

Pantheon Report

Generated at 2018-10-26 08:12:29 (UTC).

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

Repeated the test of 18 congestion control schemes 5 times.

Each test lasted for 30 seconds running 1 flow.

NTP offsets were measured against **nets.org.sg** and have been applied to correct the timestamps in logs.

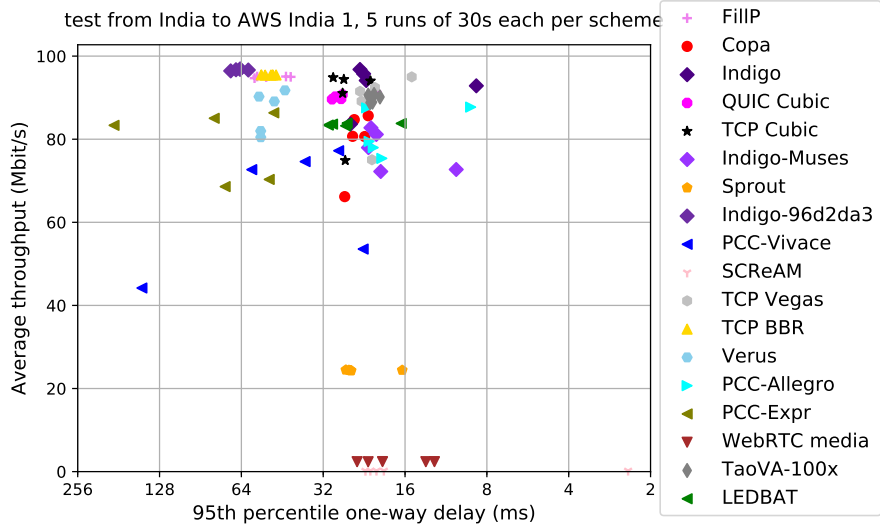
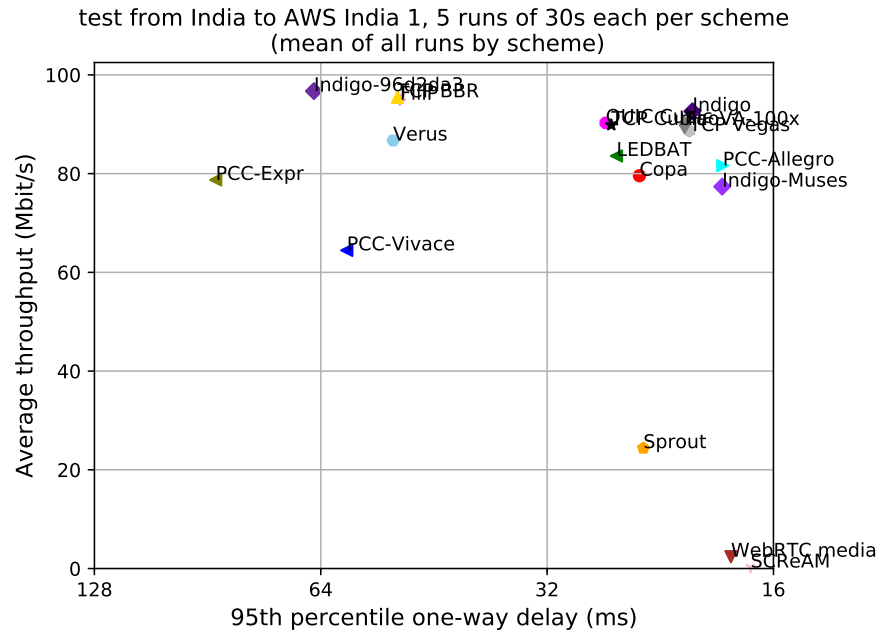
System info:

```
Linux 4.15.0-1023-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

