

Pantheon Report

Generated at 2018-09-06 06:27:18 (UTC).

Data path: AWS India 1 on `ens5` (*local*) → India on `em1` (*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.

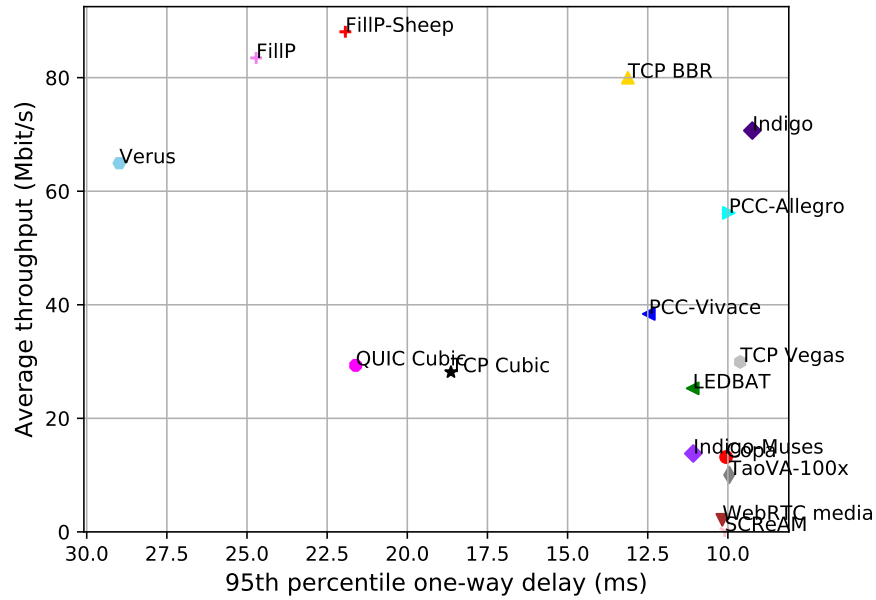
System info:

```
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
```

