

## Pantheon Report

Generated at 2018-10-02 16:18:23 (UTC).  
Data path: Saudi Arabia on `enp2s0` (*remote*) → AWS India 2 on `ens5` (*local*).  
Repeated the test of 18 congestion control schemes 5 times.  
Each test lasted for 30 seconds running 1 flow.  
NTP offsets were measured against `nets.org.sg` and have been applied to correct the timestamps in logs.

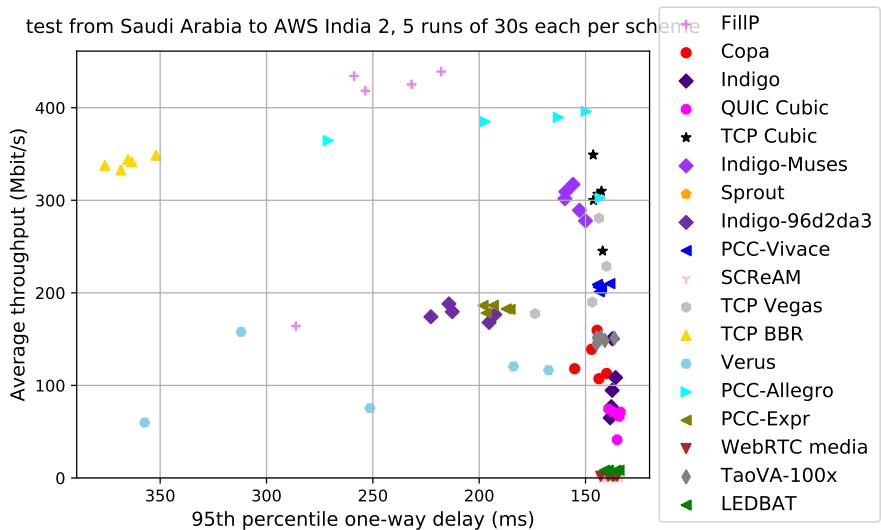
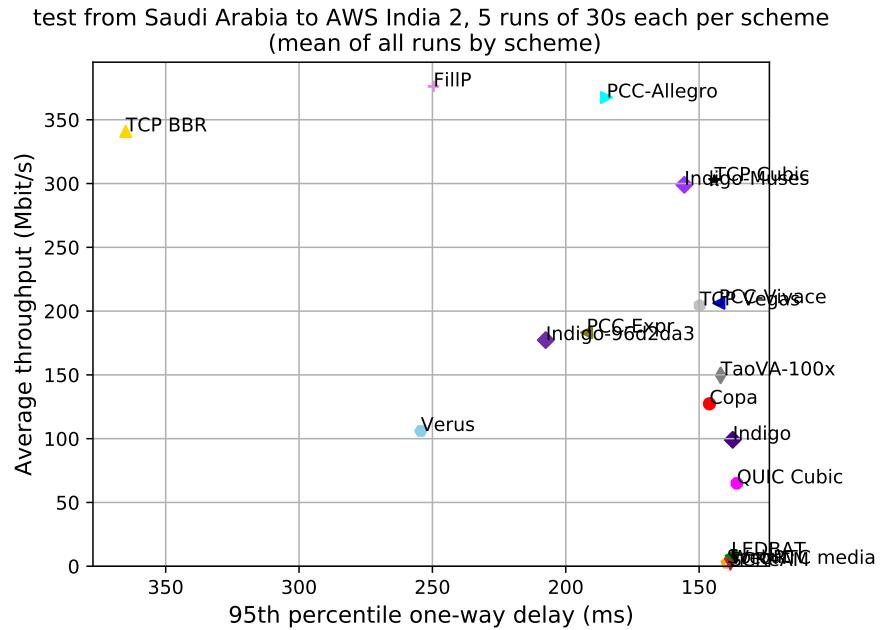
System info:

```
Linux 4.15.0-1021-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

```
branch: muses @ 2e19c0464530faa92c63f8217c9971438a26a3be
third_party/fillp @ 5332fc9127c63565e13f4933b336c02d1aabdac6
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbfed0c6349ae986009b4fa8643c40a
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
```

third\_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851



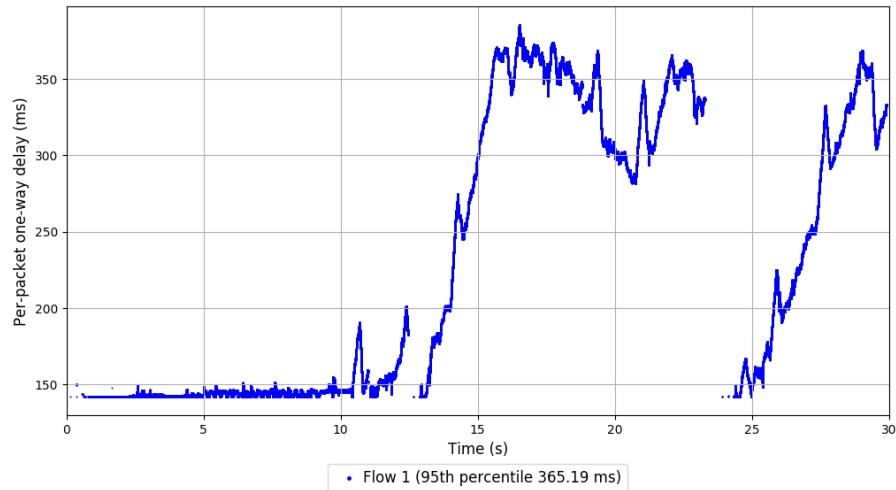
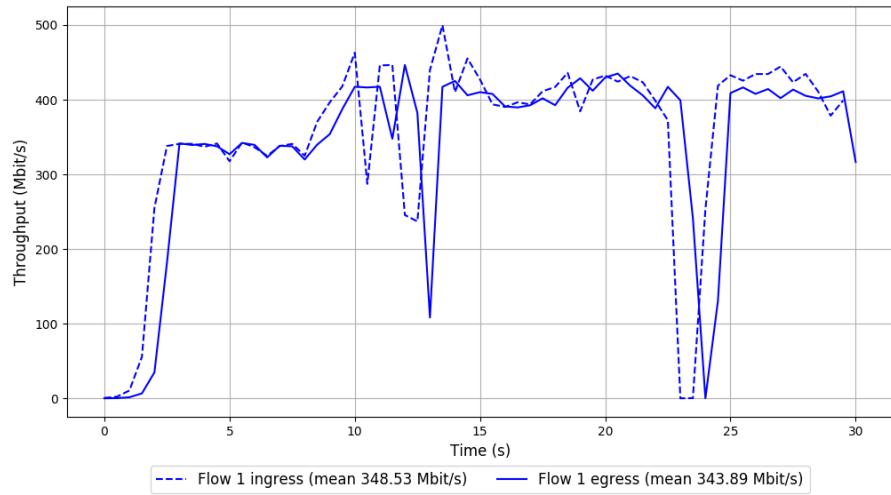
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	340.87	364.97	2.10
Copa	5	127.35	146.12	0.67
TCP Cubic	5	302.18	144.28	0.84
FillP	5	376.14	249.62	2.42
Indigo	5	99.09	137.41	0.71
Indigo-96d2da3	5	177.27	207.51	0.94
LEDBAT	5	8.25	138.00	1.40
Indigo-Muses	5	299.00	155.55	0.90
PCC-Allegro	5	367.45	184.68	0.91
PCC-Expr	5	183.18	192.22	0.75
QUIC Cubic	5	64.99	135.88	0.85
SCReAM	5	0.22	138.55	0.69
Sprout	5	2.52	139.55	0.58
TaoVA-100x	5	149.62	141.93	0.72
TCP Vegas	5	204.47	149.78	0.68
Verus	5	106.02	254.36	1.57
PCC-Vivace	5	206.20	142.62	0.82
WebRTC media	5	1.88	138.21	0.77

Run 1: Statistics of TCP BBR

```
Start at: 2018-10-02 13:52:25
End at: 2018-10-02 13:52:55
Local clock offset: 1.605 ms
Remote clock offset: -39.045 ms

# Below is generated by plot.py at 2018-10-02 15:55:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 343.89 Mbit/s
95th percentile per-packet one-way delay: 365.188 ms
Loss rate: 2.03%
-- Flow 1:
Average throughput: 343.89 Mbit/s
95th percentile per-packet one-way delay: 365.188 ms
Loss rate: 2.03%
```

## Run 1: Report of TCP BBR — Data Link

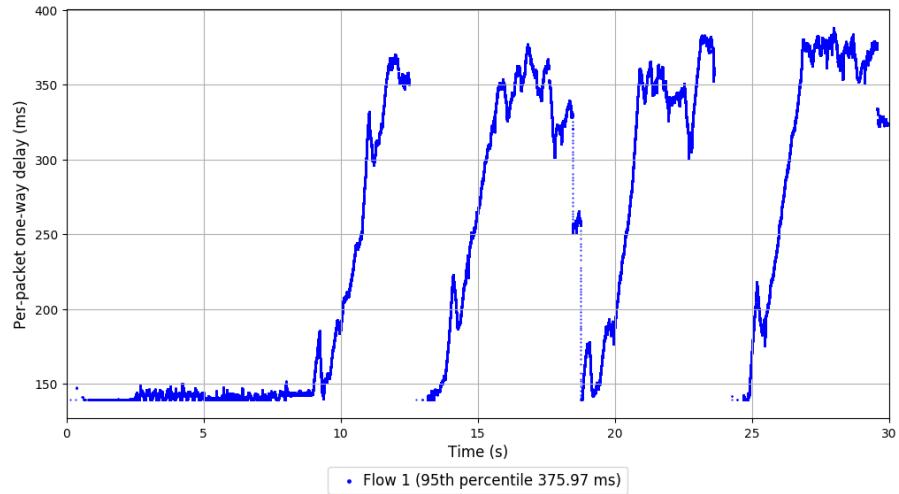
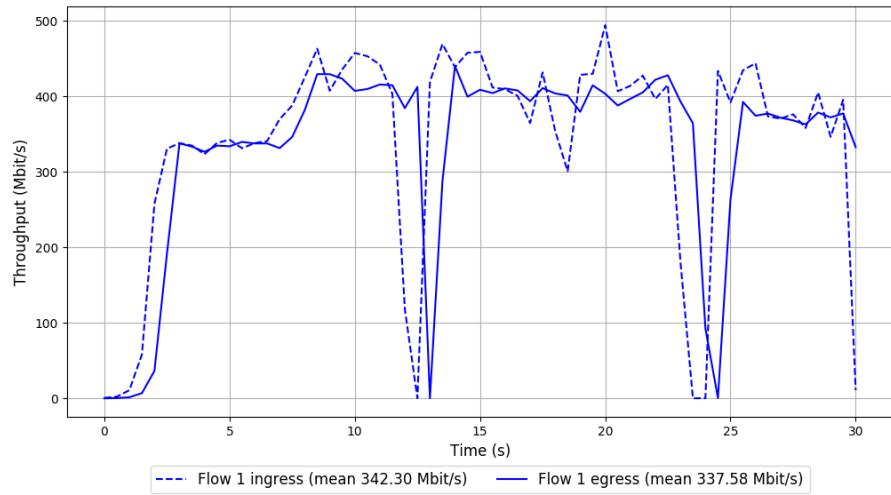


Run 2: Statistics of TCP BBR

```
Start at: 2018-10-02 14:27:54
End at: 2018-10-02 14:28:24
Local clock offset: -0.903 ms
Remote clock offset: -38.348 ms

# Below is generated by plot.py at 2018-10-02 15:55:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 337.58 Mbit/s
95th percentile per-packet one-way delay: 375.974 ms
Loss rate: 2.10%
-- Flow 1:
Average throughput: 337.58 Mbit/s
95th percentile per-packet one-way delay: 375.974 ms
Loss rate: 2.10%
```

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

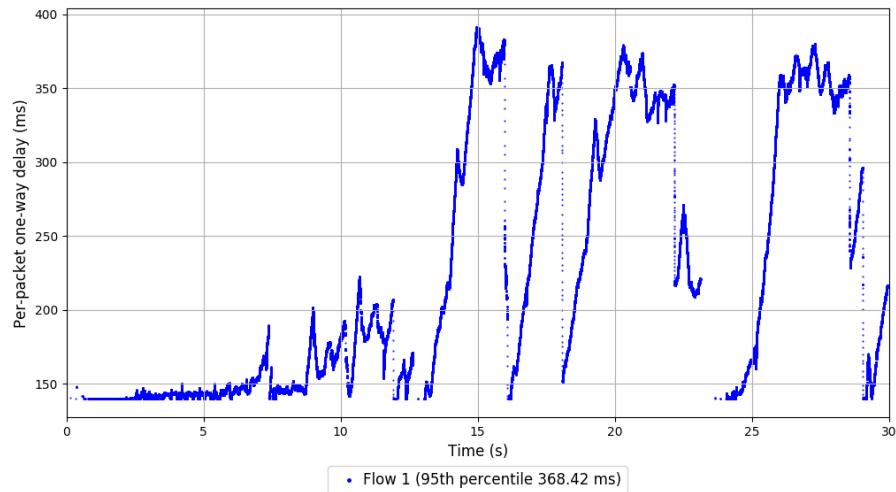
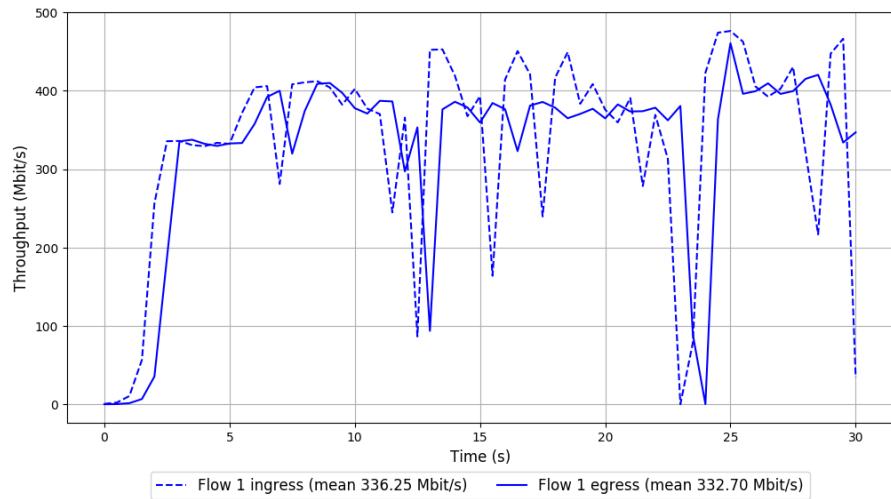


Run 3: Statistics of TCP BBR

```
Start at: 2018-10-02 14:51:55
End at: 2018-10-02 14:52:25
Local clock offset: -2.192 ms
Remote clock offset: -38.158 ms

# Below is generated by plot.py at 2018-10-02 15:55:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 332.70 Mbit/s
95th percentile per-packet one-way delay: 368.421 ms
Loss rate: 1.85%
-- Flow 1:
Average throughput: 332.70 Mbit/s
95th percentile per-packet one-way delay: 368.421 ms
Loss rate: 1.85%
```

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

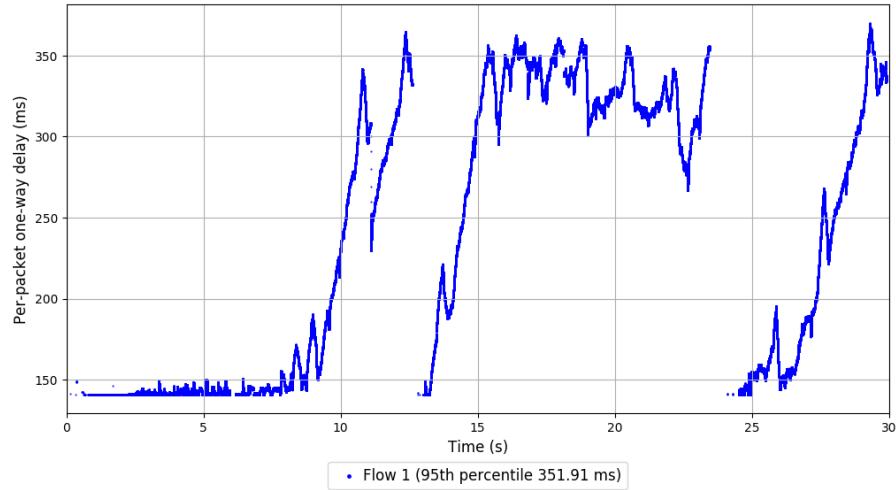
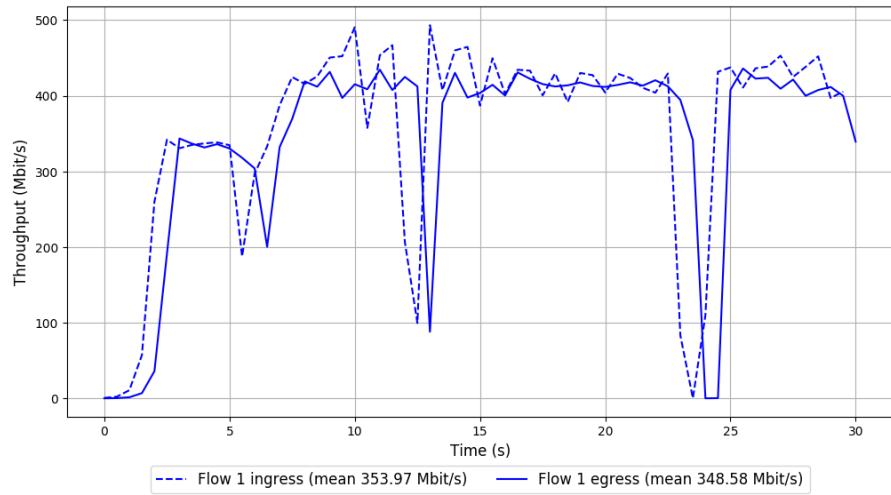


Run 4: Statistics of TCP BBR

```
Start at: 2018-10-02 15:21:21
End at: 2018-10-02 15:21:51
Local clock offset: -2.231 ms
Remote clock offset: -39.031 ms

# Below is generated by plot.py at 2018-10-02 15:56:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 348.58 Mbit/s
95th percentile per-packet one-way delay: 351.908 ms
Loss rate: 2.22%
-- Flow 1:
Average throughput: 348.58 Mbit/s
95th percentile per-packet one-way delay: 351.908 ms
Loss rate: 2.22%
```

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

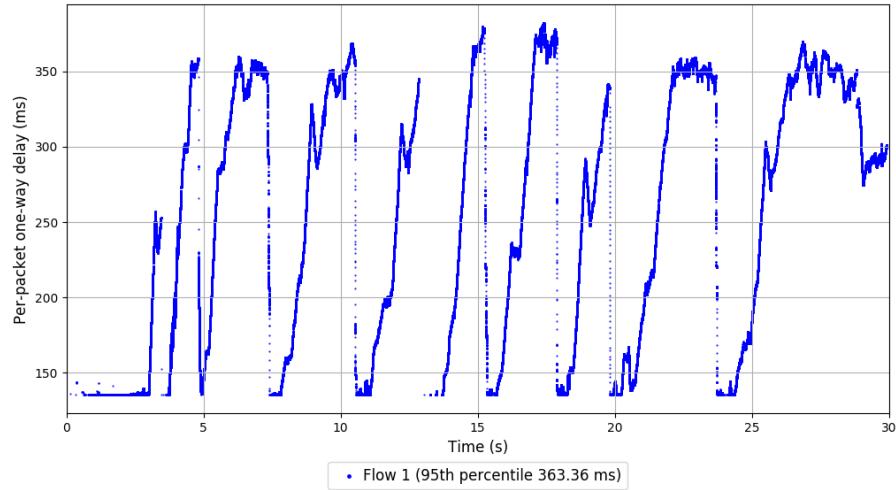
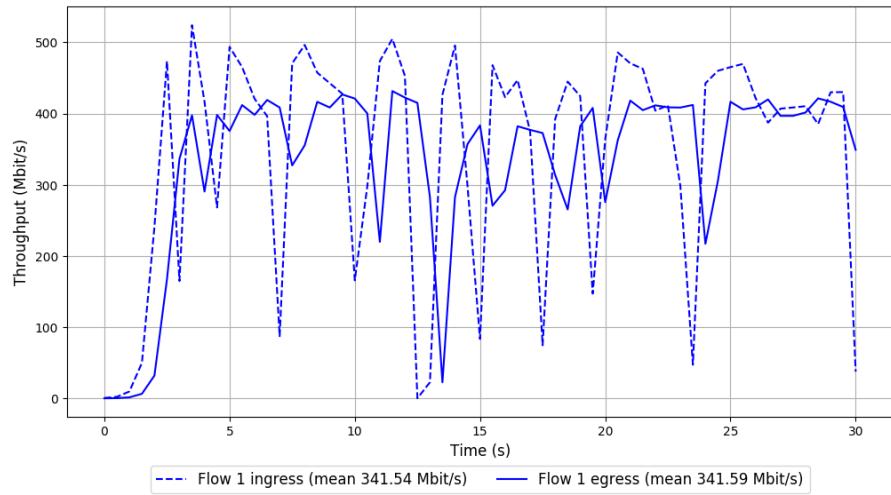


Run 5: Statistics of TCP BBR

```
Start at: 2018-10-02 15:45:11
End at: 2018-10-02 15:45:41
Local clock offset: -1.961 ms
Remote clock offset: -34.466 ms

# Below is generated by plot.py at 2018-10-02 15:56:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 341.59 Mbit/s
95th percentile per-packet one-way delay: 363.360 ms
Loss rate: 2.31%
-- Flow 1:
Average throughput: 341.59 Mbit/s
95th percentile per-packet one-way delay: 363.360 ms
Loss rate: 2.31%
```

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

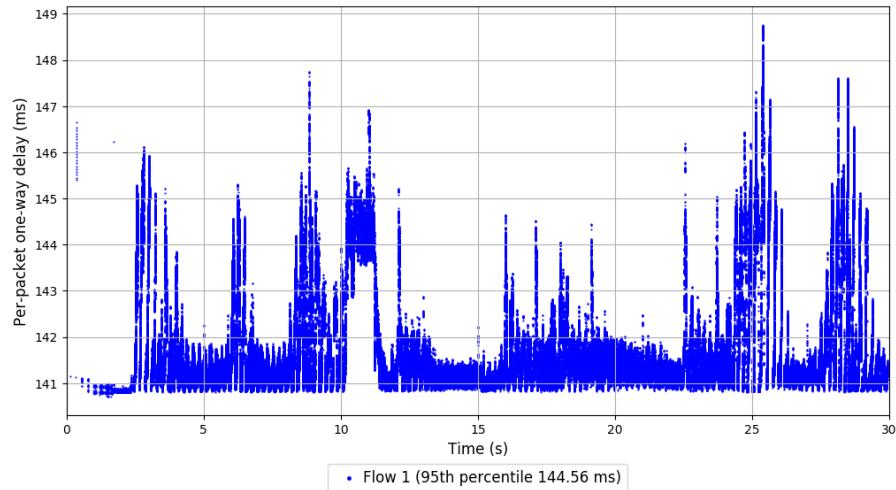
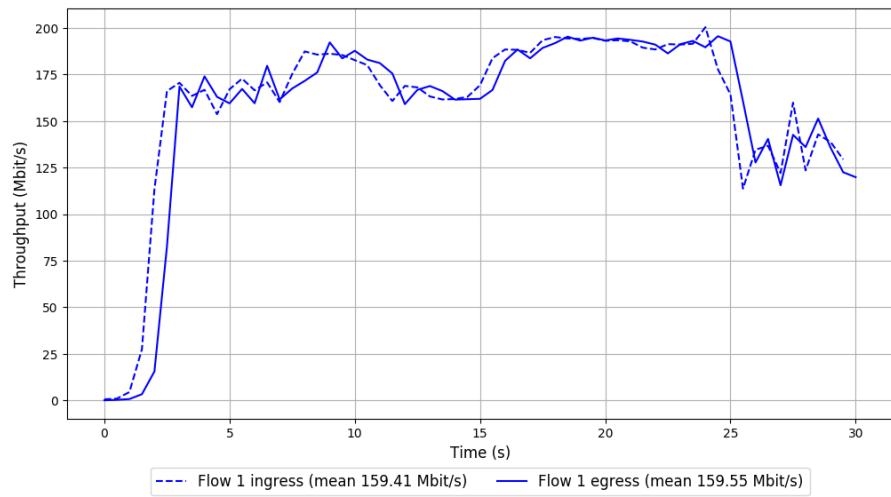


Run 1: Statistics of Copa

```
Start at: 2018-10-02 13:34:29
End at: 2018-10-02 13:34:59
Local clock offset: 2.864 ms
Remote clock offset: -37.616 ms

# Below is generated by plot.py at 2018-10-02 15:56:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 159.55 Mbit/s
95th percentile per-packet one-way delay: 144.560 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 159.55 Mbit/s
95th percentile per-packet one-way delay: 144.560 ms
Loss rate: 0.61%
```

## Run 1: Report of Copa — Data Link

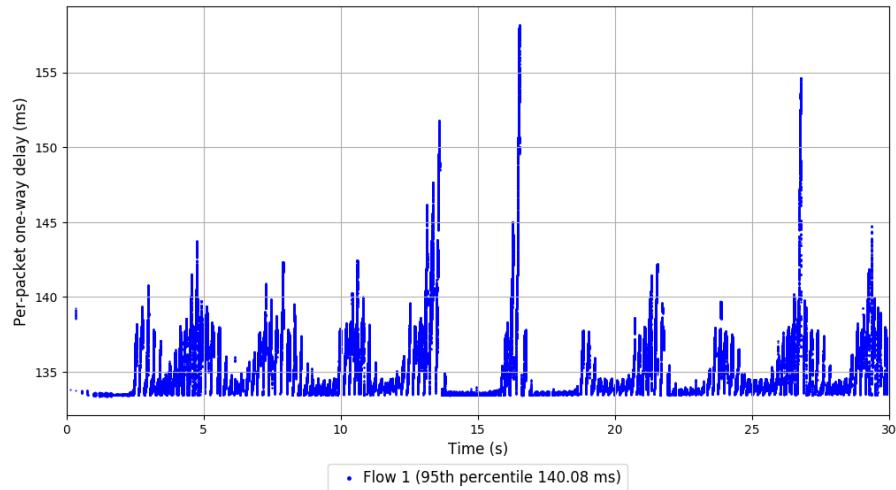
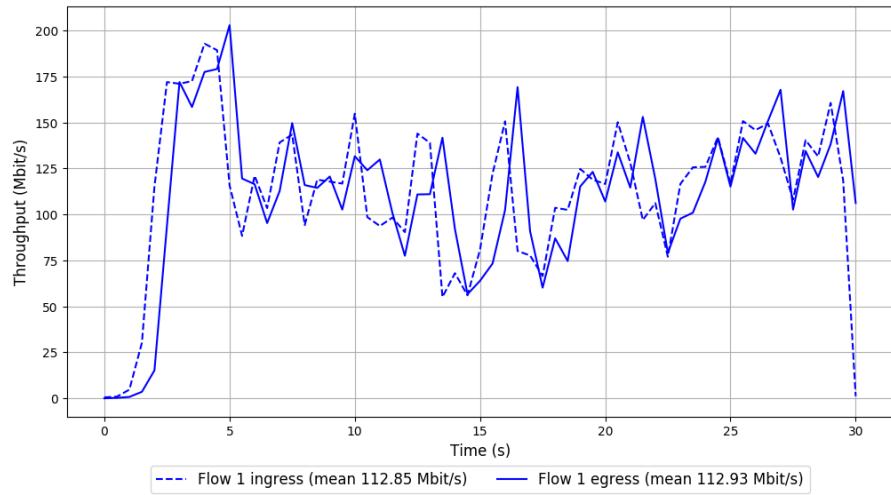


Run 2: Statistics of Copa

```
Start at: 2018-10-02 14:10:01
End at: 2018-10-02 14:10:31
Local clock offset: -0.841 ms
Remote clock offset: -34.393 ms

# Below is generated by plot.py at 2018-10-02 15:56:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 112.93 Mbit/s
95th percentile per-packet one-way delay: 140.076 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 112.93 Mbit/s
95th percentile per-packet one-way delay: 140.076 ms
Loss rate: 0.64%
```

## Run 2: Report of Copa — Data Link

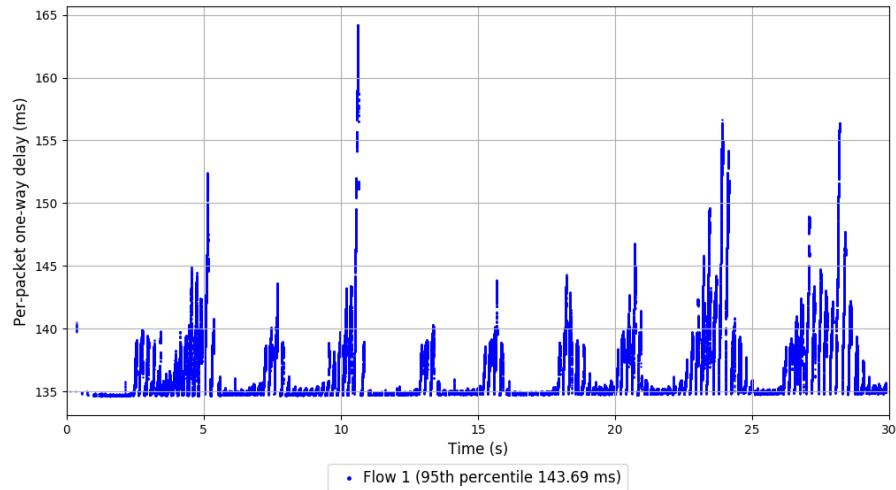
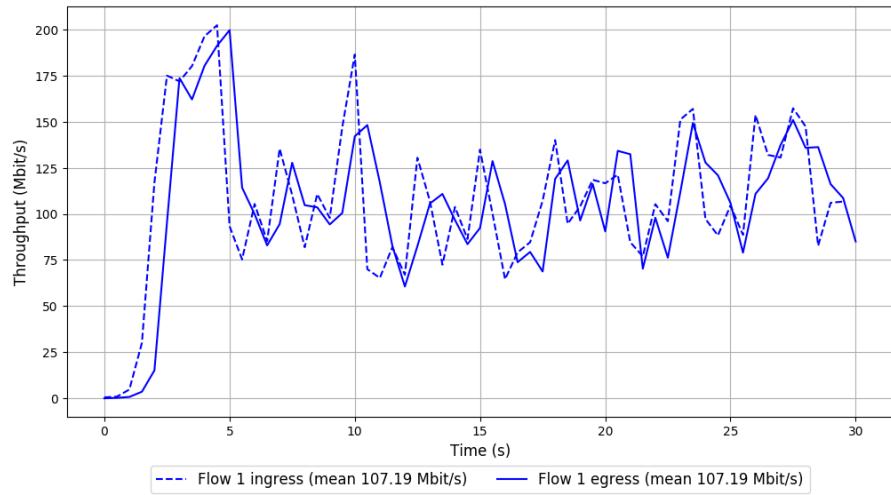


Run 3: Statistics of Copa

```
Start at: 2018-10-02 14:39:45
End at: 2018-10-02 14:40:15
Local clock offset: 2.082 ms
Remote clock offset: -32.131 ms

# Below is generated by plot.py at 2018-10-02 15:56:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 107.19 Mbit/s
95th percentile per-packet one-way delay: 143.691 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 107.19 Mbit/s
95th percentile per-packet one-way delay: 143.691 ms
Loss rate: 0.69%
```

### Run 3: Report of Copa — Data Link

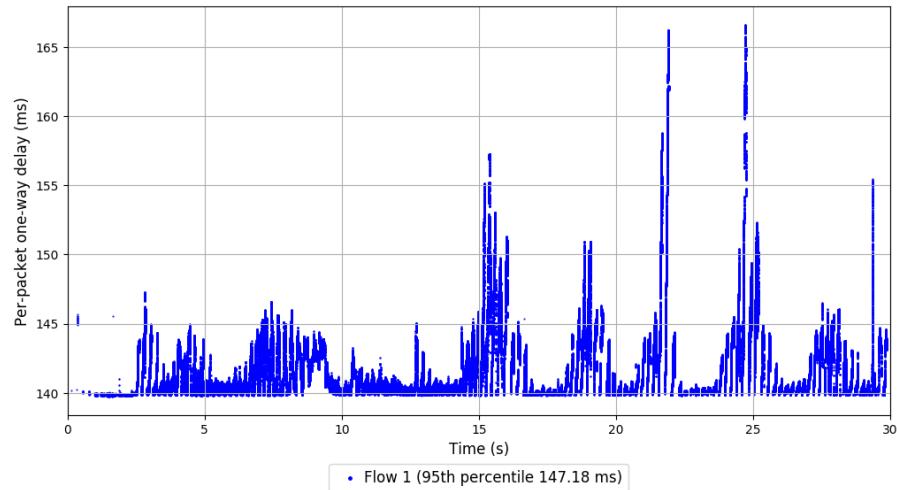
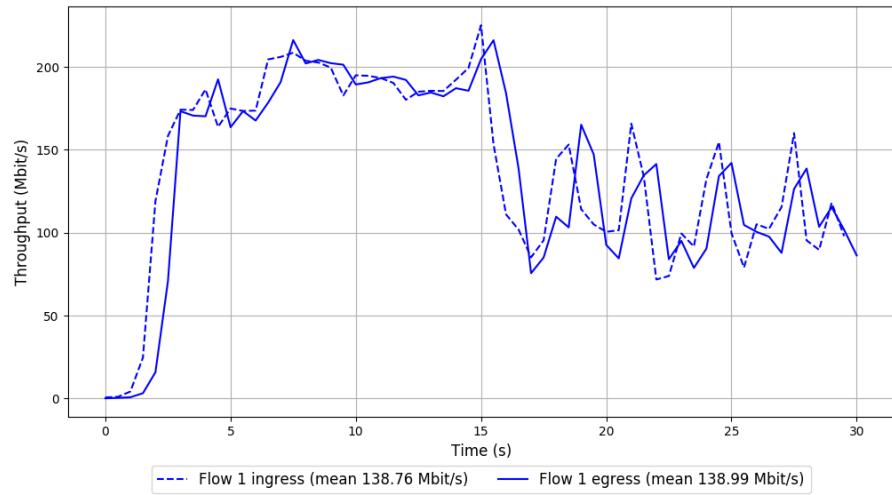


Run 4: Statistics of Copa

```
Start at: 2018-10-02 15:03:44
End at: 2018-10-02 15:04:14
Local clock offset: -1.858 ms
Remote clock offset: -37.814 ms

# Below is generated by plot.py at 2018-10-02 15:57:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 138.99 Mbit/s
95th percentile per-packet one-way delay: 147.178 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 138.99 Mbit/s
95th percentile per-packet one-way delay: 147.178 ms
Loss rate: 0.53%
```

## Run 4: Report of Copa — Data Link

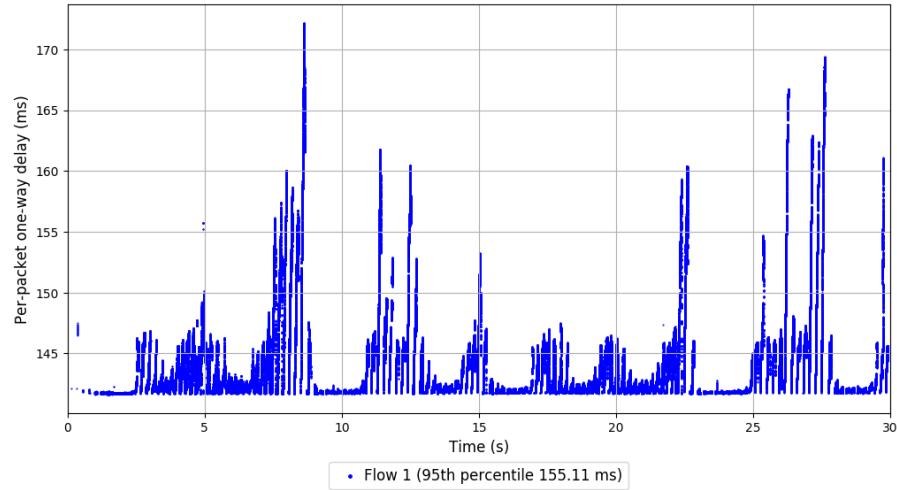
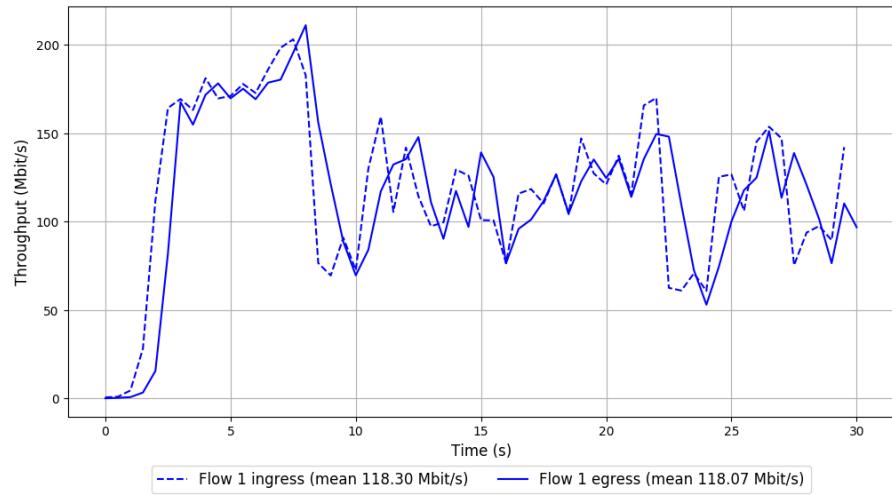


Run 5: Statistics of Copa

