

Pantheon Report

Generated at 2019-01-03 06:47:33 (UTC).
Data path: Brazil on p4p1 (*remote*) → AWS Brazil 1 on `ens5` (*local*).
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.

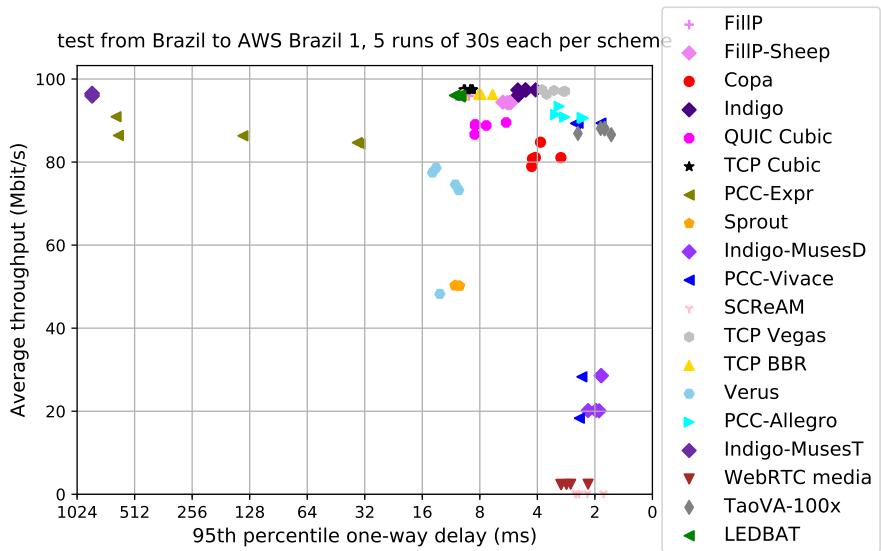
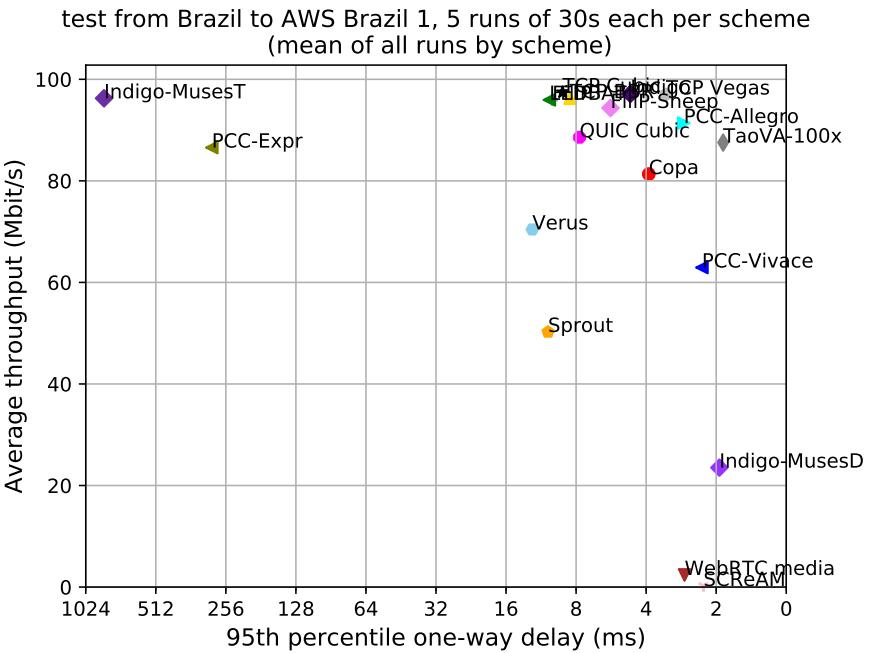
System info:

```
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 @ 0e5bb722943babcd2b090d2c64fc45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbfed0c6349ae986009b4fa8643c40a
third_party/muses-refactored @ 31f8f0ba8ef8b1da76c2bc0cd0a7850c33ff64fb
third_party/pantheon-tunnel @ f866d3f58d27af942717625ee3a354cc2e802bd
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-quic @ 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



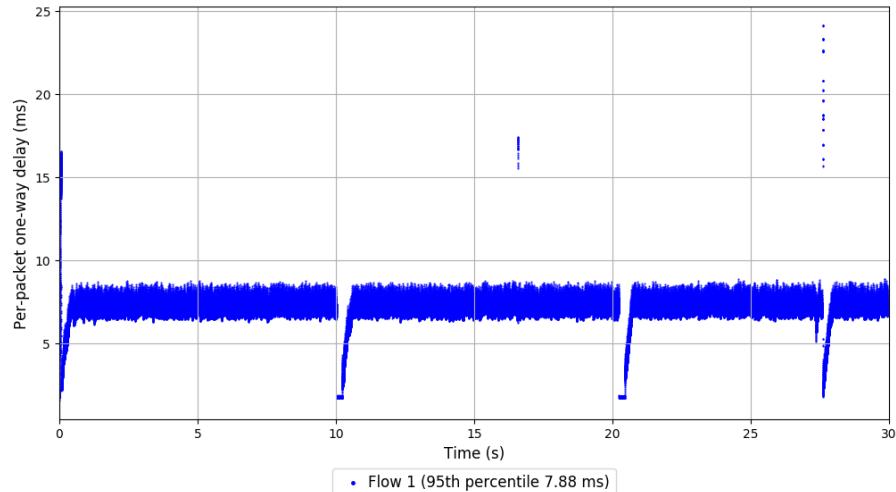
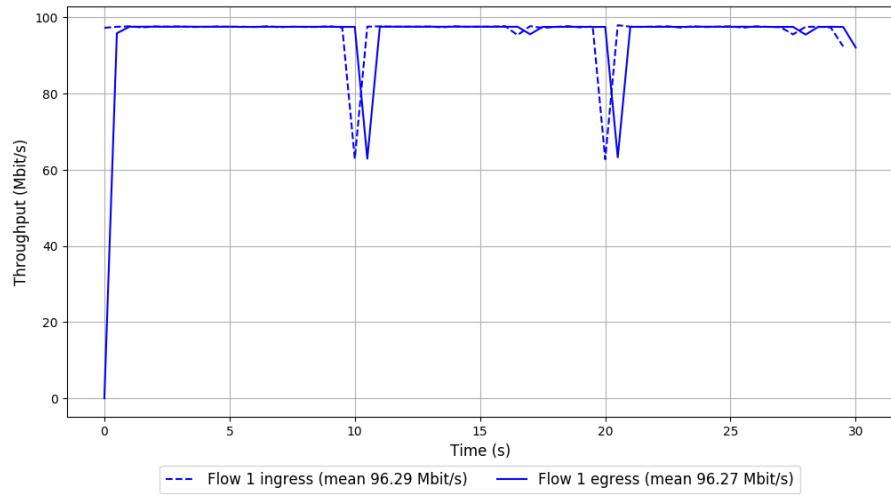
| scheme | # runs | mean avg tput (Mbit/s) flow 1 | mean 95th-%ile delay (ms) flow 1 | mean loss rate (%) flow 1 |
|---------------|--------|----------------------------------|-------------------------------------|------------------------------|
| TCP BBR | 5 | 96.28 | 8.50 | 0.06 |
| Copa | 5 | 81.34 | 3.90 | 0.01 |
| TCP Cubic | 5 | 97.44 | 9.15 | 0.05 |
| FillP | 5 | 95.93 | 10.13 | 0.03 |
| FillP-Sheep | 5 | 94.36 | 5.69 | 0.01 |
| Indigo | 5 | 97.12 | 4.68 | 0.02 |
| Indigo-MusesD | 5 | 23.52 | 1.91 | 0.01 |
| Indigo-MusesT | 5 | 96.26 | 854.67 | 2.70 |
| LEDBAT | 5 | 95.95 | 10.43 | 0.07 |
| PCC-Allegro | 5 | 91.39 | 2.76 | 0.01 |
| PCC-Expr | 5 | 86.55 | 294.28 | 3.04 |
| QUIC Cubic | 5 | 88.58 | 7.73 | 0.02 |
| SCReAM | 5 | 0.22 | 2.27 | 0.03 |
| Sprout | 5 | 50.25 | 10.56 | 0.04 |
| TaoVA-100x | 5 | 87.54 | 1.80 | 0.01 |
| TCP Vegas | 5 | 97.01 | 3.28 | 0.01 |
| Verus | 5 | 70.43 | 12.34 | 0.06 |
| PCC-Vivace | 5 | 62.93 | 2.30 | 0.02 |
| WebRTC media | 5 | 2.38 | 2.74 | 0.01 |

Run 1: Statistics of TCP BBR

```
Start at: 2019-01-03 05:03:25
End at: 2019-01-03 05:03:55
Local clock offset: -10.245 ms
Remote clock offset: -0.057 ms

# Below is generated by plot.py at 2019-01-03 06:36:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.27 Mbit/s
95th percentile per-packet one-way delay: 7.877 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 96.27 Mbit/s
95th percentile per-packet one-way delay: 7.877 ms
Loss rate: 0.03%
```

Run 1: Report of TCP BBR — Data Link

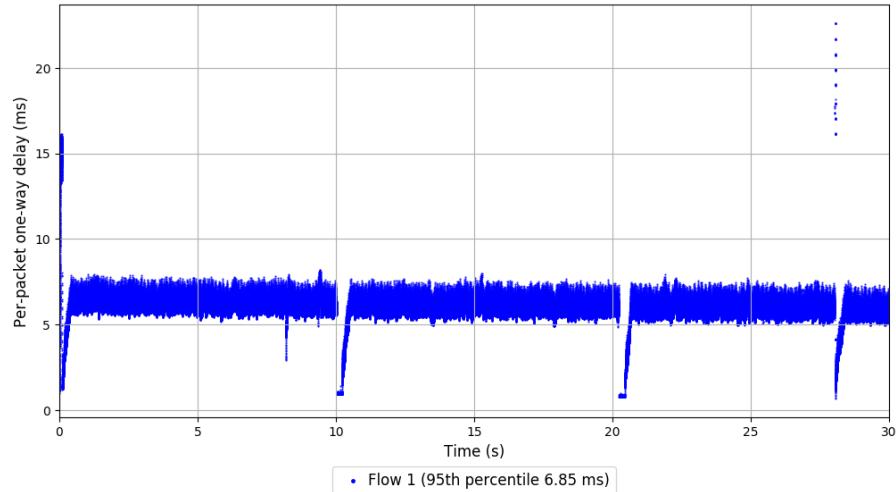
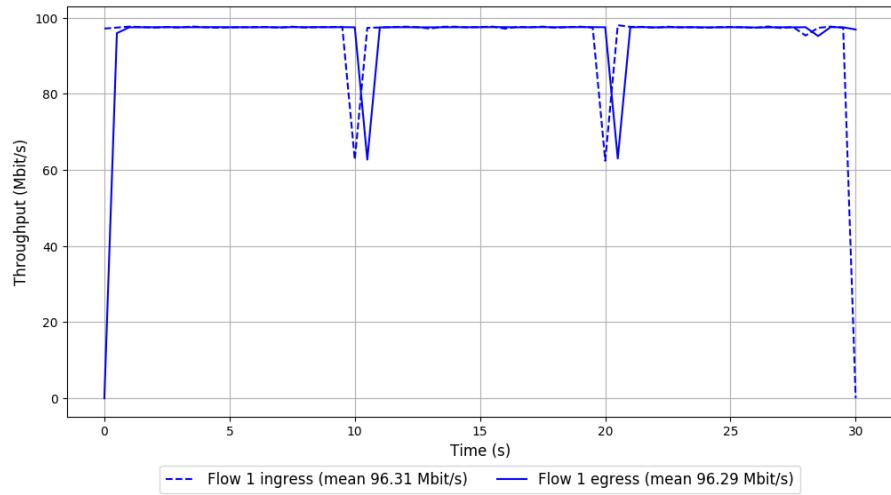


Run 2: Statistics of TCP BBR

```
Start at: 2019-01-03 05:24:55
End at: 2019-01-03 05:25:25
Local clock offset: -11.333 ms
Remote clock offset: 0.191 ms

# Below is generated by plot.py at 2019-01-03 06:36:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.29 Mbit/s
95th percentile per-packet one-way delay: 6.852 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 96.29 Mbit/s
95th percentile per-packet one-way delay: 6.852 ms
Loss rate: 0.03%
```

Run 2: Report of TCP BBR — Data Link

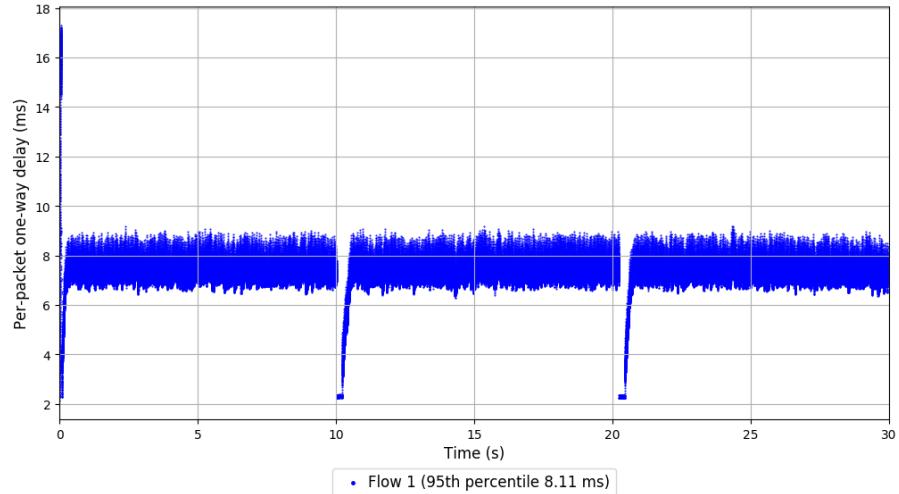
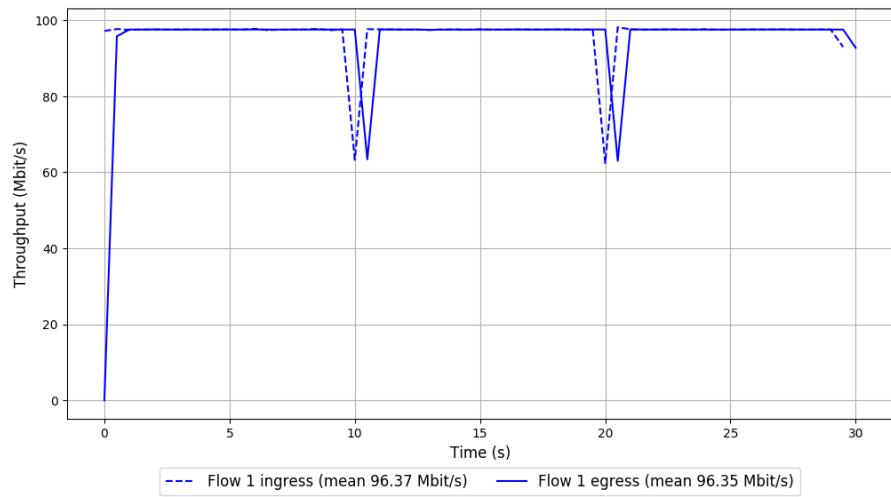


Run 3: Statistics of TCP BBR

```
Start at: 2019-01-03 05:46:23
End at: 2019-01-03 05:46:53
Local clock offset: -0.901 ms
Remote clock offset: 0.392 ms

# Below is generated by plot.py at 2019-01-03 06:36:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.35 Mbit/s
95th percentile per-packet one-way delay: 8.113 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 96.35 Mbit/s
95th percentile per-packet one-way delay: 8.113 ms
Loss rate: 0.03%
```

Run 3: Report of TCP BBR — Data Link

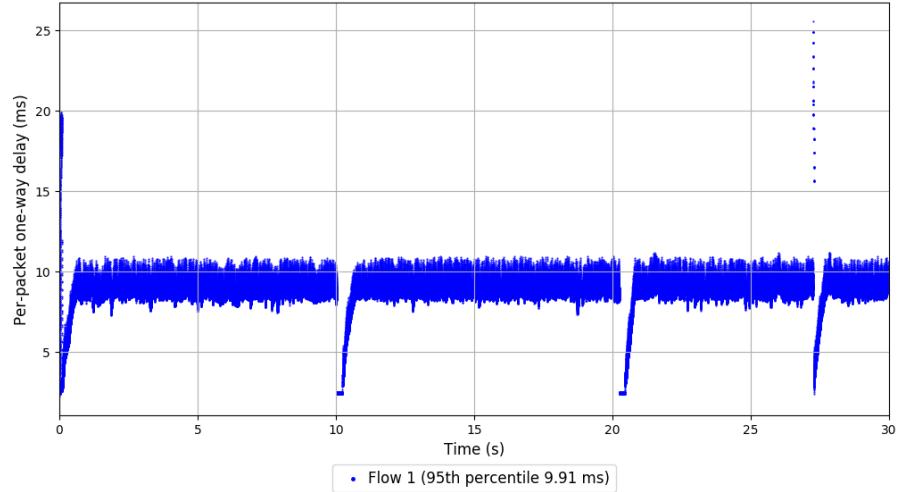
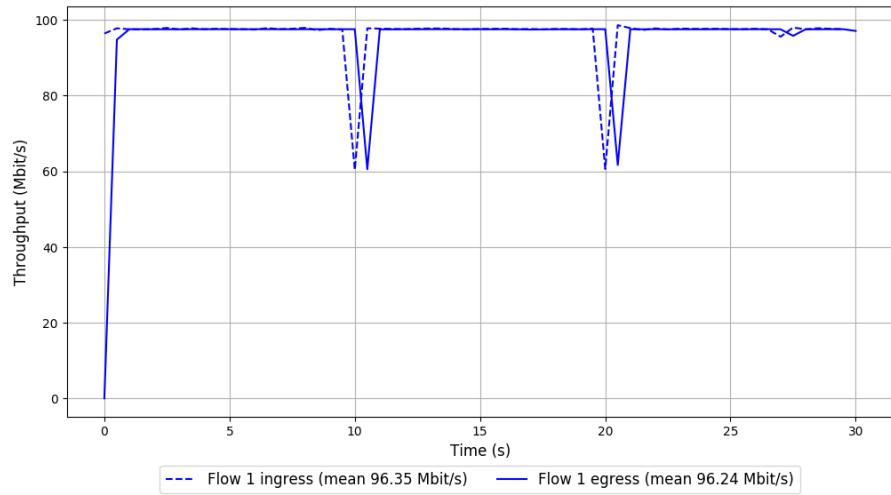


Run 4: Statistics of TCP BBR

```
Start at: 2019-01-03 06:07:49
End at: 2019-01-03 06:08:19
Local clock offset: -1.637 ms
Remote clock offset: 0.601 ms

# Below is generated by plot.py at 2019-01-03 06:36:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.24 Mbit/s
95th percentile per-packet one-way delay: 9.906 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 96.24 Mbit/s
95th percentile per-packet one-way delay: 9.906 ms
Loss rate: 0.12%
```

Run 4: Report of TCP BBR — Data Link

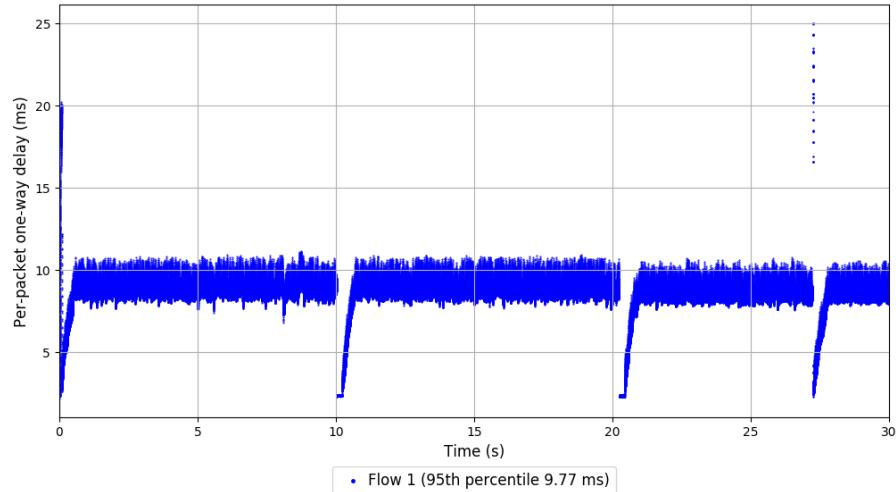
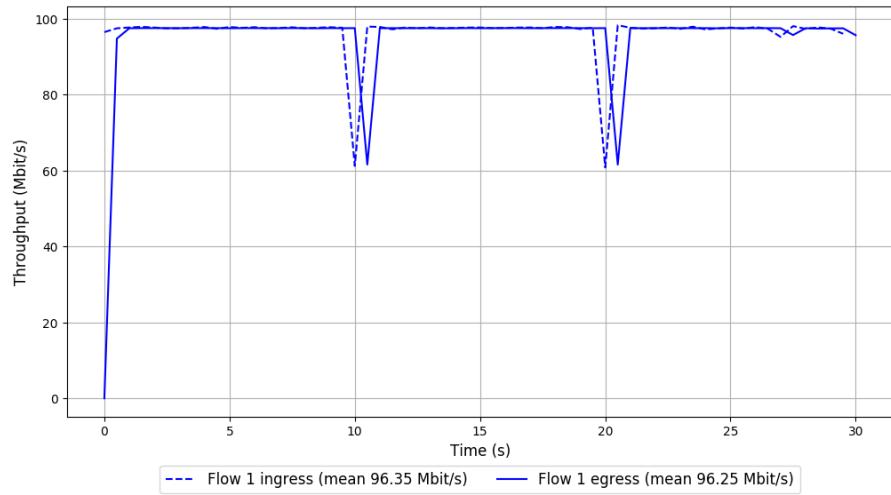


Run 5: Statistics of TCP BBR

```
Start at: 2019-01-03 06:29:21
End at: 2019-01-03 06:29:51
Local clock offset: -1.103 ms
Remote clock offset: 0.71 ms

# Below is generated by plot.py at 2019-01-03 06:36:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.25 Mbit/s
95th percentile per-packet one-way delay: 9.771 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 96.25 Mbit/s
95th percentile per-packet one-way delay: 9.771 ms
Loss rate: 0.11%
```

Run 5: Report of TCP BBR — Data Link

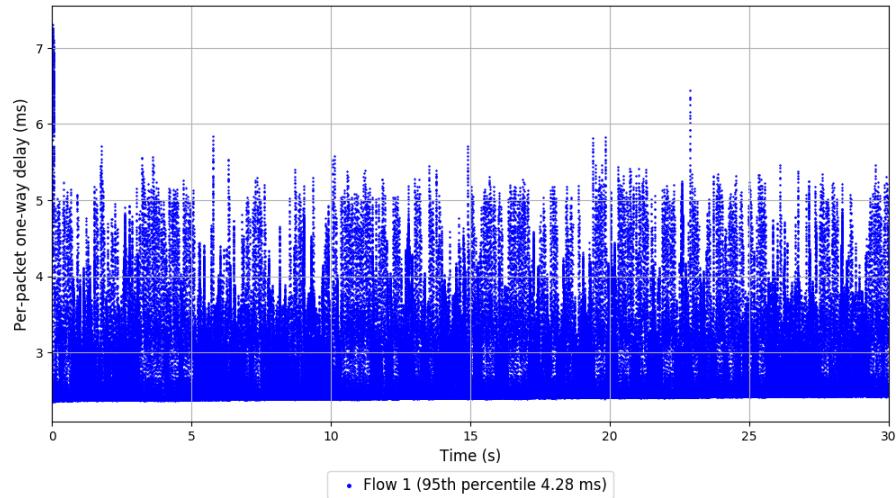
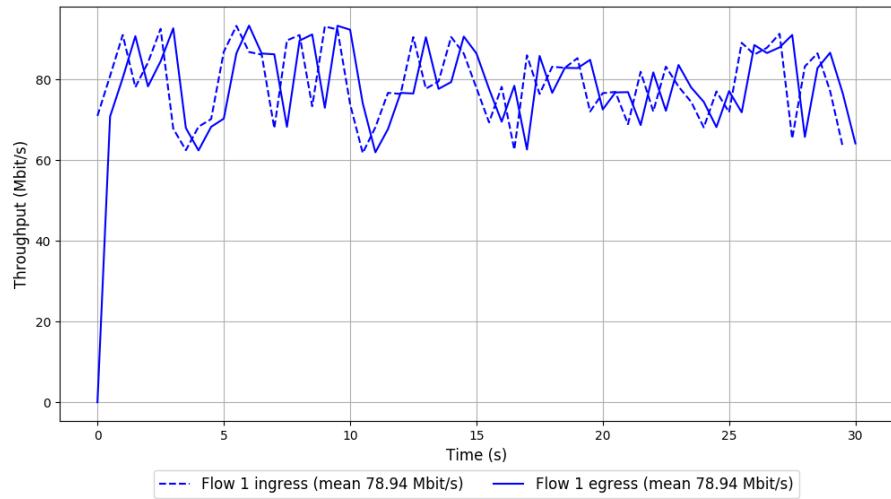


Run 1: Statistics of Copa

```
Start at: 2019-01-03 04:47:34
End at: 2019-01-03 04:48:04
Local clock offset: -8.061 ms
Remote clock offset: -0.18 ms

# Below is generated by plot.py at 2019-01-03 06:36:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.94 Mbit/s
95th percentile per-packet one-way delay: 4.281 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 78.94 Mbit/s
95th percentile per-packet one-way delay: 4.281 ms
Loss rate: 0.00%
```

Run 1: Report of Copa — Data Link

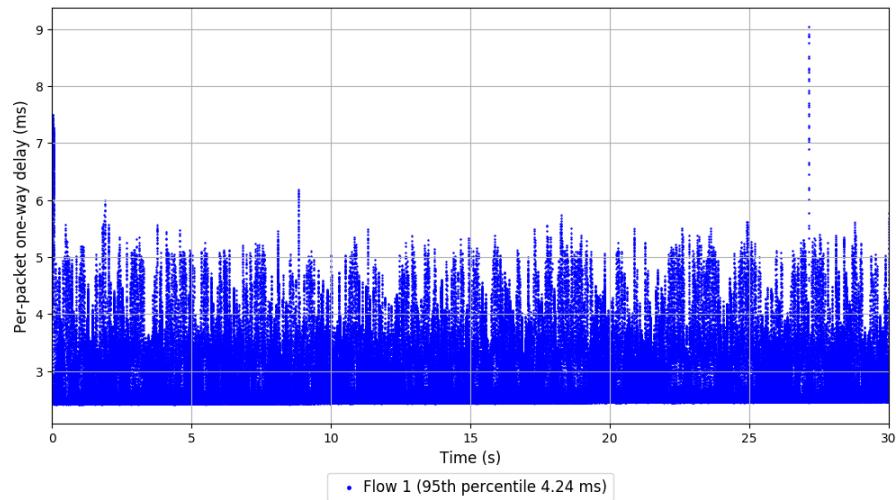
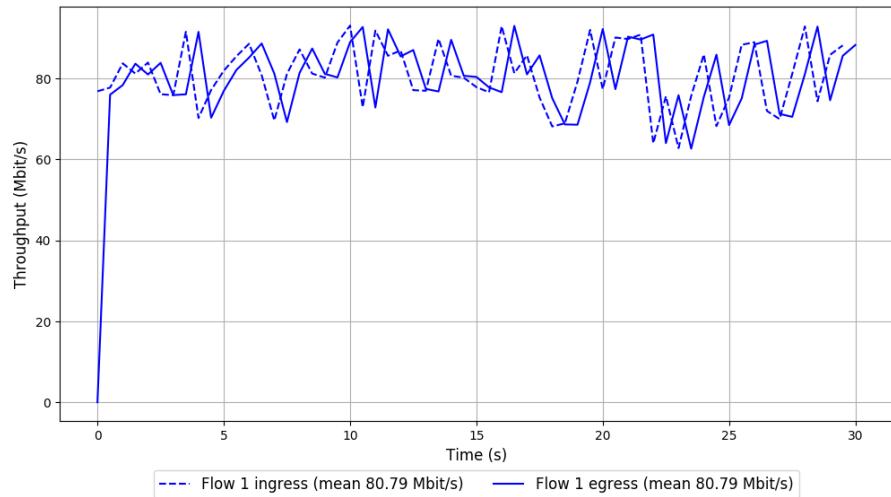


Run 2: Statistics of Copa

```
Start at: 2019-01-03 05:09:04
End at: 2019-01-03 05:09:34
Local clock offset: -10.009 ms
Remote clock offset: -0.028 ms

# Below is generated by plot.py at 2019-01-03 06:36:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 80.79 Mbit/s
95th percentile per-packet one-way delay: 4.242 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 80.79 Mbit/s
95th percentile per-packet one-way delay: 4.242 ms
Loss rate: 0.01%
```

Run 2: Report of Copa — Data Link

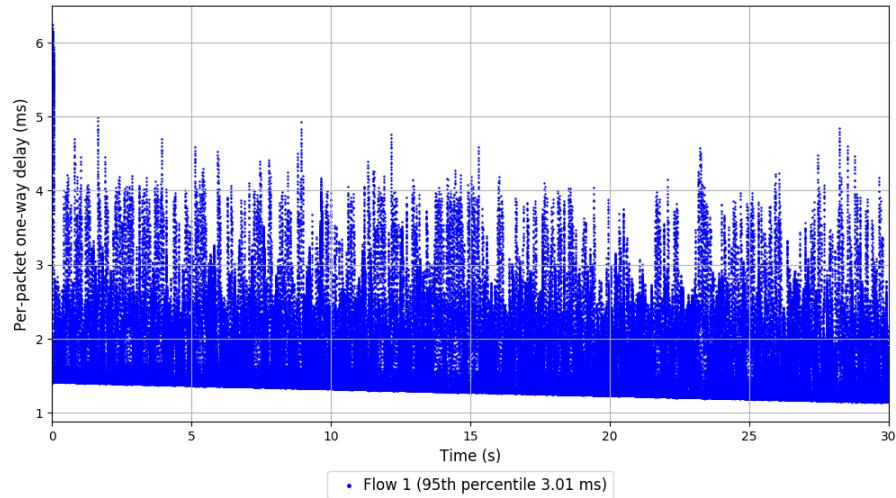
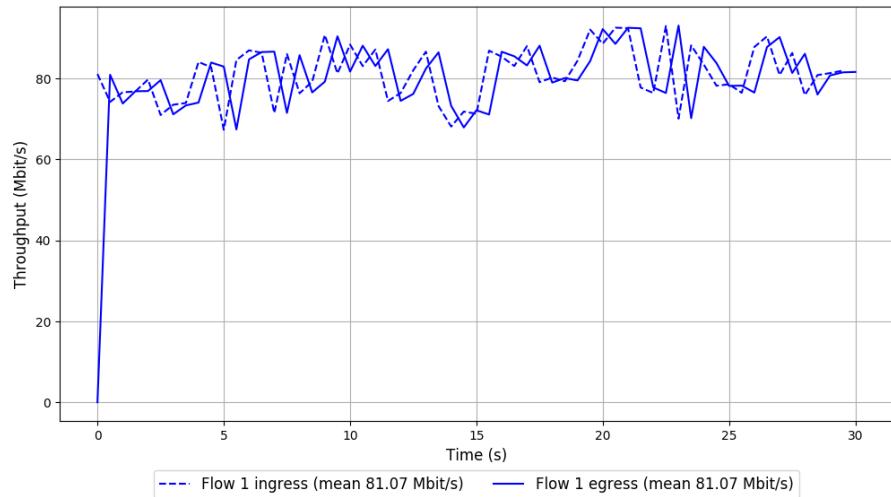


Run 3: Statistics of Copa

```
Start at: 2019-01-03 05:30:35
End at: 2019-01-03 05:31:05
Local clock offset: -6.725 ms
Remote clock offset: 0.183 ms

# Below is generated by plot.py at 2019-01-03 06:36:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 81.07 Mbit/s
95th percentile per-packet one-way delay: 3.011 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 81.07 Mbit/s
95th percentile per-packet one-way delay: 3.011 ms
Loss rate: 0.01%
```

Run 3: Report of Copa — Data Link

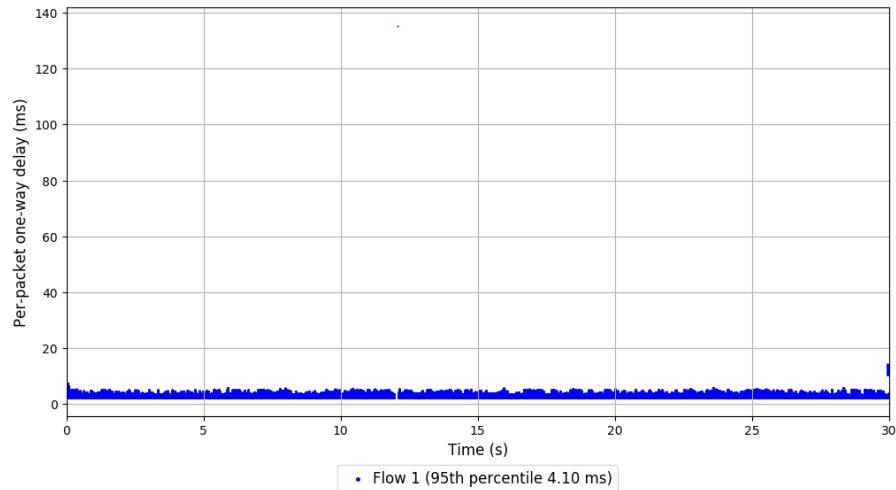
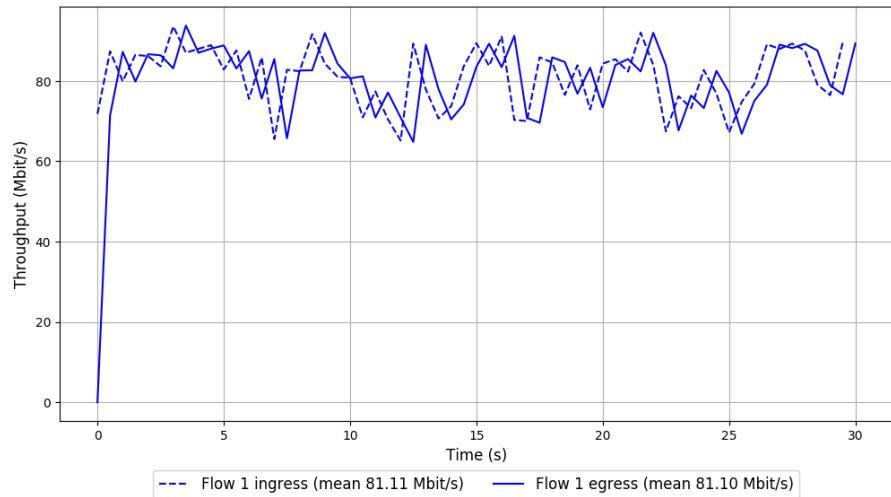


Run 4: Statistics of Copa

```
Start at: 2019-01-03 05:52:02
End at: 2019-01-03 05:52:32
Local clock offset: 0.012 ms
Remote clock offset: 0.391 ms

# Below is generated by plot.py at 2019-01-03 06:37:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 81.10 Mbit/s
95th percentile per-packet one-way delay: 4.097 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 81.10 Mbit/s
95th percentile per-packet one-way delay: 4.097 ms
Loss rate: 0.01%
```

Run 4: Report of Copa — Data Link

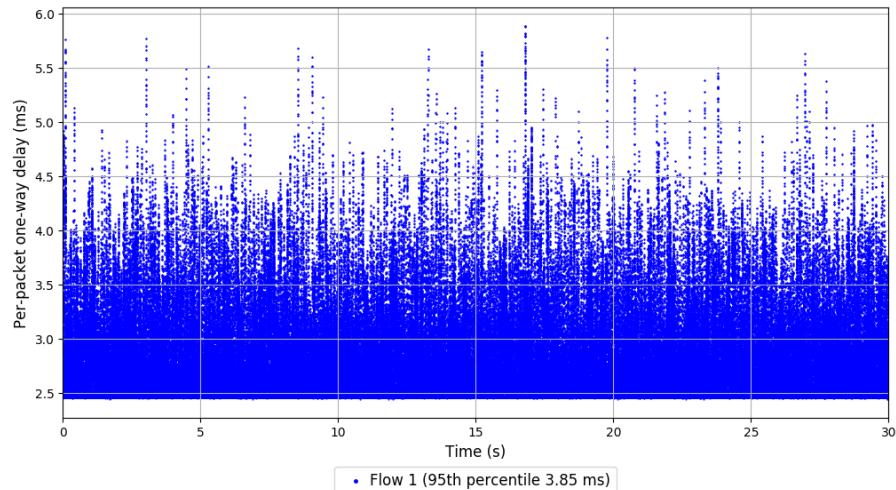
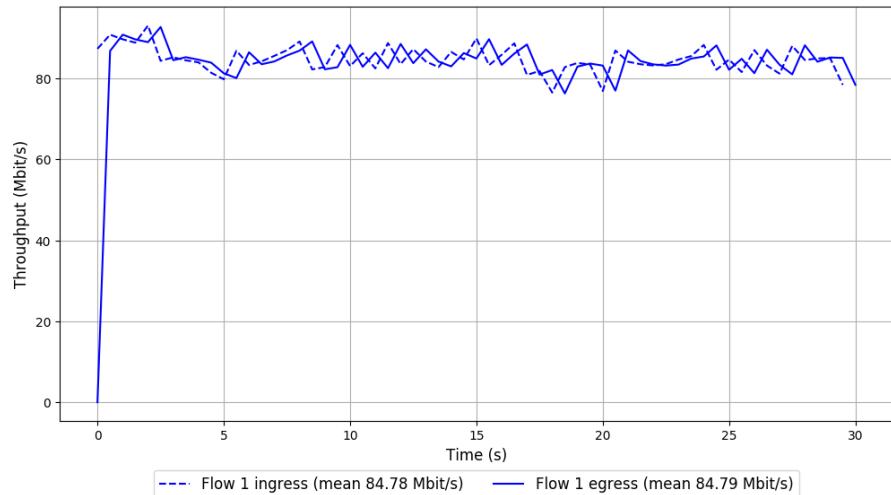


Run 5: Statistics of Copa

```
Start at: 2019-01-03 06:13:28
End at: 2019-01-03 06:13:58
Local clock offset: -1.7 ms
Remote clock offset: 0.522 ms

