

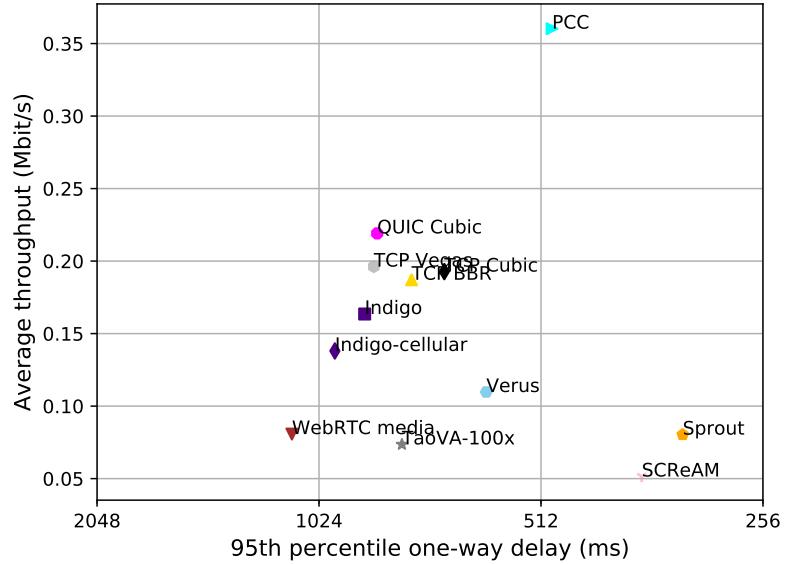
## Pantheon Report

Generated at 2017-09-22 09:31:54 (UTC).  
Data path: China ppp0 (*remote*) → AWS Korea Ethernet (*local*).  
Repeated the test of 13 congestion control schemes 3 times.  
Each test lasted for 30 seconds running 1 flow.  
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).  
Tested BBR with qdisc of Fair Queuing (**fq**), and other schemes with the default Linux qdisc (**pfifo\_fast**).  
NTP offsets were measured against `ntp.nict.jp` and have been applied to correct the timestamps in logs.

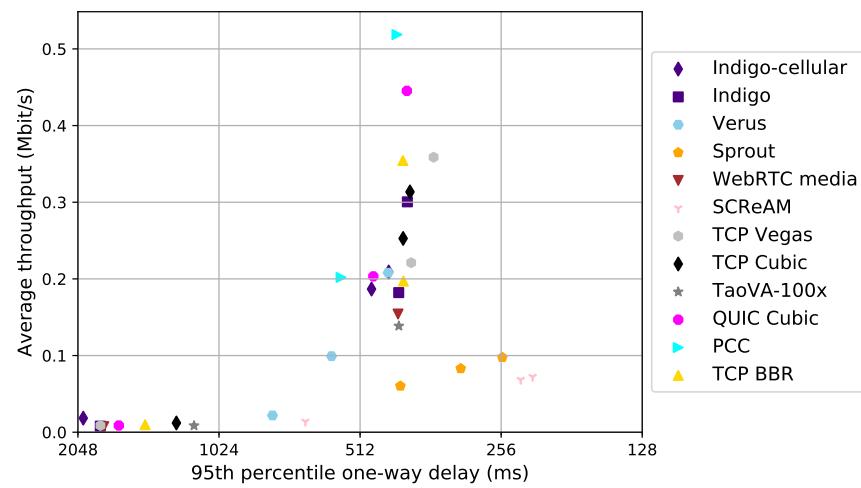
Git summary:

```
branch: indigos @ 46c7c812d4acb71eea4f5fb0b03b3657cea3062f
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/genericCC @ f7ca42f251bf49b432bb71de6d13fa903515c366
third_party/indigo @ b19f3730105f9aa95452552af924e3719b03cc55
third_party/indigo-cellular @ aee99e8eb842cb053f8c9a80e28cd256a930bbc2
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/indigo-no-cwnd @ 3e58442c04028a11d7b02456e137604633ba2d6c
third_party/indigo-no-delivery-rate @ 57caa40858b964906edff4876d5a7e5bfff666c5
third_party/indigo-no-queuing-delay @ 03455460fd1a8ffbdad86fabb936fdca204b80db
third_party/indigo-no-send-rate @ b39dfa6b2c5f19cb7cd89626cb4f5bb81f9fecda
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
  M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ baf443516dea3eeddeccaf9b916cc313273ca4f4
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/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
  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/webrtc @ a488197ddd041ace68a42849b2540ad834825f42
```

test from China ppp0 to AWS Korea Ethernet, 3 runs of 30s each per scheme  
(mean of all runs by scheme)



test from China ppp0 to AWS Korea Ethernet, 3 runs of 30s each per scheme



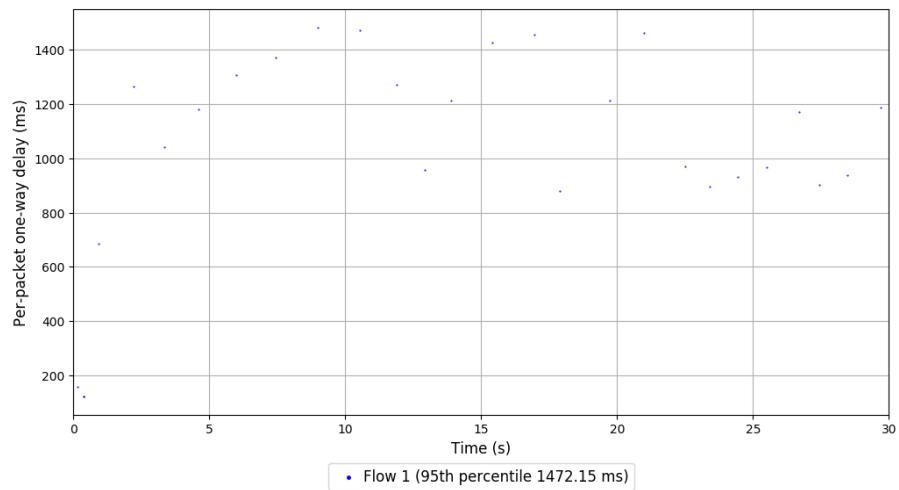
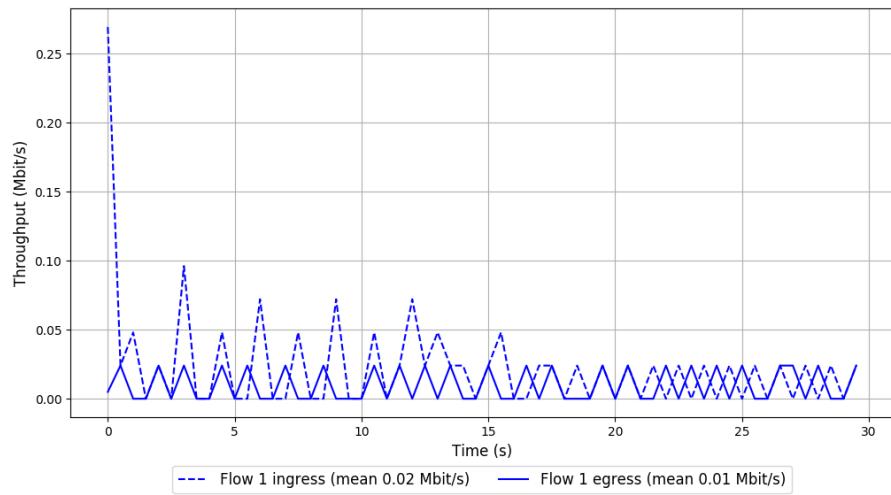
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	3	0.19	766.92	30.37
TCP Cubic	3	0.19	692.47	23.75
LEDBAT	0	N/A	N/A	N/A
PCC	2	0.36	494.56	99.52
QUIC Cubic	3	0.22	853.93	45.31
SCReAM	3	0.05	373.82	15.20
WebRTC media	2	0.08	1114.58	48.63
Sprout	3	0.08	328.93	8.42
TaoVA-100x	2	0.08	790.41	62.02
TCP Vegas	3	0.20	862.94	21.28
Verus	3	0.11	607.40	47.71
Indigo	3	0.16	887.99	65.79
Indigo-cellular	3	0.14	974.55	42.45

Run 1: Statistics of TCP BBR

```
Start at: 2017-09-22 08:00:47
End at: 2017-09-22 08:01:17
Local clock offset: -2.569 ms
Remote clock offset: 0.056 ms

# Below is generated by plot.py at 2017-09-22 09:31:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1472.149 ms
Loss rate: 57.69%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1472.149 ms
Loss rate: 57.69%
```

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

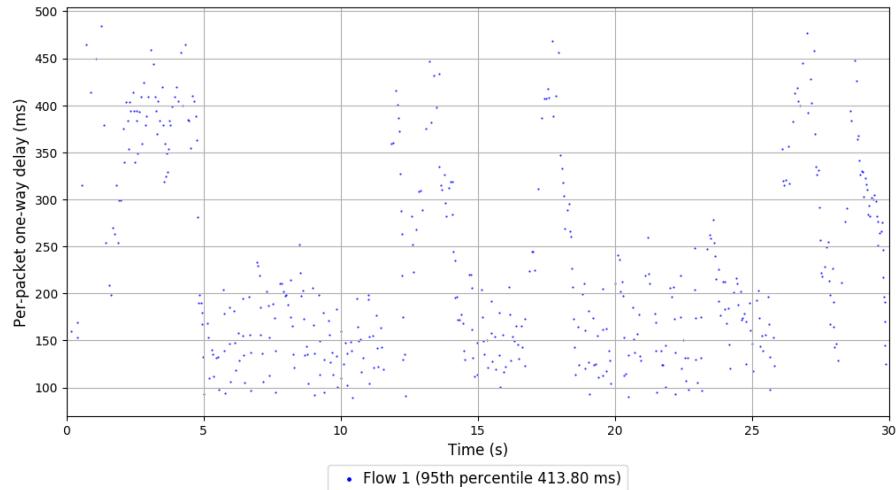
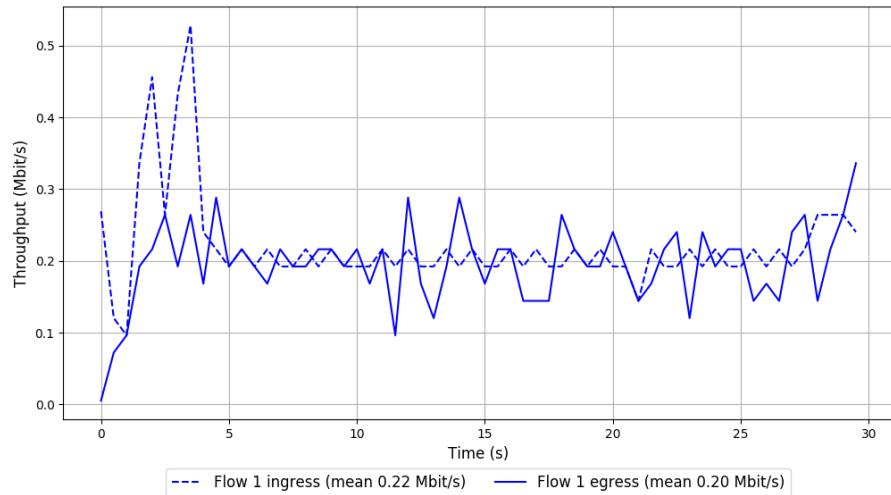


Run 2: Statistics of TCP BBR

```
Start at: 2017-09-22 08:18:19
End at: 2017-09-22 08:18:49
Local clock offset: -1.418 ms
Remote clock offset: 0.12 ms

# Below is generated by plot.py at 2017-09-22 09:31:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 413.795 ms
Loss rate: 11.27%
-- Flow 1:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 413.795 ms
Loss rate: 11.27%
```

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

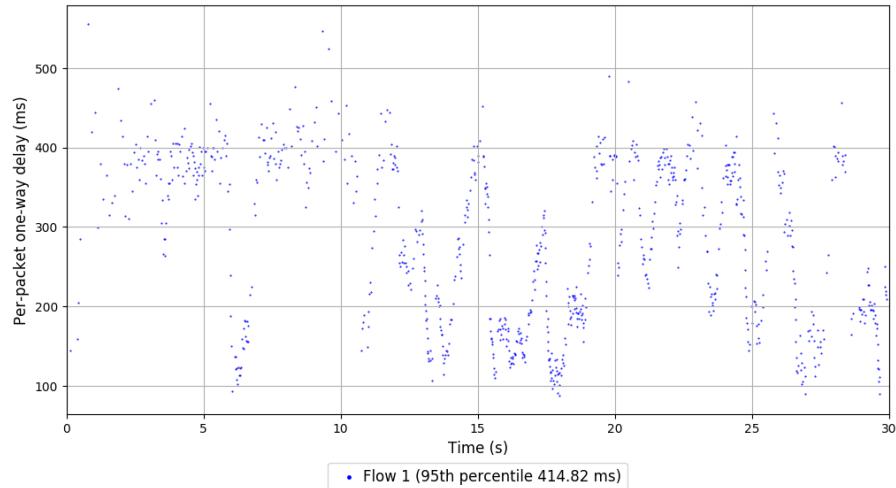
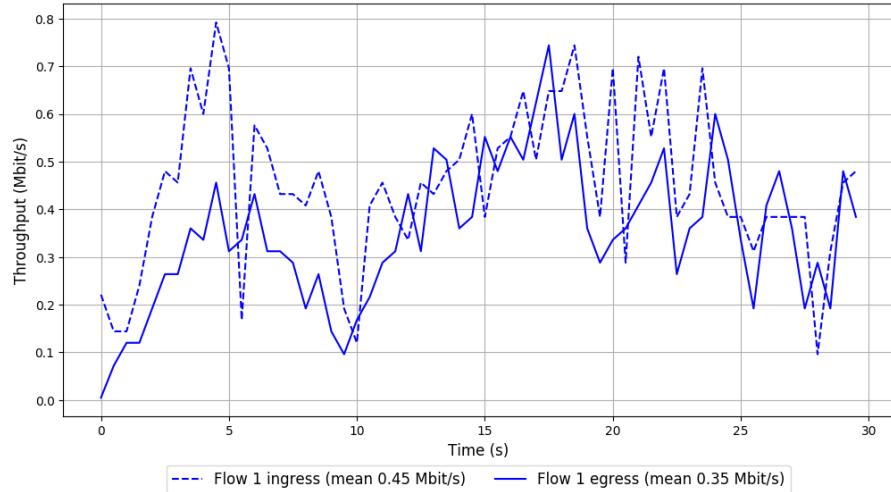


Run 3: Statistics of TCP BBR

```
Start at: 2017-09-22 08:33:42
End at: 2017-09-22 08:34:12
Local clock offset: -2.559 ms
Remote clock offset: -0.323 ms

# Below is generated by plot.py at 2017-09-22 09:31:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 414.817 ms
Loss rate: 22.14%
-- Flow 1:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 414.817 ms
Loss rate: 22.14%
```

