

Pantheon Report

Generated at 2018-12-11 13:14:11 (UTC).
Data path: GCE Sydney on `ens4 (local)` → GCE Iowa 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:

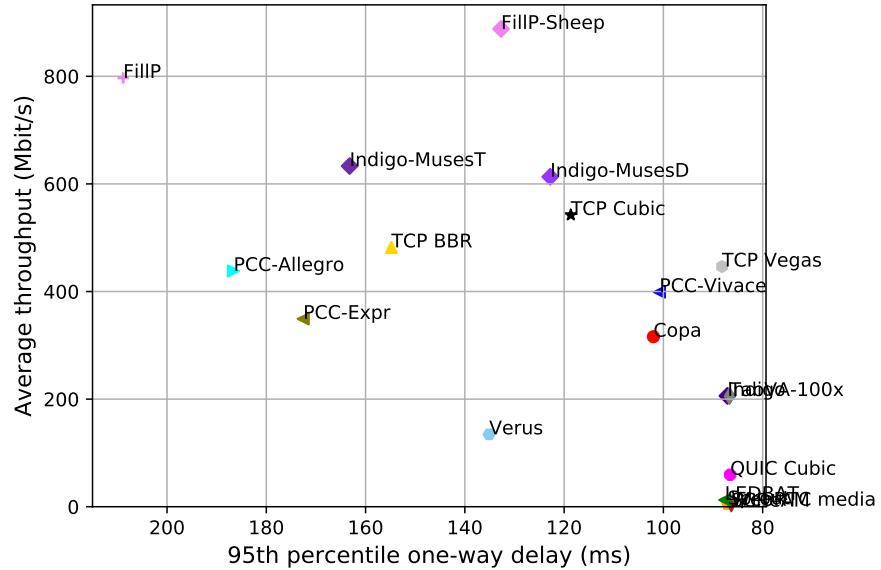
```
Linux 4.15.0-1024-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

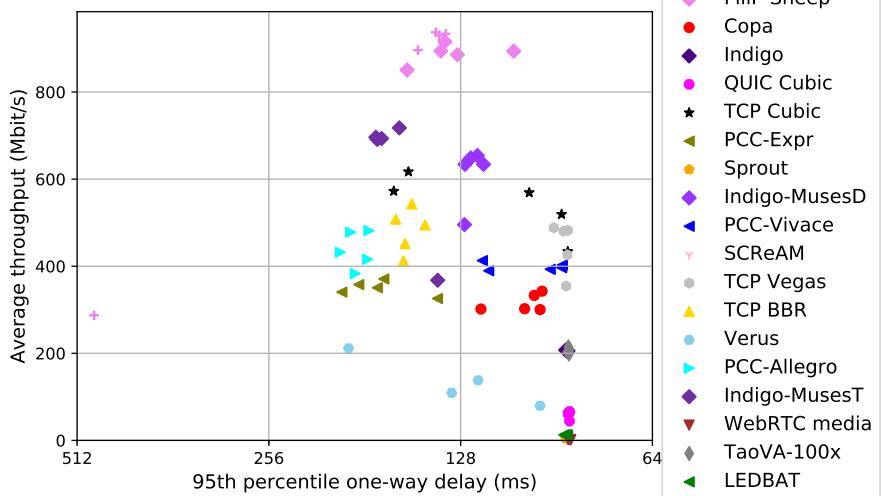
```
branch: muses @ c654af0b7d59d4ef4b914cfac404e1fc2e96dc68
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fc45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d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



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



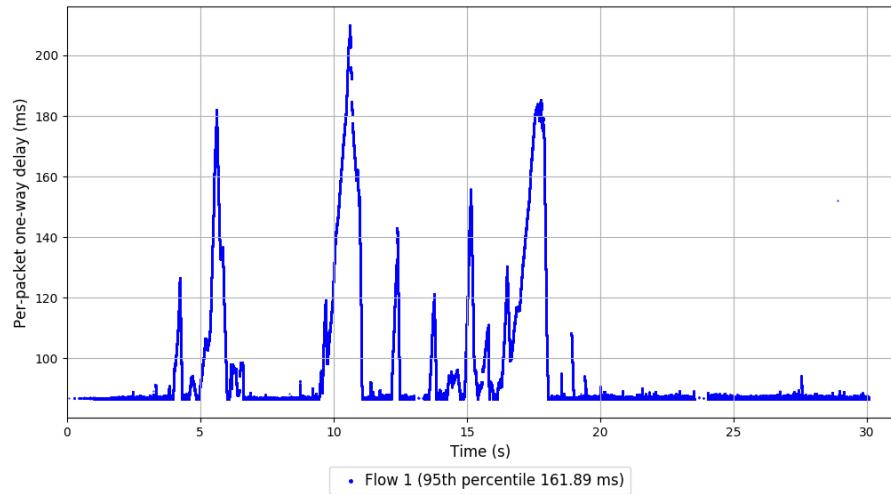
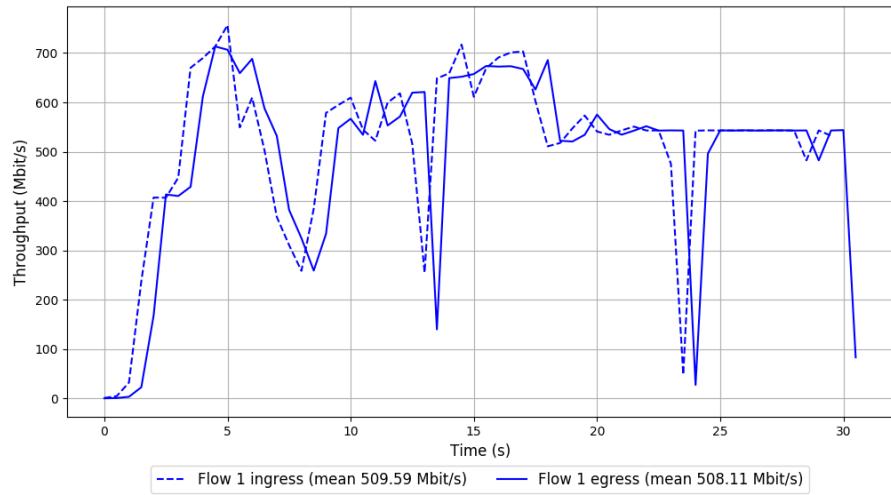
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	481.96	154.80	0.27
Copa	5	315.99	102.01	0.00
TCP Cubic	5	542.26	118.66	0.06
FillP	5	796.97	208.84	0.87
FillP-Sheep	5	888.03	132.71	0.96
Indigo	5	206.03	87.10	0.00
Indigo-MusesD	5	613.23	122.80	0.10
Indigo-MusesT	5	633.19	163.22	0.88
LEDBAT	5	12.51	87.65	0.00
PCC-Allegro	5	438.16	186.59	1.70
PCC-Expr	5	349.06	172.57	2.69
QUIC Cubic	5	59.42	86.54	0.00
SCReAM	5	0.22	86.40	0.00
Sprout	5	4.41	87.07	0.00
TaoVA-100x	5	205.75	86.67	0.00
TCP Vegas	5	446.38	88.19	0.00
Verus	4	134.57	135.11	0.09
PCC-Vivace	5	398.97	100.81	0.00
WebRTC media	5	1.90	86.31	0.00

Run 1: Statistics of TCP BBR

```
Start at: 2018-12-11 08:59:47
End at: 2018-12-11 09:00:17
Local clock offset: -0.102 ms
Remote clock offset: 0.114 ms

# Below is generated by plot.py at 2018-12-11 11:42:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 508.11 Mbit/s
95th percentile per-packet one-way delay: 161.891 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 508.11 Mbit/s
95th percentile per-packet one-way delay: 161.891 ms
Loss rate: 0.29%
```

Run 1: Report of TCP BBR — Data Link

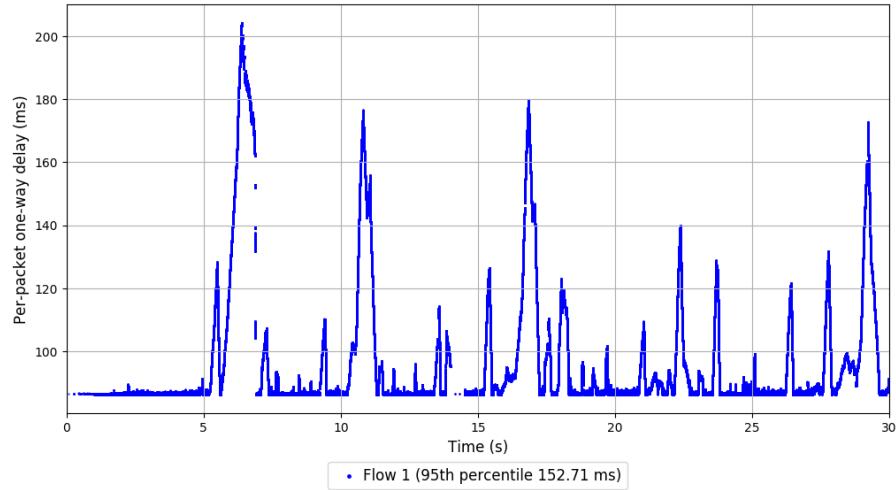
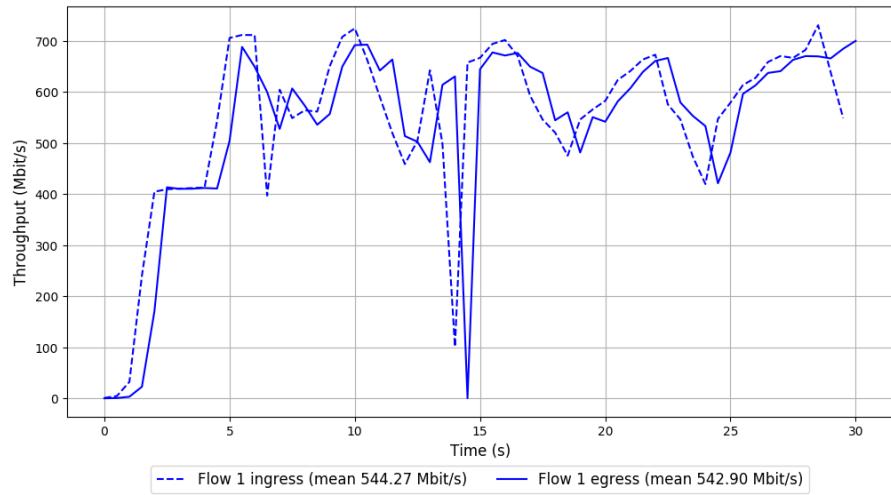


Run 2: Statistics of TCP BBR

```
Start at: 2018-12-11 09:28:15
End at: 2018-12-11 09:28:45
Local clock offset: -0.446 ms
Remote clock offset: 0.244 ms

# Below is generated by plot.py at 2018-12-11 11:43:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 542.90 Mbit/s
95th percentile per-packet one-way delay: 152.714 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 542.90 Mbit/s
95th percentile per-packet one-way delay: 152.714 ms
Loss rate: 0.24%
```

Run 2: Report of TCP BBR — Data Link

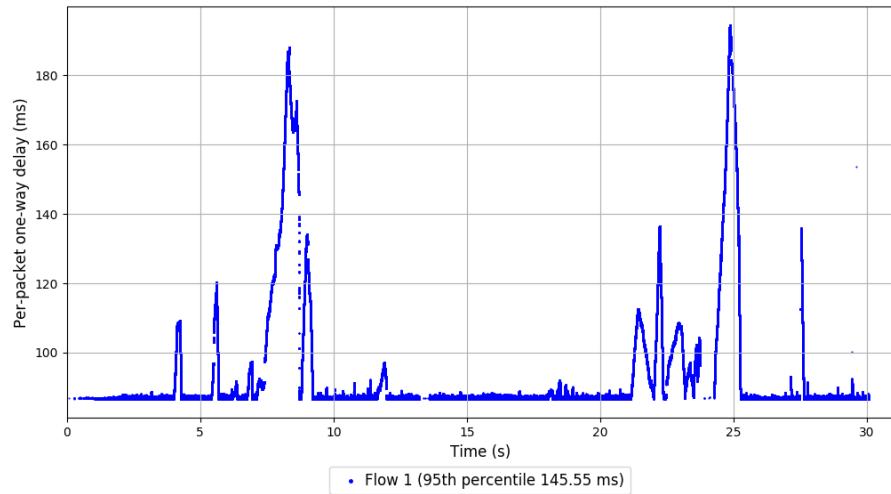
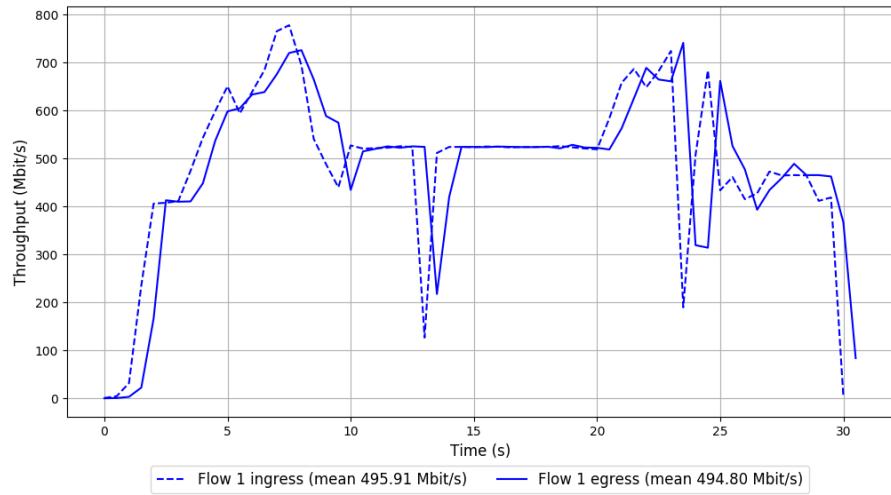


Run 3: Statistics of TCP BBR

```
Start at: 2018-12-11 09:56:53
End at: 2018-12-11 09:57:23
Local clock offset: -0.403 ms
Remote clock offset: 0.296 ms

# Below is generated by plot.py at 2018-12-11 11:43:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 494.80 Mbit/s
95th percentile per-packet one-way delay: 145.548 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 494.80 Mbit/s
95th percentile per-packet one-way delay: 145.548 ms
Loss rate: 0.22%
```

Run 3: Report of TCP BBR — Data Link

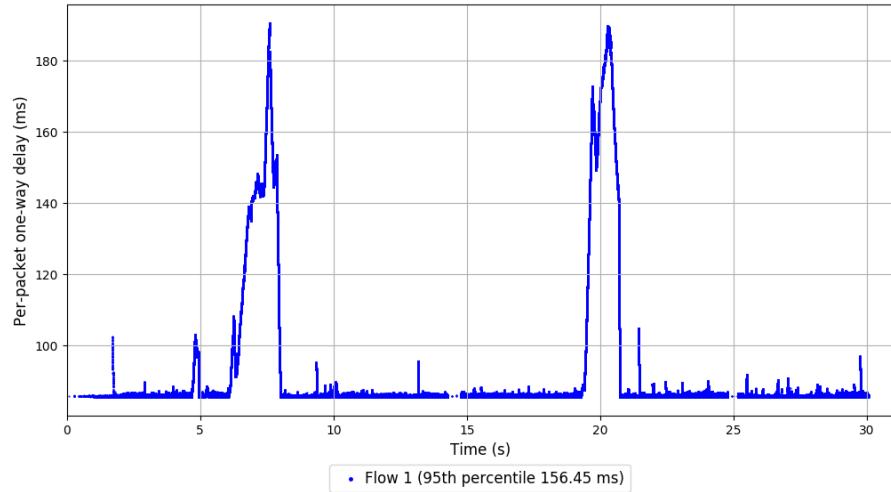
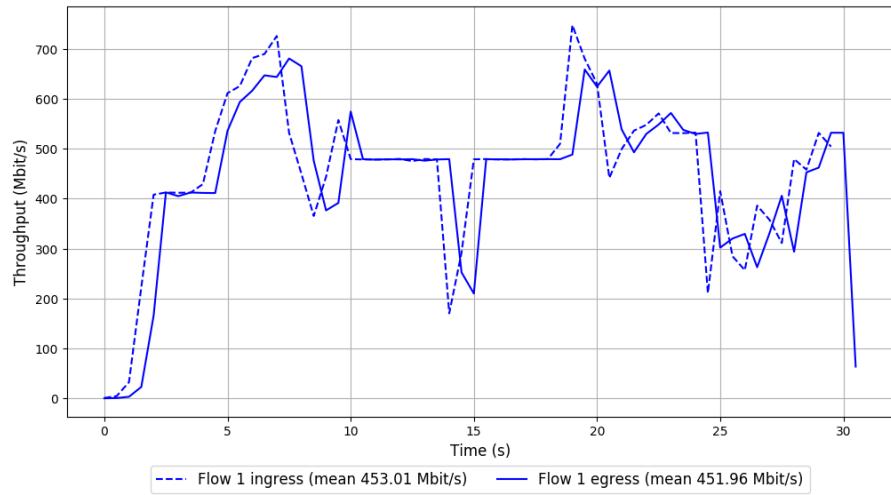


Run 4: Statistics of TCP BBR

```
Start at: 2018-12-11 10:25:37
End at: 2018-12-11 10:26:07
Local clock offset: 0.29 ms
Remote clock offset: 0.404 ms

# Below is generated by plot.py at 2018-12-11 11:43:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 451.96 Mbit/s
95th percentile per-packet one-way delay: 156.454 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 451.96 Mbit/s
95th percentile per-packet one-way delay: 156.454 ms
Loss rate: 0.23%
```

Run 4: Report of TCP BBR — Data Link

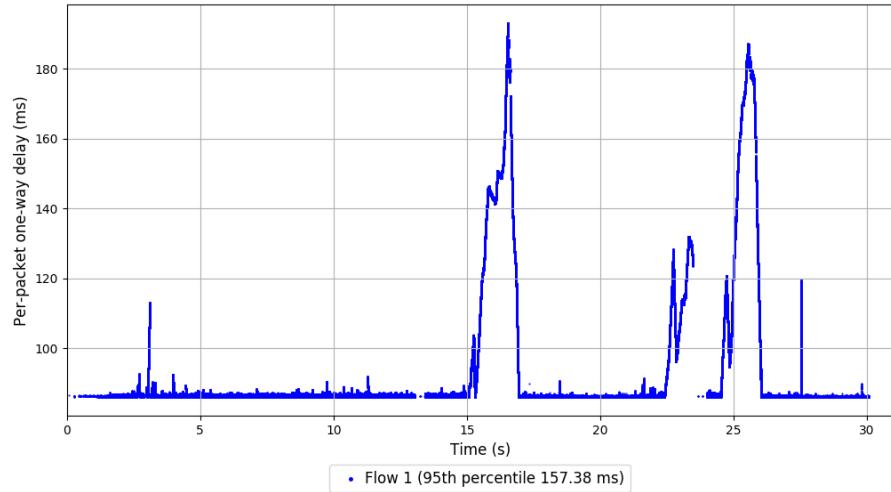
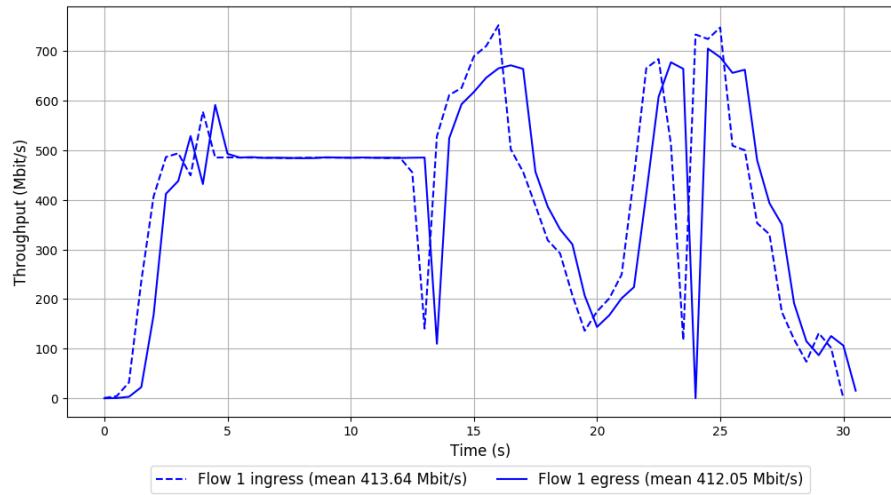


Run 5: Statistics of TCP BBR

```
Start at: 2018-12-11 10:54:01
End at: 2018-12-11 10:54:31
Local clock offset: -0.284 ms
Remote clock offset: 0.47 ms

# Below is generated by plot.py at 2018-12-11 11:43:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 412.05 Mbit/s
95th percentile per-packet one-way delay: 157.375 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 412.05 Mbit/s
95th percentile per-packet one-way delay: 157.375 ms
Loss rate: 0.39%
```

Run 5: Report of TCP BBR — Data Link

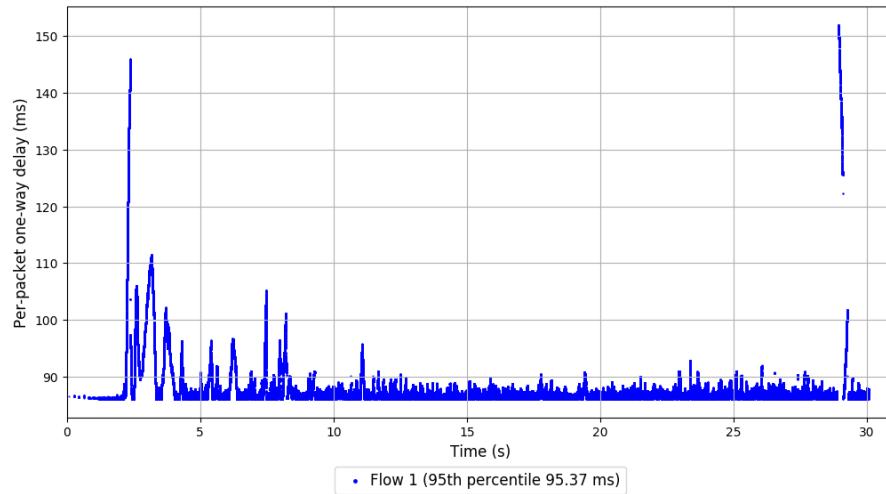
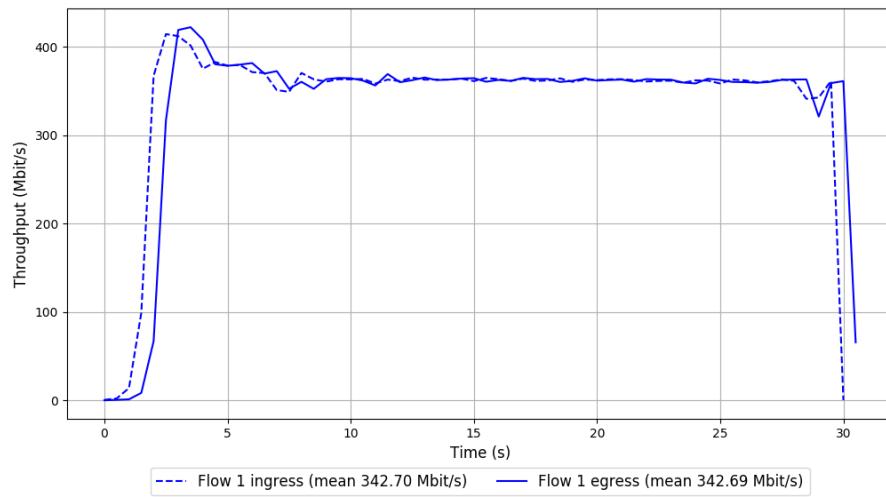


Run 1: Statistics of Copa

```
Start at: 2018-12-11 09:09:39
End at: 2018-12-11 09:10:09
Local clock offset: 0.014 ms
Remote clock offset: 0.134 ms

# Below is generated by plot.py at 2018-12-11 11:44:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 342.69 Mbit/s
95th percentile per-packet one-way delay: 95.367 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 342.69 Mbit/s
95th percentile per-packet one-way delay: 95.367 ms
Loss rate: 0.00%
```

Run 1: Report of Copa — Data Link

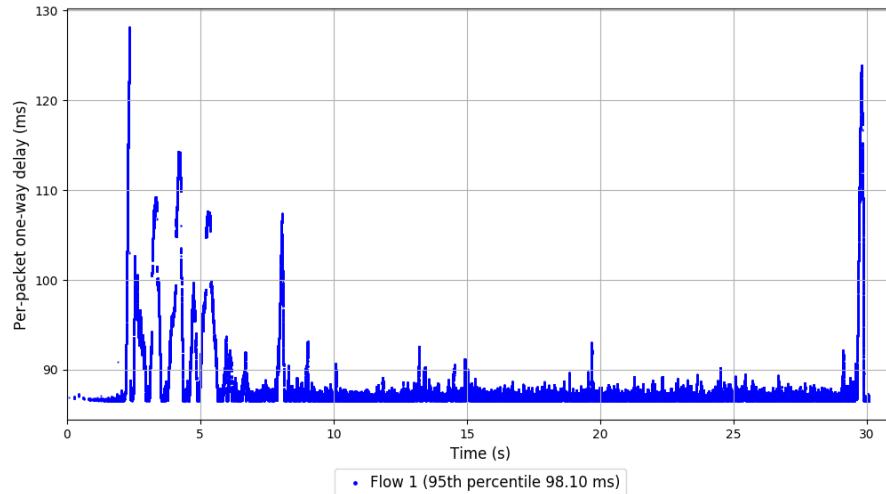
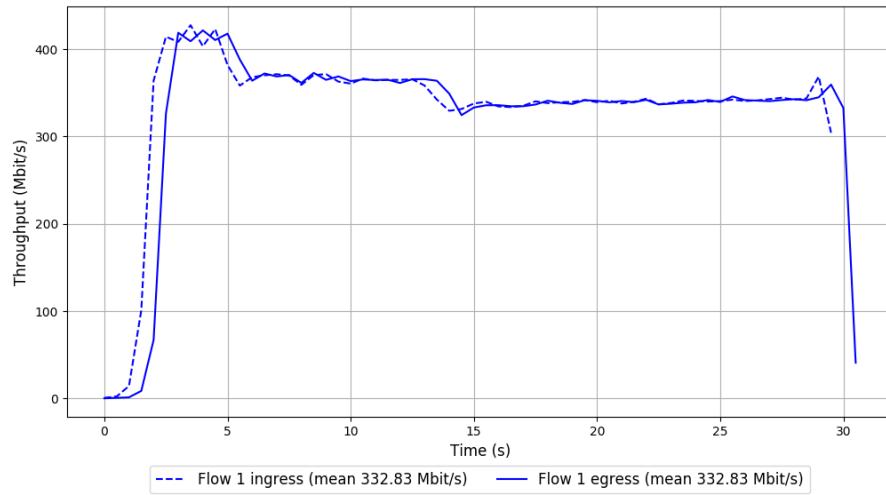


Run 2: Statistics of Copa

```
Start at: 2018-12-11 09:38:10
End at: 2018-12-11 09:38:40
Local clock offset: -0.387 ms
Remote clock offset: 0.249 ms

# Below is generated by plot.py at 2018-12-11 11:44:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 332.83 Mbit/s
95th percentile per-packet one-way delay: 98.098 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 332.83 Mbit/s
95th percentile per-packet one-way delay: 98.098 ms
Loss rate: 0.00%
```

Run 2: Report of Copa — Data Link

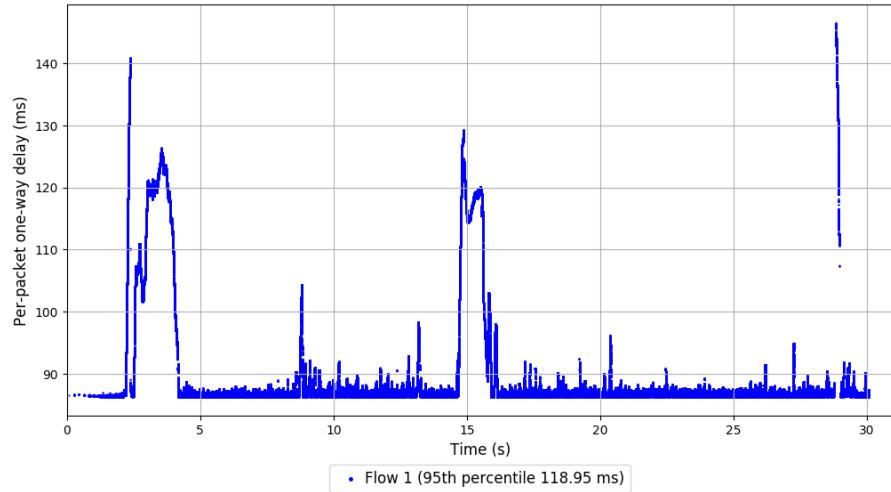
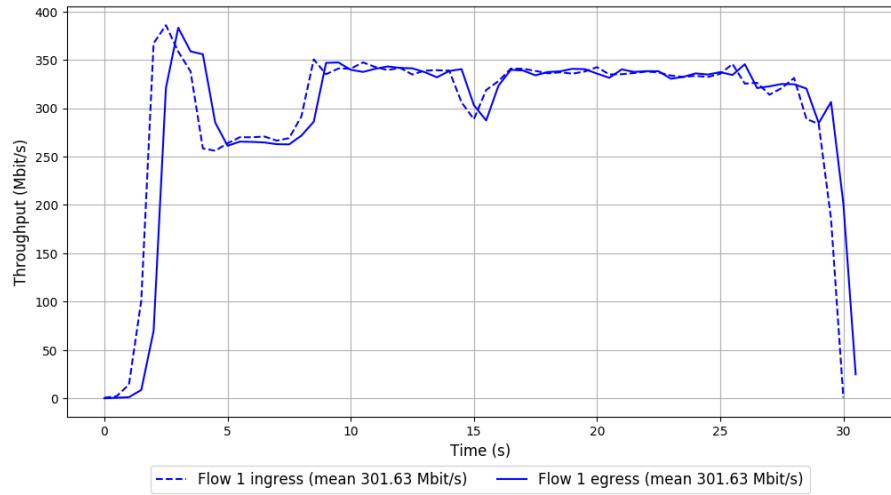


Run 3: Statistics of Copa

```
Start at: 2018-12-11 10:06:57
End at: 2018-12-11 10:07:27
Local clock offset: -0.186 ms
Remote clock offset: 0.334 ms

# Below is generated by plot.py at 2018-12-11 11:44:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 301.63 Mbit/s
95th percentile per-packet one-way delay: 118.952 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 301.63 Mbit/s
95th percentile per-packet one-way delay: 118.952 ms
Loss rate: 0.00%
```

Run 3: Report of Copa — Data Link

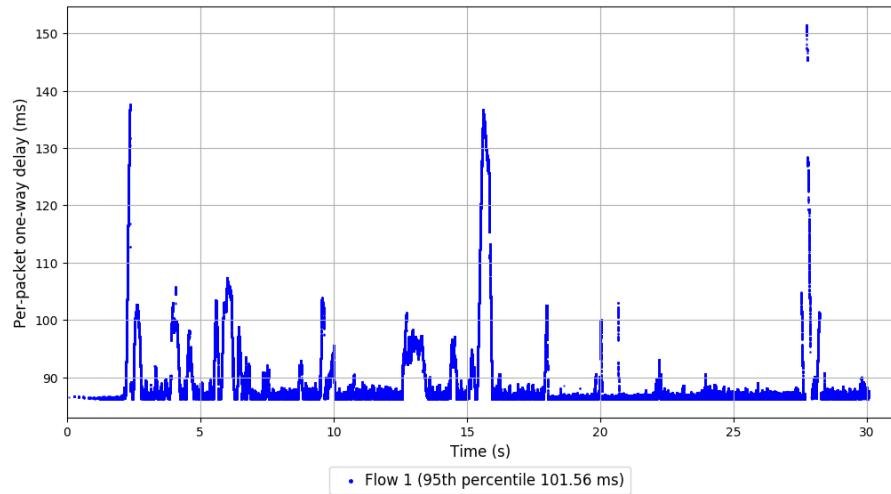
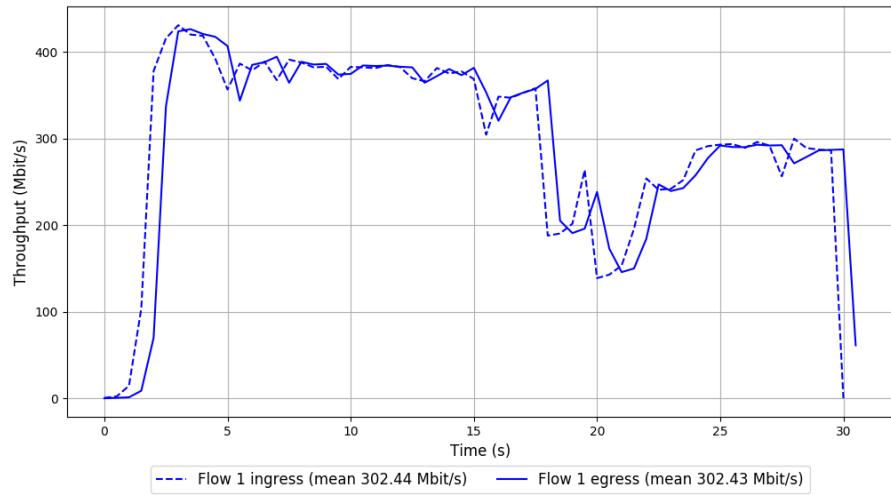


Run 4: Statistics of Copa

```
Start at: 2018-12-11 10:35:20
End at: 2018-12-11 10:35:50
Local clock offset: -0.007 ms
Remote clock offset: 0.432 ms

# Below is generated by plot.py at 2018-12-11 11:51:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 302.43 Mbit/s
95th percentile per-packet one-way delay: 101.565 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 302.43 Mbit/s
95th percentile per-packet one-way delay: 101.565 ms
Loss rate: 0.00%
```

Run 4: Report of Copa — Data Link

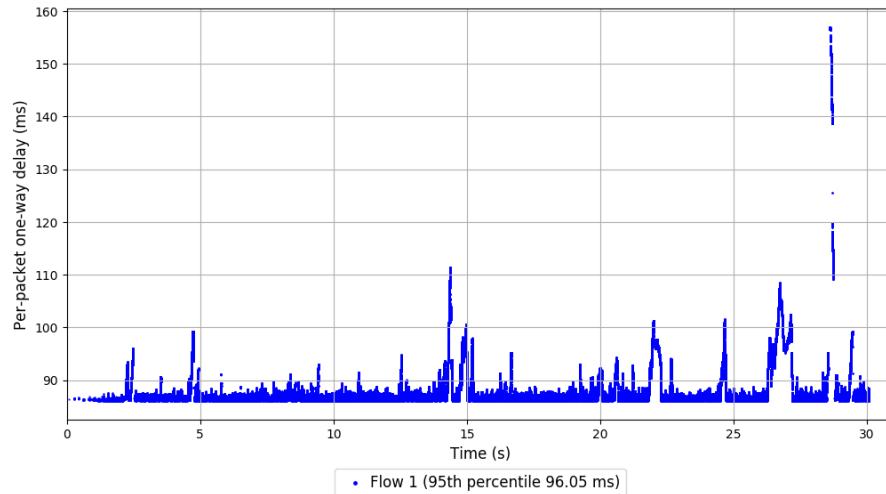
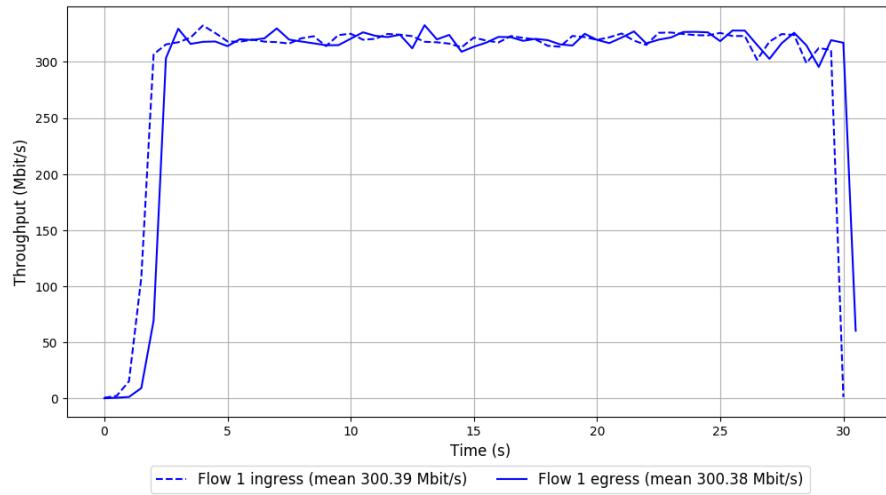


Run 5: Statistics of Copa

```
Start at: 2018-12-11 11:03:53
End at: 2018-12-11 11:04:23
Local clock offset: -0.127 ms
Remote clock offset: 0.543 ms

# Below is generated by plot.py at 2018-12-11 11:52:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 300.38 Mbit/s
95th percentile per-packet one-way delay: 96.050 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 300.38 Mbit/s
95th percentile per-packet one-way delay: 96.050 ms
Loss rate: 0.00%
```

Run 5: Report of Copa — Data Link

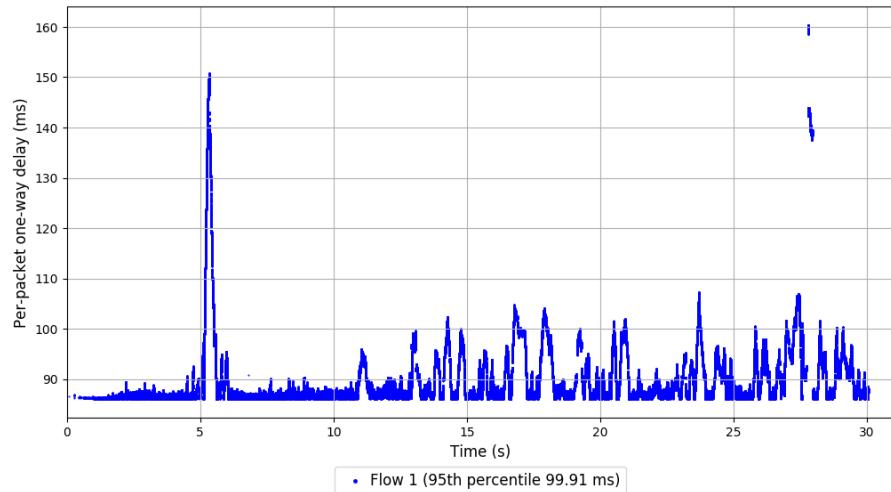
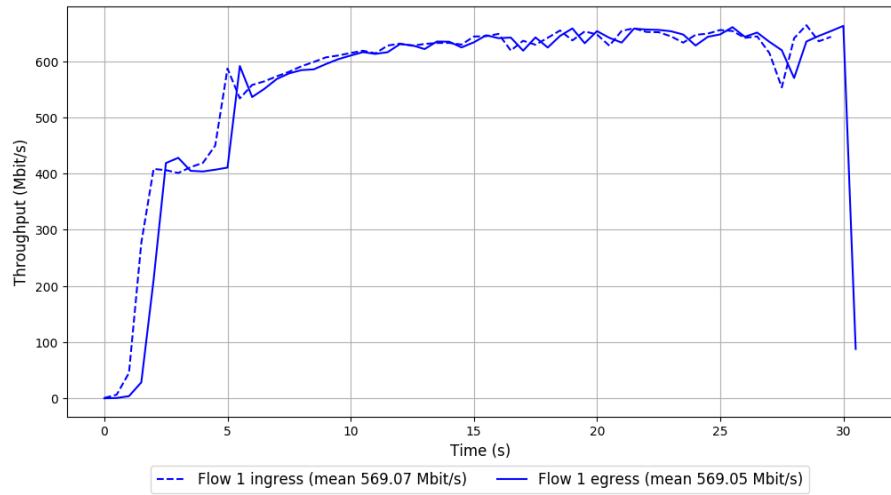