# Below is generated by plot.py at 2019-01-03 06:37:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 84.79 Mbit/s
95th percentile per-packet one-way delay: 3.853 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 84.79 Mbit/s
95th percentile per-packet one-way delay: 3.853 ms
Loss rate: 0.01%
```

Run 5: Report of Copa — Data Link

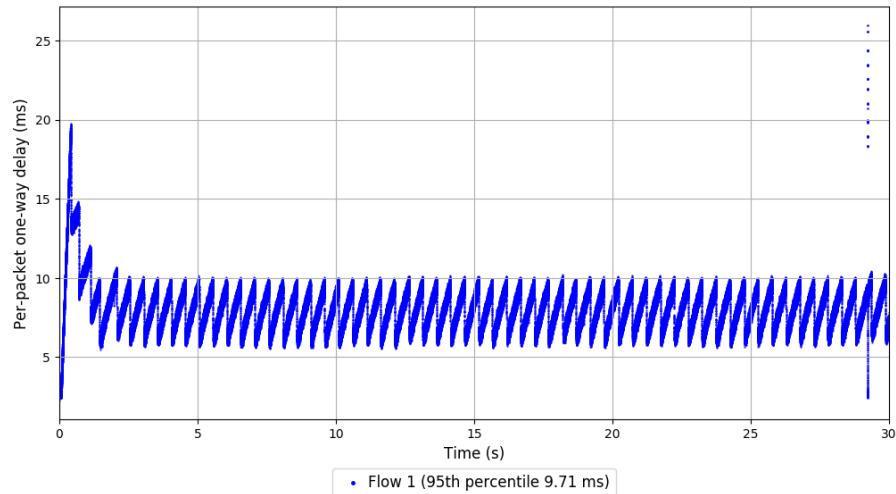
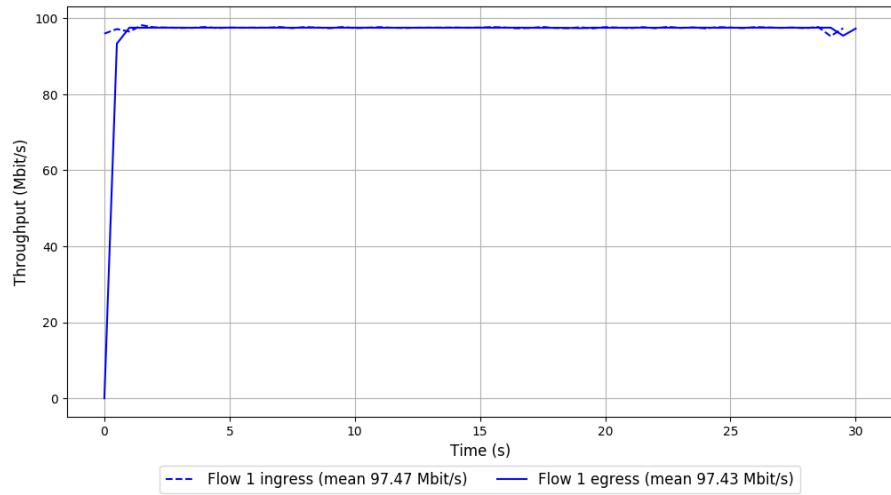


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2019-01-03 04:58:52
End at: 2019-01-03 04:59:22
Local clock offset: -9.108 ms
Remote clock offset: -0.042 ms

# Below is generated by plot.py at 2019-01-03 06:37:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.43 Mbit/s
95th percentile per-packet one-way delay: 9.712 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 97.43 Mbit/s
95th percentile per-packet one-way delay: 9.712 ms
Loss rate: 0.05%
```

Run 1: Report of TCP Cubic — Data Link

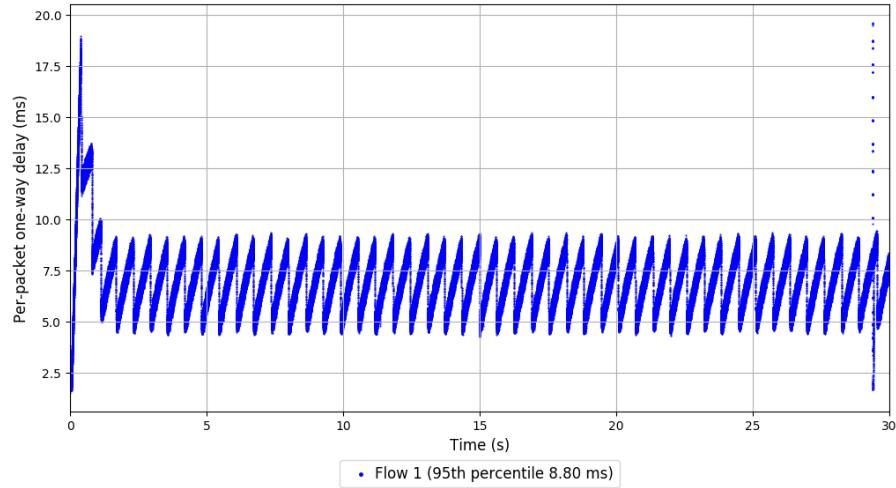
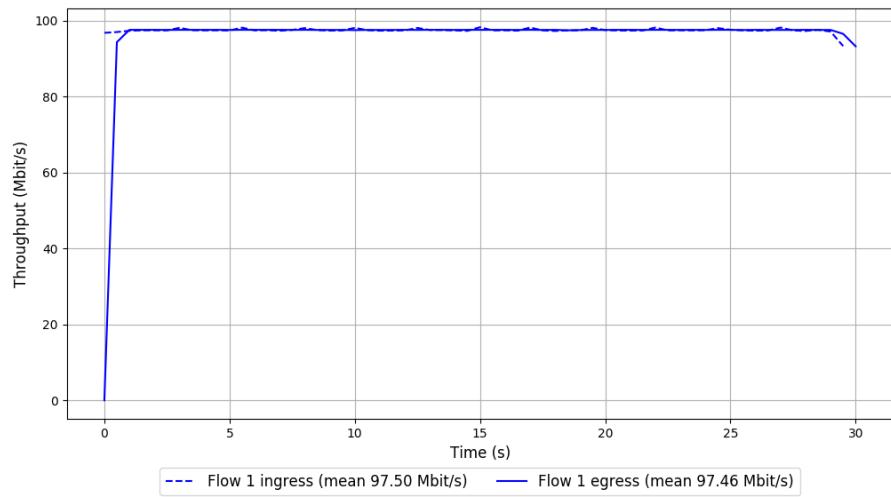


Run 2: Statistics of TCP Cubic

```
Start at: 2019-01-03 05:20:23
End at: 2019-01-03 05:20:53
Local clock offset: -11.54 ms
Remote clock offset: 0.176 ms

# Below is generated by plot.py at 2019-01-03 06:37:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 8.797 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 8.797 ms
Loss rate: 0.05%
```

Run 2: Report of TCP Cubic — Data Link

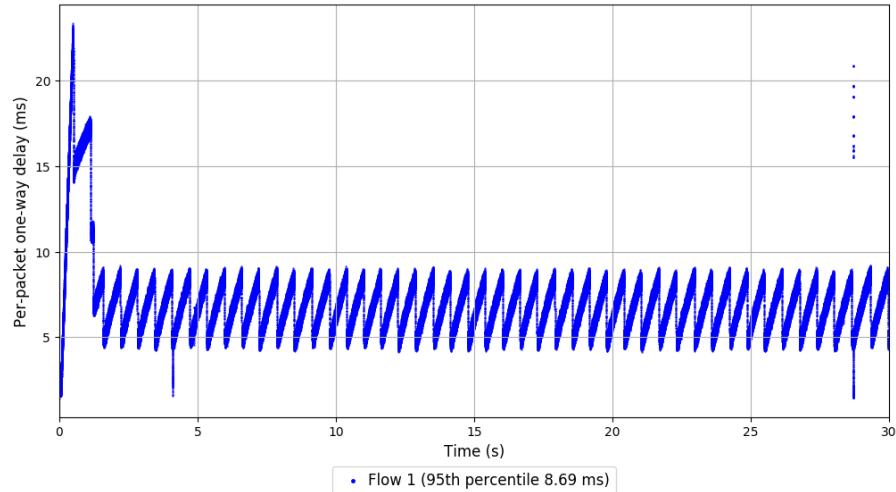
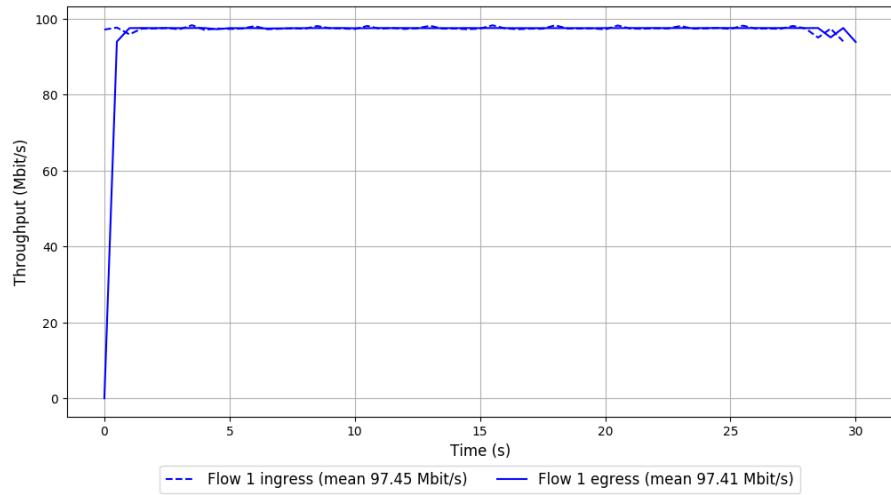


Run 3: Statistics of TCP Cubic

```
Start at: 2019-01-03 05:41:54
End at: 2019-01-03 05:42:24
Local clock offset: -2.505 ms
Remote clock offset: 0.325 ms

# Below is generated by plot.py at 2019-01-03 06:37:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.41 Mbit/s
95th percentile per-packet one-way delay: 8.690 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 97.41 Mbit/s
95th percentile per-packet one-way delay: 8.690 ms
Loss rate: 0.04%
```

Run 3: Report of TCP Cubic — Data Link

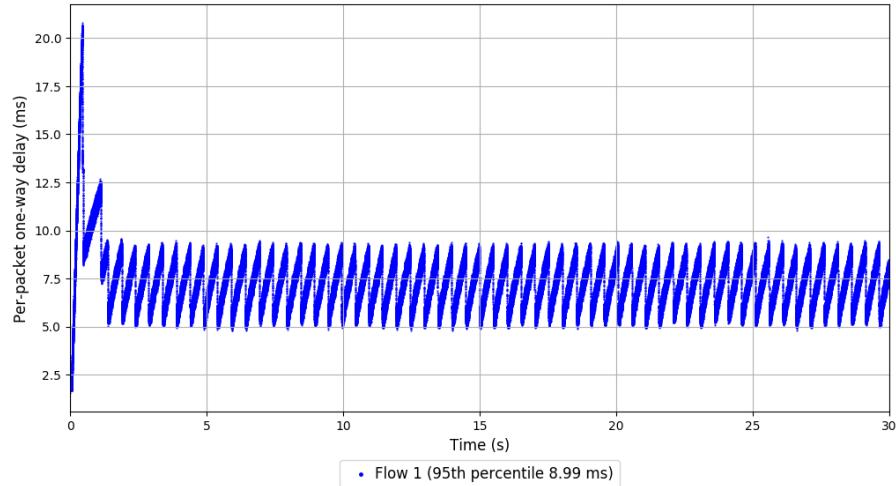
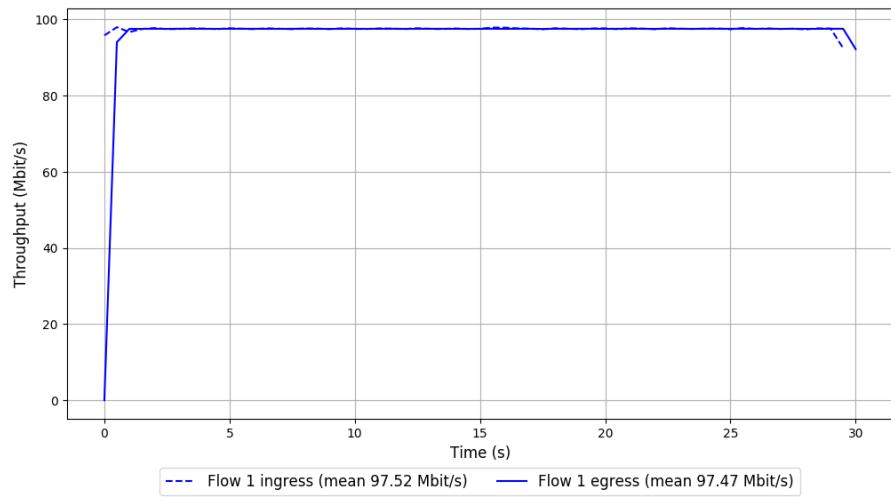


Run 4: Statistics of TCP Cubic

```
Start at: 2019-01-03 06:03:19
End at: 2019-01-03 06:03:49
Local clock offset: -2.149 ms
Remote clock offset: 0.495 ms

# Below is generated by plot.py at 2019-01-03 06:37:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.47 Mbit/s
95th percentile per-packet one-way delay: 8.989 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 97.47 Mbit/s
95th percentile per-packet one-way delay: 8.989 ms
Loss rate: 0.06%
```

Run 4: Report of TCP Cubic — Data Link

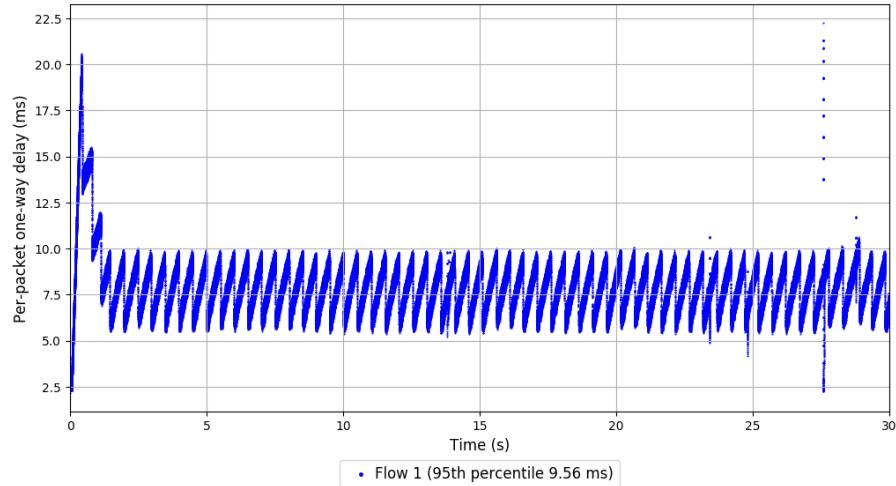
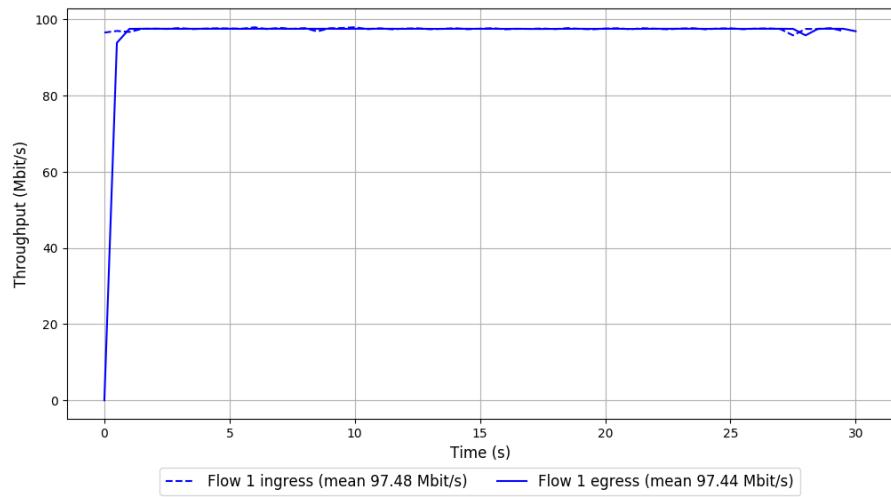


Run 5: Statistics of TCP Cubic

```
Start at: 2019-01-03 06:24:48
End at: 2019-01-03 06:25:18
Local clock offset: -1.524 ms
Remote clock offset: 0.631 ms

# Below is generated by plot.py at 2019-01-03 06:37:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.44 Mbit/s
95th percentile per-packet one-way delay: 9.560 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 97.44 Mbit/s
95th percentile per-packet one-way delay: 9.560 ms
Loss rate: 0.05%
```

Run 5: Report of TCP Cubic — Data Link

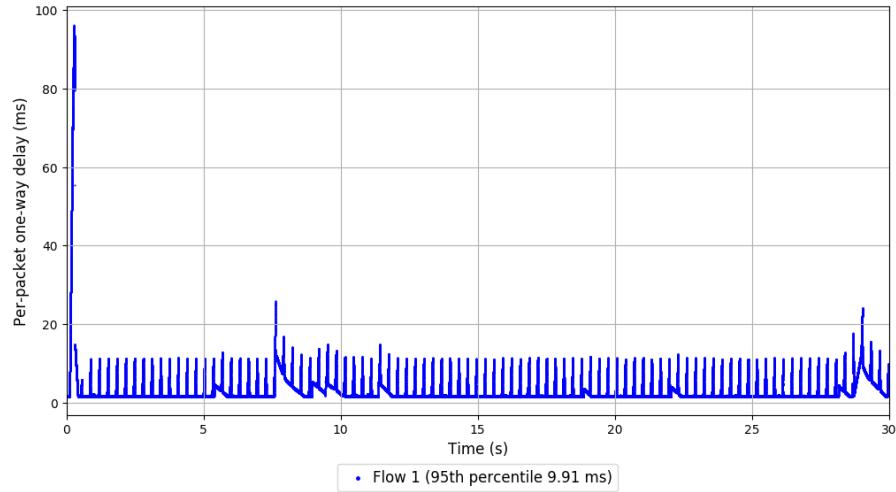
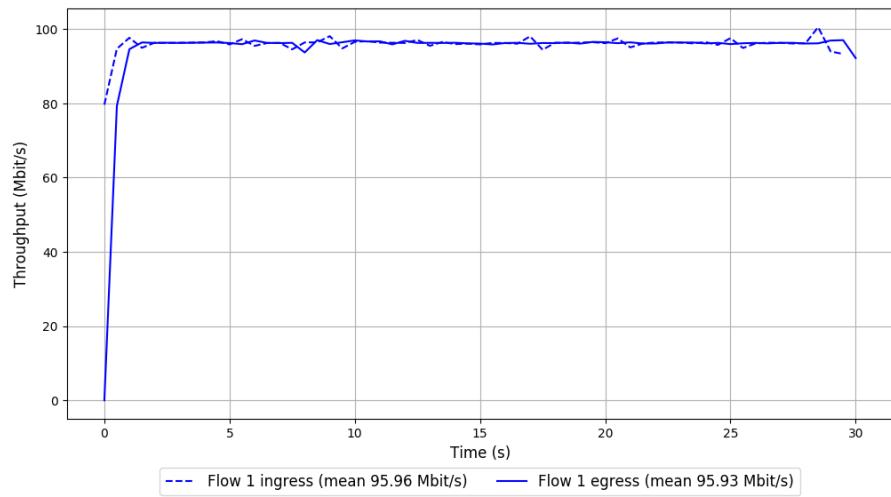


```
Run 1: Statistics of FillP
```

```
Start at: 2019-01-03 04:54:22
End at: 2019-01-03 04:54:52
Local clock offset: -9.453 ms
Remote clock offset: -0.13 ms

# Below is generated by plot.py at 2019-01-03 06:38:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.93 Mbit/s
95th percentile per-packet one-way delay: 9.908 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 95.93 Mbit/s
95th percentile per-packet one-way delay: 9.908 ms
Loss rate: 0.04%
```

Run 1: Report of FillP — Data Link

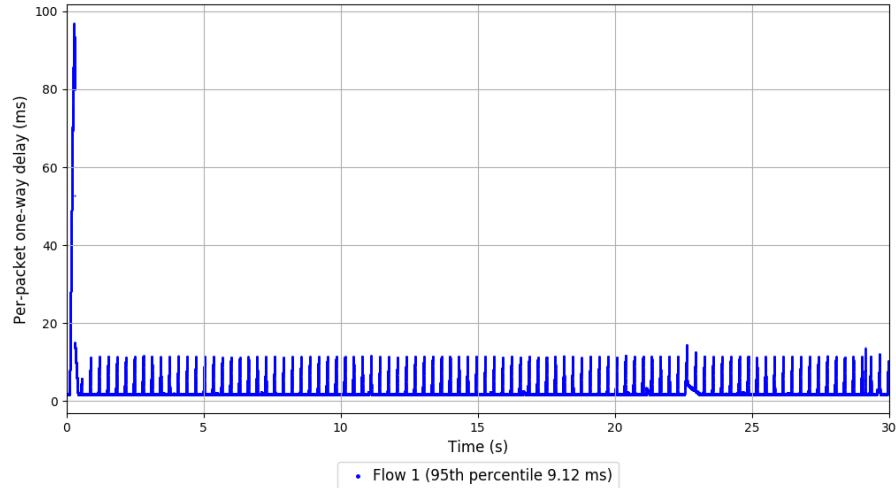
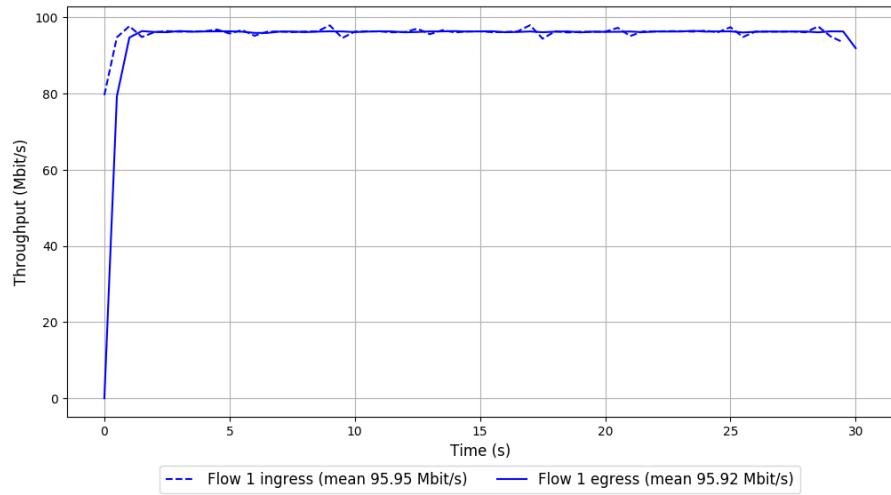


Run 2: Statistics of FillP

```
Start at: 2019-01-03 05:15:52
End at: 2019-01-03 05:16:22
Local clock offset: -11.211 ms
Remote clock offset: 0.111 ms

# Below is generated by plot.py at 2019-01-03 06:38:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.92 Mbit/s
95th percentile per-packet one-way delay: 9.123 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 95.92 Mbit/s
95th percentile per-packet one-way delay: 9.123 ms
Loss rate: 0.03%
```

Run 2: Report of FillP — Data Link

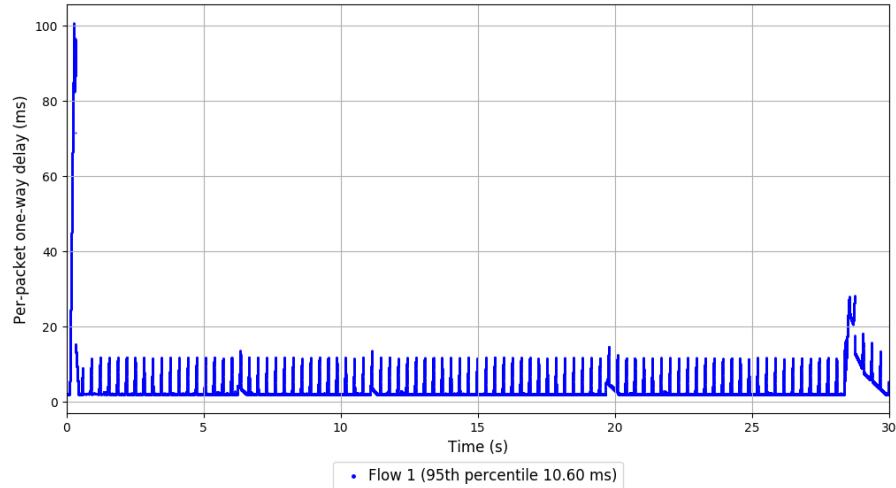
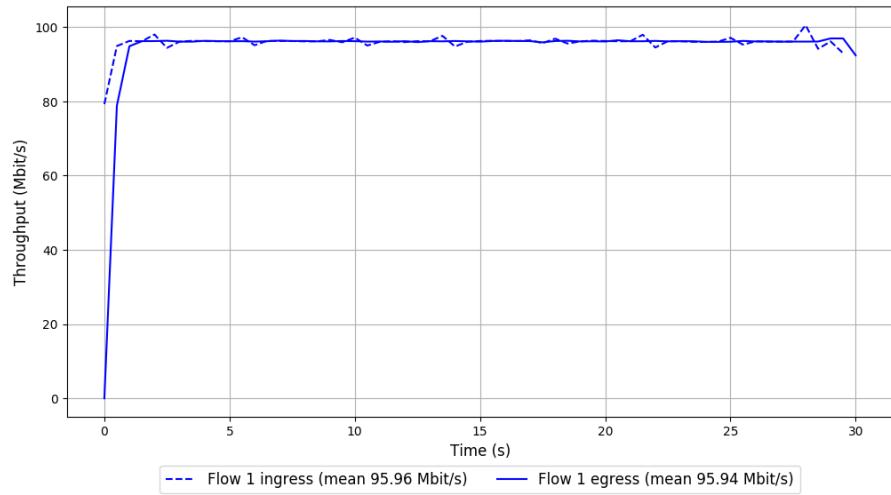


Run 3: Statistics of FillP

```
Start at: 2019-01-03 05:37:23
End at: 2019-01-03 05:37:53
Local clock offset: -3.021 ms
Remote clock offset: 0.3 ms

# Below is generated by plot.py at 2019-01-03 06:38:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.94 Mbit/s
95th percentile per-packet one-way delay: 10.602 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 95.94 Mbit/s
95th percentile per-packet one-way delay: 10.602 ms
Loss rate: 0.03%
```

Run 3: Report of FillP — Data Link

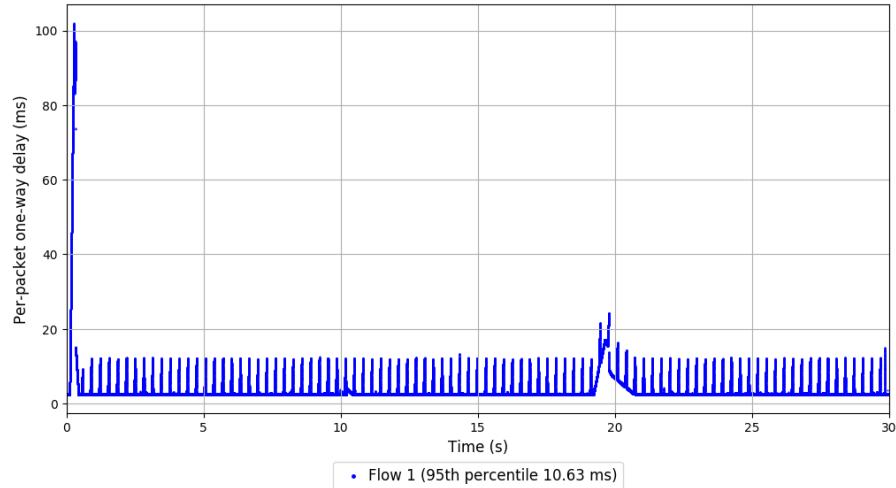
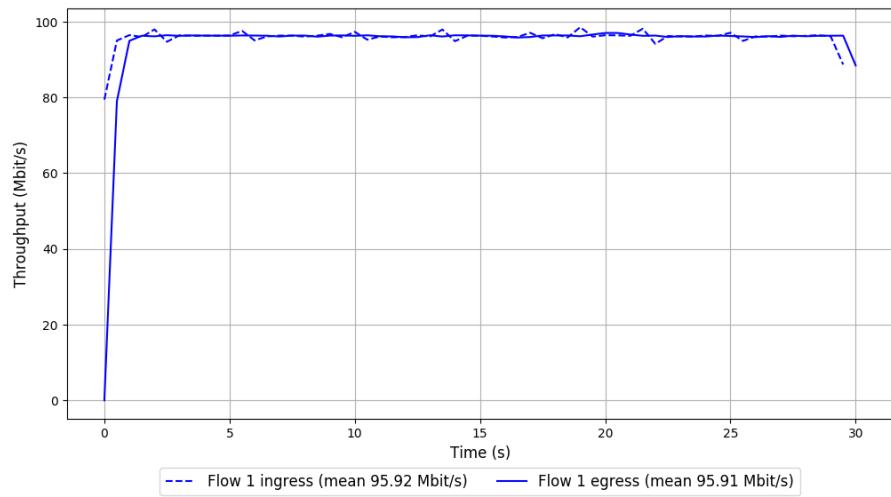


Run 4: Statistics of FillP

```
Start at: 2019-01-03 05:58:48
End at: 2019-01-03 05:59:18
Local clock offset: -0.785 ms
Remote clock offset: 0.48 ms

# Below is generated by plot.py at 2019-01-03 06:38:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.91 Mbit/s
95th percentile per-packet one-way delay: 10.626 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 95.91 Mbit/s
95th percentile per-packet one-way delay: 10.626 ms
Loss rate: 0.02%
```

Run 4: Report of FillP — Data Link

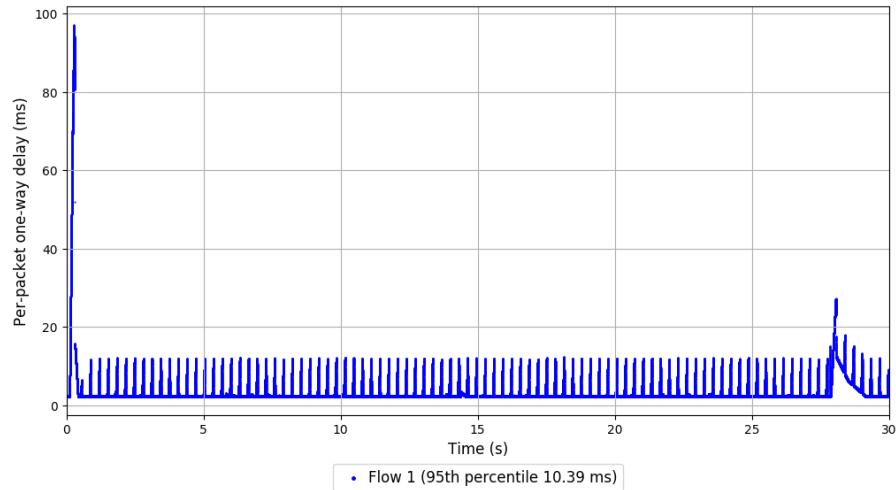
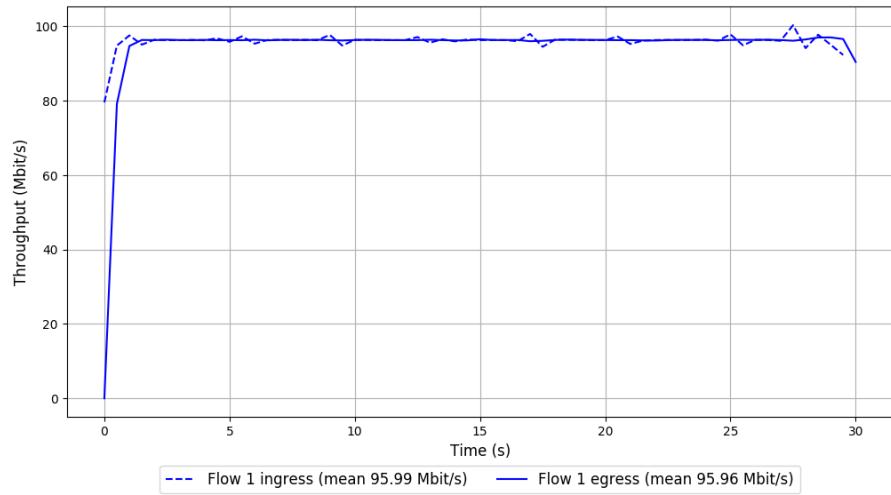


Run 5: Statistics of FillP

```
Start at: 2019-01-03 06:20:16
End at: 2019-01-03 06:20:46
Local clock offset: -1.604 ms
Remote clock offset: 0.613 ms

# Below is generated by plot.py at 2019-01-03 06:39:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.96 Mbit/s
95th percentile per-packet one-way delay: 10.387 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 95.96 Mbit/s
95th percentile per-packet one-way delay: 10.387 ms
Loss rate: 0.04%
```

Run 5: Report of FillP — Data Link

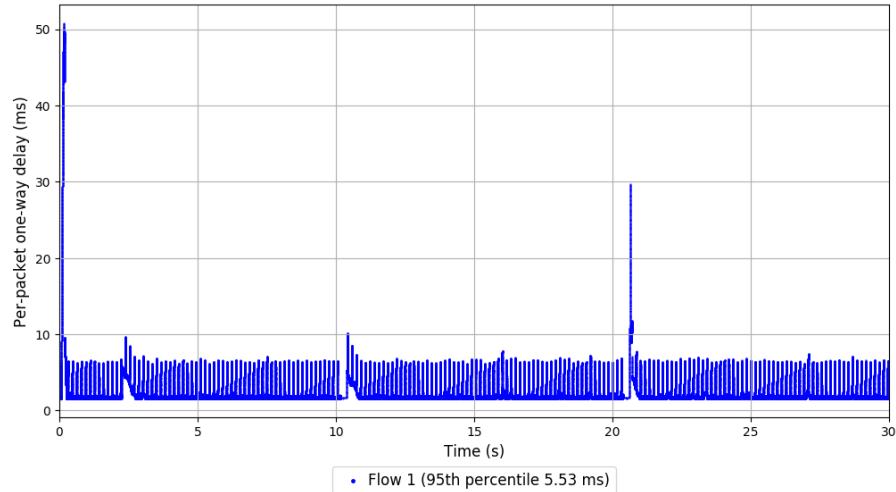
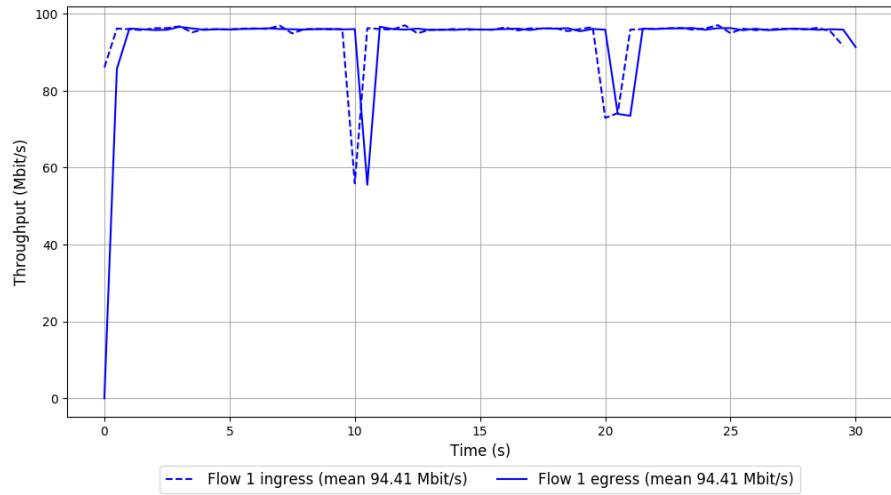


```
Run 1: Statistics of FillP-Sheep
```

```
Start at: 2019-01-03 05:01:09
End at: 2019-01-03 05:01:39
Local clock offset: -10.059 ms
Remote clock offset: -0.079 ms

# Below is generated by plot.py at 2019-01-03 06:39:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.41 Mbit/s
95th percentile per-packet one-way delay: 5.532 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 94.41 Mbit/s
95th percentile per-packet one-way delay: 5.532 ms
Loss rate: 0.01%
```

Run 1: Report of FillP-Sheep — Data Link

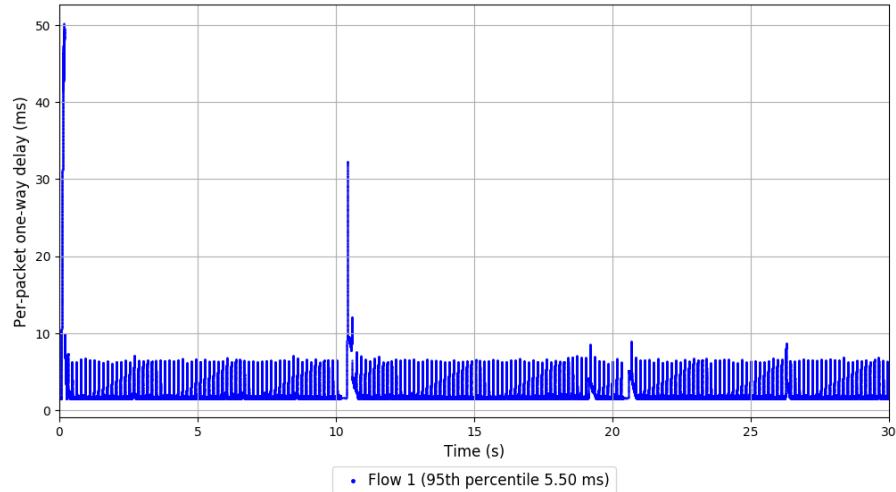
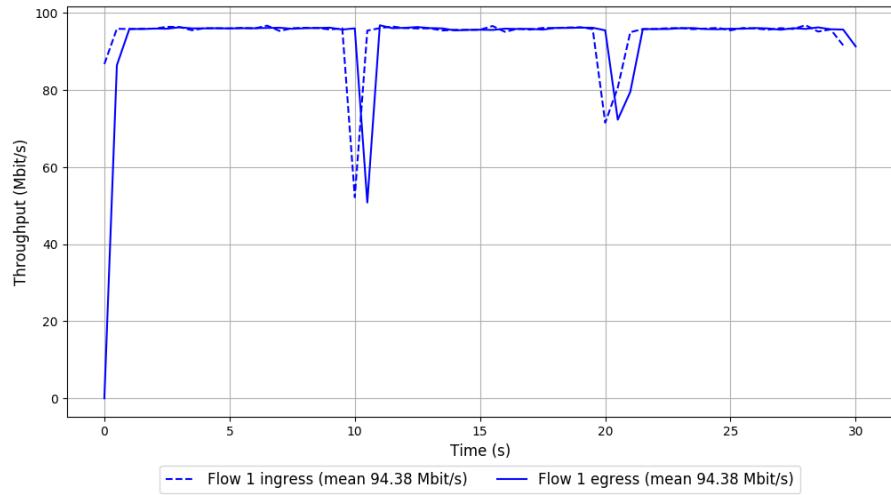


Run 2: Statistics of FillP-Sheep

```
Start at: 2019-01-03 05:22:39
End at: 2019-01-03 05:23:09
Local clock offset: -11.728 ms
Remote clock offset: 0.204 ms

# Below is generated by plot.py at 2019-01-03 06:39:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.38 Mbit/s
95th percentile per-packet one-way delay: 5.501 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 94.38 Mbit/s
95th percentile per-packet one-way delay: 5.501 ms
Loss rate: 0.01%
```

