

Pantheon Report

Generated at 2018-09-06 07:05:55 (UTC).
Data path: AWS India 2 on `ens5` (*local*) → Saudi Arabia on `enp2s0` (*remote*).
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.

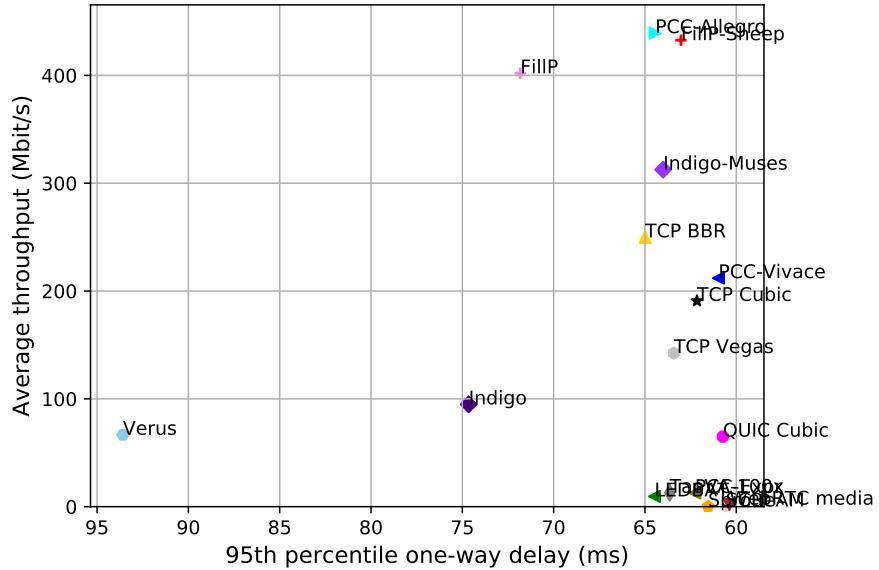
System info:

```
Linux 4.15.0-1020-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
net.ipv4.tcp_mem = 536870912 536870912 536870912
```

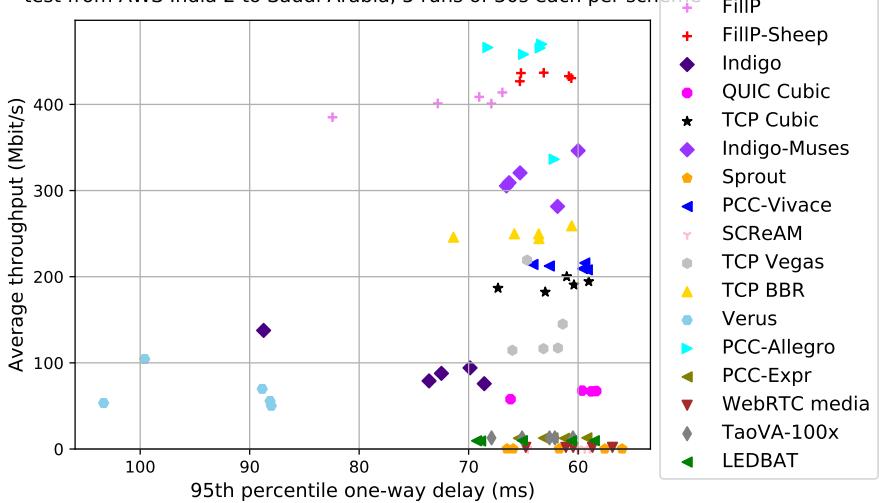
Git summary:

```
branch: muses @ f392ce15d580343f4432c3d7e068b3290f03eb4a
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedbfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ a28d20fb82a95a965a3da65fd1eb71b8994e9b84
third_party/pantheon-tunnel @ cbfce6db5ff5740dafe1771f813cd646339e1952
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
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

test from AWS India 2 to Saudi Arabia, 5 runs of 30s each per scheme
(mean of all runs by scheme)



test from AWS India 2 to Saudi Arabia, 5 runs of 30s each per scheme



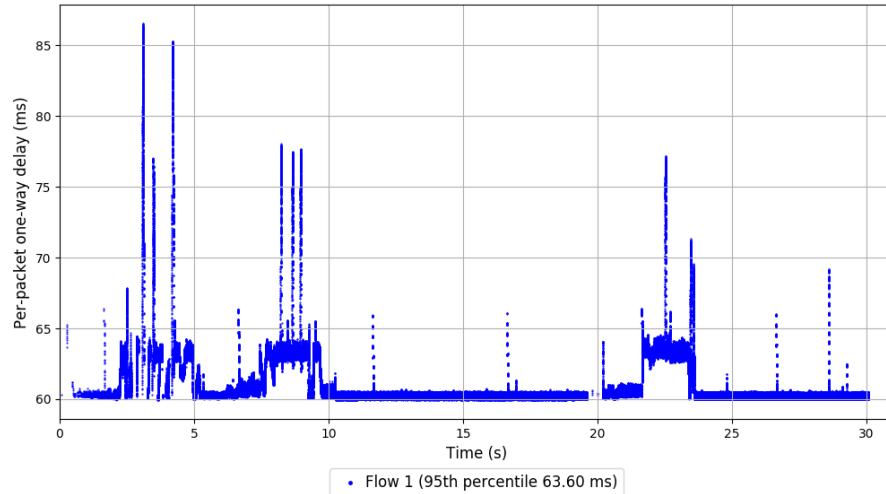
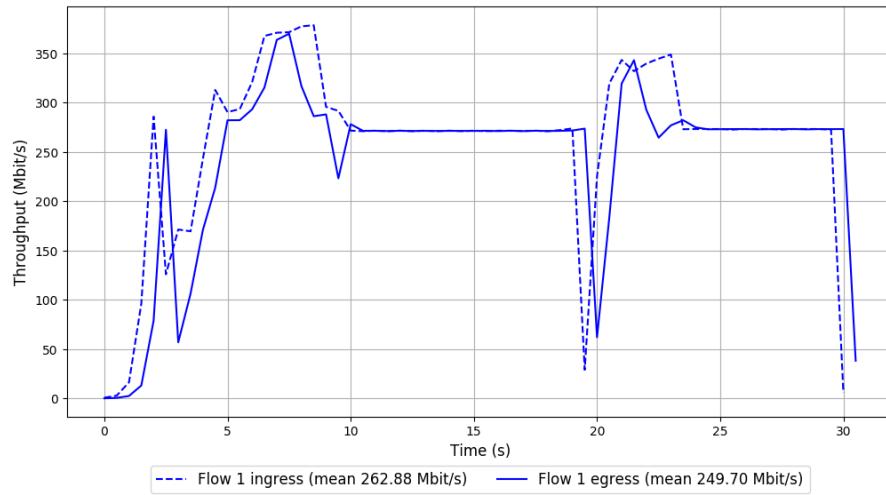
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	249.76	64.99	6.16
Copa	0	N/A	N/A	N/A
TCP Cubic	5	190.80	62.15	0.59
FillP	5	401.94	71.83	20.86
FillP-Sheep	5	432.65	63.03	10.14
Indigo	5	94.90	74.65	0.27
LEDBAT	5	9.54	64.48	0.00
Indigo-Muses	5	312.59	64.01	6.39
PCC-Allegro	5	439.18	64.44	4.15
PCC-Expr	5	12.70	62.27	29.80
QUIC Cubic	4	64.95	60.74	0.01
SCReAM	5	0.22	60.58	0.00
Sprout	5	0.25	61.54	0.00
TaoVA-100x	5	12.90	63.65	21.24
TCP Vegas	5	142.51	63.42	0.61
Verus	5	66.69	93.59	44.02
PCC-Vivace	5	211.98	60.98	0.91
WebRTC media	5	1.89	60.38	0.00

Run 1: Statistics of TCP BBR

```
Start at: 2018-09-06 04:41:57
End at: 2018-09-06 04:42:27
Local clock offset: -0.135 ms
Remote clock offset: -34.906 ms

# Below is generated by plot.py at 2018-09-06 06:47:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 249.70 Mbit/s
95th percentile per-packet one-way delay: 63.597 ms
Loss rate: 5.02%
-- Flow 1:
Average throughput: 249.70 Mbit/s
95th percentile per-packet one-way delay: 63.597 ms
Loss rate: 5.02%
```

Run 1: Report of TCP BBR — Data Link

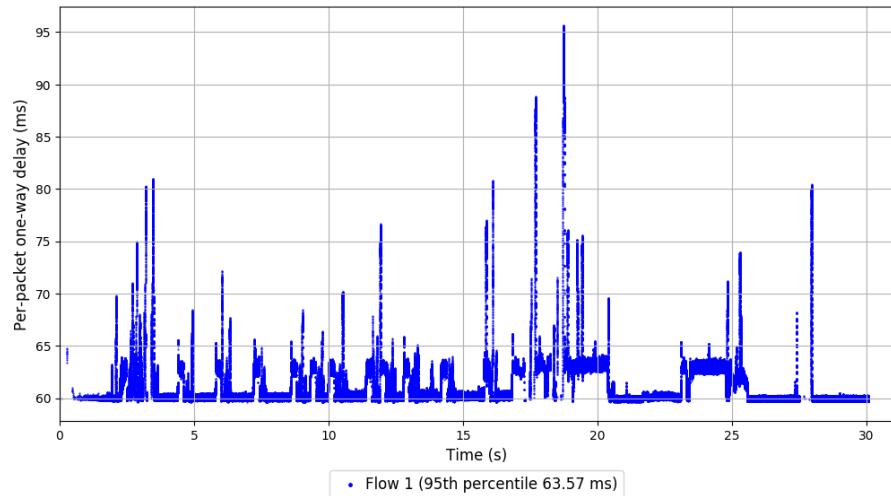
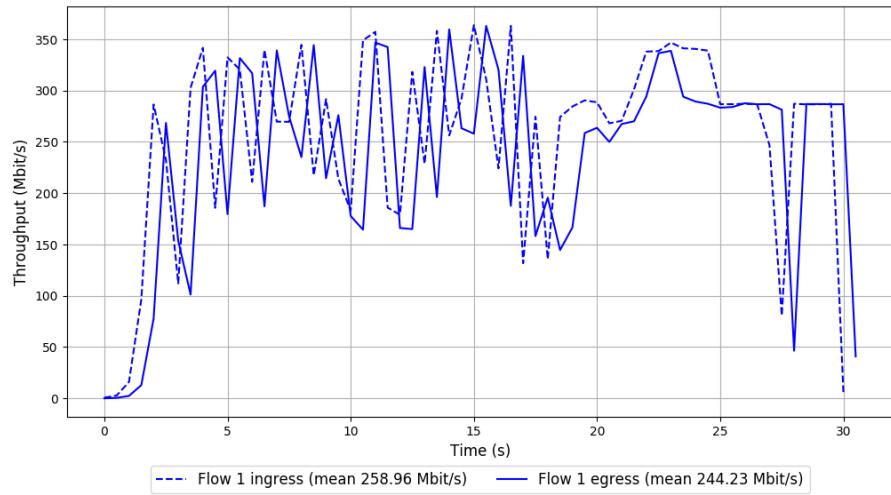


Run 2: Statistics of TCP BBR

```
Start at: 2018-09-06 05:05:04
End at: 2018-09-06 05:05:34
Local clock offset: -1.85 ms
Remote clock offset: -37.057 ms

# Below is generated by plot.py at 2018-09-06 06:47:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 244.23 Mbit/s
95th percentile per-packet one-way delay: 63.573 ms
Loss rate: 5.69%
-- Flow 1:
Average throughput: 244.23 Mbit/s
95th percentile per-packet one-way delay: 63.573 ms
Loss rate: 5.69%
```

Run 2: Report of TCP BBR — Data Link

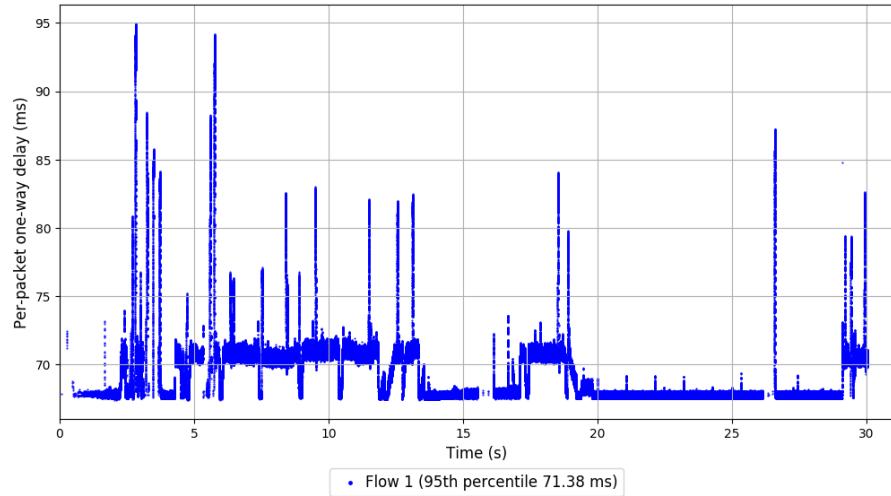
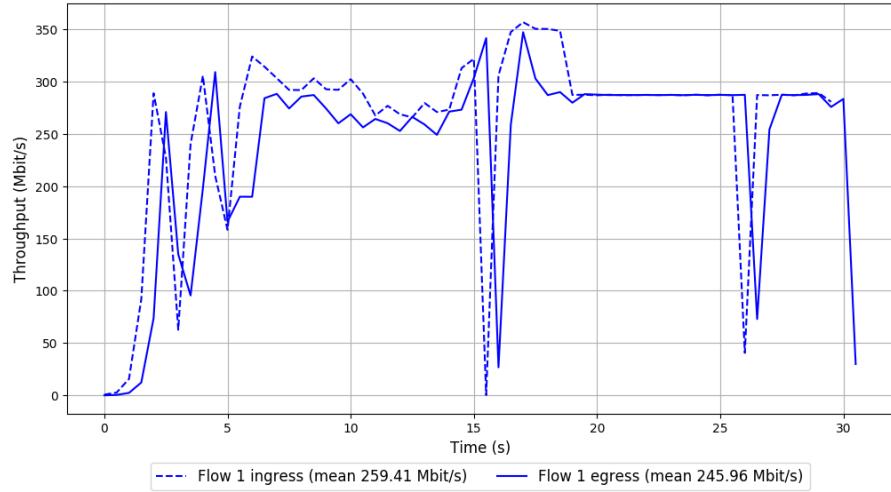


Run 3: Statistics of TCP BBR

```
Start at: 2018-09-06 05:28:11
End at: 2018-09-06 05:28:41
Local clock offset: -0.034 ms
Remote clock offset: -31.61 ms

# Below is generated by plot.py at 2018-09-06 06:47:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 245.96 Mbit/s
95th percentile per-packet one-way delay: 71.383 ms
Loss rate: 5.18%
-- Flow 1:
Average throughput: 245.96 Mbit/s
95th percentile per-packet one-way delay: 71.383 ms
Loss rate: 5.18%
```

Run 3: Report of TCP BBR — Data Link

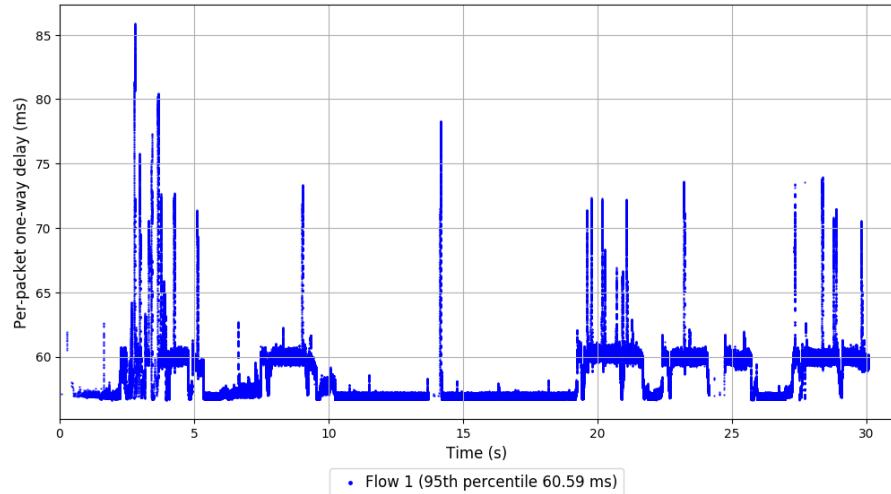
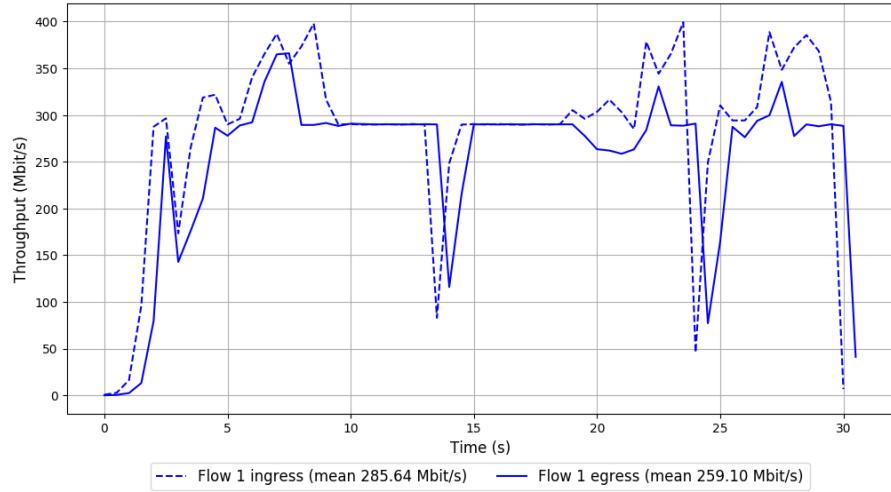


Run 4: Statistics of TCP BBR

```
Start at: 2018-09-06 05:51:22
End at: 2018-09-06 05:51:53
Local clock offset: 3.002 ms
Remote clock offset: -36.873 ms

# Below is generated by plot.py at 2018-09-06 06:47:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 259.10 Mbit/s
95th percentile per-packet one-way delay: 60.586 ms
Loss rate: 9.28%
-- Flow 1:
Average throughput: 259.10 Mbit/s
95th percentile per-packet one-way delay: 60.586 ms
Loss rate: 9.28%
```

Run 4: Report of TCP BBR — Data Link

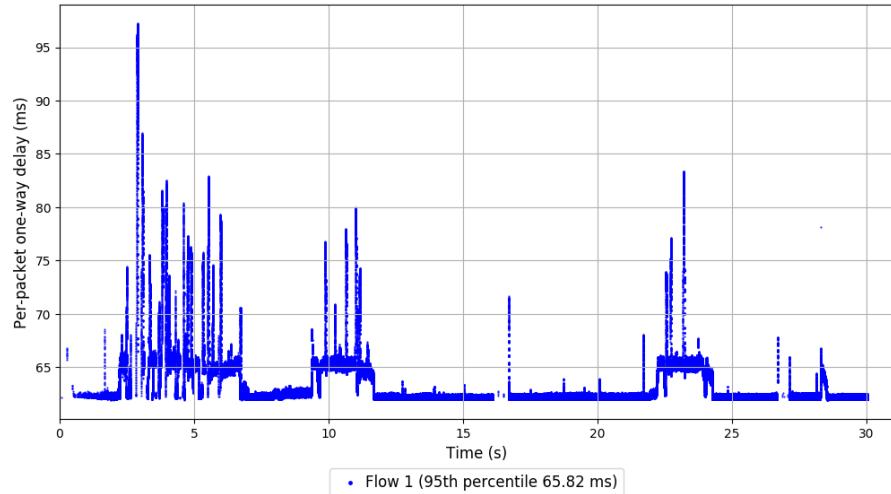
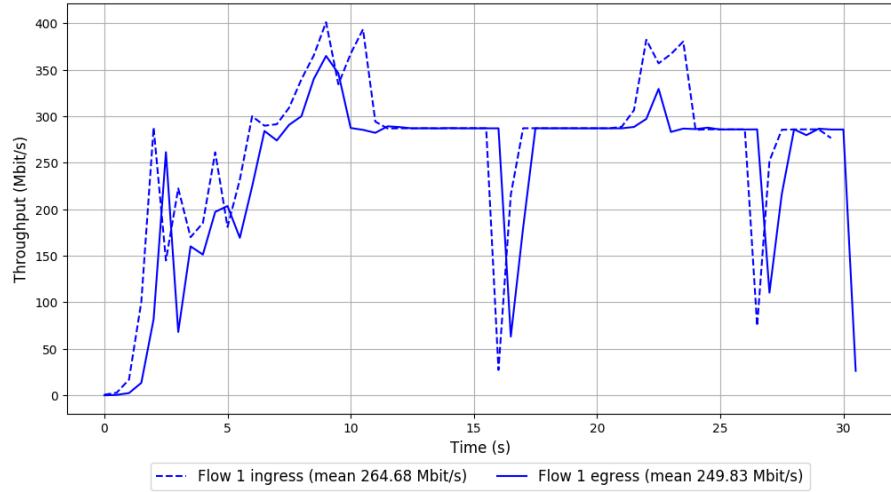


Run 5: Statistics of TCP BBR

```
Start at: 2018-09-06 06:20:11
End at: 2018-09-06 06:20:41
Local clock offset: 1.331 ms
Remote clock offset: -32.624 ms

# Below is generated by plot.py at 2018-09-06 06:47:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 249.83 Mbit/s
95th percentile per-packet one-way delay: 65.822 ms
Loss rate: 5.61%
-- Flow 1:
Average throughput: 249.83 Mbit/s
95th percentile per-packet one-way delay: 65.822 ms
Loss rate: 5.61%
```

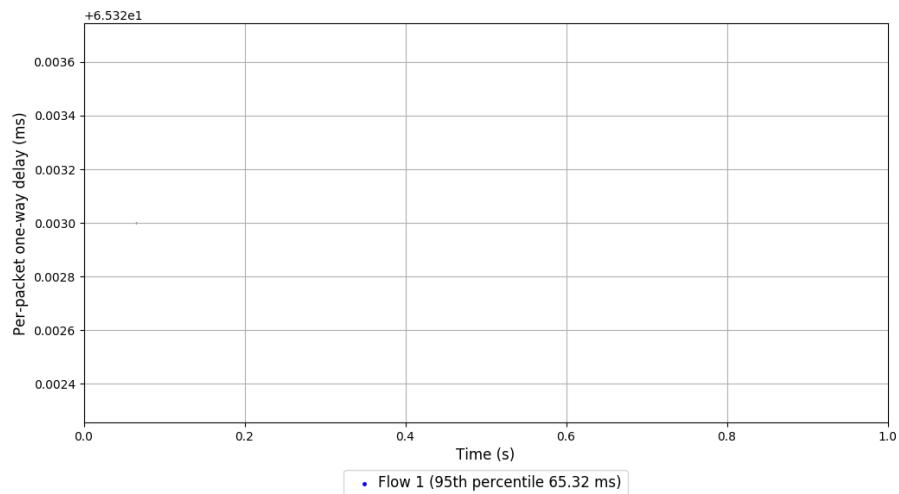
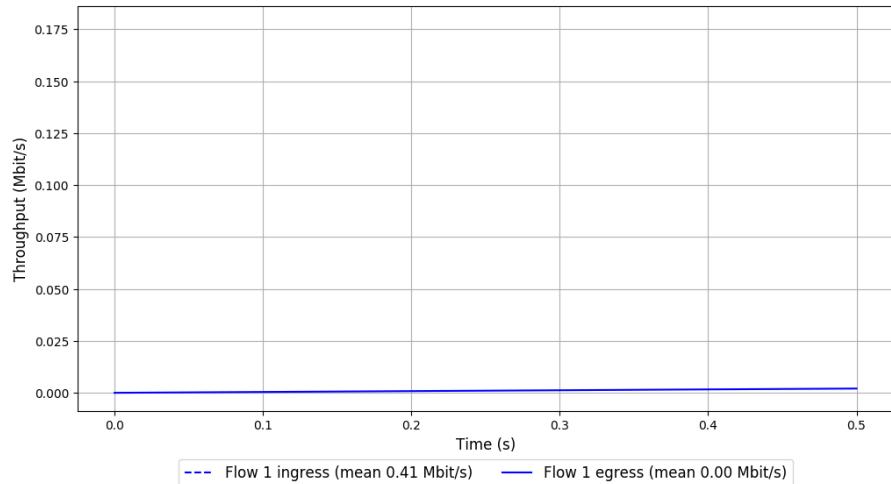
Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2018-09-06 04:48:17
End at: 2018-09-06 04:48:47
Local clock offset: -1.811 ms
Remote clock offset: -34.423 ms

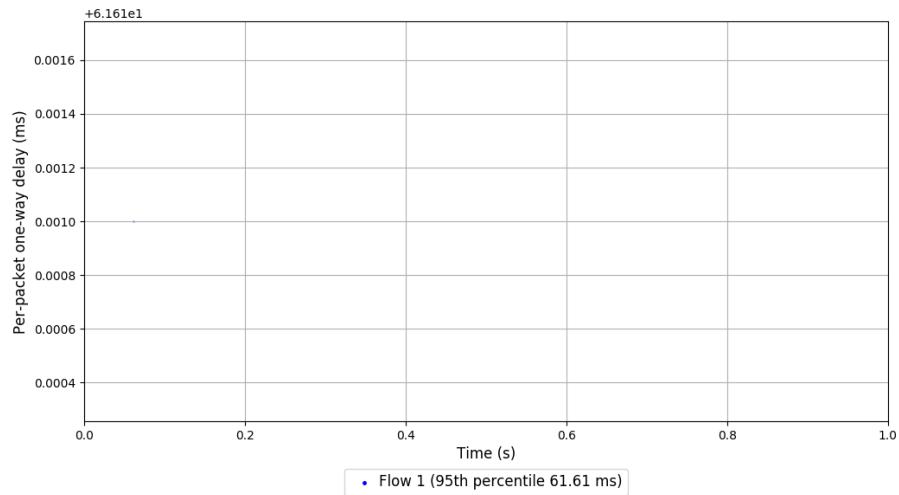
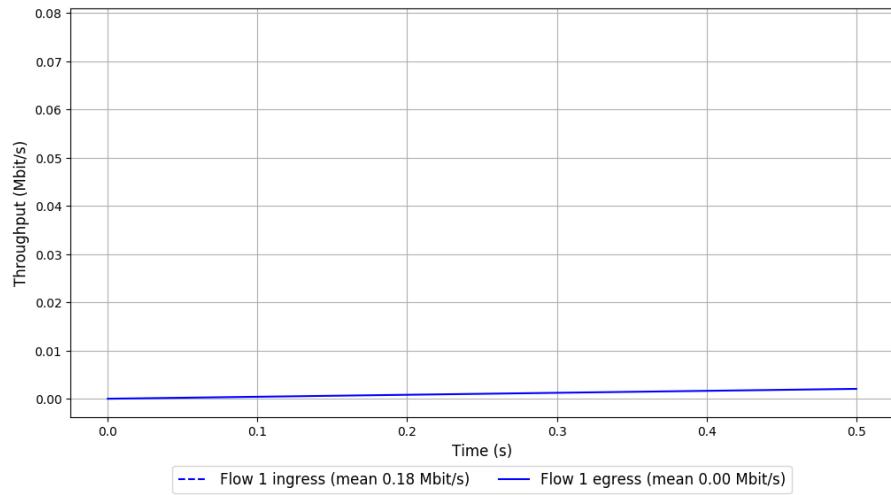
Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-09-06 05:11:23
End at: 2018-09-06 05:11:53
Local clock offset: -1.166 ms
Remote clock offset: -36.792 ms

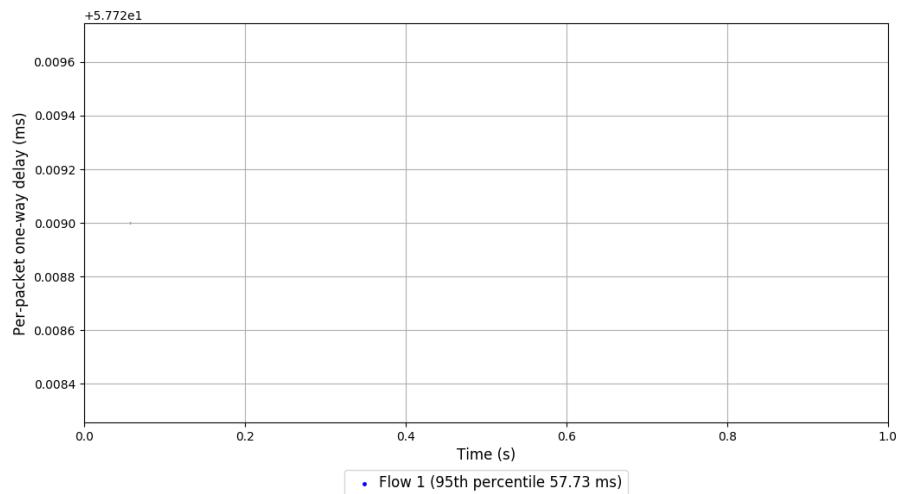
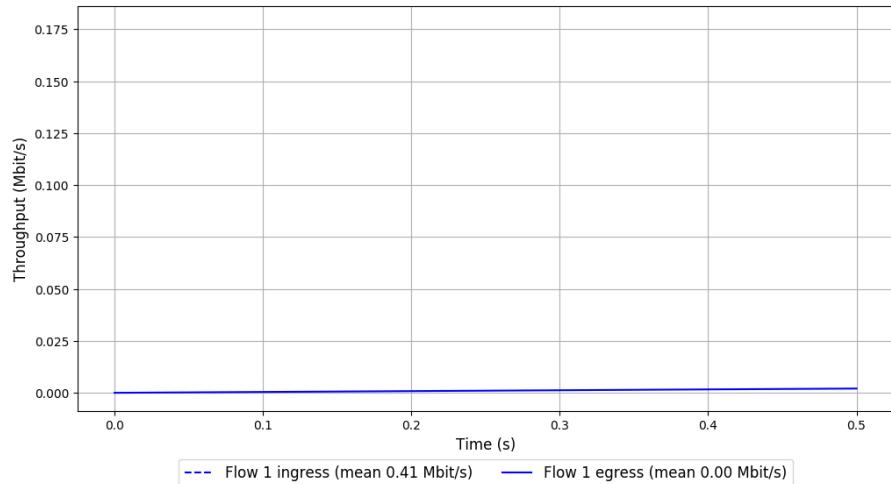
Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-09-06 05:34:29
End at: 2018-09-06 05:34:59
Local clock offset: 3.719 ms
Remote clock offset: -35.62 ms

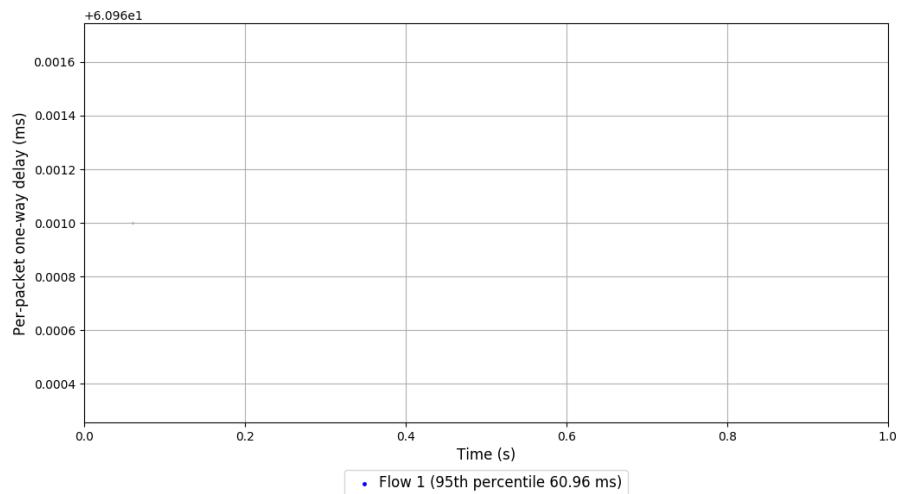
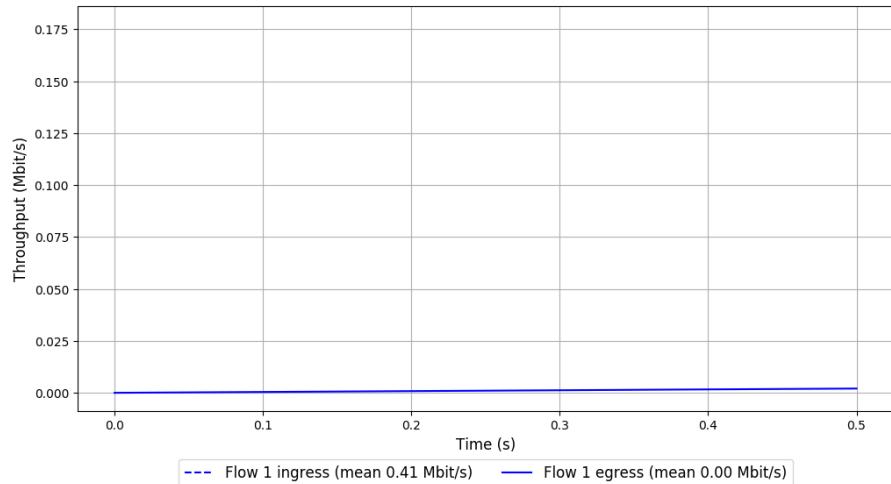
Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2018-09-06 05:57:43
End at: 2018-09-06 05:58:13
Local clock offset: 2.462 ms
Remote clock offset: -36.177 ms

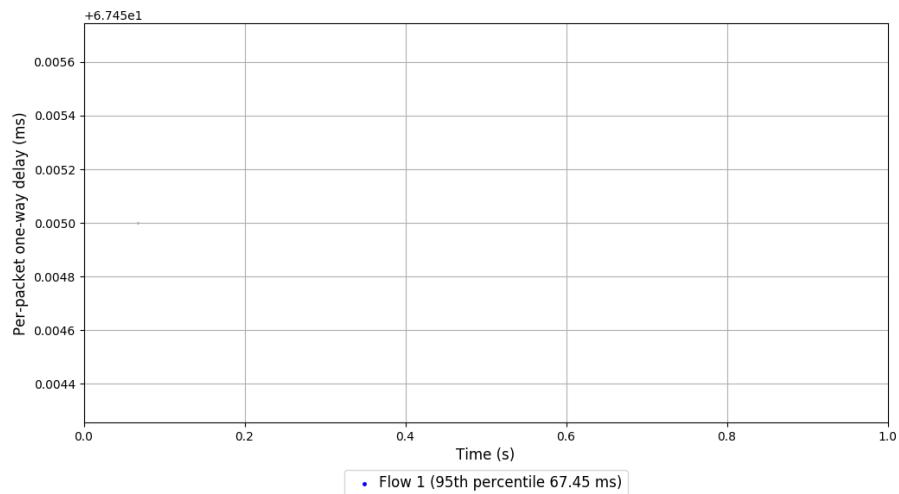
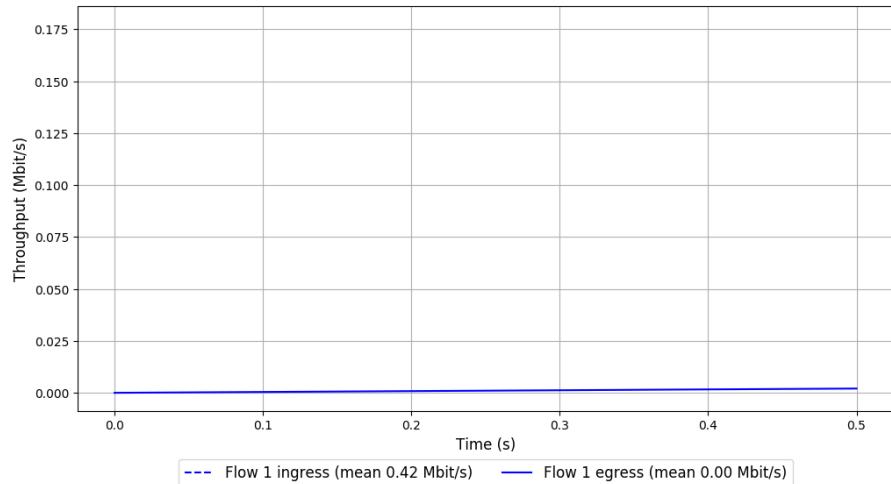
Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-09-06 06:26:30
End at: 2018-09-06 06:27:00
Local clock offset: -3.329 ms
Remote clock offset: -32.046 ms

Run 5: Report of Copa — Data Link

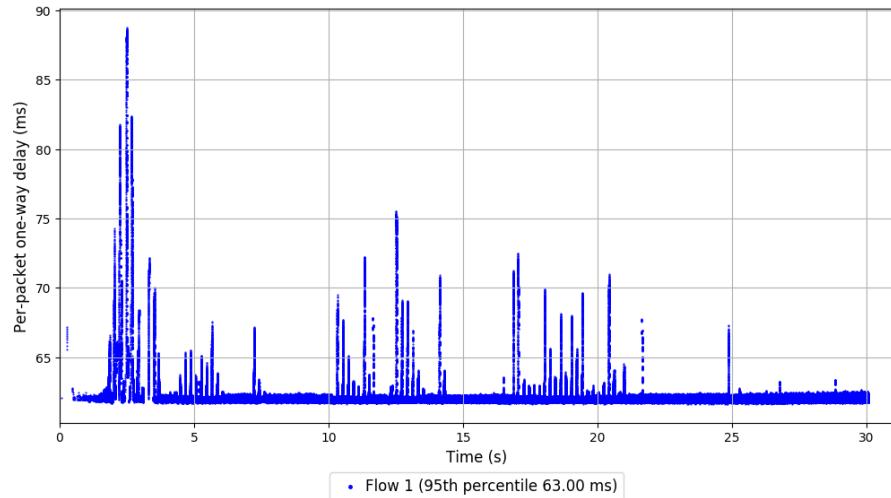
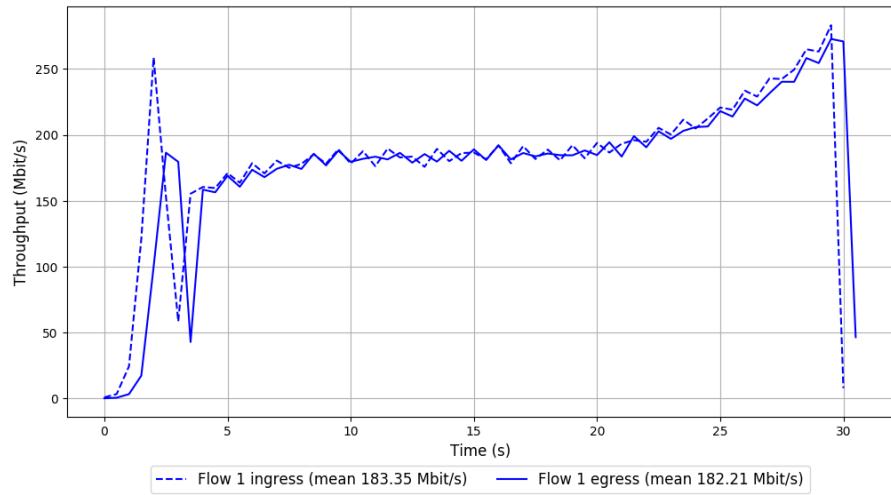


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2018-09-06 04:43:19
End at: 2018-09-06 04:43:49
Local clock offset: -2.235 ms
Remote clock offset: -35.14 ms

# Below is generated by plot.py at 2018-09-06 06:47:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 182.21 Mbit/s
95th percentile per-packet one-way delay: 62.999 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 182.21 Mbit/s
95th percentile per-packet one-way delay: 62.999 ms
Loss rate: 0.62%
```

