

Pantheon Report

Generated at 2019-01-03 09:20:56 (UTC).
Data path: GCE Iowa on `ens4 (local)` → GCE Tokyo on `ens4 (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 `time.google.com` and have been applied to correct the timestamps in logs.

System info:

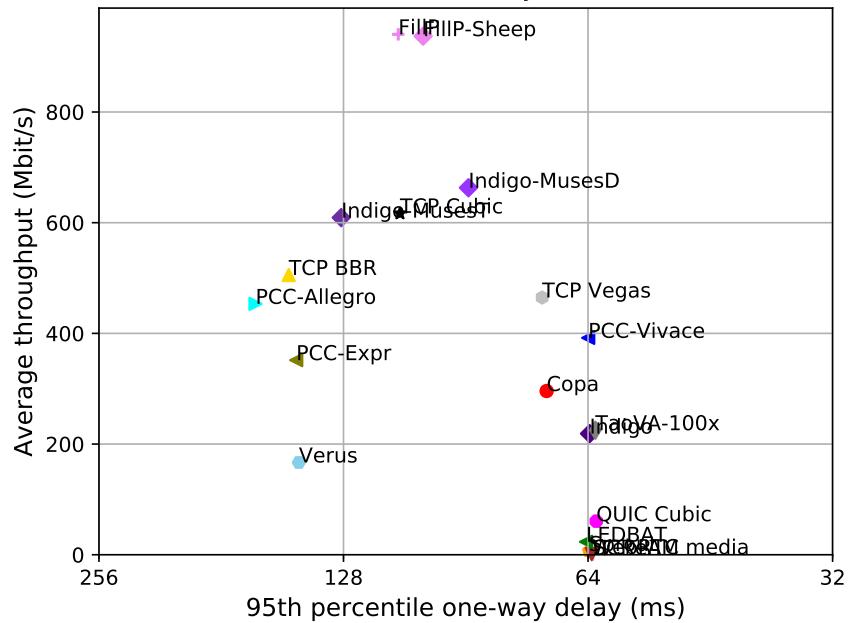
```
Linux 4.15.0-1025-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

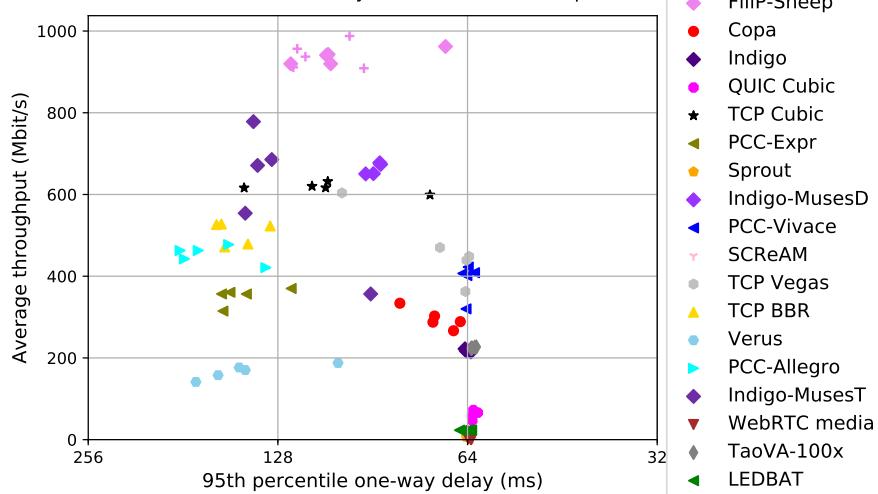
```
branch: muses @ c654af0b7d59d4ef4b914cfac404e1fc2e96dc68
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fc45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
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 GCE Iowa to GCE Tokyo, 5 runs of 30s each per scheme
(mean of all runs by scheme)



test from GCE Iowa to GCE Tokyo, 5 runs of 30s each per scheme



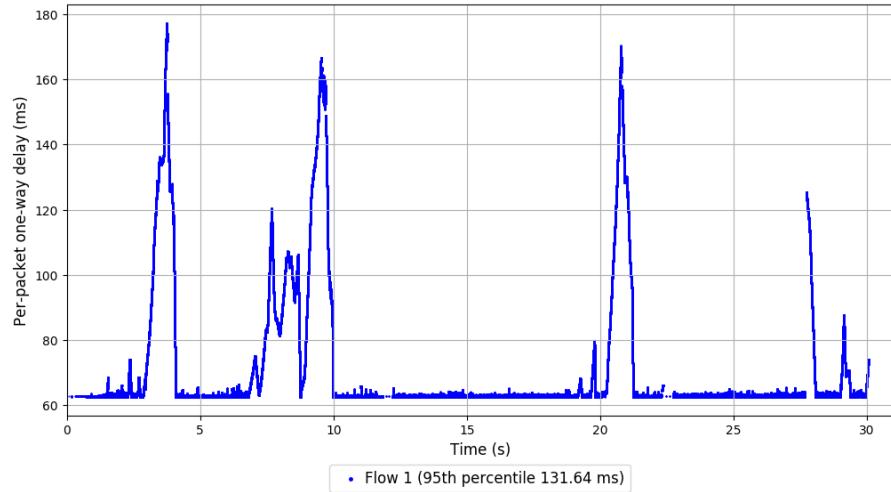
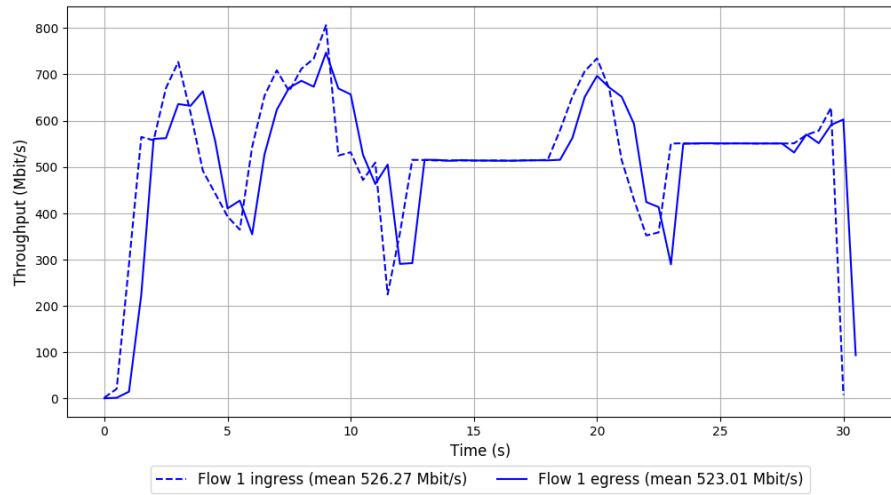
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	505.56	149.50	0.77
Copa	5	295.86	71.97	0.01
TCP Cubic	5	616.78	109.07	0.11
FillP	5	940.35	109.59	0.60
FillP-Sheep	5	937.11	102.14	0.56
Indigo	5	218.85	63.73	0.00
Indigo-MusesD	4	663.14	89.83	0.04
Indigo-MusesT	5	609.13	128.82	0.20
LEDBAT	5	23.36	64.36	0.00
PCC-Allegro	5	453.30	164.25	2.26
PCC-Expr	5	351.63	146.37	1.86
QUIC Cubic	4	60.64	62.53	0.00
SCReAM	5	0.22	63.10	0.00
Sprout	5	6.80	63.85	0.00
TaoVA-100x	5	225.03	62.70	0.02
TCP Vegas	5	464.78	72.89	0.00
Verus	5	166.73	145.27	0.59
PCC-Vivace	5	391.90	63.98	0.00
WebRTC media	4	1.12	63.34	0.00

Run 1: Statistics of TCP BBR

```
Start at: 2019-01-03 04:47:24
End at: 2019-01-03 04:47:54
Local clock offset: -0.081 ms
Remote clock offset: -0.227 ms

# Below is generated by plot.py at 2019-01-03 07:20:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 523.01 Mbit/s
95th percentile per-packet one-way delay: 131.643 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 523.01 Mbit/s
95th percentile per-packet one-way delay: 131.643 ms
Loss rate: 0.62%
```

Run 1: Report of TCP BBR — Data Link

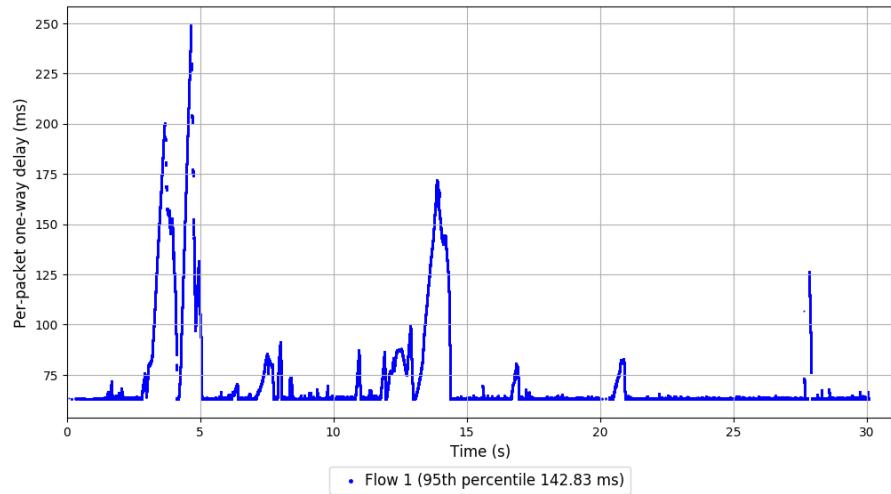
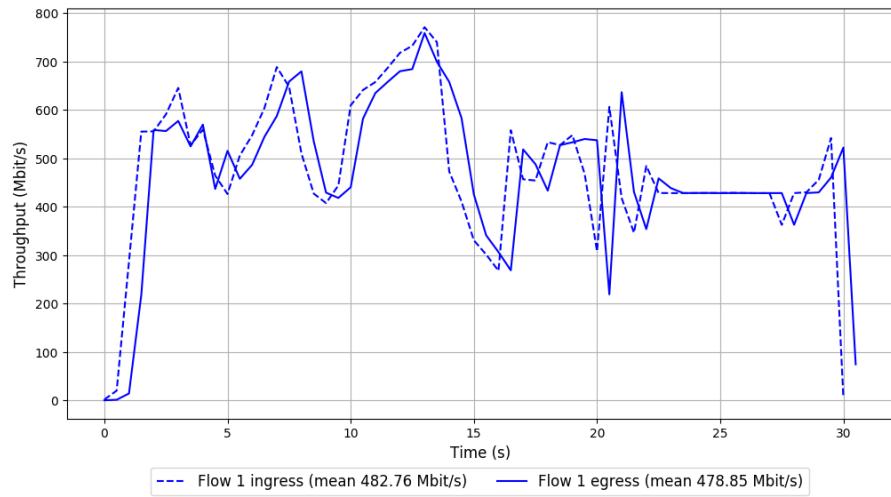


Run 2: Statistics of TCP BBR

```
Start at: 2019-01-03 05:15:42
End at: 2019-01-03 05:16:12
Local clock offset: -0.024 ms
Remote clock offset: 0.011 ms

# Below is generated by plot.py at 2019-01-03 07:20:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 478.85 Mbit/s
95th percentile per-packet one-way delay: 142.832 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 478.85 Mbit/s
95th percentile per-packet one-way delay: 142.832 ms
Loss rate: 0.81%
```

Run 2: Report of TCP BBR — Data Link

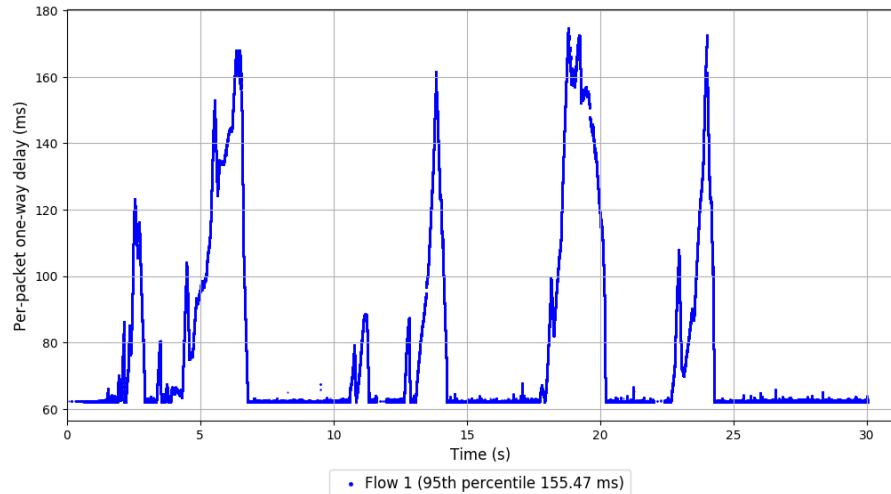
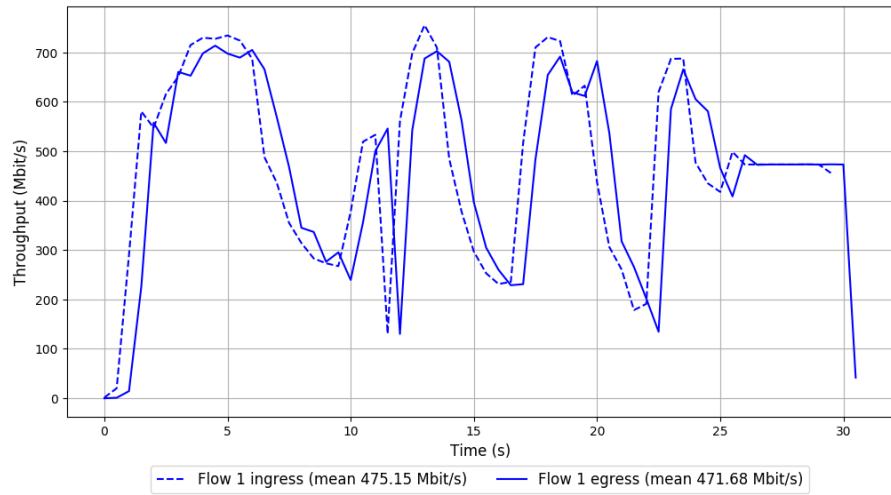


Run 3: Statistics of TCP BBR

```
Start at: 2019-01-03 05:43:49
End at: 2019-01-03 05:44:19
Local clock offset: -0.05 ms
Remote clock offset: -0.687 ms

# Below is generated by plot.py at 2019-01-03 07:20:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 471.68 Mbit/s
95th percentile per-packet one-way delay: 155.465 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 471.68 Mbit/s
95th percentile per-packet one-way delay: 155.465 ms
Loss rate: 0.73%
```

Run 3: Report of TCP BBR — Data Link

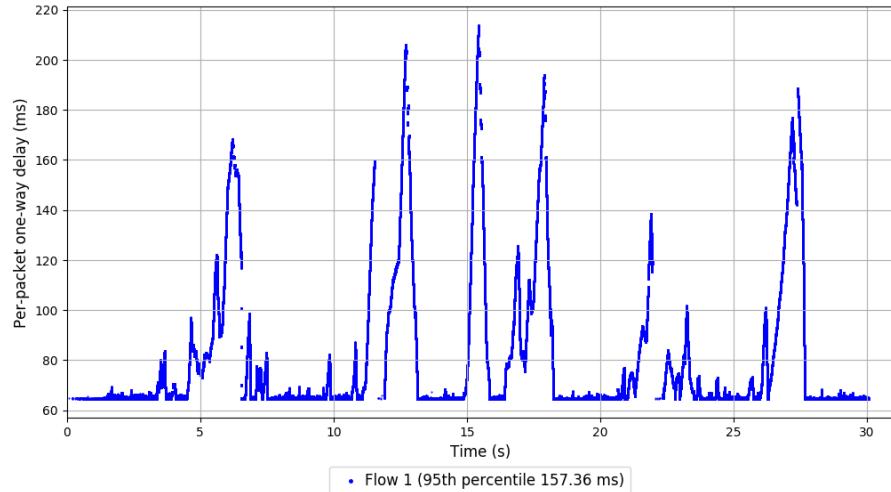
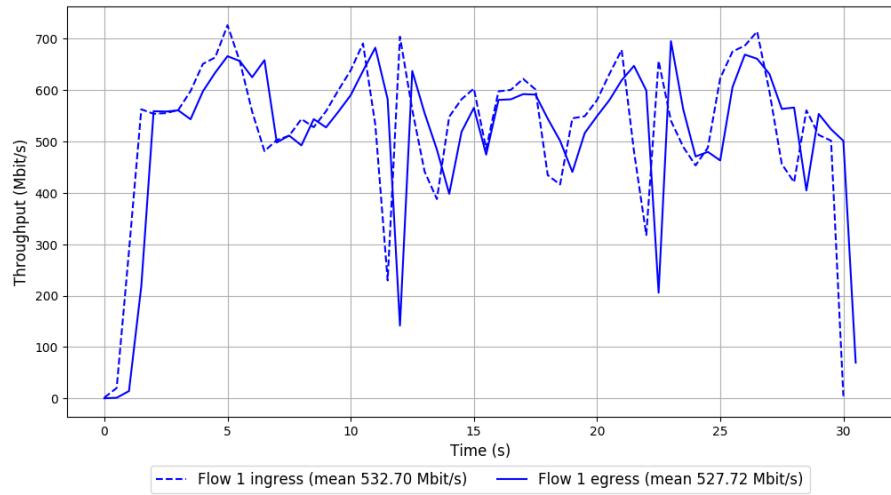


Run 4: Statistics of TCP BBR

```
Start at: 2019-01-03 06:12:06
End at: 2019-01-03 06:12:36
Local clock offset: -0.004 ms
Remote clock offset: 1.476 ms

# Below is generated by plot.py at 2019-01-03 07:20:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 527.72 Mbit/s
95th percentile per-packet one-way delay: 157.362 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 527.72 Mbit/s
95th percentile per-packet one-way delay: 157.362 ms
Loss rate: 0.93%
```

Run 4: Report of TCP BBR — Data Link

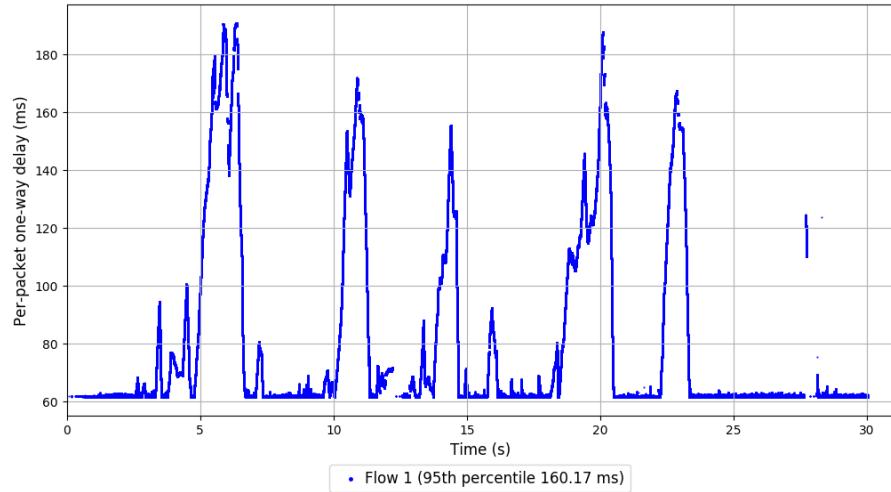
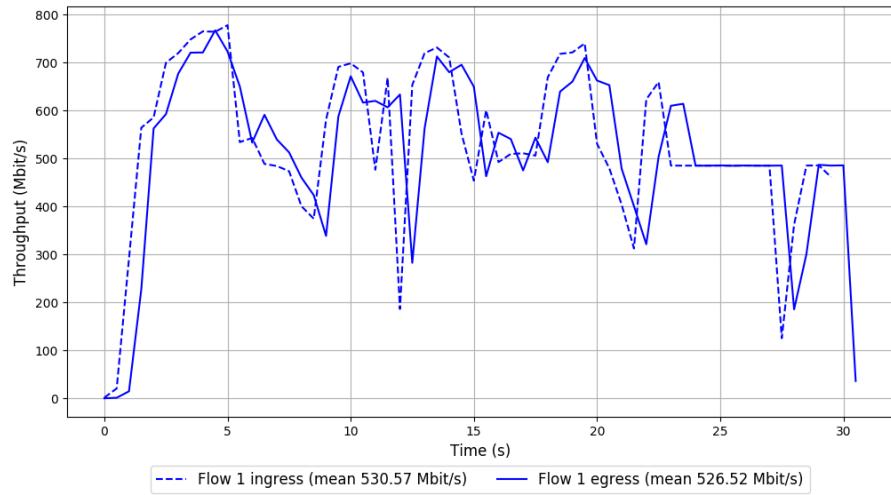


Run 5: Statistics of TCP BBR

```
Start at: 2019-01-03 06:40:28
End at: 2019-01-03 06:40:58
Local clock offset: -0.001 ms
Remote clock offset: -1.224 ms

# Below is generated by plot.py at 2019-01-03 07:20:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 526.52 Mbit/s
95th percentile per-packet one-way delay: 160.174 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 526.52 Mbit/s
95th percentile per-packet one-way delay: 160.174 ms
Loss rate: 0.76%
```

Run 5: Report of TCP BBR — Data Link

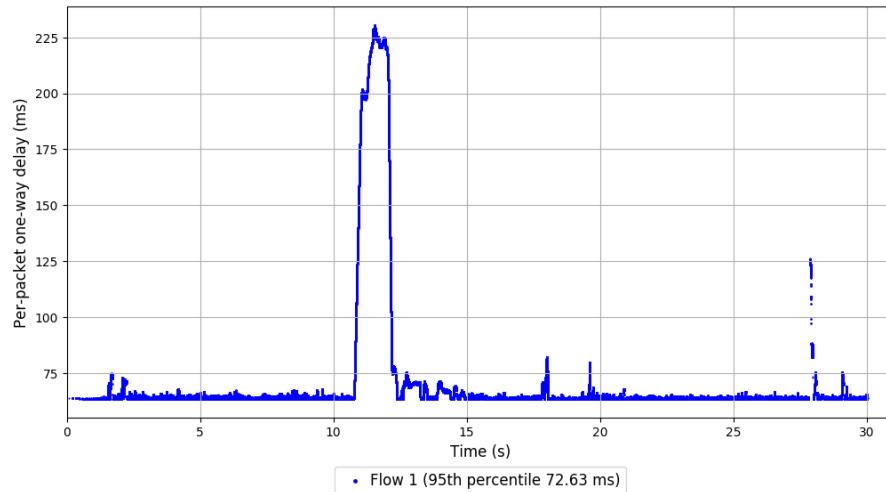
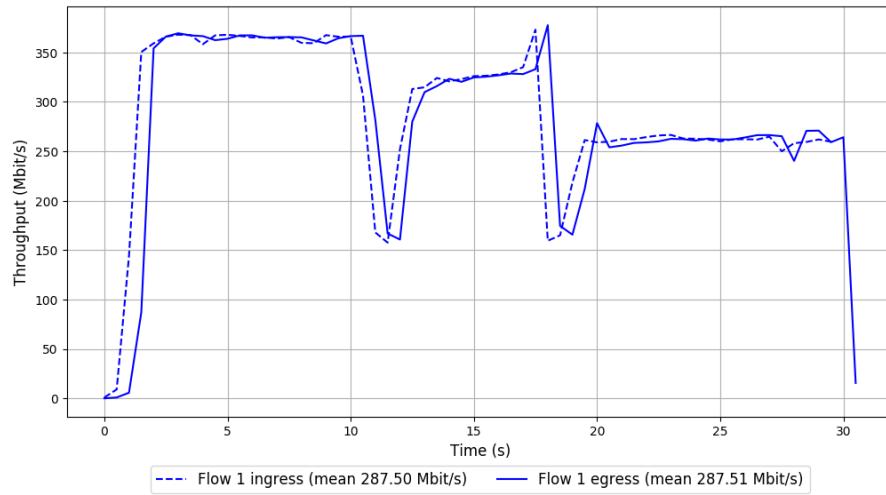


Run 1: Statistics of Copa

```
Start at: 2019-01-03 04:44:14
End at: 2019-01-03 04:44:44
Local clock offset: -0.048 ms
Remote clock offset: 0.538 ms

# Below is generated by plot.py at 2019-01-03 07:20:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 287.51 Mbit/s
95th percentile per-packet one-way delay: 72.632 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 287.51 Mbit/s
95th percentile per-packet one-way delay: 72.632 ms
Loss rate: 0.00%
```

Run 1: Report of Copa — Data Link

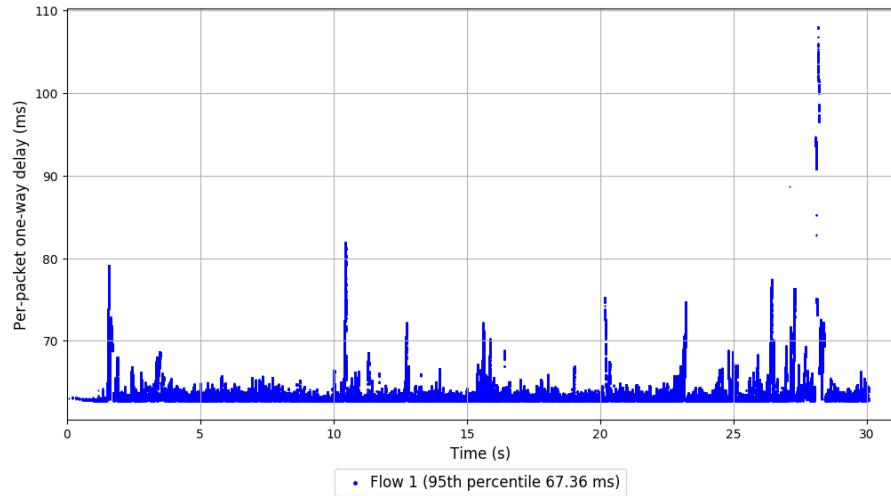
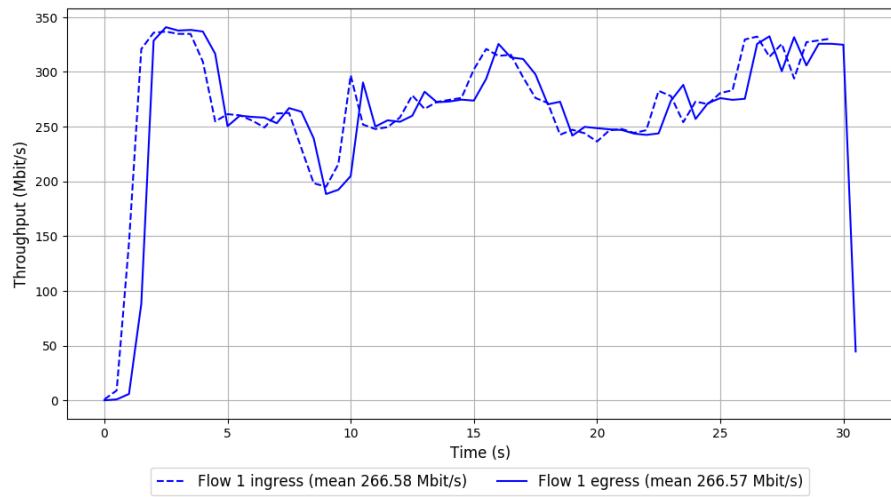


Run 2: Statistics of Copa

```
Start at: 2019-01-03 05:12:31
End at: 2019-01-03 05:13:01
Local clock offset: -0.047 ms
Remote clock offset: -0.163 ms

# Below is generated by plot.py at 2019-01-03 07:20:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 266.57 Mbit/s
95th percentile per-packet one-way delay: 67.362 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 266.57 Mbit/s
95th percentile per-packet one-way delay: 67.362 ms
Loss rate: 0.00%
```

Run 2: Report of Copa — Data Link

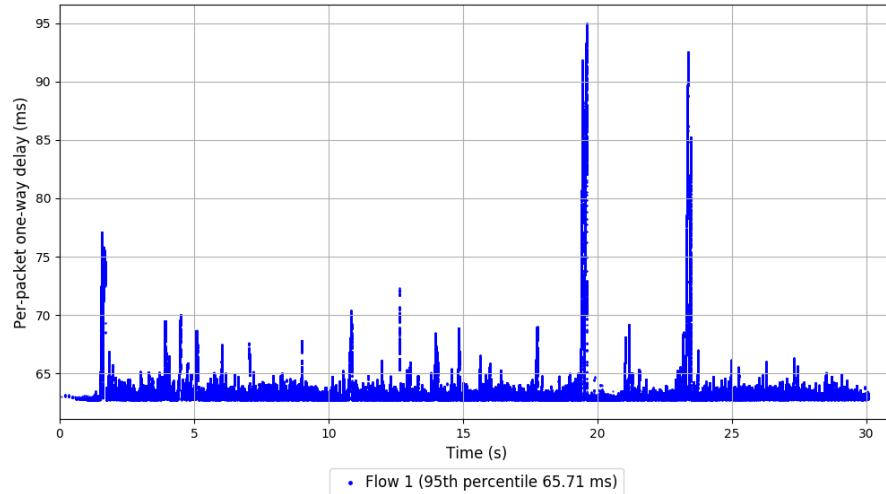
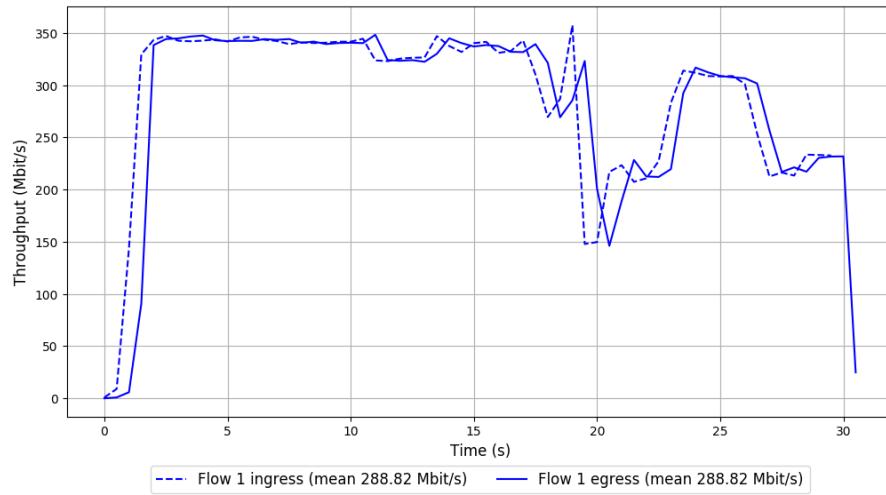


Run 3: Statistics of Copa

```
Start at: 2019-01-03 05:40:36
End at: 2019-01-03 05:41:06
Local clock offset: -0.019 ms
Remote clock offset: 0.063 ms

# Below is generated by plot.py at 2019-01-03 07:20:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 288.82 Mbit/s
95th percentile per-packet one-way delay: 65.710 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 288.82 Mbit/s
95th percentile per-packet one-way delay: 65.710 ms
Loss rate: 0.00%
```

Run 3: Report of Copa — Data Link

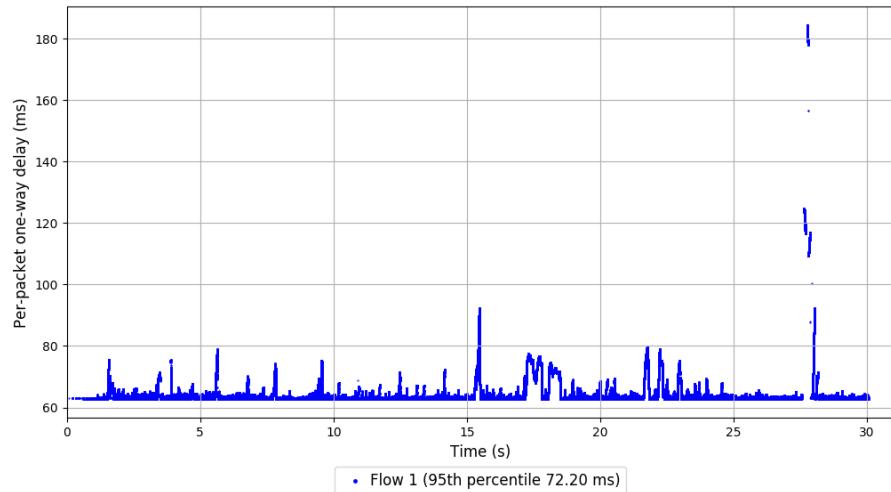
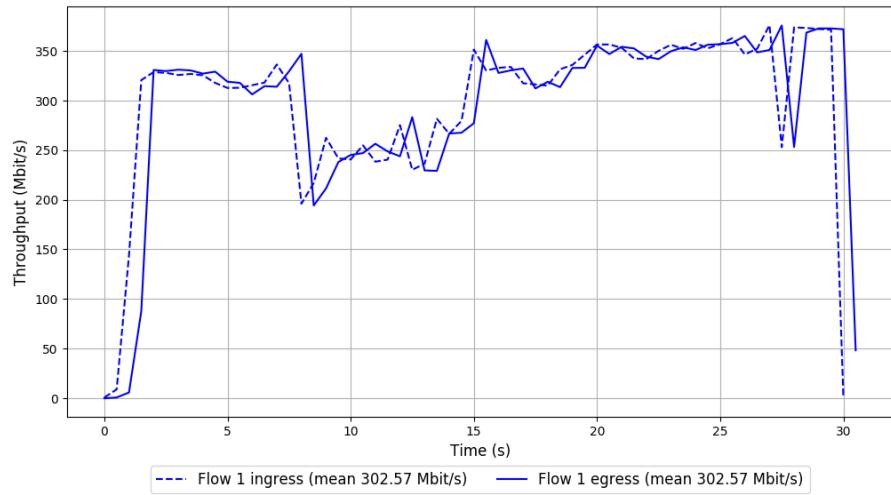


Run 4: Statistics of Copa

```
Start at: 2019-01-03 06:08:52
End at: 2019-01-03 06:09:22
Local clock offset: -0.045 ms
Remote clock offset: -0.059 ms

# Below is generated by plot.py at 2019-01-03 07:32:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 302.57 Mbit/s
95th percentile per-packet one-way delay: 72.201 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 302.57 Mbit/s
95th percentile per-packet one-way delay: 72.201 ms
Loss rate: 0.00%
```

Run 4: Report of Copa — Data Link

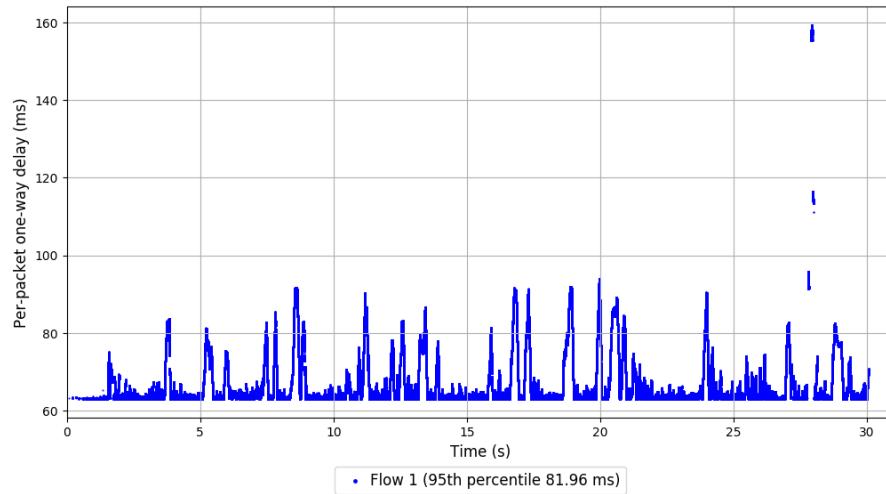
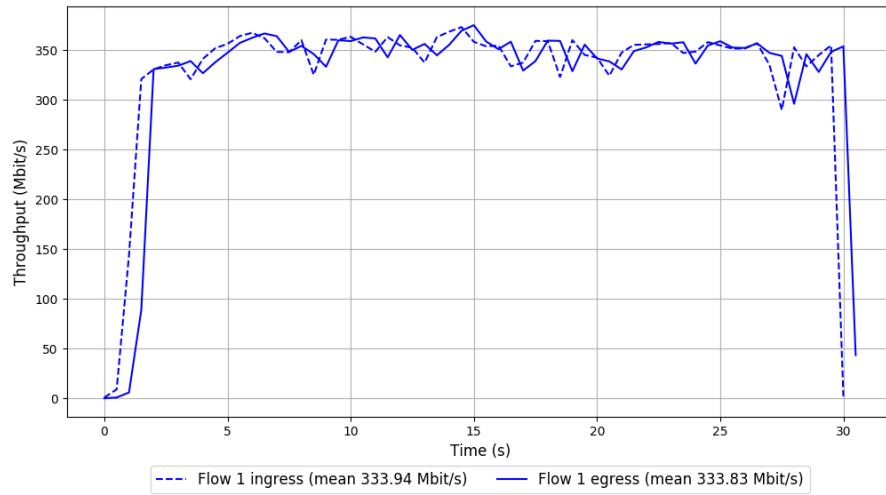


Run 5: Statistics of Copa

```
Start at: 2019-01-03 06:37:10
End at: 2019-01-03 06:37:40
Local clock offset: -0.027 ms
Remote clock offset: 0.1 ms

# Below is generated by plot.py at 2019-01-03 07:33:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 333.83 Mbit/s
95th percentile per-packet one-way delay: 81.962 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 333.83 Mbit/s
95th percentile per-packet one-way delay: 81.962 ms
Loss rate: 0.03%
```

Run 5: Report of Copa — Data Link

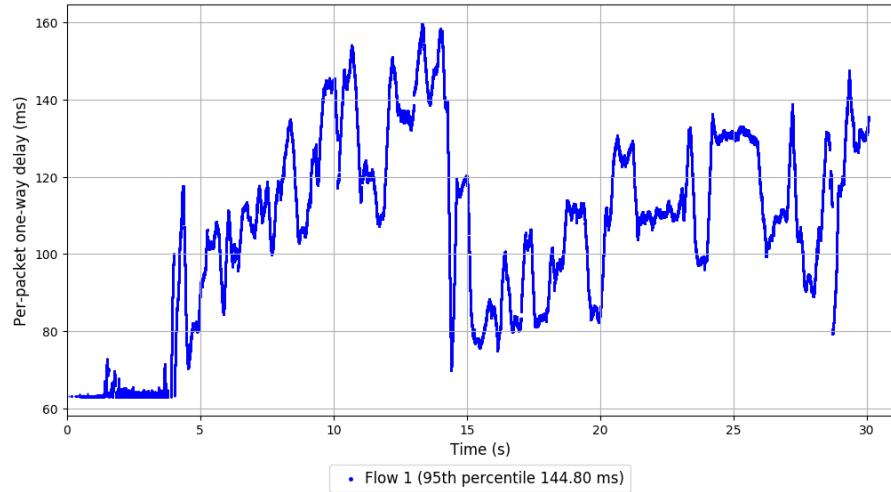
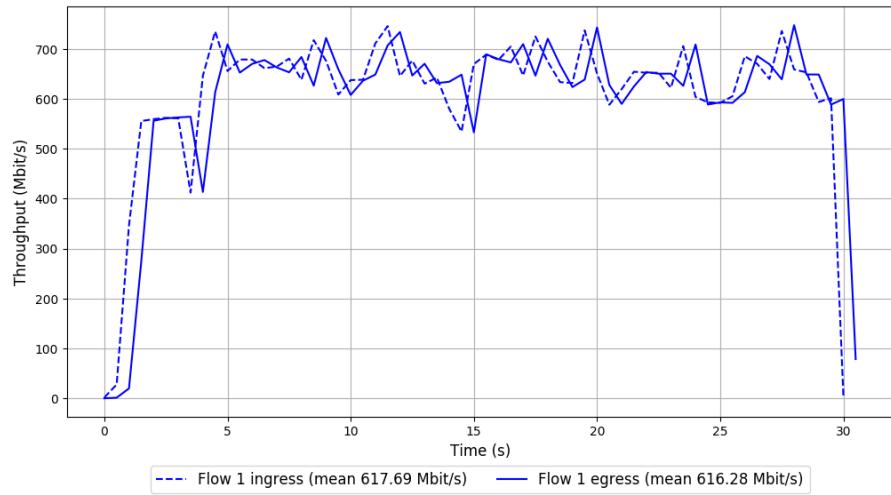