Run 1: Statistics of TCP Cubic

```
Start at: 2018-12-11 09:06:49
End at: 2018-12-11 09:07:19
Local clock offset: 0.159 ms
Remote clock offset: 0.096 ms

# Below is generated by plot.py at 2018-12-11 11:53:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 569.05 Mbit/s
95th percentile per-packet one-way delay: 99.908 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 569.05 Mbit/s
95th percentile per-packet one-way delay: 99.908 ms
Loss rate: 0.00%
```

Run 1: Report of TCP Cubic — Data Link

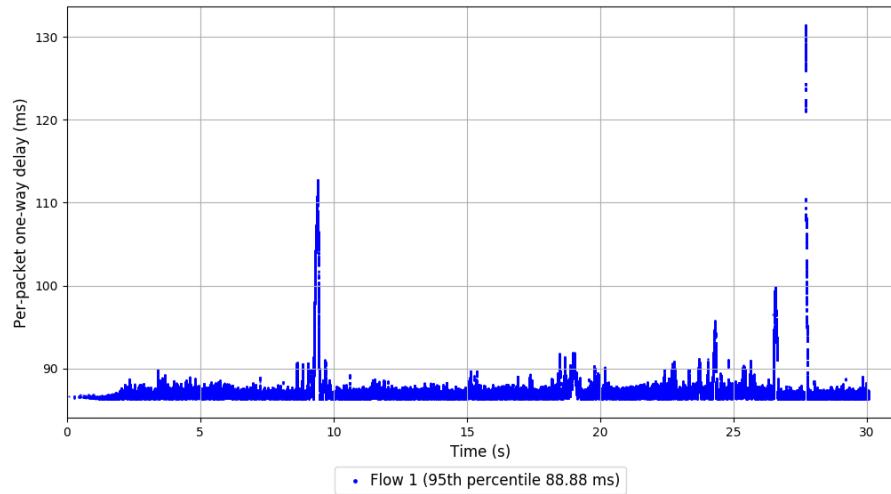
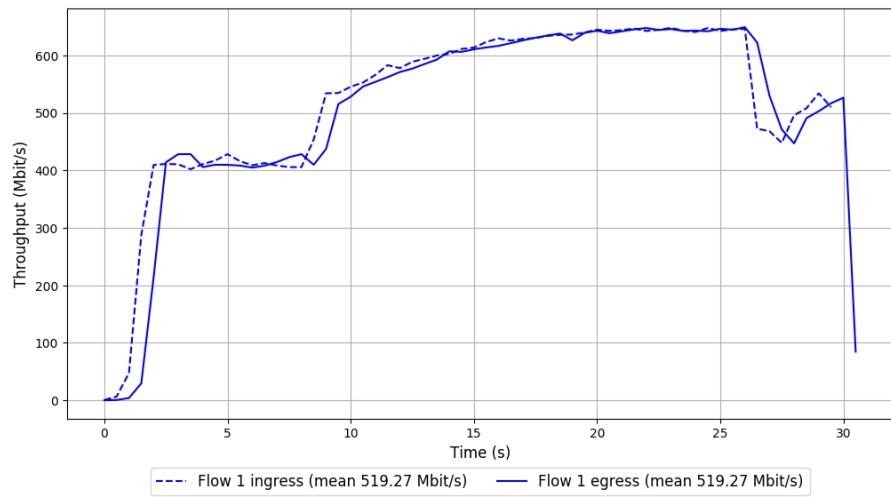


Run 2: Statistics of TCP Cubic

```
Start at: 2018-12-11 09:35:22
End at: 2018-12-11 09:35:52
Local clock offset: -0.529 ms
Remote clock offset: 0.253 ms

# Below is generated by plot.py at 2018-12-11 11:53:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 519.27 Mbit/s
95th percentile per-packet one-way delay: 88.877 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 519.27 Mbit/s
95th percentile per-packet one-way delay: 88.877 ms
Loss rate: 0.00%
```

Run 2: Report of TCP Cubic — Data Link

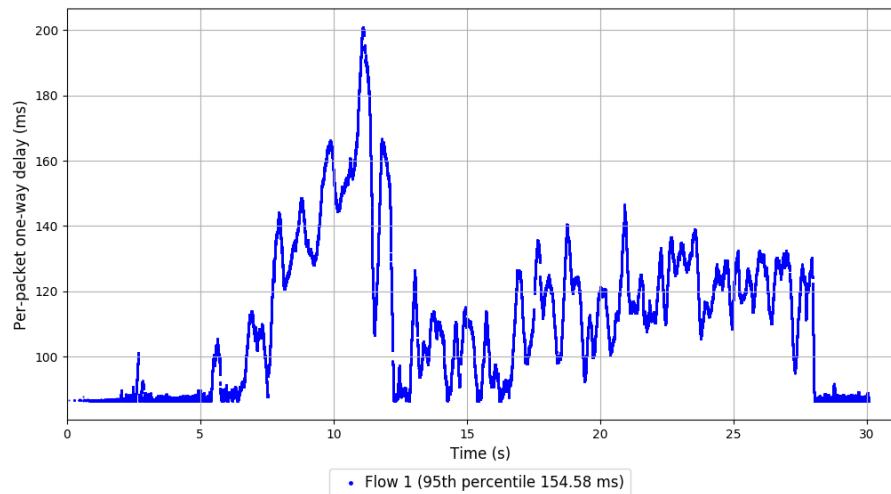
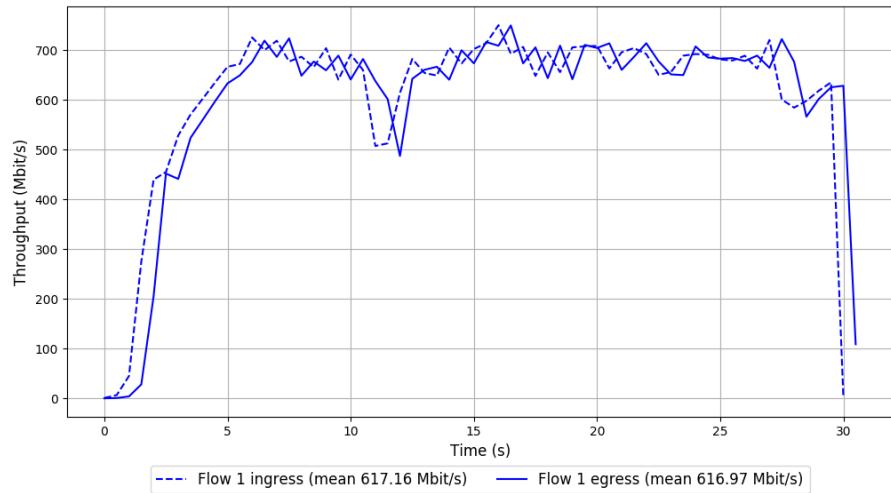


Run 3: Statistics of TCP Cubic

```
Start at: 2018-12-11 10:04:05
End at: 2018-12-11 10:04:35
Local clock offset: -0.173 ms
Remote clock offset: 0.321 ms

# Below is generated by plot.py at 2018-12-11 11:54:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 616.97 Mbit/s
95th percentile per-packet one-way delay: 154.576 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 616.97 Mbit/s
95th percentile per-packet one-way delay: 154.576 ms
Loss rate: 0.03%
```

Run 3: Report of TCP Cubic — Data Link

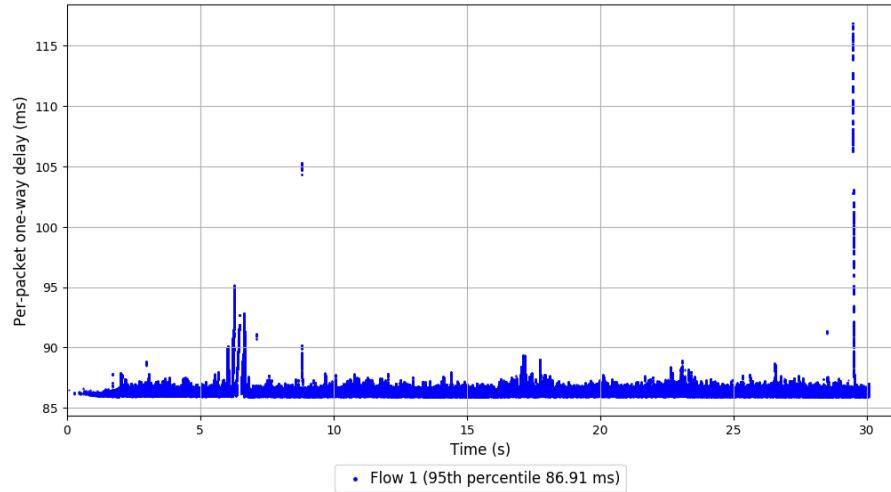
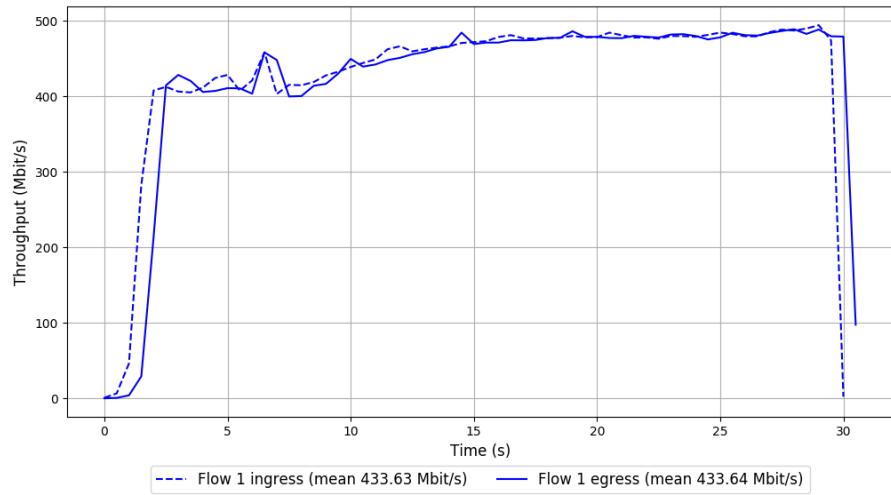


Run 4: Statistics of TCP Cubic

```
Start at: 2018-12-11 10:32:38
End at: 2018-12-11 10:33:08
Local clock offset: 0.346 ms
Remote clock offset: 0.479 ms

# Below is generated by plot.py at 2018-12-11 11:54:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 433.64 Mbit/s
95th percentile per-packet one-way delay: 86.907 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 433.64 Mbit/s
95th percentile per-packet one-way delay: 86.907 ms
Loss rate: 0.00%
```

Run 4: Report of TCP Cubic — Data Link

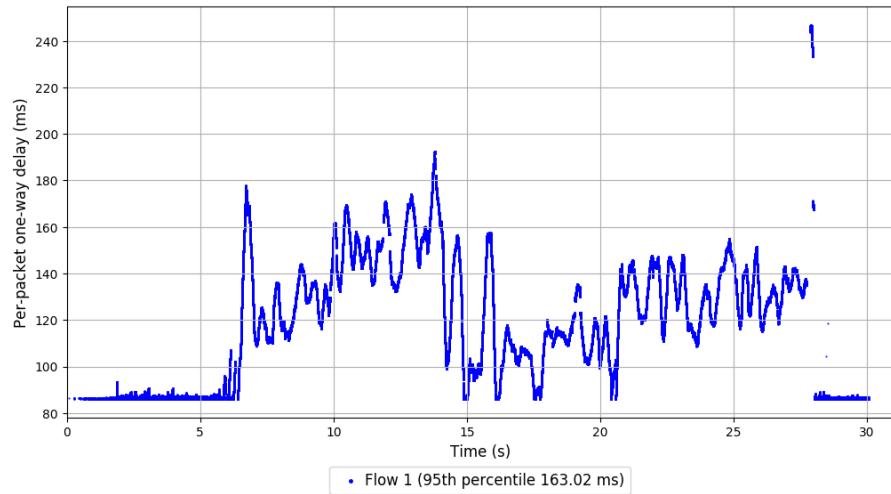
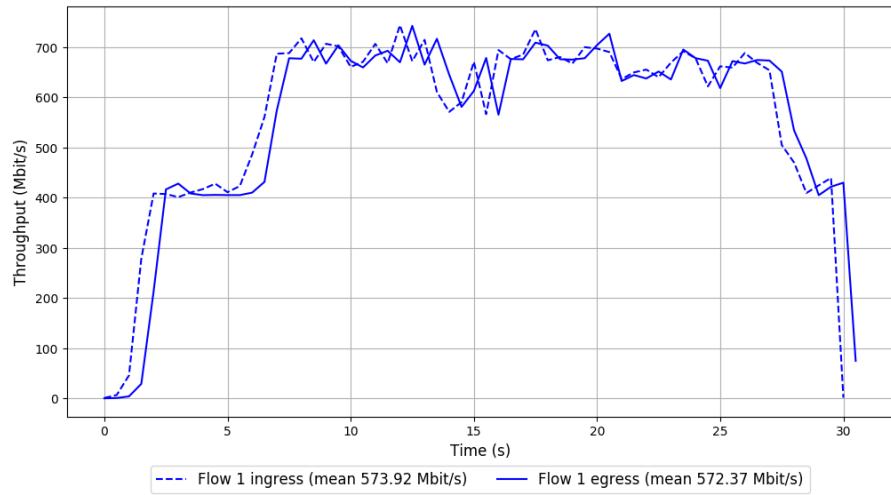


Run 5: Statistics of TCP Cubic

```
Start at: 2018-12-11 11:01:03
End at: 2018-12-11 11:01:33
Local clock offset: 0.012 ms
Remote clock offset: 0.512 ms

# Below is generated by plot.py at 2018-12-11 11:55:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 572.37 Mbit/s
95th percentile per-packet one-way delay: 163.021 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 572.37 Mbit/s
95th percentile per-packet one-way delay: 163.021 ms
Loss rate: 0.27%
```

Run 5: Report of TCP Cubic — Data Link

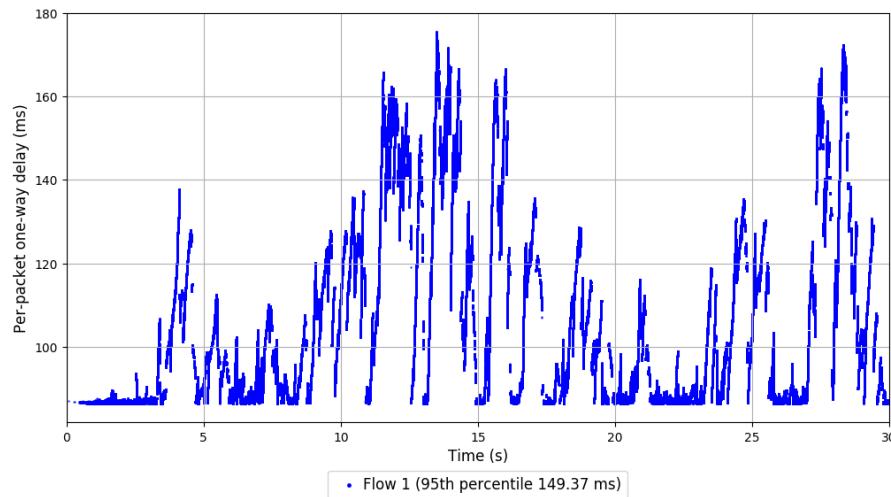
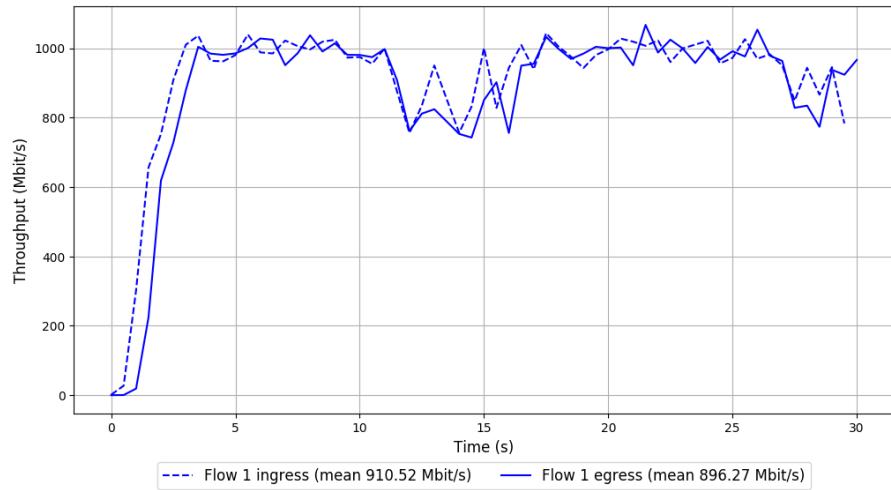


```
Run 1: Statistics of FillP
```

```
Start at: 2018-12-11 09:11:21
End at: 2018-12-11 09:11:51
Local clock offset: -0.095 ms
Remote clock offset: 0.171 ms

# Below is generated by plot.py at 2018-12-11 12:03:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 896.27 Mbit/s
95th percentile per-packet one-way delay: 149.368 ms
Loss rate: 1.57%
-- Flow 1:
Average throughput: 896.27 Mbit/s
95th percentile per-packet one-way delay: 149.368 ms
Loss rate: 1.57%
```

Run 1: Report of FillP — Data Link

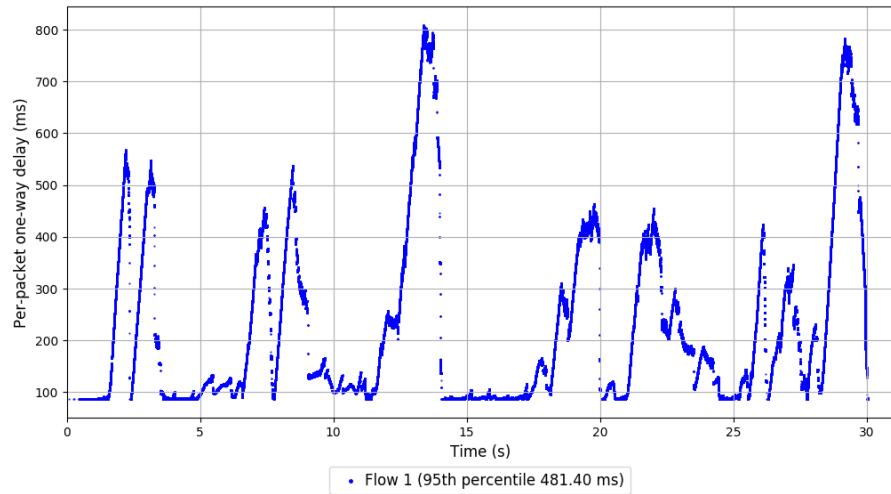
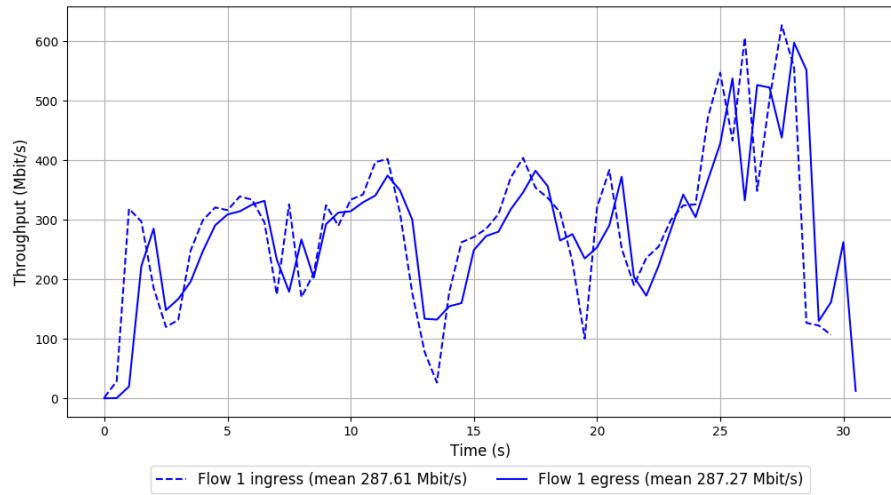


Run 2: Statistics of FillP

```
Start at: 2018-12-11 09:39:52
End at: 2018-12-11 09:40:22
Local clock offset: 0.106 ms
Remote clock offset: 0.243 ms

# Below is generated by plot.py at 2018-12-11 12:03:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 287.27 Mbit/s
95th percentile per-packet one-way delay: 481.405 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 287.27 Mbit/s
95th percentile per-packet one-way delay: 481.405 ms
Loss rate: 0.11%
```

Run 2: Report of FillP — Data Link

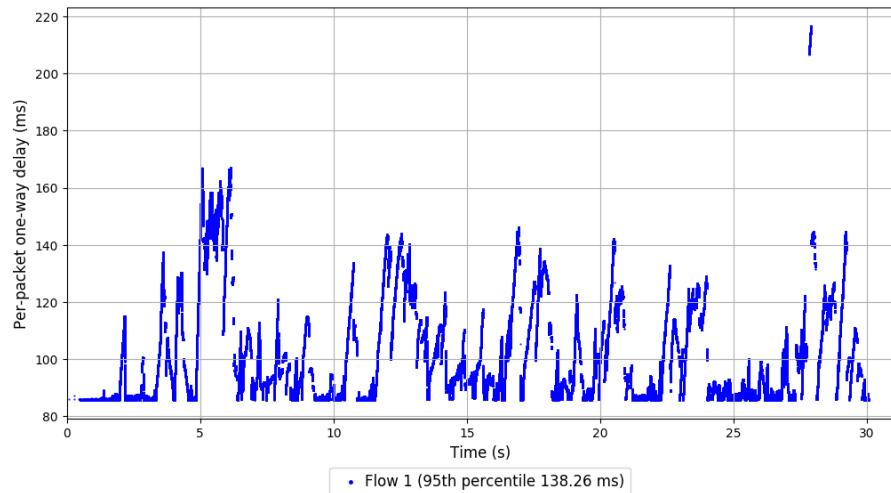
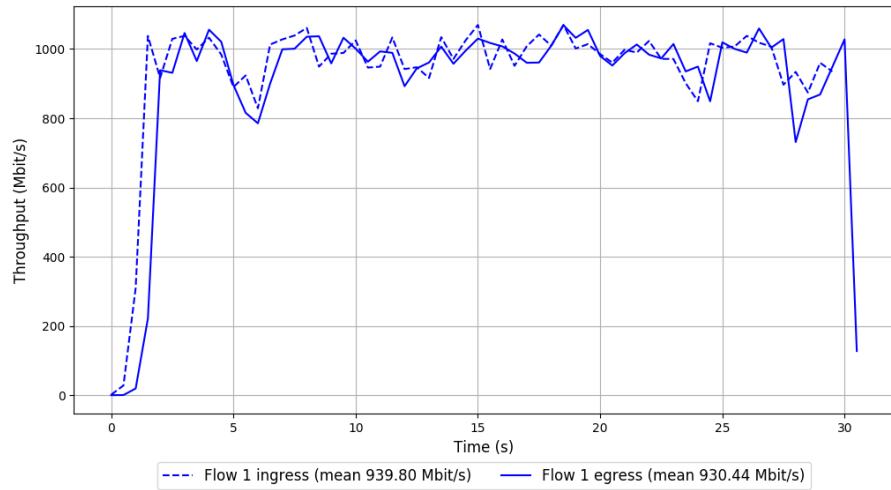


Run 3: Statistics of FillP

```
Start at: 2018-12-11 10:08:40
End at: 2018-12-11 10:09:10
Local clock offset: 0.077 ms
Remote clock offset: 0.318 ms

# Below is generated by plot.py at 2018-12-11 12:14:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 930.44 Mbit/s
95th percentile per-packet one-way delay: 138.262 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 930.44 Mbit/s
95th percentile per-packet one-way delay: 138.262 ms
Loss rate: 1.00%
```

Run 3: Report of FillP — Data Link

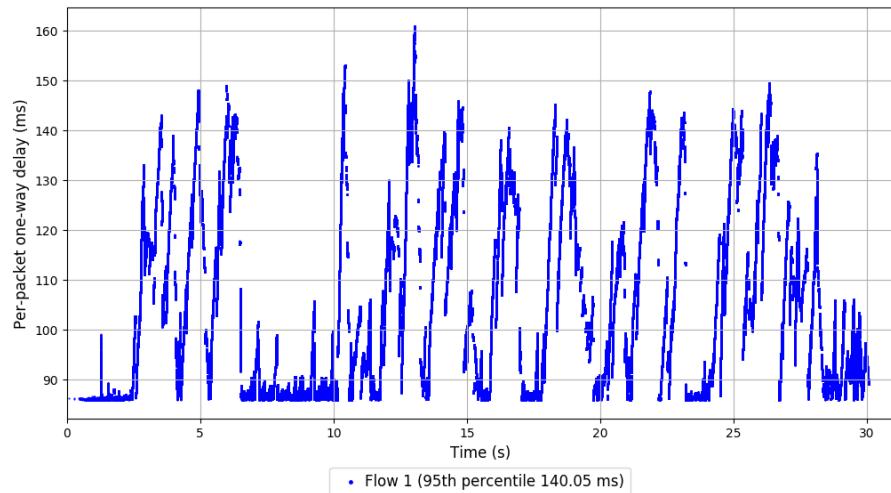
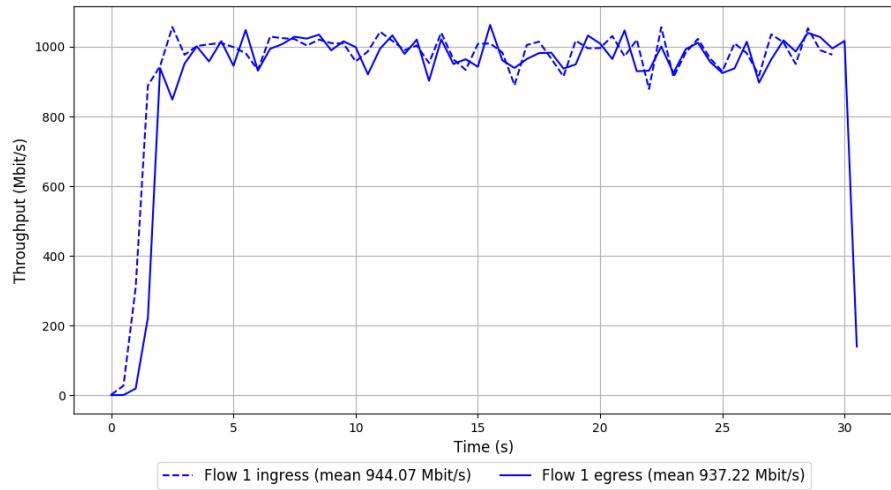


```
Run 4: Statistics of FillP
```

```
Start at: 2018-12-11 10:36:58
End at: 2018-12-11 10:37:28
Local clock offset: 0.356 ms
Remote clock offset: 0.431 ms

# Below is generated by plot.py at 2018-12-11 12:14:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 937.22 Mbit/s
95th percentile per-packet one-way delay: 140.051 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 937.22 Mbit/s
95th percentile per-packet one-way delay: 140.051 ms
Loss rate: 0.72%
```

Run 4: Report of FillP — Data Link

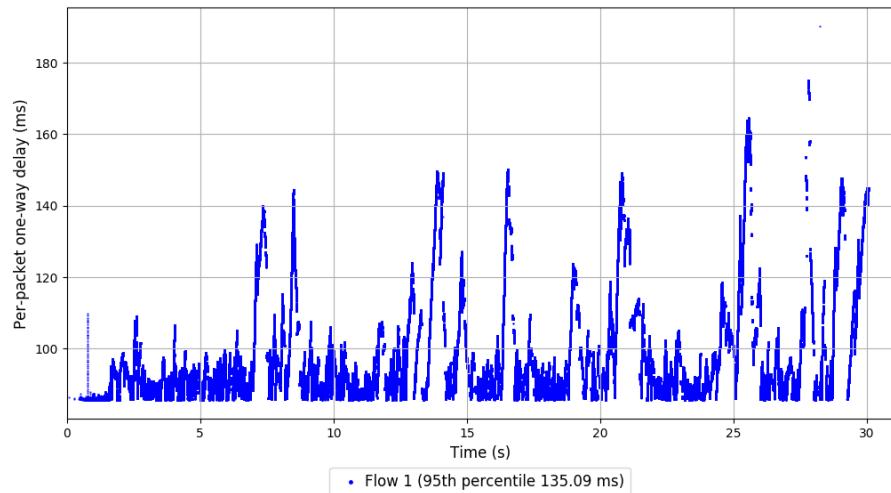
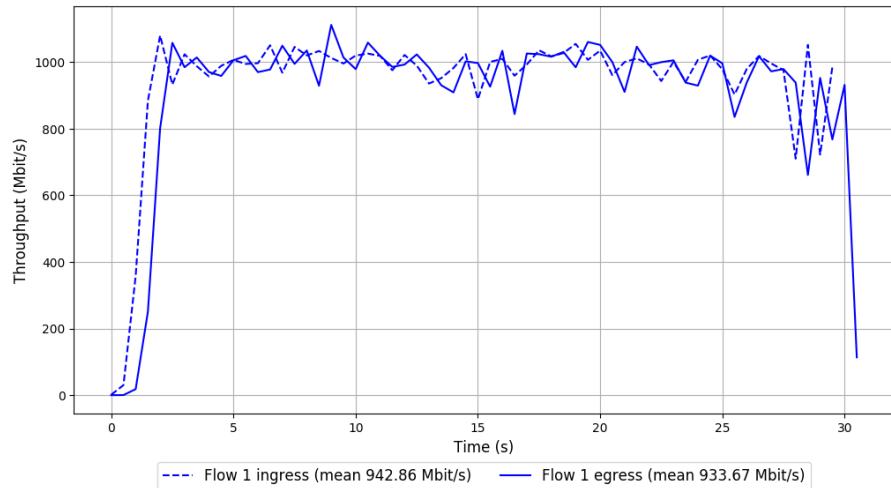


Run 5: Statistics of FillP

```
Start at: 2018-12-11 11:05:32
End at: 2018-12-11 11:06:02
Local clock offset: 0.298 ms
Remote clock offset: 0.557 ms

# Below is generated by plot.py at 2018-12-11 12:14:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 933.67 Mbit/s
95th percentile per-packet one-way delay: 135.092 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 933.67 Mbit/s
95th percentile per-packet one-way delay: 135.092 ms
Loss rate: 0.97%
```

Run 5: Report of FillP — Data Link

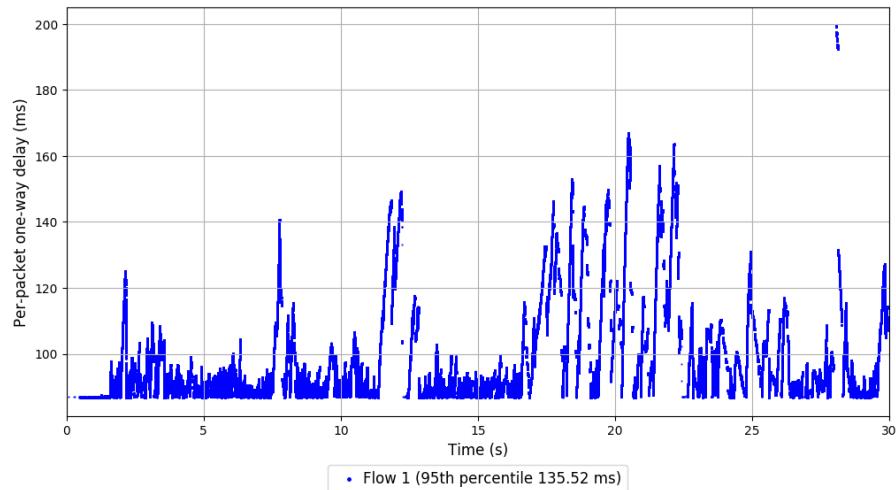
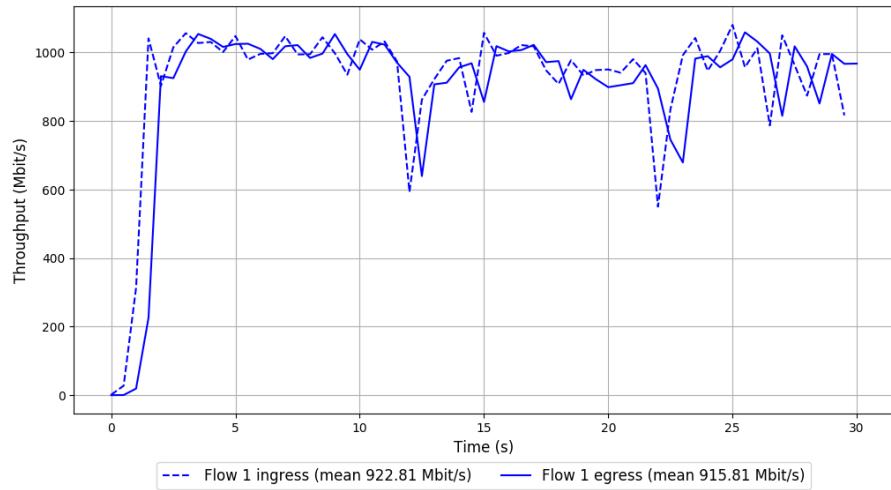


Run 1: Statistics of FillP-Sheep

```
Start at: 2018-12-11 09:26:28
End at: 2018-12-11 09:26:58
Local clock offset: -0.506 ms
Remote clock offset: 0.215 ms

# Below is generated by plot.py at 2018-12-11 12:15:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 915.81 Mbit/s
95th percentile per-packet one-way delay: 135.524 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 915.81 Mbit/s
95th percentile per-packet one-way delay: 135.524 ms
Loss rate: 0.76%
```

Run 1: Report of FillP-Sheep — Data Link

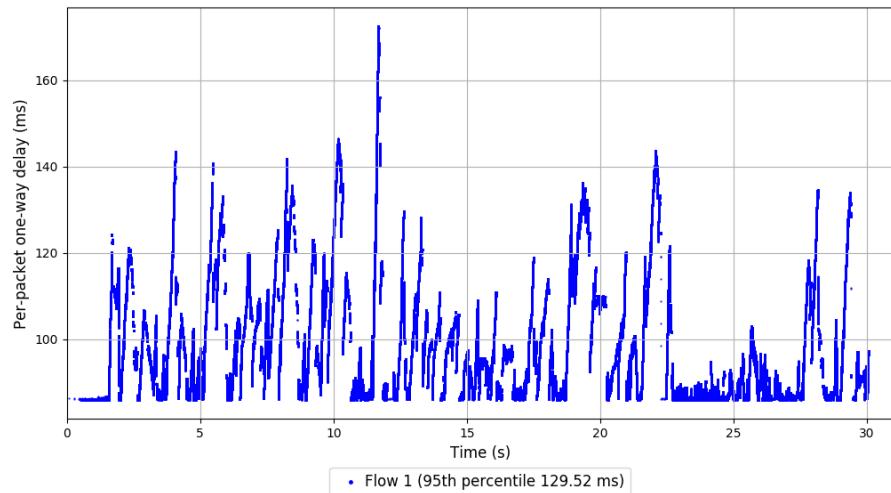
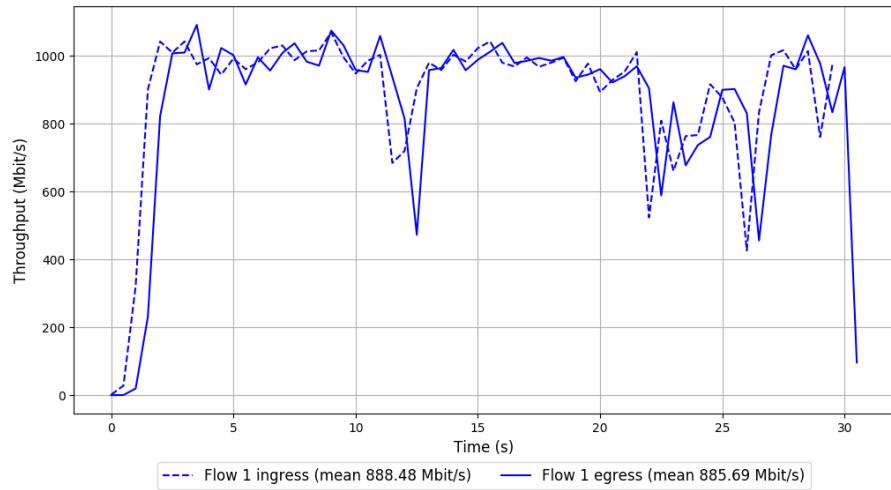


Run 2: Statistics of FillP-Sheep

```
Start at: 2018-12-11 09:55:05
End at: 2018-12-11 09:55:35
Local clock offset: 0.264 ms
Remote clock offset: 0.269 ms

# Below is generated by plot.py at 2018-12-11 12:15:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 885.69 Mbit/s
95th percentile per-packet one-way delay: 129.518 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 885.69 Mbit/s
95th percentile per-packet one-way delay: 129.518 ms
Loss rate: 0.31%
```

Run 2: Report of FillP-Sheep — Data Link

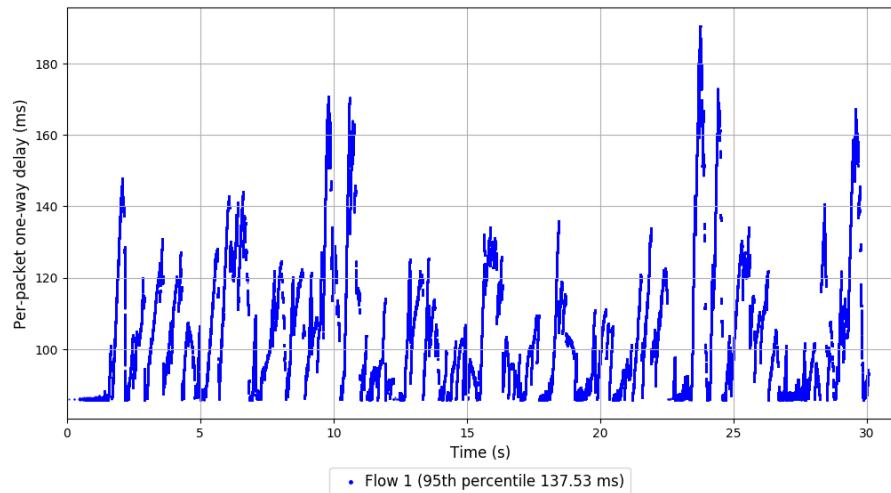
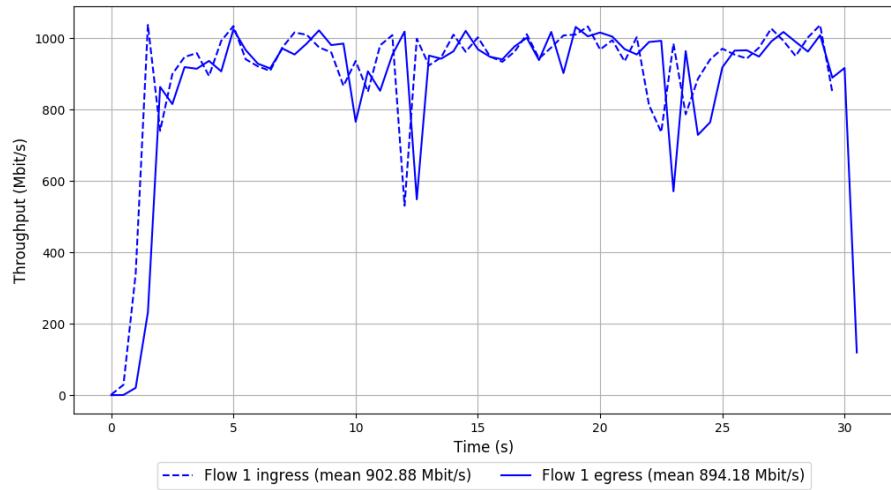