Run 2: Report of FillP-Sheep — Data Link

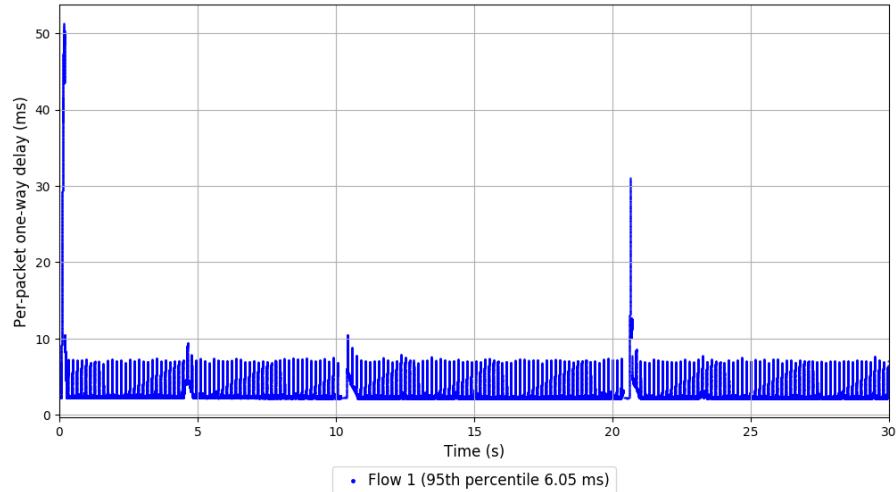
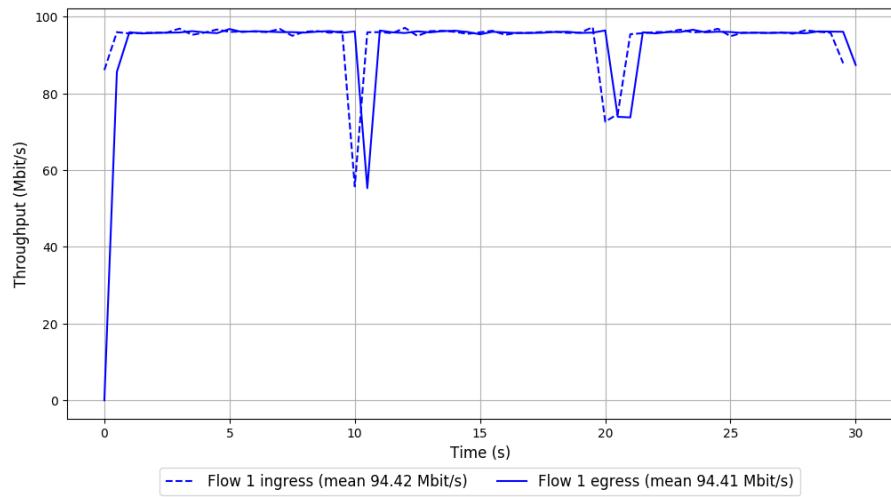


Run 3: Statistics of FillP-Sheep

```
Start at: 2019-01-03 05:44:10
End at: 2019-01-03 05:44:40
Local clock offset: -1.235 ms
Remote clock offset: 0.383 ms

# Below is generated by plot.py at 2019-01-03 06:39:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.41 Mbit/s
95th percentile per-packet one-way delay: 6.055 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 94.41 Mbit/s
95th percentile per-packet one-way delay: 6.055 ms
Loss rate: 0.02%
```

Run 3: Report of FillP-Sheep — Data Link

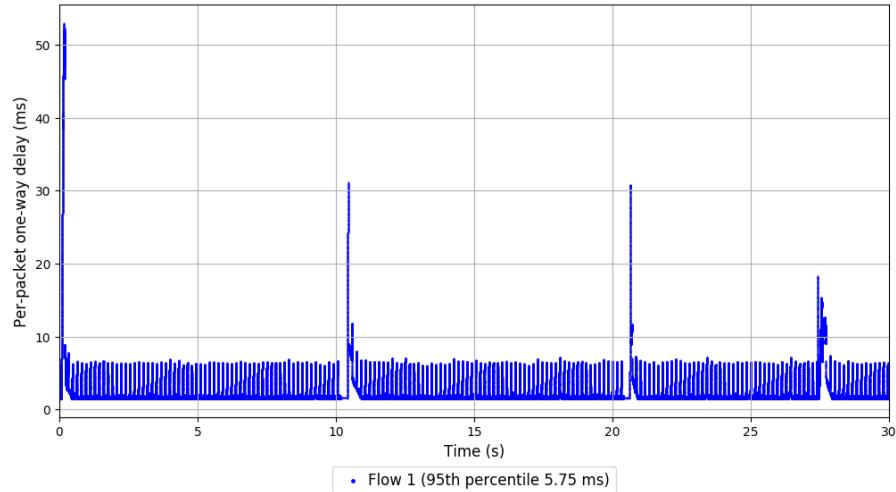
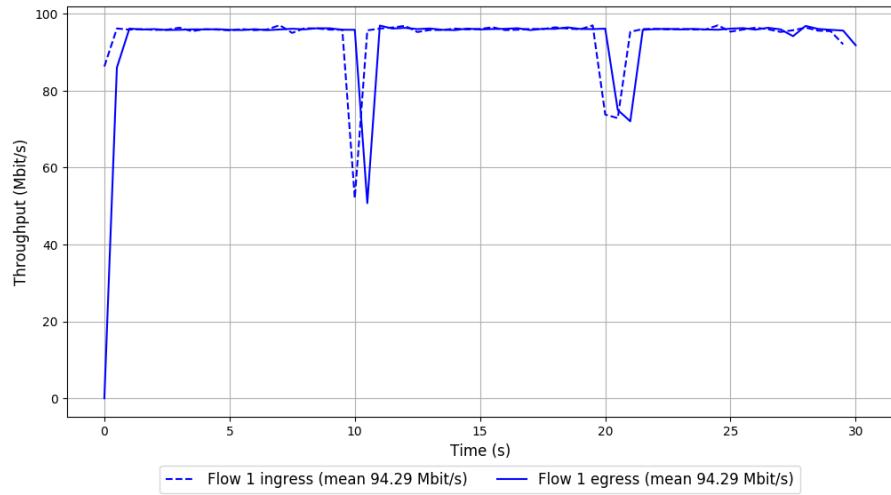


Run 4: Statistics of FillP-Sheep

```
Start at: 2019-01-03 06:05:35
End at: 2019-01-03 06:06:05
Local clock offset: -2.297 ms
Remote clock offset: 0.555 ms

# Below is generated by plot.py at 2019-01-03 06:39:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.29 Mbit/s
95th percentile per-packet one-way delay: 5.747 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 94.29 Mbit/s
95th percentile per-packet one-way delay: 5.747 ms
Loss rate: 0.01%
```

Run 4: Report of FillP-Sheep — Data Link

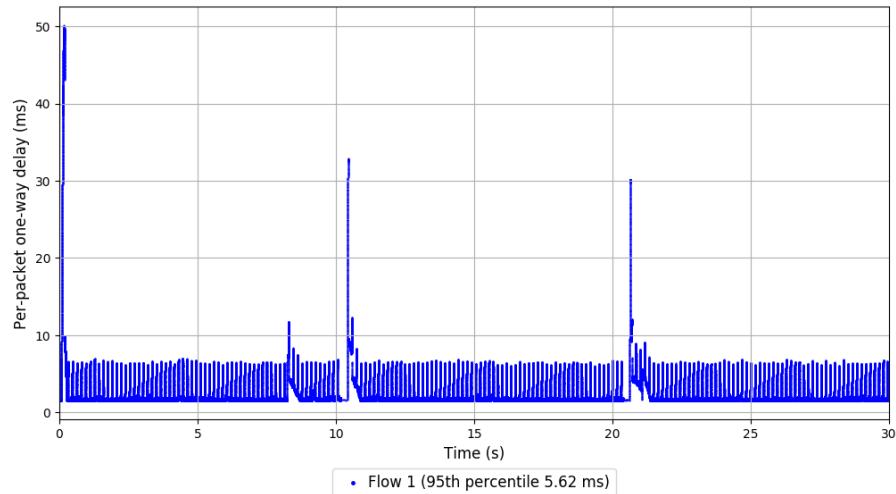
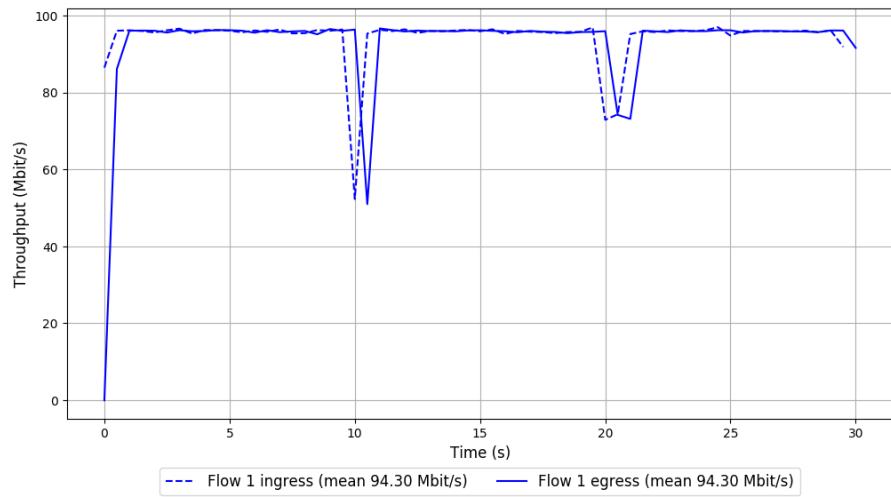


Run 5: Statistics of FillP-Sheep

```
Start at: 2019-01-03 06:27:04
End at: 2019-01-03 06:27:34
Local clock offset: -2.036 ms
Remote clock offset: 0.587 ms

# Below is generated by plot.py at 2019-01-03 06:39:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.30 Mbit/s
95th percentile per-packet one-way delay: 5.617 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 94.30 Mbit/s
95th percentile per-packet one-way delay: 5.617 ms
Loss rate: 0.01%
```

Run 5: Report of FillP-Sheep — Data Link

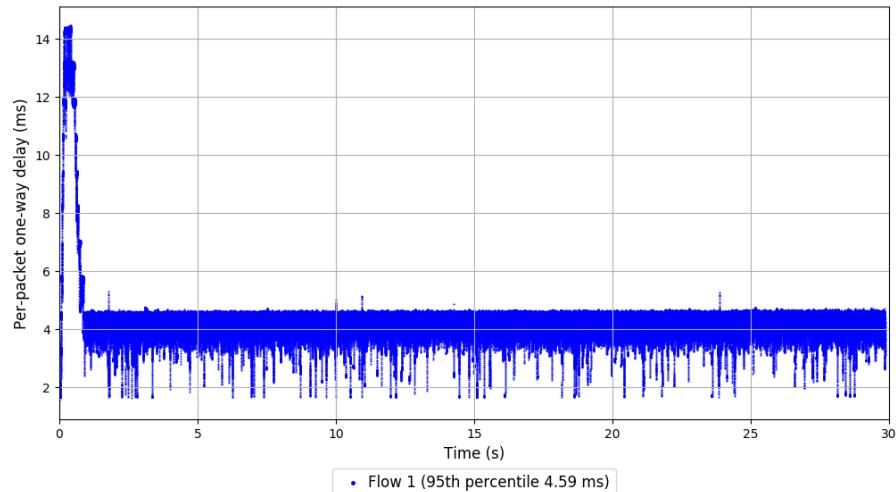
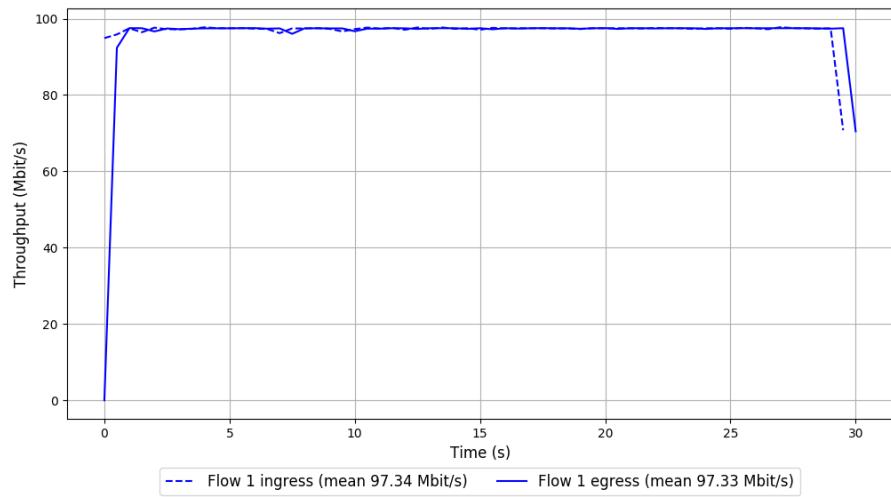


Run 1: Statistics of Indigo

```
Start at: 2019-01-03 05:04:33
End at: 2019-01-03 05:05:03
Local clock offset: -10.401 ms
Remote clock offset: -0.039 ms

# Below is generated by plot.py at 2019-01-03 06:39:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.33 Mbit/s
95th percentile per-packet one-way delay: 4.593 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 97.33 Mbit/s
95th percentile per-packet one-way delay: 4.593 ms
Loss rate: 0.02%
```

Run 1: Report of Indigo — Data Link

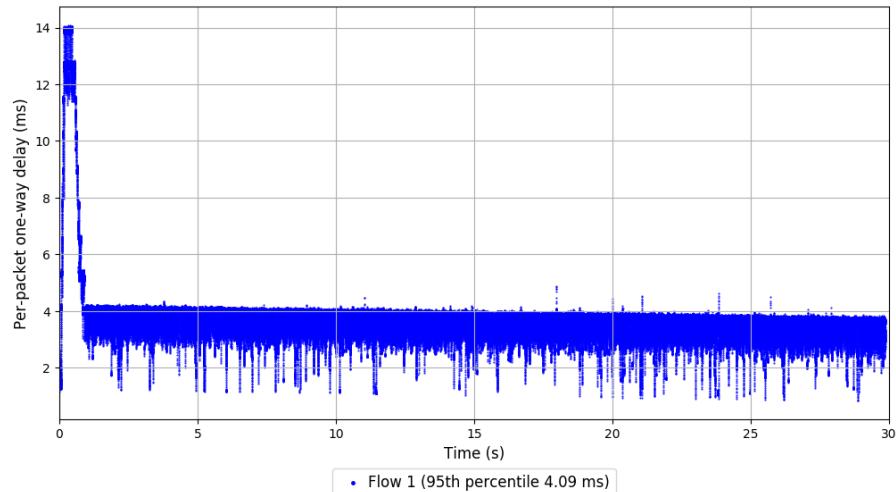
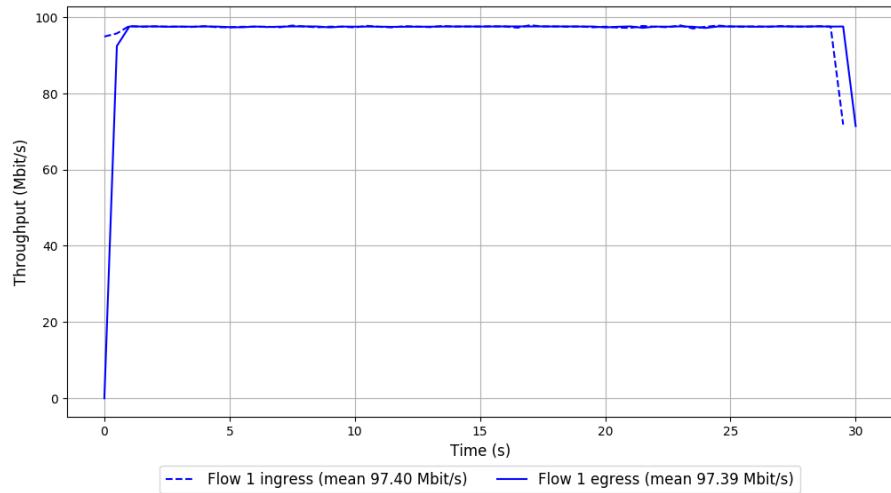


Run 2: Statistics of Indigo

```
Start at: 2019-01-03 05:26:03
End at: 2019-01-03 05:26:33
Local clock offset: -10.108 ms
Remote clock offset: 0.21 ms

# Below is generated by plot.py at 2019-01-03 06:39:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.39 Mbit/s
95th percentile per-packet one-way delay: 4.086 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 97.39 Mbit/s
95th percentile per-packet one-way delay: 4.086 ms
Loss rate: 0.02%
```

Run 2: Report of Indigo — Data Link

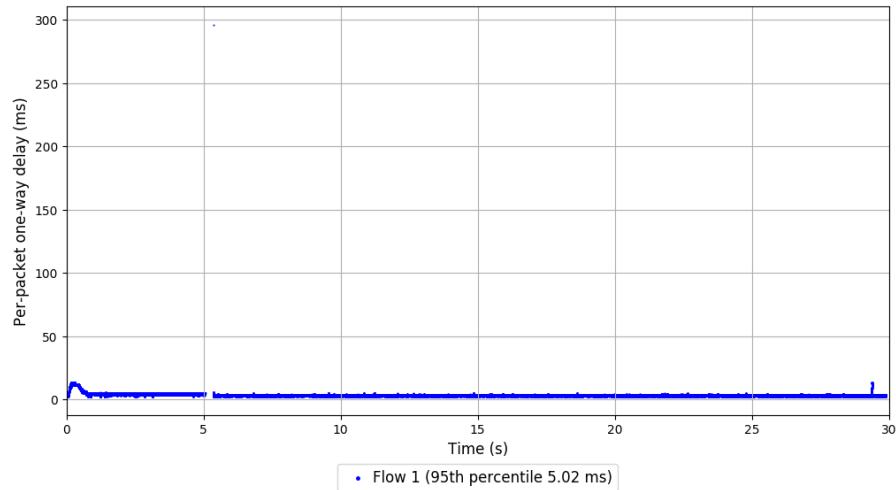
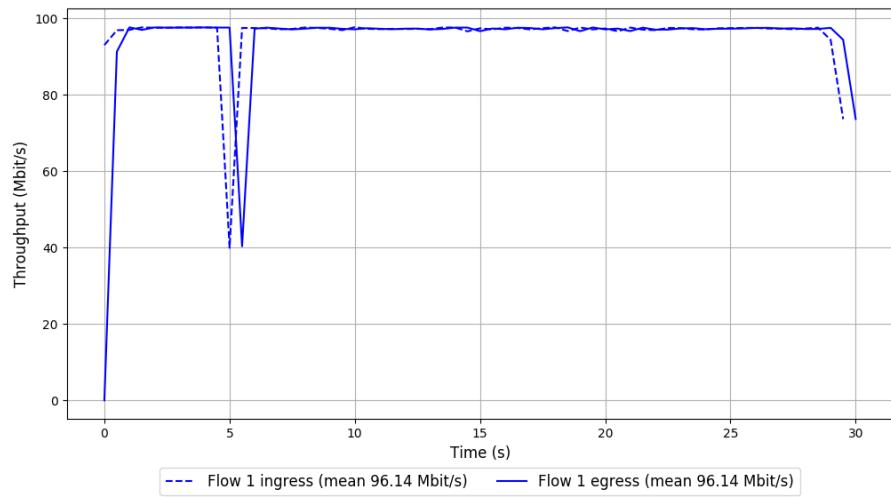


Run 3: Statistics of Indigo

```
Start at: 2019-01-03 05:47:31
End at: 2019-01-03 05:48:01
Local clock offset: -0.666 ms
Remote clock offset: 0.321 ms

# Below is generated by plot.py at 2019-01-03 06:40:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.14 Mbit/s
95th percentile per-packet one-way delay: 5.016 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 96.14 Mbit/s
95th percentile per-packet one-way delay: 5.016 ms
Loss rate: 0.01%
```

Run 3: Report of Indigo — Data Link

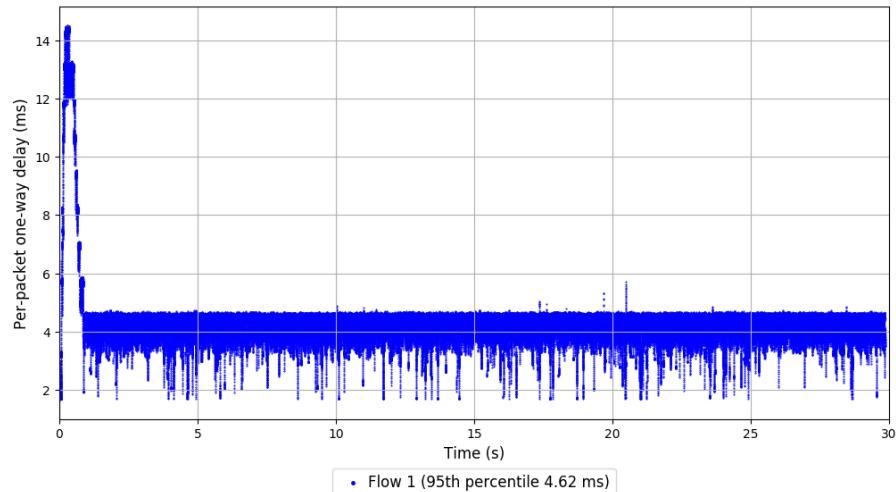
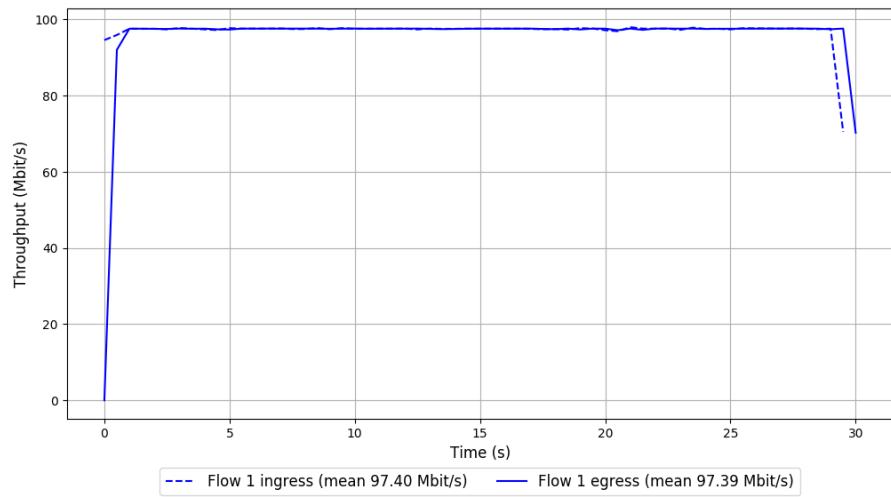


Run 4: Statistics of Indigo

```
Start at: 2019-01-03 06:08:57
End at: 2019-01-03 06:09:27
Local clock offset: -2.423 ms
Remote clock offset: 0.53 ms

# Below is generated by plot.py at 2019-01-03 06:40:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.39 Mbit/s
95th percentile per-packet one-way delay: 4.624 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 97.39 Mbit/s
95th percentile per-packet one-way delay: 4.624 ms
Loss rate: 0.02%
```

Run 4: Report of Indigo — Data Link

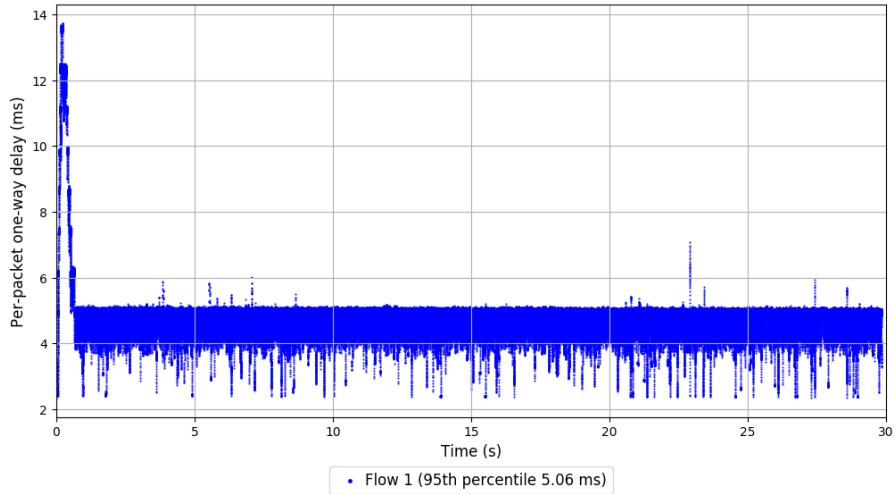
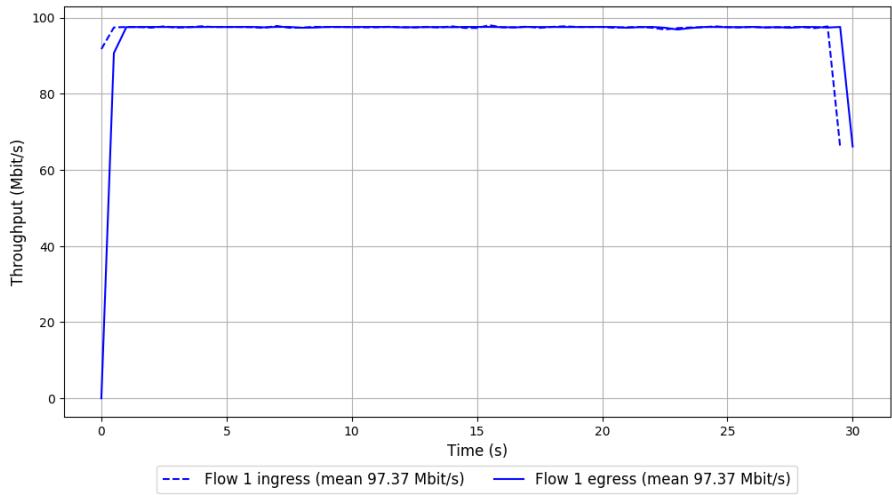


Run 5: Statistics of Indigo

```
Start at: 2019-01-03 06:30:29
End at: 2019-01-03 06:30:59
Local clock offset: -1.118 ms
Remote clock offset: 0.55 ms

# Below is generated by plot.py at 2019-01-03 06:40:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.37 Mbit/s
95th percentile per-packet one-way delay: 5.061 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.37 Mbit/s
95th percentile per-packet one-way delay: 5.061 ms
Loss rate: 0.01%
```

Run 5: Report of Indigo — Data Link

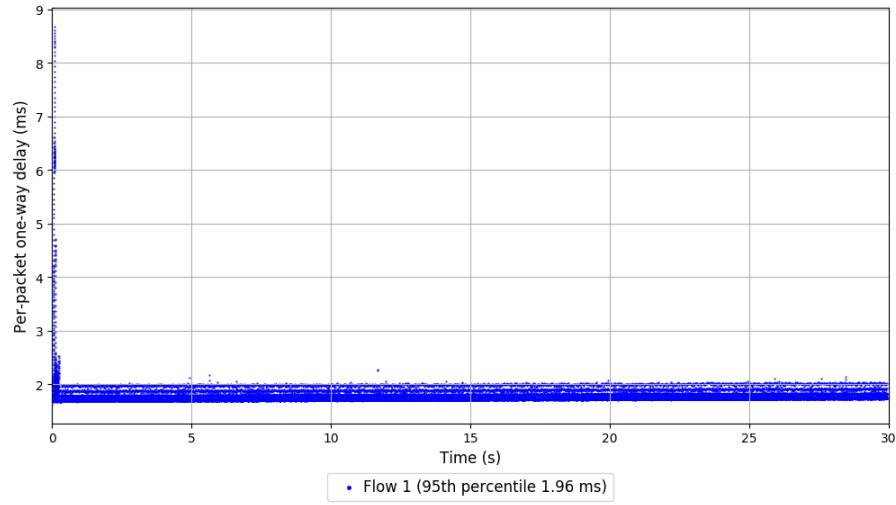
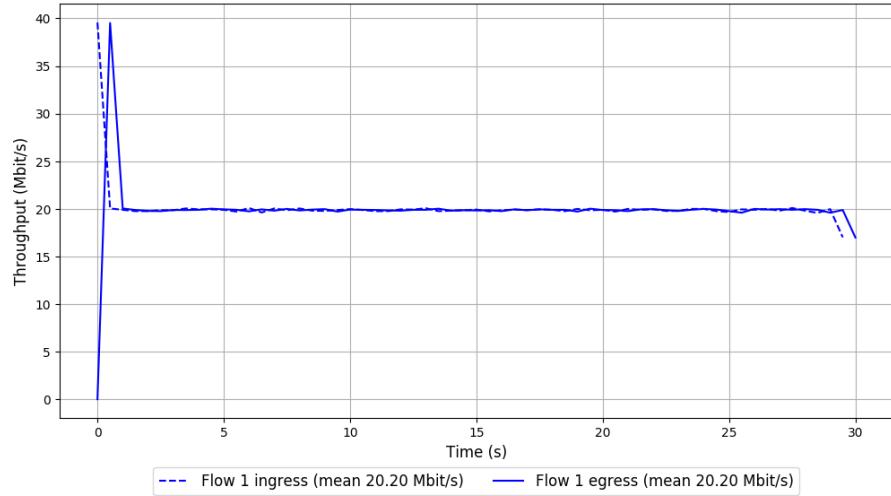


```
Run 1: Statistics of Indigo-MusesD
```

```
Start at: 2019-01-03 05:06:48
End at: 2019-01-03 05:07:18
Local clock offset: -10.519 ms
Remote clock offset: -0.013 ms

# Below is generated by plot.py at 2019-01-03 06:40:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 20.20 Mbit/s
95th percentile per-packet one-way delay: 1.963 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 20.20 Mbit/s
95th percentile per-packet one-way delay: 1.963 ms
Loss rate: 0.01%
```

Run 1: Report of Indigo-MusesD — Data Link

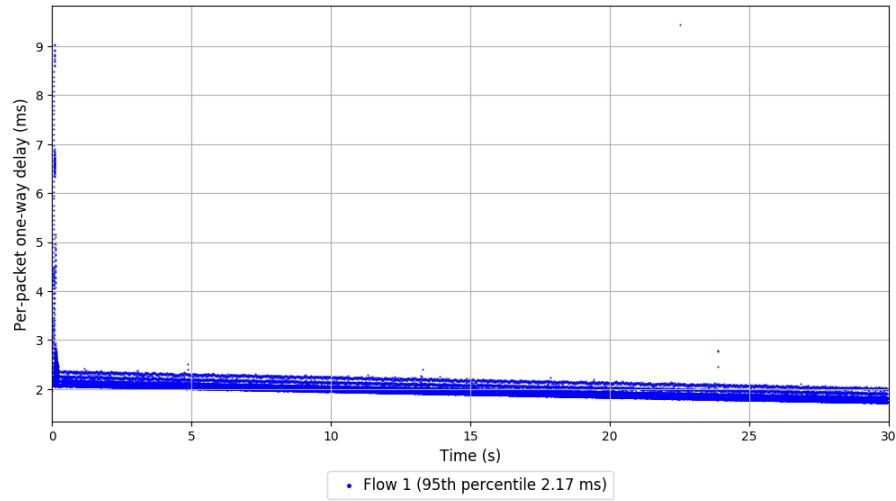
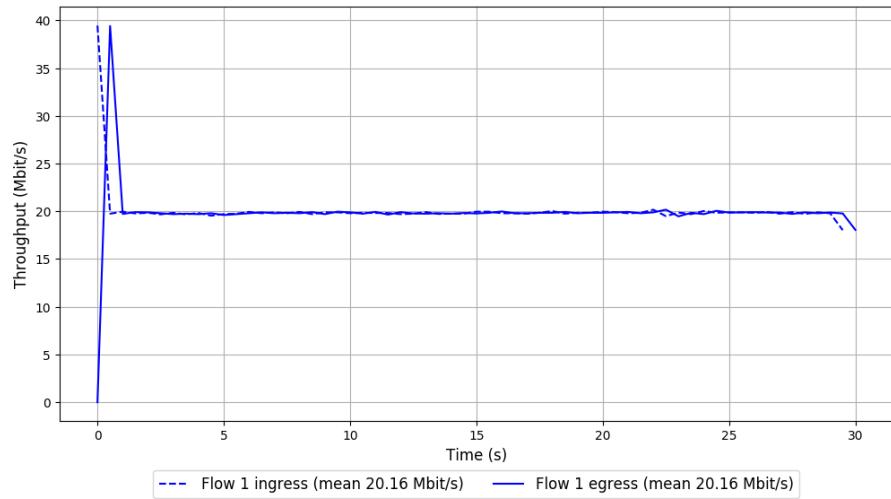


Run 2: Statistics of Indigo-MusesD

```
Start at: 2019-01-03 05:28:19
End at: 2019-01-03 05:28:49
Local clock offset: -7.516 ms
Remote clock offset: 0.189 ms

# Below is generated by plot.py at 2019-01-03 06:40:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 20.16 Mbit/s
95th percentile per-packet one-way delay: 2.171 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 20.16 Mbit/s
95th percentile per-packet one-way delay: 2.171 ms
Loss rate: 0.01%
```

Run 2: Report of Indigo-MusesD — Data Link

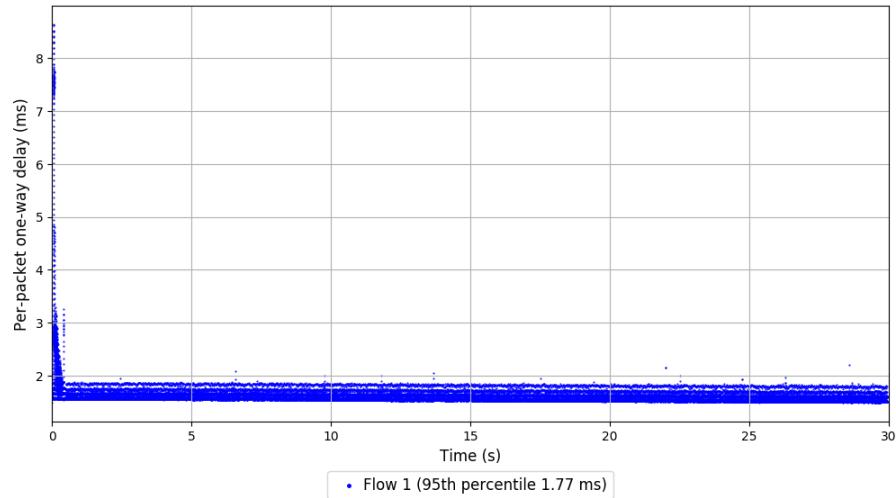
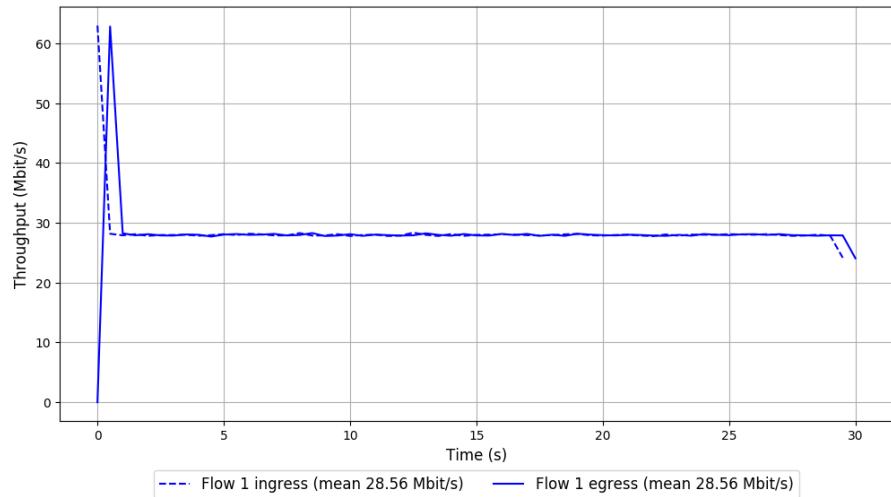


Run 3: Statistics of Indigo-MusesD

```
Start at: 2019-01-03 05:49:46
End at: 2019-01-03 05:50:16
Local clock offset: -1.067 ms
Remote clock offset: 0.451 ms

# Below is generated by plot.py at 2019-01-03 06:40:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 28.56 Mbit/s
95th percentile per-packet one-way delay: 1.773 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 28.56 Mbit/s
95th percentile per-packet one-way delay: 1.773 ms
Loss rate: 0.01%
```

Run 3: Report of Indigo-MusesD — Data Link

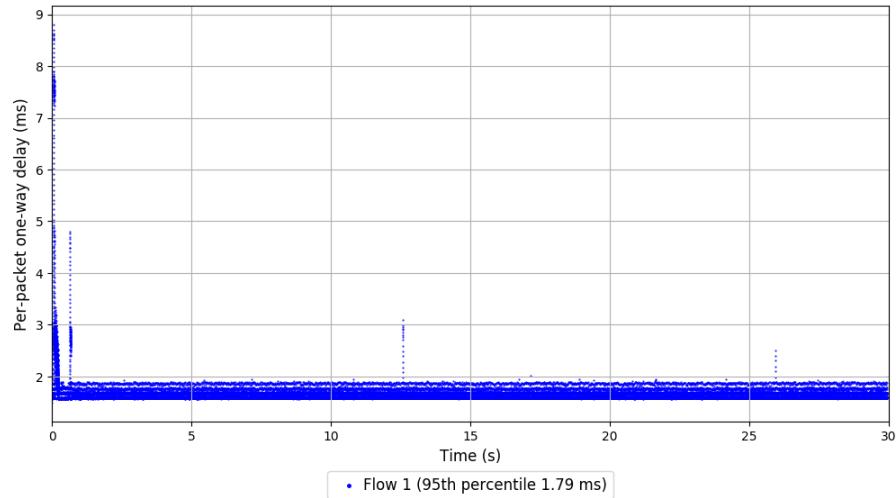
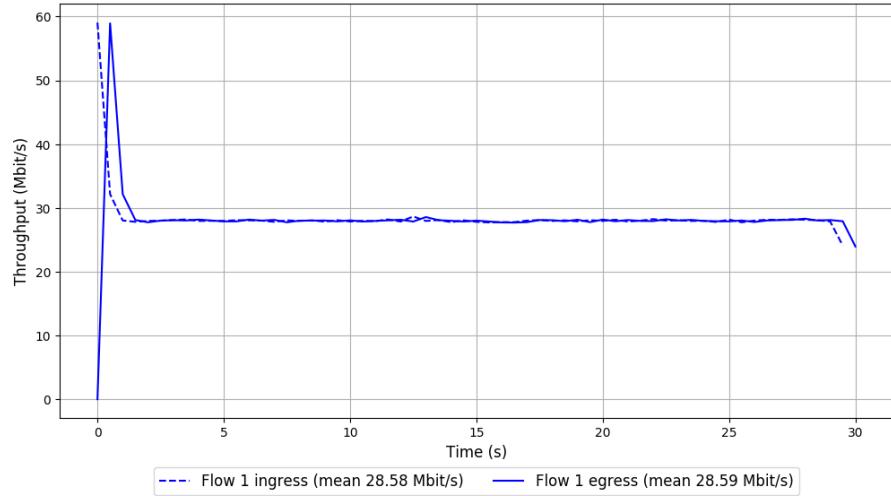


Run 4: Statistics of Indigo-MusesD

```
Start at: 2019-01-03 06:11:12
End at: 2019-01-03 06:11:42
Local clock offset: -2.525 ms
Remote clock offset: 0.581 ms

# Below is generated by plot.py at 2019-01-03 06:40:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 28.59 Mbit/s
95th percentile per-packet one-way delay: 1.788 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 28.59 Mbit/s
95th percentile per-packet one-way delay: 1.788 ms
Loss rate: 0.01%
```

