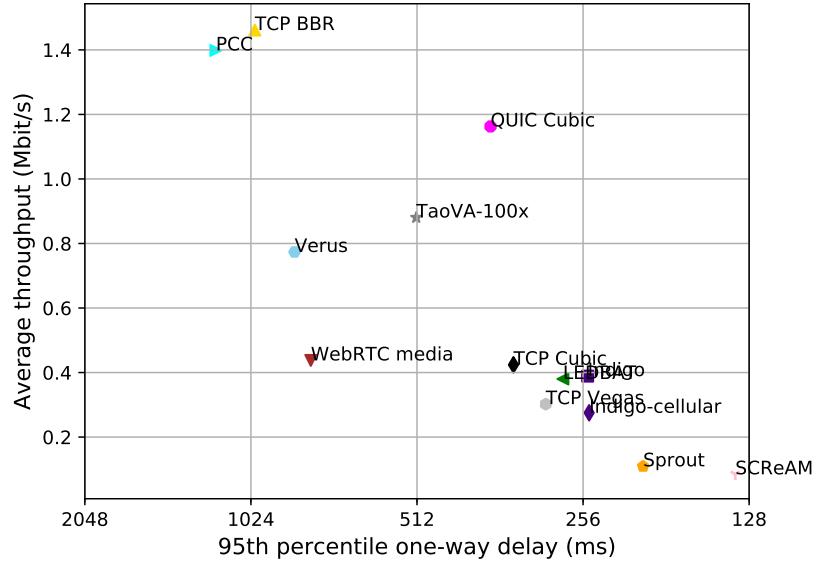


## Pantheon Report

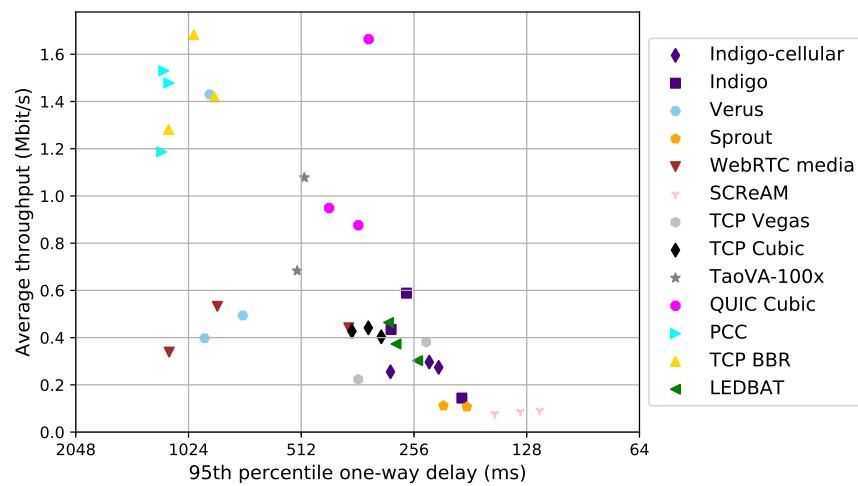
Generated at 2017-09-22 09:19:29 (UTC).  
Data path: AWS India 1 Ethernet (*local*) → India ppp0 (*remote*).  
Repeated the test of 13 congestion control schemes 3 times.  
Each test lasted for 30 seconds running 1 flow.  
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).  
Tested BBR with qdisc of Fair Queuing (**fq**), and other schemes with the default Linux qdisc (**pfifo\_fast**).  
NTP offsets were measured against [nets.org.sg](http://nets.org.sg) 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 AWS India 1 Ethernet to India ppp0, 3 runs of 30s each per scheme  
(mean of all runs by scheme)



test from AWS India 1 Ethernet to India ppp0, 3 runs of 30s each per scheme



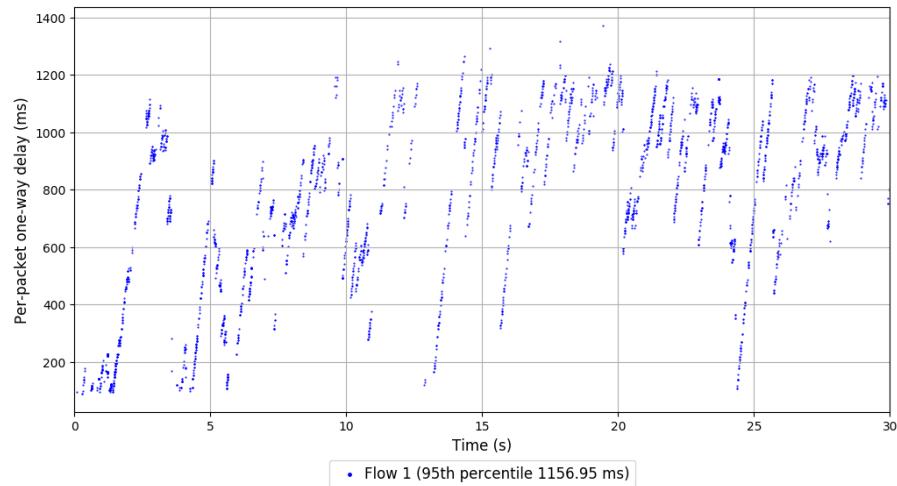
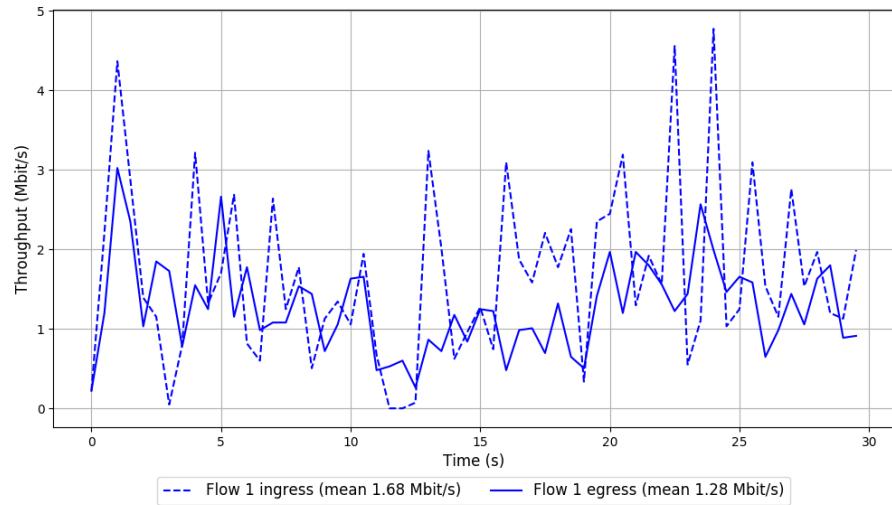
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	3	1.46	1007.34	10.90
TCP Cubic	3	0.42	342.29	2.39
LEDBAT	3	0.38	278.49	3.58
PCC	3	1.40	1185.46	42.74
QUIC Cubic	3	1.16	376.73	1.52
SCReAM	3	0.09	135.62	0.85
WebRTC media	3	0.44	797.60	5.40
Sprout	2	0.11	199.26	1.27
TaoVA-100x	2	0.88	513.59	1.06
TCP Vegas	2	0.30	299.12	2.56
Verus	3	0.77	853.42	11.57
Indigo	3	0.39	251.17	1.22
Indigo-cellular	3	0.28	249.59	1.67

Run 1: Statistics of TCP BBR

```
Start at: 2017-09-22 08:46:09
End at: 2017-09-22 08:46:39
Local clock offset: 1.311 ms
Remote clock offset: 6.194 ms

# Below is generated by plot.py at 2017-09-22 09:19:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 1156.950 ms
Loss rate: 23.60%
-- Flow 1:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 1156.950 ms
Loss rate: 23.60%
```

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

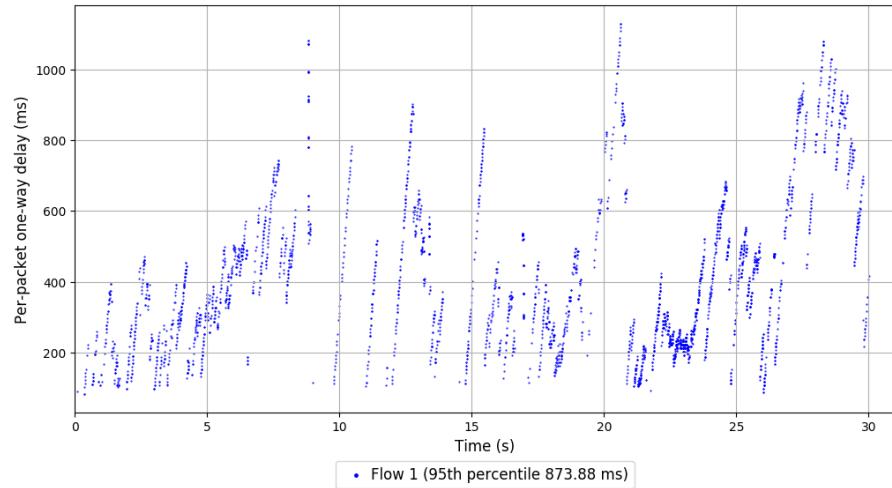
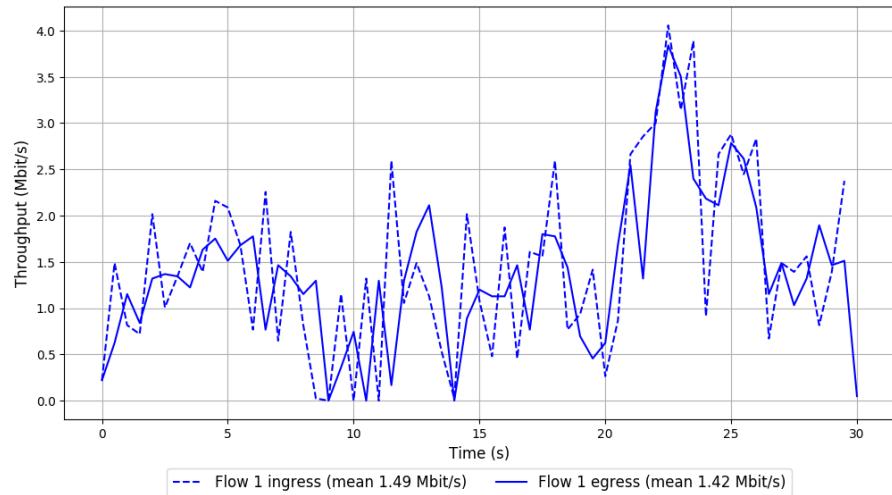


Run 2: Statistics of TCP BBR

```
Start at: 2017-09-22 09:00:18
End at: 2017-09-22 09:00:48
Local clock offset: 1.375 ms
Remote clock offset: 9.589 ms

# Below is generated by plot.py at 2017-09-22 09:19:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.42 Mbit/s
95th percentile per-packet one-way delay: 873.883 ms
Loss rate: 4.76%
-- Flow 1:
Average throughput: 1.42 Mbit/s
95th percentile per-packet one-way delay: 873.883 ms
Loss rate: 4.76%
```

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

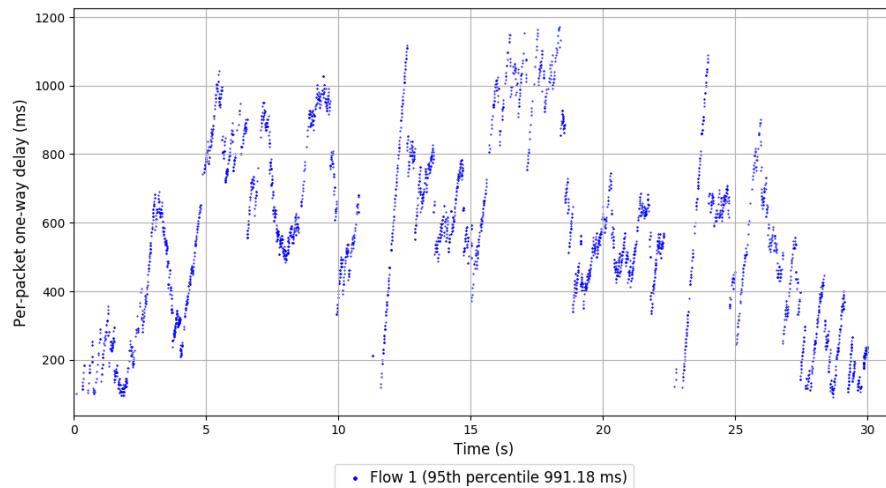
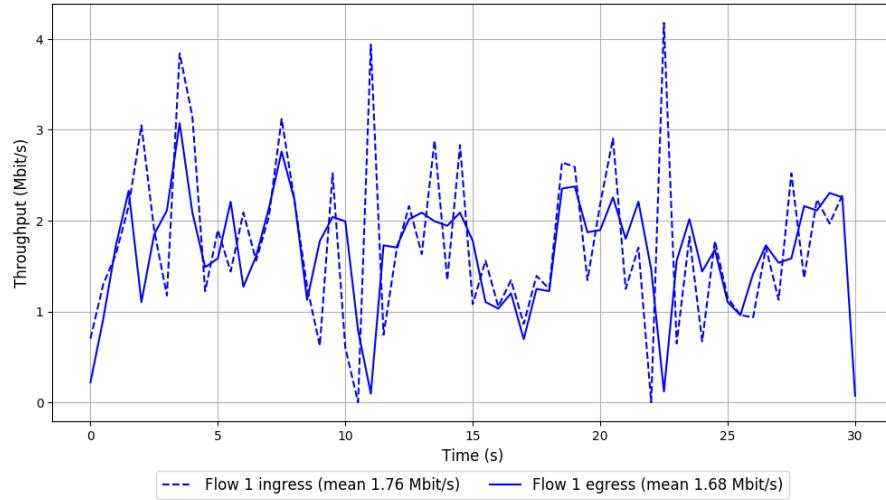


Run 3: Statistics of TCP BBR

```
Start at: 2017-09-22 09:14:34
End at: 2017-09-22 09:15:04
Local clock offset: -0.017 ms
Remote clock offset: 6.366 ms

# Below is generated by plot.py at 2017-09-22 09:19:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.68 Mbit/s
95th percentile per-packet one-way delay: 991.181 ms
Loss rate: 4.33%
-- Flow 1:
Average throughput: 1.68 Mbit/s
95th percentile per-packet one-way delay: 991.181 ms
Loss rate: 4.33%
```

