

Pantheon Report

Generated at 2019-01-02 21:59:03 (UTC).
Data path: AWS India 2 on `ens5` (*local*) → Saudi Arabia on `enp2s0` (*remote*).
Repeated the test of 19 congestion control schemes 5 times.
Each test lasted for 30 seconds running 1 flow.
NTP offsets were measured against `nets.org.sg` and have been applied to correct the timestamps in logs.

System info:

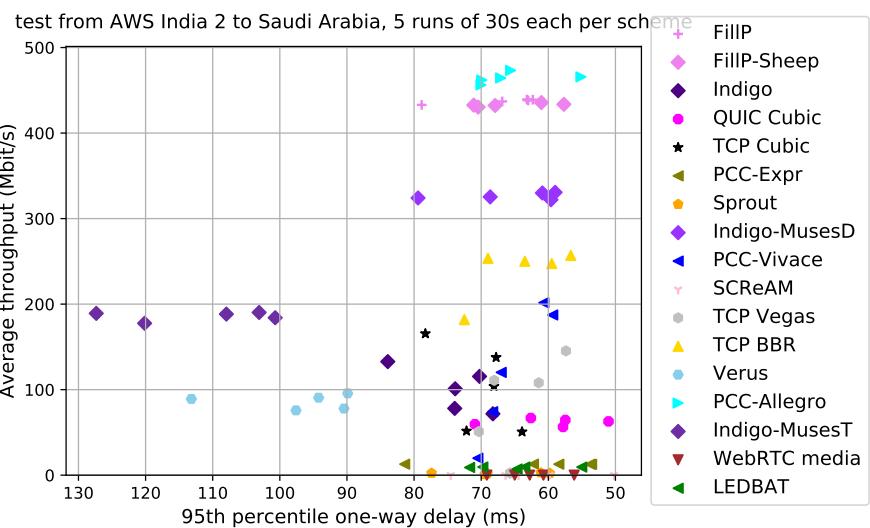
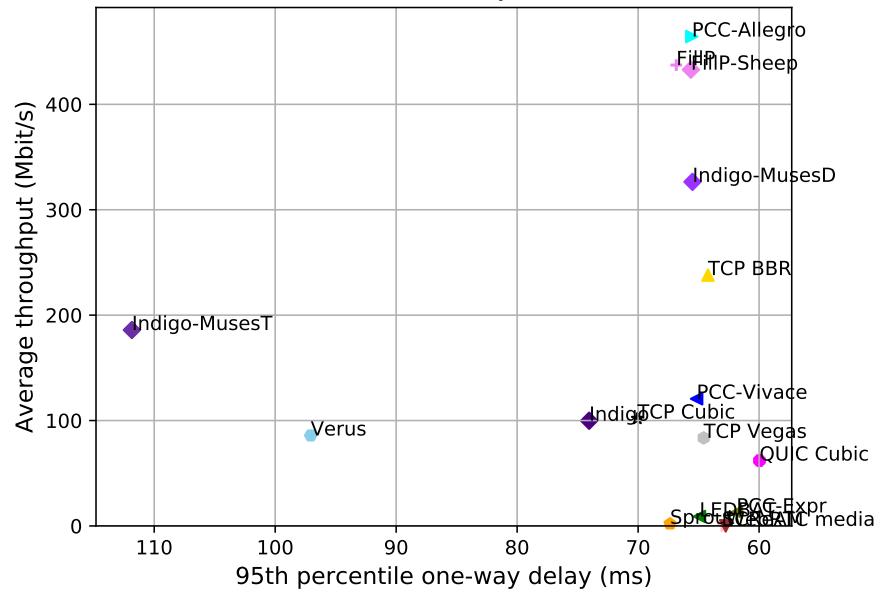
```
Linux 4.15.0-1029-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

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

test from AWS India 2 to Saudi Arabia, 5 runs of 30s each per scheme
(mean of all runs by scheme)



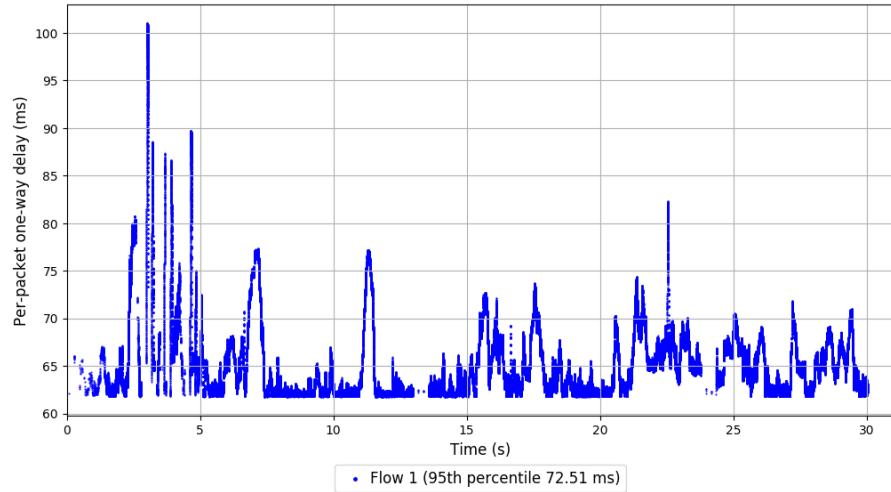
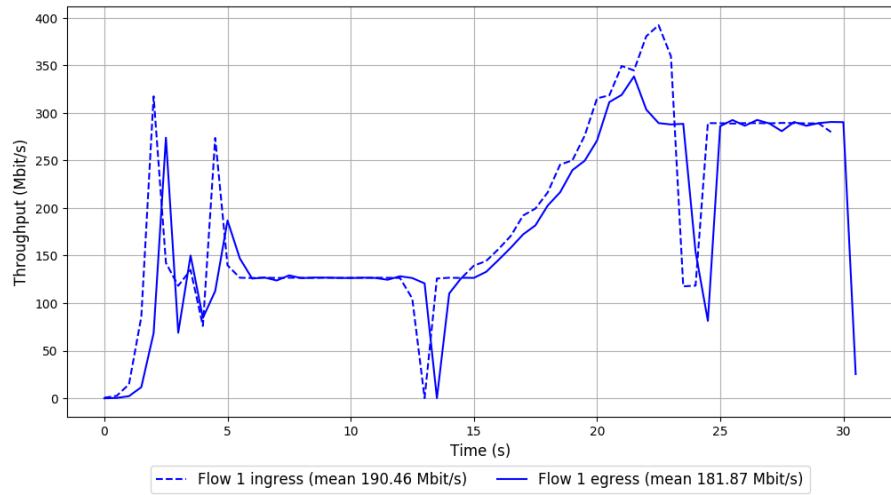
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	238.02	64.23	6.03
Copa	0	N/A	N/A	N/A
TCP Cubic	5	101.88	70.06	0.83
FillP	5	437.27	66.85	5.39
FillP-Sheep	5	432.91	65.64	4.84
Indigo	5	99.82	74.05	0.31
Indigo-MusesD	5	326.45	65.51	27.88
Indigo-MusesT	5	185.88	111.85	27.97
LEDBAT	5	8.96	64.93	0.04
PCC-Allegro	5	464.32	65.56	3.79
PCC-Expr	5	12.81	61.88	31.28
QUIC Cubic	5	62.03	59.97	0.01
SCReAM	5	0.22	63.07	0.00
Sprout	5	2.02	67.36	0.00
TaoVA-100x	0	N/A	N/A	N/A
TCP Vegas	5	83.53	64.58	0.38
Verus	5	85.82	97.06	65.66
PCC-Vivace	5	120.63	65.17	0.41
WebRTC media	5	0.05	62.76	0.00

Run 1: Statistics of TCP BBR

```
Start at: 2019-01-02 19:37:26
End at: 2019-01-02 19:37:56
Local clock offset: 0.12 ms
Remote clock offset: -36.533 ms

# Below is generated by plot.py at 2019-01-02 21:40:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 181.87 Mbit/s
95th percentile per-packet one-way delay: 72.508 ms
Loss rate: 4.52%
-- Flow 1:
Average throughput: 181.87 Mbit/s
95th percentile per-packet one-way delay: 72.508 ms
Loss rate: 4.52%
```

Run 1: Report of TCP BBR — Data Link

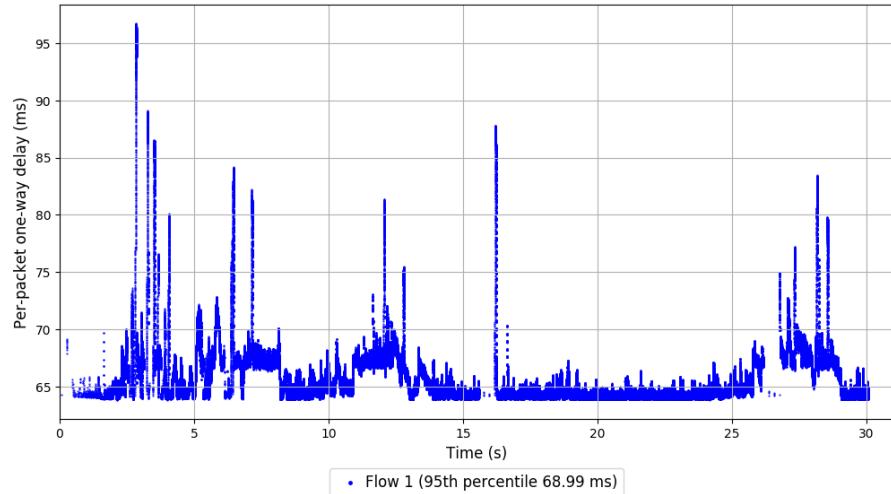
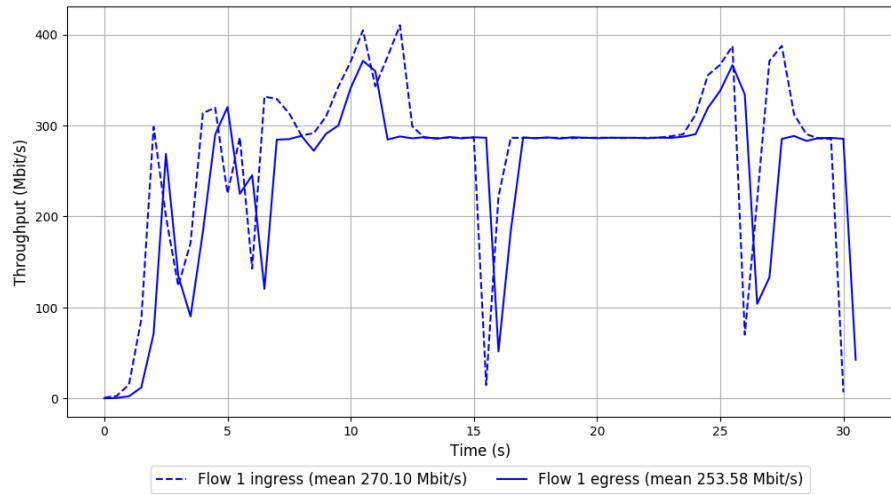


Run 2: Statistics of TCP BBR

```
Start at: 2019-01-02 20:07:28
End at: 2019-01-02 20:07:58
Local clock offset: 2.596 ms
Remote clock offset: -34.199 ms

# Below is generated by plot.py at 2019-01-02 21:41:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 253.58 Mbit/s
95th percentile per-packet one-way delay: 68.987 ms
Loss rate: 6.12%
-- Flow 1:
Average throughput: 253.58 Mbit/s
95th percentile per-packet one-way delay: 68.987 ms
Loss rate: 6.12%
```

Run 2: Report of TCP BBR — Data Link

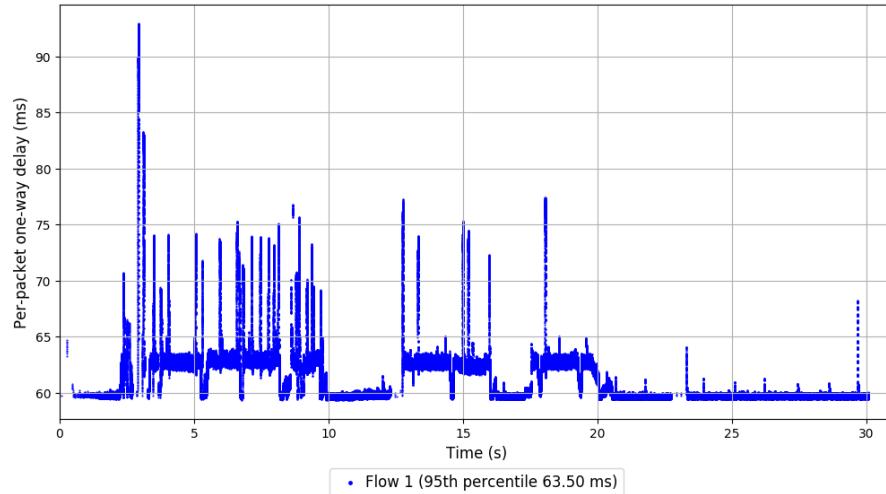
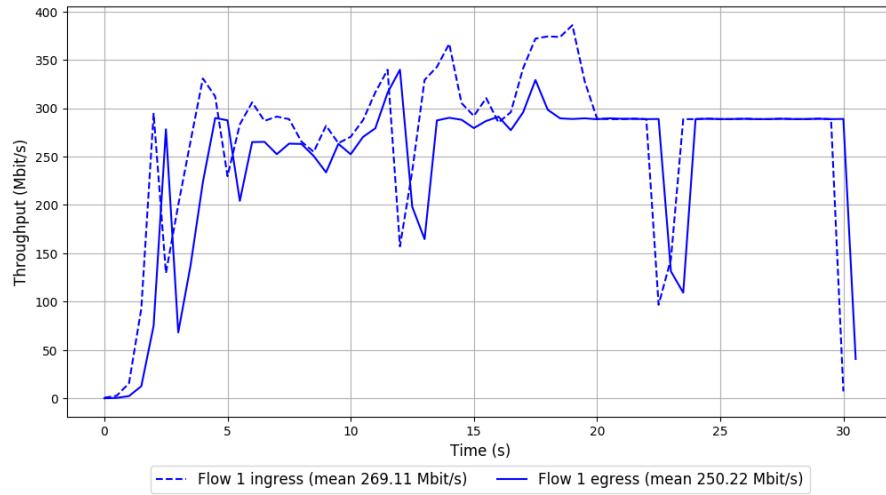


Run 3: Statistics of TCP BBR

```
Start at: 2019-01-02 20:37:51
End at: 2019-01-02 20:38:21
Local clock offset: 2.208 ms
Remote clock offset: -39.64 ms

# Below is generated by plot.py at 2019-01-02 21:41:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 250.22 Mbit/s
95th percentile per-packet one-way delay: 63.503 ms
Loss rate: 7.03%
-- Flow 1:
Average throughput: 250.22 Mbit/s
95th percentile per-packet one-way delay: 63.503 ms
Loss rate: 7.03%
```

Run 3: Report of TCP BBR — Data Link

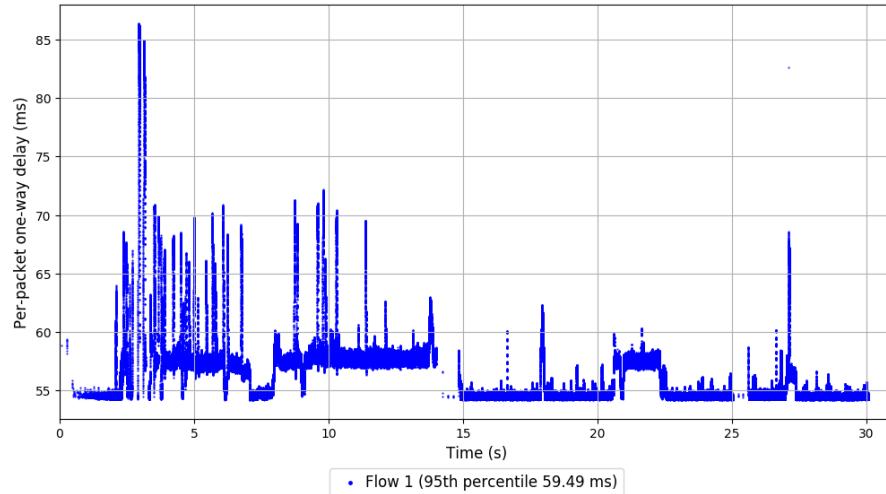
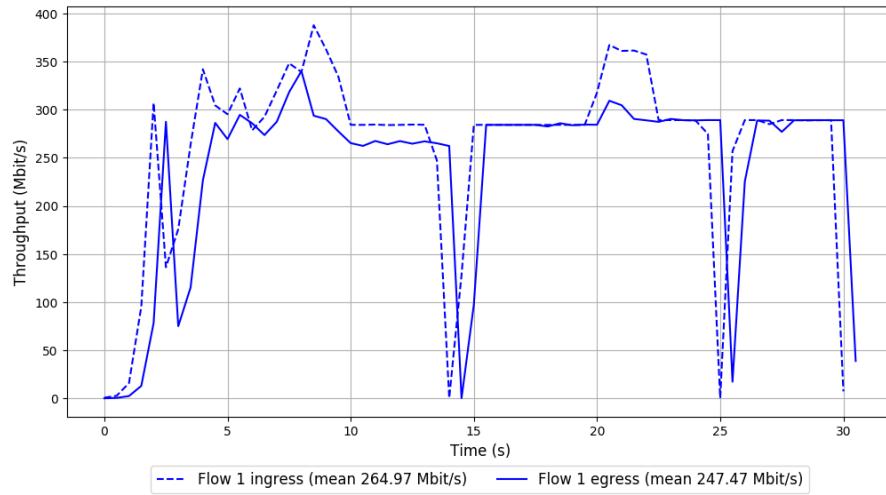


Run 4: Statistics of TCP BBR

```
Start at: 2019-01-02 21:02:12
End at: 2019-01-02 21:02:42
Local clock offset: -0.12 ms
Remote clock offset: -44.594 ms

# Below is generated by plot.py at 2019-01-02 21:41:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 247.47 Mbit/s
95th percentile per-packet one-way delay: 59.488 ms
Loss rate: 6.62%
-- Flow 1:
Average throughput: 247.47 Mbit/s
95th percentile per-packet one-way delay: 59.488 ms
Loss rate: 6.62%
```

Run 4: Report of TCP BBR — Data Link

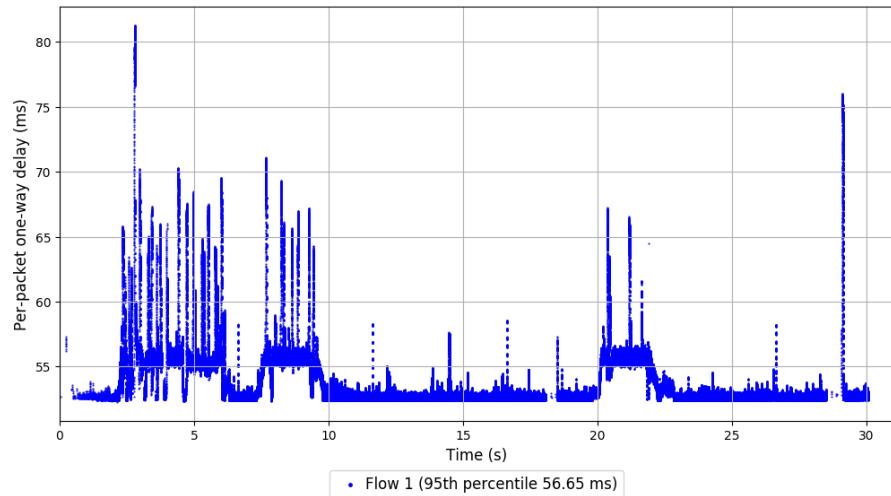
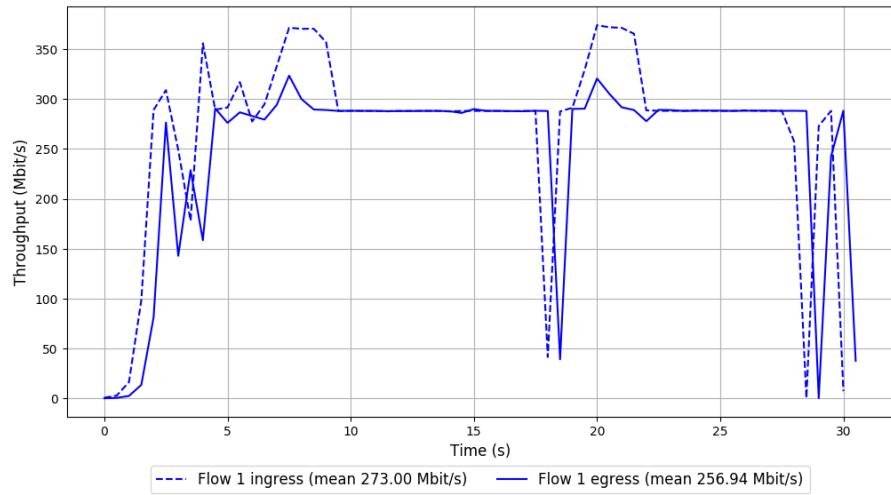


Run 5: Statistics of TCP BBR

```
Start at: 2019-01-02 21:26:35
End at: 2019-01-02 21:27:05
Local clock offset: 2.151 ms
Remote clock offset: -44.49 ms

# Below is generated by plot.py at 2019-01-02 21:41:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 256.94 Mbit/s
95th percentile per-packet one-way delay: 56.653 ms
Loss rate: 5.88%
-- Flow 1:
Average throughput: 256.94 Mbit/s
95th percentile per-packet one-way delay: 56.653 ms
Loss rate: 5.88%
```

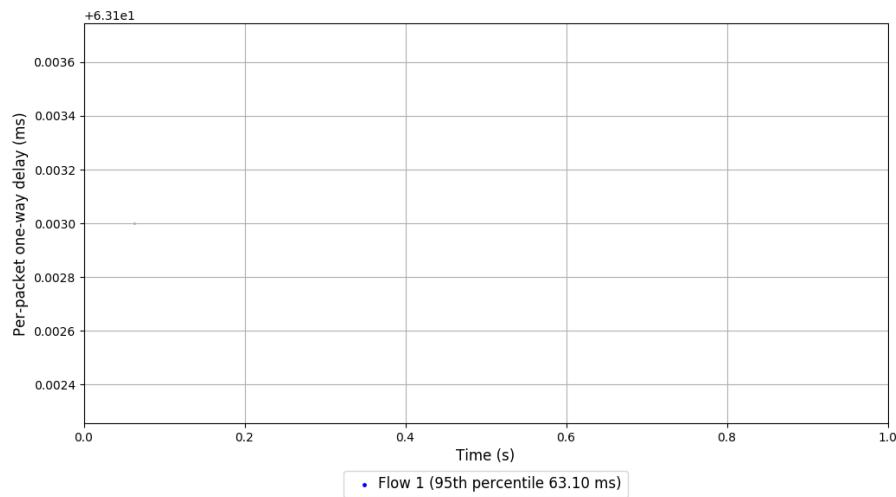
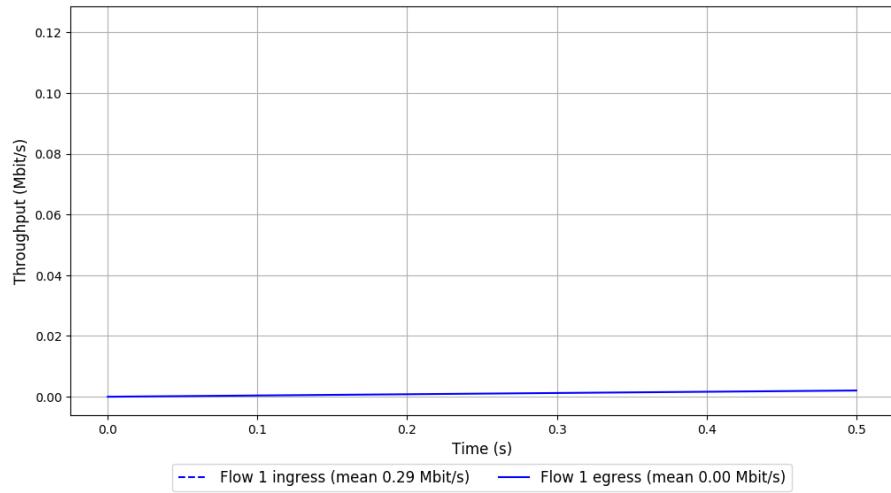
Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2019-01-02 19:47:05
End at: 2019-01-02 19:47:35
Local clock offset: -0.422 ms
Remote clock offset: -35.702 ms

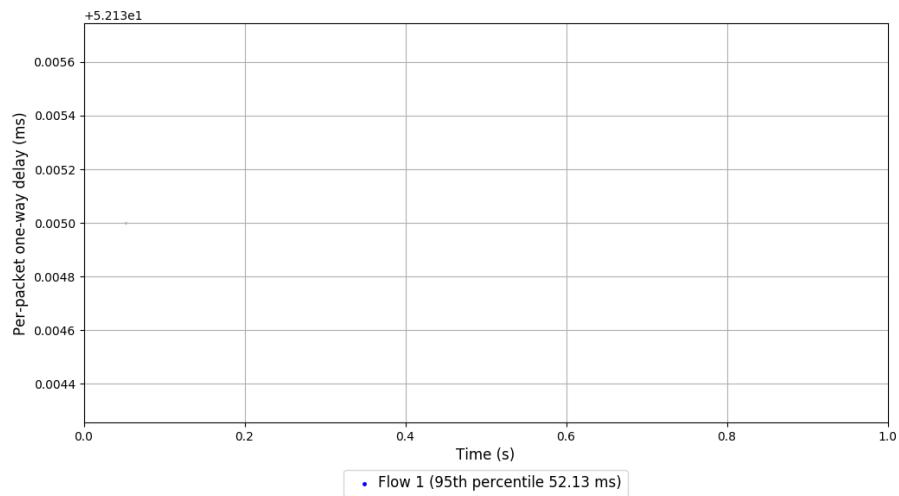
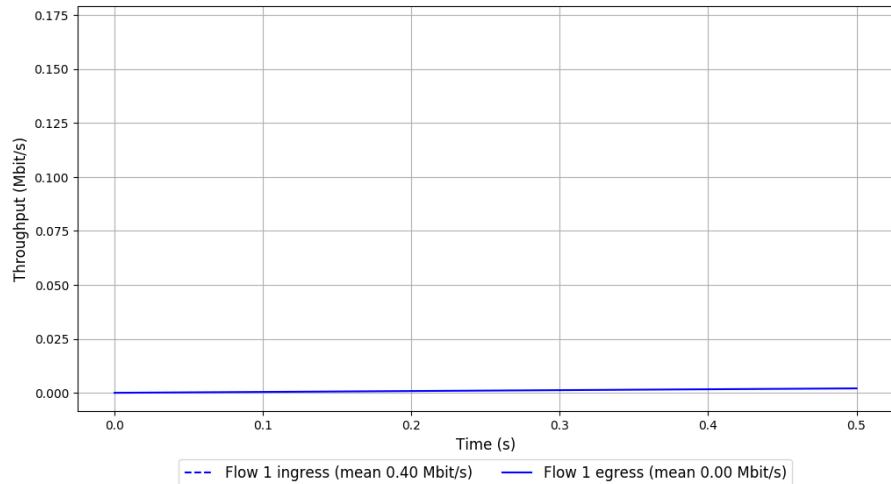
Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2019-01-02 20:17:31
End at: 2019-01-02 20:18:01
Local clock offset: 1.739 ms
Remote clock offset: -45.509 ms

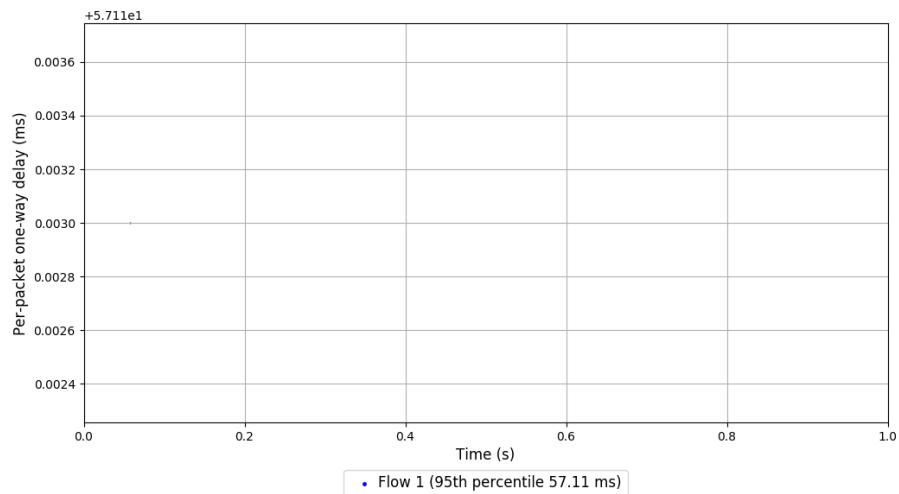
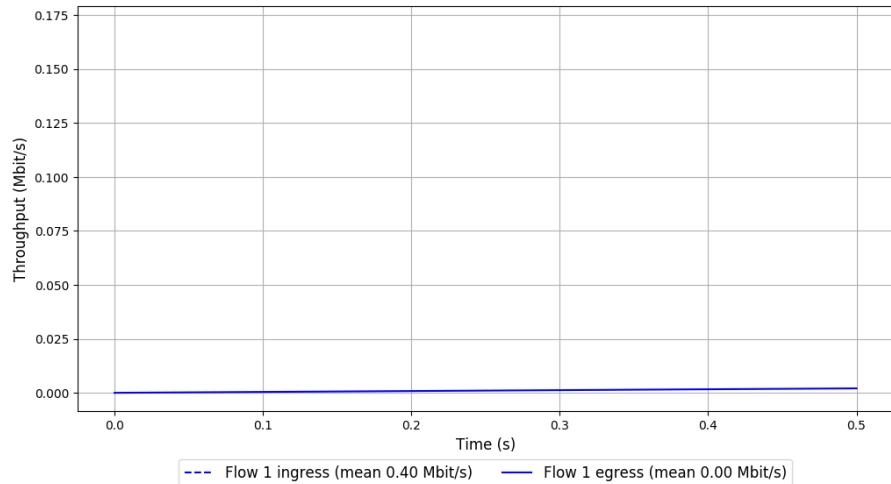
Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2019-01-02 20:41:53
End at: 2019-01-02 20:42:23
Local clock offset: 3.418 ms
Remote clock offset: -38.768 ms

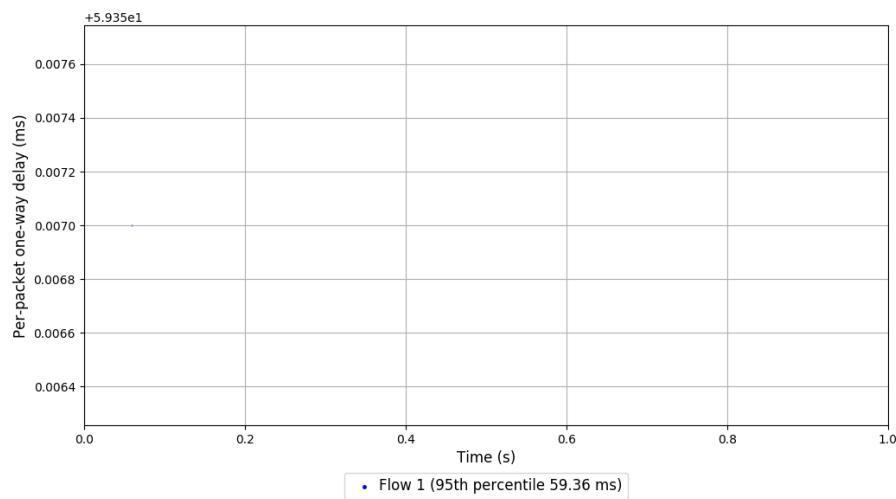
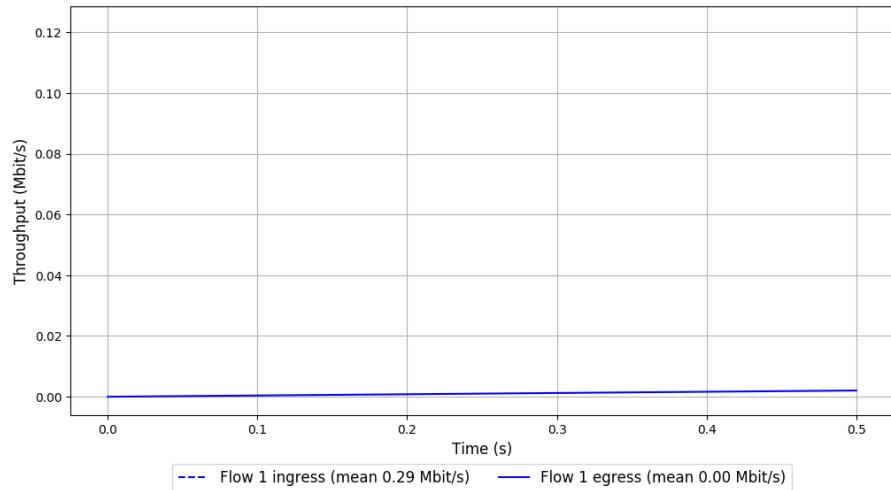
Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2019-01-02 21:06:09
End at: 2019-01-02 21:06:39
Local clock offset: 2.165 ms
Remote clock offset: -37.526 ms

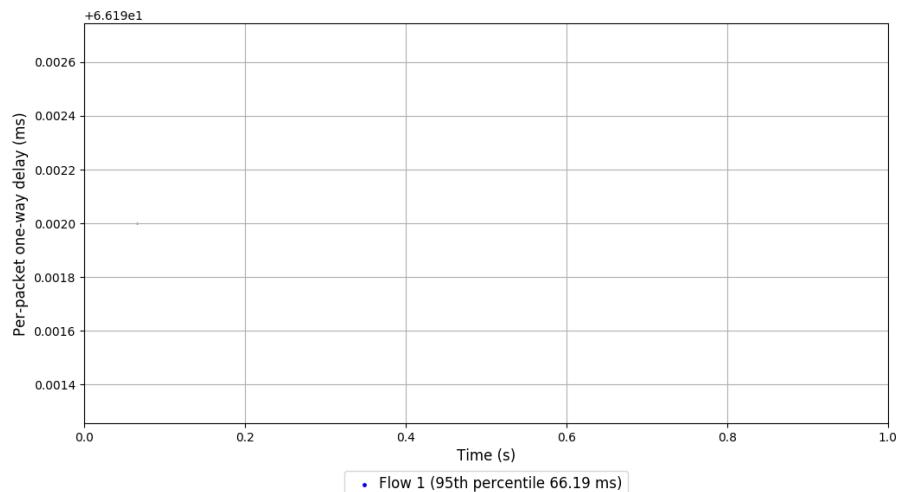
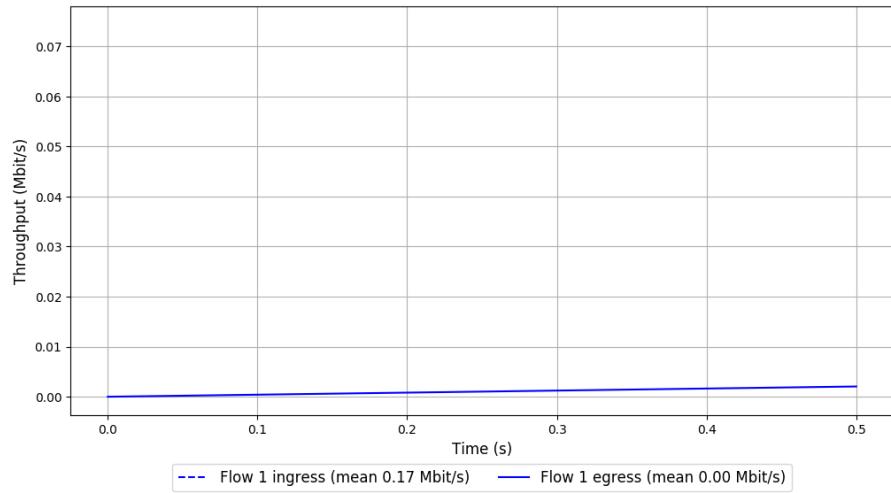
Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2019-01-02 21:30:35
End at: 2019-01-02 21:31:05
Local clock offset: 2.332 ms
Remote clock offset: -31.543 ms

Run 5: Report of Copa — Data Link

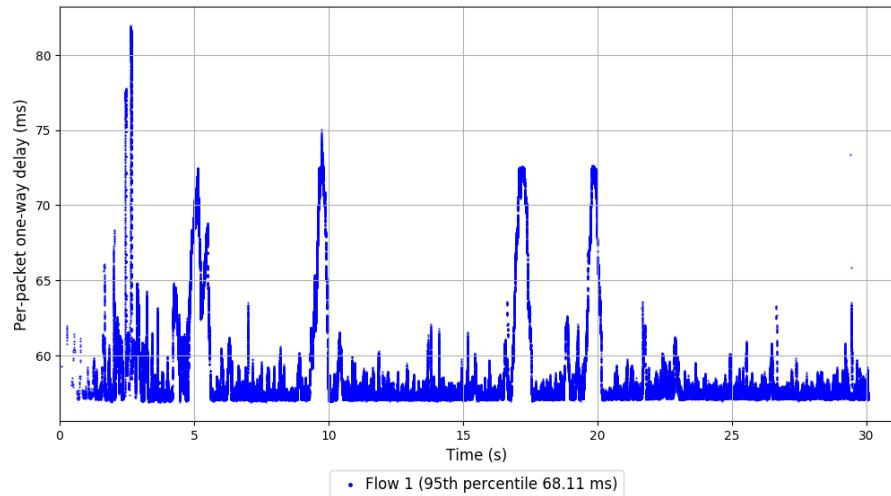
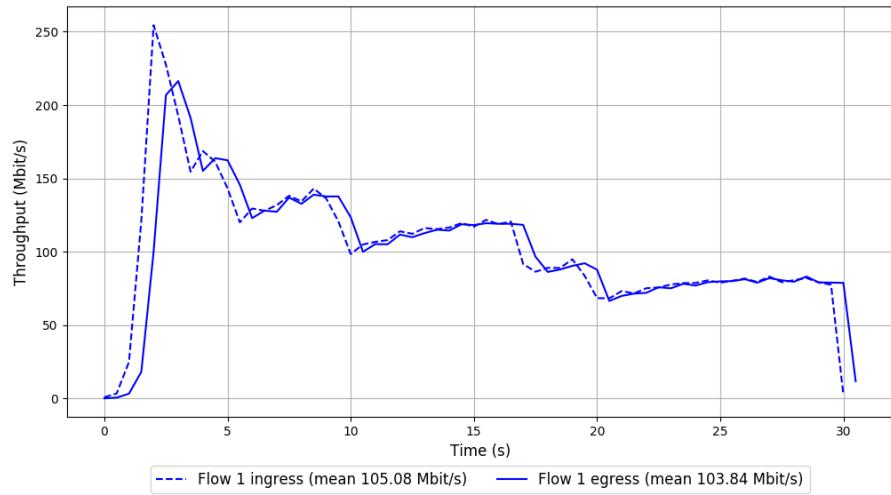


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2019-01-02 19:38:45
End at: 2019-01-02 19:39:16
Local clock offset: -0.345 ms
Remote clock offset: -39.205 ms

# Below is generated by plot.py at 2019-01-02 21:41:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 103.84 Mbit/s
95th percentile per-packet one-way delay: 68.105 ms
Loss rate: 1.19%
-- Flow 1:
Average throughput: 103.84 Mbit/s
95th percentile per-packet one-way delay: 68.105 ms
Loss rate: 1.19%
```