```
Start at: 2018-10-02 15:33:08
End at: 2018-10-02 15:33:38
Local clock offset: -1.412 ms
Remote clock offset: -38.82 ms

# Below is generated by plot.py at 2018-10-02 15:57:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 118.07 Mbit/s
95th percentile per-packet one-way delay: 155.110 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 118.07 Mbit/s
95th percentile per-packet one-way delay: 155.110 ms
Loss rate: 0.90%
```

### Run 5: Report of Copa — Data Link

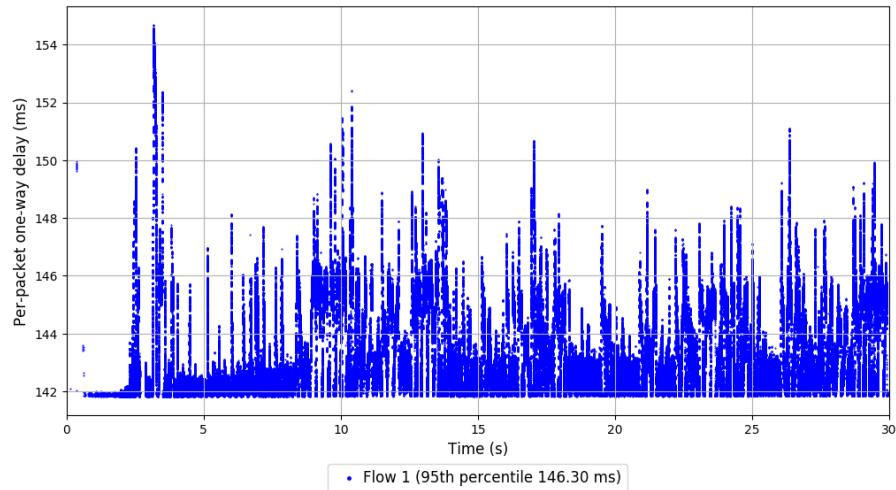
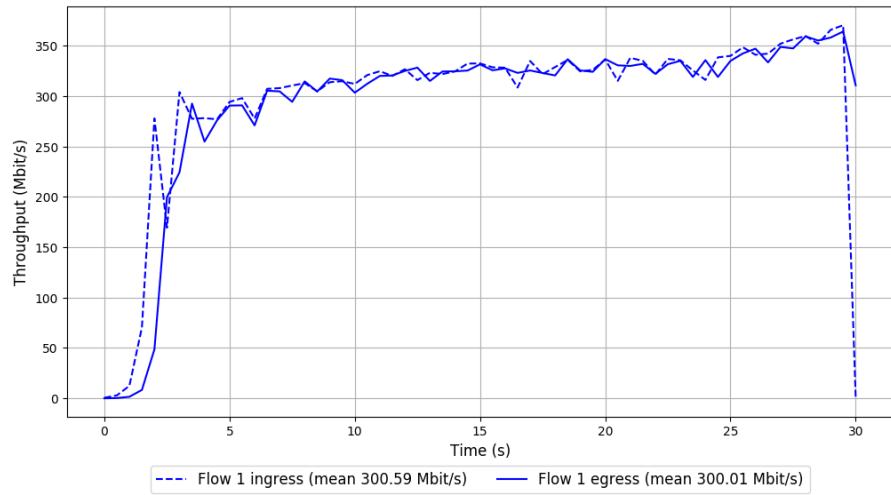


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2018-10-02 13:35:53
End at: 2018-10-02 13:36:23
Local clock offset: -0.371 ms
Remote clock offset: -42.028 ms

# Below is generated by plot.py at 2018-10-02 15:58:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 300.01 Mbit/s
95th percentile per-packet one-way delay: 146.304 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 300.01 Mbit/s
95th percentile per-packet one-way delay: 146.304 ms
Loss rate: 0.89%
```

### Run 1: Report of TCP Cubic — Data Link

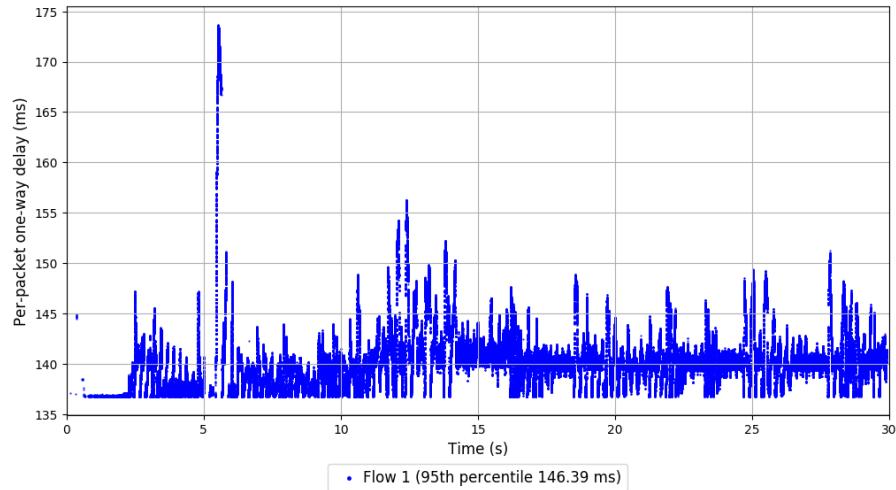
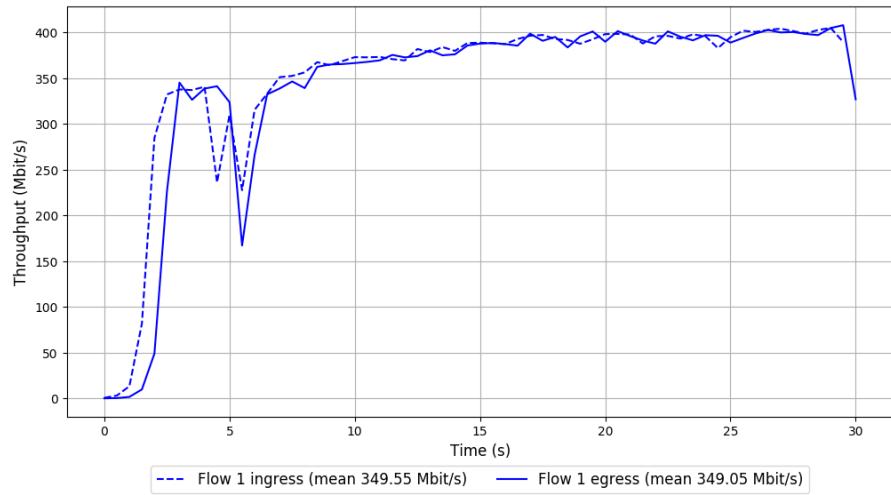


Run 2: Statistics of TCP Cubic

```
Start at: 2018-10-02 14:11:21
End at: 2018-10-02 14:11:51
Local clock offset: -0.881 ms
Remote clock offset: -36.101 ms

# Below is generated by plot.py at 2018-10-02 15:59:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 349.05 Mbit/s
95th percentile per-packet one-way delay: 146.388 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 349.05 Mbit/s
95th percentile per-packet one-way delay: 146.388 ms
Loss rate: 0.85%
```

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

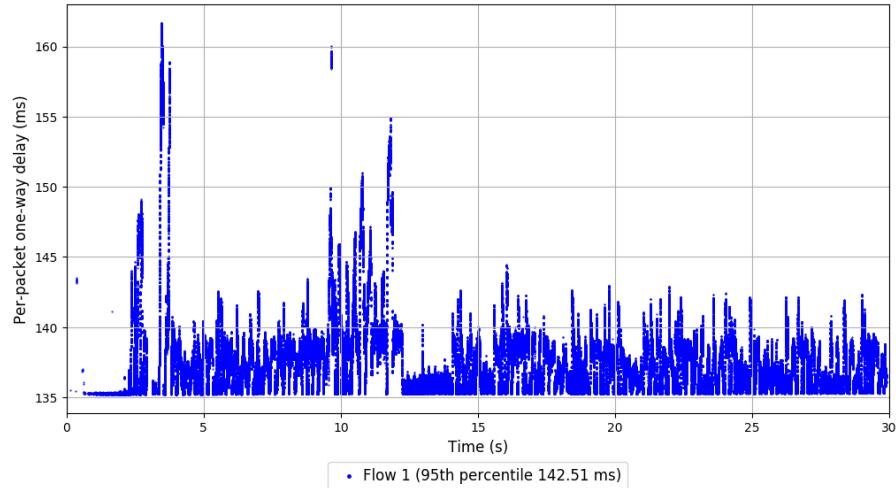
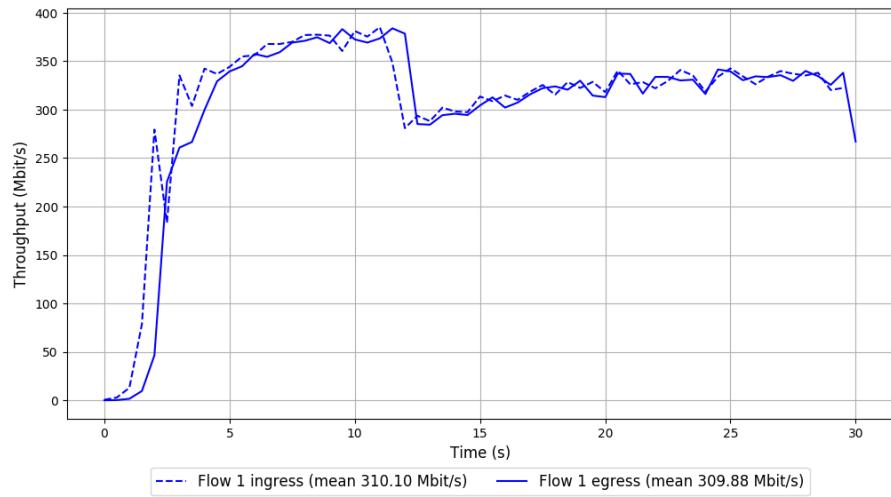


Run 3: Statistics of TCP Cubic

```
Start at: 2018-10-02 14:41:05
End at: 2018-10-02 14:41:35
Local clock offset: -0.747 ms
Remote clock offset: -33.639 ms

# Below is generated by plot.py at 2018-10-02 15:59:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 309.88 Mbit/s
95th percentile per-packet one-way delay: 142.509 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 309.88 Mbit/s
95th percentile per-packet one-way delay: 142.509 ms
Loss rate: 0.77%
```

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

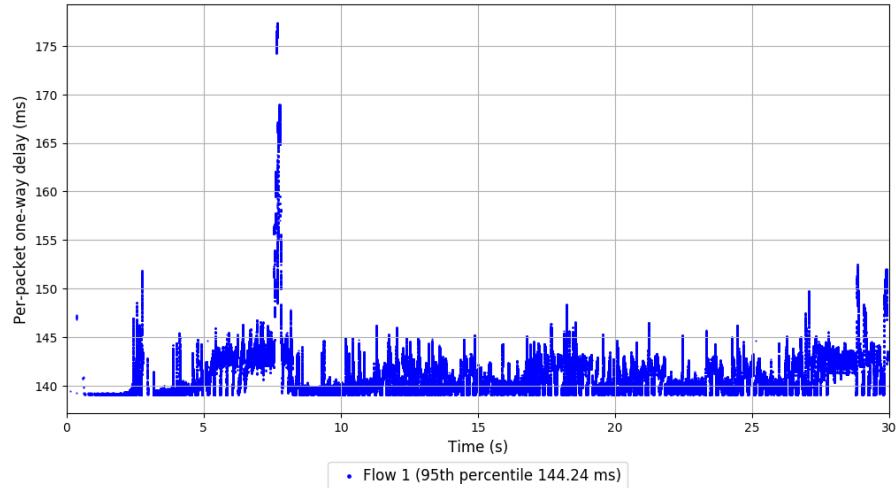
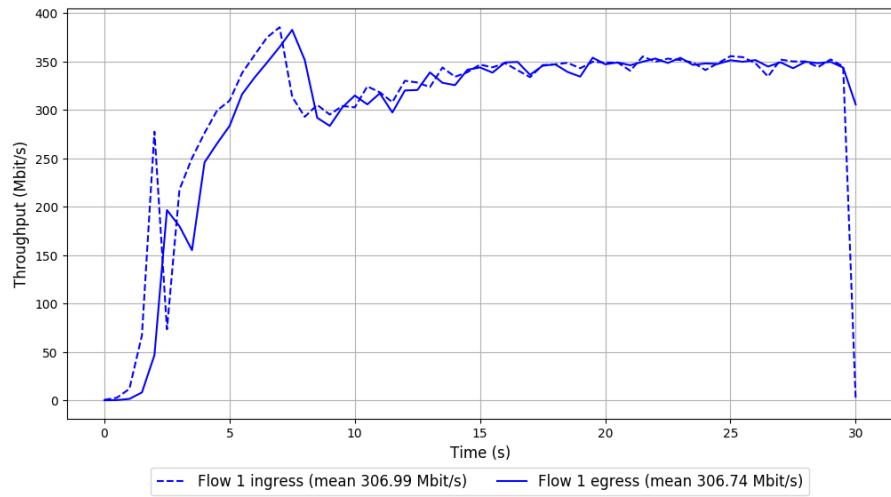


Run 4: Statistics of TCP Cubic

```
Start at: 2018-10-02 15:05:06
End at: 2018-10-02 15:05:36
Local clock offset: -0.828 ms
Remote clock offset: -35.955 ms

# Below is generated by plot.py at 2018-10-02 15:59:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 306.74 Mbit/s
95th percentile per-packet one-way delay: 144.236 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 306.74 Mbit/s
95th percentile per-packet one-way delay: 144.236 ms
Loss rate: 0.79%
```

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

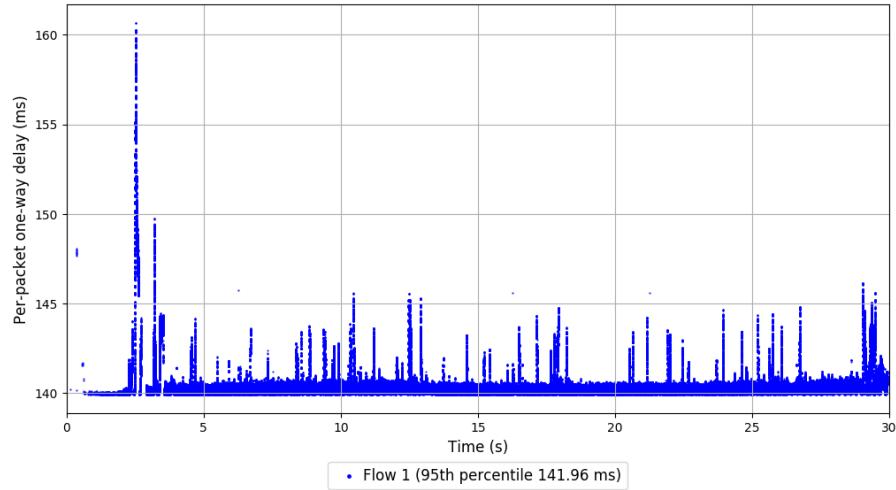
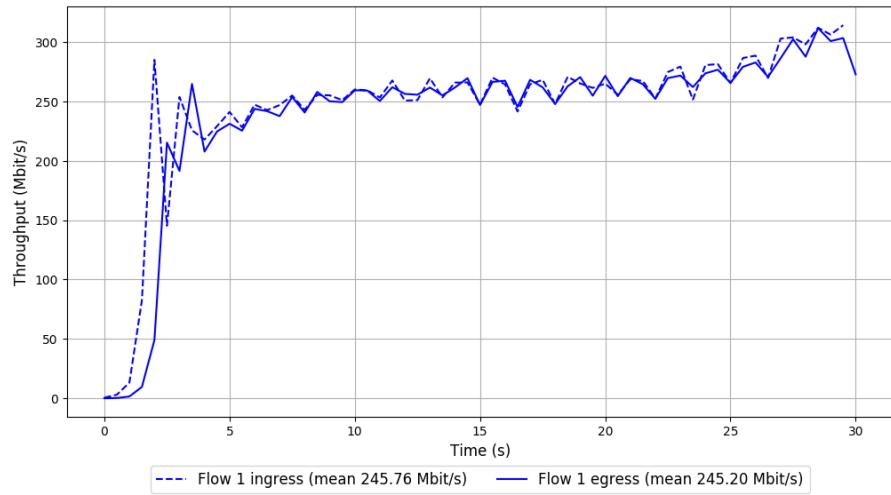


Run 5: Statistics of TCP Cubic

```
Start at: 2018-10-02 15:34:29
End at: 2018-10-02 15:34:59
Local clock offset: -0.664 ms
Remote clock offset: -36.521 ms

# Below is generated by plot.py at 2018-10-02 15:59:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 245.20 Mbit/s
95th percentile per-packet one-way delay: 141.959 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 245.20 Mbit/s
95th percentile per-packet one-way delay: 141.959 ms
Loss rate: 0.92%
```

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

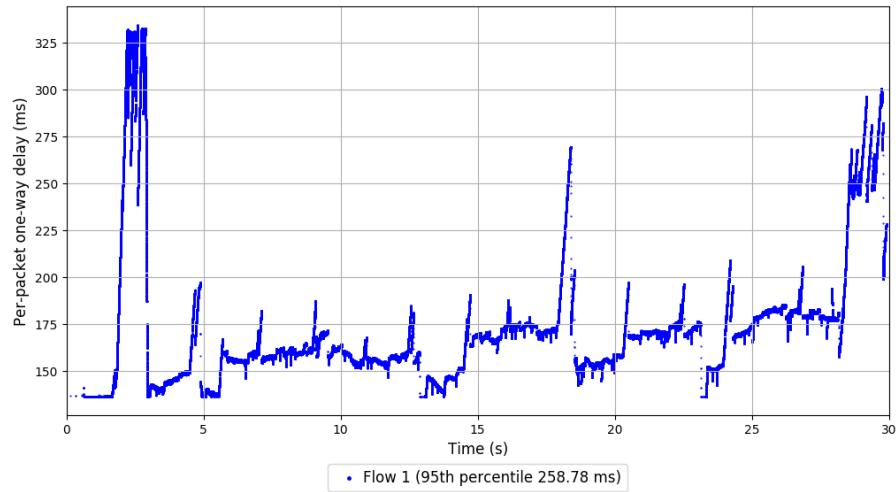
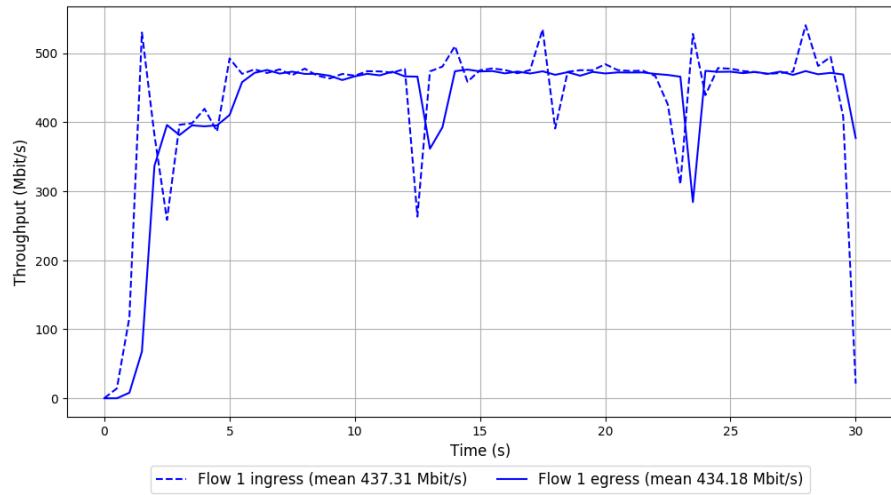


```
Run 1: Statistics of FillP
```

```
Start at: 2018-10-02 13:48:22
End at: 2018-10-02 13:48:52
Local clock offset: 1.256 ms
Remote clock offset: -36.02 ms

# Below is generated by plot.py at 2018-10-02 16:02:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 434.18 Mbit/s
95th percentile per-packet one-way delay: 258.782 ms
Loss rate: 1.54%
-- Flow 1:
Average throughput: 434.18 Mbit/s
95th percentile per-packet one-way delay: 258.782 ms
Loss rate: 1.54%
```

Run 1: Report of FillP — Data Link

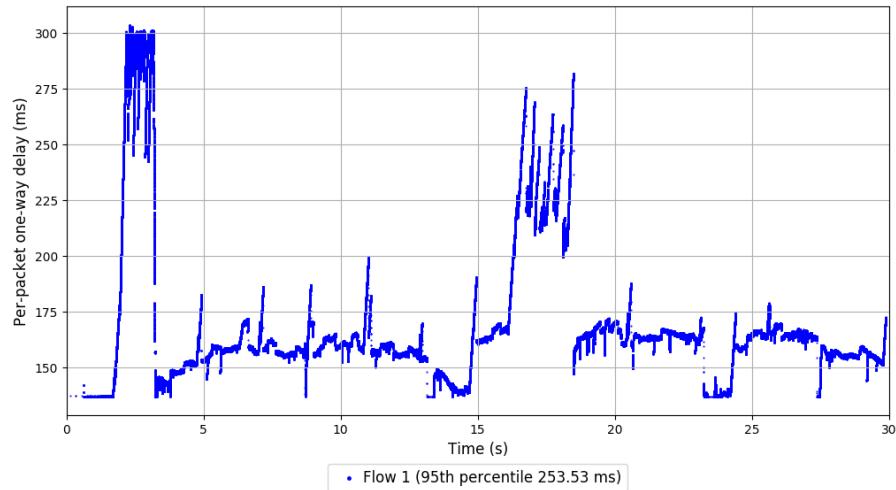
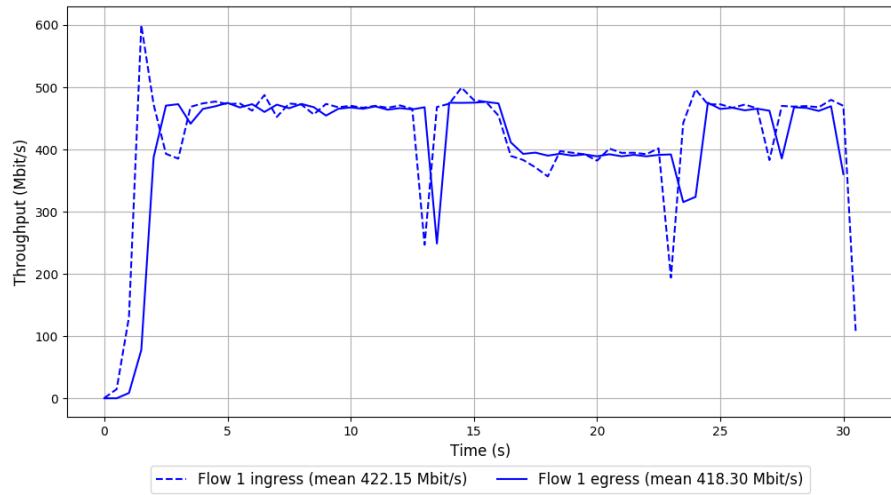


Run 2: Statistics of FillP

```
Start at: 2018-10-02 14:23:50
End at: 2018-10-02 14:24:20
Local clock offset: 2.176 ms
Remote clock offset: -32.851 ms

# Below is generated by plot.py at 2018-10-02 16:03:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 418.30 Mbit/s
95th percentile per-packet one-way delay: 253.531 ms
Loss rate: 3.73%
-- Flow 1:
Average throughput: 418.30 Mbit/s
95th percentile per-packet one-way delay: 253.531 ms
Loss rate: 3.73%
```

## Run 2: Report of FillP — Data Link

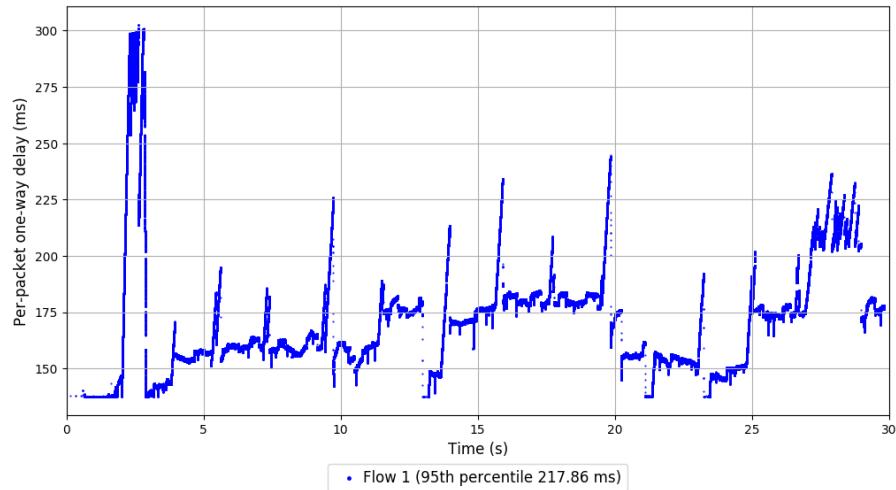
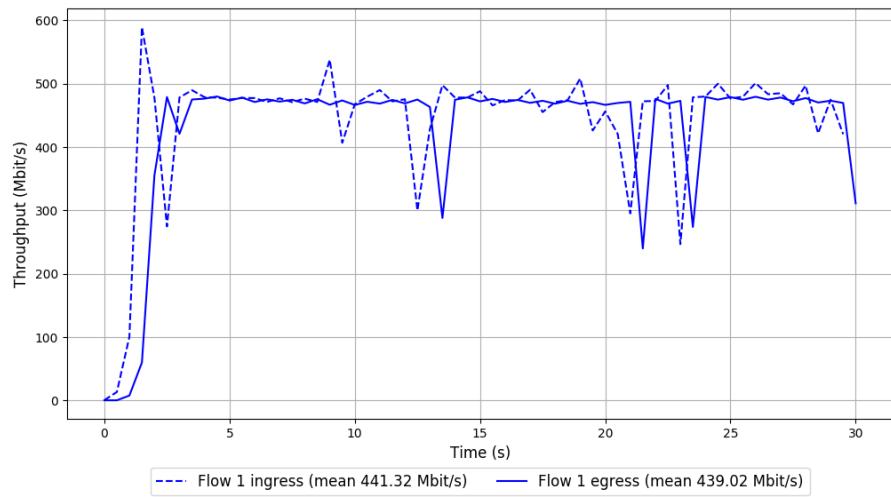


Run 3: Statistics of FillP

```
Start at: 2018-10-02 14:47:52
End at: 2018-10-02 14:48:22
Local clock offset: -1.302 ms
Remote clock offset: -35.301 ms

# Below is generated by plot.py at 2018-10-02 16:04:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 439.02 Mbit/s
95th percentile per-packet one-way delay: 217.863 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 439.02 Mbit/s
95th percentile per-packet one-way delay: 217.863 ms
Loss rate: 1.36%
```

### Run 3: Report of FillP — Data Link

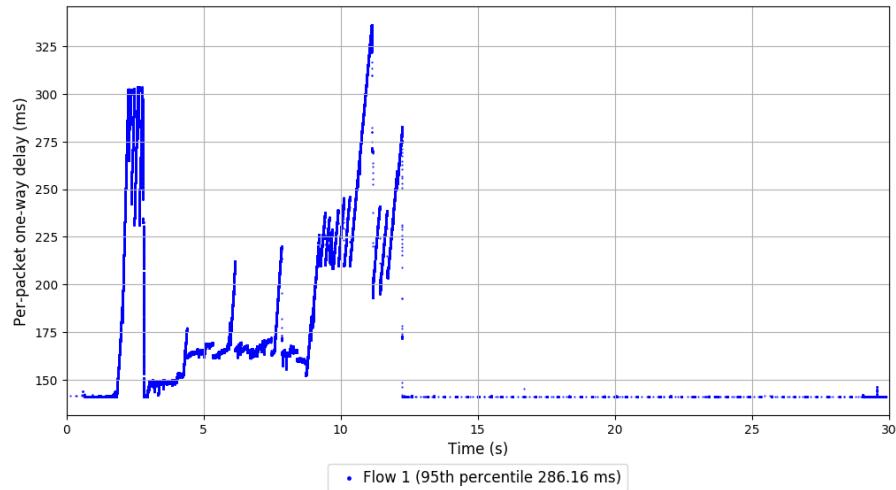
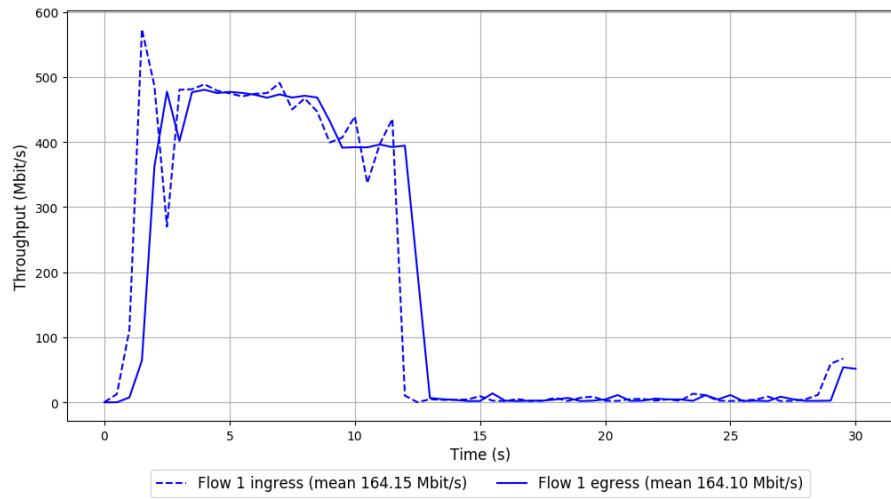


Run 4: Statistics of FillP

```
Start at: 2018-10-02 15:11:51
End at: 2018-10-02 15:12:21
Local clock offset: -1.904 ms
Remote clock offset: -38.745 ms

# Below is generated by plot.py at 2018-10-02 16:04:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 164.10 Mbit/s
95th percentile per-packet one-way delay: 286.160 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 164.10 Mbit/s
95th percentile per-packet one-way delay: 286.160 ms
Loss rate: 0.72%
```

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

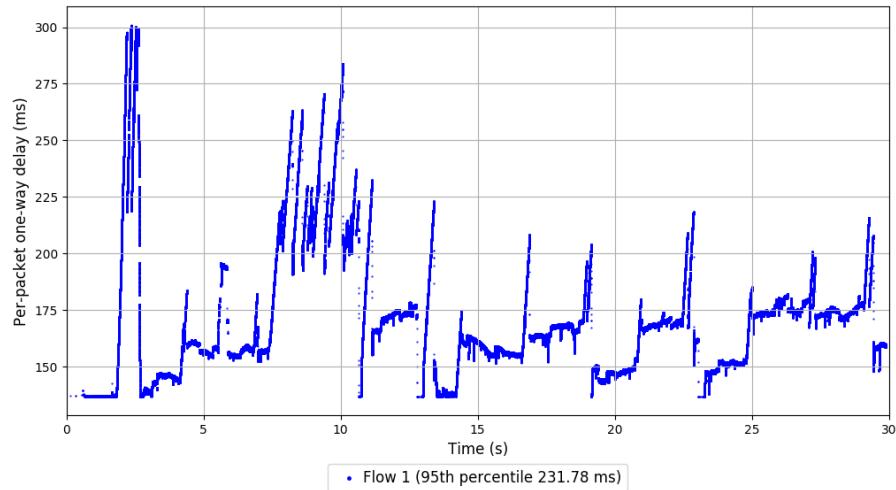
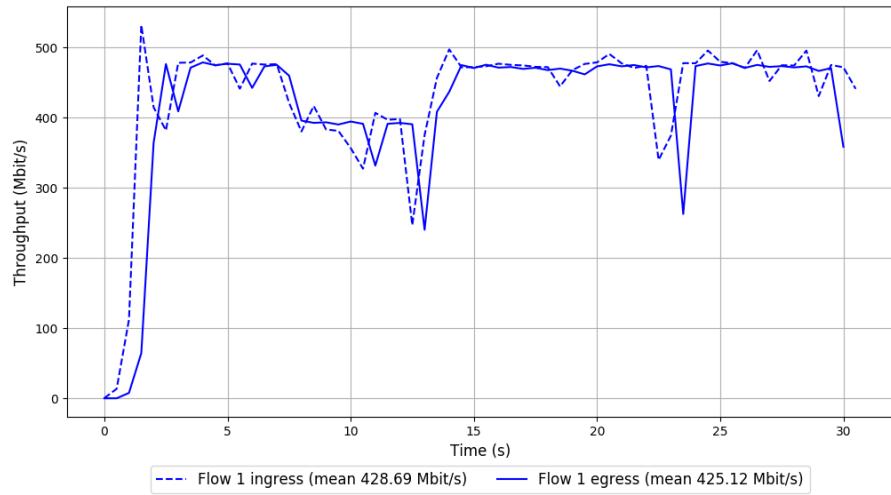


Run 5: Statistics of FillP

```
Start at: 2018-10-02 15:41:07
End at: 2018-10-02 15:41:37
Local clock offset: -0.098 ms
Remote clock offset: -33.42 ms

# Below is generated by plot.py at 2018-10-02 16:05:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 425.12 Mbit/s
95th percentile per-packet one-way delay: 231.776 ms
Loss rate: 4.75%
-- Flow 1:
Average throughput: 425.12 Mbit/s
95th percentile per-packet one-way delay: 231.776 ms
Loss rate: 4.75%
```

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

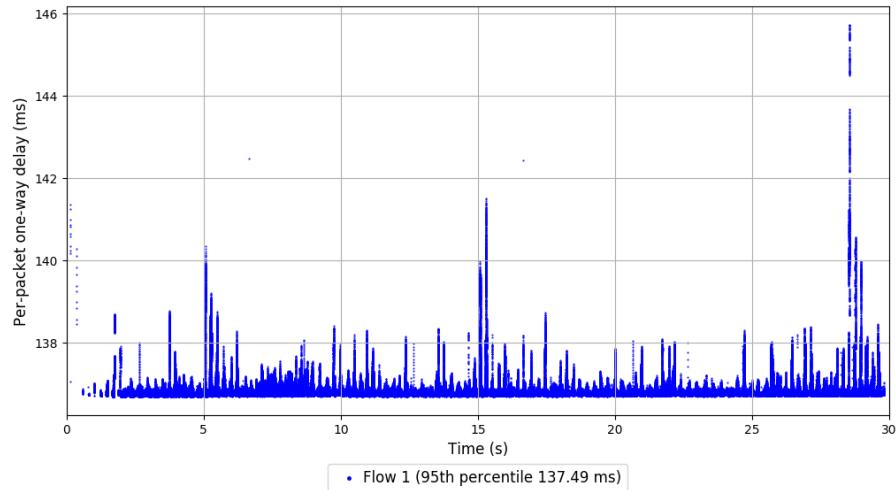
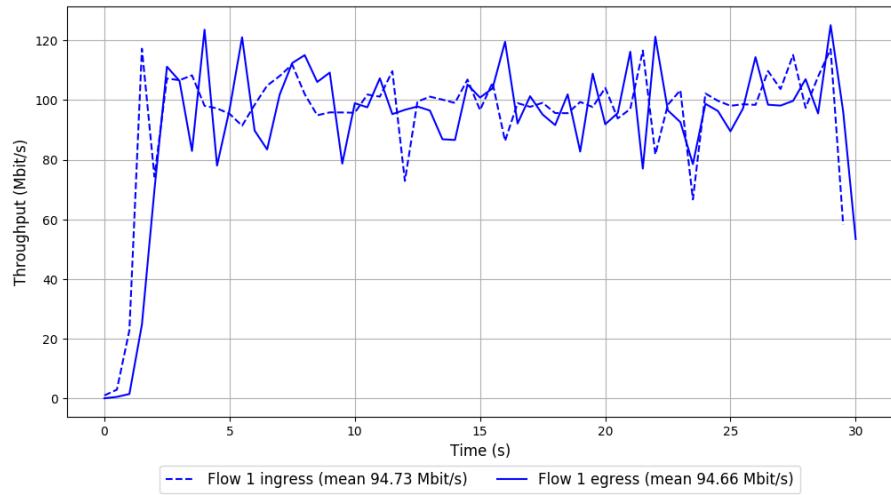


Run 1: Statistics of Indigo

```
Start at: 2018-10-02 13:26:39
End at: 2018-10-02 13:27:09
Local clock offset: 1.194 ms
Remote clock offset: -35.655 ms

# Below is generated by plot.py at 2018-10-02 16:05:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.66 Mbit/s
95th percentile per-packet one-way delay: 137.490 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 94.66 Mbit/s
95th percentile per-packet one-way delay: 137.490 ms
Loss rate: 0.77%
```

