

Pantheon Report

Generated at 2018-10-02 15:29:27 (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.

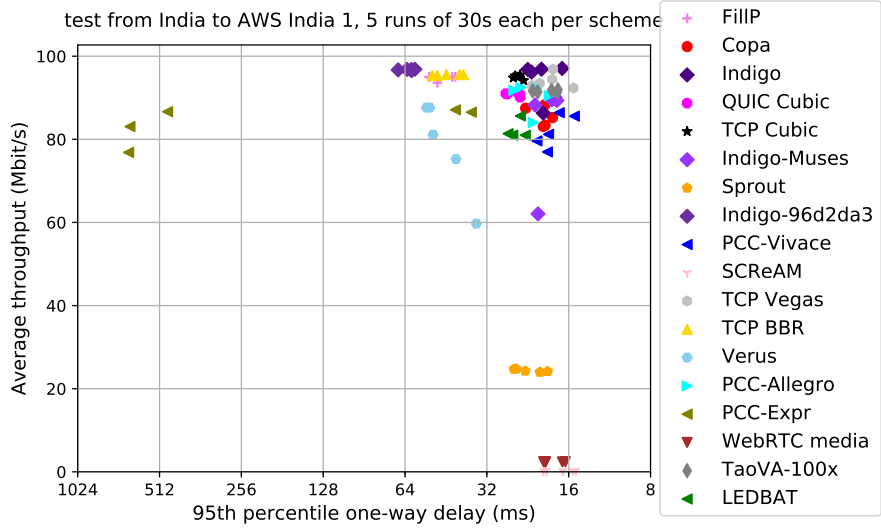
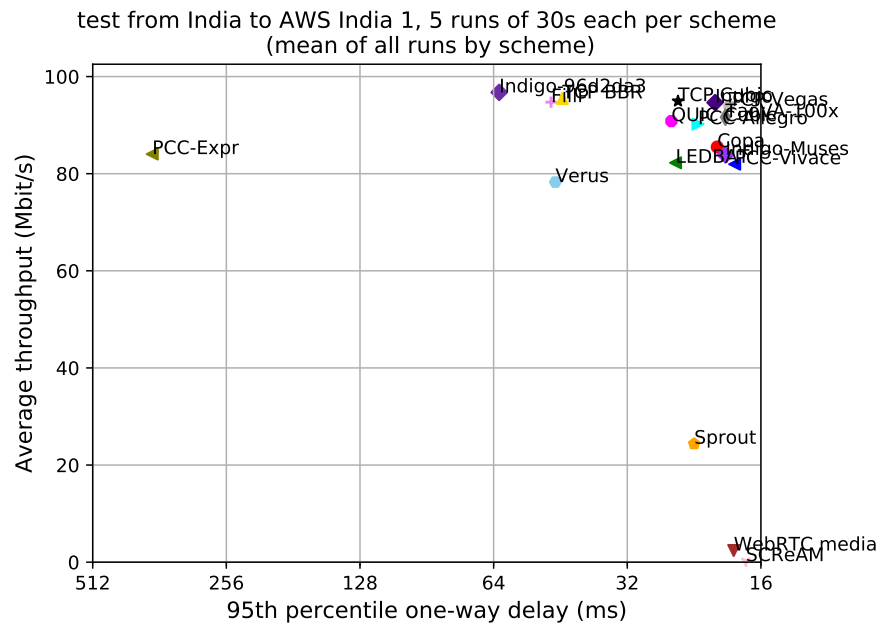
System info:

```
Linux 4.15.0-1021-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 @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
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-quick @ 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	95.50	44.80	1.84
Copa	5	85.50	20.07	0.10
TCP Cubic	5	94.94	24.60	0.10
FillP	5	94.73	47.52	1.61
Indigo	5	94.64	20.29	0.09
Indigo-96d2da3	5	96.75	62.19	7.07
LEDBAT	4	82.24	24.91	0.14
Indigo-Muses	5	83.87	19.24	0.09
PCC-Allegro	5	90.20	22.18	0.12
PCC-Expr	5	84.04	375.96	2.64
QUIC Cubic	5	90.83	25.46	0.12
SCReAM	5	0.22	17.30	0.10
Sprout	5	24.38	22.62	0.13
TaoVA-100x	5	91.64	19.23	0.11
TCP Vegas	5	94.01	18.87	0.11
Verus	5	78.27	46.47	0.26
PCC-Vivace	5	81.95	18.34	0.13
WebRTC media	5	2.40	18.43	0.11

Run 1: Statistics of TCP BBR

Start at: 2018-10-02 13:28:40

End at: 2018-10-02 13:29:10

Local clock offset: -0.46 ms

Remote clock offset: -2.442 ms

Below is generated by plot.py at 2018-10-02 15:18:24

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.37 Mbit/s

95th percentile per-packet one-way delay: 48.652 ms

Loss rate: 2.23%

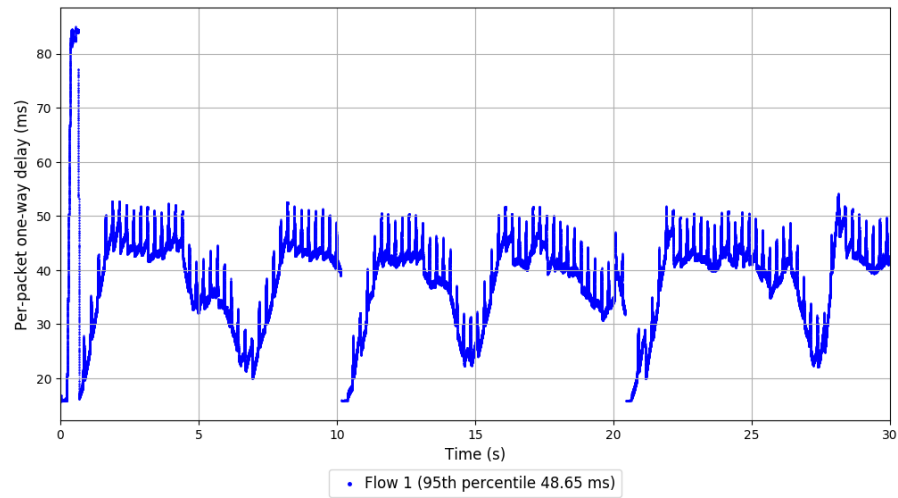
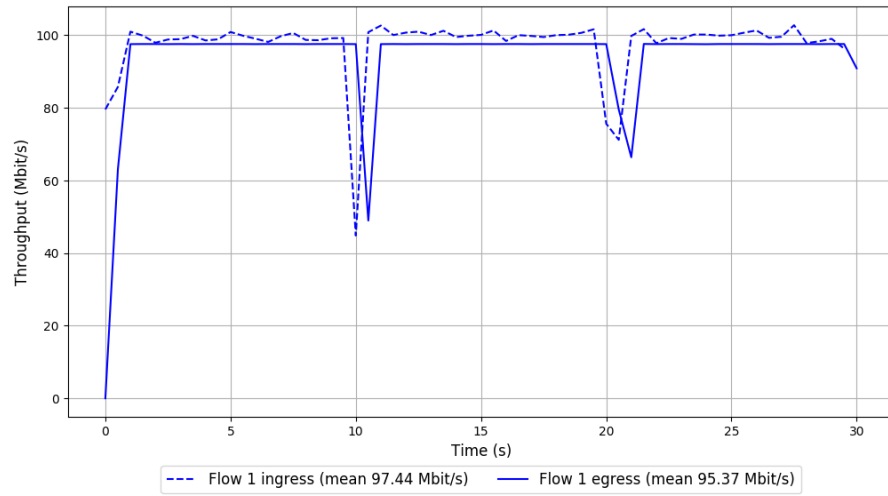
-- Flow 1:

Average throughput: 95.37 Mbit/s

95th percentile per-packet one-way delay: 48.652 ms

Loss rate: 2.23%

Run 1: Report of TCP BBR — Data Link

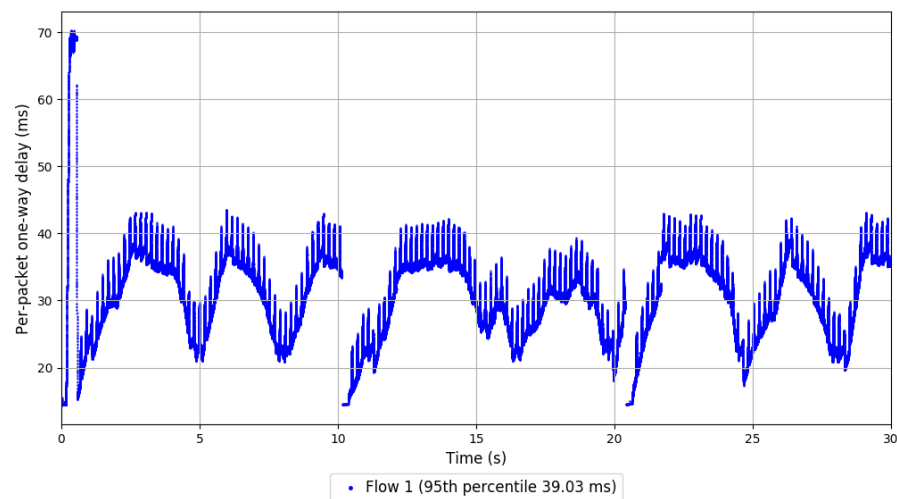
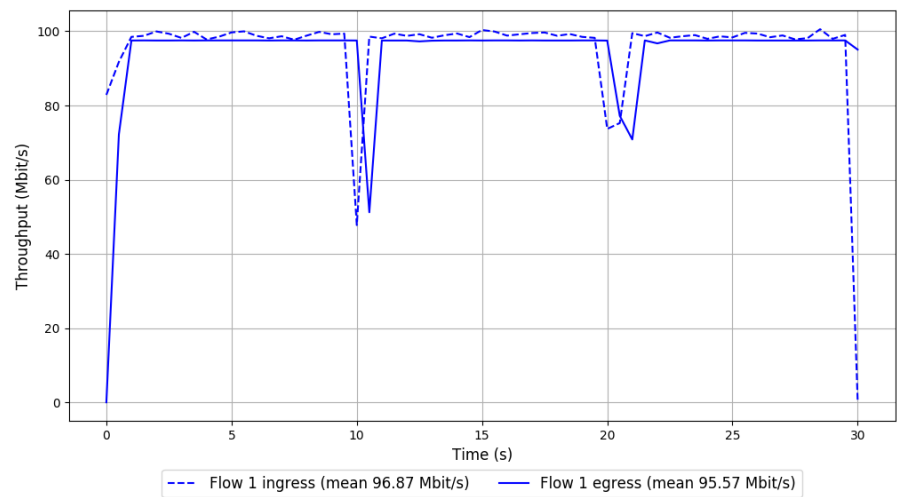


Run 2: Statistics of TCP BBR

Start at: 2018-10-02 13:50:11
End at: 2018-10-02 13:50:41
Local clock offset: -0.37 ms
Remote clock offset: -1.037 ms

Below is generated by plot.py at 2018-10-02 15:18:24
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.57 Mbit/s
95th percentile per-packet one-way delay: 39.035 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 95.57 Mbit/s
95th percentile per-packet one-way delay: 39.035 ms
Loss rate: 1.43%

Run 2: Report of TCP BBR — Data Link

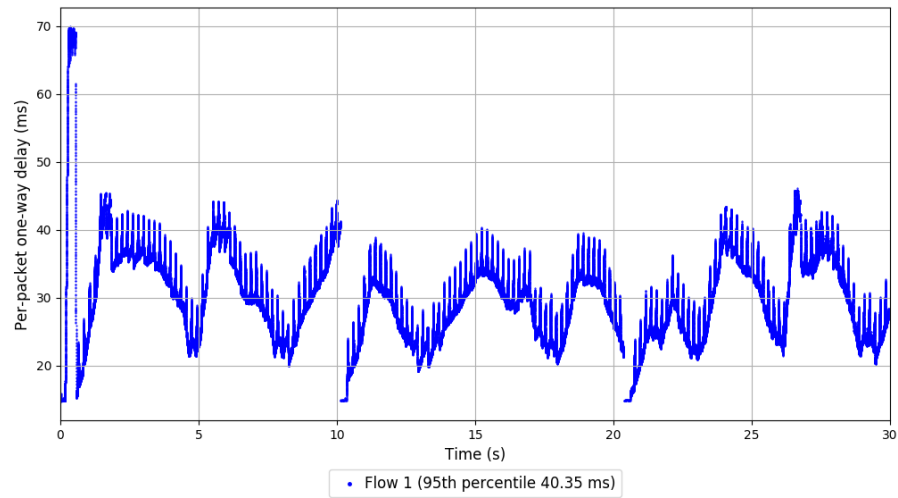
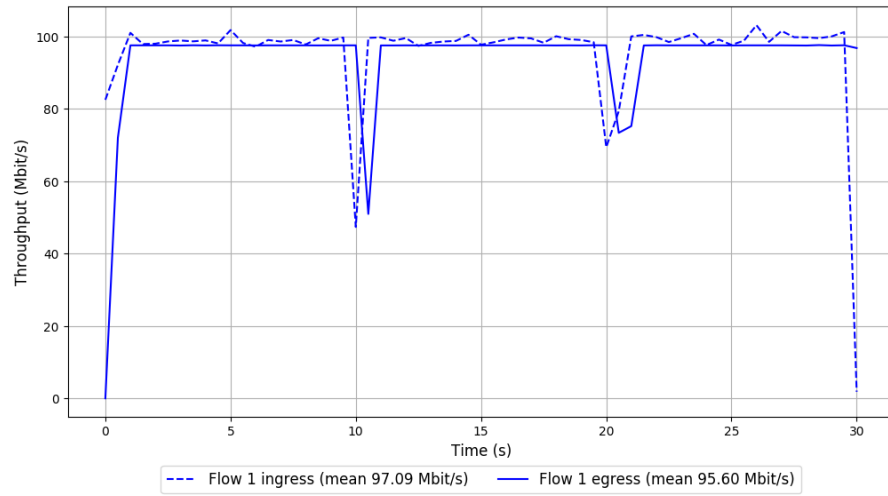


Run 3: Statistics of TCP BBR

Start at: 2018-10-02 14:11:34
End at: 2018-10-02 14:12:04
Local clock offset: -0.911 ms
Remote clock offset: -2.051 ms

Below is generated by plot.py at 2018-10-02 15:18:24
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.60 Mbit/s
95th percentile per-packet one-way delay: 40.355 ms
Loss rate: 1.64%
-- Flow 1:
Average throughput: 95.60 Mbit/s
95th percentile per-packet one-way delay: 40.355 ms
Loss rate: 1.64%

Run 3: Report of TCP BBR — Data Link

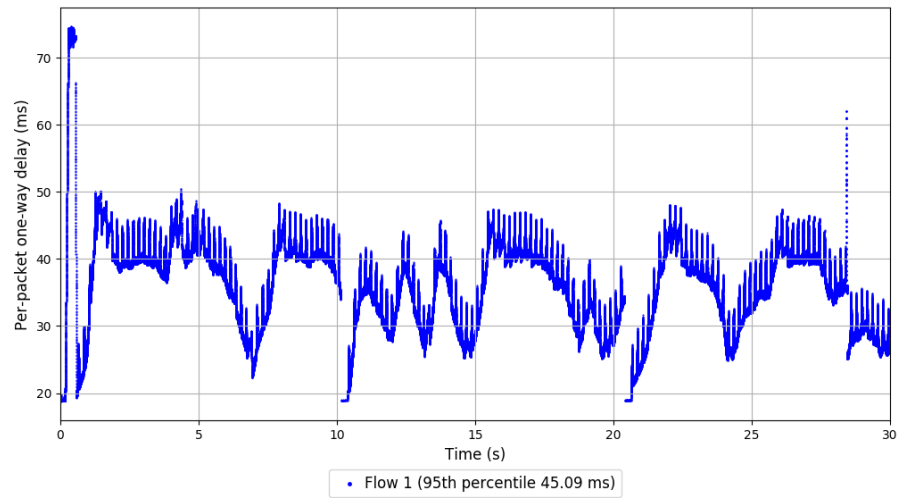
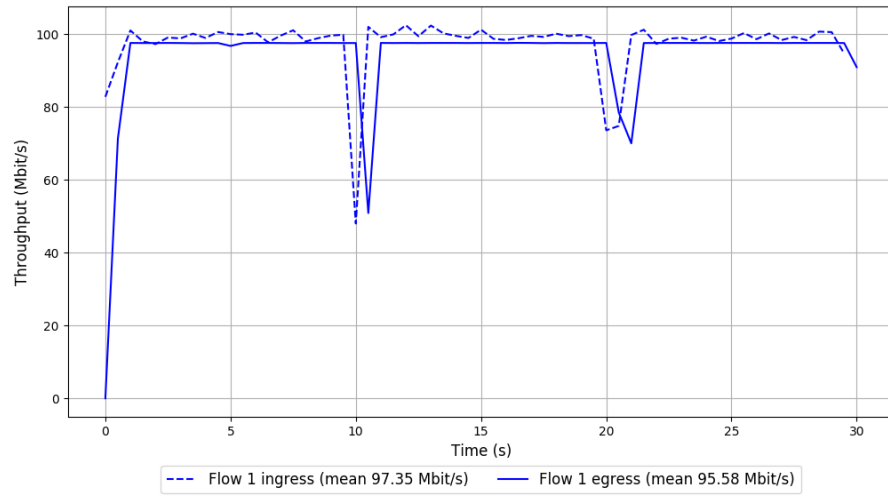


Run 4: Statistics of TCP BBR

Start at: 2018-10-02 14:33:08
End at: 2018-10-02 14:33:38
Local clock offset: 0.616 ms
Remote clock offset: -4.626 ms

Below is generated by plot.py at 2018-10-02 15:18:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.58 Mbit/s
95th percentile per-packet one-way delay: 45.092 ms
Loss rate: 1.93%
-- Flow 1:
Average throughput: 95.58 Mbit/s
95th percentile per-packet one-way delay: 45.092 ms
Loss rate: 1.93%

Run 4: Report of TCP BBR — Data Link

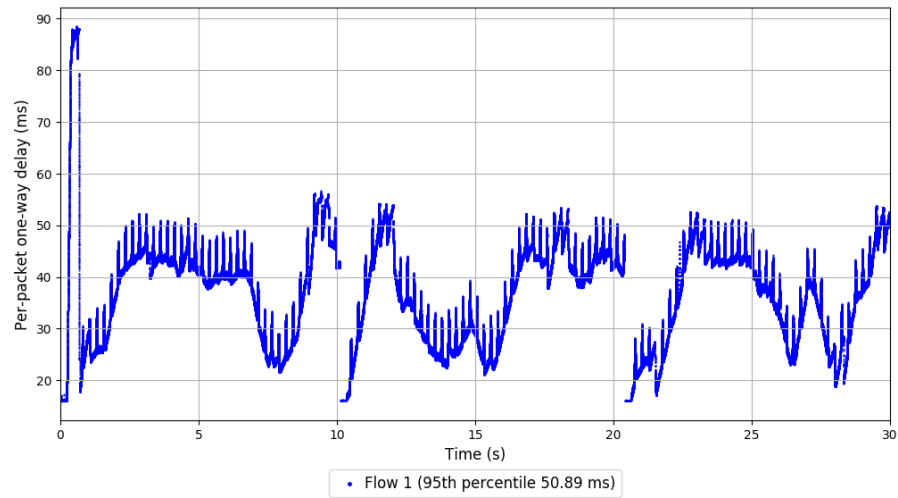
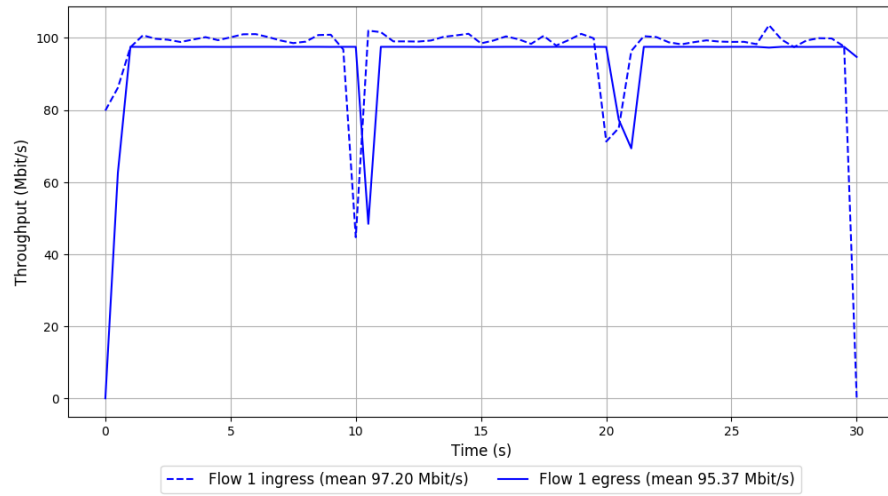


Run 5: Statistics of TCP BBR

Start at: 2018-10-02 14:59:14
End at: 2018-10-02 14:59:44
Local clock offset: -0.561 ms
Remote clock offset: -3.426 ms

Below is generated by plot.py at 2018-10-02 15:18:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.37 Mbit/s
95th percentile per-packet one-way delay: 50.888 ms
Loss rate: 1.99%
-- Flow 1:
Average throughput: 95.37 Mbit/s
95th percentile per-packet one-way delay: 50.888 ms
Loss rate: 1.99%

Run 5: Report of TCP BBR — Data Link

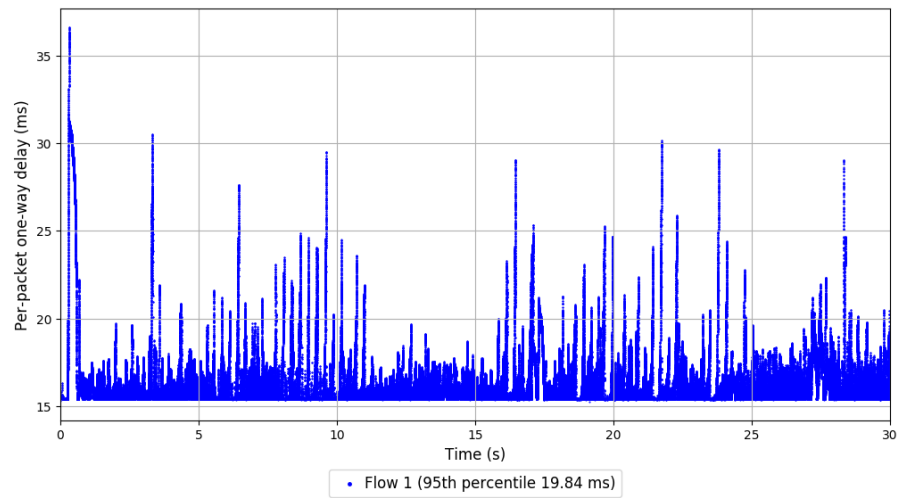
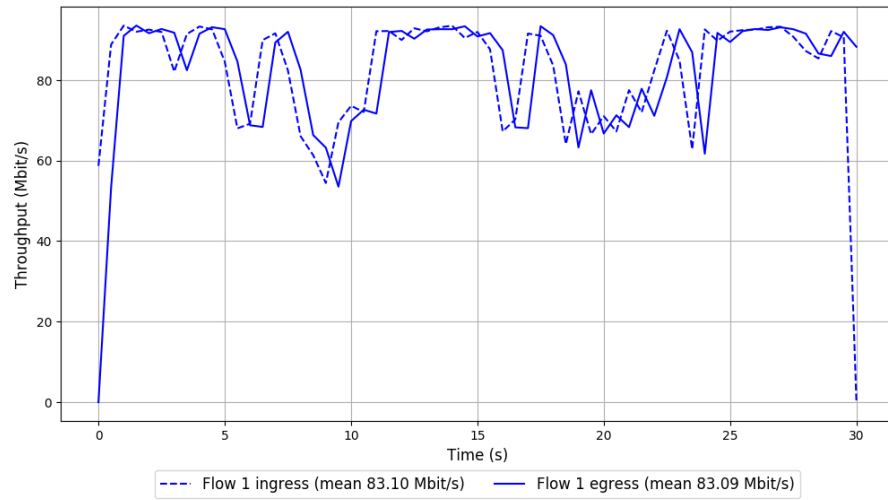


Run 1: Statistics of Copa

Start at: 2018-10-02 13:30:00
End at: 2018-10-02 13:30:30
Local clock offset: -0.376 ms
Remote clock offset: -1.905 ms

Below is generated by plot.py at 2018-10-02 15:19:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 83.09 Mbit/s
95th percentile per-packet one-way delay: 19.838 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 83.09 Mbit/s
95th percentile per-packet one-way delay: 19.838 ms
Loss rate: 0.12%

Run 1: Report of Copa — Data Link

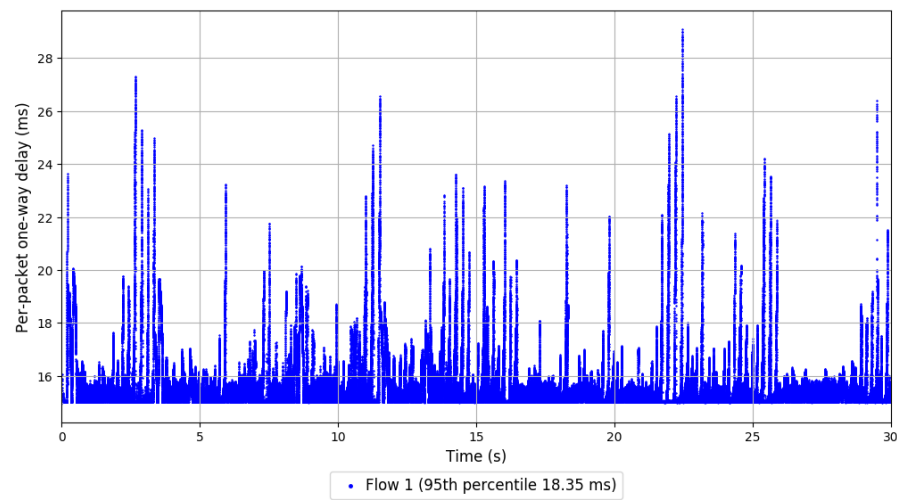
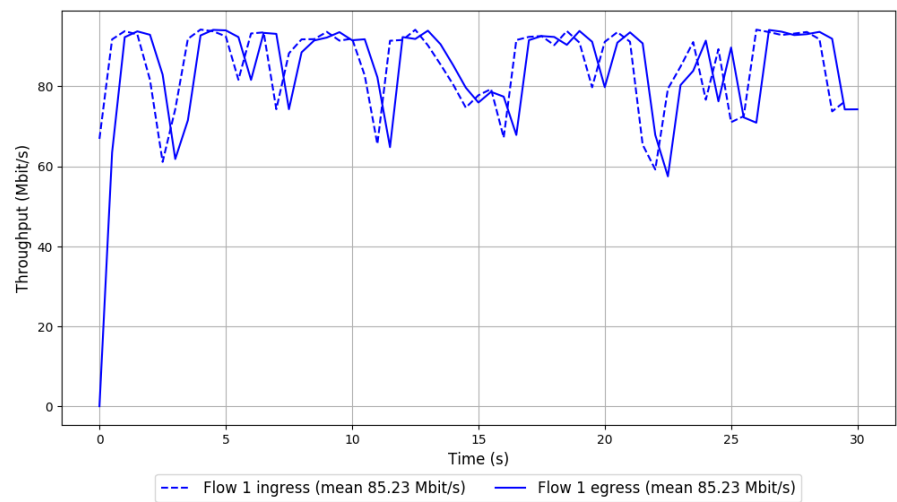


Run 2: Statistics of Copa

Start at: 2018-10-02 13:51:24
End at: 2018-10-02 13:51:54
Local clock offset: -1.218 ms
Remote clock offset: -2.378 ms

Below is generated by plot.py at 2018-10-02 15:19:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 85.23 Mbit/s
95th percentile per-packet one-way delay: 18.347 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 85.23 Mbit/s
95th percentile per-packet one-way delay: 18.347 ms
Loss rate: 0.08%

Run 2: Report of Copa — Data Link

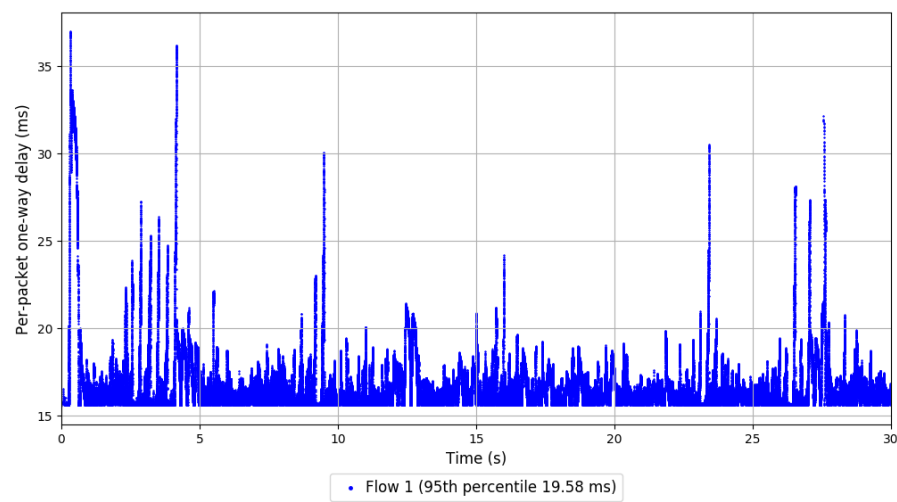
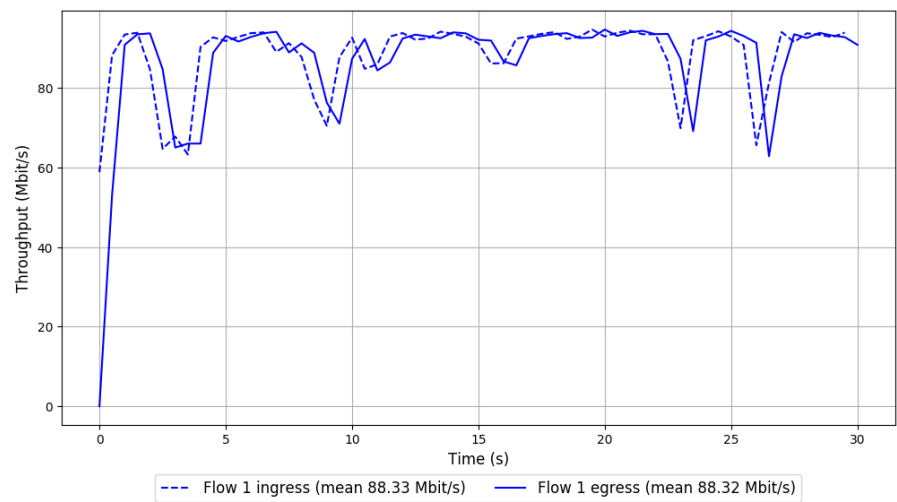


Run 3: Statistics of Copa

Start at: 2018-10-02 14:12:50
End at: 2018-10-02 14:13:20
Local clock offset: -0.68 ms
Remote clock offset: -2.659 ms

Below is generated by plot.py at 2018-10-02 15:19:20
Datalink statistics
-- Total of 1 flow:
Average throughput: 88.32 Mbit/s
95th percentile per-packet one-way delay: 19.581 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 88.32 Mbit/s
95th percentile per-packet one-way delay: 19.581 ms
Loss rate: 0.12%

Run 3: Report of Copa — Data Link

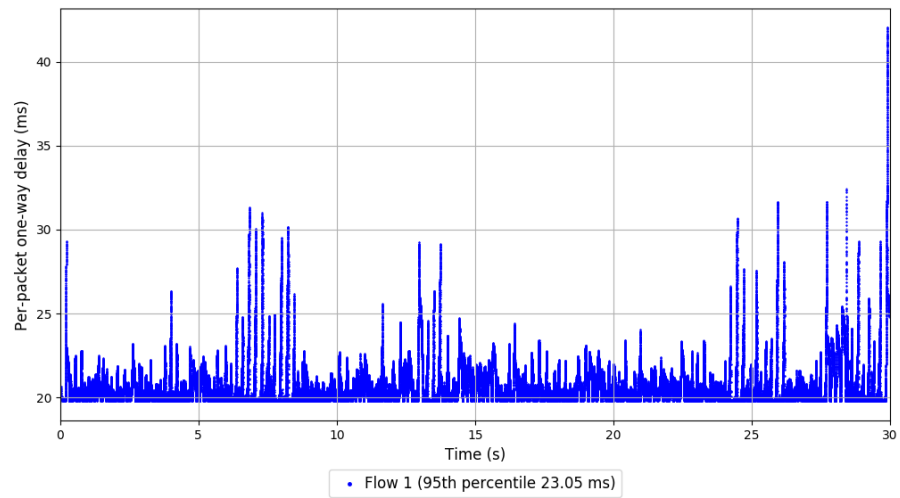
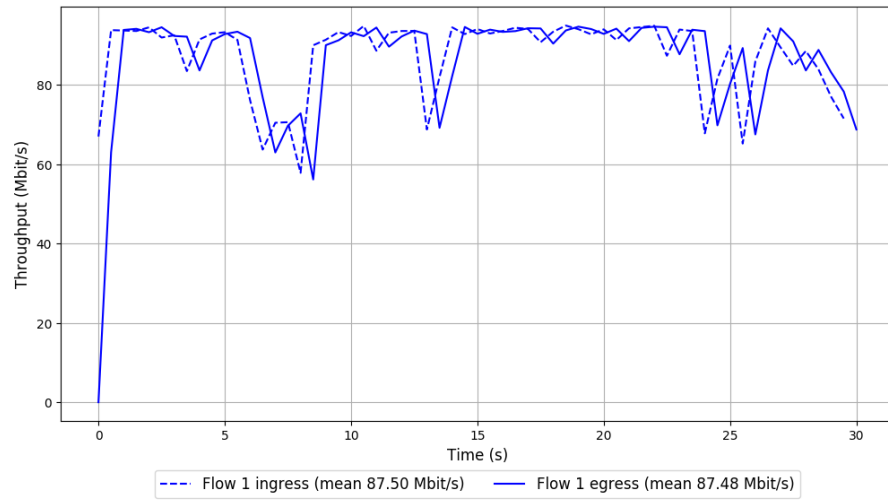


Run 4: Statistics of Copa

Start at: 2018-10-02 14:34:19
End at: 2018-10-02 14:34:49
Local clock offset: 1.518 ms
Remote clock offset: -4.678 ms

Below is generated by plot.py at 2018-10-02 15:20:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 87.48 Mbit/s
95th percentile per-packet one-way delay: 23.048 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 87.48 Mbit/s
95th percentile per-packet one-way delay: 23.048 ms
Loss rate: 0.10%

Run 4: Report of Copa — Data Link

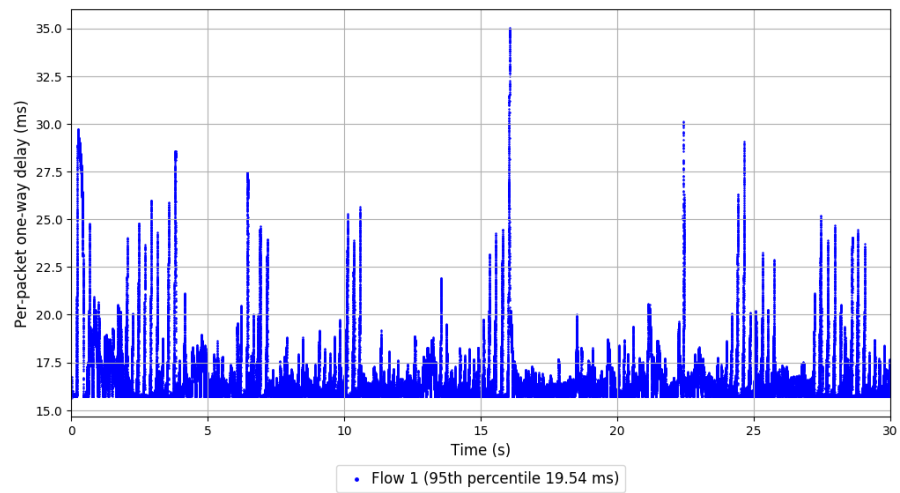
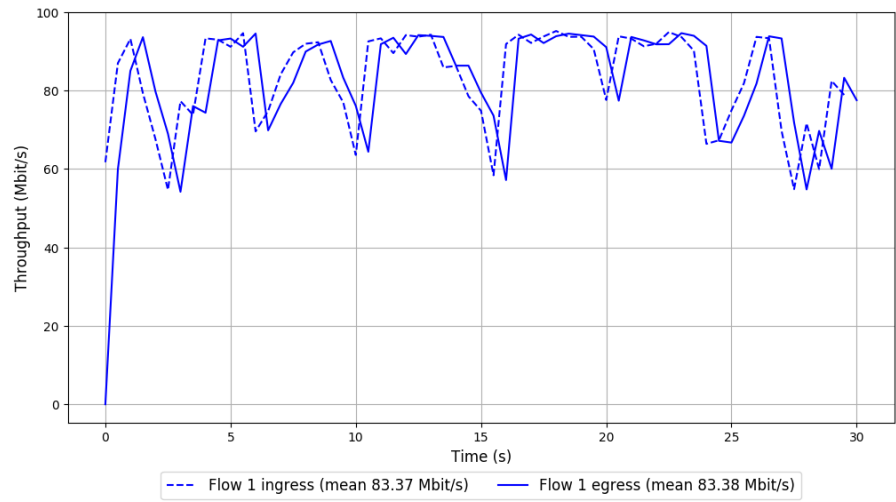


Run 5: Statistics of Copa

Start at: 2018-10-02 15:00:28