Run 1: Report of TCP Cubic — Data Link

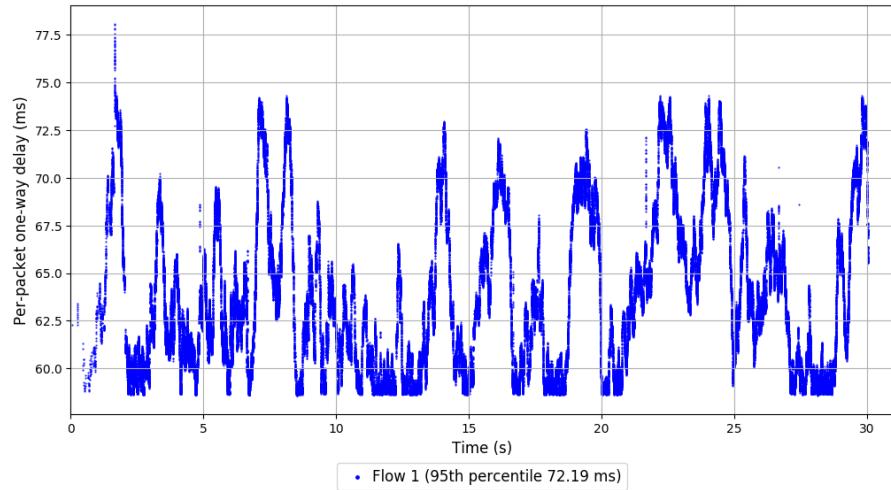
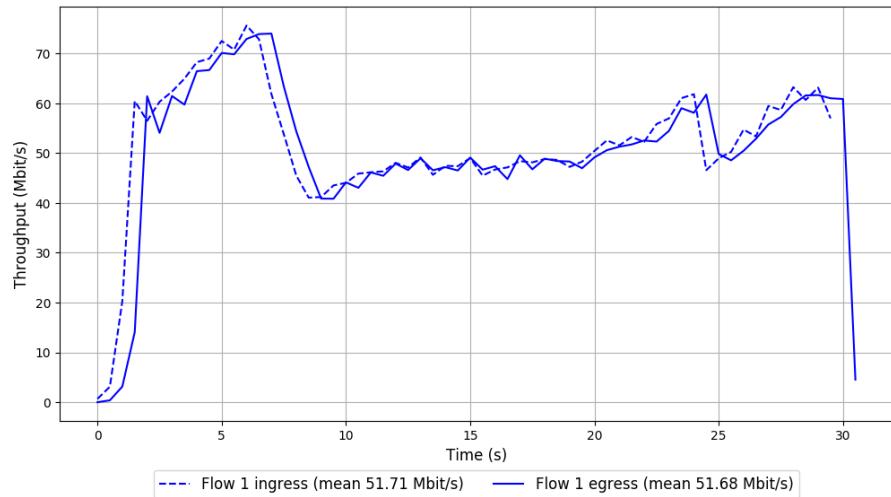


Run 2: Statistics of TCP Cubic

```
Start at: 2019-01-02 20:08:53
End at: 2019-01-02 20:09:23
Local clock offset: -0.278 ms
Remote clock offset: -42.564 ms

# Below is generated by plot.py at 2019-01-02 21:41:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 51.68 Mbit/s
95th percentile per-packet one-way delay: 72.185 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 51.68 Mbit/s
95th percentile per-packet one-way delay: 72.185 ms
Loss rate: 0.06%
```

Run 2: Report of TCP Cubic — Data Link

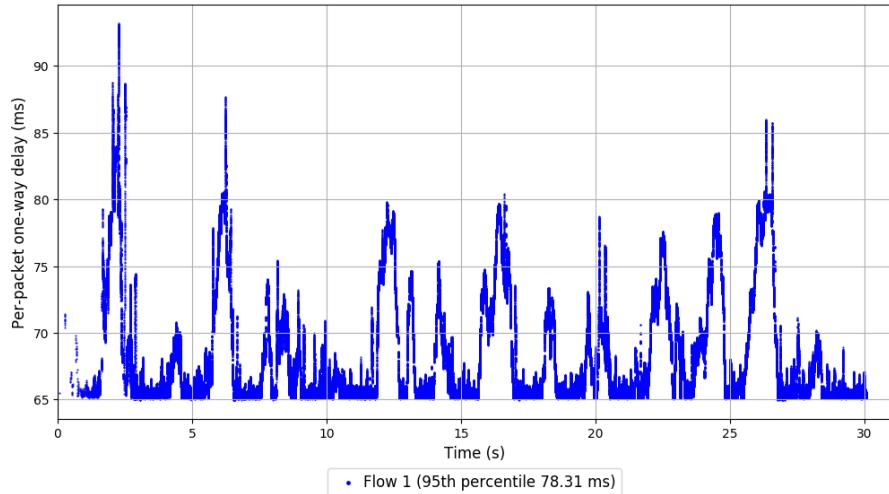
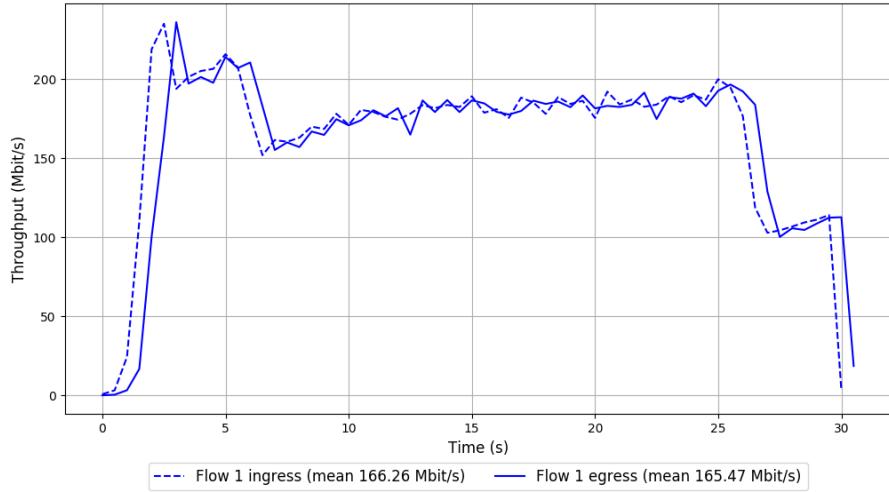


Run 3: Statistics of TCP Cubic

```
Start at: 2019-01-02 20:39:15
End at: 2019-01-02 20:39:45
Local clock offset: 0.852 ms
Remote clock offset: -33.158 ms

# Below is generated by plot.py at 2019-01-02 21:41:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 165.47 Mbit/s
95th percentile per-packet one-way delay: 78.313 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 165.47 Mbit/s
95th percentile per-packet one-way delay: 78.313 ms
Loss rate: 0.48%
```

Run 3: Report of TCP Cubic — Data Link

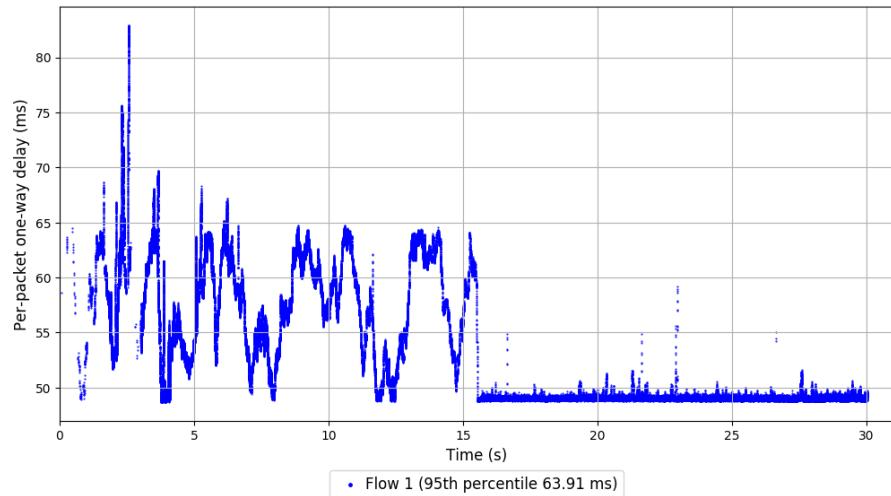
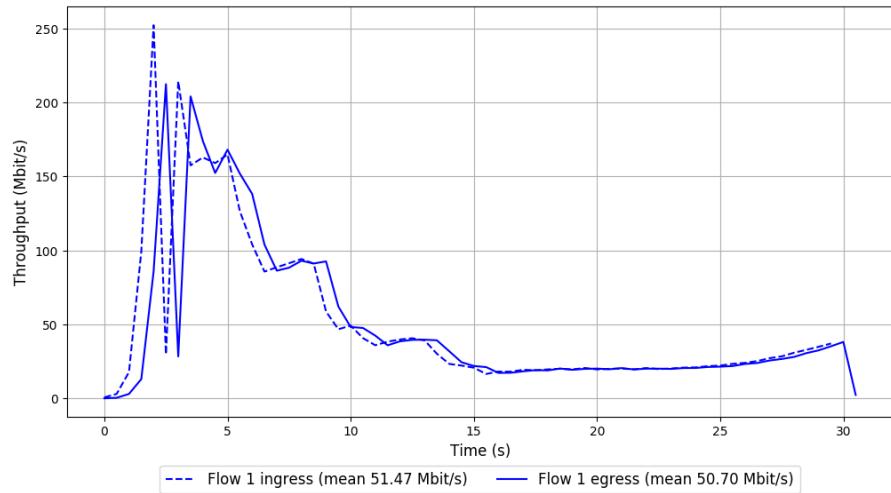


Run 4: Statistics of TCP Cubic

```
Start at: 2019-01-02 21:03:35
End at: 2019-01-02 21:04:05
Local clock offset: 3.81 ms
Remote clock offset: -46.186 ms

# Below is generated by plot.py at 2019-01-02 21:41:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.70 Mbit/s
95th percentile per-packet one-way delay: 63.913 ms
Loss rate: 1.53%
-- Flow 1:
Average throughput: 50.70 Mbit/s
95th percentile per-packet one-way delay: 63.913 ms
Loss rate: 1.53%
```

Run 4: Report of TCP Cubic — Data Link

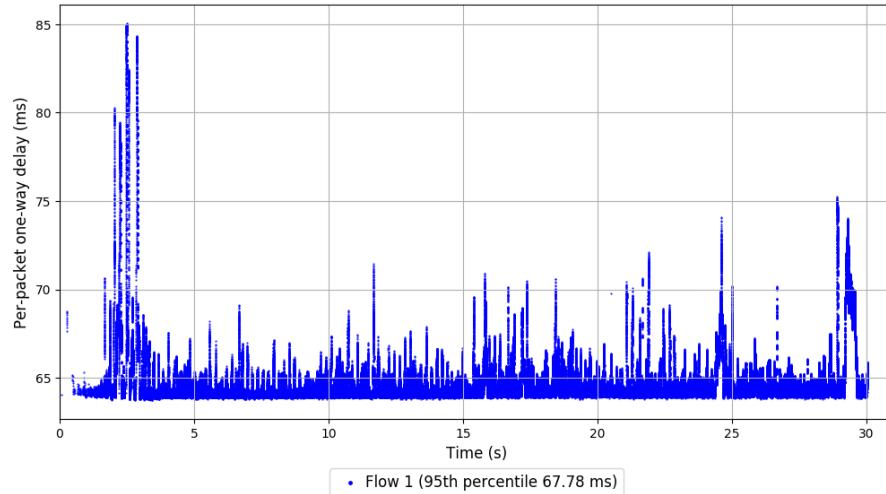
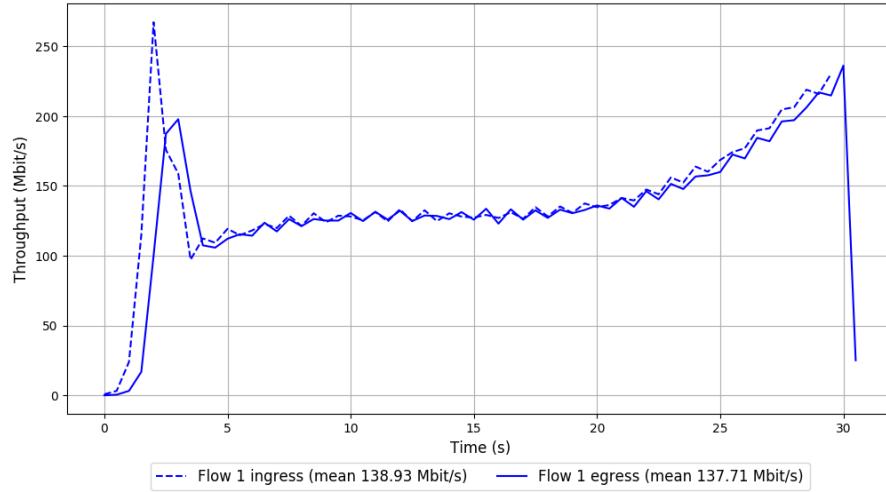


Run 5: Statistics of TCP Cubic

```
Start at: 2019-01-02 21:27:59
End at: 2019-01-02 21:28:29
Local clock offset: 0.217 ms
Remote clock offset: -35.414 ms

# Below is generated by plot.py at 2019-01-02 21:41:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 137.71 Mbit/s
95th percentile per-packet one-way delay: 67.776 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 137.71 Mbit/s
95th percentile per-packet one-way delay: 67.776 ms
Loss rate: 0.88%
```

Run 5: Report of TCP Cubic — Data Link

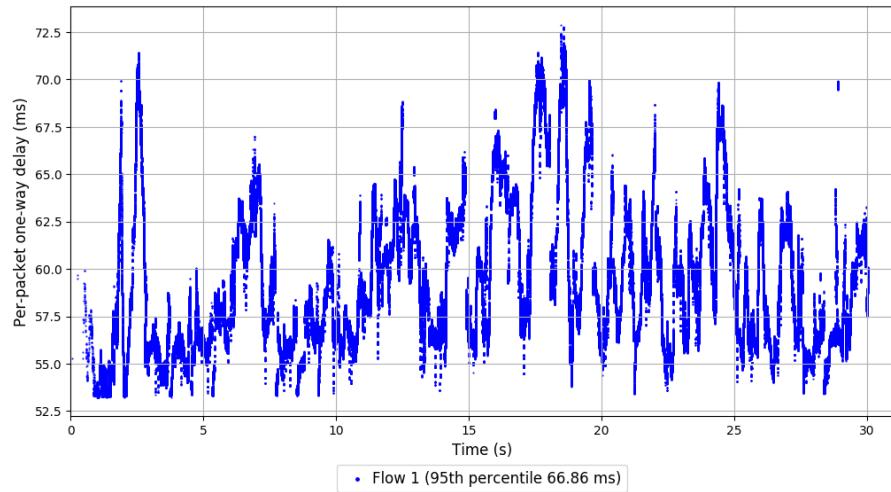
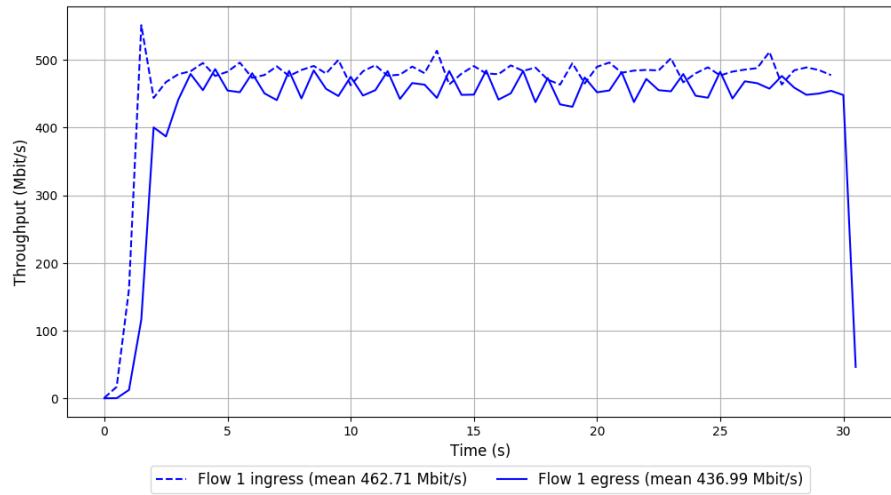


```
Run 1: Statistics of FillP
```

```
Start at: 2019-01-02 19:33:33
End at: 2019-01-02 19:34:03
Local clock offset: -2.321 ms
Remote clock offset: -46.06 ms

# Below is generated by plot.py at 2019-01-02 21:46:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 436.99 Mbit/s
95th percentile per-packet one-way delay: 66.865 ms
Loss rate: 5.56%
-- Flow 1:
Average throughput: 436.99 Mbit/s
95th percentile per-packet one-way delay: 66.865 ms
Loss rate: 5.56%
```

Run 1: Report of FillP — Data Link

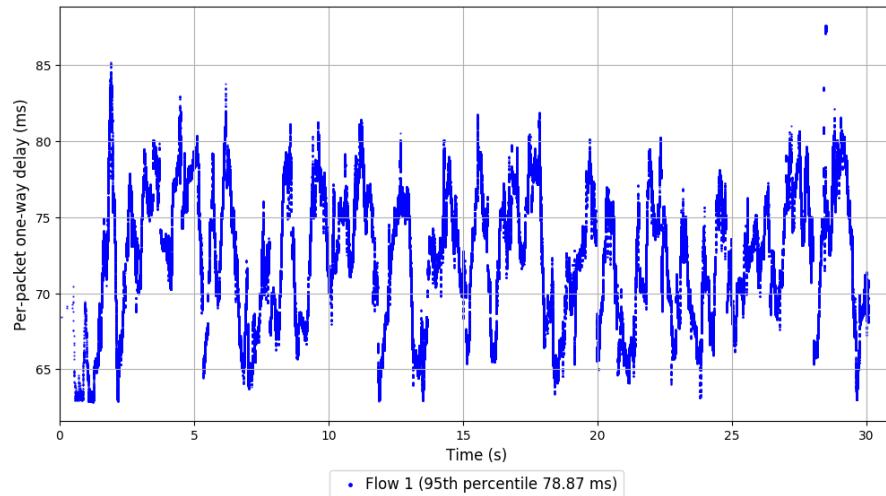
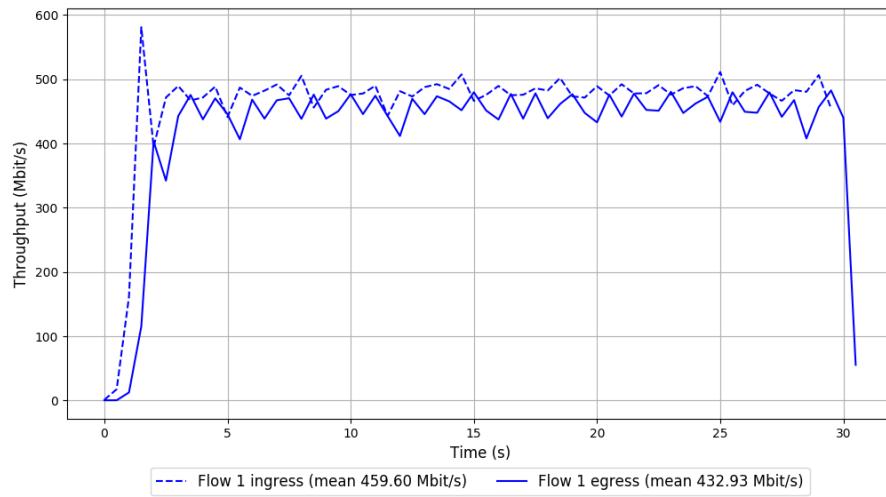


```
Run 2: Statistics of FillP
```

```
Start at: 2019-01-02 20:03:32
End at: 2019-01-02 20:04:02
Local clock offset: -0.136 ms
Remote clock offset: -37.536 ms

# Below is generated by plot.py at 2019-01-02 21:46:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 432.93 Mbit/s
95th percentile per-packet one-way delay: 78.866 ms
Loss rate: 5.80%
-- Flow 1:
Average throughput: 432.93 Mbit/s
95th percentile per-packet one-way delay: 78.866 ms
Loss rate: 5.80%
```

Run 2: Report of FillP — Data Link

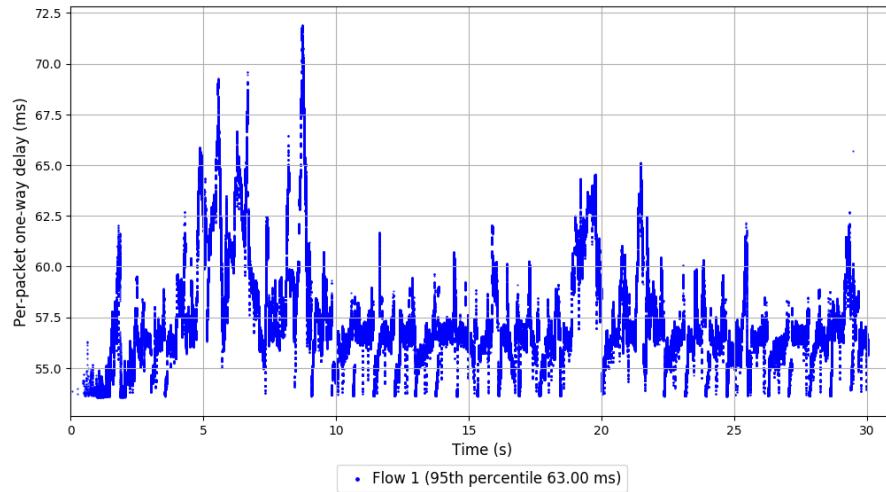
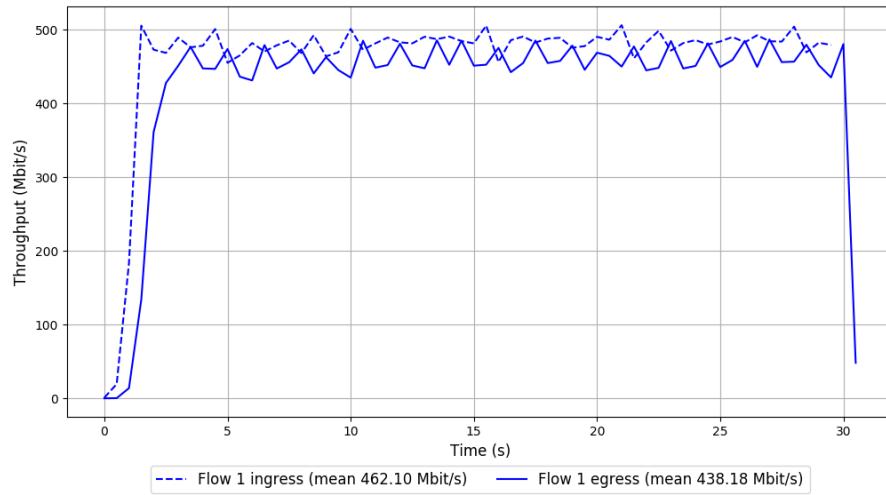


Run 3: Statistics of FillP

```
Start at: 2019-01-02 20:34:02
End at: 2019-01-02 20:34:32
Local clock offset: 1.466 ms
Remote clock offset: -46.085 ms

# Below is generated by plot.py at 2019-01-02 21:46:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 438.18 Mbit/s
95th percentile per-packet one-way delay: 62.997 ms
Loss rate: 5.18%
-- Flow 1:
Average throughput: 438.18 Mbit/s
95th percentile per-packet one-way delay: 62.997 ms
Loss rate: 5.18%
```

Run 3: Report of FillP — Data Link

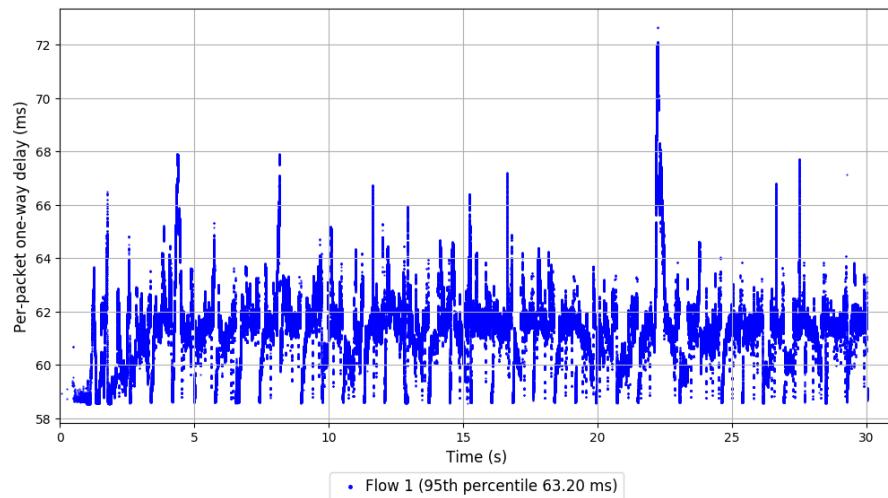
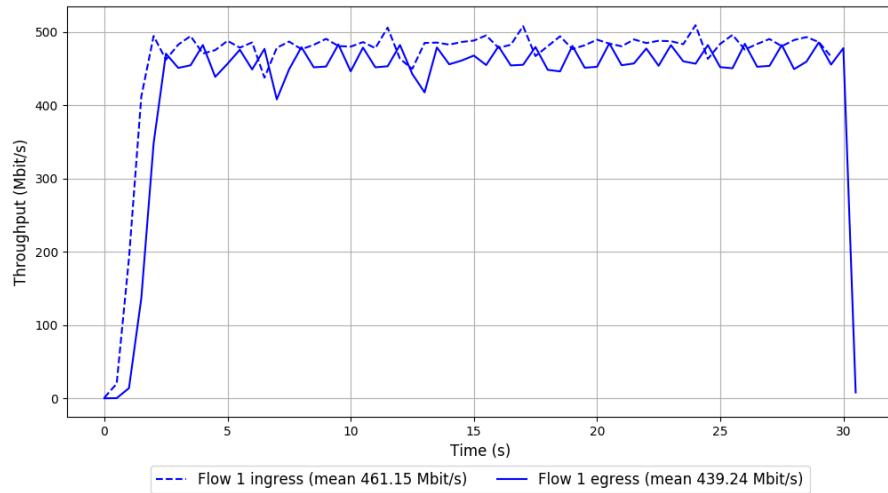


Run 4: Statistics of FillP

```
Start at: 2019-01-02 20:58:18
End at: 2019-01-02 20:58:48
Local clock offset: 0.395 ms
Remote clock offset: -39.748 ms

# Below is generated by plot.py at 2019-01-02 21:47:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 439.24 Mbit/s
95th percentile per-packet one-way delay: 63.197 ms
Loss rate: 4.75%
-- Flow 1:
Average throughput: 439.24 Mbit/s
95th percentile per-packet one-way delay: 63.197 ms
Loss rate: 4.75%
```

Run 4: Report of FillP — Data Link

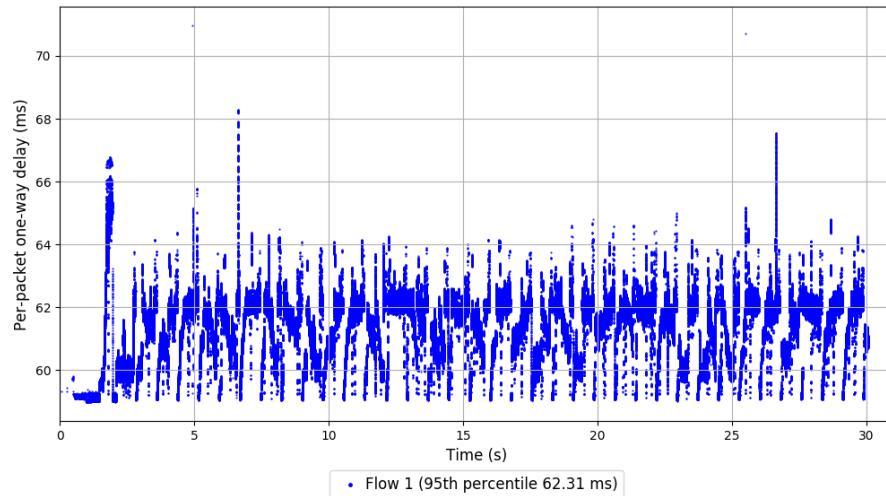
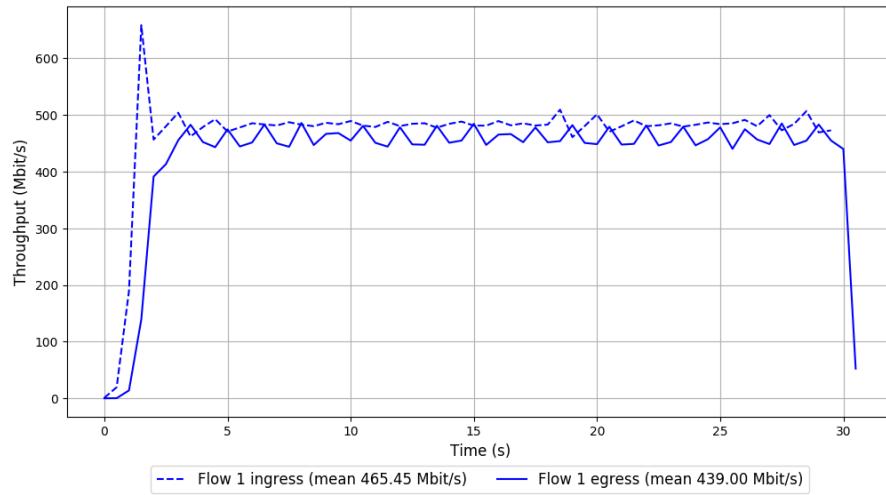


```
Run 5: Statistics of FillP
```

```
Start at: 2019-01-02 21:22:40
End at: 2019-01-02 21:23:10
Local clock offset: 2.513 ms
Remote clock offset: -36.886 ms

# Below is generated by plot.py at 2019-01-02 21:47:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 439.00 Mbit/s
95th percentile per-packet one-way delay: 62.308 ms
Loss rate: 5.68%
-- Flow 1:
Average throughput: 439.00 Mbit/s
95th percentile per-packet one-way delay: 62.308 ms
Loss rate: 5.68%
```

Run 5: Report of FillP — Data Link

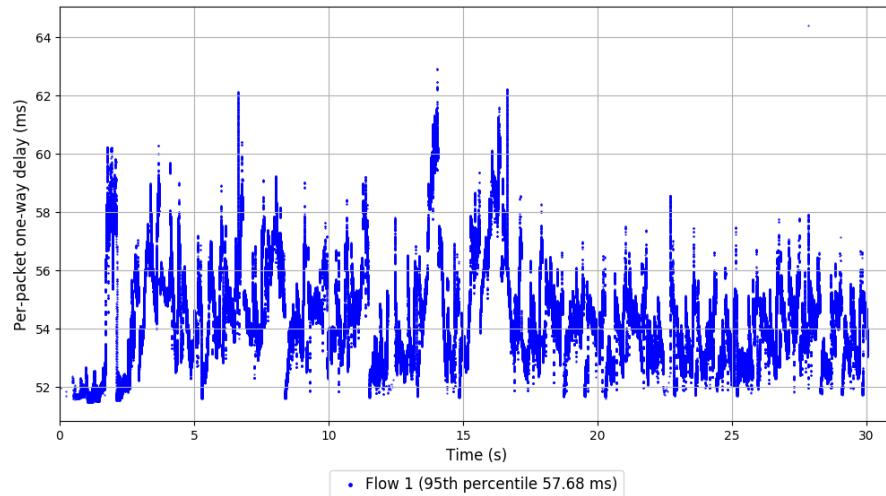
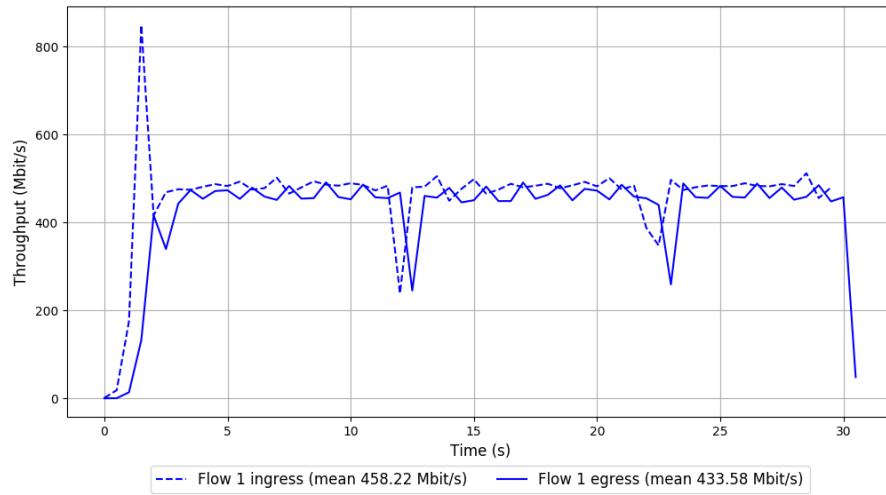


```
Run 1: Statistics of FillP-Sheep
```

```
Start at: 2019-01-02 19:32:06
End at: 2019-01-02 19:32:37
Local clock offset: -3.562 ms
Remote clock offset: -46.131 ms

# Below is generated by plot.py at 2019-01-02 21:47:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 433.58 Mbit/s
95th percentile per-packet one-way delay: 57.678 ms
Loss rate: 5.37%
-- Flow 1:
Average throughput: 433.58 Mbit/s
95th percentile per-packet one-way delay: 57.678 ms
Loss rate: 5.37%
```

Run 1: Report of FillP-Sheep — Data Link

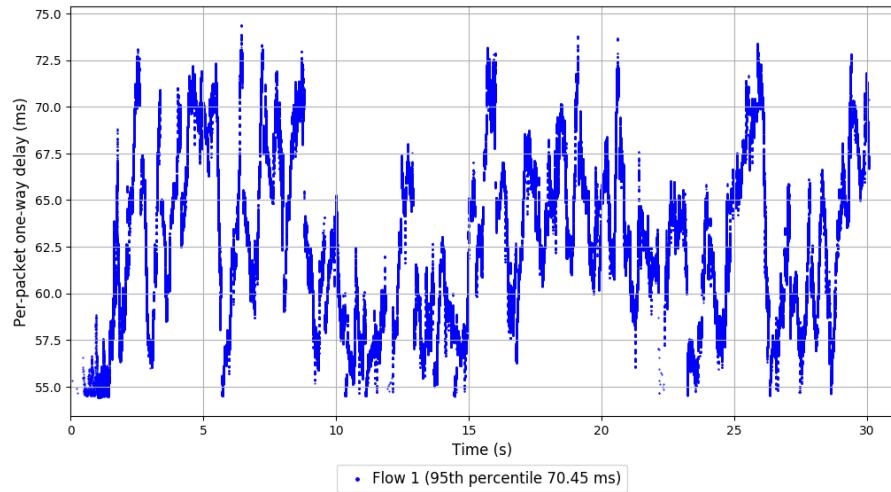
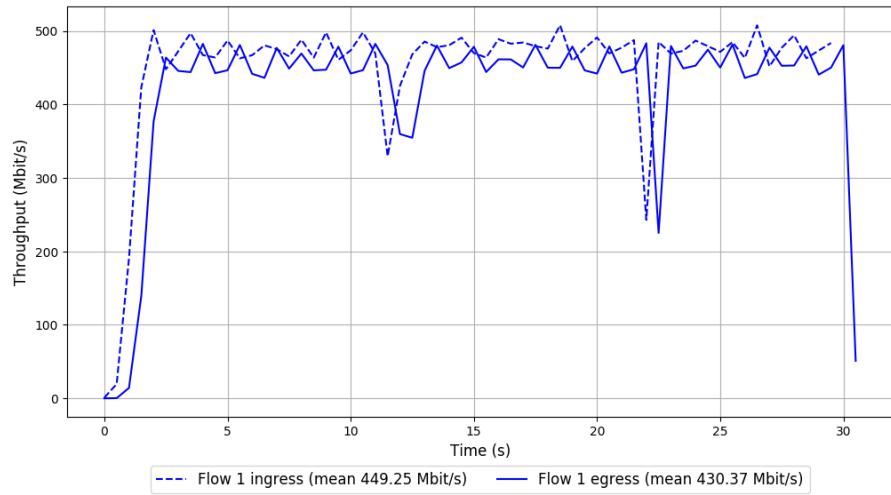


Run 2: Statistics of FillP-Sheep

```
Start at: 2019-01-02 20:02:04
End at: 2019-01-02 20:02:34
Local clock offset: 0.732 ms
Remote clock offset: -42.787 ms

# Below is generated by plot.py at 2019-01-02 21:47:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 430.37 Mbit/s
95th percentile per-packet one-way delay: 70.454 ms
Loss rate: 4.18%
-- Flow 1:
Average throughput: 430.37 Mbit/s
95th percentile per-packet one-way delay: 70.454 ms
Loss rate: 4.18%
```

Run 2: Report of FillP-Sheep — Data Link

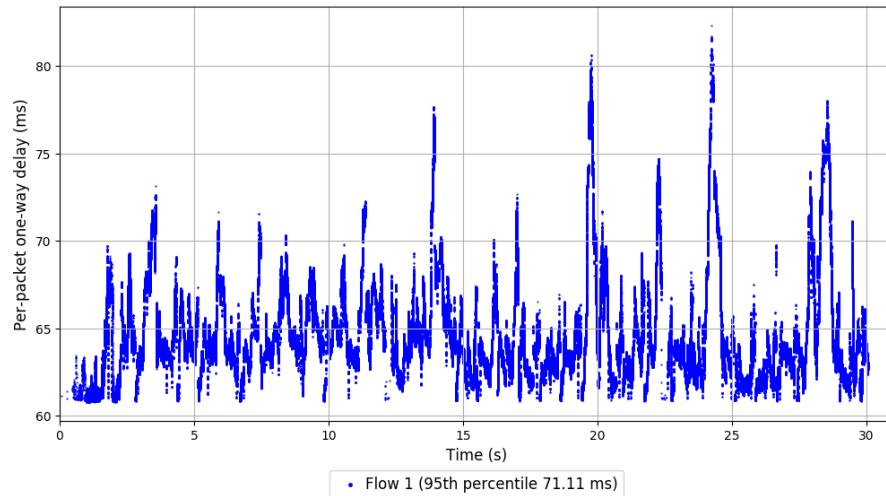
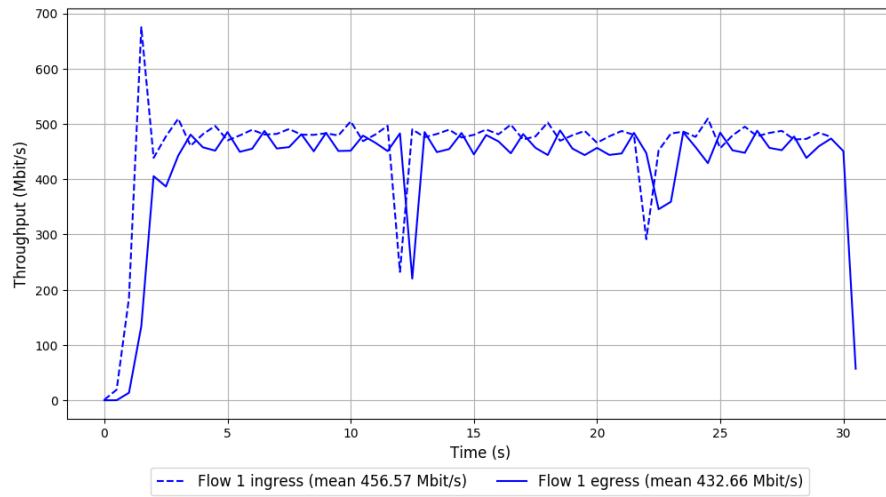