```
branch: muses @ 2e19c0464530faa92c63f8217c9971438a26a3be
third_party/fillp @ 5332fc9127c63565e13f4933b336c02d1aabdac6
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
```

third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851



scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	95.46	50.60	2.52
Copa	5	79.57	24.12	0.11
TCP Cubic	5	89.85	26.29	0.21
FillP	5	94.97	50.23	1.74
Indigo	5	92.63	20.51	0.15
Indigo-96d2da3	5	96.71	65.35	6.82
LEDBAT	5	83.58	25.88	0.10
Indigo-Muses	5	77.36	18.72	0.10
PCC-Allegro	5	81.62	18.69	0.11
PCC-Expr	5	78.73	88.29	0.14
QUIC Cubic	5	90.28	26.74	0.14
SCReAM	5	0.20	17.16	0.13
Sprout	5	24.39	23.83	0.10
TaoVA-100x	5	89.85	21.01	0.09
TCP Vegas	5	88.63	20.70	0.12
Verus	5	86.71	51.29	0.44
PCC-Vivace	5	64.45	59.10	0.20
WebRTC media	5	2.39	18.23	0.07

Run 1: Statistics of TCP BBR

Start at: 2018-10-26 06:16:07

End at: 2018-10-26 06:16:37

Local clock offset: -0.245 ms

Remote clock offset: -5.04 ms

Below is generated by plot.py at 2018-10-26 08:01:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.43 Mbit/s

95th percentile per-packet one-way delay: 52.328 ms

Loss rate: 2.24%

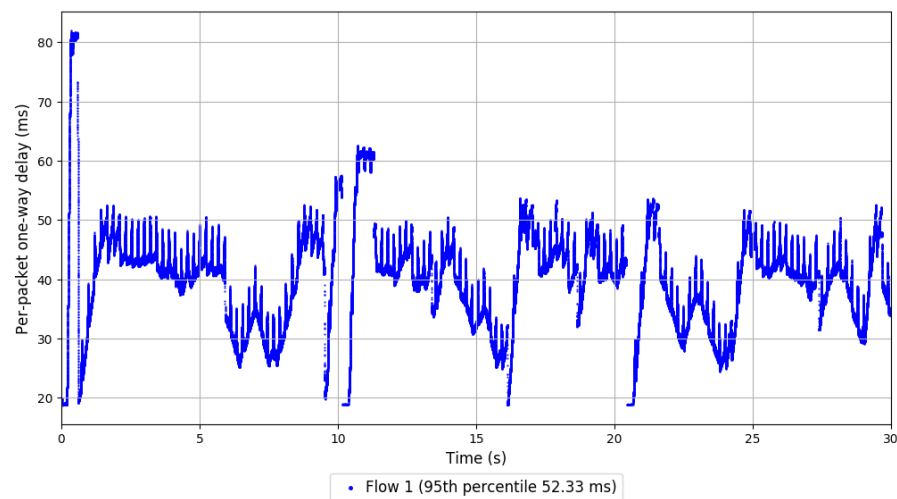
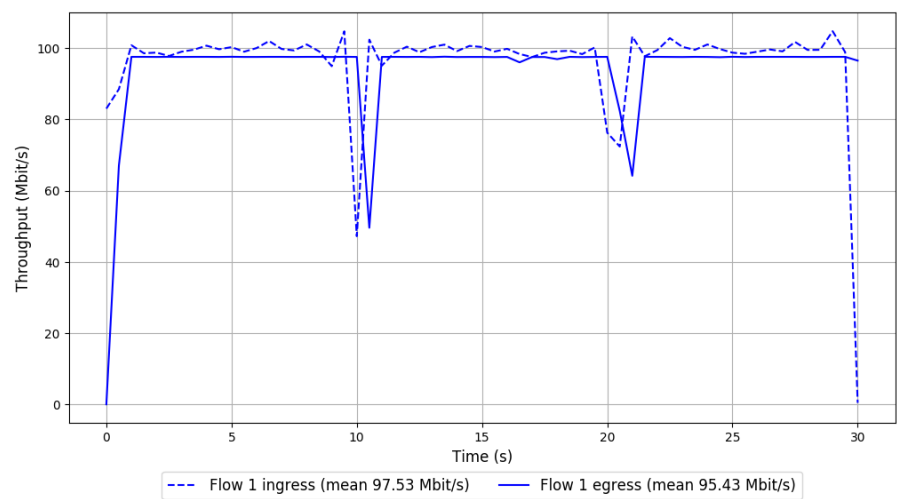
-- Flow 1:

Average throughput: 95.43 Mbit/s

95th percentile per-packet one-way delay: 52.328 ms

Loss rate: 2.24%

Run 1: Report of TCP BBR — Data Link

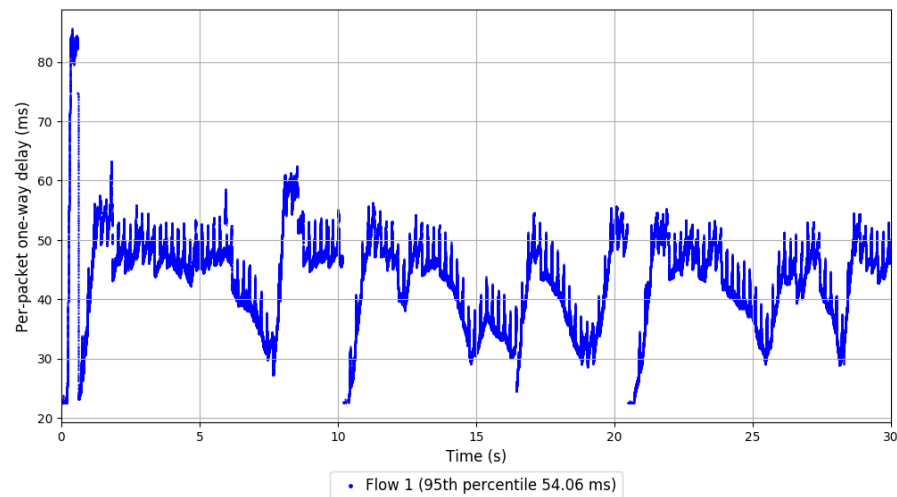
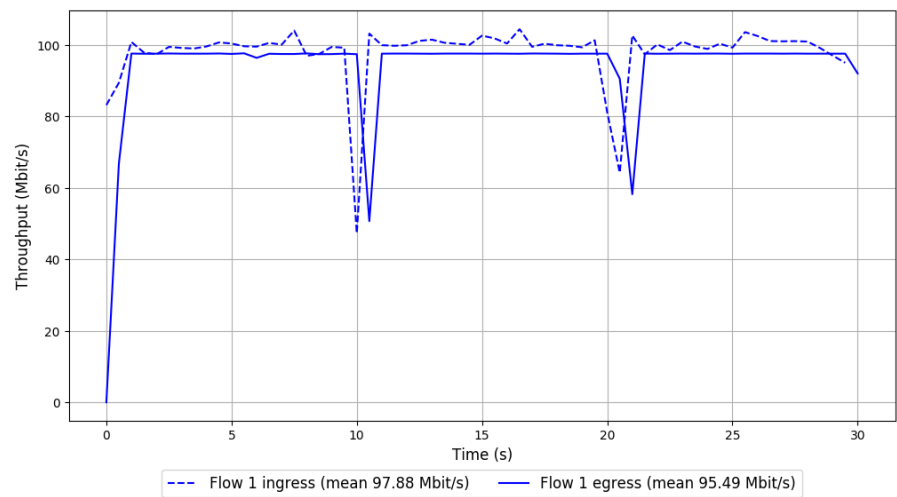


Run 2: Statistics of TCP BBR

Start at: 2018-10-26 06:38:48
End at: 2018-10-26 06:39:18
Local clock offset: 4.167 ms
Remote clock offset: -5.428 ms

Below is generated by plot.py at 2018-10-26 08:01:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.49 Mbit/s
95th percentile per-packet one-way delay: 54.056 ms
Loss rate: 2.53%
-- Flow 1:
Average throughput: 95.49 Mbit/s
95th percentile per-packet one-way delay: 54.056 ms
Loss rate: 2.53%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-10-26 07:01:20

End at: 2018-10-26 07:01:50

Local clock offset: 2.445 ms

Remote clock offset: -3.197 ms

Below is generated by plot.py at 2018-10-26 08:01:33

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.46 Mbit/s

95th percentile per-packet one-way delay: 47.712 ms

Loss rate: 2.70%

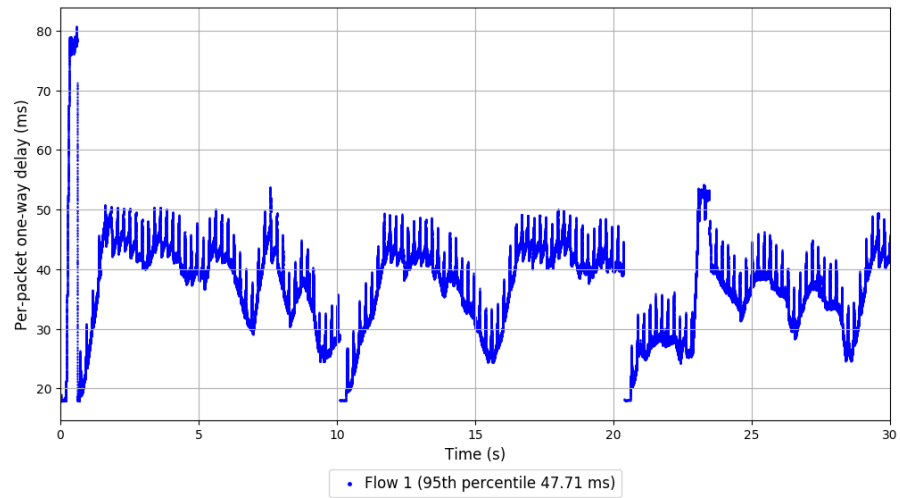
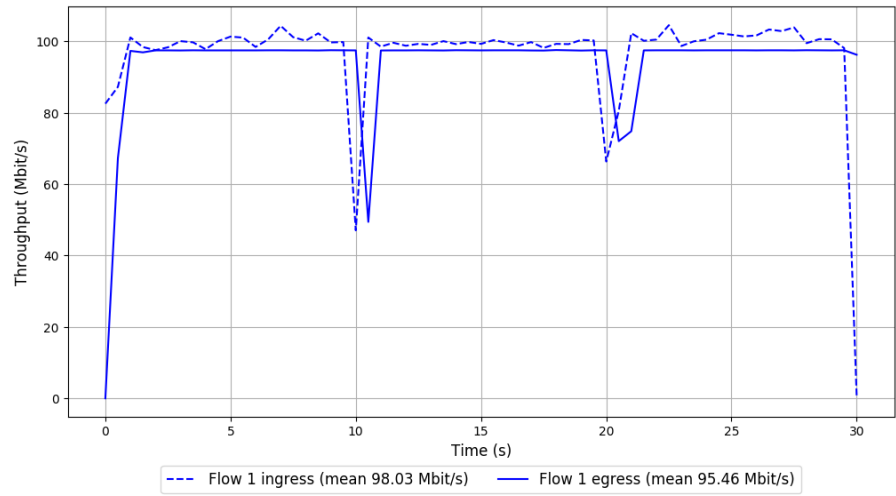
-- Flow 1:

Average throughput: 95.46 Mbit/s

95th percentile per-packet one-way delay: 47.712 ms

Loss rate: 2.70%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-10-26 07:23:04

End at: 2018-10-26 07:23:34

Local clock offset: 0.839 ms

Remote clock offset: -4.335 ms

Below is generated by plot.py at 2018-10-26 08:01:33

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.45 Mbit/s

95th percentile per-packet one-way delay: 49.816 ms

Loss rate: 2.24%

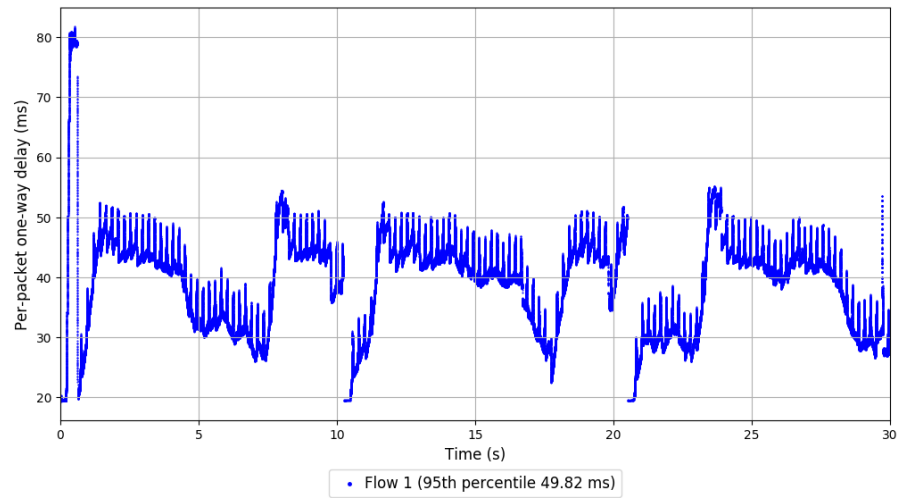
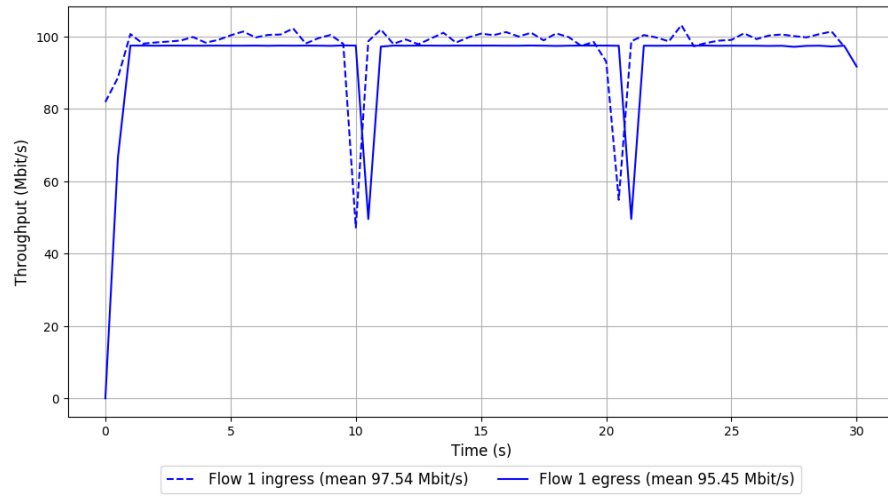
-- Flow 1:

Average throughput: 95.45 Mbit/s

95th percentile per-packet one-way delay: 49.816 ms

Loss rate: 2.24%

Run 4: Report of TCP BBR — Data Link

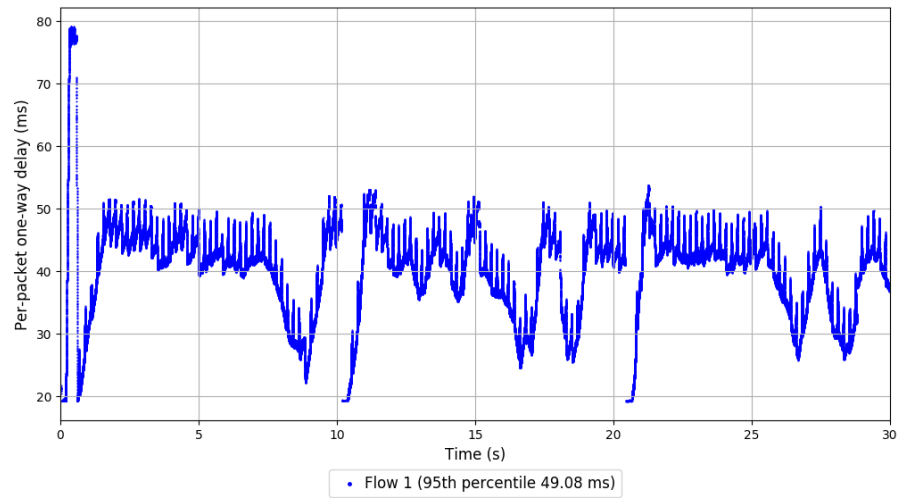
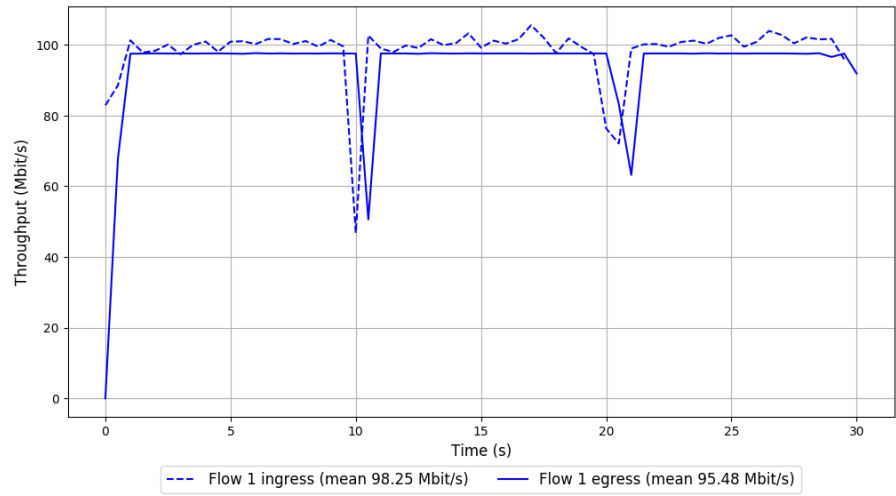


Run 5: Statistics of TCP BBR

Start at: 2018-10-26 07:44:20
End at: 2018-10-26 07:44:50
Local clock offset: 1.949 ms
Remote clock offset: -4.042 ms

Below is generated by plot.py at 2018-10-26 08:01:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.48 Mbit/s
95th percentile per-packet one-way delay: 49.080 ms
Loss rate: 2.90%
-- Flow 1:
Average throughput: 95.48 Mbit/s
95th percentile per-packet one-way delay: 49.080 ms
Loss rate: 2.90%

Run 5: Report of TCP BBR — Data Link

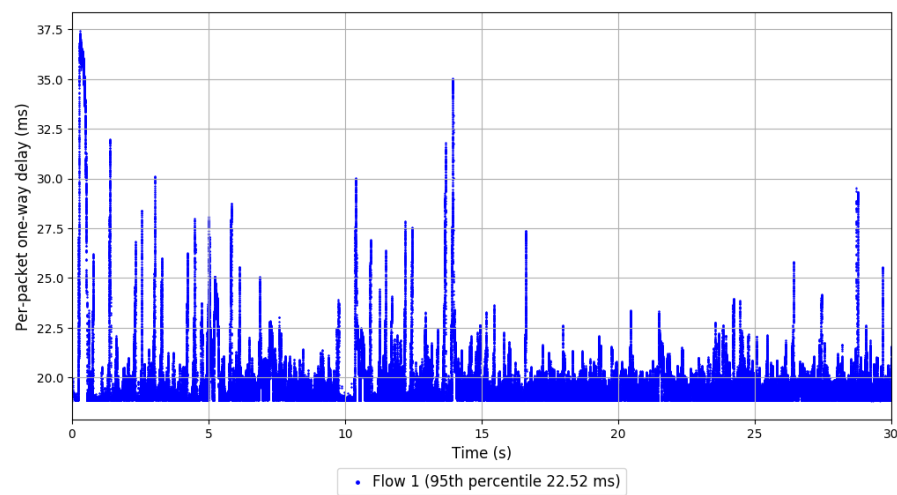
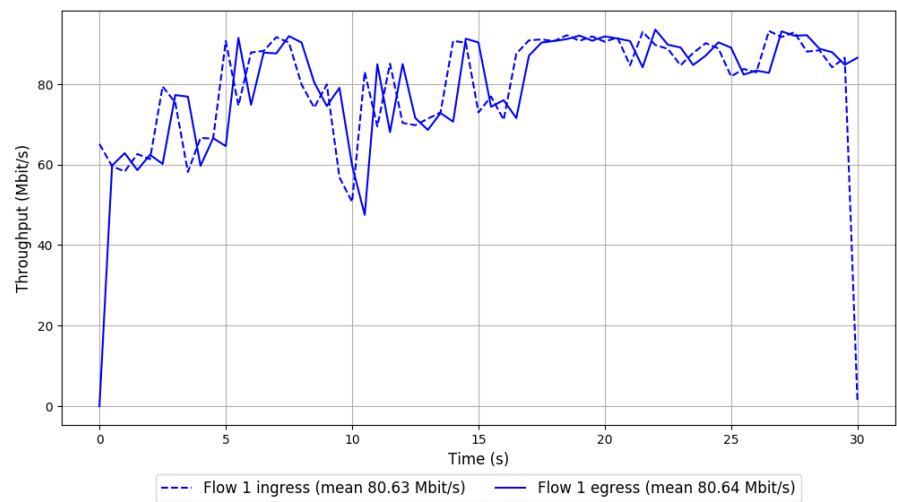


Run 1: Statistics of Copa

Start at: 2018-10-26 06:18:47
End at: 2018-10-26 06:19:17
Local clock offset: -0.309 ms
Remote clock offset: -5.168 ms

Below is generated by plot.py at 2018-10-26 08:02:16
Datalink statistics
-- Total of 1 flow:
Average throughput: 80.64 Mbit/s
95th percentile per-packet one-way delay: 22.516 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 80.64 Mbit/s
95th percentile per-packet one-way delay: 22.516 ms
Loss rate: 0.09%

Run 1: Report of Copa — Data Link

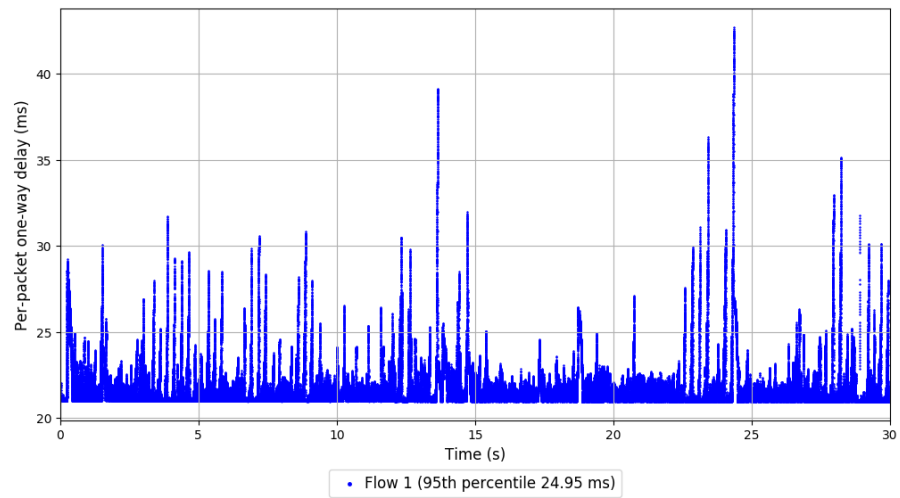
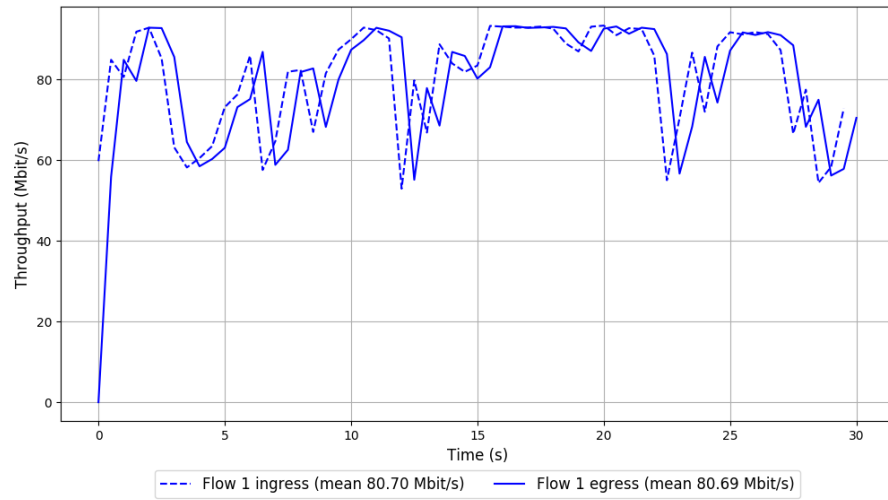


Run 2: Statistics of Copa

Start at: 2018-10-26 06:41:24
End at: 2018-10-26 06:41:54
Local clock offset: 2.73 ms
Remote clock offset: -5.573 ms

Below is generated by plot.py at 2018-10-26 08:02:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 80.69 Mbit/s
95th percentile per-packet one-way delay: 24.947 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 80.69 Mbit/s
95th percentile per-packet one-way delay: 24.947 ms
Loss rate: 0.10%

Run 2: Report of Copa — Data Link

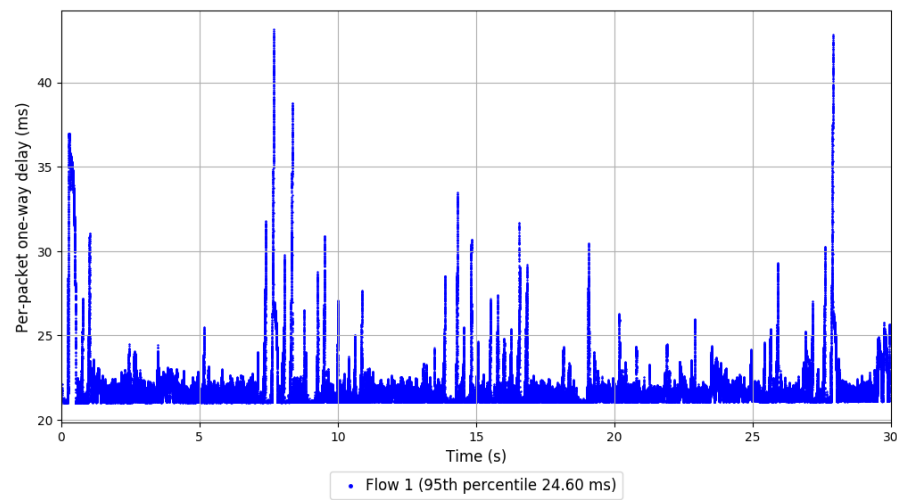
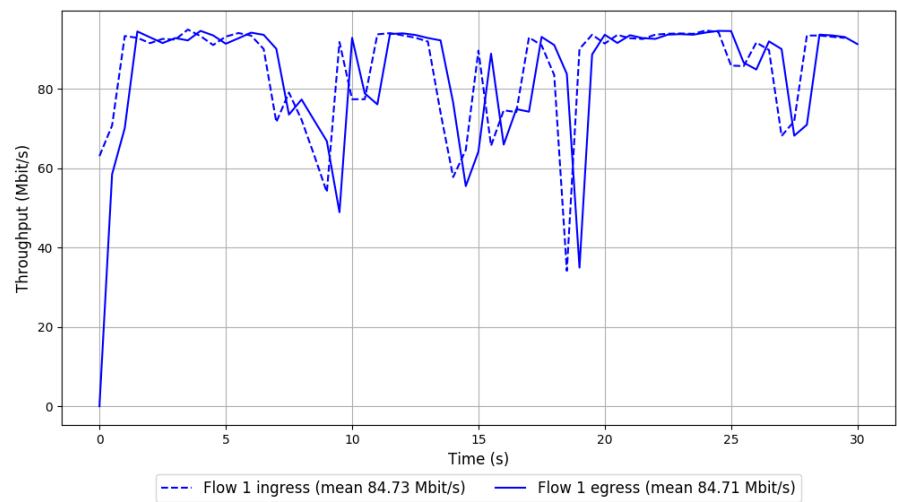


Run 3: Statistics of Copa

Start at: 2018-10-26 07:03:51
End at: 2018-10-26 07:04:21
Local clock offset: 4.452 ms
Remote clock offset: -3.844 ms

Below is generated by plot.py at 2018-10-26 08:02:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 84.71 Mbit/s
95th percentile per-packet one-way delay: 24.599 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 84.71 Mbit/s
95th percentile per-packet one-way delay: 24.599 ms
Loss rate: 0.11%

Run 3: Report of Copa — Data Link

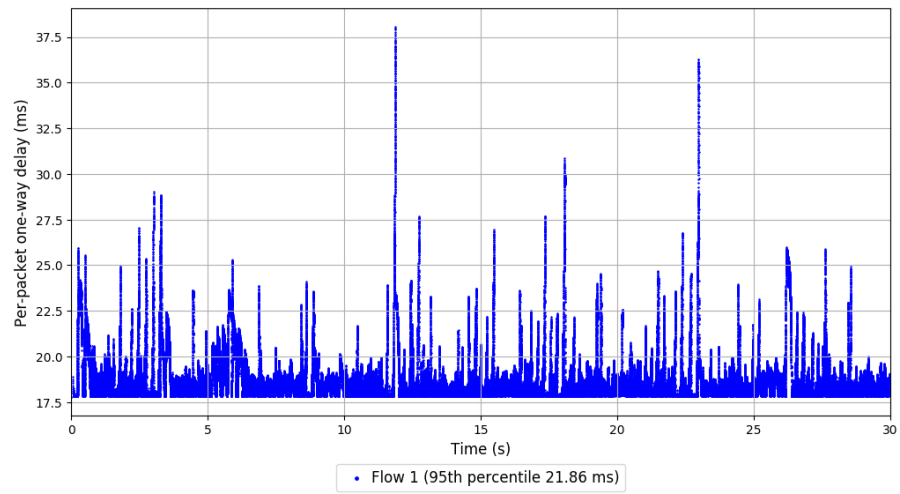
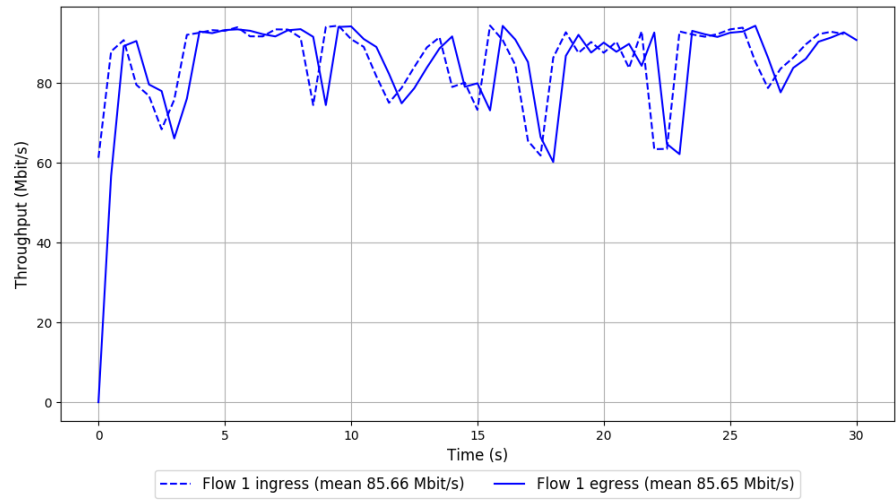


Run 4: Statistics of Copa

Start at: 2018-10-26 07:25:31
End at: 2018-10-26 07:26:01
Local clock offset: 0.363 ms
Remote clock offset: -3.169 ms

Below is generated by plot.py at 2018-10-26 08:03:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 85.65 Mbit/s
95th percentile per-packet one-way delay: 21.860 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 85.65 Mbit/s
95th percentile per-packet one-way delay: 21.860 ms
Loss rate: 0.10%

Run 4: Report of Copa — Data Link

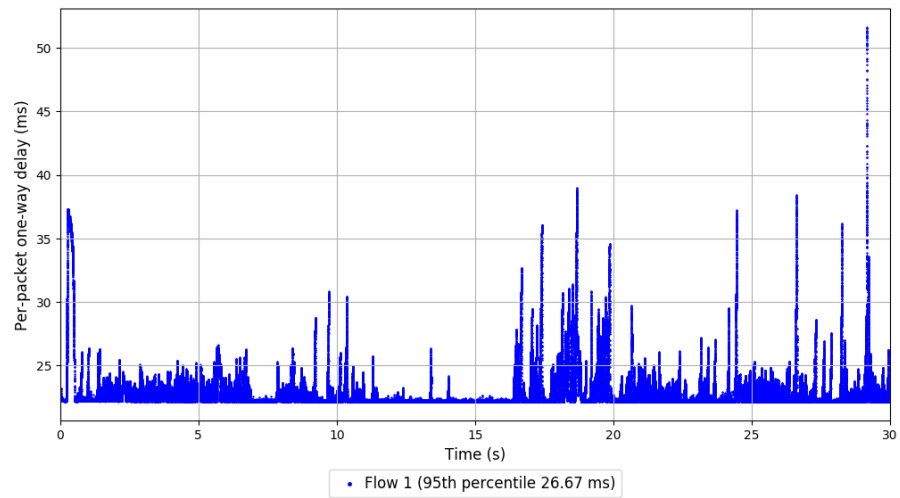
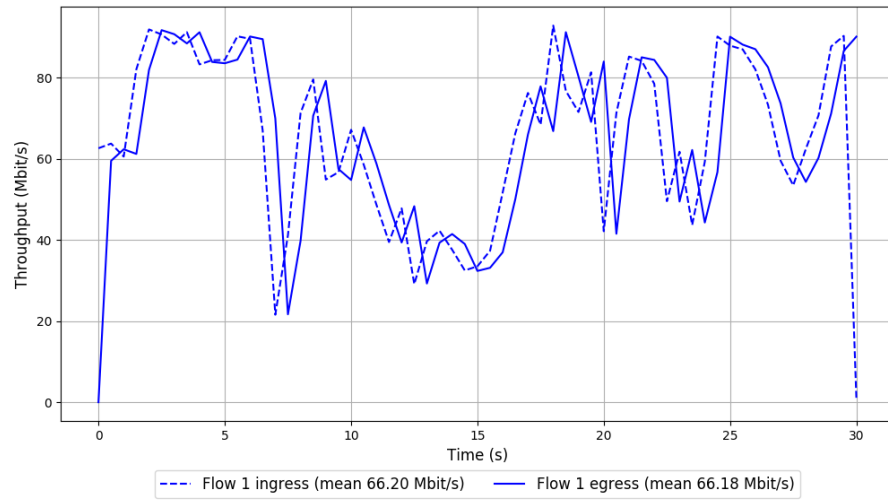


Run 5: Statistics of Copa

Start at: 2018-10-26 07:47:00
End at: 2018-10-26 07:47:30
Local clock offset: 3.517 ms
Remote clock offset: -5.517 ms

Below is generated by plot.py at 2018-10-26 08:03:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 66.18 Mbit/s
95th percentile per-packet one-way delay: 26.673 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 66.18 Mbit/s
95th percentile per-packet one-way delay: 26.673 ms
Loss rate: 0.13%

Run 5: Report of Copa — Data Link

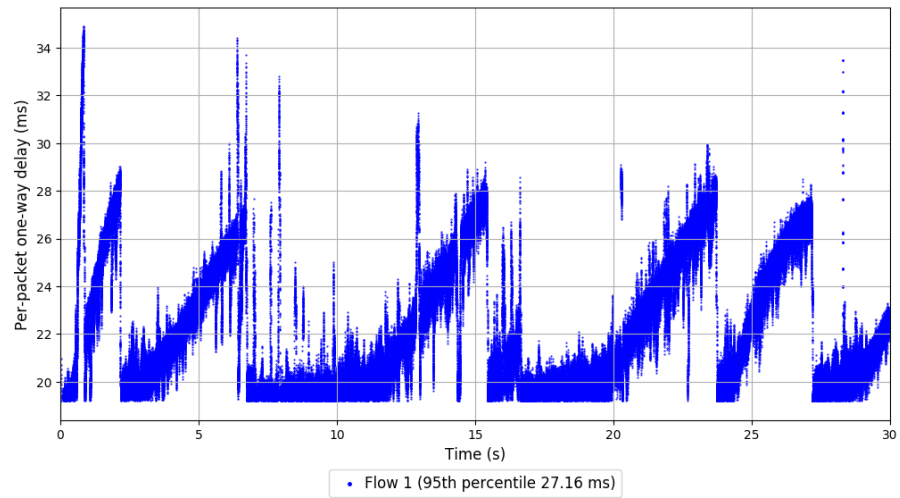
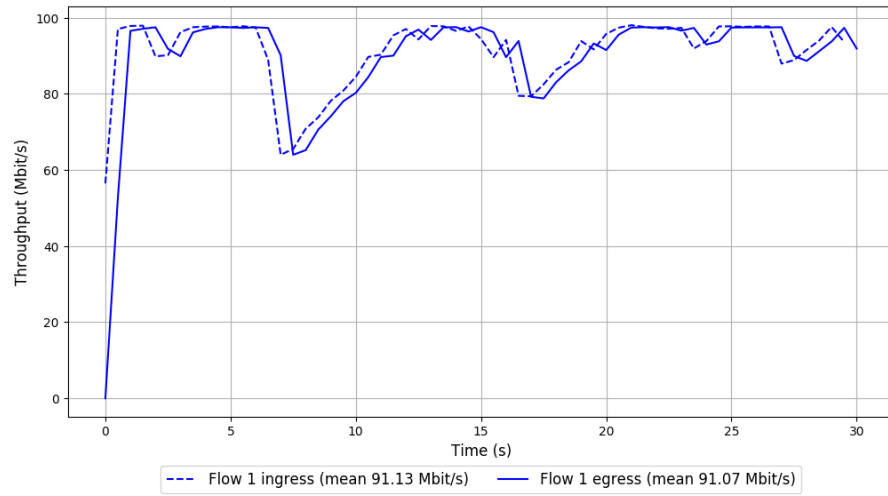


Run 1: Statistics of TCP Cubic

Start at: 2018-10-26 06:21:21
End at: 2018-10-26 06:21:51
Local clock offset: 0.583 ms
Remote clock offset: -4.724 ms

Below is generated by plot.py at 2018-10-26 08:03:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 91.07 Mbit/s
95th percentile per-packet one-way delay: 27.155 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 91.07 Mbit/s
95th percentile per-packet one-way delay: 27.155 ms
Loss rate: 0.15%

Run 1: Report of TCP Cubic — Data Link

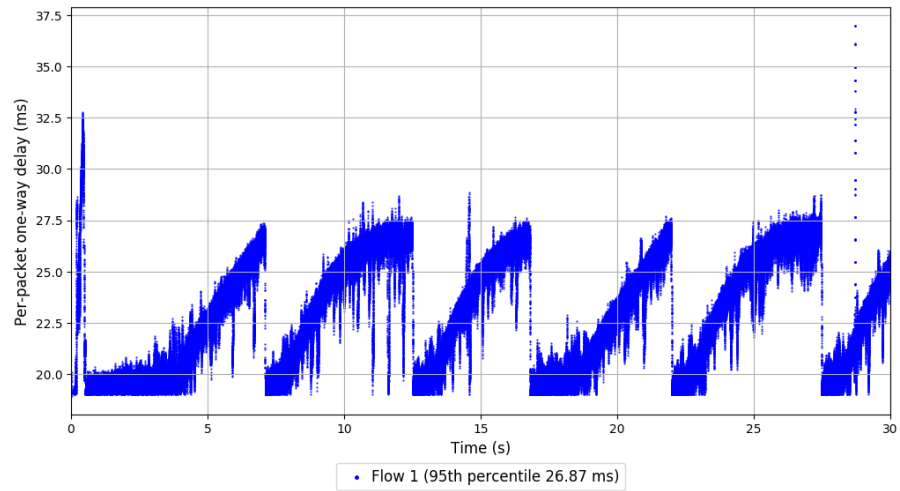
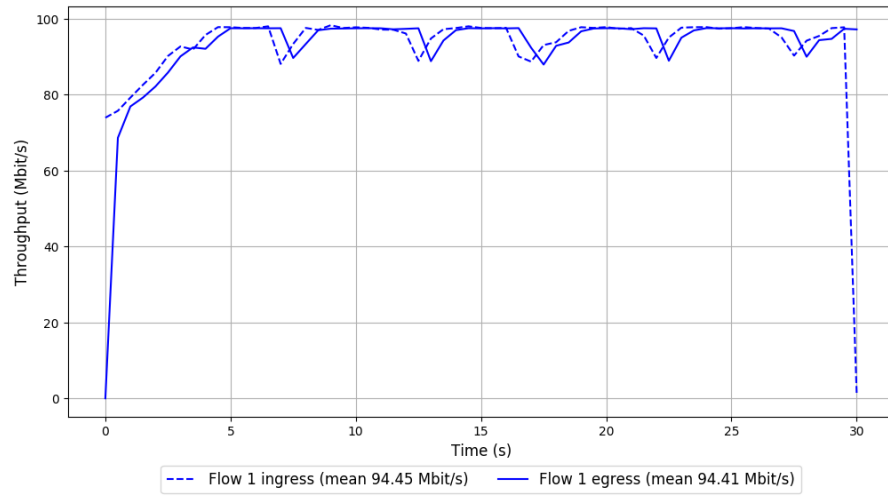


Run 2: Statistics of TCP Cubic

Start at: 2018-10-26 06:44:03
End at: 2018-10-26 06:44:33
Local clock offset: 2.239 ms
Remote clock offset: -4.257 ms

Below is generated by plot.py at 2018-10-26 08:03:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.41 Mbit/s
95th percentile per-packet one-way delay: 26.874 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 94.41 Mbit/s
95th percentile per-packet one-way delay: 26.874 ms
Loss rate: 0.14%

Run 2: Report of TCP Cubic — Data Link

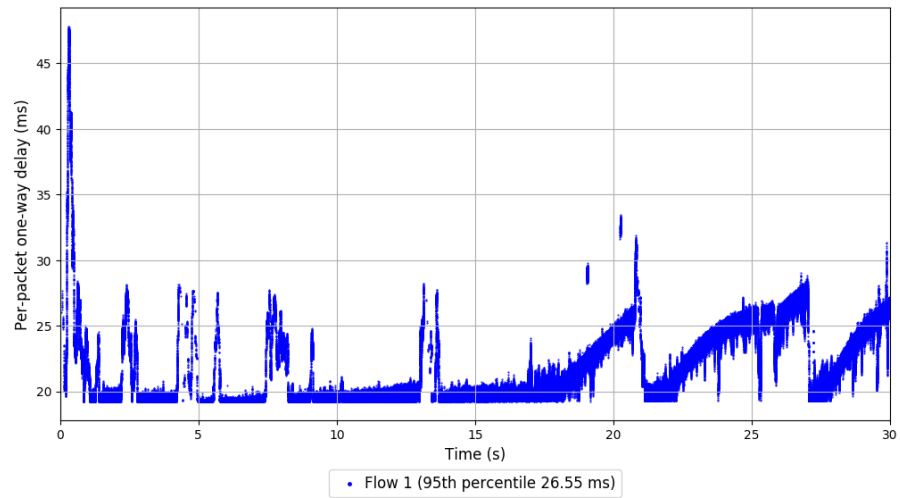
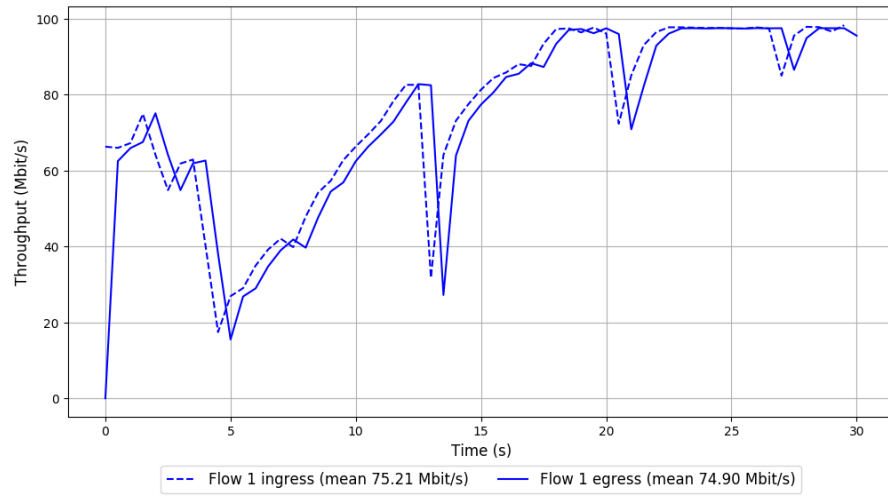


Run 3: Statistics of TCP Cubic

Start at: 2018-10-26 07:06:18
End at: 2018-10-26 07:06:48
Local clock offset: 1.88 ms
Remote clock offset: -4.279 ms

Below is generated by plot.py at 2018-10-26 08:03:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 74.90 Mbit/s
95th percentile per-packet one-way delay: 26.553 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 74.90 Mbit/s
95th percentile per-packet one-way delay: 26.553 ms
Loss rate: 0.53%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-10-26 07:27:58

End at: 2018-10-26 07:28:28

Local clock offset: 3.97 ms

Remote clock offset: 4.881 ms

Below is generated by plot.py at 2018-10-26 08:03:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 94.04 Mbit/s

95th percentile per-packet one-way delay: 21.440 ms

Loss rate: 0.12%

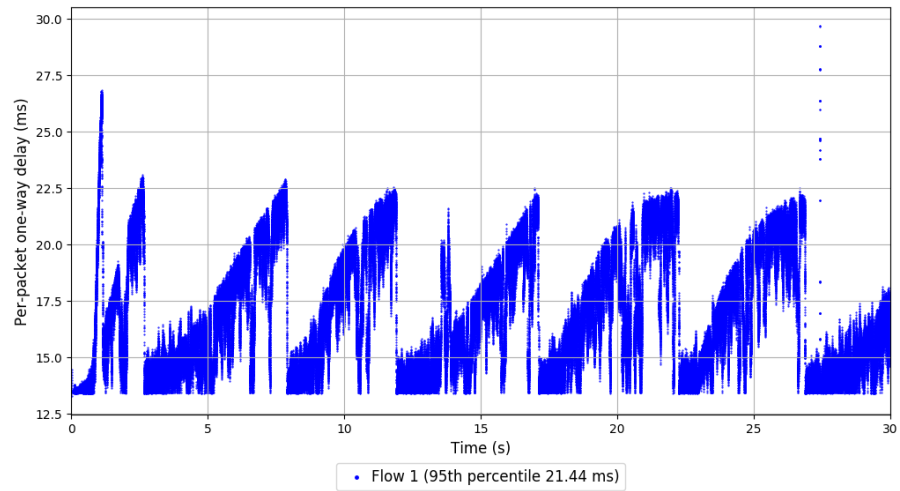
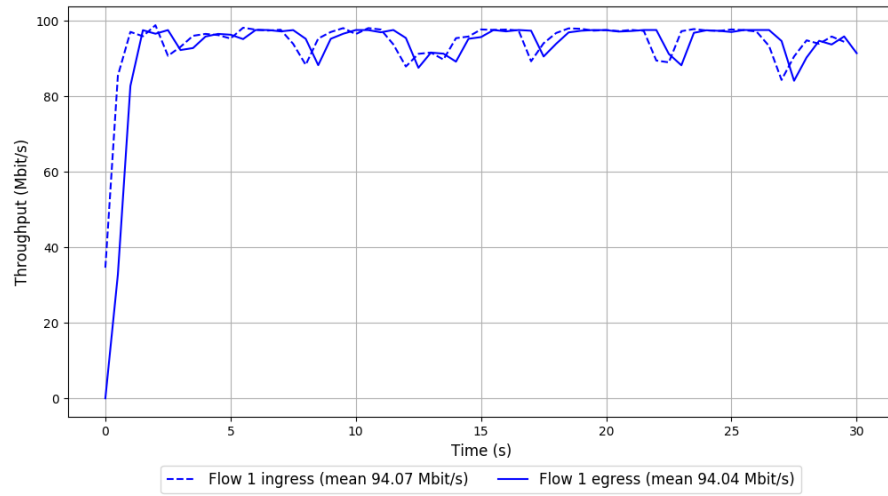
-- Flow 1:

Average throughput: 94.04 Mbit/s

95th percentile per-packet one-way delay: 21.440 ms

Loss rate: 0.12%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-10-26 07:49:30

End at: 2018-10-26 07:50:00

Local clock offset: 4.202 ms

Remote clock offset: -4.48 ms

Below is generated by plot.py at 2018-10-26 08:03:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 94.84 Mbit/s

95th percentile per-packet one-way delay: 29.409 ms

Loss rate: 0.12%

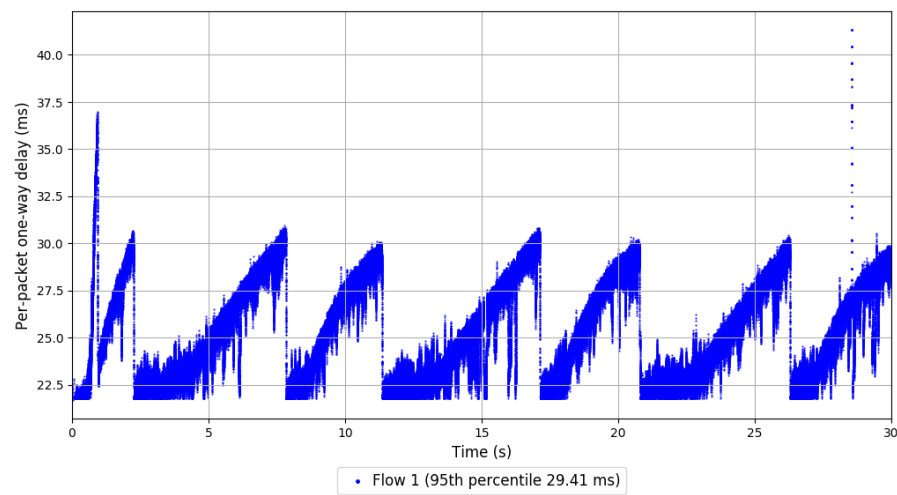
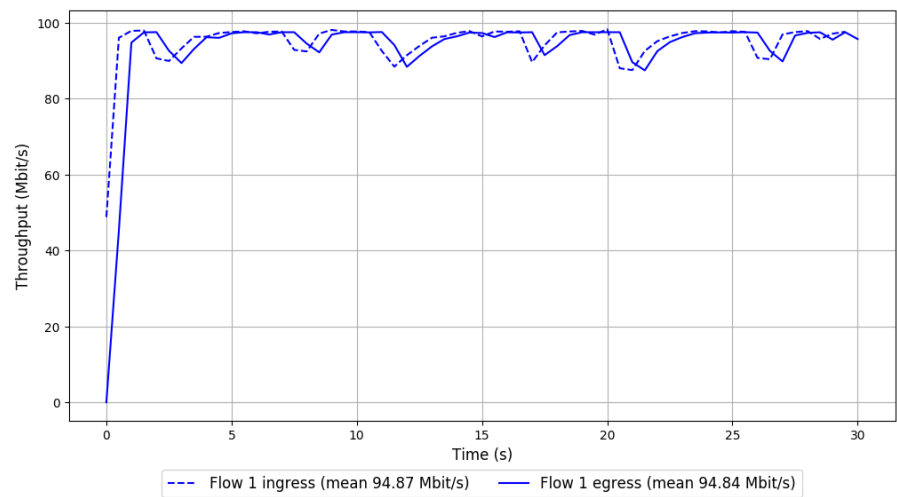
-- Flow 1:

Average throughput: 94.84 Mbit/s

95th percentile per-packet one-way delay: 29.409 ms

Loss rate: 0.12%

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2018-10-26 06:24:03

End at: 2018-10-26 06:24:33

Local clock offset: 1.947 ms

Remote clock offset: -4.81 ms

Below is generated by plot.py at 2018-10-26 08:03:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.09 Mbit/s

95th percentile per-packet one-way delay: 56.004 ms

Loss rate: 2.04%

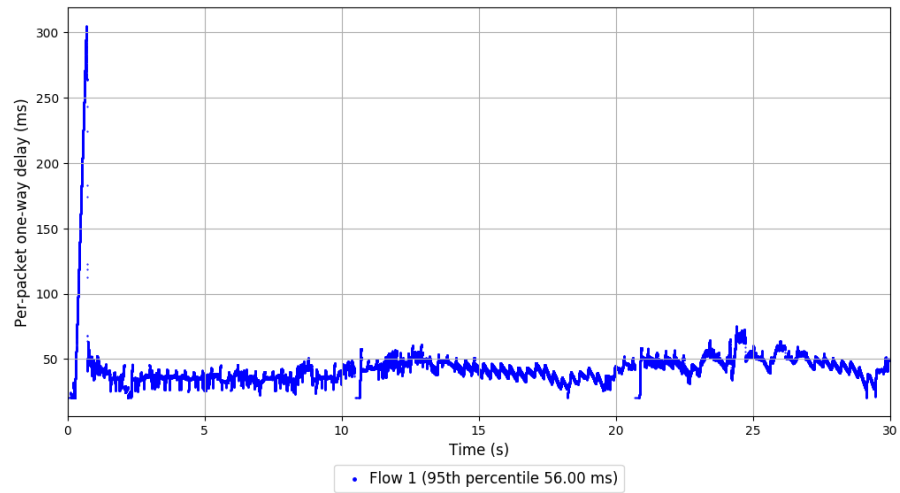
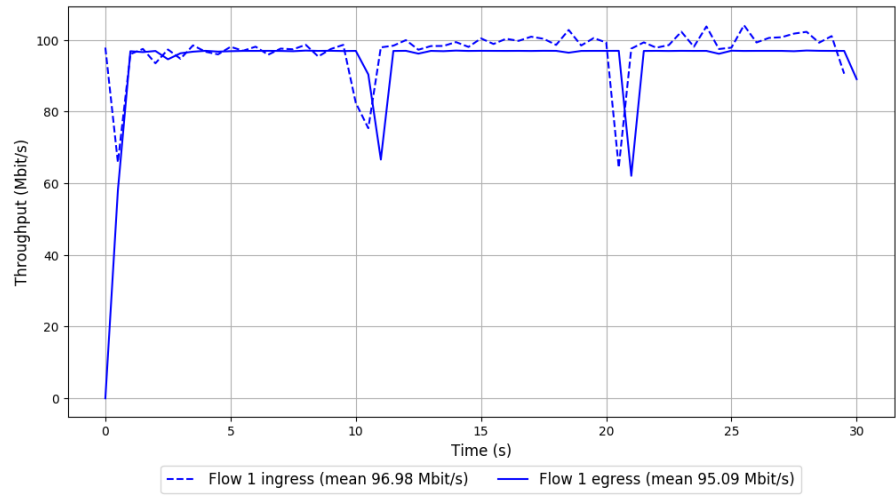
-- Flow 1:

Average throughput: 95.09 Mbit/s

95th percentile per-packet one-way delay: 56.004 ms

Loss rate: 2.04%

Run 1: Report of FillP — Data Link

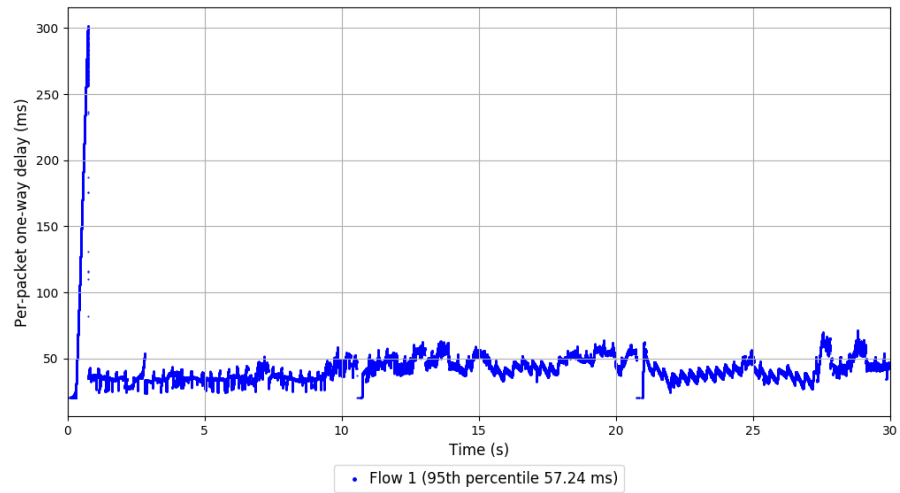
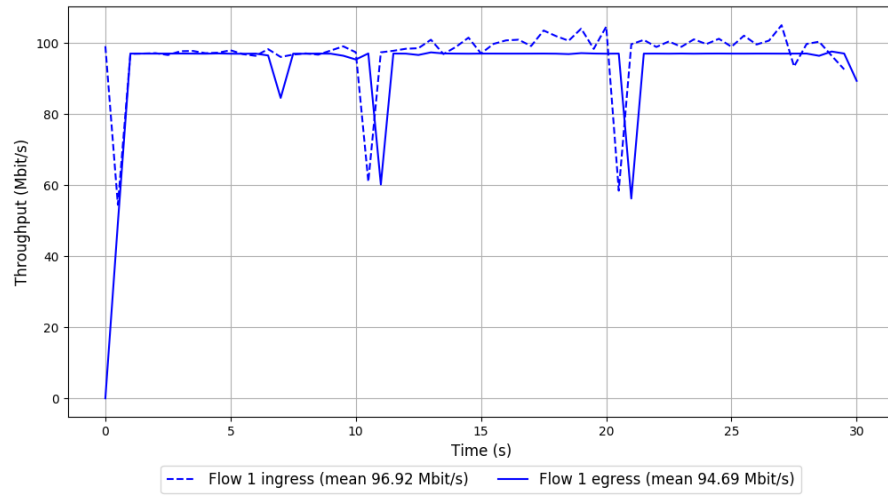


Run 2: Statistics of FillP

Start at: 2018-10-26 06:46:43
End at: 2018-10-26 06:47:13
Local clock offset: 2.702 ms
Remote clock offset: -5.106 ms

Below is generated by plot.py at 2018-10-26 08:03:53
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.69 Mbit/s
95th percentile per-packet one-way delay: 57.243 ms
Loss rate: 2.39%
-- Flow 1:
Average throughput: 94.69 Mbit/s
95th percentile per-packet one-way delay: 57.243 ms
Loss rate: 2.39%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-10-26 07:08:51

End at: 2018-10-26 07:09:21

Local clock offset: 4.139 ms

Remote clock offset: -4.1 ms

Below is generated by plot.py at 2018-10-26 08:04:00

Datalink statistics

-- Total of 1 flow:

Average throughput: 94.95 Mbit/s

95th percentile per-packet one-way delay: 51.879 ms

Loss rate: 1.29%

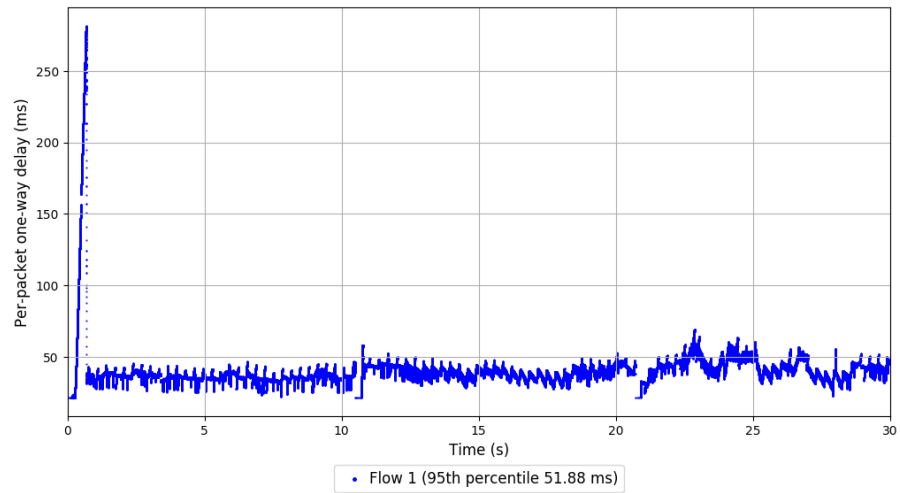
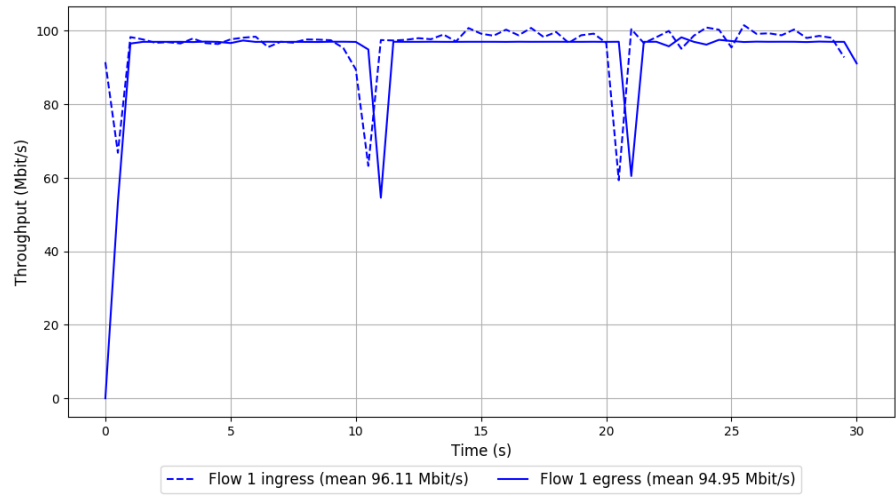
-- Flow 1:

Average throughput: 94.95 Mbit/s

95th percentile per-packet one-way delay: 51.879 ms

Loss rate: 1.29%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-10-26 07:30:26

End at: 2018-10-26 07:30:56

Local clock offset: 3.12 ms

Remote clock offset: 3.176 ms

Below is generated by plot.py at 2018-10-26 08:04:05

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.01 Mbit/s

95th percentile per-packet one-way delay: 42.143 ms

Loss rate: 1.47%

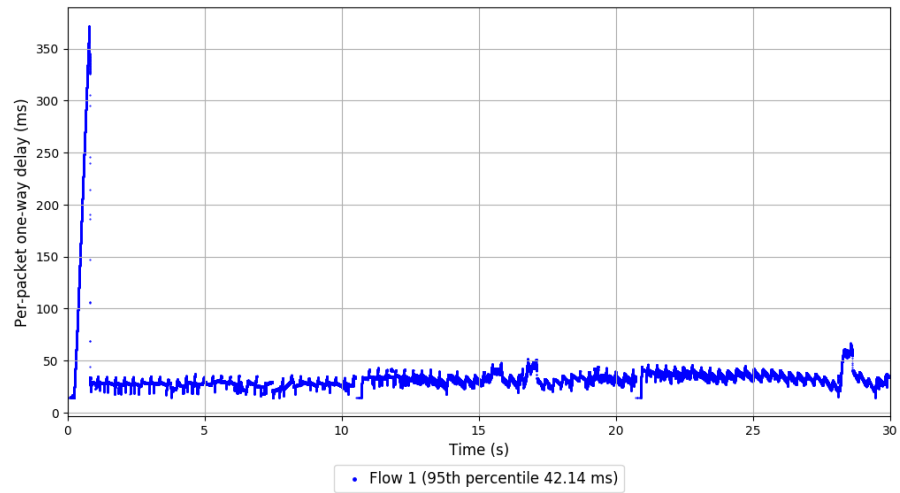
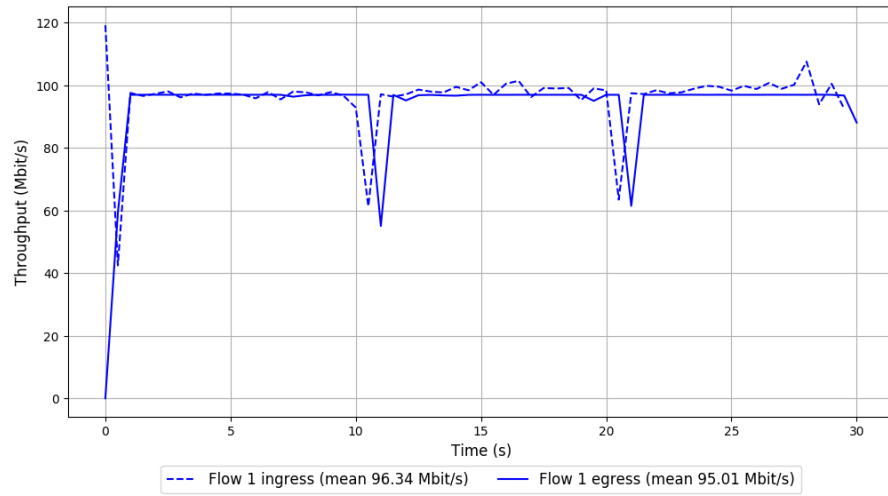
-- Flow 1:

Average throughput: 95.01 Mbit/s

95th percentile per-packet one-way delay: 42.143 ms

Loss rate: 1.47%

Run 4: Report of FillP — Data Link

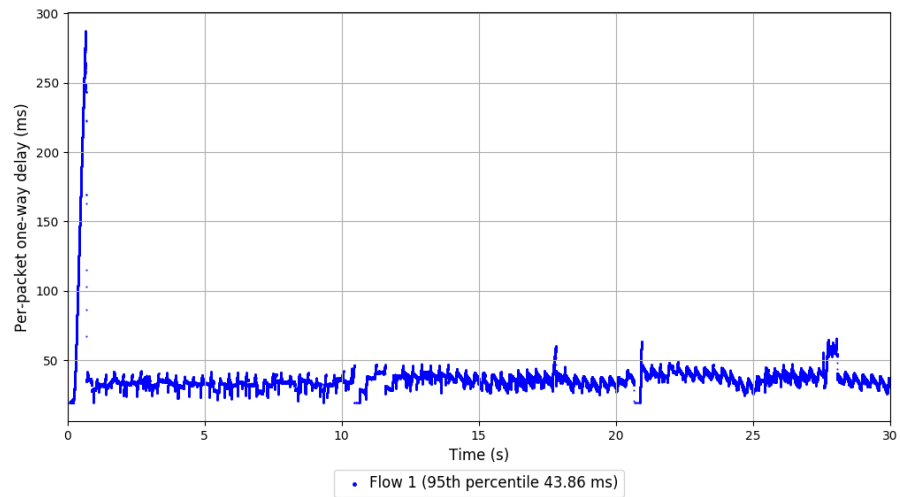
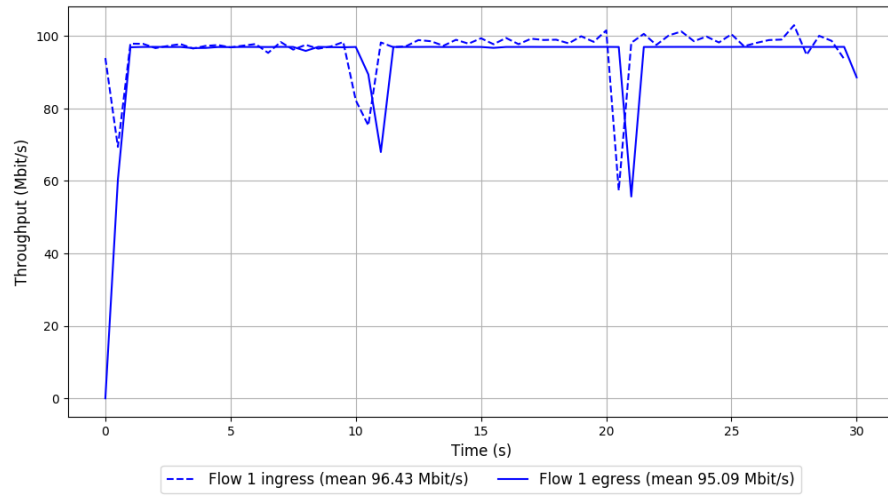


Run 5: Statistics of FillP

Start at: 2018-10-26 07:51:59
End at: 2018-10-26 07:52:29
Local clock offset: 1.713 ms
Remote clock offset: -4.606 ms

Below is generated by plot.py at 2018-10-26 08:04:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.09 Mbit/s
95th percentile per-packet one-way delay: 43.863 ms
Loss rate: 1.49%
-- Flow 1:
Average throughput: 95.09 Mbit/s
95th percentile per-packet one-way delay: 43.863 ms
Loss rate: 1.49%

Run 5: Report of FillP — Data Link

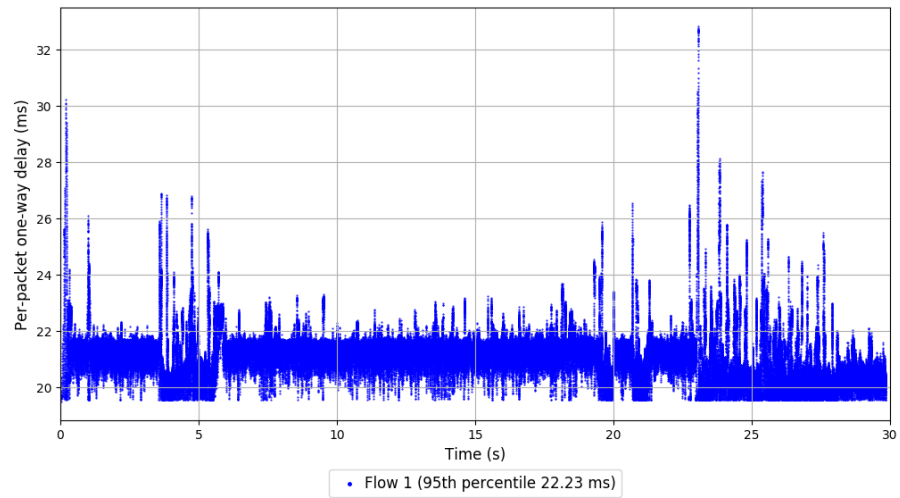
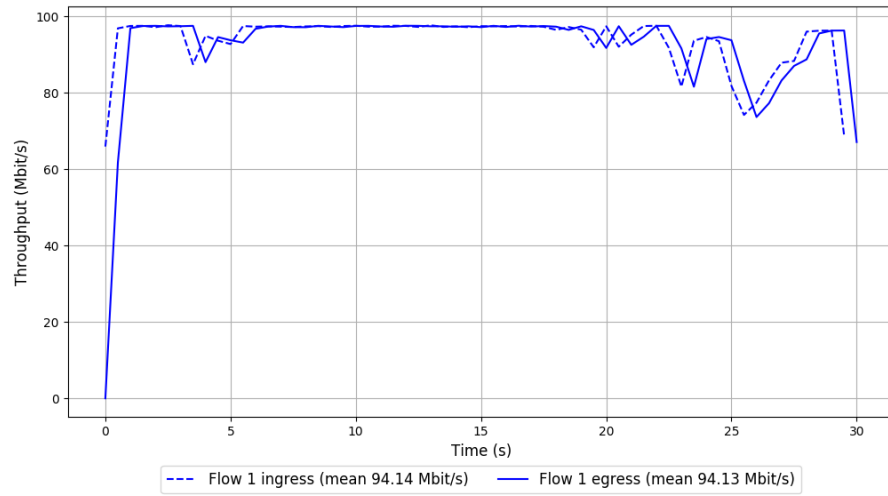



```
Run 1: Statistics of Indigo

Start at: 2018-10-26 06:30:20
End at: 2018-10-26 06:30:50
Local clock offset: 1.145 ms
Remote clock offset: -4.701 ms