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

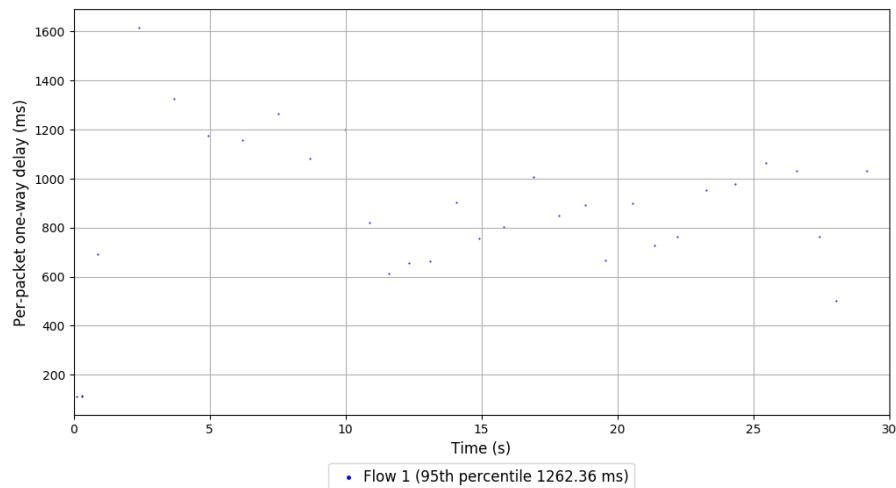
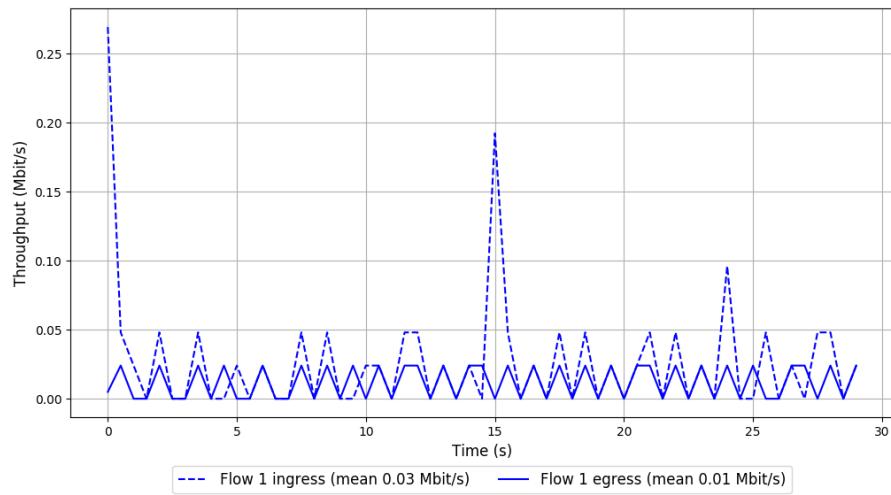


Run 1: Statistics of TCP Cubic

```
Start at: 2017-09-22 08:01:59
End at: 2017-09-22 08:02:29
Local clock offset: -1.361 ms
Remote clock offset: 0.318 ms

# Below is generated by plot.py at 2017-09-22 09:31:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1262.360 ms
Loss rate: 55.89%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1262.360 ms
Loss rate: 55.89%
```

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

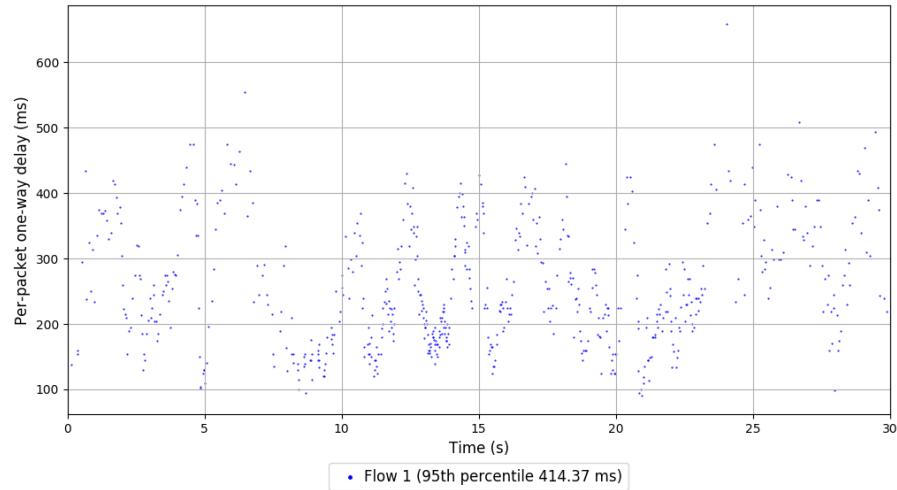
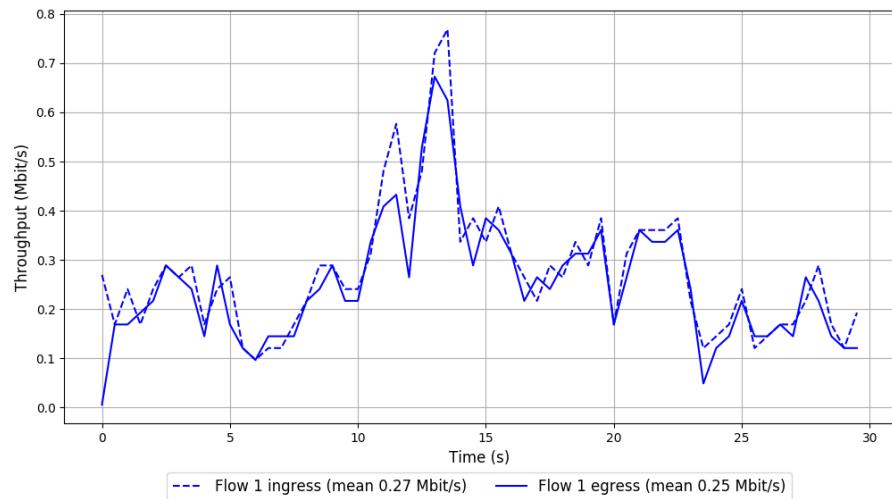


Run 2: Statistics of TCP Cubic

```
Start at: 2017-09-22 08:19:27
End at: 2017-09-22 08:19:57
Local clock offset: -2.366 ms
Remote clock offset: 0.246 ms

# Below is generated by plot.py at 2017-09-22 09:31:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 414.368 ms
Loss rate: 8.61%
-- Flow 1:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 414.368 ms
Loss rate: 8.61%
```

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

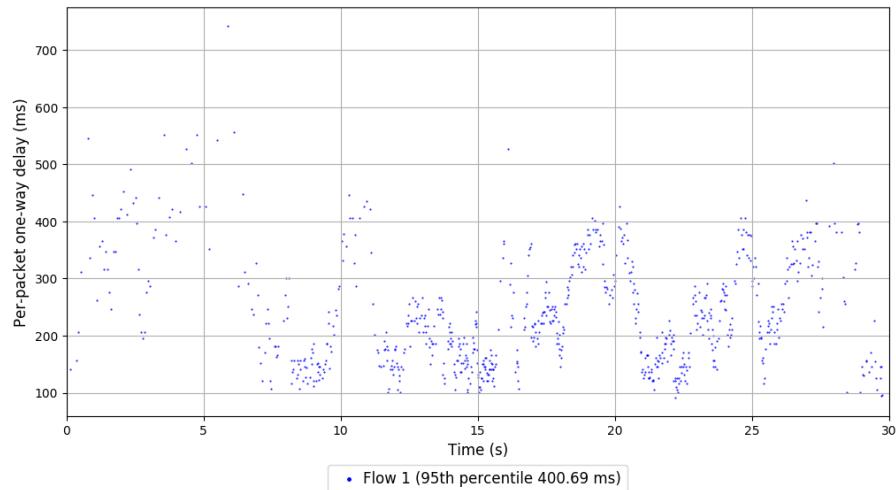
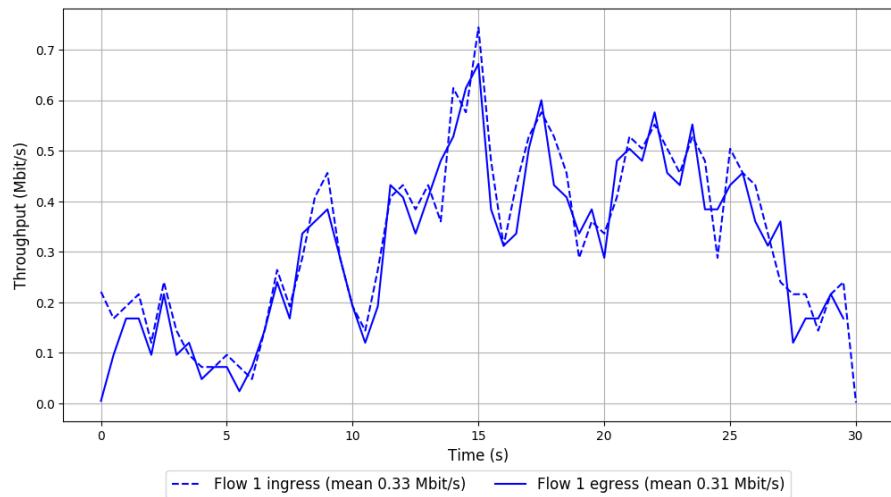


```
Run 3: Statistics of TCP Cubic
```

```
Start at: 2017-09-22 08:34:51
End at: 2017-09-22 08:35:21
Local clock offset: -2.582 ms
Remote clock offset: 0.089 ms

# Below is generated by plot.py at 2017-09-22 09:31:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 400.688 ms
Loss rate: 6.76%
-- Flow 1:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 400.688 ms
Loss rate: 6.76%
```

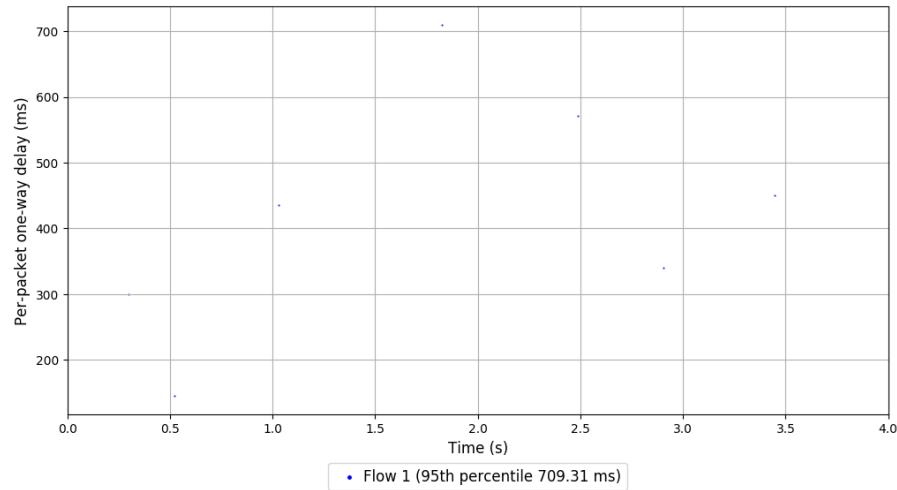
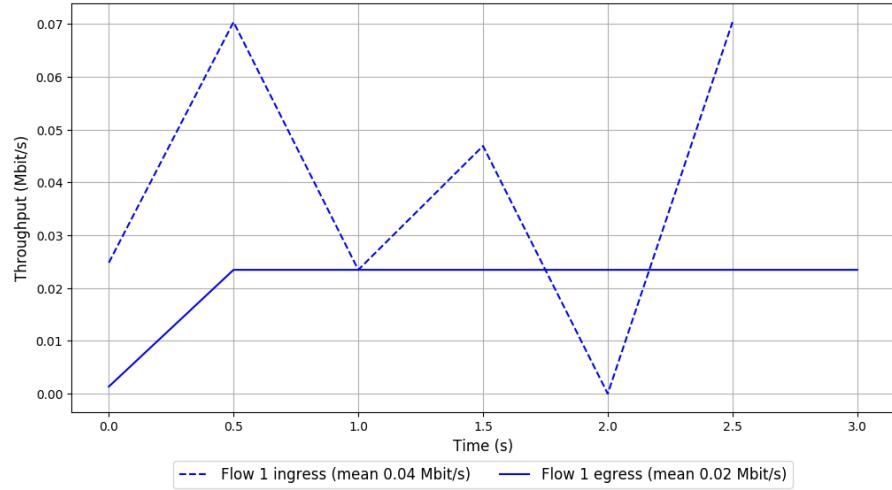
### Run 3: Report of TCP Cubic — Data Link



Run 1: Statistics of LEDBAT

Start at: 2017-09-22 08:13:32  
End at: 2017-09-22 08:14:02  
Local clock offset: -2.513 ms  
Remote clock offset: 0.132 ms

## Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2017-09-22 08:29:47  
End at: 2017-09-22 08:30:17  
Local clock offset: -2.47 ms  
Remote clock offset: 0.074 ms

Run 2: Report of LEDBAT — Data Link

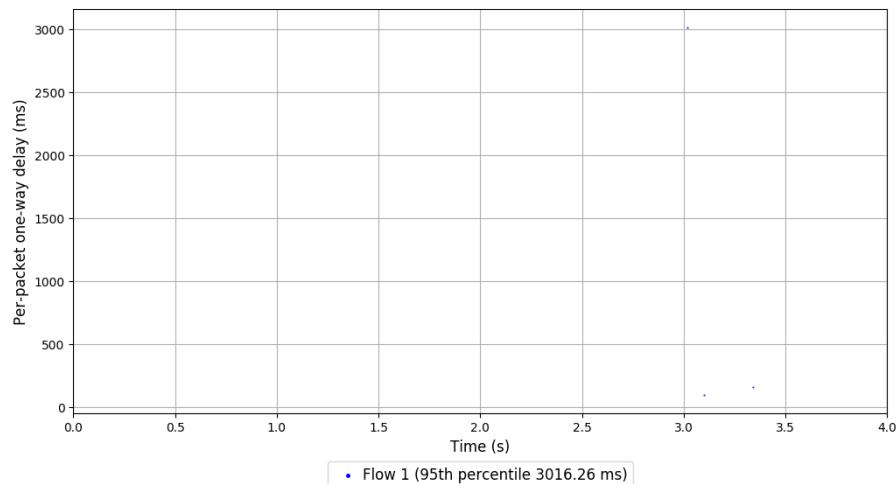
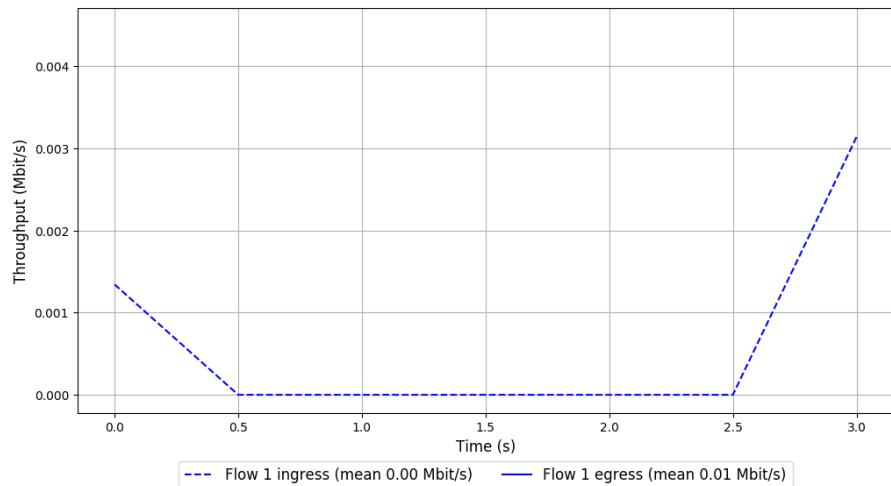
Figure is missing

Figure is missing

Run 3: Statistics of LEDBAT

Start at: 2017-09-22 08:45:13  
End at: 2017-09-22 08:45:43  
Local clock offset: -2.569 ms  
Remote clock offset: -0.232 ms