Run 3: Statistics of FillP-Sheep

```
Start at: 2019-01-02 20:32:34
End at: 2019-01-02 20:33:05
Local clock offset: 0.033 ms
Remote clock offset: -38.094 ms

# Below is generated by plot.py at 2019-01-02 21:47:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 432.66 Mbit/s
95th percentile per-packet one-way delay: 71.108 ms
Loss rate: 5.23%
-- Flow 1:
Average throughput: 432.66 Mbit/s
95th percentile per-packet one-way delay: 71.108 ms
Loss rate: 5.23%
```

Run 3: Report of FillP-Sheep — Data Link

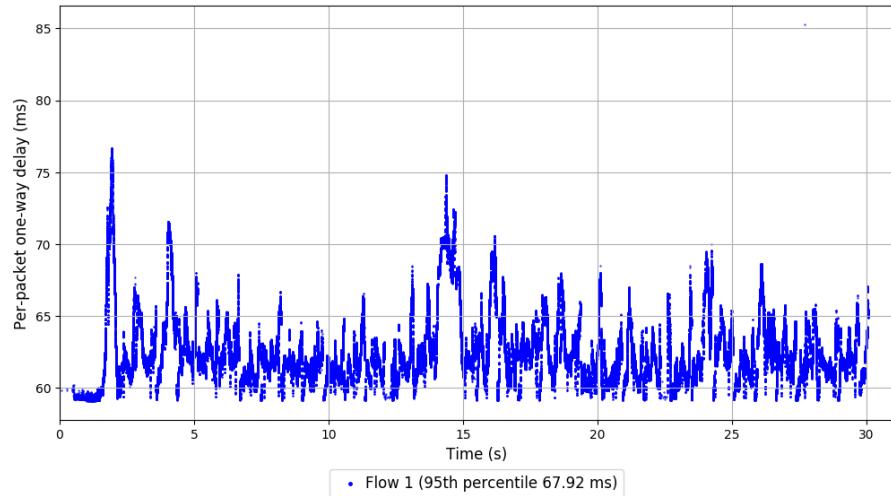
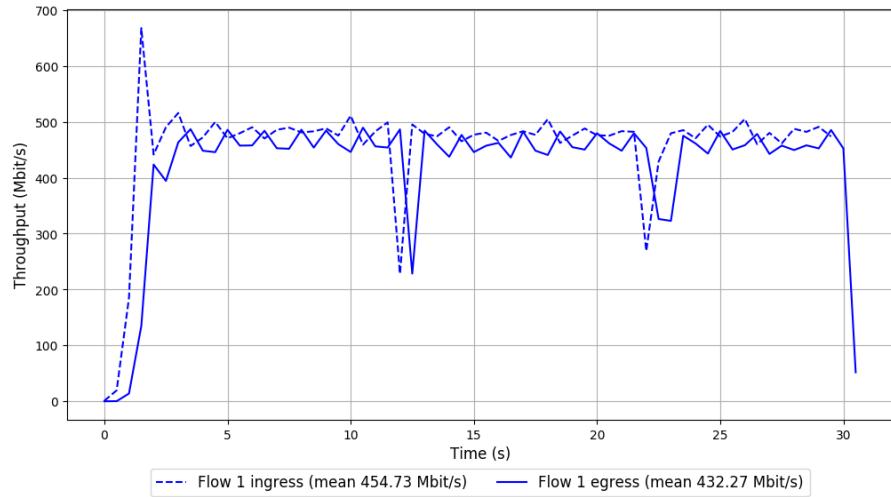


Run 4: Statistics of FillP-Sheep

```
Start at: 2019-01-02 20:56:51
End at: 2019-01-02 20:57:21
Local clock offset: 0.134 ms
Remote clock offset: -39.134 ms

# Below is generated by plot.py at 2019-01-02 21:51:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 432.27 Mbit/s
95th percentile per-packet one-way delay: 67.922 ms
Loss rate: 4.93%
-- Flow 1:
Average throughput: 432.27 Mbit/s
95th percentile per-packet one-way delay: 67.922 ms
Loss rate: 4.93%
```

Run 4: Report of FillP-Sheep — Data Link

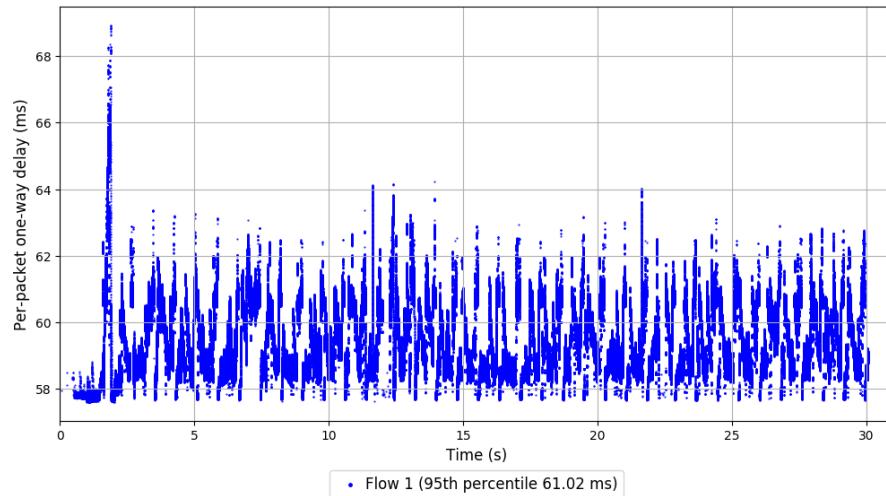
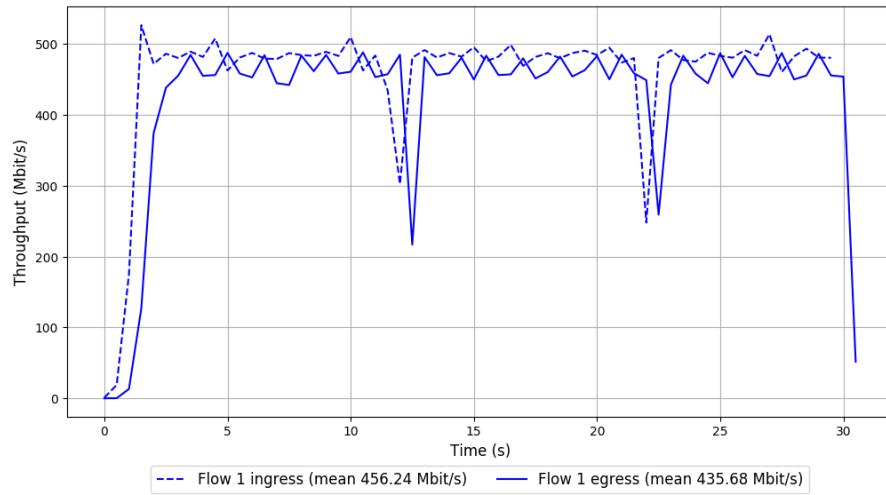


Run 5: Statistics of FillP-Sheep

```
Start at: 2019-01-02 21:21:13
End at: 2019-01-02 21:21:43
Local clock offset: 1.071 ms
Remote clock offset: -42.212 ms

# Below is generated by plot.py at 2019-01-02 21:52:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 435.68 Mbit/s
95th percentile per-packet one-way delay: 61.025 ms
Loss rate: 4.51%
-- Flow 1:
Average throughput: 435.68 Mbit/s
95th percentile per-packet one-way delay: 61.025 ms
Loss rate: 4.51%
```

Run 5: Report of FillP-Sheep — Data Link

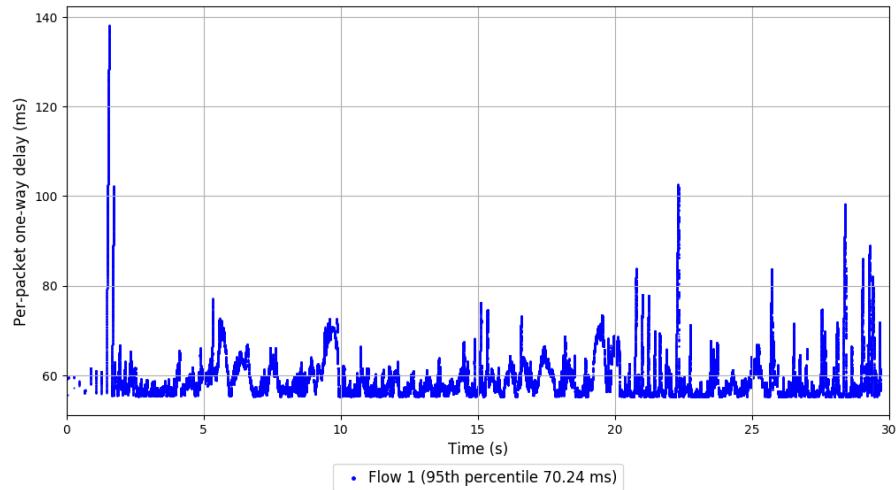
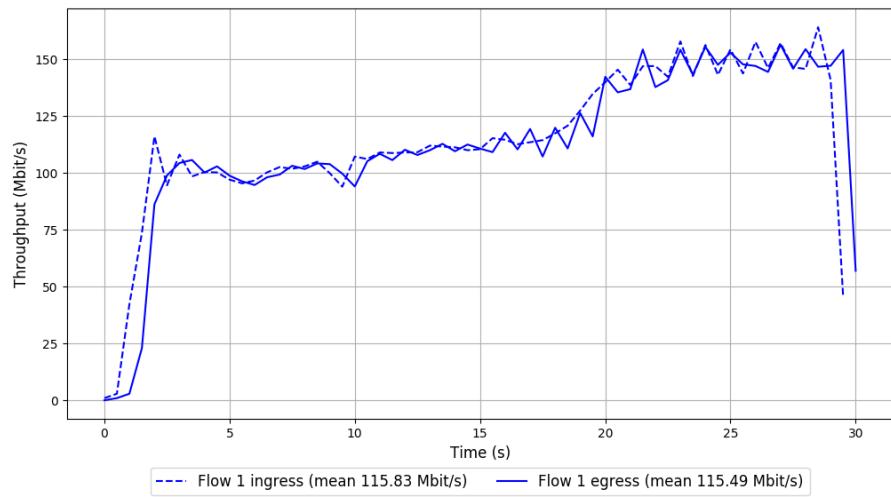


Run 1: Statistics of Indigo

```
Start at: 2019-01-02 19:23:25
End at: 2019-01-02 19:23:55
Local clock offset: -8.187 ms
Remote clock offset: -41.703 ms

# Below is generated by plot.py at 2019-01-02 21:52:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 115.49 Mbit/s
95th percentile per-packet one-way delay: 70.243 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 115.49 Mbit/s
95th percentile per-packet one-way delay: 70.243 ms
Loss rate: 0.29%
```

Run 1: Report of Indigo — Data Link

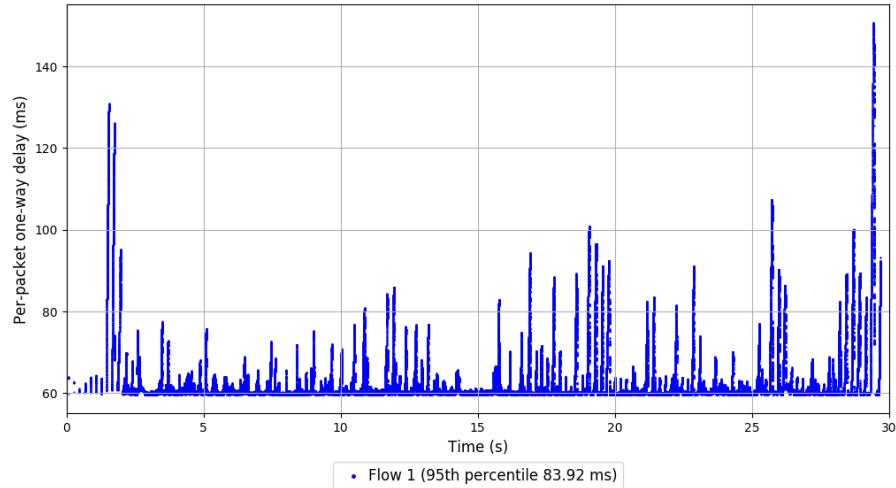
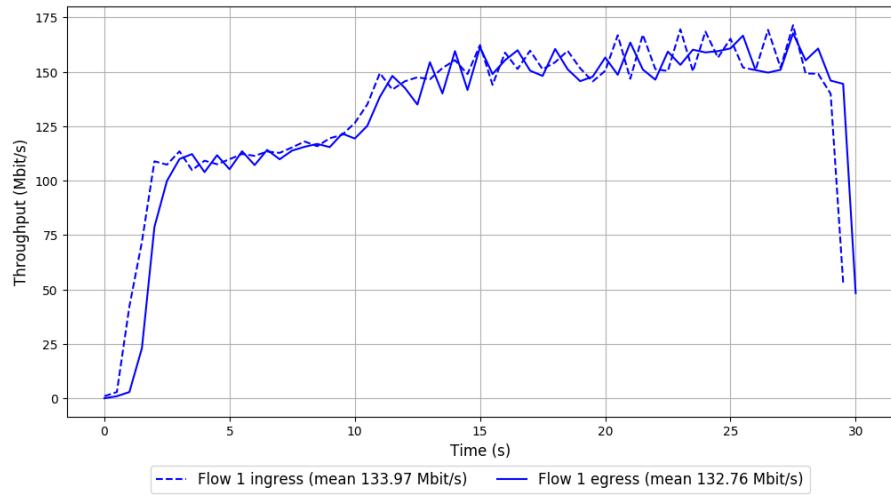


Run 2: Statistics of Indigo

```
Start at: 2019-01-02 19:53:20
End at: 2019-01-02 19:53:50
Local clock offset: -2.342 ms
Remote clock offset: -39.186 ms

# Below is generated by plot.py at 2019-01-02 21:52:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 132.76 Mbit/s
95th percentile per-packet one-way delay: 83.916 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 132.76 Mbit/s
95th percentile per-packet one-way delay: 83.916 ms
Loss rate: 0.84%
```

Run 2: Report of Indigo — Data Link

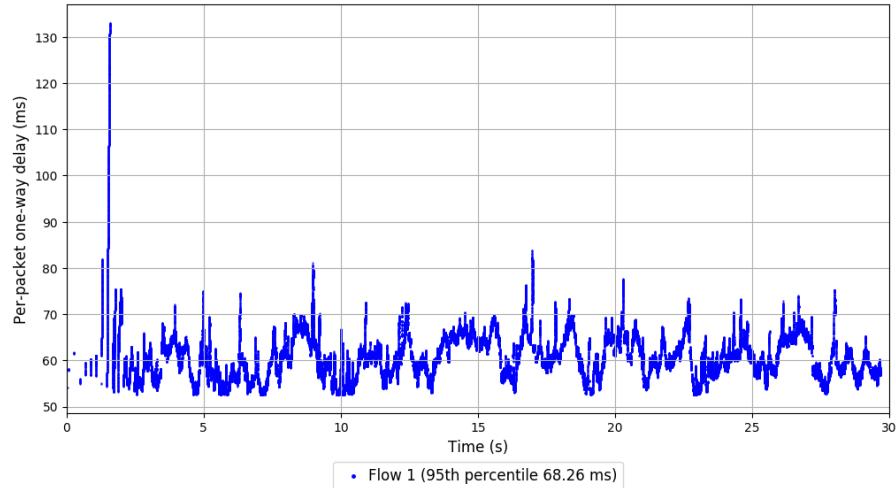
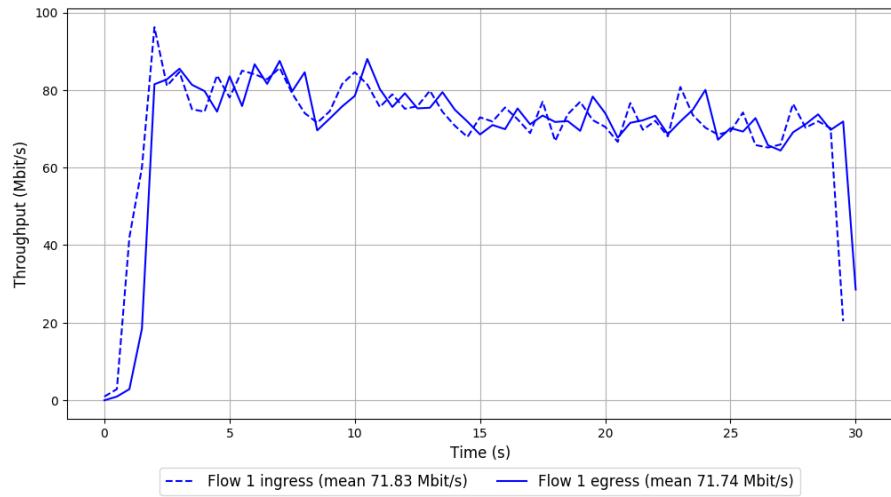


Run 3: Statistics of Indigo

```
Start at: 2019-01-02 20:23:47
End at: 2019-01-02 20:24:17
Local clock offset: -0.995 ms
Remote clock offset: -46.926 ms

# Below is generated by plot.py at 2019-01-02 21:52:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 71.74 Mbit/s
95th percentile per-packet one-way delay: 68.256 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 71.74 Mbit/s
95th percentile per-packet one-way delay: 68.256 ms
Loss rate: 0.11%
```

Run 3: Report of Indigo — Data Link

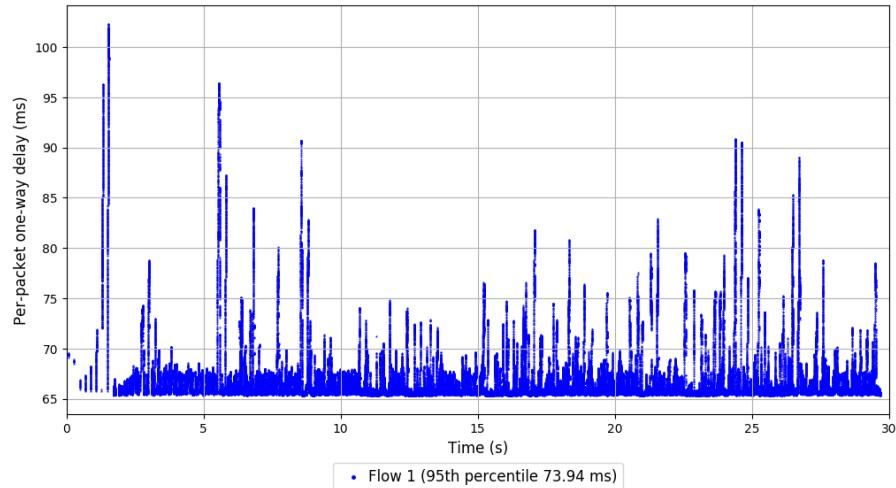
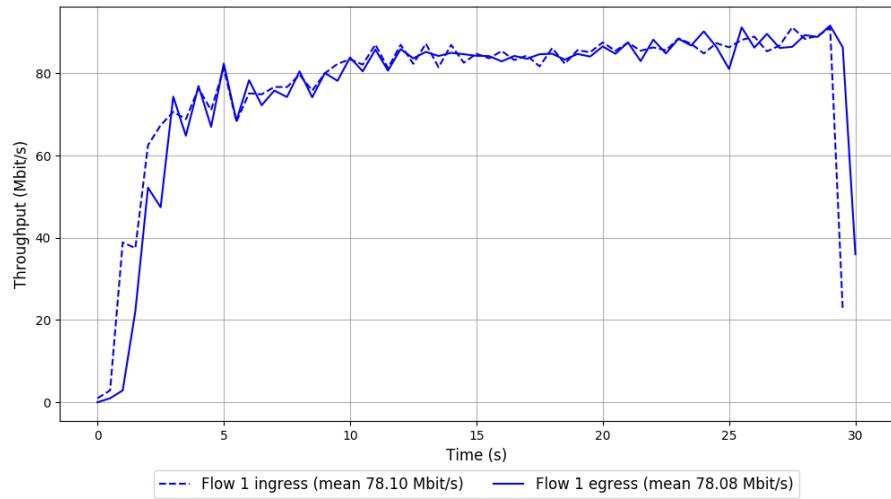


Run 4: Statistics of Indigo

```
Start at: 2019-01-02 20:48:08
End at: 2019-01-02 20:48:38
Local clock offset: 0.337 ms
Remote clock offset: -35.576 ms

# Below is generated by plot.py at 2019-01-02 21:52:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.08 Mbit/s
95th percentile per-packet one-way delay: 73.945 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 78.08 Mbit/s
95th percentile per-packet one-way delay: 73.945 ms
Loss rate: 0.04%
```

Run 4: Report of Indigo — Data Link

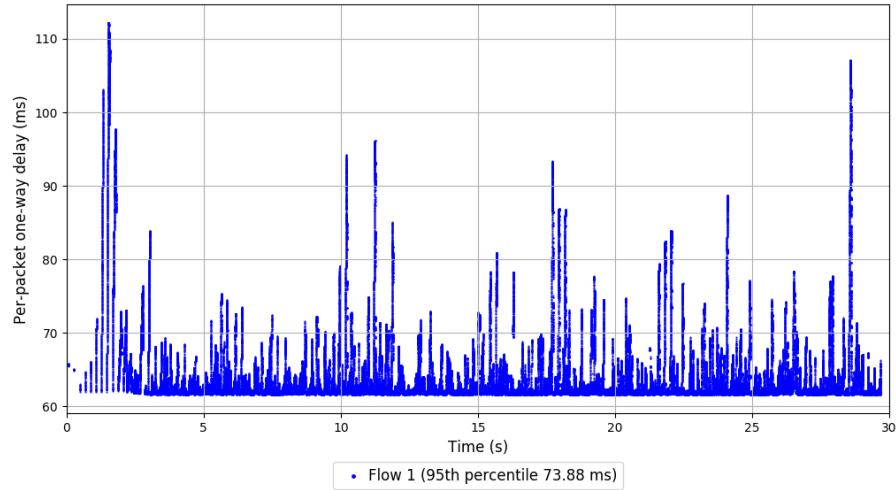
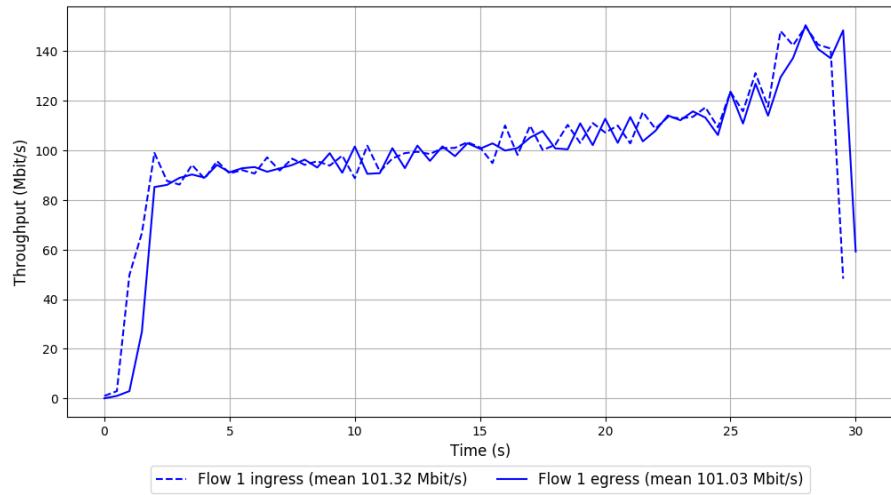


Run 5: Statistics of Indigo

```
Start at: 2019-01-02 21:12:24
End at: 2019-01-02 21:12:54
Local clock offset: 0.067 ms
Remote clock offset: -39.413 ms

# Below is generated by plot.py at 2019-01-02 21:52:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 101.03 Mbit/s
95th percentile per-packet one-way delay: 73.875 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 101.03 Mbit/s
95th percentile per-packet one-way delay: 73.875 ms
Loss rate: 0.29%
```

Run 5: Report of Indigo — Data Link

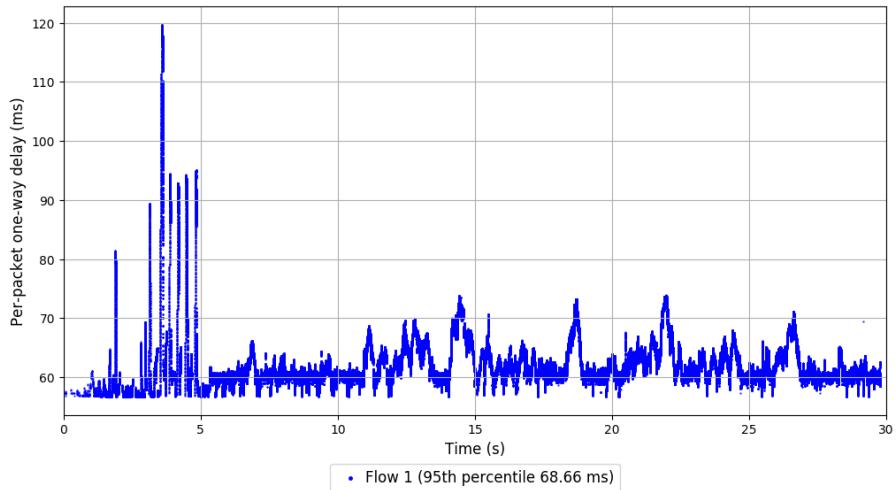
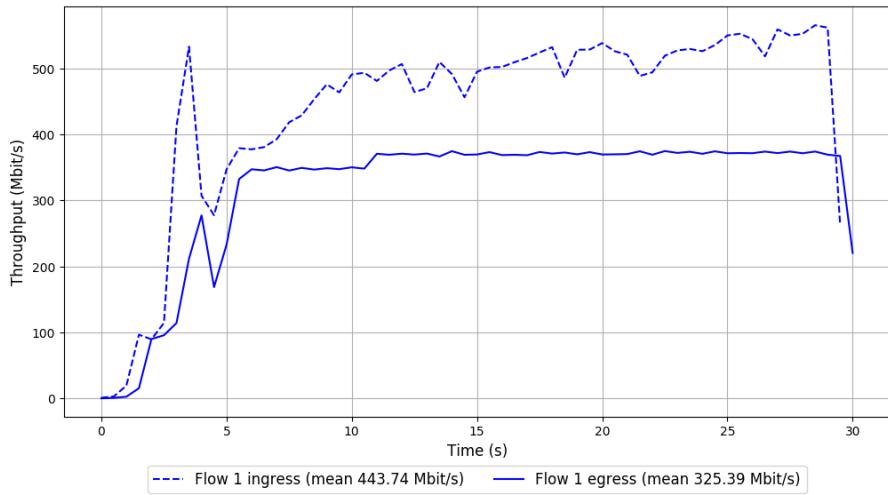


Run 1: Statistics of Indigo-MusesD

```
Start at: 2019-01-02 19:50:41
End at: 2019-01-02 19:51:11
Local clock offset: -2.755 ms
Remote clock offset: -42.744 ms

# Below is generated by plot.py at 2019-01-02 21:52:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 325.39 Mbit/s
95th percentile per-packet one-way delay: 68.656 ms
Loss rate: 26.66%
-- Flow 1:
Average throughput: 325.39 Mbit/s
95th percentile per-packet one-way delay: 68.656 ms
Loss rate: 26.66%
```

Run 1: Report of Indigo-MusesD — Data Link

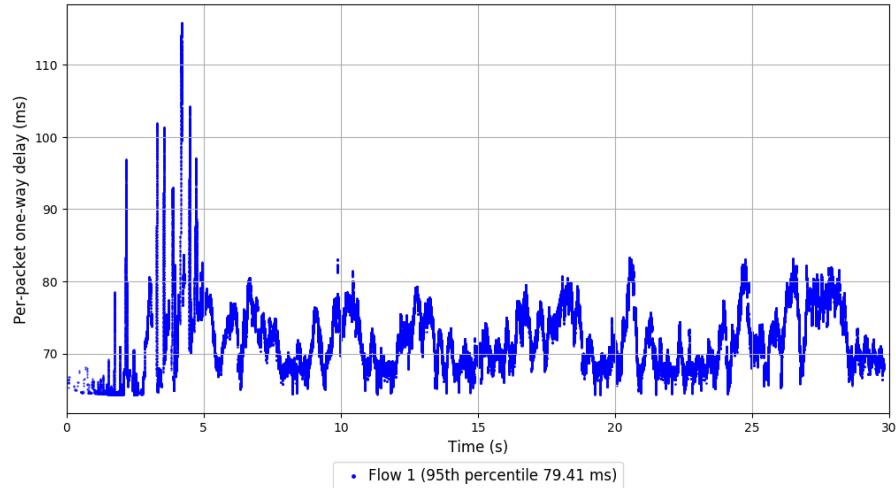
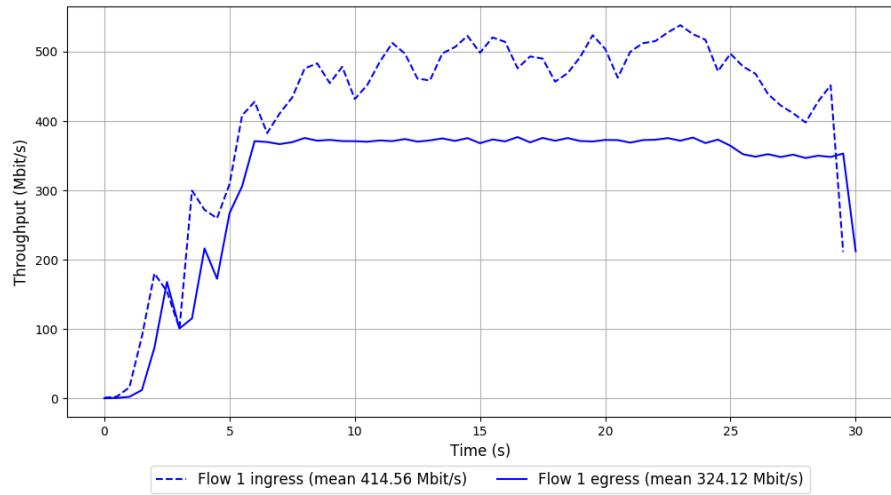


Run 2: Statistics of Indigo-MusesD

```
Start at: 2019-01-02 20:21:09
End at: 2019-01-02 20:21:39
Local clock offset: 2.055 ms
Remote clock offset: -34.896 ms

# Below is generated by plot.py at 2019-01-02 21:52:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 324.12 Mbit/s
95th percentile per-packet one-way delay: 79.405 ms
Loss rate: 21.82%
-- Flow 1:
Average throughput: 324.12 Mbit/s
95th percentile per-packet one-way delay: 79.405 ms
Loss rate: 21.82%
```

Run 2: Report of Indigo-MusesD — Data Link

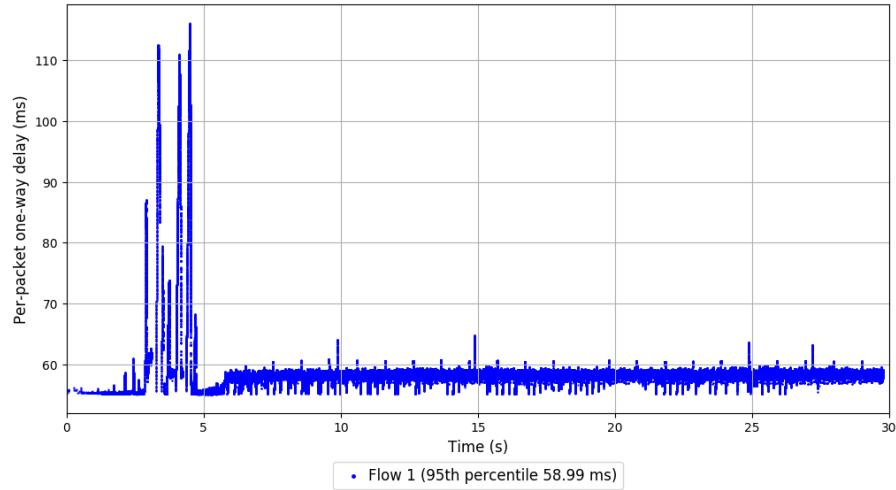
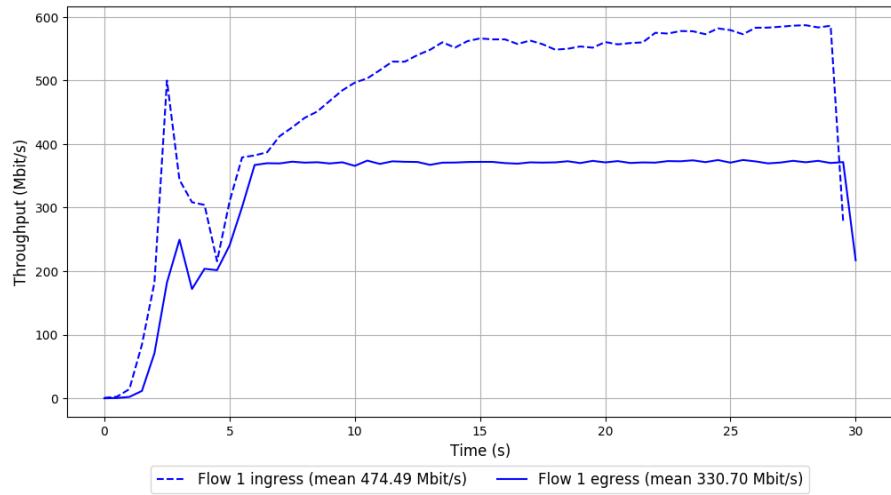


Run 3: Statistics of Indigo-MusesD

```
Start at: 2019-01-02 20:45:29
End at: 2019-01-02 20:45:59
Local clock offset: 0.32 ms
Remote clock offset: -45.972 ms

# Below is generated by plot.py at 2019-01-02 21:52:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 330.70 Mbit/s
95th percentile per-packet one-way delay: 58.987 ms
Loss rate: 30.30%
-- Flow 1:
Average throughput: 330.70 Mbit/s
95th percentile per-packet one-way delay: 58.987 ms
Loss rate: 30.30%
```

Run 3: Report of Indigo-MusesD — Data Link

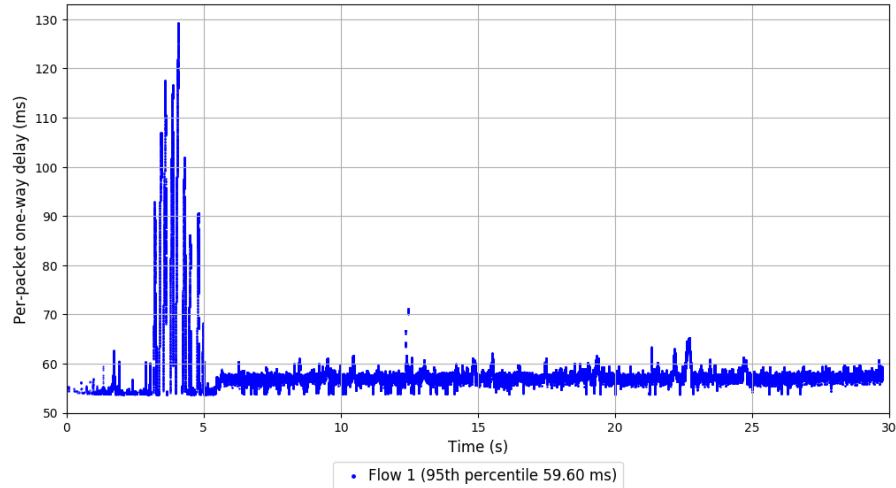
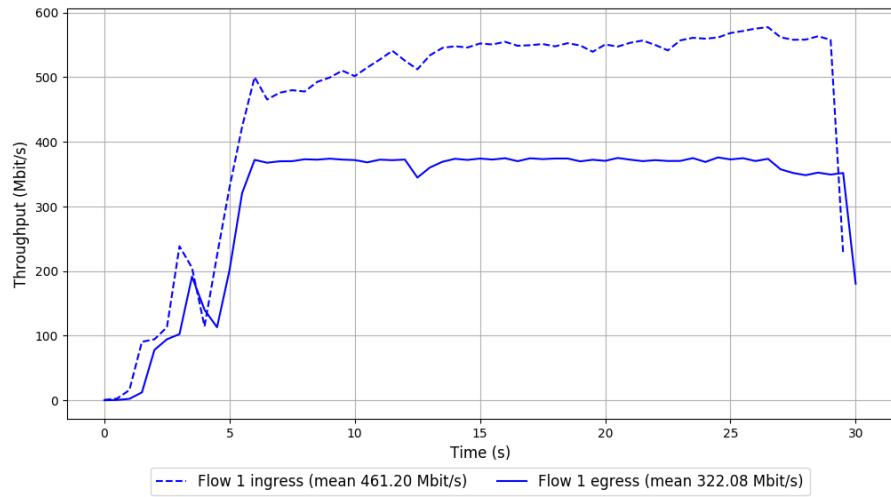


Run 4: Statistics of Indigo-MusesD

```
Start at: 2019-01-02 21:09:45
End at: 2019-01-02 21:10:15
Local clock offset: 2.175 ms
Remote clock offset: -42.982 ms

# Below is generated by plot.py at 2019-01-02 21:52:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 322.08 Mbit/s
95th percentile per-packet one-way delay: 59.602 ms
Loss rate: 30.16%
-- Flow 1:
Average throughput: 322.08 Mbit/s
95th percentile per-packet one-way delay: 59.602 ms
Loss rate: 30.16%
```

