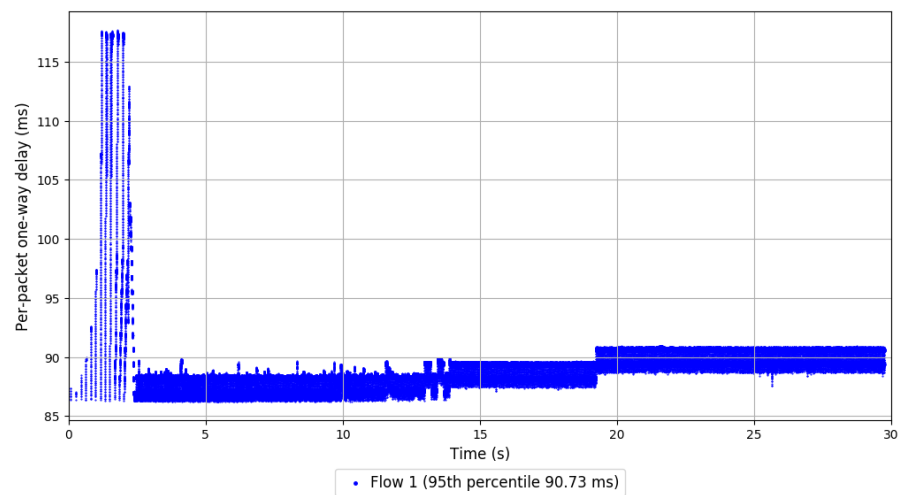
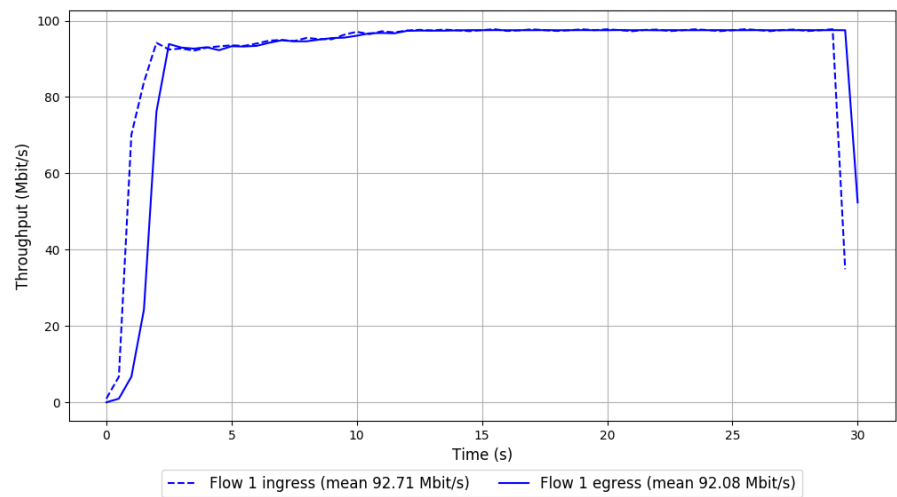


Run 4: Statistics of Indigo

Start at: 2019-01-02 20:32:59  
End at: 2019-01-02 20:33:30  
Local clock offset: -4.93 ms  
Remote clock offset: -25.471 ms

# Below is generated by plot.py at 2019-01-02 21:19:09  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 92.08 Mbit/s  
95th percentile per-packet one-way delay: 90.728 ms  
Loss rate: 0.67%  
-- Flow 1:  
Average throughput: 92.08 Mbit/s  
95th percentile per-packet one-way delay: 90.728 ms  
Loss rate: 0.67%

Run 4: Report of Indigo — Data Link

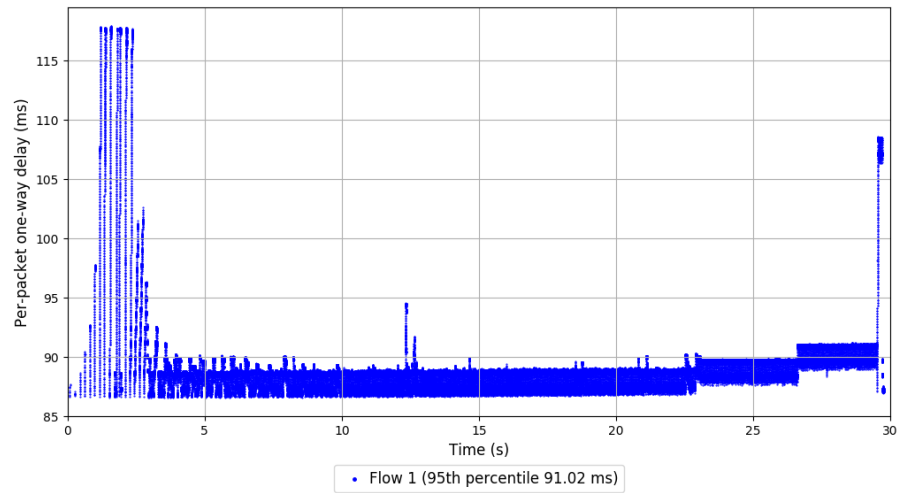
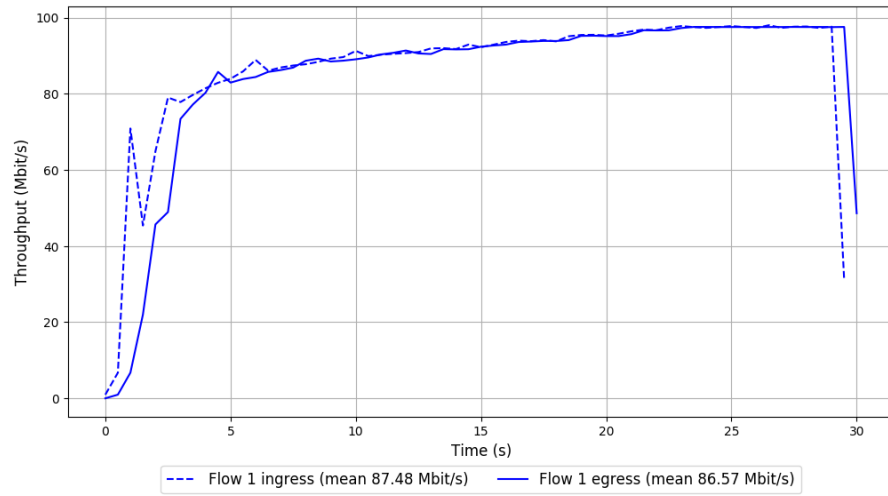


Run 5: Statistics of Indigo

Start at: 2019-01-02 20:55:12  
End at: 2019-01-02 20:55:42  
Local clock offset: -6.871 ms  
Remote clock offset: -30.557 ms

# Below is generated by plot.py at 2019-01-02 21:19:50  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 86.57 Mbit/s  
95th percentile per-packet one-way delay: 91.020 ms  
Loss rate: 1.03%  
-- Flow 1:  
Average throughput: 86.57 Mbit/s  
95th percentile per-packet one-way delay: 91.020 ms  
Loss rate: 1.03%

### Run 5: Report of Indigo — Data Link

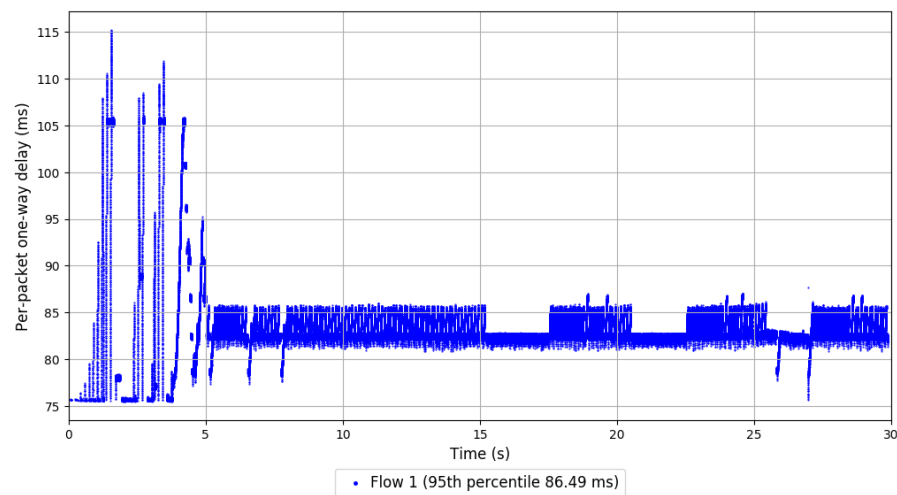
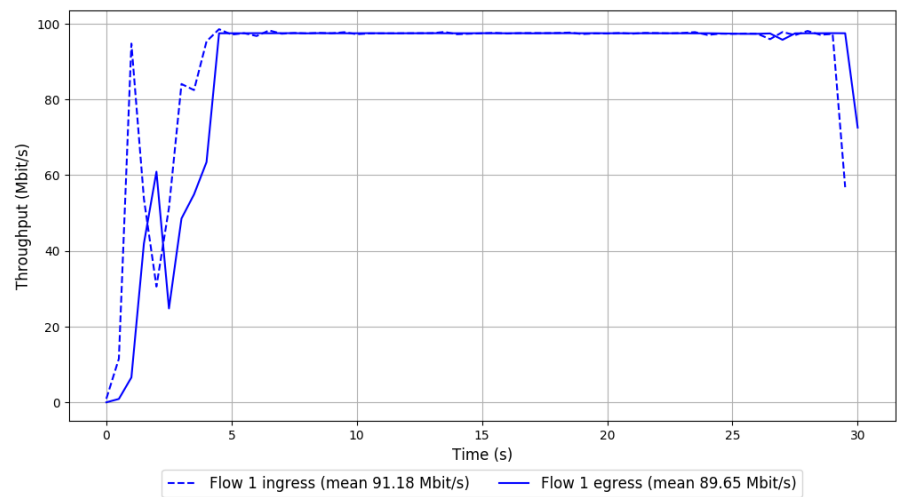


```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-01-02 19:30:25
End at: 2019-01-02 19:30:55
Local clock offset: -3.585 ms
Remote clock offset: -12.586 ms

# Below is generated by plot.py at 2019-01-02 21:19:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.65 Mbit/s
95th percentile per-packet one-way delay: 86.494 ms
Loss rate: 1.66%
-- Flow 1:
Average throughput: 89.65 Mbit/s
95th percentile per-packet one-way delay: 86.494 ms
Loss rate: 1.66%
```

Run 1: Report of Indigo-MusesD — Data Link

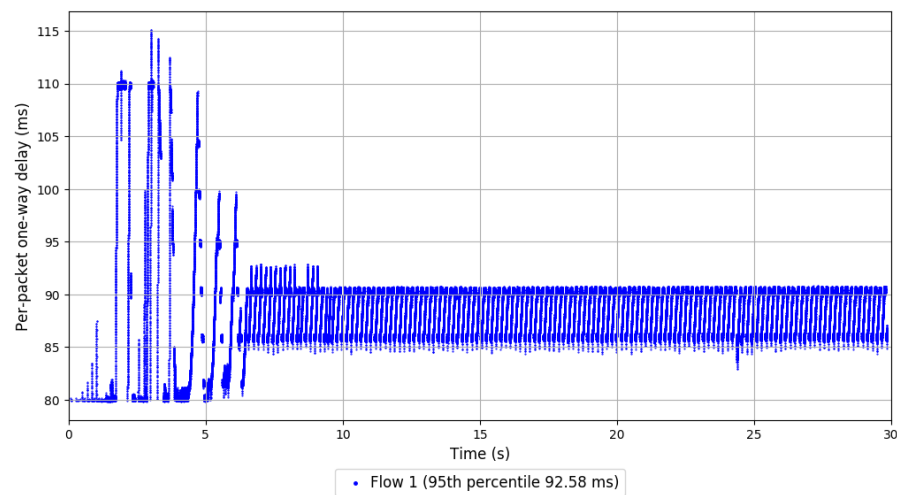
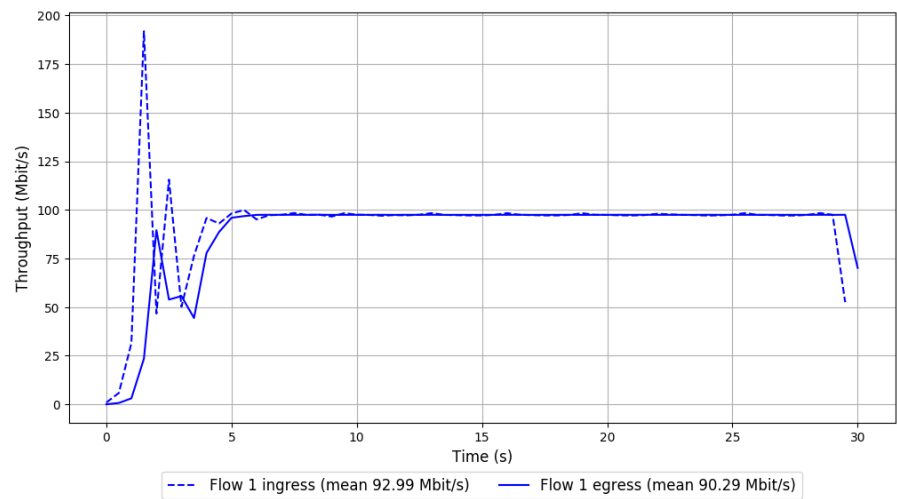


Run 2: Statistics of Indigo-MusesD

Start at: 2019-01-02 19:52:54  
End at: 2019-01-02 19:53:24  
Local clock offset: -5.538 ms  
Remote clock offset: -20.533 ms

# Below is generated by plot.py at 2019-01-02 21:19:58  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 90.29 Mbit/s  
95th percentile per-packet one-way delay: 92.575 ms  
Loss rate: 2.88%  
-- Flow 1:  
Average throughput: 90.29 Mbit/s  
95th percentile per-packet one-way delay: 92.575 ms  
Loss rate: 2.88%

Run 2: Report of Indigo-MusesD — Data Link



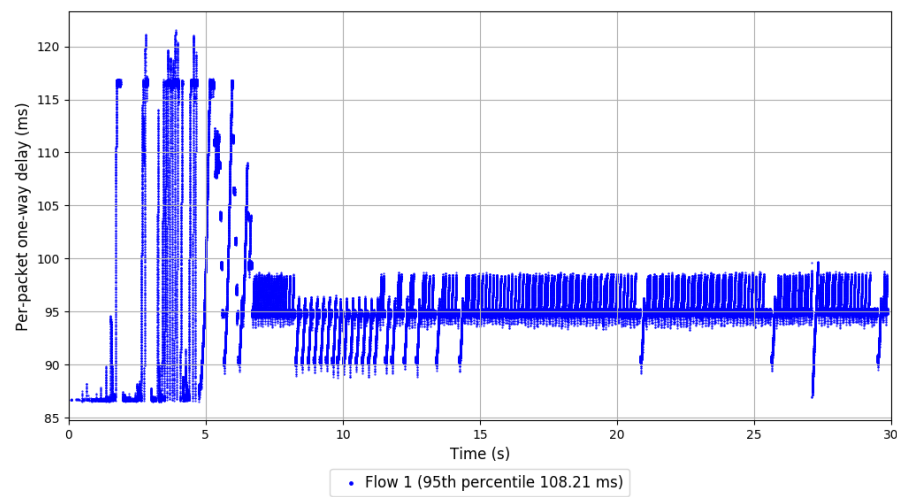
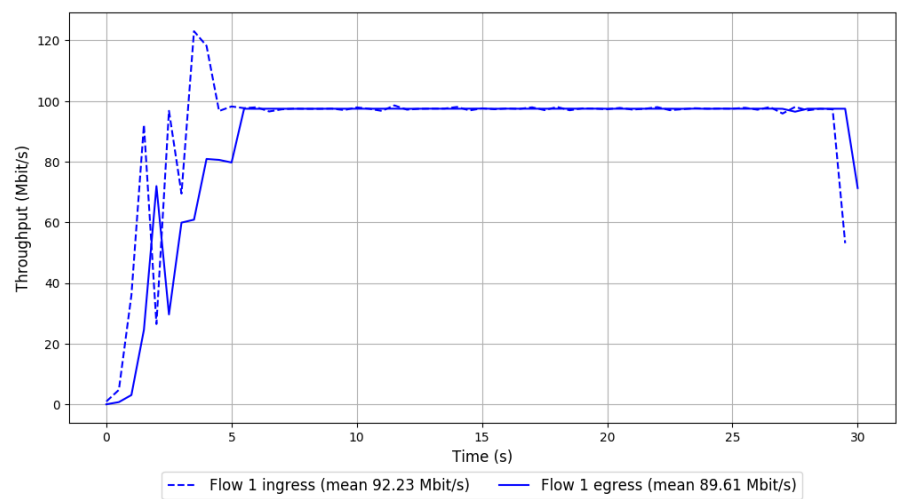


Run 3: Statistics of Indigo-MusesD

Start at: 2019-01-02 20:15:28  
End at: 2019-01-02 20:15:59  
Local clock offset: -2.162 ms  
Remote clock offset: -21.493 ms

# Below is generated by plot.py at 2019-01-02 21:19:58  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 89.61 Mbit/s  
95th percentile per-packet one-way delay: 108.208 ms  
Loss rate: 2.81%  
-- Flow 1:  
Average throughput: 89.61 Mbit/s  
95th percentile per-packet one-way delay: 108.208 ms  
Loss rate: 2.81%

Run 3: Report of Indigo-MusesD — Data Link

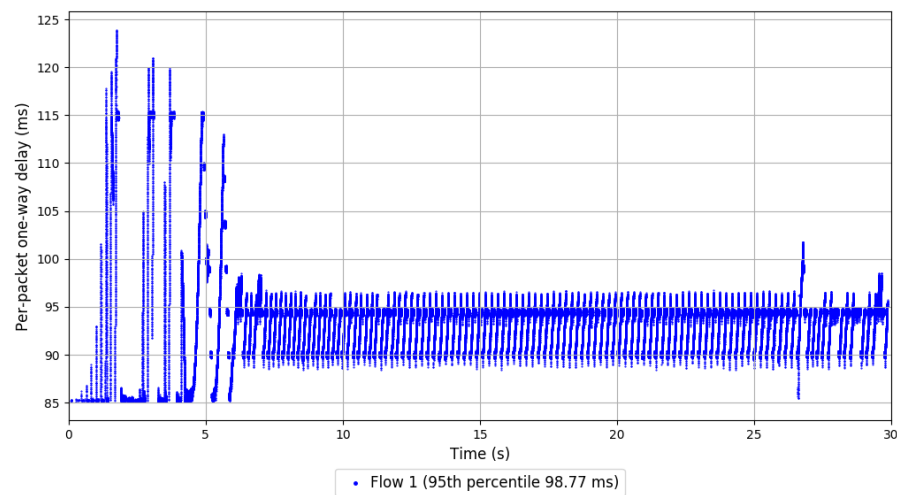
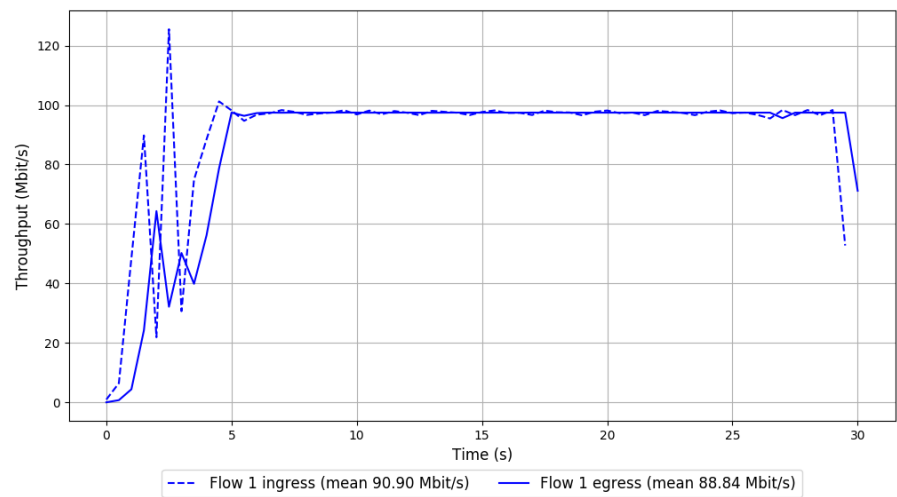


Run 4: Statistics of Indigo-MusesD

Start at: 2019-01-02 20:37:40  
End at: 2019-01-02 20:38:10  
Local clock offset: -5.856 ms  
Remote clock offset: -26.628 ms

# Below is generated by plot.py at 2019-01-02 21:19:58  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 88.84 Mbit/s  
95th percentile per-packet one-way delay: 98.773 ms  
Loss rate: 2.23%  
-- Flow 1:  
Average throughput: 88.84 Mbit/s  
95th percentile per-packet one-way delay: 98.773 ms  
Loss rate: 2.23%

Run 4: Report of Indigo-MusesD — Data Link



Run 5: Statistics of Indigo-MusesD

Start at: 2019-01-02 20:59:54

End at: 2019-01-02 21:00:24

Local clock offset: -4.46 ms

Remote clock offset: -35.267 ms

# Below is generated by plot.py at 2019-01-02 21:20:01

# Datalink statistics

-- Total of 1 flow:

Average throughput: 89.57 Mbit/s

95th percentile per-packet one-way delay: 99.535 ms

Loss rate: 2.70%

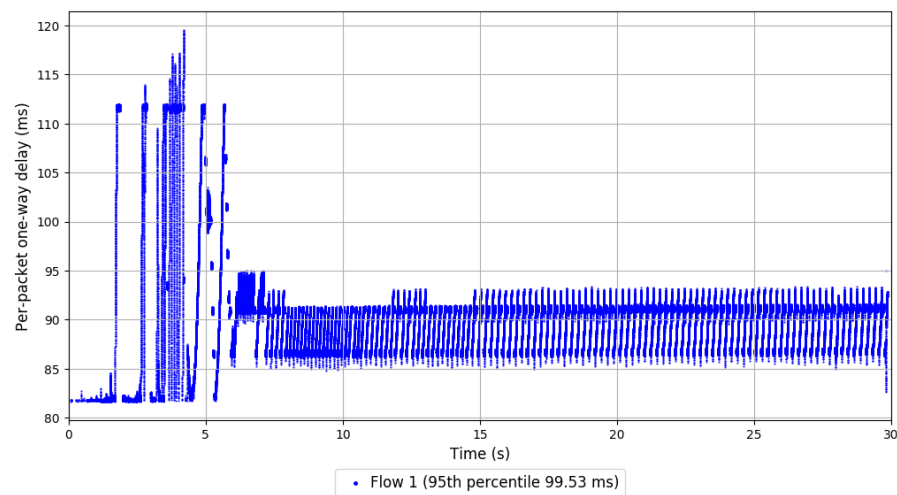
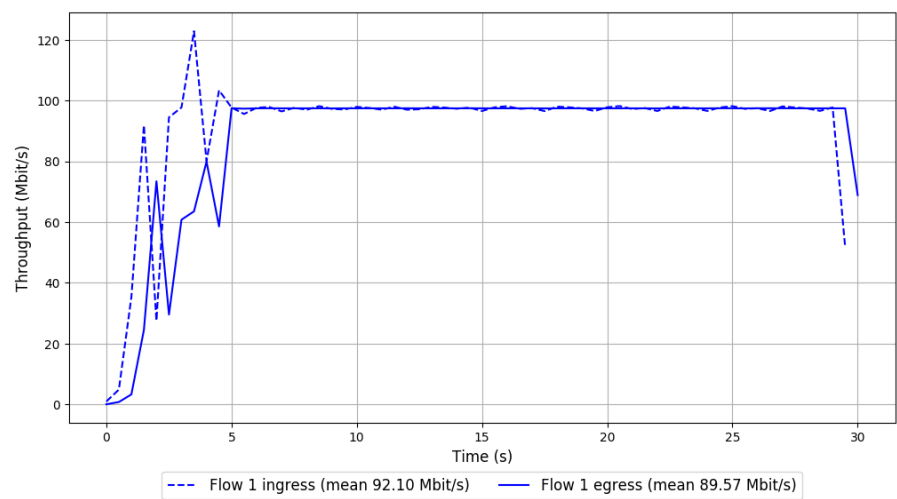
-- Flow 1:

Average throughput: 89.57 Mbit/s

95th percentile per-packet one-way delay: 99.535 ms

Loss rate: 2.70%

Run 5: Report of Indigo-MusesD — Data Link

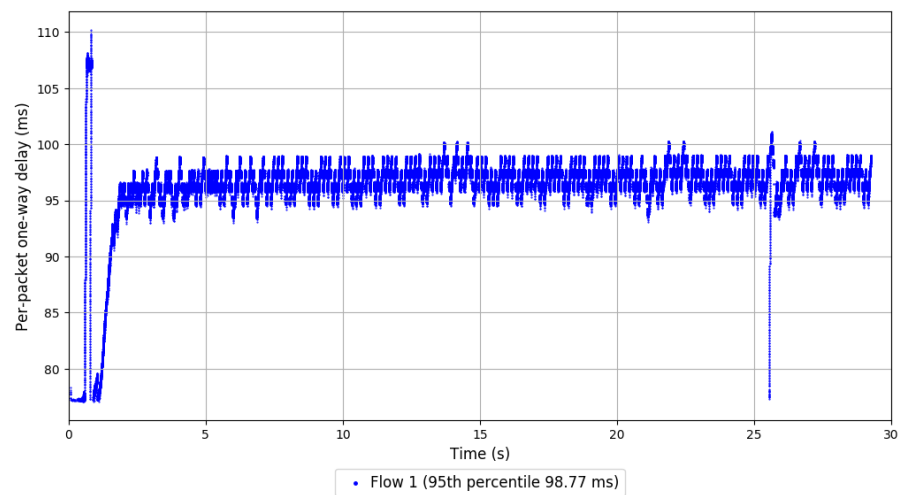
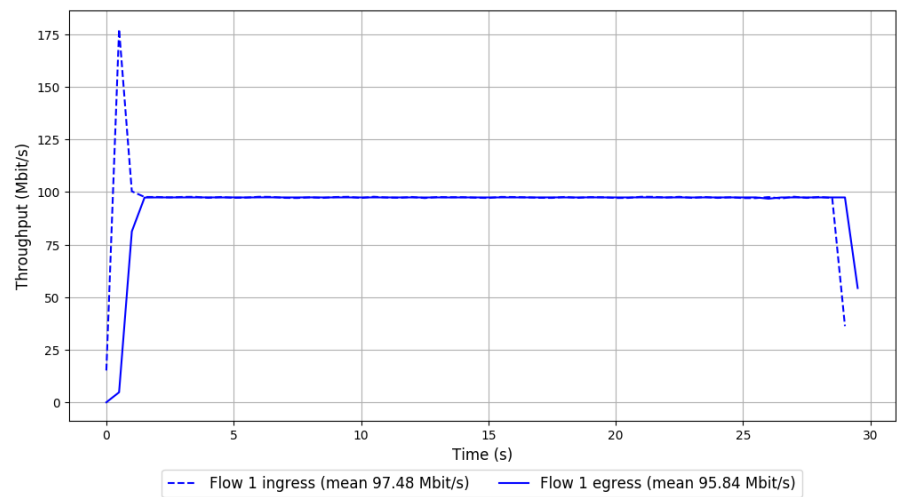


```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-01-02 19:23:21
End at: 2019-01-02 19:23:51
Local clock offset: -0.036 ms
Remote clock offset: -10.961 ms

# Below is generated by plot.py at 2019-01-02 21:20:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.84 Mbit/s
95th percentile per-packet one-way delay: 98.769 ms
Loss rate: 1.62%
-- Flow 1:
Average throughput: 95.84 Mbit/s
95th percentile per-packet one-way delay: 98.769 ms
Loss rate: 1.62%
```