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

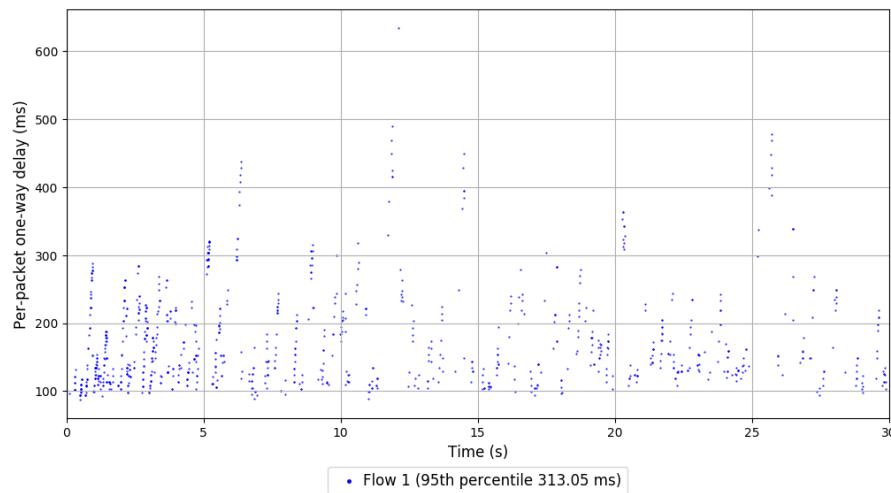
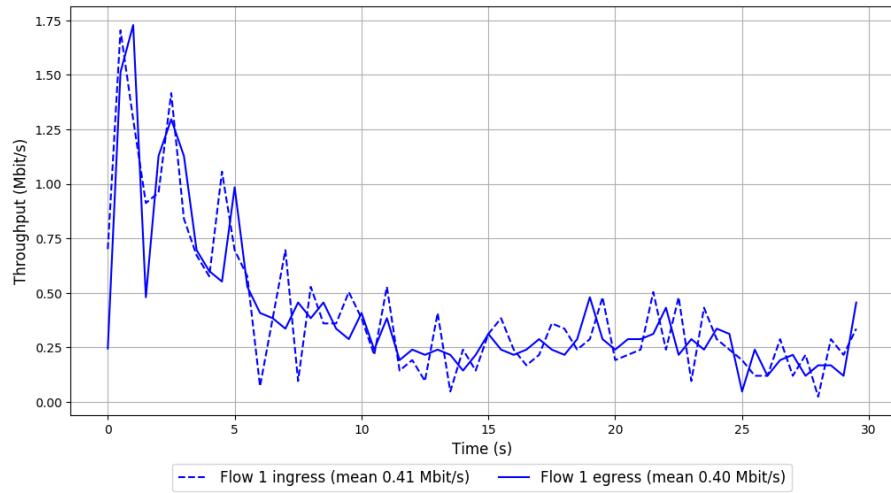


Run 1: Statistics of TCP Cubic

```
Start at: 2017-09-22 08:36:21
End at: 2017-09-22 08:36:51
Local clock offset: 0.475 ms
Remote clock offset: 4.917 ms

# Below is generated by plot.py at 2017-09-22 09:19:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 313.045 ms
Loss rate: 2.63%
-- Flow 1:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 313.045 ms
Loss rate: 2.63%
```

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

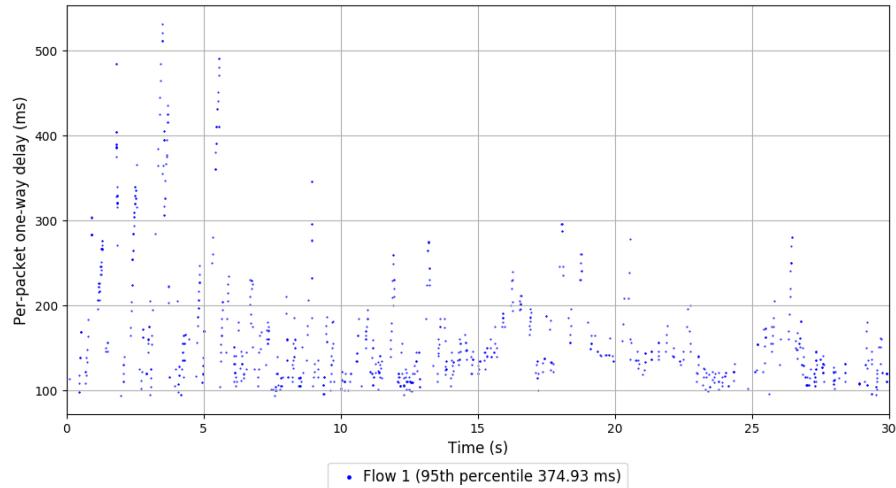
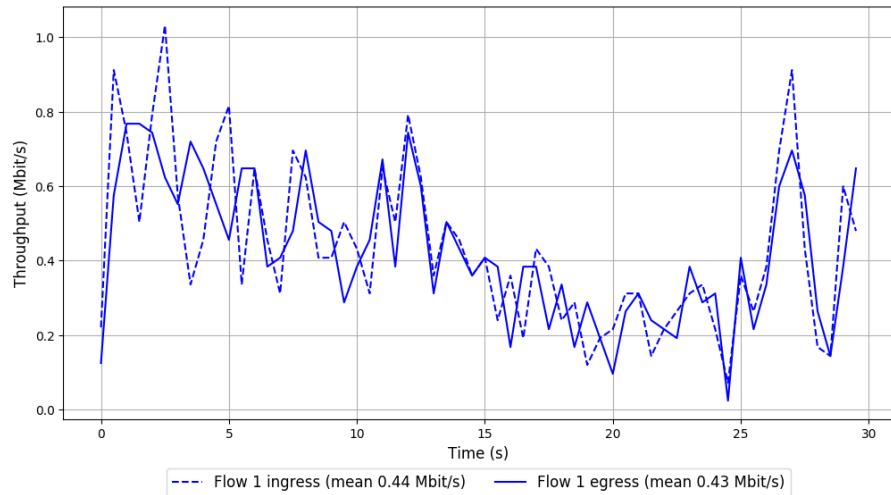


Run 2: Statistics of TCP Cubic

```
Start at: 2017-09-22 08:50:30
End at: 2017-09-22 08:51:00
Local clock offset: -1.325 ms
Remote clock offset: 5.723 ms

# Below is generated by plot.py at 2017-09-22 09:19:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 374.927 ms
Loss rate: 2.84%
-- Flow 1:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 374.927 ms
Loss rate: 2.84%
```

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

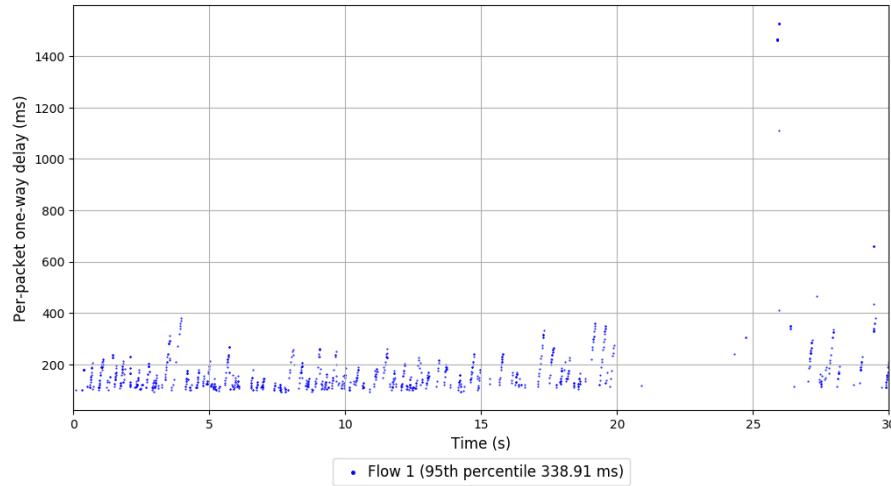
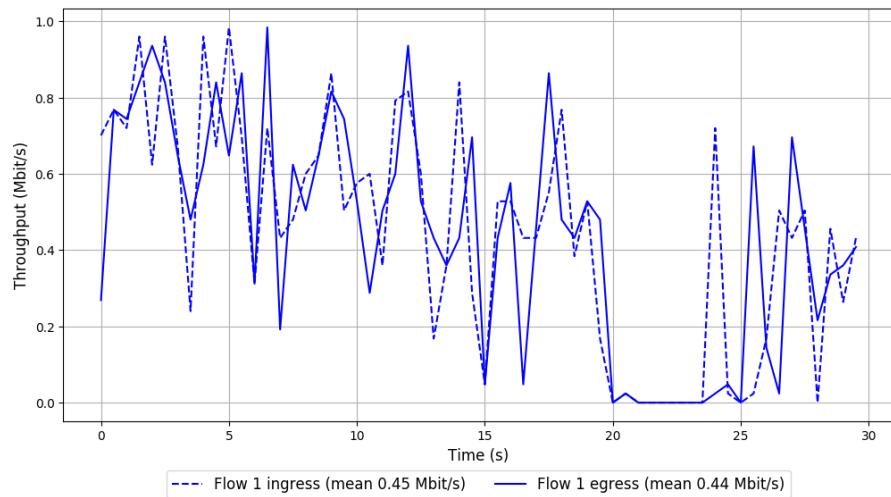


Run 3: Statistics of TCP Cubic

```
Start at: 2017-09-22 09:04:41
End at: 2017-09-22 09:05:11
Local clock offset: -0.763 ms
Remote clock offset: 5.247 ms

# Below is generated by plot.py at 2017-09-22 09:19:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 338.909 ms
Loss rate: 1.70%
-- Flow 1:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 338.909 ms
Loss rate: 1.70%
```

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

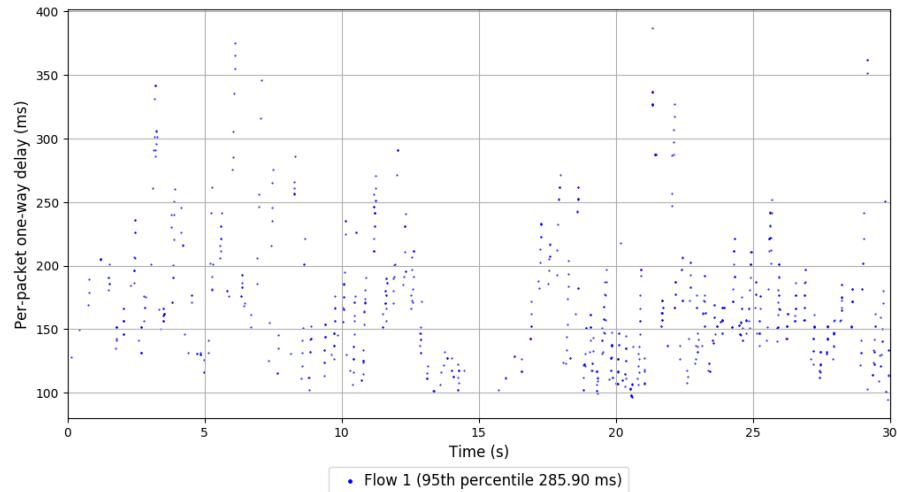
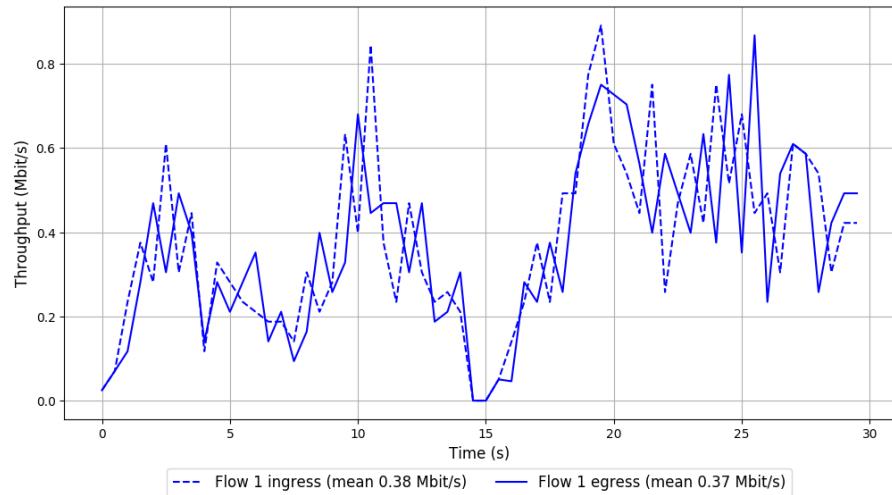


```
Run 1: Statistics of LEDBAT
```

```
Start at: 2017-09-22 08:43:58
End at: 2017-09-22 08:44:28
Local clock offset: 0.65 ms
Remote clock offset: 5.567 ms

# Below is generated by plot.py at 2017-09-22 09:19:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 285.903 ms
Loss rate: 1.66%
-- Flow 1:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 285.903 ms
Loss rate: 1.66%
```

## Run 1: Report of LEDBAT — Data Link

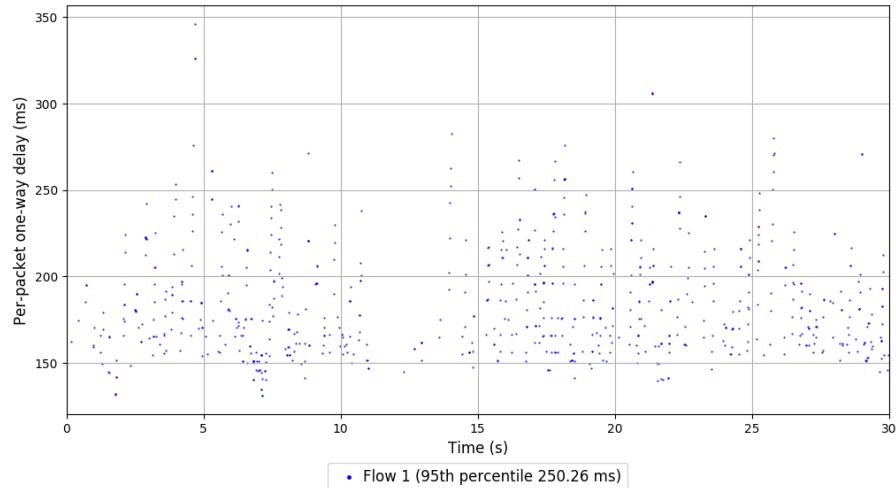
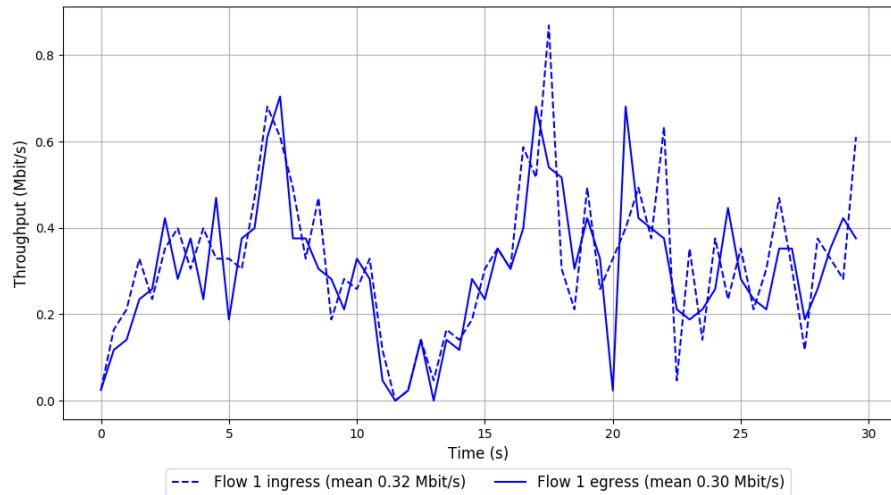


Run 2: Statistics of LEDBAT

```
Start at: 2017-09-22 08:58:07
End at: 2017-09-22 08:58:37
Local clock offset: -0.437 ms
Remote clock offset: 8.738 ms

# Below is generated by plot.py at 2017-09-22 09:19:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 250.264 ms
Loss rate: 6.10%
-- Flow 1:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 250.264 ms
Loss rate: 6.10%
```