Run 4: Report of Indigo-MusesD — Data Link

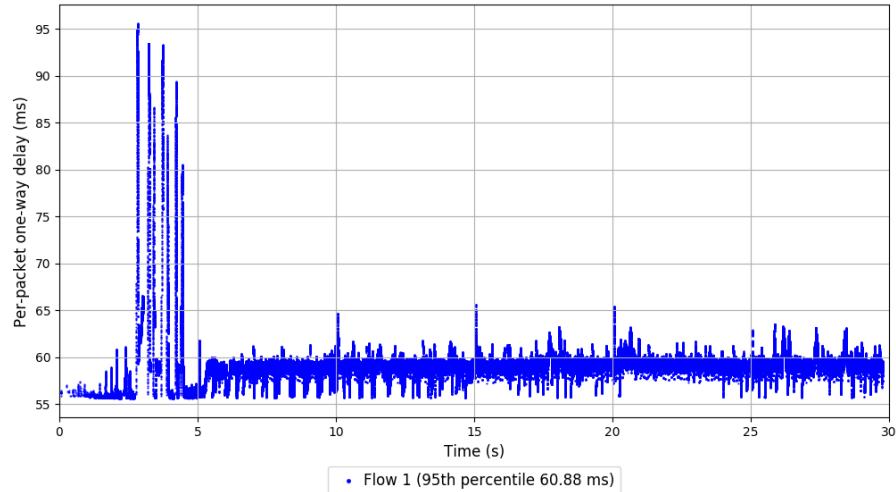
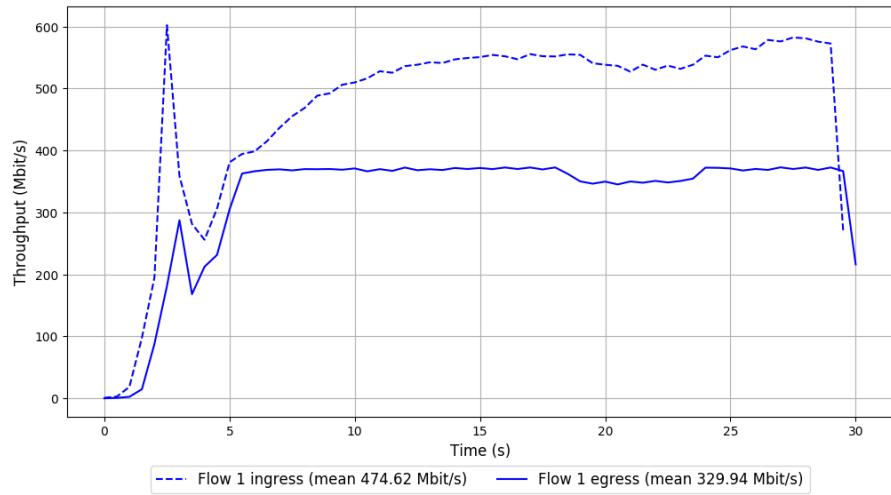


Run 5: Statistics of Indigo-MusesD

```
Start at: 2019-01-02 21:34:13
End at: 2019-01-02 21:34:43
Local clock offset: 0.203 ms
Remote clock offset: -43.971 ms

# Below is generated by plot.py at 2019-01-02 21:52:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 329.94 Mbit/s
95th percentile per-packet one-way delay: 60.883 ms
Loss rate: 30.48%
-- Flow 1:
Average throughput: 329.94 Mbit/s
95th percentile per-packet one-way delay: 60.883 ms
Loss rate: 30.48%
```

Run 5: Report of Indigo-MusesD — Data Link

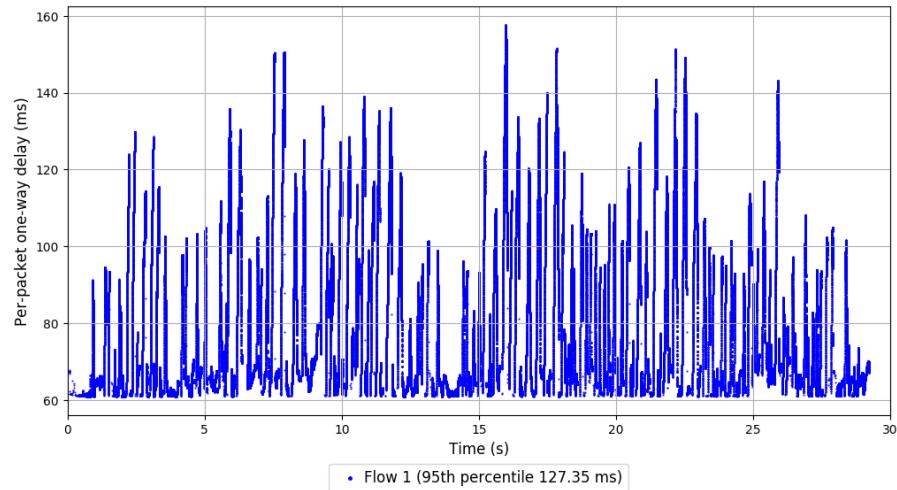
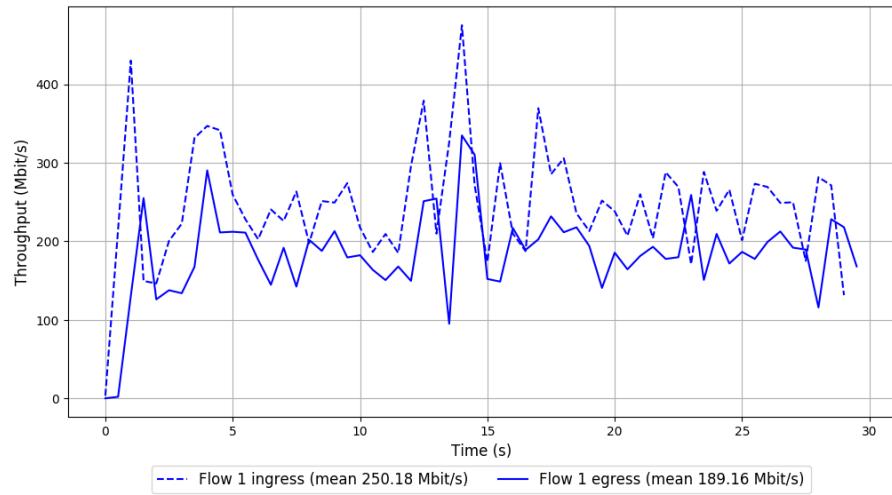


Run 1: Statistics of Indigo-MusesT

```
Start at: 2019-01-02 19:40:01
End at: 2019-01-02 19:40:31
Local clock offset: -0.738 ms
Remote clock offset: -35.495 ms

# Below is generated by plot.py at 2019-01-02 21:52:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 189.16 Mbit/s
95th percentile per-packet one-way delay: 127.350 ms
Loss rate: 24.39%
-- Flow 1:
Average throughput: 189.16 Mbit/s
95th percentile per-packet one-way delay: 127.350 ms
Loss rate: 24.39%
```

Run 1: Report of Indigo-MusesT — Data Link

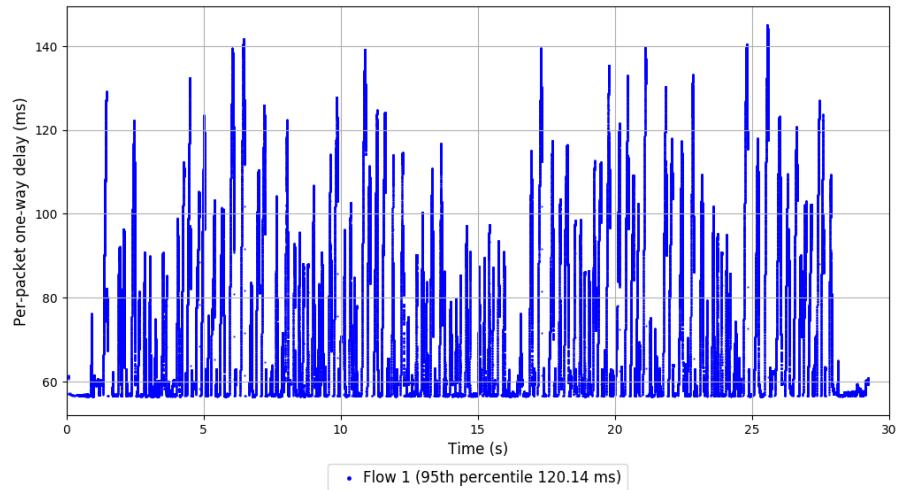
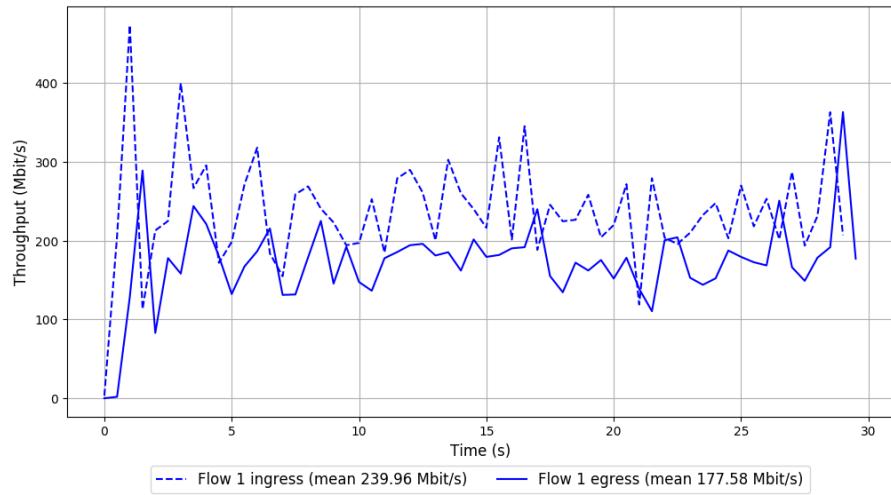


Run 2: Statistics of Indigo-MusesT

```
Start at: 2019-01-02 20:10:06
End at: 2019-01-02 20:10:36
Local clock offset: 0.274 ms
Remote clock offset: -41.623 ms

# Below is generated by plot.py at 2019-01-02 21:52:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 177.58 Mbit/s
95th percentile per-packet one-way delay: 120.145 ms
Loss rate: 26.00%
-- Flow 1:
Average throughput: 177.58 Mbit/s
95th percentile per-packet one-way delay: 120.145 ms
Loss rate: 26.00%
```

Run 2: Report of Indigo-MusesT — Data Link

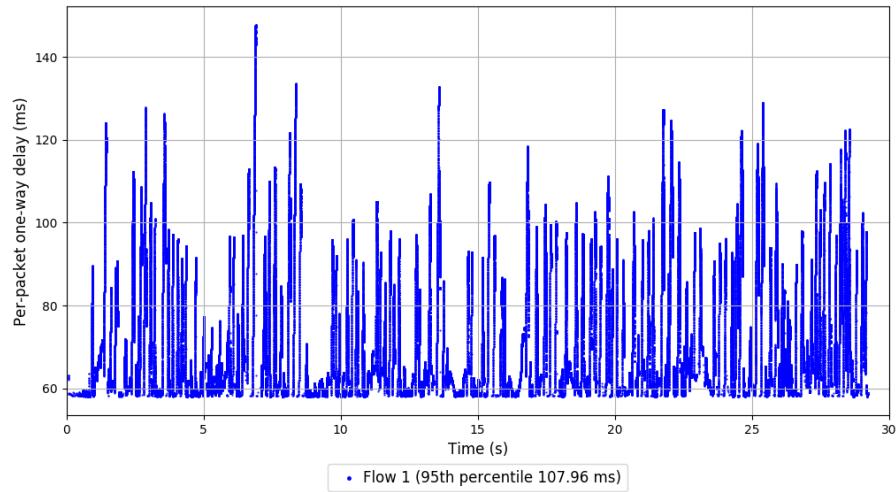
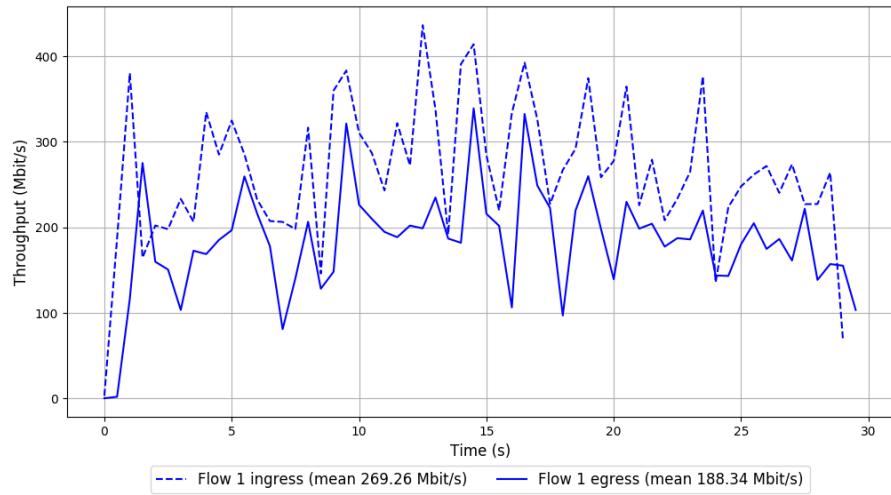


Run 3: Statistics of Indigo-MusesT

```
Start at: 2019-01-02 20:40:33
End at: 2019-01-02 20:41:03
Local clock offset: 2.231 ms
Remote clock offset: -40.851 ms

# Below is generated by plot.py at 2019-01-02 21:53:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 188.34 Mbit/s
95th percentile per-packet one-way delay: 107.963 ms
Loss rate: 30.06%
-- Flow 1:
Average throughput: 188.34 Mbit/s
95th percentile per-packet one-way delay: 107.963 ms
Loss rate: 30.06%
```

Run 3: Report of Indigo-MusesT — Data Link

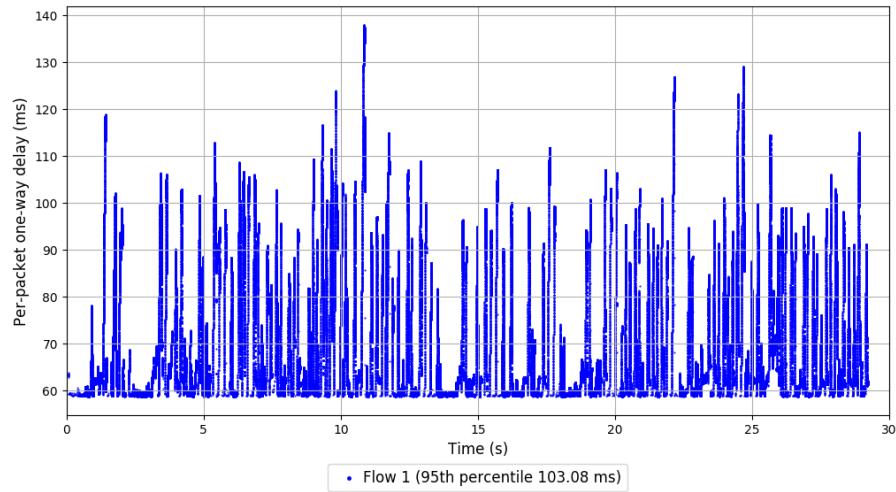
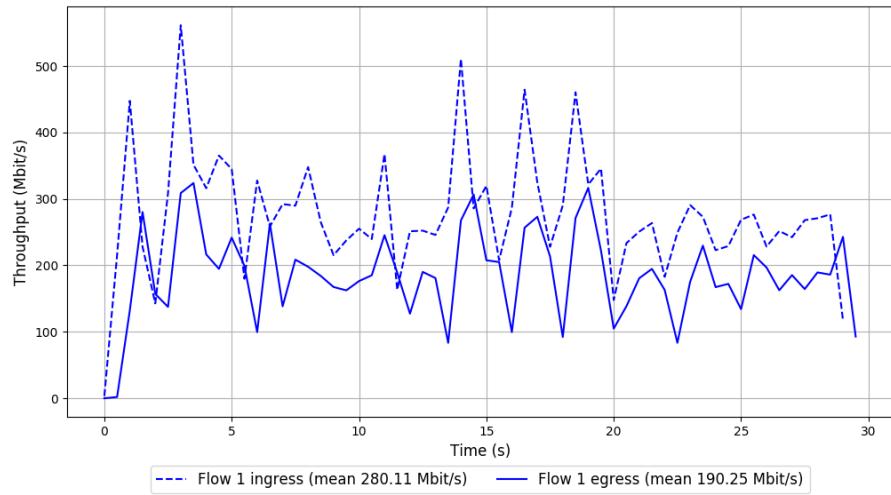


Run 4: Statistics of Indigo-MusesT

```
Start at: 2019-01-02 21:04:48
End at: 2019-01-02 21:05:18
Local clock offset: -5.411 ms
Remote clock offset: -45.662 ms

# Below is generated by plot.py at 2019-01-02 21:53:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 190.25 Mbit/s
95th percentile per-packet one-way delay: 103.083 ms
Loss rate: 32.08%
-- Flow 1:
Average throughput: 190.25 Mbit/s
95th percentile per-packet one-way delay: 103.083 ms
Loss rate: 32.08%
```

Run 4: Report of Indigo-MusesT — Data Link

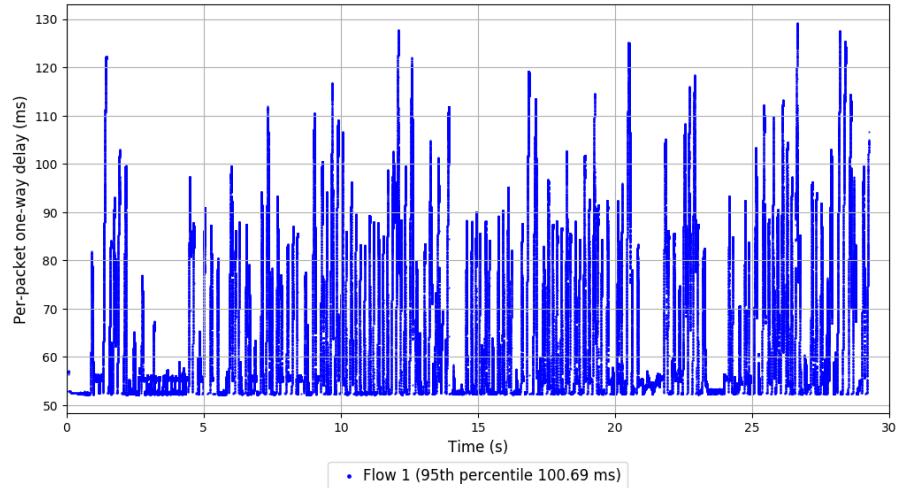
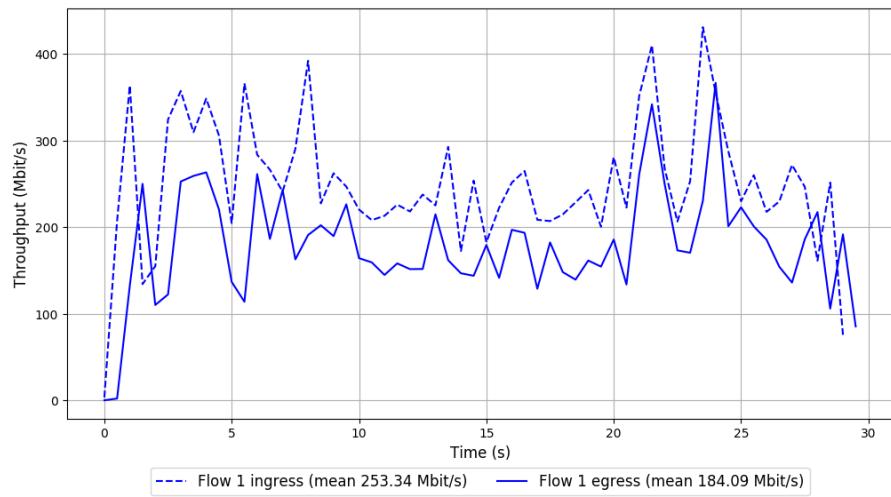


Run 5: Statistics of Indigo-MusesT

```
Start at: 2019-01-02 21:29:16
End at: 2019-01-02 21:29:46
Local clock offset: 2.807 ms
Remote clock offset: -44.226 ms

# Below is generated by plot.py at 2019-01-02 21:53:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 184.09 Mbit/s
95th percentile per-packet one-way delay: 100.690 ms
Loss rate: 27.34%
-- Flow 1:
Average throughput: 184.09 Mbit/s
95th percentile per-packet one-way delay: 100.690 ms
Loss rate: 27.34%
```

Run 5: Report of Indigo-MusesT — Data Link

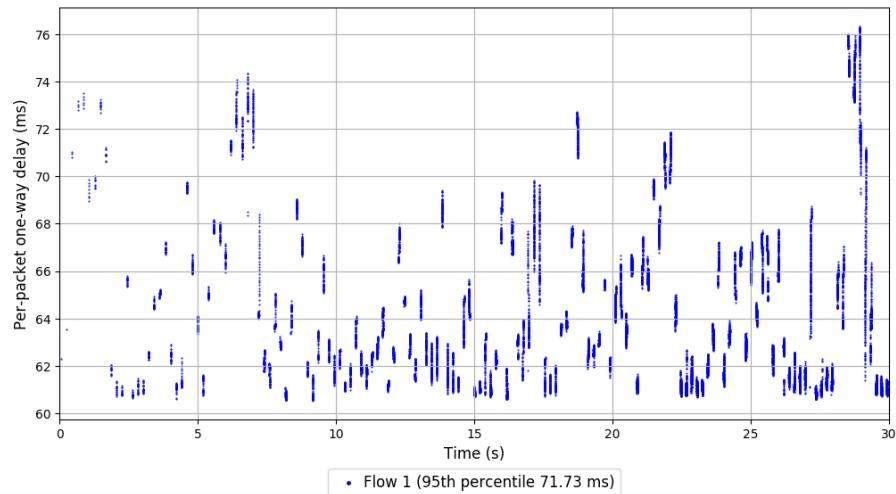
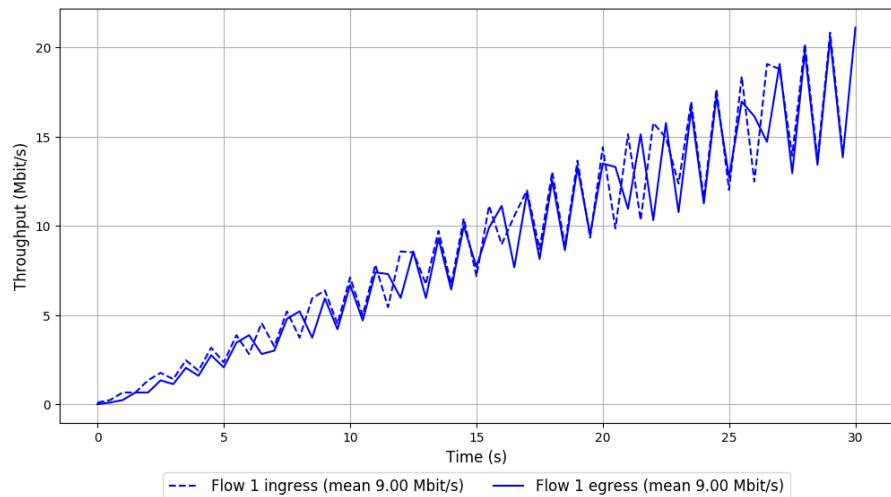


```
Run 1: Statistics of LEDBAT
```

```
Start at: 2019-01-02 19:36:14
End at: 2019-01-02 19:36:44
Local clock offset: -2.27 ms
Remote clock offset: -37.238 ms

# Below is generated by plot.py at 2019-01-02 21:53:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.00 Mbit/s
95th percentile per-packet one-way delay: 71.728 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.00 Mbit/s
95th percentile per-packet one-way delay: 71.728 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link

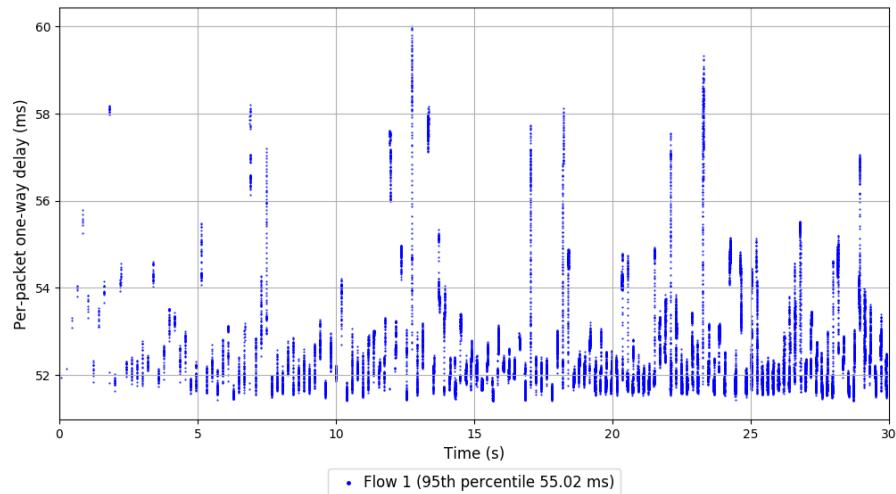
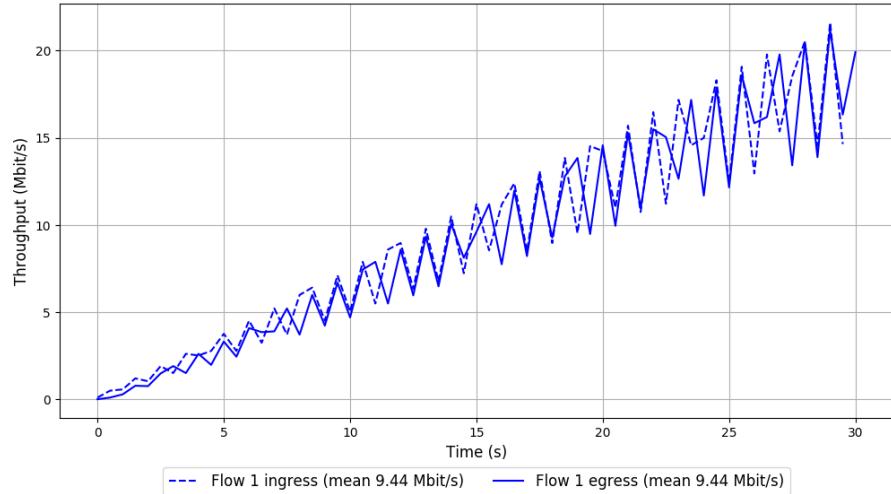


Run 2: Statistics of LEDBAT

```
Start at: 2019-01-02 20:06:17
End at: 2019-01-02 20:06:47
Local clock offset: 1.419 ms
Remote clock offset: -45.455 ms

# Below is generated by plot.py at 2019-01-02 21:53:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.44 Mbit/s
95th percentile per-packet one-way delay: 55.019 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.44 Mbit/s
95th percentile per-packet one-way delay: 55.019 ms
Loss rate: 0.00%
```

Run 2: Report of LEDBAT — Data Link

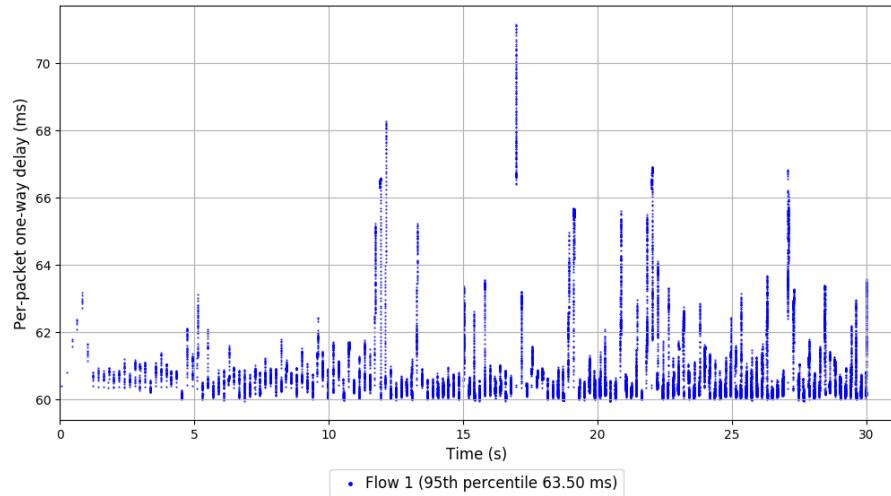
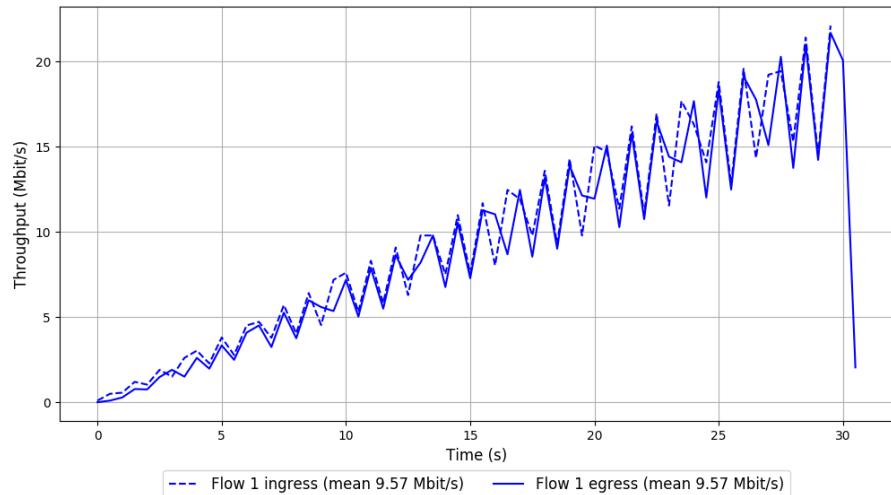


Run 3: Statistics of LEDBAT

```
Start at: 2019-01-02 20:36:39
End at: 2019-01-02 20:37:09
Local clock offset: 1.074 ms
Remote clock offset: -37.715 ms

# Below is generated by plot.py at 2019-01-02 21:53:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.57 Mbit/s
95th percentile per-packet one-way delay: 63.501 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.57 Mbit/s
95th percentile per-packet one-way delay: 63.501 ms
Loss rate: 0.00%
```

Run 3: Report of LEDBAT — Data Link

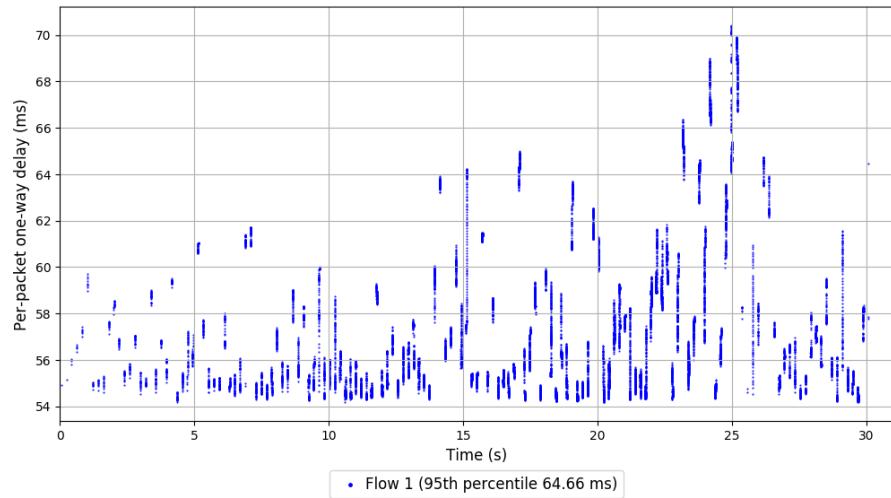
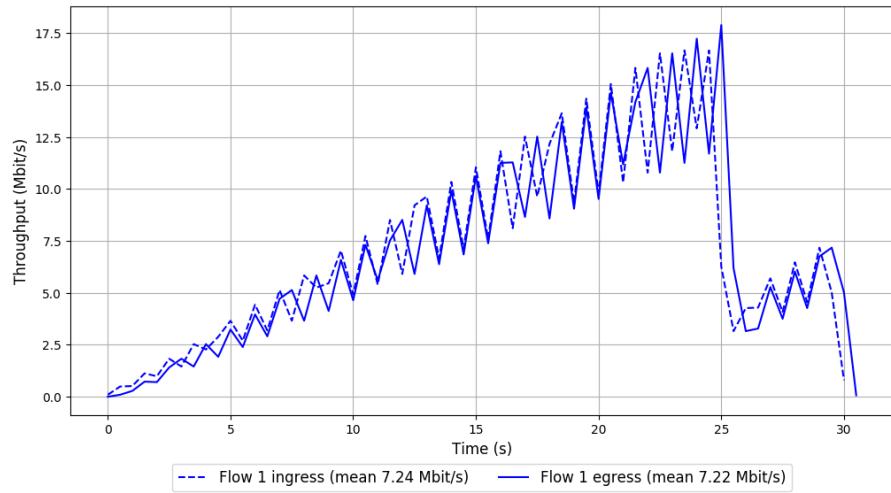


Run 4: Statistics of LEDBAT

```
Start at: 2019-01-02 21:01:01
End at: 2019-01-02 21:01:31
Local clock offset: 1.967 ms
Remote clock offset: -42.644 ms

# Below is generated by plot.py at 2019-01-02 21:53:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.22 Mbit/s
95th percentile per-packet one-way delay: 64.658 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 7.22 Mbit/s
95th percentile per-packet one-way delay: 64.658 ms
Loss rate: 0.18%
```

Run 4: Report of LEDBAT — Data Link

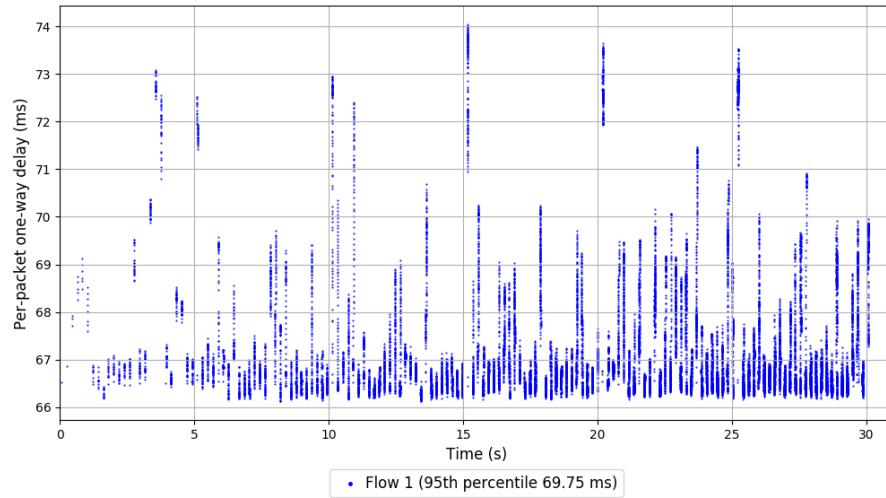
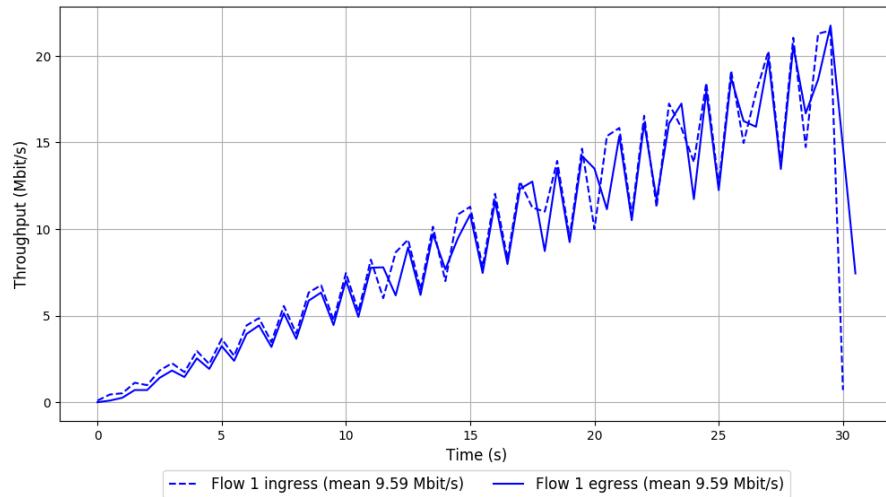


Run 5: Statistics of LEDBAT

```
Start at: 2019-01-02 21:25:23
End at: 2019-01-02 21:25:53
Local clock offset: 1.312 ms
Remote clock offset: -31.382 ms

# Below is generated by plot.py at 2019-01-02 21:53:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.59 Mbit/s
95th percentile per-packet one-way delay: 69.755 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.59 Mbit/s
95th percentile per-packet one-way delay: 69.755 ms
Loss rate: 0.00%
```

Run 5: Report of LEDBAT — Data Link

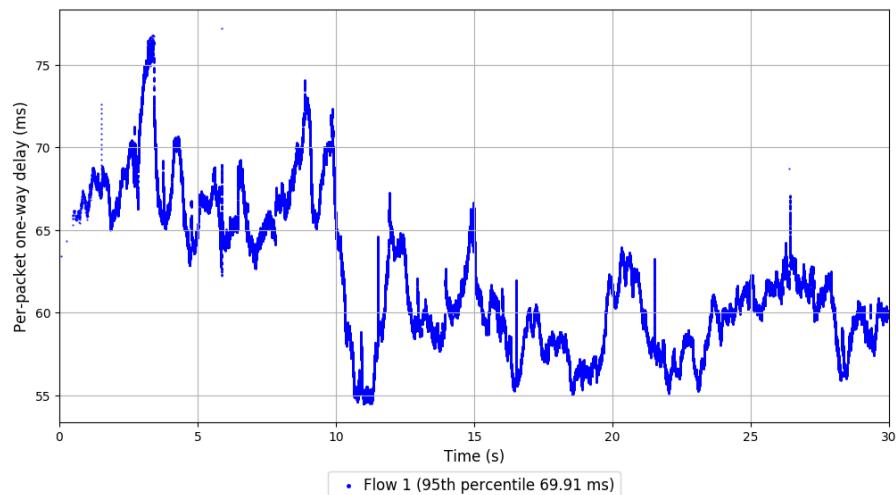
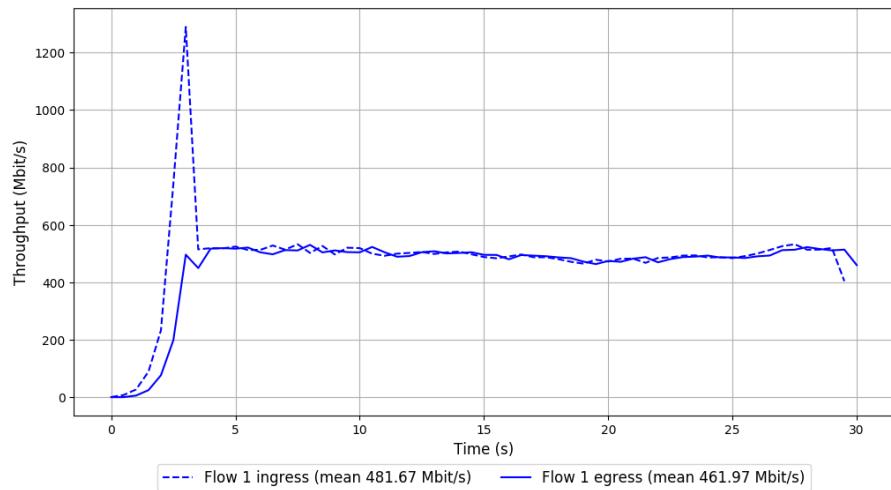


```
Run 1: Statistics of PCC-Allegro
```

```
Start at: 2019-01-02 19:30:40
End at: 2019-01-02 19:31:10
Local clock offset: -3.965 ms
Remote clock offset: -43.089 ms