# Below is generated by plot.py at 2018-10-26 08:04:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.13 Mbit/s
95th percentile per-packet one-way delay: 22.230 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 94.13 Mbit/s
95th percentile per-packet one-way delay: 22.230 ms
Loss rate: 0.10%
```

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2018-10-26 06:52:43

End at: 2018-10-26 06:53:13

Local clock offset: 4.298 ms

Remote clock offset: -5.068 ms

Below is generated by plot.py at 2018-10-26 08:04:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 83.64 Mbit/s

95th percentile per-packet one-way delay: 25.399 ms

Loss rate: 0.36%

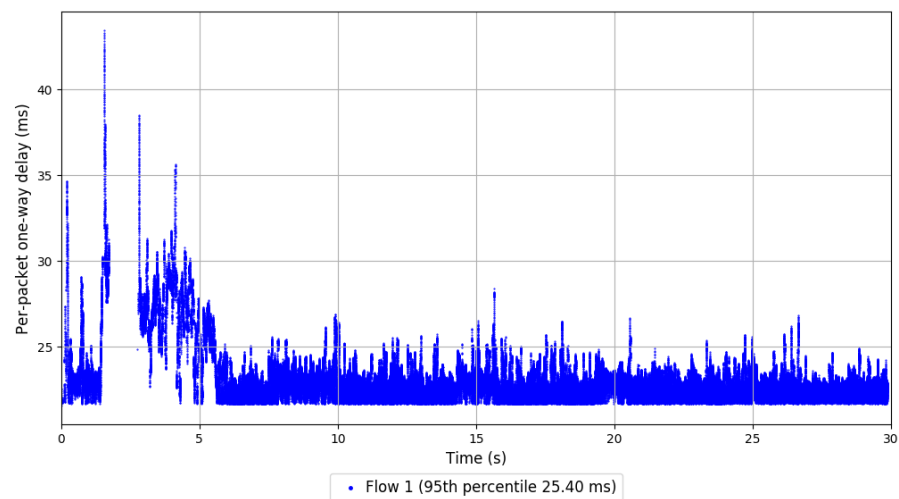
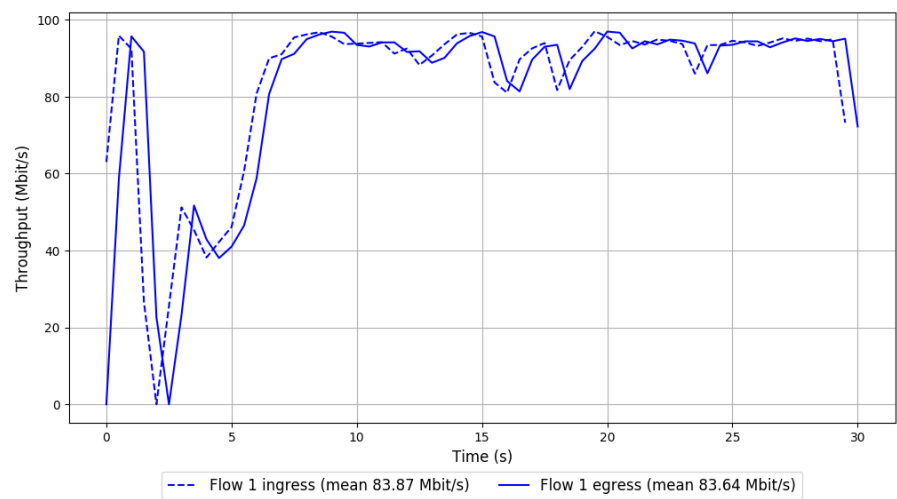
-- Flow 1:

Average throughput: 83.64 Mbit/s

95th percentile per-packet one-way delay: 25.399 ms

Loss rate: 0.36%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2018-10-26 07:14:49

End at: 2018-10-26 07:15:19

Local clock offset: 3.111 ms

Remote clock offset: -4.23 ms

Below is generated by plot.py at 2018-10-26 08:04:40

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.79 Mbit/s

95th percentile per-packet one-way delay: 23.439 ms

Loss rate: 0.10%

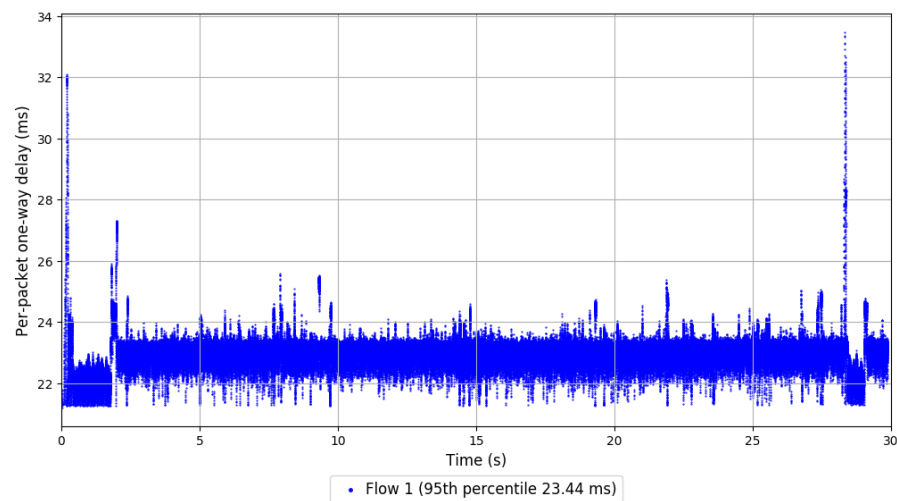
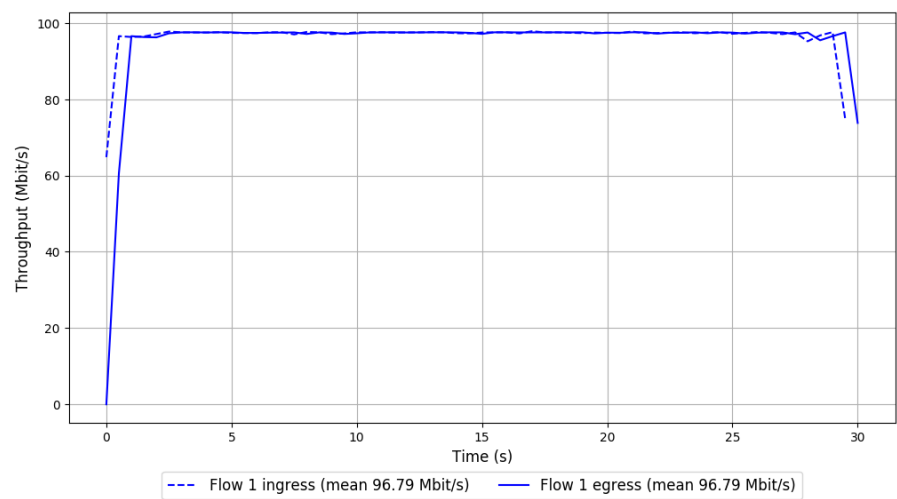
-- Flow 1:

Average throughput: 96.79 Mbit/s

95th percentile per-packet one-way delay: 23.439 ms

Loss rate: 0.10%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2018-10-26 07:36:12

End at: 2018-10-26 07:36:43

Local clock offset: 1.815 ms

Remote clock offset: 9.228 ms

Below is generated by plot.py at 2018-10-26 08:04:52

Datalink statistics

-- Total of 1 flow:

Average throughput: 92.85 Mbit/s

95th percentile per-packet one-way delay: 8.748 ms

Loss rate: 0.09%

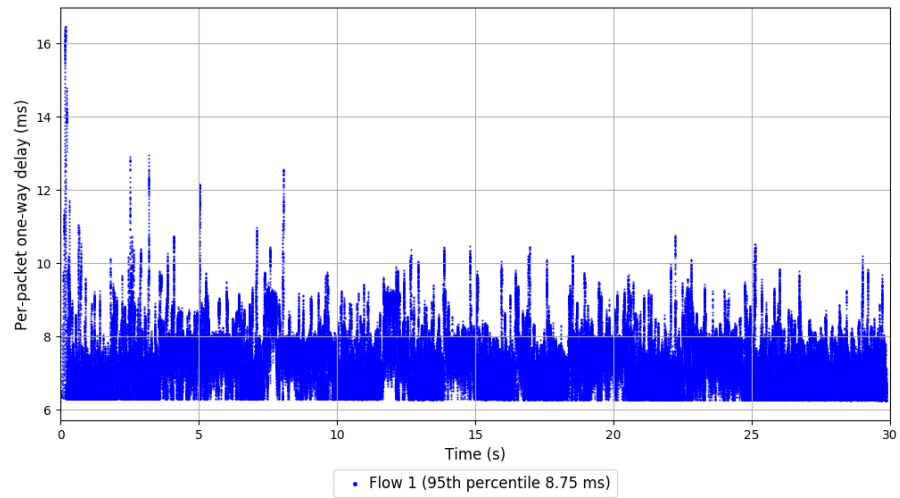
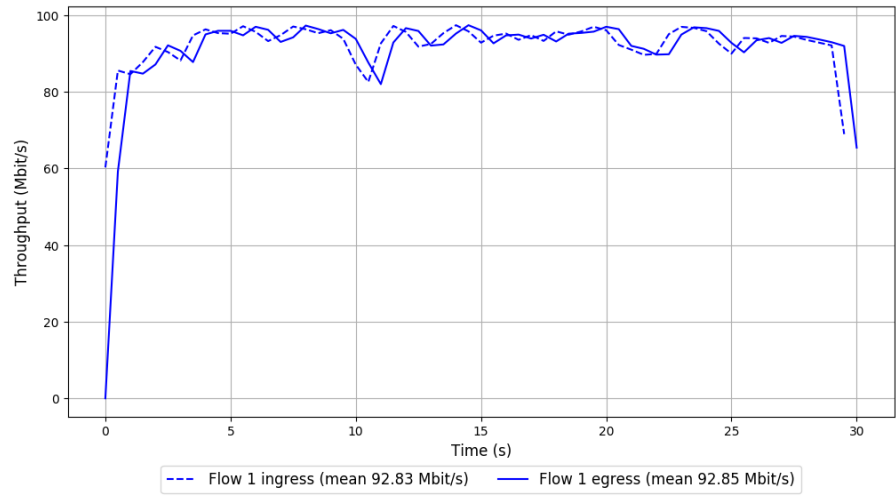
-- Flow 1:

Average throughput: 92.85 Mbit/s

95th percentile per-packet one-way delay: 8.748 ms

Loss rate: 0.09%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2018-10-26 07:57:55

End at: 2018-10-26 07:58:25

Local clock offset: 2.371 ms

Remote clock offset: -4.899 ms

Below is generated by plot.py at 2018-10-26 08:05:03

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.73 Mbit/s

95th percentile per-packet one-way delay: 22.722 ms

Loss rate: 0.10%

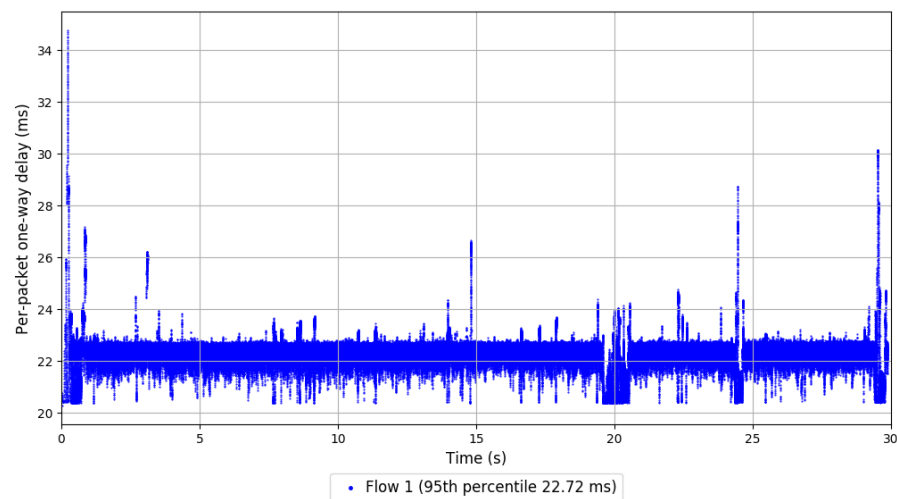
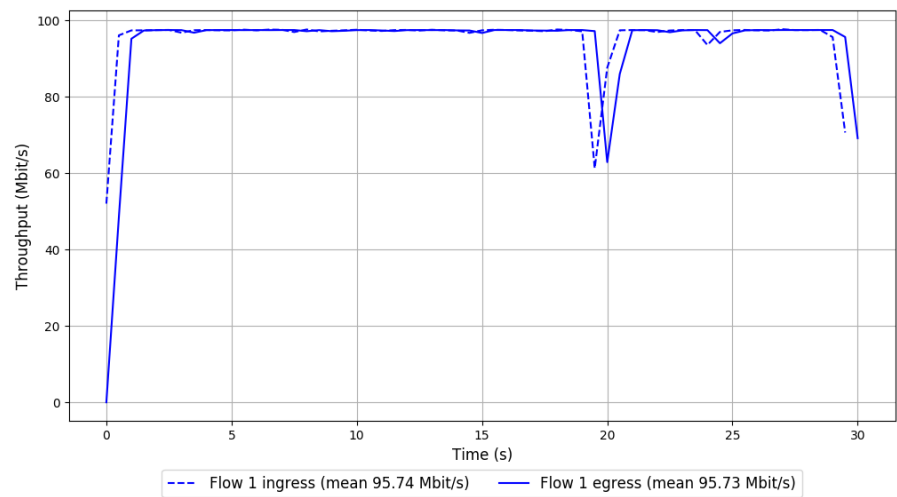
-- Flow 1:

Average throughput: 95.73 Mbit/s

95th percentile per-packet one-way delay: 22.722 ms

Loss rate: 0.10%

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-96d2da3

Start at: 2018-10-26 06:26:36

End at: 2018-10-26 06:27:06

Local clock offset: 1.805 ms

Remote clock offset: -3.932 ms

Below is generated by plot.py at 2018-10-26 08:05:13

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.72 Mbit/s

95th percentile per-packet one-way delay: 66.991 ms

Loss rate: 6.96%

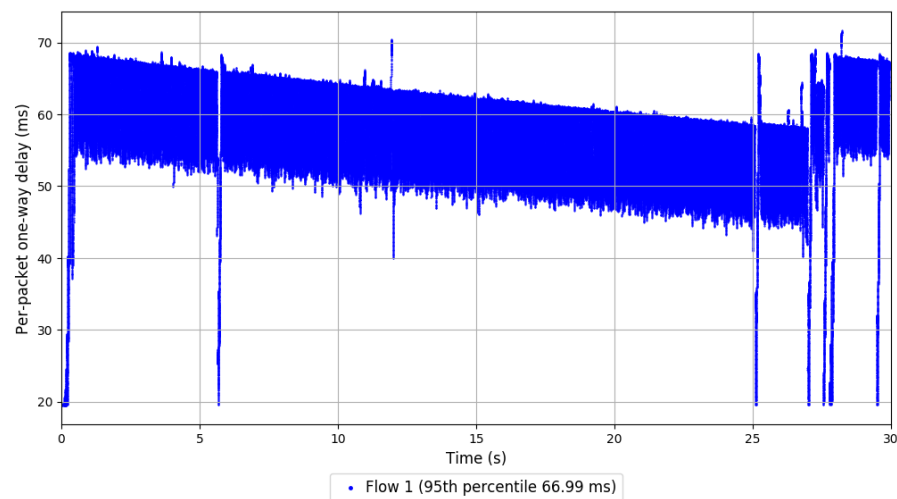
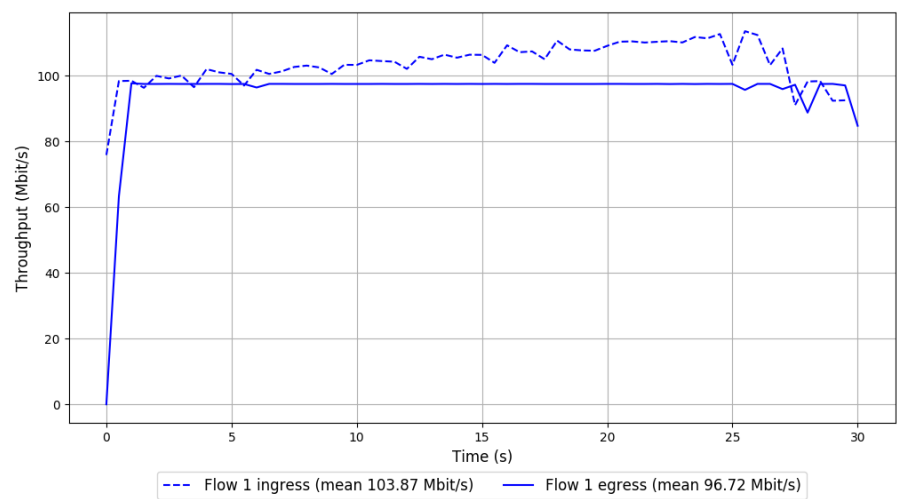
-- Flow 1:

Average throughput: 96.72 Mbit/s

95th percentile per-packet one-way delay: 66.991 ms

Loss rate: 6.96%

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



Run 2: Statistics of Indigo-96d2da3

Start at: 2018-10-26 06:49:04

End at: 2018-10-26 06:49:34

Local clock offset: 4.069 ms

Remote clock offset: -5.43 ms

Below is generated by plot.py at 2018-10-26 08:05:18

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.44 Mbit/s

95th percentile per-packet one-way delay: 70.060 ms

Loss rate: 4.39%

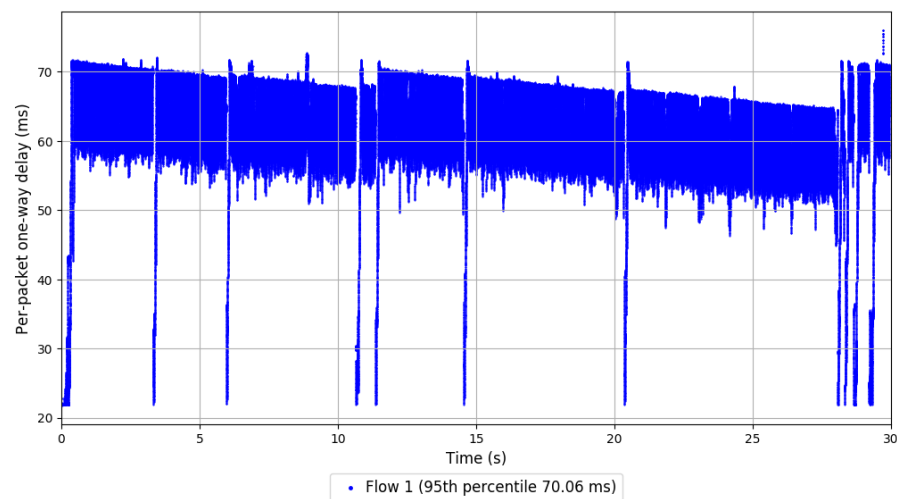
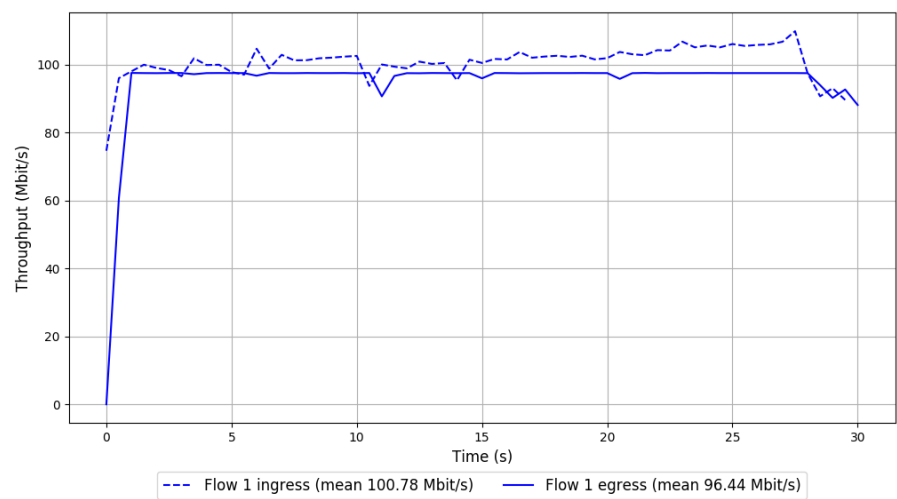
-- Flow 1:

Average throughput: 96.44 Mbit/s

95th percentile per-packet one-way delay: 70.060 ms

Loss rate: 4.39%

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

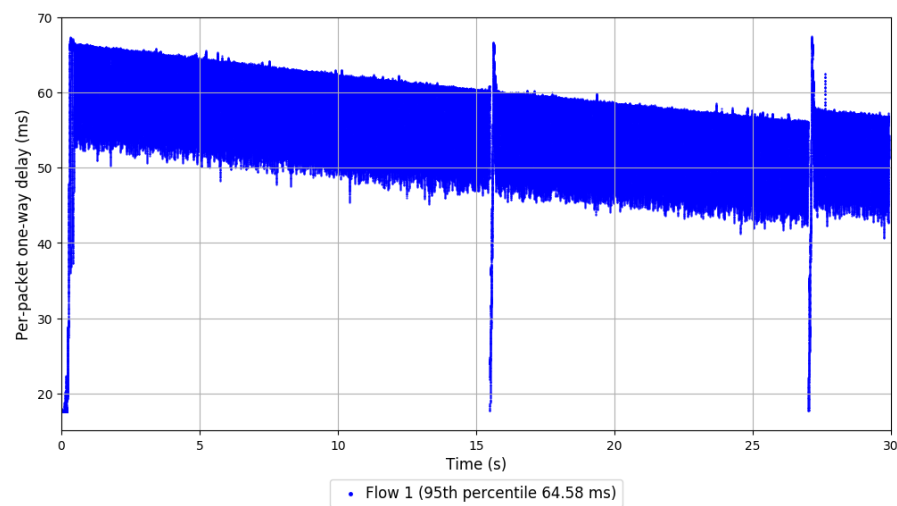
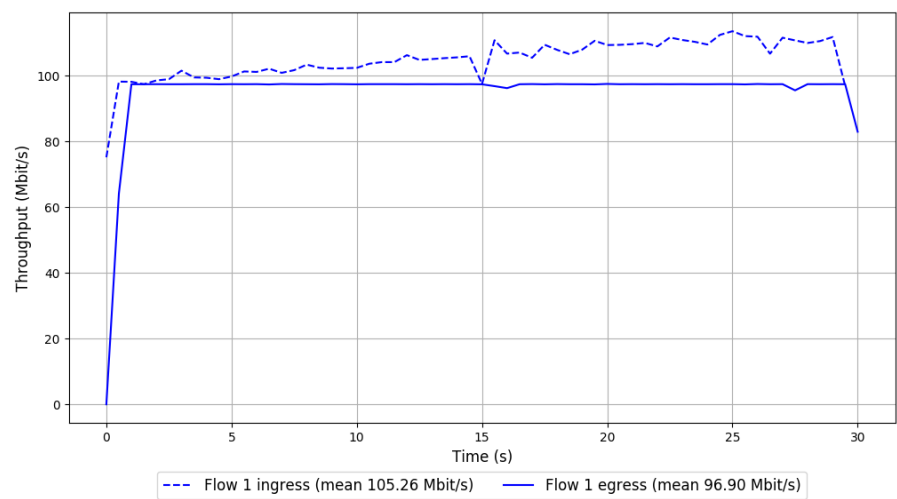


Run 3: Statistics of Indigo-96d2da3

Start at: 2018-10-26 07:11:09
End at: 2018-10-26 07:11:39
Local clock offset: 2.353 ms
Remote clock offset: -1.658 ms

Below is generated by plot.py at 2018-10-26 08:05:39
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.90 Mbit/s
95th percentile per-packet one-way delay: 64.583 ms
Loss rate: 8.01%
-- Flow 1:
Average throughput: 96.90 Mbit/s
95th percentile per-packet one-way delay: 64.583 ms
Loss rate: 8.01%

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



Run 4: Statistics of Indigo-96d2da3

Start at: 2018-10-26 07:32:42

End at: 2018-10-26 07:33:12

Local clock offset: 1.094 ms

Remote clock offset: 2.293 ms

Below is generated by plot.py at 2018-10-26 08:05:43

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.65 Mbit/s

95th percentile per-packet one-way delay: 60.345 ms

Loss rate: 6.50%

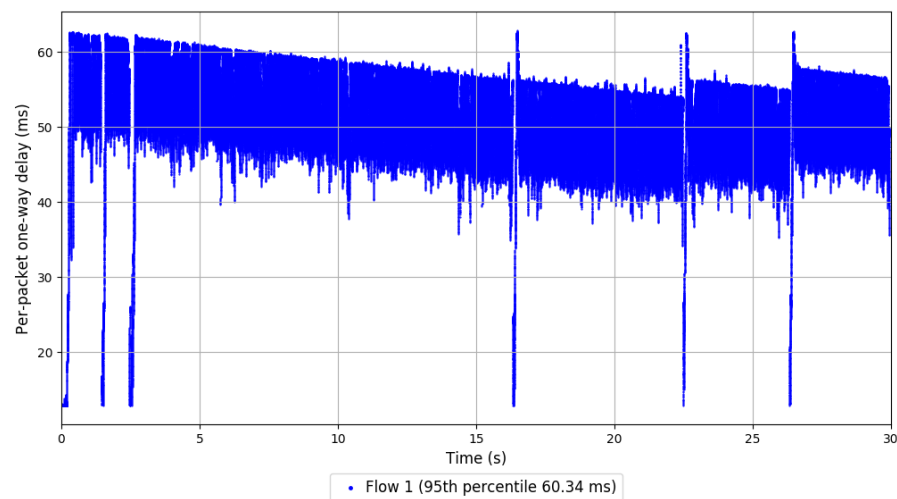
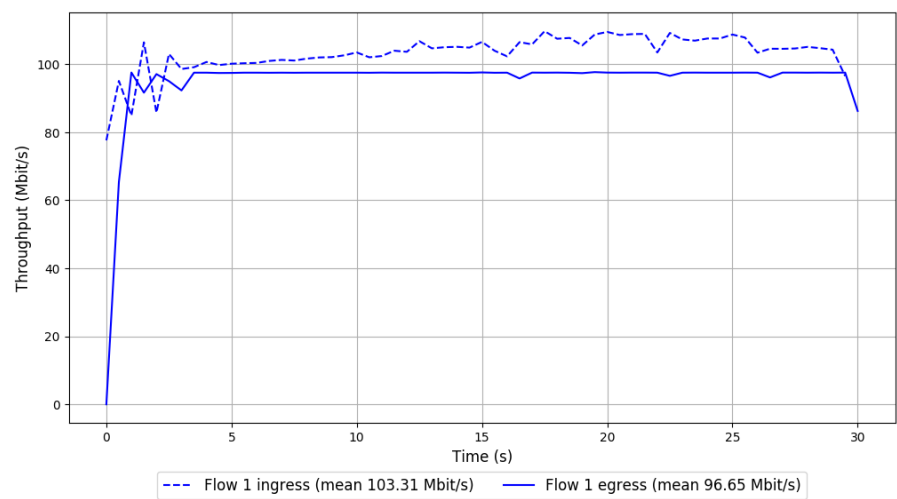
-- Flow 1:

Average throughput: 96.65 Mbit/s

95th percentile per-packet one-way delay: 60.345 ms

Loss rate: 6.50%

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

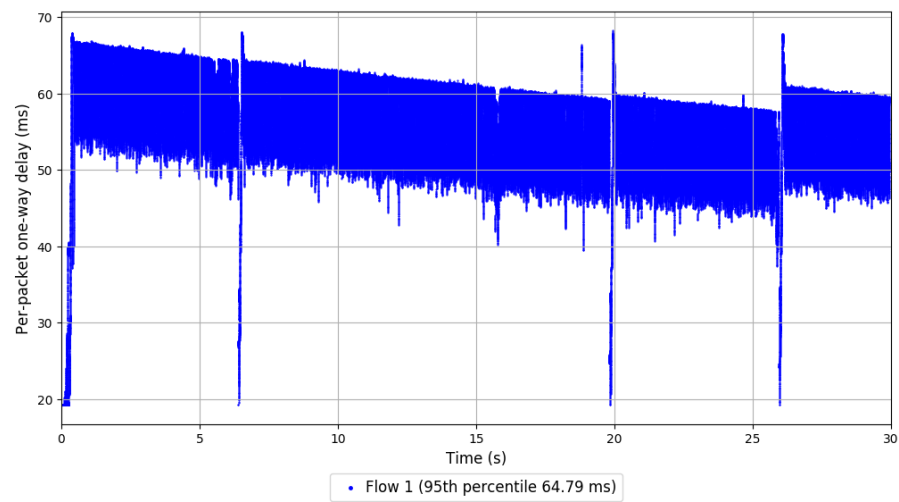
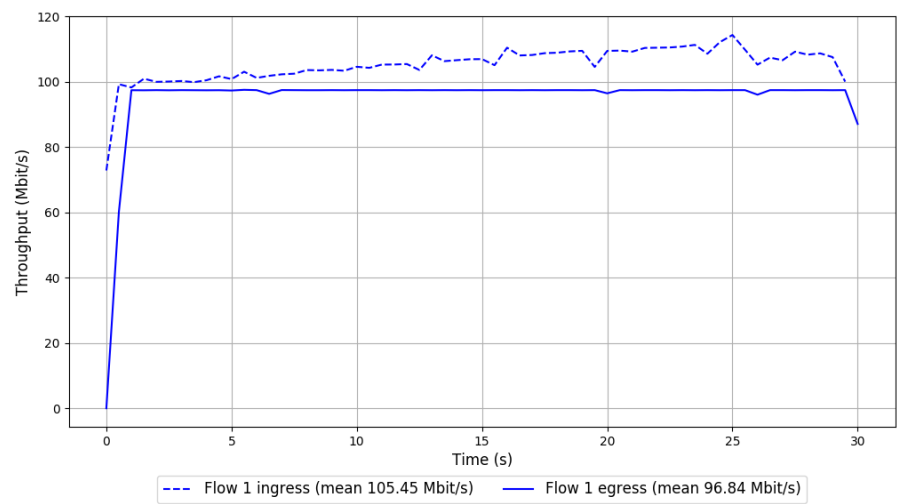


Run 5: Statistics of Indigo-96d2da3

Start at: 2018-10-26 07:54:19
End at: 2018-10-26 07:54:49
Local clock offset: 2.228 ms
Remote clock offset: -3.993 ms

Below is generated by plot.py at 2018-10-26 08:05:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.84 Mbit/s
95th percentile per-packet one-way delay: 64.787 ms
Loss rate: 8.24%
-- Flow 1:
Average throughput: 96.84 Mbit/s
95th percentile per-packet one-way delay: 64.787 ms
Loss rate: 8.24%

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

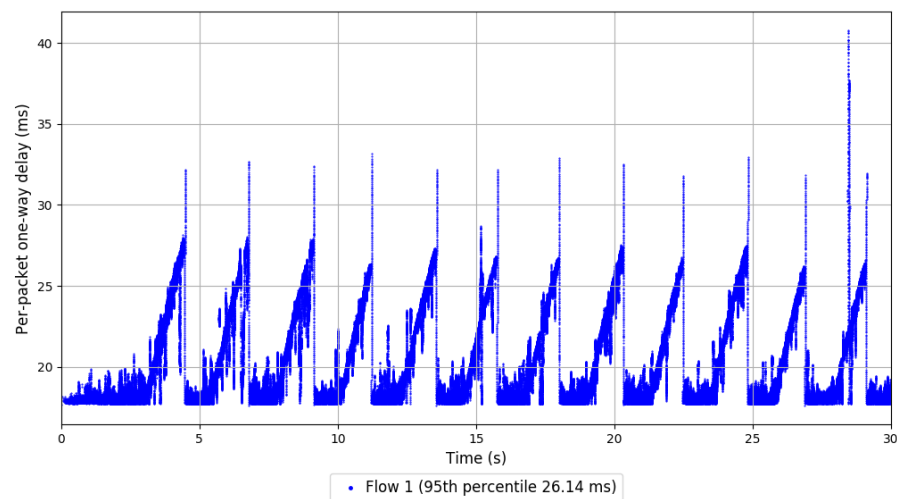
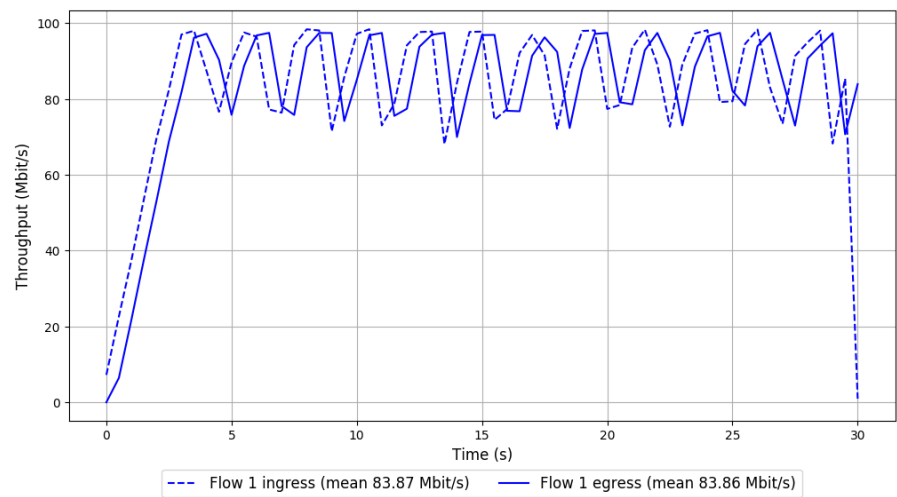


Run 1: Statistics of LEDBAT

Start at: 2018-10-26 06:27:55
End at: 2018-10-26 06:28:25
Local clock offset: -0.165 ms
Remote clock offset: -4.151 ms

Below is generated by plot.py at 2018-10-26 08:05:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 83.86 Mbit/s
95th percentile per-packet one-way delay: 26.136 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 83.86 Mbit/s
95th percentile per-packet one-way delay: 26.136 ms
Loss rate: 0.11%

Run 1: Report of LEDBAT — Data Link

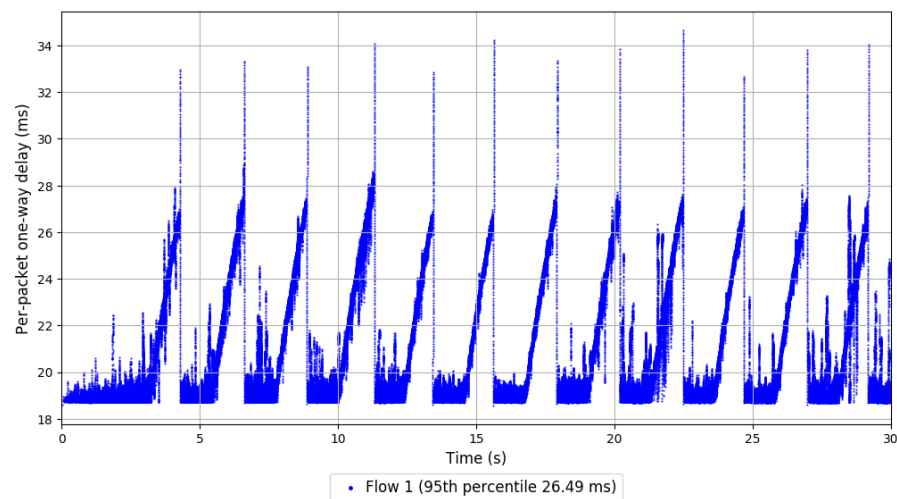
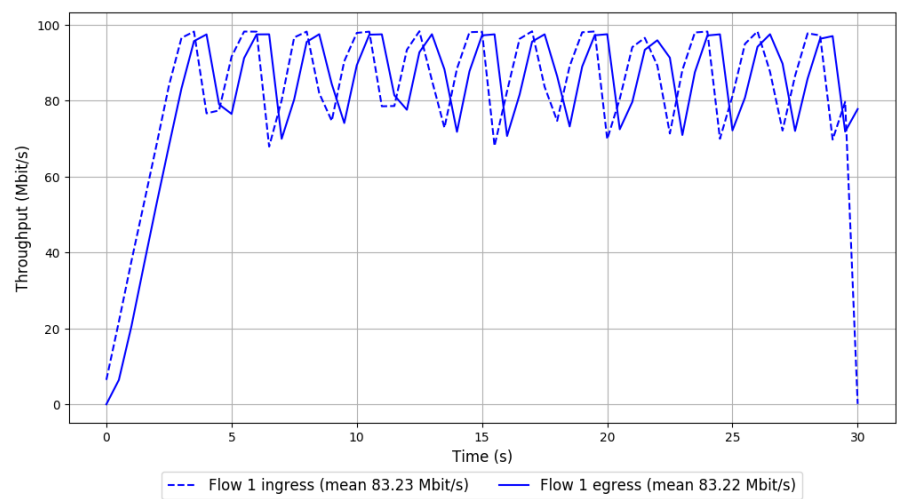


Run 2: Statistics of LEDBAT

Start at: 2018-10-26 06:50:15
End at: 2018-10-26 06:50:45
Local clock offset: 3.557 ms
Remote clock offset: -2.833 ms

Below is generated by plot.py at 2018-10-26 08:05:57
Datalink statistics
-- Total of 1 flow:
Average throughput: 83.22 Mbit/s
95th percentile per-packet one-way delay: 26.487 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 83.22 Mbit/s
95th percentile per-packet one-way delay: 26.487 ms
Loss rate: 0.10%

Run 2: Report of LEDBAT — Data Link

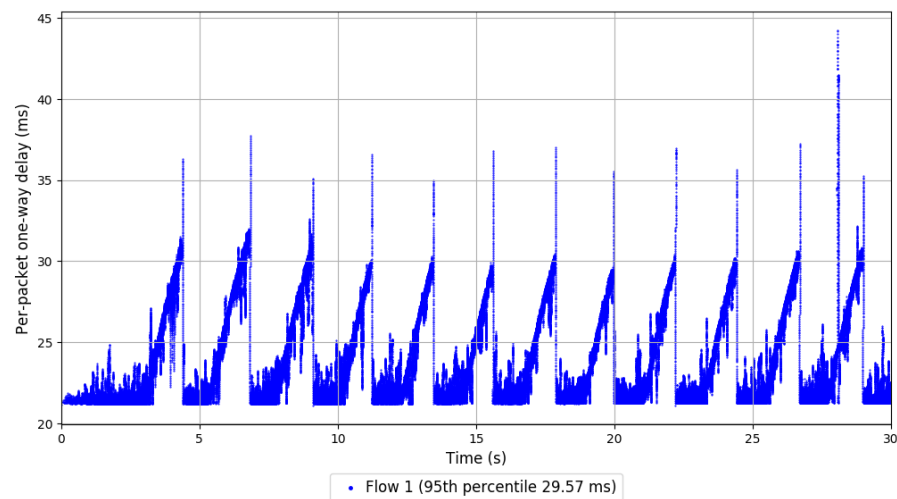
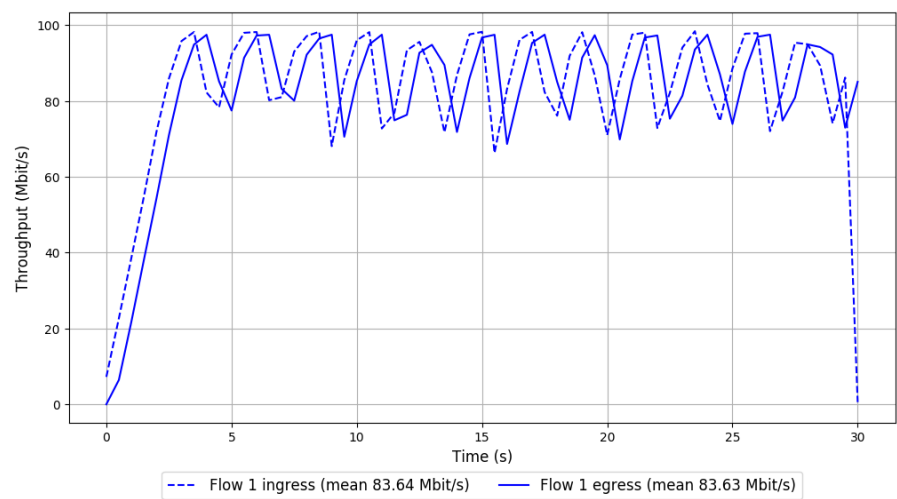


Run 3: Statistics of LEDBAT

Start at: 2018-10-26 07:12:26
End at: 2018-10-26 07:12:56
Local clock offset: -2.57 ms
Remote clock offset: -10.058 ms

Below is generated by plot.py at 2018-10-26 08:06:07
Datalink statistics
-- Total of 1 flow:
Average throughput: 83.63 Mbit/s
95th percentile per-packet one-way delay: 29.574 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 83.63 Mbit/s
95th percentile per-packet one-way delay: 29.574 ms
Loss rate: 0.11%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-10-26 07:33:52

End at: 2018-10-26 07:34:22

Local clock offset: 1.195 ms

Remote clock offset: 6.728 ms

Below is generated by plot.py at 2018-10-26 08:06:19

Datalink statistics

-- Total of 1 flow:

Average throughput: 83.80 Mbit/s

95th percentile per-packet one-way delay: 16.538 ms

Loss rate: 0.08%

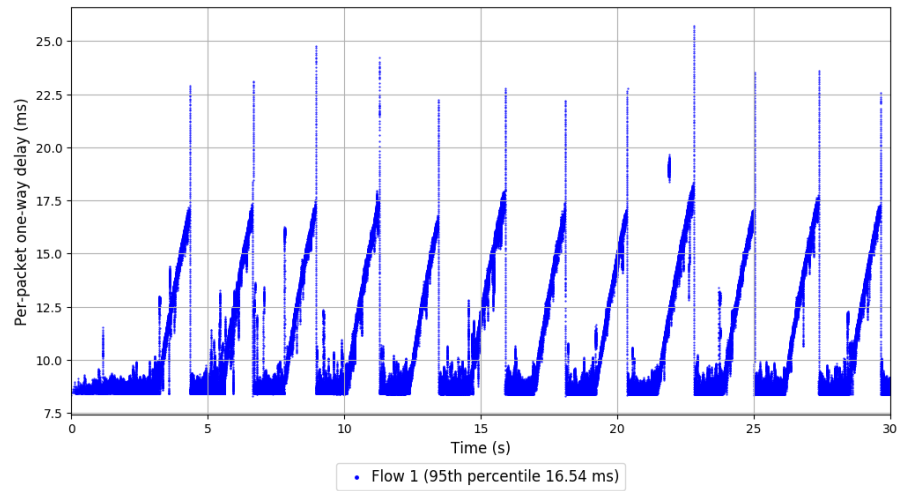
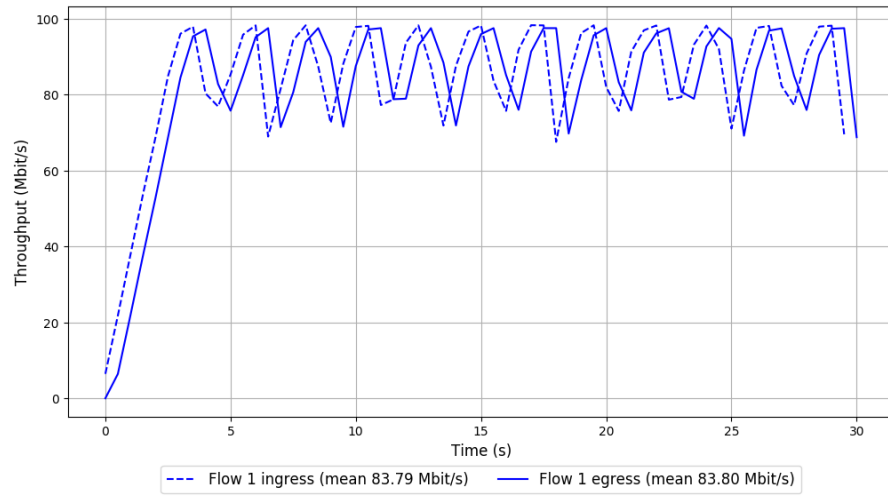
-- Flow 1:

Average throughput: 83.80 Mbit/s

95th percentile per-packet one-way delay: 16.538 ms

Loss rate: 0.08%

Run 4: Report of LEDBAT — Data Link

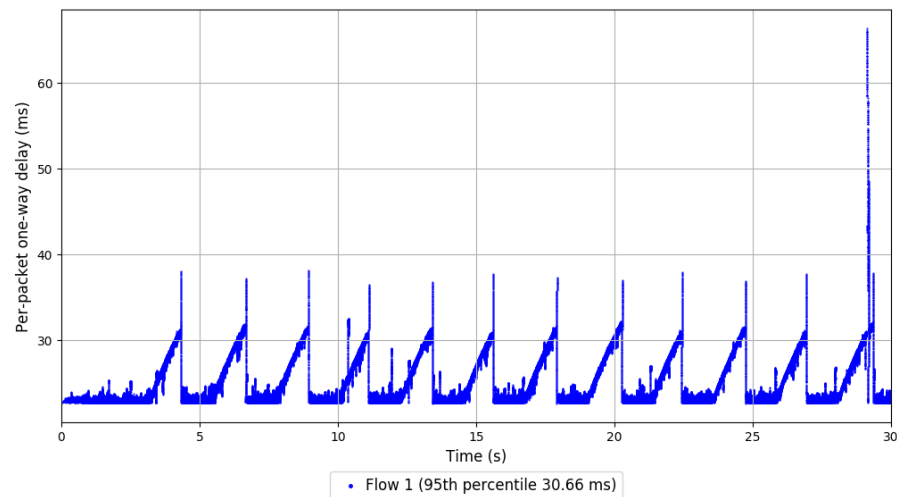
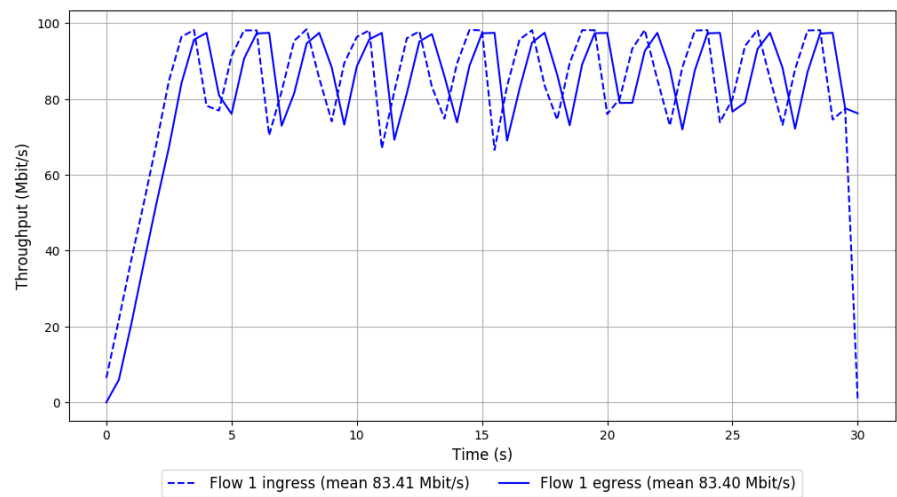


Run 5: Statistics of LEDBAT

Start at: 2018-10-26 07:55:32
End at: 2018-10-26 07:56:03
Local clock offset: 4.547 ms
Remote clock offset: -5.197 ms

Below is generated by plot.py at 2018-10-26 08:06:21
Datalink statistics
-- Total of 1 flow:
Average throughput: 83.40 Mbit/s
95th percentile per-packet one-way delay: 30.658 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 83.40 Mbit/s
95th percentile per-packet one-way delay: 30.658 ms
Loss rate: 0.10%

Run 5: Report of LEDBAT — Data Link

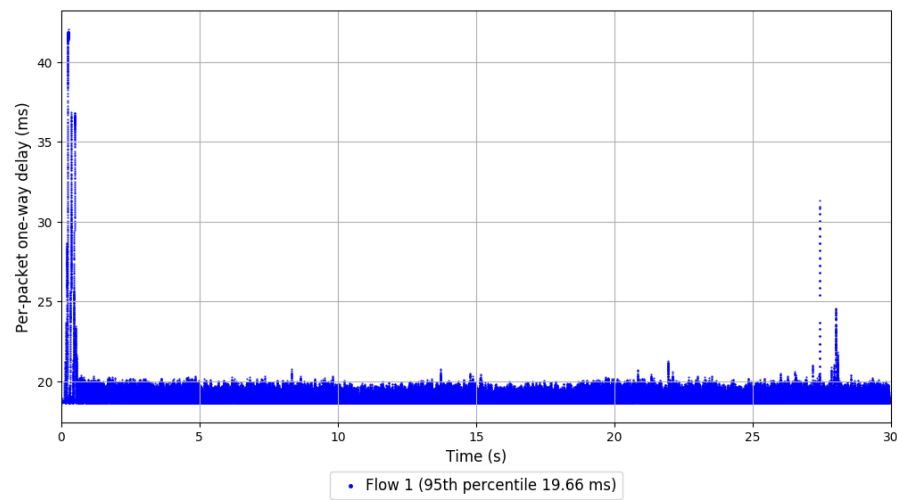
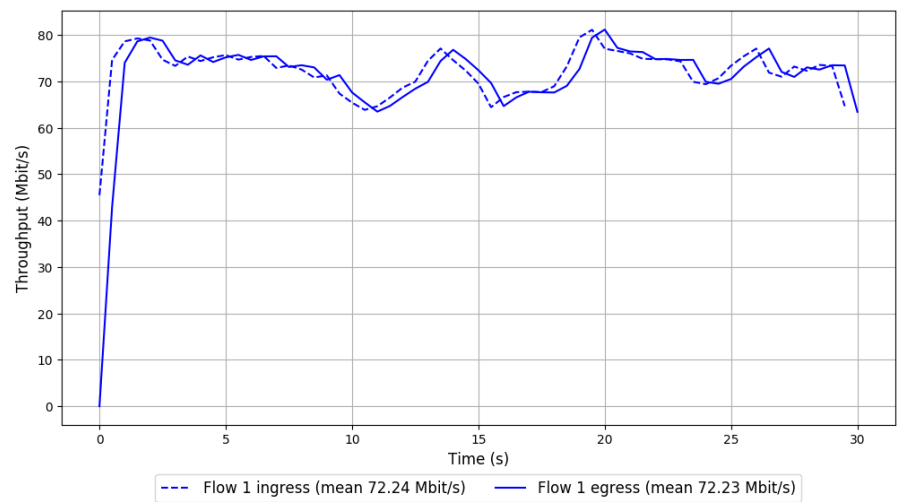


