

Pantheon Report

Generated at 2018-10-26 08:23:23 (UTC).

Data path: Mexico on **em1** (*remote*) → AWS California 2 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 **time.stanford.edu** and have been applied to correct the timestamps in logs.

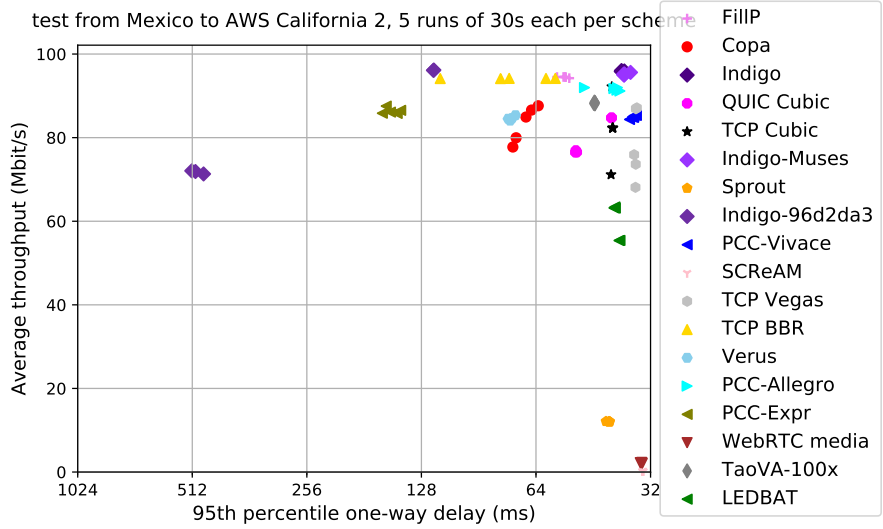
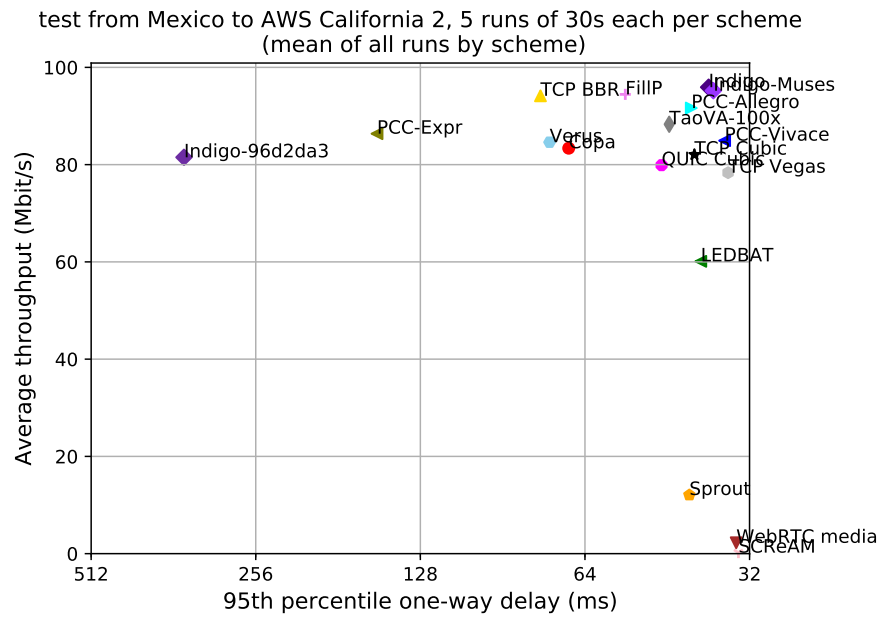
System info:

```
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 @ 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-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	94.15	77.19	0.90
Copa	5	83.38	68.53	0.22
TCP Cubic	5	82.05	40.36	0.25
FillP	5	94.45	54.00	0.68
Indigo	5	95.92	38.02	0.23
Indigo-96d2da3	5	81.51	346.36	4.52
LEDBAT	5	60.11	39.30	0.25
Indigo-Muses	5	95.20	37.27	0.23
PCC-Allegro	5	91.64	40.90	0.24
PCC-Expr	5	86.36	153.65	0.30
QUIC Cubic	5	79.89	46.36	0.28
SCReAM	5	0.21	33.54	0.23
Sprout	5	12.07	41.24	0.23
TaoVA-100x	5	88.30	44.89	0.22
TCP Vegas	5	78.34	35.03	0.29
Verus	5	84.61	74.28	0.48
PCC-Vivace	5	84.94	35.55	0.24
WebRTC media	5	2.23	33.85	0.24

Run 1: Statistics of TCP BBR

Start at: 2018-10-26 06:23:52

End at: 2018-10-26 06:24:22

Local clock offset: 0.674 ms

Remote clock offset: -2.69 ms

Below is generated by plot.py at 2018-10-26 08:12:24

Datalink statistics

-- Total of 1 flow:

Average throughput: 94.13 Mbit/s

95th percentile per-packet one-way delay: 79.285 ms

Loss rate: 0.65%

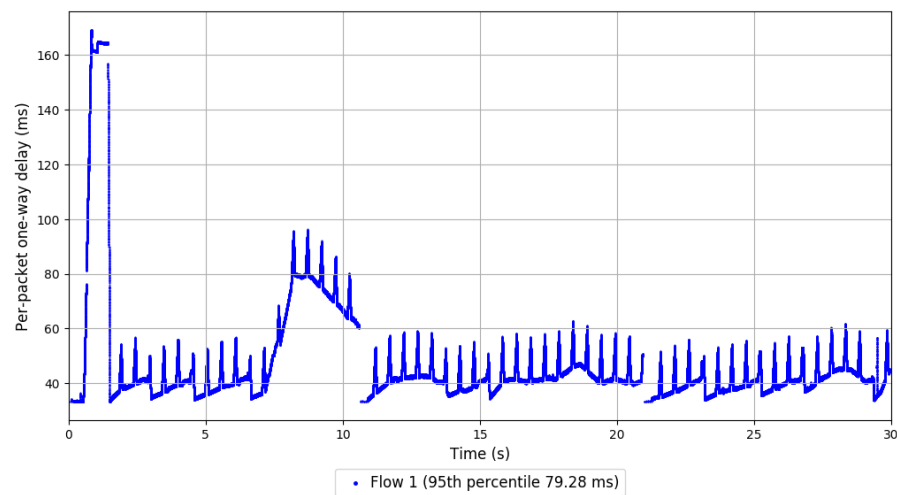
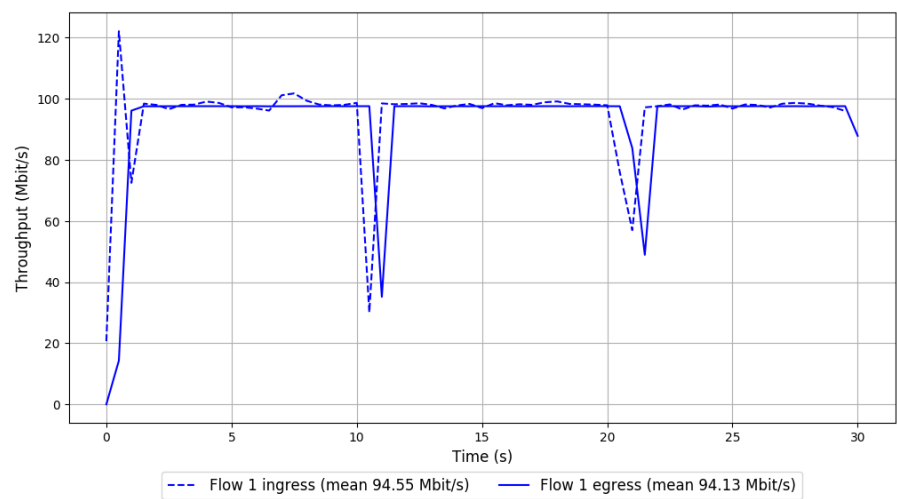
-- Flow 1:

Average throughput: 94.13 Mbit/s

95th percentile per-packet one-way delay: 79.285 ms

Loss rate: 0.65%

Run 1: Report of TCP BBR — Data Link

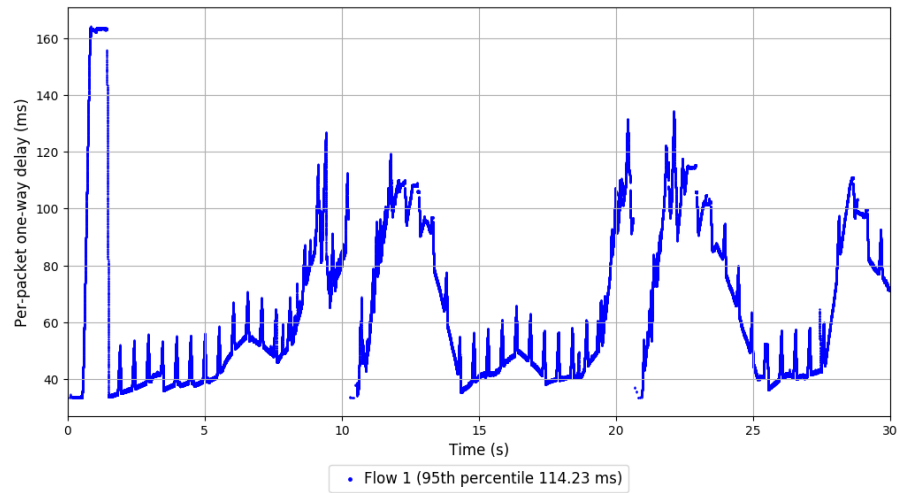
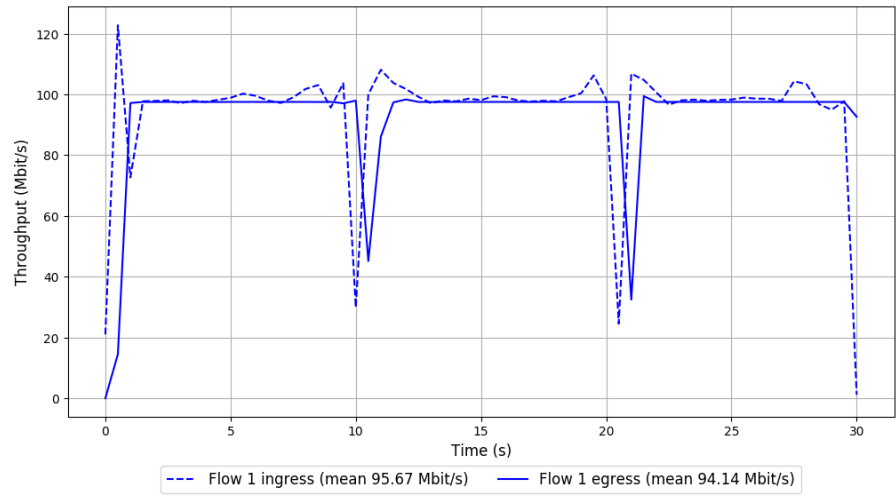


Run 2: Statistics of TCP BBR

Start at: 2018-10-26 06:48:11
End at: 2018-10-26 06:48:41
Local clock offset: 1.766 ms
Remote clock offset: -2.392 ms

Below is generated by plot.py at 2018-10-26 08:12:24
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.14 Mbit/s
95th percentile per-packet one-way delay: 114.229 ms
Loss rate: 1.81%
-- Flow 1:
Average throughput: 94.14 Mbit/s
95th percentile per-packet one-way delay: 114.229 ms
Loss rate: 1.81%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-10-26 07:12:28

End at: 2018-10-26 07:12:58

Local clock offset: 0.84 ms

Remote clock offset: -1.793 ms

Below is generated by plot.py at 2018-10-26 08:12:24

Datalink statistics

-- Total of 1 flow:

Average throughput: 94.16 Mbit/s

95th percentile per-packet one-way delay: 60.246 ms

Loss rate: 0.69%

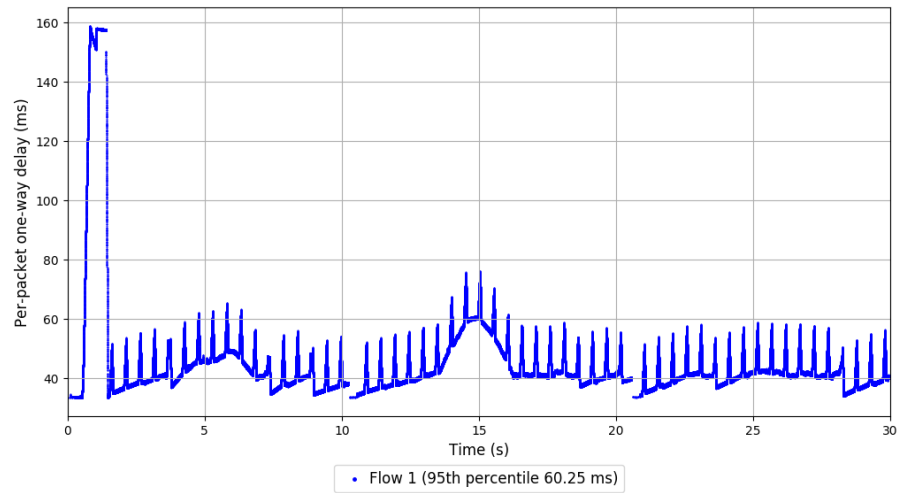
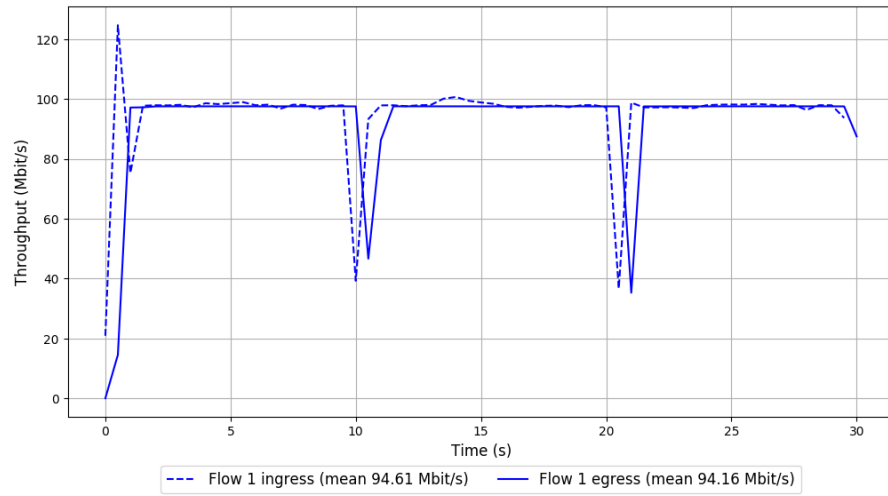
-- Flow 1:

Average throughput: 94.16 Mbit/s

95th percentile per-packet one-way delay: 60.246 ms

Loss rate: 0.69%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-10-26 07:36:23

End at: 2018-10-26 07:36:53

Local clock offset: 0.296 ms

Remote clock offset: -1.557 ms

Below is generated by plot.py at 2018-10-26 08:12:24

Datalink statistics

-- Total of 1 flow:

Average throughput: 94.17 Mbit/s

95th percentile per-packet one-way delay: 56.933 ms

Loss rate: 0.67%

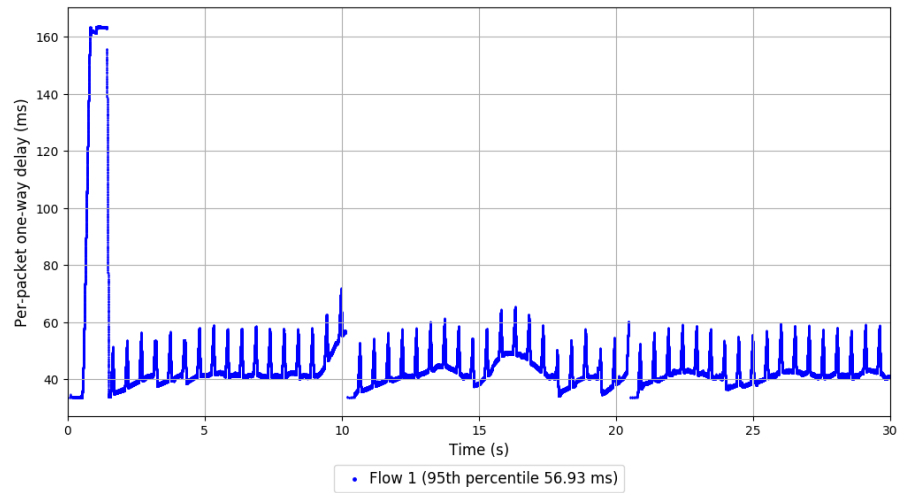
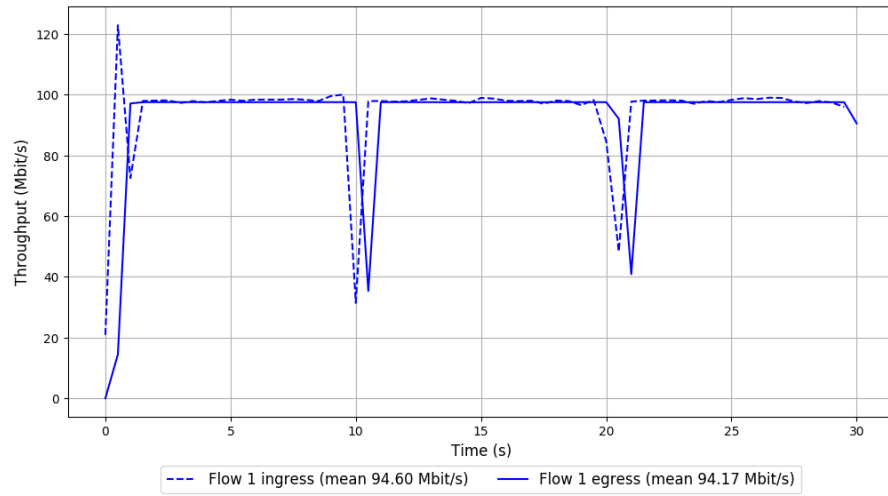
-- Flow 1:

Average throughput: 94.17 Mbit/s

95th percentile per-packet one-way delay: 56.933 ms

Loss rate: 0.67%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-10-26 08:00:52

End at: 2018-10-26 08:01:22

Local clock offset: 0.036 ms

Remote clock offset: -1.096 ms

Below is generated by plot.py at 2018-10-26 08:12:24

Datalink statistics