Run 1: Report of TCP Cubic — Data Link

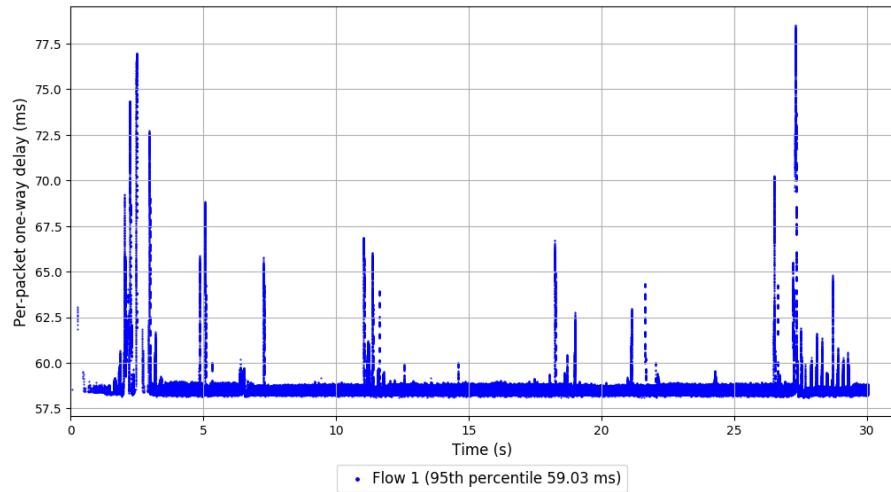
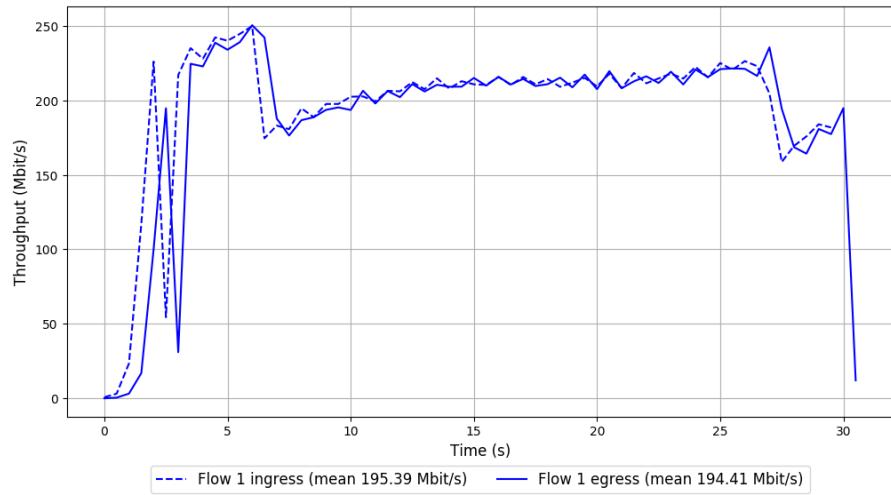


Run 2: Statistics of TCP Cubic

```
Start at: 2018-09-06 05:06:27
End at: 2018-09-06 05:06:57
Local clock offset: 0.823 ms
Remote clock offset: -37.758 ms

# Below is generated by plot.py at 2018-09-06 06:47:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 194.41 Mbit/s
95th percentile per-packet one-way delay: 59.029 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 194.41 Mbit/s
95th percentile per-packet one-way delay: 59.029 ms
Loss rate: 0.50%
```

Run 2: Report of TCP Cubic — Data Link

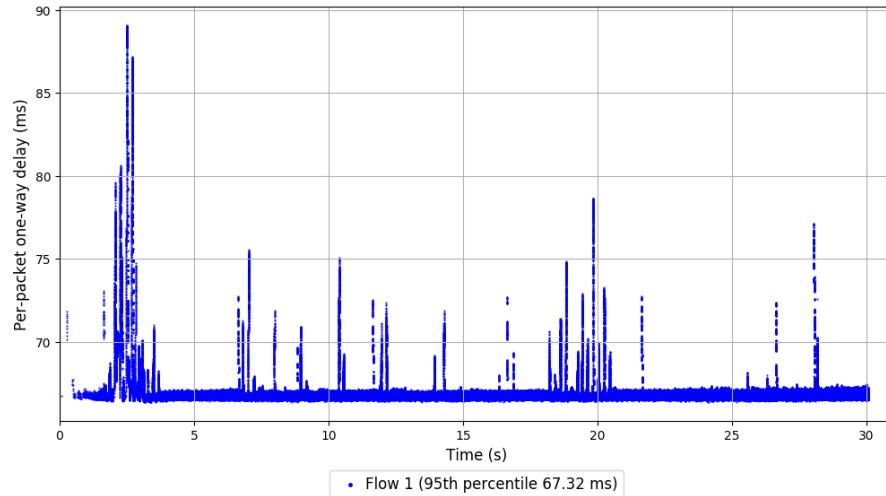
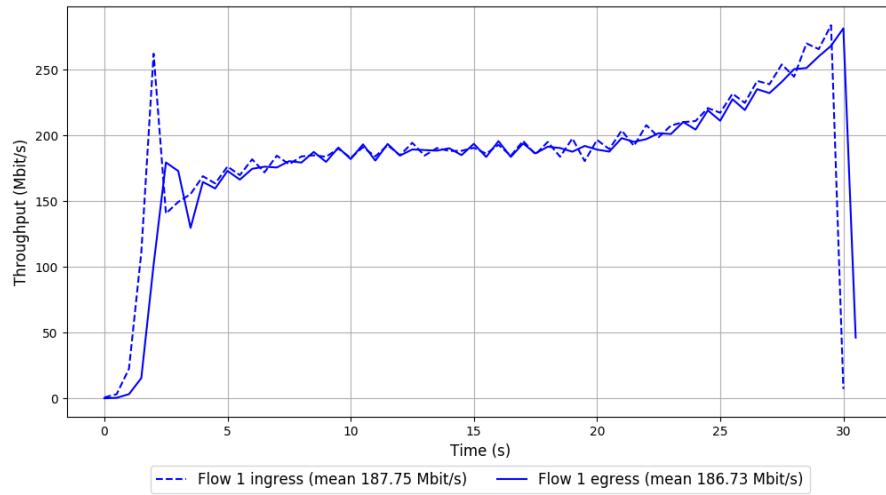


Run 3: Statistics of TCP Cubic

```
Start at: 2018-09-06 05:29:34
End at: 2018-09-06 05:30:04
Local clock offset: -0.845 ms
Remote clock offset: -33.231 ms

# Below is generated by plot.py at 2018-09-06 06:47:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 186.73 Mbit/s
95th percentile per-packet one-way delay: 67.316 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 186.73 Mbit/s
95th percentile per-packet one-way delay: 67.316 ms
Loss rate: 0.54%
```

Run 3: Report of TCP Cubic — Data Link

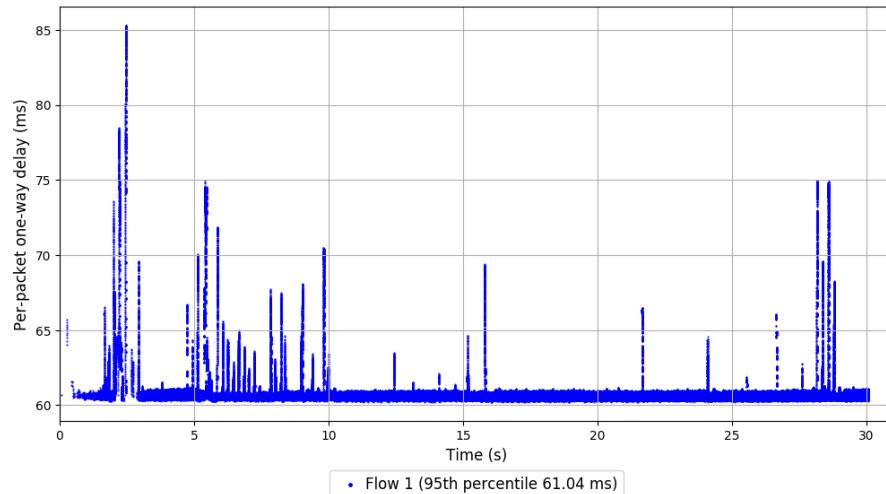
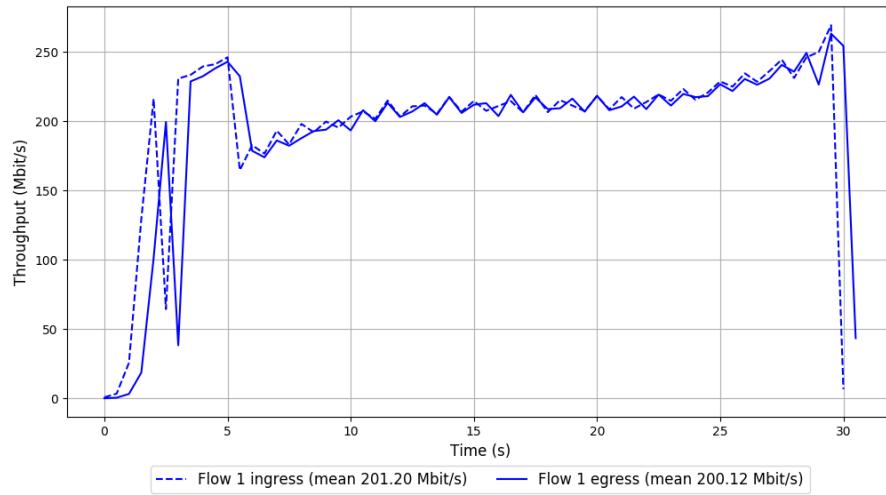


Run 4: Statistics of TCP Cubic

```
Start at: 2018-09-06 05:52:47
End at: 2018-09-06 05:53:17
Local clock offset: -0.173 ms
Remote clock offset: -36.587 ms

# Below is generated by plot.py at 2018-09-06 06:48:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 200.12 Mbit/s
95th percentile per-packet one-way delay: 61.041 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 200.12 Mbit/s
95th percentile per-packet one-way delay: 61.041 ms
Loss rate: 0.54%
```

Run 4: Report of TCP Cubic — Data Link

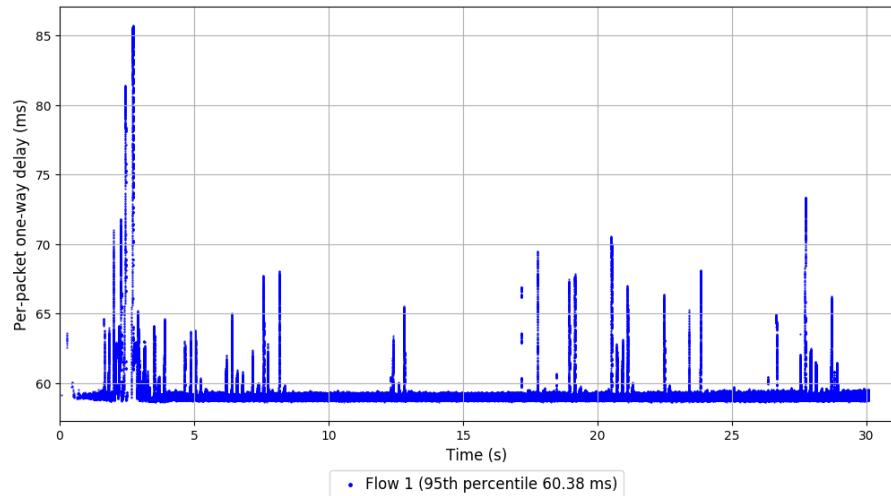
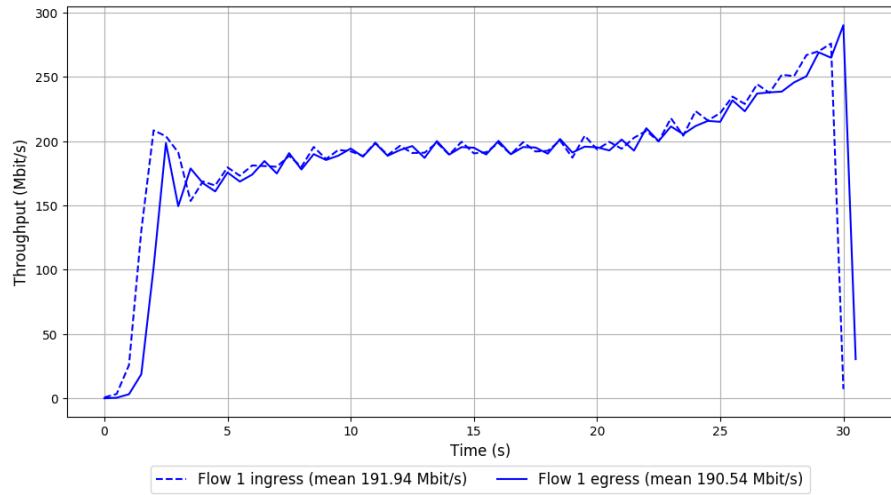


Run 5: Statistics of TCP Cubic

```
Start at: 2018-09-06 06:21:34
End at: 2018-09-06 06:22:04
Local clock offset: -0.443 ms
Remote clock offset: -37.355 ms

# Below is generated by plot.py at 2018-09-06 06:48:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 190.54 Mbit/s
95th percentile per-packet one-way delay: 60.380 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 190.54 Mbit/s
95th percentile per-packet one-way delay: 60.380 ms
Loss rate: 0.73%
```

Run 5: Report of TCP Cubic — Data Link

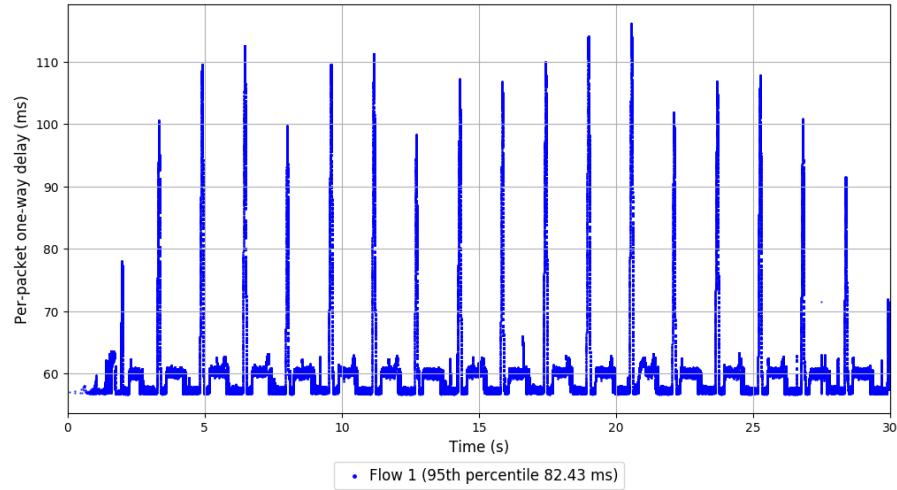
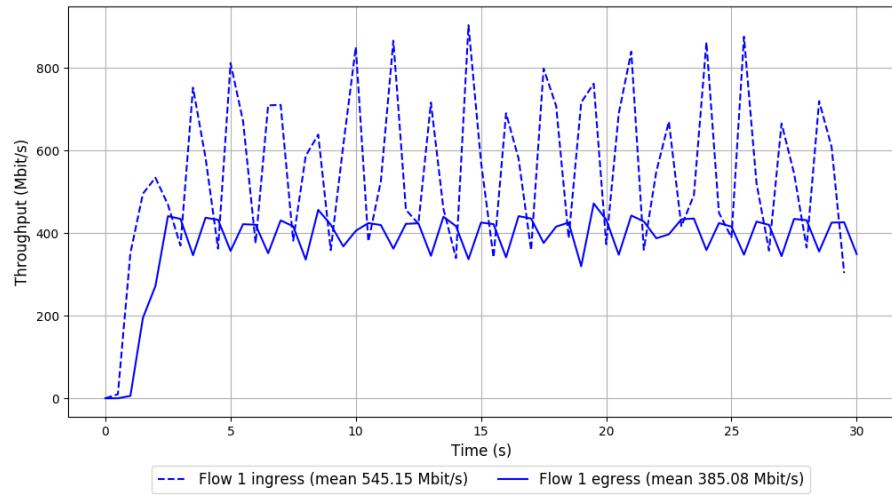


```
Run 1: Statistics of FillP

Start at: 2018-09-06 04:53:18
End at: 2018-09-06 04:53:48
Local clock offset: 0.229 ms
Remote clock offset: -37.88 ms

# Below is generated by plot.py at 2018-09-06 06:52:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 385.08 Mbit/s
95th percentile per-packet one-way delay: 82.434 ms
Loss rate: 29.36%
-- Flow 1:
Average throughput: 385.08 Mbit/s
95th percentile per-packet one-way delay: 82.434 ms
Loss rate: 29.36%
```

Run 1: Report of FillP — Data Link

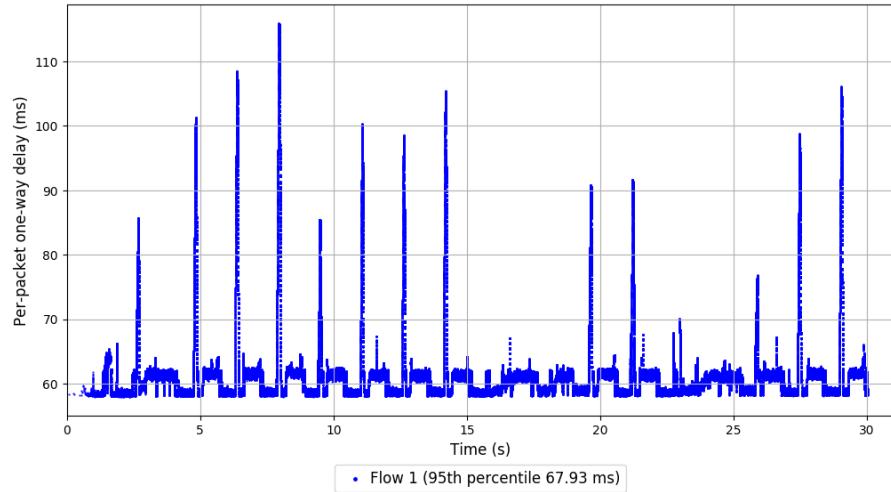
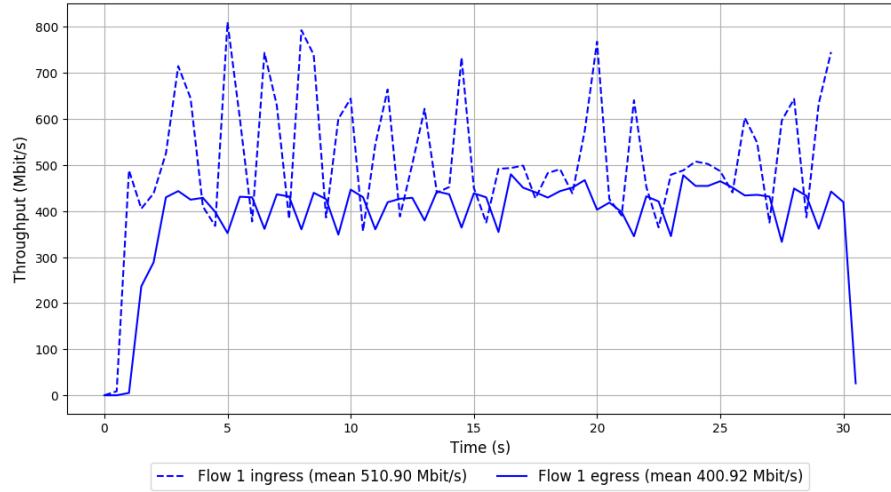


```
Run 2: Statistics of FillP
```

```
Start at: 2018-09-06 05:16:22
End at: 2018-09-06 05:16:52
Local clock offset: -1.136 ms
Remote clock offset: -37.542 ms

# Below is generated by plot.py at 2018-09-06 06:52:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 400.92 Mbit/s
95th percentile per-packet one-way delay: 67.926 ms
Loss rate: 21.53%
-- Flow 1:
Average throughput: 400.92 Mbit/s
95th percentile per-packet one-way delay: 67.926 ms
Loss rate: 21.53%
```

Run 2: Report of FillP — Data Link

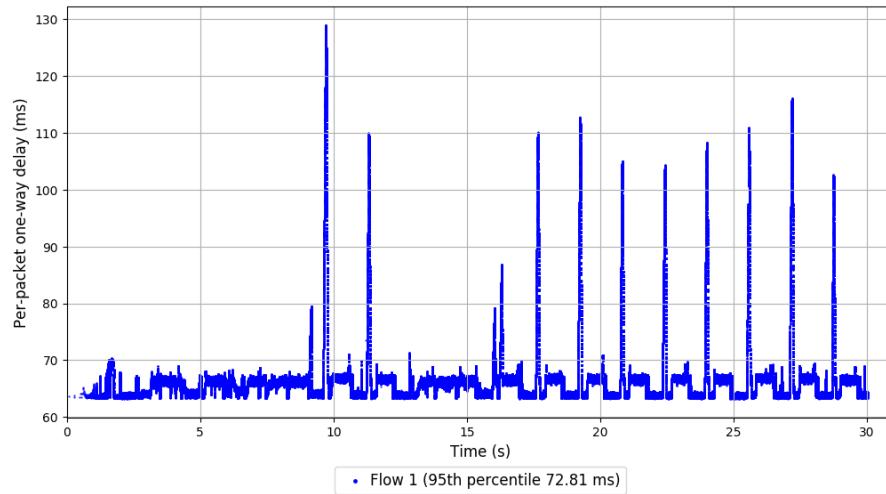
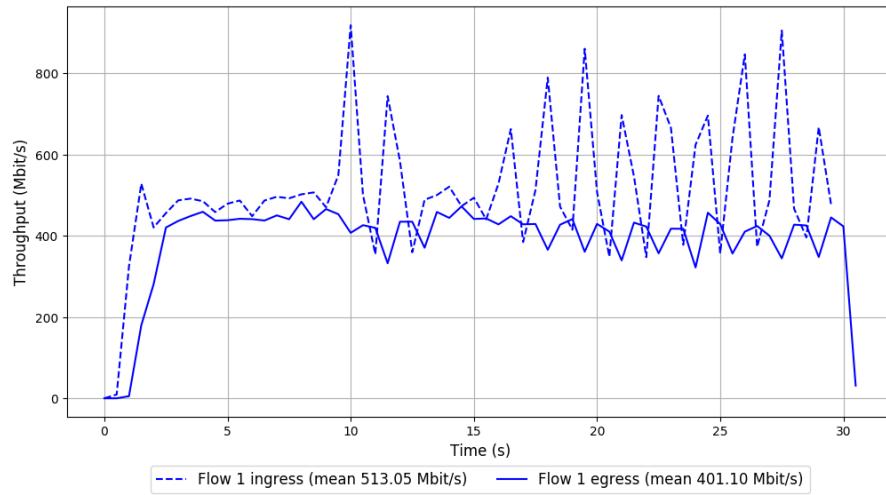


Run 3: Statistics of FillP

```
Start at: 2018-09-06 05:39:34
End at: 2018-09-06 05:40:04
Local clock offset: 0.512 ms
Remote clock offset: -35.619 ms

# Below is generated by plot.py at 2018-09-06 06:52:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 401.10 Mbit/s
95th percentile per-packet one-way delay: 72.815 ms
Loss rate: 21.82%
-- Flow 1:
Average throughput: 401.10 Mbit/s
95th percentile per-packet one-way delay: 72.815 ms
Loss rate: 21.82%
```

Run 3: Report of FillP — Data Link

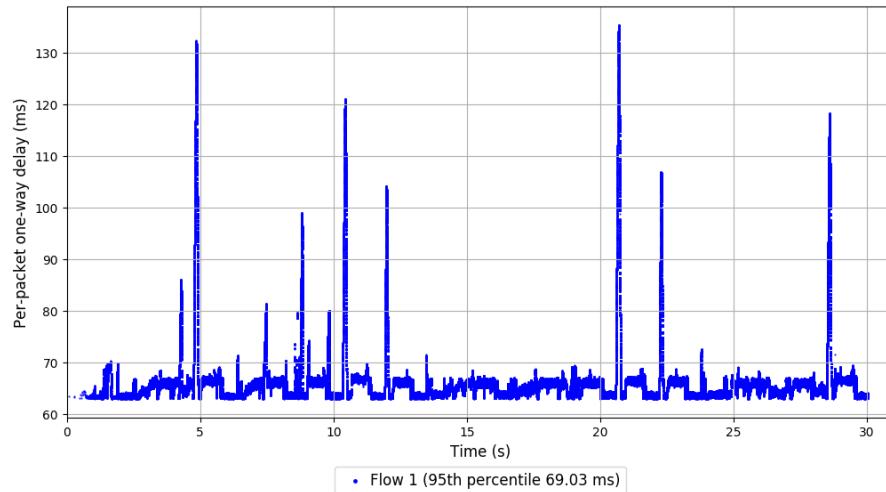
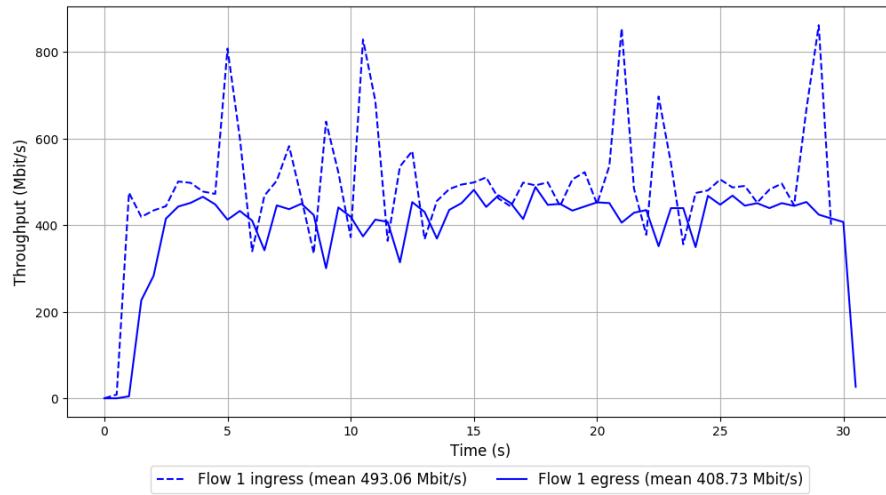


```
Run 4: Statistics of FillP
```

```
Start at: 2018-09-06 06:02:43
End at: 2018-09-06 06:03:13
Local clock offset: -0.935 ms
Remote clock offset: -36.265 ms

# Below is generated by plot.py at 2018-09-06 06:52:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 408.73 Mbit/s
95th percentile per-packet one-way delay: 69.033 ms
Loss rate: 17.10%
-- Flow 1:
Average throughput: 408.73 Mbit/s
95th percentile per-packet one-way delay: 69.033 ms
Loss rate: 17.10%
```

Run 4: Report of FillP — Data Link

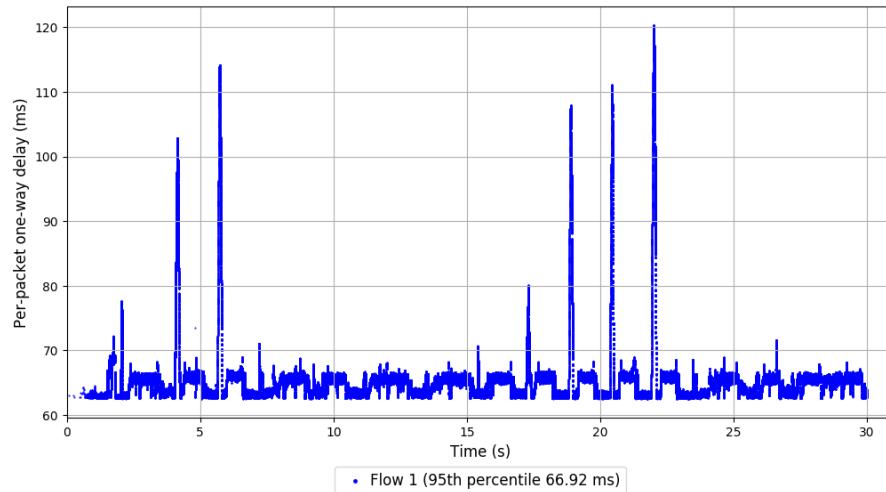
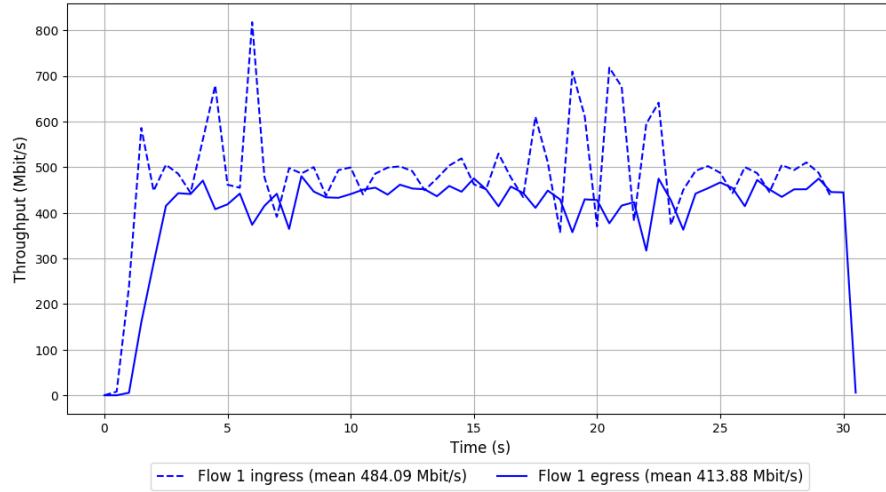


```
Run 5: Statistics of FillP
```

```
Start at: 2018-09-06 06:31:35
End at: 2018-09-06 06:32:05
Local clock offset: -0.54 ms
Remote clock offset: -32.963 ms

# Below is generated by plot.py at 2018-09-06 06:53:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 413.88 Mbit/s
95th percentile per-packet one-way delay: 66.919 ms
Loss rate: 14.50%
-- Flow 1:
Average throughput: 413.88 Mbit/s
95th percentile per-packet one-way delay: 66.919 ms
Loss rate: 14.50%
```

Run 5: Report of FillP — Data Link

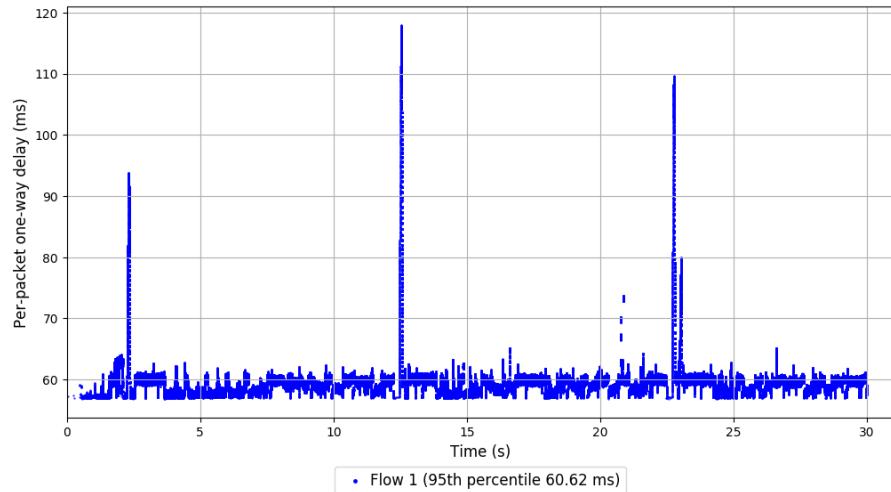
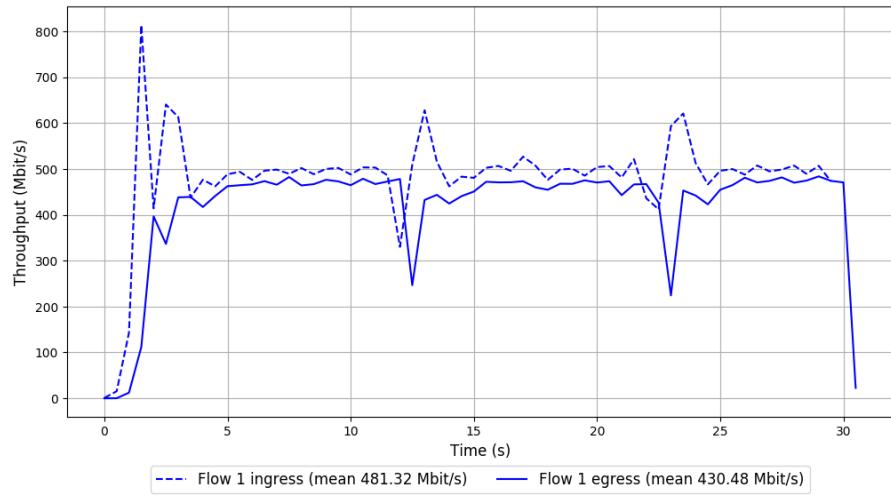


```
Run 1: Statistics of FillP-Sheep
```

```
Start at: 2018-09-06 04:58:34
End at: 2018-09-06 04:59:04
Local clock offset: 0.215 ms
Remote clock offset: -37.175 ms

# Below is generated by plot.py at 2018-09-06 06:53:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 430.48 Mbit/s
95th percentile per-packet one-way delay: 60.621 ms
Loss rate: 10.56%
-- Flow 1:
Average throughput: 430.48 Mbit/s
95th percentile per-packet one-way delay: 60.621 ms
Loss rate: 10.56%
```