```
Run 1: Statistics of Indigo-Muses

Start at: 2018-10-26 06:13:41
End at: 2018-10-26 06:14:11
Local clock offset: 0.707 ms
Remote clock offset: -3.928 ms

# Below is generated by plot.py at 2018-10-26 08:06:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 72.23 Mbit/s
95th percentile per-packet one-way delay: 19.658 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 72.23 Mbit/s
95th percentile per-packet one-way delay: 19.658 ms
Loss rate: 0.09%
```

Run 1: Report of Indigo-Muses — Data Link

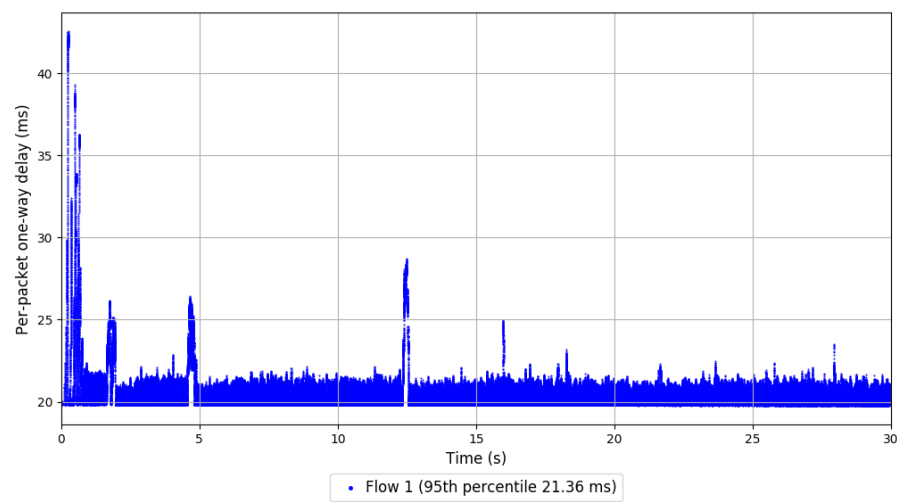
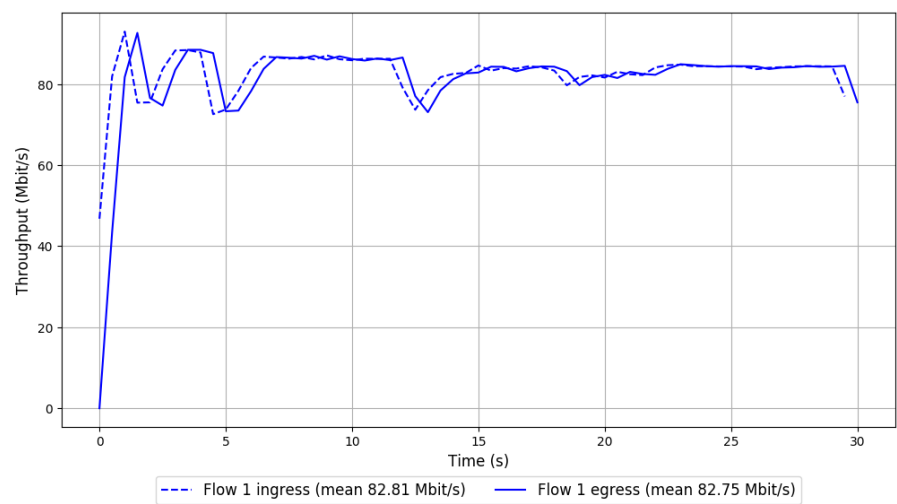


Run 2: Statistics of Indigo-Muses

Start at: 2018-10-26 06:36:20
End at: 2018-10-26 06:36:50
Local clock offset: 1.673 ms
Remote clock offset: -5.008 ms

Below is generated by plot.py at 2018-10-26 08:06:44
Datalink statistics
-- Total of 1 flow:
Average throughput: 82.75 Mbit/s
95th percentile per-packet one-way delay: 21.362 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 82.75 Mbit/s
95th percentile per-packet one-way delay: 21.362 ms
Loss rate: 0.16%

Run 2: Report of Indigo-Muses — Data Link

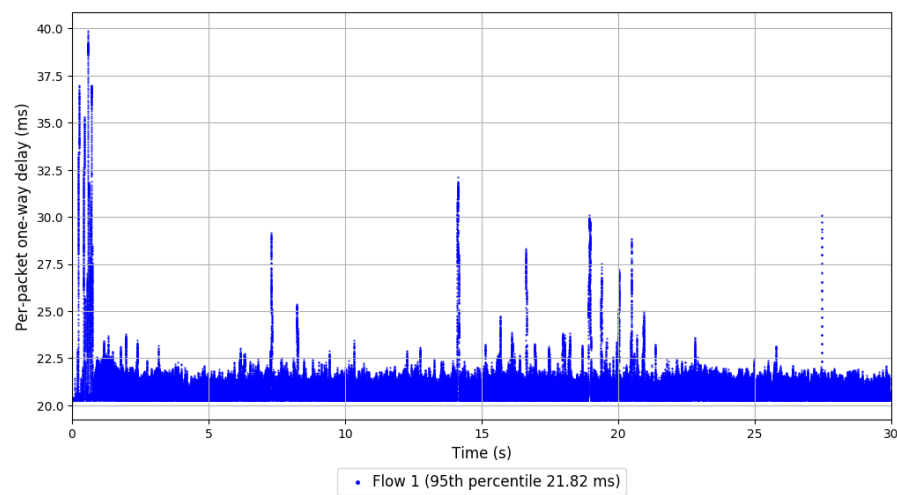
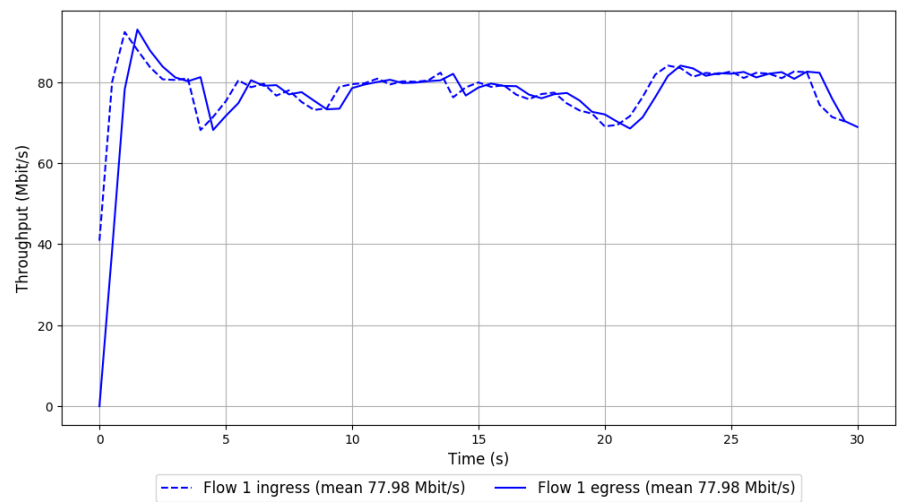


Run 3: Statistics of Indigo-Muses

Start at: 2018-10-26 06:58:50
End at: 2018-10-26 06:59:20
Local clock offset: 3.627 ms
Remote clock offset: -4.409 ms

Below is generated by plot.py at 2018-10-26 08:06:44
Datalink statistics
-- Total of 1 flow:
Average throughput: 77.98 Mbit/s
95th percentile per-packet one-way delay: 21.817 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 77.98 Mbit/s
95th percentile per-packet one-way delay: 21.817 ms
Loss rate: 0.10%

Run 3: Report of Indigo-Muses — Data Link

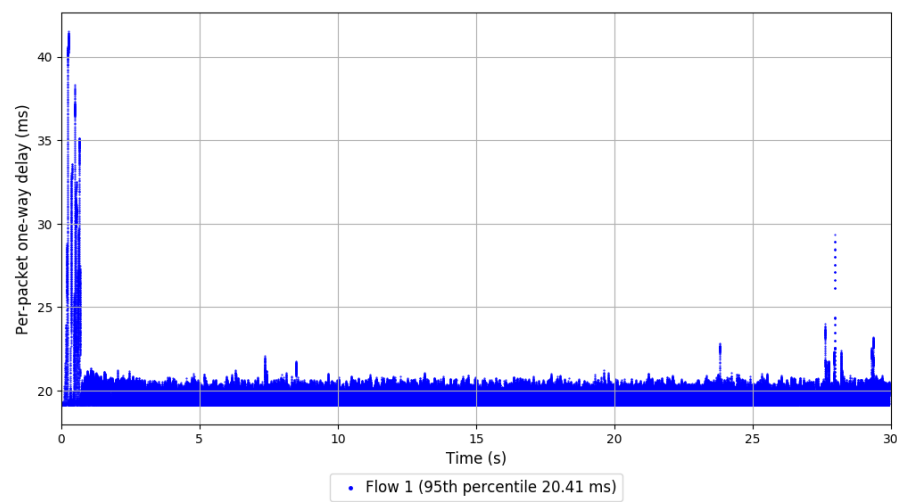
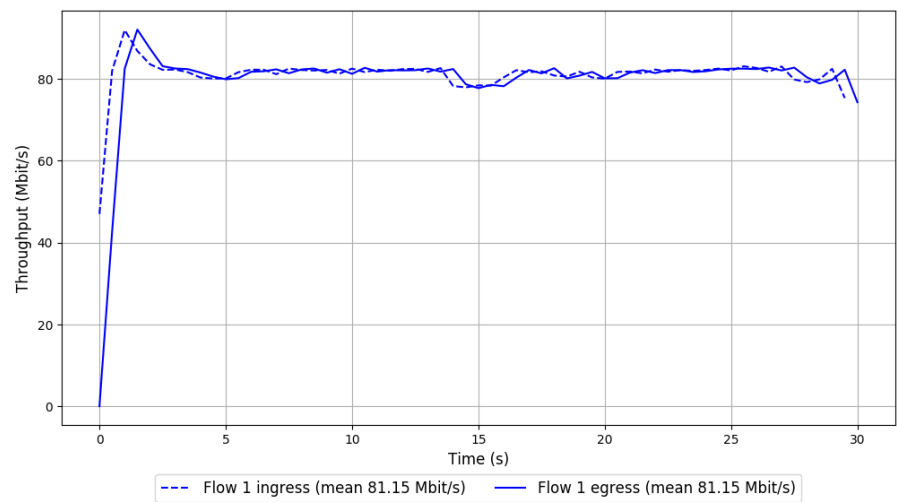


Run 4: Statistics of Indigo-Muses

Start at: 2018-10-26 07:20:43
End at: 2018-10-26 07:21:13
Local clock offset: 1.078 ms
Remote clock offset: -3.874 ms

Below is generated by plot.py at 2018-10-26 08:06:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 81.15 Mbit/s
95th percentile per-packet one-way delay: 20.407 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 81.15 Mbit/s
95th percentile per-packet one-way delay: 20.407 ms
Loss rate: 0.09%

Run 4: Report of Indigo-Muses — Data Link



Run 5: Statistics of Indigo-Muses

Start at: 2018-10-26 07:42:02

End at: 2018-10-26 07:42:32

Local clock offset: 2.082 ms

Remote clock offset: 5.982 ms

Below is generated by plot.py at 2018-10-26 08:06:51

Datalink statistics

-- Total of 1 flow:

Average throughput: 72.71 Mbit/s

95th percentile per-packet one-way delay: 10.372 ms

Loss rate: 0.08%

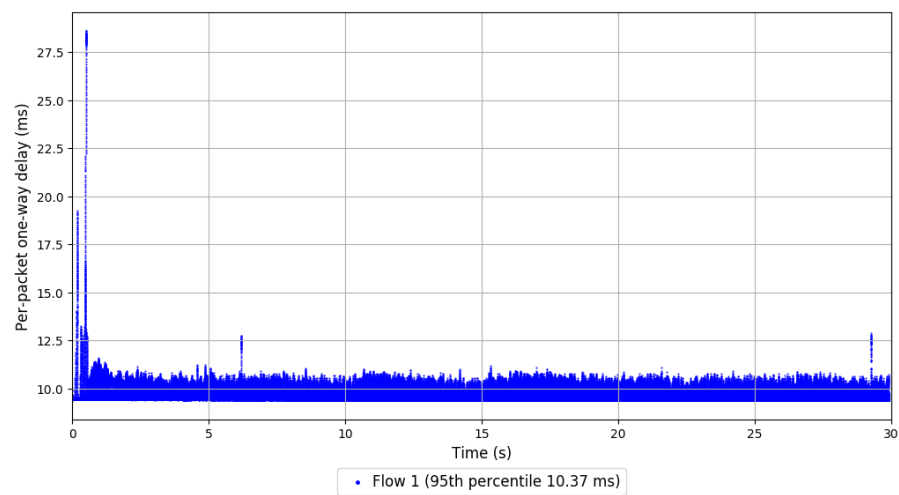
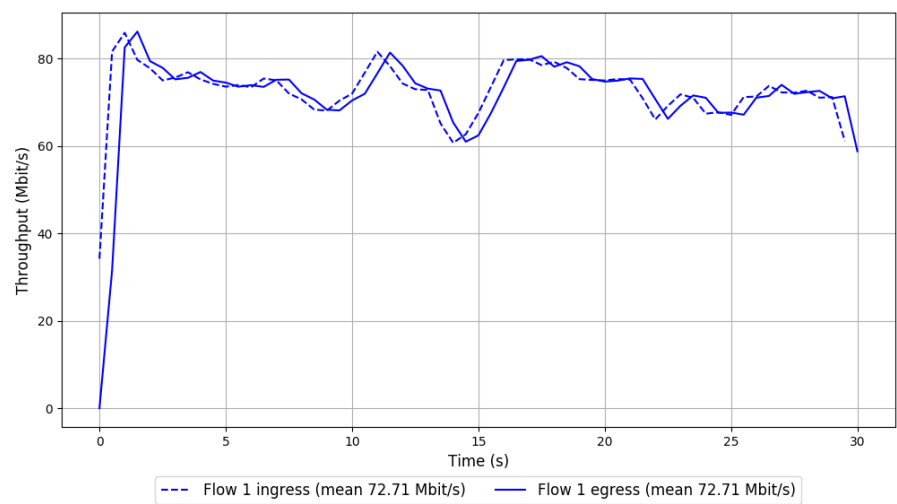
-- Flow 1:

Average throughput: 72.71 Mbit/s

95th percentile per-packet one-way delay: 10.372 ms

Loss rate: 0.08%

Run 5: Report of Indigo-Muses — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2018-10-26 06:29:10

End at: 2018-10-26 06:29:40

Local clock offset: 0.406 ms

Remote clock offset: -4.802 ms

Below is generated by plot.py at 2018-10-26 08:07:10

Datalink statistics

-- Total of 1 flow:

Average throughput: 87.54 Mbit/s

95th percentile per-packet one-way delay: 22.146 ms

Loss rate: 0.14%

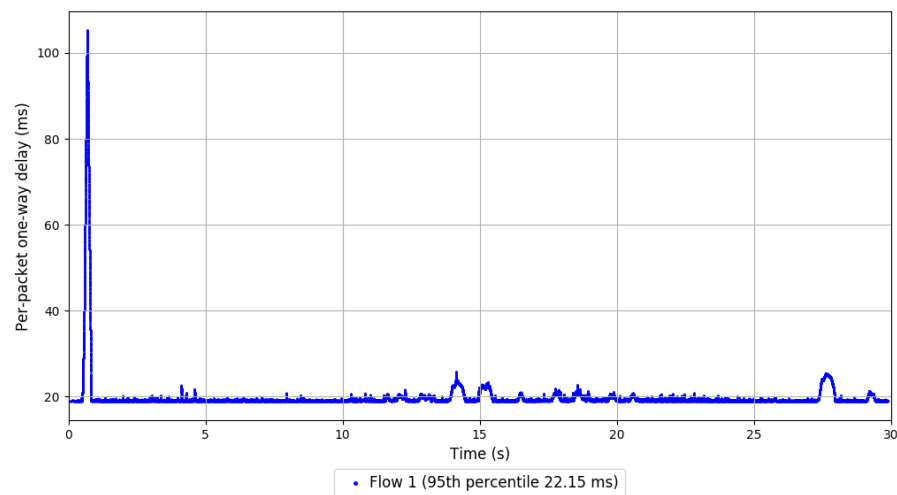
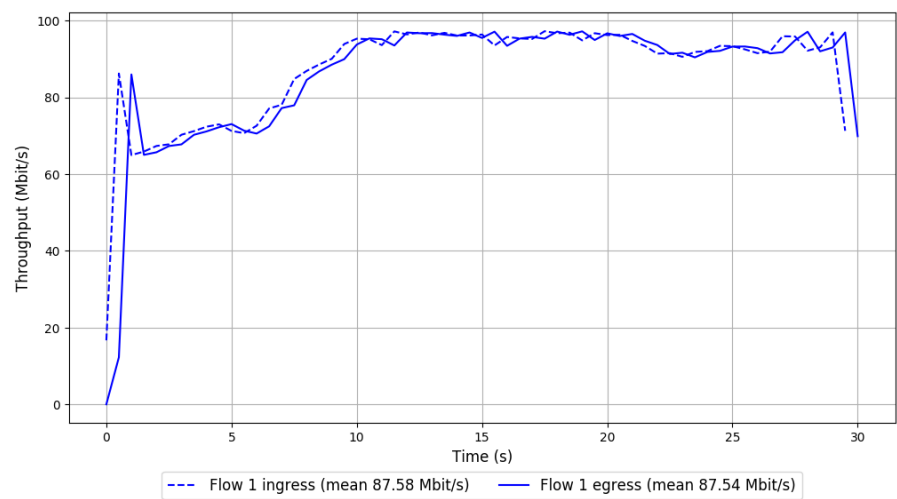
-- Flow 1:

Average throughput: 87.54 Mbit/s

95th percentile per-packet one-way delay: 22.146 ms

Loss rate: 0.14%

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-10-26 06:51:29

End at: 2018-10-26 06:51:59

Local clock offset: 3.368 ms

Remote clock offset: -3.413 ms

Below is generated by plot.py at 2018-10-26 08:07:16

Datalink statistics

-- Total of 1 flow:

Average throughput: 77.99 Mbit/s

95th percentile per-packet one-way delay: 20.940 ms

Loss rate: 0.11%

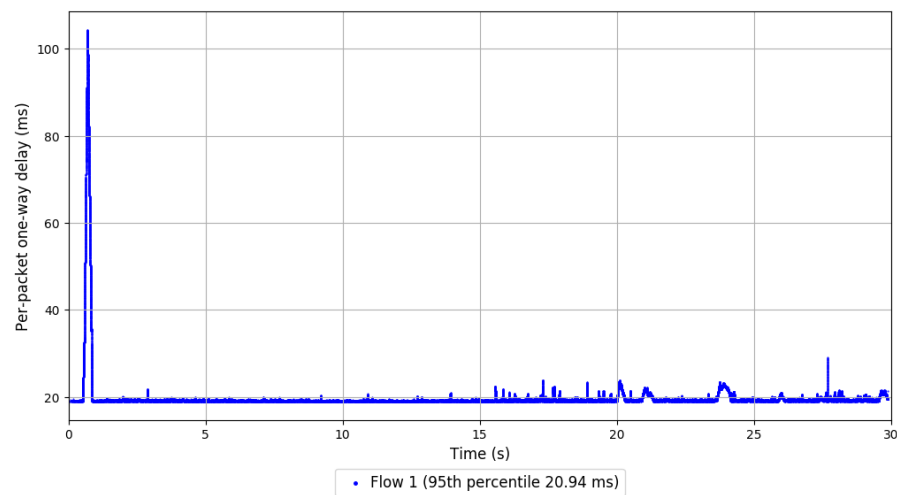
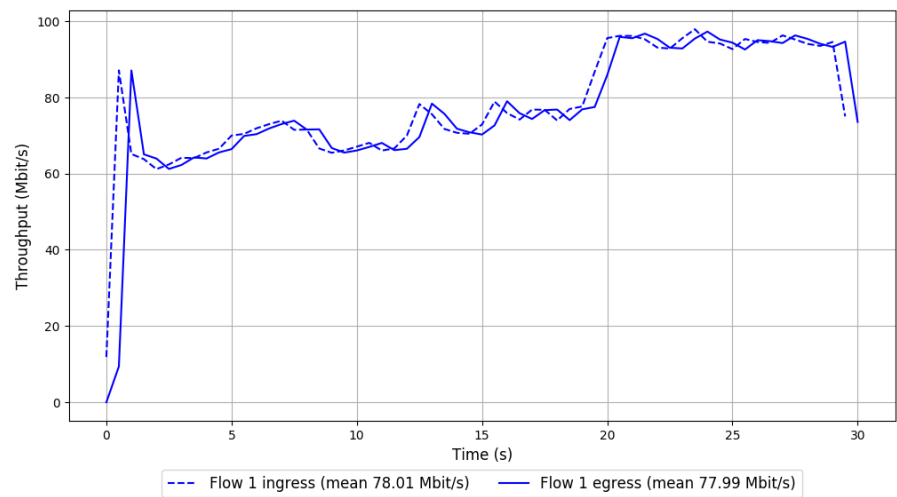
-- Flow 1:

Average throughput: 77.99 Mbit/s

95th percentile per-packet one-way delay: 20.940 ms

Loss rate: 0.11%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-10-26 07:13:40

End at: 2018-10-26 07:14:10

Local clock offset: 1.863 ms

Remote clock offset: -3.313 ms

Below is generated by plot.py at 2018-10-26 08:07:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 75.38 Mbit/s

95th percentile per-packet one-way delay: 19.472 ms

Loss rate: 0.11%

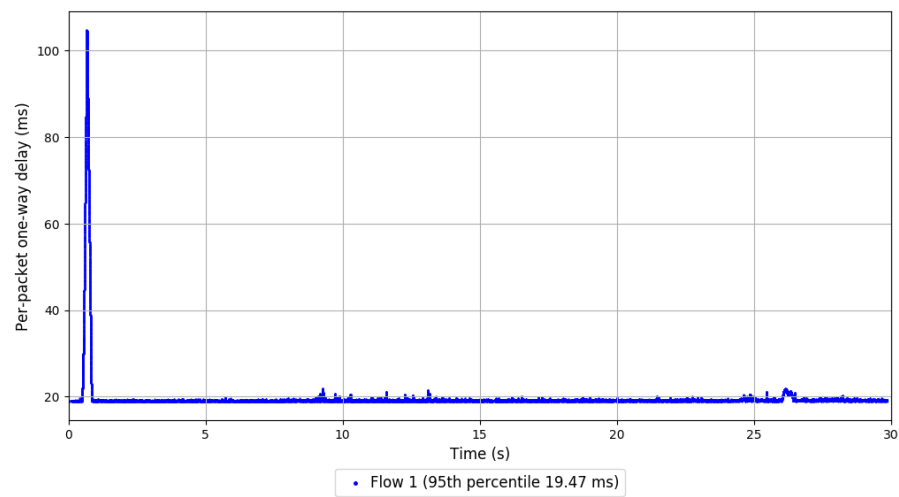
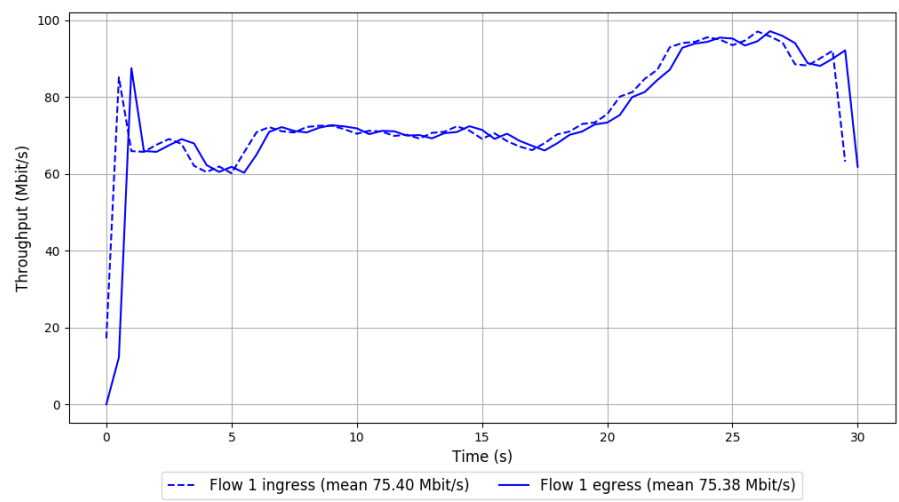
-- Flow 1:

Average throughput: 75.38 Mbit/s

95th percentile per-packet one-way delay: 19.472 ms

Loss rate: 0.11%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-10-26 07:35:03

End at: 2018-10-26 07:35:33

Local clock offset: 1.84 ms

Remote clock offset: 8.57 ms

Below is generated by plot.py at 2018-10-26 08:07:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 87.73 Mbit/s

95th percentile per-packet one-way delay: 9.178 ms

Loss rate: 0.10%

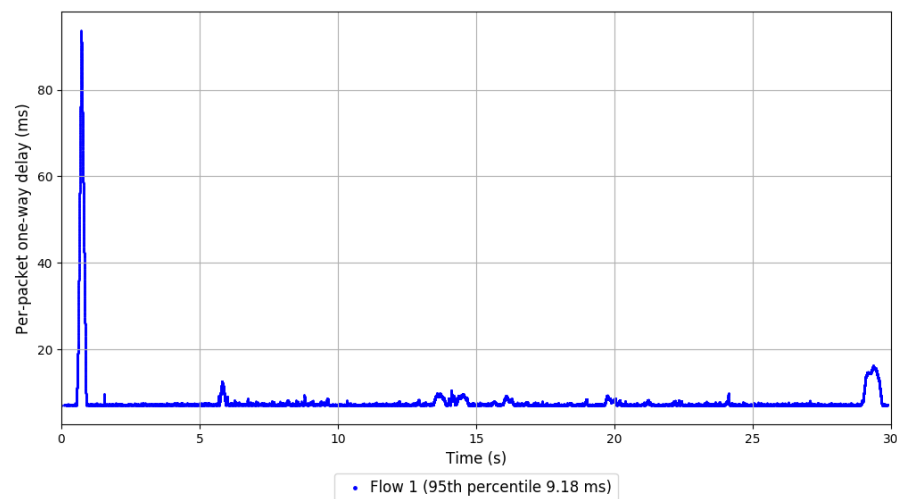
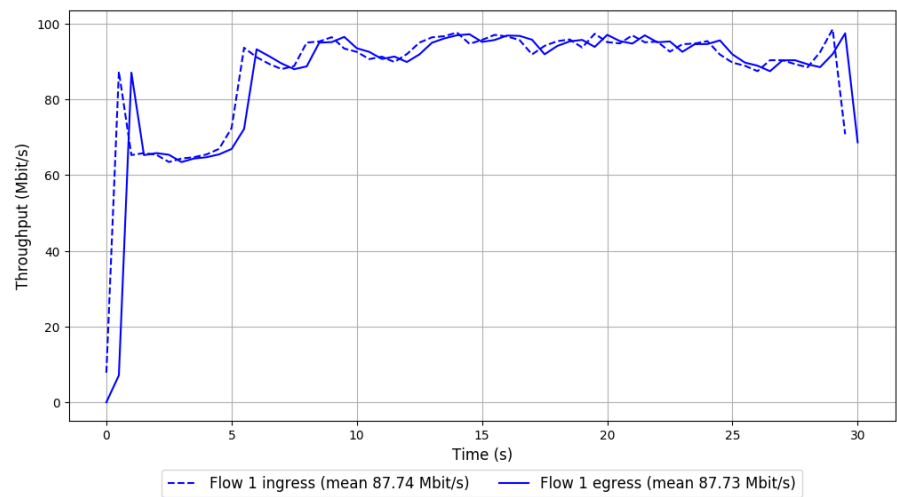
-- Flow 1:

Average throughput: 87.73 Mbit/s

95th percentile per-packet one-way delay: 9.178 ms

Loss rate: 0.10%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-10-26 07:56:43

End at: 2018-10-26 07:57:13

Local clock offset: 2.21 ms

Remote clock offset: -5.32 ms

Below is generated by plot.py at 2018-10-26 08:07:36

Datalink statistics

-- Total of 1 flow:

Average throughput: 79.47 Mbit/s

95th percentile per-packet one-way delay: 21.690 ms

Loss rate: 0.11%

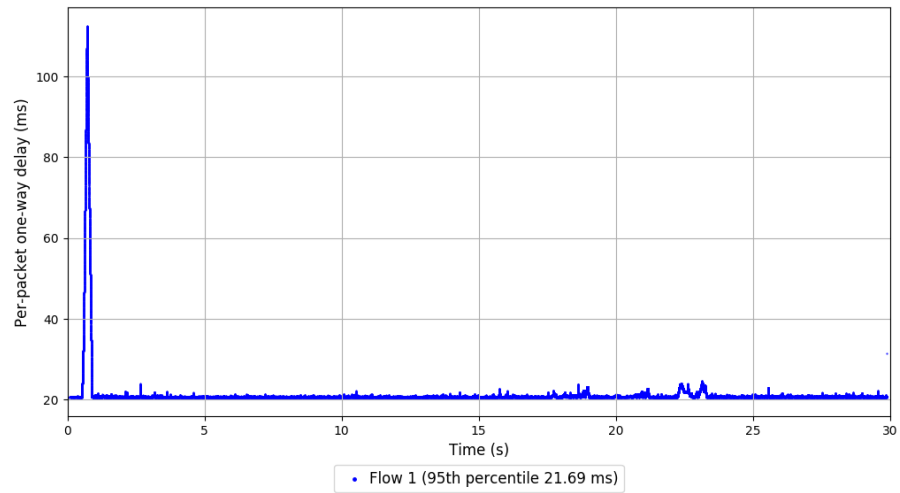
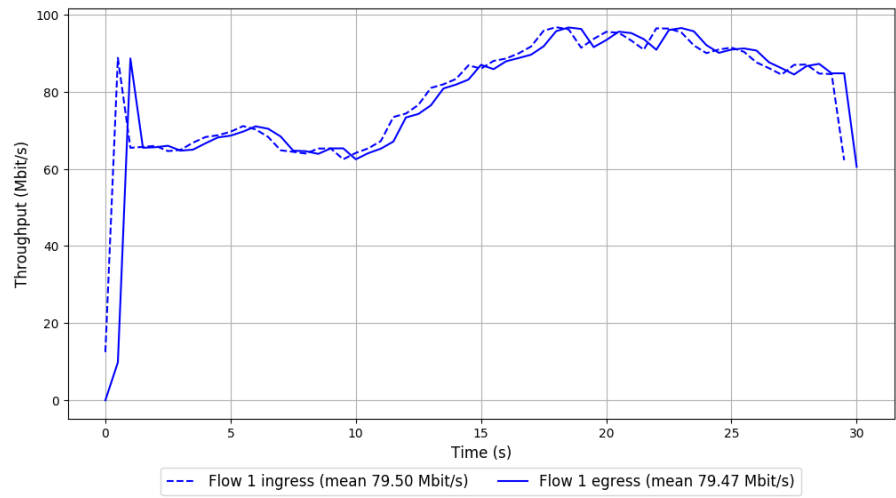
-- Flow 1:

Average throughput: 79.47 Mbit/s

95th percentile per-packet one-way delay: 21.690 ms

Loss rate: 0.11%

Run 5: Report of PCC-Allegro — Data Link

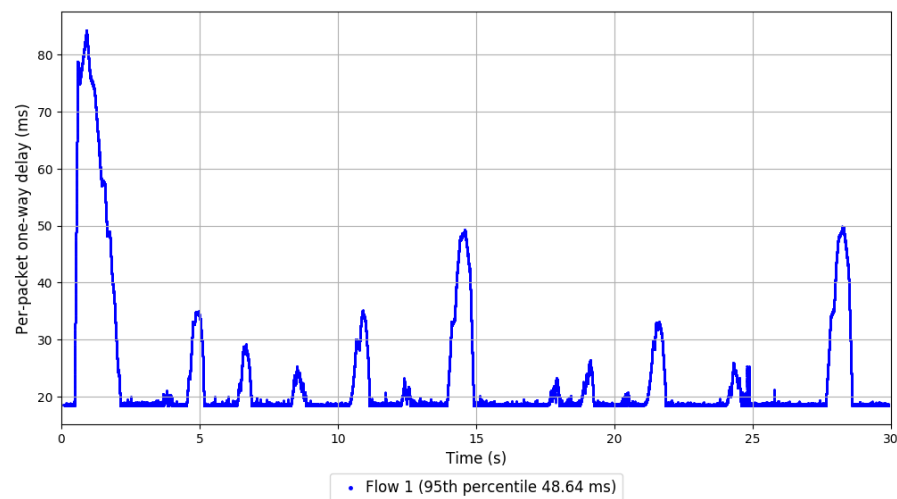
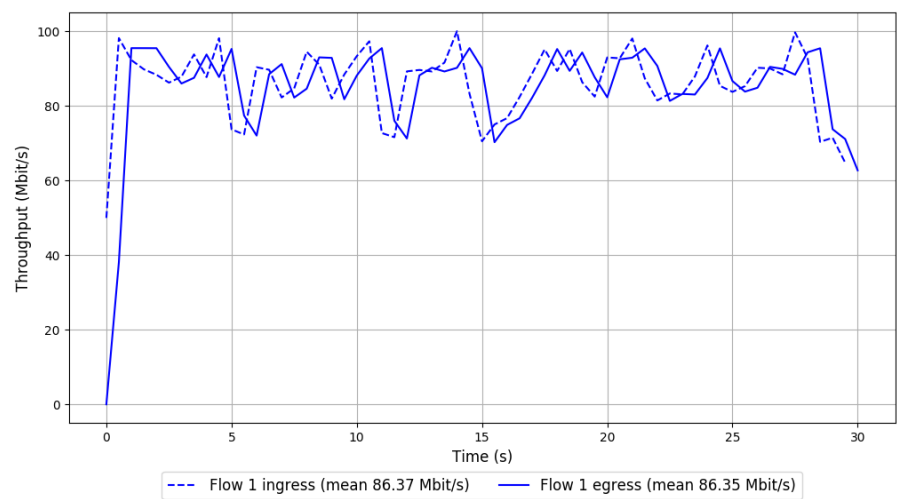