## Run 1: Report of Indigo — Data Link

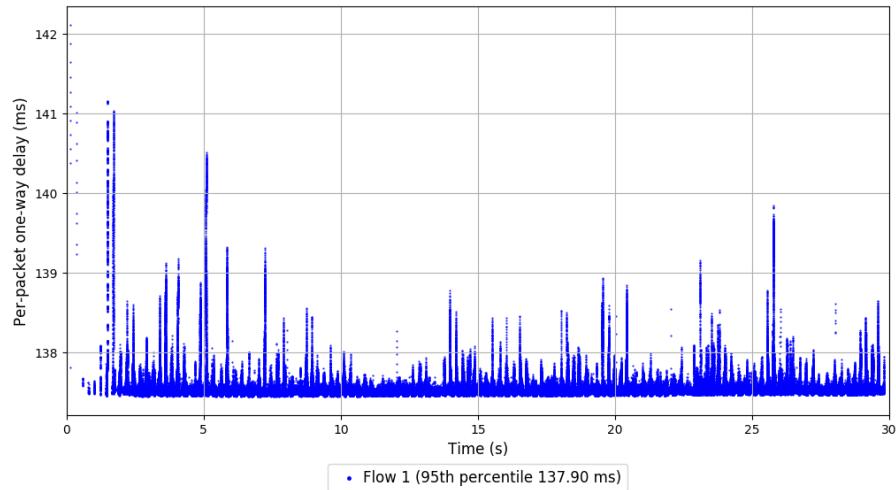
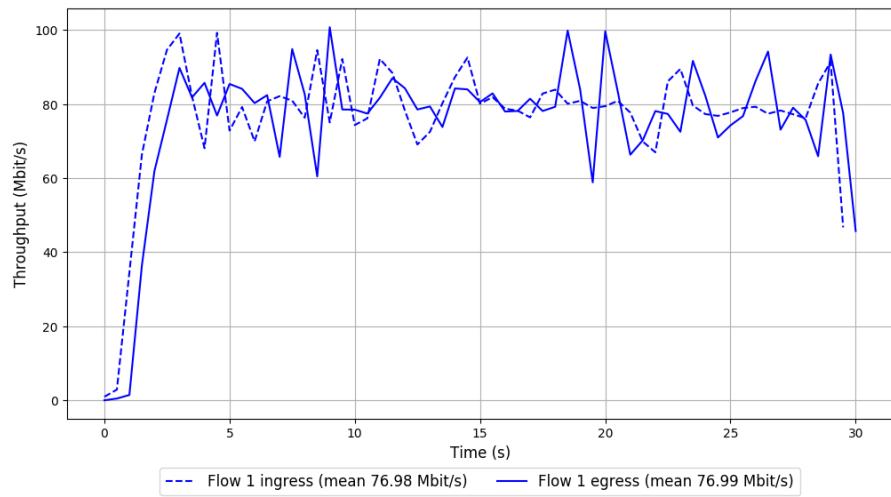


Run 2: Statistics of Indigo

```
Start at: 2018-10-02 14:02:11
End at: 2018-10-02 14:02:41
Local clock offset: -0.929 ms
Remote clock offset: -38.669 ms

# Below is generated by plot.py at 2018-10-02 16:05:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 76.99 Mbit/s
95th percentile per-packet one-way delay: 137.899 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 76.99 Mbit/s
95th percentile per-packet one-way delay: 137.899 ms
Loss rate: 0.68%
```

## Run 2: Report of Indigo — Data Link

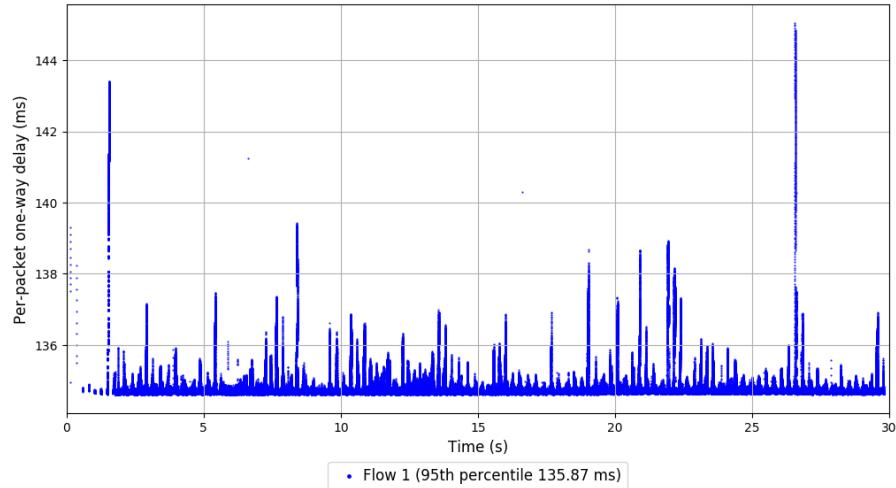
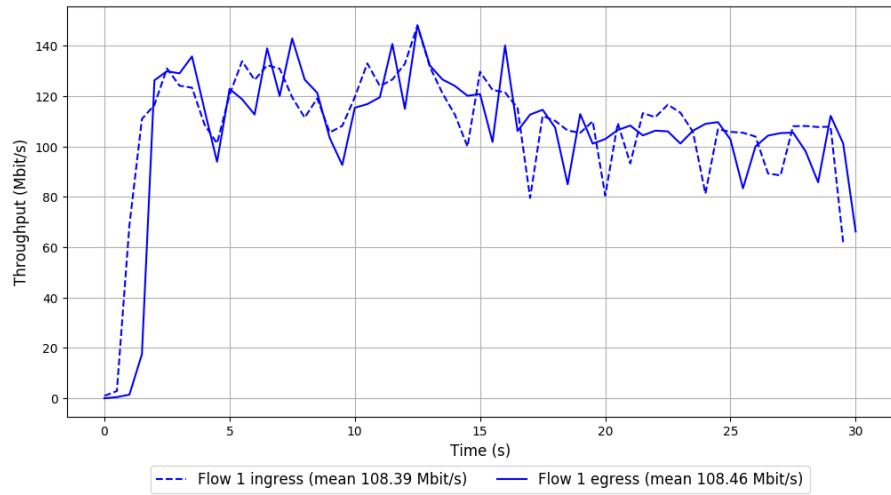


Run 3: Statistics of Indigo

```
Start at: 2018-10-02 14:31:58
End at: 2018-10-02 14:32:28
Local clock offset: -0.695 ms
Remote clock offset: -33.395 ms

# Below is generated by plot.py at 2018-10-02 16:05:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 108.46 Mbit/s
95th percentile per-packet one-way delay: 135.871 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 108.46 Mbit/s
95th percentile per-packet one-way delay: 135.871 ms
Loss rate: 0.64%
```

### Run 3: Report of Indigo — Data Link

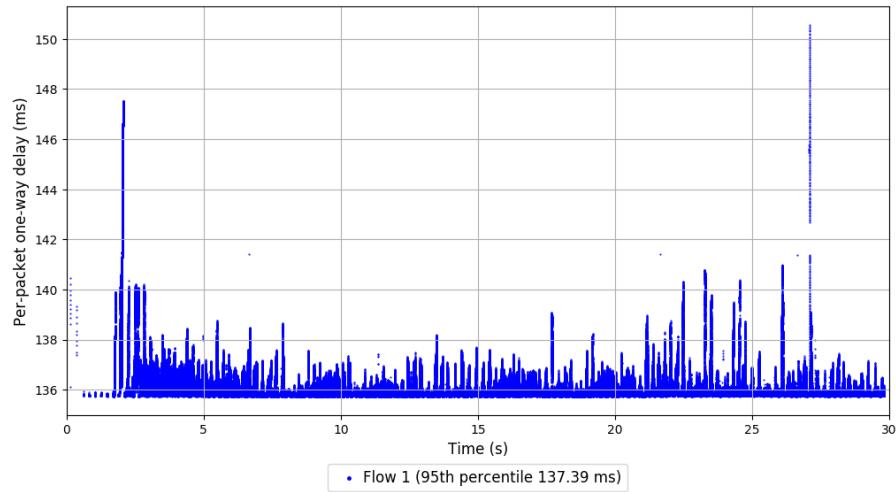
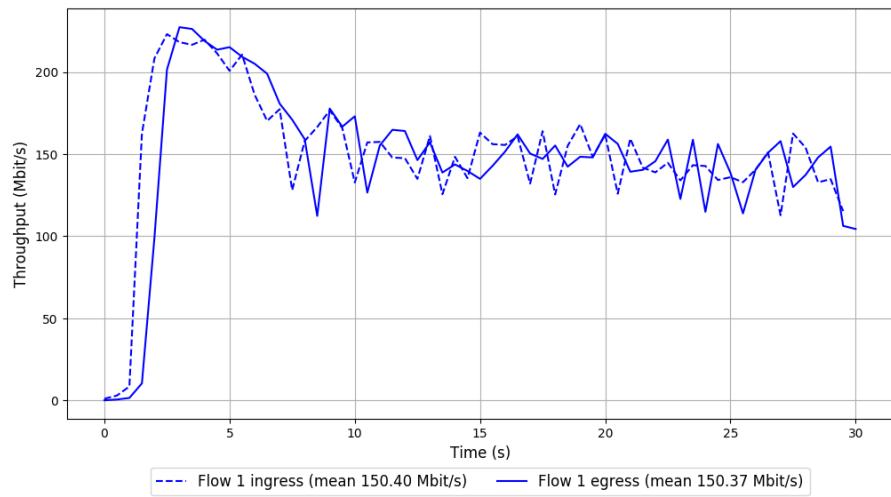


Run 4: Statistics of Indigo

```
Start at: 2018-10-02 14:56:00
End at: 2018-10-02 14:56:30
Local clock offset: 0.942 ms
Remote clock offset: -32.655 ms

# Below is generated by plot.py at 2018-10-02 16:05:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 150.37 Mbit/s
95th percentile per-packet one-way delay: 137.392 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 150.37 Mbit/s
95th percentile per-packet one-way delay: 137.392 ms
Loss rate: 0.71%
```

## Run 4: Report of Indigo — Data Link

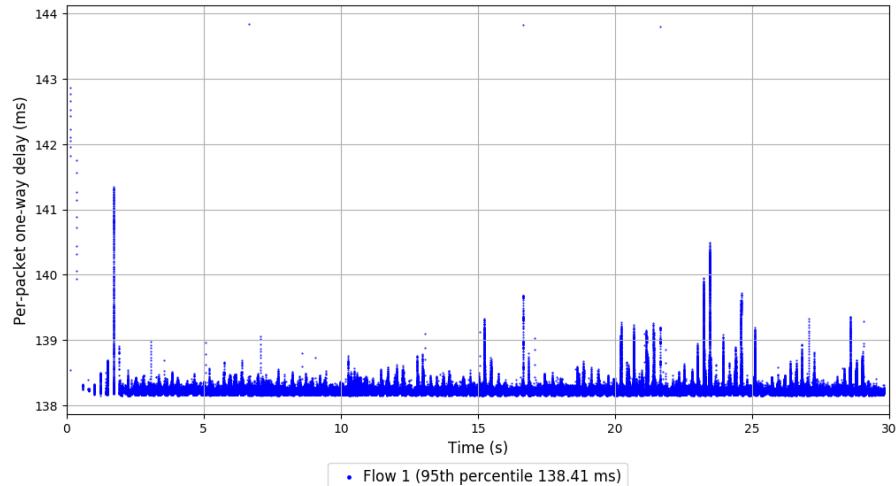
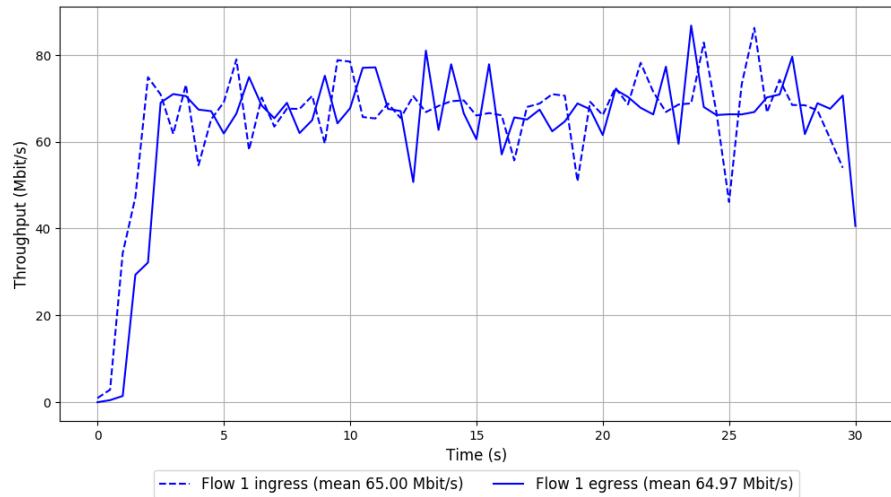


Run 5: Statistics of Indigo

```
Start at: 2018-10-02 15:25:26
End at: 2018-10-02 15:25:56
Local clock offset: -2.811 ms
Remote clock offset: -38.478 ms

# Below is generated by plot.py at 2018-10-02 16:05:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 64.97 Mbit/s
95th percentile per-packet one-way delay: 138.407 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 64.97 Mbit/s
95th percentile per-packet one-way delay: 138.407 ms
Loss rate: 0.73%
```

## Run 5: Report of Indigo — Data Link

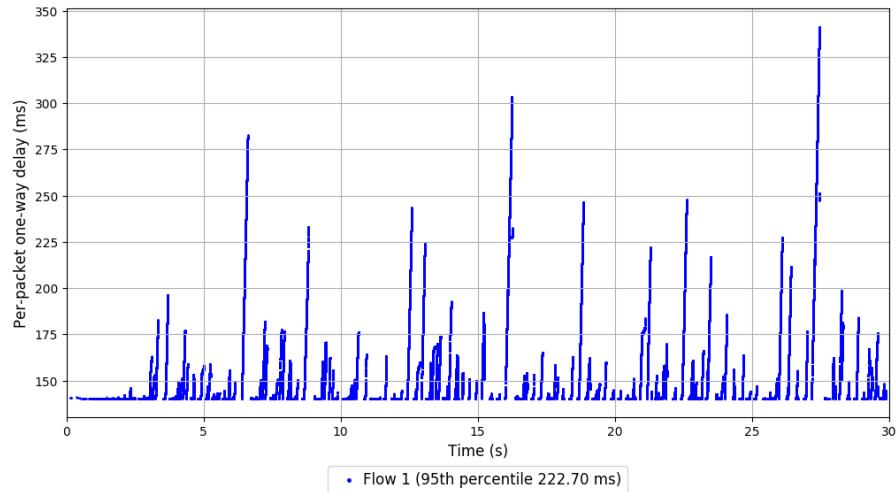
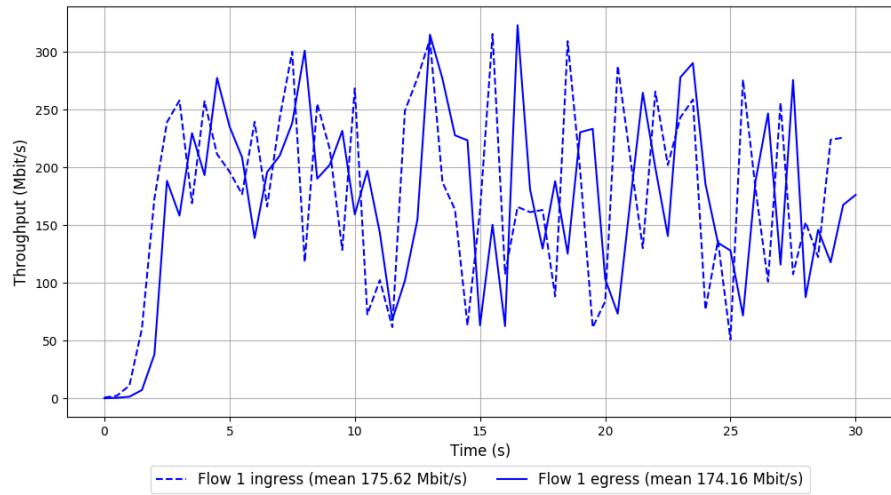


```
Run 1: Statistics of Indigo-96d2da3
```

```
Start at: 2018-10-02 13:47:02
End at: 2018-10-02 13:47:32
Local clock offset: -0.832 ms
Remote clock offset: -40.17 ms

# Below is generated by plot.py at 2018-10-02 16:05:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 174.16 Mbit/s
95th percentile per-packet one-way delay: 222.700 ms
Loss rate: 1.31%
-- Flow 1:
Average throughput: 174.16 Mbit/s
95th percentile per-packet one-way delay: 222.700 ms
Loss rate: 1.31%
```

Run 1: Report of Indigo-96d2da3 — Data Link

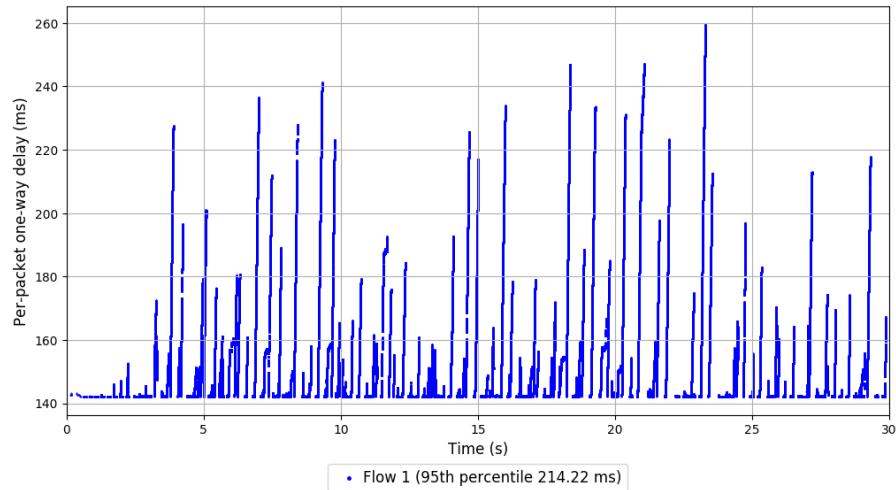
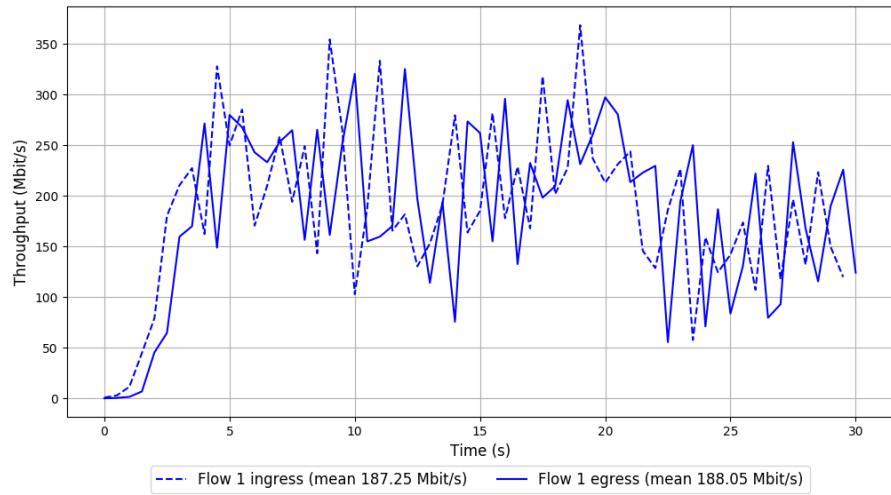


Run 2: Statistics of Indigo-96d2da3

```
Start at: 2018-10-02 14:22:30
End at: 2018-10-02 14:23:00
Local clock offset: 1.905 ms
Remote clock offset: -38.183 ms

# Below is generated by plot.py at 2018-10-02 16:05:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 188.05 Mbit/s
95th percentile per-packet one-way delay: 214.219 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 188.05 Mbit/s
95th percentile per-packet one-way delay: 214.219 ms
Loss rate: 0.28%
```

## Run 2: Report of Indigo-96d2da3 — Data Link

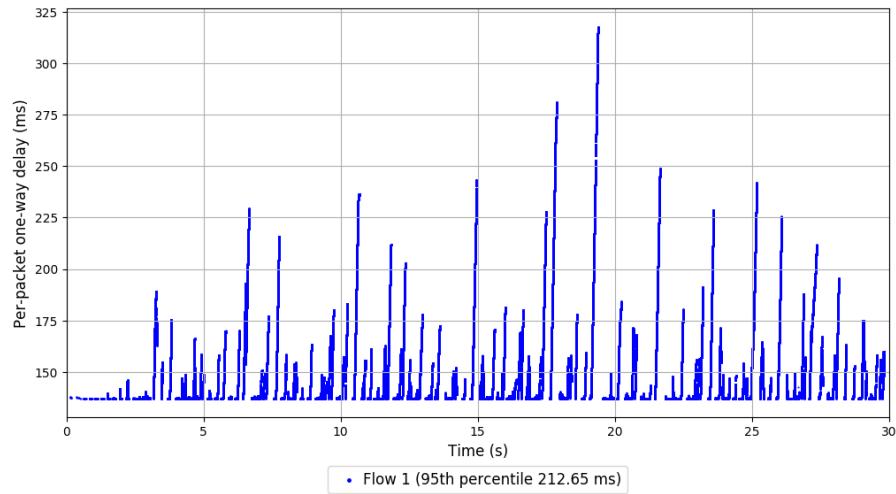
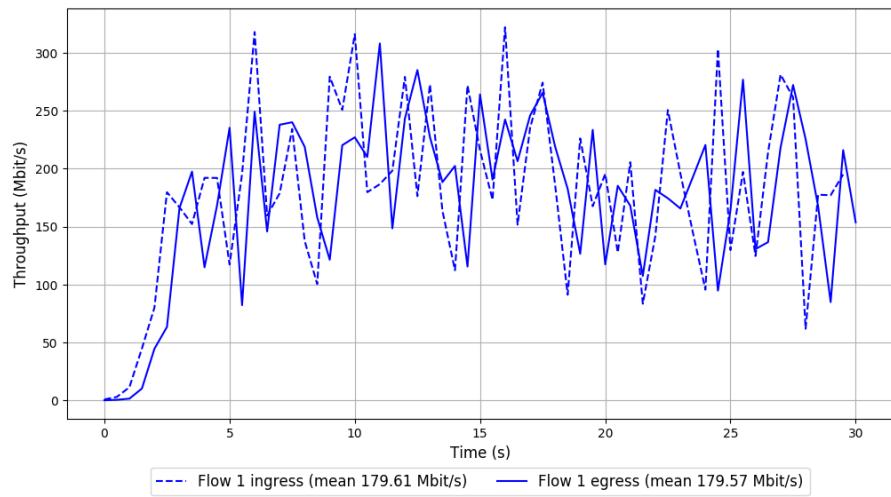


Run 3: Statistics of Indigo-96d2da3

```
Start at: 2018-10-02 14:46:33
End at: 2018-10-02 14:47:03
Local clock offset: -1.666 ms
Remote clock offset: -35.2 ms

# Below is generated by plot.py at 2018-10-02 16:05:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 179.57 Mbit/s
95th percentile per-packet one-way delay: 212.646 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 179.57 Mbit/s
95th percentile per-packet one-way delay: 212.646 ms
Loss rate: 0.89%
```

### Run 3: Report of Indigo-96d2da3 — Data Link

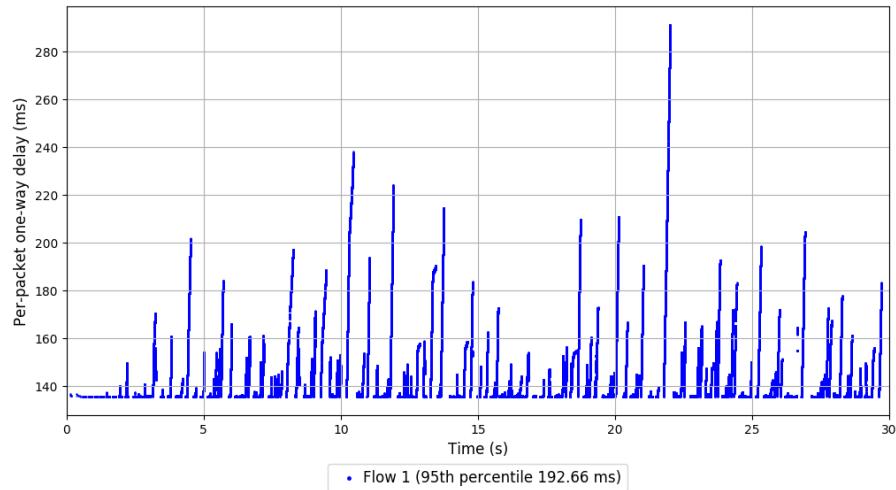
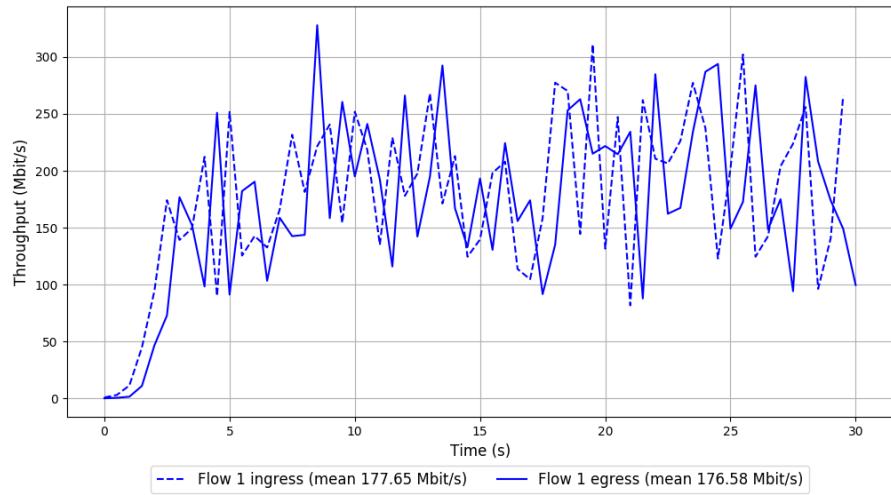


Run 4: Statistics of Indigo-96d2da3

```
Start at: 2018-10-02 15:10:32
End at: 2018-10-02 15:11:02
Local clock offset: -2.213 ms
Remote clock offset: -33.867 ms

# Below is generated by plot.py at 2018-10-02 16:05:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 176.58 Mbit/s
95th percentile per-packet one-way delay: 192.658 ms
Loss rate: 1.69%
-- Flow 1:
Average throughput: 176.58 Mbit/s
95th percentile per-packet one-way delay: 192.658 ms
Loss rate: 1.69%
```

Run 4: Report of Indigo-96d2da3 — Data Link

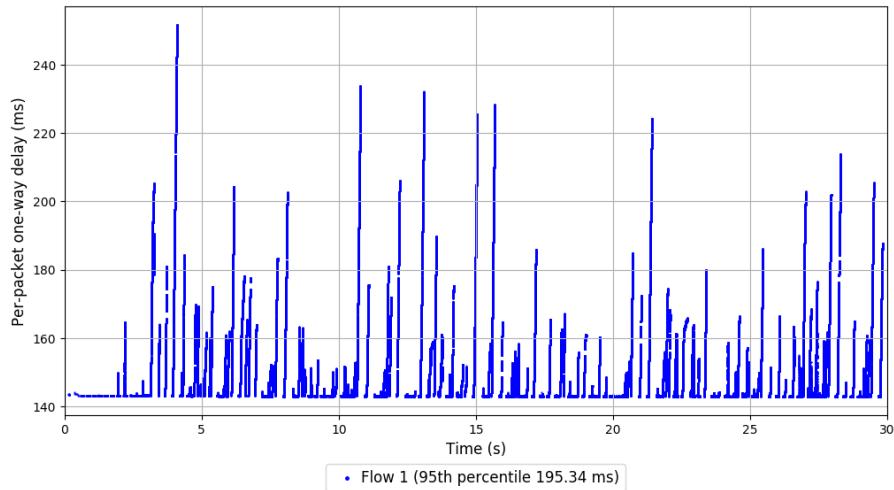
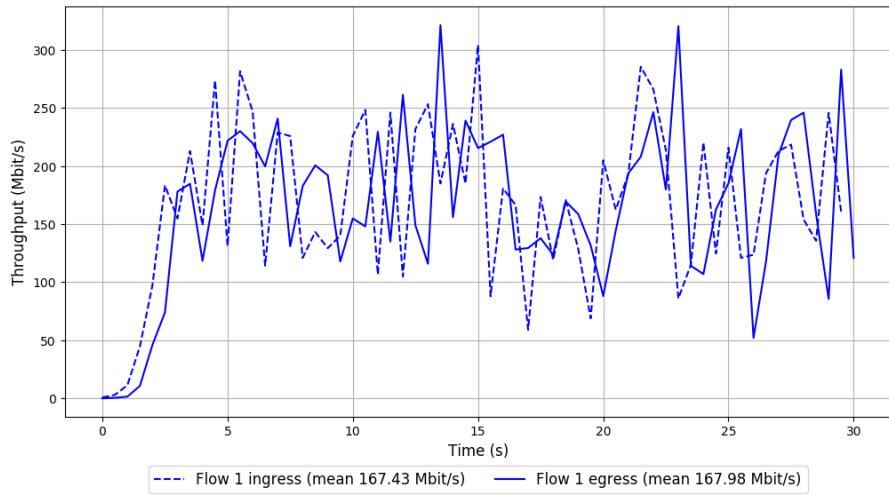


Run 5: Statistics of Indigo-96d2da3

```
Start at: 2018-10-02 15:39:47
End at: 2018-10-02 15:40:17
Local clock offset: -0.217 ms
Remote clock offset: -39.182 ms

# Below is generated by plot.py at 2018-10-02 16:05:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 167.98 Mbit/s
95th percentile per-packet one-way delay: 195.338 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 167.98 Mbit/s
95th percentile per-packet one-way delay: 195.338 ms
Loss rate: 0.52%
```

Run 5: Report of Indigo-96d2da3 — Data Link

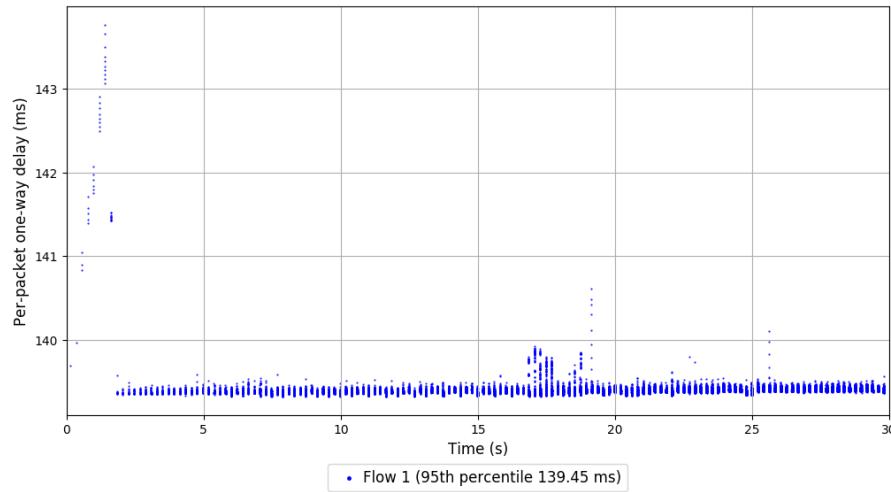
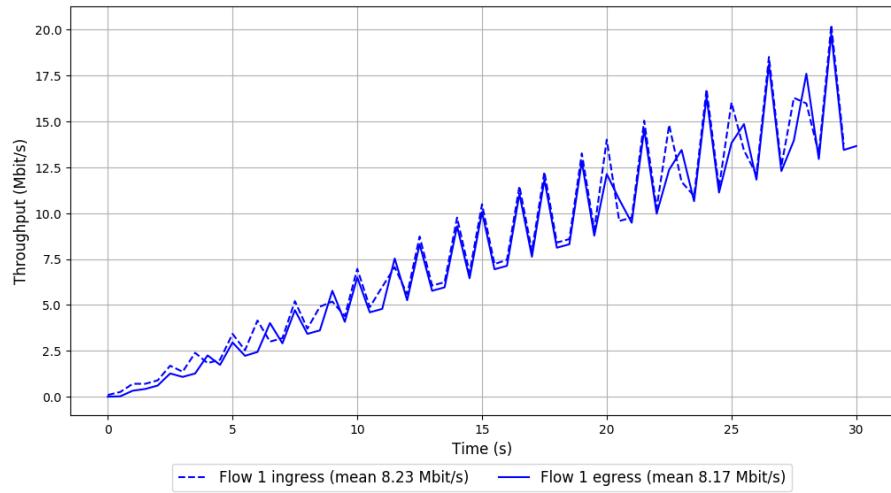


```
Run 1: Statistics of LEDBAT
```

```
Start at: 2018-10-02 13:49:50
End at: 2018-10-02 13:50:20
Local clock offset: -0.862 ms
Remote clock offset: -39.246 ms

# Below is generated by plot.py at 2018-10-02 16:05:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.17 Mbit/s
95th percentile per-packet one-way delay: 139.454 ms
Loss rate: 1.40%
-- Flow 1:
Average throughput: 8.17 Mbit/s
95th percentile per-packet one-way delay: 139.454 ms
Loss rate: 1.40%
```

## Run 1: Report of LEDBAT — Data Link

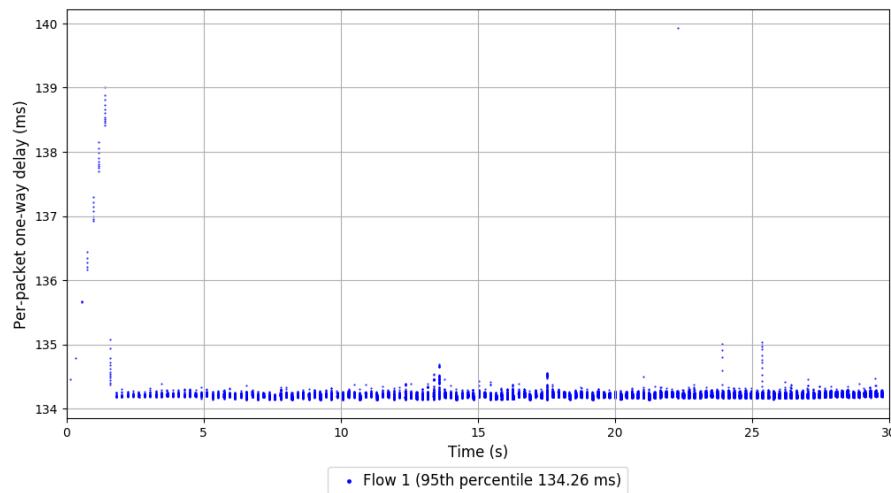
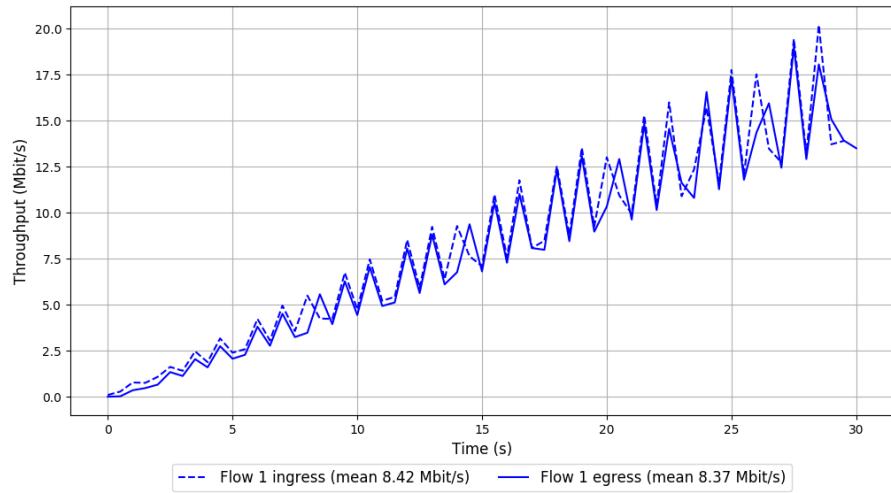


Run 2: Statistics of LEDBAT

```
Start at: 2018-10-02 14:25:18
End at: 2018-10-02 14:25:48
Local clock offset: 0.996 ms
Remote clock offset: -32.941 ms

# Below is generated by plot.py at 2018-10-02 16:05:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.37 Mbit/s
95th percentile per-packet one-way delay: 134.257 ms
Loss rate: 1.39%
-- Flow 1:
Average throughput: 8.37 Mbit/s
95th percentile per-packet one-way delay: 134.257 ms
Loss rate: 1.39%
```