-- Total of 1 flow:

Average throughput: 94.17 Mbit/s

95th percentile per-packet one-way delay: 75.264 ms

Loss rate: 0.70%

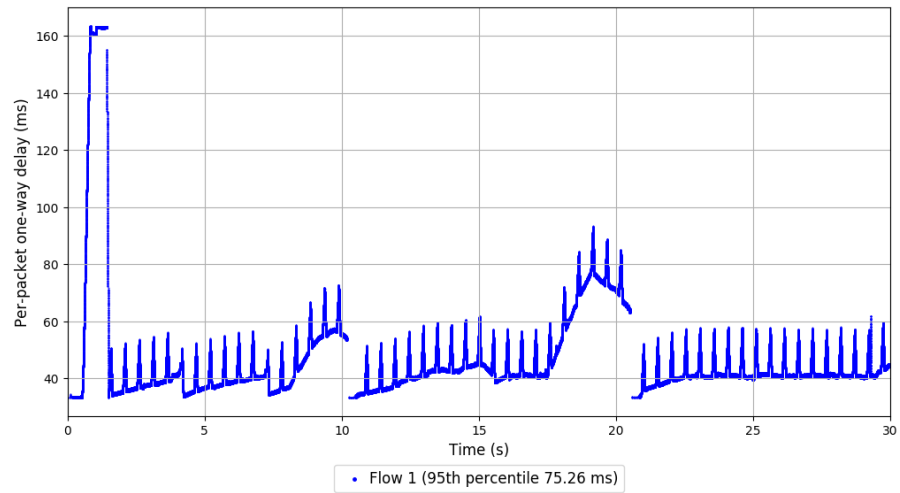
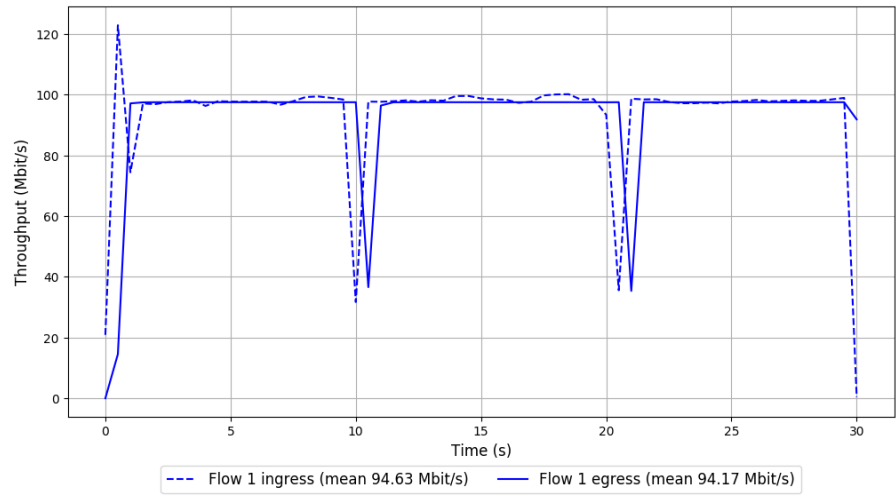
-- Flow 1:

Average throughput: 94.17 Mbit/s

95th percentile per-packet one-way delay: 75.264 ms

Loss rate: 0.70%

Run 5: Report of TCP BBR — Data Link

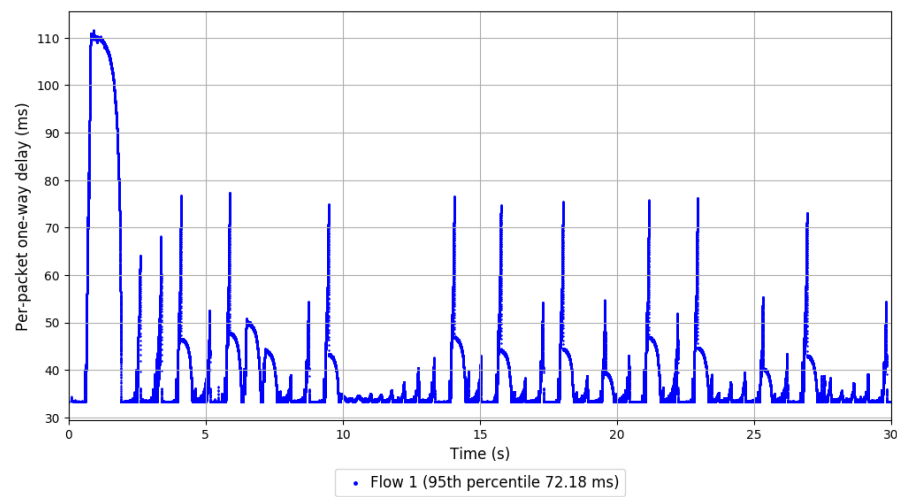
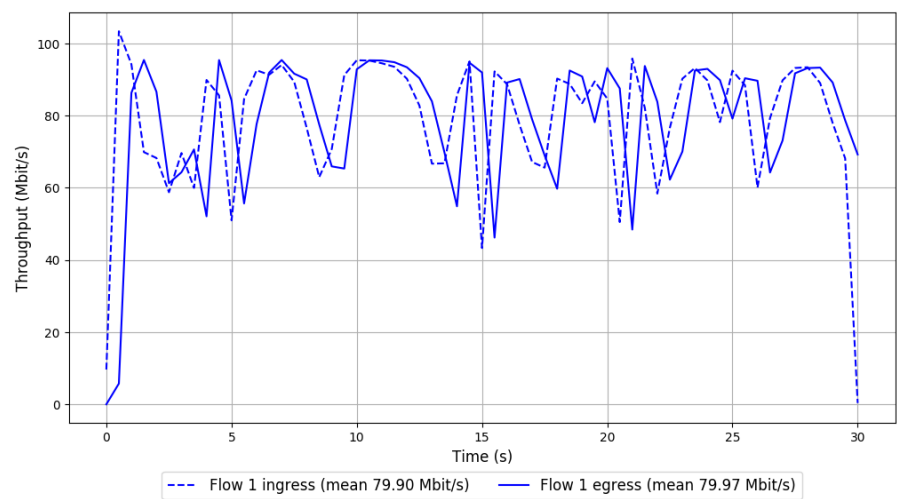


Run 1: Statistics of Copa

Start at: 2018-10-26 06:26:37
End at: 2018-10-26 06:27:07
Local clock offset: 0.689 ms
Remote clock offset: -2.635 ms

Below is generated by plot.py at 2018-10-26 08:13:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 79.97 Mbit/s
95th percentile per-packet one-way delay: 72.180 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 79.97 Mbit/s
95th percentile per-packet one-way delay: 72.180 ms
Loss rate: 0.13%

Run 1: Report of Copa — Data Link

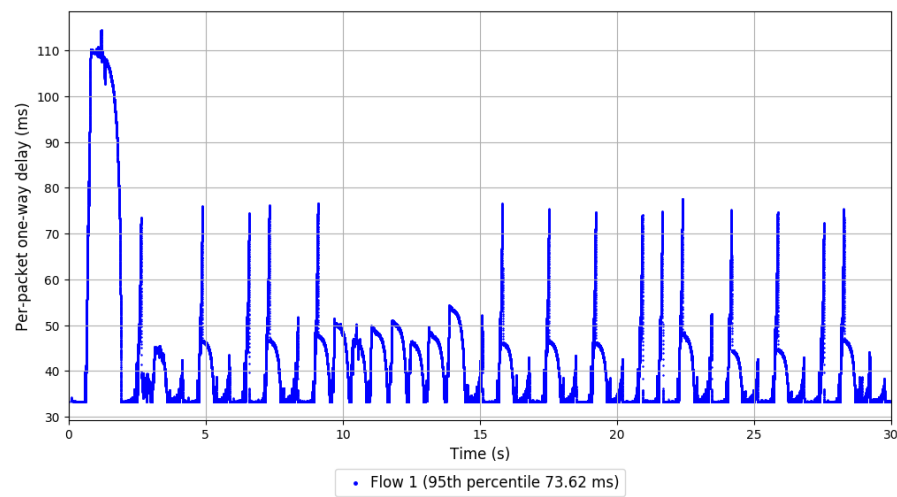
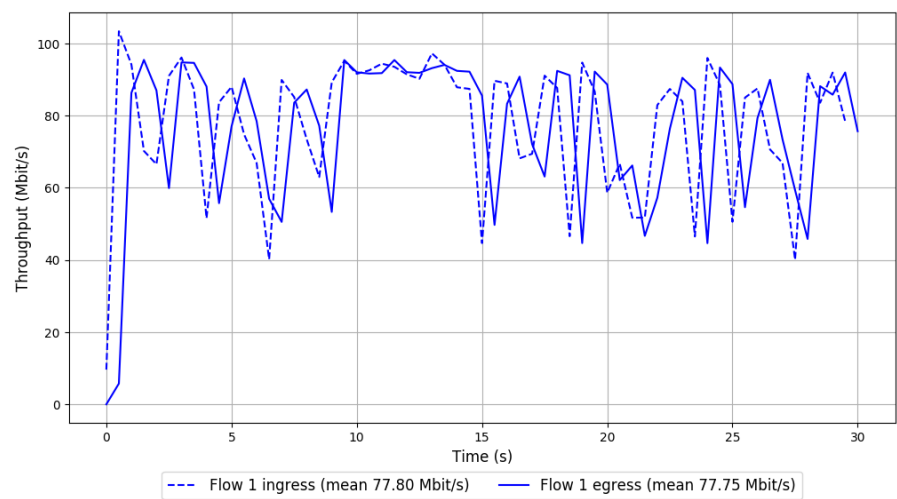


Run 2: Statistics of Copa

Start at: 2018-10-26 06:50:54
End at: 2018-10-26 06:51:24
Local clock offset: 1.856 ms
Remote clock offset: -2.144 ms

Below is generated by plot.py at 2018-10-26 08:13:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 77.75 Mbit/s
95th percentile per-packet one-way delay: 73.618 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 77.75 Mbit/s
95th percentile per-packet one-way delay: 73.618 ms
Loss rate: 0.27%

Run 2: Report of Copa — Data Link

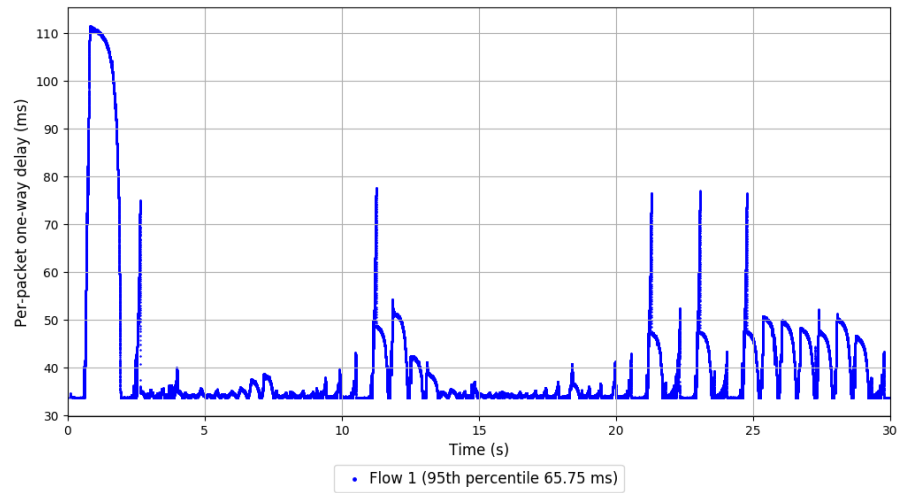
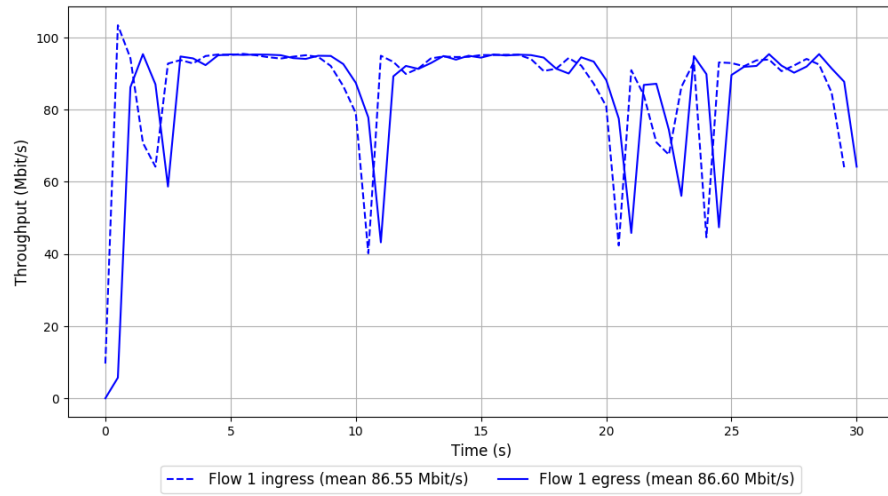


Run 3: Statistics of Copa

Start at: 2018-10-26 07:15:08
End at: 2018-10-26 07:15:38
Local clock offset: 0.677 ms
Remote clock offset: -1.943 ms

Below is generated by plot.py at 2018-10-26 08:13:20
Datalink statistics
-- Total of 1 flow:
Average throughput: 86.60 Mbit/s
95th percentile per-packet one-way delay: 65.746 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 86.60 Mbit/s
95th percentile per-packet one-way delay: 65.746 ms
Loss rate: 0.16%

Run 3: Report of Copa — Data Link

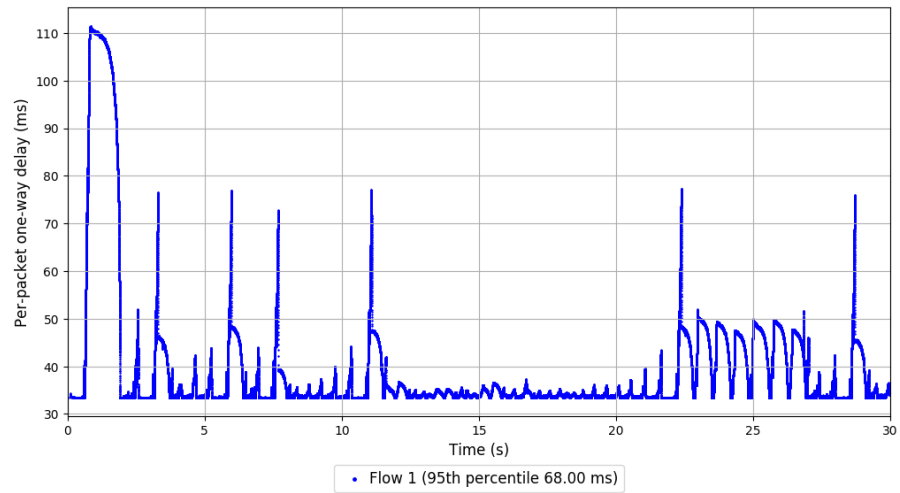
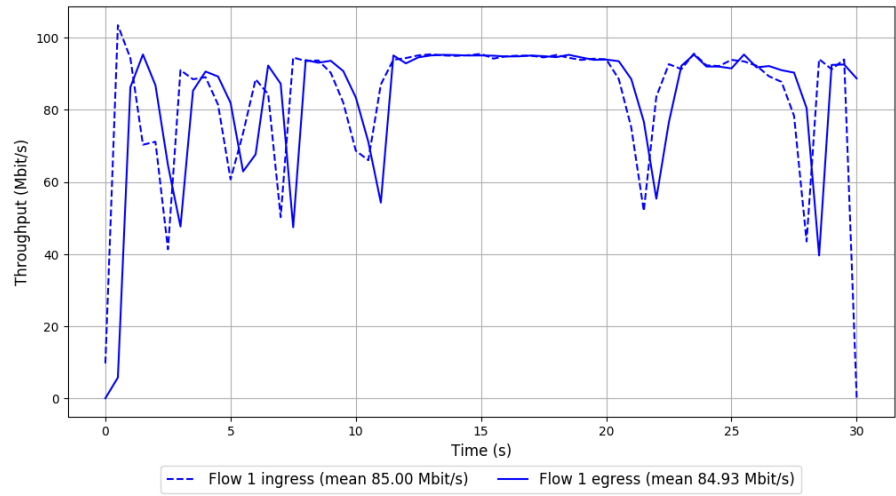


Run 4: Statistics of Copa

Start at: 2018-10-26 07:39:10
End at: 2018-10-26 07:39:40
Local clock offset: 0.281 ms
Remote clock offset: -1.365 ms

Below is generated by plot.py at 2018-10-26 08:14:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 84.93 Mbit/s
95th percentile per-packet one-way delay: 67.998 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 84.93 Mbit/s
95th percentile per-packet one-way delay: 67.998 ms
Loss rate: 0.29%

Run 4: Report of Copa — Data Link

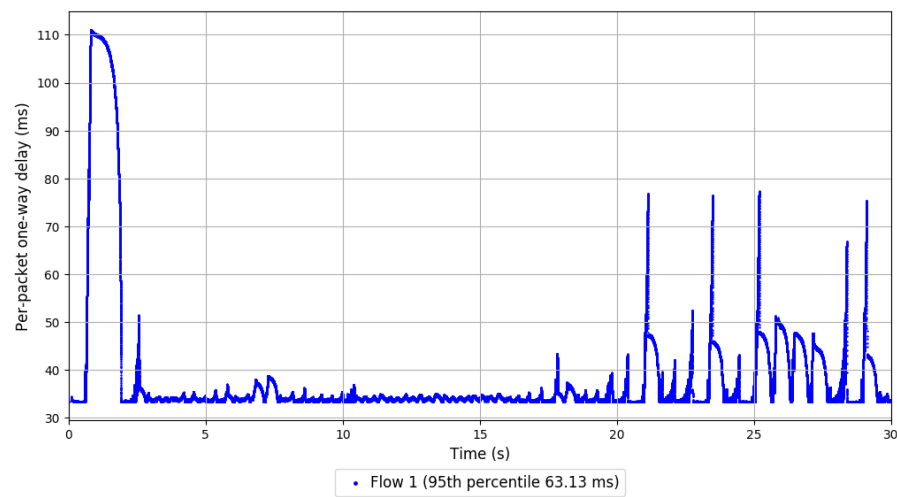
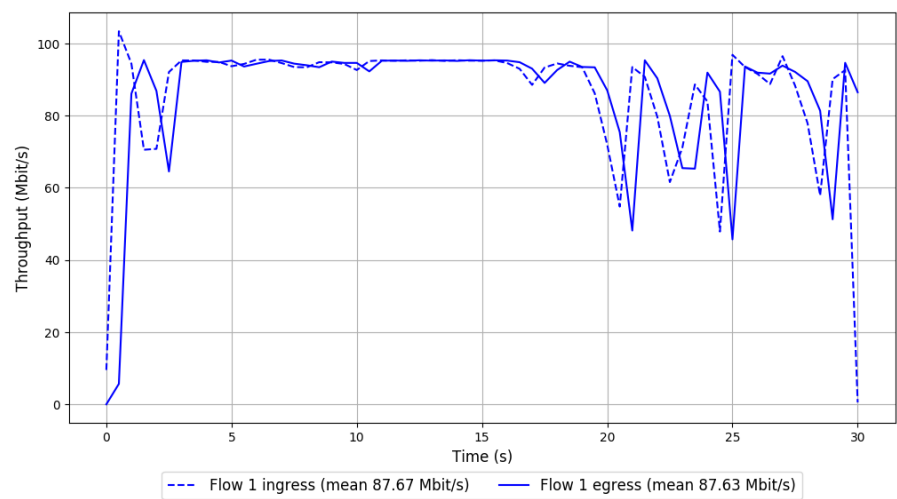


Run 5: Statistics of Copa

Start at: 2018-10-26 08:03:35
End at: 2018-10-26 08:04:05
Local clock offset: 0.086 ms
Remote clock offset: -1.032 ms

Below is generated by plot.py at 2018-10-26 08:14:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 87.63 Mbit/s
95th percentile per-packet one-way delay: 63.128 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 87.63 Mbit/s
95th percentile per-packet one-way delay: 63.128 ms
Loss rate: 0.26%

Run 5: Report of Copa — Data Link

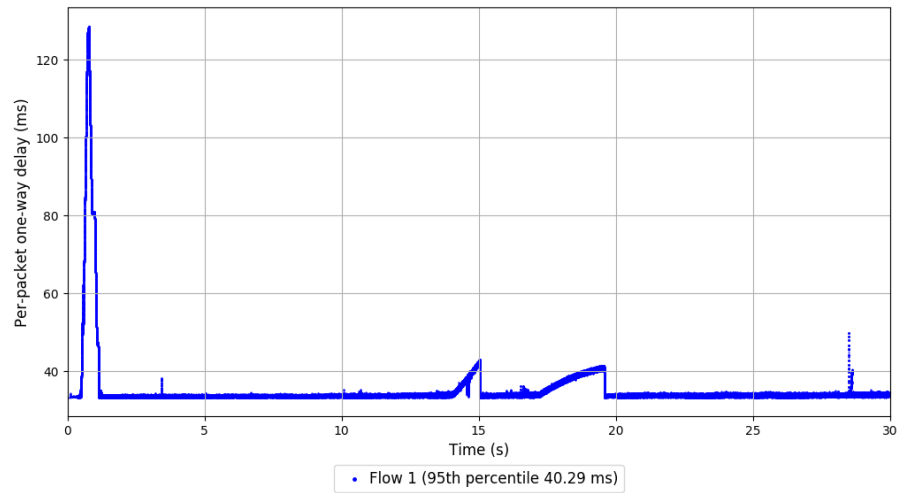
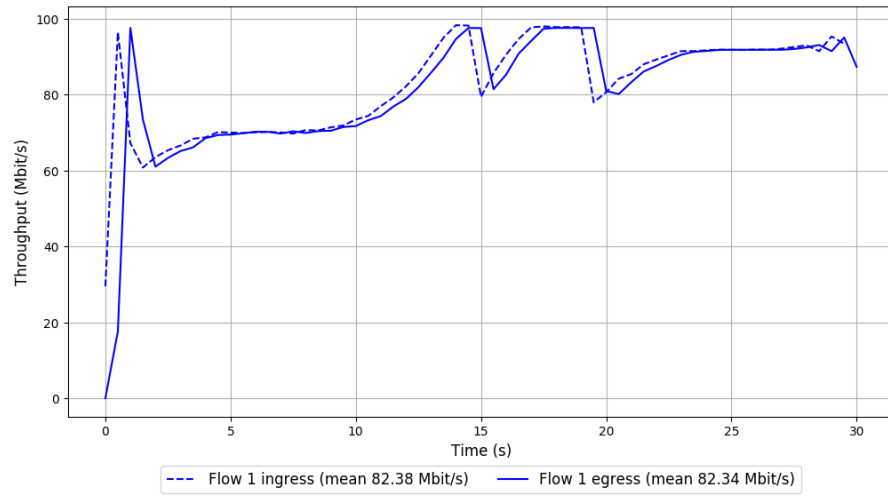


Run 1: Statistics of TCP Cubic

Start at: 2018-10-26 06:25:14
End at: 2018-10-26 06:25:44
Local clock offset: 0.692 ms
Remote clock offset: -2.598 ms