```
Run 1: Statistics of PCC-Expr

Start at: 2018-10-26 06:17:23
End at: 2018-10-26 06:17:53
Local clock offset: -0.239 ms
Remote clock offset: -4.72 ms

# Below is generated by plot.py at 2018-10-26 08:08:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.35 Mbit/s
95th percentile per-packet one-way delay: 48.638 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 86.35 Mbit/s
95th percentile per-packet one-way delay: 48.638 ms
Loss rate: 0.12%
```

Run 1: Report of PCC-Expr — Data Link

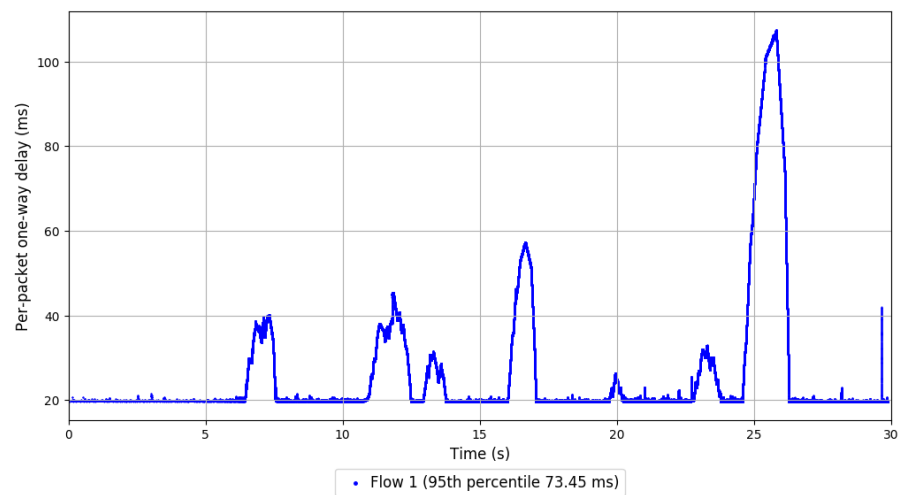
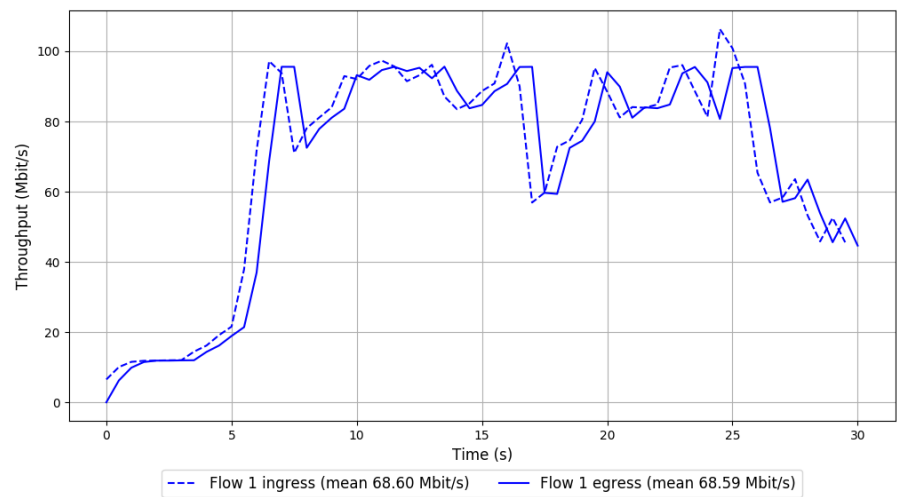


Run 2: Statistics of PCC-Expr

Start at: 2018-10-26 06:40:06
End at: 2018-10-26 06:40:36
Local clock offset: 2.423 ms
Remote clock offset: -4.581 ms

Below is generated by plot.py at 2018-10-26 08:08:37
Datalink statistics
-- Total of 1 flow:
Average throughput: 68.59 Mbit/s
95th percentile per-packet one-way delay: 73.449 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 68.59 Mbit/s
95th percentile per-packet one-way delay: 73.449 ms
Loss rate: 0.11%

Run 2: Report of PCC-Expr — Data Link

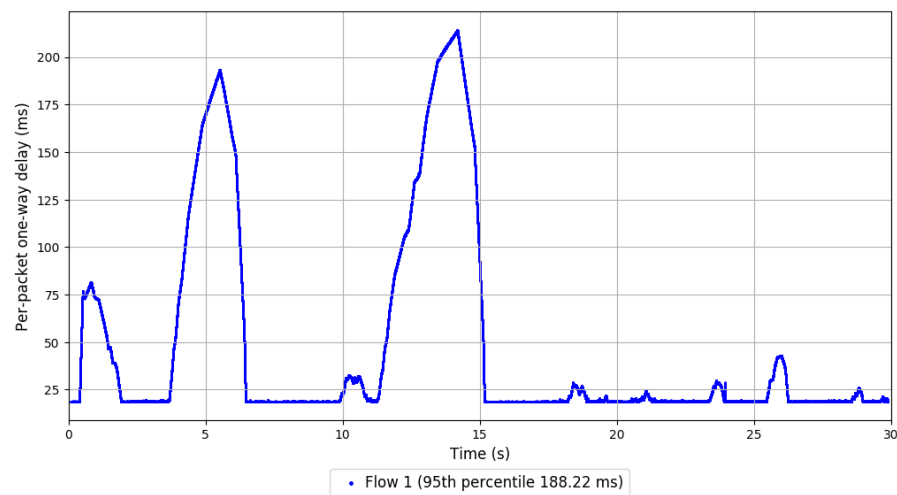
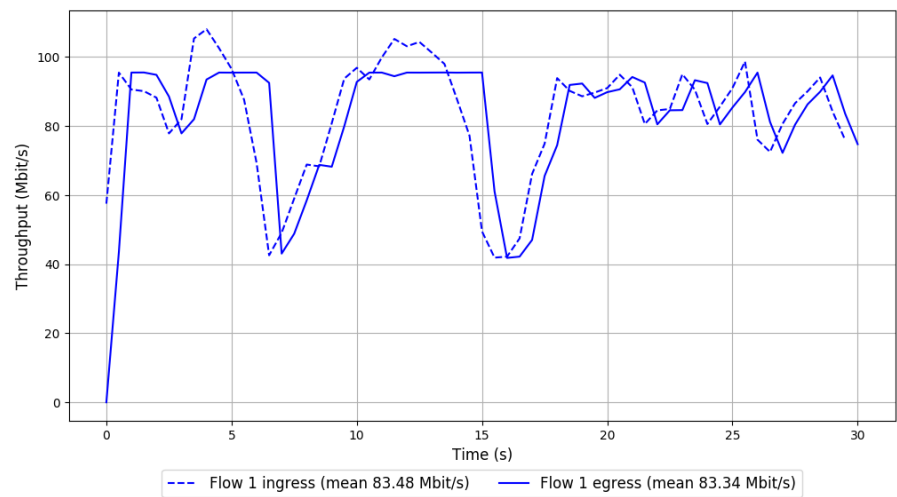


Run 3: Statistics of PCC-Expr

Start at: 2018-10-26 07:02:34
End at: 2018-10-26 07:03:04
Local clock offset: 2.554 ms
Remote clock offset: -3.644 ms

Below is generated by plot.py at 2018-10-26 08:08:48
Datalink statistics
-- Total of 1 flow:
Average throughput: 83.34 Mbit/s
95th percentile per-packet one-way delay: 188.223 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 83.34 Mbit/s
95th percentile per-packet one-way delay: 188.223 ms
Loss rate: 0.26%

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

Start at: 2018-10-26 07:24:16

End at: 2018-10-26 07:24:46

Local clock offset: 1.363 ms

Remote clock offset: -4.477 ms

Below is generated by plot.py at 2018-10-26 08:08:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 70.32 Mbit/s

95th percentile per-packet one-way delay: 50.571 ms

Loss rate: 0.12%

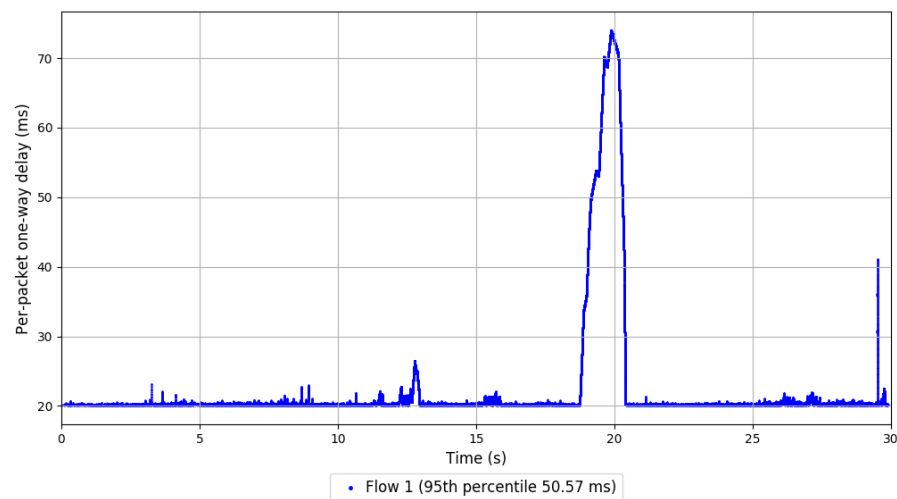
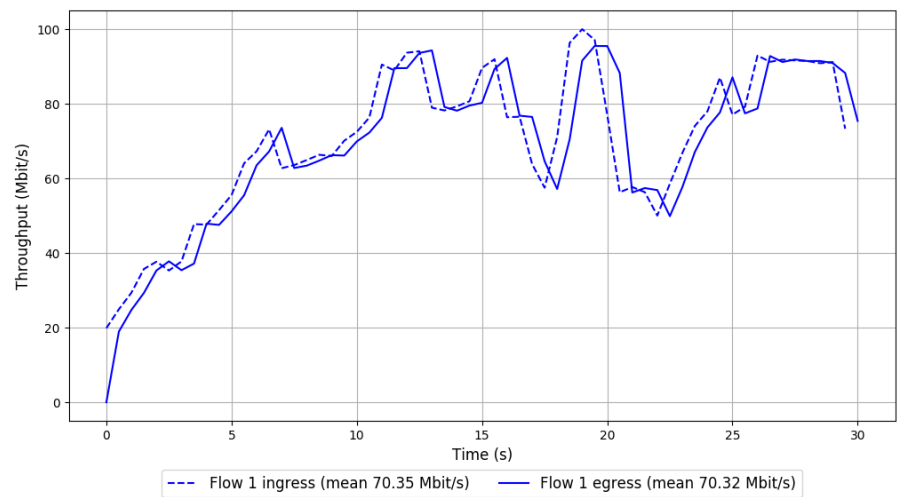
-- Flow 1:

Average throughput: 70.32 Mbit/s

95th percentile per-packet one-way delay: 50.571 ms

Loss rate: 0.12%

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

Start at: 2018-10-26 07:45:36

End at: 2018-10-26 07:46:06

Local clock offset: 1.835 ms

Remote clock offset: -5.271 ms

Below is generated by plot.py at 2018-10-26 08:09:19

Datalink statistics

-- Total of 1 flow:

Average throughput: 85.03 Mbit/s

95th percentile per-packet one-way delay: 80.587 ms

Loss rate: 0.10%

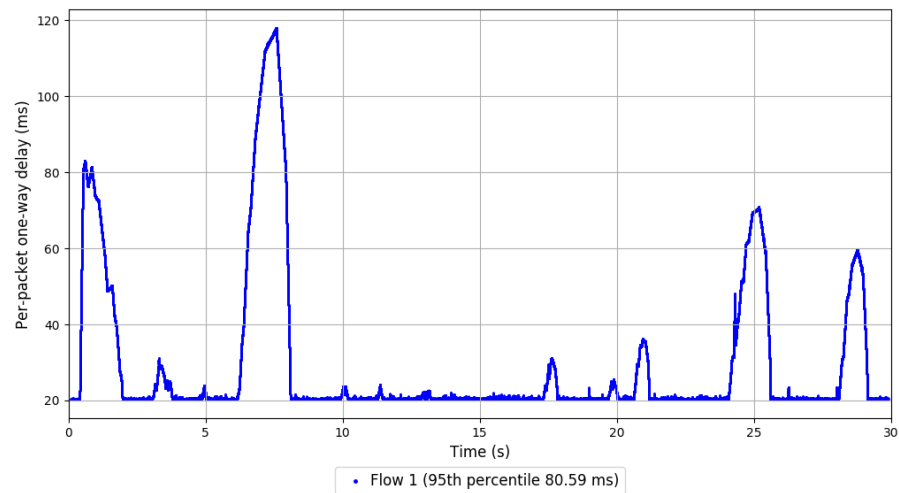
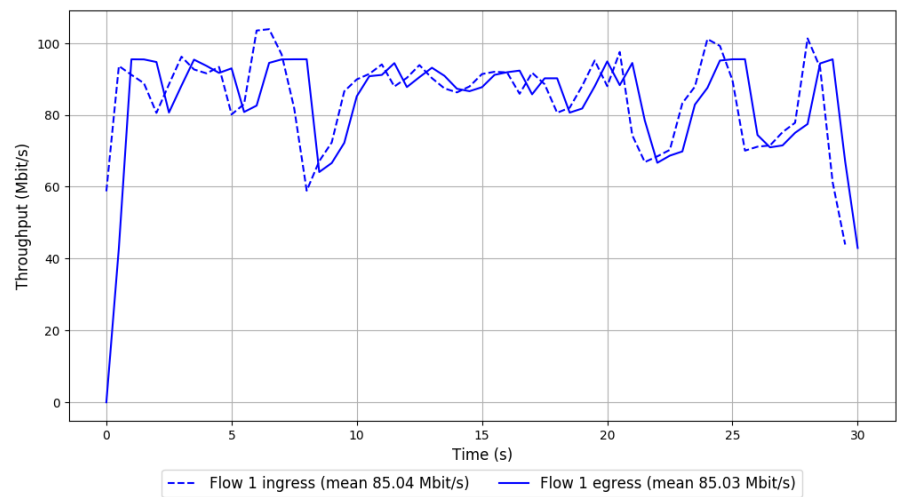
-- Flow 1:

Average throughput: 85.03 Mbit/s

95th percentile per-packet one-way delay: 80.587 ms

Loss rate: 0.10%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2018-10-26 06:20:07

End at: 2018-10-26 06:20:37

Local clock offset: 0.352 ms

Remote clock offset: -4.827 ms

Below is generated by plot.py at 2018-10-26 08:09:19

Datalink statistics

-- Total of 1 flow:

Average throughput: 89.71 Mbit/s

95th percentile per-packet one-way delay: 27.502 ms

Loss rate: 0.15%

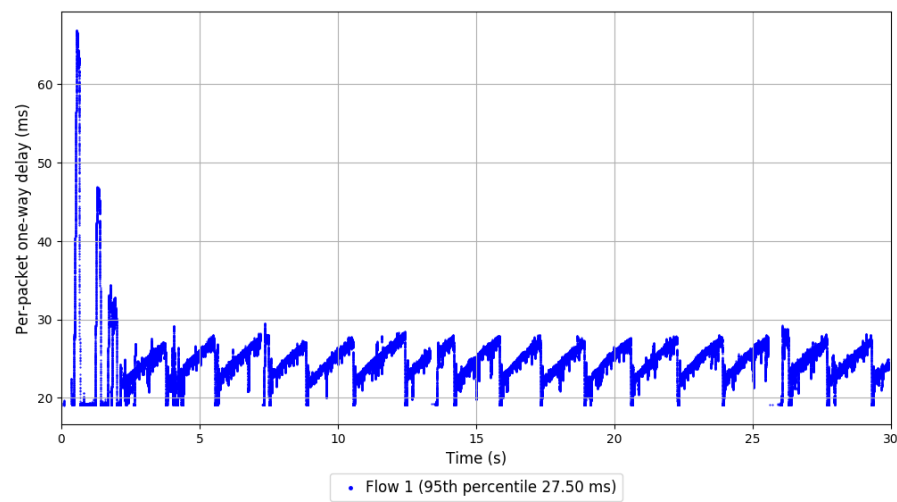
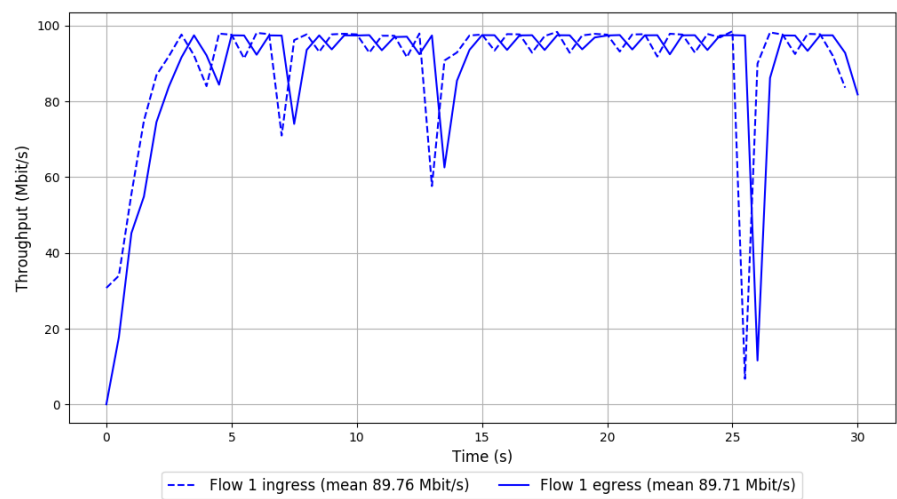
-- Flow 1:

Average throughput: 89.71 Mbit/s

95th percentile per-packet one-way delay: 27.502 ms

Loss rate: 0.15%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-10-26 06:42:48

End at: 2018-10-26 06:43:18

Local clock offset: 2.773 ms

Remote clock offset: -5.248 ms

Below is generated by plot.py at 2018-10-26 08:09:19

Datalink statistics

-- Total of 1 flow:

Average throughput: 90.24 Mbit/s

95th percentile per-packet one-way delay: 28.894 ms

Loss rate: 0.14%

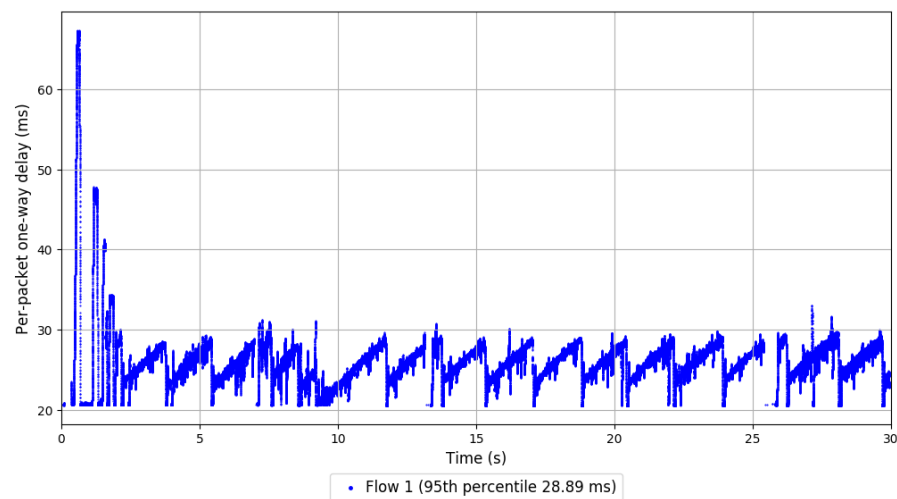
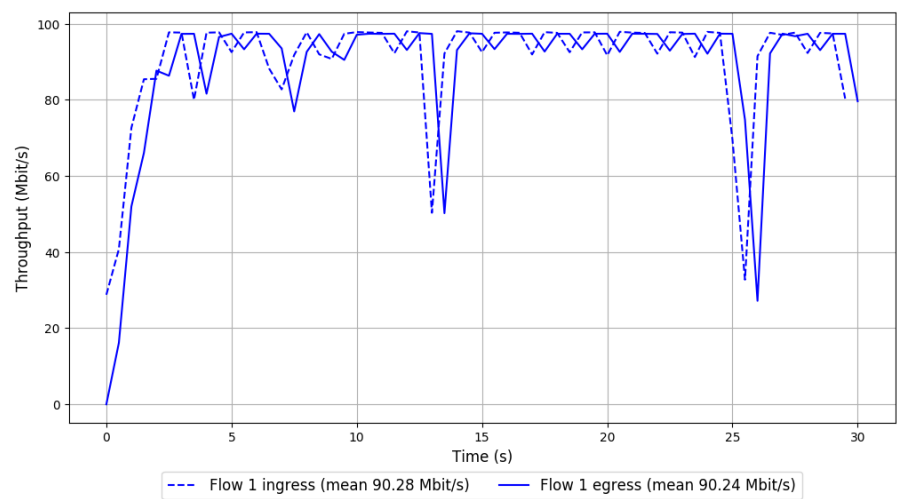
-- Flow 1:

Average throughput: 90.24 Mbit/s

95th percentile per-packet one-way delay: 28.894 ms

Loss rate: 0.14%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-10-26 07:05:08

End at: 2018-10-26 07:05:38

Local clock offset: 2.317 ms

Remote clock offset: -3.861 ms

Below is generated by plot.py at 2018-10-26 08:09:19

Datalink statistics

-- Total of 1 flow:

Average throughput: 90.74 Mbit/s

95th percentile per-packet one-way delay: 27.192 ms

Loss rate: 0.13%

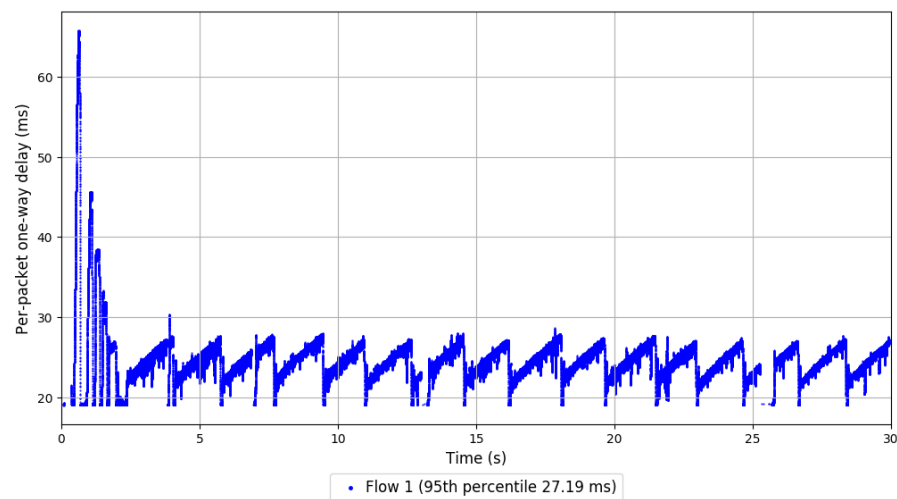
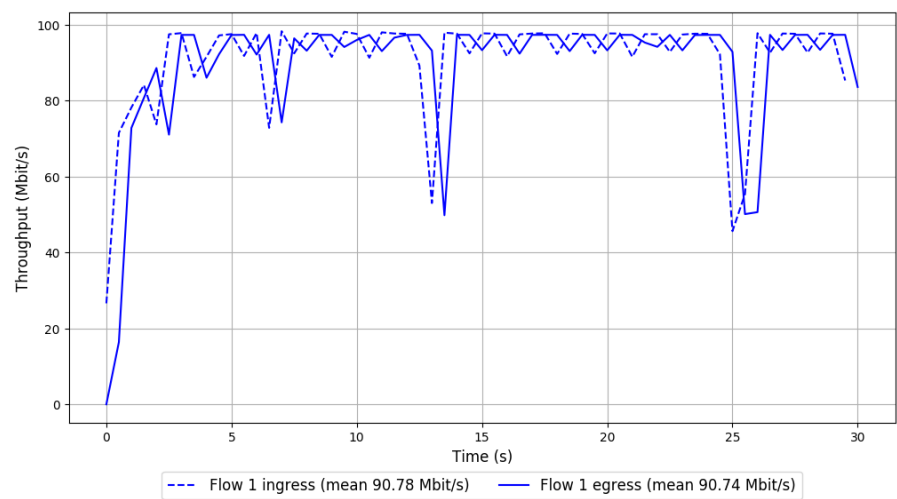
-- Flow 1:

Average throughput: 90.74 Mbit/s

95th percentile per-packet one-way delay: 27.192 ms

Loss rate: 0.13%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-10-26 07:26:45

End at: 2018-10-26 07:27:15

Local clock offset: 0.654 ms

Remote clock offset: 3.355 ms

Below is generated by plot.py at 2018-10-26 08:09:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.09 Mbit/s

95th percentile per-packet one-way delay: 20.442 ms

Loss rate: 0.16%

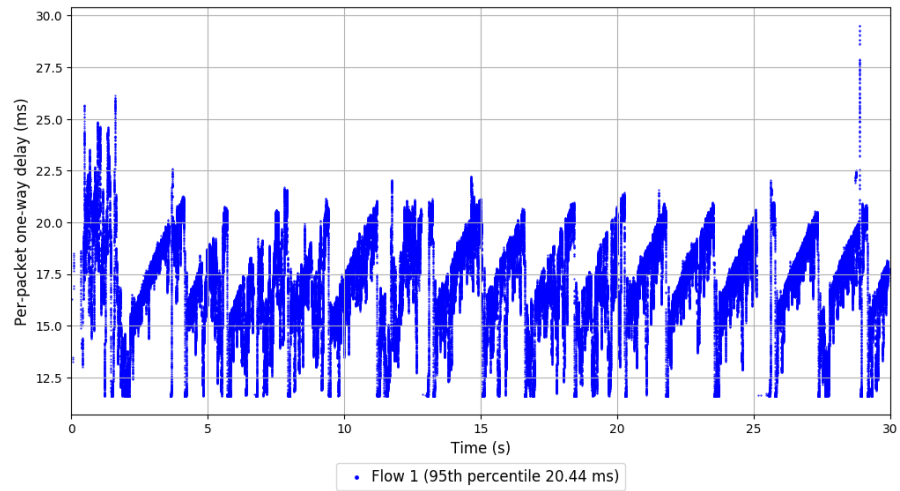
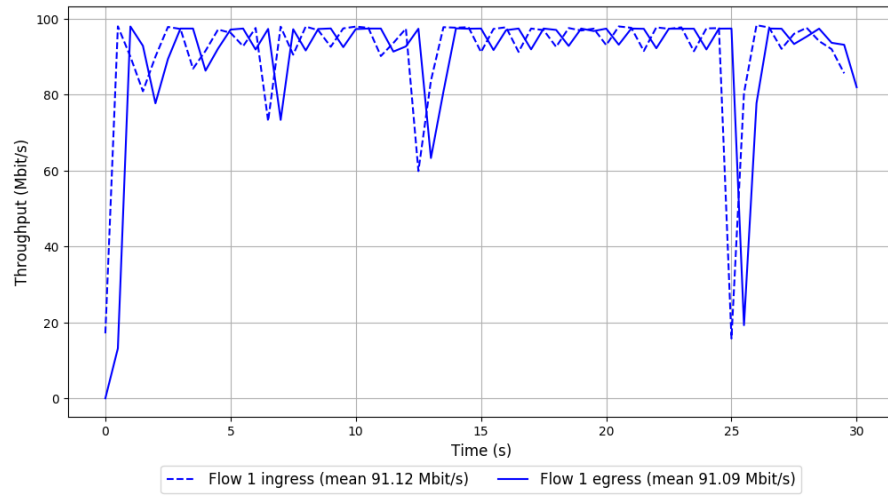
-- Flow 1:

Average throughput: 91.09 Mbit/s

95th percentile per-packet one-way delay: 20.442 ms

Loss rate: 0.16%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-10-26 07:48:17

End at: 2018-10-26 07:48:47

Local clock offset: 2.662 ms

Remote clock offset: -6.062 ms

Below is generated by plot.py at 2018-10-26 08:09:38

Datalink statistics

-- Total of 1 flow:

Average throughput: 89.62 Mbit/s

95th percentile per-packet one-way delay: 29.688 ms

Loss rate: 0.12%

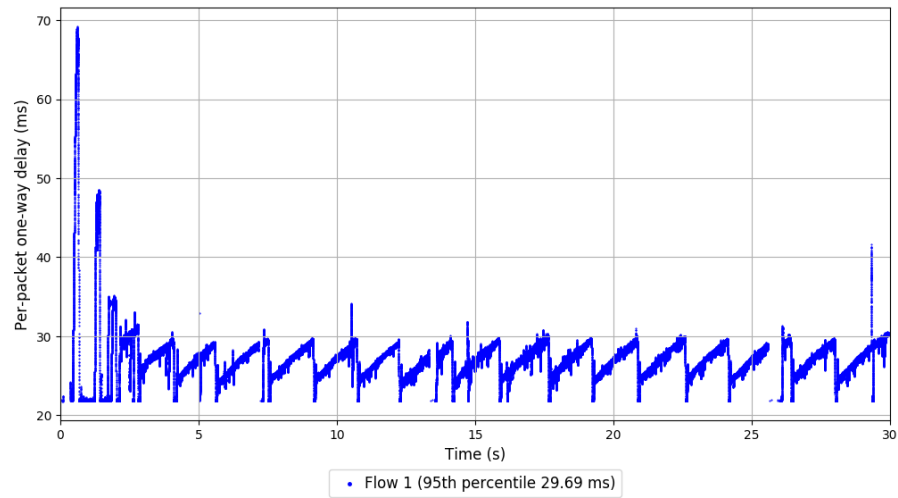
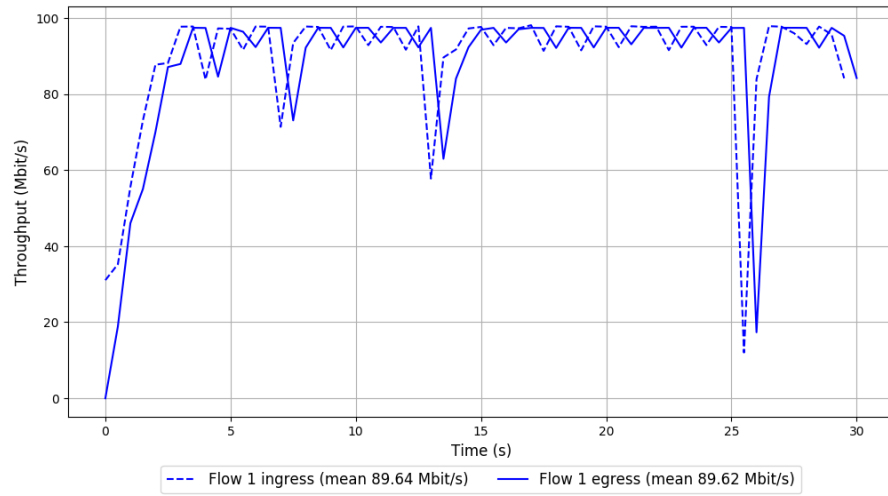
-- Flow 1:

Average throughput: 89.62 Mbit/s

95th percentile per-packet one-way delay: 29.688 ms

Loss rate: 0.12%

Run 5: Report of QUIC Cubic — Data Link

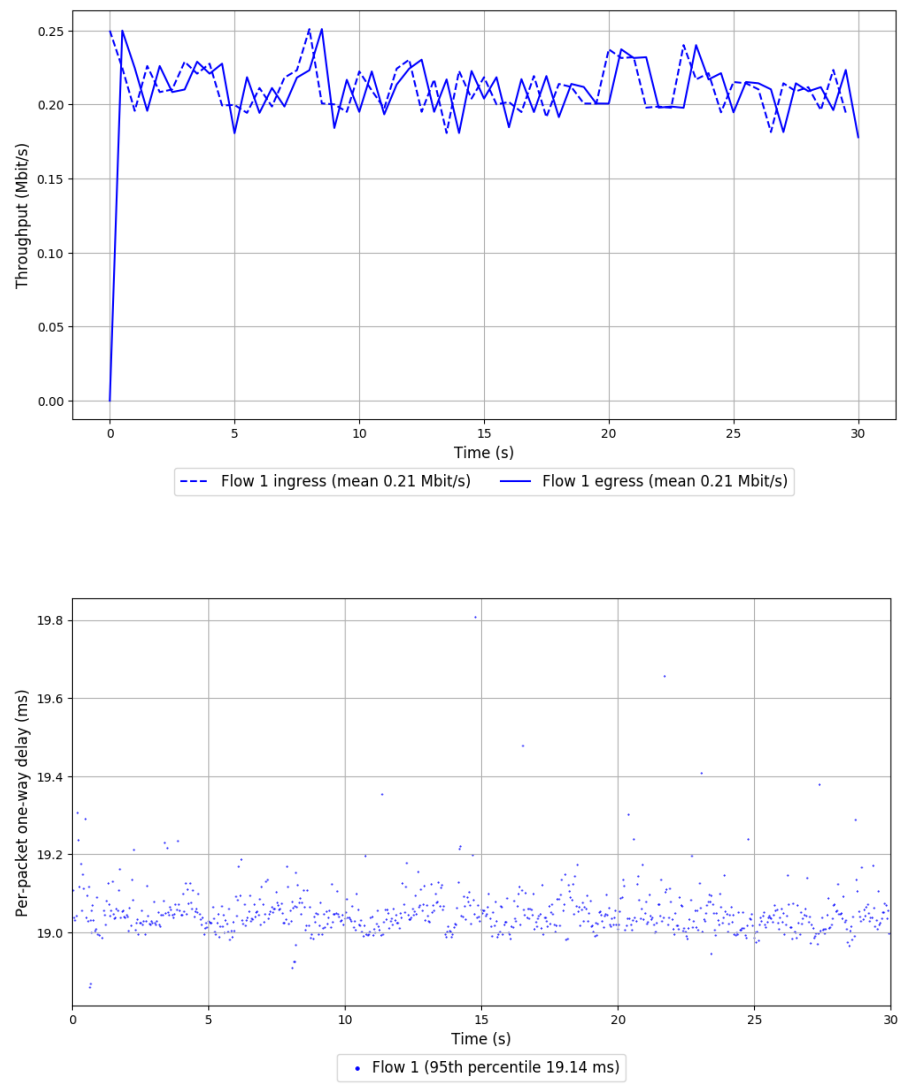