Run 3: Statistics of FillP-Sheep

```
Start at: 2018-12-11 10:23:51
End at: 2018-12-11 10:24:21
Local clock offset: 0.232 ms
Remote clock offset: 0.379 ms

# Below is generated by plot.py at 2018-12-11 12:16:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 894.18 Mbit/s
95th percentile per-packet one-way delay: 137.528 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 894.18 Mbit/s
95th percentile per-packet one-way delay: 137.528 ms
Loss rate: 0.96%
```

Run 3: Report of FillP-Sheep — Data Link

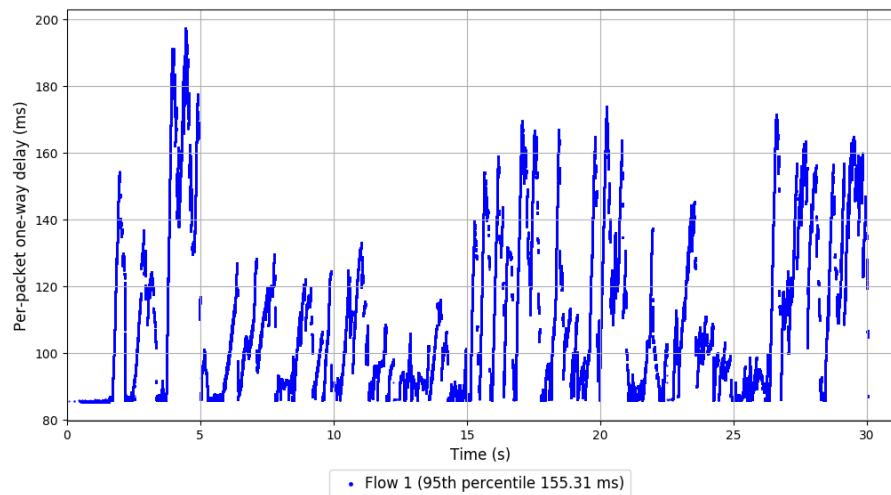
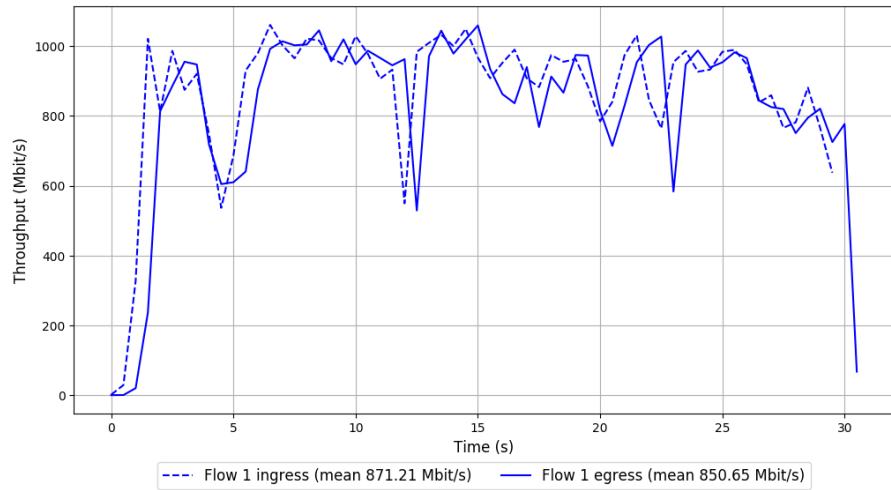


Run 4: Statistics of FillP-Sheep

```
Start at: 2018-12-11 10:52:16
End at: 2018-12-11 10:52:46
Local clock offset: 0.252 ms
Remote clock offset: 0.477 ms

# Below is generated by plot.py at 2018-12-11 12:17:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 850.65 Mbit/s
95th percentile per-packet one-way delay: 155.307 ms
Loss rate: 2.36%
-- Flow 1:
Average throughput: 850.65 Mbit/s
95th percentile per-packet one-way delay: 155.307 ms
Loss rate: 2.36%
```

Run 4: Report of FillP-Sheep — Data Link

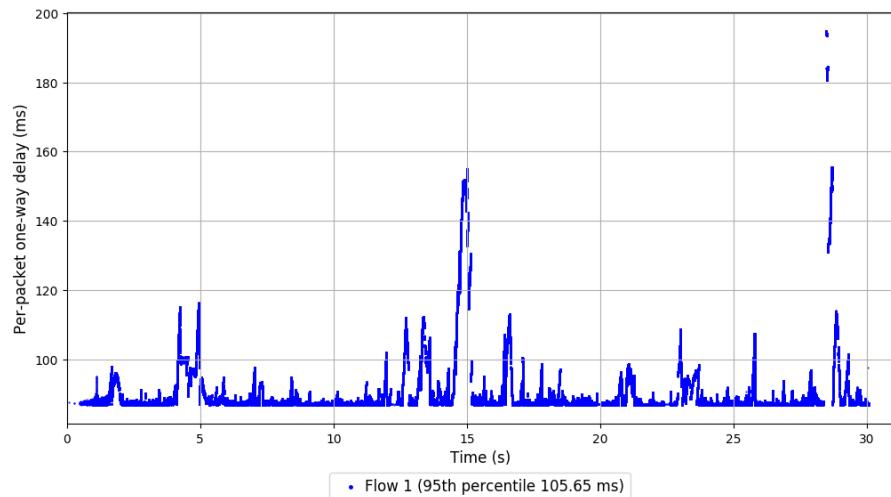
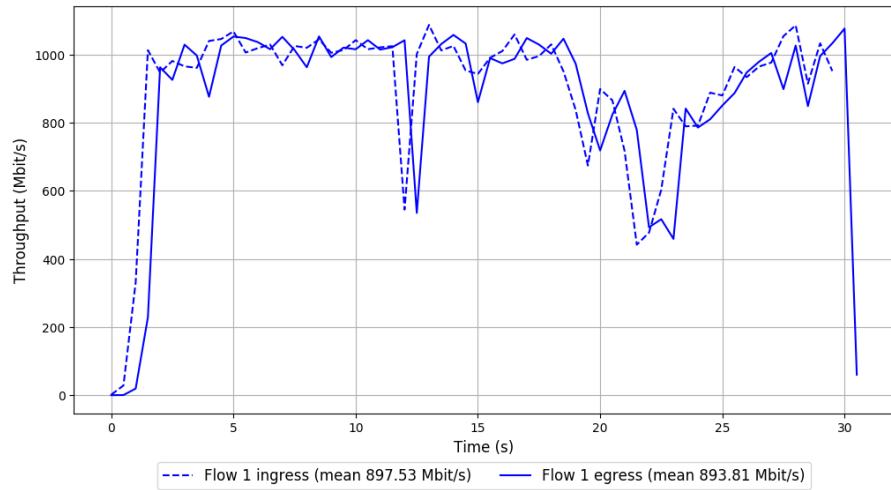


Run 5: Statistics of FillP-Sheep

```
Start at: 2018-12-11 11:20:54
End at: 2018-12-11 11:21:24
Local clock offset: -0.637 ms
Remote clock offset: 0.609 ms

# Below is generated by plot.py at 2018-12-11 12:26:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 893.81 Mbit/s
95th percentile per-packet one-way delay: 105.649 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 893.81 Mbit/s
95th percentile per-packet one-way delay: 105.649 ms
Loss rate: 0.42%
```

Run 5: Report of FillP-Sheep — Data Link

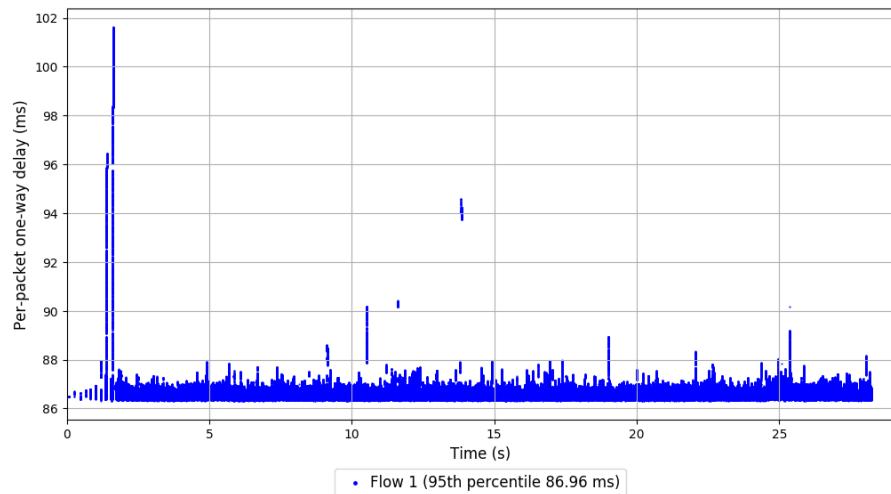
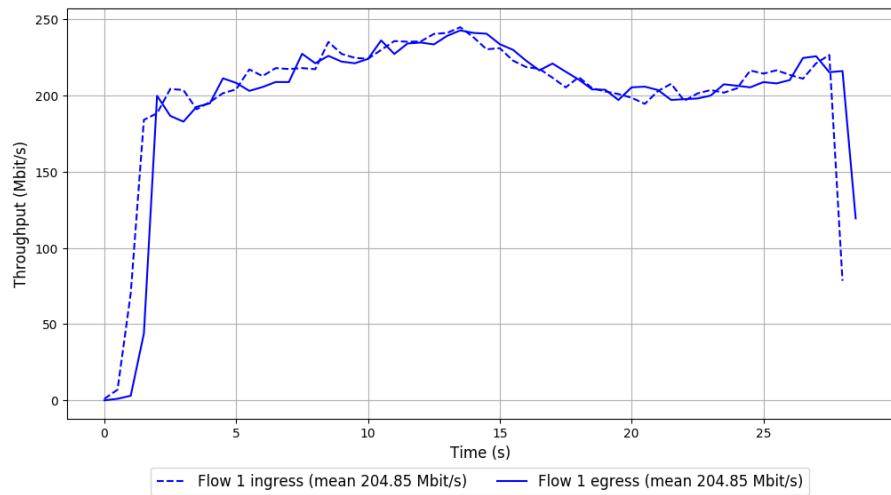


Run 1: Statistics of Indigo

```
Start at: 2018-12-11 09:17:37
End at: 2018-12-11 09:18:07
Local clock offset: -0.119 ms
Remote clock offset: 0.129 ms

# Below is generated by plot.py at 2018-12-11 12:26:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 204.85 Mbit/s
95th percentile per-packet one-way delay: 86.962 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 204.85 Mbit/s
95th percentile per-packet one-way delay: 86.962 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo — Data Link

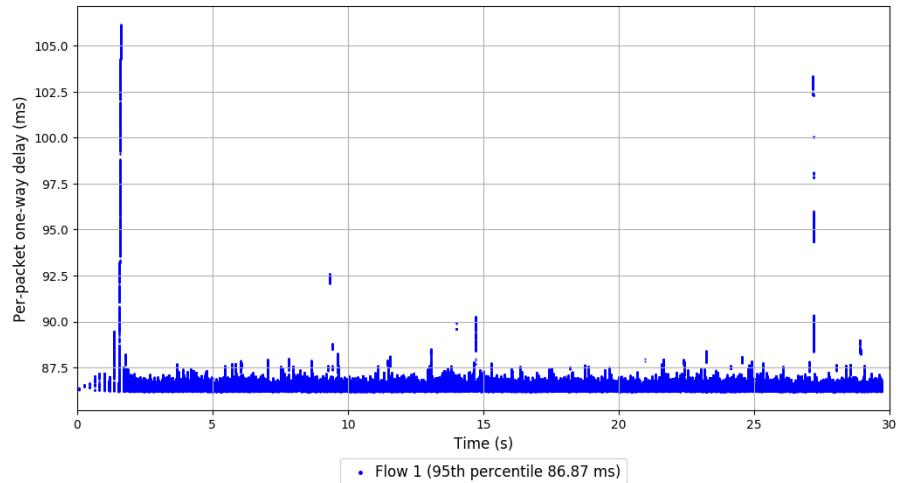
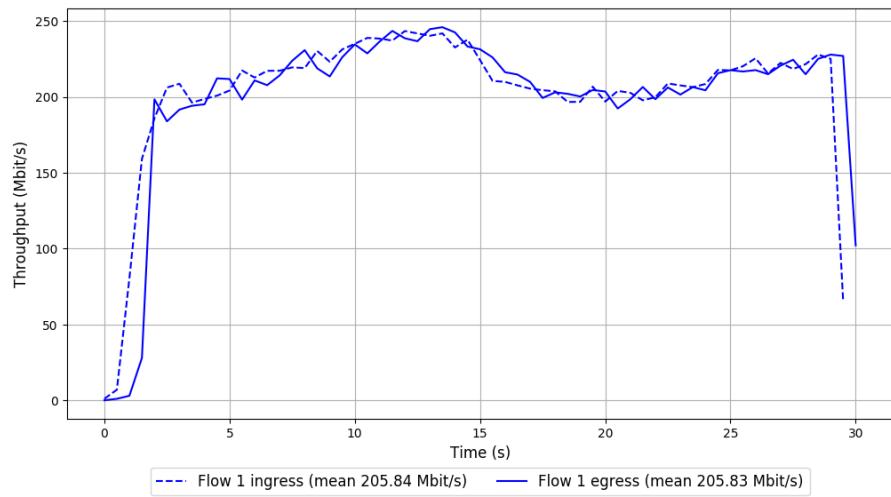


Run 2: Statistics of Indigo

```
Start at: 2018-12-11 09:46:05
End at: 2018-12-11 09:46:35
Local clock offset: -0.113 ms
Remote clock offset: 0.258 ms

# Below is generated by plot.py at 2018-12-11 12:26:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 205.83 Mbit/s
95th percentile per-packet one-way delay: 86.871 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 205.83 Mbit/s
95th percentile per-packet one-way delay: 86.871 ms
Loss rate: 0.00%
```

Run 2: Report of Indigo — Data Link

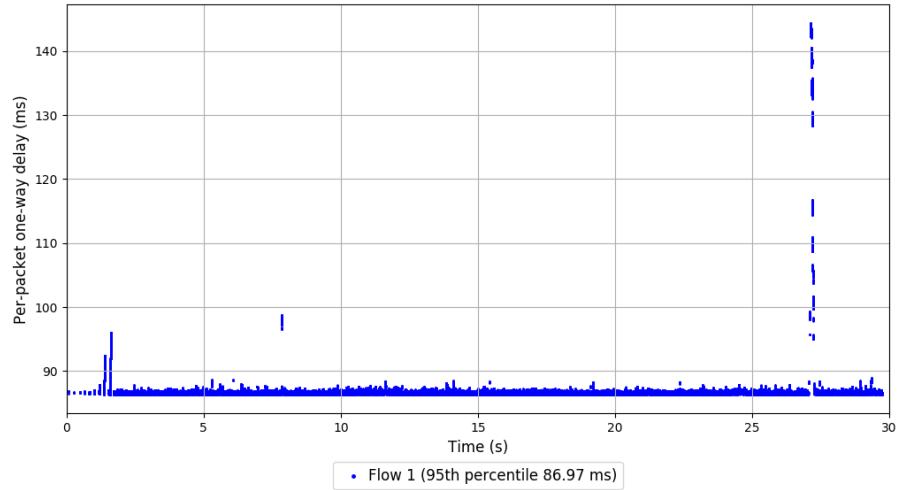
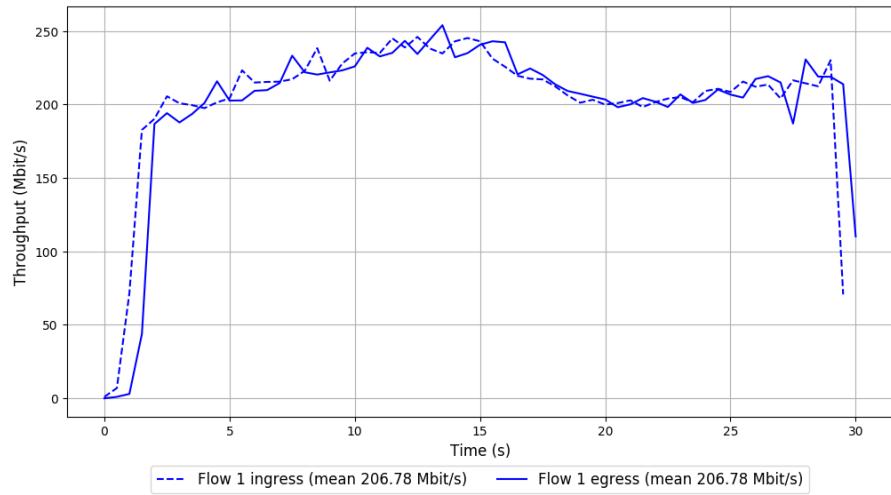


Run 3: Statistics of Indigo

```
Start at: 2018-12-11 10:15:10
End at: 2018-12-11 10:15:40
Local clock offset: -0.17 ms
Remote clock offset: 0.376 ms

# Below is generated by plot.py at 2018-12-11 12:26:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 206.78 Mbit/s
95th percentile per-packet one-way delay: 86.970 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 206.78 Mbit/s
95th percentile per-packet one-way delay: 86.970 ms
Loss rate: 0.00%
```

Run 3: Report of Indigo — Data Link

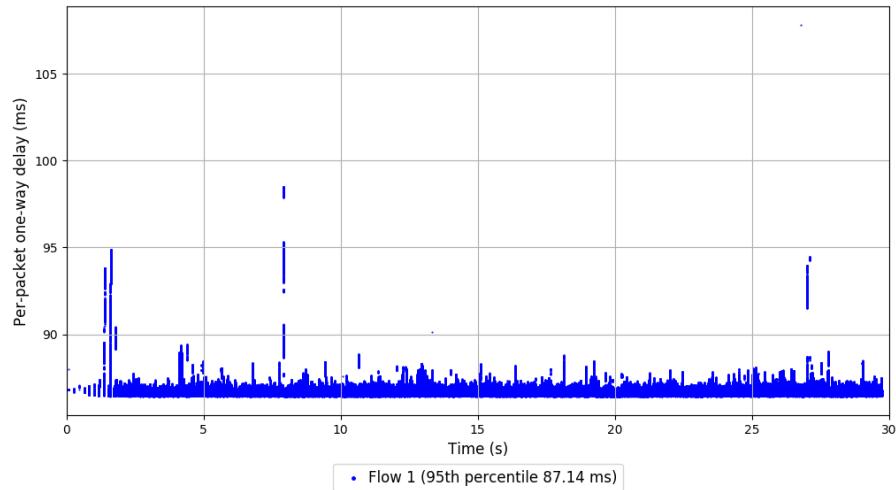
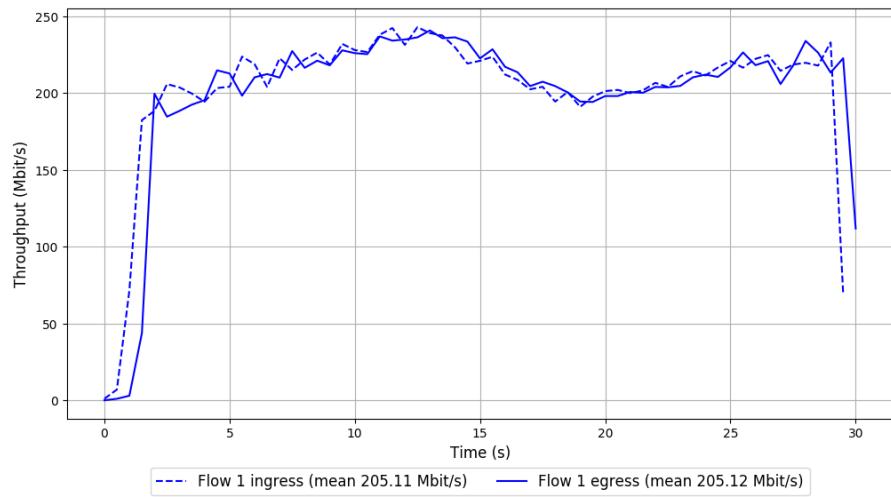


Run 4: Statistics of Indigo

```
Start at: 2018-12-11 10:43:28
End at: 2018-12-11 10:43:59
Local clock offset: -0.232 ms
Remote clock offset: 0.442 ms

# Below is generated by plot.py at 2018-12-11 12:26:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 205.12 Mbit/s
95th percentile per-packet one-way delay: 87.139 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 205.12 Mbit/s
95th percentile per-packet one-way delay: 87.139 ms
Loss rate: 0.00%
```

Run 4: Report of Indigo — Data Link

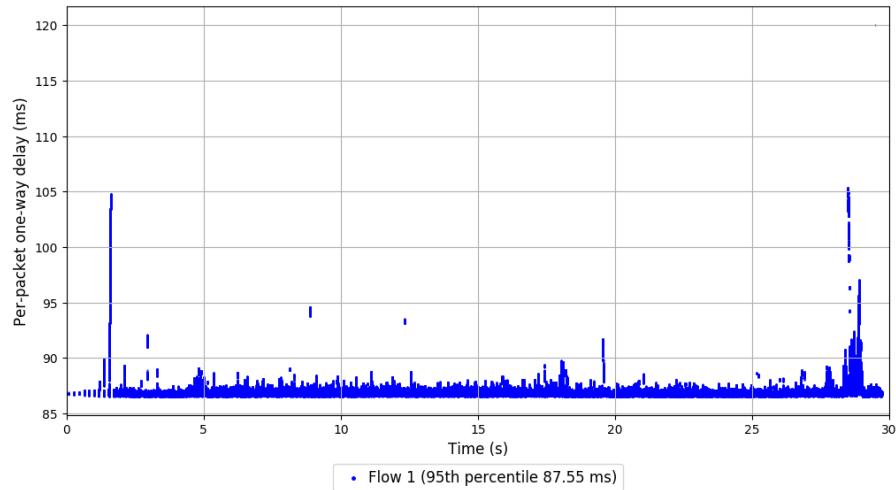
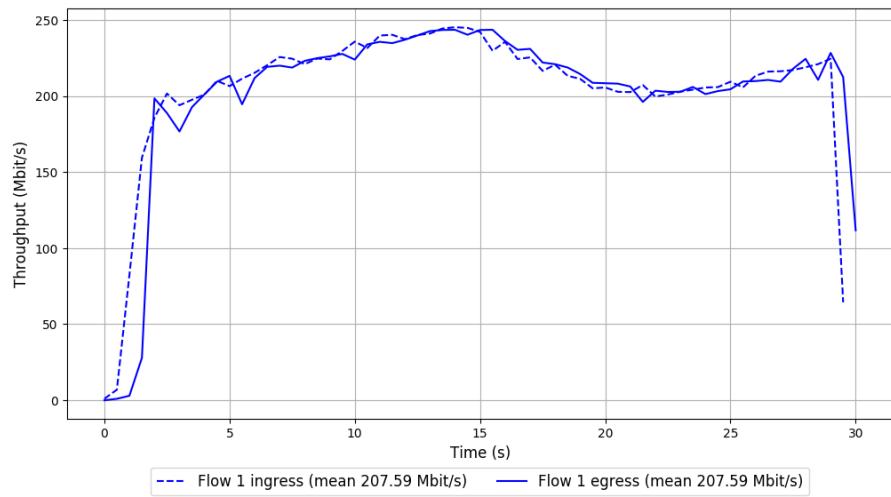


Run 5: Statistics of Indigo

```
Start at: 2018-12-11 11:11:55
End at: 2018-12-11 11:12:25
Local clock offset: -0.429 ms
Remote clock offset: 0.54 ms

# Below is generated by plot.py at 2018-12-11 12:26:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 207.59 Mbit/s
95th percentile per-packet one-way delay: 87.547 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 207.59 Mbit/s
95th percentile per-packet one-way delay: 87.547 ms
Loss rate: 0.00%
```

Run 5: Report of Indigo — Data Link

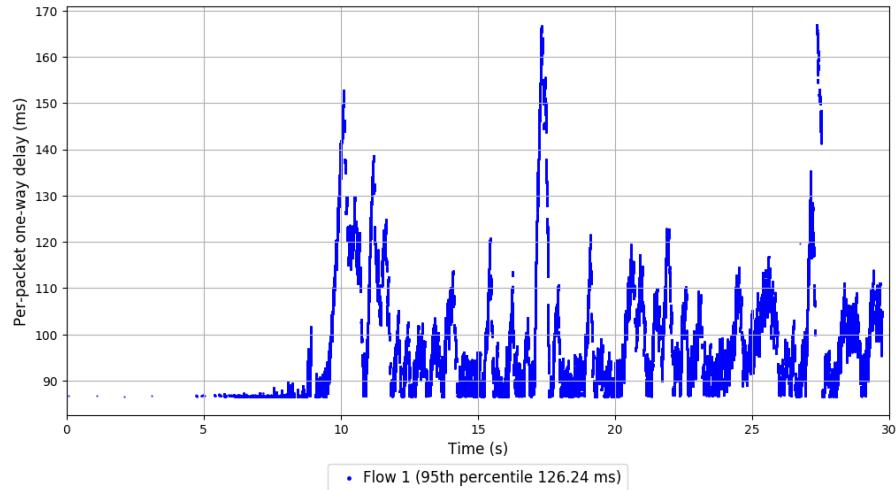
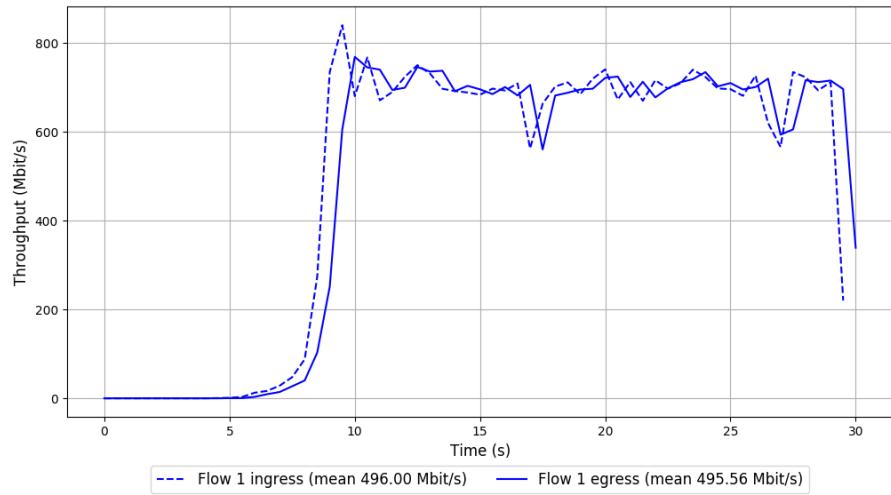


Run 1: Statistics of Indigo-MusesD

```
Start at: 2018-12-11 09:16:03
End at: 2018-12-11 09:16:33
Local clock offset: -0.36 ms
Remote clock offset: 0.128 ms

# Below is generated by plot.py at 2018-12-11 12:26:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 495.56 Mbit/s
95th percentile per-packet one-way delay: 126.236 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 495.56 Mbit/s
95th percentile per-packet one-way delay: 126.236 ms
Loss rate: 0.08%
```

Run 1: Report of Indigo-MusesD — Data Link

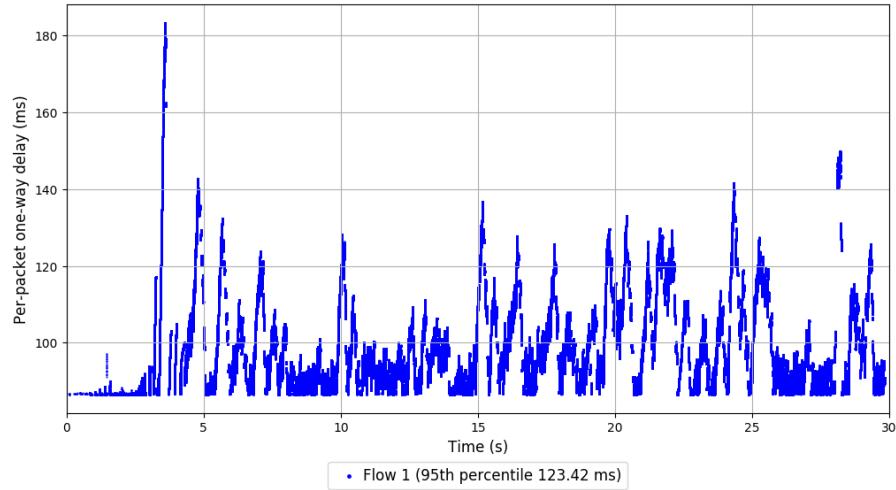
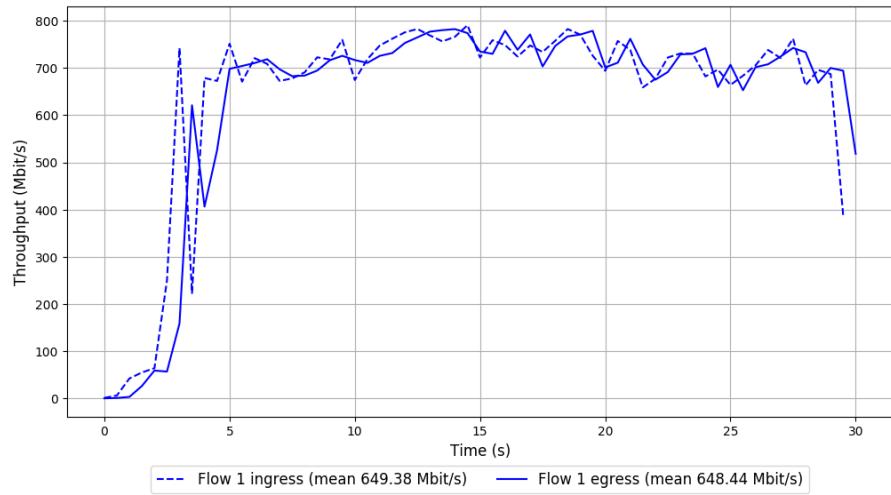


Run 2: Statistics of Indigo-MusesD

```
Start at: 2018-12-11 09:44:19
End at: 2018-12-11 09:44:49
Local clock offset: -0.157 ms
Remote clock offset: 0.241 ms

# Below is generated by plot.py at 2018-12-11 12:31:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 648.44 Mbit/s
95th percentile per-packet one-way delay: 123.419 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 648.44 Mbit/s
95th percentile per-packet one-way delay: 123.419 ms
Loss rate: 0.14%
```

Run 2: Report of Indigo-MusesD — Data Link

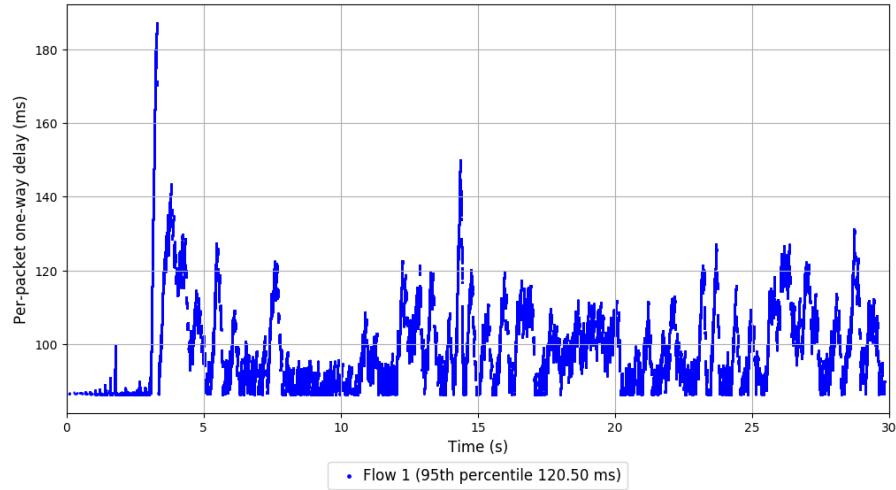
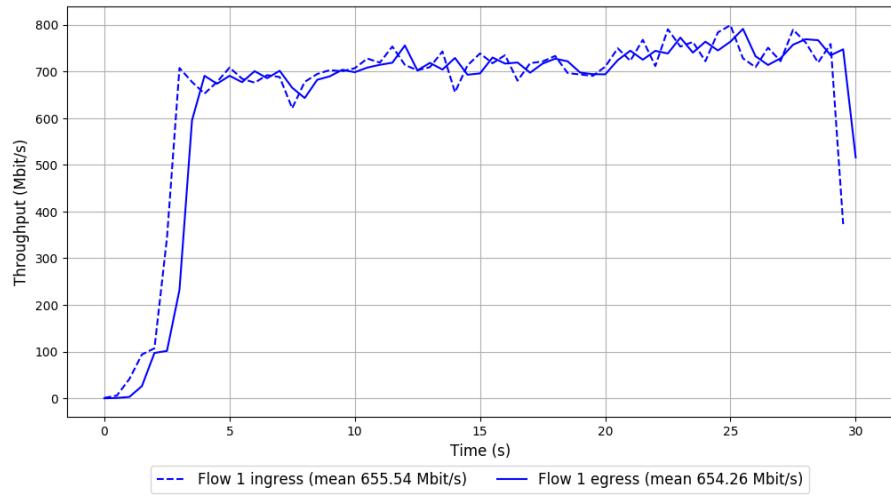


Run 3: Statistics of Indigo-MusesD

```
Start at: 2018-12-11 10:13:27
End at: 2018-12-11 10:13:57
Local clock offset: -0.112 ms
Remote clock offset: 0.376 ms

# Below is generated by plot.py at 2018-12-11 12:34:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 654.26 Mbit/s
95th percentile per-packet one-way delay: 120.495 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 654.26 Mbit/s
95th percentile per-packet one-way delay: 120.495 ms
Loss rate: 0.20%
```

Run 3: Report of Indigo-MusesD — Data Link

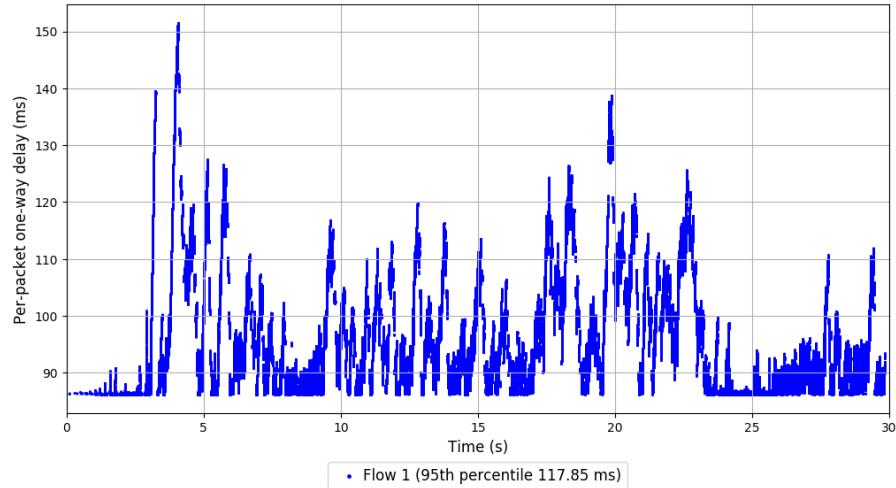
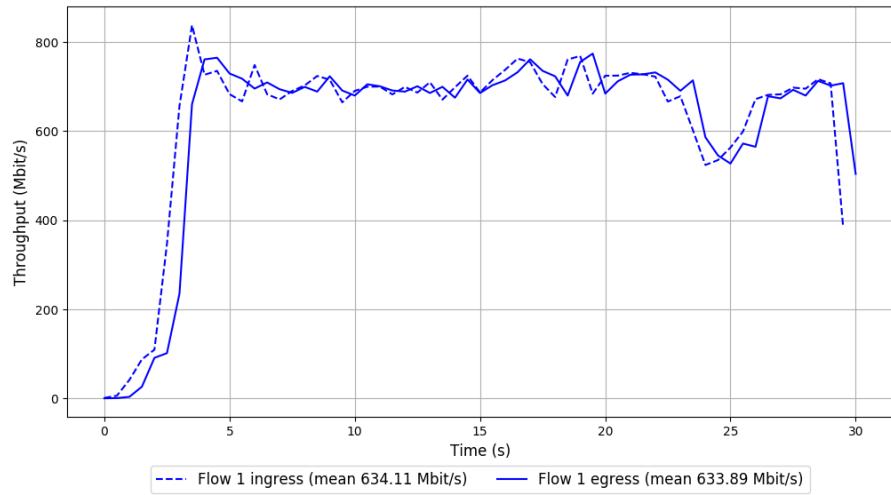


Run 4: Statistics of Indigo-MusesD

```
Start at: 2018-12-11 10:41:46
End at: 2018-12-11 10:42:17
Local clock offset: 0.023 ms
Remote clock offset: 0.435 ms