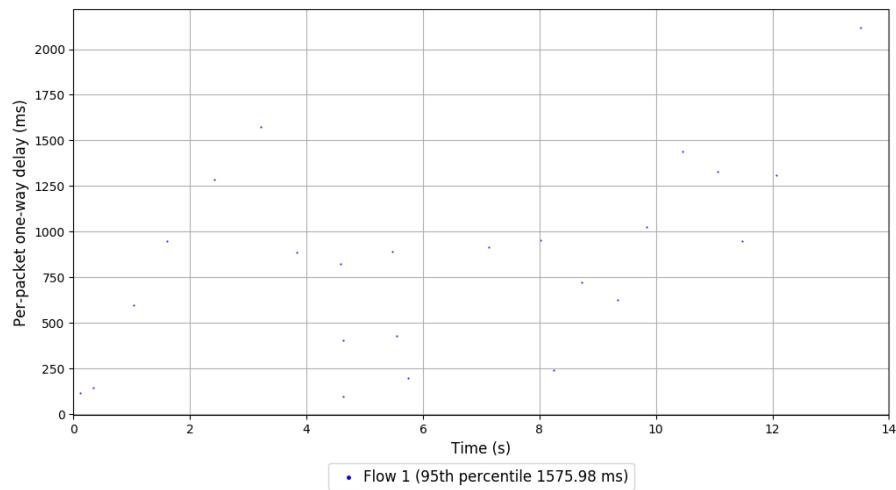
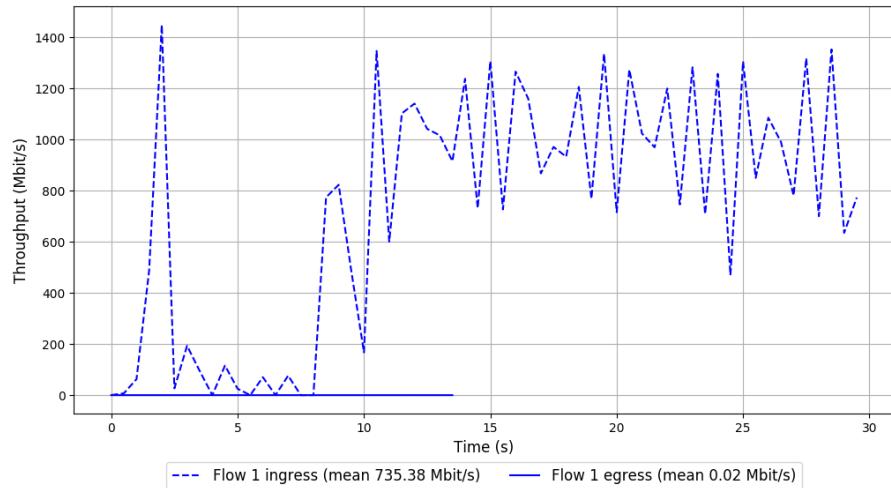
### Run 3: Report of LEDBAT — Data Link



Run 1: Statistics of PCC

Start at: 2017-09-22 07:54:56  
End at: 2017-09-22 07:55:26  
Local clock offset: -1.157 ms  
Remote clock offset: 0.19 ms

### Run 1: Report of PCC — Data Link

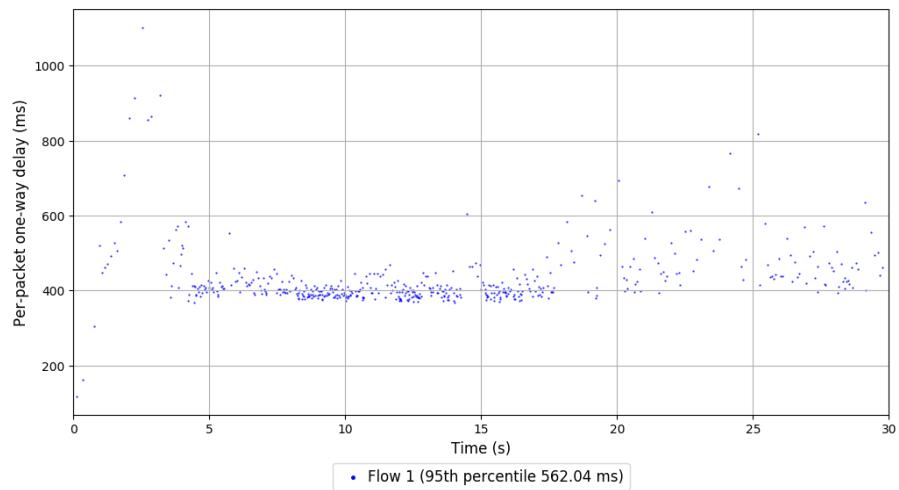
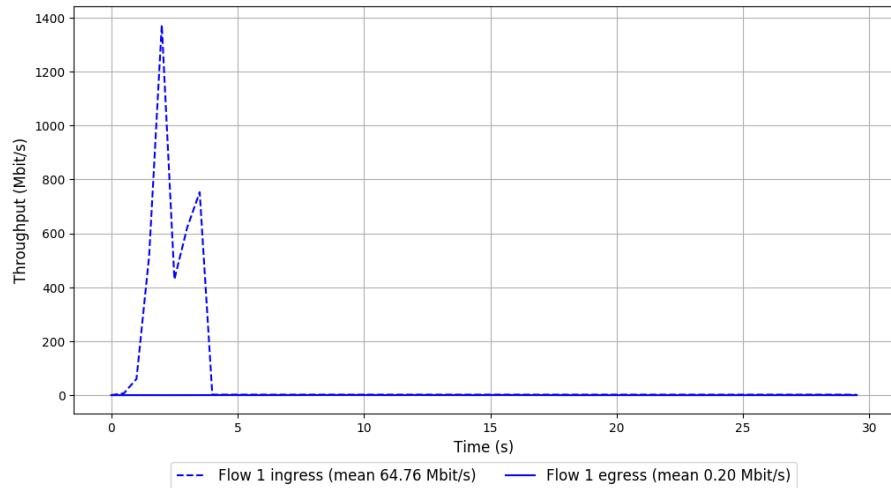


Run 2: Statistics of PCC

```
Start at: 2017-09-22 08:16:16
End at: 2017-09-22 08:16:46
Local clock offset: -1.264 ms
Remote clock offset: 0.17 ms

# Below is generated by plot.py at 2017-09-22 09:31:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 562.043 ms
Loss rate: 99.69%
-- Flow 1:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 562.043 ms
Loss rate: 99.69%
```

## Run 2: Report of PCC — Data Link

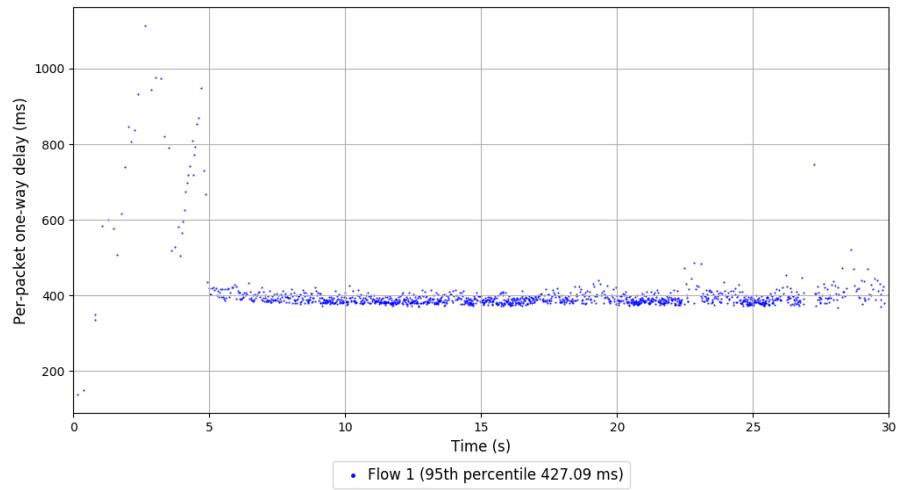
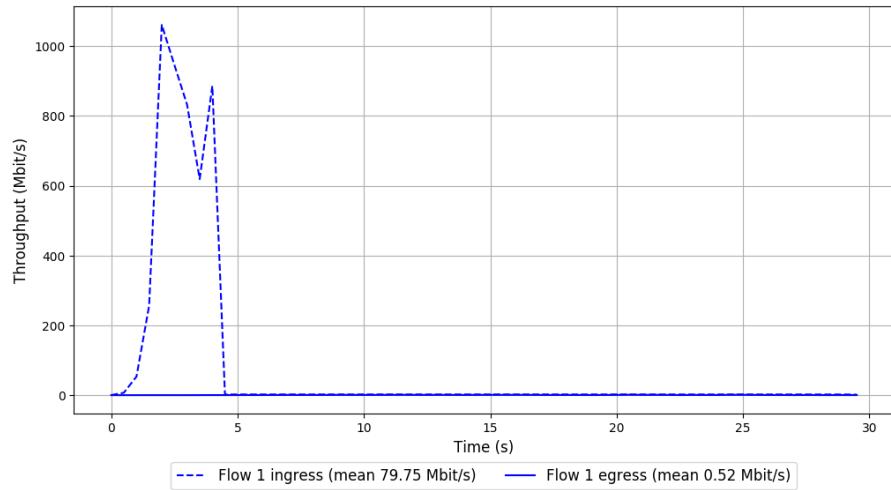


Run 3: Statistics of PCC

```
Start at: 2017-09-22 08:32:09
End at: 2017-09-22 08:32:39
Local clock offset: -1.274 ms
Remote clock offset: 0.08 ms

# Below is generated by plot.py at 2017-09-22 09:31:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 427.086 ms
Loss rate: 99.35%
-- Flow 1:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 427.086 ms
Loss rate: 99.35%
```

### Run 3: Report of PCC — Data Link

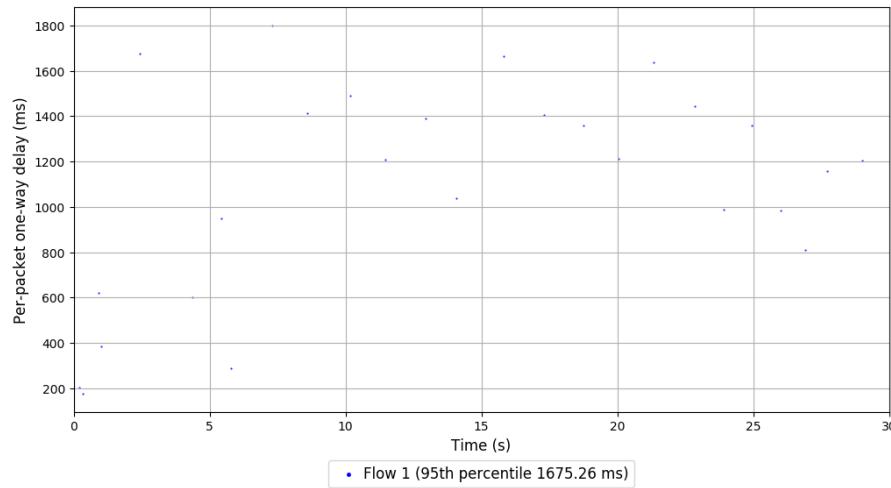
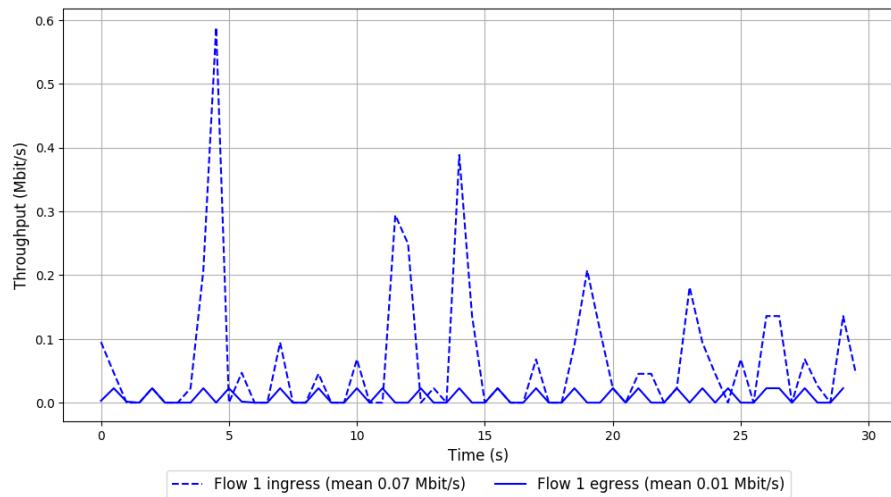


```
Run 1: Statistics of QUIC Cubic
```

```
Start at: 2017-09-22 08:03:37
End at: 2017-09-22 08:04:07
Local clock offset: -2.522 ms
Remote clock offset: 0.298 ms

# Below is generated by plot.py at 2017-09-22 09:31:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1675.260 ms
Loss rate: 87.08%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1675.260 ms
Loss rate: 87.08%
```

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

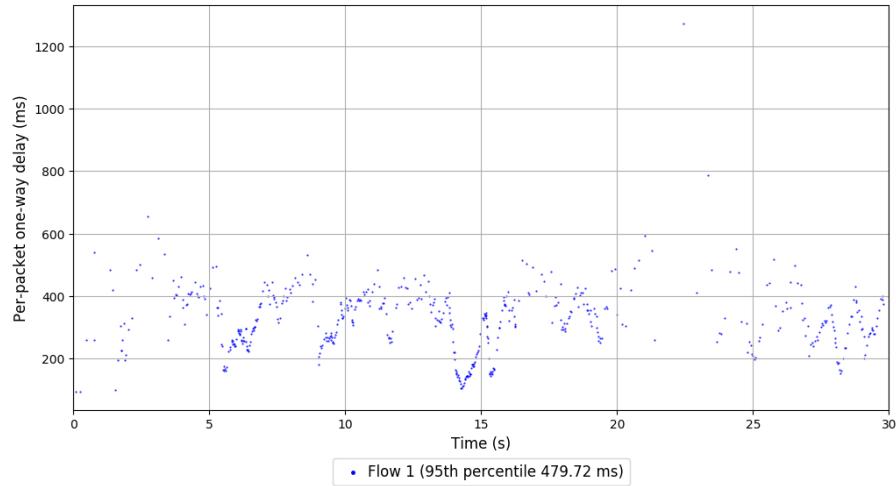
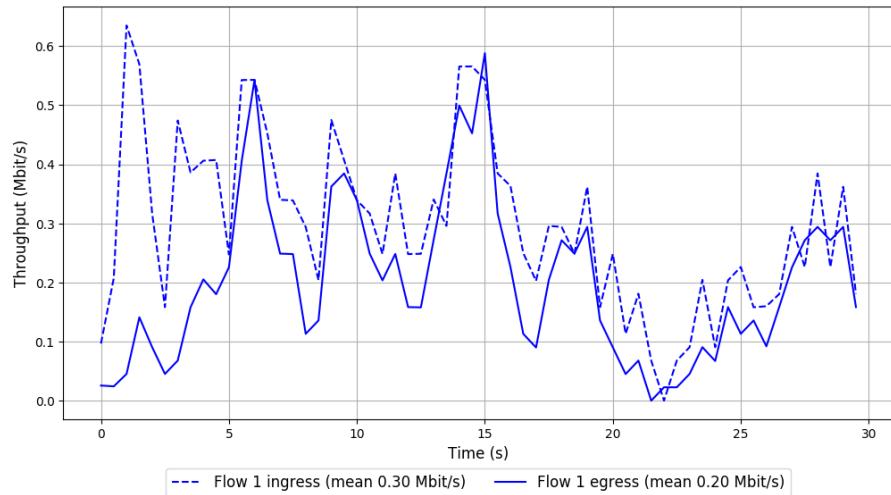