Run 1: Report of FillP-Sheep — Data Link

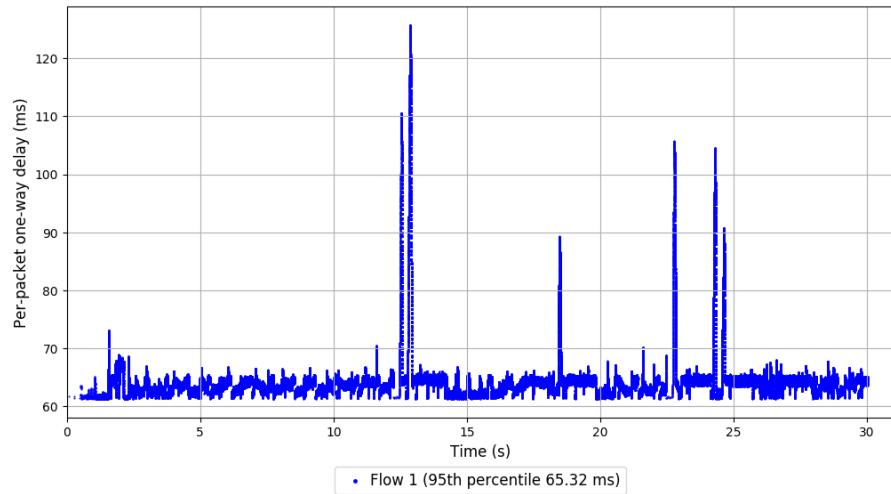
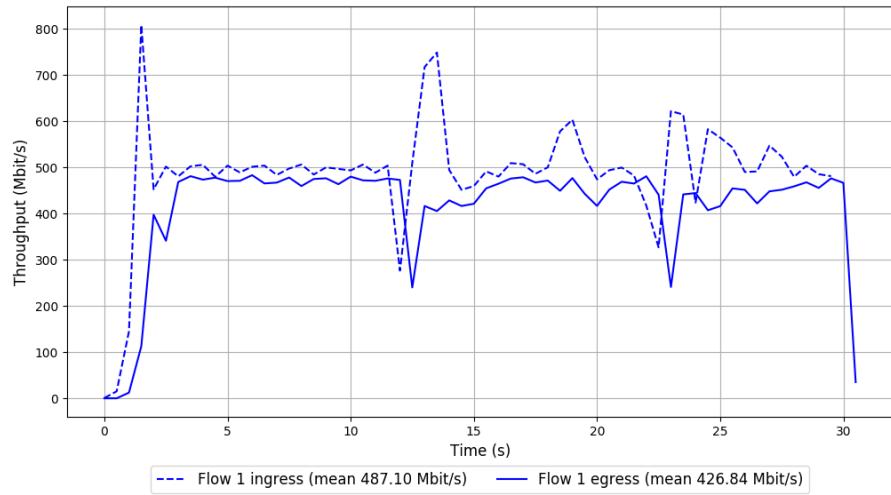


Run 2: Statistics of FillP-Sheep

```
Start at: 2018-09-06 05:21:37
End at: 2018-09-06 05:22:07
Local clock offset: -0.508 ms
Remote clock offset: -37.397 ms

# Below is generated by plot.py at 2018-09-06 06:54:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 426.84 Mbit/s
95th percentile per-packet one-way delay: 65.320 ms
Loss rate: 12.36%
-- Flow 1:
Average throughput: 426.84 Mbit/s
95th percentile per-packet one-way delay: 65.320 ms
Loss rate: 12.36%
```

Run 2: Report of FillP-Sheep — Data Link

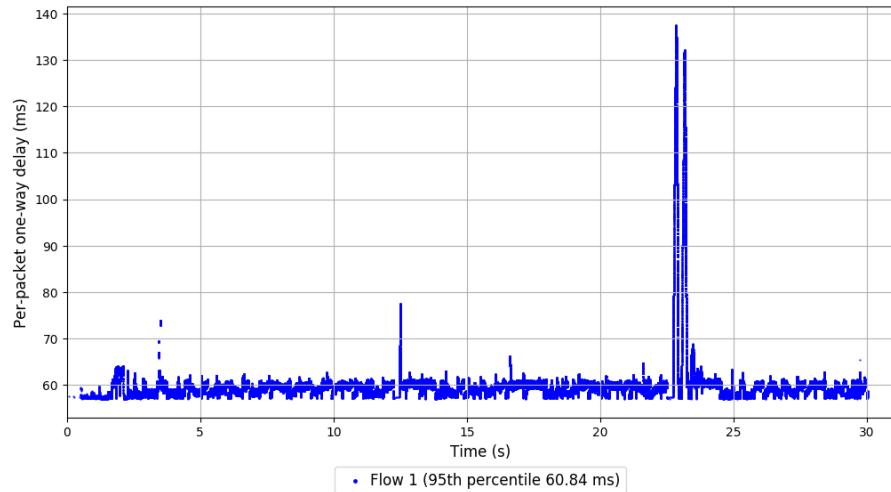
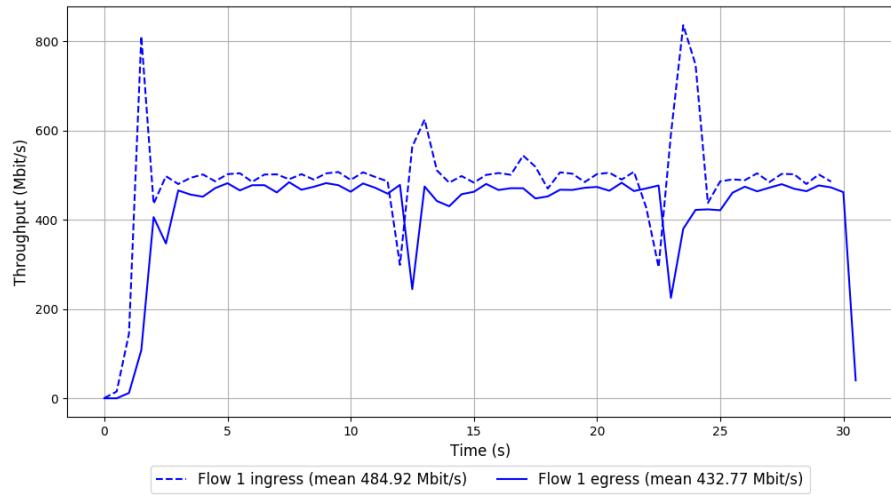


Run 3: Statistics of FillP-Sheep

```
Start at: 2018-09-06 05:44:49
End at: 2018-09-06 05:45:19
Local clock offset: 3.085 ms
Remote clock offset: -36.744 ms

# Below is generated by plot.py at 2018-09-06 06:55:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 432.77 Mbit/s
95th percentile per-packet one-way delay: 60.845 ms
Loss rate: 10.75%
-- Flow 1:
Average throughput: 432.77 Mbit/s
95th percentile per-packet one-way delay: 60.845 ms
Loss rate: 10.75%
```

Run 3: Report of FillP-Sheep — Data Link

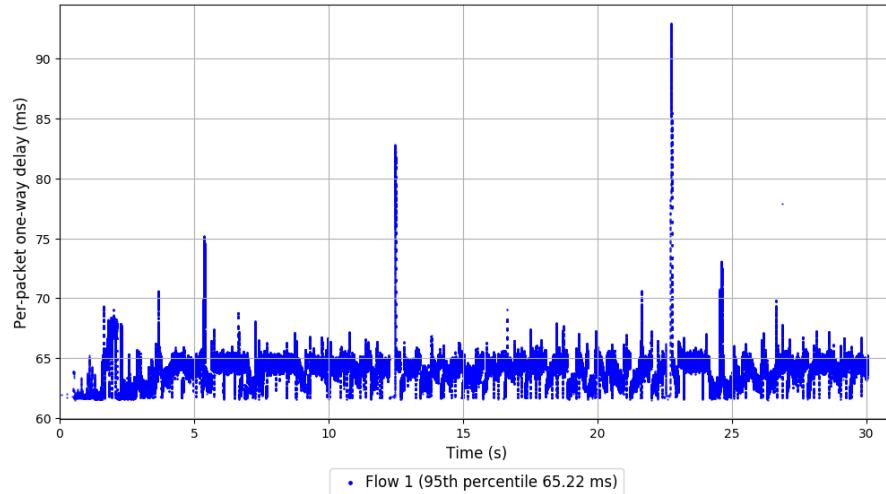
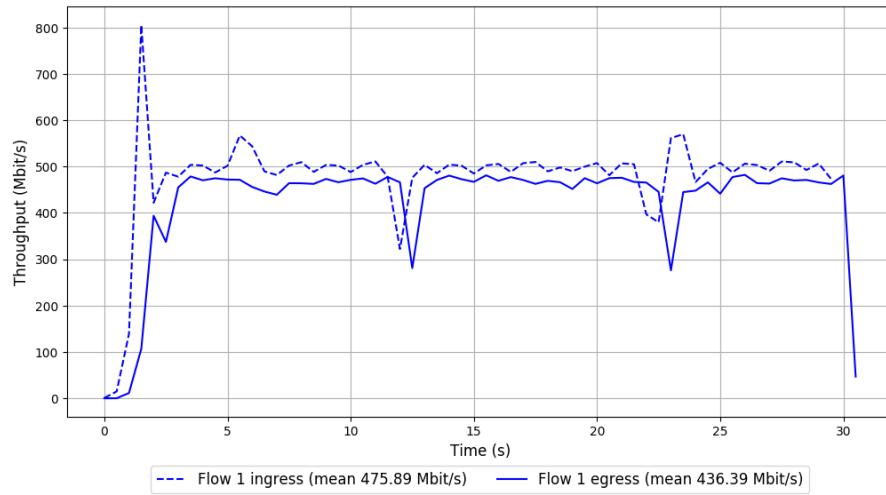


Run 4: Statistics of FillP-Sheep

```
Start at: 2018-09-06 06:13:37
End at: 2018-09-06 06:14:07
Local clock offset: 0.251 ms
Remote clock offset: -33.926 ms

# Below is generated by plot.py at 2018-09-06 06:58:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 436.39 Mbit/s
95th percentile per-packet one-way delay: 65.222 ms
Loss rate: 8.29%
-- Flow 1:
Average throughput: 436.39 Mbit/s
95th percentile per-packet one-way delay: 65.222 ms
Loss rate: 8.29%
```

Run 4: Report of FillP-Sheep — Data Link

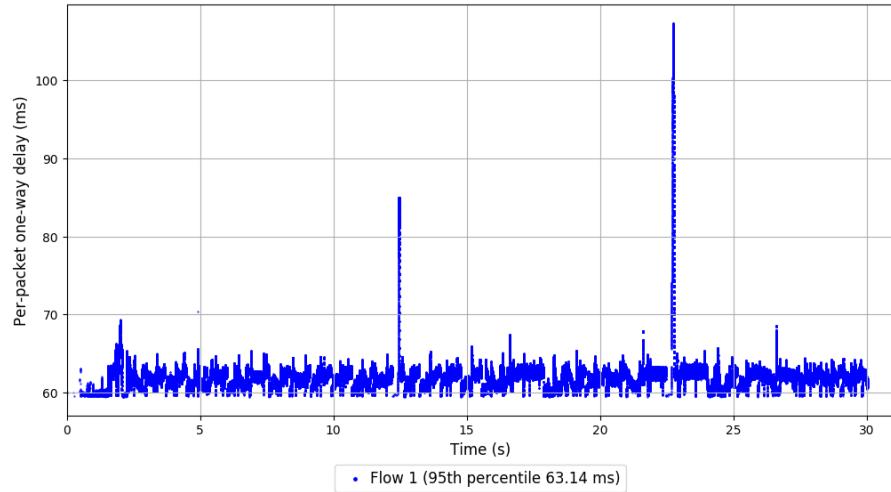
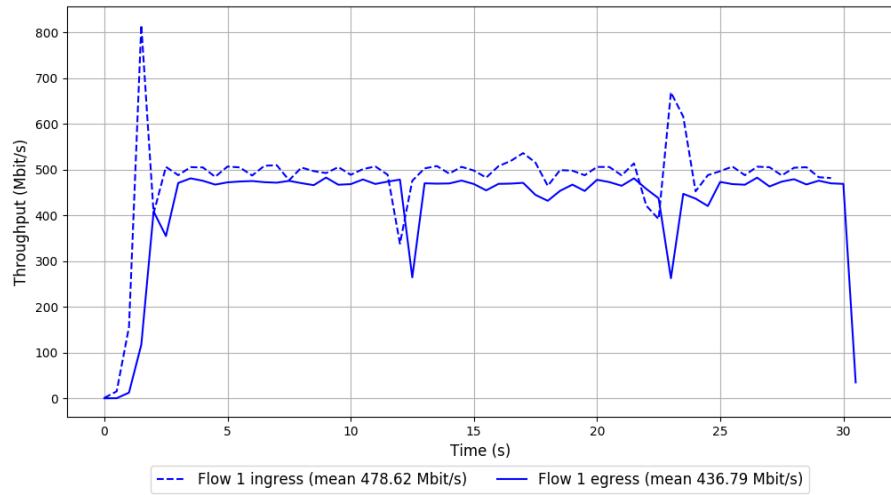


Run 5: Statistics of FillP-Sheep

```
Start at: 2018-09-06 06:36:50
End at: 2018-09-06 06:37:20
Local clock offset: -1.671 ms
Remote clock offset: -37.286 ms

# Below is generated by plot.py at 2018-09-06 06:59:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 436.79 Mbit/s
95th percentile per-packet one-way delay: 63.138 ms
Loss rate: 8.74%
-- Flow 1:
Average throughput: 436.79 Mbit/s
95th percentile per-packet one-way delay: 63.138 ms
Loss rate: 8.74%
```

Run 5: Report of FillP-Sheep — Data Link

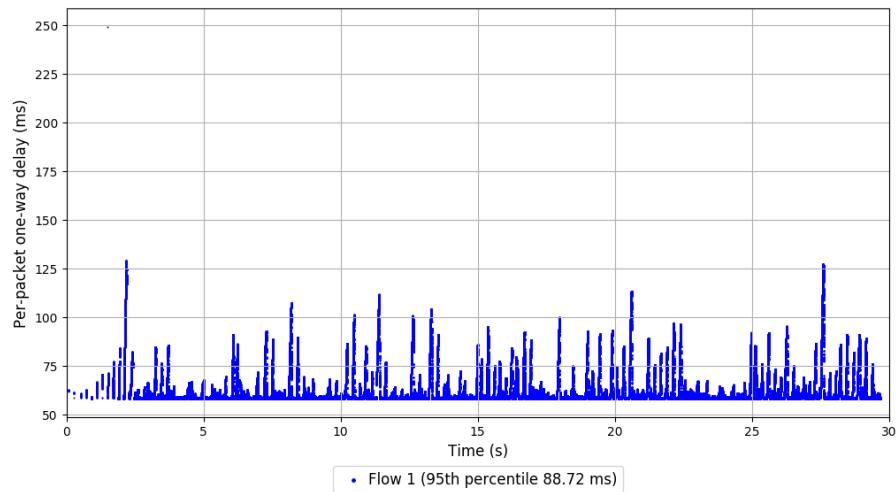
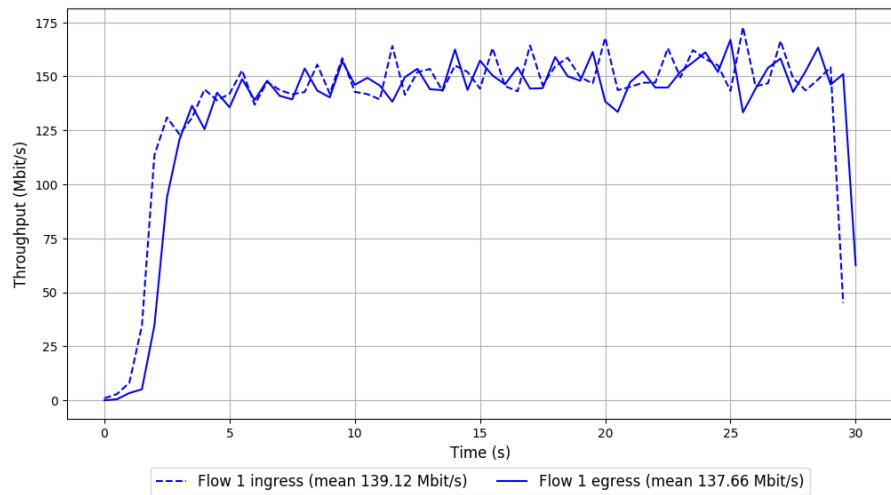


Run 1: Statistics of Indigo

```
Start at: 2018-09-06 04:46:58
End at: 2018-09-06 04:47:28
Local clock offset: -1.596 ms
Remote clock offset: -37.793 ms

# Below is generated by plot.py at 2018-09-06 06:59:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 137.66 Mbit/s
95th percentile per-packet one-way delay: 88.725 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 137.66 Mbit/s
95th percentile per-packet one-way delay: 88.725 ms
Loss rate: 1.06%
```

Run 1: Report of Indigo — Data Link

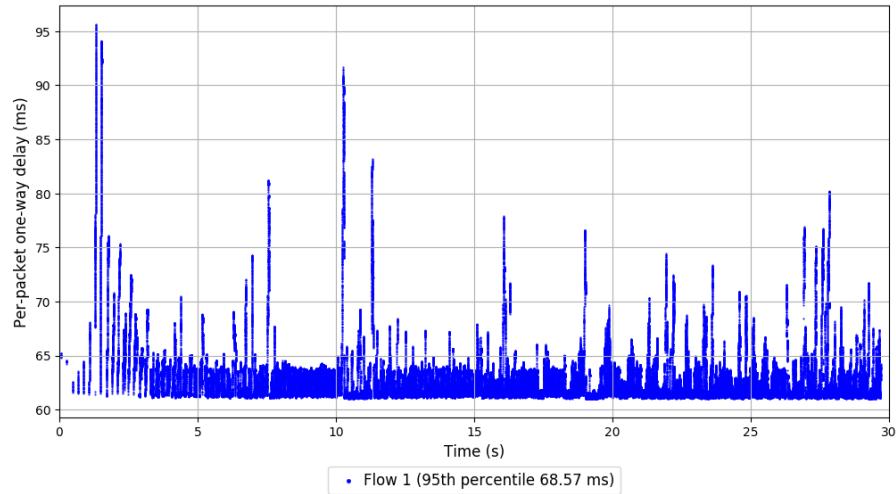
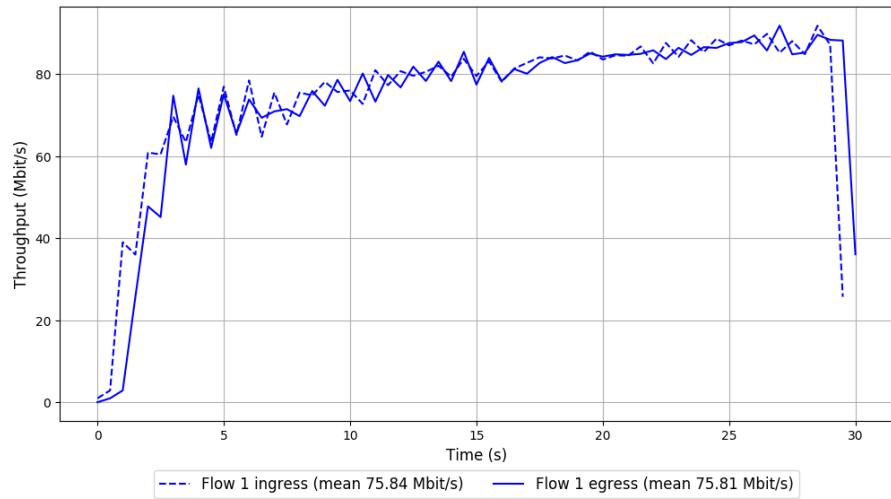


Run 2: Statistics of Indigo

```
Start at: 2018-09-06 05:10:07
End at: 2018-09-06 05:10:37
Local clock offset: -1.531 ms
Remote clock offset: -36.923 ms

# Below is generated by plot.py at 2018-09-06 06:59:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 75.81 Mbit/s
95th percentile per-packet one-way delay: 68.572 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 75.81 Mbit/s
95th percentile per-packet one-way delay: 68.572 ms
Loss rate: 0.04%
```

Run 2: Report of Indigo — Data Link

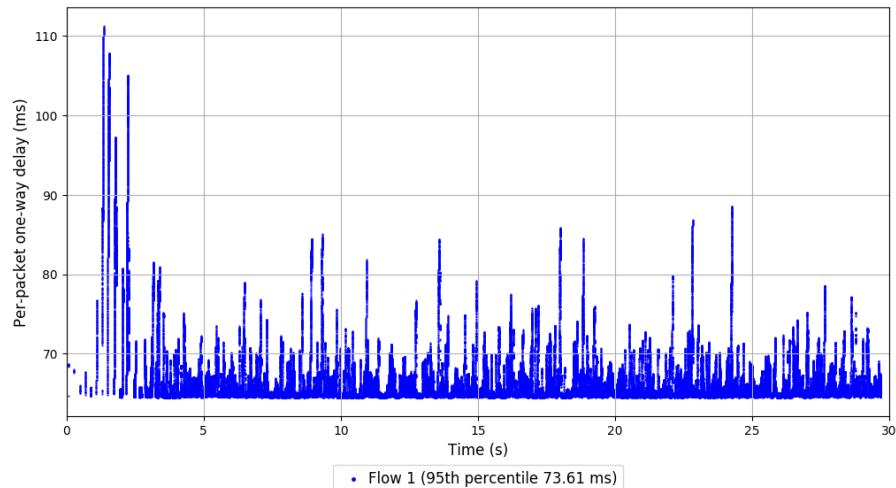
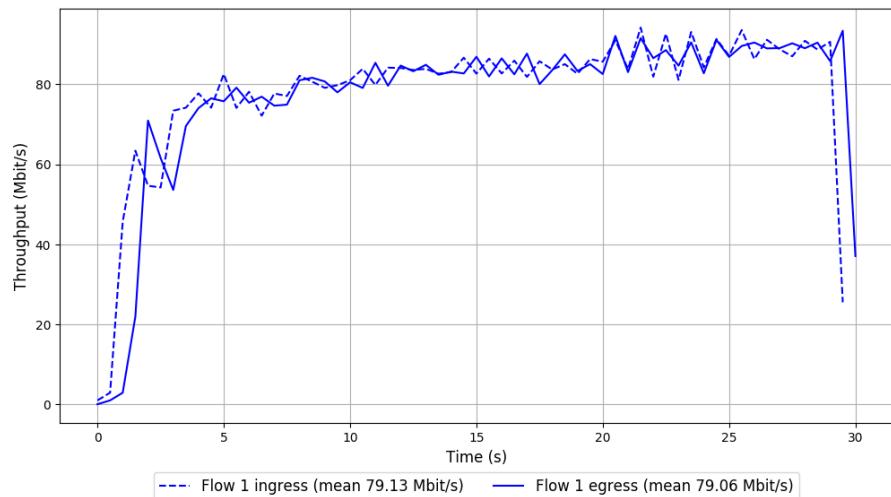


Run 3: Statistics of Indigo

```
Start at: 2018-09-06 05:33:14
End at: 2018-09-06 05:38:44
Local clock offset: -1.512 ms
Remote clock offset: -36.139 ms

# Below is generated by plot.py at 2018-09-06 06:59:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 79.06 Mbit/s
95th percentile per-packet one-way delay: 73.613 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 79.06 Mbit/s
95th percentile per-packet one-way delay: 73.613 ms
Loss rate: 0.08%
```

Run 3: Report of Indigo — Data Link

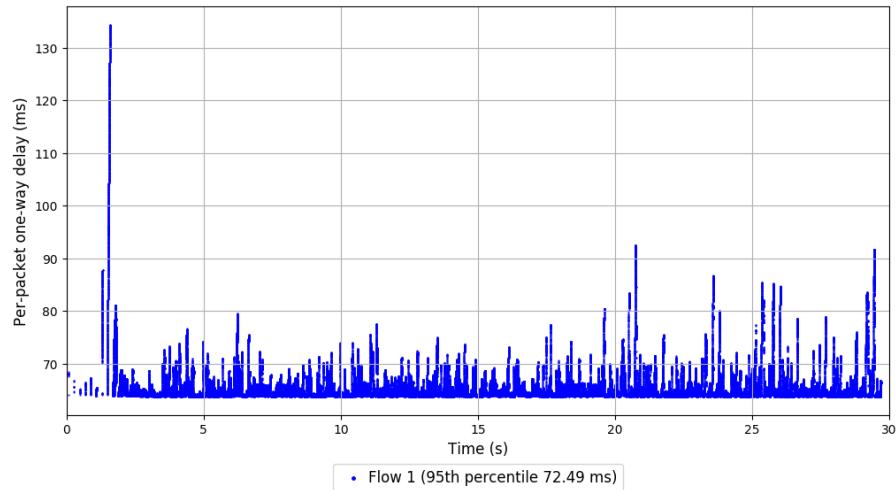
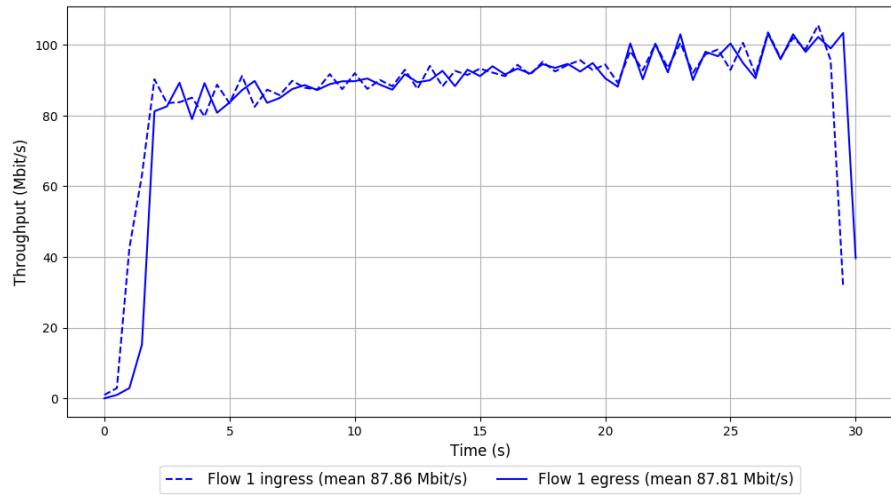


Run 4: Statistics of Indigo

```
Start at: 2018-09-06 05:56:27
End at: 2018-09-06 05:56:57
Local clock offset: 2.686 ms
Remote clock offset: -32.169 ms

# Below is generated by plot.py at 2018-09-06 06:59:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.81 Mbit/s
95th percentile per-packet one-way delay: 72.486 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 87.81 Mbit/s
95th percentile per-packet one-way delay: 72.486 ms
Loss rate: 0.06%
```

Run 4: Report of Indigo — Data Link

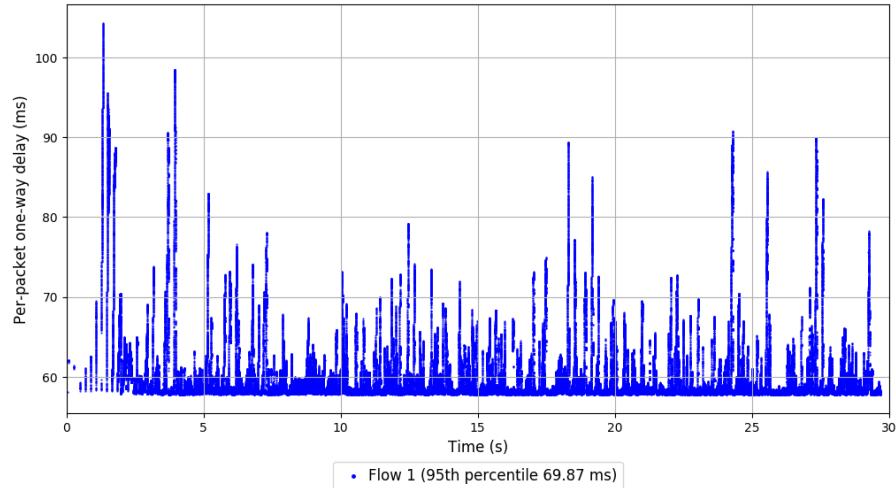
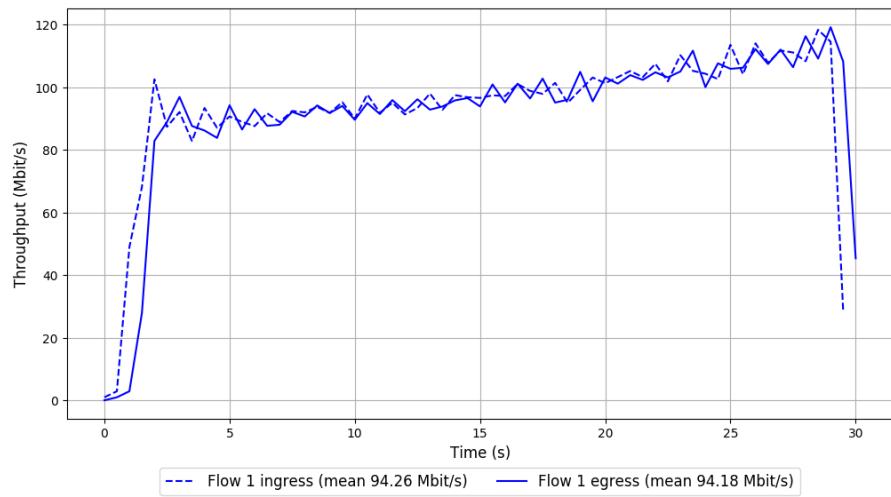


Run 5: Statistics of Indigo

```
Start at: 2018-09-06 06:25:13
End at: 2018-09-06 06:25:43
Local clock offset: 1.181 ms
Remote clock offset: -36.795 ms

# Below is generated by plot.py at 2018-09-06 06:59:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.18 Mbit/s
95th percentile per-packet one-way delay: 69.872 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 94.18 Mbit/s
95th percentile per-packet one-way delay: 69.872 ms
Loss rate: 0.09%
```

Run 5: Report of Indigo — Data Link

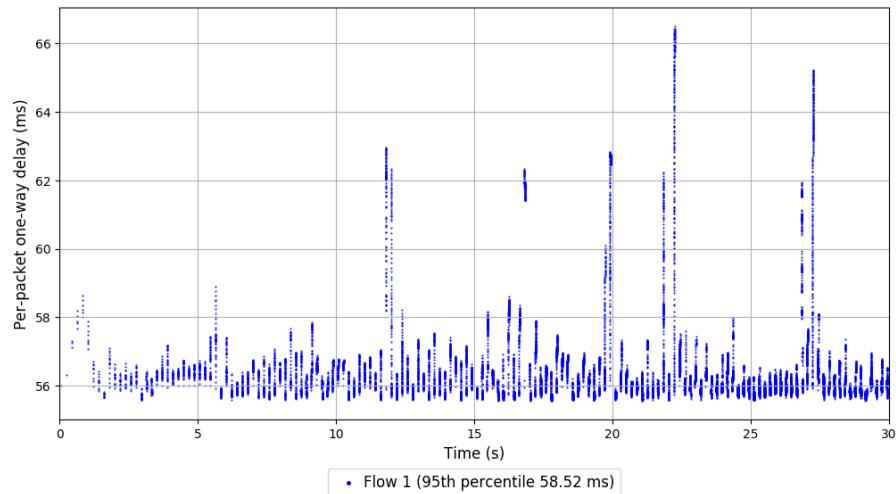
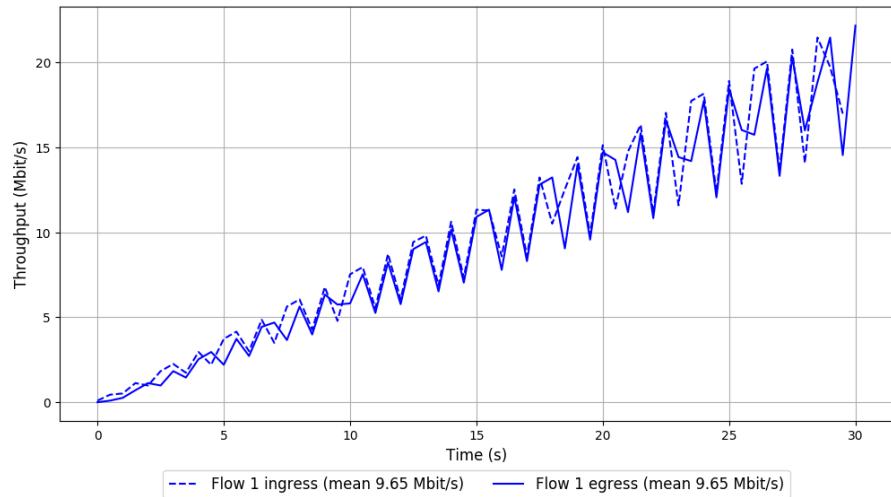


```
Run 1: Statistics of LEDBAT
```

```
Start at: 2018-09-06 04:55:58
End at: 2018-09-06 04:56:28
Local clock offset: 1.056 ms
Remote clock offset: -38.005 ms

# Below is generated by plot.py at 2018-09-06 06:59:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.65 Mbit/s
95th percentile per-packet one-way delay: 58.522 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.65 Mbit/s
95th percentile per-packet one-way delay: 58.522 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link

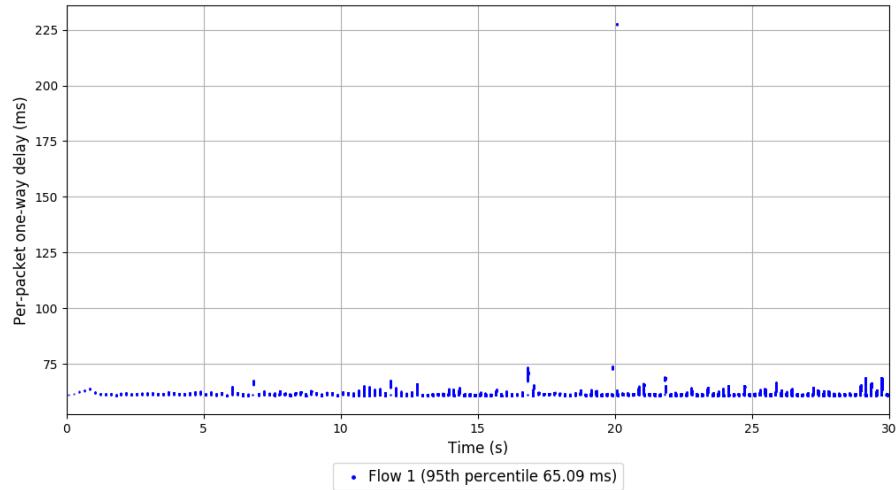
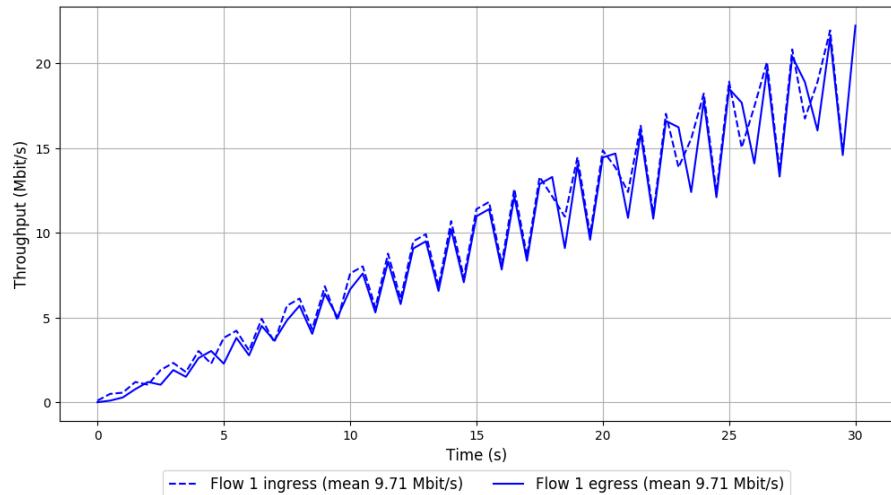


Run 2: Statistics of LEDBAT

```
Start at: 2018-09-06 05:19:01
End at: 2018-09-06 05:19:31
Local clock offset: -1.555 ms
Remote clock offset: -35.77 ms