Below is generated by plot.py at 2018-10-26 08:14:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 82.34 Mbit/s
95th percentile per-packet one-way delay: 40.287 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 82.34 Mbit/s
95th percentile per-packet one-way delay: 40.287 ms
Loss rate: 0.26%

Run 1: Report of TCP Cubic — Data Link

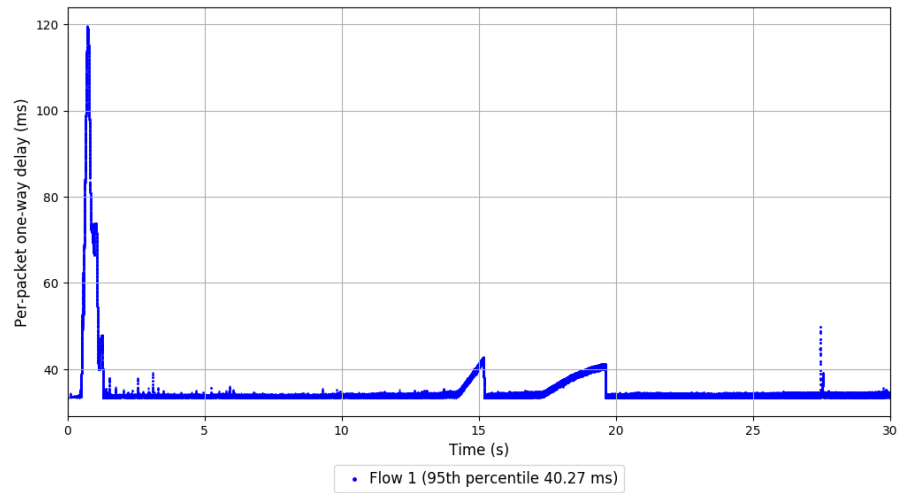
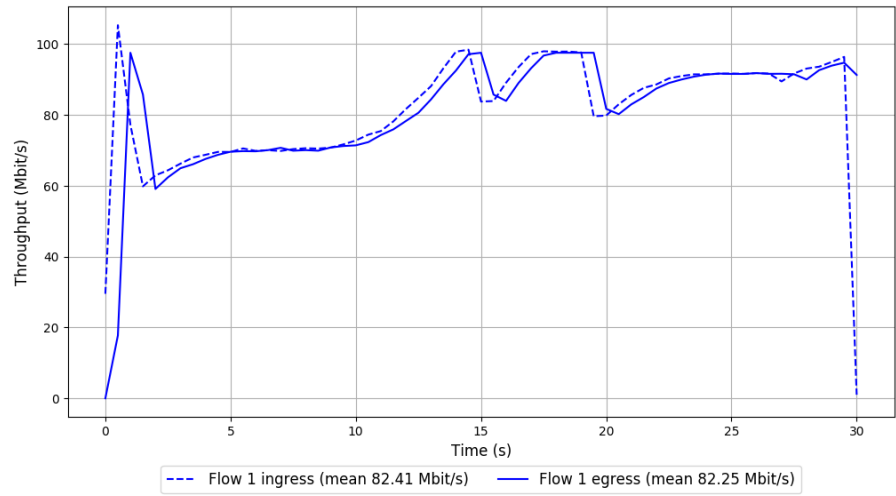


Run 2: Statistics of TCP Cubic

Start at: 2018-10-26 06:49:34
End at: 2018-10-26 06:50:04
Local clock offset: 1.807 ms
Remote clock offset: -2.254 ms

Below is generated by plot.py at 2018-10-26 08:14:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 82.25 Mbit/s
95th percentile per-packet one-way delay: 40.268 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 82.25 Mbit/s
95th percentile per-packet one-way delay: 40.268 ms
Loss rate: 0.41%

Run 2: Report of TCP Cubic — Data Link

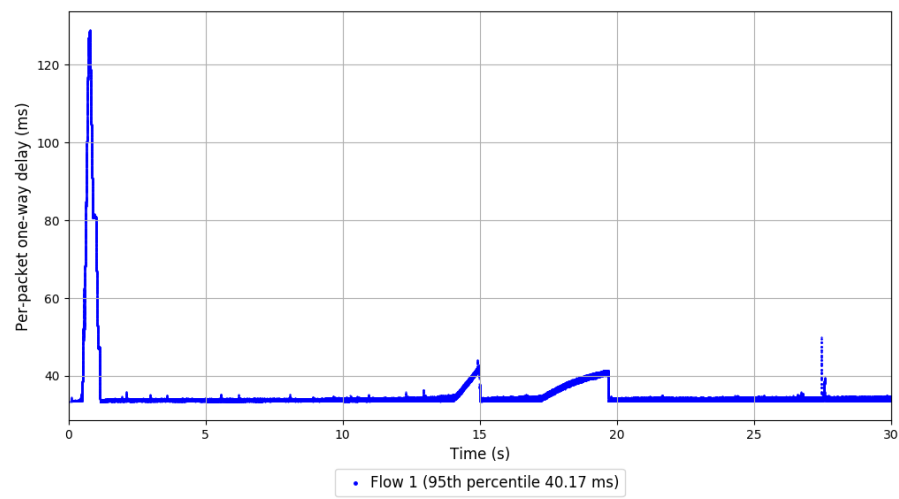
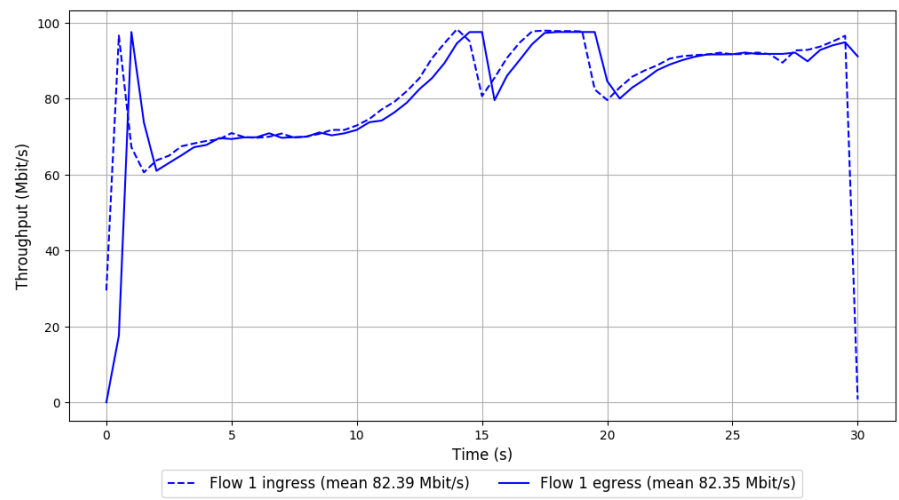


Run 3: Statistics of TCP Cubic

Start at: 2018-10-26 07:13:48
End at: 2018-10-26 07:14:18
Local clock offset: 0.731 ms
Remote clock offset: -1.657 ms

Below is generated by plot.py at 2018-10-26 08:14:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 82.35 Mbit/s
95th percentile per-packet one-way delay: 40.168 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 82.35 Mbit/s
95th percentile per-packet one-way delay: 40.168 ms
Loss rate: 0.26%

Run 3: Report of TCP Cubic — Data Link

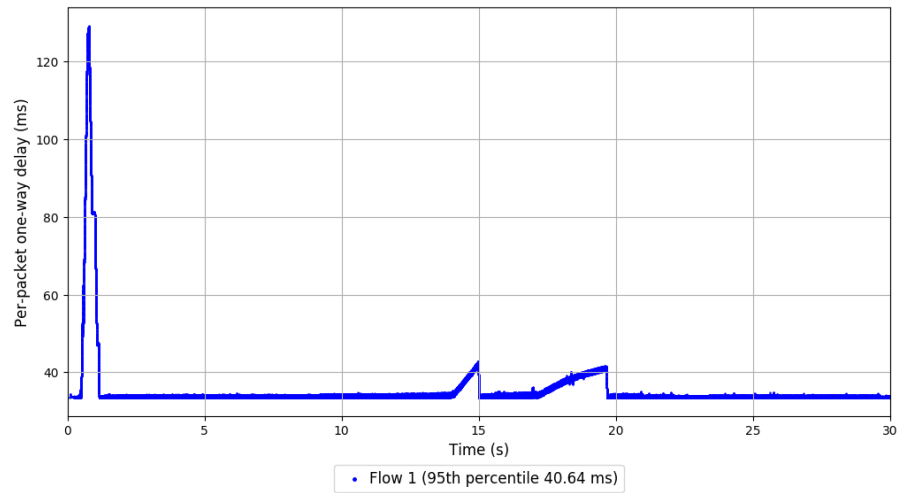
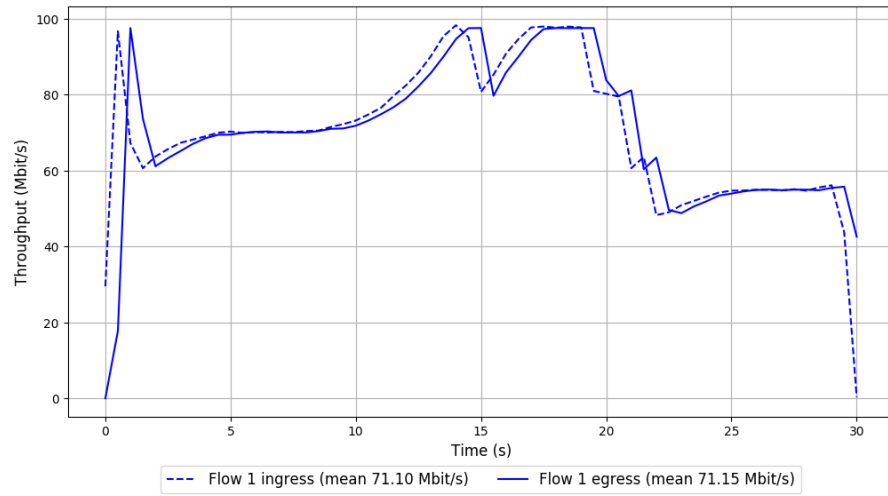


Run 4: Statistics of TCP Cubic

Start at: 2018-10-26 07:37:50
End at: 2018-10-26 07:38:20
Local clock offset: 0.287 ms
Remote clock offset: -1.531 ms

Below is generated by plot.py at 2018-10-26 08:14:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 71.15 Mbit/s
95th percentile per-packet one-way delay: 40.644 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 71.15 Mbit/s
95th percentile per-packet one-way delay: 40.644 ms
Loss rate: 0.14%

Run 4: Report of TCP Cubic — Data Link

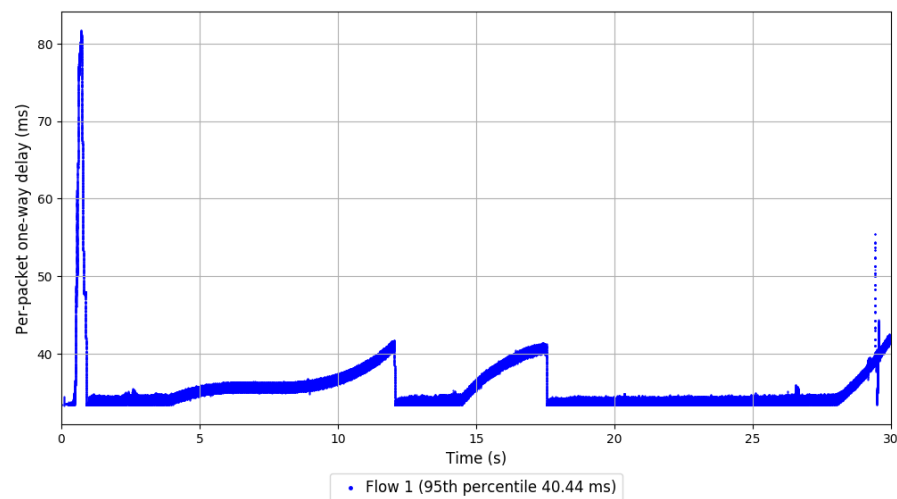
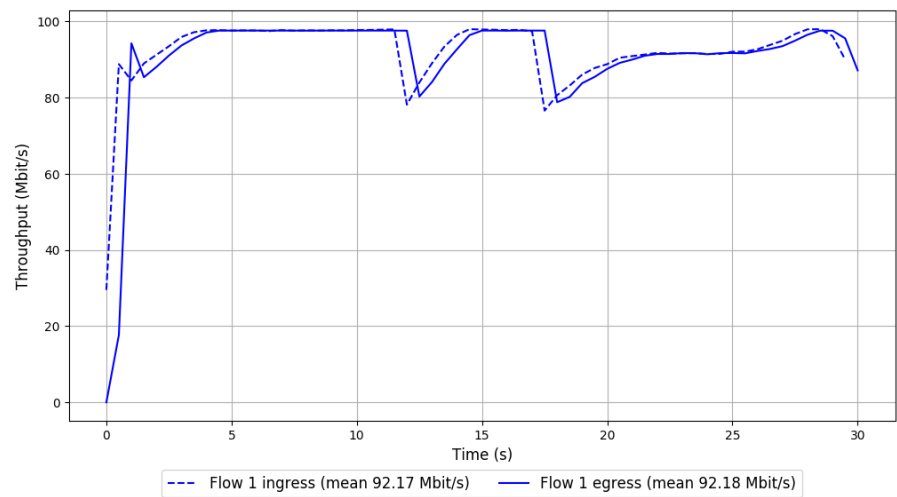


Run 5: Statistics of TCP Cubic

Start at: 2018-10-26 08:02:14
End at: 2018-10-26 08:02:44
Local clock offset: 0.054 ms
Remote clock offset: -1.101 ms

Below is generated by plot.py at 2018-10-26 08:14:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 92.18 Mbit/s
95th percentile per-packet one-way delay: 40.444 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 92.18 Mbit/s
95th percentile per-packet one-way delay: 40.444 ms
Loss rate: 0.20%

Run 5: Report of TCP Cubic — Data Link

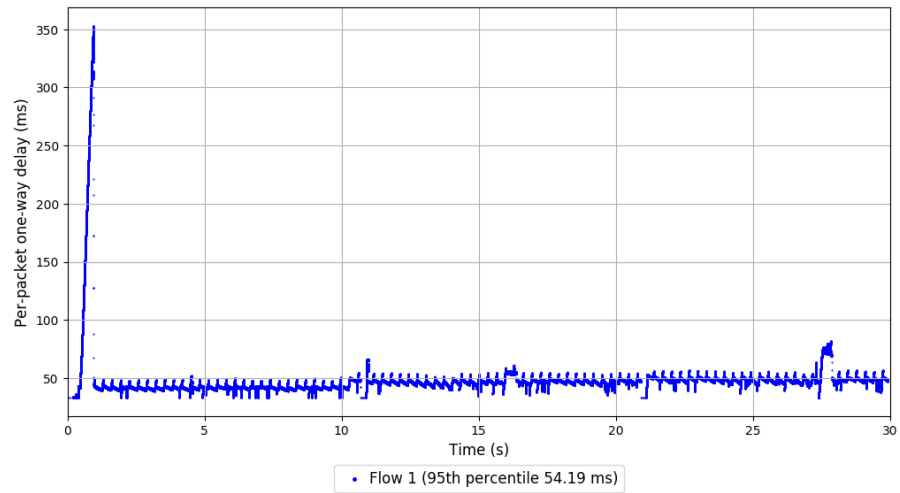
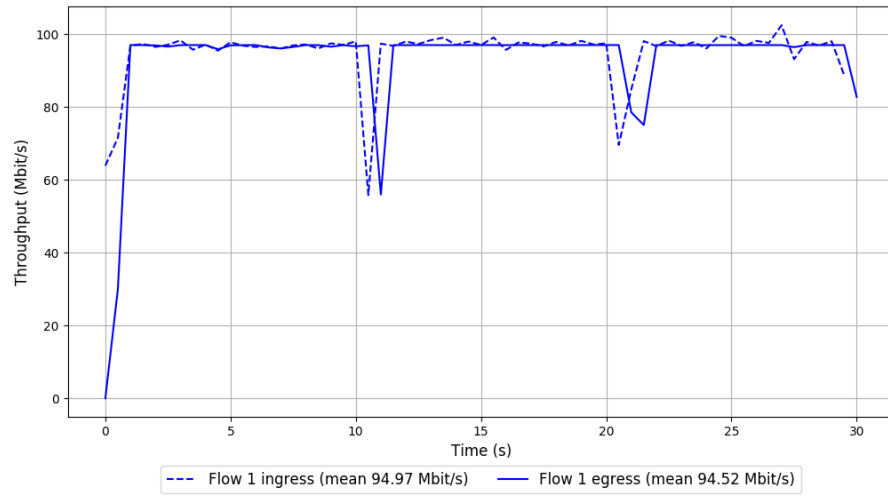


Run 1: Statistics of FillP

Start at: 2018-10-26 06:14:30
End at: 2018-10-26 06:15:00
Local clock offset: 0.612 ms
Remote clock offset: -2.792 ms

Below is generated by plot.py at 2018-10-26 08:14:45
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.52 Mbit/s
95th percentile per-packet one-way delay: 54.188 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 94.52 Mbit/s
95th percentile per-packet one-way delay: 54.188 ms
Loss rate: 0.69%

Run 1: Report of FillP — Data Link

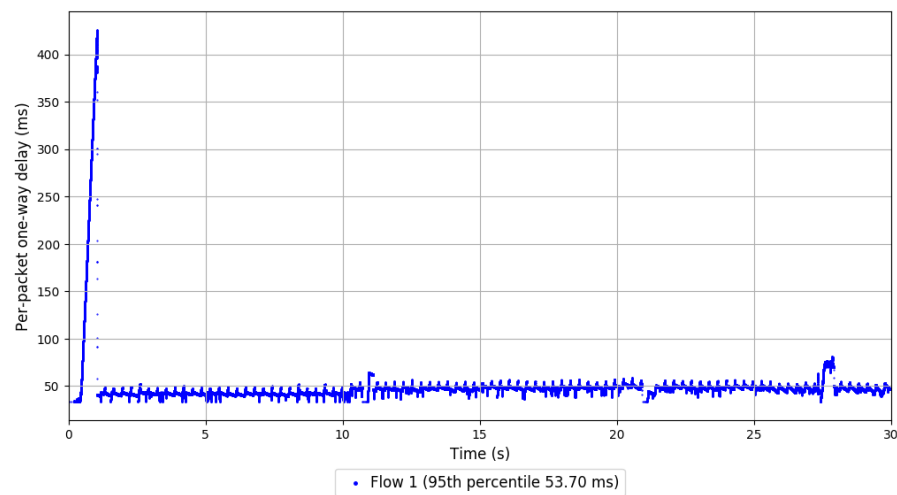
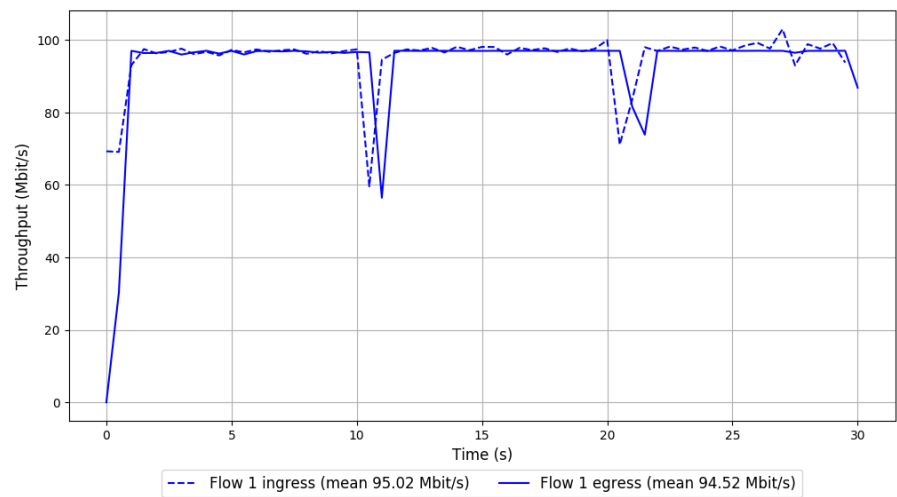


Run 2: Statistics of FillP

Start at: 2018-10-26 06:38:46
End at: 2018-10-26 06:39:16
Local clock offset: 1.31 ms
Remote clock offset: -2.412 ms

Below is generated by plot.py at 2018-10-26 08:14:48