## Run 2: Report of LEDBAT — Data Link

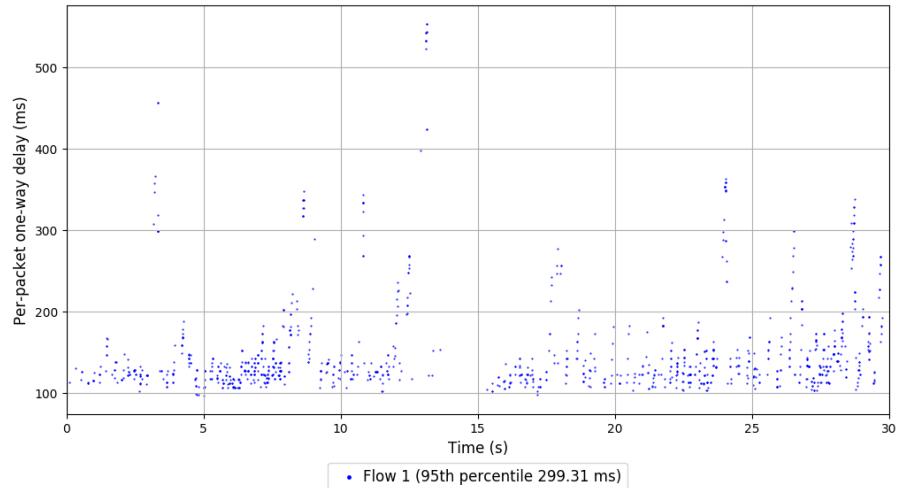
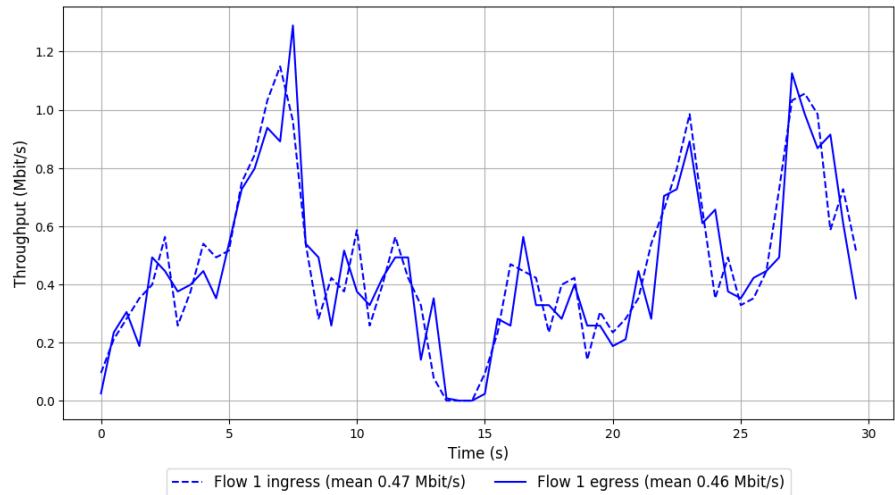


Run 3: Statistics of LEDBAT

```
Start at: 2017-09-22 09:12:23
End at: 2017-09-22 09:12:53
Local clock offset: 1.451 ms
Remote clock offset: 10.55 ms

# Below is generated by plot.py at 2017-09-22 09:19:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 299.311 ms
Loss rate: 2.98%
-- Flow 1:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 299.311 ms
Loss rate: 2.98%
```

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

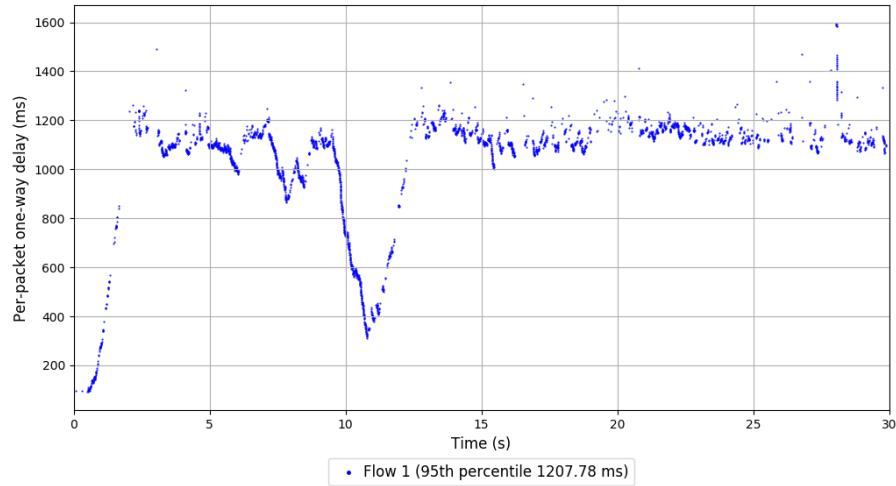
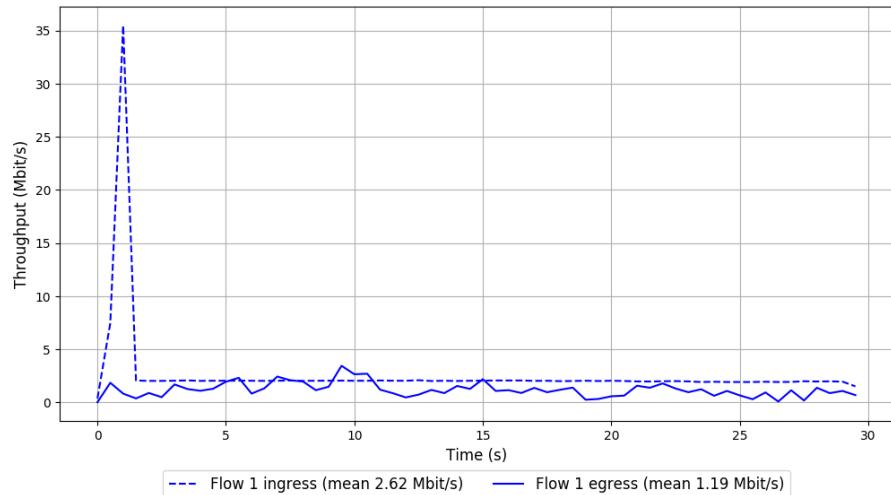


Run 1: Statistics of PCC

```
Start at: 2017-09-22 08:48:19
End at: 2017-09-22 08:48:49
Local clock offset: 0.346 ms
Remote clock offset: 4.003 ms

# Below is generated by plot.py at 2017-09-22 09:19:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 1207.777 ms
Loss rate: 54.90%
-- Flow 1:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 1207.777 ms
Loss rate: 54.90%
```

## Run 1: Report of PCC — Data Link

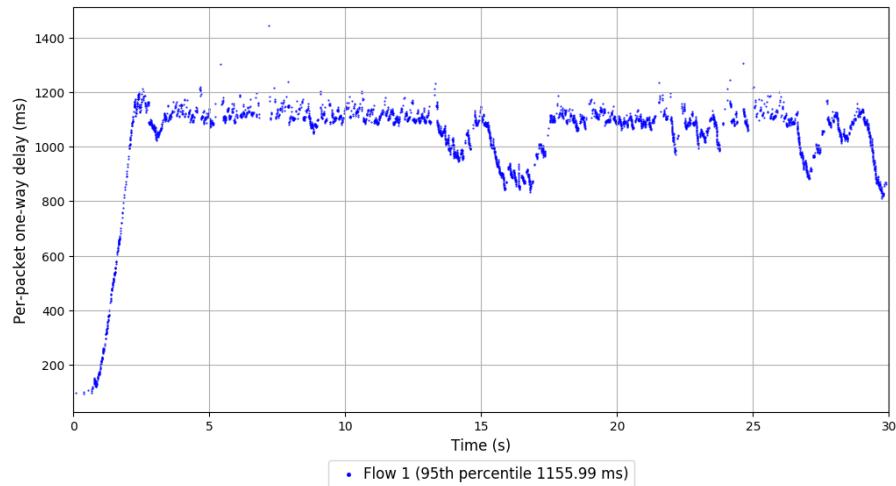
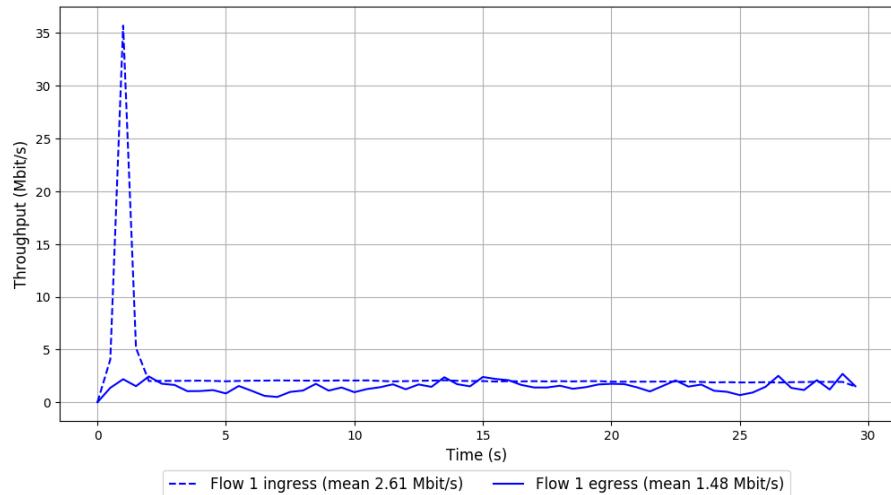


Run 2: Statistics of PCC

```
Start at: 2017-09-22 09:02:30
End at: 2017-09-22 09:03:00
Local clock offset: 1.72 ms
Remote clock offset: 8.716 ms

# Below is generated by plot.py at 2017-09-22 09:19:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.48 Mbit/s
95th percentile per-packet one-way delay: 1155.986 ms
Loss rate: 43.55%
-- Flow 1:
Average throughput: 1.48 Mbit/s
95th percentile per-packet one-way delay: 1155.986 ms
Loss rate: 43.55%
```

## Run 2: Report of PCC — Data Link

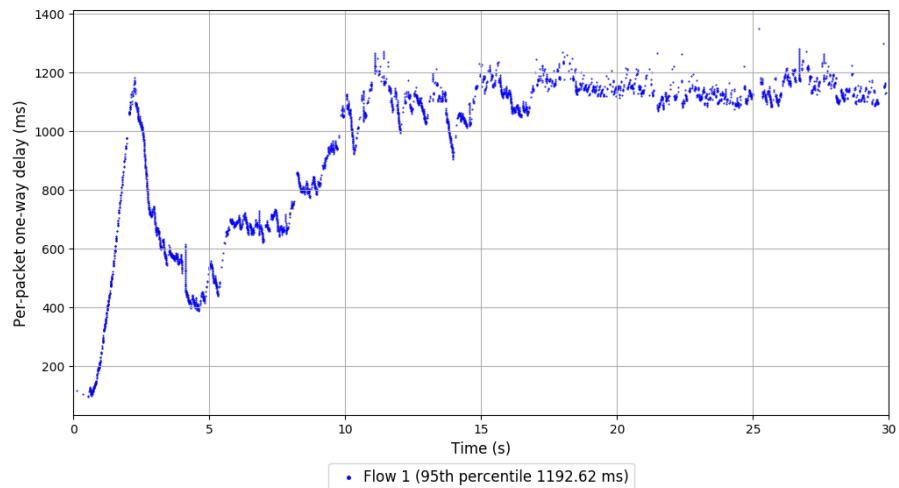
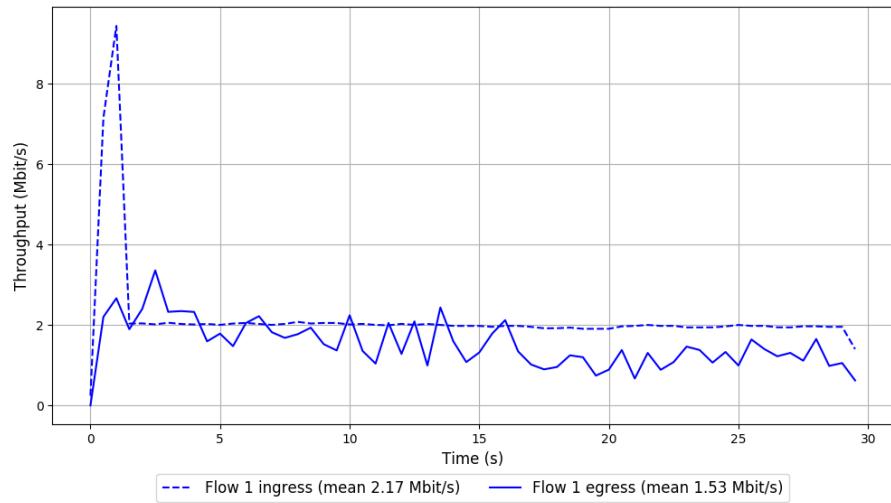


Run 3: Statistics of PCC

```
Start at: 2017-09-22 09:16:46
End at: 2017-09-22 09:17:16
Local clock offset: 2.328 ms
Remote clock offset: 9.058 ms

# Below is generated by plot.py at 2017-09-22 09:19:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.53 Mbit/s
95th percentile per-packet one-way delay: 1192.620 ms
Loss rate: 29.77%
-- Flow 1:
Average throughput: 1.53 Mbit/s
95th percentile per-packet one-way delay: 1192.620 ms
Loss rate: 29.77%
```

### Run 3: Report of PCC — Data Link

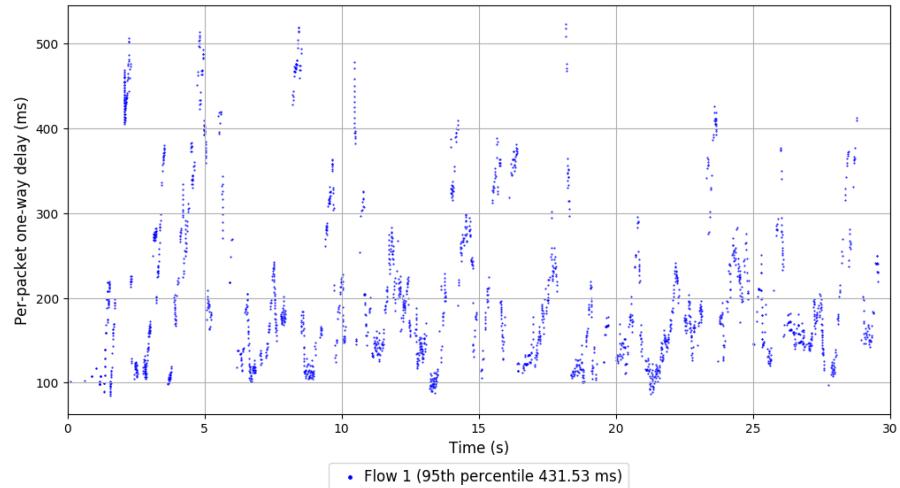
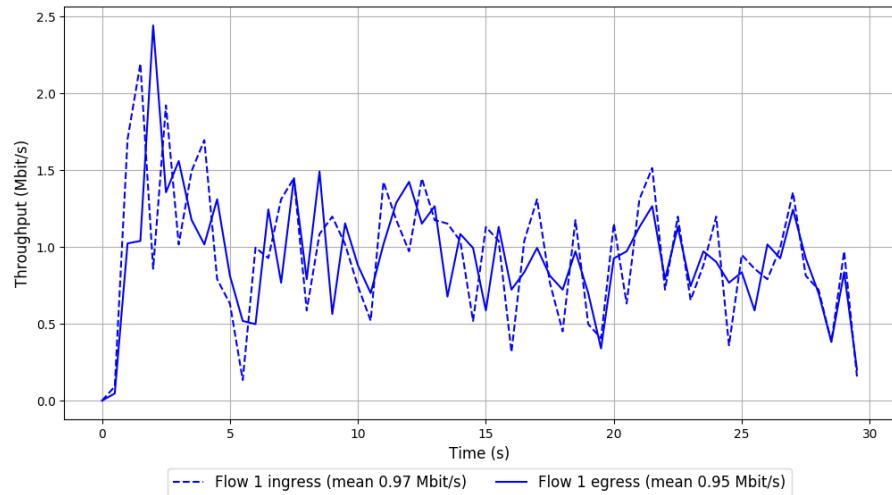


```
Run 1: Statistics of QUIC Cubic
```

```
Start at: 2017-09-22 08:42:52
End at: 2017-09-22 08:43:22
Local clock offset: 0.85 ms
Remote clock offset: 5.231 ms

# Below is generated by plot.py at 2017-09-22 09:19:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.95 Mbit/s
95th percentile per-packet one-way delay: 431.533 ms
Loss rate: 2.10%
-- Flow 1:
Average throughput: 0.95 Mbit/s
95th percentile per-packet one-way delay: 431.533 ms
Loss rate: 2.10%
```