# Below is generated by plot.py at 2018-09-06 06:59:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.71 Mbit/s
95th percentile per-packet one-way delay: 65.093 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.71 Mbit/s
95th percentile per-packet one-way delay: 65.093 ms
Loss rate: 0.00%
```

Run 2: Report of LEDBAT — Data Link

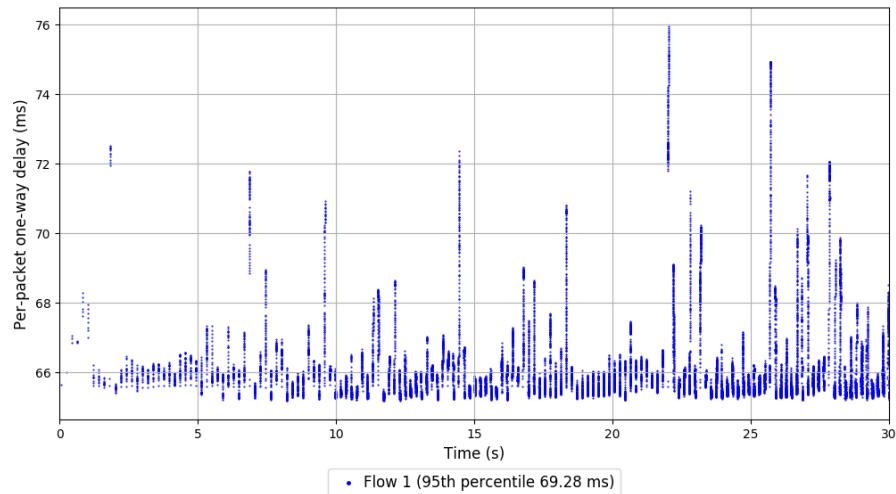
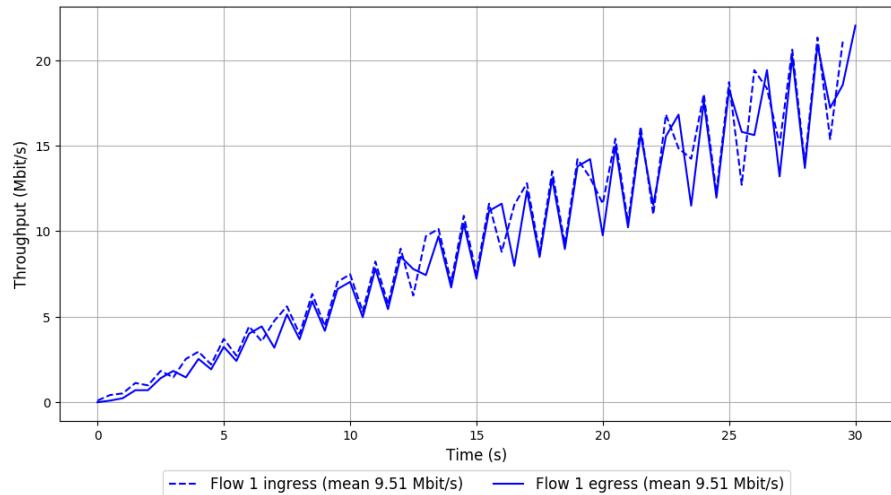


Run 3: Statistics of LEDBAT

```
Start at: 2018-09-06 05:42:14
End at: 2018-09-06 05:42:44
Local clock offset: 1.124 ms
Remote clock offset: -30.59 ms

# Below is generated by plot.py at 2018-09-06 06:59:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.51 Mbit/s
95th percentile per-packet one-way delay: 69.280 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.51 Mbit/s
95th percentile per-packet one-way delay: 69.280 ms
Loss rate: 0.00%
```

Run 3: Report of LEDBAT — Data Link

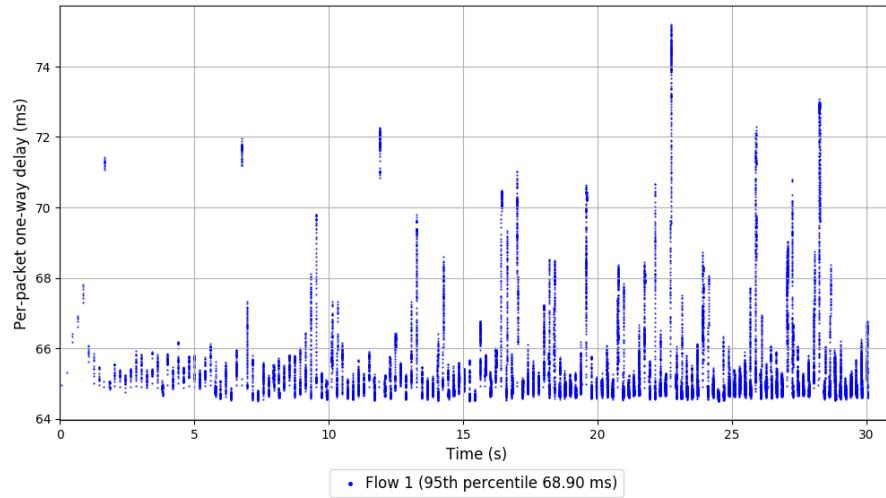
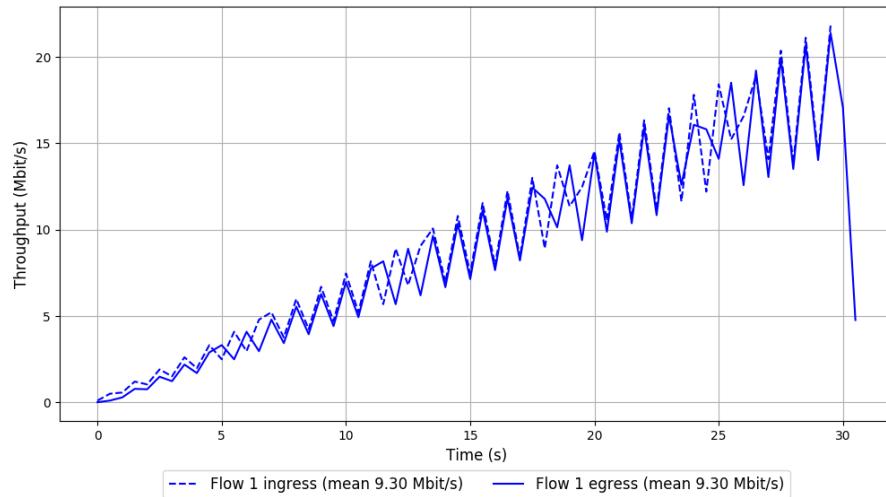


Run 4: Statistics of LEDBAT

```
Start at: 2018-09-06 06:10:53
End at: 2018-09-06 06:11:24
Local clock offset: -0.367 ms
Remote clock offset: -34.347 ms

# Below is generated by plot.py at 2018-09-06 06:59:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.30 Mbit/s
95th percentile per-packet one-way delay: 68.904 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.30 Mbit/s
95th percentile per-packet one-way delay: 68.904 ms
Loss rate: 0.00%
```

Run 4: Report of LEDBAT — Data Link

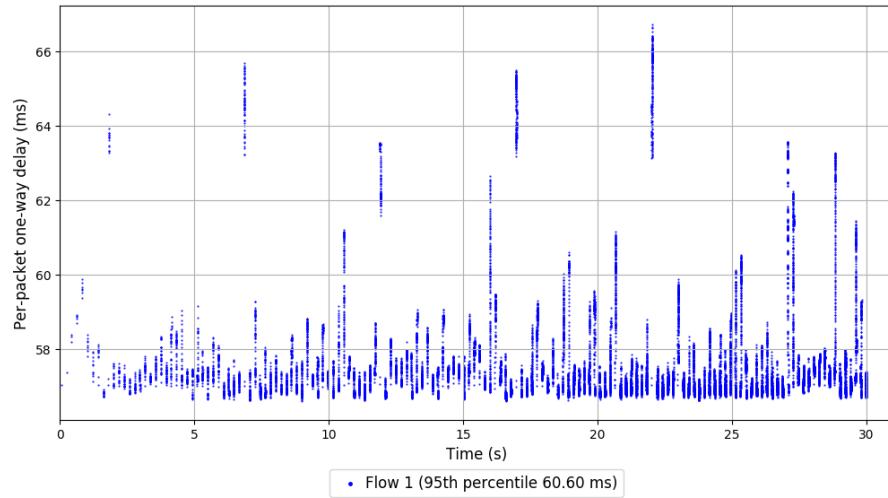
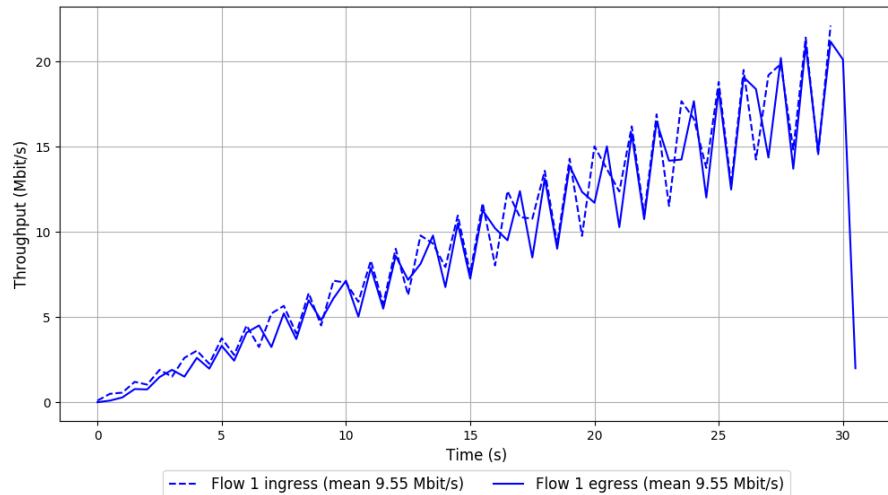


Run 5: Statistics of LEDBAT

```
Start at: 2018-09-06 06:34:14
End at: 2018-09-06 06:34:44
Local clock offset: 0.044 ms
Remote clock offset: -38.484 ms

# Below is generated by plot.py at 2018-09-06 06:59:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.55 Mbit/s
95th percentile per-packet one-way delay: 60.597 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.55 Mbit/s
95th percentile per-packet one-way delay: 60.597 ms
Loss rate: 0.00%
```

Run 5: Report of LEDBAT — Data Link

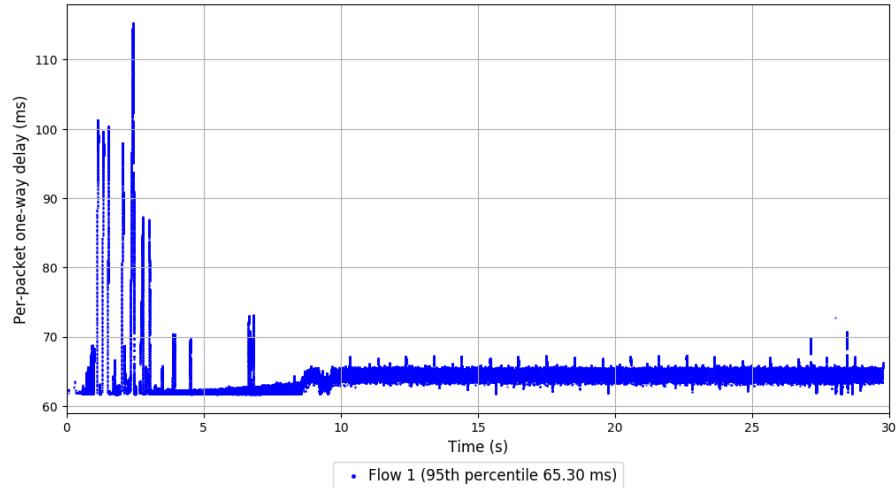
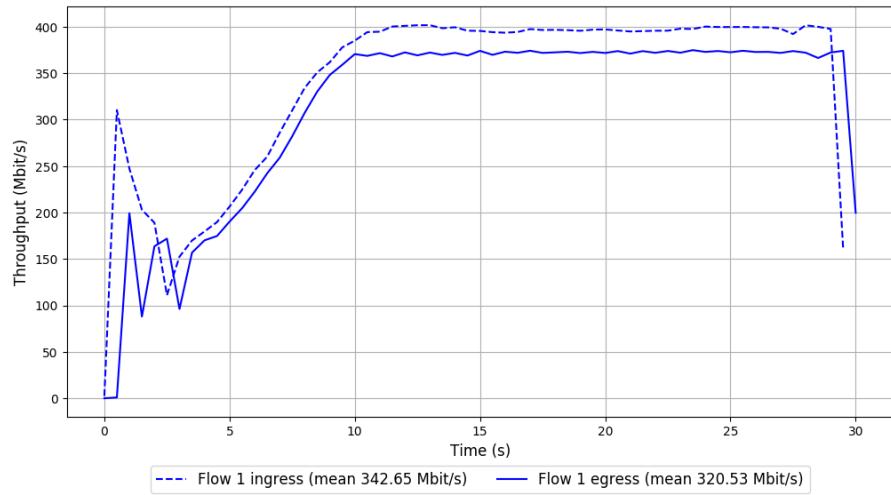


```
Run 1: Statistics of Indigo-Muses
```

```
Start at: 2018-09-06 04:49:27
End at: 2018-09-06 04:49:57
Local clock offset: 0.484 ms
Remote clock offset: -32.818 ms

# Below is generated by plot.py at 2018-09-06 06:59:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 320.53 Mbit/s
95th percentile per-packet one-way delay: 65.303 ms
Loss rate: 6.44%
-- Flow 1:
Average throughput: 320.53 Mbit/s
95th percentile per-packet one-way delay: 65.303 ms
Loss rate: 6.44%
```

Run 1: Report of Indigo-Muses — Data Link

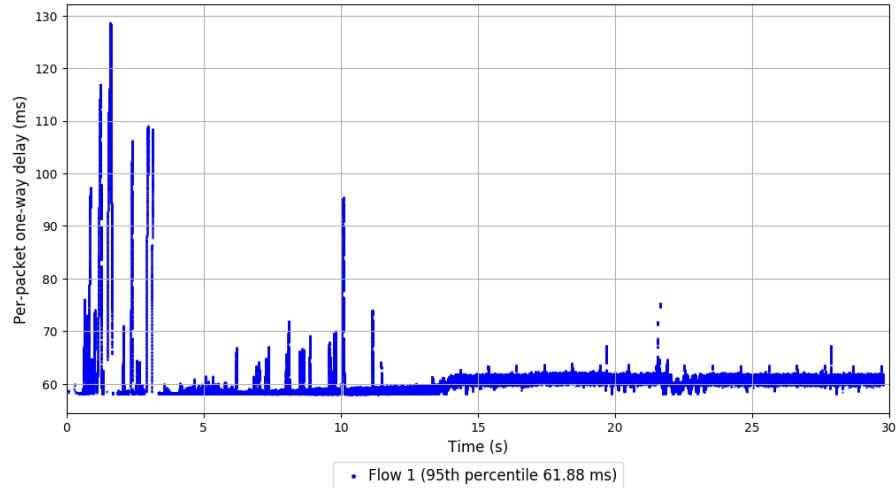
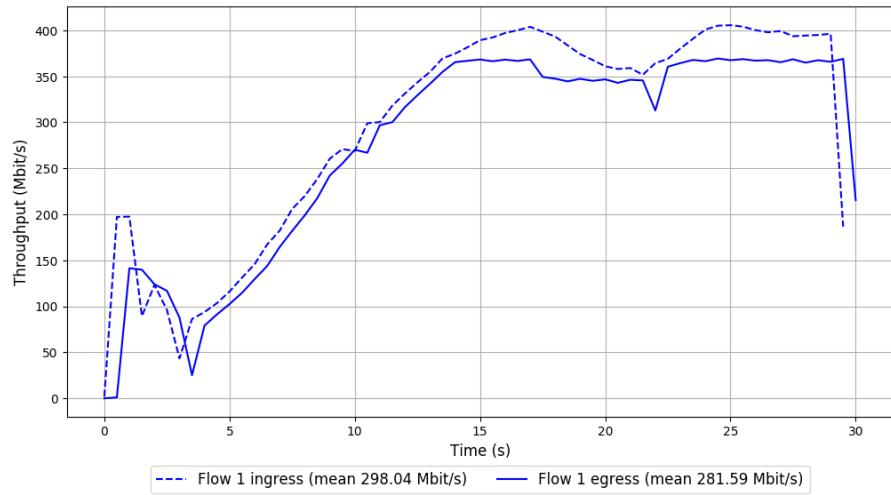


Run 2: Statistics of Indigo-Muses

```
Start at: 2018-09-06 05:12:32
End at: 2018-09-06 05:13:02
Local clock offset: -0.621 ms
Remote clock offset: -37.096 ms

# Below is generated by plot.py at 2018-09-06 06:59:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 281.59 Mbit/s
95th percentile per-packet one-way delay: 61.880 ms
Loss rate: 5.51%
-- Flow 1:
Average throughput: 281.59 Mbit/s
95th percentile per-packet one-way delay: 61.880 ms
Loss rate: 5.51%
```

Run 2: Report of Indigo-Muses — Data Link

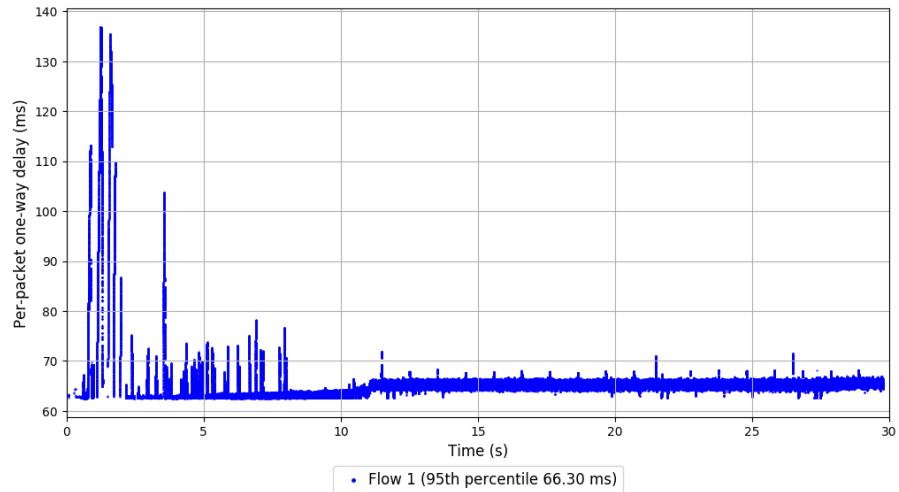
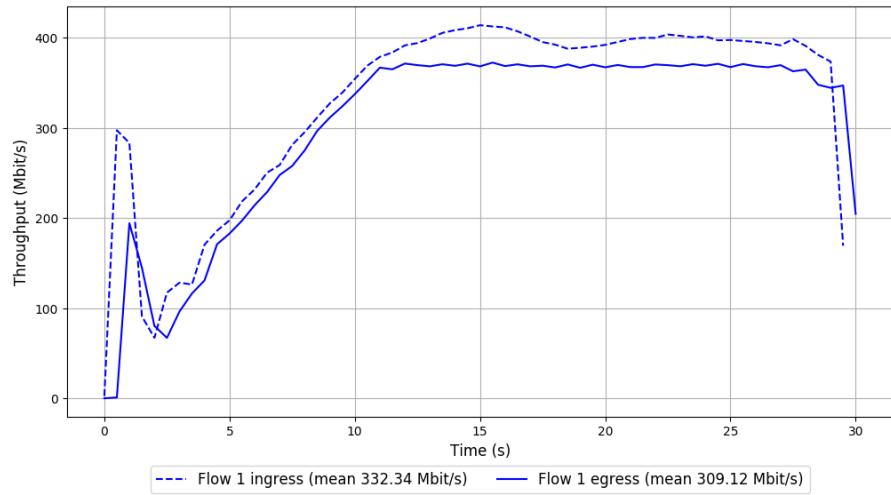


Run 3: Statistics of Indigo-Muses

```
Start at: 2018-09-06 05:35:38
End at: 2018-09-06 05:36:08
Local clock offset: 1.505 ms
Remote clock offset: -32.617 ms

# Below is generated by plot.py at 2018-09-06 06:59:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 309.12 Mbit/s
95th percentile per-packet one-way delay: 66.302 ms
Loss rate: 6.98%
-- Flow 1:
Average throughput: 309.12 Mbit/s
95th percentile per-packet one-way delay: 66.302 ms
Loss rate: 6.98%
```

Run 3: Report of Indigo-Muses — Data Link

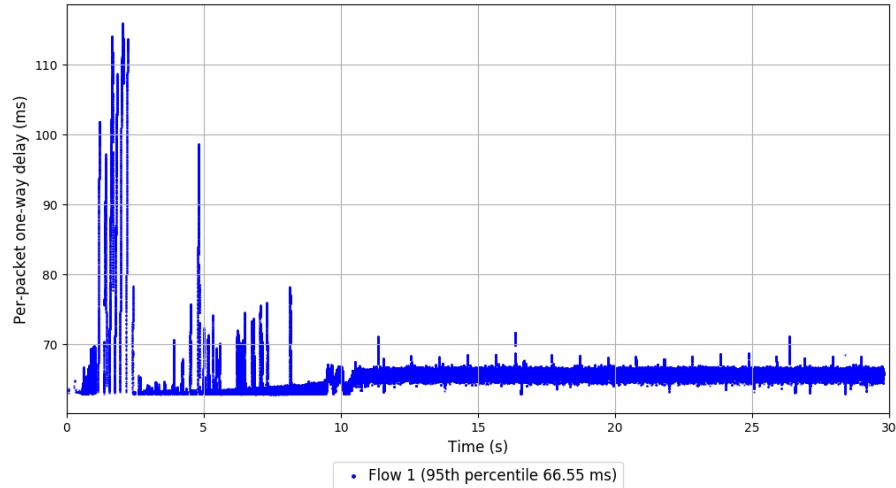
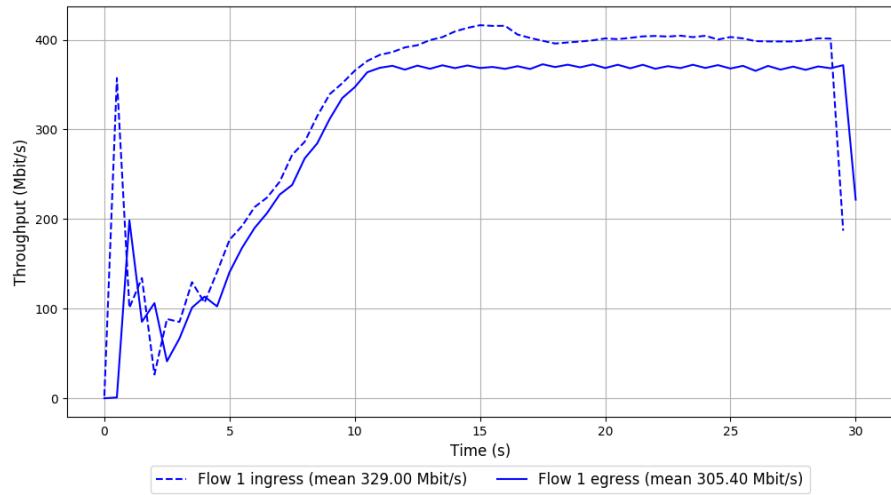


Run 4: Statistics of Indigo-Muses

```
Start at: 2018-09-06 05:58:53
End at: 2018-09-06 05:59:23
Local clock offset: -2.233 ms
Remote clock offset: -35.372 ms

# Below is generated by plot.py at 2018-09-06 06:59:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 305.40 Mbit/s
95th percentile per-packet one-way delay: 66.546 ms
Loss rate: 7.17%
-- Flow 1:
Average throughput: 305.40 Mbit/s
95th percentile per-packet one-way delay: 66.546 ms
Loss rate: 7.17%
```

Run 4: Report of Indigo-Muses — Data Link

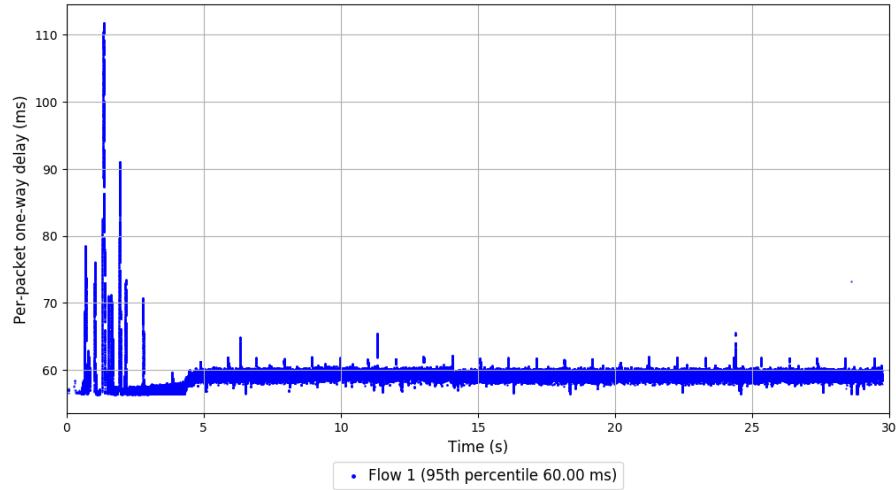
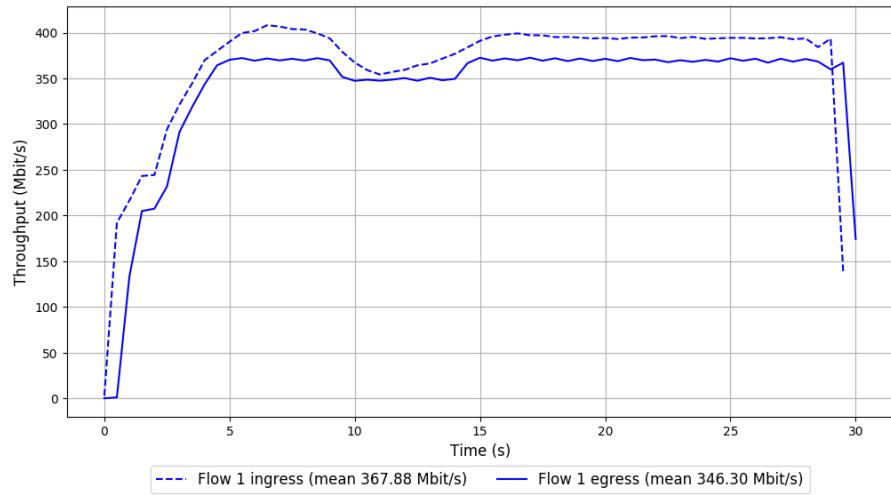


Run 5: Statistics of Indigo-Muses

```
Start at: 2018-09-06 06:27:39
End at: 2018-09-06 06:28:09
Local clock offset: -1.037 ms
Remote clock offset: -39.788 ms

# Below is generated by plot.py at 2018-09-06 06:59:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 346.30 Mbit/s
95th percentile per-packet one-way delay: 59.996 ms
Loss rate: 5.86%
-- Flow 1:
Average throughput: 346.30 Mbit/s
95th percentile per-packet one-way delay: 59.996 ms
Loss rate: 5.86%
```

Run 5: Report of Indigo-Muses — Data Link

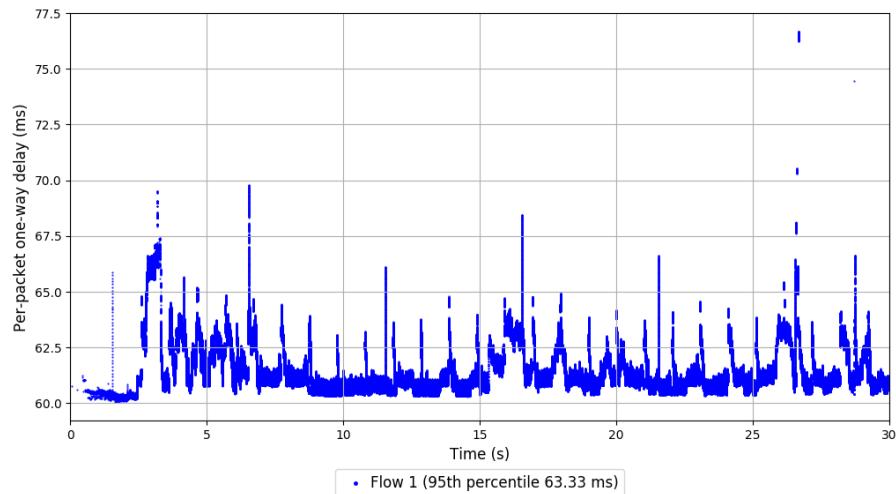
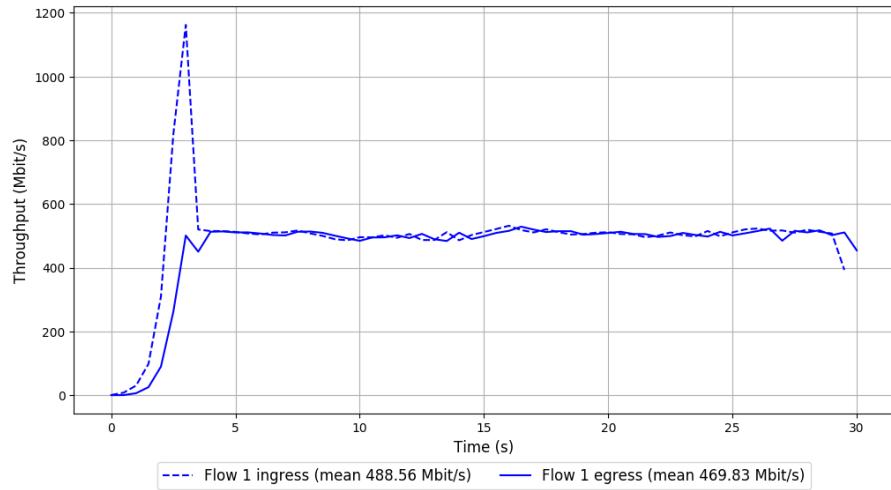


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-09-06 05:02:28
End at: 2018-09-06 05:02:58
Local clock offset: -2.008 ms
Remote clock offset: -36.342 ms

# Below is generated by plot.py at 2018-09-06 07:00:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 469.83 Mbit/s
95th percentile per-packet one-way delay: 63.325 ms
Loss rate: 3.83%
-- Flow 1:
Average throughput: 469.83 Mbit/s
95th percentile per-packet one-way delay: 63.325 ms
Loss rate: 3.83%
```

Run 1: Report of PCC-Allegro — Data Link

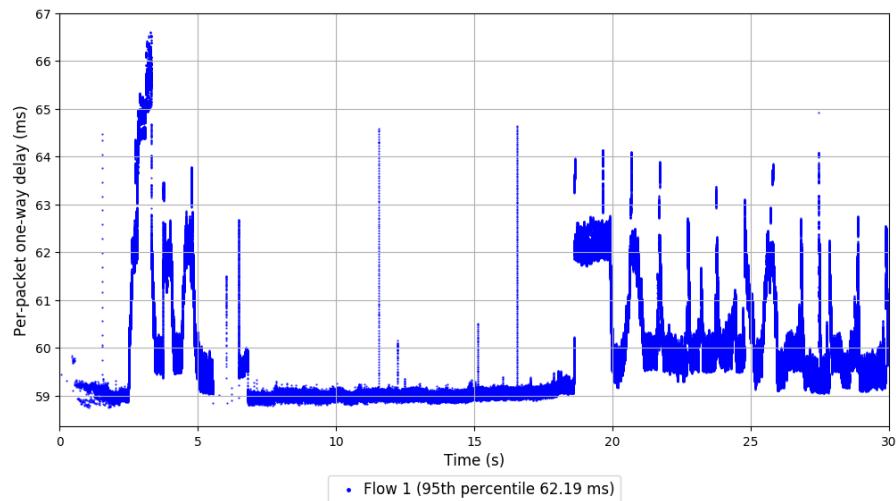
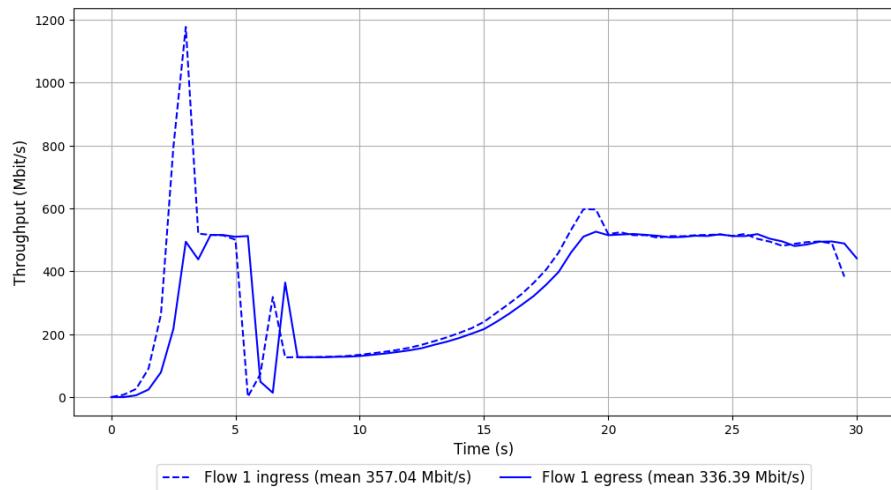


Run 2: Statistics of PCC-Allegro

```
Start at: 2018-09-06 05:25:38
End at: 2018-09-06 05:26:08
Local clock offset: 2.885 ms
Remote clock offset: -34.602 ms

# Below is generated by plot.py at 2018-09-06 07:02:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 336.39 Mbit/s
95th percentile per-packet one-way delay: 62.189 ms
Loss rate: 5.78%
-- Flow 1:
Average throughput: 336.39 Mbit/s
95th percentile per-packet one-way delay: 62.189 ms
Loss rate: 5.78%
```

Run 2: Report of PCC-Allegro — Data Link

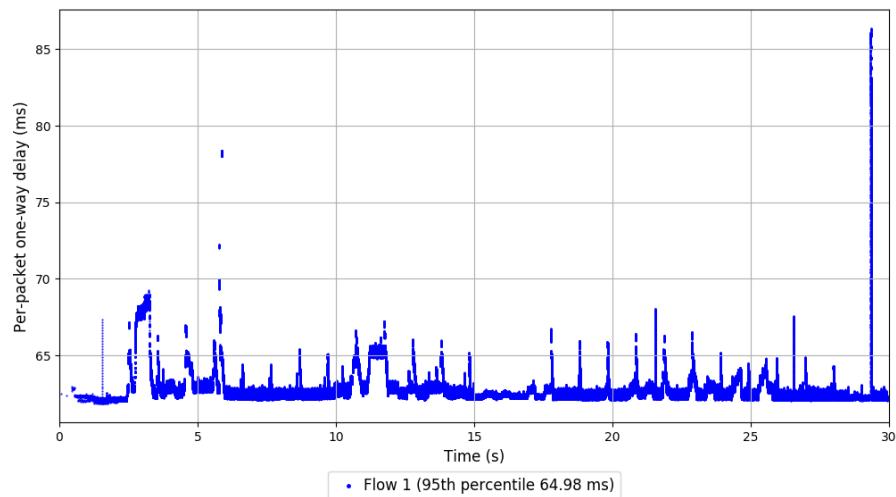
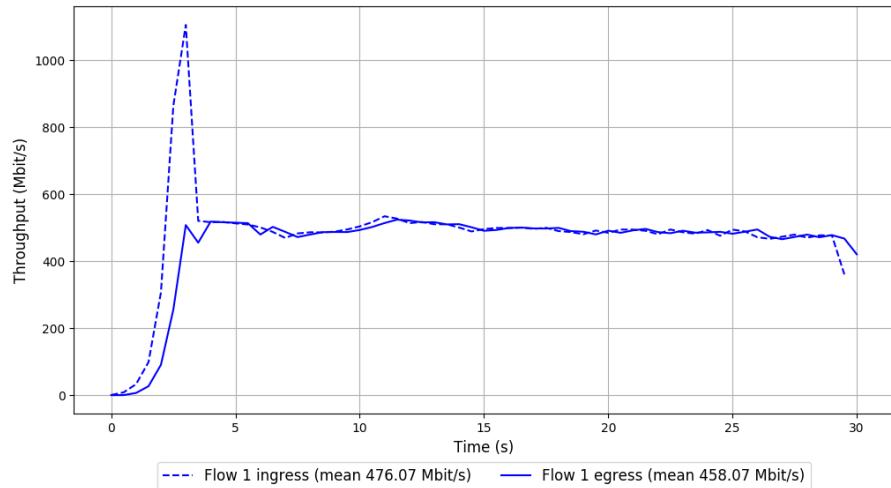


Run 3: Statistics of PCC-Allegro

```
Start at: 2018-09-06 05:48:47
End at: 2018-09-06 05:49:17
Local clock offset: 0.229 ms
Remote clock offset: -34.473 ms

# Below is generated by plot.py at 2018-09-06 07:04:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 458.07 Mbit/s
95th percentile per-packet one-way delay: 64.981 ms
Loss rate: 3.78%
-- Flow 1:
Average throughput: 458.07 Mbit/s
95th percentile per-packet one-way delay: 64.981 ms
Loss rate: 3.78%
```