Run 2: Statistics of QUIC Cubic

```
Start at: 2017-09-22 08:20:36
End at: 2017-09-22 08:21:06
Local clock offset: -1.158 ms
Remote clock offset: 0.299 ms

# Below is generated by plot.py at 2017-09-22 09:31:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 479.717 ms
Loss rate: 32.29%
-- Flow 1:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 479.717 ms
Loss rate: 32.29%
```

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

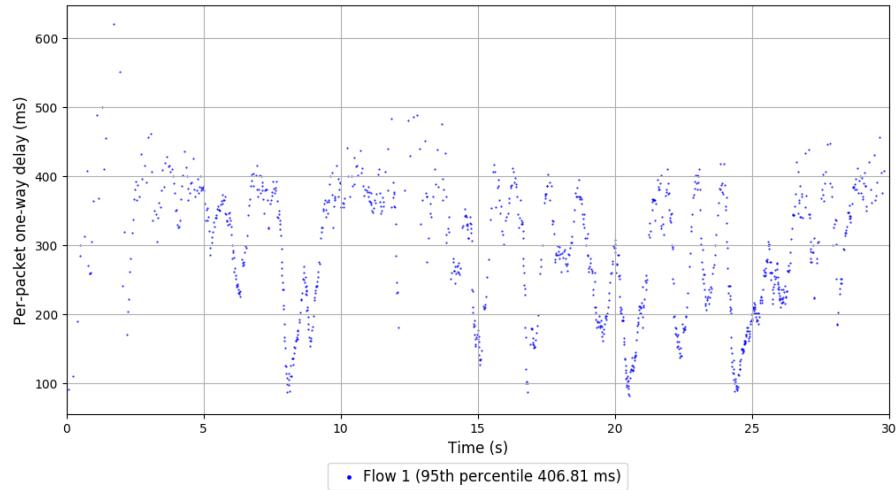
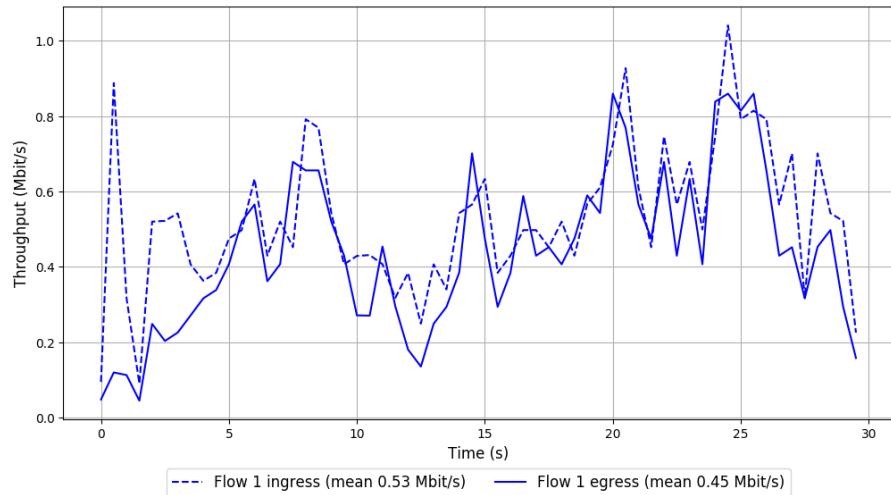


Run 3: Statistics of QUIC Cubic

```
Start at: 2017-09-22 08:36:00
End at: 2017-09-22 08:36:30
Local clock offset: -2.597 ms
Remote clock offset: -0.019 ms

# Below is generated by plot.py at 2017-09-22 09:31:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 406.815 ms
Loss rate: 16.56%
-- Flow 1:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 406.815 ms
Loss rate: 16.56%
```

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

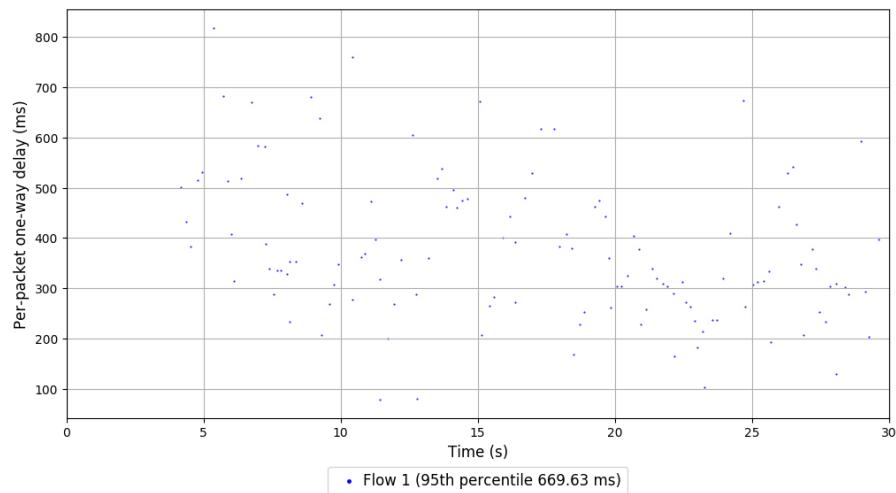
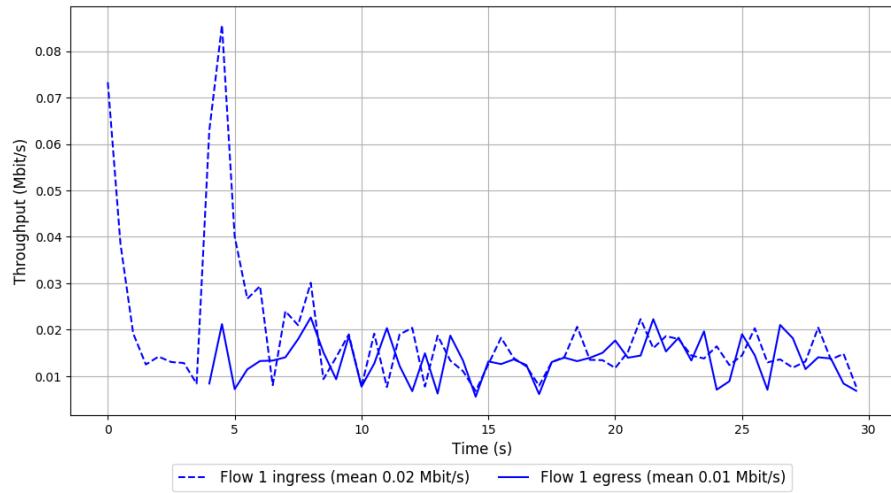


```
Run 1: Statistics of SCReAM
```

```
Start at: 2017-09-22 08:09:29
End at: 2017-09-22 08:09:59
Local clock offset: -1.424 ms
Remote clock offset: 0.17 ms

# Below is generated by plot.py at 2017-09-22 09:31:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 669.627 ms
Loss rate: 38.02%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 669.627 ms
Loss rate: 38.02%
```

## Run 1: Report of SCReAM — Data Link

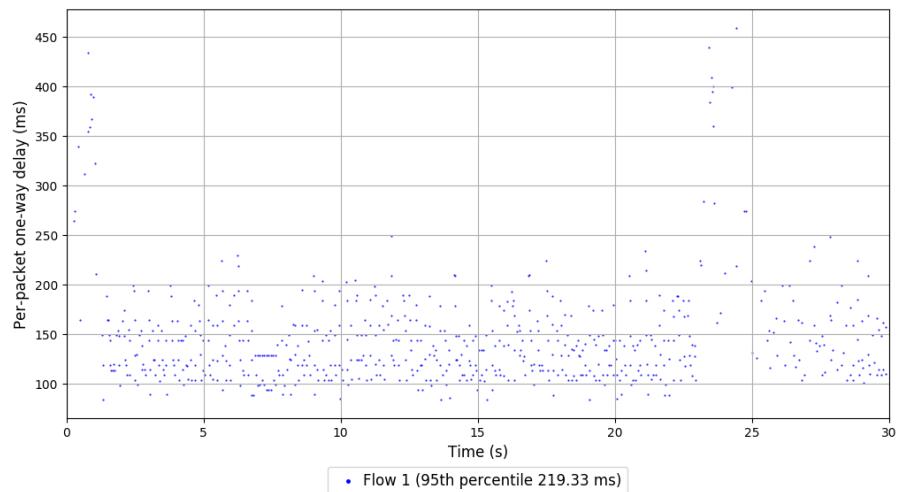
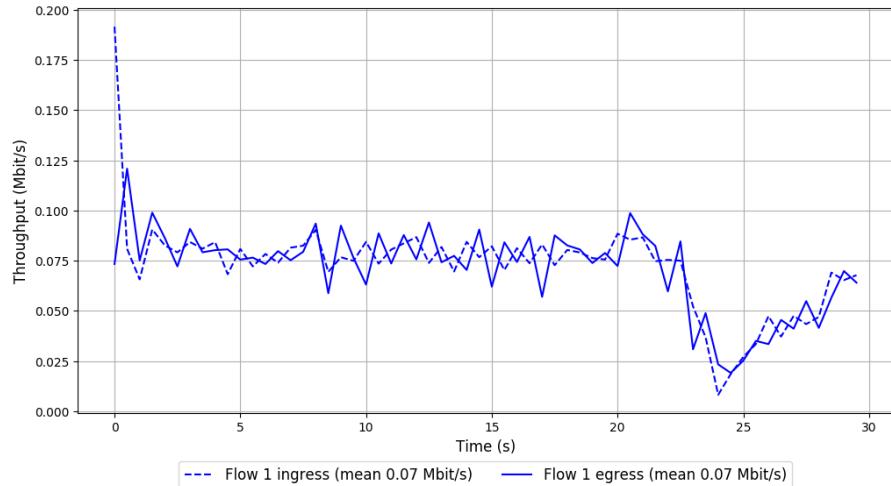


Run 2: Statistics of SCReAM

```
Start at: 2017-09-22 08:26:21
End at: 2017-09-22 08:26:51
Local clock offset: -2.522 ms
Remote clock offset: -0.325 ms

# Below is generated by plot.py at 2017-09-22 09:31:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 219.331 ms
Loss rate: 1.57%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 219.331 ms
Loss rate: 1.57%
```

## Run 2: Report of SCReAM — Data Link

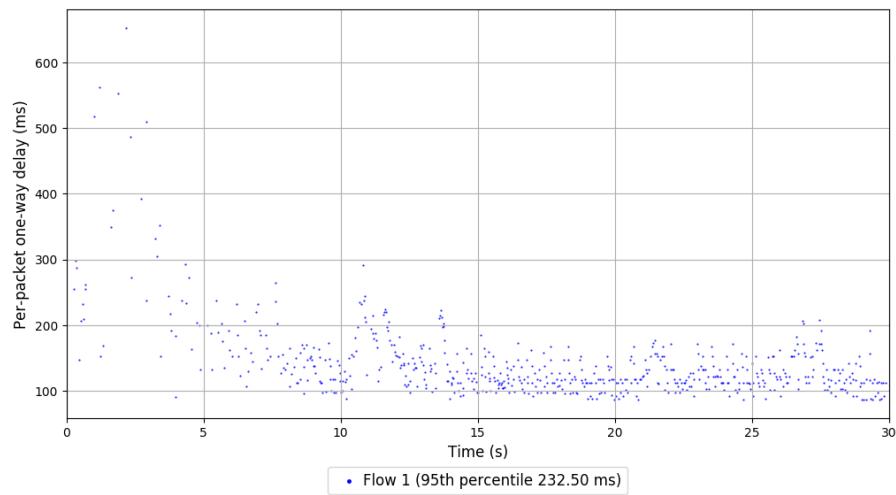
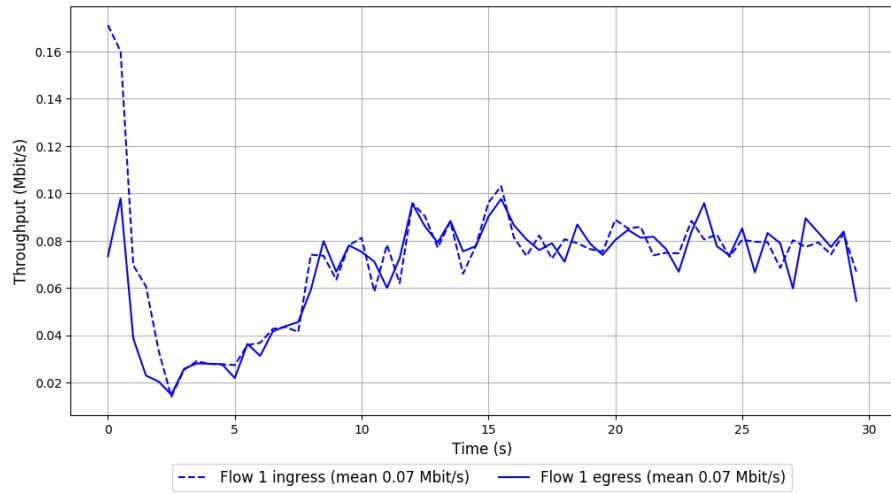


Run 3: Statistics of SCReAM

```
Start at: 2017-09-22 08:41:46
End at: 2017-09-22 08:42:16
Local clock offset: -2.555 ms
Remote clock offset: 0.028 ms

# Below is generated by plot.py at 2017-09-22 09:31:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 232.498 ms
Loss rate: 6.00%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 232.498 ms
Loss rate: 6.00%
```

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

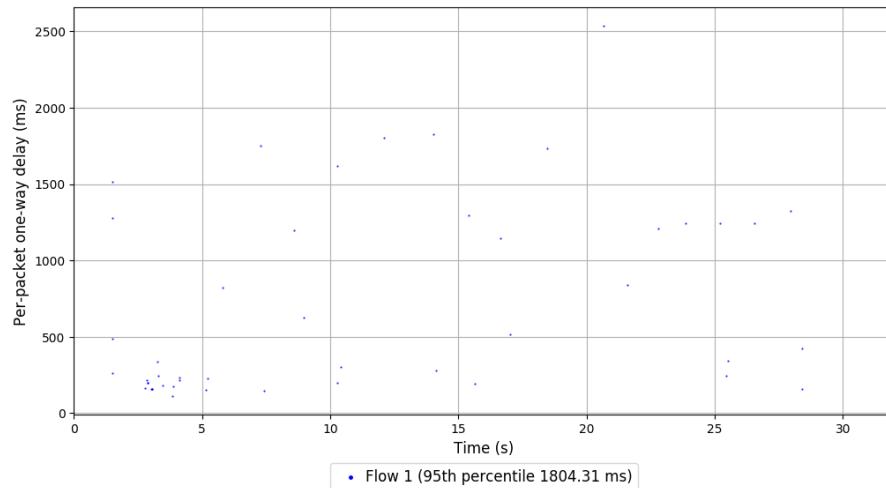
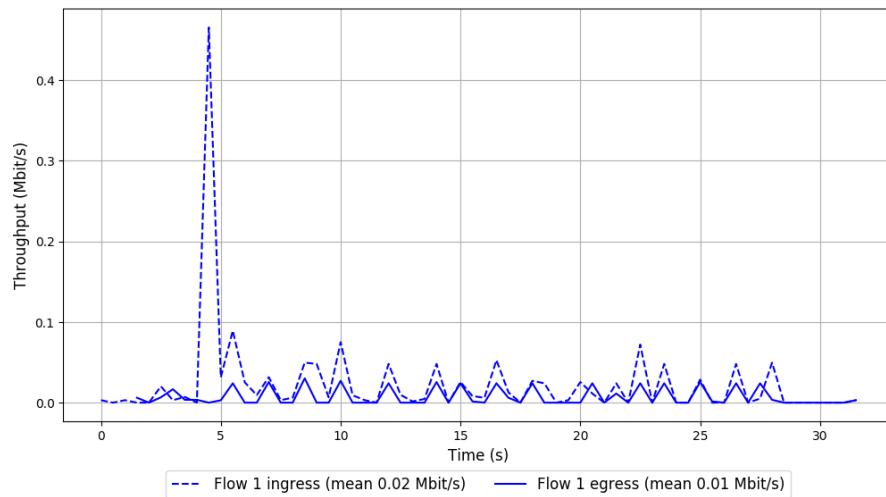


```
Run 1: Statistics of WebRTC media
```

```
Start at: 2017-09-22 08:07:10
End at: 2017-09-22 08:07:40
Local clock offset: -1.368 ms
Remote clock offset: 0.276 ms

# Below is generated by plot.py at 2017-09-22 09:31:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1804.308 ms
Loss rate: 70.16%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1804.308 ms
Loss rate: 70.16%
```