## Run 2: Report of LEDBAT — Data Link

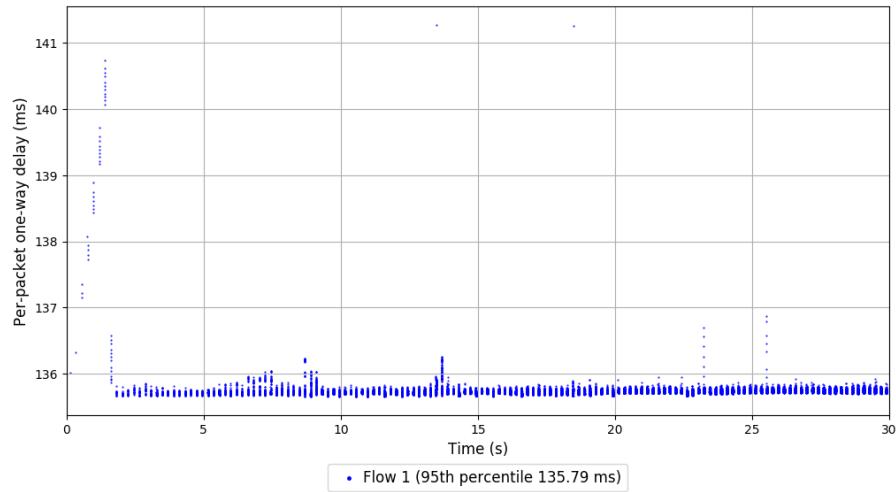
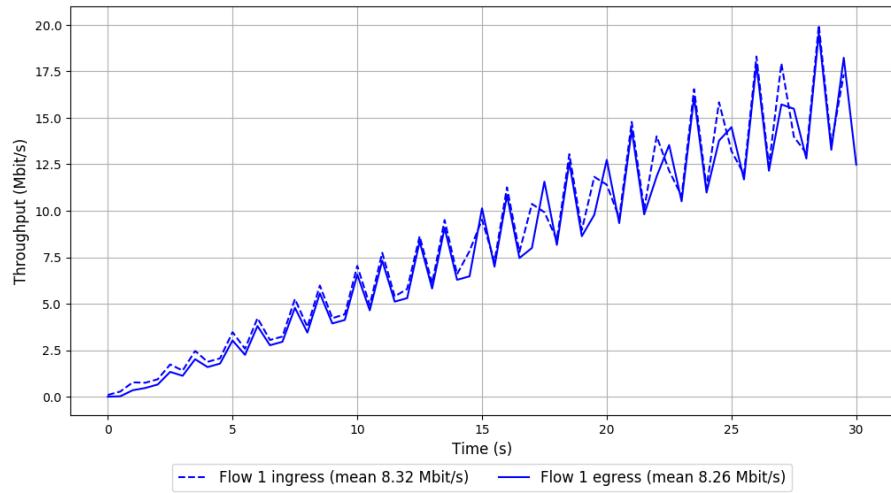


Run 3: Statistics of LEDBAT

```
Start at: 2018-10-02 14:49:22
End at: 2018-10-02 14:49:52
Local clock offset: 0.15 ms
Remote clock offset: -31.907 ms

# Below is generated by plot.py at 2018-10-02 16:05:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.26 Mbit/s
95th percentile per-packet one-way delay: 135.787 ms
Loss rate: 1.39%
-- Flow 1:
Average throughput: 8.26 Mbit/s
95th percentile per-packet one-way delay: 135.787 ms
Loss rate: 1.39%
```

### Run 3: Report of LEDBAT — Data Link

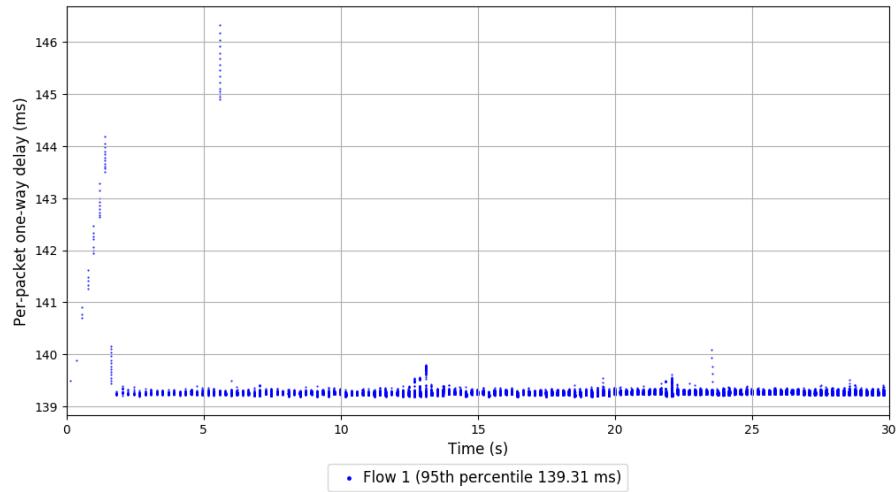
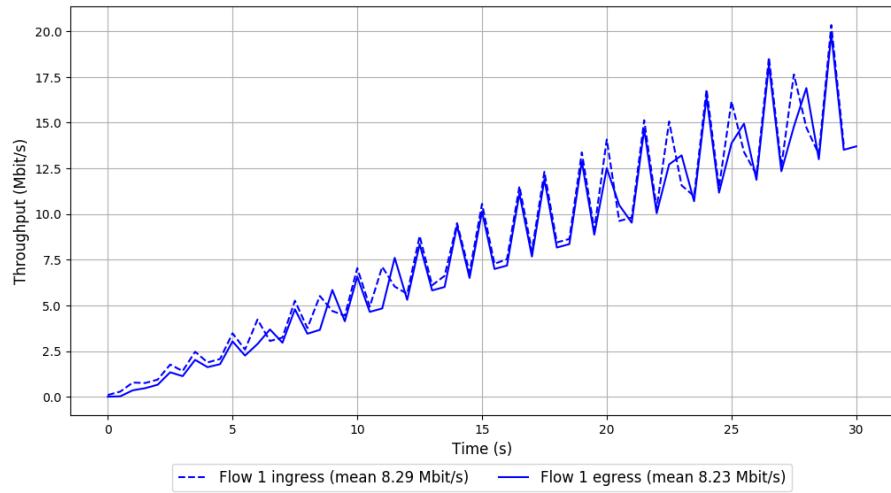


Run 4: Statistics of LEDBAT

```
Start at: 2018-10-02 15:13:08
End at: 2018-10-02 15:13:38
Local clock offset: -3.326 ms
Remote clock offset: -38.153 ms

# Below is generated by plot.py at 2018-10-02 16:05:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.23 Mbit/s
95th percentile per-packet one-way delay: 139.311 ms
Loss rate: 1.40%
-- Flow 1:
Average throughput: 8.23 Mbit/s
95th percentile per-packet one-way delay: 139.311 ms
Loss rate: 1.40%
```

## Run 4: Report of LEDBAT — Data Link

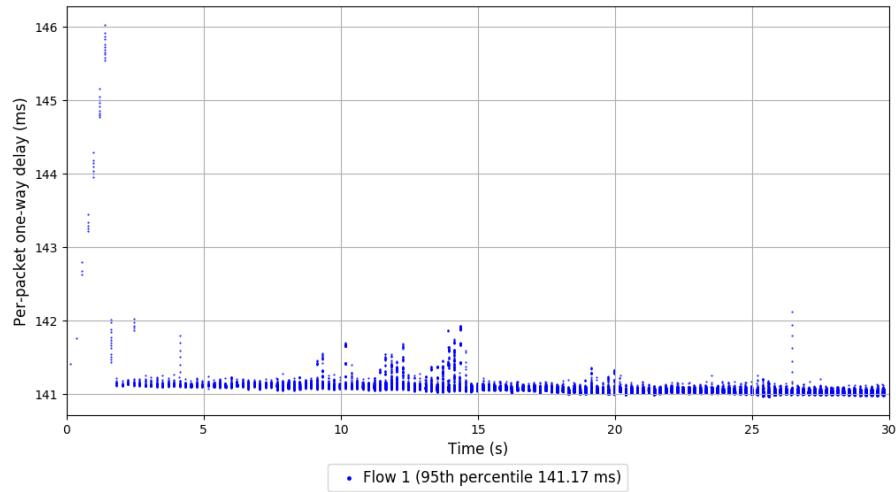
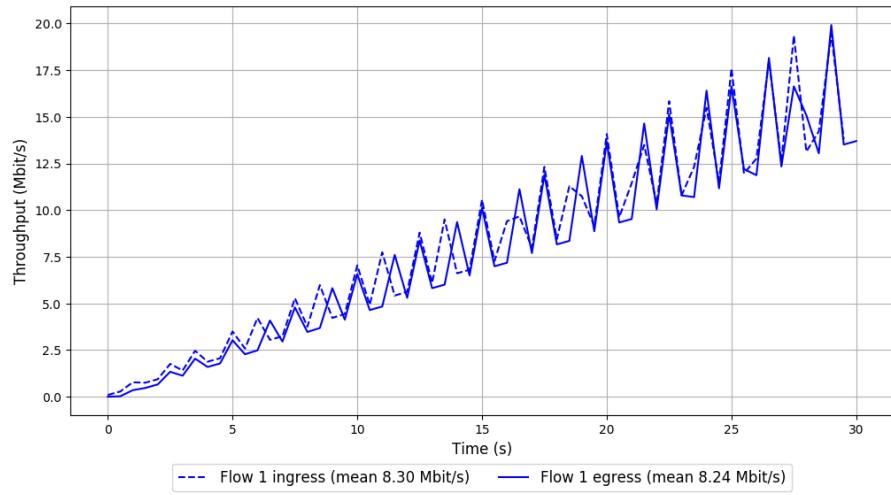


Run 5: Statistics of LEDBAT

```
Start at: 2018-10-02 15:42:35
End at: 2018-10-02 15:43:05
Local clock offset: -1.745 ms
Remote clock offset: -39.792 ms

# Below is generated by plot.py at 2018-10-02 16:05:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.24 Mbit/s
95th percentile per-packet one-way delay: 141.168 ms
Loss rate: 1.40%
-- Flow 1:
Average throughput: 8.24 Mbit/s
95th percentile per-packet one-way delay: 141.168 ms
Loss rate: 1.40%
```

## Run 5: Report of LEDBAT — Data Link

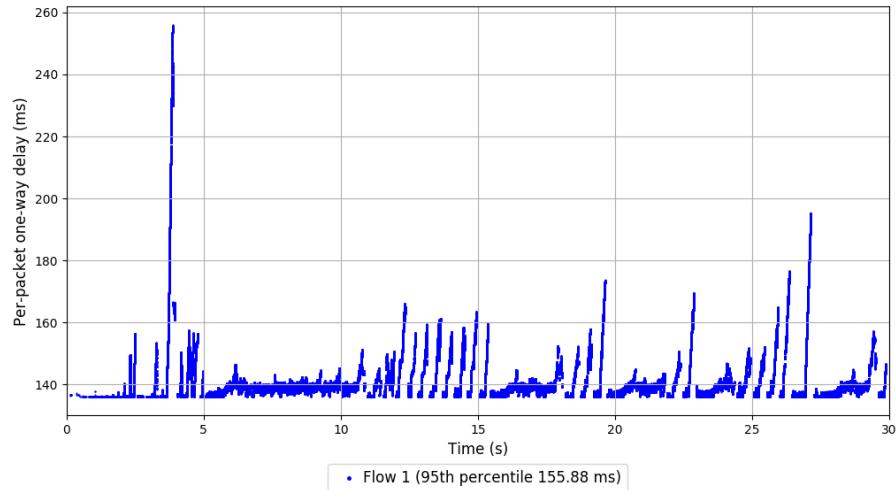
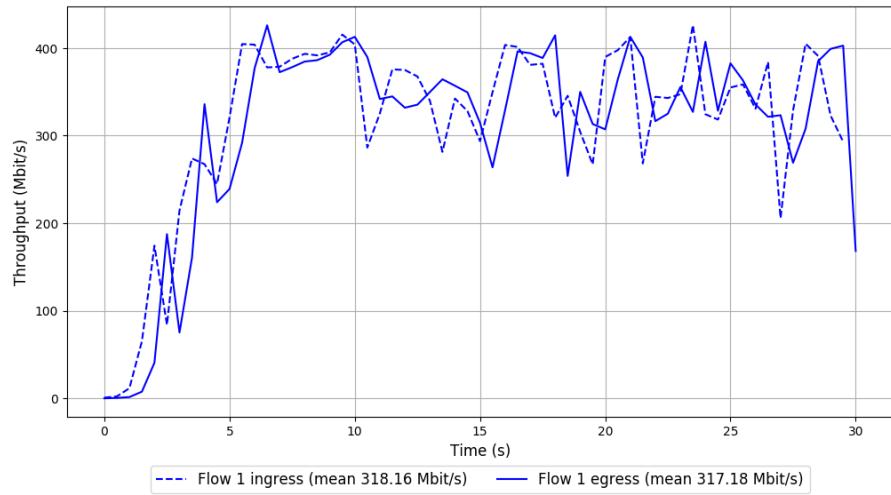


Run 1: Statistics of Indigo-Muses

```
Start at: 2018-10-02 13:38:37
End at: 2018-10-02 13:39:07
Local clock offset: 1.809 ms
Remote clock offset: -35.424 ms

# Below is generated by plot.py at 2018-10-02 16:07:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 317.18 Mbit/s
95th percentile per-packet one-way delay: 155.884 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 317.18 Mbit/s
95th percentile per-packet one-way delay: 155.884 ms
Loss rate: 0.81%
```

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

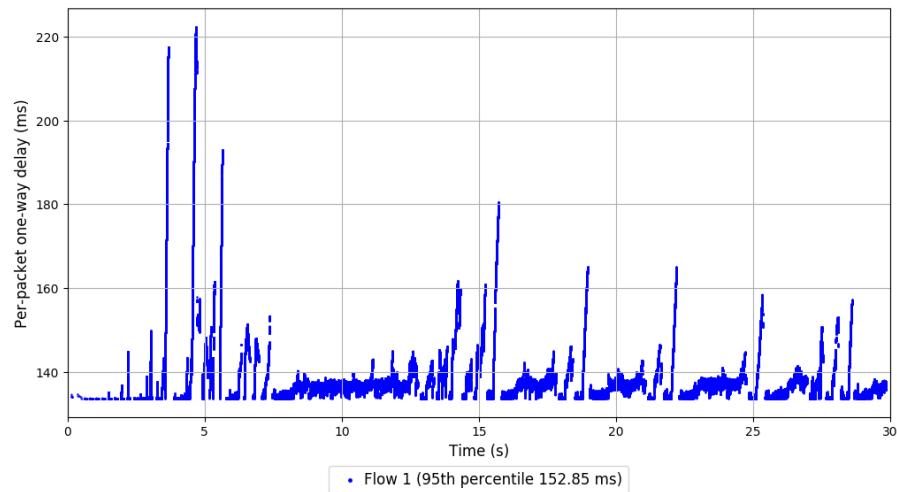
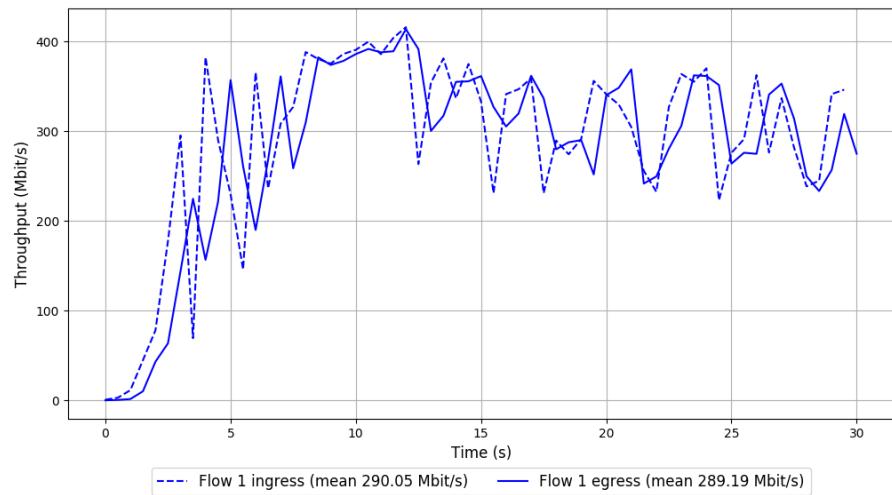


Run 2: Statistics of Indigo-Muses

```
Start at: 2018-10-02 14:14:08
End at: 2018-10-02 14:14:38
Local clock offset: -0.424 ms
Remote clock offset: -34.027 ms

# Below is generated by plot.py at 2018-10-02 16:07:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 289.19 Mbit/s
95th percentile per-packet one-way delay: 152.851 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 289.19 Mbit/s
95th percentile per-packet one-way delay: 152.851 ms
Loss rate: 1.00%
```

## Run 2: Report of Indigo-Muses — Data Link

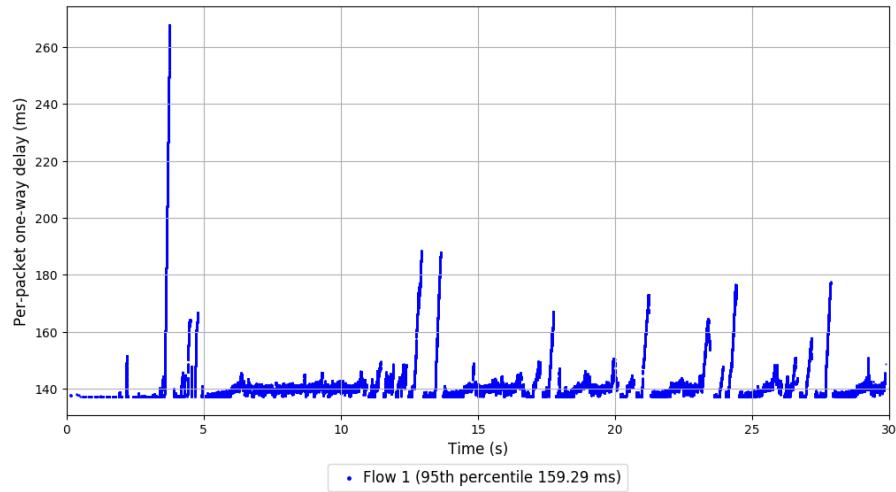
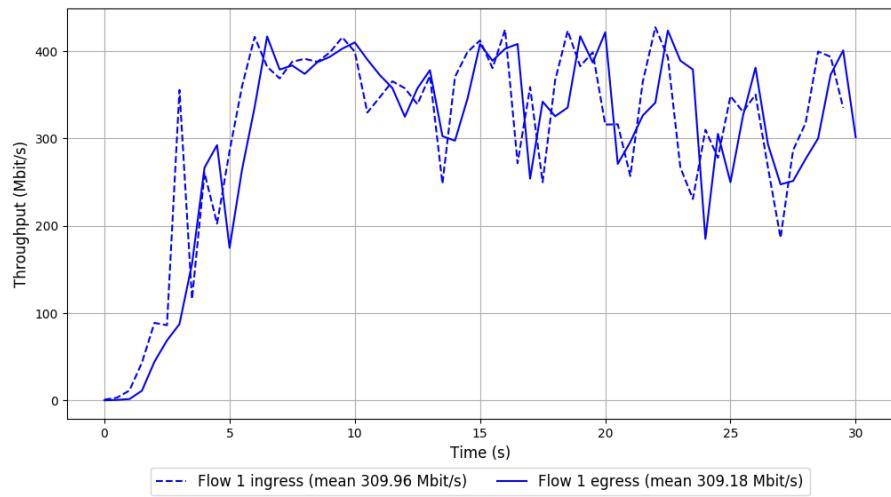


Run 3: Statistics of Indigo-Muses

```
Start at: 2018-10-02 14:43:54
End at: 2018-10-02 14:44:24
Local clock offset: -1.453 ms
Remote clock offset: -37.451 ms

# Below is generated by plot.py at 2018-10-02 16:07:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 309.18 Mbit/s
95th percentile per-packet one-way delay: 159.286 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 309.18 Mbit/s
95th percentile per-packet one-way delay: 159.286 ms
Loss rate: 0.80%
```

### Run 3: Report of Indigo-Muses — Data Link

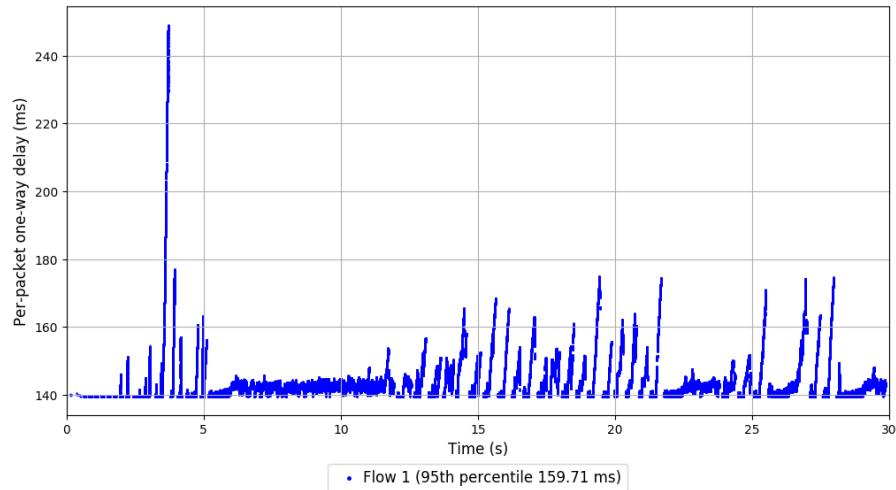
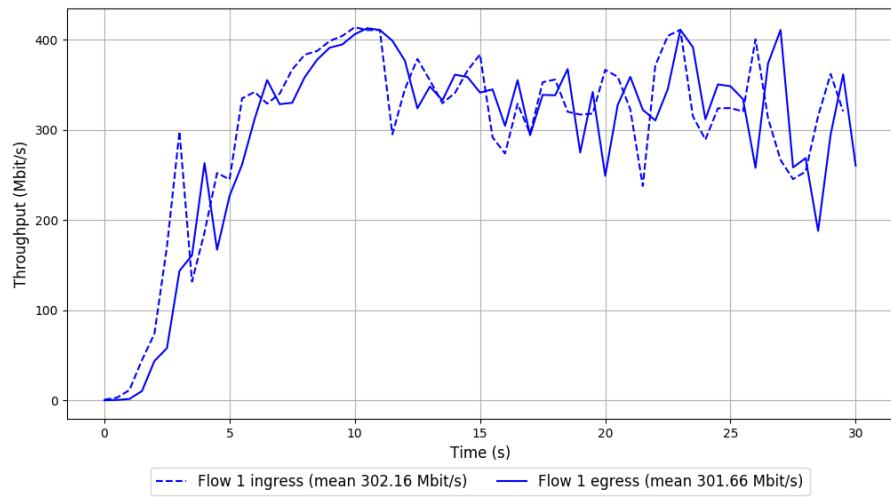


Run 4: Statistics of Indigo-Muses

```
Start at: 2018-10-02 15:07:52
End at: 2018-10-02 15:08:22
Local clock offset: -3.181 ms
Remote clock offset: -38.325 ms

# Below is generated by plot.py at 2018-10-02 16:07:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 301.66 Mbit/s
95th percentile per-packet one-way delay: 159.711 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 301.66 Mbit/s
95th percentile per-packet one-way delay: 159.711 ms
Loss rate: 0.87%
```

## Run 4: Report of Indigo-Muses — Data Link

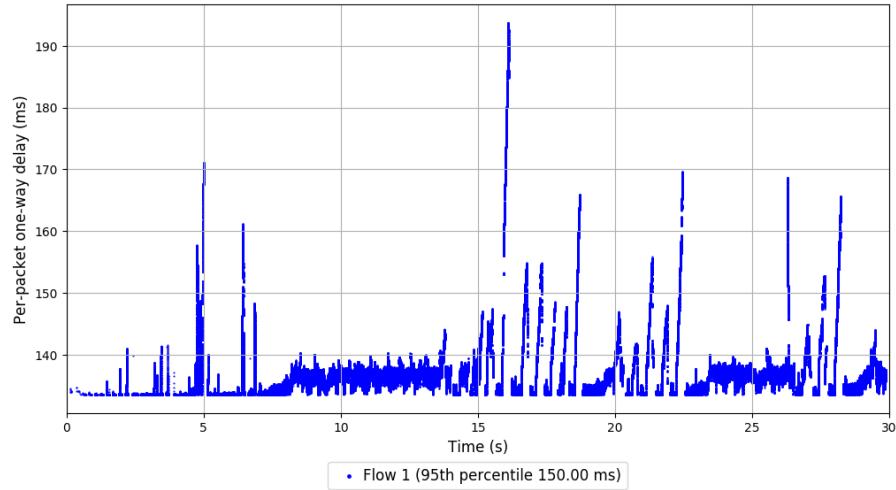
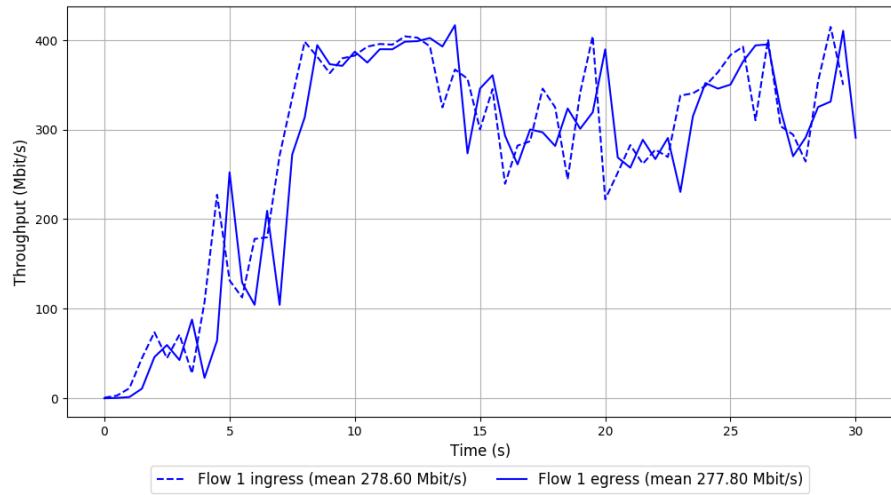


Run 5: Statistics of Indigo-Muses

```
Start at: 2018-10-02 15:37:09
End at: 2018-10-02 15:37:39
Local clock offset: -2.388 ms
Remote clock offset: -33.333 ms

# Below is generated by plot.py at 2018-10-02 16:07:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 277.80 Mbit/s
95th percentile per-packet one-way delay: 150.002 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 277.80 Mbit/s
95th percentile per-packet one-way delay: 150.002 ms
Loss rate: 1.01%
```

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

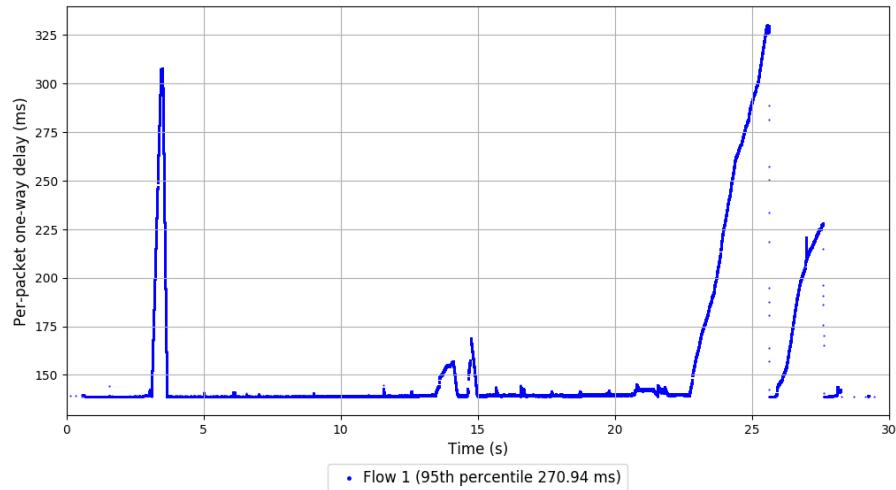
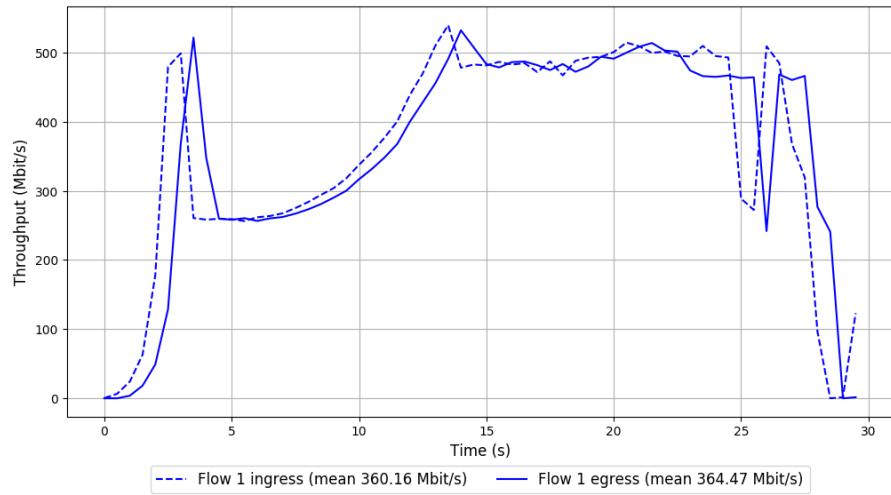


Run 1: Statistics of PCC-Allegro

```
Start at: 2018-10-02 13:51:02
End at: 2018-10-02 13:51:32
Local clock offset: 1.85 ms
Remote clock offset: -36.395 ms

# Below is generated by plot.py at 2018-10-02 16:08:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 364.47 Mbit/s
95th percentile per-packet one-way delay: 270.940 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 364.47 Mbit/s
95th percentile per-packet one-way delay: 270.940 ms
Loss rate: 0.62%
```

Run 1: Report of PCC-Allegro — Data Link

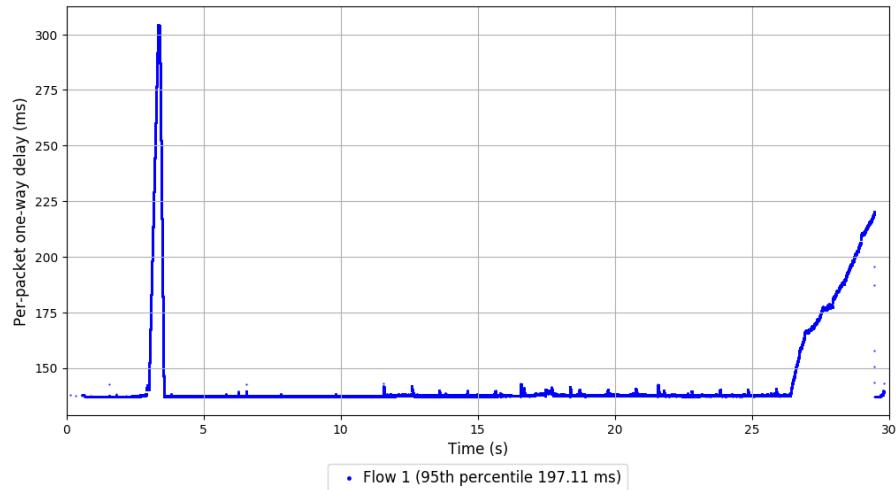
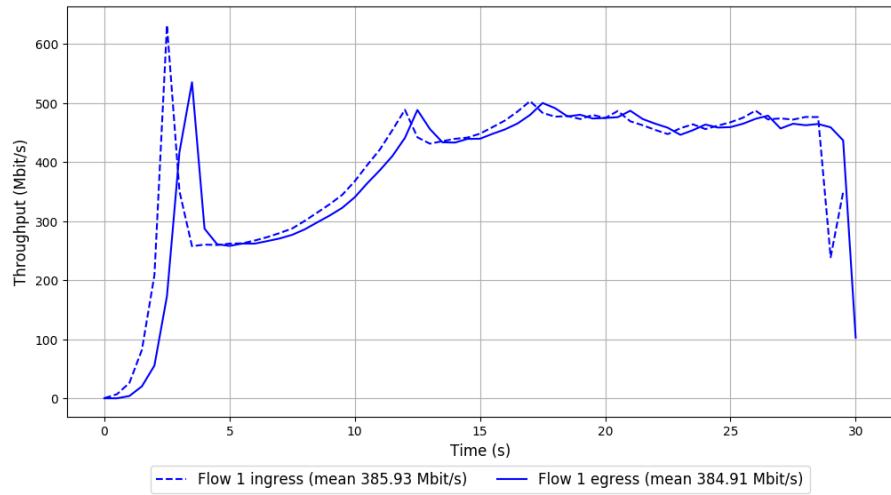


Run 2: Statistics of PCC-Allegro

```
Start at: 2018-10-02 14:26:30
End at: 2018-10-02 14:27:00
Local clock offset: -0.235 ms
Remote clock offset: -35.596 ms

# Below is generated by plot.py at 2018-10-02 16:08:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 384.91 Mbit/s
95th percentile per-packet one-way delay: 197.111 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 384.91 Mbit/s
95th percentile per-packet one-way delay: 197.111 ms
Loss rate: 1.09%
```

Run 2: Report of PCC-Allegro — Data Link

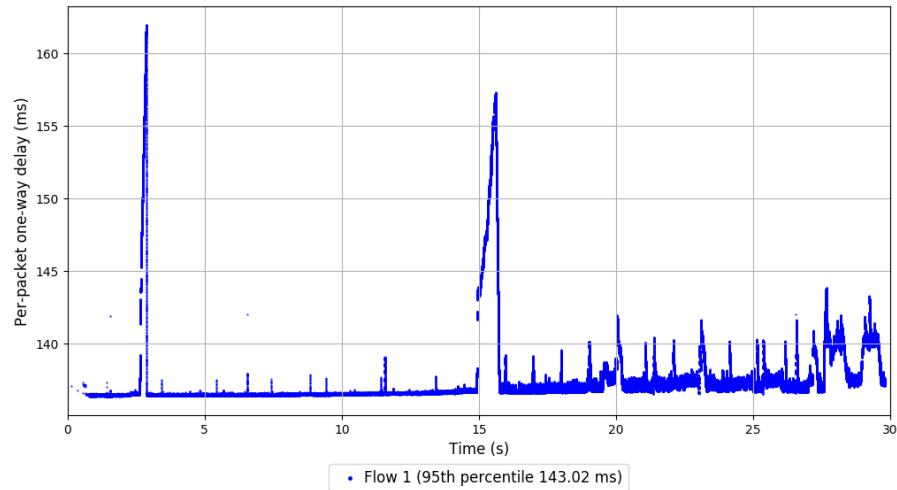
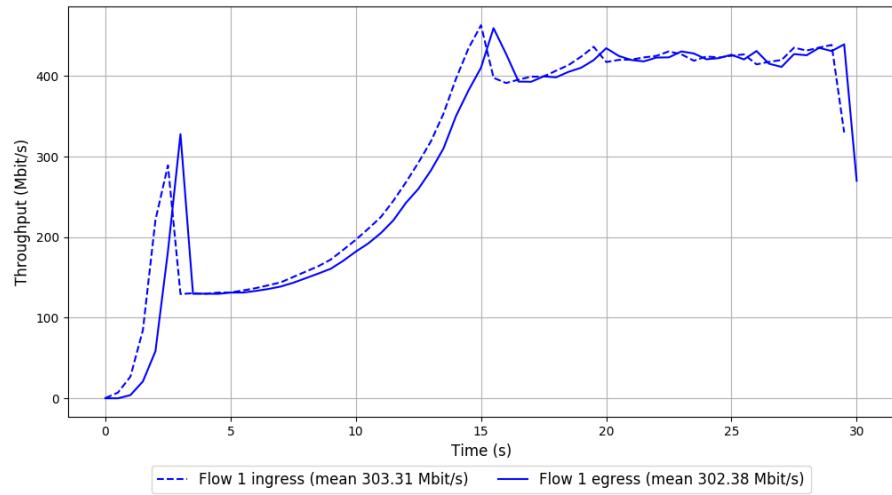


Run 3: Statistics of PCC-Allegro

```
Start at: 2018-10-02 14:50:34
End at: 2018-10-02 14:51:04
Local clock offset: -1.857 ms
Remote clock offset: -34.885 ms

# Below is generated by plot.py at 2018-10-02 16:08:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 302.38 Mbit/s
95th percentile per-packet one-way delay: 143.019 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 302.38 Mbit/s
95th percentile per-packet one-way delay: 143.019 ms
Loss rate: 1.00%
```

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

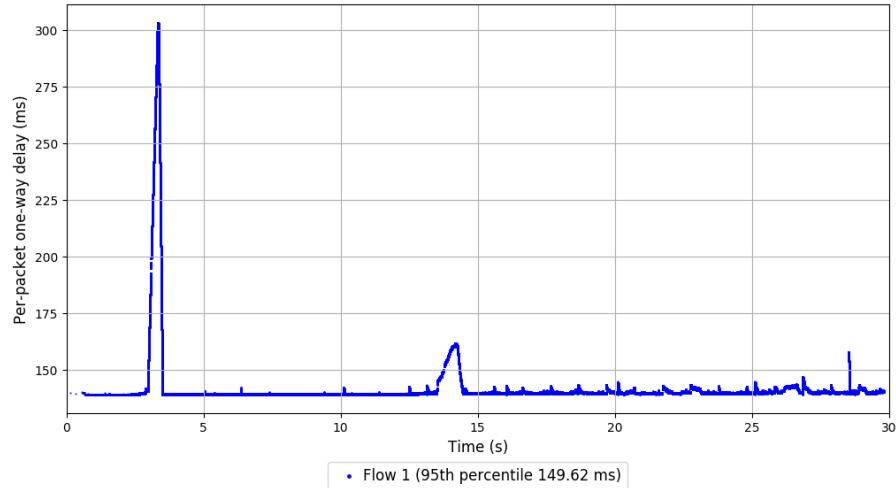
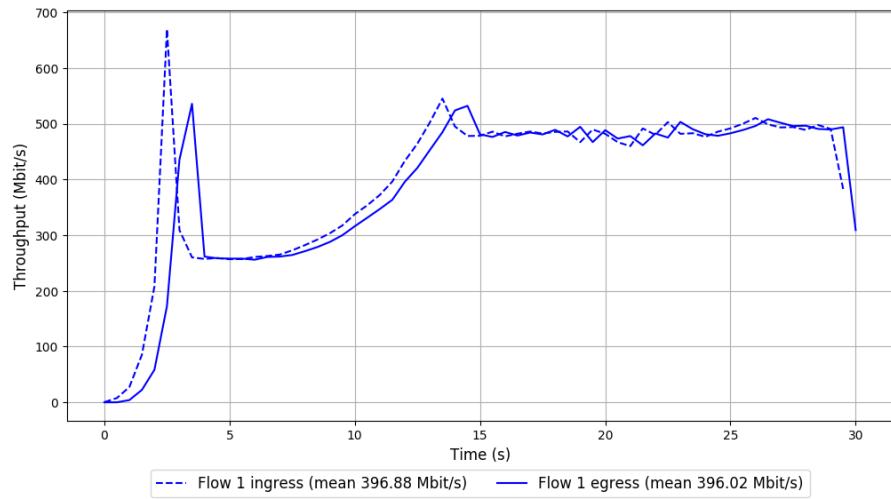