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.52 Mbit/s
95th percentile per-packet one-way delay: 53.703 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 94.52 Mbit/s
95th percentile per-packet one-way delay: 53.703 ms
Loss rate: 0.73%

Run 2: Report of FillP — Data Link

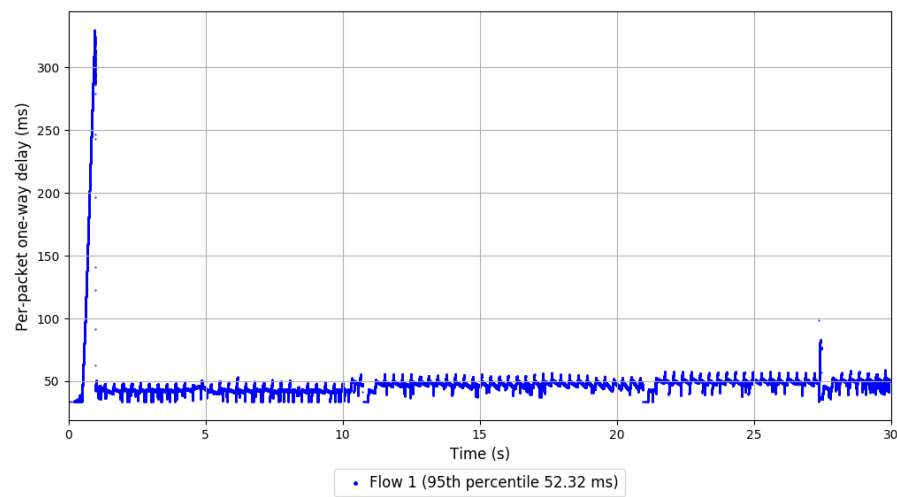
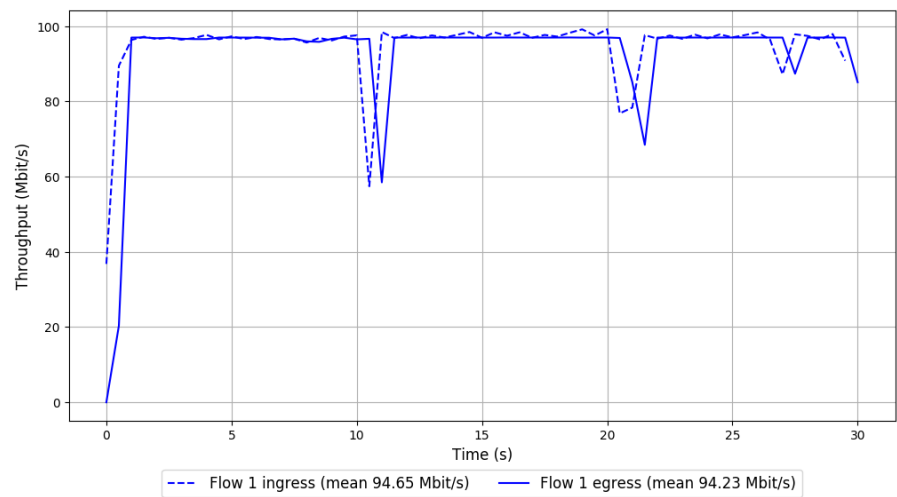


Run 3: Statistics of FillP

Start at: 2018-10-26 07:03:12
End at: 2018-10-26 07:03:42
Local clock offset: 1.853 ms
Remote clock offset: -1.907 ms

Below is generated by plot.py at 2018-10-26 08:14:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.23 Mbit/s
95th percentile per-packet one-way delay: 52.323 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 94.23 Mbit/s
95th percentile per-packet one-way delay: 52.323 ms
Loss rate: 0.65%

Run 3: Report of FillP — Data Link

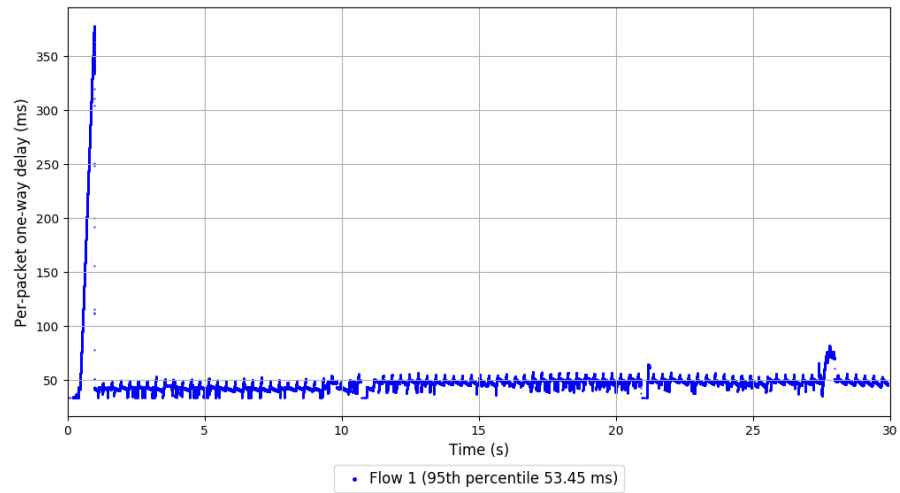
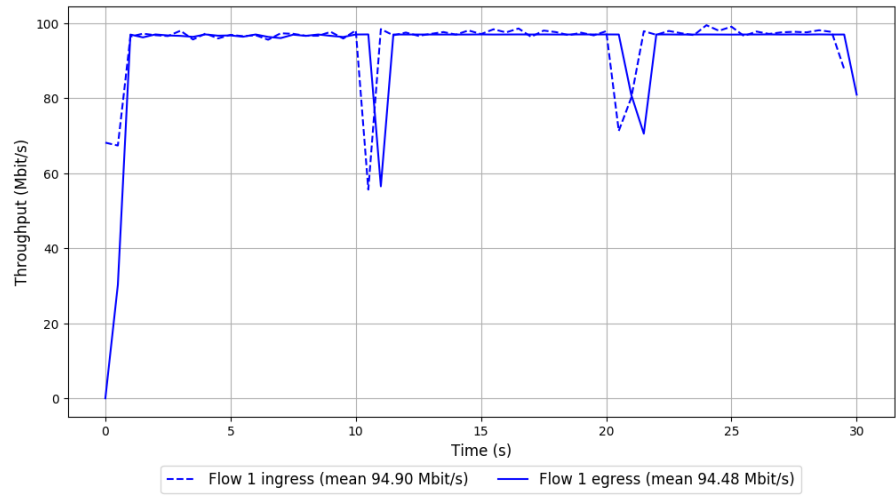


Run 4: Statistics of FillP

Start at: 2018-10-26 07:27:07
End at: 2018-10-26 07:27:37
Local clock offset: 0.418 ms
Remote clock offset: -1.556 ms

Below is generated by plot.py at 2018-10-26 08:14:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.48 Mbit/s
95th percentile per-packet one-way delay: 53.455 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 94.48 Mbit/s
95th percentile per-packet one-way delay: 53.455 ms
Loss rate: 0.66%

Run 4: Report of FillP — Data Link

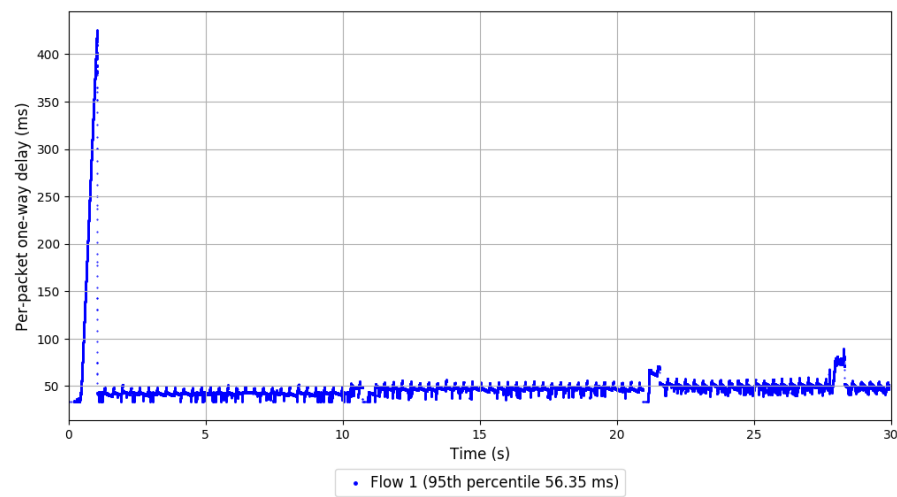
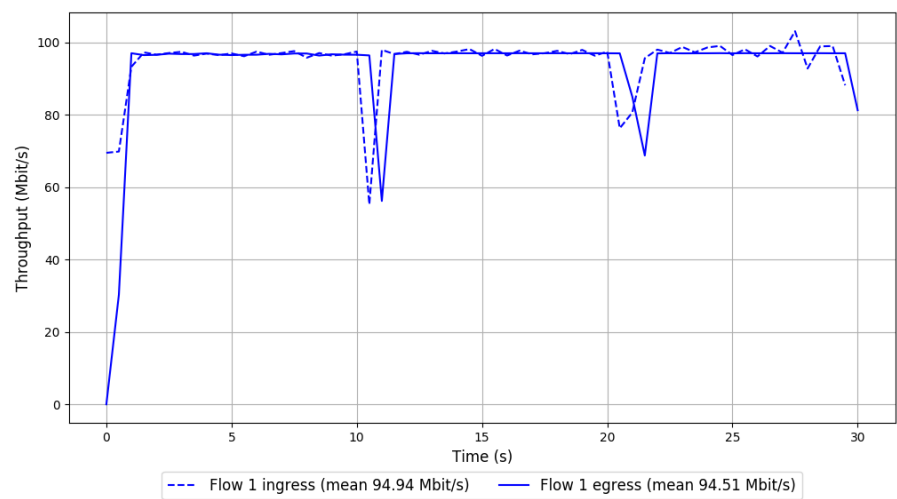


Run 5: Statistics of FillP

Start at: 2018-10-26 07:51:30
End at: 2018-10-26 07:52:00
Local clock offset: 0.116 ms
Remote clock offset: -1.127 ms

Below is generated by plot.py at 2018-10-26 08:15:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.51 Mbit/s
95th percentile per-packet one-way delay: 56.350 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 94.51 Mbit/s
95th percentile per-packet one-way delay: 56.350 ms
Loss rate: 0.67%

Run 5: Report of FillP — Data Link



Run 1: Statistics of Indigo

Start at: 2018-10-26 06:17:06

End at: 2018-10-26 06:17:36

Local clock offset: 0.638 ms

Remote clock offset: -2.745 ms

Below is generated by plot.py at 2018-10-26 08:15:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.95 Mbit/s

95th percentile per-packet one-way delay: 37.499 ms

Loss rate: 0.23%

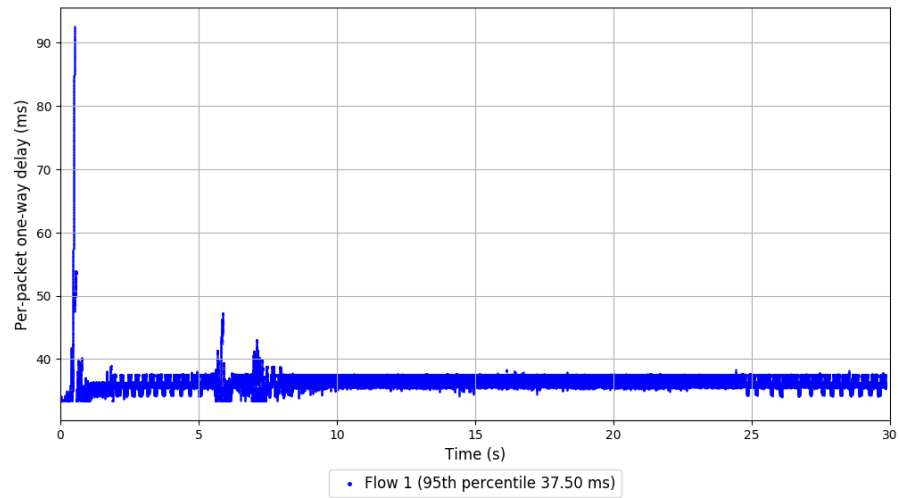
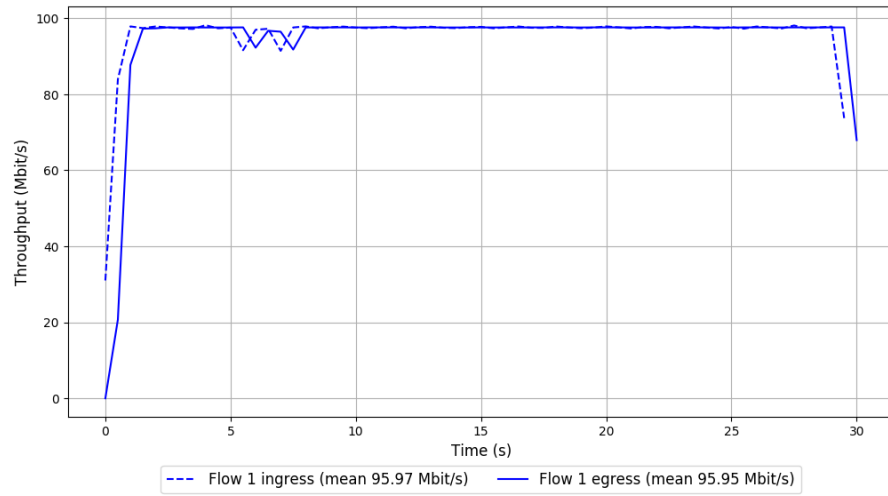
-- Flow 1:

Average throughput: 95.95 Mbit/s

95th percentile per-packet one-way delay: 37.499 ms

Loss rate: 0.23%

Run 1: Report of Indigo — Data Link

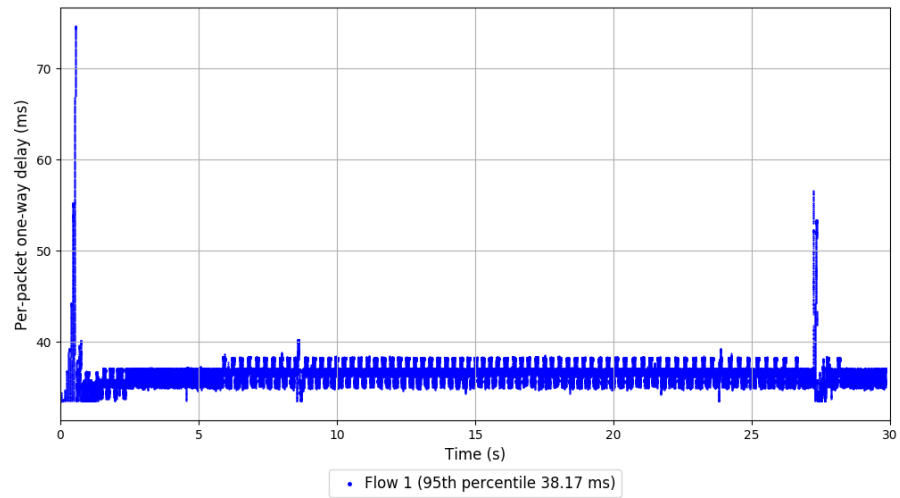
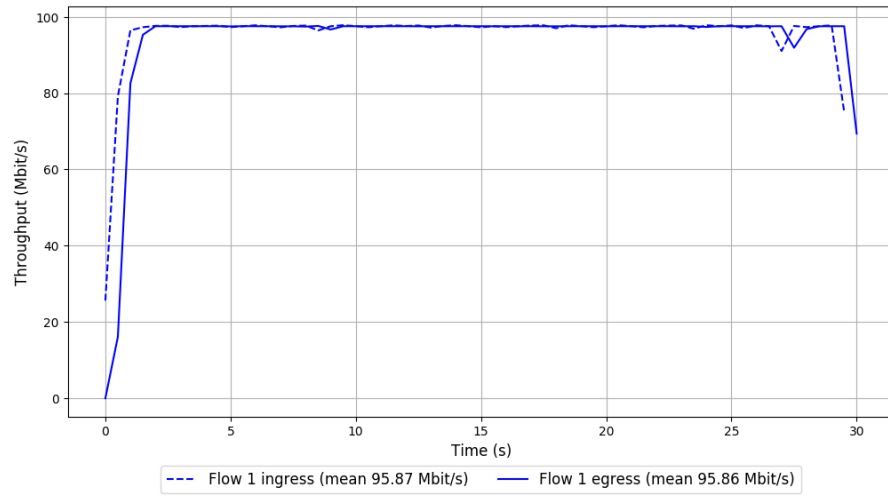


Run 2: Statistics of Indigo

Start at: 2018-10-26 06:41:21
End at: 2018-10-26 06:41:51
Local clock offset: 1.452 ms
Remote clock offset: -2.431 ms

Below is generated by plot.py at 2018-10-26 08:15:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.86 Mbit/s
95th percentile per-packet one-way delay: 38.167 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 95.86 Mbit/s
95th percentile per-packet one-way delay: 38.167 ms
Loss rate: 0.23%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2018-10-26 07:05:49

End at: 2018-10-26 07:06:19

Local clock offset: 1.455 ms

Remote clock offset: -1.819 ms

Below is generated by plot.py at 2018-10-26 08:15:40

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.04 Mbit/s

95th percentile per-packet one-way delay: 38.140 ms

Loss rate: 0.22%

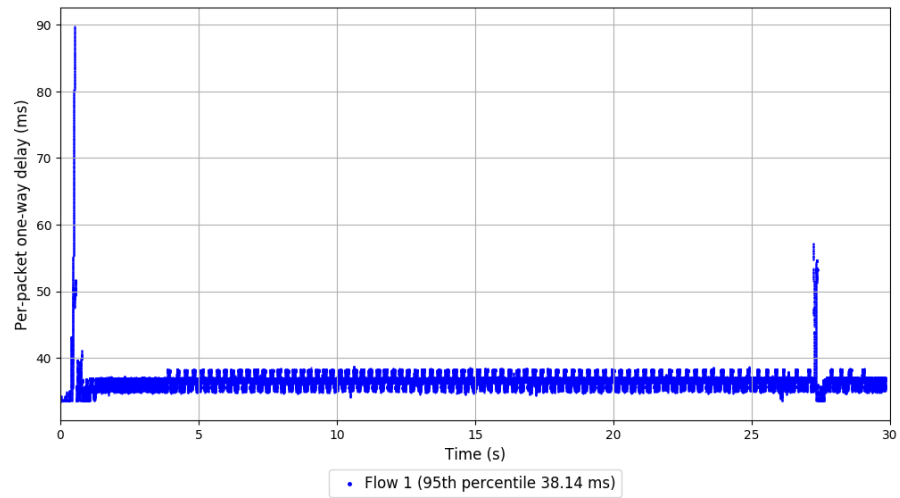
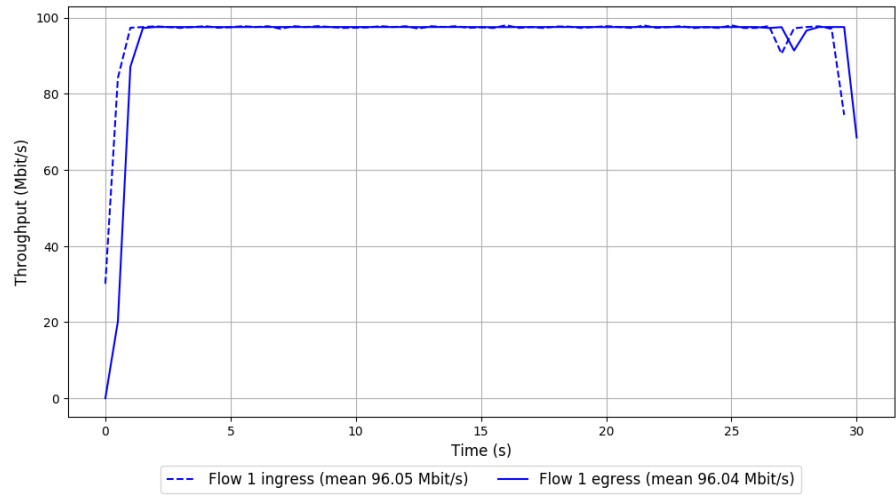