# Below is generated by plot.py at 2018-12-11 12:34:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 633.89 Mbit/s
95th percentile per-packet one-way delay: 117.849 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 633.89 Mbit/s
95th percentile per-packet one-way delay: 117.849 ms
Loss rate: 0.03%
```

Run 4: Report of Indigo-MusesD — Data Link

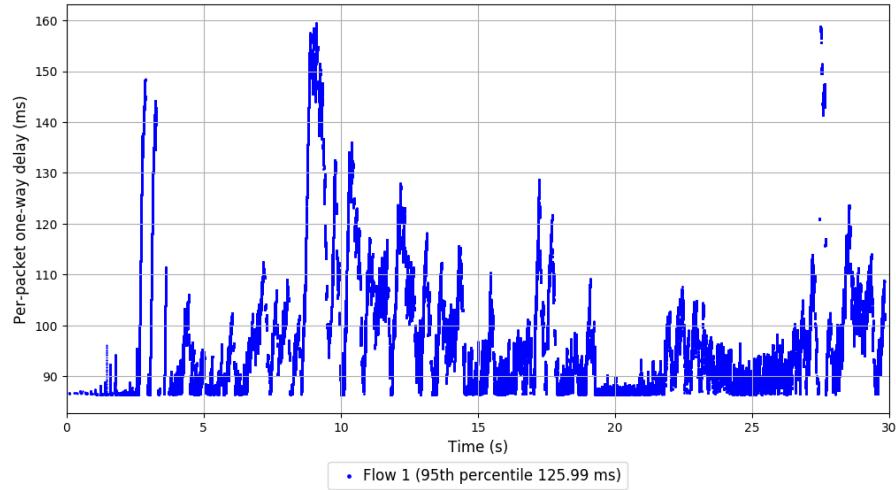
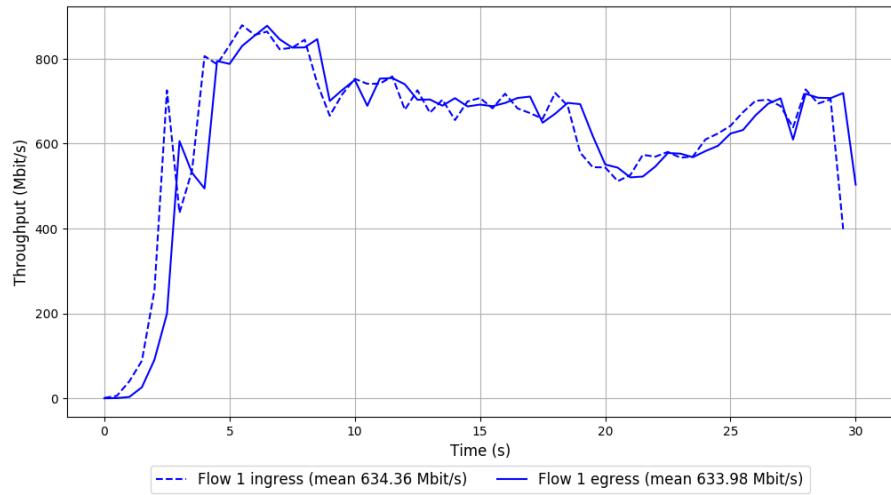


Run 5: Statistics of Indigo-MusesD

```
Start at: 2018-12-11 11:10:14
End at: 2018-12-11 11:10:44
Local clock offset: -0.199 ms
Remote clock offset: 0.539 ms

# Below is generated by plot.py at 2018-12-11 12:34:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 633.98 Mbit/s
95th percentile per-packet one-way delay: 125.994 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 633.98 Mbit/s
95th percentile per-packet one-way delay: 125.994 ms
Loss rate: 0.06%
```

Run 5: Report of Indigo-MusesD — Data Link

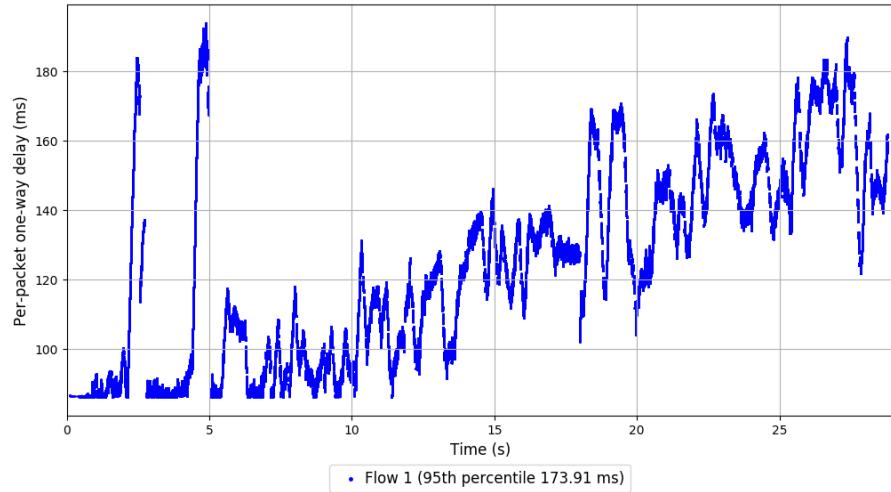
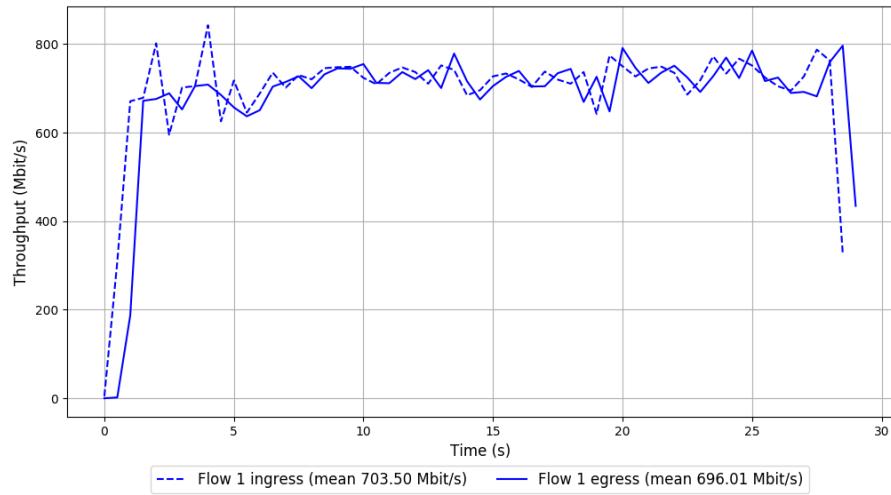


Run 1: Statistics of Indigo-MusesT

```
Start at: 2018-12-11 09:19:05
End at: 2018-12-11 09:19:35
Local clock offset: 0.095 ms
Remote clock offset: 0.149 ms

# Below is generated by plot.py at 2018-12-11 12:35:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 696.01 Mbit/s
95th percentile per-packet one-way delay: 173.905 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 696.01 Mbit/s
95th percentile per-packet one-way delay: 173.905 ms
Loss rate: 1.06%
```

Run 1: Report of Indigo-MusesT — Data Link

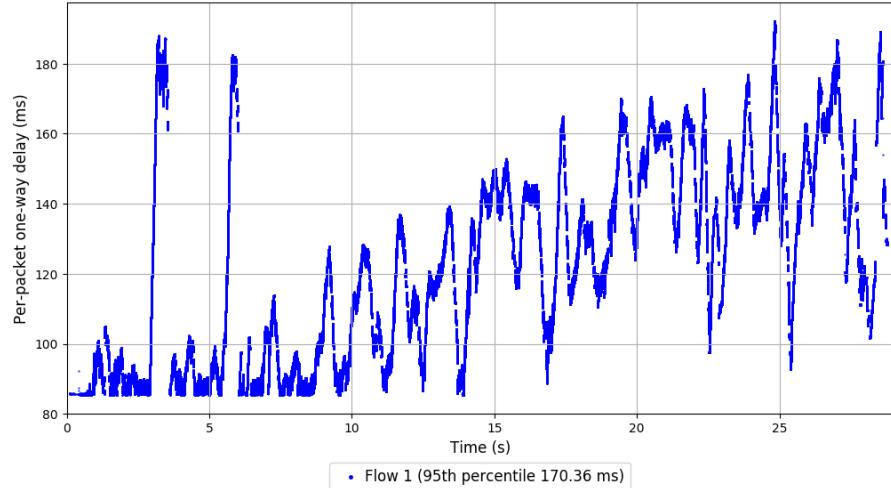
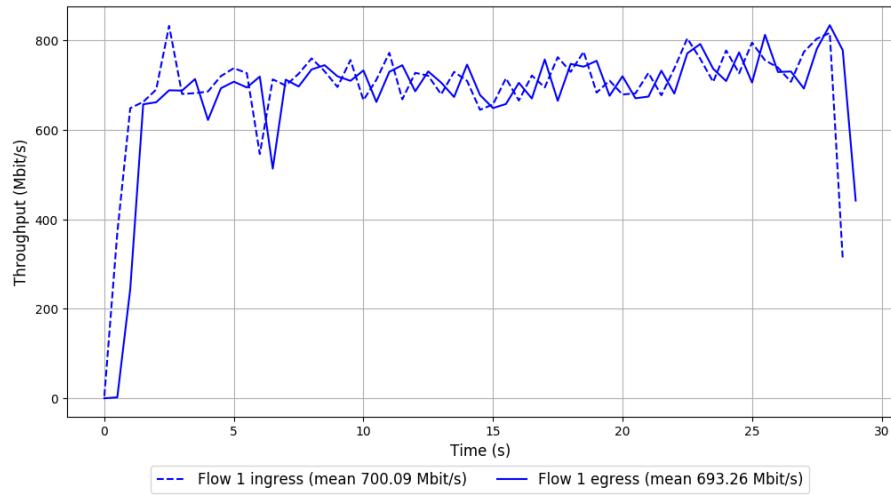


Run 2: Statistics of Indigo-MusesT

```
Start at: 2018-12-11 09:47:35
End at: 2018-12-11 09:48:05
Local clock offset: 0.31 ms
Remote clock offset: 0.264 ms

# Below is generated by plot.py at 2018-12-11 12:36:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 693.26 Mbit/s
95th percentile per-packet one-way delay: 170.356 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 693.26 Mbit/s
95th percentile per-packet one-way delay: 170.356 ms
Loss rate: 0.97%
```

Run 2: Report of Indigo-MusesT — Data Link

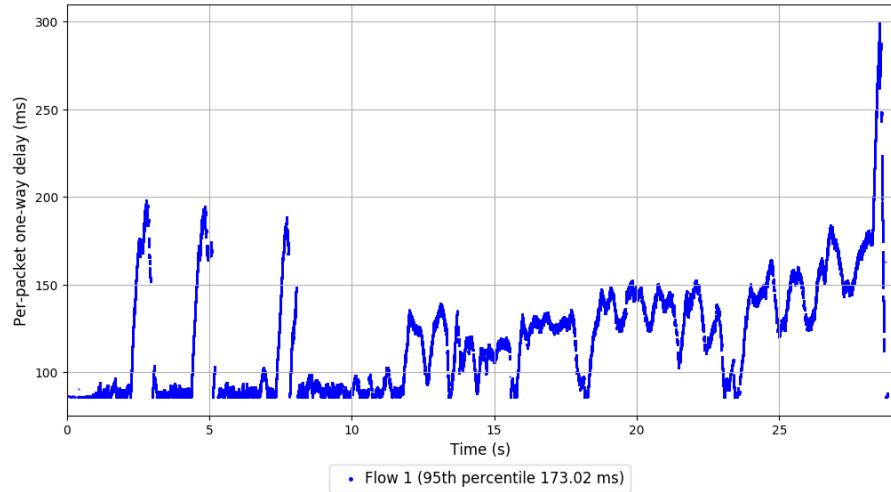
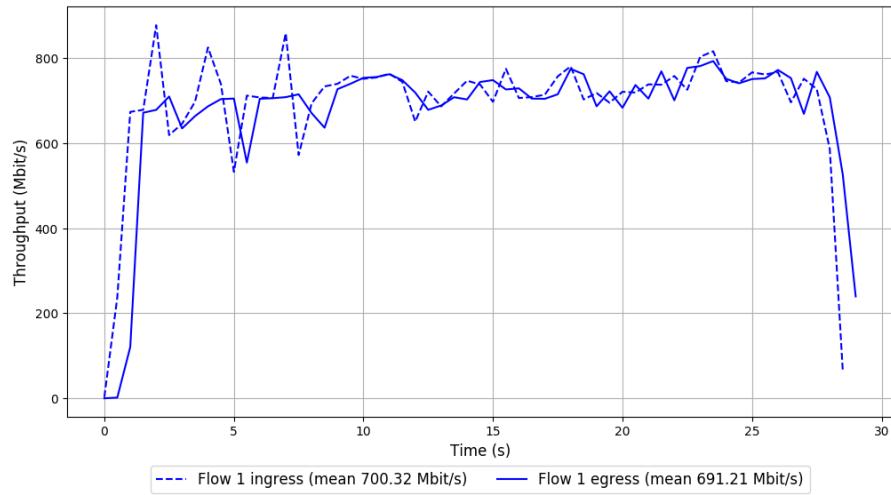


Run 3: Statistics of Indigo-MusesT

```
Start at: 2018-12-11 10:16:39
End at: 2018-12-11 10:17:09
Local clock offset: -0.278 ms
Remote clock offset: 0.349 ms

# Below is generated by plot.py at 2018-12-11 12:38:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 691.21 Mbit/s
95th percentile per-packet one-way delay: 173.021 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 691.21 Mbit/s
95th percentile per-packet one-way delay: 173.021 ms
Loss rate: 1.30%
```

Run 3: Report of Indigo-MusesT — Data Link

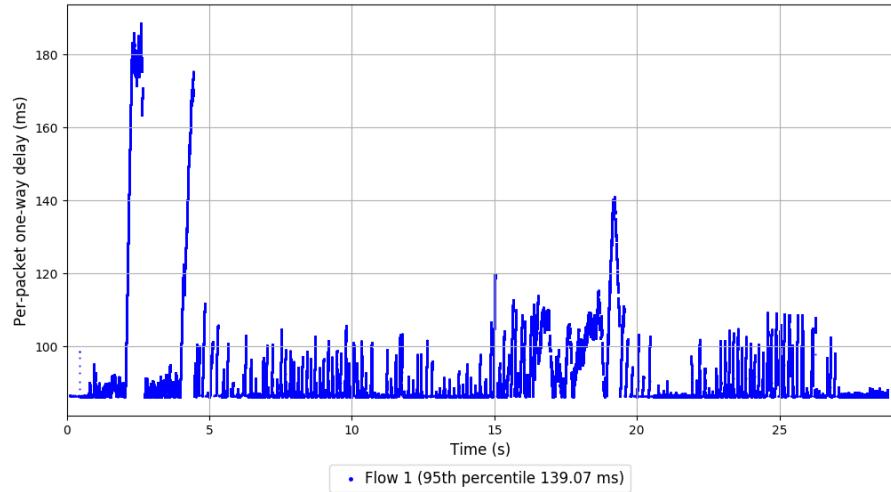
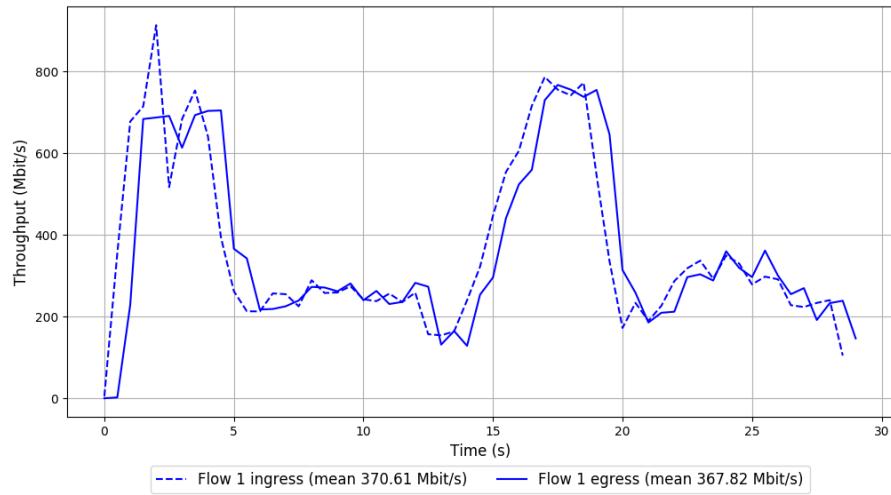


Run 4: Statistics of Indigo-MusesT

```
Start at: 2018-12-11 10:44:58
End at: 2018-12-11 10:45:28
Local clock offset: -0.009 ms
Remote clock offset: 0.447 ms

# Below is generated by plot.py at 2018-12-11 12:38:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 367.82 Mbit/s
95th percentile per-packet one-way delay: 139.075 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 367.82 Mbit/s
95th percentile per-packet one-way delay: 139.075 ms
Loss rate: 0.75%
```

Run 4: Report of Indigo-MusesT — Data Link

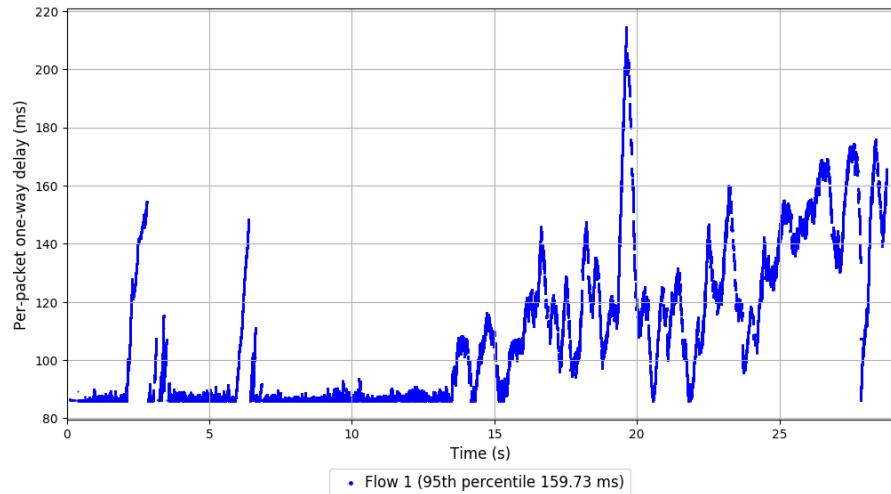
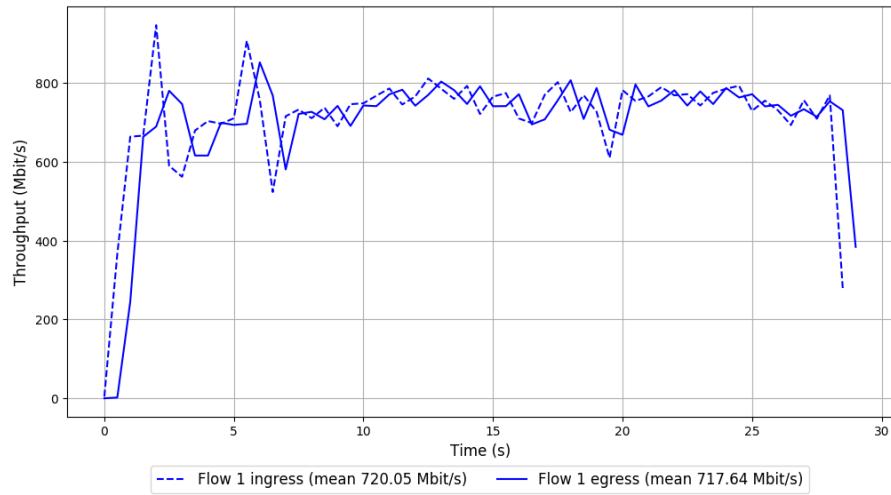


Run 5: Statistics of Indigo-MusesT

```
Start at: 2018-12-11 11:13:24
End at: 2018-12-11 11:13:54
Local clock offset: 0.061 ms
Remote clock offset: 0.541 ms

# Below is generated by plot.py at 2018-12-11 12:42:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 717.64 Mbit/s
95th percentile per-packet one-way delay: 159.734 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 717.64 Mbit/s
95th percentile per-packet one-way delay: 159.734 ms
Loss rate: 0.33%
```

Run 5: Report of Indigo-MusesT — Data Link

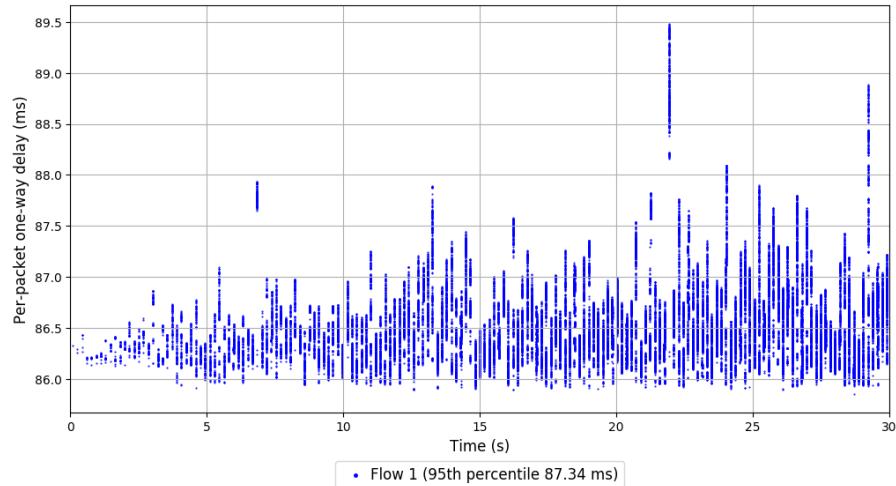
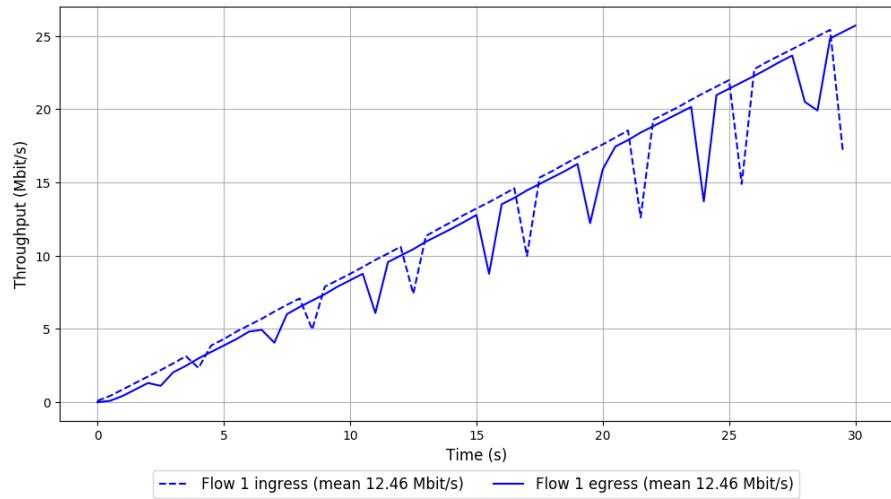


```
Run 1: Statistics of LEDBAT
```

```
Start at: 2018-12-11 09:08:28
End at: 2018-12-11 09:08:58
Local clock offset: 0.355 ms
Remote clock offset: 0.137 ms

# Below is generated by plot.py at 2018-12-11 12:42:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.46 Mbit/s
95th percentile per-packet one-way delay: 87.337 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.46 Mbit/s
95th percentile per-packet one-way delay: 87.337 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link

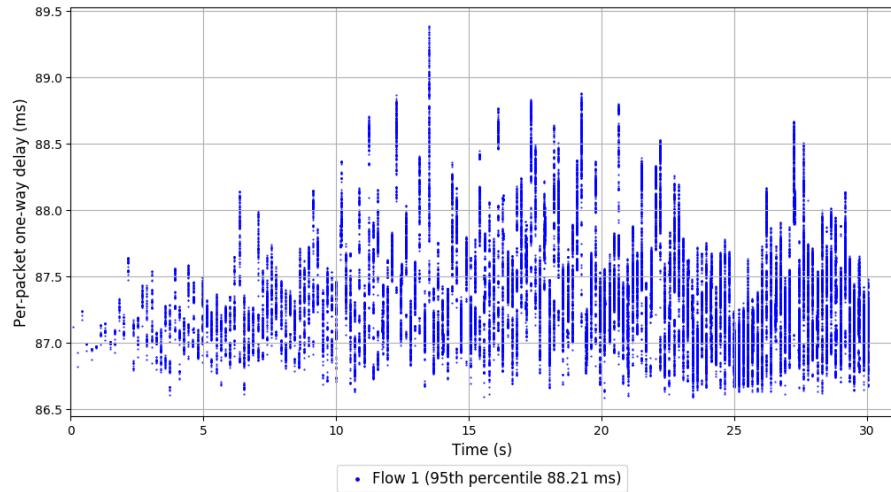
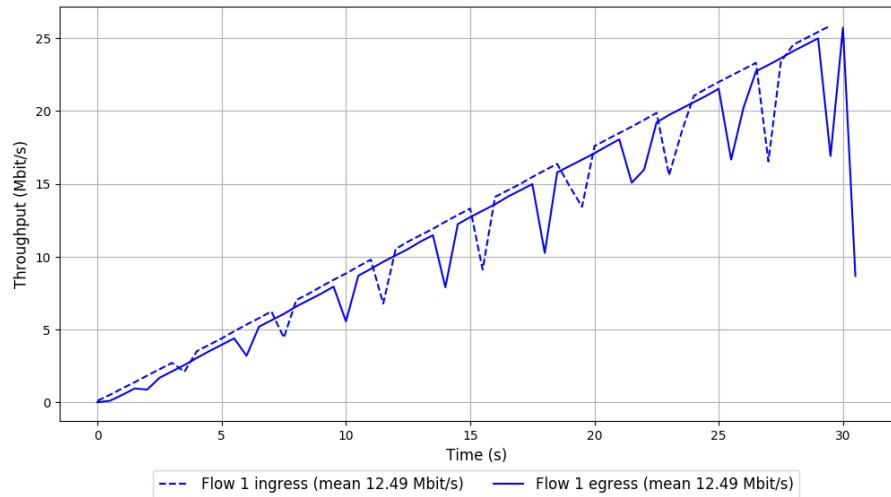


Run 2: Statistics of LEDBAT

```
Start at: 2018-12-11 09:36:59
End at: 2018-12-11 09:37:29
Local clock offset: -0.105 ms
Remote clock offset: 0.239 ms

# Below is generated by plot.py at 2018-12-11 12:42:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.49 Mbit/s
95th percentile per-packet one-way delay: 88.207 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.49 Mbit/s
95th percentile per-packet one-way delay: 88.207 ms
Loss rate: 0.00%
```

Run 2: Report of LEDBAT — Data Link

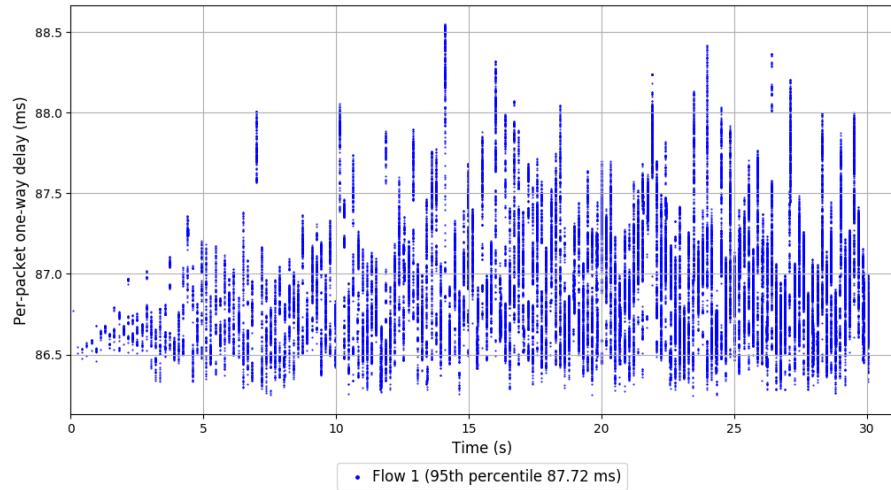
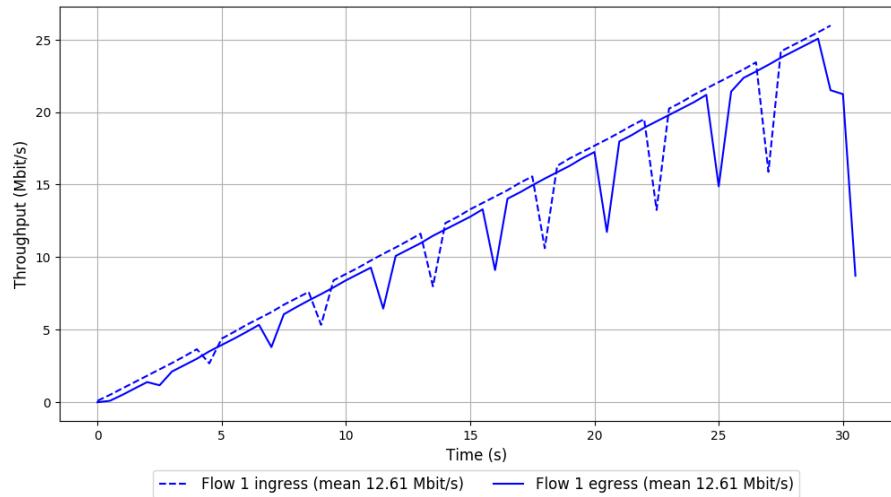


Run 3: Statistics of LEDBAT

```
Start at: 2018-12-11 10:05:46
End at: 2018-12-11 10:06:16
Local clock offset: -0.334 ms
Remote clock offset: 0.355 ms

# Below is generated by plot.py at 2018-12-11 12:42:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 87.716 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 87.716 ms
Loss rate: 0.00%
```

Run 3: Report of LEDBAT — Data Link

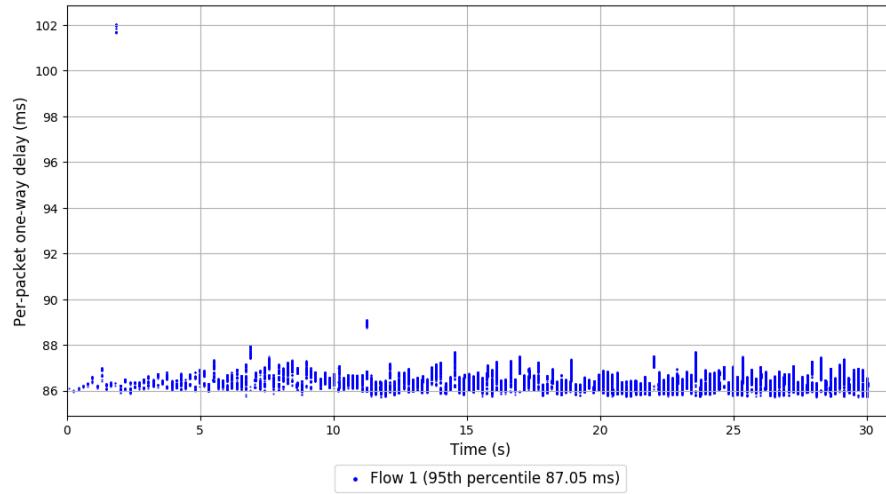
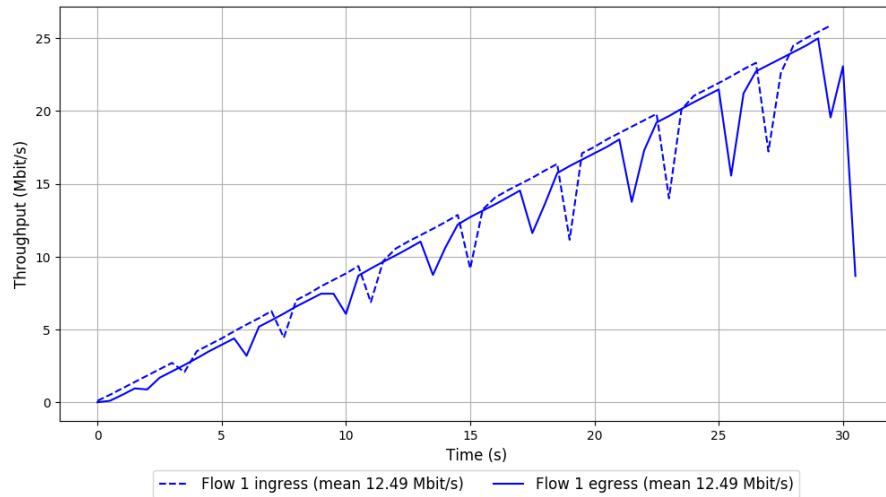


Run 4: Statistics of LEDBAT

```
Start at: 2018-12-11 10:34:09
End at: 2018-12-11 10:34:39
Local clock offset: 0.362 ms
Remote clock offset: 0.413 ms

# Below is generated by plot.py at 2018-12-11 12:42:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.49 Mbit/s
95th percentile per-packet one-way delay: 87.046 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.49 Mbit/s
95th percentile per-packet one-way delay: 87.046 ms
Loss rate: 0.00%
```

Run 4: Report of LEDBAT — Data Link

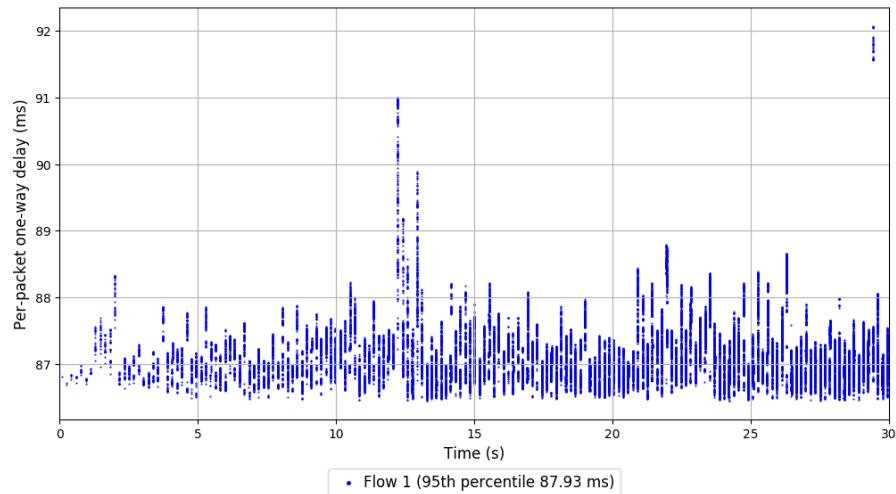
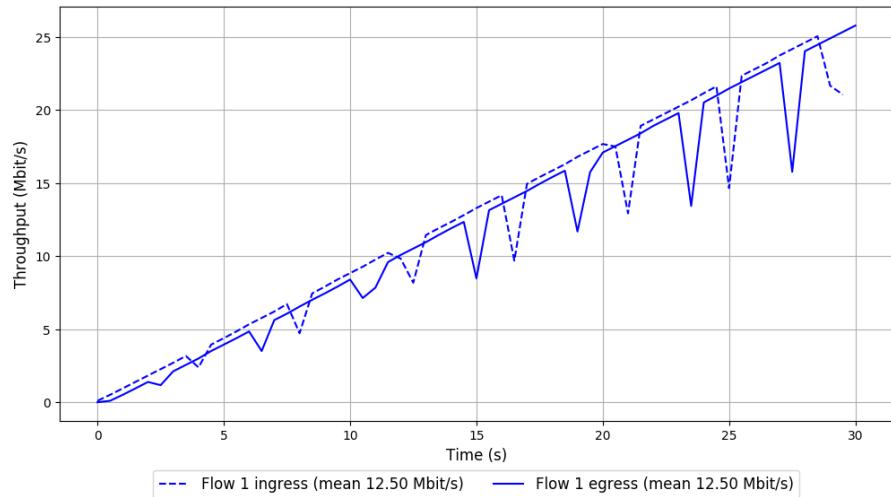


Run 5: Statistics of LEDBAT

```
Start at: 2018-12-11 11:02:42
End at: 2018-12-11 11:03:12
Local clock offset: -0.572 ms
Remote clock offset: 0.498 ms

# Below is generated by plot.py at 2018-12-11 12:42:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.50 Mbit/s
95th percentile per-packet one-way delay: 87.928 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.50 Mbit/s
95th percentile per-packet one-way delay: 87.928 ms
Loss rate: 0.00%
```

Run 5: Report of LEDBAT — Data Link

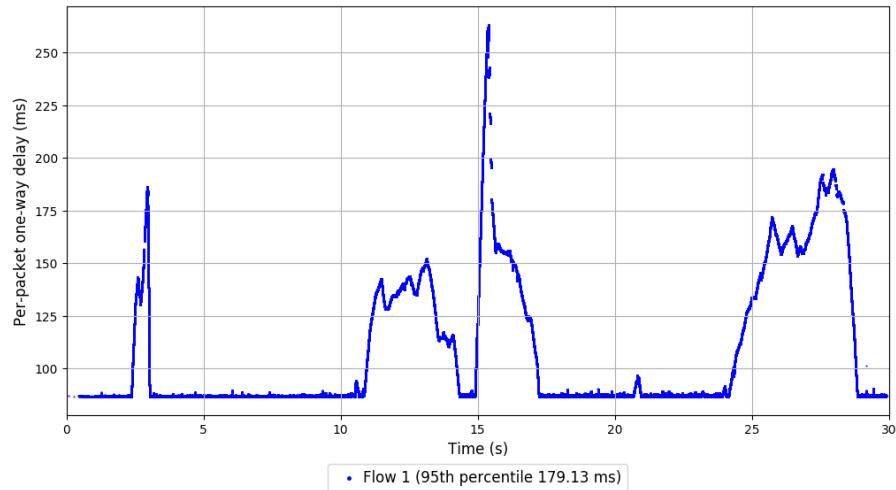
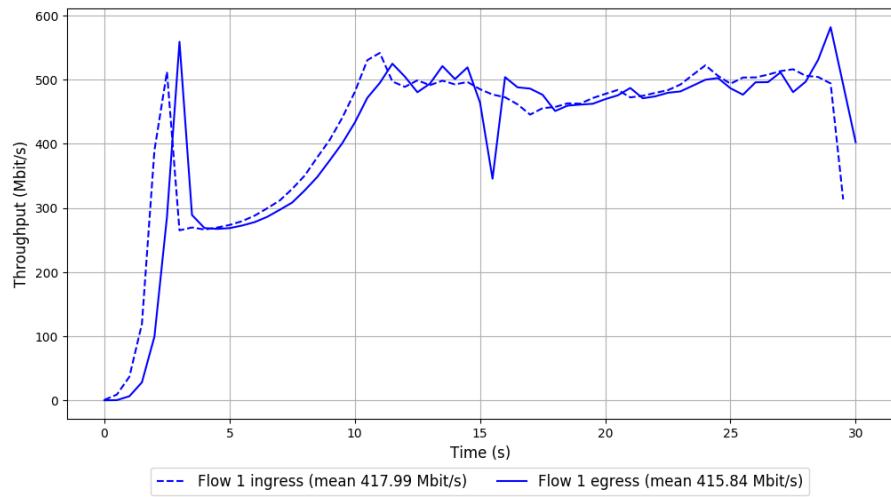


```
Run 1: Statistics of PCC-Allegro
```

```
Start at: 2018-12-11 09:03:44
End at: 2018-12-11 09:04:14
Local clock offset: -0.529 ms
Remote clock offset: 0.109 ms

# Below is generated by plot.py at 2018-12-11 12:50:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 415.84 Mbit/s
95th percentile per-packet one-way delay: 179.135 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 415.84 Mbit/s
95th percentile per-packet one-way delay: 179.135 ms
Loss rate: 0.51%
```