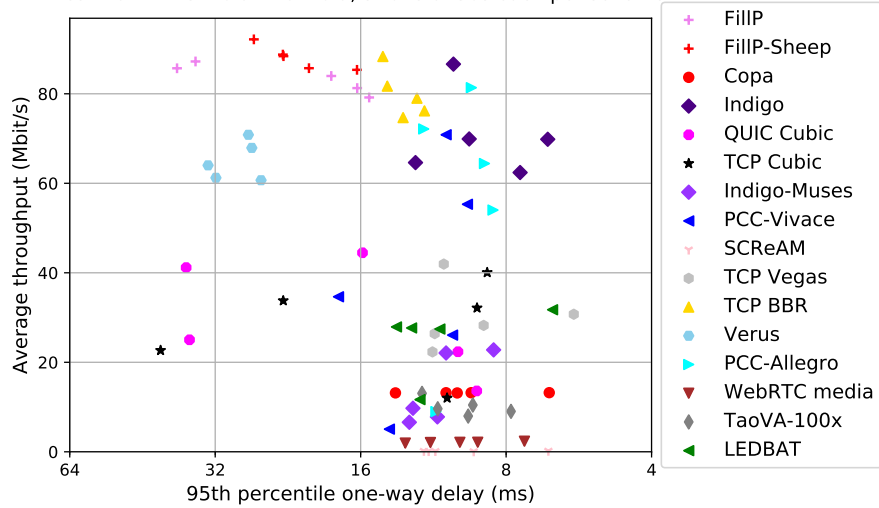
Git summary:

```
branch: muses @ f392ce15d580343f4432c3d7e068b3290f03eb4a
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf5e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ a28d20fb82a95a965a3da65fd1eb71b8994e9b84
third_party/pantheon-tunnel @ cbfce6db5ff5740d4fe1771f813cd646339e1952
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 1 to India, 5 runs of 30s each per scheme
(mean of all runs by scheme)



test from AWS India 1 to India, 5 runs of 30s each per scheme



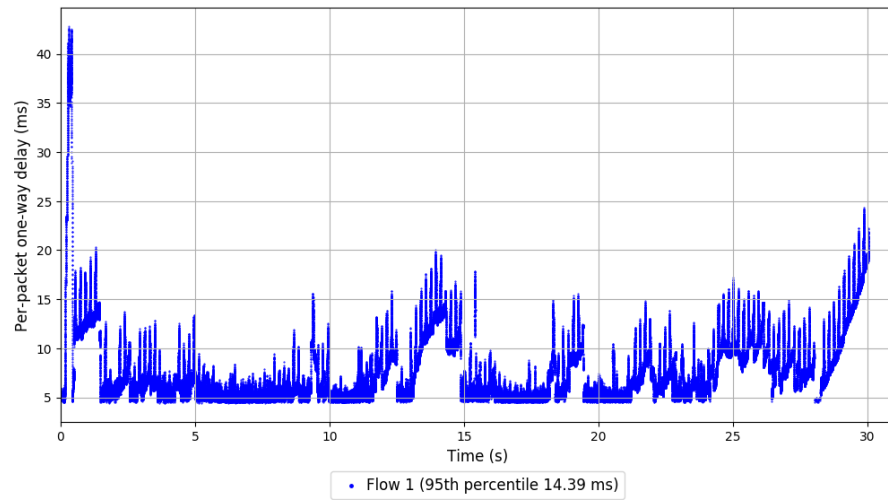
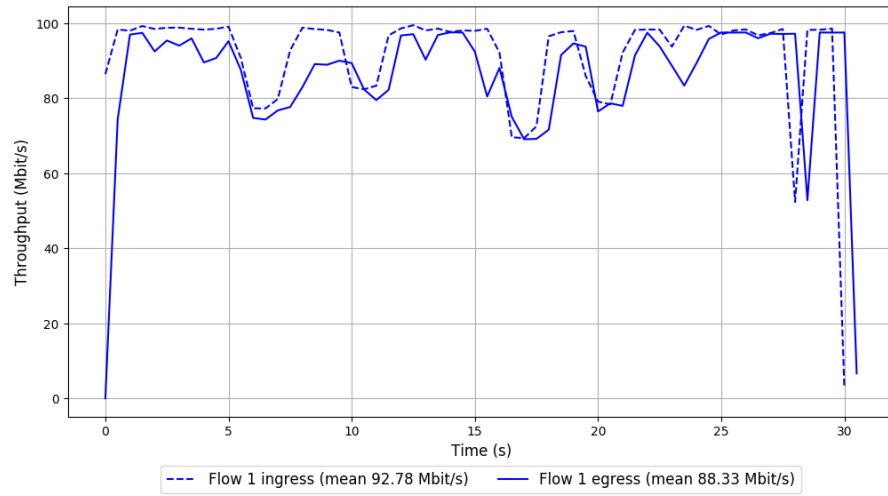
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	79.99	13.12	8.99
Copa	5	13.18	10.05	45.51
TCP Cubic	5	28.13	18.64	0.41
FillP	5	83.47	24.71	13.07
FillP-Sheep	5	88.08	21.93	9.87
Indigo	5	70.68	9.24	8.03
LEDBAT	5	25.28	11.10	0.40
Indigo-Muses	5	13.80	11.08	2.20
PCC-Allegro	5	56.18	9.97	5.63
PCC-Expr	0	N/A	N/A	N/A
QUIC Cubic	5	29.33	21.61	1.41
SCReAM	5	0.16	10.10	0.31
Sprout	0	N/A	N/A	N/A
TaoVA-100x	5	10.03	9.96	74.29
TCP Vegas	5	29.93	9.61	0.22
Verus	5	64.93	28.98	6.13
PCC-Vivace	5	38.39	12.47	3.98
WebRTC media	5	2.13	10.17	0.32

Run 1: Statistics of TCP BBR

Start at: 2018-09-06 04:52:34
End at: 2018-09-06 04:53:04
Local clock offset: -2.167 ms
Remote clock offset: -4.014 ms

Below is generated by plot.py at 2018-09-06 06:22:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 88.33 Mbit/s
95th percentile per-packet one-way delay: 14.393 ms
Loss rate: 4.74%
-- Flow 1:
Average throughput: 88.33 Mbit/s
95th percentile per-packet one-way delay: 14.393 ms
Loss rate: 4.74%

Run 1: Report of TCP BBR — Data Link

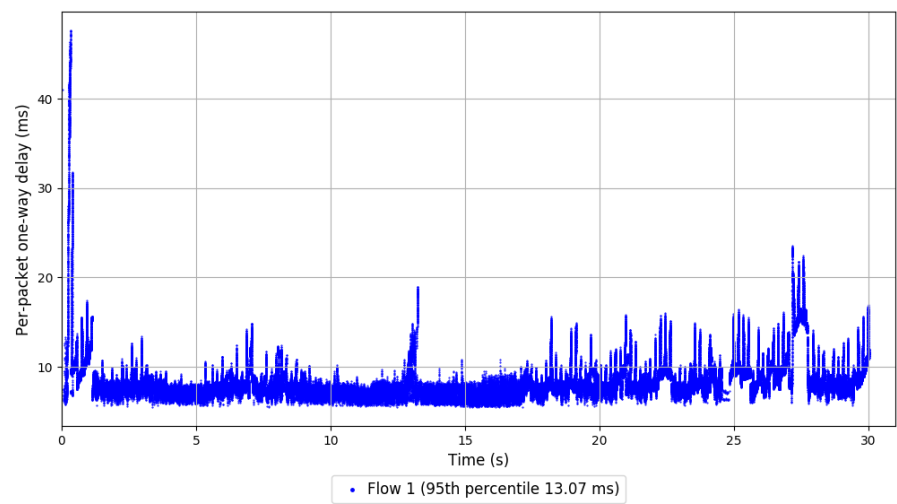
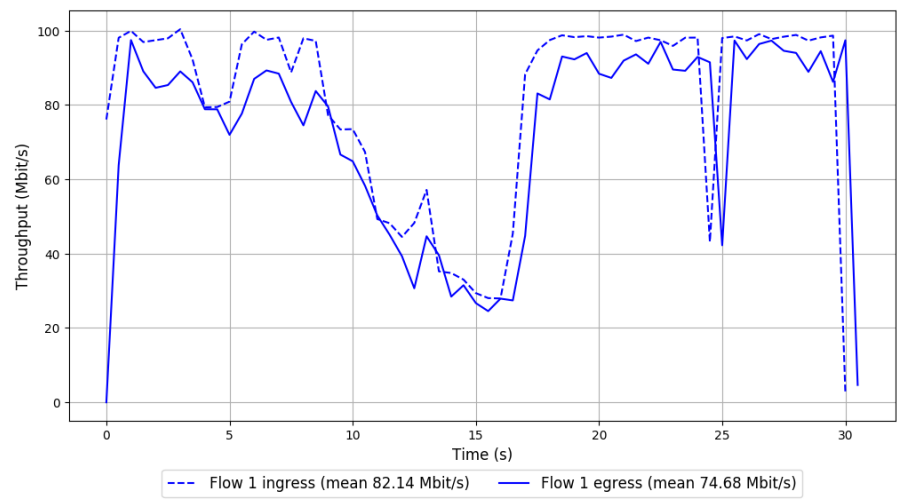


Run 2: Statistics of TCP BBR

Start at: 2018-09-06 05:12:43
End at: 2018-09-06 05:13:13
Local clock offset: -2.796 ms
Remote clock offset: -4.254 ms

Below is generated by plot.py at 2018-09-06 06:22:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 74.68 Mbit/s
95th percentile per-packet one-way delay: 13.071 ms
Loss rate: 9.17%
-- Flow 1:
Average throughput: 74.68 Mbit/s
95th percentile per-packet one-way delay: 13.071 ms
Loss rate: 9.17%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-09-06 05:32:53

End at: 2018-09-06 05:33:23

Local clock offset: 0.802 ms

Remote clock offset: -3.23 ms

Below is generated by plot.py at 2018-09-06 06:22:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 79.02 Mbit/s

95th percentile per-packet one-way delay: 12.235 ms

Loss rate: 10.82%

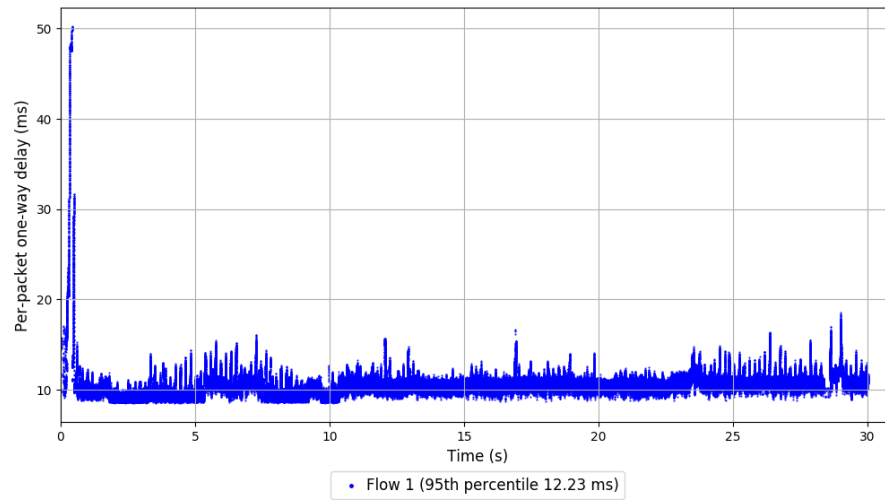
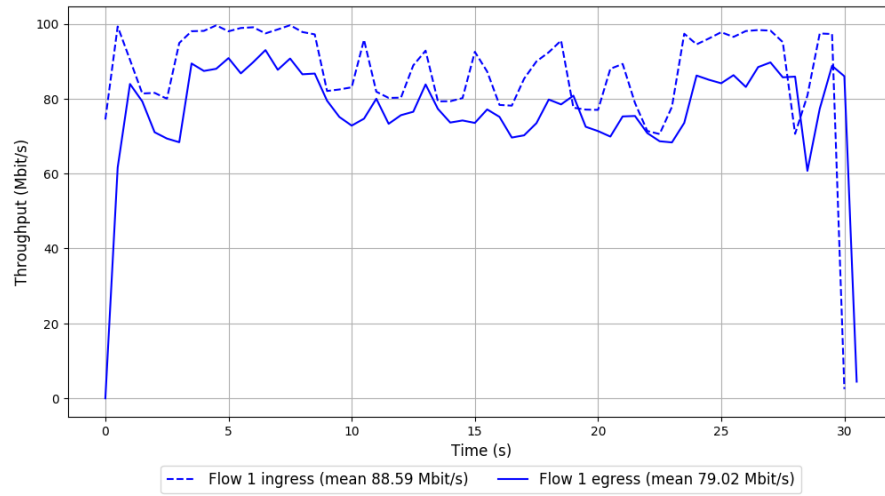
-- Flow 1:

Average throughput: 79.02 Mbit/s

95th percentile per-packet one-way delay: 12.235 ms

Loss rate: 10.82%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-09-06 05:53:04

End at: 2018-09-06 05:53:34

Local clock offset: -1.614 ms

Remote clock offset: -3.827 ms

Below is generated by plot.py at 2018-09-06 06:22:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 81.71 Mbit/s

95th percentile per-packet one-way delay: 14.092 ms

Loss rate: 9.10%

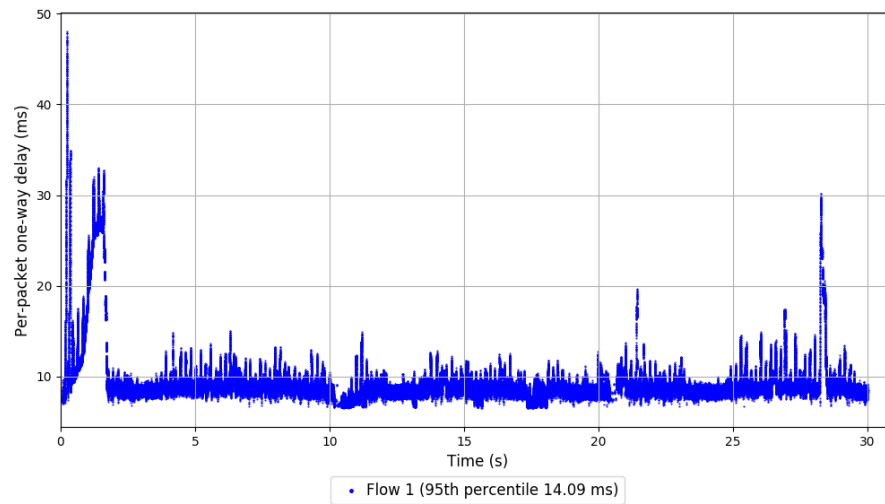
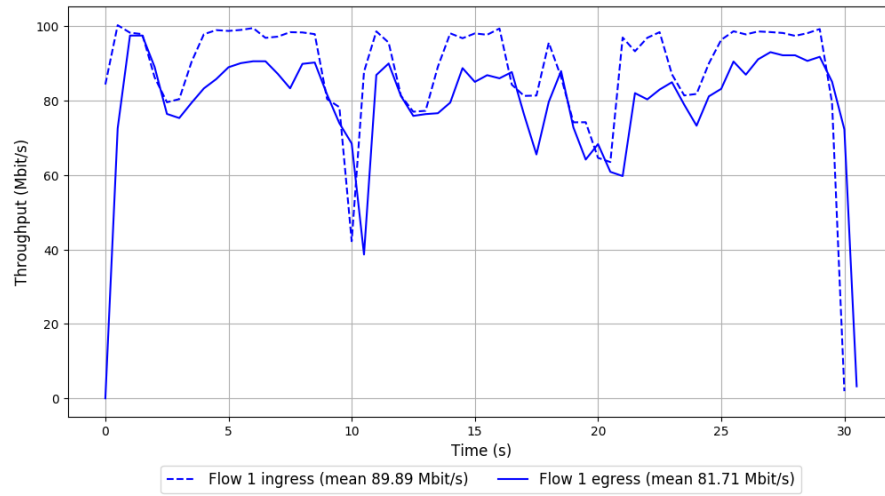
-- Flow 1:

Average throughput: 81.71 Mbit/s

95th percentile per-packet one-way delay: 14.092 ms

Loss rate: 9.10%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-09-06 06:13:26

End at: 2018-09-06 06:13:56

Local clock offset: -4.05 ms

Remote clock offset: -3.905 ms

Below is generated by plot.py at 2018-09-06 06:22:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 76.19 Mbit/s

95th percentile per-packet one-way delay: 11.806 ms

Loss rate: 11.12%

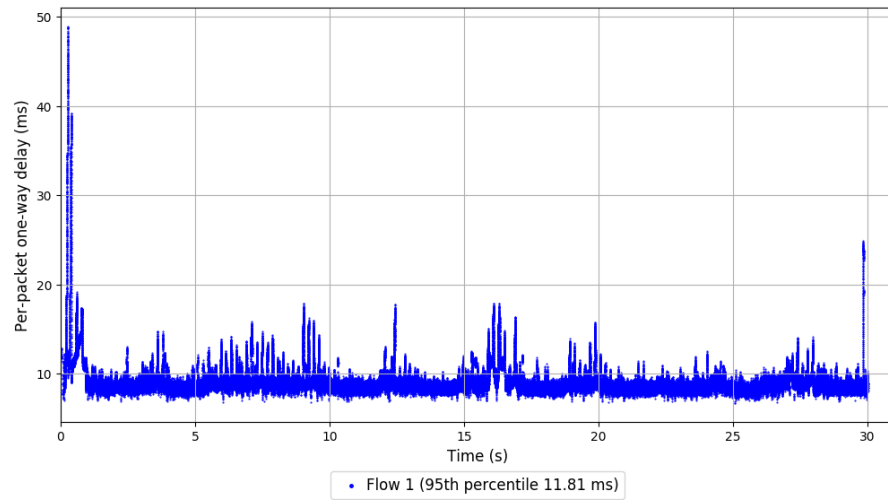
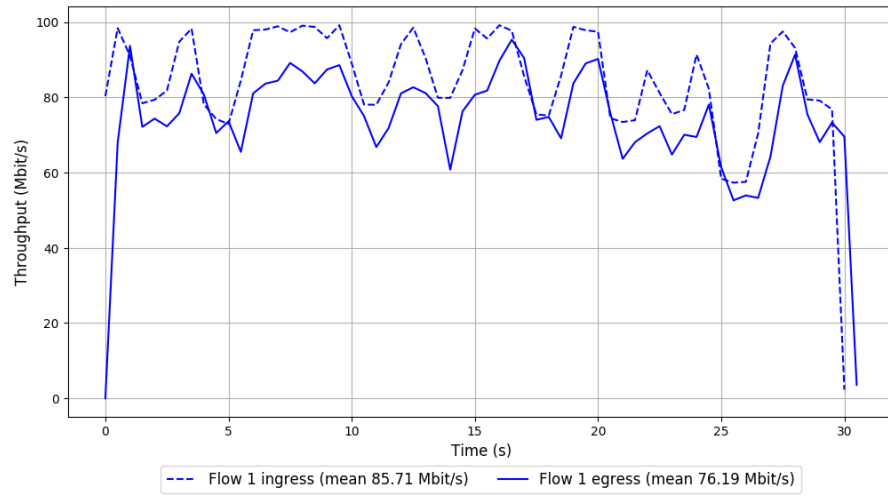
-- Flow 1:

Average throughput: 76.19 Mbit/s

95th percentile per-packet one-way delay: 11.806 ms

Loss rate: 11.12%

Run 5: Report of TCP BBR — Data Link

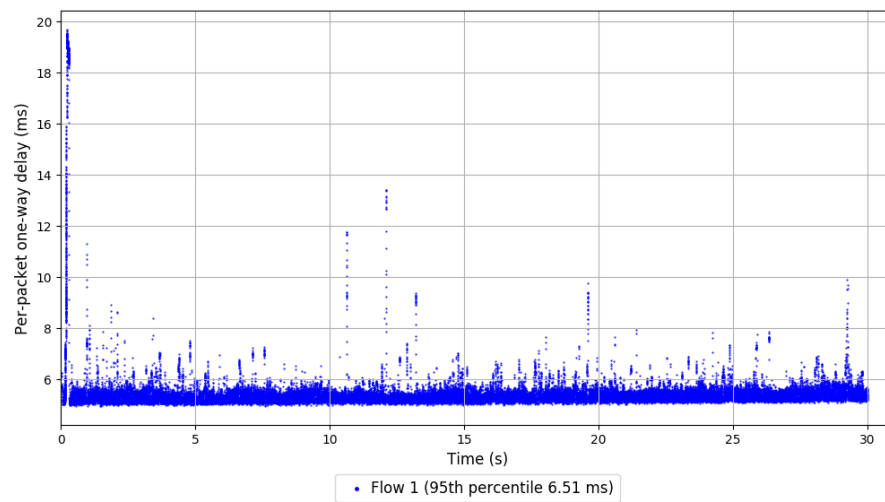
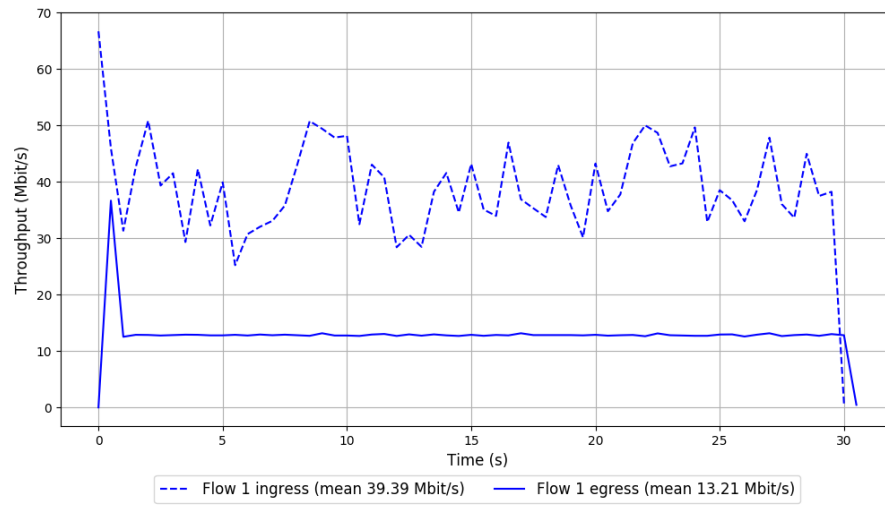


Run 1: Statistics of Copa

Start at: 2018-09-06 04:45:49
End at: 2018-09-06 04:46:20
Local clock offset: -3.459 ms
Remote clock offset: -3.295 ms

Below is generated by plot.py at 2018-09-06 06:22:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 13.21 Mbit/s
95th percentile per-packet one-way delay: 6.514 ms
Loss rate: 66.46%
-- Flow 1:
Average throughput: 13.21 Mbit/s
95th percentile per-packet one-way delay: 6.514 ms
Loss rate: 66.46%

Run 1: Report of Copa — Data Link

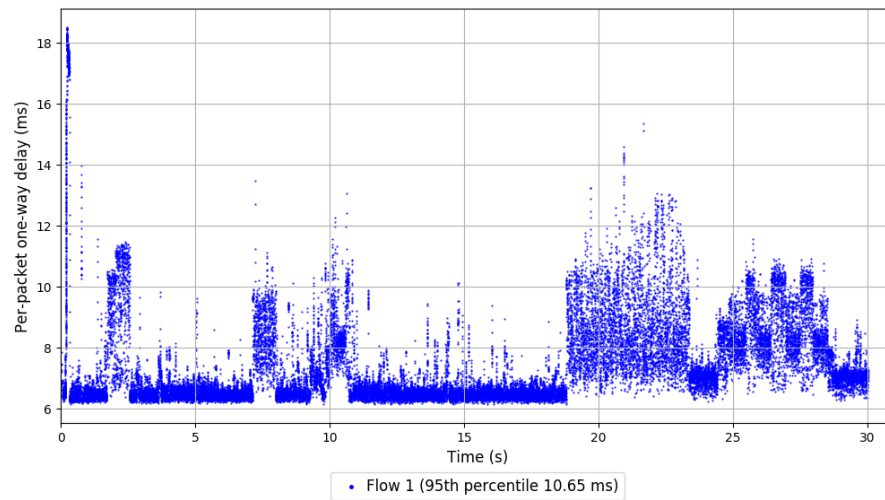
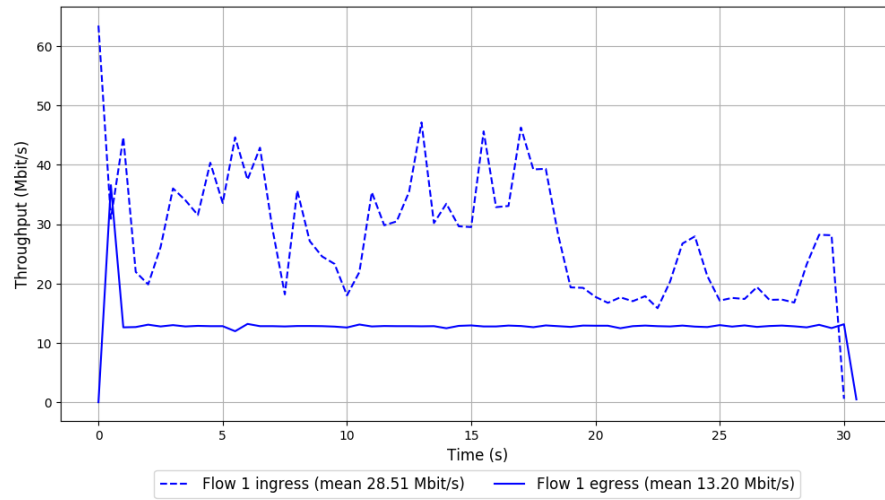


Run 2: Statistics of Copa

Start at: 2018-09-06 05:06:04
End at: 2018-09-06 05:06:34
Local clock offset: -2.804 ms
Remote clock offset: -3.505 ms

Below is generated by plot.py at 2018-09-06 06:22:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 13.20 Mbit/s
95th percentile per-packet one-way delay: 10.652 ms
Loss rate: 53.71%
-- Flow 1:
Average throughput: 13.20 Mbit/s
95th percentile per-packet one-way delay: 10.652 ms
Loss rate: 53.71%

Run 2: Report of Copa — Data Link

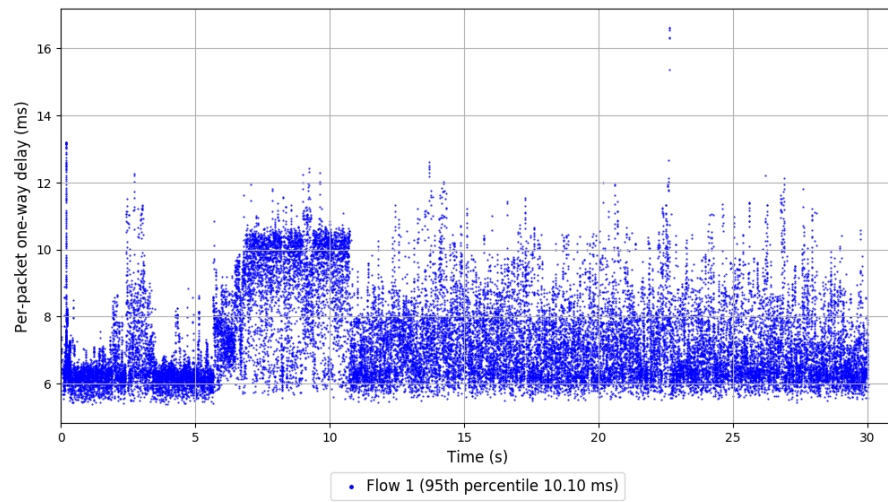
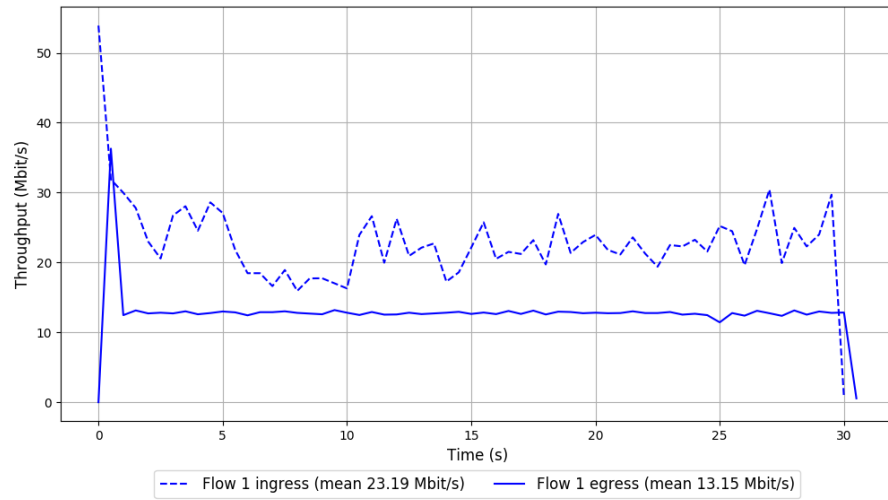


Run 3: Statistics of Copa

Start at: 2018-09-06 05:26:11
End at: 2018-09-06 05:26:41
Local clock offset: 1.54 ms
Remote clock offset: -3.724 ms

Below is generated by plot.py at 2018-09-06 06:22:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 13.15 Mbit/s
95th percentile per-packet one-way delay: 10.099 ms
Loss rate: 43.30%
-- Flow 1:
Average throughput: 13.15 Mbit/s
95th percentile per-packet one-way delay: 10.099 ms
Loss rate: 43.30%

Run 3: Report of Copa — Data Link

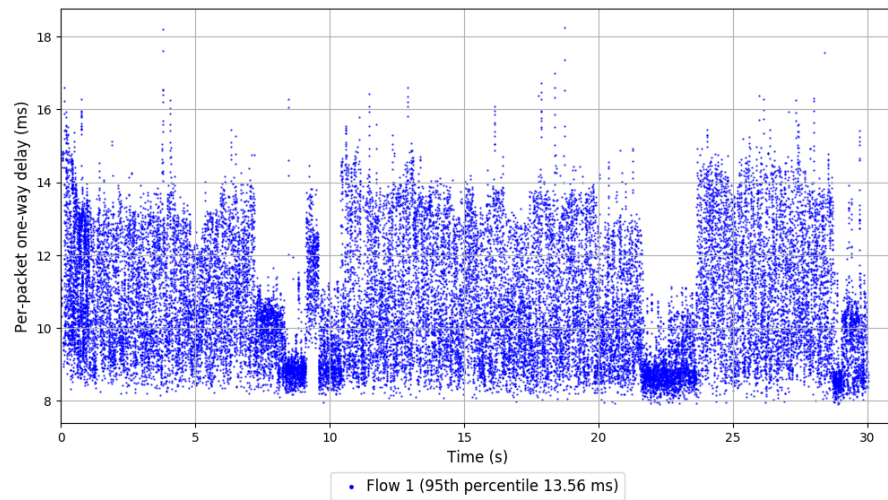
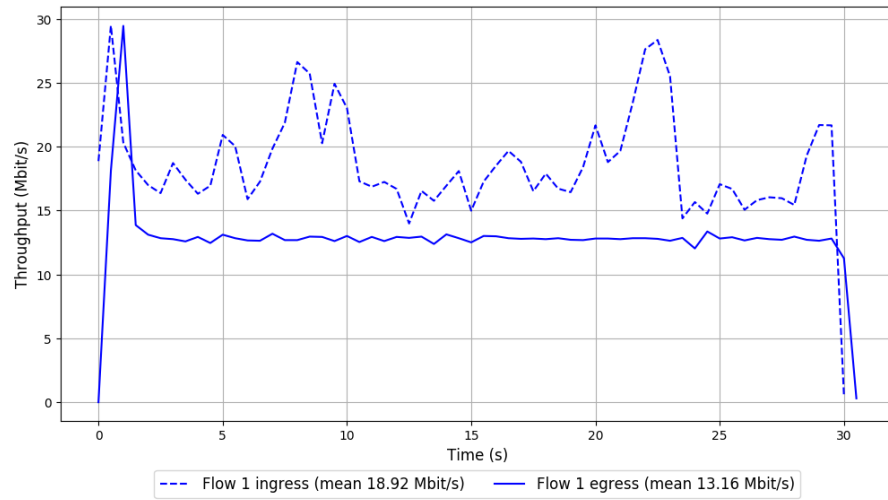


Run 4: Statistics of Copa

Start at: 2018-09-06 05:46:21
End at: 2018-09-06 05:46:51
Local clock offset: 0.879 ms
Remote clock offset: -2.765 ms

Below is generated by plot.py at 2018-09-06 06:22:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 13.16 Mbit/s
95th percentile per-packet one-way delay: 13.556 ms
Loss rate: 30.46%
-- Flow 1:
Average throughput: 13.16 Mbit/s
95th percentile per-packet one-way delay: 13.556 ms
Loss rate: 30.46%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-09-06 06:06:36

End at: 2018-09-06 06:07:06

Local clock offset: -2.489 ms

Remote clock offset: -3.78 ms

Below is generated by plot.py at 2018-09-06 06:22:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 13.20 Mbit/s

95th percentile per-packet one-way delay: 9.452 ms

Loss rate: 33.63%

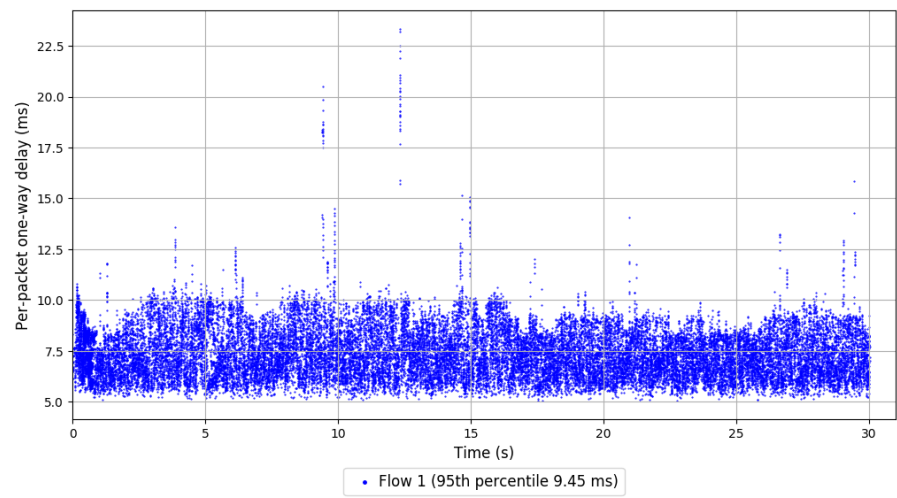
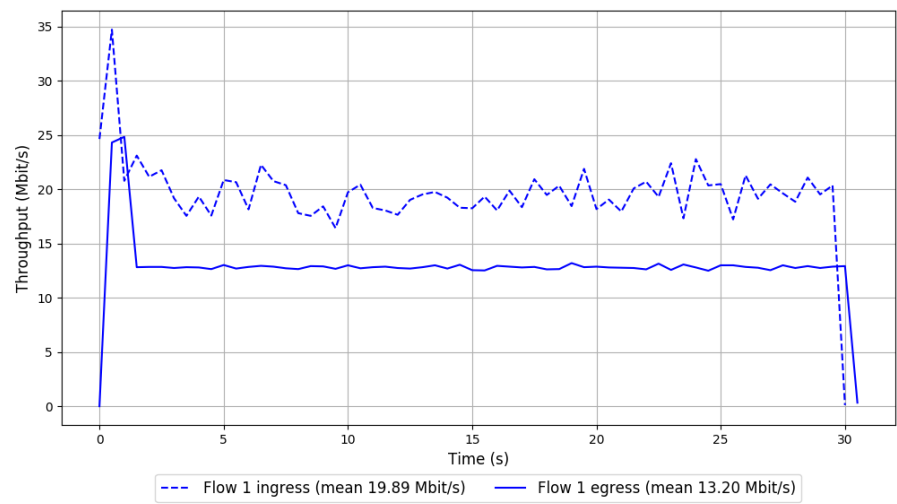
-- Flow 1:

Average throughput: 13.20 Mbit/s

95th percentile per-packet one-way delay: 9.452 ms

Loss rate: 33.63%

Run 5: Report of Copa — Data Link

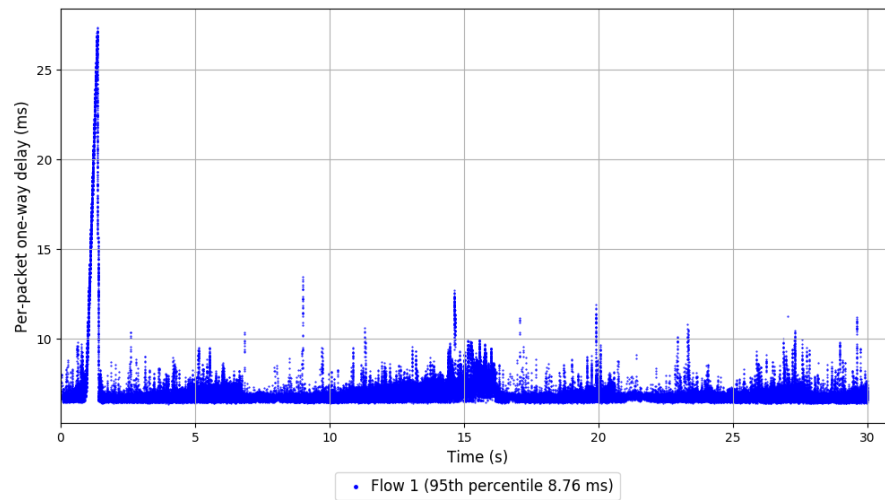
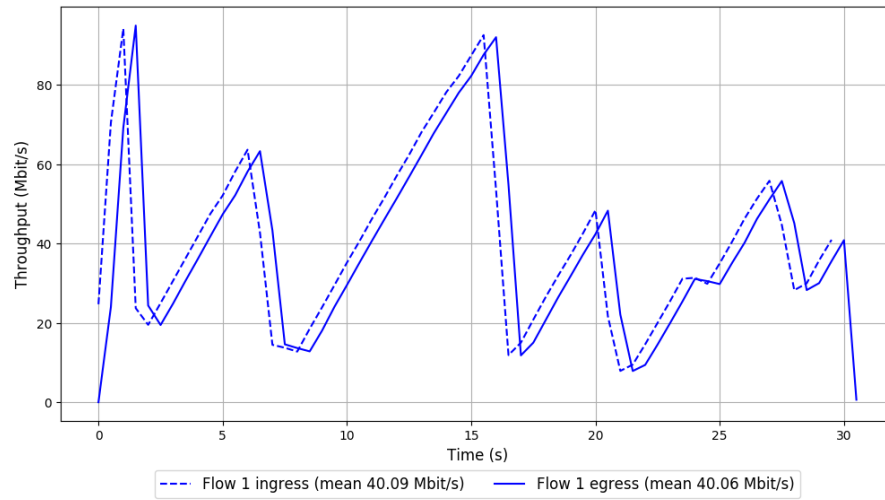


Run 1: Statistics of TCP Cubic

Start at: 2018-09-06 04:44:43
End at: 2018-09-06 04:45:13
Local clock offset: -5.072 ms
Remote clock offset: -3.212 ms

Below is generated by plot.py at 2018-09-06 06:22:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 40.06 Mbit/s
95th percentile per-packet one-way delay: 8.755 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 40.06 Mbit/s
95th percentile per-packet one-way delay: 8.755 ms
Loss rate: 0.08%

Run 1: Report of TCP Cubic — Data Link

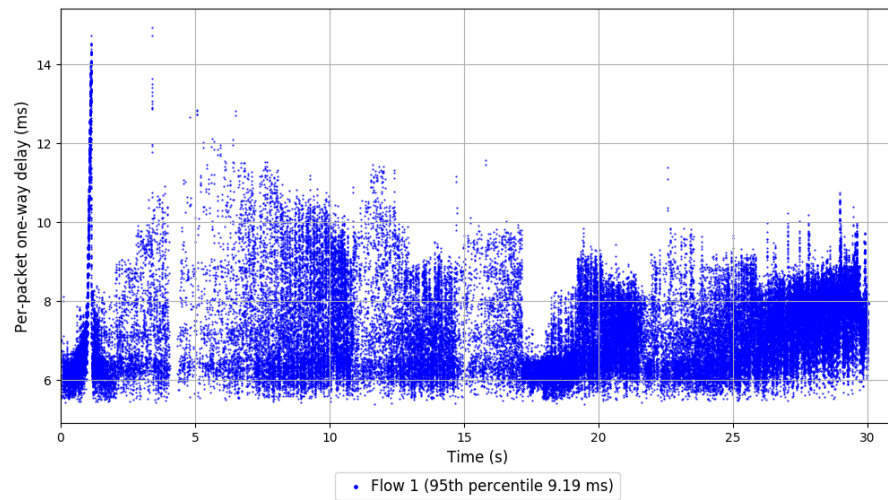
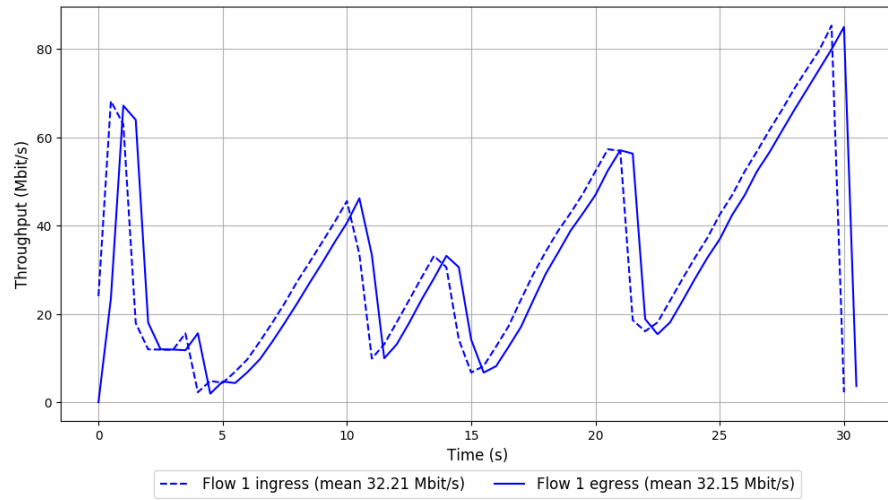


Run 2: Statistics of TCP Cubic

Start at: 2018-09-06 05:04:57
End at: 2018-09-06 05:05:27
Local clock offset: -2.784 ms
Remote clock offset: -4.333 ms

Below is generated by plot.py at 2018-09-06 06:22:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 32.15 Mbit/s
95th percentile per-packet one-way delay: 9.189 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 32.15 Mbit/s