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2019-01-03 04:56:47
End at: 2019-01-03 04:57:17
Local clock offset: -0.073 ms
Remote clock offset: 0.133 ms

# Below is generated by plot.py at 2019-01-03 07:33:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 616.28 Mbit/s
95th percentile per-packet one-way delay: 144.802 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 616.28 Mbit/s
95th percentile per-packet one-way delay: 144.802 ms
Loss rate: 0.23%
```

Run 1: Report of TCP Cubic — Data Link

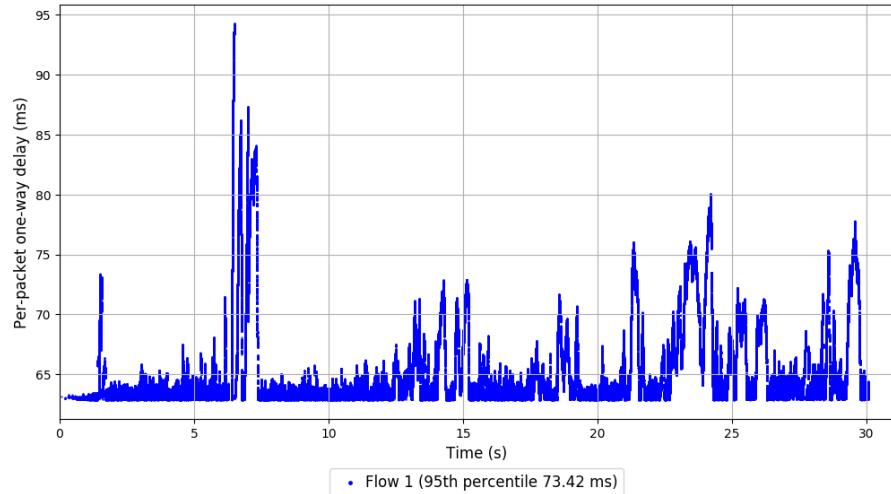
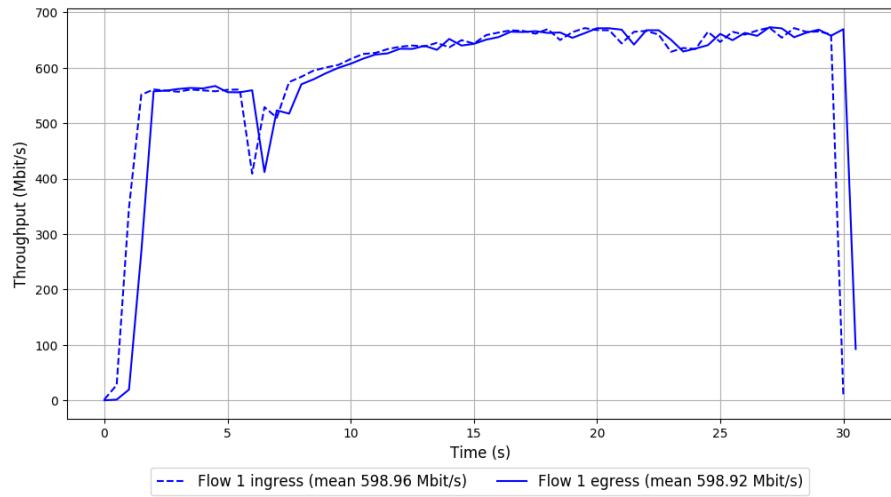


Run 2: Statistics of TCP Cubic

```
Start at: 2019-01-03 05:25:04
End at: 2019-01-03 05:25:34
Local clock offset: -0.037 ms
Remote clock offset: -0.308 ms

# Below is generated by plot.py at 2019-01-03 07:34:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 598.92 Mbit/s
95th percentile per-packet one-way delay: 73.420 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 598.92 Mbit/s
95th percentile per-packet one-way delay: 73.420 ms
Loss rate: 0.01%
```

Run 2: Report of TCP Cubic — Data Link

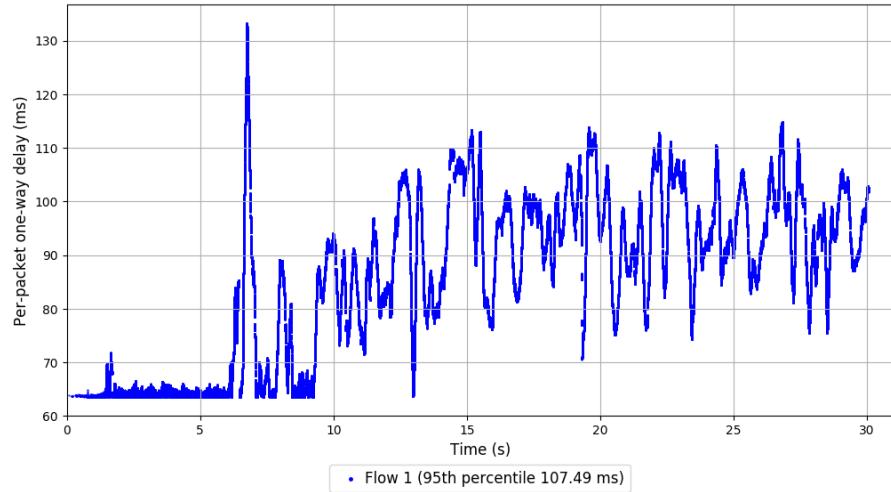
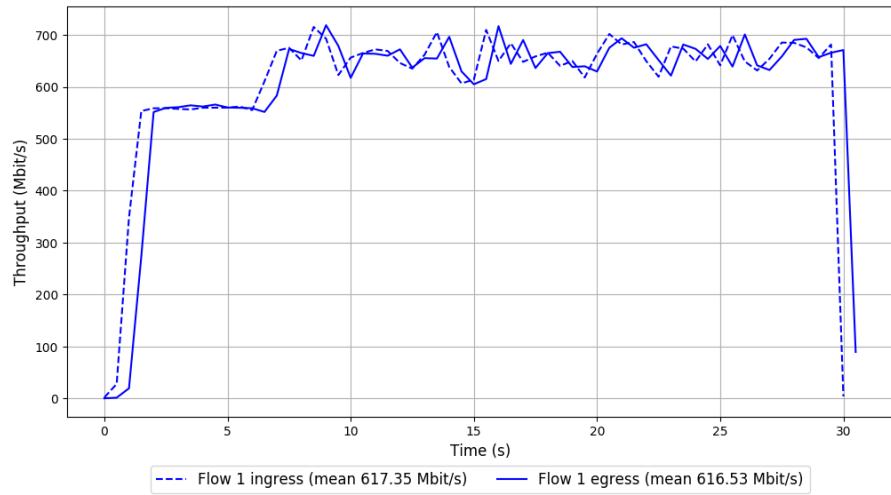


```
Run 3: Statistics of TCP Cubic
```

```
Start at: 2019-01-03 05:53:12
End at: 2019-01-03 05:53:42
Local clock offset: -0.075 ms
Remote clock offset: 0.637 ms

# Below is generated by plot.py at 2019-01-03 07:34:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 616.53 Mbit/s
95th percentile per-packet one-way delay: 107.492 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 616.53 Mbit/s
95th percentile per-packet one-way delay: 107.492 ms
Loss rate: 0.13%
```

Run 3: Report of TCP Cubic — Data Link

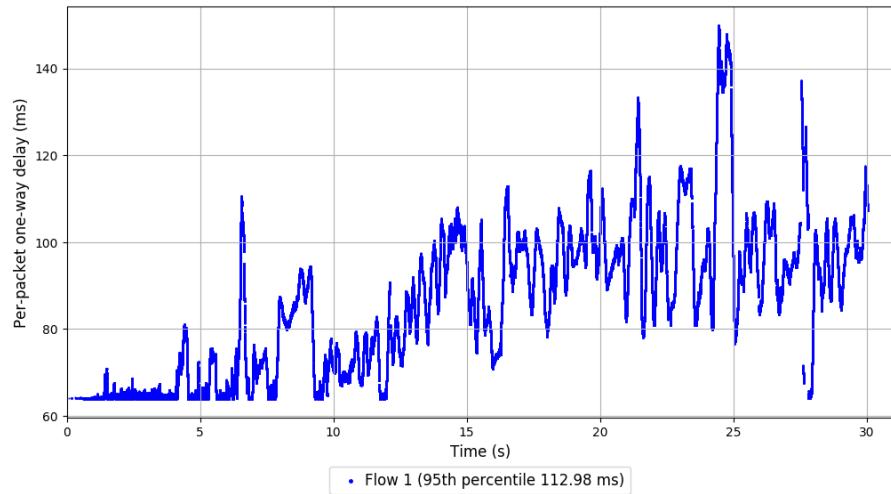
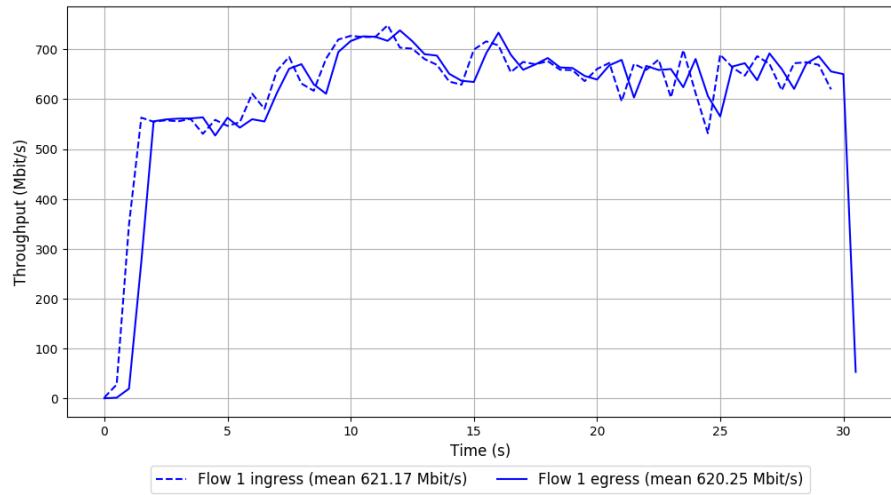


Run 4: Statistics of TCP Cubic

```
Start at: 2019-01-03 06:21:32
End at: 2019-01-03 06:22:02
Local clock offset: 0.007 ms
Remote clock offset: 1.309 ms

# Below is generated by plot.py at 2019-01-03 07:34:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 620.25 Mbit/s
95th percentile per-packet one-way delay: 112.983 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 620.25 Mbit/s
95th percentile per-packet one-way delay: 112.983 ms
Loss rate: 0.14%
```

Run 4: Report of TCP Cubic — Data Link

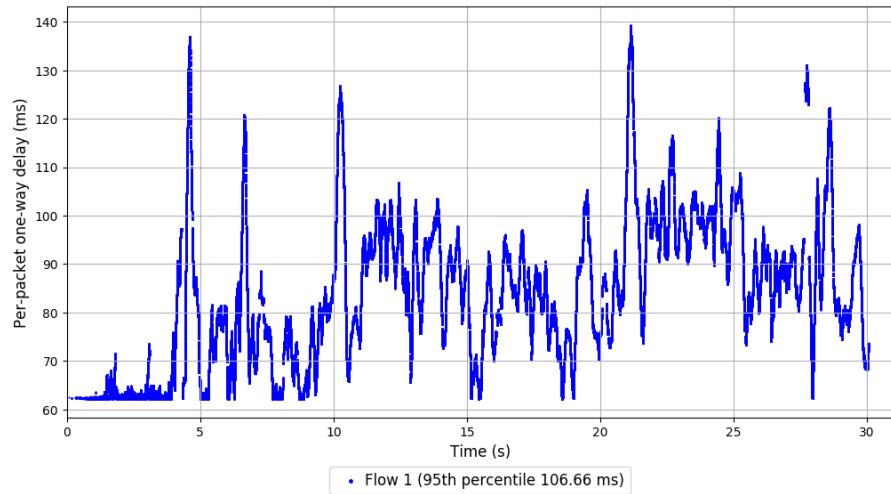
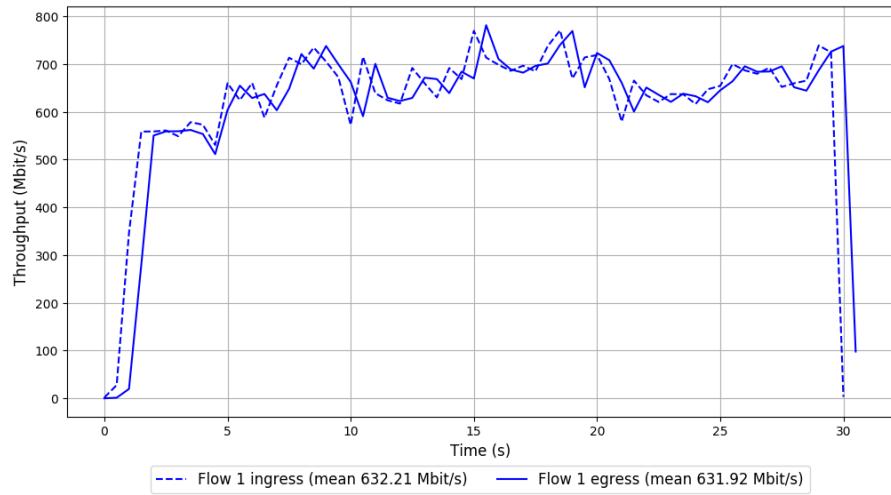


Run 5: Statistics of TCP Cubic

```
Start at: 2019-01-03 06:49:46
End at: 2019-01-03 06:50:16
Local clock offset: 0.032 ms
Remote clock offset: -0.671 ms

# Below is generated by plot.py at 2019-01-03 07:34:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 631.92 Mbit/s
95th percentile per-packet one-way delay: 106.664 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 631.92 Mbit/s
95th percentile per-packet one-way delay: 106.664 ms
Loss rate: 0.05%
```

Run 5: Report of TCP Cubic — Data Link

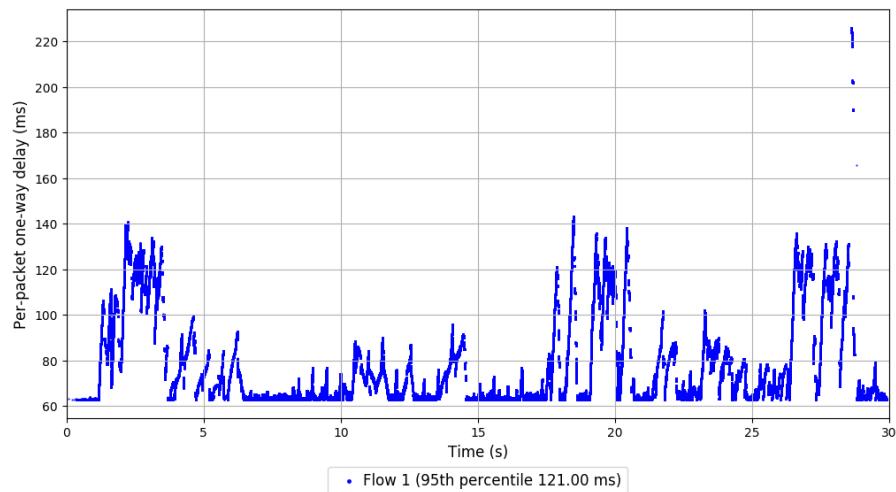
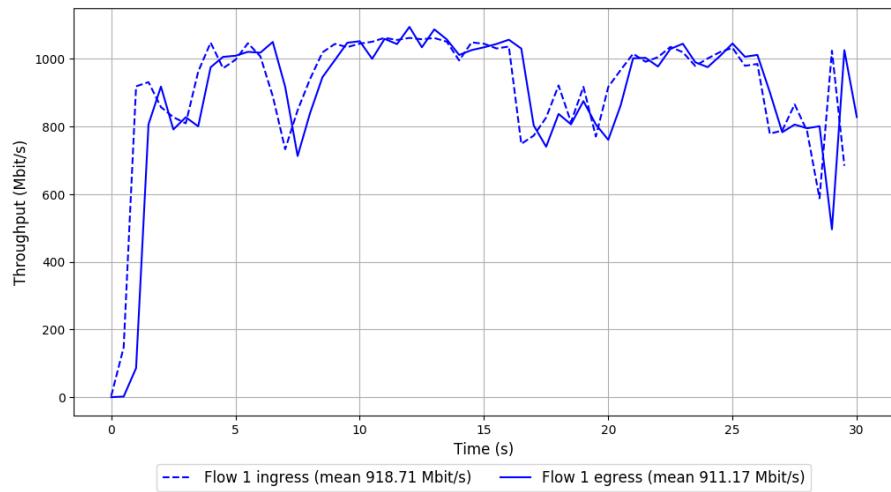


```
Run 1: Statistics of FillP

Start at: 2019-01-03 05:00:44
End at: 2019-01-03 05:01:14
Local clock offset: -0.082 ms
Remote clock offset: 0.105 ms

# Below is generated by plot.py at 2019-01-03 07:43:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 911.17 Mbit/s
95th percentile per-packet one-way delay: 120.999 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 911.17 Mbit/s
95th percentile per-packet one-way delay: 120.999 ms
Loss rate: 0.82%
```

Run 1: Report of FillP — Data Link

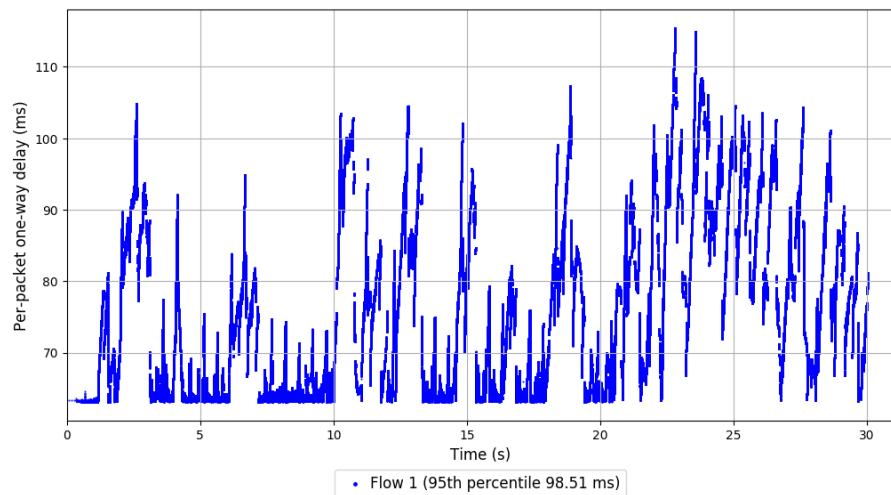
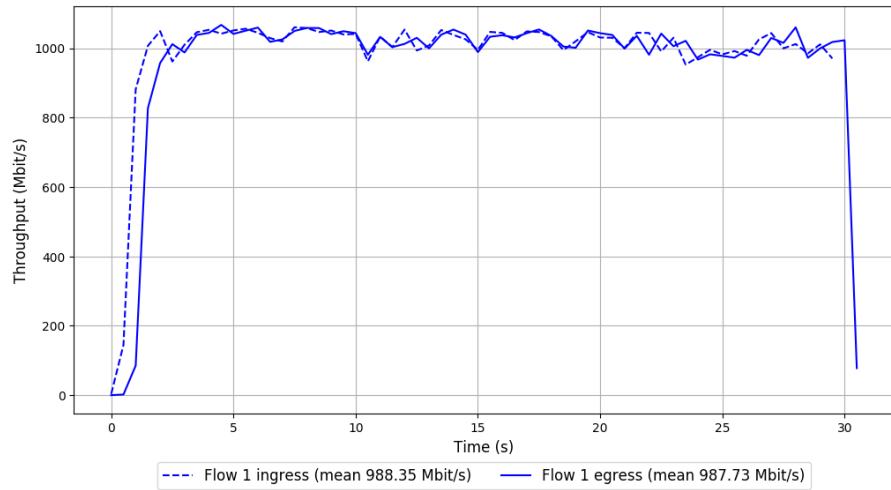


```
Run 2: Statistics of FillP
```

```
Start at: 2019-01-03 05:28:57
End at: 2019-01-03 05:29:27
Local clock offset: -0.077 ms
Remote clock offset: 0.295 ms

# Below is generated by plot.py at 2019-01-03 08:00:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 987.73 Mbit/s
95th percentile per-packet one-way delay: 98.507 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 987.73 Mbit/s
95th percentile per-packet one-way delay: 98.507 ms
Loss rate: 0.06%
```

Run 2: Report of FillP — Data Link

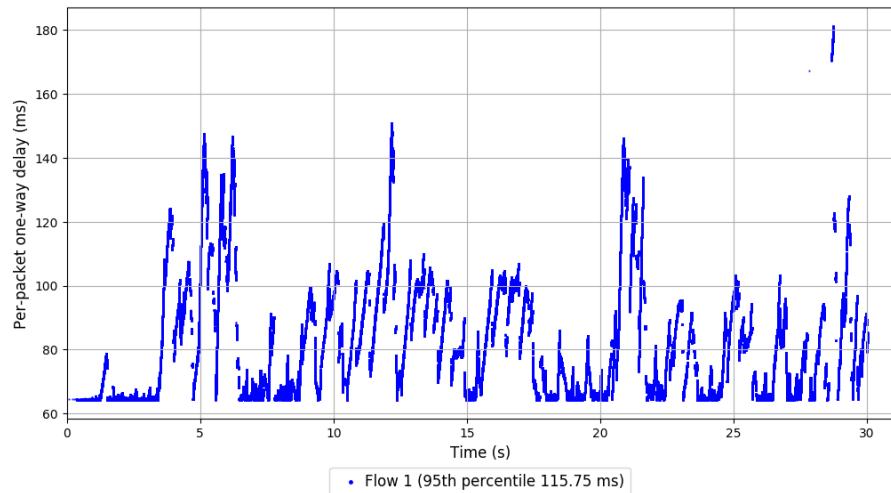
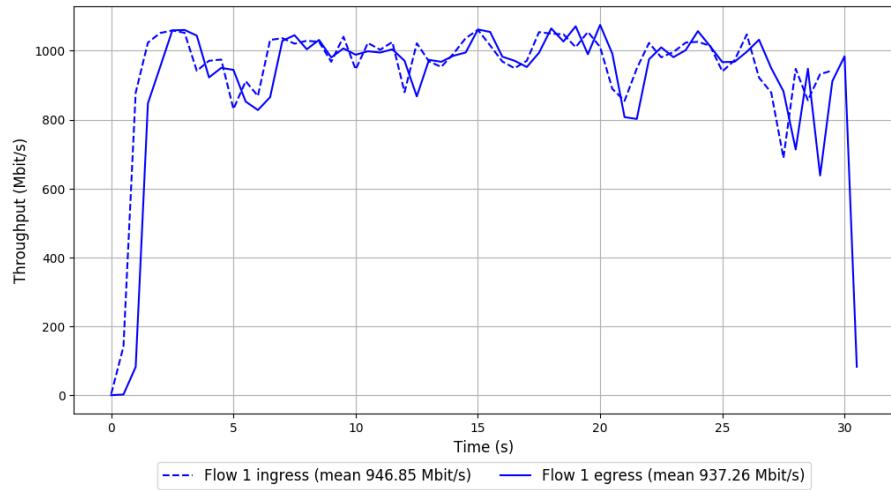


```
Run 3: Statistics of FillP
```

```
Start at: 2019-01-03 05:57:07
End at: 2019-01-03 05:57:37
Local clock offset: -0.07 ms
Remote clock offset: 1.297 ms

# Below is generated by plot.py at 2019-01-03 08:00:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 937.26 Mbit/s
95th percentile per-packet one-way delay: 115.752 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 937.26 Mbit/s
95th percentile per-packet one-way delay: 115.752 ms
Loss rate: 1.01%
```

Run 3: Report of FillP — Data Link

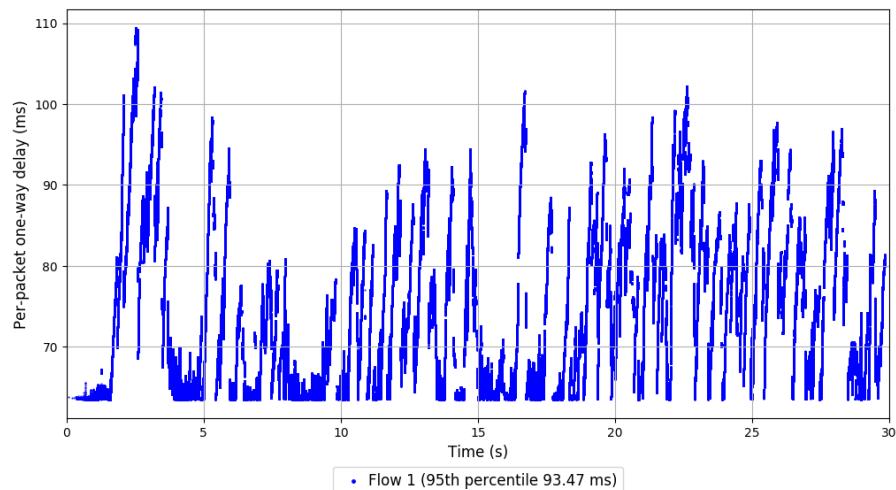
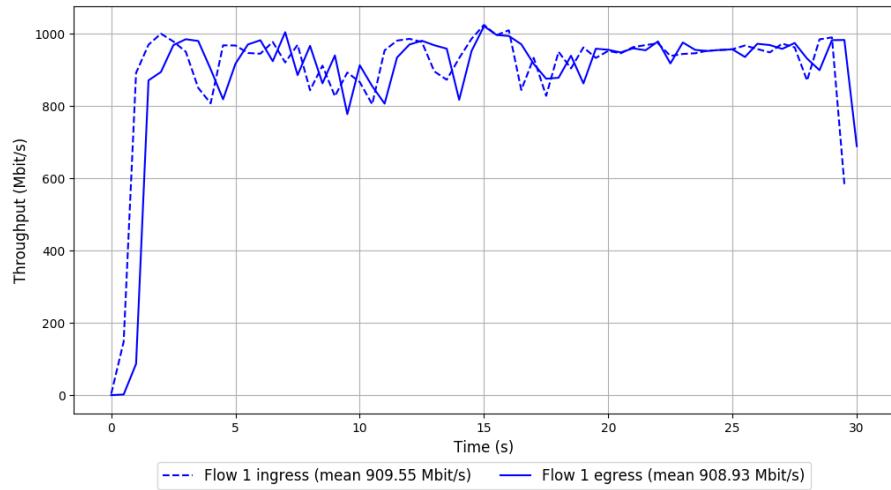


Run 4: Statistics of FillP

```
Start at: 2019-01-03 06:25:29
End at: 2019-01-03 06:25:59
Local clock offset: -0.012 ms
Remote clock offset: 0.836 ms

# Below is generated by plot.py at 2019-01-03 08:00:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 908.93 Mbit/s
95th percentile per-packet one-way delay: 93.466 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 908.93 Mbit/s
95th percentile per-packet one-way delay: 93.466 ms
Loss rate: 0.07%
```

Run 4: Report of FillP — Data Link

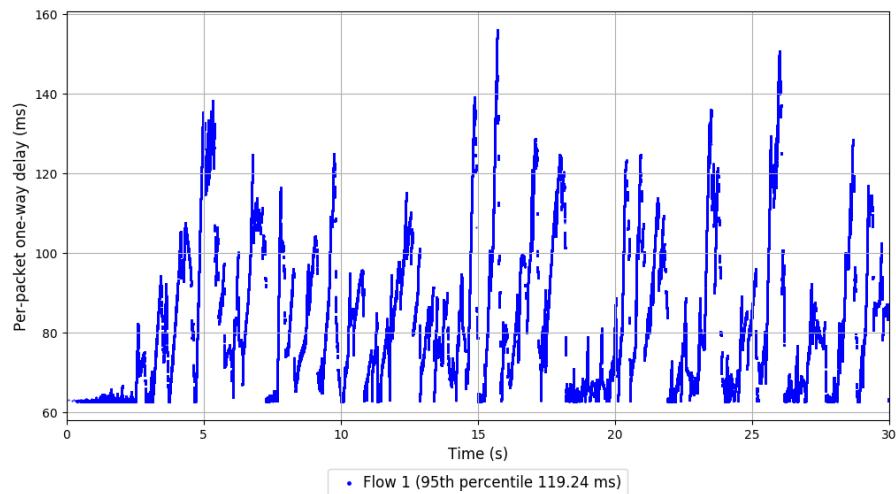
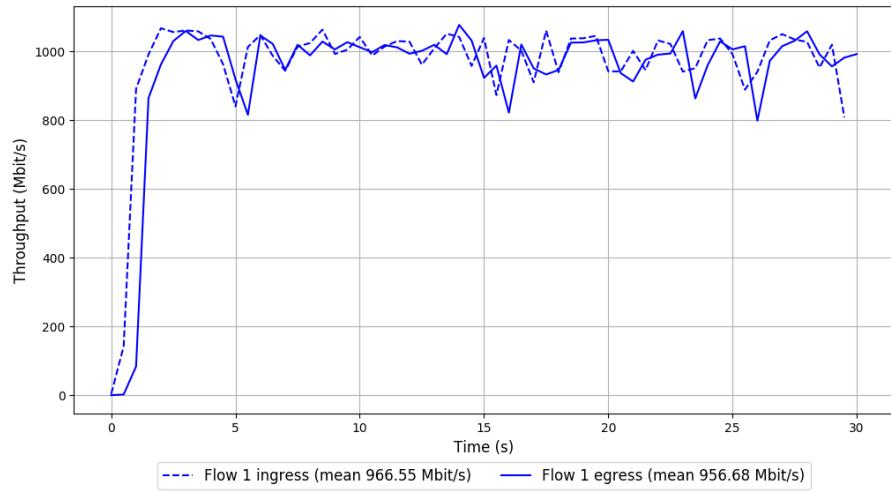


Run 5: Statistics of FillP

```
Start at: 2019-01-03 06:53:44
End at: 2019-01-03 06:54:14
Local clock offset: 0.01 ms
Remote clock offset: -0.05 ms

# Below is generated by plot.py at 2019-01-03 08:01:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 956.68 Mbit/s
95th percentile per-packet one-way delay: 119.243 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 956.68 Mbit/s
95th percentile per-packet one-way delay: 119.243 ms
Loss rate: 1.02%
```

Run 5: Report of FillP — Data Link

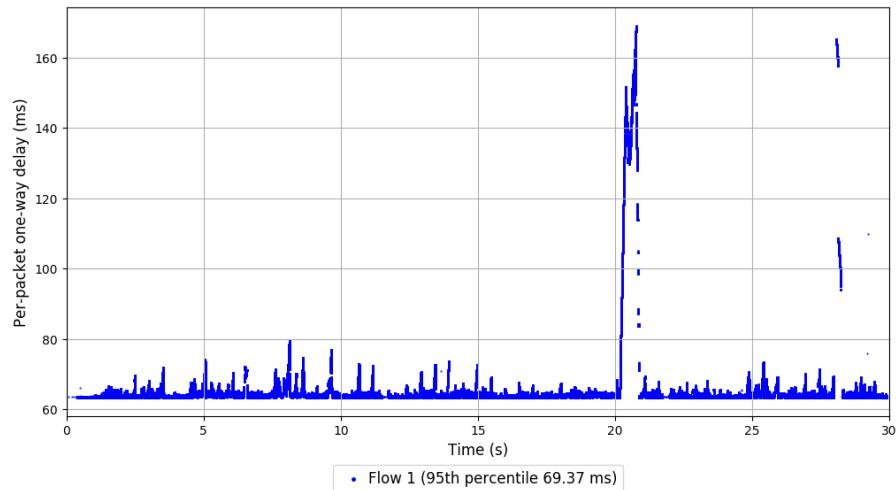
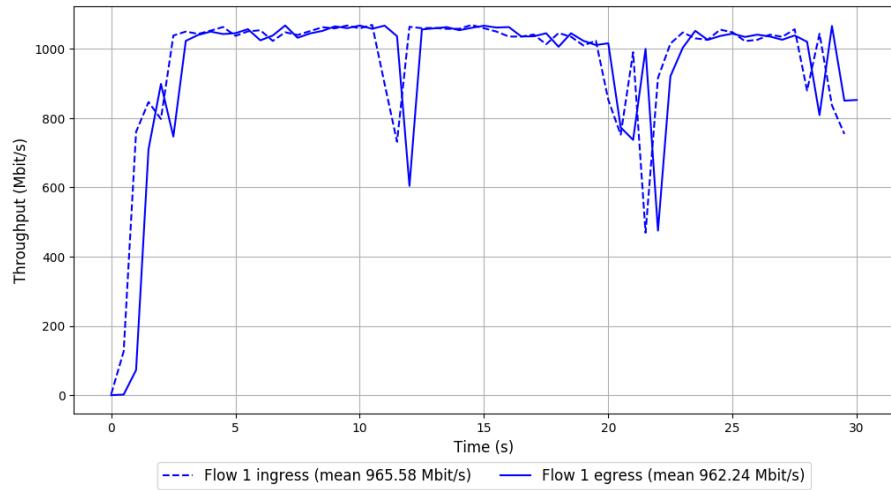


```
Run 1: Statistics of FillP-Sheep
```

```
Start at: 2019-01-03 04:52:06
End at: 2019-01-03 04:52:36
Local clock offset: -0.032 ms
Remote clock offset: 0.4 ms

# Below is generated by plot.py at 2019-01-03 08:01:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 962.24 Mbit/s
95th percentile per-packet one-way delay: 69.371 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 962.24 Mbit/s
95th percentile per-packet one-way delay: 69.371 ms
Loss rate: 0.35%
```

Run 1: Report of FillP-Sheep — Data Link

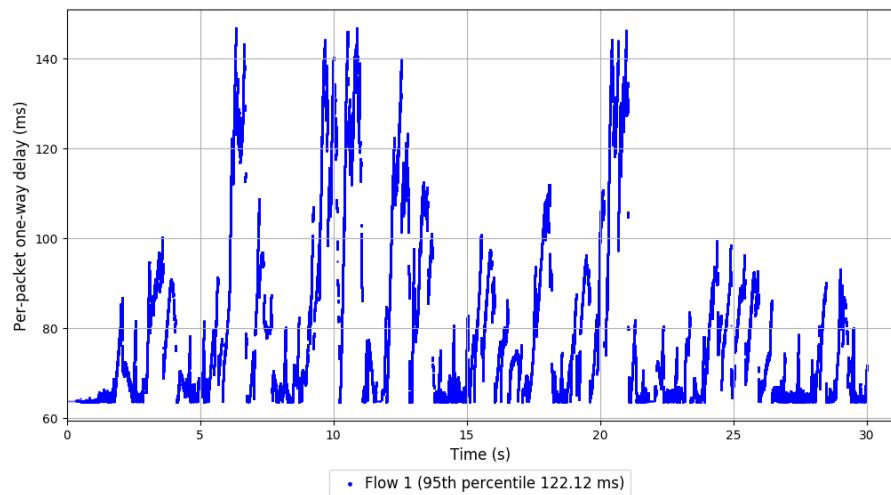
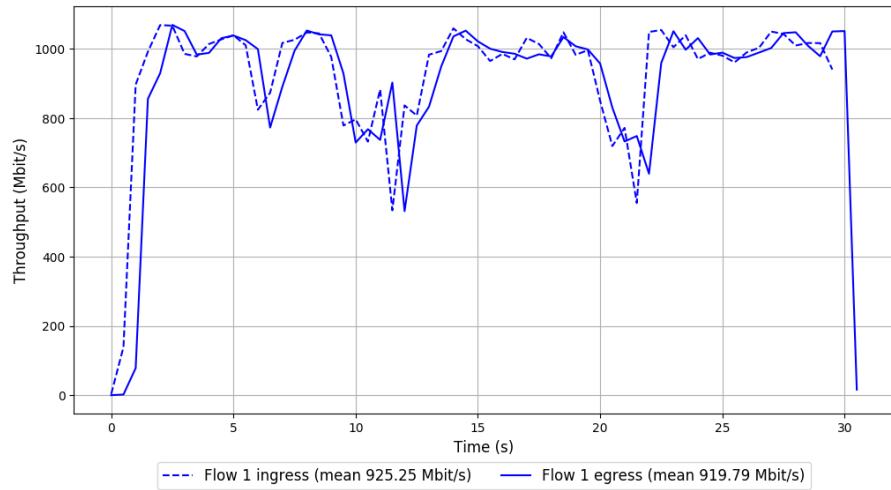


Run 2: Statistics of FillP-Sheep

```
Start at: 2019-01-03 05:20:27
End at: 2019-01-03 05:20:57
Local clock offset: -0.035 ms
Remote clock offset: 0.754 ms