Run 1: Report of PCC-Allegro — Data Link

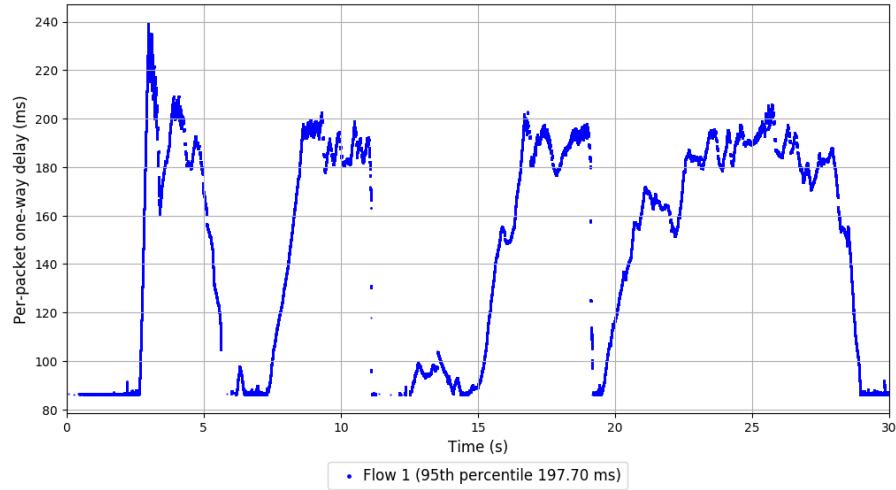
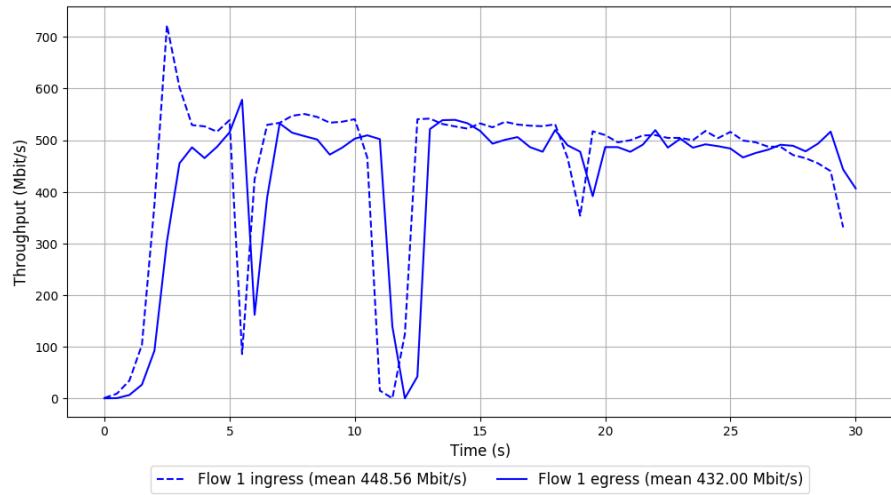


Run 2: Statistics of PCC-Allegro

```
Start at: 2018-12-11 09:32:13
End at: 2018-12-11 09:32:43
Local clock offset: -0.386 ms
Remote clock offset: 0.226 ms

# Below is generated by plot.py at 2018-12-11 12:51:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 432.00 Mbit/s
95th percentile per-packet one-way delay: 197.696 ms
Loss rate: 3.69%
-- Flow 1:
Average throughput: 432.00 Mbit/s
95th percentile per-packet one-way delay: 197.696 ms
Loss rate: 3.69%
```

Run 2: Report of PCC-Allegro — Data Link

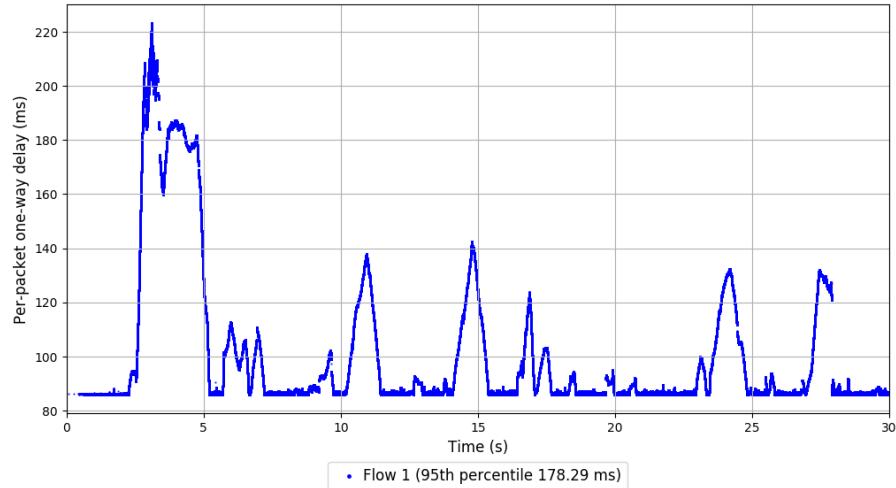
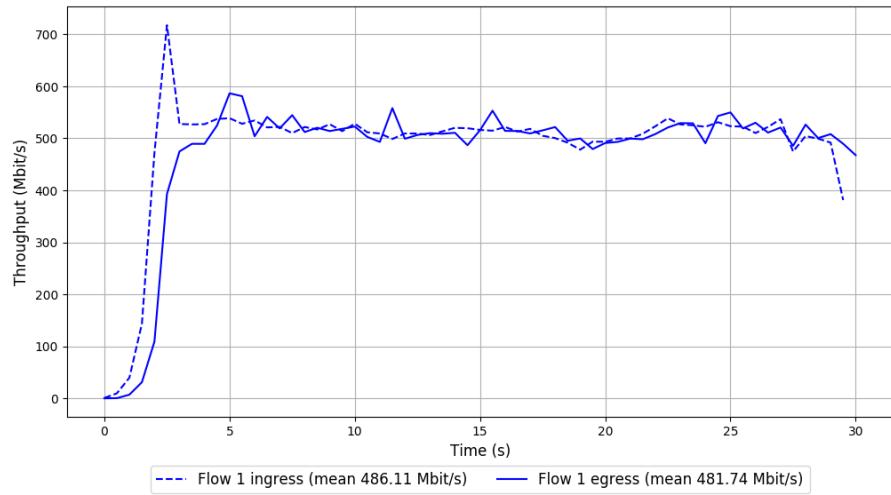


Run 3: Statistics of PCC-Allegro

```
Start at: 2018-12-11 10:00:52
End at: 2018-12-11 10:01:22
Local clock offset: -0.173 ms
Remote clock offset: 0.314 ms

# Below is generated by plot.py at 2018-12-11 12:52:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 481.74 Mbit/s
95th percentile per-packet one-way delay: 178.291 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 481.74 Mbit/s
95th percentile per-packet one-way delay: 178.291 ms
Loss rate: 0.90%
```

Run 3: Report of PCC-Allegro — Data Link

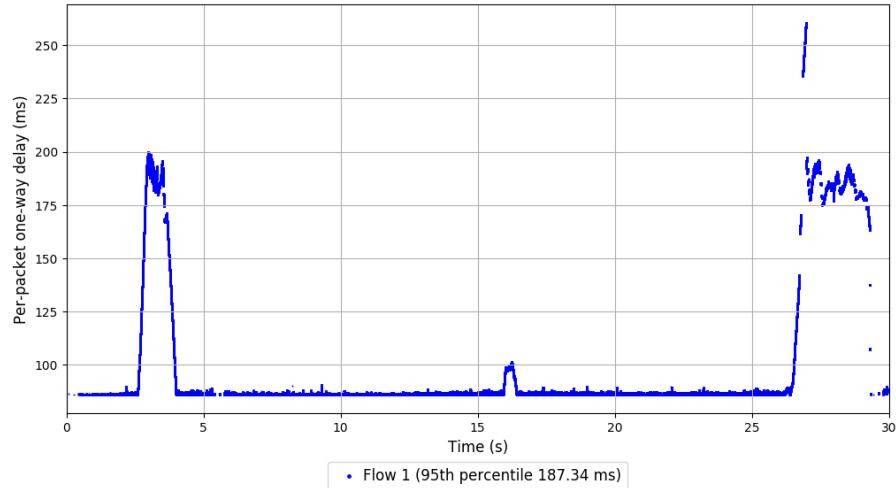
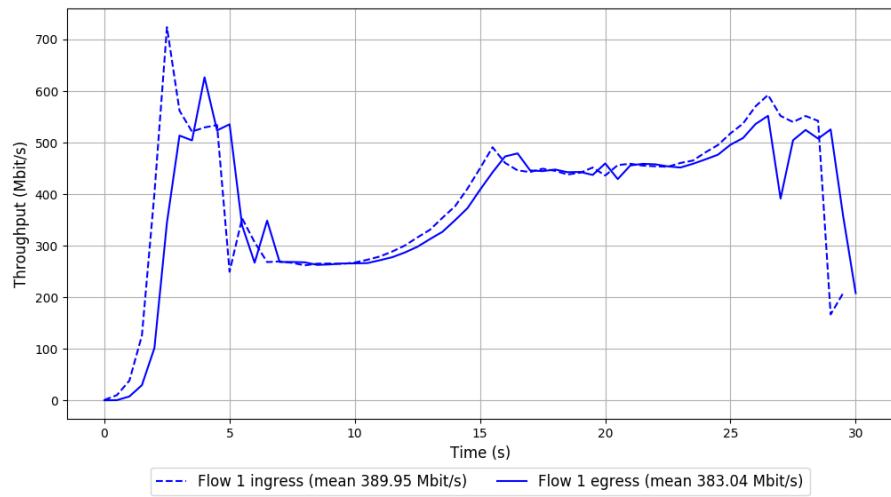


Run 4: Statistics of PCC-Allegro

```
Start at: 2018-12-11 10:29:32
End at: 2018-12-11 10:30:02
Local clock offset: -0.242 ms
Remote clock offset: 0.396 ms

# Below is generated by plot.py at 2018-12-11 12:52:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 383.04 Mbit/s
95th percentile per-packet one-way delay: 187.344 ms
Loss rate: 1.77%
-- Flow 1:
Average throughput: 383.04 Mbit/s
95th percentile per-packet one-way delay: 187.344 ms
Loss rate: 1.77%
```

Run 4: Report of PCC-Allegro — Data Link

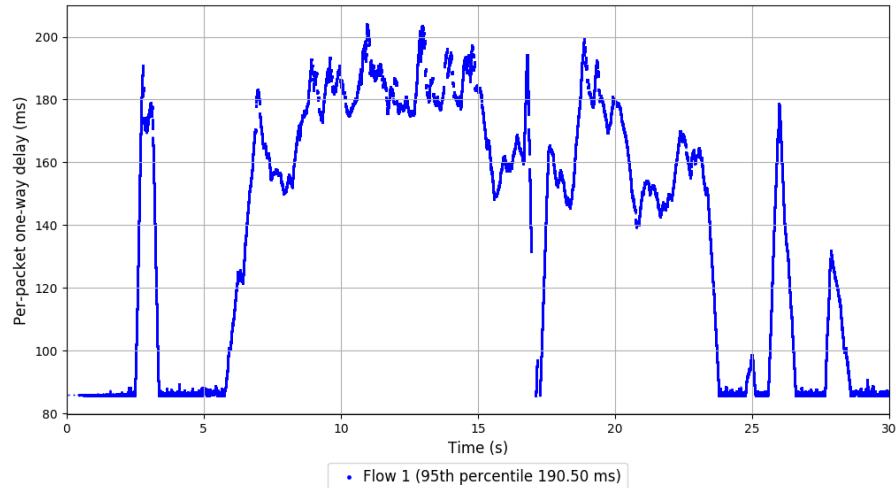
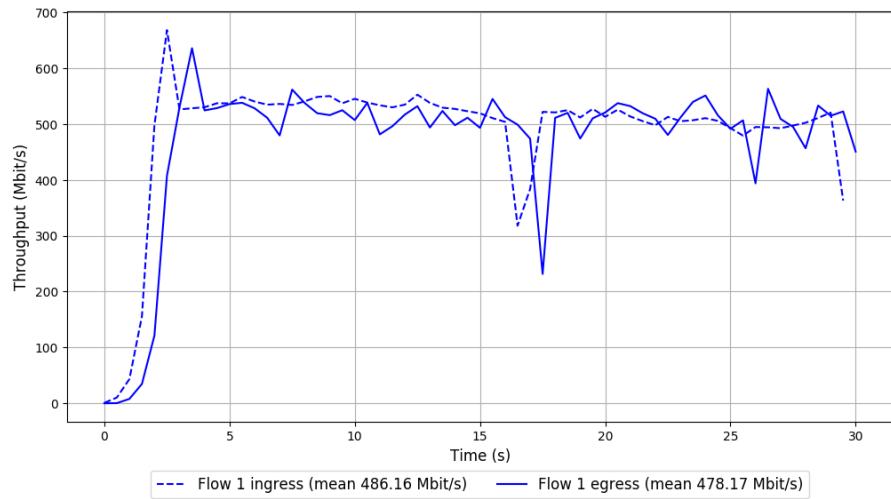


Run 5: Statistics of PCC-Allegro

```
Start at: 2018-12-11 10:57:53
End at: 2018-12-11 10:58:23
Local clock offset: 0.094 ms
Remote clock offset: 0.523 ms

# Below is generated by plot.py at 2018-12-11 12:53:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 478.17 Mbit/s
95th percentile per-packet one-way delay: 190.499 ms
Loss rate: 1.64%
-- Flow 1:
Average throughput: 478.17 Mbit/s
95th percentile per-packet one-way delay: 190.499 ms
Loss rate: 1.64%
```

Run 5: Report of PCC-Allegro — Data Link

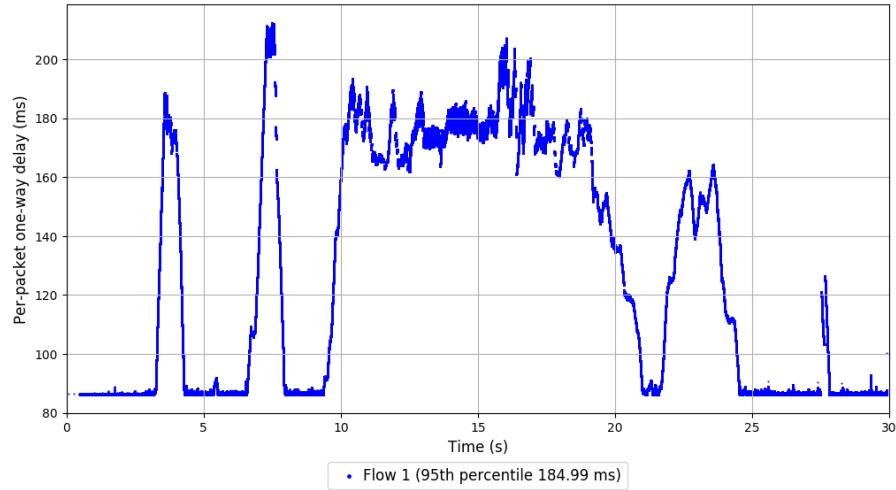
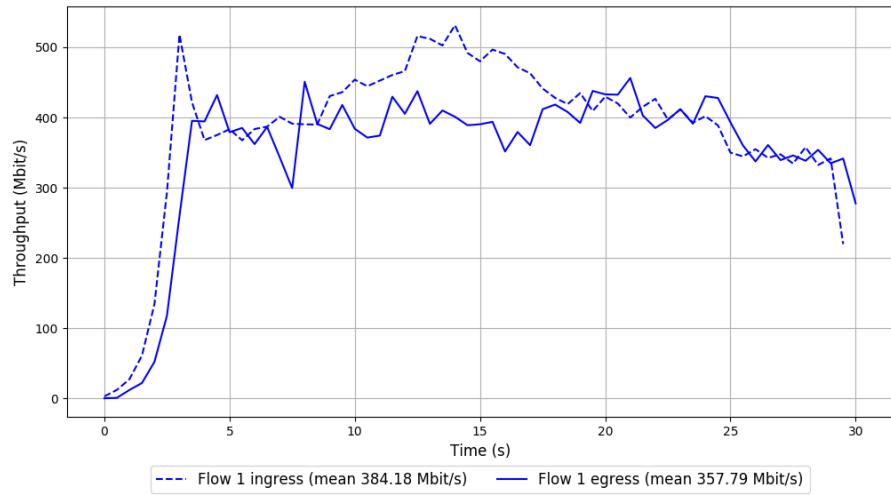


```
Run 1: Statistics of PCC-Expr
```

```
Start at: 2018-12-11 09:14:20
End at: 2018-12-11 09:14:50
Local clock offset: 0.032 ms
Remote clock offset: 0.144 ms

# Below is generated by plot.py at 2018-12-11 12:53:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 357.79 Mbit/s
95th percentile per-packet one-way delay: 184.991 ms
Loss rate: 6.87%
-- Flow 1:
Average throughput: 357.79 Mbit/s
95th percentile per-packet one-way delay: 184.991 ms
Loss rate: 6.87%
```

Run 1: Report of PCC-Expr — Data Link

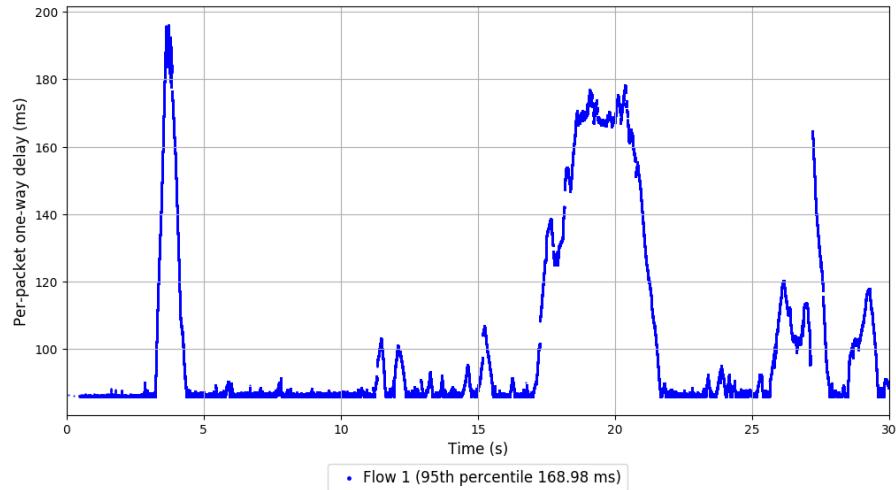
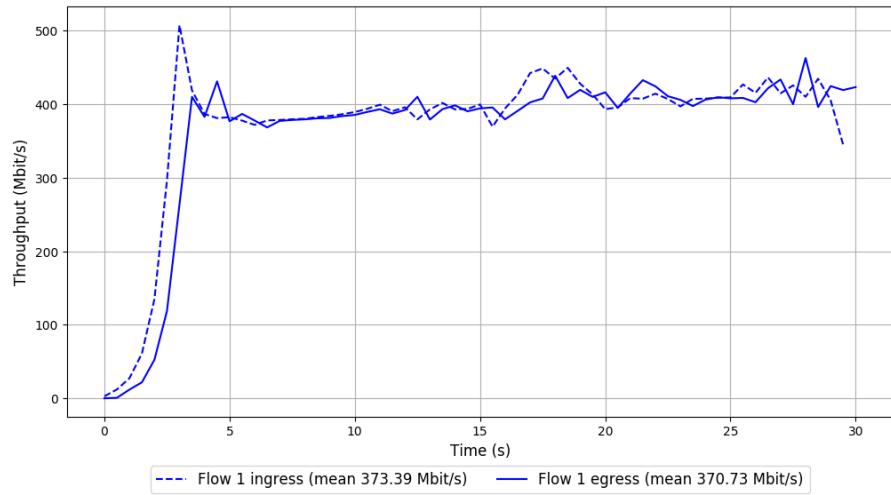


Run 2: Statistics of PCC-Expr

```
Start at: 2018-12-11 09:42:27
End at: 2018-12-11 09:42:57
Local clock offset: -0.159 ms
Remote clock offset: 0.267 ms

# Below is generated by plot.py at 2018-12-11 12:53:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 370.73 Mbit/s
95th percentile per-packet one-way delay: 168.982 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 370.73 Mbit/s
95th percentile per-packet one-way delay: 168.982 ms
Loss rate: 0.71%
```

Run 2: Report of PCC-Expr — Data Link

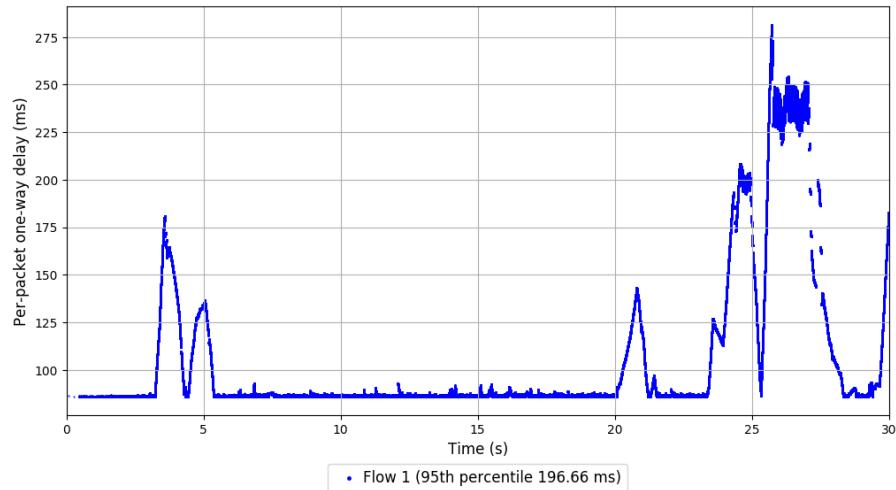
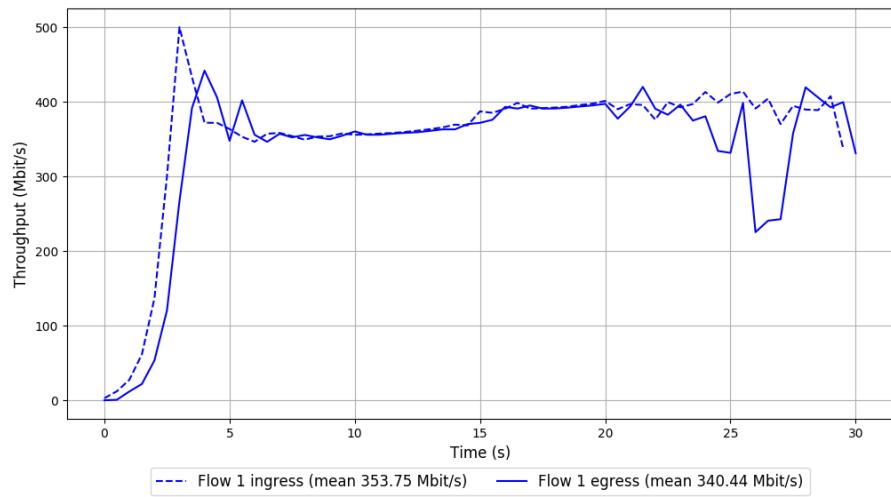


Run 3: Statistics of PCC-Expr

```
Start at: 2018-12-11 10:11:45
End at: 2018-12-11 10:12:15
Local clock offset: -0.139 ms
Remote clock offset: 0.345 ms

# Below is generated by plot.py at 2018-12-11 12:56:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 340.44 Mbit/s
95th percentile per-packet one-way delay: 196.659 ms
Loss rate: 3.76%
-- Flow 1:
Average throughput: 340.44 Mbit/s
95th percentile per-packet one-way delay: 196.659 ms
Loss rate: 3.76%
```

Run 3: Report of PCC-Expr — Data Link

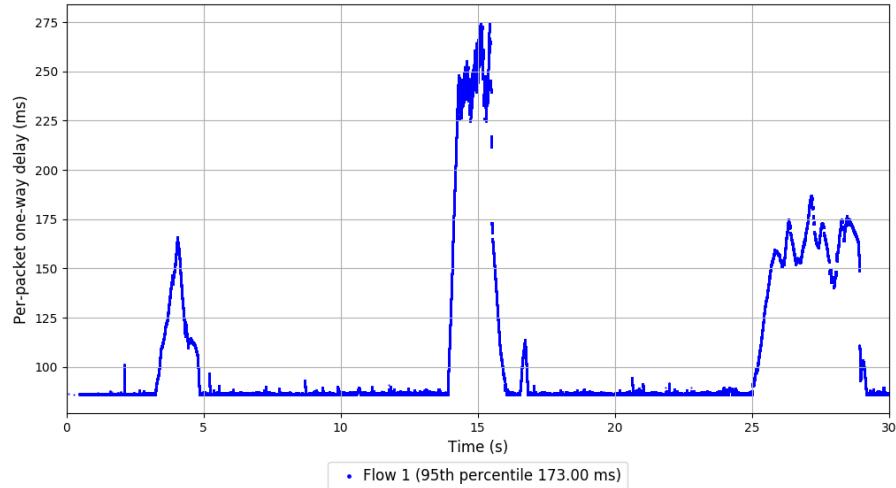
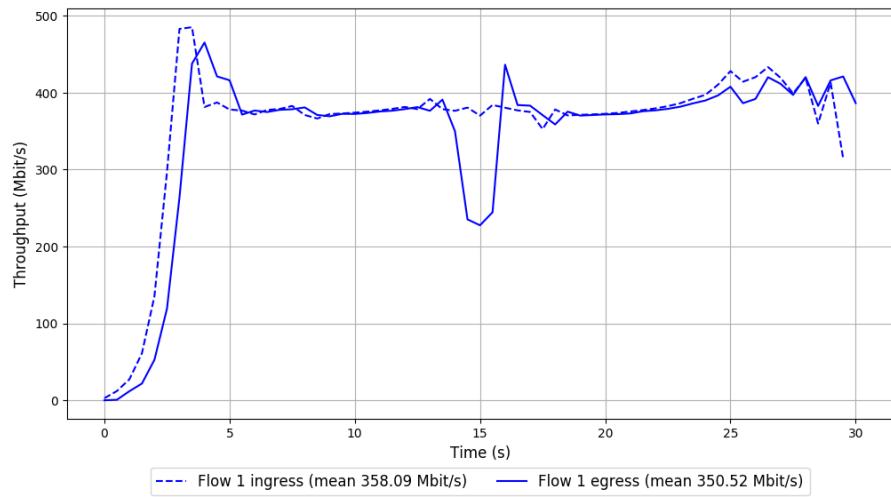


Run 4: Statistics of PCC-Expr

```
Start at: 2018-12-11 10:40:03
End at: 2018-12-11 10:40:33
Local clock offset: -0.073 ms
Remote clock offset: 0.456 ms

# Below is generated by plot.py at 2018-12-11 13:02:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 350.52 Mbit/s
95th percentile per-packet one-way delay: 172.996 ms
Loss rate: 2.11%
-- Flow 1:
Average throughput: 350.52 Mbit/s
95th percentile per-packet one-way delay: 172.996 ms
Loss rate: 2.11%
```

Run 4: Report of PCC-Expr — Data Link

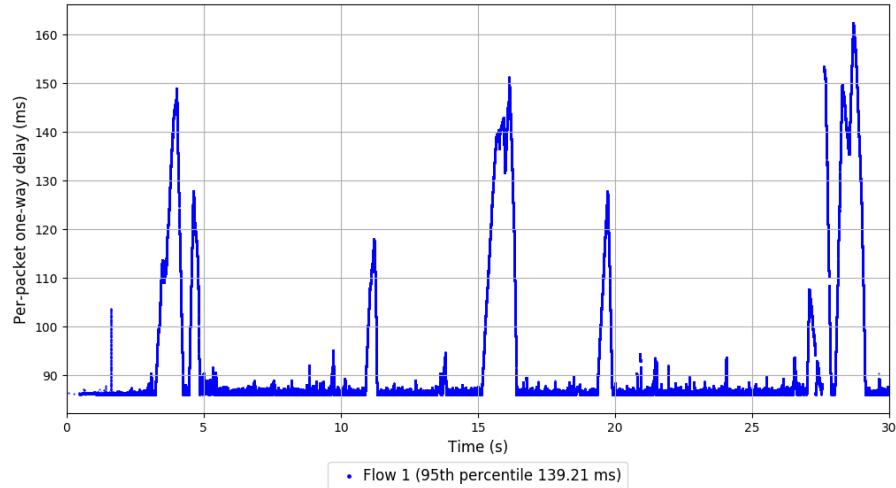
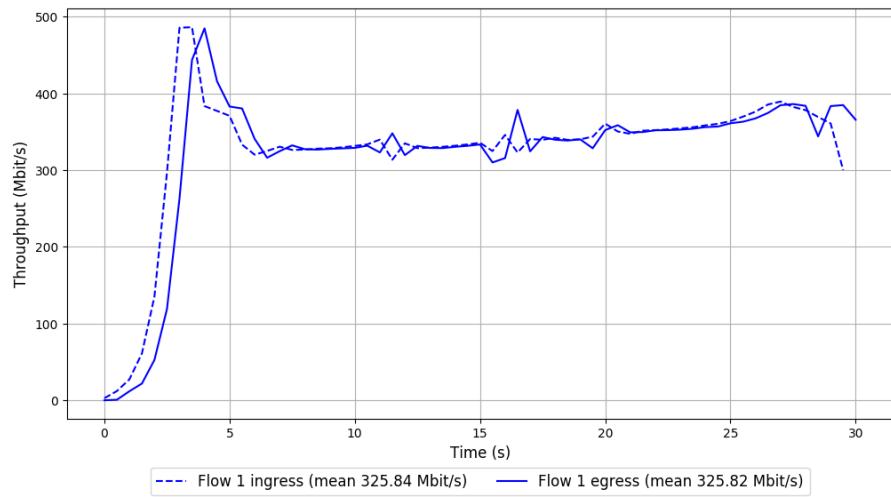


Run 5: Statistics of PCC-Expr

```
Start at: 2018-12-11 11:08:34
End at: 2018-12-11 11:09:04
Local clock offset: -0.181 ms
Remote clock offset: 0.629 ms

# Below is generated by plot.py at 2018-12-11 13:02:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 325.82 Mbit/s
95th percentile per-packet one-way delay: 139.214 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 325.82 Mbit/s
95th percentile per-packet one-way delay: 139.214 ms
Loss rate: 0.01%
```

Run 5: Report of PCC-Expr — Data Link

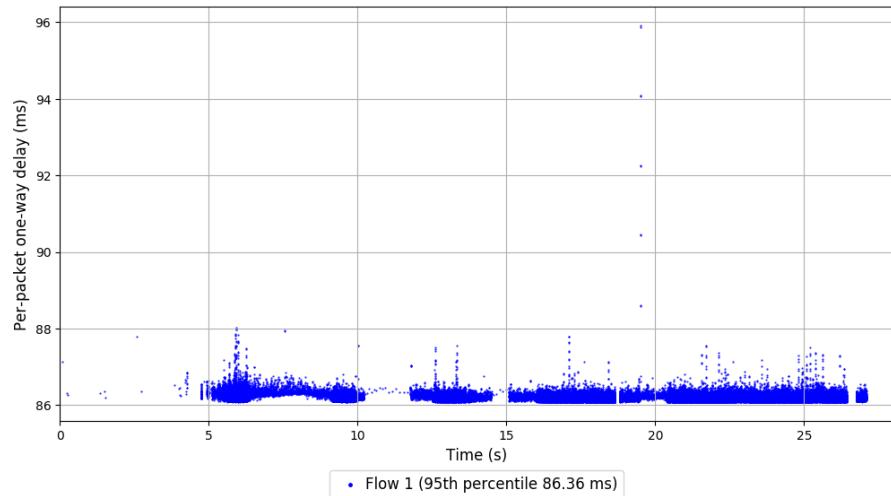
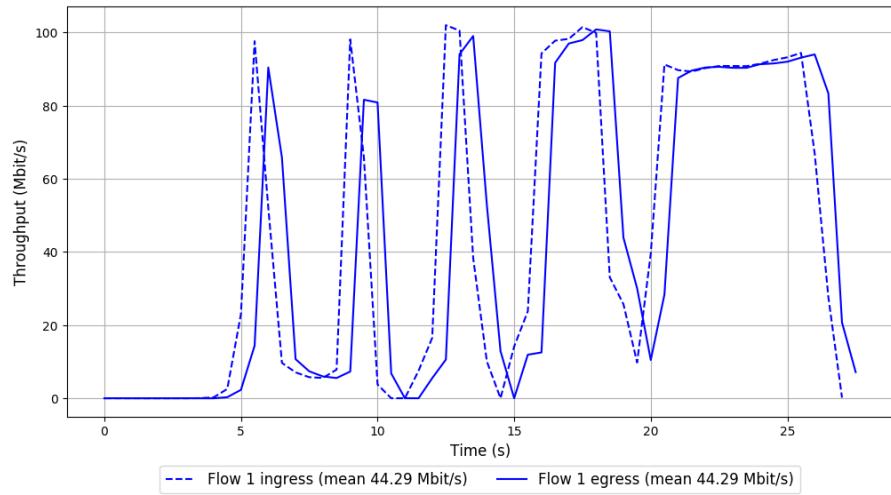


Run 1: Statistics of QUIC Cubic

```
Start at: 2018-12-11 09:13:07
End at: 2018-12-11 09:13:37
Local clock offset: 0.163 ms
Remote clock offset: 0.185 ms

# Below is generated by plot.py at 2018-12-11 13:02:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 44.29 Mbit/s
95th percentile per-packet one-way delay: 86.357 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 44.29 Mbit/s
95th percentile per-packet one-way delay: 86.357 ms
Loss rate: 0.00%
```

Run 1: Report of QUIC Cubic — Data Link

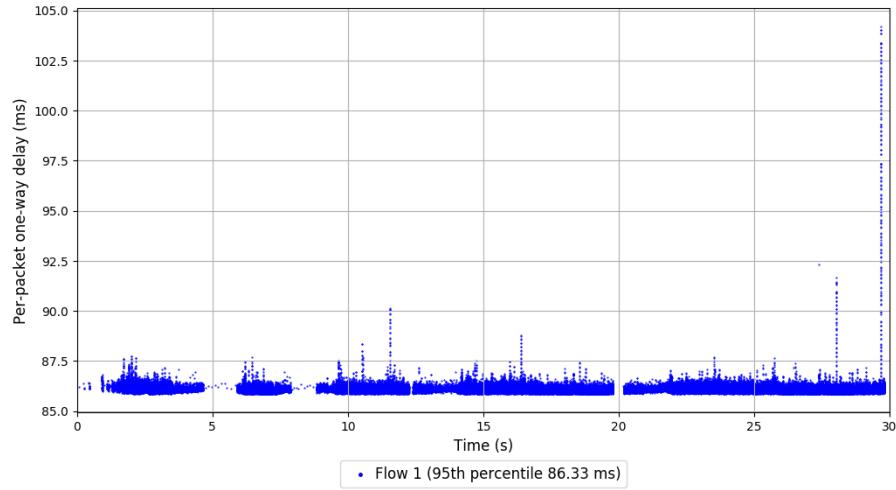
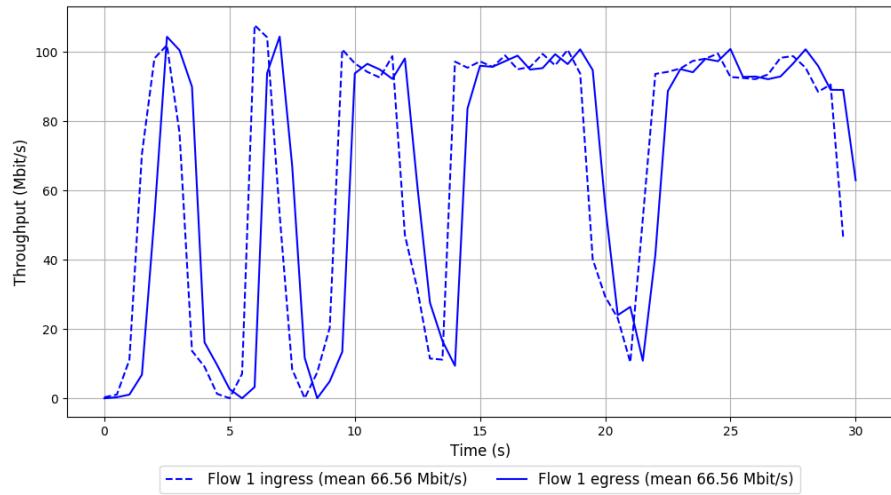


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-12-11 09:41:14
End at: 2018-12-11 09:41:44
Local clock offset: -0.156 ms
Remote clock offset: 0.243 ms

# Below is generated by plot.py at 2018-12-11 13:02:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 66.56 Mbit/s
95th percentile per-packet one-way delay: 86.325 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 66.56 Mbit/s
95th percentile per-packet one-way delay: 86.325 ms
Loss rate: 0.00%
```

Run 2: Report of QUIC Cubic — Data Link

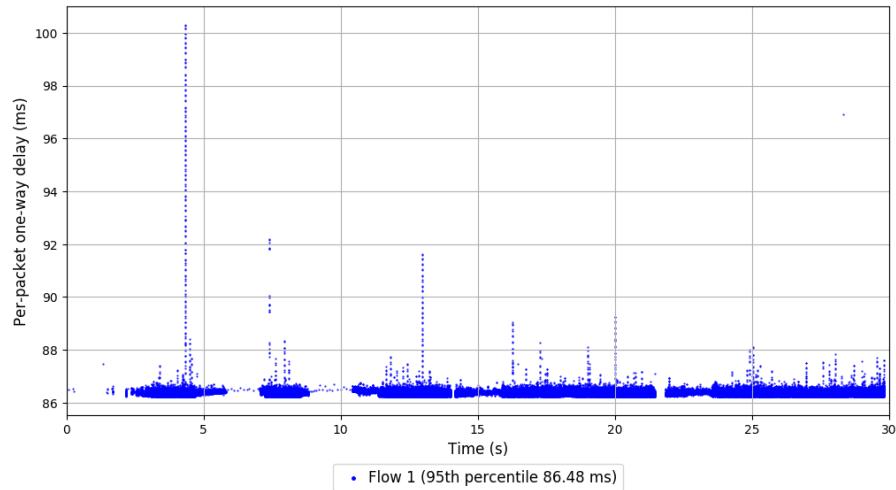
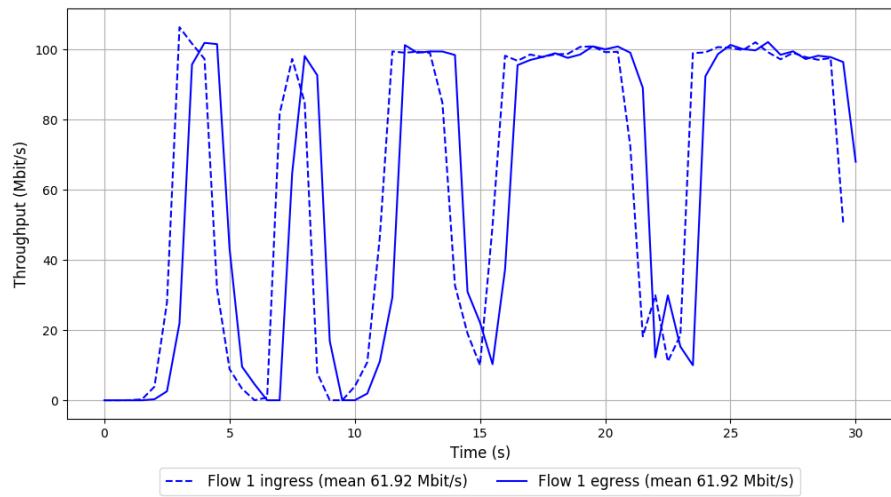


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-12-11 10:10:32
End at: 2018-12-11 10:11:02
Local clock offset: -0.14 ms
Remote clock offset: 0.327 ms

# Below is generated by plot.py at 2018-12-11 13:02:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 61.92 Mbit/s
95th percentile per-packet one-way delay: 86.480 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 61.92 Mbit/s
95th percentile per-packet one-way delay: 86.480 ms
Loss rate: 0.00%
```