95th percentile per-packet one-way delay: 9.189 ms
Loss rate: 0.17%

Run 2: Report of TCP Cubic — Data Link

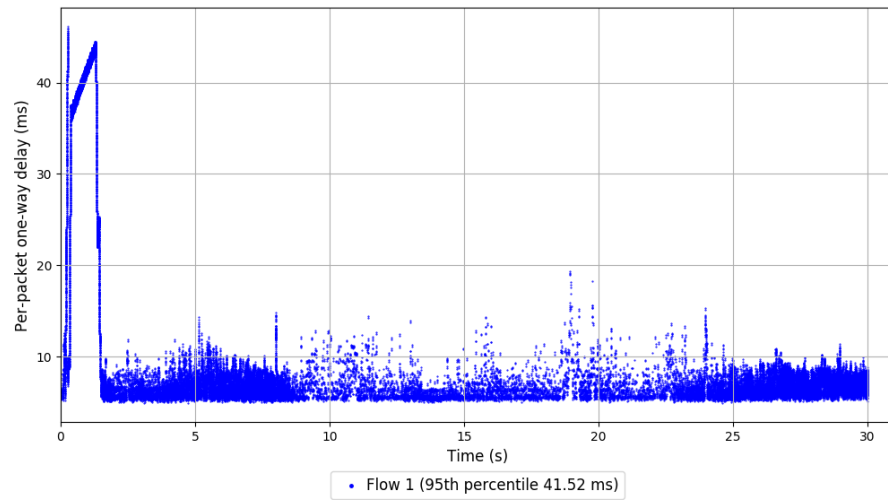
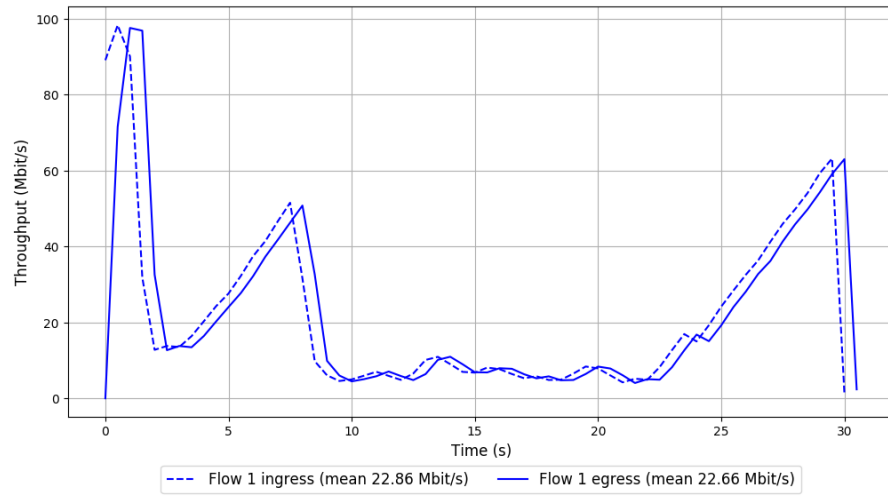


Run 3: Statistics of TCP Cubic

Start at: 2018-09-06 05:25:03
End at: 2018-09-06 05:25:33
Local clock offset: 2.447 ms
Remote clock offset: -4.152 ms

Below is generated by plot.py at 2018-09-06 06:22:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 22.66 Mbit/s
95th percentile per-packet one-way delay: 41.515 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 22.66 Mbit/s
95th percentile per-packet one-way delay: 41.515 ms
Loss rate: 0.87%

Run 3: Report of TCP Cubic — Data Link

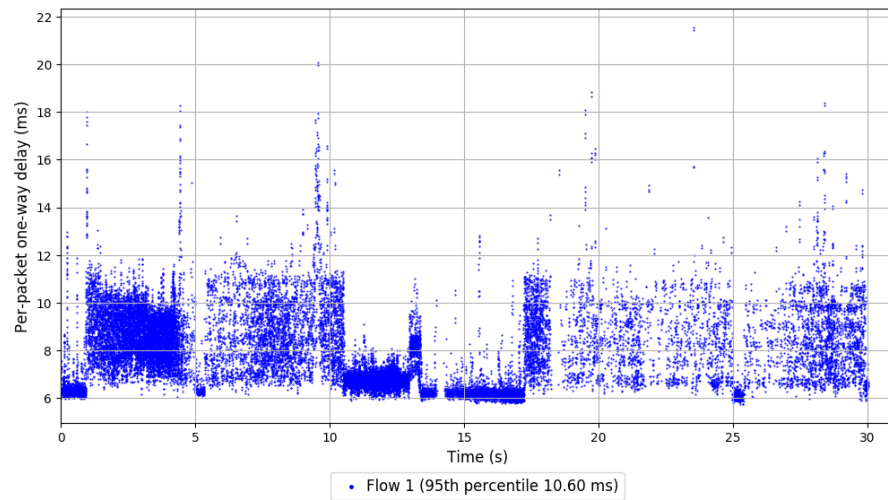
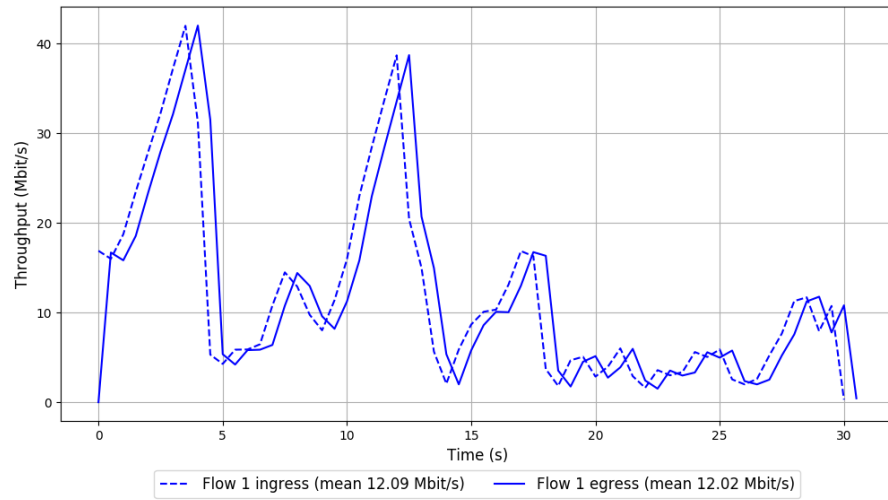


Run 4: Statistics of TCP Cubic

Start at: 2018-09-06 05:45:15
End at: 2018-09-06 05:45:45
Local clock offset: 2.112 ms
Remote clock offset: -4.239 ms

Below is generated by plot.py at 2018-09-06 06:22:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.02 Mbit/s
95th percentile per-packet one-way delay: 10.598 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 12.02 Mbit/s
95th percentile per-packet one-way delay: 10.598 ms
Loss rate: 0.51%

Run 4: Report of TCP Cubic — Data Link

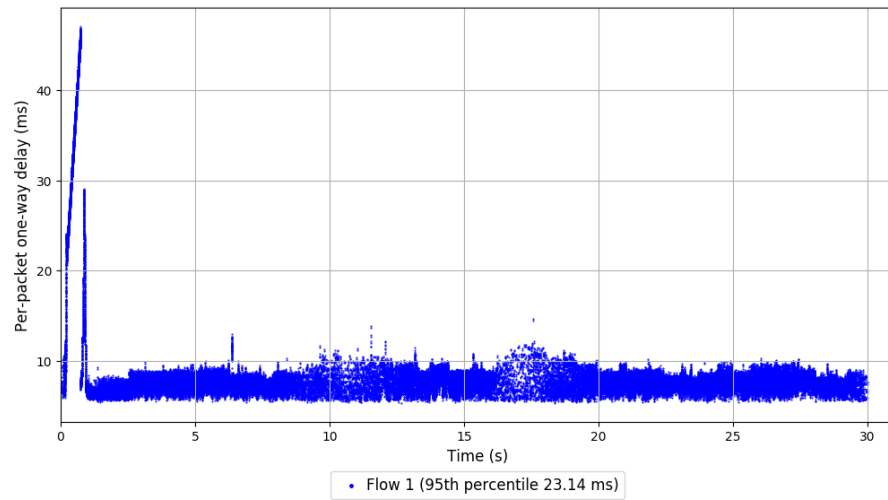
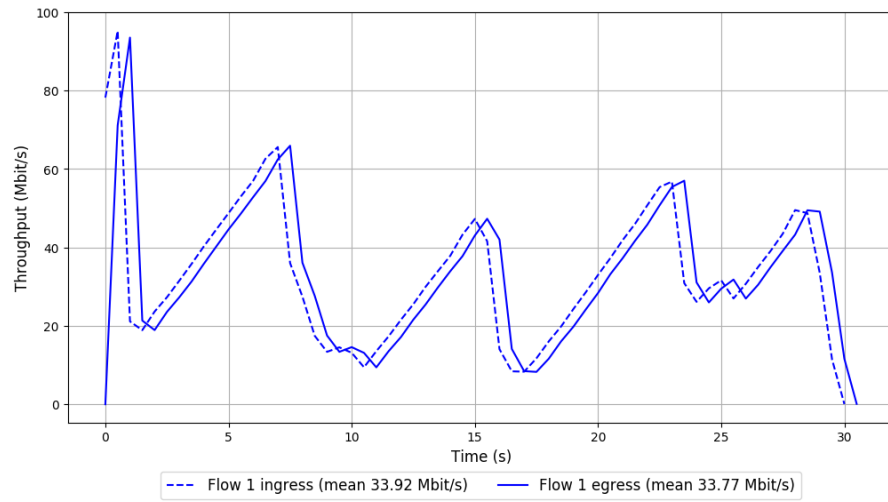


Run 5: Statistics of TCP Cubic

Start at: 2018-09-06 06:05:28
End at: 2018-09-06 06:05:58
Local clock offset: -3.081 ms
Remote clock offset: -5.348 ms

Below is generated by plot.py at 2018-09-06 06:22:45
Datalink statistics
-- Total of 1 flow:
Average throughput: 33.77 Mbit/s
95th percentile per-packet one-way delay: 23.139 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 33.77 Mbit/s
95th percentile per-packet one-way delay: 23.139 ms
Loss rate: 0.44%

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2018-09-06 04:40:12

End at: 2018-09-06 04:40:42

Local clock offset: -4.642 ms

Remote clock offset: -3.61 ms

Below is generated by plot.py at 2018-09-06 06:23:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 85.70 Mbit/s

95th percentile per-packet one-way delay: 38.384 ms

Loss rate: 12.37%

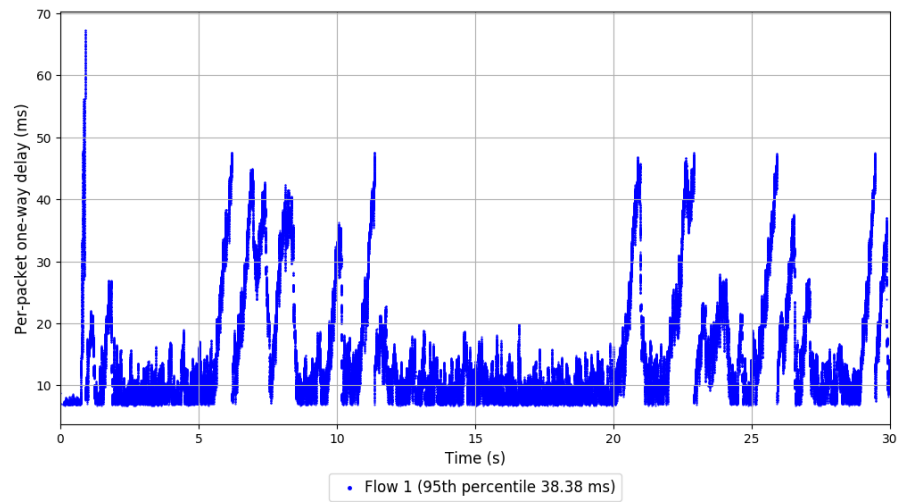
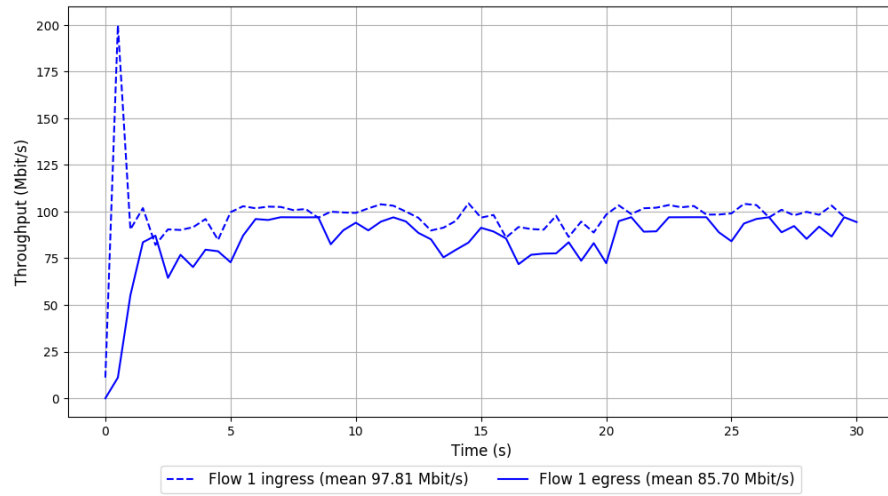
-- Flow 1:

Average throughput: 85.70 Mbit/s

95th percentile per-packet one-way delay: 38.384 ms

Loss rate: 12.37%

Run 1: Report of FillP — Data Link

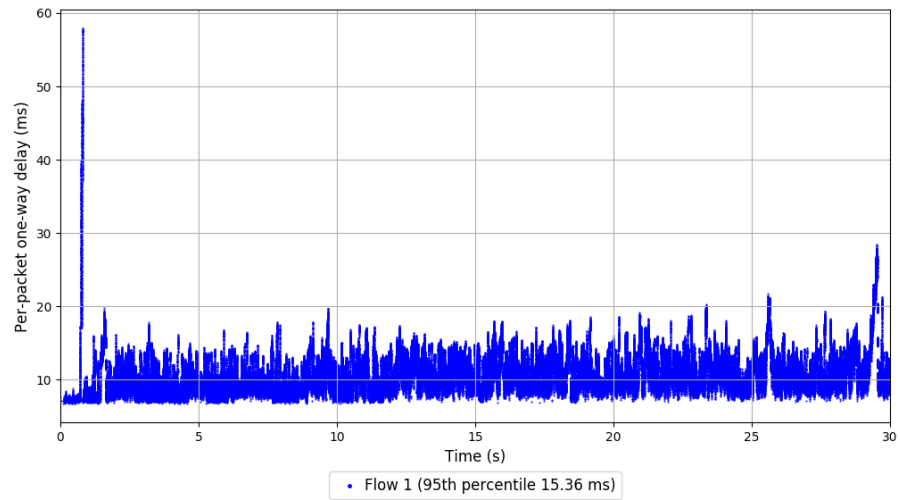
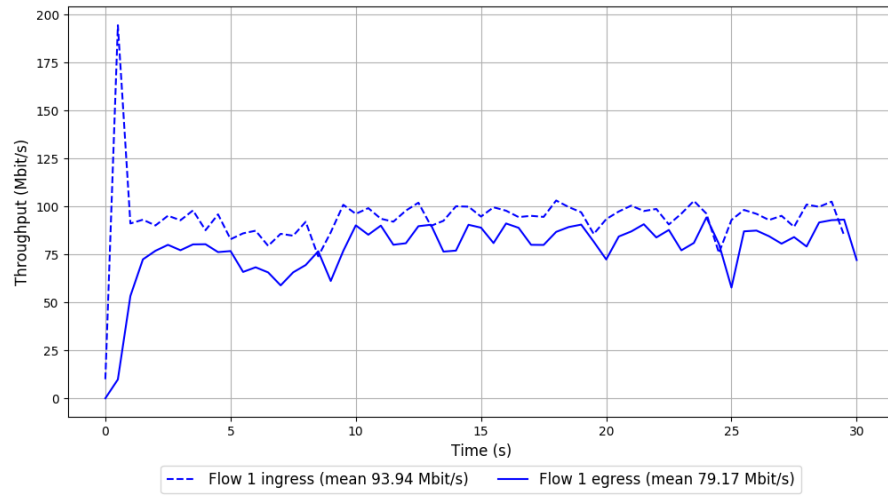


Run 2: Statistics of FillP

Start at: 2018-09-06 05:00:28
End at: 2018-09-06 05:00:58
Local clock offset: -1.987 ms
Remote clock offset: -2.928 ms

Below is generated by plot.py at 2018-09-06 06:23:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 79.17 Mbit/s
95th percentile per-packet one-way delay: 15.364 ms
Loss rate: 15.72%
-- Flow 1:
Average throughput: 79.17 Mbit/s
95th percentile per-packet one-way delay: 15.364 ms
Loss rate: 15.72%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-09-06 05:20:31

End at: 2018-09-06 05:21:01

Local clock offset: -1.412 ms

Remote clock offset: -4.84 ms

Below is generated by plot.py at 2018-09-06 06:23:51

Datalink statistics

-- Total of 1 flow:

Average throughput: 87.22 Mbit/s

95th percentile per-packet one-way delay: 35.148 ms

Loss rate: 12.51%

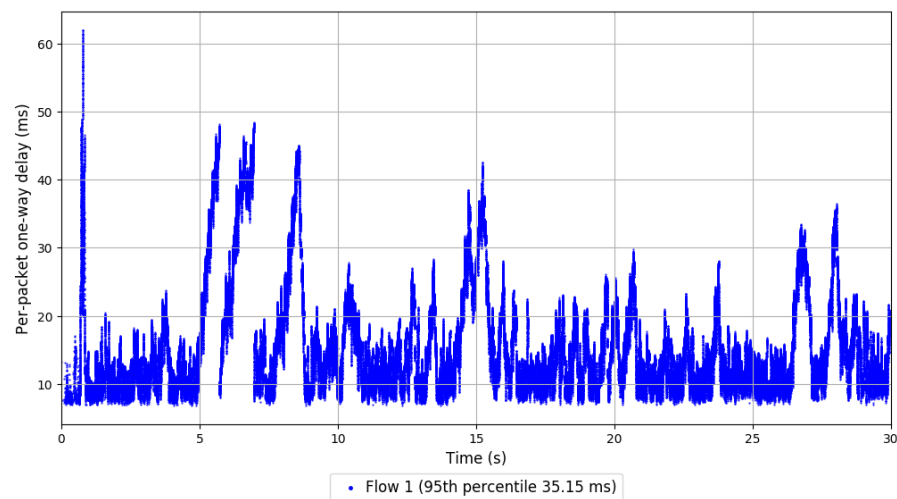
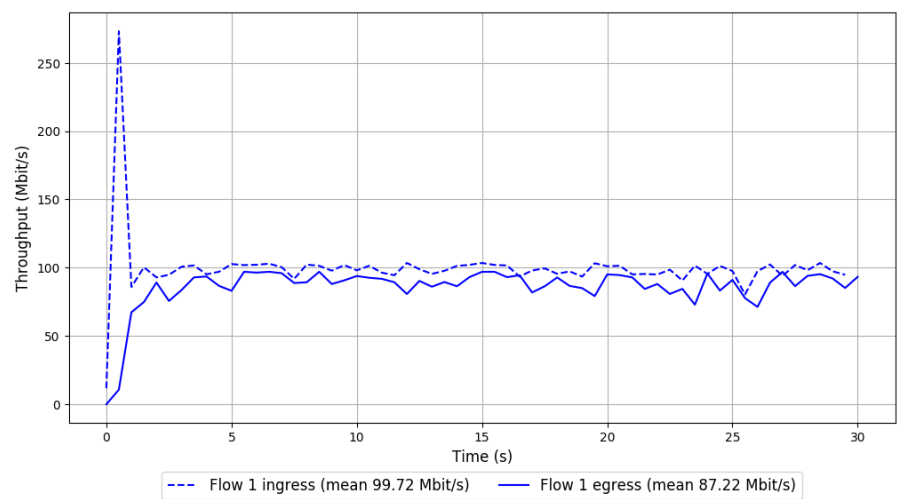
-- Flow 1:

Average throughput: 87.22 Mbit/s

95th percentile per-packet one-way delay: 35.148 ms

Loss rate: 12.51%

Run 3: Report of FillP — Data Link

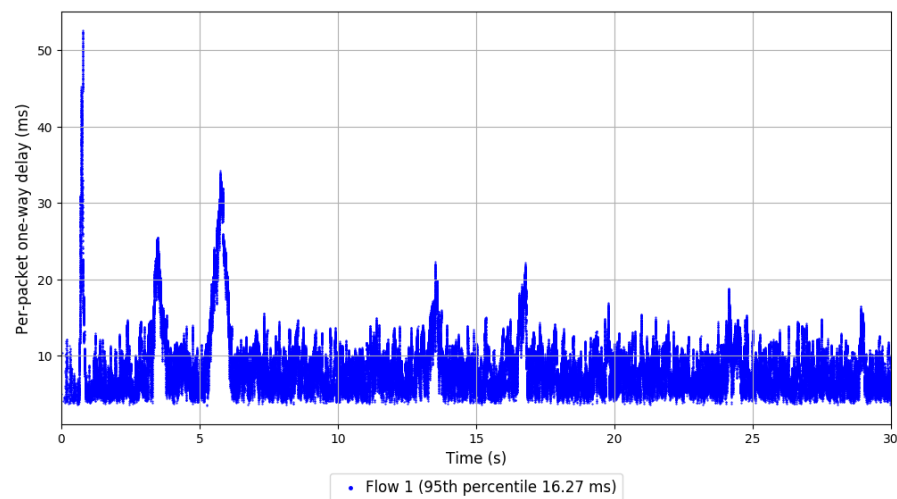
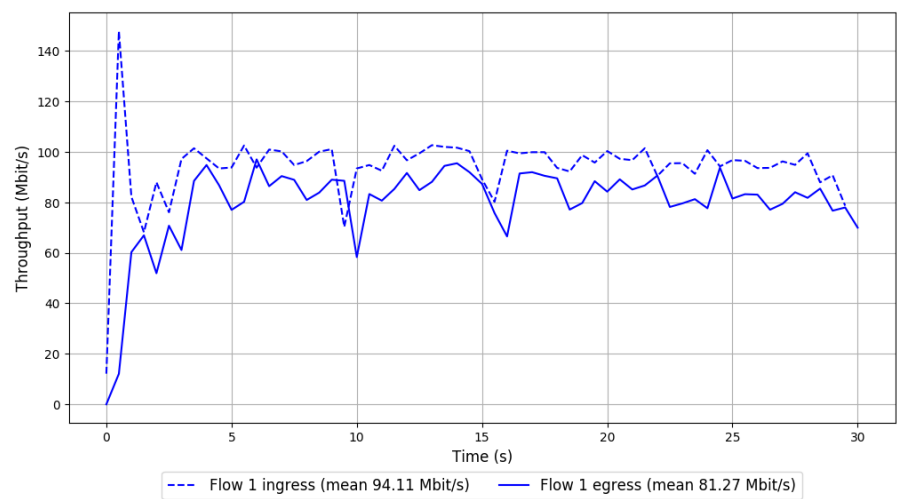


Run 4: Statistics of FillP

Start at: 2018-09-06 05:40:45
End at: 2018-09-06 05:41:15
Local clock offset: 4.705 ms
Remote clock offset: -3.788 ms

Below is generated by plot.py at 2018-09-06 06:23:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 81.27 Mbit/s
95th percentile per-packet one-way delay: 16.266 ms
Loss rate: 13.65%
-- Flow 1:
Average throughput: 81.27 Mbit/s
95th percentile per-packet one-way delay: 16.266 ms
Loss rate: 13.65%

Run 4: Report of FillP — Data Link

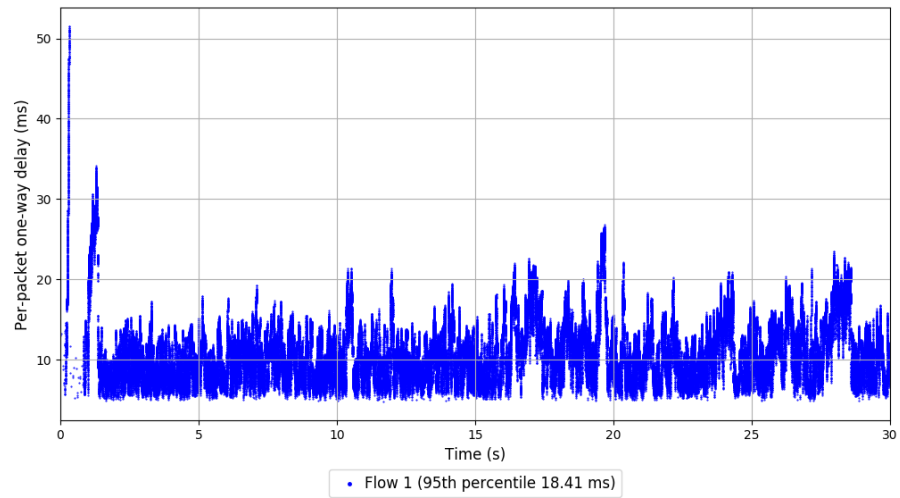
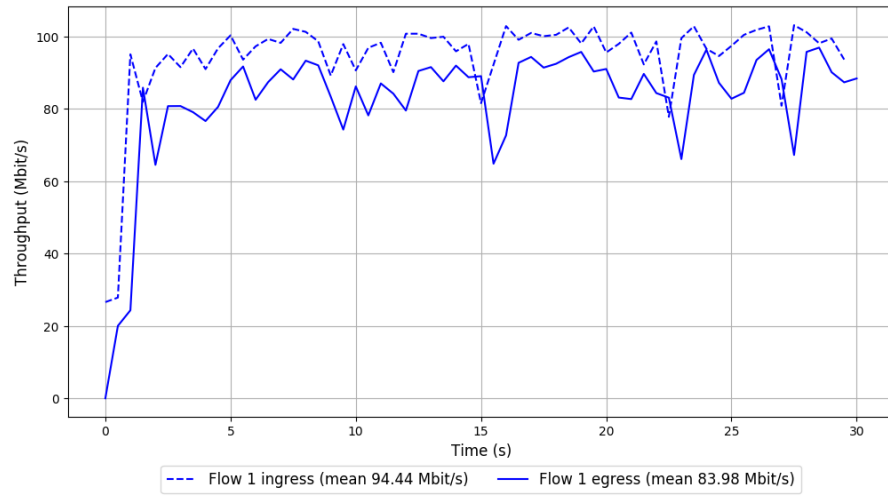


Run 5: Statistics of FillP

Start at: 2018-09-06 06:00:57
End at: 2018-09-06 06:01:27
Local clock offset: -2.234 ms
Remote clock offset: -4.497 ms

Below is generated by plot.py at 2018-09-06 06:23:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 83.98 Mbit/s
95th percentile per-packet one-way delay: 18.406 ms
Loss rate: 11.09%
-- Flow 1:
Average throughput: 83.98 Mbit/s
95th percentile per-packet one-way delay: 18.406 ms
Loss rate: 11.09%

Run 5: Report of FillP — Data Link

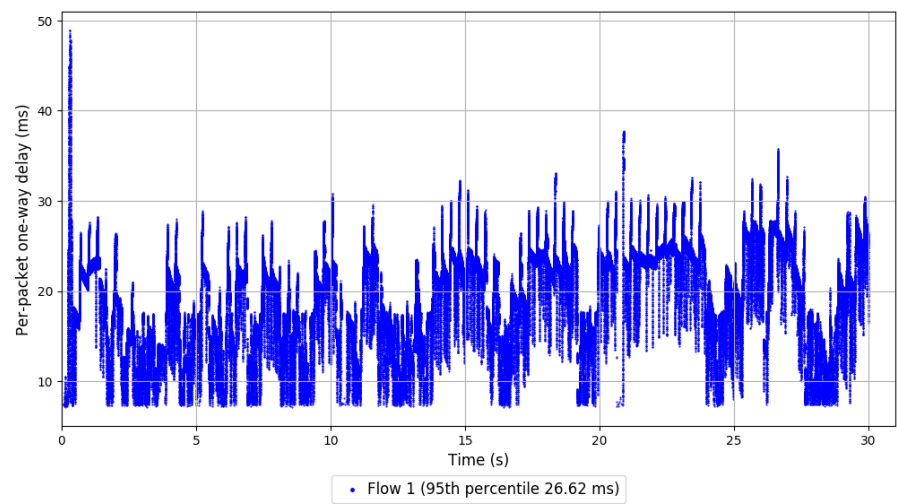
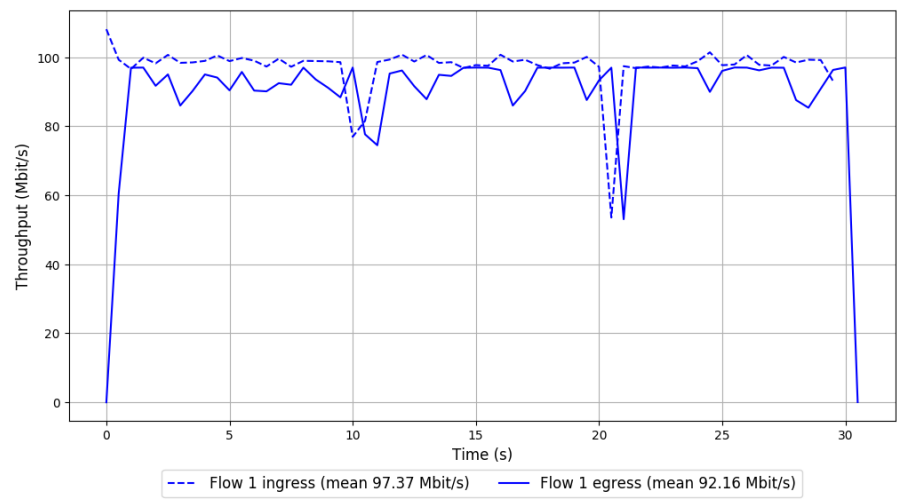


Run 1: Statistics of FillP-Sheep

Start at: 2018-09-06 04:48:00
End at: 2018-09-06 04:48:30
Local clock offset: -4.828 ms
Remote clock offset: -4.023 ms

Below is generated by plot.py at 2018-09-06 06:23:57
Datalink statistics
-- Total of 1 flow:
Average throughput: 92.16 Mbit/s
95th percentile per-packet one-way delay: 26.616 ms
Loss rate: 5.29%
-- Flow 1:
Average throughput: 92.16 Mbit/s
95th percentile per-packet one-way delay: 26.616 ms
Loss rate: 5.29%

Run 1: Report of FillP-Sheep — Data Link

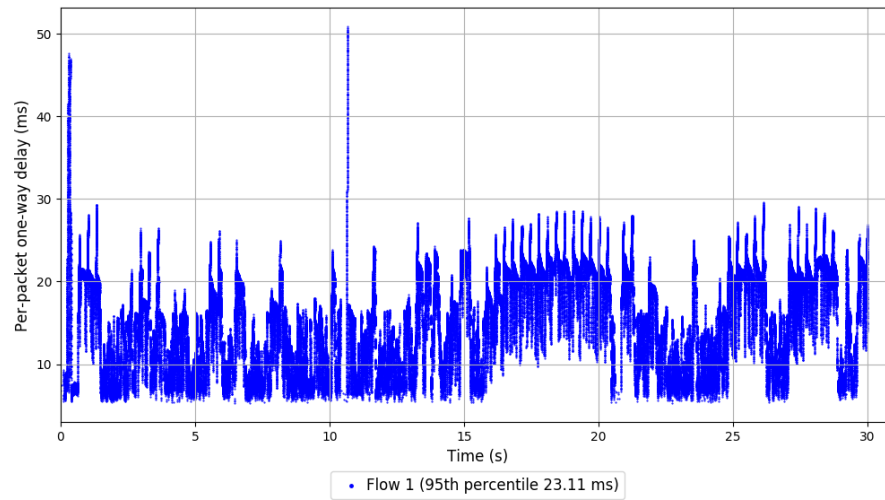
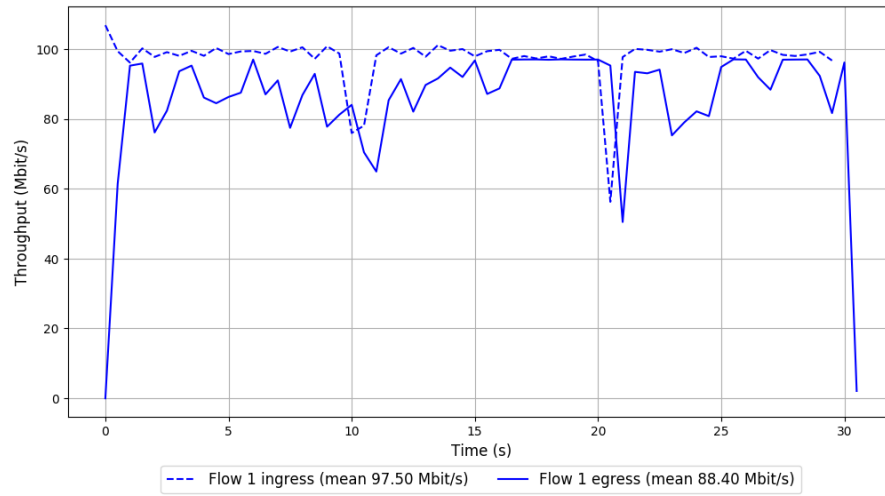


Run 2: Statistics of FillP-Sheep

Start at: 2018-09-06 05:08:14
End at: 2018-09-06 05:08:44
Local clock offset: -1.679 ms
Remote clock offset: -3.175 ms

Below is generated by plot.py at 2018-09-06 06:23:58
Datalink statistics
-- Total of 1 flow:
Average throughput: 88.40 Mbit/s
95th percentile per-packet one-way delay: 23.115 ms
Loss rate: 9.27%
-- Flow 1:
Average throughput: 88.40 Mbit/s
95th percentile per-packet one-way delay: 23.115 ms
Loss rate: 9.27%

Run 2: Report of FillP-Sheep — Data Link

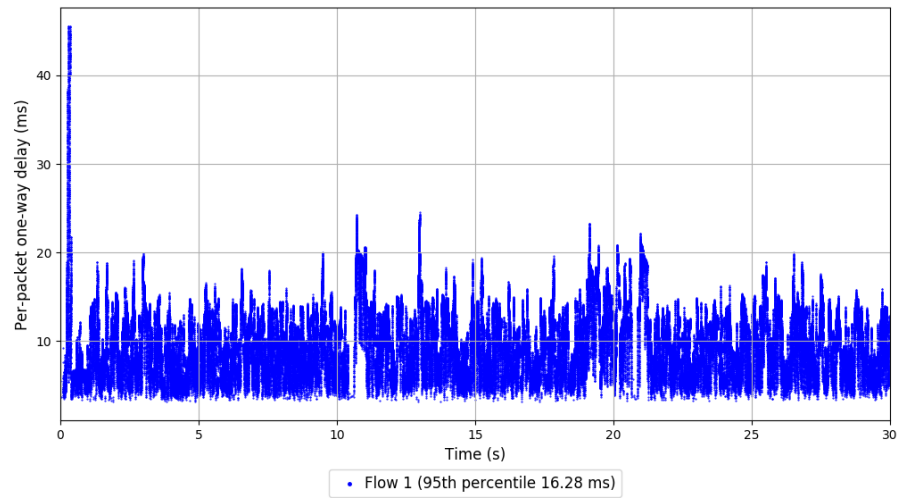
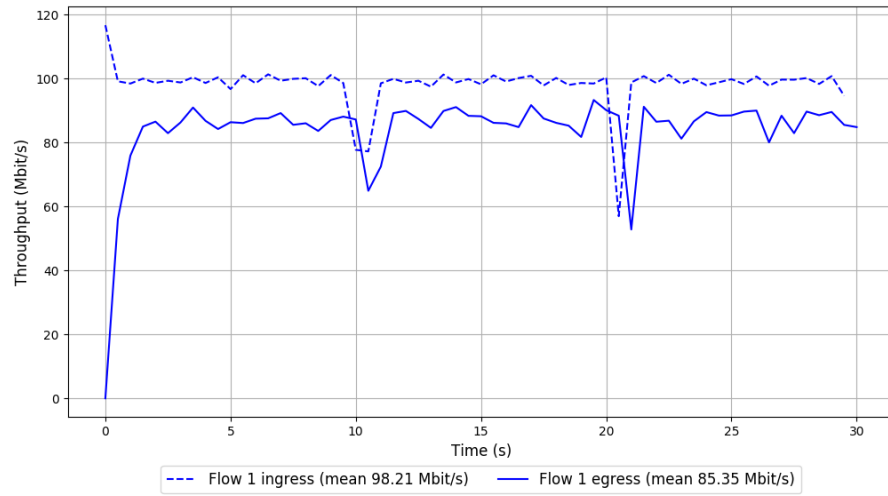


Run 3: Statistics of FillP-Sheep

Start at: 2018-09-06 05:28:22
End at: 2018-09-06 05:28:52
Local clock offset: 3.796 ms
Remote clock offset: -3.966 ms

Below is generated by plot.py at 2018-09-06 06:24:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 85.35 Mbit/s
95th percentile per-packet one-way delay: 16.281 ms
Loss rate: 13.09%
-- Flow 1:
Average throughput: 85.35 Mbit/s
95th percentile per-packet one-way delay: 16.281 ms
Loss rate: 13.09%

Run 3: Report of FillP-Sheep — Data Link

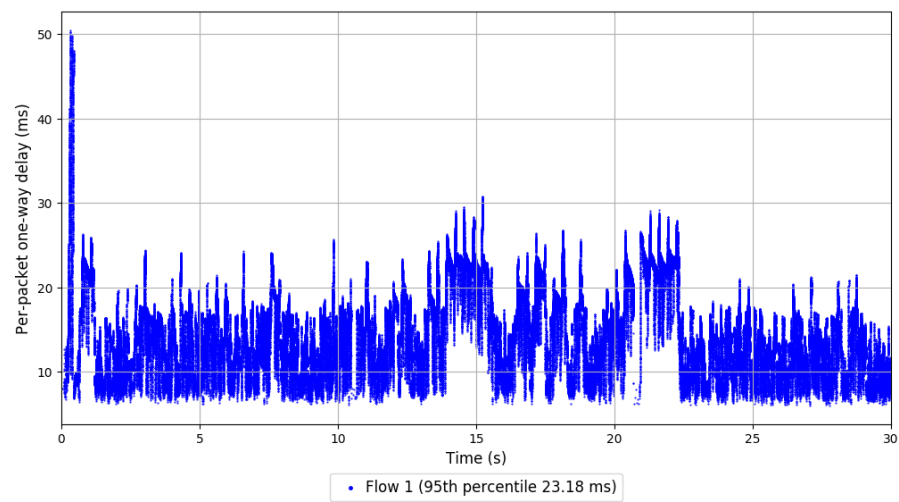
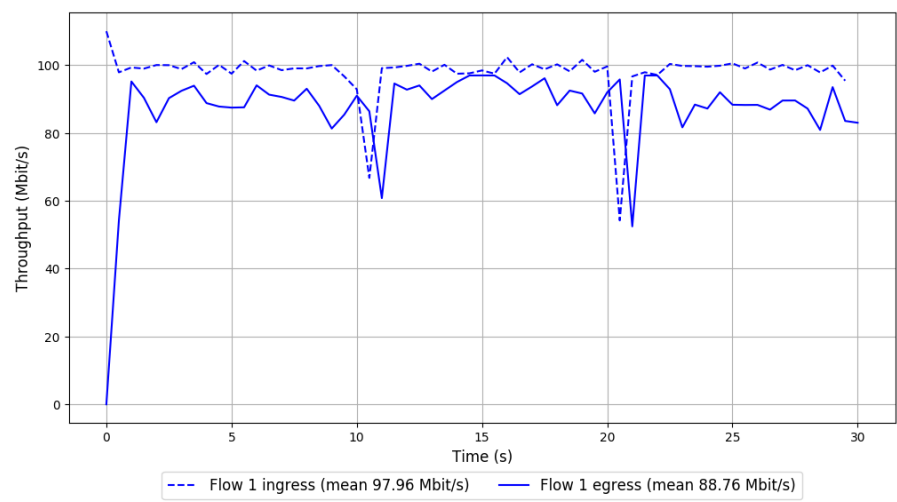


Run 4: Statistics of FillP-Sheep

Start at: 2018-09-06 05:48:33
End at: 2018-09-06 05:49:03
Local clock offset: 2.338 ms
Remote clock offset: -3.065 ms

Below is generated by plot.py at 2018-09-06 06:25:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 88.76 Mbit/s
95th percentile per-packet one-way delay: 23.179 ms
Loss rate: 9.39%
-- Flow 1:
Average throughput: 88.76 Mbit/s
95th percentile per-packet one-way delay: 23.179 ms
Loss rate: 9.39%

Run 4: Report of FillP-Sheep — Data Link

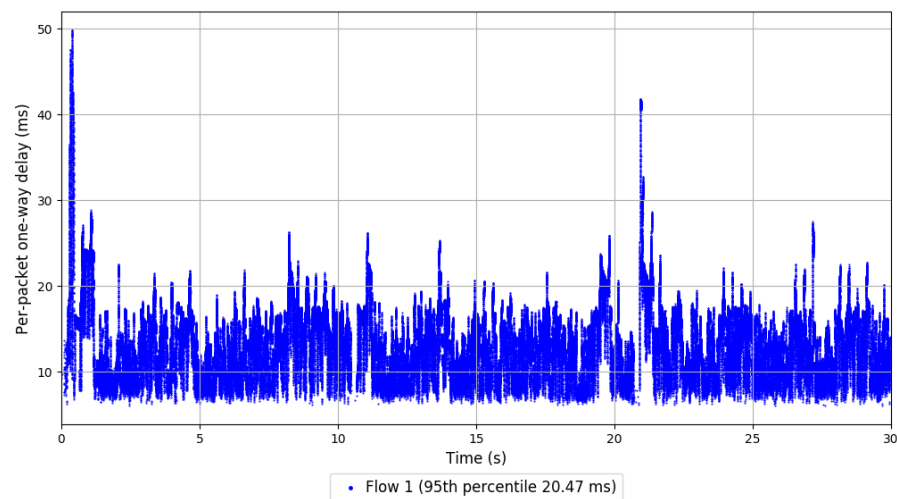
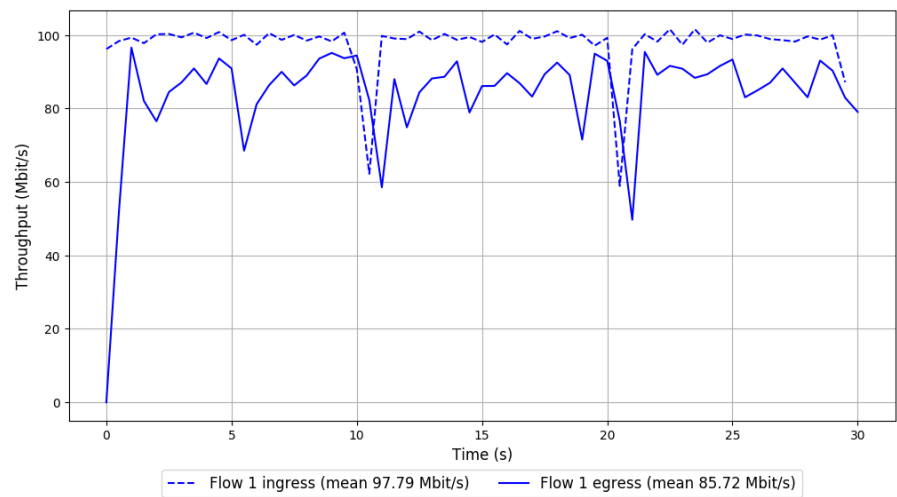


Run 5: Statistics of FillP-Sheep

Start at: 2018-09-06 06:08:47
End at: 2018-09-06 06:09:17
Local clock offset: -3.669 ms
Remote clock offset: -4.556 ms

Below is generated by plot.py at 2018-09-06 06:25:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 85.72 Mbit/s
95th percentile per-packet one-way delay: 20.470 ms
Loss rate: 12.33%
-- Flow 1:
Average throughput: 85.72 Mbit/s
95th percentile per-packet one-way delay: 20.470 ms
Loss rate: 12.33%

Run 5: Report of FillP-Sheep — Data Link

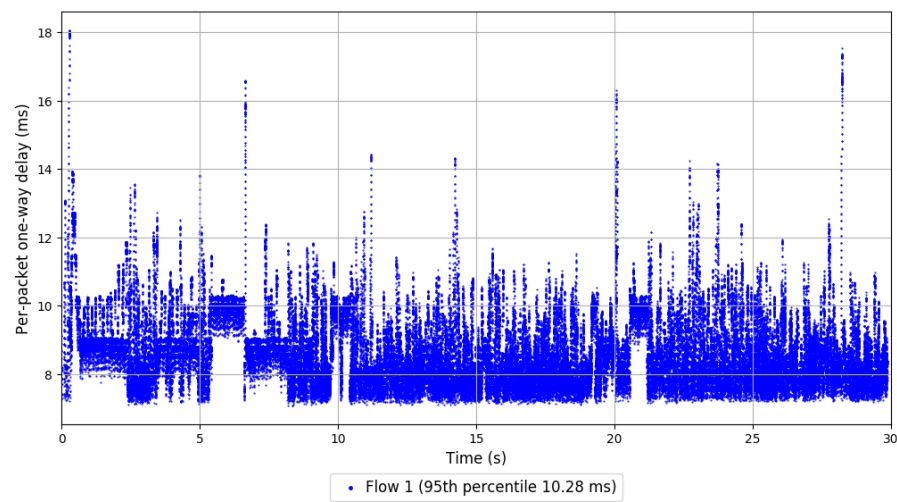
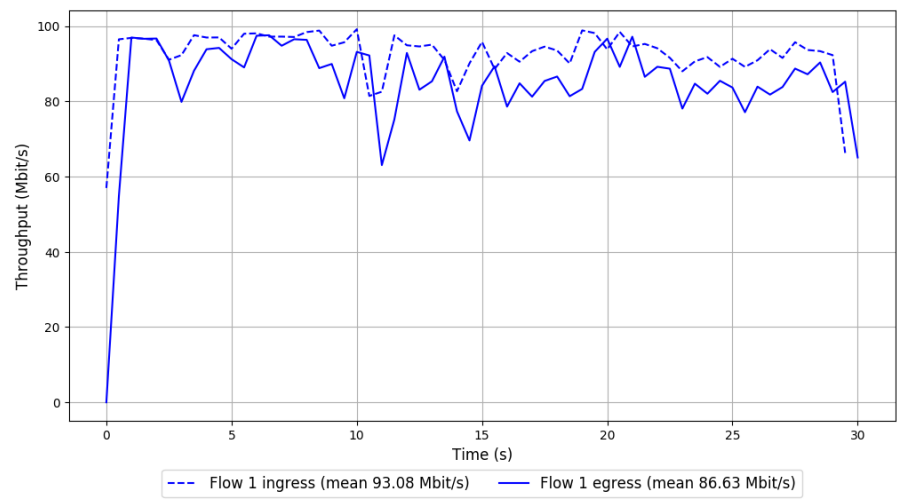