Run 3: Report of PCC-Allegro — Data Link

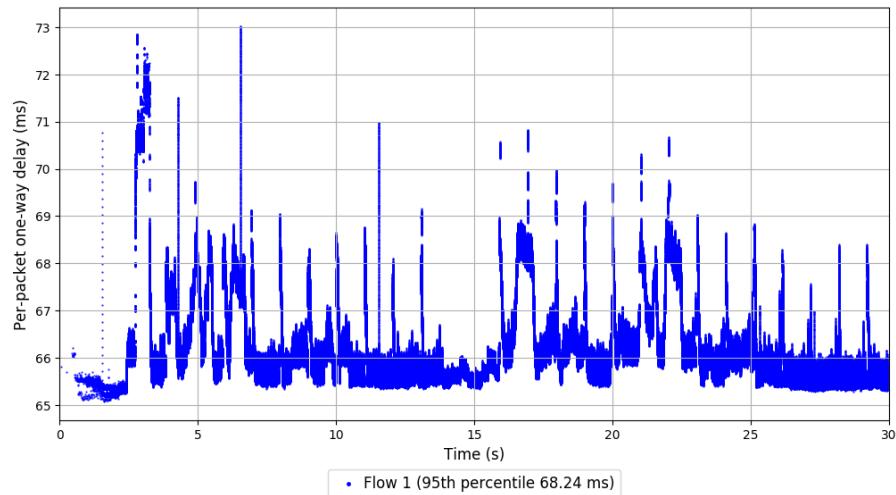
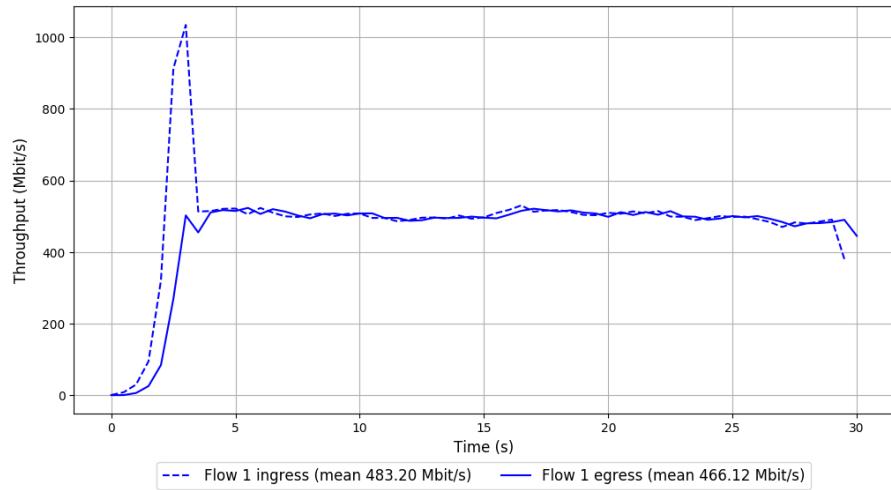


Run 4: Statistics of PCC-Allegro

```
Start at: 2018-09-06 06:17:35
End at: 2018-09-06 06:18:05
Local clock offset: -0.706 ms
Remote clock offset: -31.309 ms

# Below is generated by plot.py at 2018-09-06 07:04:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 466.12 Mbit/s
95th percentile per-packet one-way delay: 68.239 ms
Loss rate: 3.54%
-- Flow 1:
Average throughput: 466.12 Mbit/s
95th percentile per-packet one-way delay: 68.239 ms
Loss rate: 3.54%
```

Run 4: Report of PCC-Allegro — Data Link

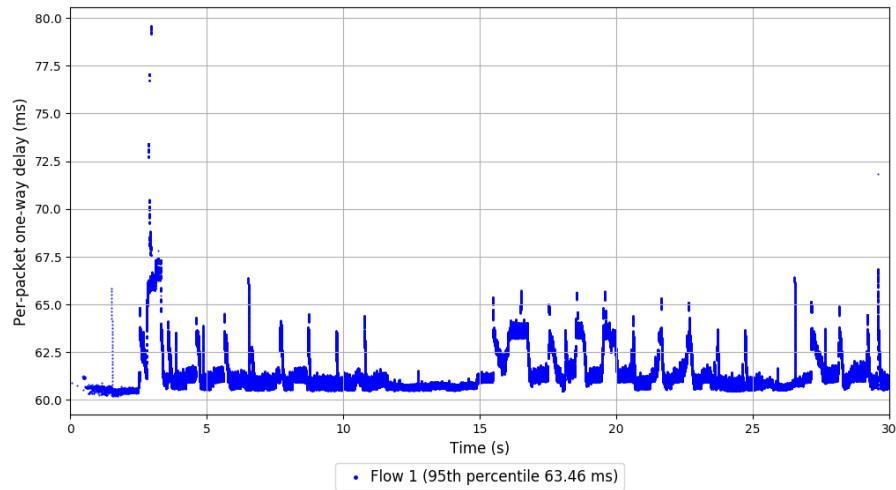
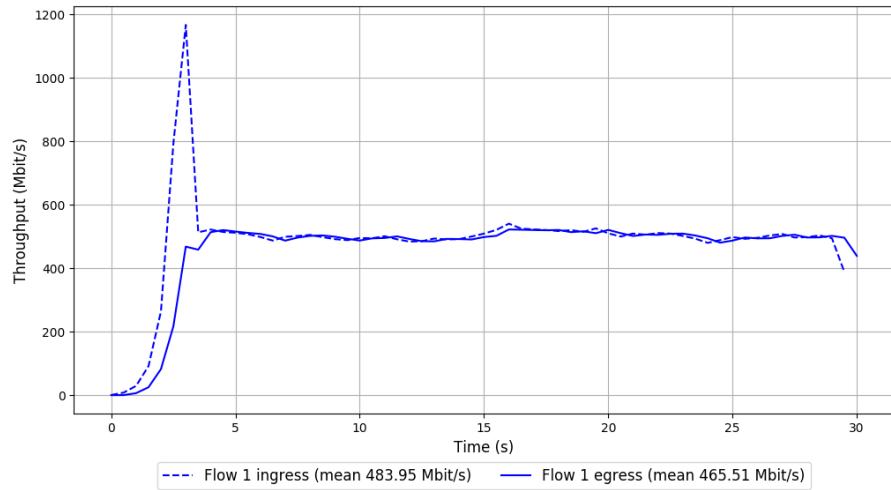


```
Run 5: Statistics of PCC-Allegro
```

```
Start at: 2018-09-06 06:40:47
End at: 2018-09-06 06:41:17
Local clock offset: -0.27 ms
Remote clock offset: -37.465 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 465.51 Mbit/s
95th percentile per-packet one-way delay: 63.464 ms
Loss rate: 3.81%
-- Flow 1:
Average throughput: 465.51 Mbit/s
95th percentile per-packet one-way delay: 63.464 ms
Loss rate: 3.81%
```

Run 5: Report of PCC-Allegro — Data Link

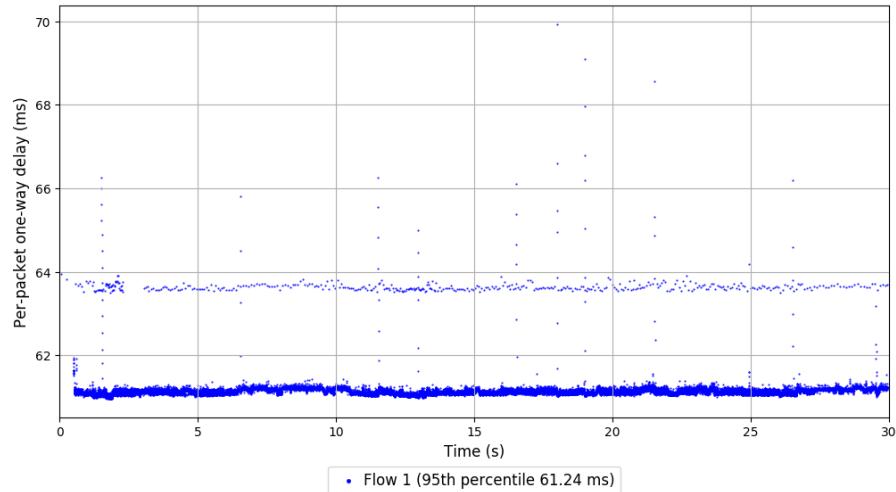
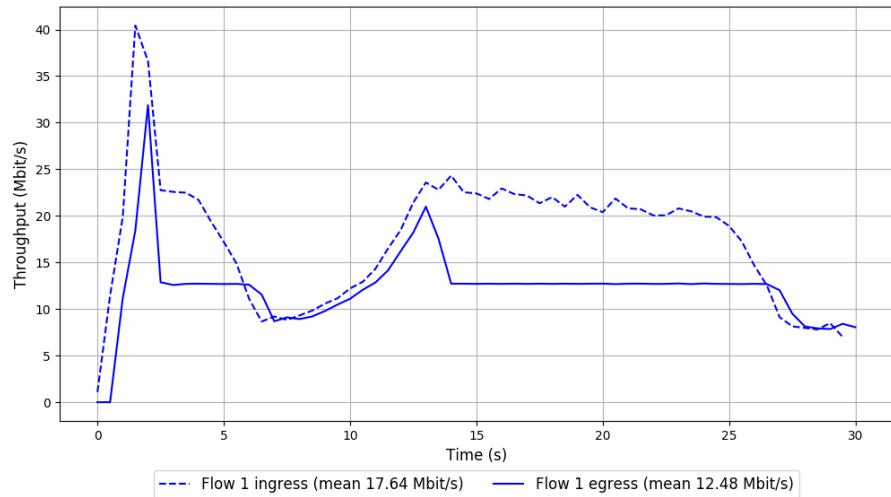


```
Run 1: Statistics of PCC-Expr
```

```
Start at: 2018-09-06 04:52:06
End at: 2018-09-06 04:52:36
Local clock offset: -0.938 ms
Remote clock offset: -34.834 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.48 Mbit/s
95th percentile per-packet one-way delay: 61.241 ms
Loss rate: 29.22%
-- Flow 1:
Average throughput: 12.48 Mbit/s
95th percentile per-packet one-way delay: 61.241 ms
Loss rate: 29.22%
```

Run 1: Report of PCC-Expr — Data Link

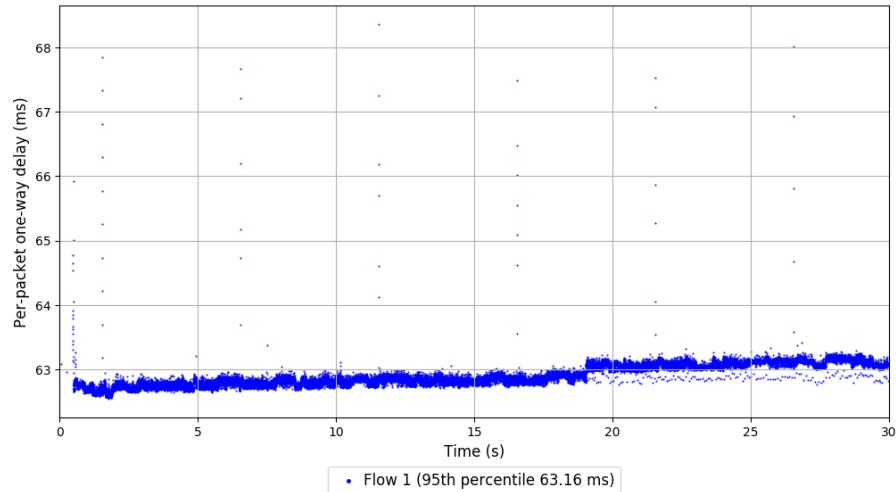
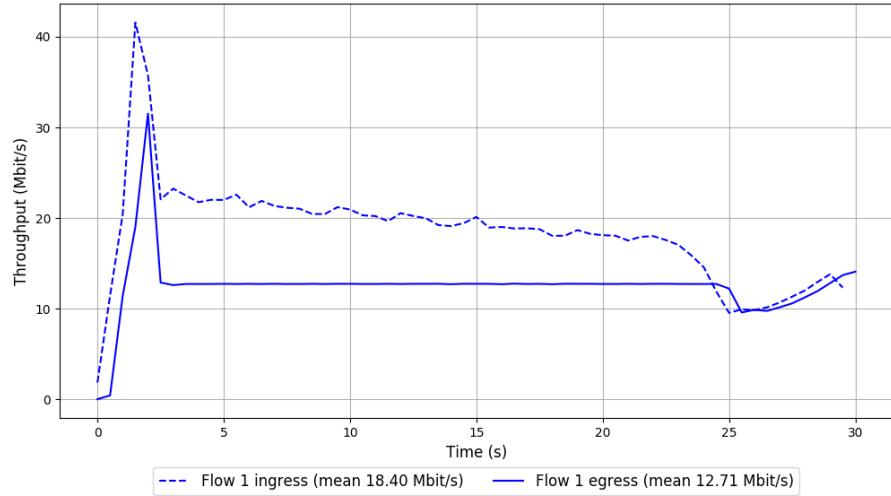


```
Run 2: Statistics of PCC-Expr
```

```
Start at: 2018-09-06 05:15:10
End at: 2018-09-06 05:15:40
Local clock offset: -1.808 ms
Remote clock offset: -33.337 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.71 Mbit/s
95th percentile per-packet one-way delay: 63.157 ms
Loss rate: 30.94%
-- Flow 1:
Average throughput: 12.71 Mbit/s
95th percentile per-packet one-way delay: 63.157 ms
Loss rate: 30.94%
```

Run 2: Report of PCC-Expr — Data Link

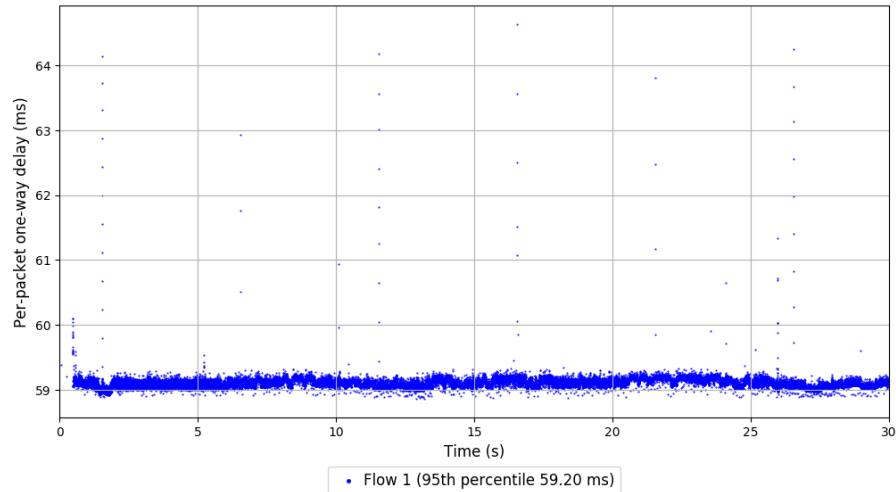
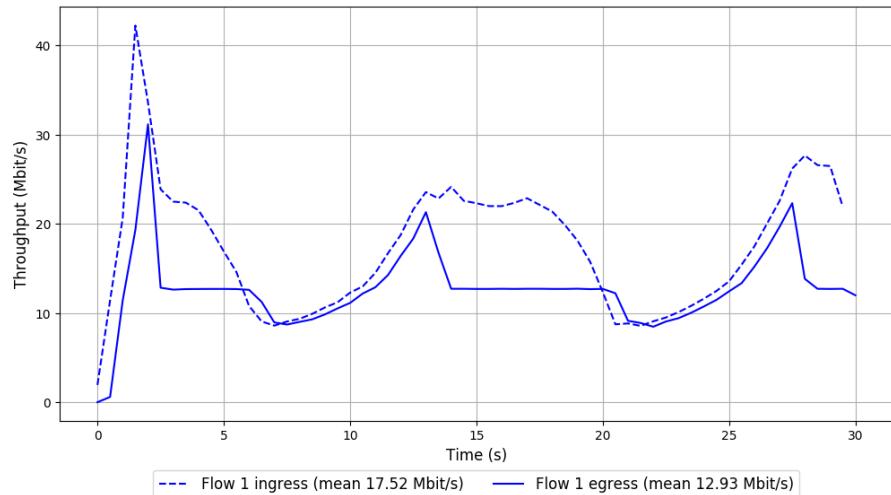


Run 3: Statistics of PCC-Expr

```
Start at: 2018-09-06 05:38:22
End at: 2018-09-06 05:38:52
Local clock offset: 1.36 ms
Remote clock offset: -36.88 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.93 Mbit/s
95th percentile per-packet one-way delay: 59.203 ms
Loss rate: 26.19%
-- Flow 1:
Average throughput: 12.93 Mbit/s
95th percentile per-packet one-way delay: 59.203 ms
Loss rate: 26.19%
```

Run 3: Report of PCC-Expr — Data Link

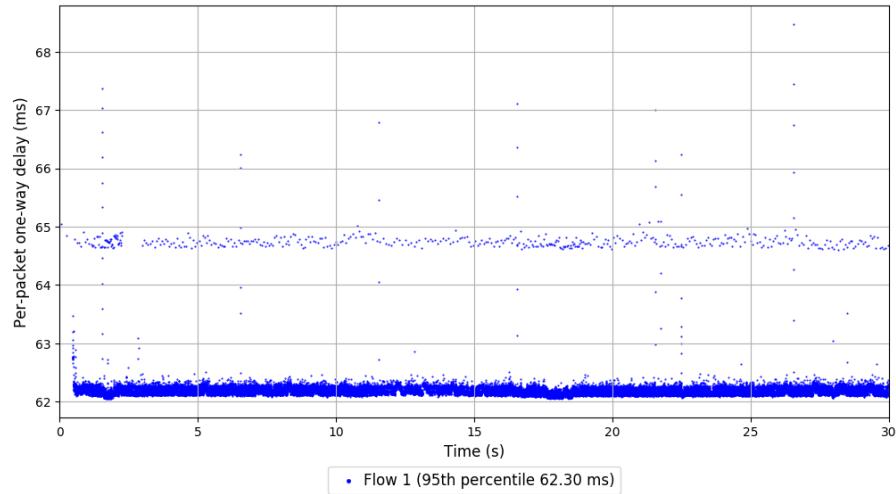
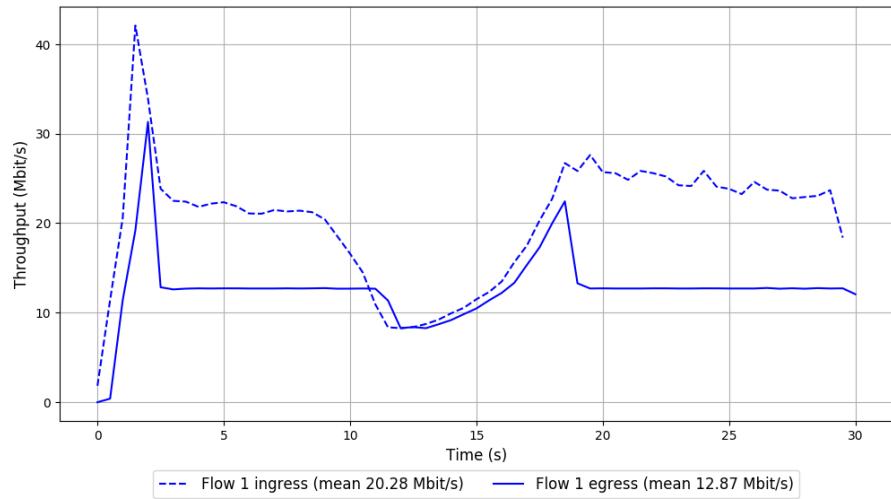


Run 4: Statistics of PCC-Expr

```
Start at: 2018-09-06 06:01:31
End at: 2018-09-06 06:02:01
Local clock offset: -0.07 ms
Remote clock offset: -34.149 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.87 Mbit/s
95th percentile per-packet one-way delay: 62.301 ms
Loss rate: 36.55%
-- Flow 1:
Average throughput: 12.87 Mbit/s
95th percentile per-packet one-way delay: 62.301 ms
Loss rate: 36.55%
```

Run 4: Report of PCC-Expr — Data Link

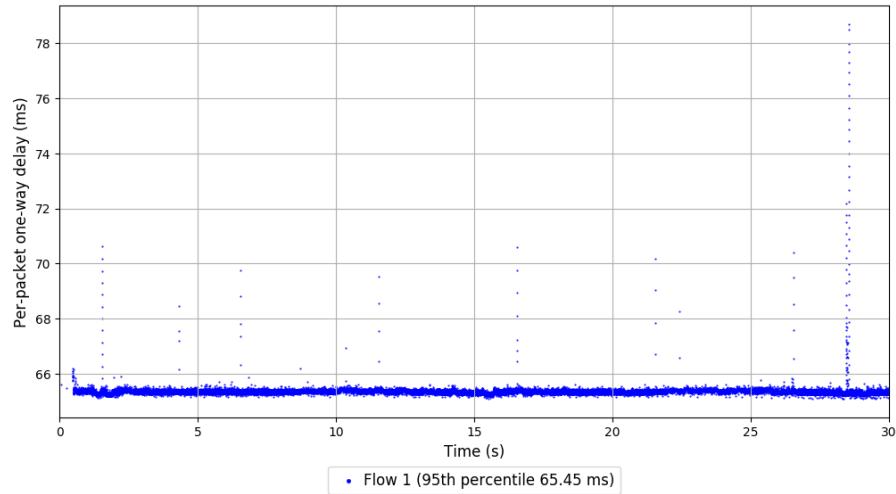
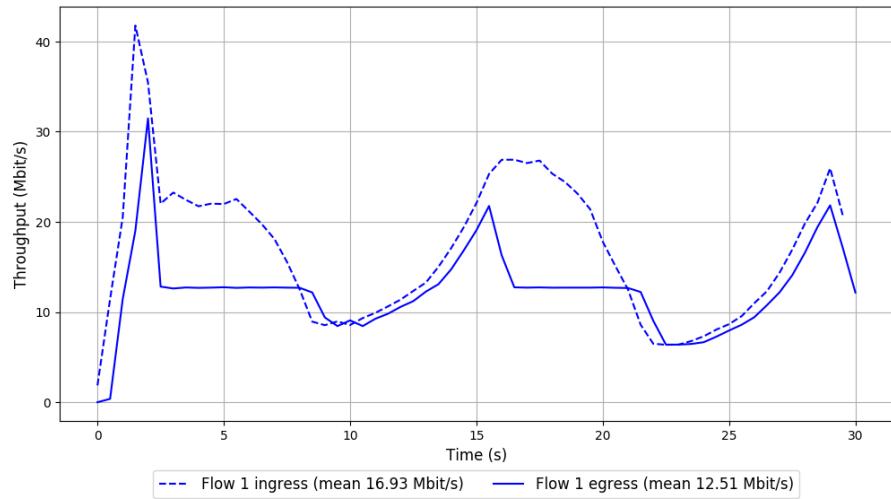


Run 5: Statistics of PCC-Expr

```
Start at: 2018-09-06 06:30:22
End at: 2018-09-06 06:30:52
Local clock offset: -2.804 ms
Remote clock offset: -33.022 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.51 Mbit/s
95th percentile per-packet one-way delay: 65.452 ms
Loss rate: 26.08%
-- Flow 1:
Average throughput: 12.51 Mbit/s
95th percentile per-packet one-way delay: 65.452 ms
Loss rate: 26.08%
```

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

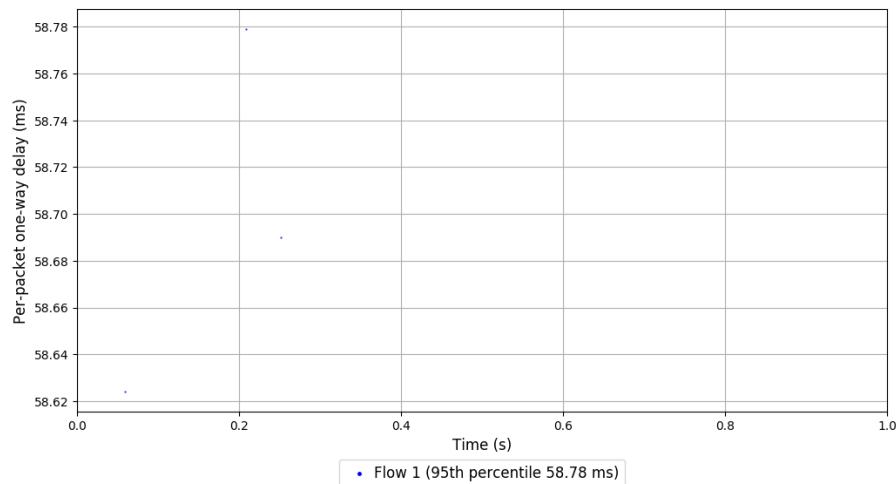
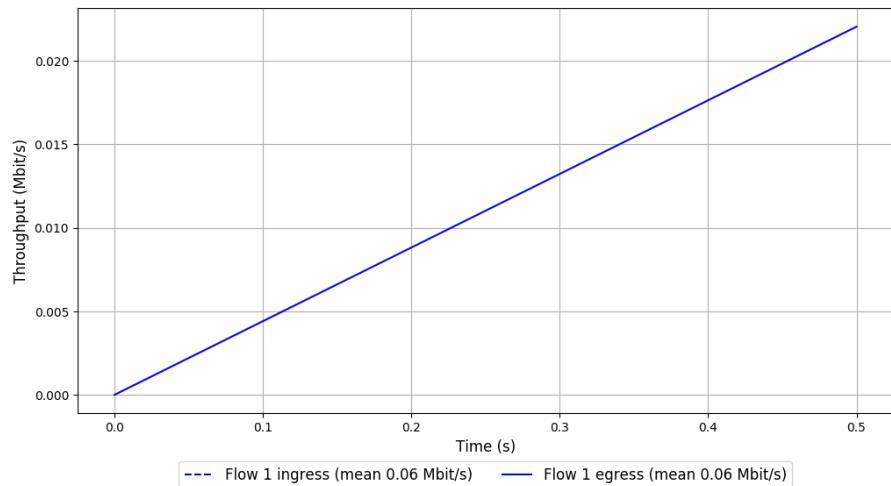
Start at: 2018-09-06 05:01:18

End at: 2018-09-06 05:01:48

Local clock offset: -1.572 ms

Remote clock offset: -37.95 ms

Run 1: Report of QUIC Cubic — Data Link

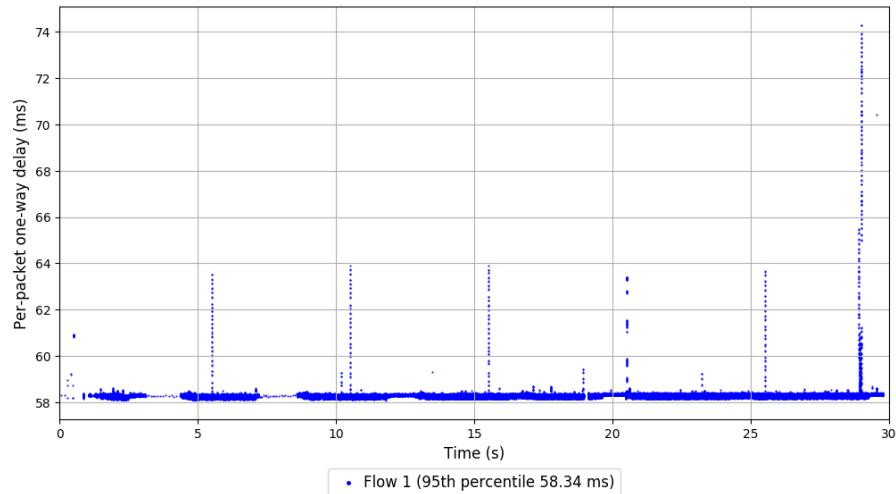
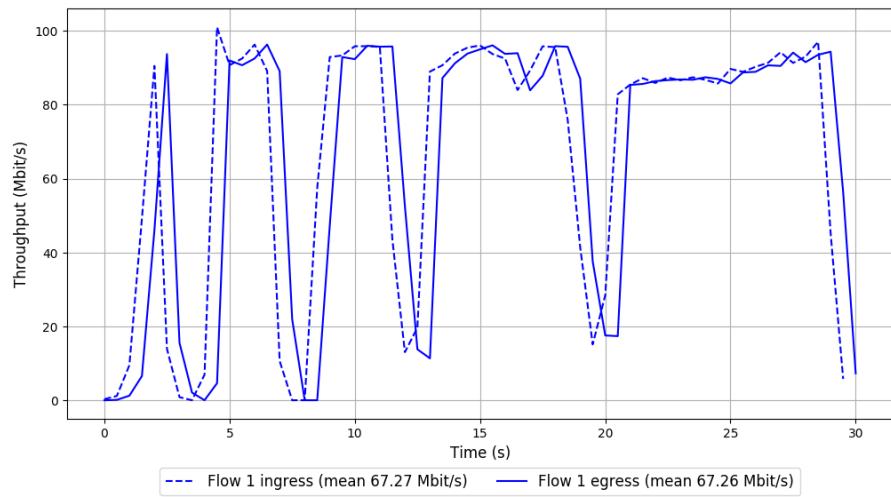


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-09-06 05:24:24
End at: 2018-09-06 05:24:54
Local clock offset: 3.138 ms
Remote clock offset: -37.414 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 67.26 Mbit/s
95th percentile per-packet one-way delay: 58.345 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 67.26 Mbit/s
95th percentile per-packet one-way delay: 58.345 ms
Loss rate: 0.02%
```

Run 2: Report of QUIC Cubic — Data Link

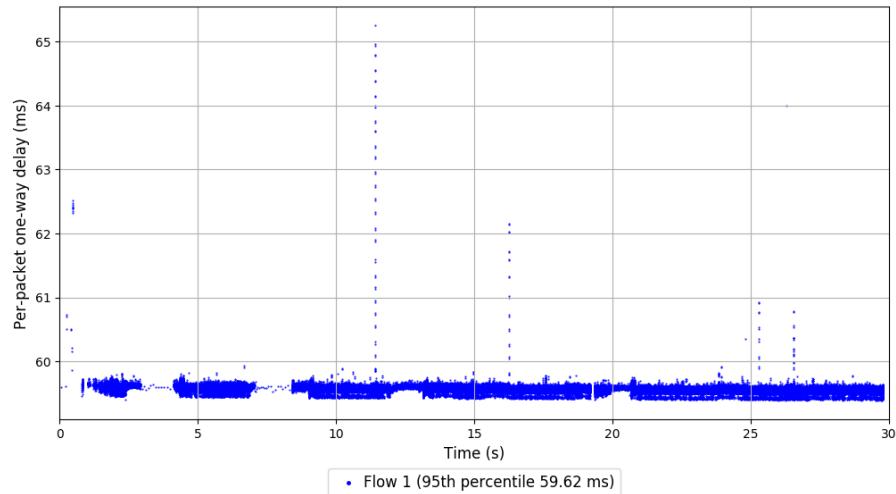
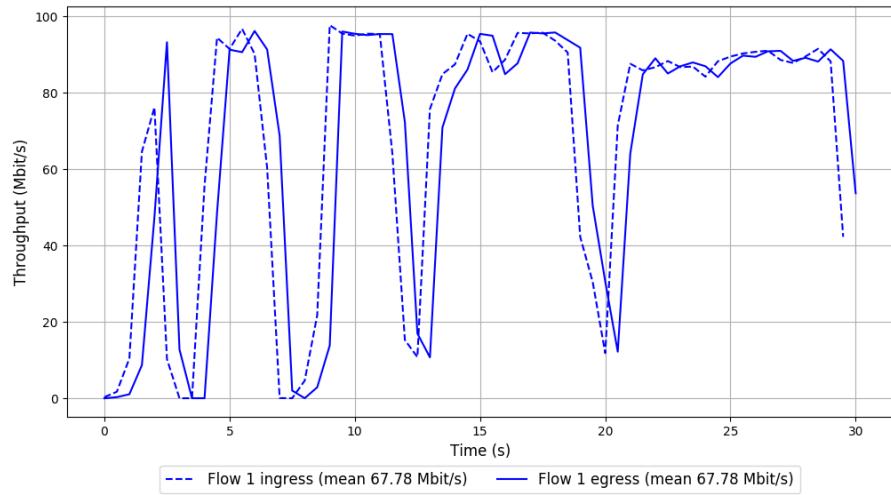


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-09-06 05:47:33
End at: 2018-09-06 05:48:03
Local clock offset: 2.06 ms
Remote clock offset: -35.271 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 67.78 Mbit/s
95th percentile per-packet one-way delay: 59.624 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 67.78 Mbit/s
95th percentile per-packet one-way delay: 59.624 ms
Loss rate: 0.00%
```

Run 3: Report of QUIC Cubic — Data Link

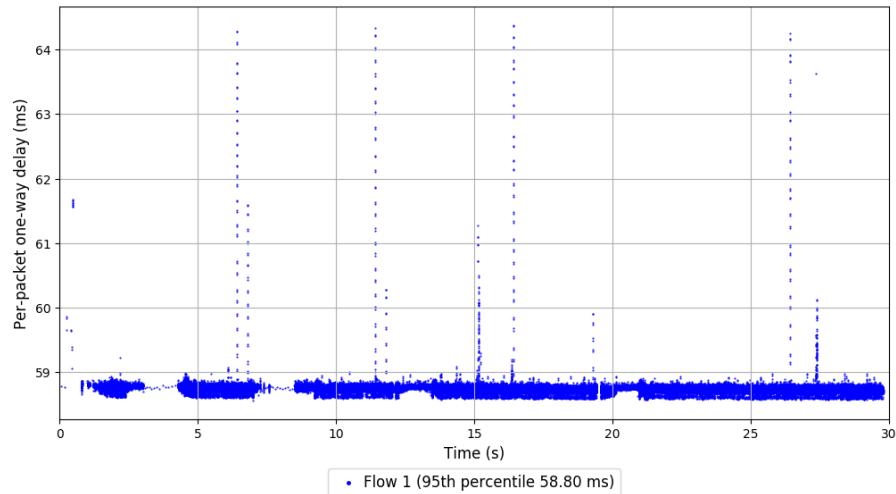
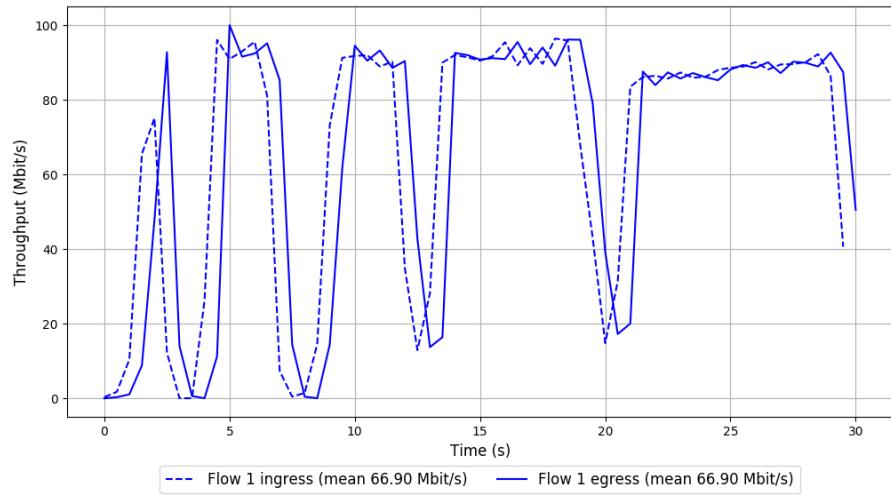


Run 4: Statistics of QUIC Cubic

```
Start at: 2018-09-06 06:16:21
End at: 2018-09-06 06:16:51
Local clock offset: -0.016 ms
Remote clock offset: -37.525 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 66.90 Mbit/s
95th percentile per-packet one-way delay: 58.799 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 66.90 Mbit/s
95th percentile per-packet one-way delay: 58.799 ms
Loss rate: 0.00%
```

Run 4: Report of QUIC Cubic — Data Link

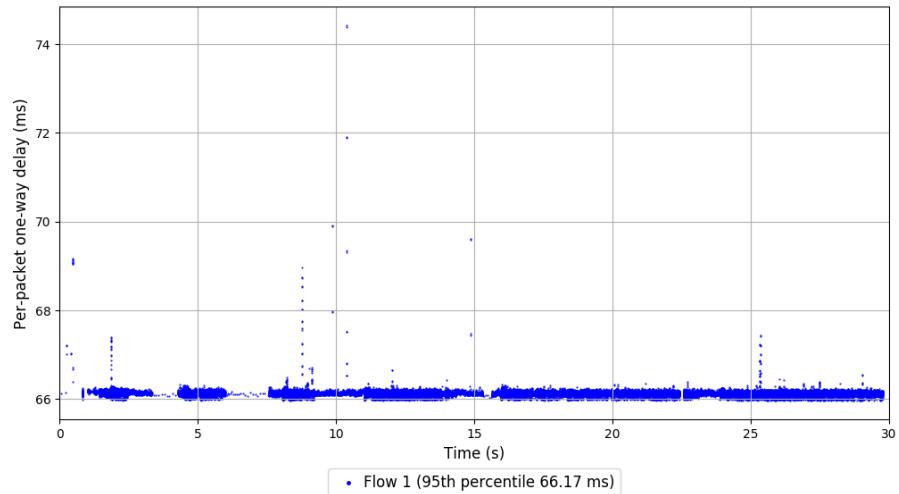
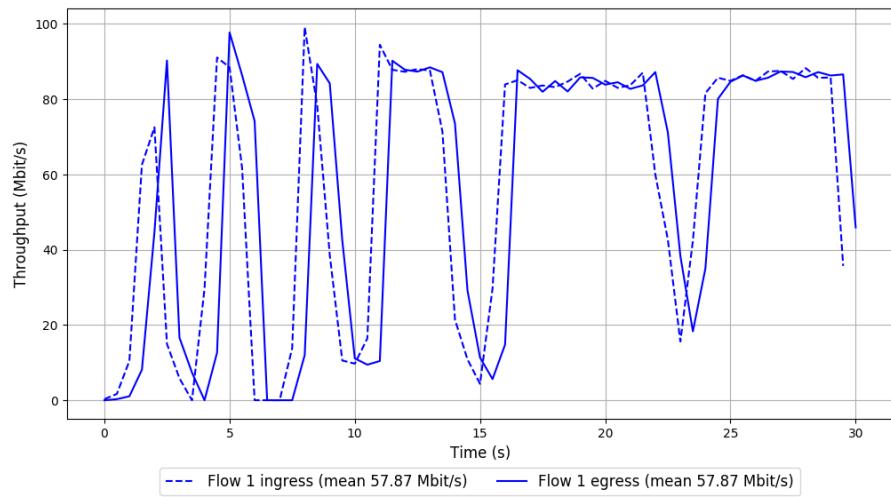