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

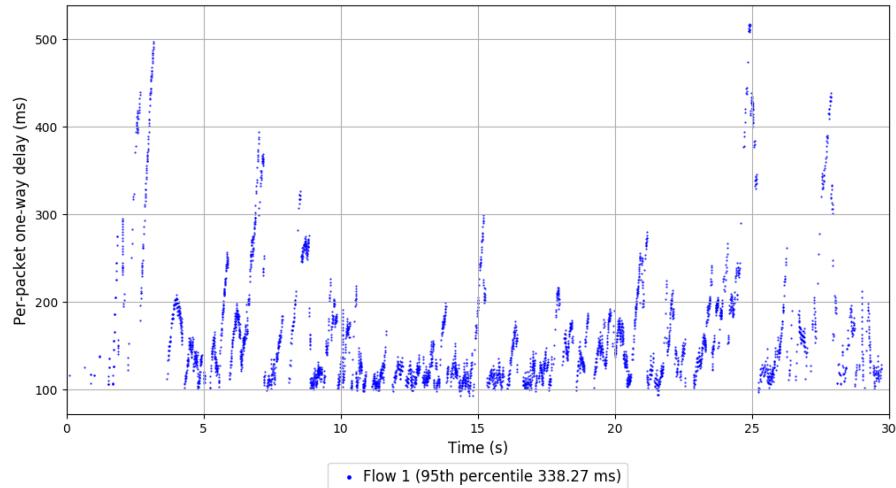
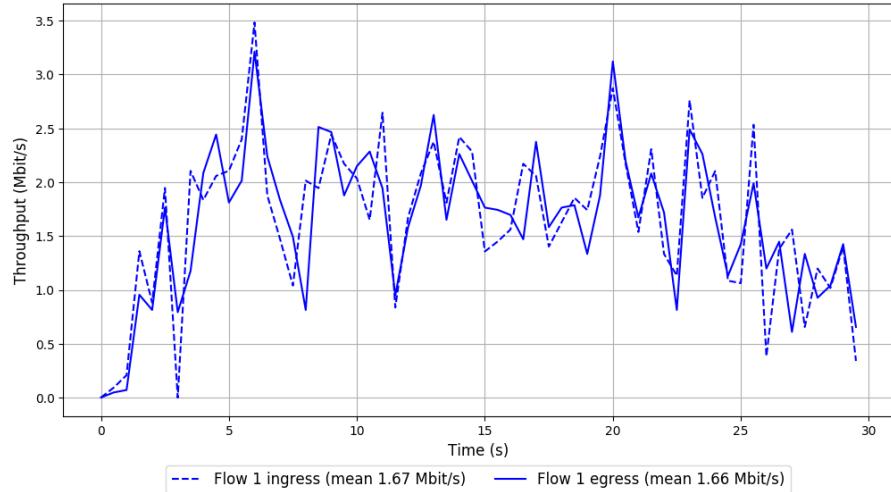


Run 2: Statistics of QUIC Cubic

```
Start at: 2017-09-22 08:57:01
End at: 2017-09-22 08:57:31
Local clock offset: 1.479 ms
Remote clock offset: 6.351 ms

# Below is generated by plot.py at 2017-09-22 09:19:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.66 Mbit/s
95th percentile per-packet one-way delay: 338.275 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 1.66 Mbit/s
95th percentile per-packet one-way delay: 338.275 ms
Loss rate: 0.96%
```

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

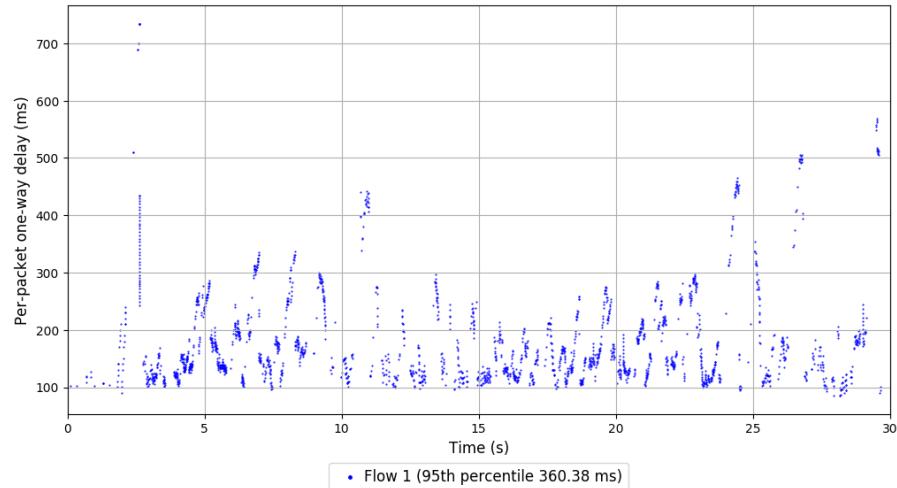
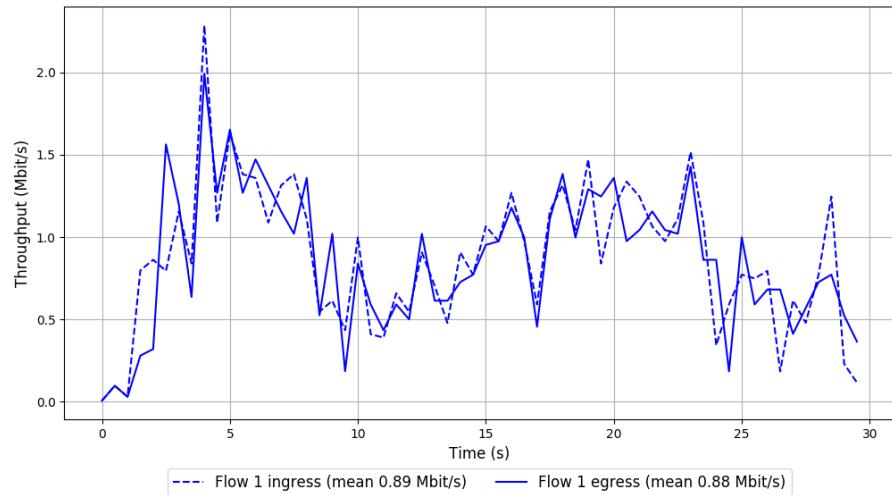


Run 3: Statistics of QUIC Cubic

```
Start at: 2017-09-22 09:11:18
End at: 2017-09-22 09:11:48
Local clock offset: 1.948 ms
Remote clock offset: 9.9 ms

# Below is generated by plot.py at 2017-09-22 09:19:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.88 Mbit/s
95th percentile per-packet one-way delay: 360.378 ms
Loss rate: 1.51%
-- Flow 1:
Average throughput: 0.88 Mbit/s
95th percentile per-packet one-way delay: 360.378 ms
Loss rate: 1.51%
```

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

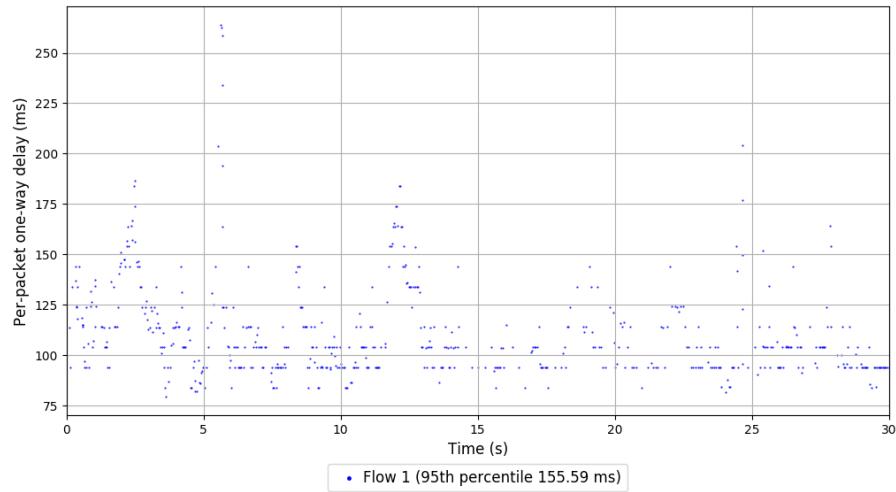
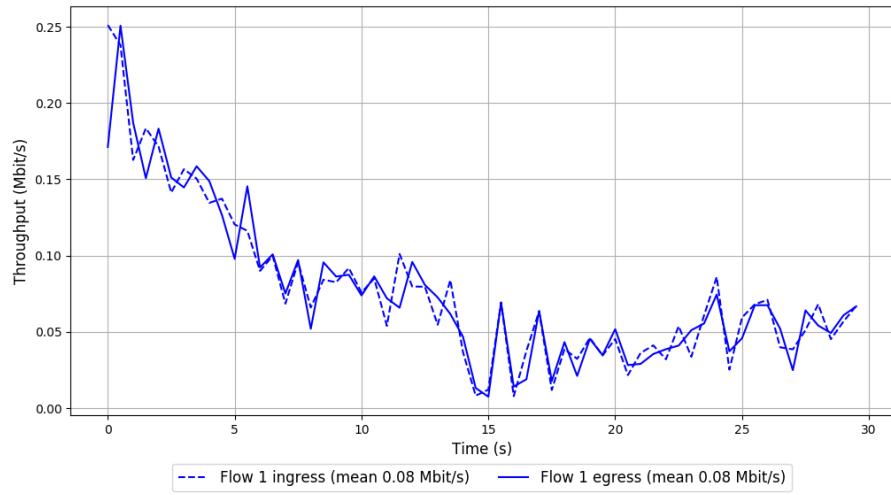


```
Run 1: Statistics of SCReAM

Start at: 2017-09-22 08:37:26
End at: 2017-09-22 08:37:56
Local clock offset: -1.646 ms
Remote clock offset: 0.143 ms

# Below is generated by plot.py at 2017-09-22 09:19:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 155.586 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 155.586 ms
Loss rate: 1.14%
```

## Run 1: Report of SCReAM — Data Link

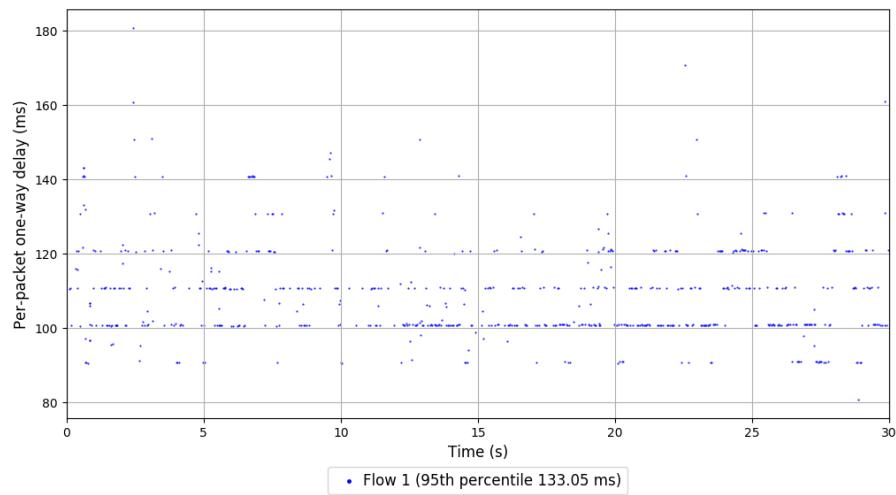
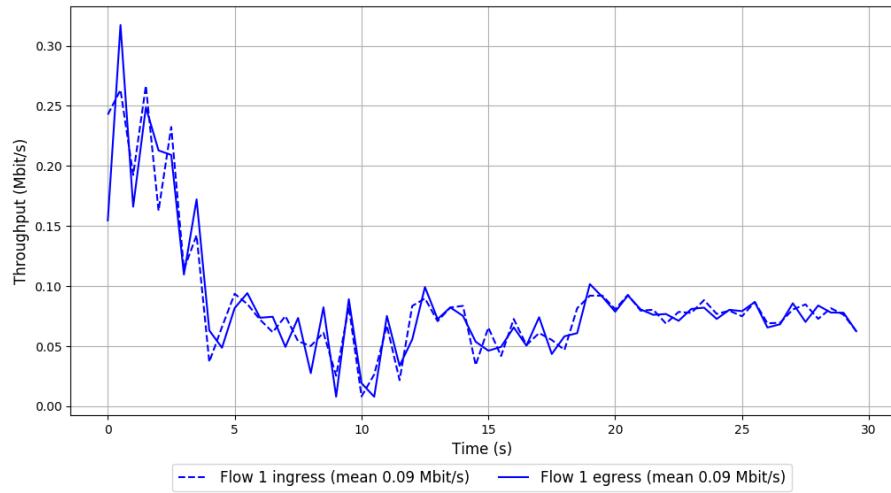


Run 2: Statistics of SCReAM

```
Start at: 2017-09-22 08:51:35
End at: 2017-09-22 08:52:05
Local clock offset: -0.267 ms
Remote clock offset: 4.276 ms

# Below is generated by plot.py at 2017-09-22 09:19:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 133.048 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 133.048 ms
Loss rate: 0.94%
```

## Run 2: Report of SCReAM — Data Link

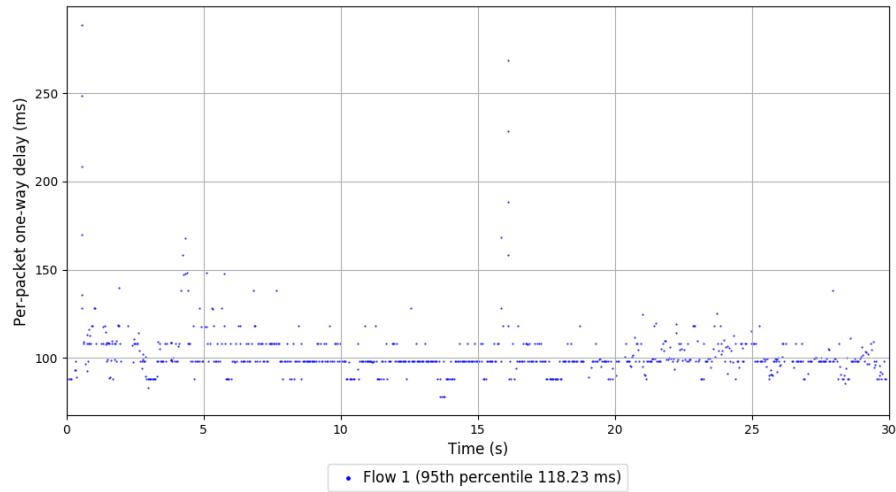
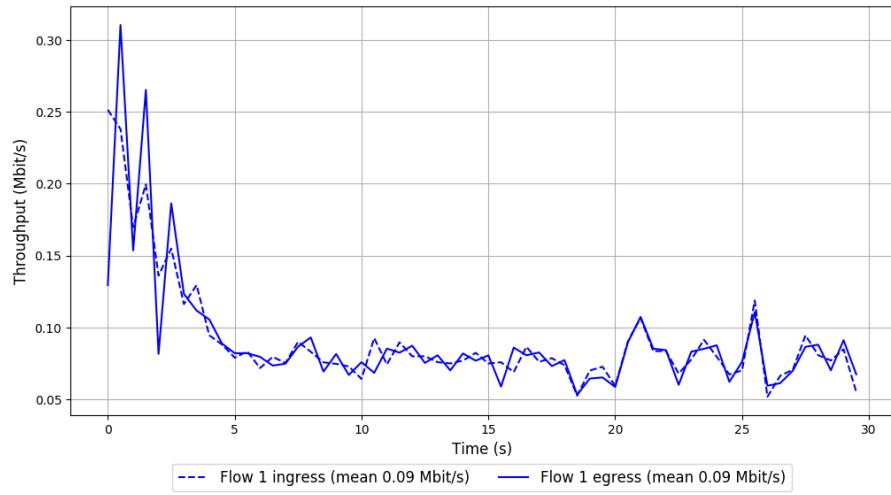