Run 4: Report of Indigo-MusesD — Data Link

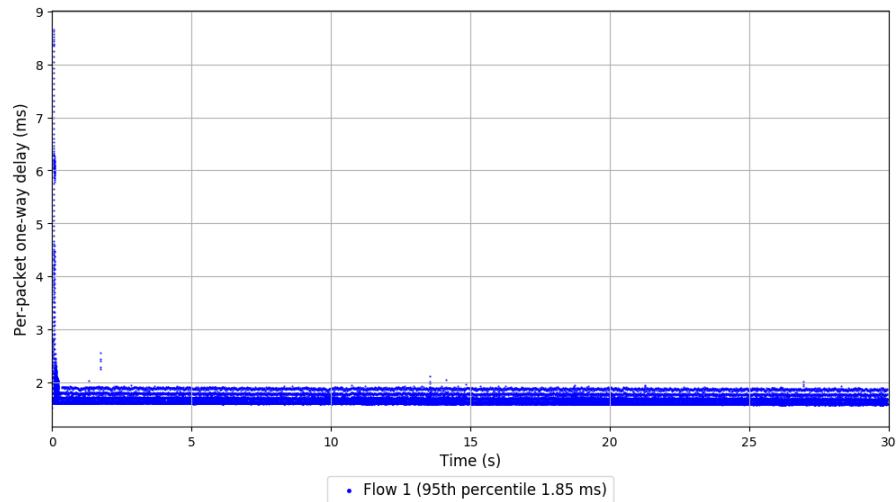
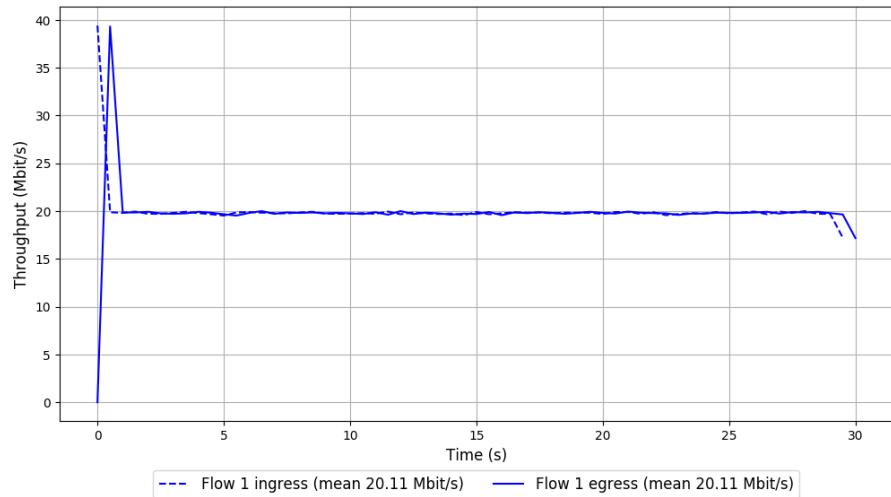


Run 5: Statistics of Indigo-MusesD

```
Start at: 2019-01-03 06:32:44
End at: 2019-01-03 06:33:14
Local clock offset: -1.671 ms
Remote clock offset: 0.634 ms

# Below is generated by plot.py at 2019-01-03 06:40:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 20.11 Mbit/s
95th percentile per-packet one-way delay: 1.854 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 20.11 Mbit/s
95th percentile per-packet one-way delay: 1.854 ms
Loss rate: 0.01%
```

Run 5: Report of Indigo-MusesD — Data Link

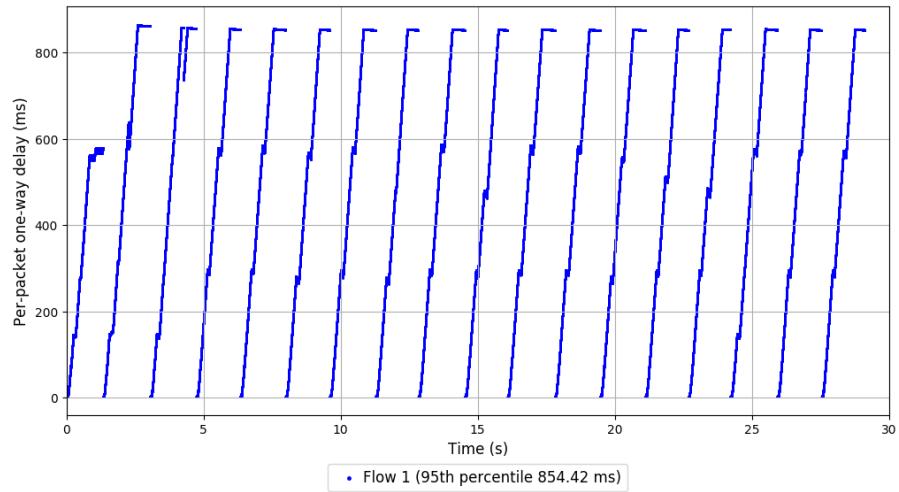
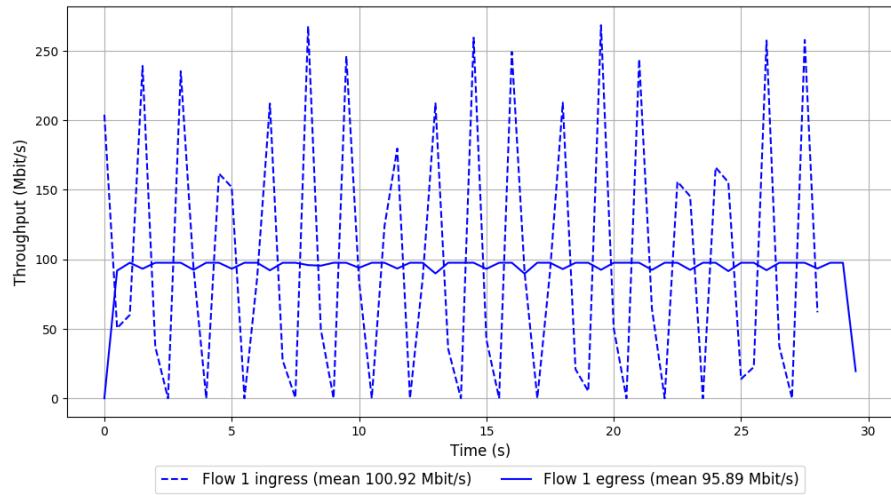


Run 1: Statistics of Indigo-MusesT

```
Start at: 2019-01-03 04:55:29
End at: 2019-01-03 04:55:59
Local clock offset: -8.802 ms
Remote clock offset: -0.117 ms

# Below is generated by plot.py at 2019-01-03 06:40:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.89 Mbit/s
95th percentile per-packet one-way delay: 854.422 ms
Loss rate: 2.34%
-- Flow 1:
Average throughput: 95.89 Mbit/s
95th percentile per-packet one-way delay: 854.422 ms
Loss rate: 2.34%
```

Run 1: Report of Indigo-MusesT — Data Link

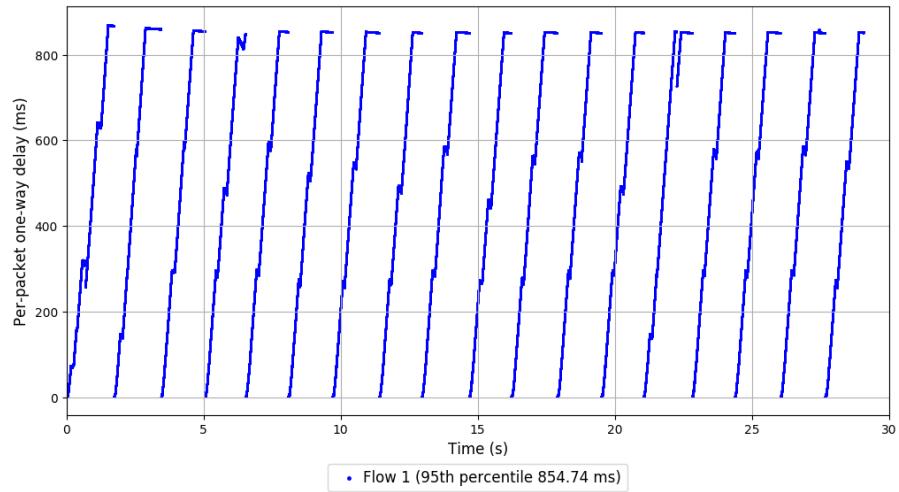
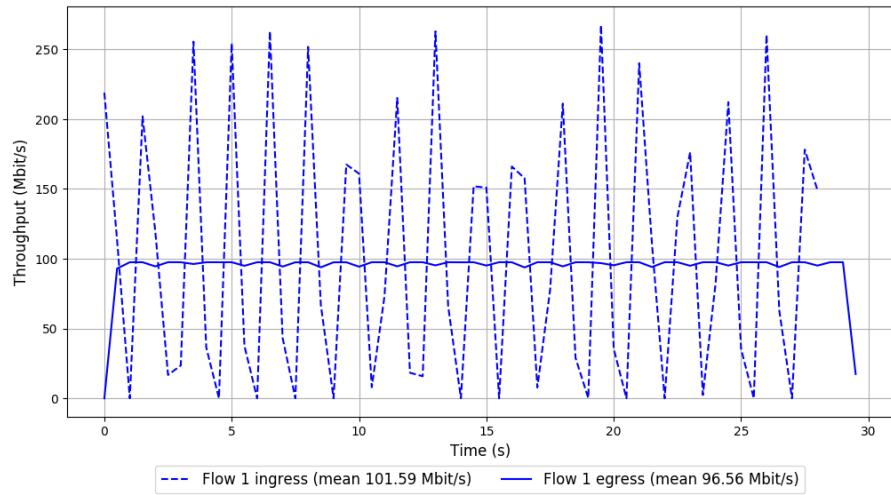


Run 2: Statistics of Indigo-MusesT

```
Start at: 2019-01-03 05:16:59
End at: 2019-01-03 05:17:29
Local clock offset: -11.304 ms
Remote clock offset: 0.093 ms

# Below is generated by plot.py at 2019-01-03 06:41:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.56 Mbit/s
95th percentile per-packet one-way delay: 854.744 ms
Loss rate: 2.87%
-- Flow 1:
Average throughput: 96.56 Mbit/s
95th percentile per-packet one-way delay: 854.744 ms
Loss rate: 2.87%
```

Run 2: Report of Indigo-MusesT — Data Link

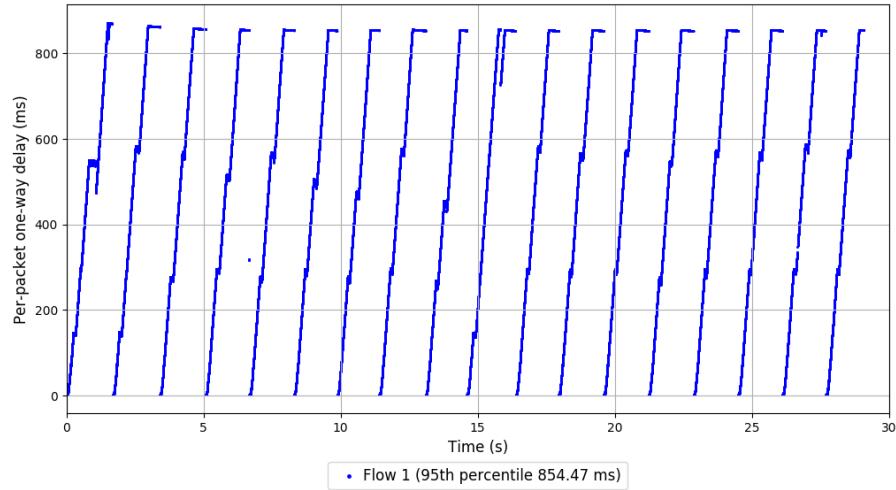
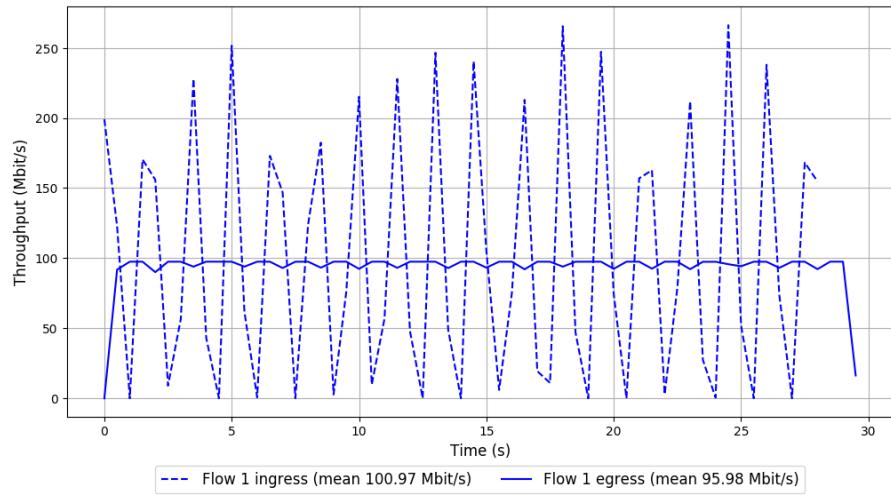


Run 3: Statistics of Indigo-MusesT

```
Start at: 2019-01-03 05:38:30
End at: 2019-01-03 05:39:00
Local clock offset: -2.618 ms
Remote clock offset: 0.326 ms

# Below is generated by plot.py at 2019-01-03 06:41:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.98 Mbit/s
95th percentile per-packet one-way delay: 854.468 ms
Loss rate: 2.98%
-- Flow 1:
Average throughput: 95.98 Mbit/s
95th percentile per-packet one-way delay: 854.468 ms
Loss rate: 2.98%
```

Run 3: Report of Indigo-MusesT — Data Link

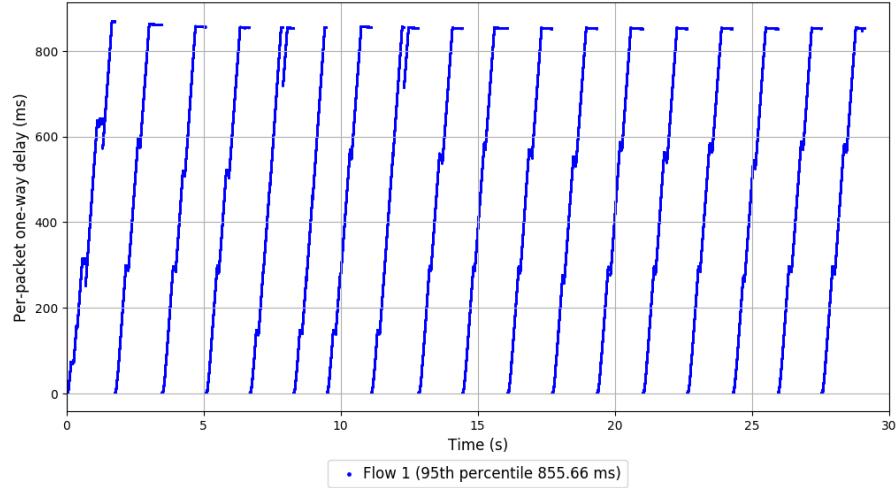
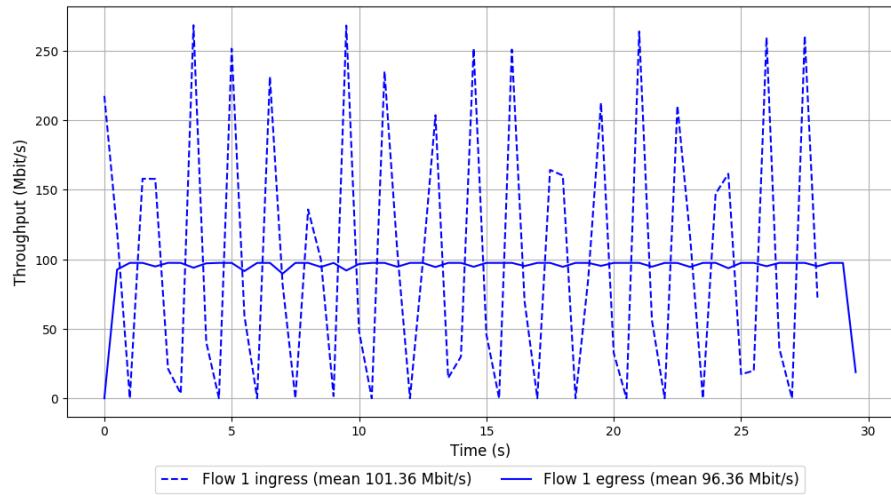


Run 4: Statistics of Indigo-MusesT

```
Start at: 2019-01-03 05:59:56
End at: 2019-01-03 06:00:26
Local clock offset: -1.059 ms
Remote clock offset: 0.545 ms

# Below is generated by plot.py at 2019-01-03 06:41:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.36 Mbit/s
95th percentile per-packet one-way delay: 855.658 ms
Loss rate: 2.48%
-- Flow 1:
Average throughput: 96.36 Mbit/s
95th percentile per-packet one-way delay: 855.658 ms
Loss rate: 2.48%
```

Run 4: Report of Indigo-MusesT — Data Link

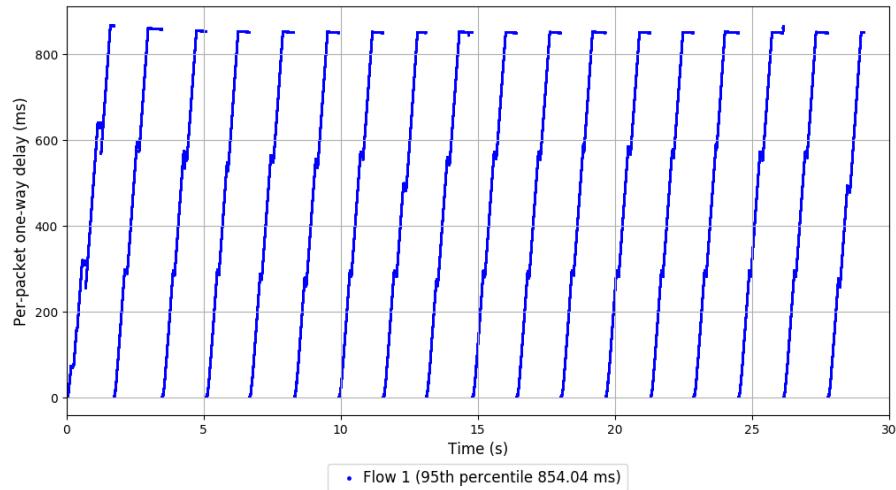
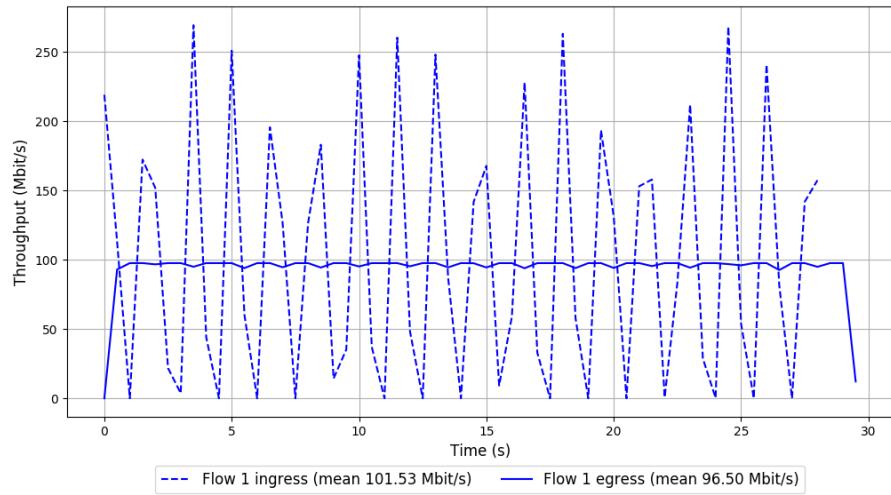


Run 5: Statistics of Indigo-MusesT

```
Start at: 2019-01-03 06:21:24
End at: 2019-01-03 06:21:54
Local clock offset: -2.331 ms
Remote clock offset: 0.624 ms

# Below is generated by plot.py at 2019-01-03 06:41:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.50 Mbit/s
95th percentile per-packet one-way delay: 854.036 ms
Loss rate: 2.81%
-- Flow 1:
Average throughput: 96.50 Mbit/s
95th percentile per-packet one-way delay: 854.036 ms
Loss rate: 2.81%
```

Run 5: Report of Indigo-MusesT — Data Link

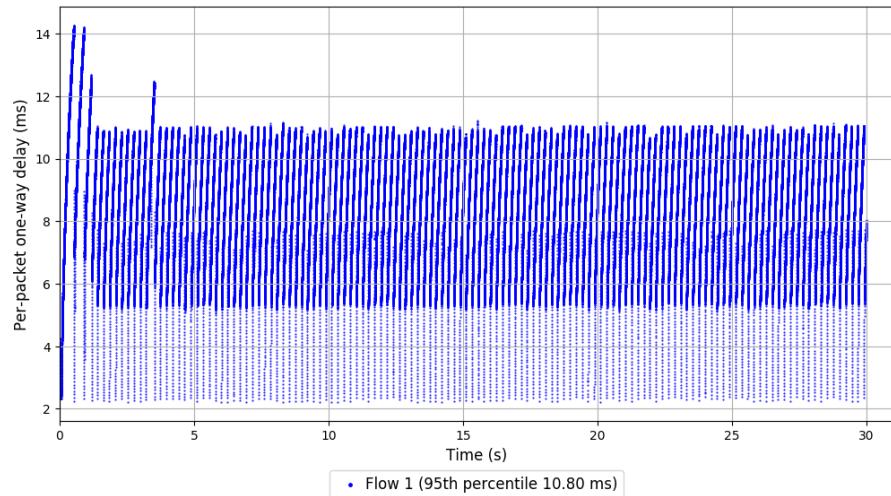
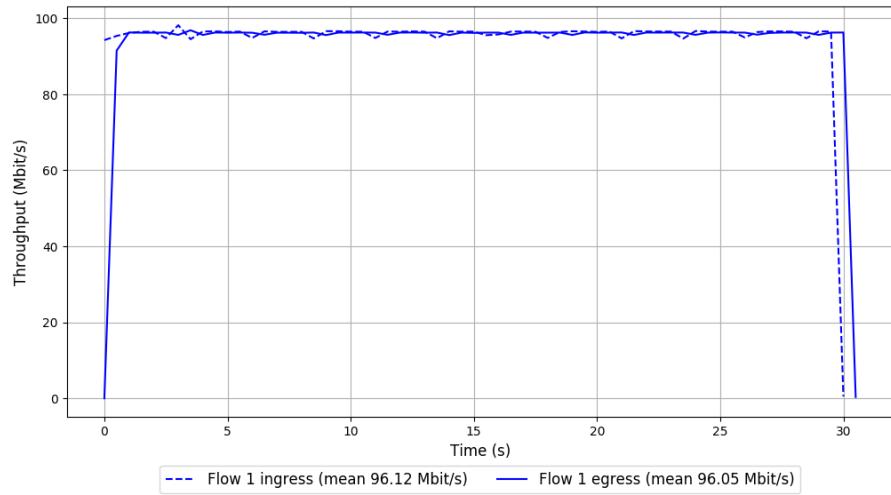


```
Run 1: Statistics of LEDBAT
```

```
Start at: 2019-01-03 04:49:53
End at: 2019-01-03 04:50:23
Local clock offset: -8.305 ms
Remote clock offset: -0.119 ms

# Below is generated by plot.py at 2019-01-03 06:41:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.05 Mbit/s
95th percentile per-packet one-way delay: 10.800 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 96.05 Mbit/s
95th percentile per-packet one-way delay: 10.800 ms
Loss rate: 0.08%
```

Run 1: Report of LEDBAT — Data Link

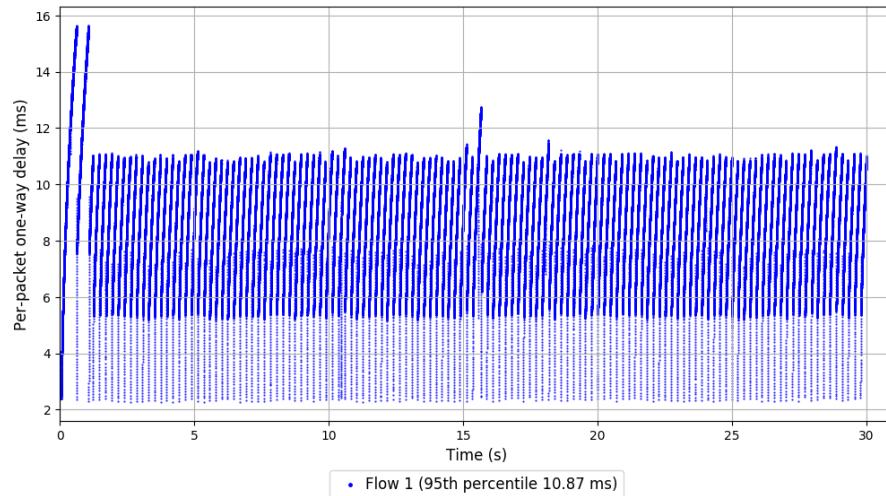
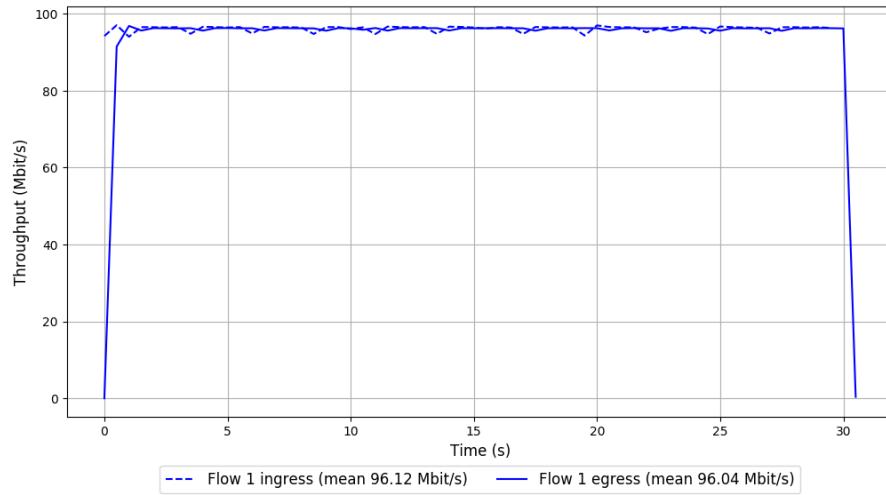


Run 2: Statistics of LEDBAT

```
Start at: 2019-01-03 05:11:23
End at: 2019-01-03 05:11:53
Local clock offset: -10.133 ms
Remote clock offset: 0.071 ms

# Below is generated by plot.py at 2019-01-03 06:41:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.04 Mbit/s
95th percentile per-packet one-way delay: 10.870 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 96.04 Mbit/s
95th percentile per-packet one-way delay: 10.870 ms
Loss rate: 0.08%
```

Run 2: Report of LEDBAT — Data Link

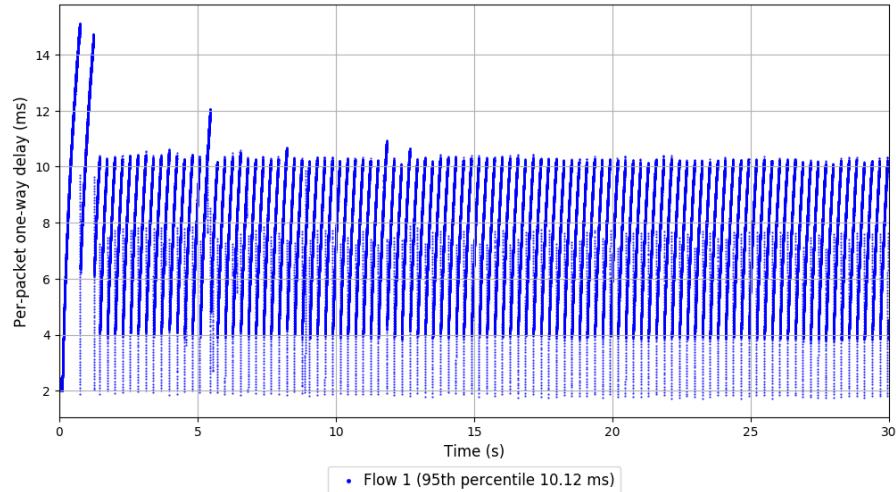
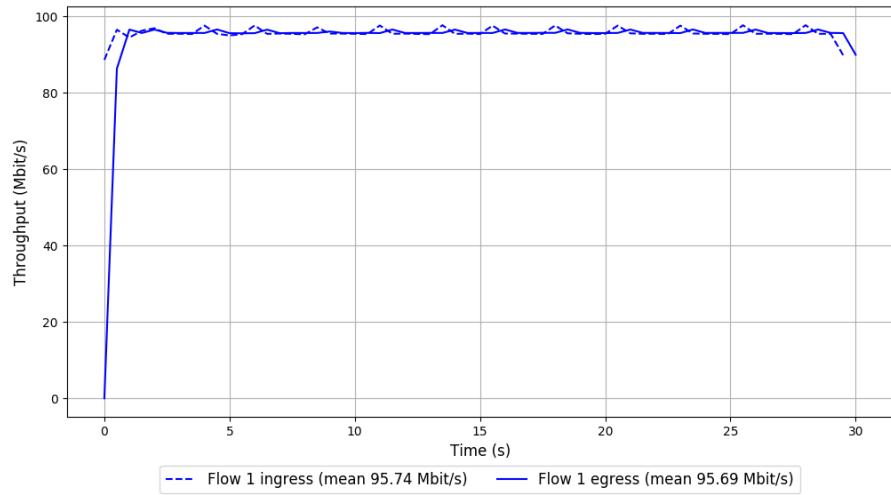


Run 3: Statistics of LEDBAT

```
Start at: 2019-01-03 05:32:54
End at: 2019-01-03 05:33:24
Local clock offset: -4.836 ms
Remote clock offset: 0.32 ms

# Below is generated by plot.py at 2019-01-03 06:41:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.69 Mbit/s
95th percentile per-packet one-way delay: 10.124 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 95.69 Mbit/s
95th percentile per-packet one-way delay: 10.124 ms
Loss rate: 0.06%
```

Run 3: Report of LEDBAT — Data Link

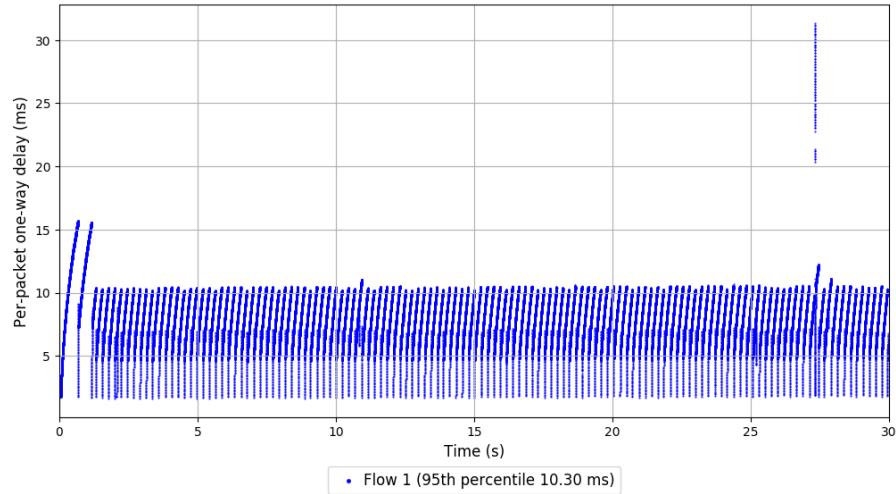
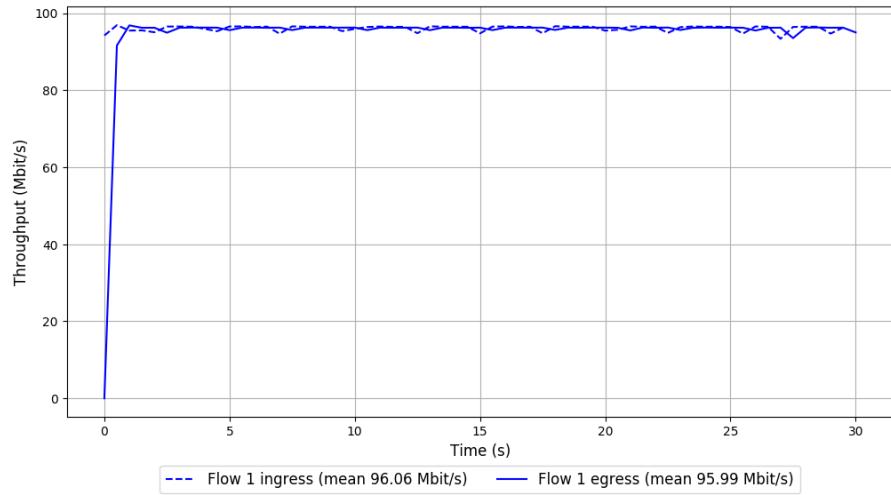


Run 4: Statistics of LEDBAT

```
Start at: 2019-01-03 05:54:19
End at: 2019-01-03 05:54:50
Local clock offset: -0.468 ms
Remote clock offset: 0.485 ms

# Below is generated by plot.py at 2019-01-03 06:42:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.99 Mbit/s
95th percentile per-packet one-way delay: 10.302 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 95.99 Mbit/s
95th percentile per-packet one-way delay: 10.302 ms
Loss rate: 0.08%
```

Run 4: Report of LEDBAT — Data Link

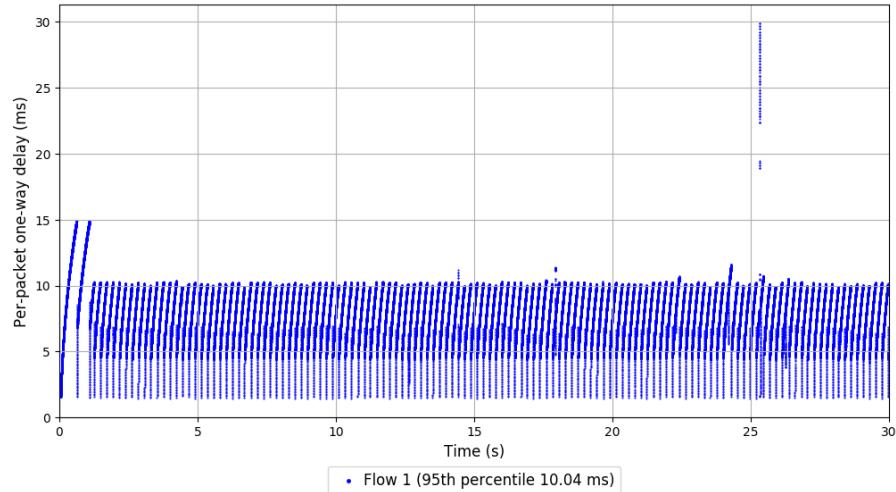
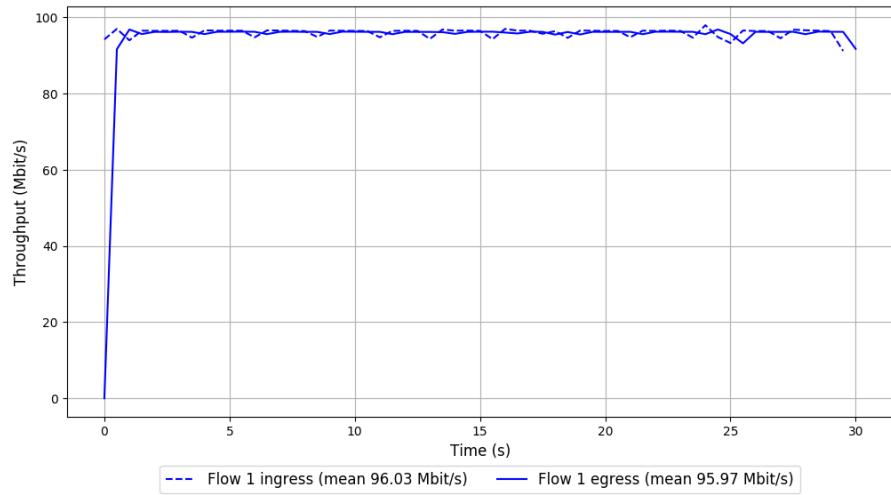


Run 5: Statistics of LEDBAT

```
Start at: 2019-01-03 06:15:47
End at: 2019-01-03 06:16:17
Local clock offset: -2.444 ms
Remote clock offset: 0.631 ms

# Below is generated by plot.py at 2019-01-03 06:42:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.97 Mbit/s
95th percentile per-packet one-way delay: 10.045 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 95.97 Mbit/s
95th percentile per-packet one-way delay: 10.045 ms
Loss rate: 0.07%
```

Run 5: Report of LEDBAT — Data Link

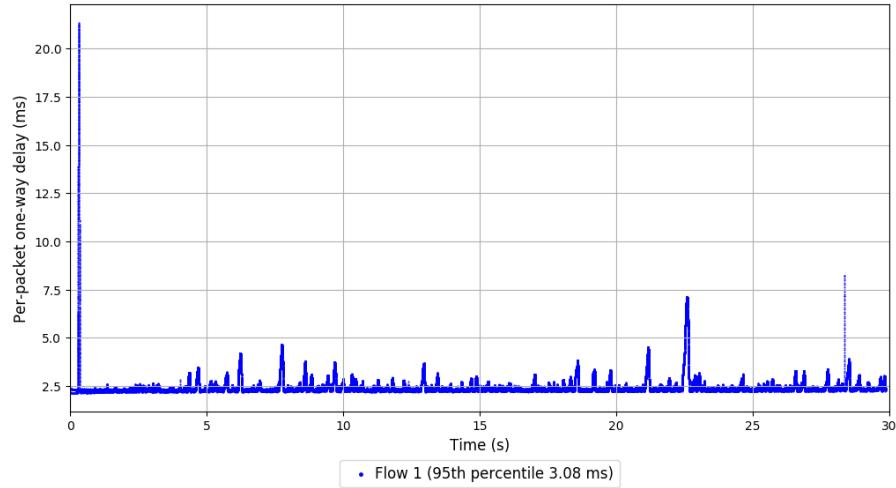
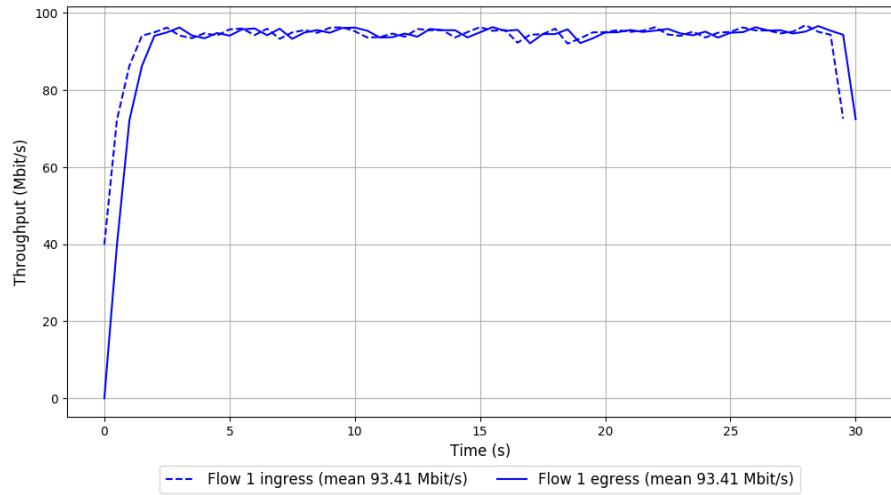


```
Run 1: Statistics of PCC-Allegro
```

```
Start at: 2019-01-03 04:51:02
End at: 2019-01-03 04:51:32
Local clock offset: -8.458 ms
Remote clock offset: -0.105 ms

# Below is generated by plot.py at 2019-01-03 06:42:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.41 Mbit/s
95th percentile per-packet one-way delay: 3.076 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 93.41 Mbit/s
95th percentile per-packet one-way delay: 3.076 ms
Loss rate: 0.01%
```