Run 1: Report of Indigo-MusesT — Data Link



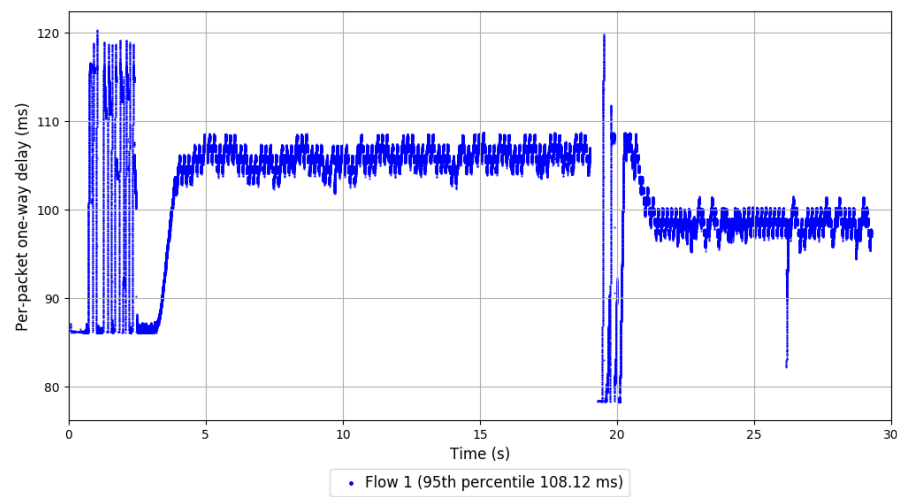
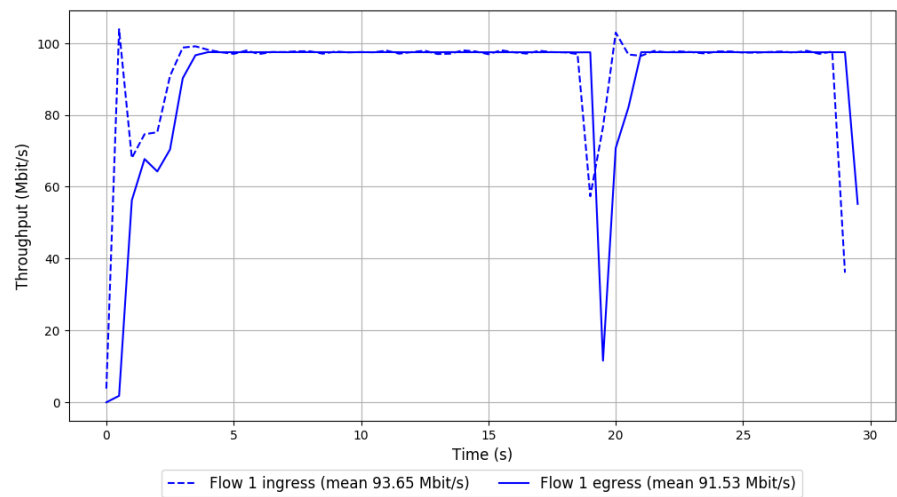


Run 2: Statistics of Indigo-MusesT

Start at: 2019-01-02 19:45:42  
End at: 2019-01-02 19:46:12  
Local clock offset: -5.239 ms  
Remote clock offset: -14.833 ms

# Below is generated by plot.py at 2019-01-02 21:20:18  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 91.53 Mbit/s  
95th percentile per-packet one-way delay: 108.116 ms  
Loss rate: 2.23%  
-- Flow 1:  
Average throughput: 91.53 Mbit/s  
95th percentile per-packet one-way delay: 108.116 ms  
Loss rate: 2.23%

Run 2: Report of Indigo-MusesT — Data Link



Run 3: Statistics of Indigo-MusesT

Start at: 2019-01-02 20:08:27

End at: 2019-01-02 20:08:57

Local clock offset: -2.849 ms

Remote clock offset: -23.853 ms

# Below is generated by plot.py at 2019-01-02 21:20:53

# Datalink statistics

-- Total of 1 flow:

Average throughput: 94.68 Mbit/s

95th percentile per-packet one-way delay: 106.763 ms

Loss rate: 0.62%

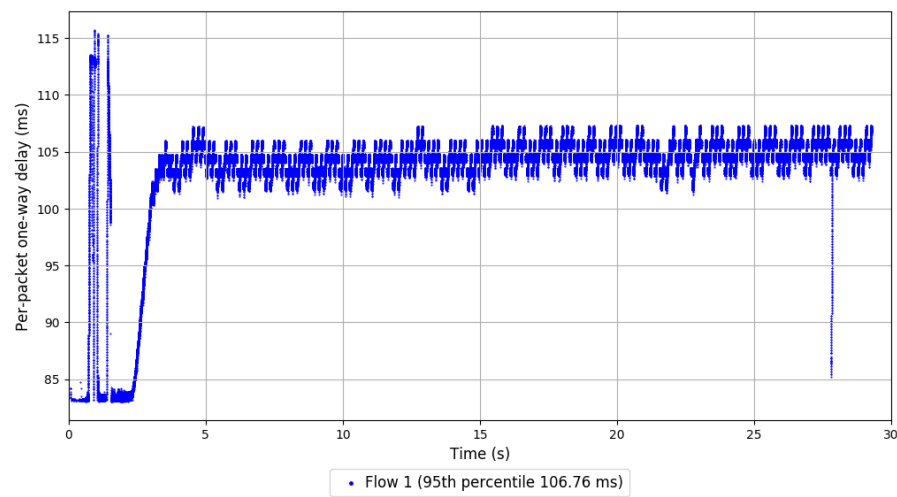
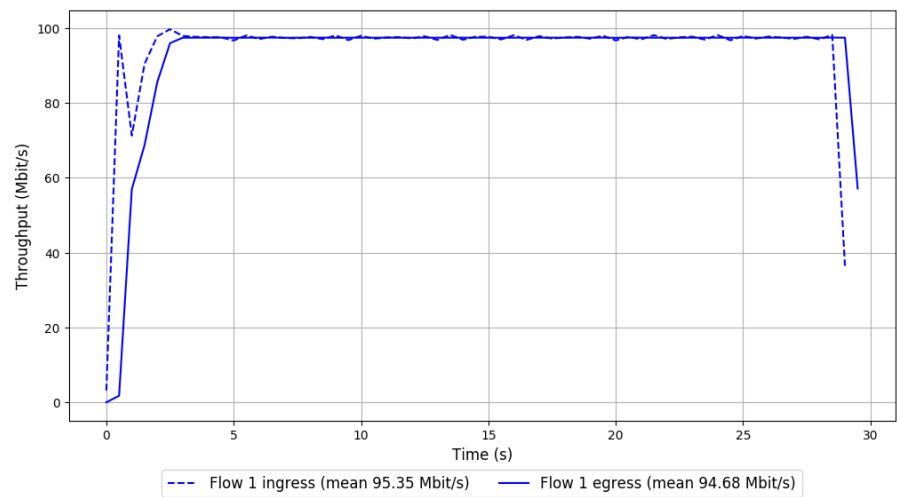
-- Flow 1:

Average throughput: 94.68 Mbit/s

95th percentile per-packet one-way delay: 106.763 ms

Loss rate: 0.62%

Run 3: Report of Indigo-MusesT — Data Link

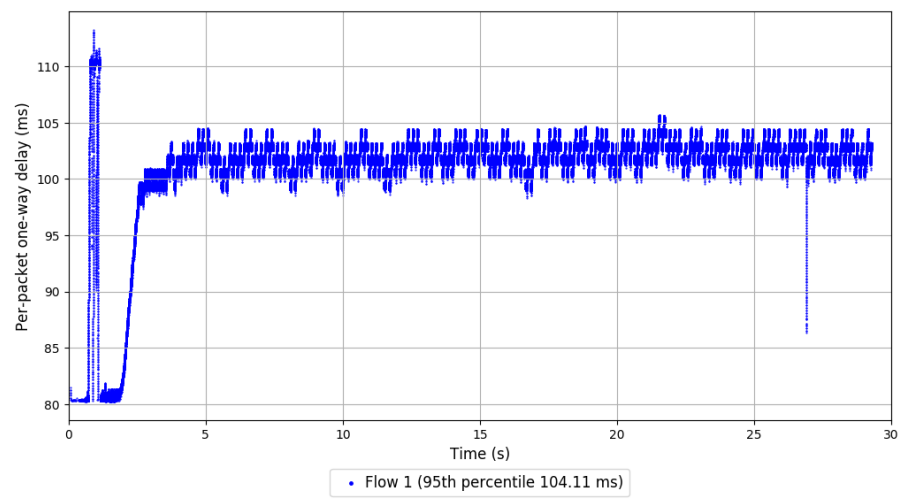
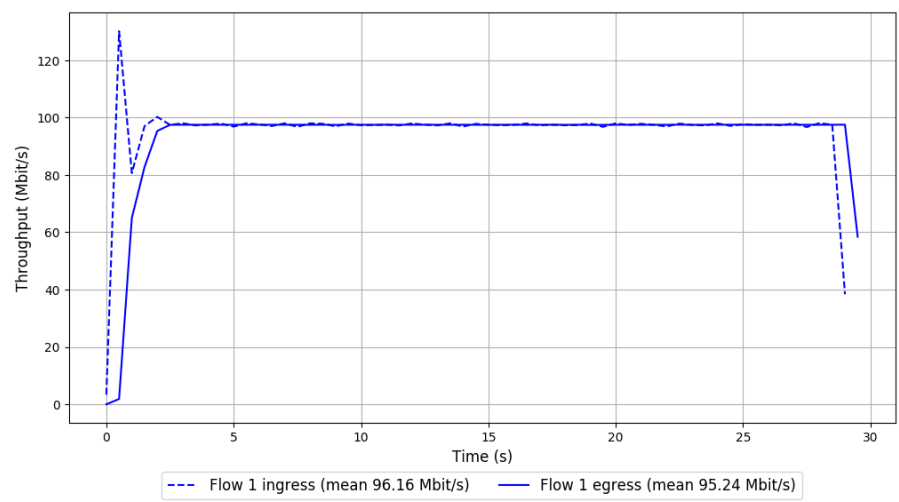


Run 4: Statistics of Indigo-MusesT

Start at: 2019-01-02 20:30:40  
End at: 2019-01-02 20:31:10  
Local clock offset: -3.583 ms  
Remote clock offset: -28.729 ms

# Below is generated by plot.py at 2019-01-02 21:21:06  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 95.24 Mbit/s  
95th percentile per-packet one-way delay: 104.106 ms  
Loss rate: 0.88%  
-- Flow 1:  
Average throughput: 95.24 Mbit/s  
95th percentile per-packet one-way delay: 104.106 ms  
Loss rate: 0.88%

Run 4: Report of Indigo-MusesT — Data Link

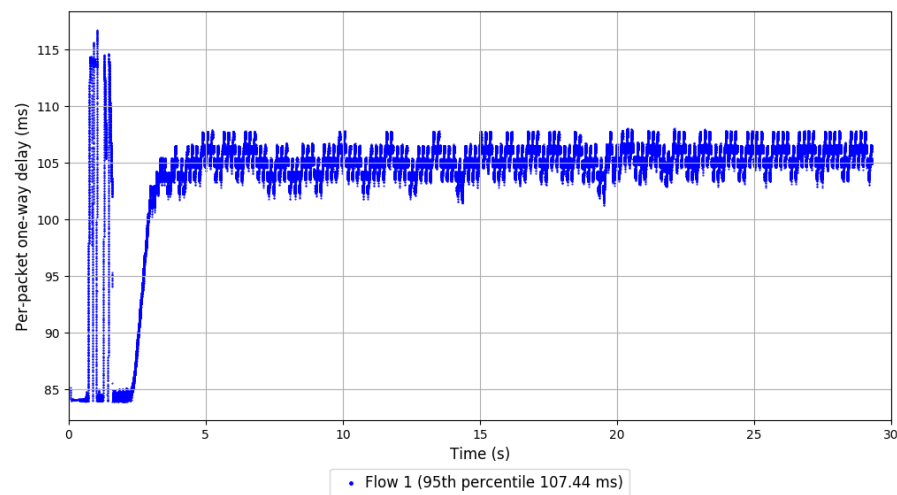
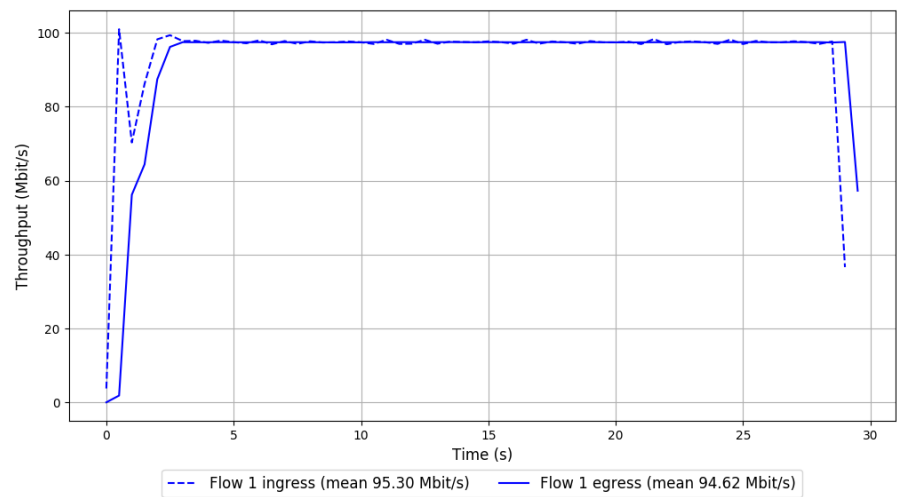


Run 5: Statistics of Indigo-MusesT

Start at: 2019-01-02 20:52:52  
End at: 2019-01-02 20:53:22  
Local clock offset: -6.414 ms  
Remote clock offset: -29.856 ms

# Below is generated by plot.py at 2019-01-02 21:21:06  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 94.62 Mbit/s  
95th percentile per-packet one-way delay: 107.435 ms  
Loss rate: 0.64%  
-- Flow 1:  
Average throughput: 94.62 Mbit/s  
95th percentile per-packet one-way delay: 107.435 ms  
Loss rate: 0.64%

Run 5: Report of Indigo-MusesT — Data Link



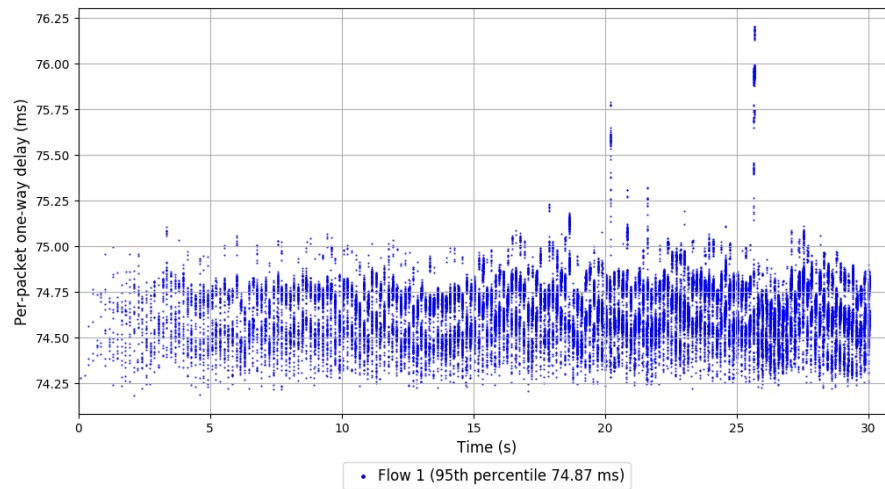
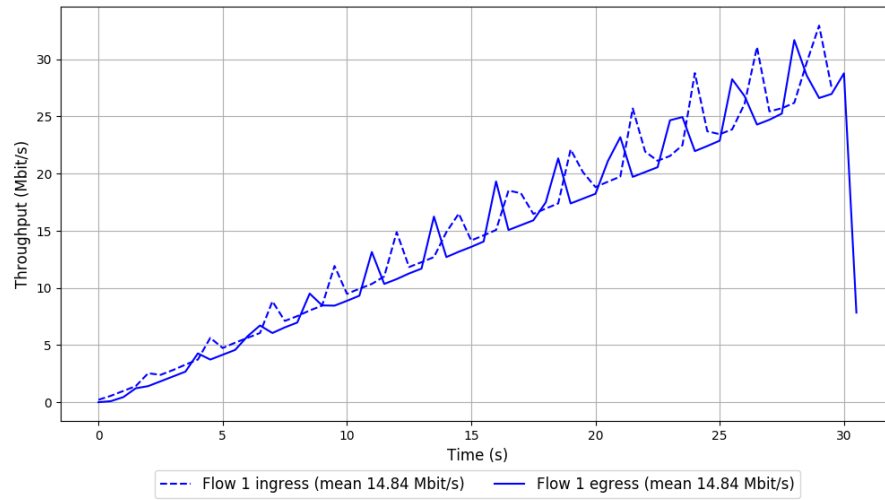


```
Run 1: Statistics of LEDBAT

Start at: 2019-01-02 19:36:18
End at: 2019-01-02 19:36:48
Local clock offset: -4.254 ms
Remote clock offset: -13.873 ms

# Below is generated by plot.py at 2019-01-02 21:21:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 14.84 Mbit/s
95th percentile per-packet one-way delay: 74.867 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 14.84 Mbit/s
95th percentile per-packet one-way delay: 74.867 ms
Loss rate: 0.00%
```

# Run 1: Report of LEDBAT — Data Link

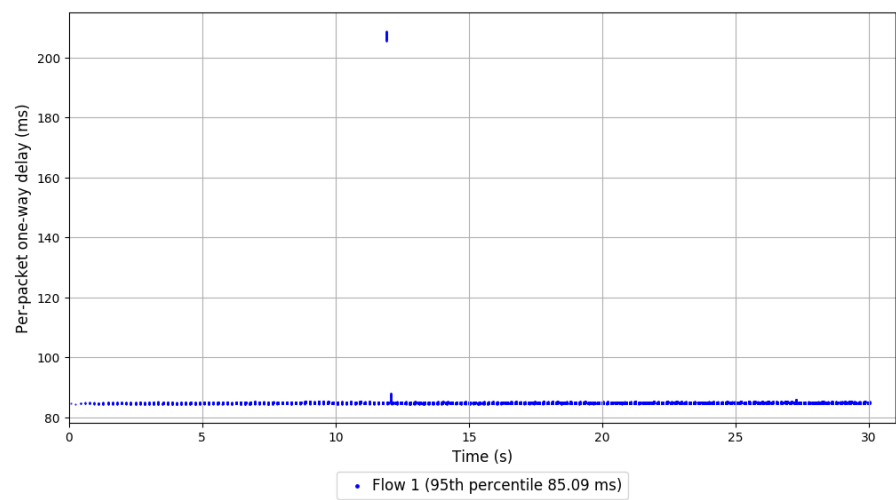
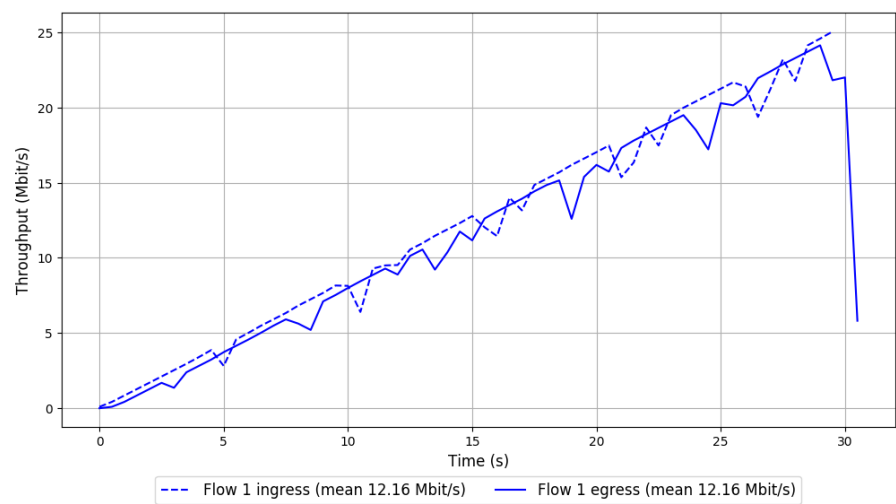


Run 2: Statistics of LEDBAT

Start at: 2019-01-02 19:59:07  
End at: 2019-01-02 19:59:37  
Local clock offset: -3.846 ms  
Remote clock offset: -18.176 ms

# Below is generated by plot.py at 2019-01-02 21:21:06  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 12.16 Mbit/s  
95th percentile per-packet one-way delay: 85.086 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 12.16 Mbit/s  
95th percentile per-packet one-way delay: 85.086 ms  
Loss rate: 0.00%

Run 2: Report of LEDBAT — Data Link

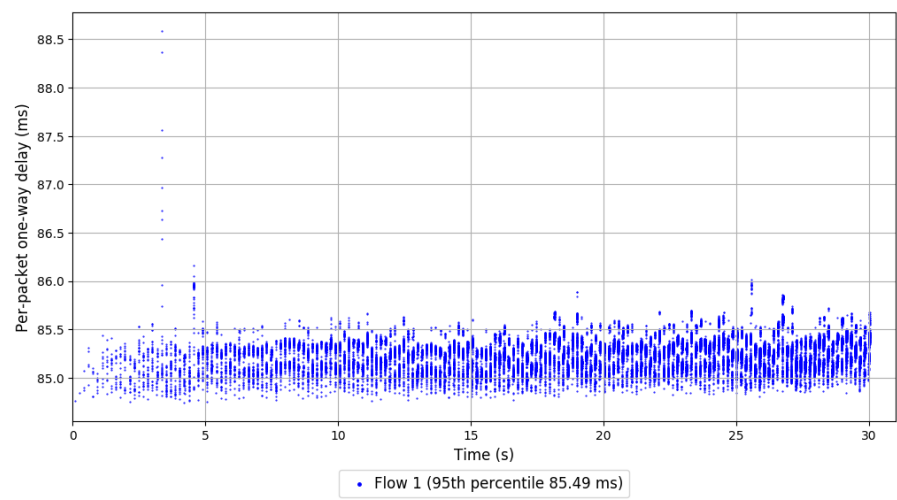
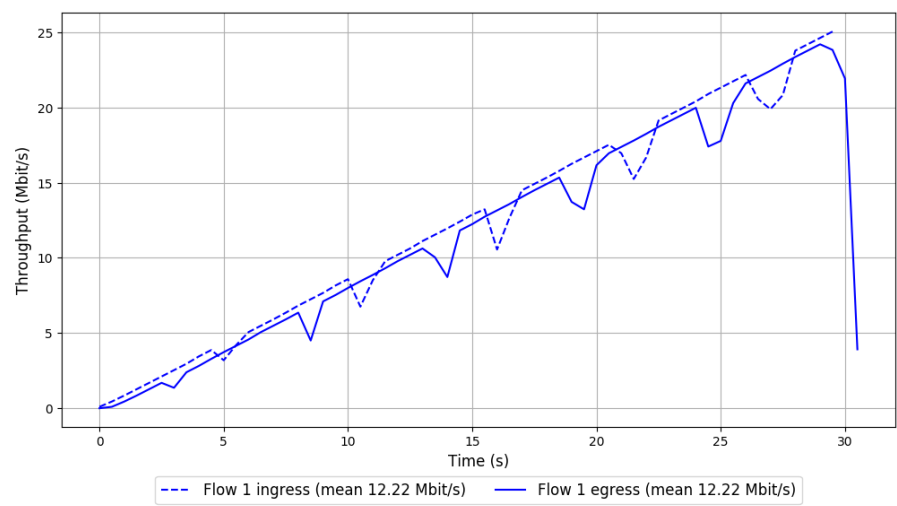


Run 3: Statistics of LEDBAT

Start at: 2019-01-02 20:21:23  
End at: 2019-01-02 20:21:53  
Local clock offset: -1.717 ms  
Remote clock offset: -22.882 ms

# Below is generated by plot.py at 2019-01-02 21:21:06  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 12.22 Mbit/s  
95th percentile per-packet one-way delay: 85.487 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 12.22 Mbit/s  
95th percentile per-packet one-way delay: 85.487 ms  
Loss rate: 0.00%

Run 3: Report of LEDBAT — Data Link

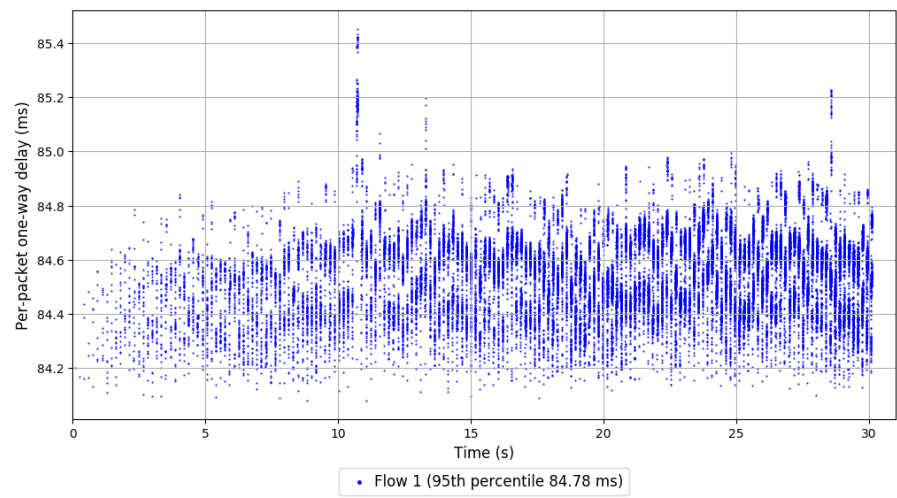
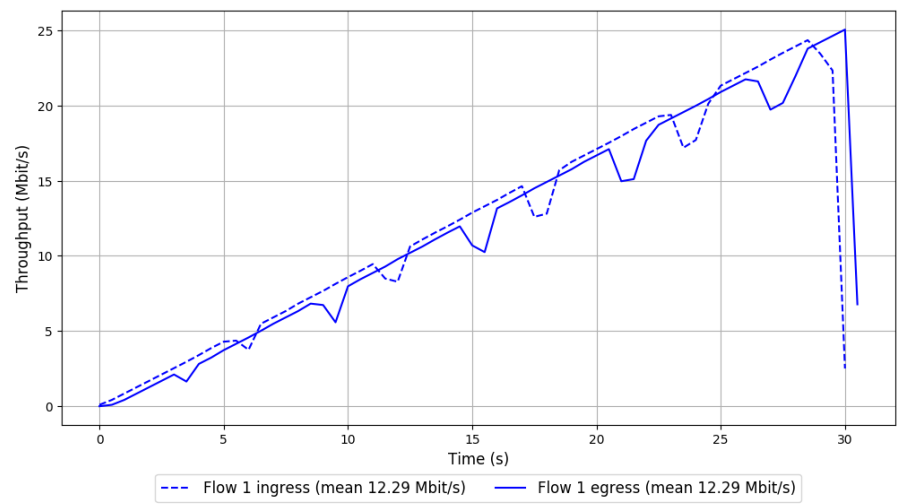


Run 4: Statistics of LEDBAT

Start at: 2019-01-02 20:43:35  
End at: 2019-01-02 20:44:05  
Local clock offset: -5.846 ms  
Remote clock offset: -27.641 ms

# Below is generated by plot.py at 2019-01-02 21:21:06  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 12.29 Mbit/s  
95th percentile per-packet one-way delay: 84.779 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 12.29 Mbit/s  
95th percentile per-packet one-way delay: 84.779 ms  
Loss rate: 0.00%