# Below is generated by plot.py at 2019-01-03 08:01:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 919.79 Mbit/s
95th percentile per-packet one-way delay: 122.117 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 919.79 Mbit/s
95th percentile per-packet one-way delay: 122.117 ms
Loss rate: 0.59%
```

Run 2: Report of FillP-Sheep — Data Link

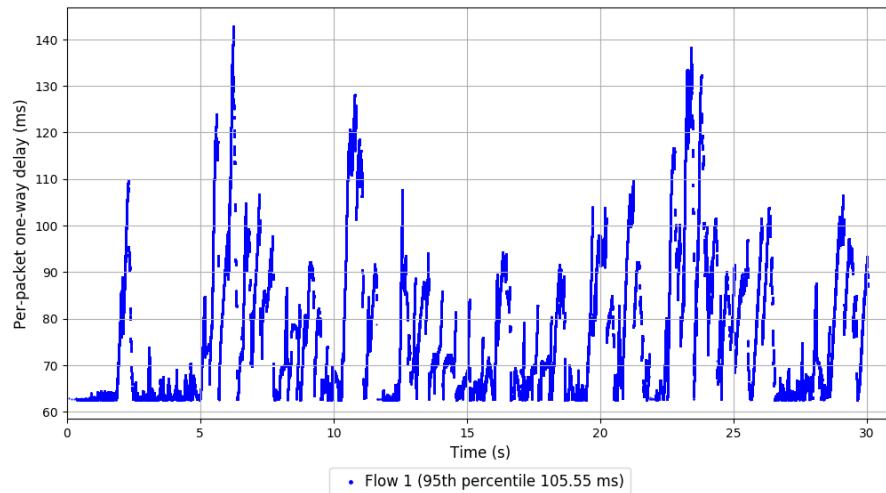
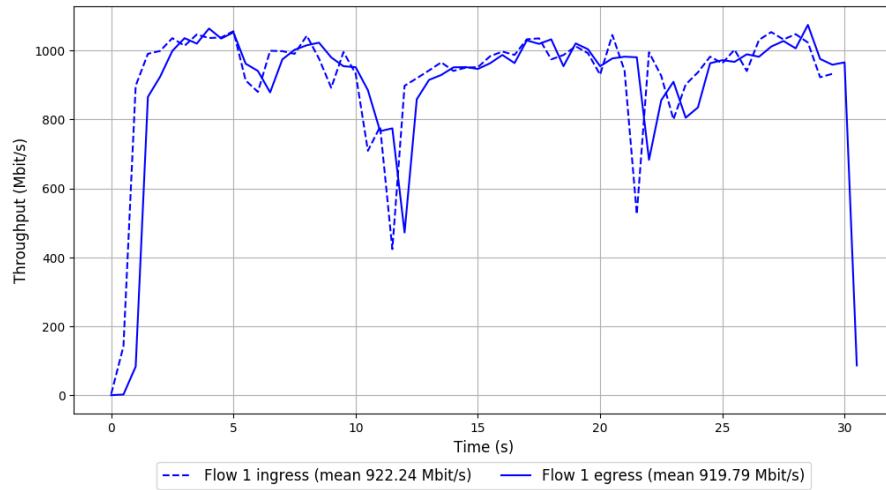


```
Run 3: Statistics of FillP-Sheep
```

```
Start at: 2019-01-03 05:48:36
End at: 2019-01-03 05:49:06
Local clock offset: -0.062 ms
Remote clock offset: -0.413 ms

# Below is generated by plot.py at 2019-01-03 08:01:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 919.79 Mbit/s
95th percentile per-packet one-way delay: 105.545 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 919.79 Mbit/s
95th percentile per-packet one-way delay: 105.545 ms
Loss rate: 0.26%
```

Run 3: Report of FillP-Sheep — Data Link

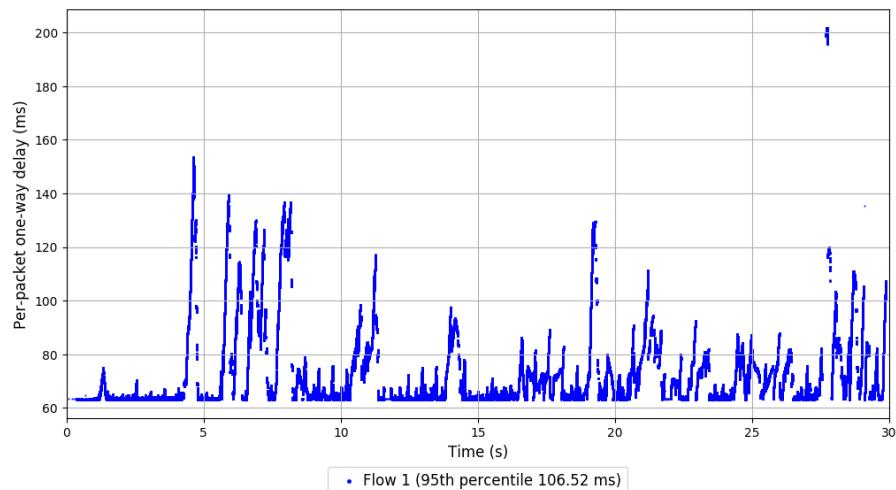
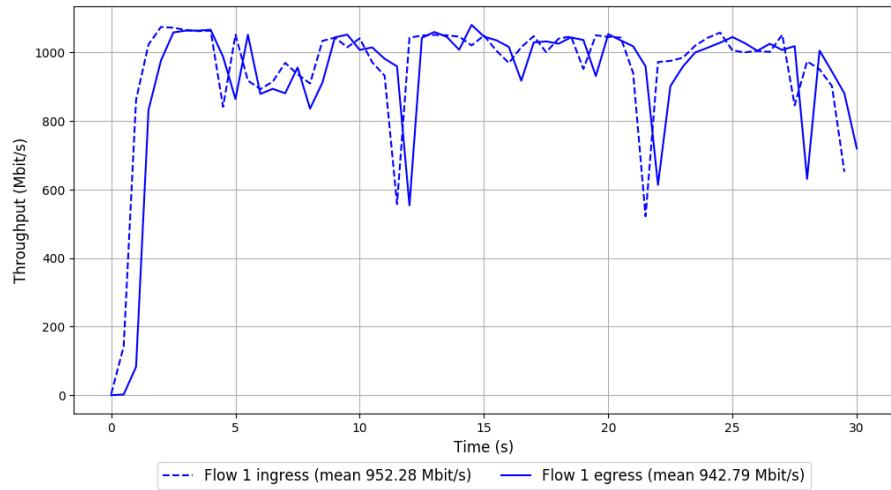


Run 4: Statistics of FillP-Sheep

```
Start at: 2019-01-03 06:16:55
End at: 2019-01-03 06:17:25
Local clock offset: 0.013 ms
Remote clock offset: 0.471 ms

# Below is generated by plot.py at 2019-01-03 08:13:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 942.79 Mbit/s
95th percentile per-packet one-way delay: 106.518 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 942.79 Mbit/s
95th percentile per-packet one-way delay: 106.518 ms
Loss rate: 0.99%
```

Run 4: Report of FillP-Sheep — Data Link

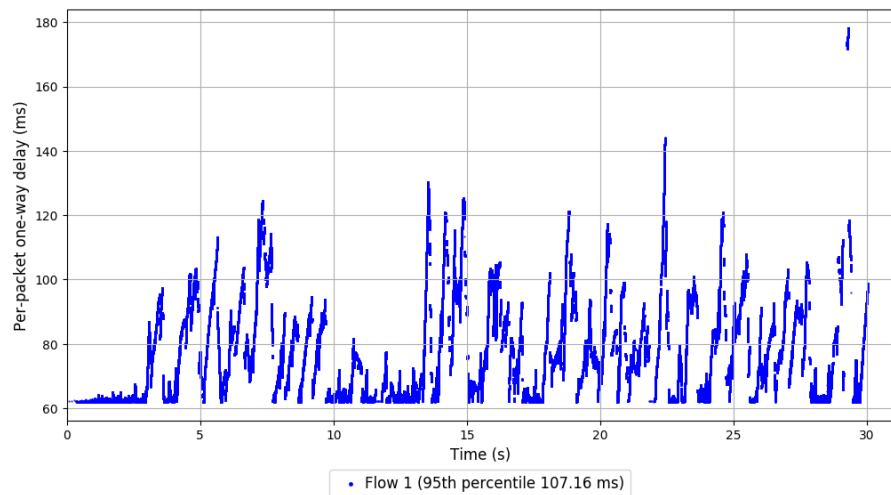
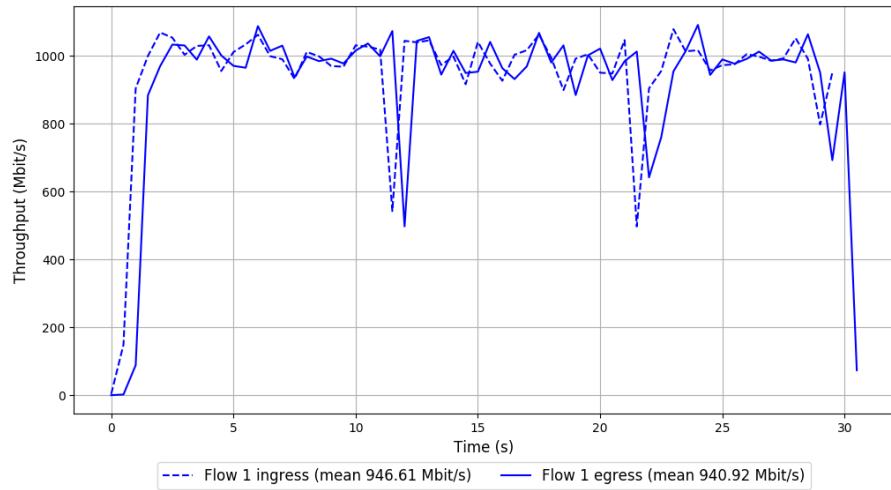


Run 5: Statistics of FillP-Sheep

```
Start at: 2019-01-03 06:45:08
End at: 2019-01-03 06:45:38
Local clock offset: -0.01 ms
Remote clock offset: -0.904 ms

# Below is generated by plot.py at 2019-01-03 08:27:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 940.92 Mbit/s
95th percentile per-packet one-way delay: 107.156 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 940.92 Mbit/s
95th percentile per-packet one-way delay: 107.156 ms
Loss rate: 0.60%
```

Run 5: Report of FillP-Sheep — Data Link

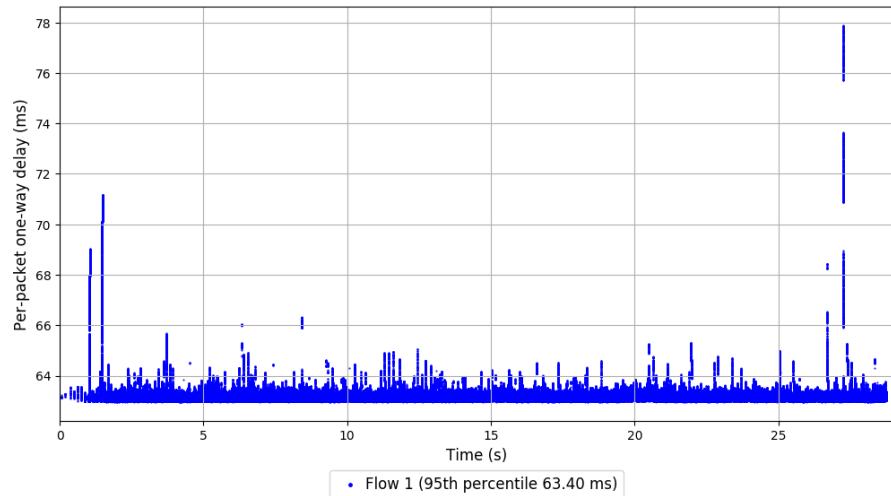
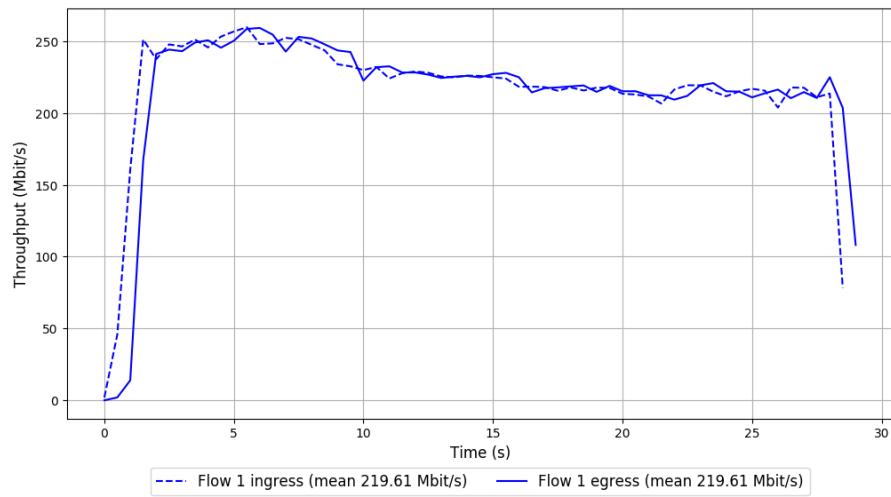


Run 1: Statistics of Indigo

```
Start at: 2019-01-03 04:53:54
End at: 2019-01-03 04:54:24
Local clock offset: -0.05 ms
Remote clock offset: 0.195 ms

# Below is generated by plot.py at 2019-01-03 08:27:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 219.61 Mbit/s
95th percentile per-packet one-way delay: 63.397 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 219.61 Mbit/s
95th percentile per-packet one-way delay: 63.397 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo — Data Link

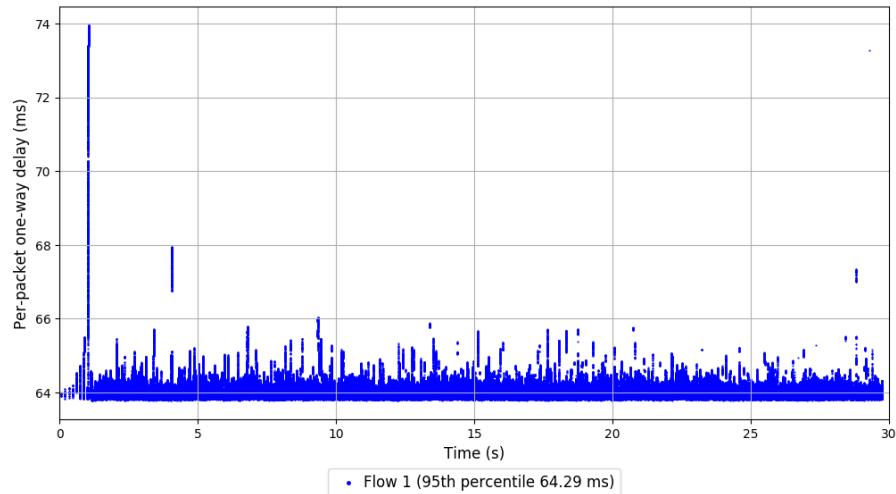
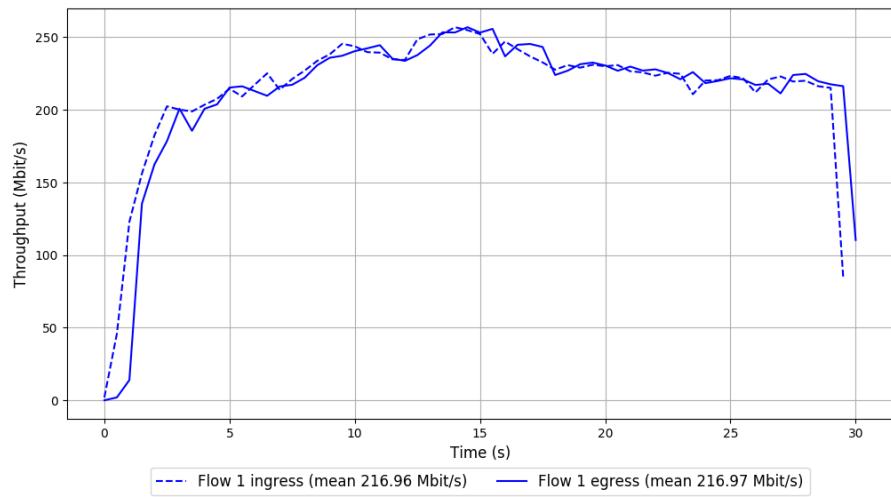


Run 2: Statistics of Indigo

```
Start at: 2019-01-03 05:22:11
End at: 2019-01-03 05:22:41
Local clock offset: -0.069 ms
Remote clock offset: 0.631 ms

# Below is generated by plot.py at 2019-01-03 08:27:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 216.97 Mbit/s
95th percentile per-packet one-way delay: 64.288 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 216.97 Mbit/s
95th percentile per-packet one-way delay: 64.288 ms
Loss rate: 0.00%
```

Run 2: Report of Indigo — Data Link

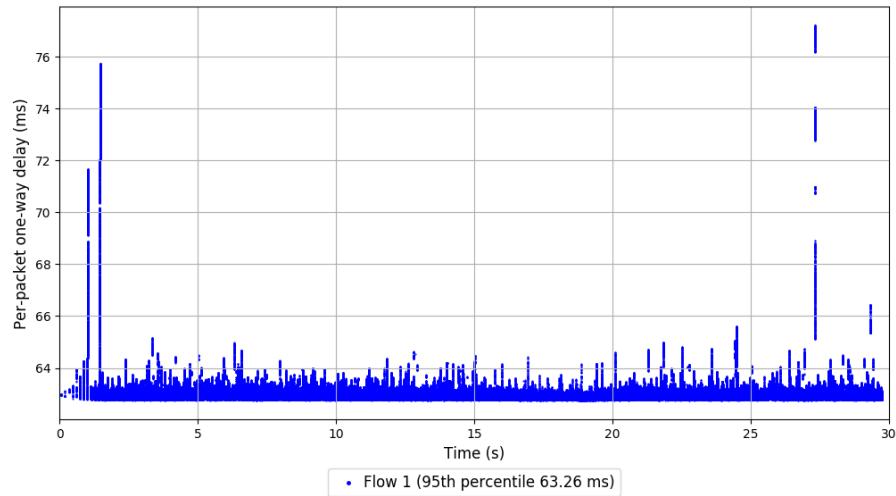
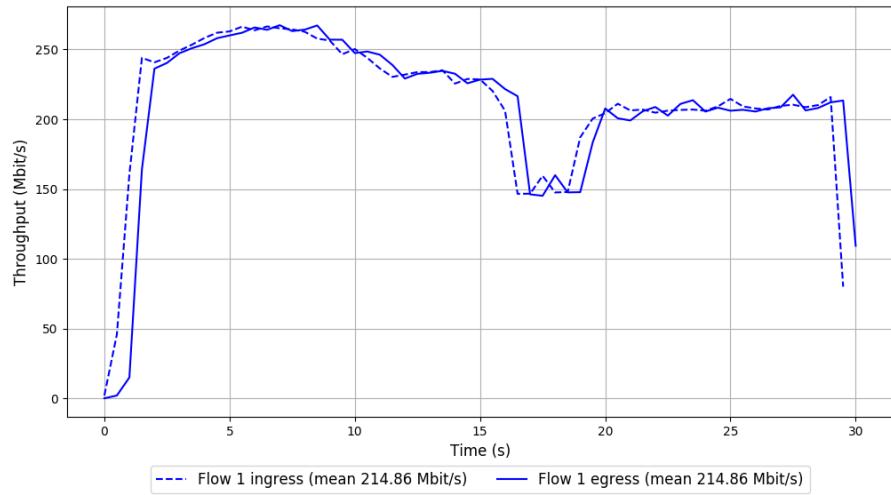


Run 3: Statistics of Indigo

```
Start at: 2019-01-03 05:50:21
End at: 2019-01-03 05:50:51
Local clock offset: -0.04 ms
Remote clock offset: 0.148 ms

# Below is generated by plot.py at 2019-01-03 08:27:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 214.86 Mbit/s
95th percentile per-packet one-way delay: 63.256 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 214.86 Mbit/s
95th percentile per-packet one-way delay: 63.256 ms
Loss rate: 0.00%
```

Run 3: Report of Indigo — Data Link

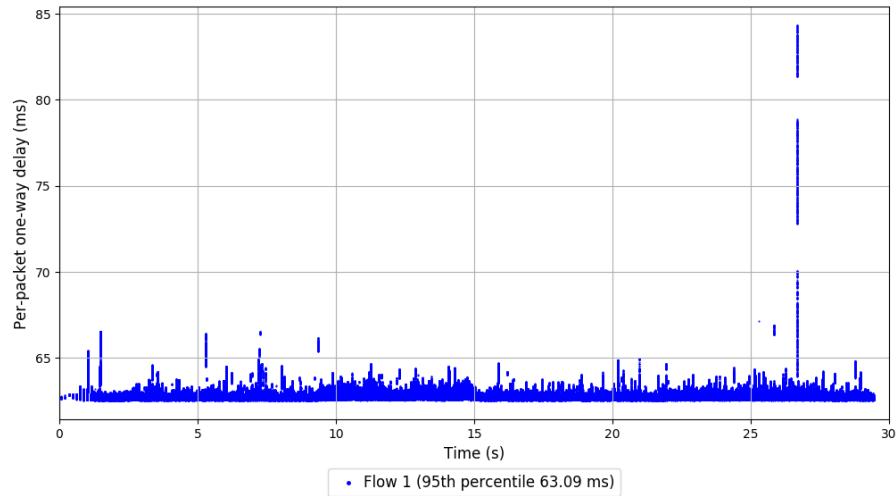
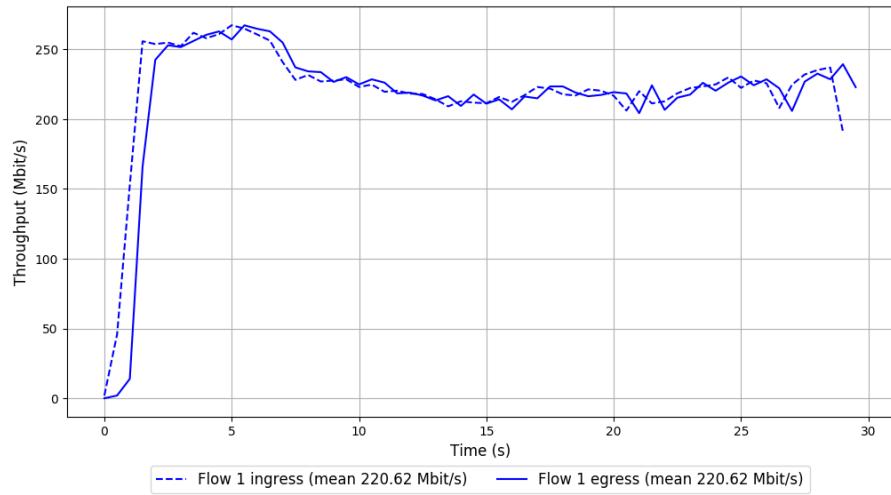


Run 4: Statistics of Indigo

```
Start at: 2019-01-03 06:18:42
End at: 2019-01-03 06:19:12
Local clock offset: -0.028 ms
Remote clock offset: -0.092 ms

# Below is generated by plot.py at 2019-01-03 08:27:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 220.62 Mbit/s
95th percentile per-packet one-way delay: 63.091 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 220.62 Mbit/s
95th percentile per-packet one-way delay: 63.091 ms
Loss rate: 0.00%
```

Run 4: Report of Indigo — Data Link

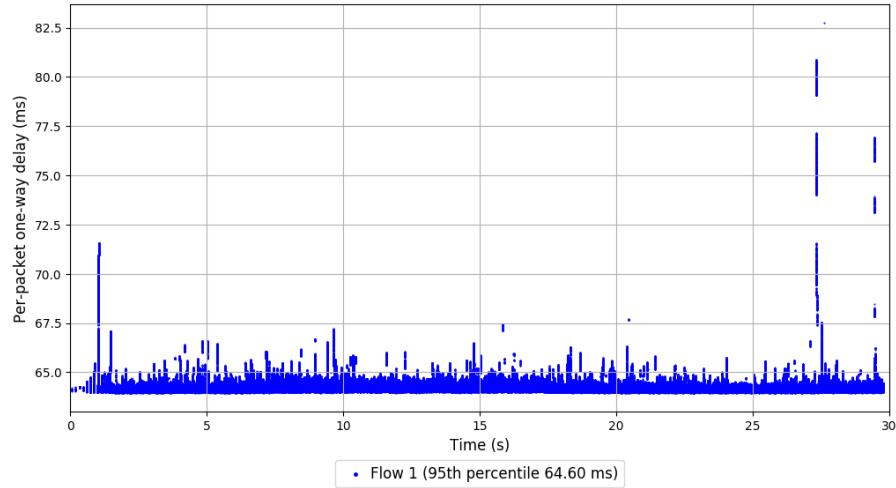
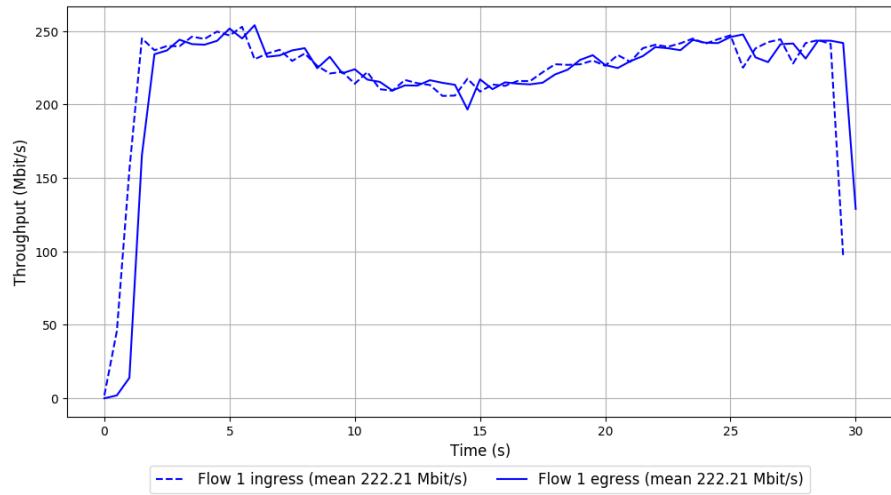


Run 5: Statistics of Indigo

```
Start at: 2019-01-03 06:46:54
End at: 2019-01-03 06:47:24
Local clock offset: 0.004 ms
Remote clock offset: 1.155 ms

# Below is generated by plot.py at 2019-01-03 08:27:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 222.21 Mbit/s
95th percentile per-packet one-way delay: 64.596 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 222.21 Mbit/s
95th percentile per-packet one-way delay: 64.596 ms
Loss rate: 0.00%
```

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-MusesD

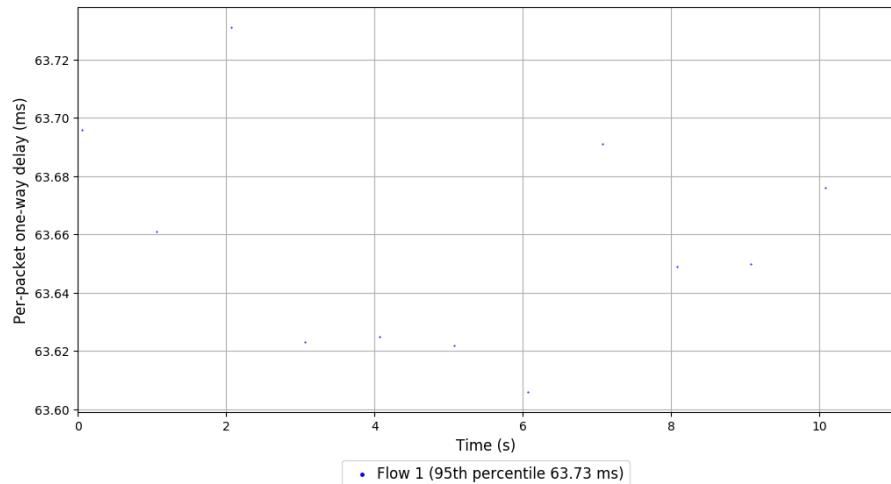
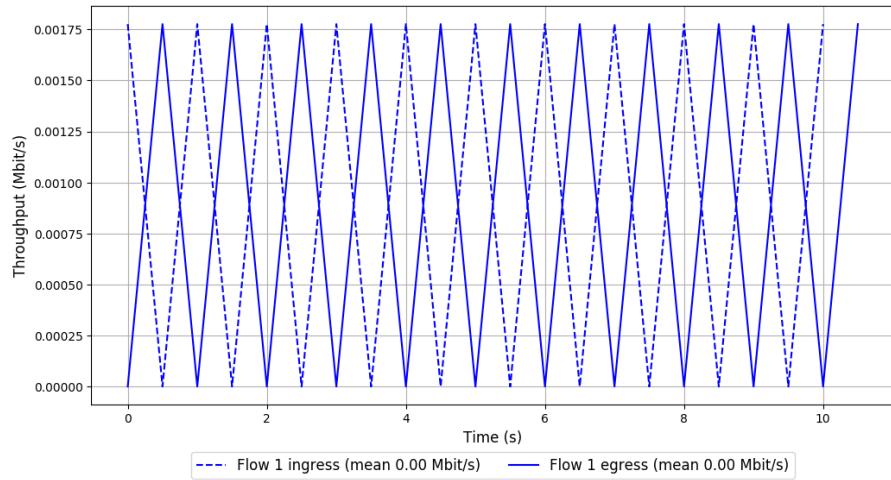
Start at: 2019-01-03 04:37:53

End at: 2019-01-03 04:38:23

Local clock offset: -0.054 ms

Remote clock offset: 0.608 ms

Run 1: Report of Indigo-MusesD — Data Link

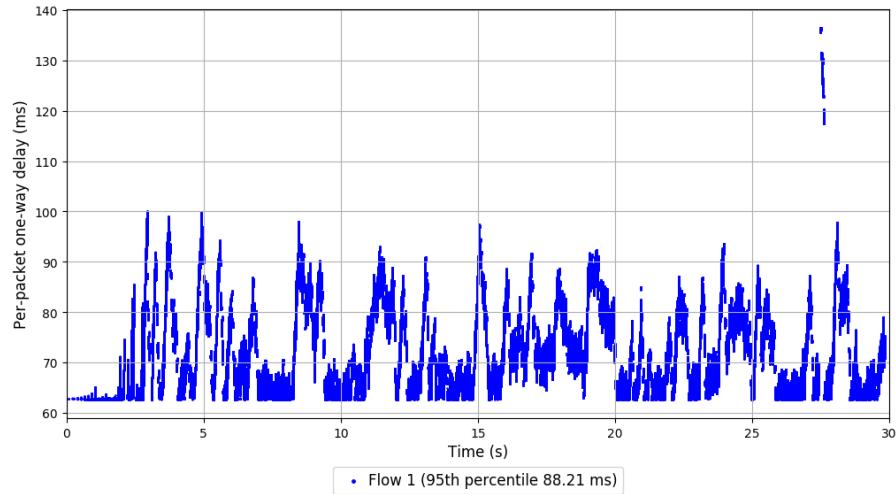
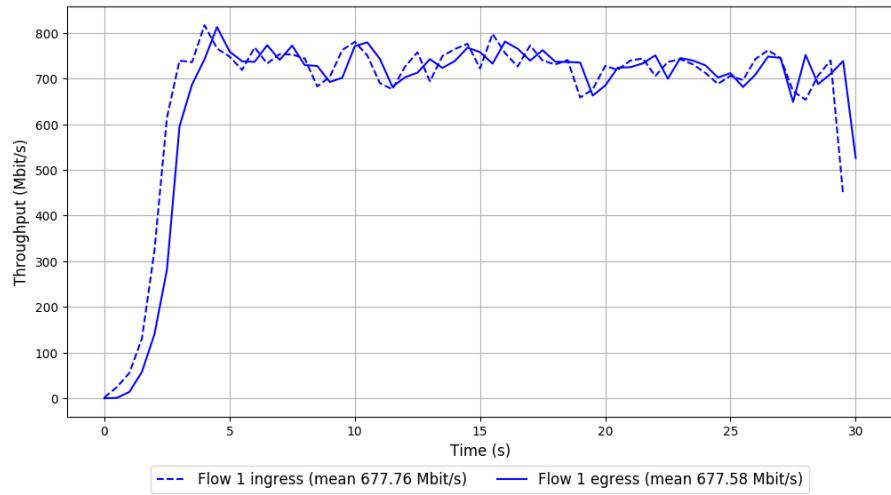


Run 2: Statistics of Indigo-MusesD

```
Start at: 2019-01-03 05:05:35
End at: 2019-01-03 05:06:05
Local clock offset: -0.06 ms
Remote clock offset: -0.099 ms

# Below is generated by plot.py at 2019-01-03 08:27:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 677.58 Mbit/s
95th percentile per-packet one-way delay: 88.207 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 677.58 Mbit/s
95th percentile per-packet one-way delay: 88.207 ms
Loss rate: 0.02%
```

Run 2: Report of Indigo-MusesD — Data Link

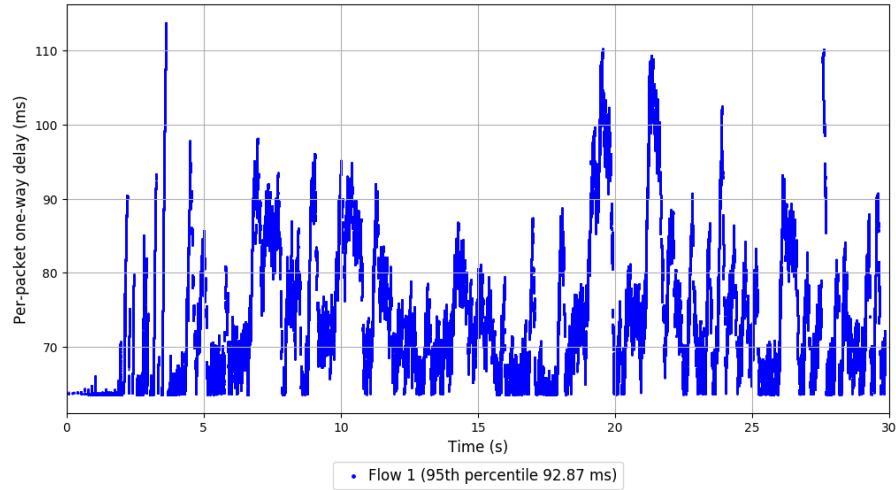
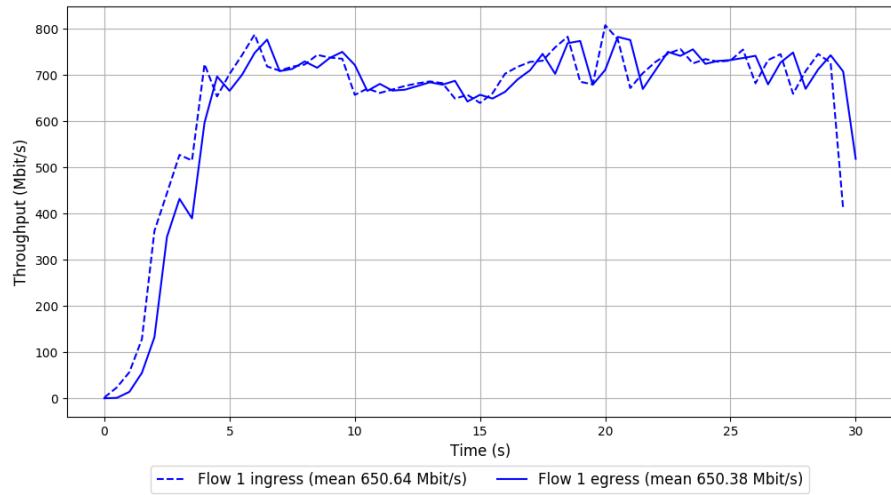


Run 3: Statistics of Indigo-MusesD

```
Start at: 2019-01-03 05:33:43
End at: 2019-01-03 05:34:13
Local clock offset: -0.115 ms
Remote clock offset: 0.428 ms

# Below is generated by plot.py at 2019-01-03 08:27:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 650.38 Mbit/s
95th percentile per-packet one-way delay: 92.868 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 650.38 Mbit/s
95th percentile per-packet one-way delay: 92.868 ms
Loss rate: 0.04%
```

Run 3: Report of Indigo-MusesD — Data Link

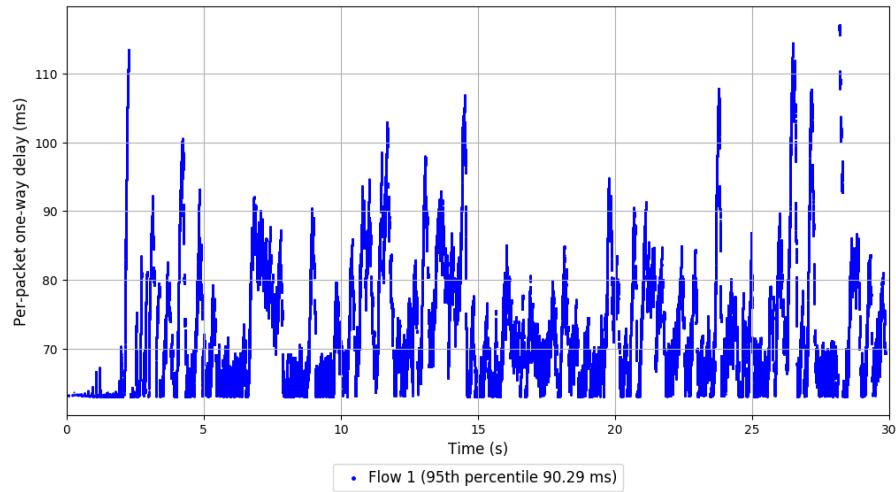
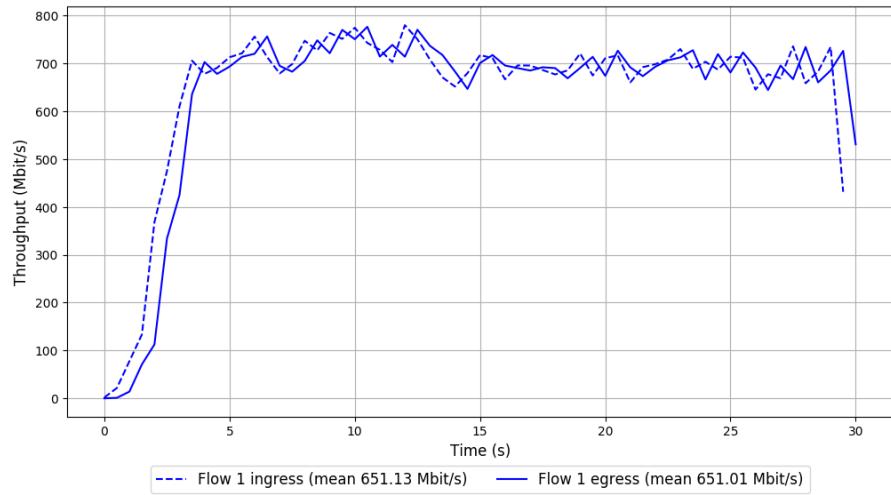


Run 4: Statistics of Indigo-MusesD

```
Start at: 2019-01-03 06:02:00
End at: 2019-01-03 06:02:30
Local clock offset: -0.045 ms
Remote clock offset: -0.118 ms

# Below is generated by plot.py at 2019-01-03 08:27:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 651.01 Mbit/s
95th percentile per-packet one-way delay: 90.287 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 651.01 Mbit/s
95th percentile per-packet one-way delay: 90.287 ms
Loss rate: 0.02%
```