```
Run 1: Statistics of Indigo

Start at: 2018-09-06 04:51:23
End at: 2018-09-06 04:51:53
Local clock offset: -3.113 ms
Remote clock offset: -3.198 ms

# Below is generated by plot.py at 2018-09-06 06:25:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.63 Mbit/s
95th percentile per-packet one-way delay: 10.283 ms
Loss rate: 6.93%
-- Flow 1:
Average throughput: 86.63 Mbit/s
95th percentile per-packet one-way delay: 10.283 ms
Loss rate: 6.93%
```

Run 1: Report of Indigo — Data Link

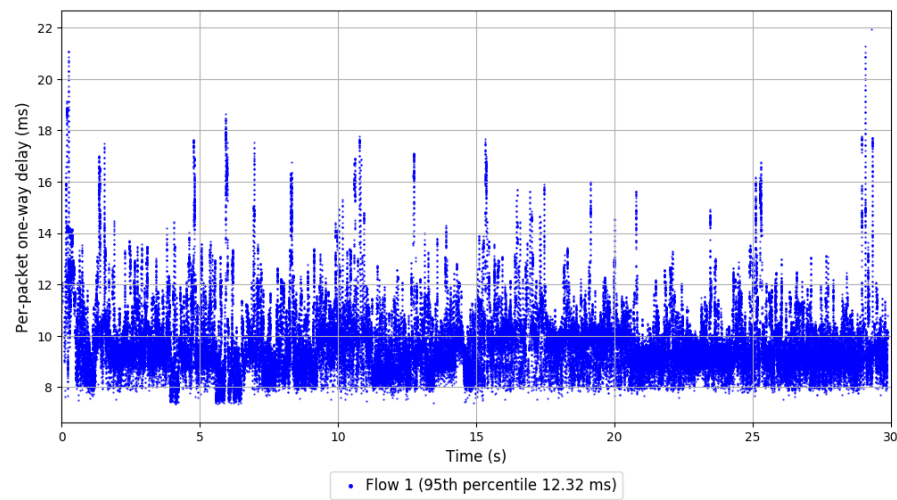
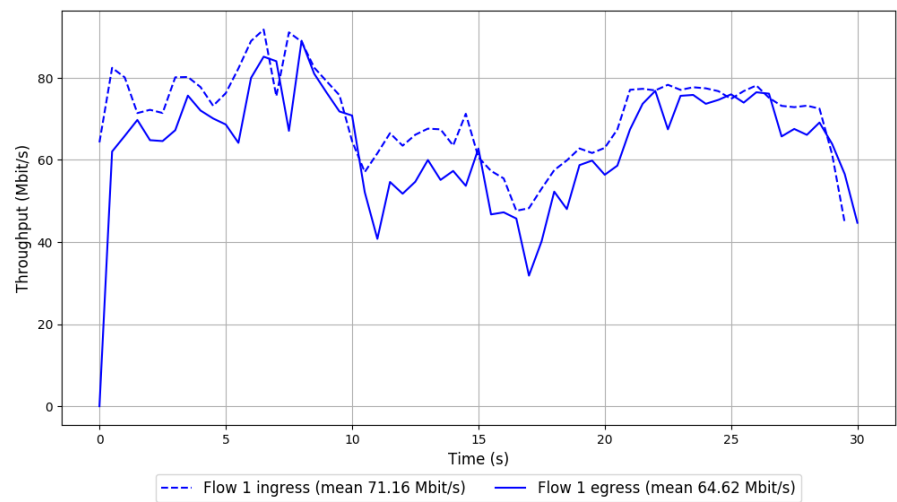


Run 2: Statistics of Indigo

Start at: 2018-09-06 05:11:34
End at: 2018-09-06 05:12:04
Local clock offset: -3.579 ms
Remote clock offset: -4.173 ms

Below is generated by plot.py at 2018-09-06 06:25:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 64.62 Mbit/s
95th percentile per-packet one-way delay: 12.321 ms
Loss rate: 9.18%
-- Flow 1:
Average throughput: 64.62 Mbit/s
95th percentile per-packet one-way delay: 12.321 ms
Loss rate: 9.18%

Run 2: Report of Indigo — Data Link

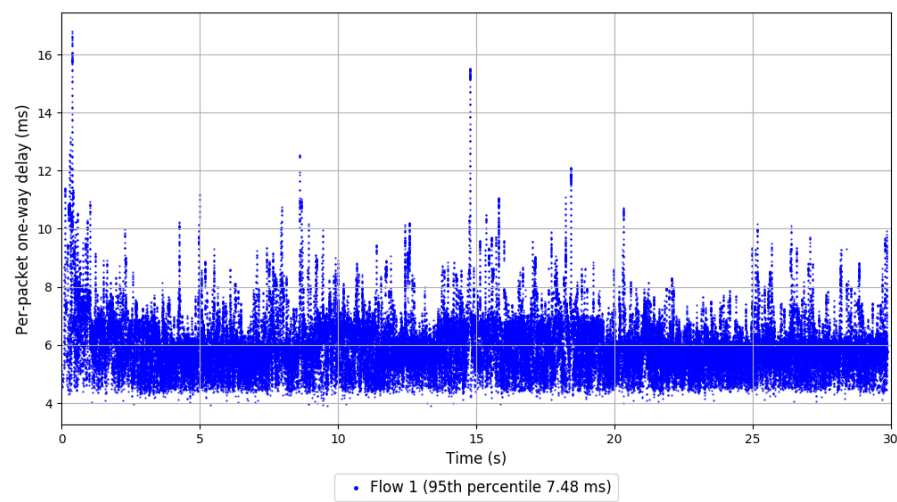
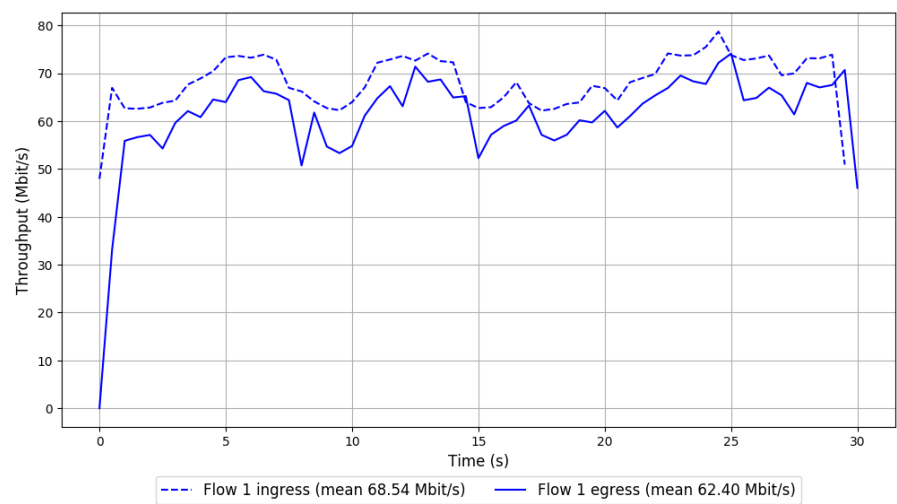


Run 3: Statistics of Indigo

Start at: 2018-09-06 05:31:44
End at: 2018-09-06 05:32:14
Local clock offset: 3.655 ms
Remote clock offset: -4.956 ms

Below is generated by plot.py at 2018-09-06 06:25:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 62.40 Mbit/s
95th percentile per-packet one-way delay: 7.484 ms
Loss rate: 8.95%
-- Flow 1:
Average throughput: 62.40 Mbit/s
95th percentile per-packet one-way delay: 7.484 ms
Loss rate: 8.95%

Run 3: Report of Indigo — Data Link

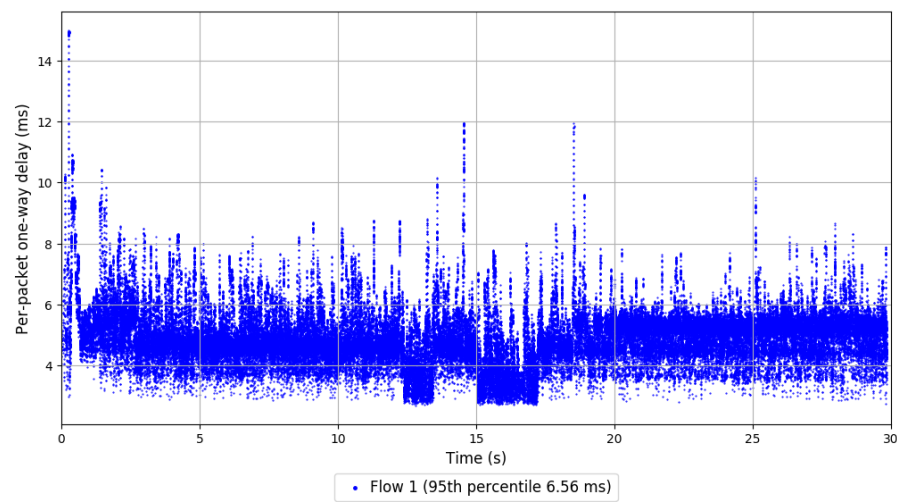
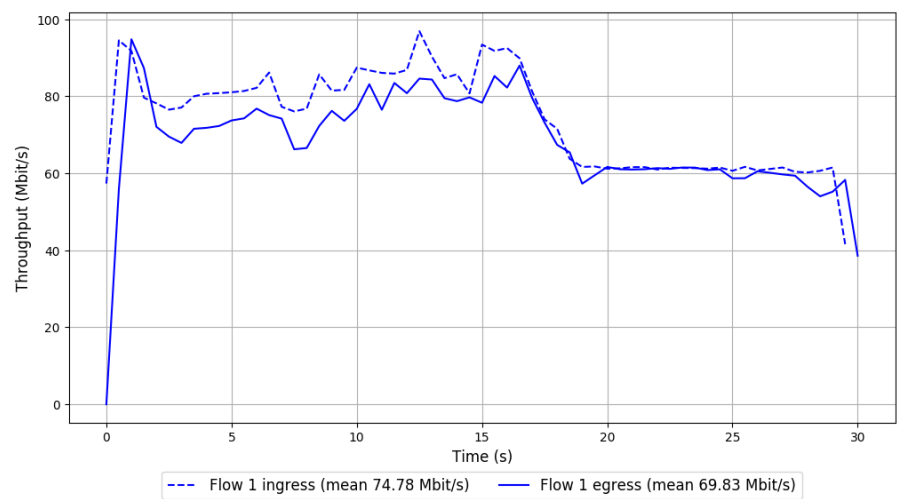


Run 4: Statistics of Indigo

Start at: 2018-09-06 05:51:55
End at: 2018-09-06 05:52:25
Local clock offset: 1.998 ms
Remote clock offset: -4.352 ms

Below is generated by plot.py at 2018-09-06 06:25:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 69.83 Mbit/s
95th percentile per-packet one-way delay: 6.561 ms
Loss rate: 6.61%
-- Flow 1:
Average throughput: 69.83 Mbit/s
95th percentile per-packet one-way delay: 6.561 ms
Loss rate: 6.61%

Run 4: Report of Indigo — Data Link

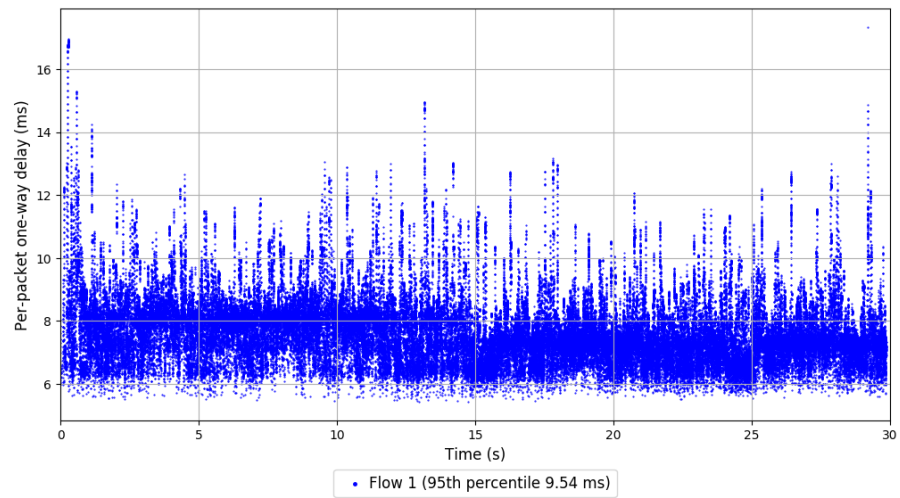
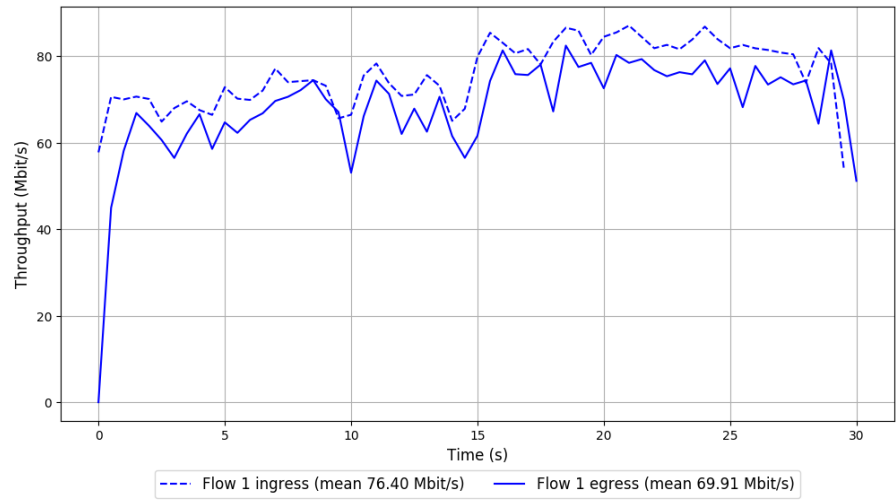


Run 5: Statistics of Indigo

Start at: 2018-09-06 06:12:15
End at: 2018-09-06 06:12:45
Local clock offset: -3.986 ms
Remote clock offset: -4.097 ms

Below is generated by plot.py at 2018-09-06 06:25:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 69.91 Mbit/s
95th percentile per-packet one-way delay: 9.539 ms
Loss rate: 8.50%
-- Flow 1:
Average throughput: 69.91 Mbit/s
95th percentile per-packet one-way delay: 9.539 ms
Loss rate: 8.50%

Run 5: Report of Indigo — Data Link

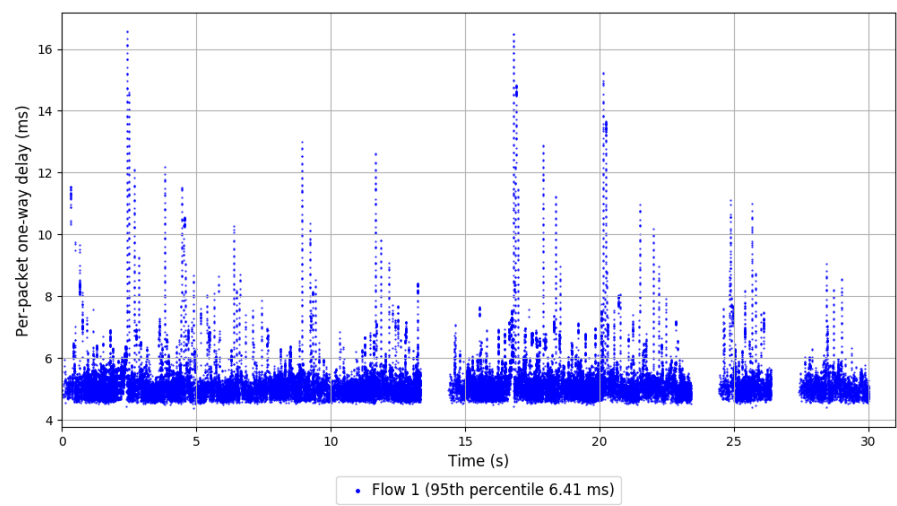
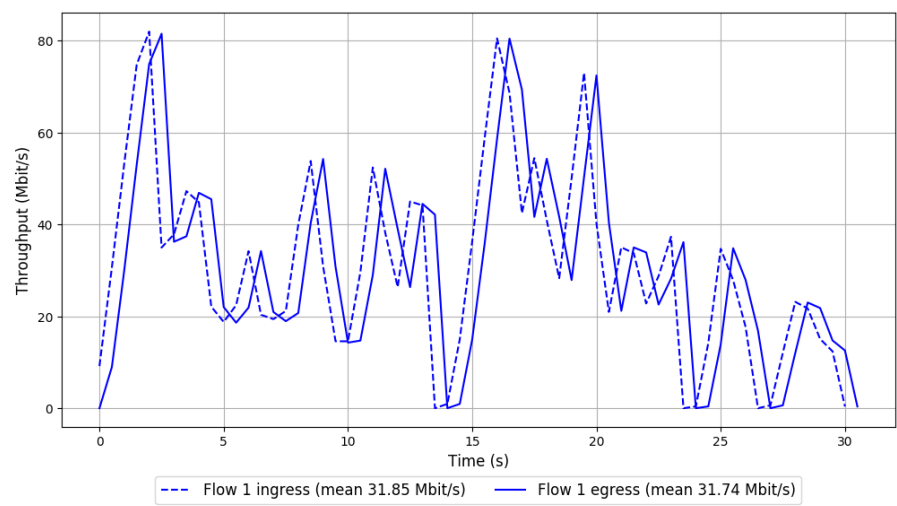


```
Run 1: Statistics of LEDBAT

Start at: 2018-09-06 04:59:20
End at: 2018-09-06 04:59:50
Local clock offset: -0.948 ms
Remote clock offset: -3.194 ms