-- Flow 1:

Average throughput: 96.04 Mbit/s

95th percentile per-packet one-way delay: 38.140 ms

Loss rate: 0.22%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2018-10-26 07:29:42

End at: 2018-10-26 07:30:12

Local clock offset: 0.384 ms

Remote clock offset: -1.431 ms

Below is generated by plot.py at 2018-10-26 08:15:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.86 Mbit/s

95th percentile per-packet one-way delay: 38.095 ms

Loss rate: 0.23%

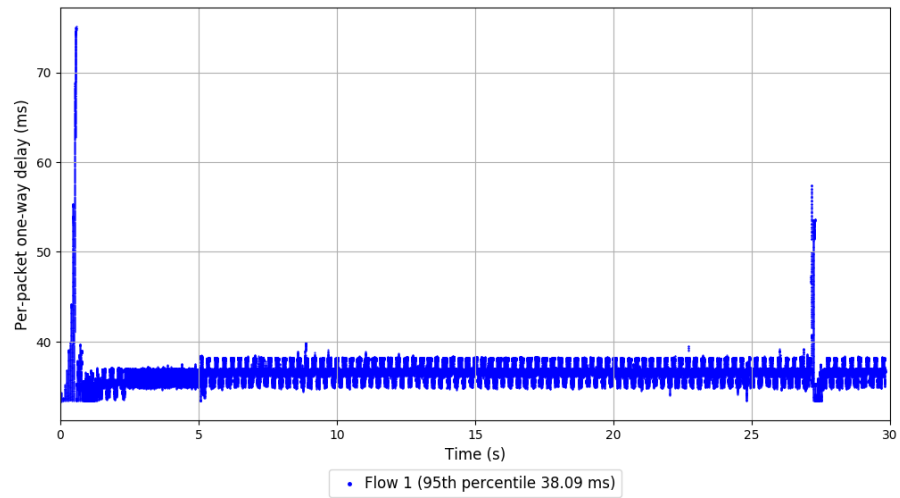
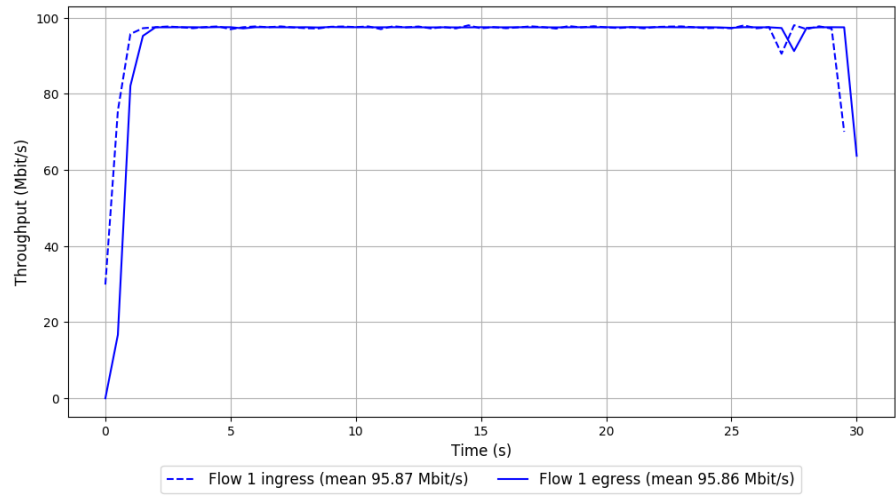
-- Flow 1:

Average throughput: 95.86 Mbit/s

95th percentile per-packet one-way delay: 38.095 ms

Loss rate: 0.23%

Run 4: Report of Indigo — Data Link

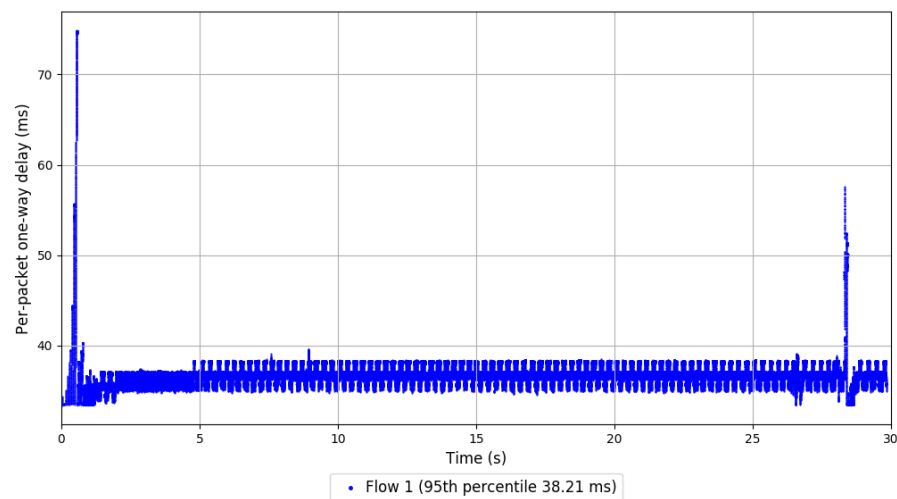
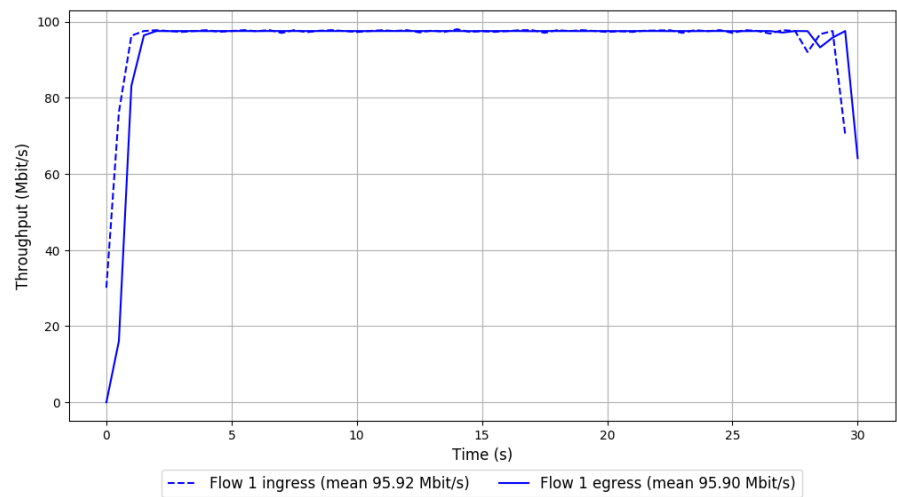


Run 5: Statistics of Indigo

Start at: 2018-10-26 07:54:07
End at: 2018-10-26 07:54:37
Local clock offset: 0.076 ms
Remote clock offset: -1.124 ms

Below is generated by plot.py at 2018-10-26 08:15:59
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.90 Mbit/s
95th percentile per-packet one-way delay: 38.208 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 95.90 Mbit/s
95th percentile per-packet one-way delay: 38.208 ms
Loss rate: 0.23%

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-96d2da3

Start at: 2018-10-26 06:10:34

End at: 2018-10-26 06:11:04

Local clock offset: 0.668 ms

Remote clock offset: -2.731 ms

Below is generated by plot.py at 2018-10-26 08:16:03

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.17 Mbit/s

95th percentile per-packet one-way delay: 118.703 ms

Loss rate: 8.57%

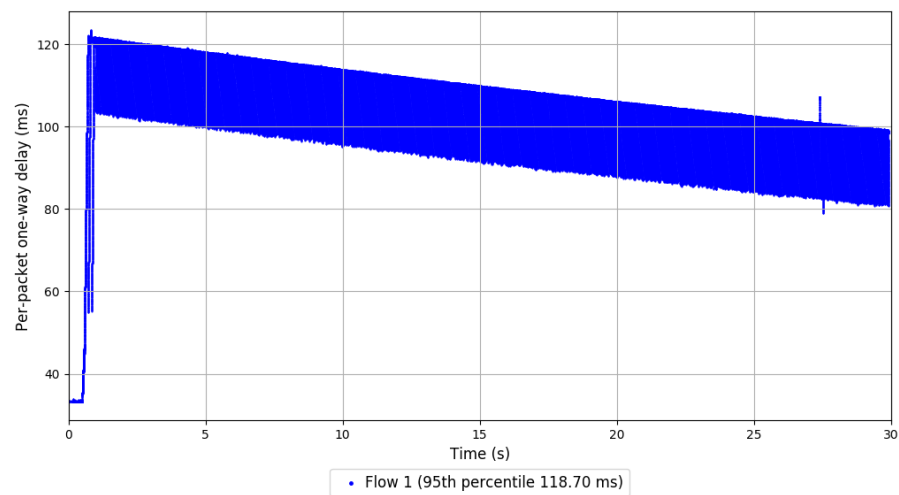
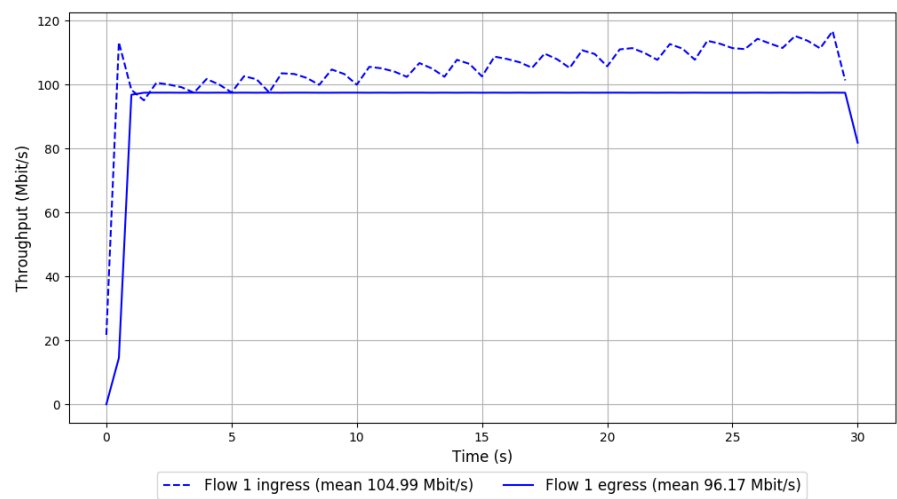
-- Flow 1:

Average throughput: 96.17 Mbit/s

95th percentile per-packet one-way delay: 118.703 ms

Loss rate: 8.57%

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

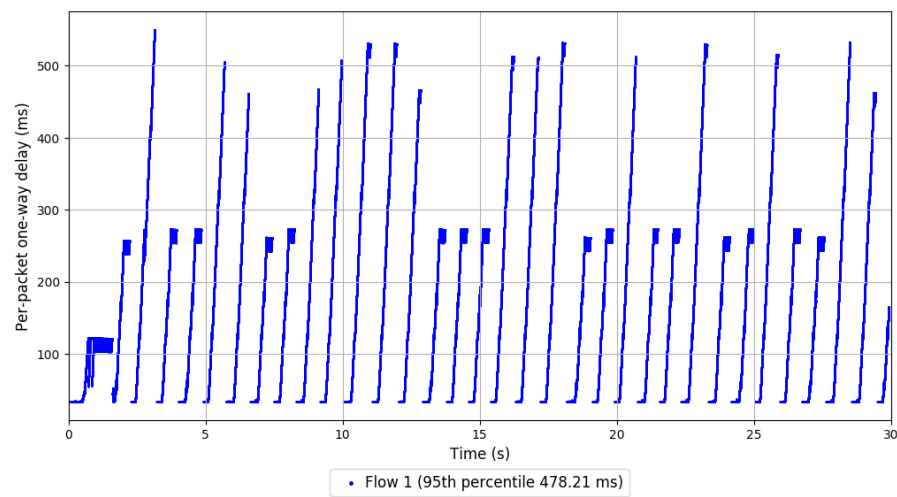
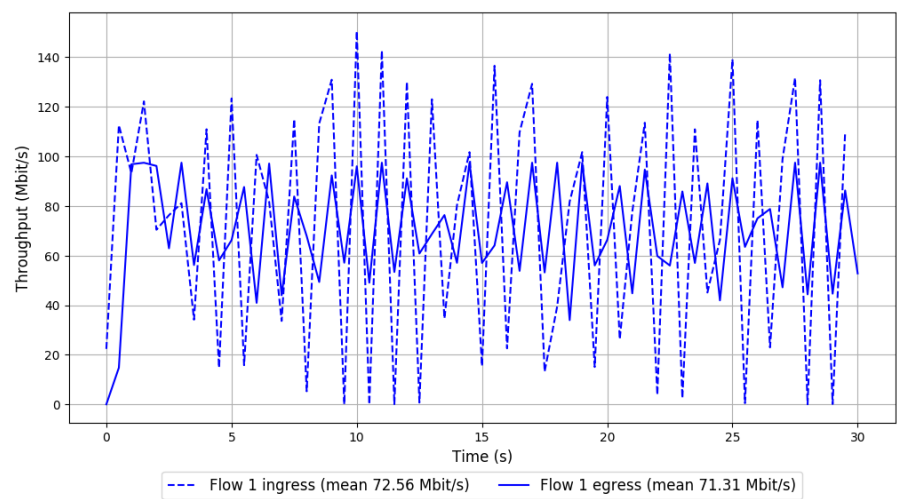


Run 2: Statistics of Indigo-96d2da3

Start at: 2018-10-26 06:34:49
End at: 2018-10-26 06:35:19
Local clock offset: 1.035 ms
Remote clock offset: -2.522 ms

Below is generated by plot.py at 2018-10-26 08:16:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 71.31 Mbit/s
95th percentile per-packet one-way delay: 478.208 ms
Loss rate: 1.93%
-- Flow 1:
Average throughput: 71.31 Mbit/s
95th percentile per-packet one-way delay: 478.208 ms
Loss rate: 1.93%

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

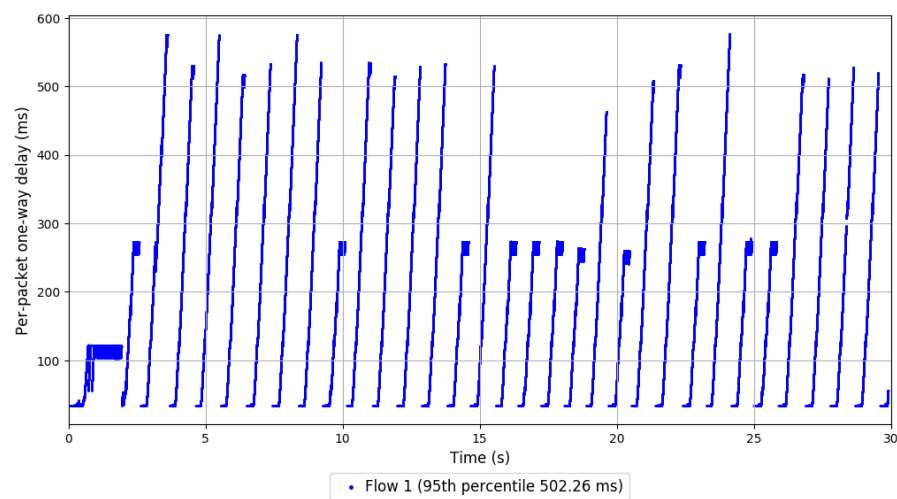
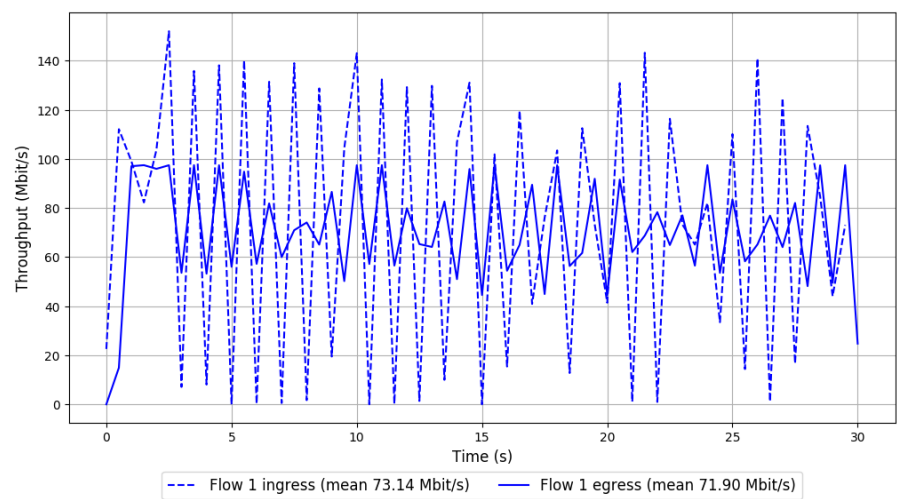


Run 3: Statistics of Indigo-96d2da3

Start at: 2018-10-26 06:59:15
End at: 2018-10-26 06:59:45
Local clock offset: 2.114 ms
Remote clock offset: -2.132 ms

Below is generated by plot.py at 2018-10-26 08:16:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 71.90 Mbit/s
95th percentile per-packet one-way delay: 502.259 ms
Loss rate: 1.91%
-- Flow 1:
Average throughput: 71.90 Mbit/s
95th percentile per-packet one-way delay: 502.259 ms
Loss rate: 1.91%

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

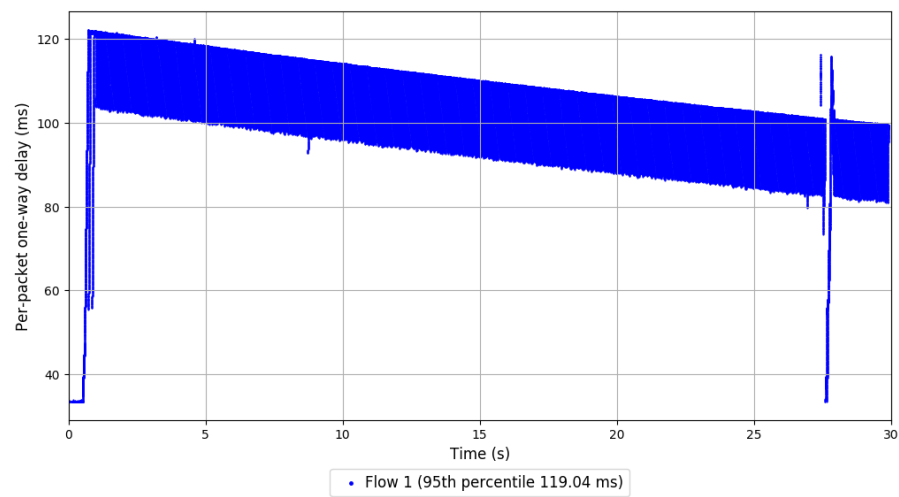
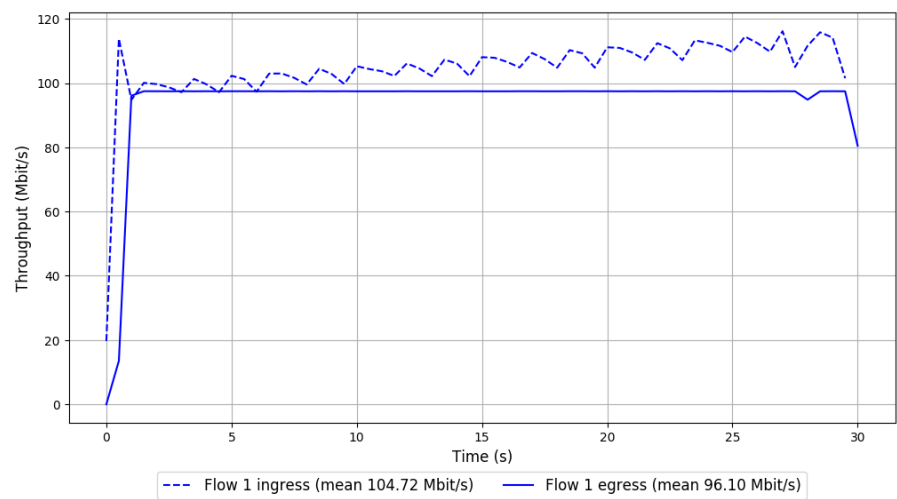


Run 4: Statistics of Indigo-96d2da3

Start at: 2018-10-26 07:23:11
End at: 2018-10-26 07:23:41
Local clock offset: 0.452 ms
Remote clock offset: -1.628 ms

Below is generated by plot.py at 2018-10-26 08:16:47
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.10 Mbit/s
95th percentile per-packet one-way delay: 119.043 ms
Loss rate: 8.44%