```
Run 1: Statistics of SCReAM

Start at: 2018-10-26 06:11:25
End at: 2018-10-26 06:11:55
Local clock offset: -0.135 ms
Remote clock offset: -5.063 ms

# Below is generated by plot.py at 2018-10-26 08:09:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 19.145 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 19.145 ms
Loss rate: 0.13%
```

Run 1: Report of SReAM — Data Link

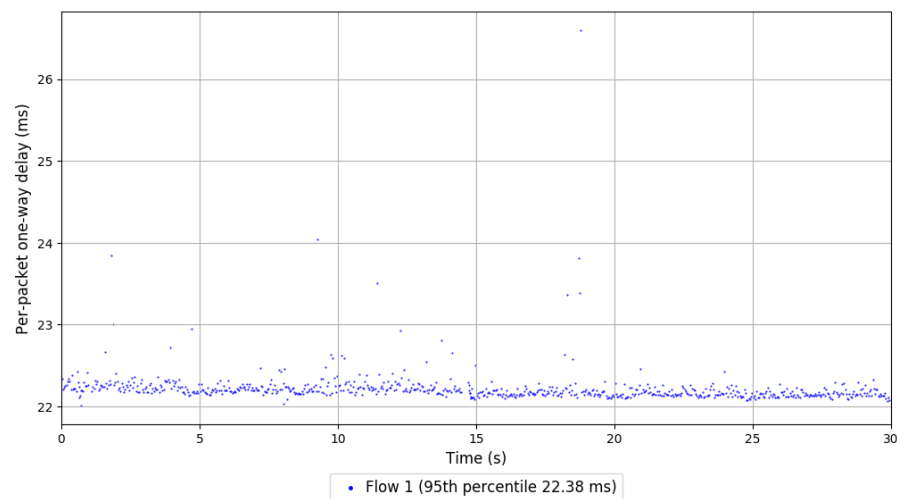
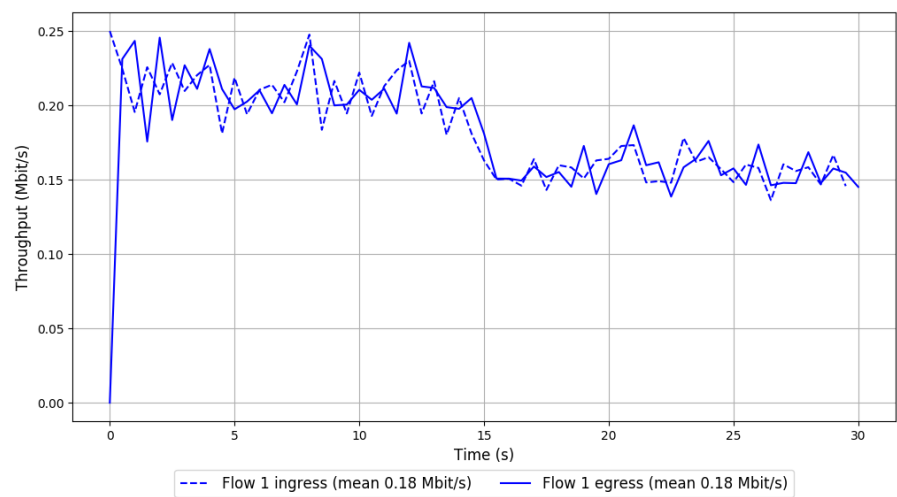


Run 2: Statistics of SCReAM

Start at: 2018-10-26 06:34:02
End at: 2018-10-26 06:34:32
Local clock offset: 3.141 ms
Remote clock offset: -5.664 ms

Below is generated by plot.py at 2018-10-26 08:09:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 22.376 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 22.376 ms
Loss rate: 0.11%

Run 2: Report of SReAM — Data Link

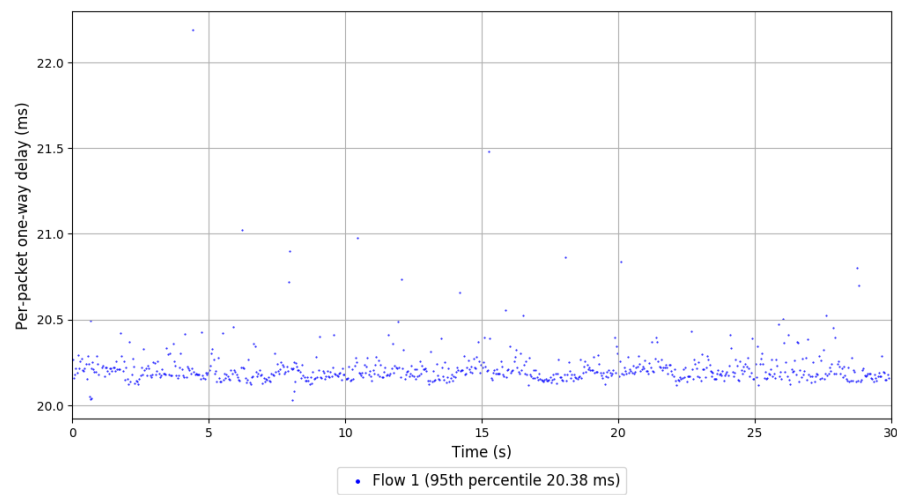
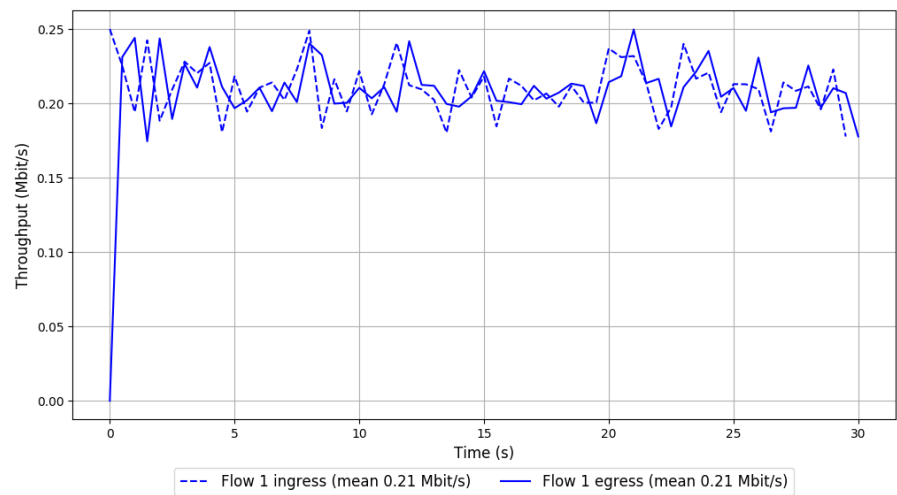


Run 3: Statistics of SCReAM

Start at: 2018-10-26 06:56:28
End at: 2018-10-26 06:56:58
Local clock offset: 2.484 ms
Remote clock offset: -5.409 ms

Below is generated by plot.py at 2018-10-26 08:09:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 20.384 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 20.384 ms
Loss rate: 0.13%

Run 3: Report of SReAM — Data Link

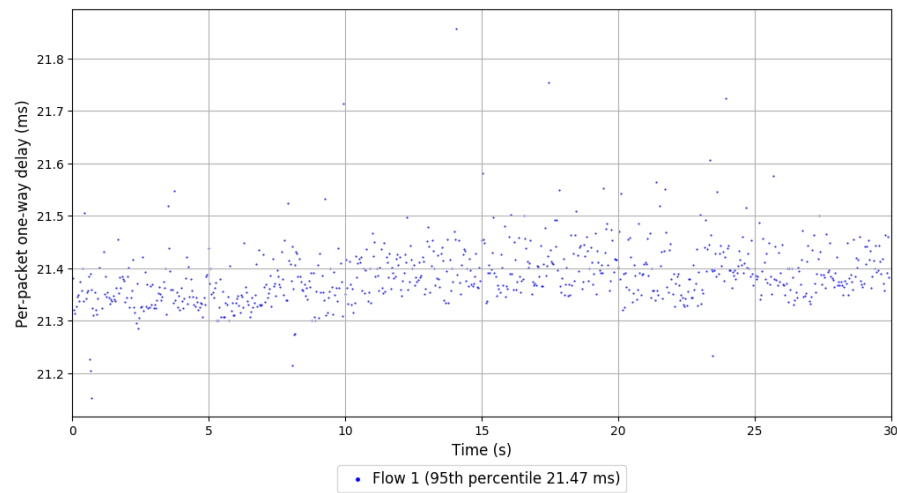
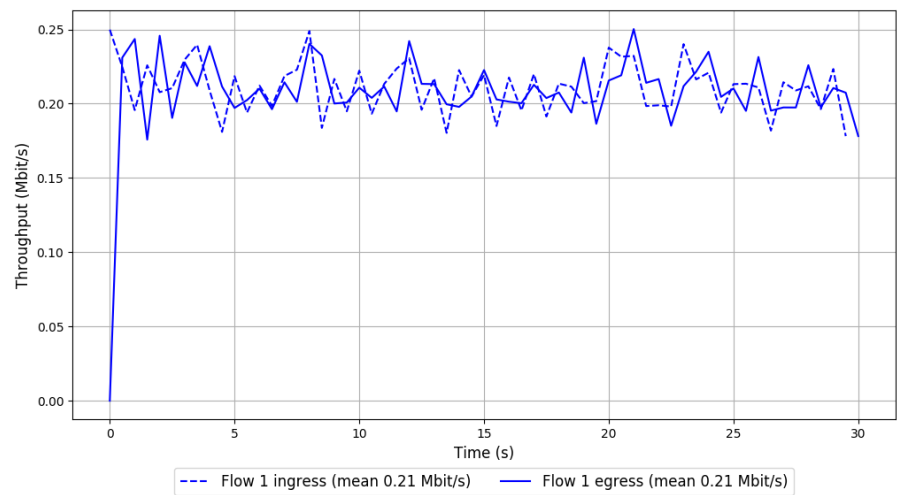


Run 4: Statistics of SCReAM

Start at: 2018-10-26 07:18:25
End at: 2018-10-26 07:18:55
Local clock offset: 3.516 ms
Remote clock offset: -3.691 ms

Below is generated by plot.py at 2018-10-26 08:09:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 21.472 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 21.472 ms
Loss rate: 0.13%

Run 4: Report of SCReAM — Data Link

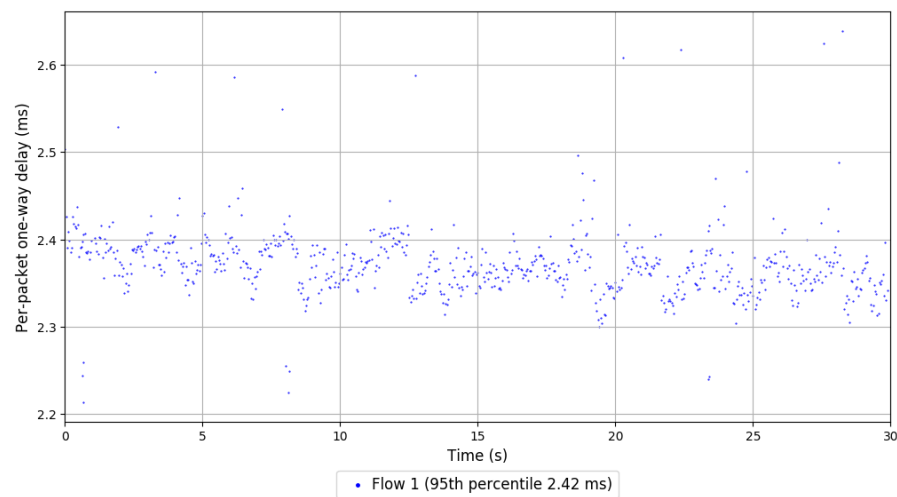
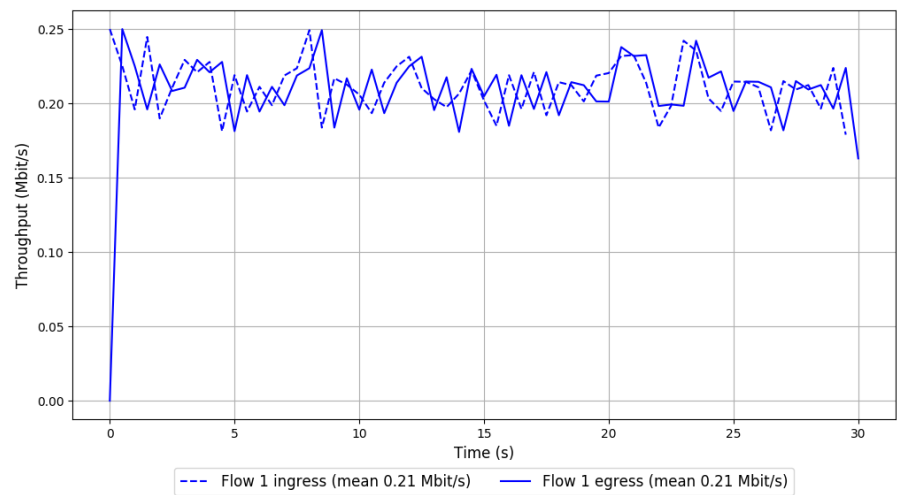


Run 5: Statistics of SCReAM

Start at: 2018-10-26 07:39:47
End at: 2018-10-26 07:40:17
Local clock offset: 1.273 ms
Remote clock offset: 12.365 ms

Below is generated by plot.py at 2018-10-26 08:09:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 2.419 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 2.419 ms
Loss rate: 0.13%

Run 5: Report of SReAM — Data Link

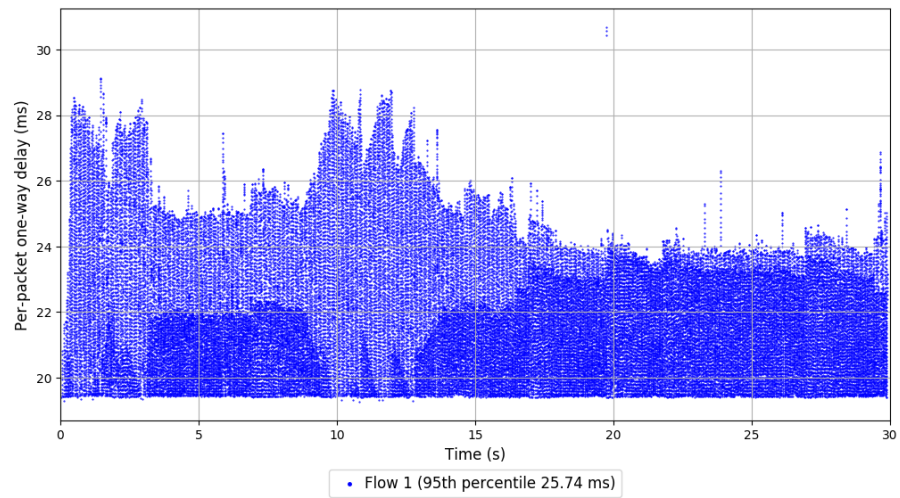
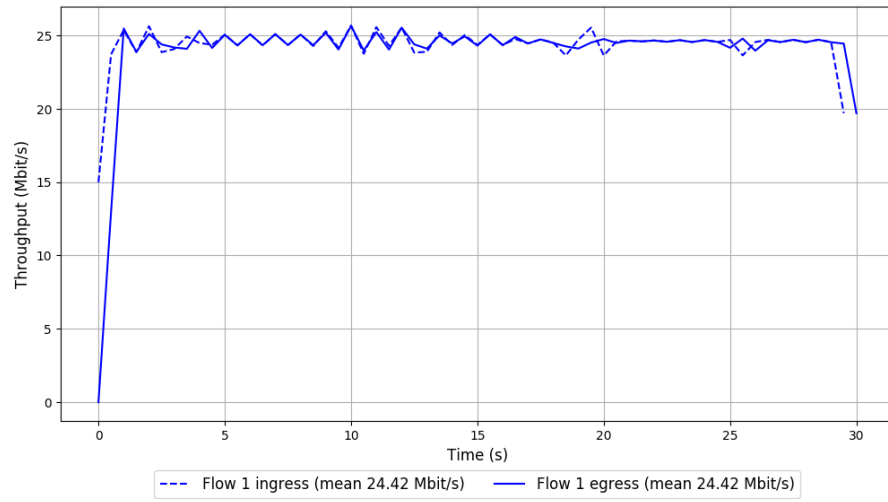


Run 1: Statistics of Sprout

Start at: 2018-10-26 06:25:29
End at: 2018-10-26 06:25:59
Local clock offset: 0.648 ms
Remote clock offset: -4.971 ms

Below is generated by plot.py at 2018-10-26 08:09:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.42 Mbit/s
95th percentile per-packet one-way delay: 25.740 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 24.42 Mbit/s
95th percentile per-packet one-way delay: 25.740 ms
Loss rate: 0.08%

Run 1: Report of Sprout — Data Link

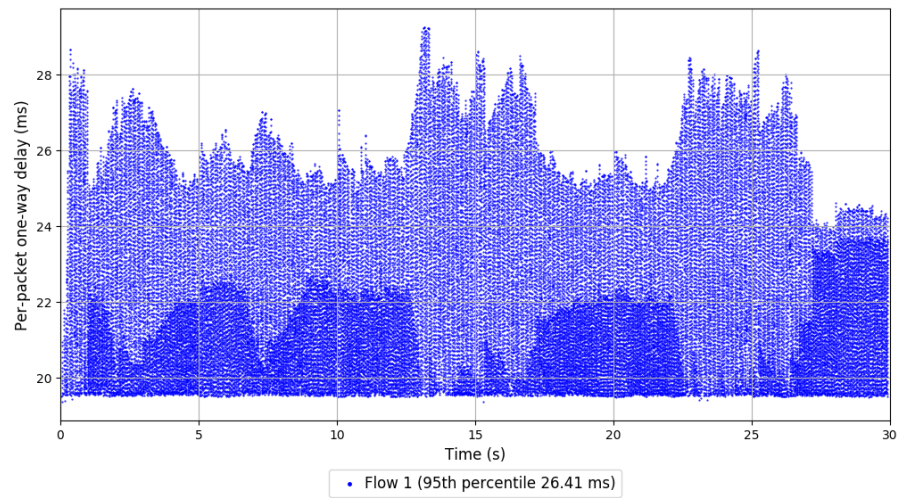
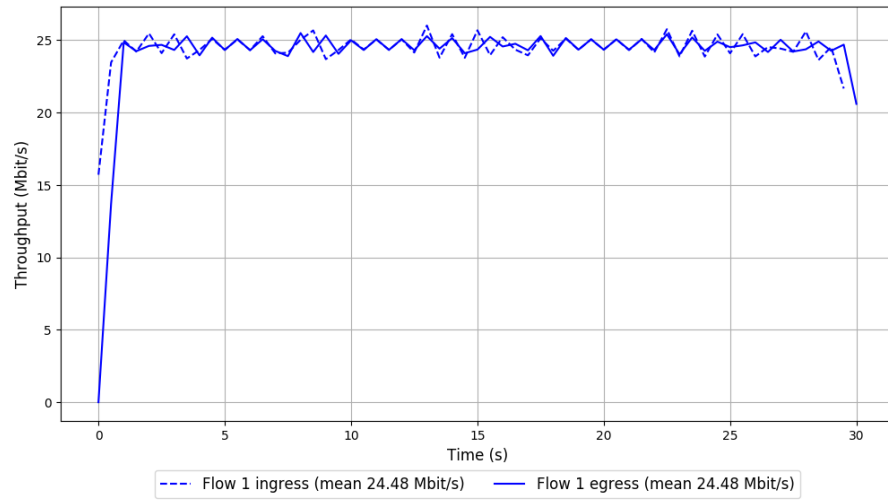


Run 2: Statistics of Sprout

Start at: 2018-10-26 06:47:58
End at: 2018-10-26 06:48:28
Local clock offset: 2.464 ms
Remote clock offset: -4.646 ms

Below is generated by plot.py at 2018-10-26 08:09:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.48 Mbit/s
95th percentile per-packet one-way delay: 26.414 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 24.48 Mbit/s
95th percentile per-packet one-way delay: 26.414 ms
Loss rate: 0.13%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-10-26 07:10:03

End at: 2018-10-26 07:10:33

Local clock offset: 1.564 ms

Remote clock offset: 5.865 ms

Below is generated by plot.py at 2018-10-26 08:09:38

Datalink statistics

-- Total of 1 flow:

Average throughput: 24.42 Mbit/s

95th percentile per-packet one-way delay: 16.385 ms

Loss rate: 0.09%

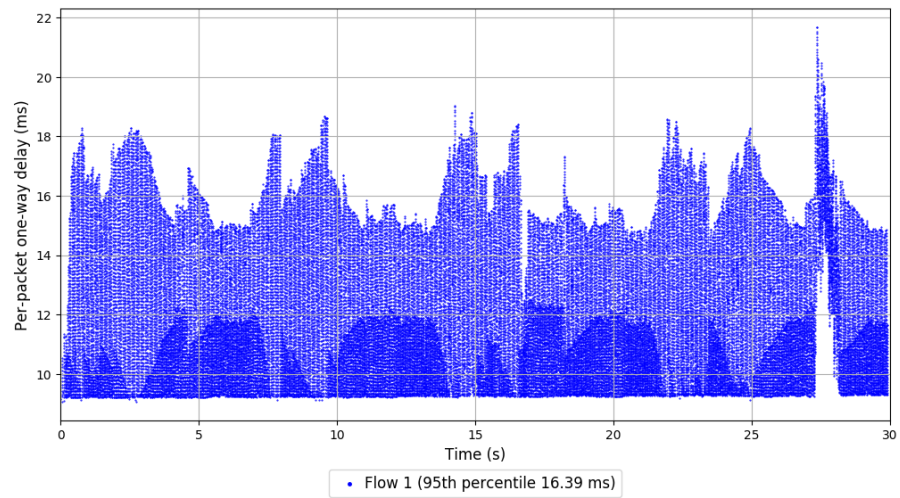
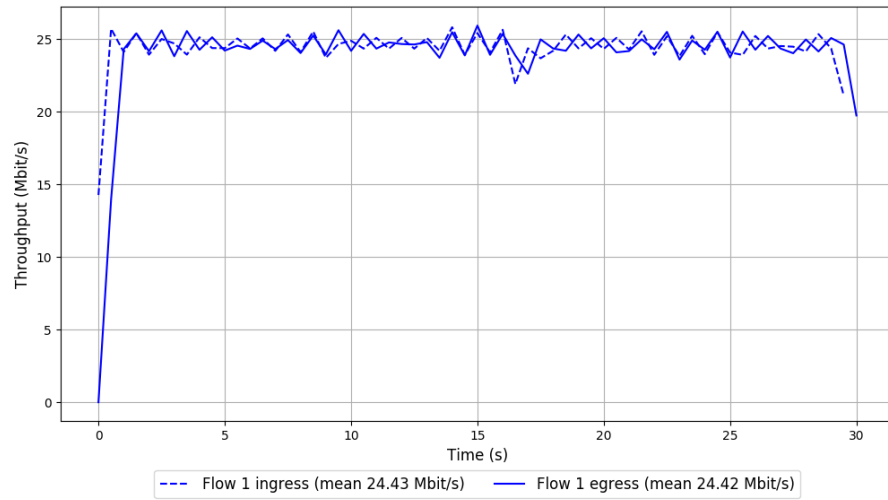
-- Flow 1:

Average throughput: 24.42 Mbit/s

95th percentile per-packet one-way delay: 16.385 ms

Loss rate: 0.09%

Run 3: Report of Sprout — Data Link

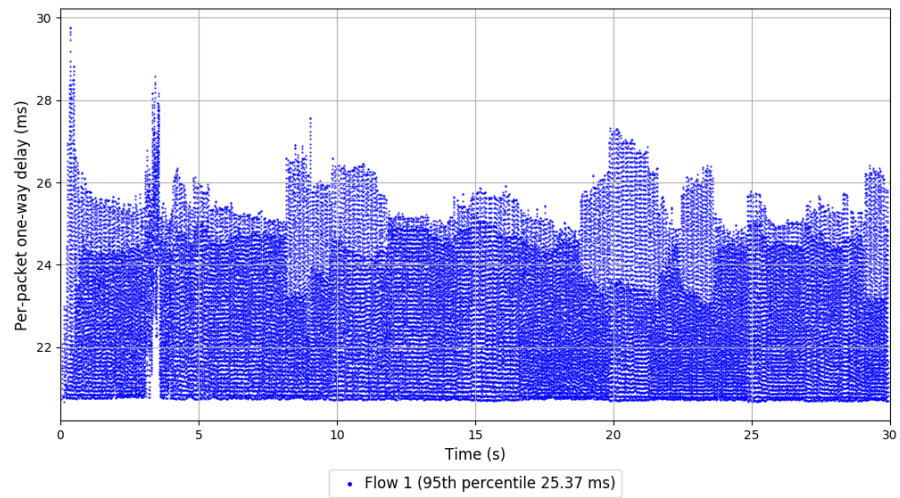
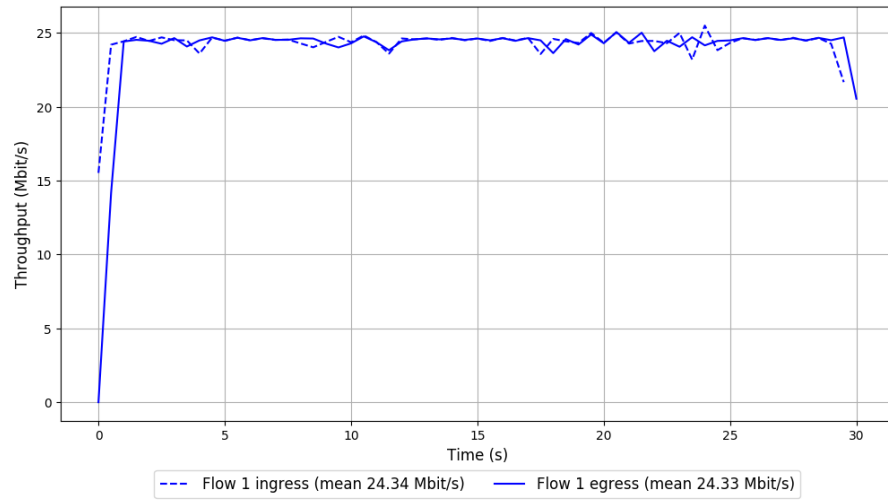


Run 4: Statistics of Sprout

Start at: 2018-10-26 07:31:36
End at: 2018-10-26 07:32:06
Local clock offset: 1.972 ms
Remote clock offset: -4.515 ms

Below is generated by plot.py at 2018-10-26 08:09:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.33 Mbit/s
95th percentile per-packet one-way delay: 25.369 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 24.33 Mbit/s
95th percentile per-packet one-way delay: 25.369 ms
Loss rate: 0.12%

Run 4: Report of Sprout — Data Link

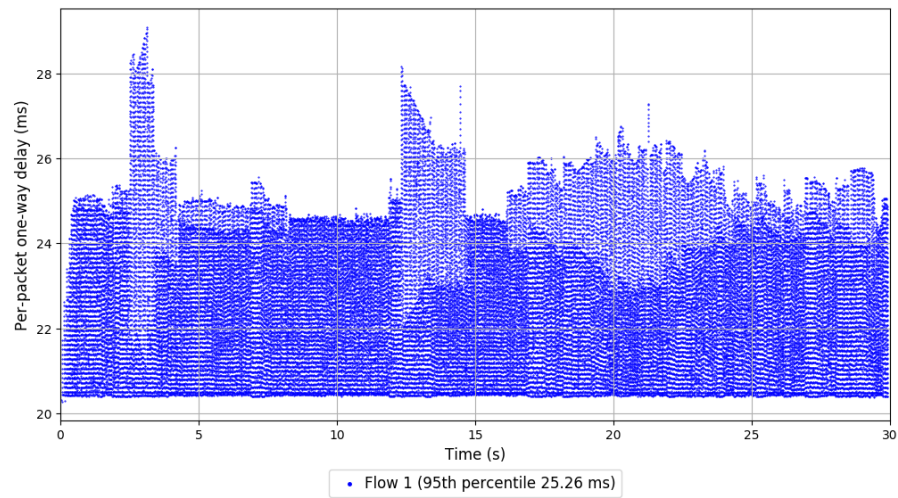
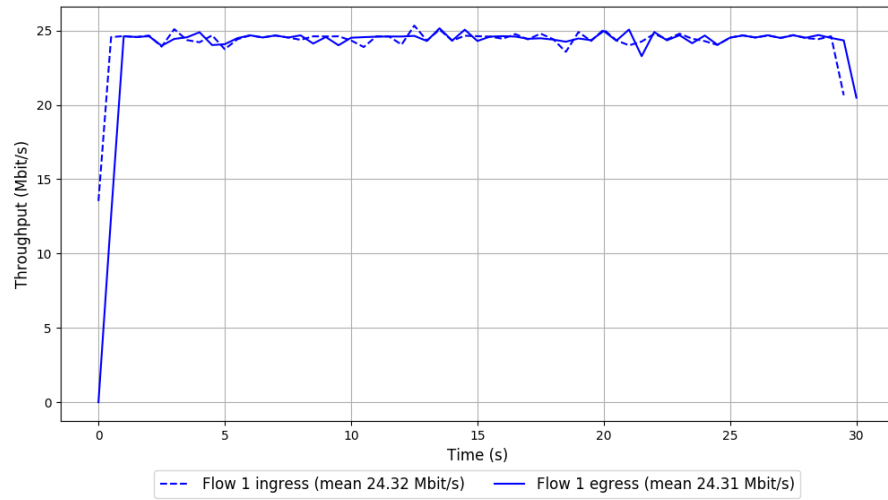


Run 5: Statistics of Sprout

Start at: 2018-10-26 07:53:12
End at: 2018-10-26 07:53:42
Local clock offset: 2.467 ms
Remote clock offset: -4.884 ms

Below is generated by plot.py at 2018-10-26 08:09:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.31 Mbit/s
95th percentile per-packet one-way delay: 25.258 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 24.31 Mbit/s
95th percentile per-packet one-way delay: 25.258 ms
Loss rate: 0.08%

Run 5: Report of Sprout — Data Link

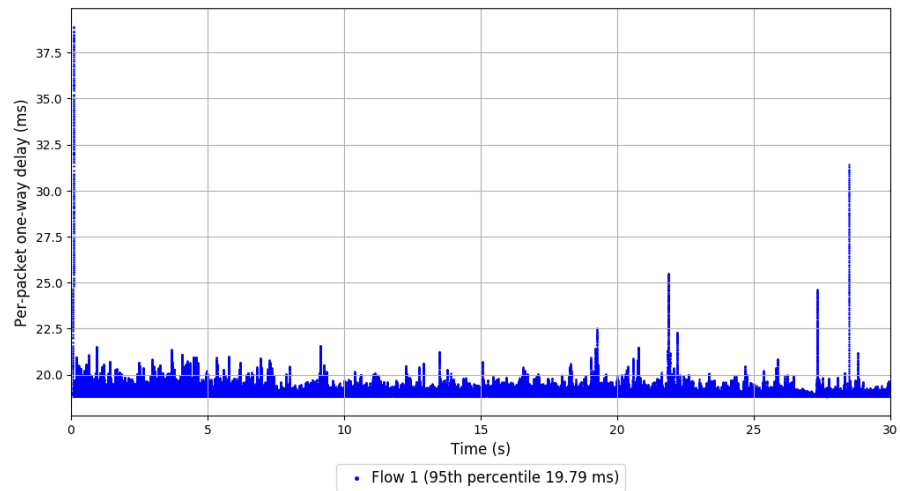
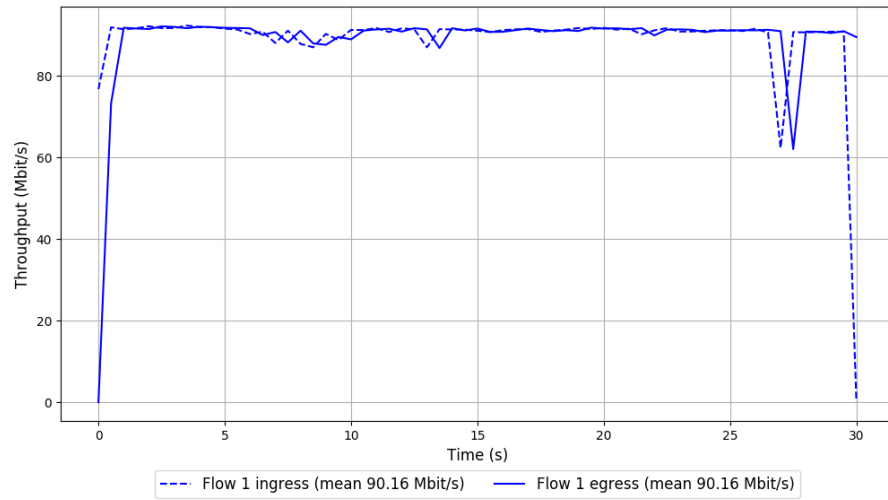


Run 1: Statistics of TaoVA-100x

Start at: 2018-10-26 06:22:37
End at: 2018-10-26 06:23:08
Local clock offset: -0.202 ms
Remote clock offset: -5.192 ms

Below is generated by plot.py at 2018-10-26 08:11:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 90.16 Mbit/s
95th percentile per-packet one-way delay: 19.787 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 90.16 Mbit/s
95th percentile per-packet one-way delay: 19.787 ms
Loss rate: 0.09%

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

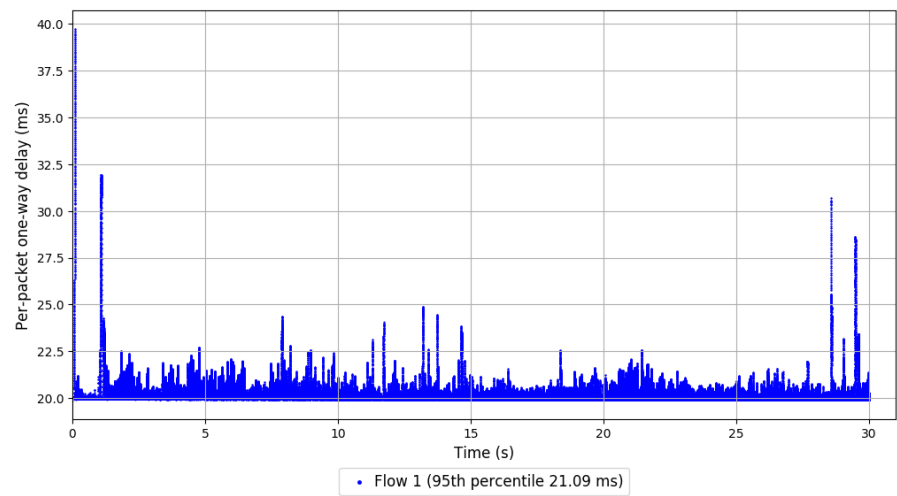
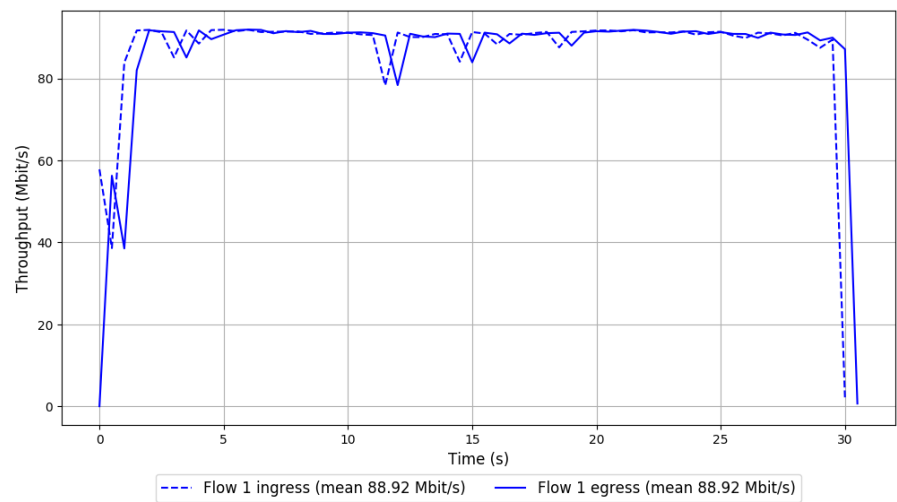


Run 2: Statistics of TaoVA-100x

Start at: 2018-10-26 06:45:20
End at: 2018-10-26 06:45:50
Local clock offset: 2.623 ms
Remote clock offset: -4.851 ms

Below is generated by plot.py at 2018-10-26 08:11:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 88.92 Mbit/s
95th percentile per-packet one-way delay: 21.086 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 88.92 Mbit/s
95th percentile per-packet one-way delay: 21.086 ms
Loss rate: 0.09%

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-10-26 07:07:33

End at: 2018-10-26 07:08:03

Local clock offset: 4.331 ms

Remote clock offset: -3.356 ms