# Below is generated by plot.py at 2018-09-06 06:25:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 31.74 Mbit/s
95th percentile per-packet one-way delay: 6.412 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 31.74 Mbit/s
95th percentile per-packet one-way delay: 6.412 ms
Loss rate: 0.36%
```

Run 1: Report of LEDBAT — Data Link

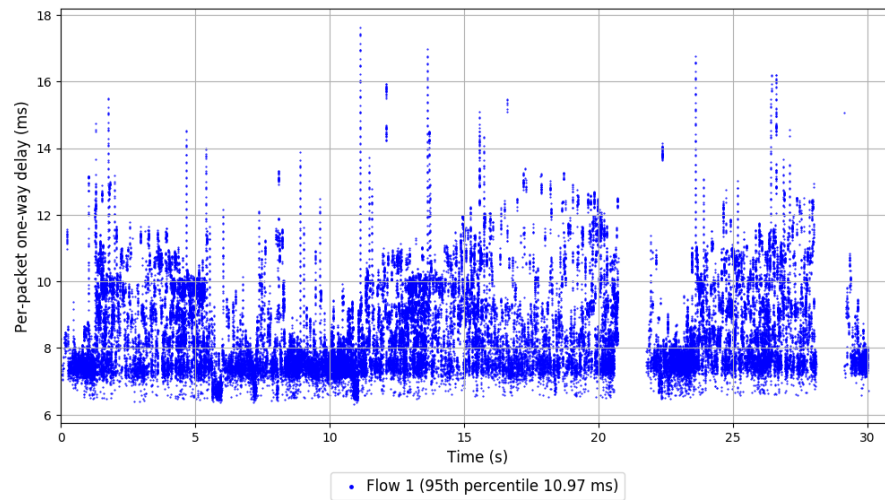
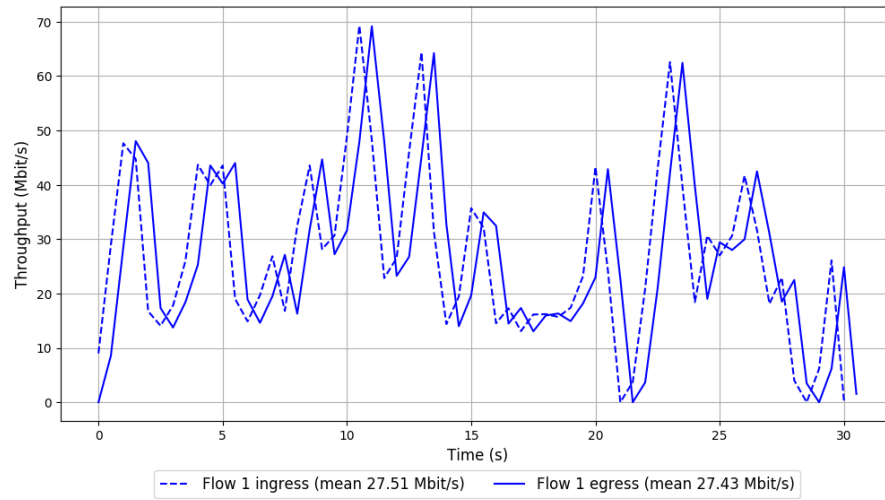


Run 2: Statistics of LEDBAT

Start at: 2018-09-06 05:19:24
End at: 2018-09-06 05:19:54
Local clock offset: -0.985 ms
Remote clock offset: -3.398 ms

Below is generated by plot.py at 2018-09-06 06:25:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 27.43 Mbit/s
95th percentile per-packet one-way delay: 10.970 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 27.43 Mbit/s
95th percentile per-packet one-way delay: 10.970 ms
Loss rate: 0.32%

Run 2: Report of LEDBAT — Data Link

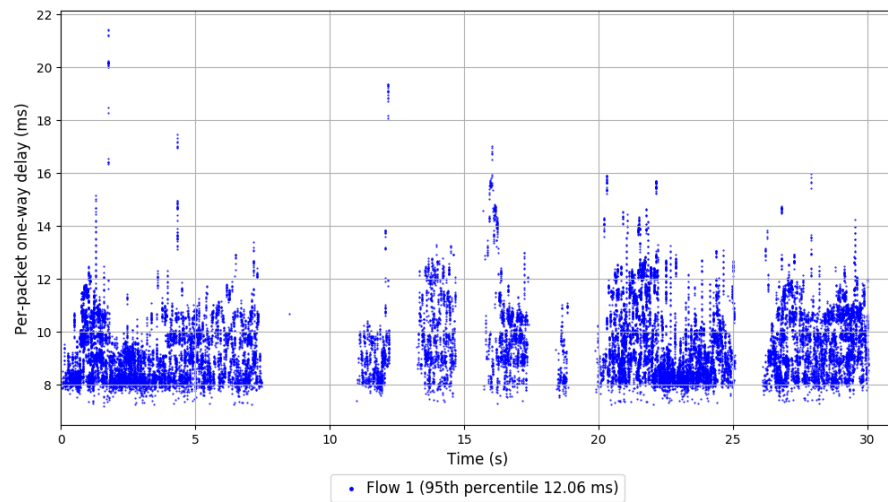
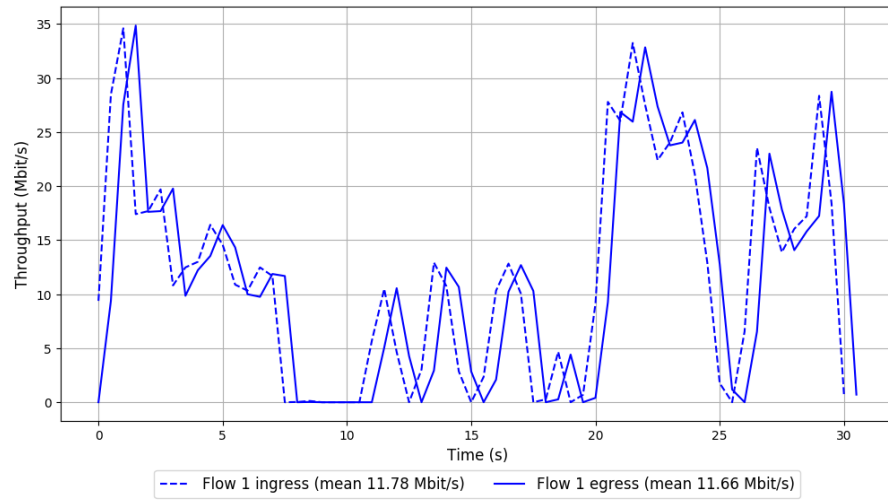


Run 3: Statistics of LEDBAT

Start at: 2018-09-06 05:39:39
End at: 2018-09-06 05:40:09
Local clock offset: -4.267 ms
Remote clock offset: -9.144 ms

Below is generated by plot.py at 2018-09-06 06:25:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 11.66 Mbit/s
95th percentile per-packet one-way delay: 12.062 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 11.66 Mbit/s
95th percentile per-packet one-way delay: 12.062 ms
Loss rate: 1.01%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-09-06 05:59:50

End at: 2018-09-06 06:00:20

Local clock offset: -4.842 ms

Remote clock offset: -4.51 ms

Below is generated by plot.py at 2018-09-06 06:25:03

Datalink statistics

-- Total of 1 flow:

Average throughput: 27.67 Mbit/s

95th percentile per-packet one-way delay: 12.553 ms

Loss rate: 0.14%

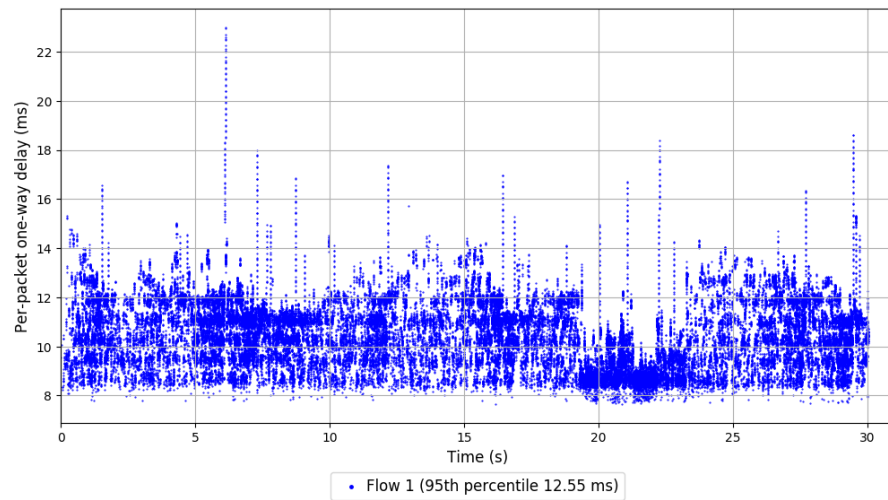
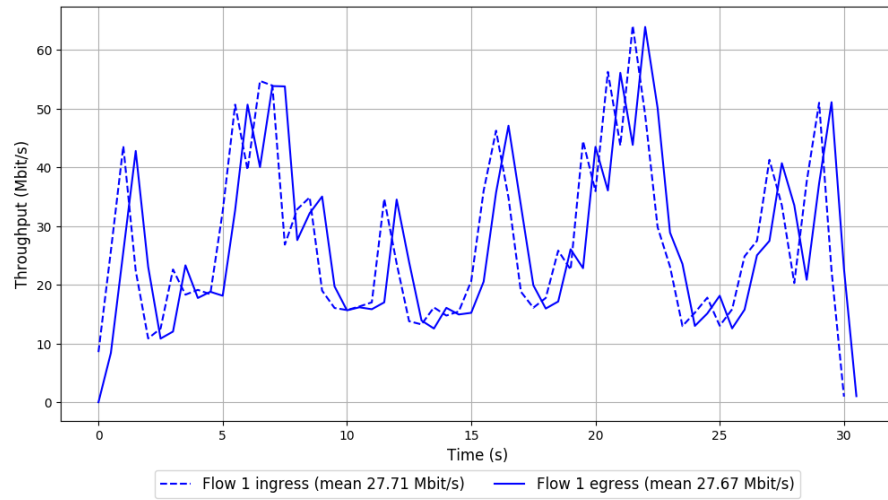
-- Flow 1:

Average throughput: 27.67 Mbit/s

95th percentile per-packet one-way delay: 12.553 ms

Loss rate: 0.14%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-09-06 06:20:14

End at: 2018-09-06 06:20:44

Local clock offset: -6.425 ms

Remote clock offset: -3.67 ms

Below is generated by plot.py at 2018-09-06 06:25:14

Datalink statistics

-- Total of 1 flow:

Average throughput: 27.90 Mbit/s

95th percentile per-packet one-way delay: 13.491 ms

Loss rate: 0.18%

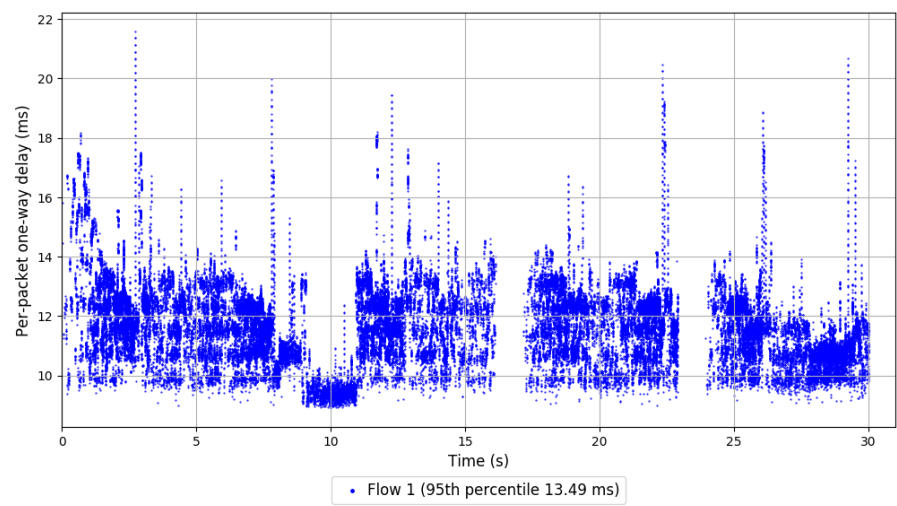
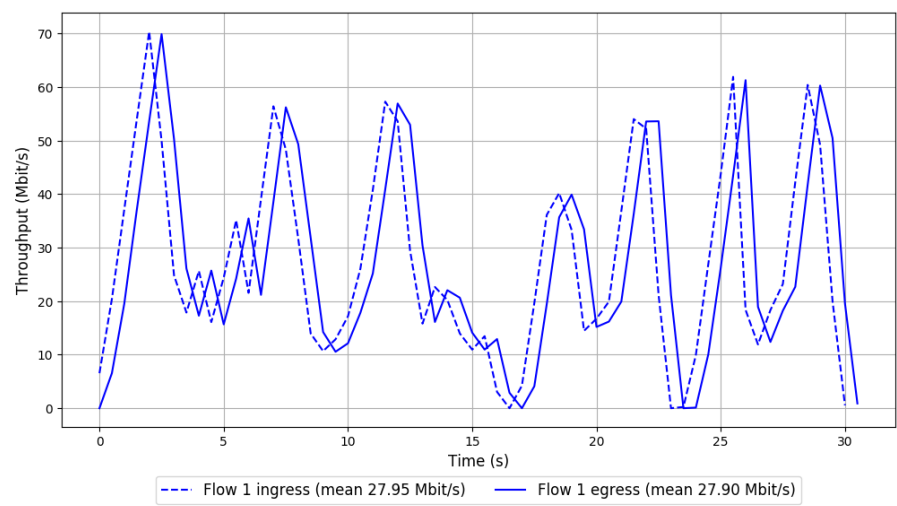
-- Flow 1:

Average throughput: 27.90 Mbit/s

95th percentile per-packet one-way delay: 13.491 ms

Loss rate: 0.18%

Run 5: Report of LEDBAT — Data Link



Run 1: Statistics of Indigo-Muses

Start at: 2018-09-06 04:49:09

End at: 2018-09-06 04:49:39

Local clock offset: -4.39 ms

Remote clock offset: -3.656 ms

Below is generated by plot.py at 2018-09-06 06:25:14

Datalink statistics

-- Total of 1 flow:

Average throughput: 22.77 Mbit/s

95th percentile per-packet one-way delay: 8.491 ms

Loss rate: 2.09%

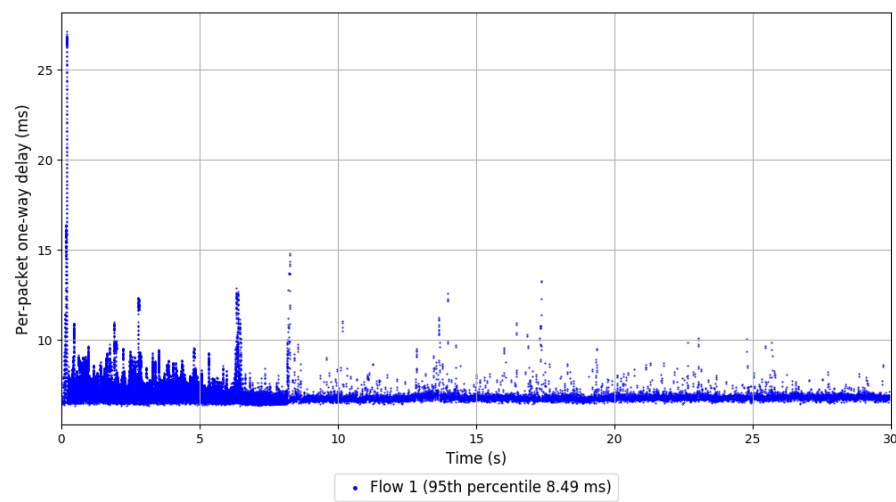
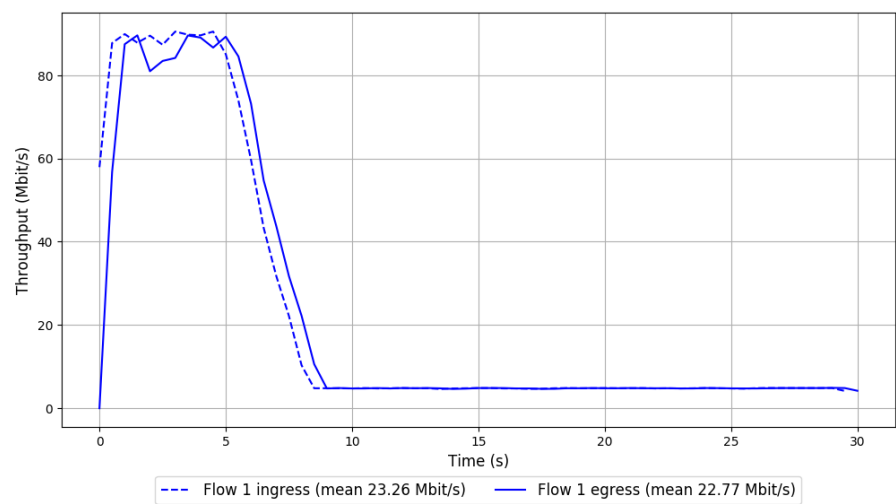
-- Flow 1:

Average throughput: 22.77 Mbit/s

95th percentile per-packet one-way delay: 8.491 ms

Loss rate: 2.09%

Run 1: Report of Indigo-Muses — Data Link

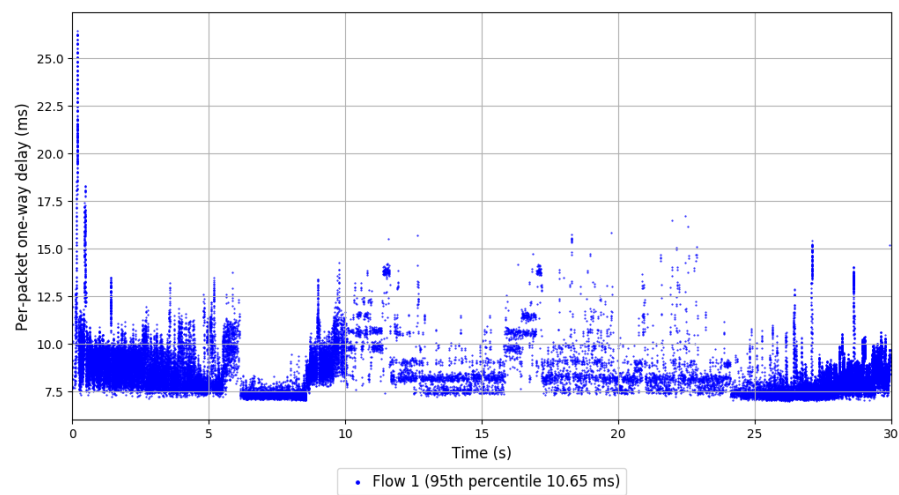
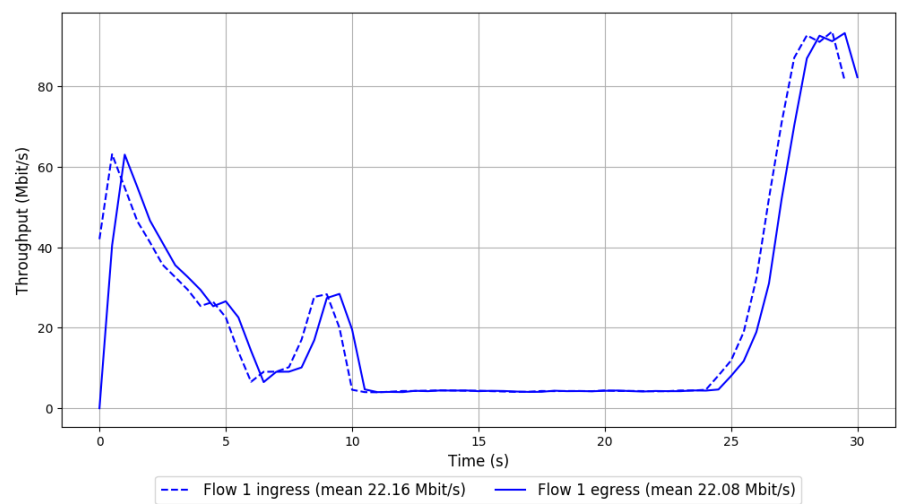


Run 2: Statistics of Indigo-Muses

Start at: 2018-09-06 05:09:23
End at: 2018-09-06 05:09:53
Local clock offset: -2.796 ms
Remote clock offset: -3.652 ms

Below is generated by plot.py at 2018-09-06 06:25:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 22.08 Mbit/s
95th percentile per-packet one-way delay: 10.650 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 22.08 Mbit/s
95th percentile per-packet one-way delay: 10.650 ms
Loss rate: 0.31%

Run 2: Report of Indigo-Muses — Data Link

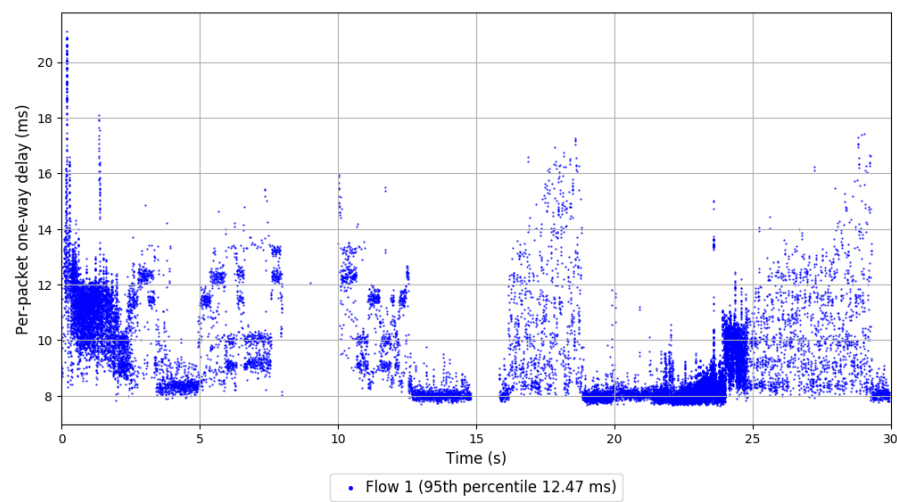
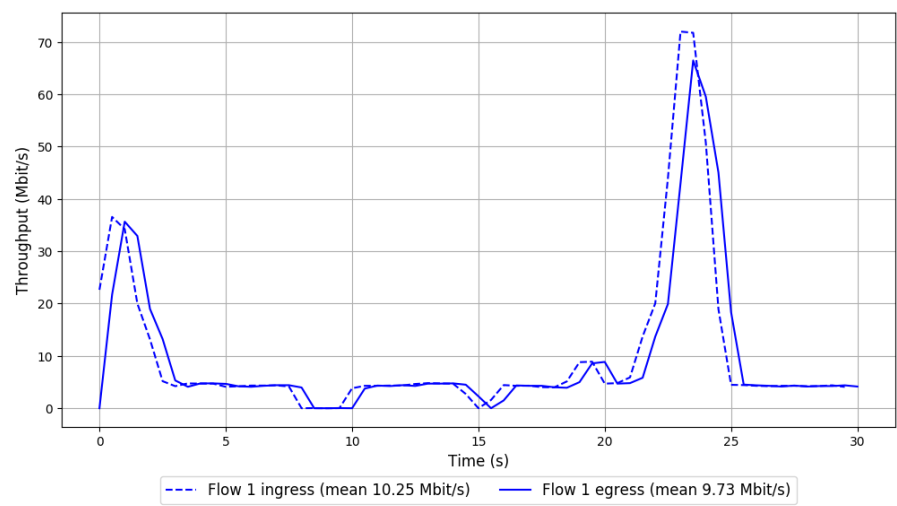


Run 3: Statistics of Indigo-Muses

Start at: 2018-09-06 05:29:31
End at: 2018-09-06 05:30:01
Local clock offset: -0.527 ms
Remote clock offset: -3.956 ms

Below is generated by plot.py at 2018-09-06 06:25:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 9.73 Mbit/s
95th percentile per-packet one-way delay: 12.471 ms
Loss rate: 5.04%
-- Flow 1:
Average throughput: 9.73 Mbit/s
95th percentile per-packet one-way delay: 12.471 ms
Loss rate: 5.04%

Run 3: Report of Indigo-Muses — Data Link

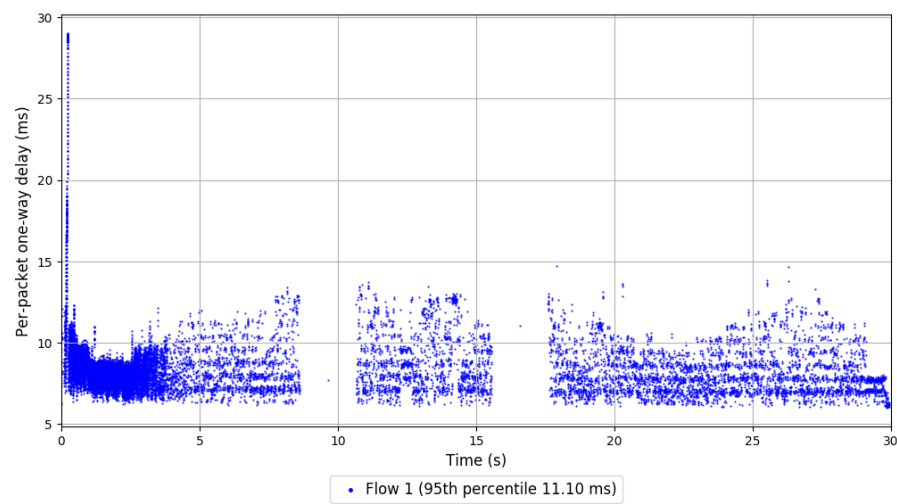
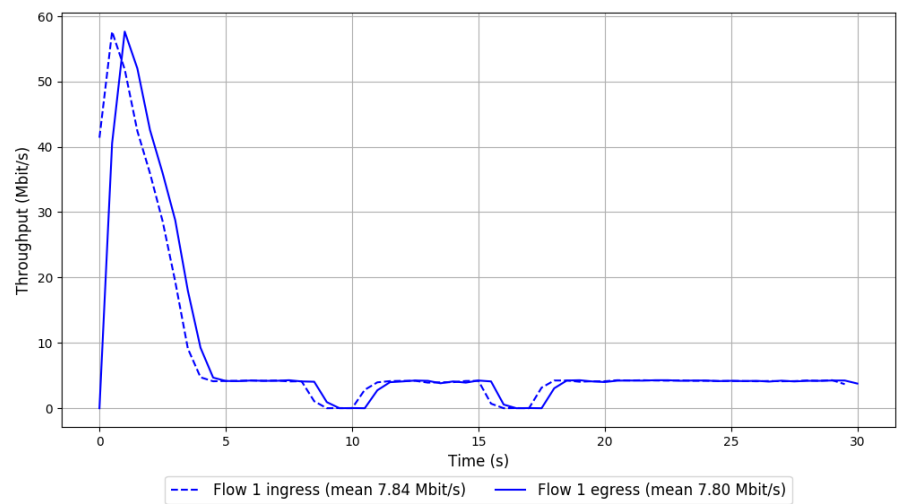


Run 4: Statistics of Indigo-Muses

Start at: 2018-09-06 05:49:43
End at: 2018-09-06 05:50:13
Local clock offset: 0.989 ms
Remote clock offset: -4.025 ms

Below is generated by plot.py at 2018-09-06 06:25:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 7.80 Mbit/s
95th percentile per-packet one-way delay: 11.100 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 7.80 Mbit/s
95th percentile per-packet one-way delay: 11.100 ms
Loss rate: 0.44%

Run 4: Report of Indigo-Muses — Data Link

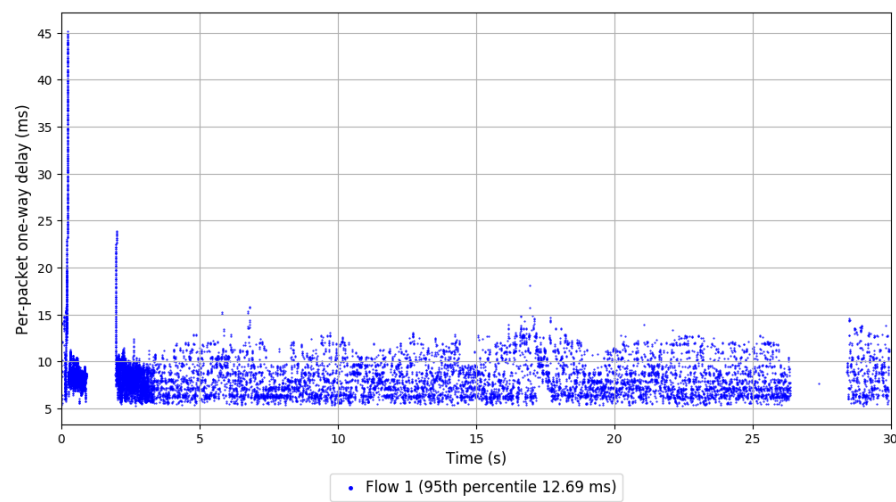
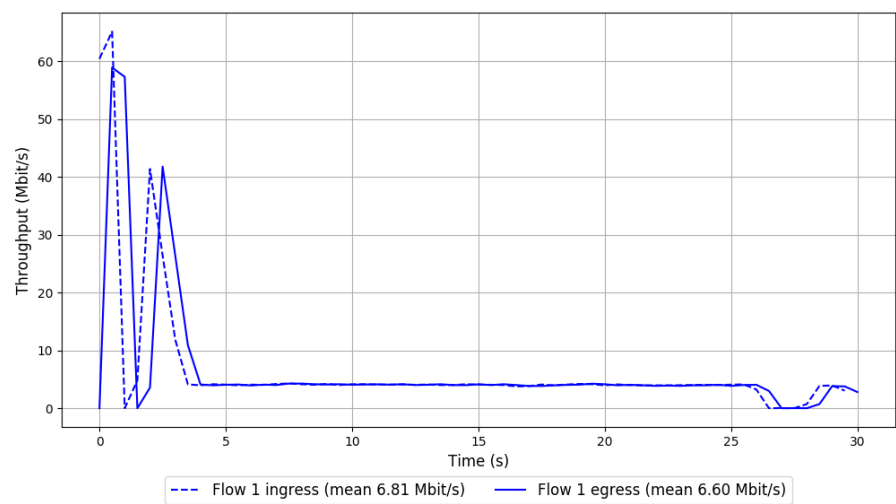


Run 5: Statistics of Indigo-Muses

Start at: 2018-09-06 06:09:58
End at: 2018-09-06 06:10:28
Local clock offset: -2.942 ms
Remote clock offset: -4.587 ms

Below is generated by plot.py at 2018-09-06 06:25:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 6.60 Mbit/s
95th percentile per-packet one-way delay: 12.689 ms
Loss rate: 3.11%
-- Flow 1:
Average throughput: 6.60 Mbit/s
95th percentile per-packet one-way delay: 12.689 ms
Loss rate: 3.11%

Run 5: Report of Indigo-Muses — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2018-09-06 04:50:14

End at: 2018-09-06 04:50:44

Local clock offset: -3.295 ms

Remote clock offset: -3.922 ms

Below is generated by plot.py at 2018-09-06 06:26:12

Datalink statistics

-- Total of 1 flow:

Average throughput: 81.36 Mbit/s

95th percentile per-packet one-way delay: 9.441 ms

Loss rate: 6.02%

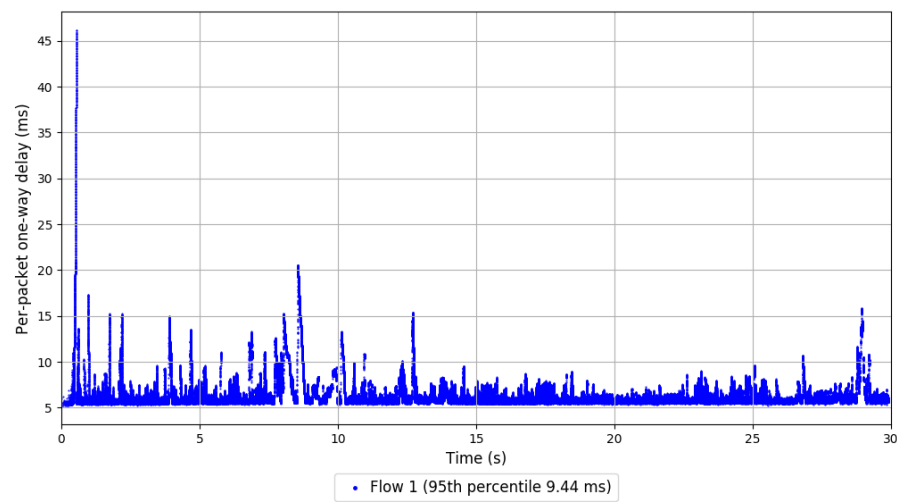
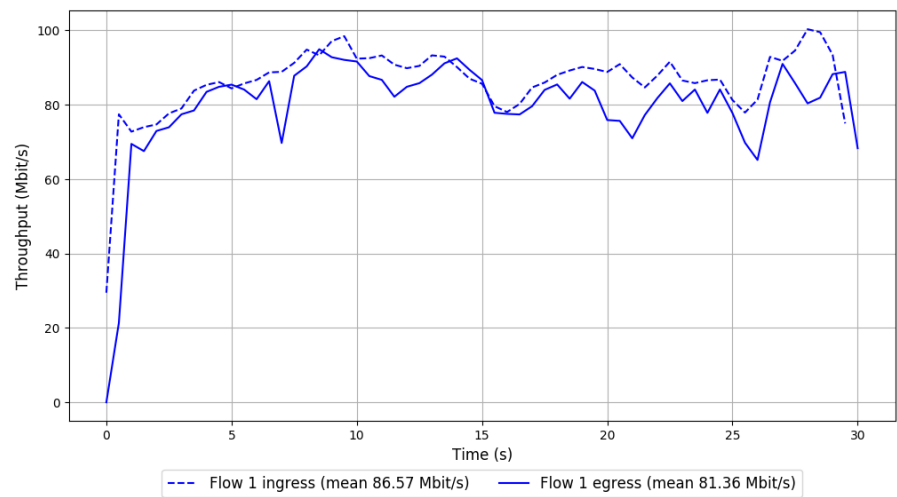
-- Flow 1:

Average throughput: 81.36 Mbit/s

95th percentile per-packet one-way delay: 9.441 ms

Loss rate: 6.02%

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-09-06 05:10:29

End at: 2018-09-06 05:10:59

Local clock offset: -1.477 ms