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



Run 2: Statistics of WebRTC media

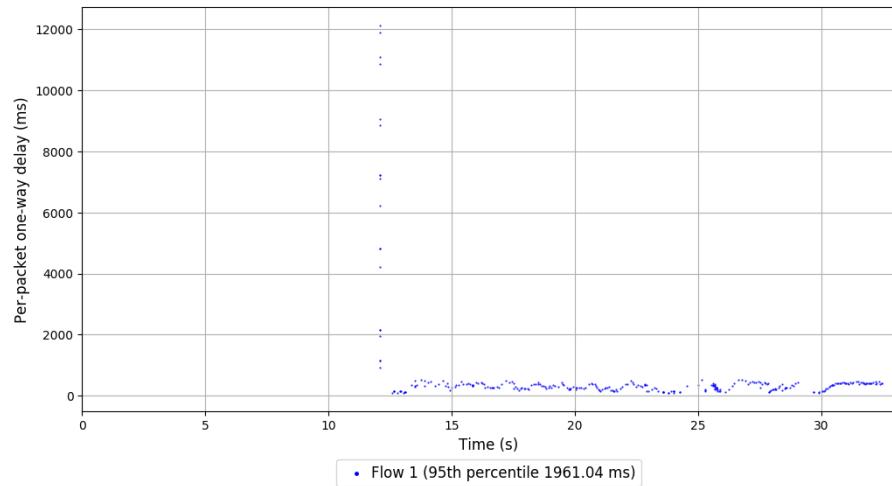
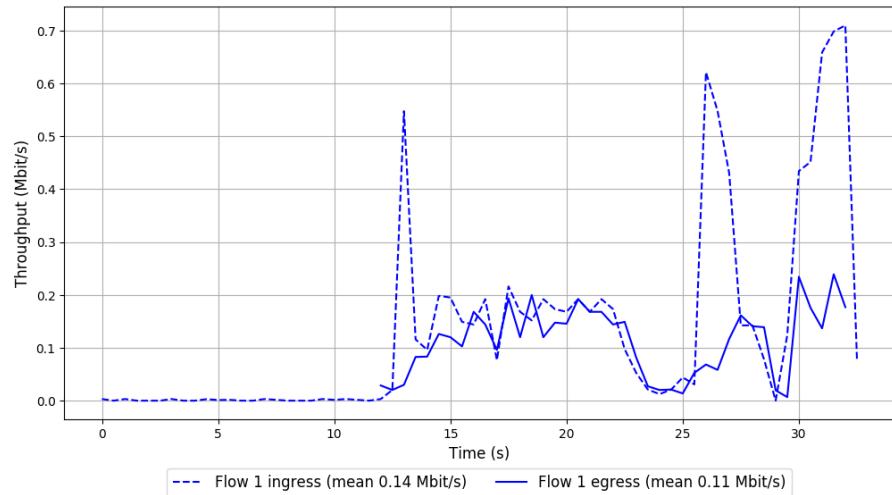
Start at: 2017-09-22 08:24:03

End at: 2017-09-22 08:24:33

Local clock offset: -2.646 ms

Remote clock offset: 0.128 ms

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

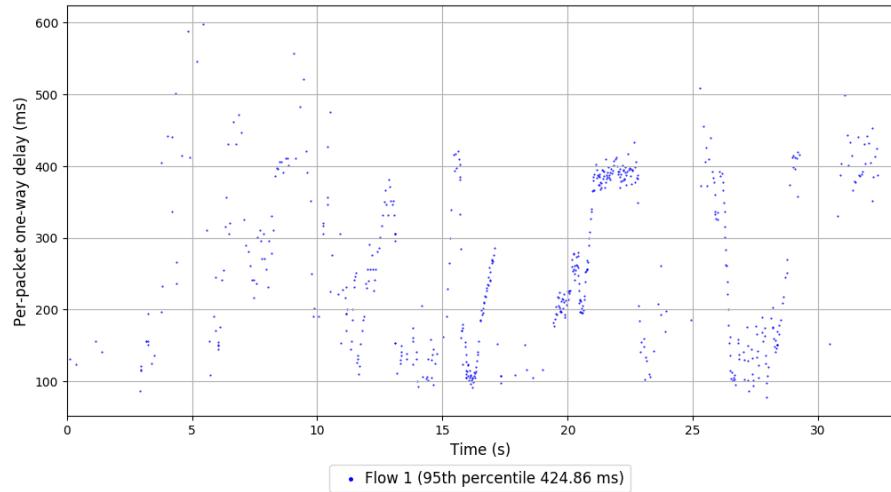
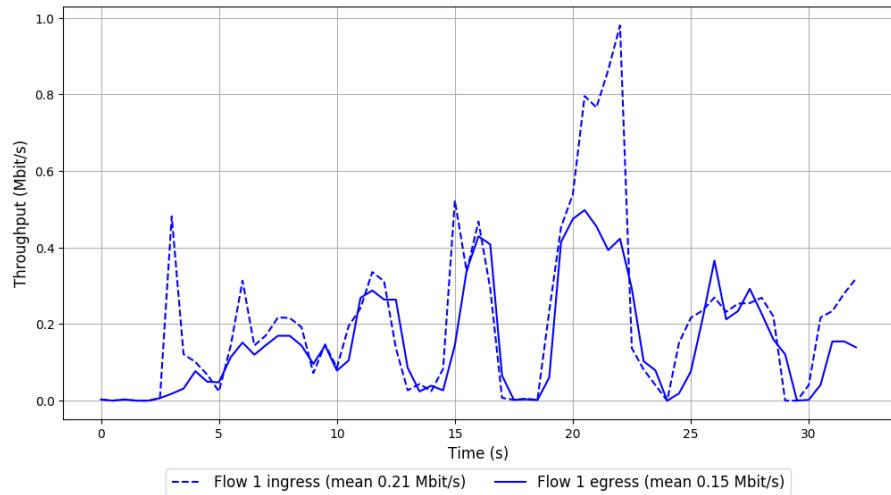


```
Run 3: Statistics of WebRTC media
```

```
Start at: 2017-09-22 08:39:27
End at: 2017-09-22 08:39:57
Local clock offset: -1.436 ms
Remote clock offset: -0.314 ms

# Below is generated by plot.py at 2017-09-22 09:31:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 424.861 ms
Loss rate: 27.10%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 424.861 ms
Loss rate: 27.10%
```

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

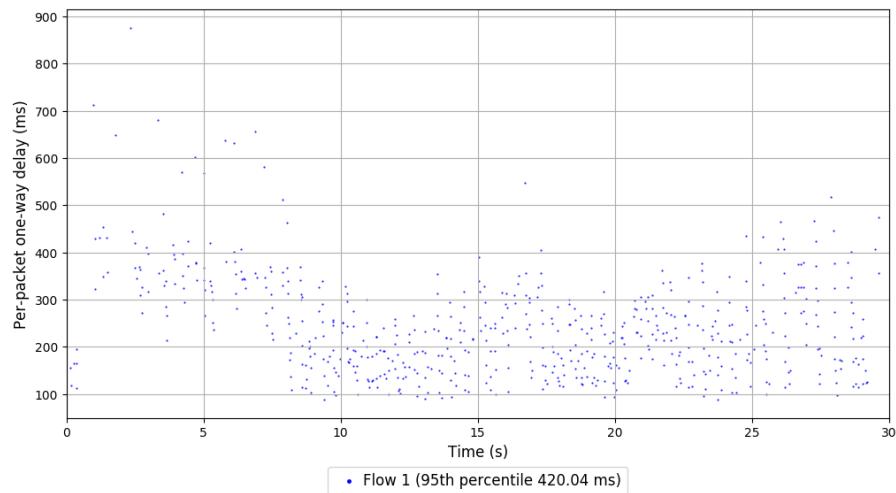
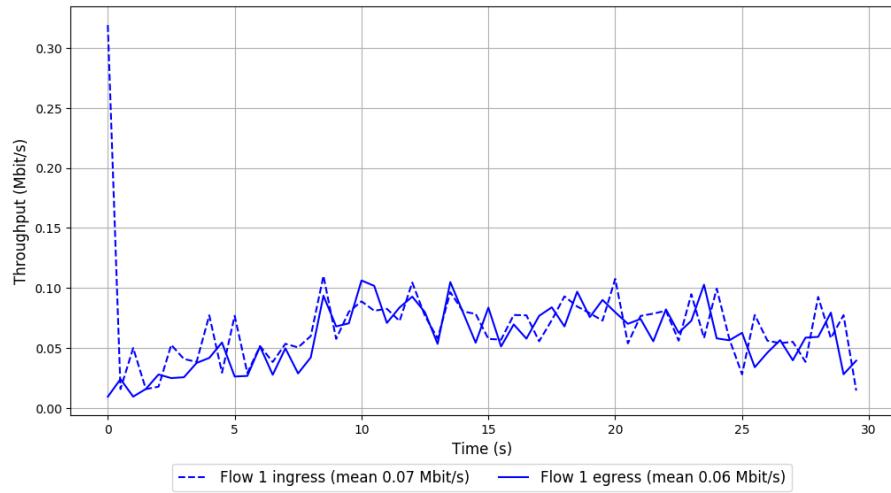


Run 1: Statistics of Sprout

```
Start at: 2017-09-22 08:11:47
End at: 2017-09-22 08:12:17
Local clock offset: -1.326 ms
Remote clock offset: 0.062 ms

# Below is generated by plot.py at 2017-09-22 09:31:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 420.037 ms
Loss rate: 13.87%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 420.037 ms
Loss rate: 13.87%
```

## Run 1: Report of Sprout — Data Link

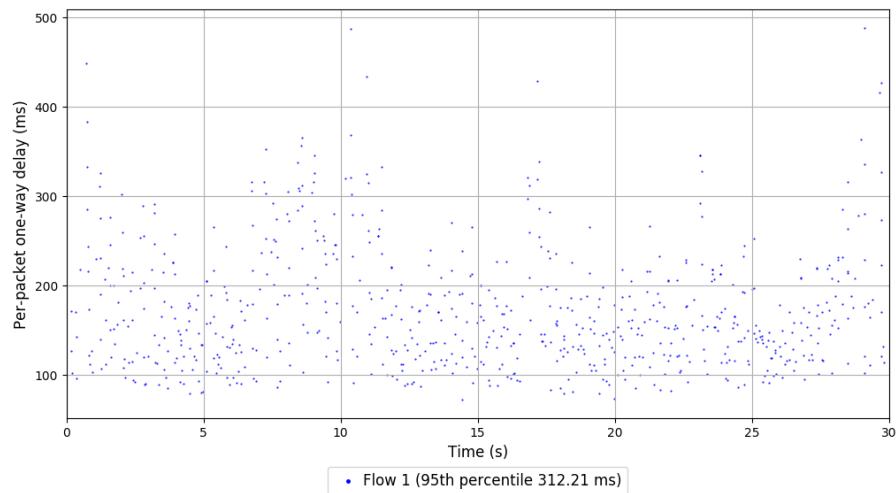
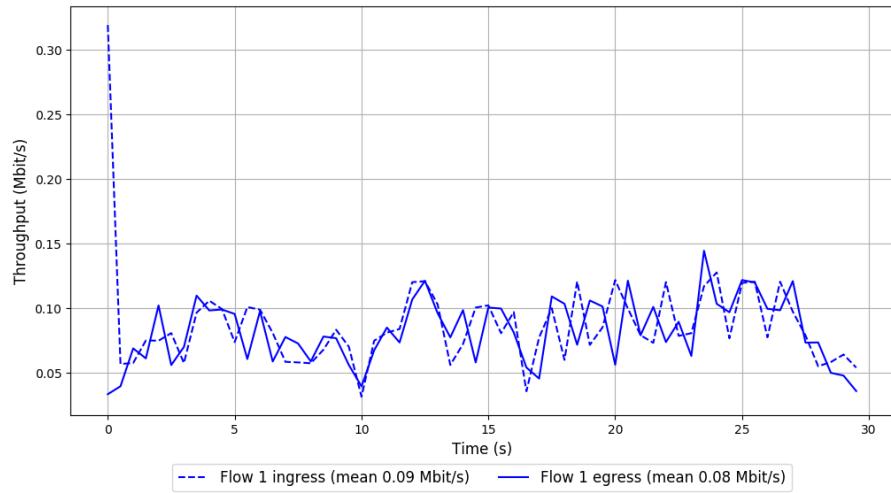


Run 2: Statistics of Sprout

```
Start at: 2017-09-22 08:28:38
End at: 2017-09-22 08:29:08
Local clock offset: -2.513 ms
Remote clock offset: 0.079 ms

# Below is generated by plot.py at 2017-09-22 09:31:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 312.211 ms
Loss rate: 6.29%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 312.211 ms
Loss rate: 6.29%
```

## Run 2: Report of Sprout — Data Link

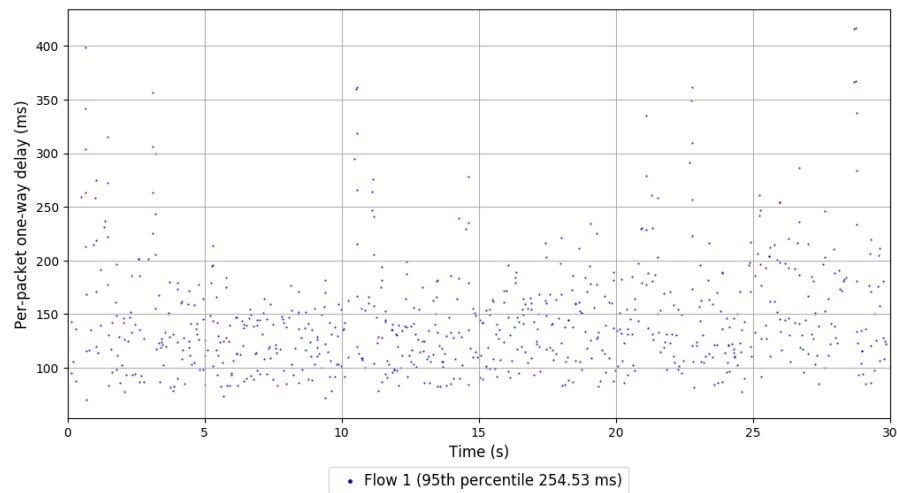
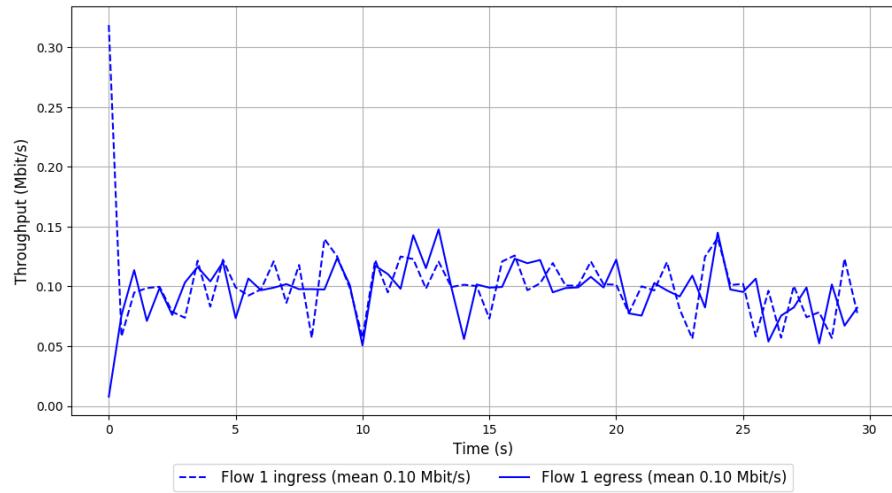