Run 4: Report of LEDBAT — Data Link



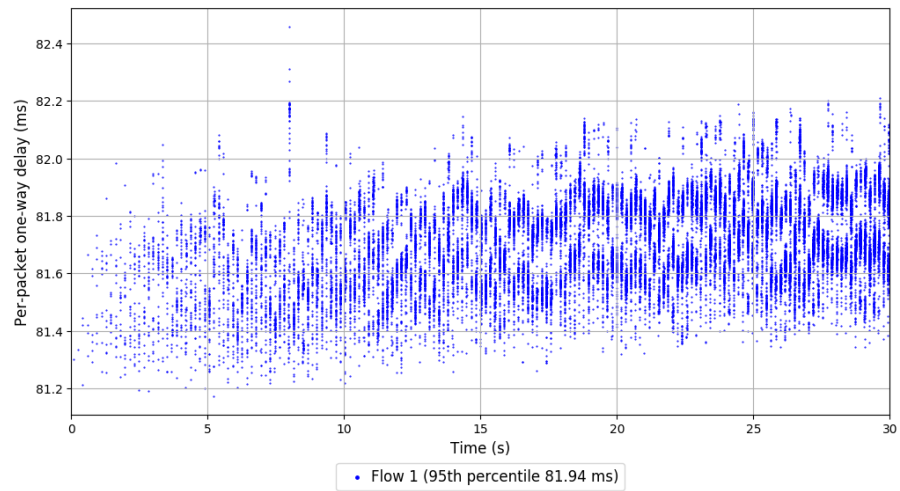
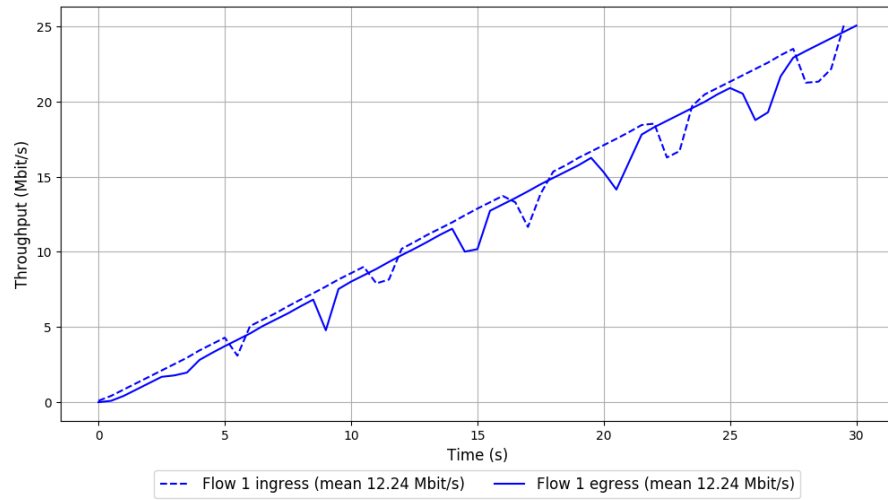


Run 5: Statistics of LEDBAT

Start at: 2019-01-02 21:05:47  
End at: 2019-01-02 21:06:17  
Local clock offset: -2.834 ms  
Remote clock offset: -36.656 ms

# Below is generated by plot.py at 2019-01-02 21:21:06  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 12.24 Mbit/s  
95th percentile per-packet one-way delay: 81.940 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 12.24 Mbit/s  
95th percentile per-packet one-way delay: 81.940 ms  
Loss rate: 0.00%

### Run 5: Report of LEDBAT — Data Link

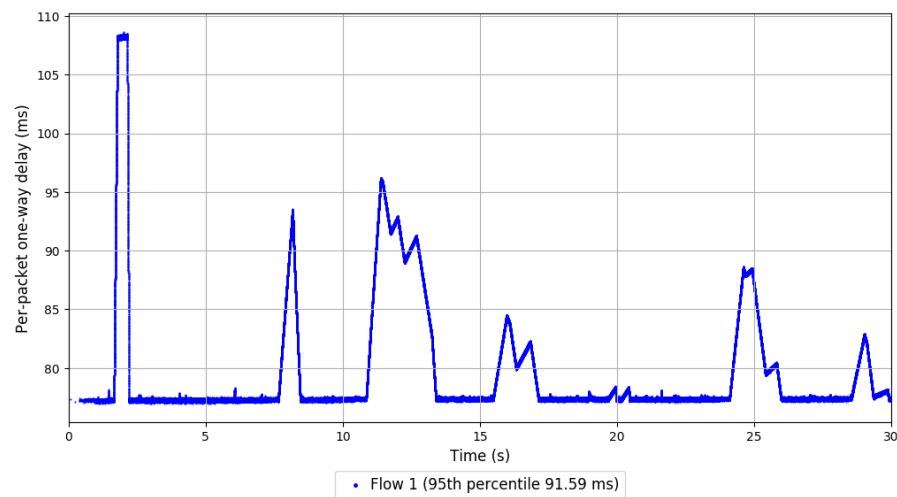
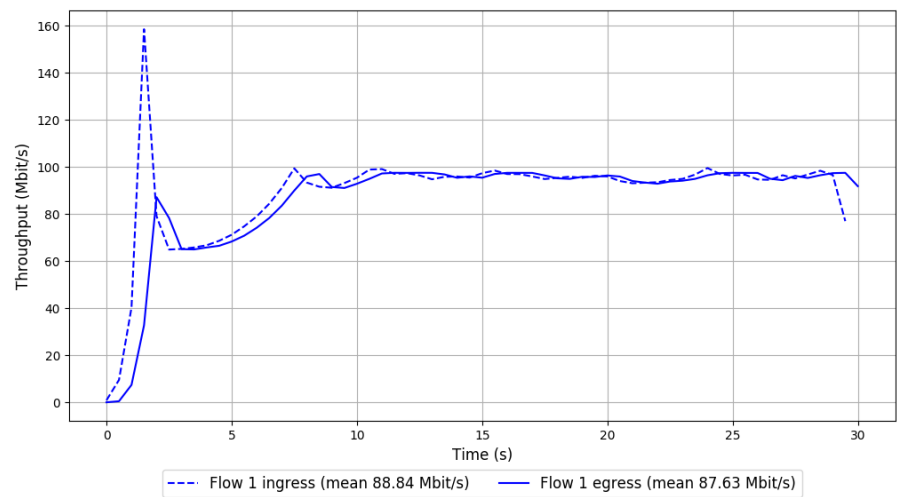


```
Run 1: Statistics of PCC-Allegro

Start at: 2019-01-02 19:37:26
End at: 2019-01-02 19:37:56
Local clock offset: -5.24 ms
Remote clock offset: -12.91 ms

# Below is generated by plot.py at 2019-01-02 21:21:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.63 Mbit/s
95th percentile per-packet one-way delay: 91.592 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 87.63 Mbit/s
95th percentile per-packet one-way delay: 91.592 ms
Loss rate: 1.36%
```

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2019-01-02 20:00:16

End at: 2019-01-02 20:00:46

Local clock offset: -4.306 ms

Remote clock offset: -21.951 ms

# Below is generated by plot.py at 2019-01-02 21:21:19

# Datalink statistics

-- Total of 1 flow:

Average throughput: 86.89 Mbit/s

95th percentile per-packet one-way delay: 92.377 ms

Loss rate: 1.51%

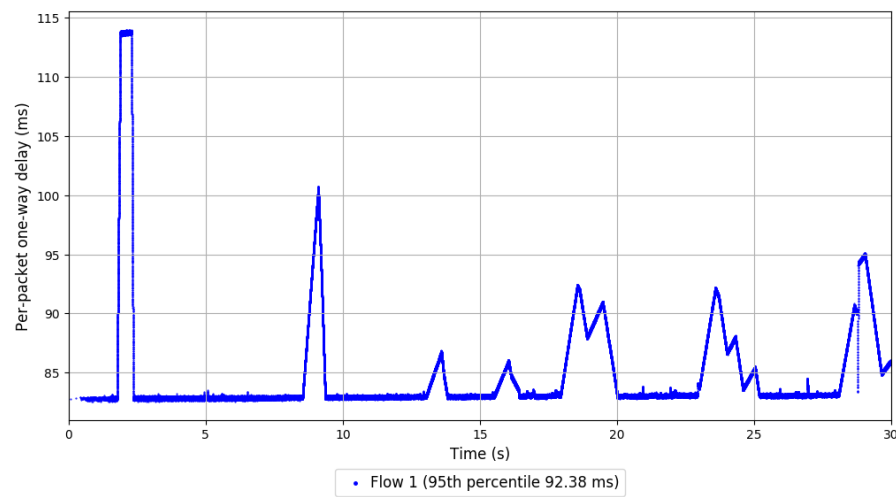
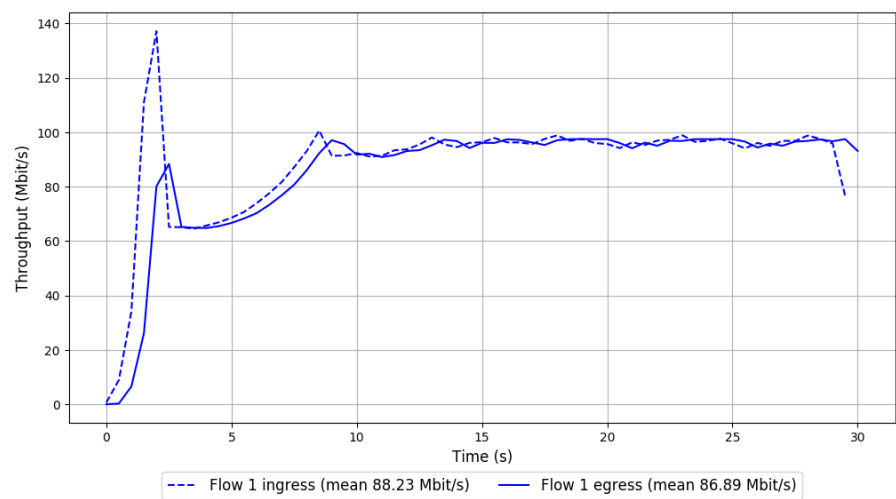
-- Flow 1:

Average throughput: 86.89 Mbit/s

95th percentile per-packet one-way delay: 92.377 ms

Loss rate: 1.51%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2019-01-02 20:22:32

End at: 2019-01-02 20:23:02

Local clock offset: -1.604 ms

Remote clock offset: -23.099 ms

# Below is generated by plot.py at 2019-01-02 21:21:19

# Datalink statistics

-- Total of 1 flow:

Average throughput: 85.62 Mbit/s

95th percentile per-packet one-way delay: 97.930 ms

Loss rate: 1.50%

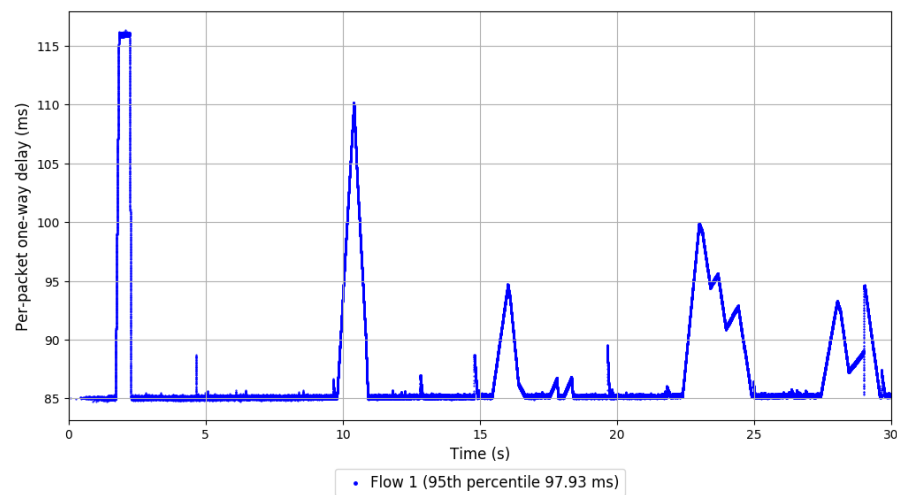
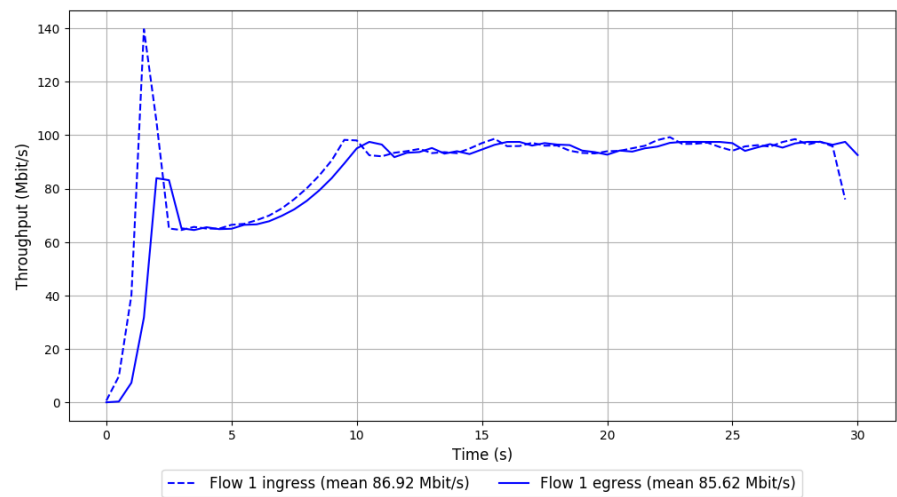
-- Flow 1:

Average throughput: 85.62 Mbit/s

95th percentile per-packet one-way delay: 97.930 ms

Loss rate: 1.50%

Run 3: Report of PCC-Allegro — Data Link





Run 4: Statistics of PCC-Allegro

Start at: 2019-01-02 20:44:44

End at: 2019-01-02 20:45:14

Local clock offset: -6.657 ms

Remote clock offset: -28.049 ms

# Below is generated by plot.py at 2019-01-02 21:21:20

# Datalink statistics

-- Total of 1 flow:

Average throughput: 86.92 Mbit/s

95th percentile per-packet one-way delay: 94.246 ms

Loss rate: 1.44%

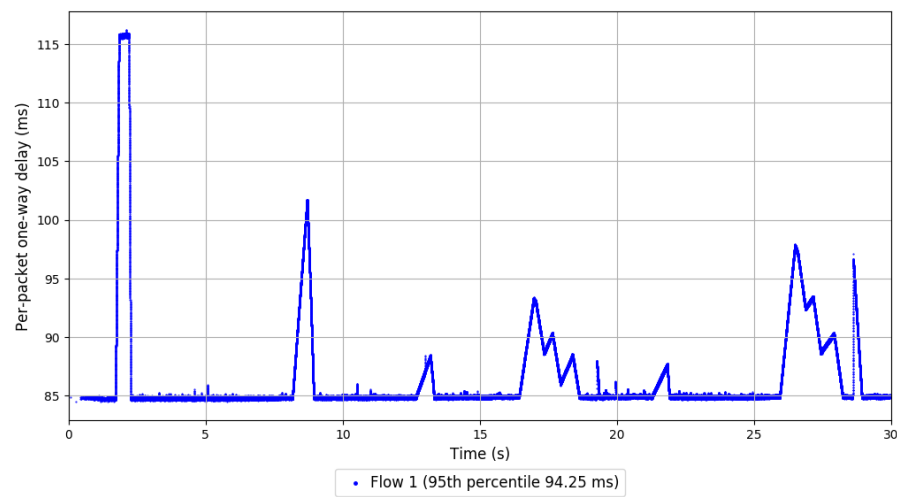
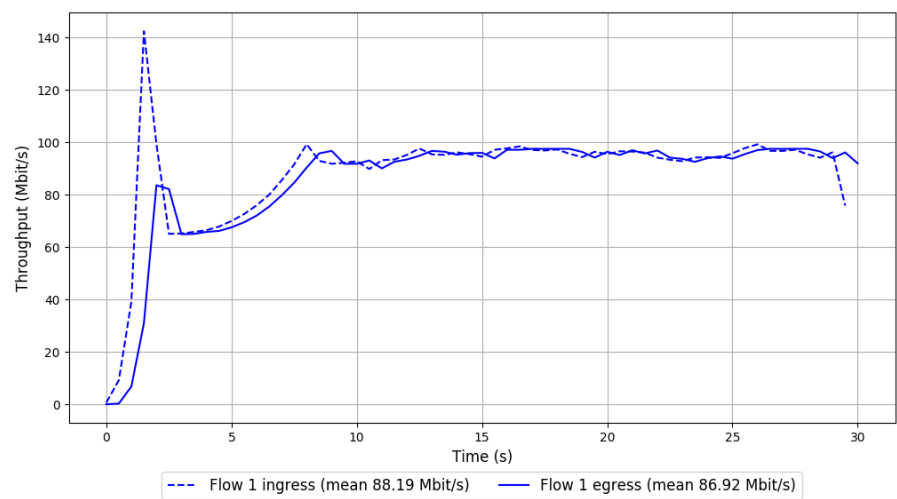
-- Flow 1:

Average throughput: 86.92 Mbit/s

95th percentile per-packet one-way delay: 94.246 ms

Loss rate: 1.44%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2019-01-02 21:06:55

End at: 2019-01-02 21:07:25

Local clock offset: -1.839 ms

Remote clock offset: -36.876 ms

# Below is generated by plot.py at 2019-01-02 21:21:22

# Datalink statistics

-- Total of 1 flow:

Average throughput: 87.05 Mbit/s

95th percentile per-packet one-way delay: 90.067 ms

Loss rate: 1.48%

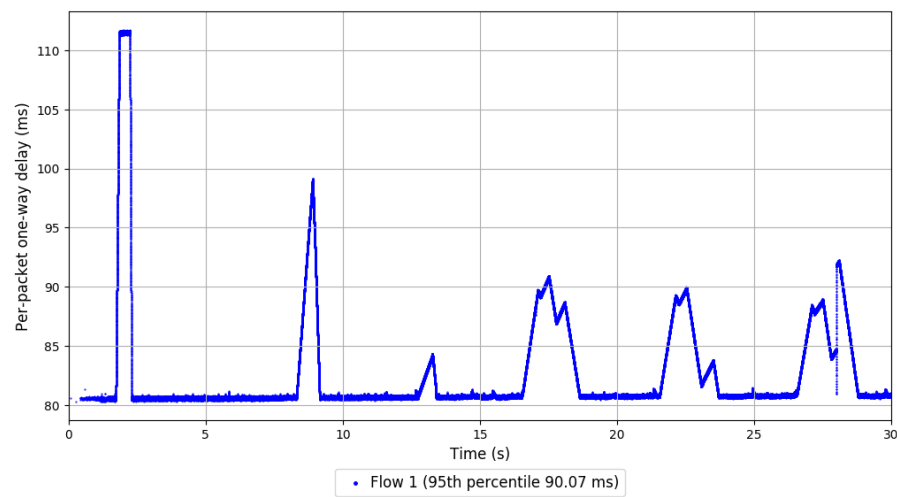
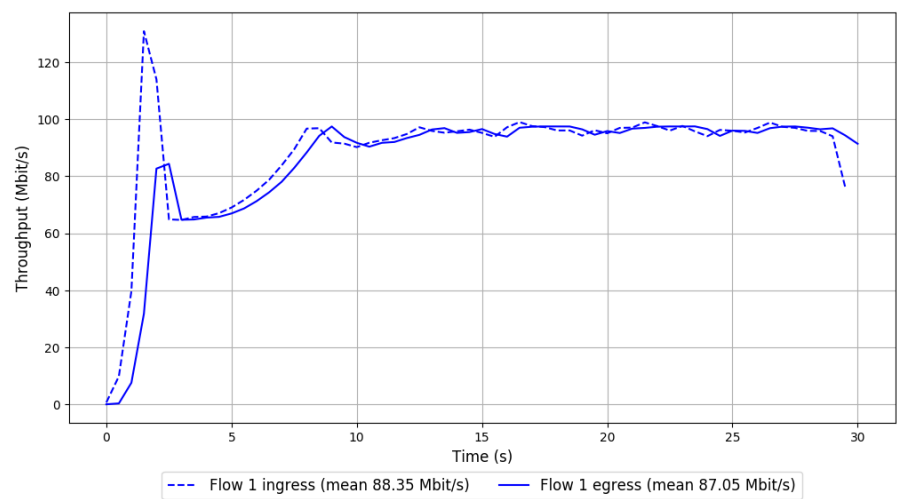
-- Flow 1:

Average throughput: 87.05 Mbit/s

95th percentile per-packet one-way delay: 90.067 ms

Loss rate: 1.48%

Run 5: Report of PCC-Allegro — Data Link

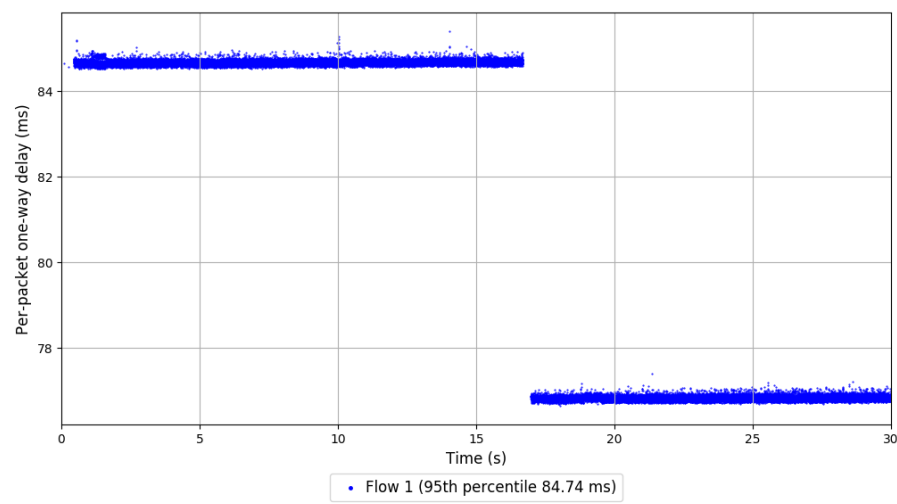
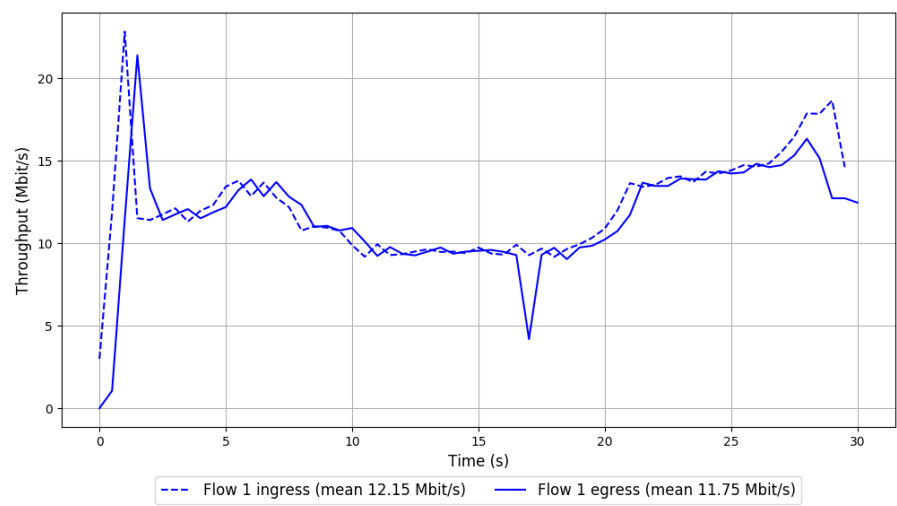


Run 1: Statistics of PCC-Expr

Start at: 2019-01-02 19:40:59  
End at: 2019-01-02 19:41:30  
Local clock offset: -5.636 ms  
Remote clock offset: -13.909 ms

# Below is generated by plot.py at 2019-01-02 21:21:22  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 11.75 Mbit/s  
95th percentile per-packet one-way delay: 84.740 ms  
Loss rate: 3.35%  
-- Flow 1:  
Average throughput: 11.75 Mbit/s  
95th percentile per-packet one-way delay: 84.740 ms  
Loss rate: 3.35%

Run 1: Report of PCC-Expr — Data Link

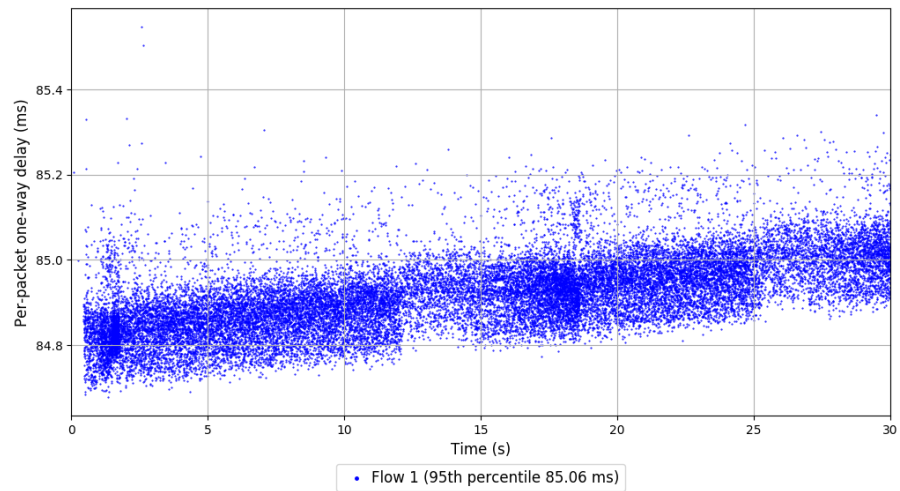
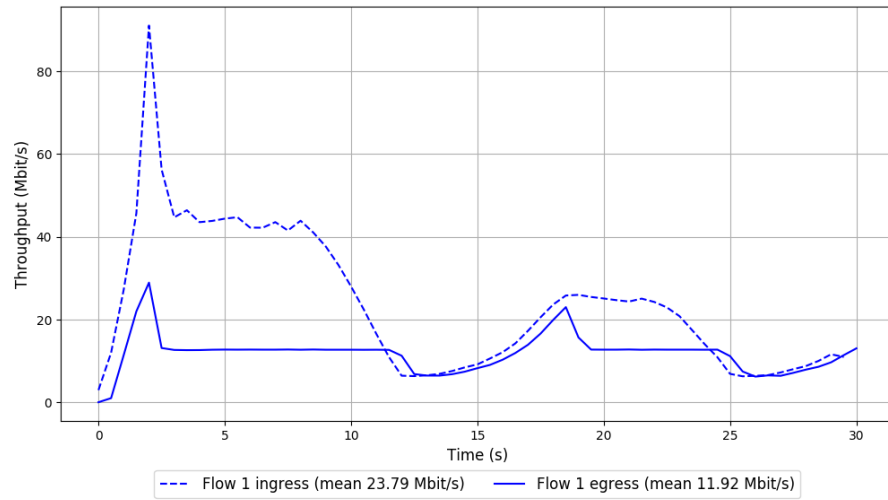


Run 2: Statistics of PCC-Expr

Start at: 2019-01-02 20:03:53  
End at: 2019-01-02 20:04:23  
Local clock offset: -3.557 ms  
Remote clock offset: -19.023 ms

# Below is generated by plot.py at 2019-01-02 21:21:22  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 11.92 Mbit/s  
95th percentile per-packet one-way delay: 85.058 ms  
Loss rate: 49.91%  
-- Flow 1:  
Average throughput: 11.92 Mbit/s  
95th percentile per-packet one-way delay: 85.058 ms  
Loss rate: 49.91%

## Run 2: Report of PCC-Expr — Data Link



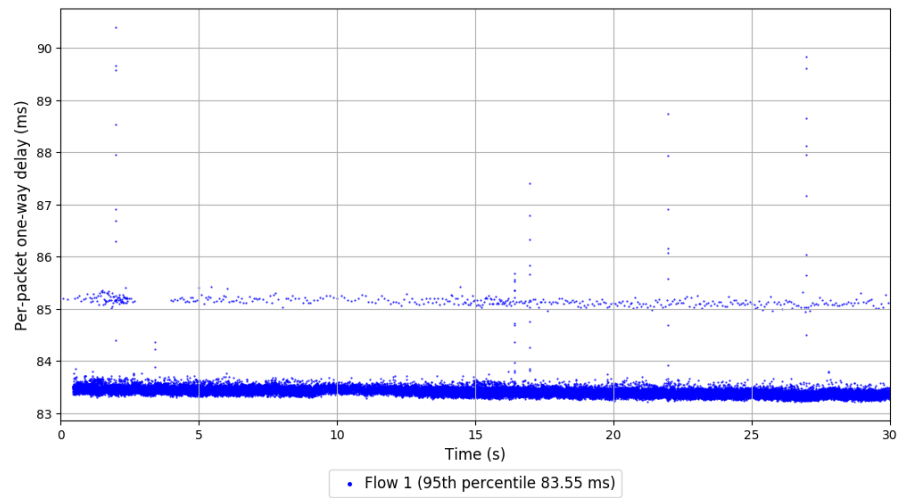
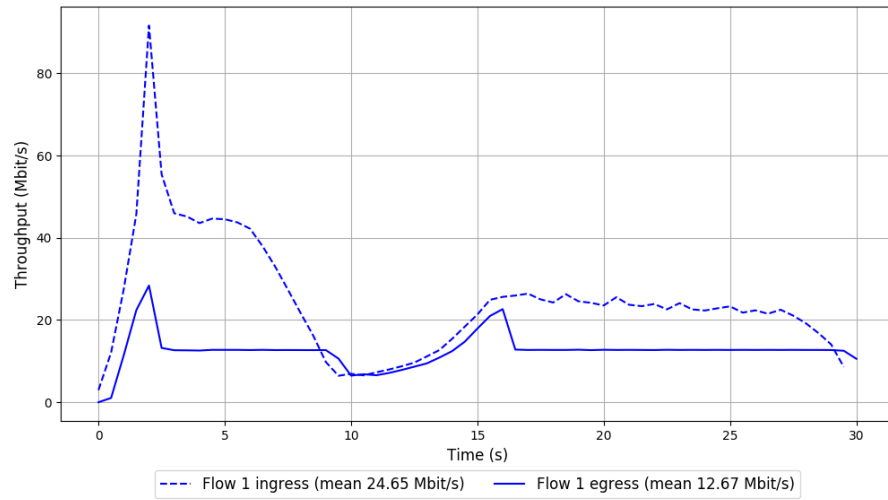