Run 1: Report of PCC-Allegro — Data Link

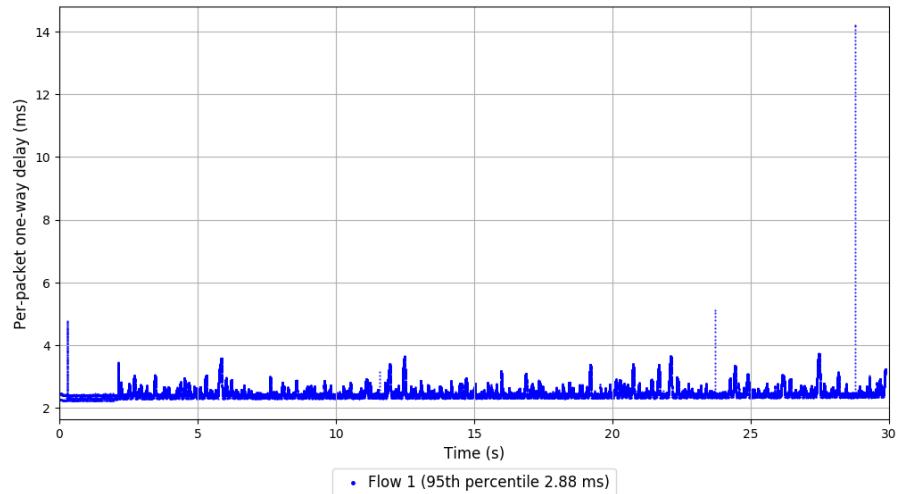
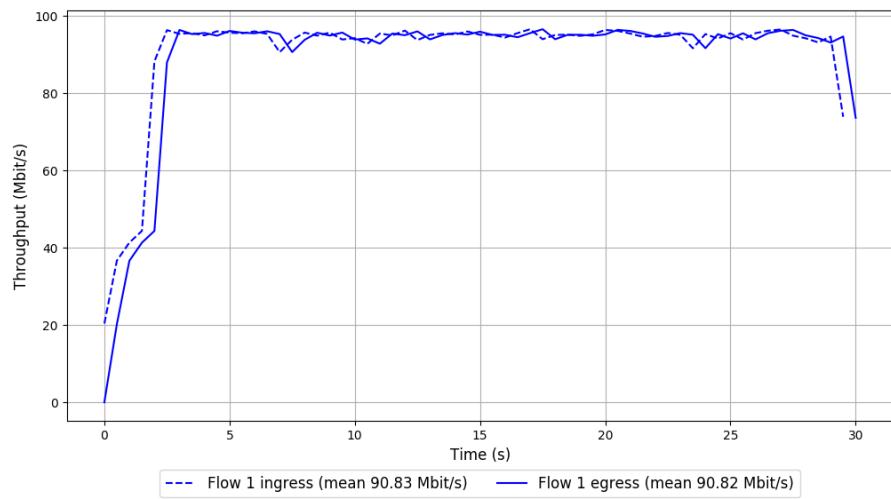


Run 2: Statistics of PCC-Allegro

```
Start at: 2019-01-03 05:12:32
End at: 2019-01-03 05:13:02
Local clock offset: -10.202 ms
Remote clock offset: 0.102 ms

# Below is generated by plot.py at 2019-01-03 06:42:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.82 Mbit/s
95th percentile per-packet one-way delay: 2.878 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 90.82 Mbit/s
95th percentile per-packet one-way delay: 2.878 ms
Loss rate: 0.01%
```

Run 2: Report of PCC-Allegro — Data Link

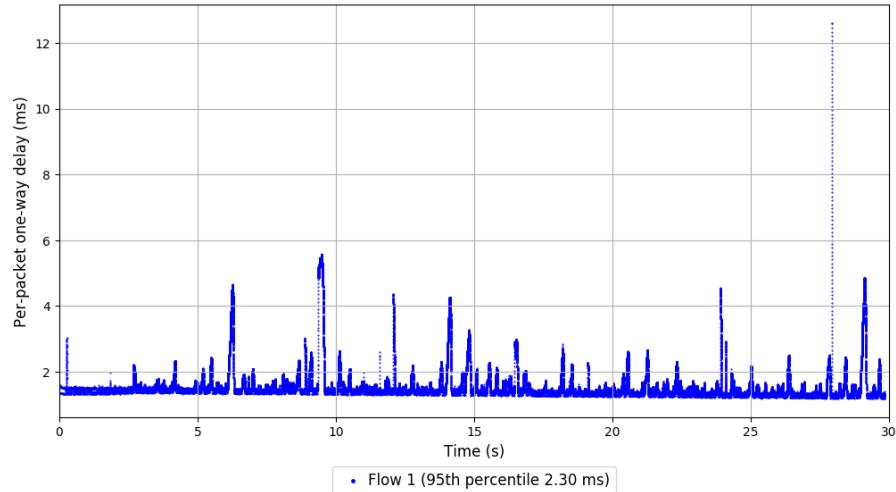
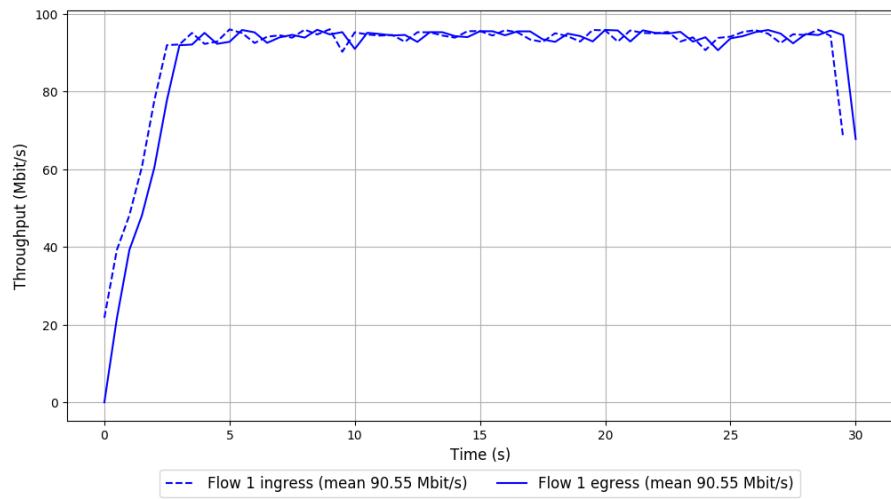


Run 3: Statistics of PCC-Allegro

```
Start at: 2019-01-03 05:34:04
End at: 2019-01-03 05:34:34
Local clock offset: -4.91 ms
Remote clock offset: 0.281 ms

# Below is generated by plot.py at 2019-01-03 06:42:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.55 Mbit/s
95th percentile per-packet one-way delay: 2.300 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 90.55 Mbit/s
95th percentile per-packet one-way delay: 2.300 ms
Loss rate: 0.01%
```

Run 3: Report of PCC-Allegro — Data Link

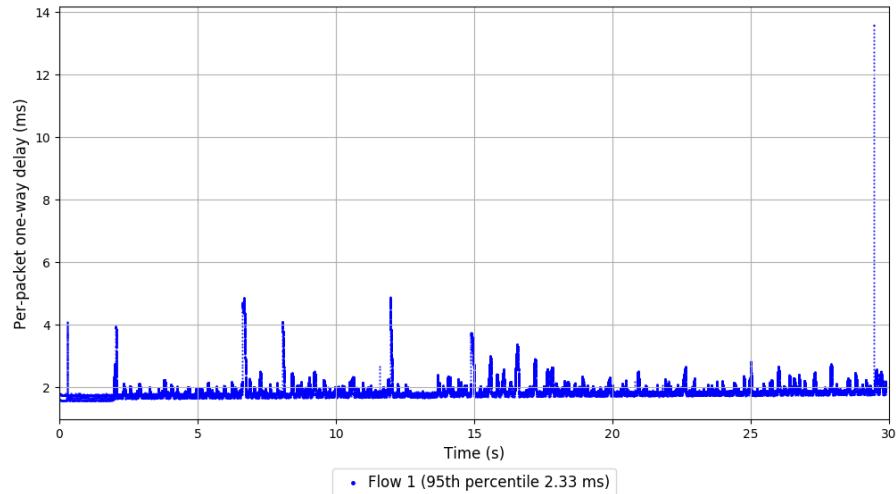
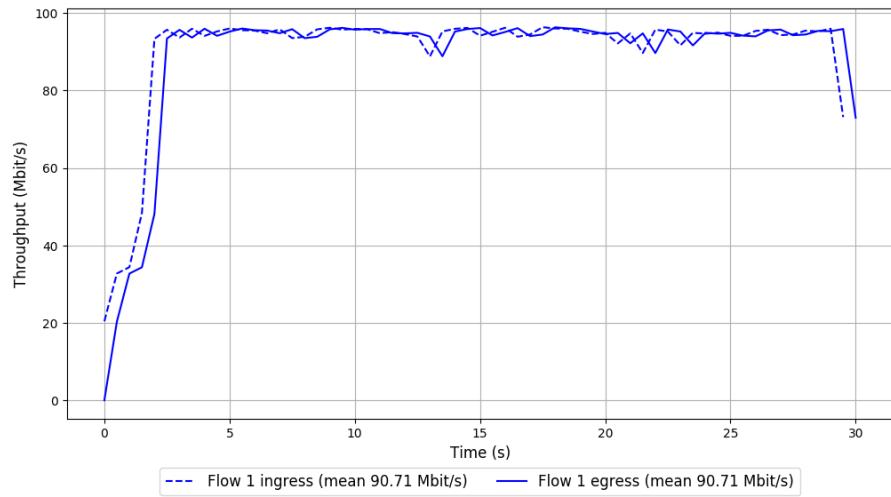


Run 4: Statistics of PCC-Allegro

```
Start at: 2019-01-03 05:55:29
End at: 2019-01-03 05:55:59
Local clock offset: -0.779 ms
Remote clock offset: 0.514 ms

# Below is generated by plot.py at 2019-01-03 06:42:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.71 Mbit/s
95th percentile per-packet one-way delay: 2.332 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 90.71 Mbit/s
95th percentile per-packet one-way delay: 2.332 ms
Loss rate: 0.01%
```

Run 4: Report of PCC-Allegro — Data Link

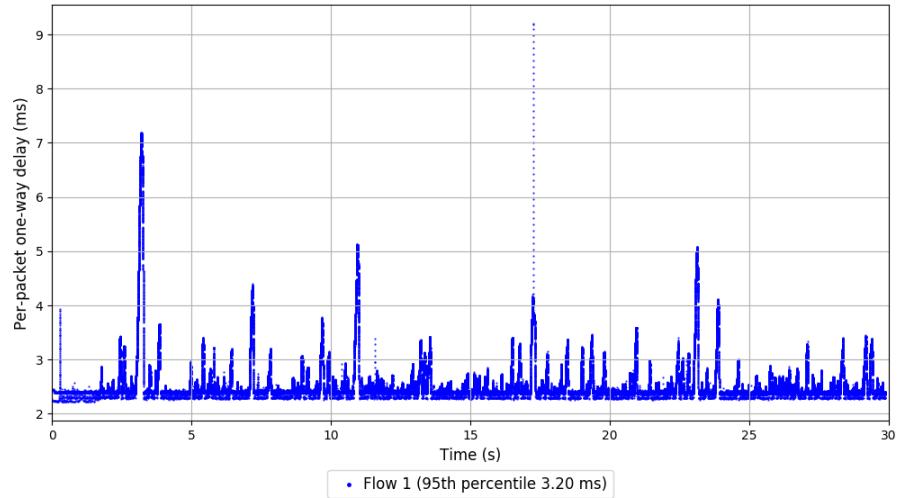
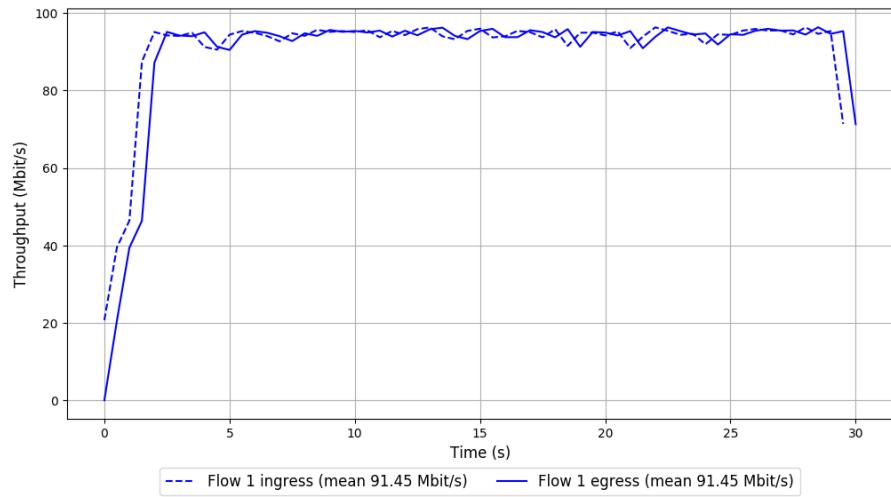


Run 5: Statistics of PCC-Allegro

```
Start at: 2019-01-03 06:16:57
End at: 2019-01-03 06:17:27
Local clock offset: -1.683 ms
Remote clock offset: 0.601 ms

# Below is generated by plot.py at 2019-01-03 06:42:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.45 Mbit/s
95th percentile per-packet one-way delay: 3.204 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 91.45 Mbit/s
95th percentile per-packet one-way delay: 3.204 ms
Loss rate: 0.01%
```

Run 5: Report of PCC-Allegro — Data Link

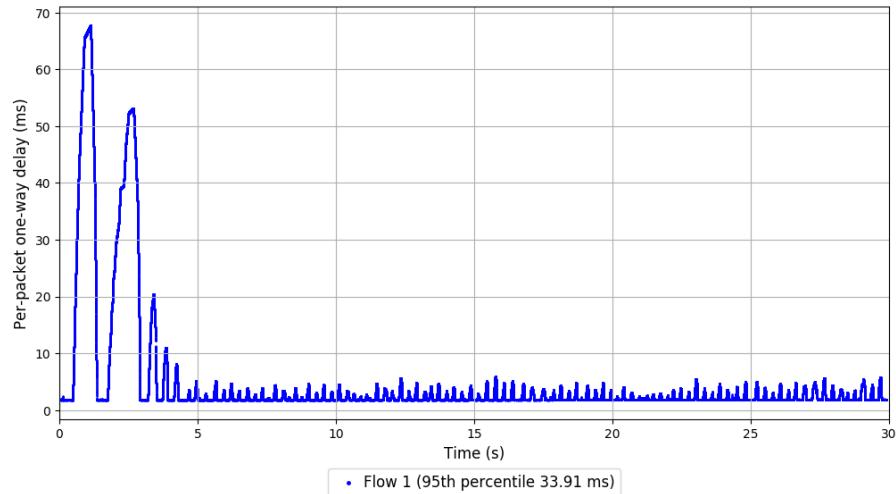
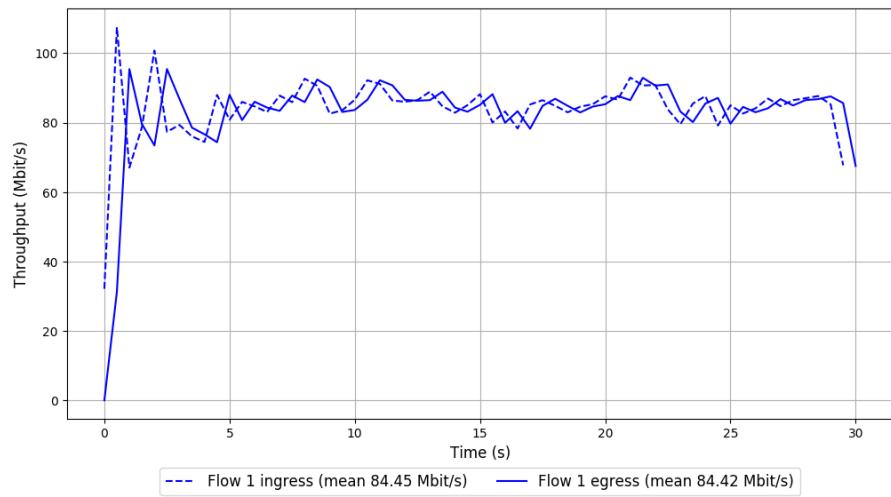


```
Run 1: Statistics of PCC-Expr
```

```
Start at: 2019-01-03 04:46:24
End at: 2019-01-03 04:46:54
Local clock offset: -8.603 ms
Remote clock offset: -0.273 ms

# Below is generated by plot.py at 2019-01-03 06:43:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 84.42 Mbit/s
95th percentile per-packet one-way delay: 33.912 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 84.42 Mbit/s
95th percentile per-packet one-way delay: 33.912 ms
Loss rate: 0.04%
```

Run 1: Report of PCC-Expr — Data Link

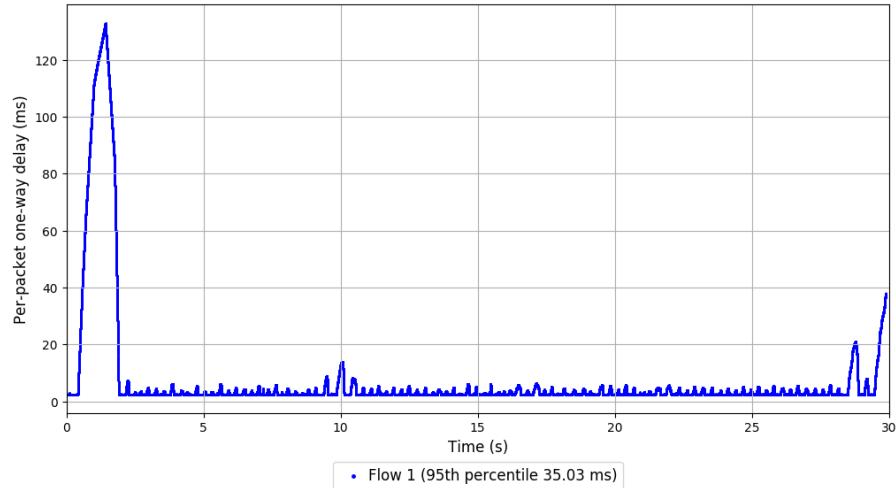
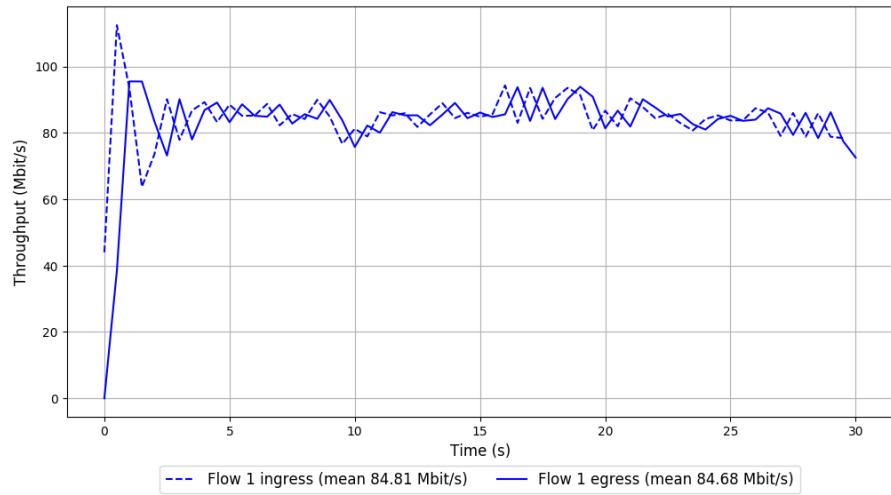


Run 2: Statistics of PCC-Expr

```
Start at: 2019-01-03 05:07:54
End at: 2019-01-03 05:08:24
Local clock offset: -9.842 ms
Remote clock offset: -0.042 ms

# Below is generated by plot.py at 2019-01-03 06:43:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 84.68 Mbit/s
95th percentile per-packet one-way delay: 35.035 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 84.68 Mbit/s
95th percentile per-packet one-way delay: 35.035 ms
Loss rate: 0.16%
```

Run 2: Report of PCC-Expr — Data Link

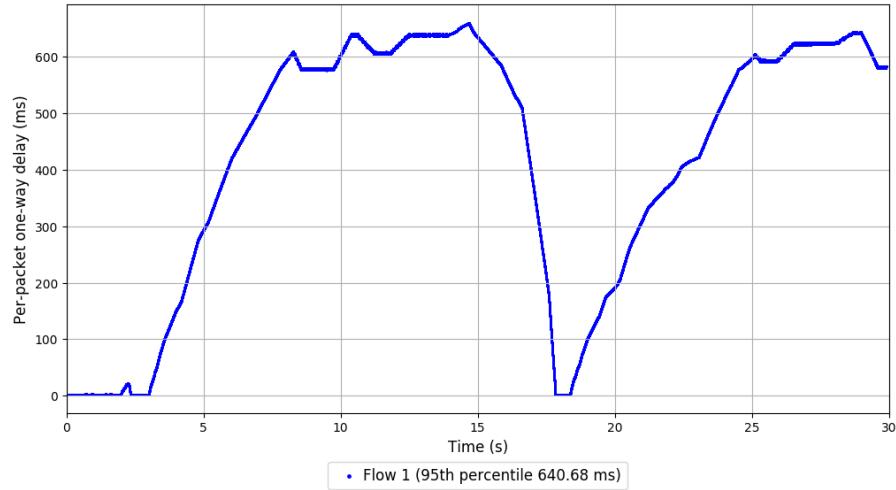
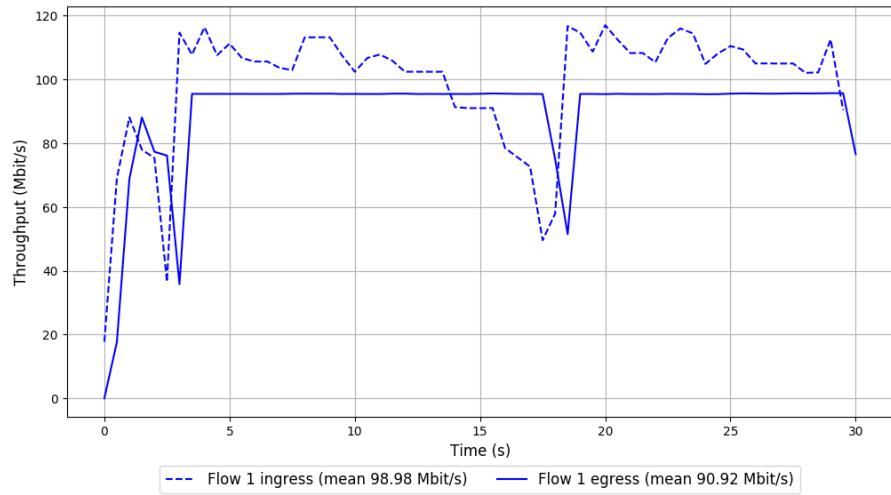


Run 3: Statistics of PCC-Expr

```
Start at: 2019-01-03 05:29:24
End at: 2019-01-03 05:29:54
Local clock offset: -6.734 ms
Remote clock offset: 0.203 ms

# Below is generated by plot.py at 2019-01-03 06:44:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.92 Mbit/s
95th percentile per-packet one-way delay: 640.683 ms
Loss rate: 8.16%
-- Flow 1:
Average throughput: 90.92 Mbit/s
95th percentile per-packet one-way delay: 640.683 ms
Loss rate: 8.16%
```

Run 3: Report of PCC-Expr — Data Link

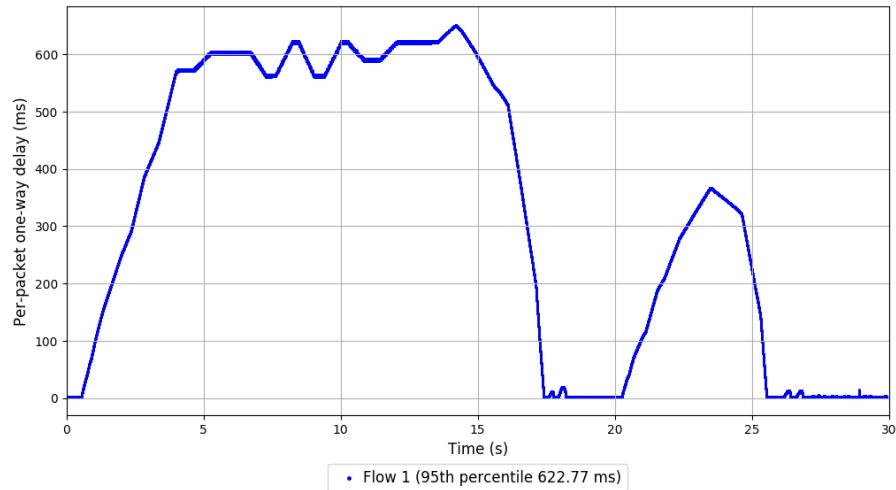
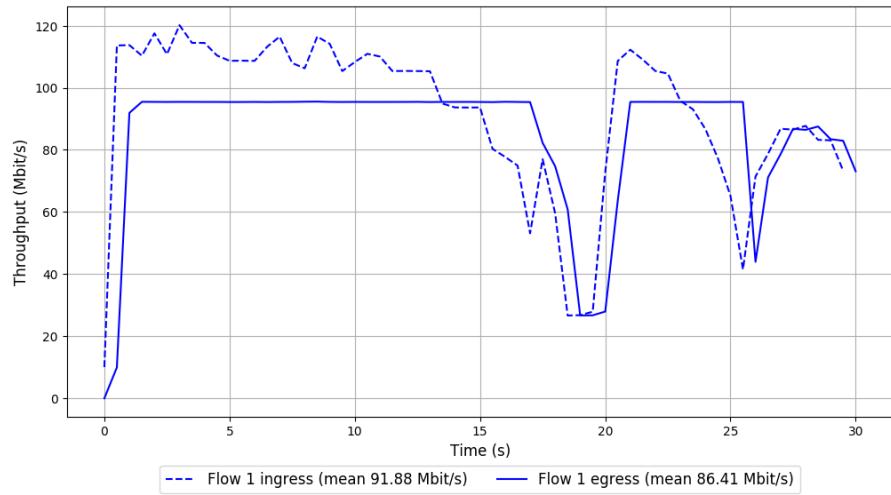


Run 4: Statistics of PCC-Expr

```
Start at: 2019-01-03 05:50:51
End at: 2019-01-03 05:51:21
Local clock offset: -0.247 ms
Remote clock offset: 0.433 ms

# Below is generated by plot.py at 2019-01-03 06:44:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.41 Mbit/s
95th percentile per-packet one-way delay: 622.775 ms
Loss rate: 5.97%
-- Flow 1:
Average throughput: 86.41 Mbit/s
95th percentile per-packet one-way delay: 622.775 ms
Loss rate: 5.97%
```

Run 4: Report of PCC-Expr — Data Link

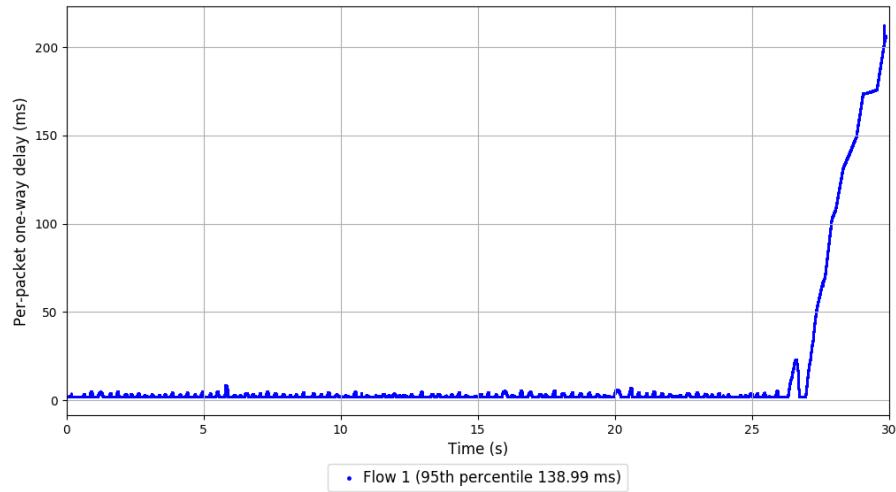
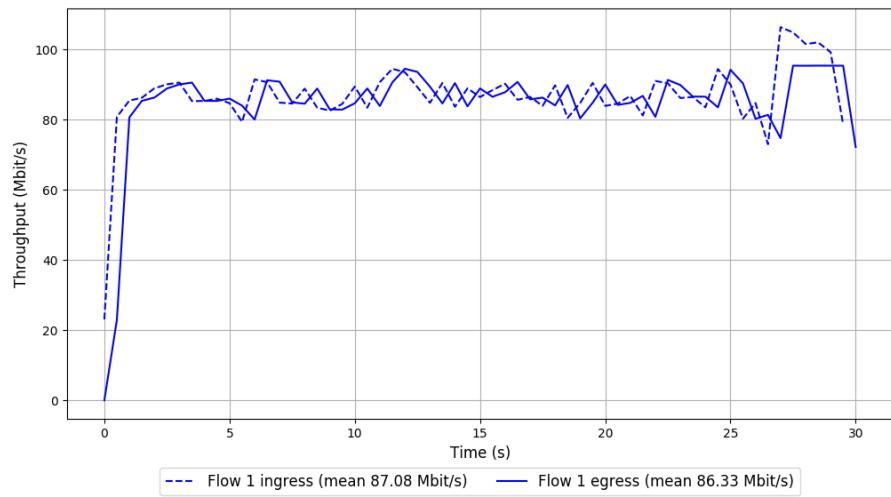


Run 5: Statistics of PCC-Expr

```
Start at: 2019-01-03 06:12:17
End at: 2019-01-03 06:12:47
Local clock offset: -1.772 ms
Remote clock offset: 0.631 ms

# Below is generated by plot.py at 2019-01-03 06:44:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.33 Mbit/s
95th percentile per-packet one-way delay: 138.991 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 86.33 Mbit/s
95th percentile per-packet one-way delay: 138.991 ms
Loss rate: 0.87%
```

Run 5: Report of PCC-Expr — Data Link

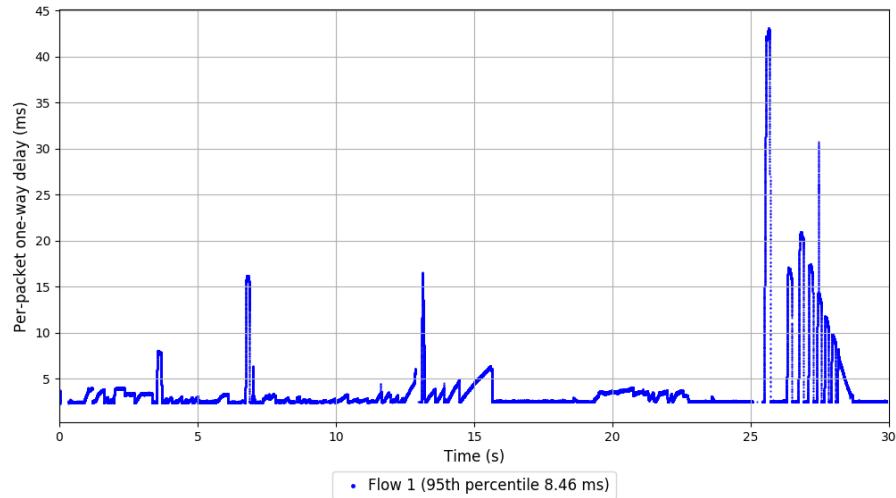
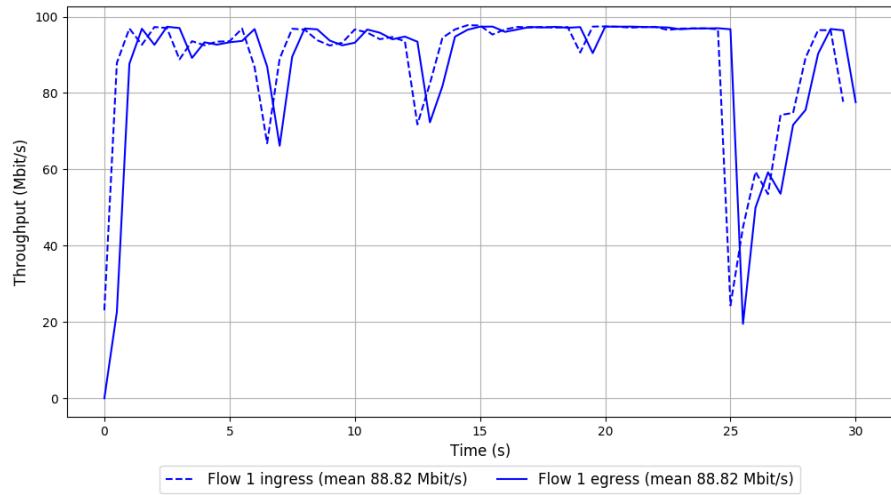


Run 1: Statistics of QUIC Cubic

```
Start at: 2019-01-03 05:00:01
End at: 2019-01-03 05:00:31
Local clock offset: -9.208 ms
Remote clock offset: -0.078 ms

# Below is generated by plot.py at 2019-01-03 06:44:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.82 Mbit/s
95th percentile per-packet one-way delay: 8.465 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 88.82 Mbit/s
95th percentile per-packet one-way delay: 8.465 ms
Loss rate: 0.02%
```

Run 1: Report of QUIC Cubic — Data Link

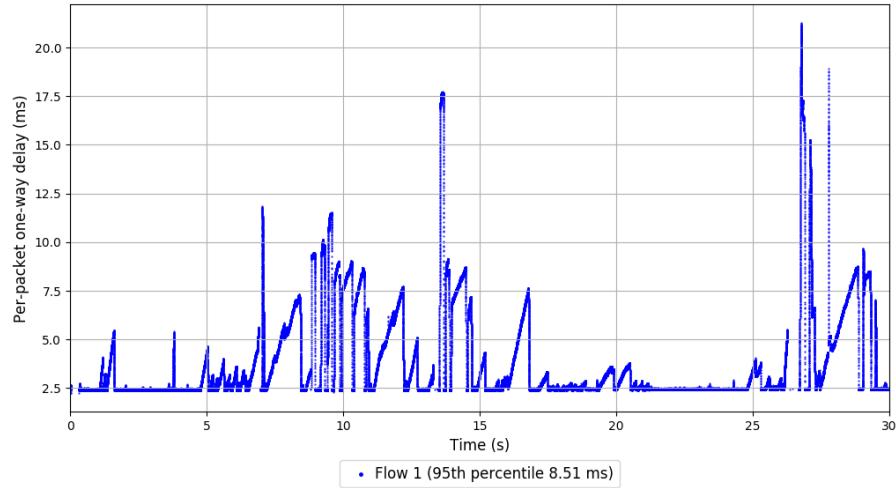
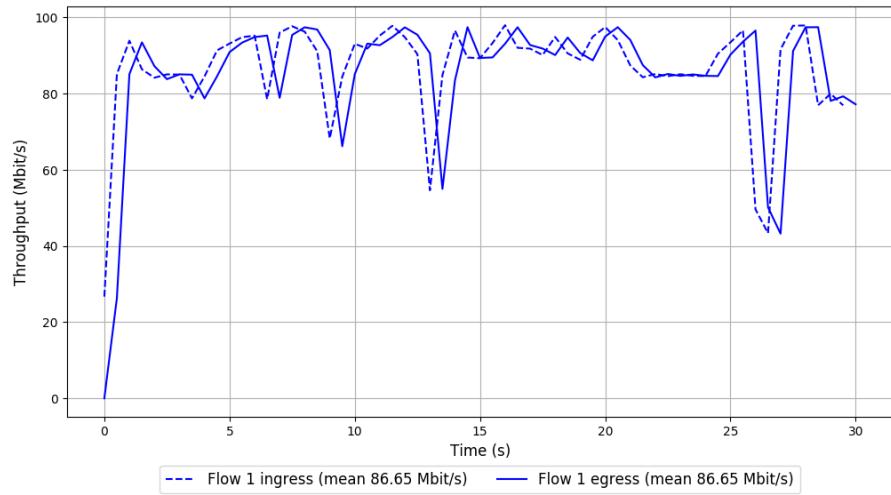


Run 2: Statistics of QUIC Cubic

```
Start at: 2019-01-03 05:21:31
End at: 2019-01-03 05:22:01
Local clock offset: -10.89 ms
Remote clock offset: 0.2 ms

# Below is generated by plot.py at 2019-01-03 06:44:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.65 Mbit/s
95th percentile per-packet one-way delay: 8.510 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 86.65 Mbit/s
95th percentile per-packet one-way delay: 8.510 ms
Loss rate: 0.02%
```

Run 2: Report of QUIC Cubic — Data Link

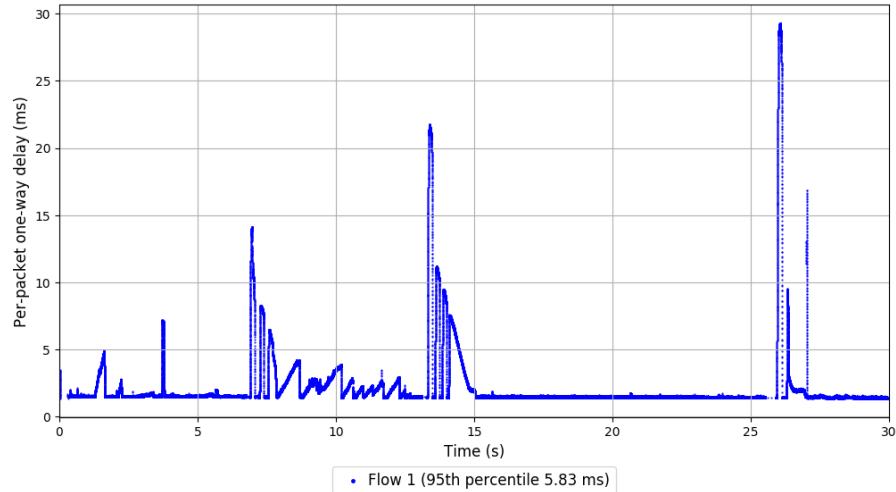
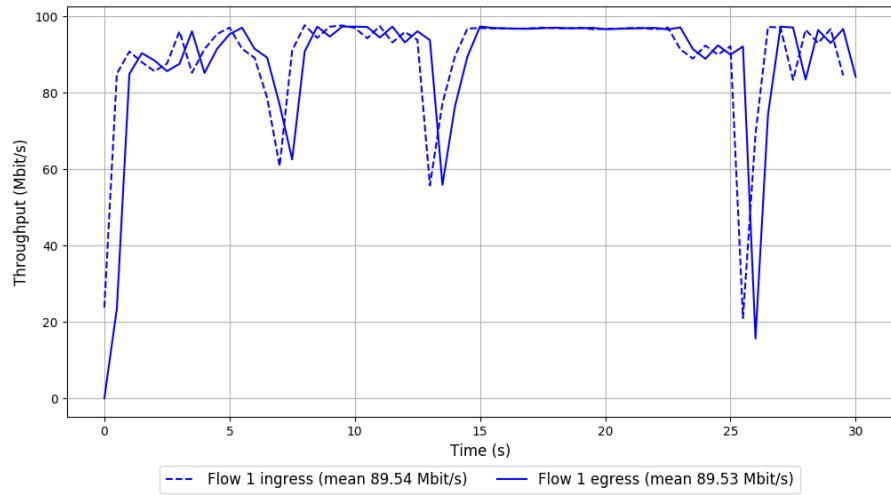