Run 5: Statistics of QUIC Cubic

```
Start at: 2018-09-06 06:39:34
End at: 2018-09-06 06:40:04
Local clock offset: -0.862 ms
Remote clock offset: -32.629 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 57.87 Mbit/s
95th percentile per-packet one-way delay: 66.173 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 57.87 Mbit/s
95th percentile per-packet one-way delay: 66.173 ms
Loss rate: 0.00%
```

Run 5: Report of QUIC Cubic — Data Link

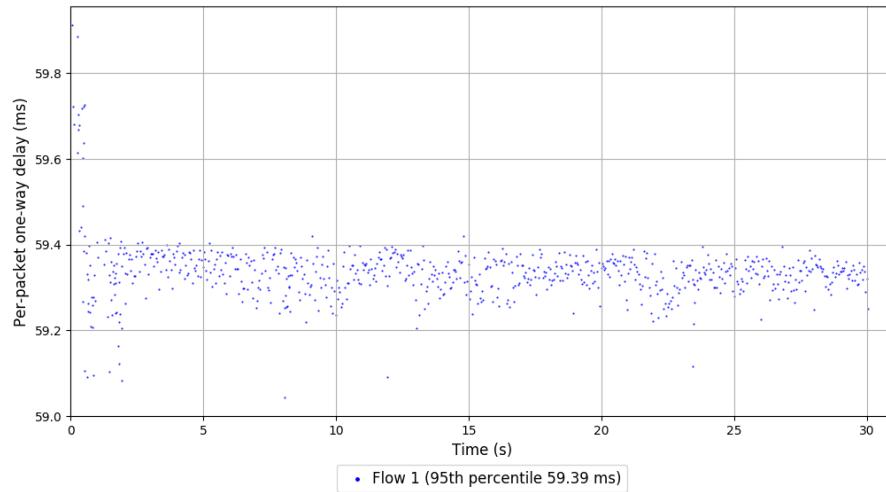
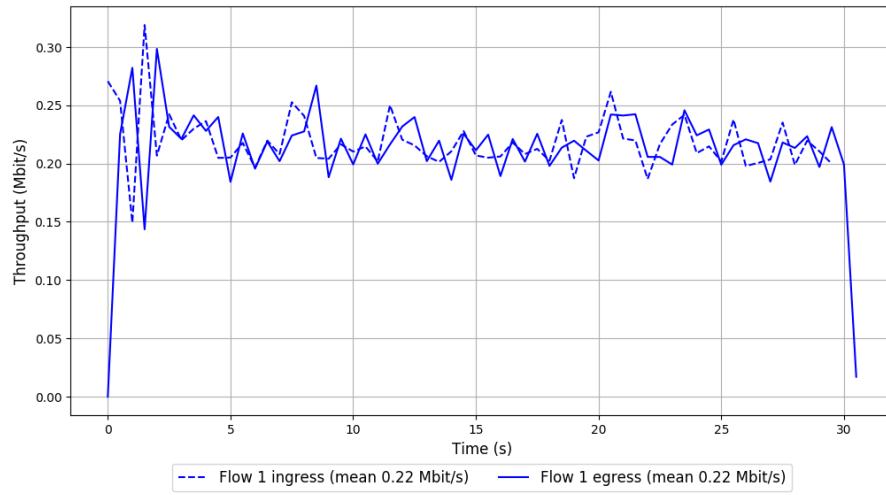


```
Run 1: Statistics of SCReAM

Start at: 2018-09-06 04:40:46
End at: 2018-09-06 04:41:16
Local clock offset: -1.058 ms
Remote clock offset: -39.687 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 59.394 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 59.394 ms
Loss rate: 0.00%
```

Run 1: Report of SCReAM — Data Link

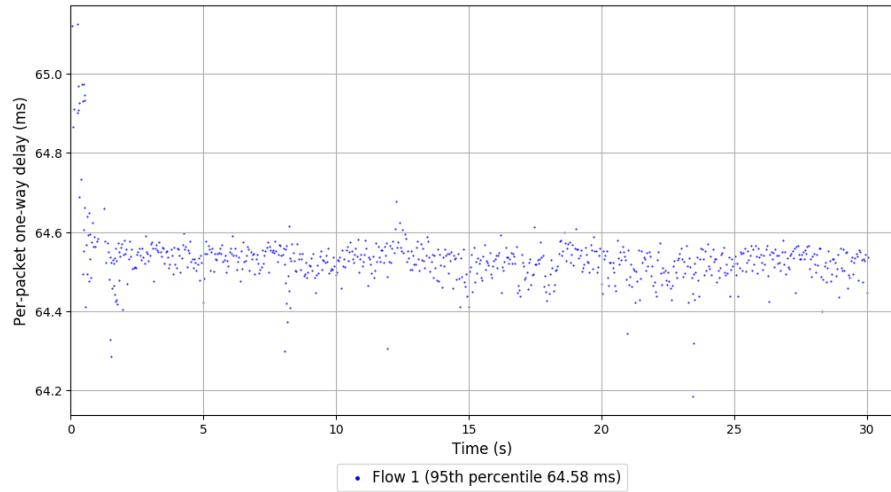
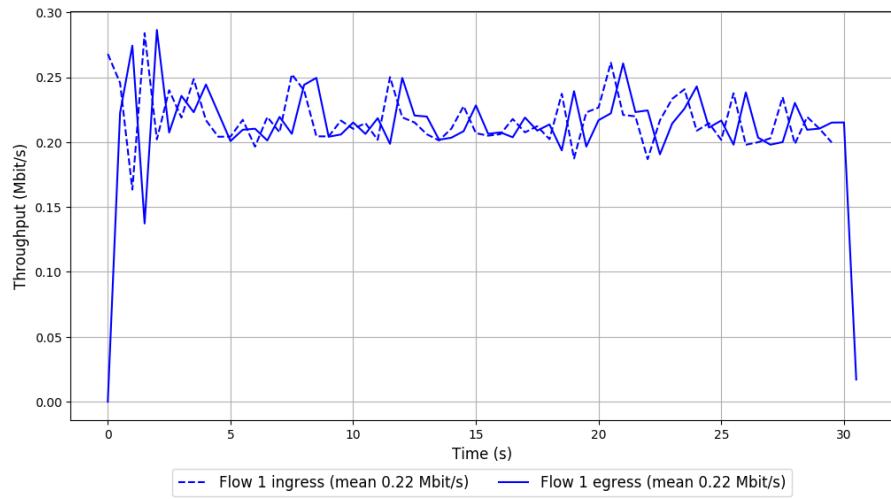


Run 2: Statistics of SCReAM

```
Start at: 2018-09-06 05:03:54
End at: 2018-09-06 05:04:24
Local clock offset: -1.288 ms
Remote clock offset: -31.732 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 64.583 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 64.583 ms
Loss rate: 0.00%
```

Run 2: Report of SCReAM — Data Link

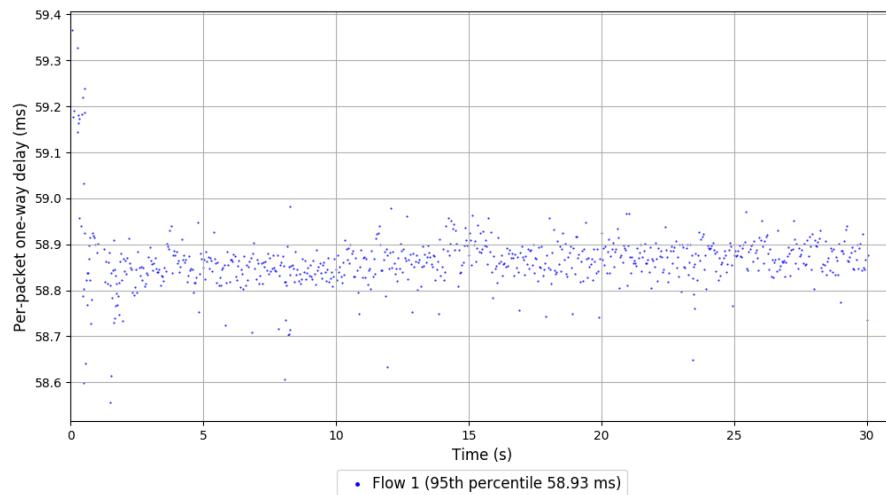
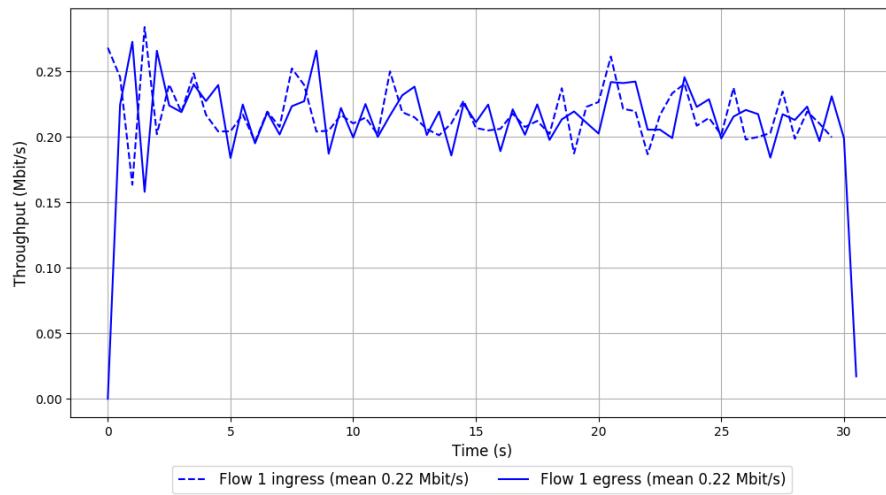


Run 3: Statistics of SCReAM

```
Start at: 2018-09-06 05:27:01
End at: 2018-09-06 05:27:31
Local clock offset: 0.965 ms
Remote clock offset: -36.888 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 58.934 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 58.934 ms
Loss rate: 0.00%
```

Run 3: Report of SCReAM — Data Link

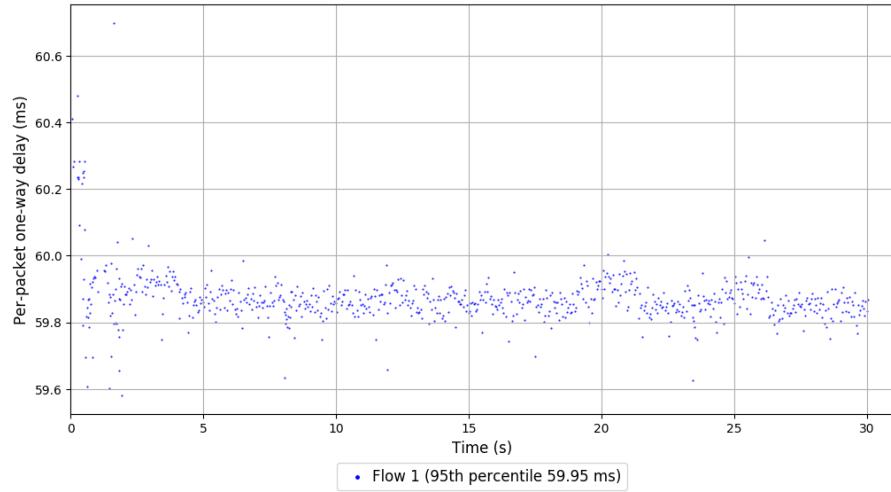
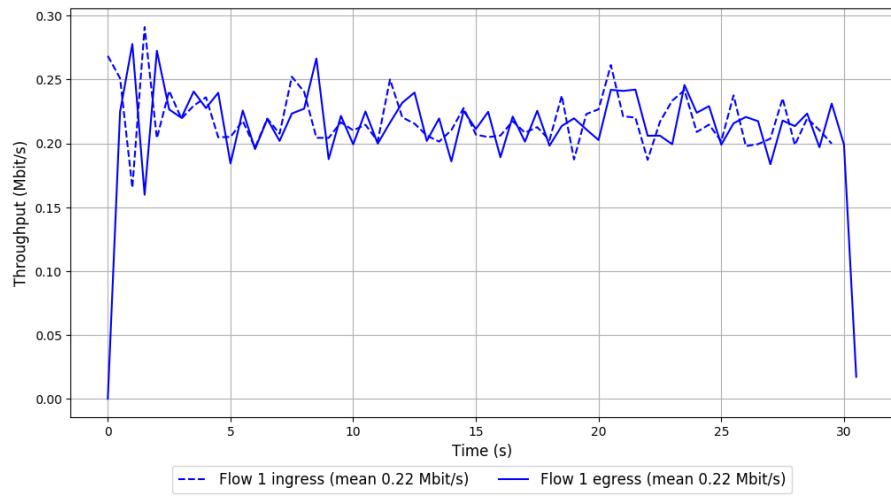


Run 4: Statistics of SCReAM

```
Start at: 2018-09-06 05:50:13
End at: 2018-09-06 05:50:43
Local clock offset: 2.884 ms
Remote clock offset: -36.583 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 59.954 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 59.954 ms
Loss rate: 0.00%
```

Run 4: Report of SCReAM — Data Link

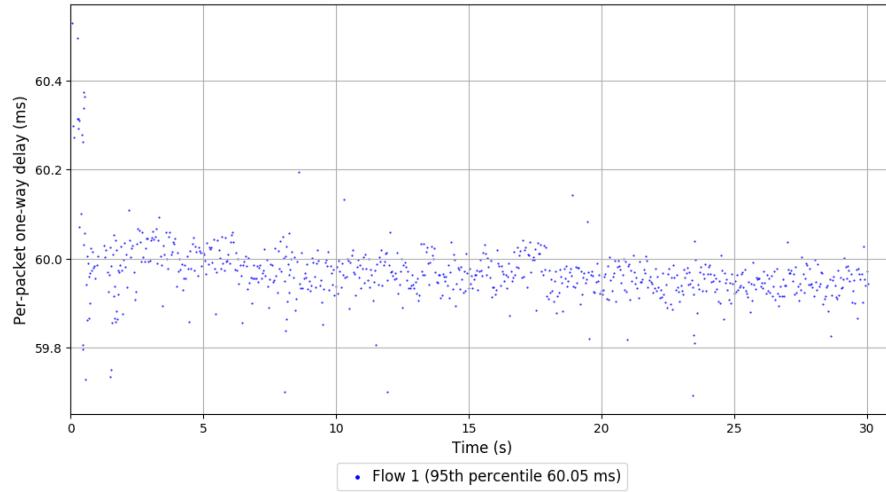
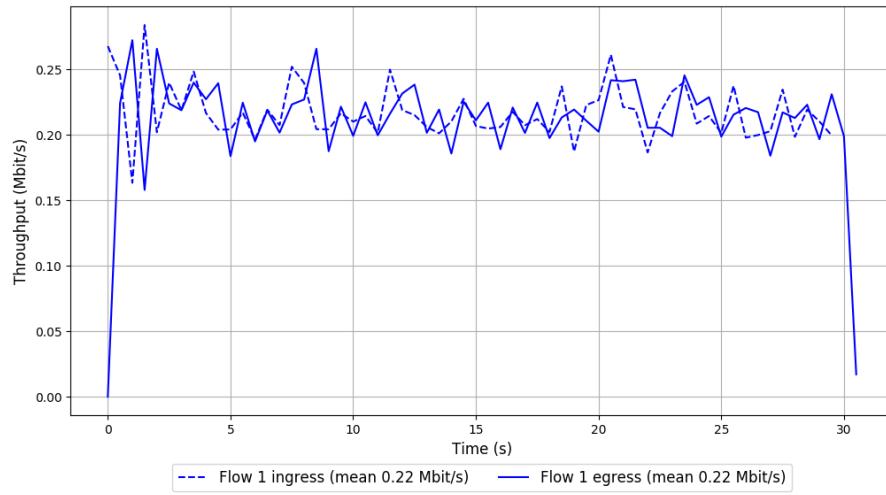


Run 5: Statistics of SCReAM

```
Start at: 2018-09-06 06:19:01
End at: 2018-09-06 06:19:31
Local clock offset: -0.512 ms
Remote clock offset: -36.548 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.047 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.047 ms
Loss rate: 0.00%
```

Run 5: Report of SCReAM — Data Link

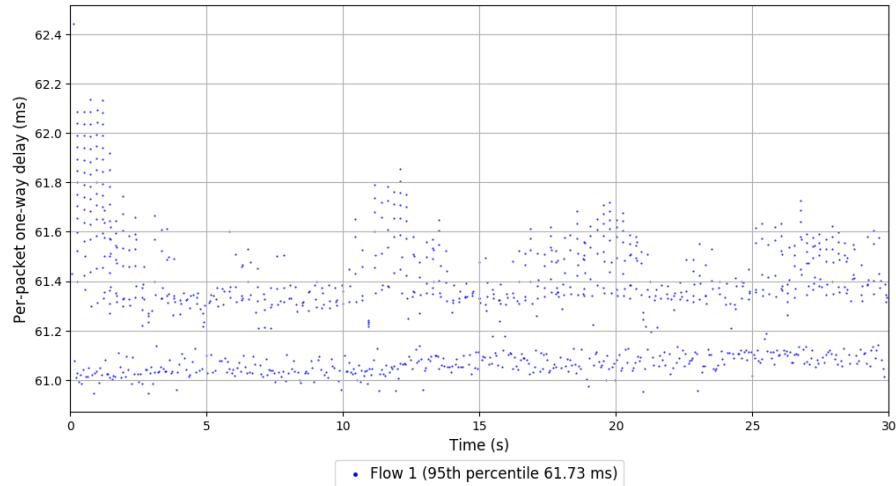
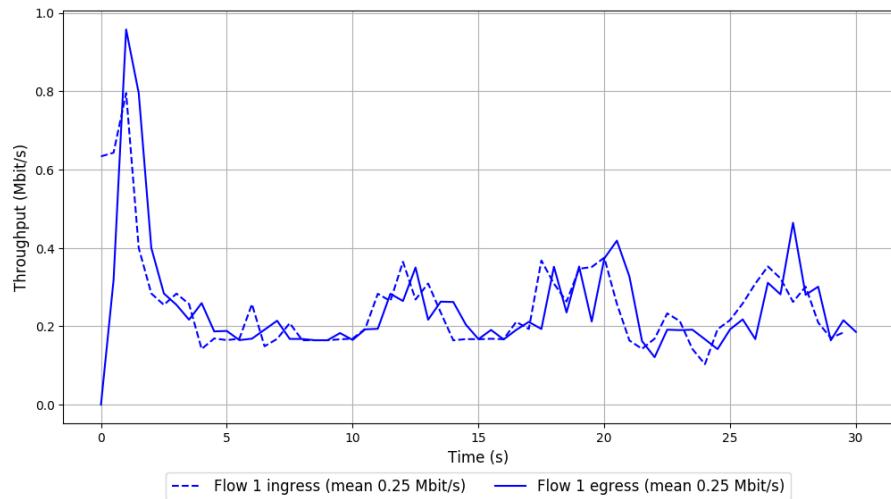


Run 1: Statistics of Sprout

```
Start at: 2018-09-06 04:45:48
End at: 2018-09-06 04:46:18
Local clock offset: -0.509 ms
Remote clock offset: -34.185 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 61.732 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 61.732 ms
Loss rate: 0.00%
```

Run 1: Report of Sprout — Data Link

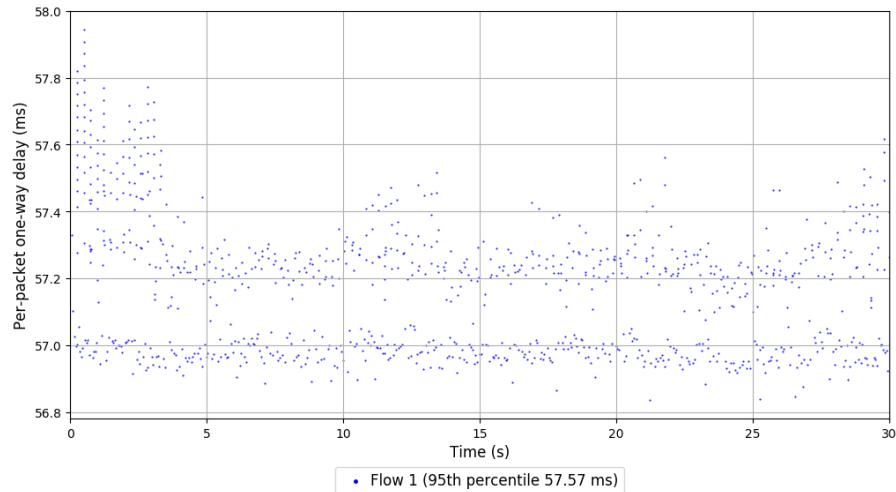
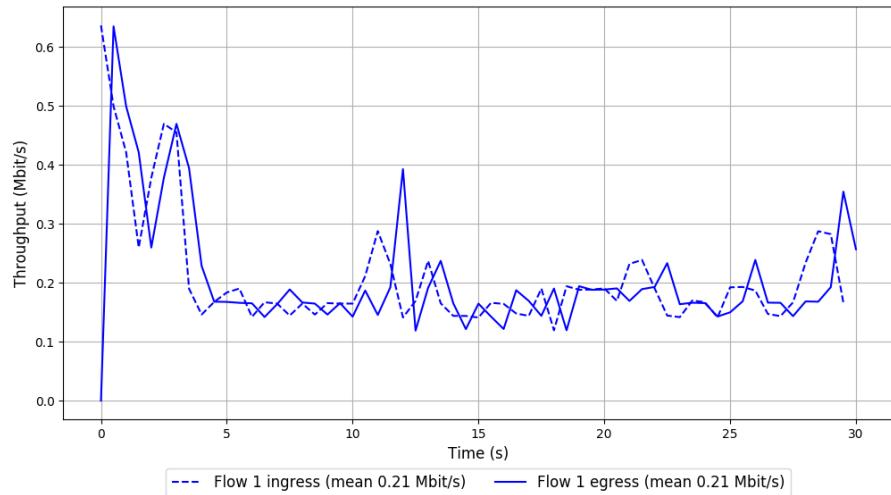


Run 2: Statistics of Sprout

```
Start at: 2018-09-06 05:08:57
End at: 2018-09-06 05:09:27
Local clock offset: 0.322 ms
Remote clock offset: -36.992 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 57.569 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 57.569 ms
Loss rate: 0.00%
```

Run 2: Report of Sprout — Data Link

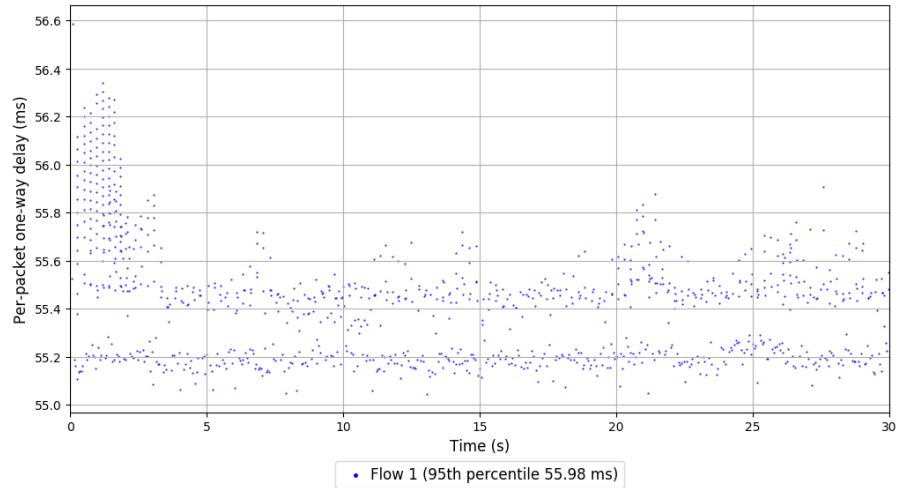
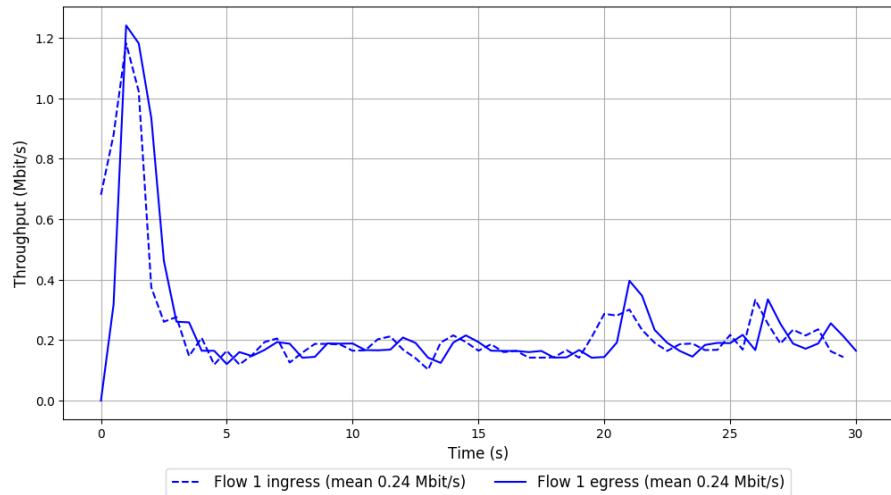


Run 3: Statistics of Sprout

```
Start at: 2018-09-06 05:32:03
End at: 2018-09-06 05:32:33
Local clock offset: 2.691 ms
Remote clock offset: -38.918 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 55.979 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 55.979 ms
Loss rate: 0.00%
```

Run 3: Report of Sprout — Data Link

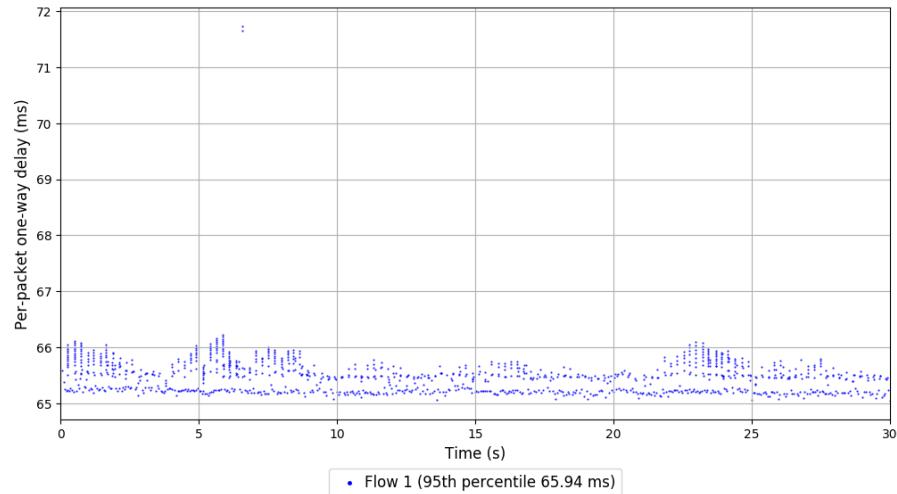
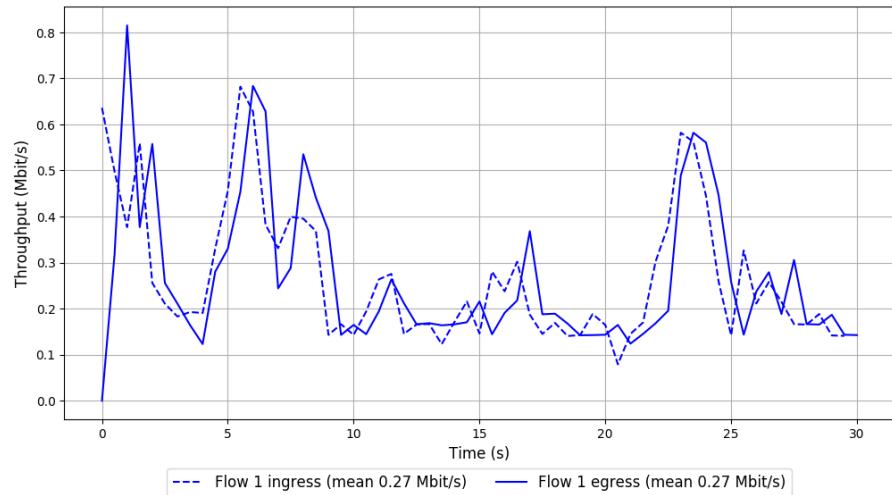


Run 4: Statistics of Sprout

```
Start at: 2018-09-06 05:55:17
End at: 2018-09-06 05:55:47
Local clock offset: -1.476 ms
Remote clock offset: -32.972 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 65.937 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 65.937 ms
Loss rate: 0.00%
```

Run 4: Report of Sprout — Data Link

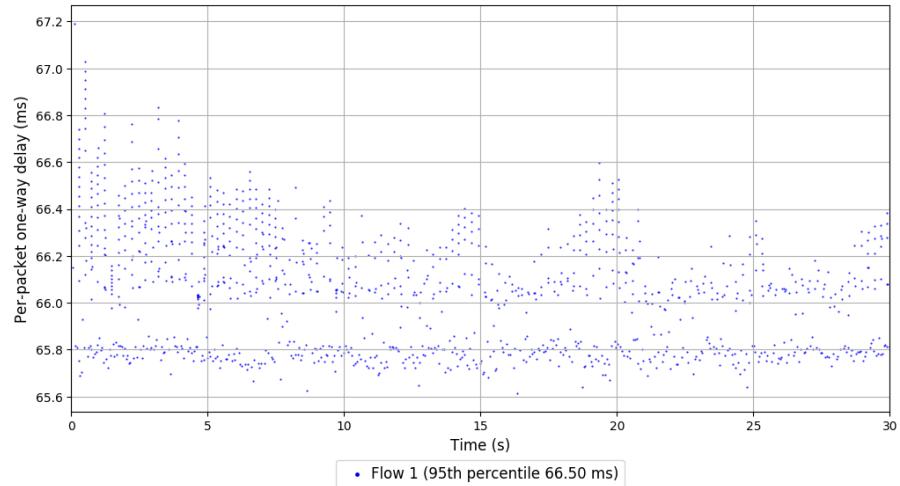
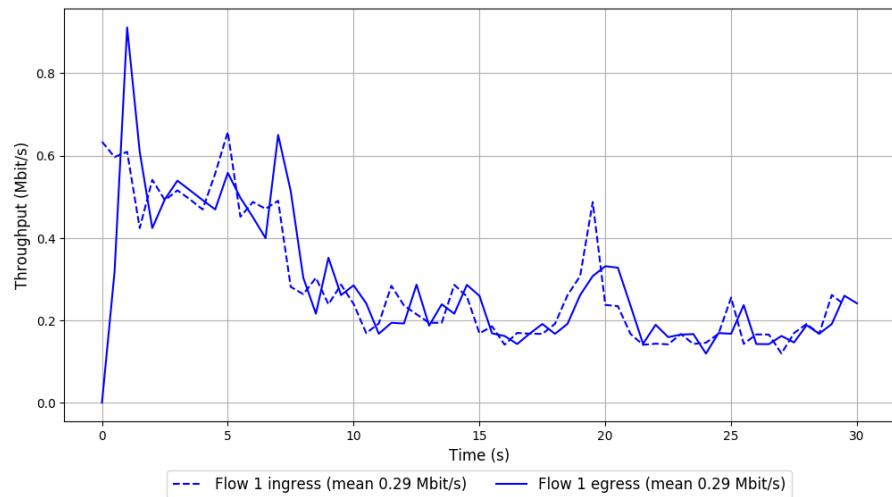


Run 5: Statistics of Sprout

```
Start at: 2018-09-06 06:24:04
End at: 2018-09-06 06:24:34
Local clock offset: -2.17 ms
Remote clock offset: -34.436 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 66.499 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 66.499 ms
Loss rate: 0.00%
```

Run 5: Report of Sprout — Data Link

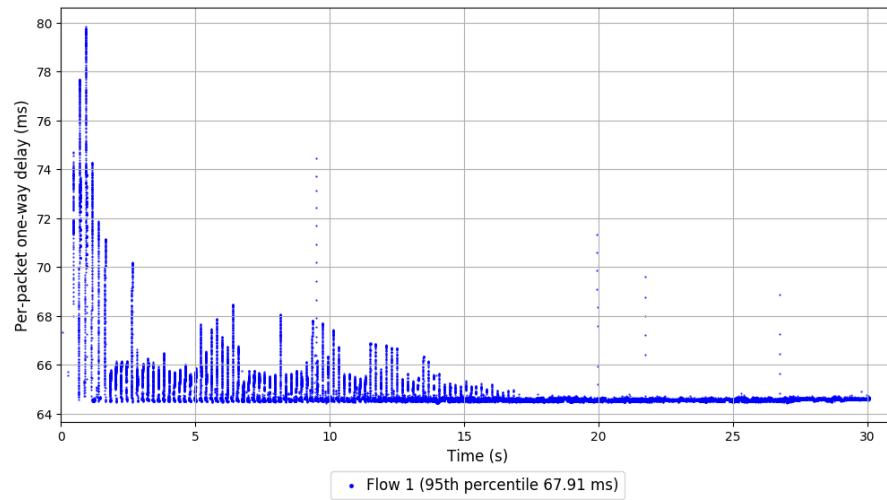
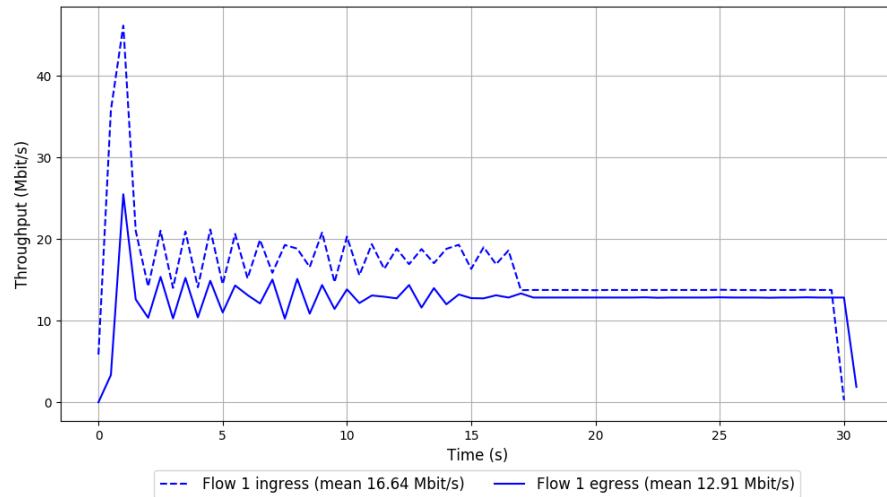


Run 1: Statistics of TaoVA-100x

```
Start at: 2018-09-06 04:54:46
End at: 2018-09-06 04:55:16
Local clock offset: -2.203 ms
Remote clock offset: -32.645 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.91 Mbit/s
95th percentile per-packet one-way delay: 67.906 ms
Loss rate: 22.46%
-- Flow 1:
Average throughput: 12.91 Mbit/s
95th percentile per-packet one-way delay: 67.906 ms
Loss rate: 22.46%
```

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

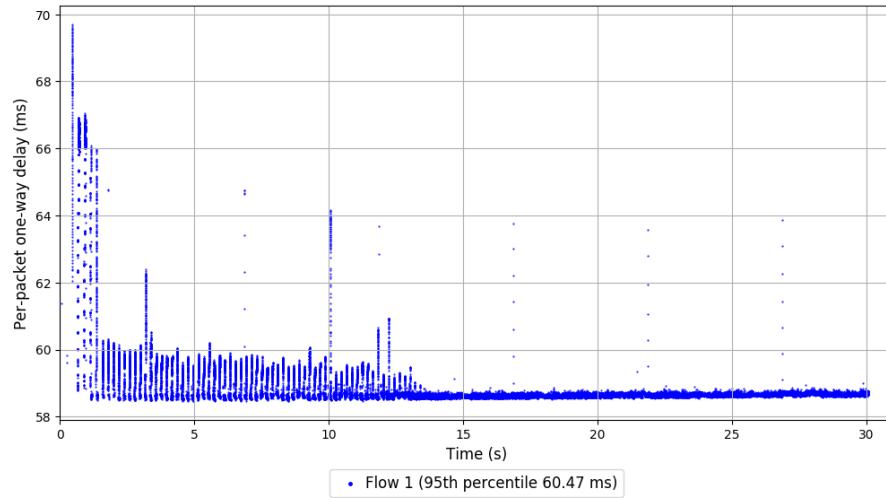
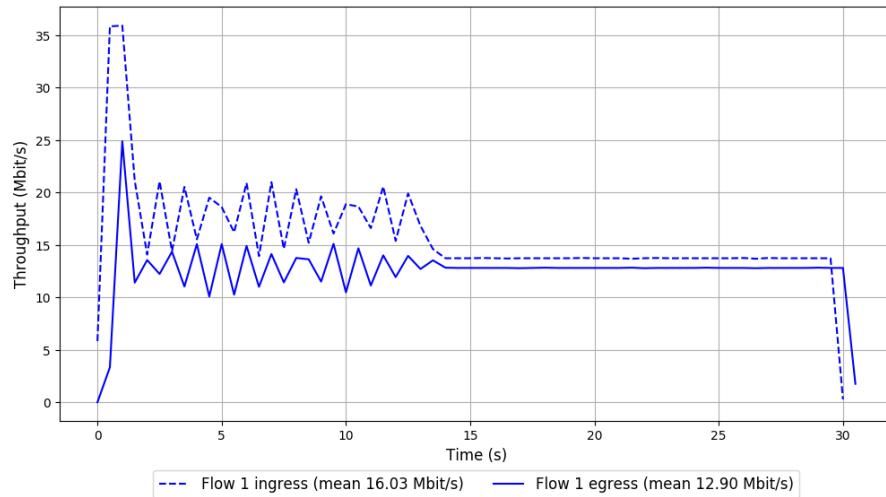