Run 3: Statistics of PCC-Expr

Start at: 2019-01-02 20:26:05  
End at: 2019-01-02 20:26:35  
Local clock offset: -1.597 ms  
Remote clock offset: -24.175 ms

# Below is generated by plot.py at 2019-01-02 21:21:22  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 12.67 Mbit/s  
95th percentile per-packet one-way delay: 83.551 ms  
Loss rate: 48.63%  
-- Flow 1:  
Average throughput: 12.67 Mbit/s  
95th percentile per-packet one-way delay: 83.551 ms  
Loss rate: 48.63%

### Run 3: Report of PCC-Expr — Data Link

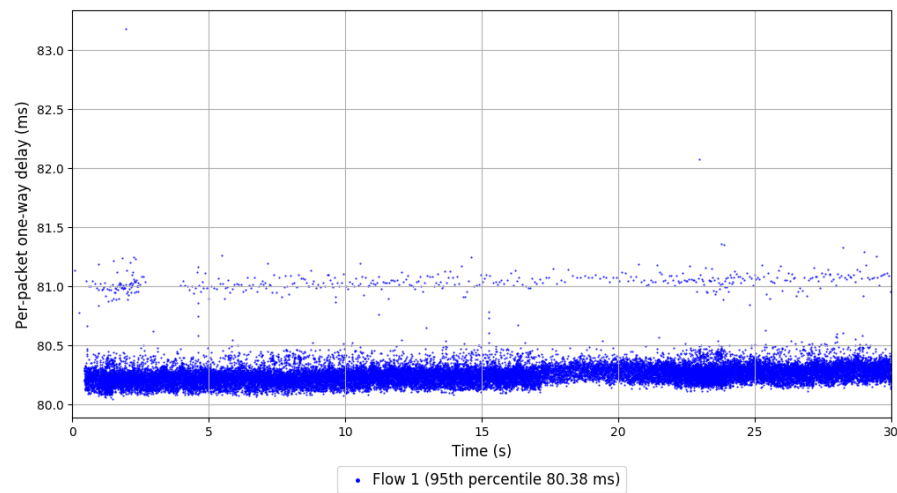
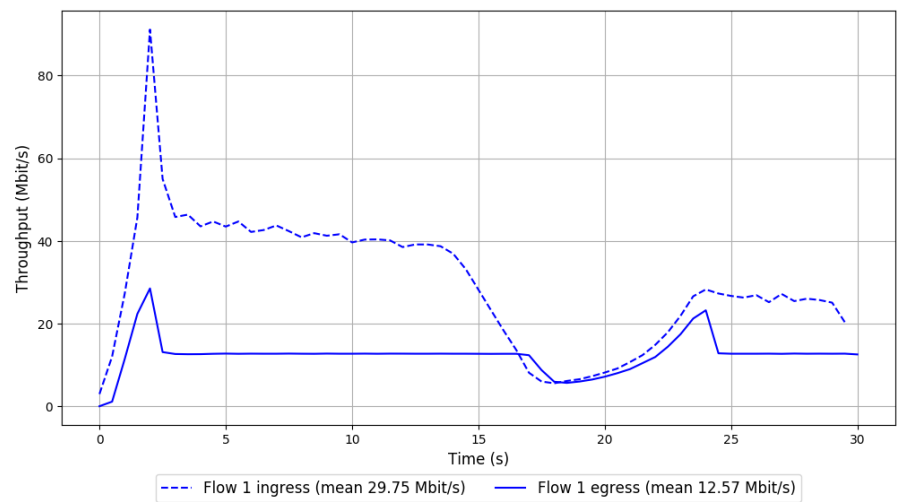


Run 4: Statistics of PCC-Expr

Start at: 2019-01-02 20:48:18  
End at: 2019-01-02 20:48:48  
Local clock offset: -6.146 ms  
Remote clock offset: -32.648 ms

# Below is generated by plot.py at 2019-01-02 21:21:22  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 12.57 Mbit/s  
95th percentile per-packet one-way delay: 80.381 ms  
Loss rate: 57.73%  
-- Flow 1:  
Average throughput: 12.57 Mbit/s  
95th percentile per-packet one-way delay: 80.381 ms  
Loss rate: 57.73%

Run 4: Report of PCC-Expr — Data Link

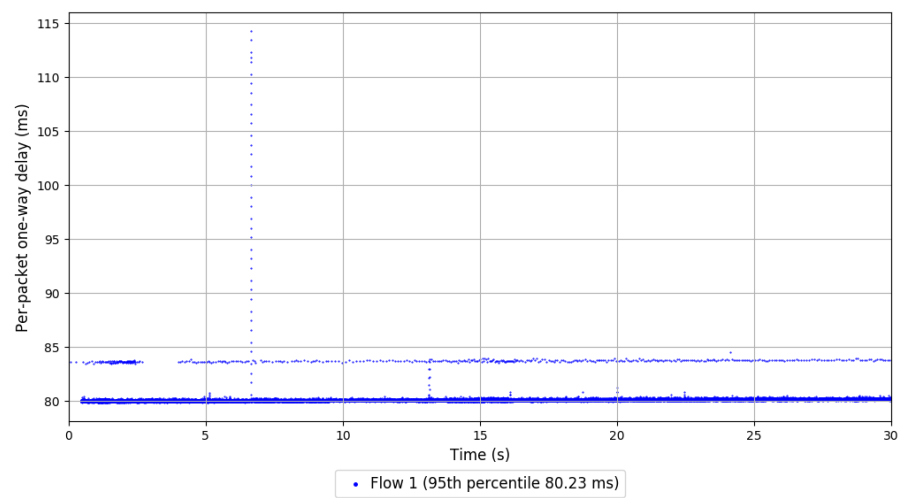
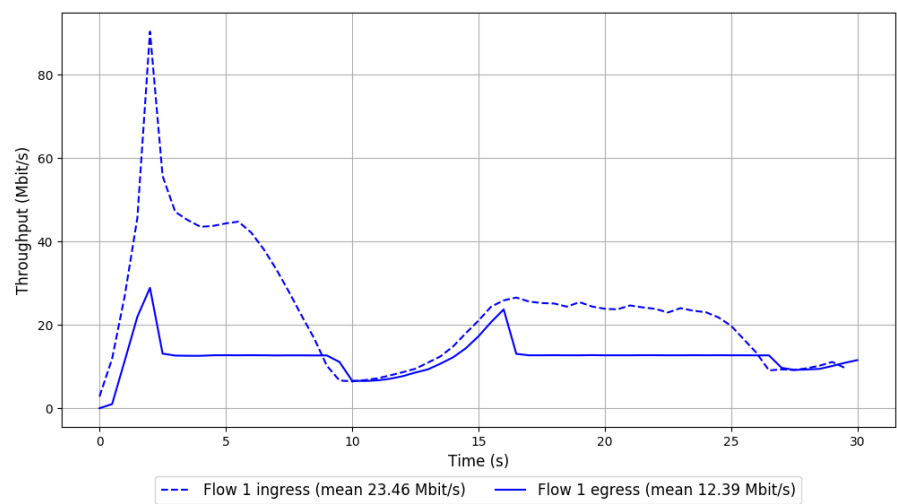


Run 5: Statistics of PCC-Expr

Start at: 2019-01-02 21:10:29  
End at: 2019-01-02 21:10:59  
Local clock offset: -1.218 ms  
Remote clock offset: -37.97 ms

# Below is generated by plot.py at 2019-01-02 21:21:26  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 12.39 Mbit/s  
95th percentile per-packet one-way delay: 80.229 ms  
Loss rate: 47.21%  
-- Flow 1:  
Average throughput: 12.39 Mbit/s  
95th percentile per-packet one-way delay: 80.229 ms  
Loss rate: 47.21%

Run 5: Report of PCC-Expr — Data Link

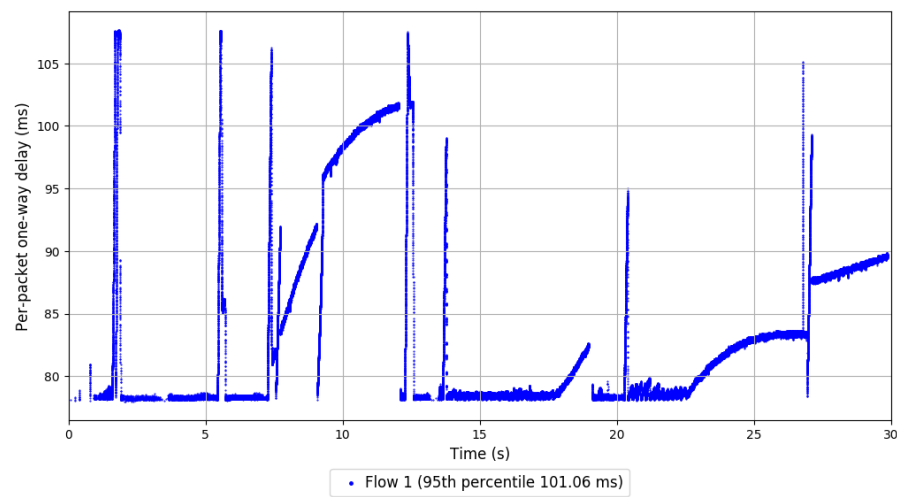
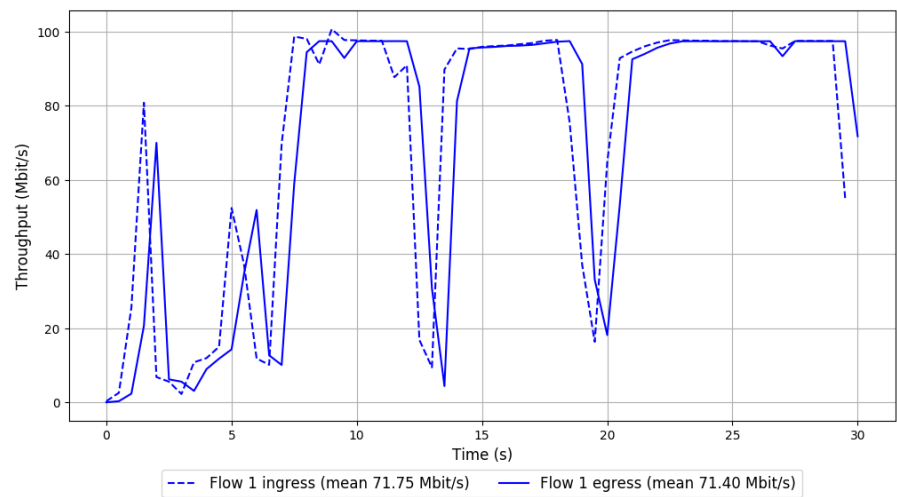


Run 1: Statistics of QUIC Cubic

Start at: 2019-01-02 19:31:37  
End at: 2019-01-02 19:32:07  
Local clock offset: -4.035 ms  
Remote clock offset: -12.041 ms

# Below is generated by plot.py at 2019-01-02 21:22:14  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 71.40 Mbit/s  
95th percentile per-packet one-way delay: 101.055 ms  
Loss rate: 0.46%  
-- Flow 1:  
Average throughput: 71.40 Mbit/s  
95th percentile per-packet one-way delay: 101.055 ms  
Loss rate: 0.46%

Run 1: Report of QUIC Cubic — Data Link



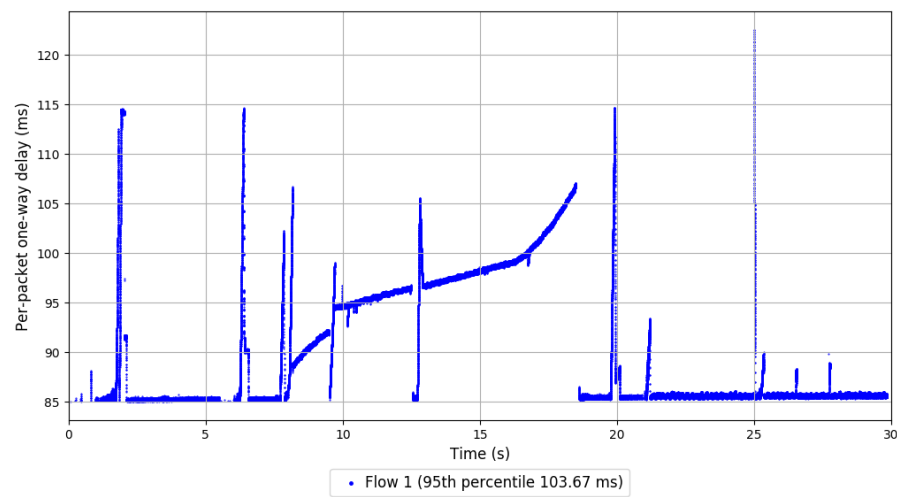
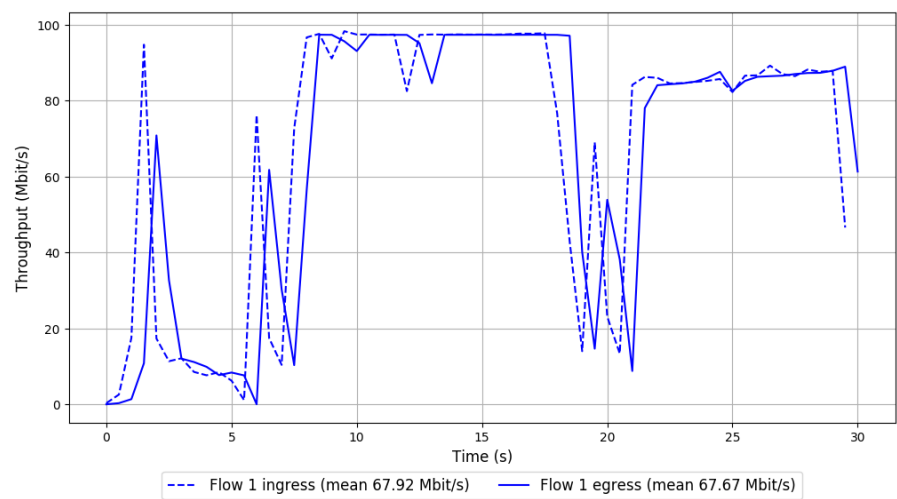


Run 2: Statistics of QUIC Cubic

Start at: 2019-01-02 19:54:08  
End at: 2019-01-02 19:54:38  
Local clock offset: -5.631 ms  
Remote clock offset: -16.743 ms

# Below is generated by plot.py at 2019-01-02 21:22:14  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 67.67 Mbit/s  
95th percentile per-packet one-way delay: 103.673 ms  
Loss rate: 0.37%  
-- Flow 1:  
Average throughput: 67.67 Mbit/s  
95th percentile per-packet one-way delay: 103.673 ms  
Loss rate: 0.37%

Run 2: Report of QUIC Cubic — Data Link

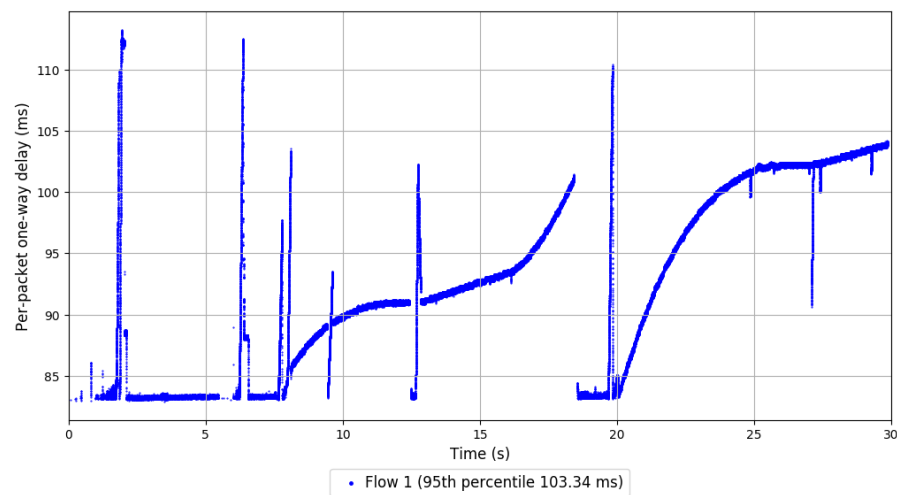
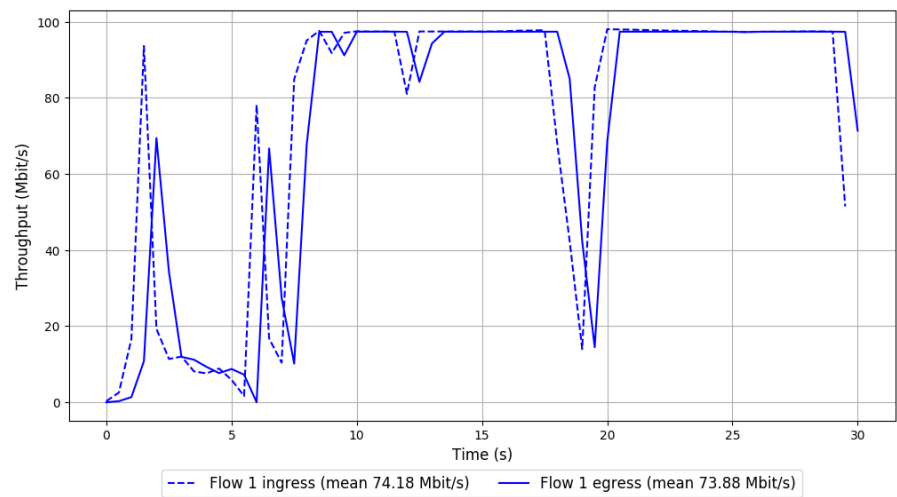


Run 3: Statistics of QUIC Cubic

Start at: 2019-01-02 20:16:40  
End at: 2019-01-02 20:17:10  
Local clock offset: -2.003 ms  
Remote clock offset: -25.774 ms

# Below is generated by plot.py at 2019-01-02 21:22:20  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 73.88 Mbit/s  
95th percentile per-packet one-way delay: 103.342 ms  
Loss rate: 0.34%  
-- Flow 1:  
Average throughput: 73.88 Mbit/s  
95th percentile per-packet one-way delay: 103.342 ms  
Loss rate: 0.34%

Run 3: Report of QUIC Cubic — Data Link

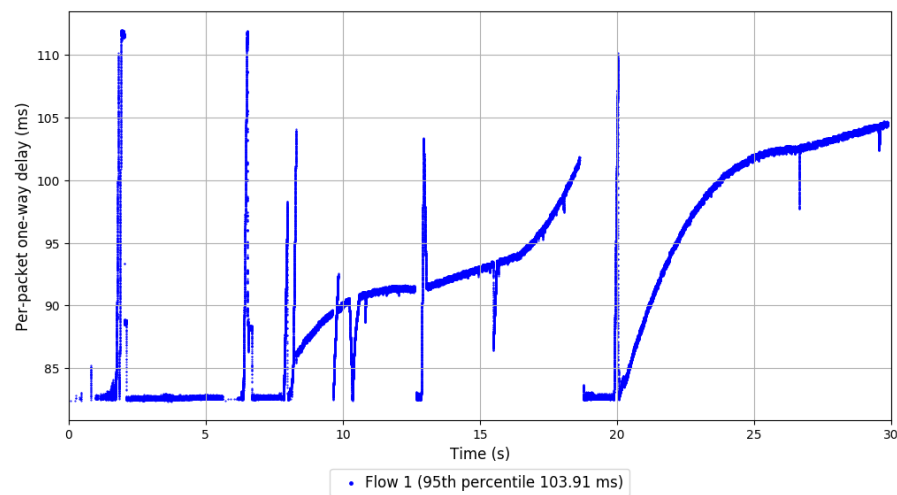
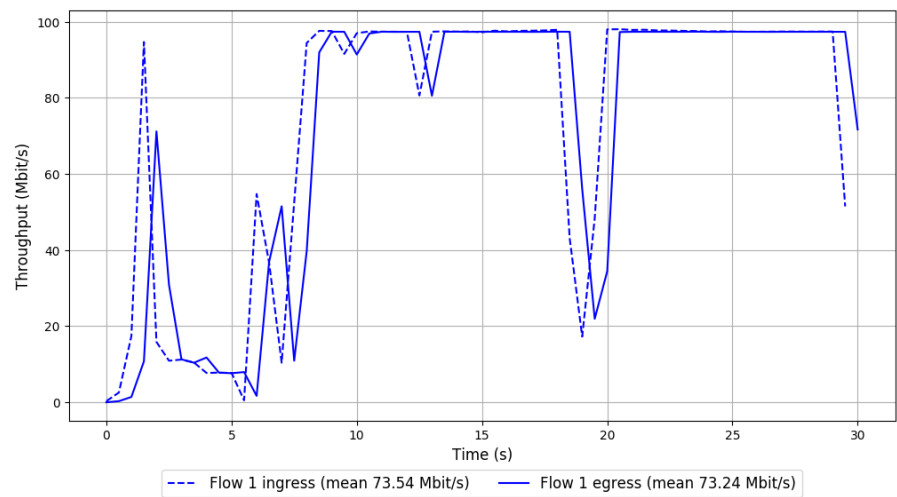


Run 4: Statistics of QUIC Cubic

Start at: 2019-01-02 20:38:52  
End at: 2019-01-02 20:39:22  
Local clock offset: -6.03 ms  
Remote clock offset: -30.509 ms

# Below is generated by plot.py at 2019-01-02 21:22:20  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 73.24 Mbit/s  
95th percentile per-packet one-way delay: 103.911 ms  
Loss rate: 0.34%  
-- Flow 1:  
Average throughput: 73.24 Mbit/s  
95th percentile per-packet one-way delay: 103.911 ms  
Loss rate: 0.34%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2019-01-02 21:01:05

End at: 2019-01-02 21:01:35

Local clock offset: -3.359 ms

Remote clock offset: -31.68 ms

# Below is generated by plot.py at 2019-01-02 21:22:21

# Datalink statistics

-- Total of 1 flow:

Average throughput: 73.86 Mbit/s

95th percentile per-packet one-way delay: 106.616 ms

Loss rate: 0.34%

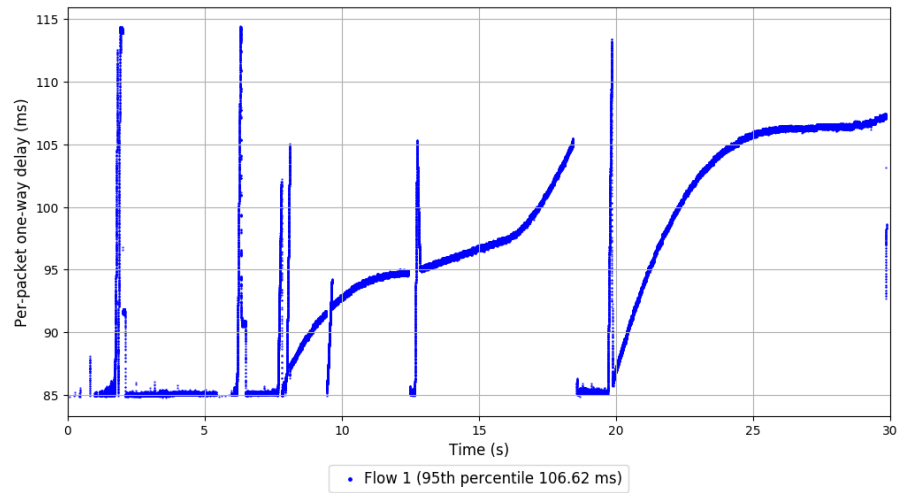
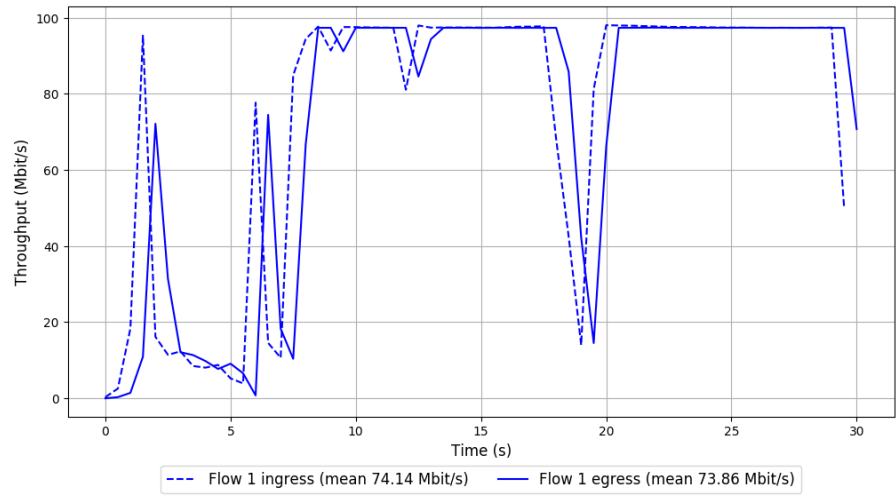
-- Flow 1:

Average throughput: 73.86 Mbit/s

95th percentile per-packet one-way delay: 106.616 ms

Loss rate: 0.34%

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



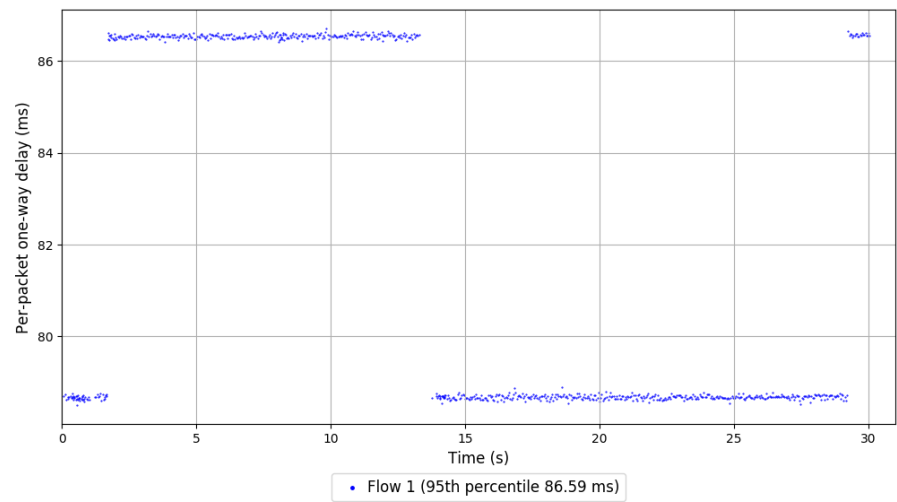
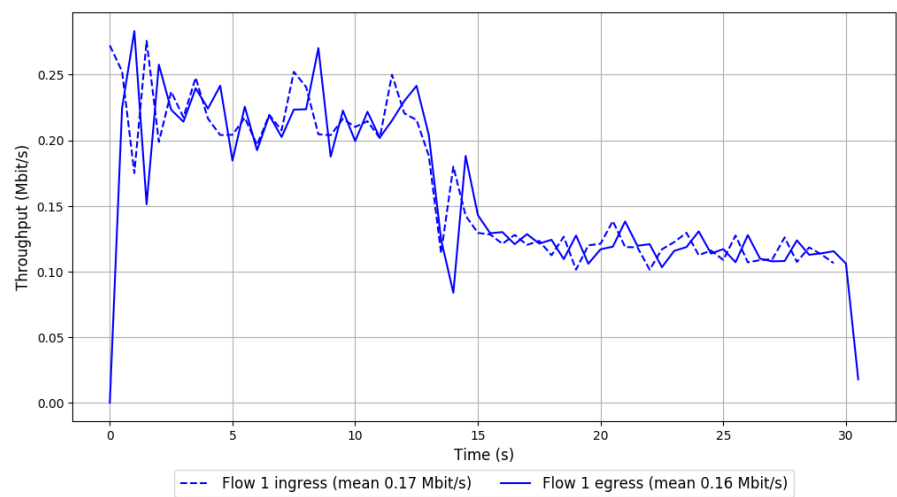