Remote clock offset: -4.337 ms

Below is generated by plot.py at 2018-09-06 06:26:12

Datalink statistics

-- Total of 1 flow:

Average throughput: 8.98 Mbit/s

95th percentile per-packet one-way delay: 11.178 ms

Loss rate: 0.16%

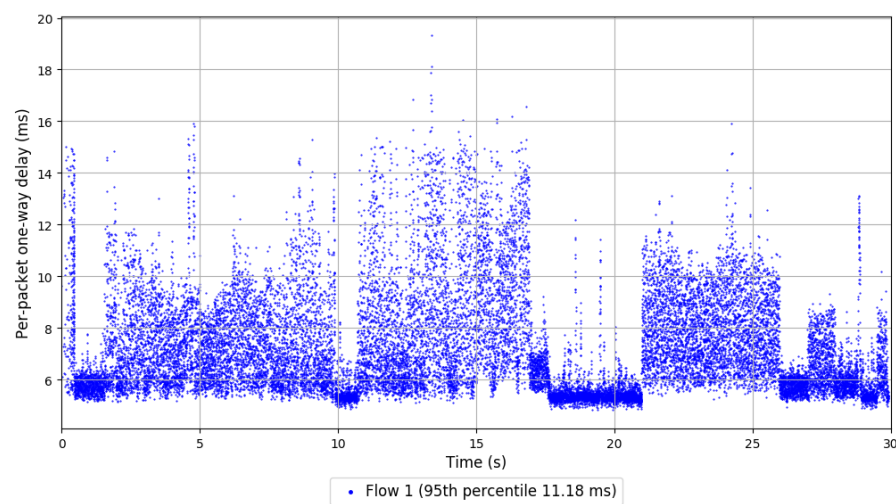
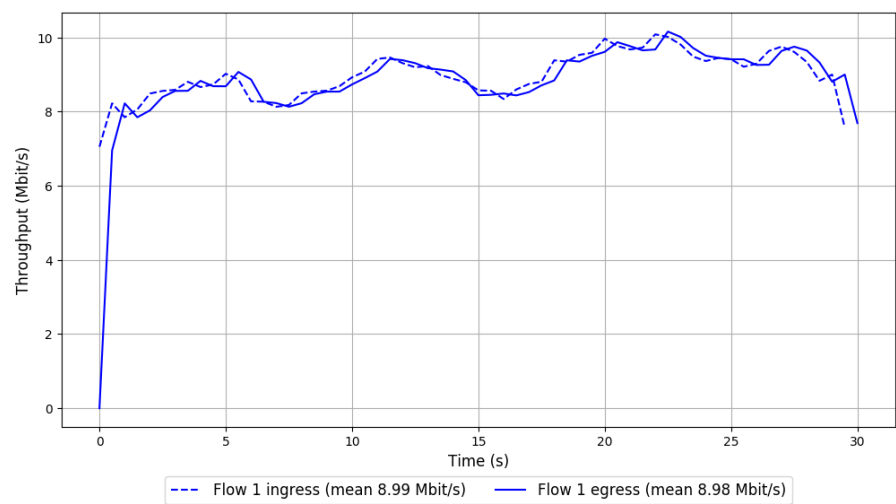
-- Flow 1:

Average throughput: 8.98 Mbit/s

95th percentile per-packet one-way delay: 11.178 ms

Loss rate: 0.16%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-09-06 05:30:37

End at: 2018-09-06 05:31:07

Local clock offset: 2.324 ms

Remote clock offset: -3.57 ms

Below is generated by plot.py at 2018-09-06 06:26:12

Datalink statistics

-- Total of 1 flow:

Average throughput: 54.02 Mbit/s

95th percentile per-packet one-way delay: 8.515 ms

Loss rate: 7.45%

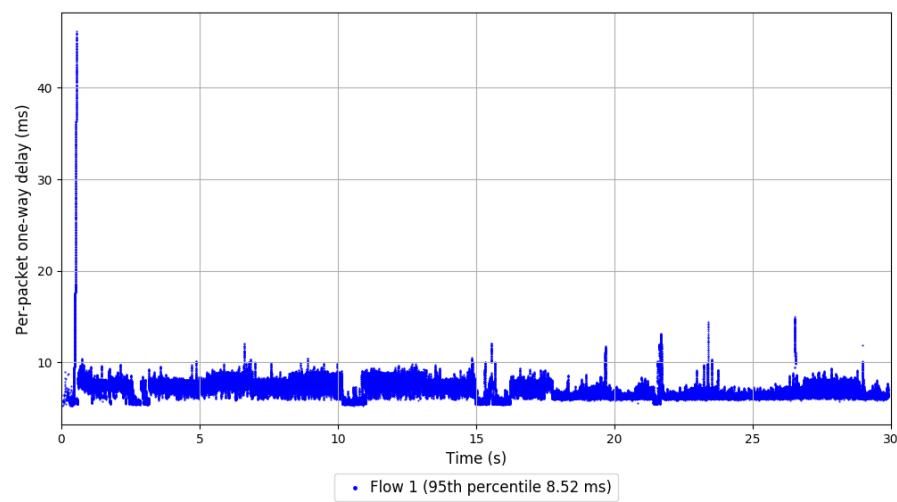
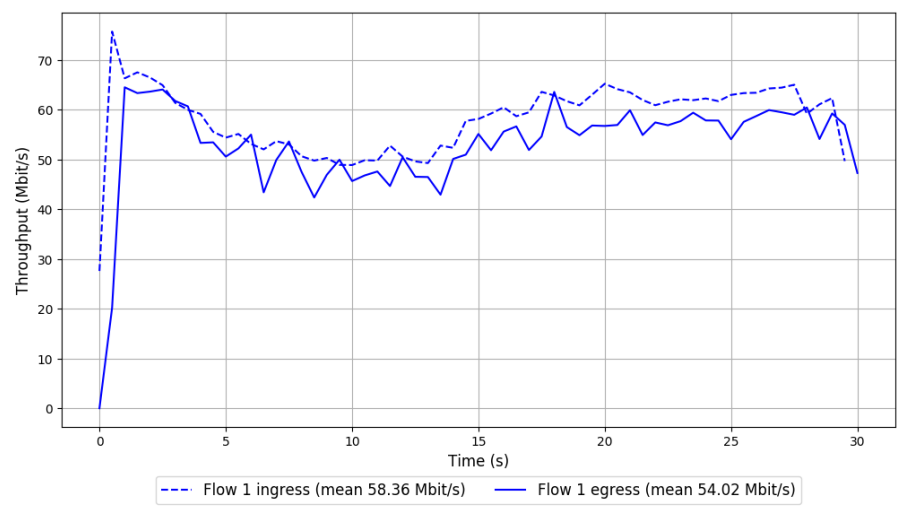
-- Flow 1:

Average throughput: 54.02 Mbit/s

95th percentile per-packet one-way delay: 8.515 ms

Loss rate: 7.45%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-09-06 05:50:48

End at: 2018-09-06 05:51:18

Local clock offset: -0.17 ms

Remote clock offset: -4.639 ms

Below is generated by plot.py at 2018-09-06 06:26:12

Datalink statistics

-- Total of 1 flow:

Average throughput: 64.41 Mbit/s

95th percentile per-packet one-way delay: 8.869 ms

Loss rate: 6.74%

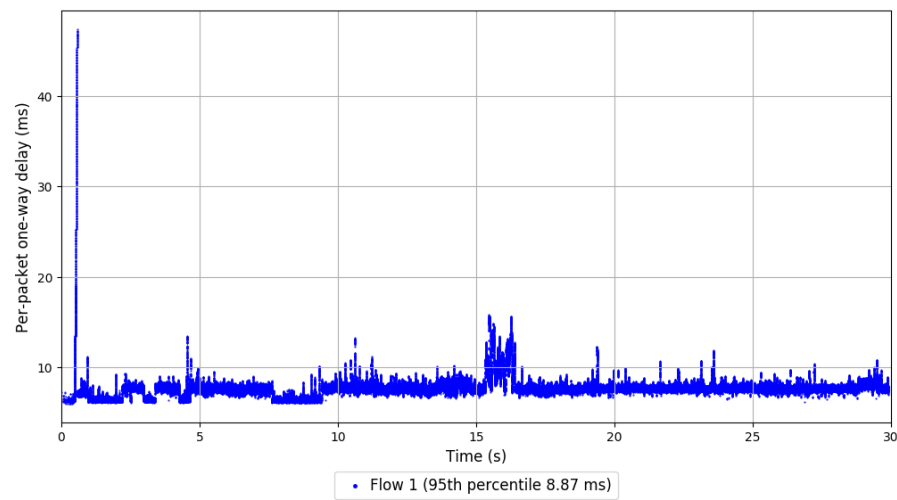
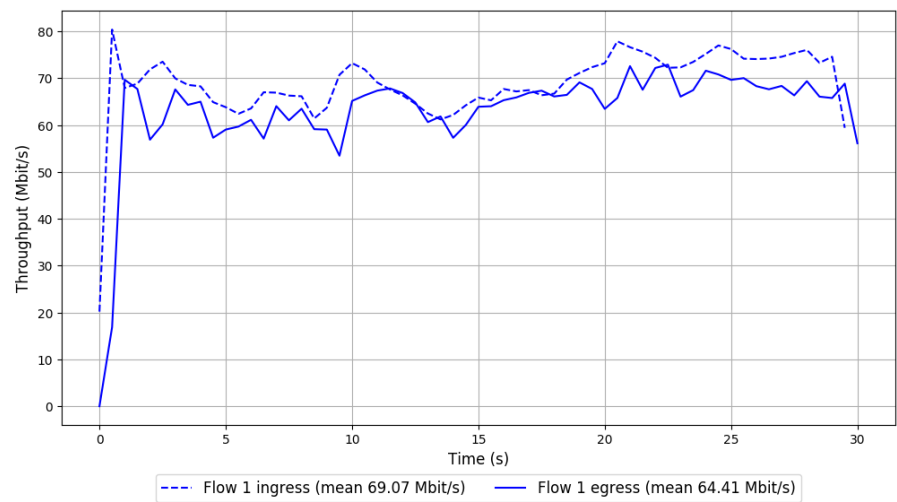
-- Flow 1:

Average throughput: 64.41 Mbit/s

95th percentile per-packet one-way delay: 8.869 ms

Loss rate: 6.74%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-09-06 06:11:04

End at: 2018-09-06 06:11:34

Local clock offset: -5.987 ms

Remote clock offset: -3.498 ms

Below is generated by plot.py at 2018-09-06 06:26:12

Datalink statistics

-- Total of 1 flow:

Average throughput: 72.14 Mbit/s

95th percentile per-packet one-way delay: 11.847 ms

Loss rate: 7.76%

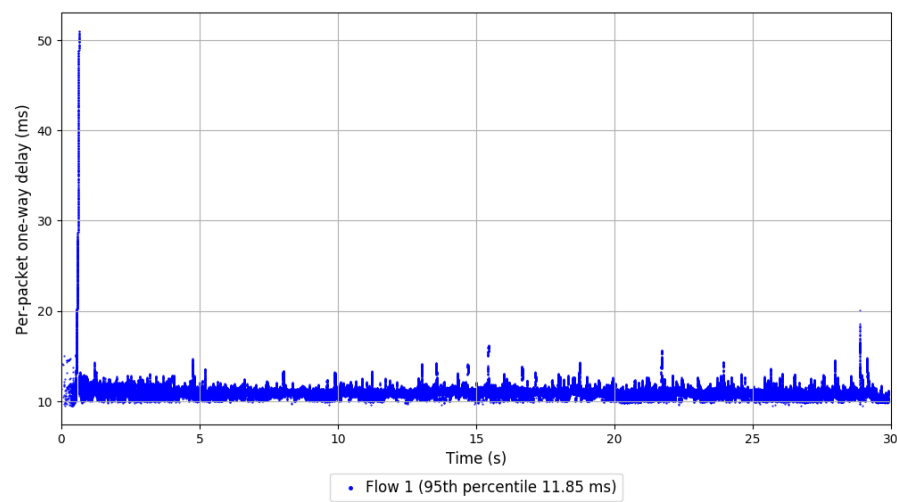
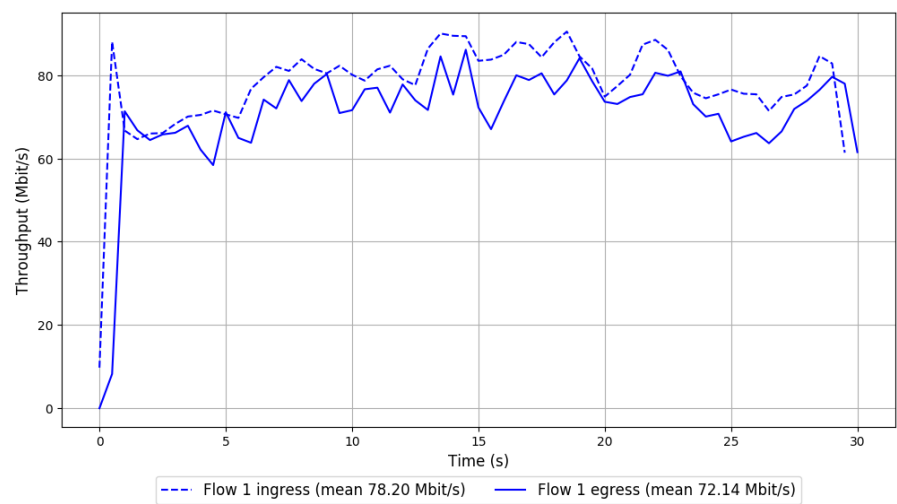
-- Flow 1:

Average throughput: 72.14 Mbit/s

95th percentile per-packet one-way delay: 11.847 ms

Loss rate: 7.76%

Run 5: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

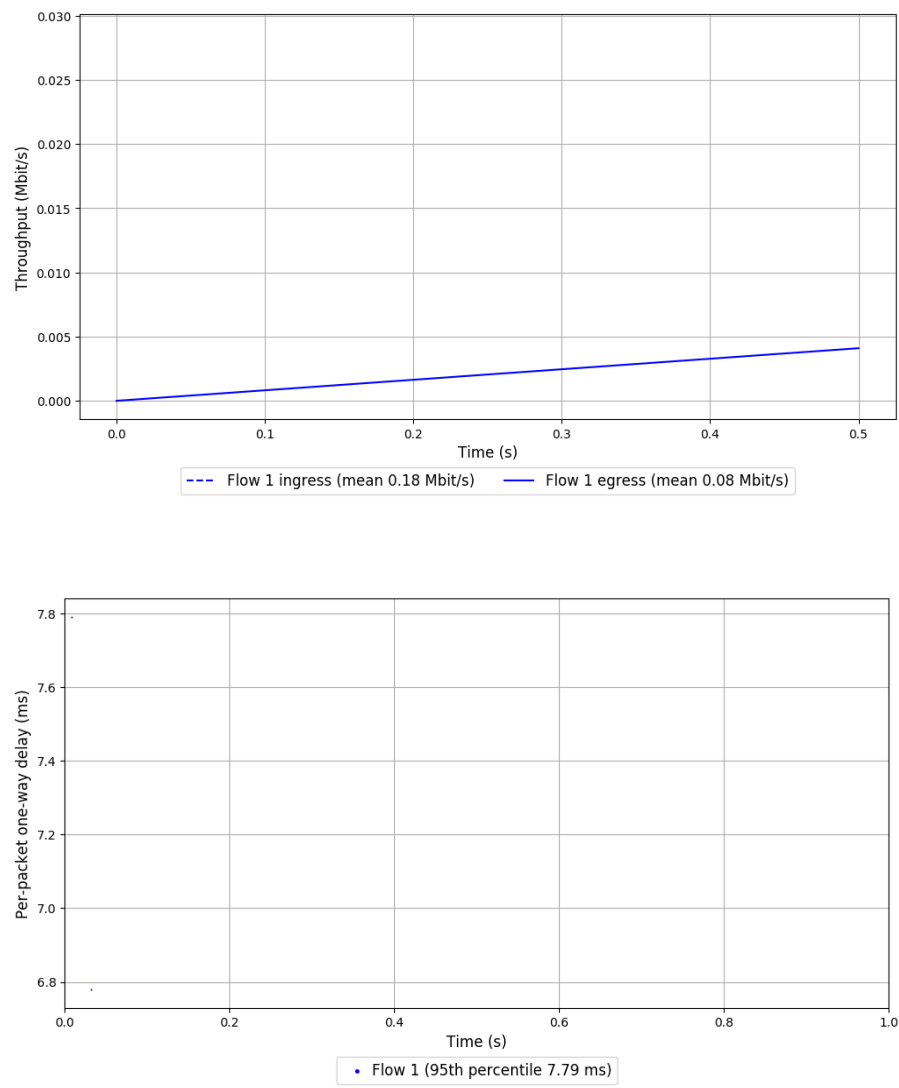
Start at: 2018-09-06 04:43:38

End at: 2018-09-06 04:44:08

Local clock offset: -4.272 ms

Remote clock offset: -3.316 ms

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

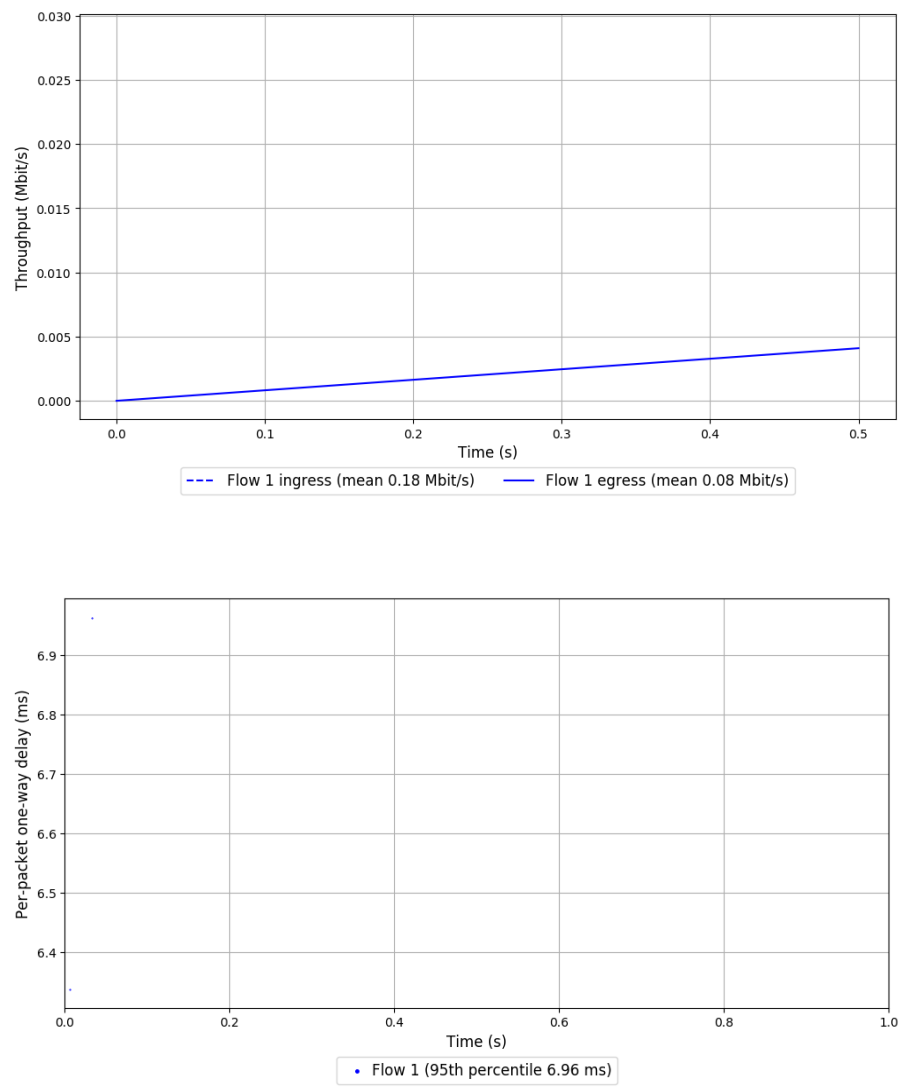
Start at: 2018-09-06 05:03:53

End at: 2018-09-06 05:04:23

Local clock offset: -0.261 ms

Remote clock offset: -3.2 ms

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

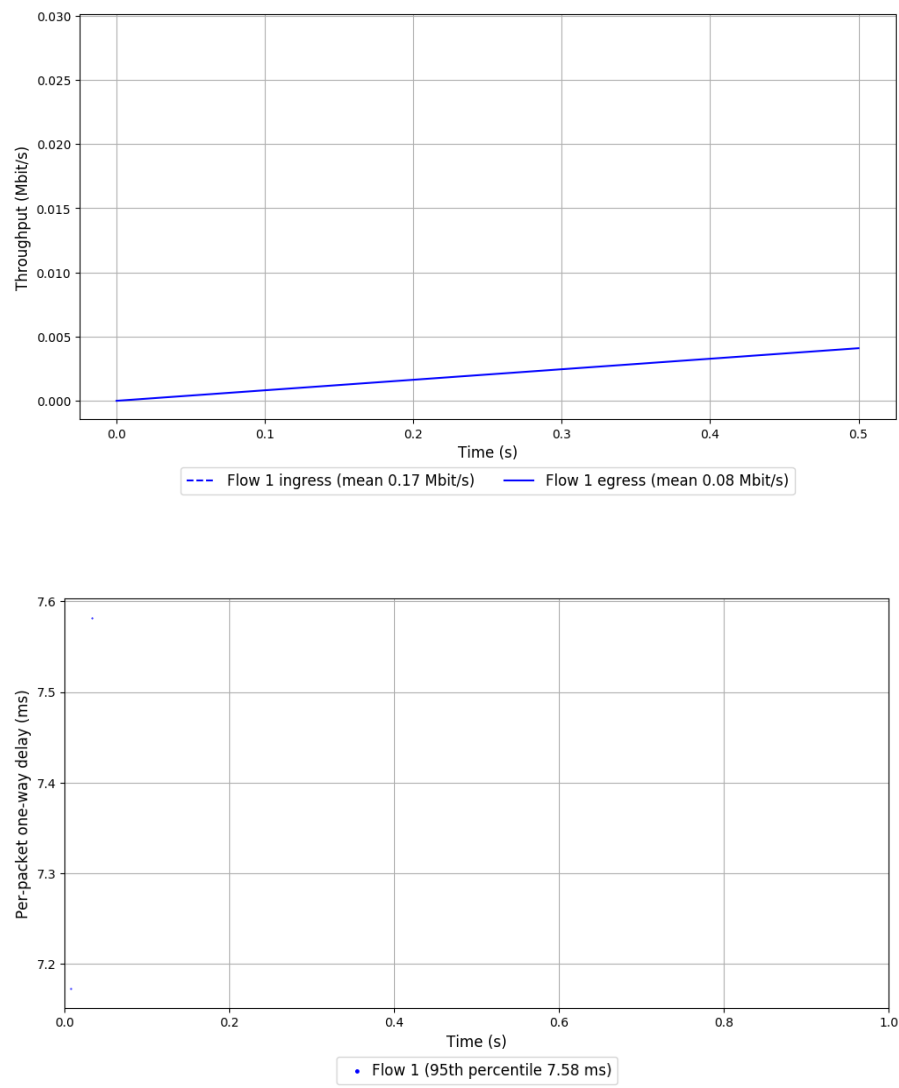
Start at: 2018-09-06 05:23:58

End at: 2018-09-06 05:24:28

Local clock offset: 1.17 ms

Remote clock offset: -3.792 ms

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

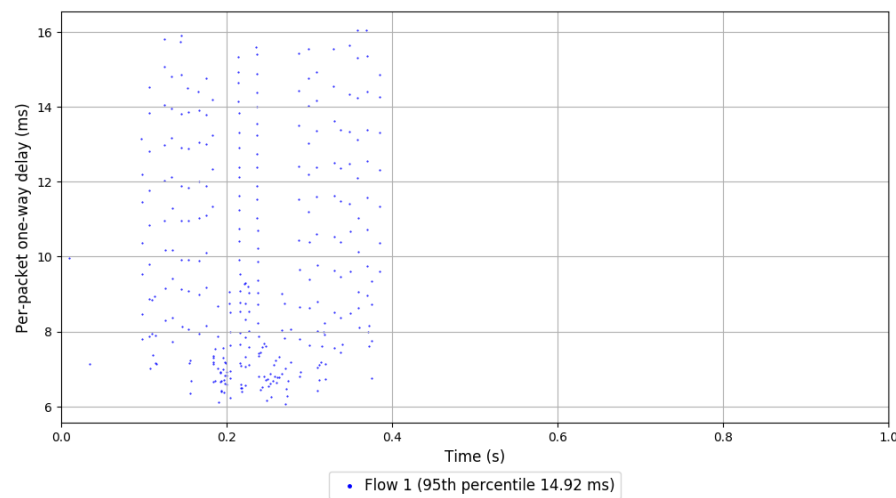
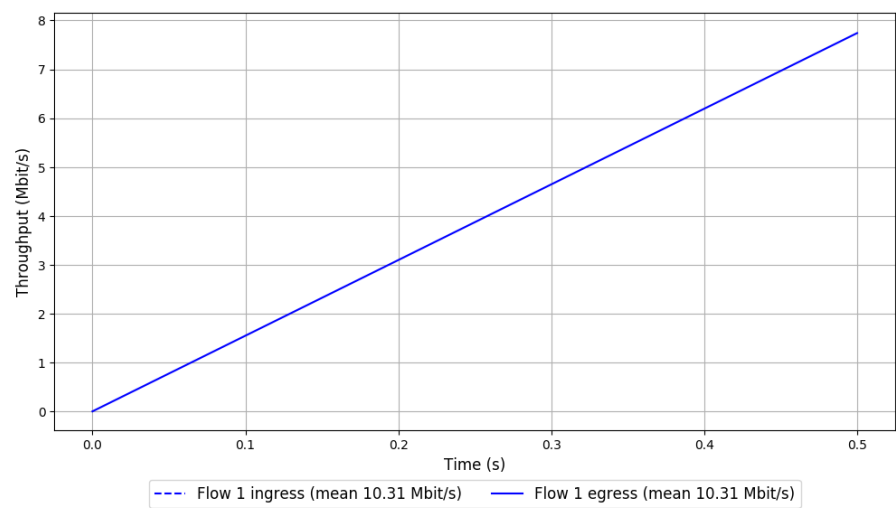
Start at: 2018-09-06 05:44:11

End at: 2018-09-06 05:44:41

Local clock offset: 2.28 ms

Remote clock offset: -4.2 ms

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

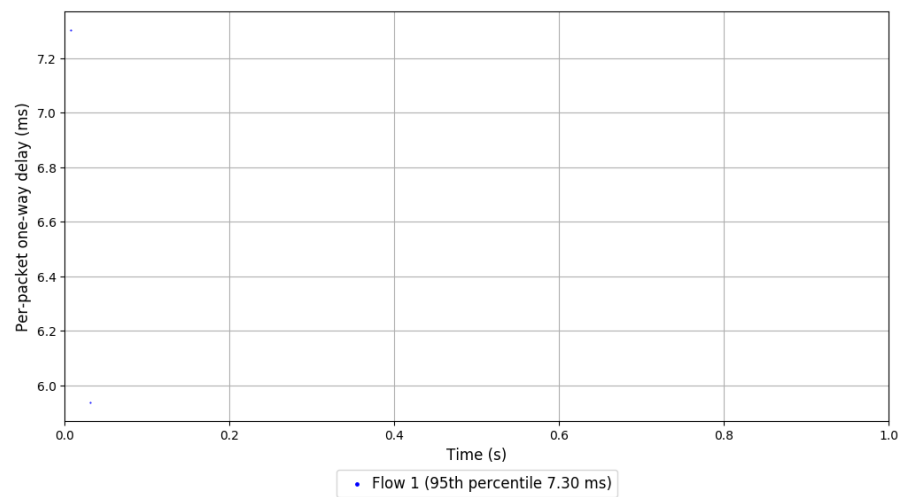
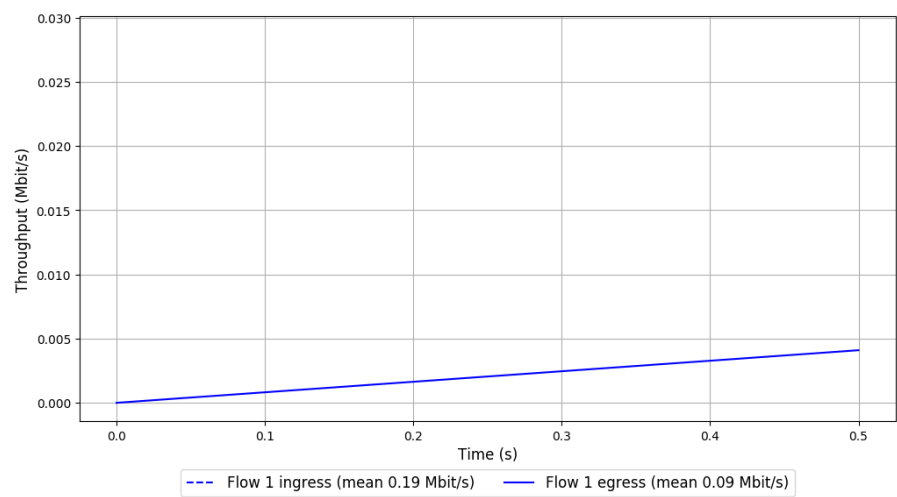
Start at: 2018-09-06 06:04:23

End at: 2018-09-06 06:04:53

Local clock offset: -2.847 ms

Remote clock offset: -3.846 ms

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2018-09-06 04:58:13

End at: 2018-09-06 04:58:43

Local clock offset: -2.061 ms

Remote clock offset: -3.485 ms

Below is generated by plot.py at 2018-09-06 06:26:12

Datalink statistics

-- Total of 1 flow:

Average throughput: 25.03 Mbit/s

95th percentile per-packet one-way delay: 36.170 ms

Loss rate: 1.76%

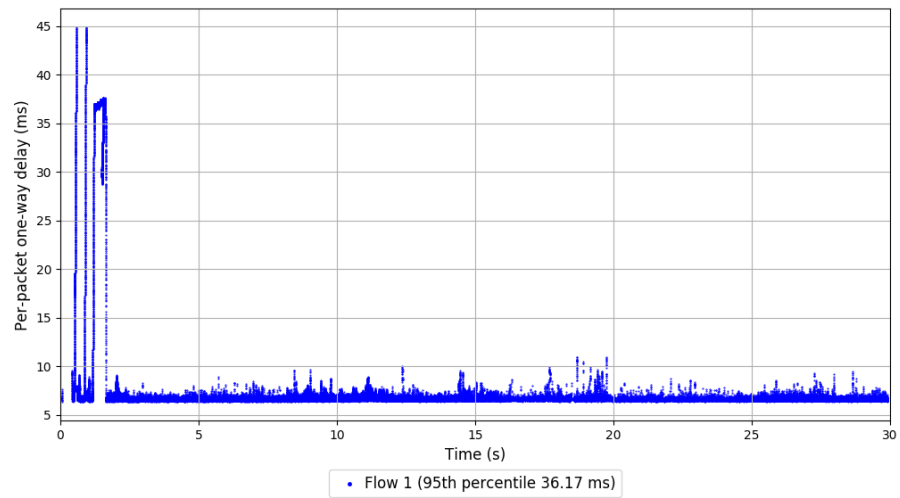
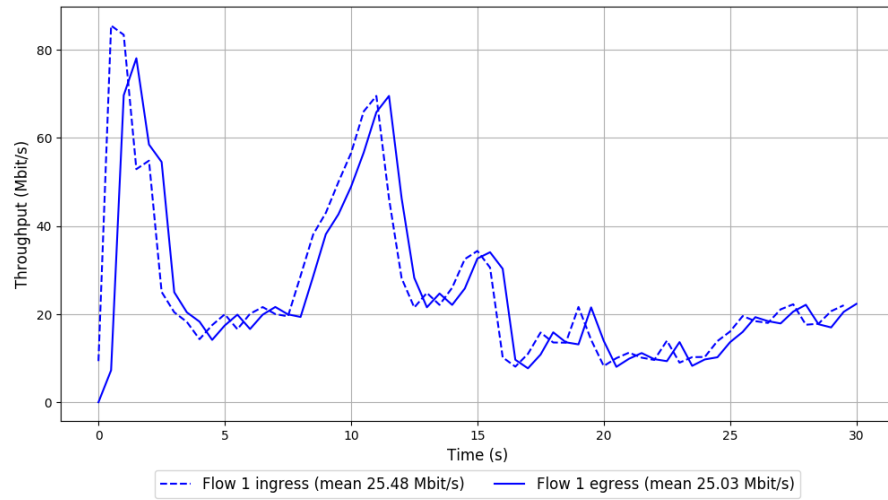
-- Flow 1:

Average throughput: 25.03 Mbit/s

95th percentile per-packet one-way delay: 36.170 ms

Loss rate: 1.76%

Run 1: Report of QUIC Cubic — Data Link

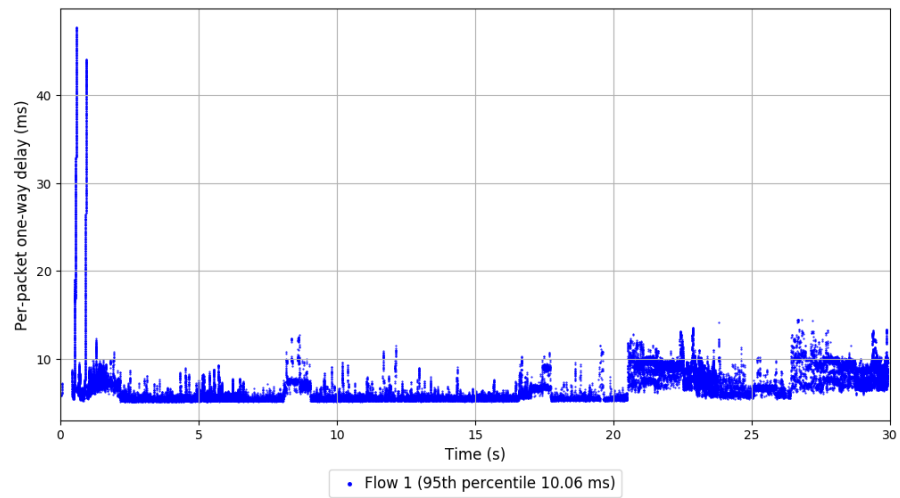
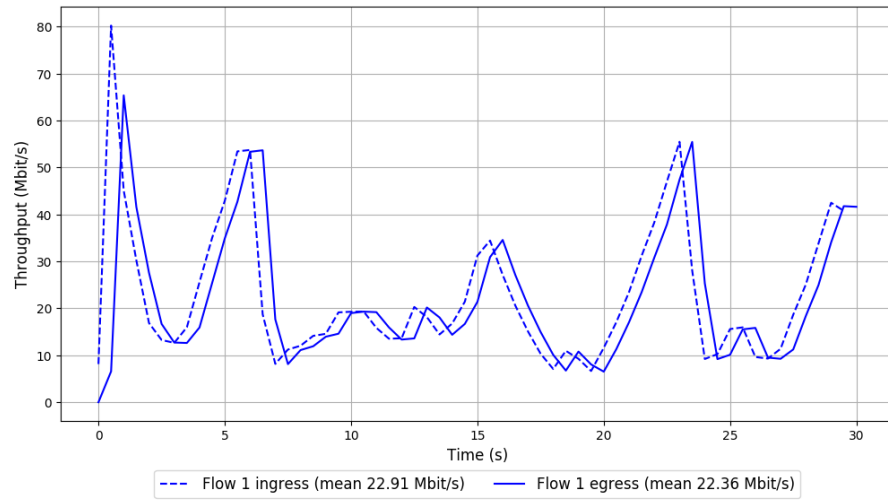


Run 2: Statistics of QUIC Cubic

Start at: 2018-09-06 05:18:17
End at: 2018-09-06 05:18:47
Local clock offset: 0.115 ms
Remote clock offset: -4.103 ms

Below is generated by plot.py at 2018-09-06 06:26:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 22.36 Mbit/s
95th percentile per-packet one-way delay: 10.064 ms
Loss rate: 2.40%
-- Flow 1:
Average throughput: 22.36 Mbit/s
95th percentile per-packet one-way delay: 10.064 ms
Loss rate: 2.40%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-09-06 05:38:33

End at: 2018-09-06 05:39:03

Local clock offset: 4.361 ms

Remote clock offset: -4.04 ms

Below is generated by plot.py at 2018-09-06 06:26:12

Datalink statistics

-- Total of 1 flow:

Average throughput: 13.60 Mbit/s

95th percentile per-packet one-way delay: 9.202 ms

Loss rate: 1.23%

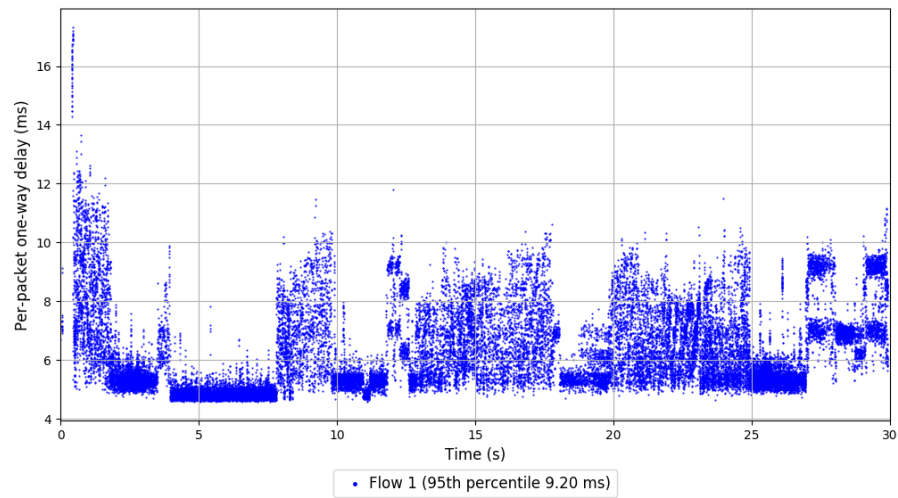
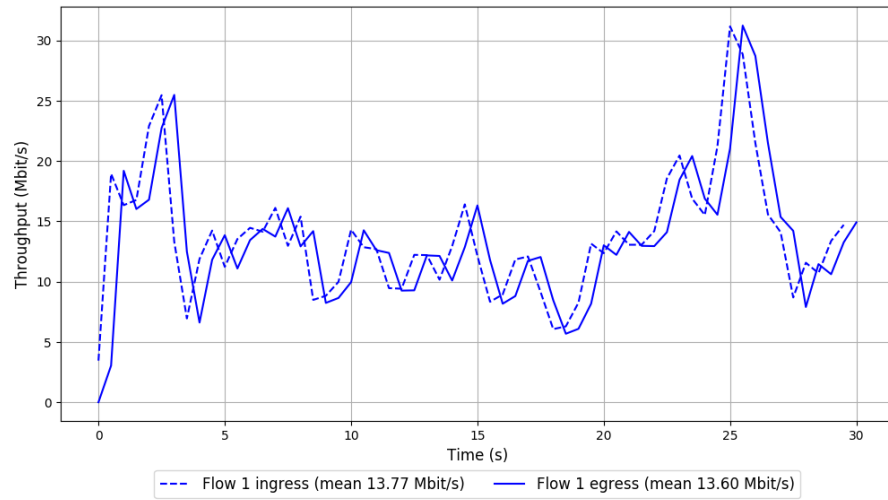
-- Flow 1:

Average throughput: 13.60 Mbit/s

95th percentile per-packet one-way delay: 9.202 ms

Loss rate: 1.23%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-09-06 05:58:42

End at: 2018-09-06 05:59:12

Local clock offset: -0.541 ms

Remote clock offset: -3.981 ms

Below is generated by plot.py at 2018-09-06 06:26:12

Datalink statistics

-- Total of 1 flow:

Average throughput: 41.16 Mbit/s

95th percentile per-packet one-way delay: 36.753 ms

Loss rate: 0.93%

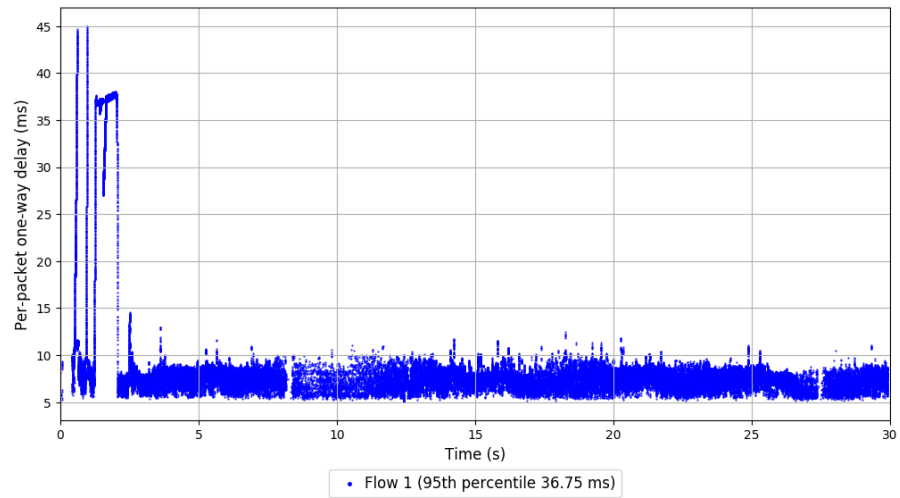
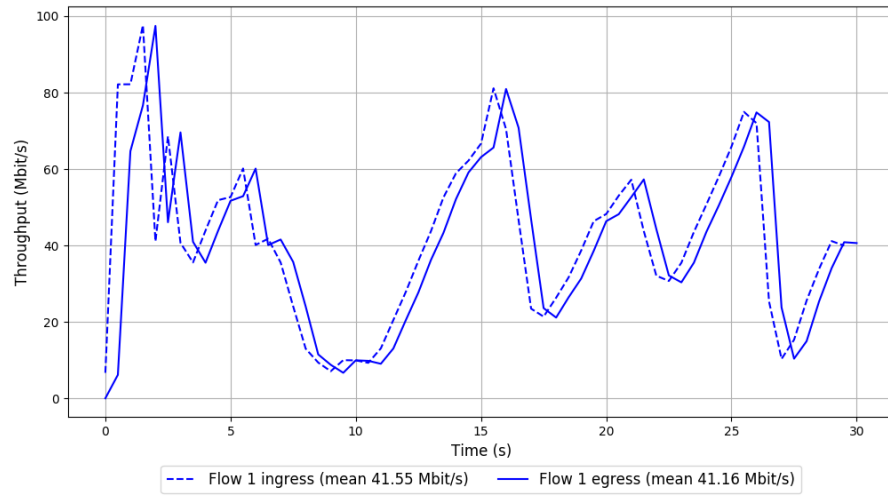
-- Flow 1:

Average throughput: 41.16 Mbit/s

95th percentile per-packet one-way delay: 36.753 ms

Loss rate: 0.93%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-09-06 06:19:04

End at: 2018-09-06 06:19:34

Local clock offset: -3.542 ms

Remote clock offset: -3.513 ms

Below is generated by plot.py at 2018-09-06 06:26:12

Datalink statistics

-- Total of 1 flow:

Average throughput: 44.48 Mbit/s

95th percentile per-packet one-way delay: 15.861 ms

Loss rate: 0.74%

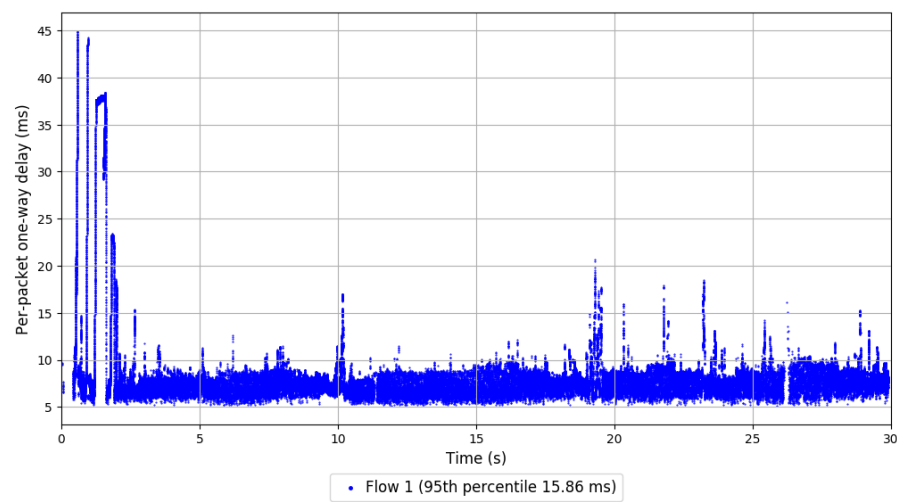
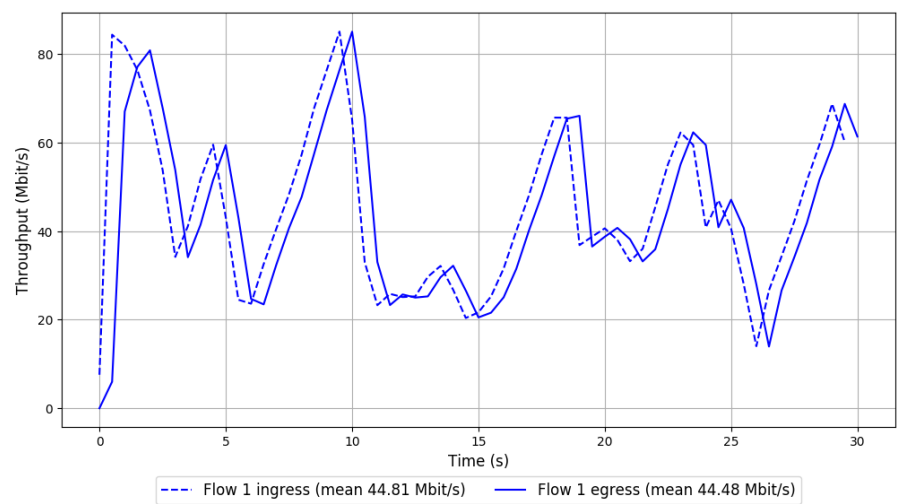
-- Flow 1:

Average throughput: 44.48 Mbit/s

95th percentile per-packet one-way delay: 15.861 ms

Loss rate: 0.74%

Run 5: Report of QUIC Cubic — Data Link

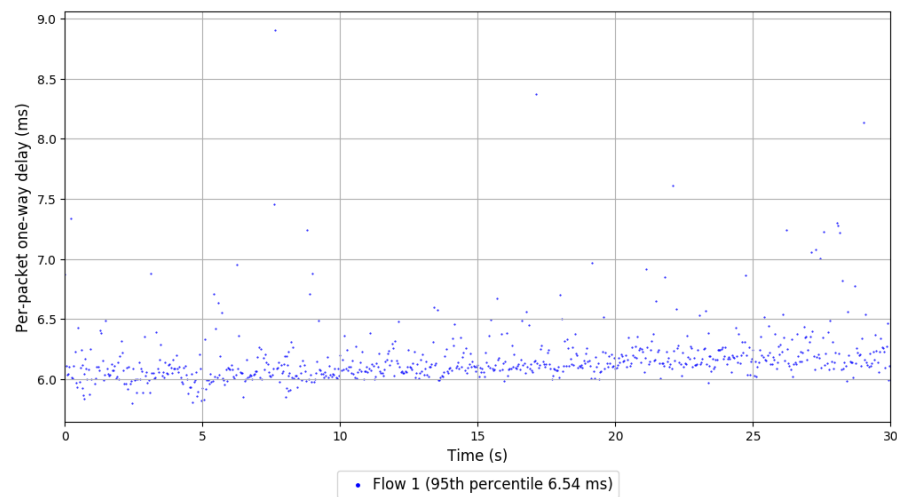
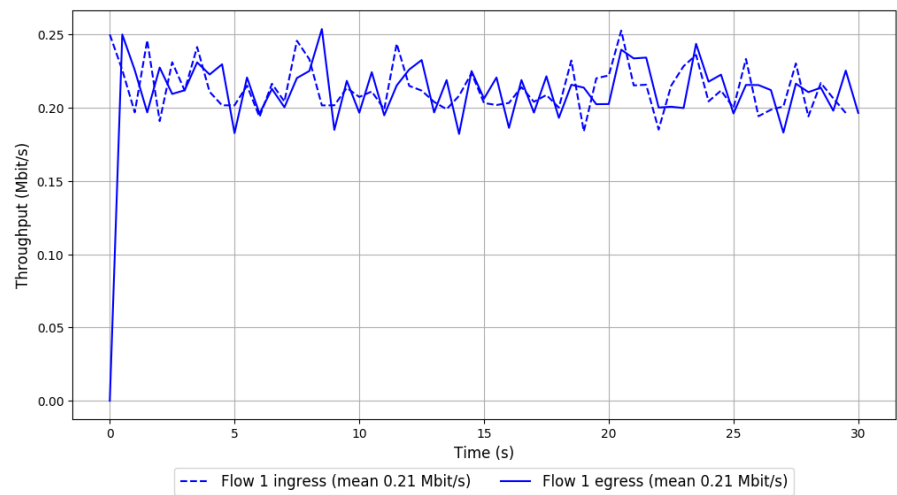