Run 3: Statistics of SCReAM

```
Start at: 2017-09-22 09:05:47
End at: 2017-09-22 09:06:17
Local clock offset: 0.118 ms
Remote clock offset: 5.338 ms

# Below is generated by plot.py at 2017-09-22 09:19:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 118.234 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 118.234 ms
Loss rate: 0.47%
```

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

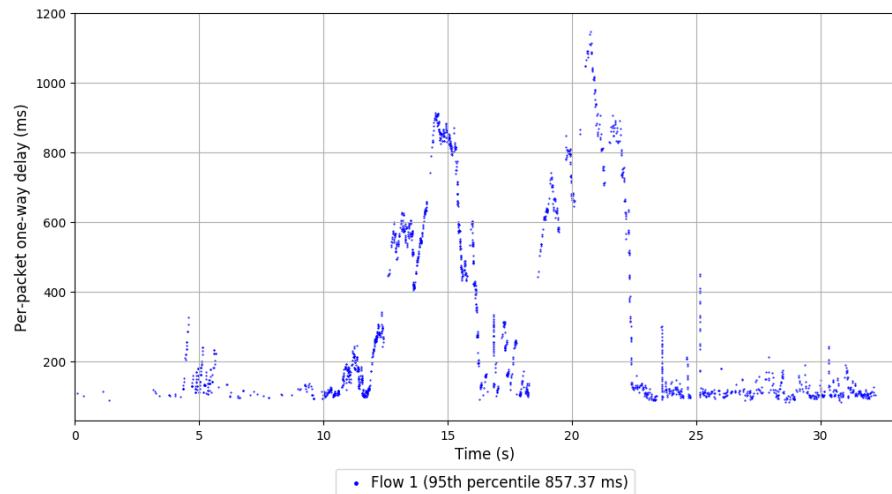
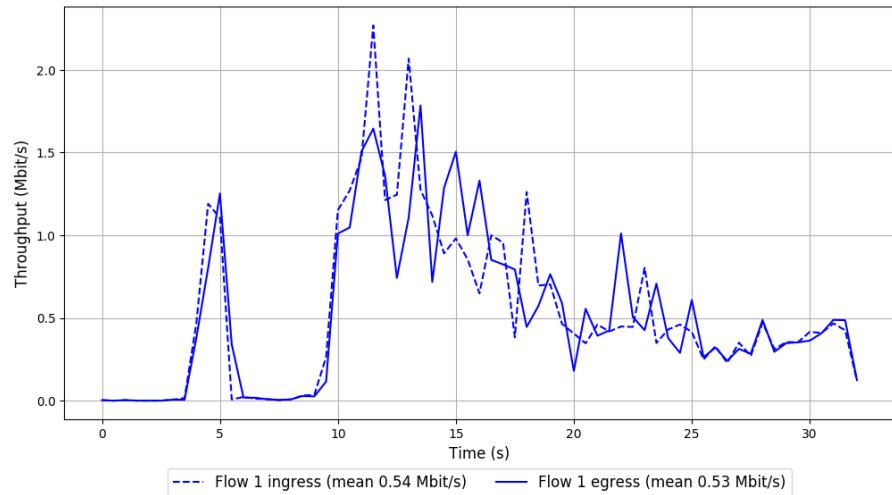


```
Run 1: Statistics of WebRTC media

Start at: 2017-09-22 08:38:31
End at: 2017-09-22 08:39:01
Local clock offset: -0.882 ms
Remote clock offset: 4.387 ms

# Below is generated by plot.py at 2017-09-22 09:19:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 857.371 ms
Loss rate: 1.97%
-- Flow 1:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 857.371 ms
Loss rate: 1.97%
```

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

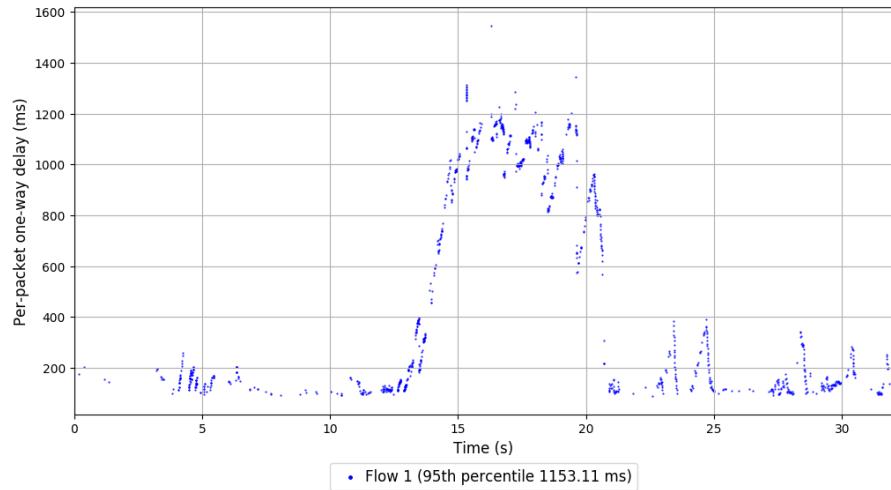
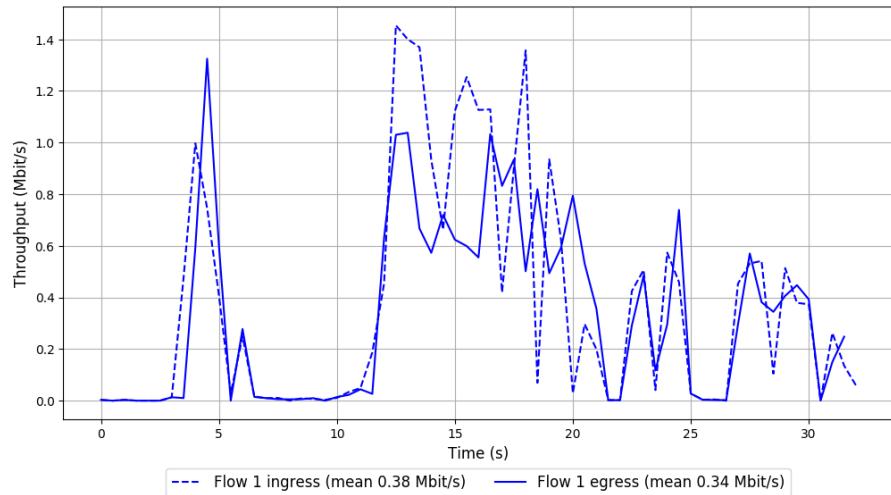


Run 2: Statistics of WebRTC media

```
Start at: 2017-09-22 08:52:40
End at: 2017-09-22 08:53:10
Local clock offset: -1.091 ms
Remote clock offset: 6.233 ms

# Below is generated by plot.py at 2017-09-22 09:19:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 1153.110 ms
Loss rate: 11.82%
-- Flow 1:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 1153.110 ms
Loss rate: 11.82%
```

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

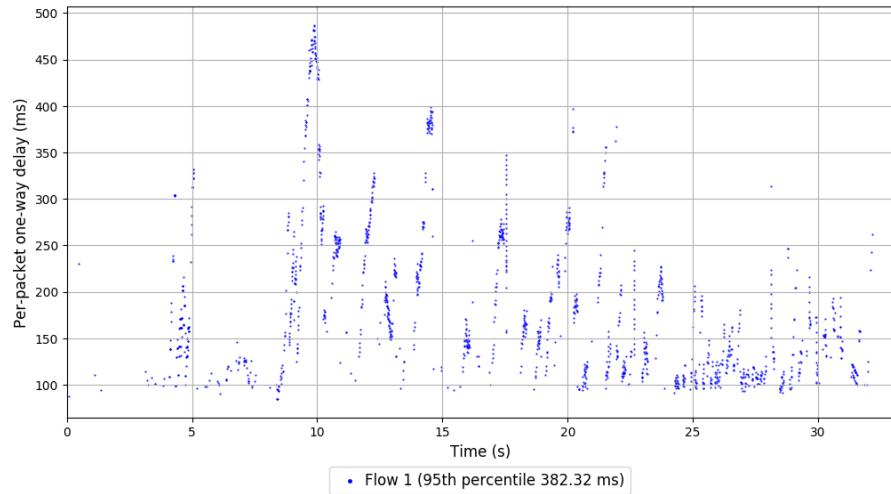
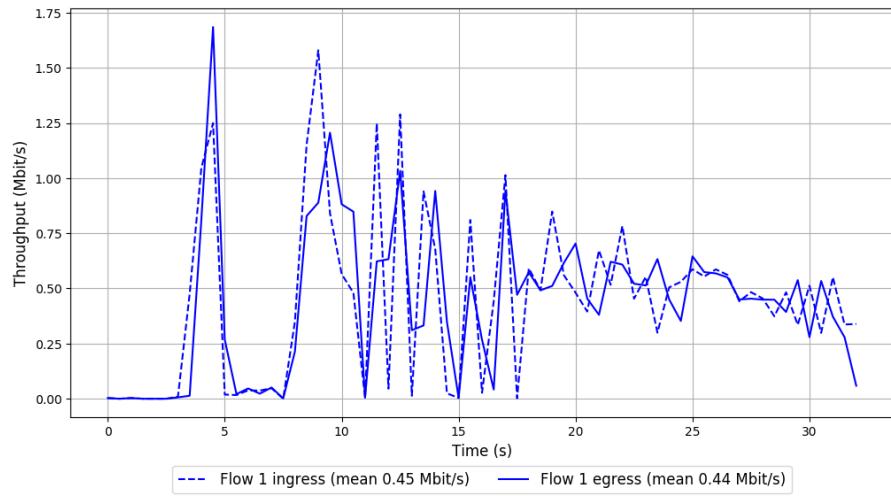


Run 3: Statistics of WebRTC media

```
Start at: 2017-09-22 09:06:53
End at: 2017-09-22 09:07:23
Local clock offset: 0.186 ms
Remote clock offset: 6.113 ms

# Below is generated by plot.py at 2017-09-22 09:19:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 382.317 ms
Loss rate: 2.41%
-- Flow 1:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 382.317 ms
Loss rate: 2.41%
```

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



Run 1: Statistics of Sprout

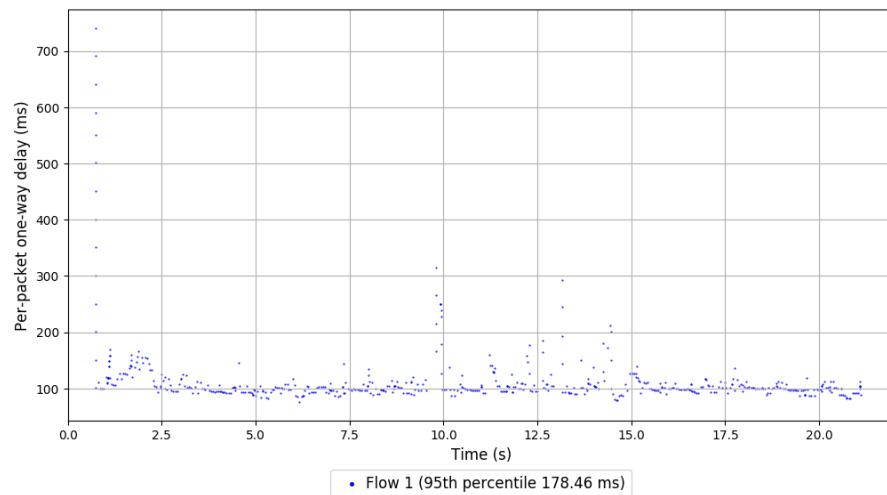
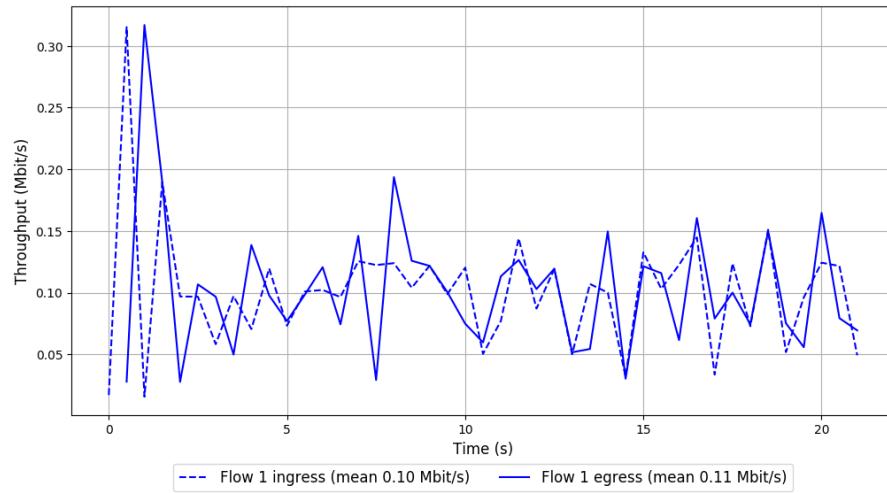
Start at: 2017-09-22 08:39:36

End at: 2017-09-22 08:40:06

Local clock offset: 0.418 ms

Remote clock offset: 1.573 ms

## Run 1: Report of Sprout — Data Link

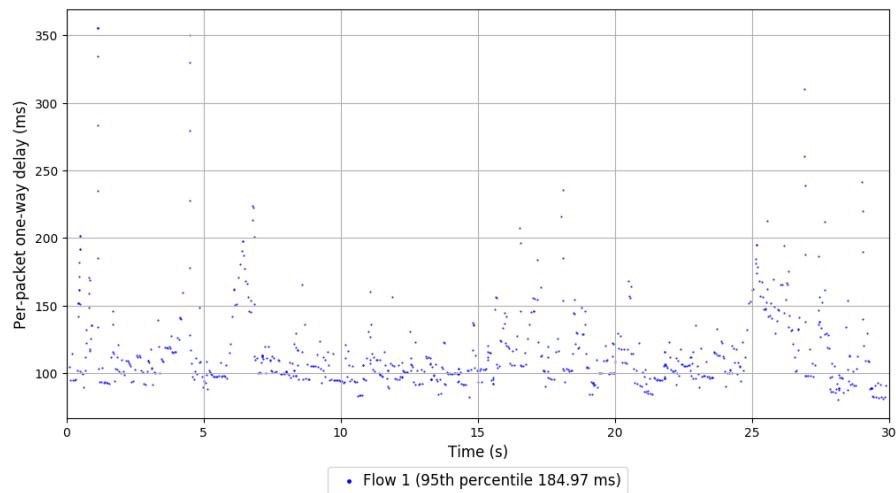
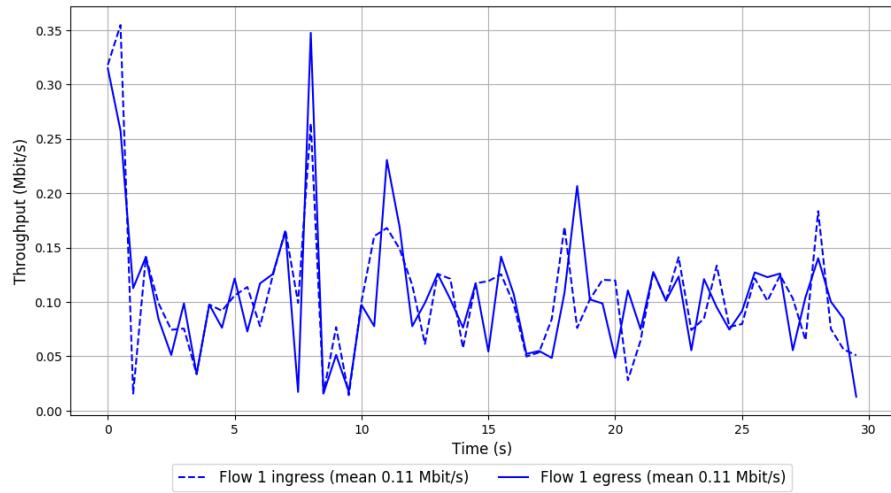