Run 2: Statistics of TaoVA-100x

```
Start at: 2018-09-06 05:17:49
End at: 2018-09-06 05:18:19
Local clock offset: -0.409 ms
Remote clock offset: -36.983 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.90 Mbit/s
95th percentile per-packet one-way delay: 60.474 ms
Loss rate: 19.54%
-- Flow 1:
Average throughput: 12.90 Mbit/s
95th percentile per-packet one-way delay: 60.474 ms
Loss rate: 19.54%
```

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

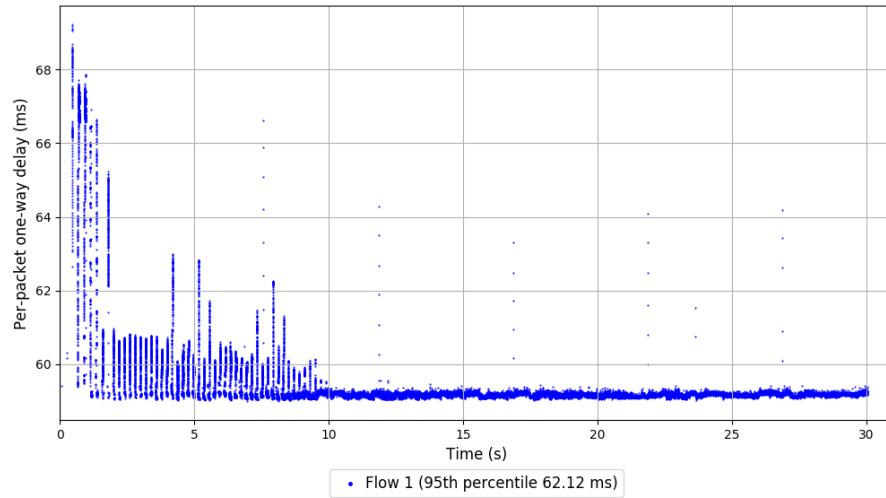
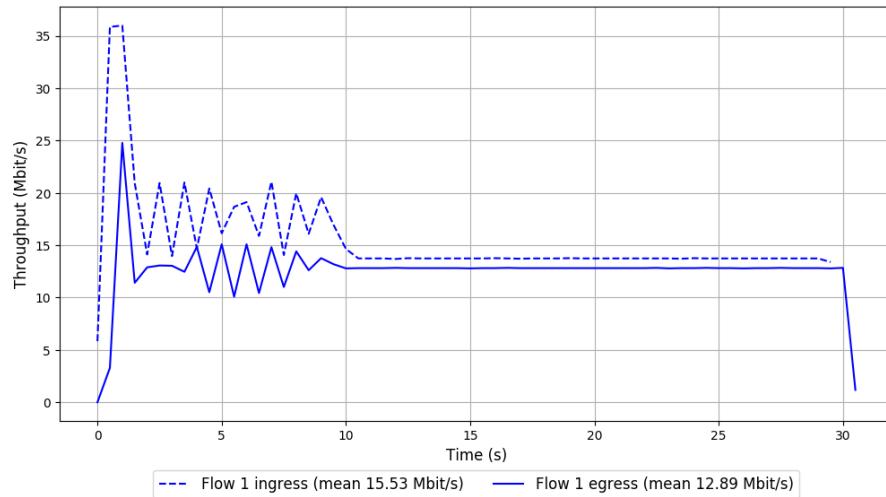


Run 3: Statistics of TaoVA-100x

```
Start at: 2018-09-06 05:41:01
End at: 2018-09-06 05:41:31
Local clock offset: 1.051 ms
Remote clock offset: -37.207 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.89 Mbit/s
95th percentile per-packet one-way delay: 62.125 ms
Loss rate: 16.97%
-- Flow 1:
Average throughput: 12.89 Mbit/s
95th percentile per-packet one-way delay: 62.125 ms
Loss rate: 16.97%
```

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

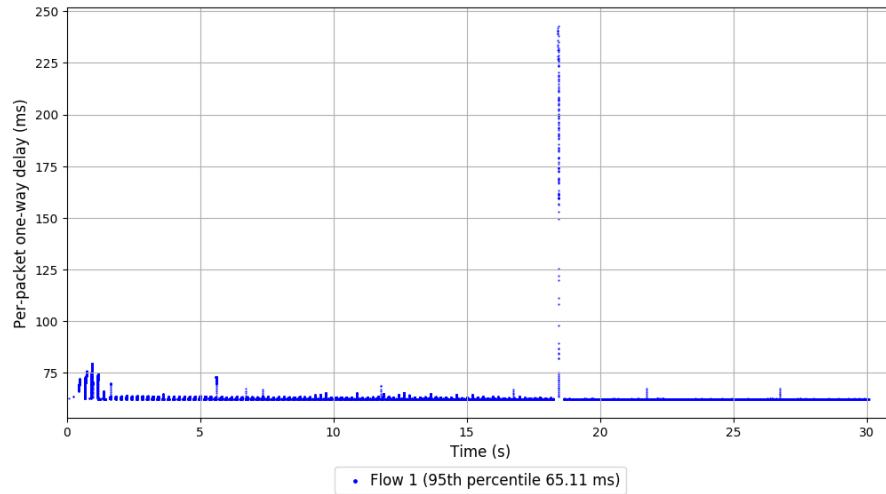
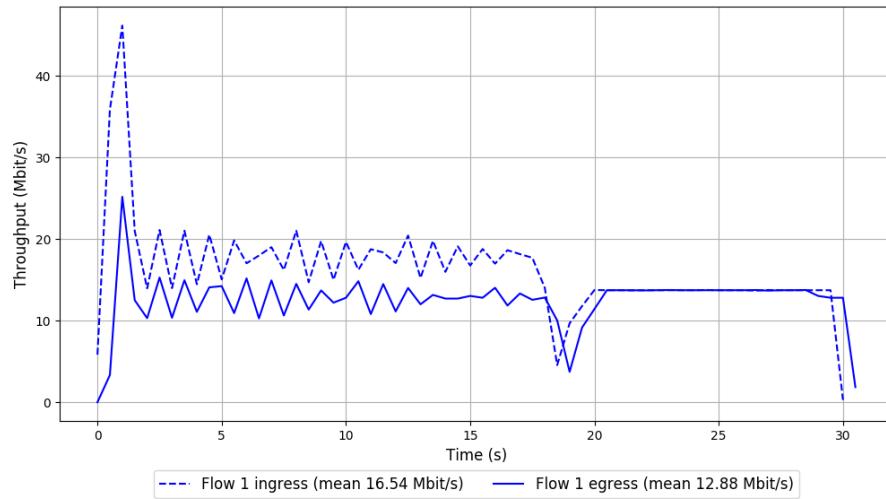


Run 4: Statistics of TaoVA-100x

```
Start at: 2018-09-06 06:04:10
End at: 2018-09-06 06:04:41
Local clock offset: -0.008 ms
Remote clock offset: -33.971 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.88 Mbit/s
95th percentile per-packet one-way delay: 65.114 ms
Loss rate: 22.15%
-- Flow 1:
Average throughput: 12.88 Mbit/s
95th percentile per-packet one-way delay: 65.114 ms
Loss rate: 22.15%
```

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

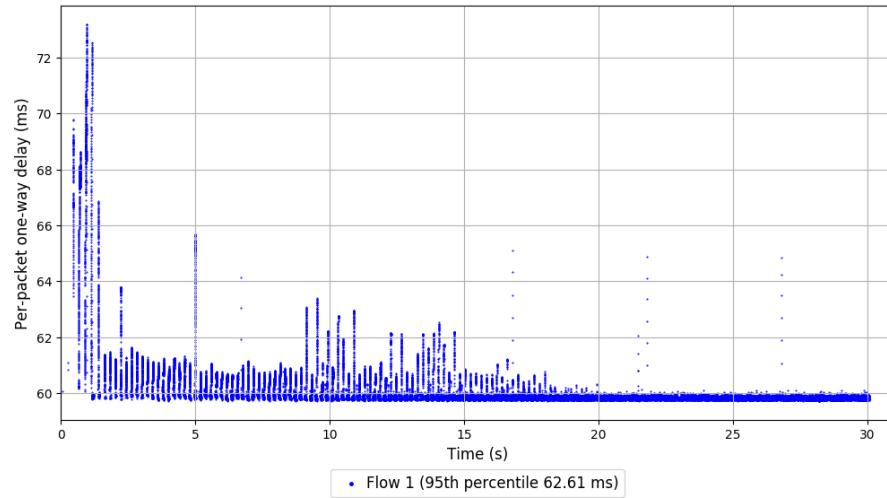
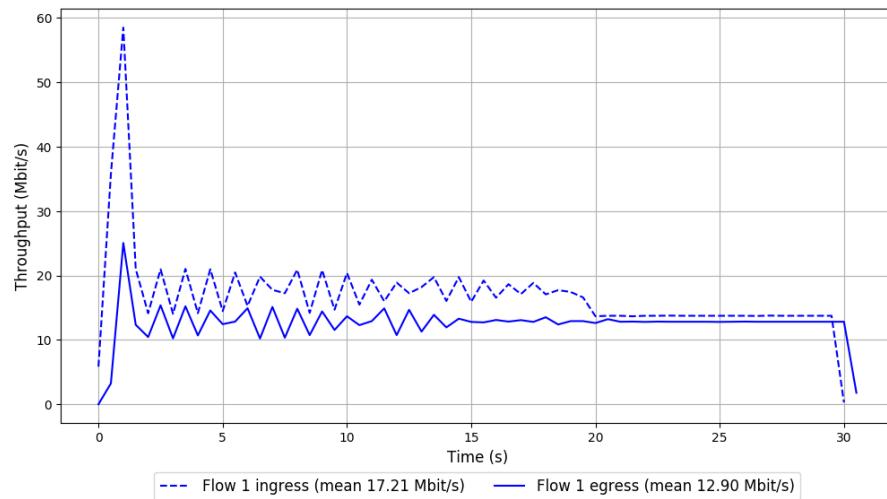


Run 5: Statistics of TaoVA-100x

```
Start at: 2018-09-06 06:33:03
End at: 2018-09-06 06:33:33
Local clock offset: -1.091 ms
Remote clock offset: -36.72 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.90 Mbit/s
95th percentile per-packet one-way delay: 62.614 ms
Loss rate: 25.07%
-- Flow 1:
Average throughput: 12.90 Mbit/s
95th percentile per-packet one-way delay: 62.614 ms
Loss rate: 25.07%
```

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

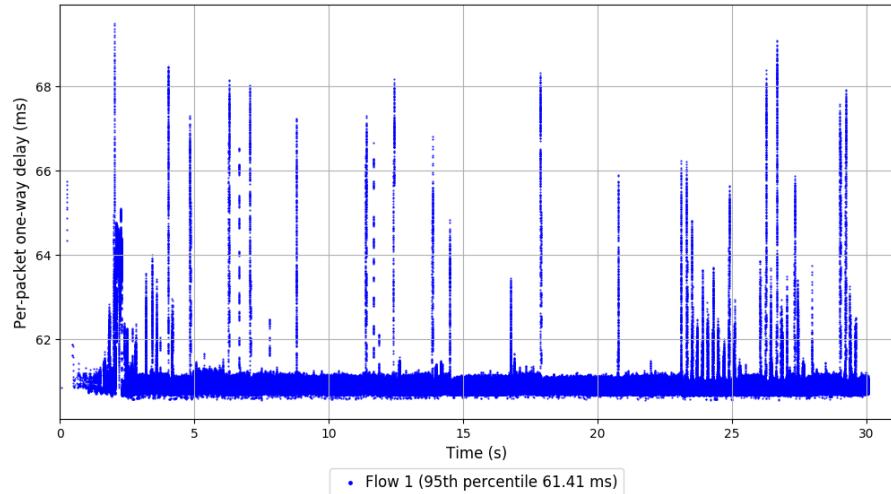
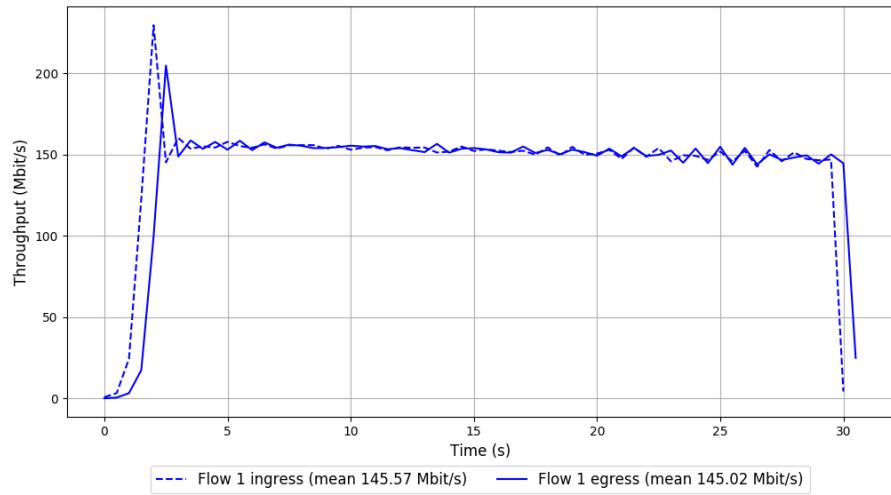


Run 1: Statistics of TCP Vegas

```
Start at: 2018-09-06 05:00:01
End at: 2018-09-06 05:00:31
Local clock offset: -2.269 ms
Remote clock offset: -36.29 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 145.02 Mbit/s
95th percentile per-packet one-way delay: 61.406 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 145.02 Mbit/s
95th percentile per-packet one-way delay: 61.406 ms
Loss rate: 0.38%
```

Run 1: Report of TCP Vegas — Data Link

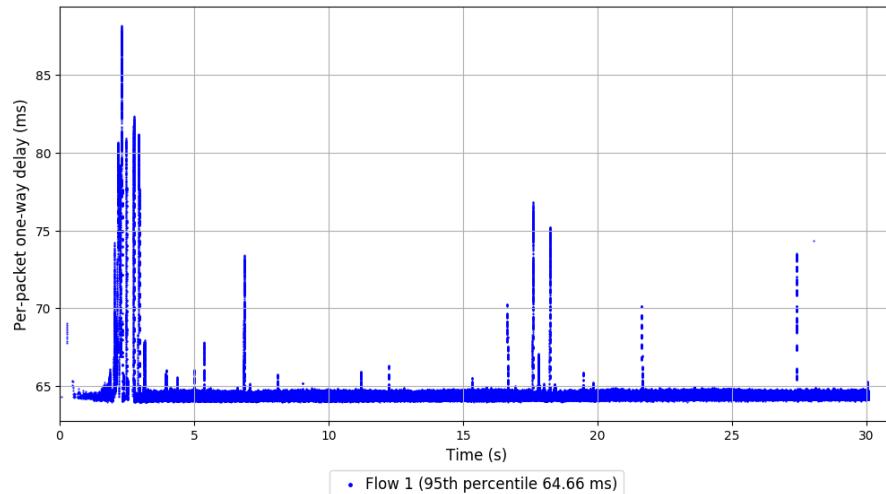
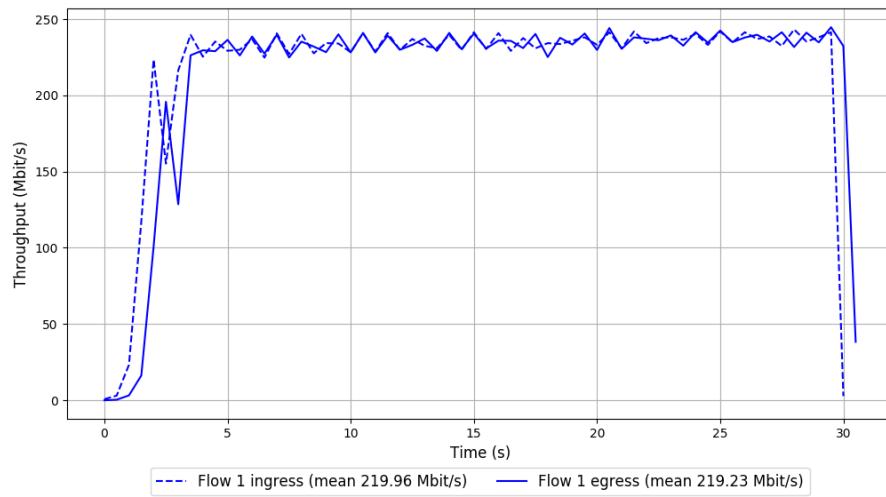


Run 2: Statistics of TCP Vegas

```
Start at: 2018-09-06 05:23:04
End at: 2018-09-06 05:23:34
Local clock offset: 2.204 ms
Remote clock offset: -32.272 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 219.23 Mbit/s
95th percentile per-packet one-way delay: 64.663 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 219.23 Mbit/s
95th percentile per-packet one-way delay: 64.663 ms
Loss rate: 0.33%
```

Run 2: Report of TCP Vegas — Data Link

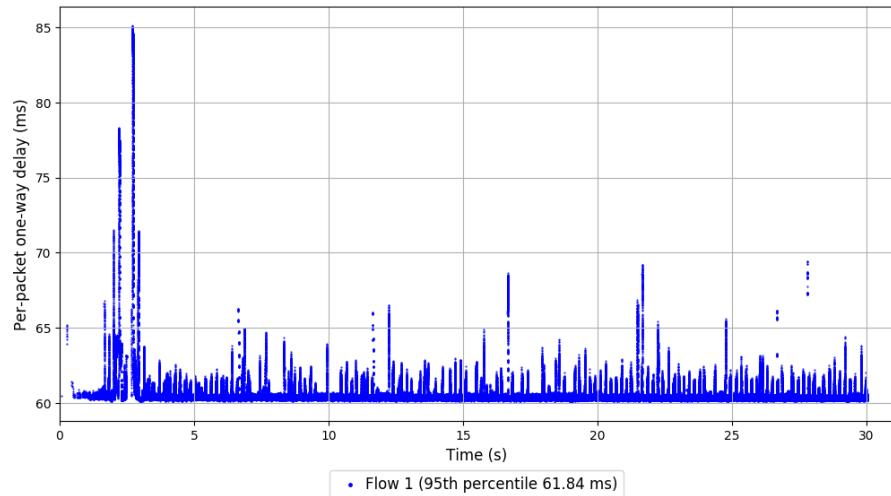
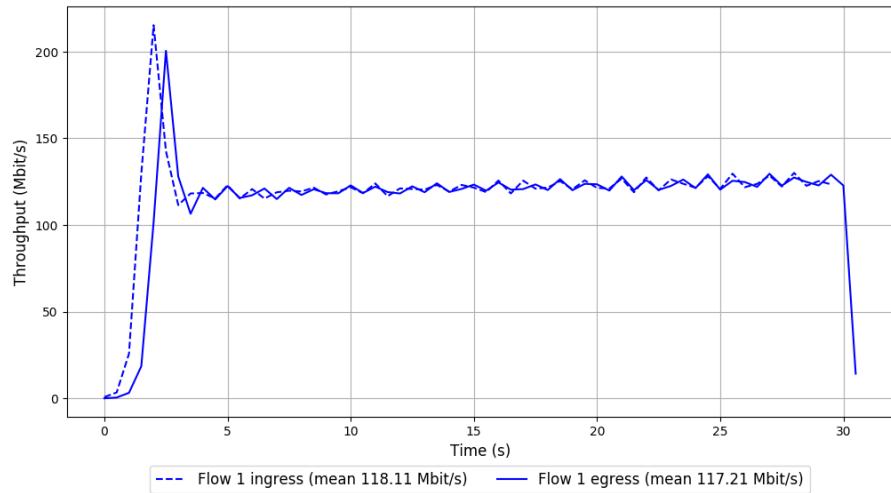


Run 3: Statistics of TCP Vegas

```
Start at: 2018-09-06 05:46:17
End at: 2018-09-06 05:46:47
Local clock offset: 3.449 ms
Remote clock offset: -33.499 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 117.21 Mbit/s
95th percentile per-packet one-way delay: 61.845 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 117.21 Mbit/s
95th percentile per-packet one-way delay: 61.845 ms
Loss rate: 0.76%
```

Run 3: Report of TCP Vegas — Data Link

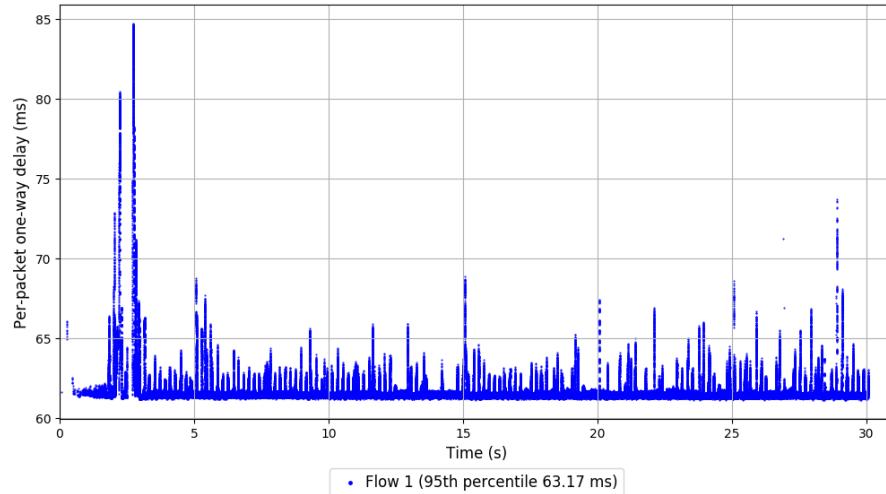
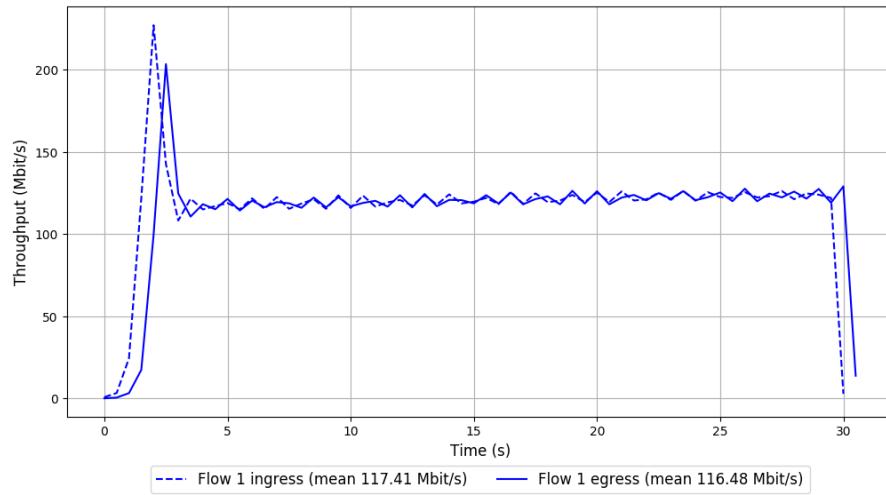


Run 4: Statistics of TCP Vegas

```
Start at: 2018-09-06 06:15:05
End at: 2018-09-06 06:15:35
Local clock offset: 0.204 ms
Remote clock offset: -34.555 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 116.48 Mbit/s
95th percentile per-packet one-way delay: 63.166 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 116.48 Mbit/s
95th percentile per-packet one-way delay: 63.166 ms
Loss rate: 0.79%
```

Run 4: Report of TCP Vegas — Data Link

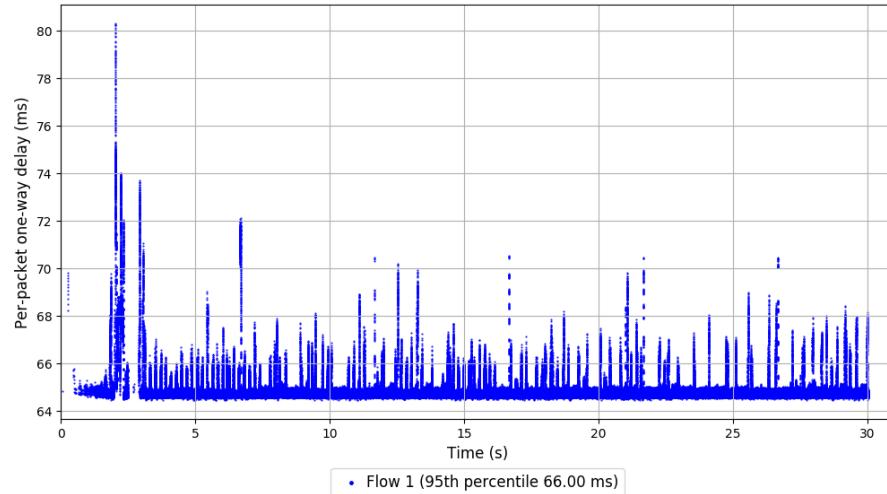
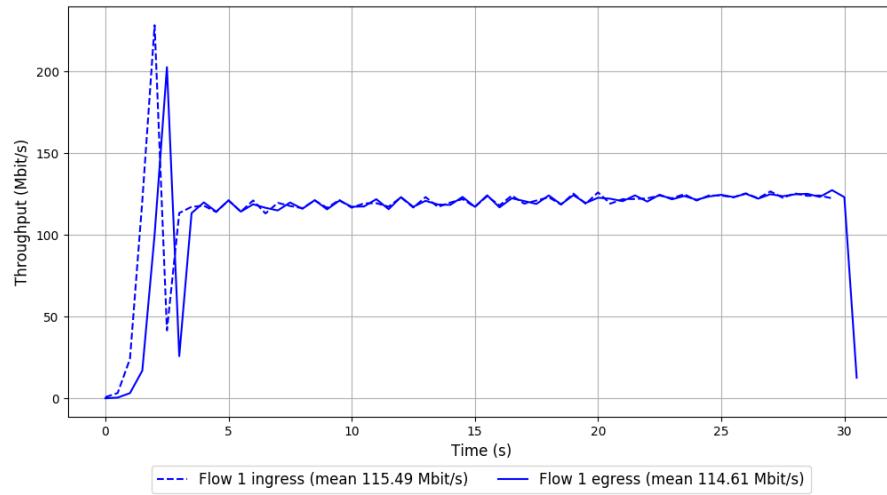


Run 5: Statistics of TCP Vegas

```
Start at: 2018-09-06 06:38:18
End at: 2018-09-06 06:38:48
Local clock offset: -0.412 ms
Remote clock offset: -31.011 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 114.61 Mbit/s
95th percentile per-packet one-way delay: 66.003 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 114.61 Mbit/s
95th percentile per-packet one-way delay: 66.003 ms
Loss rate: 0.77%
```

Run 5: Report of TCP Vegas — Data Link

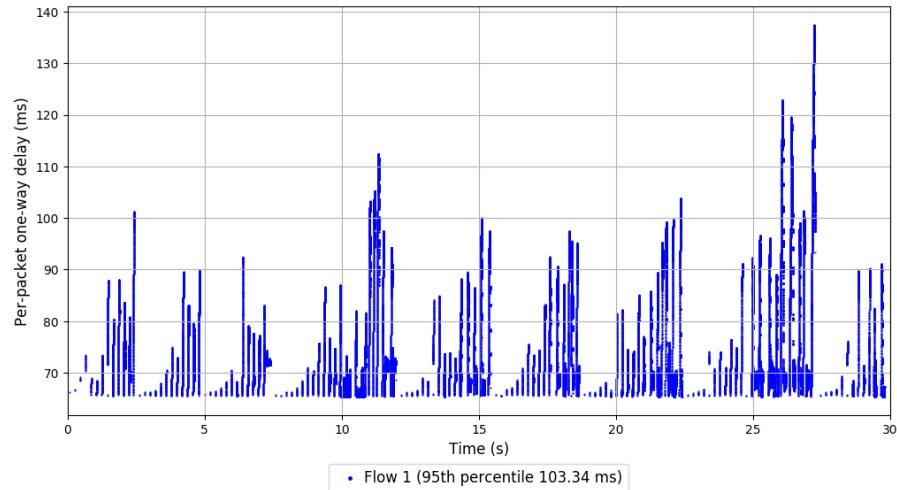
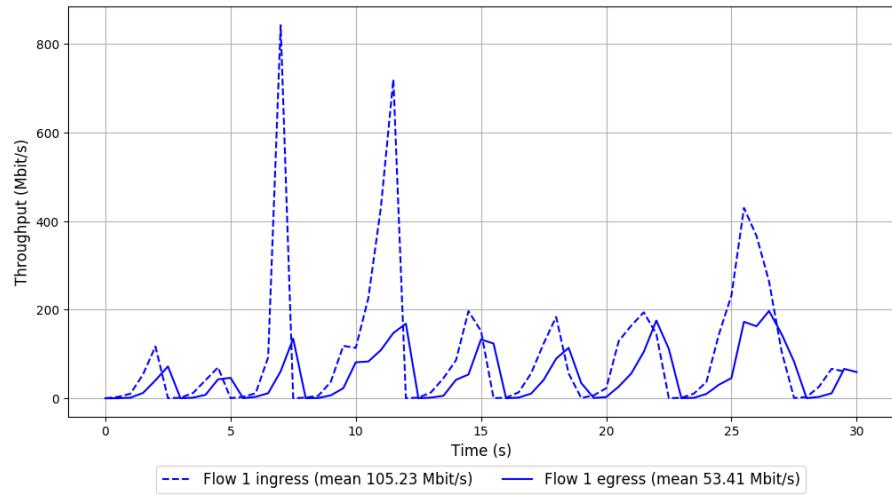


Run 1: Statistics of Verus

```
Start at: 2018-09-06 04:50:52
End at: 2018-09-06 04:51:22
Local clock offset: -1.634 ms
Remote clock offset: -33.678 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 53.41 Mbit/s
95th percentile per-packet one-way delay: 103.336 ms
Loss rate: 49.25%
-- Flow 1:
Average throughput: 53.41 Mbit/s
95th percentile per-packet one-way delay: 103.336 ms
Loss rate: 49.25%
```

Run 1: Report of Verus — Data Link

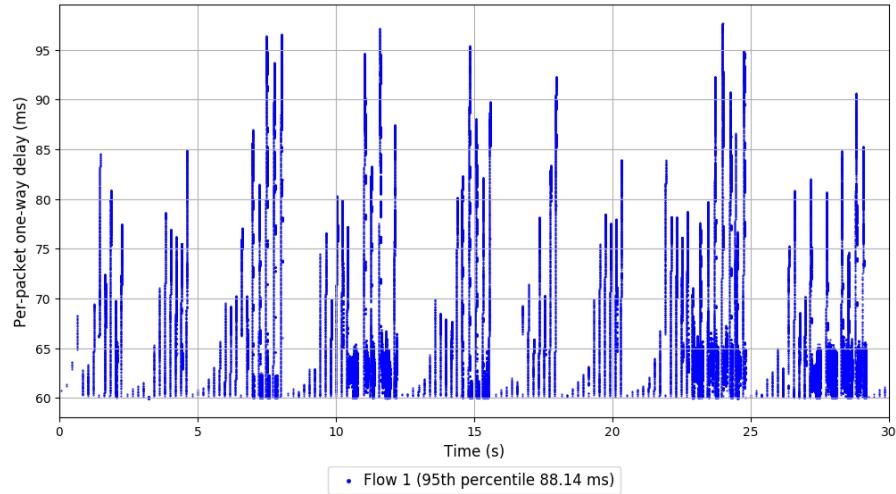
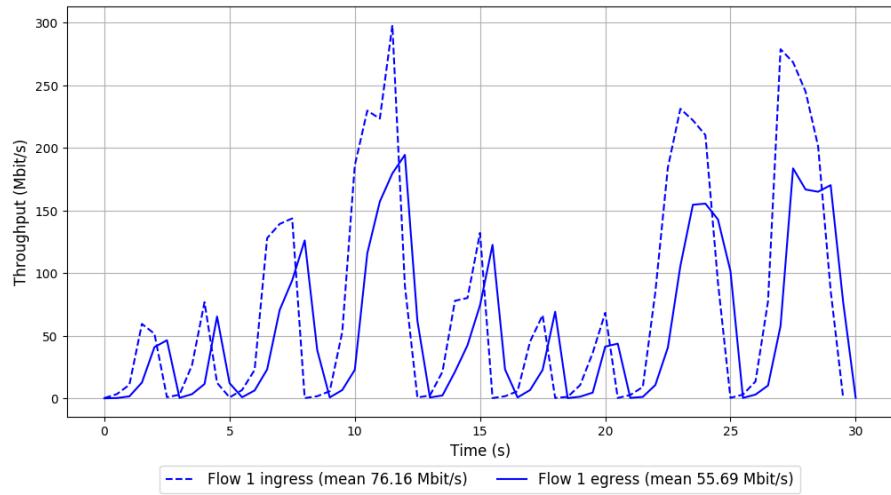


Run 2: Statistics of Verus

```
Start at: 2018-09-06 05:13:56
End at: 2018-09-06 05:14:26
Local clock offset: -0.217 ms
Remote clock offset: -34.357 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 55.69 Mbit/s
95th percentile per-packet one-way delay: 88.138 ms
Loss rate: 26.88%
-- Flow 1:
Average throughput: 55.69 Mbit/s
95th percentile per-packet one-way delay: 88.138 ms
Loss rate: 26.88%
```

Run 2: Report of Verus — Data Link

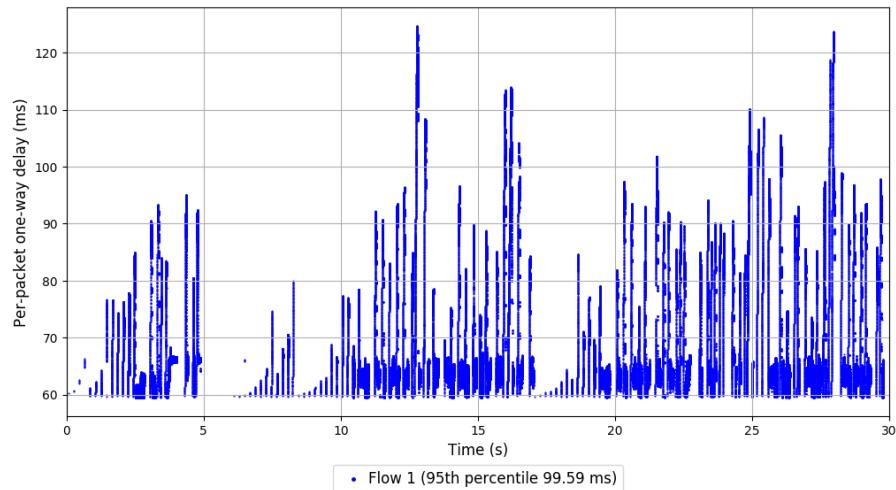
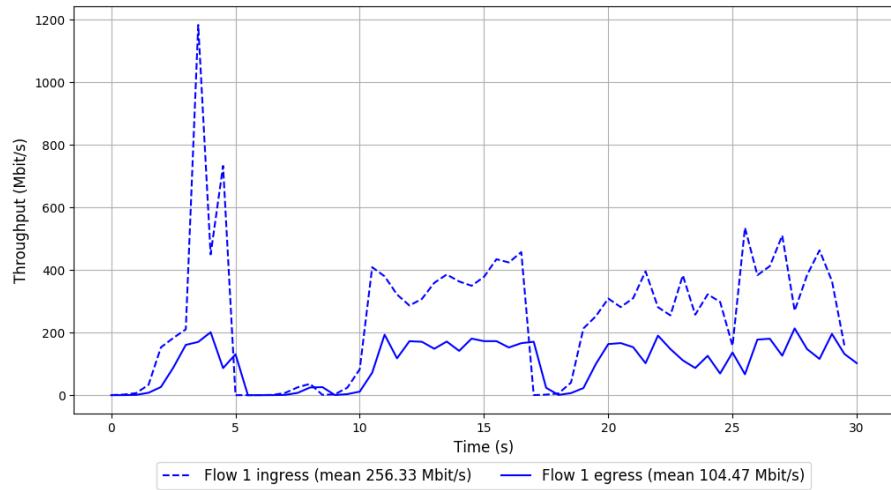