```
Run 1: Statistics of SCReAM

Start at: 2018-09-06 04:46:55
End at: 2018-09-06 04:47:25
Local clock offset: -3.194 ms
Remote clock offset: -3.566 ms

# Below is generated by plot.py at 2018-09-06 06:26:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 6.541 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 6.541 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2018-09-06 05:07:09

End at: 2018-09-06 05:07:40

Local clock offset: -0.969 ms

Remote clock offset: -2.94 ms

Below is generated by plot.py at 2018-09-06 06:26:12

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.10 Mbit/s

95th percentile per-packet one-way delay: 9.335 ms

Loss rate: 0.83%

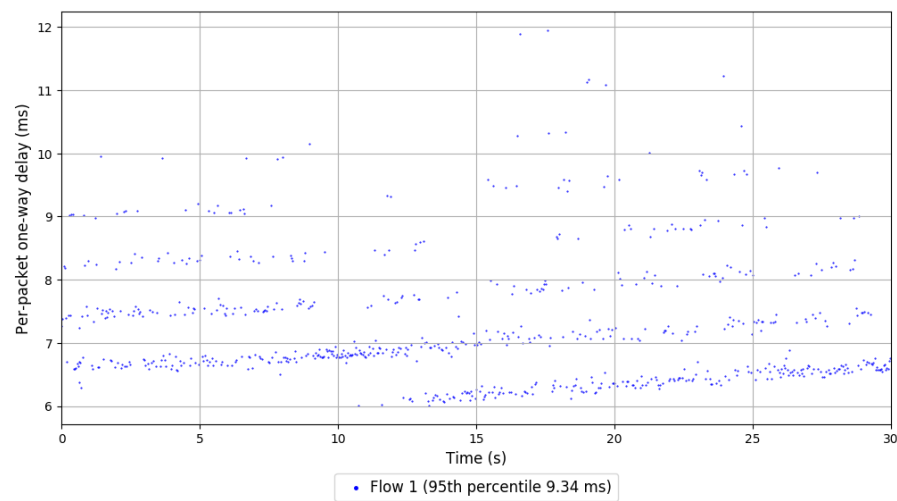
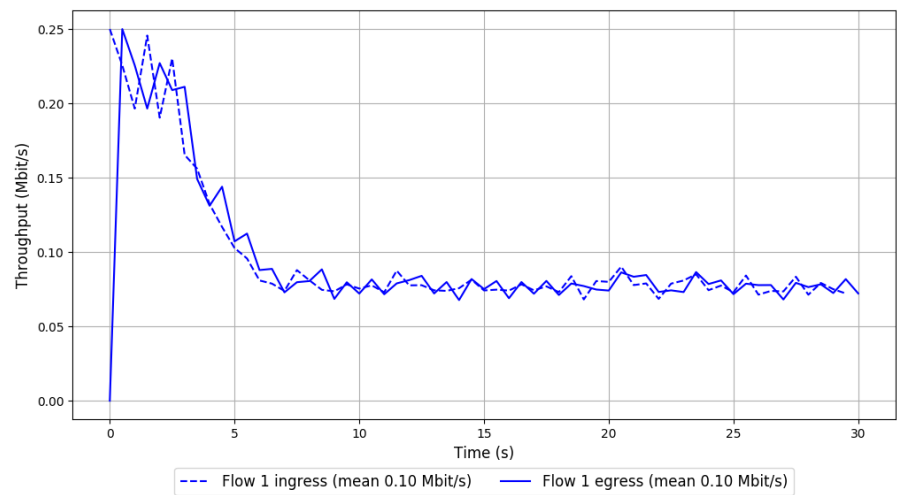
-- Flow 1:

Average throughput: 0.10 Mbit/s

95th percentile per-packet one-way delay: 9.335 ms

Loss rate: 0.83%

Run 2: Report of SReAM — Data Link

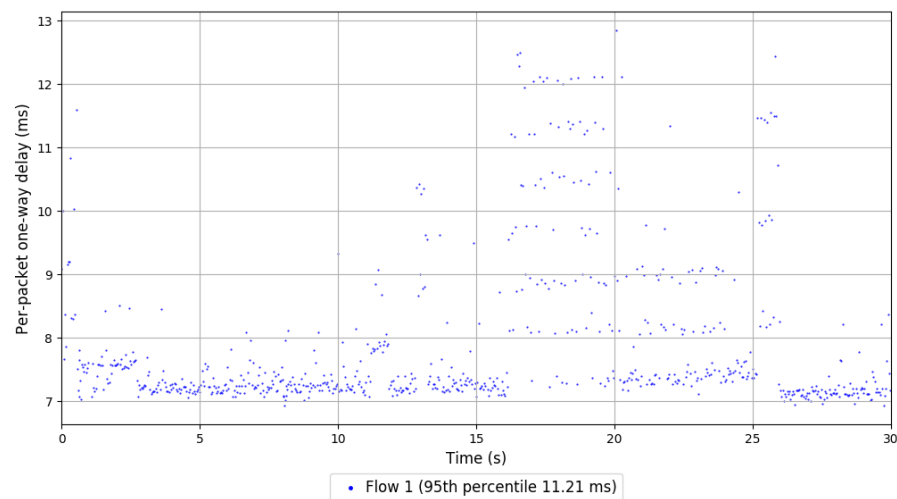
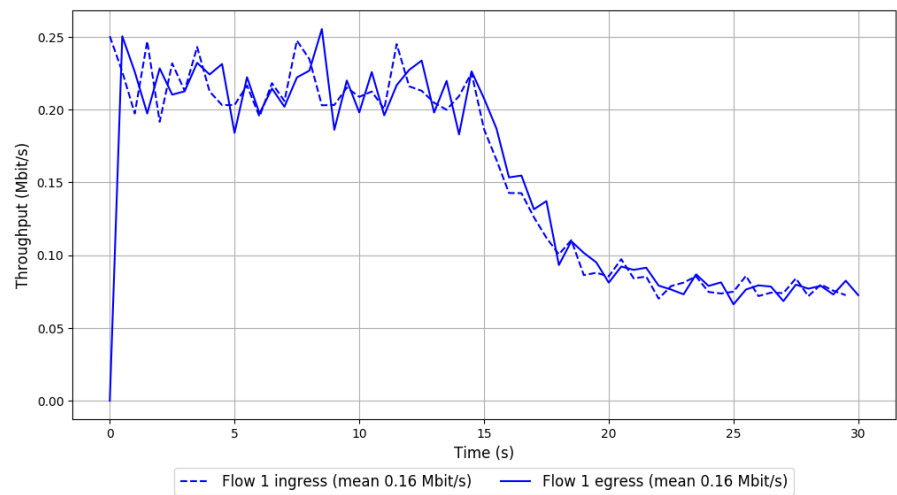


Run 3: Statistics of SCReAM

Start at: 2018-09-06 05:27:17
End at: 2018-09-06 05:27:47
Local clock offset: -0.68 ms
Remote clock offset: -4.419 ms

Below is generated by plot.py at 2018-09-06 06:26:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 11.209 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 11.209 ms
Loss rate: 0.35%

Run 3: Report of SReAM — Data Link

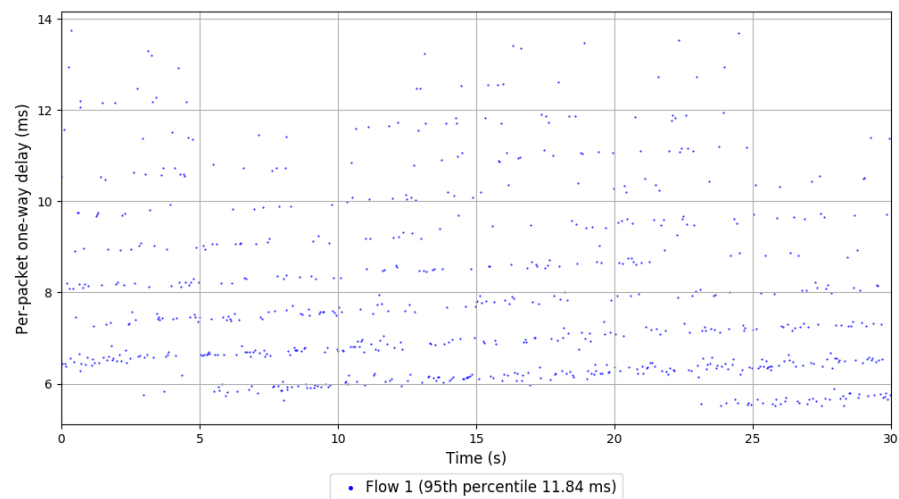
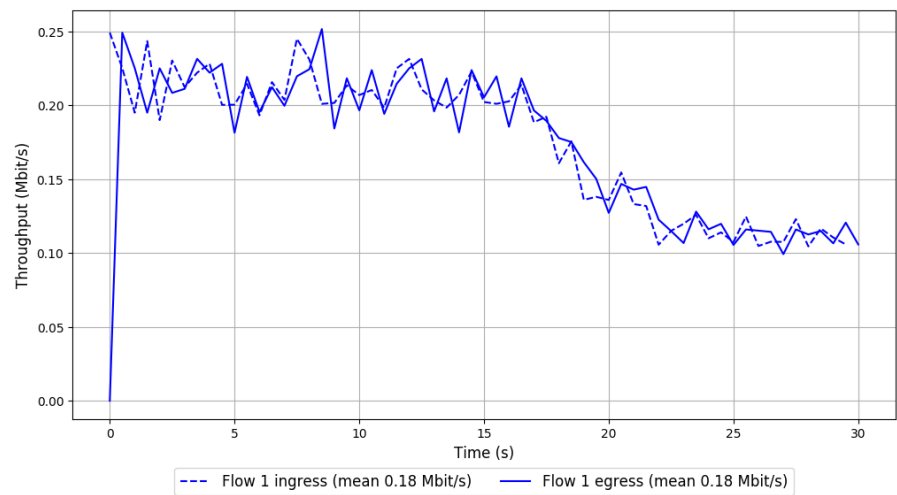


Run 4: Statistics of SCReAM

Start at: 2018-09-06 05:47:28
End at: 2018-09-06 05:47:58
Local clock offset: 1.521 ms
Remote clock offset: -4.992 ms

Below is generated by plot.py at 2018-09-06 06:26:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 11.836 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 11.836 ms
Loss rate: 0.15%

Run 4: Report of SReAM — Data Link

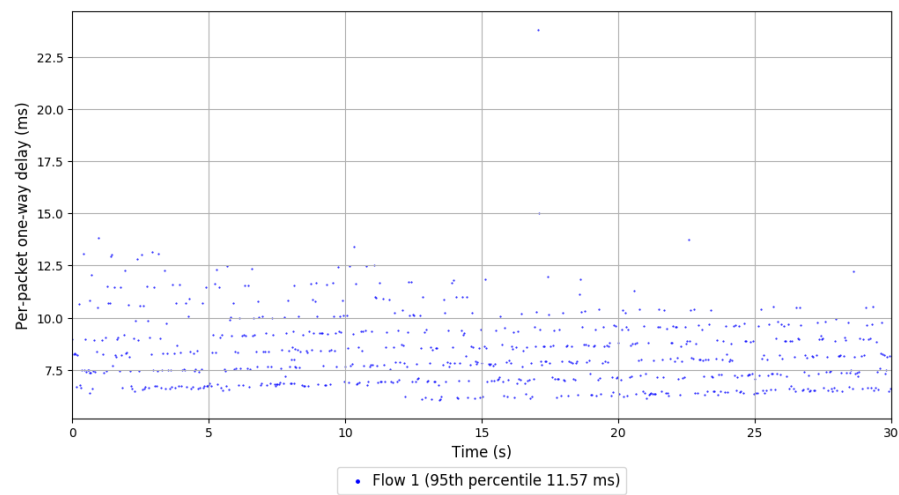
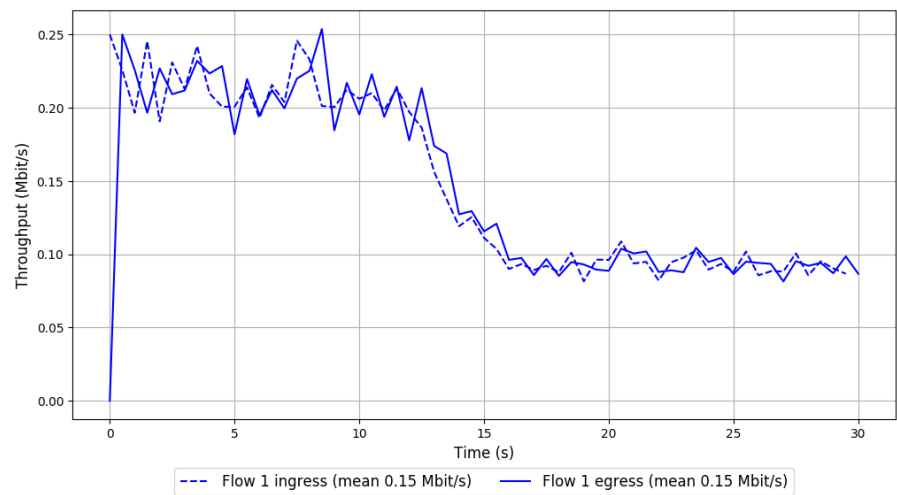


Run 5: Statistics of SCReAM

Start at: 2018-09-06 06:07:43
End at: 2018-09-06 06:08:13
Local clock offset: -2.955 ms
Remote clock offset: -3.065 ms

Below is generated by plot.py at 2018-09-06 06:26:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 11.572 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 11.572 ms
Loss rate: 0.22%

Run 5: Report of SReAM — Data Link



Run 1: Statistics of Sprout

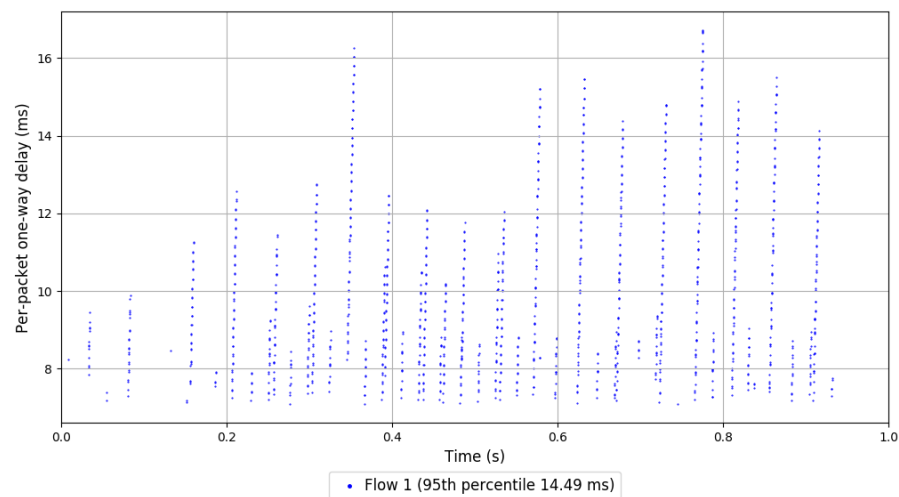
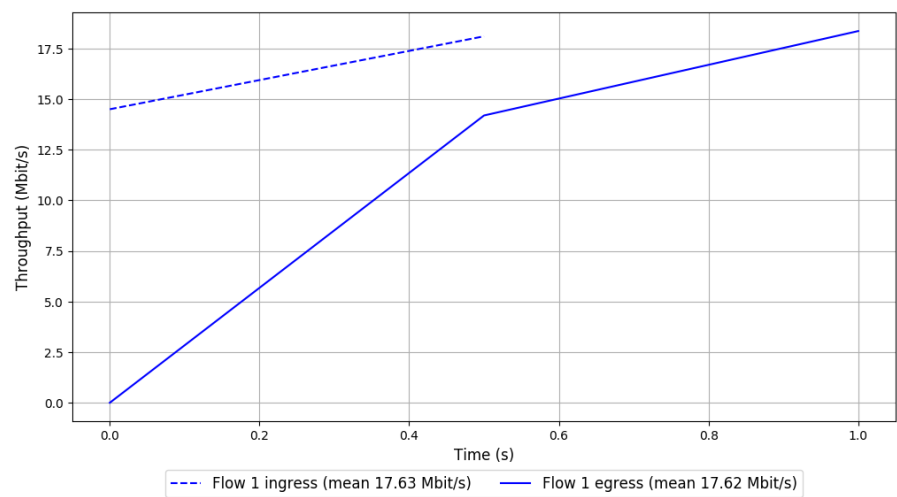
Start at: 2018-09-06 04:53:46

End at: 2018-09-06 04:54:16

Local clock offset: -4.283 ms

Remote clock offset: -3.665 ms

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

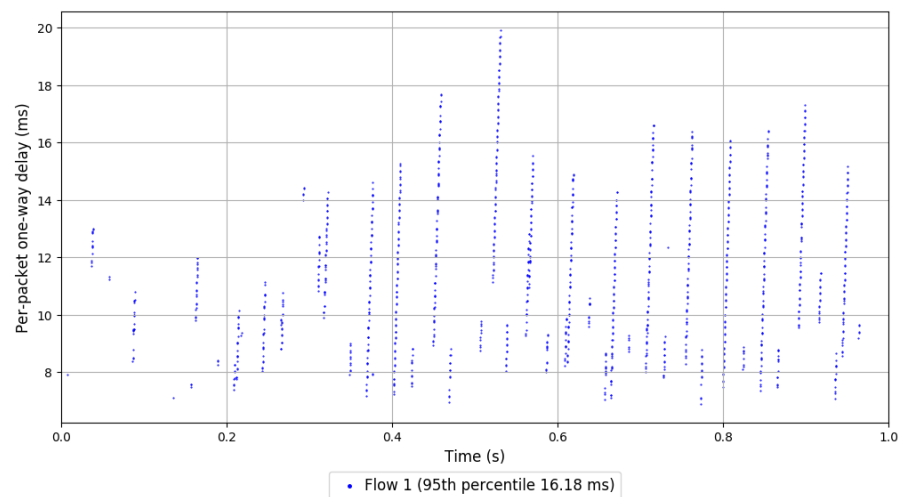
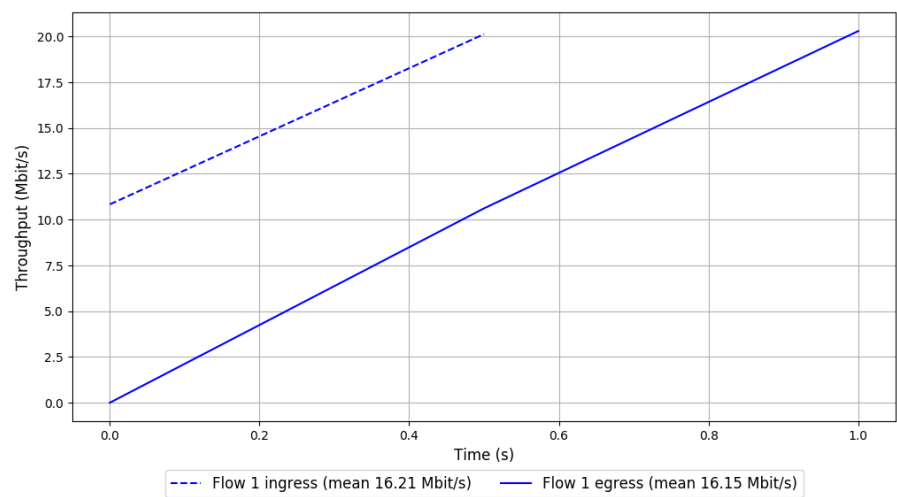
Start at: 2018-09-06 05:13:52

End at: 2018-09-06 05:14:22

Local clock offset: -3.053 ms

Remote clock offset: -3.177 ms

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

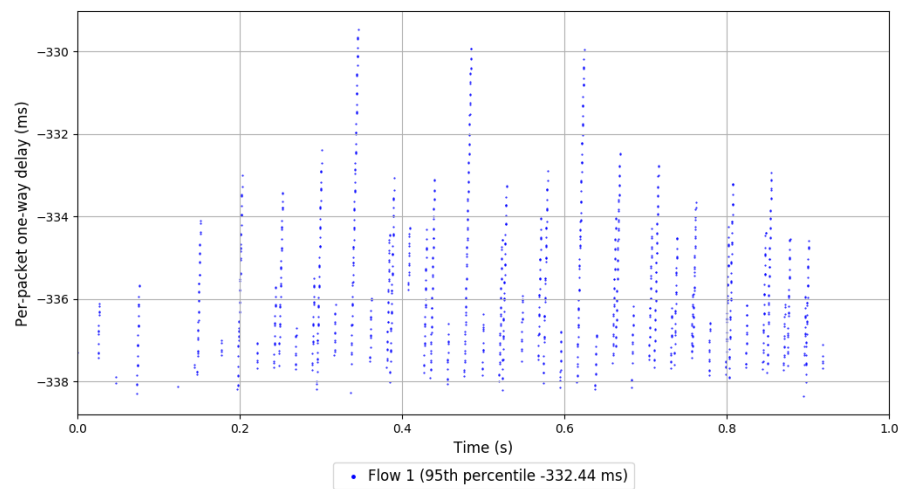
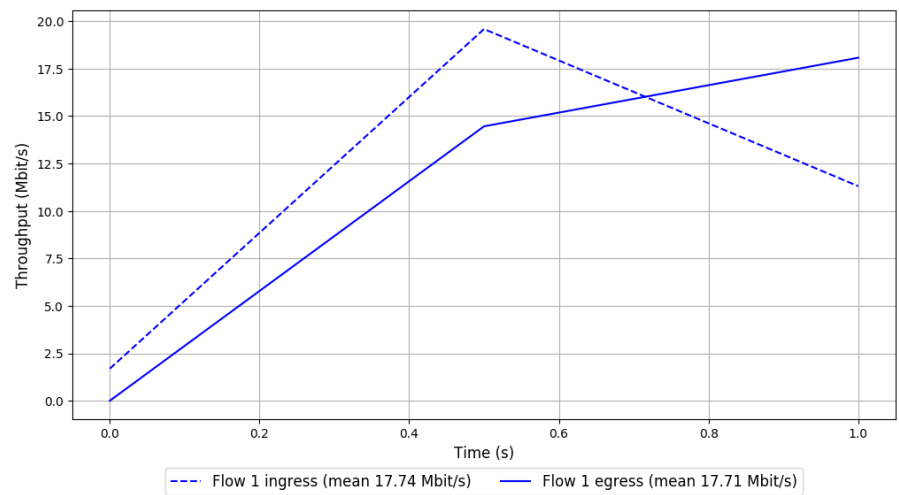
Start at: 2018-09-06 05:34:10

End at: 2018-09-06 05:34:40

Local clock offset: 1.296 ms

Remote clock offset: -348.856 ms

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

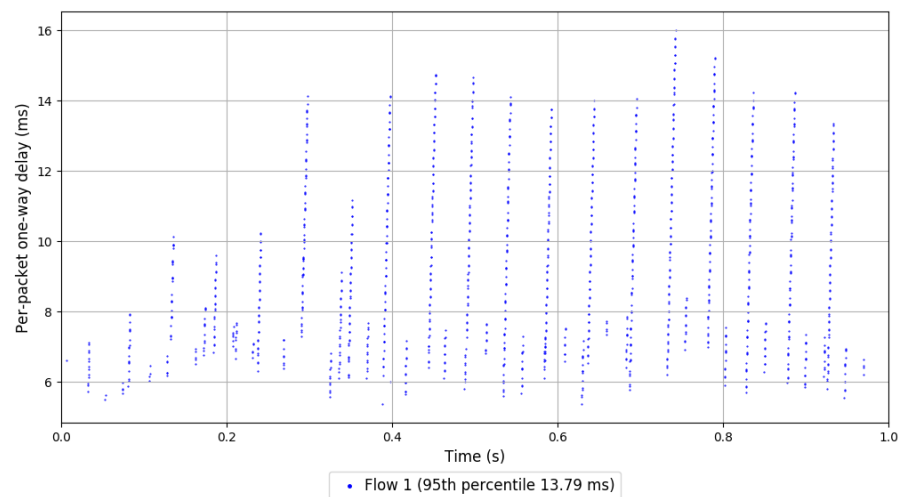
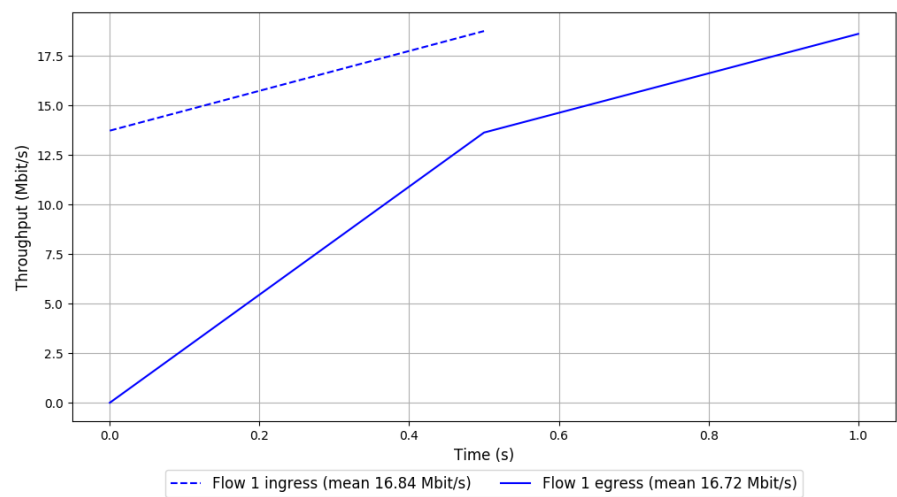
Start at: 2018-09-06 05:54:14

End at: 2018-09-06 05:54:44

Local clock offset: 0.27 ms

Remote clock offset: -4.237 ms

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

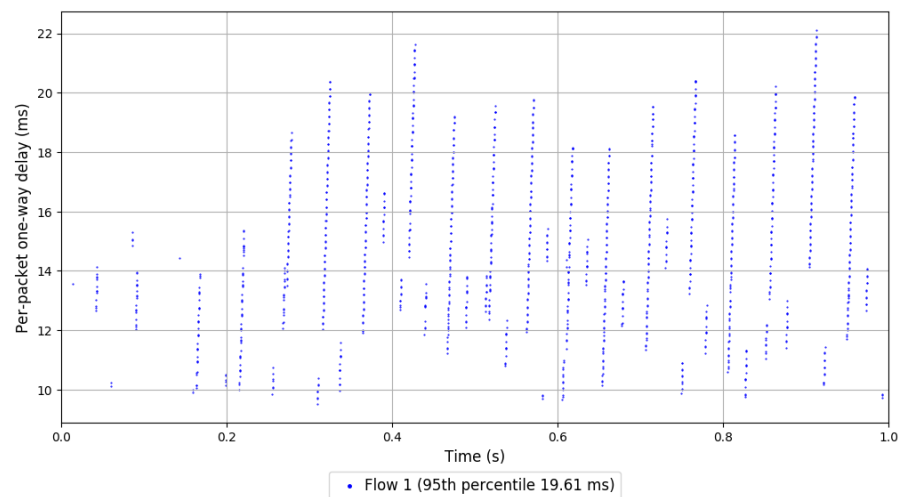
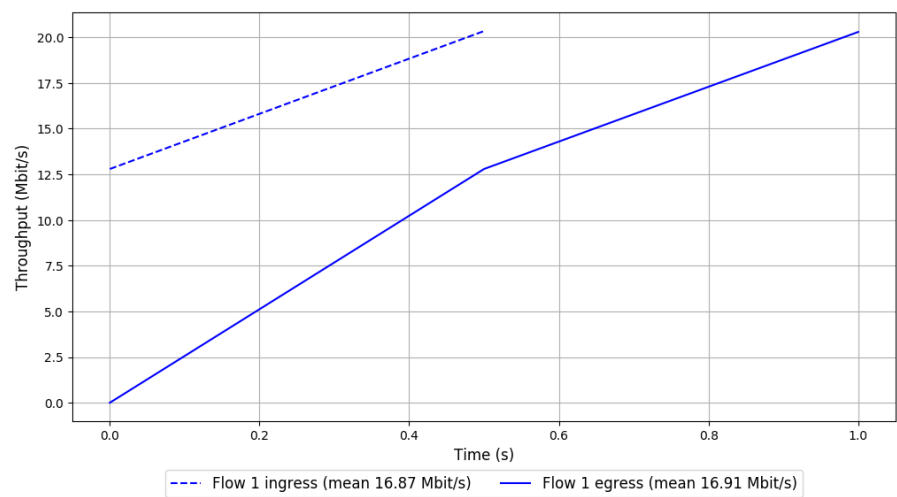
Start at: 2018-09-06 06:14:40

End at: 2018-09-06 06:15:10

Local clock offset: -6.548 ms

Remote clock offset: -3.694 ms

Run 5: Report of Sprout — Data Link

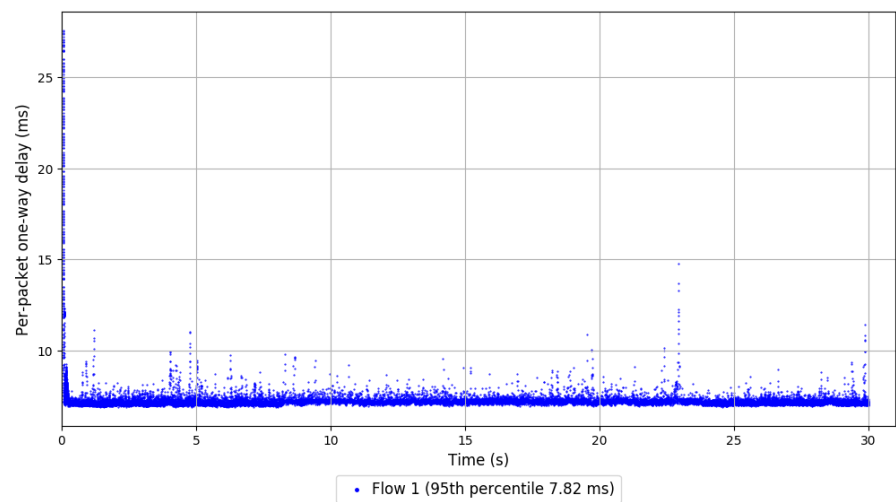
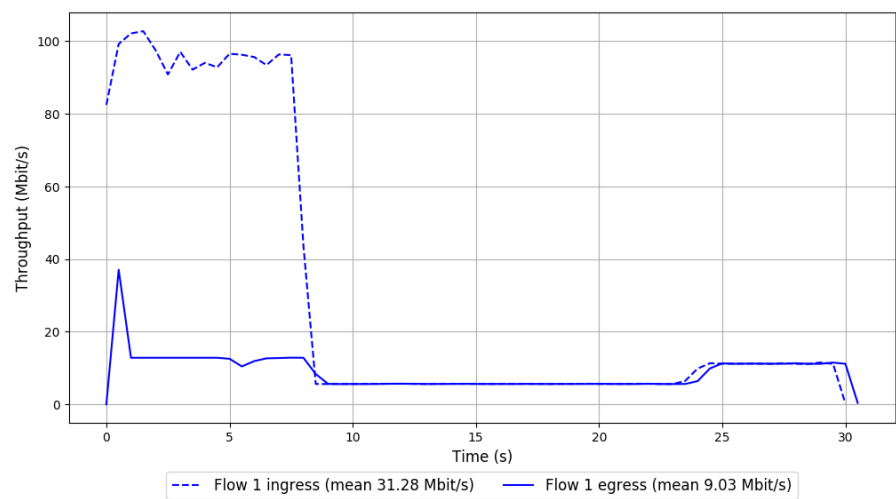


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-09-06 04:56:02
End at: 2018-09-06 04:56:32
Local clock offset: -3.895 ms
Remote clock offset: -3.576 ms