Run 4: Report of Indigo-MusesD — Data Link

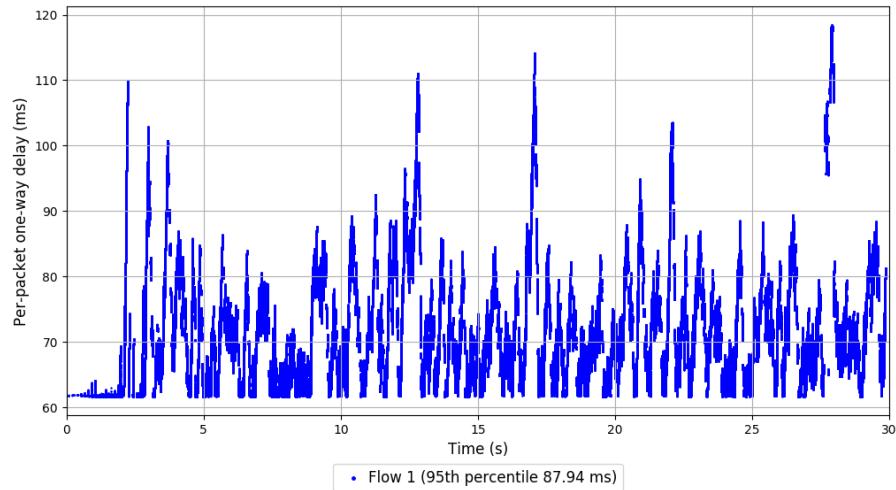
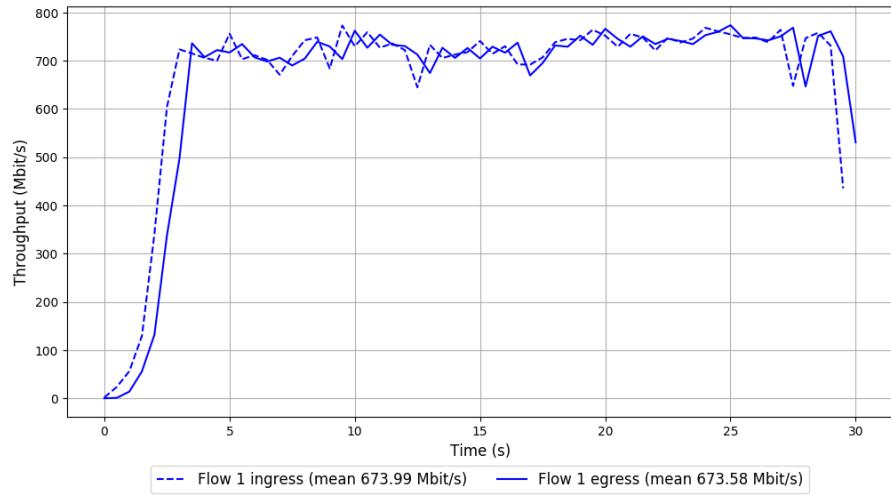


Run 5: Statistics of Indigo-MusesD

```
Start at: 2019-01-03 06:30:20
End at: 2019-01-03 06:30:50
Local clock offset: -0.03 ms
Remote clock offset: -1.27 ms

# Below is generated by plot.py at 2019-01-03 08:27:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 673.58 Mbit/s
95th percentile per-packet one-way delay: 87.942 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 673.58 Mbit/s
95th percentile per-packet one-way delay: 87.942 ms
Loss rate: 0.06%
```

Run 5: Report of Indigo-MusesD — Data Link

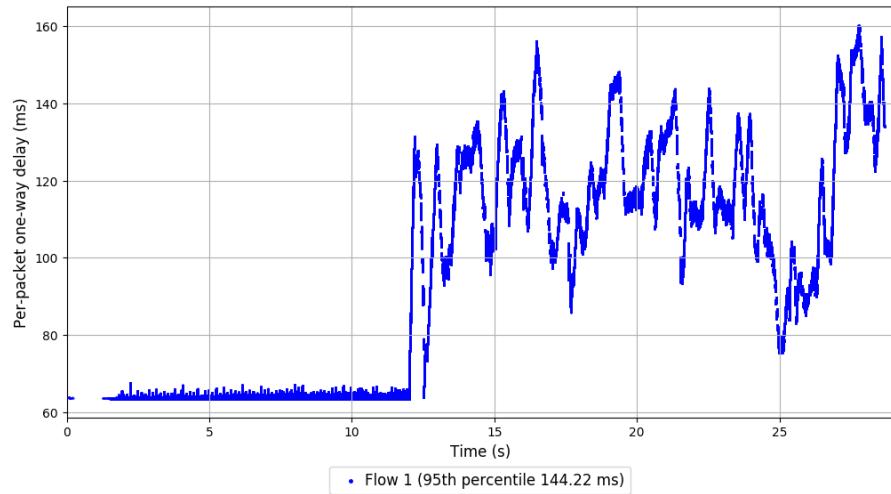
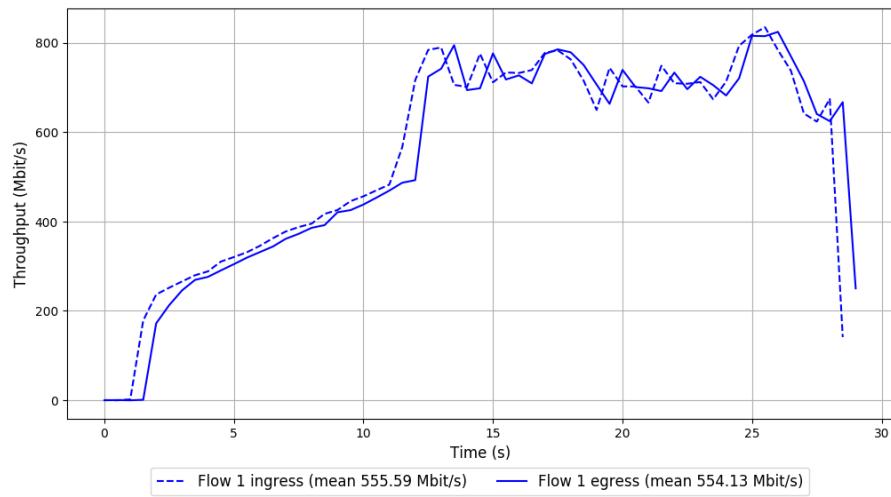


Run 1: Statistics of Indigo-MusesT

```
Start at: 2019-01-03 04:50:31
End at: 2019-01-03 04:51:01
Local clock offset: -0.062 ms
Remote clock offset: 0.444 ms

# Below is generated by plot.py at 2019-01-03 08:27:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 554.13 Mbit/s
95th percentile per-packet one-way delay: 144.218 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 554.13 Mbit/s
95th percentile per-packet one-way delay: 144.218 ms
Loss rate: 0.26%
```

Run 1: Report of Indigo-MusesT — Data Link

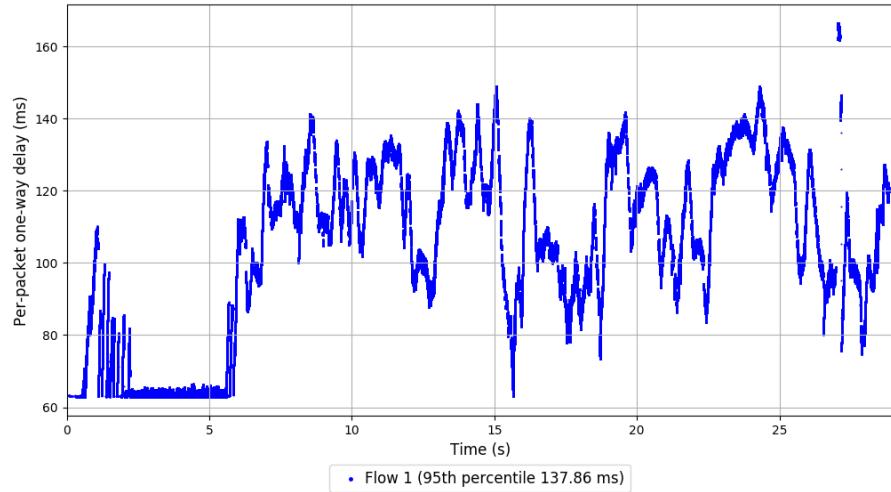
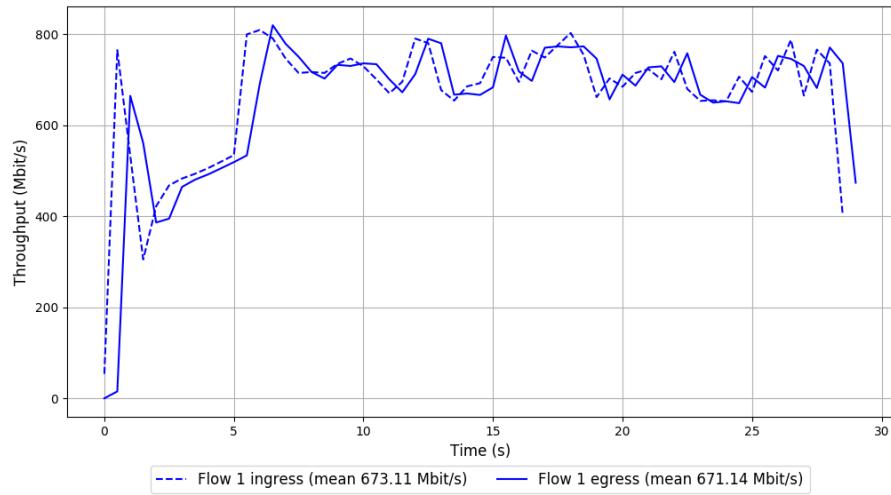


Run 2: Statistics of Indigo-MusesT

```
Start at: 2019-01-03 05:18:47
End at: 2019-01-03 05:19:17
Local clock offset: -0.03 ms
Remote clock offset: -0.148 ms

# Below is generated by plot.py at 2019-01-03 08:28:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 671.14 Mbit/s
95th percentile per-packet one-way delay: 137.862 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 671.14 Mbit/s
95th percentile per-packet one-way delay: 137.862 ms
Loss rate: 0.29%
```

Run 2: Report of Indigo-MusesT — Data Link

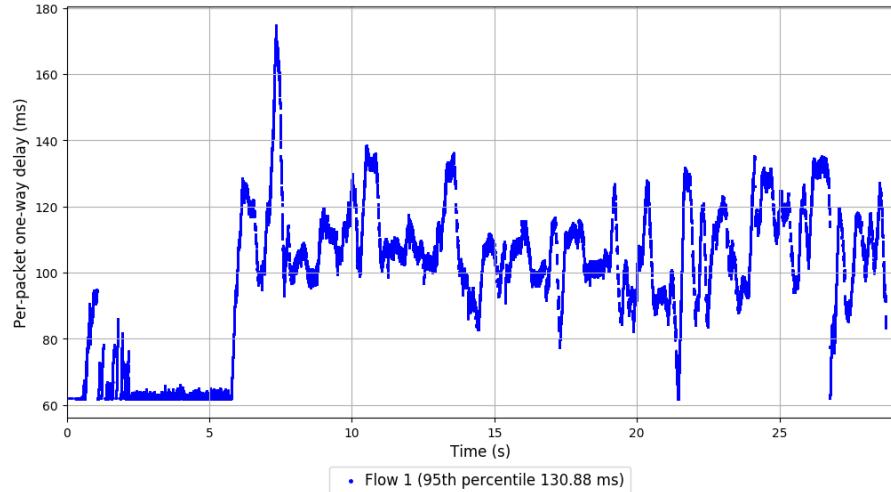
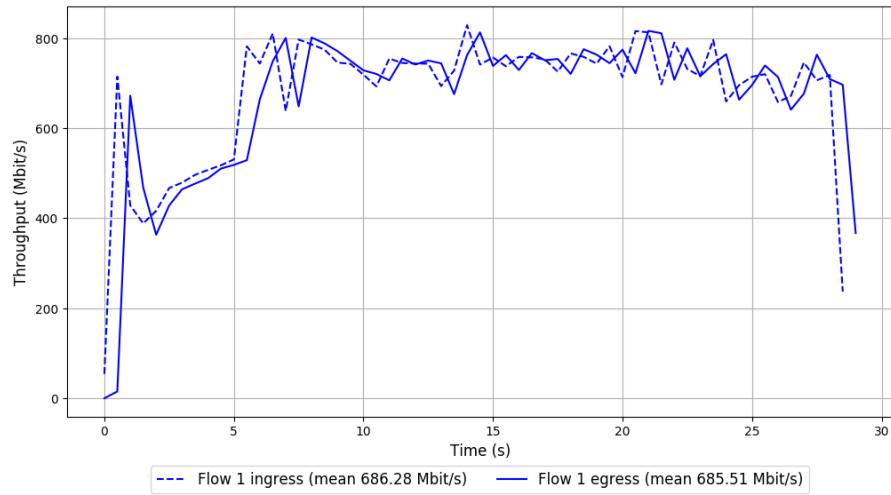


Run 3: Statistics of Indigo-MusesT

```
Start at: 2019-01-03 05:46:55
End at: 2019-01-03 05:47:25
Local clock offset: -0.052 ms
Remote clock offset: -1.256 ms

# Below is generated by plot.py at 2019-01-03 08:30:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 685.51 Mbit/s
95th percentile per-packet one-way delay: 130.884 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 685.51 Mbit/s
95th percentile per-packet one-way delay: 130.884 ms
Loss rate: 0.11%
```

Run 3: Report of Indigo-MusesT — Data Link

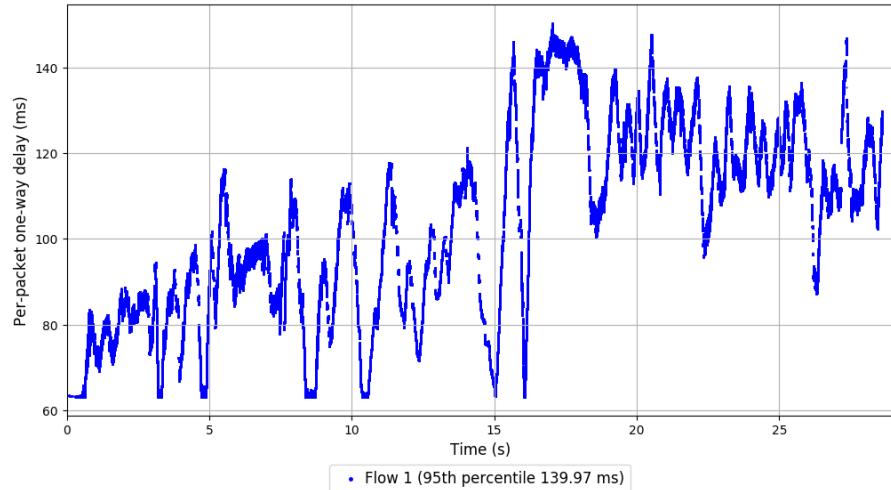
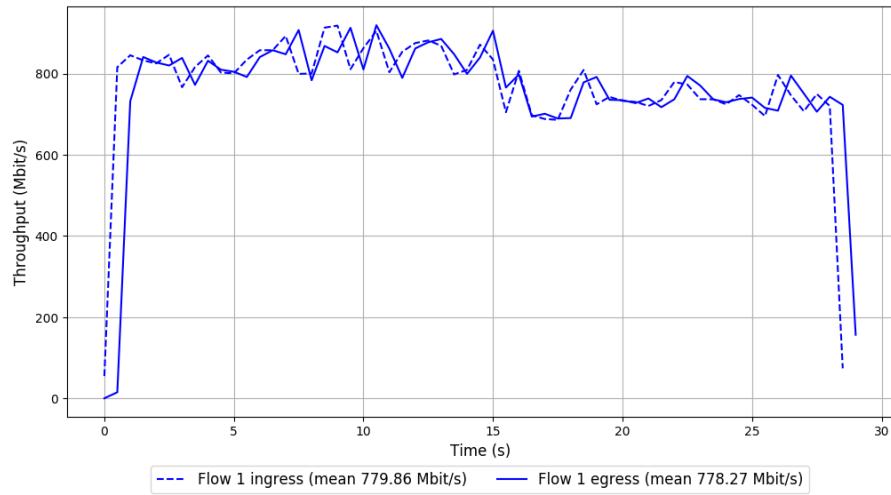


Run 4: Statistics of Indigo-MusesT

```
Start at: 2019-01-03 06:15:09
End at: 2019-01-03 06:15:39
Local clock offset: -0.009 ms
Remote clock offset: 0.242 ms

# Below is generated by plot.py at 2019-01-03 08:36:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 778.27 Mbit/s
95th percentile per-packet one-way delay: 139.968 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 778.27 Mbit/s
95th percentile per-packet one-way delay: 139.968 ms
Loss rate: 0.20%
```

Run 4: Report of Indigo-MusesT — Data Link

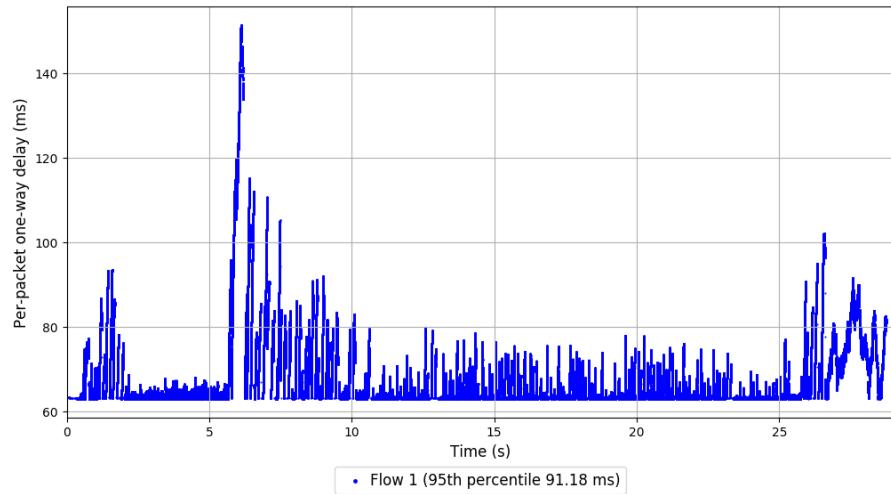
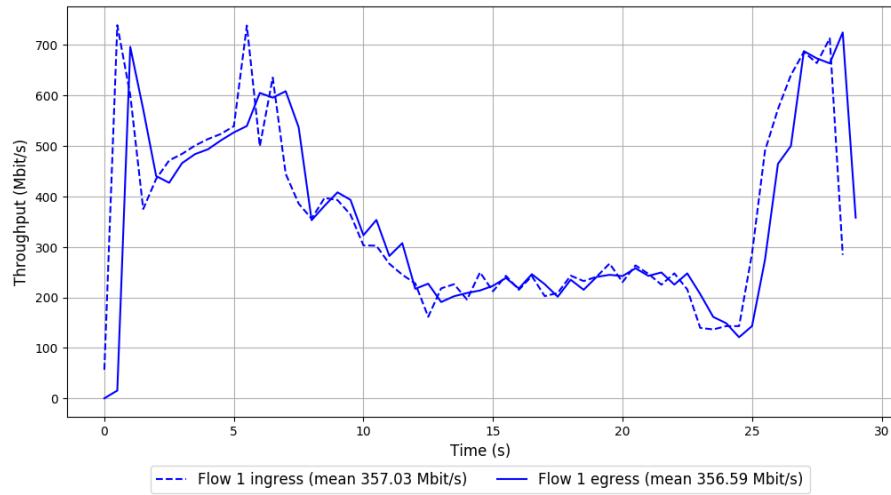


Run 5: Statistics of Indigo-MusesT

```
Start at: 2019-01-03 06:43:43
End at: 2019-01-03 06:44:13
Local clock offset: -0.025 ms
Remote clock offset: 0.135 ms

# Below is generated by plot.py at 2019-01-03 08:36:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 356.59 Mbit/s
95th percentile per-packet one-way delay: 91.184 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 356.59 Mbit/s
95th percentile per-packet one-way delay: 91.184 ms
Loss rate: 0.12%
```

Run 5: Report of Indigo-MusesT — Data Link

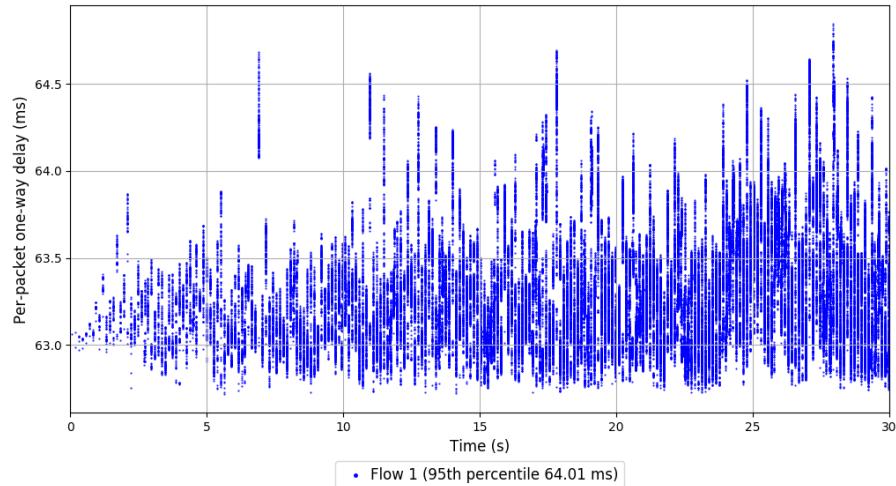
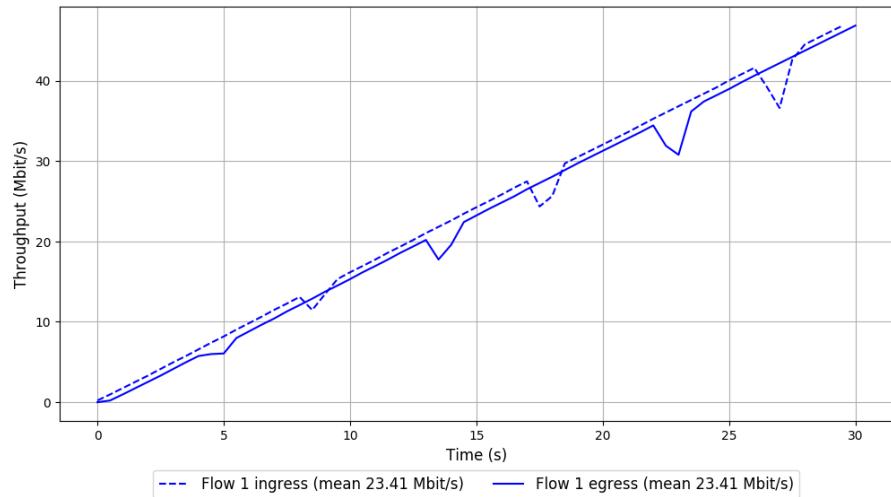


```
Run 1: Statistics of LEDBAT

Start at: 2019-01-03 04:43:04
End at: 2019-01-03 04:43:34
Local clock offset: -0.077 ms
Remote clock offset: -0.046 ms

# Below is generated by plot.py at 2019-01-03 08:36:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 23.41 Mbit/s
95th percentile per-packet one-way delay: 64.012 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 23.41 Mbit/s
95th percentile per-packet one-way delay: 64.012 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link

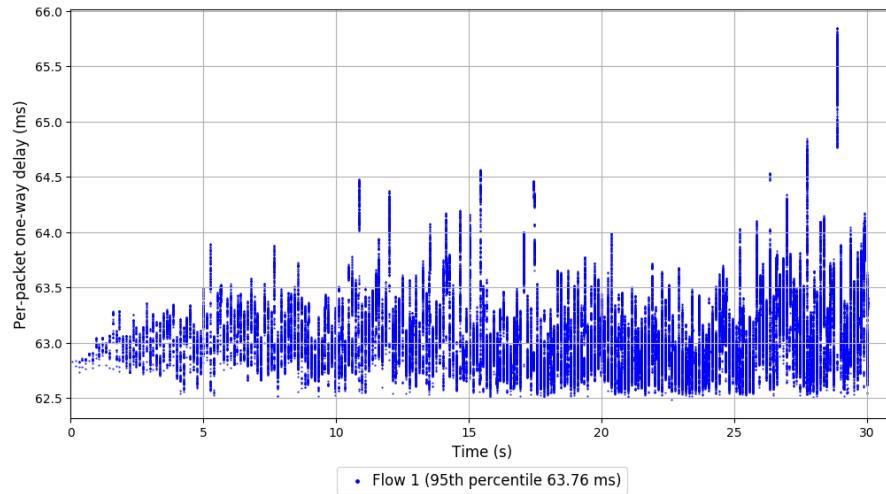
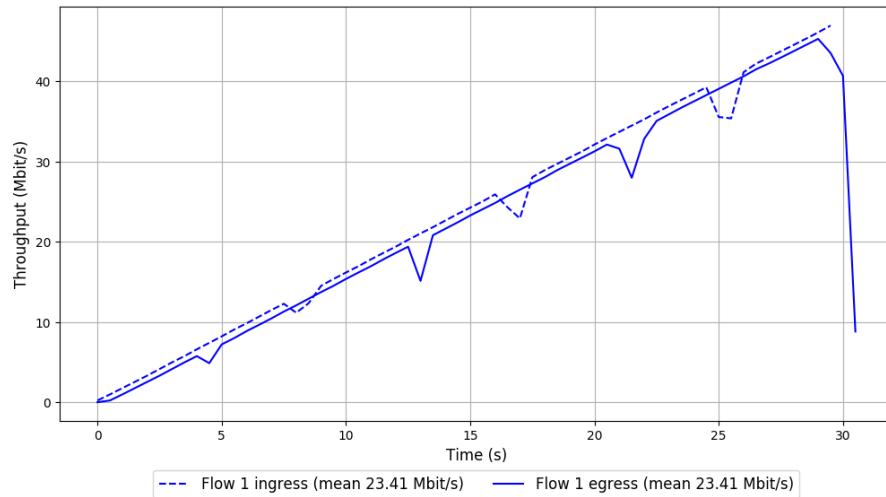


Run 2: Statistics of LEDBAT

```
Start at: 2019-01-03 05:11:20
End at: 2019-01-03 05:11:50
Local clock offset: -0.03 ms
Remote clock offset: -0.228 ms

# Below is generated by plot.py at 2019-01-03 08:36:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 23.41 Mbit/s
95th percentile per-packet one-way delay: 63.757 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 23.41 Mbit/s
95th percentile per-packet one-way delay: 63.757 ms
Loss rate: 0.00%
```

Run 2: Report of LEDBAT — Data Link

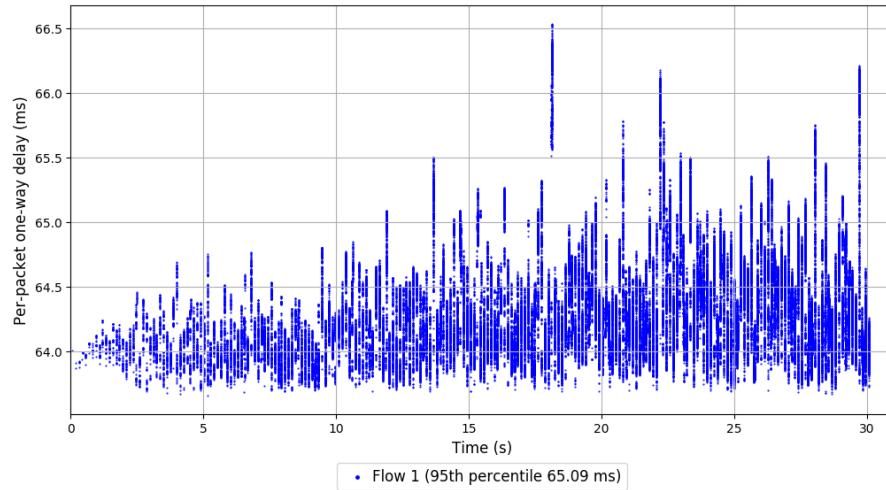
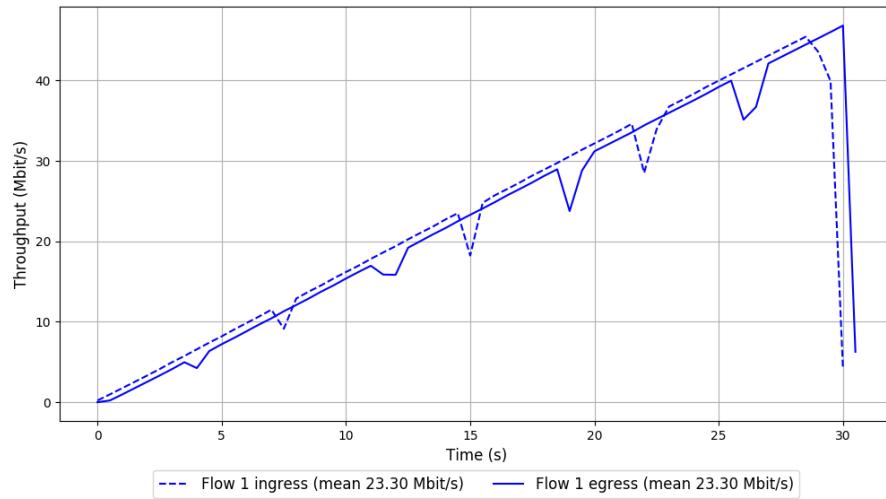


Run 3: Statistics of LEDBAT

```
Start at: 2019-01-03 05:39:26
End at: 2019-01-03 05:39:56
Local clock offset: -0.058 ms
Remote clock offset: 0.648 ms

# Below is generated by plot.py at 2019-01-03 08:36:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 23.30 Mbit/s
95th percentile per-packet one-way delay: 65.093 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 23.30 Mbit/s
95th percentile per-packet one-way delay: 65.093 ms
Loss rate: 0.00%
```

Run 3: Report of LEDBAT — Data Link

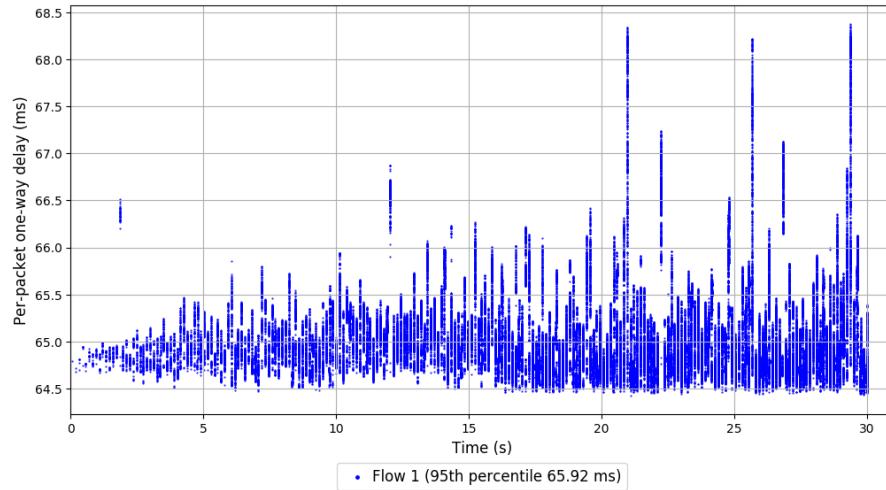
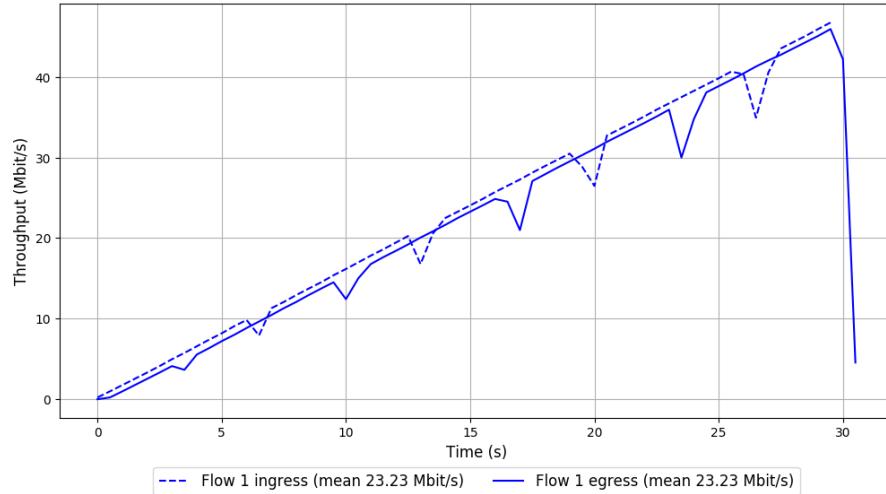


Run 4: Statistics of LEDBAT

```
Start at: 2019-01-03 06:07:41
End at: 2019-01-03 06:08:11
Local clock offset: 0.006 ms
Remote clock offset: 1.337 ms

# Below is generated by plot.py at 2019-01-03 08:36:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 23.23 Mbit/s
95th percentile per-packet one-way delay: 65.915 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 23.23 Mbit/s
95th percentile per-packet one-way delay: 65.915 ms
Loss rate: 0.00%
```

Run 4: Report of LEDBAT — Data Link

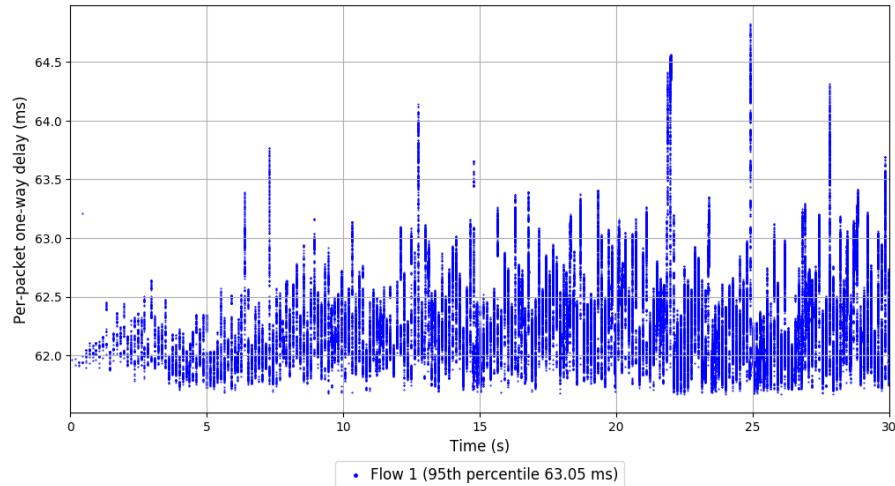
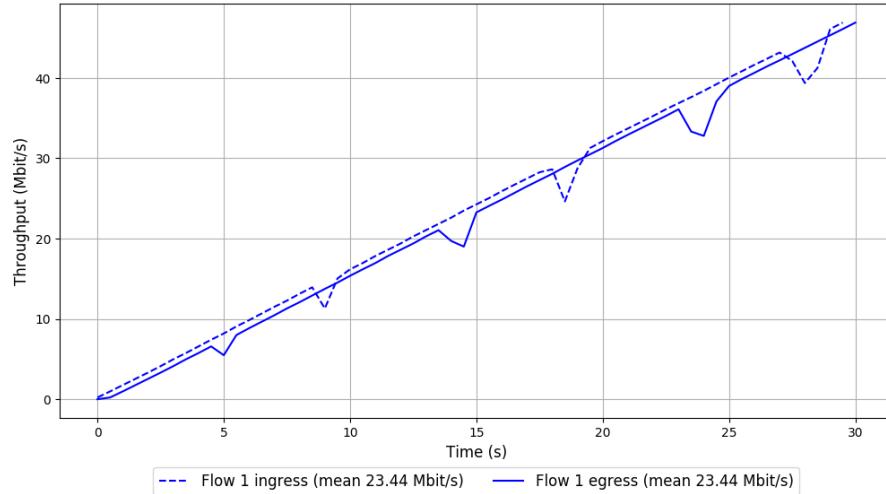


Run 5: Statistics of LEDBAT

```
Start at: 2019-01-03 06:36:00
End at: 2019-01-03 06:36:30
Local clock offset: -0.02 ms
Remote clock offset: -1.106 ms

# Below is generated by plot.py at 2019-01-03 08:36:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 23.44 Mbit/s
95th percentile per-packet one-way delay: 63.047 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 23.44 Mbit/s
95th percentile per-packet one-way delay: 63.047 ms
Loss rate: 0.00%
```

Run 5: Report of LEDBAT — Data Link

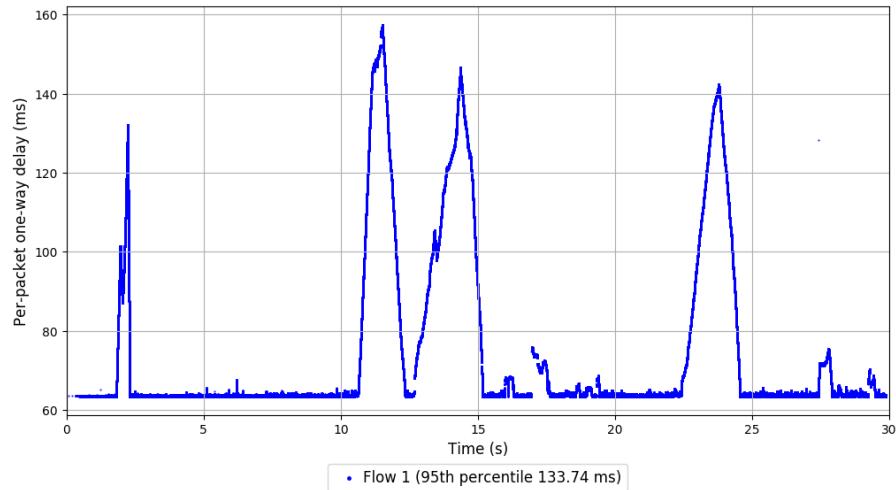
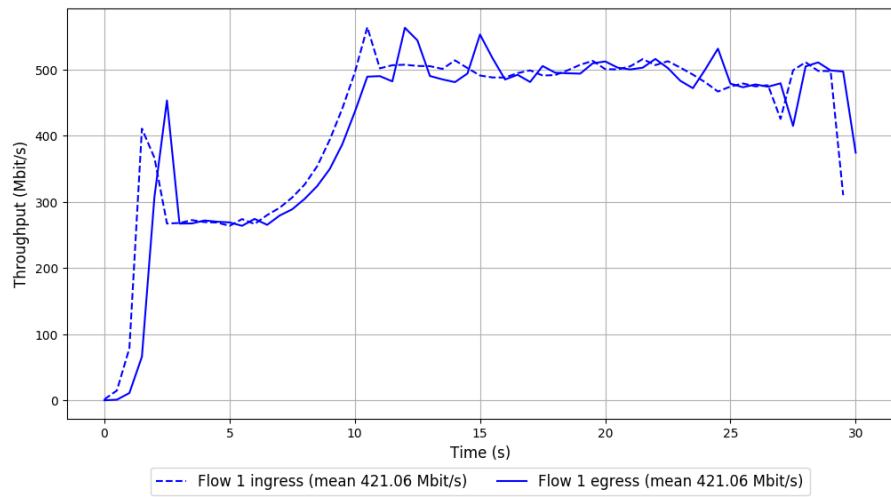


```
Run 1: Statistics of PCC-Allegro
```

```
Start at: 2019-01-03 04:45:49
End at: 2019-01-03 04:46:19
Local clock offset: -0.037 ms
Remote clock offset: 0.678 ms