Run 3: Report of QUIC Cubic — Data Link

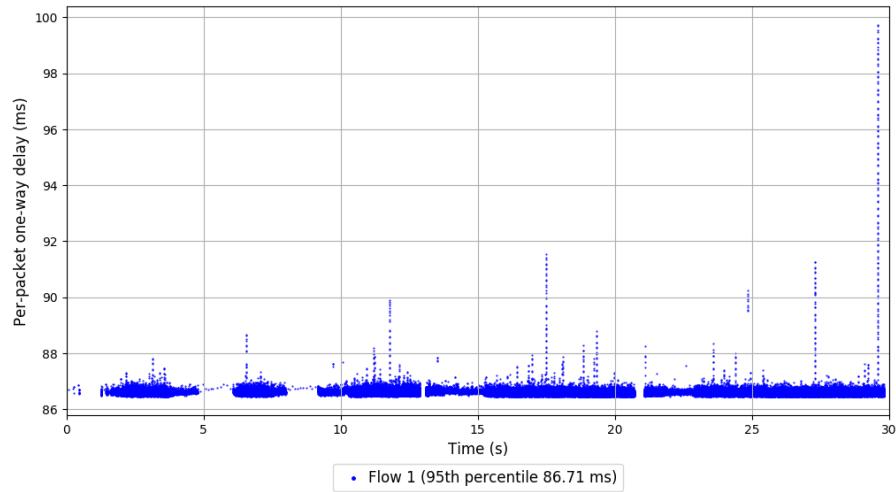
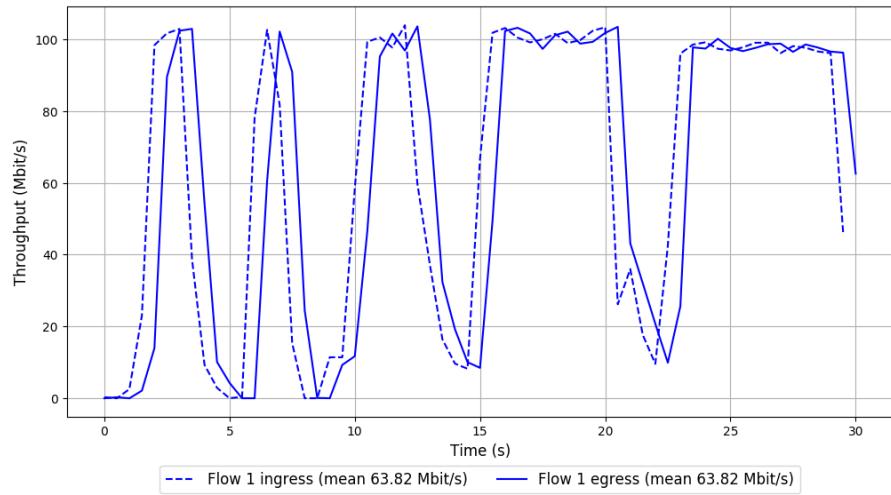


Run 4: Statistics of QUIC Cubic

```
Start at: 2018-12-11 10:38:49
End at: 2018-12-11 10:39:19
Local clock offset: -0.272 ms
Remote clock offset: 0.482 ms

# Below is generated by plot.py at 2018-12-11 13:02:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 63.82 Mbit/s
95th percentile per-packet one-way delay: 86.712 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 63.82 Mbit/s
95th percentile per-packet one-way delay: 86.712 ms
Loss rate: 0.00%
```

Run 4: Report of QUIC Cubic — Data Link

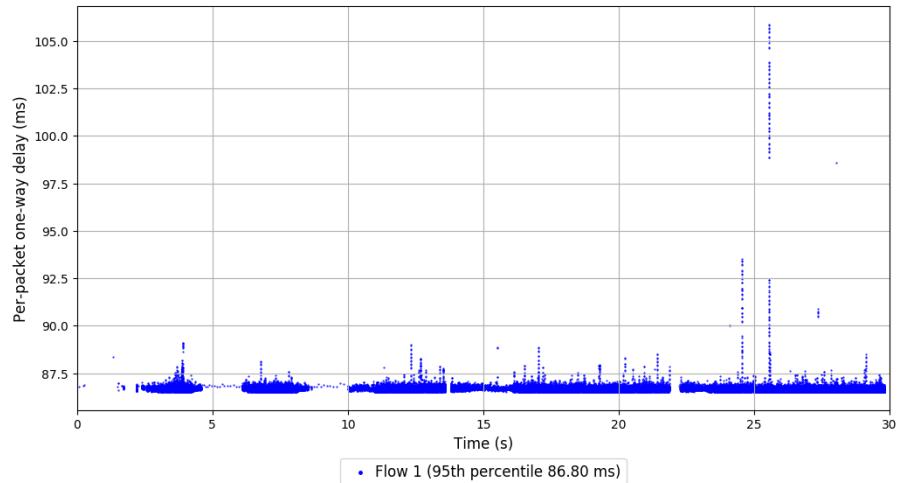
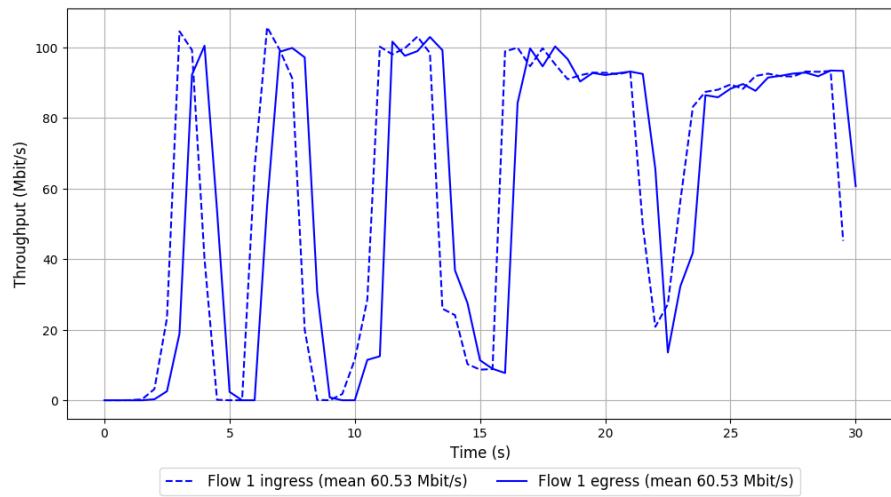


Run 5: Statistics of QUIC Cubic

```
Start at: 2018-12-11 11:07:22
End at: 2018-12-11 11:07:52
Local clock offset: -0.198 ms
Remote clock offset: 0.505 ms

# Below is generated by plot.py at 2018-12-11 13:02:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 60.53 Mbit/s
95th percentile per-packet one-way delay: 86.803 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 60.53 Mbit/s
95th percentile per-packet one-way delay: 86.803 ms
Loss rate: 0.00%
```

Run 5: Report of QUIC Cubic — Data Link

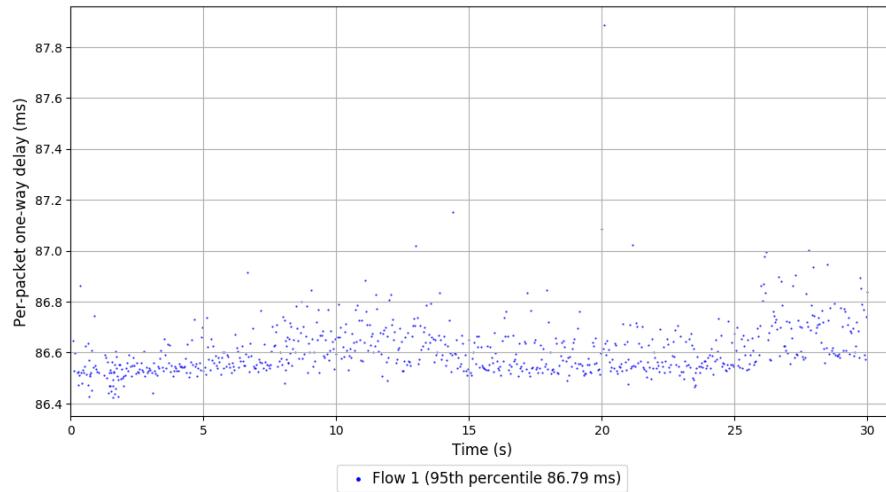
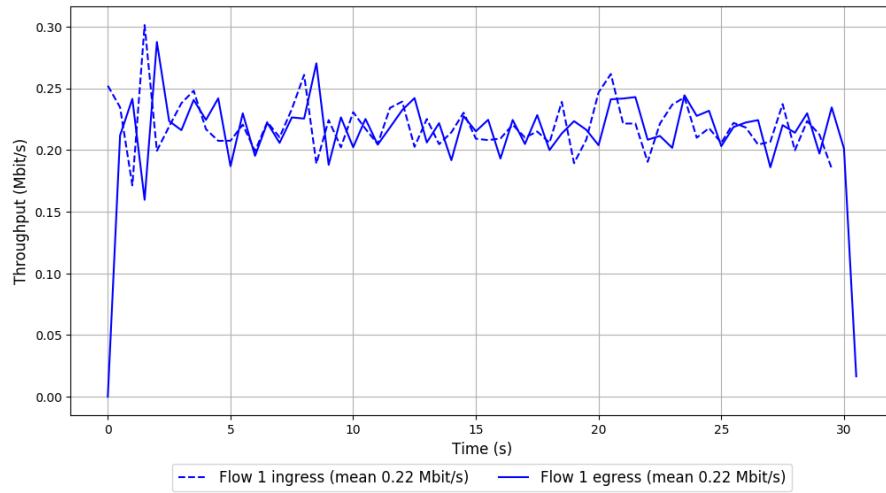


Run 1: Statistics of SCReAM

```
Start at: 2018-12-11 09:02:35
End at: 2018-12-11 09:03:05
Local clock offset: -0.135 ms
Remote clock offset: 0.114 ms

# Below is generated by plot.py at 2018-12-11 13:02:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.786 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.786 ms
Loss rate: 0.00%
```

Run 1: Report of SCReAM — Data Link

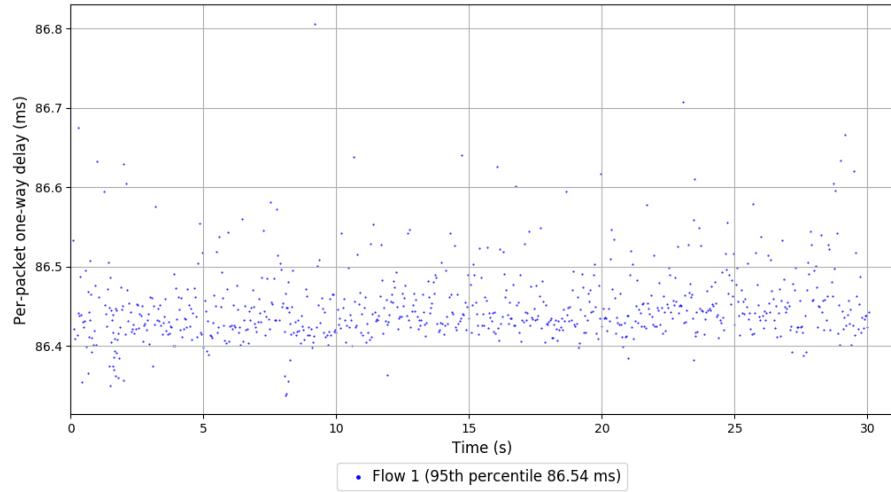
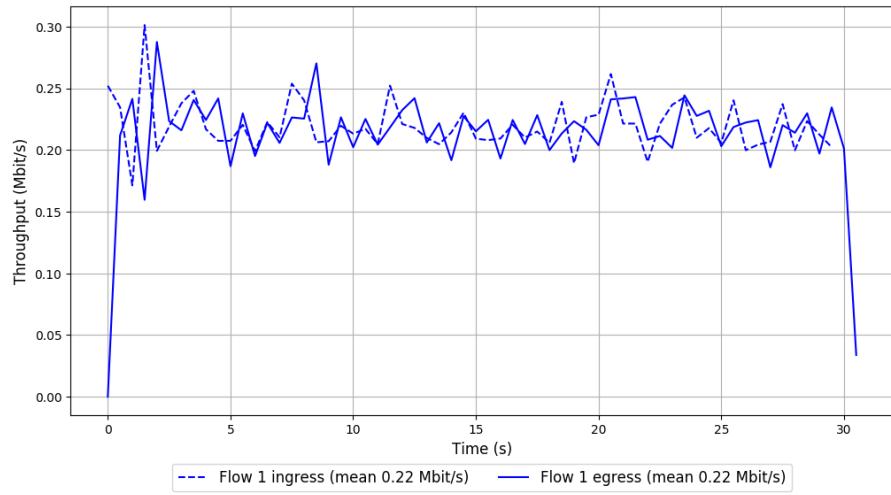


Run 2: Statistics of SCReAM

```
Start at: 2018-12-11 09:31:04
End at: 2018-12-11 09:31:34
Local clock offset: -0.506 ms
Remote clock offset: 0.188 ms

# Below is generated by plot.py at 2018-12-11 13:02:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.542 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.542 ms
Loss rate: 0.00%
```

Run 2: Report of SCReAM — Data Link

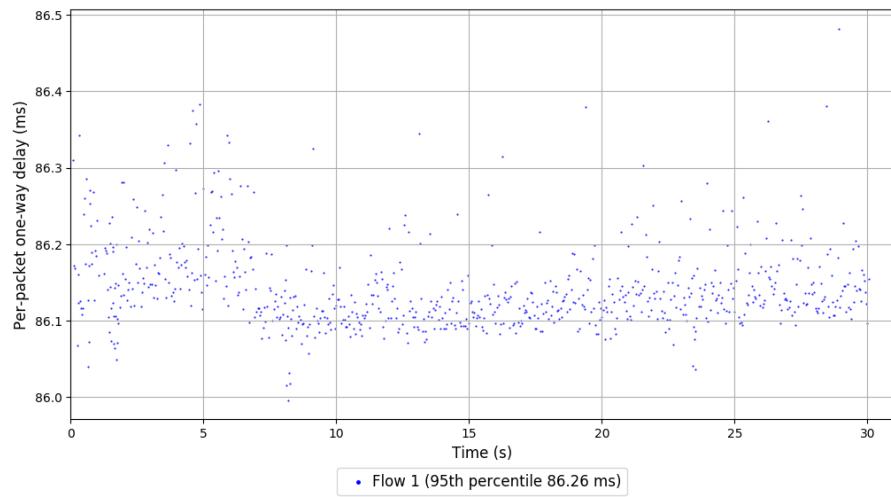
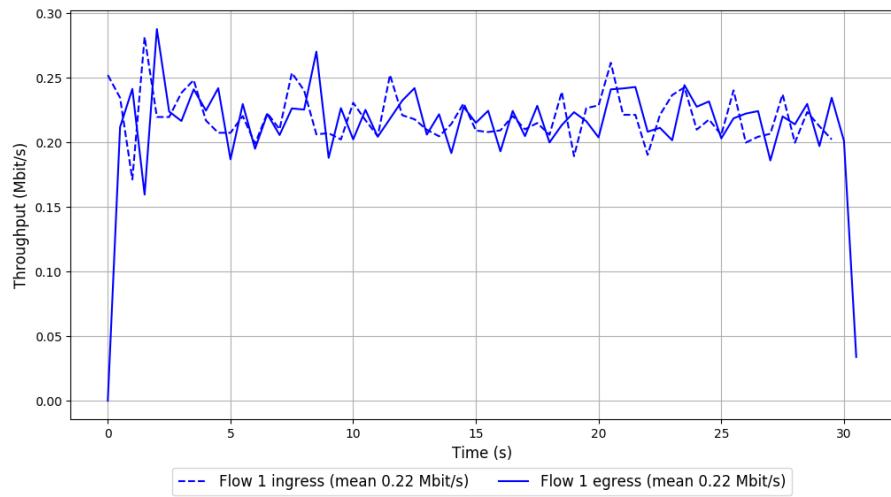


Run 3: Statistics of SCReAM

```
Start at: 2018-12-11 09:59:43
End at: 2018-12-11 10:00:13
Local clock offset: -0.141 ms
Remote clock offset: 0.274 ms

# Below is generated by plot.py at 2018-12-11 13:02:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.262 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.262 ms
Loss rate: 0.00%
```

Run 3: Report of SCReAM — Data Link

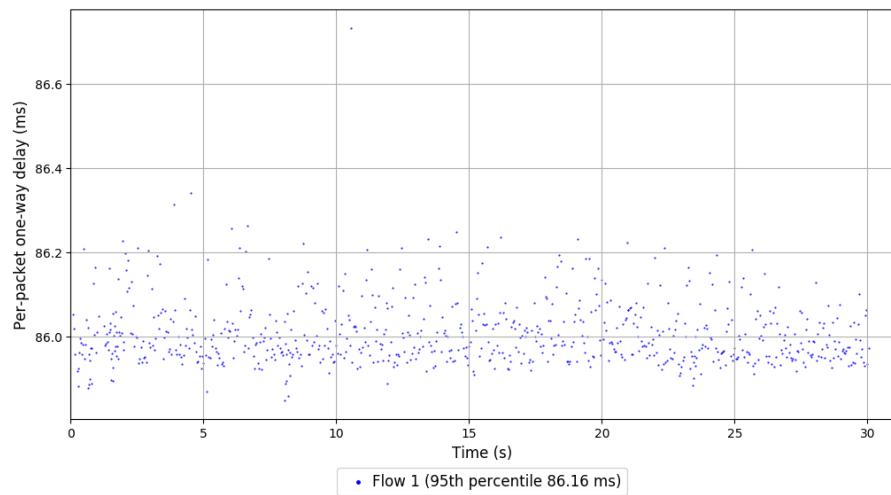
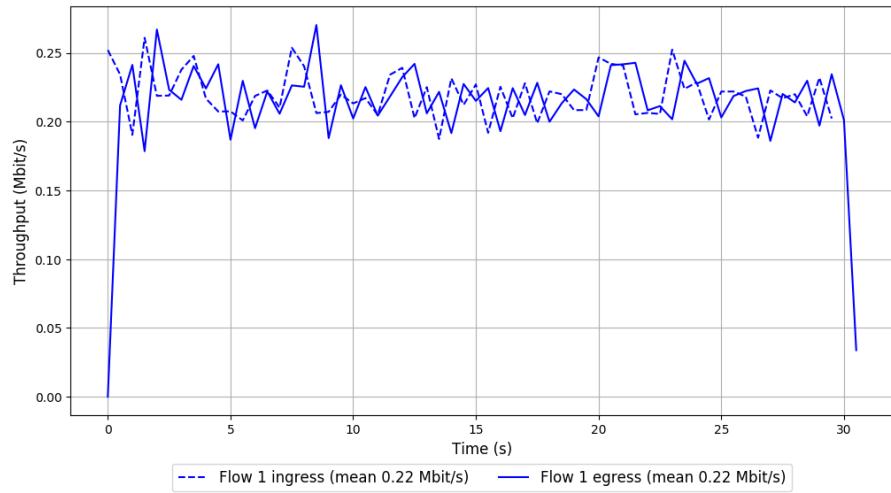


Run 4: Statistics of SCReAM

```
Start at: 2018-12-11 10:28:23
End at: 2018-12-11 10:28:53
Local clock offset: 0.168 ms
Remote clock offset: 0.448 ms

# Below is generated by plot.py at 2018-12-11 13:02:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.163 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.163 ms
Loss rate: 0.00%
```

Run 4: Report of SCReAM — Data Link

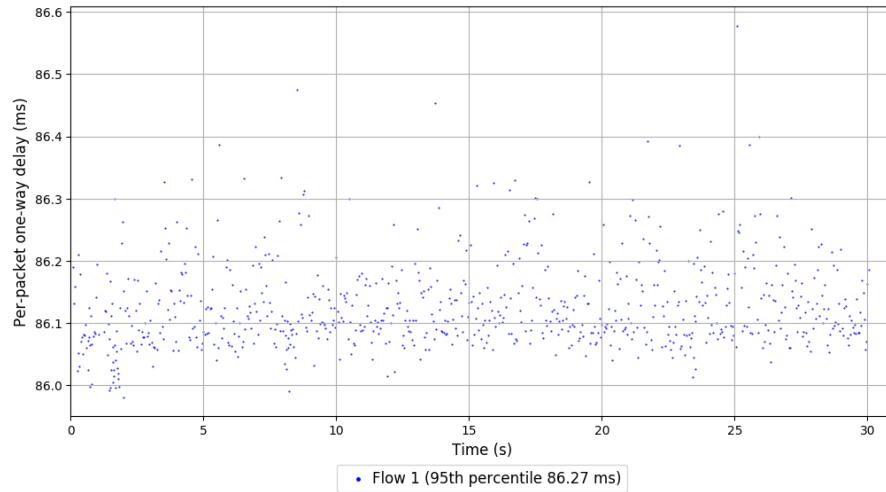
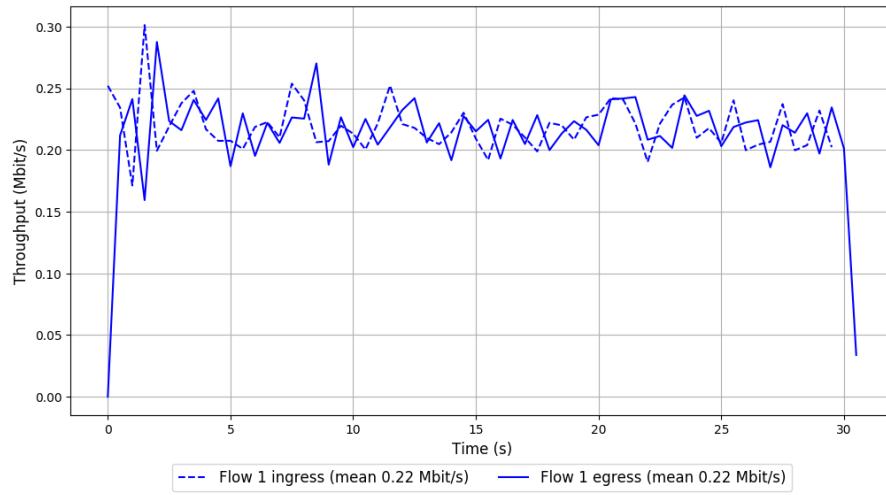


Run 5: Statistics of SCReAM

```
Start at: 2018-12-11 10:56:44
End at: 2018-12-11 10:57:14
Local clock offset: -0.148 ms
Remote clock offset: 0.498 ms

# Below is generated by plot.py at 2018-12-11 13:02:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.265 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.265 ms
Loss rate: 0.00%
```

Run 5: Report of SCReAM — Data Link

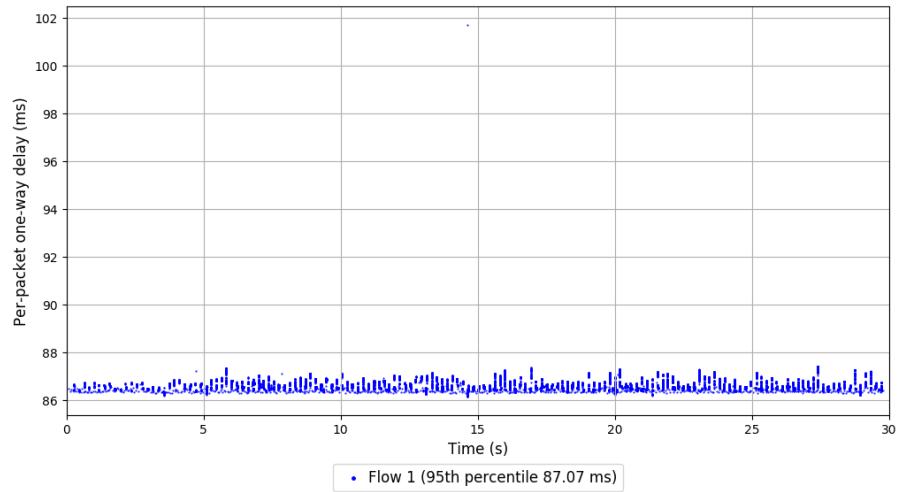
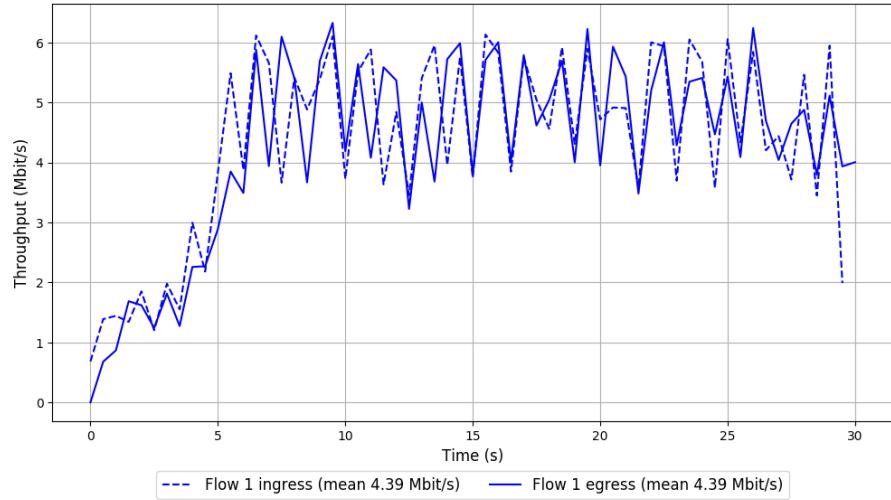


Run 1: Statistics of Sprout

```
Start at: 2018-12-11 09:01:25
End at: 2018-12-11 09:01:55
Local clock offset: -0.294 ms
Remote clock offset: 0.151 ms

# Below is generated by plot.py at 2018-12-11 13:02:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.39 Mbit/s
95th percentile per-packet one-way delay: 87.067 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.39 Mbit/s
95th percentile per-packet one-way delay: 87.067 ms
Loss rate: 0.00%
```

Run 1: Report of Sprout — Data Link

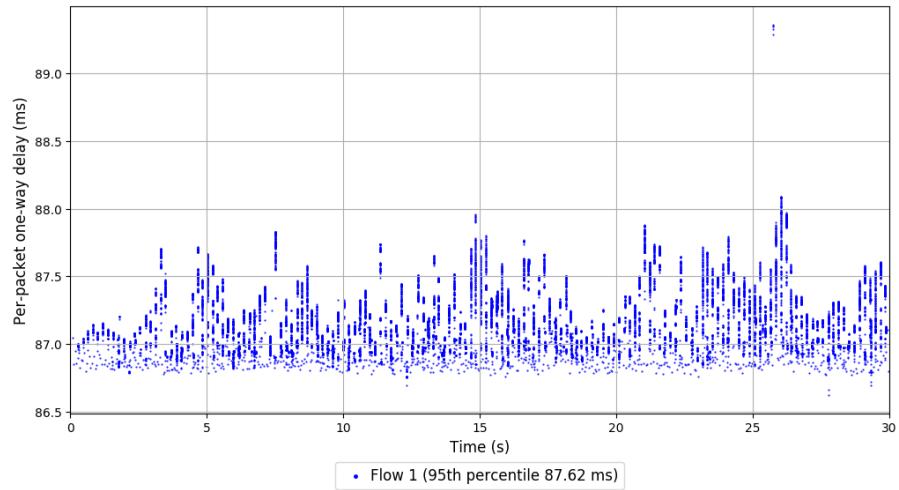
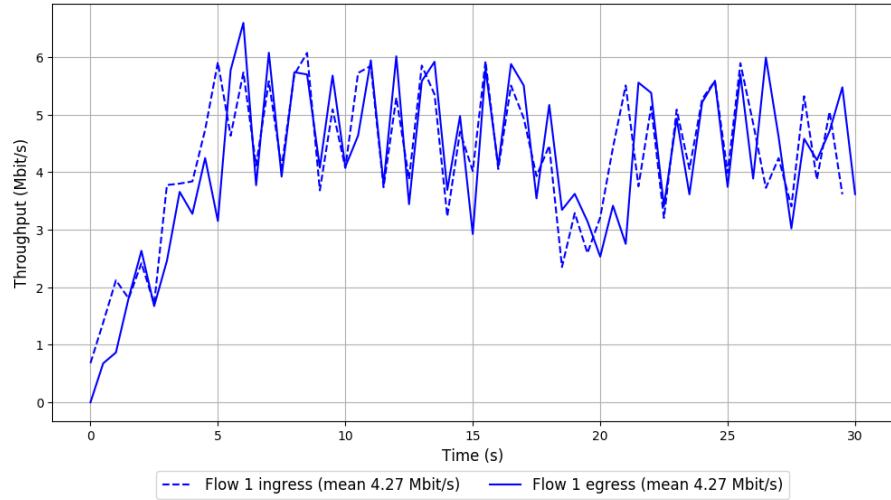


Run 2: Statistics of Sprout

```
Start at: 2018-12-11 09:29:54
End at: 2018-12-11 09:30:24
Local clock offset: -0.515 ms
Remote clock offset: 0.194 ms

# Below is generated by plot.py at 2018-12-11 13:02:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.27 Mbit/s
95th percentile per-packet one-way delay: 87.618 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.27 Mbit/s
95th percentile per-packet one-way delay: 87.618 ms
Loss rate: 0.00%
```

Run 2: Report of Sprout — Data Link

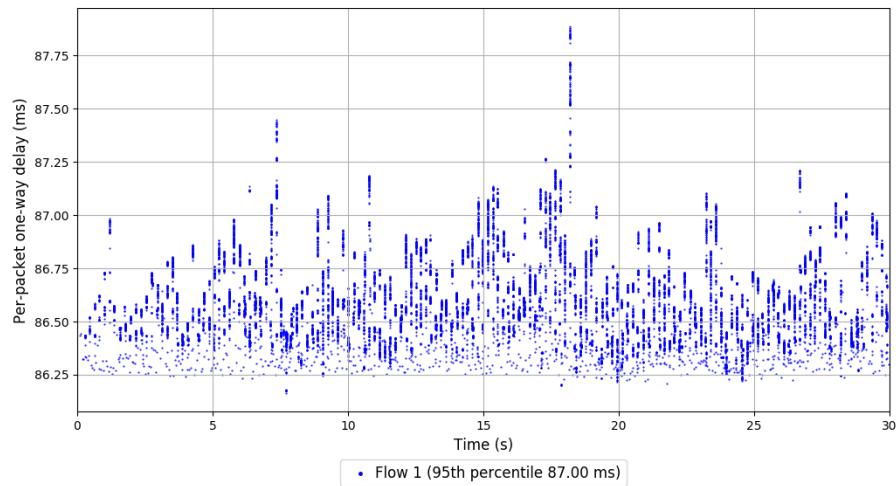
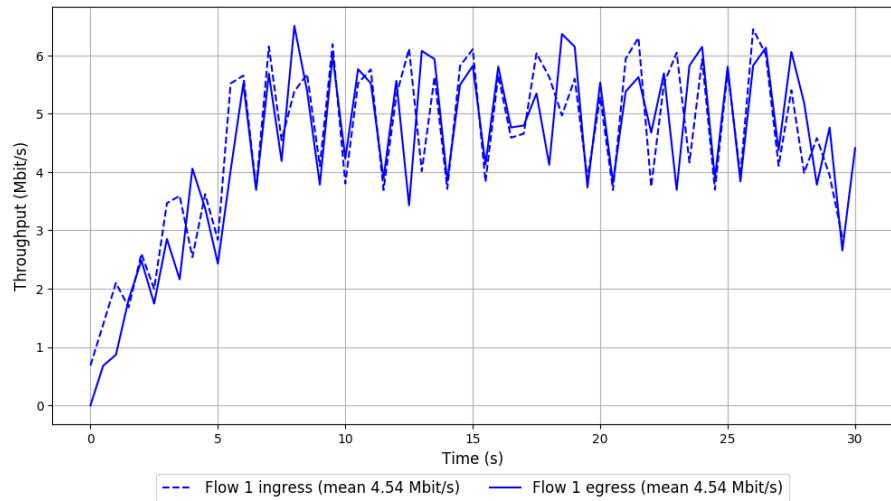


Run 3: Statistics of Sprout

```
Start at: 2018-12-11 09:58:33
End at: 2018-12-11 09:59:03
Local clock offset: 0.075 ms
Remote clock offset: 0.316 ms

# Below is generated by plot.py at 2018-12-11 13:02:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.54 Mbit/s
95th percentile per-packet one-way delay: 87.004 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.54 Mbit/s
95th percentile per-packet one-way delay: 87.004 ms
Loss rate: 0.00%
```

Run 3: Report of Sprout — Data Link

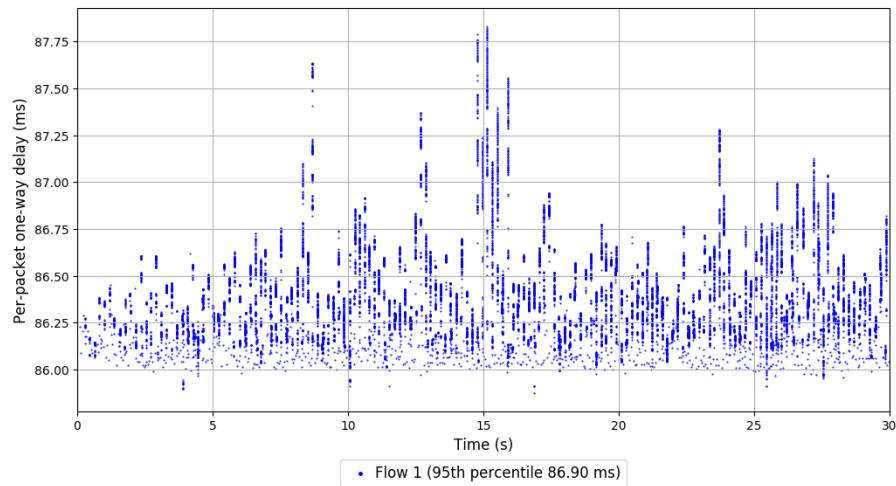
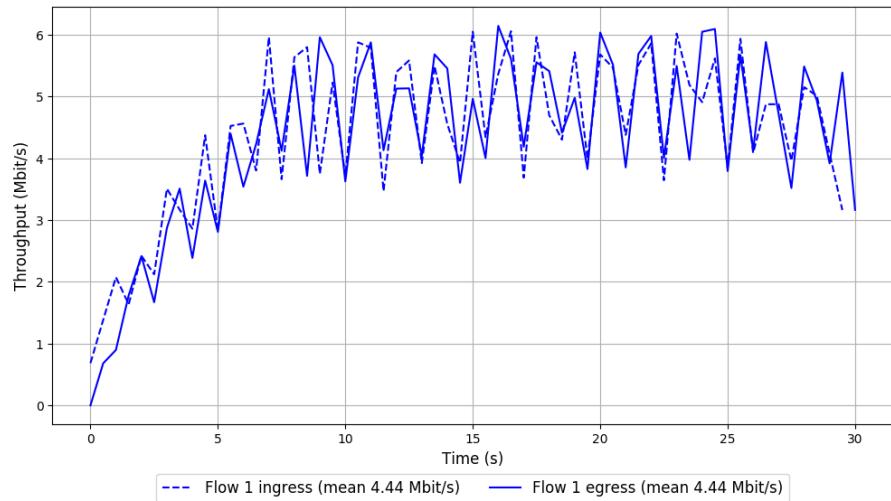


Run 4: Statistics of Sprout

```
Start at: 2018-12-11 10:27:13
End at: 2018-12-11 10:27:43
Local clock offset: -0.085 ms
Remote clock offset: 0.373 ms

# Below is generated by plot.py at 2018-12-11 13:02:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.44 Mbit/s
95th percentile per-packet one-way delay: 86.898 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.44 Mbit/s
95th percentile per-packet one-way delay: 86.898 ms
Loss rate: 0.00%
```

Run 4: Report of Sprout — Data Link

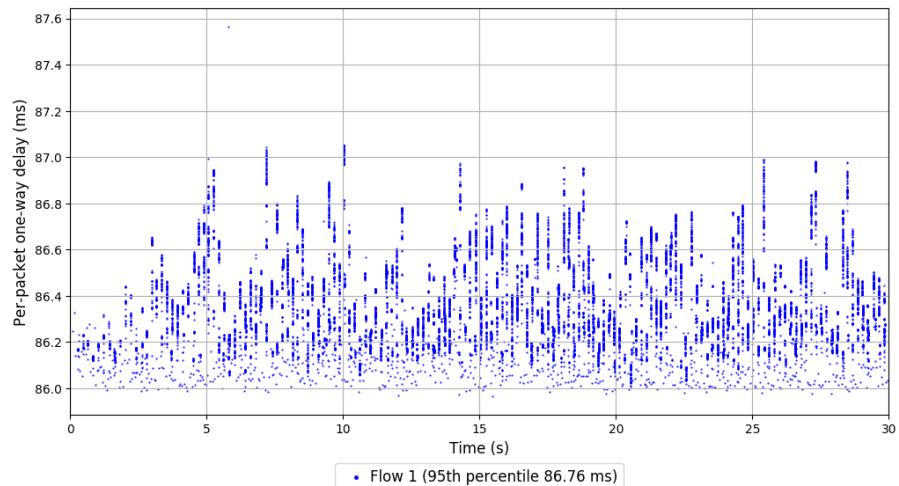
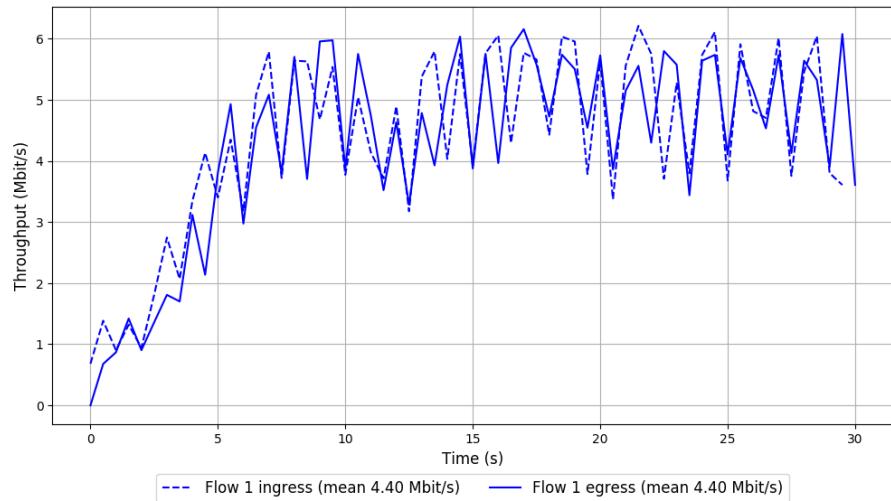


Run 5: Statistics of Sprout

```
Start at: 2018-12-11 10:55:34
End at: 2018-12-11 10:56:04
Local clock offset: -0.128 ms
Remote clock offset: 0.49 ms

# Below is generated by plot.py at 2018-12-11 13:02:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.40 Mbit/s
95th percentile per-packet one-way delay: 86.757 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.40 Mbit/s
95th percentile per-packet one-way delay: 86.757 ms
Loss rate: 0.00%
```