End at: 2018-10-02 15:00:58
Local clock offset: -1.237 ms
Remote clock offset: -3.778 ms

Below is generated by plot.py at 2018-10-02 15:20:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 83.38 Mbit/s
95th percentile per-packet one-way delay: 19.537 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 83.38 Mbit/s
95th percentile per-packet one-way delay: 19.537 ms
Loss rate: 0.07%

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-10-02 13:40:47

End at: 2018-10-02 13:41:17

Local clock offset: 1.181 ms

Remote clock offset: -2.07 ms

Below is generated by plot.py at 2018-10-02 15:20:22

Datalink statistics

-- Total of 1 flow:

Average throughput: 94.93 Mbit/s

95th percentile per-packet one-way delay: 24.634 ms

Loss rate: 0.10%

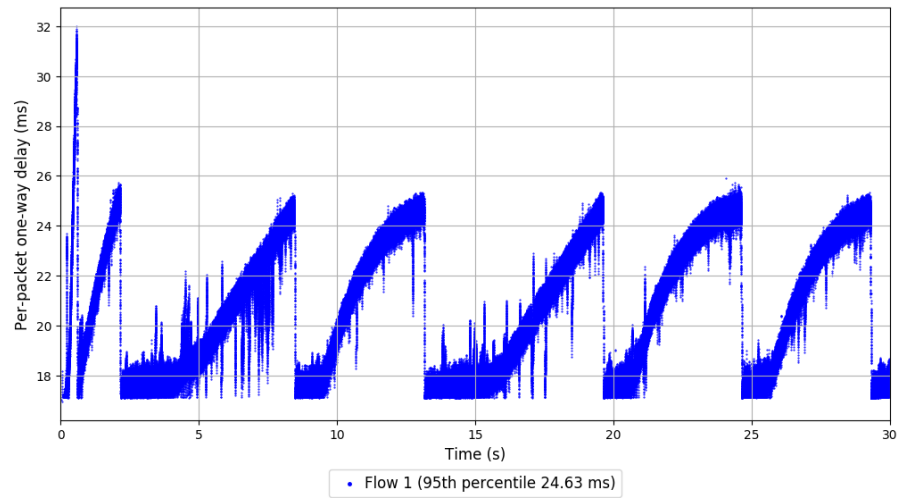
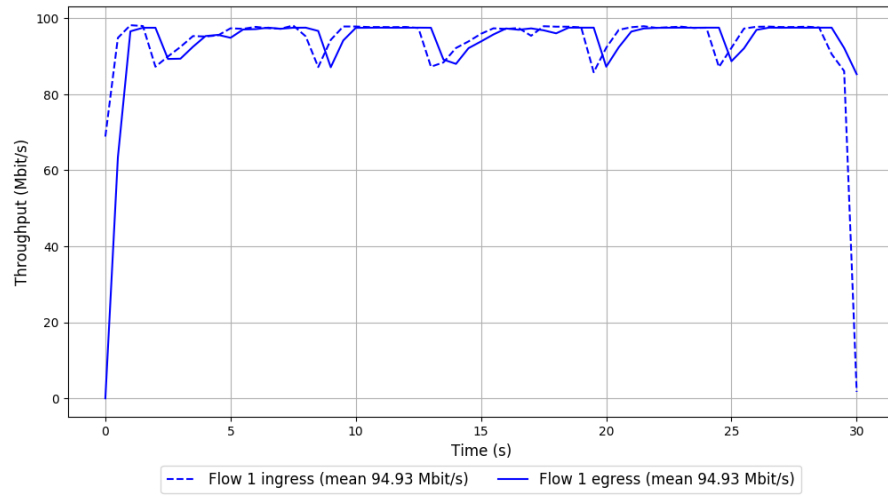
-- Flow 1:

Average throughput: 94.93 Mbit/s

95th percentile per-packet one-way delay: 24.634 ms

Loss rate: 0.10%

Run 1: Report of TCP Cubic — Data Link

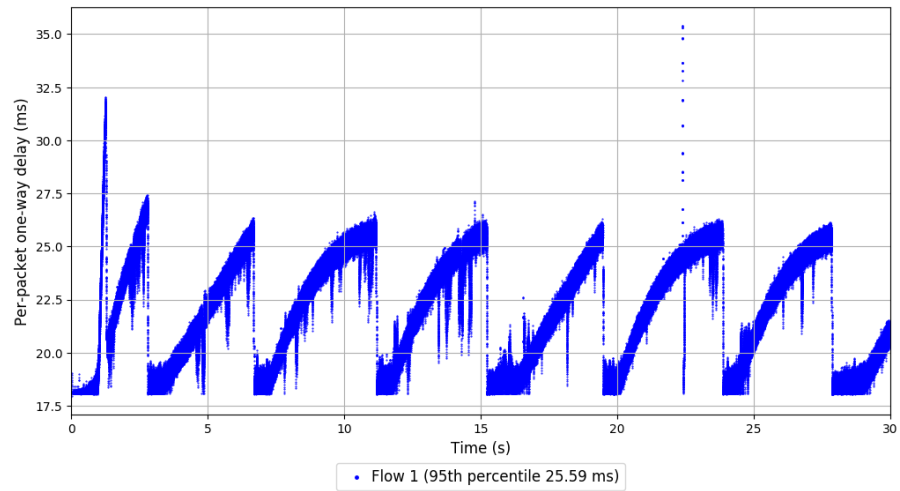
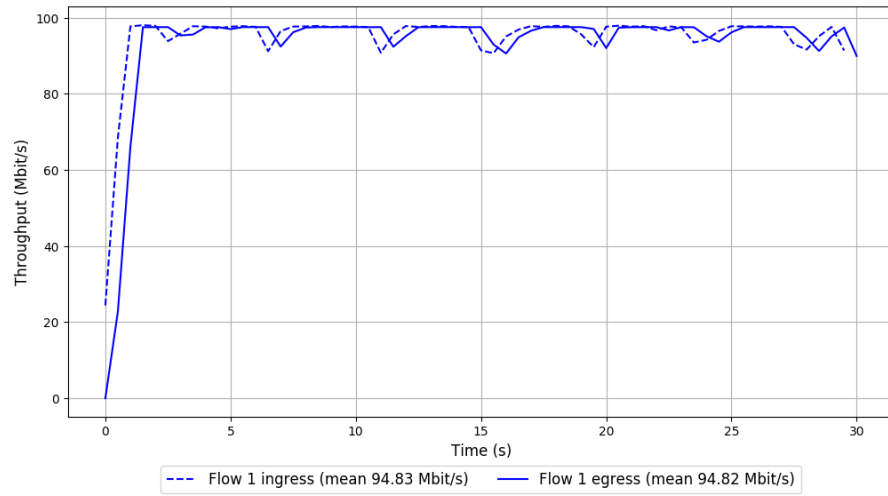


Run 2: Statistics of TCP Cubic

Start at: 2018-10-02 14:02:10
End at: 2018-10-02 14:02:40
Local clock offset: 1.65 ms
Remote clock offset: -2.657 ms

Below is generated by plot.py at 2018-10-02 15:20:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.82 Mbit/s
95th percentile per-packet one-way delay: 25.595 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 94.82 Mbit/s
95th percentile per-packet one-way delay: 25.595 ms
Loss rate: 0.10%

Run 2: Report of TCP Cubic — Data Link

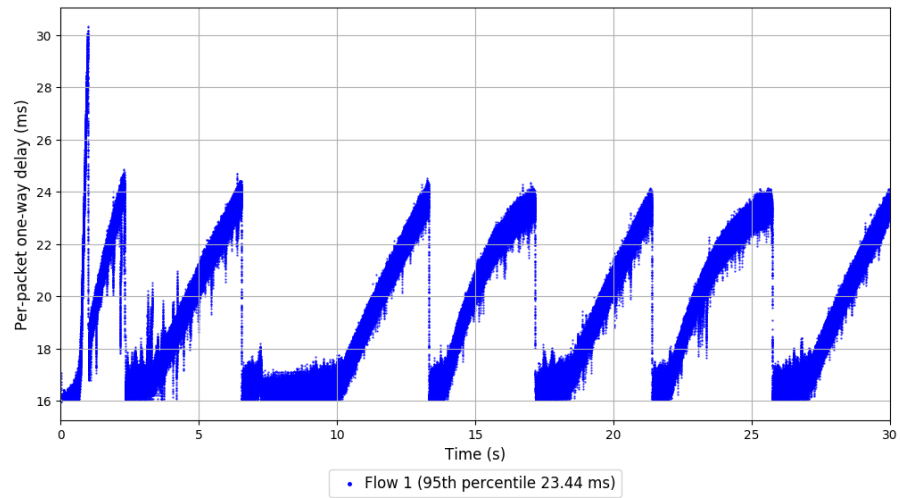
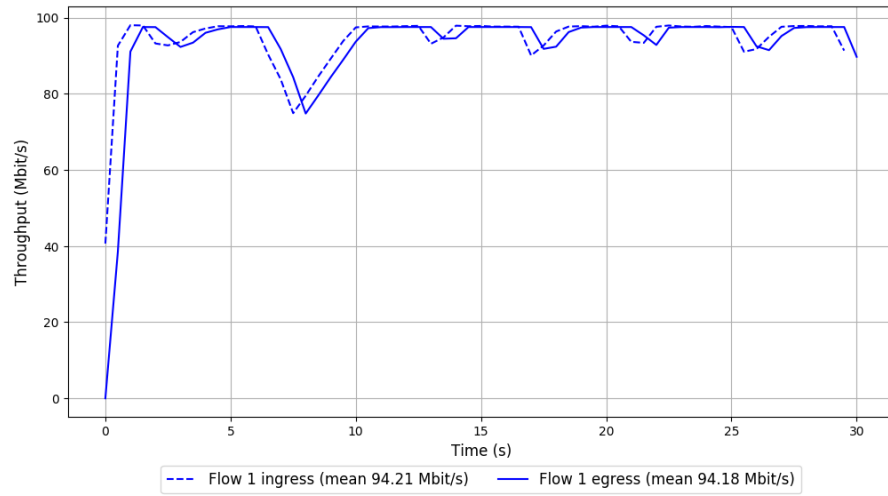


Run 3: Statistics of TCP Cubic

Start at: 2018-10-02 14:23:42
End at: 2018-10-02 14:24:12
Local clock offset: 0.523 ms
Remote clock offset: -1.938 ms

Below is generated by plot.py at 2018-10-02 15:20:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.18 Mbit/s
95th percentile per-packet one-way delay: 23.439 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 94.18 Mbit/s
95th percentile per-packet one-way delay: 23.439 ms
Loss rate: 0.11%

Run 3: Report of TCP Cubic — Data Link

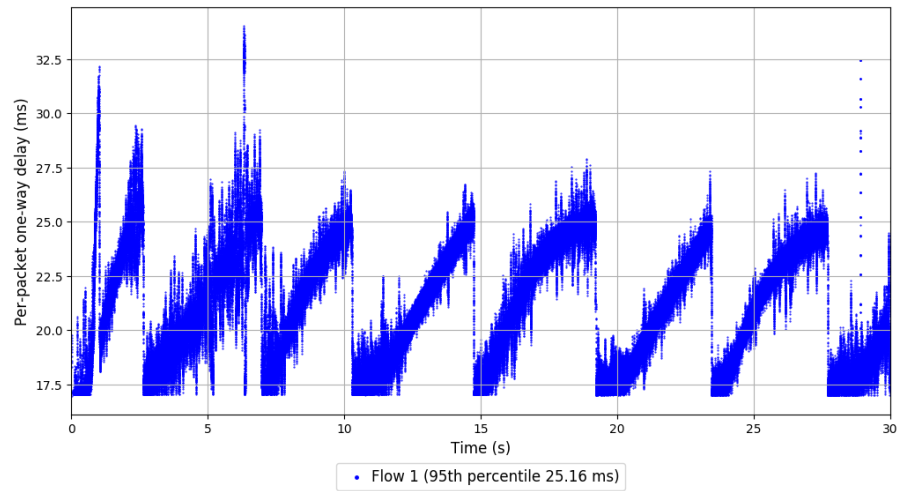
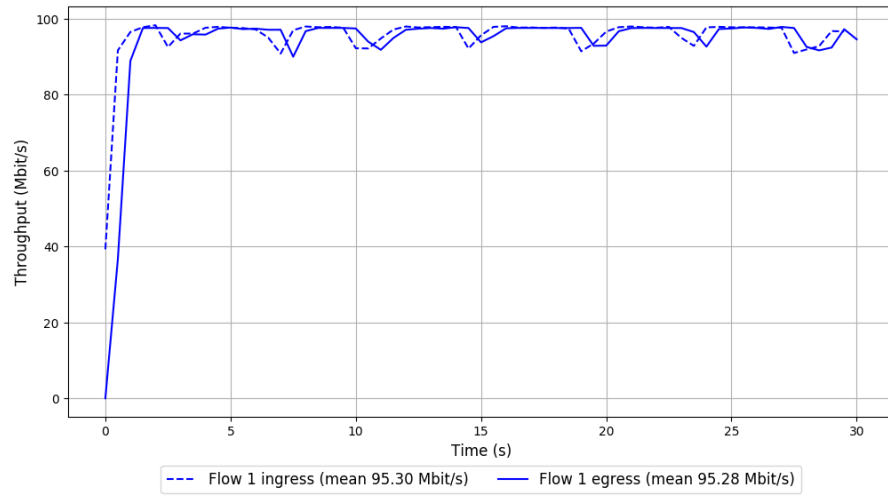


Run 4: Statistics of TCP Cubic

Start at: 2018-10-02 14:47:52
End at: 2018-10-02 14:48:22
Local clock offset: -0.914 ms
Remote clock offset: -4.497 ms

Below is generated by plot.py at 2018-10-02 15:20:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.28 Mbit/s
95th percentile per-packet one-way delay: 25.156 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 95.28 Mbit/s
95th percentile per-packet one-way delay: 25.156 ms
Loss rate: 0.10%

Run 4: Report of TCP Cubic — Data Link

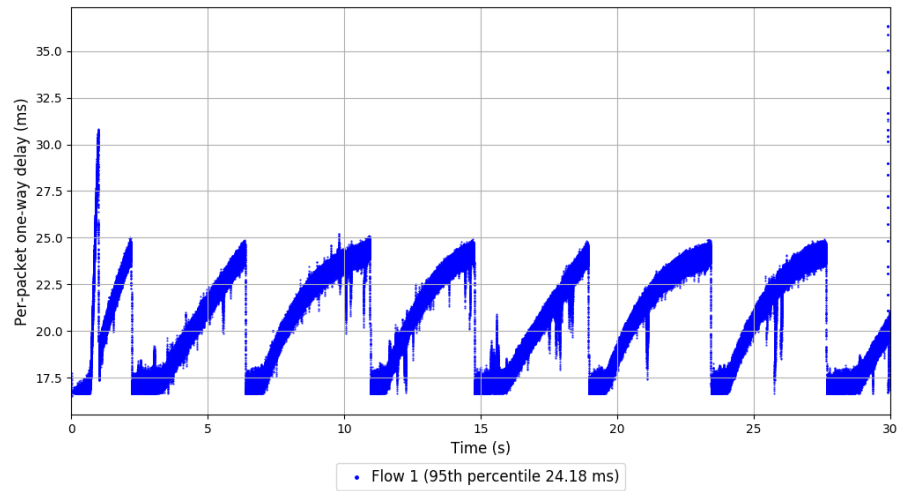
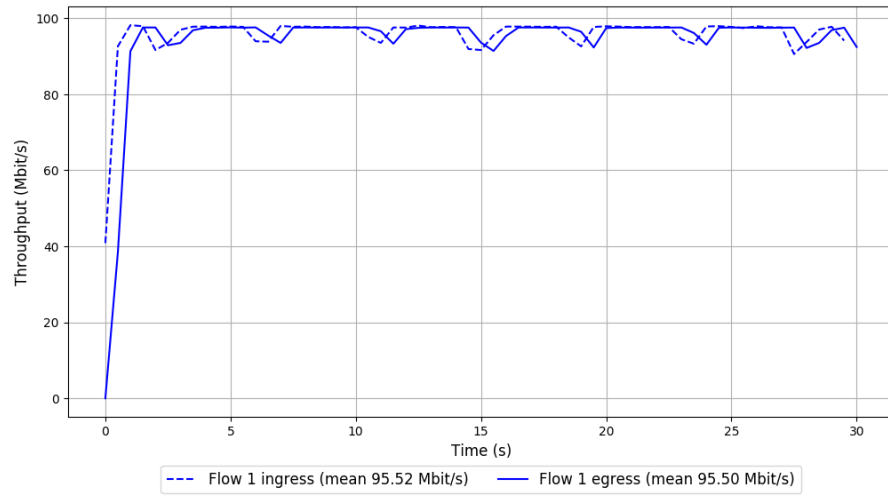


Run 5: Statistics of TCP Cubic

Start at: 2018-10-02 15:11:24
End at: 2018-10-02 15:11:54
Local clock offset: -1.271 ms
Remote clock offset: -4.756 ms

Below is generated by plot.py at 2018-10-02 15:20:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.50 Mbit/s
95th percentile per-packet one-way delay: 24.183 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 95.50 Mbit/s
95th percentile per-packet one-way delay: 24.183 ms
Loss rate: 0.10%

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2018-10-02 13:44:13

End at: 2018-10-02 13:44:43

Local clock offset: -0.446 ms

Remote clock offset: -1.97 ms

Below is generated by plot.py at 2018-10-02 15:20:43

Datalink statistics

-- Total of 1 flow:

Average throughput: 94.99 Mbit/s

95th percentile per-packet one-way delay: 42.880 ms

Loss rate: 1.40%

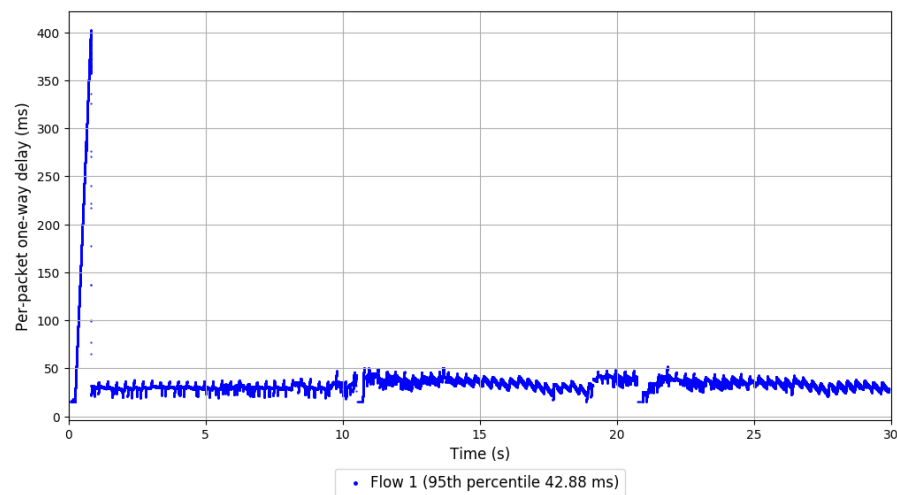
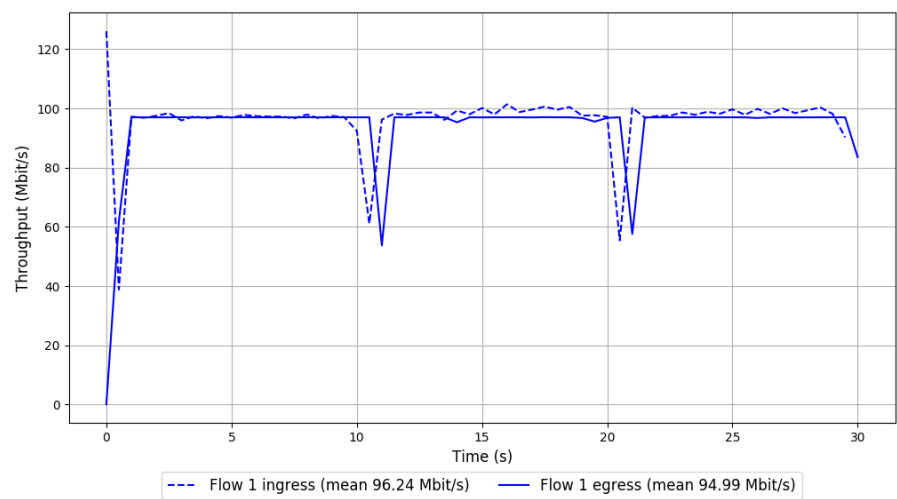
-- Flow 1:

Average throughput: 94.99 Mbit/s

95th percentile per-packet one-way delay: 42.880 ms

Loss rate: 1.40%

Run 1: Report of FillP — Data Link

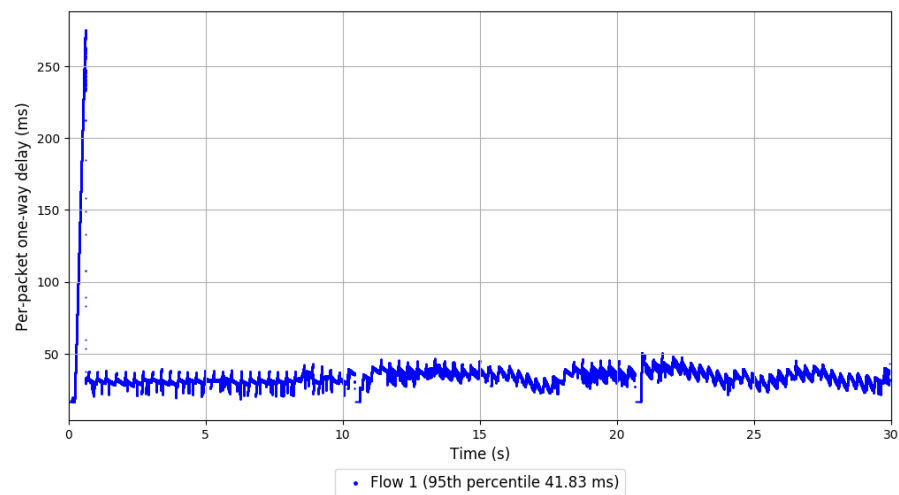
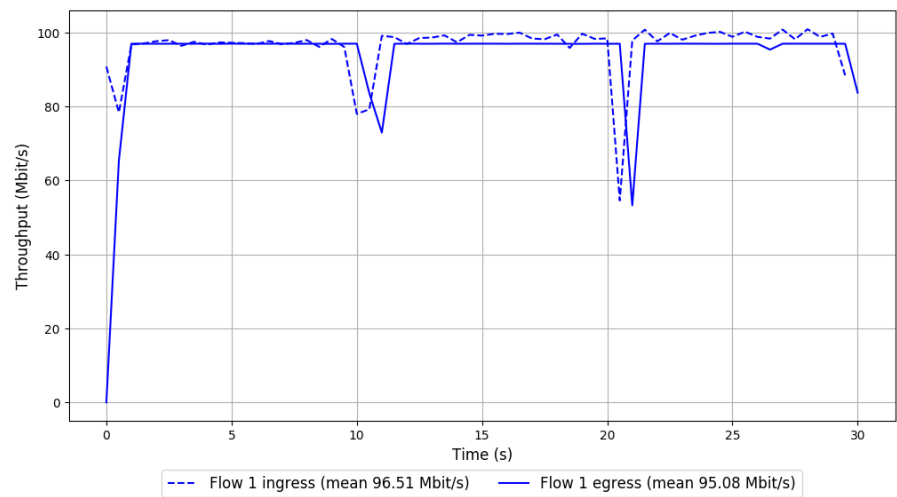


Run 2: Statistics of FillP

Start at: 2018-10-02 14:05:37
End at: 2018-10-02 14:06:07
Local clock offset: 0.692 ms
Remote clock offset: -2.324 ms

Below is generated by plot.py at 2018-10-02 15:20:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.08 Mbit/s
95th percentile per-packet one-way delay: 41.830 ms
Loss rate: 1.56%
-- Flow 1:
Average throughput: 95.08 Mbit/s
95th percentile per-packet one-way delay: 41.830 ms
Loss rate: 1.56%

Run 2: Report of FillP — Data Link

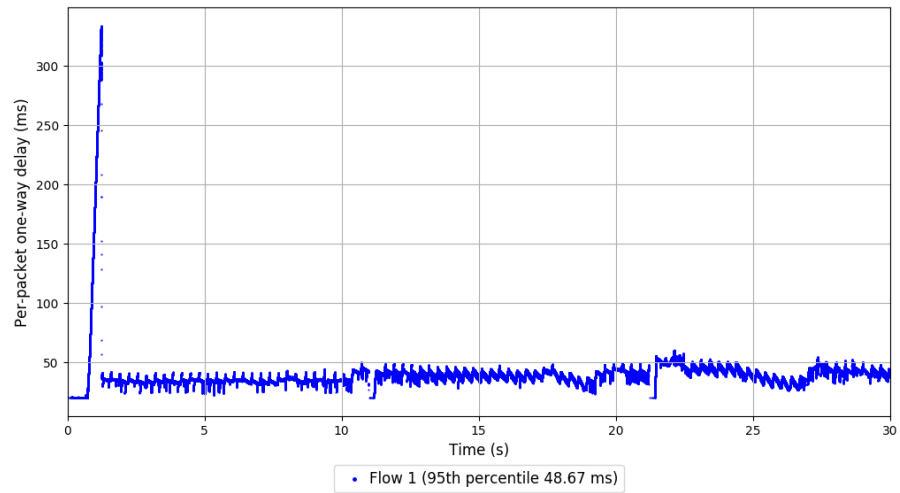
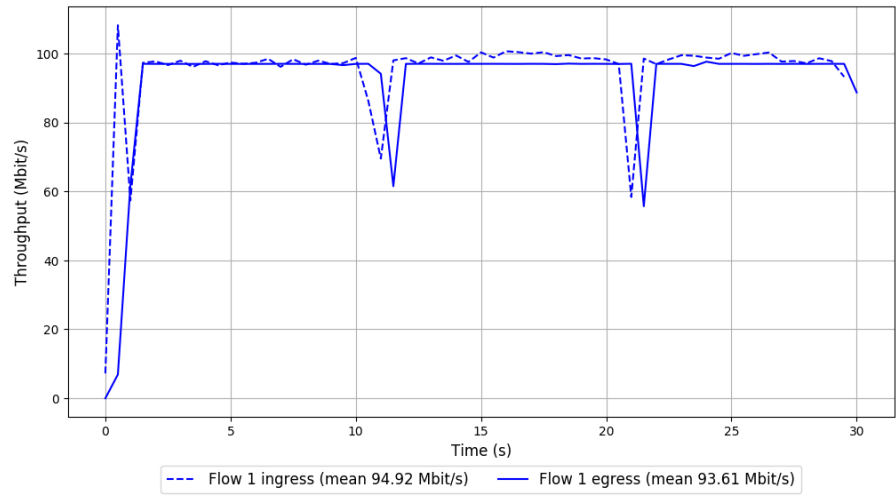


Run 3: Statistics of FillP

Start at: 2018-10-02 14:27:09
End at: 2018-10-02 14:27:39
Local clock offset: 1.664 ms
Remote clock offset: -4.739 ms

Below is generated by plot.py at 2018-10-02 15:20:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 93.61 Mbit/s
95th percentile per-packet one-way delay: 48.668 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 93.61 Mbit/s
95th percentile per-packet one-way delay: 48.668 ms
Loss rate: 1.48%

Run 3: Report of FillP — Data Link

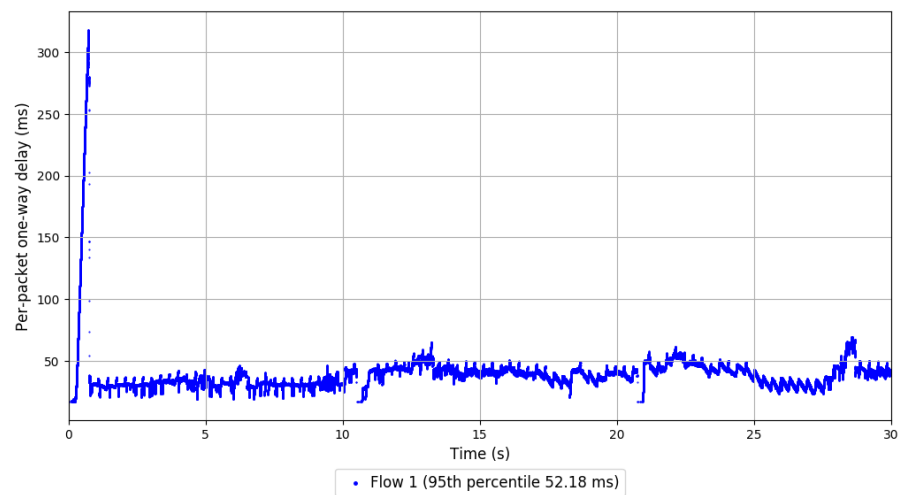
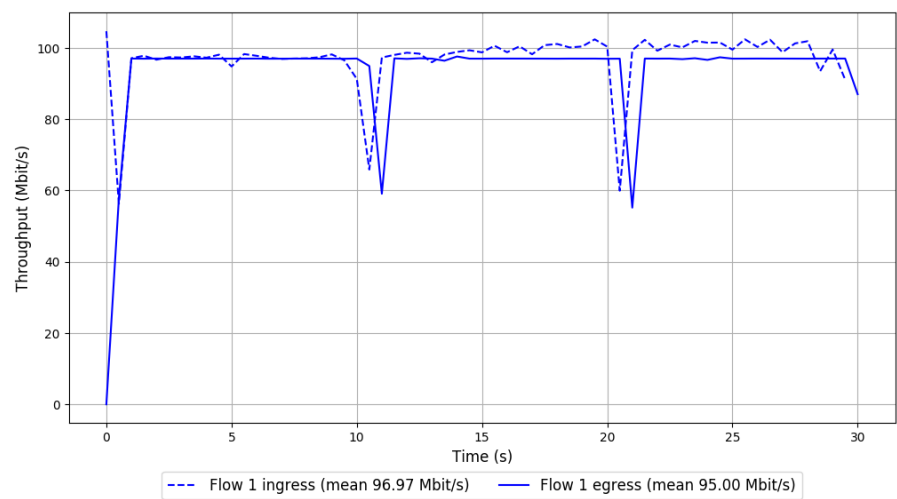


Run 4: Statistics of FillP

Start at: 2018-10-02 14:52:39
End at: 2018-10-02 14:53:09
Local clock offset: -0.933 ms
Remote clock offset: -4.577 ms

Below is generated by plot.py at 2018-10-02 15:20:53
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.00 Mbit/s
95th percentile per-packet one-way delay: 52.179 ms
Loss rate: 2.13%
-- Flow 1:
Average throughput: 95.00 Mbit/s
95th percentile per-packet one-way delay: 52.179 ms
Loss rate: 2.13%

Run 4: Report of FillP — Data Link

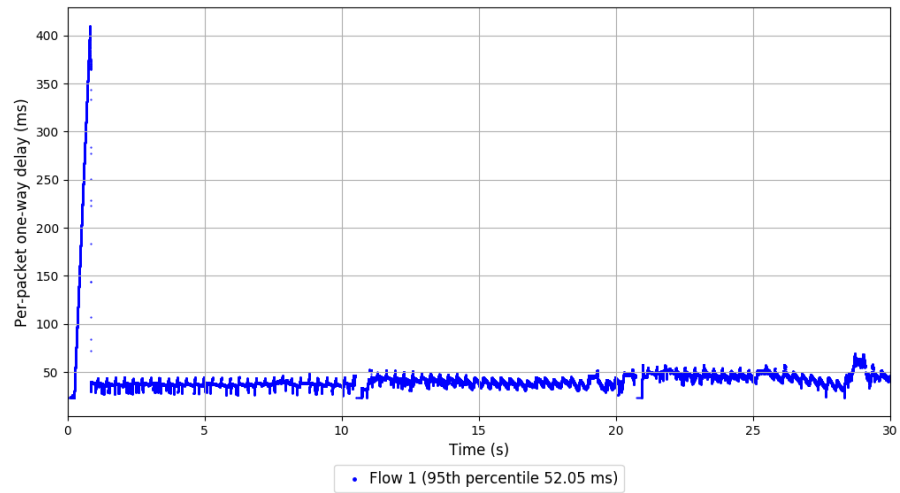
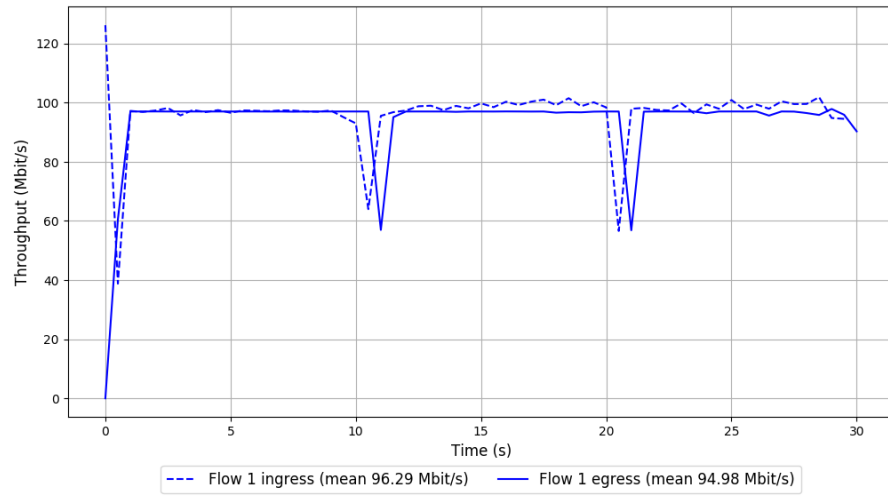


Run 5: Statistics of FillP

Start at: 2018-10-02 15:14:58
End at: 2018-10-02 15:15:28
Local clock offset: -1.803 ms
Remote clock offset: -11.96 ms

Below is generated by plot.py at 2018-10-02 15:21:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.98 Mbit/s
95th percentile per-packet one-way delay: 52.051 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 94.98 Mbit/s
95th percentile per-packet one-way delay: 52.051 ms
Loss rate: 1.48%

Run 5: Report of FillP — Data Link

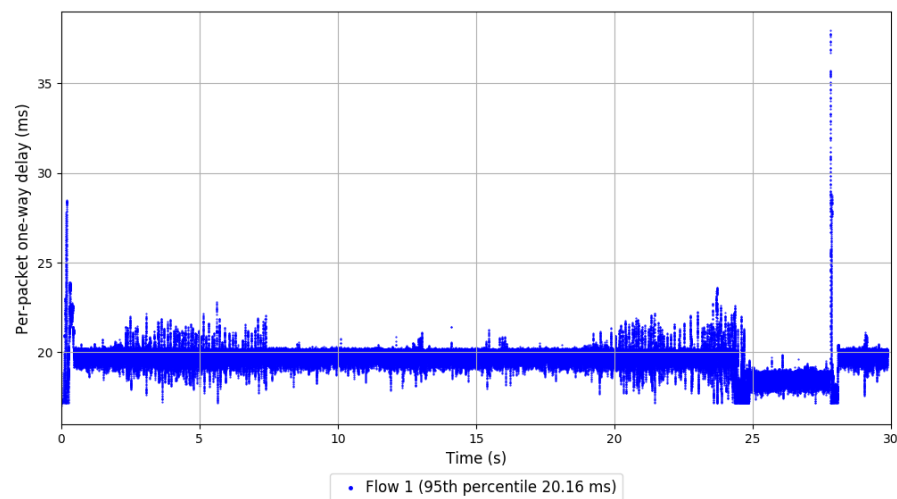
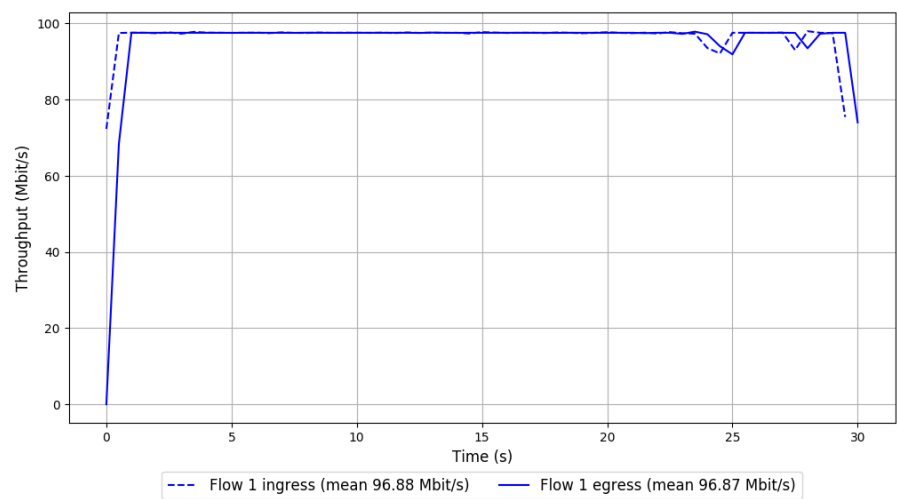