# Below is generated by plot.py at 2019-01-02 21:57:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 461.97 Mbit/s
95th percentile per-packet one-way delay: 69.912 ms
Loss rate: 4.11%
-- Flow 1:
Average throughput: 461.97 Mbit/s
95th percentile per-packet one-way delay: 69.912 ms
Loss rate: 4.11%
```

Run 1: Report of PCC-Allegro — Data Link

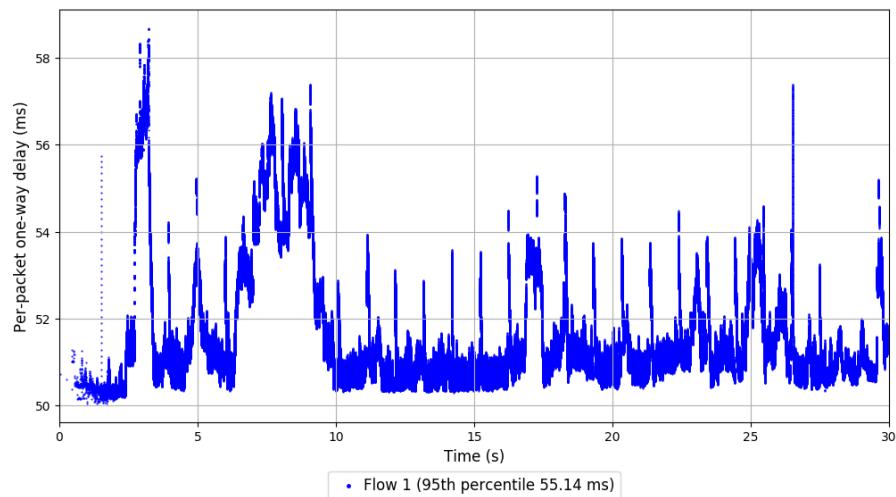
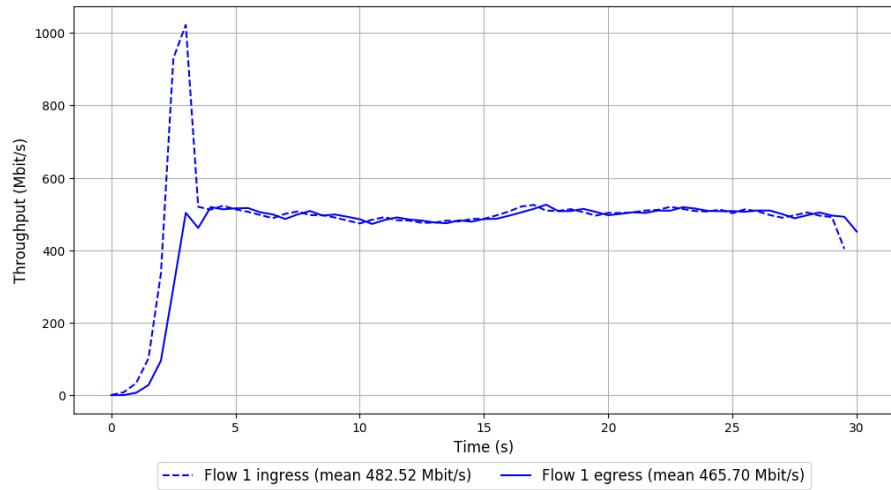


Run 2: Statistics of PCC-Allegro

```
Start at: 2019-01-02 20:00:38
End at: 2019-01-02 20:01:08
Local clock offset: -0.037 ms
Remote clock offset: -47.547 ms

# Below is generated by plot.py at 2019-01-02 21:57:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 465.70 Mbit/s
95th percentile per-packet one-way delay: 55.136 ms
Loss rate: 3.48%
-- Flow 1:
Average throughput: 465.70 Mbit/s
95th percentile per-packet one-way delay: 55.136 ms
Loss rate: 3.48%
```

Run 2: Report of PCC-Allegro — Data Link

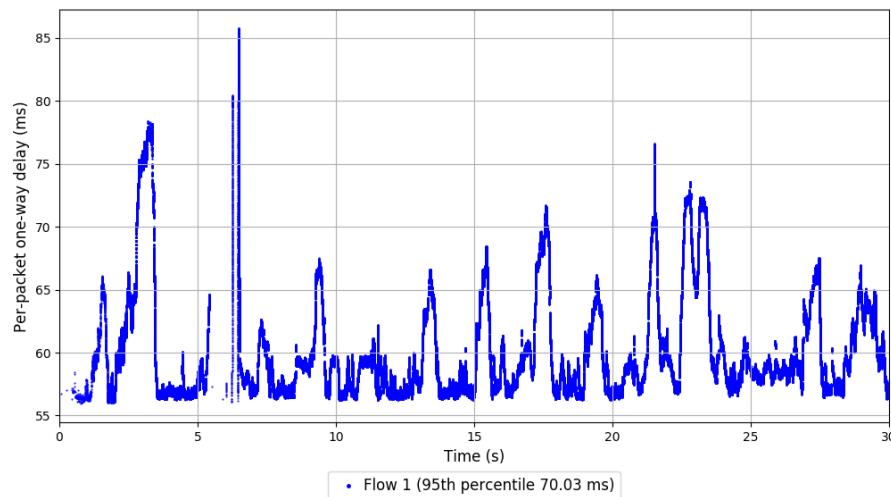
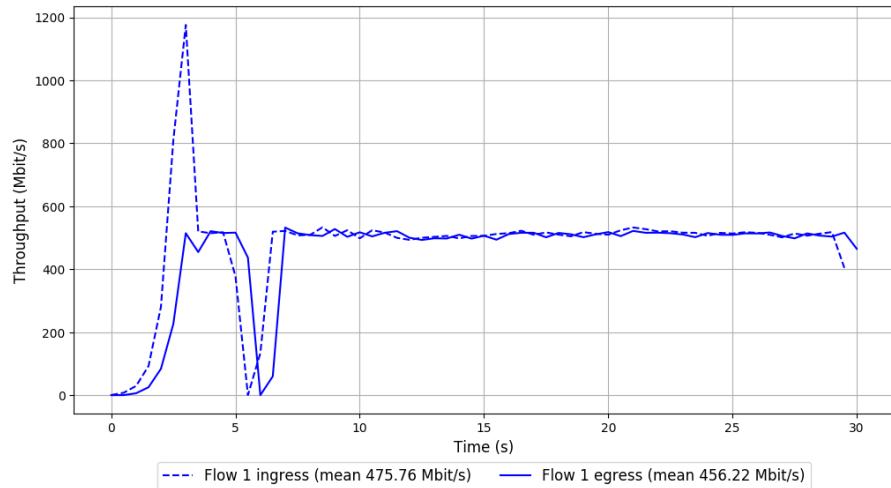


Run 3: Statistics of PCC-Allegro

```
Start at: 2019-01-02 20:31:09
End at: 2019-01-02 20:31:39
Local clock offset: 4.059 ms
Remote clock offset: -40.913 ms

# Below is generated by plot.py at 2019-01-02 21:57:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 456.22 Mbit/s
95th percentile per-packet one-way delay: 70.029 ms
Loss rate: 4.12%
-- Flow 1:
Average throughput: 456.22 Mbit/s
95th percentile per-packet one-way delay: 70.029 ms
Loss rate: 4.12%
```

Run 3: Report of PCC-Allegro — Data Link

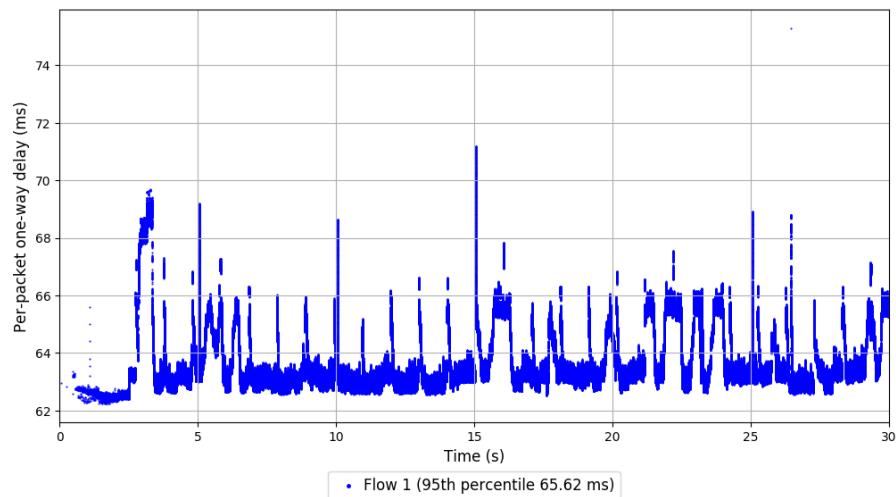
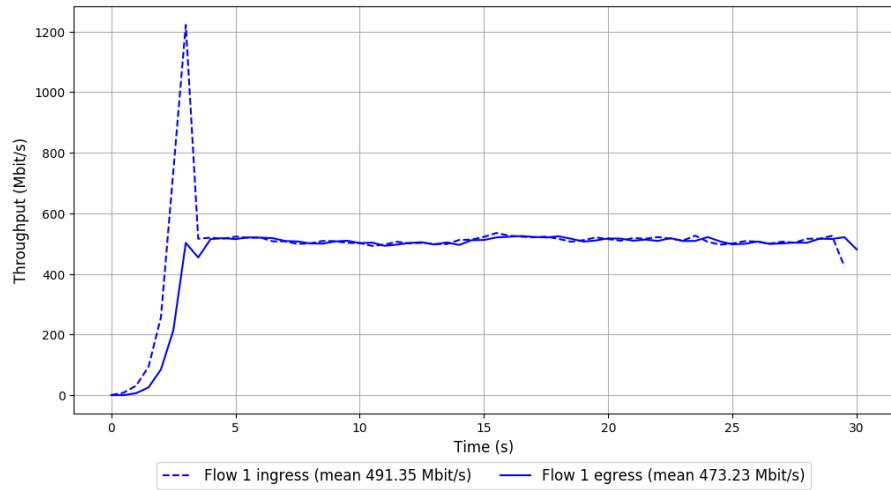


Run 4: Statistics of PCC-Allegro

```
Start at: 2019-01-02 20:55:24
End at: 2019-01-02 20:55:54
Local clock offset: -0.703 ms
Remote clock offset: -39.544 ms

# Below is generated by plot.py at 2019-01-02 21:57:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 473.23 Mbit/s
95th percentile per-packet one-way delay: 65.616 ms
Loss rate: 3.69%
-- Flow 1:
Average throughput: 473.23 Mbit/s
95th percentile per-packet one-way delay: 65.616 ms
Loss rate: 3.69%
```

Run 4: Report of PCC-Allegro — Data Link

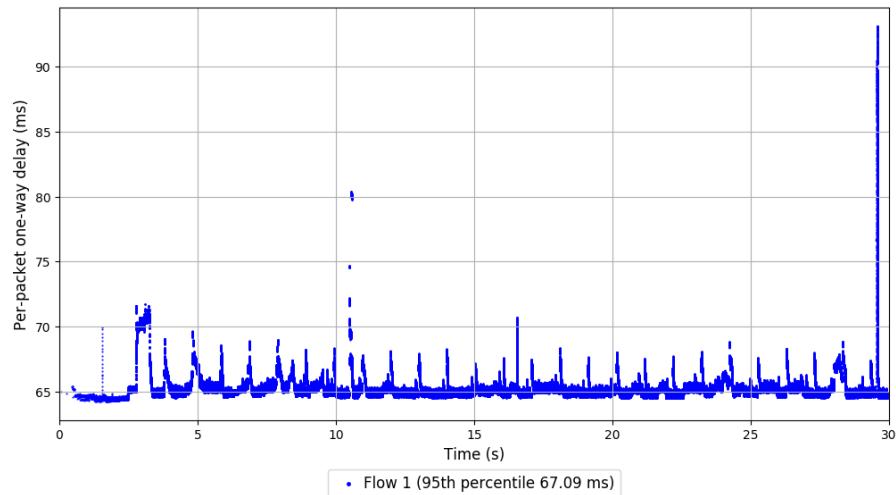
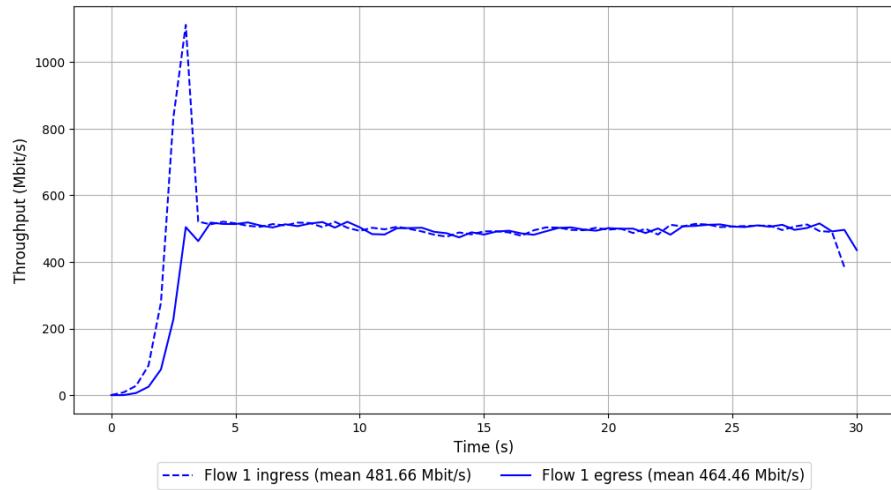


Run 5: Statistics of PCC-Allegro

```
Start at: 2019-01-02 21:19:47
End at: 2019-01-02 21:20:17
Local clock offset: -0.673 ms
Remote clock offset: -34.87 ms

# Below is generated by plot.py at 2019-01-02 21:57:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 464.46 Mbit/s
95th percentile per-packet one-way delay: 67.091 ms
Loss rate: 3.57%
-- Flow 1:
Average throughput: 464.46 Mbit/s
95th percentile per-packet one-way delay: 67.091 ms
Loss rate: 3.57%
```

Run 5: Report of PCC-Allegro — Data Link

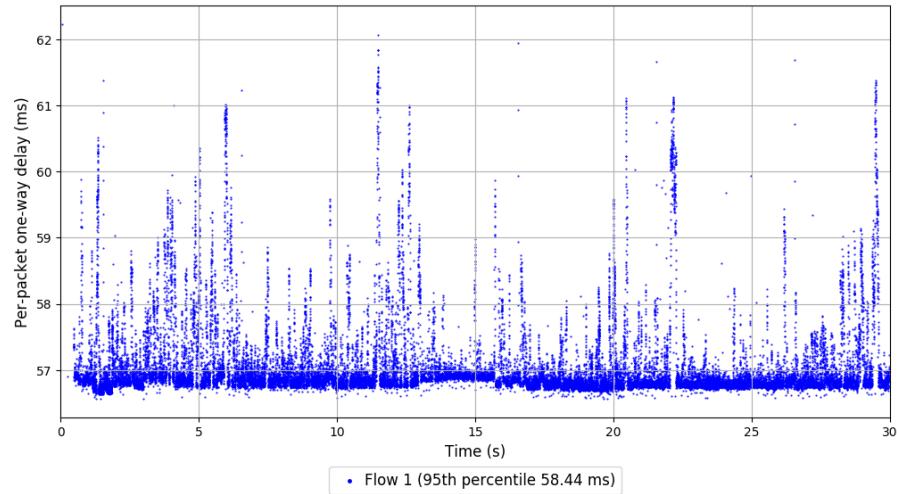
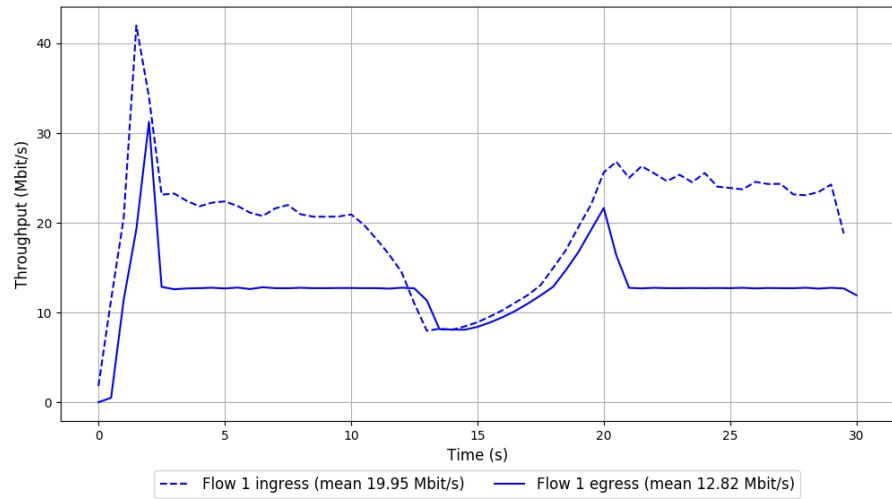


```
Run 1: Statistics of PCC-Expr
```

```
Start at: 2019-01-02 19:52:08
End at: 2019-01-02 19:52:38
Local clock offset: -0.104 ms
Remote clock offset: -40.1 ms

# Below is generated by plot.py at 2019-01-02 21:57:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.82 Mbit/s
95th percentile per-packet one-way delay: 58.435 ms
Loss rate: 35.73%
-- Flow 1:
Average throughput: 12.82 Mbit/s
95th percentile per-packet one-way delay: 58.435 ms
Loss rate: 35.73%
```

Run 1: Report of PCC-Expr — Data Link

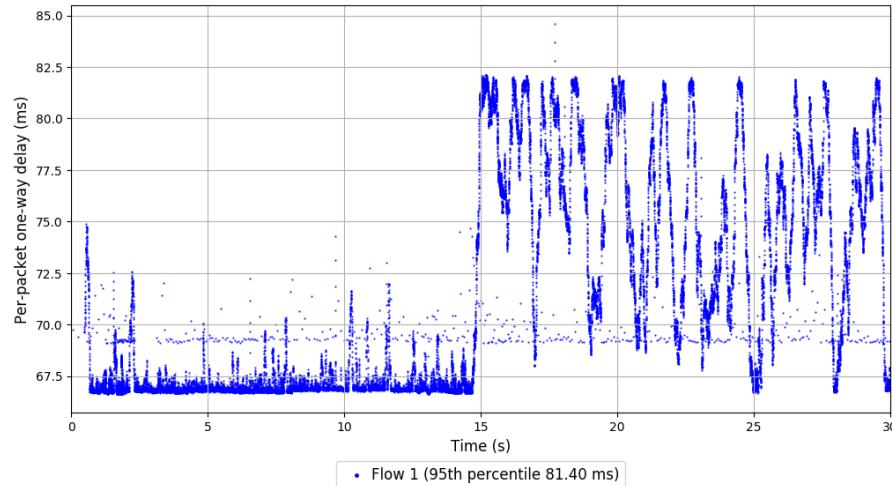
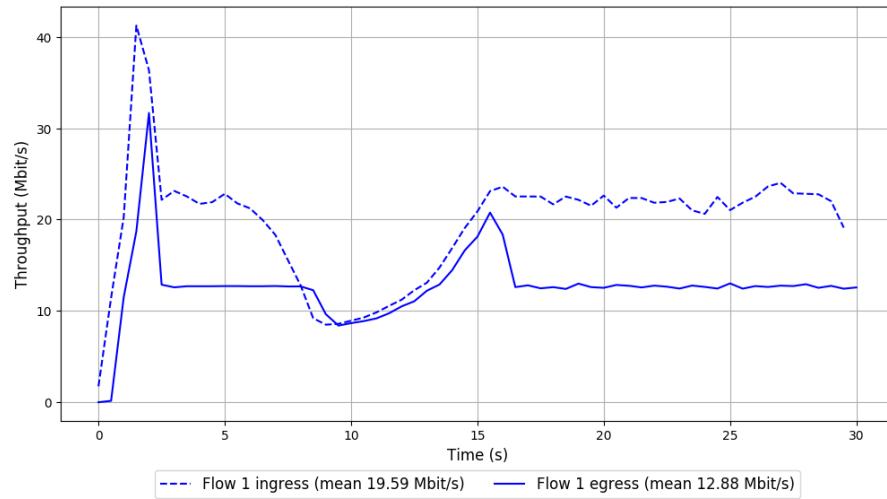


Run 2: Statistics of PCC-Expr

```
Start at: 2019-01-02 20:22:36
End at: 2019-01-02 20:23:06
Local clock offset: 0.813 ms
Remote clock offset: -31.1 ms

# Below is generated by plot.py at 2019-01-02 21:57:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.88 Mbit/s
95th percentile per-packet one-way delay: 81.402 ms
Loss rate: 34.23%
-- Flow 1:
Average throughput: 12.88 Mbit/s
95th percentile per-packet one-way delay: 81.402 ms
Loss rate: 34.23%
```

Run 2: Report of PCC-Expr — Data Link

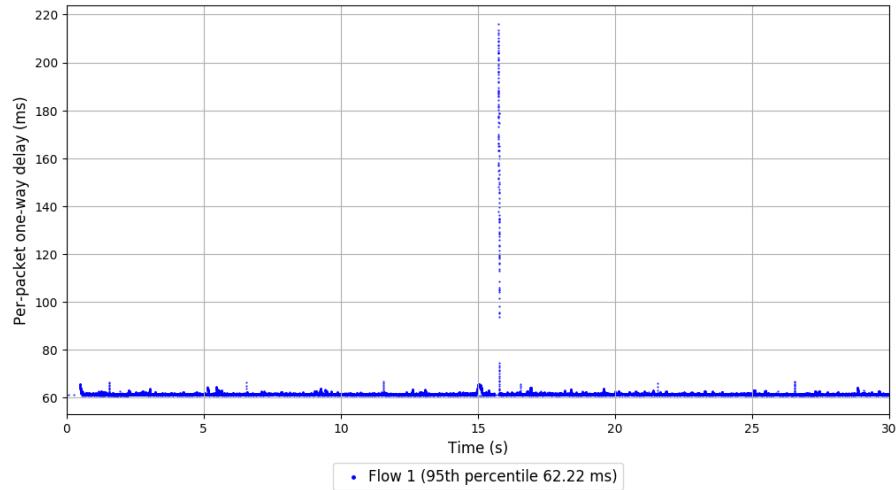
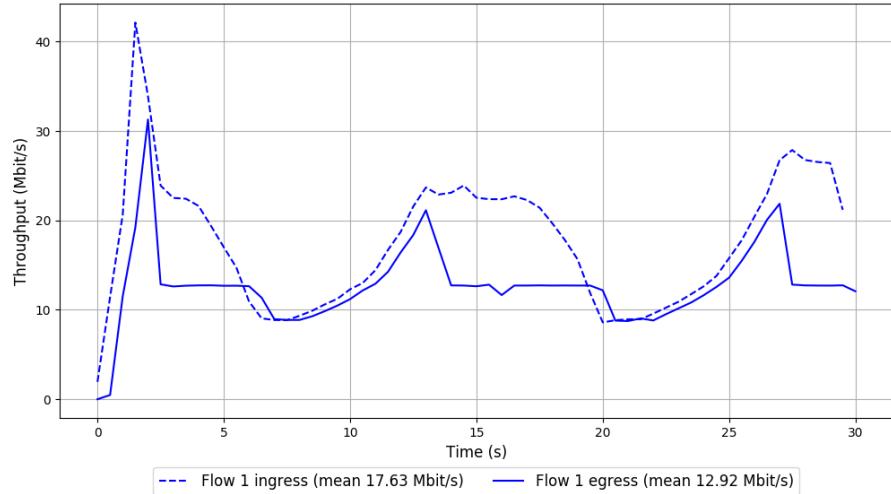


Run 3: Statistics of PCC-Expr

```
Start at: 2019-01-02 20:46:56
End at: 2019-01-02 20:47:26
Local clock offset: 2.884 ms
Remote clock offset: -34.79 ms

# Below is generated by plot.py at 2019-01-02 21:57:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.92 Mbit/s
95th percentile per-packet one-way delay: 62.218 ms
Loss rate: 26.76%
-- Flow 1:
Average throughput: 12.92 Mbit/s
95th percentile per-packet one-way delay: 62.218 ms
Loss rate: 26.76%
```

Run 3: Report of PCC-Expr — Data Link

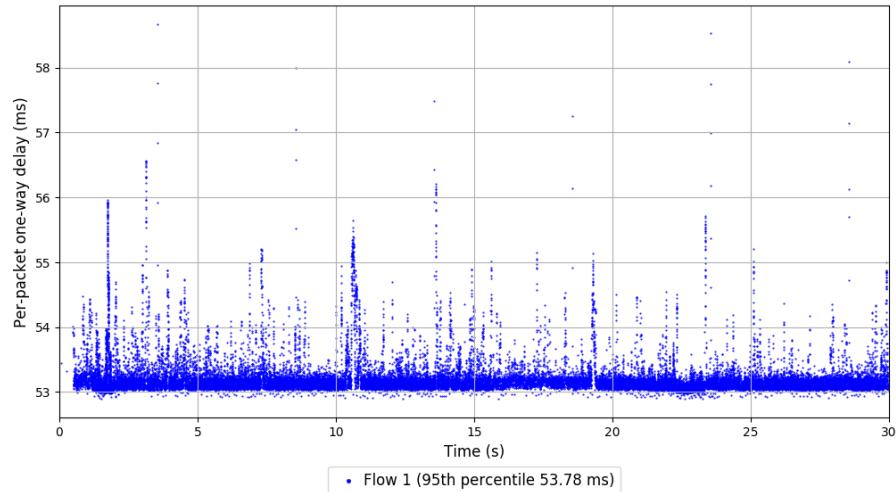
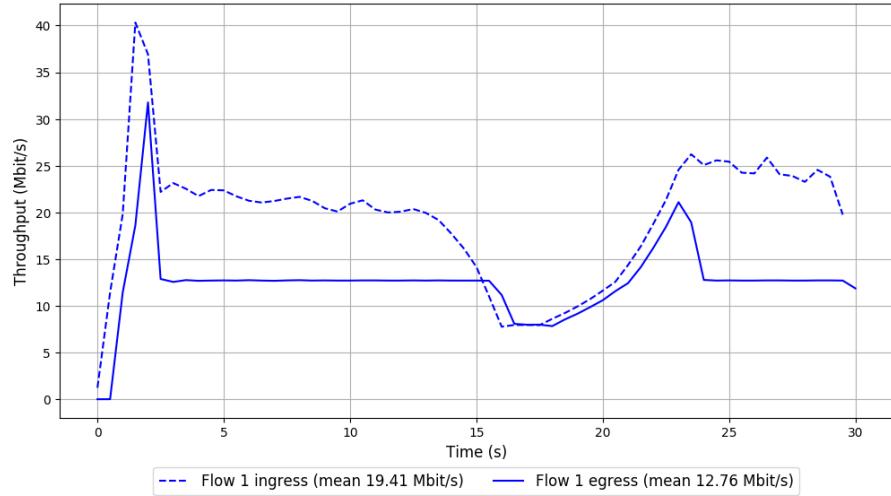


Run 4: Statistics of PCC-Expr

```
Start at: 2019-01-02 21:11:12
End at: 2019-01-02 21:11:42
Local clock offset: 2.207 ms
Remote clock offset: -43.565 ms

# Below is generated by plot.py at 2019-01-02 21:57:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.76 Mbit/s
95th percentile per-packet one-way delay: 53.777 ms
Loss rate: 34.24%
-- Flow 1:
Average throughput: 12.76 Mbit/s
95th percentile per-packet one-way delay: 53.777 ms
Loss rate: 34.24%
```

Run 4: Report of PCC-Expr — Data Link

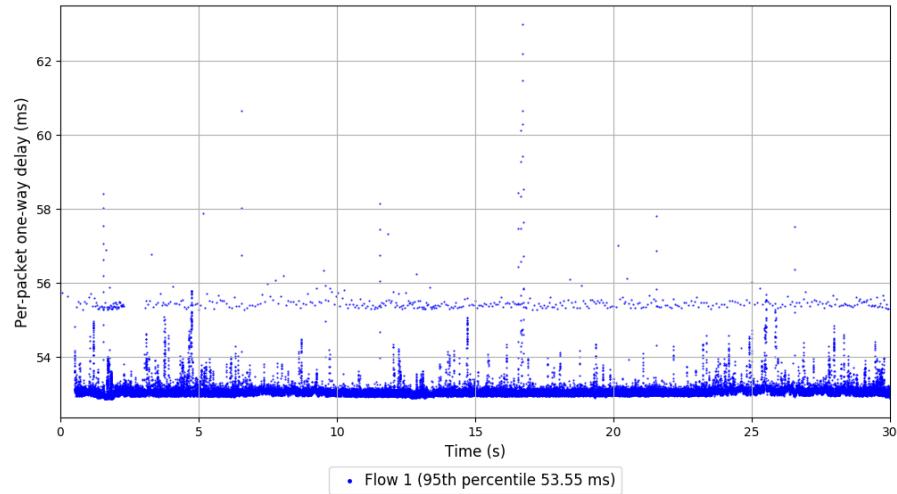
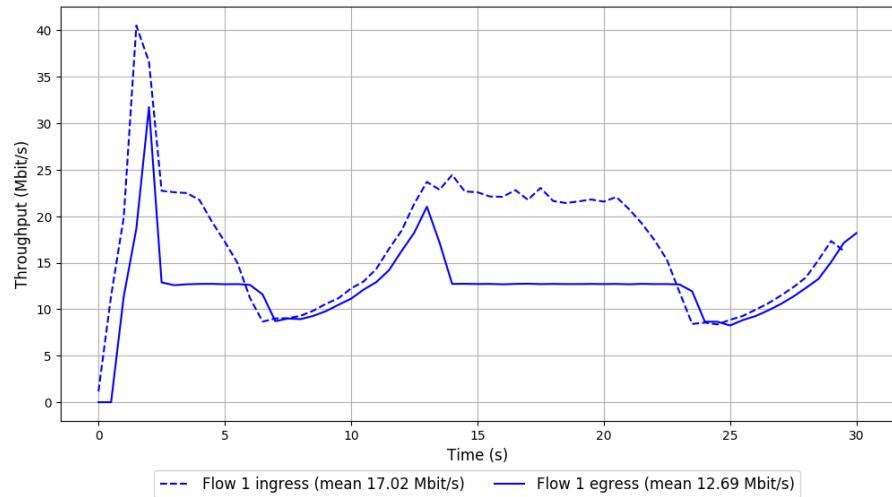


Run 5: Statistics of PCC-Expr

```
Start at: 2019-01-02 21:35:40
End at: 2019-01-02 21:36:10
Local clock offset: 2.707 ms
Remote clock offset: -44.125 ms

# Below is generated by plot.py at 2019-01-02 21:57:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.69 Mbit/s
95th percentile per-packet one-way delay: 53.552 ms
Loss rate: 25.46%
-- Flow 1:
Average throughput: 12.69 Mbit/s
95th percentile per-packet one-way delay: 53.552 ms
Loss rate: 25.46%
```

Run 5: Report of PCC-Expr — Data Link

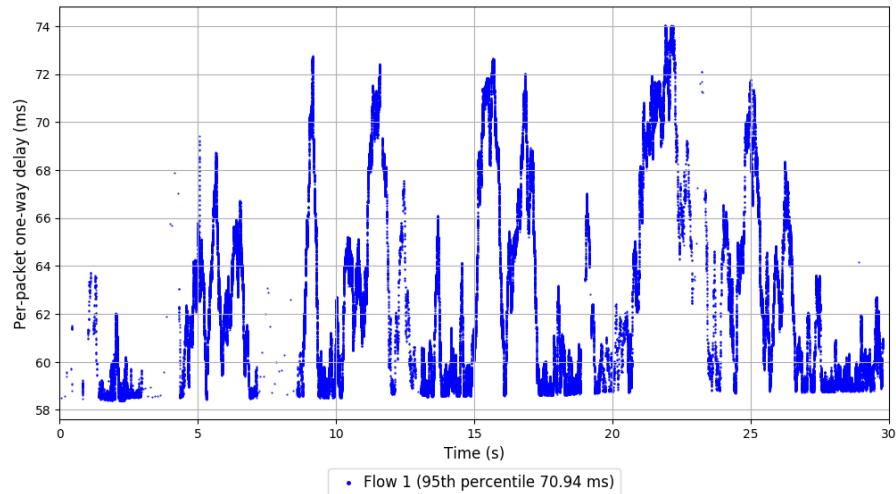
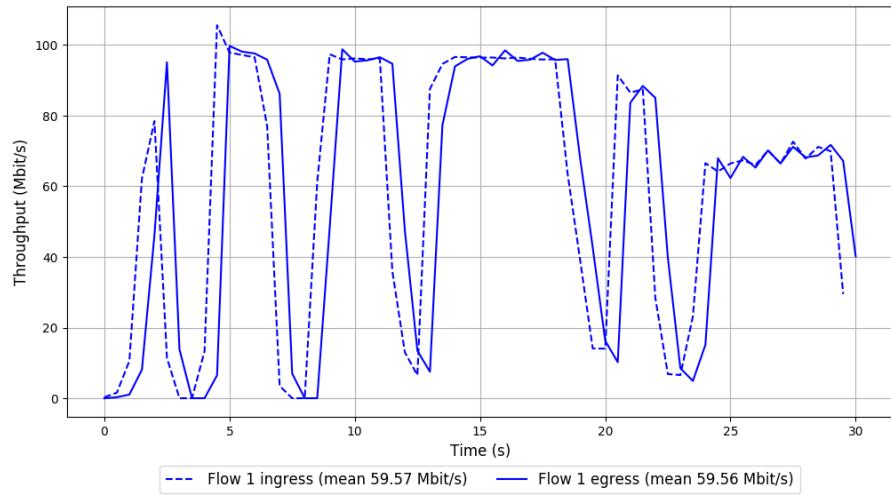


```
Run 1: Statistics of QUIC Cubic

Start at: 2019-01-02 19:25:54
End at: 2019-01-02 19:26:24
Local clock offset: -9.234 ms
Remote clock offset: -41.235 ms

# Below is generated by plot.py at 2019-01-02 21:57:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 59.56 Mbit/s
95th percentile per-packet one-way delay: 70.937 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 59.56 Mbit/s
95th percentile per-packet one-way delay: 70.937 ms
Loss rate: 0.02%
```

Run 1: Report of QUIC Cubic — Data Link

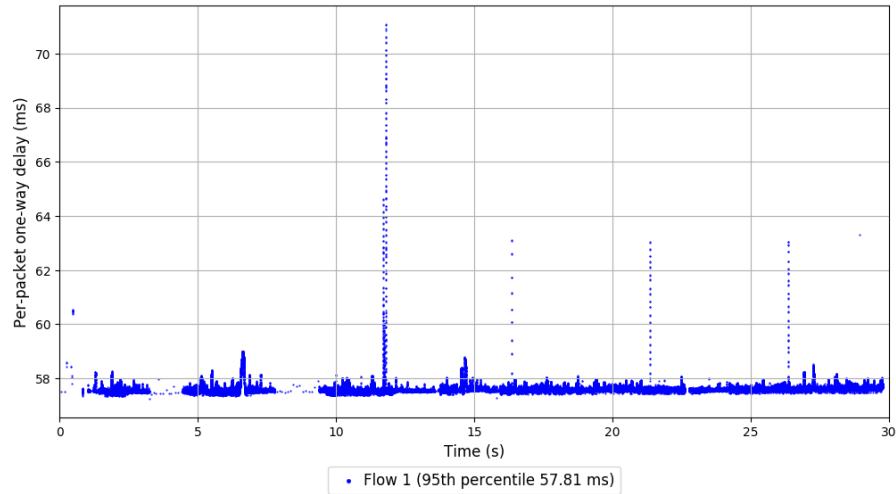
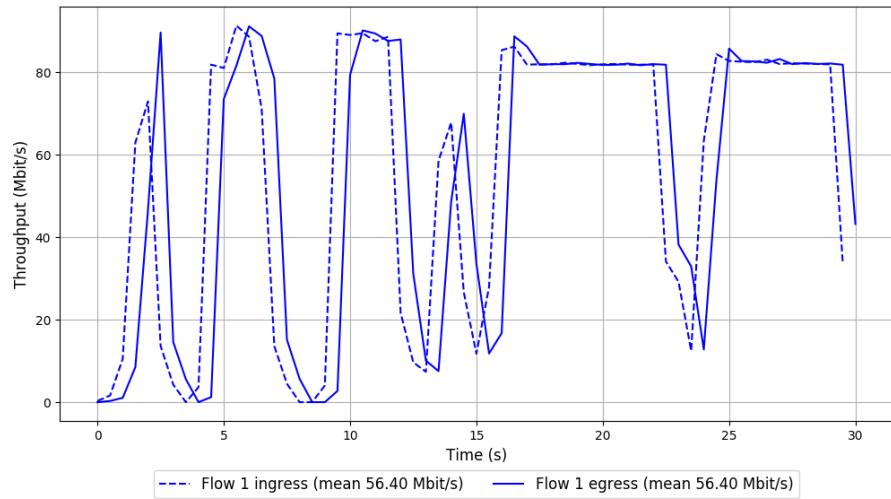


Run 2: Statistics of QUIC Cubic

```
Start at: 2019-01-02 19:55:49
End at: 2019-01-02 19:56:19
Local clock offset: 0.971 ms
Remote clock offset: -38.487 ms

# Below is generated by plot.py at 2019-01-02 21:57:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 56.40 Mbit/s
95th percentile per-packet one-way delay: 57.806 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 56.40 Mbit/s
95th percentile per-packet one-way delay: 57.806 ms
Loss rate: 0.00%
```

Run 2: Report of QUIC Cubic — Data Link

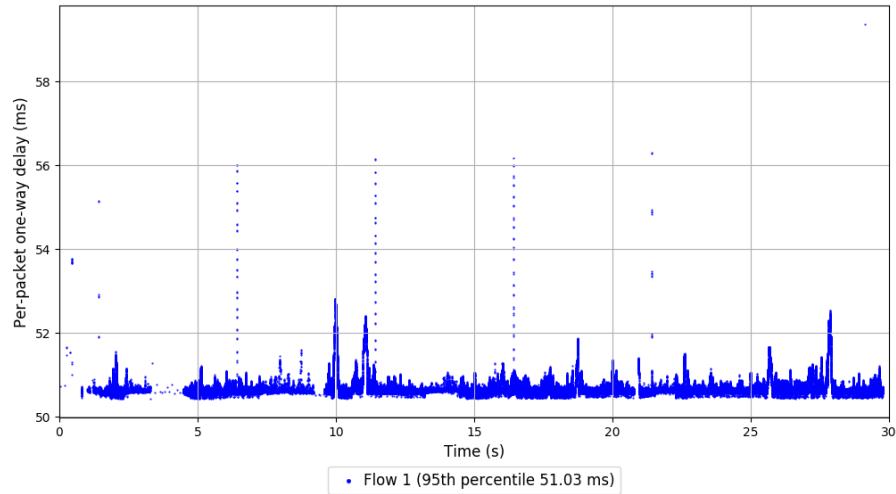
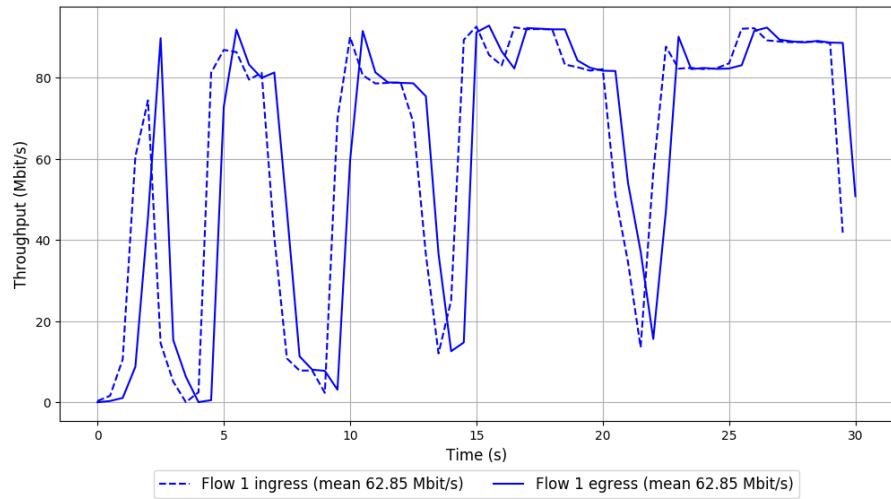


Run 3: Statistics of QUIC Cubic