Run 1: Statistics of SCReAM

Start at: 2019-01-02 19:43:28  
End at: 2019-01-02 19:43:58  
Local clock offset: -5.884 ms  
Remote clock offset: -14.312 ms

# Below is generated by plot.py at 2019-01-02 21:22:21  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 0.16 Mbit/s  
95th percentile per-packet one-way delay: 86.591 ms  
Loss rate: 1.12%  
-- Flow 1:  
Average throughput: 0.16 Mbit/s  
95th percentile per-packet one-way delay: 86.591 ms  
Loss rate: 1.12%

Run 1: Report of SReAM — Data Link

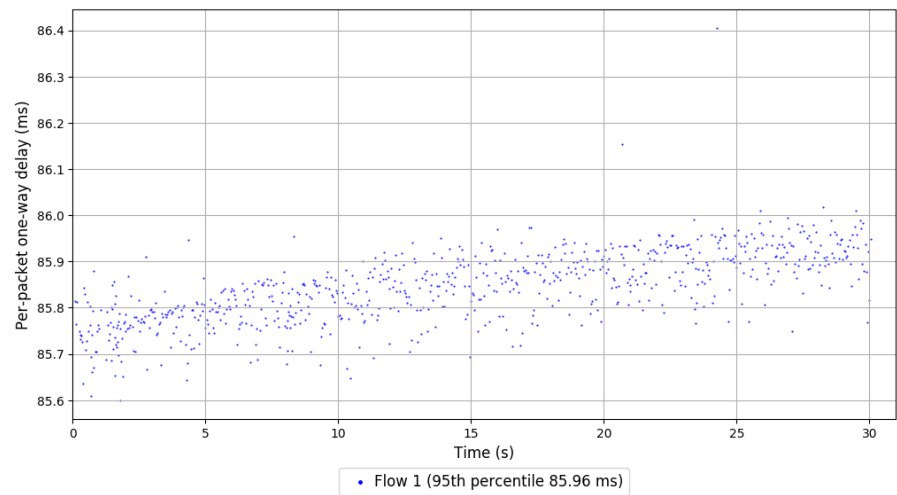
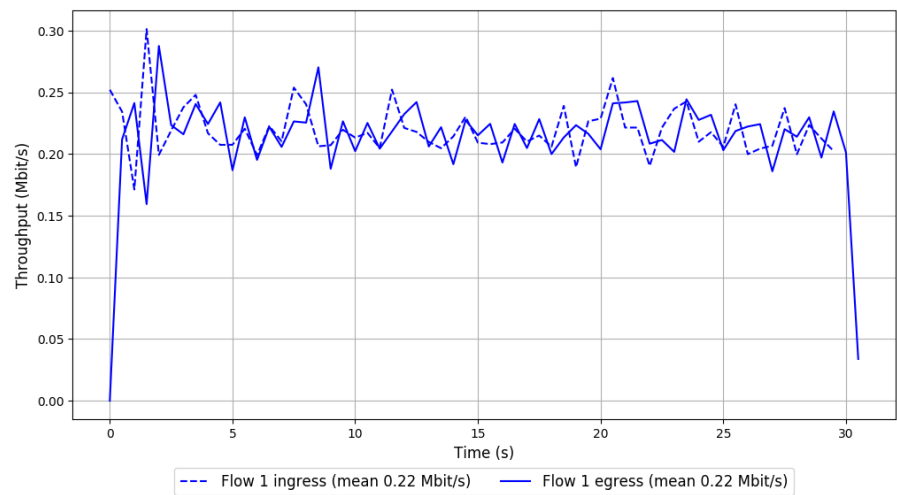


Run 2: Statistics of SCReAM

Start at: 2019-01-02 20:06:13  
End at: 2019-01-02 20:06:43  
Local clock offset: -2.396 ms  
Remote clock offset: -19.573 ms

# Below is generated by plot.py at 2019-01-02 21:22:21  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 85.957 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 85.957 ms  
Loss rate: 0.00%

Run 2: Report of SReAM — Data Link

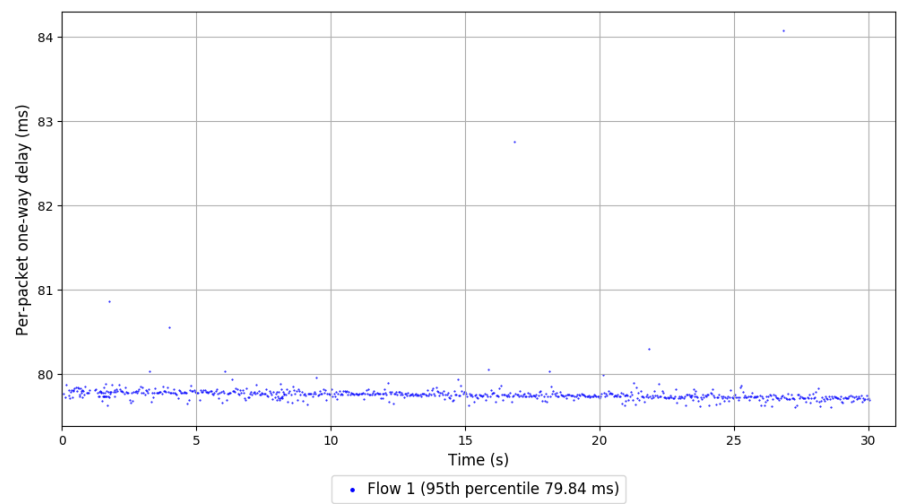
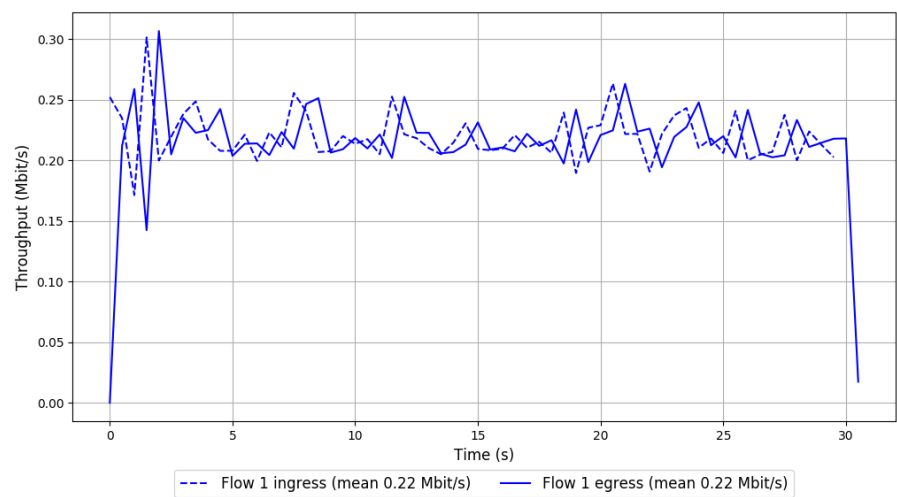


Run 3: Statistics of SReAM

Start at: 2019-01-02 20:28:25  
End at: 2019-01-02 20:28:55  
Local clock offset: -2.685 ms  
Remote clock offset: -28.395 ms

# Below is generated by plot.py at 2019-01-02 21:22:21  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 79.837 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 79.837 ms  
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link

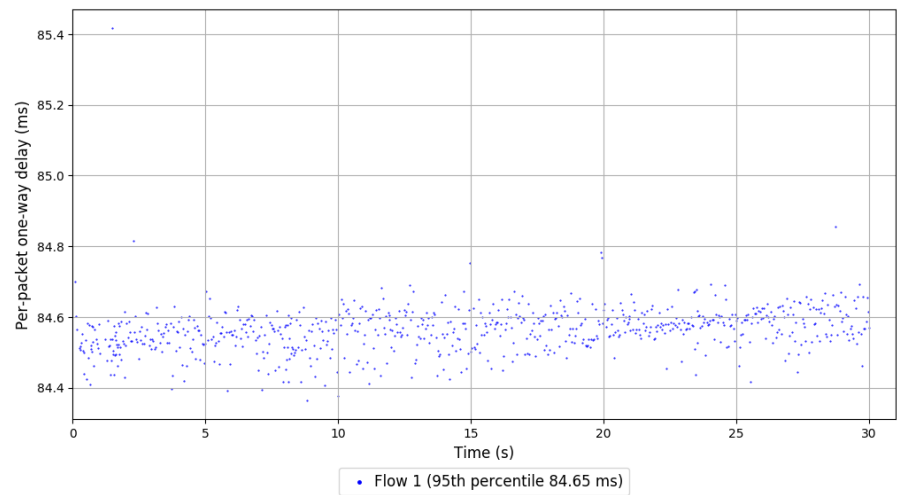
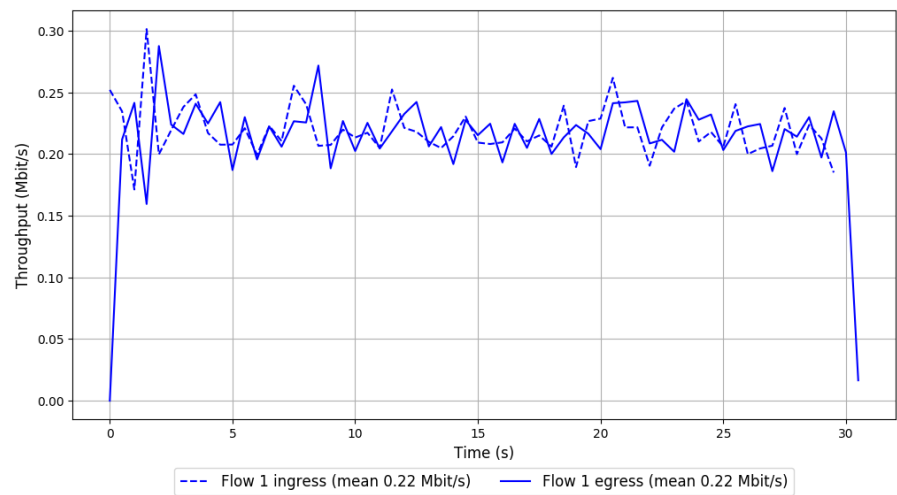


Run 4: Statistics of SCReAM

Start at: 2019-01-02 20:50:38  
End at: 2019-01-02 20:51:08  
Local clock offset: -6.289 ms  
Remote clock offset: -29.284 ms

# Below is generated by plot.py at 2019-01-02 21:22:21  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 84.649 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 84.649 ms  
Loss rate: 0.00%

Run 4: Report of SReAM — Data Link



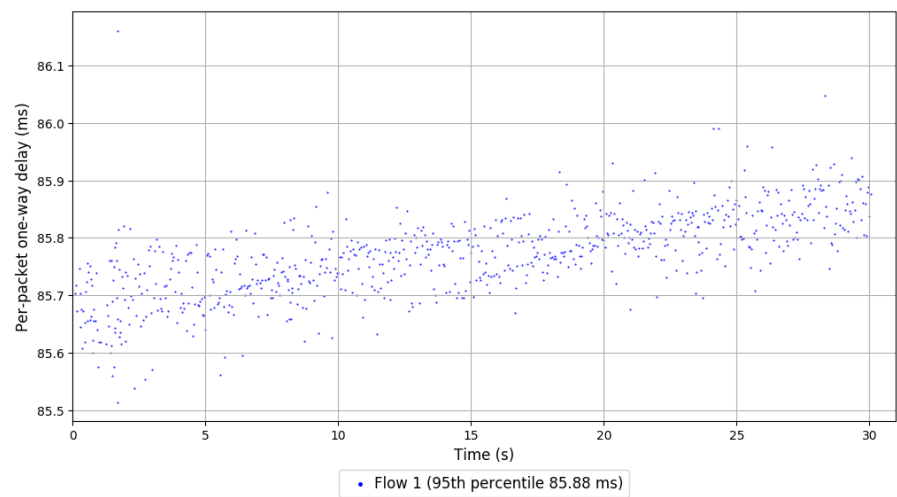
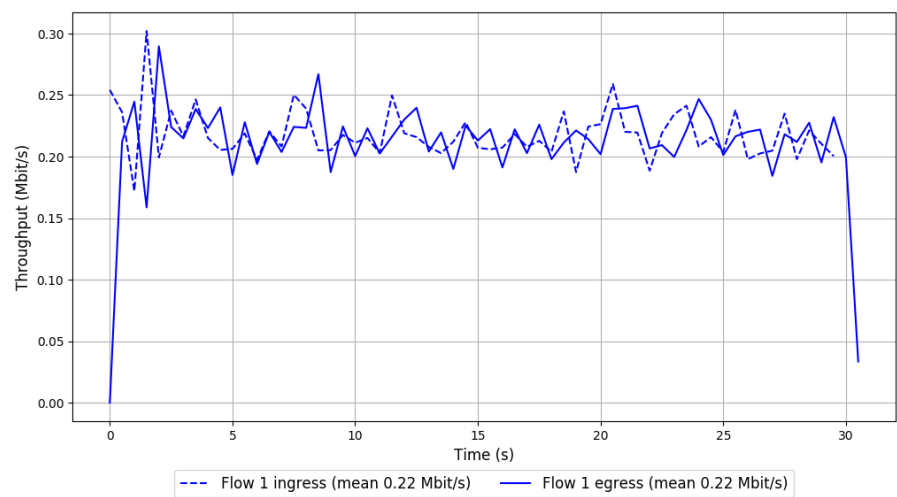


Run 5: Statistics of SCReAM

Start at: 2019-01-02 21:12:50  
End at: 2019-01-02 21:13:20  
Local clock offset: -0.916 ms  
Remote clock offset: -34.519 ms

# Below is generated by plot.py at 2019-01-02 21:22:21  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 85.884 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 85.884 ms  
Loss rate: 0.00%

Run 5: Report of SReAM — Data Link

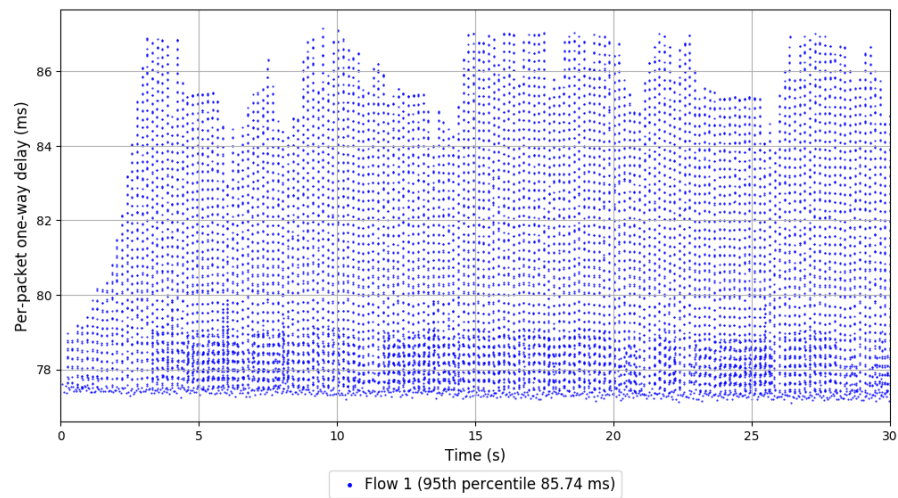
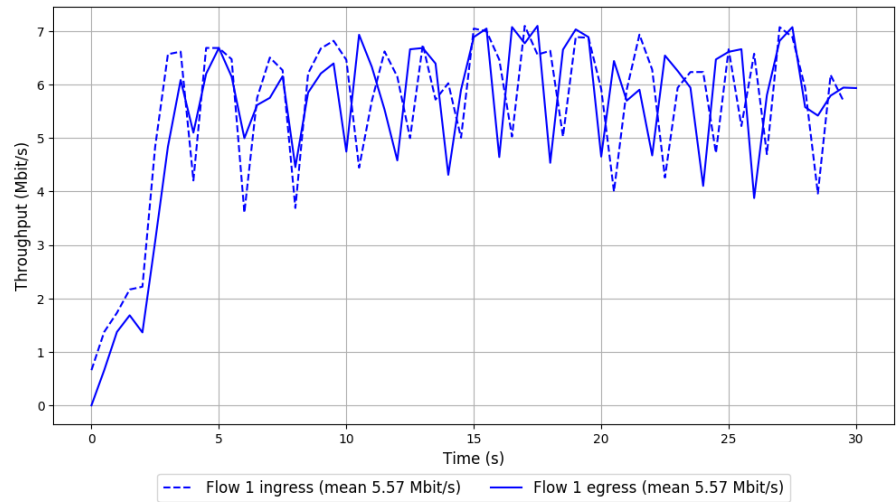


Run 1: Statistics of Sprout

Start at: 2019-01-02 19:24:36  
End at: 2019-01-02 19:25:06  
Local clock offset: -0.775 ms  
Remote clock offset: -10.029 ms

# Below is generated by plot.py at 2019-01-02 21:22:21  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 5.57 Mbit/s  
95th percentile per-packet one-way delay: 85.736 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 5.57 Mbit/s  
95th percentile per-packet one-way delay: 85.736 ms  
Loss rate: 0.00%

## Run 1: Report of Sprout — Data Link

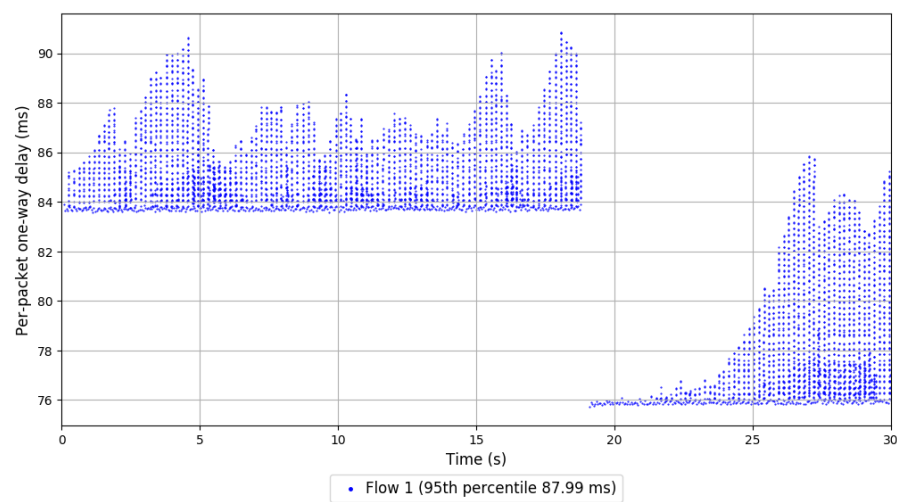
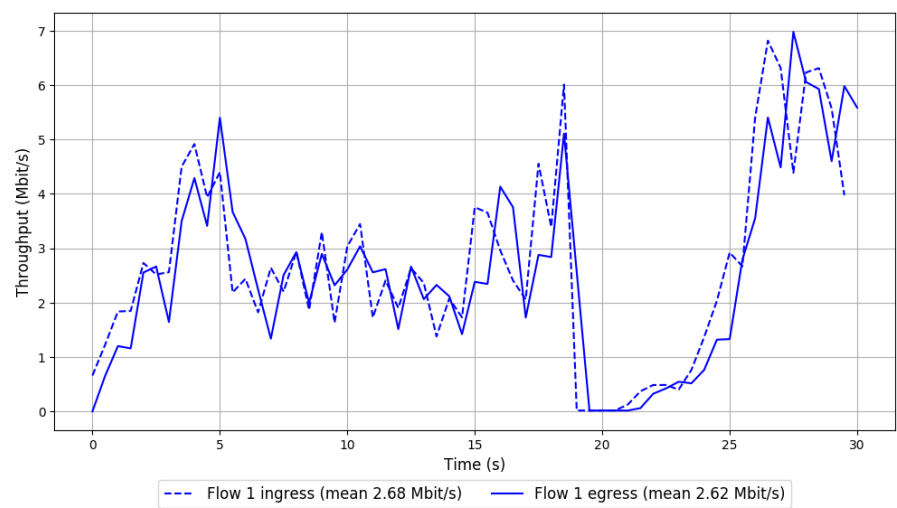


Run 2: Statistics of Sprout

Start at: 2019-01-02 19:46:54  
End at: 2019-01-02 19:47:24  
Local clock offset: -5.308 ms  
Remote clock offset: -15.311 ms

# Below is generated by plot.py at 2019-01-02 21:22:21  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 2.62 Mbit/s  
95th percentile per-packet one-way delay: 87.991 ms  
Loss rate: 2.15%  
-- Flow 1:  
Average throughput: 2.62 Mbit/s  
95th percentile per-packet one-way delay: 87.991 ms  
Loss rate: 2.15%

Run 2: Report of Sprout — Data Link

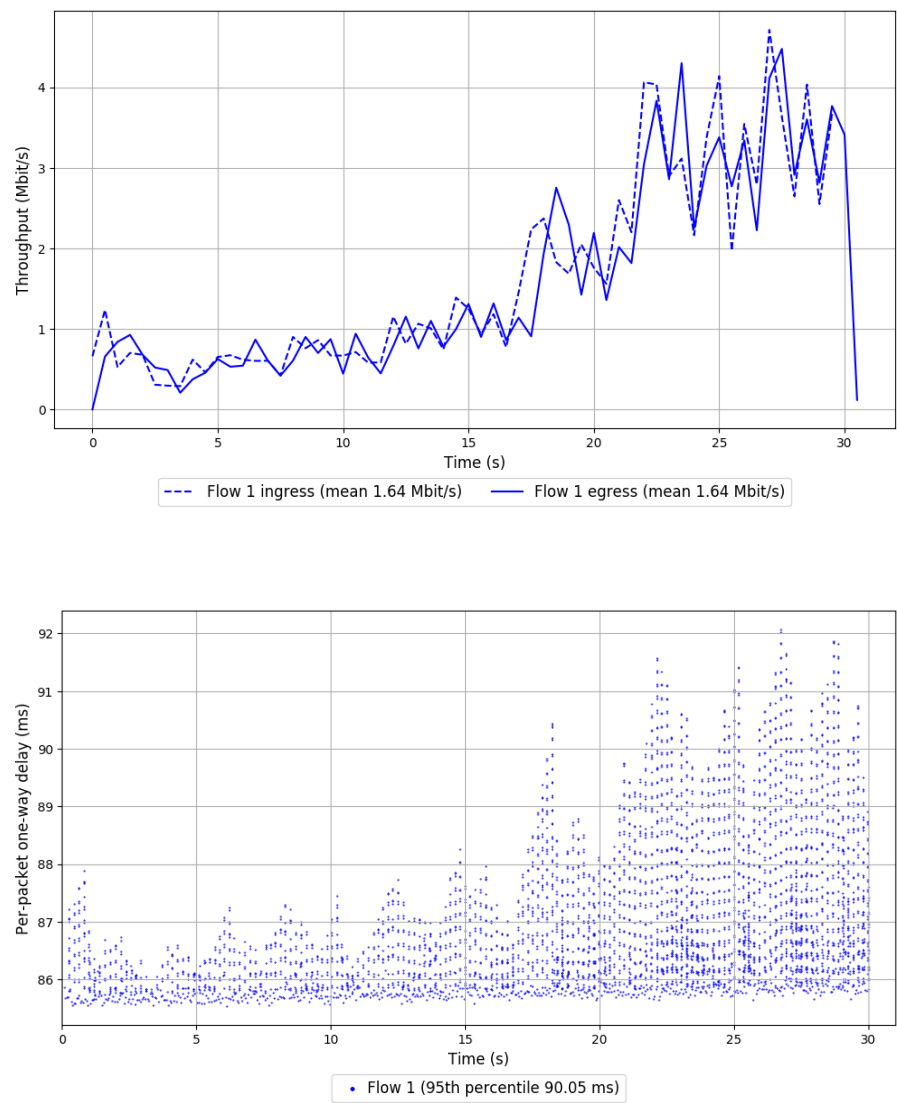


Run 3: Statistics of Sprout

Start at: 2019-01-02 20:09:40  
End at: 2019-01-02 20:10:10  
Local clock offset: -1.909 ms  
Remote clock offset: -20.292 ms

# Below is generated by plot.py at 2019-01-02 21:22:21  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 1.64 Mbit/s  
95th percentile per-packet one-way delay: 90.053 ms  
Loss rate: 0.14%  
-- Flow 1:  
Average throughput: 1.64 Mbit/s  
95th percentile per-packet one-way delay: 90.053 ms  
Loss rate: 0.14%

Run 3: Report of Sprout — Data Link



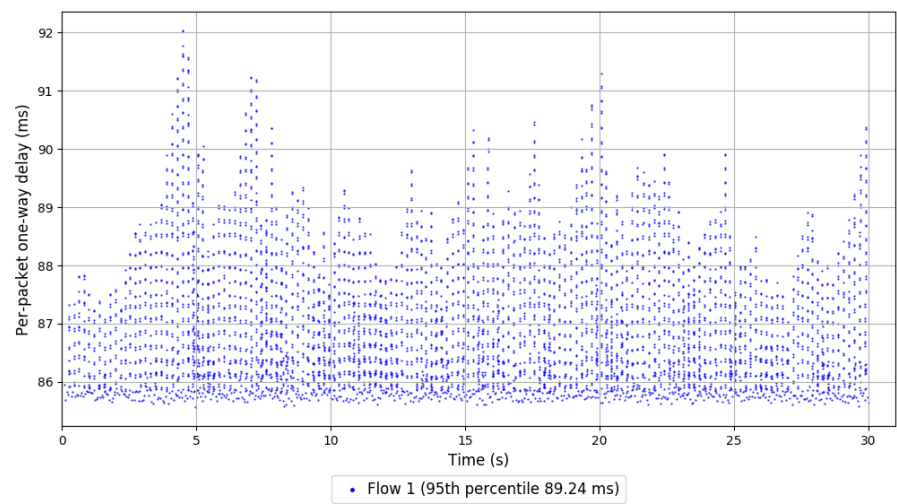
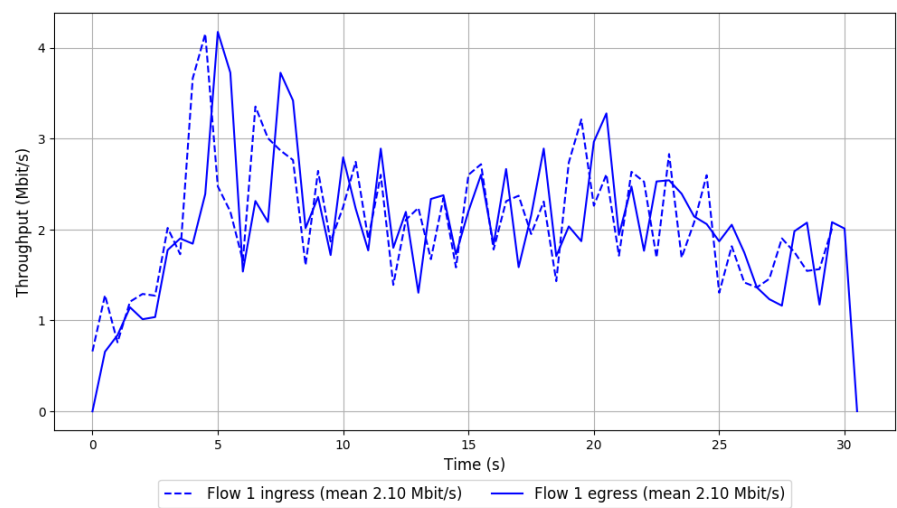


Run 4: Statistics of Sprout

Start at: 2019-01-02 20:31:52  
End at: 2019-01-02 20:32:22  
Local clock offset: -3.947 ms  
Remote clock offset: -25.004 ms