# Below is generated by plot.py at 2018-09-06 06:26:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.03 Mbit/s
95th percentile per-packet one-way delay: 7.816 ms
Loss rate: 71.12%
-- Flow 1:
Average throughput: 9.03 Mbit/s
95th percentile per-packet one-way delay: 7.816 ms
Loss rate: 71.12%
```

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



Run 2: Statistics of TaoVA-100x

Start at: 2018-09-06 05:16:05

End at: 2018-09-06 05:16:35

Local clock offset: -2.849 ms

Remote clock offset: -3.72 ms

Below is generated by plot.py at 2018-09-06 06:26:12

Datalink statistics

-- Total of 1 flow:

Average throughput: 13.05 Mbit/s

95th percentile per-packet one-way delay: 11.943 ms

Loss rate: 75.68%

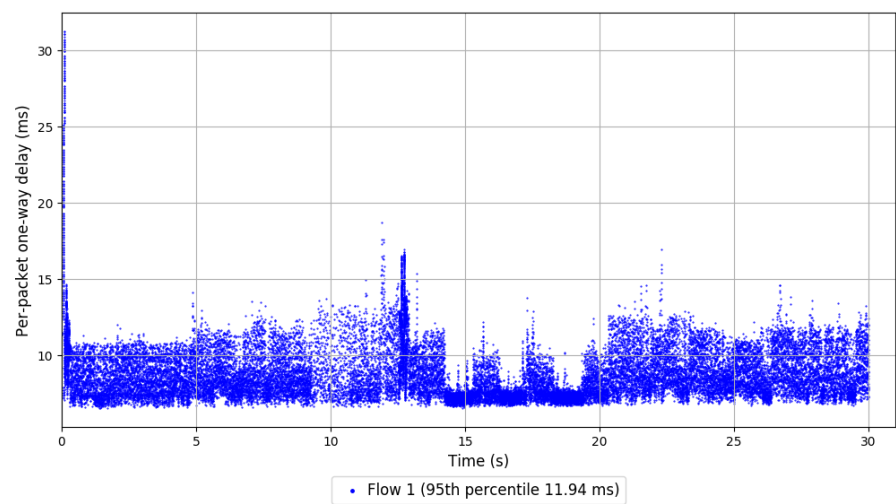
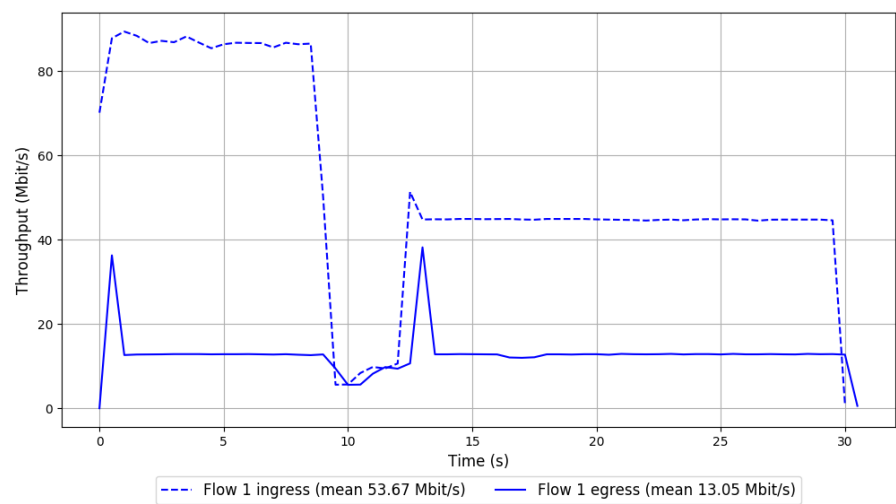
-- Flow 1:

Average throughput: 13.05 Mbit/s

95th percentile per-packet one-way delay: 11.943 ms

Loss rate: 75.68%

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-09-06 05:36:22

End at: 2018-09-06 05:36:52

Local clock offset: 2.746 ms

Remote clock offset: -3.623 ms

Below is generated by plot.py at 2018-09-06 06:26:12

Datalink statistics

-- Total of 1 flow:

Average throughput: 9.62 Mbit/s

95th percentile per-packet one-way delay: 11.081 ms

Loss rate: 69.88%

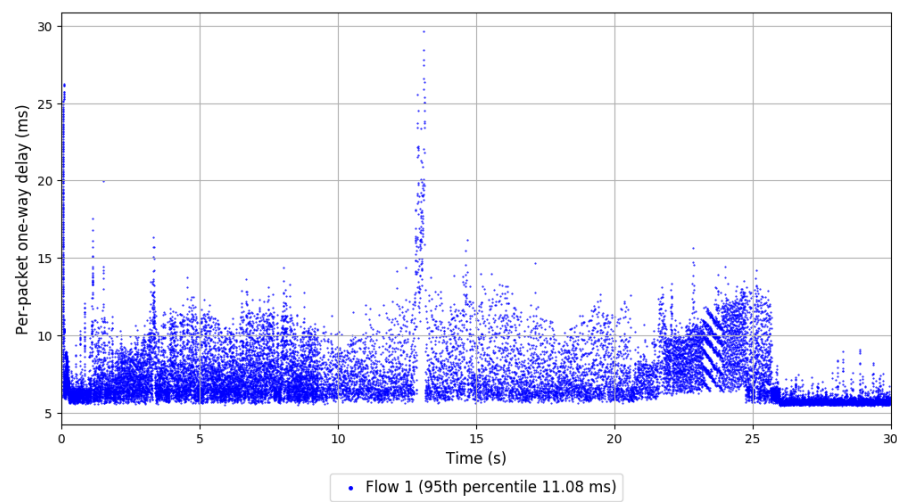
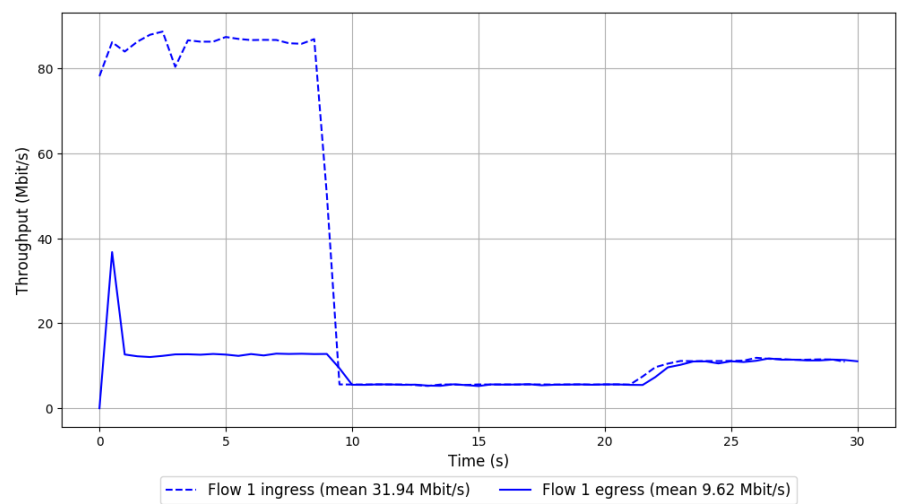
-- Flow 1:

Average throughput: 9.62 Mbit/s

95th percentile per-packet one-way delay: 11.081 ms

Loss rate: 69.88%

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

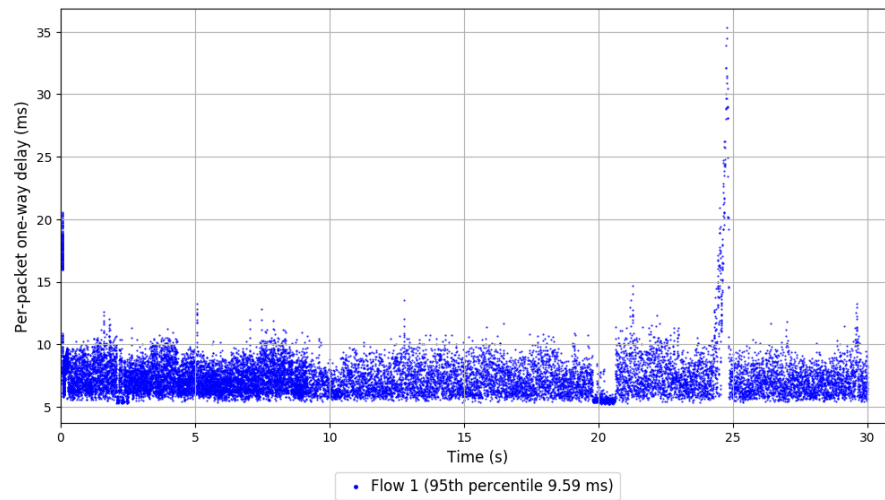
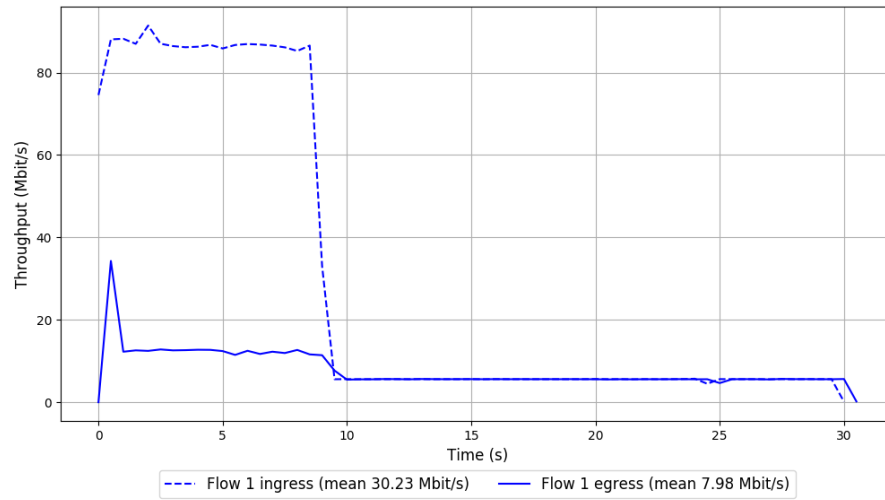


Run 4: Statistics of TaoVA-100x

Start at: 2018-09-06 05:56:31
End at: 2018-09-06 05:57:01
Local clock offset: -1.9 ms
Remote clock offset: -4.571 ms

Below is generated by plot.py at 2018-09-06 06:26:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 7.98 Mbit/s
95th percentile per-packet one-way delay: 9.585 ms
Loss rate: 73.60%
-- Flow 1:
Average throughput: 7.98 Mbit/s
95th percentile per-packet one-way delay: 9.585 ms
Loss rate: 73.60%

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

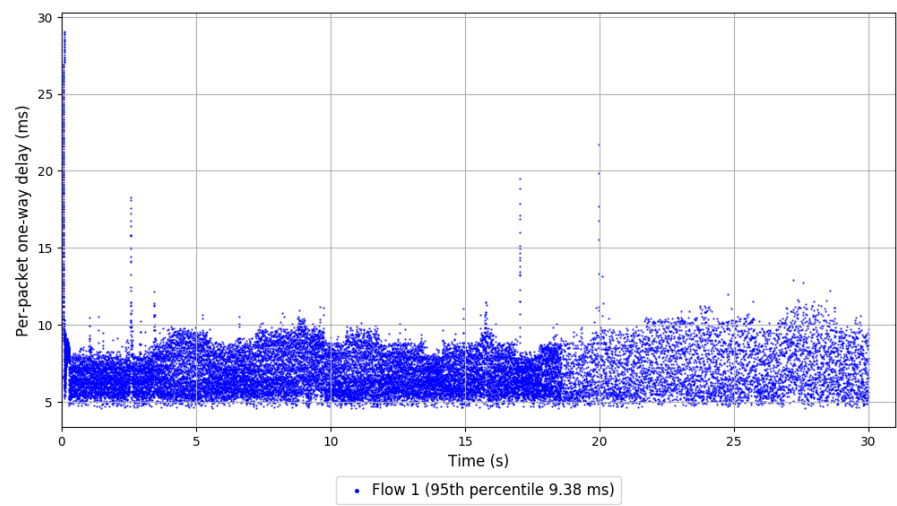
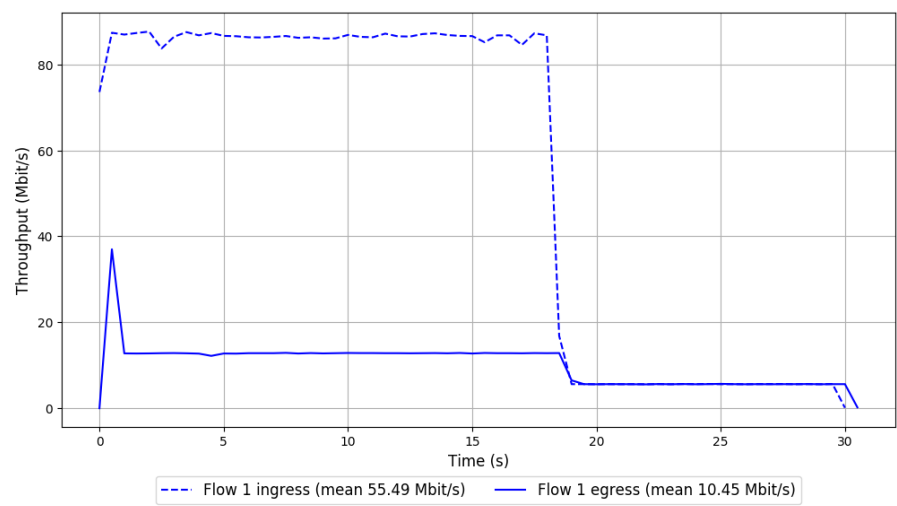


Run 5: Statistics of TaoVA-100x

Start at: 2018-09-06 06:16:51
End at: 2018-09-06 06:17:21
Local clock offset: -3.105 ms
Remote clock offset: -3.778 ms

Below is generated by plot.py at 2018-09-06 06:26:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 10.45 Mbit/s
95th percentile per-packet one-way delay: 9.375 ms
Loss rate: 81.17%
-- Flow 1:
Average throughput: 10.45 Mbit/s
95th percentile per-packet one-way delay: 9.375 ms
Loss rate: 81.17%

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

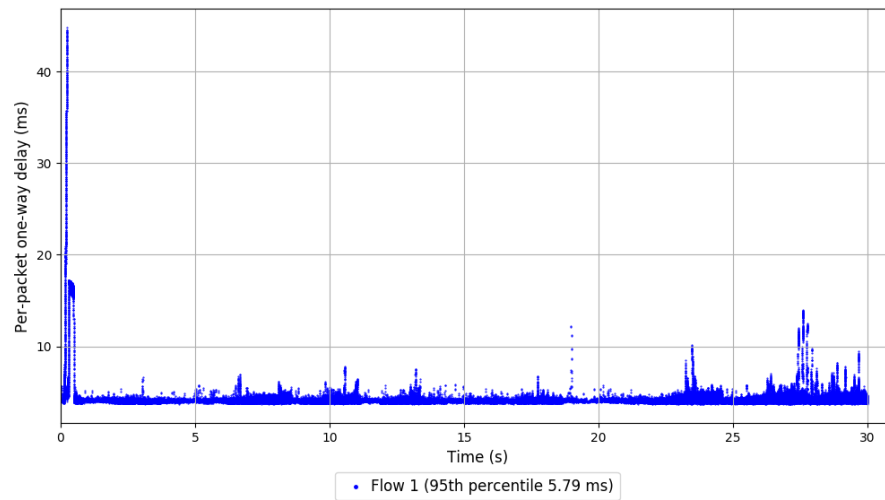
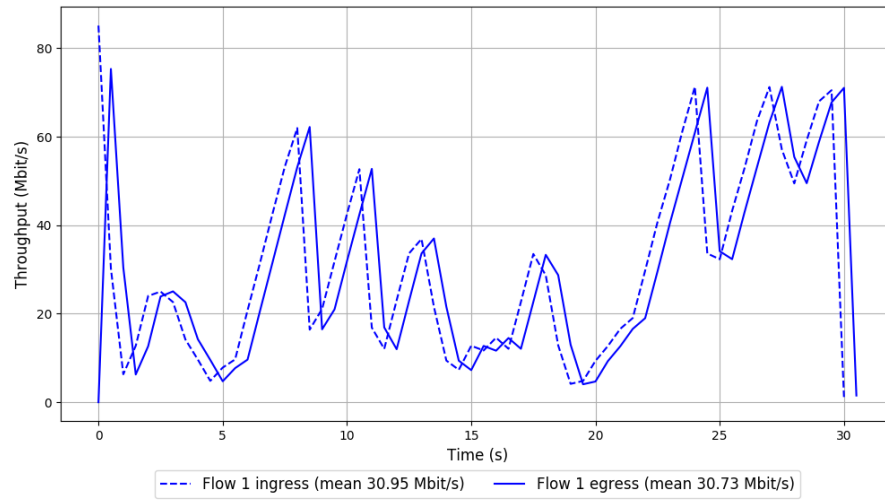


Run 1: Statistics of TCP Vegas

Start at: 2018-09-06 04:42:32
End at: 2018-09-06 04:43:02
Local clock offset: -2.851 ms
Remote clock offset: -3.799 ms

Below is generated by plot.py at 2018-09-06 06:26:24
Datalink statistics
-- Total of 1 flow:
Average throughput: 30.73 Mbit/s
95th percentile per-packet one-way delay: 5.795 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 30.73 Mbit/s
95th percentile per-packet one-way delay: 5.795 ms
Loss rate: 0.68%

Run 1: Report of TCP Vegas — Data Link

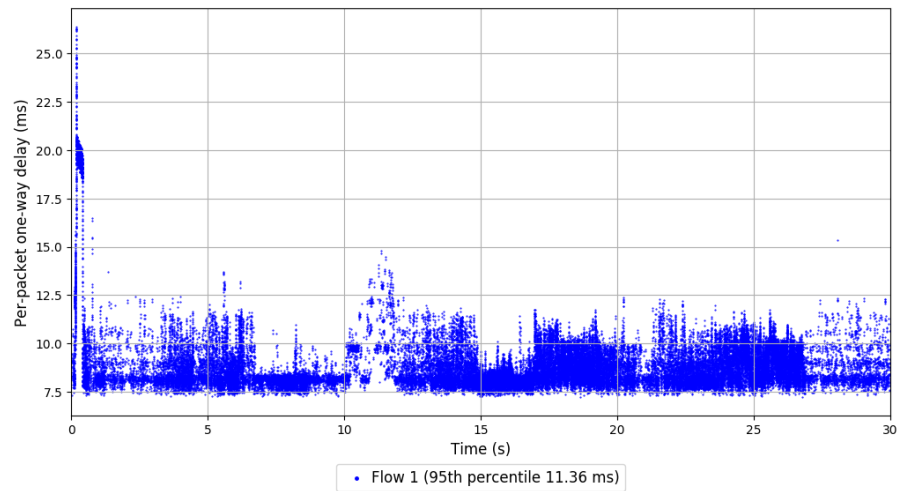
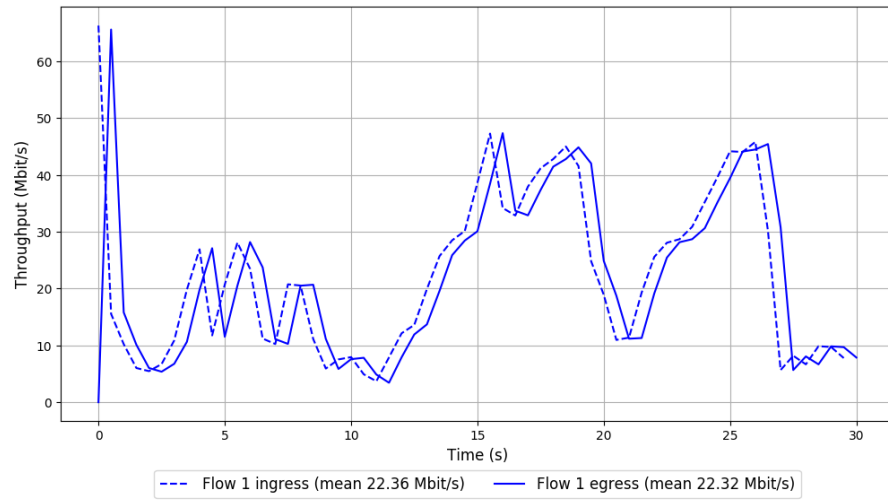


Run 2: Statistics of TCP Vegas

Start at: 2018-09-06 05:02:47
End at: 2018-09-06 05:03:17
Local clock offset: -3.179 ms
Remote clock offset: -2.873 ms

Below is generated by plot.py at 2018-09-06 06:26:24
Datalink statistics
-- Total of 1 flow:
Average throughput: 22.32 Mbit/s
95th percentile per-packet one-way delay: 11.364 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 22.32 Mbit/s
95th percentile per-packet one-way delay: 11.364 ms
Loss rate: 0.18%

Run 2: Report of TCP Vegas — Data Link

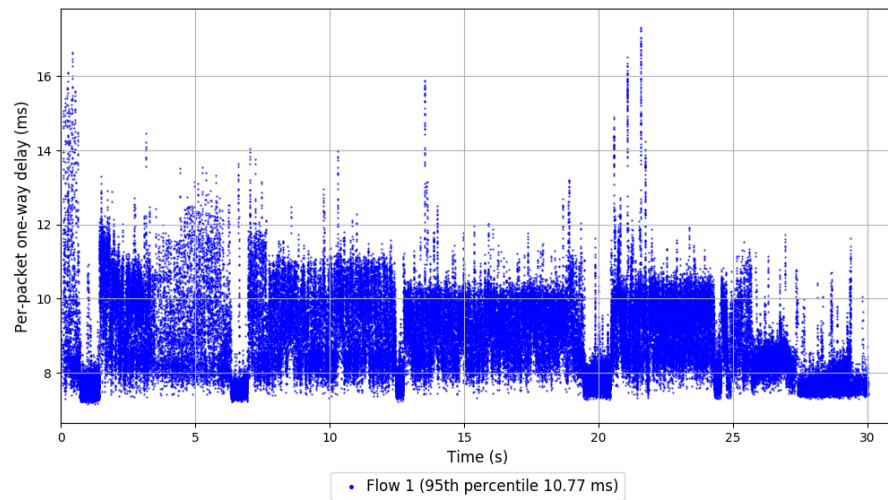
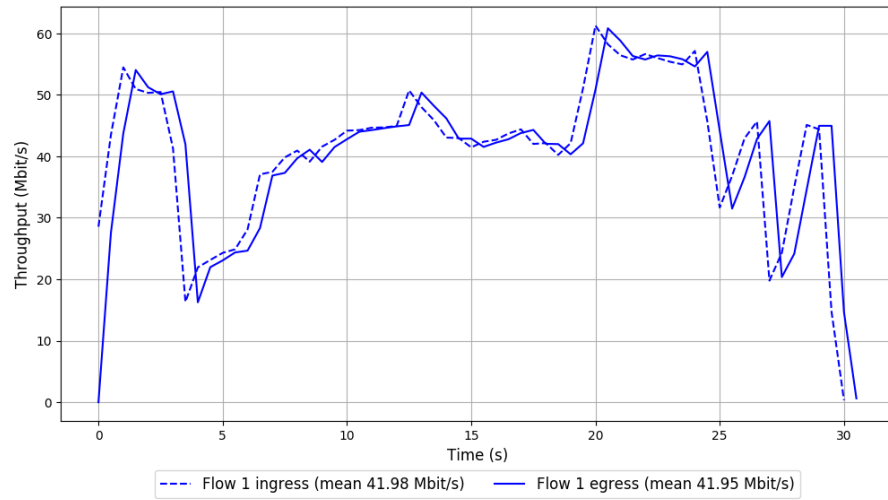


Run 3: Statistics of TCP Vegas

Start at: 2018-09-06 05:22:50
End at: 2018-09-06 05:23:20
Local clock offset: -0.98 ms
Remote clock offset: -3.567 ms

Below is generated by plot.py at 2018-09-06 06:26:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 41.95 Mbit/s
95th percentile per-packet one-way delay: 10.767 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 41.95 Mbit/s
95th percentile per-packet one-way delay: 10.767 ms
Loss rate: 0.09%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2018-09-06 05:43:04

End at: 2018-09-06 05:43:34

Local clock offset: -0.113 ms

Remote clock offset: -4.74 ms

Below is generated by plot.py at 2018-09-06 06:26:33

Datalink statistics

-- Total of 1 flow:

Average throughput: 26.41 Mbit/s

95th percentile per-packet one-way delay: 11.243 ms

Loss rate: 0.06%

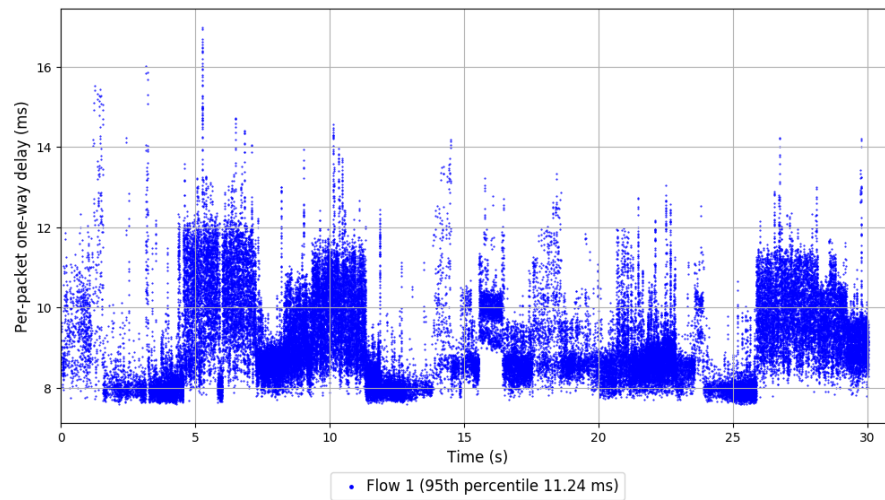
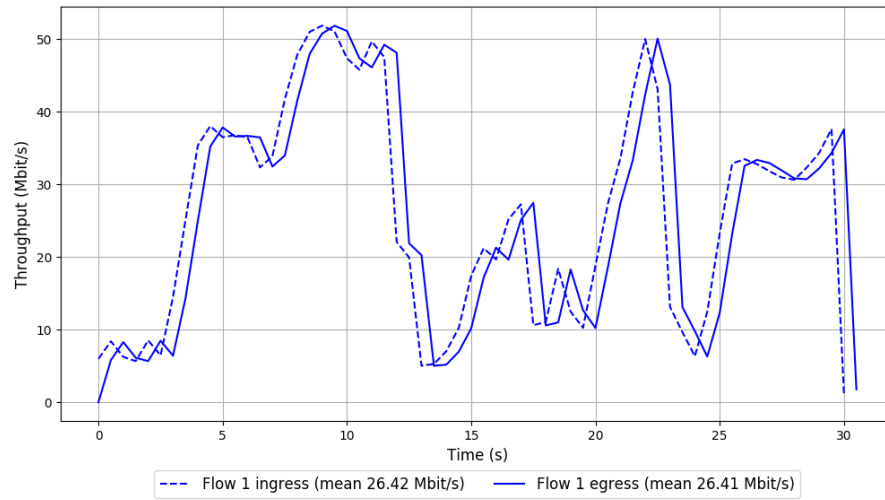
-- Flow 1:

Average throughput: 26.41 Mbit/s

95th percentile per-packet one-way delay: 11.243 ms

Loss rate: 0.06%

Run 4: Report of TCP Vegas — Data Link

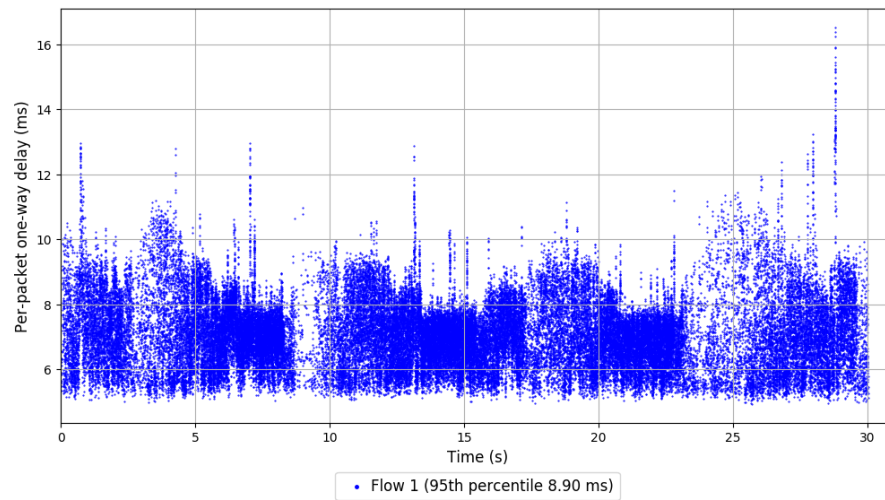
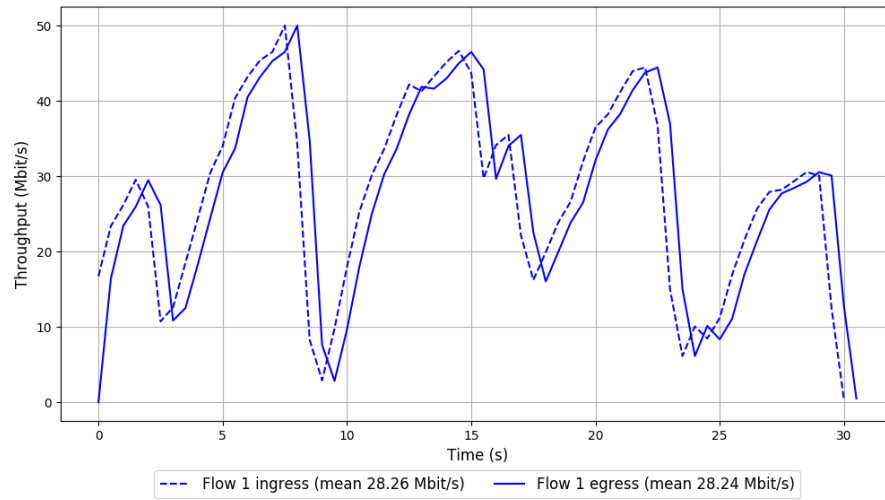


Run 5: Statistics of TCP Vegas

Start at: 2018-09-06 06:03:16
End at: 2018-09-06 06:03:46
Local clock offset: -1.326 ms
Remote clock offset: -4.279 ms

Below is generated by plot.py at 2018-09-06 06:26:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 28.24 Mbit/s
95th percentile per-packet one-way delay: 8.904 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 28.24 Mbit/s
95th percentile per-packet one-way delay: 8.904 ms
Loss rate: 0.08%

Run 5: Report of TCP Vegas — Data Link

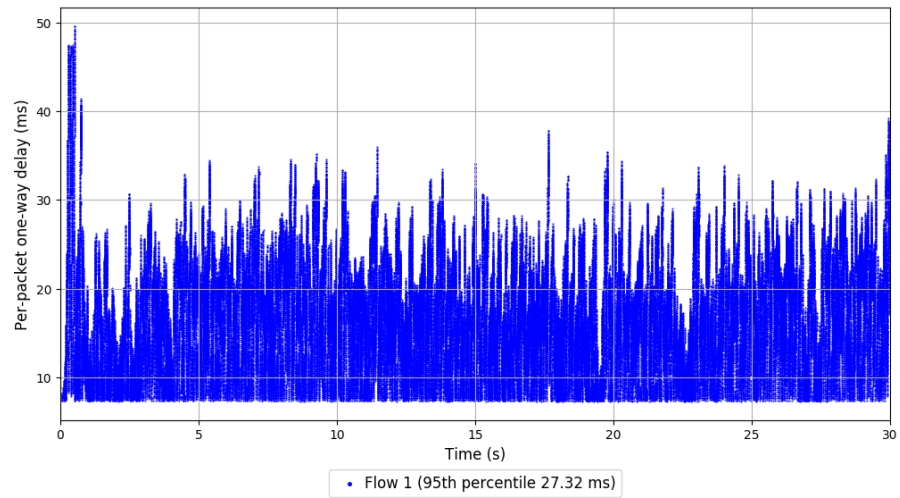
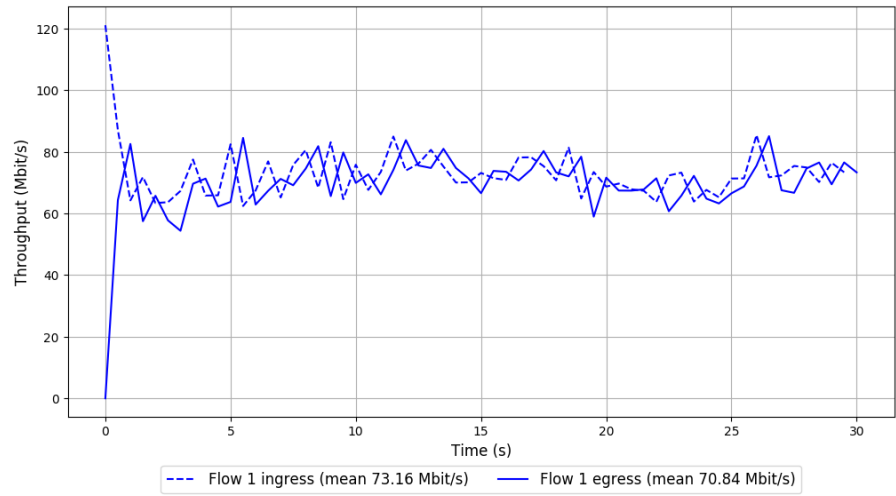


Run 1: Statistics of Verus

Start at: 2018-09-06 04:41:22
End at: 2018-09-06 04:41:52
Local clock offset: -5.189 ms
Remote clock offset: -3.715 ms

Below is generated by plot.py at 2018-09-06 06:27:07
Datalink statistics
-- Total of 1 flow:
Average throughput: 70.84 Mbit/s
95th percentile per-packet one-way delay: 27.322 ms
Loss rate: 3.14%
-- Flow 1:
Average throughput: 70.84 Mbit/s
95th percentile per-packet one-way delay: 27.322 ms
Loss rate: 3.14%

Run 1: Report of Verus — Data Link

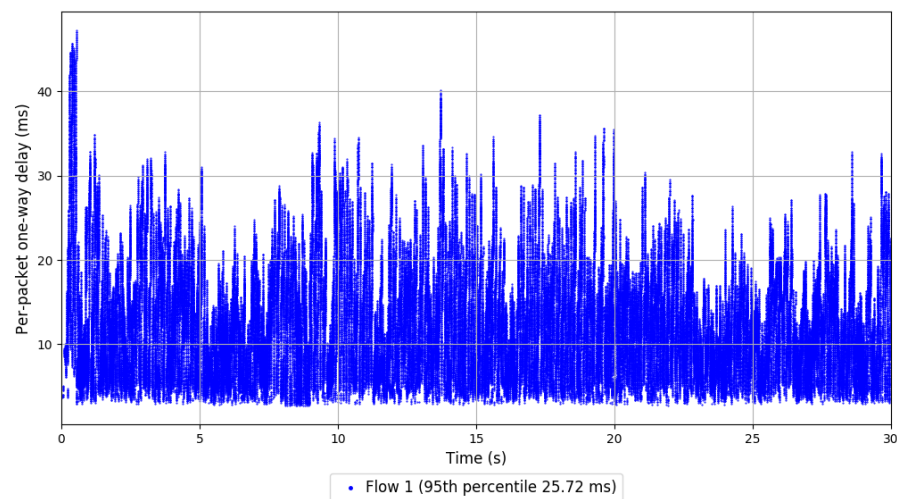
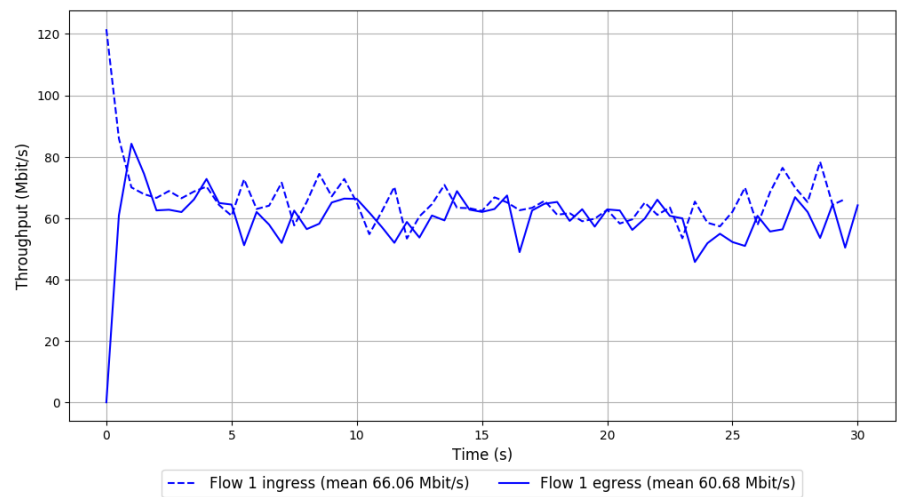


Run 2: Statistics of Verus

Start at: 2018-09-06 05:01:37
End at: 2018-09-06 05:02:07
Local clock offset: -0.021 ms
Remote clock offset: -4.181 ms

Below is generated by plot.py at 2018-09-06 06:27:07
Datalink statistics
-- Total of 1 flow:
Average throughput: 60.68 Mbit/s
95th percentile per-packet one-way delay: 25.720 ms
Loss rate: 8.08%
-- Flow 1:
Average throughput: 60.68 Mbit/s
95th percentile per-packet one-way delay: 25.720 ms
Loss rate: 8.08%

Run 2: Report of Verus — Data Link

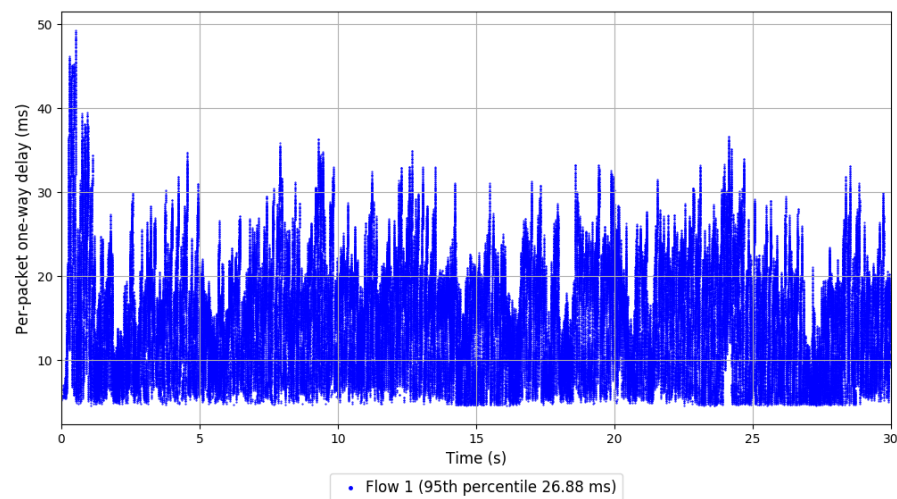
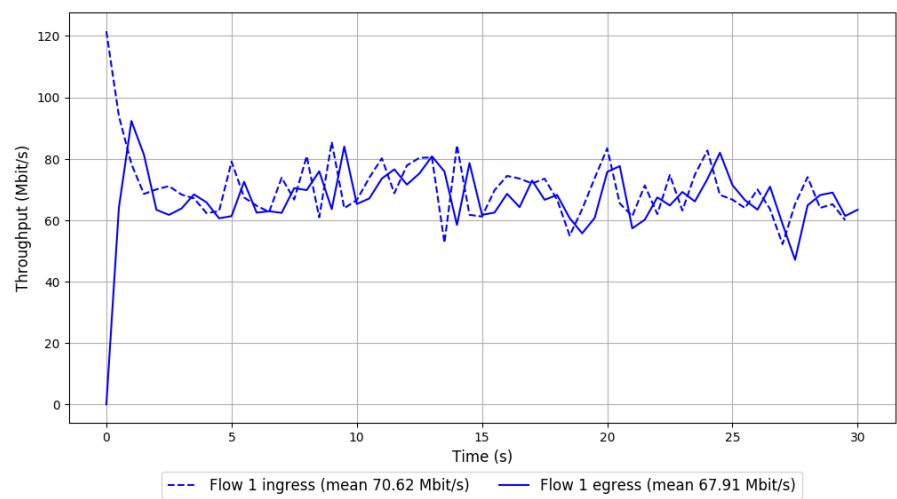


Run 3: Statistics of Verus

Start at: 2018-09-06 05:21:40
End at: 2018-09-06 05:22:10
Local clock offset: 0.864 ms
Remote clock offset: -4.092 ms

Below is generated by plot.py at 2018-09-06 06:27:07
Datalink statistics
-- Total of 1 flow:
Average throughput: 67.91 Mbit/s
95th percentile per-packet one-way delay: 26.878 ms
Loss rate: 3.82%
-- Flow 1:
Average throughput: 67.91 Mbit/s
95th percentile per-packet one-way delay: 26.878 ms
Loss rate: 3.82%

Run 3: Report of Verus — Data Link

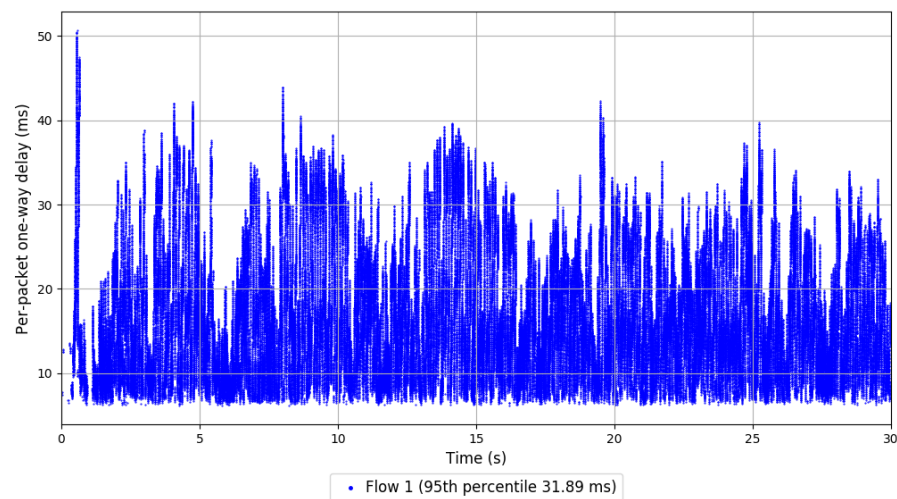
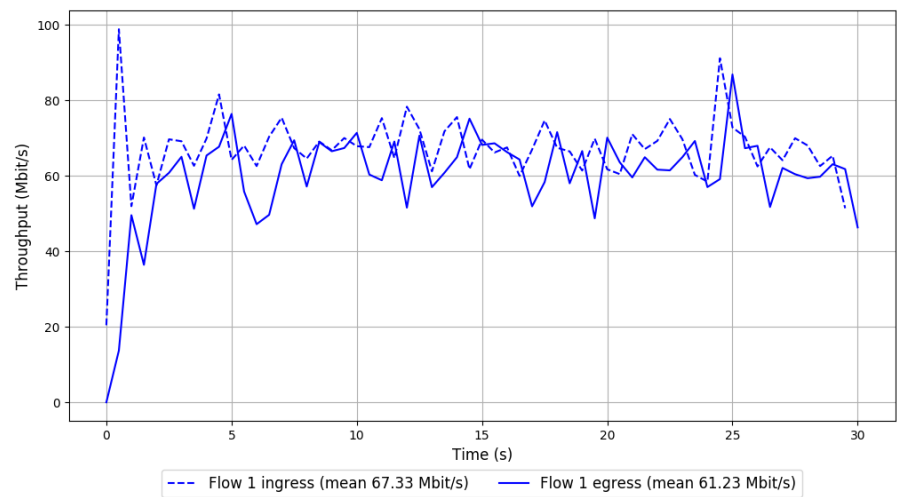


Run 4: Statistics of Verus

Start at: 2018-09-06 05:41:55
End at: 2018-09-06 05:42:25
Local clock offset: 3.339 ms
Remote clock offset: -3.805 ms

Below is generated by plot.py at 2018-09-06 06:27:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 61.23 Mbit/s
95th percentile per-packet one-way delay: 31.892 ms
Loss rate: 9.06%
-- Flow 1:
Average throughput: 61.23 Mbit/s
95th percentile per-packet one-way delay: 31.892 ms
Loss rate: 9.06%

Run 4: Report of Verus — Data Link

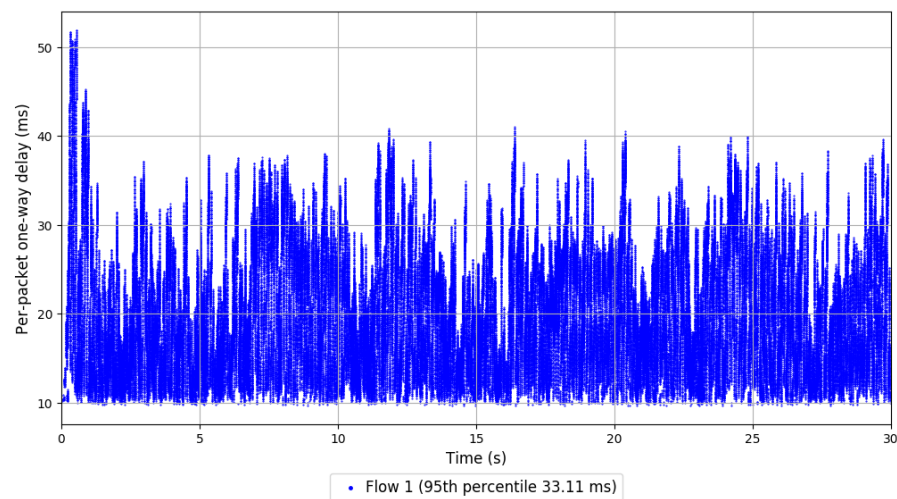
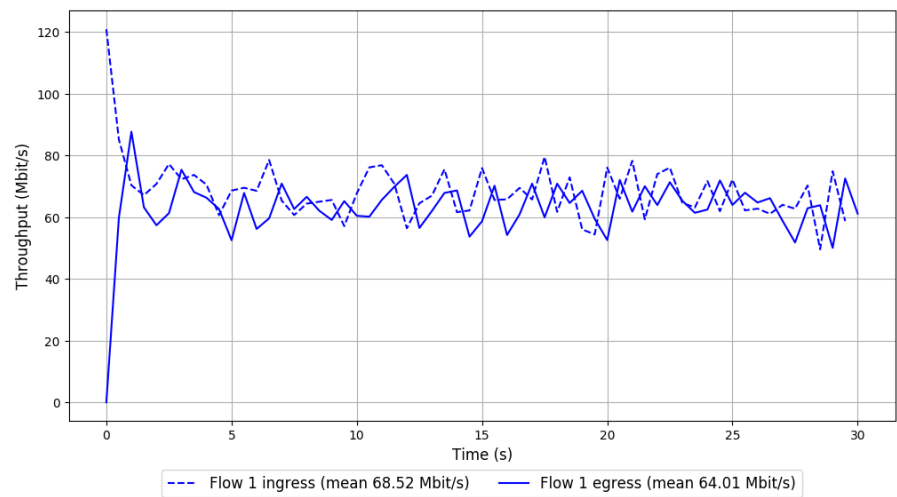


Run 5: Statistics of Verus

Start at: 2018-09-06 06:02:07
End at: 2018-09-06 06:02:37
Local clock offset: -5.424 ms
Remote clock offset: -3.813 ms

Below is generated by plot.py at 2018-09-06 06:27:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 64.01 Mbit/s
95th percentile per-packet one-way delay: 33.109 ms
Loss rate: 6.56%
-- Flow 1:
Average throughput: 64.01 Mbit/s
95th percentile per-packet one-way delay: 33.109 ms
Loss rate: 6.56%

Run 5: Report of Verus — Data Link

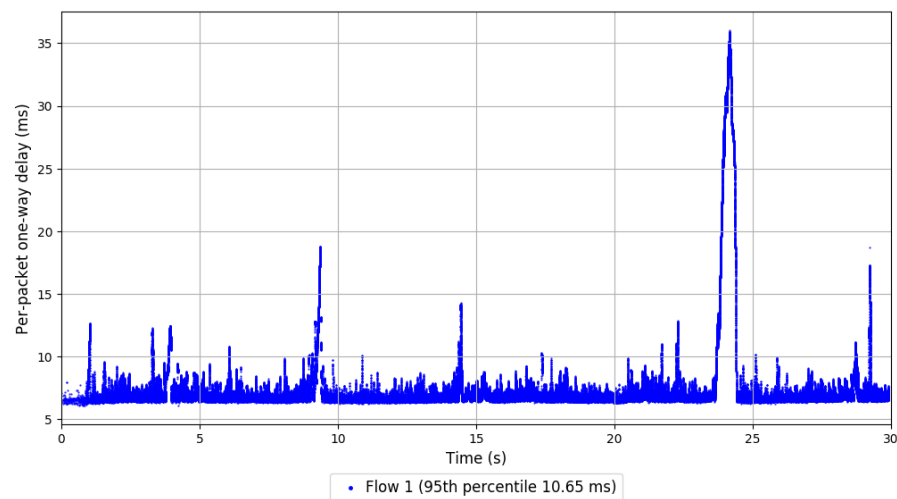
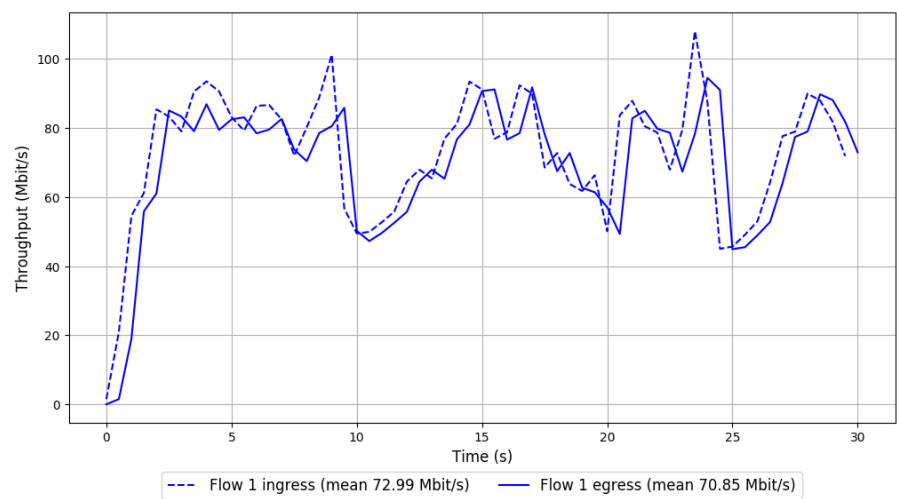


Run 1: Statistics of PCC-Vivace

Start at: 2018-09-06 04:54:50
End at: 2018-09-06 04:55:20
Local clock offset: -2.78 ms
Remote clock offset: -3.014 ms

Below is generated by plot.py at 2018-09-06 06:27:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 70.85 Mbit/s
95th percentile per-packet one-way delay: 10.649 ms
Loss rate: 2.94%
-- Flow 1:
Average throughput: 70.85 Mbit/s
95th percentile per-packet one-way delay: 10.649 ms
Loss rate: 2.94%

Run 1: Report of PCC-Vivace — Data Link

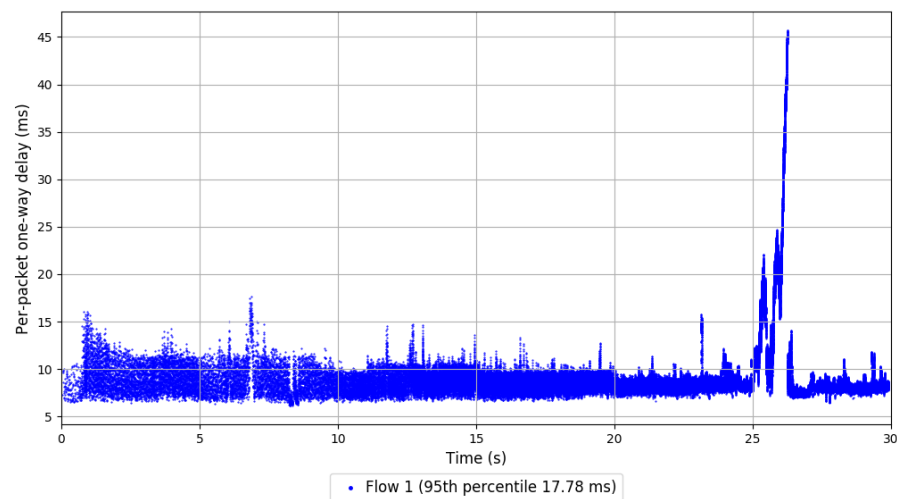
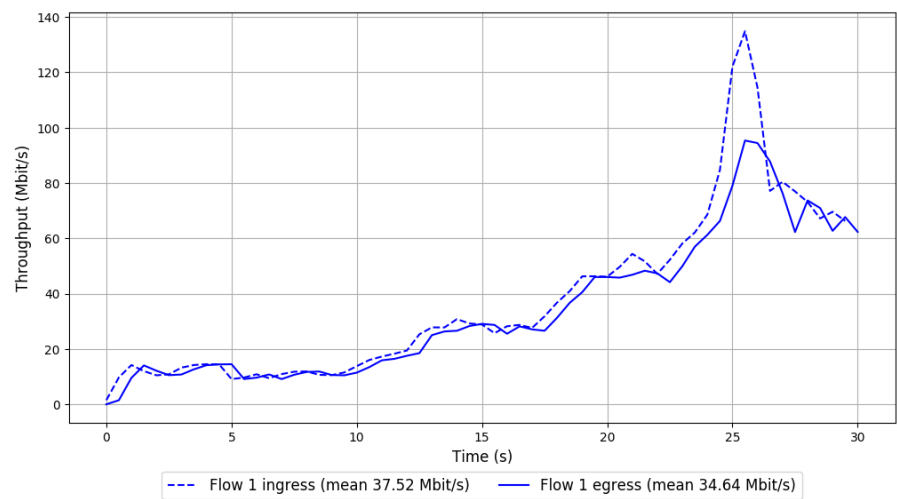


Run 2: Statistics of PCC-Vivace

Start at: 2018-09-06 05:14:57
End at: 2018-09-06 05:15:27
Local clock offset: -2.111 ms
Remote clock offset: -3.747 ms

Below is generated by plot.py at 2018-09-06 06:27:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 34.64 Mbit/s
95th percentile per-packet one-way delay: 17.784 ms
Loss rate: 7.69%
-- Flow 1:
Average throughput: 34.64 Mbit/s
95th percentile per-packet one-way delay: 17.784 ms
Loss rate: 7.69%

Run 2: Report of PCC-Vivace — Data Link

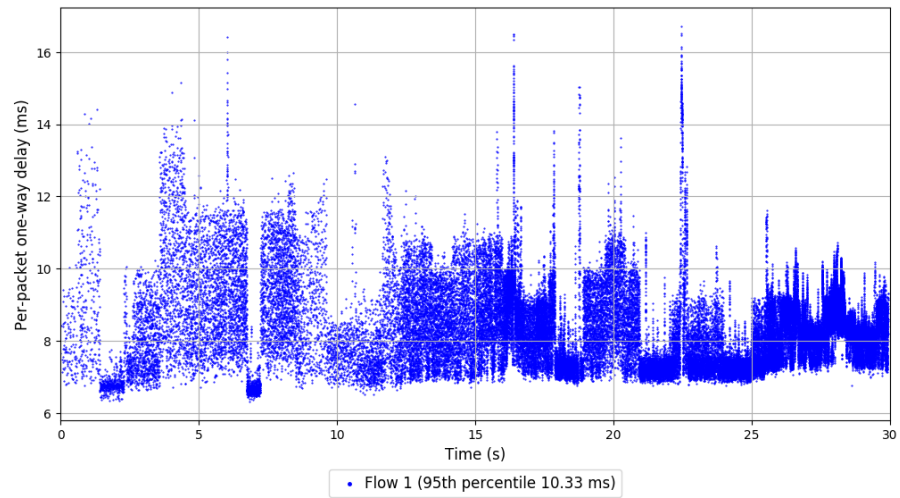
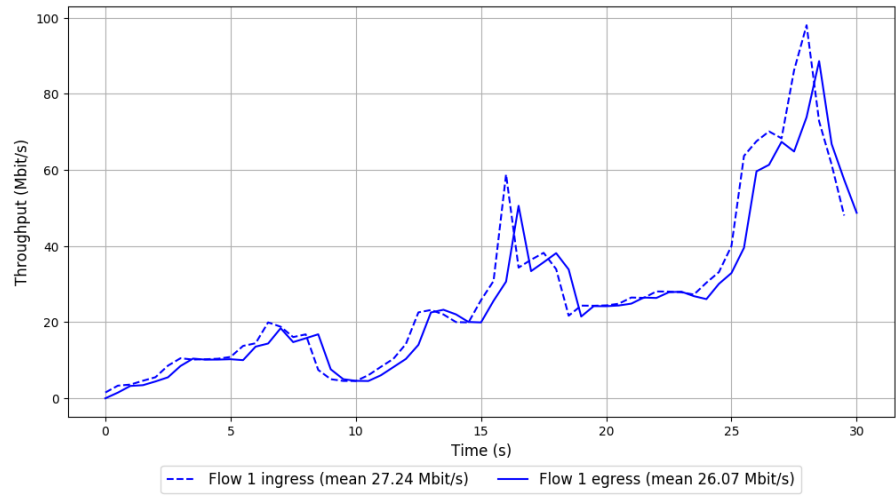


Run 3: Statistics of PCC-Vivace

Start at: 2018-09-06 05:35:15
End at: 2018-09-06 05:35:45
Local clock offset: 2.265 ms
Remote clock offset: -4.027 ms

Below is generated by plot.py at 2018-09-06 06:27:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 26.07 Mbit/s
95th percentile per-packet one-way delay: 10.326 ms
Loss rate: 4.27%
-- Flow 1:
Average throughput: 26.07 Mbit/s
95th percentile per-packet one-way delay: 10.326 ms
Loss rate: 4.27%

Run 3: Report of PCC-Vivace — Data Link

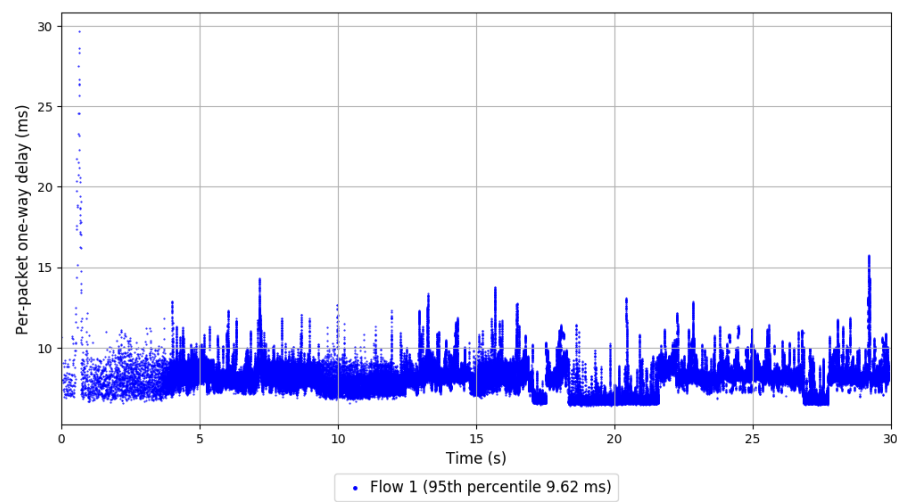
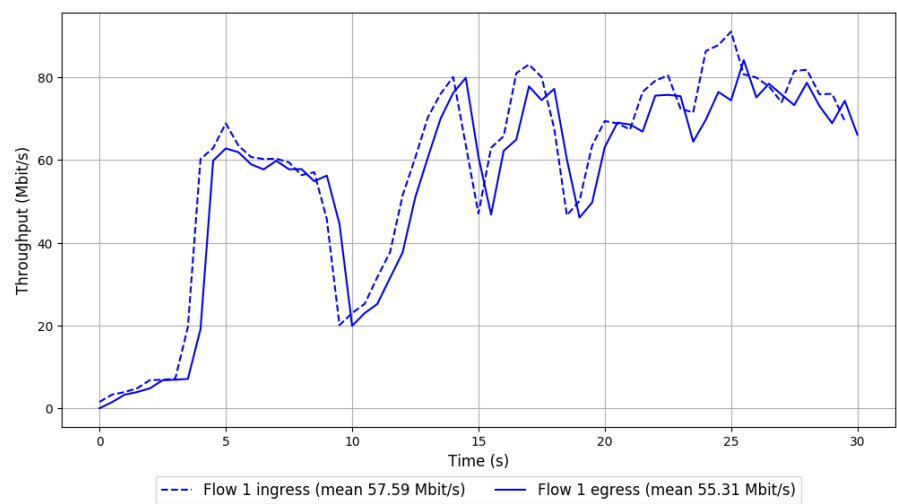


Run 4: Statistics of PCC-Vivace

Start at: 2018-09-06 05:55:19
End at: 2018-09-06 05:55:49
Local clock offset: -1.921 ms
Remote clock offset: -3.613 ms

Below is generated by plot.py at 2018-09-06 06:27:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 55.31 Mbit/s
95th percentile per-packet one-way delay: 9.621 ms
Loss rate: 3.97%
-- Flow 1:
Average throughput: 55.31 Mbit/s
95th percentile per-packet one-way delay: 9.621 ms
Loss rate: 3.97%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2018-09-06 06:15:45

End at: 2018-09-06 06:16:15

Local clock offset: -6.336 ms

Remote clock offset: -4.1 ms

Below is generated by plot.py at 2018-09-06 06:27:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 5.06 Mbit/s

95th percentile per-packet one-way delay: 13.954 ms

Loss rate: 1.01%

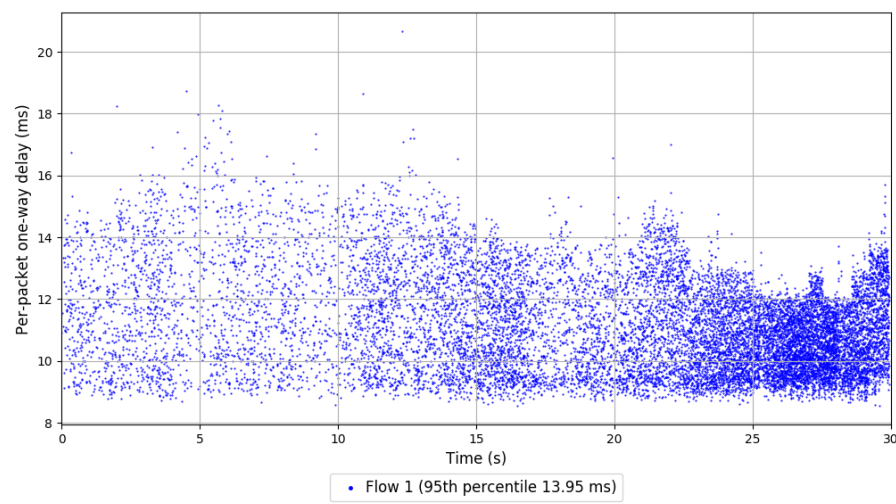
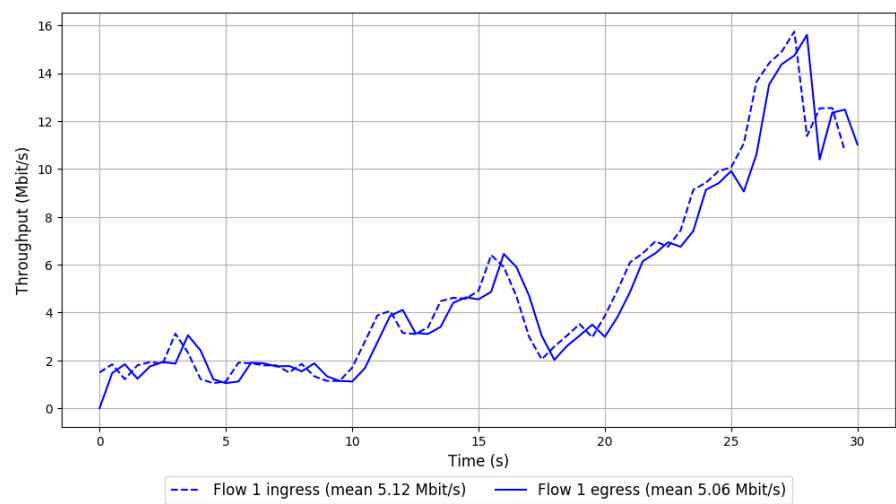
-- Flow 1:

Average throughput: 5.06 Mbit/s

95th percentile per-packet one-way delay: 13.954 ms

Loss rate: 1.01%

Run 5: Report of PCC-Vivace — Data Link

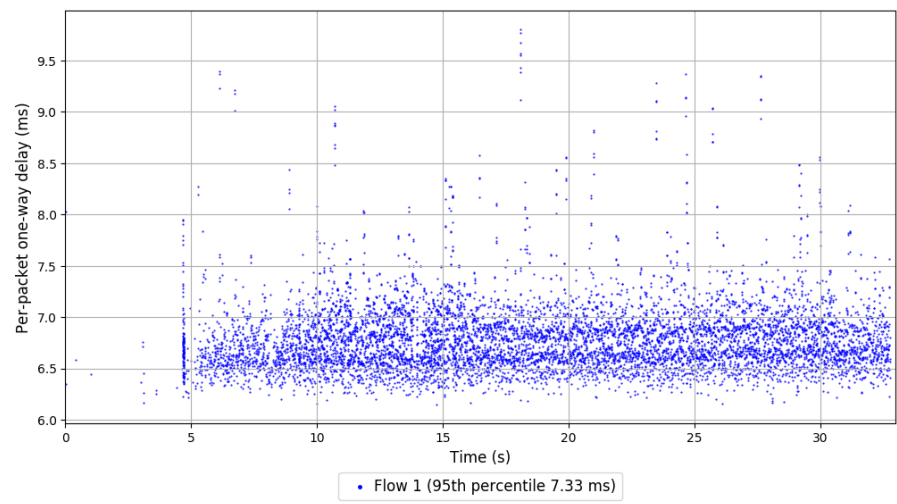
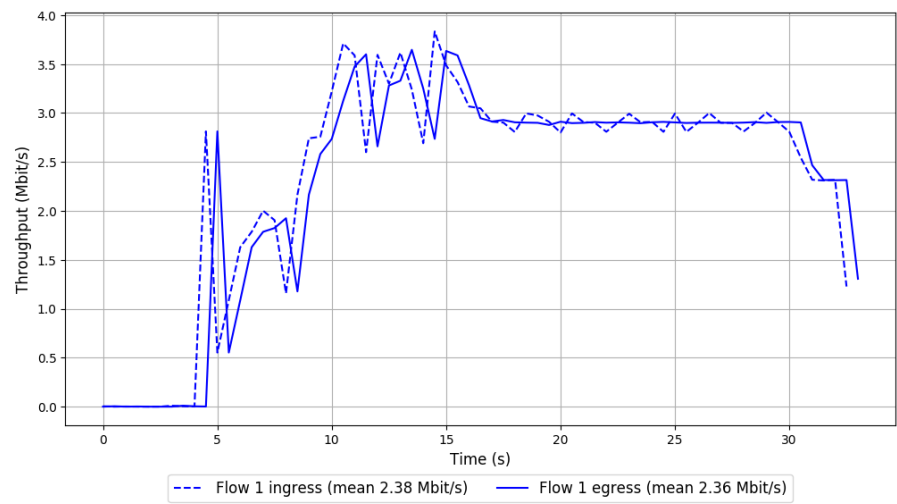


Run 1: Statistics of WebRTC media

Start at: 2018-09-06 04:57:08
End at: 2018-09-06 04:57:38
Local clock offset: -2.546 ms
Remote clock offset: -3.978 ms

Below is generated by plot.py at 2018-09-06 06:27:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.36 Mbit/s
95th percentile per-packet one-way delay: 7.331 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 2.36 Mbit/s
95th percentile per-packet one-way delay: 7.331 ms
Loss rate: 0.74%

Run 1: Report of WebRTC media — Data Link

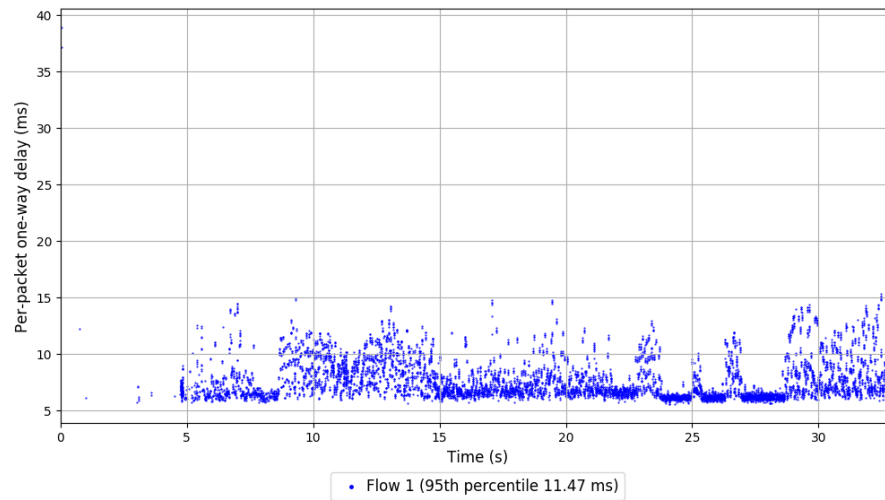
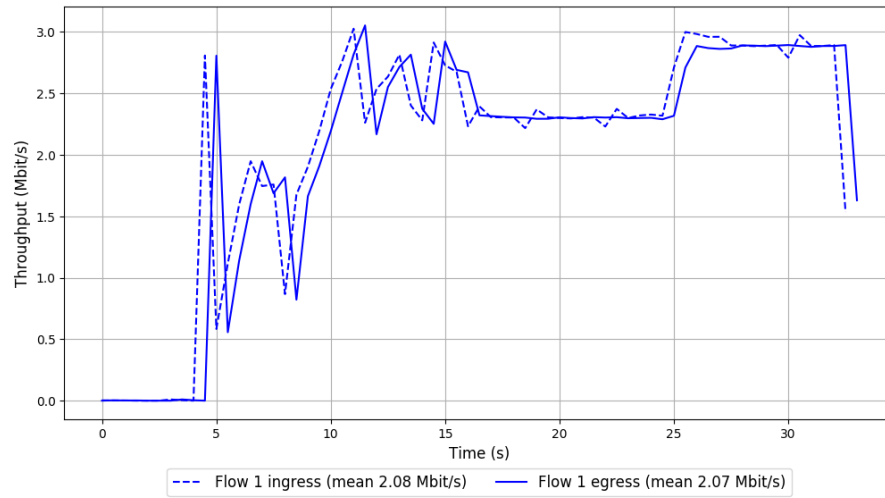


Run 2: Statistics of WebRTC media

Start at: 2018-09-06 05:17:12
End at: 2018-09-06 05:17:42
Local clock offset: -1.71 ms
Remote clock offset: -3.931 ms

Below is generated by plot.py at 2018-09-06 06:27:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.07 Mbit/s
95th percentile per-packet one-way delay: 11.474 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 2.07 Mbit/s
95th percentile per-packet one-way delay: 11.474 ms
Loss rate: 0.34%

Run 2: Report of WebRTC media — Data Link

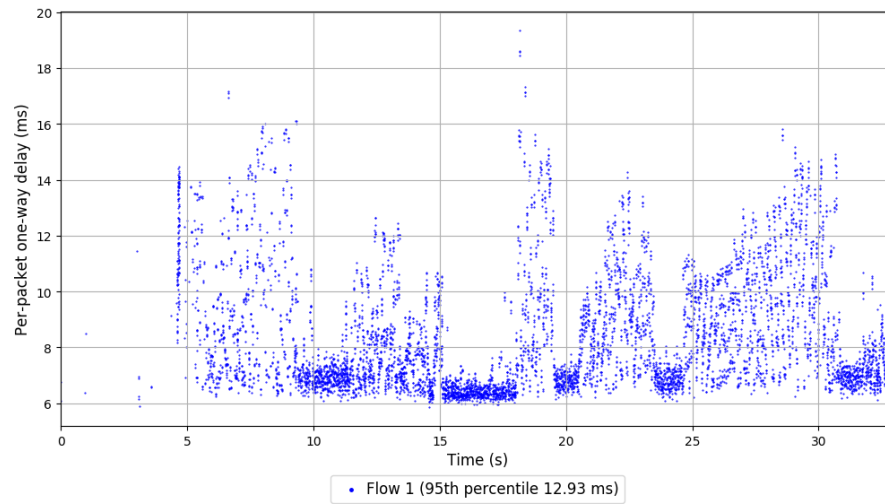
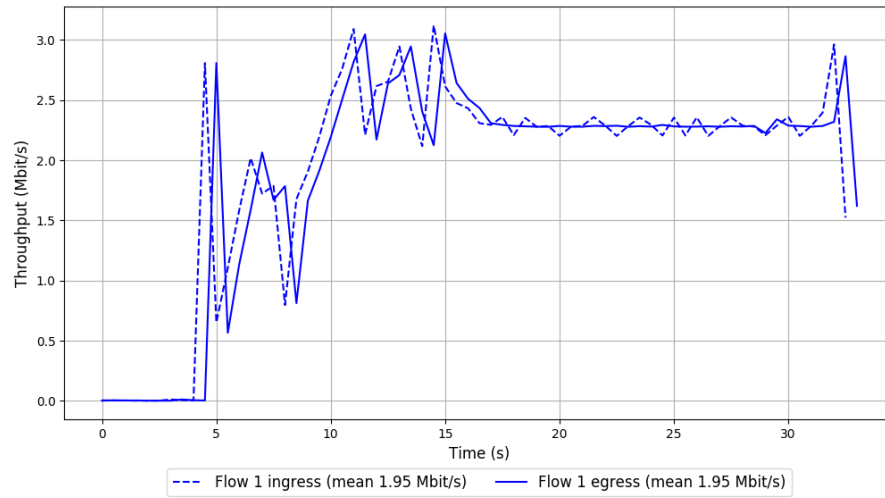


Run 3: Statistics of WebRTC media

Start at: 2018-09-06 05:37:27
End at: 2018-09-06 05:37:57
Local clock offset: 2.715 ms
Remote clock offset: -4.166 ms

Below is generated by plot.py at 2018-09-06 06:27:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.95 Mbit/s
95th percentile per-packet one-way delay: 12.934 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 1.95 Mbit/s
95th percentile per-packet one-way delay: 12.934 ms
Loss rate: 0.10%

Run 3: Report of WebRTC media — Data Link

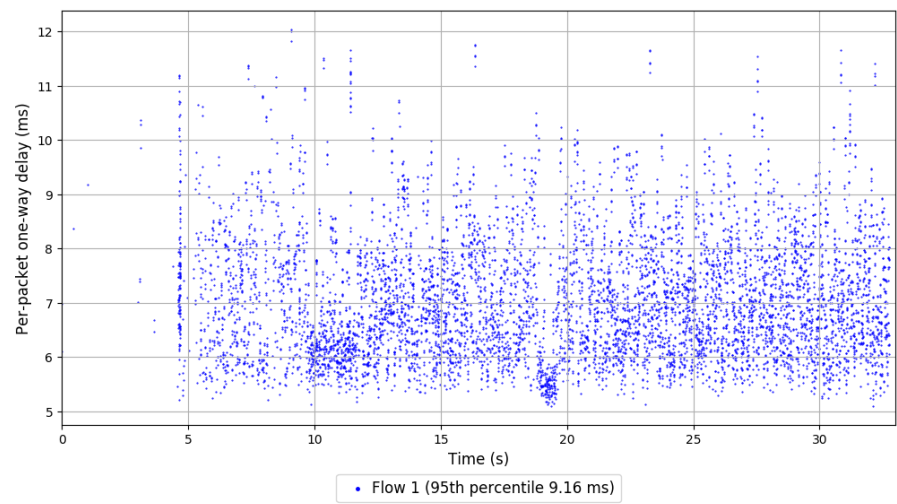
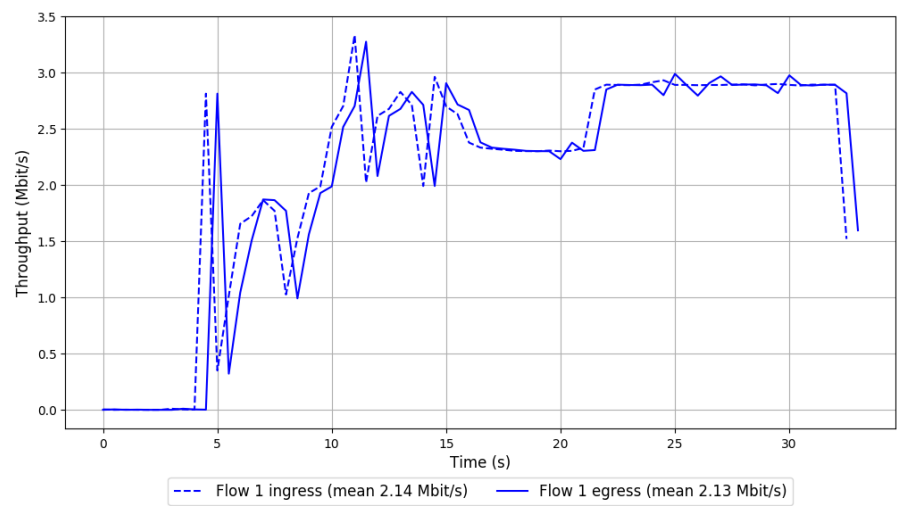


Run 4: Statistics of WebRTC media

Start at: 2018-09-06 05:57:37
End at: 2018-09-06 05:58:07
Local clock offset: -1.676 ms
Remote clock offset: -4.183 ms

Below is generated by plot.py at 2018-09-06 06:27:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.13 Mbit/s
95th percentile per-packet one-way delay: 9.159 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 2.13 Mbit/s
95th percentile per-packet one-way delay: 9.159 ms
Loss rate: 0.05%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-09-06 06:17:59
End at: 2018-09-06 06:18:29
Local clock offset: -4.327 ms
Remote clock offset: -5.208 ms

Below is generated by plot.py at 2018-09-06 06:27:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.12 Mbit/s
95th percentile per-packet one-way delay: 9.972 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 2.12 Mbit/s
95th percentile per-packet one-way delay: 9.972 ms
Loss rate: 0.38%

Run 5: Report of WebRTC media — Data Link