Run 4: Statistics of PCC-Allegro

```
Start at: 2018-10-02 15:14:20
End at: 2018-10-02 15:14:50
Local clock offset: -1.445 ms
Remote clock offset: -36.332 ms

# Below is generated by plot.py at 2018-10-02 16:11:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 396.02 Mbit/s
95th percentile per-packet one-way delay: 149.624 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 396.02 Mbit/s
95th percentile per-packet one-way delay: 149.624 ms
Loss rate: 0.93%
```

Run 4: Report of PCC-Allegro — Data Link

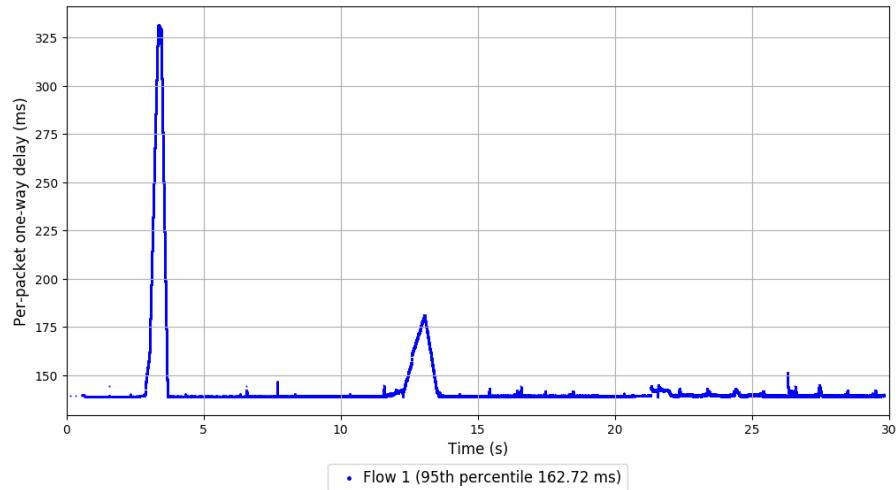
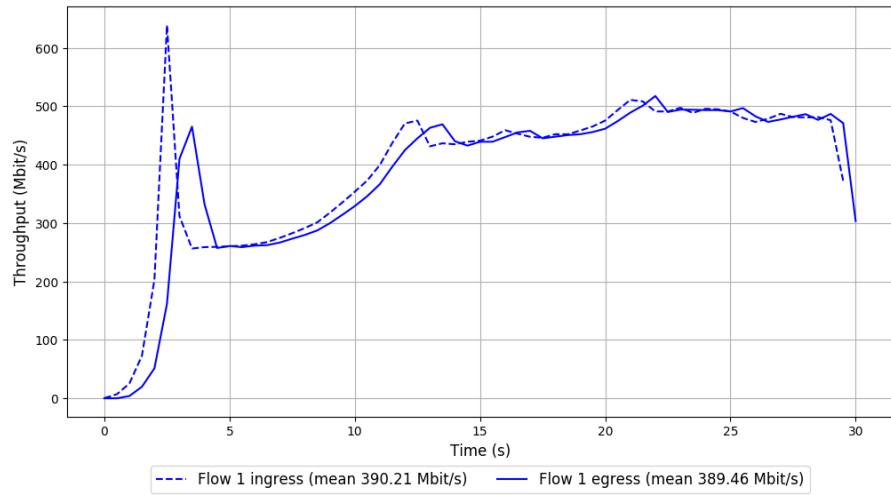


Run 5: Statistics of PCC-Allegro

```
Start at: 2018-10-02 15:43:47
End at: 2018-10-02 15:44:17
Local clock offset: -2.681 ms
Remote clock offset: -38.907 ms

# Below is generated by plot.py at 2018-10-02 16:11:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 389.46 Mbit/s
95th percentile per-packet one-way delay: 162.716 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 389.46 Mbit/s
95th percentile per-packet one-way delay: 162.716 ms
Loss rate: 0.89%
```

Run 5: Report of PCC-Allegro — Data Link

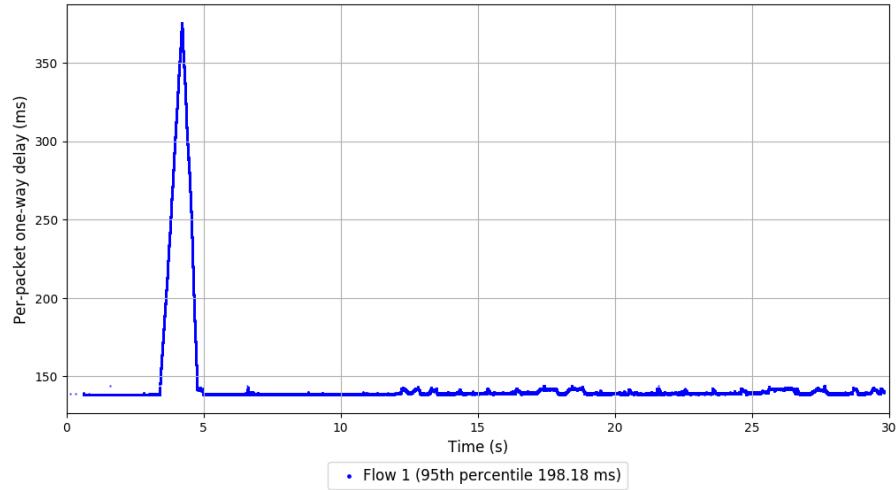
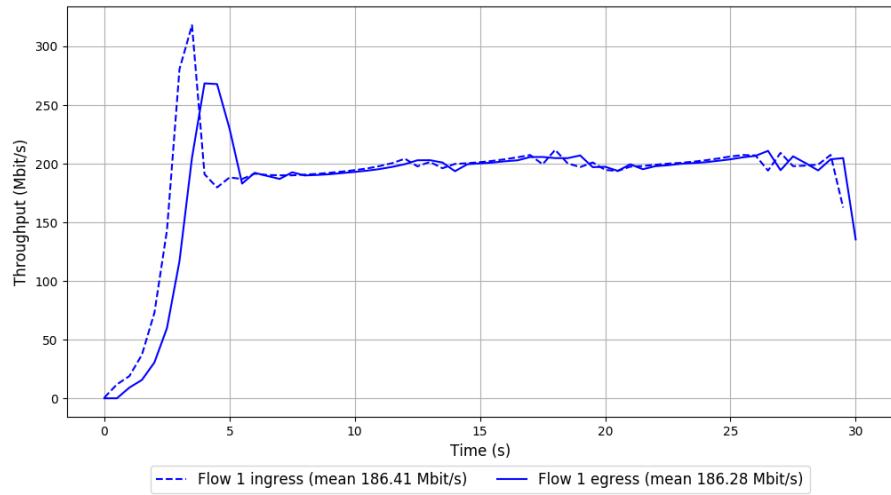


```
Run 1: Statistics of PCC-Expr
```

```
Start at: 2018-10-02 13:53:53
End at: 2018-10-02 13:54:23
Local clock offset: -0.053 ms
Remote clock offset: -39.08 ms

# Below is generated by plot.py at 2018-10-02 16:11:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 186.28 Mbit/s
95th percentile per-packet one-way delay: 198.177 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 186.28 Mbit/s
95th percentile per-packet one-way delay: 198.177 ms
Loss rate: 0.76%
```

Run 1: Report of PCC-Expr — Data Link

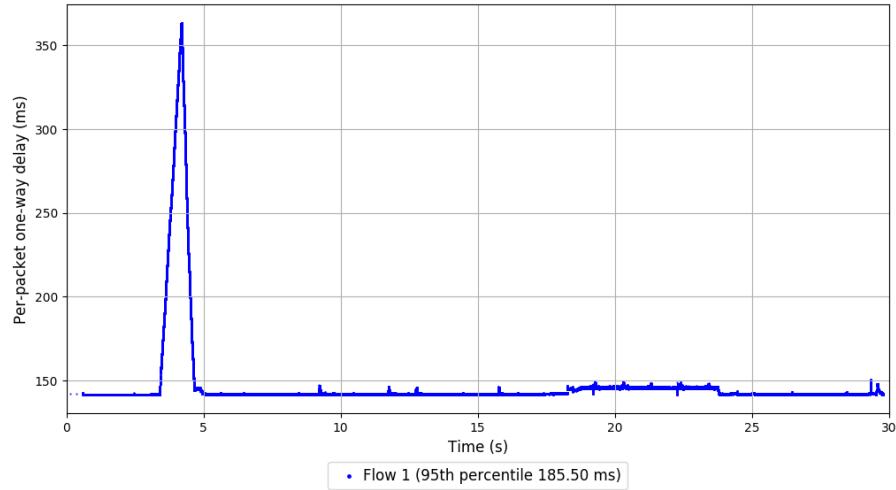
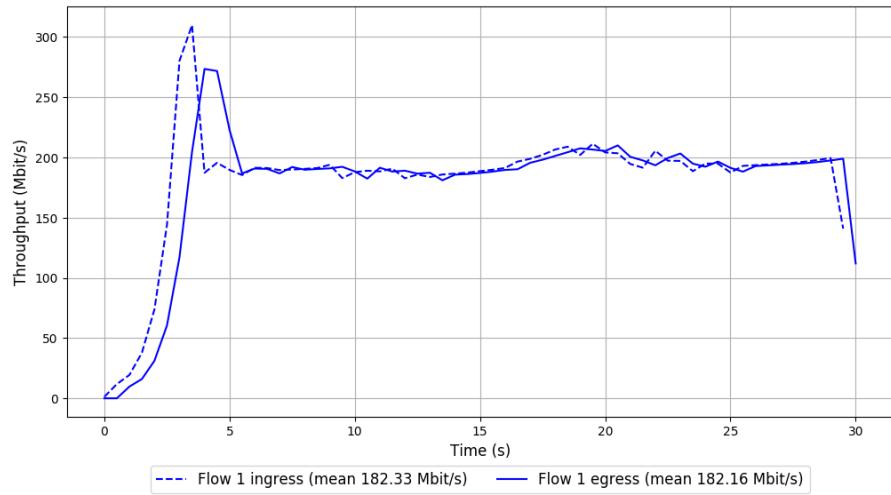


Run 2: Statistics of PCC-Expr

```
Start at: 2018-10-02 14:29:21
End at: 2018-10-02 14:29:51
Local clock offset: 1.064 ms
Remote clock offset: -38.701 ms

# Below is generated by plot.py at 2018-10-02 16:11:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 182.16 Mbit/s
95th percentile per-packet one-way delay: 185.496 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 182.16 Mbit/s
95th percentile per-packet one-way delay: 185.496 ms
Loss rate: 0.79%
```

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

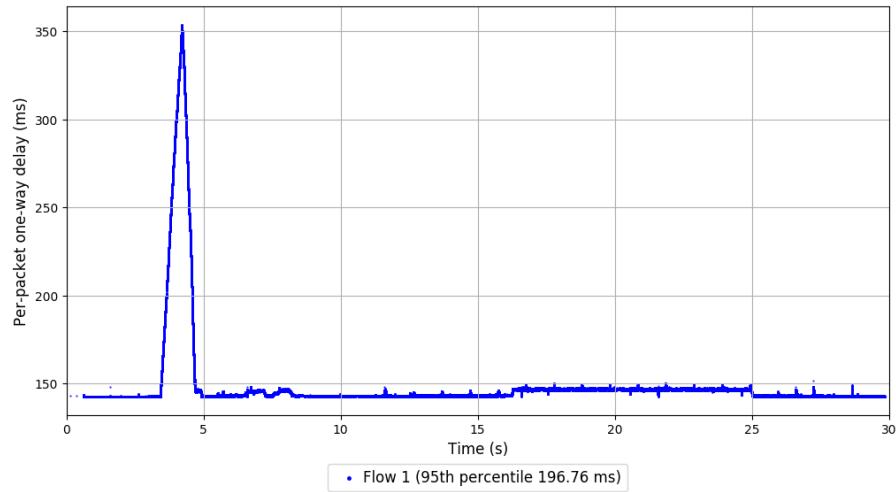
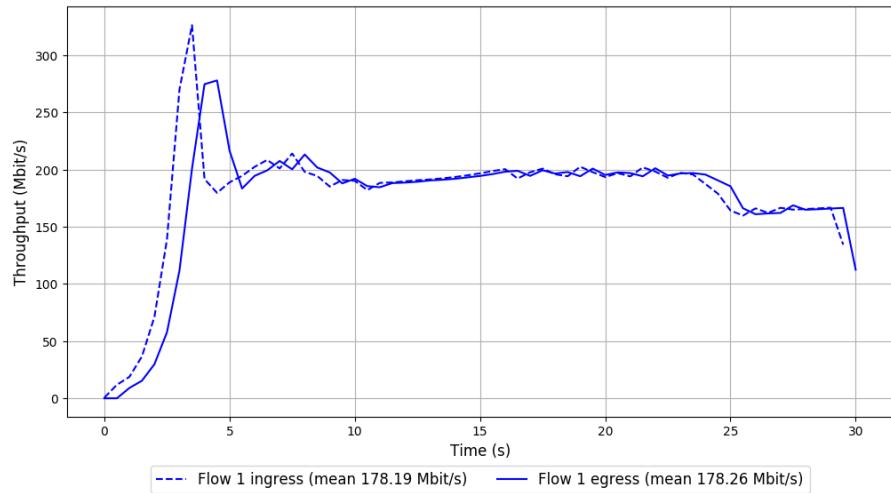


Run 3: Statistics of PCC-Expr

```
Start at: 2018-10-02 14:53:24
End at: 2018-10-02 14:53:54
Local clock offset: 0.699 ms
Remote clock offset: -38.068 ms

# Below is generated by plot.py at 2018-10-02 16:11:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 178.26 Mbit/s
95th percentile per-packet one-way delay: 196.761 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 178.26 Mbit/s
95th percentile per-packet one-way delay: 196.761 ms
Loss rate: 0.66%
```

Run 3: Report of PCC-Expr — Data Link

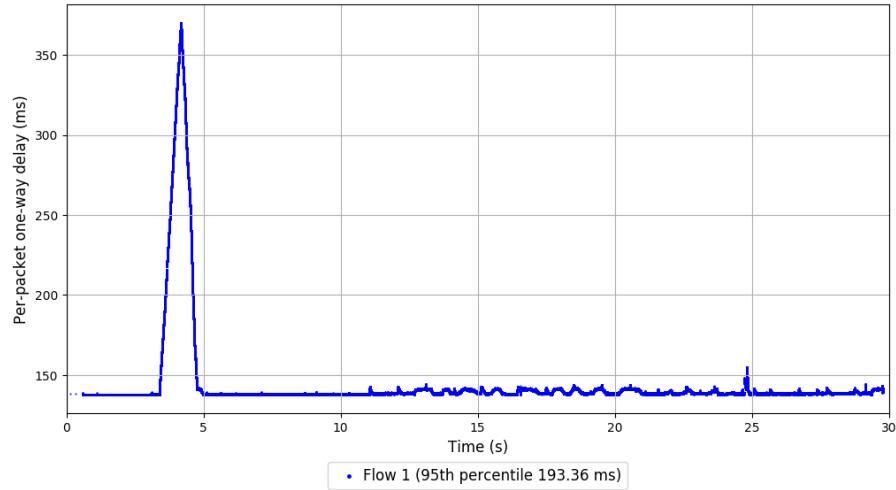
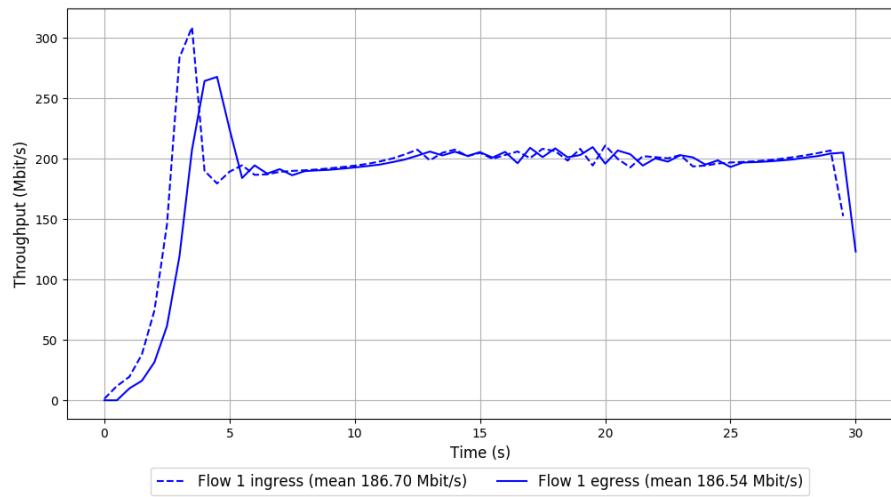


Run 4: Statistics of PCC-Expr

```
Start at: 2018-10-02 15:22:48
End at: 2018-10-02 15:23:18
Local clock offset: -2.957 ms
Remote clock offset: -36.575 ms

# Below is generated by plot.py at 2018-10-02 16:12:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 186.54 Mbit/s
95th percentile per-packet one-way delay: 193.360 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 186.54 Mbit/s
95th percentile per-packet one-way delay: 193.360 ms
Loss rate: 0.79%
```

Run 4: Report of PCC-Expr — Data Link

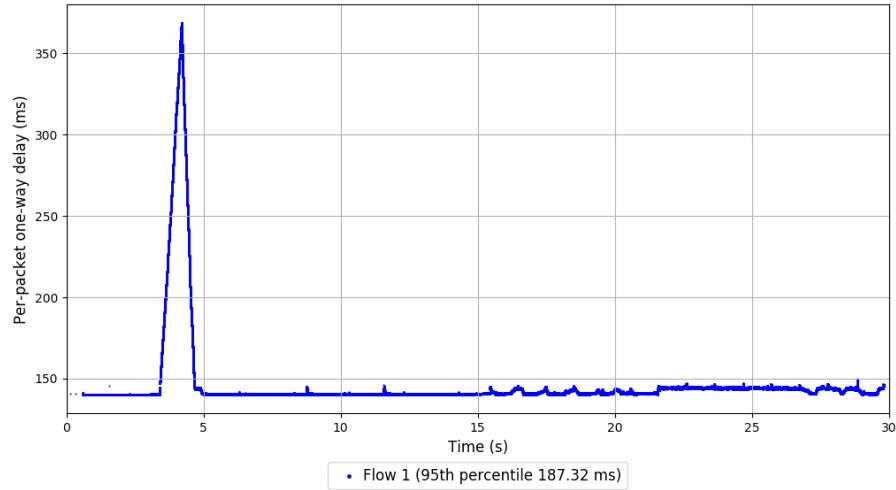
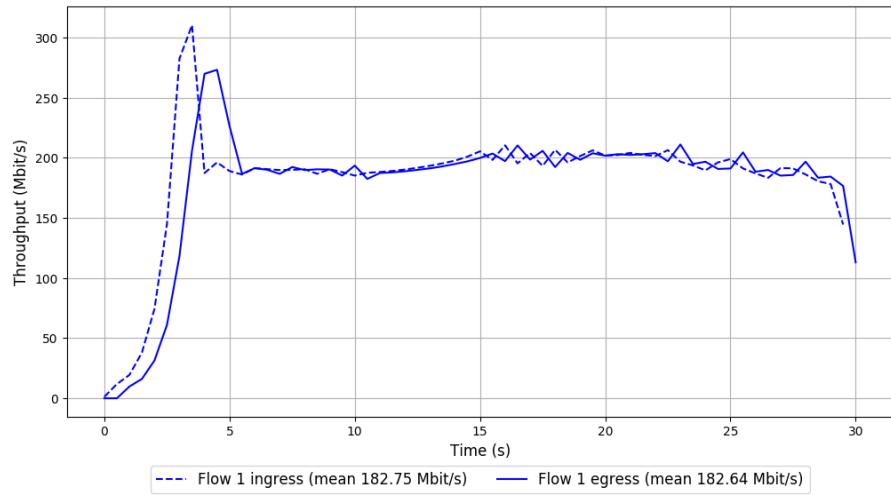


Run 5: Statistics of PCC-Expr

```
Start at: 2018-10-02 15:46:39
End at: 2018-10-02 15:47:09
Local clock offset: -1.754 ms
Remote clock offset: -39.62 ms

# Below is generated by plot.py at 2018-10-02 16:13:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 182.64 Mbit/s
95th percentile per-packet one-way delay: 187.317 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 182.64 Mbit/s
95th percentile per-packet one-way delay: 187.317 ms
Loss rate: 0.77%
```

Run 5: Report of PCC-Expr — Data Link

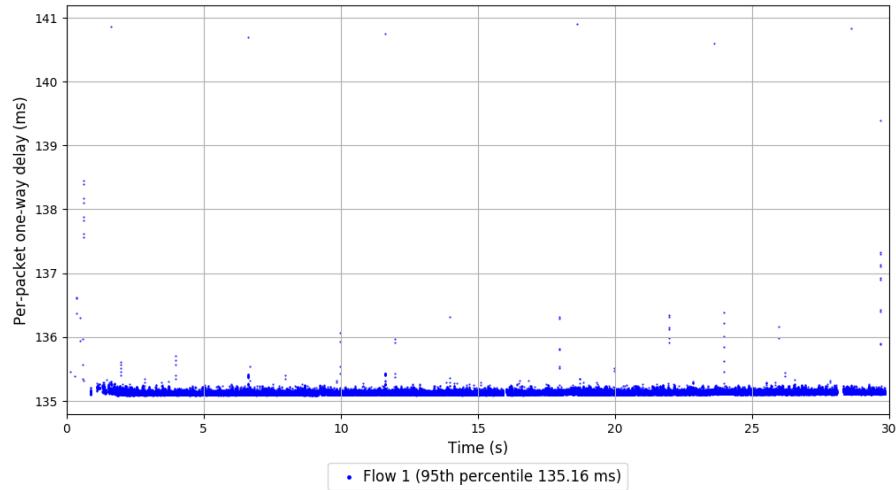
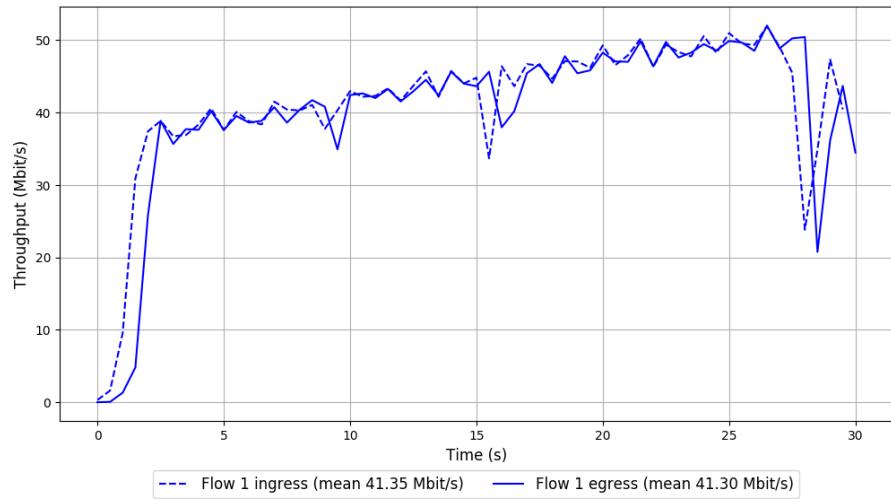


Run 1: Statistics of QUIC Cubic

```
Start at: 2018-10-02 13:45:42
End at: 2018-10-02 13:46:12
Local clock offset: 1.214 ms
Remote clock offset: -34.938 ms

# Below is generated by plot.py at 2018-10-02 16:13:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 41.30 Mbit/s
95th percentile per-packet one-way delay: 135.159 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 41.30 Mbit/s
95th percentile per-packet one-way delay: 135.159 ms
Loss rate: 0.83%
```

## Run 1: Report of QUIC Cubic — Data Link

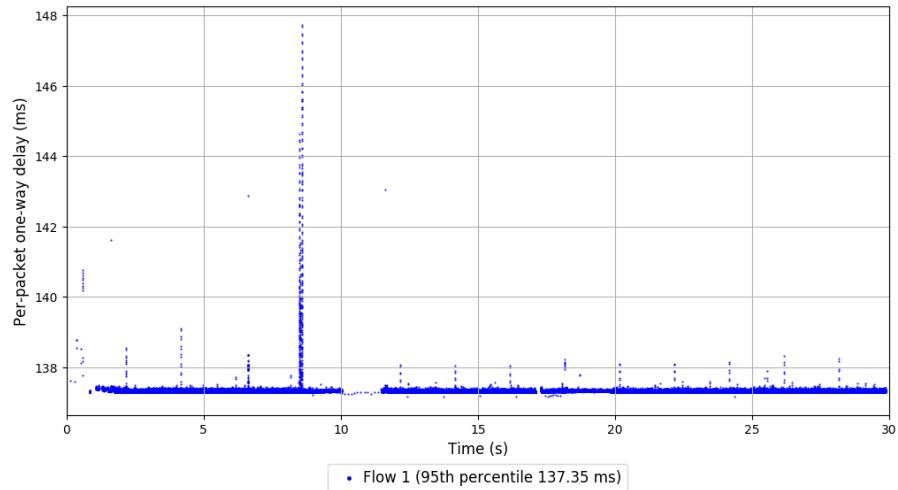
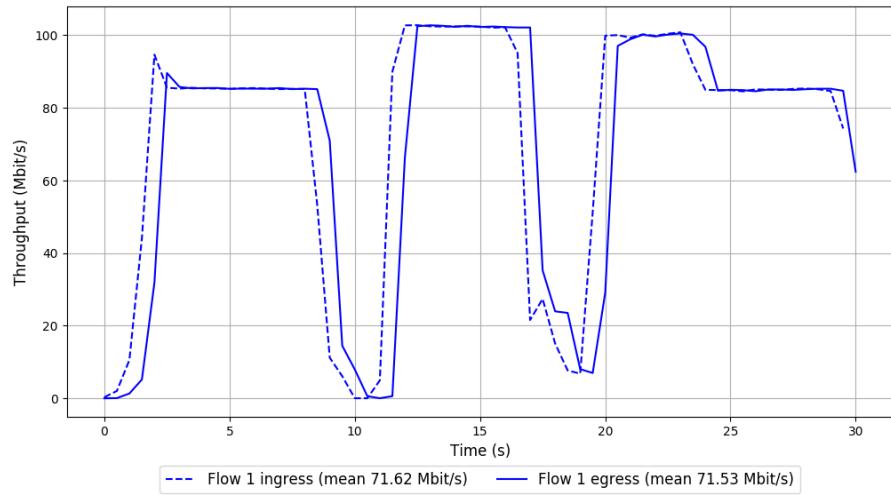


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-10-02 14:21:07
End at: 2018-10-02 14:21:37
Local clock offset: 1.537 ms
Remote clock offset: -34.04 ms

# Below is generated by plot.py at 2018-10-02 16:13:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 71.53 Mbit/s
95th percentile per-packet one-way delay: 137.353 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 71.53 Mbit/s
95th percentile per-packet one-way delay: 137.353 ms
Loss rate: 0.82%
```

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

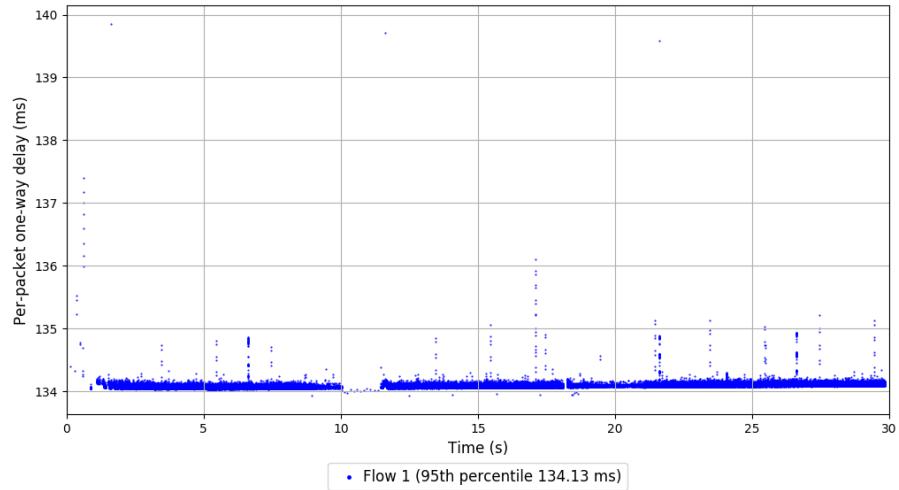
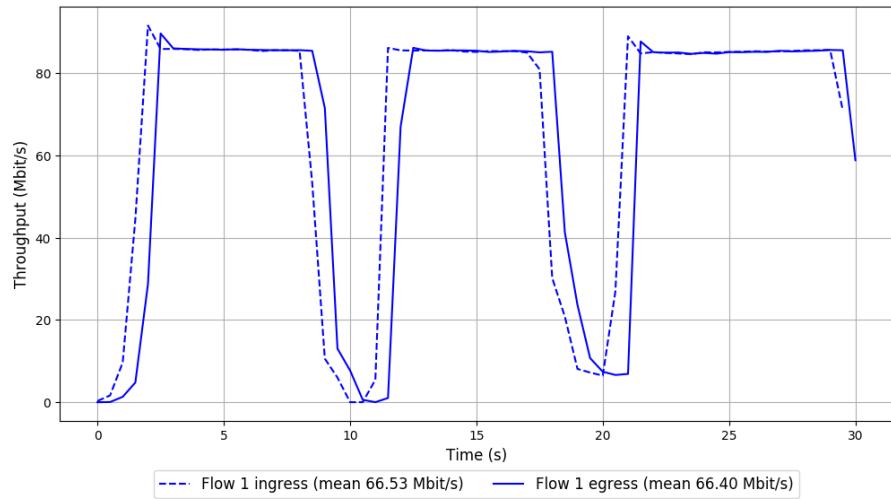


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-10-02 14:45:18
End at: 2018-10-02 14:45:48
Local clock offset: 0.378 ms
Remote clock offset: -32.323 ms

# Below is generated by plot.py at 2018-10-02 16:13:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 66.40 Mbit/s
95th percentile per-packet one-way delay: 134.126 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 66.40 Mbit/s
95th percentile per-packet one-way delay: 134.126 ms
Loss rate: 0.88%
```

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

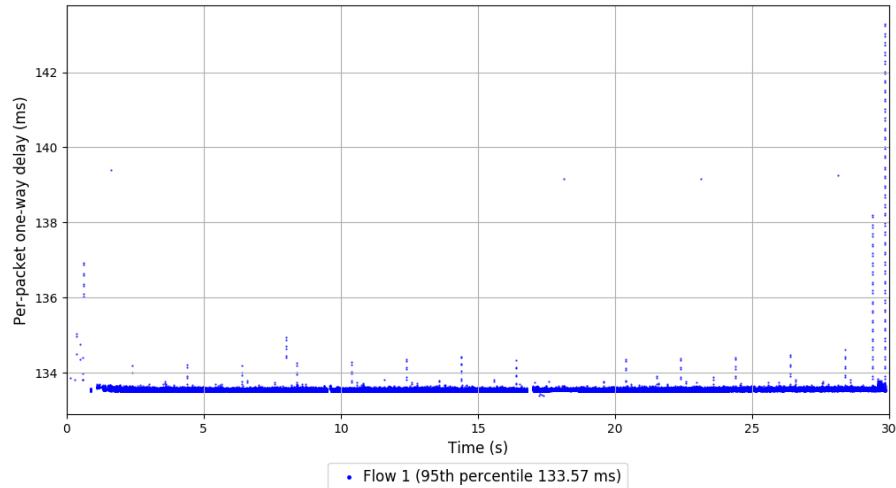
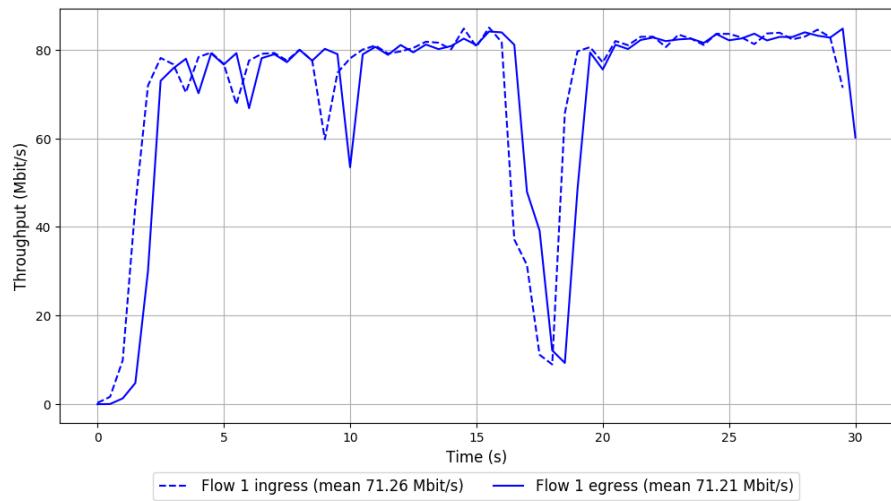


Run 4: Statistics of QUIC Cubic

```
Start at: 2018-10-02 15:09:17
End at: 2018-10-02 15:09:47
Local clock offset: -1.298 ms
Remote clock offset: -32.461 ms

# Below is generated by plot.py at 2018-10-02 16:13:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 71.21 Mbit/s
95th percentile per-packet one-way delay: 133.573 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 71.21 Mbit/s
95th percentile per-packet one-way delay: 133.573 ms
Loss rate: 0.75%
```

## Run 4: Report of QUIC Cubic — Data Link

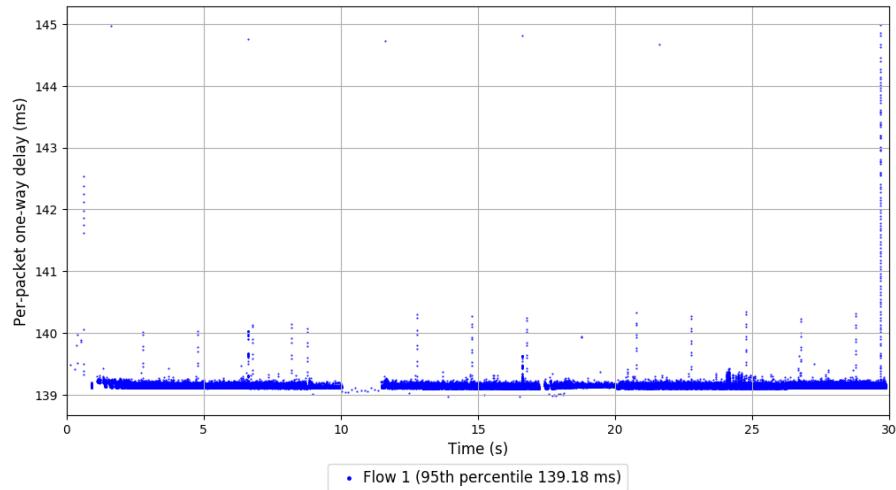
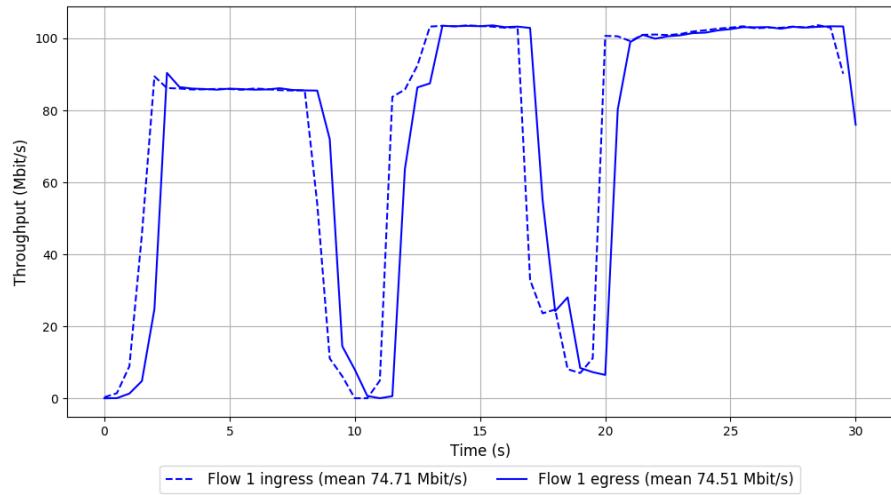