```
Start at: 2019-01-02 20:26:13
End at: 2019-01-02 20:26:43
Local clock offset: 1.345 ms
Remote clock offset: -46.706 ms

# Below is generated by plot.py at 2019-01-02 21:57:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 62.85 Mbit/s
95th percentile per-packet one-way delay: 51.030 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 62.85 Mbit/s
95th percentile per-packet one-way delay: 51.030 ms
Loss rate: 0.00%
```

Run 3: Report of QUIC Cubic — Data Link

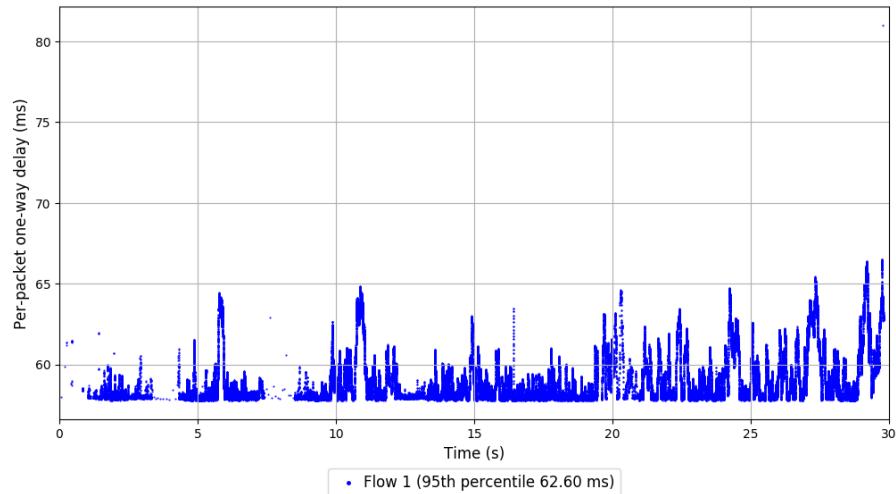
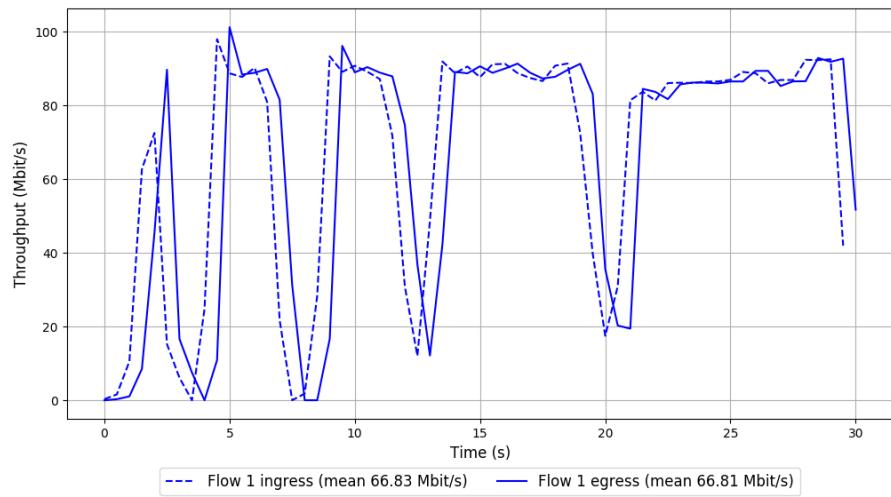


Run 4: Statistics of QUIC Cubic

```
Start at: 2019-01-02 20:50:34
End at: 2019-01-02 20:51:04
Local clock offset: 0.749 ms
Remote clock offset: -40.379 ms

# Below is generated by plot.py at 2019-01-02 21:57:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 66.81 Mbit/s
95th percentile per-packet one-way delay: 62.601 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 66.81 Mbit/s
95th percentile per-packet one-way delay: 62.601 ms
Loss rate: 0.03%
```

Run 4: Report of QUIC Cubic — Data Link

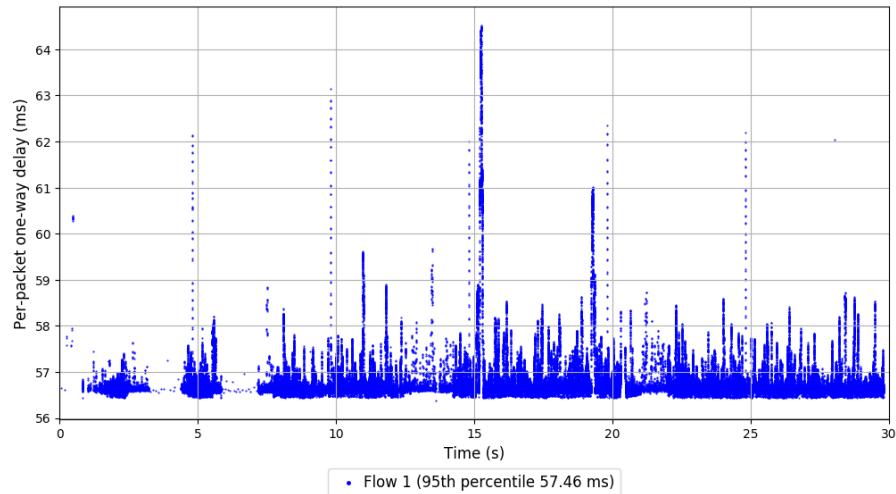
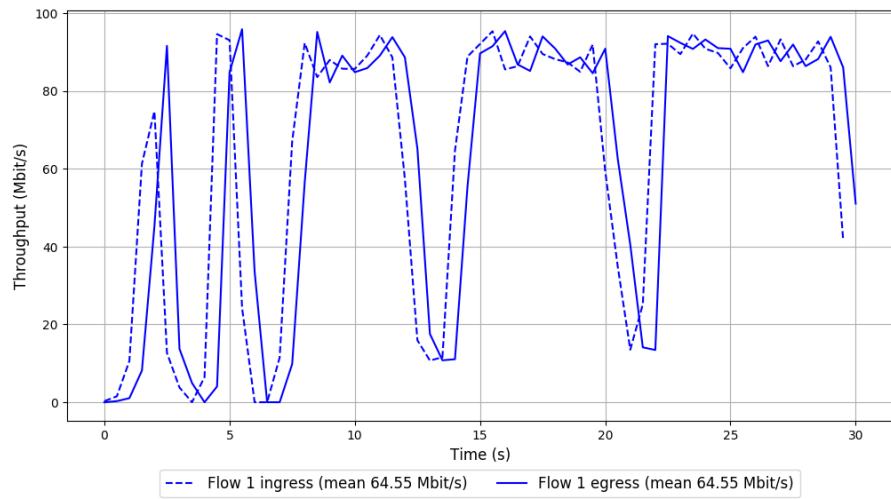


Run 5: Statistics of QUIC Cubic

```
Start at: 2019-01-02 21:14:51
End at: 2019-01-02 21:15:21
Local clock offset: -0.041 ms
Remote clock offset: -42.412 ms

# Below is generated by plot.py at 2019-01-02 21:57:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 64.55 Mbit/s
95th percentile per-packet one-way delay: 57.463 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 64.55 Mbit/s
95th percentile per-packet one-way delay: 57.463 ms
Loss rate: 0.00%
```

Run 5: Report of QUIC Cubic — Data Link

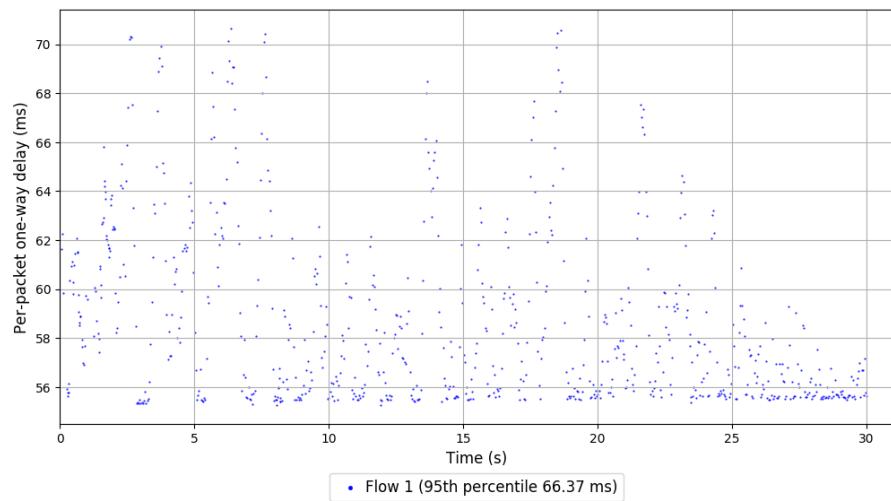
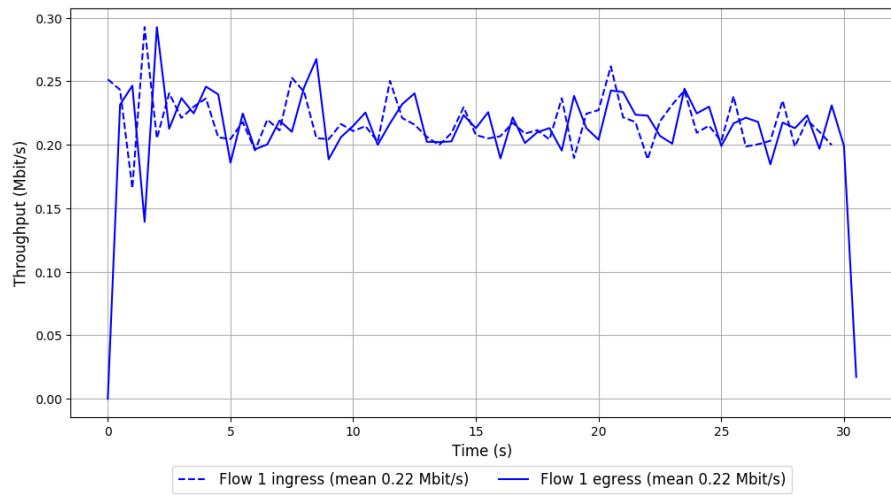


Run 1: Statistics of SCReAM

```
Start at: 2019-01-02 19:29:30
End at: 2019-01-02 19:30:00
Local clock offset: -4.444 ms
Remote clock offset: -42.231 ms

# Below is generated by plot.py at 2019-01-02 21:57:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 66.372 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 66.372 ms
Loss rate: 0.00%
```

Run 1: Report of SCReAM — Data Link

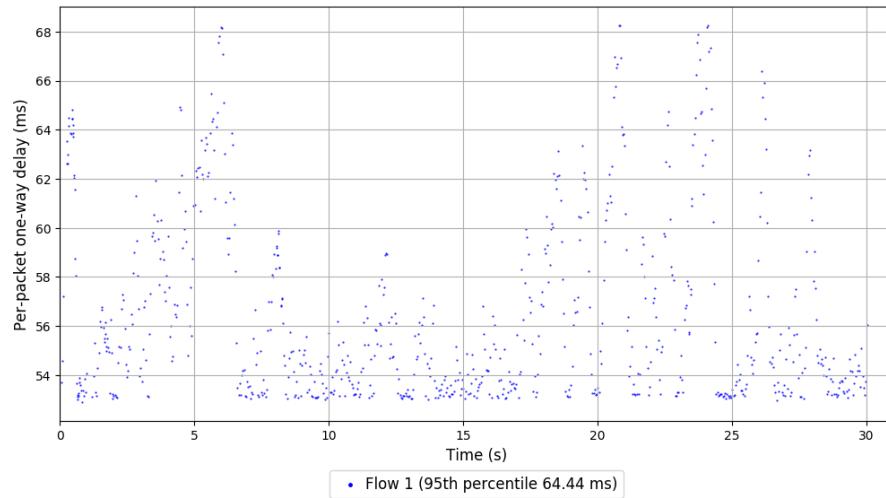
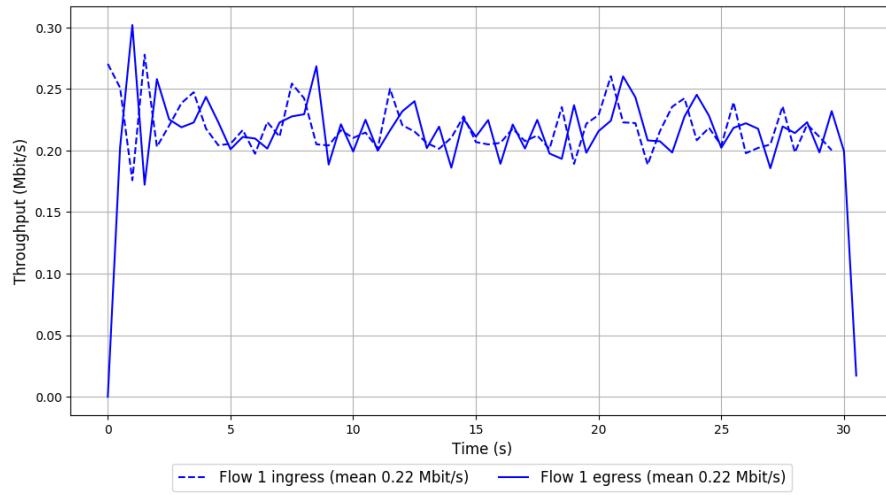


Run 2: Statistics of SCReAM

```
Start at: 2019-01-02 19:59:27
End at: 2019-01-02 19:59:57
Local clock offset: 2.369 ms
Remote clock offset: -42.554 ms

# Below is generated by plot.py at 2019-01-02 21:57:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 64.438 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 64.438 ms
Loss rate: 0.00%
```

Run 2: Report of SCReAM — Data Link

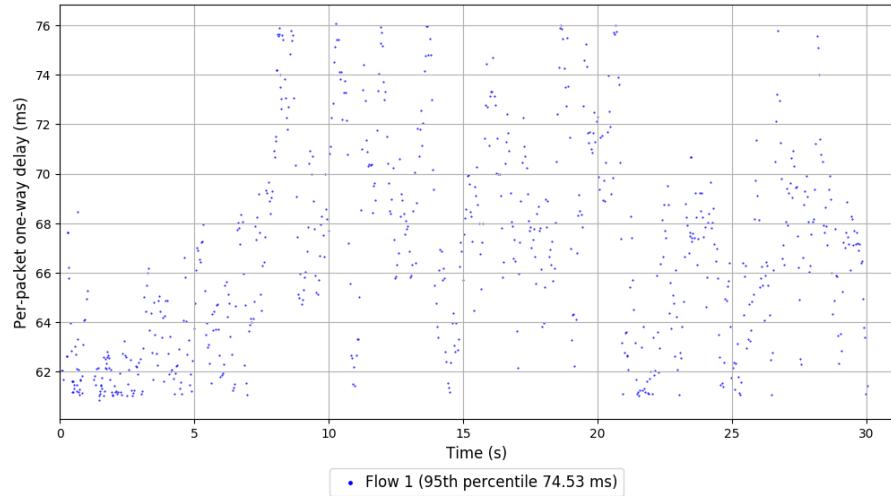
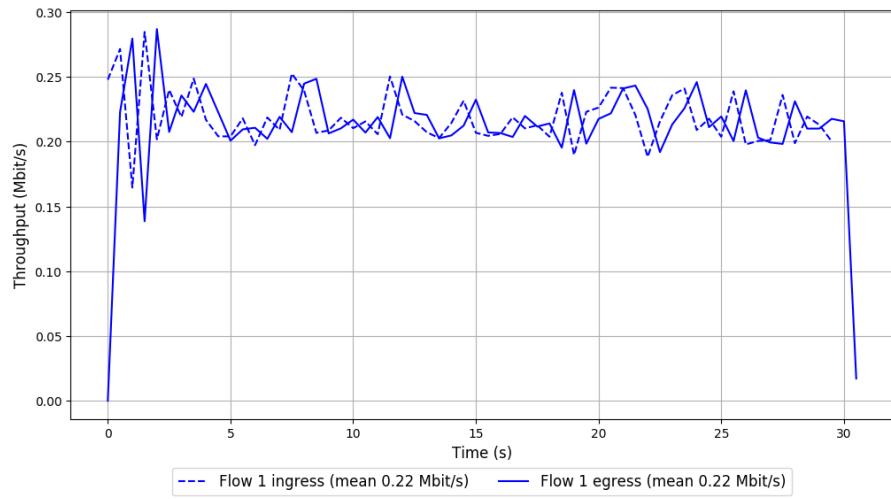


Run 3: Statistics of SCReAM

```
Start at: 2019-01-02 20:29:59
End at: 2019-01-02 20:30:29
Local clock offset: 0.986 ms
Remote clock offset: -37.04 ms

# Below is generated by plot.py at 2019-01-02 21:57:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 74.530 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 74.530 ms
Loss rate: 0.00%
```

Run 3: Report of SCReAM — Data Link

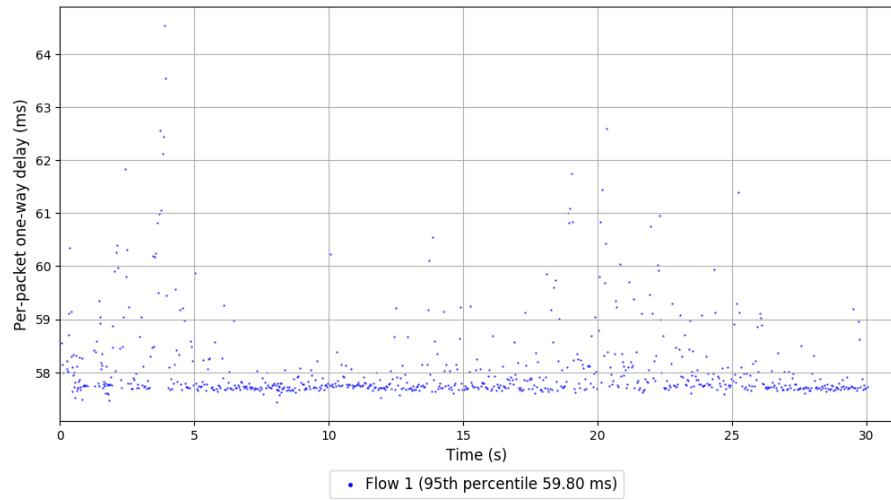
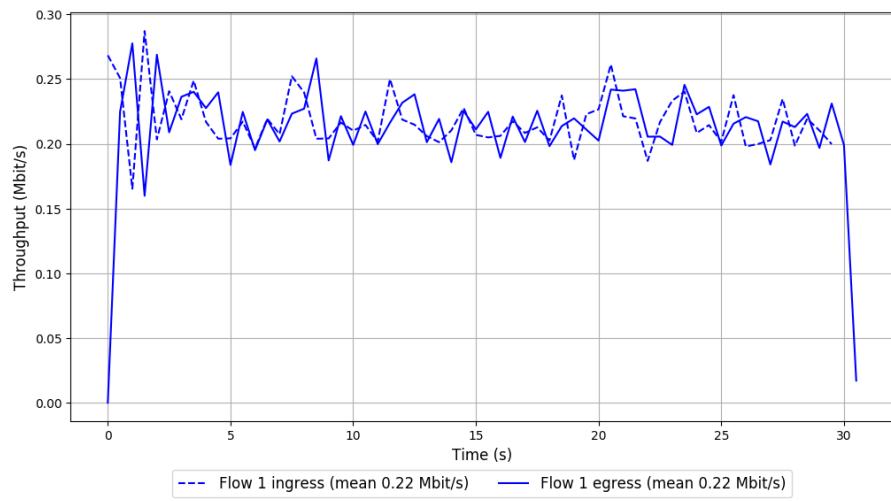


Run 4: Statistics of SCReAM

```
Start at: 2019-01-02 20:54:15
End at: 2019-01-02 20:54:45
Local clock offset: -0.199 ms
Remote clock offset: -41.508 ms

# Below is generated by plot.py at 2019-01-02 21:57:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 59.799 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 59.799 ms
Loss rate: 0.00%
```

Run 4: Report of SCReAM — Data Link

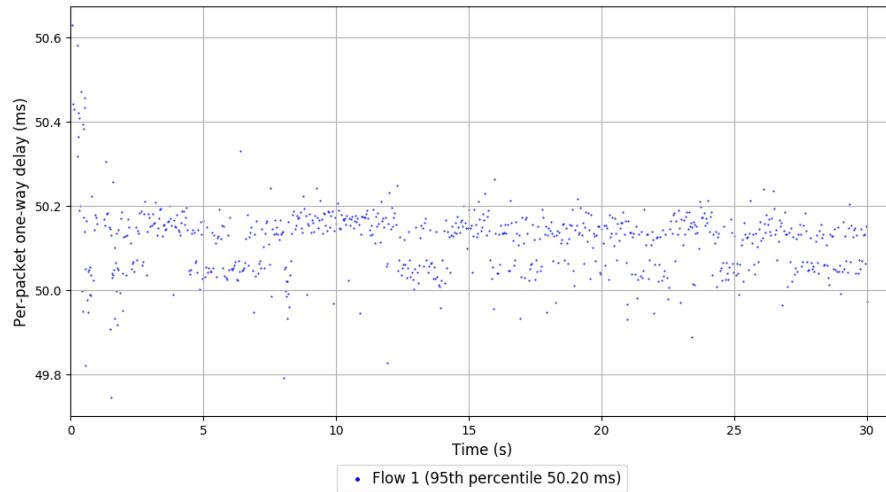
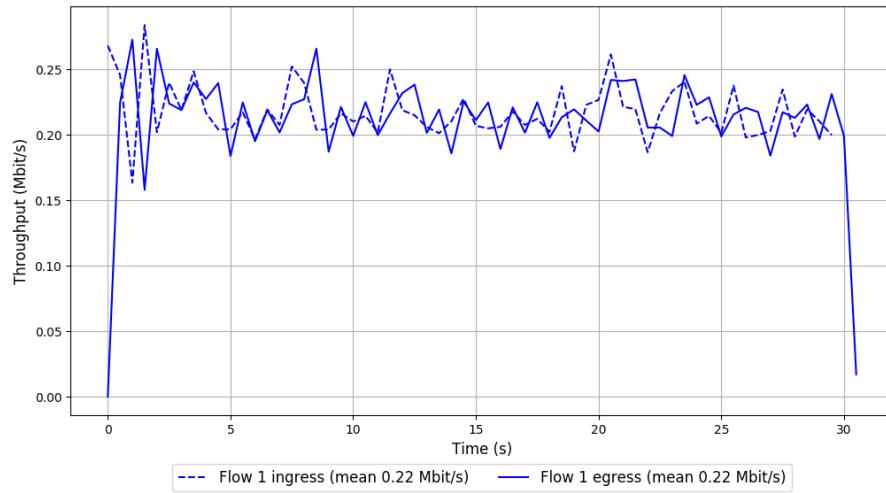


Run 5: Statistics of SCReAM

```
Start at: 2019-01-02 21:18:37
End at: 2019-01-02 21:19:07
Local clock offset: 2.228 ms
Remote clock offset: -46.541 ms

# Below is generated by plot.py at 2019-01-02 21:57:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.201 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.201 ms
Loss rate: 0.00%
```

Run 5: Report of SCReAM — Data Link

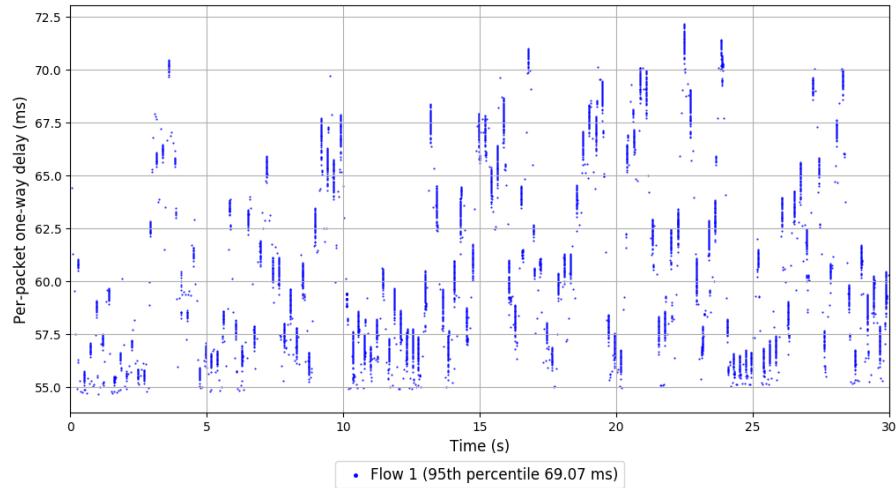
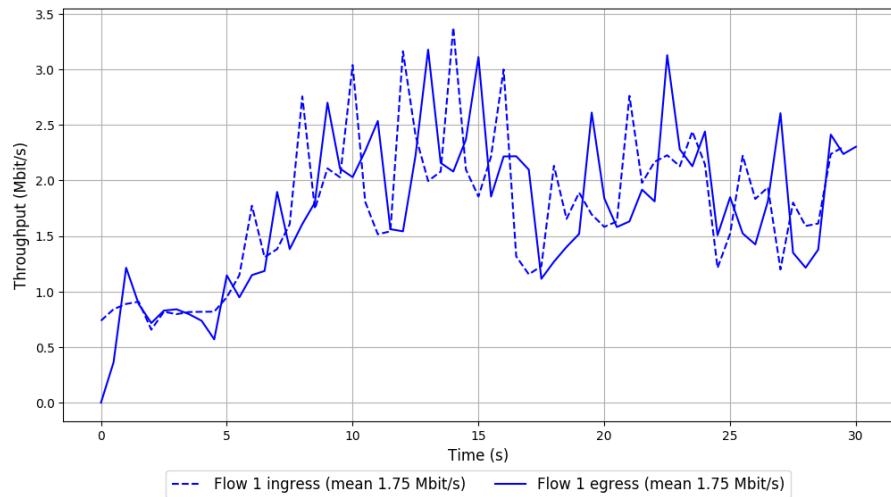


Run 1: Statistics of Sprout

```
Start at: 2019-01-02 19:24:44
End at: 2019-01-02 19:25:14
Local clock offset: -7.384 ms
Remote clock offset: -44.3 ms

# Below is generated by plot.py at 2019-01-02 21:57:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.75 Mbit/s
95th percentile per-packet one-way delay: 69.068 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.75 Mbit/s
95th percentile per-packet one-way delay: 69.068 ms
Loss rate: 0.00%
```

Run 1: Report of Sprout — Data Link

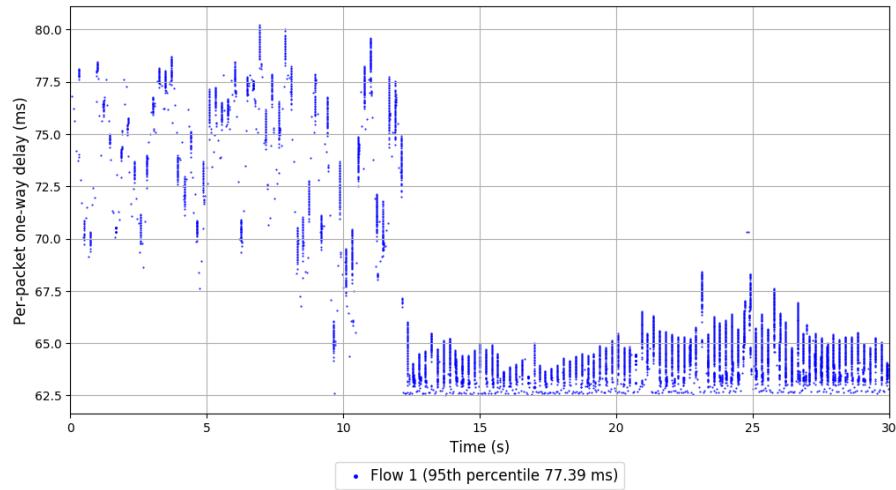
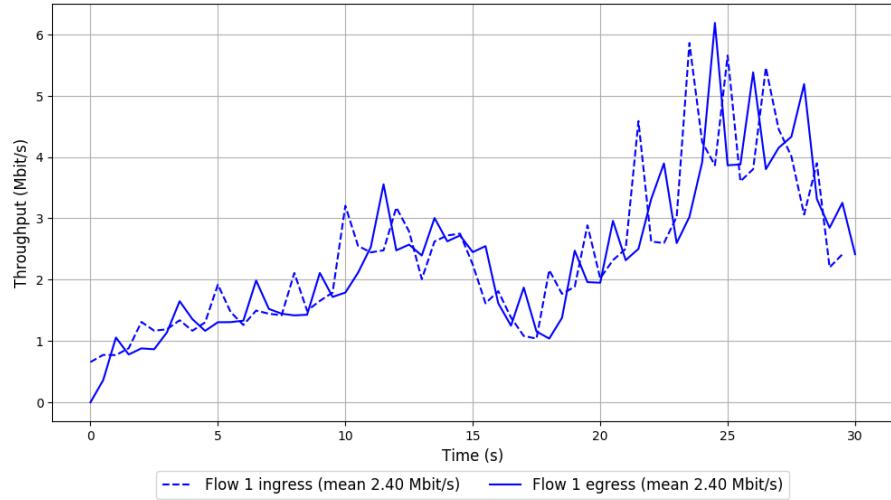


Run 2: Statistics of Sprout

```
Start at: 2019-01-02 19:54:39
End at: 2019-01-02 19:55:09
Local clock offset: -1.661 ms
Remote clock offset: -35.933 ms

# Below is generated by plot.py at 2019-01-02 21:57:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.40 Mbit/s
95th percentile per-packet one-way delay: 77.391 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.40 Mbit/s
95th percentile per-packet one-way delay: 77.391 ms
Loss rate: 0.00%
```

Run 2: Report of Sprout — Data Link

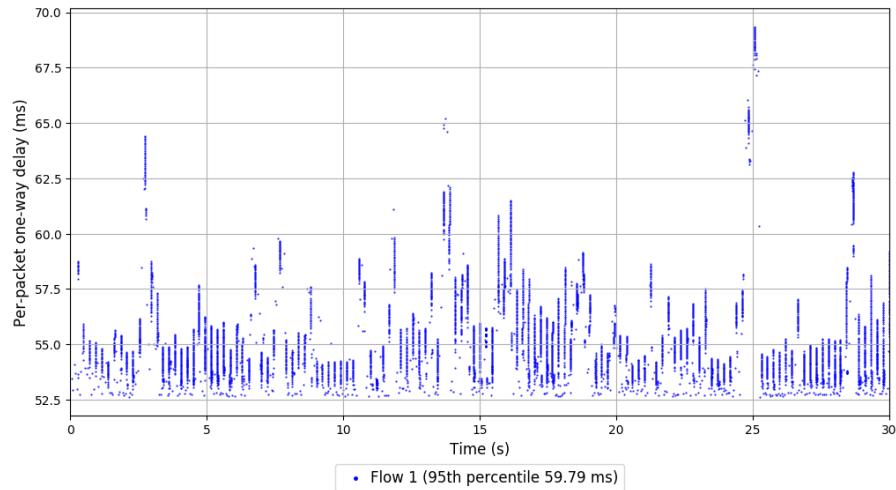
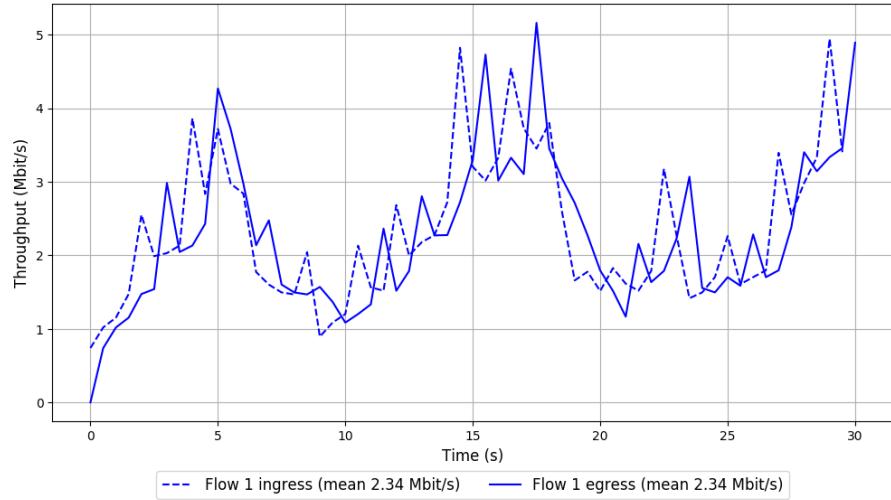


Run 3: Statistics of Sprout

```
Start at: 2019-01-02 20:25:03
End at: 2019-01-02 20:25:33
Local clock offset: 1.738 ms
Remote clock offset: -46.732 ms

# Below is generated by plot.py at 2019-01-02 21:57:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.34 Mbit/s
95th percentile per-packet one-way delay: 59.789 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.34 Mbit/s
95th percentile per-packet one-way delay: 59.789 ms
Loss rate: 0.00%
```

Run 3: Report of Sprout — Data Link

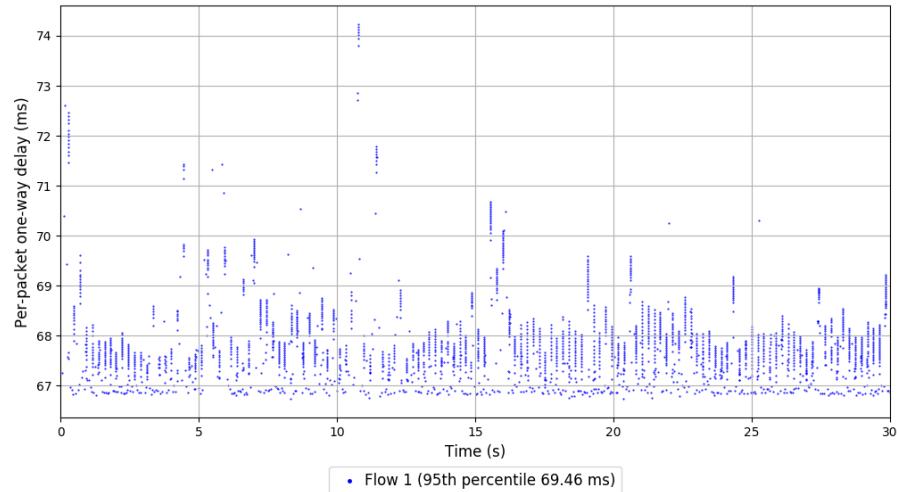
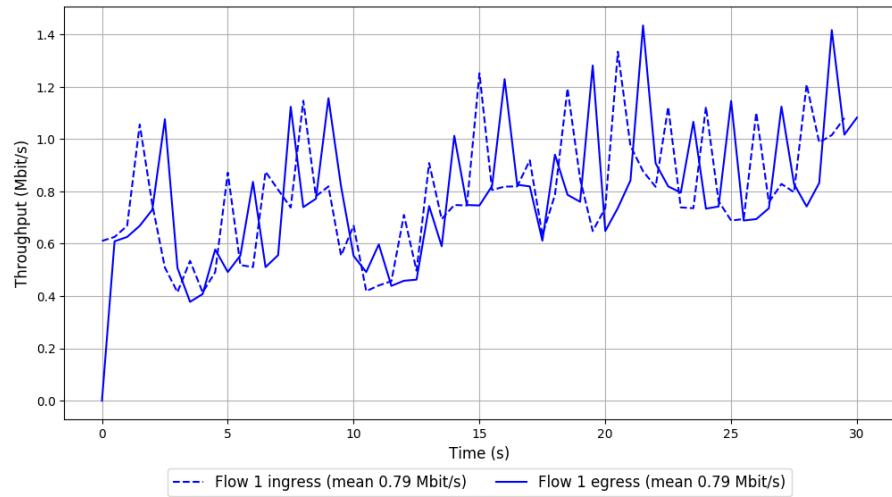


Run 4: Statistics of Sprout

```
Start at: 2019-01-02 20:49:23
End at: 2019-01-02 20:49:53
Local clock offset: 0.814 ms
Remote clock offset: -31.306 ms

# Below is generated by plot.py at 2019-01-02 21:57:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.79 Mbit/s
95th percentile per-packet one-way delay: 69.456 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.79 Mbit/s
95th percentile per-packet one-way delay: 69.456 ms
Loss rate: 0.00%
```

Run 4: Report of Sprout — Data Link

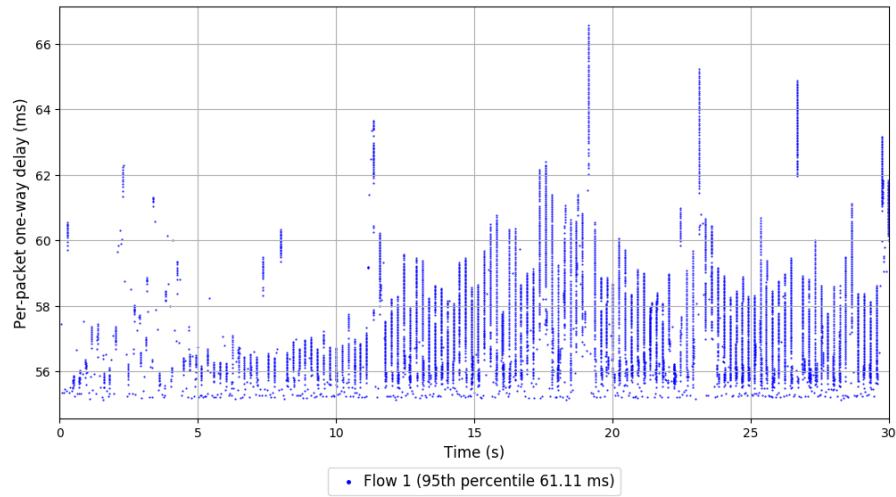
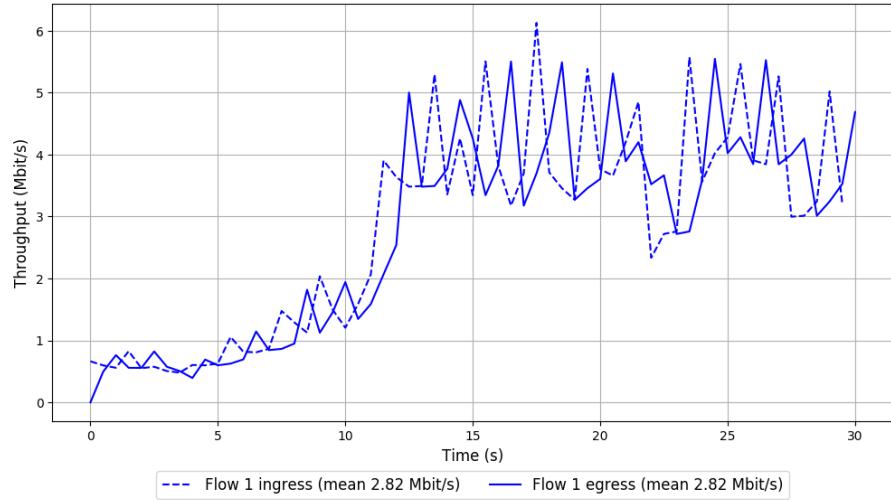


Run 5: Statistics of Sprout