```
Run 1: Statistics of Indigo

Start at: 2018-10-02 13:31:17
End at: 2018-10-02 13:31:47
Local clock offset: 1.683 ms
Remote clock offset: -1.618 ms

# Below is generated by plot.py at 2018-10-02 15:21:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.87 Mbit/s
95th percentile per-packet one-way delay: 20.158 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 96.87 Mbit/s
95th percentile per-packet one-way delay: 20.158 ms
Loss rate: 0.09%
```

Run 1: Report of Indigo — Data Link

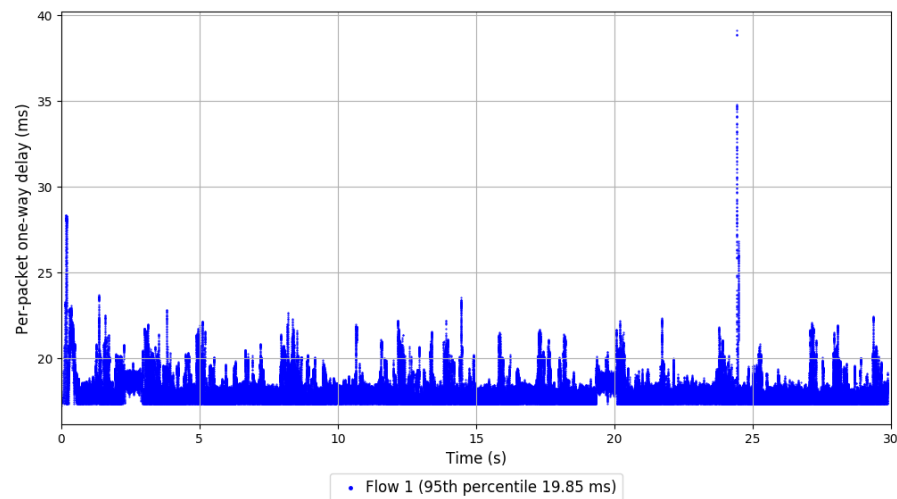
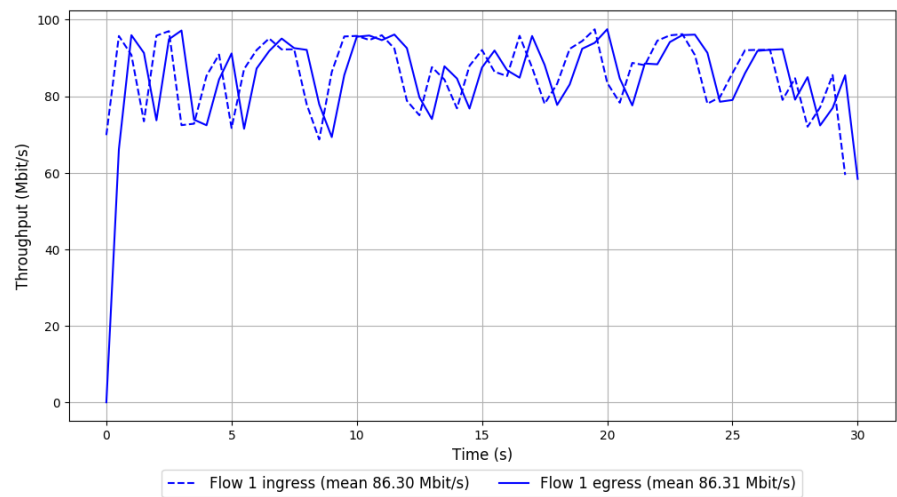


Run 2: Statistics of Indigo

Start at: 2018-10-02 13:52:41
End at: 2018-10-02 13:53:11
Local clock offset: 1.797 ms
Remote clock offset: -1.687 ms

Below is generated by plot.py at 2018-10-02 15:21:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 86.31 Mbit/s
95th percentile per-packet one-way delay: 19.846 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 86.31 Mbit/s
95th percentile per-packet one-way delay: 19.846 ms
Loss rate: 0.07%

Run 2: Report of Indigo — Data Link

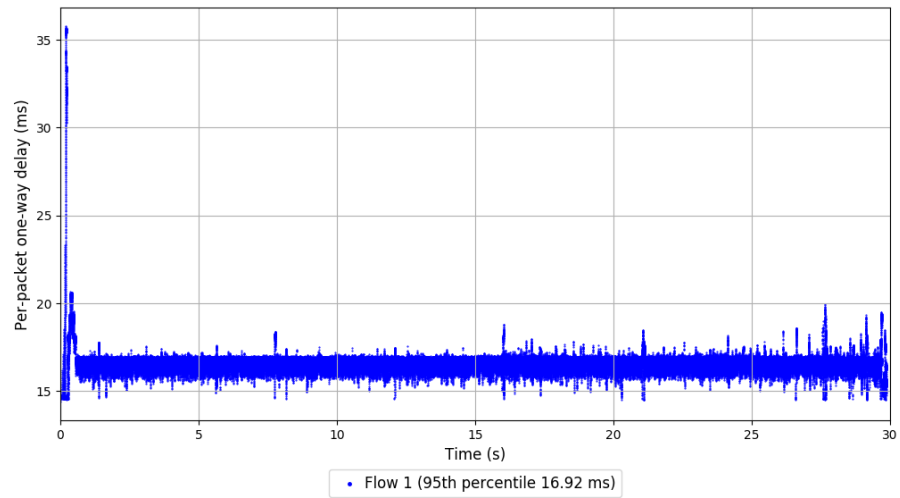
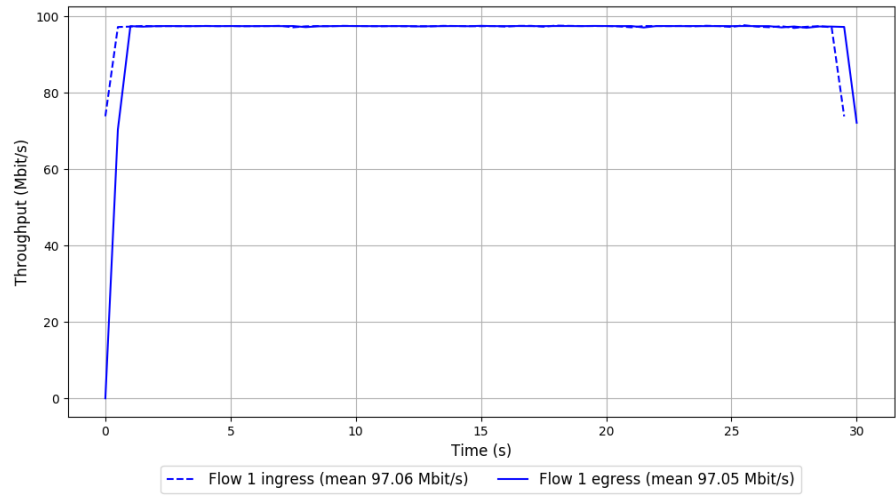


Run 3: Statistics of Indigo

Start at: 2018-10-02 14:14:09
End at: 2018-10-02 14:14:39
Local clock offset: -1.181 ms
Remote clock offset: -2.039 ms

Below is generated by plot.py at 2018-10-02 15:21:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 97.05 Mbit/s
95th percentile per-packet one-way delay: 16.922 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 97.05 Mbit/s
95th percentile per-packet one-way delay: 16.922 ms
Loss rate: 0.08%

Run 3: Report of Indigo — Data Link

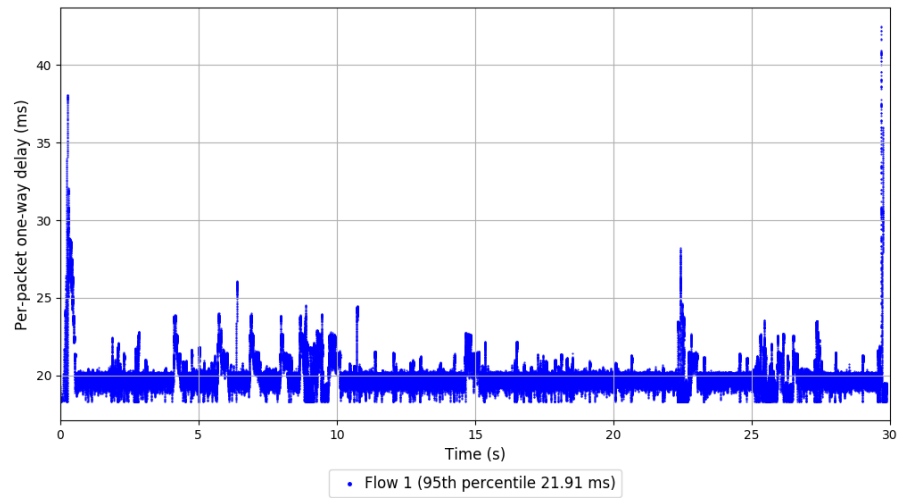
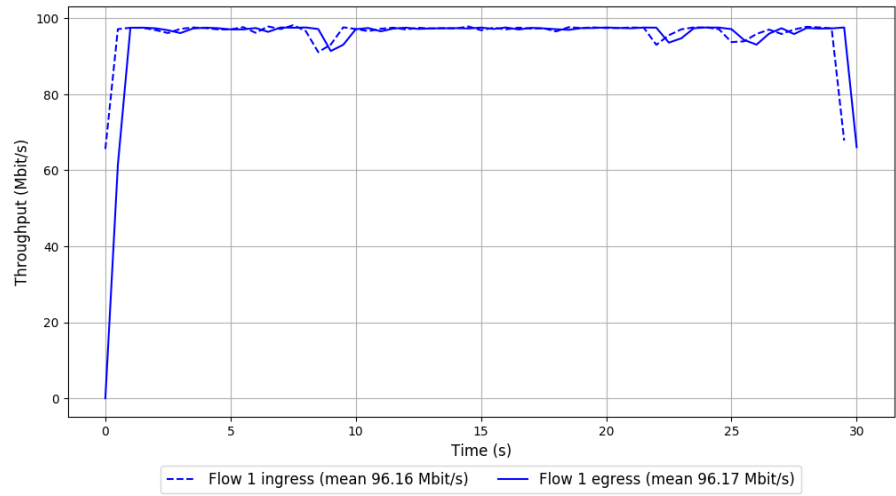


Run 4: Statistics of Indigo

Start at: 2018-10-02 14:35:35
End at: 2018-10-02 14:36:05
Local clock offset: 1.015 ms
Remote clock offset: -3.687 ms

Below is generated by plot.py at 2018-10-02 15:21:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.17 Mbit/s
95th percentile per-packet one-way delay: 21.914 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 96.17 Mbit/s
95th percentile per-packet one-way delay: 21.914 ms
Loss rate: 0.10%

Run 4: Report of Indigo — Data Link

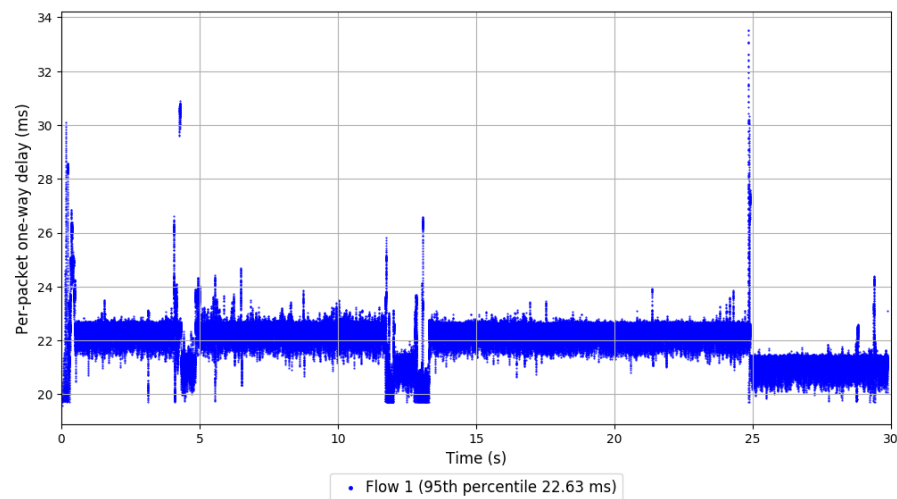
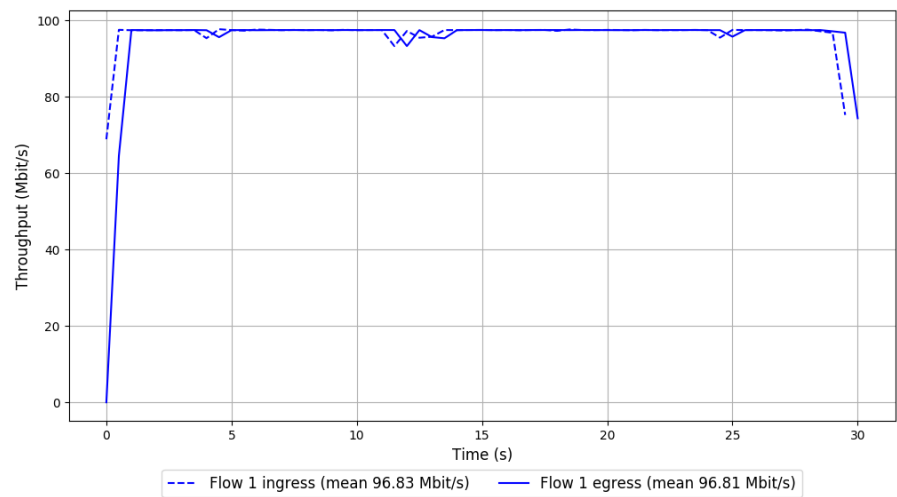


Run 5: Statistics of Indigo

Start at: 2018-10-02 15:01:43
End at: 2018-10-02 15:02:13
Local clock offset: 2.252 ms
Remote clock offset: -4.276 ms

Below is generated by plot.py at 2018-10-02 15:22:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.81 Mbit/s
95th percentile per-packet one-way delay: 22.634 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 96.81 Mbit/s
95th percentile per-packet one-way delay: 22.634 ms
Loss rate: 0.09%

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-96d2da3

Start at: 2018-10-02 13:34:53

End at: 2018-10-02 13:35:23

Local clock offset: 1.214 ms

Remote clock offset: -2.234 ms

Below is generated by plot.py at 2018-10-02 15:22:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.54 Mbit/s

95th percentile per-packet one-way delay: 60.569 ms

Loss rate: 7.25%

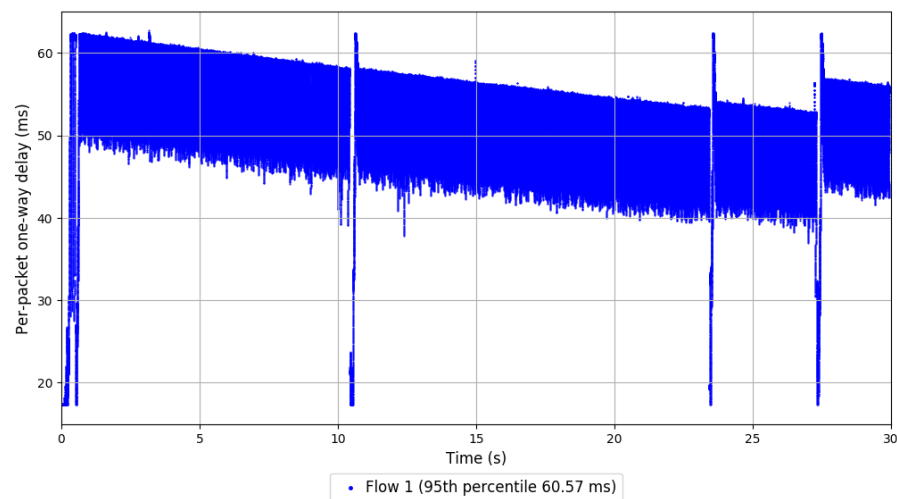
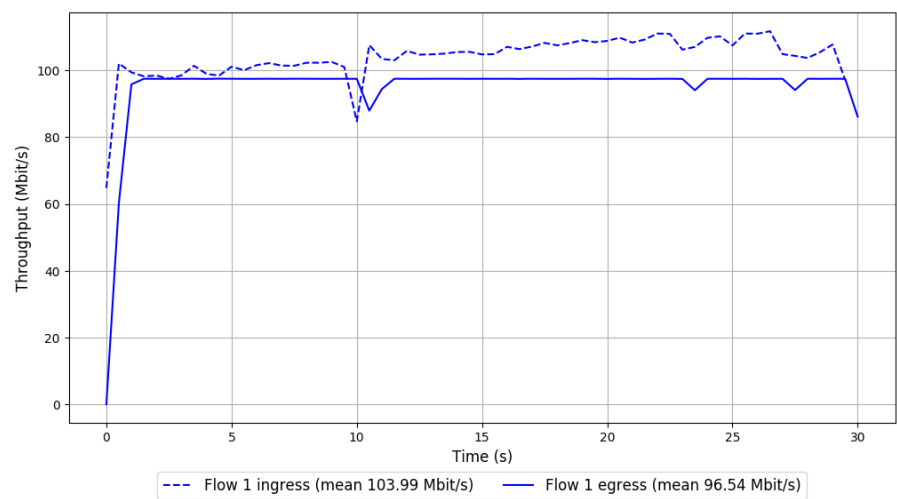
-- Flow 1:

Average throughput: 96.54 Mbit/s

95th percentile per-packet one-way delay: 60.569 ms

Loss rate: 7.25%

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

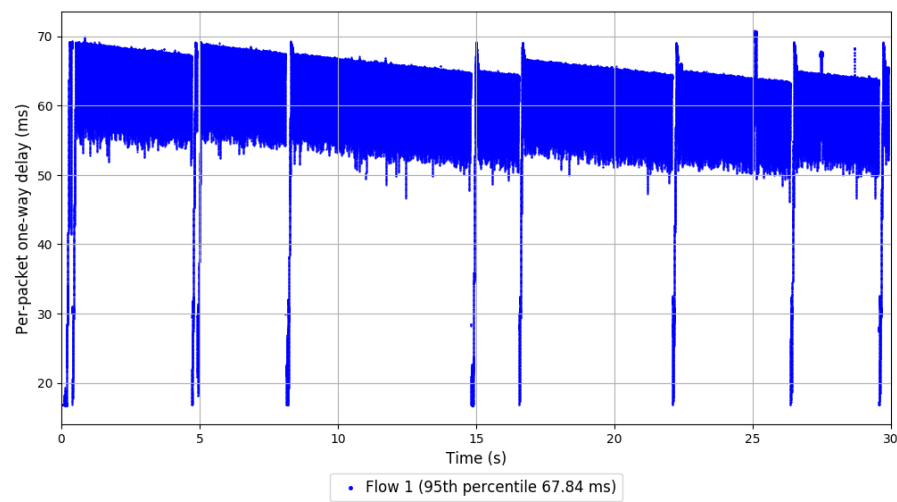
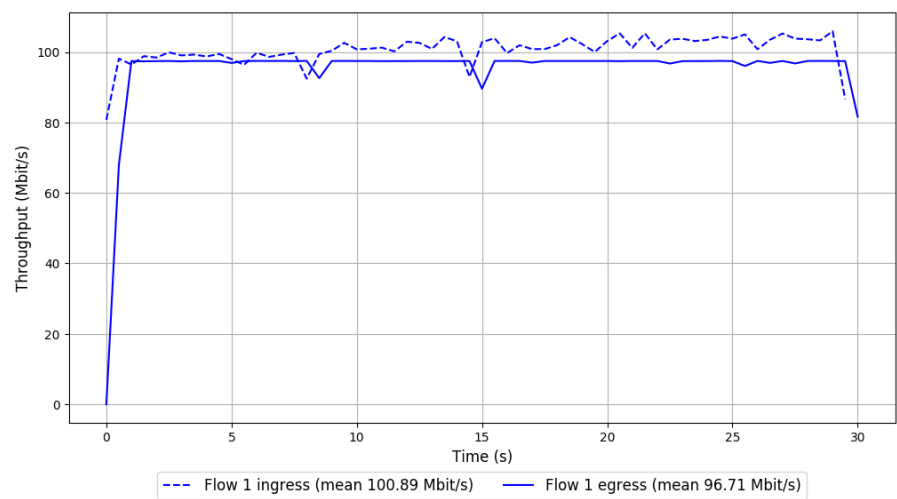


Run 2: Statistics of Indigo-96d2da3

Start at: 2018-10-02 13:56:12
End at: 2018-10-02 13:56:42
Local clock offset: -0.914 ms
Remote clock offset: -3.892 ms

Below is generated by plot.py at 2018-10-02 15:22:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.71 Mbit/s
95th percentile per-packet one-way delay: 67.841 ms
Loss rate: 4.22%
-- Flow 1:
Average throughput: 96.71 Mbit/s
95th percentile per-packet one-way delay: 67.841 ms
Loss rate: 4.22%

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

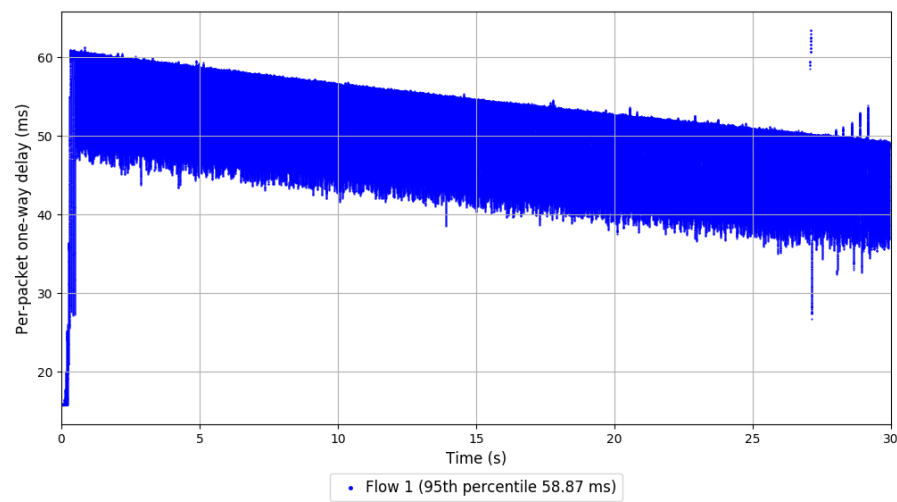
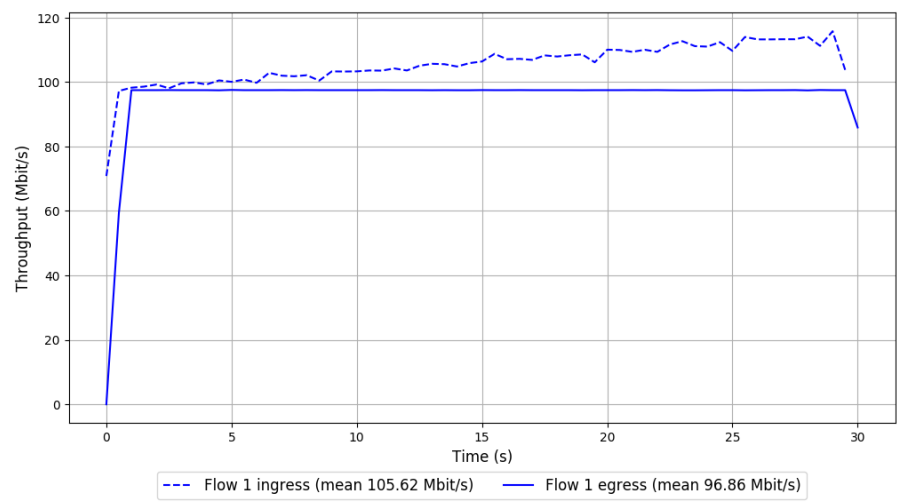


Run 3: Statistics of Indigo-96d2da3

Start at: 2018-10-02 14:17:42
End at: 2018-10-02 14:18:12
Local clock offset: 0.817 ms
Remote clock offset: -1.384 ms

Below is generated by plot.py at 2018-10-02 15:22:36
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.86 Mbit/s
95th percentile per-packet one-way delay: 58.871 ms
Loss rate: 8.35%
-- Flow 1:
Average throughput: 96.86 Mbit/s
95th percentile per-packet one-way delay: 58.871 ms
Loss rate: 8.35%

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

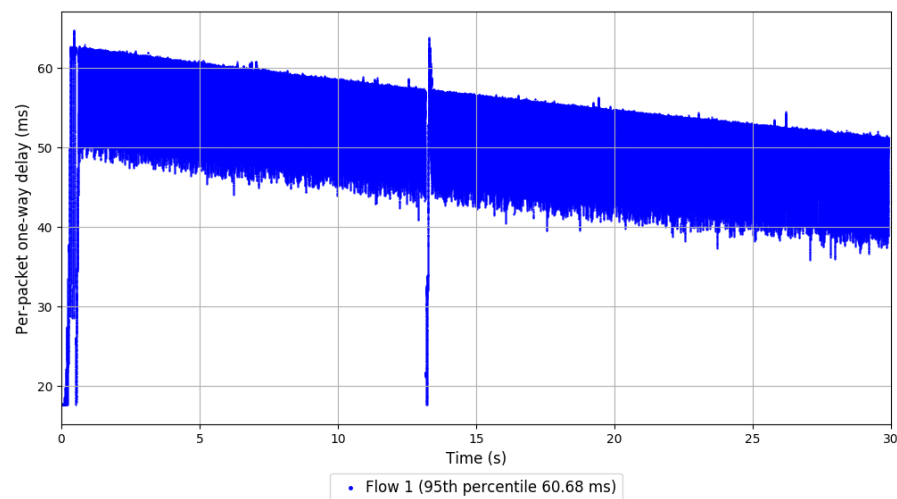
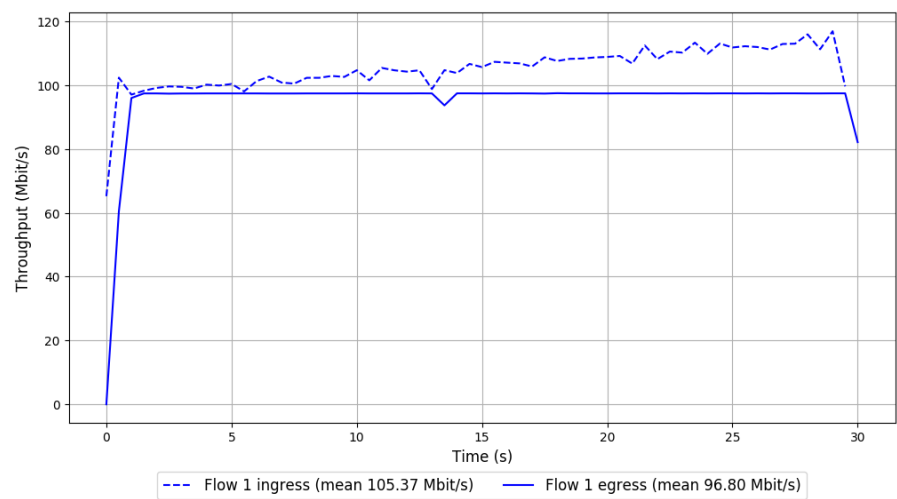


Run 4: Statistics of Indigo-96d2da3

Start at: 2018-10-02 14:39:14
End at: 2018-10-02 14:39:44
Local clock offset: -1.039 ms
Remote clock offset: -5.043 ms

Below is generated by plot.py at 2018-10-02 15:22:39
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.80 Mbit/s
95th percentile per-packet one-way delay: 60.680 ms
Loss rate: 8.22%
-- Flow 1:
Average throughput: 96.80 Mbit/s
95th percentile per-packet one-way delay: 60.680 ms
Loss rate: 8.22%

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

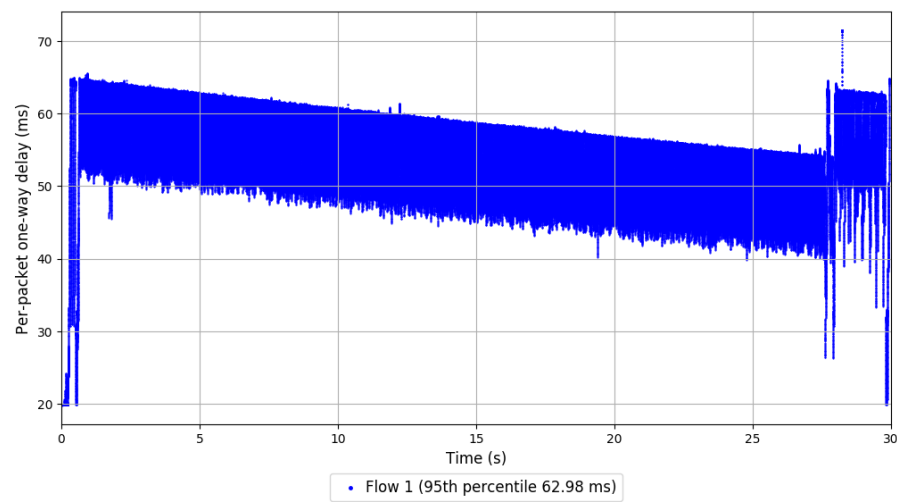
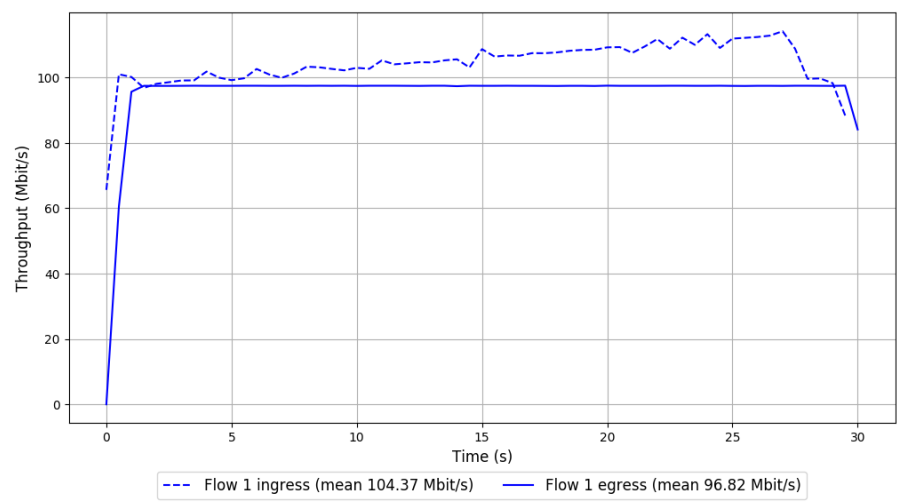


Run 5: Statistics of Indigo-96d2da3

Start at: 2018-10-02 15:05:17
End at: 2018-10-02 15:05:47
Local clock offset: 2.151 ms
Remote clock offset: -4.486 ms

Below is generated by plot.py at 2018-10-02 15:22:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.82 Mbit/s
95th percentile per-packet one-way delay: 62.979 ms
Loss rate: 7.31%
-- Flow 1:
Average throughput: 96.82 Mbit/s
95th percentile per-packet one-way delay: 62.979 ms
Loss rate: 7.31%

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

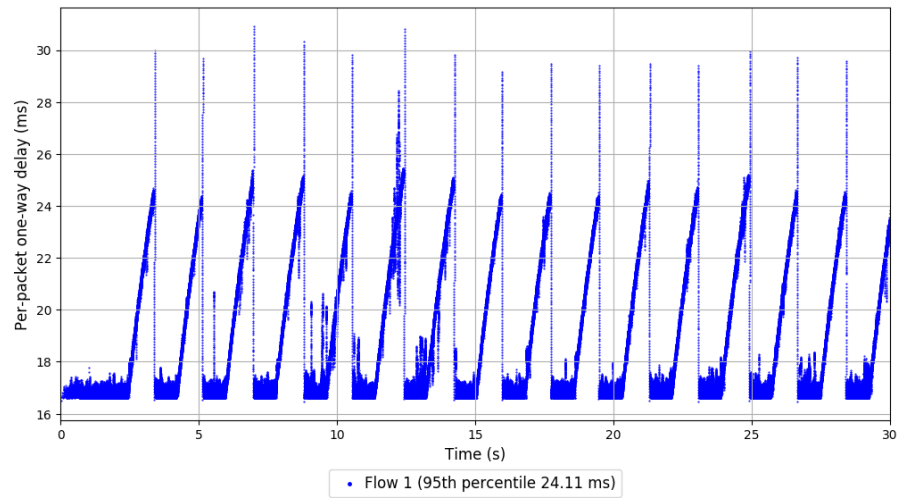
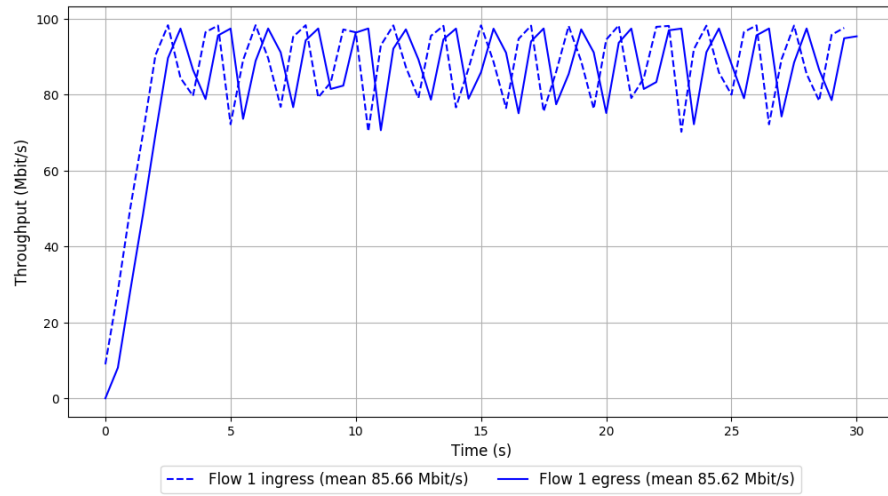


```
Run 1: Statistics of LEDBAT

Start at: 2018-10-02 13:32:30
End at: 2018-10-02 13:33:00
Local clock offset: 0.352 ms
Remote clock offset: -2.397 ms