Run 5: Report of Sprout — Data Link

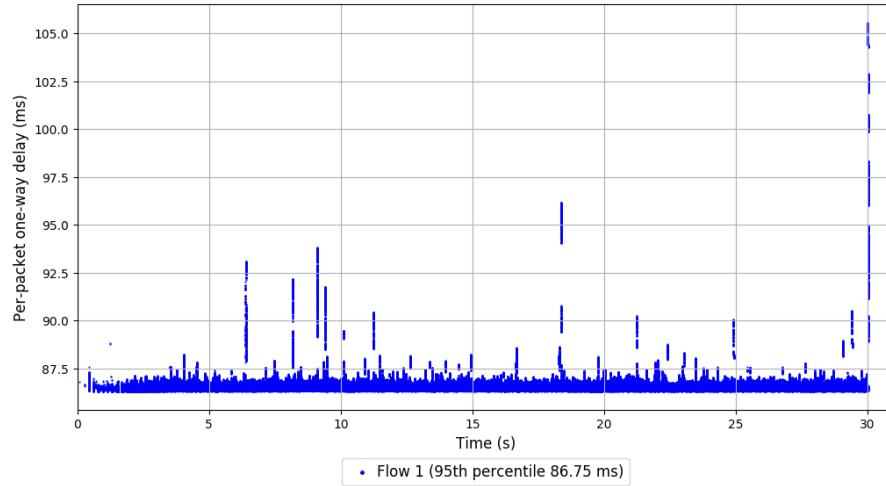
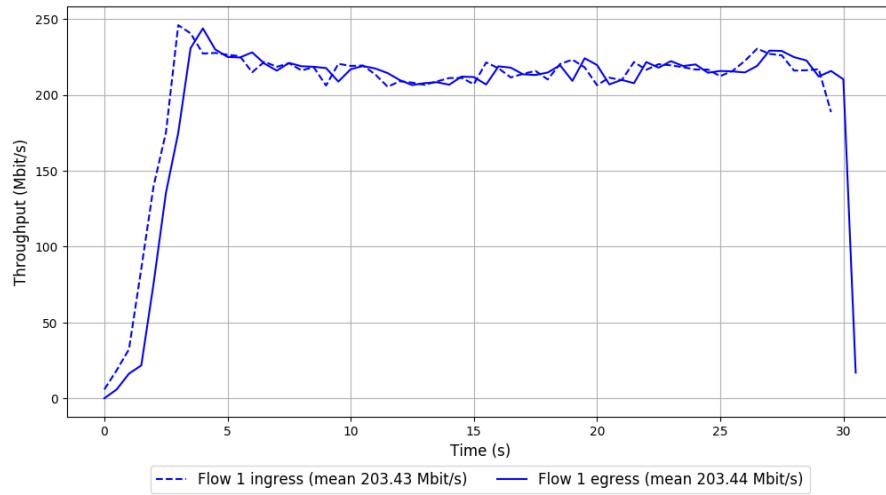


Run 1: Statistics of TaoVA-100x

```
Start at: 2018-12-11 09:05:21
End at: 2018-12-11 09:05:51
Local clock offset: -0.247 ms
Remote clock offset: 0.091 ms

# Below is generated by plot.py at 2018-12-11 13:02:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 203.44 Mbit/s
95th percentile per-packet one-way delay: 86.755 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 203.44 Mbit/s
95th percentile per-packet one-way delay: 86.755 ms
Loss rate: 0.00%
```

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

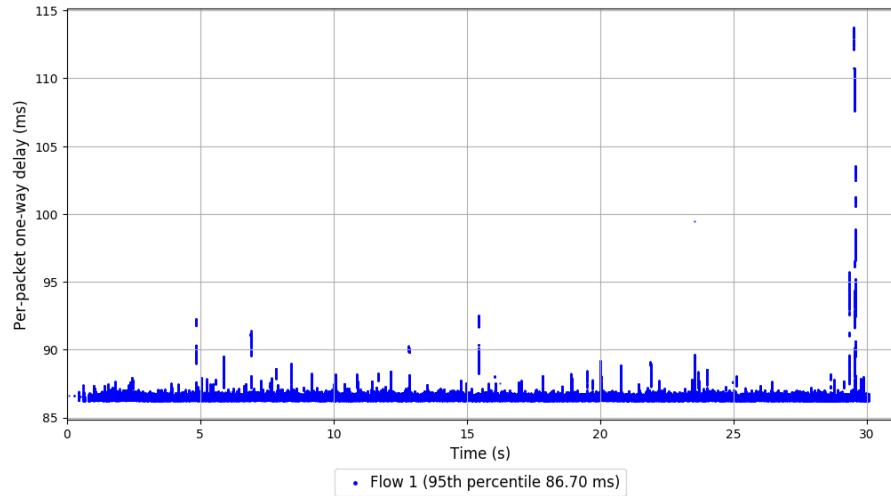
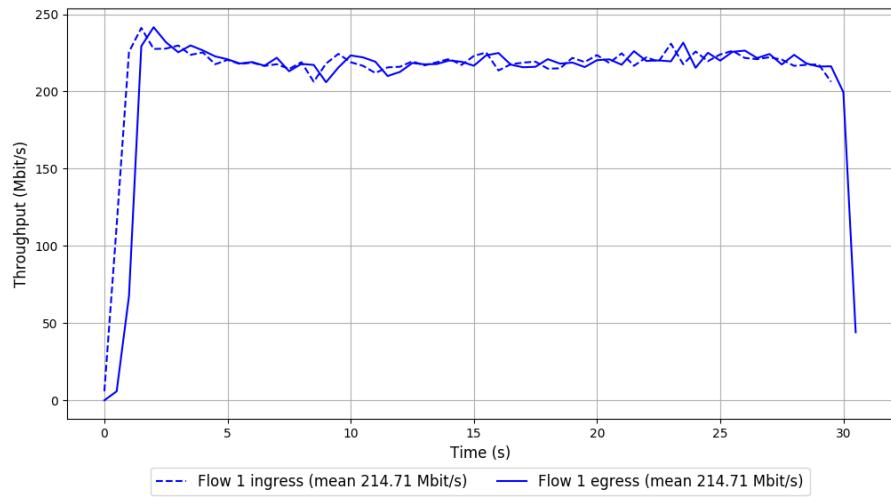


Run 2: Statistics of TaoVA-100x

```
Start at: 2018-12-11 09:33:52
End at: 2018-12-11 09:34:22
Local clock offset: -0.141 ms
Remote clock offset: 0.211 ms

# Below is generated by plot.py at 2018-12-11 13:02:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 214.71 Mbit/s
95th percentile per-packet one-way delay: 86.699 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 214.71 Mbit/s
95th percentile per-packet one-way delay: 86.699 ms
Loss rate: 0.00%
```

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

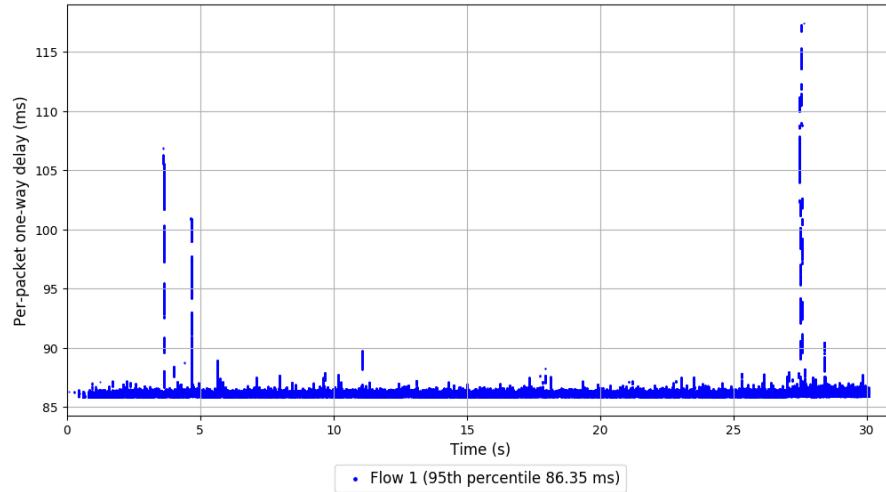
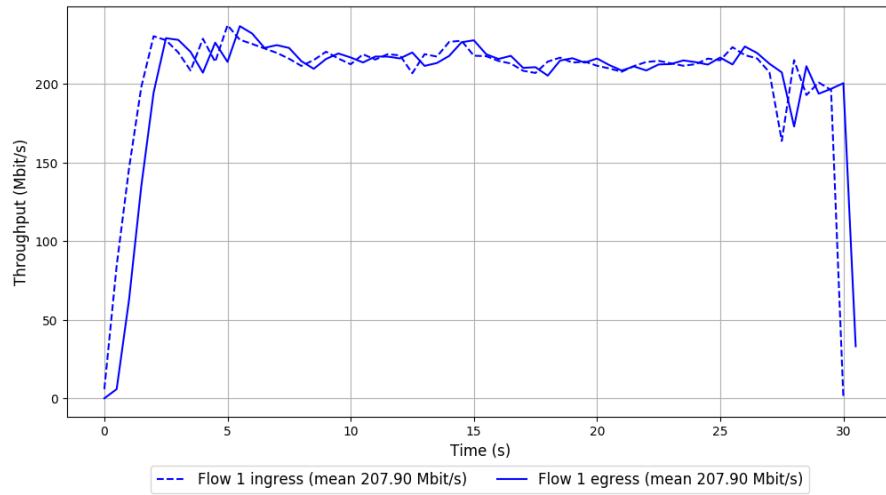


Run 3: Statistics of TaoVA-100x

```
Start at: 2018-12-11 10:02:36
End at: 2018-12-11 10:03:06
Local clock offset: -0.177 ms
Remote clock offset: 0.317 ms

# Below is generated by plot.py at 2018-12-11 13:02:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 207.90 Mbit/s
95th percentile per-packet one-way delay: 86.350 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 207.90 Mbit/s
95th percentile per-packet one-way delay: 86.350 ms
Loss rate: 0.00%
```

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

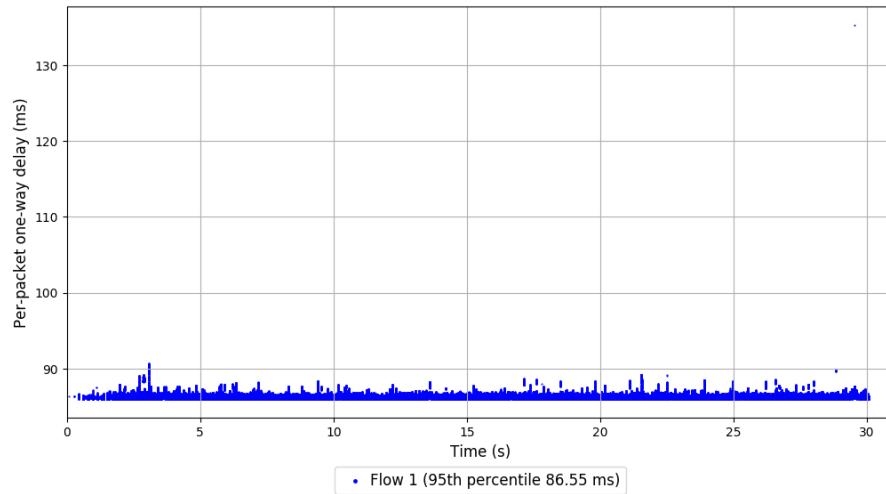
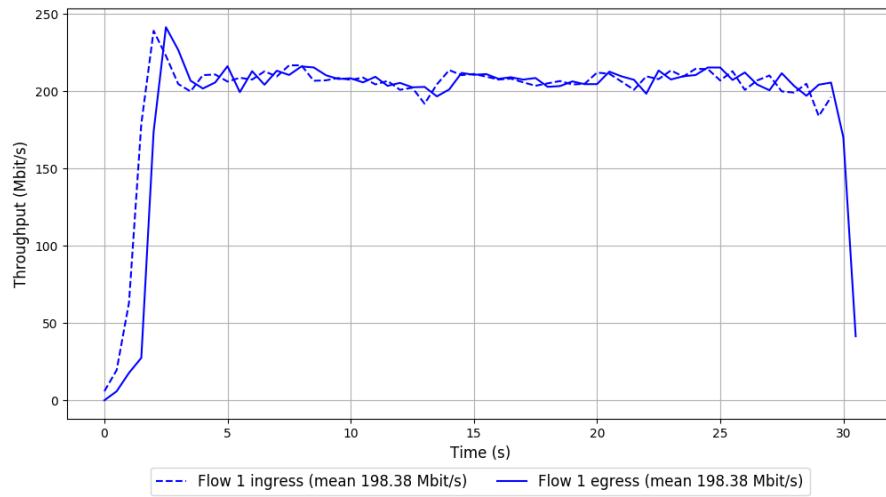


Run 4: Statistics of TaoVA-100x

```
Start at: 2018-12-11 10:31:09
End at: 2018-12-11 10:31:39
Local clock offset: -0.046 ms
Remote clock offset: 0.428 ms

# Below is generated by plot.py at 2018-12-11 13:02:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 198.38 Mbit/s
95th percentile per-packet one-way delay: 86.554 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 198.38 Mbit/s
95th percentile per-packet one-way delay: 86.554 ms
Loss rate: 0.00%
```

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

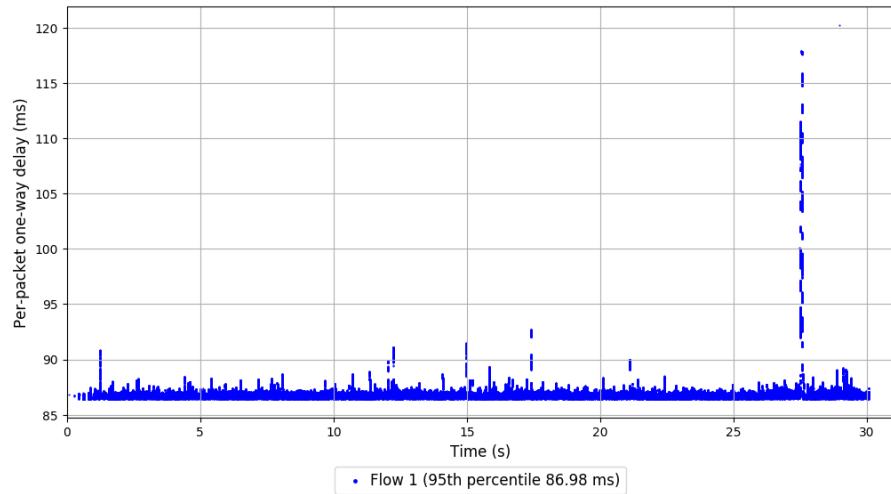
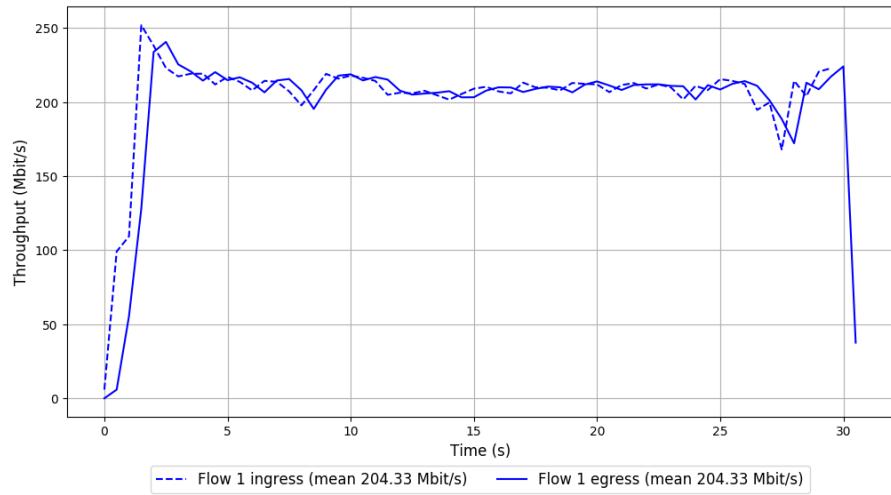


Run 5: Statistics of TaoVA-100x

```
Start at: 2018-12-11 10:59:34
End at: 2018-12-11 11:00:04
Local clock offset: -0.162 ms
Remote clock offset: 0.547 ms

# Below is generated by plot.py at 2018-12-11 13:02:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 204.33 Mbit/s
95th percentile per-packet one-way delay: 86.980 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 204.33 Mbit/s
95th percentile per-packet one-way delay: 86.980 ms
Loss rate: 0.00%
```

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

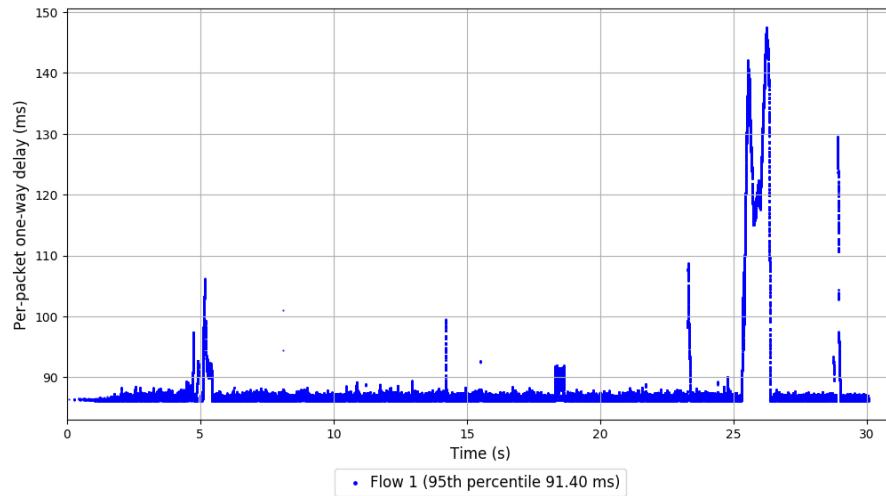
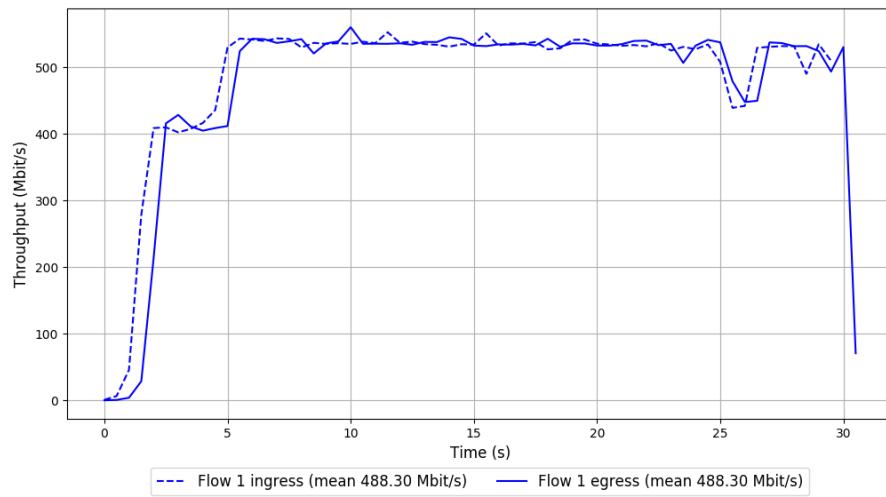


Run 1: Statistics of TCP Vegas

```
Start at: 2018-12-11 09:23:37
End at: 2018-12-11 09:24:07
Local clock offset: -0.098 ms
Remote clock offset: 0.145 ms

# Below is generated by plot.py at 2018-12-11 13:06:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 488.30 Mbit/s
95th percentile per-packet one-way delay: 91.402 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 488.30 Mbit/s
95th percentile per-packet one-way delay: 91.402 ms
Loss rate: 0.00%
```

Run 1: Report of TCP Vegas — Data Link

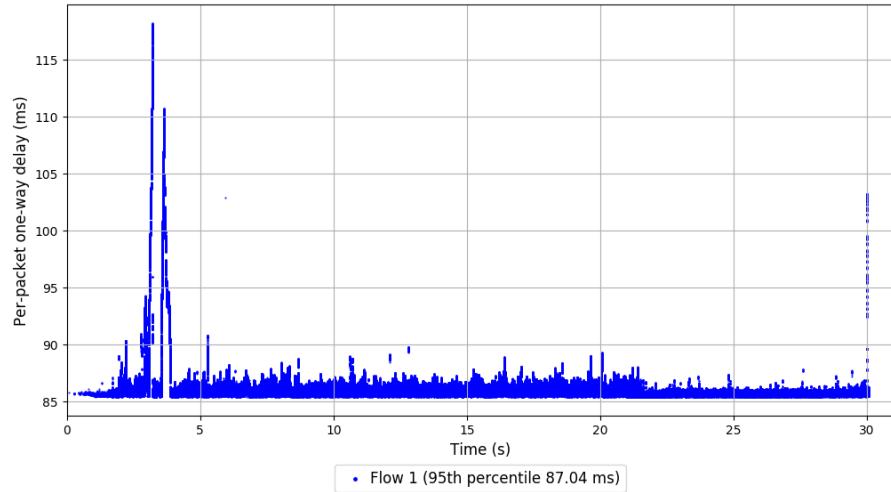
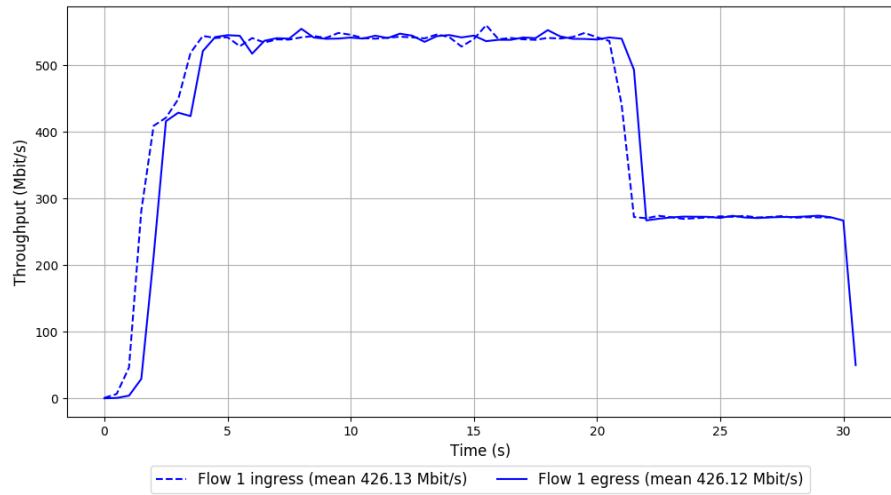


Run 2: Statistics of TCP Vegas

```
Start at: 2018-12-11 09:52:11
End at: 2018-12-11 09:52:41
Local clock offset: 0.279 ms
Remote clock offset: 0.27 ms

# Below is generated by plot.py at 2018-12-11 13:09:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 426.12 Mbit/s
95th percentile per-packet one-way delay: 87.038 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 426.12 Mbit/s
95th percentile per-packet one-way delay: 87.038 ms
Loss rate: 0.00%
```

Run 2: Report of TCP Vegas — Data Link

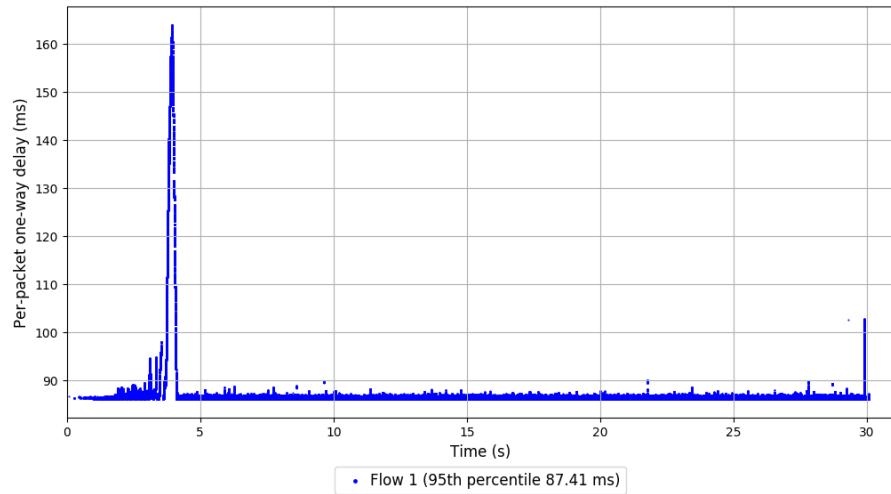
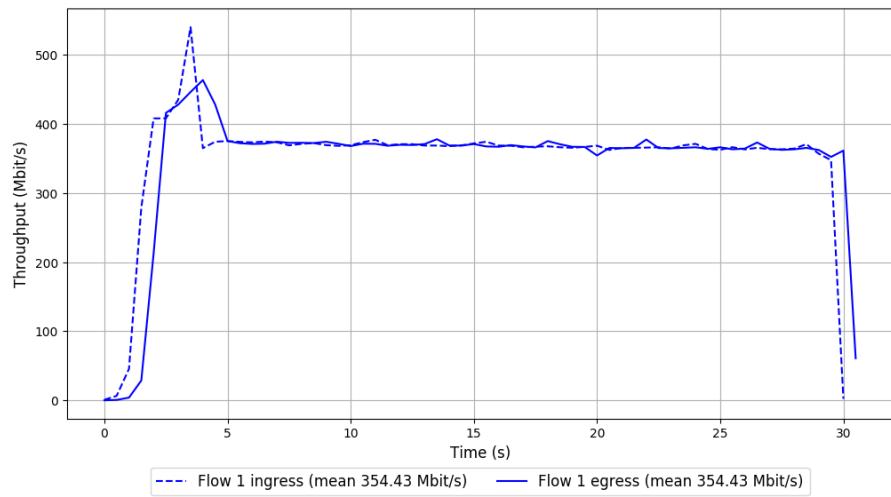


Run 3: Statistics of TCP Vegas

```
Start at: 2018-12-11 10:21:10
End at: 2018-12-11 10:21:40
Local clock offset: -0.313 ms
Remote clock offset: 0.381 ms

# Below is generated by plot.py at 2018-12-11 13:09:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 354.43 Mbit/s
95th percentile per-packet one-way delay: 87.405 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 354.43 Mbit/s
95th percentile per-packet one-way delay: 87.405 ms
Loss rate: 0.00%
```

Run 3: Report of TCP Vegas — Data Link

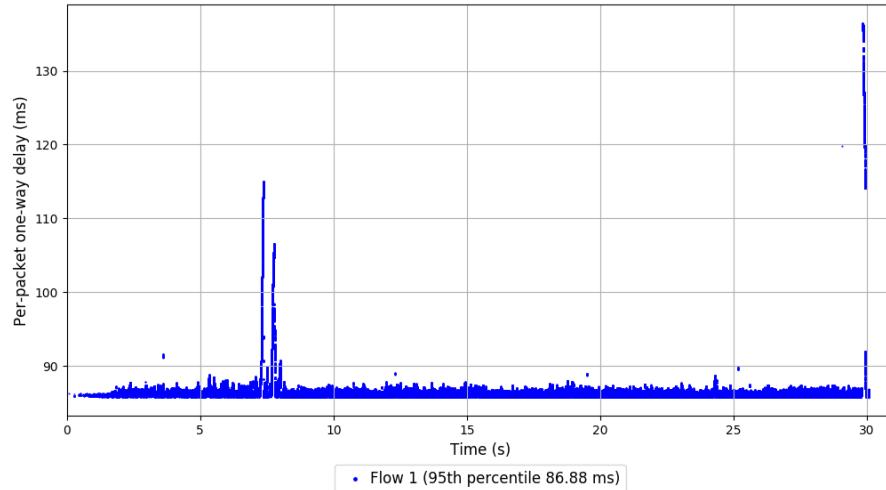
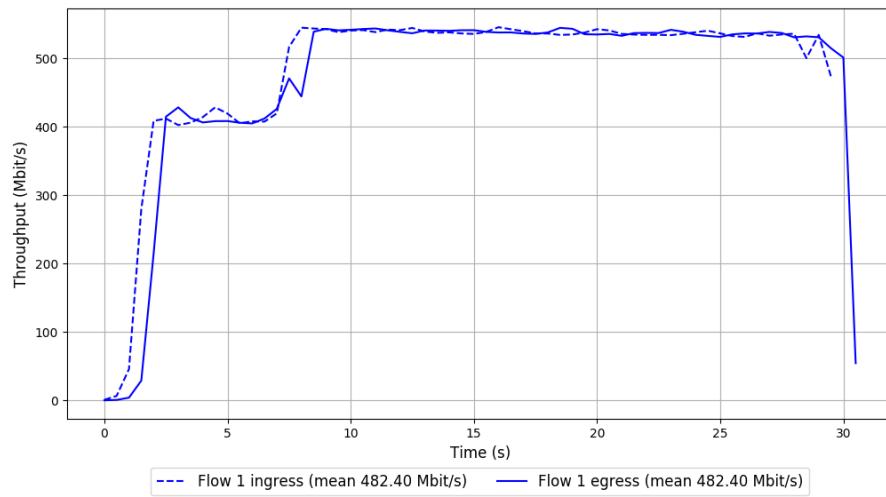


Run 4: Statistics of TCP Vegas

```
Start at: 2018-12-11 10:49:12
End at: 2018-12-11 10:49:42
Local clock offset: -0.082 ms
Remote clock offset: 0.464 ms

# Below is generated by plot.py at 2018-12-11 13:10:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 482.40 Mbit/s
95th percentile per-packet one-way delay: 86.879 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 482.40 Mbit/s
95th percentile per-packet one-way delay: 86.879 ms
Loss rate: 0.00%
```

Run 4: Report of TCP Vegas — Data Link

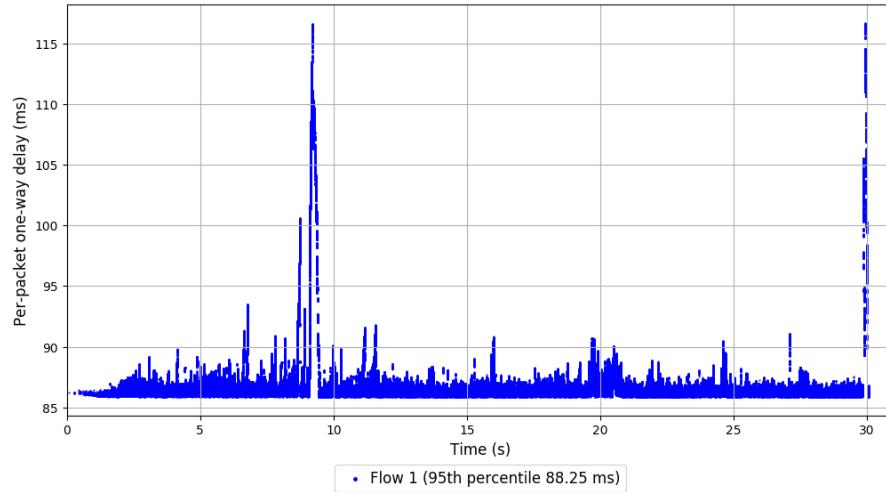
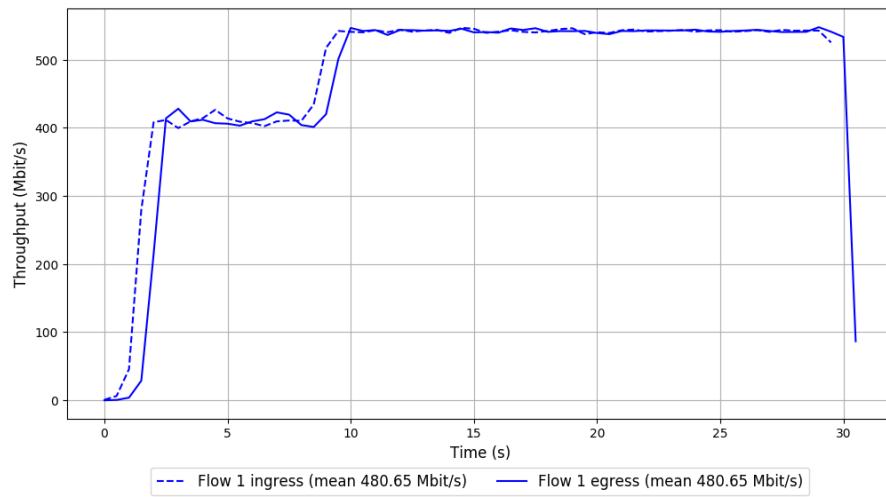


Run 5: Statistics of TCP Vegas

```
Start at: 2018-12-11 11:17:56
End at: 2018-12-11 11:18:26
Local clock offset: 0.186 ms
Remote clock offset: 0.568 ms

# Below is generated by plot.py at 2018-12-11 13:10:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 480.65 Mbit/s
95th percentile per-packet one-way delay: 88.245 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 480.65 Mbit/s
95th percentile per-packet one-way delay: 88.245 ms
Loss rate: 0.00%
```

Run 5: Report of TCP Vegas — Data Link

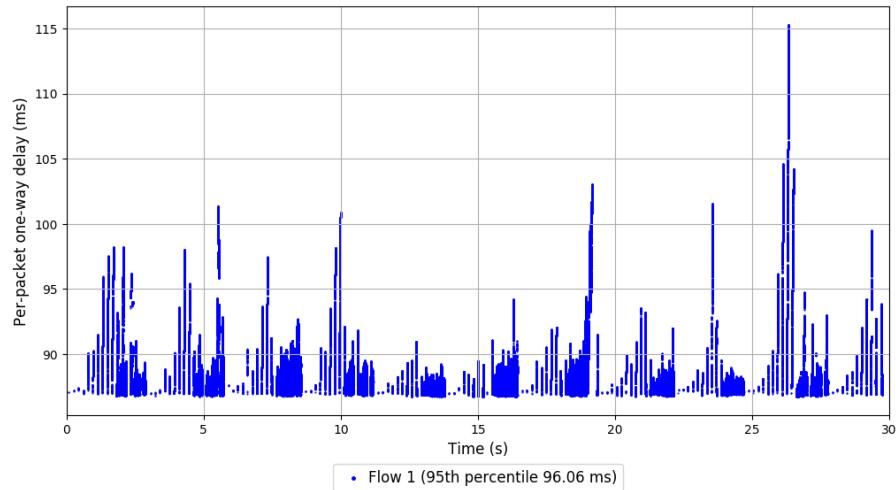
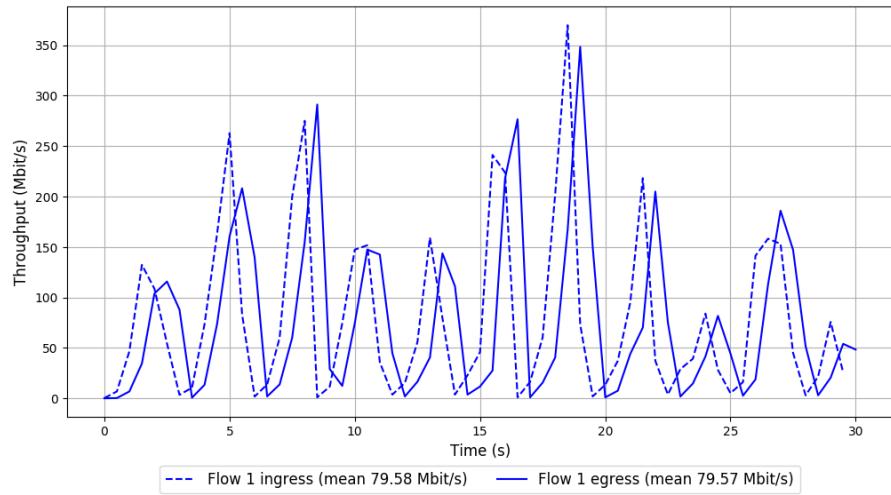


Run 1: Statistics of Verus

```
Start at: 2018-12-11 09:25:11
End at: 2018-12-11 09:25:41
Local clock offset: -0.387 ms
Remote clock offset: 0.174 ms

# Below is generated by plot.py at 2018-12-11 13:10:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 79.57 Mbit/s
95th percentile per-packet one-way delay: 96.061 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 79.57 Mbit/s
95th percentile per-packet one-way delay: 96.061 ms
Loss rate: 0.00%
```

Run 1: Report of Verus — Data Link

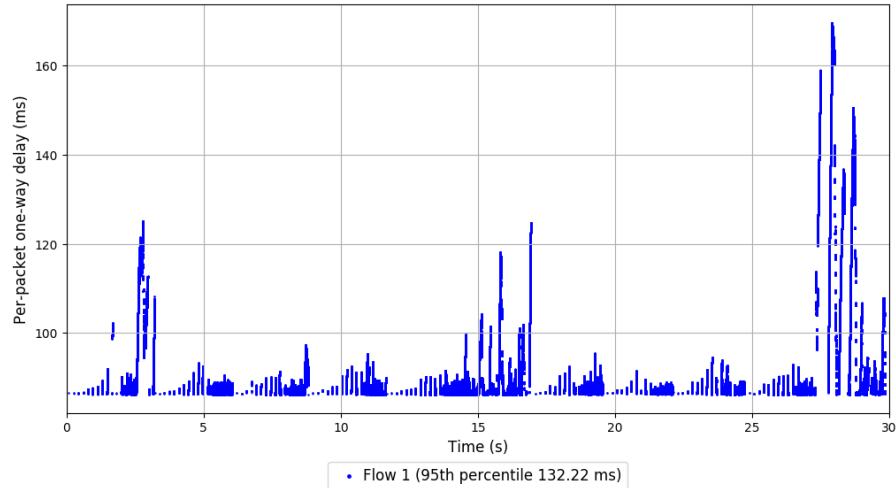
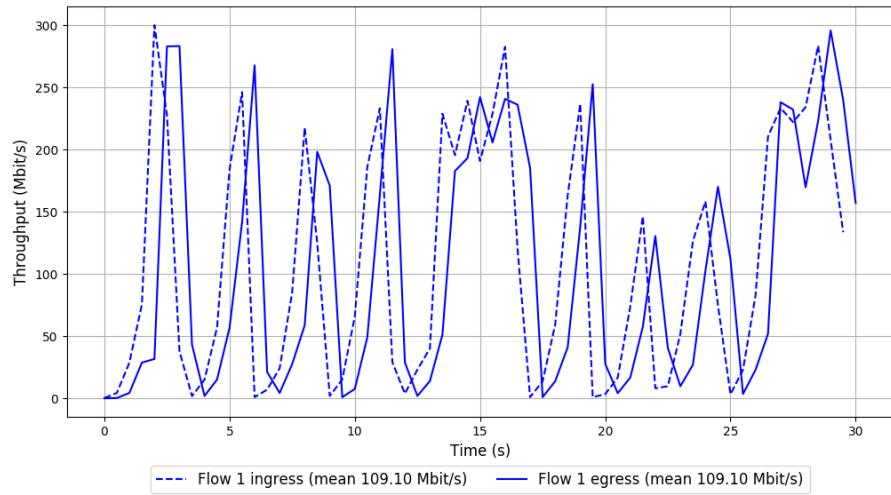


Run 2: Statistics of Verus

```
Start at: 2018-12-11 09:53:44
End at: 2018-12-11 09:54:14
Local clock offset: -0.134 ms
Remote clock offset: 0.28 ms

# Below is generated by plot.py at 2018-12-11 13:10:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 109.10 Mbit/s
95th percentile per-packet one-way delay: 132.220 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 109.10 Mbit/s
95th percentile per-packet one-way delay: 132.220 ms
Loss rate: 0.00%
```