Run 5: Statistics of QUIC Cubic

```
Start at: 2018-10-02 15:38:33
End at: 2018-10-02 15:39:03
Local clock offset: -2.397 ms
Remote clock offset: -39.015 ms

# Below is generated by plot.py at 2018-10-02 16:13:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 74.51 Mbit/s
95th percentile per-packet one-way delay: 139.176 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 74.51 Mbit/s
95th percentile per-packet one-way delay: 139.176 ms
Loss rate: 0.95%
```

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

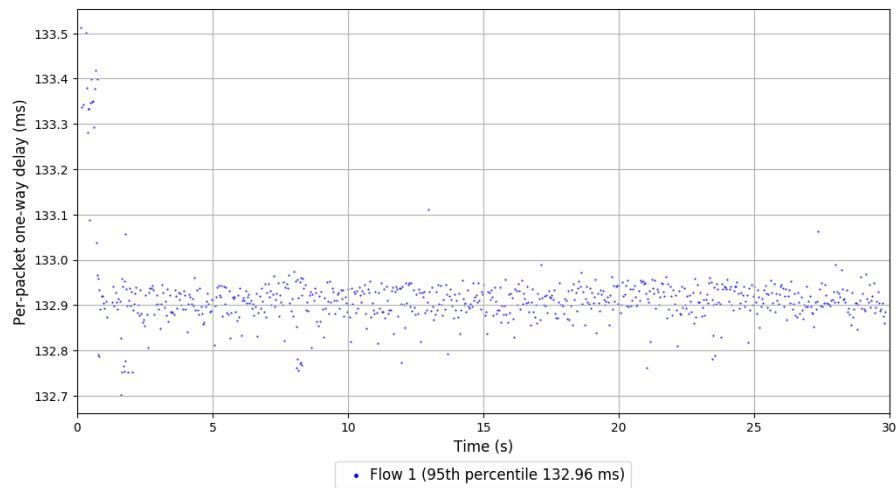
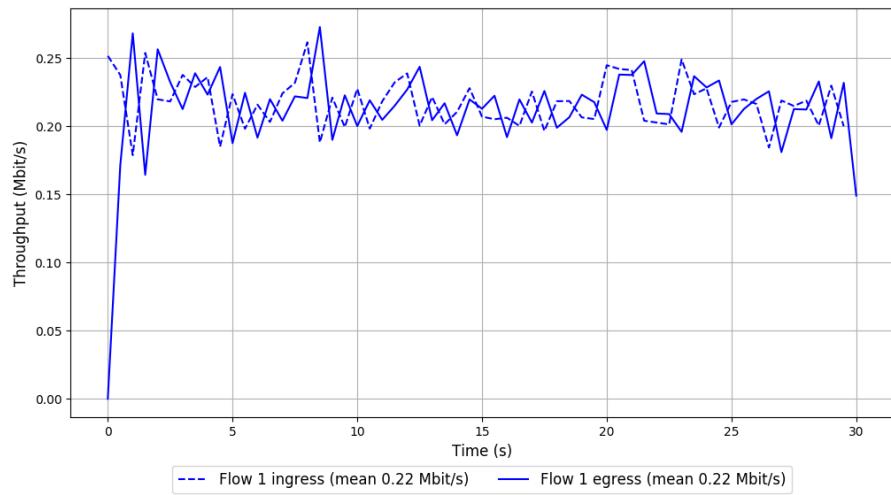


Run 1: Statistics of SCReAM

```
Start at: 2018-10-02 13:28:04
End at: 2018-10-02 13:28:34
Local clock offset: -0.92 ms
Remote clock offset: -35.332 ms

# Below is generated by plot.py at 2018-10-02 16:13:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 132.959 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 132.959 ms
Loss rate: 0.77%
```

Run 1: Report of SCReAM — Data Link

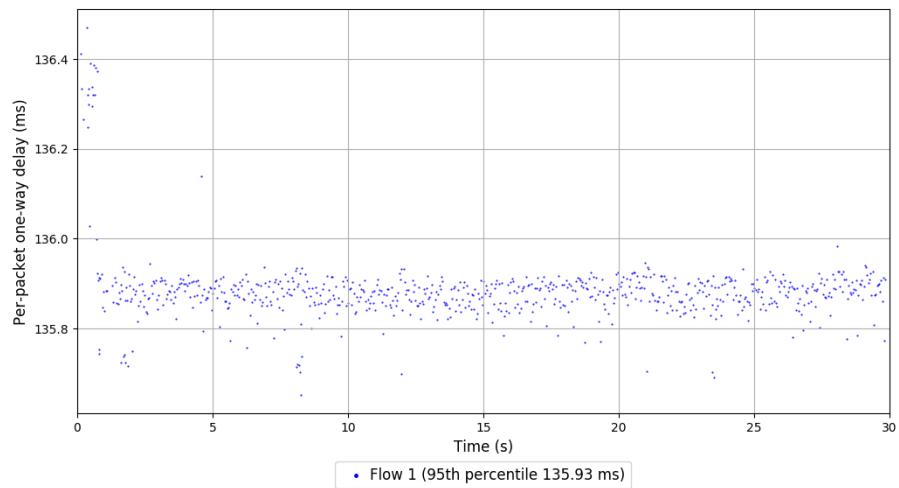
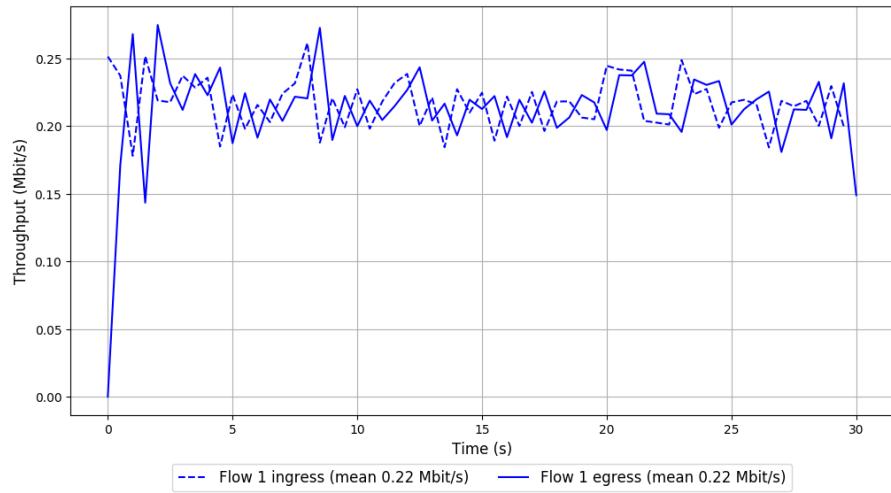


Run 2: Statistics of SCReAM

```
Start at: 2018-10-02 14:03:32
End at: 2018-10-02 14:04:02
Local clock offset: 0.094 ms
Remote clock offset: -34.02 ms

# Below is generated by plot.py at 2018-10-02 16:13:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.926 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.926 ms
Loss rate: 0.77%
```

Run 2: Report of SCReAM — Data Link

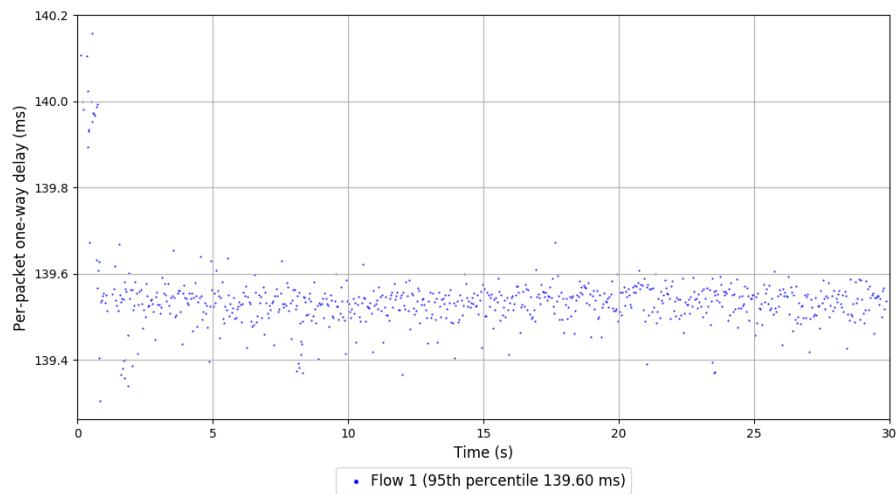
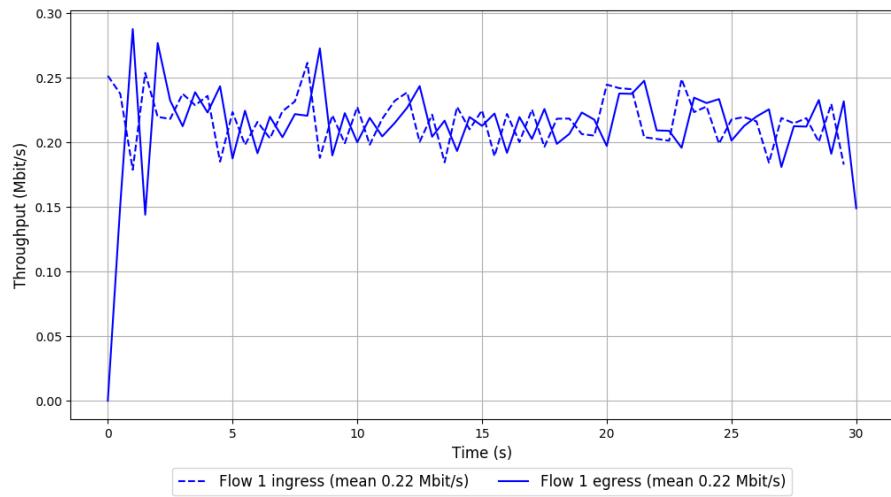


Run 3: Statistics of SCReAM

```
Start at: 2018-10-02 14:33:16
End at: 2018-10-02 14:33:46
Local clock offset: 1.464 ms
Remote clock offset: -37.527 ms

# Below is generated by plot.py at 2018-10-02 16:13:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 139.597 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 139.597 ms
Loss rate: 0.64%
```

### Run 3: Report of SCReAM — Data Link

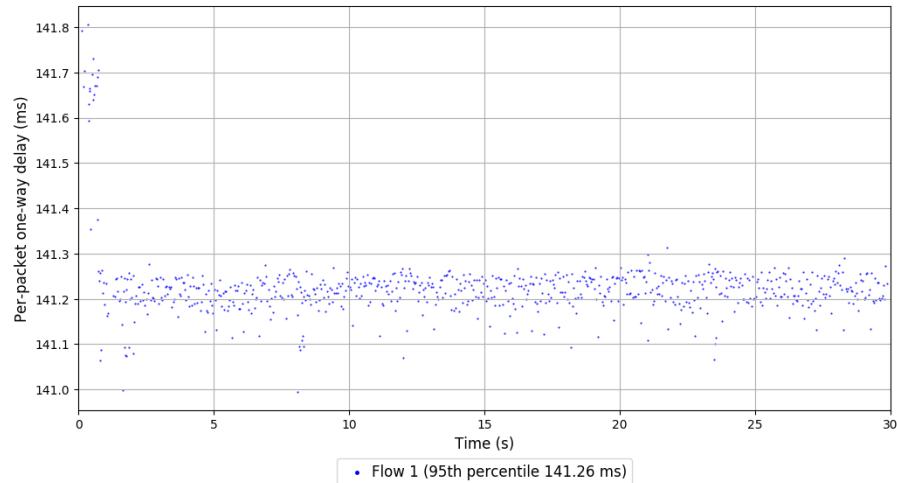
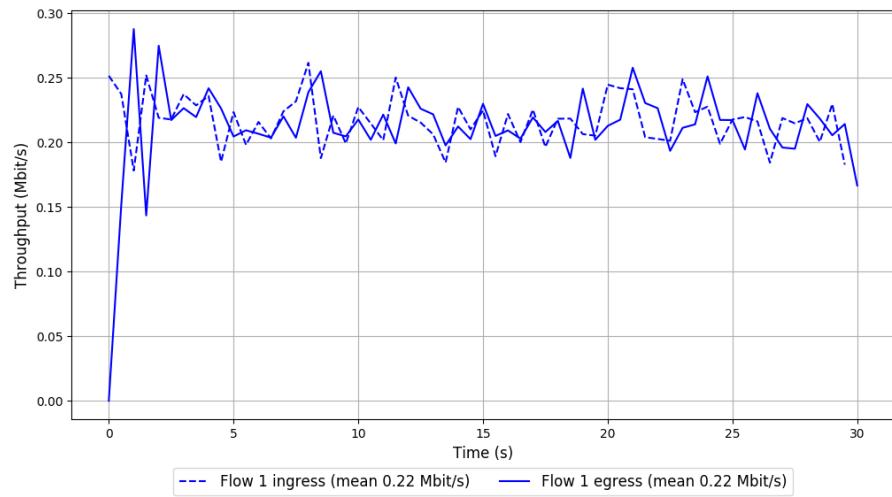


Run 4: Statistics of SCReAM

```
Start at: 2018-10-02 14:57:20
End at: 2018-10-02 14:57:50
Local clock offset: -0.764 ms
Remote clock offset: -38.208 ms

# Below is generated by plot.py at 2018-10-02 16:13:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 141.264 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 141.264 ms
Loss rate: 0.64%
```

Run 4: Report of SCReAM — Data Link

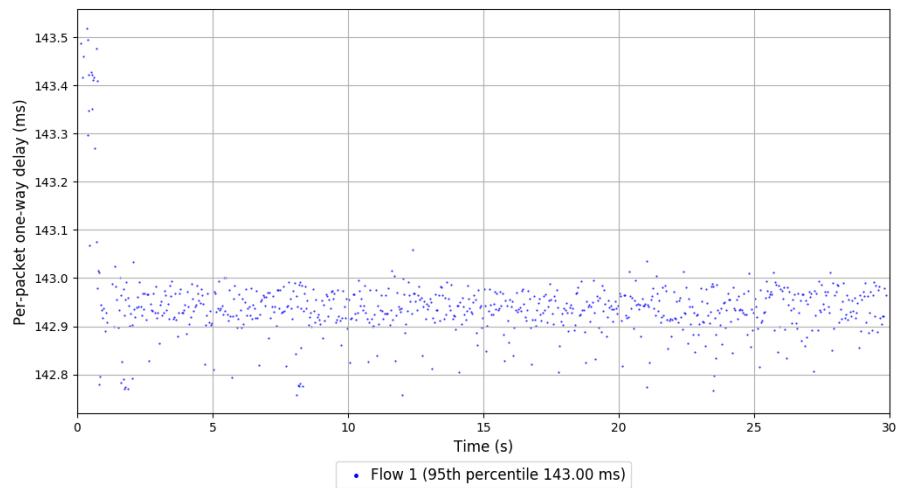
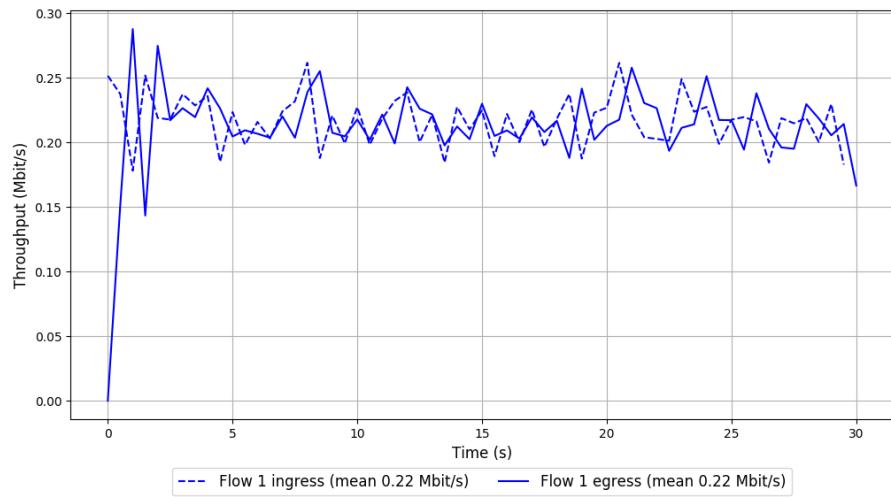


Run 5: Statistics of SCReAM

```
Start at: 2018-10-02 15:26:42
End at: 2018-10-02 15:27:12
Local clock offset: 0.032 ms
Remote clock offset: -38.776 ms

# Below is generated by plot.py at 2018-10-02 16:13:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 142.995 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 142.995 ms
Loss rate: 0.64%
```

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

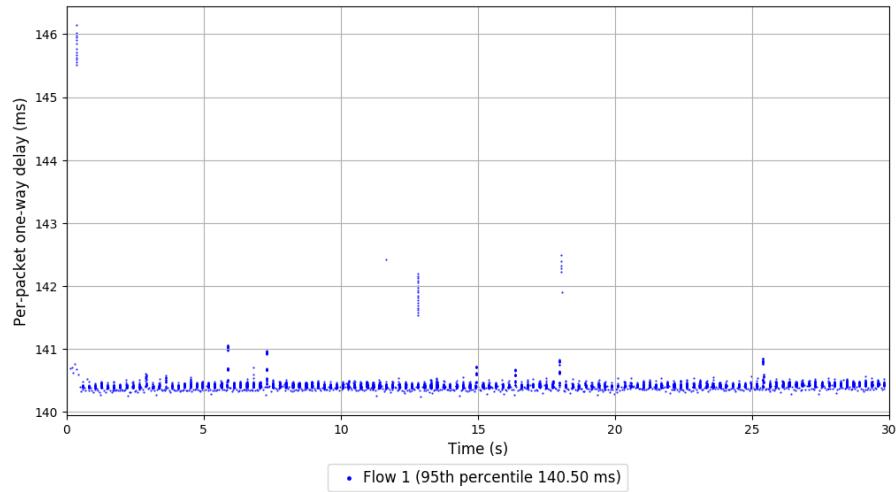
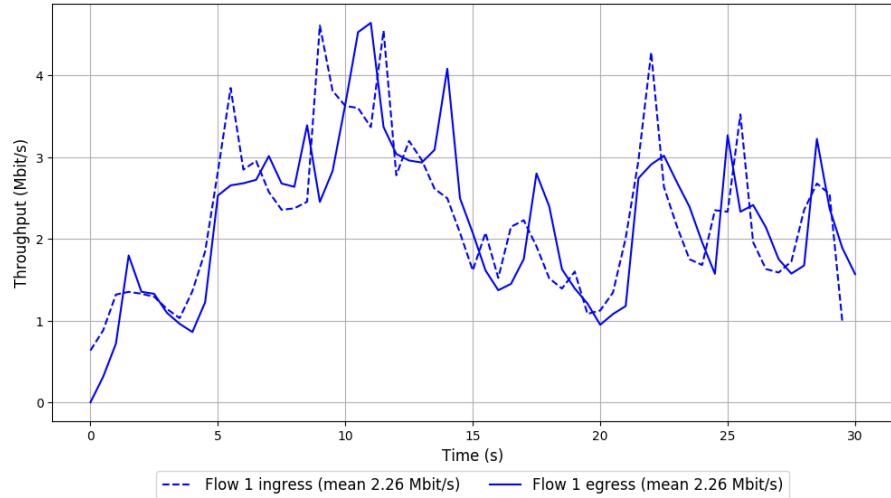


Run 1: Statistics of Sprout

```
Start at: 2018-10-02 14:00:59
End at: 2018-10-02 14:01:29
Local clock offset: -0.753 ms
Remote clock offset: -39.906 ms

# Below is generated by plot.py at 2018-10-02 16:13:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 140.497 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 140.497 ms
Loss rate: 0.29%
```

## Run 1: Report of Sprout — Data Link

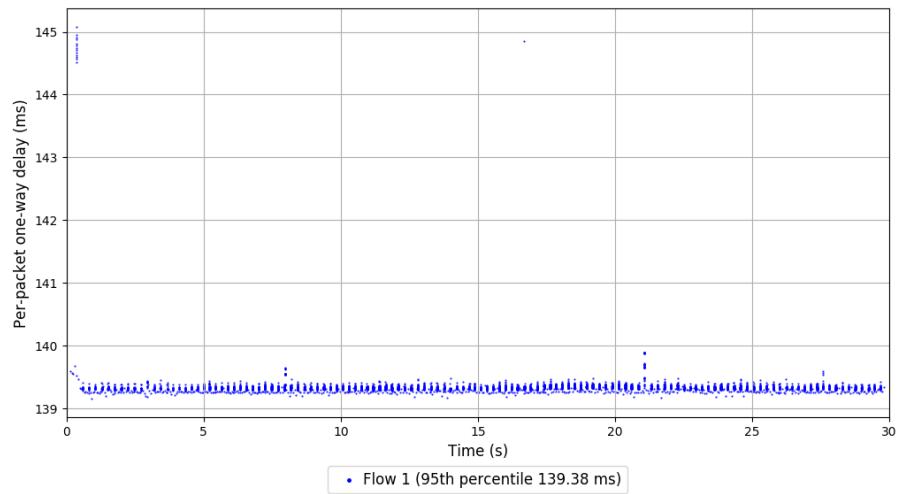
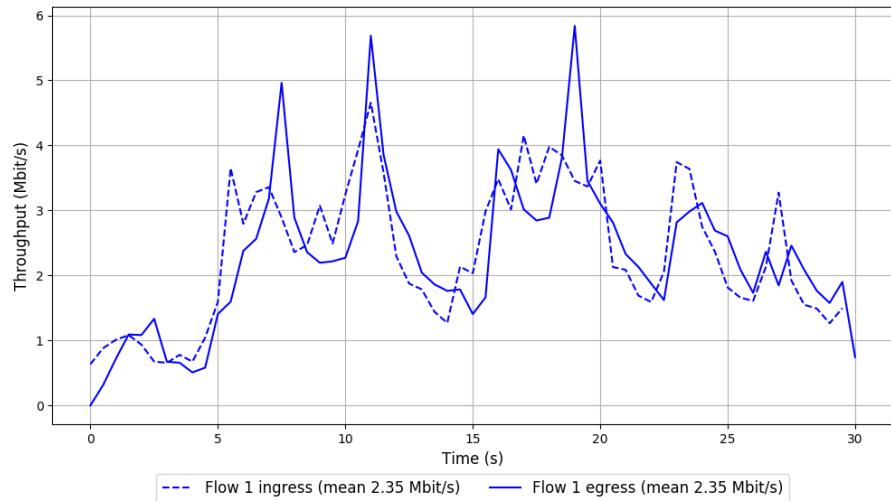


Run 2: Statistics of Sprout

```
Start at: 2018-10-02 14:30:47
End at: 2018-10-02 14:31:17
Local clock offset: -0.453 ms
Remote clock offset: -37.894 ms

# Below is generated by plot.py at 2018-10-02 16:13:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 139.382 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 139.382 ms
Loss rate: 0.54%
```

## Run 2: Report of Sprout — Data Link

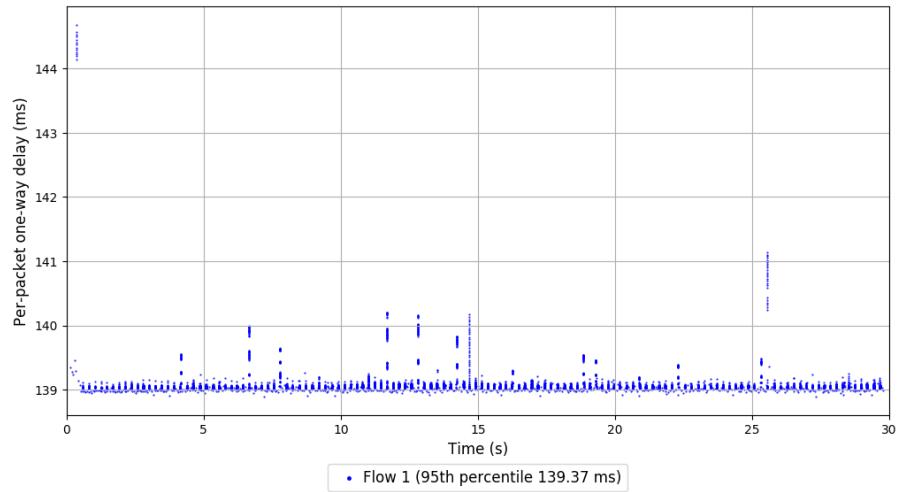
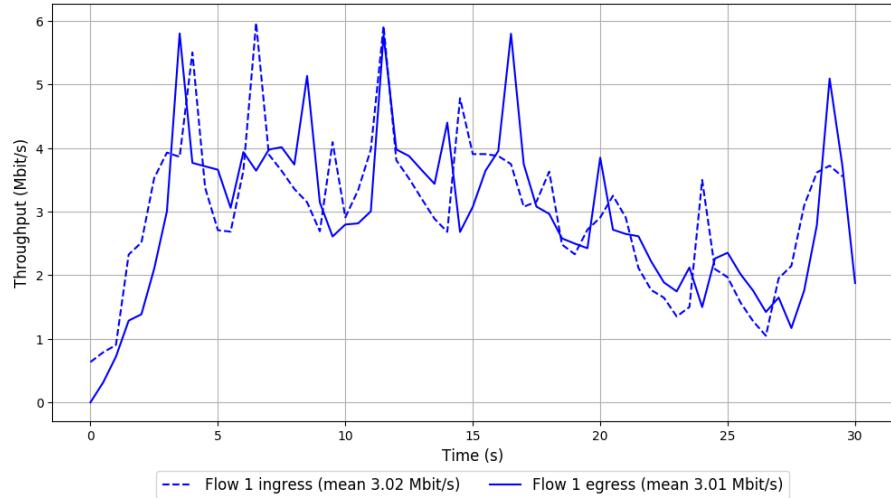


Run 3: Statistics of Sprout

```
Start at: 2018-10-02 14:54:49
End at: 2018-10-02 14:55:19
Local clock offset: -2.702 ms
Remote clock offset: -38.046 ms

# Below is generated by plot.py at 2018-10-02 16:13:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 3.01 Mbit/s
95th percentile per-packet one-way delay: 139.368 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 3.01 Mbit/s
95th percentile per-packet one-way delay: 139.368 ms
Loss rate: 0.93%
```

### Run 3: Report of Sprout — Data Link

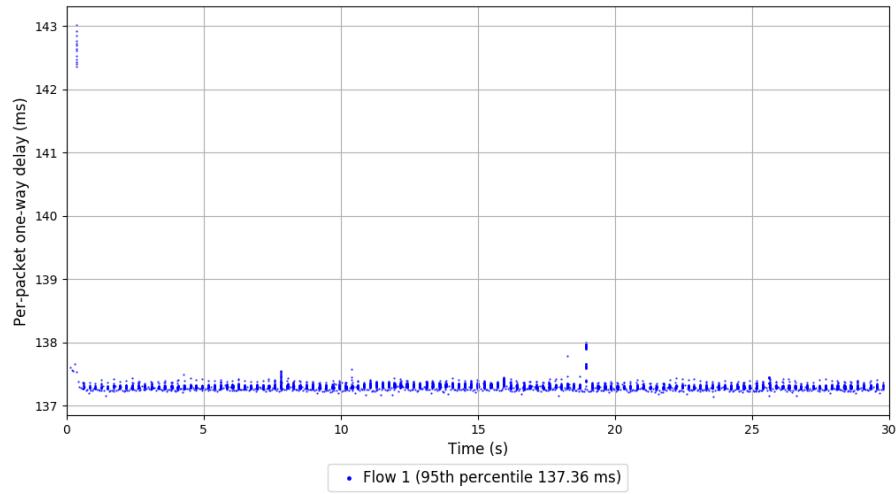
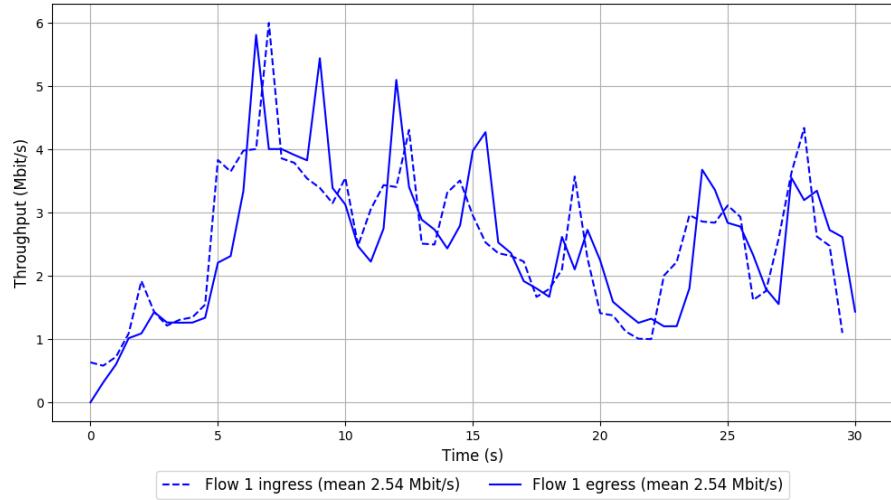


Run 4: Statistics of Sprout

```
Start at: 2018-10-02 15:24:15
End at: 2018-10-02 15:24:45
Local clock offset: -0.907 ms
Remote clock offset: -33.807 ms

# Below is generated by plot.py at 2018-10-02 16:13:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.54 Mbit/s
95th percentile per-packet one-way delay: 137.359 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 2.54 Mbit/s
95th percentile per-packet one-way delay: 137.359 ms
Loss rate: 0.56%
```

## Run 4: Report of Sprout — Data Link

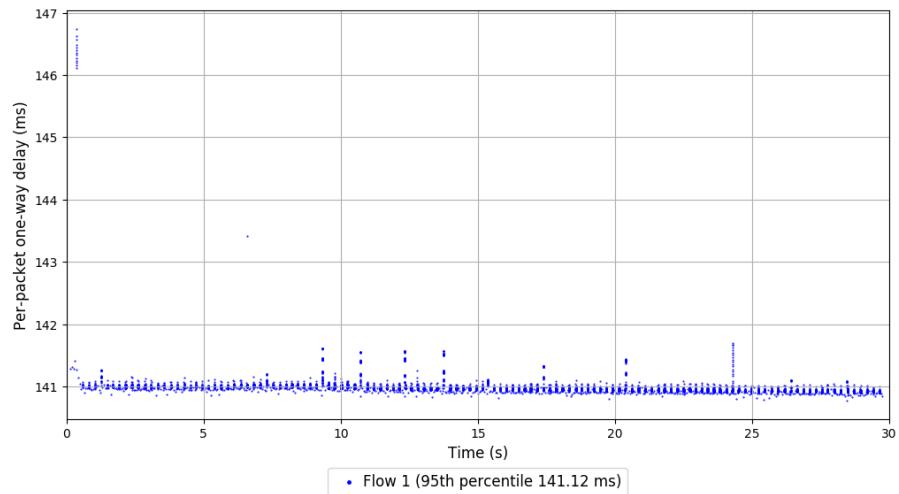
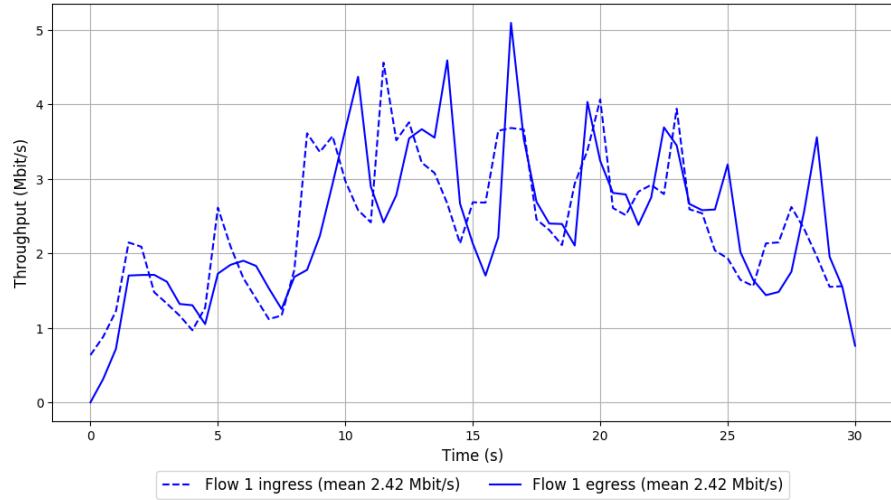


Run 5: Statistics of Sprout

```
Start at: 2018-10-02 15:48:05
End at: 2018-10-02 15:48:35
Local clock offset: -1.024 ms
Remote clock offset: -39.857 ms

# Below is generated by plot.py at 2018-10-02 16:13:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.42 Mbit/s
95th percentile per-packet one-way delay: 141.121 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 2.42 Mbit/s
95th percentile per-packet one-way delay: 141.121 ms
Loss rate: 0.56%
```

## Run 5: Report of Sprout — Data Link

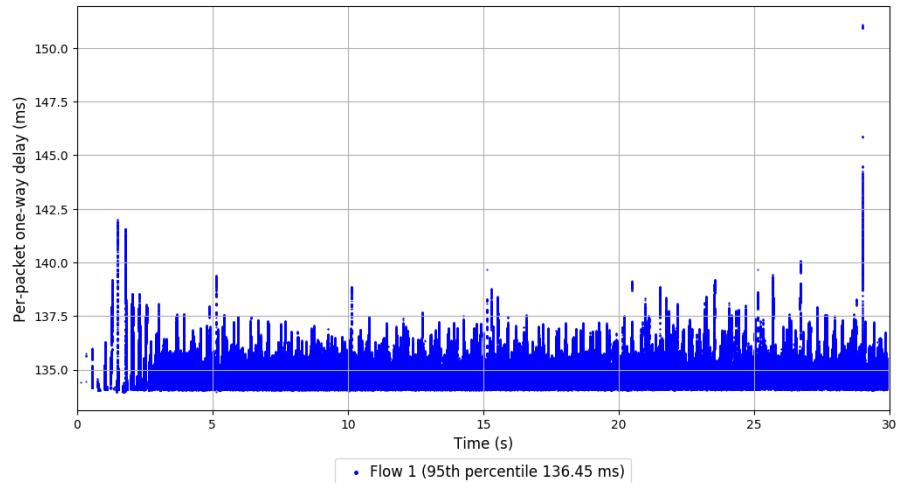
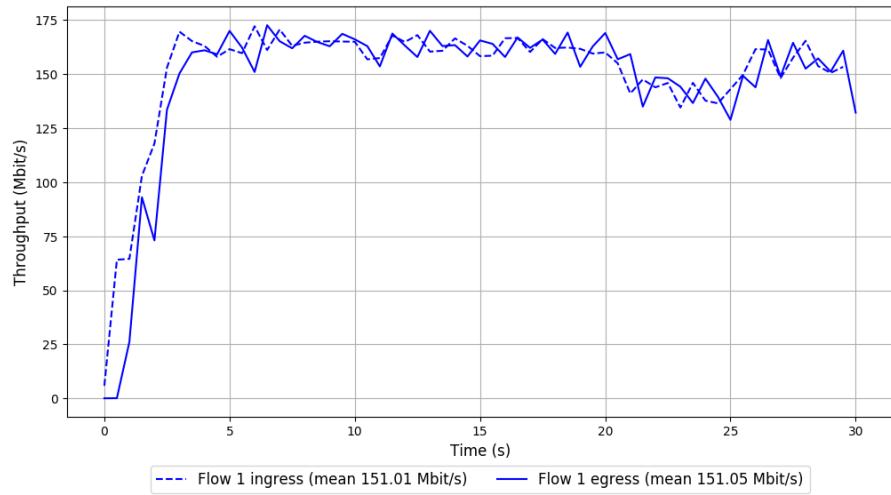


Run 1: Statistics of TaoVA-100x

```
Start at: 2018-10-02 13:30:25
End at: 2018-10-02 13:30:55
Local clock offset: -0.771 ms
Remote clock offset: -34.877 ms

# Below is generated by plot.py at 2018-10-02 16:14:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 151.05 Mbit/s
95th percentile per-packet one-way delay: 136.449 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 151.05 Mbit/s
95th percentile per-packet one-way delay: 136.449 ms
Loss rate: 0.66%
```

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

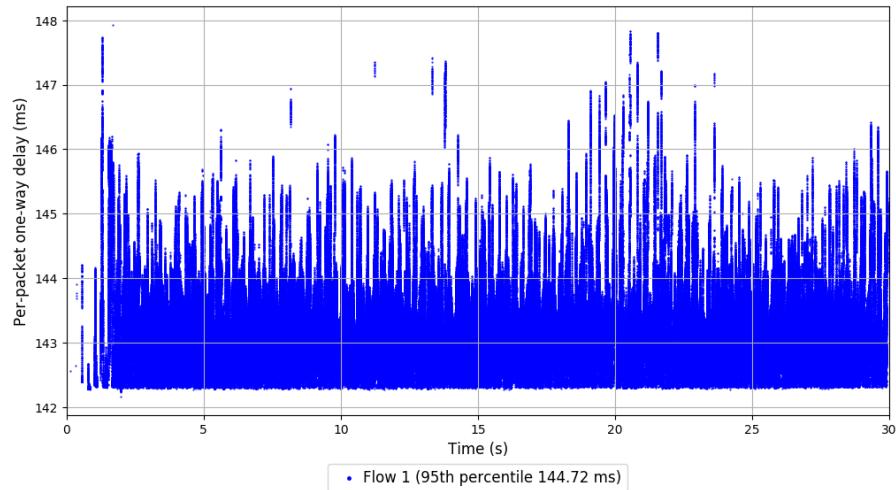
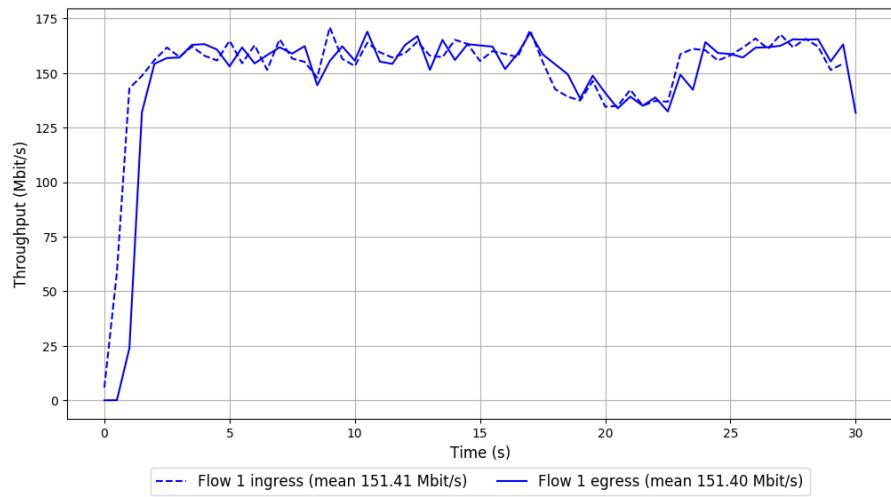