# Below is generated by plot.py at 2019-01-02 21:22:21  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 2.10 Mbit/s  
95th percentile per-packet one-way delay: 89.242 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 2.10 Mbit/s  
95th percentile per-packet one-way delay: 89.242 ms  
Loss rate: 0.00%

Run 4: Report of Sprout — Data Link

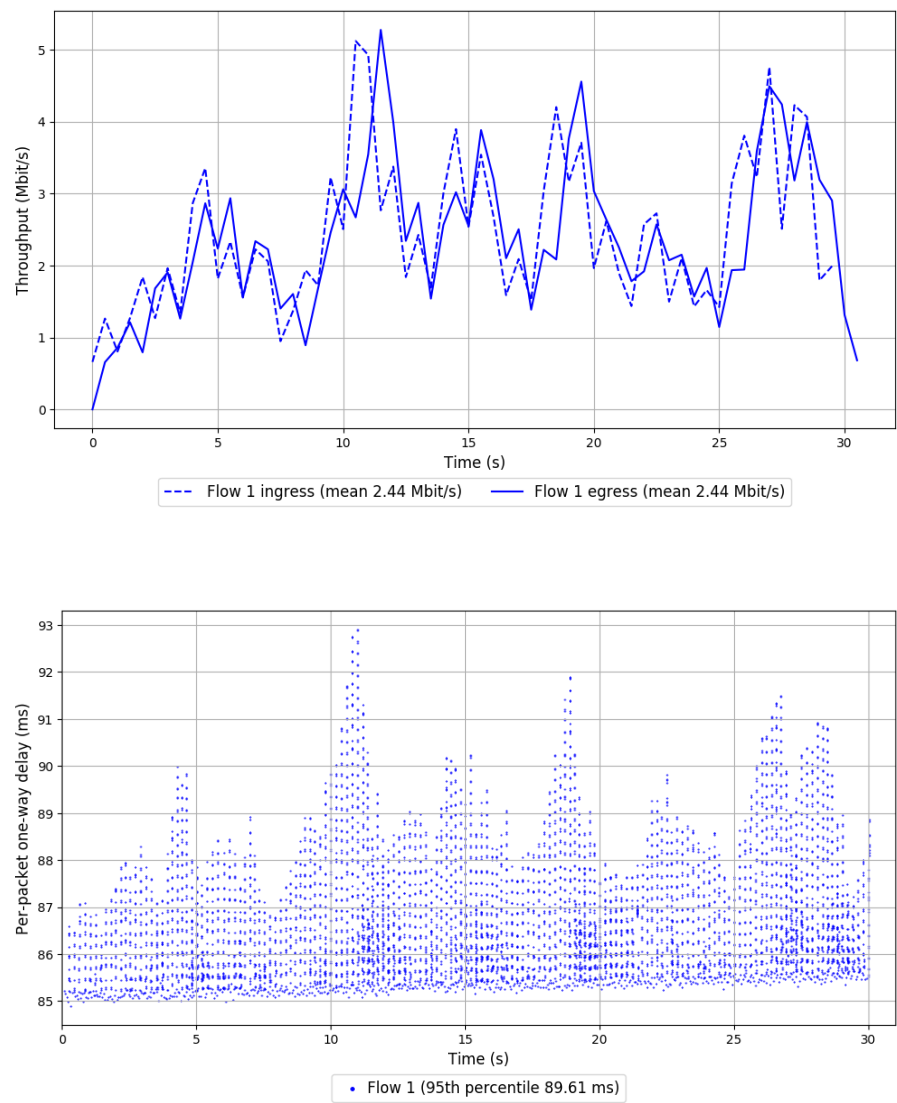


Run 5: Statistics of Sprout

Start at: 2019-01-02 20:54:04  
End at: 2019-01-02 20:54:34  
Local clock offset: -7.289 ms  
Remote clock offset: -30.412 ms

# Below is generated by plot.py at 2019-01-02 21:22:21  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 2.44 Mbit/s  
95th percentile per-packet one-way delay: 89.608 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 2.44 Mbit/s  
95th percentile per-packet one-way delay: 89.608 ms  
Loss rate: 0.00%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

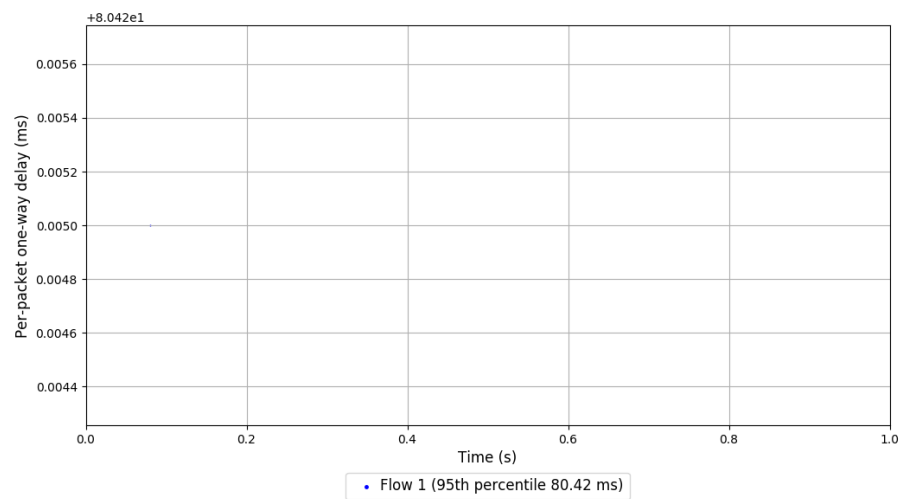
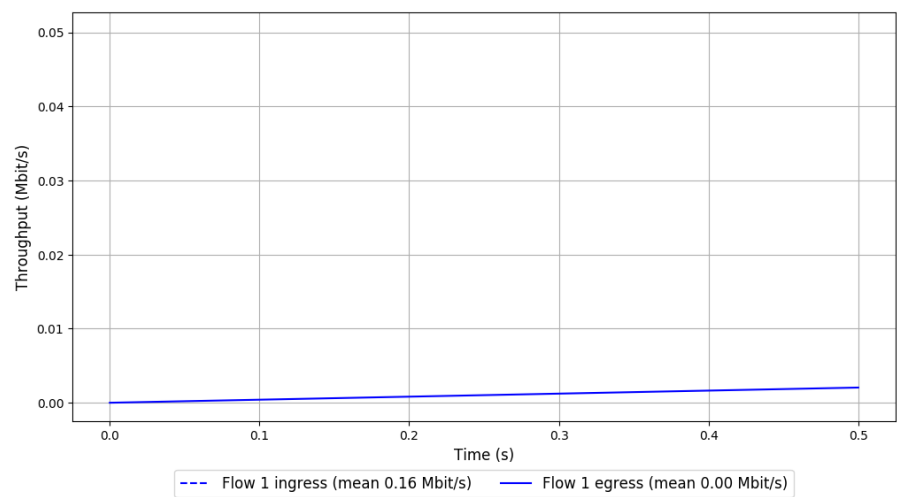
Start at: 2019-01-02 19:33:59

End at: 2019-01-02 19:34:29

Local clock offset: -4.609 ms

Remote clock offset: -12.292 ms

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



Run 2: Statistics of TaoVA-100x

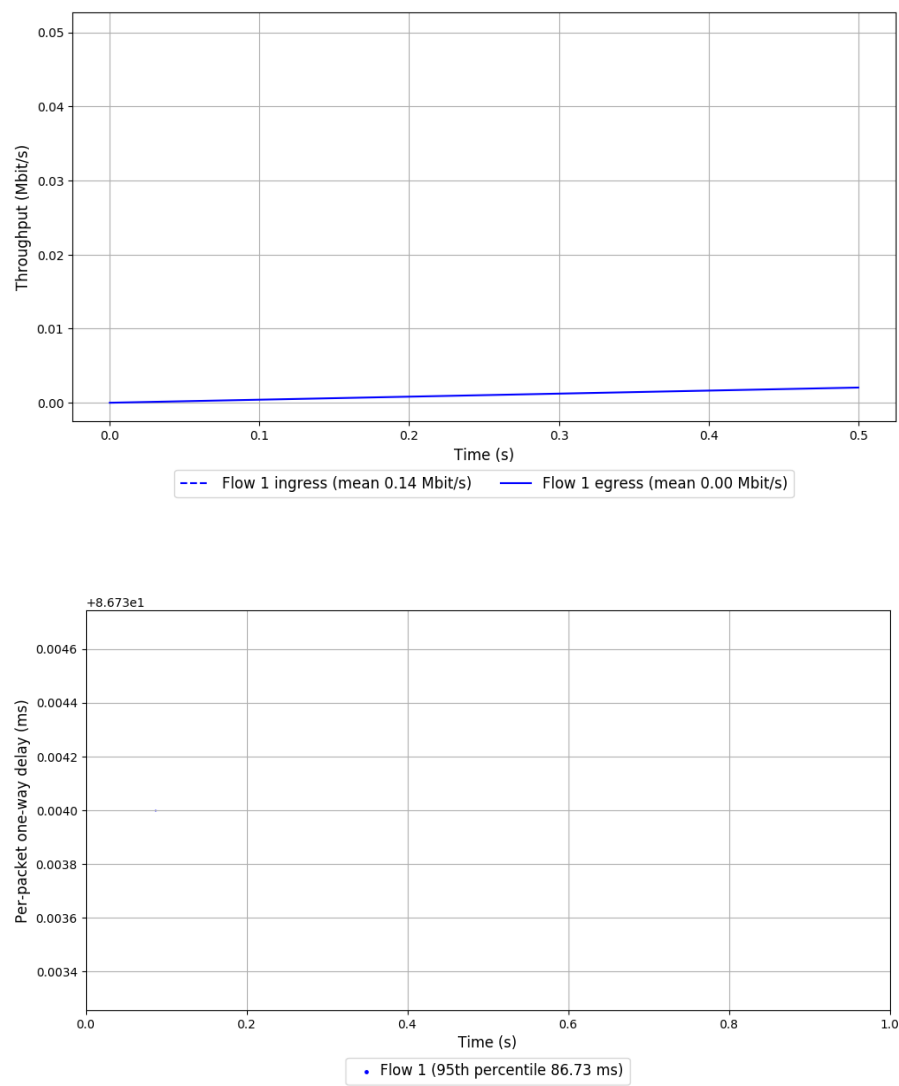
Start at: 2019-01-02 19:56:44

End at: 2019-01-02 19:57:14

Local clock offset: -5.408 ms

Remote clock offset: -17.738 ms

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





Run 3: Statistics of TaoVA-100x

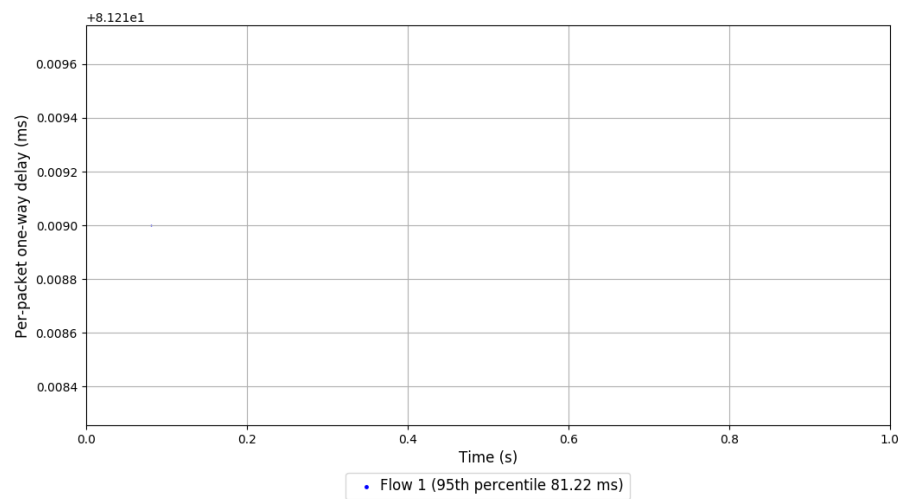
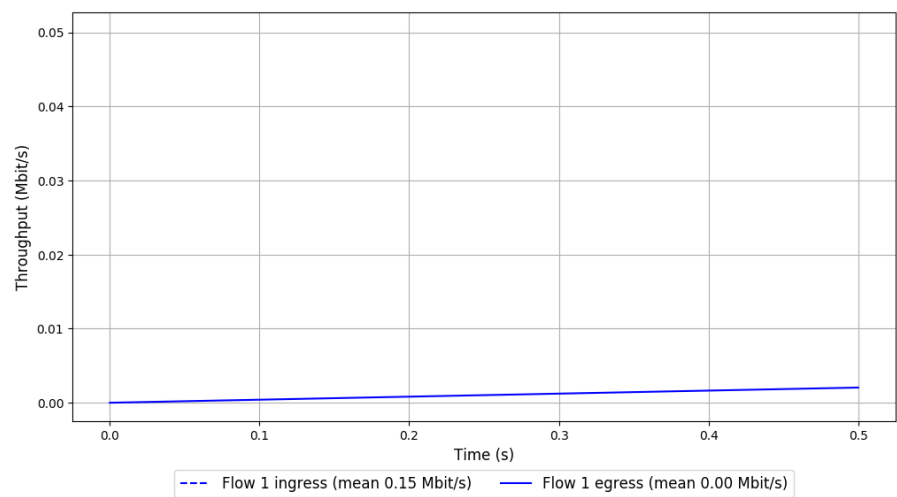
Start at: 2019-01-02 20:19:04

End at: 2019-01-02 20:19:34

Local clock offset: -1.821 ms

Remote clock offset: -26.082 ms

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



Run 4: Statistics of TaoVA-100x

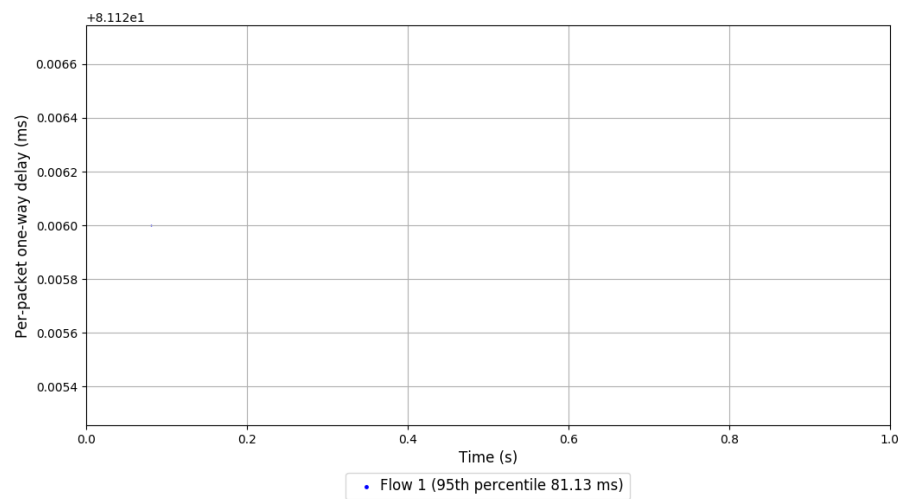
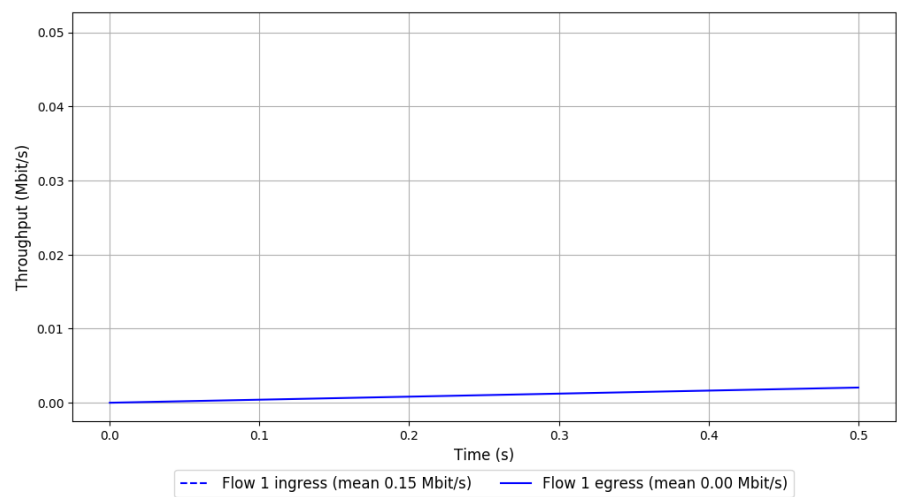
Start at: 2019-01-02 20:41:15

End at: 2019-01-02 20:41:45

Local clock offset: -6.329 ms

Remote clock offset: -31.106 ms

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



Run 5: Statistics of TaoVA-100x

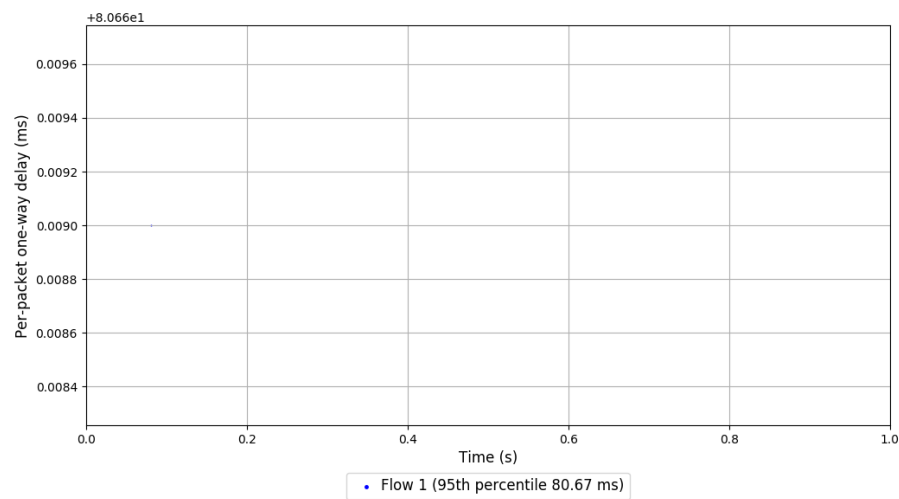
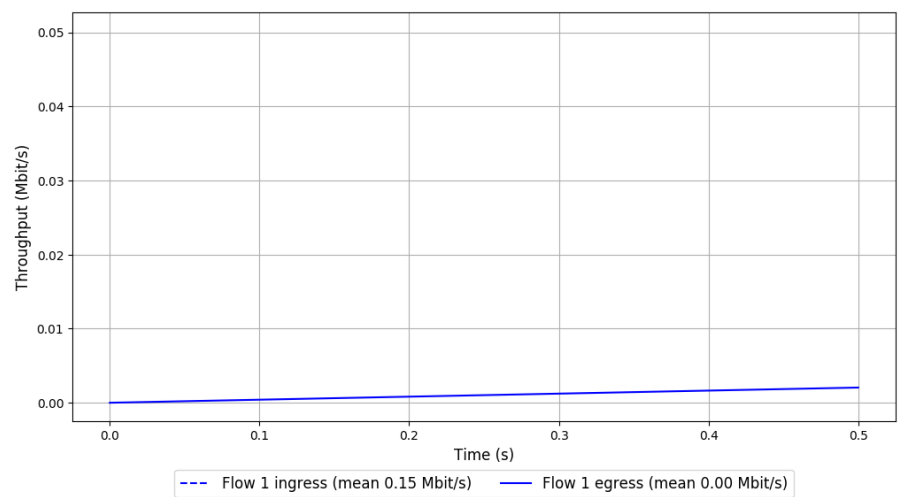
Start at: 2019-01-02 21:03:28

End at: 2019-01-02 21:03:59

Local clock offset: -2.58 ms

Remote clock offset: -36.066 ms

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

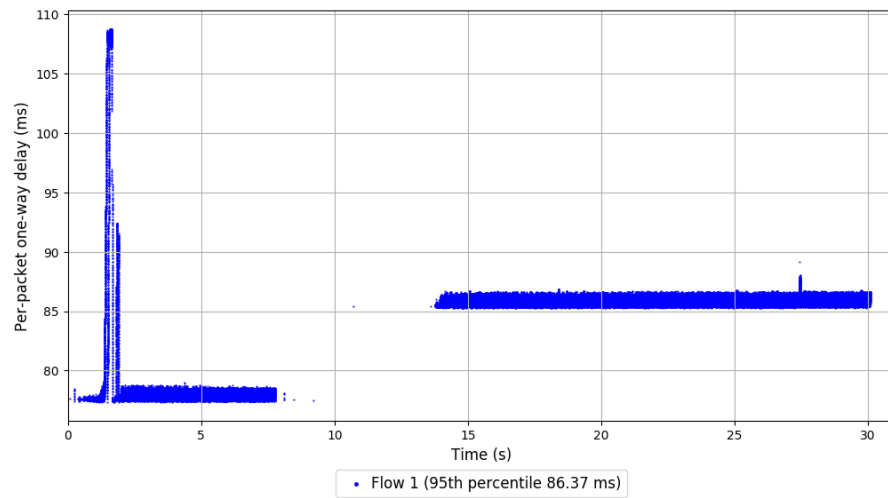
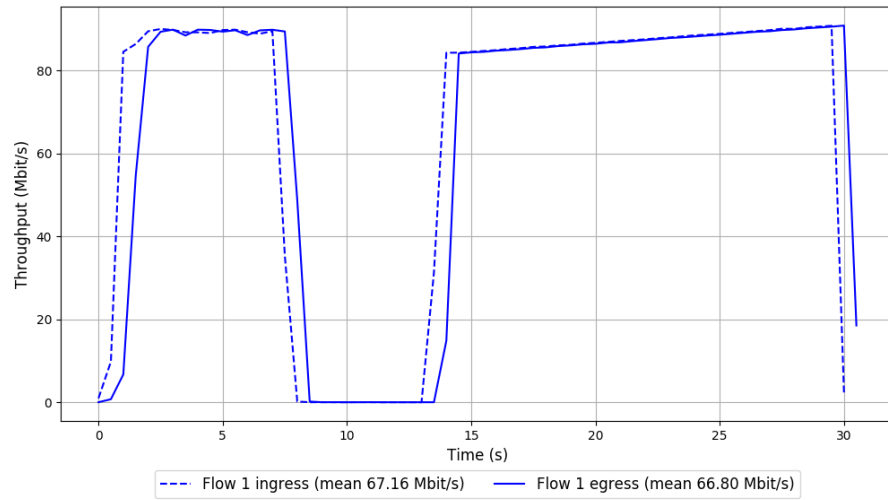


Run 1: Statistics of TCP Vegas

Start at: 2019-01-02 19:39:48  
End at: 2019-01-02 19:40:18  
Local clock offset: -5.621 ms  
Remote clock offset: -14.772 ms

# Below is generated by plot.py at 2019-01-02 21:22:21  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 66.80 Mbit/s  
95th percentile per-packet one-way delay: 86.374 ms  
Loss rate: 0.51%  
-- Flow 1:  
Average throughput: 66.80 Mbit/s  
95th percentile per-packet one-way delay: 86.374 ms  
Loss rate: 0.51%

# Run 1: Report of TCP Vegas — Data Link



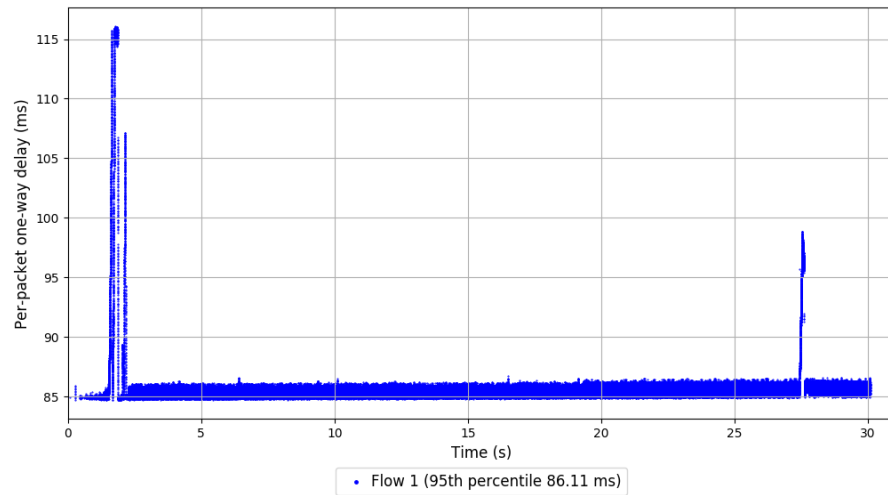
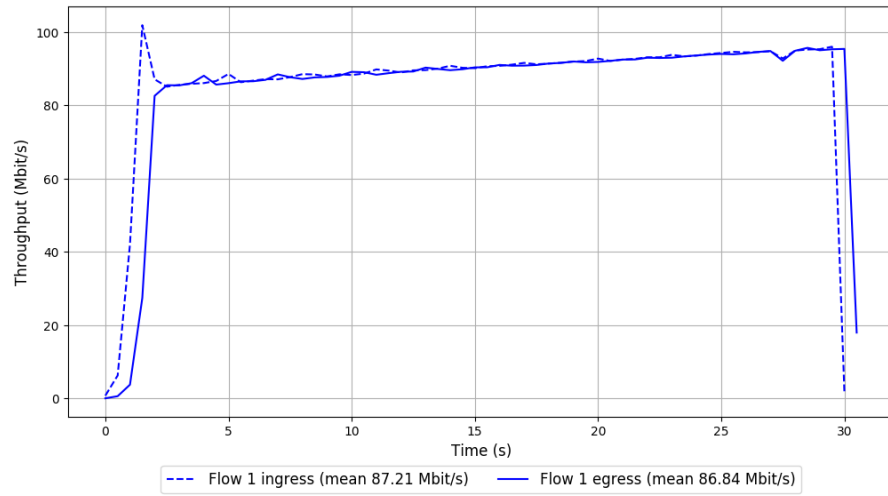


Run 2: Statistics of TCP Vegas

Start at: 2019-01-02 20:02:40  
End at: 2019-01-02 20:03:10  
Local clock offset: -3.764 ms  
Remote clock offset: -22.402 ms

# Below is generated by plot.py at 2019-01-02 21:22:35  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 86.84 Mbit/s  
95th percentile per-packet one-way delay: 86.106 ms  
Loss rate: 0.43%  
-- Flow 1:  
Average throughput: 86.84 Mbit/s  
95th percentile per-packet one-way delay: 86.106 ms  
Loss rate: 0.43%

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

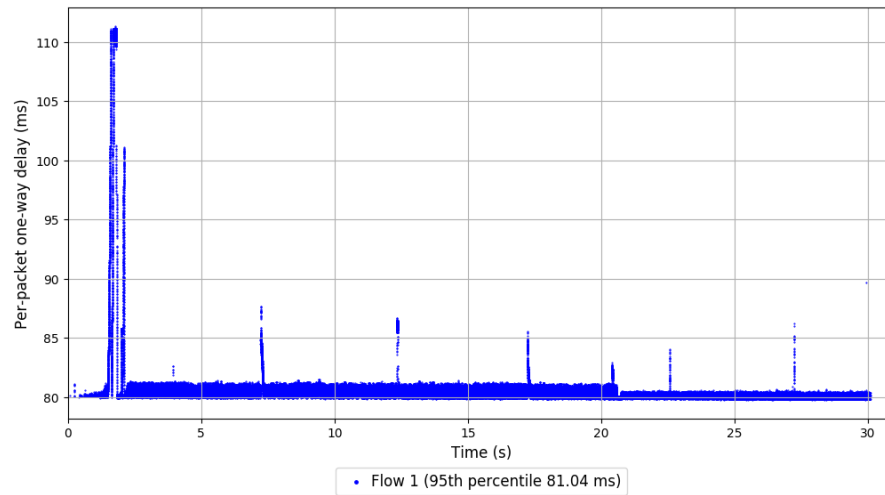
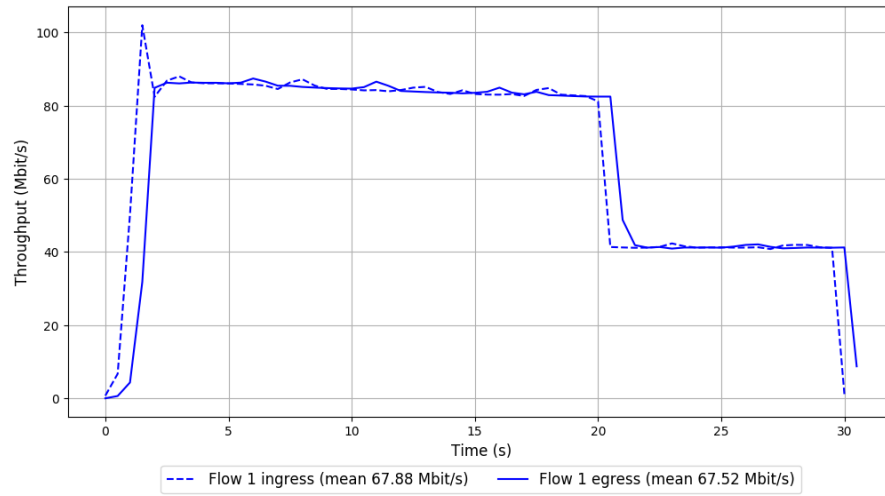