Run 3: Statistics of Sprout

```
Start at: 2017-09-22 08:44:05
End at: 2017-09-22 08:44:35
Local clock offset: -1.403 ms
Remote clock offset: -0.341 ms

# Below is generated by plot.py at 2017-09-22 09:31:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 254.528 ms
Loss rate: 5.10%
-- Flow 1:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 254.528 ms
Loss rate: 5.10%
```

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

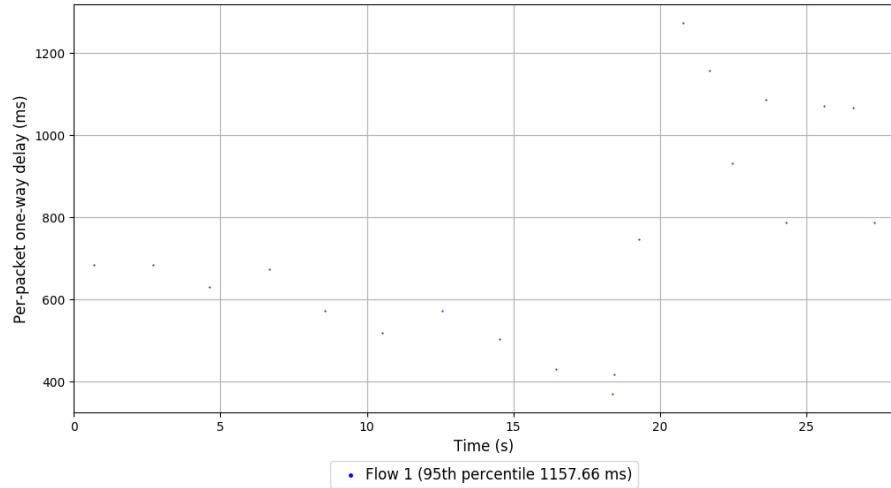
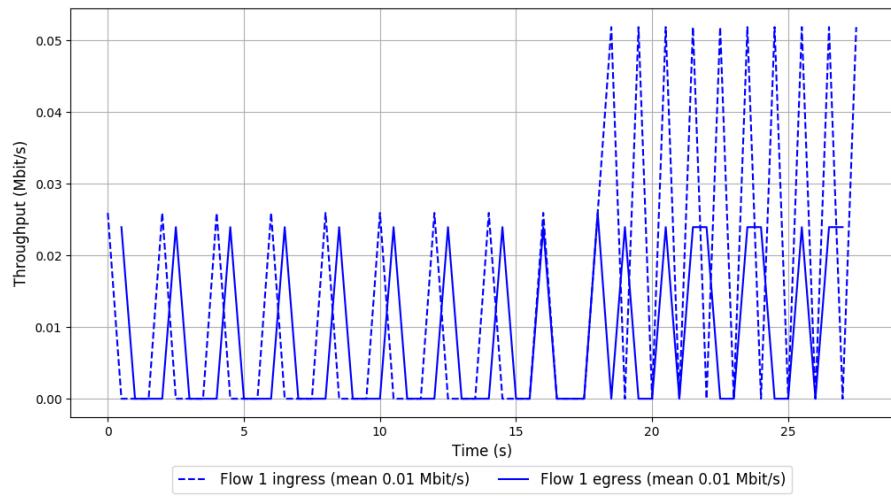


Run 1: Statistics of TaoVA-100x

```
Start at: 2017-09-22 08:08:19
End at: 2017-09-22 08:08:49
Local clock offset: -2.412 ms
Remote clock offset: 0.211 ms

# Below is generated by plot.py at 2017-09-22 09:31:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1157.665 ms
Loss rate: 41.26%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1157.665 ms
Loss rate: 41.26%
```

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



Run 2: Statistics of TaoVA-100x

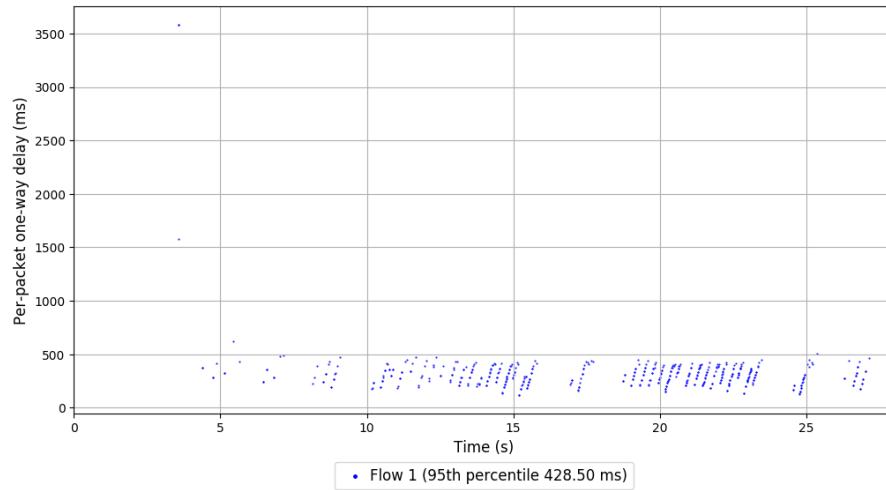
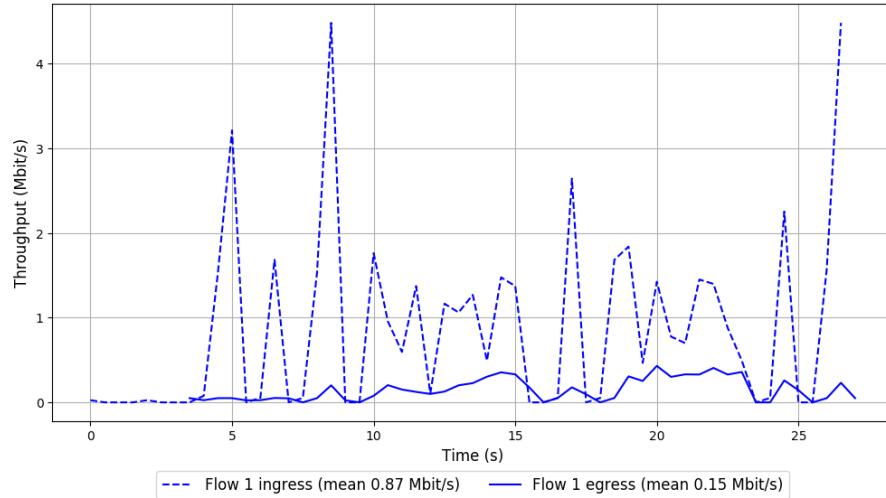
Start at: 2017-09-22 08:25:12

End at: 2017-09-22 08:25:42

Local clock offset: -2.514 ms

Remote clock offset: 0.117 ms

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

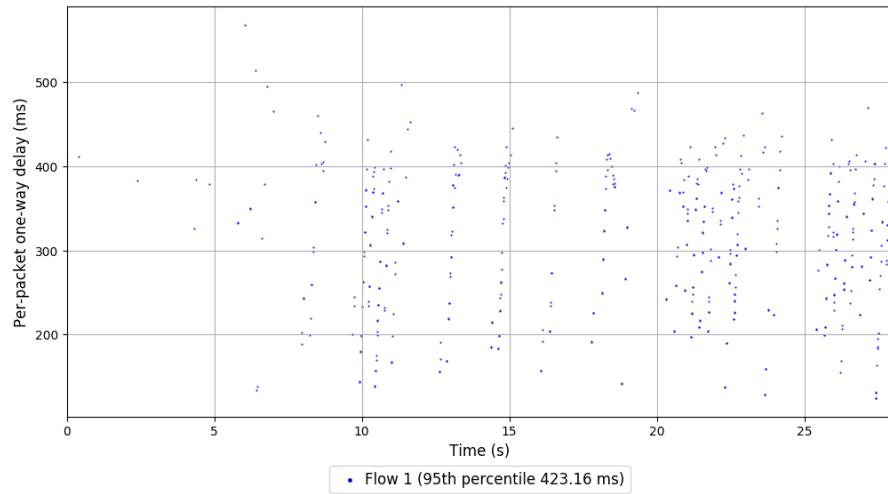
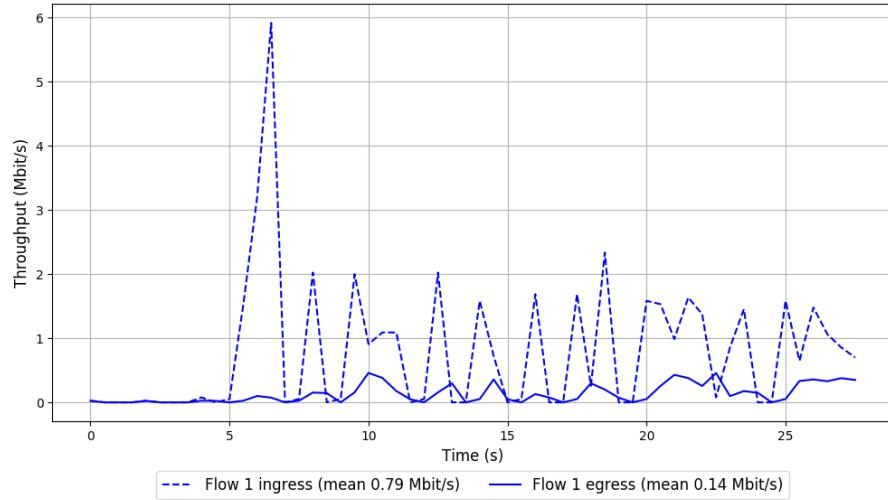


Run 3: Statistics of TaoVA-100x

```
Start at: 2017-09-22 08:40:36
End at: 2017-09-22 08:41:06
Local clock offset: -1.293 ms
Remote clock offset: -0.225 ms

# Below is generated by plot.py at 2017-09-22 09:31:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 423.156 ms
Loss rate: 82.77%
-- Flow 1:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 423.156 ms
Loss rate: 82.77%
```

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

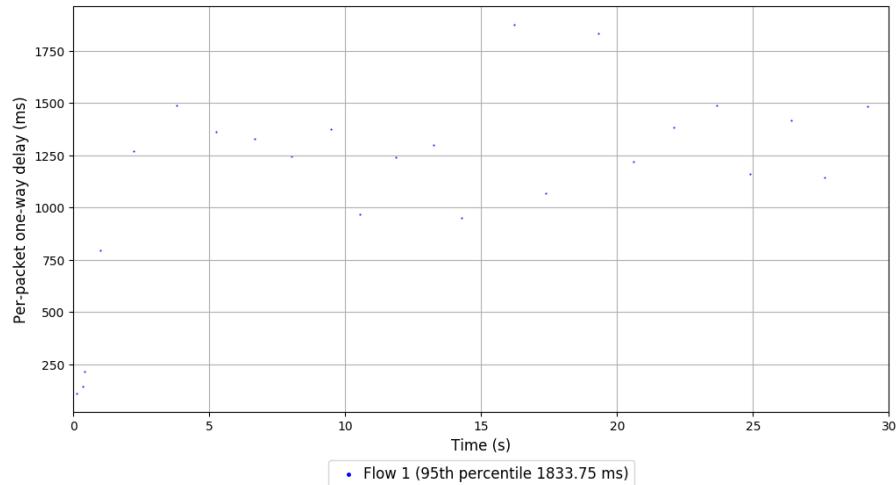
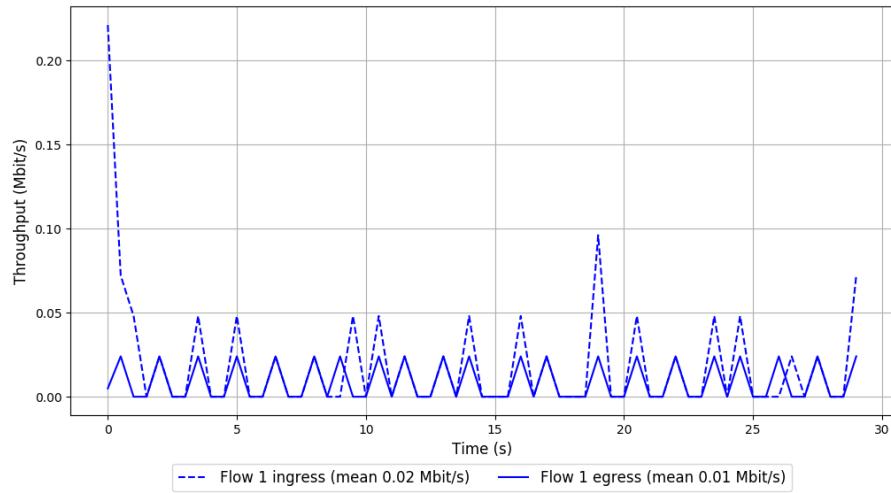


Run 1: Statistics of TCP Vegas

```
Start at: 2017-09-22 08:04:49
End at: 2017-09-22 08:05:19
Local clock offset: -2.418 ms
Remote clock offset: 0.269 ms

# Below is generated by plot.py at 2017-09-22 09:31:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1833.747 ms
Loss rate: 56.01%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1833.747 ms
Loss rate: 56.01%
```

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

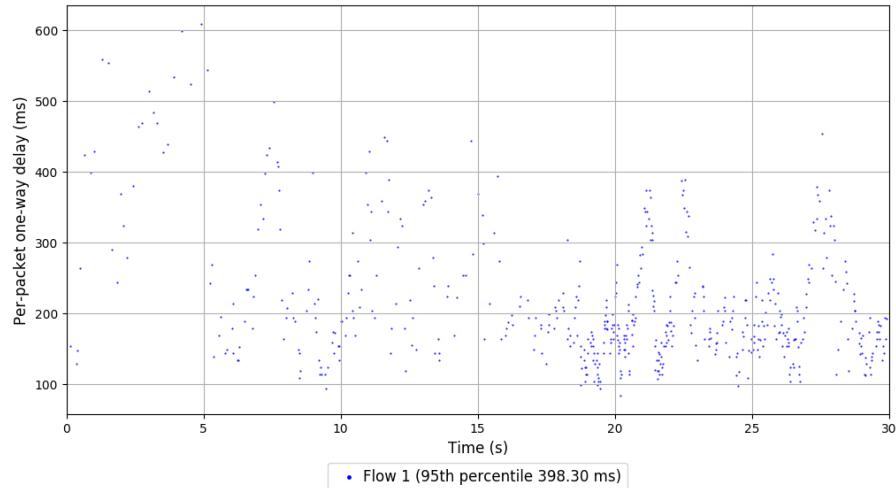
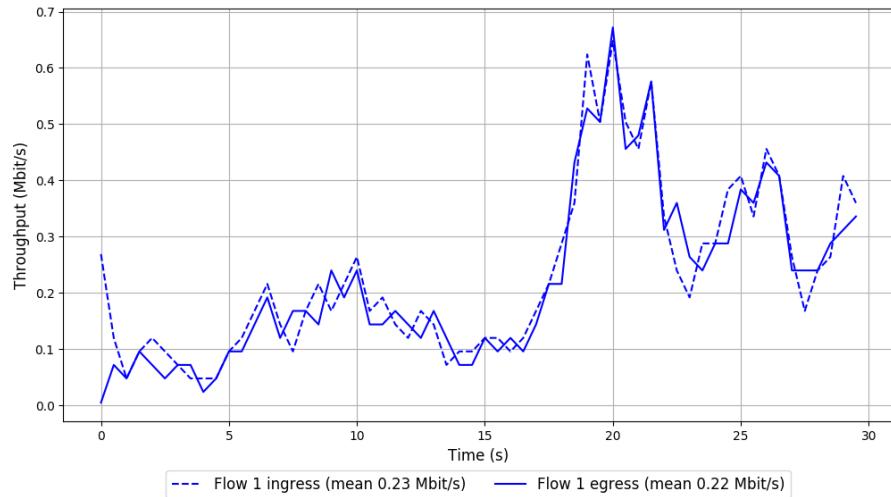