-- Flow 1:
Average throughput: 96.10 Mbit/s
95th percentile per-packet one-way delay: 119.043 ms
Loss rate: 8.44%

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

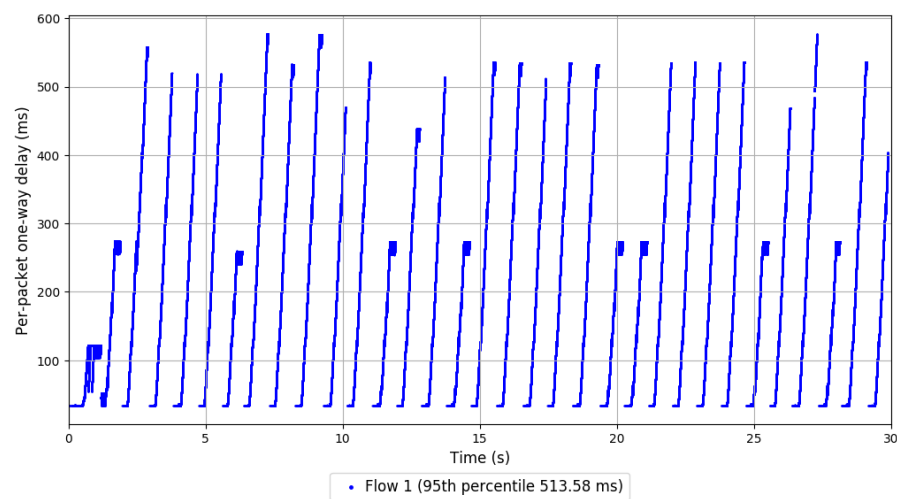
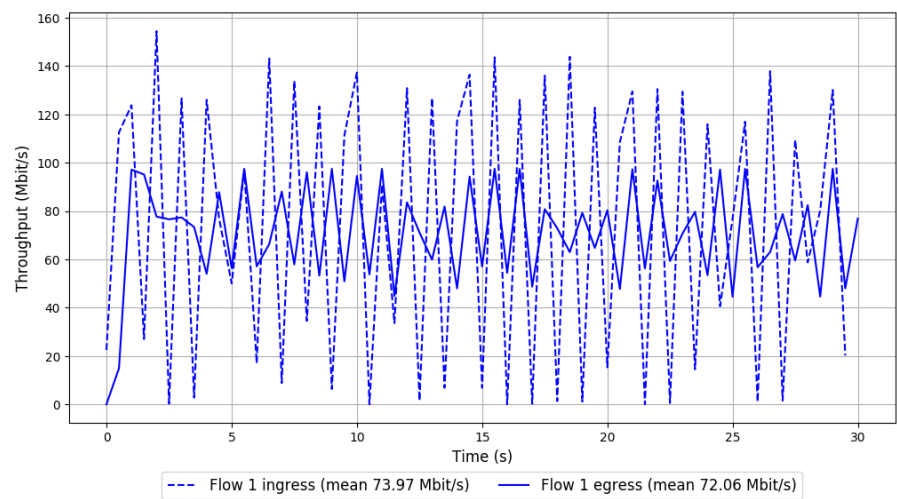


Run 5: Statistics of Indigo-96d2da3

Start at: 2018-10-26 07:47:30
End at: 2018-10-26 07:48:00
Local clock offset: 0.142 ms
Remote clock offset: -1.387 ms

Below is generated by plot.py at 2018-10-26 08:16:47
Datalink statistics
-- Total of 1 flow:
Average throughput: 72.06 Mbit/s
95th percentile per-packet one-way delay: 513.579 ms
Loss rate: 1.73%
-- Flow 1:
Average throughput: 72.06 Mbit/s
95th percentile per-packet one-way delay: 513.579 ms
Loss rate: 1.73%

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

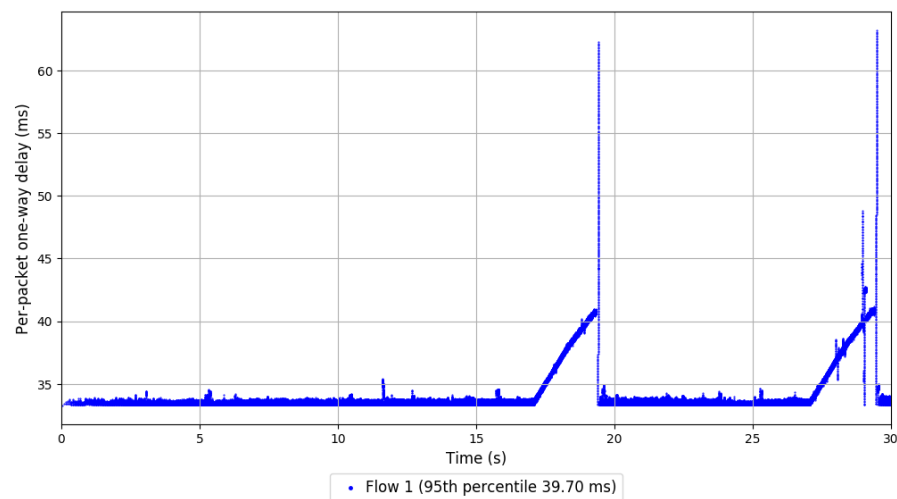
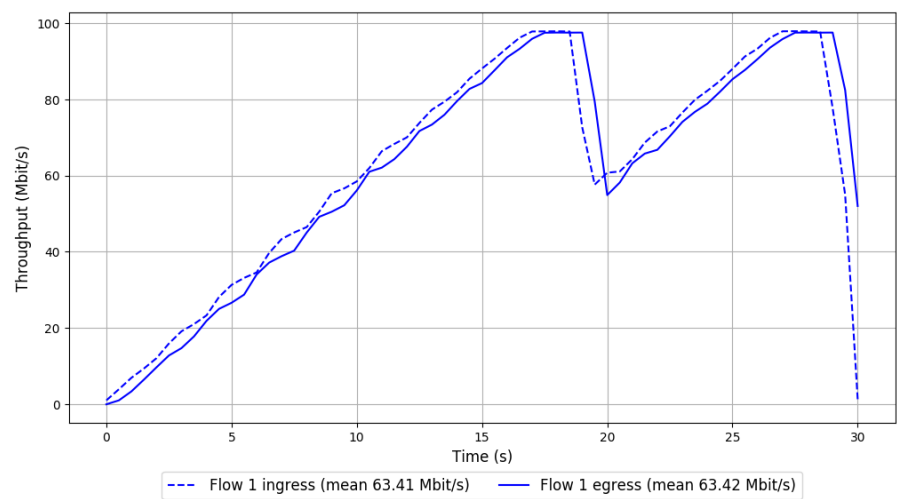


Run 1: Statistics of LEDBAT

Start at: 2018-10-26 06:13:11
End at: 2018-10-26 06:13:41
Local clock offset: 0.645 ms
Remote clock offset: -2.769 ms

Below is generated by plot.py at 2018-10-26 08:16:47
Datalink statistics
-- Total of 1 flow:
Average throughput: 63.42 Mbit/s
95th percentile per-packet one-way delay: 39.703 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 63.42 Mbit/s
95th percentile per-packet one-way delay: 39.703 ms
Loss rate: 0.19%

Run 1: Report of LEDBAT — Data Link

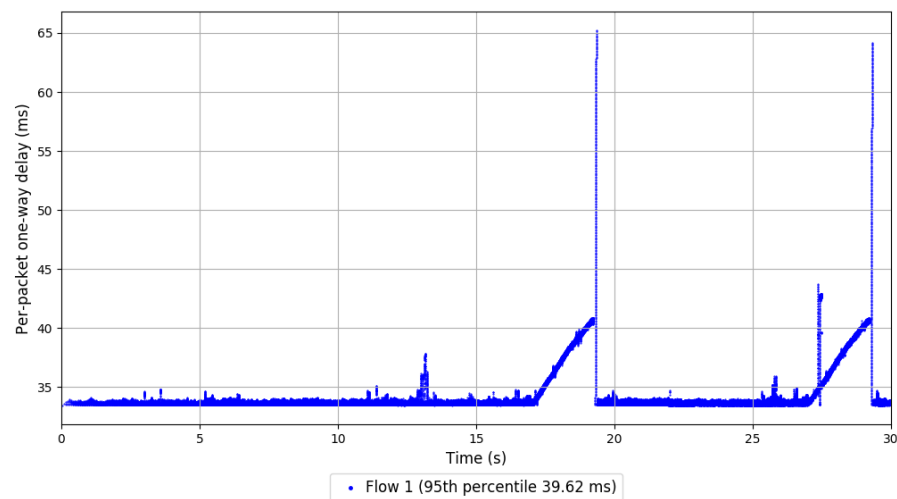
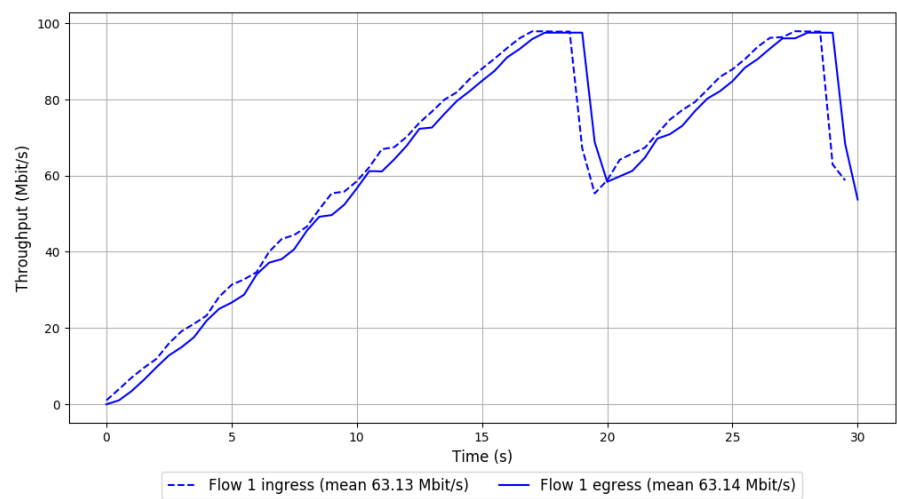


Run 2: Statistics of LEDBAT

Start at: 2018-10-26 06:37:25
End at: 2018-10-26 06:37:55
Local clock offset: 1.227 ms
Remote clock offset: -2.469 ms

Below is generated by plot.py at 2018-10-26 08:16:47
Datalink statistics
-- Total of 1 flow:
Average throughput: 63.14 Mbit/s
95th percentile per-packet one-way delay: 39.624 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 63.14 Mbit/s
95th percentile per-packet one-way delay: 39.624 ms
Loss rate: 0.20%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-10-26 07:01:52

End at: 2018-10-26 07:02:22

Local clock offset: 2.142 ms

Remote clock offset: -1.93 ms

Below is generated by plot.py at 2018-10-26 08:16:47

Datalink statistics

-- Total of 1 flow:

Average throughput: 55.39 Mbit/s

95th percentile per-packet one-way delay: 38.740 ms

Loss rate: 0.34%

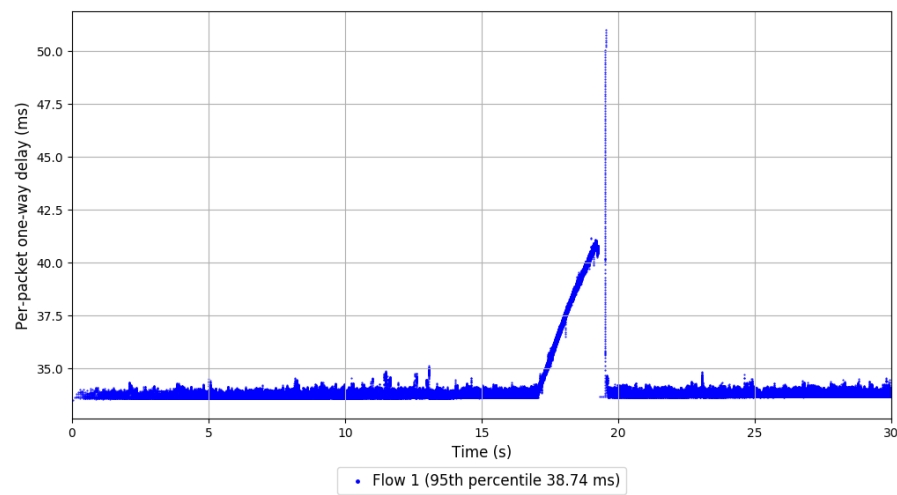
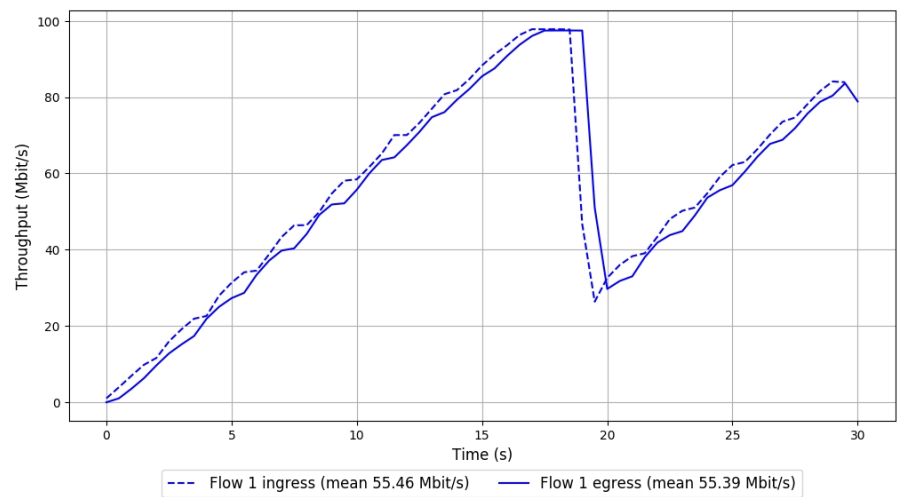
-- Flow 1:

Average throughput: 55.39 Mbit/s

95th percentile per-packet one-way delay: 38.740 ms

Loss rate: 0.34%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-10-26 07:25:48

End at: 2018-10-26 07:26:18

Local clock offset: 0.417 ms

Remote clock offset: -1.59 ms

Below is generated by plot.py at 2018-10-26 08:16:47

Datalink statistics

-- Total of 1 flow:

Average throughput: 55.42 Mbit/s

95th percentile per-packet one-way delay: 38.512 ms

Loss rate: 0.34%

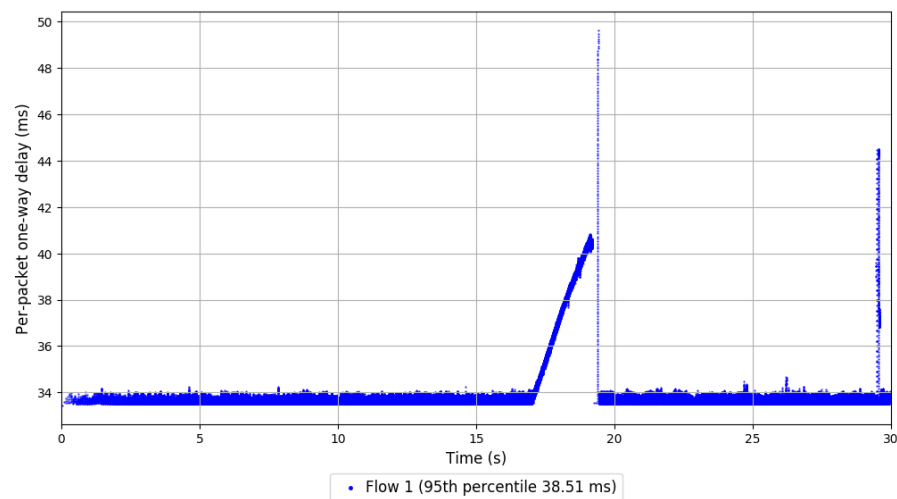
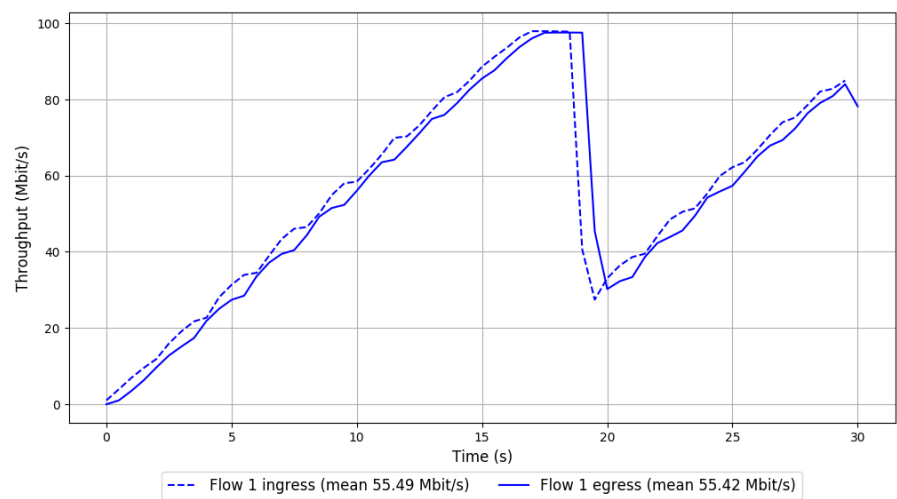
-- Flow 1:

Average throughput: 55.42 Mbit/s

95th percentile per-packet one-way delay: 38.512 ms

Loss rate: 0.34%

Run 4: Report of LEDBAT — Data Link

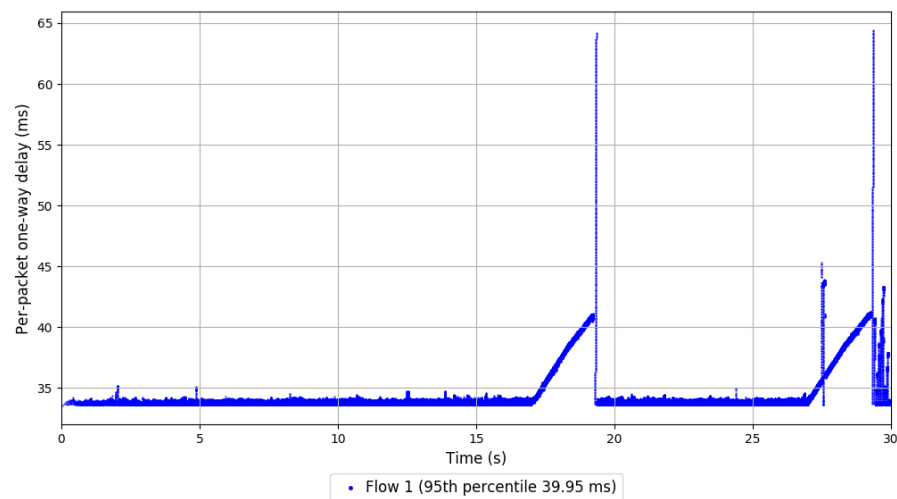
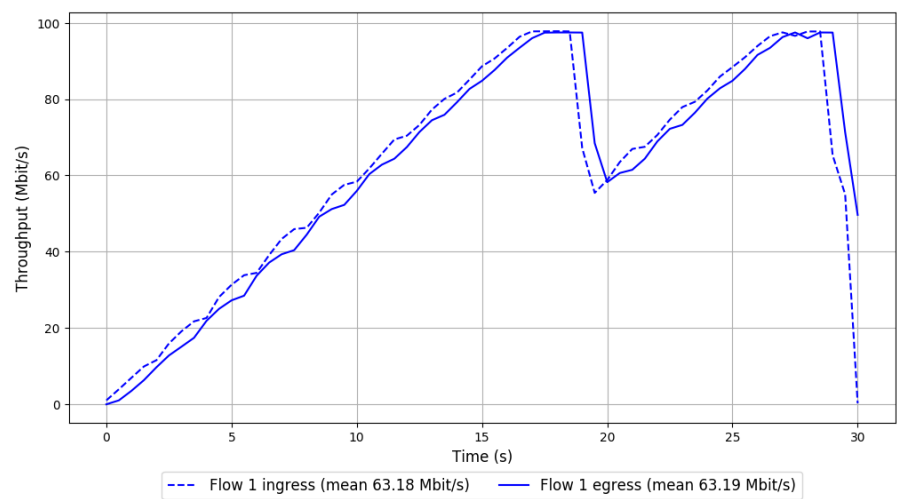


Run 5: Statistics of LEDBAT

Start at: 2018-10-26 07:50:08
End at: 2018-10-26 07:50:38
Local clock offset: 0.114 ms
Remote clock offset: -1.299 ms

Below is generated by plot.py at 2018-10-26 08:16:53
Datalink statistics
-- Total of 1 flow:
Average throughput: 63.19 Mbit/s
95th percentile per-packet one-way delay: 39.945 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 63.19 Mbit/s