Run 3: Statistics of QUIC Cubic

```
Start at: 2019-01-03 05:43:02
End at: 2019-01-03 05:43:32
Local clock offset: -2.239 ms
Remote clock offset: 0.411 ms

# Below is generated by plot.py at 2019-01-03 06:44:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.53 Mbit/s
95th percentile per-packet one-way delay: 5.828 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 89.53 Mbit/s
95th percentile per-packet one-way delay: 5.828 ms
Loss rate: 0.02%
```

Run 3: Report of QUIC Cubic — Data Link

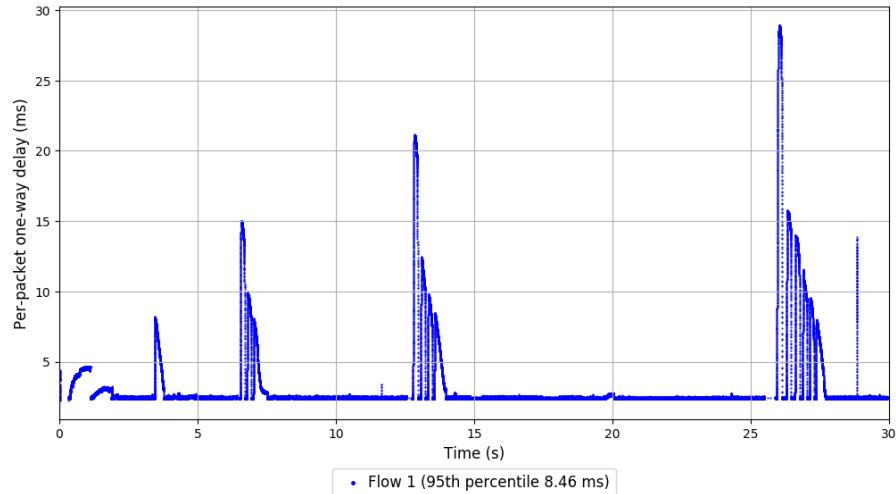
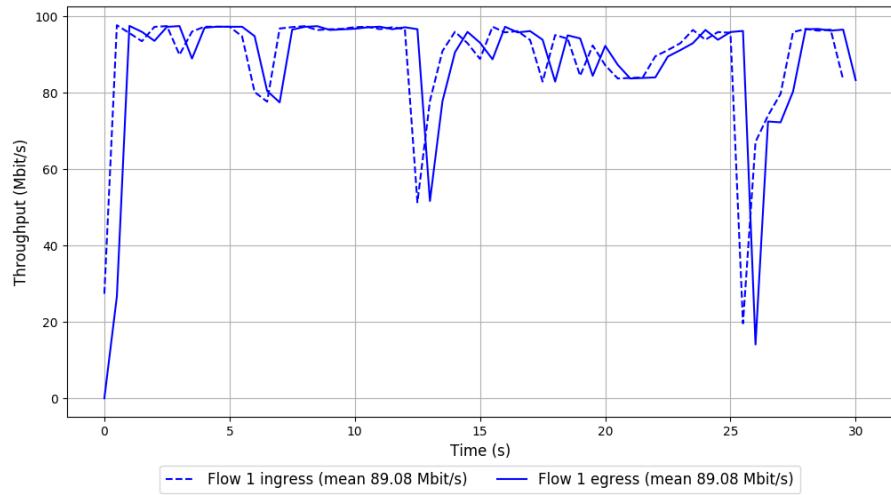


Run 4: Statistics of QUIC Cubic

```
Start at: 2019-01-03 06:04:27
End at: 2019-01-03 06:04:57
Local clock offset: -1.468 ms
Remote clock offset: 0.574 ms

# Below is generated by plot.py at 2019-01-03 06:44:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.08 Mbit/s
95th percentile per-packet one-way delay: 8.456 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 89.08 Mbit/s
95th percentile per-packet one-way delay: 8.456 ms
Loss rate: 0.02%
```

Run 4: Report of QUIC Cubic — Data Link

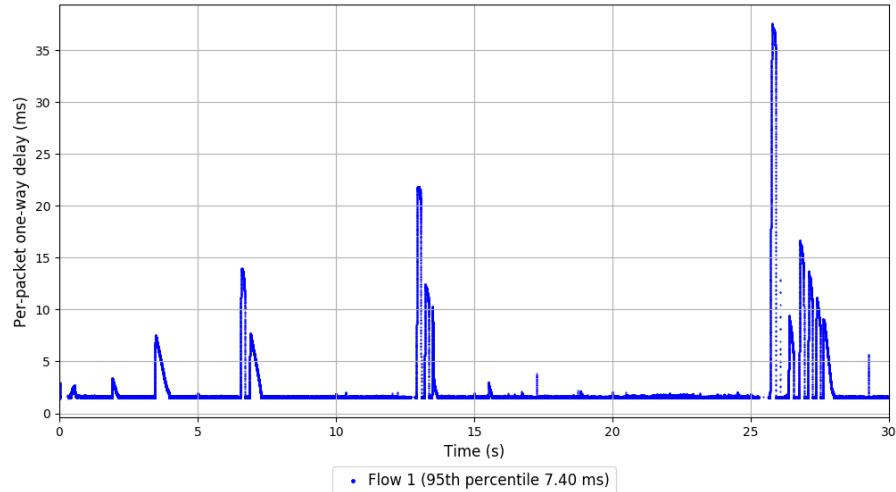
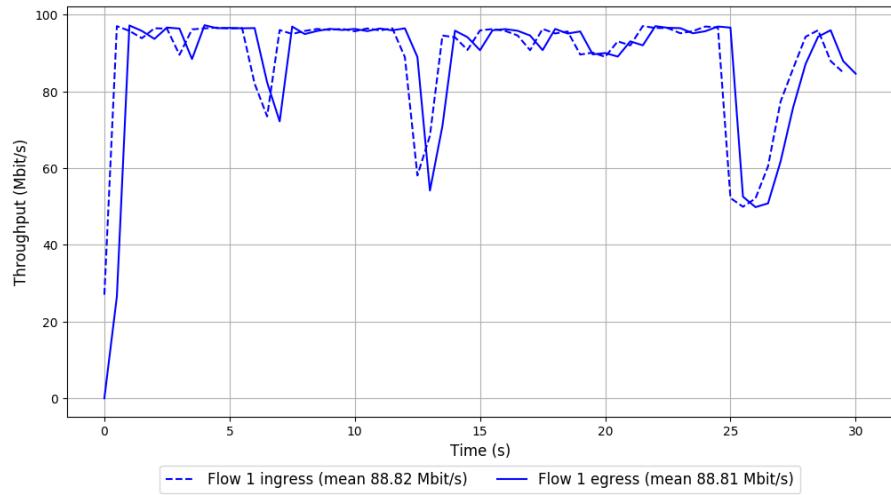


Run 5: Statistics of QUIC Cubic

```
Start at: 2019-01-03 06:25:56
End at: 2019-01-03 06:26:26
Local clock offset: -2.176 ms
Remote clock offset: 0.625 ms

# Below is generated by plot.py at 2019-01-03 06:44:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.81 Mbit/s
95th percentile per-packet one-way delay: 7.400 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 88.81 Mbit/s
95th percentile per-packet one-way delay: 7.400 ms
Loss rate: 0.02%
```

Run 5: Report of QUIC Cubic — Data Link

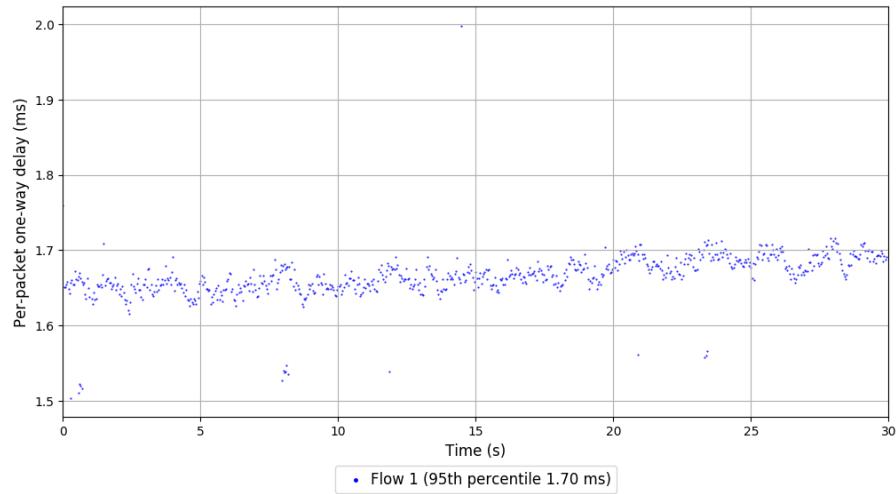
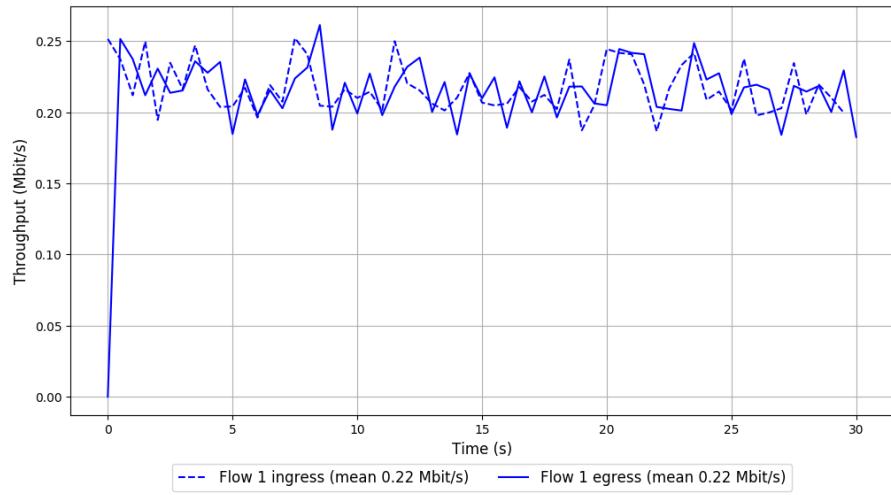


Run 1: Statistics of SCReAM

```
Start at: 2019-01-03 04:53:17
End at: 2019-01-03 04:53:47
Local clock offset: -9.346 ms
Remote clock offset: -0.088 ms

# Below is generated by plot.py at 2019-01-03 06:44:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.701 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.701 ms
Loss rate: 0.13%
```

Run 1: Report of SCReAM — Data Link

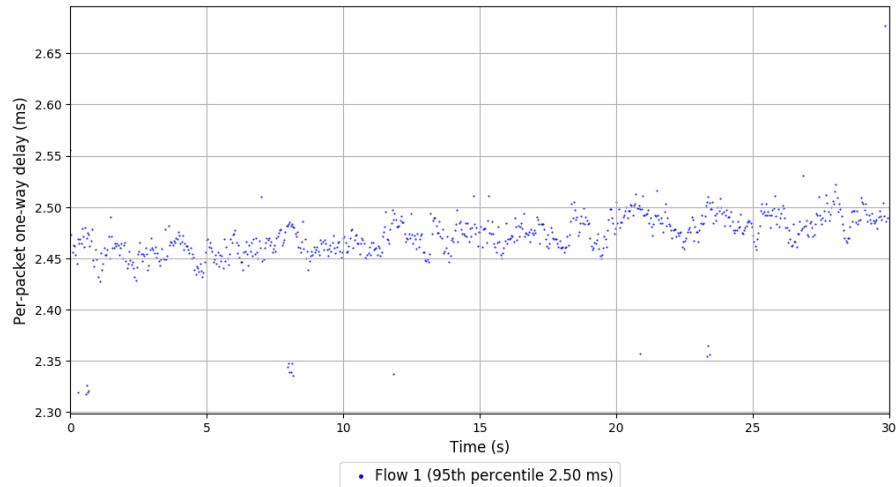
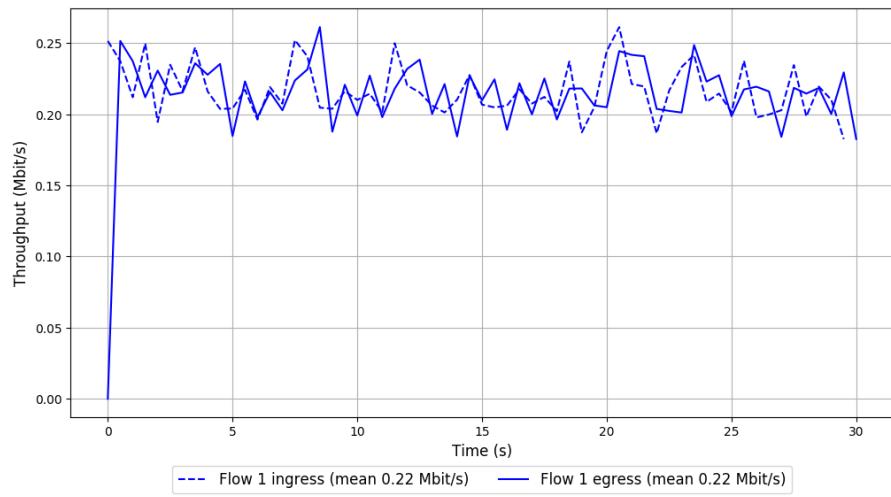


Run 2: Statistics of SCReAM

```
Start at: 2019-01-03 05:14:47
End at: 2019-01-03 05:15:17
Local clock offset: -10.388 ms
Remote clock offset: 0.06 ms

# Below is generated by plot.py at 2019-01-03 06:44:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.501 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.501 ms
Loss rate: 0.00%
```

Run 2: Report of SCReAM — Data Link

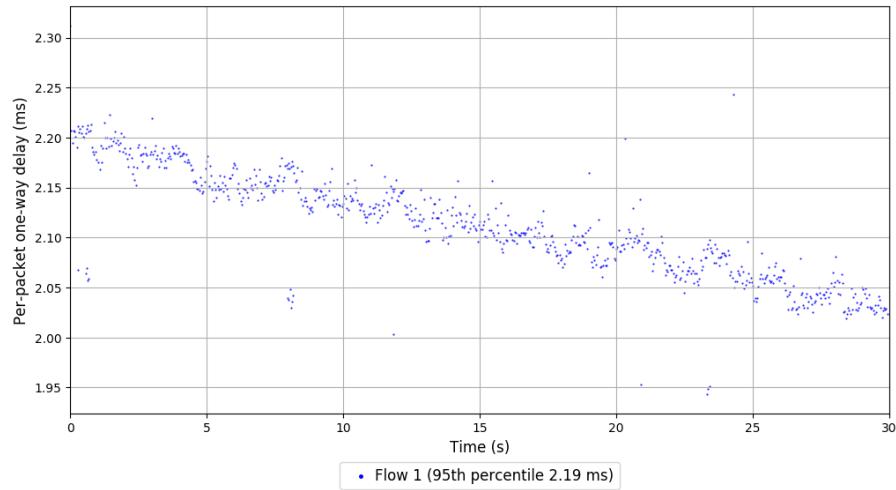
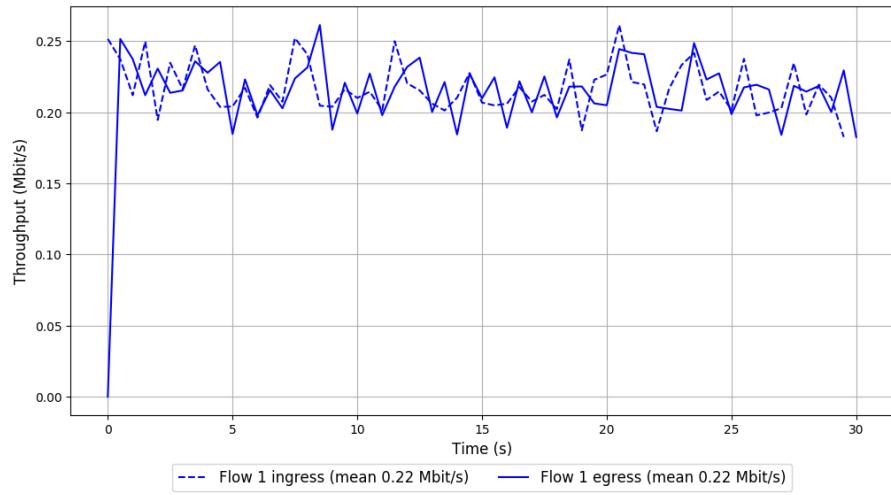


Run 3: Statistics of SCReAM

```
Start at: 2019-01-03 05:36:19
End at: 2019-01-03 05:36:49
Local clock offset: -3.301 ms
Remote clock offset: 0.365 ms

# Below is generated by plot.py at 2019-01-03 06:44:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.192 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.192 ms
Loss rate: 0.00%
```

Run 3: Report of SCReAM — Data Link

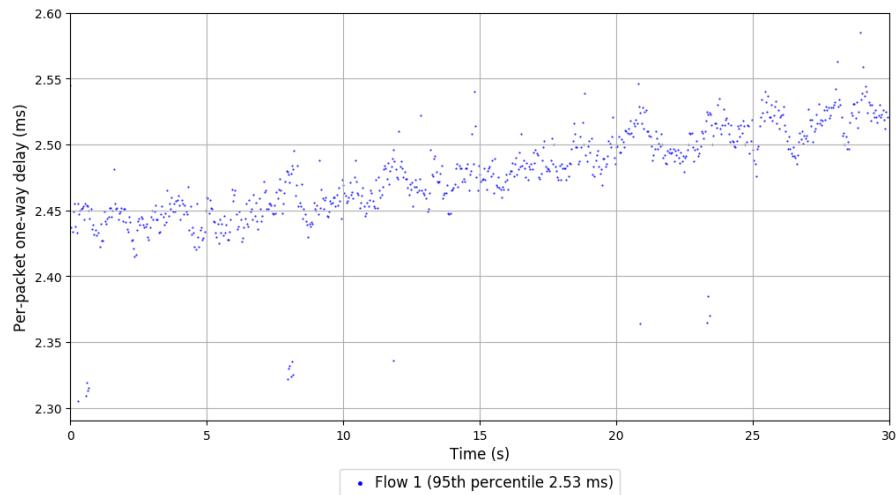
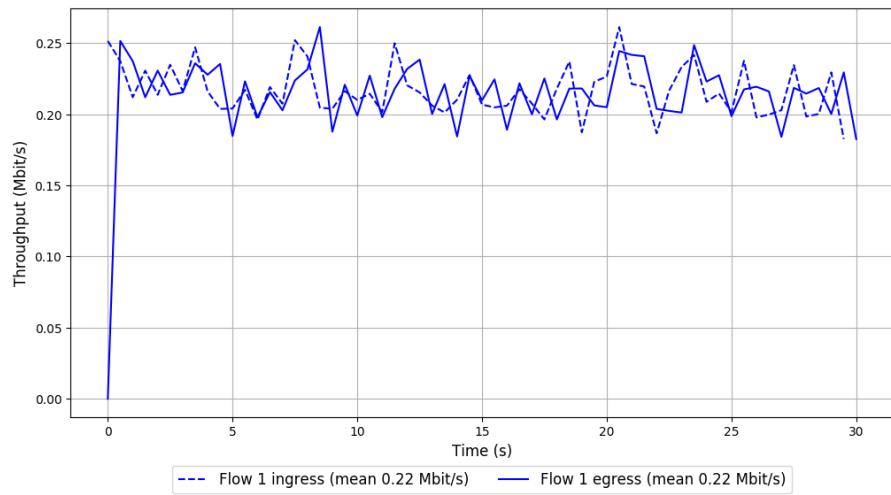


Run 4: Statistics of SCReAM

```
Start at: 2019-01-03 05:57:44
End at: 2019-01-03 05:58:14
Local clock offset: -0.587 ms
Remote clock offset: 0.541 ms

# Below is generated by plot.py at 2019-01-03 06:44:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.528 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.528 ms
Loss rate: 0.00%
```

Run 4: Report of SCReAM — Data Link

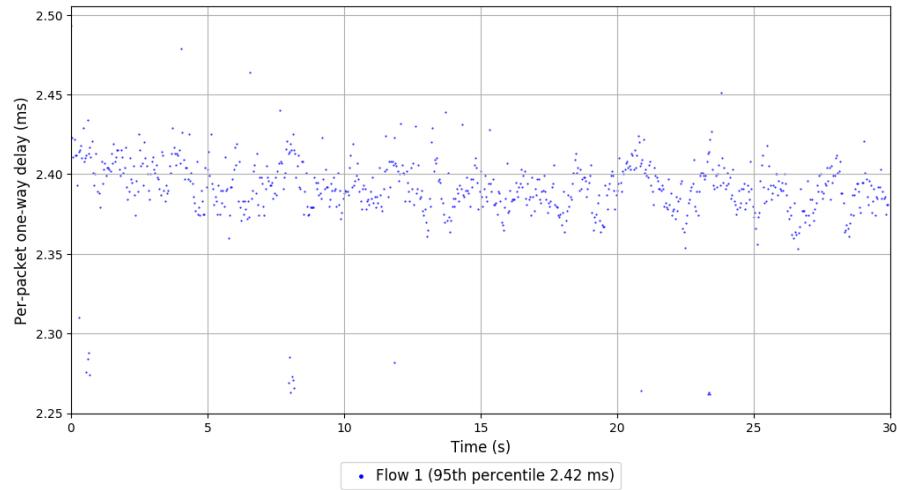
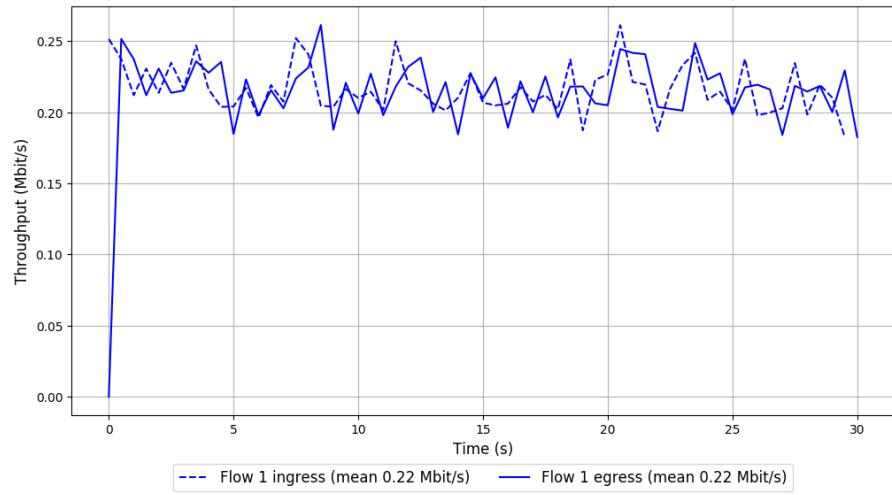


Run 5: Statistics of SCReAM

```
Start at: 2019-01-03 06:19:12
End at: 2019-01-03 06:19:42
Local clock offset: -1.631 ms
Remote clock offset: 0.61 ms

# Below is generated by plot.py at 2019-01-03 06:44:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.418 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.418 ms
Loss rate: 0.00%
```

Run 5: Report of SCReAM — Data Link

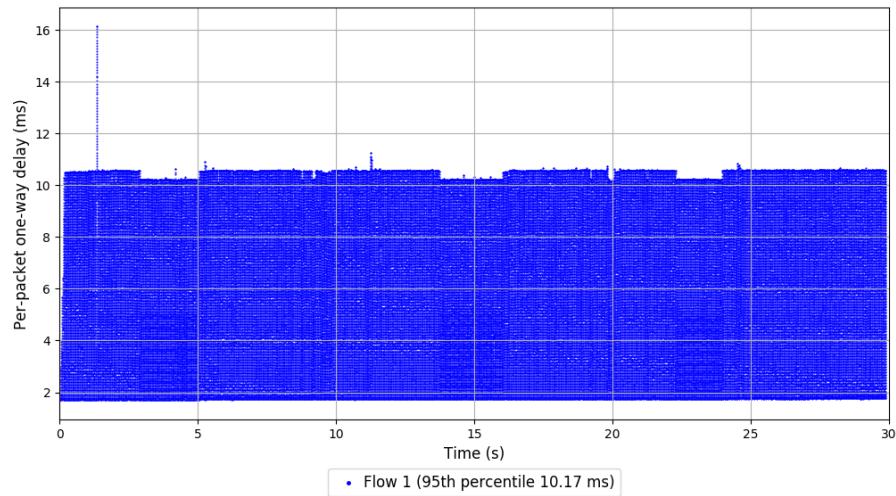
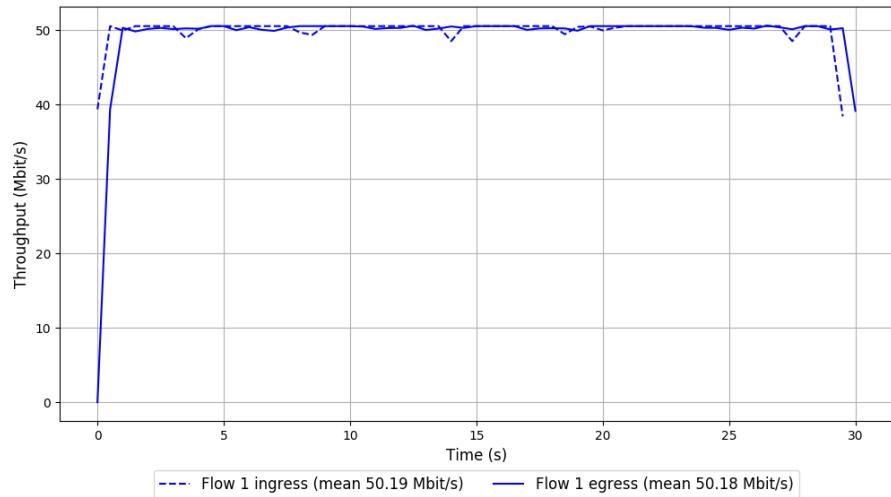


Run 1: Statistics of Sprout

```
Start at: 2019-01-03 05:05:43
End at: 2019-01-03 05:06:13
Local clock offset: -10.429 ms
Remote clock offset: -0.005 ms

# Below is generated by plot.py at 2019-01-03 06:44:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.18 Mbit/s
95th percentile per-packet one-way delay: 10.172 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.18 Mbit/s
95th percentile per-packet one-way delay: 10.172 ms
Loss rate: 0.00%
```

Run 1: Report of Sprout — Data Link

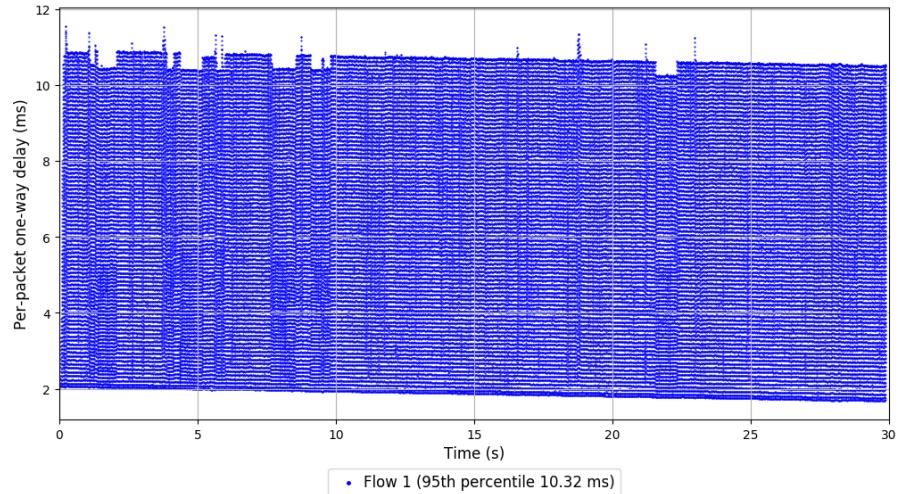
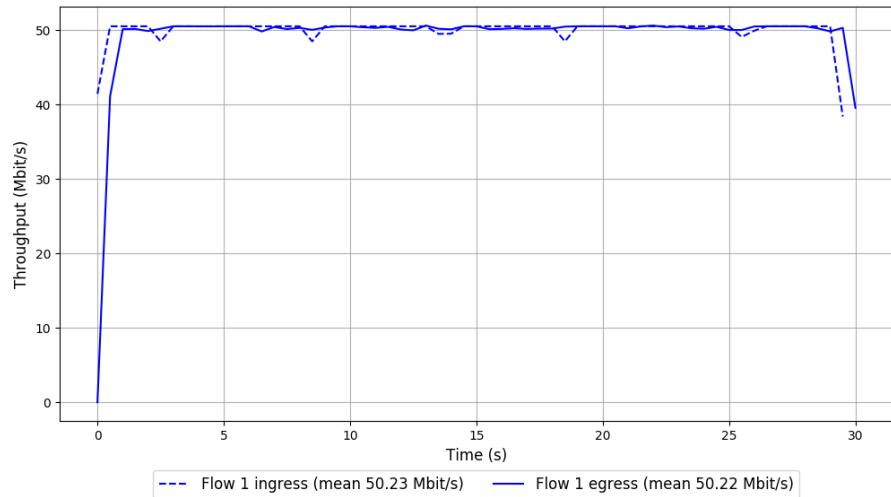


Run 2: Statistics of Sprout

```
Start at: 2019-01-03 05:27:13
End at: 2019-01-03 05:27:43
Local clock offset: -8.315 ms
Remote clock offset: 0.244 ms

# Below is generated by plot.py at 2019-01-03 06:44:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.22 Mbit/s
95th percentile per-packet one-way delay: 10.324 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.22 Mbit/s
95th percentile per-packet one-way delay: 10.324 ms
Loss rate: 0.00%
```

Run 2: Report of Sprout — Data Link

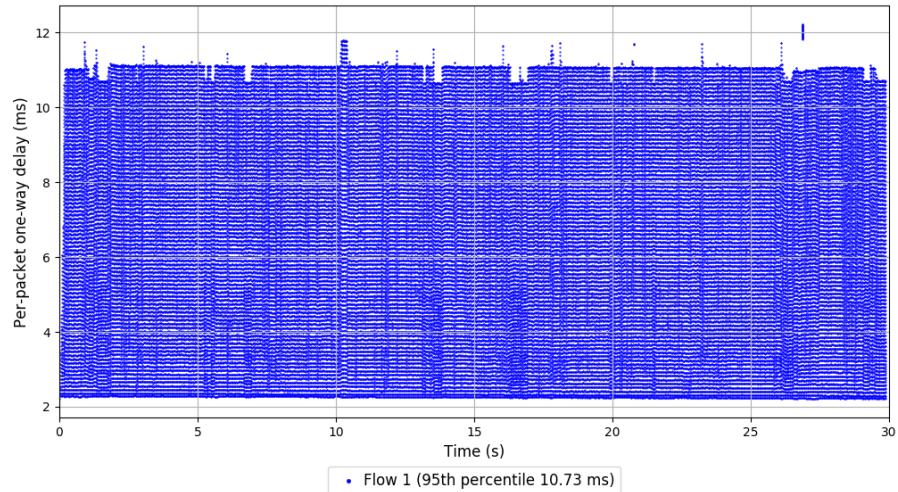
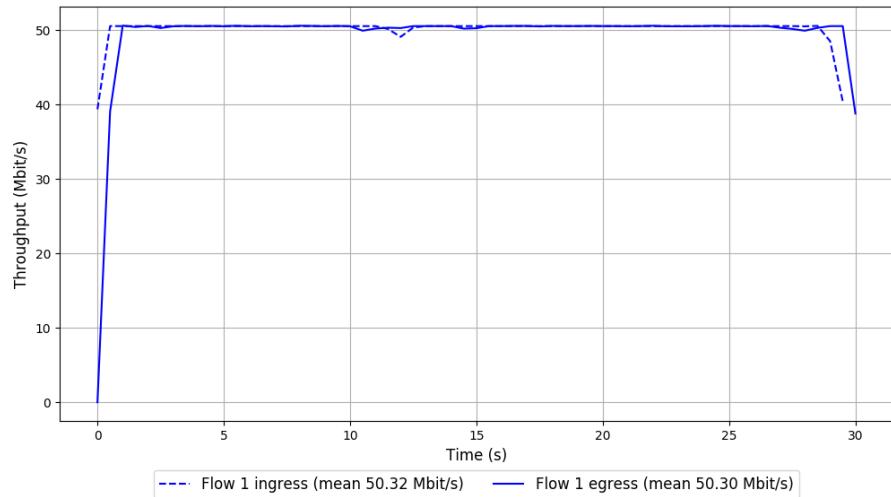


Run 3: Statistics of Sprout

```
Start at: 2019-01-03 05:48:40
End at: 2019-01-03 05:49:10
Local clock offset: -0.514 ms
Remote clock offset: 0.455 ms

# Below is generated by plot.py at 2019-01-03 06:44:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.30 Mbit/s
95th percentile per-packet one-way delay: 10.728 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 50.30 Mbit/s
95th percentile per-packet one-way delay: 10.728 ms
Loss rate: 0.05%
```

Run 3: Report of Sprout — Data Link

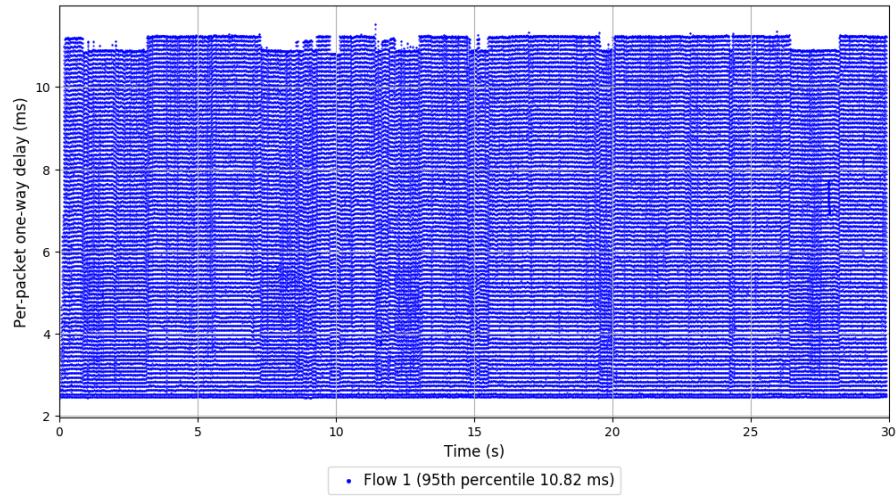
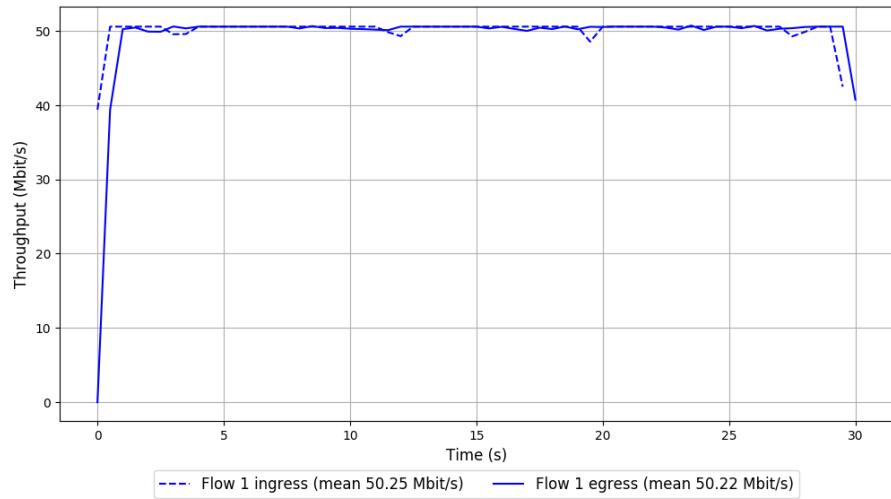


Run 4: Statistics of Sprout

```
Start at: 2019-01-03 06:10:06
End at: 2019-01-03 06:10:36
Local clock offset: -1.703 ms
Remote clock offset: 0.543 ms

# Below is generated by plot.py at 2019-01-03 06:44:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.22 Mbit/s
95th percentile per-packet one-way delay: 10.818 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 50.22 Mbit/s
95th percentile per-packet one-way delay: 10.818 ms
Loss rate: 0.06%
```

Run 4: Report of Sprout — Data Link

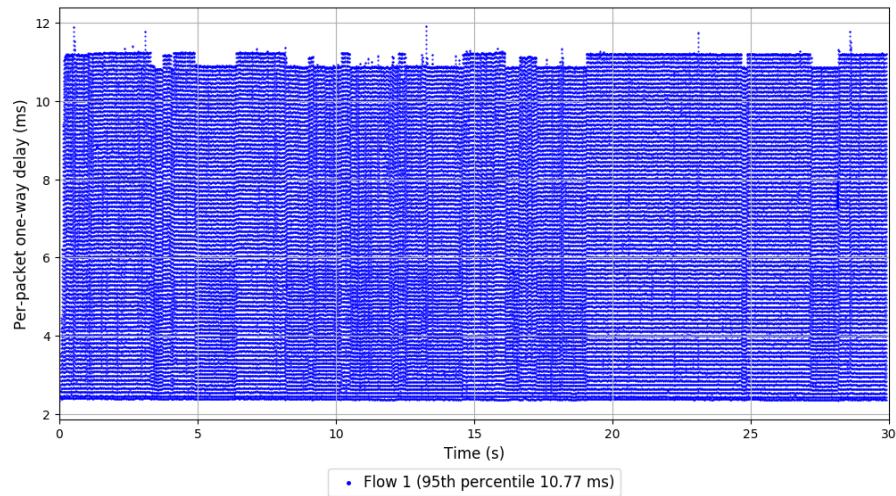
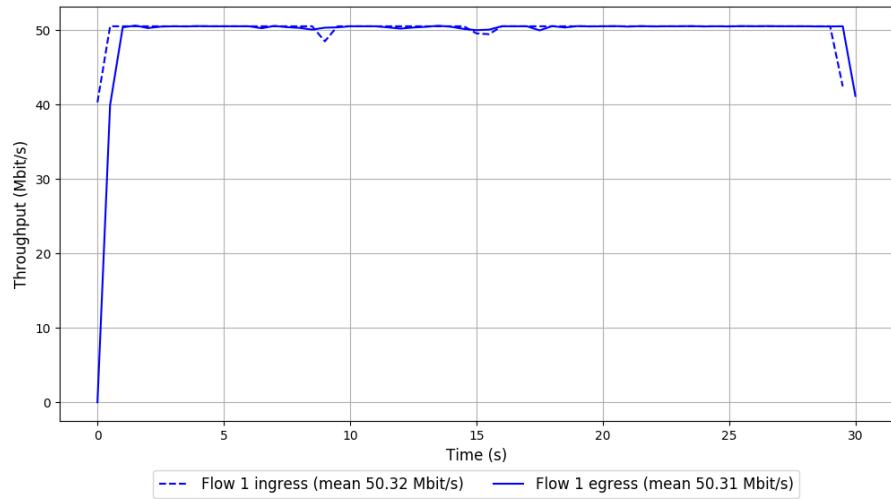


Run 5: Statistics of Sprout

```
Start at: 2019-01-03 06:31:38
End at: 2019-01-03 06:32:08
Local clock offset: -0.97 ms
Remote clock offset: 0.654 ms

# Below is generated by plot.py at 2019-01-03 06:44:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.31 Mbit/s
95th percentile per-packet one-way delay: 10.774 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 50.31 Mbit/s
95th percentile per-packet one-way delay: 10.774 ms
Loss rate: 0.07%
```