Run 2: Statistics of TCP Vegas

```
Start at: 2017-09-22 08:21:45
End at: 2017-09-22 08:22:15
Local clock offset: -1.194 ms
Remote clock offset: 0.203 ms

# Below is generated by plot.py at 2017-09-22 09:31:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 398.297 ms
Loss rate: 5.19%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 398.297 ms
Loss rate: 5.19%
```

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

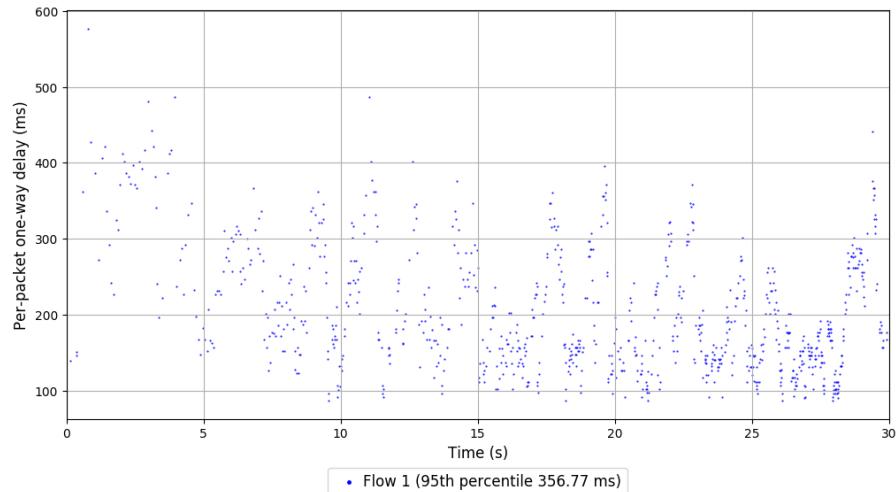
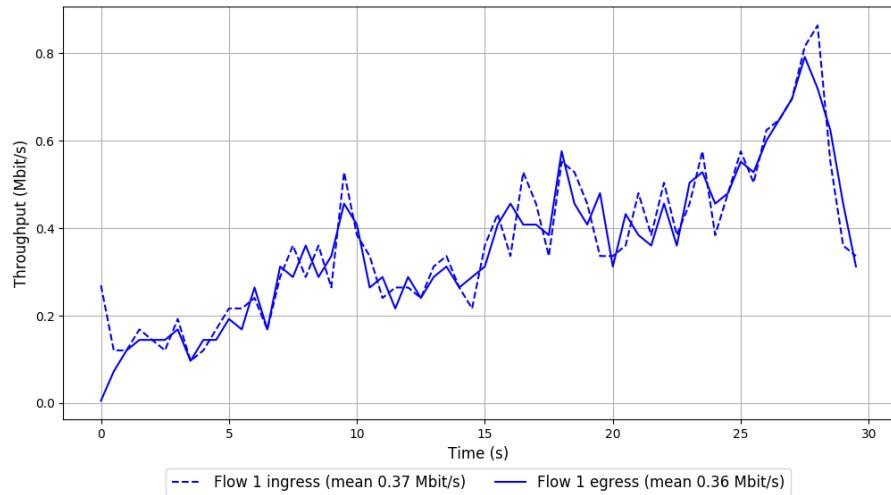


Run 3: Statistics of TCP Vegas

```
Start at: 2017-09-22 08:37:09
End at: 2017-09-22 08:37:39
Local clock offset: -1.253 ms
Remote clock offset: 0.021 ms

# Below is generated by plot.py at 2017-09-22 09:31:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 356.774 ms
Loss rate: 2.63%
-- Flow 1:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 356.774 ms
Loss rate: 2.63%
```

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

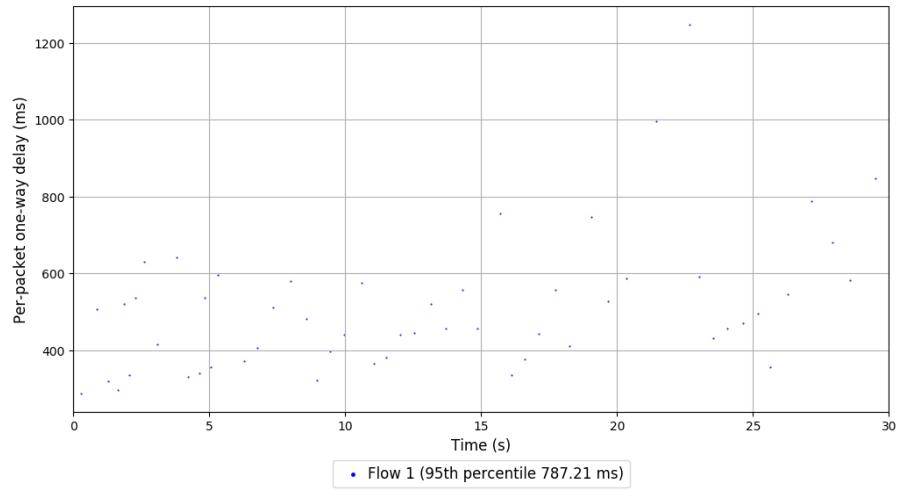
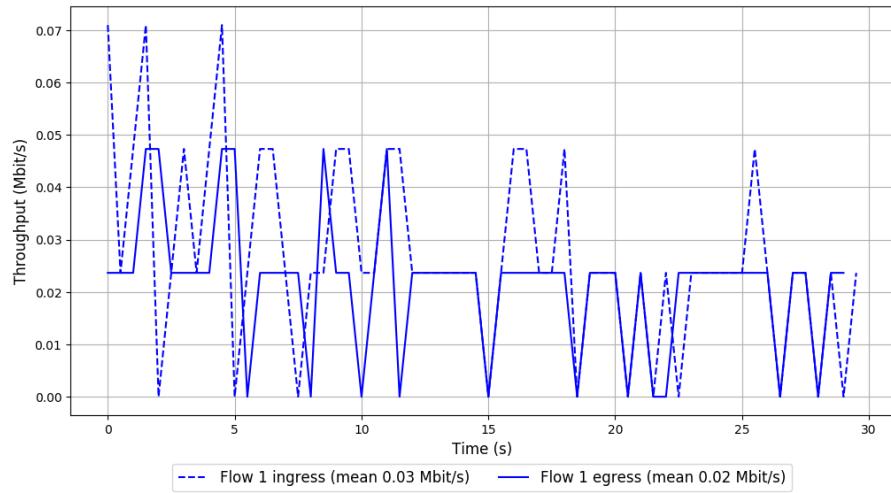


Run 1: Statistics of Verus

```
Start at: 2017-09-22 07:53:47
End at: 2017-09-22 07:54:17
Local clock offset: -1.338 ms
Remote clock offset: -2.715 ms

# Below is generated by plot.py at 2017-09-22 09:31:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 787.210 ms
Loss rate: 20.59%
-- Flow 1:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 787.210 ms
Loss rate: 20.59%
```

## Run 1: Report of Verus — Data Link

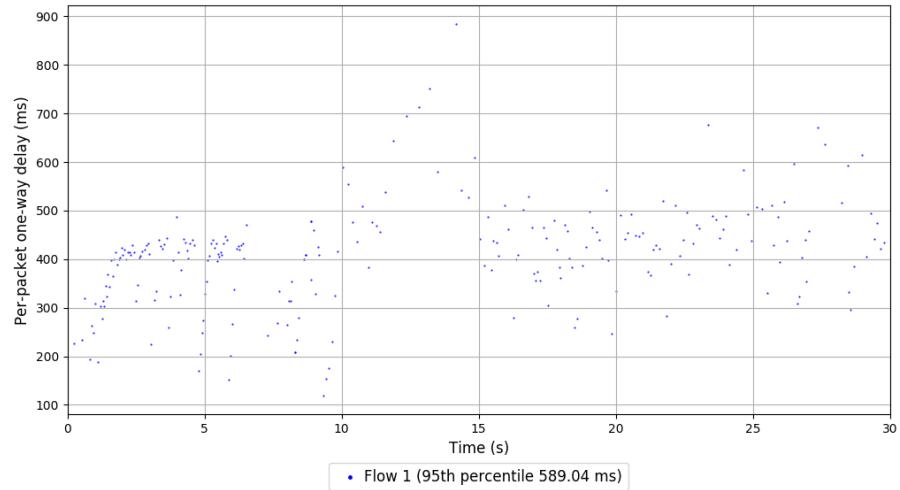
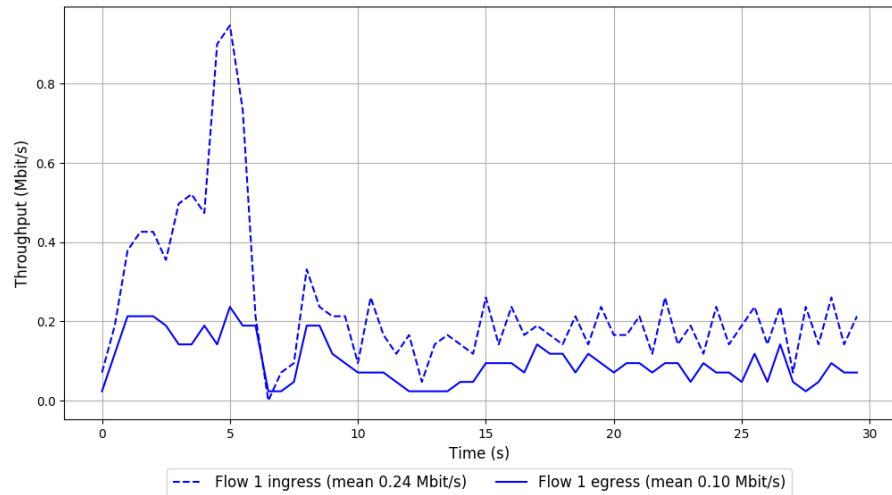


Run 2: Statistics of Verus

```
Start at: 2017-09-22 08:15:05
End at: 2017-09-22 08:15:35
Local clock offset: -2.517 ms
Remote clock offset: 0.188 ms

# Below is generated by plot.py at 2017-09-22 09:31:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 589.041 ms
Loss rate: 58.74%
-- Flow 1:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 589.041 ms
Loss rate: 58.74%
```

## Run 2: Report of Verus — Data Link

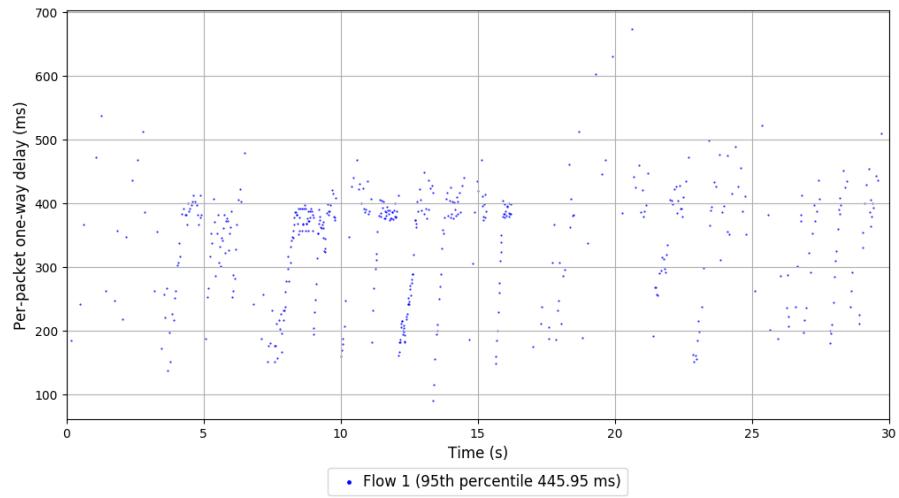
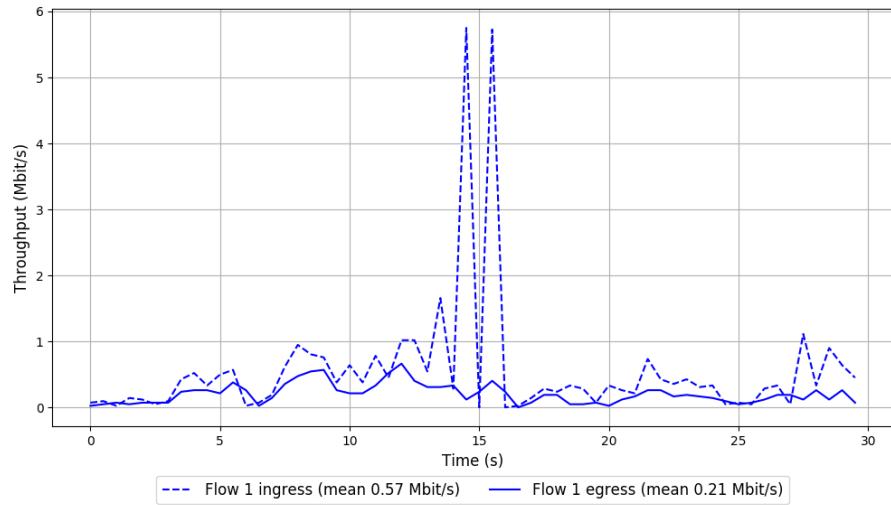


Run 3: Statistics of Verus

```
Start at: 2017-09-22 08:31:00
End at: 2017-09-22 08:31:30
Local clock offset: -2.499 ms
Remote clock offset: -0.012 ms

# Below is generated by plot.py at 2017-09-22 09:31:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 445.946 ms
Loss rate: 63.79%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 445.946 ms
Loss rate: 63.79%
```