Run 2: Statistics of TaoVA-100x

```
Start at: 2018-10-02 14:05:53
End at: 2018-10-02 14:06:23
Local clock offset: -0.082 ms
Remote clock offset: -40.745 ms

# Below is generated by plot.py at 2018-10-02 16:15:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 151.40 Mbit/s
95th percentile per-packet one-way delay: 144.715 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 151.40 Mbit/s
95th percentile per-packet one-way delay: 144.715 ms
Loss rate: 0.69%
```

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

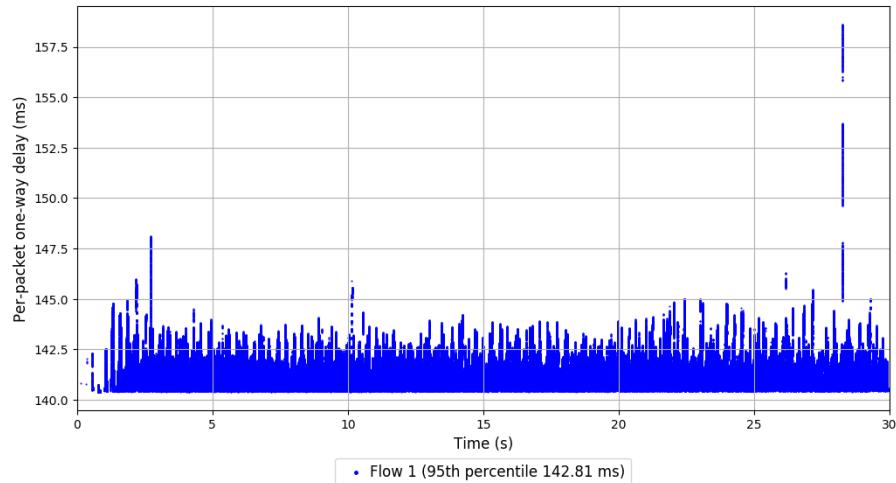
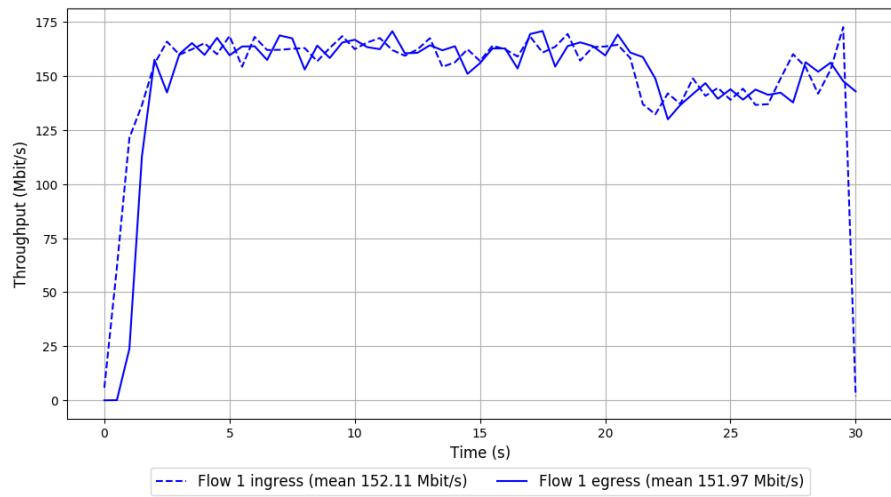


Run 3: Statistics of TaoVA-100x

```
Start at: 2018-10-02 14:35:36
End at: 2018-10-02 14:36:06
Local clock offset: -0.666 ms
Remote clock offset: -38.879 ms

# Below is generated by plot.py at 2018-10-02 16:15:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 151.97 Mbit/s
95th percentile per-packet one-way delay: 142.811 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 151.97 Mbit/s
95th percentile per-packet one-way delay: 142.811 ms
Loss rate: 0.79%
```

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

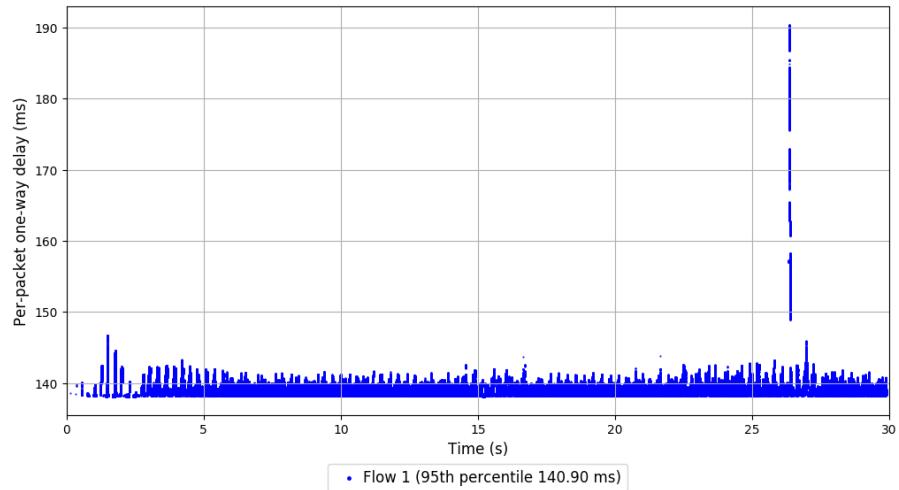
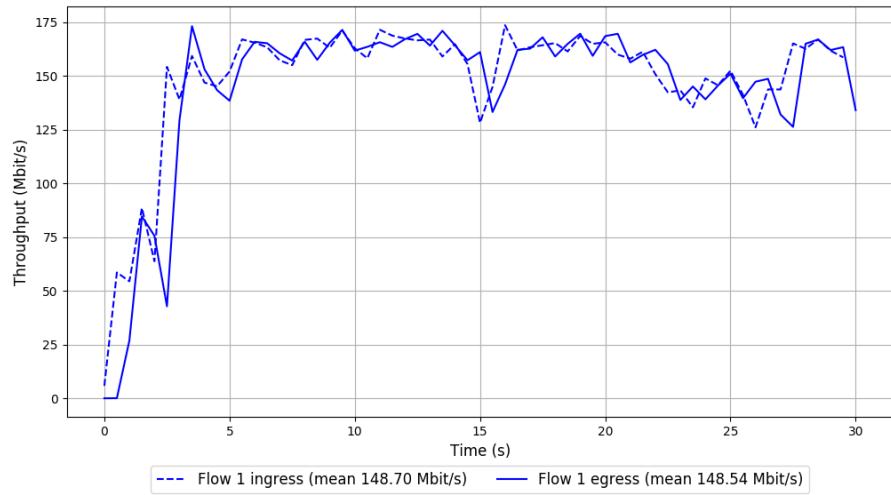


Run 4: Statistics of TaoVA-100x

```
Start at: 2018-10-02 14:59:41
End at: 2018-10-02 15:00:11
Local clock offset: -2.488 ms
Remote clock offset: -38.381 ms

# Below is generated by plot.py at 2018-10-02 16:15:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 148.54 Mbit/s
95th percentile per-packet one-way delay: 140.897 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 148.54 Mbit/s
95th percentile per-packet one-way delay: 140.897 ms
Loss rate: 0.79%
```

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

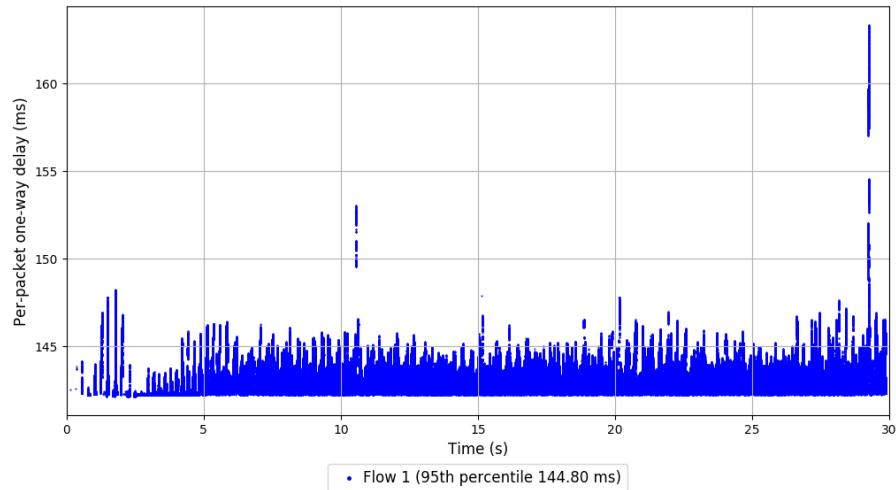
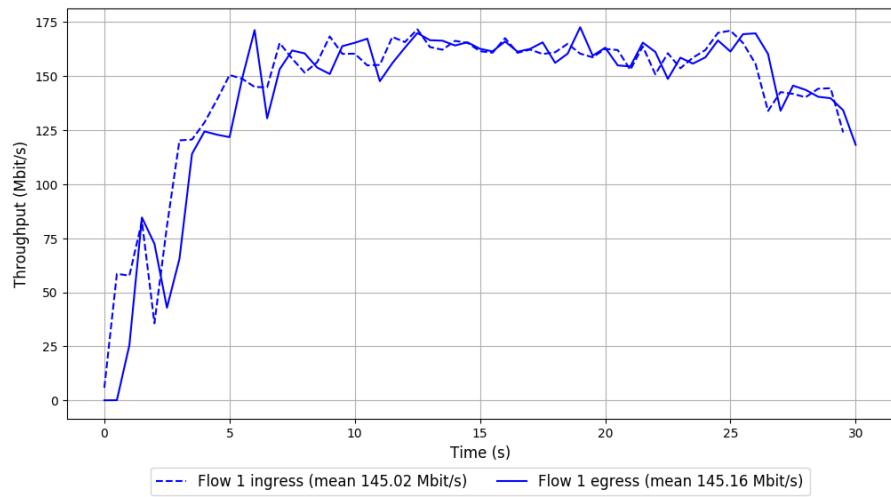


Run 5: Statistics of TaoVA-100x

```
Start at: 2018-10-02 15:29:02
End at: 2018-10-02 15:29:32
Local clock offset: 0.166 ms
Remote clock offset: -39.624 ms

# Below is generated by plot.py at 2018-10-02 16:15:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 145.16 Mbit/s
95th percentile per-packet one-way delay: 144.799 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 145.16 Mbit/s
95th percentile per-packet one-way delay: 144.799 ms
Loss rate: 0.66%
```

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

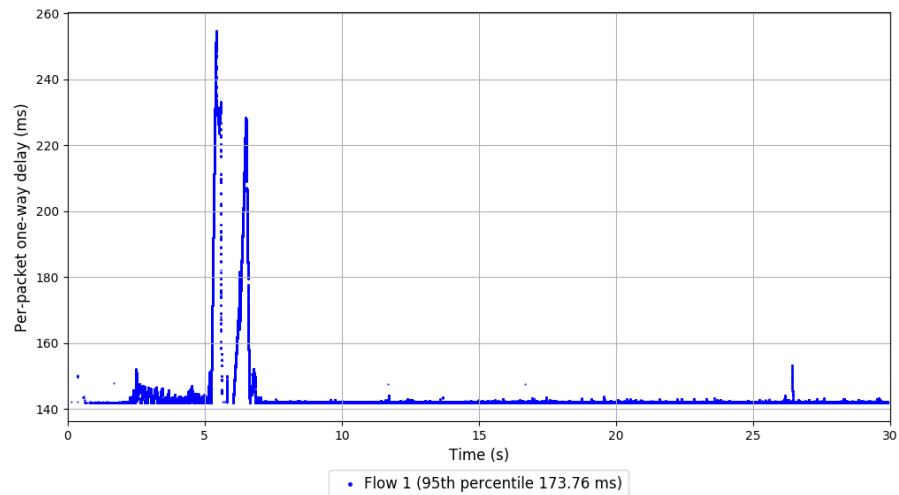
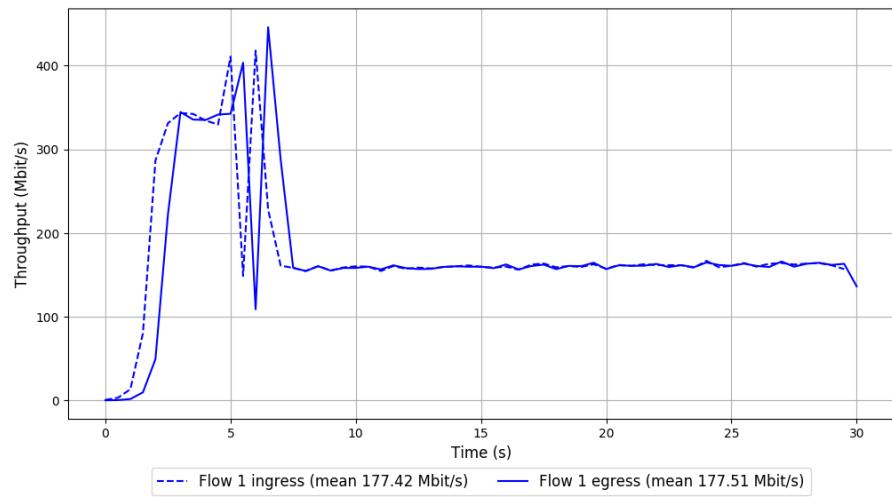


Run 1: Statistics of TCP Vegas

```
Start at: 2018-10-02 13:37:18
End at: 2018-10-02 13:37:48
Local clock offset: 1.169 ms
Remote clock offset: -40.448 ms

# Below is generated by plot.py at 2018-10-02 16:15:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 177.51 Mbit/s
95th percentile per-packet one-way delay: 173.756 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 177.51 Mbit/s
95th percentile per-packet one-way delay: 173.756 ms
Loss rate: 0.64%
```

Run 1: Report of TCP Vegas — Data Link

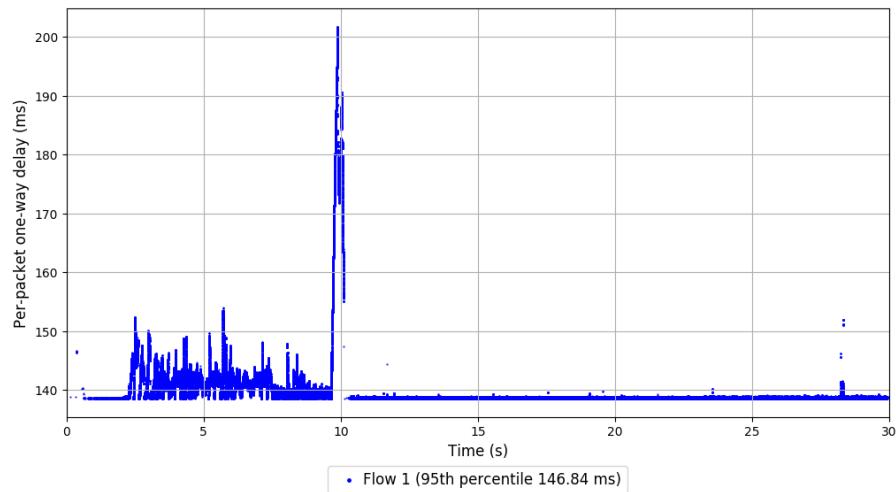
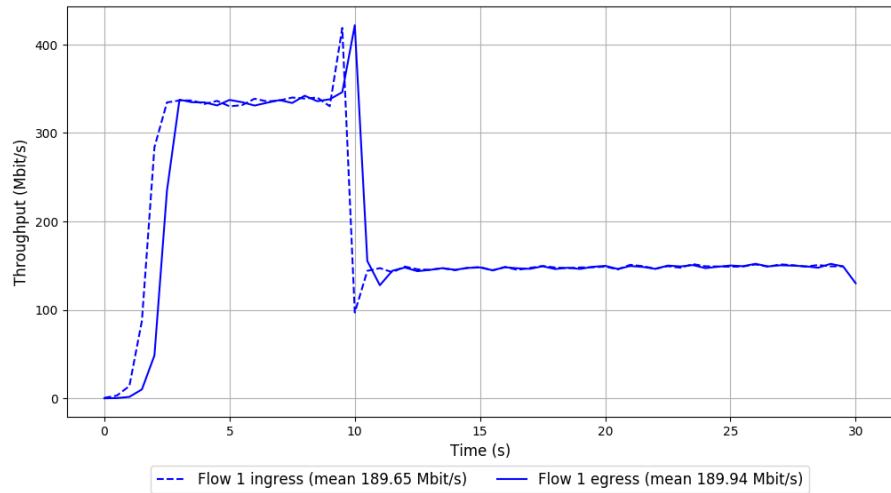


Run 2: Statistics of TCP Vegas

```
Start at: 2018-10-02 14:12:48
End at: 2018-10-02 14:13:18
Local clock offset: -0.289 ms
Remote clock offset: -38.76 ms

# Below is generated by plot.py at 2018-10-02 16:15:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 189.94 Mbit/s
95th percentile per-packet one-way delay: 146.843 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 189.94 Mbit/s
95th percentile per-packet one-way delay: 146.843 ms
Loss rate: 0.54%
```

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

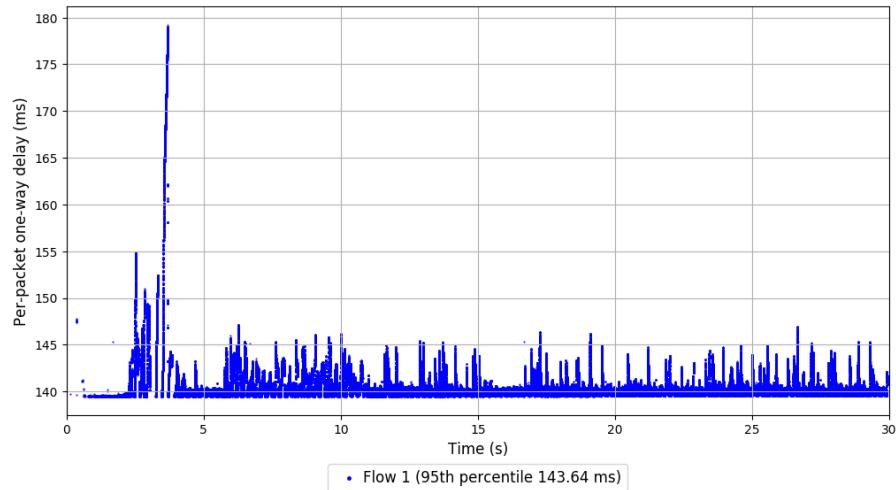
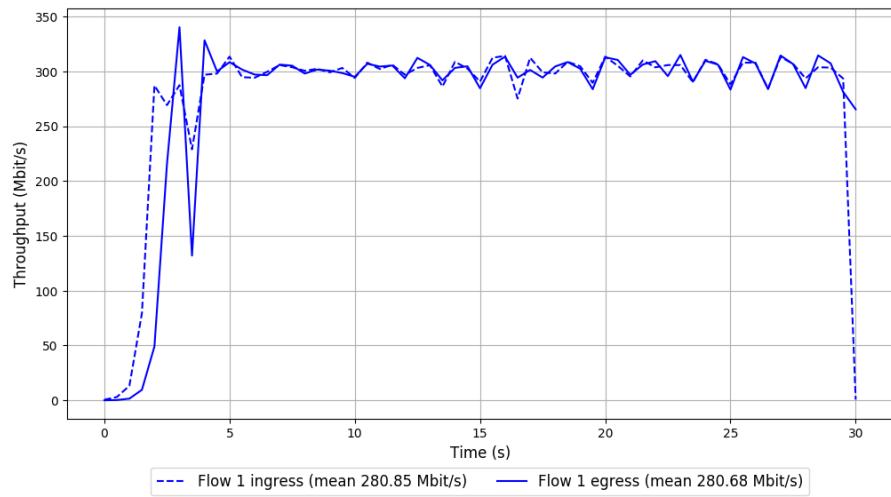


Run 3: Statistics of TCP Vegas

```
Start at: 2018-10-02 14:42:30
End at: 2018-10-02 14:43:00
Local clock offset: -1.115 ms
Remote clock offset: -38.01 ms

# Below is generated by plot.py at 2018-10-02 16:16:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 280.68 Mbit/s
95th percentile per-packet one-way delay: 143.643 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 280.68 Mbit/s
95th percentile per-packet one-way delay: 143.643 ms
Loss rate: 0.75%
```

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

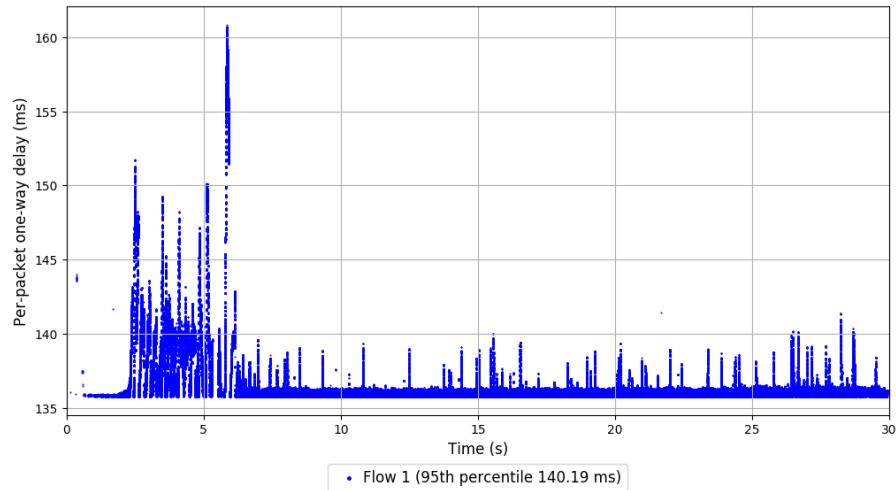
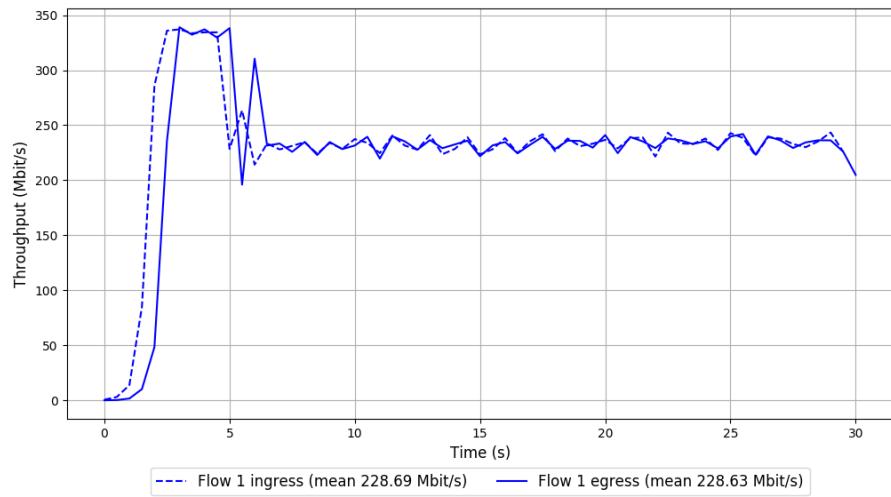


Run 4: Statistics of TCP Vegas

```
Start at: 2018-10-02 15:06:31
End at: 2018-10-02 15:07:01
Local clock offset: -0.18 ms
Remote clock offset: -33.472 ms

# Below is generated by plot.py at 2018-10-02 16:17:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 228.63 Mbit/s
95th percentile per-packet one-way delay: 140.192 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 228.63 Mbit/s
95th percentile per-packet one-way delay: 140.192 ms
Loss rate: 0.72%
```

Run 4: Report of TCP Vegas — Data Link

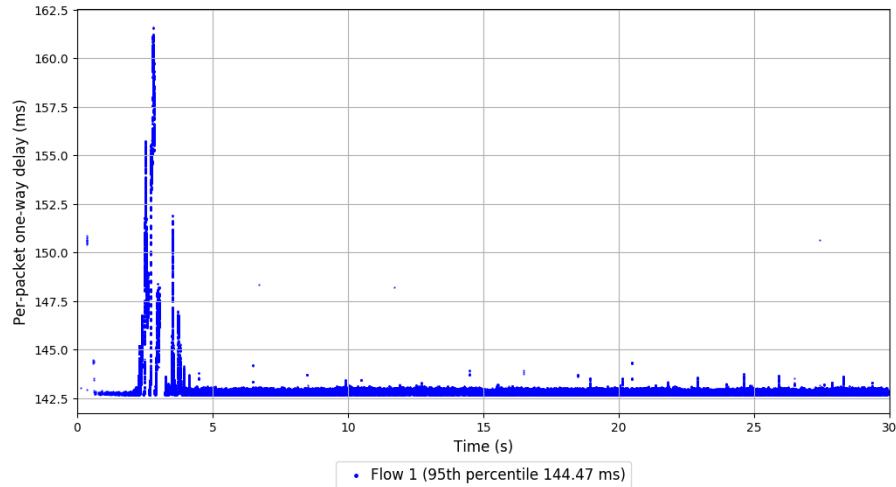
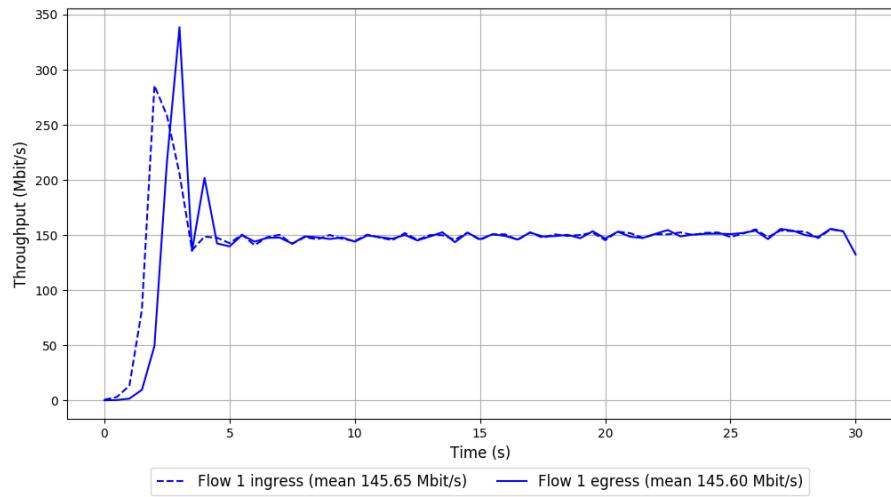


Run 5: Statistics of TCP Vegas

```
Start at: 2018-10-02 15:35:51
End at: 2018-10-02 15:36:21
Local clock offset: -0.673 ms
Remote clock offset: -39.325 ms

# Below is generated by plot.py at 2018-10-02 16:17:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 145.60 Mbit/s
95th percentile per-packet one-way delay: 144.473 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 145.60 Mbit/s
95th percentile per-packet one-way delay: 144.473 ms
Loss rate: 0.73%
```

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

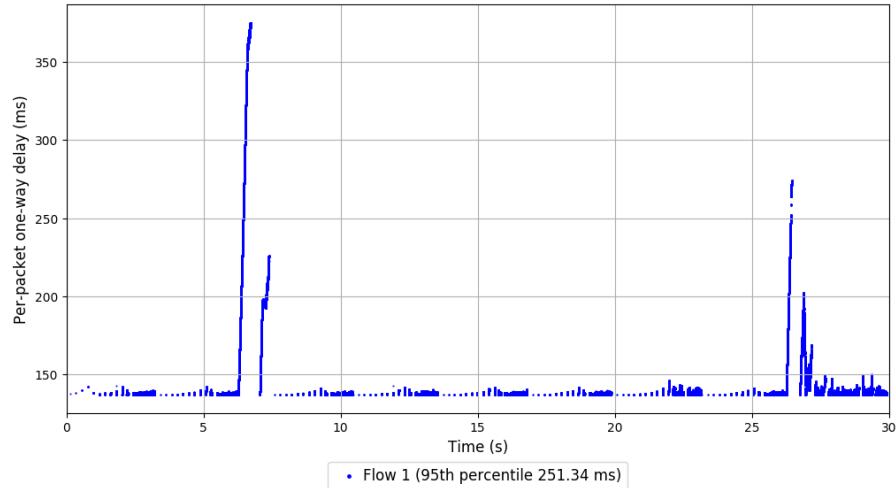
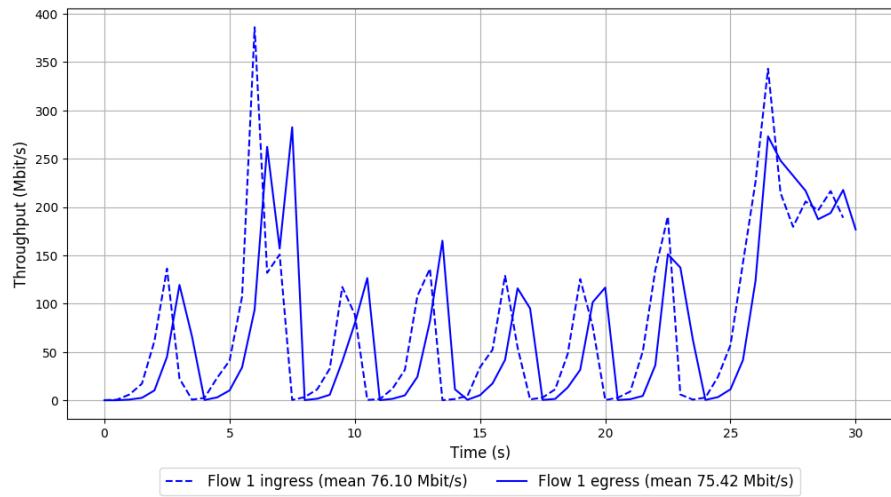


Run 1: Statistics of Verus

```
Start at: 2018-10-02 13:31:49
End at: 2018-10-02 13:32:19
Local clock offset: 1.411 ms
Remote clock offset: -35.375 ms

# Below is generated by plot.py at 2018-10-02 16:17:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 75.42 Mbit/s
95th percentile per-packet one-way delay: 251.340 ms
Loss rate: 1.59%
-- Flow 1:
Average throughput: 75.42 Mbit/s
95th percentile per-packet one-way delay: 251.340 ms
Loss rate: 1.59%
```

Run 1: Report of Verus — Data Link

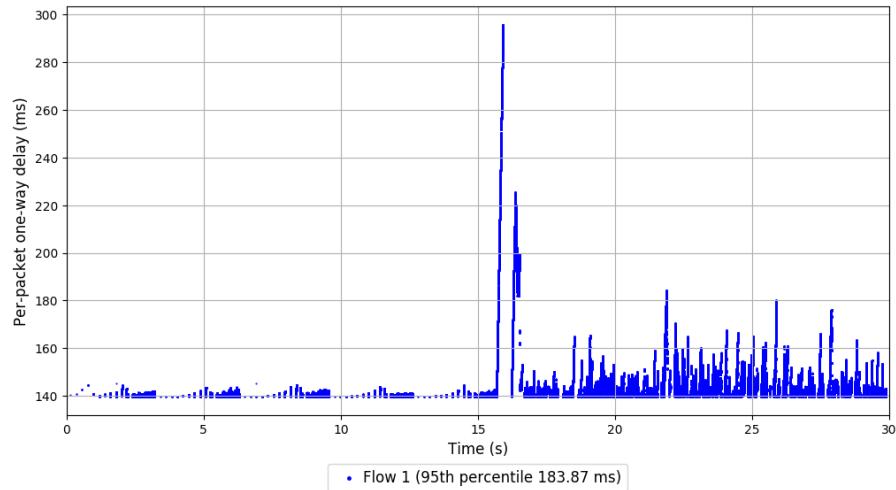
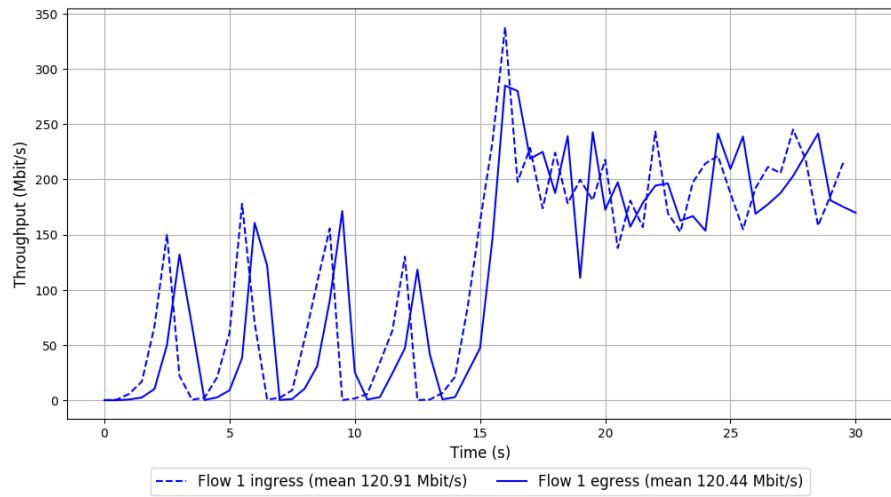


Run 2: Statistics of Verus

```
Start at: 2018-10-02 14:07:18
End at: 2018-10-02 14:07:48
Local clock offset: 1.333 ms
Remote clock offset: -38.543 ms

# Below is generated by plot.py at 2018-10-02 16:17:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 120.44 Mbit/s
95th percentile per-packet one-way delay: 183.874 ms
Loss rate: 1.19%
-- Flow 1:
Average throughput: 120.44 Mbit/s
95th percentile per-packet one-way delay: 183.874 ms
Loss rate: 1.19%
```

## Run 2: Report of Verus — Data Link

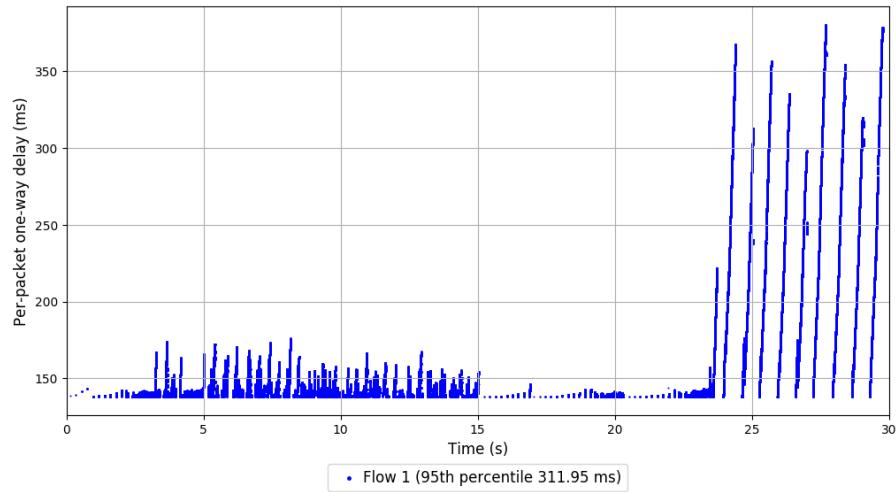
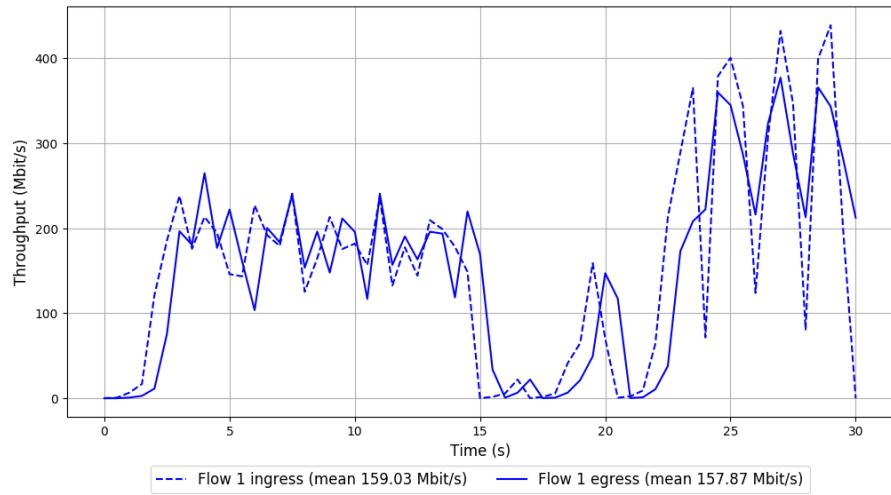