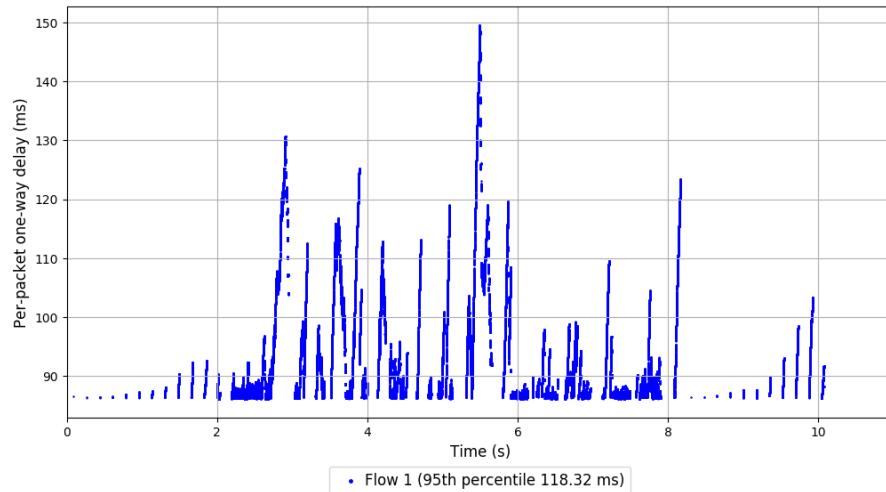
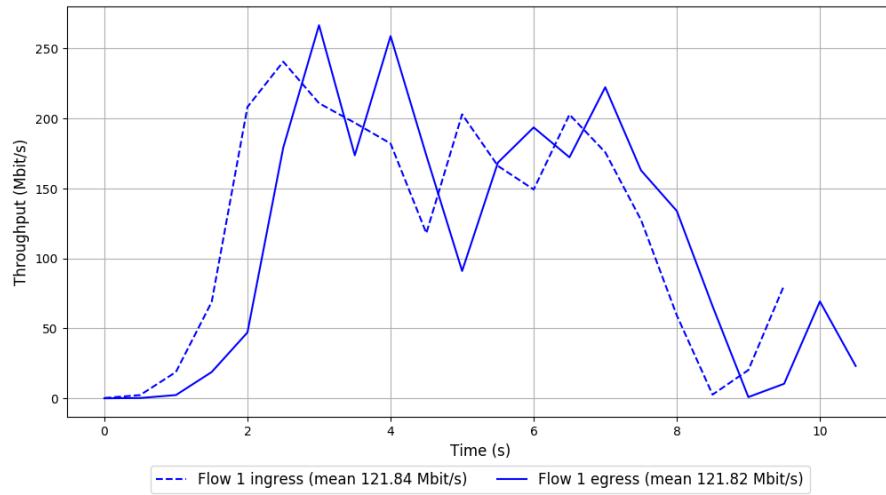
Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-12-11 10:22:37
End at: 2018-12-11 10:23:07
Local clock offset: 0.192 ms
Remote clock offset: 0.417 ms

Run 3: Report of Verus — Data Link

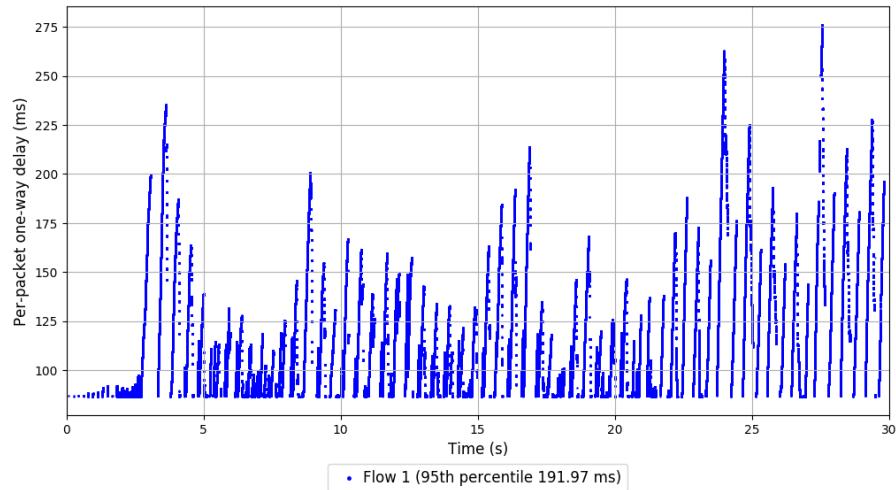
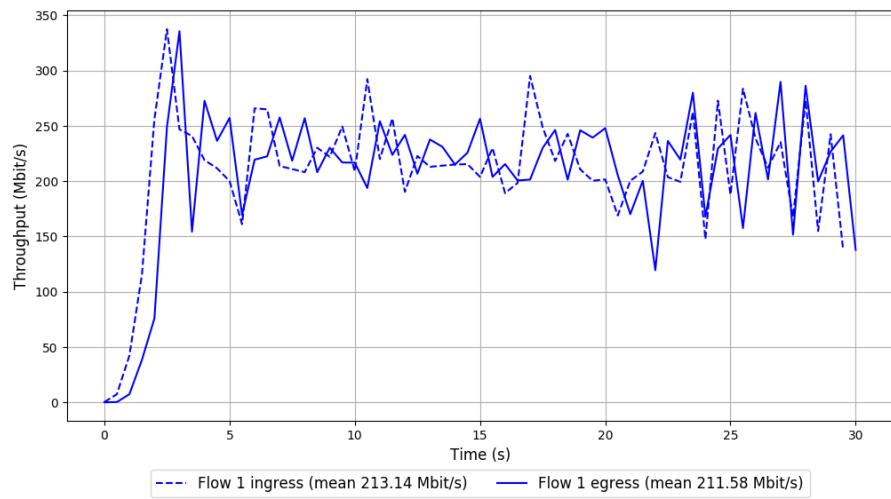


Run 4: Statistics of Verus

```
Start at: 2018-12-11 10:50:45
End at: 2018-12-11 10:51:15
Local clock offset: -0.09 ms
Remote clock offset: 0.483 ms

# Below is generated by plot.py at 2018-12-11 13:11:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 211.58 Mbit/s
95th percentile per-packet one-way delay: 191.968 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 211.58 Mbit/s
95th percentile per-packet one-way delay: 191.968 ms
Loss rate: 0.36%
```

Run 4: Report of Verus — Data Link

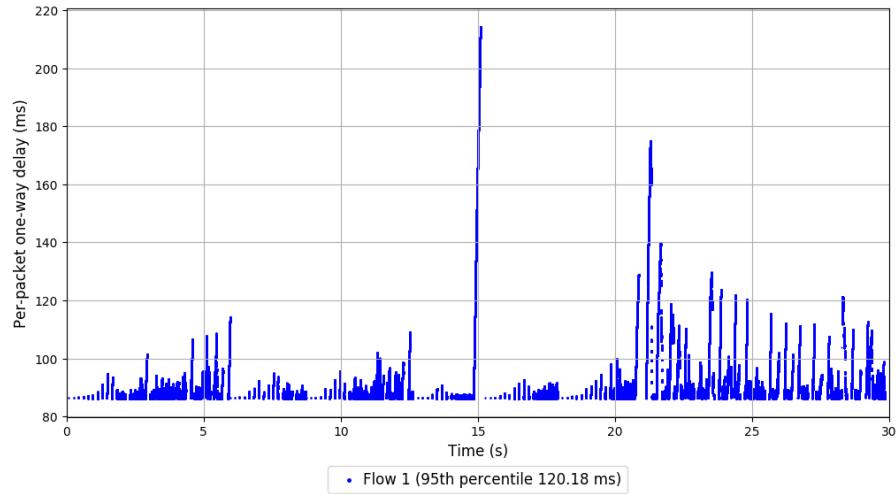
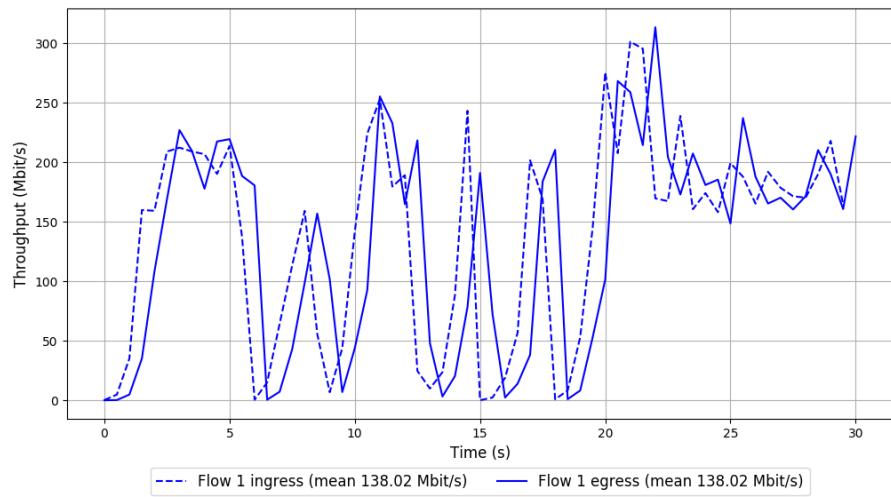


Run 5: Statistics of Verus

```
Start at: 2018-12-11 11:19:31
End at: 2018-12-11 11:20:01
Local clock offset: -0.596 ms
Remote clock offset: 0.561 ms

# Below is generated by plot.py at 2018-12-11 13:11:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 138.02 Mbit/s
95th percentile per-packet one-way delay: 120.181 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 138.02 Mbit/s
95th percentile per-packet one-way delay: 120.181 ms
Loss rate: 0.00%
```

Run 5: Report of Verus — Data Link

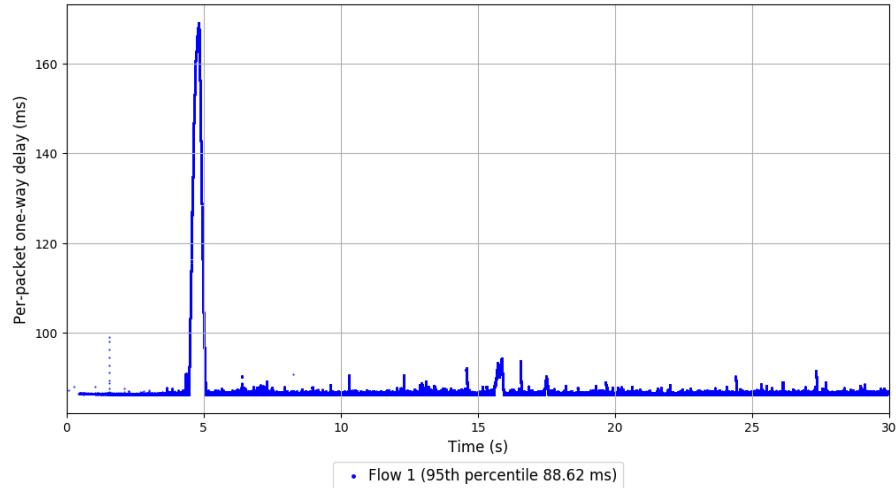
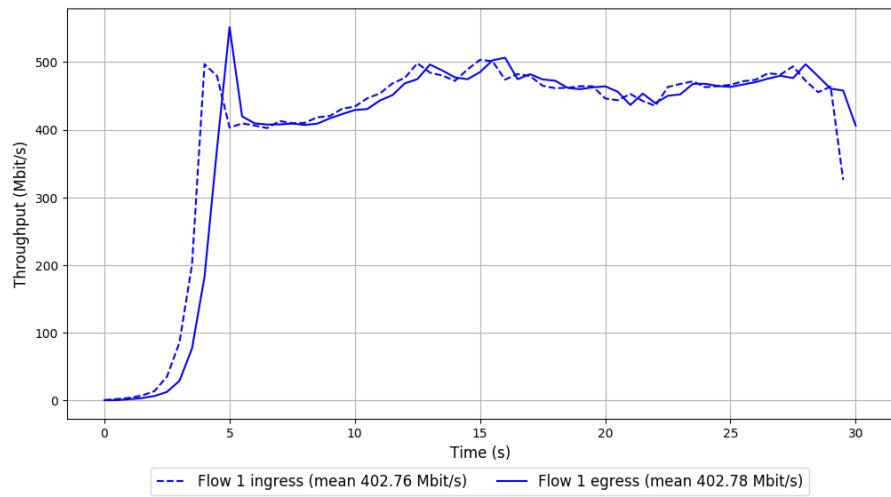


Run 1: Statistics of PCC-Vivace

```
Start at: 2018-12-11 09:20:49
End at: 2018-12-11 09:21:19
Local clock offset: -0.514 ms
Remote clock offset: 0.16 ms

# Below is generated by plot.py at 2018-12-11 13:13:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 402.78 Mbit/s
95th percentile per-packet one-way delay: 88.624 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 402.78 Mbit/s
95th percentile per-packet one-way delay: 88.624 ms
Loss rate: 0.00%
```

Run 1: Report of PCC-Vivace — Data Link

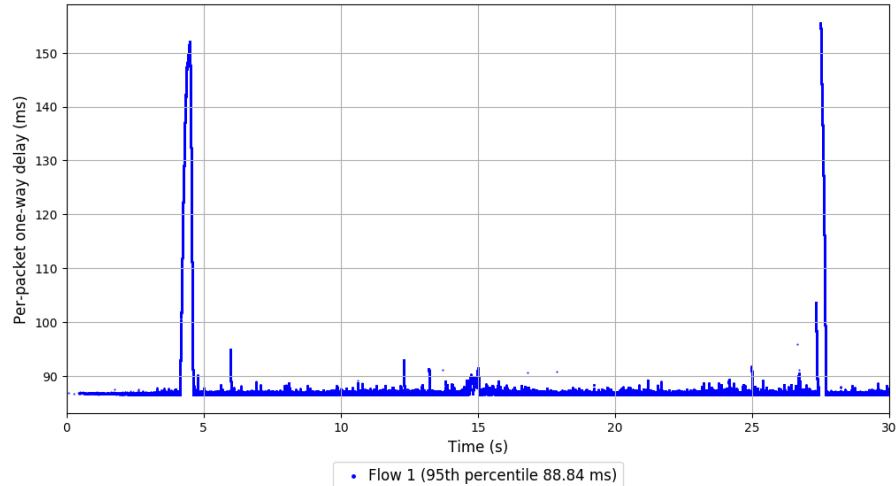
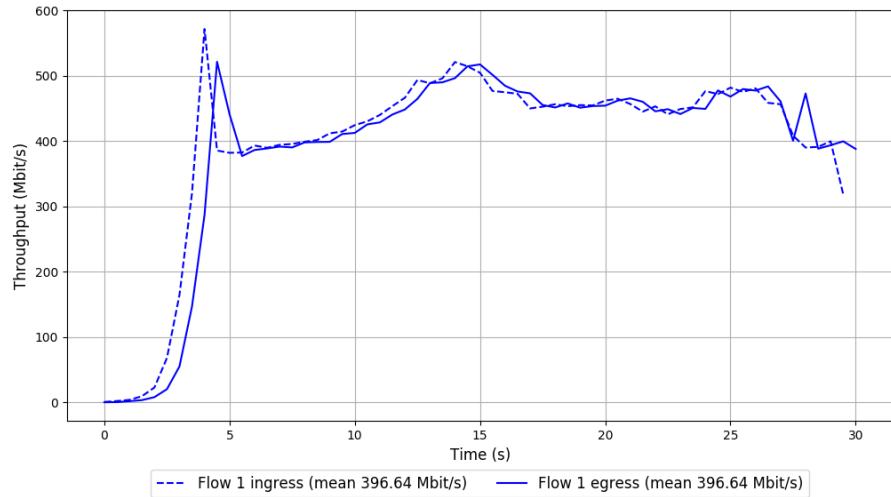


Run 2: Statistics of PCC-Vivace

```
Start at: 2018-12-11 09:49:22
End at: 2018-12-11 09:49:52
Local clock offset: -0.139 ms
Remote clock offset: 0.255 ms

# Below is generated by plot.py at 2018-12-11 13:13:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 396.64 Mbit/s
95th percentile per-packet one-way delay: 88.843 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 396.64 Mbit/s
95th percentile per-packet one-way delay: 88.843 ms
Loss rate: 0.00%
```

Run 2: Report of PCC-Vivace — Data Link

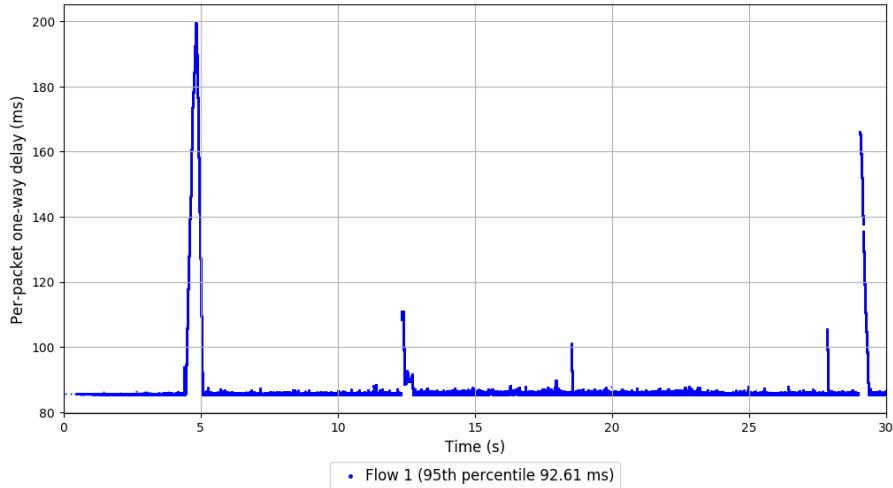
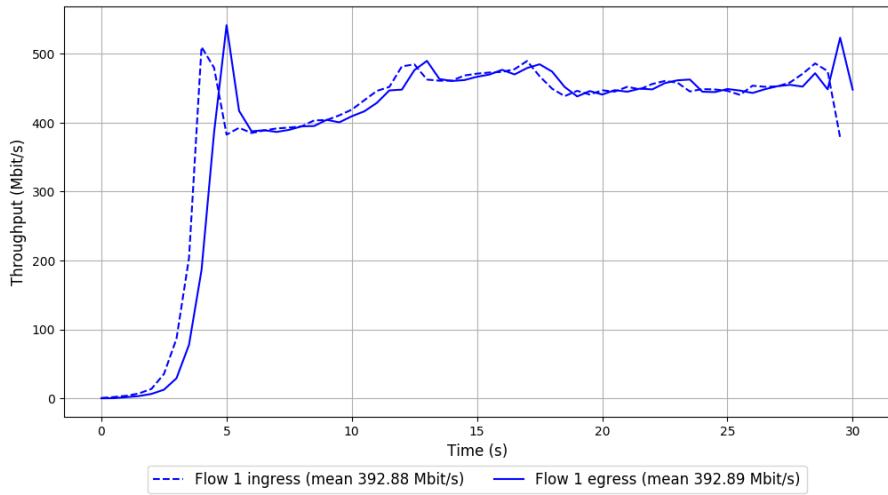


Run 3: Statistics of PCC-Vivace

```
Start at: 2018-12-11 10:18:23
End at: 2018-12-11 10:18:53
Local clock offset: 0.354 ms
Remote clock offset: 0.355 ms

# Below is generated by plot.py at 2018-12-11 13:14:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 392.89 Mbit/s
95th percentile per-packet one-way delay: 92.605 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 392.89 Mbit/s
95th percentile per-packet one-way delay: 92.605 ms
Loss rate: 0.00%
```

Run 3: Report of PCC-Vivace — Data Link

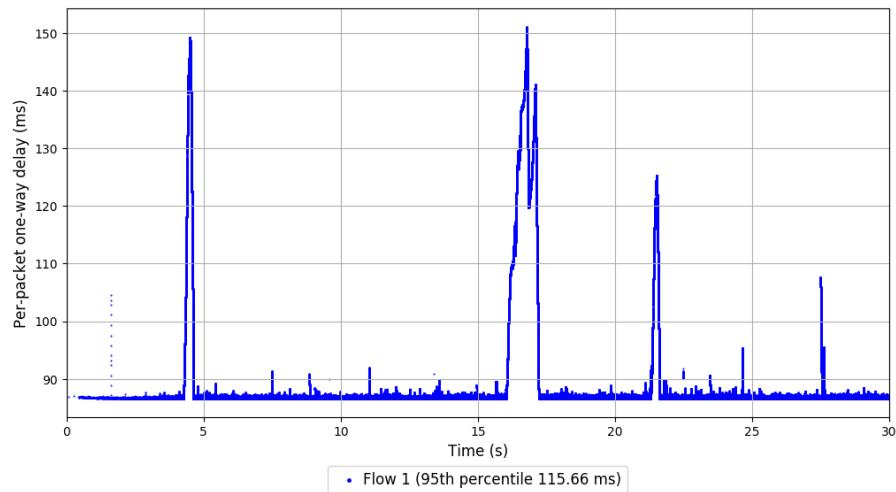
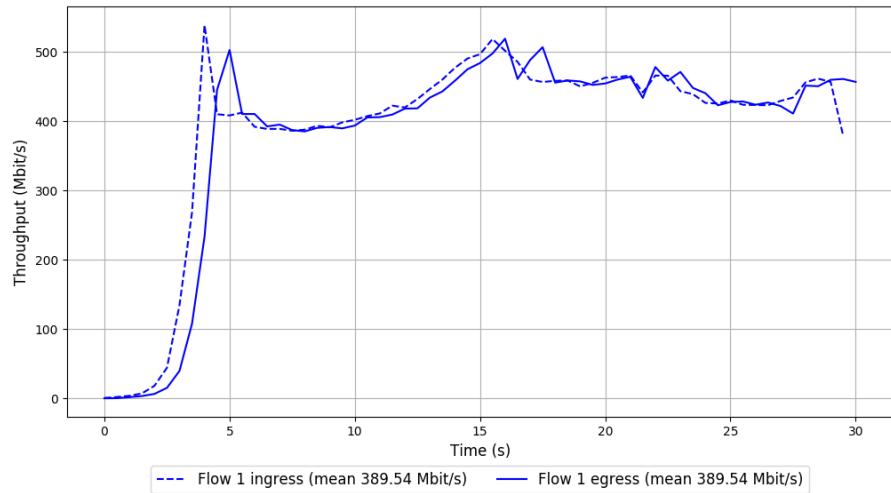


Run 4: Statistics of PCC-Vivace

```
Start at: 2018-12-11 10:46:26
End at: 2018-12-11 10:46:56
Local clock offset: -0.283 ms
Remote clock offset: 0.485 ms

# Below is generated by plot.py at 2018-12-11 13:14:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 389.54 Mbit/s
95th percentile per-packet one-way delay: 115.657 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 389.54 Mbit/s
95th percentile per-packet one-way delay: 115.657 ms
Loss rate: 0.00%
```

Run 4: Report of PCC-Vivace — Data Link

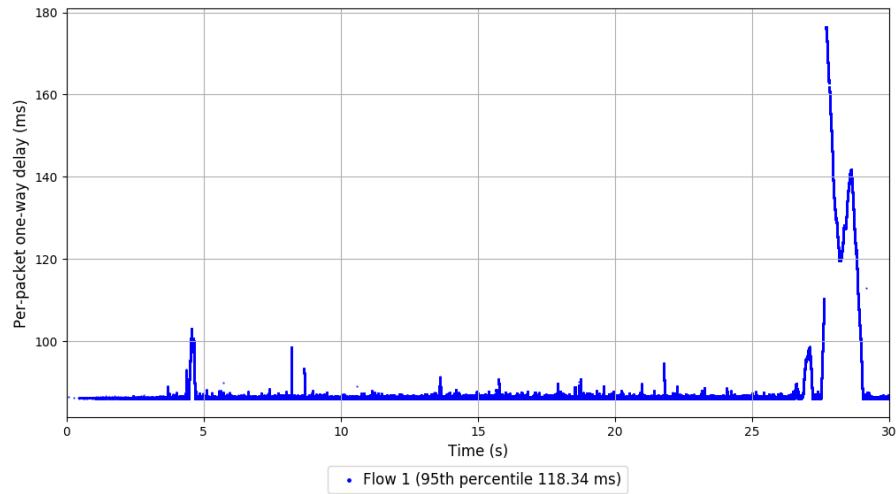
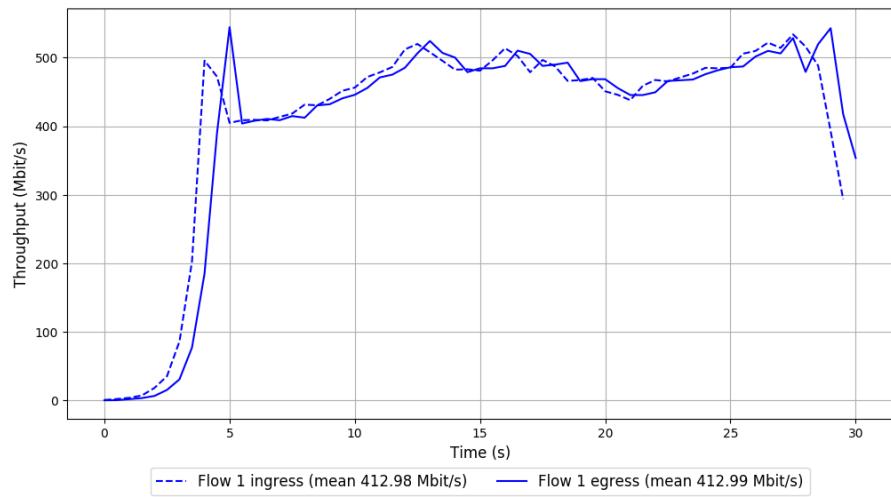


Run 5: Statistics of PCC-Vivace

```
Start at: 2018-12-11 11:15:09
End at: 2018-12-11 11:15:39
Local clock offset: -0.033 ms
Remote clock offset: 0.554 ms

# Below is generated by plot.py at 2018-12-11 13:14:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 412.99 Mbit/s
95th percentile per-packet one-way delay: 118.342 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 412.99 Mbit/s
95th percentile per-packet one-way delay: 118.342 ms
Loss rate: 0.00%
```

Run 5: Report of PCC-Vivace — Data Link

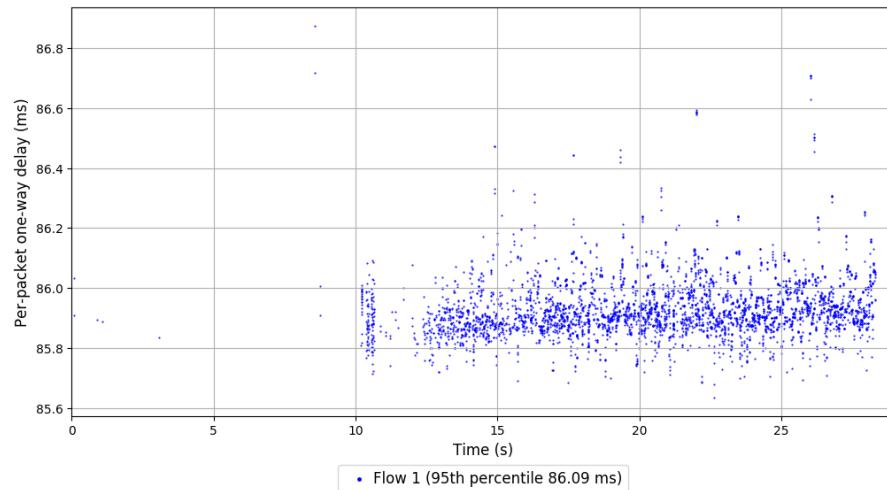
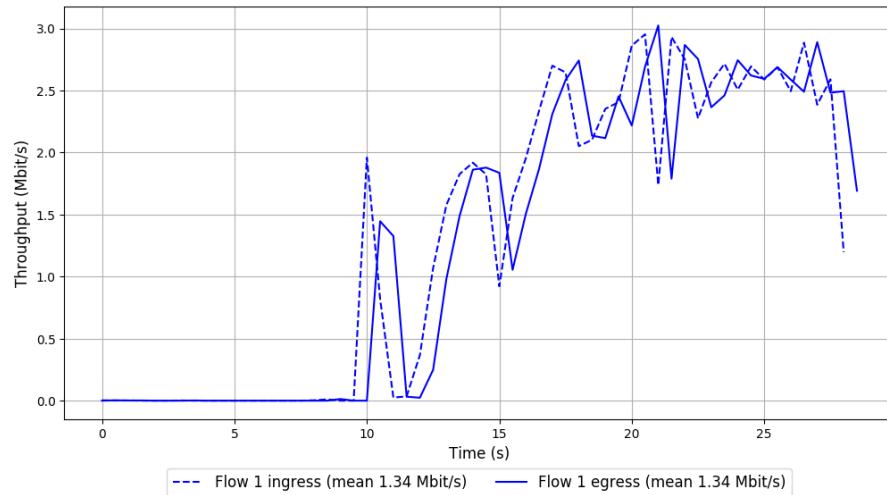


```
Run 1: Statistics of WebRTC media

Start at: 2018-12-11 09:22:28
End at: 2018-12-11 09:22:58
Local clock offset: 0.128 ms
Remote clock offset: 0.171 ms

# Below is generated by plot.py at 2018-12-11 13:14:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.34 Mbit/s
95th percentile per-packet one-way delay: 86.091 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.34 Mbit/s
95th percentile per-packet one-way delay: 86.091 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link

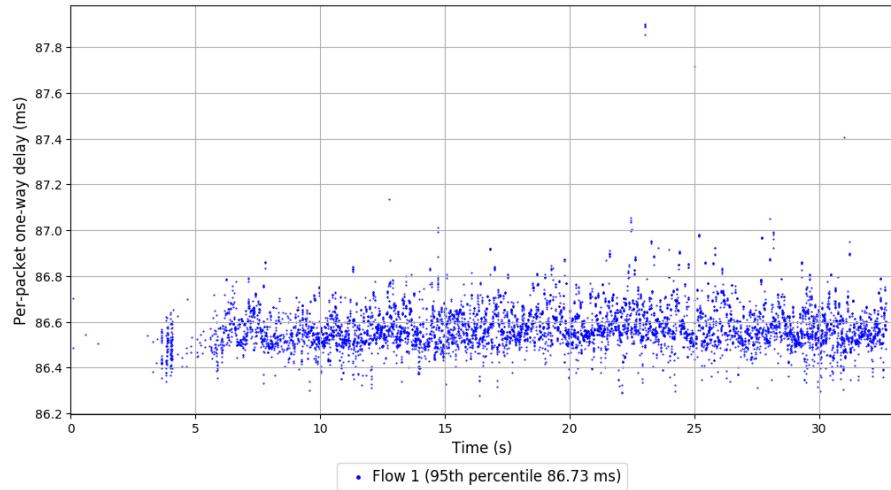
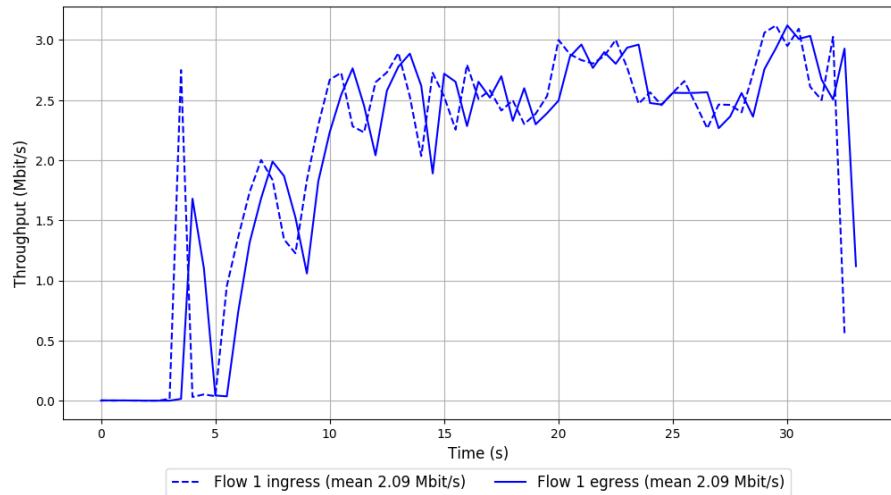


Run 2: Statistics of WebRTC media

```
Start at: 2018-12-11 09:51:02
End at: 2018-12-11 09:51:32
Local clock offset: -0.171 ms
Remote clock offset: 0.287 ms

# Below is generated by plot.py at 2018-12-11 13:14:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.09 Mbit/s
95th percentile per-packet one-way delay: 86.731 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.09 Mbit/s
95th percentile per-packet one-way delay: 86.731 ms
Loss rate: 0.00%
```

Run 2: Report of WebRTC media — Data Link

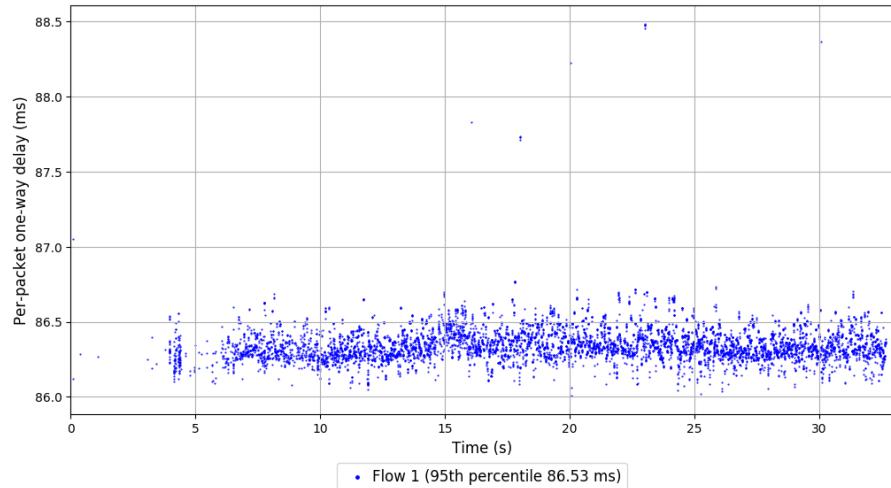
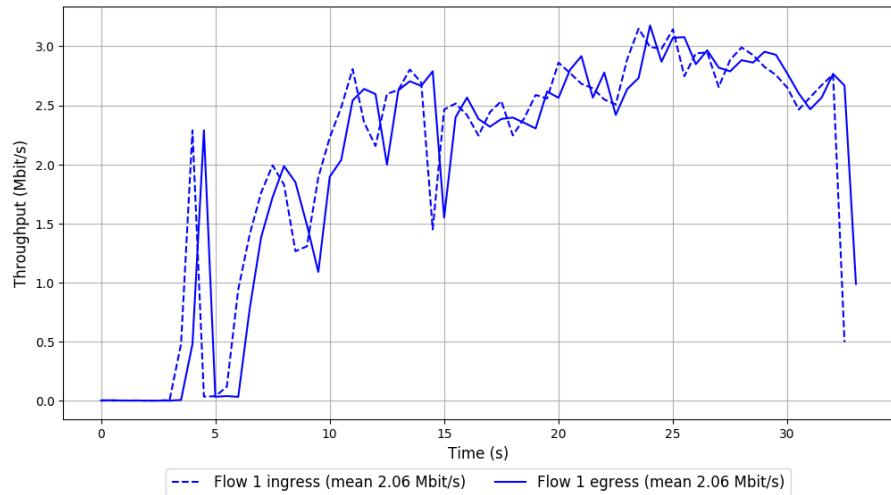


Run 3: Statistics of WebRTC media

```
Start at: 2018-12-11 10:20:01
End at: 2018-12-11 10:20:31
Local clock offset: -0.237 ms
Remote clock offset: 0.363 ms

# Below is generated by plot.py at 2018-12-11 13:14:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.06 Mbit/s
95th percentile per-packet one-way delay: 86.530 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.06 Mbit/s
95th percentile per-packet one-way delay: 86.530 ms
Loss rate: 0.00%
```

Run 3: Report of WebRTC media — Data Link

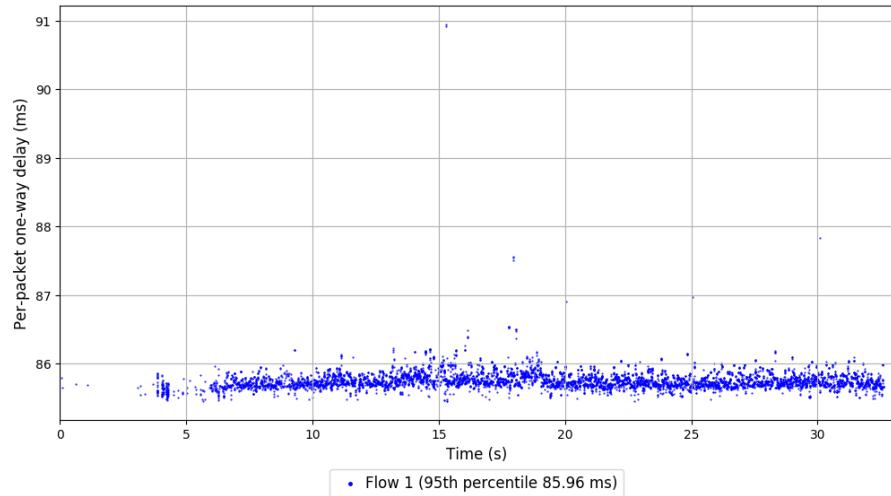
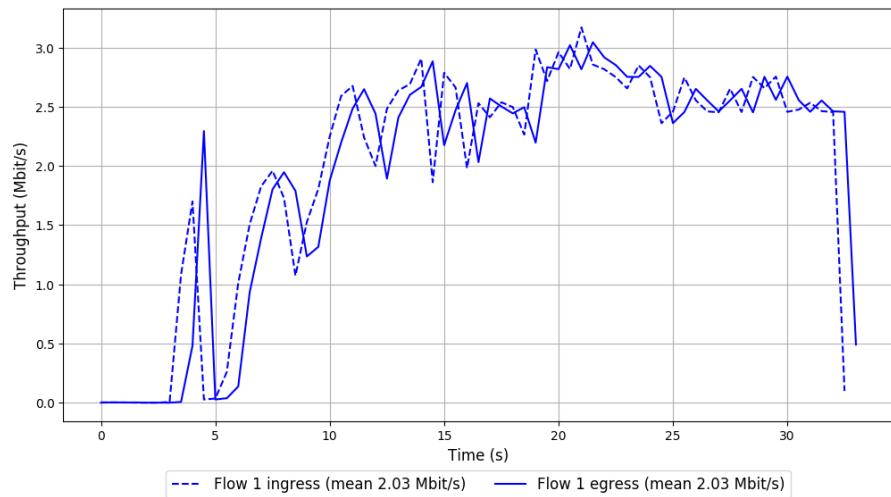


Run 4: Statistics of WebRTC media

```
Start at: 2018-12-11 10:48:03
End at: 2018-12-11 10:48:33
Local clock offset: 0.312 ms
Remote clock offset: 0.473 ms

# Below is generated by plot.py at 2018-12-11 13:14:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.03 Mbit/s
95th percentile per-packet one-way delay: 85.957 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.03 Mbit/s
95th percentile per-packet one-way delay: 85.957 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

```
Start at: 2018-12-11 11:16:47
End at: 2018-12-11 11:17:17
Local clock offset: -0.004 ms
Remote clock offset: 0.556 ms

# Below is generated by plot.py at 2018-12-11 13:14:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 86.231 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 86.231 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link