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

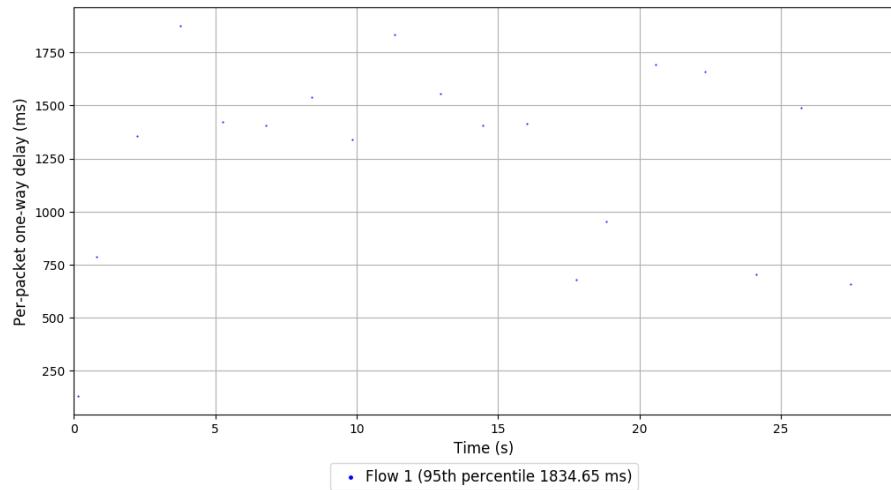
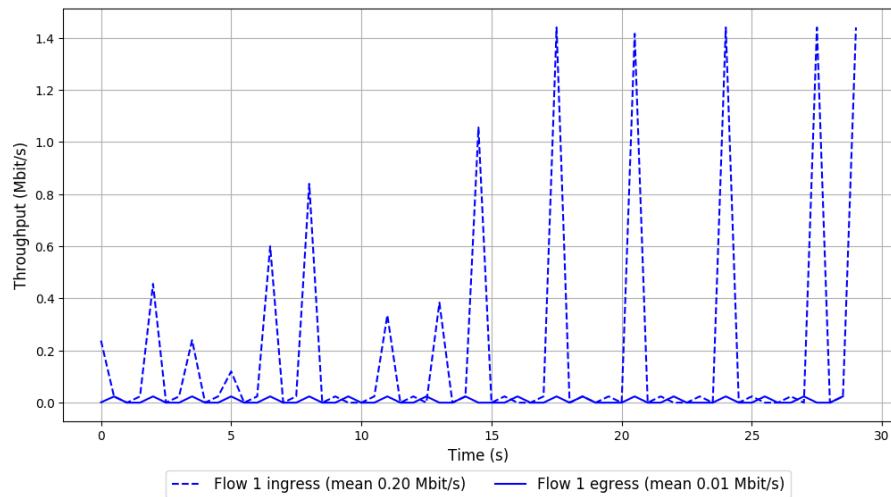


Run 1: Statistics of Indigo

```
Start at: 2017-09-22 08:06:01
End at: 2017-09-22 08:06:31
Local clock offset: -2.349 ms
Remote clock offset: 0.29 ms

# Below is generated by plot.py at 2017-09-22 09:31:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1834.653 ms
Loss rate: 96.16%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1834.653 ms
Loss rate: 96.16%
```

## Run 1: Report of Indigo — Data Link

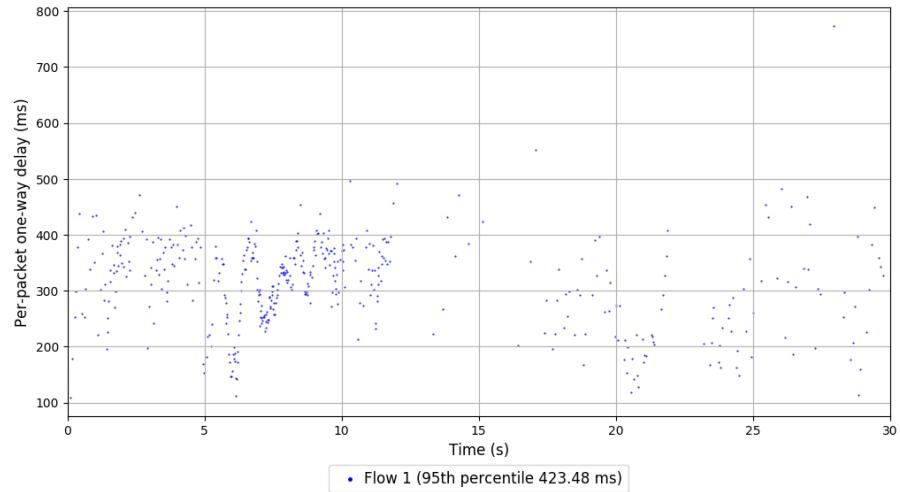
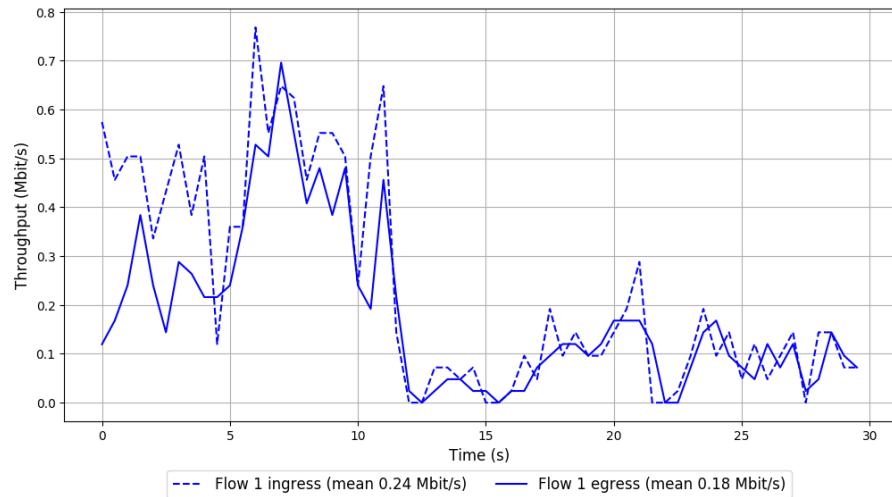


Run 2: Statistics of Indigo

```
Start at: 2017-09-22 08:22:54
End at: 2017-09-22 08:23:24
Local clock offset: -2.386 ms
Remote clock offset: 0.108 ms

# Below is generated by plot.py at 2017-09-22 09:31:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 423.479 ms
Loss rate: 24.87%
-- Flow 1:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 423.479 ms
Loss rate: 24.87%
```

## Run 2: Report of Indigo — Data Link

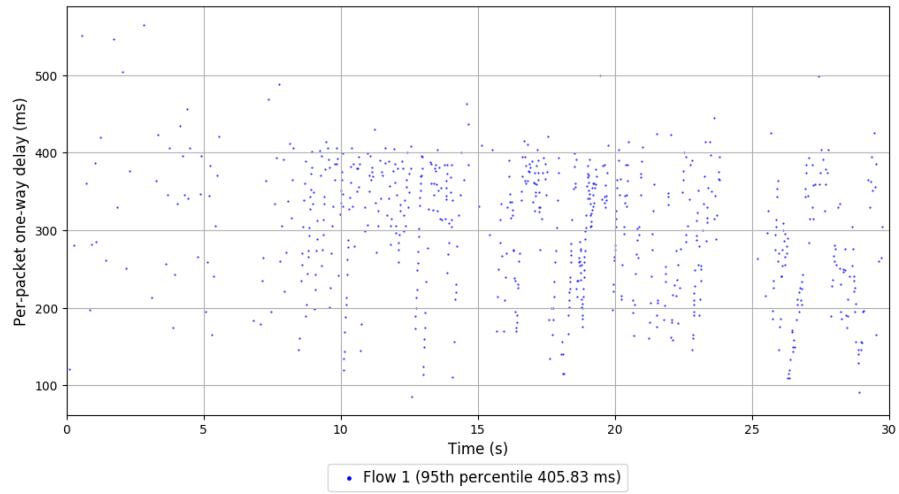
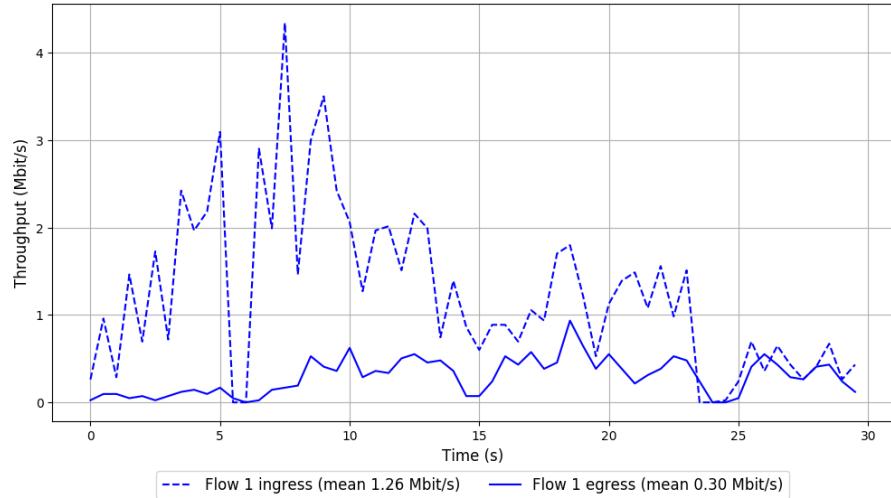


Run 3: Statistics of Indigo

```
Start at: 2017-09-22 08:38:18
End at: 2017-09-22 08:38:48
Local clock offset: -1.129 ms
Remote clock offset: -0.09 ms

# Below is generated by plot.py at 2017-09-22 09:31:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 405.830 ms
Loss rate: 76.35%
-- Flow 1:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 405.830 ms
Loss rate: 76.35%
```

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

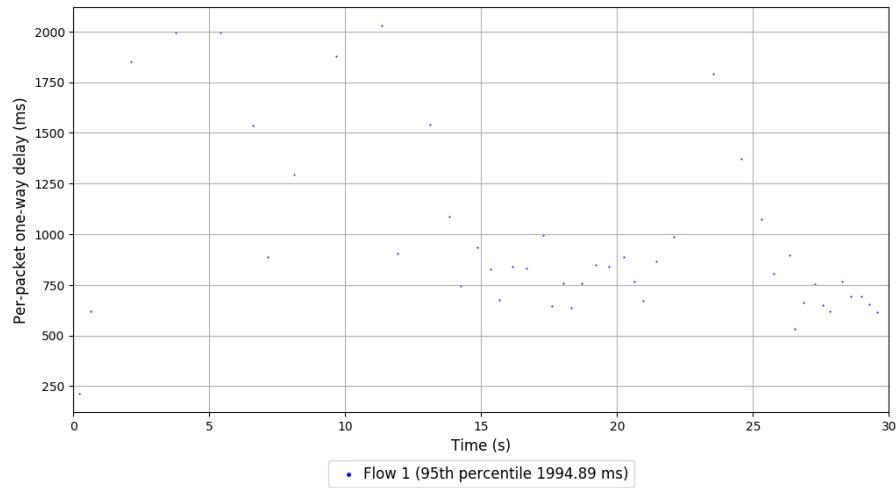
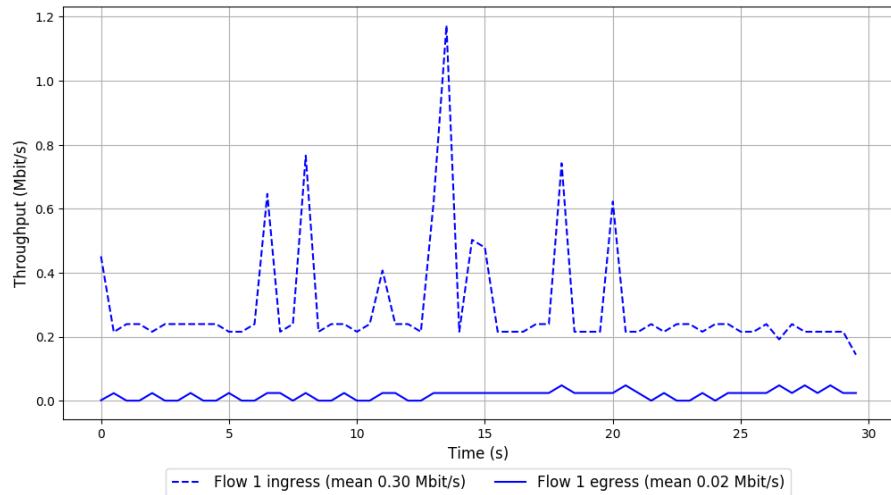


```
Run 1: Statistics of Indigo-cellular
```

```
Start at: 2017-09-22 08:10:37
End at: 2017-09-22 08:11:07
Local clock offset: -1.231 ms
Remote clock offset: 0.25 ms

# Below is generated by plot.py at 2017-09-22 09:31:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 1994.891 ms
Loss rate: 93.89%
-- Flow 1:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 1994.891 ms
Loss rate: 93.89%
```

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

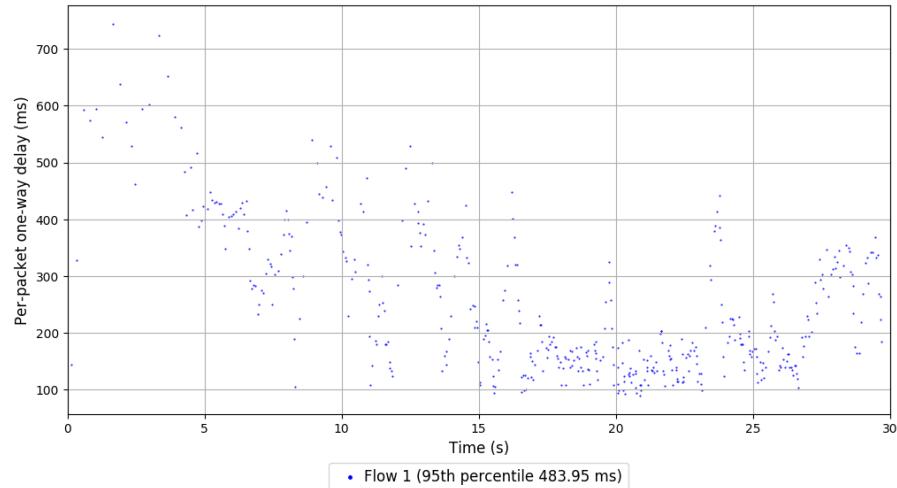
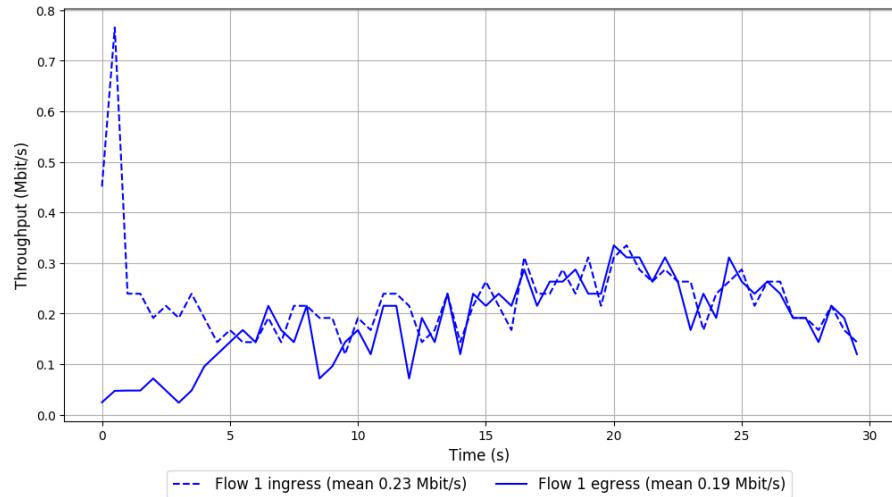


Run 2: Statistics of Indigo-cellular

```
Start at: 2017-09-22 08:27:30
End at: 2017-09-22 08:28:00
Local clock offset: -1.31 ms
Remote clock offset: 0.24 ms

# Below is generated by plot.py at 2017-09-22 09:31:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 483.955 ms
Loss rate: 20.22%
-- Flow 1:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 483.955 ms
Loss rate: 20.22%
```

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



Run 3: Statistics of Indigo-cellular

```
Start at: 2017-09-22 08:42:56
End at: 2017-09-22 08:43:26
Local clock offset: -2.46 ms
Remote clock offset: -0.102 ms

# Below is generated by plot.py at 2017-09-22 09:31:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 444.815 ms
Loss rate: 13.24%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 444.815 ms
Loss rate: 13.24%
```

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