Below is generated by plot.py at 2018-10-26 08:11:06

Datalink statistics

-- Total of 1 flow:

Average throughput: 88.81 Mbit/s

95th percentile per-packet one-way delay: 21.516 ms

Loss rate: 0.09%

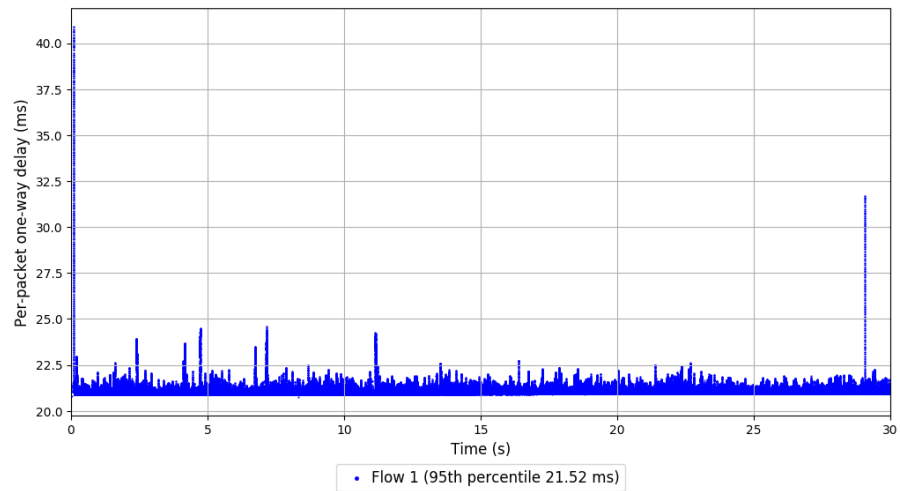
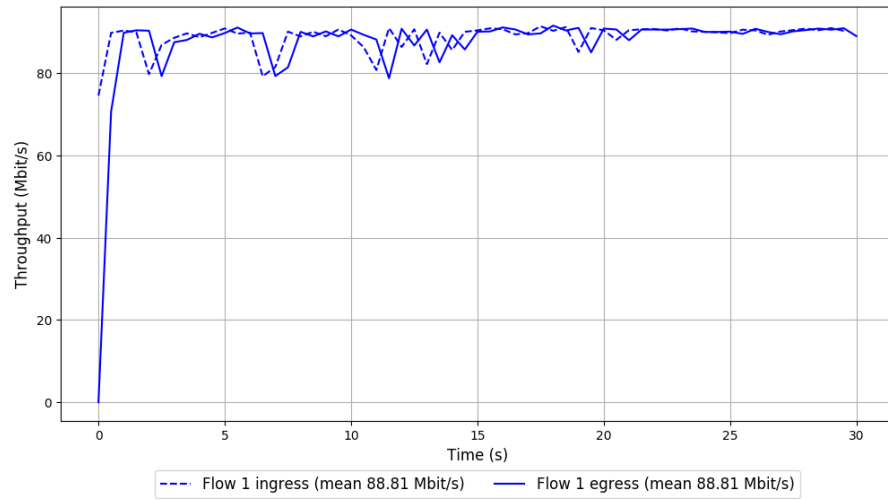
-- Flow 1:

Average throughput: 88.81 Mbit/s

95th percentile per-packet one-way delay: 21.516 ms

Loss rate: 0.09%

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-10-26 07:29:09

End at: 2018-10-26 07:29:39

Local clock offset: 2.532 ms

Remote clock offset: -4.13 ms

Below is generated by plot.py at 2018-10-26 08:11:14

Datalink statistics

-- Total of 1 flow:

Average throughput: 90.60 Mbit/s

95th percentile per-packet one-way delay: 21.847 ms

Loss rate: 0.10%

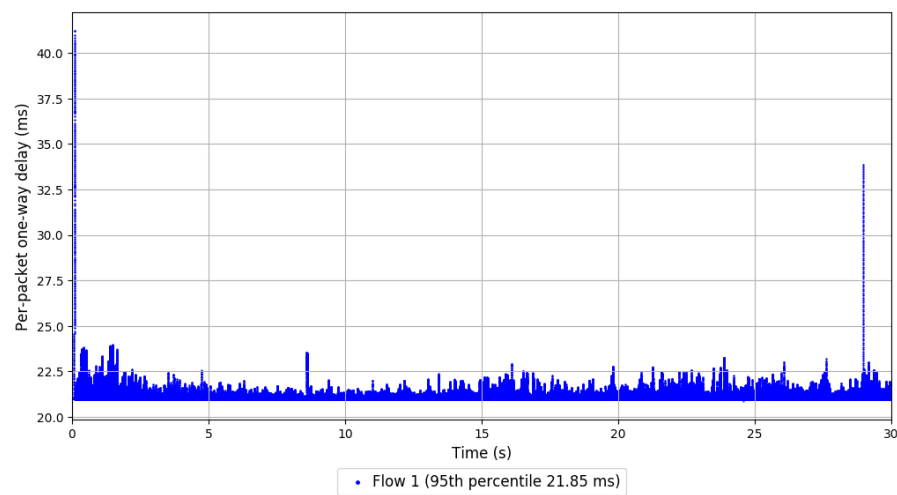
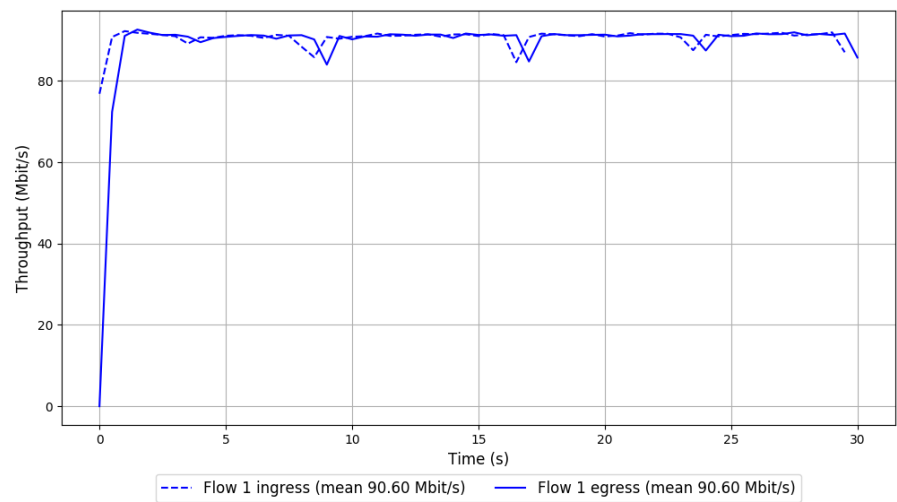
-- Flow 1:

Average throughput: 90.60 Mbit/s

95th percentile per-packet one-way delay: 21.847 ms

Loss rate: 0.10%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-10-26 07:50:42

End at: 2018-10-26 07:51:12

Local clock offset: 2.418 ms

Remote clock offset: -4.547 ms

Below is generated by plot.py at 2018-10-26 08:11:14

Datalink statistics

-- Total of 1 flow:

Average throughput: 90.76 Mbit/s

95th percentile per-packet one-way delay: 20.798 ms

Loss rate: 0.10%

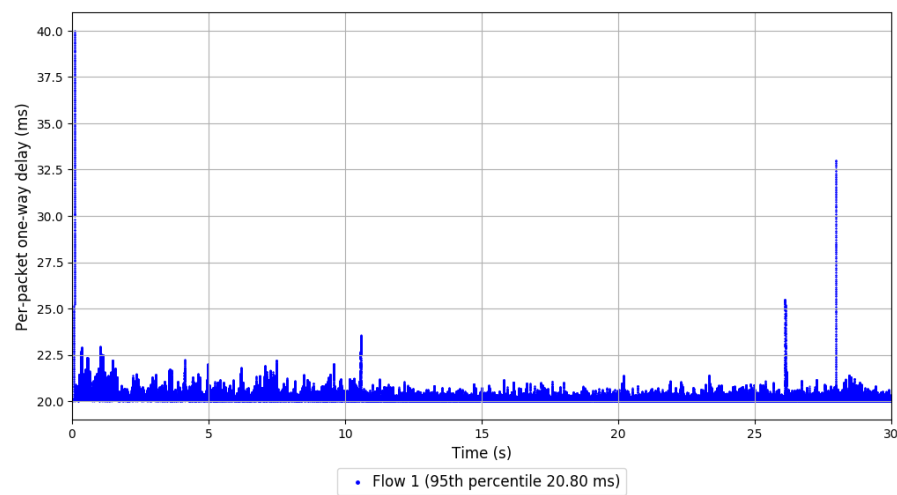
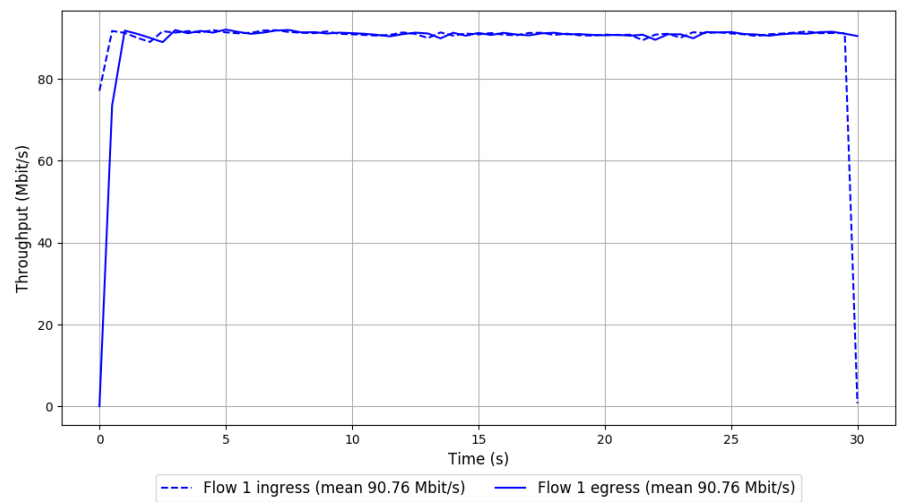
-- Flow 1:

Average throughput: 90.76 Mbit/s

95th percentile per-packet one-way delay: 20.798 ms

Loss rate: 0.10%

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

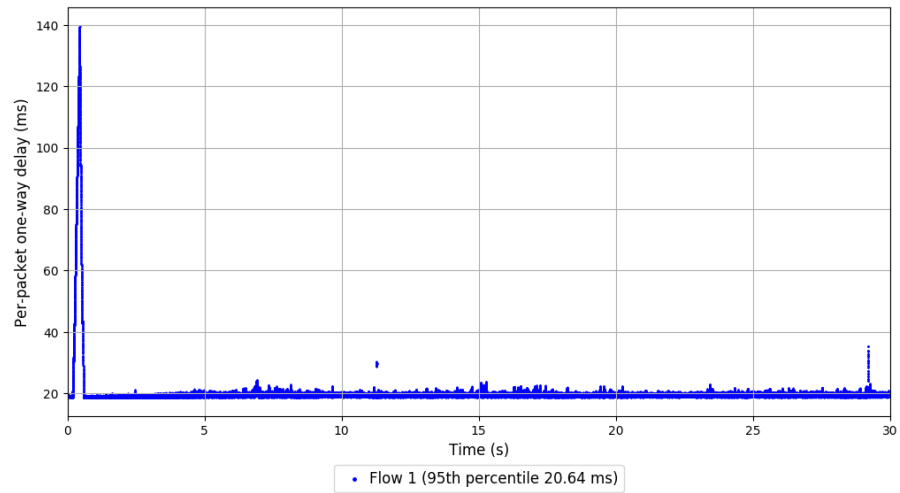
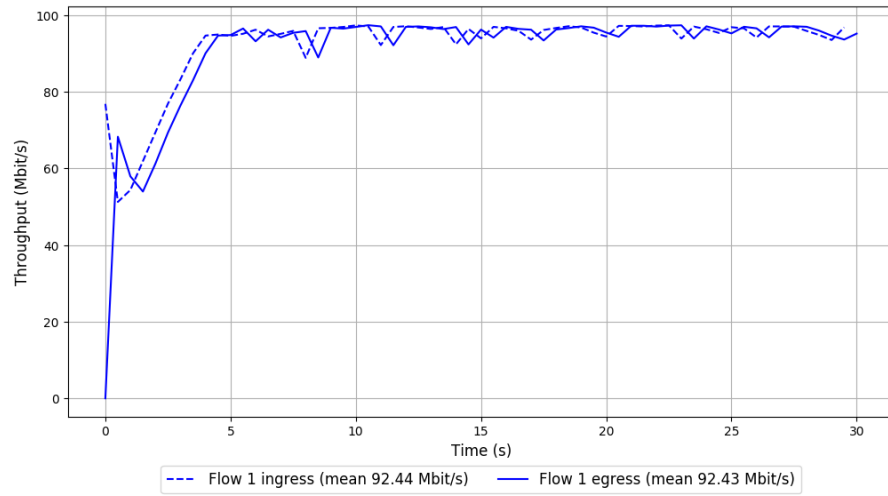


Run 1: Statistics of TCP Vegas

Start at: 2018-10-26 06:14:51
End at: 2018-10-26 06:15:21
Local clock offset: 0.274 ms
Remote clock offset: -4.362 ms

Below is generated by plot.py at 2018-10-26 08:11:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 92.43 Mbit/s
95th percentile per-packet one-way delay: 20.644 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 92.43 Mbit/s
95th percentile per-packet one-way delay: 20.644 ms
Loss rate: 0.10%

Run 1: Report of TCP Vegas — Data Link

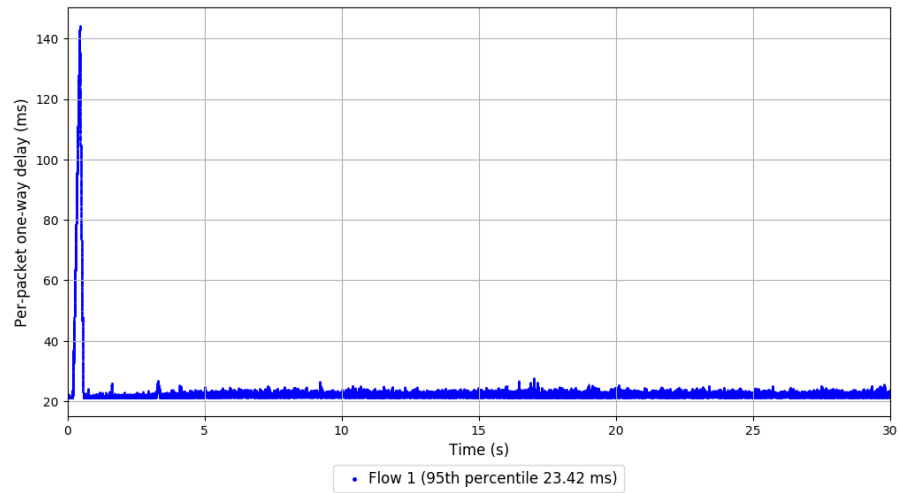
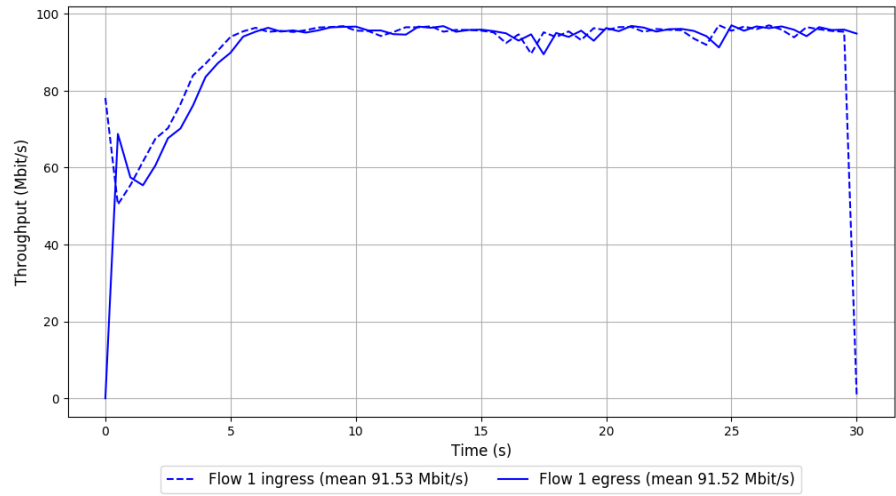


Run 2: Statistics of TCP Vegas

Start at: 2018-10-26 06:37:36
End at: 2018-10-26 06:38:06
Local clock offset: 2.449 ms
Remote clock offset: -5.709 ms

Below is generated by plot.py at 2018-10-26 08:11:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 91.52 Mbit/s
95th percentile per-packet one-way delay: 23.418 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 91.52 Mbit/s
95th percentile per-packet one-way delay: 23.418 ms
Loss rate: 0.10%

Run 2: Report of TCP Vegas — Data Link

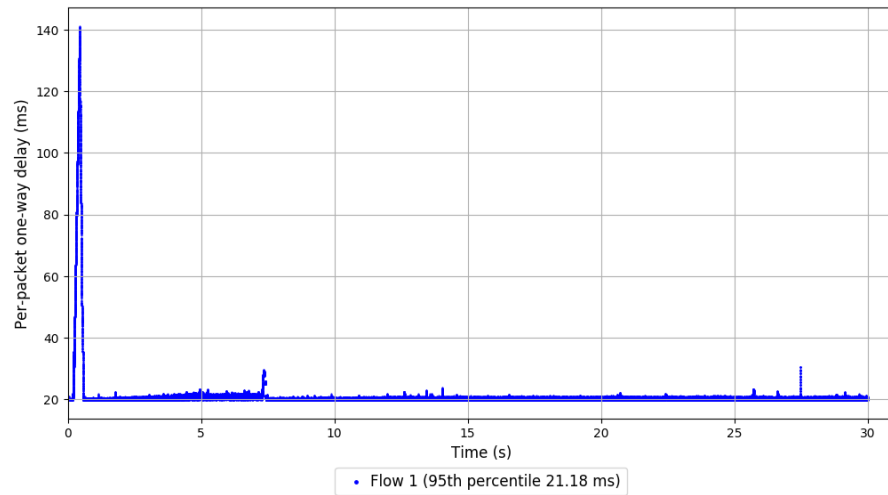
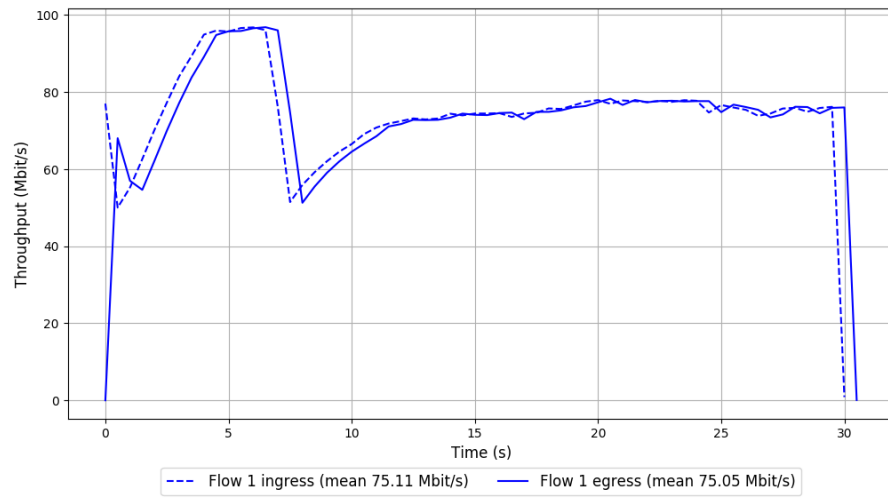


Run 3: Statistics of TCP Vegas

Start at: 2018-10-26 07:00:07
End at: 2018-10-26 07:00:37
Local clock offset: 3.447 ms
Remote clock offset: -4.035 ms

Below is generated by plot.py at 2018-10-26 08:11:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 75.05 Mbit/s
95th percentile per-packet one-way delay: 21.176 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 75.05 Mbit/s
95th percentile per-packet one-way delay: 21.176 ms
Loss rate: 0.18%

Run 3: Report of TCP Vegas — Data Link

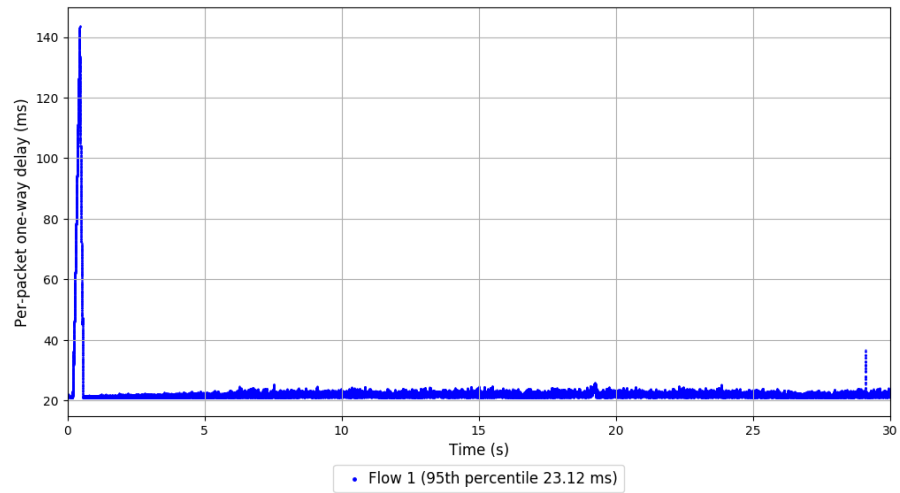
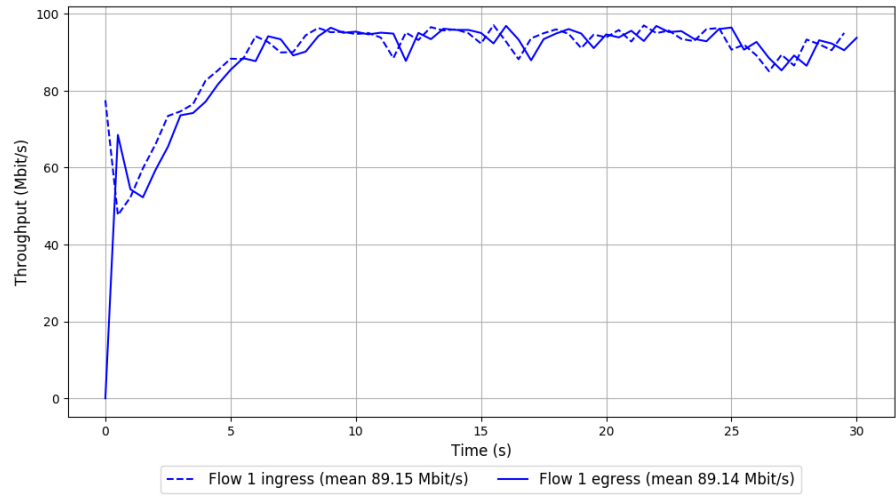


Run 4: Statistics of TCP Vegas

Start at: 2018-10-26 07:21:53
End at: 2018-10-26 07:22:23
Local clock offset: 3.182 ms
Remote clock offset: -3.606 ms

Below is generated by plot.py at 2018-10-26 08:11:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 89.14 Mbit/s
95th percentile per-packet one-way delay: 23.119 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 89.14 Mbit/s
95th percentile per-packet one-way delay: 23.119 ms
Loss rate: 0.10%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-10-26 07:43:11

End at: 2018-10-26 07:43:41

Local clock offset: 2.775 ms

Remote clock offset: 2.564 ms

Below is generated by plot.py at 2018-10-26 08:11:40

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.00 Mbit/s

95th percentile per-packet one-way delay: 15.121 ms

Loss rate: 0.10%

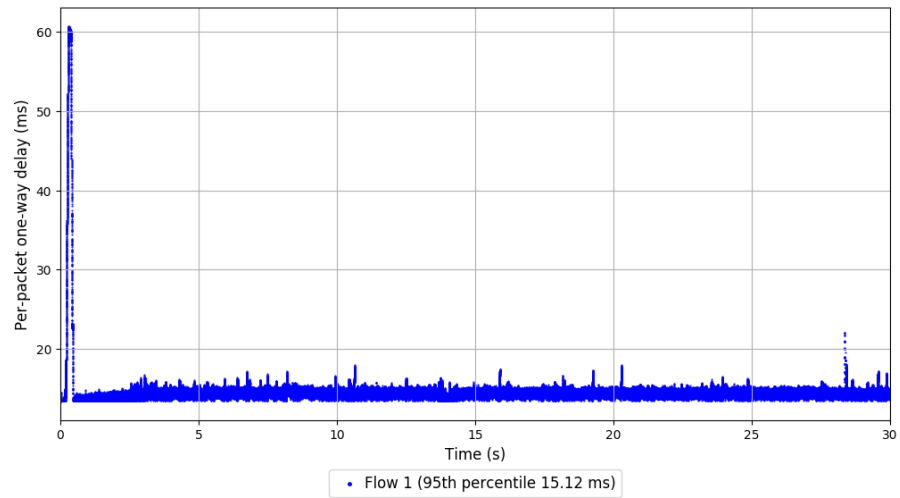
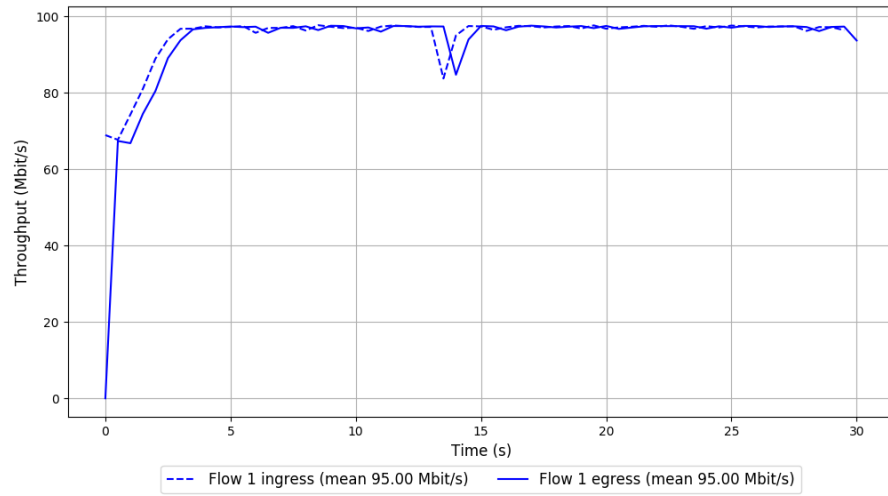
-- Flow 1:

Average throughput: 95.00 Mbit/s

95th percentile per-packet one-way delay: 15.121 ms

Loss rate: 0.10%

Run 5: Report of TCP Vegas — Data Link

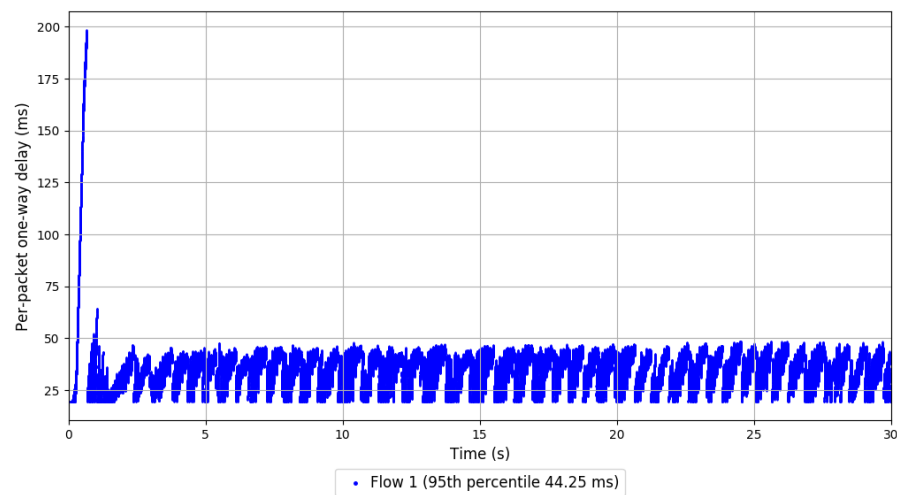
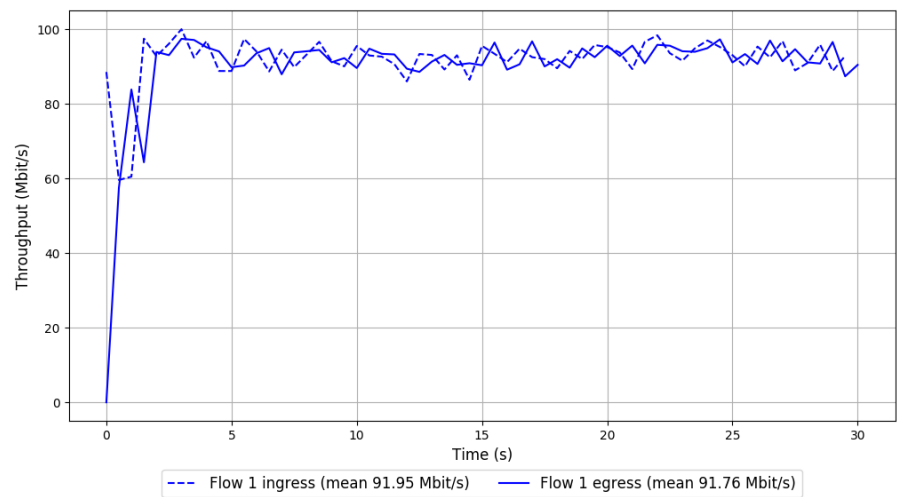


Run 1: Statistics of Verus

Start at: 2018-10-26 06:09:06
End at: 2018-10-26 06:09:36
Local clock offset: -0.079 ms
Remote clock offset: -5.313 ms

Below is generated by plot.py at 2018-10-26 08:11:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 91.76 Mbit/s
95th percentile per-packet one-way delay: 44.251 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 91.76 Mbit/s
95th percentile per-packet one-way delay: 44.251 ms
Loss rate: 0.28%

Run 1: Report of Verus — Data Link

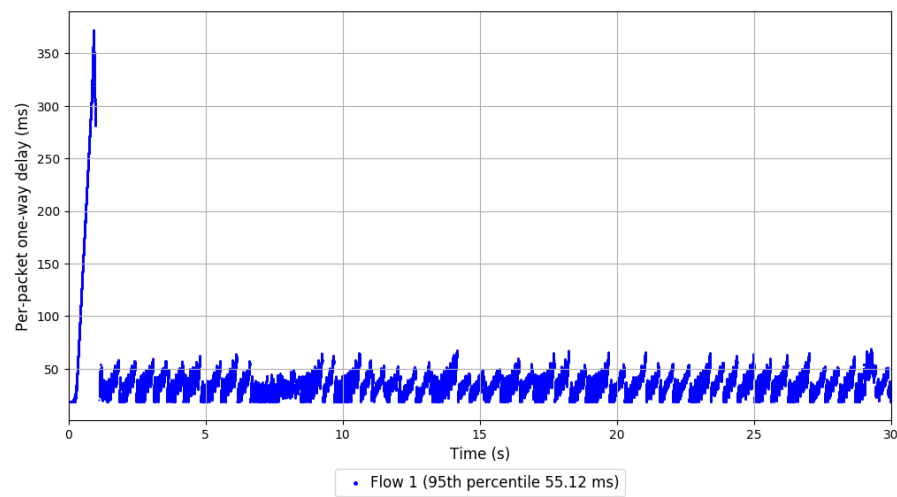
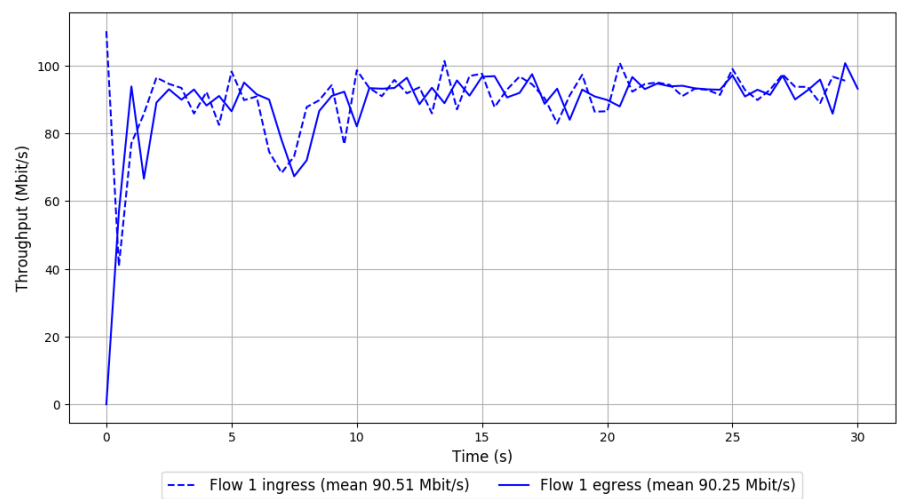


Run 2: Statistics of Verus

Start at: 2018-10-26 06:31:40
End at: 2018-10-26 06:32:10
Local clock offset: 0.281 ms
Remote clock offset: -4.766 ms

Below is generated by plot.py at 2018-10-26 08:12:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 90.25 Mbit/s
95th percentile per-packet one-way delay: 55.119 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 90.25 Mbit/s
95th percentile per-packet one-way delay: 55.119 ms
Loss rate: 0.37%

Run 2: Report of Verus — Data Link

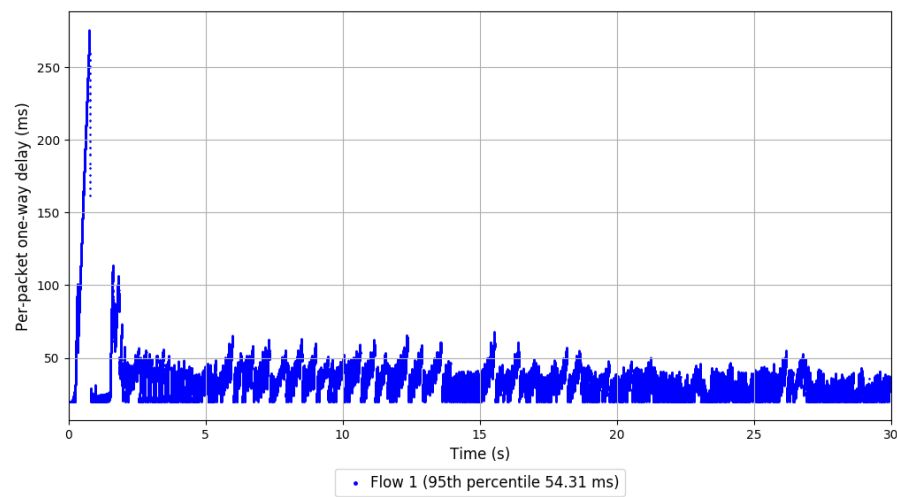
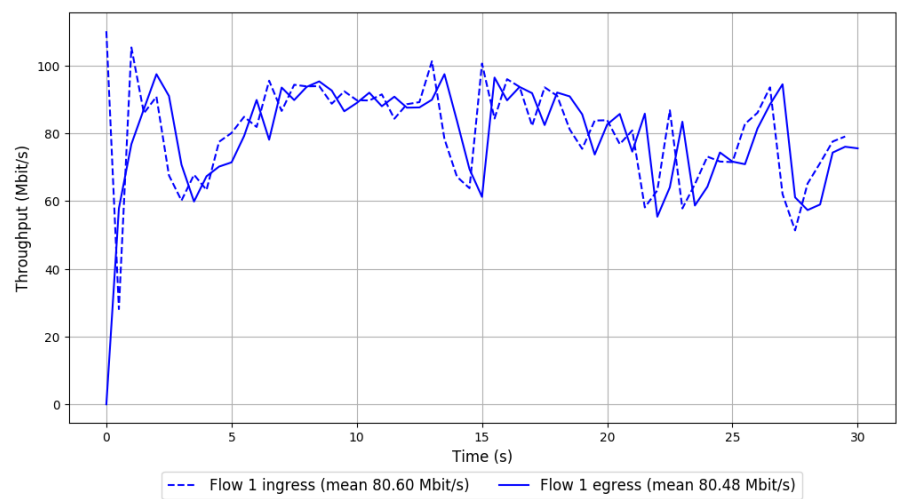


Run 3: Statistics of Verus

Start at: 2018-10-26 06:54:01
End at: 2018-10-26 06:54:31
Local clock offset: 2.741 ms
Remote clock offset: -4.768 ms

Below is generated by plot.py at 2018-10-26 08:12:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 80.48 Mbit/s
95th percentile per-packet one-way delay: 54.311 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 80.48 Mbit/s
95th percentile per-packet one-way delay: 54.311 ms
Loss rate: 0.23%

Run 3: Report of Verus — Data Link

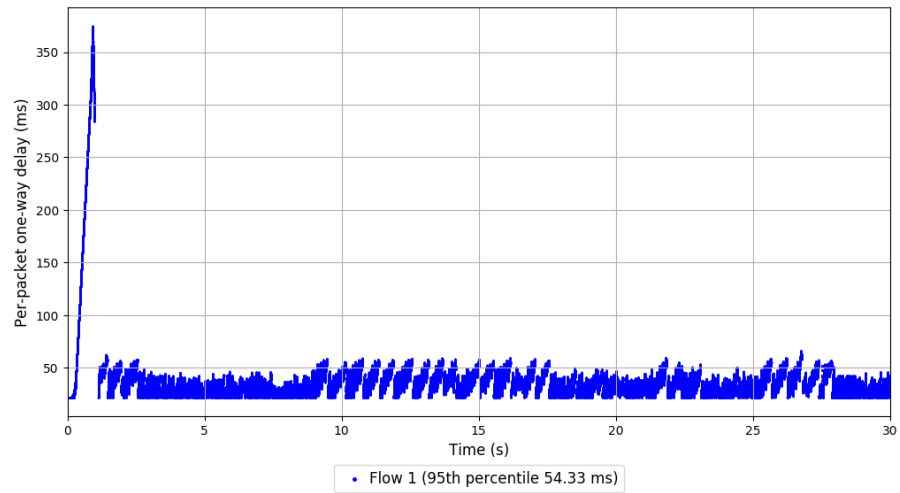
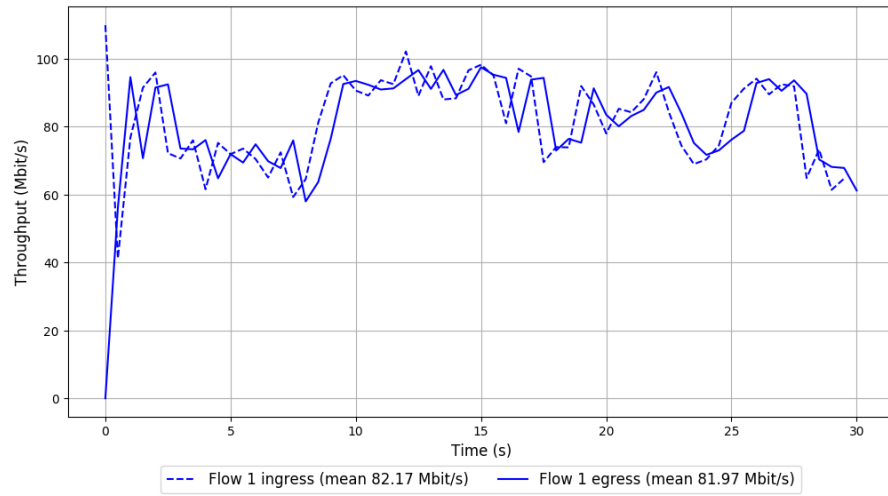


Run 4: Statistics of Verus

Start at: 2018-10-26 07:16:07
End at: 2018-10-26 07:16:37
Local clock offset: 3.441 ms
Remote clock offset: -3.975 ms