Run 3: Statistics of Verus

```
Start at: 2018-09-06 05:37:03
End at: 2018-09-06 05:37:33
Local clock offset: 2.875 ms
Remote clock offset: -37.117 ms

# Below is generated by plot.py at 2018-09-06 07:04:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 104.47 Mbit/s
95th percentile per-packet one-way delay: 99.588 ms
Loss rate: 59.24%
-- Flow 1:
Average throughput: 104.47 Mbit/s
95th percentile per-packet one-way delay: 99.588 ms
Loss rate: 59.24%
```

Run 3: Report of Verus — Data Link

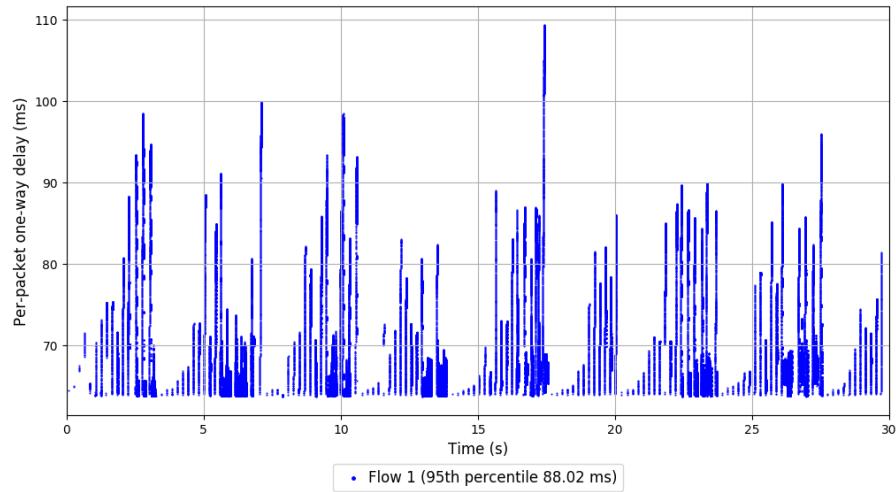
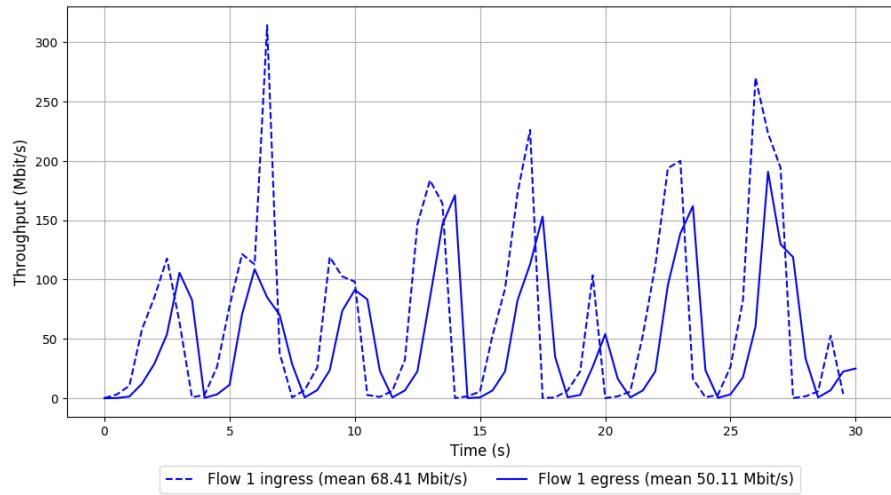


Run 4: Statistics of Verus

```
Start at: 2018-09-06 06:00:18
End at: 2018-09-06 06:00:48
Local clock offset: 2.311 ms
Remote clock offset: -32.777 ms

# Below is generated by plot.py at 2018-09-06 07:04:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.11 Mbit/s
95th percentile per-packet one-way delay: 88.024 ms
Loss rate: 26.72%
-- Flow 1:
Average throughput: 50.11 Mbit/s
95th percentile per-packet one-way delay: 88.024 ms
Loss rate: 26.72%
```

Run 4: Report of Verus — Data Link

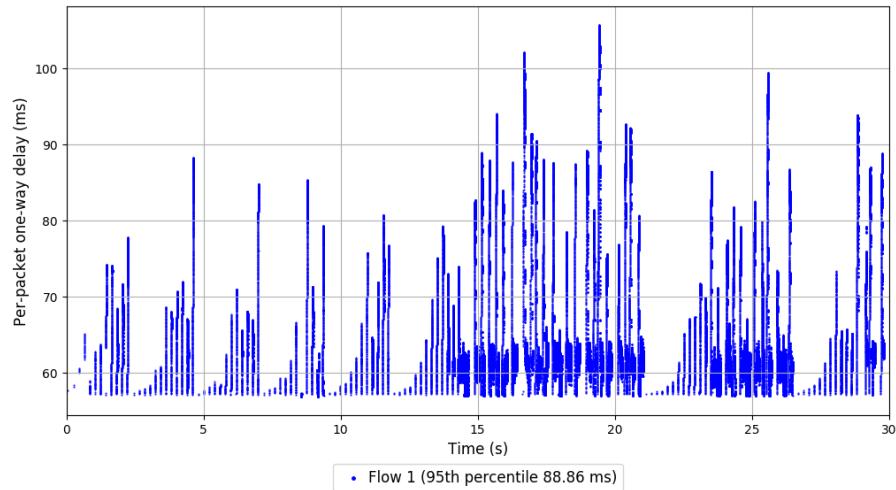
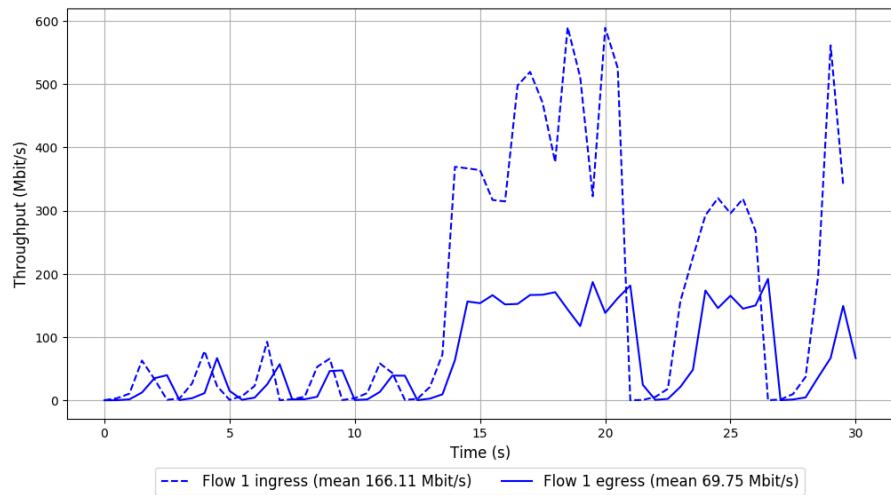


Run 5: Statistics of Verus

```
Start at: 2018-09-06 06:29:06
End at: 2018-09-06 06:29:36
Local clock offset: 1.807 ms
Remote clock offset: -36.935 ms

# Below is generated by plot.py at 2018-09-06 07:04:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 69.75 Mbit/s
95th percentile per-packet one-way delay: 88.856 ms
Loss rate: 58.00%
-- Flow 1:
Average throughput: 69.75 Mbit/s
95th percentile per-packet one-way delay: 88.856 ms
Loss rate: 58.00%
```

Run 5: Report of Verus — Data Link

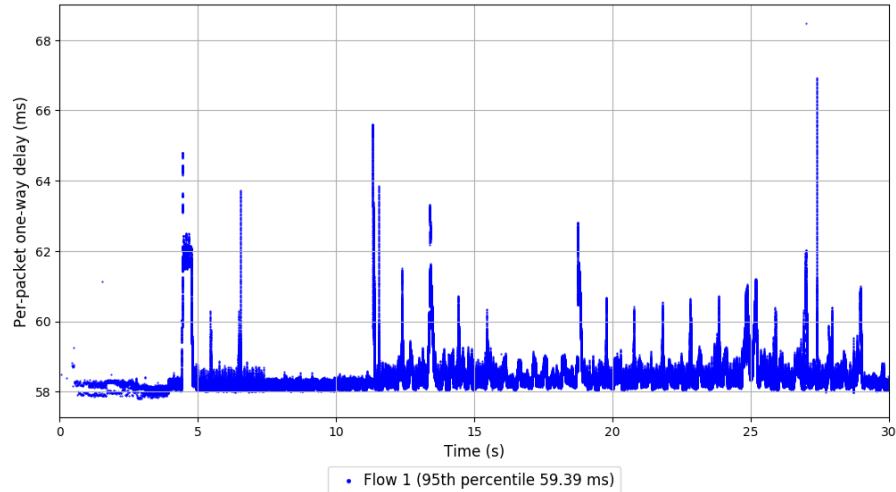
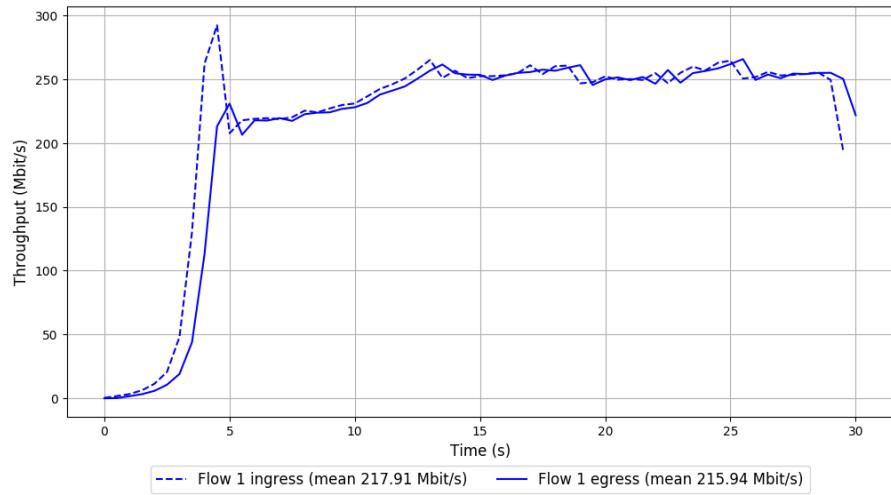


```
Run 1: Statistics of PCC-Vivace
```

```
Start at: 2018-09-06 04:57:10
End at: 2018-09-06 04:57:40
Local clock offset: 1.327 ms
Remote clock offset: -35.262 ms

# Below is generated by plot.py at 2018-09-06 07:05:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 215.94 Mbit/s
95th percentile per-packet one-way delay: 59.392 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 215.94 Mbit/s
95th percentile per-packet one-way delay: 59.392 ms
Loss rate: 0.90%
```

Run 1: Report of PCC-Vivace — Data Link

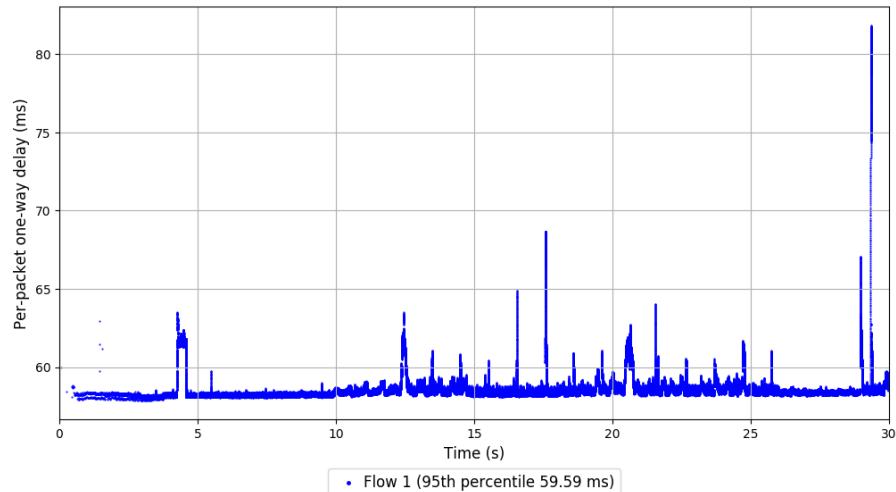
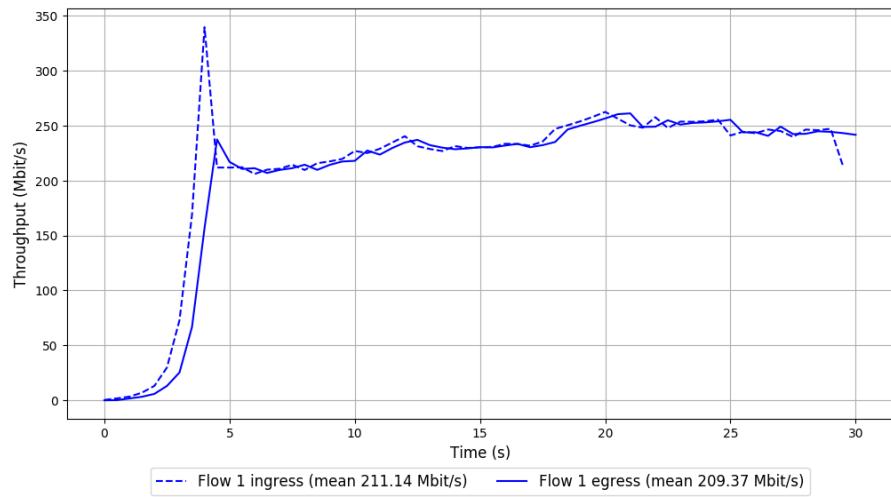


Run 2: Statistics of PCC-Vivace

```
Start at: 2018-09-06 05:20:13
End at: 2018-09-06 05:20:43
Local clock offset: 0.722 ms
Remote clock offset: -36.927 ms

# Below is generated by plot.py at 2018-09-06 07:05:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 209.37 Mbit/s
95th percentile per-packet one-way delay: 59.587 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 209.37 Mbit/s
95th percentile per-packet one-way delay: 59.587 ms
Loss rate: 0.84%
```

Run 2: Report of PCC-Vivace — Data Link

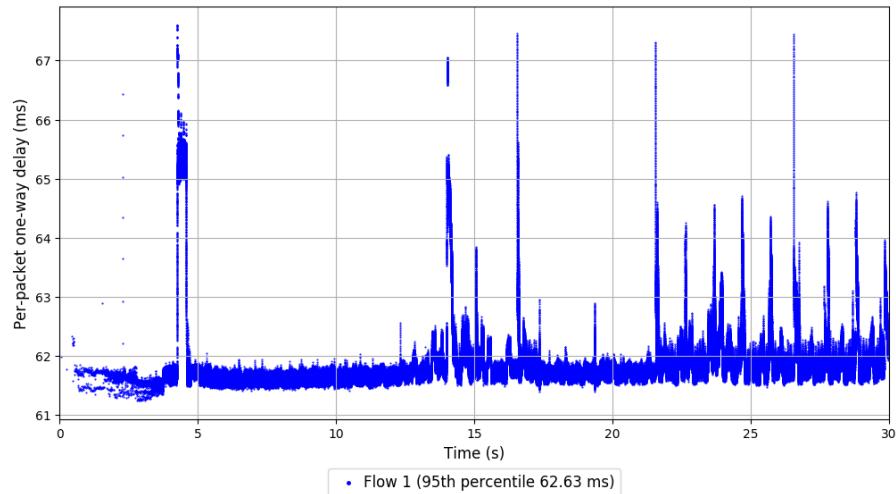
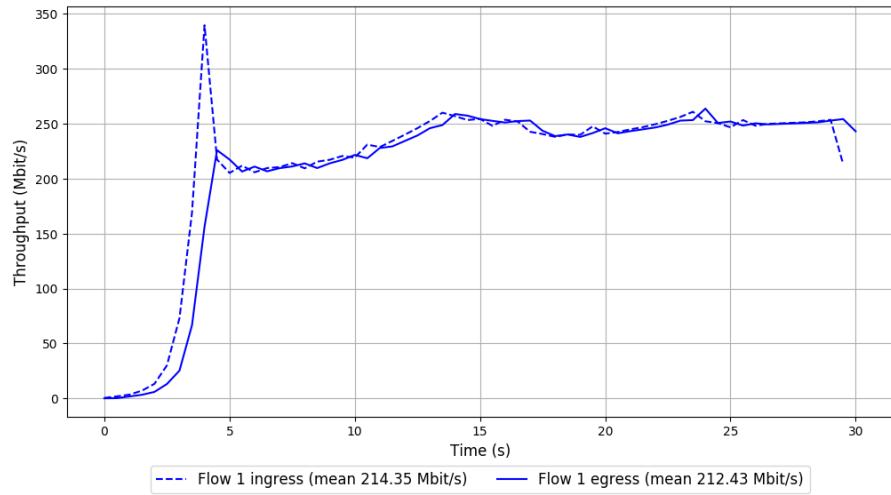


Run 3: Statistics of PCC-Vivace

```
Start at: 2018-09-06 05:43:25
End at: 2018-09-06 05:43:55
Local clock offset: 0.798 ms
Remote clock offset: -35.098 ms

# Below is generated by plot.py at 2018-09-06 07:05:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 212.43 Mbit/s
95th percentile per-packet one-way delay: 62.632 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 212.43 Mbit/s
95th percentile per-packet one-way delay: 62.632 ms
Loss rate: 0.89%
```

Run 3: Report of PCC-Vivace — Data Link

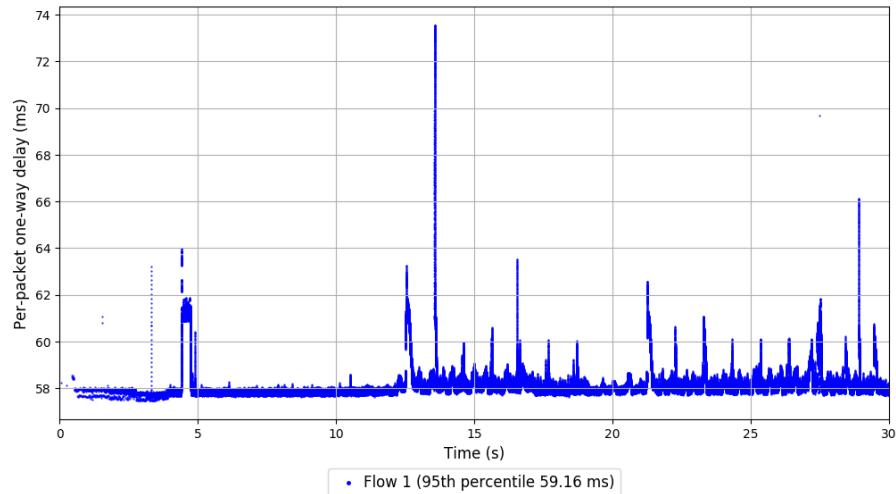
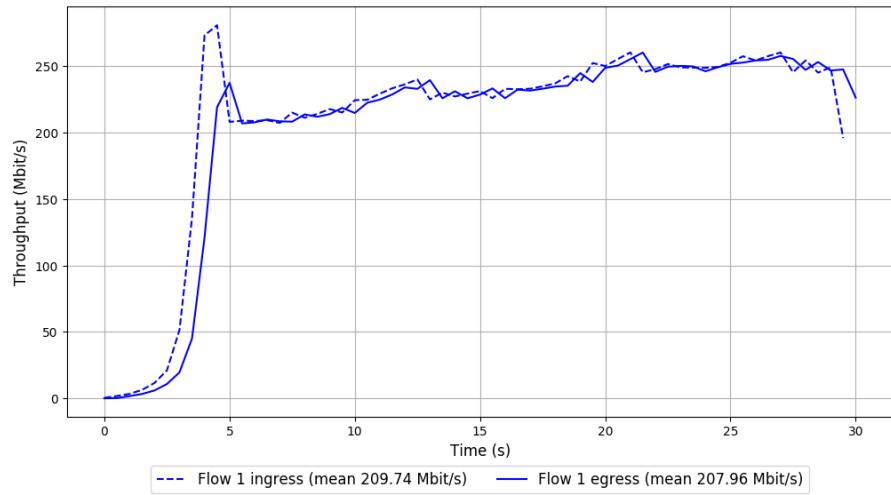


Run 4: Statistics of PCC-Vivace

```
Start at: 2018-09-06 06:12:09
End at: 2018-09-06 06:12:39
Local clock offset: 0.524 ms
Remote clock offset: -37.821 ms

# Below is generated by plot.py at 2018-09-06 07:05:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 207.96 Mbit/s
95th percentile per-packet one-way delay: 59.161 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 207.96 Mbit/s
95th percentile per-packet one-way delay: 59.161 ms
Loss rate: 0.85%
```

Run 4: Report of PCC-Vivace — Data Link

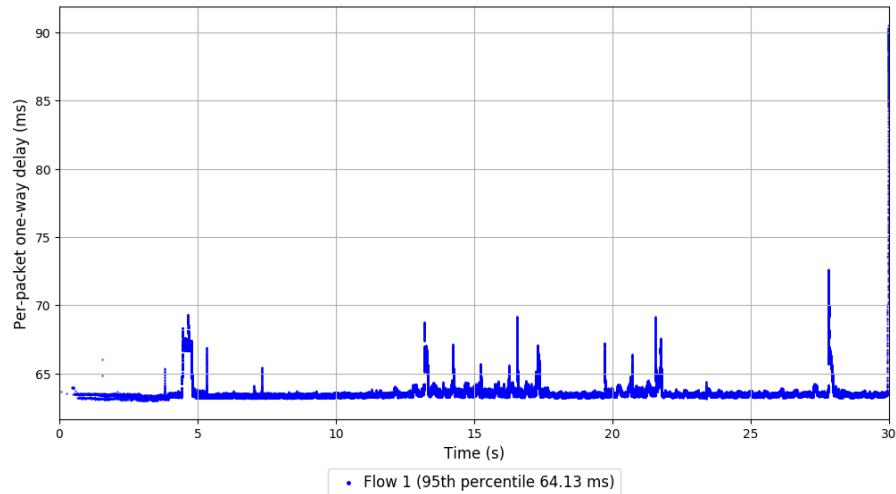
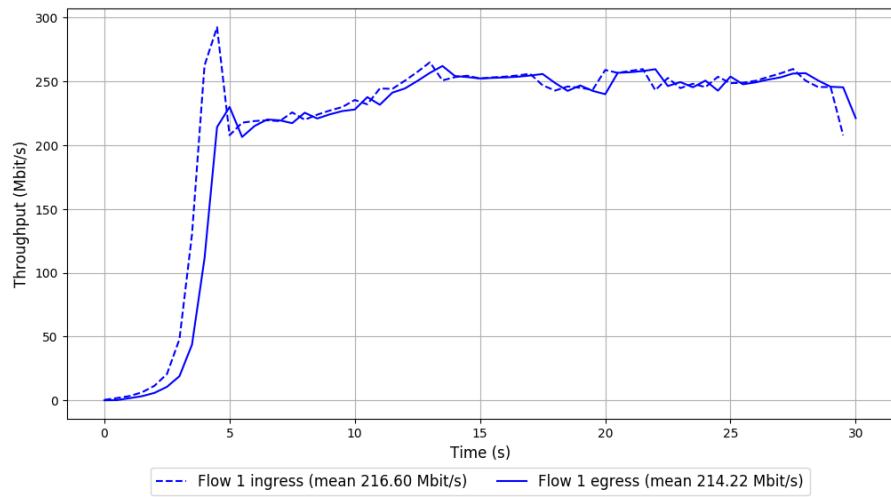


Run 5: Statistics of PCC-Vivace

```
Start at: 2018-09-06 06:35:26
End at: 2018-09-06 06:35:56
Local clock offset: -1.787 ms
Remote clock offset: -33.808 ms

# Below is generated by plot.py at 2018-09-06 07:05:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 214.22 Mbit/s
95th percentile per-packet one-way delay: 64.126 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 214.22 Mbit/s
95th percentile per-packet one-way delay: 64.126 ms
Loss rate: 1.09%
```

Run 5: Report of PCC-Vivace — Data Link

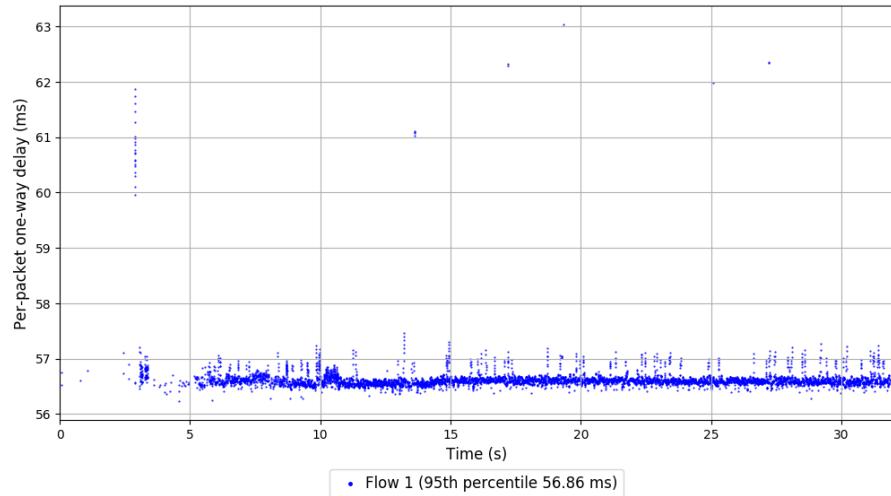
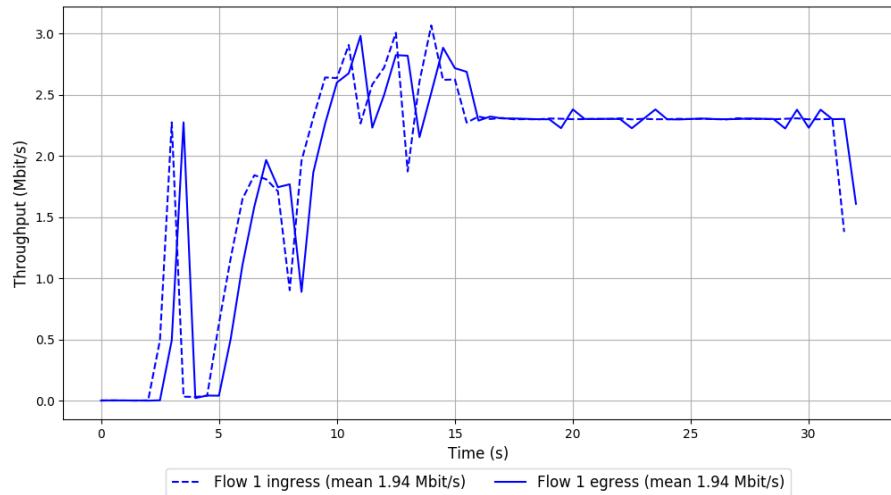


```
Run 1: Statistics of WebRTC media
```

```
Start at: 2018-09-06 04:44:38
End at: 2018-09-06 04:45:08
Local clock offset: -1.634 ms
Remote clock offset: -39.625 ms

# Below is generated by plot.py at 2018-09-06 07:05:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 56.863 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 56.863 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link

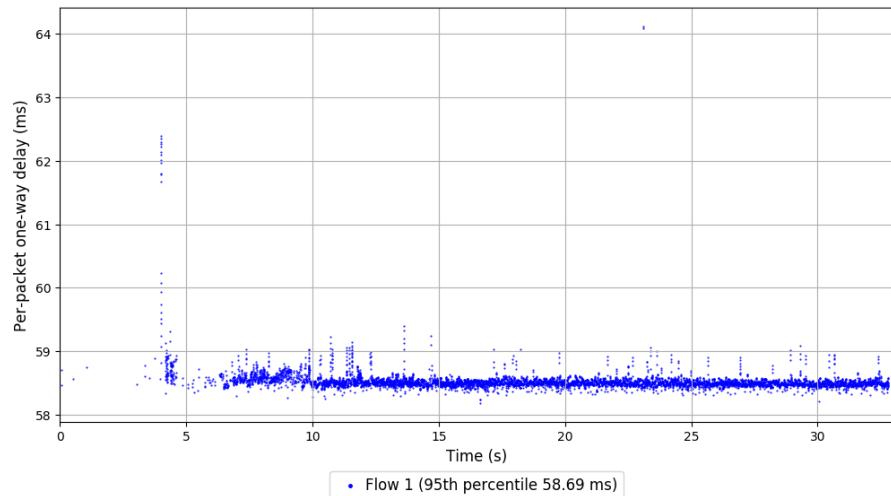
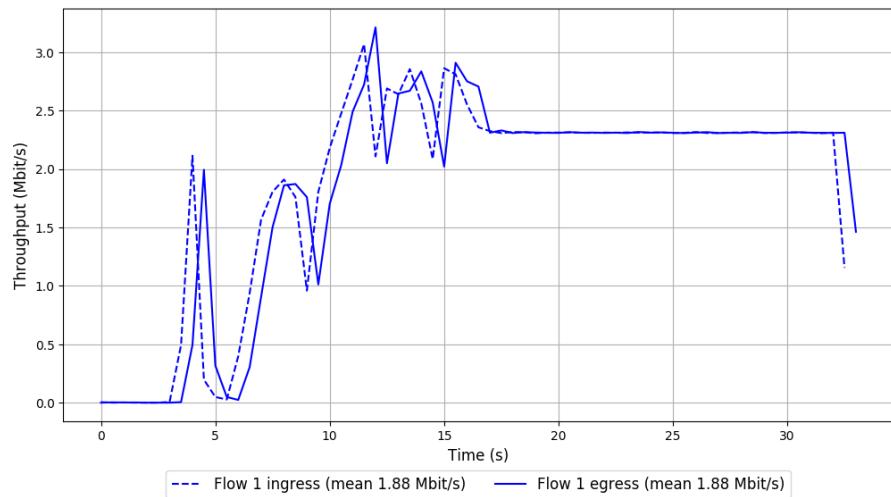


Run 2: Statistics of WebRTC media

```
Start at: 2018-09-06 05:07:47
End at: 2018-09-06 05:08:17
Local clock offset: -1.275 ms
Remote clock offset: -37.206 ms

# Below is generated by plot.py at 2018-09-06 07:05:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.88 Mbit/s
95th percentile per-packet one-way delay: 58.690 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.88 Mbit/s
95th percentile per-packet one-way delay: 58.690 ms
Loss rate: 0.00%
```

Run 2: Report of WebRTC media — Data Link

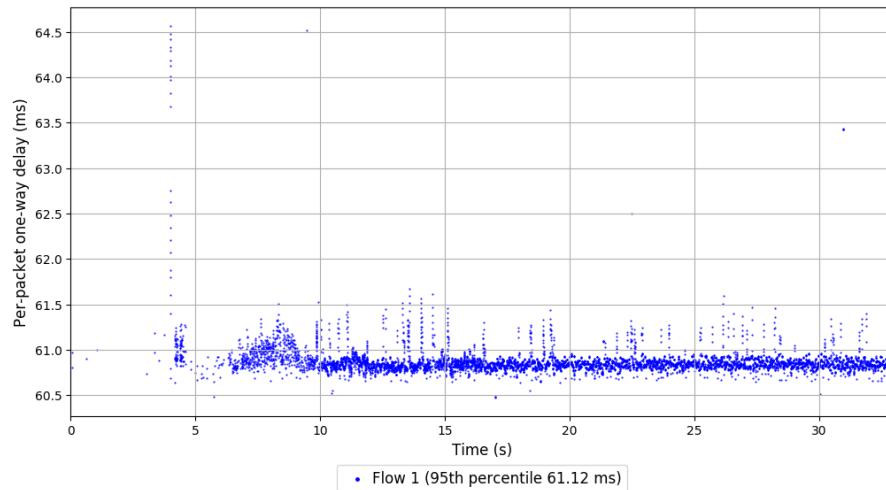
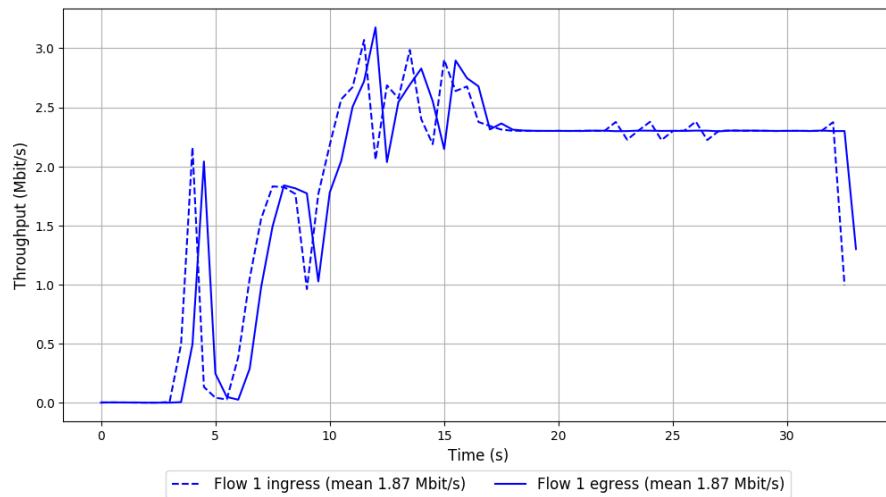


Run 3: Statistics of WebRTC media

```
Start at: 2018-09-06 05:30:53
End at: 2018-09-06 05:31:23
Local clock offset: 1.079 ms
Remote clock offset: -35.041 ms

# Below is generated by plot.py at 2018-09-06 07:05:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 61.118 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 61.118 ms
Loss rate: 0.00%
```

Run 3: Report of WebRTC media — Data Link

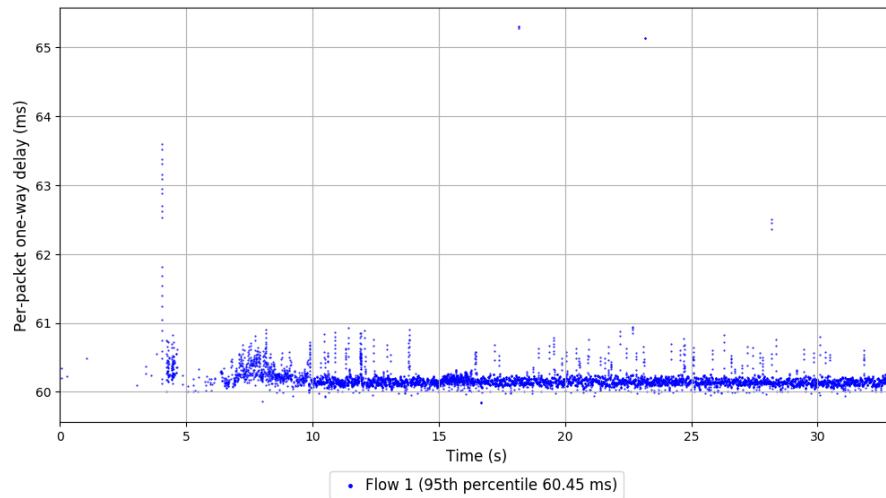
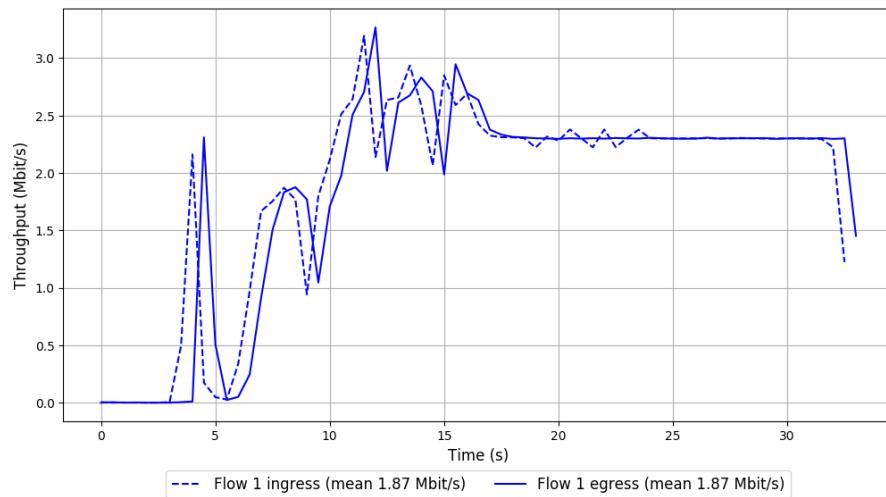


Run 4: Statistics of WebRTC media

```
Start at: 2018-09-06 05:54:07
End at: 2018-09-06 05:54:37
Local clock offset: -0.694 ms
Remote clock offset: -37.126 ms

# Below is generated by plot.py at 2018-09-06 07:05:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 60.451 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 60.451 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

```
Start at: 2018-09-06 06:22:53
End at: 2018-09-06 06:23:23
Local clock offset: -3.147 ms
Remote clock offset: -34.752 ms

# Below is generated by plot.py at 2018-09-06 07:05:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 64.780 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 64.780 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link