# Below is generated by plot.py at 2018-10-02 15:22:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 85.62 Mbit/s
95th percentile per-packet one-way delay: 24.109 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 85.62 Mbit/s
95th percentile per-packet one-way delay: 24.109 ms
Loss rate: 0.12%
```

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

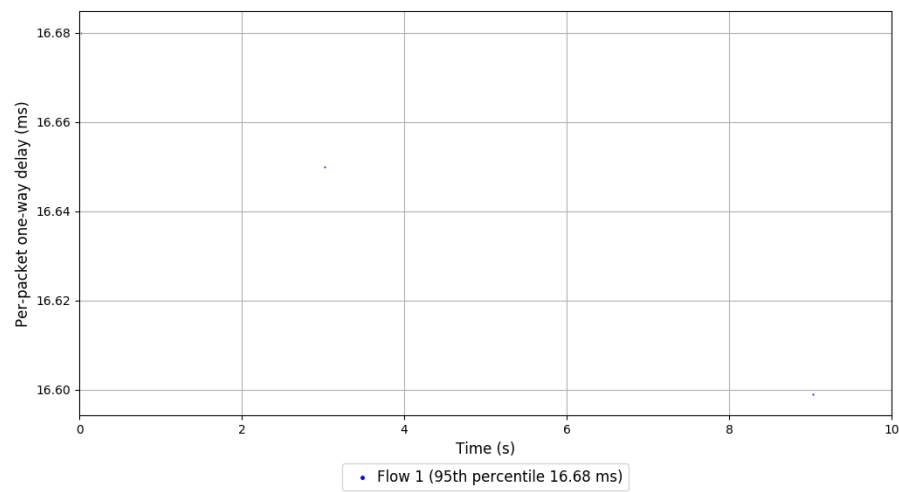
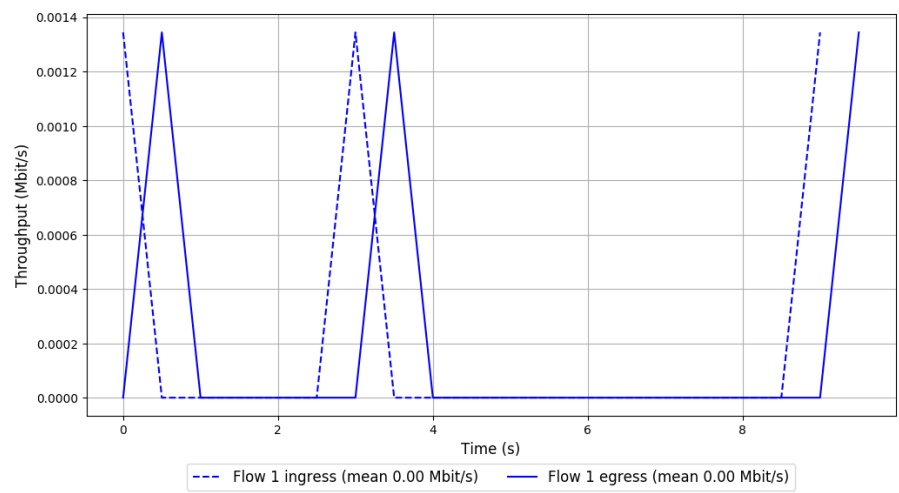
Start at: 2018-10-02 13:53:54

End at: 2018-10-02 13:54:24

Local clock offset: 0.921 ms

Remote clock offset: -1.988 ms

Run 2: Report of LEDBAT — Data Link

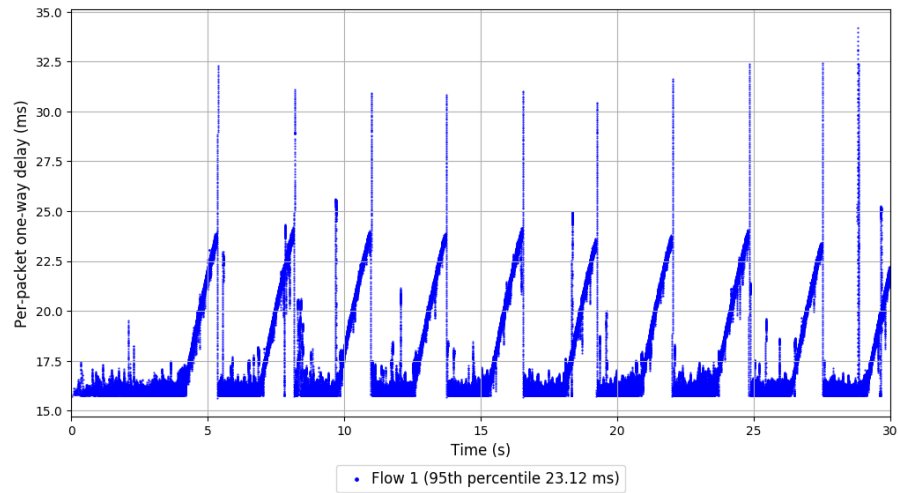
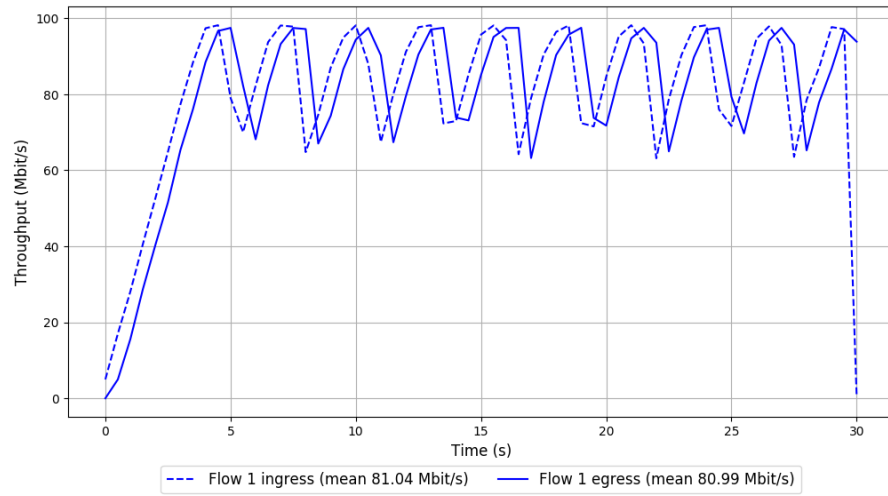


Run 3: Statistics of LEDBAT

Start at: 2018-10-02 14:15:22
End at: 2018-10-02 14:15:52
Local clock offset: -0.111 ms
Remote clock offset: -2.235 ms

Below is generated by plot.py at 2018-10-02 15:22:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 80.99 Mbit/s
95th percentile per-packet one-way delay: 23.117 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 80.99 Mbit/s
95th percentile per-packet one-way delay: 23.117 ms
Loss rate: 0.16%

Run 3: Report of LEDBAT — Data Link

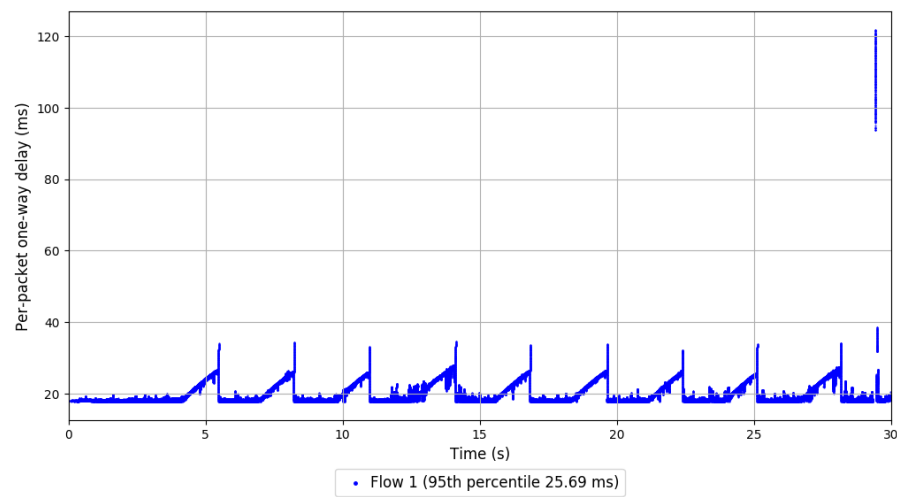
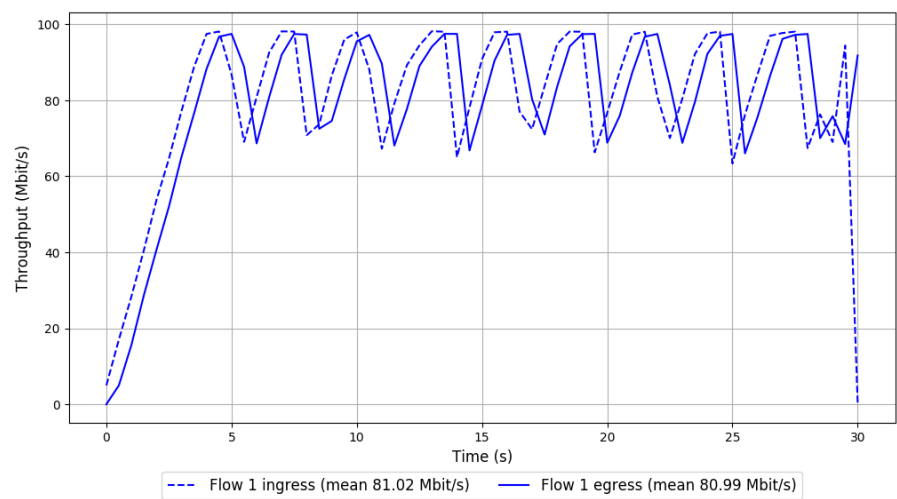


Run 4: Statistics of LEDBAT

Start at: 2018-10-02 14:36:47
End at: 2018-10-02 14:37:17
Local clock offset: 0.746 ms
Remote clock offset: -3.568 ms

Below is generated by plot.py at 2018-10-02 15:23:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 80.99 Mbit/s
95th percentile per-packet one-way delay: 25.689 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 80.99 Mbit/s
95th percentile per-packet one-way delay: 25.689 ms
Loss rate: 0.14%

Run 4: Report of LEDBAT — Data Link

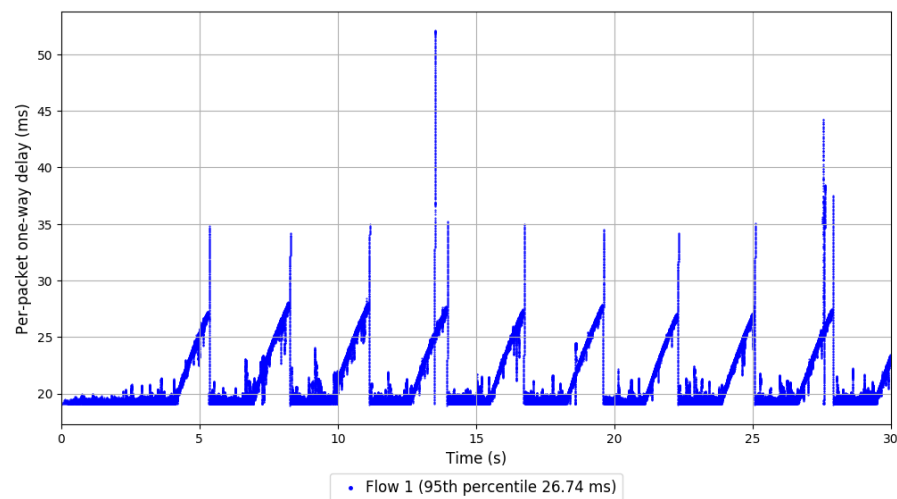
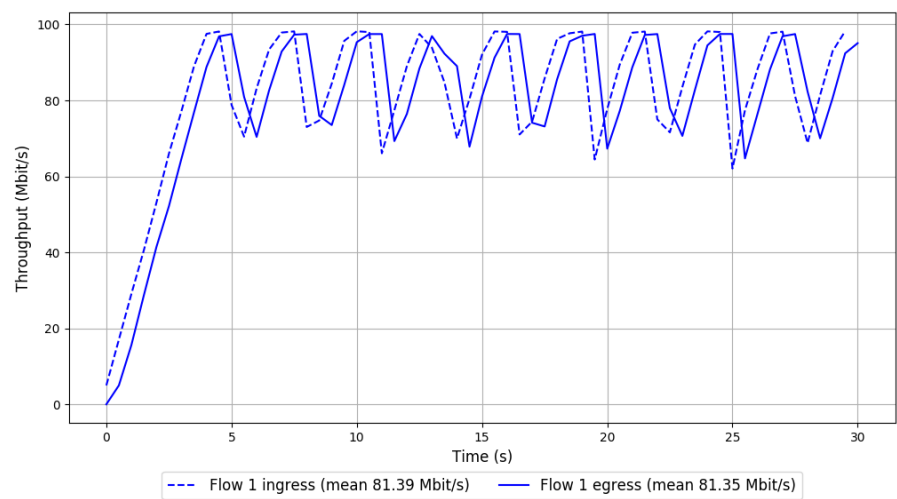


Run 5: Statistics of LEDBAT

Start at: 2018-10-02 15:02:54
End at: 2018-10-02 15:03:24
Local clock offset: 1.725 ms
Remote clock offset: -4.174 ms

Below is generated by plot.py at 2018-10-02 15:23:05
Datalink statistics
-- Total of 1 flow:
Average throughput: 81.35 Mbit/s
95th percentile per-packet one-way delay: 26.743 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 81.35 Mbit/s
95th percentile per-packet one-way delay: 26.743 ms
Loss rate: 0.15%

Run 5: Report of LEDBAT — Data Link

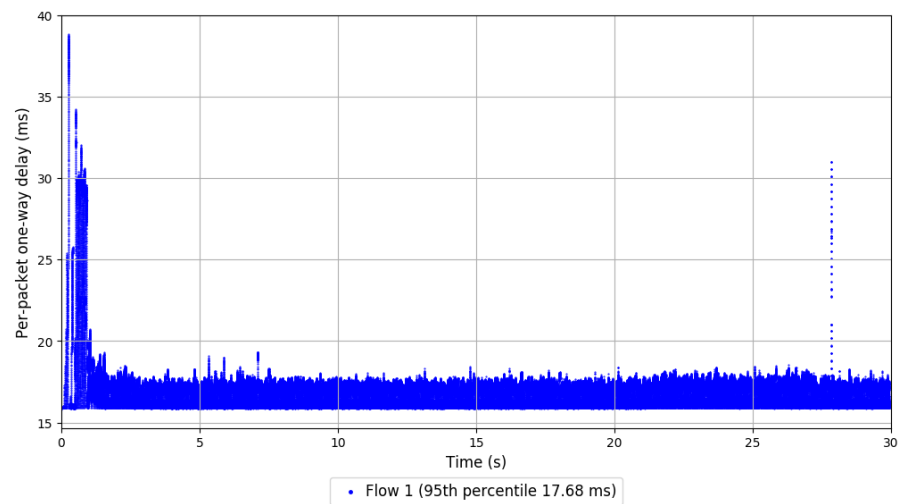
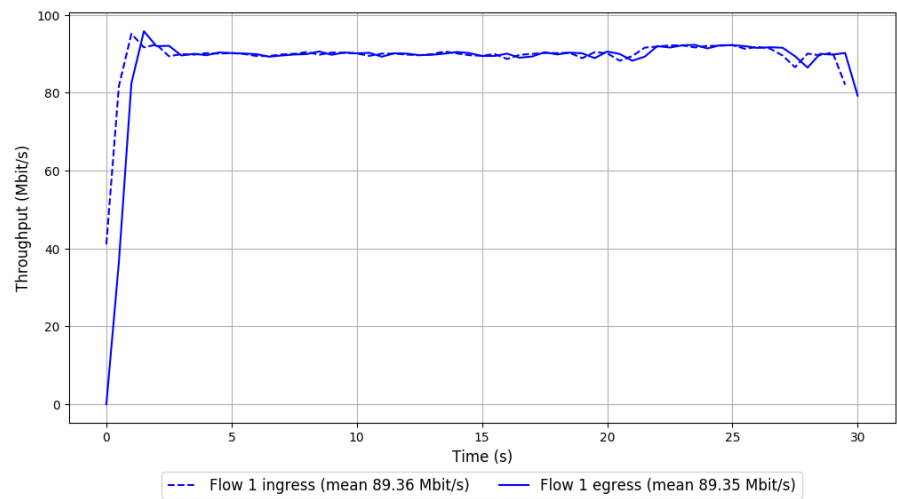


```
Run 1: Statistics of Indigo-Muses

Start at: 2018-10-02 13:41:57
End at: 2018-10-02 13:42:27
Local clock offset: 0.352 ms
Remote clock offset: -1.676 ms

# Below is generated by plot.py at 2018-10-02 15:23:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.35 Mbit/s
95th percentile per-packet one-way delay: 17.684 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 89.35 Mbit/s
95th percentile per-packet one-way delay: 17.684 ms
Loss rate: 0.11%
```

Run 1: Report of Indigo-Muses — Data Link

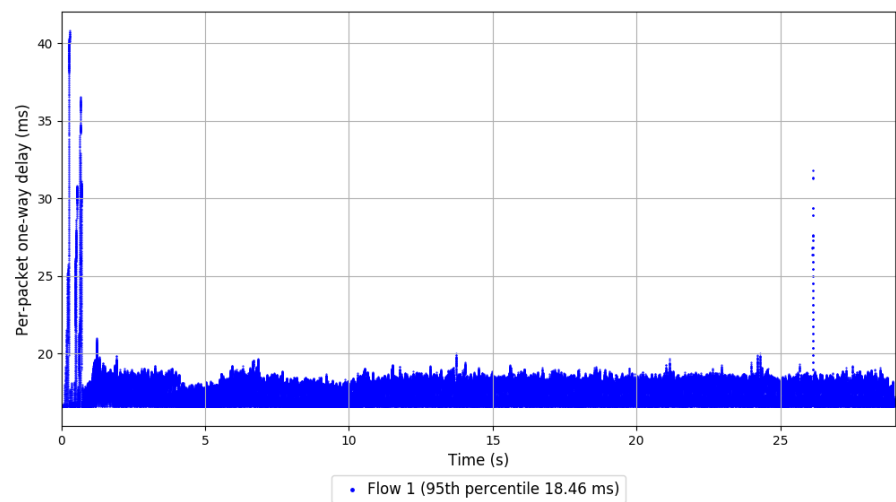
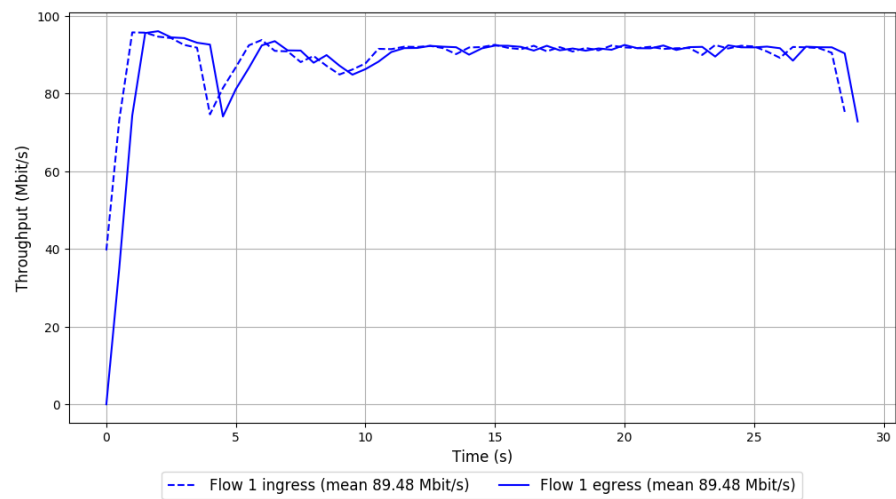


Run 2: Statistics of Indigo-Muses

Start at: 2018-10-02 14:03:22
End at: 2018-10-02 14:03:52
Local clock offset: 1.324 ms
Remote clock offset: -1.531 ms

Below is generated by plot.py at 2018-10-02 15:23:36
Datalink statistics
-- Total of 1 flow:
Average throughput: 89.48 Mbit/s
95th percentile per-packet one-way delay: 18.463 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 89.48 Mbit/s
95th percentile per-packet one-way delay: 18.463 ms
Loss rate: 0.11%

Run 2: Report of Indigo-Muses — Data Link

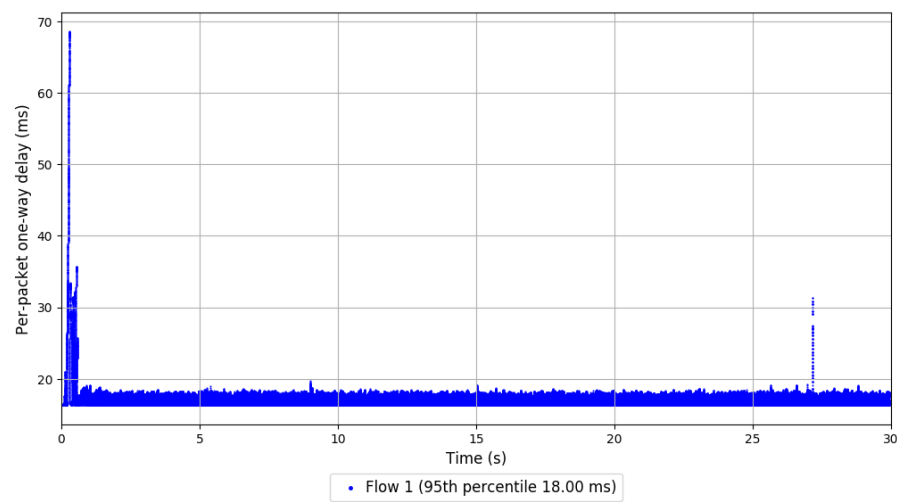
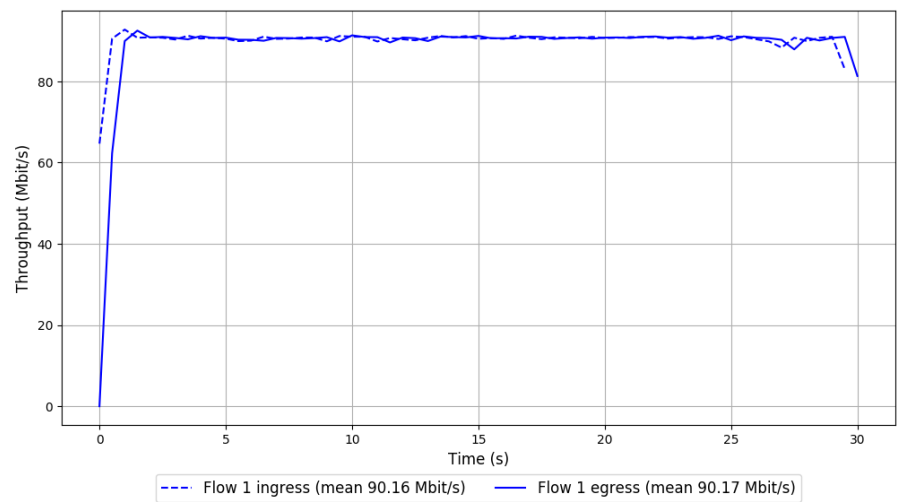


Run 3: Statistics of Indigo-Muses

Start at: 2018-10-02 14:24:52
End at: 2018-10-02 14:25:22
Local clock offset: 0.635 ms
Remote clock offset: -2.078 ms

Below is generated by plot.py at 2018-10-02 15:23:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 90.17 Mbit/s
95th percentile per-packet one-way delay: 17.999 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 90.17 Mbit/s
95th percentile per-packet one-way delay: 17.999 ms
Loss rate: 0.09%

Run 3: Report of Indigo-Muses — Data Link

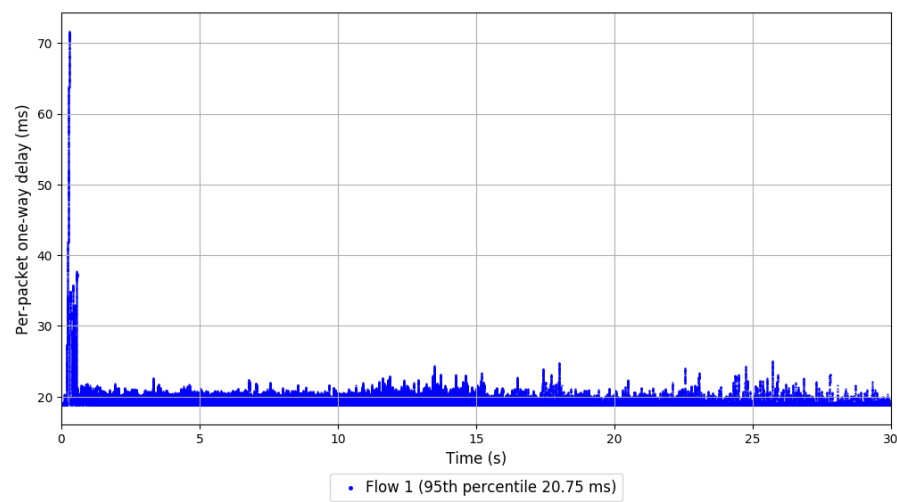
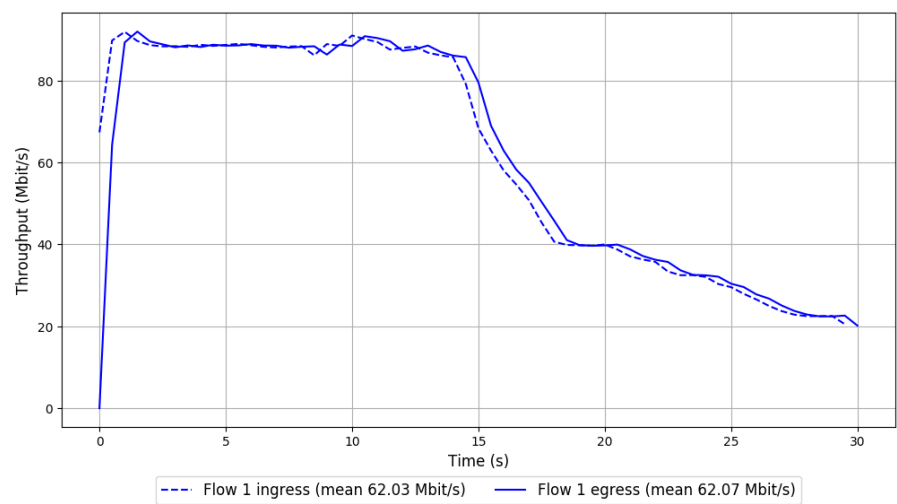


Run 4: Statistics of Indigo-Muses

Start at: 2018-10-02 14:50:06
End at: 2018-10-02 14:50:36
Local clock offset: 0.938 ms
Remote clock offset: -4.544 ms

Below is generated by plot.py at 2018-10-02 15:23:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 62.07 Mbit/s
95th percentile per-packet one-way delay: 20.754 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 62.07 Mbit/s
95th percentile per-packet one-way delay: 20.754 ms
Loss rate: 0.03%

Run 4: Report of Indigo-Muses — Data Link

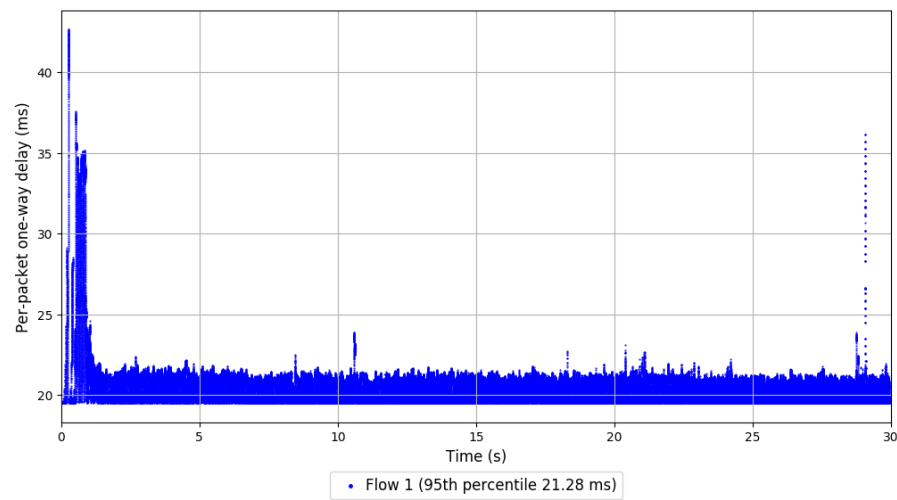
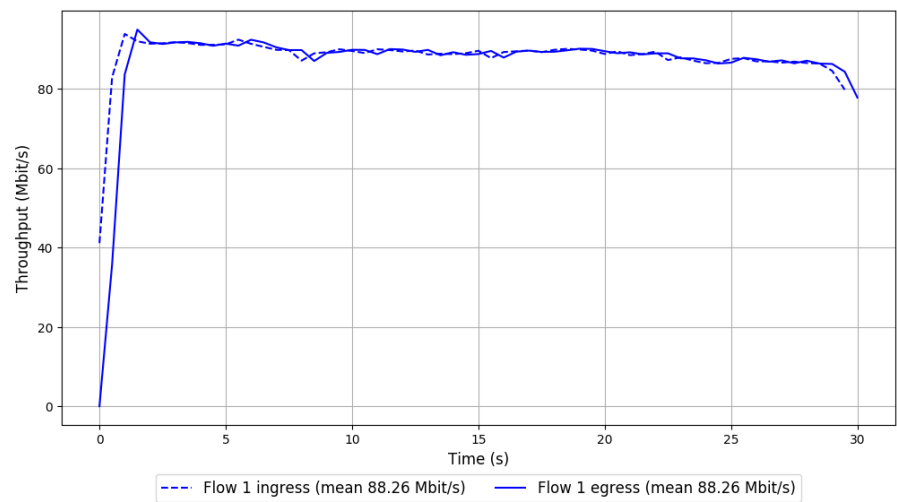


Run 5: Statistics of Indigo-Muses

Start at: 2018-10-02 15:12:36
End at: 2018-10-02 15:13:07
Local clock offset: 1.747 ms
Remote clock offset: -4.613 ms

Below is generated by plot.py at 2018-10-02 15:23:45
Datalink statistics
-- Total of 1 flow:
Average throughput: 88.26 Mbit/s
95th percentile per-packet one-way delay: 21.278 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 88.26 Mbit/s
95th percentile per-packet one-way delay: 21.278 ms
Loss rate: 0.11%

Run 5: Report of Indigo-Muses — Data Link

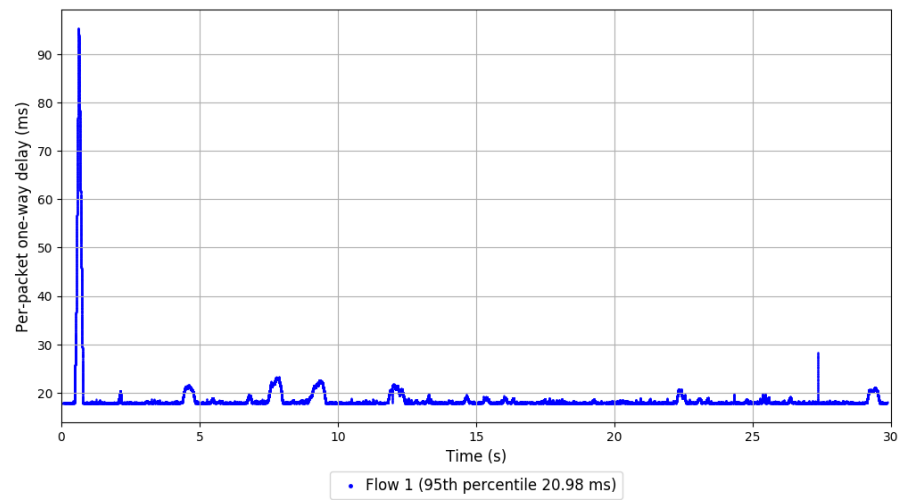
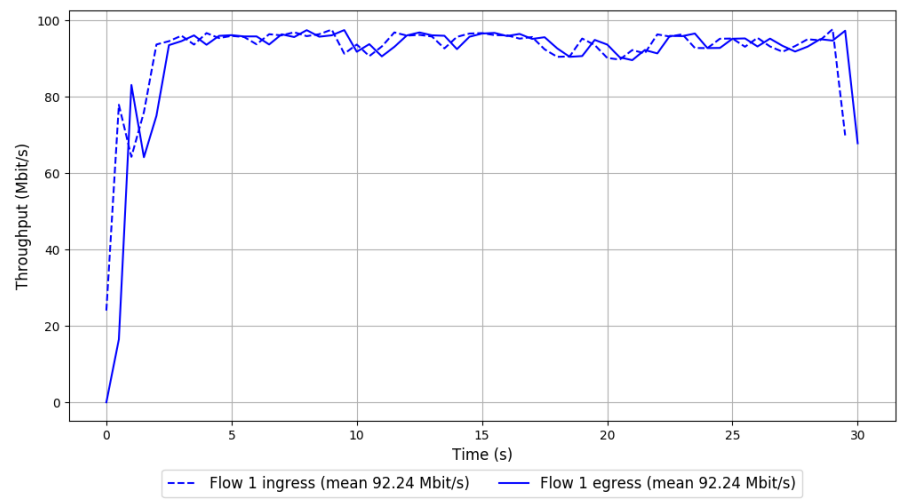



```
Run 1: Statistics of PCC-Allegro

Start at: 2018-10-02 13:37:16
End at: 2018-10-02 13:37:46
Local clock offset: 1.922 ms
Remote clock offset: -2.153 ms

# Below is generated by plot.py at 2018-10-02 15:23:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.24 Mbit/s
95th percentile per-packet one-way delay: 20.981 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 92.24 Mbit/s
95th percentile per-packet one-way delay: 20.981 ms
Loss rate: 0.11%
```

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-10-02 13:58:36

End at: 2018-10-02 13:59:06

Local clock offset: -0.732 ms

Remote clock offset: -3.042 ms

Below is generated by plot.py at 2018-10-02 15:24:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 92.49 Mbit/s

95th percentile per-packet one-way delay: 23.997 ms

Loss rate: 0.14%

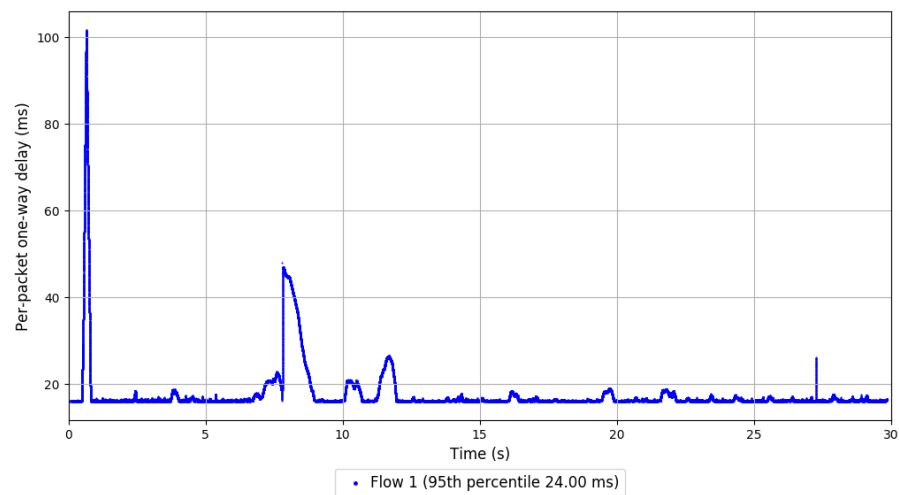
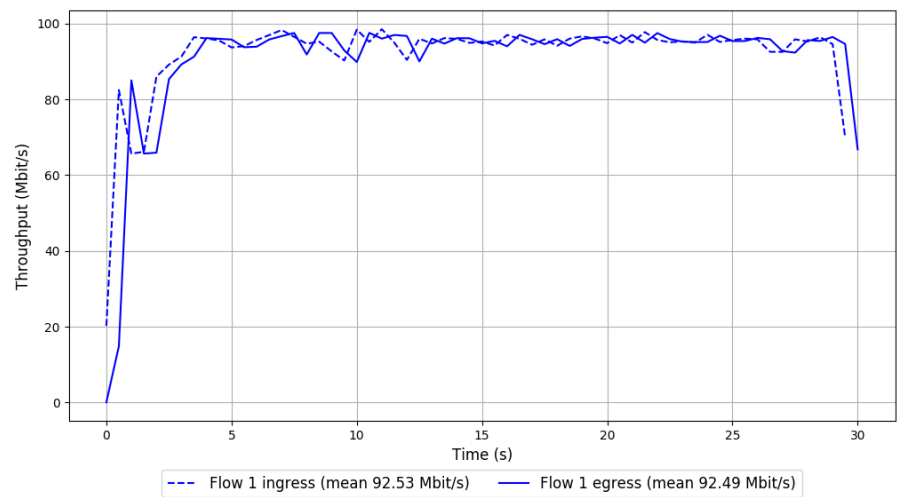
-- Flow 1:

Average throughput: 92.49 Mbit/s

95th percentile per-packet one-way delay: 23.997 ms

Loss rate: 0.14%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-10-02 14:20:04

End at: 2018-10-02 14:20:34

Local clock offset: -1.105 ms

Remote clock offset: -3.013 ms

Below is generated by plot.py at 2018-10-02 15:24:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 90.48 Mbit/s

95th percentile per-packet one-way delay: 18.874 ms

Loss rate: 0.14%

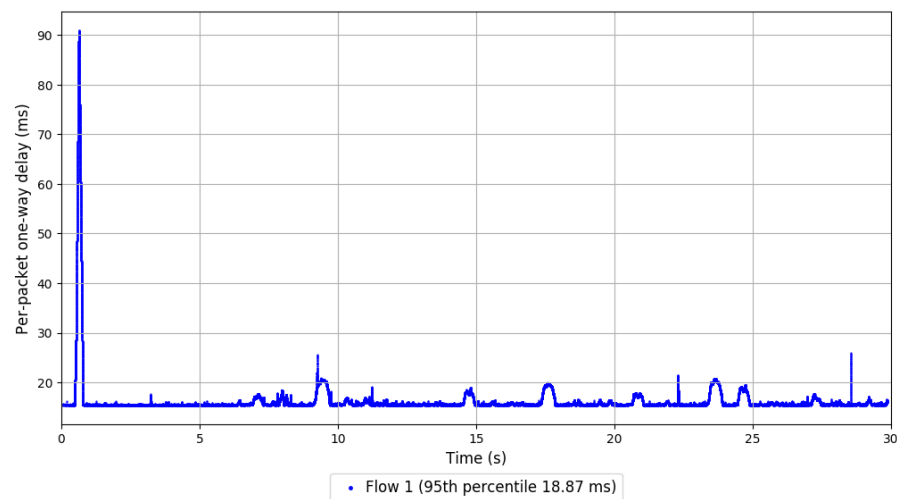
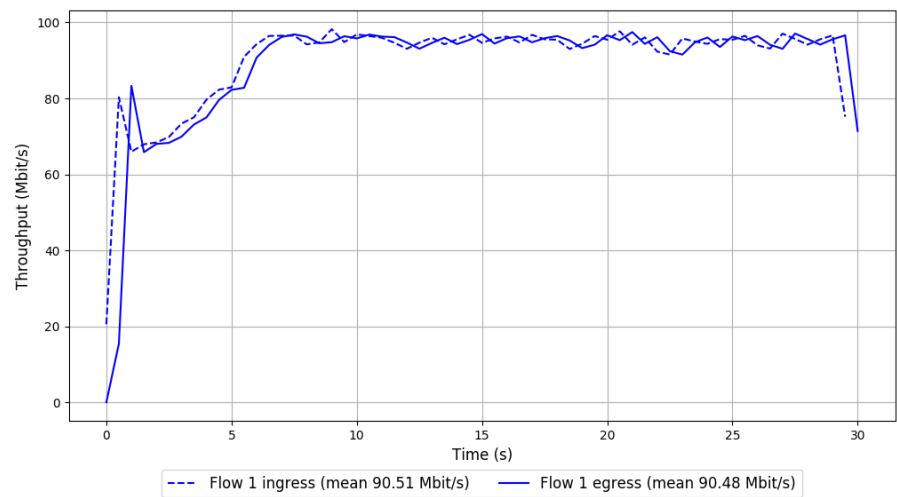
-- Flow 1:

Average throughput: 90.48 Mbit/s

95th percentile per-packet one-way delay: 18.874 ms

Loss rate: 0.14%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-10-02 14:42:15

End at: 2018-10-02 14:42:45

Local clock offset: 0.465 ms

Remote clock offset: -4.553 ms

Below is generated by plot.py at 2018-10-02 15:24:10

Datalink statistics

-- Total of 1 flow:

Average throughput: 84.01 Mbit/s

95th percentile per-packet one-way delay: 21.590 ms

Loss rate: 0.11%

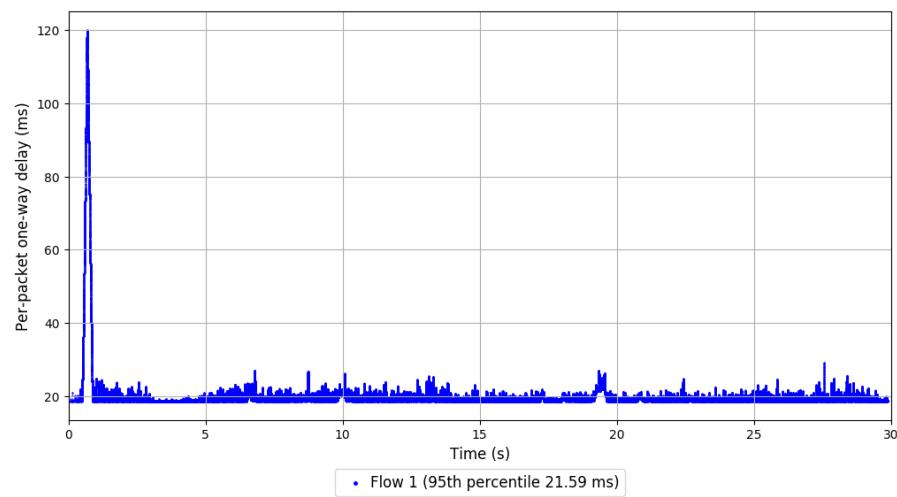
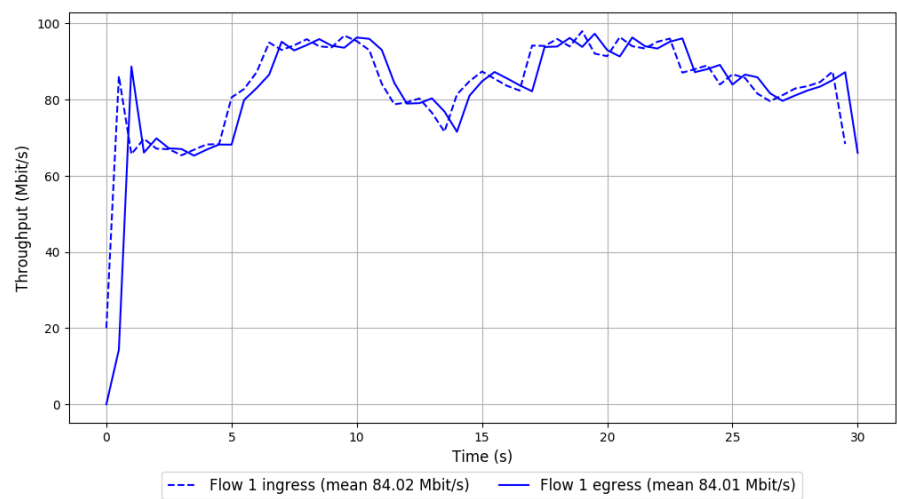
-- Flow 1:

Average throughput: 84.01 Mbit/s

95th percentile per-packet one-way delay: 21.590 ms

Loss rate: 0.11%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-10-02 15:07:45

End at: 2018-10-02 15:08:15

Local clock offset: 0.322 ms

Remote clock offset: -4.247 ms

Below is generated by plot.py at 2018-10-02 15:24:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.76 Mbit/s

95th percentile per-packet one-way delay: 25.454 ms

Loss rate: 0.11%

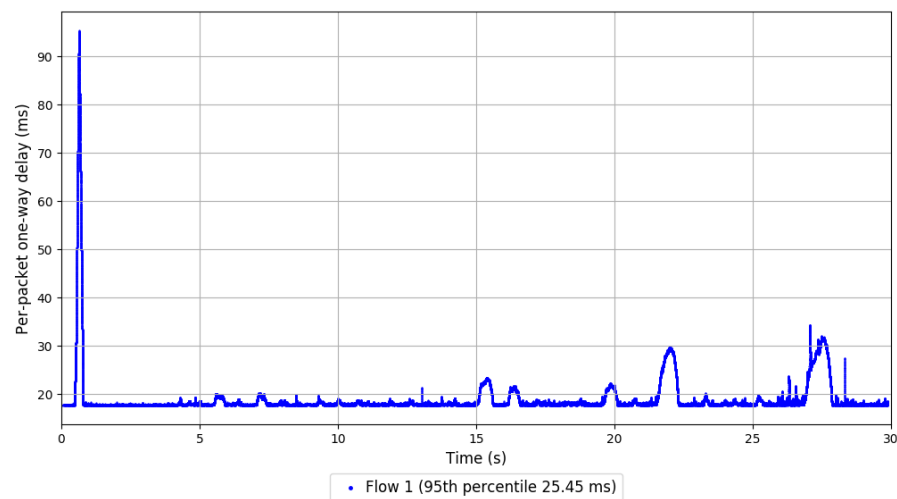
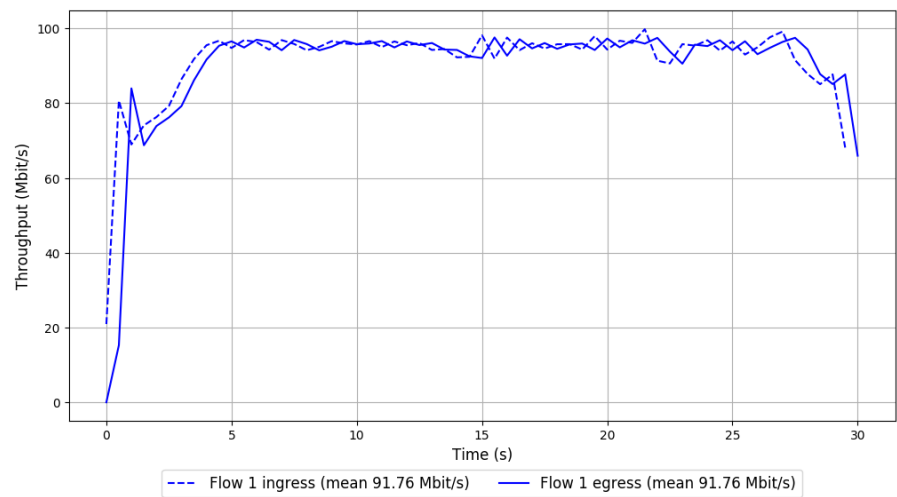
-- Flow 1:

Average throughput: 91.76 Mbit/s

95th percentile per-packet one-way delay: 25.454 ms

Loss rate: 0.11%

Run 5: Report of PCC-Allegro — Data Link

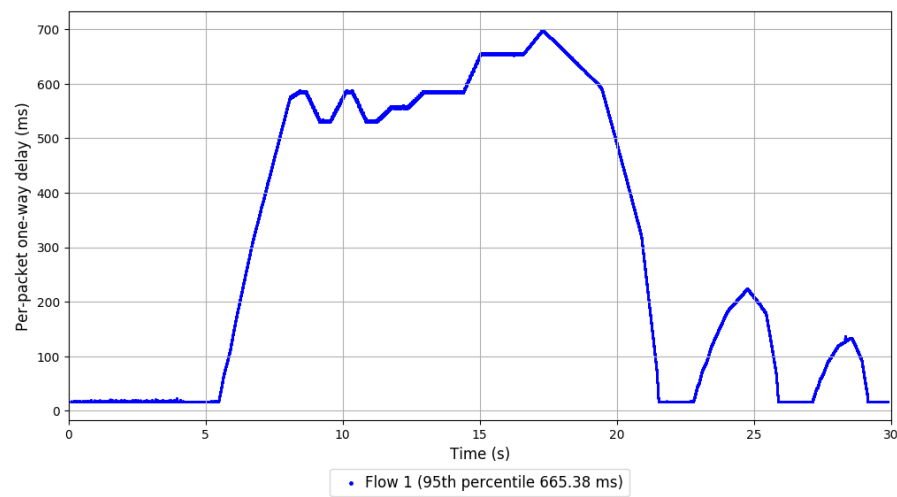
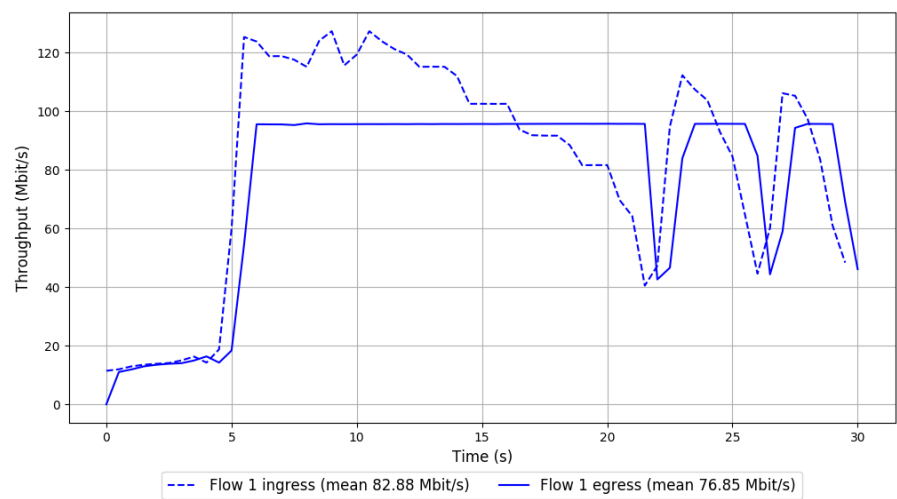