Run 5: Report of Sprout — Data Link

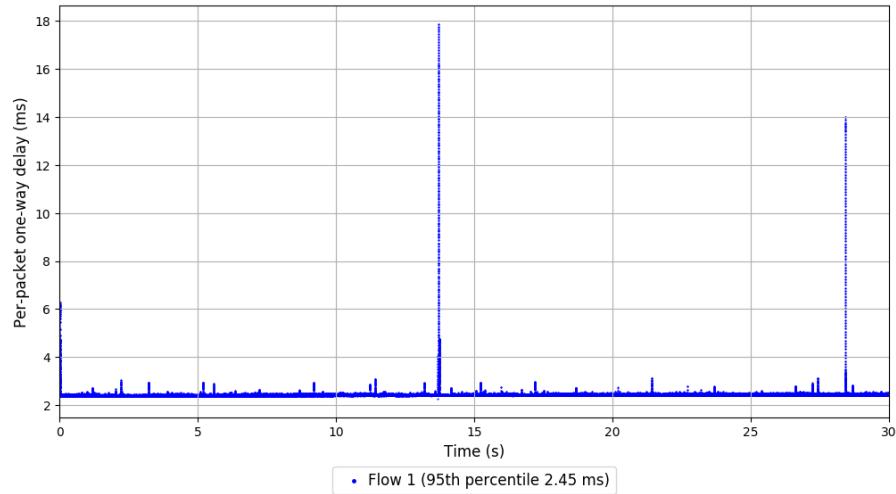
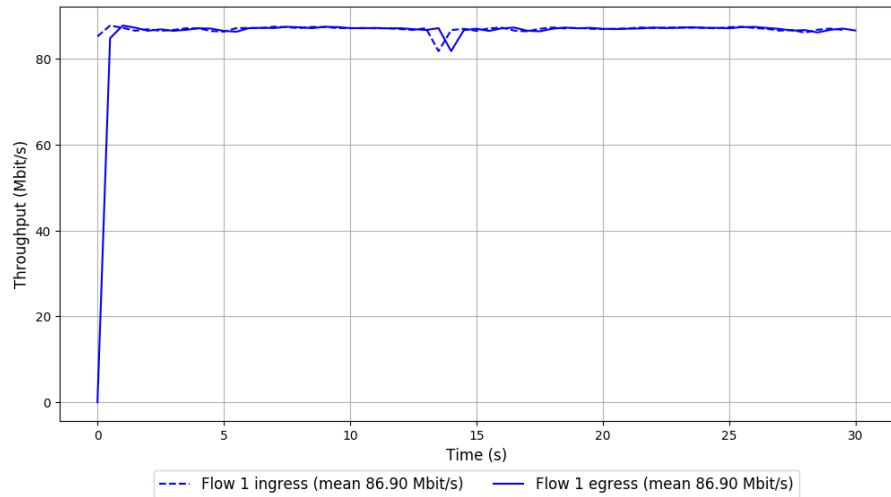


Run 1: Statistics of TaoVA-100x

```
Start at: 2019-01-03 04:57:42
End at: 2019-01-03 04:58:12
Local clock offset: -9.02 ms
Remote clock offset: -0.083 ms

# Below is generated by plot.py at 2019-01-03 06:46:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.90 Mbit/s
95th percentile per-packet one-way delay: 2.453 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 86.90 Mbit/s
95th percentile per-packet one-way delay: 2.453 ms
Loss rate: 0.01%
```

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

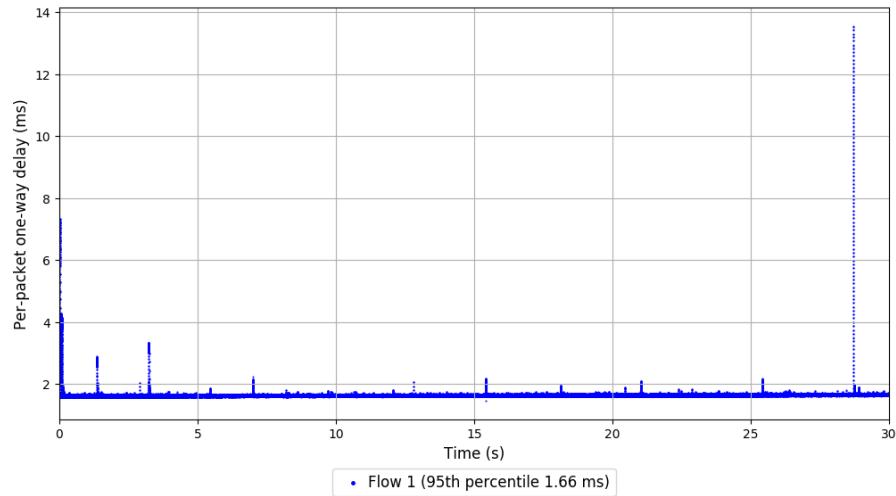
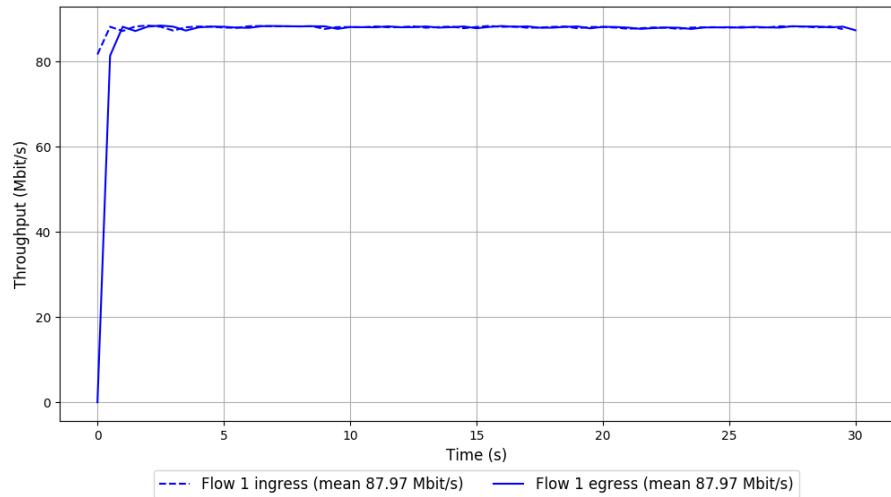


Run 2: Statistics of TaoVA-100x

```
Start at: 2019-01-03 05:19:12
End at: 2019-01-03 05:19:42
Local clock offset: -11.476 ms
Remote clock offset: 0.187 ms

# Below is generated by plot.py at 2019-01-03 06:46:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.97 Mbit/s
95th percentile per-packet one-way delay: 1.663 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 87.97 Mbit/s
95th percentile per-packet one-way delay: 1.663 ms
Loss rate: 0.01%
```

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

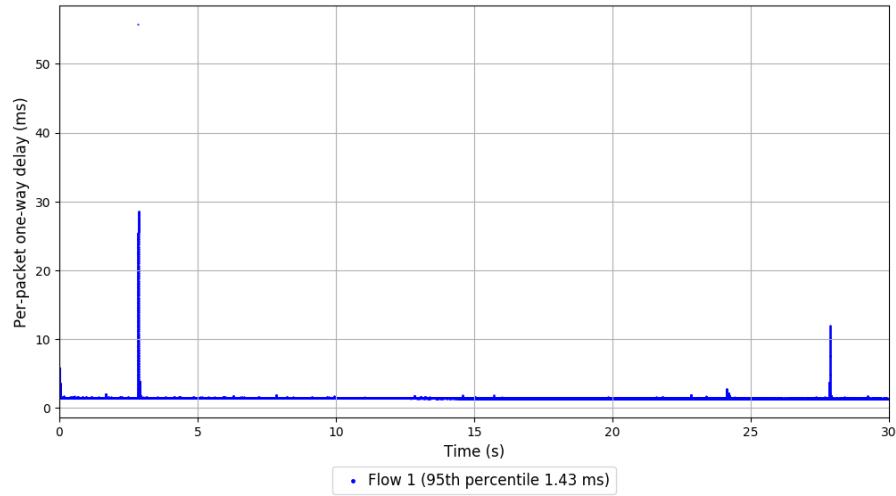
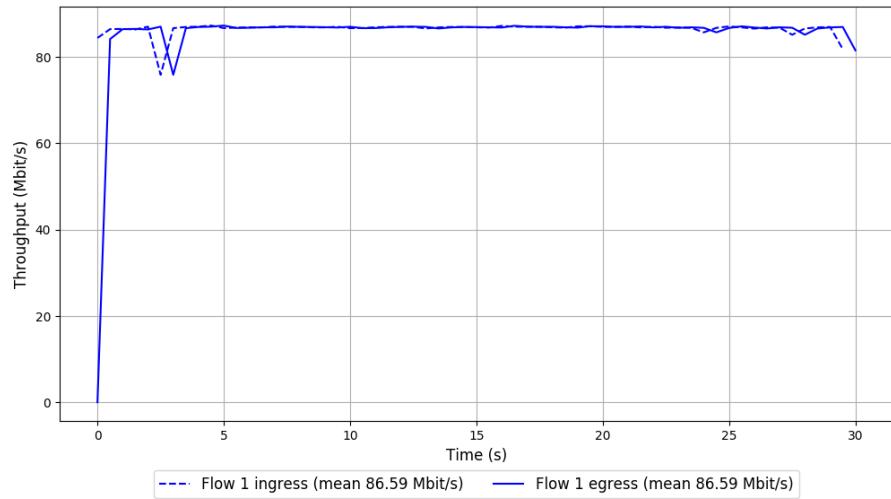


Run 3: Statistics of TaoVA-100x

```
Start at: 2019-01-03 05:40:43
End at: 2019-01-03 05:41:13
Local clock offset: -2.812 ms
Remote clock offset: 0.386 ms

# Below is generated by plot.py at 2019-01-03 06:46:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.59 Mbit/s
95th percentile per-packet one-way delay: 1.431 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 86.59 Mbit/s
95th percentile per-packet one-way delay: 1.431 ms
Loss rate: 0.01%
```

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

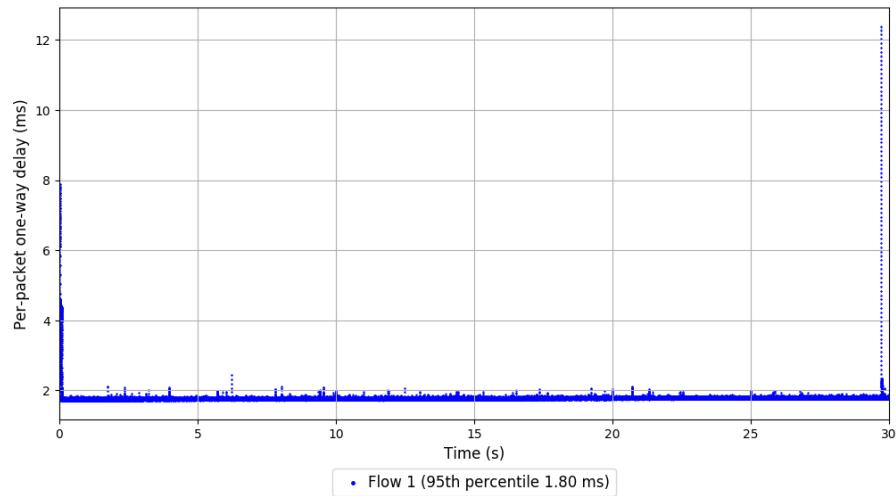
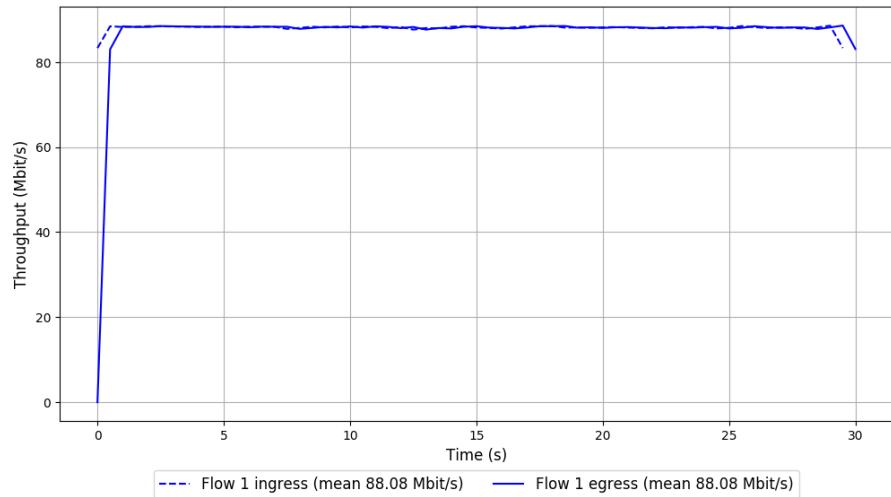


Run 4: Statistics of TaoVA-100x

```
Start at: 2019-01-03 06:02:08
End at: 2019-01-03 06:02:38
Local clock offset: -2.02 ms
Remote clock offset: 0.481 ms

# Below is generated by plot.py at 2019-01-03 06:46:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.08 Mbit/s
95th percentile per-packet one-way delay: 1.798 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 88.08 Mbit/s
95th percentile per-packet one-way delay: 1.798 ms
Loss rate: 0.01%
```

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

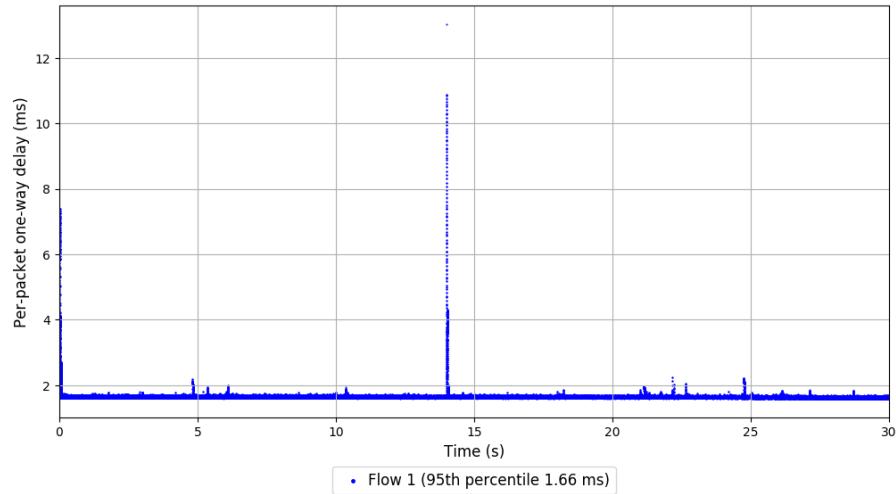
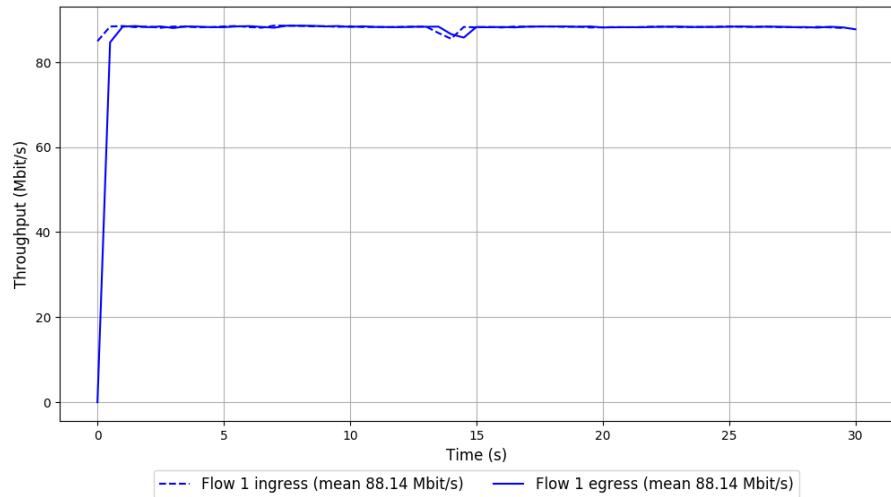


Run 5: Statistics of TaoVA-100x

```
Start at: 2019-01-03 06:23:37
End at: 2019-01-03 06:24:07
Local clock offset: -2.266 ms
Remote clock offset: 0.636 ms

# Below is generated by plot.py at 2019-01-03 06:46:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.14 Mbit/s
95th percentile per-packet one-way delay: 1.662 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 88.14 Mbit/s
95th percentile per-packet one-way delay: 1.662 ms
Loss rate: 0.01%
```

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

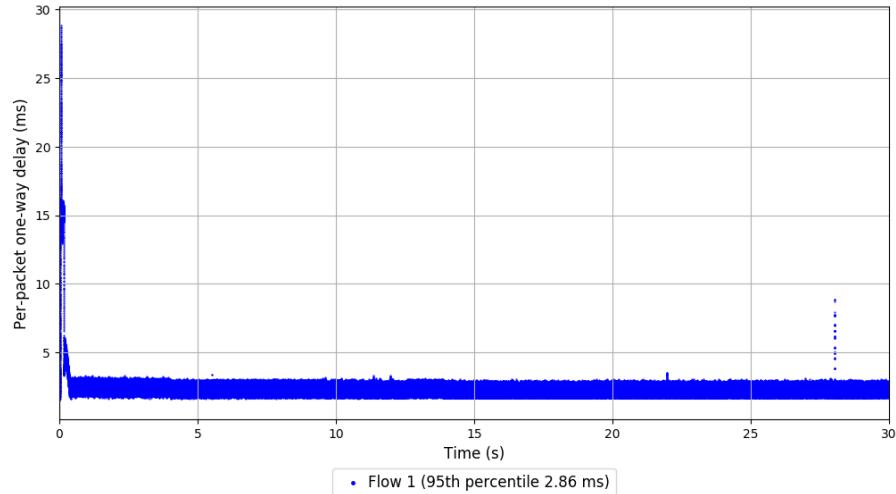
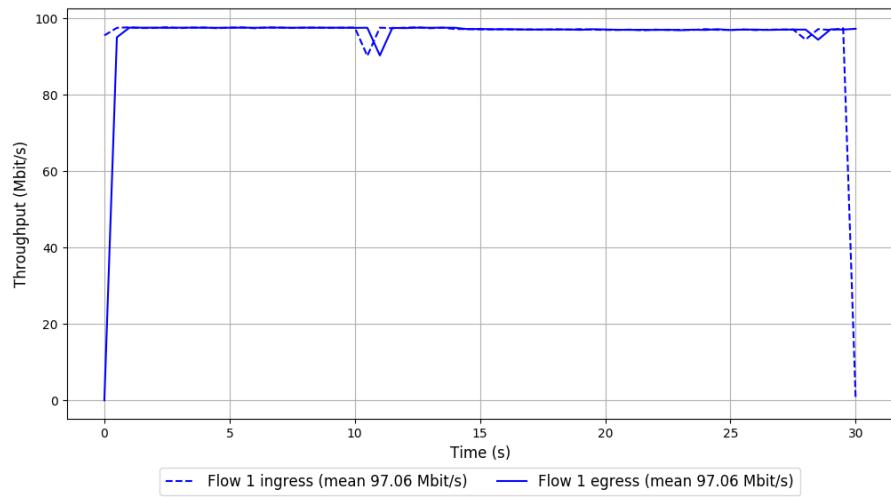


Run 1: Statistics of TCP Vegas

```
Start at: 2019-01-03 04:52:09
End at: 2019-01-03 04:52:39
Local clock offset: -9.239 ms
Remote clock offset: -0.093 ms

# Below is generated by plot.py at 2019-01-03 06:46:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.06 Mbit/s
95th percentile per-packet one-way delay: 2.864 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.06 Mbit/s
95th percentile per-packet one-way delay: 2.864 ms
Loss rate: 0.01%
```

Run 1: Report of TCP Vegas — Data Link

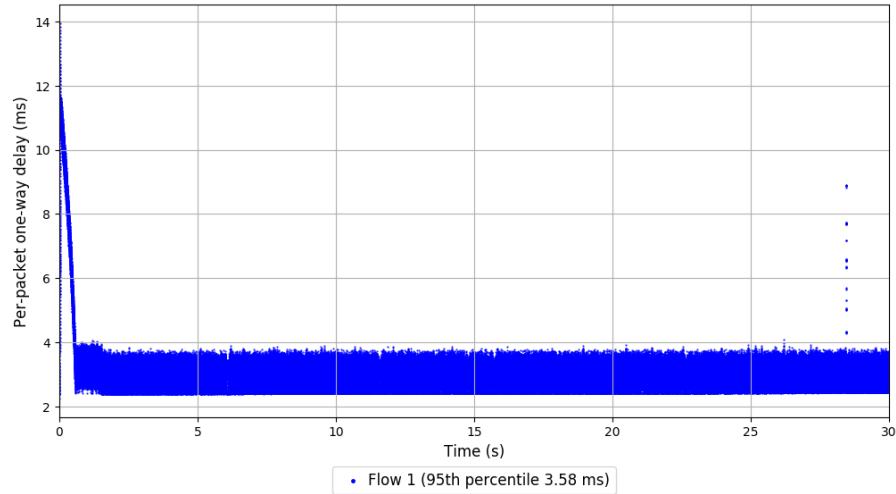
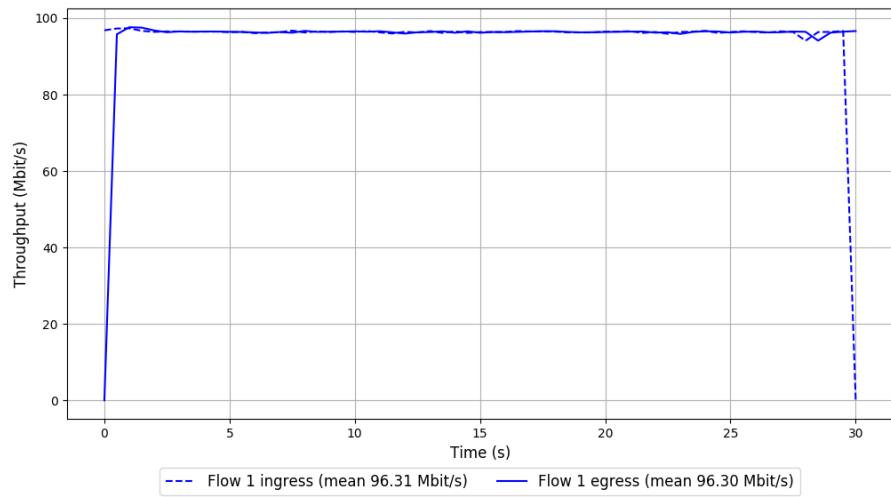


Run 2: Statistics of TCP Vegas

```
Start at: 2019-01-03 05:13:39
End at: 2019-01-03 05:14:09
Local clock offset: -10.282 ms
Remote clock offset: 0.124 ms

# Below is generated by plot.py at 2019-01-03 06:46:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.30 Mbit/s
95th percentile per-packet one-way delay: 3.583 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 96.30 Mbit/s
95th percentile per-packet one-way delay: 3.583 ms
Loss rate: 0.01%
```

Run 2: Report of TCP Vegas — Data Link

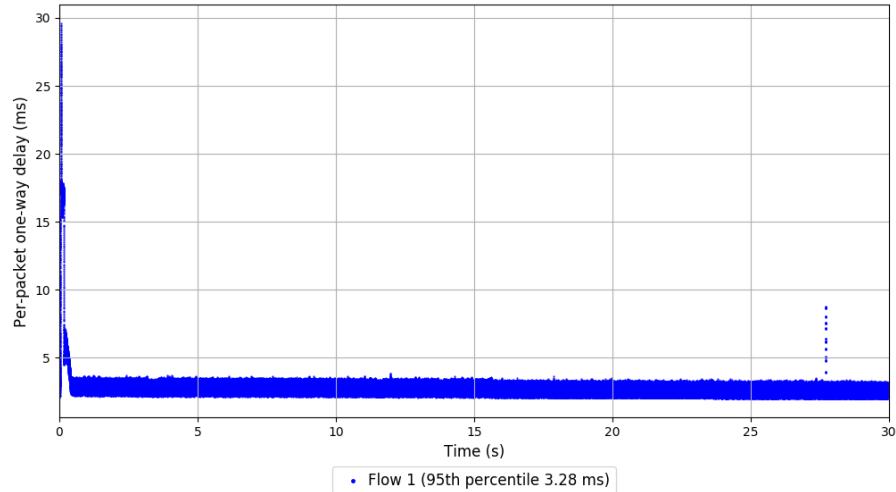
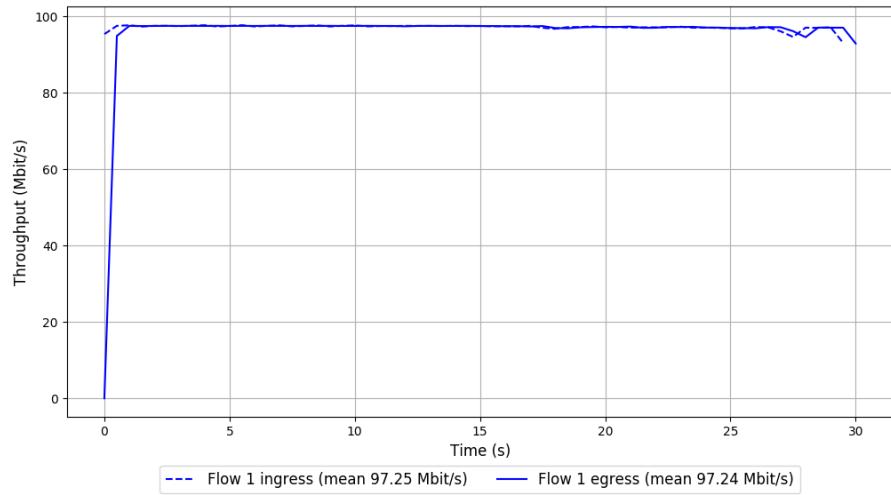


Run 3: Statistics of TCP Vegas

```
Start at: 2019-01-03 05:35:10
End at: 2019-01-03 05:35:40
Local clock offset: -3.774 ms
Remote clock offset: 0.345 ms

# Below is generated by plot.py at 2019-01-03 06:46:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.24 Mbit/s
95th percentile per-packet one-way delay: 3.276 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.24 Mbit/s
95th percentile per-packet one-way delay: 3.276 ms
Loss rate: 0.01%
```

Run 3: Report of TCP Vegas — Data Link

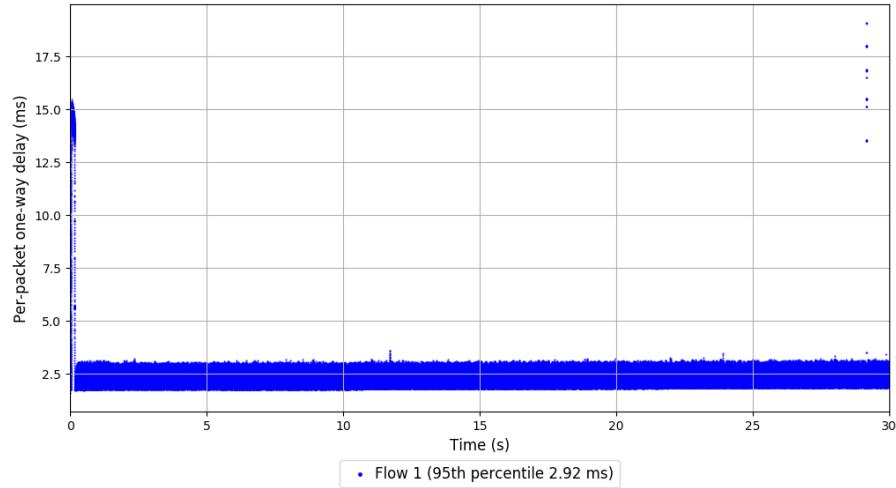
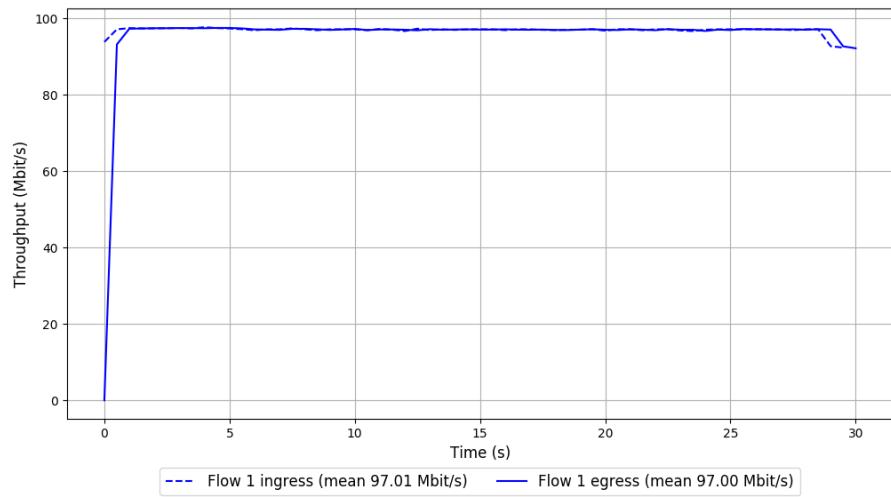


Run 4: Statistics of TCP Vegas

```
Start at: 2019-01-03 05:56:36
End at: 2019-01-03 05:57:06
Local clock offset: -1.124 ms
Remote clock offset: 0.455 ms

# Below is generated by plot.py at 2019-01-03 06:46:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.00 Mbit/s
95th percentile per-packet one-way delay: 2.919 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.00 Mbit/s
95th percentile per-packet one-way delay: 2.919 ms
Loss rate: 0.01%
```

Run 4: Report of TCP Vegas — Data Link

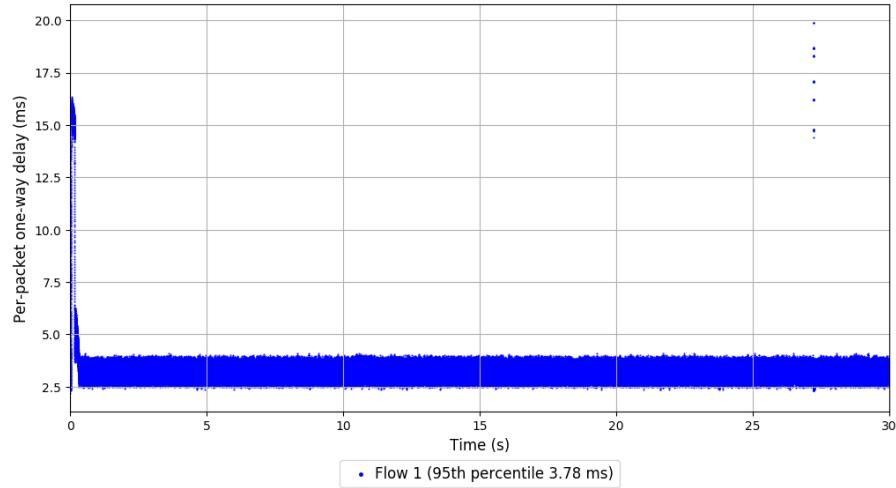
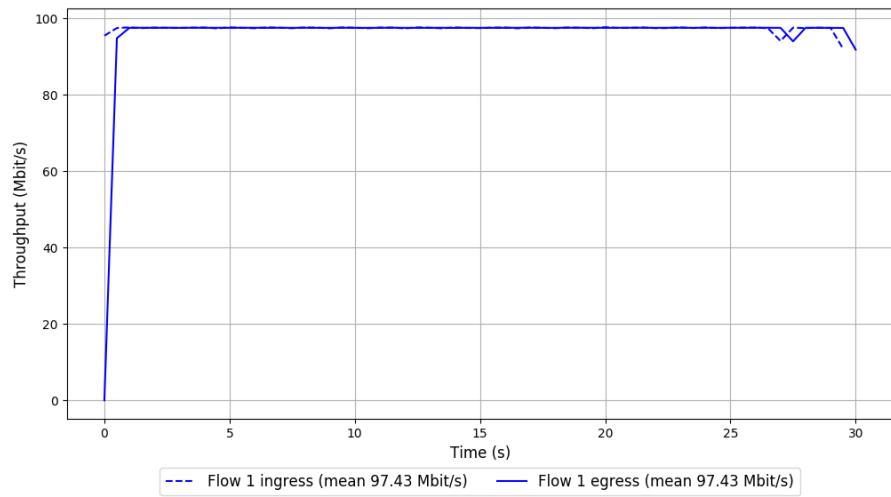


Run 5: Statistics of TCP Vegas

```
Start at: 2019-01-03 06:18:04
End at: 2019-01-03 06:18:34
Local clock offset: -1.661 ms
Remote clock offset: 0.642 ms

# Below is generated by plot.py at 2019-01-03 06:46:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.43 Mbit/s
95th percentile per-packet one-way delay: 3.780 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 97.43 Mbit/s
95th percentile per-packet one-way delay: 3.780 ms
Loss rate: 0.02%
```

Run 5: Report of TCP Vegas — Data Link

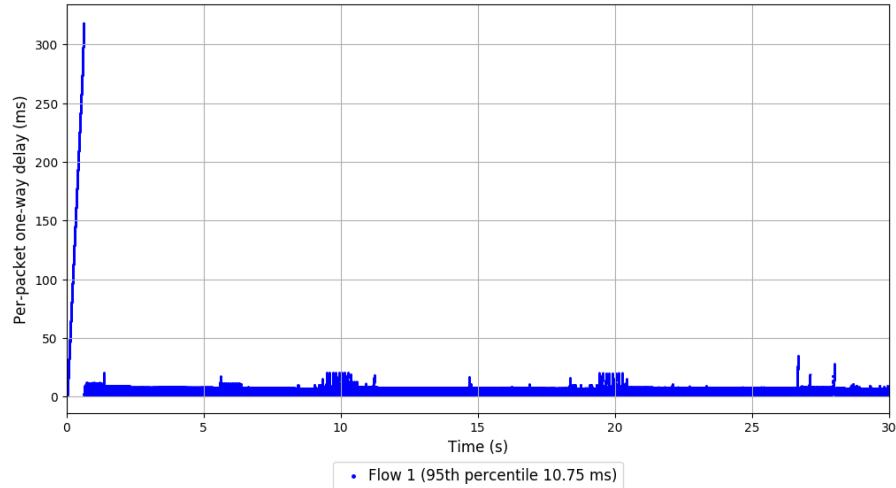
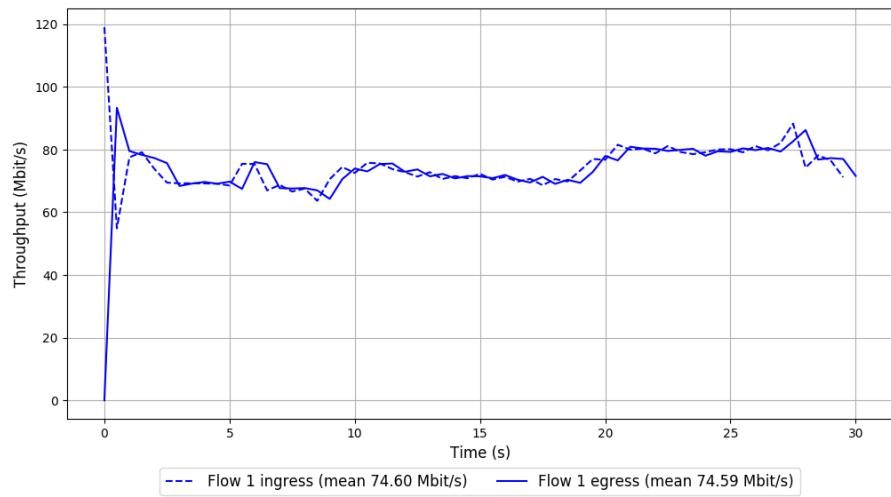


Run 1: Statistics of Verus

```
Start at: 2019-01-03 04:48:44
End at: 2019-01-03 04:49:14
Local clock offset: -8.876 ms
Remote clock offset: -0.275 ms

# Below is generated by plot.py at 2019-01-03 06:46:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 74.59 Mbit/s
95th percentile per-packet one-way delay: 10.747 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 74.59 Mbit/s
95th percentile per-packet one-way delay: 10.747 ms
Loss rate: 0.01%
```

Run 1: Report of Verus — Data Link

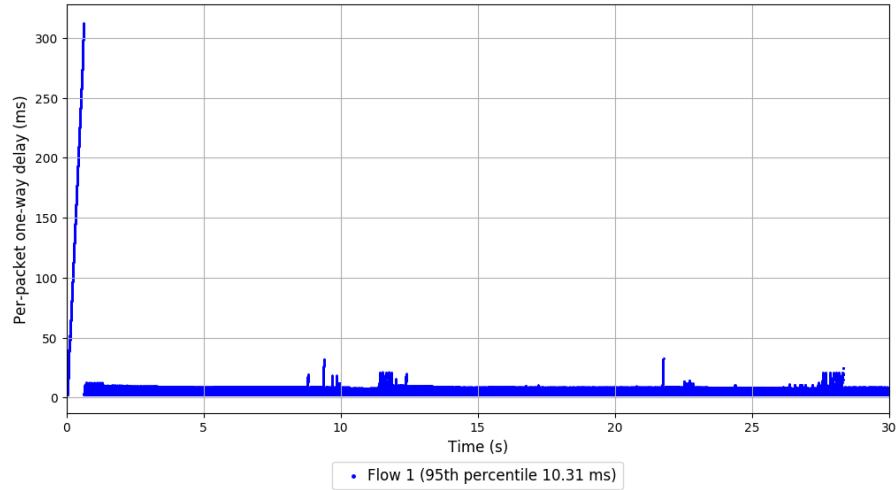
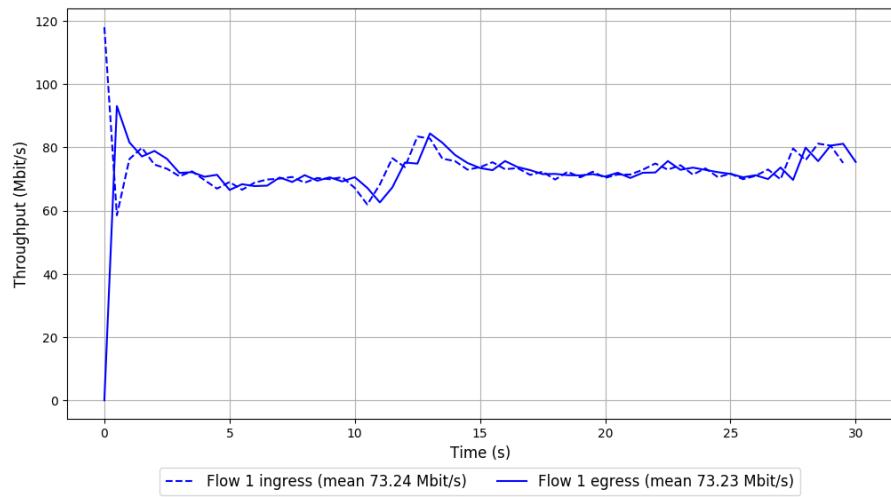


Run 2: Statistics of Verus

```
Start at: 2019-01-03 05:10:15
End at: 2019-01-03 05:10:45
Local clock offset: -10.017 ms
Remote clock offset: 0.045 ms

# Below is generated by plot.py at 2019-01-03 06:47:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 73.23 Mbit/s
95th percentile per-packet one-way delay: 10.310 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 73.23 Mbit/s
95th percentile per-packet one-way delay: 10.310 ms
Loss rate: 0.02%
```