Run 2: Statistics of Sprout

```
Start at: 2017-09-22 08:53:45
End at: 2017-09-22 08:54:16
Local clock offset: 0.922 ms
Remote clock offset: 1.958 ms

# Below is generated by plot.py at 2017-09-22 09:19:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 184.972 ms
Loss rate: 1.26%
-- Flow 1:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 184.972 ms
Loss rate: 1.26%
```

## Run 2: Report of Sprout — Data Link

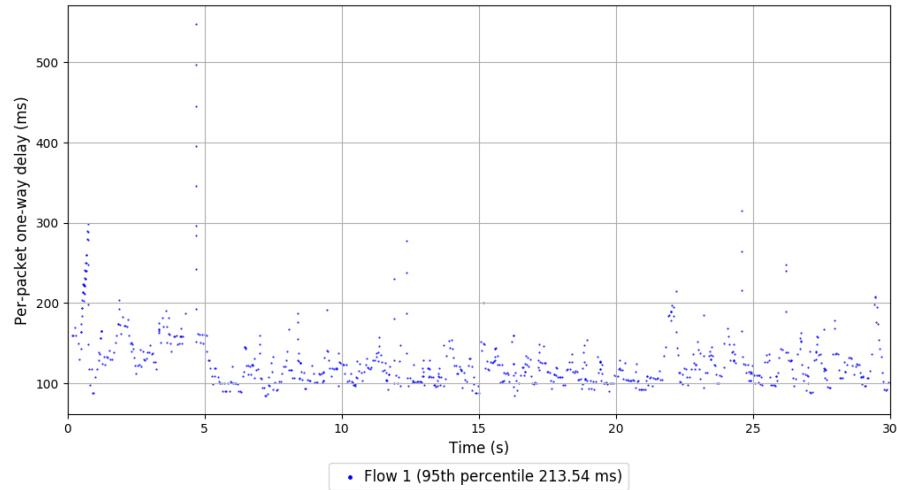
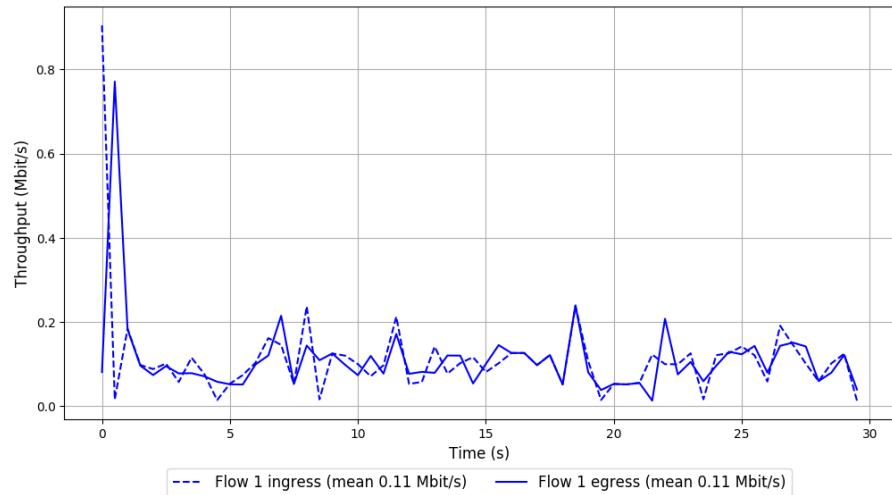


Run 3: Statistics of Sprout

```
Start at: 2017-09-22 09:07:59
End at: 2017-09-22 09:08:29
Local clock offset: 0.791 ms
Remote clock offset: 6.848 ms

# Below is generated by plot.py at 2017-09-22 09:19:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 213.543 ms
Loss rate: 1.28%
-- Flow 1:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 213.543 ms
Loss rate: 1.28%
```

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

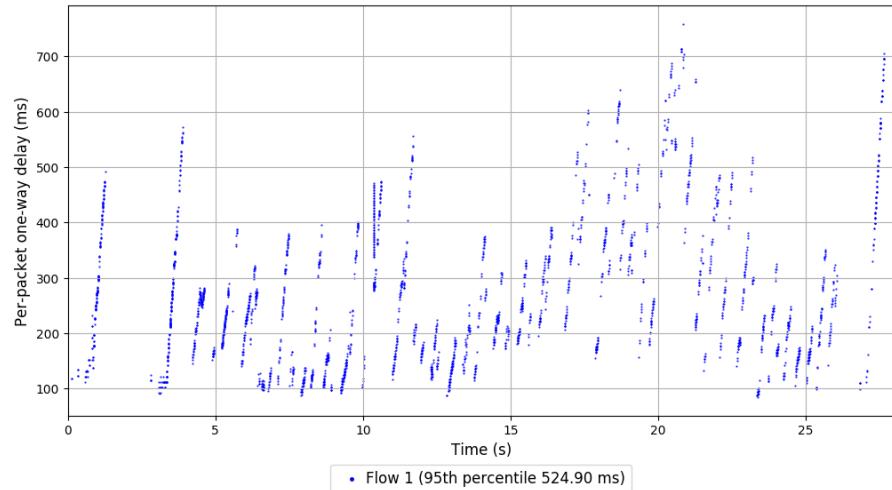
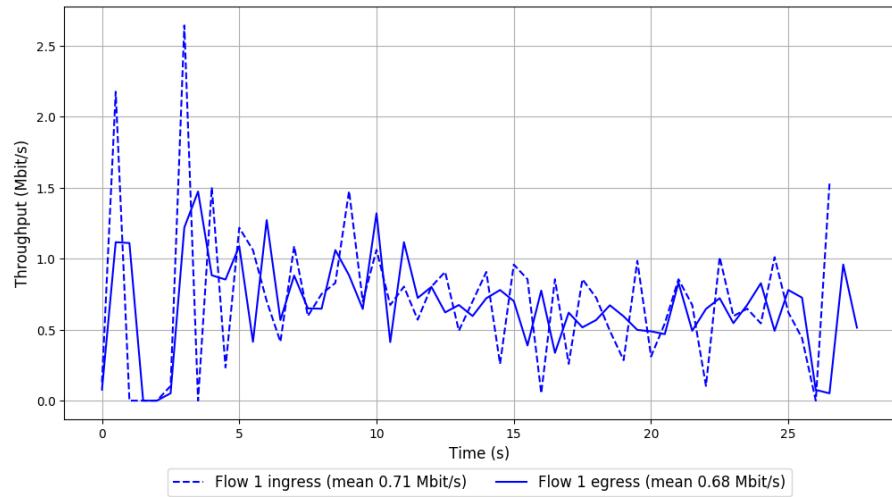


Run 1: Statistics of TaoVA-100x

```
Start at: 2017-09-22 08:45:03
End at: 2017-09-22 08:45:33
Local clock offset: -0.171 ms
Remote clock offset: 8.639 ms

# Below is generated by plot.py at 2017-09-22 09:19:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.68 Mbit/s
95th percentile per-packet one-way delay: 524.901 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 0.68 Mbit/s
95th percentile per-packet one-way delay: 524.901 ms
Loss rate: 1.02%
```

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

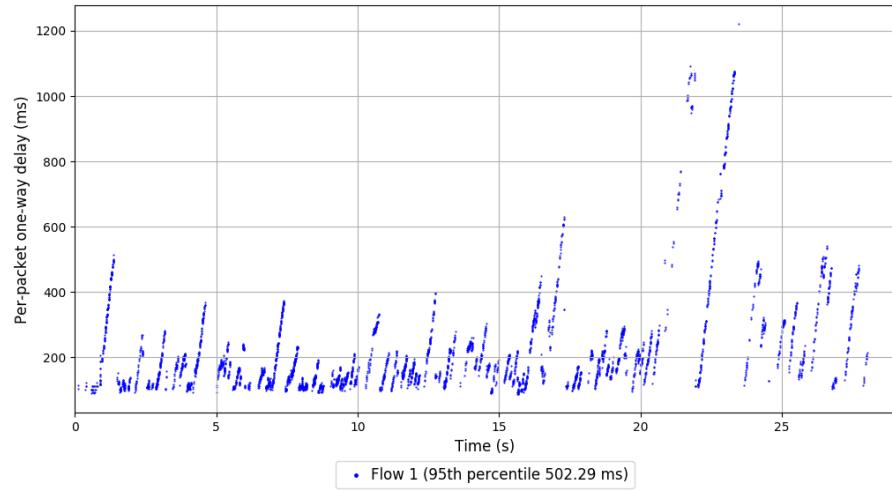
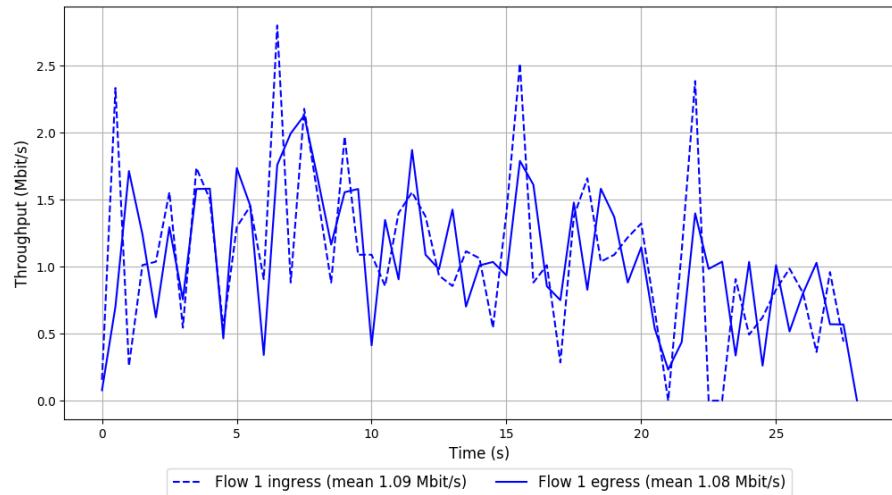


Run 2: Statistics of TaoVA-100x

```
Start at: 2017-09-22 08:59:12
End at: 2017-09-22 08:59:42
Local clock offset: 0.687 ms
Remote clock offset: 5.995 ms

# Below is generated by plot.py at 2017-09-22 09:19:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.08 Mbit/s
95th percentile per-packet one-way delay: 502.286 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 1.08 Mbit/s
95th percentile per-packet one-way delay: 502.286 ms
Loss rate: 1.09%
```

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



Run 3: Statistics of TaoVA-100x

Start at: 2017-09-22 09:13:29

End at: 2017-09-22 09:13:59

Local clock offset: 0.034 ms

Remote clock offset: 9.225 ms

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

Figure is missing

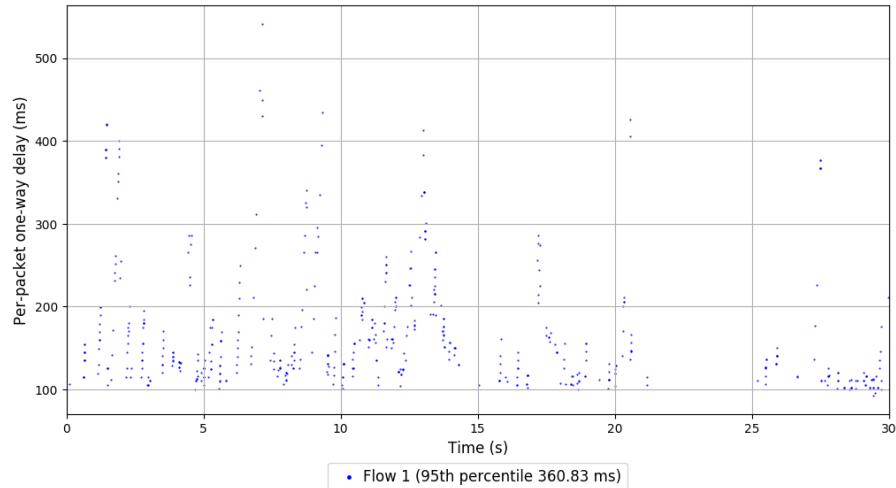
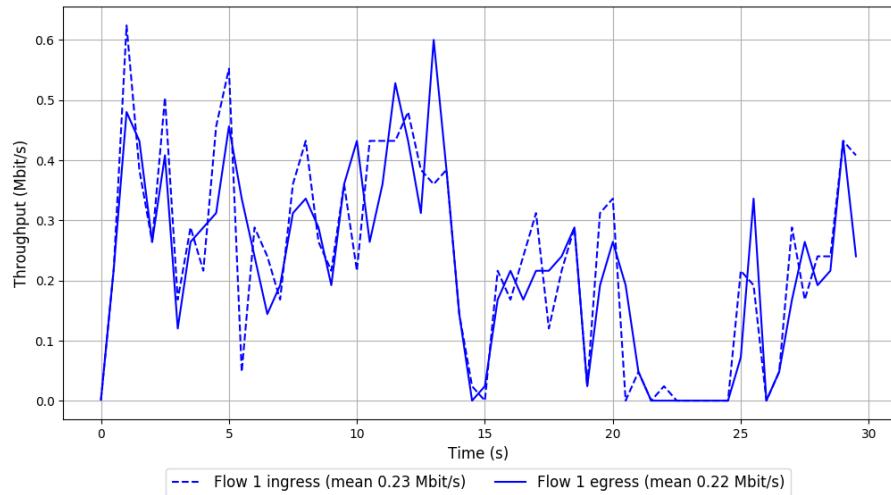
Figure is missing

Run 1: Statistics of TCP Vegas

```
Start at: 2017-09-22 08:41:47
End at: 2017-09-22 08:42:17
Local clock offset: 0.69 ms
Remote clock offset: 4.787 ms

# Below is generated by plot.py at 2017-09-22 09:19:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 360.830 ms
Loss rate: 3.98%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 360.830 ms
Loss rate: 3.98%
```

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

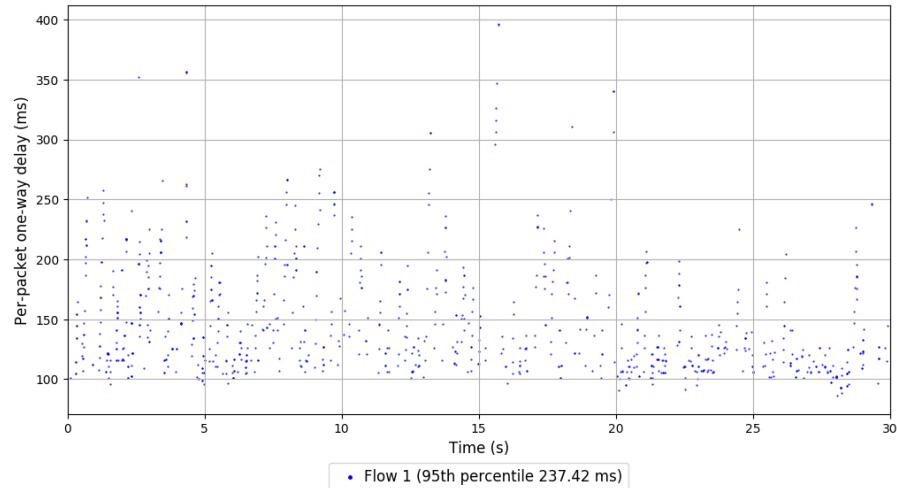
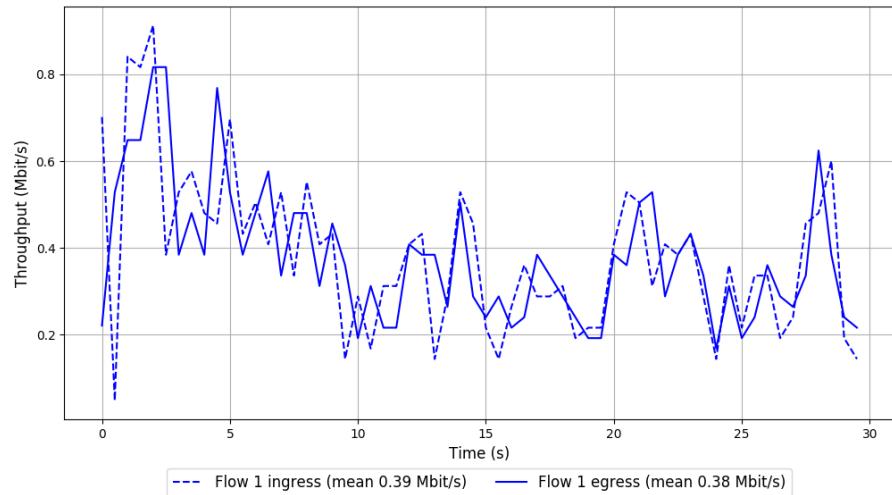