```
Run 1: Statistics of PCC-Expr

Start at: 2018-10-02 13:26:09
End at: 2018-10-02 13:26:39
Local clock offset: 0.744 ms
Remote clock offset: -2.16 ms

# Below is generated by plot.py at 2018-10-02 15:25:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 76.85 Mbit/s
95th percentile per-packet one-way delay: 665.385 ms
Loss rate: 7.37%
-- Flow 1:
Average throughput: 76.85 Mbit/s
95th percentile per-packet one-way delay: 665.385 ms
Loss rate: 7.37%
```

Run 1: Report of PCC-Expr — Data Link

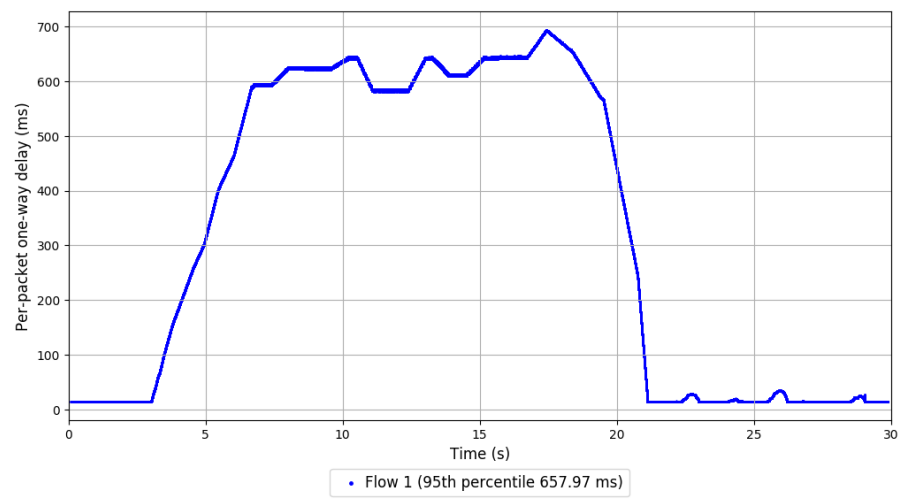
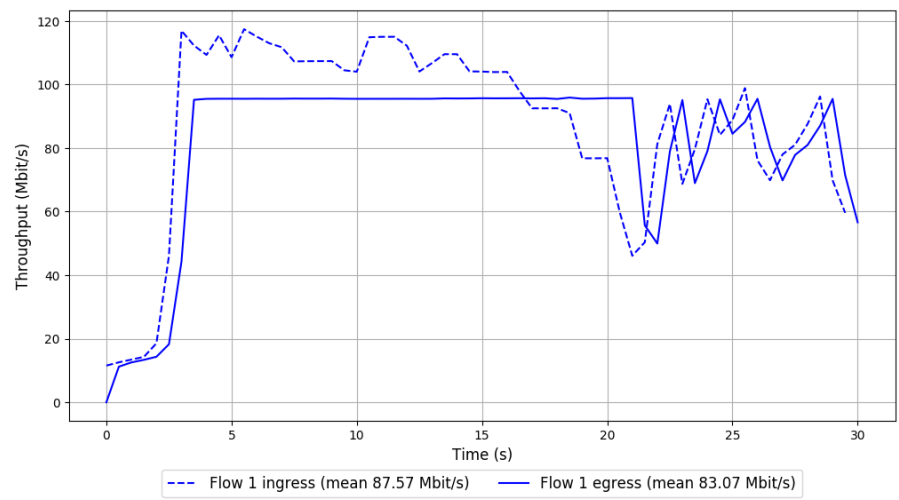


Run 2: Statistics of PCC-Expr

Start at: 2018-10-02 13:47:34
End at: 2018-10-02 13:48:04
Local clock offset: -0.964 ms
Remote clock offset: -1.585 ms

Below is generated by plot.py at 2018-10-02 15:25:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 83.07 Mbit/s
95th percentile per-packet one-way delay: 657.966 ms
Loss rate: 5.23%
-- Flow 1:
Average throughput: 83.07 Mbit/s
95th percentile per-packet one-way delay: 657.966 ms
Loss rate: 5.23%

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2018-10-02 14:08:58

End at: 2018-10-02 14:09:29

Local clock offset: 0.842 ms

Remote clock offset: -2.679 ms

Below is generated by plot.py at 2018-10-02 15:25:44

Datalink statistics

-- Total of 1 flow:

Average throughput: 87.10 Mbit/s

95th percentile per-packet one-way delay: 41.761 ms

Loss rate: 0.14%

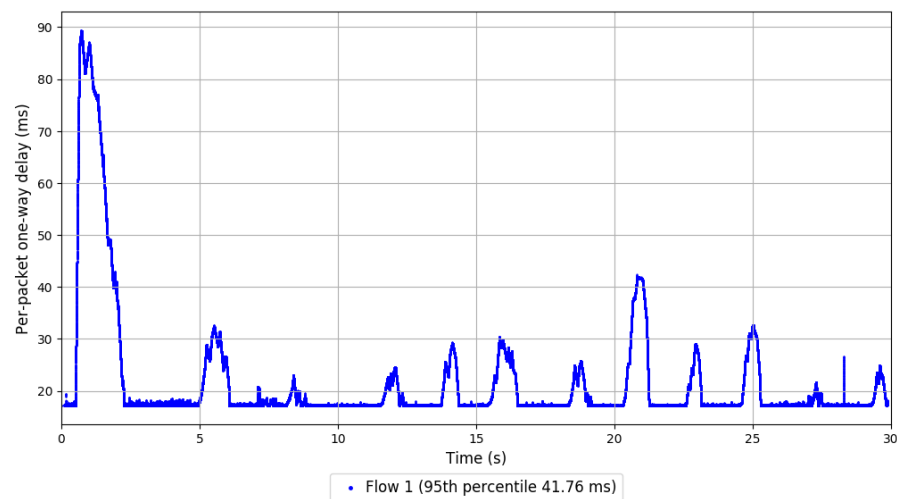
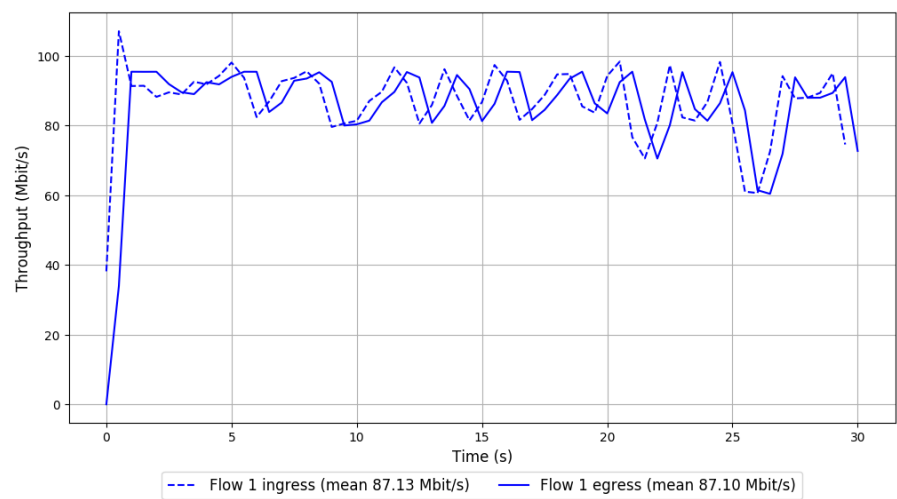
-- Flow 1:

Average throughput: 87.10 Mbit/s

95th percentile per-packet one-way delay: 41.761 ms

Loss rate: 0.14%

Run 3: Report of PCC-Expr — Data Link

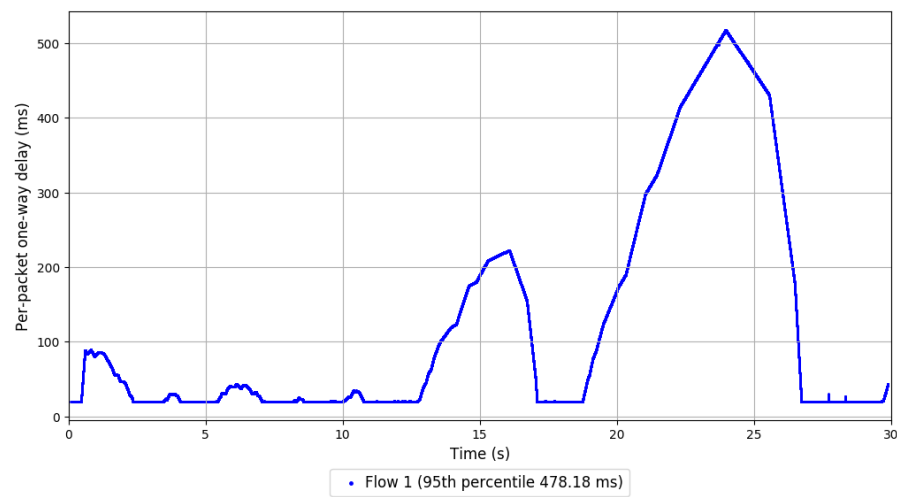
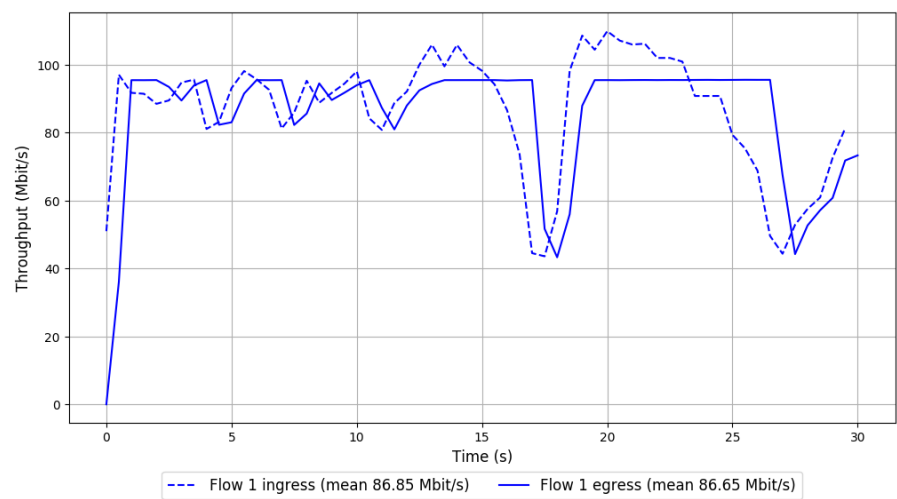


Run 4: Statistics of PCC-Expr

Start at: 2018-10-02 14:30:30
End at: 2018-10-02 14:31:00
Local clock offset: 1.5 ms
Remote clock offset: -4.802 ms

Below is generated by plot.py at 2018-10-02 15:25:53
Datalink statistics
-- Total of 1 flow:
Average throughput: 86.65 Mbit/s
95th percentile per-packet one-way delay: 478.180 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 86.65 Mbit/s
95th percentile per-packet one-way delay: 478.180 ms
Loss rate: 0.34%

Run 4: Report of PCC-Expr — Data Link

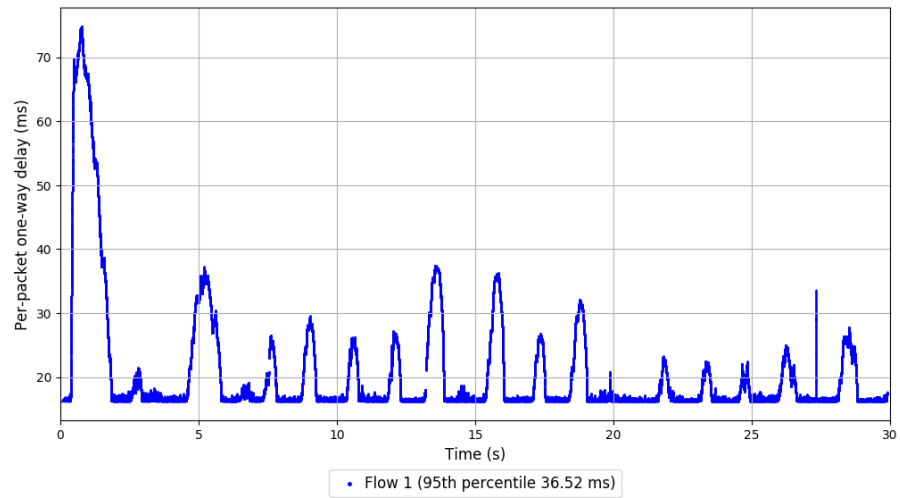
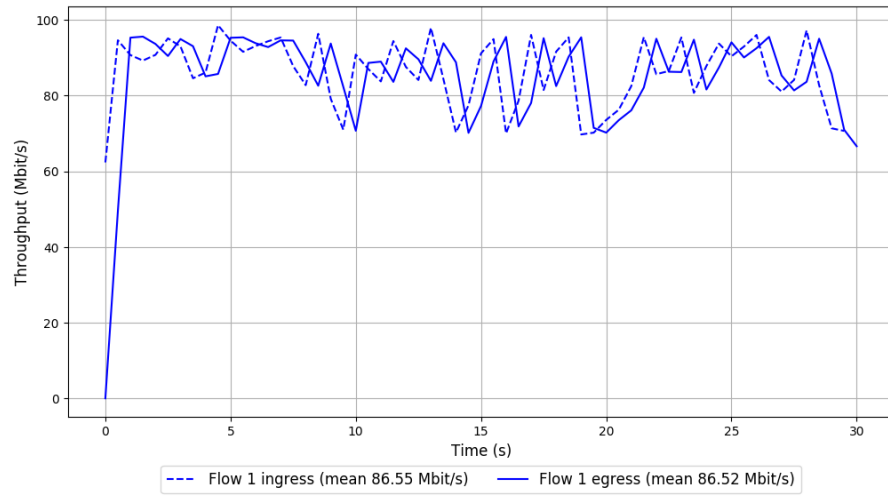


Run 5: Statistics of PCC-Expr

Start at: 2018-10-02 14:56:17
End at: 2018-10-02 14:56:47
Local clock offset: -0.471 ms
Remote clock offset: -3.524 ms

Below is generated by plot.py at 2018-10-02 15:26:06
Datalink statistics
-- Total of 1 flow:
Average throughput: 86.52 Mbit/s
95th percentile per-packet one-way delay: 36.520 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 86.52 Mbit/s
95th percentile per-packet one-way delay: 36.520 ms
Loss rate: 0.14%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2018-10-02 13:33:42

End at: 2018-10-02 13:34:12

Local clock offset: 1.515 ms

Remote clock offset: -0.905 ms

Below is generated by plot.py at 2018-10-02 15:26:06

Datalink statistics

-- Total of 1 flow:

Average throughput: 90.11 Mbit/s

95th percentile per-packet one-way delay: 24.143 ms

Loss rate: 0.14%

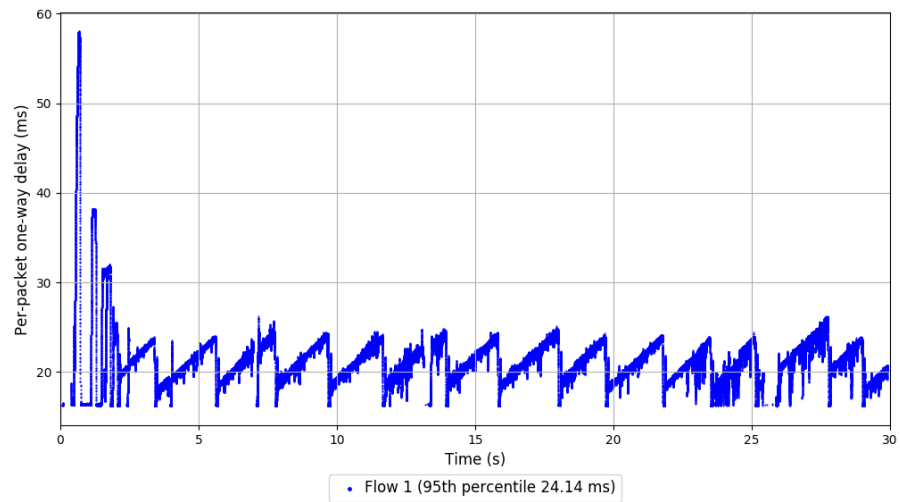
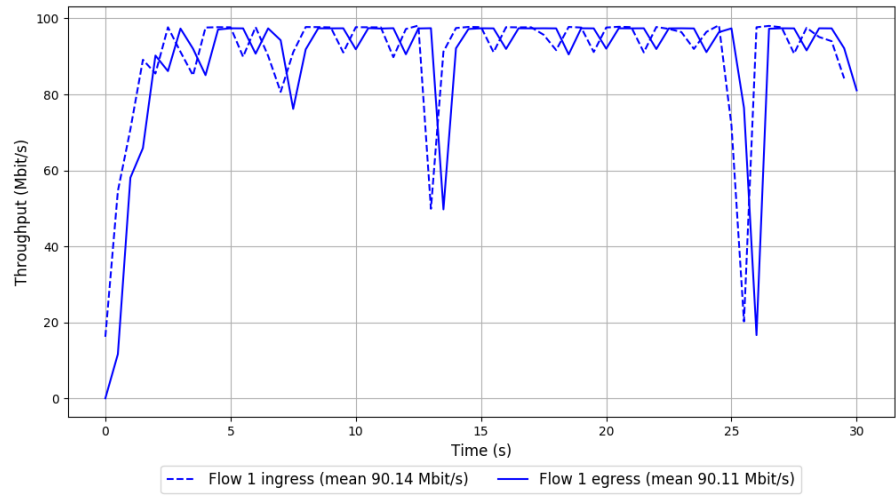
-- Flow 1:

Average throughput: 90.11 Mbit/s

95th percentile per-packet one-way delay: 24.143 ms

Loss rate: 0.14%

Run 1: Report of QUIC Cubic — Data Link

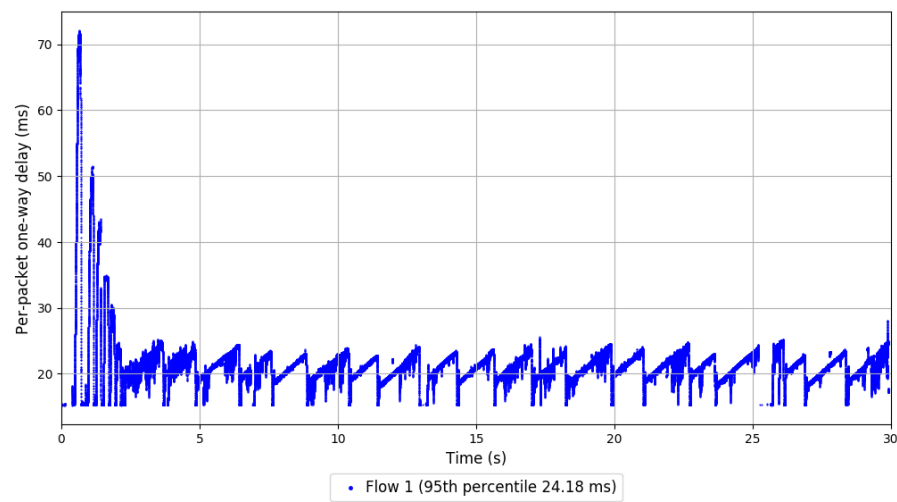
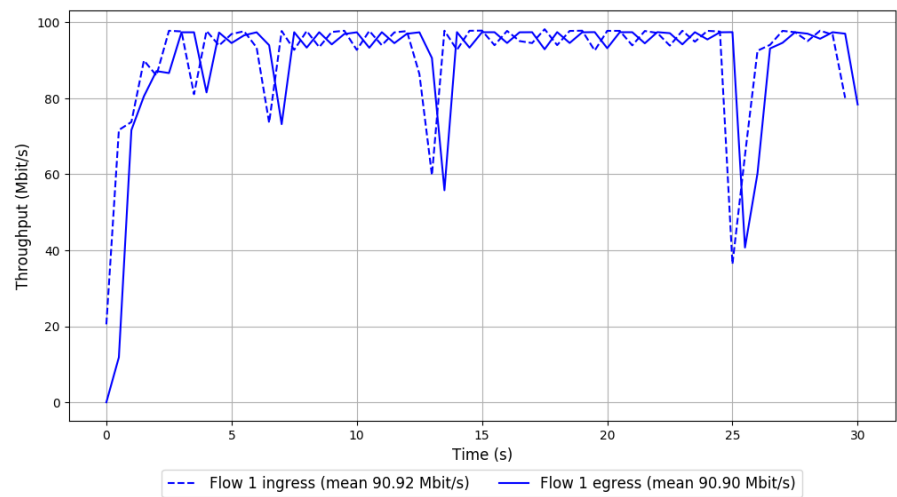


Run 2: Statistics of QUIC Cubic

Start at: 2018-10-02 13:54:59
End at: 2018-10-02 13:55:29
Local clock offset: -1.124 ms
Remote clock offset: -2.605 ms

Below is generated by plot.py at 2018-10-02 15:26:06
Datalink statistics
-- Total of 1 flow:
Average throughput: 90.90 Mbit/s
95th percentile per-packet one-way delay: 24.176 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 90.90 Mbit/s
95th percentile per-packet one-way delay: 24.176 ms
Loss rate: 0.11%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-10-02 14:16:33

End at: 2018-10-02 14:17:03

Local clock offset: 1.039 ms

Remote clock offset: -2.453 ms

Below is generated by plot.py at 2018-10-02 15:26:06

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.30 Mbit/s

95th percentile per-packet one-way delay: 24.796 ms

Loss rate: 0.09%

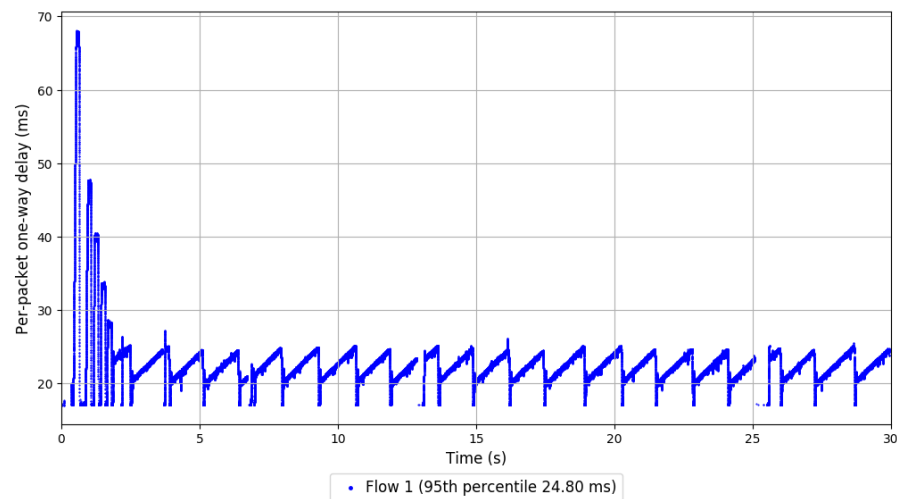
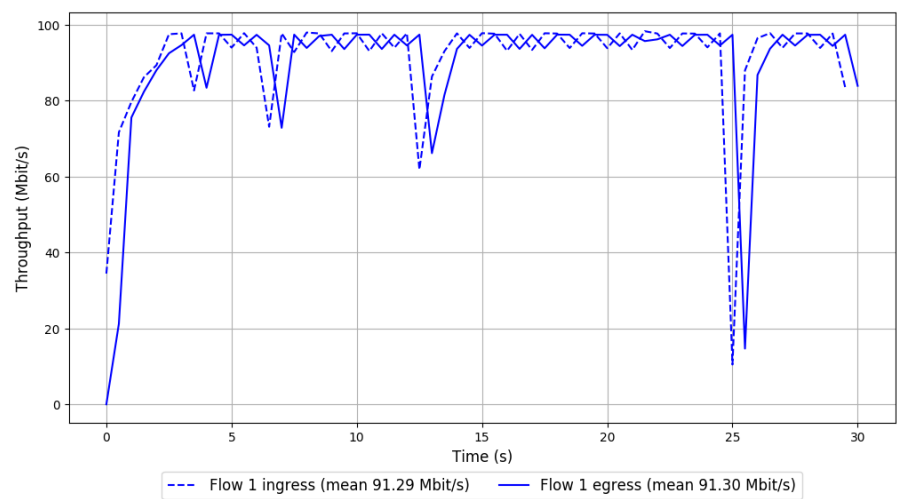
-- Flow 1:

Average throughput: 91.30 Mbit/s

95th percentile per-packet one-way delay: 24.796 ms

Loss rate: 0.09%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-10-02 14:38:00

End at: 2018-10-02 14:38:30

Local clock offset: 0.851 ms

Remote clock offset: -4.66 ms

Below is generated by plot.py at 2018-10-02 15:26:27

Datalink statistics

-- Total of 1 flow:

Average throughput: 90.85 Mbit/s

95th percentile per-packet one-way delay: 26.916 ms

Loss rate: 0.14%

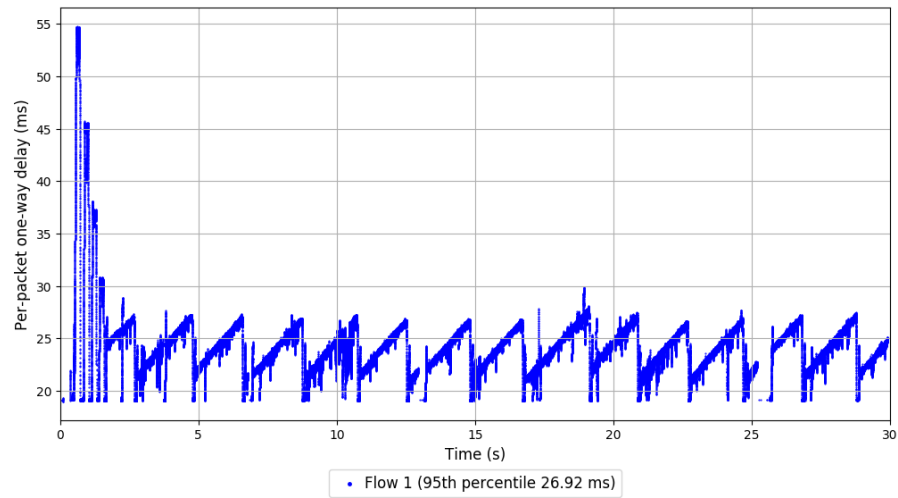
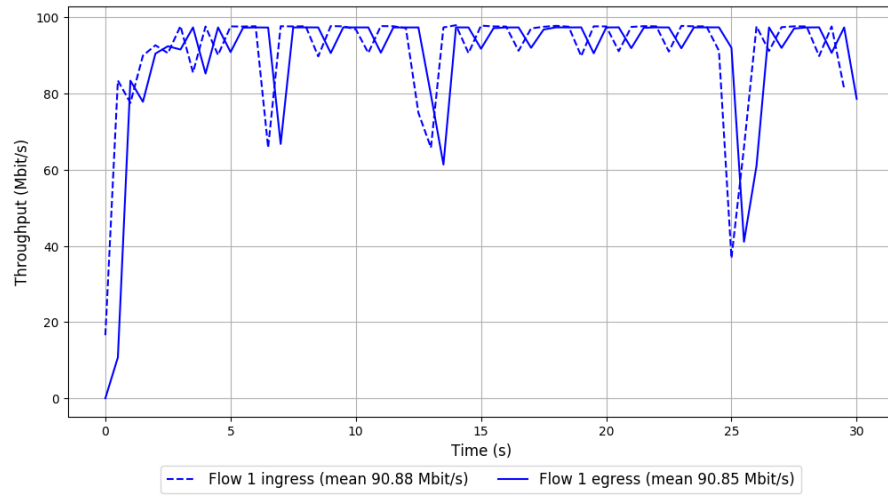
-- Flow 1:

Average throughput: 90.85 Mbit/s

95th percentile per-packet one-way delay: 26.916 ms

Loss rate: 0.14%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-10-02 15:04:06

End at: 2018-10-02 15:04:36

Local clock offset: 1.995 ms

Remote clock offset: -4.292 ms

Below is generated by plot.py at 2018-10-02 15:26:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.00 Mbit/s

95th percentile per-packet one-way delay: 27.278 ms

Loss rate: 0.12%

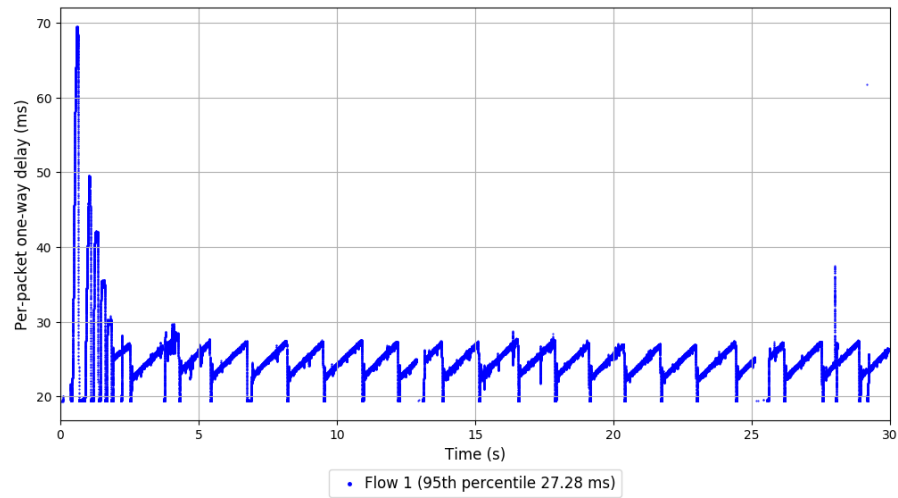
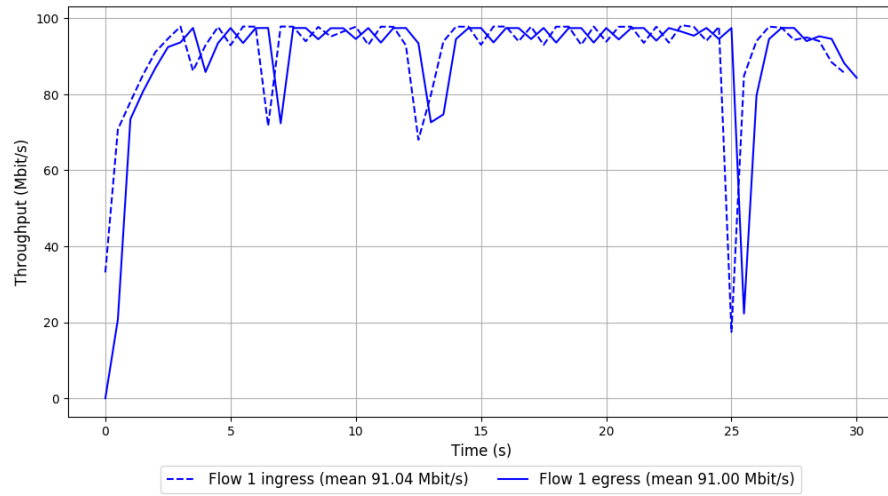
-- Flow 1:

Average throughput: 91.00 Mbit/s

95th percentile per-packet one-way delay: 27.278 ms

Loss rate: 0.12%

Run 5: Report of QUIC Cubic — Data Link

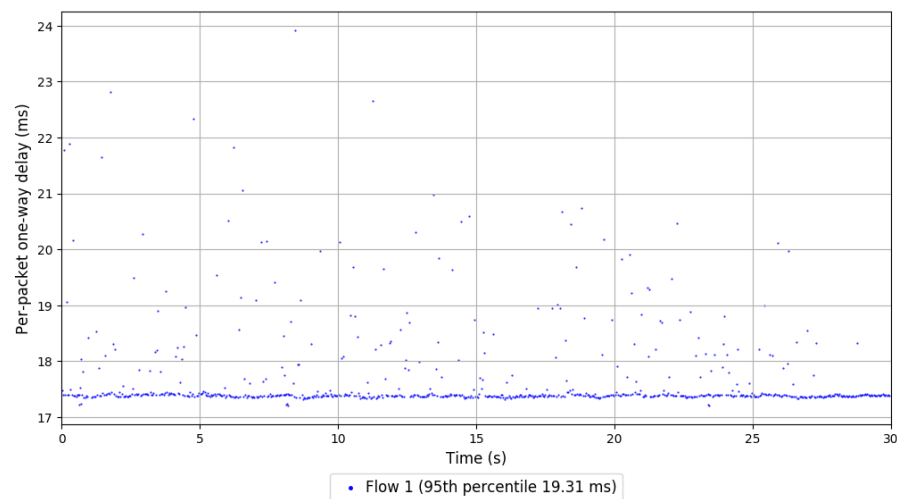
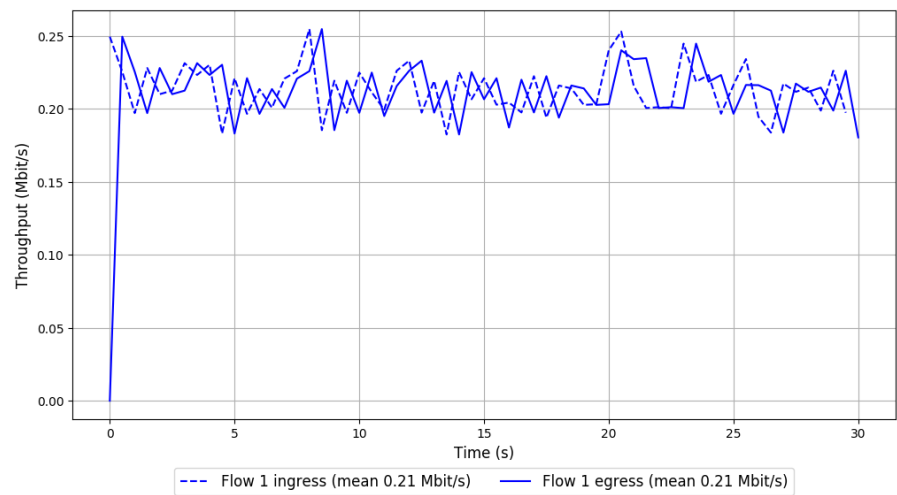