```
Start at: 2019-01-02 21:13:41
End at: 2019-01-02 21:14:11
Local clock offset: 2.947 ms
Remote clock offset: -42.845 ms

# Below is generated by plot.py at 2019-01-02 21:57:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.82 Mbit/s
95th percentile per-packet one-way delay: 61.110 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.82 Mbit/s
95th percentile per-packet one-way delay: 61.110 ms
Loss rate: 0.00%
```

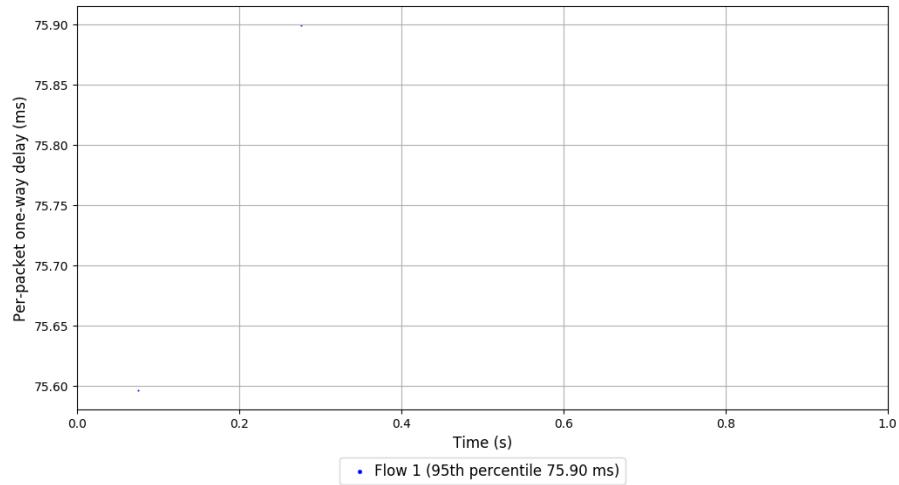
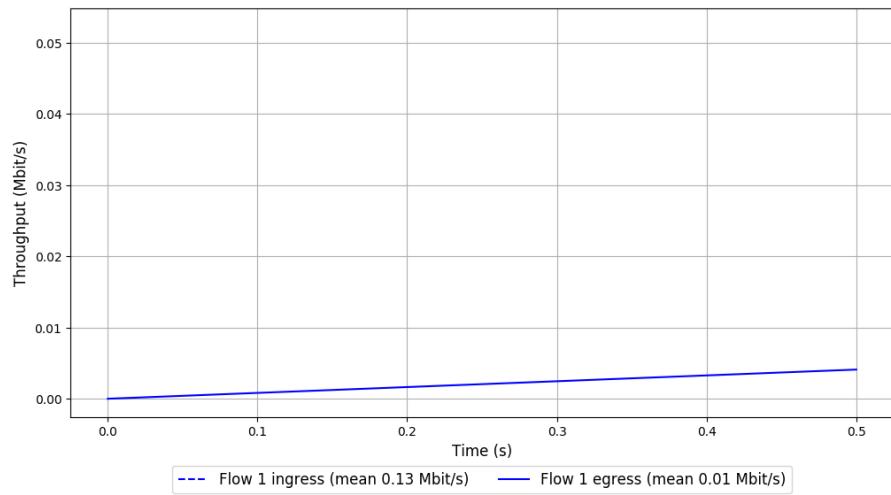
Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2019-01-02 19:28:21
End at: 2019-01-02 19:28:51
Local clock offset: -6.301 ms
Remote clock offset: -30.89 ms

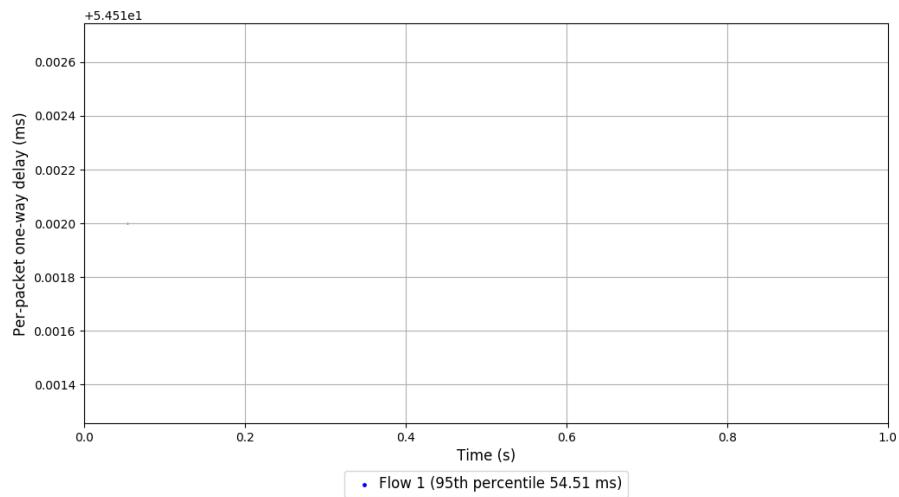
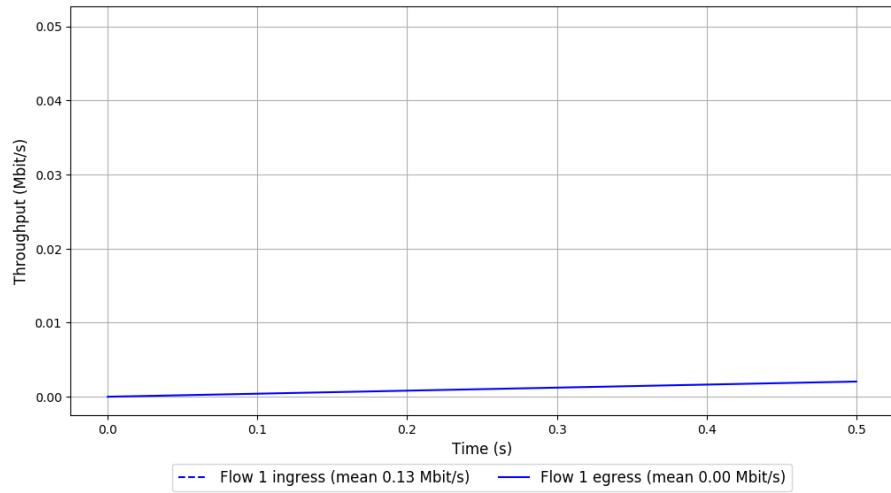
Run 1: Report of TaoVA-100x — Data Link



Run 2: Statistics of TaoVA-100x

Start at: 2019-01-02 19:58:18
End at: 2019-01-02 19:58:48
Local clock offset: 0.535 ms
Remote clock offset: -43.573 ms

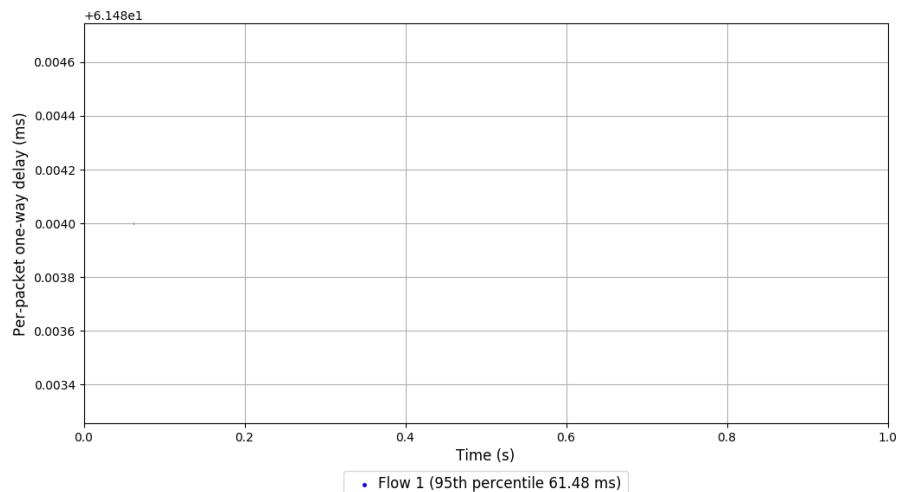
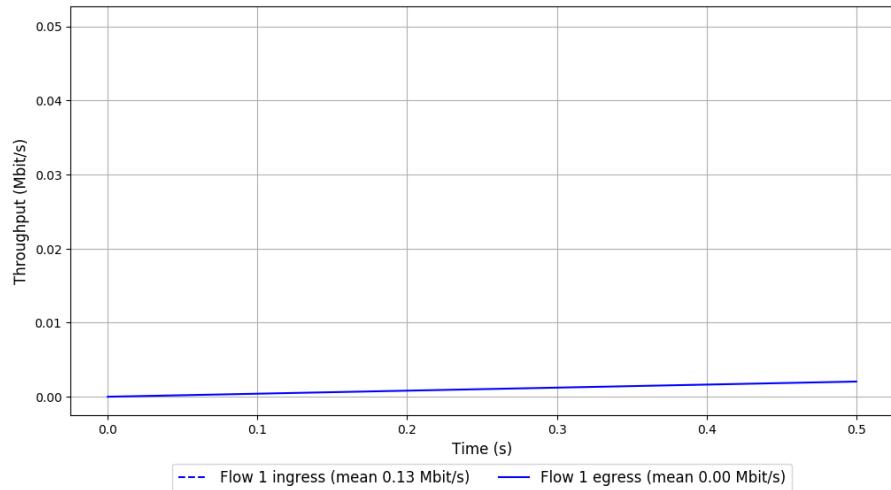
Run 2: Report of TaoVA-100x — Data Link



Run 3: Statistics of TaoVA-100x

Start at: 2019-01-02 20:28:50
End at: 2019-01-02 20:29:20
Local clock offset: 1.078 ms
Remote clock offset: -41.089 ms

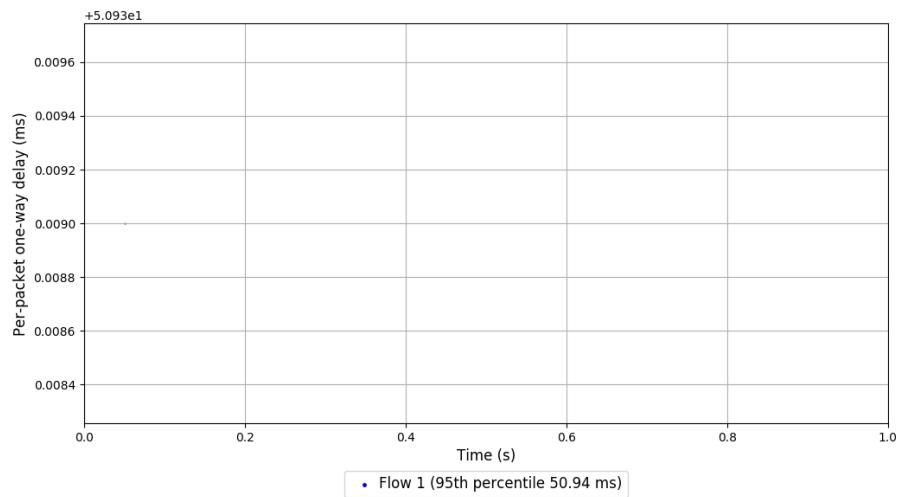
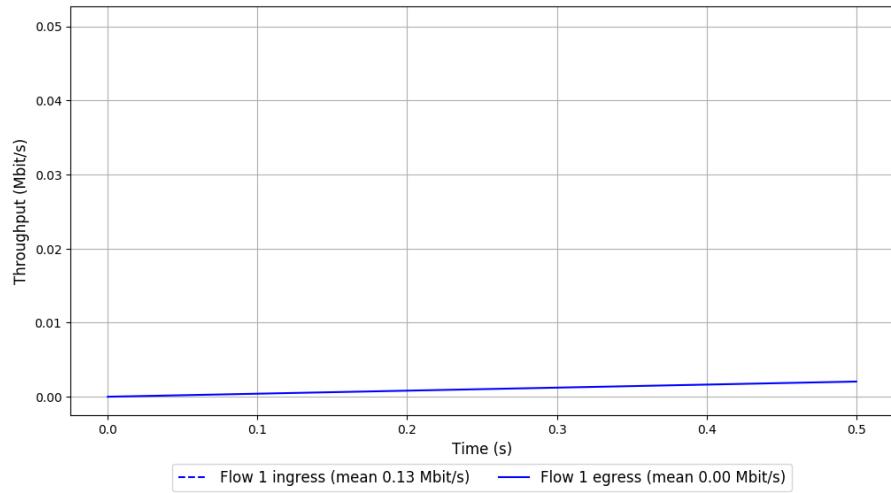
Run 3: Report of TaoVA-100x — Data Link



Run 4: Statistics of TaoVA-100x

Start at: 2019-01-02 20:53:05
End at: 2019-01-02 20:53:35
Local clock offset: 2.609 ms
Remote clock offset: -45.839 ms

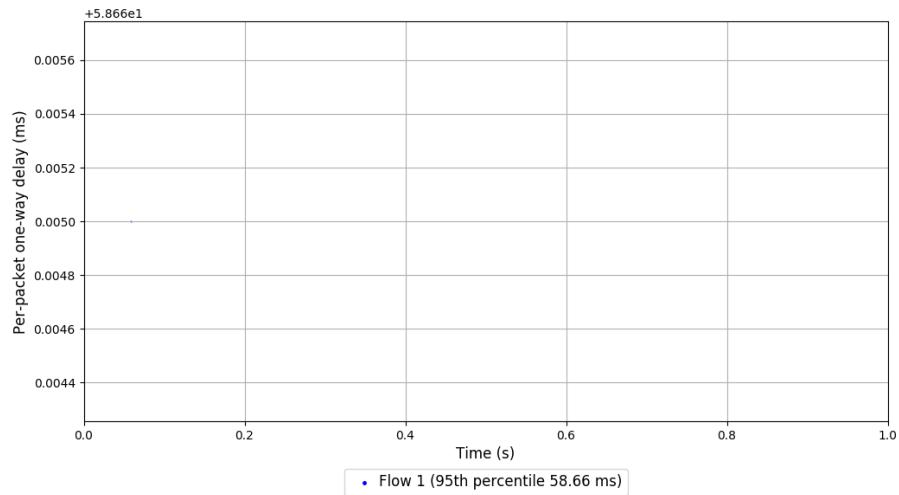
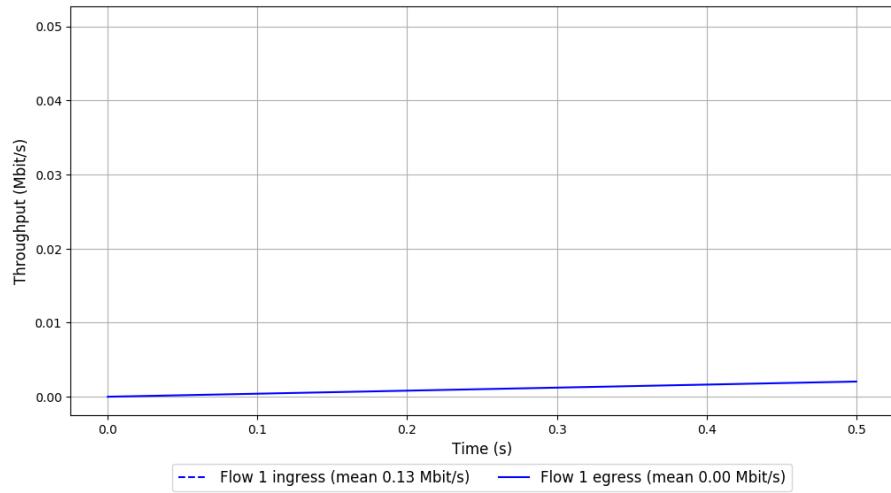
Run 4: Report of TaoVA-100x — Data Link



Run 5: Statistics of TaoVA-100x

Start at: 2019-01-02 21:17:28
End at: 2019-01-02 21:17:58
Local clock offset: 0.614 ms
Remote clock offset: -39.944 ms

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

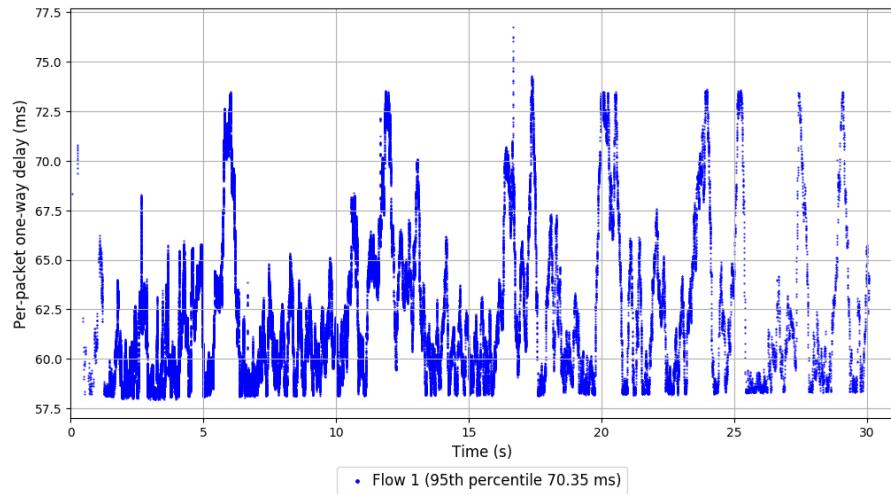
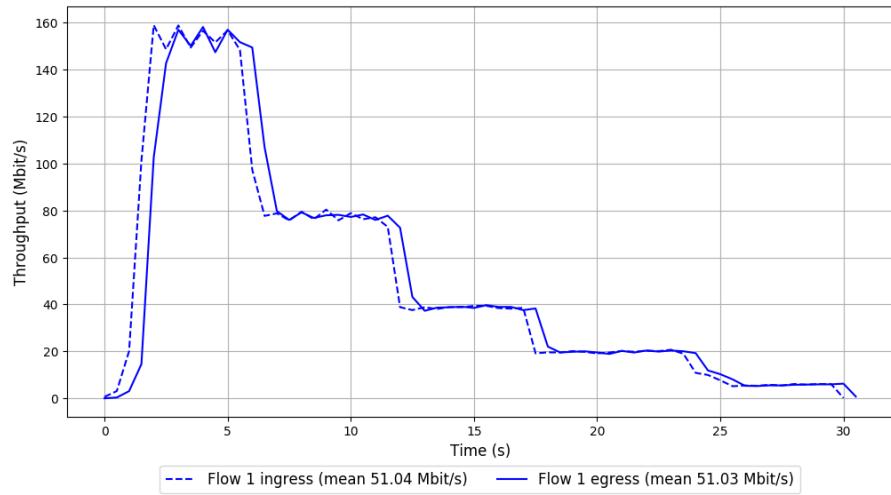


Run 1: Statistics of TCP Vegas

```
Start at: 2019-01-02 19:35:01
End at: 2019-01-02 19:35:31
Local clock offset: -4.371 ms
Remote clock offset: -41.637 ms

# Below is generated by plot.py at 2019-01-02 21:57:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 51.03 Mbit/s
95th percentile per-packet one-way delay: 70.350 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 51.03 Mbit/s
95th percentile per-packet one-way delay: 70.350 ms
Loss rate: 0.03%
```

Run 1: Report of TCP Vegas — Data Link

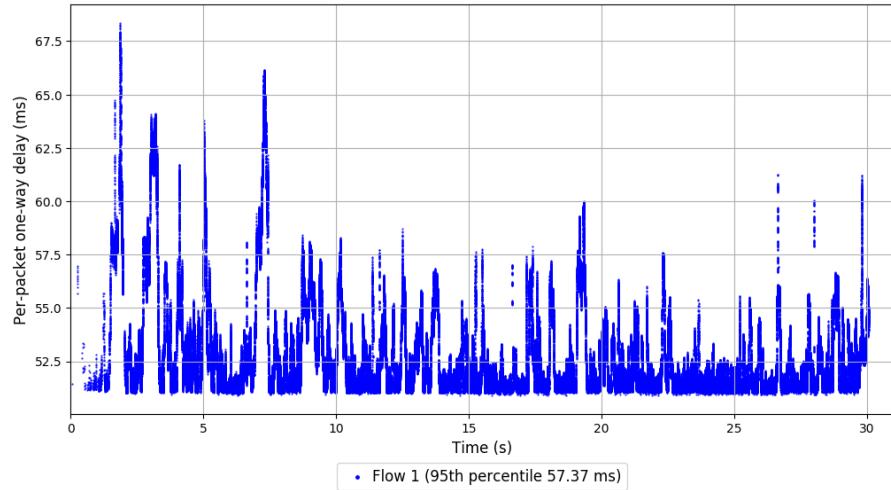
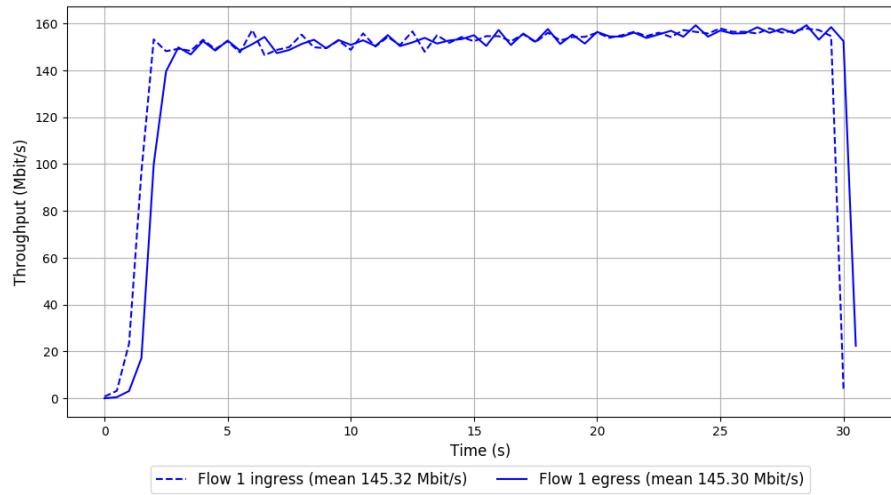


Run 2: Statistics of TCP Vegas

```
Start at: 2019-01-02 20:04:59
End at: 2019-01-02 20:05:29
Local clock offset: 3.271 ms
Remote clock offset: -43.947 ms

# Below is generated by plot.py at 2019-01-02 21:57:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 145.30 Mbit/s
95th percentile per-packet one-way delay: 57.371 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 145.30 Mbit/s
95th percentile per-packet one-way delay: 57.371 ms
Loss rate: 0.01%
```

Run 2: Report of TCP Vegas — Data Link

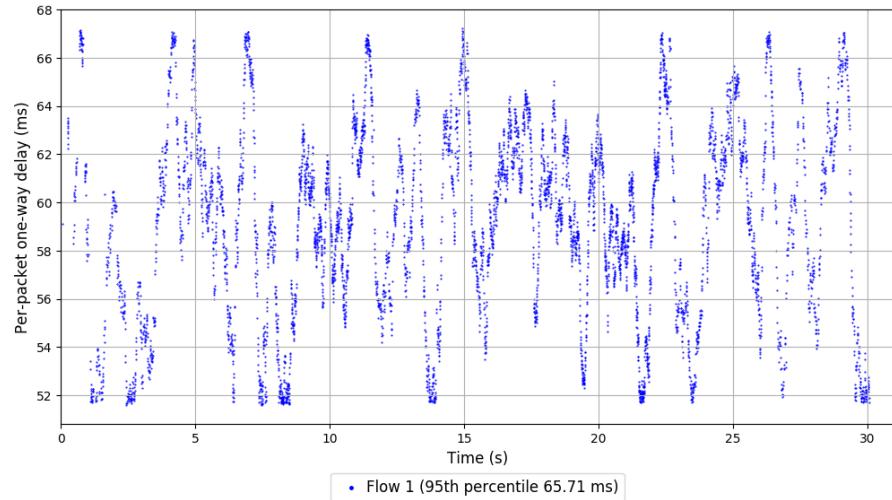
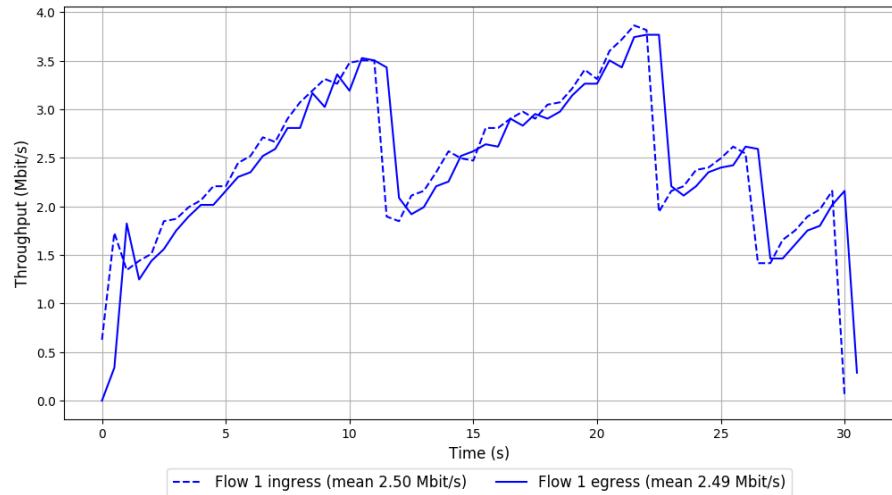


Run 3: Statistics of TCP Vegas

```
Start at: 2019-01-02 20:35:29
End at: 2019-01-02 20:35:59
Local clock offset: 2.325 ms
Remote clock offset: -47.485 ms

# Below is generated by plot.py at 2019-01-02 21:57:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.49 Mbit/s
95th percentile per-packet one-way delay: 65.712 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 2.49 Mbit/s
95th percentile per-packet one-way delay: 65.712 ms
Loss rate: 0.18%
```

Run 3: Report of TCP Vegas — Data Link

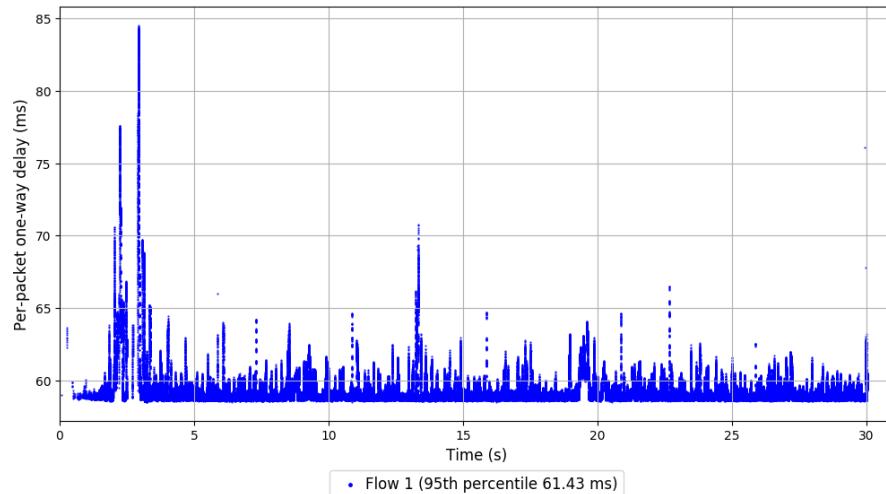
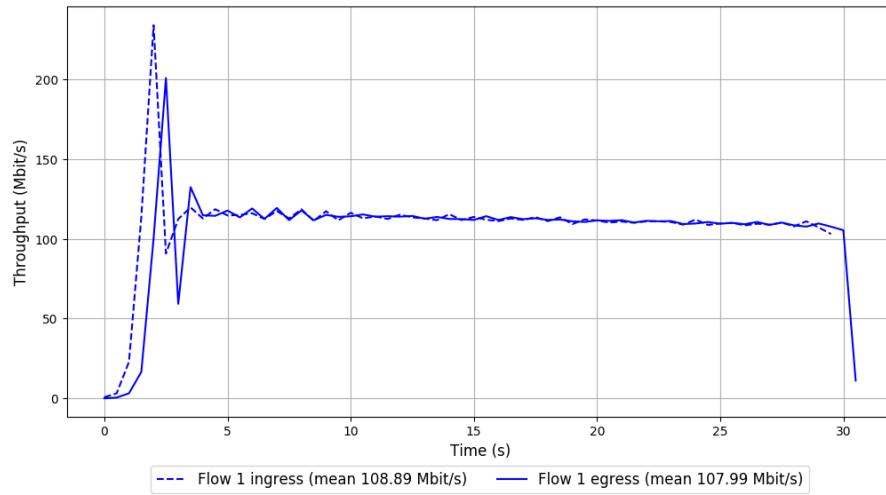


Run 4: Statistics of TCP Vegas

```
Start at: 2019-01-02 20:59:45
End at: 2019-01-02 21:00:15
Local clock offset: 1.199 ms
Remote clock offset: -41.41 ms

# Below is generated by plot.py at 2019-01-02 21:57:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 107.99 Mbit/s
95th percentile per-packet one-way delay: 61.428 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 107.99 Mbit/s
95th percentile per-packet one-way delay: 61.428 ms
Loss rate: 0.83%
```

Run 4: Report of TCP Vegas — Data Link

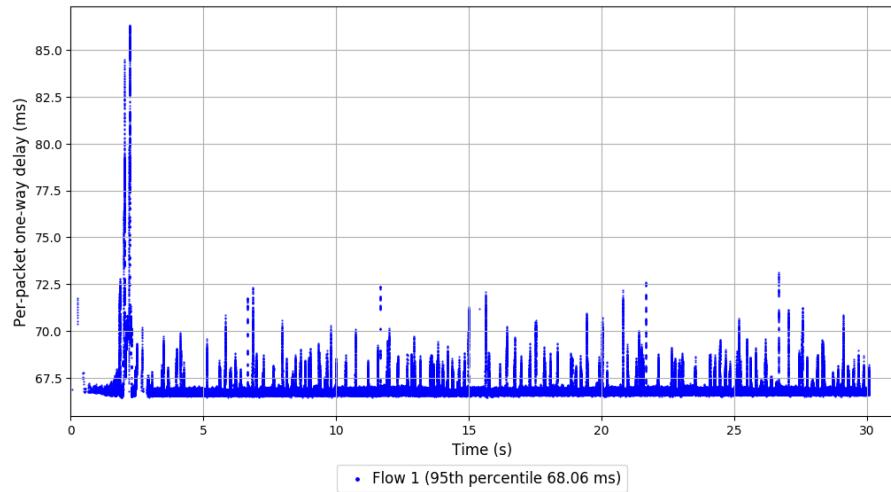
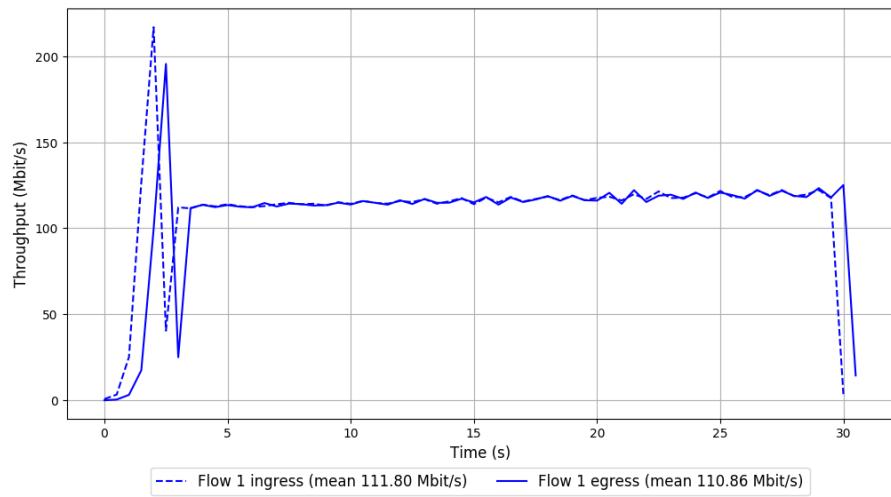


Run 5: Statistics of TCP Vegas

```
Start at: 2019-01-02 21:24:08
End at: 2019-01-02 21:24:38
Local clock offset: 1.458 ms
Remote clock offset: -30.799 ms

# Below is generated by plot.py at 2019-01-02 21:57:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 110.86 Mbit/s
95th percentile per-packet one-way delay: 68.057 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 110.86 Mbit/s
95th percentile per-packet one-way delay: 68.057 ms
Loss rate: 0.84%
```

Run 5: Report of TCP Vegas — Data Link

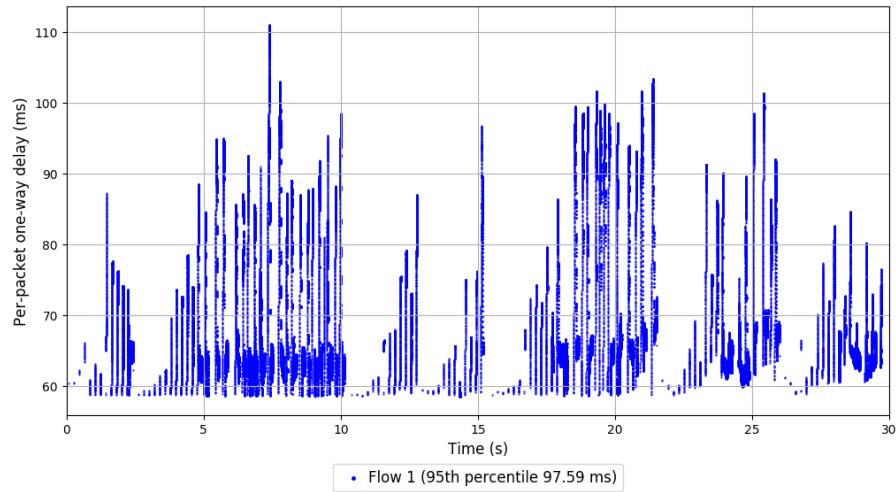
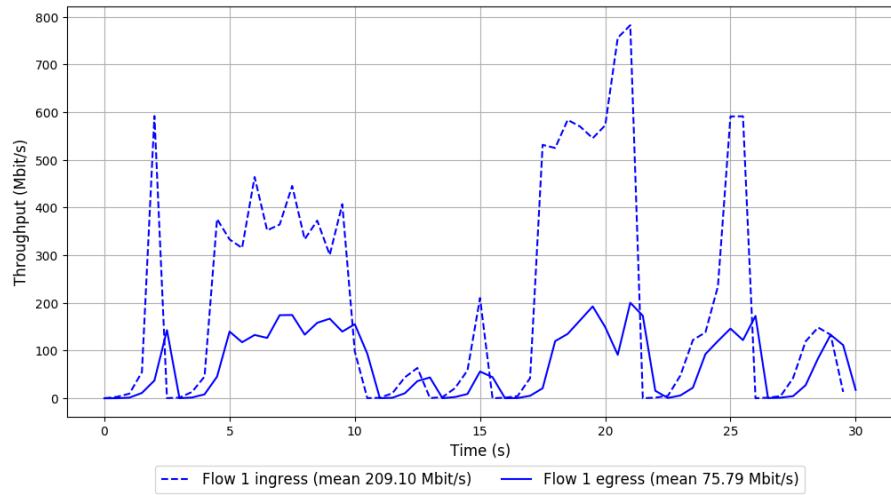


Run 1: Statistics of Verus

```
Start at: 2019-01-02 19:48:14
End at: 2019-01-02 19:48:44
Local clock offset: 0.081 ms
Remote clock offset: -37.805 ms

# Below is generated by plot.py at 2019-01-02 21:57:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 75.79 Mbit/s
95th percentile per-packet one-way delay: 97.590 ms
Loss rate: 63.75%
-- Flow 1:
Average throughput: 75.79 Mbit/s
95th percentile per-packet one-way delay: 97.590 ms
Loss rate: 63.75%
```

Run 1: Report of Verus — Data Link

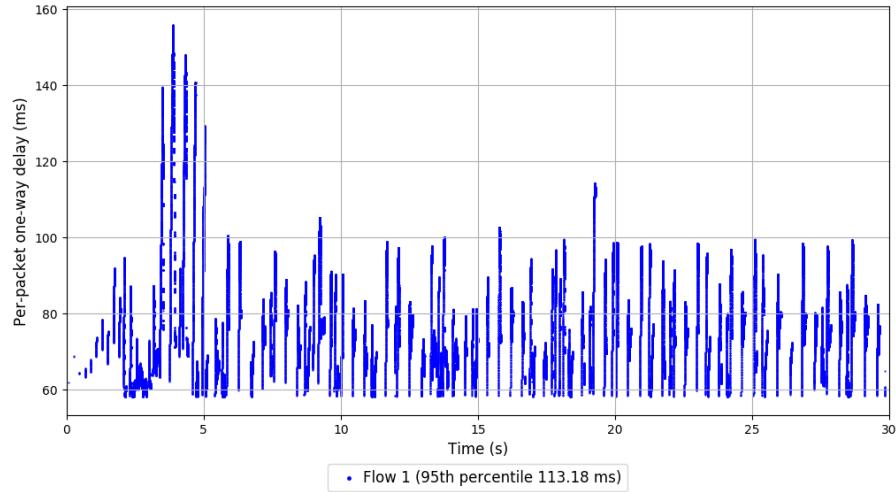
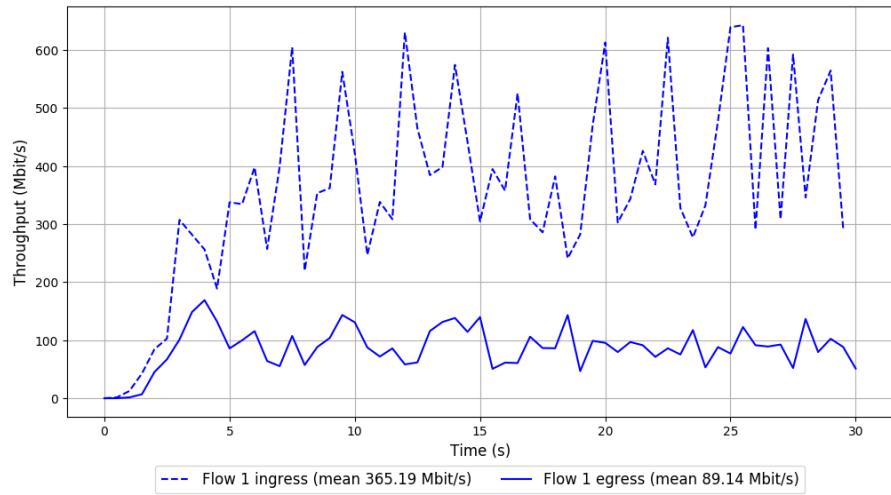


Run 2: Statistics of Verus

```
Start at: 2019-01-02 20:18:40
End at: 2019-01-02 20:19:10
Local clock offset: 1.848 ms
Remote clock offset: -41.093 ms