Run 2: Statistics of TCP Vegas

```
Start at: 2017-09-22 08:55:56
End at: 2017-09-22 08:56:26
Local clock offset: -0.791 ms
Remote clock offset: 7.333 ms

# Below is generated by plot.py at 2017-09-22 09:19:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 237.417 ms
Loss rate: 1.15%
-- Flow 1:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 237.417 ms
Loss rate: 1.15%
```

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



Run 3: Statistics of TCP Vegas

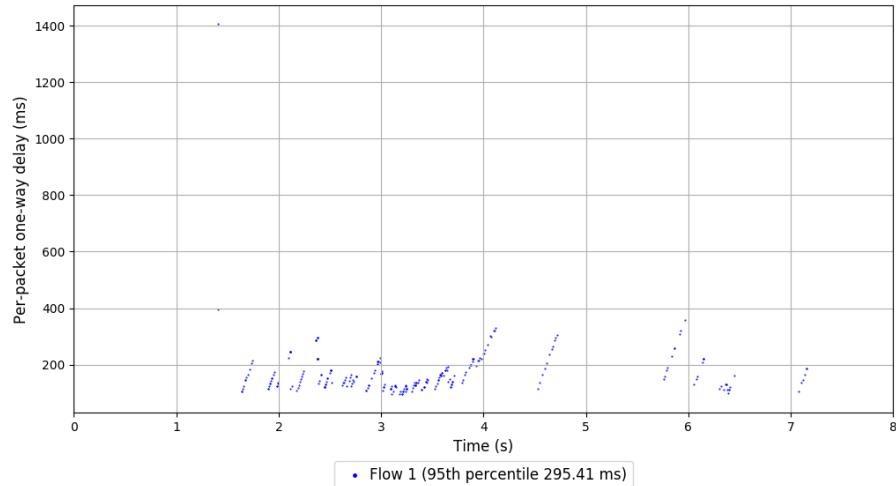
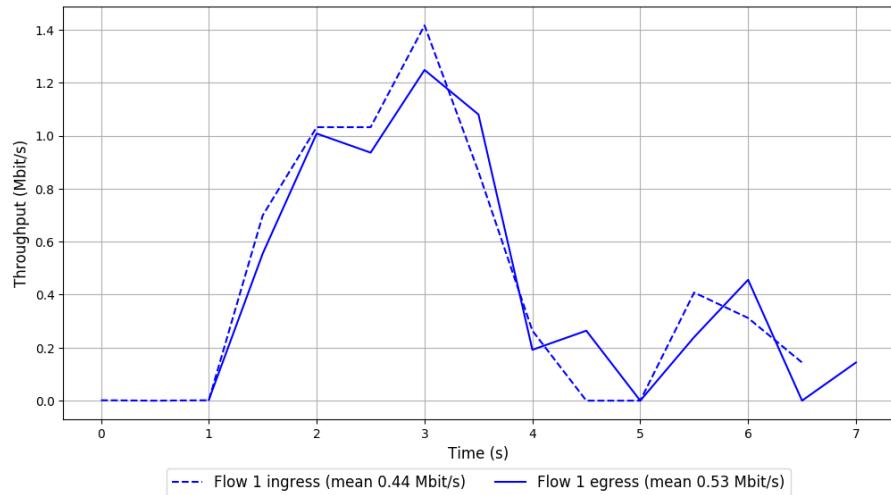
Start at: 2017-09-22 09:10:10

End at: 2017-09-22 09:10:40

Local clock offset: 2.219 ms

Remote clock offset: 8.767 ms

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

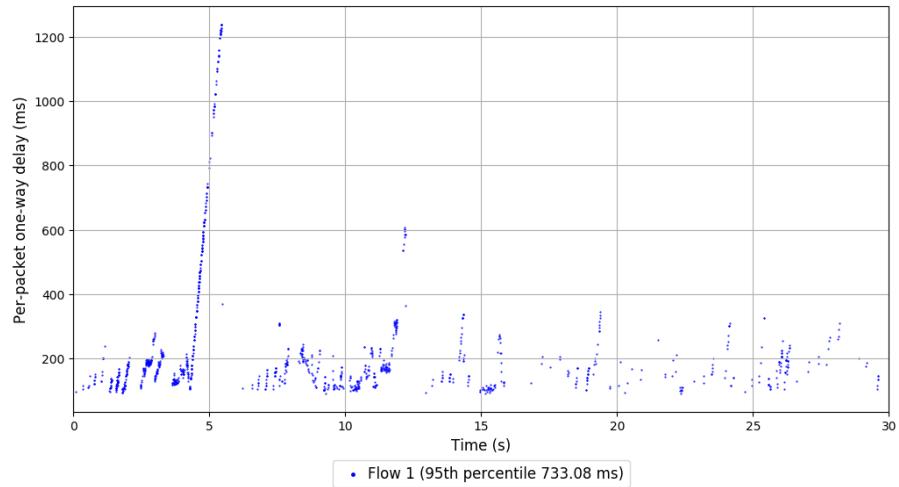
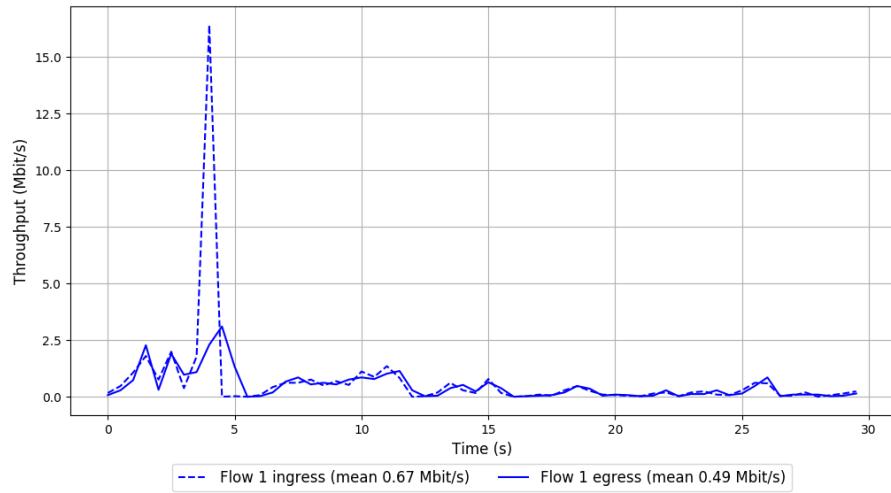


Run 1: Statistics of Verus

```
Start at: 2017-09-22 08:49:25
End at: 2017-09-22 08:49:55
Local clock offset: -1.609 ms
Remote clock offset: 5.553 ms

# Below is generated by plot.py at 2017-09-22 09:19:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 733.084 ms
Loss rate: 27.10%
-- Flow 1:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 733.084 ms
Loss rate: 27.10%
```

## Run 1: Report of Verus — Data Link

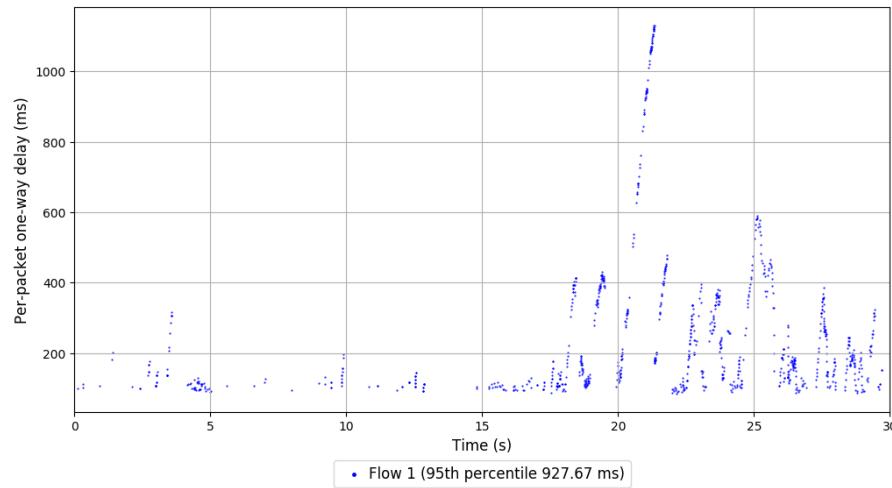
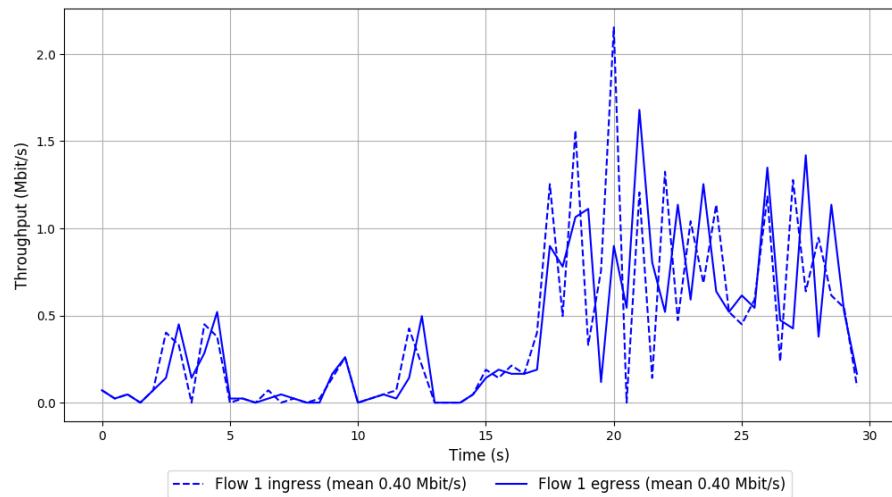


Run 2: Statistics of Verus

```
Start at: 2017-09-22 09:03:35
End at: 2017-09-22 09:04:05
Local clock offset: 2.096 ms
Remote clock offset: 6.714 ms

# Below is generated by plot.py at 2017-09-22 09:19:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 927.674 ms
Loss rate: 1.58%
-- Flow 1:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 927.674 ms
Loss rate: 1.58%
```

## Run 2: Report of Verus — Data Link

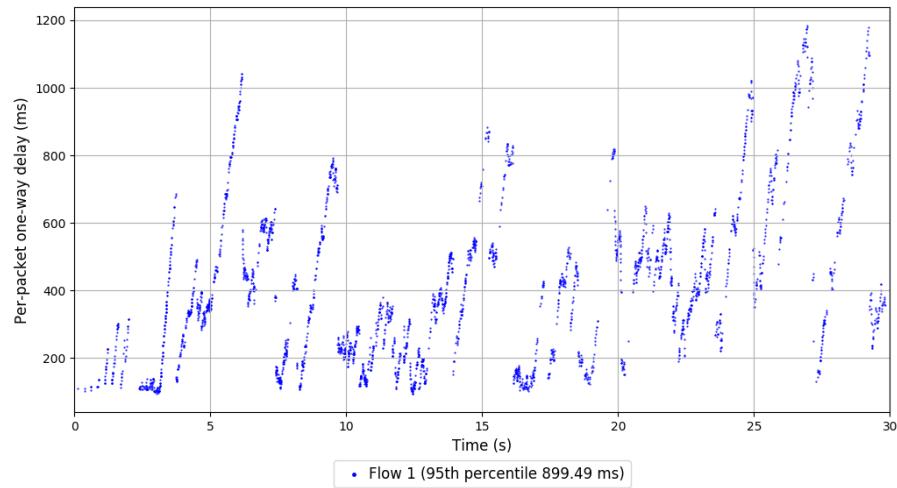
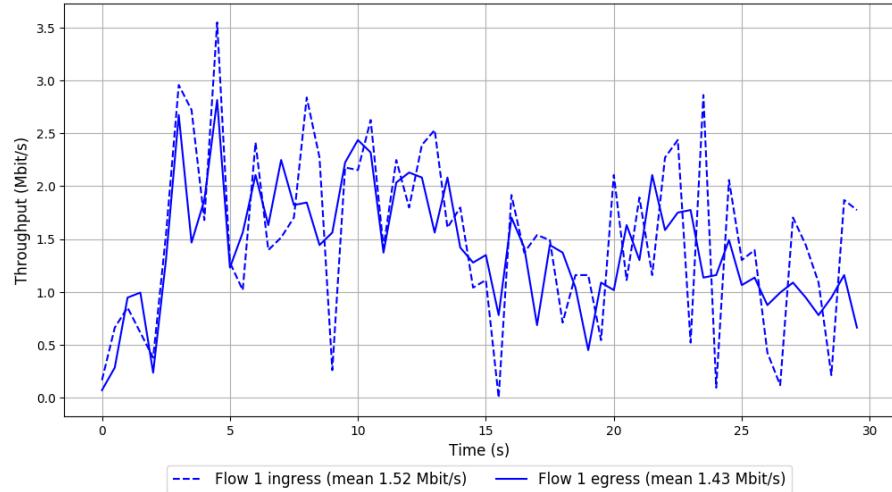


Run 3: Statistics of Verus

```
Start at: 2017-09-22 09:17:52
End at: 2017-09-22 09:18:22
Local clock offset: -0.573 ms
Remote clock offset: 8.557 ms

# Below is generated by plot.py at 2017-09-22 09:19:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.43 Mbit/s
95th percentile per-packet one-way delay: 899.493 ms
Loss rate: 6.04%
-- Flow 1:
Average throughput: 1.43 Mbit/s
95th percentile per-packet one-way delay: 899.493 ms
Loss rate: 6.04%
```