# Below is generated by plot.py at 2019-01-03 08:48:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 421.06 Mbit/s
95th percentile per-packet one-way delay: 133.742 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 421.06 Mbit/s
95th percentile per-packet one-way delay: 133.742 ms
Loss rate: 0.00%
```

Run 1: Report of PCC-Allegro — Data Link

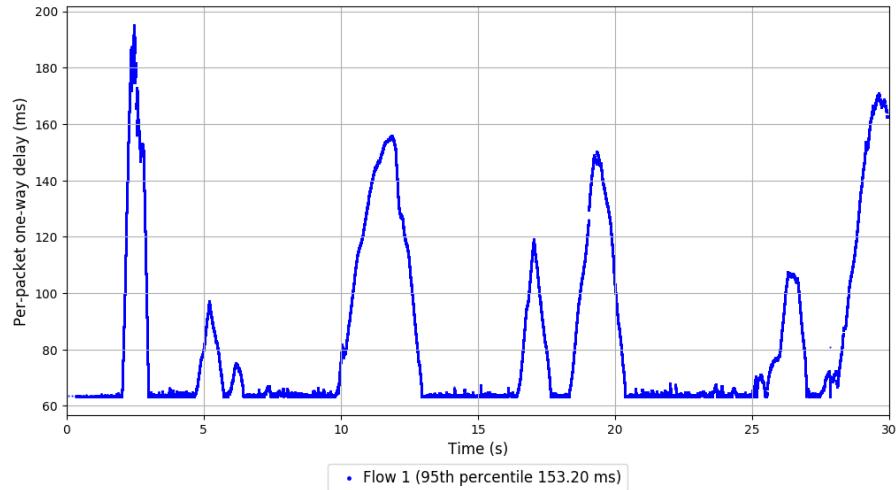
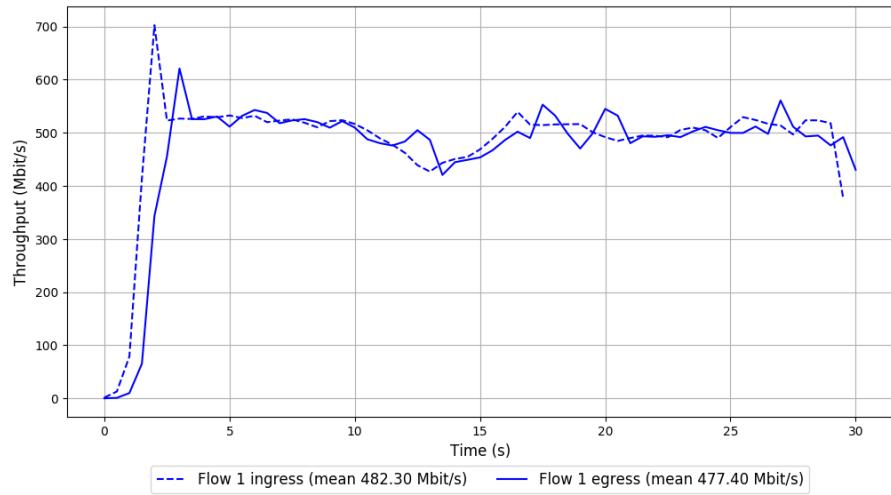


Run 2: Statistics of PCC-Allegro

```
Start at: 2019-01-03 05:14:03
End at: 2019-01-03 05:14:33
Local clock offset: -0.019 ms
Remote clock offset: 0.395 ms

# Below is generated by plot.py at 2019-01-03 08:51:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 477.40 Mbit/s
95th percentile per-packet one-way delay: 153.202 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 477.40 Mbit/s
95th percentile per-packet one-way delay: 153.202 ms
Loss rate: 1.01%
```

Run 2: Report of PCC-Allegro — Data Link

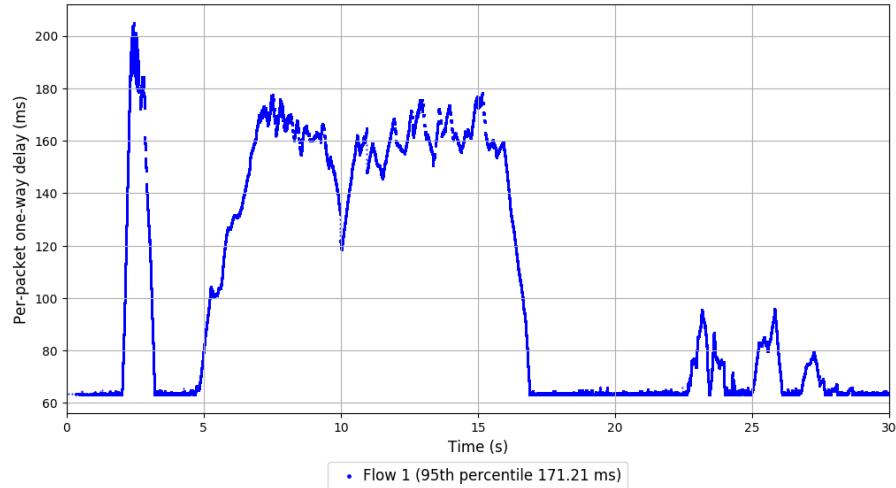
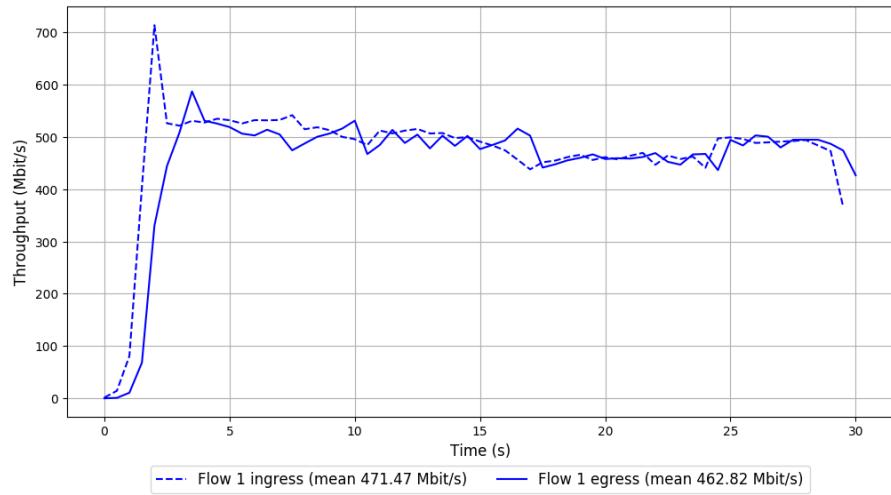


Run 3: Statistics of PCC-Allegro

```
Start at: 2019-01-03 05:42:11
End at: 2019-01-03 05:42:41
Local clock offset: -0.089 ms
Remote clock offset: 0.37 ms

# Below is generated by plot.py at 2019-01-03 08:51:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 462.82 Mbit/s
95th percentile per-packet one-way delay: 171.207 ms
Loss rate: 1.83%
-- Flow 1:
Average throughput: 462.82 Mbit/s
95th percentile per-packet one-way delay: 171.207 ms
Loss rate: 1.83%
```

Run 3: Report of PCC-Allegro — Data Link

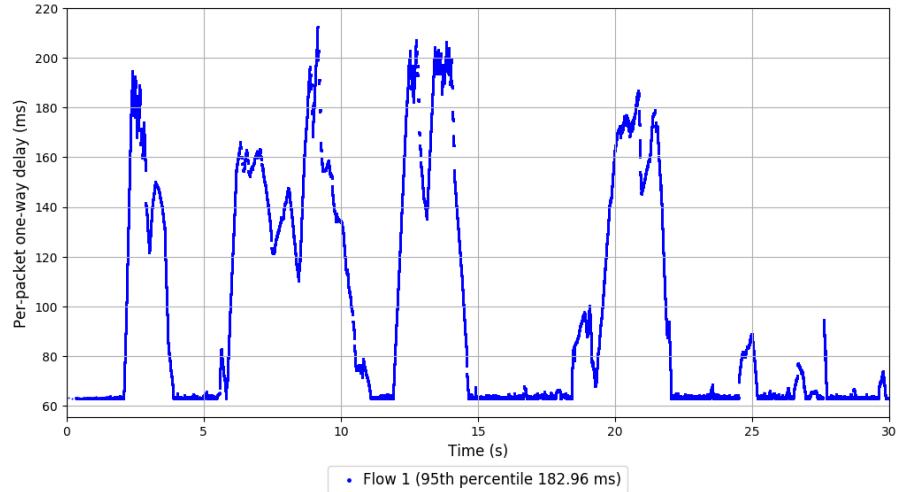
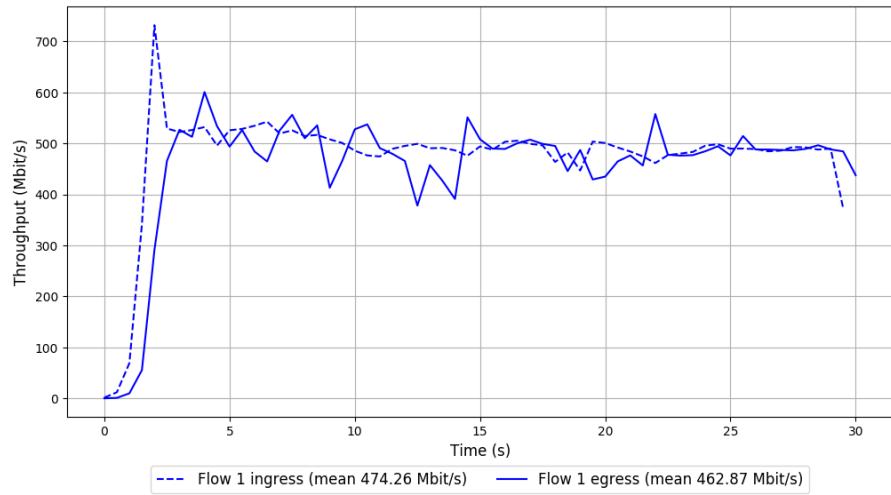


Run 4: Statistics of PCC-Allegro

```
Start at: 2019-01-03 06:10:28
End at: 2019-01-03 06:10:58
Local clock offset: -0.011 ms
Remote clock offset: 0.241 ms

# Below is generated by plot.py at 2019-01-03 08:51:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 462.87 Mbit/s
95th percentile per-packet one-way delay: 182.956 ms
Loss rate: 2.40%
-- Flow 1:
Average throughput: 462.87 Mbit/s
95th percentile per-packet one-way delay: 182.956 ms
Loss rate: 2.40%
```

Run 4: Report of PCC-Allegro — Data Link

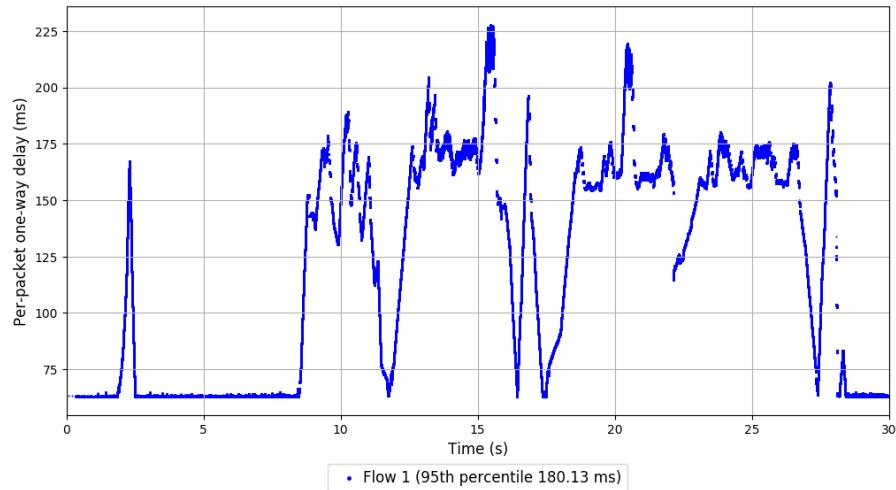
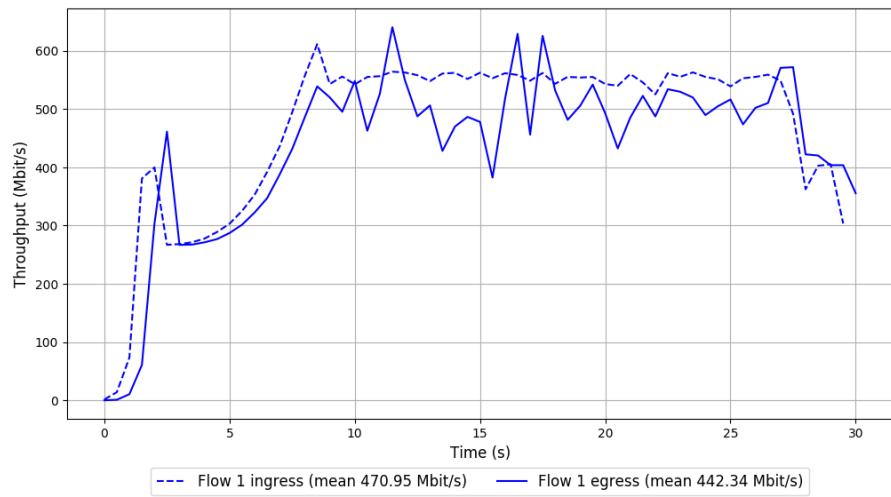


Run 5: Statistics of PCC-Allegro

```
Start at: 2019-01-03 06:38:50
End at: 2019-01-03 06:39:20
Local clock offset: 0.008 ms
Remote clock offset: -0.086 ms

# Below is generated by plot.py at 2019-01-03 08:51:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 442.34 Mbit/s
95th percentile per-packet one-way delay: 180.129 ms
Loss rate: 6.07%
-- Flow 1:
Average throughput: 442.34 Mbit/s
95th percentile per-packet one-way delay: 180.129 ms
Loss rate: 6.07%
```

Run 5: Report of PCC-Allegro — Data Link

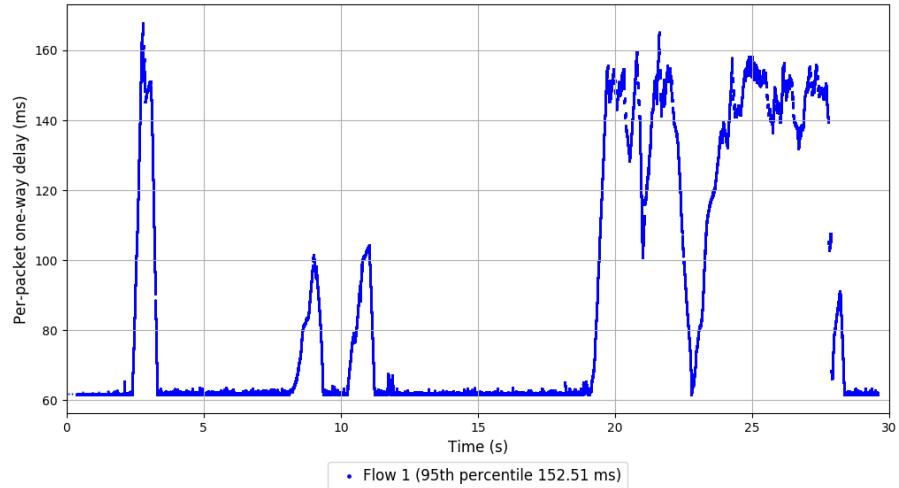
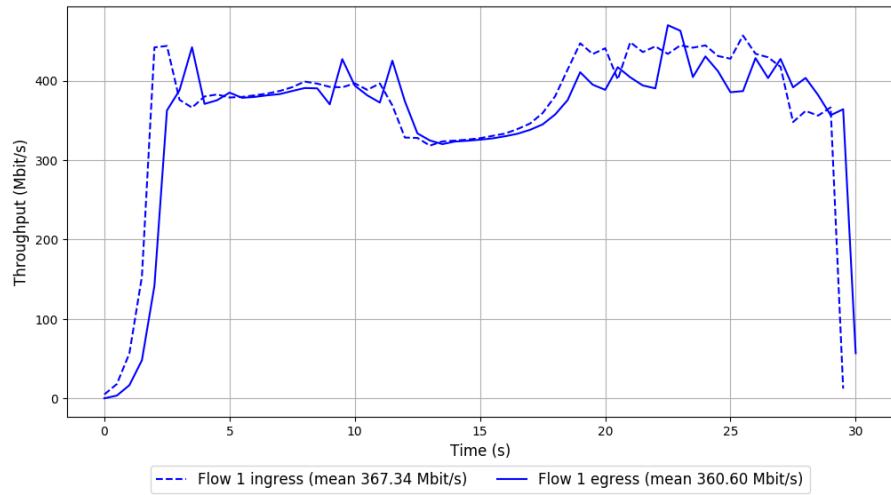


Run 1: Statistics of PCC-Expr

```
Start at: 2019-01-03 04:39:01
End at: 2019-01-03 04:39:31
Local clock offset: -0.088 ms
Remote clock offset: -1.431 ms

# Below is generated by plot.py at 2019-01-03 08:51:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 360.60 Mbit/s
95th percentile per-packet one-way delay: 152.508 ms
Loss rate: 1.83%
-- Flow 1:
Average throughput: 360.60 Mbit/s
95th percentile per-packet one-way delay: 152.508 ms
Loss rate: 1.83%
```

Run 1: Report of PCC-Expr — Data Link

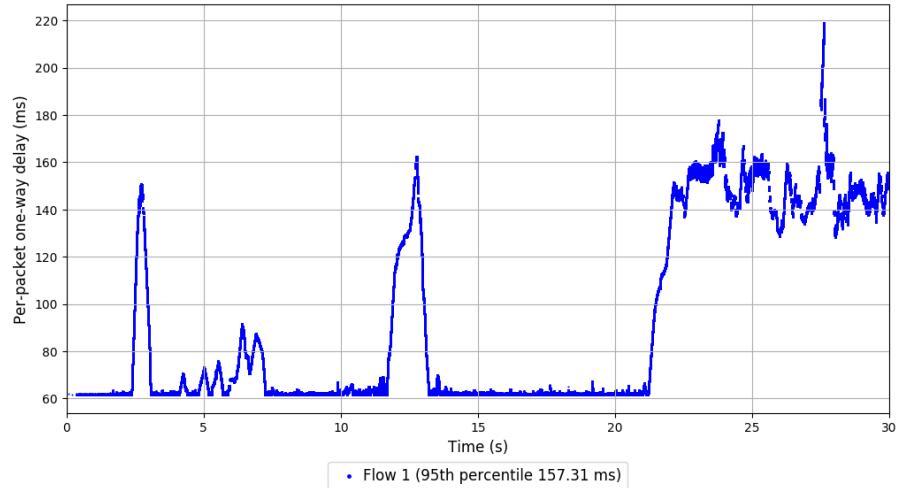
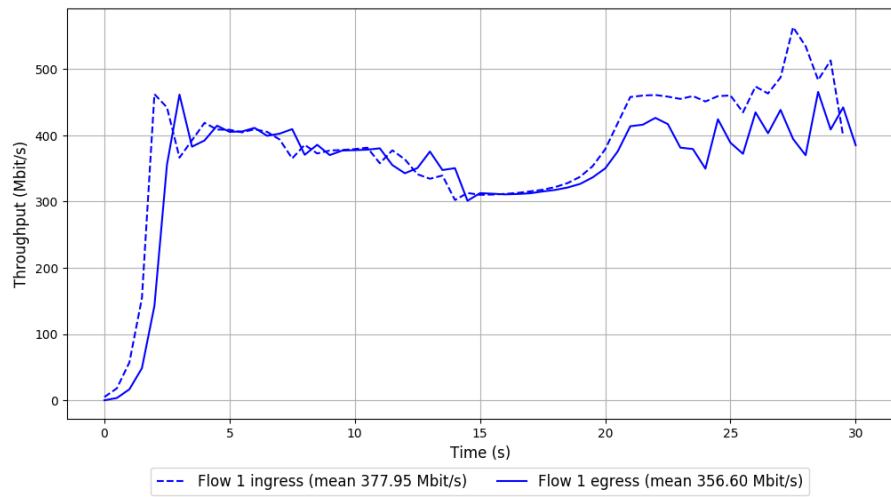


Run 2: Statistics of PCC-Expr

```
Start at: 2019-01-03 05:07:18
End at: 2019-01-03 05:07:48
Local clock offset: -0.054 ms
Remote clock offset: -1.265 ms

# Below is generated by plot.py at 2019-01-03 08:51:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 356.60 Mbit/s
95th percentile per-packet one-way delay: 157.306 ms
Loss rate: 5.65%
-- Flow 1:
Average throughput: 356.60 Mbit/s
95th percentile per-packet one-way delay: 157.306 ms
Loss rate: 5.65%
```

Run 2: Report of PCC-Expr — Data Link

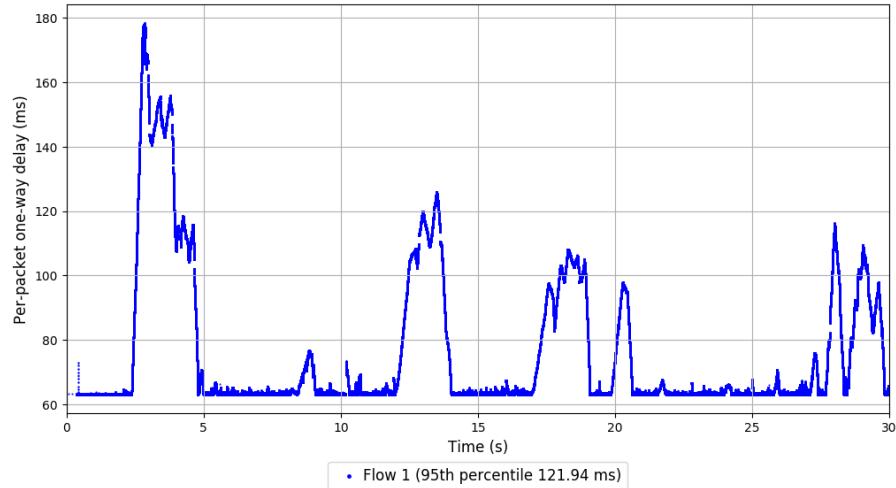
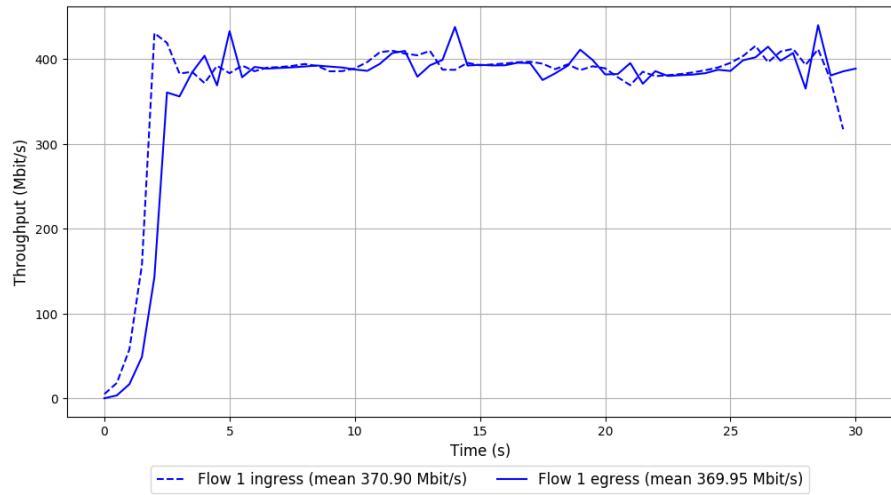


Run 3: Statistics of PCC-Expr

```
Start at: 2019-01-03 05:35:24
End at: 2019-01-03 05:35:54
Local clock offset: -0.058 ms
Remote clock offset: 0.166 ms

# Below is generated by plot.py at 2019-01-03 08:54:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 369.95 Mbit/s
95th percentile per-packet one-way delay: 121.945 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 369.95 Mbit/s
95th percentile per-packet one-way delay: 121.945 ms
Loss rate: 0.26%
```

Run 3: Report of PCC-Expr — Data Link

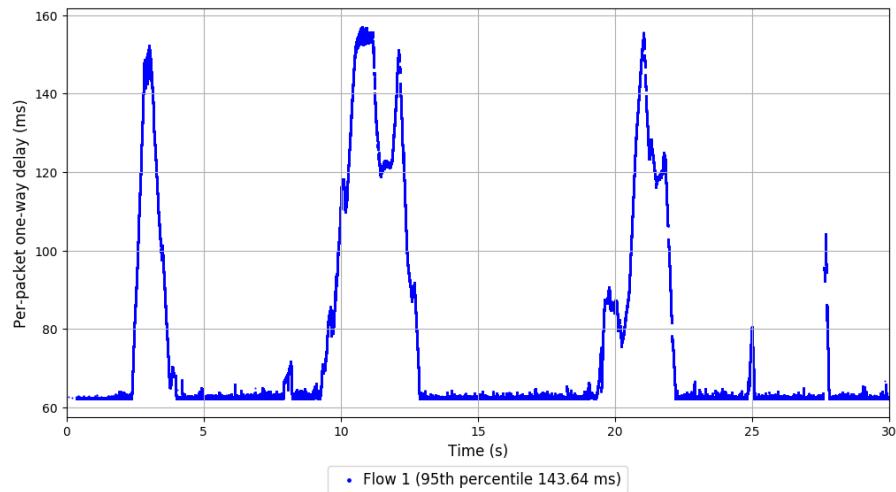
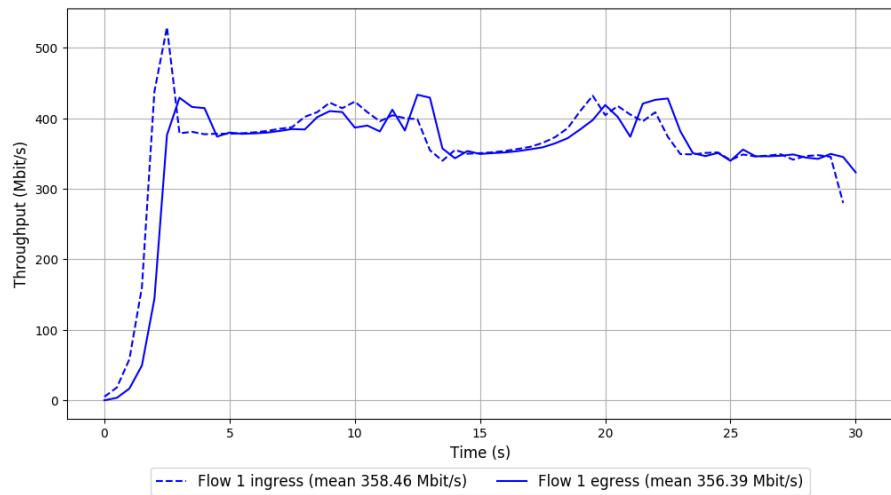


Run 4: Statistics of PCC-Expr

```
Start at: 2019-01-03 06:03:40
End at: 2019-01-03 06:04:10
Local clock offset: -0.003 ms
Remote clock offset: -0.296 ms

# Below is generated by plot.py at 2019-01-03 09:03:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 356.39 Mbit/s
95th percentile per-packet one-way delay: 143.643 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 356.39 Mbit/s
95th percentile per-packet one-way delay: 143.643 ms
Loss rate: 0.58%
```

Run 4: Report of PCC-Expr — Data Link

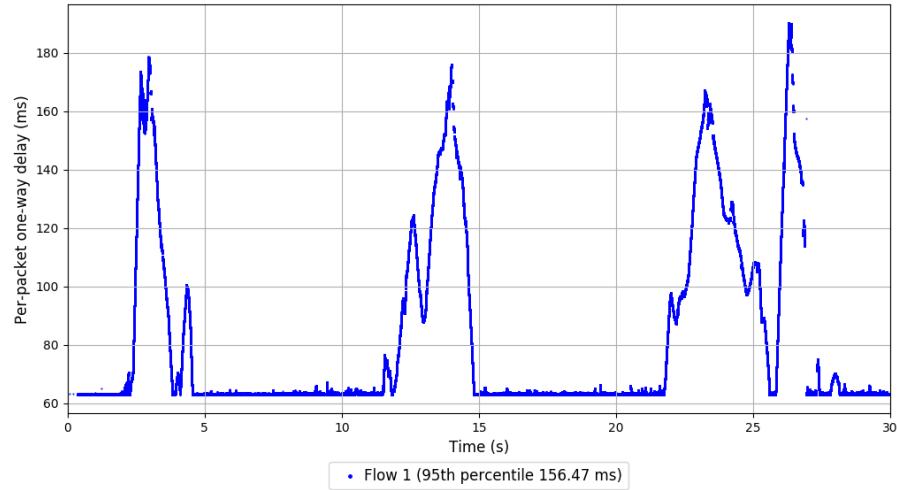
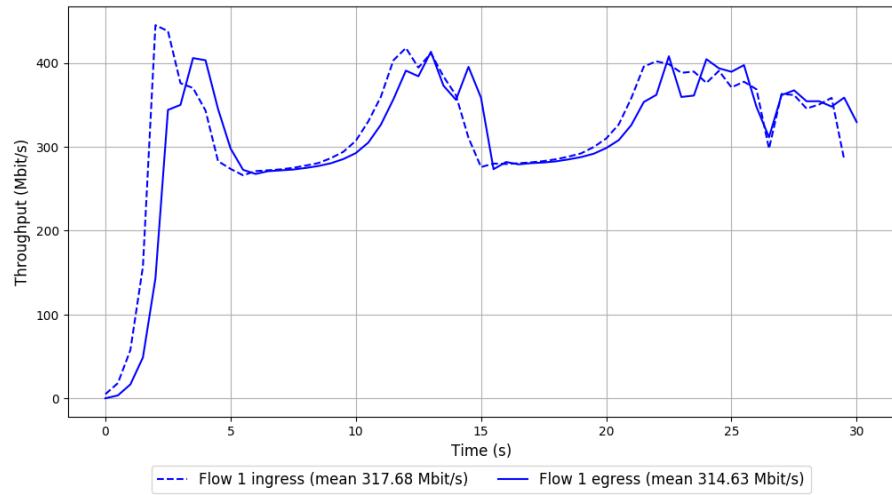


Run 5: Statistics of PCC-Expr

```
Start at: 2019-01-03 06:32:02
End at: 2019-01-03 06:32:32
Local clock offset: -0.049 ms
Remote clock offset: 0.096 ms

# Below is generated by plot.py at 2019-01-03 09:03:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 314.63 Mbit/s
95th percentile per-packet one-way delay: 156.467 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 314.63 Mbit/s
95th percentile per-packet one-way delay: 156.467 ms
Loss rate: 0.96%
```

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

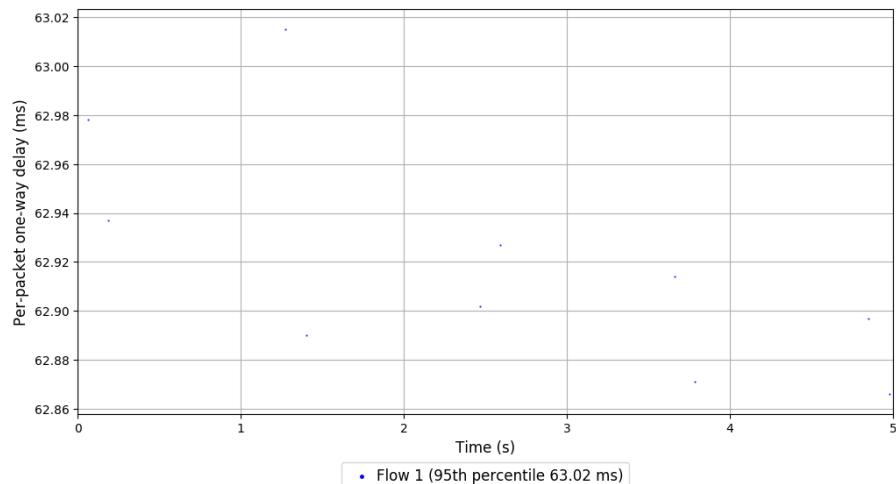
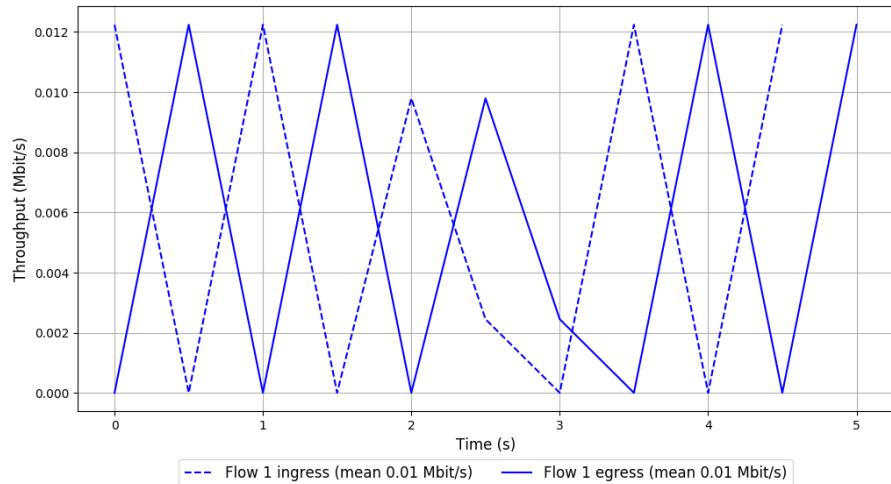
Start at: 2019-01-03 04:40:47

End at: 2019-01-03 04:41:17

Local clock offset: -0.101 ms

Remote clock offset: -0.045 ms

Run 1: Report of QUIC Cubic — Data Link

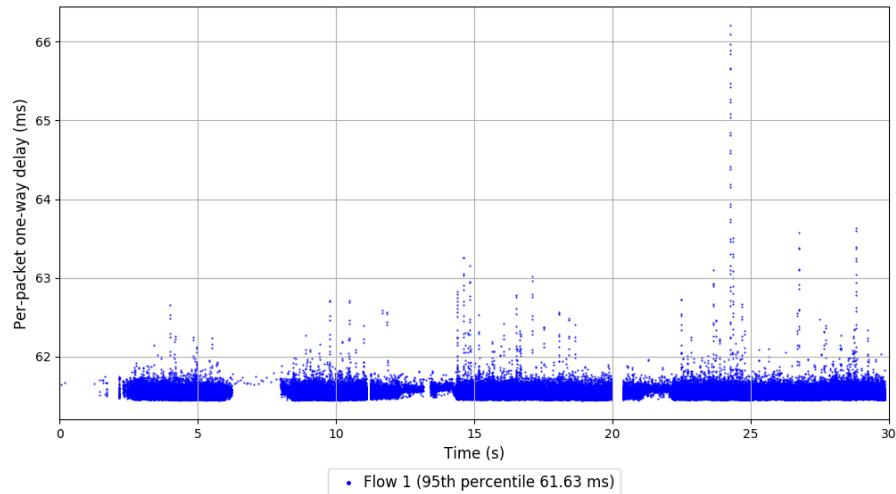
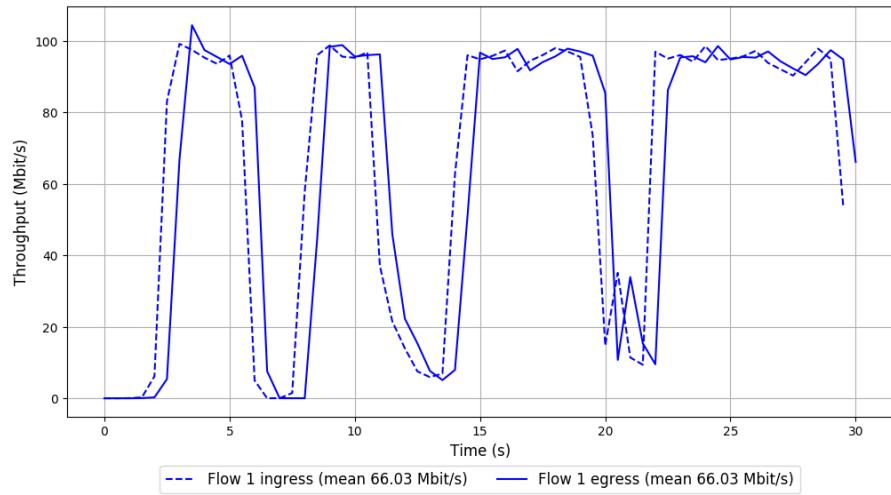


Run 2: Statistics of QUIC Cubic

```
Start at: 2019-01-03 05:08:59
End at: 2019-01-03 05:09:29
Local clock offset: -0.018 ms
Remote clock offset: -1.242 ms

# Below is generated by plot.py at 2019-01-03 09:03:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 66.03 Mbit/s
95th percentile per-packet one-way delay: 61.627 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 66.03 Mbit/s
95th percentile per-packet one-way delay: 61.627 ms
Loss rate: 0.00%
```

Run 2: Report of QUIC Cubic — Data Link

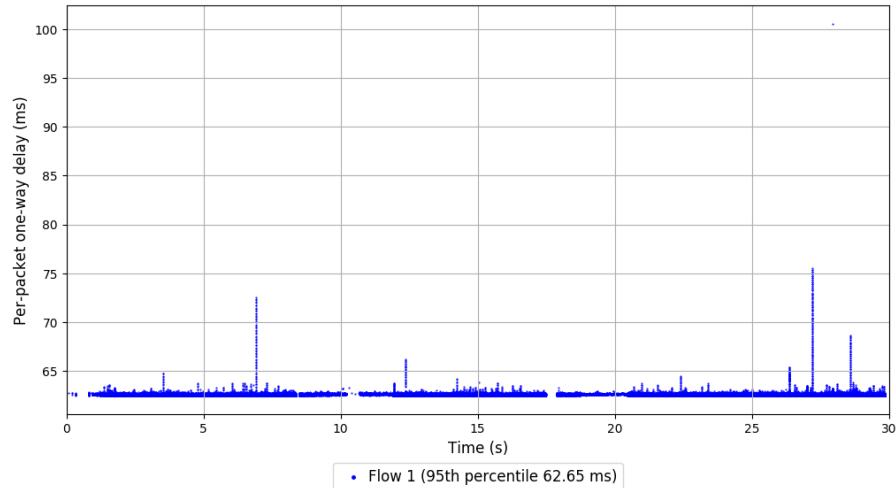
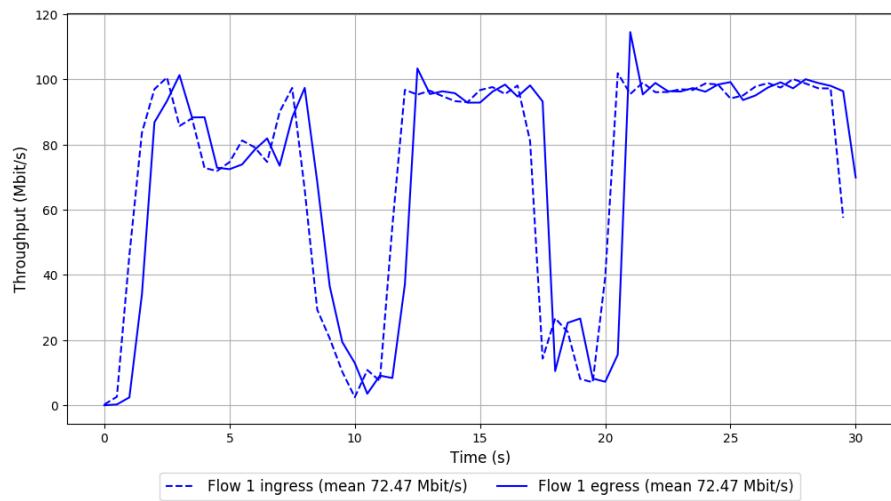


Run 3: Statistics of QUIC Cubic

```
Start at: 2019-01-03 05:37:05
End at: 2019-01-03 05:37:35
Local clock offset: -0.057 ms
Remote clock offset: -0.183 ms