95th percentile per-packet one-way delay: 39.945 ms
Loss rate: 0.20%

Run 5: Report of LEDBAT — Data Link

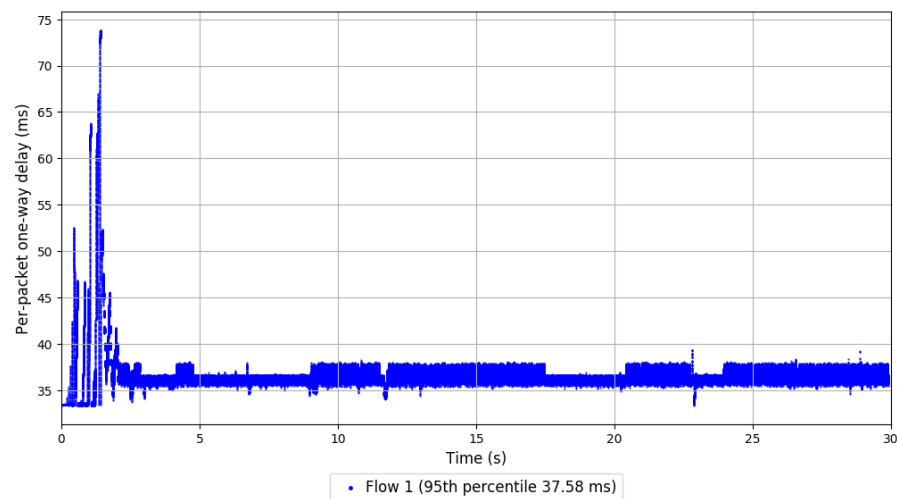
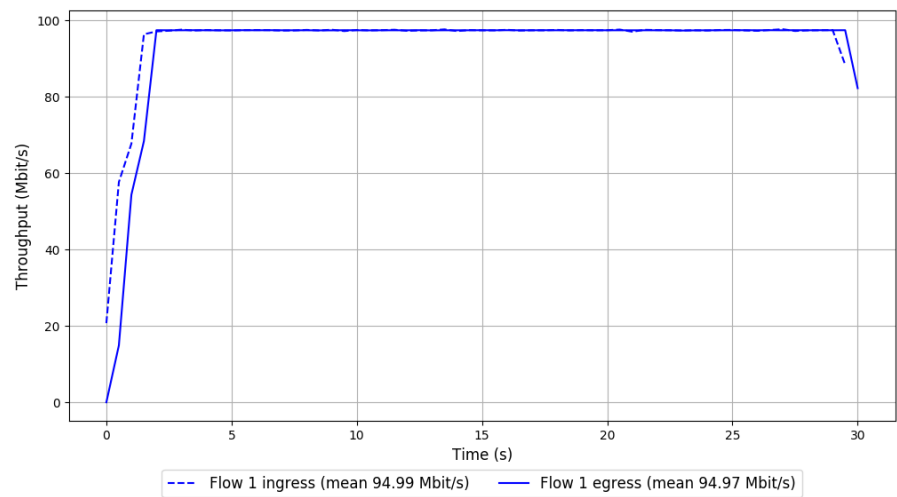


Run 1: Statistics of Indigo-Muses

Start at: 2018-10-26 06:18:28
End at: 2018-10-26 06:18:58
Local clock offset: 0.638 ms
Remote clock offset: -2.758 ms

Below is generated by plot.py at 2018-10-26 08:17:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.97 Mbit/s
95th percentile per-packet one-way delay: 37.583 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 94.97 Mbit/s
95th percentile per-packet one-way delay: 37.583 ms
Loss rate: 0.23%

Run 1: Report of Indigo-Muses — Data Link

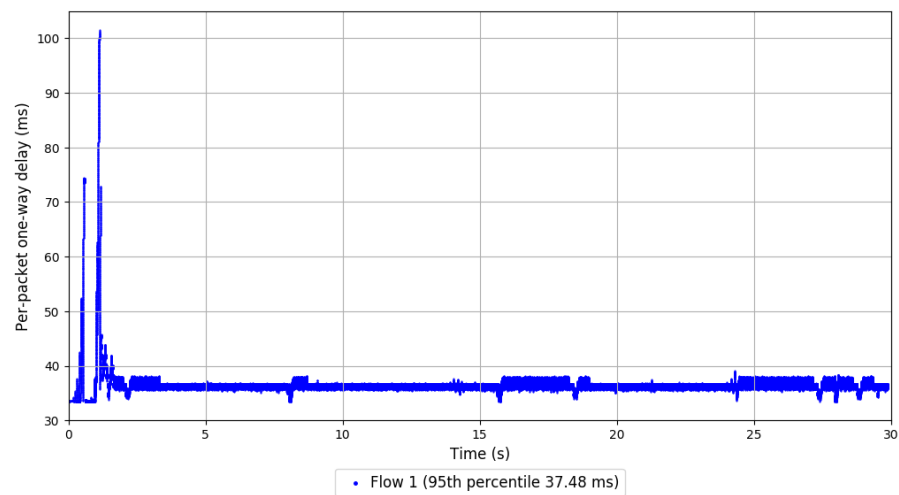
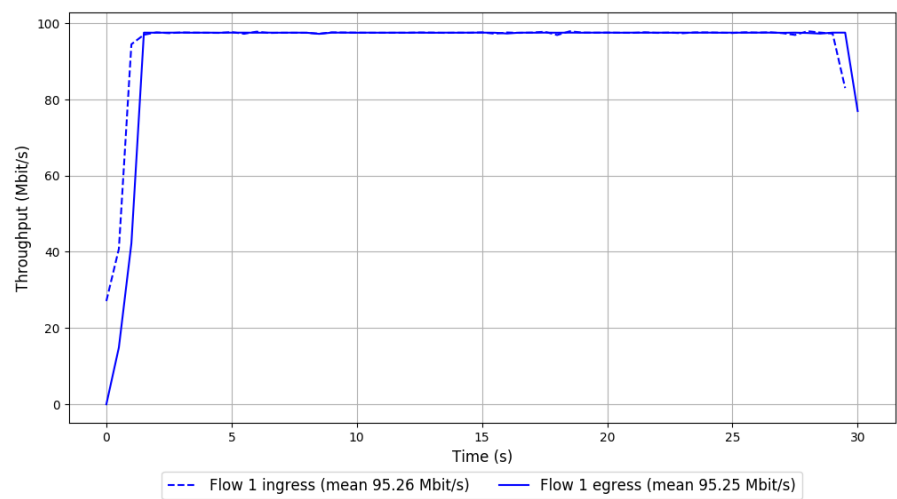


Run 2: Statistics of Indigo-Muses

Start at: 2018-10-26 06:42:50
End at: 2018-10-26 06:43:20
Local clock offset: 1.516 ms
Remote clock offset: -2.401 ms

Below is generated by plot.py at 2018-10-26 08:17:42
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.25 Mbit/s
95th percentile per-packet one-way delay: 37.481 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 95.25 Mbit/s
95th percentile per-packet one-way delay: 37.481 ms
Loss rate: 0.23%

Run 2: Report of Indigo-Muses — Data Link

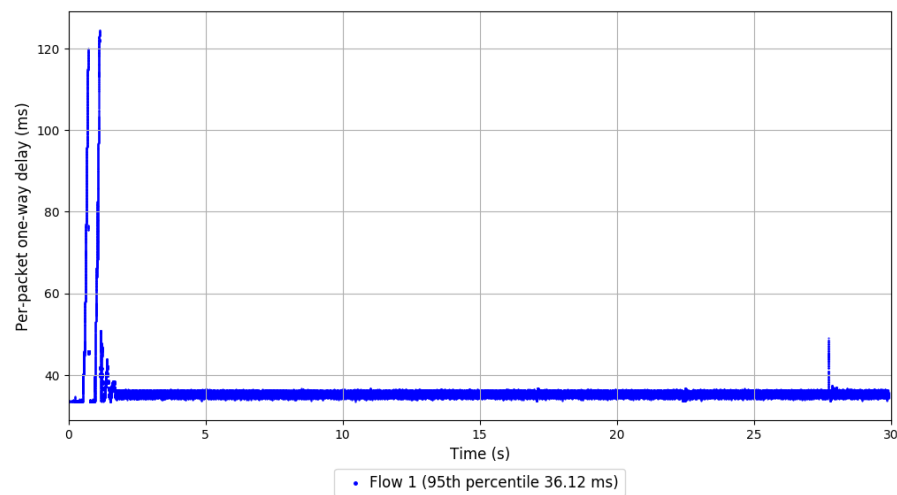
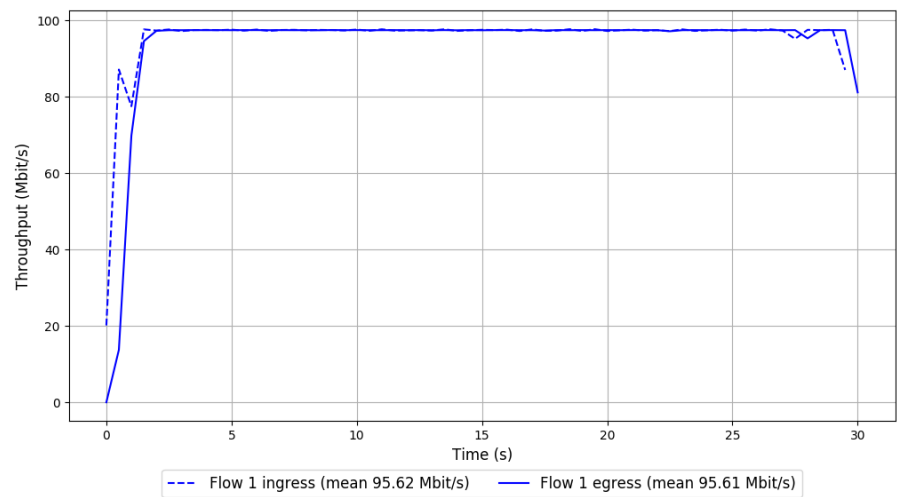


Run 3: Statistics of Indigo-Muses

Start at: 2018-10-26 07:07:10
End at: 2018-10-26 07:07:40
Local clock offset: 1.311 ms
Remote clock offset: -1.856 ms

Below is generated by plot.py at 2018-10-26 08:17:42
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.61 Mbit/s
95th percentile per-packet one-way delay: 36.122 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 95.61 Mbit/s
95th percentile per-packet one-way delay: 36.122 ms
Loss rate: 0.22%

Run 3: Report of Indigo-Muses — Data Link

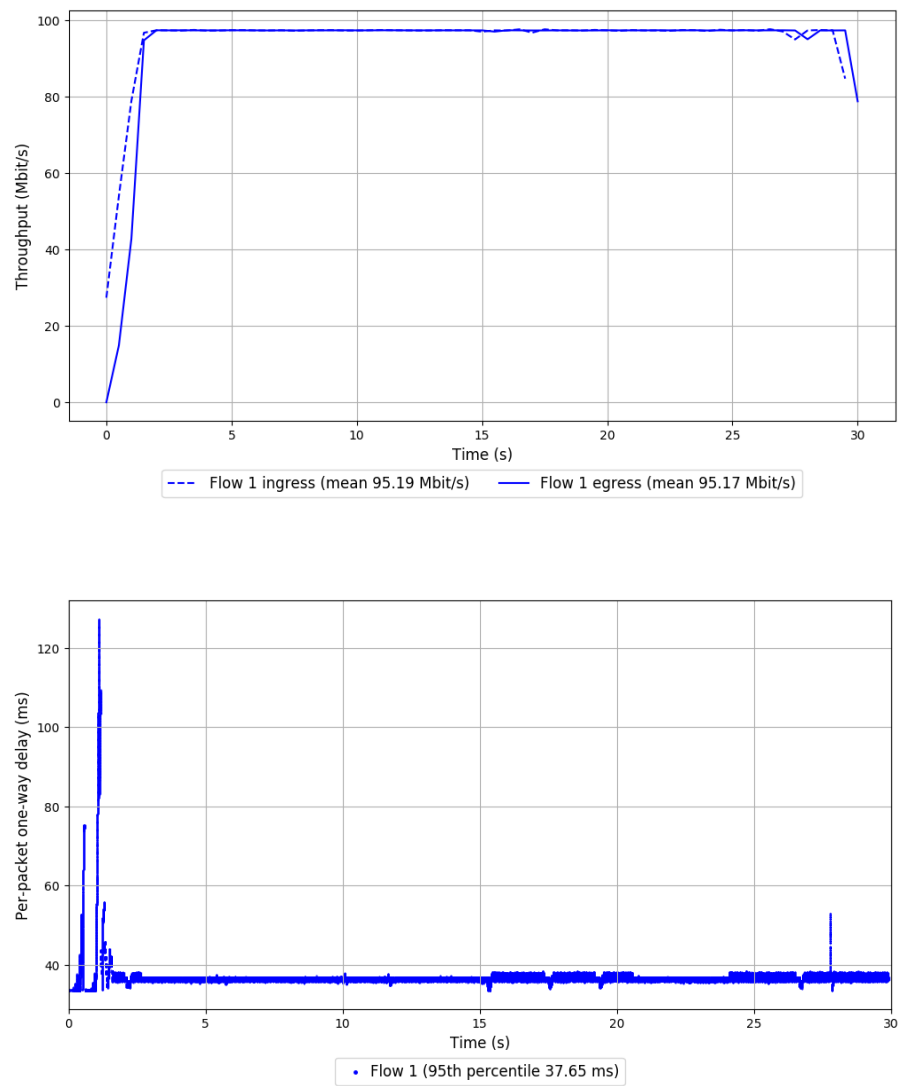


Run 4: Statistics of Indigo-Muses

Start at: 2018-10-26 07:31:03
End at: 2018-10-26 07:31:33
Local clock offset: 0.369 ms
Remote clock offset: -1.614 ms

Below is generated by plot.py at 2018-10-26 08:17:45
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.17 Mbit/s
95th percentile per-packet one-way delay: 37.652 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 95.17 Mbit/s
95th percentile per-packet one-way delay: 37.652 ms
Loss rate: 0.23%

Run 4: Report of Indigo-Muses — Data Link

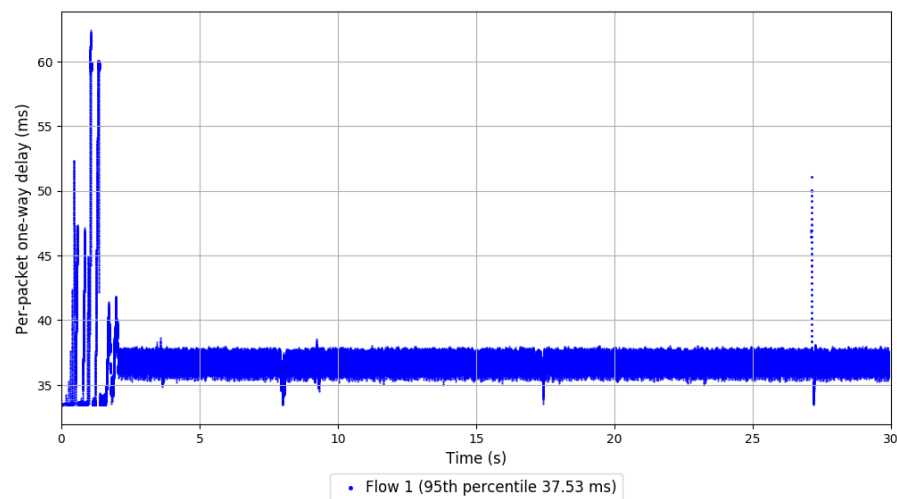
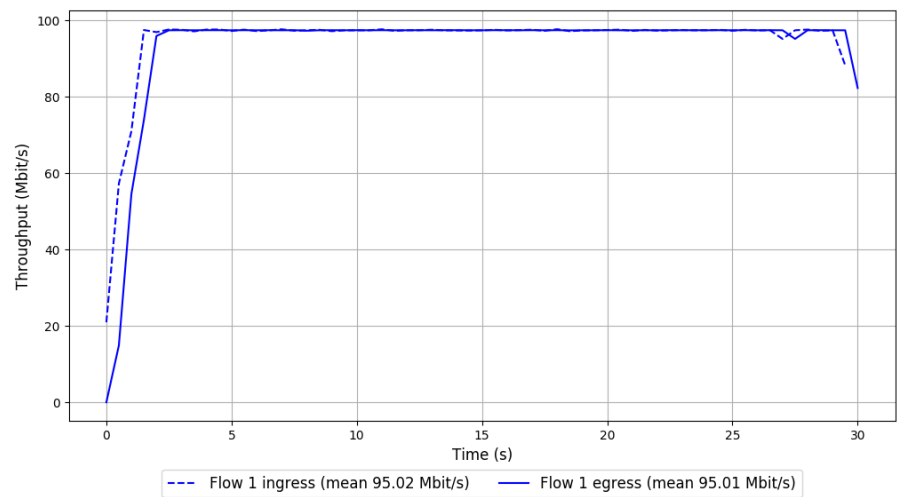


Run 5: Statistics of Indigo-Muses

Start at: 2018-10-26 07:55:30
End at: 2018-10-26 07:56:00
Local clock offset: 0.06 ms
Remote clock offset: -1.091 ms

Below is generated by plot.py at 2018-10-26 08:17:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.01 Mbit/s
95th percentile per-packet one-way delay: 37.533 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 95.01 Mbit/s
95th percentile per-packet one-way delay: 37.533 ms
Loss rate: 0.23%

Run 5: Report of Indigo-Muses — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2018-10-26 06:32:10

End at: 2018-10-26 06:32:40

Local clock offset: 0.793 ms

Remote clock offset: -2.785 ms

Below is generated by plot.py at 2018-10-26 08:17:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.16 Mbit/s

95th percentile per-packet one-way delay: 38.508 ms

Loss rate: 0.23%

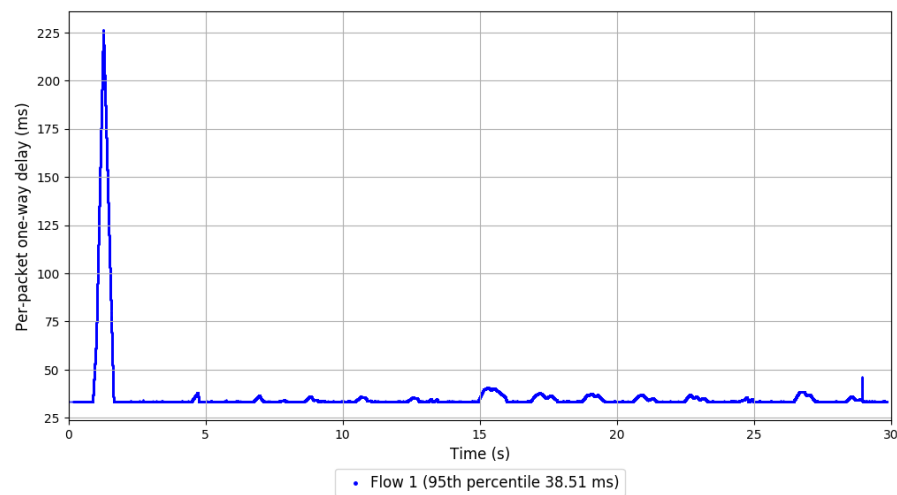
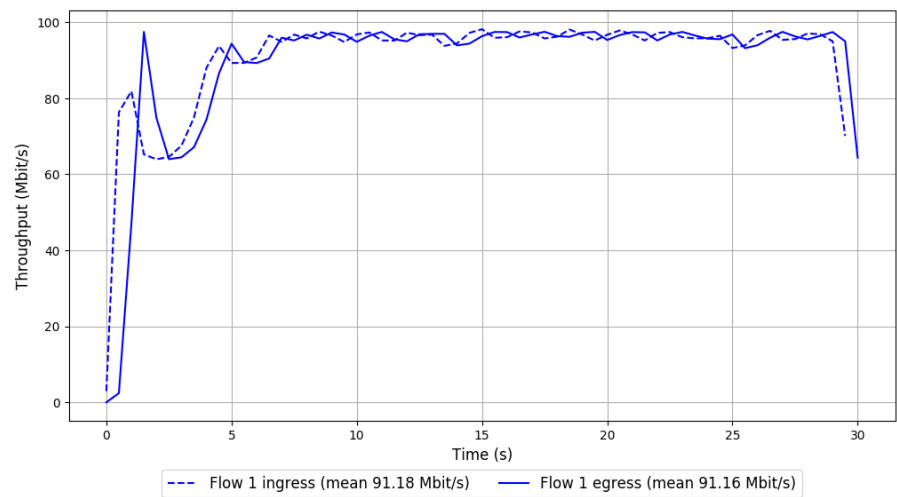
-- Flow 1:

Average throughput: 91.16 Mbit/s