Run 3: Statistics of TCP Vegas

Start at: 2019-01-02 20:24:54  
End at: 2019-01-02 20:25:24  
Local clock offset: -0.986 ms  
Remote clock offset: -27.556 ms

# Below is generated by plot.py at 2019-01-02 21:22:35  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 67.52 Mbit/s  
95th percentile per-packet one-way delay: 81.041 ms  
Loss rate: 0.53%  
-- Flow 1:  
Average throughput: 67.52 Mbit/s  
95th percentile per-packet one-way delay: 81.041 ms  
Loss rate: 0.53%

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

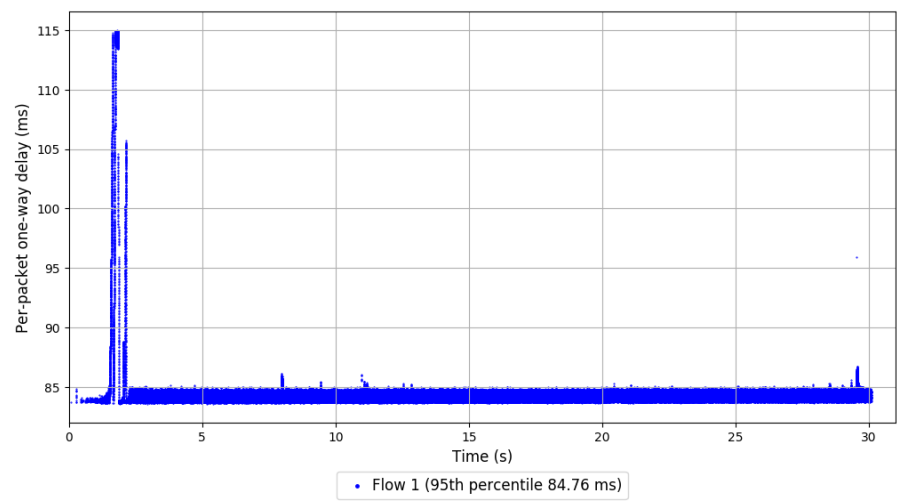
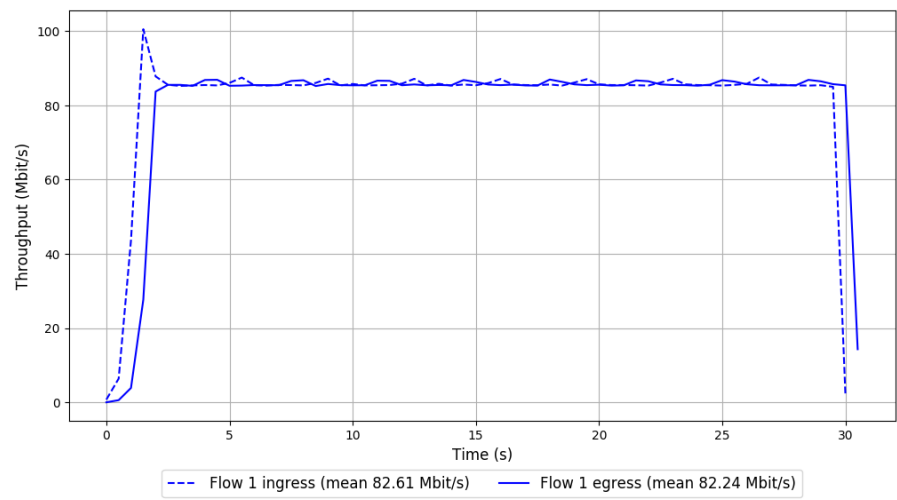


Run 4: Statistics of TCP Vegas

Start at: 2019-01-02 20:47:06  
End at: 2019-01-02 20:47:36  
Local clock offset: -6.069 ms  
Remote clock offset: -32.464 ms

# Below is generated by plot.py at 2019-01-02 21:23:06  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 82.24 Mbit/s  
95th percentile per-packet one-way delay: 84.759 ms  
Loss rate: 0.45%  
-- Flow 1:  
Average throughput: 82.24 Mbit/s  
95th percentile per-packet one-way delay: 84.759 ms  
Loss rate: 0.45%

Run 4: Report of TCP Vegas — Data Link

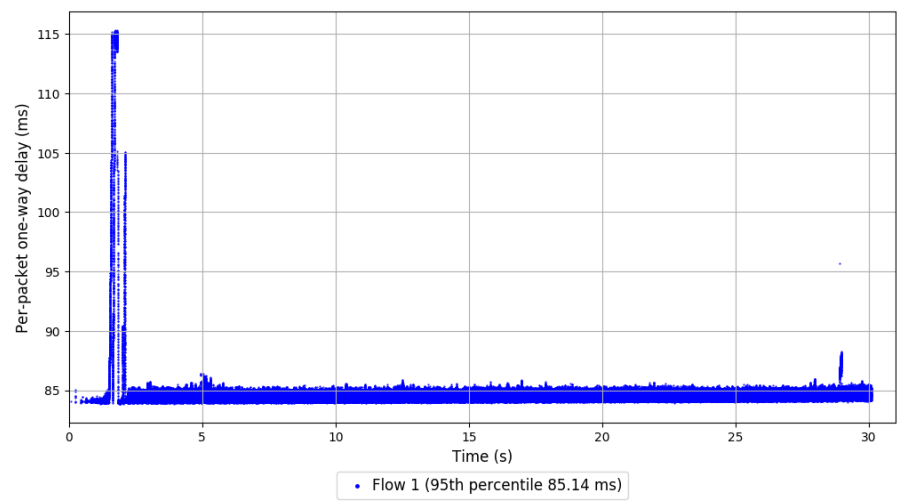
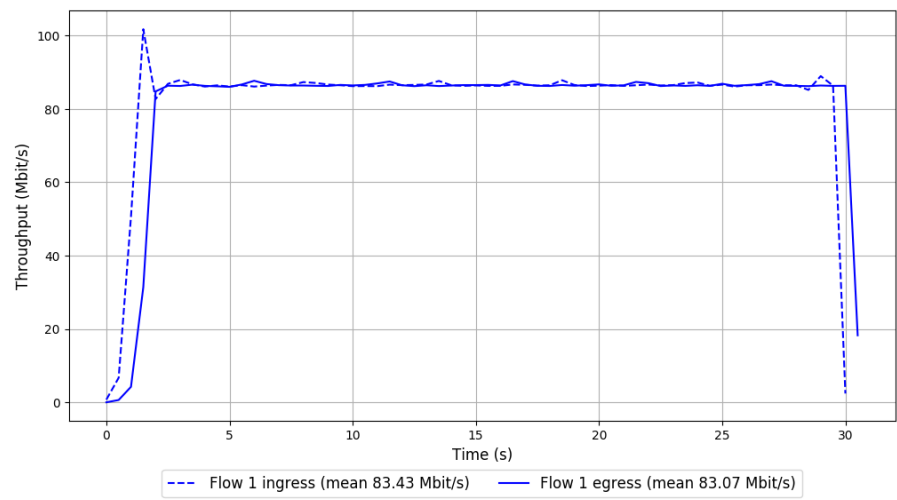


Run 5: Statistics of TCP Vegas

Start at: 2019-01-02 21:09:18  
End at: 2019-01-02 21:09:48  
Local clock offset: -1.389 ms  
Remote clock offset: -33.687 ms

# Below is generated by plot.py at 2019-01-02 21:23:09  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 83.07 Mbit/s  
95th percentile per-packet one-way delay: 85.142 ms  
Loss rate: 0.43%  
-- Flow 1:  
Average throughput: 83.07 Mbit/s  
95th percentile per-packet one-way delay: 85.142 ms  
Loss rate: 0.43%

Run 5: Report of TCP Vegas — Data Link



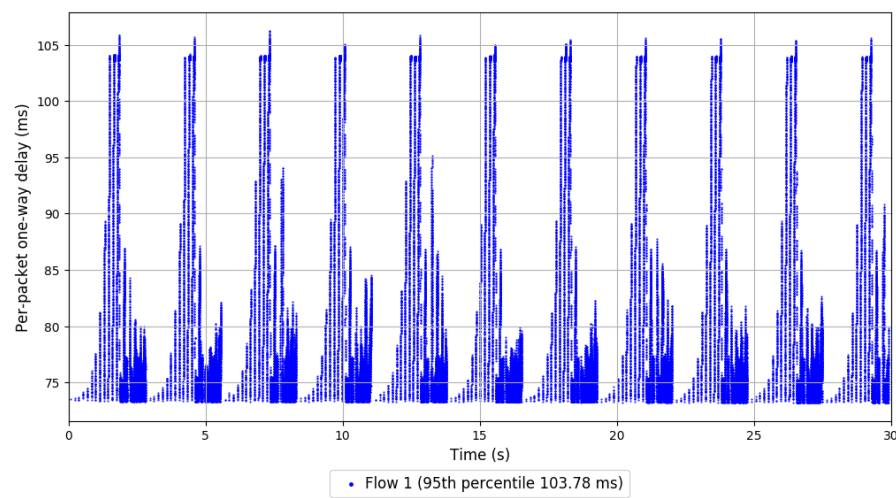
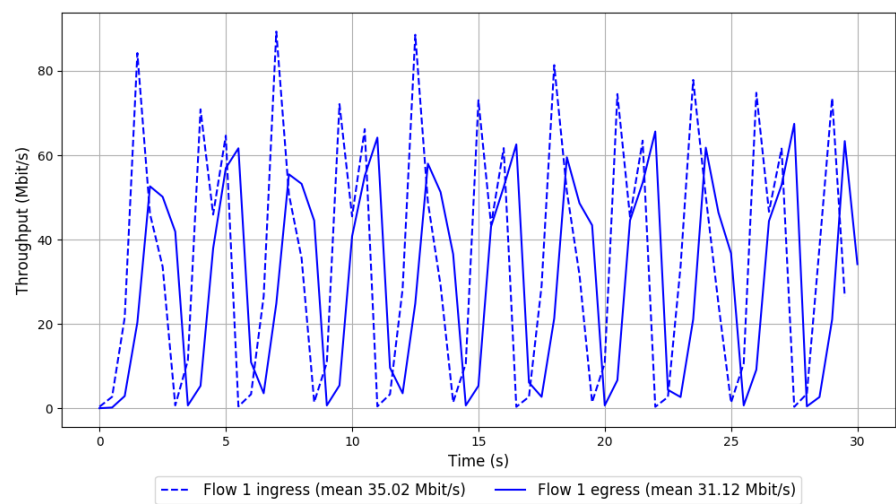


Run 1: Statistics of Verus

Start at: 2019-01-02 19:26:57  
End at: 2019-01-02 19:27:27  
Local clock offset: -2.146 ms  
Remote clock offset: -11.798 ms

# Below is generated by plot.py at 2019-01-02 21:23:09  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 31.12 Mbit/s  
95th percentile per-packet one-way delay: 103.785 ms  
Loss rate: 11.11%  
-- Flow 1:  
Average throughput: 31.12 Mbit/s  
95th percentile per-packet one-way delay: 103.785 ms  
Loss rate: 11.11%

Run 1: Report of Verus — Data Link

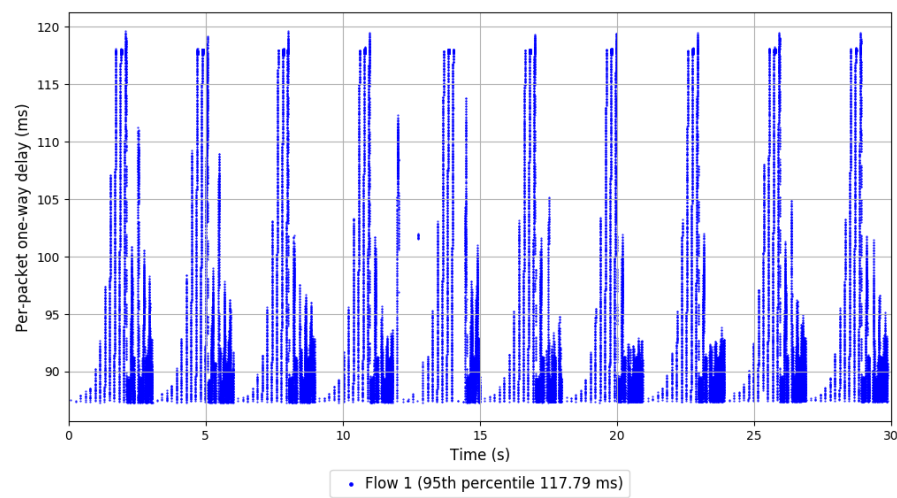
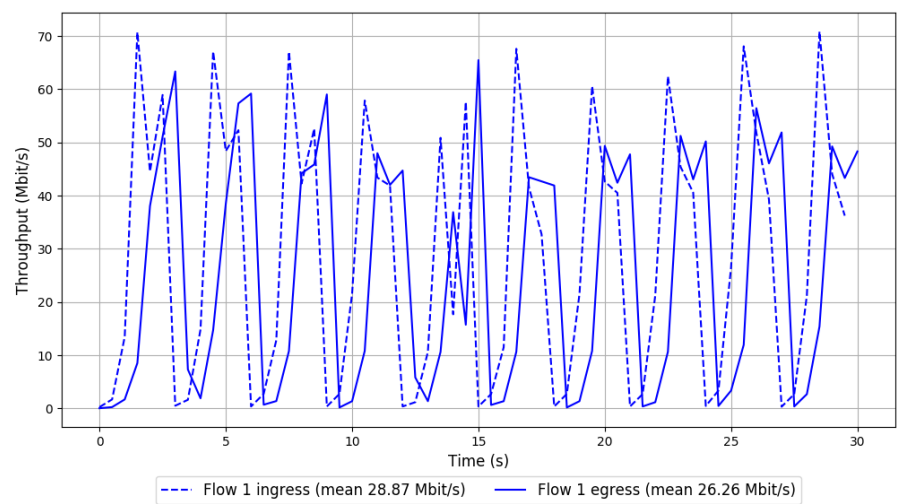


Run 2: Statistics of Verus

Start at: 2019-01-02 19:49:15  
End at: 2019-01-02 19:49:45  
Local clock offset: -5.432 ms  
Remote clock offset: -15.957 ms

# Below is generated by plot.py at 2019-01-02 21:23:09  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 26.26 Mbit/s  
95th percentile per-packet one-way delay: 117.794 ms  
Loss rate: 9.03%  
-- Flow 1:  
Average throughput: 26.26 Mbit/s  
95th percentile per-packet one-way delay: 117.794 ms  
Loss rate: 9.03%

Run 2: Report of Verus — Data Link

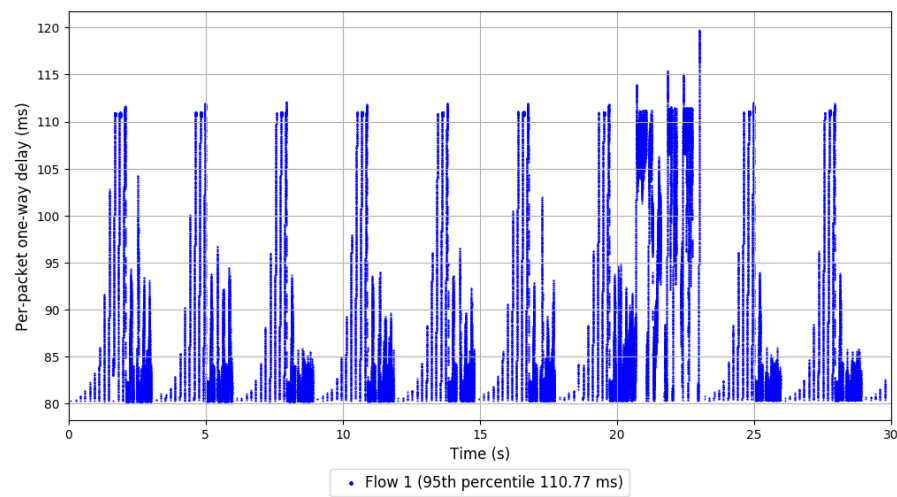
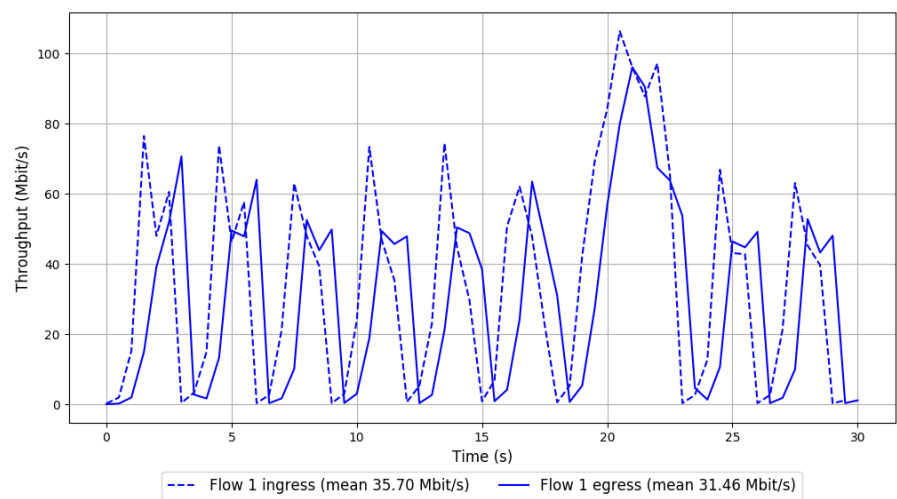


Run 3: Statistics of Verus

Start at: 2019-01-02 20:12:00  
End at: 2019-01-02 20:12:30  
Local clock offset: -1.658 ms  
Remote clock offset: -24.75 ms

# Below is generated by plot.py at 2019-01-02 21:23:09  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 31.46 Mbit/s  
95th percentile per-packet one-way delay: 110.768 ms  
Loss rate: 11.86%  
-- Flow 1:  
Average throughput: 31.46 Mbit/s  
95th percentile per-packet one-way delay: 110.768 ms  
Loss rate: 11.86%

Run 3: Report of Verus — Data Link

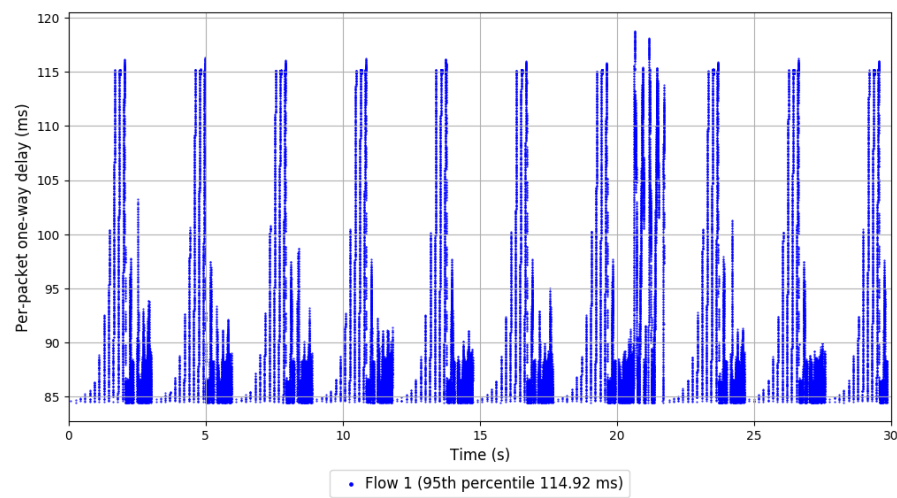
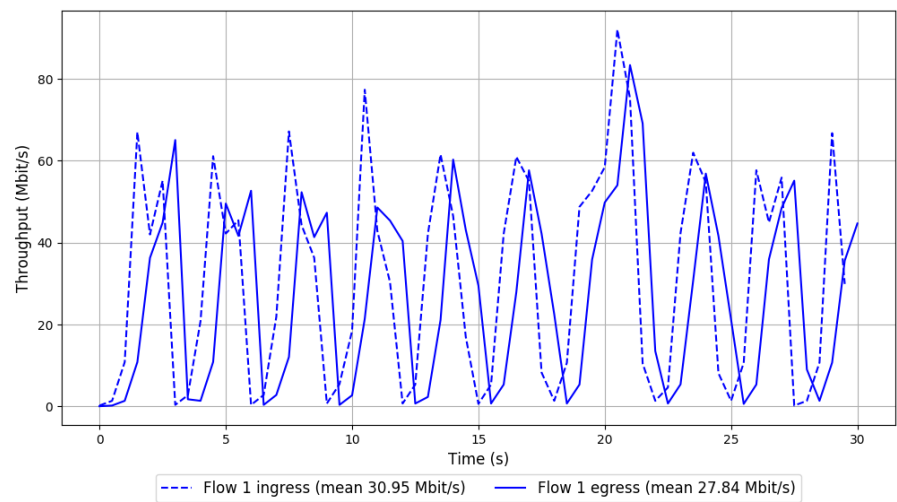


Run 4: Statistics of Verus

Start at: 2019-01-02 20:34:12  
End at: 2019-01-02 20:34:42  
Local clock offset: -5.228 ms  
Remote clock offset: -25.696 ms

# Below is generated by plot.py at 2019-01-02 21:23:09  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 27.84 Mbit/s  
95th percentile per-packet one-way delay: 114.920 ms  
Loss rate: 10.04%  
-- Flow 1:  
Average throughput: 27.84 Mbit/s  
95th percentile per-packet one-way delay: 114.920 ms  
Loss rate: 10.04%

Run 4: Report of Verus — Data Link





Run 5: Statistics of Verus

Start at: 2019-01-02 20:56:25

End at: 2019-01-02 20:56:55

Local clock offset: -6.103 ms

Remote clock offset: -34.7 ms

# Below is generated by plot.py at 2019-01-02 21:23:09

# Datalink statistics

-- Total of 1 flow:

Average throughput: 29.24 Mbit/s

95th percentile per-packet one-way delay: 160.449 ms

Loss rate: 63.69%

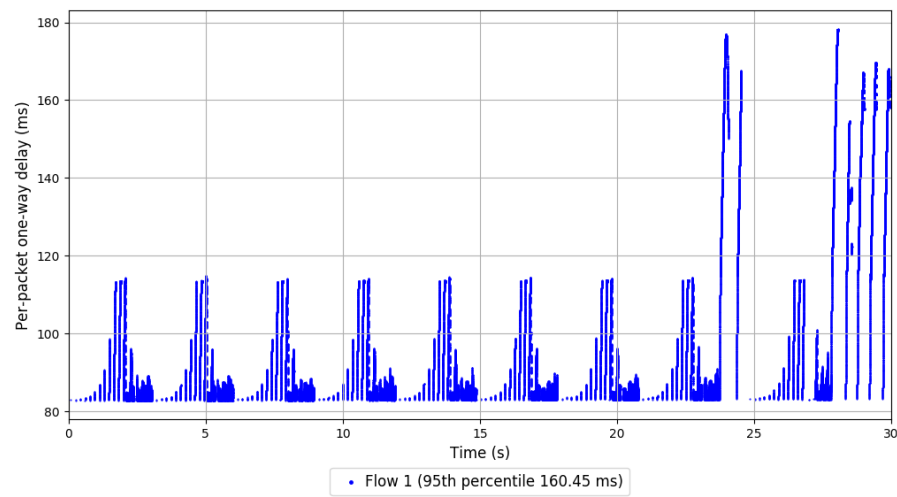
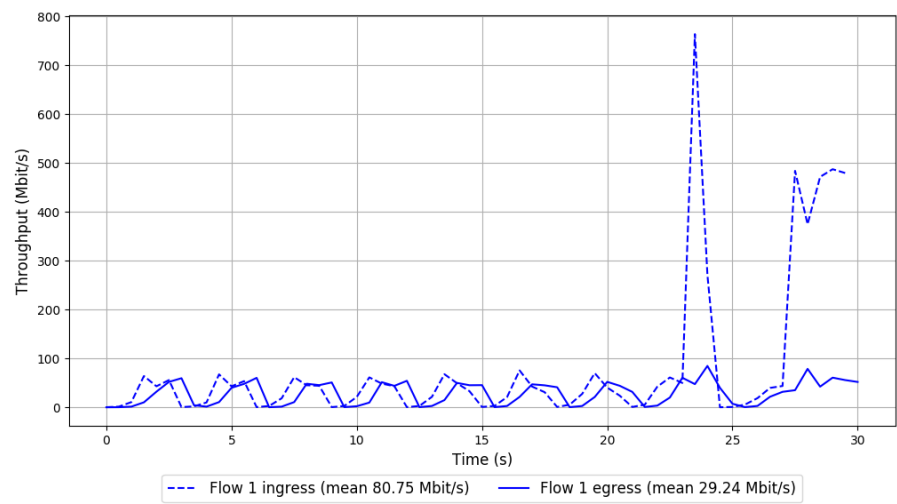
-- Flow 1:

Average throughput: 29.24 Mbit/s

95th percentile per-packet one-way delay: 160.449 ms

Loss rate: 63.69%

Run 5: Report of Verus — Data Link

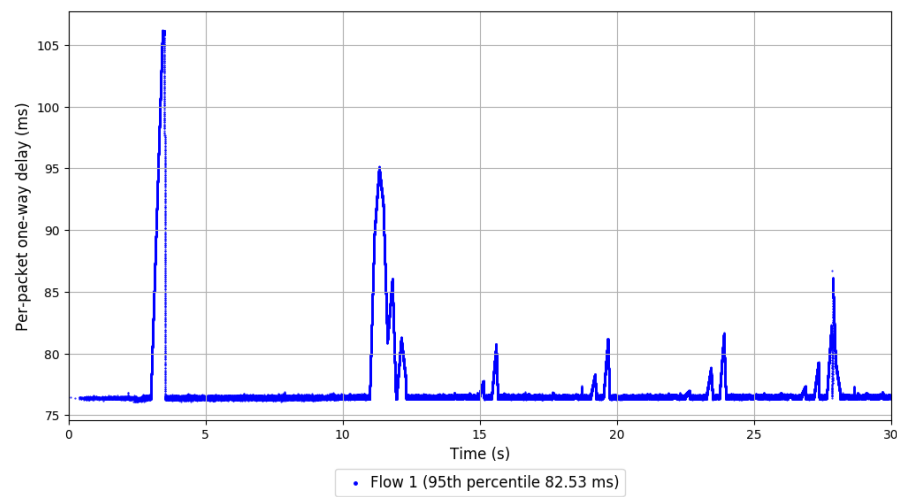
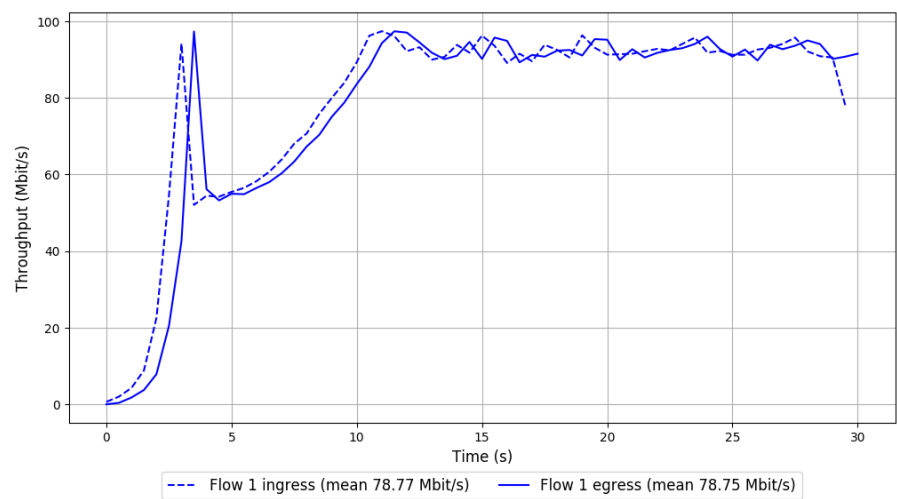