Below is generated by plot.py at 2018-10-26 08:12:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 81.97 Mbit/s
95th percentile per-packet one-way delay: 54.333 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 81.97 Mbit/s
95th percentile per-packet one-way delay: 54.333 ms
Loss rate: 0.23%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-10-26 07:37:29

End at: 2018-10-26 07:37:59

Local clock offset: 4.77 ms

Remote clock offset: 6.016 ms

Below is generated by plot.py at 2018-10-26 08:12:19

Datalink statistics

-- Total of 1 flow:

Average throughput: 89.09 Mbit/s

95th percentile per-packet one-way delay: 48.415 ms

Loss rate: 1.11%

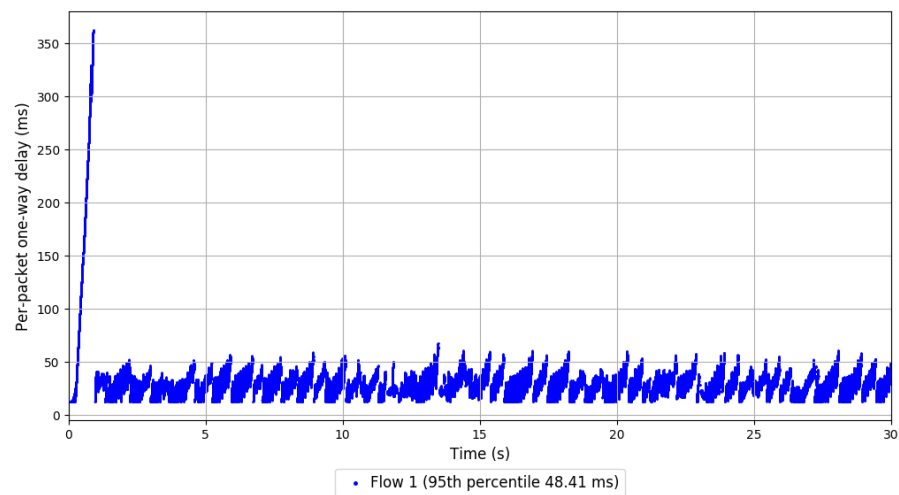
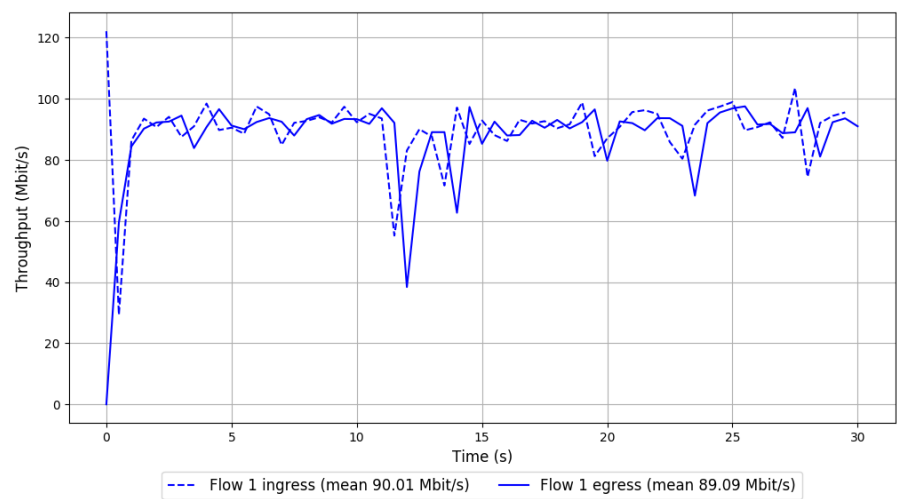
-- Flow 1:

Average throughput: 89.09 Mbit/s

95th percentile per-packet one-way delay: 48.415 ms

Loss rate: 1.11%

Run 5: Report of Verus — Data Link

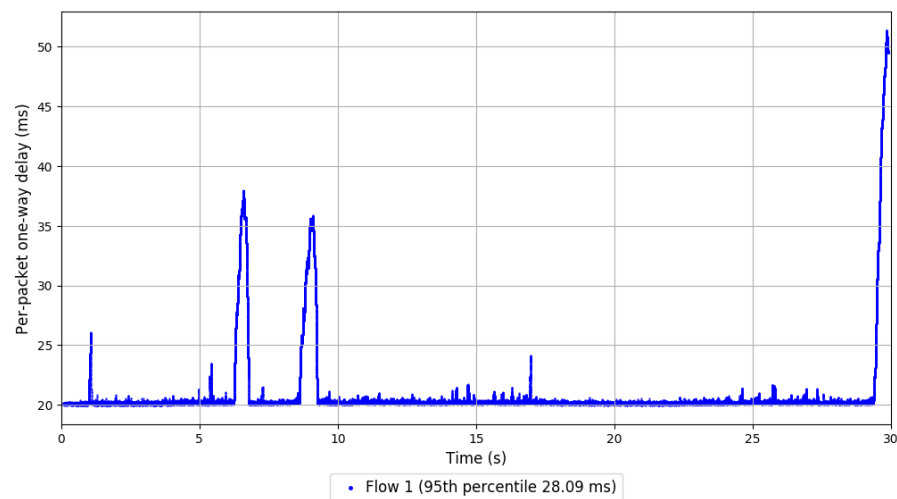
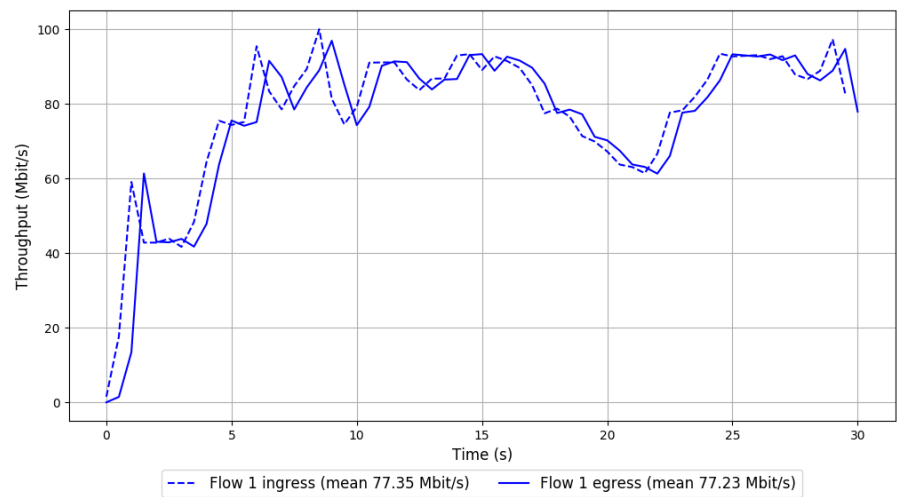


Run 1: Statistics of PCC-Vivace

Start at: 2018-10-26 06:12:30
End at: 2018-10-26 06:13:00
Local clock offset: 0.551 ms
Remote clock offset: -5.494 ms

Below is generated by plot.py at 2018-10-26 08:12:19
Datalink statistics
-- Total of 1 flow:
Average throughput: 77.23 Mbit/s
95th percentile per-packet one-way delay: 28.085 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 77.23 Mbit/s
95th percentile per-packet one-way delay: 28.085 ms
Loss rate: 0.25%

Run 1: Report of PCC-Vivace — Data Link

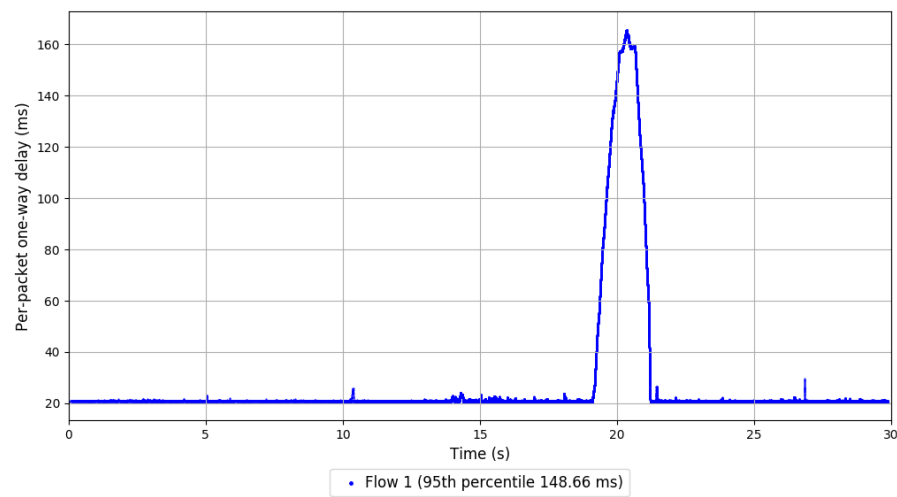
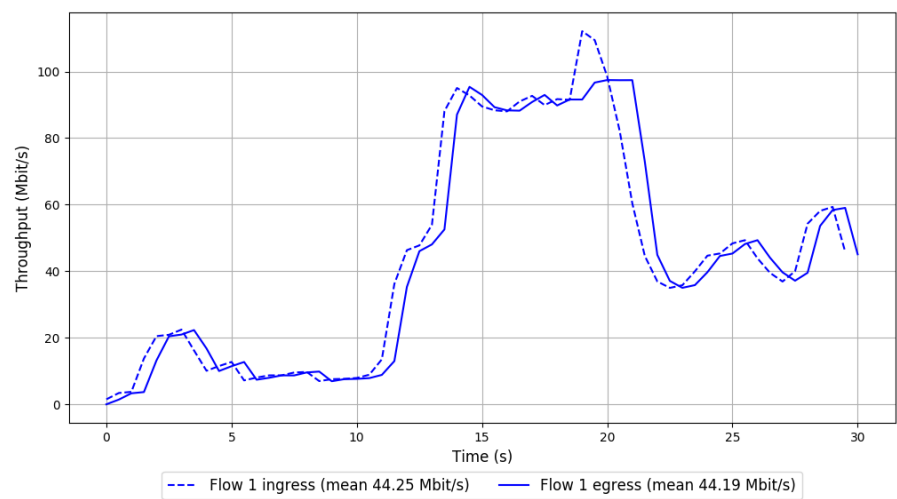


Run 2: Statistics of PCC-Vivace

Start at: 2018-10-26 06:35:07
End at: 2018-10-26 06:35:37
Local clock offset: 2.458 ms
Remote clock offset: -4.991 ms

Below is generated by plot.py at 2018-10-26 08:12:19
Datalink statistics
-- Total of 1 flow:
Average throughput: 44.19 Mbit/s
95th percentile per-packet one-way delay: 148.655 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 44.19 Mbit/s
95th percentile per-packet one-way delay: 148.655 ms
Loss rate: 0.22%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2018-10-26 06:57:33

End at: 2018-10-26 06:58:03

Local clock offset: 3.529 ms

Remote clock offset: 8.326 ms

Below is generated by plot.py at 2018-10-26 08:12:27

Datalink statistics

-- Total of 1 flow:

Average throughput: 74.61 Mbit/s

95th percentile per-packet one-way delay: 37.308 ms

Loss rate: 0.16%

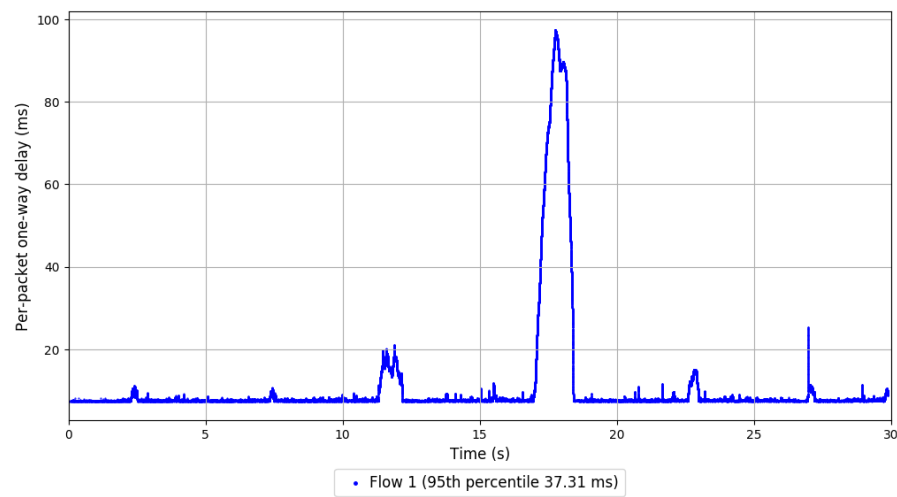
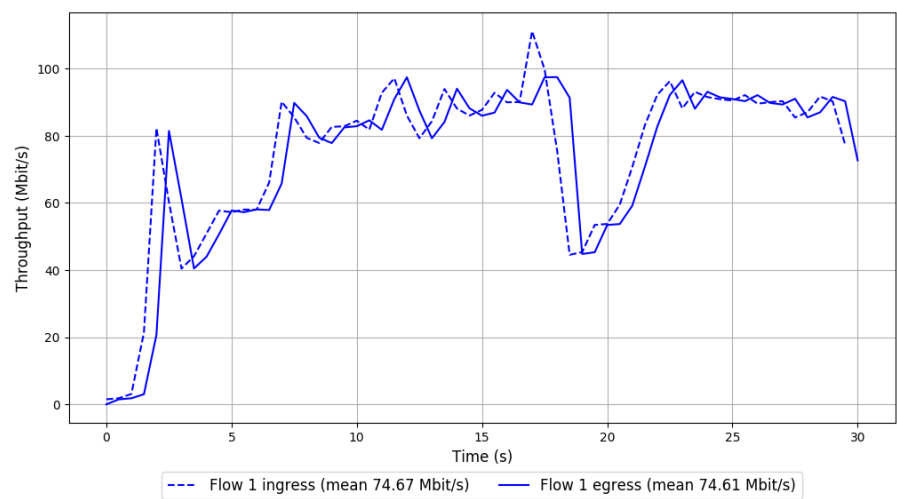
-- Flow 1:

Average throughput: 74.61 Mbit/s

95th percentile per-packet one-way delay: 37.308 ms

Loss rate: 0.16%

Run 3: Report of PCC-Vivace — Data Link

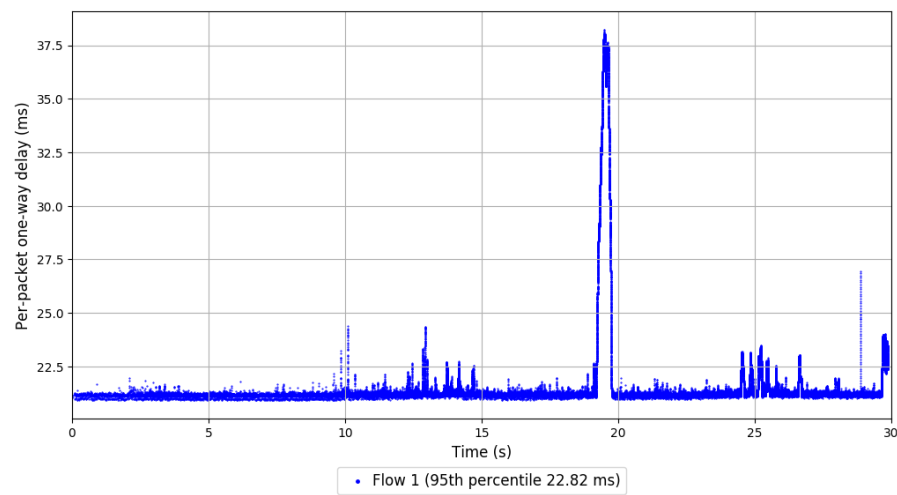
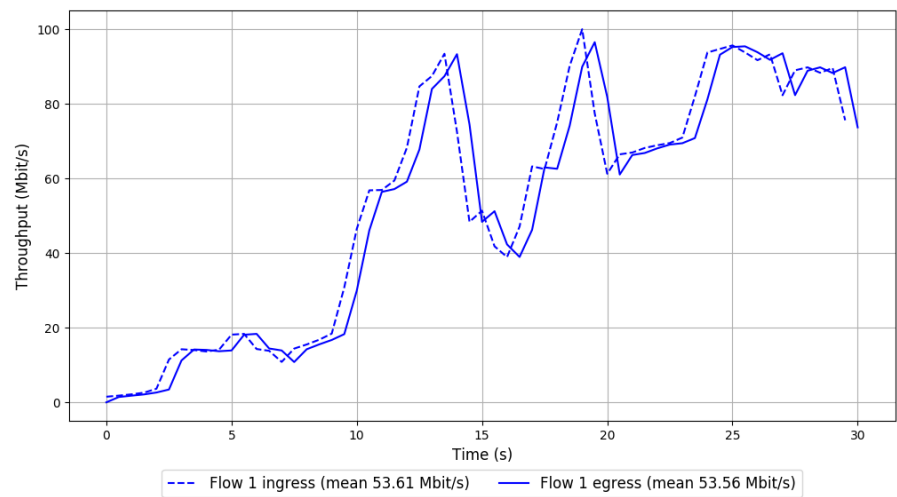


Run 4: Statistics of PCC-Vivace

Start at: 2018-10-26 07:19:30
End at: 2018-10-26 07:20:00
Local clock offset: 3.115 ms
Remote clock offset: -3.852 ms

Below is generated by plot.py at 2018-10-26 08:12:27
Datalink statistics
-- Total of 1 flow:
Average throughput: 53.56 Mbit/s
95th percentile per-packet one-way delay: 22.820 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 53.56 Mbit/s
95th percentile per-packet one-way delay: 22.820 ms
Loss rate: 0.19%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2018-10-26 07:40:52

End at: 2018-10-26 07:41:22

Local clock offset: 3.797 ms

Remote clock offset: 5.659 ms

Below is generated by plot.py at 2018-10-26 08:12:27

Datalink statistics

-- Total of 1 flow:

Average throughput: 72.68 Mbit/s

95th percentile per-packet one-way delay: 58.622 ms

Loss rate: 0.16%

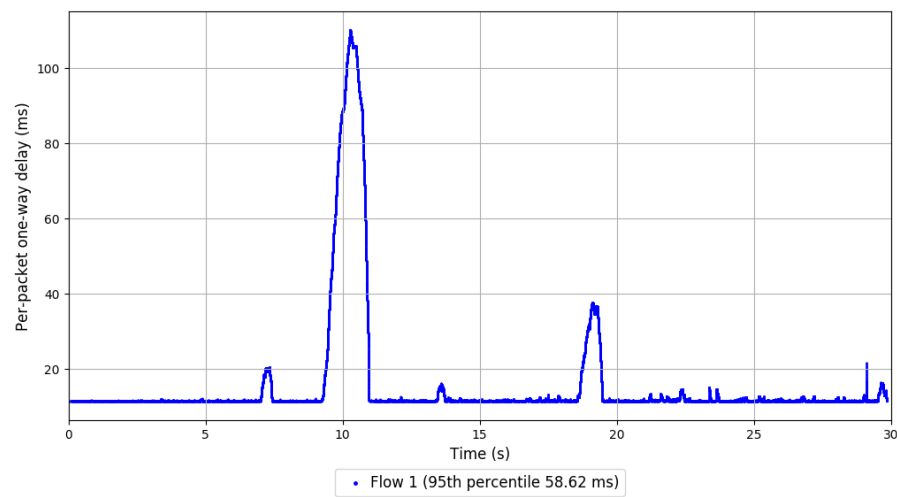
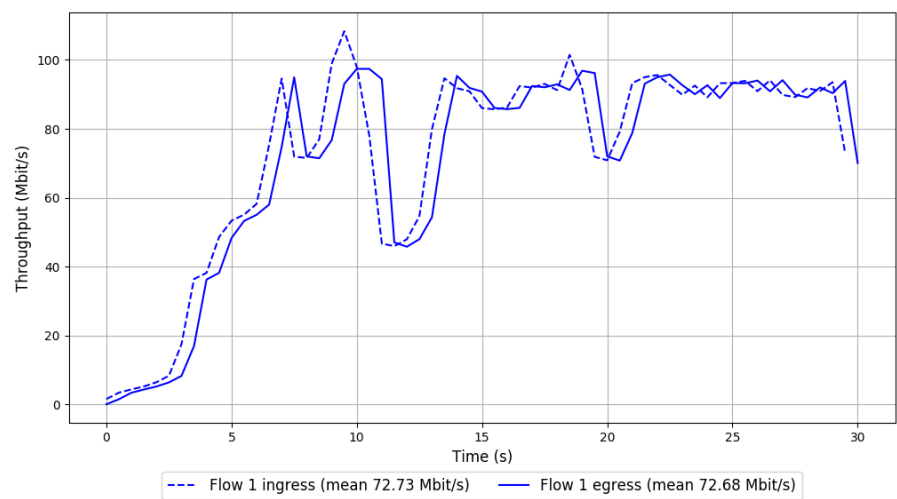
-- Flow 1:

Average throughput: 72.68 Mbit/s

95th percentile per-packet one-way delay: 58.622 ms

Loss rate: 0.16%

Run 5: Report of PCC-Vivace — Data Link

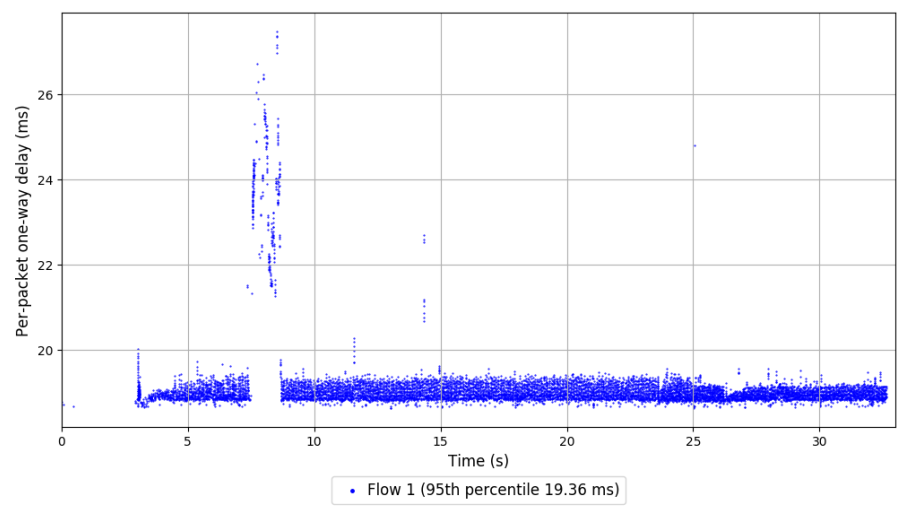
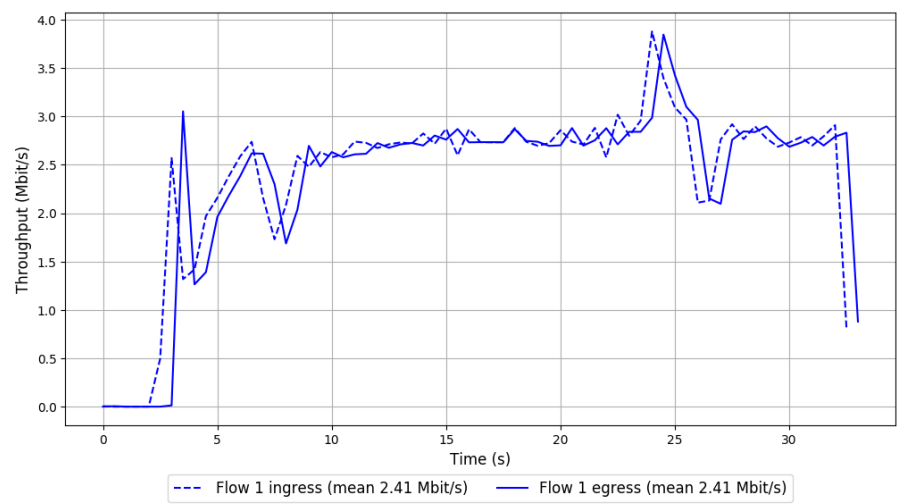


Run 1: Statistics of WebRTC media

Start at: 2018-10-26 06:10:20
End at: 2018-10-26 06:10:50
Local clock offset: 0.313 ms
Remote clock offset: -4.376 ms

Below is generated by plot.py at 2018-10-26 08:12:27
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 19.365 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 19.365 ms
Loss rate: 0.06%

Run 1: Report of WebRTC media — Data Link

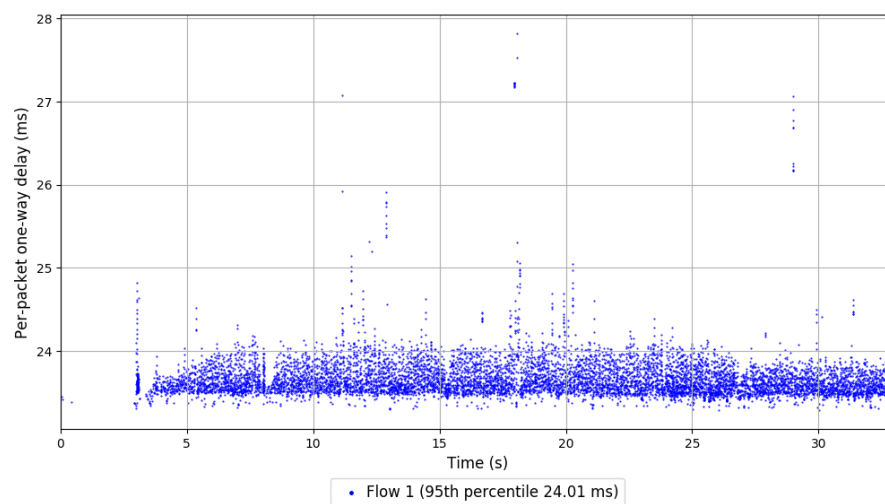
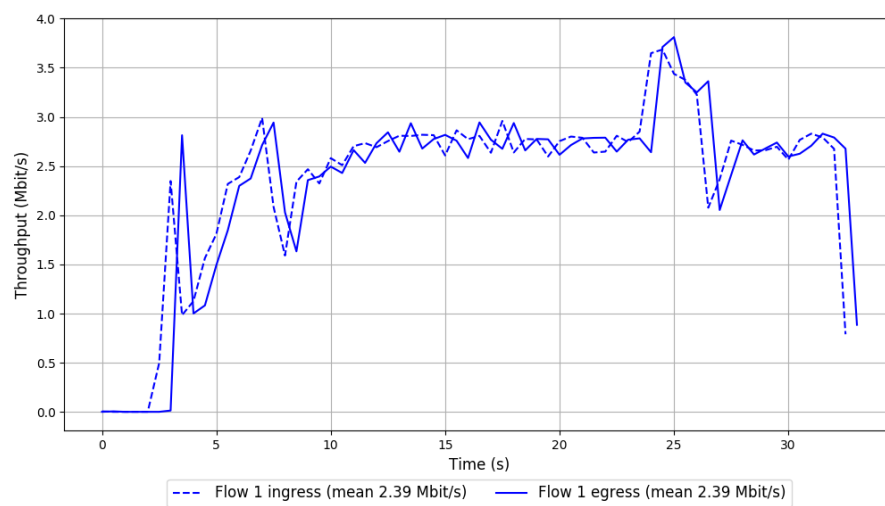


Run 2: Statistics of WebRTC media

Start at: 2018-10-26 06:32:56
End at: 2018-10-26 06:33:26
Local clock offset: 4.089 ms
Remote clock offset: -5.913 ms

Below is generated by plot.py at 2018-10-26 08:12:27
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.39 Mbit/s
95th percentile per-packet one-way delay: 24.013 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 2.39 Mbit/s
95th percentile per-packet one-way delay: 24.013 ms
Loss rate: 0.06%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-10-26 06:55:22

End at: 2018-10-26 06:55:52

Local clock offset: 4.958 ms

Remote clock offset: -4.11 ms

Below is generated by plot.py at 2018-10-26 08:12:27

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.38 Mbit/s

95th percentile per-packet one-way delay: 21.867 ms

Loss rate: 0.13%

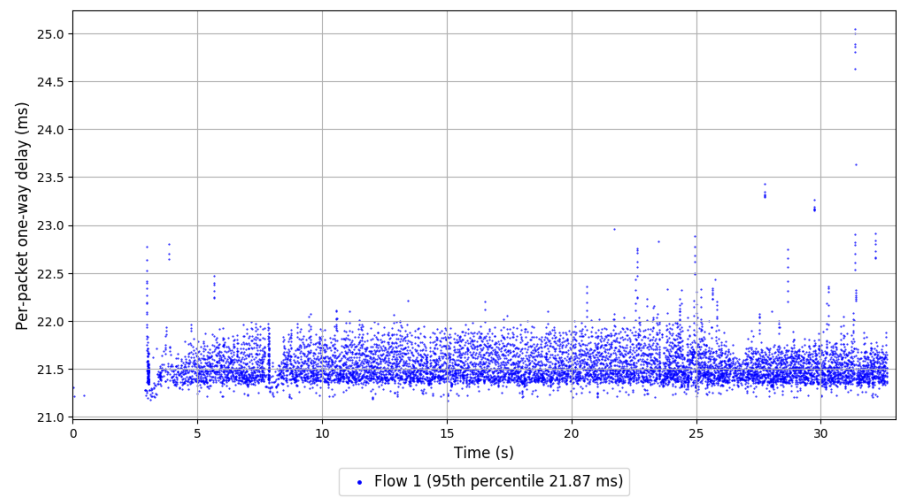
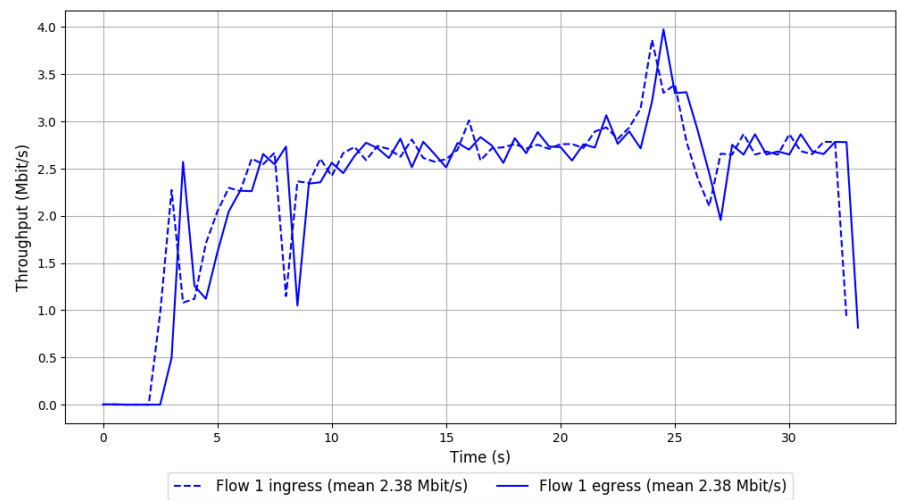
-- Flow 1:

Average throughput: 2.38 Mbit/s

95th percentile per-packet one-way delay: 21.867 ms

Loss rate: 0.13%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-10-26 07:17:20

End at: 2018-10-26 07:17:50

Local clock offset: 2.707 ms

Remote clock offset: 3.864 ms

Below is generated by plot.py at 2018-10-26 08:12:27

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.39 Mbit/s

95th percentile per-packet one-way delay: 13.418 ms

Loss rate: 0.06%

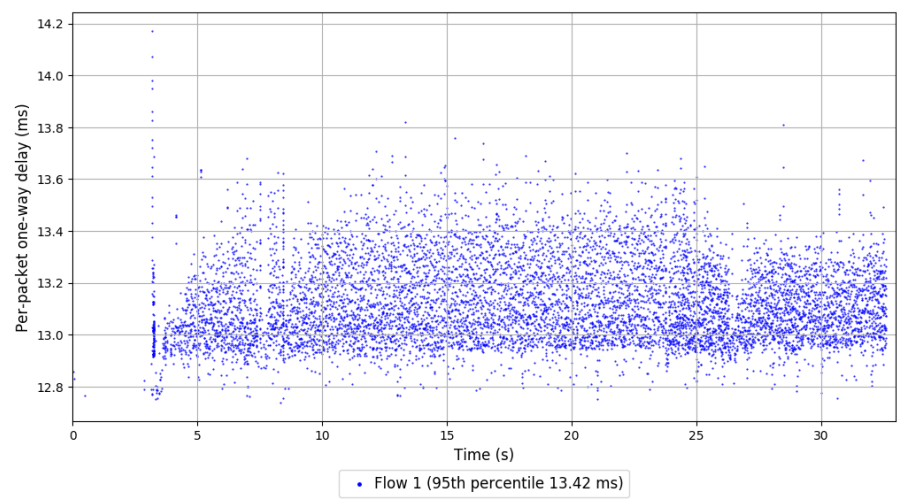
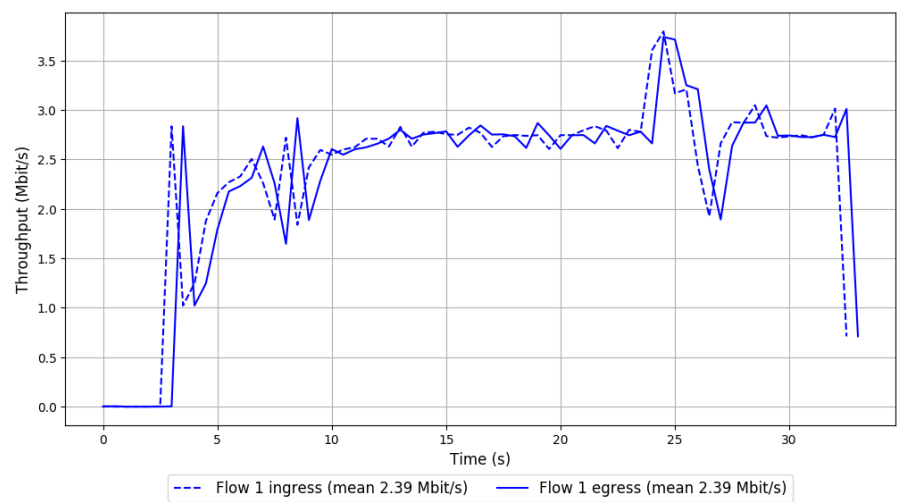
-- Flow 1:

Average throughput: 2.39 Mbit/s

95th percentile per-packet one-way delay: 13.418 ms

Loss rate: 0.06%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-10-26 07:38:42

End at: 2018-10-26 07:39:12

Local clock offset: 1.924 ms

Remote clock offset: 3.468 ms

Below is generated by plot.py at 2018-10-26 08:12:27

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.40 Mbit/s

95th percentile per-packet one-way delay: 12.472 ms

Loss rate: 0.06%

-- Flow 1:

Average throughput: 2.40 Mbit/s

95th percentile per-packet one-way delay: 12.472 ms

Loss rate: 0.06%

Run 5: Report of WebRTC media — Data Link