# Below is generated by plot.py at 2019-01-03 09:03:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 72.47 Mbit/s
95th percentile per-packet one-way delay: 62.650 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 72.47 Mbit/s
95th percentile per-packet one-way delay: 62.650 ms
Loss rate: 0.00%
```

Run 3: Report of QUIC Cubic — Data Link

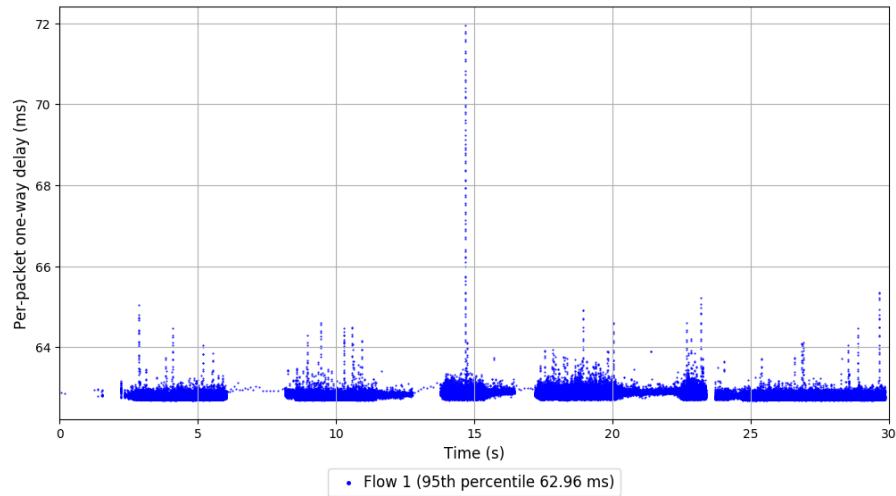
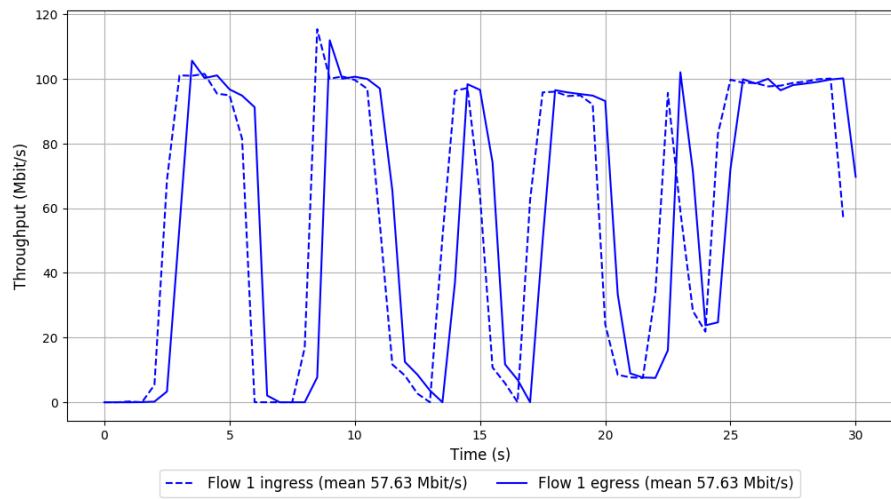


Run 4: Statistics of QUIC Cubic

```
Start at: 2019-01-03 06:05:21
End at: 2019-01-03 06:05:51
Local clock offset: -0.041 ms
Remote clock offset: -0.175 ms

# Below is generated by plot.py at 2019-01-03 09:03:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 57.63 Mbit/s
95th percentile per-packet one-way delay: 62.958 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 57.63 Mbit/s
95th percentile per-packet one-way delay: 62.958 ms
Loss rate: 0.00%
```

Run 4: Report of QUIC Cubic — Data Link

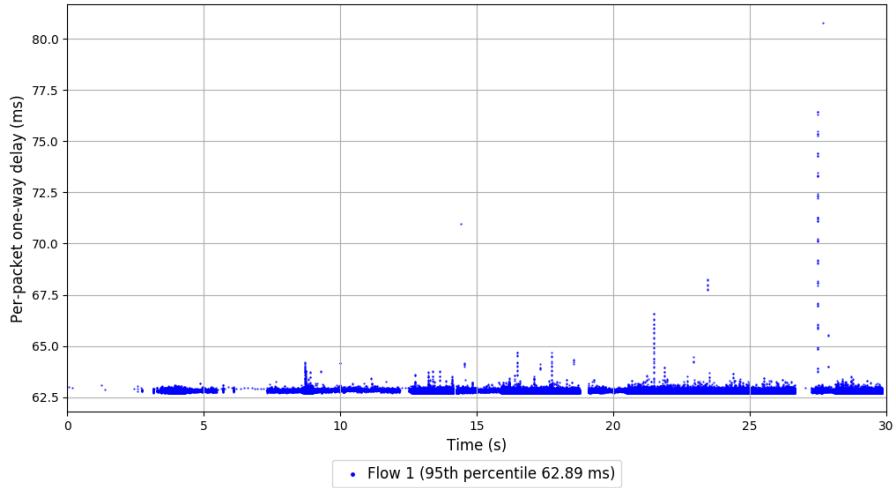
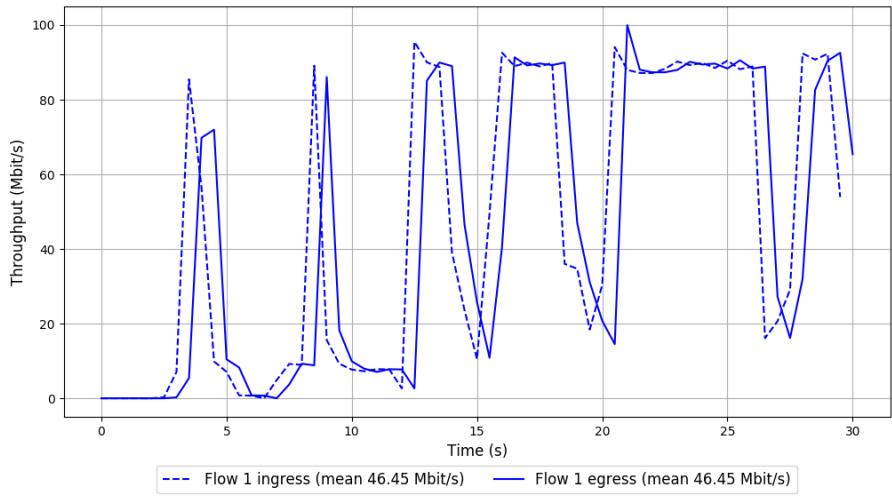


Run 5: Statistics of QUIC Cubic

```
Start at: 2019-01-03 06:33:40
End at: 2019-01-03 06:34:10
Local clock offset: -0.039 ms
Remote clock offset: -0.089 ms

# Below is generated by plot.py at 2019-01-03 09:03:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 46.45 Mbit/s
95th percentile per-packet one-way delay: 62.893 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 46.45 Mbit/s
95th percentile per-packet one-way delay: 62.893 ms
Loss rate: 0.00%
```

Run 5: Report of QUIC Cubic — Data Link

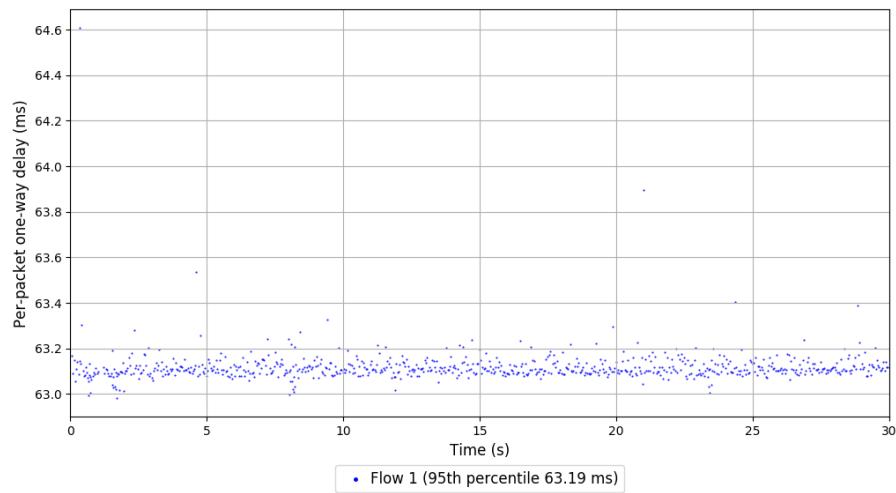
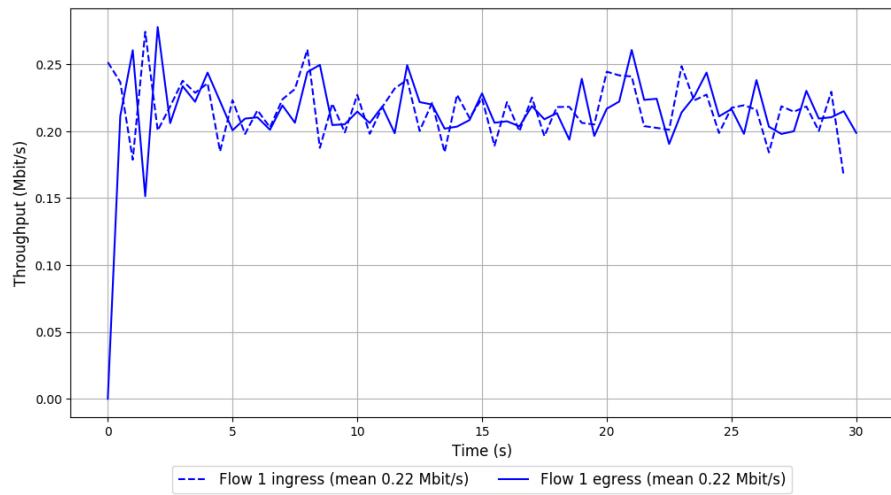


```
Run 1: Statistics of SCReAM

Start at: 2019-01-03 04:58:28
End at: 2019-01-03 04:58:58
Local clock offset: -0.063 ms
Remote clock offset: 0.062 ms

# Below is generated by plot.py at 2019-01-03 09:03:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.191 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.191 ms
Loss rate: 0.00%
```

Run 1: Report of SCReAM — Data Link

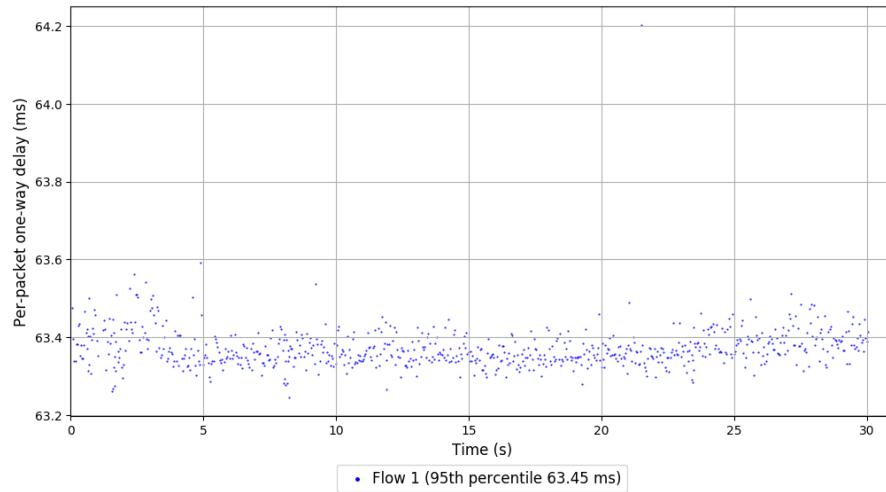
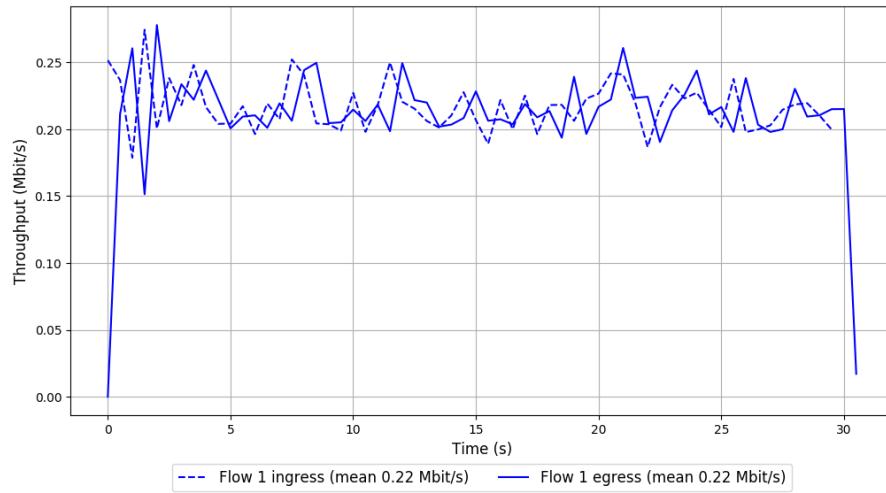


Run 2: Statistics of SCReAM

```
Start at: 2019-01-03 05:26:41
End at: 2019-01-03 05:27:11
Local clock offset: -0.019 ms
Remote clock offset: -0.035 ms

# Below is generated by plot.py at 2019-01-03 09:03:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.453 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.453 ms
Loss rate: 0.00%
```

Run 2: Report of SCReAM — Data Link

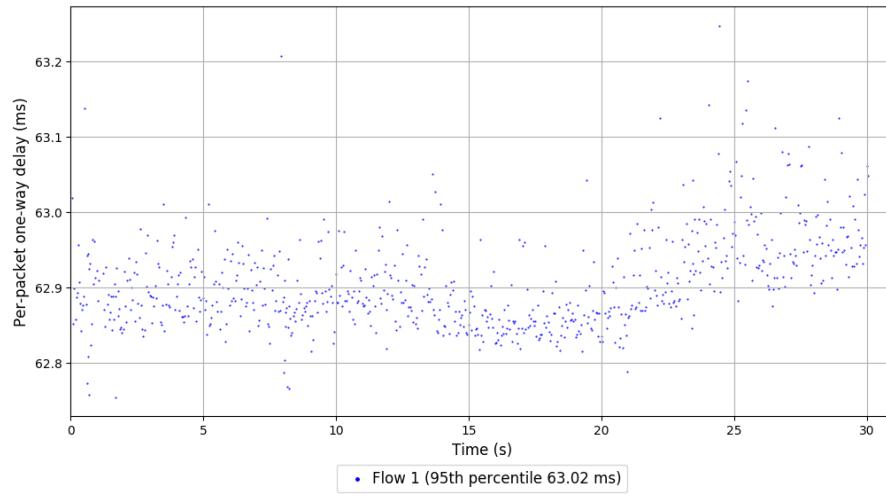
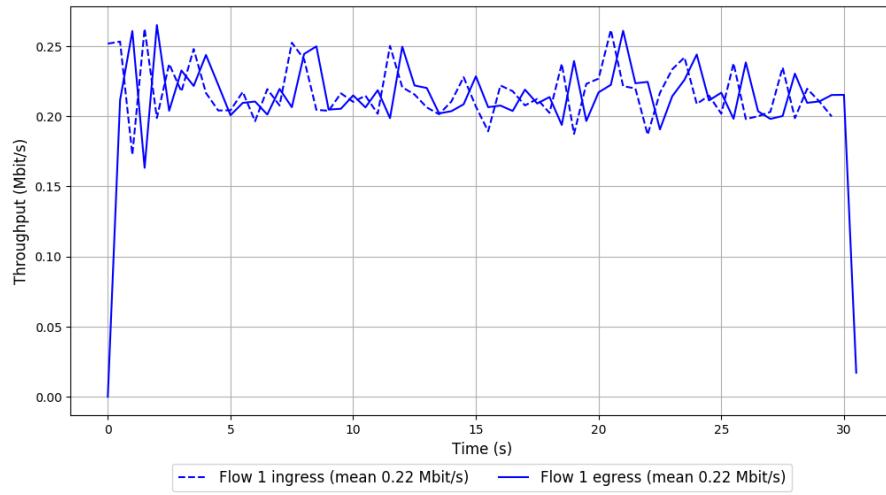


Run 3: Statistics of SCReAM

```
Start at: 2019-01-03 05:54:51
End at: 2019-01-03 05:55:21
Local clock offset: -0.099 ms
Remote clock offset: -0.295 ms

# Below is generated by plot.py at 2019-01-03 09:03:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.019 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.019 ms
Loss rate: 0.00%
```

Run 3: Report of SCReAM — Data Link

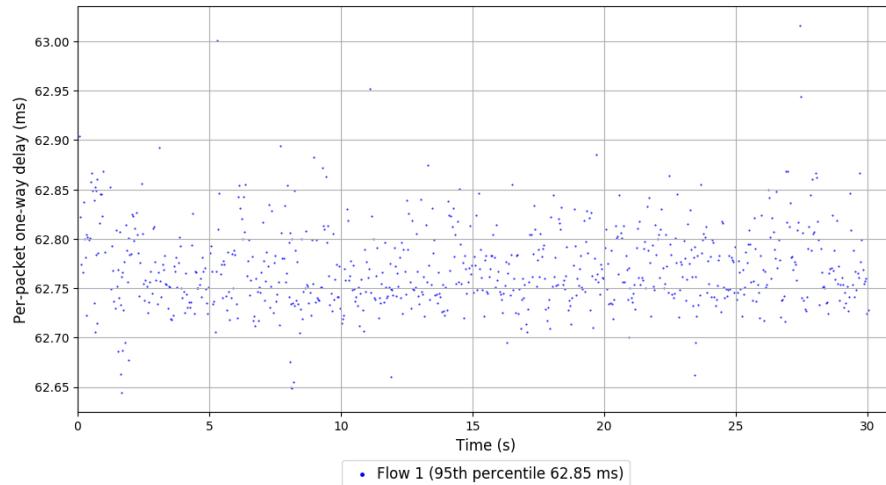
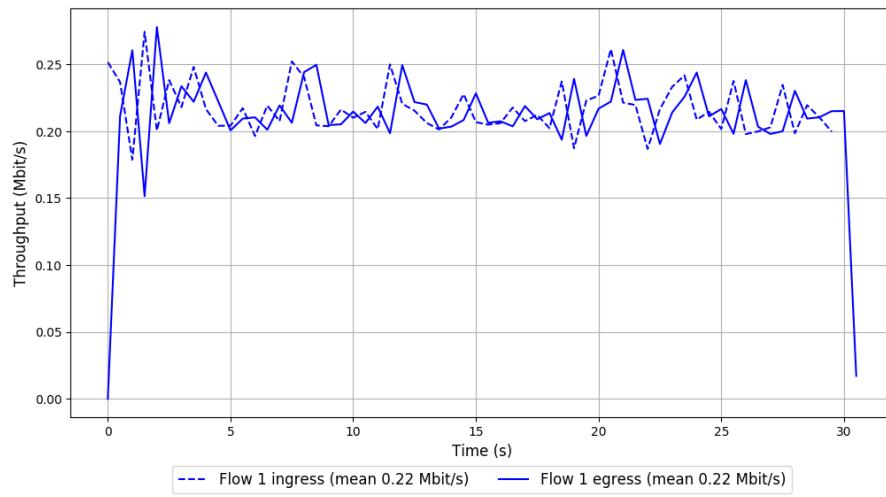


Run 4: Statistics of SCReAM

```
Start at: 2019-01-03 06:23:12
End at: 2019-01-03 06:23:42
Local clock offset: -0.023 ms
Remote clock offset: -0.085 ms

# Below is generated by plot.py at 2019-01-03 09:03:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.846 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.846 ms
Loss rate: 0.00%
```

Run 4: Report of SCReAM — Data Link

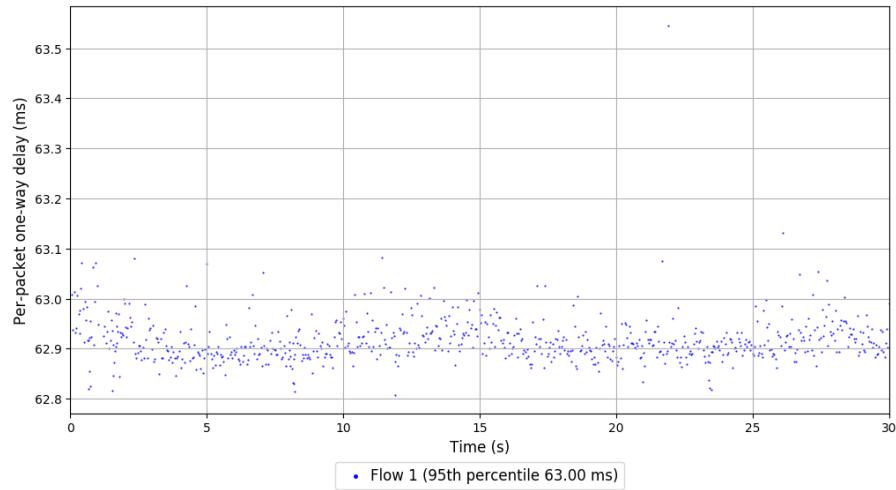
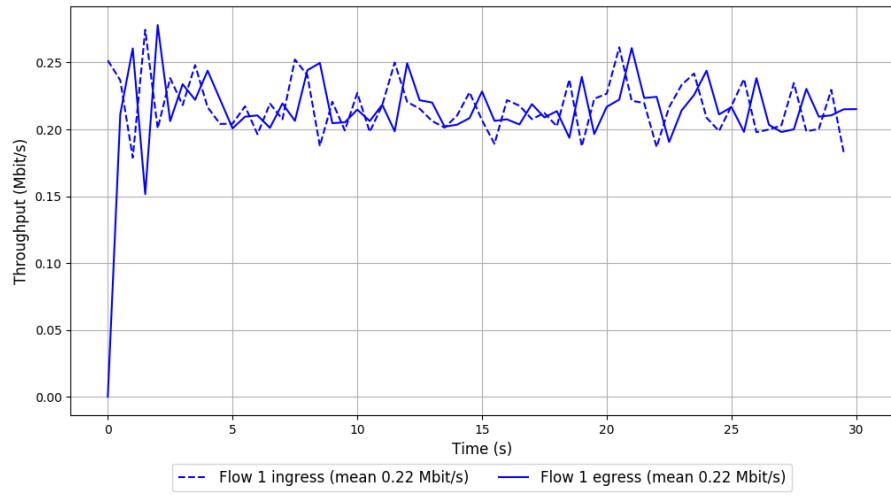


Run 5: Statistics of SCReAM

```
Start at: 2019-01-03 06:51:27
End at: 2019-01-03 06:51:57
Local clock offset: -0.007 ms
Remote clock offset: -0.276 ms

# Below is generated by plot.py at 2019-01-03 09:03:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.996 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.996 ms
Loss rate: 0.00%
```

Run 5: Report of SCReAM — Data Link

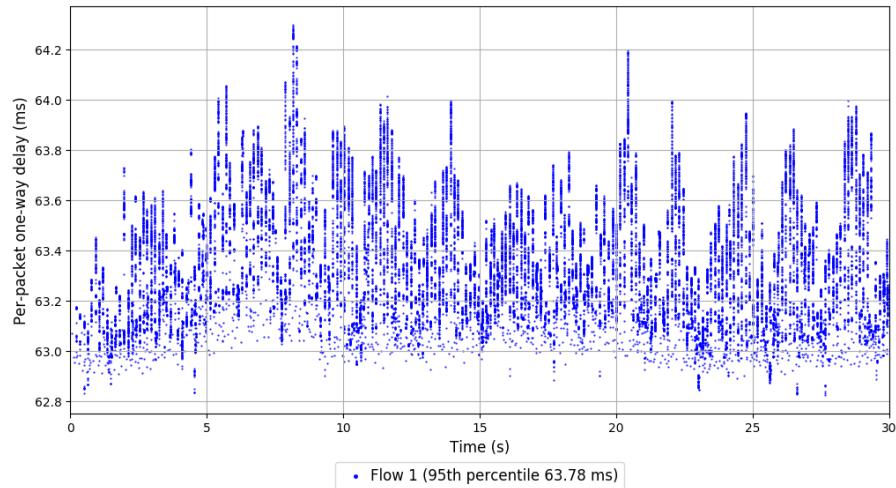
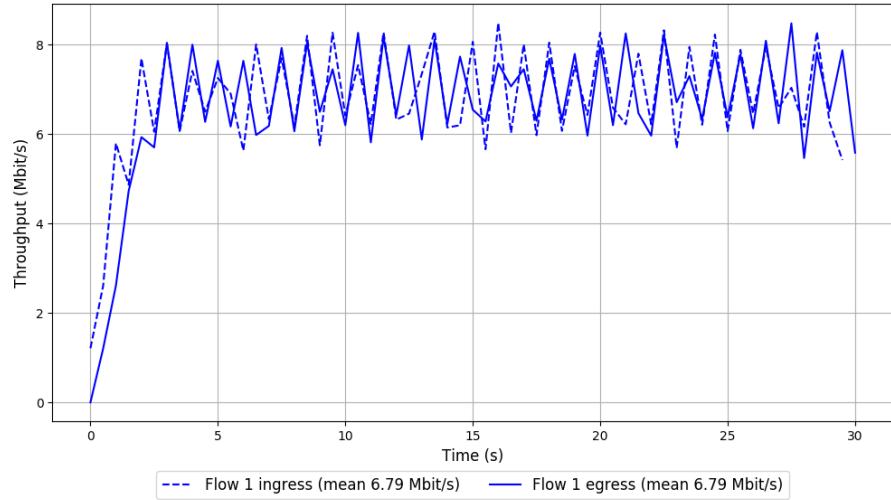


Run 1: Statistics of Sprout

```
Start at: 2019-01-03 04:41:55
End at: 2019-01-03 04:42:25
Local clock offset: -0.065 ms
Remote clock offset: -0.02 ms

# Below is generated by plot.py at 2019-01-03 09:03:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.79 Mbit/s
95th percentile per-packet one-way delay: 63.784 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.79 Mbit/s
95th percentile per-packet one-way delay: 63.784 ms
Loss rate: 0.00%
```

Run 1: Report of Sprout — Data Link

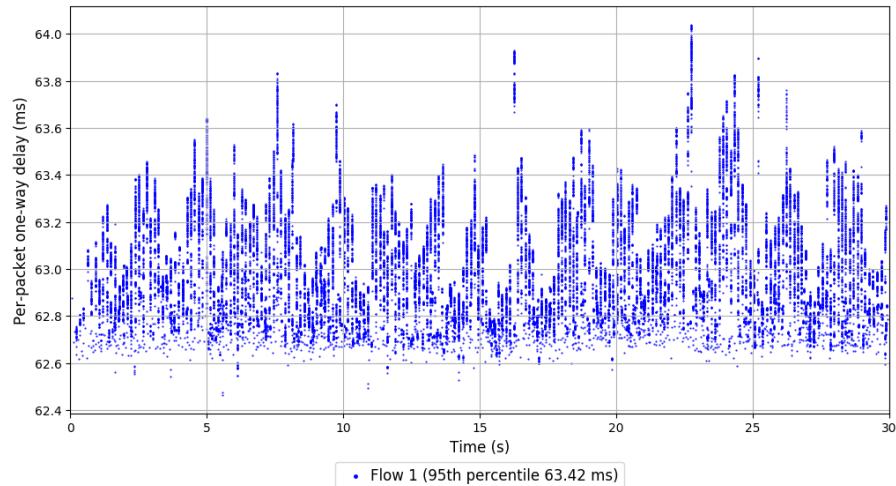
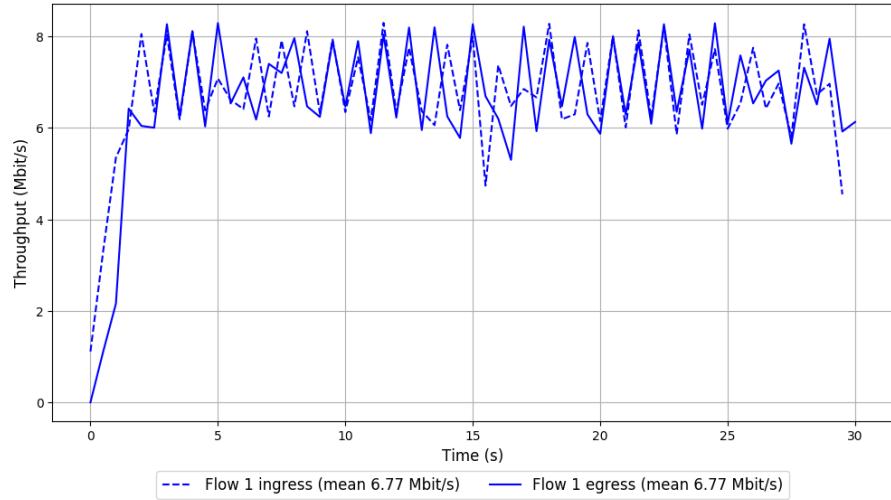


Run 2: Statistics of Sprout

```
Start at: 2019-01-03 05:10:11
End at: 2019-01-03 05:10:41
Local clock offset: -0.051 ms
Remote clock offset: -0.167 ms

# Below is generated by plot.py at 2019-01-03 09:03:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.77 Mbit/s
95th percentile per-packet one-way delay: 63.417 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.77 Mbit/s
95th percentile per-packet one-way delay: 63.417 ms
Loss rate: 0.00%
```

Run 2: Report of Sprout — Data Link

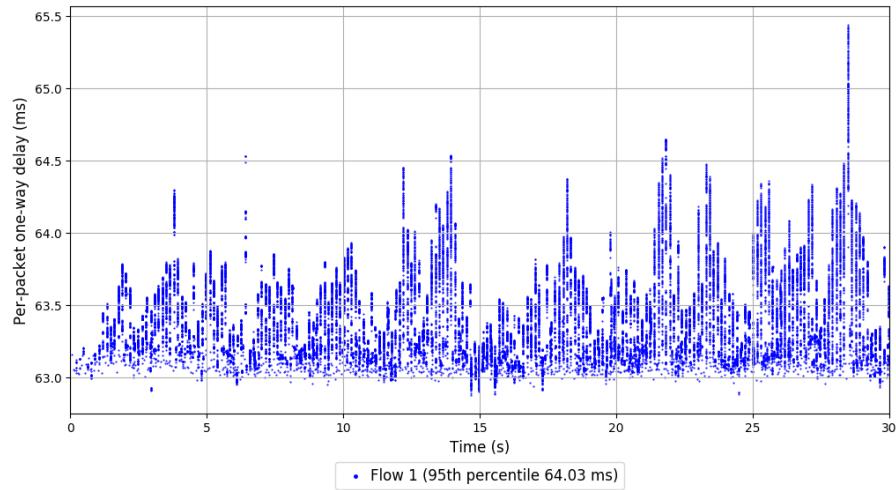
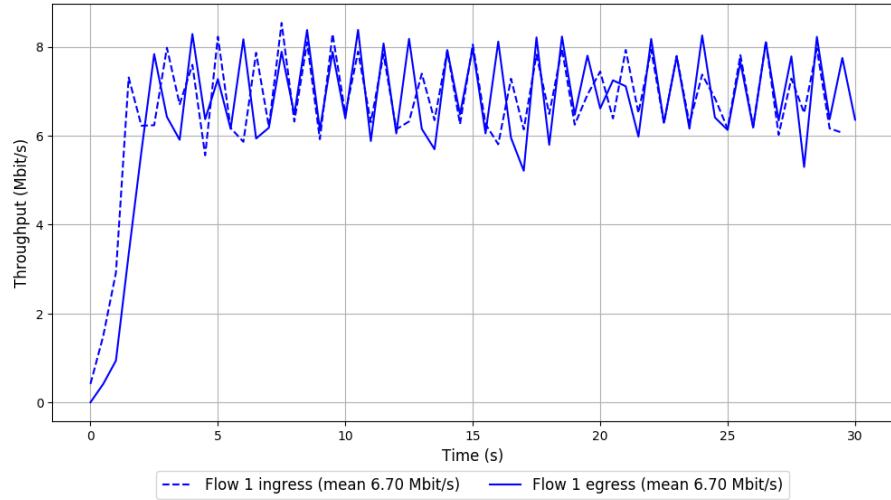


Run 3: Statistics of Sprout

```
Start at: 2019-01-03 05:38:17
End at: 2019-01-03 05:38:47
Local clock offset: -0.045 ms
Remote clock offset: -0.18 ms

# Below is generated by plot.py at 2019-01-03 09:03:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.70 Mbit/s
95th percentile per-packet one-way delay: 64.028 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.70 Mbit/s
95th percentile per-packet one-way delay: 64.028 ms
Loss rate: 0.00%
```

Run 3: Report of Sprout — Data Link

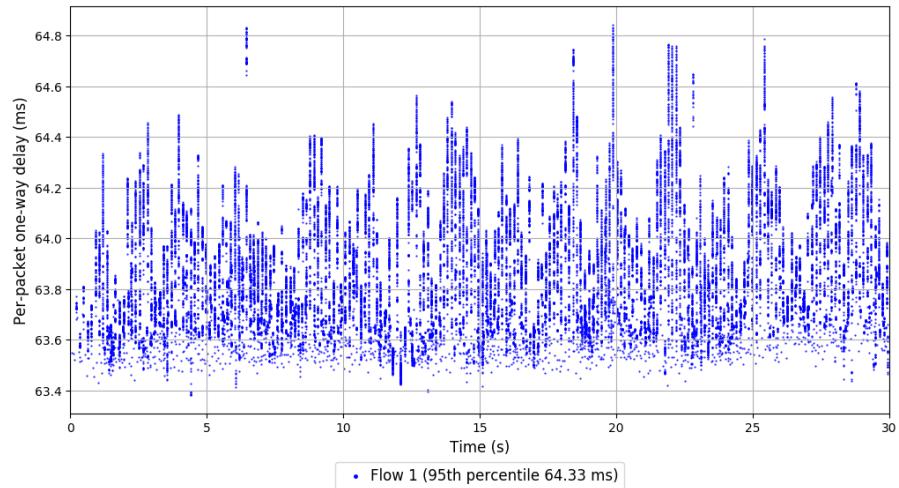
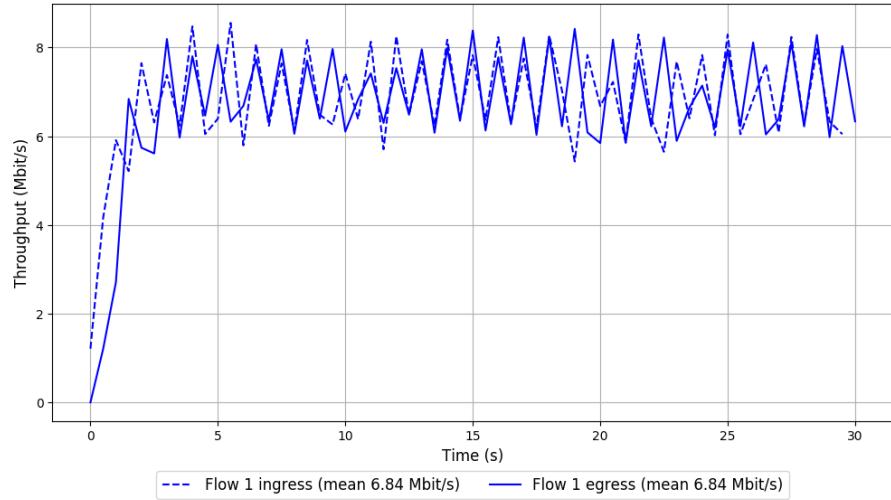


Run 4: Statistics of Sprout

```
Start at: 2019-01-03 06:06:32
End at: 2019-01-03 06:07:02
Local clock offset: -0.022 ms
Remote clock offset: 0.179 ms

# Below is generated by plot.py at 2019-01-03 09:03:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.84 Mbit/s
95th percentile per-packet one-way delay: 64.330 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.84 Mbit/s
95th percentile per-packet one-way delay: 64.330 ms
Loss rate: 0.00%
```

Run 4: Report of Sprout — Data Link

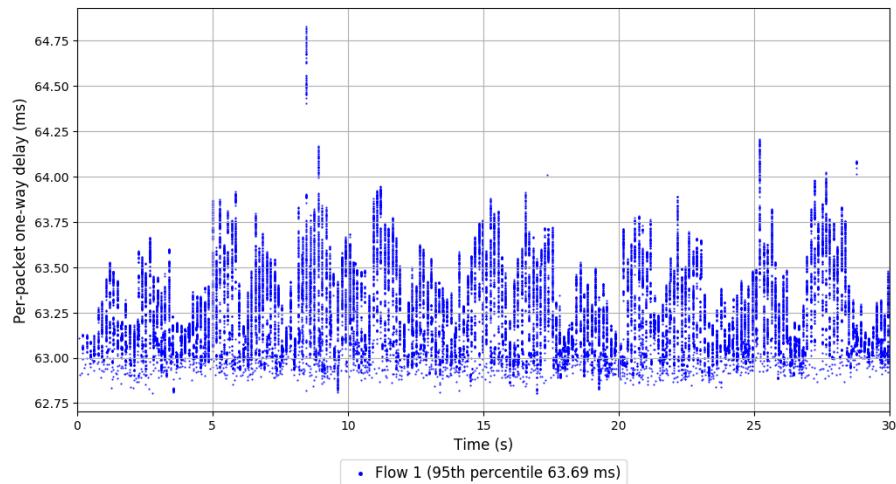
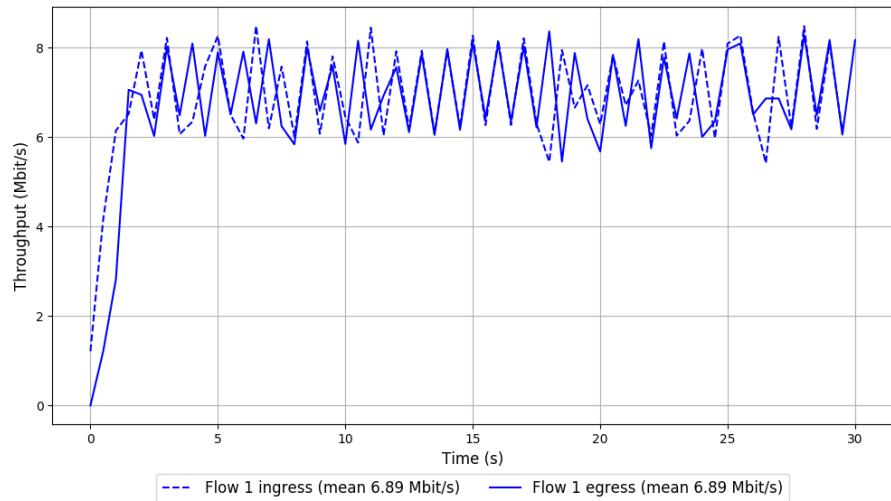


Run 5: Statistics of Sprout

```
Start at: 2019-01-03 06:34:51
End at: 2019-01-03 06:35:21
Local clock offset: -0.031 ms
Remote clock offset: -0.118 ms