```
Run 1: Statistics of SCReAM

Start at: 2018-10-02 13:23:11
End at: 2018-10-02 13:23:41
Local clock offset: 0.925 ms
Remote clock offset: -2.465 ms

# Below is generated by plot.py at 2018-10-02 15:26:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 19.310 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 19.310 ms
Loss rate: 0.13%
```

Run 1: Report of SReAM — Data Link

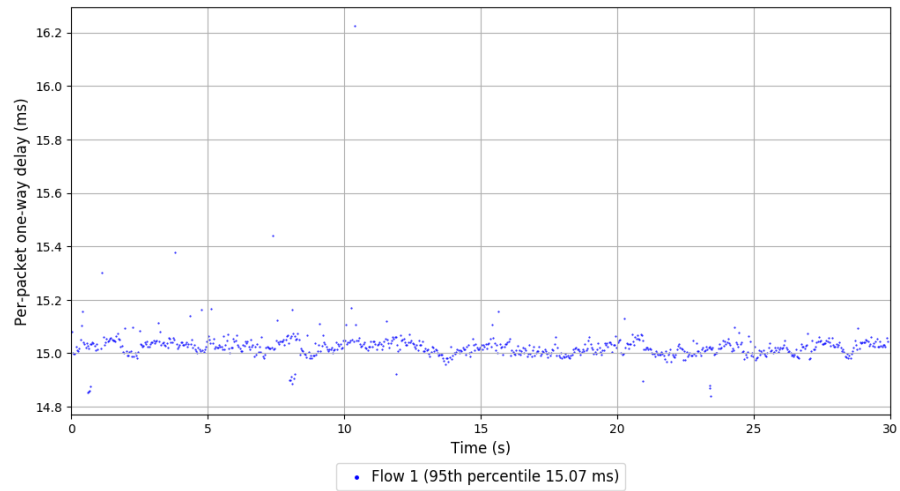
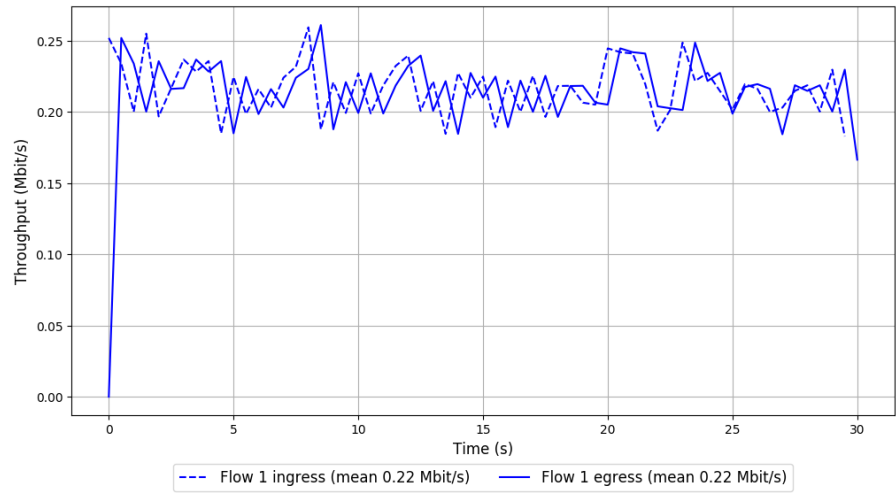


Run 2: Statistics of SCReAM

Start at: 2018-10-02 13:45:22
End at: 2018-10-02 13:45:52
Local clock offset: -0.975 ms
Remote clock offset: -2.098 ms

Below is generated by plot.py at 2018-10-02 15:26:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 15.069 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 15.069 ms
Loss rate: 0.13%

Run 2: Report of SReAM — Data Link

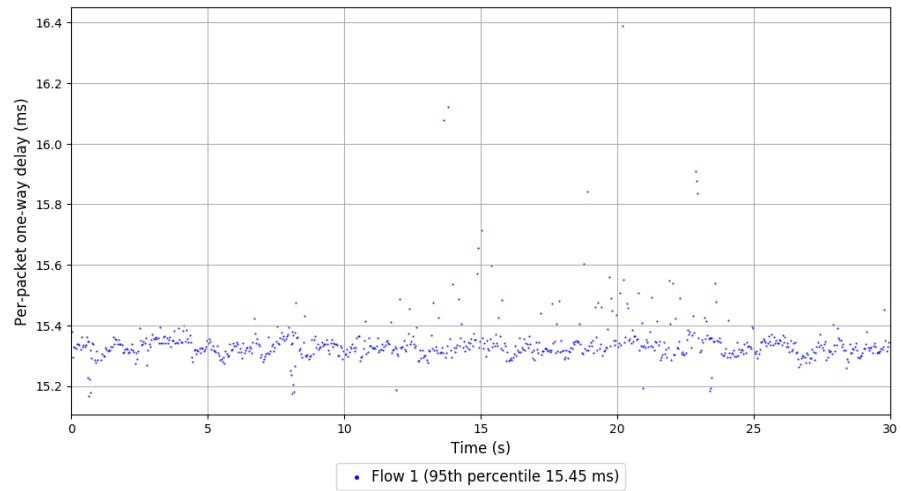
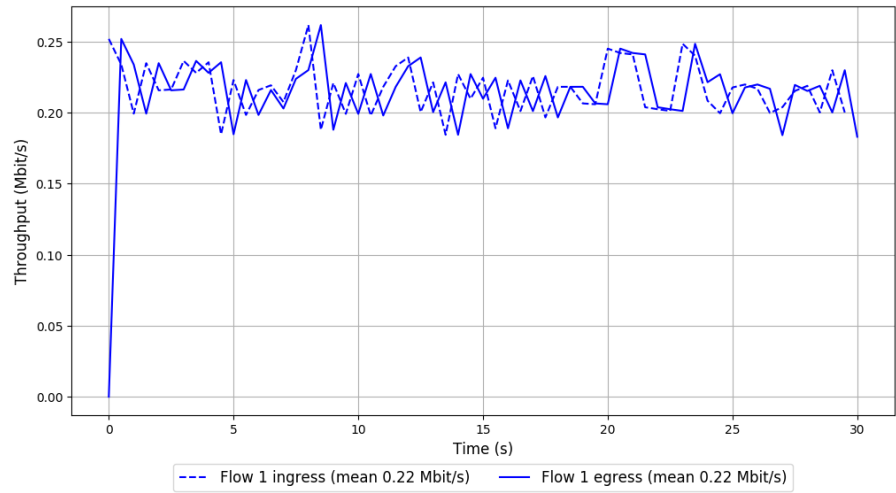


Run 3: Statistics of SCReAM

Start at: 2018-10-02 14:06:48
End at: 2018-10-02 14:07:18
Local clock offset: -0.878 ms
Remote clock offset: -2.458 ms

Below is generated by plot.py at 2018-10-02 15:26:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 15.448 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 15.448 ms
Loss rate: 0.13%

Run 3: Report of SReAM — Data Link

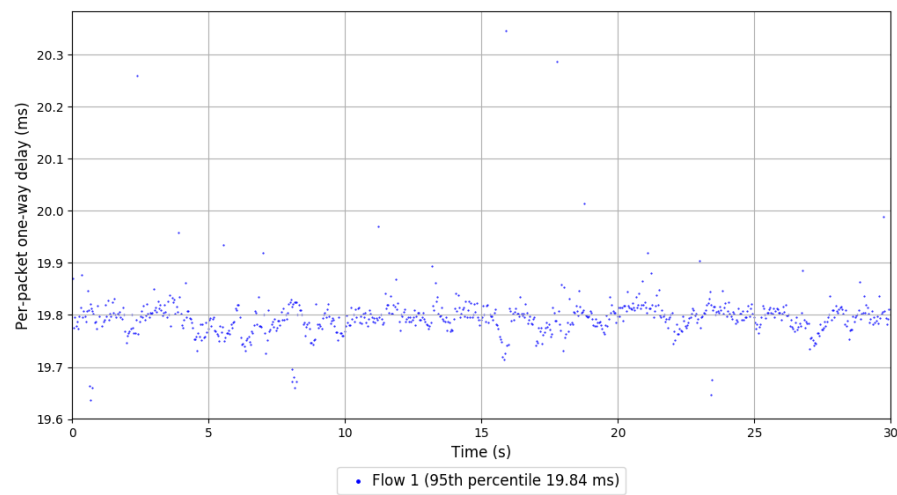
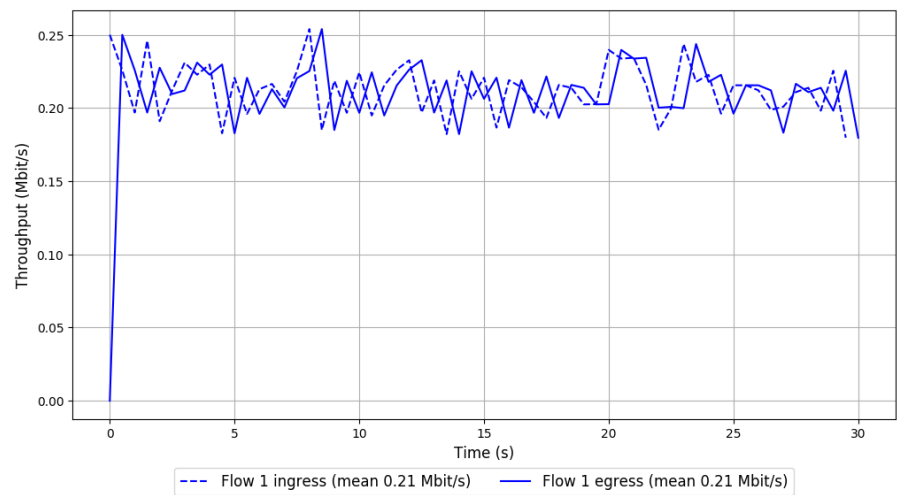


Run 4: Statistics of SCReAM

Start at: 2018-10-02 14:28:19
End at: 2018-10-02 14:28:49
Local clock offset: 0.993 ms
Remote clock offset: -5.152 ms

Below is generated by plot.py at 2018-10-02 15:26:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 19.836 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 19.836 ms
Loss rate: 0.00%

Run 4: Report of SReAM — Data Link

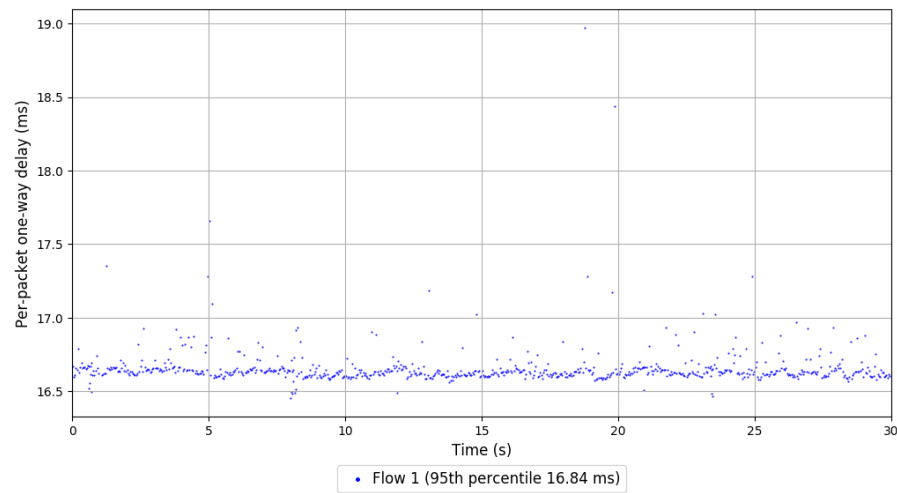
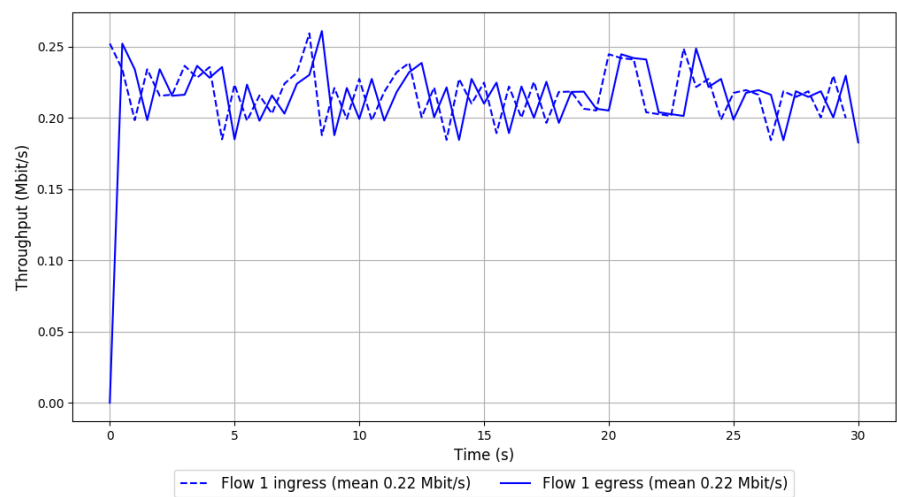


Run 5: Statistics of SCReAM

Start at: 2018-10-02 14:54:00
End at: 2018-10-02 14:54:30
Local clock offset: -0.871 ms
Remote clock offset: -4.225 ms

Below is generated by plot.py at 2018-10-02 15:26:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 16.835 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 16.835 ms
Loss rate: 0.13%

Run 5: Report of SCReAM — Data Link

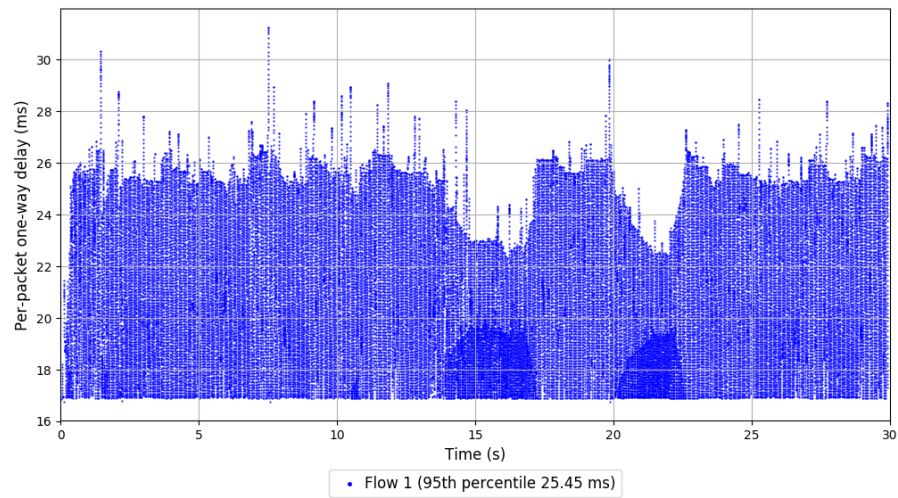
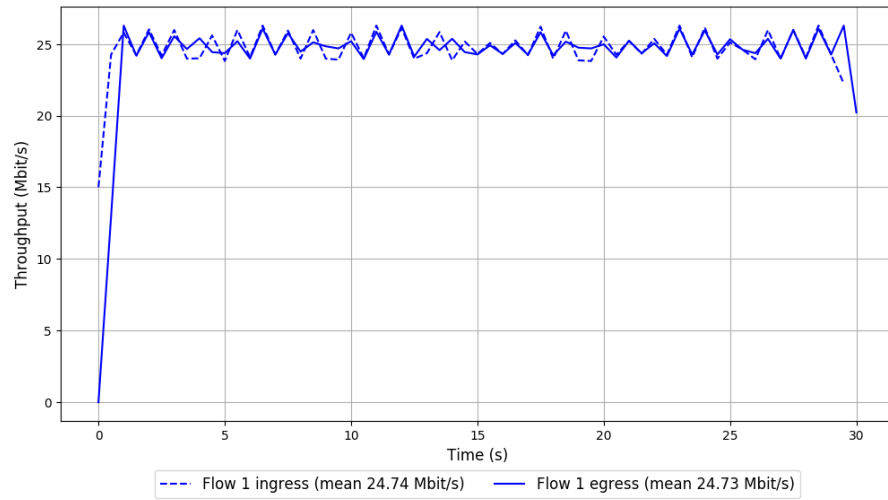


Run 1: Statistics of Sprout

Start at: 2018-10-02 13:24:17
End at: 2018-10-02 13:24:47
Local clock offset: -0.975 ms
Remote clock offset: -3.905 ms

Below is generated by plot.py at 2018-10-02 15:26:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.73 Mbit/s
95th percentile per-packet one-way delay: 25.450 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 24.73 Mbit/s
95th percentile per-packet one-way delay: 25.450 ms
Loss rate: 0.14%

Run 1: Report of Sprout — Data Link

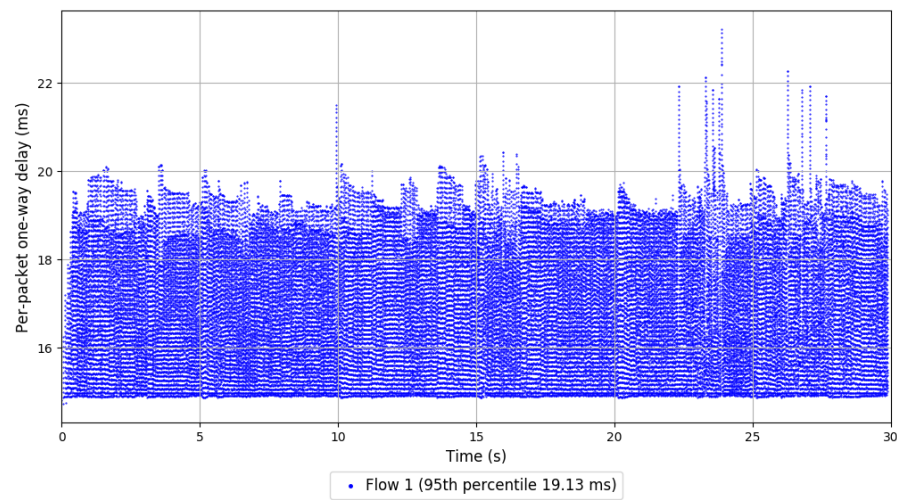
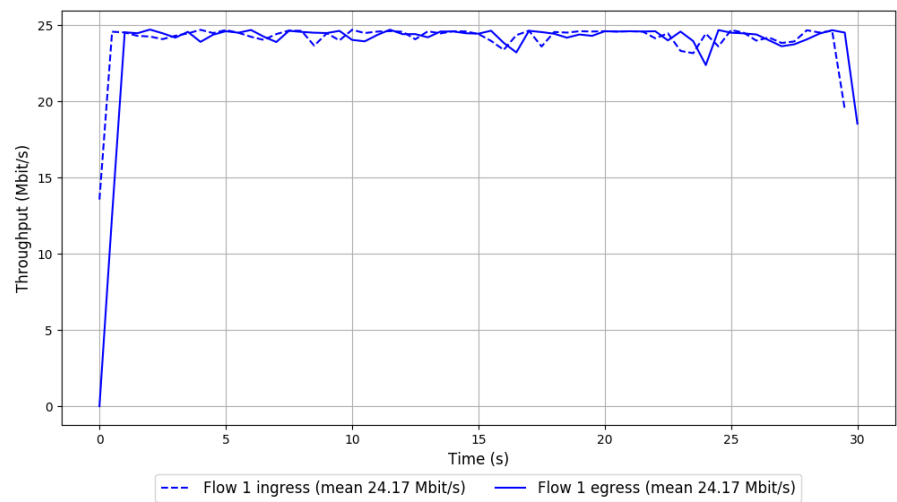


Run 2: Statistics of Sprout

Start at: 2018-10-02 13:46:27
End at: 2018-10-02 13:46:57
Local clock offset: -0.568 ms
Remote clock offset: -1.546 ms

Below is generated by plot.py at 2018-10-02 15:26:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.17 Mbit/s
95th percentile per-packet one-way delay: 19.129 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 24.17 Mbit/s
95th percentile per-packet one-way delay: 19.129 ms
Loss rate: 0.14%

Run 2: Report of Sprout — Data Link

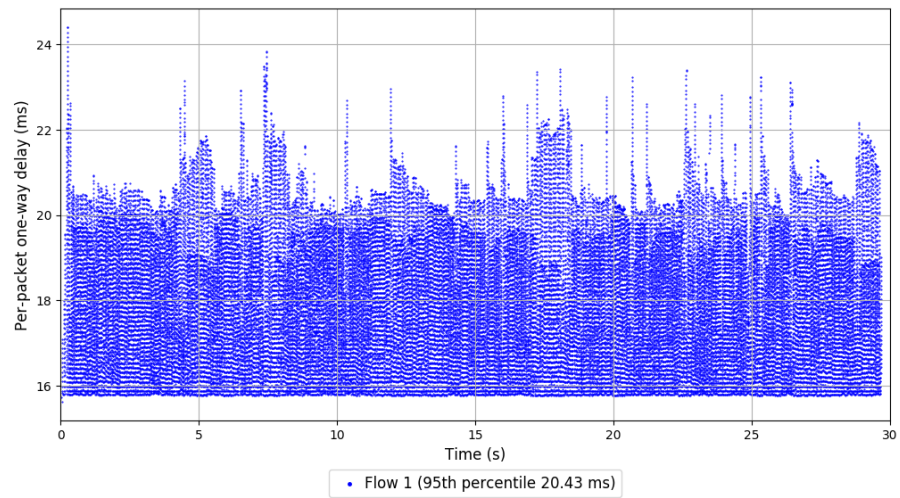
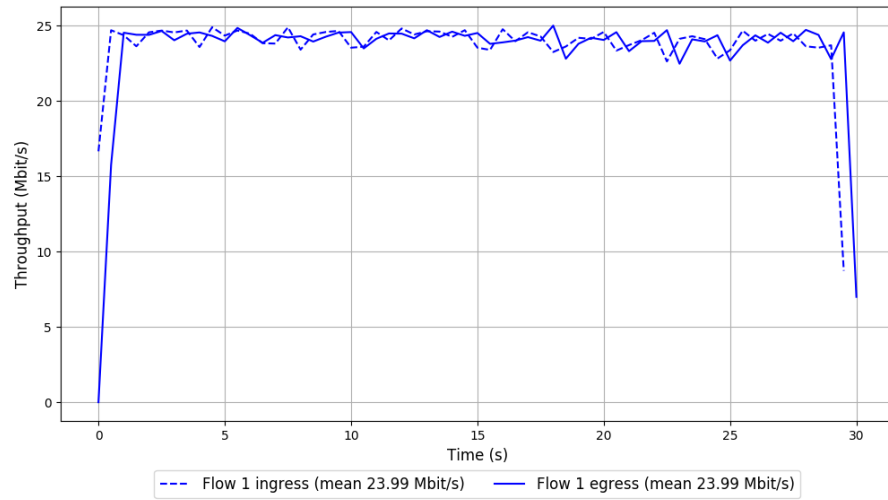


Run 3: Statistics of Sprout

Start at: 2018-10-02 14:07:53
End at: 2018-10-02 14:08:23
Local clock offset: -0.631 ms
Remote clock offset: -2.674 ms

Below is generated by plot.py at 2018-10-02 15:26:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 23.99 Mbit/s
95th percentile per-packet one-way delay: 20.432 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 23.99 Mbit/s
95th percentile per-packet one-way delay: 20.432 ms
Loss rate: 0.12%

Run 3: Report of Sprout — Data Link

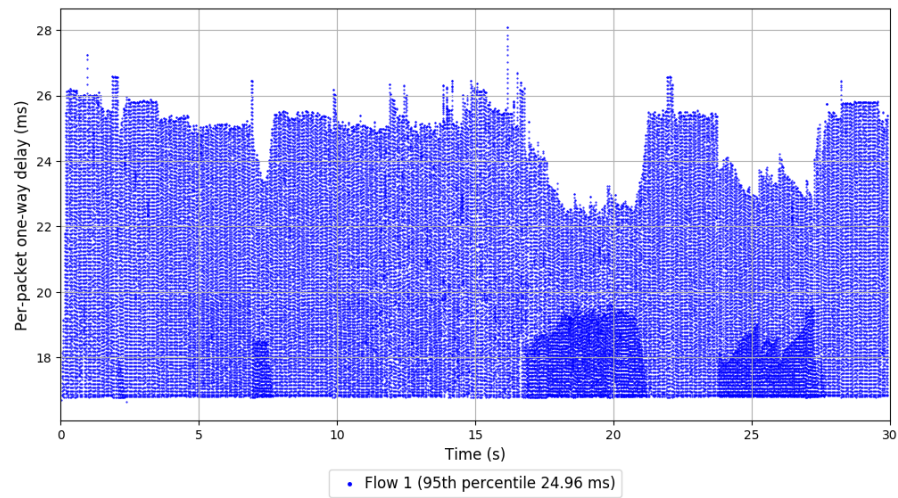
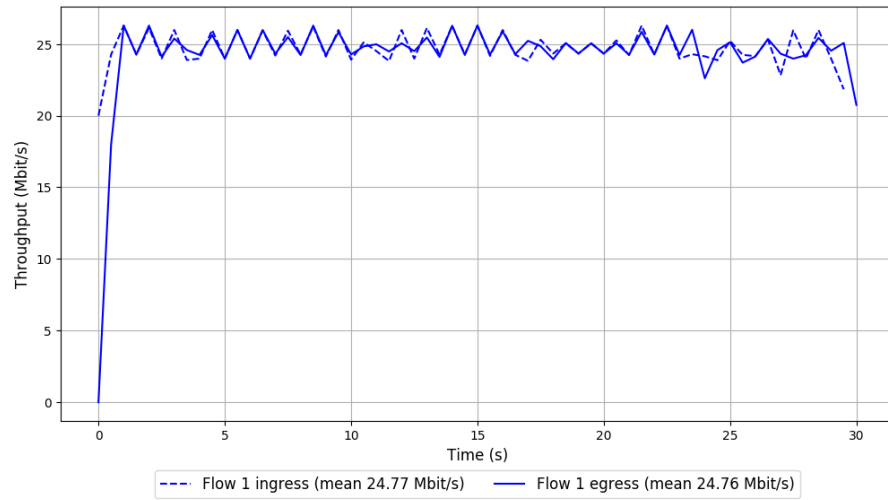


Run 4: Statistics of Sprout

Start at: 2018-10-02 14:29:24
End at: 2018-10-02 14:29:54
Local clock offset: -1.054 ms
Remote clock offset: -4.191 ms

Below is generated by plot.py at 2018-10-02 15:26:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.76 Mbit/s
95th percentile per-packet one-way delay: 24.957 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 24.76 Mbit/s
95th percentile per-packet one-way delay: 24.957 ms
Loss rate: 0.13%

Run 4: Report of Sprout — Data Link

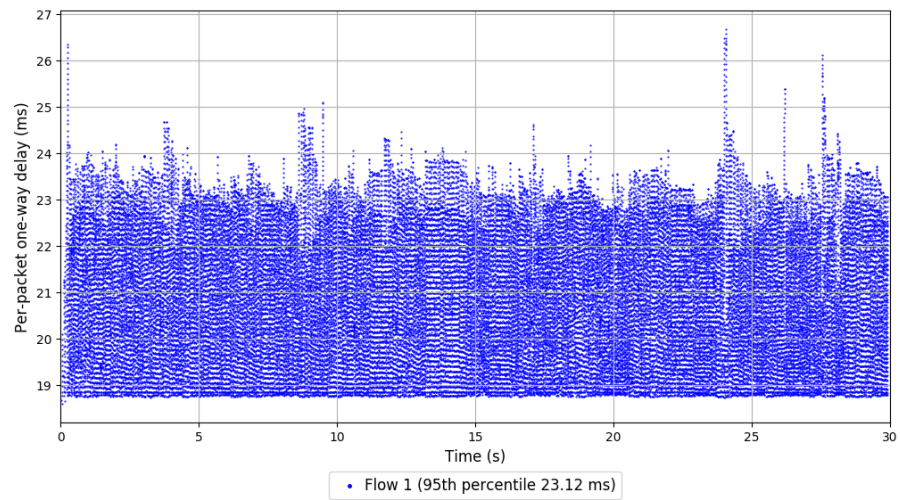
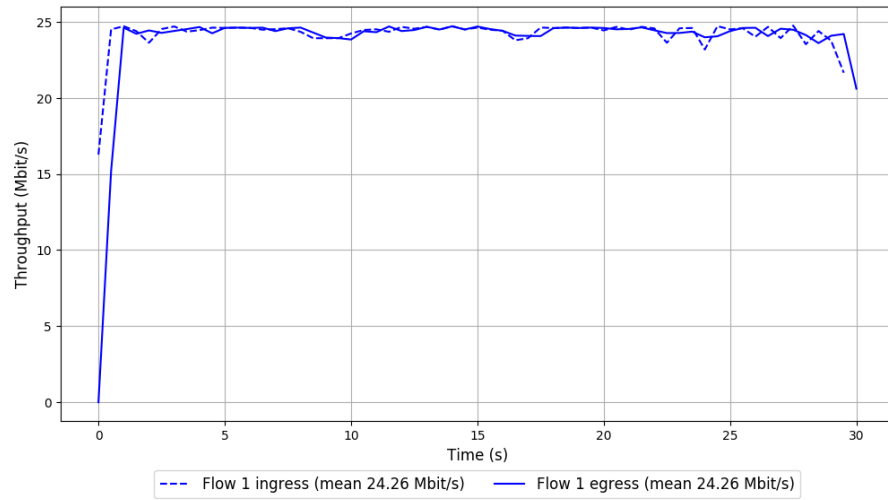


Run 5: Statistics of Sprout

Start at: 2018-10-02 14:55:10
End at: 2018-10-02 14:55:40
Local clock offset: 2.001 ms
Remote clock offset: -3.489 ms

Below is generated by plot.py at 2018-10-02 15:26:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.26 Mbit/s
95th percentile per-packet one-way delay: 23.116 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 24.26 Mbit/s
95th percentile per-packet one-way delay: 23.116 ms
Loss rate: 0.14%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2018-10-02 13:27:27

End at: 2018-10-02 13:27:57

Local clock offset: 0.13 ms

Remote clock offset: -2.946 ms

Below is generated by plot.py at 2018-10-02 15:27:55

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.79 Mbit/s

95th percentile per-packet one-way delay: 18.506 ms

Loss rate: 0.10%

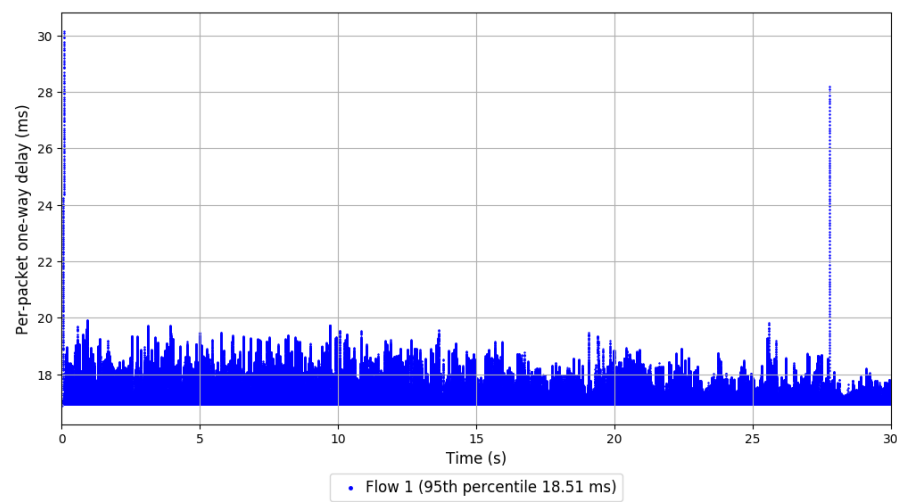
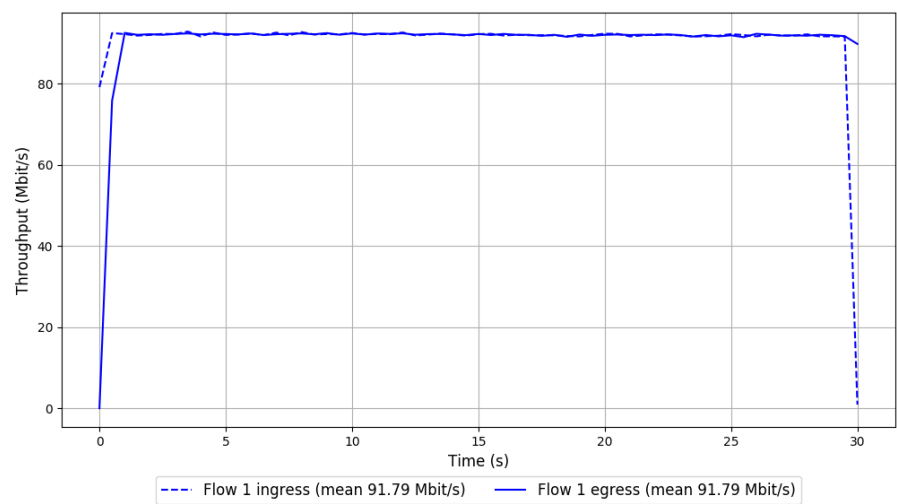
-- Flow 1:

Average throughput: 91.79 Mbit/s

95th percentile per-packet one-way delay: 18.506 ms

Loss rate: 0.10%

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

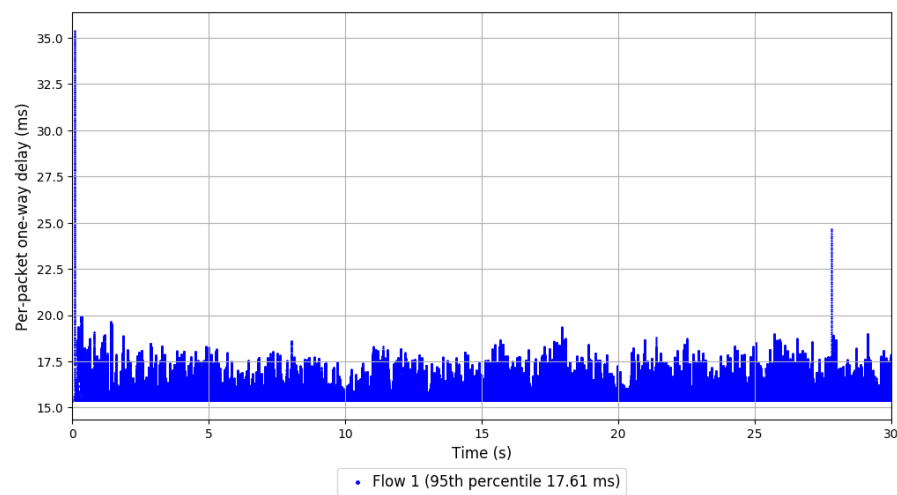
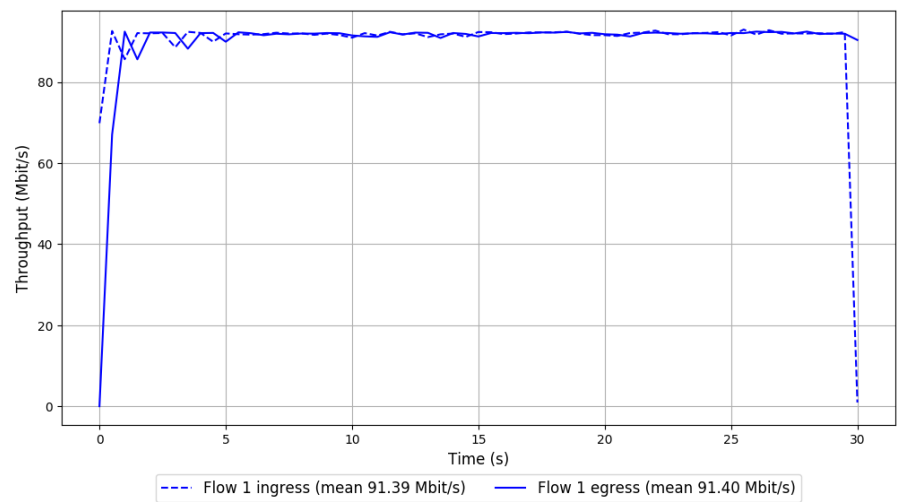


Run 2: Statistics of TaoVA-100x

Start at: 2018-10-02 13:48:52
End at: 2018-10-02 13:49:22
Local clock offset: -0.513 ms
Remote clock offset: -2.065 ms

Below is generated by plot.py at 2018-10-02 15:27:55
Datalink statistics
-- Total of 1 flow:
Average throughput: 91.40 Mbit/s
95th percentile per-packet one-way delay: 17.608 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 91.40 Mbit/s
95th percentile per-packet one-way delay: 17.608 ms
Loss rate: 0.10%

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-10-02 14:10:14

End at: 2018-10-02 14:10:44

Local clock offset: 0.618 ms

Remote clock offset: -1.385 ms

Below is generated by plot.py at 2018-10-02 15:28:03