Run 2: Report of Verus — Data Link

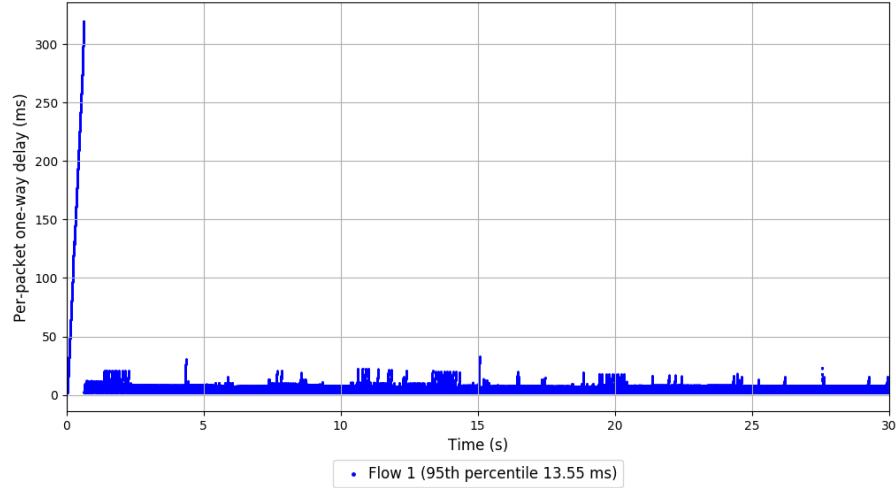
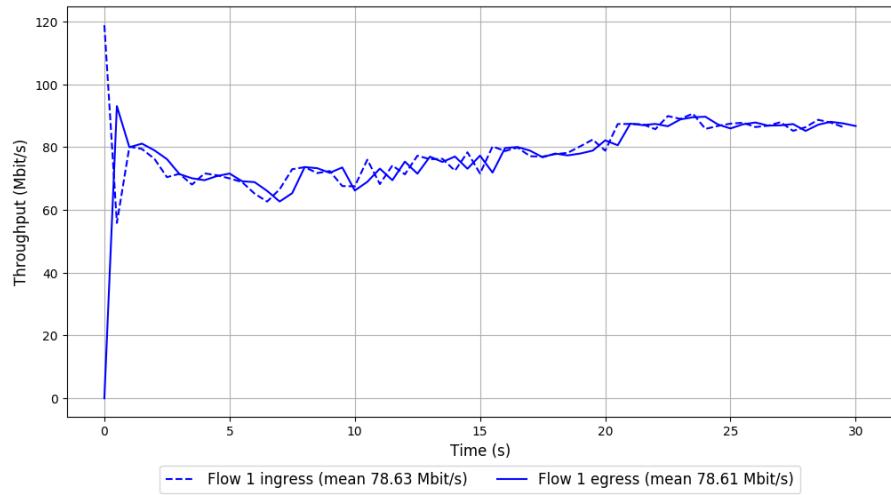


Run 3: Statistics of Verus

```
Start at: 2019-01-03 05:31:46
End at: 2019-01-03 05:32:16
Local clock offset: -5.306 ms
Remote clock offset: 0.26 ms

# Below is generated by plot.py at 2019-01-03 06:47:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.61 Mbit/s
95th percentile per-packet one-way delay: 13.547 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 78.61 Mbit/s
95th percentile per-packet one-way delay: 13.547 ms
Loss rate: 0.03%
```

Run 3: Report of Verus — Data Link

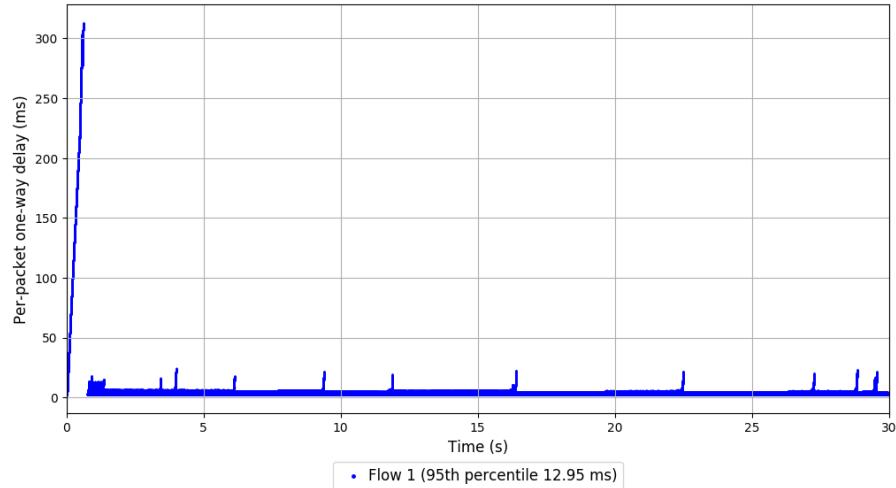
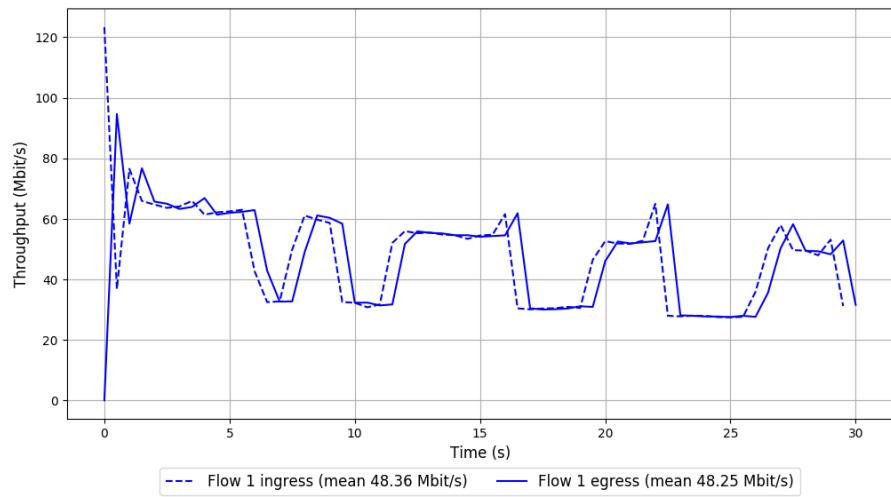


Run 4: Statistics of Verus

```
Start at: 2019-01-03 05:53:13
End at: 2019-01-03 05:53:43
Local clock offset: 0.138 ms
Remote clock offset: 0.469 ms

# Below is generated by plot.py at 2019-01-03 06:47:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 48.25 Mbit/s
95th percentile per-packet one-way delay: 12.952 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 48.25 Mbit/s
95th percentile per-packet one-way delay: 12.952 ms
Loss rate: 0.22%
```

Run 4: Report of Verus — Data Link

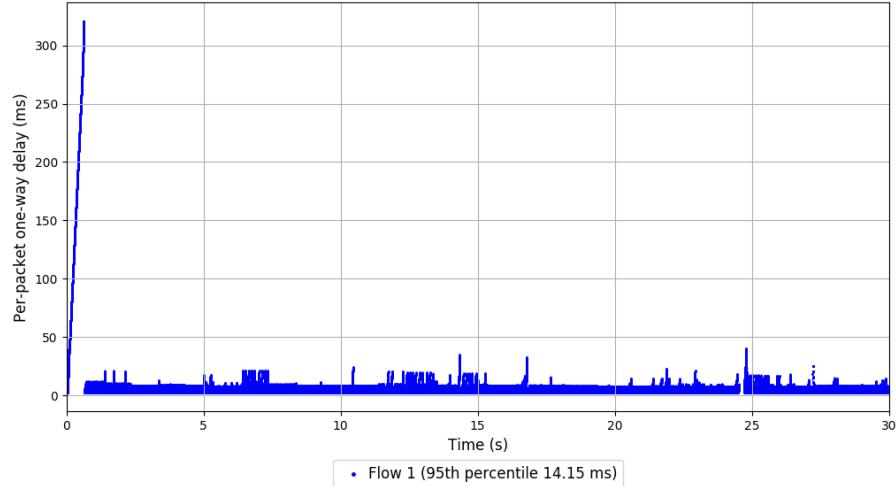
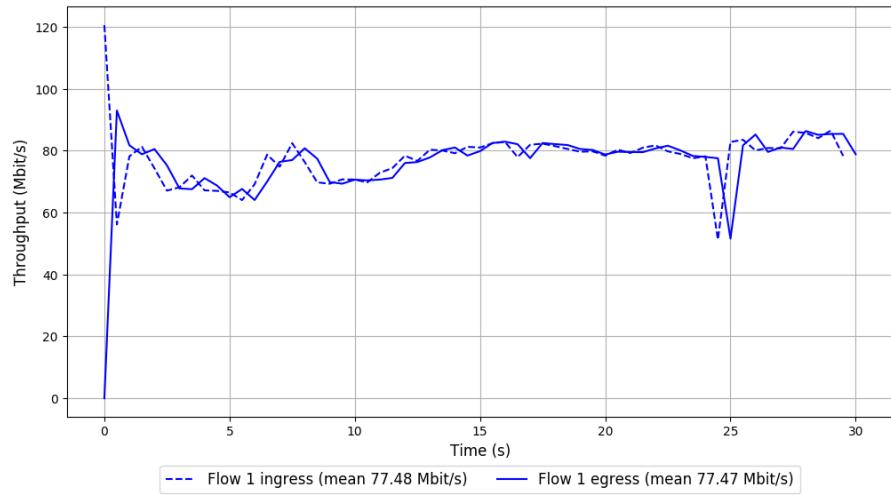


Run 5: Statistics of Verus

```
Start at: 2019-01-03 06:14:39
End at: 2019-01-03 06:15:09
Local clock offset: -1.747 ms
Remote clock offset: 0.491 ms

# Below is generated by plot.py at 2019-01-03 06:47:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 77.47 Mbit/s
95th percentile per-packet one-way delay: 14.154 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 77.47 Mbit/s
95th percentile per-packet one-way delay: 14.154 ms
Loss rate: 0.02%
```

Run 5: Report of Verus — Data Link

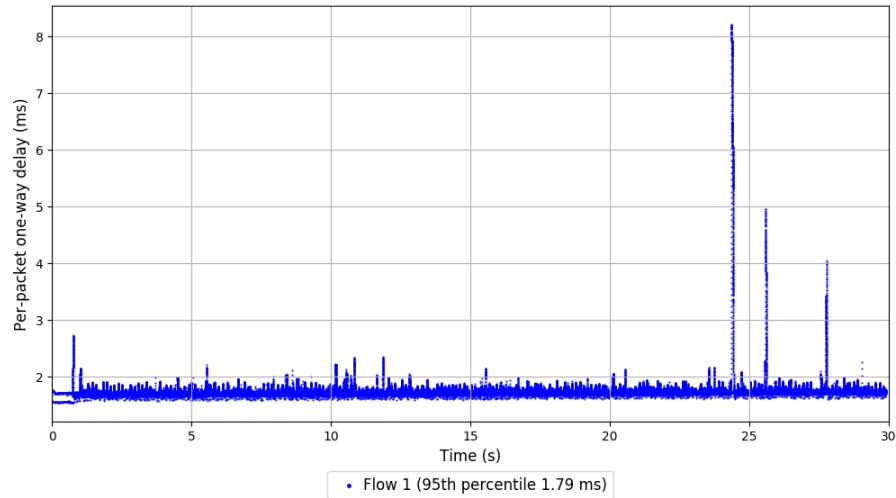
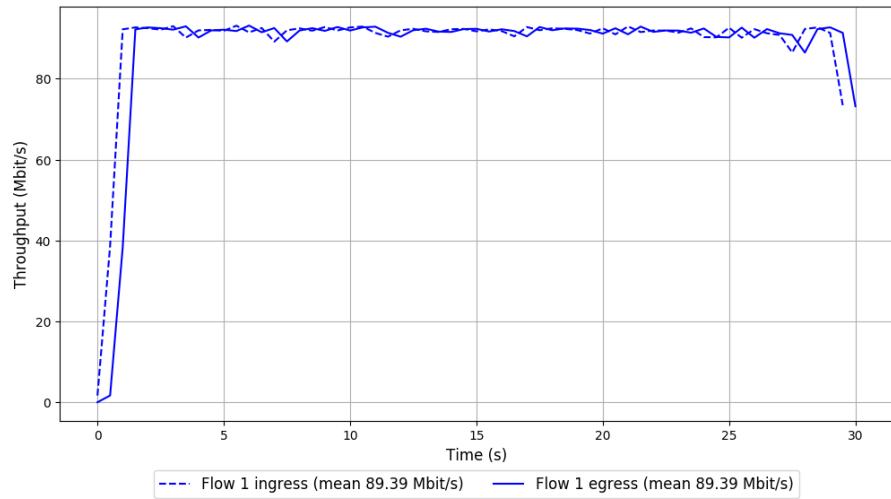


```
Run 1: Statistics of PCC-Vivace
```

```
Start at: 2019-01-03 05:02:16
End at: 2019-01-03 05:02:46
Local clock offset: -10.146 ms
Remote clock offset: -0.059 ms

# Below is generated by plot.py at 2019-01-03 06:47:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.39 Mbit/s
95th percentile per-packet one-way delay: 1.791 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 89.39 Mbit/s
95th percentile per-packet one-way delay: 1.791 ms
Loss rate: 0.01%
```

Run 1: Report of PCC-Vivace — Data Link

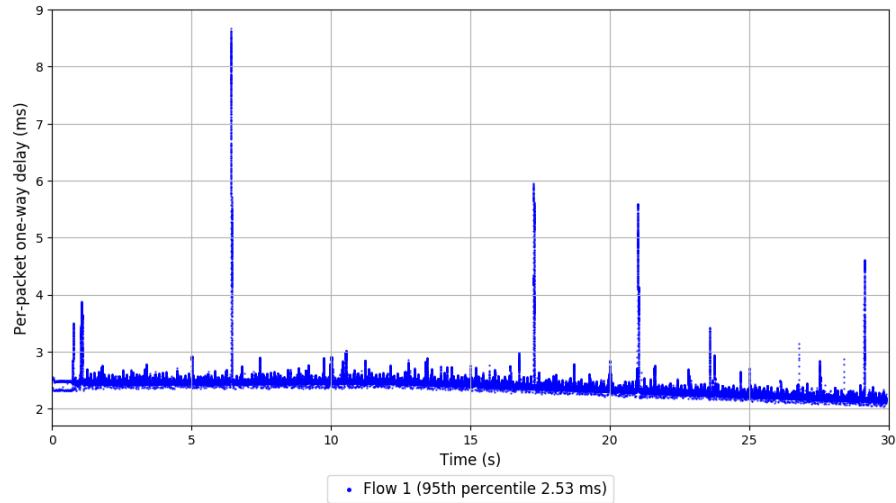
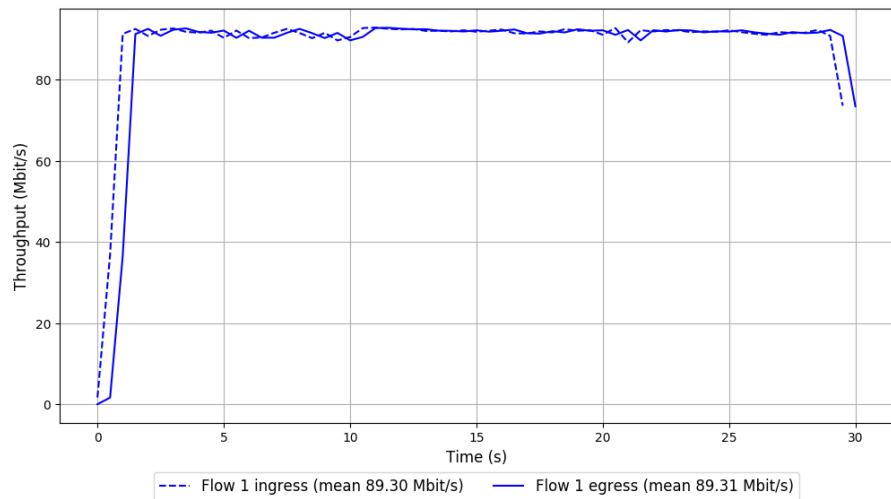


Run 2: Statistics of PCC-Vivace

```
Start at: 2019-01-03 05:23:46
End at: 2019-01-03 05:24:16
Local clock offset: -11.053 ms
Remote clock offset: 0.119 ms

# Below is generated by plot.py at 2019-01-03 06:47:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.31 Mbit/s
95th percentile per-packet one-way delay: 2.526 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 89.31 Mbit/s
95th percentile per-packet one-way delay: 2.526 ms
Loss rate: 0.01%
```

Run 2: Report of PCC-Vivace — Data Link

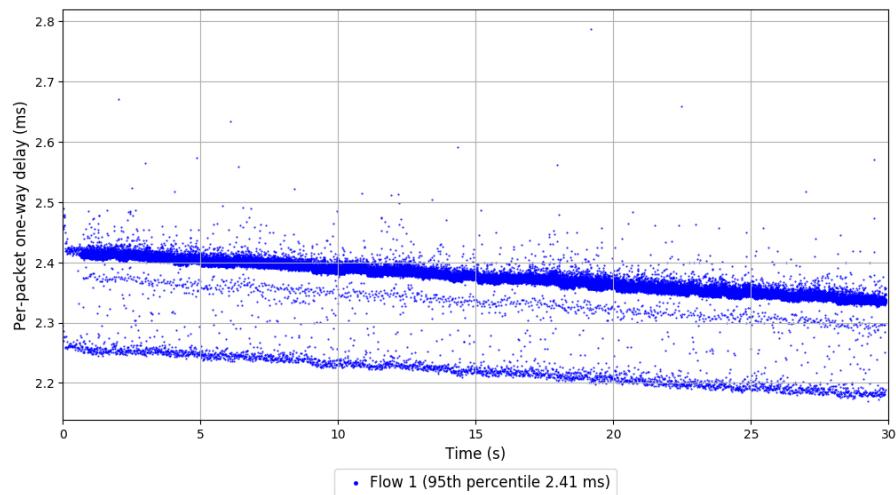
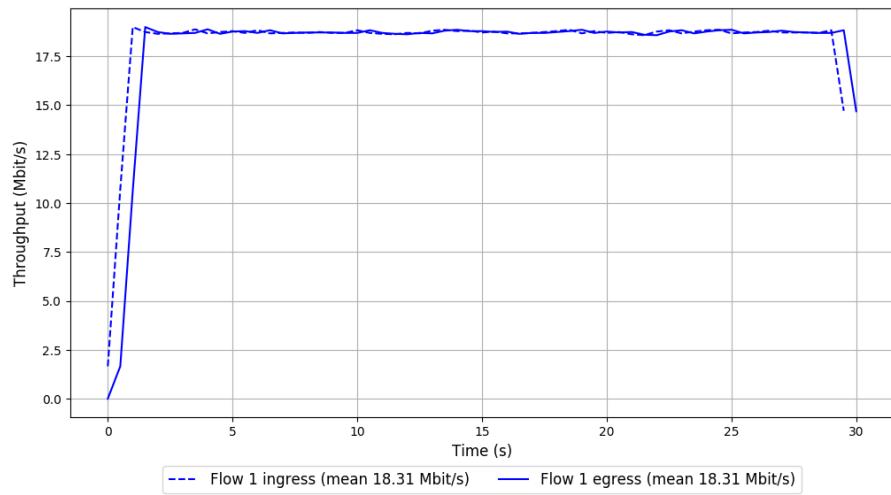


Run 3: Statistics of PCC-Vivace

```
Start at: 2019-01-03 05:45:18
End at: 2019-01-03 05:45:48
Local clock offset: -1.03 ms
Remote clock offset: 0.294 ms

# Below is generated by plot.py at 2019-01-03 06:47:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 18.31 Mbit/s
95th percentile per-packet one-way delay: 2.412 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 18.31 Mbit/s
95th percentile per-packet one-way delay: 2.412 ms
Loss rate: 0.01%
```

Run 3: Report of PCC-Vivace — Data Link

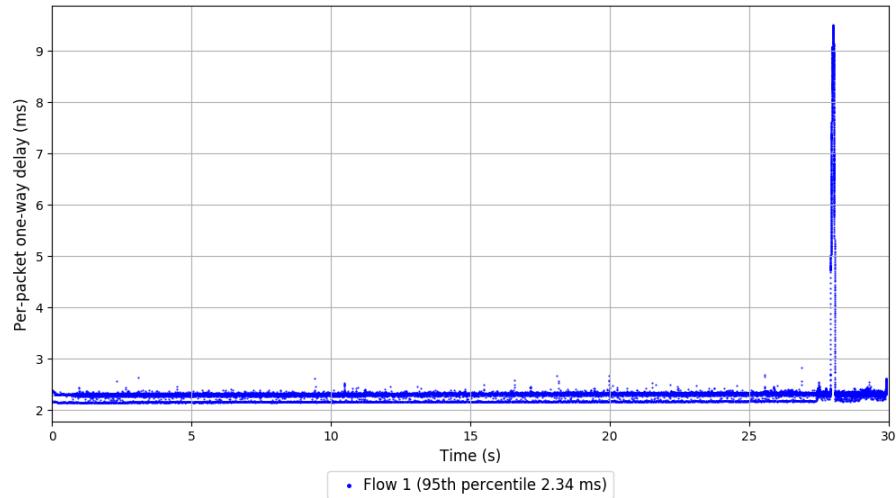
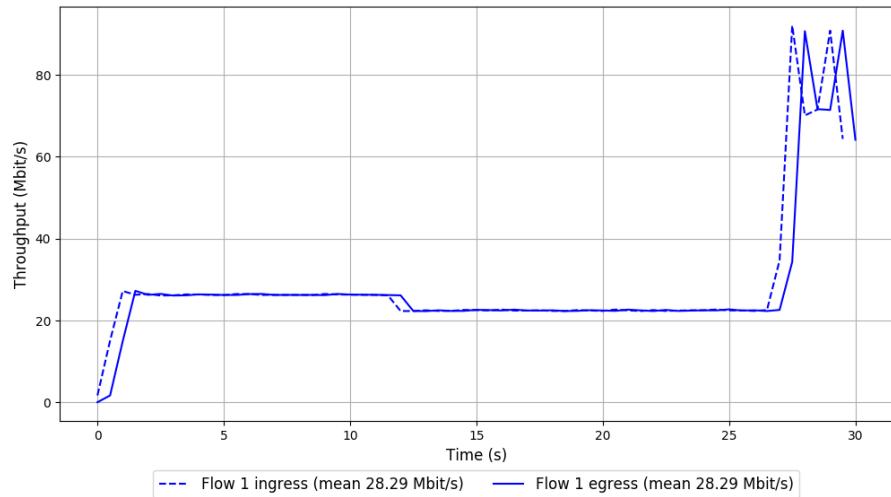


Run 4: Statistics of PCC-Vivace

```
Start at: 2019-01-03 06:06:43
End at: 2019-01-03 06:07:13
Local clock offset: -1.653 ms
Remote clock offset: 0.584 ms

# Below is generated by plot.py at 2019-01-03 06:47:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 28.29 Mbit/s
95th percentile per-packet one-way delay: 2.340 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 28.29 Mbit/s
95th percentile per-packet one-way delay: 2.340 ms
Loss rate: 0.04%
```

Run 4: Report of PCC-Vivace — Data Link

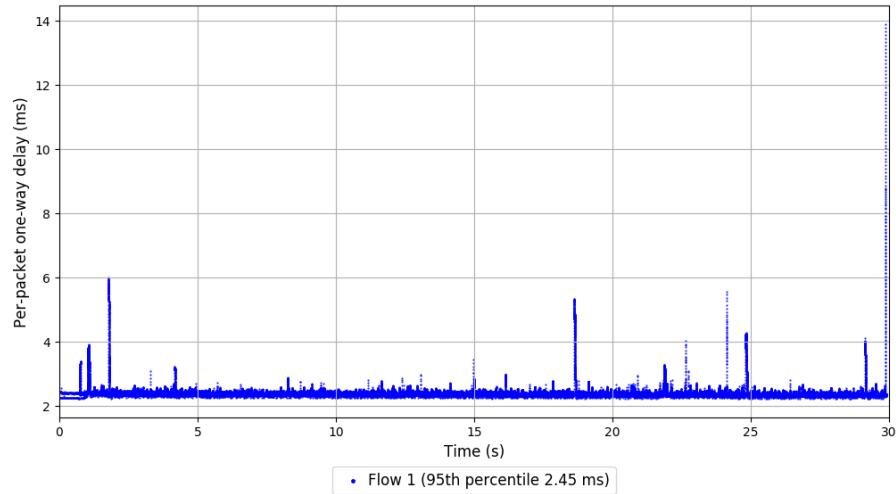
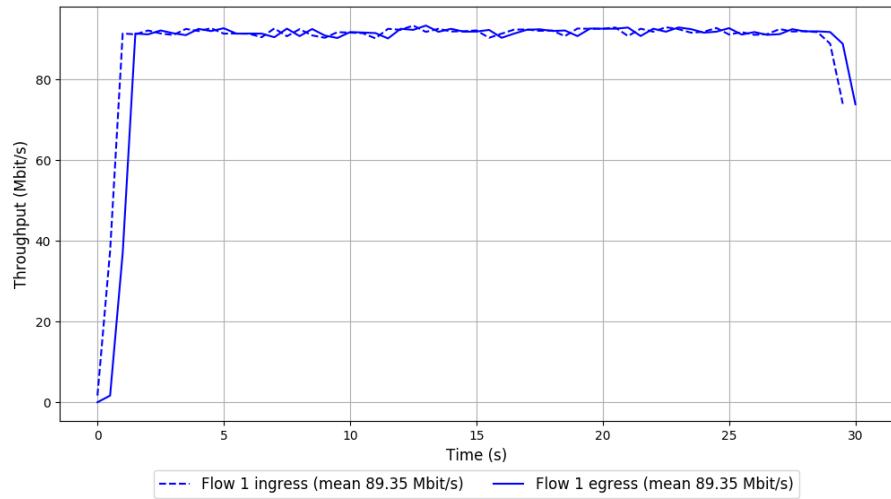


Run 5: Statistics of PCC-Vivace

```
Start at: 2019-01-03 06:28:11
End at: 2019-01-03 06:28:41
Local clock offset: -1.188 ms
Remote clock offset: 0.642 ms

# Below is generated by plot.py at 2019-01-03 06:47:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.35 Mbit/s
95th percentile per-packet one-way delay: 2.451 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 89.35 Mbit/s
95th percentile per-packet one-way delay: 2.451 ms
Loss rate: 0.01%
```

Run 5: Report of PCC-Vivace — Data Link

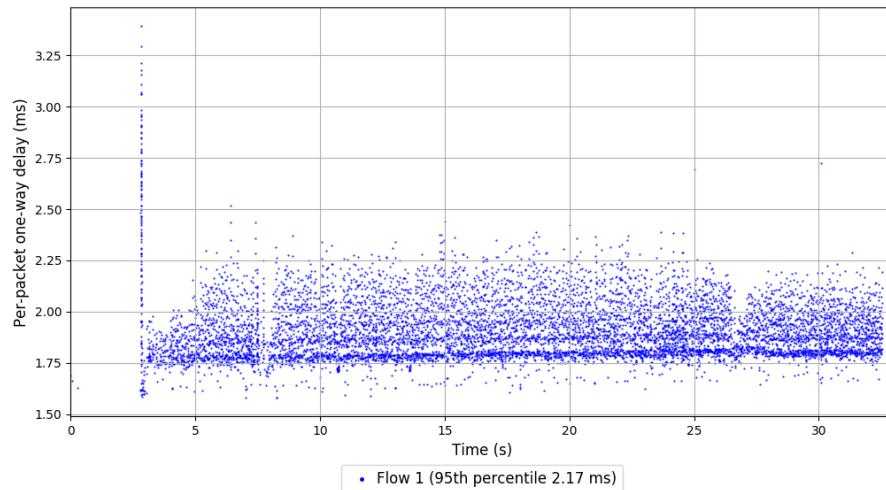
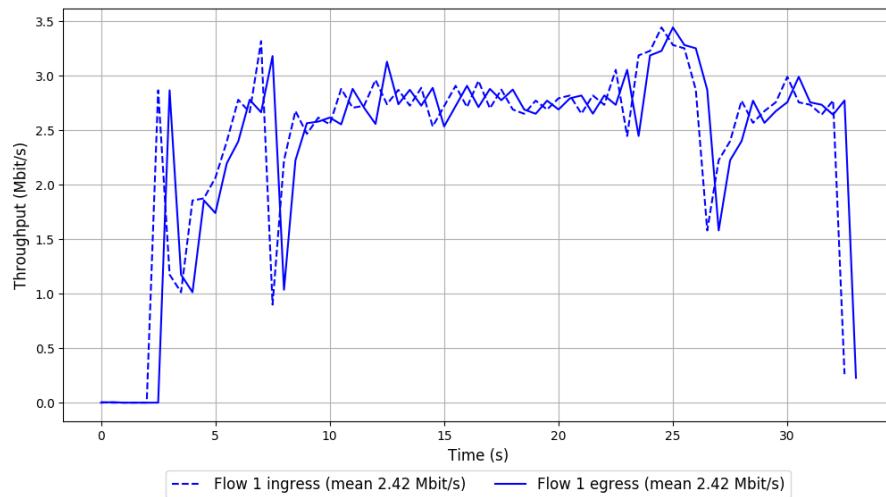


```
Run 1: Statistics of WebRTC media

Start at: 2019-01-03 04:56:37
End at: 2019-01-03 04:57:07
Local clock offset: -9.663 ms
Remote clock offset: -0.147 ms

# Below is generated by plot.py at 2019-01-03 06:47:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.42 Mbit/s
95th percentile per-packet one-way delay: 2.170 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 2.42 Mbit/s
95th percentile per-packet one-way delay: 2.170 ms
Loss rate: 0.02%
```

Run 1: Report of WebRTC media — Data Link

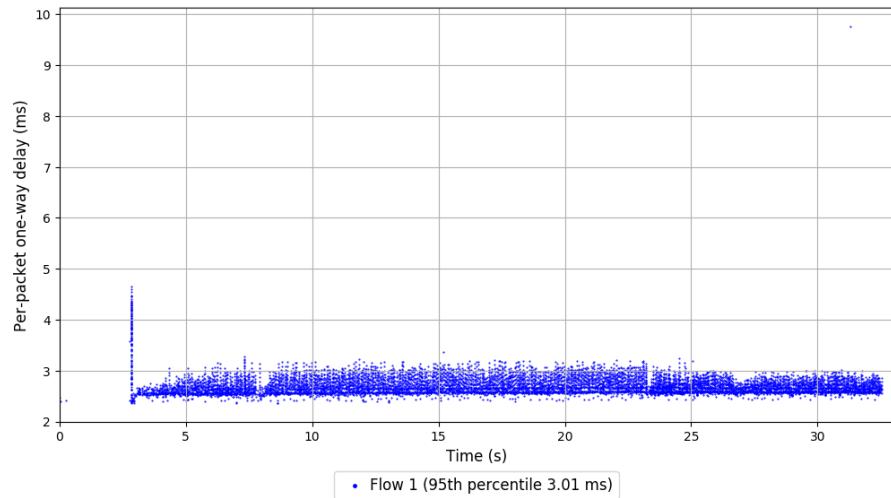
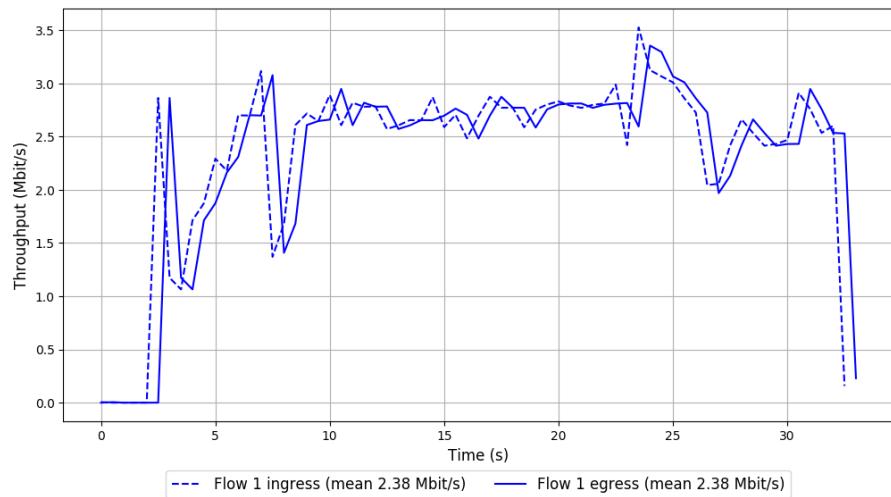


Run 2: Statistics of WebRTC media

```
Start at: 2019-01-03 05:18:07
End at: 2019-01-03 05:18:37
Local clock offset: -10.62 ms
Remote clock offset: 0.049 ms

# Below is generated by plot.py at 2019-01-03 06:47:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.38 Mbit/s
95th percentile per-packet one-way delay: 3.010 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.38 Mbit/s
95th percentile per-packet one-way delay: 3.010 ms
Loss rate: 0.00%
```

Run 2: Report of WebRTC media — Data Link

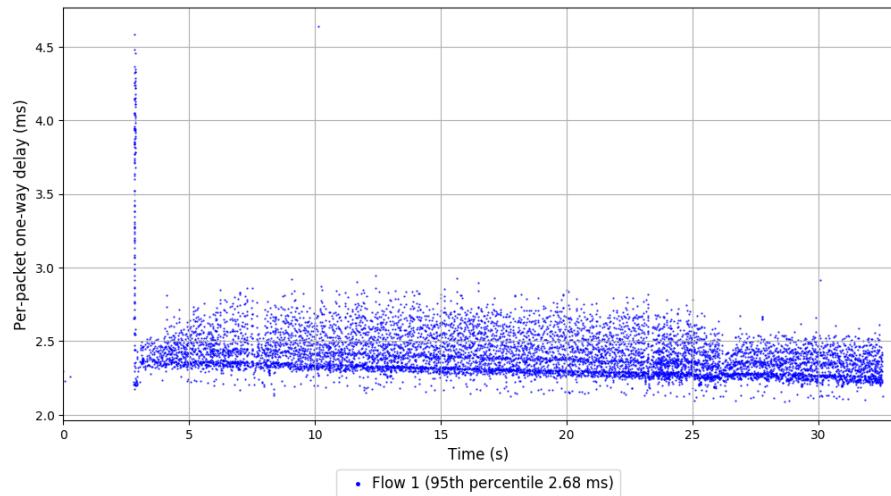
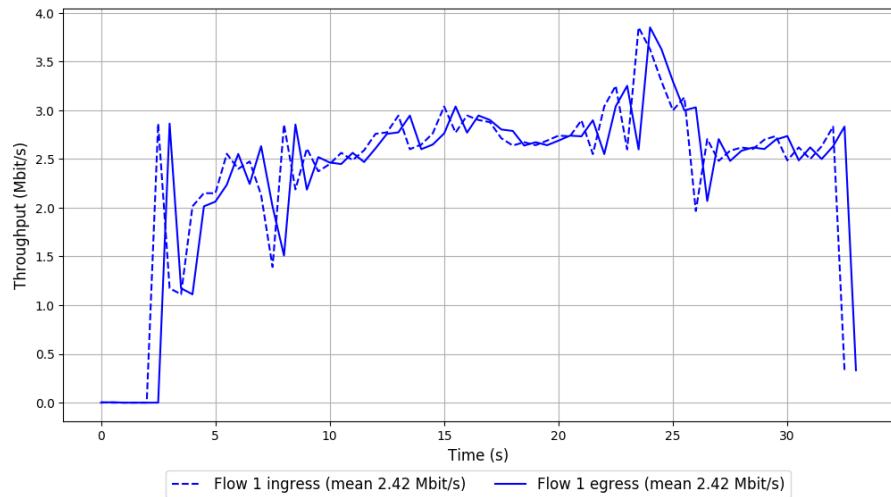


Run 3: Statistics of WebRTC media

```
Start at: 2019-01-03 05:39:39
End at: 2019-01-03 05:40:09
Local clock offset: -2.247 ms
Remote clock offset: 0.324 ms

# Below is generated by plot.py at 2019-01-03 06:47:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.42 Mbit/s
95th percentile per-packet one-way delay: 2.678 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.42 Mbit/s
95th percentile per-packet one-way delay: 2.678 ms
Loss rate: 0.00%
```

Run 3: Report of WebRTC media — Data Link

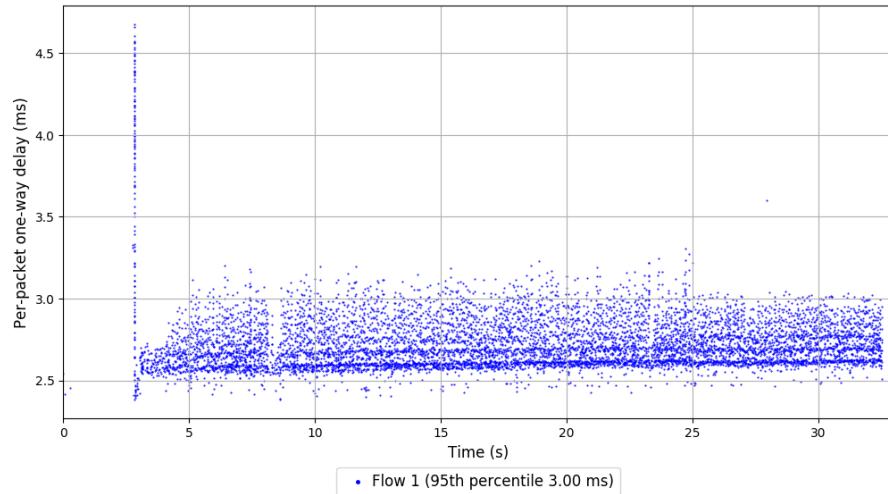
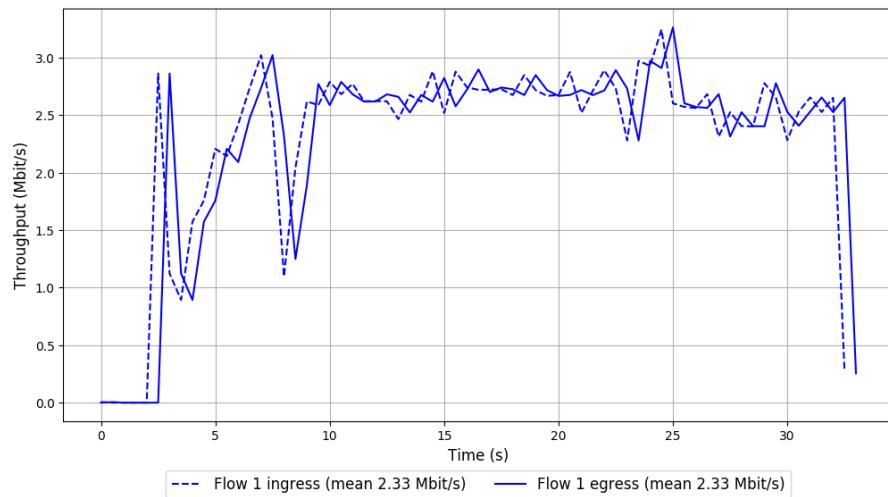


Run 4: Statistics of WebRTC media

```
Start at: 2019-01-03 06:01:04
End at: 2019-01-03 06:01:34
Local clock offset: -1.144 ms
Remote clock offset: 0.42 ms

# Below is generated by plot.py at 2019-01-03 06:47:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.33 Mbit/s
95th percentile per-packet one-way delay: 3.000 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 2.33 Mbit/s
95th percentile per-packet one-way delay: 3.000 ms
Loss rate: 0.01%
```

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

```
Start at: 2019-01-03 06:22:32
End at: 2019-01-03 06:23:02
Local clock offset: -1.553 ms
Remote clock offset: 0.674 ms

# Below is generated by plot.py at 2019-01-03 06:47:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 2.817 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 2.817 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link