# Below is generated by plot.py at 2019-01-02 21:58:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.14 Mbit/s
95th percentile per-packet one-way delay: 113.178 ms
Loss rate: 75.59%
-- Flow 1:
Average throughput: 89.14 Mbit/s
95th percentile per-packet one-way delay: 113.178 ms
Loss rate: 75.59%
```

Run 2: Report of Verus — Data Link

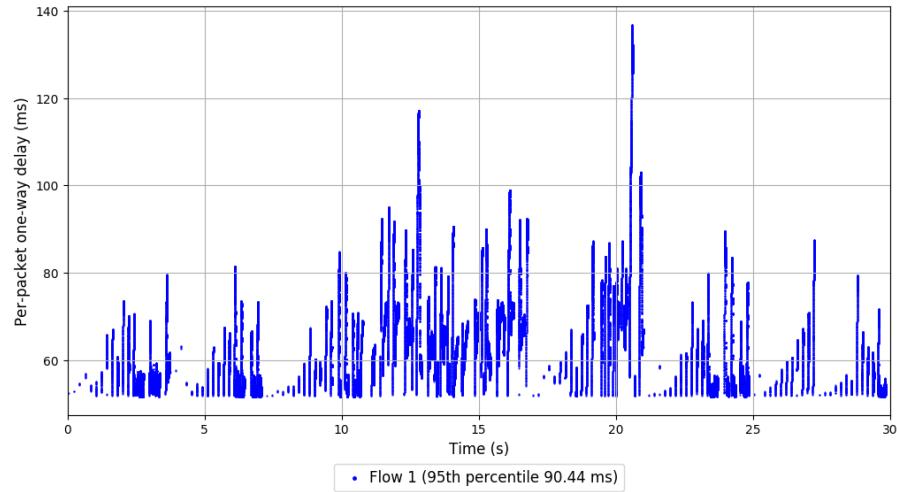
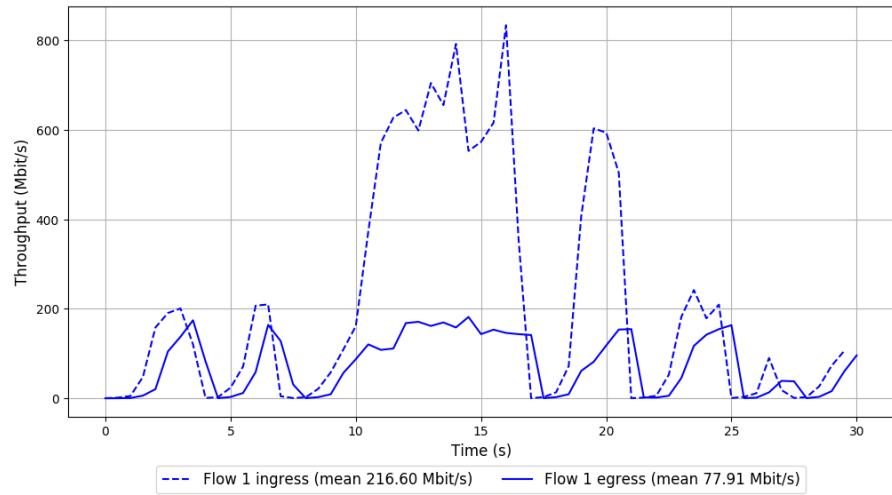


Run 3: Statistics of Verus

```
Start at: 2019-01-02 20:43:03
End at: 2019-01-02 20:43:33
Local clock offset: 3.375 ms
Remote clock offset: -43.85 ms

# Below is generated by plot.py at 2019-01-02 21:58:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 77.91 Mbit/s
95th percentile per-packet one-way delay: 90.439 ms
Loss rate: 64.03%
-- Flow 1:
Average throughput: 77.91 Mbit/s
95th percentile per-packet one-way delay: 90.439 ms
Loss rate: 64.03%
```

Run 3: Report of Verus — Data Link

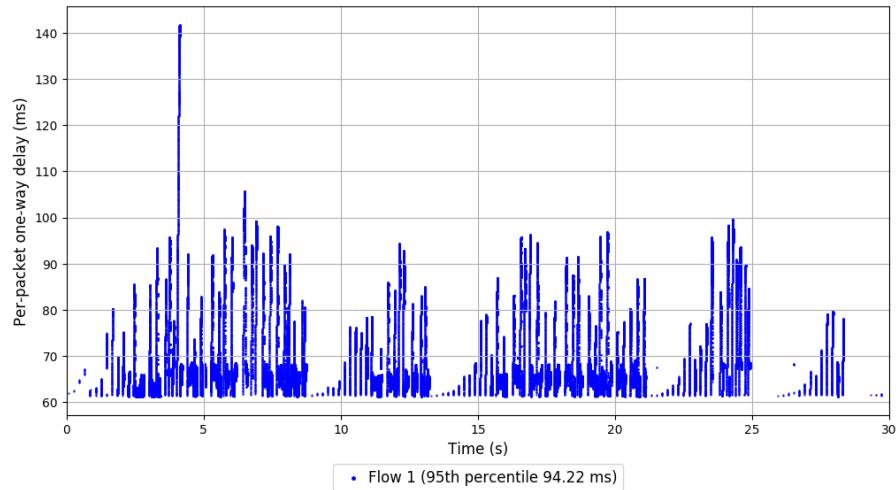
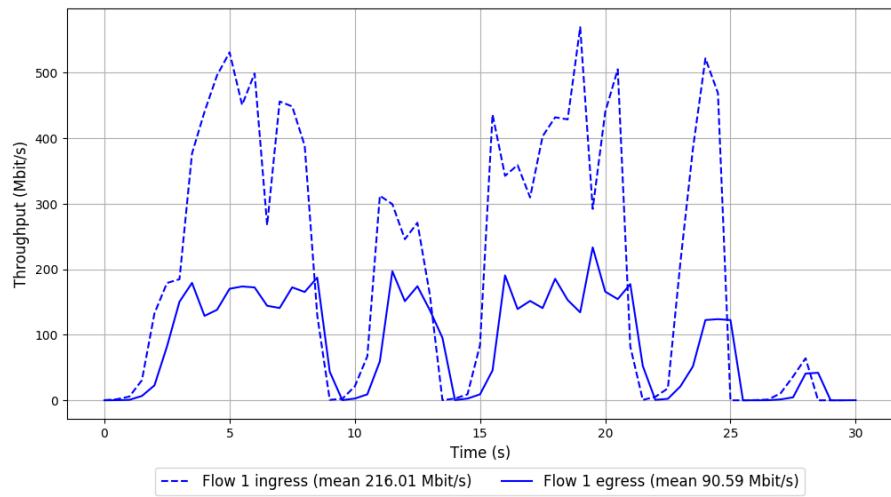


Run 4: Statistics of Verus

```
Start at: 2019-01-02 21:07:18
End at: 2019-01-02 21:07:48
Local clock offset: 2.565 ms
Remote clock offset: -37.414 ms

# Below is generated by plot.py at 2019-01-02 21:58:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.59 Mbit/s
95th percentile per-packet one-way delay: 94.222 ms
Loss rate: 58.06%
-- Flow 1:
Average throughput: 90.59 Mbit/s
95th percentile per-packet one-way delay: 94.222 ms
Loss rate: 58.06%
```

Run 4: Report of Verus — Data Link

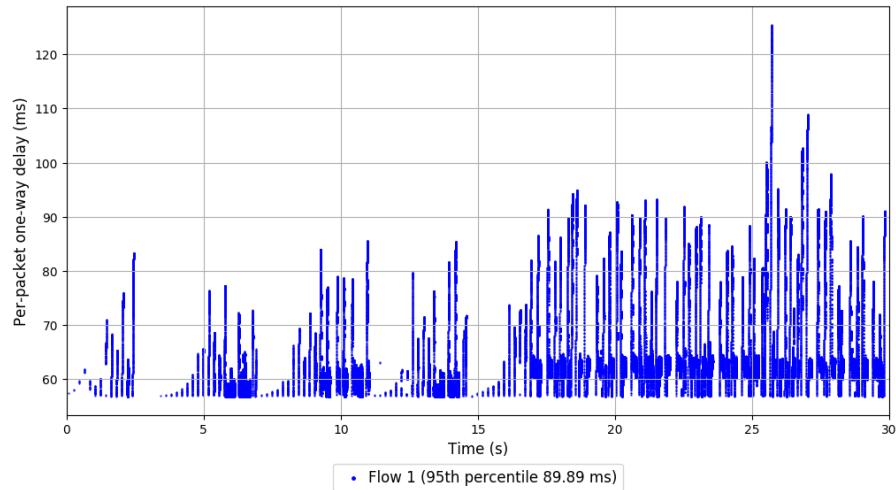
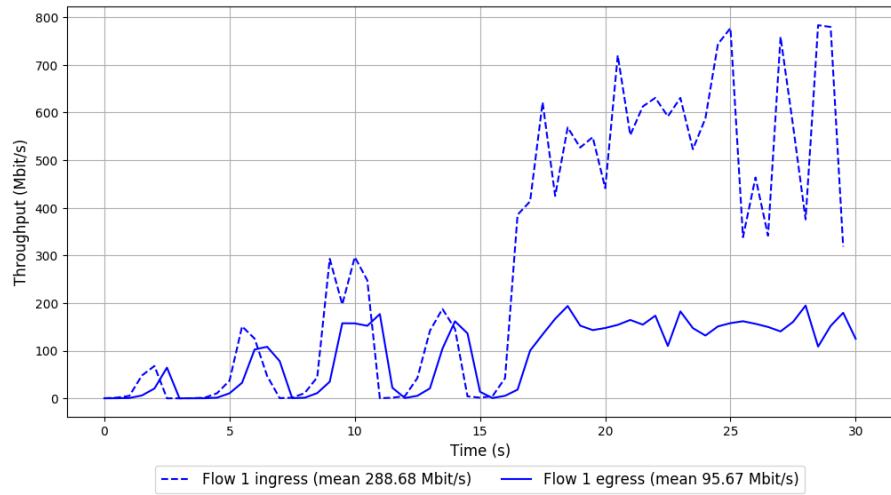


Run 5: Statistics of Verus

```
Start at: 2019-01-02 21:31:45
End at: 2019-01-02 21:32:15
Local clock offset: 1.565 ms
Remote clock offset: -40.882 ms

# Below is generated by plot.py at 2019-01-02 21:58:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.67 Mbit/s
95th percentile per-packet one-way delay: 89.890 ms
Loss rate: 66.85%
-- Flow 1:
Average throughput: 95.67 Mbit/s
95th percentile per-packet one-way delay: 89.890 ms
Loss rate: 66.85%
```

Run 5: Report of Verus — Data Link

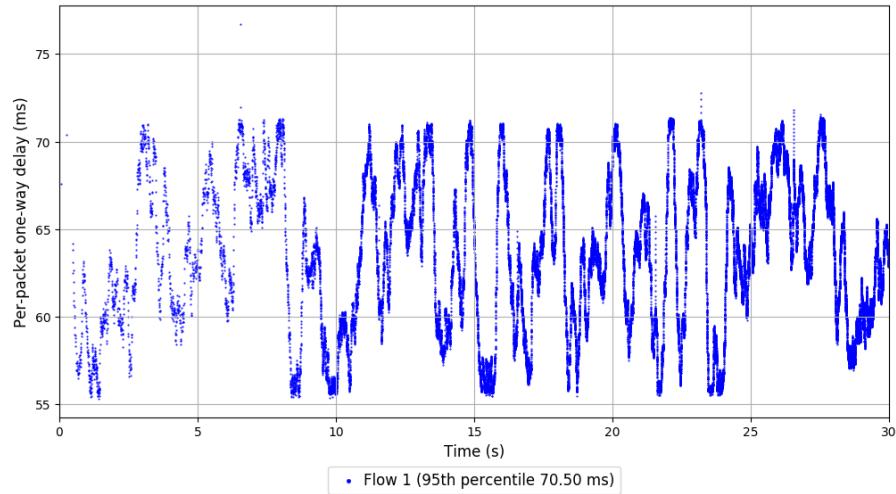
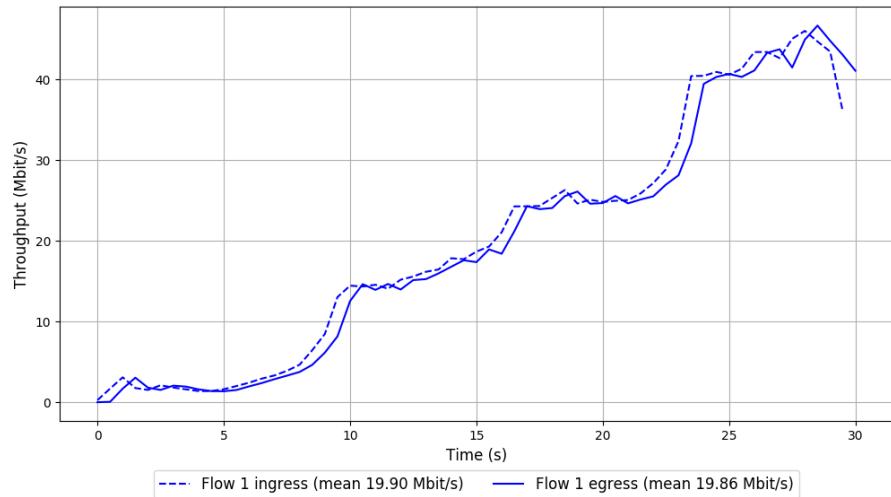


```
Run 1: Statistics of PCC-Vivace
```

```
Start at: 2019-01-02 19:27:08
End at: 2019-01-02 19:27:38
Local clock offset: -5.751 ms
Remote clock offset: -41.861 ms

# Below is generated by plot.py at 2019-01-02 21:58:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 19.86 Mbit/s
95th percentile per-packet one-way delay: 70.499 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 19.86 Mbit/s
95th percentile per-packet one-way delay: 70.499 ms
Loss rate: 0.24%
```

Run 1: Report of PCC-Vivace — Data Link

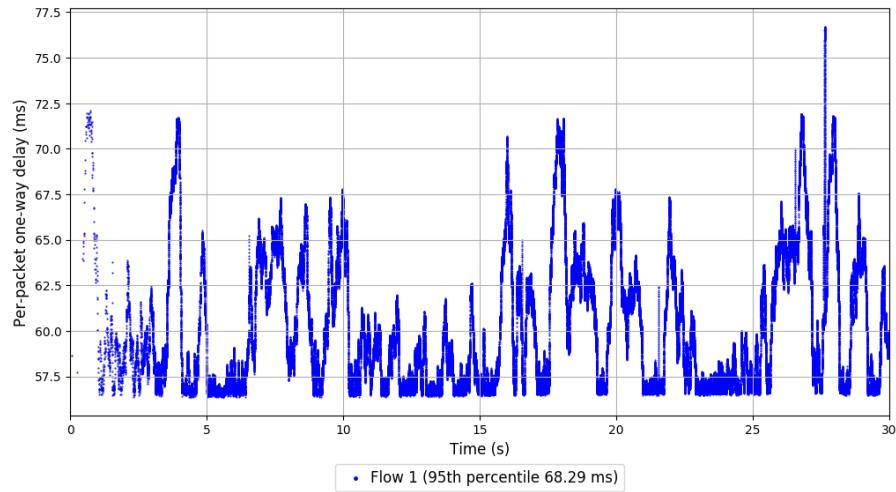
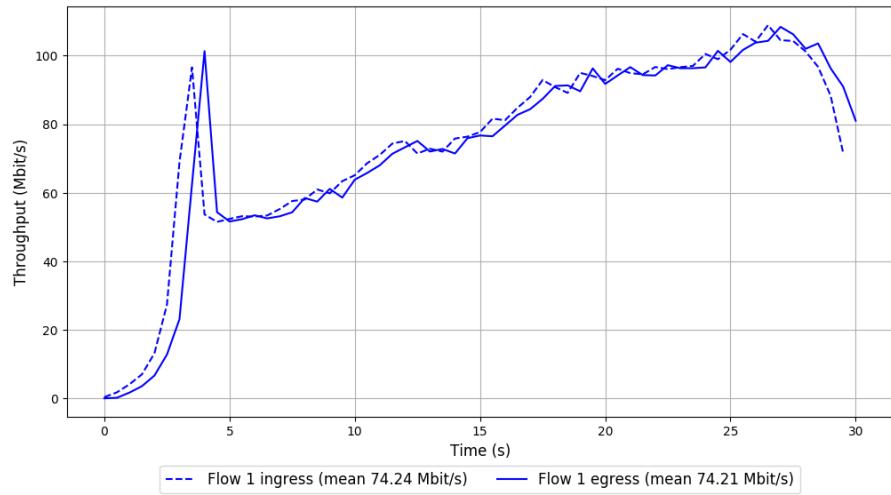


Run 2: Statistics of PCC-Vivace

```
Start at: 2019-01-02 19:57:02
End at: 2019-01-02 19:57:32
Local clock offset: -1.618 ms
Remote clock offset: -42.46 ms

# Below is generated by plot.py at 2019-01-02 21:58:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 74.21 Mbit/s
95th percentile per-packet one-way delay: 68.291 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 74.21 Mbit/s
95th percentile per-packet one-way delay: 68.291 ms
Loss rate: 0.03%
```

Run 2: Report of PCC-Vivace — Data Link

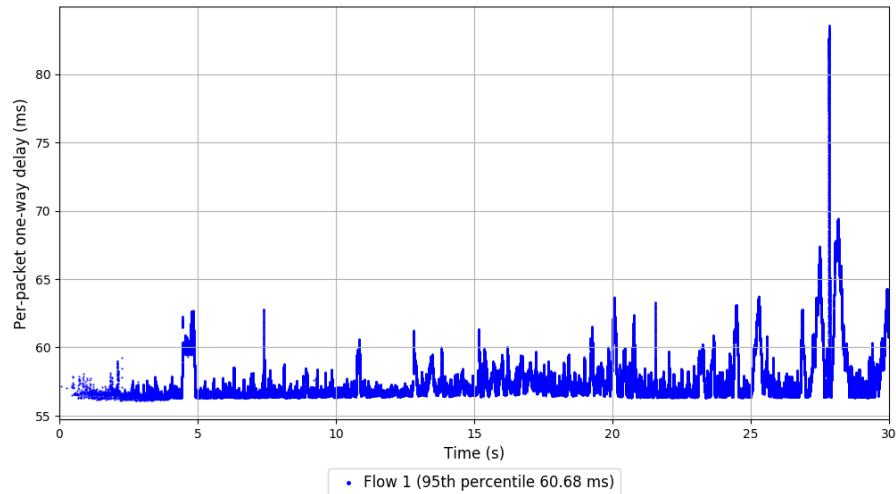
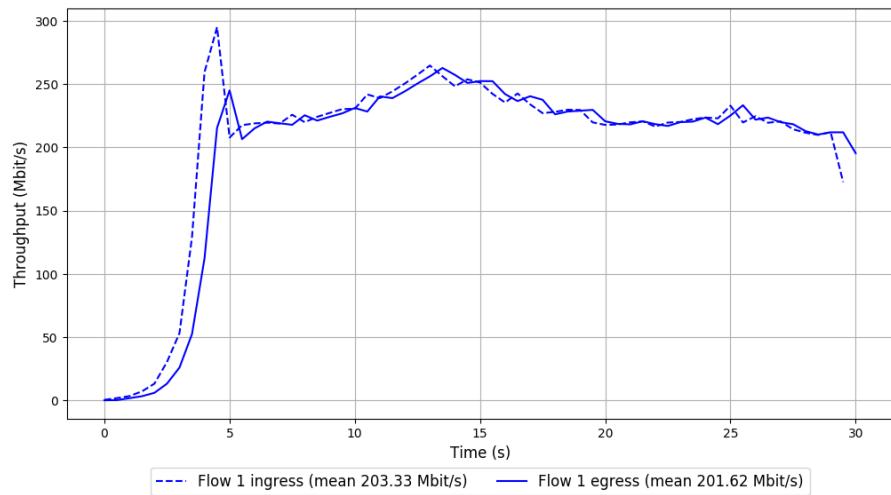


Run 3: Statistics of PCC-Vivace

```
Start at: 2019-01-02 20:27:27
End at: 2019-01-02 20:27:57
Local clock offset: -0.215 ms
Remote clock offset: -42.546 ms

# Below is generated by plot.py at 2019-01-02 21:59:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 201.62 Mbit/s
95th percentile per-packet one-way delay: 60.677 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 201.62 Mbit/s
95th percentile per-packet one-way delay: 60.677 ms
Loss rate: 0.83%
```

Run 3: Report of PCC-Vivace — Data Link

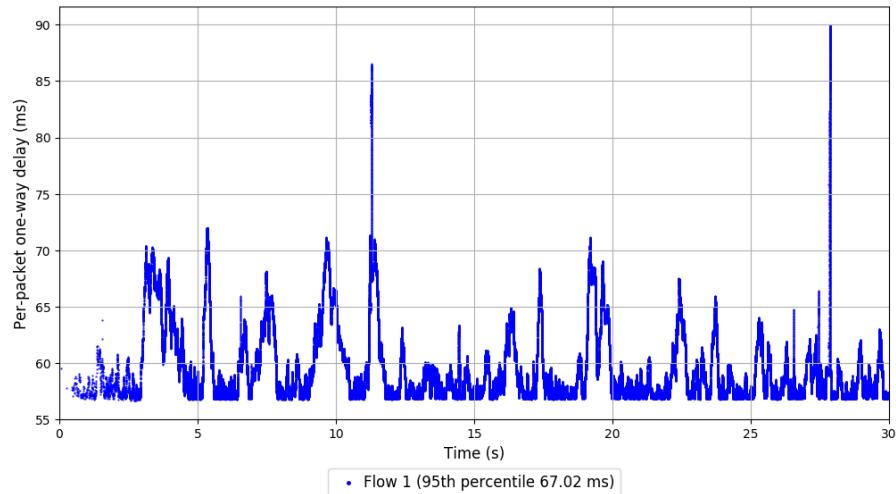
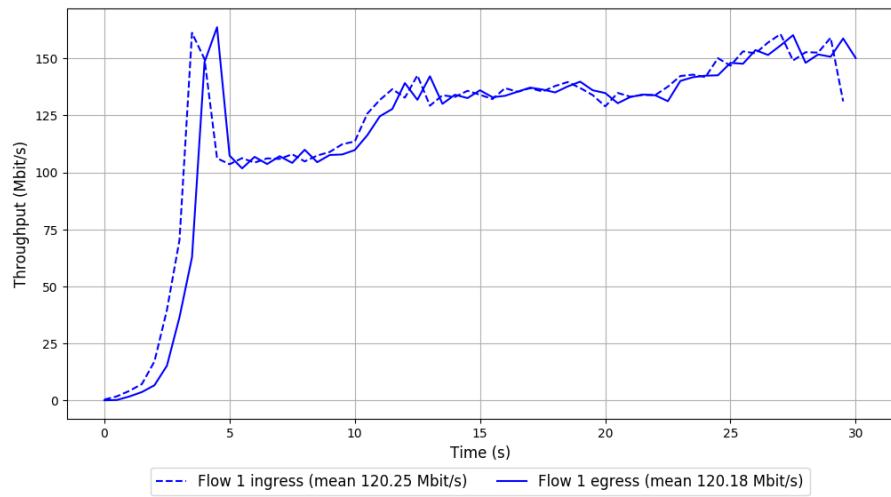


Run 4: Statistics of PCC-Vivace

```
Start at: 2019-01-02 20:51:47
End at: 2019-01-02 20:52:17
Local clock offset: 0.203 ms
Remote clock offset: -44.192 ms

# Below is generated by plot.py at 2019-01-02 21:59:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 120.18 Mbit/s
95th percentile per-packet one-way delay: 67.022 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 120.18 Mbit/s
95th percentile per-packet one-way delay: 67.022 ms
Loss rate: 0.07%
```

Run 4: Report of PCC-Vivace — Data Link

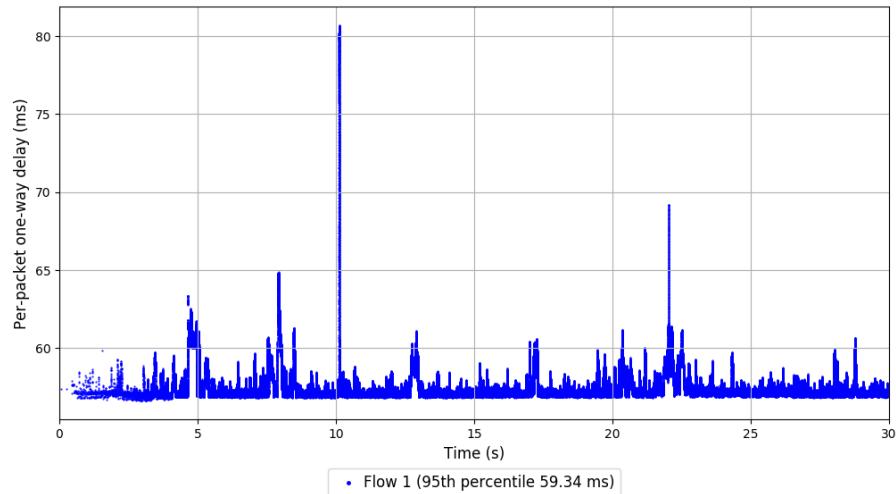
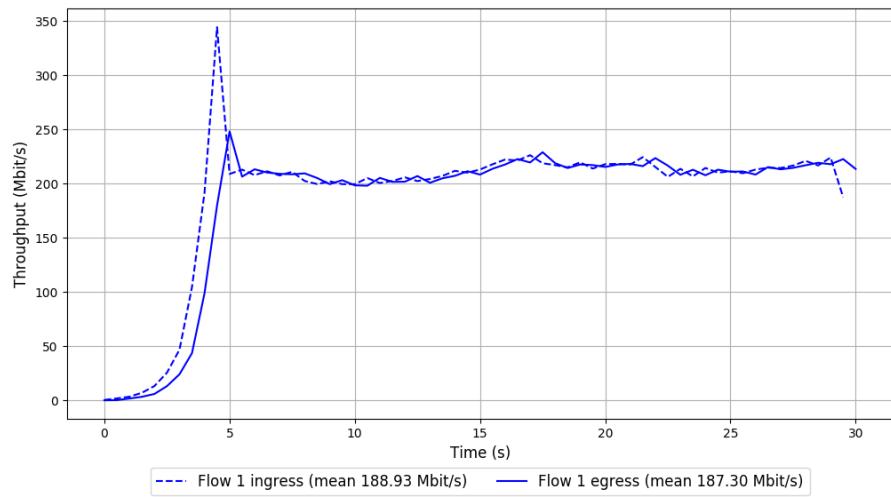


Run 5: Statistics of PCC-Vivace

```
Start at: 2019-01-02 21:16:05
End at: 2019-01-02 21:16:35
Local clock offset: 1.712 ms
Remote clock offset: -40.319 ms

# Below is generated by plot.py at 2019-01-02 21:59:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 187.30 Mbit/s
95th percentile per-packet one-way delay: 59.344 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 187.30 Mbit/s
95th percentile per-packet one-way delay: 59.344 ms
Loss rate: 0.86%
```

Run 5: Report of PCC-Vivace — Data Link

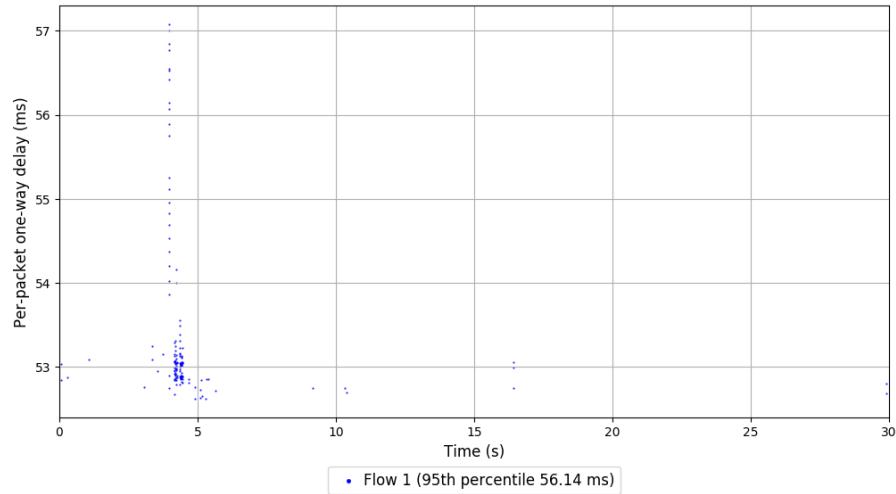
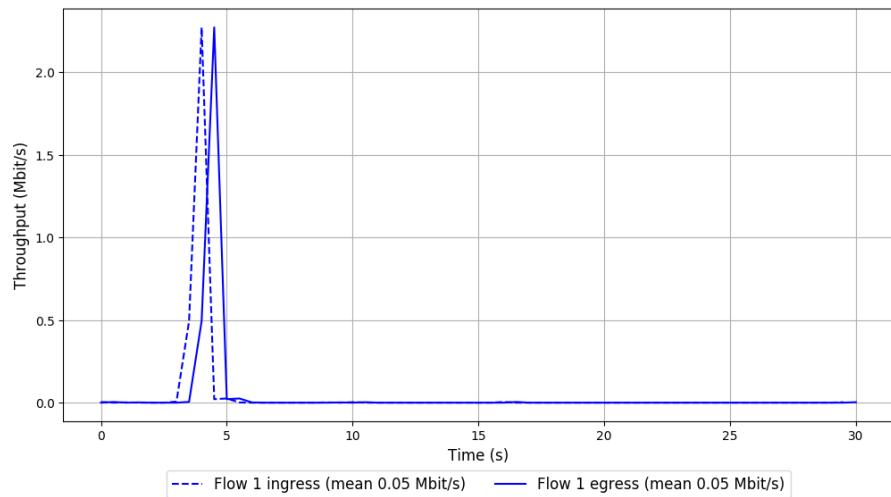


```
Run 1: Statistics of WebRTC media

Start at: 2019-01-02 19:49:31
End at: 2019-01-02 19:50:02
Local clock offset: -2.182 ms
Remote clock offset: -46.26 ms

# Below is generated by plot.py at 2019-01-02 21:59:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 56.143 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 56.143 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link

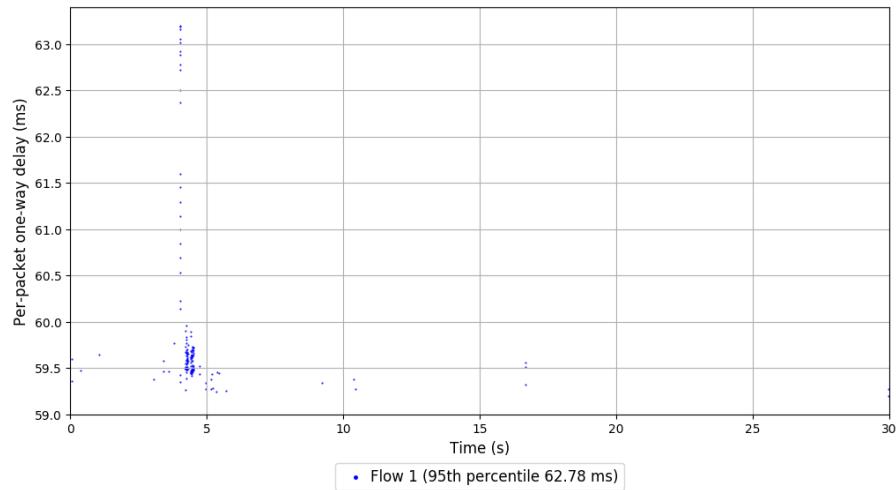
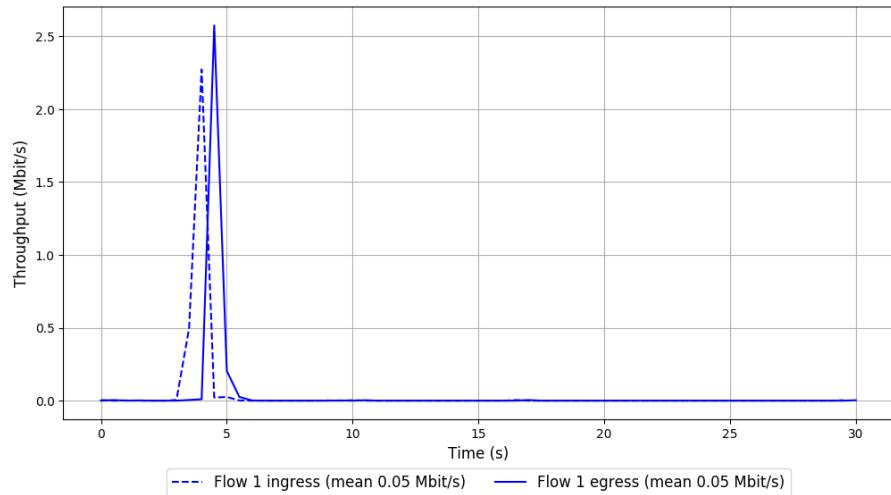


Run 2: Statistics of WebRTC media

```
Start at: 2019-01-02 20:20:00
End at: 2019-01-02 20:20:30
Local clock offset: -0.718 ms
Remote clock offset: -39.663 ms

# Below is generated by plot.py at 2019-01-02 21:59:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 62.777 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 62.777 ms
Loss rate: 0.00%
```

Run 2: Report of WebRTC media — Data Link

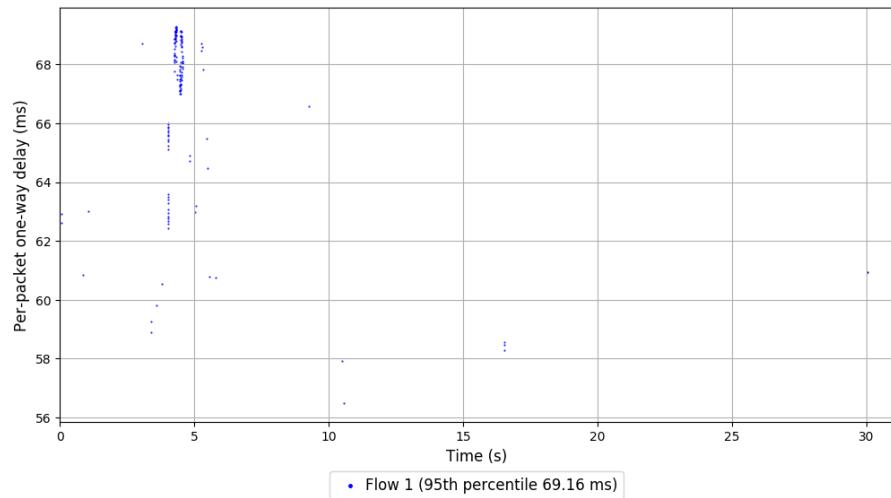
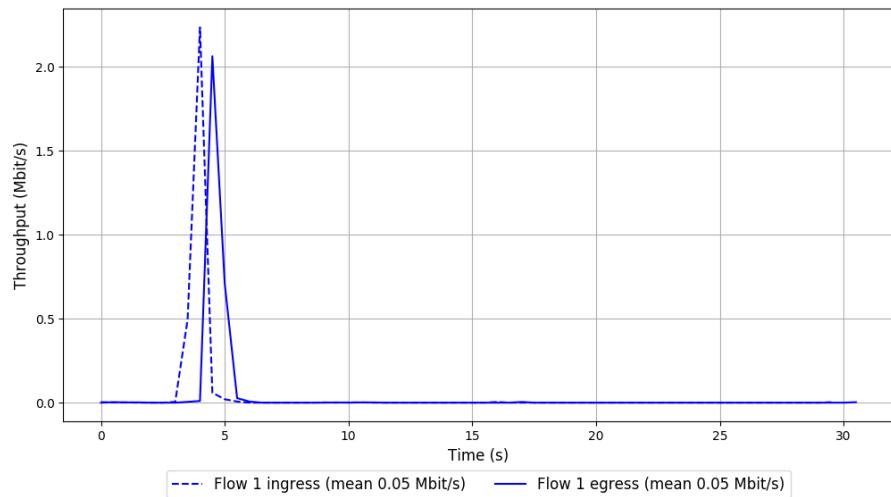


```
Run 3: Statistics of WebRTC media

Start at: 2019-01-02 20:44:20
End at: 2019-01-02 20:44:50
Local clock offset: 2.184 ms
Remote clock offset: -43.019 ms

# Below is generated by plot.py at 2019-01-02 21:59:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 69.156 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 69.156 ms
Loss rate: 0.00%
```

Run 3: Report of WebRTC media — Data Link

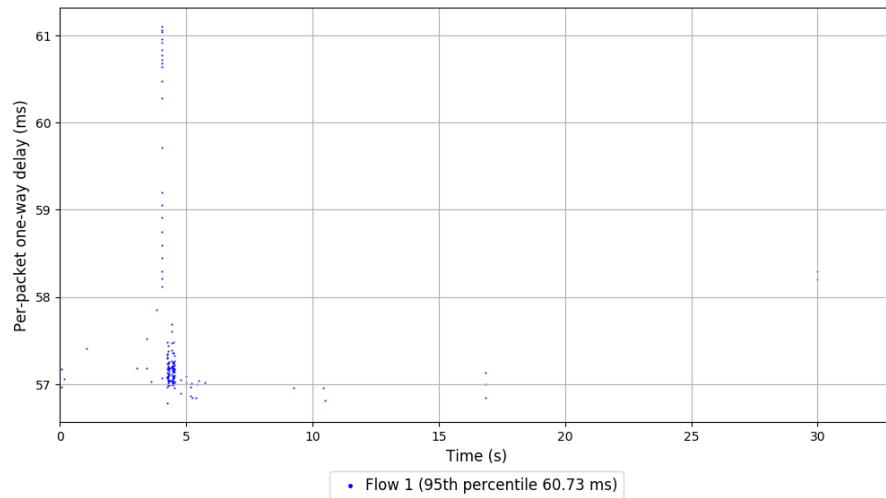
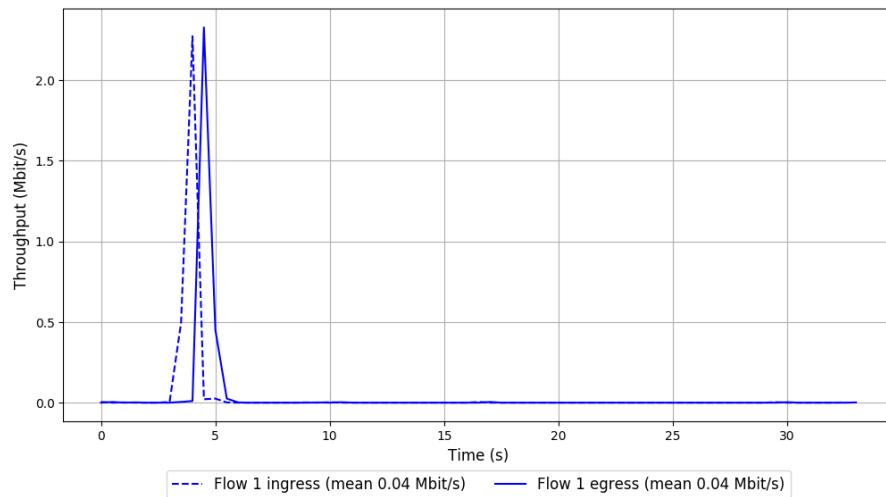


Run 4: Statistics of WebRTC media

```
Start at: 2019-01-02 21:08:36
End at: 2019-01-02 21:09:06
Local clock offset: 2.366 ms
Remote clock offset: -39.724 ms

# Below is generated by plot.py at 2019-01-02 21:59:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 60.726 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 60.726 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

```
Start at: 2019-01-02 21:33:03
End at: 2019-01-02 21:33:33
Local clock offset: -0.438 ms
Remote clock offset: -38.212 ms

# Below is generated by plot.py at 2019-01-02 21:59:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 65.001 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 65.001 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link