Run 1: Statistics of PCC-Vivace

Start at: 2019-01-02 19:35:06  
End at: 2019-01-02 19:35:36  
Local clock offset: -4.126 ms  
Remote clock offset: -12.438 ms

# Below is generated by plot.py at 2019-01-02 21:23:24  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 78.75 Mbit/s  
95th percentile per-packet one-way delay: 82.530 ms  
Loss rate: 0.03%  
-- Flow 1:  
Average throughput: 78.75 Mbit/s  
95th percentile per-packet one-way delay: 82.530 ms  
Loss rate: 0.03%

Run 1: Report of PCC-Vivace — Data Link

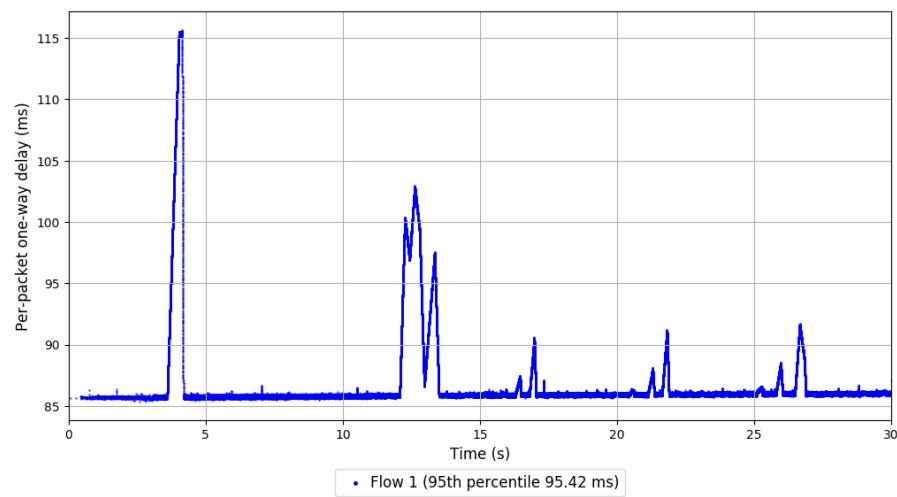
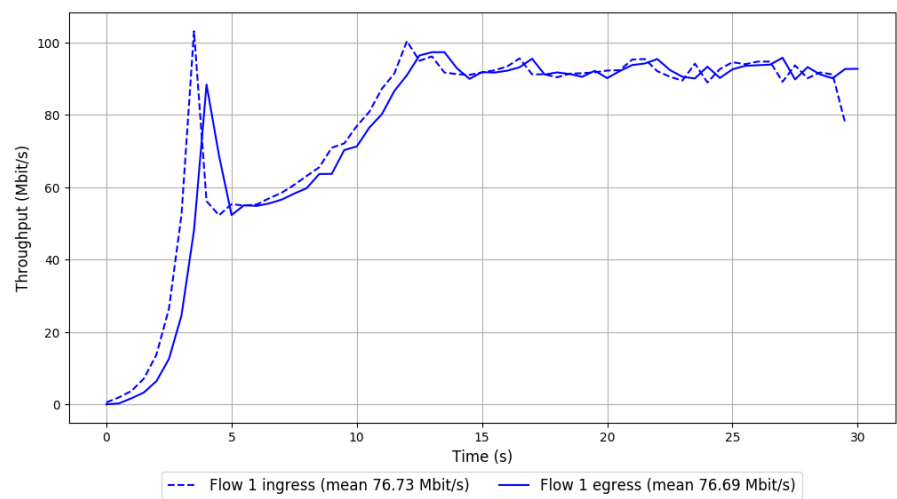


Run 2: Statistics of PCC-Vivace

Start at: 2019-01-02 19:57:51  
End at: 2019-01-02 19:58:21  
Local clock offset: -4.347 ms  
Remote clock offset: -17.79 ms

# Below is generated by plot.py at 2019-01-02 21:23:25  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 76.69 Mbit/s  
95th percentile per-packet one-way delay: 95.424 ms  
Loss rate: 0.04%  
-- Flow 1:  
Average throughput: 76.69 Mbit/s  
95th percentile per-packet one-way delay: 95.424 ms  
Loss rate: 0.04%

Run 2: Report of PCC-Vivace — Data Link

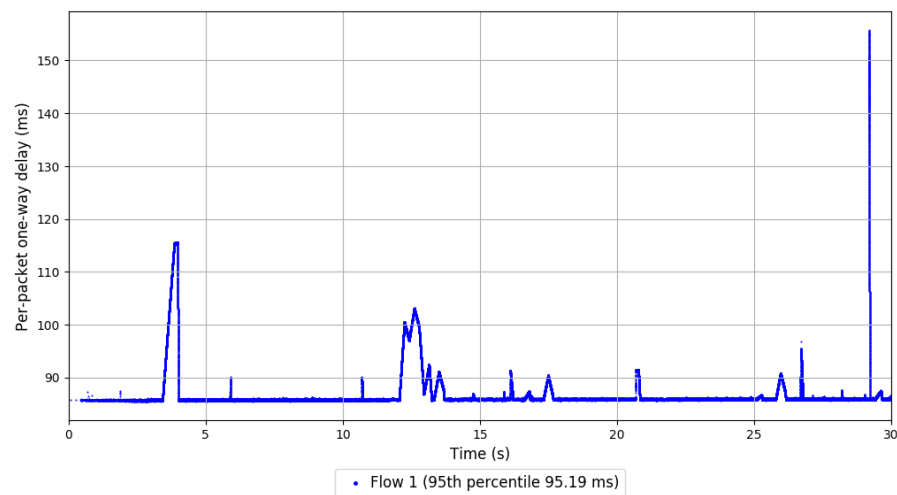
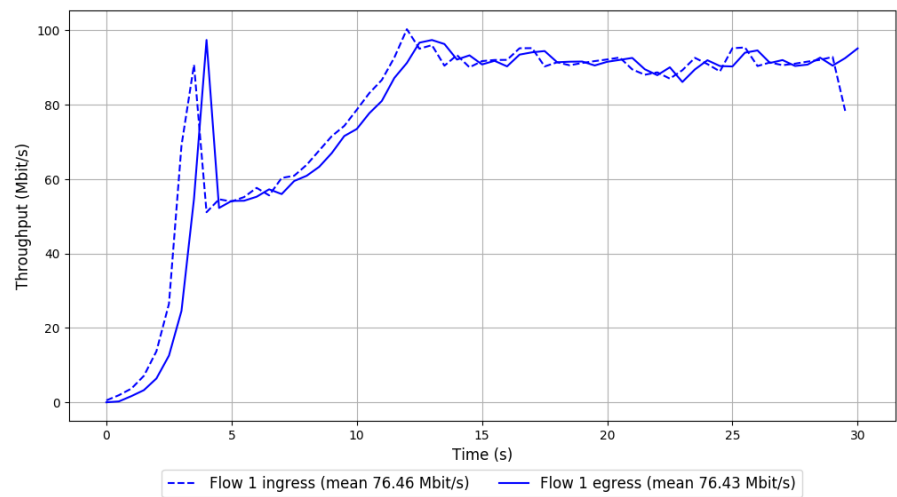


Run 3: Statistics of PCC-Vivace

Start at: 2019-01-02 20:20:11  
End at: 2019-01-02 20:20:41  
Local clock offset: -0.985 ms  
Remote clock offset: -22.644 ms

# Below is generated by plot.py at 2019-01-02 21:23:26  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 76.43 Mbit/s  
95th percentile per-packet one-way delay: 95.194 ms  
Loss rate: 0.04%  
-- Flow 1:  
Average throughput: 76.43 Mbit/s  
95th percentile per-packet one-way delay: 95.194 ms  
Loss rate: 0.04%

Run 3: Report of PCC-Vivace — Data Link



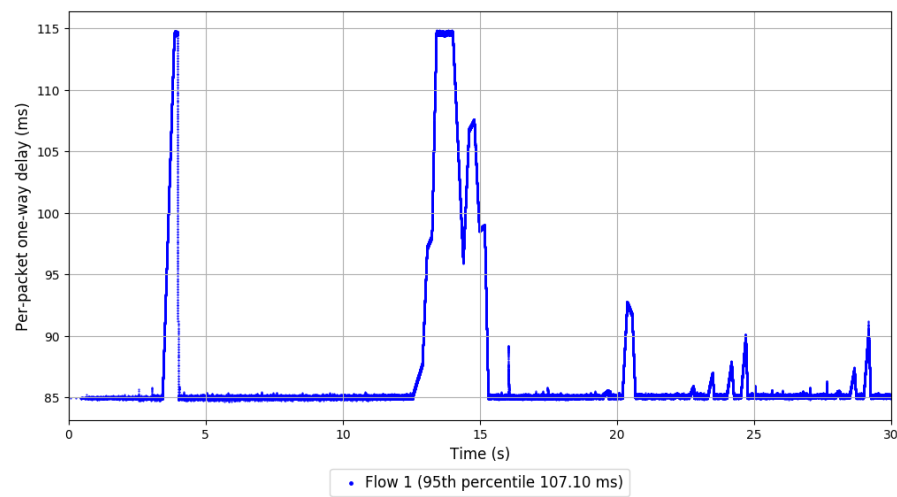
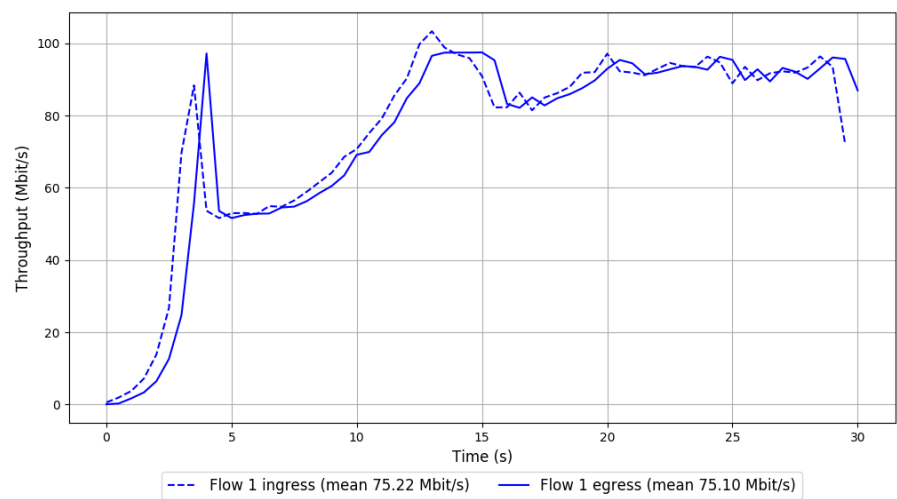


Run 4: Statistics of PCC-Vivace

Start at: 2019-01-02 20:42:22  
End at: 2019-01-02 20:42:52  
Local clock offset: -5.682 ms  
Remote clock offset: -27.512 ms

# Below is generated by plot.py at 2019-01-02 21:23:26  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 75.10 Mbit/s  
95th percentile per-packet one-way delay: 107.102 ms  
Loss rate: 0.16%  
-- Flow 1:  
Average throughput: 75.10 Mbit/s  
95th percentile per-packet one-way delay: 107.102 ms  
Loss rate: 0.16%

Run 4: Report of PCC-Vivace — Data Link

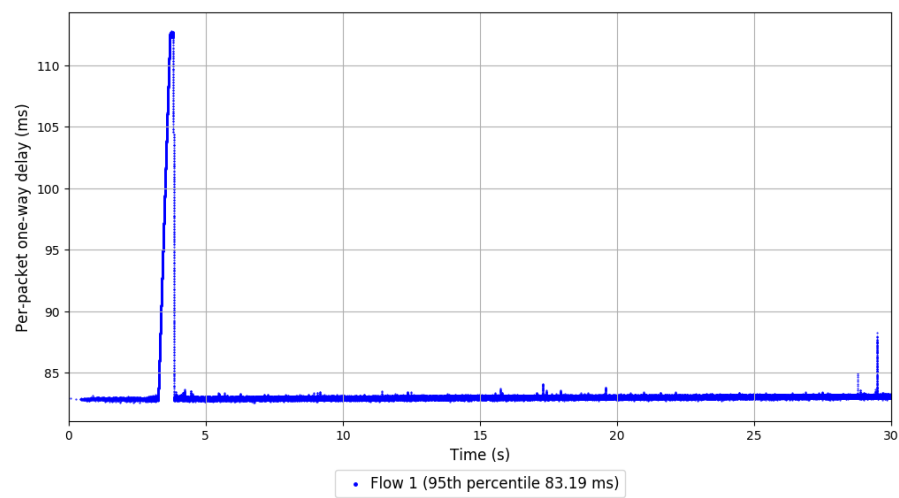
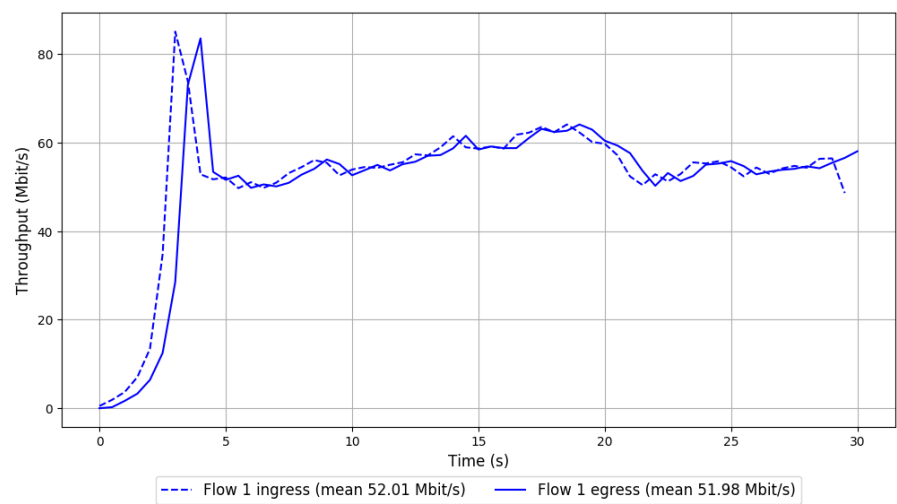


Run 5: Statistics of PCC-Vivace

Start at: 2019-01-02 21:04:36  
End at: 2019-01-02 21:05:06  
Local clock offset: -3.114 ms  
Remote clock offset: -36.31 ms

# Below is generated by plot.py at 2019-01-02 21:23:26  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 51.98 Mbit/s  
95th percentile per-packet one-way delay: 83.195 ms  
Loss rate: 0.06%  
-- Flow 1:  
Average throughput: 51.98 Mbit/s  
95th percentile per-packet one-way delay: 83.195 ms  
Loss rate: 0.06%

Run 5: Report of PCC-Vivace — Data Link

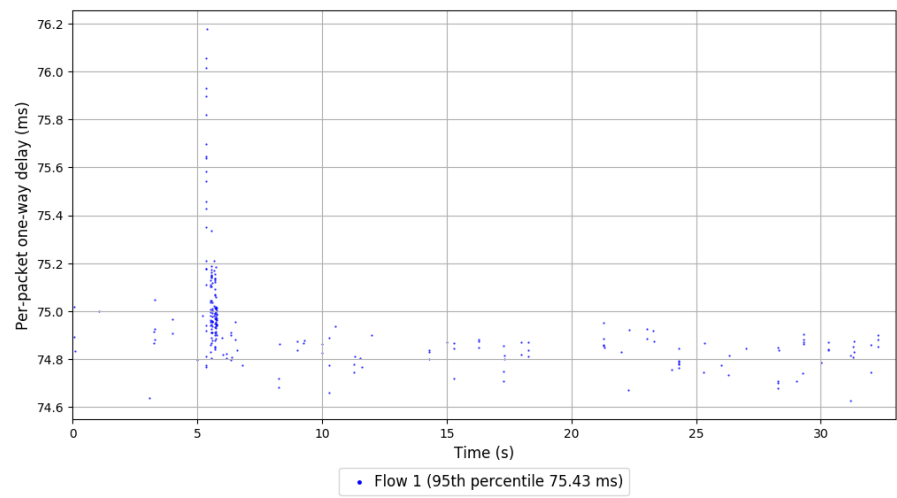
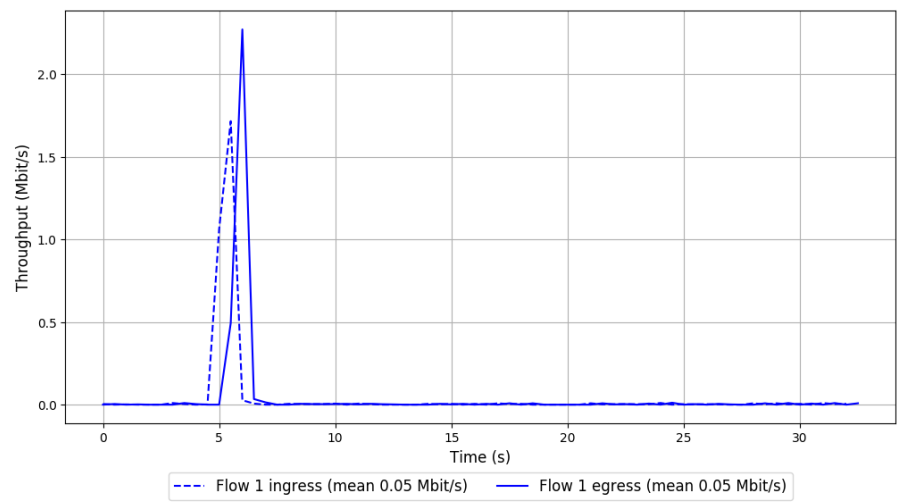


```
Run 1: Statistics of WebRTC media

Start at: 2019-01-02 19:29:18
End at: 2019-01-02 19:29:48
Local clock offset: -3.181 ms
Remote clock offset: -12.469 ms

# Below is generated by plot.py at 2019-01-02 21:23:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 75.429 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 75.429 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link

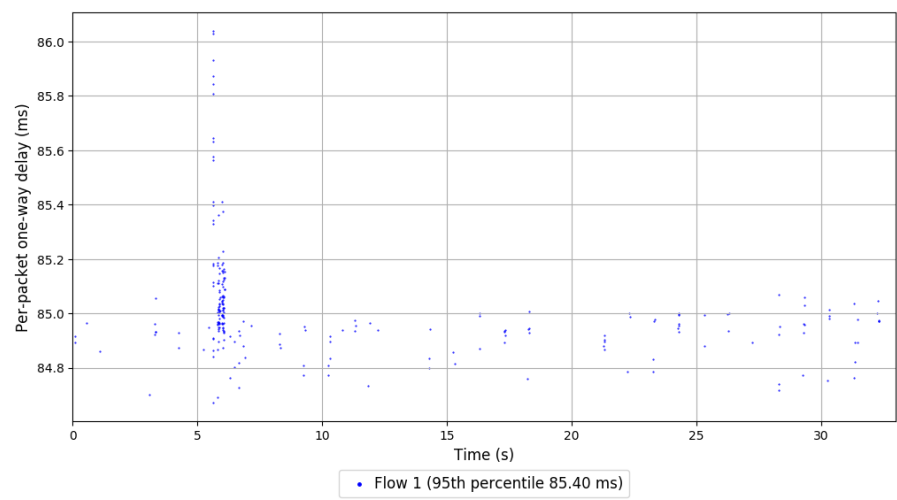
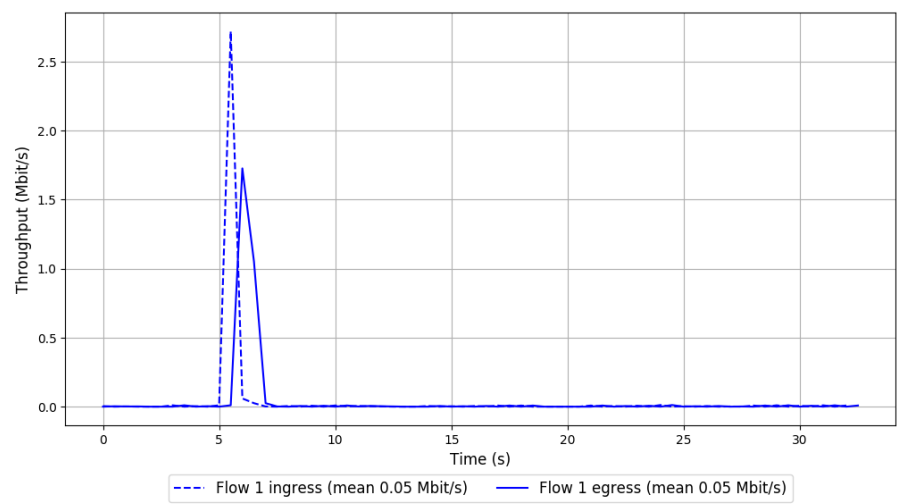


Run 2: Statistics of WebRTC media

Start at: 2019-01-02 19:51:47  
End at: 2019-01-02 19:52:17  
Local clock offset: -6.269 ms  
Remote clock offset: -16.348 ms

# Below is generated by plot.py at 2019-01-02 21:23:26  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 85.398 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 85.398 ms  
Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



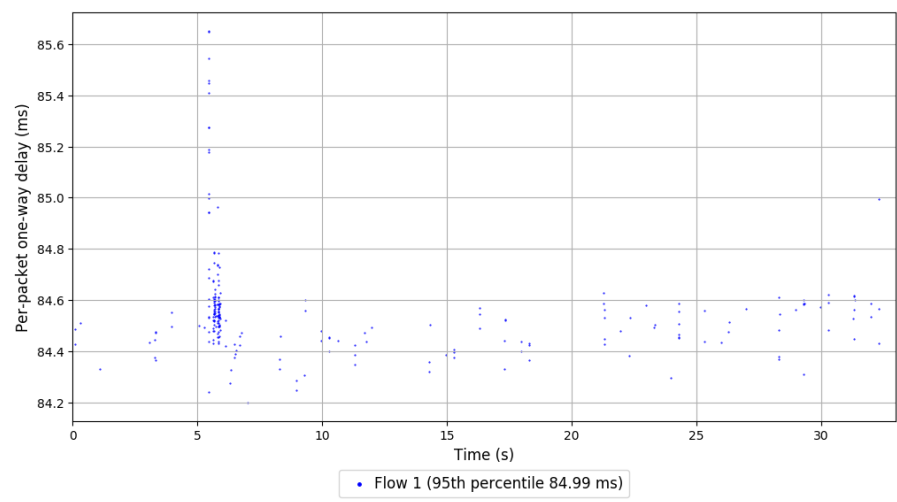
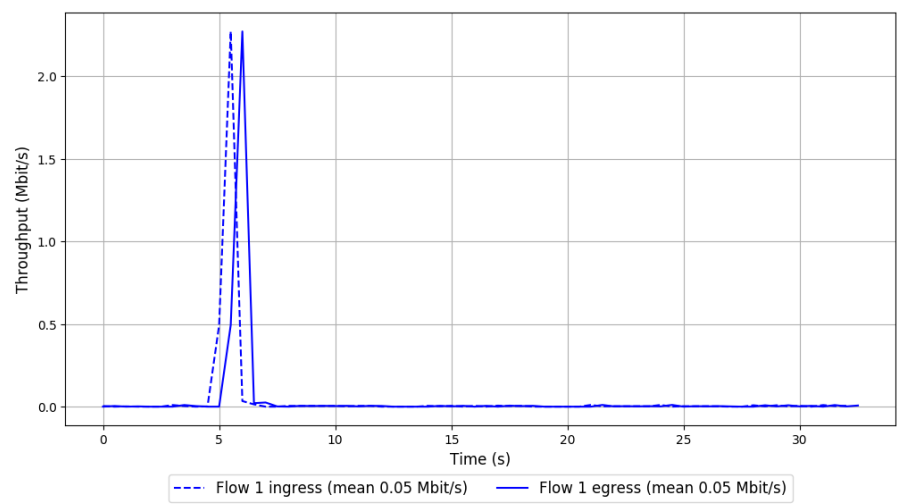


Run 3: Statistics of WebRTC media

Start at: 2019-01-02 20:14:21  
End at: 2019-01-02 20:14:51  
Local clock offset: -2.213 ms  
Remote clock offset: -25.326 ms

# Below is generated by plot.py at 2019-01-02 21:23:26  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 84.994 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 84.994 ms  
Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

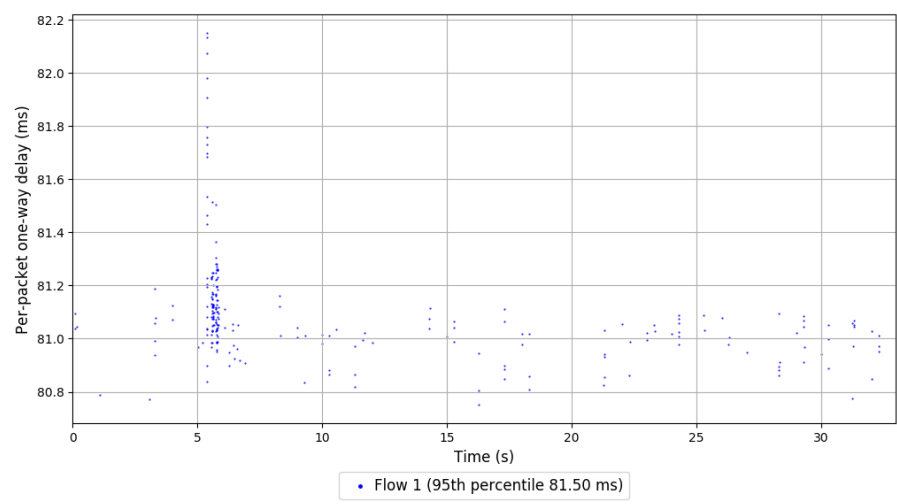
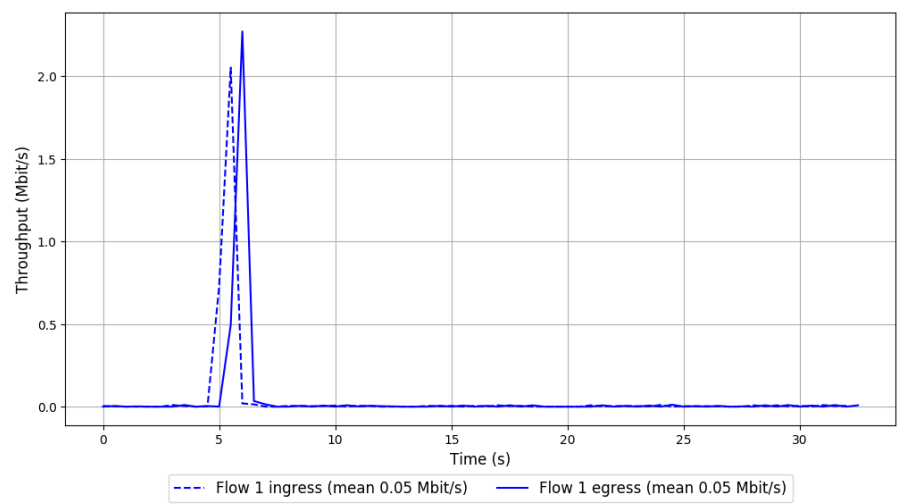


Run 4: Statistics of WebRTC media

Start at: 2019-01-02 20:36:33  
End at: 2019-01-02 20:37:03  
Local clock offset: -5.686 ms  
Remote clock offset: -30.169 ms

# Below is generated by plot.py at 2019-01-02 21:23:26  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 81.504 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 81.504 ms  
Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2019-01-02 20:58:46  
End at: 2019-01-02 20:59:16  
Local clock offset: -4.966 ms  
Remote clock offset: -31.355 ms

# Below is generated by plot.py at 2019-01-02 21:23:26  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 86.079 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 86.079 ms  
Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