# Below is generated by plot.py at 2019-01-03 09:03:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.89 Mbit/s
95th percentile per-packet one-way delay: 63.693 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.89 Mbit/s
95th percentile per-packet one-way delay: 63.693 ms
Loss rate: 0.00%
```

Run 5: Report of Sprout — Data Link

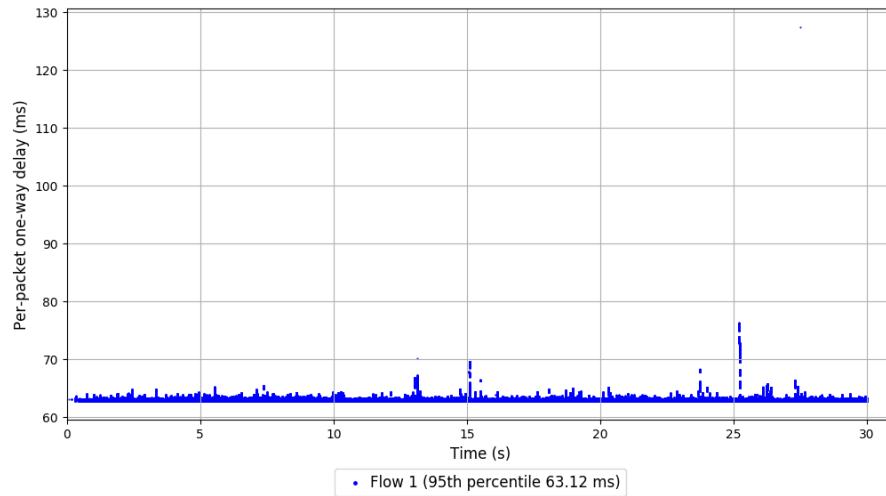
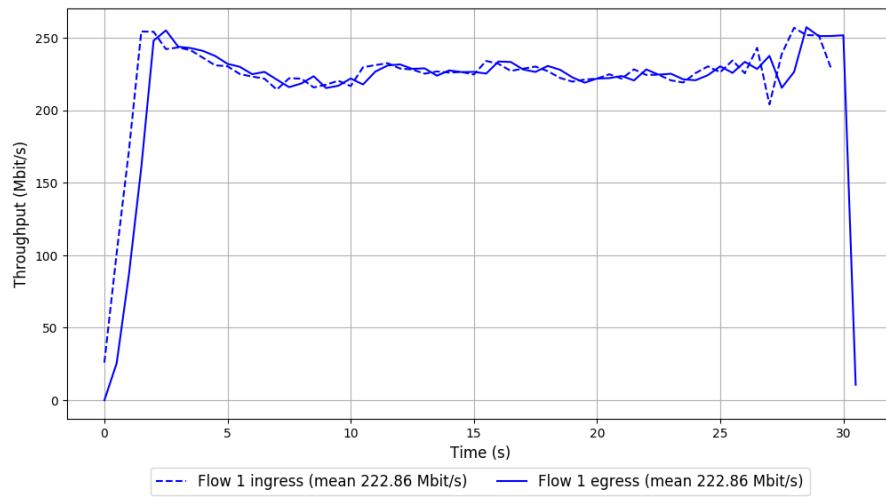


Run 1: Statistics of TaoVA-100x

```
Start at: 2019-01-03 05:02:30
End at: 2019-01-03 05:03:00
Local clock offset: -0.026 ms
Remote clock offset: 0.015 ms

# Below is generated by plot.py at 2019-01-03 09:03:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 222.86 Mbit/s
95th percentile per-packet one-way delay: 63.123 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 222.86 Mbit/s
95th percentile per-packet one-way delay: 63.123 ms
Loss rate: 0.00%
```

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

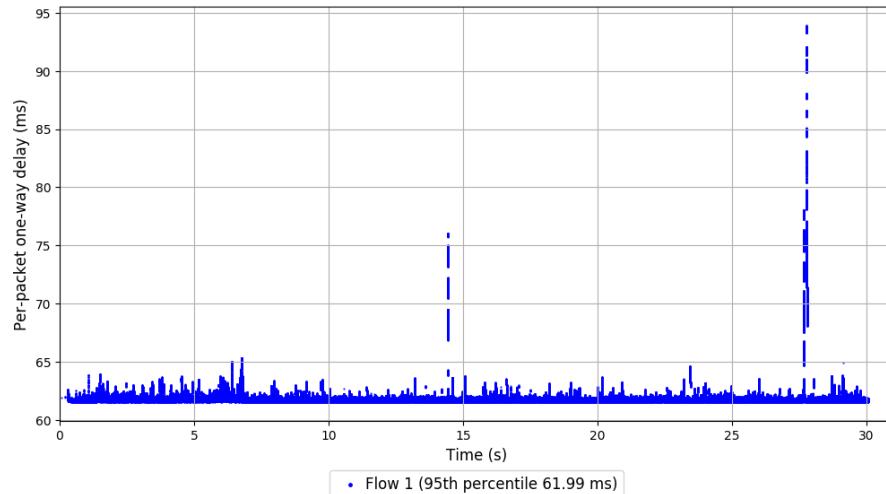
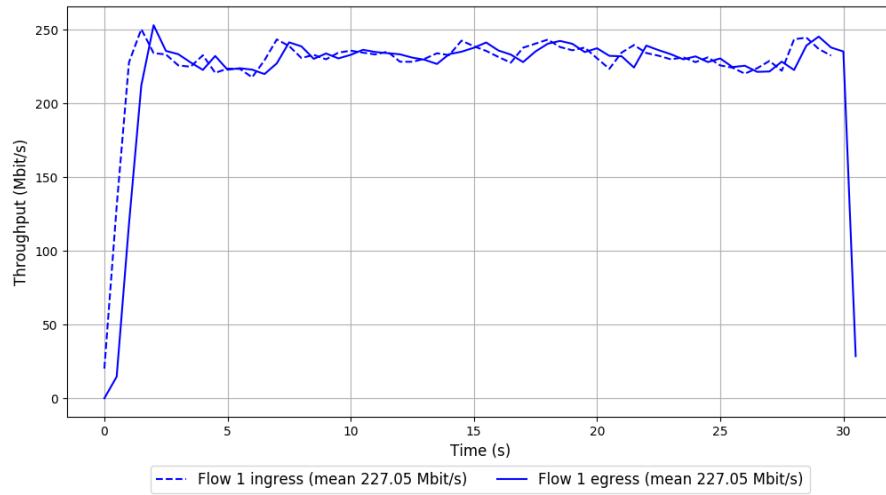


Run 2: Statistics of TaoVA-100x

```
Start at: 2019-01-03 05:30:44
End at: 2019-01-03 05:31:14
Local clock offset: -0.036 ms
Remote clock offset: -1.29 ms

# Below is generated by plot.py at 2019-01-03 09:03:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 227.05 Mbit/s
95th percentile per-packet one-way delay: 61.991 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 227.05 Mbit/s
95th percentile per-packet one-way delay: 61.991 ms
Loss rate: 0.00%
```

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

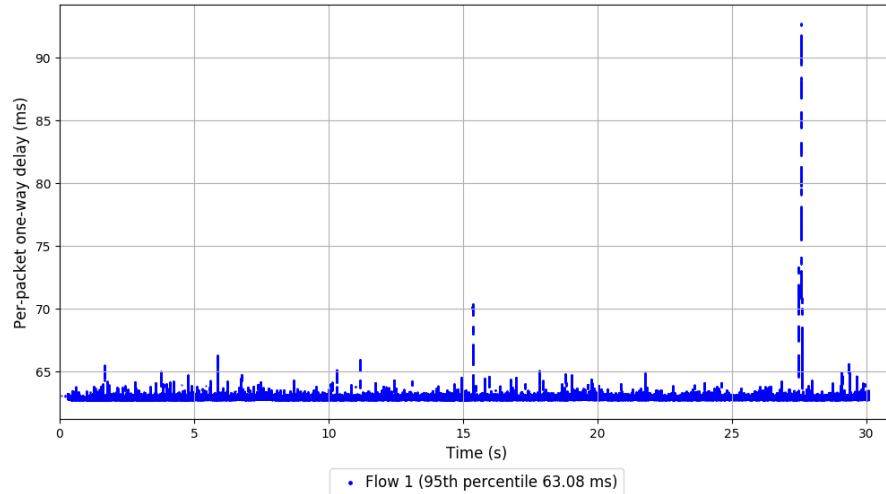
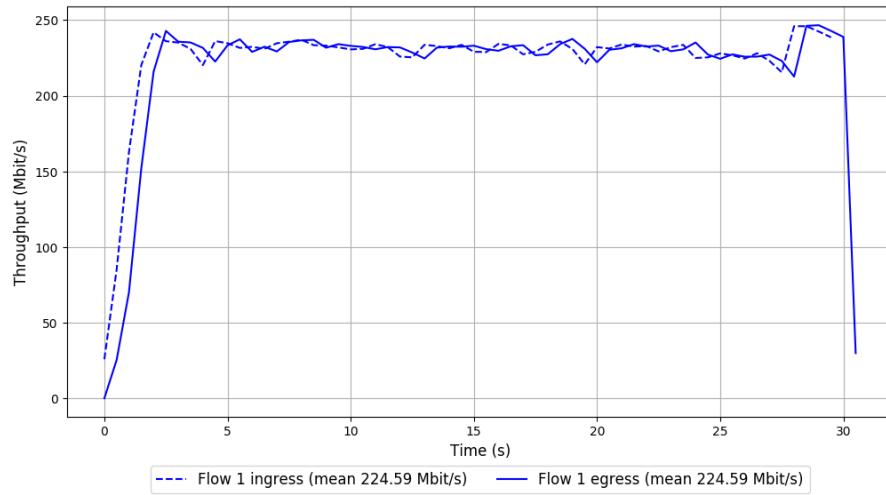


Run 3: Statistics of TaoVA-100x

```
Start at: 2019-01-03 05:58:54
End at: 2019-01-03 05:59:24
Local clock offset: -0.029 ms
Remote clock offset: -0.025 ms

# Below is generated by plot.py at 2019-01-03 09:03:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 224.59 Mbit/s
95th percentile per-packet one-way delay: 63.083 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 224.59 Mbit/s
95th percentile per-packet one-way delay: 63.083 ms
Loss rate: 0.00%
```

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

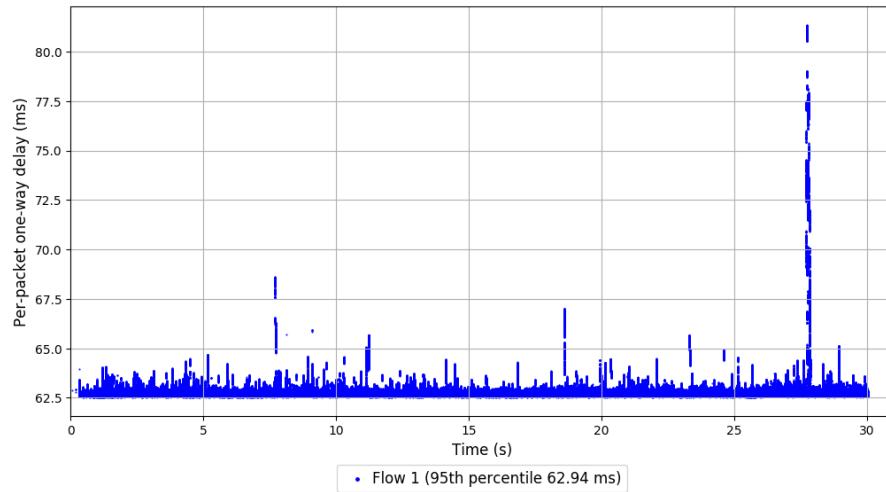
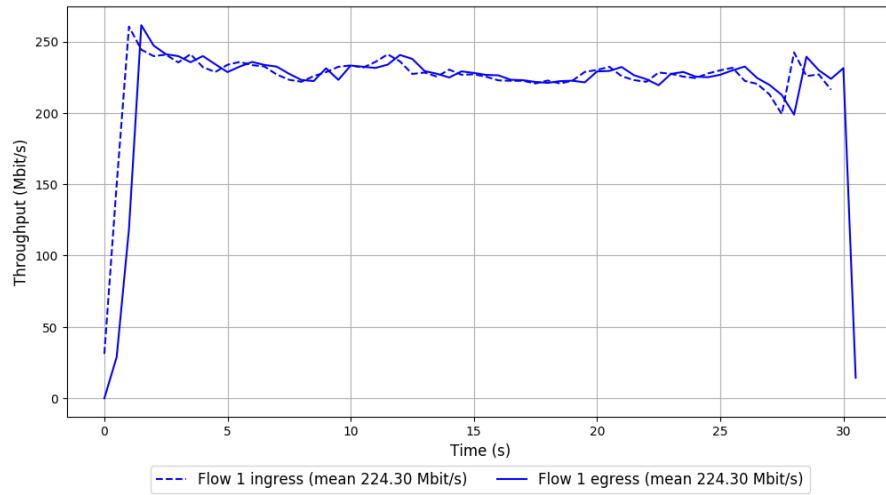


Run 4: Statistics of TaoVA-100x

```
Start at: 2019-01-03 06:27:14
End at: 2019-01-03 06:27:44
Local clock offset: 0.017 ms
Remote clock offset: -0.012 ms

# Below is generated by plot.py at 2019-01-03 09:03:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 224.30 Mbit/s
95th percentile per-packet one-way delay: 62.941 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 224.30 Mbit/s
95th percentile per-packet one-way delay: 62.941 ms
Loss rate: 0.00%
```

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

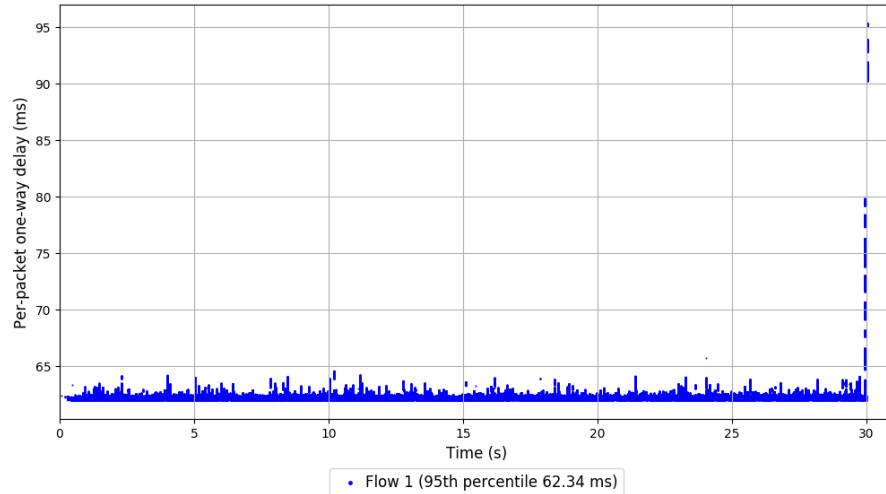
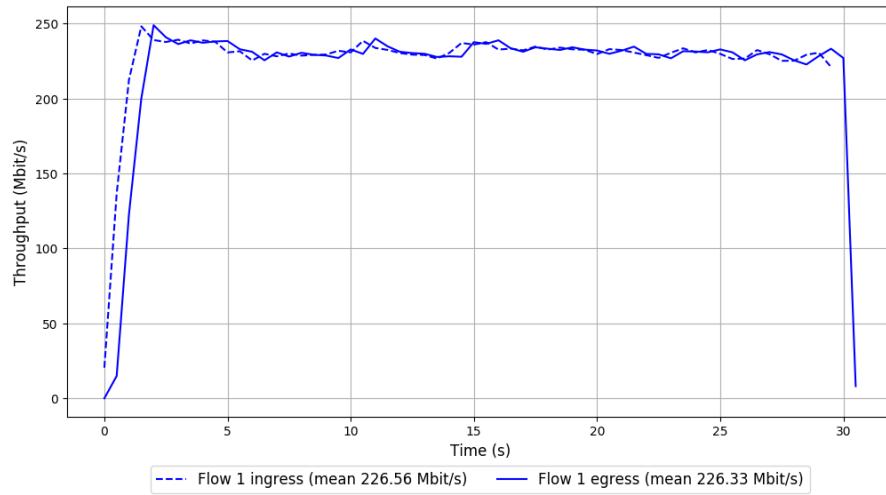


Run 5: Statistics of TaoVA-100x

```
Start at: 2019-01-03 06:55:33
End at: 2019-01-03 06:56:03
Local clock offset: -0.014 ms
Remote clock offset: -0.693 ms

# Below is generated by plot.py at 2019-01-03 09:03:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 226.33 Mbit/s
95th percentile per-packet one-way delay: 62.344 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 226.33 Mbit/s
95th percentile per-packet one-way delay: 62.344 ms
Loss rate: 0.10%
```

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

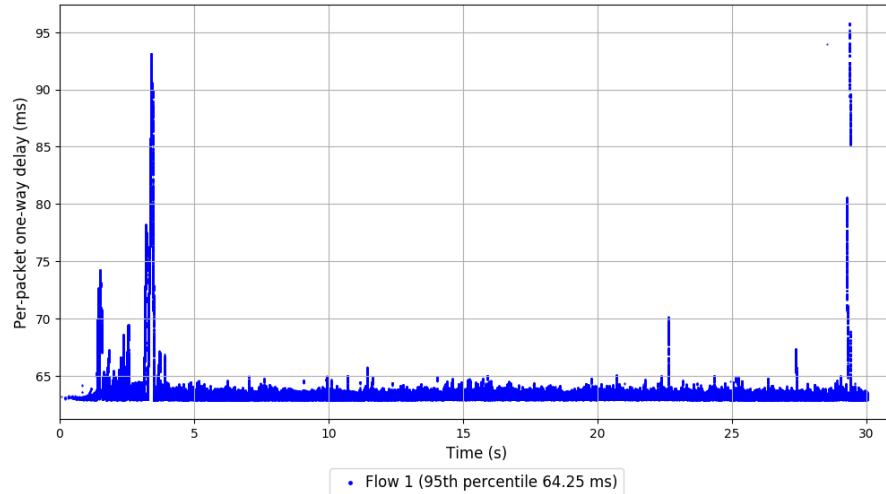
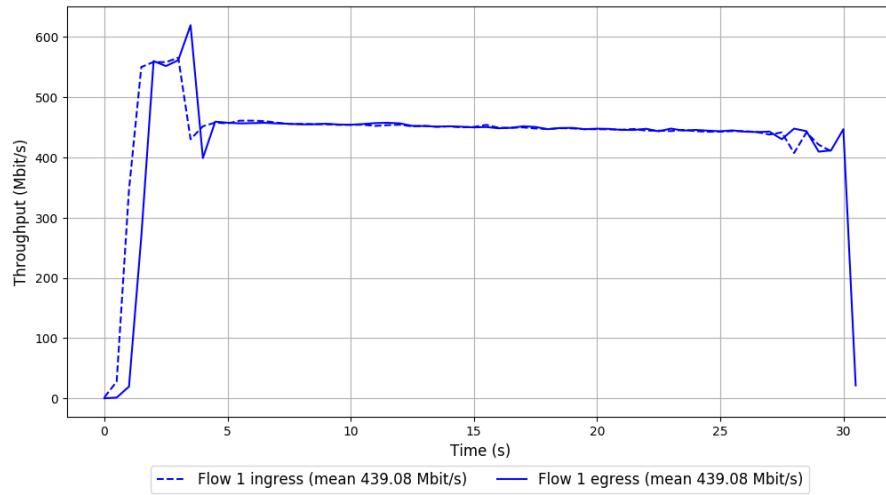


Run 1: Statistics of TCP Vegas

```
Start at: 2019-01-03 04:49:00
End at: 2019-01-03 04:49:30
Local clock offset: -0.047 ms
Remote clock offset: 0.122 ms

# Below is generated by plot.py at 2019-01-03 09:06:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 439.08 Mbit/s
95th percentile per-packet one-way delay: 64.249 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 439.08 Mbit/s
95th percentile per-packet one-way delay: 64.249 ms
Loss rate: 0.00%
```

Run 1: Report of TCP Vegas — Data Link

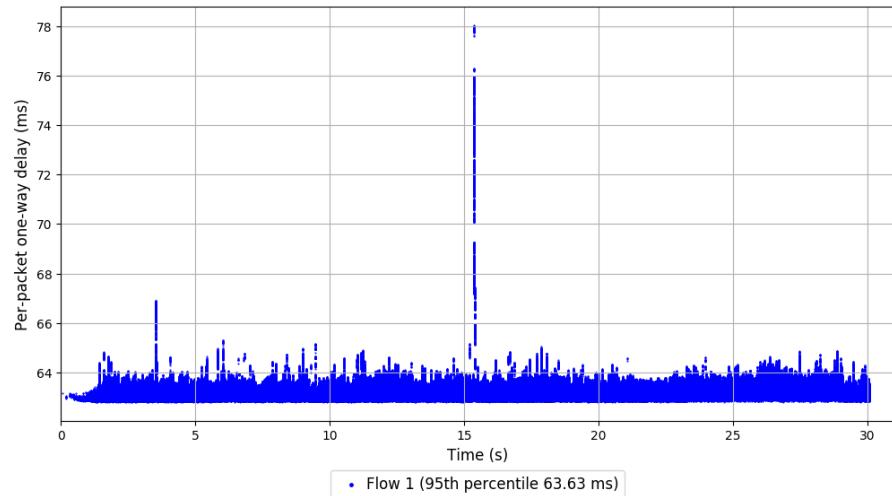
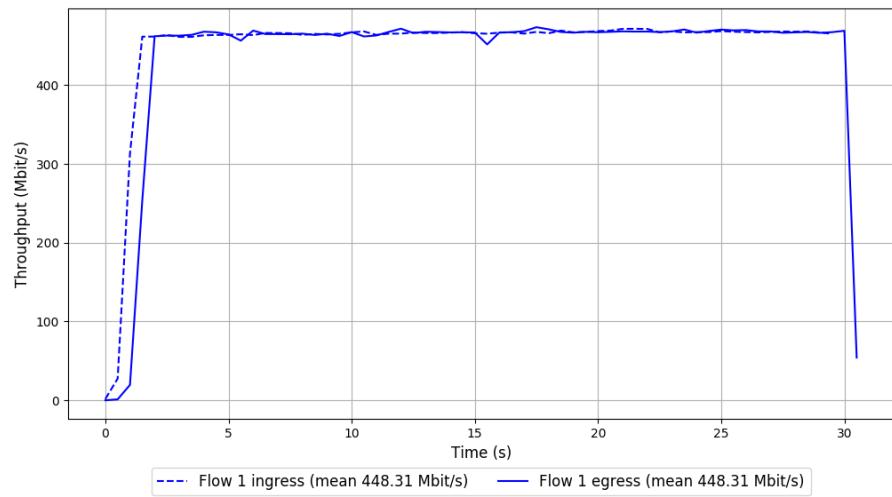


Run 2: Statistics of TCP Vegas

```
Start at: 2019-01-03 05:17:17
End at: 2019-01-03 05:17:47
Local clock offset: -0.029 ms
Remote clock offset: -0.174 ms

# Below is generated by plot.py at 2019-01-03 09:13:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 448.31 Mbit/s
95th percentile per-packet one-way delay: 63.634 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 448.31 Mbit/s
95th percentile per-packet one-way delay: 63.634 ms
Loss rate: 0.00%
```

Run 2: Report of TCP Vegas — Data Link

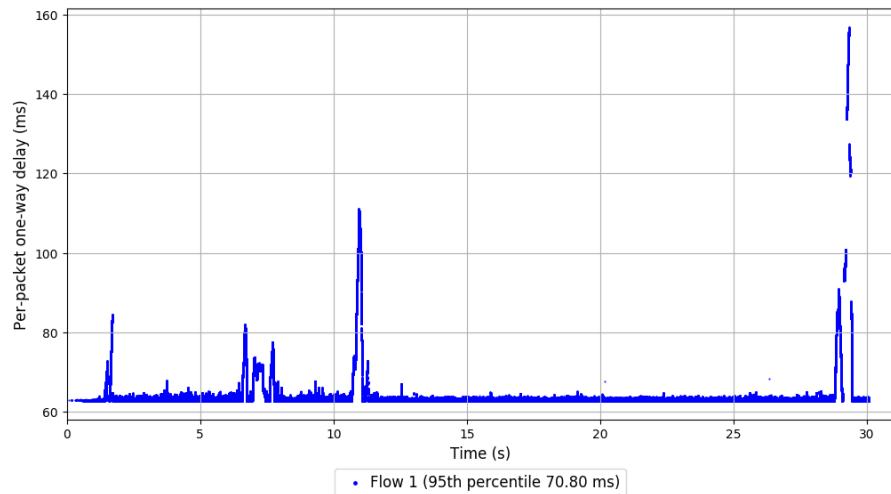
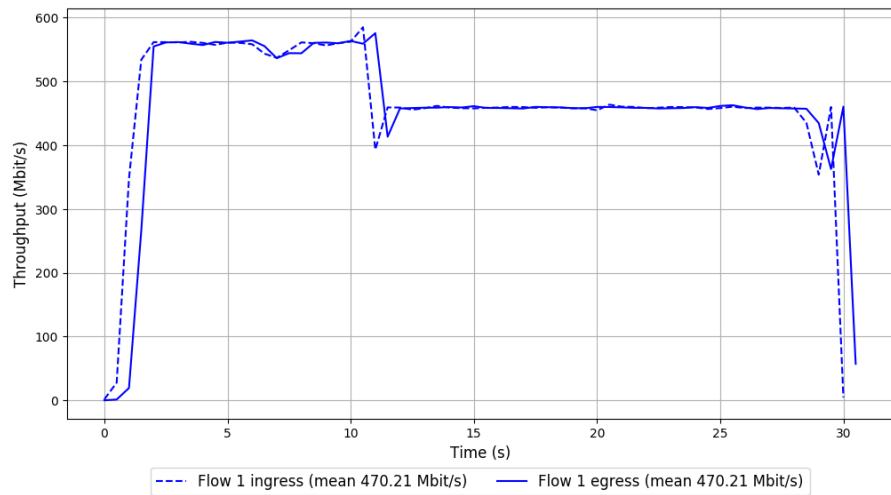


Run 3: Statistics of TCP Vegas

```
Start at: 2019-01-03 05:45:23
End at: 2019-01-03 05:45:53
Local clock offset: -0.055 ms
Remote clock offset: -0.167 ms

# Below is generated by plot.py at 2019-01-03 09:14:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 470.21 Mbit/s
95th percentile per-packet one-way delay: 70.796 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 470.21 Mbit/s
95th percentile per-packet one-way delay: 70.796 ms
Loss rate: 0.00%
```

Run 3: Report of TCP Vegas — Data Link

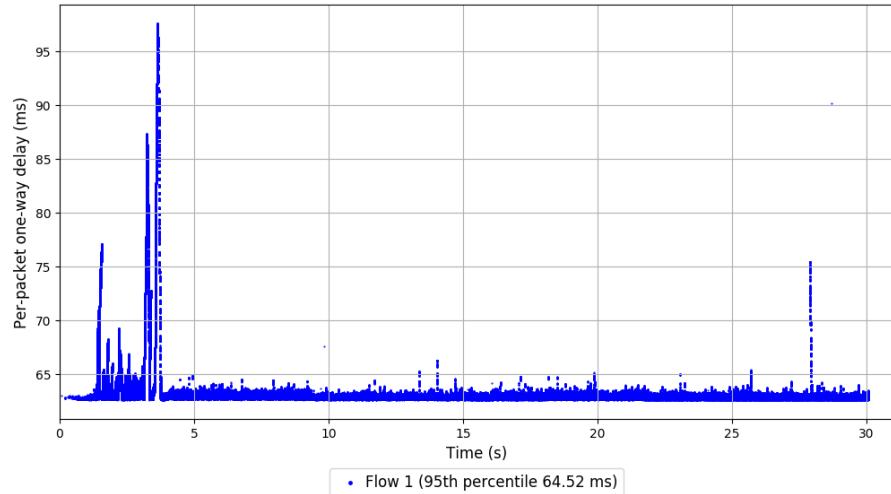
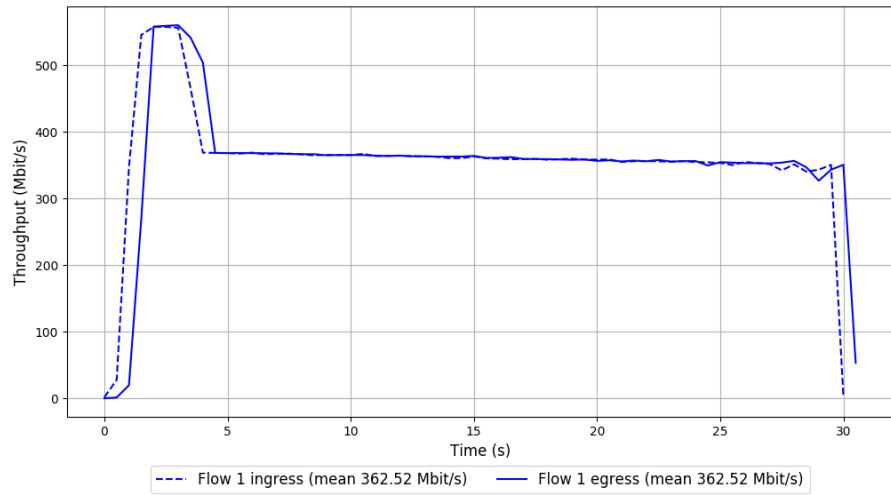


Run 4: Statistics of TCP Vegas

```
Start at: 2019-01-03 06:13:43
End at: 2019-01-03 06:14:13
Local clock offset: -0.024 ms
Remote clock offset: 0.009 ms

# Below is generated by plot.py at 2019-01-03 09:14:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 362.52 Mbit/s
95th percentile per-packet one-way delay: 64.515 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 362.52 Mbit/s
95th percentile per-packet one-way delay: 64.515 ms
Loss rate: 0.00%
```

Run 4: Report of TCP Vegas — Data Link

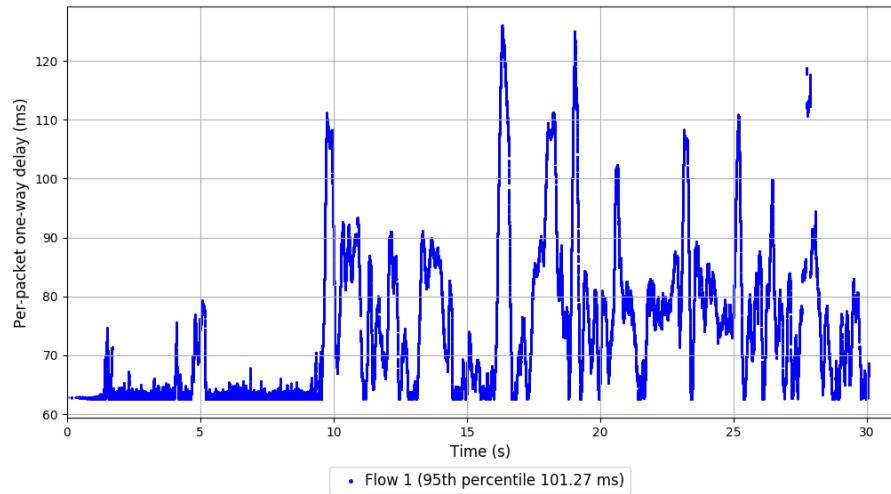
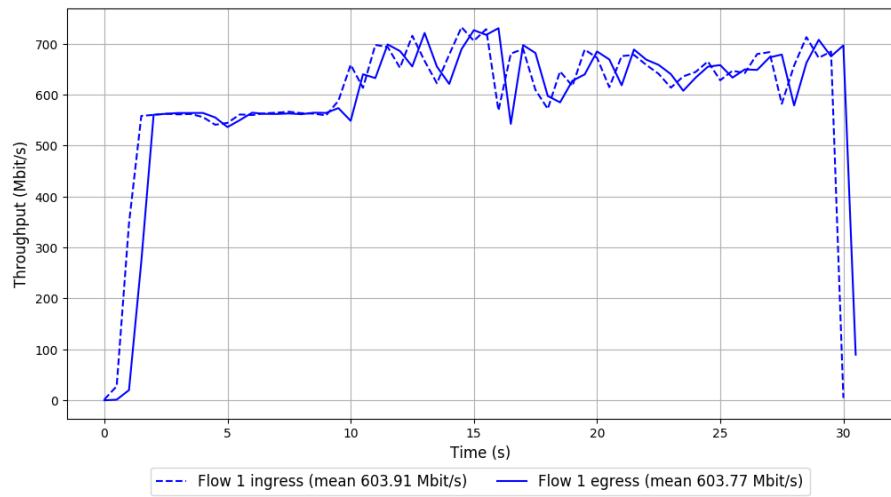


Run 5: Statistics of TCP Vegas

```
Start at: 2019-01-03 06:42:05
End at: 2019-01-03 06:42:35
Local clock offset: -0.018 ms
Remote clock offset: -0.178 ms

# Below is generated by plot.py at 2019-01-03 09:17:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 603.77 Mbit/s
95th percentile per-packet one-way delay: 101.269 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 603.77 Mbit/s
95th percentile per-packet one-way delay: 101.269 ms
Loss rate: 0.02%
```

Run 5: Report of TCP Vegas — Data Link

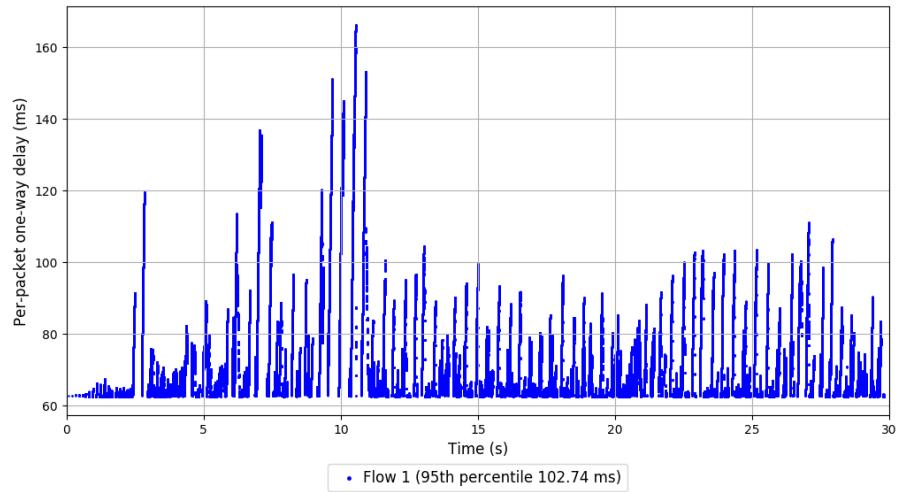
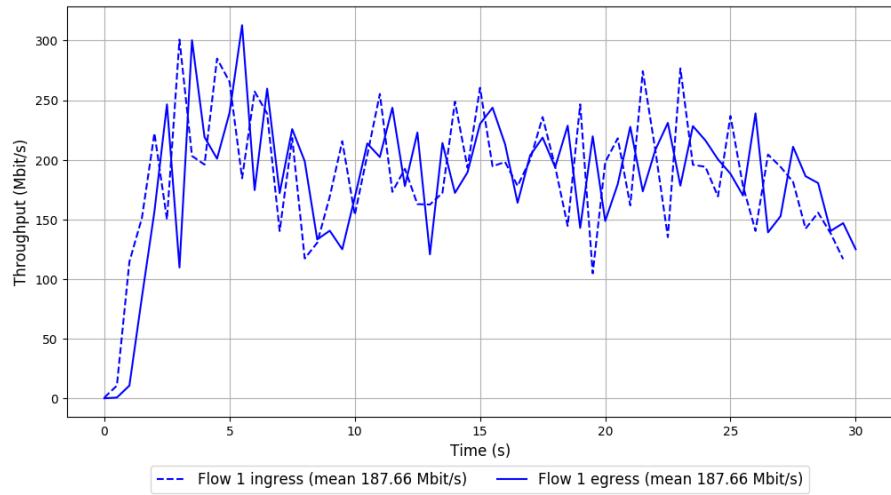


Run 1: Statistics of Verus

```
Start at: 2019-01-03 04:55:22
End at: 2019-01-03 04:55:52
Local clock offset: -0.019 ms
Remote clock offset: -0.187 ms

# Below is generated by plot.py at 2019-01-03 09:17:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 187.66 Mbit/s
95th percentile per-packet one-way delay: 102.736 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 187.66 Mbit/s
95th percentile per-packet one-way delay: 102.736 ms
Loss rate: 0.00%
```

Run 1: Report of Verus — Data Link

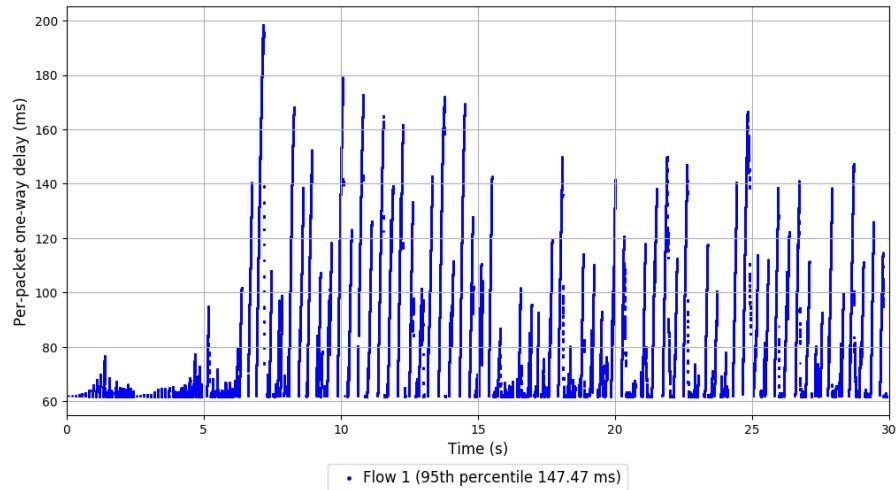
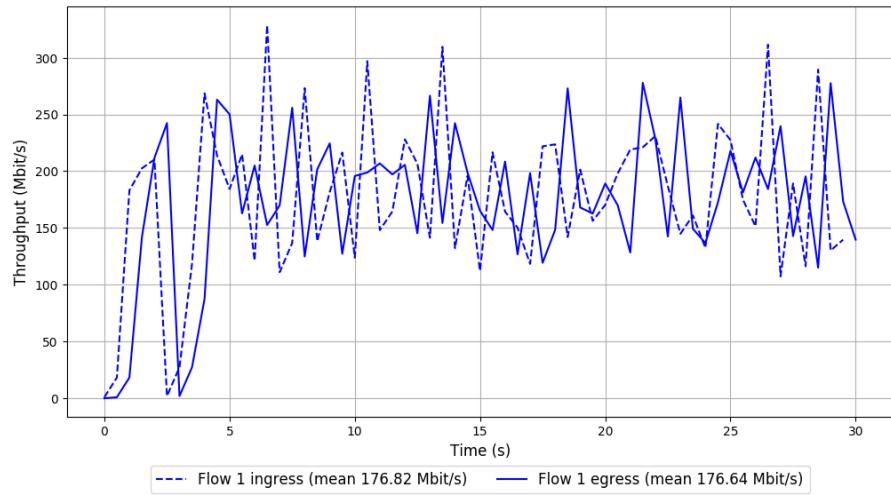


Run 2: Statistics of Verus

```
Start at: 2019-01-03 05:23:40
End at: 2019-01-03 05:24:10
Local clock offset: -0.025 ms
Remote clock offset: -1.375 ms