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

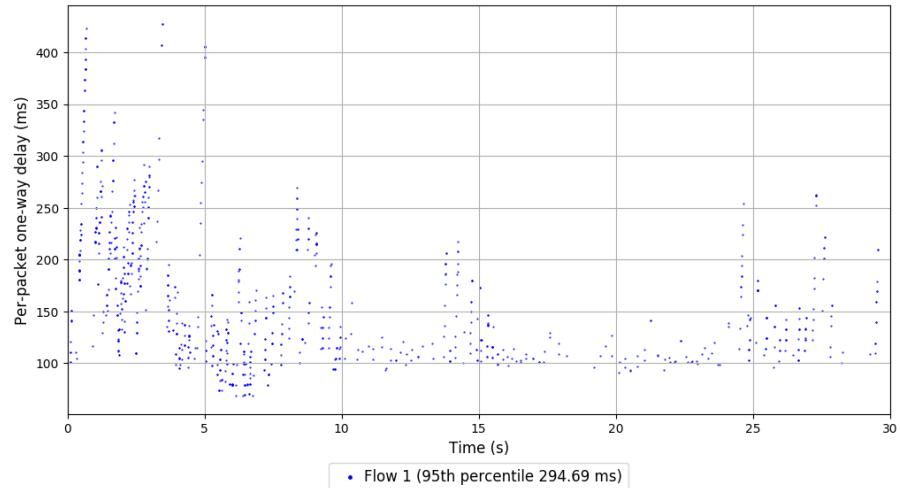
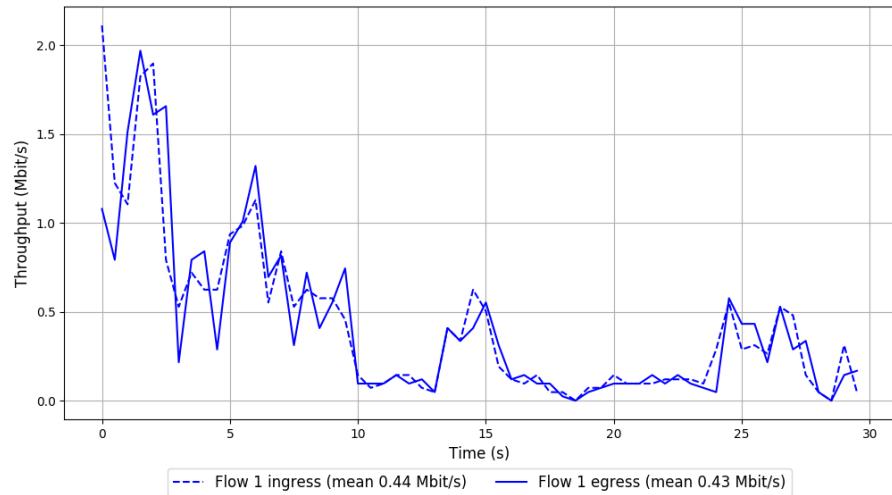


Run 1: Statistics of Indigo

```
Start at: 2017-09-22 08:47:14
End at: 2017-09-22 08:47:44
Local clock offset: -1.207 ms
Remote clock offset: 5.147 ms

# Below is generated by plot.py at 2017-09-22 09:19:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 294.687 ms
Loss rate: 2.29%
-- Flow 1:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 294.687 ms
Loss rate: 2.29%
```

## Run 1: Report of Indigo — Data Link

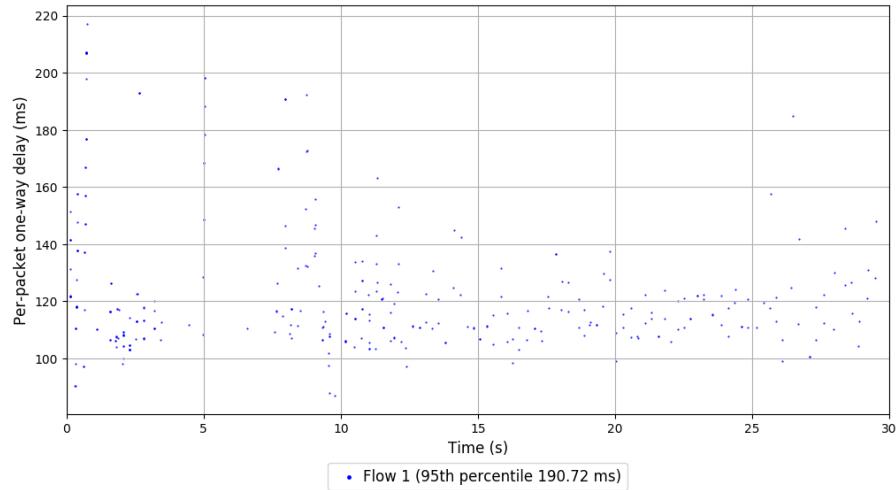
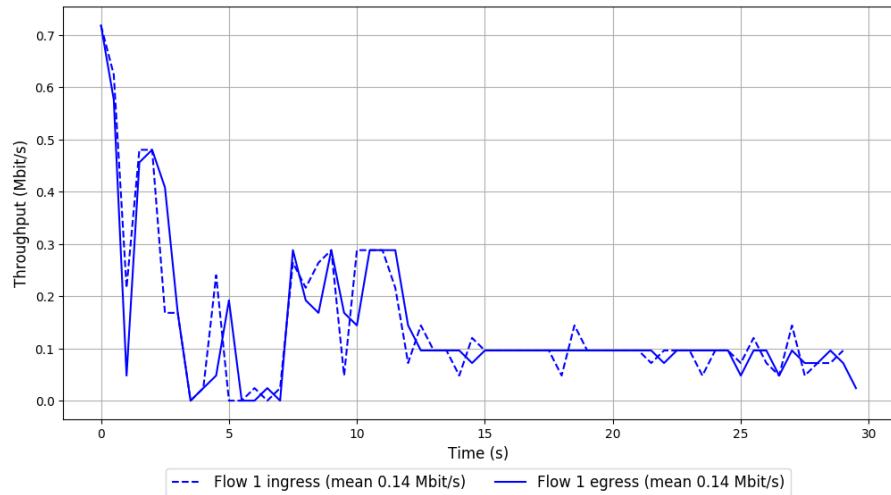


Run 2: Statistics of Indigo

```
Start at: 2017-09-22 09:01:24
End at: 2017-09-22 09:01:54
Local clock offset: -0.303 ms
Remote clock offset: 9.57 ms

# Below is generated by plot.py at 2017-09-22 09:19:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 190.719 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 190.719 ms
Loss rate: 0.28%
```

## Run 2: Report of Indigo — Data Link

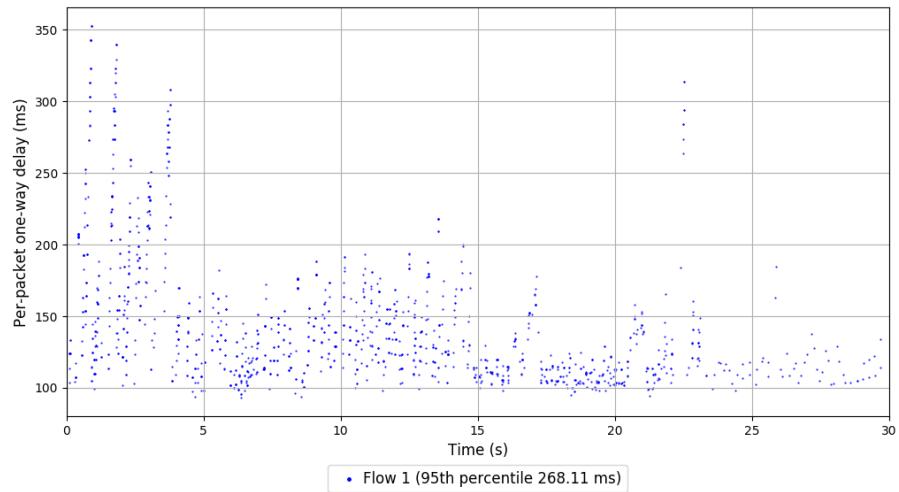
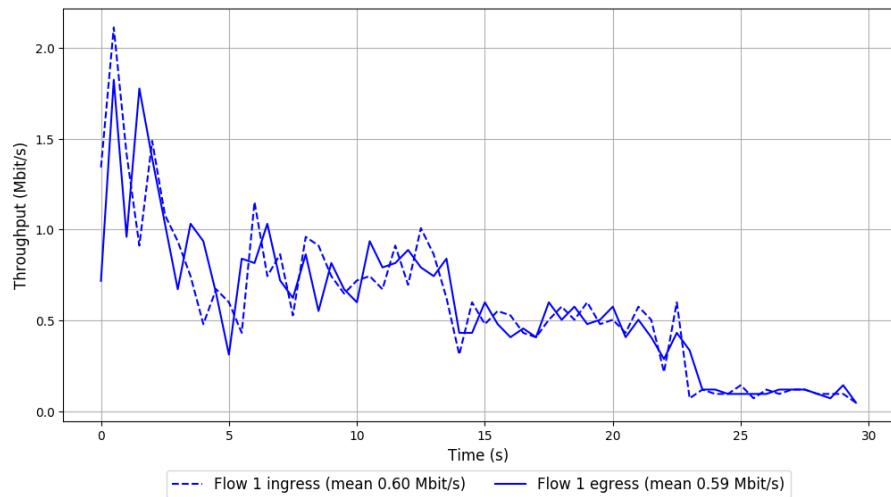


Run 3: Statistics of Indigo

```
Start at: 2017-09-22 09:15:41
End at: 2017-09-22 09:16:11
Local clock offset: -0.571 ms
Remote clock offset: 6.792 ms

# Below is generated by plot.py at 2017-09-22 09:19:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.59 Mbit/s
95th percentile per-packet one-way delay: 268.110 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 0.59 Mbit/s
95th percentile per-packet one-way delay: 268.110 ms
Loss rate: 1.09%
```

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

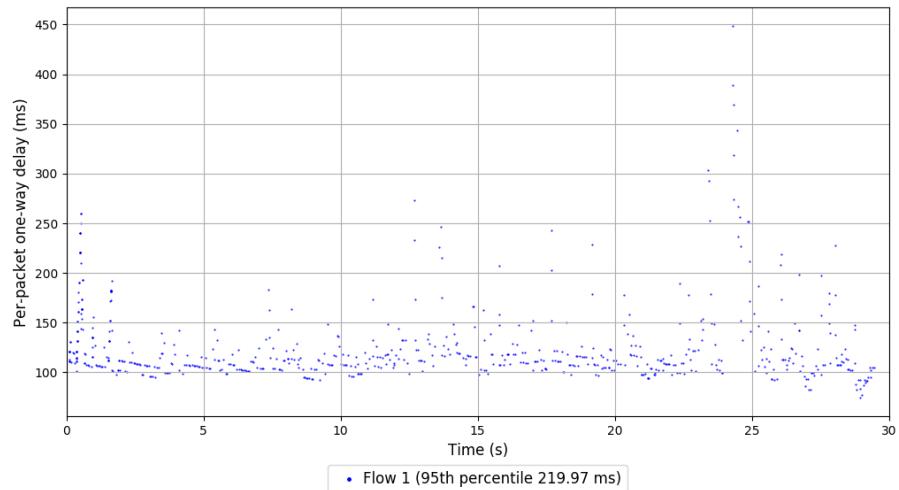
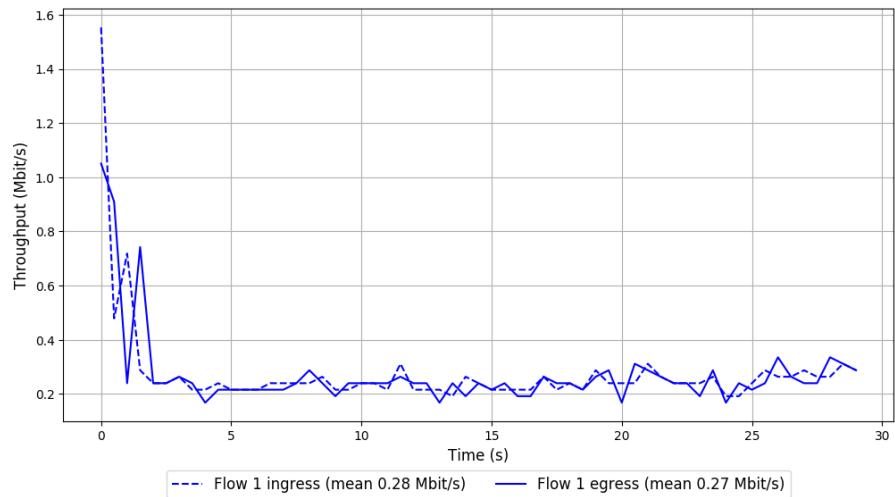


```
Run 1: Statistics of Indigo-cellular
```

```
Start at: 2017-09-22 08:40:42
End at: 2017-09-22 08:41:12
Local clock offset: 1.257 ms
Remote clock offset: 4.377 ms

# Below is generated by plot.py at 2017-09-22 09:19:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 219.975 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 219.975 ms
Loss rate: 1.32%
```

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

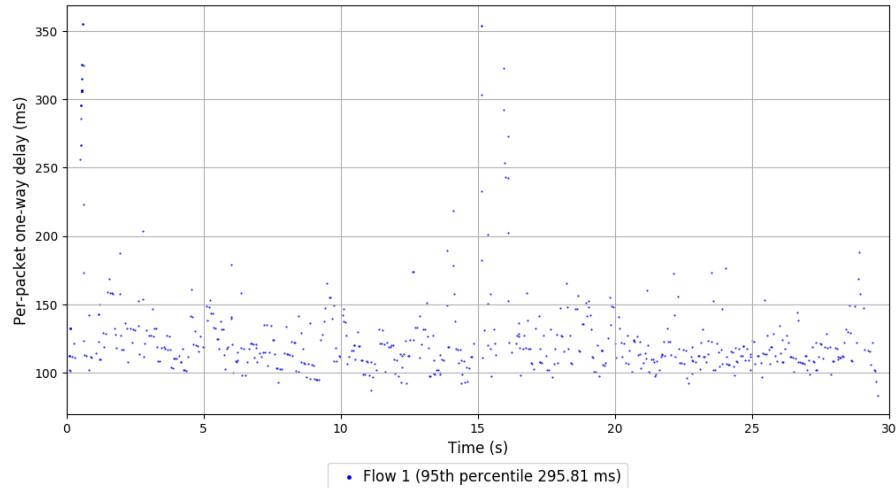
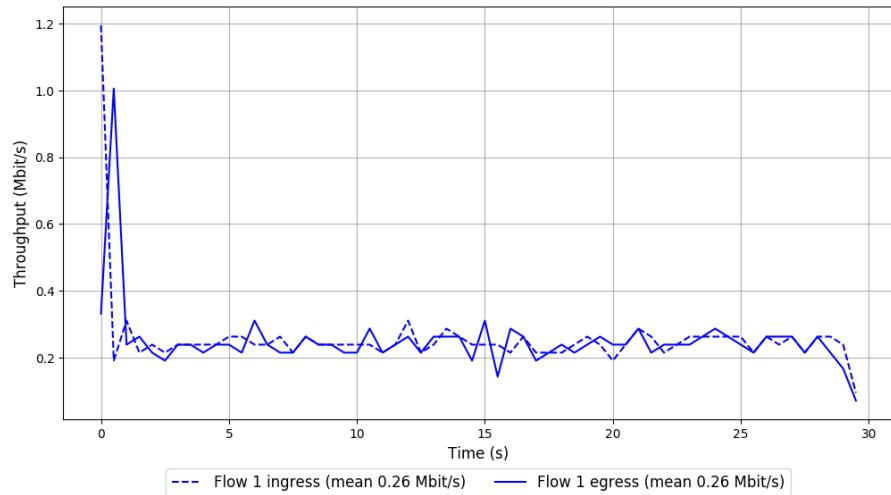


Run 2: Statistics of Indigo-cellular

```
Start at: 2017-09-22 08:54:51
End at: 2017-09-22 08:55:21
Local clock offset: 0.448 ms
Remote clock offset: 6.754 ms

# Below is generated by plot.py at 2017-09-22 09:19:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.26 Mbit/s
95th percentile per-packet one-way delay: 295.806 ms
Loss rate: 2.48%
-- Flow 1:
Average throughput: 0.26 Mbit/s
95th percentile per-packet one-way delay: 295.806 ms
Loss rate: 2.48%
```

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



Run 3: Statistics of Indigo-cellular

```
Start at: 2017-09-22 09:09:04
End at: 2017-09-22 09:09:34
Local clock offset: -0.407 ms
Remote clock offset: 7.9 ms

# Below is generated by plot.py at 2017-09-22 09:19:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 233.004 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 233.004 ms
Loss rate: 1.22%
```

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