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.92 Mbit/s

95th percentile per-packet one-way delay: 17.533 ms

Loss rate: 0.11%

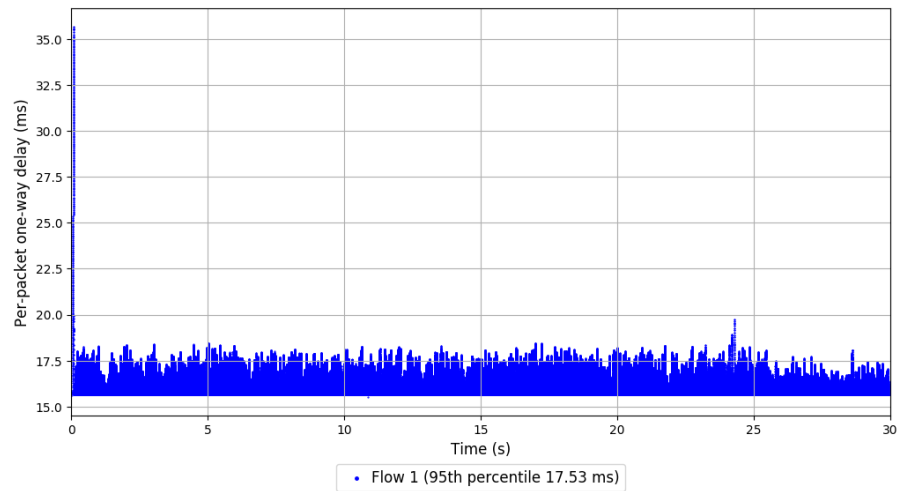
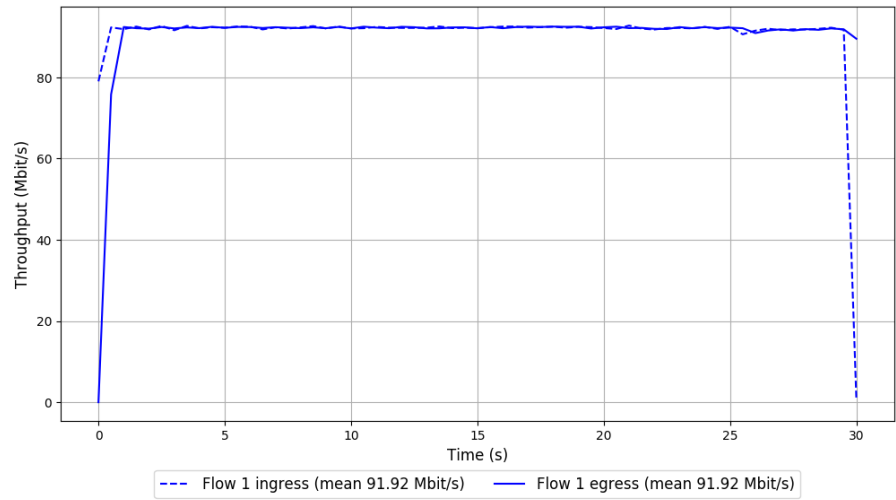
-- Flow 1:

Average throughput: 91.92 Mbit/s

95th percentile per-packet one-way delay: 17.533 ms

Loss rate: 0.11%

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-10-02 14:31:50

End at: 2018-10-02 14:32:20

Local clock offset: 1.659 ms

Remote clock offset: -4.578 ms

Below is generated by plot.py at 2018-10-02 15:28:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.41 Mbit/s

95th percentile per-packet one-way delay: 20.811 ms

Loss rate: 0.11%

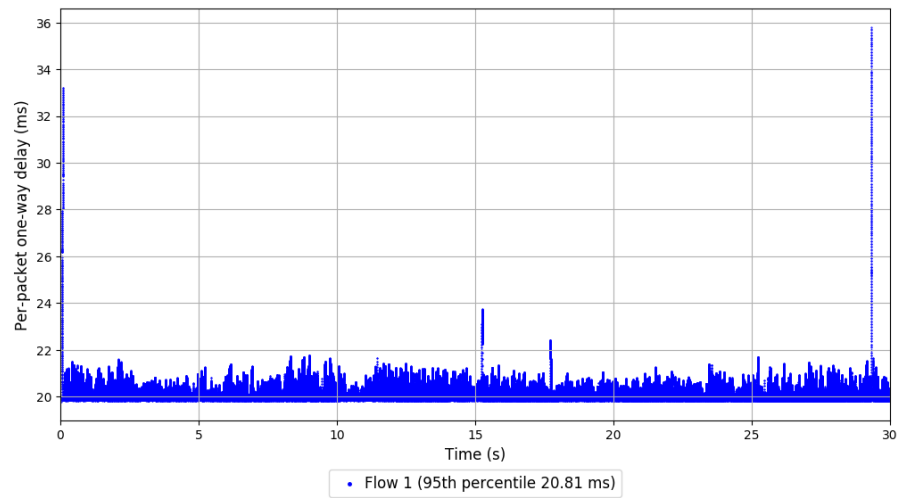
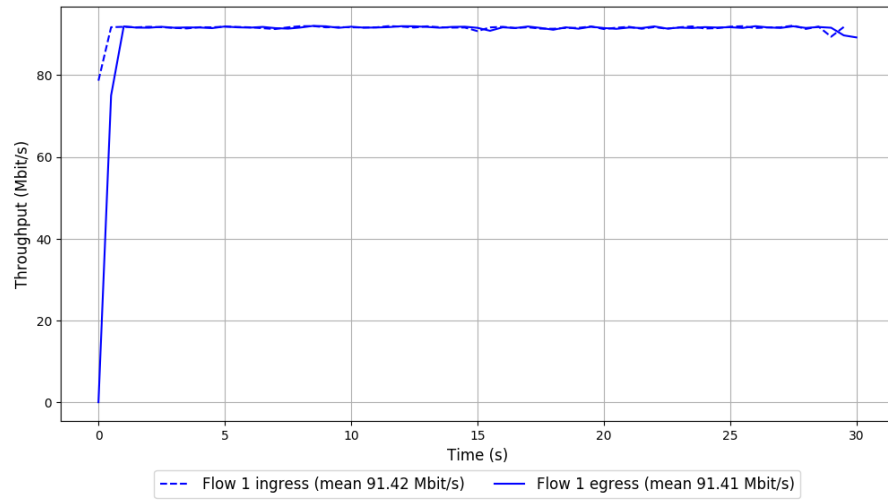
-- Flow 1:

Average throughput: 91.41 Mbit/s

95th percentile per-packet one-way delay: 20.811 ms

Loss rate: 0.11%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-10-02 14:57:52

End at: 2018-10-02 14:58:22

Local clock offset: 1.852 ms

Remote clock offset: -4.518 ms

Below is generated by plot.py at 2018-10-02 15:28:07

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.66 Mbit/s

95th percentile per-packet one-way delay: 21.714 ms

Loss rate: 0.12%

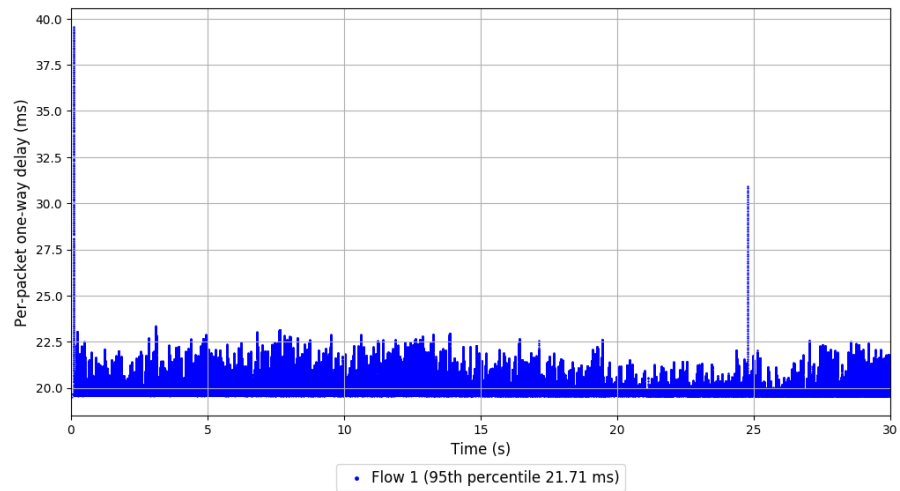
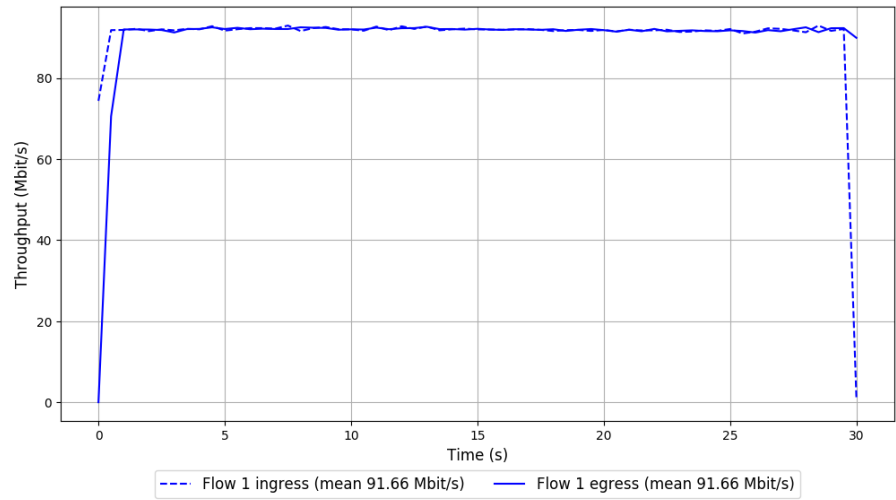
-- Flow 1:

Average throughput: 91.66 Mbit/s

95th percentile per-packet one-way delay: 21.714 ms

Loss rate: 0.12%

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

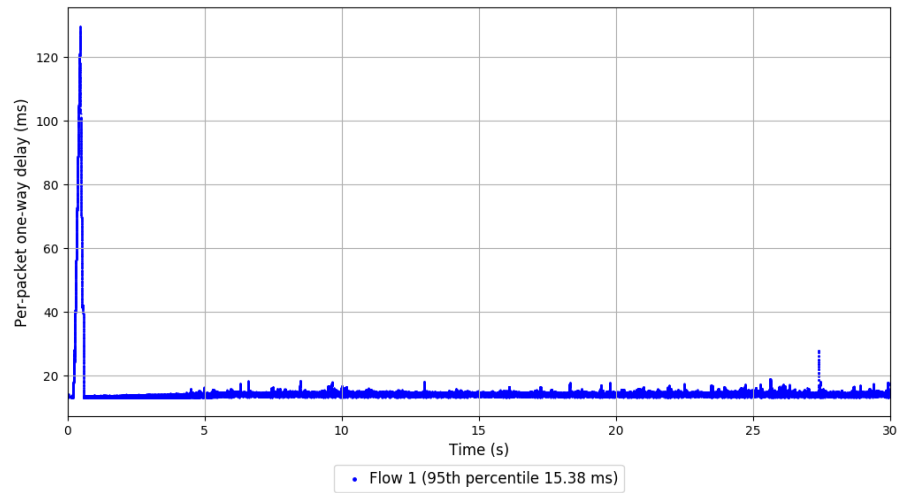
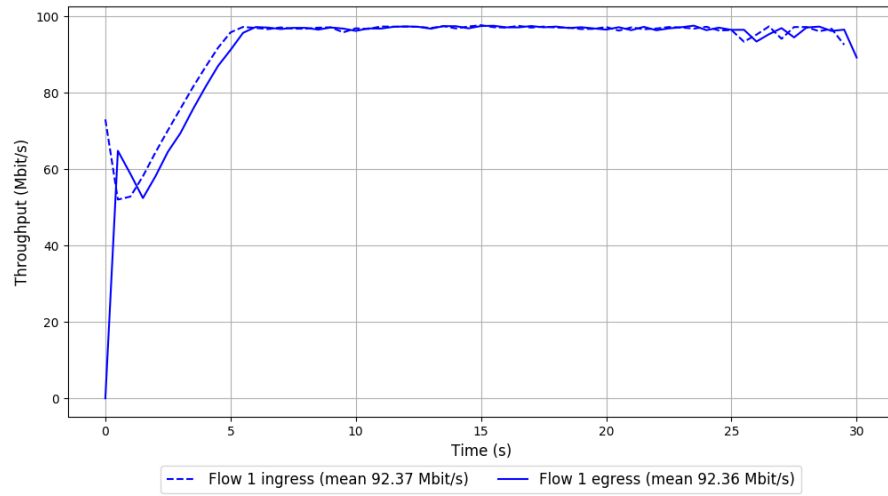


Run 1: Statistics of TCP Vegas

Start at: 2018-10-02 13:36:04
End at: 2018-10-02 13:36:34
Local clock offset: -1.461 ms
Remote clock offset: -0.894 ms

Below is generated by plot.py at 2018-10-02 15:28:07
Datalink statistics
-- Total of 1 flow:
Average throughput: 92.36 Mbit/s
95th percentile per-packet one-way delay: 15.375 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 92.36 Mbit/s
95th percentile per-packet one-way delay: 15.375 ms
Loss rate: 0.12%

Run 1: Report of TCP Vegas — Data Link

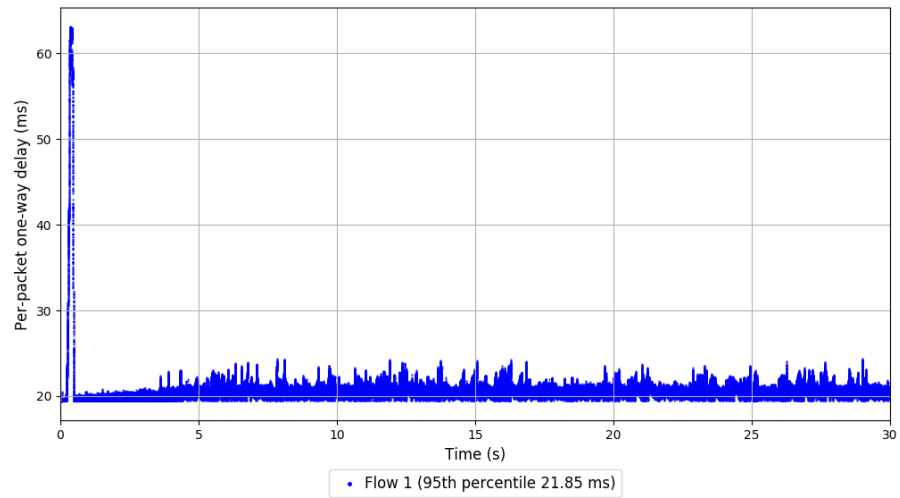
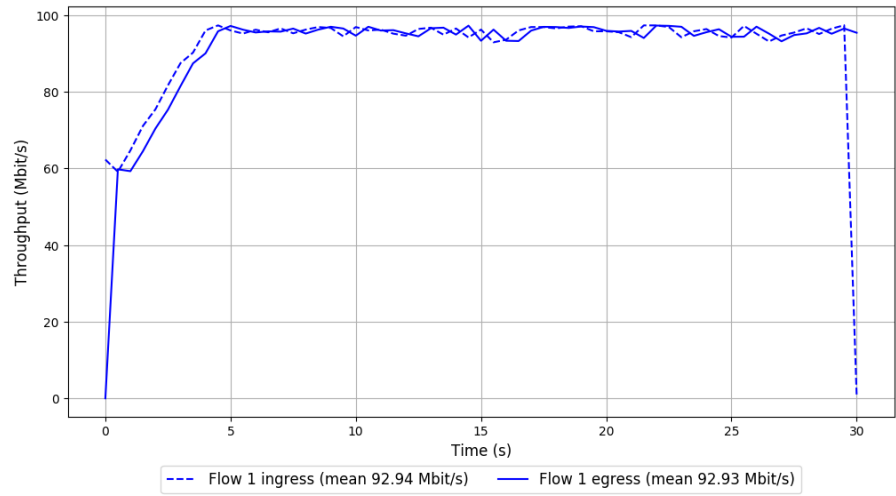


Run 2: Statistics of TCP Vegas

Start at: 2018-10-02 13:57:25
End at: 2018-10-02 13:57:56
Local clock offset: 1.525 ms
Remote clock offset: -4.141 ms

Below is generated by plot.py at 2018-10-02 15:28:07
Datalink statistics
-- Total of 1 flow:
Average throughput: 92.93 Mbit/s
95th percentile per-packet one-way delay: 21.852 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 92.93 Mbit/s
95th percentile per-packet one-way delay: 21.852 ms
Loss rate: 0.12%

Run 2: Report of TCP Vegas — Data Link

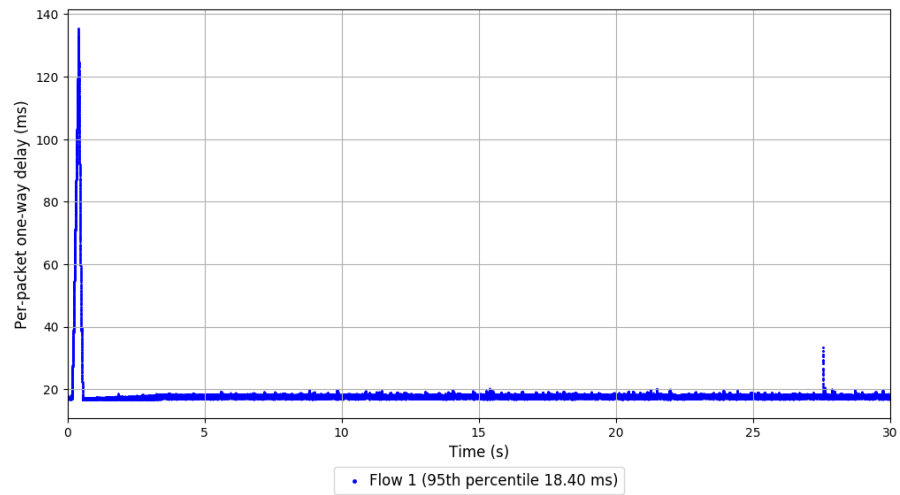
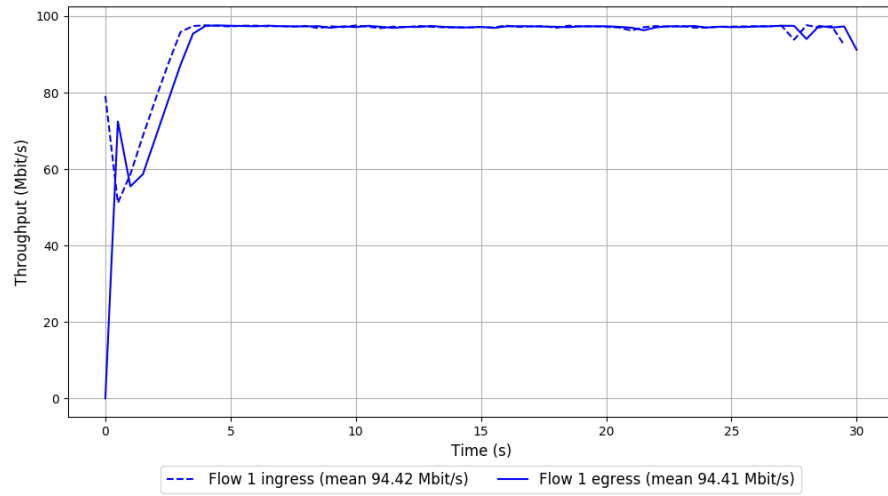


Run 3: Statistics of TCP Vegas

Start at: 2018-10-02 14:18:53
End at: 2018-10-02 14:19:23
Local clock offset: 1.3 ms
Remote clock offset: -1.851 ms

Below is generated by plot.py at 2018-10-02 15:28:07
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.41 Mbit/s
95th percentile per-packet one-way delay: 18.398 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 94.41 Mbit/s
95th percentile per-packet one-way delay: 18.398 ms
Loss rate: 0.09%

Run 3: Report of TCP Vegas — Data Link

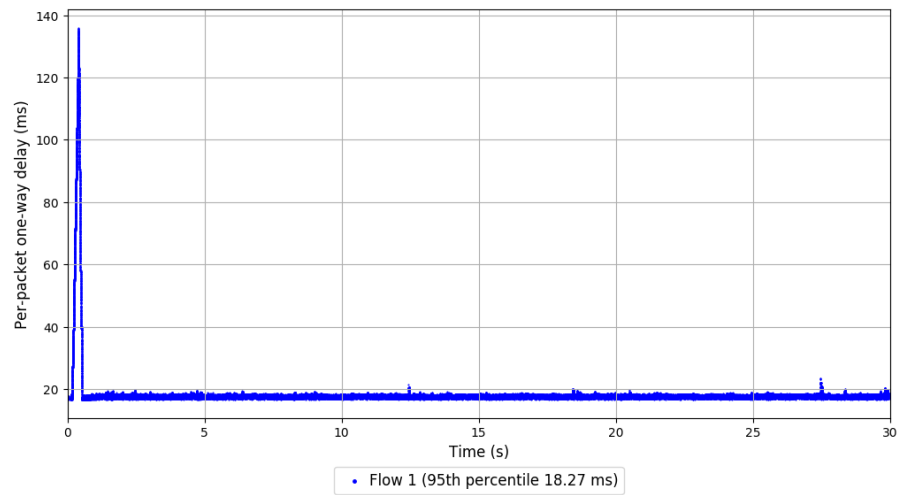
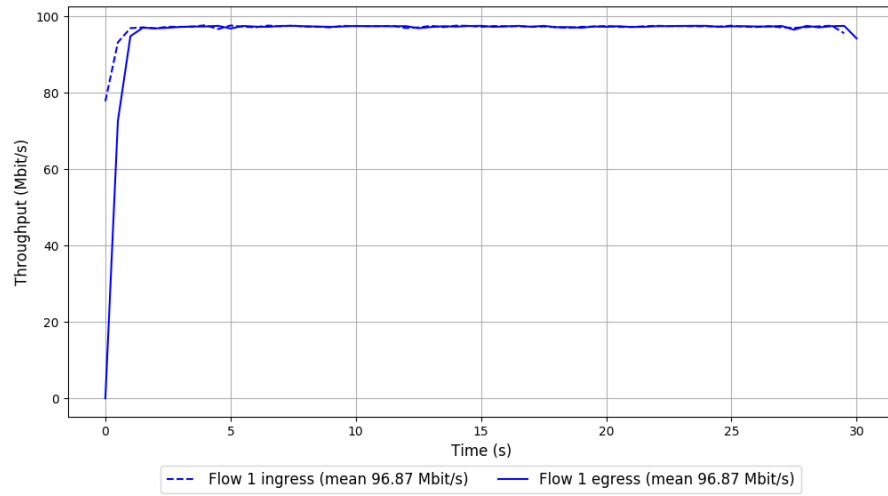


Run 4: Statistics of TCP Vegas

Start at: 2018-10-02 14:40:28
End at: 2018-10-02 14:40:58
Local clock offset: -1.372 ms
Remote clock offset: -4.488 ms

Below is generated by plot.py at 2018-10-02 15:28:23
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.87 Mbit/s
95th percentile per-packet one-way delay: 18.273 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 96.87 Mbit/s
95th percentile per-packet one-way delay: 18.273 ms
Loss rate: 0.09%

Run 4: Report of TCP Vegas — Data Link

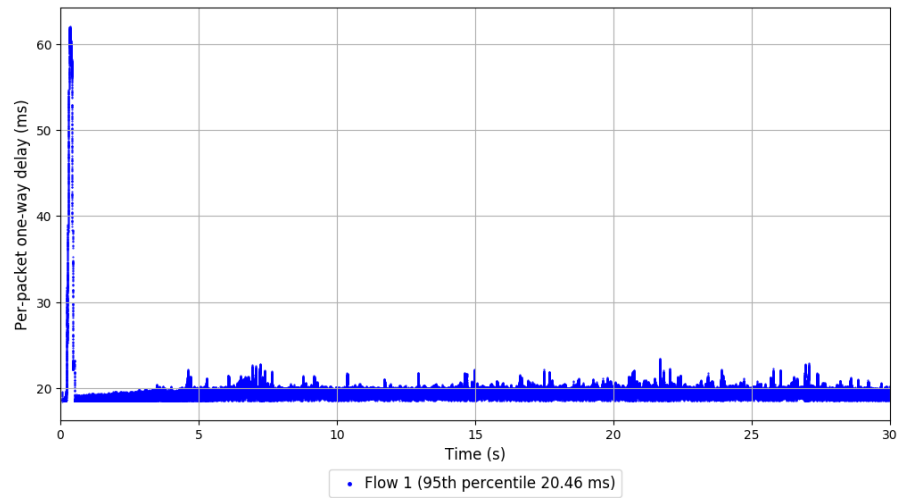
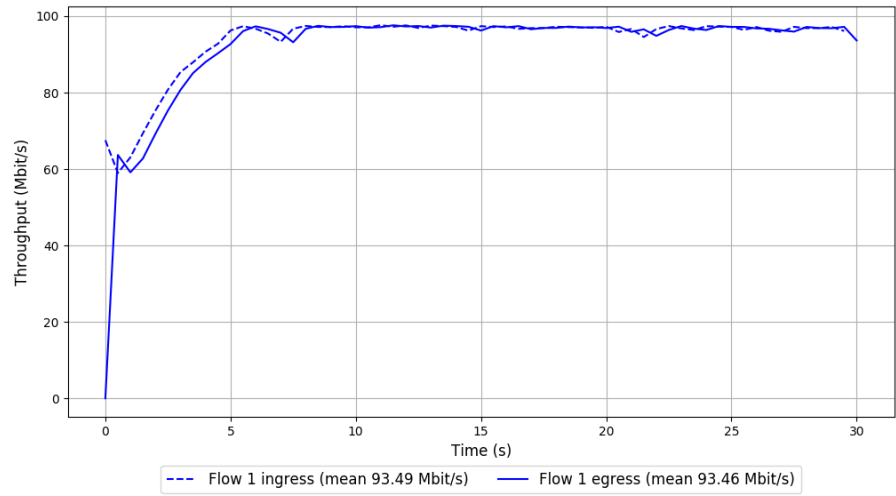


Run 5: Statistics of TCP Vegas

Start at: 2018-10-02 15:06:32
End at: 2018-10-02 15:07:02
Local clock offset: 0.569 ms
Remote clock offset: -4.864 ms

Below is generated by plot.py at 2018-10-02 15:28:42
Datalink statistics
-- Total of 1 flow:
Average throughput: 93.46 Mbit/s
95th percentile per-packet one-way delay: 20.460 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 93.46 Mbit/s
95th percentile per-packet one-way delay: 20.460 ms
Loss rate: 0.13%

Run 5: Report of TCP Vegas — Data Link

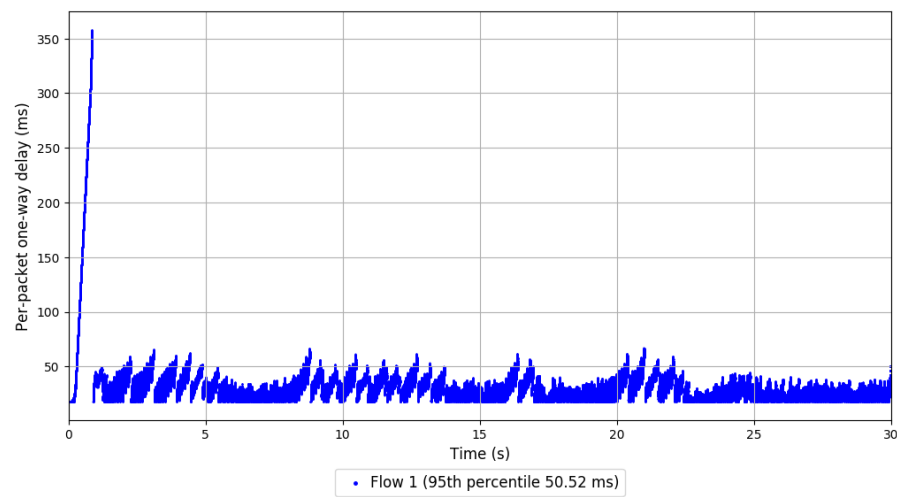
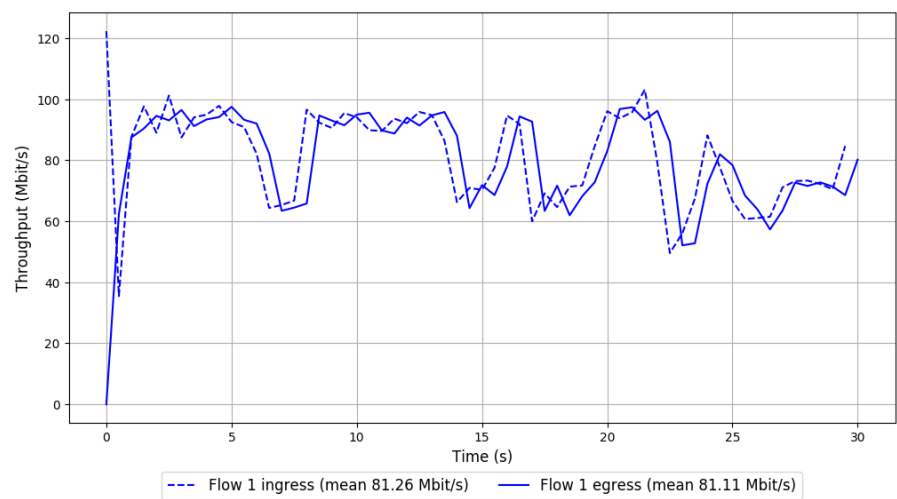


Run 1: Statistics of Verus

Start at: 2018-10-02 13:39:37
End at: 2018-10-02 13:40:07
Local clock offset: 1.798 ms
Remote clock offset: -2.084 ms

Below is generated by plot.py at 2018-10-02 15:28:42
Datalink statistics
-- Total of 1 flow:
Average throughput: 81.11 Mbit/s
95th percentile per-packet one-way delay: 50.525 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 81.11 Mbit/s
95th percentile per-packet one-way delay: 50.525 ms
Loss rate: 0.28%

Run 1: Report of Verus — Data Link

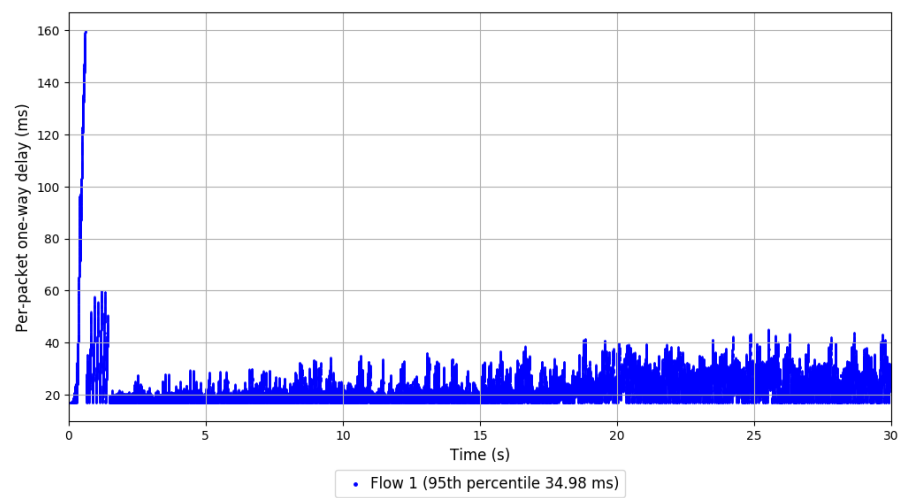
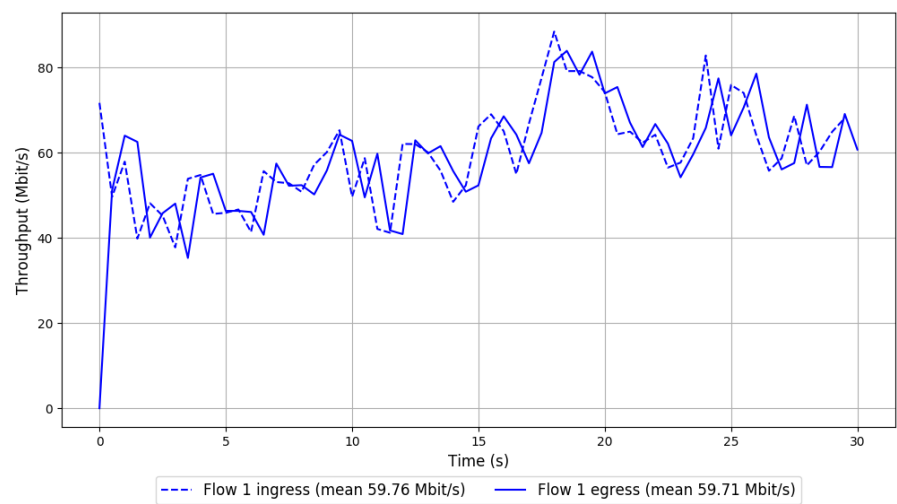


Run 2: Statistics of Verus

Start at: 2018-10-02 14:00:59
End at: 2018-10-02 14:01:29
Local clock offset: -7.132 ms
Remote clock offset: -10.385 ms

Below is generated by plot.py at 2018-10-02 15:28:42
Datalink statistics
-- Total of 1 flow:
Average throughput: 59.71 Mbit/s
95th percentile per-packet one-way delay: 34.976 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 59.71 Mbit/s
95th percentile per-packet one-way delay: 34.976 ms
Loss rate: 0.25%

Run 2: Report of Verus — Data Link

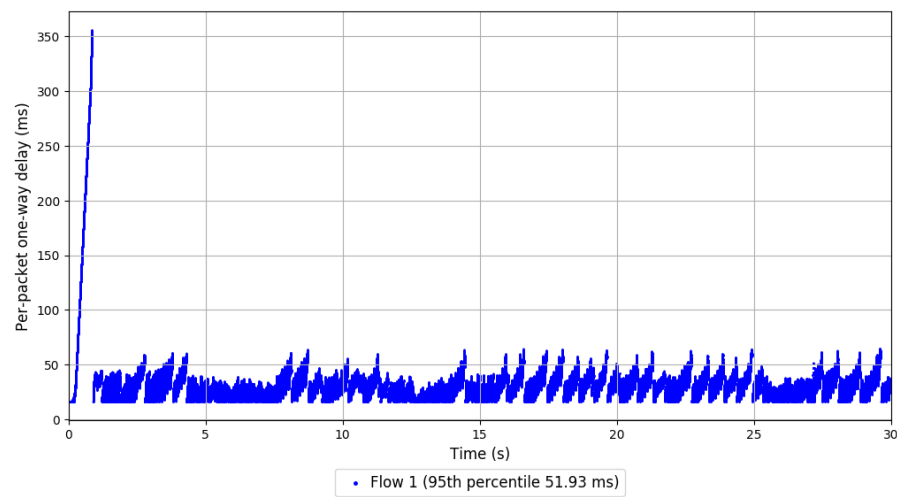
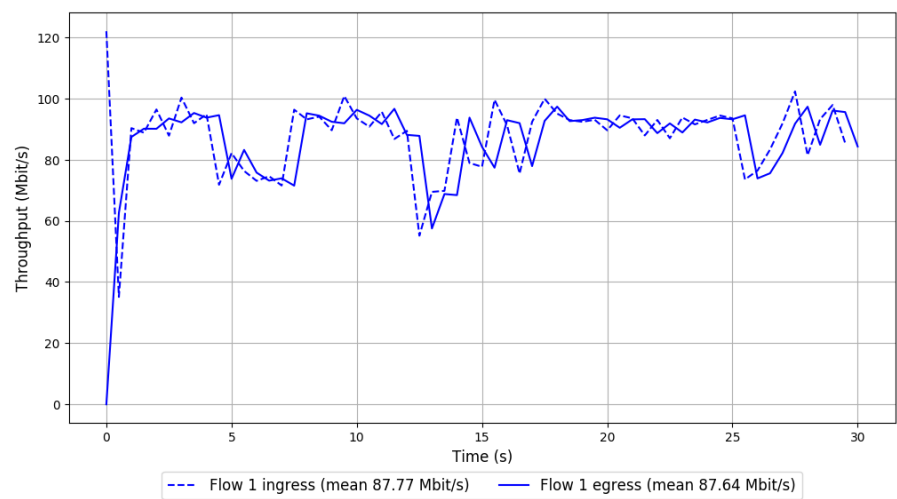


Run 3: Statistics of Verus

Start at: 2018-10-02 14:22:29
End at: 2018-10-02 14:22:59
Local clock offset: 0.856 ms
Remote clock offset: -1.737 ms

Below is generated by plot.py at 2018-10-02 15:28:58
Datalink statistics
-- Total of 1 flow:
Average throughput: 87.64 Mbit/s
95th percentile per-packet one-way delay: 51.930 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 87.64 Mbit/s
95th percentile per-packet one-way delay: 51.930 ms
Loss rate: 0.23%

Run 3: Report of Verus — Data Link

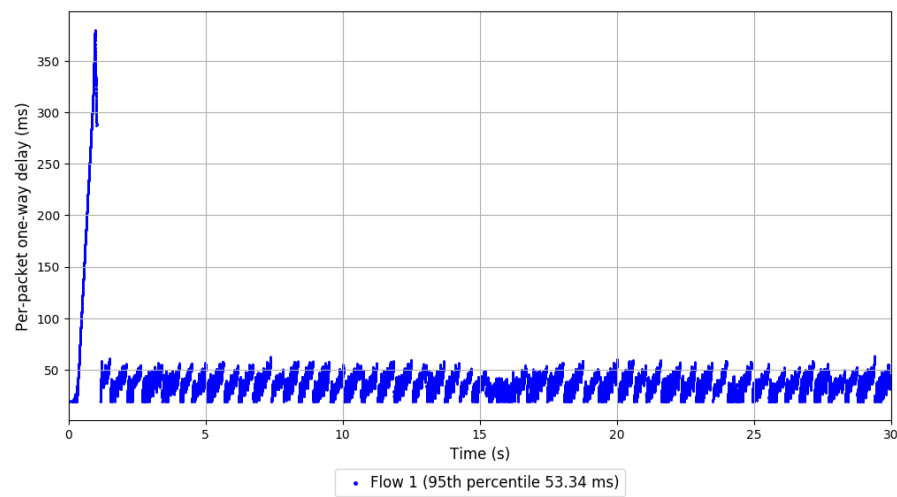
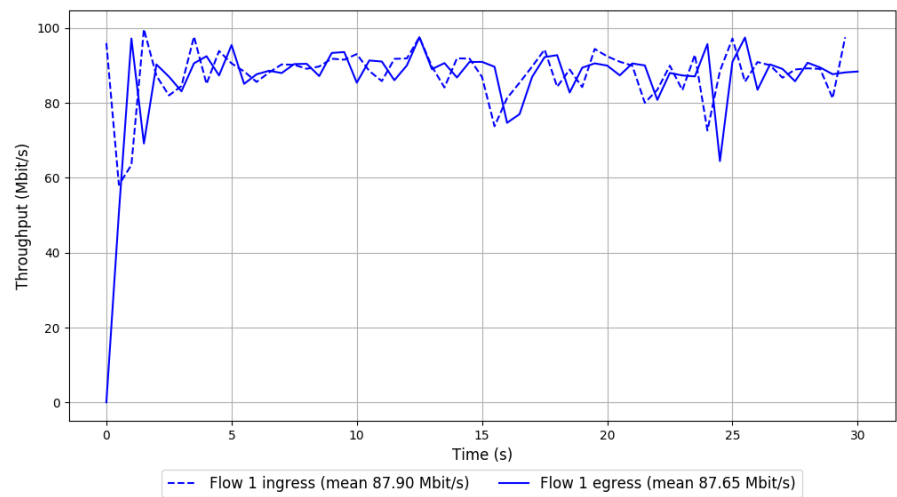


Run 4: Statistics of Verus

Start at: 2018-10-02 14:45:00
End at: 2018-10-02 14:45:30
Local clock offset: 0.811 ms
Remote clock offset: -4.302 ms

Below is generated by plot.py at 2018-10-02 15:29:06
Datalink statistics
-- Total of 1 flow:
Average throughput: 87.65 Mbit/s
95th percentile per-packet one-way delay: 53.336 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 87.65 Mbit/s
95th percentile per-packet one-way delay: 53.336 ms
Loss rate: 0.33%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-10-02 15:10:12

End at: 2018-10-02 15:10:42

Local clock offset: 1.382 ms

Remote clock offset: -4.58 ms

Below is generated by plot.py at 2018-10-02 15:29:06

Datalink statistics

-- Total of 1 flow:

Average throughput: 75.25 Mbit/s

95th percentile per-packet one-way delay: 41.561 ms

Loss rate: 0.19%

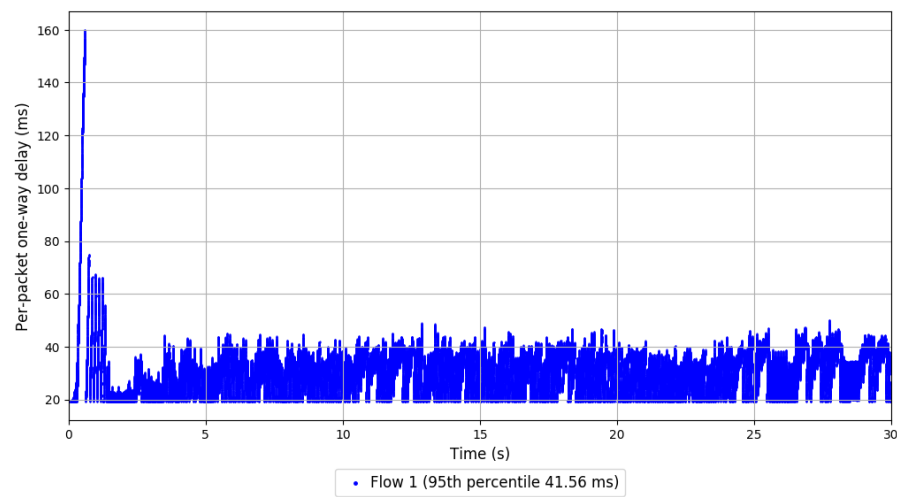
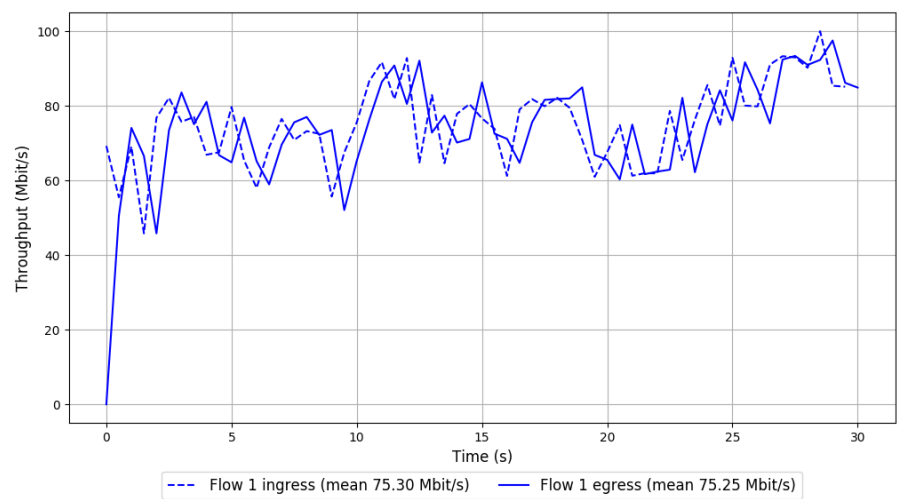
-- Flow 1:

Average throughput: 75.25 Mbit/s

95th percentile per-packet one-way delay: 41.561 ms

Loss rate: 0.19%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2018-10-02 13:38:26

End at: 2018-10-02 13:38:56

Local clock offset: 1.108 ms

Remote clock offset: -1.909 ms

Below is generated by plot.py at 2018-10-02 15:29:11

Datalink statistics

-- Total of 1 flow:

Average throughput: 86.40 Mbit/s

95th percentile per-packet one-way delay: 17.336 ms

Loss rate: 0.06%

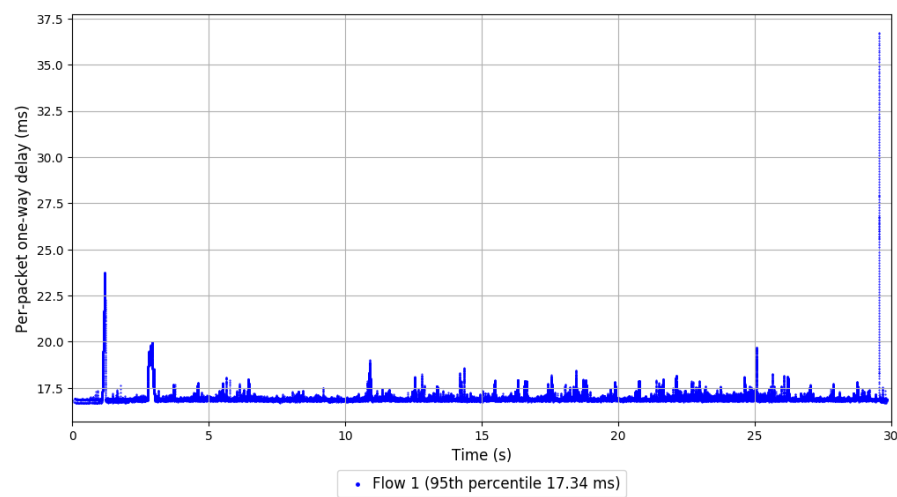
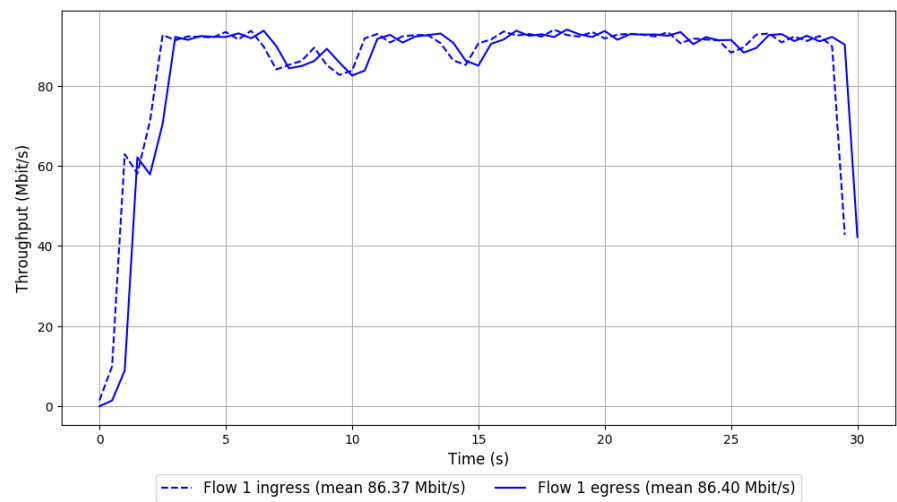
-- Flow 1:

Average throughput: 86.40 Mbit/s

95th percentile per-packet one-way delay: 17.336 ms

Loss rate: 0.06%

Run 1: Report of PCC-Vivace — Data Link

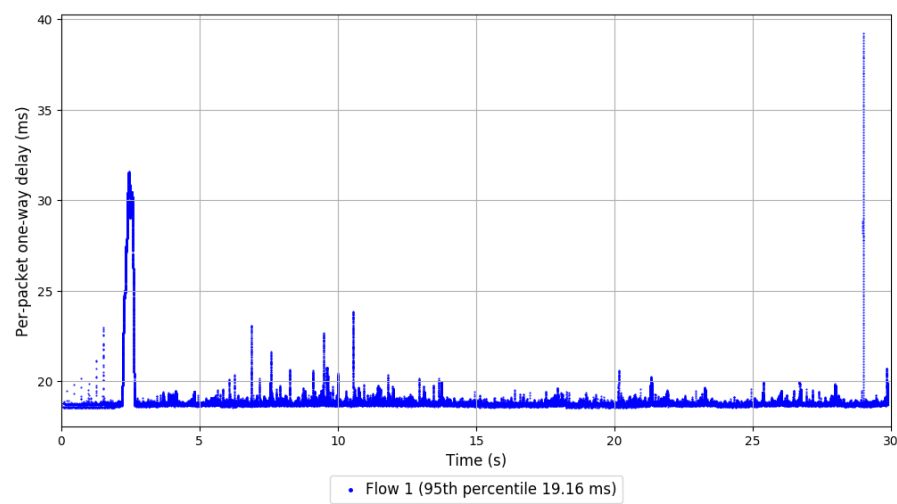
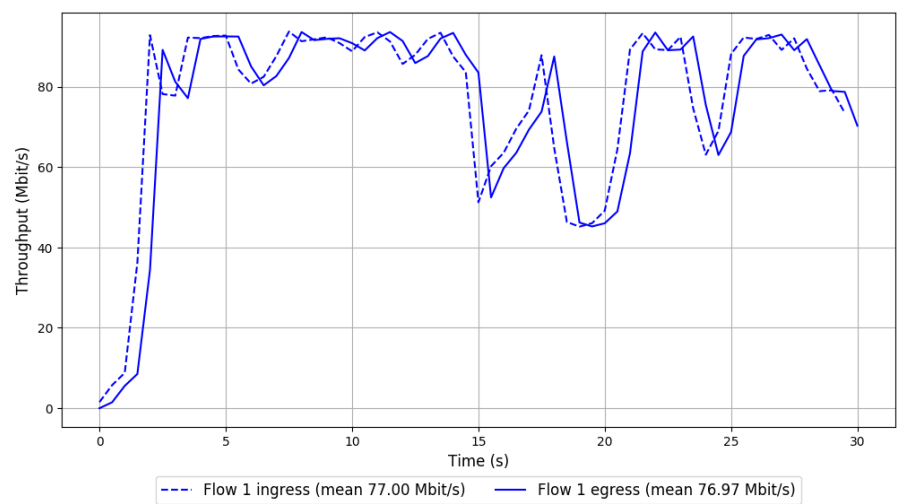


Run 2: Statistics of PCC-Vivace

Start at: 2018-10-02 13:59:46
End at: 2018-10-02 14:00:16
Local clock offset: 0.863 ms
Remote clock offset: -4.116 ms

Below is generated by plot.py at 2018-10-02 15:29:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 76.97 Mbit/s
95th percentile per-packet one-way delay: 19.165 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 76.97 Mbit/s
95th percentile per-packet one-way delay: 19.165 ms
Loss rate: 0.14%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2018-10-02 14:21:16

End at: 2018-10-02 14:21:46

Local clock offset: -1.115 ms

Remote clock offset: -2.19 ms

Below is generated by plot.py at 2018-10-02 15:29:25

Datalink statistics

-- Total of 1 flow:

Average throughput: 85.58 Mbit/s

95th percentile per-packet one-way delay: 15.255 ms

Loss rate: 0.12%

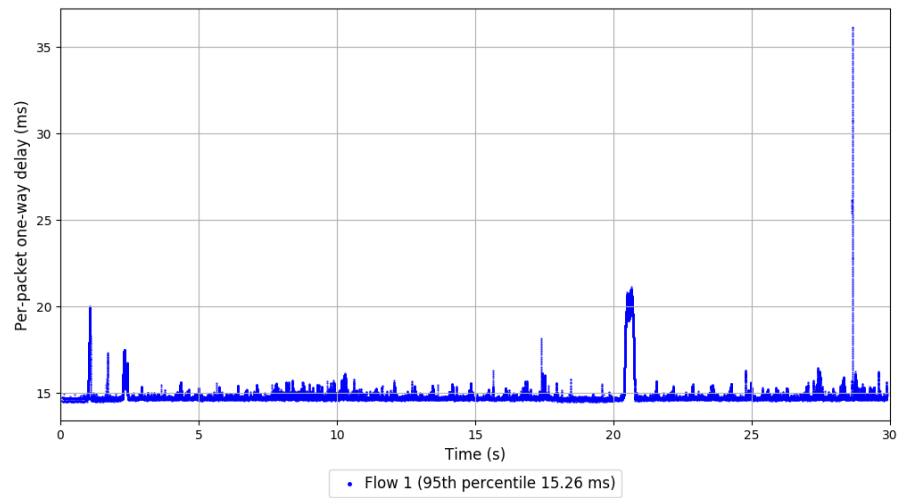
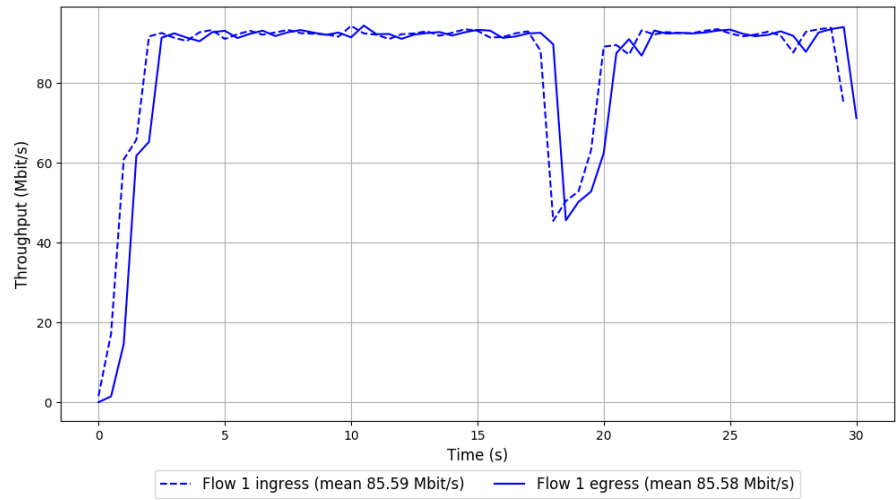
-- Flow 1:

Average throughput: 85.58 Mbit/s

95th percentile per-packet one-way delay: 15.255 ms

Loss rate: 0.12%

Run 3: Report of PCC-Vivace — Data Link

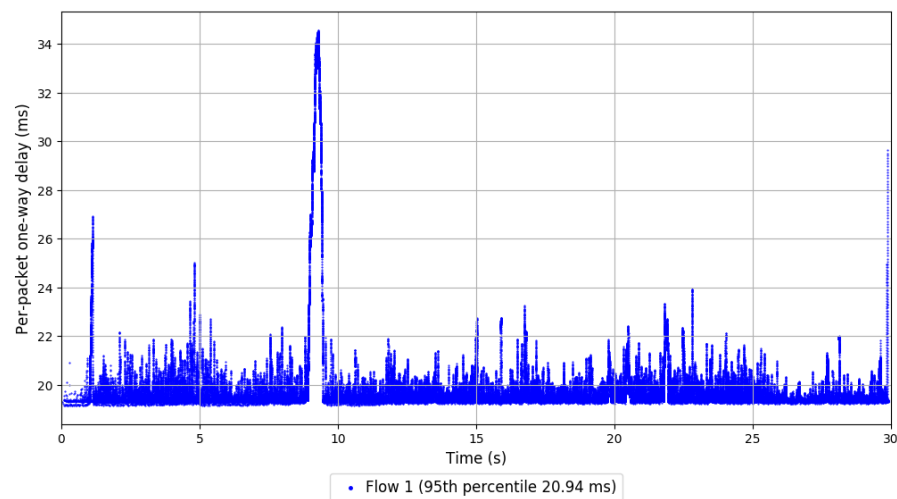
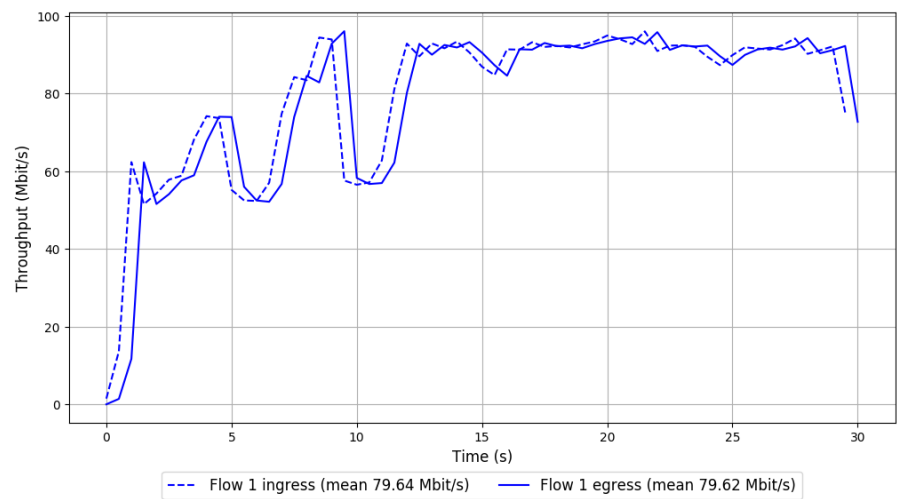


Run 4: Statistics of PCC-Vivace

Start at: 2018-10-02 14:43:40
End at: 2018-10-02 14:44:10
Local clock offset: 1.127 ms
Remote clock offset: -4.574 ms

Below is generated by plot.py at 2018-10-02 15:29:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 79.62 Mbit/s
95th percentile per-packet one-way delay: 20.938 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 79.62 Mbit/s
95th percentile per-packet one-way delay: 20.938 ms
Loss rate: 0.13%

Run 4: Report of PCC-Vivace — Data Link

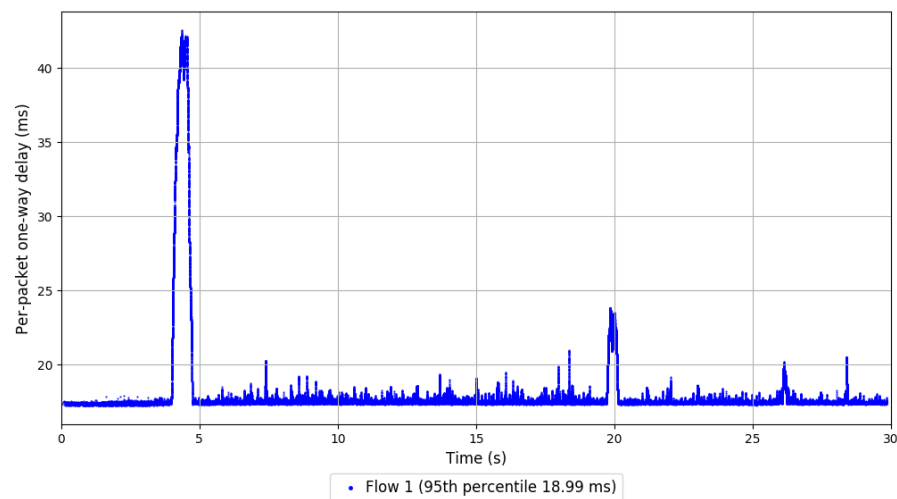
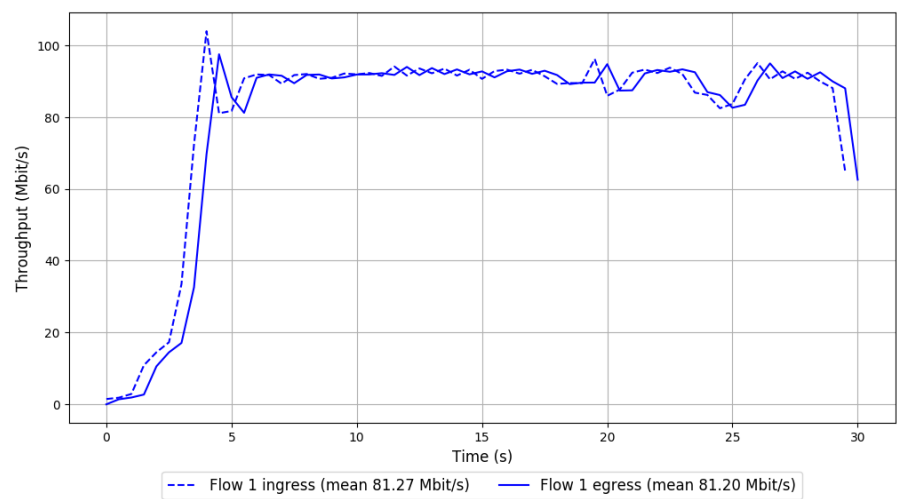


Run 5: Statistics of PCC-Vivace

Start at: 2018-10-02 15:08:55
End at: 2018-10-02 15:09:25
Local clock offset: -0.316 ms
Remote clock offset: -4.544 ms

Below is generated by plot.py at 2018-10-02 15:29:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 81.20 Mbit/s
95th percentile per-packet one-way delay: 18.986 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 81.20 Mbit/s
95th percentile per-packet one-way delay: 18.986 ms
Loss rate: 0.18%

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2018-10-02 13:43:07

End at: 2018-10-02 13:43:37

Local clock offset: 1.2 ms

Remote clock offset: -1.364 ms

Below is generated by plot.py at 2018-10-02 15:29:25

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.39 Mbit/s

95th percentile per-packet one-way delay: 16.883 ms

Loss rate: 0.11%

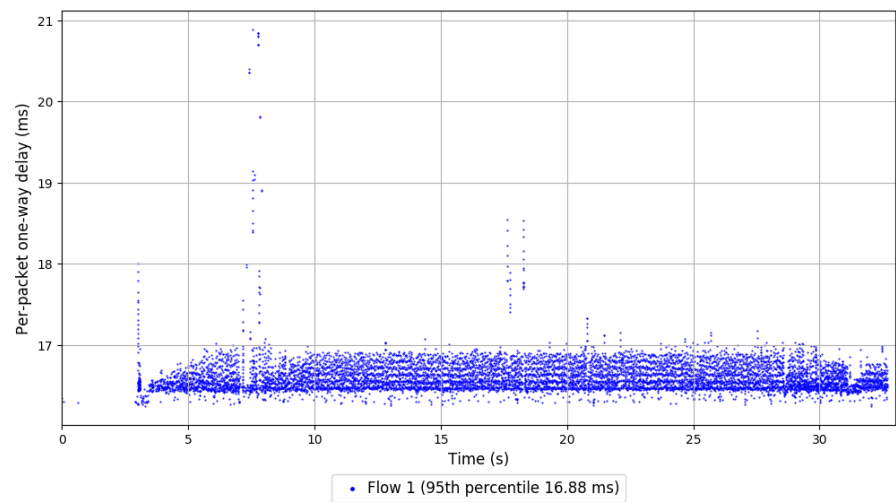
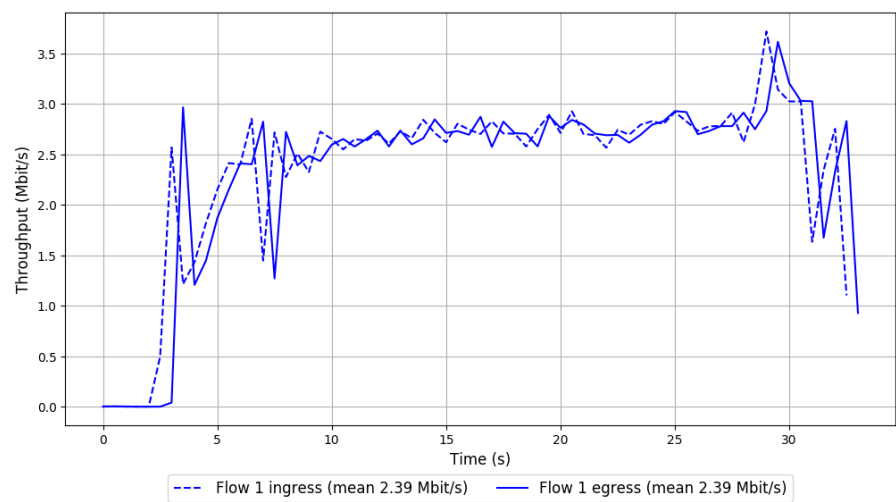
-- Flow 1:

Average throughput: 2.39 Mbit/s

95th percentile per-packet one-way delay: 16.883 ms

Loss rate: 0.11%

Run 1: Report of WebRTC media — Data Link

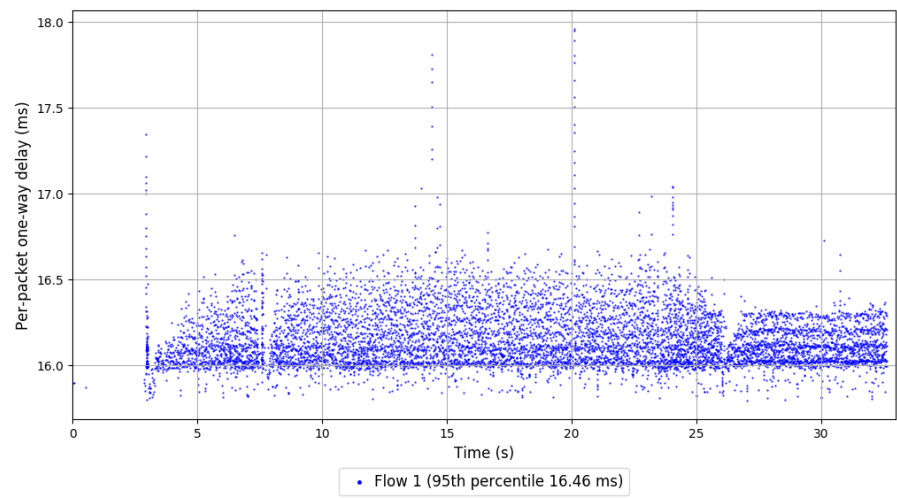
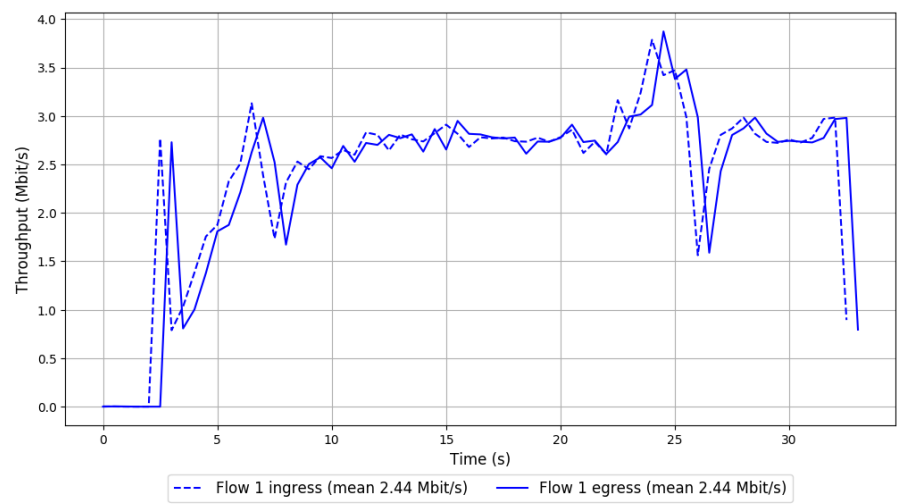


Run 2: Statistics of WebRTC media

Start at: 2018-10-02 14:04:32
End at: 2018-10-02 14:05:02
Local clock offset: 0.438 ms
Remote clock offset: -1.793 ms

Below is generated by plot.py at 2018-10-02 15:29:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.44 Mbit/s
95th percentile per-packet one-way delay: 16.464 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 2.44 Mbit/s
95th percentile per-packet one-way delay: 16.464 ms
Loss rate: 0.13%

Run 2: Report of WebRTC media — Data Link

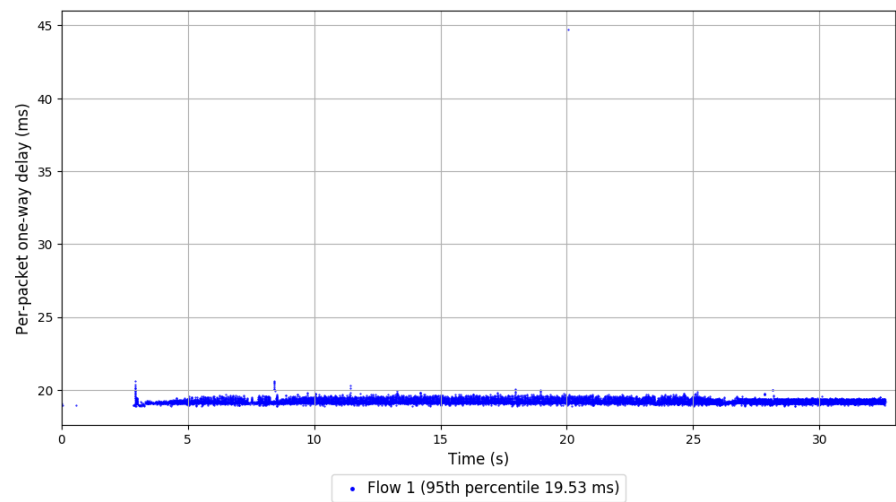
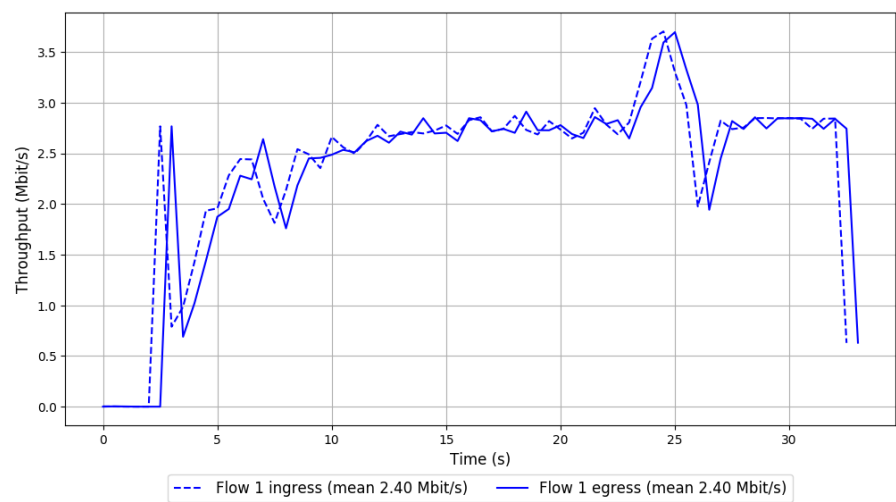


Run 3: Statistics of WebRTC media

Start at: 2018-10-02 14:26:04
End at: 2018-10-02 14:26:34
Local clock offset: 0.728 ms
Remote clock offset: -4.711 ms

Below is generated by plot.py at 2018-10-02 15:29:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.40 Mbit/s
95th percentile per-packet one-way delay: 19.526 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 2.40 Mbit/s
95th percentile per-packet one-way delay: 19.526 ms
Loss rate: 0.13%

Run 3: Report of WebRTC media — Data Link

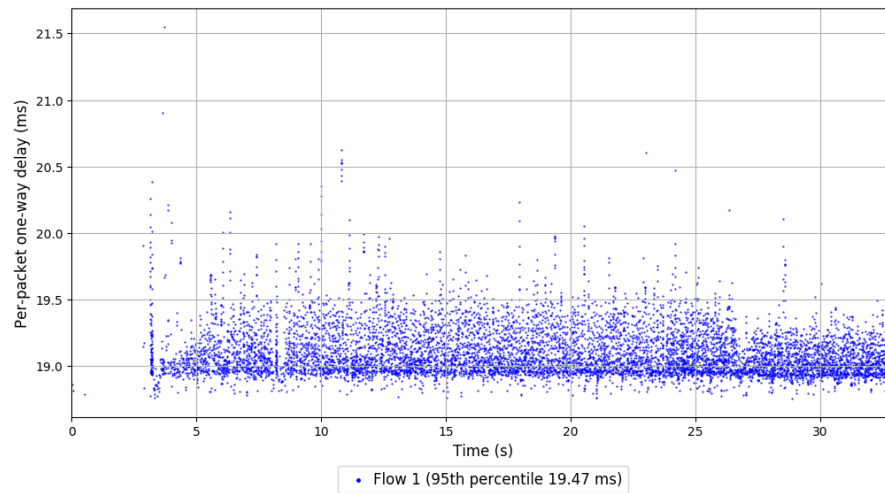
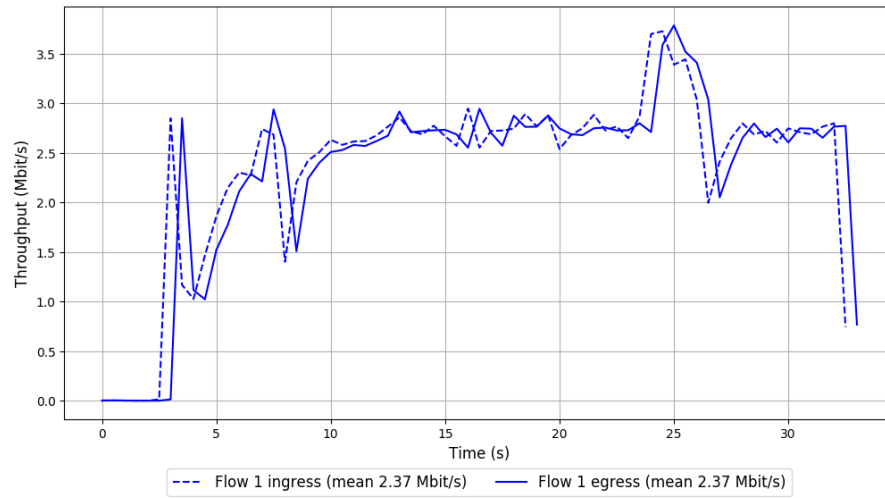


Run 4: Statistics of WebRTC media

Start at: 2018-10-02 14:51:34
End at: 2018-10-02 14:52:04
Local clock offset: 1.102 ms
Remote clock offset: -4.527 ms

Below is generated by plot.py at 2018-10-02 15:29:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.37 Mbit/s
95th percentile per-packet one-way delay: 19.468 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 2.37 Mbit/s
95th percentile per-packet one-way delay: 19.468 ms
Loss rate: 0.07%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-10-02 15:13:53
End at: 2018-10-02 15:14:23
Local clock offset: 2.039 ms
Remote clock offset: -4.124 ms

Below is generated by plot.py at 2018-10-02 15:29:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.40 Mbit/s
95th percentile per-packet one-way delay: 19.799 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 2.40 Mbit/s
95th percentile per-packet one-way delay: 19.799 ms
Loss rate: 0.13%

Run 5: Report of WebRTC media — Data Link