# Below is generated by plot.py at 2019-01-03 09:17:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 176.64 Mbit/s
95th percentile per-packet one-way delay: 147.474 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 176.64 Mbit/s
95th percentile per-packet one-way delay: 147.474 ms
Loss rate: 0.10%
```

Run 2: Report of Verus — Data Link

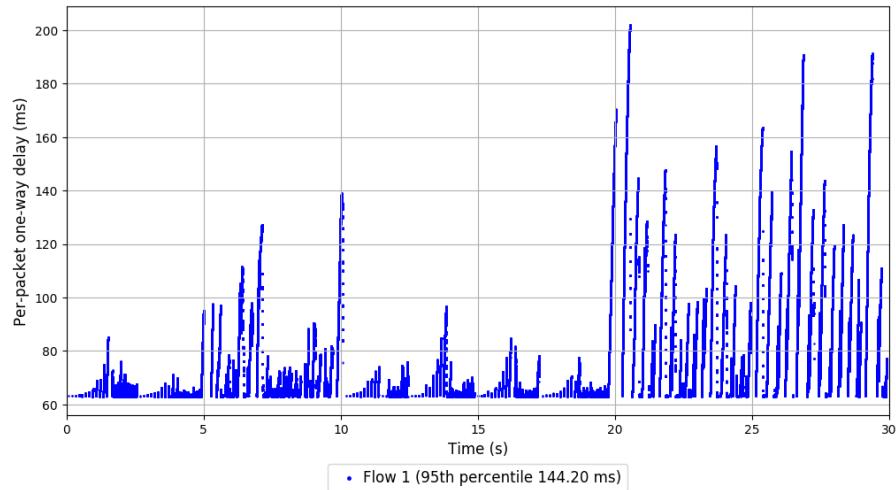
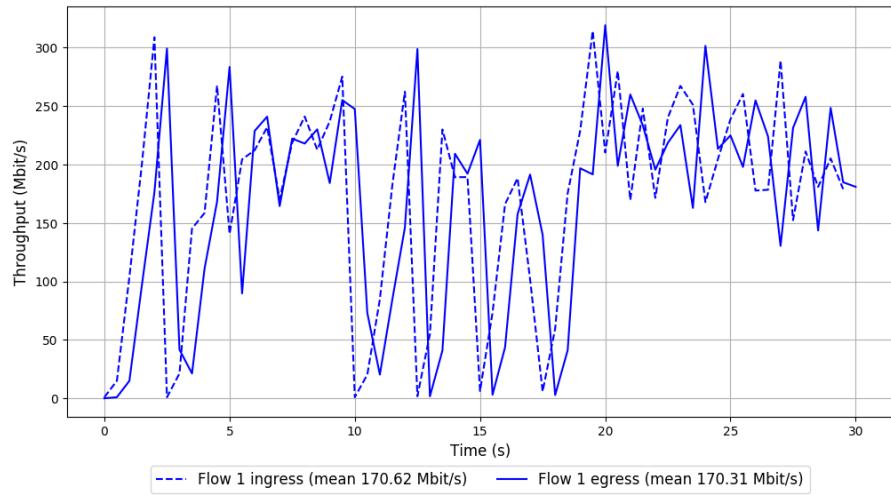


Run 3: Statistics of Verus

```
Start at: 2019-01-03 05:51:48
End at: 2019-01-03 05:52:18
Local clock offset: -0.066 ms
Remote clock offset: -0.021 ms

# Below is generated by plot.py at 2019-01-03 09:17:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 170.31 Mbit/s
95th percentile per-packet one-way delay: 144.197 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 170.31 Mbit/s
95th percentile per-packet one-way delay: 144.197 ms
Loss rate: 0.18%
```

Run 3: Report of Verus — Data Link

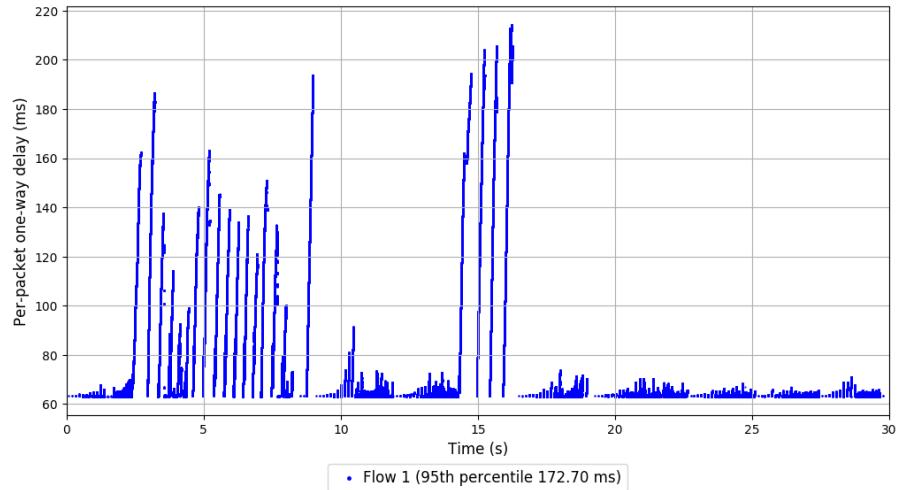
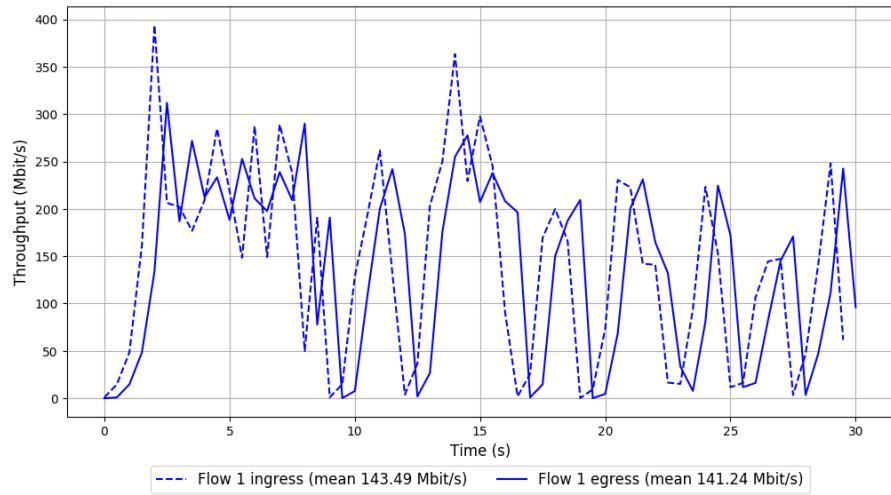


Run 4: Statistics of Verus

```
Start at: 2019-01-03 06:20:10
End at: 2019-01-03 06:20:40
Local clock offset: -0.018 ms
Remote clock offset: -0.094 ms

# Below is generated by plot.py at 2019-01-03 09:17:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 141.24 Mbit/s
95th percentile per-packet one-way delay: 172.703 ms
Loss rate: 1.57%
-- Flow 1:
Average throughput: 141.24 Mbit/s
95th percentile per-packet one-way delay: 172.703 ms
Loss rate: 1.57%
```

Run 4: Report of Verus — Data Link

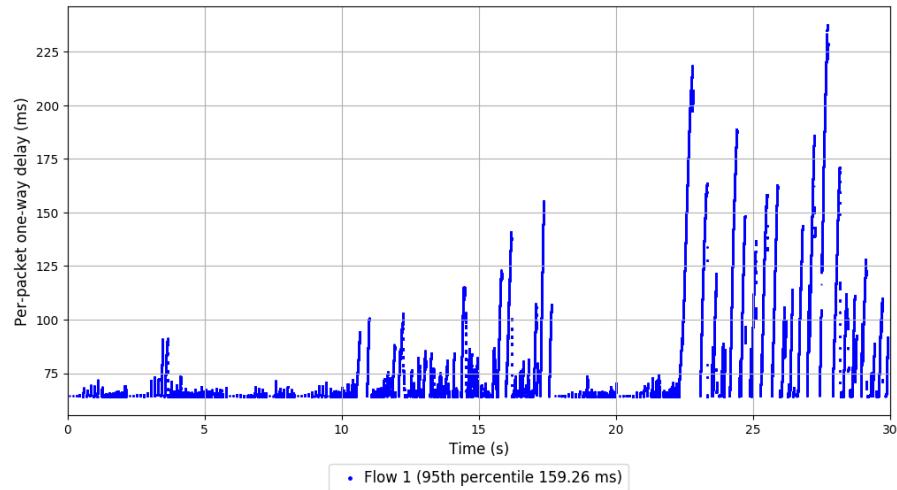
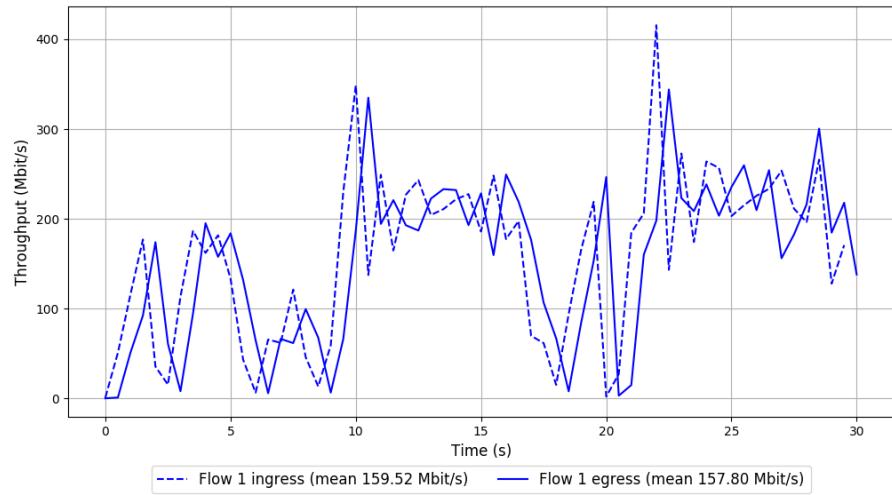


Run 5: Statistics of Verus

```
Start at: 2019-01-03 06:48:22
End at: 2019-01-03 06:48:52
Local clock offset: 0.012 ms
Remote clock offset: 1.24 ms

# Below is generated by plot.py at 2019-01-03 09:18:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 157.80 Mbit/s
95th percentile per-packet one-way delay: 159.261 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 157.80 Mbit/s
95th percentile per-packet one-way delay: 159.261 ms
Loss rate: 1.08%
```

Run 5: Report of Verus — Data Link

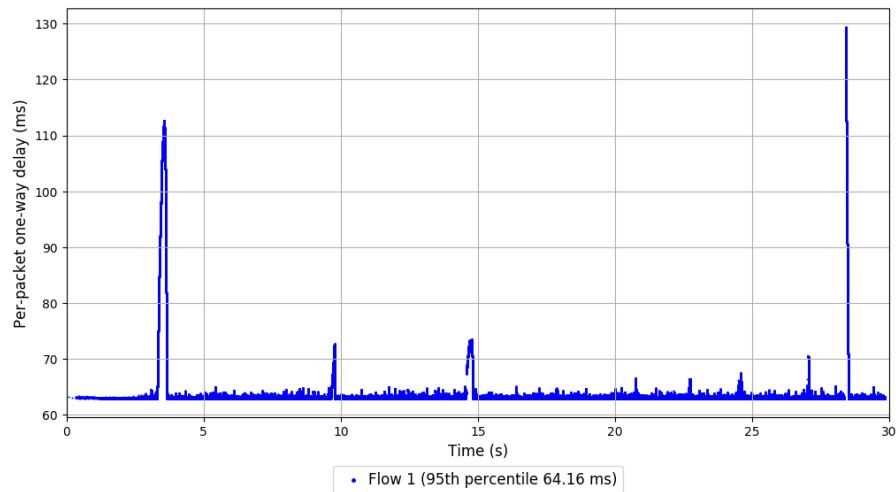
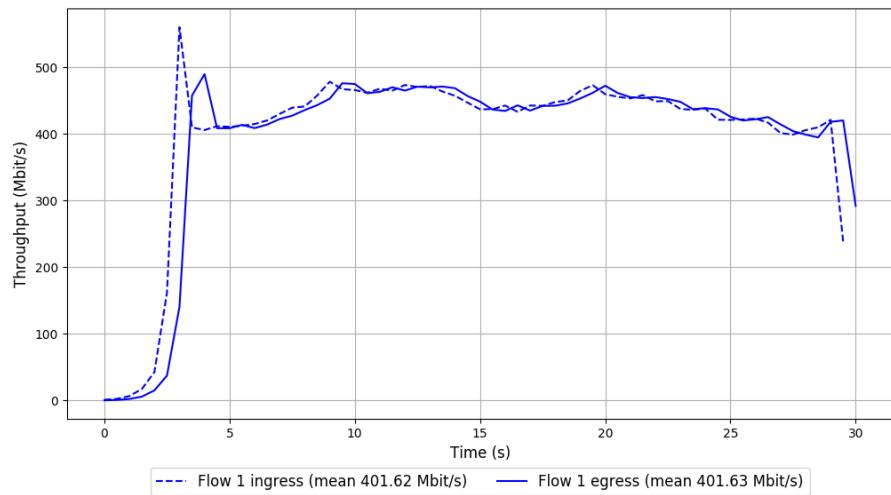


```
Run 1: Statistics of PCC-Vivace
```

```
Start at: 2019-01-03 04:36:07
End at: 2019-01-03 04:36:37
Local clock offset: -0.1 ms
Remote clock offset: 0.135 ms

# Below is generated by plot.py at 2019-01-03 09:20:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 401.63 Mbit/s
95th percentile per-packet one-way delay: 64.161 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 401.63 Mbit/s
95th percentile per-packet one-way delay: 64.161 ms
Loss rate: 0.00%
```

Run 1: Report of PCC-Vivace — Data Link

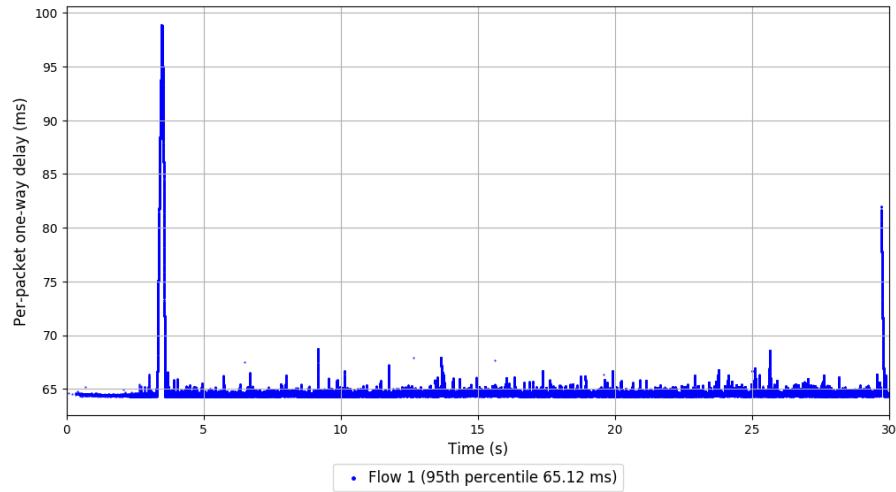
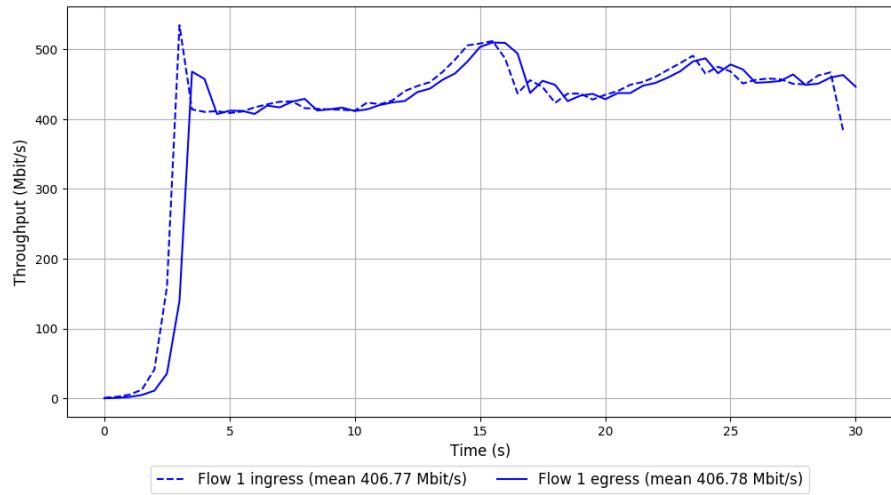


Run 2: Statistics of PCC-Vivace

```
Start at: 2019-01-03 05:03:59
End at: 2019-01-03 05:04:29
Local clock offset: -0.082 ms
Remote clock offset: 1.35 ms

# Below is generated by plot.py at 2019-01-03 09:20:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 406.78 Mbit/s
95th percentile per-packet one-way delay: 65.120 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 406.78 Mbit/s
95th percentile per-packet one-way delay: 65.120 ms
Loss rate: 0.00%
```

Run 2: Report of PCC-Vivace — Data Link

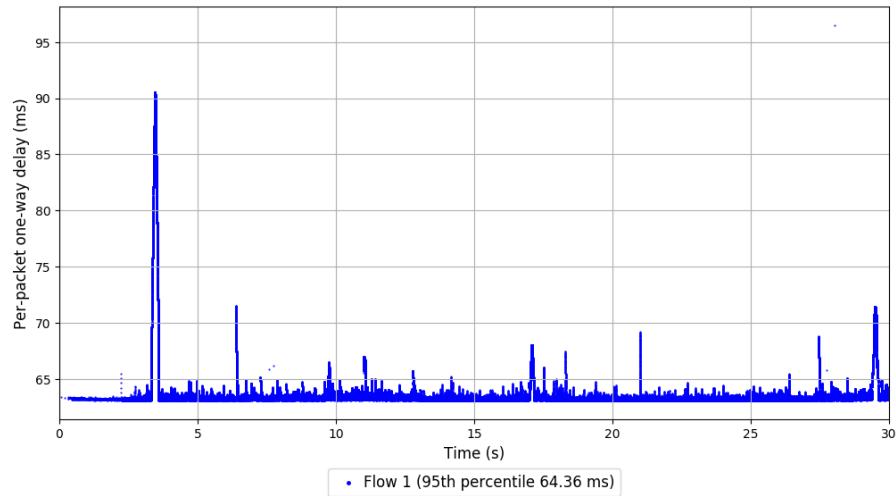
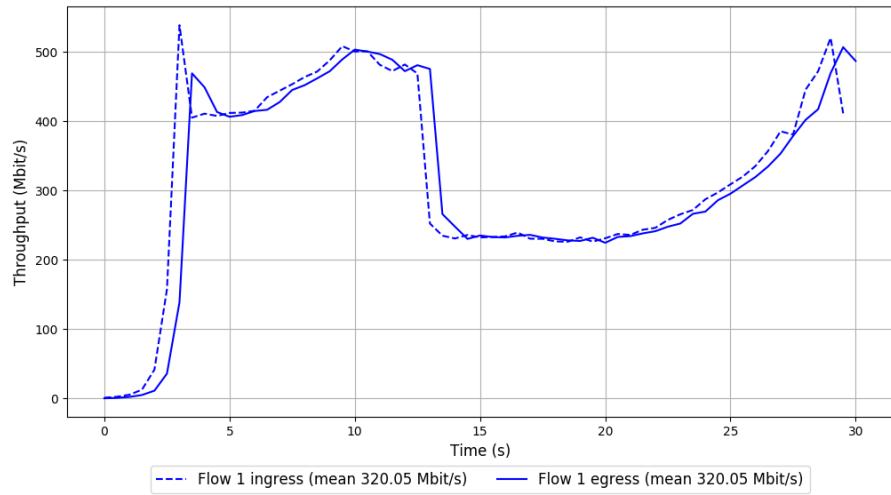


Run 3: Statistics of PCC-Vivace

```
Start at: 2019-01-03 05:32:14
End at: 2019-01-03 05:32:44
Local clock offset: -0.059 ms
Remote clock offset: 0.161 ms

# Below is generated by plot.py at 2019-01-03 09:20:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 320.05 Mbit/s
95th percentile per-packet one-way delay: 64.361 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 320.05 Mbit/s
95th percentile per-packet one-way delay: 64.361 ms
Loss rate: 0.00%
```

Run 3: Report of PCC-Vivace — Data Link

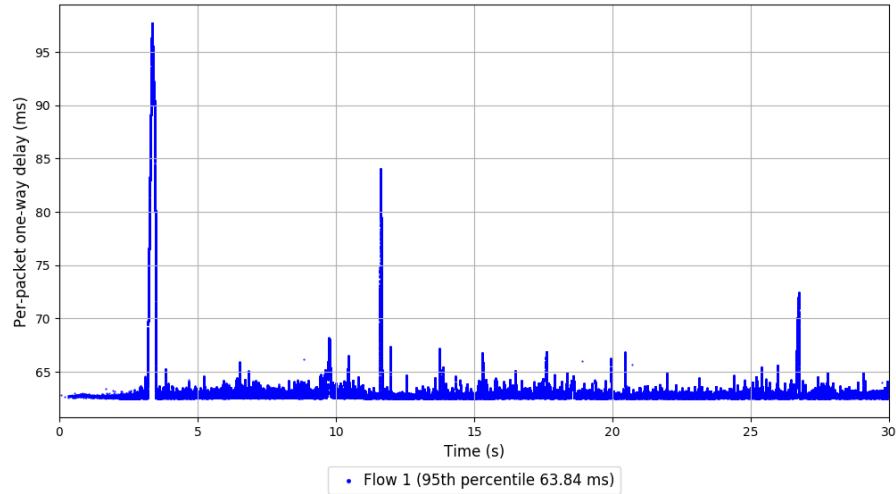
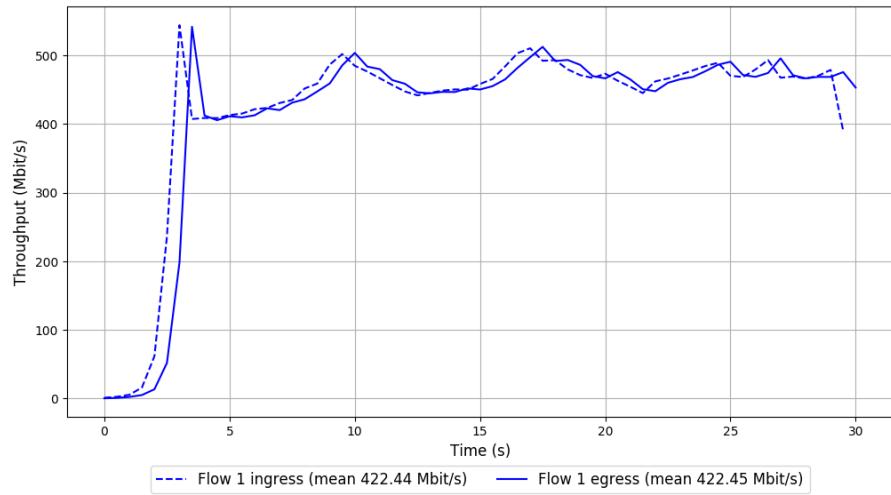


Run 4: Statistics of PCC-Vivace

```
Start at: 2019-01-03 06:00:22
End at: 2019-01-03 06:00:52
Local clock offset: -0.069 ms
Remote clock offset: -0.166 ms

# Below is generated by plot.py at 2019-01-03 09:20:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 422.45 Mbit/s
95th percentile per-packet one-way delay: 63.840 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 422.45 Mbit/s
95th percentile per-packet one-way delay: 63.840 ms
Loss rate: 0.00%
```

Run 4: Report of PCC-Vivace — Data Link

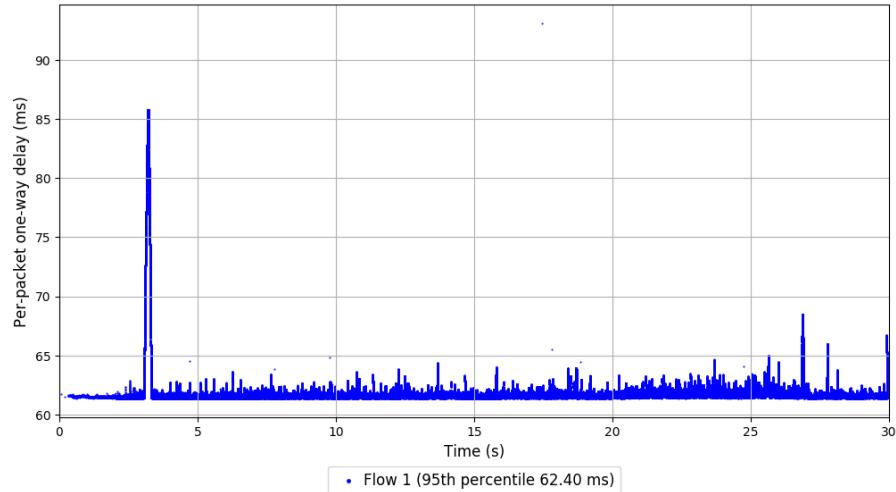
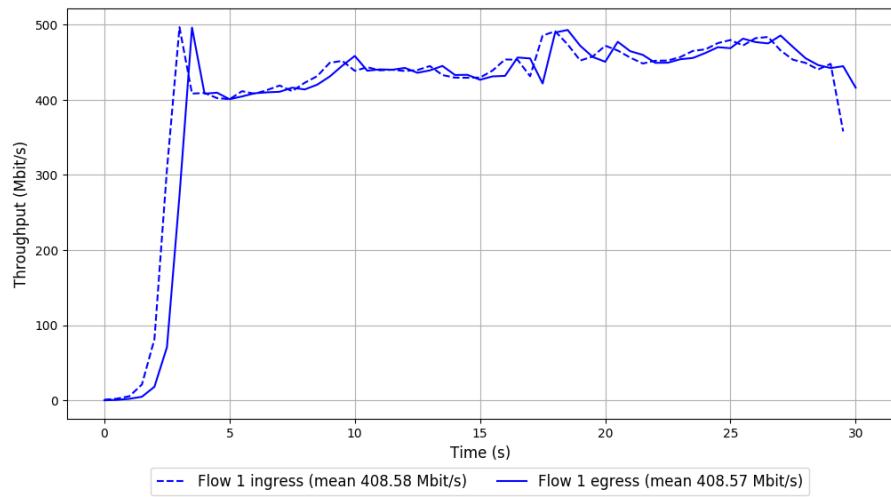


Run 5: Statistics of PCC-Vivace

```
Start at: 2019-01-03 06:28:44
End at: 2019-01-03 06:29:14
Local clock offset: -0.036 ms
Remote clock offset: -1.24 ms

# Below is generated by plot.py at 2019-01-03 09:20:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 408.57 Mbit/s
95th percentile per-packet one-way delay: 62.397 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 408.57 Mbit/s
95th percentile per-packet one-way delay: 62.397 ms
Loss rate: 0.00%
```

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

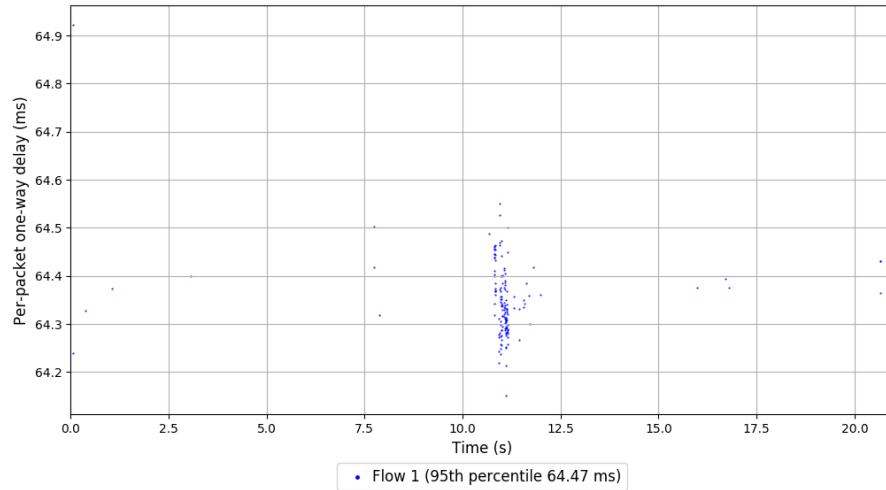
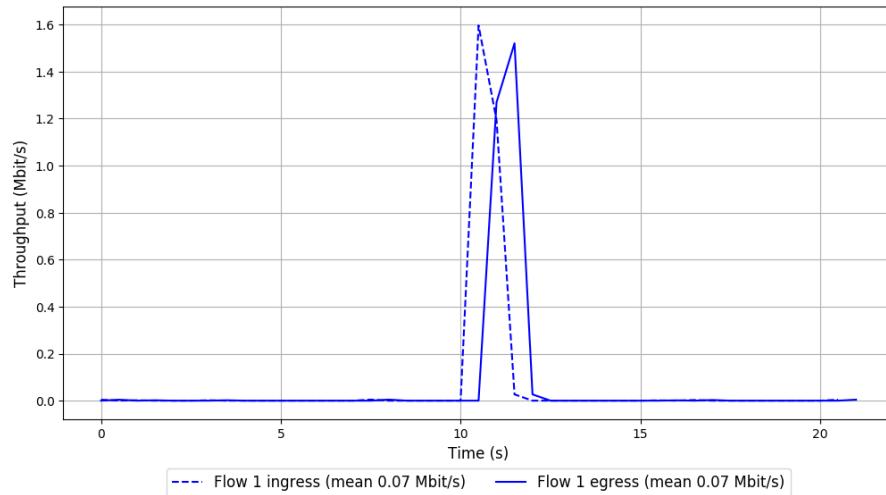
Start at: 2019-01-03 04:59:36

End at: 2019-01-03 05:00:06

Local clock offset: -0.057 ms

Remote clock offset: 1.214 ms

Run 1: Report of WebRTC media — Data Link

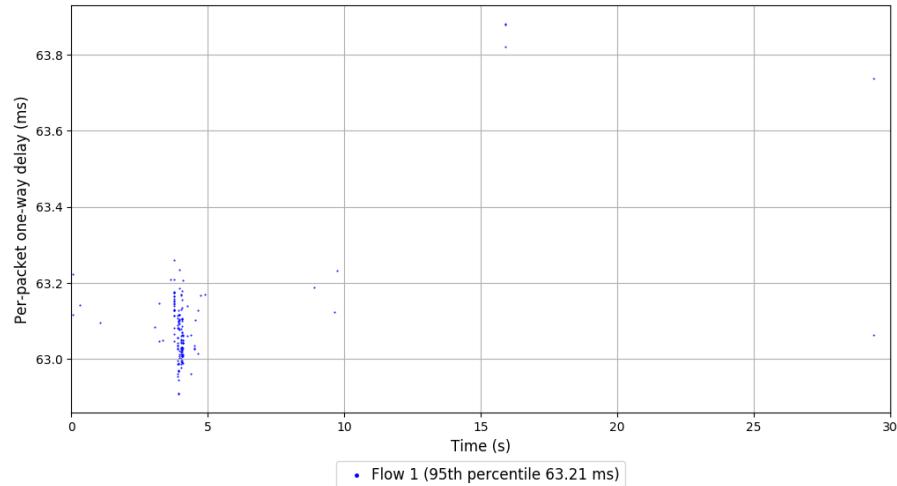
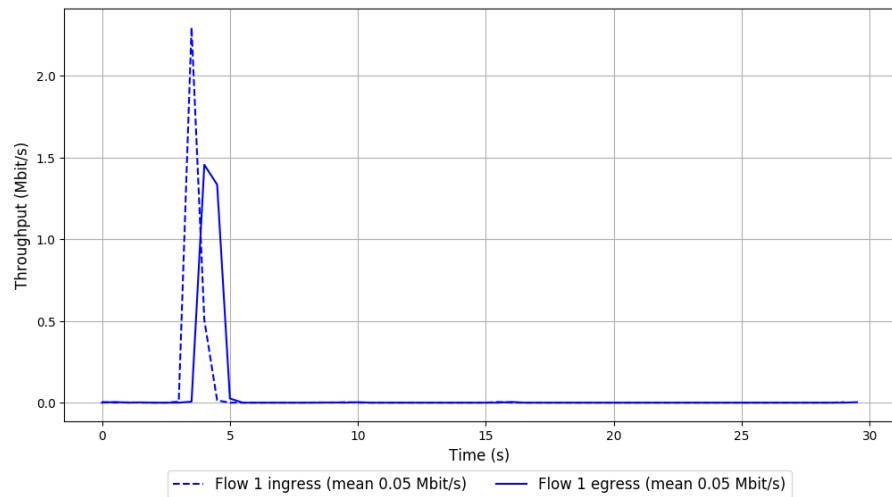


Run 2: Statistics of WebRTC media

```
Start at: 2019-01-03 05:27:49
End at: 2019-01-03 05:28:19
Local clock offset: -0.056 ms
Remote clock offset: 0.117 ms

# Below is generated by plot.py at 2019-01-03 09:20:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 63.210 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 63.210 ms
Loss rate: 0.00%
```

Run 2: Report of WebRTC media — Data Link

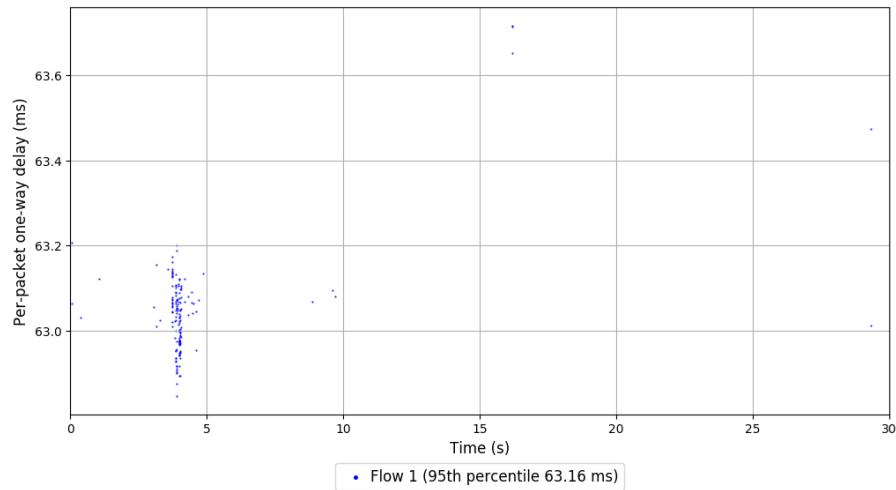
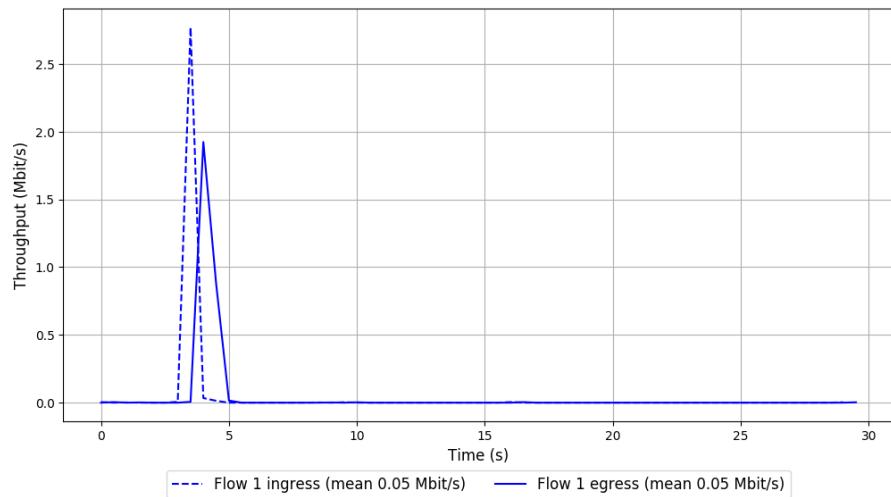


Run 3: Statistics of WebRTC media

```
Start at: 2019-01-03 05:55:59
End at: 2019-01-03 05:56:29
Local clock offset: -0.067 ms
Remote clock offset: -0.054 ms

# Below is generated by plot.py at 2019-01-03 09:20:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 63.162 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 63.162 ms
Loss rate: 0.00%
```

Run 3: Report of WebRTC media — Data Link

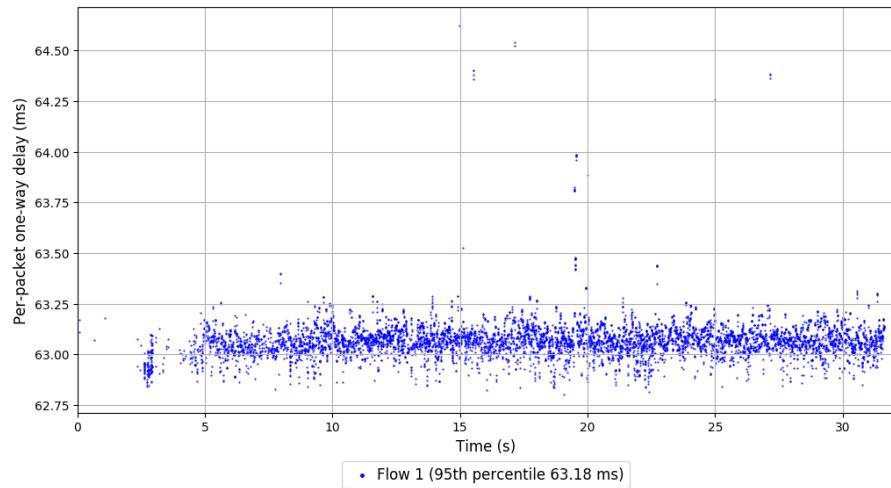
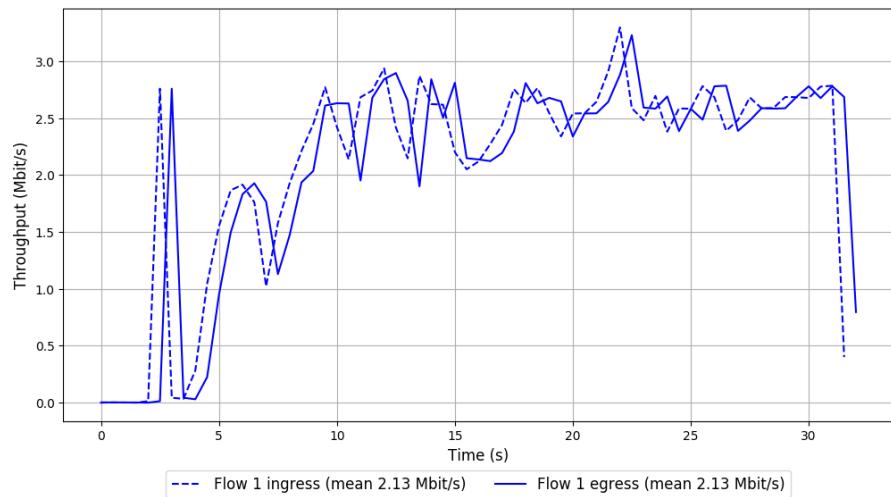


Run 4: Statistics of WebRTC media

```
Start at: 2019-01-03 06:24:21
End at: 2019-01-03 06:24:51
Local clock offset: -0.034 ms
Remote clock offset: -0.213 ms

# Below is generated by plot.py at 2019-01-03 09:20:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.13 Mbit/s
95th percentile per-packet one-way delay: 63.178 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.13 Mbit/s
95th percentile per-packet one-way delay: 63.178 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

```
Start at: 2019-01-03 06:52:36
End at: 2019-01-03 06:53:06
Local clock offset: 0.044 ms
Remote clock offset: 0.771 ms

# Below is generated by plot.py at 2019-01-03 09:20:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 63.807 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 63.807 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link