Run 3: Statistics of Verus

```
Start at: 2018-10-02 14:37:01
End at: 2018-10-02 14:37:31
Local clock offset: -0.127 ms
Remote clock offset: -37.644 ms

# Below is generated by plot.py at 2018-10-02 16:17:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 157.87 Mbit/s
95th percentile per-packet one-way delay: 311.947 ms
Loss rate: 2.10%
-- Flow 1:
Average throughput: 157.87 Mbit/s
95th percentile per-packet one-way delay: 311.947 ms
Loss rate: 2.10%
```

### Run 3: Report of Verus — Data Link

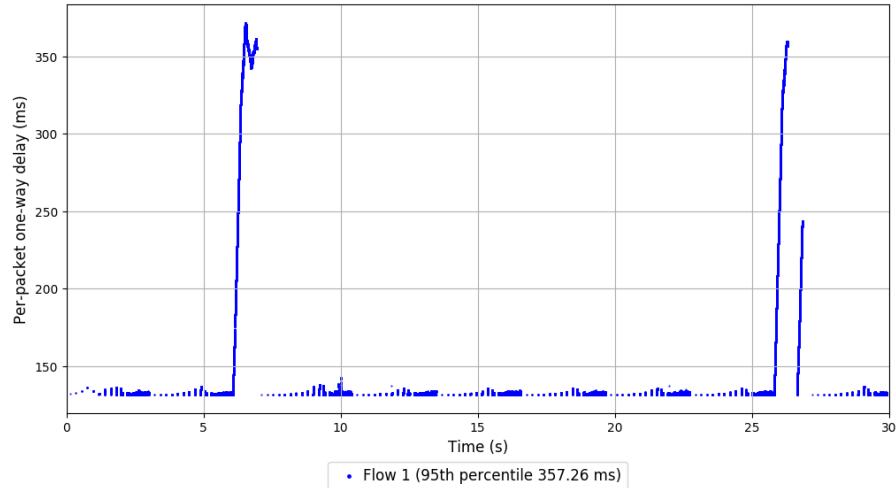
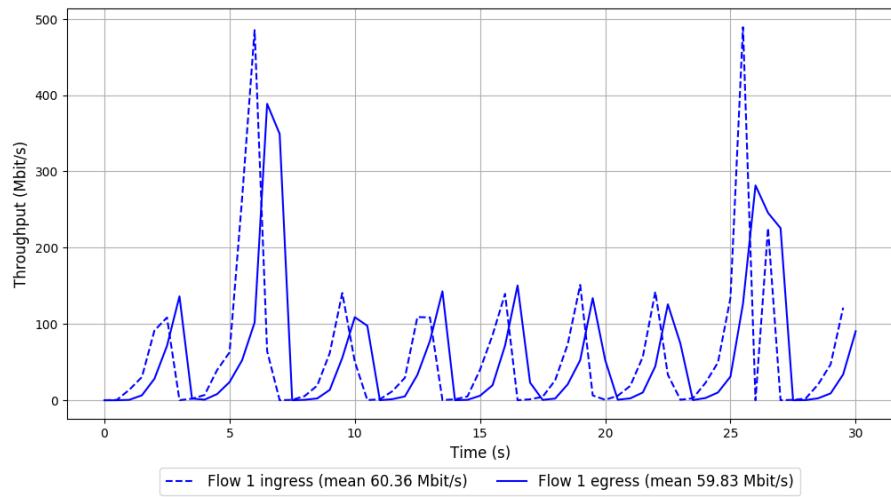


Run 4: Statistics of Verus

```
Start at: 2018-10-02 15:01:04
End at: 2018-10-02 15:01:34
Local clock offset: -3.282 ms
Remote clock offset: -32.504 ms

# Below is generated by plot.py at 2018-10-02 16:17:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 59.83 Mbit/s
95th percentile per-packet one-way delay: 357.258 ms
Loss rate: 1.56%
-- Flow 1:
Average throughput: 59.83 Mbit/s
95th percentile per-packet one-way delay: 357.258 ms
Loss rate: 1.56%
```

## Run 4: Report of Verus — Data Link

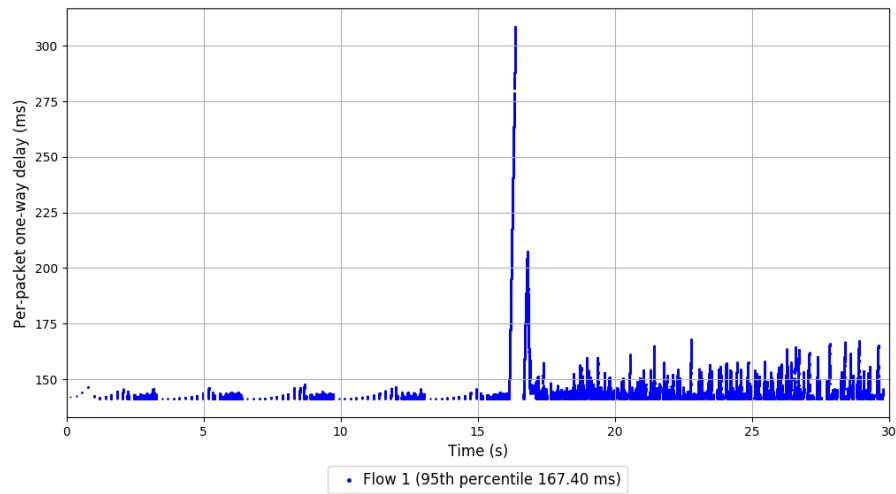
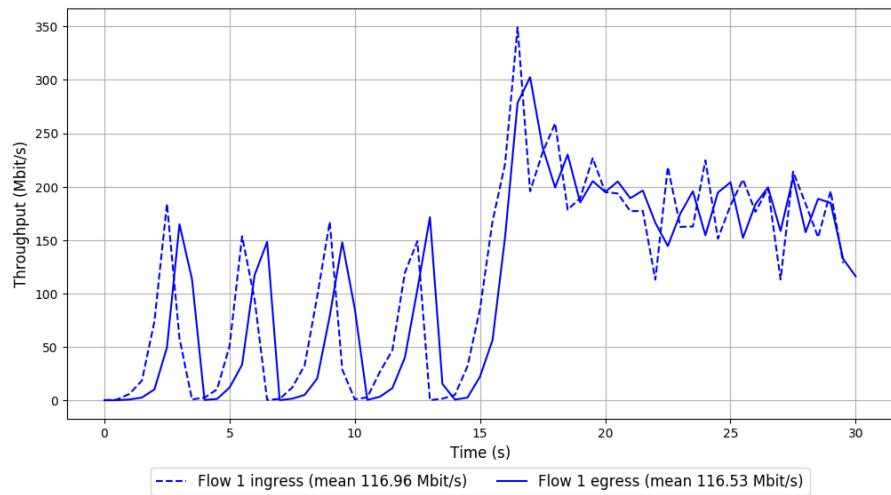


Run 5: Statistics of Verus

```
Start at: 2018-10-02 15:30:26
End at: 2018-10-02 15:30:56
Local clock offset: -2.005 ms
Remote clock offset: -38.97 ms

# Below is generated by plot.py at 2018-10-02 16:17:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 116.53 Mbit/s
95th percentile per-packet one-way delay: 167.404 ms
Loss rate: 1.41%
-- Flow 1:
Average throughput: 116.53 Mbit/s
95th percentile per-packet one-way delay: 167.404 ms
Loss rate: 1.41%
```

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

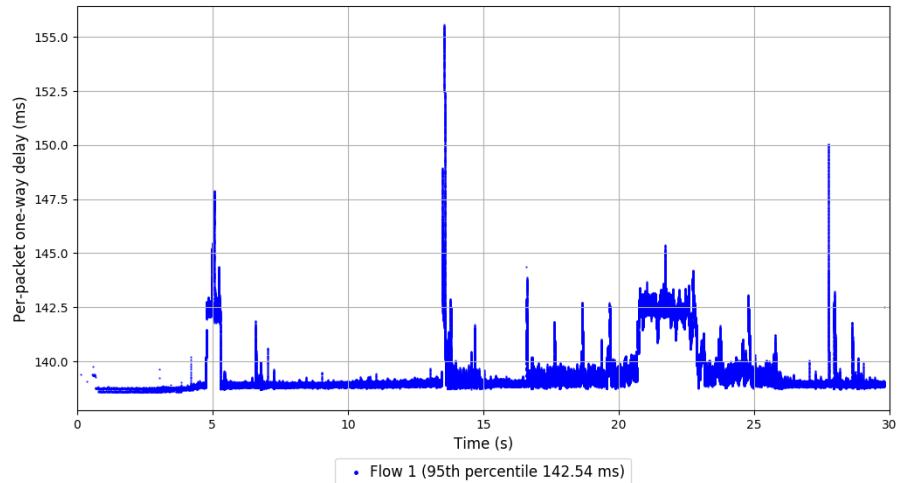
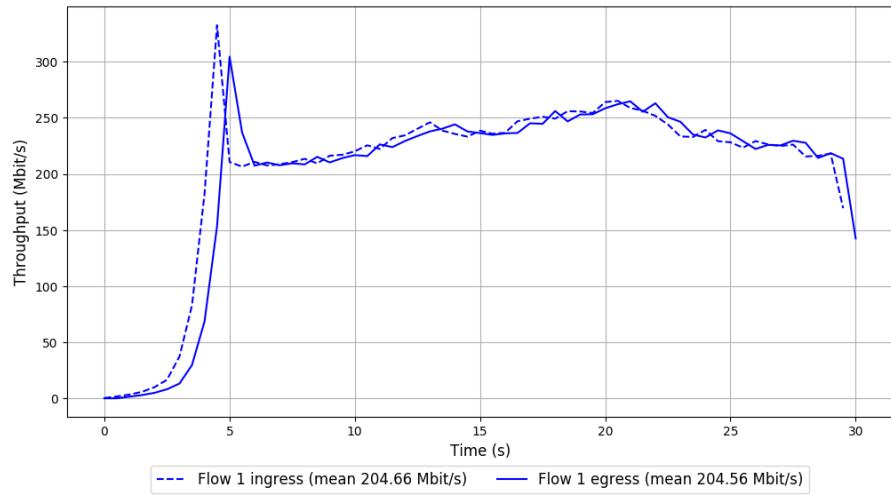


Run 1: Statistics of PCC-Vivace

```
Start at: 2018-10-02 13:33:04
End at: 2018-10-02 13:33:34
Local clock offset: 2.927 ms
Remote clock offset: -35.498 ms

# Below is generated by plot.py at 2018-10-02 16:17:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 204.56 Mbit/s
95th percentile per-packet one-way delay: 142.541 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 204.56 Mbit/s
95th percentile per-packet one-way delay: 142.541 ms
Loss rate: 0.73%
```

Run 1: Report of PCC-Vivace — Data Link

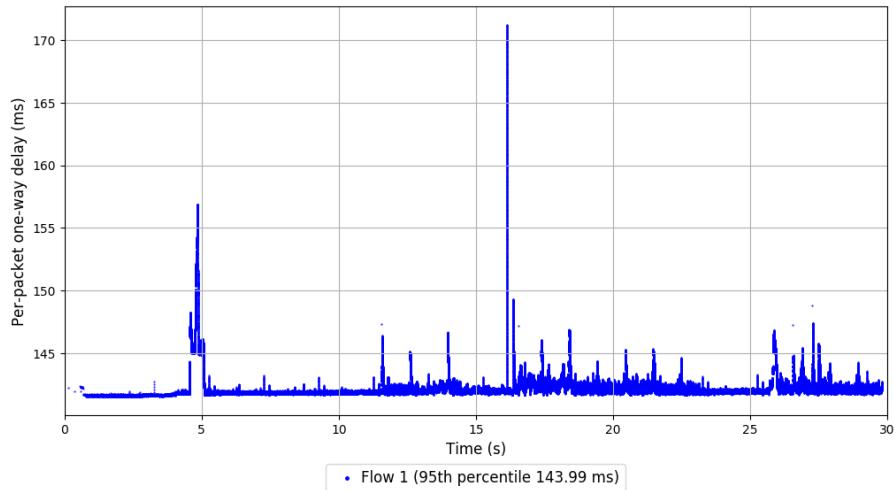
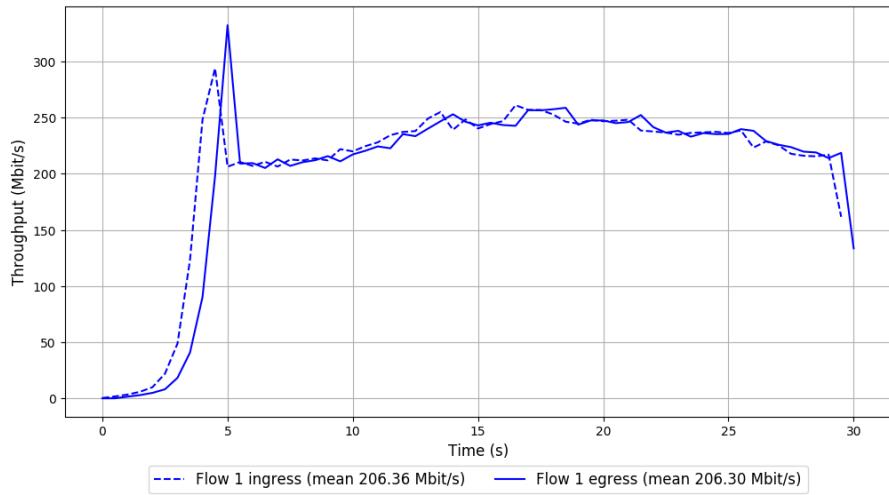


Run 2: Statistics of PCC-Vivace

```
Start at: 2018-10-02 14:08:36
End at: 2018-10-02 14:09:06
Local clock offset: 1.486 ms
Remote clock offset: -38.797 ms

# Below is generated by plot.py at 2018-10-02 16:18:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 206.30 Mbit/s
95th percentile per-packet one-way delay: 143.988 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 206.30 Mbit/s
95th percentile per-packet one-way delay: 143.988 ms
Loss rate: 0.73%
```

Run 2: Report of PCC-Vivace — Data Link

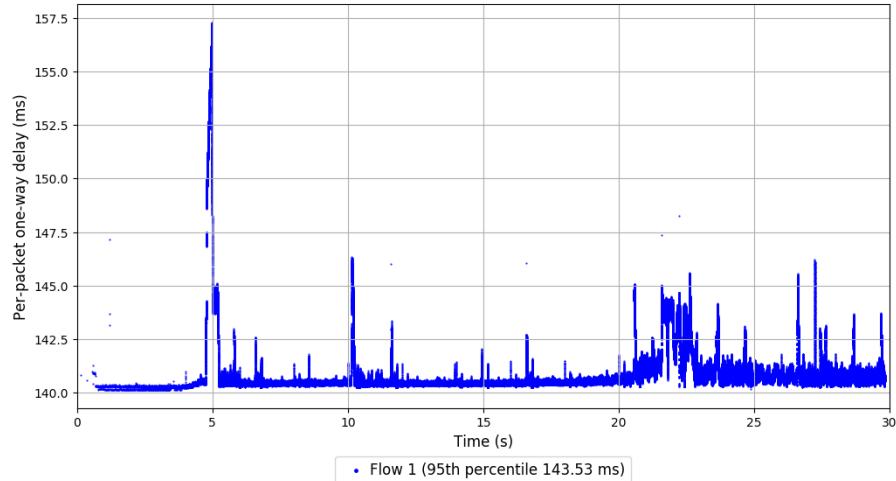
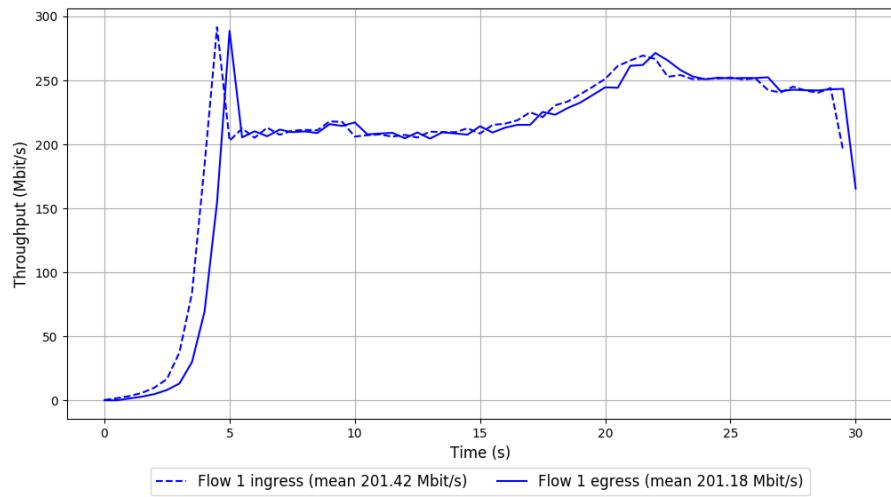


Run 3: Statistics of PCC-Vivace

```
Start at: 2018-10-02 14:38:21
End at: 2018-10-02 14:38:52
Local clock offset: -0.332 ms
Remote clock offset: -38.642 ms

# Below is generated by plot.py at 2018-10-02 16:18:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 201.18 Mbit/s
95th percentile per-packet one-way delay: 143.530 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 201.18 Mbit/s
95th percentile per-packet one-way delay: 143.530 ms
Loss rate: 0.82%
```

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

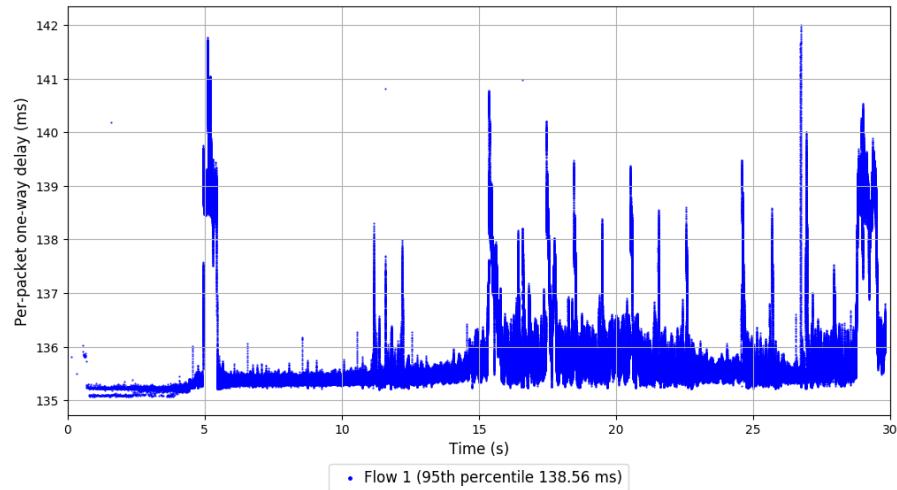
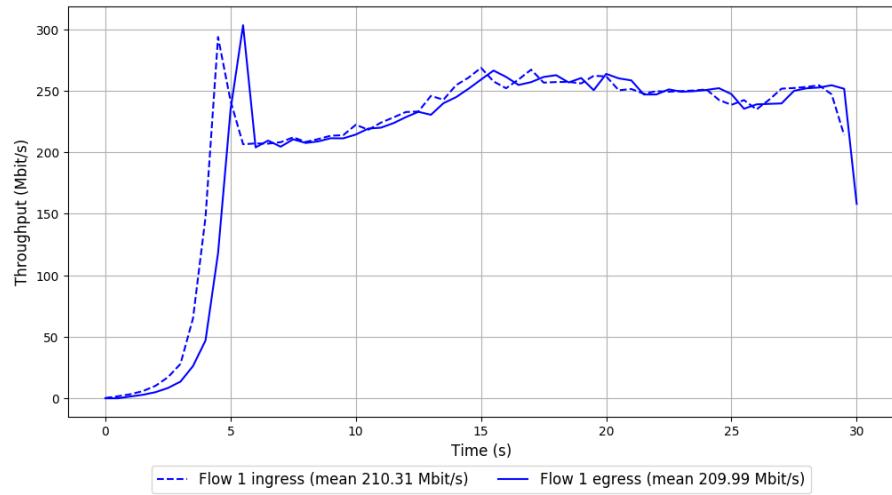


Run 4: Statistics of PCC-Vivace

```
Start at: 2018-10-02 15:02:19
End at: 2018-10-02 15:02:49
Local clock offset: -0.801 ms
Remote clock offset: -33.637 ms

# Below is generated by plot.py at 2018-10-02 16:18:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 209.99 Mbit/s
95th percentile per-packet one-way delay: 138.559 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 209.99 Mbit/s
95th percentile per-packet one-way delay: 138.559 ms
Loss rate: 0.96%
```

Run 4: Report of PCC-Vivace — Data Link

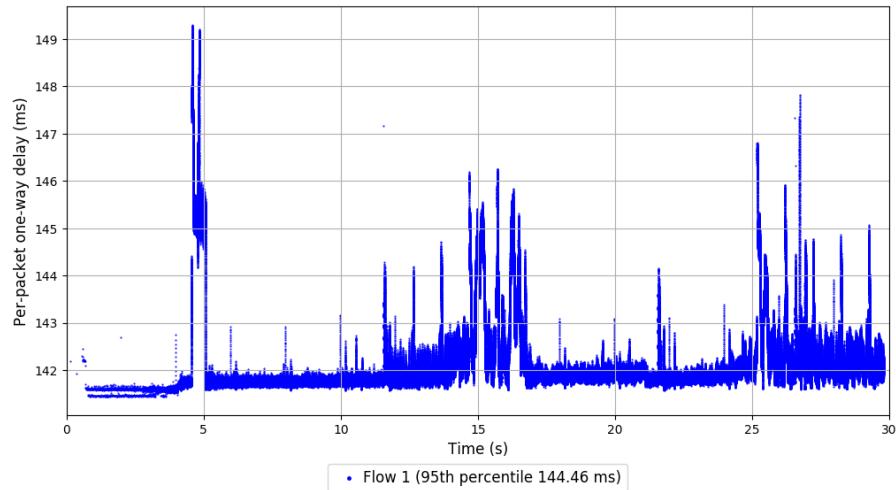
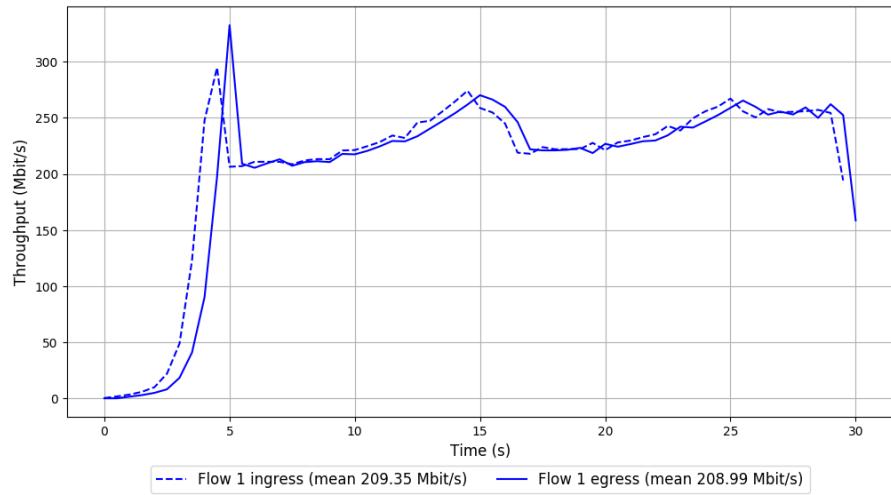


Run 5: Statistics of PCC-Vivace

```
Start at: 2018-10-02 15:31:44
End at: 2018-10-02 15:32:14
Local clock offset: -1.336 ms
Remote clock offset: -38.939 ms

# Below is generated by plot.py at 2018-10-02 16:18:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 208.99 Mbit/s
95th percentile per-packet one-way delay: 144.463 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 208.99 Mbit/s
95th percentile per-packet one-way delay: 144.463 ms
Loss rate: 0.87%
```

Run 5: Report of PCC-Vivace — Data Link

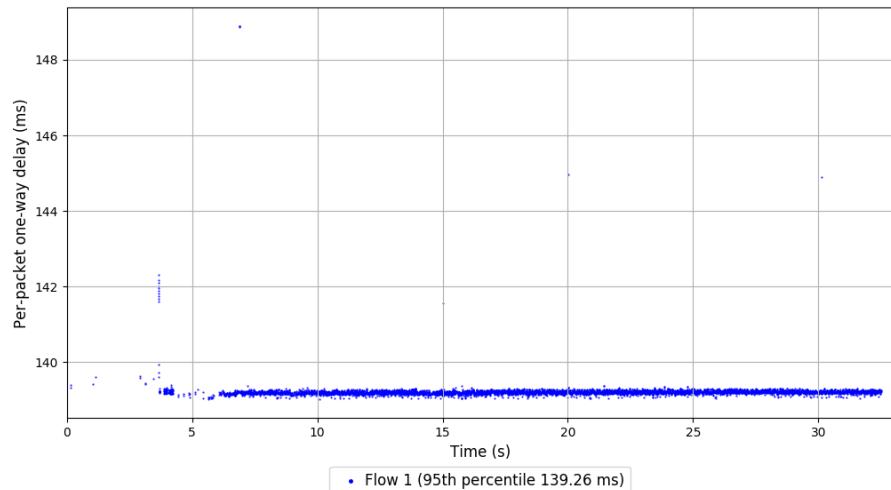
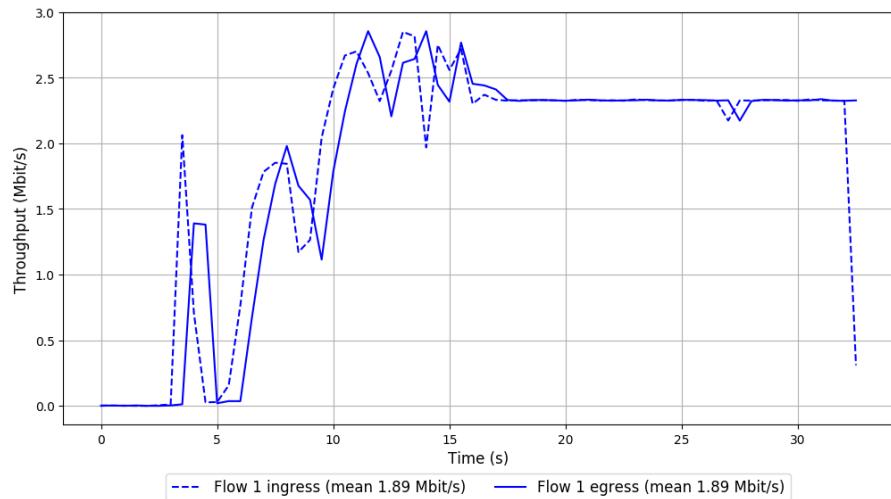


Run 1: Statistics of WebRTC media

```
Start at: 2018-10-02 13:29:14
End at: 2018-10-02 13:29:44
Local clock offset: 0.019 ms
Remote clock offset: -40.756 ms

# Below is generated by plot.py at 2018-10-02 16:18:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 139.263 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 139.263 ms
Loss rate: 0.76%
```

### Run 1: Report of WebRTC media — Data Link

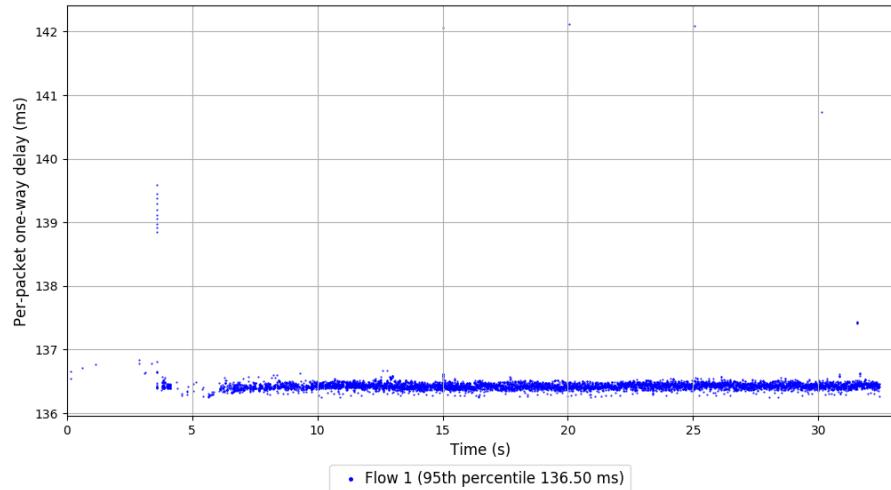
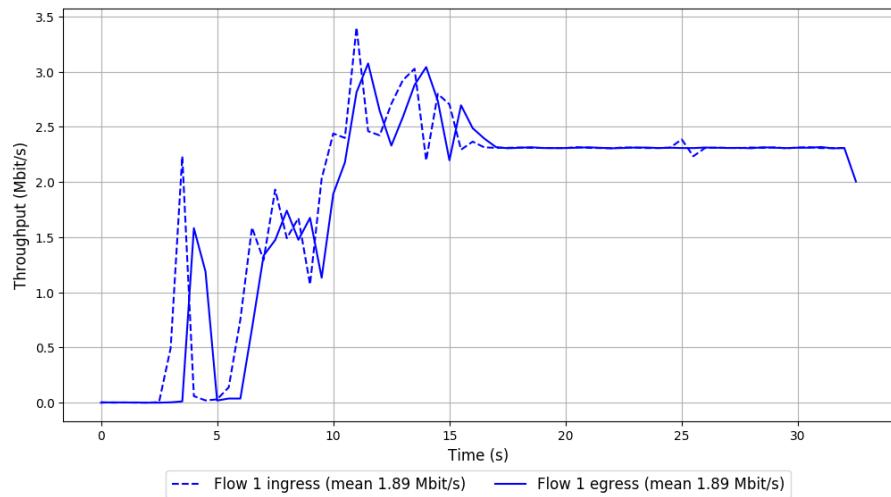


Run 2: Statistics of WebRTC media

```
Start at: 2018-10-02 14:04:43
End at: 2018-10-02 14:05:13
Local clock offset: -0.592 ms
Remote clock offset: -35.649 ms

# Below is generated by plot.py at 2018-10-02 16:18:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 136.496 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 136.496 ms
Loss rate: 0.75%
```

## Run 2: Report of WebRTC media — Data Link

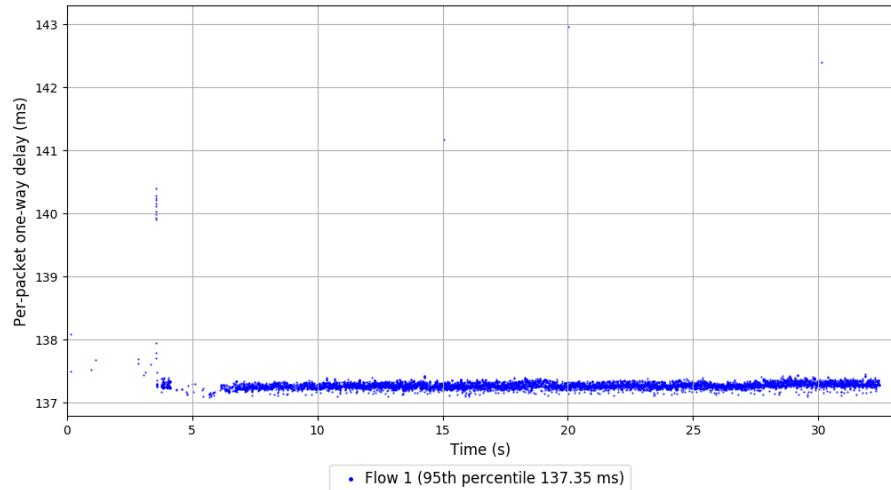
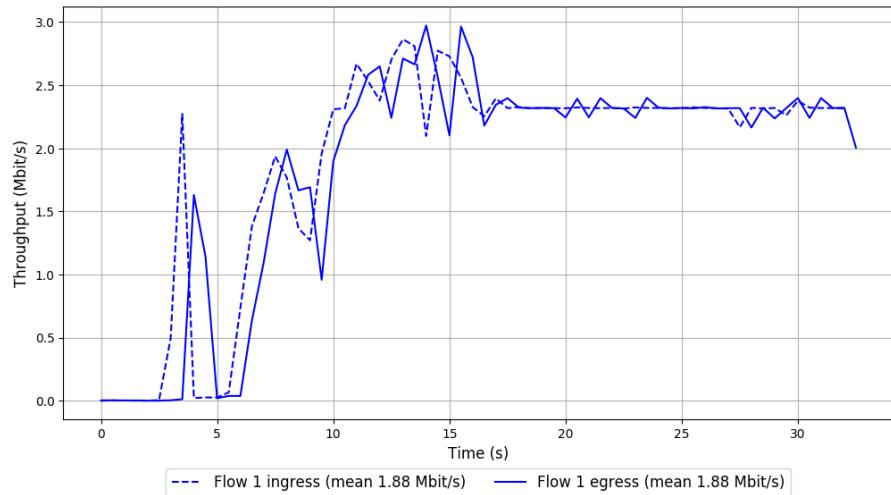


Run 3: Statistics of WebRTC media

```
Start at: 2018-10-02 14:34:26
End at: 2018-10-02 14:34:56
Local clock offset: -0.042 ms
Remote clock offset: -35.326 ms

# Below is generated by plot.py at 2018-10-02 16:18:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.88 Mbit/s
95th percentile per-packet one-way delay: 137.350 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 1.88 Mbit/s
95th percentile per-packet one-way delay: 137.350 ms
Loss rate: 0.76%
```

### Run 3: Report of WebRTC media — Data Link

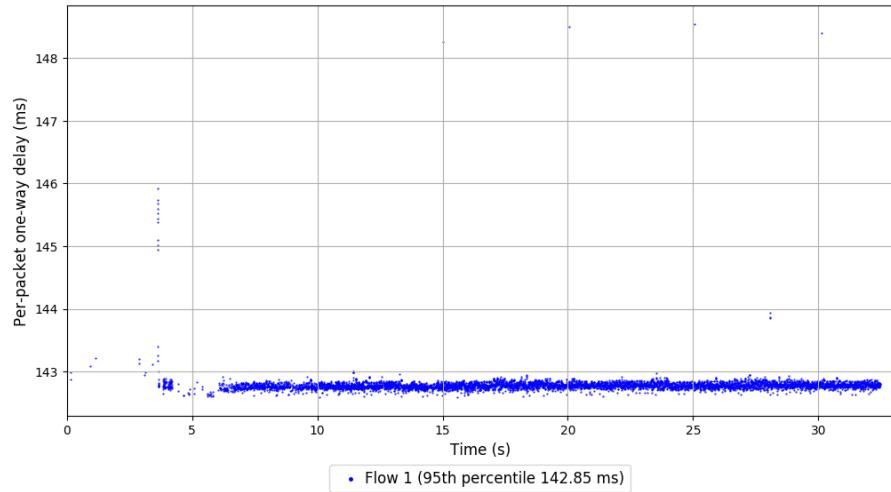
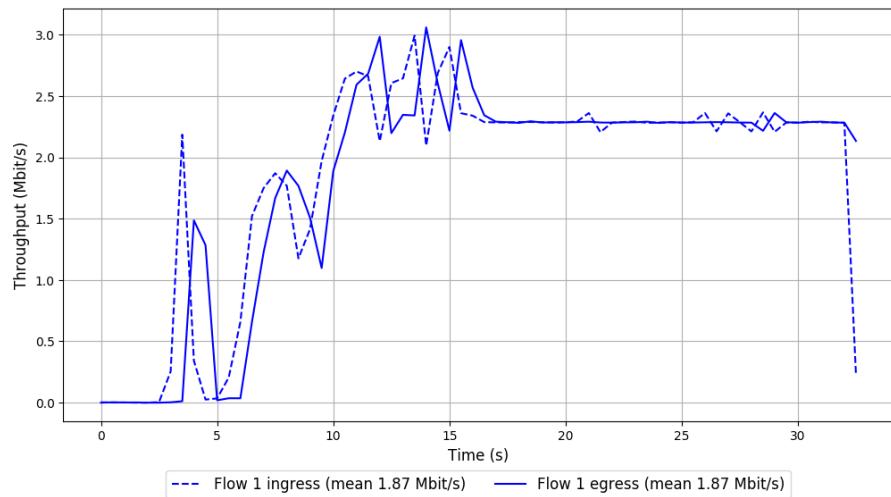


Run 4: Statistics of WebRTC media

```
Start at: 2018-10-02 14:58:30
End at: 2018-10-02 14:59:00
Local clock offset: -0.294 ms
Remote clock offset: -38.936 ms

# Below is generated by plot.py at 2018-10-02 16:18:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 142.853 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 142.853 ms
Loss rate: 0.81%
```

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

```
Start at: 2018-10-02 15:27:52
End at: 2018-10-02 15:28:22
Local clock offset: 0.04 ms
Remote clock offset: -32.573 ms

# Below is generated by plot.py at 2018-10-02 16:18:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.85 Mbit/s
95th percentile per-packet one-way delay: 135.087 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 1.85 Mbit/s
95th percentile per-packet one-way delay: 135.087 ms
Loss rate: 0.75%
```

Run 5: Report of WebRTC media — Data Link