95th percentile per-packet one-way delay: 38.508 ms

Loss rate: 0.23%

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-10-26 06:56:30

End at: 2018-10-26 06:57:00

Local clock offset: 2.035 ms

Remote clock offset: -2.268 ms

Below is generated by plot.py at 2018-10-26 08:17:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.36 Mbit/s

95th percentile per-packet one-way delay: 39.212 ms

Loss rate: 0.23%

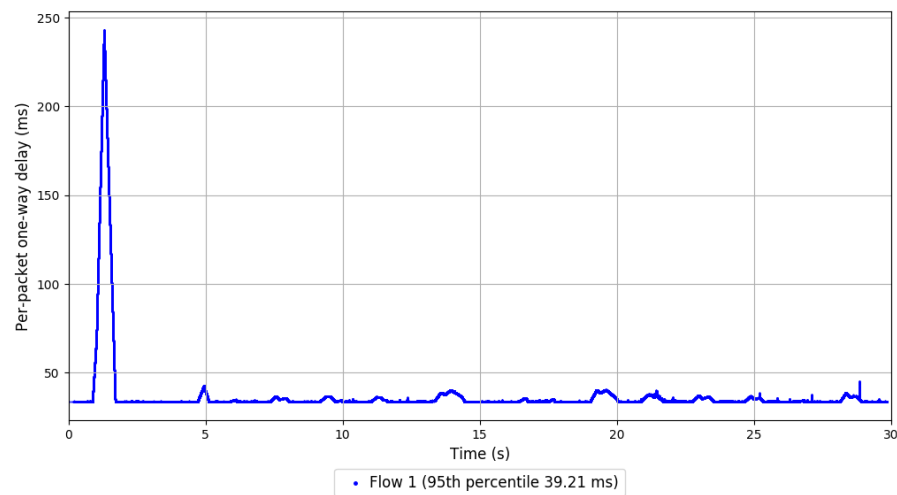
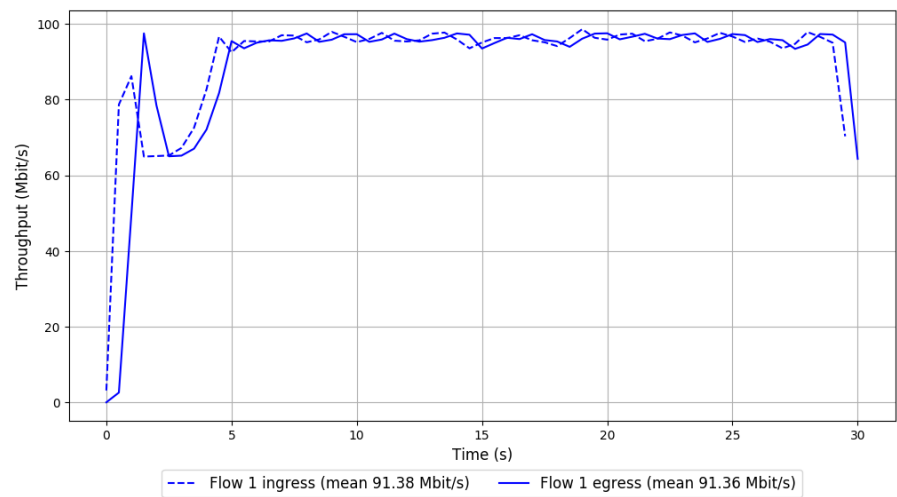
-- Flow 1:

Average throughput: 91.36 Mbit/s

95th percentile per-packet one-way delay: 39.212 ms

Loss rate: 0.23%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-10-26 07:20:33

End at: 2018-10-26 07:21:03

Local clock offset: 0.497 ms

Remote clock offset: -1.66 ms

Below is generated by plot.py at 2018-10-26 08:18:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.96 Mbit/s

95th percentile per-packet one-way delay: 39.105 ms

Loss rate: 0.23%

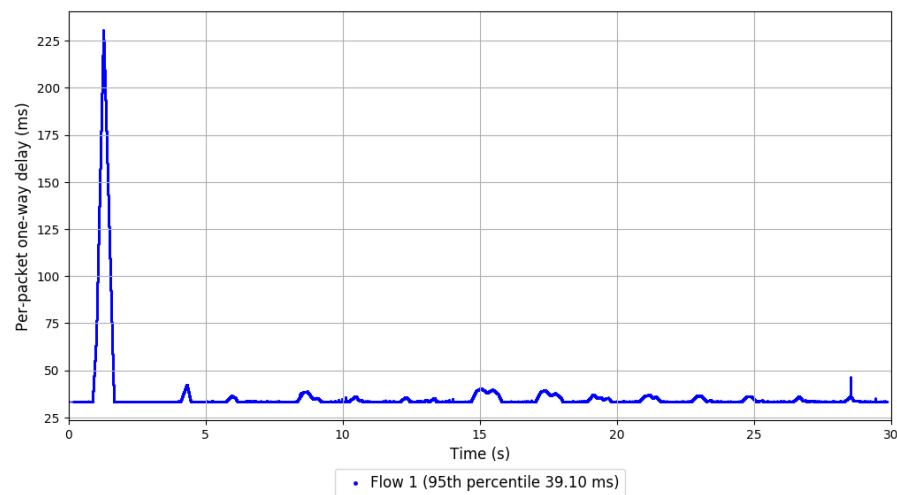
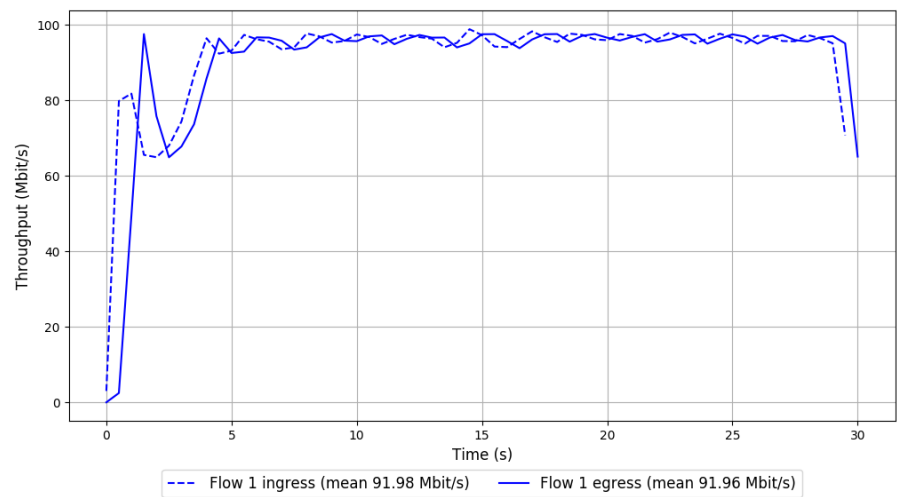
-- Flow 1:

Average throughput: 91.96 Mbit/s

95th percentile per-packet one-way delay: 39.105 ms

Loss rate: 0.23%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-10-26 07:44:49

End at: 2018-10-26 07:45:19

Local clock offset: 0.193 ms

Remote clock offset: -1.282 ms

Below is generated by plot.py at 2018-10-26 08:18:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.98 Mbit/s

95th percentile per-packet one-way delay: 47.723 ms

Loss rate: 0.25%

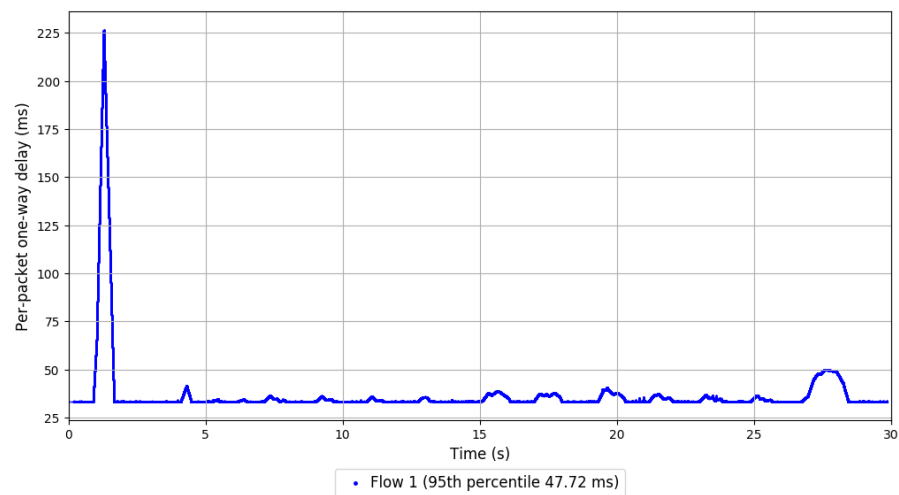
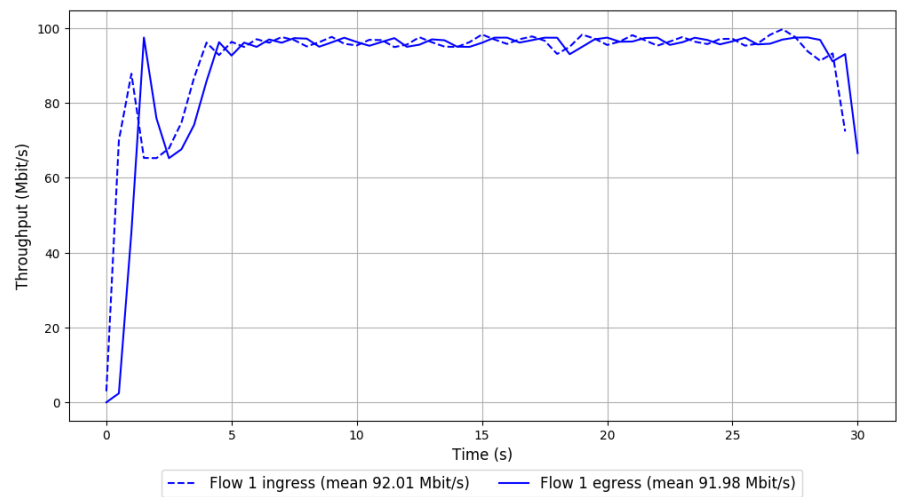
-- Flow 1:

Average throughput: 91.98 Mbit/s

95th percentile per-packet one-way delay: 47.723 ms

Loss rate: 0.25%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-10-26 08:09:03

End at: 2018-10-26 08:09:33

Local clock offset: 0.191 ms

Remote clock offset: -0.967 ms

Below is generated by plot.py at 2018-10-26 08:18:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.74 Mbit/s

95th percentile per-packet one-way delay: 39.936 ms

Loss rate: 0.26%

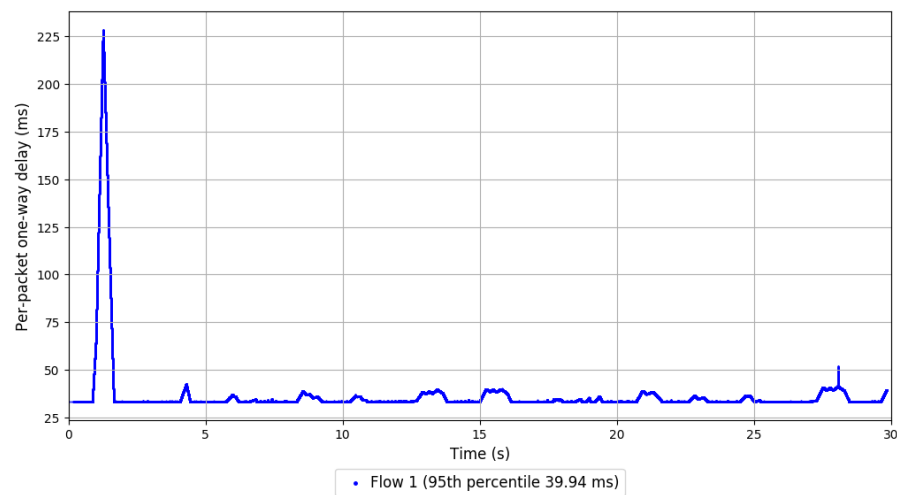
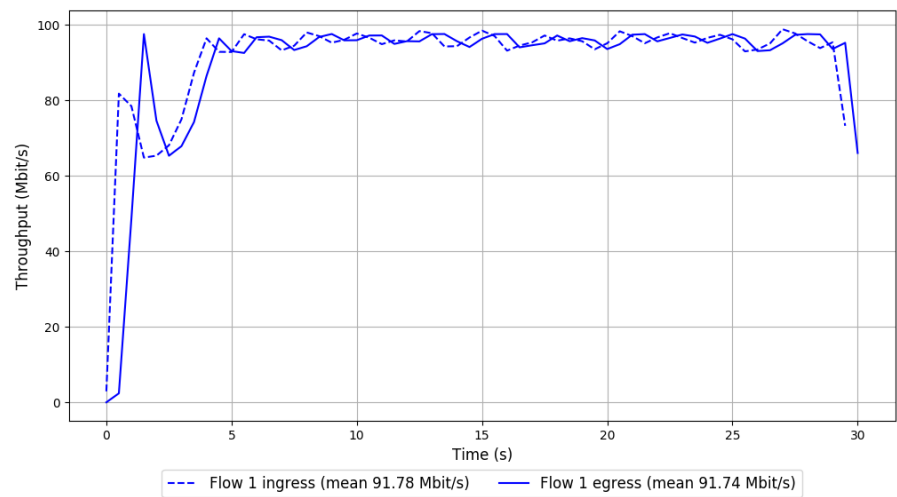
-- Flow 1:

Average throughput: 91.74 Mbit/s

95th percentile per-packet one-way delay: 39.936 ms

Loss rate: 0.26%

Run 5: Report of PCC-Allegro — Data Link

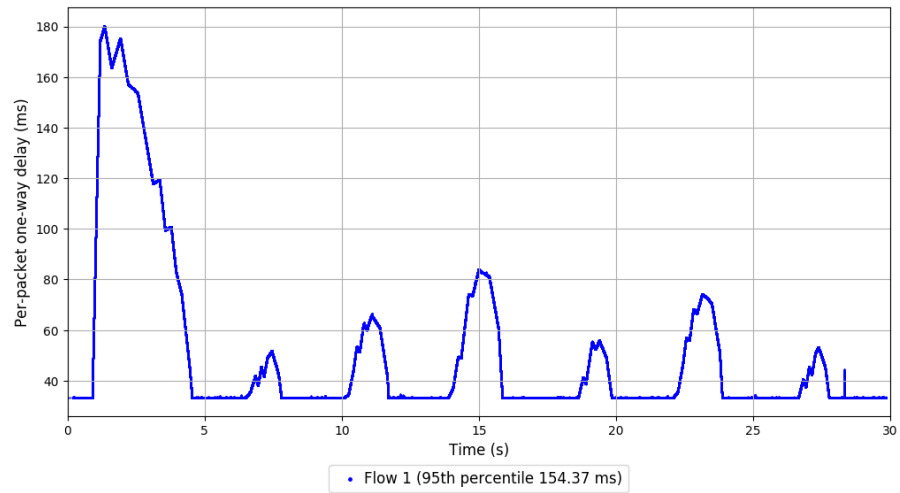
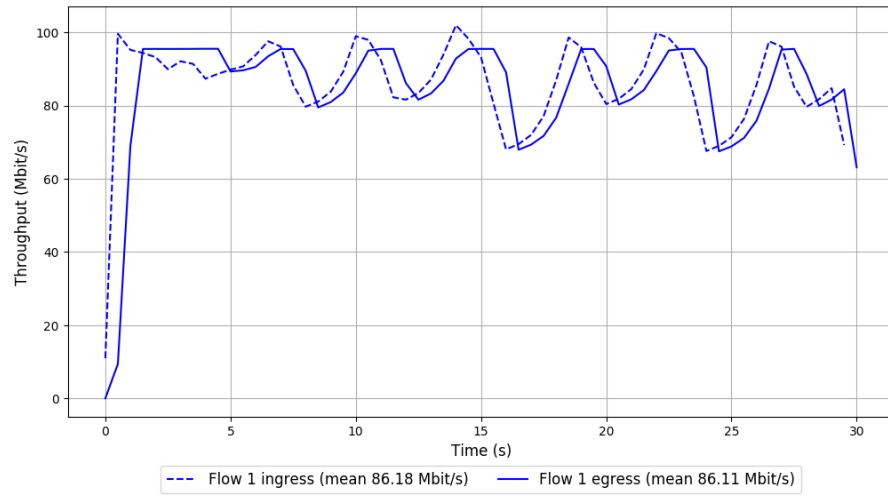


```
Run 1: Statistics of PCC-Expr

Start at: 2018-10-26 06:28:03
End at: 2018-10-26 06:28:33
Local clock offset: 0.722 ms
Remote clock offset: -2.616 ms

# Below is generated by plot.py at 2018-10-26 08:19:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.11 Mbit/s
95th percentile per-packet one-way delay: 154.368 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 86.11 Mbit/s
95th percentile per-packet one-way delay: 154.368 ms
Loss rate: 0.30%
```

Run 1: Report of PCC-Expr — Data Link

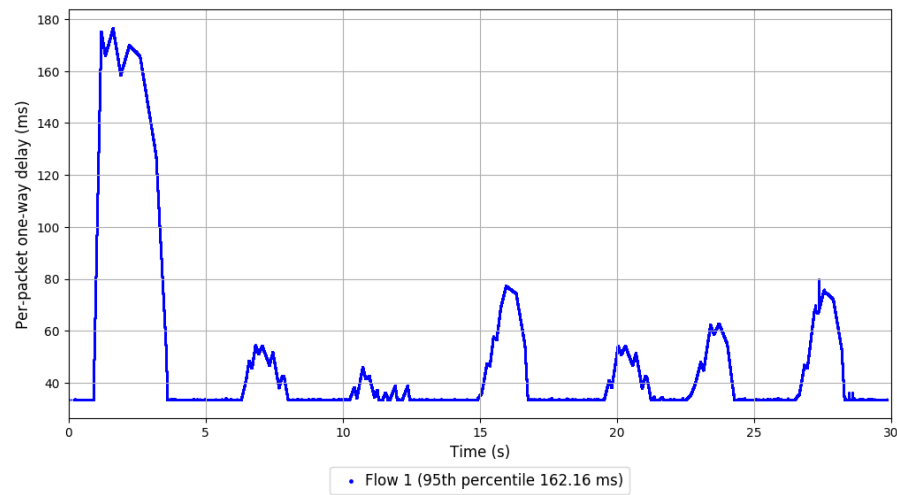
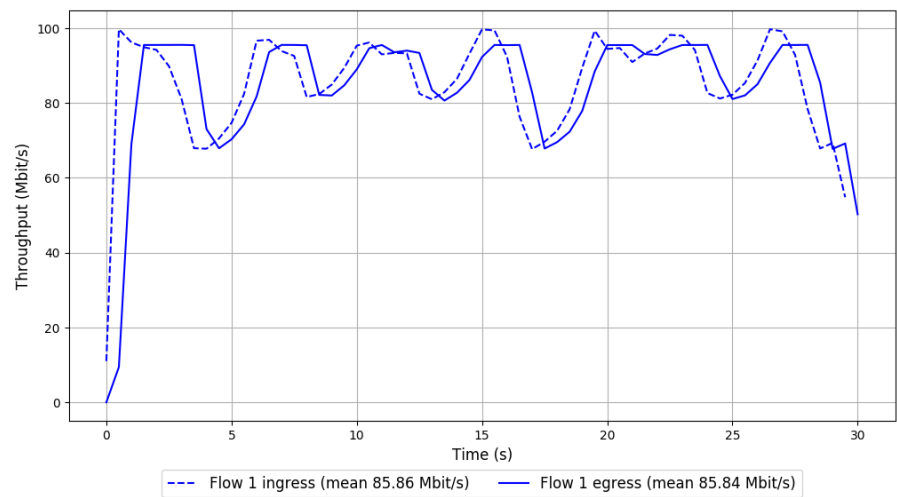


Run 2: Statistics of PCC-Expr

Start at: 2018-10-26 06:52:18
End at: 2018-10-26 06:52:48
Local clock offset: 1.91 ms
Remote clock offset: -2.319 ms

Below is generated by plot.py at 2018-10-26 08:19:40
Datalink statistics
-- Total of 1 flow:
Average throughput: 85.84 Mbit/s
95th percentile per-packet one-way delay: 162.159 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 85.84 Mbit/s
95th percentile per-packet one-way delay: 162.159 ms
Loss rate: 0.24%

Run 2: Report of PCC-Expr — Data Link

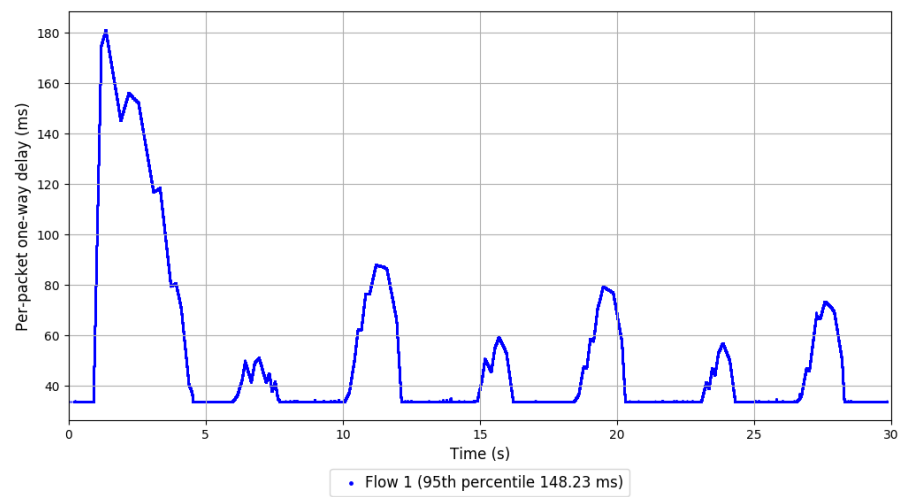
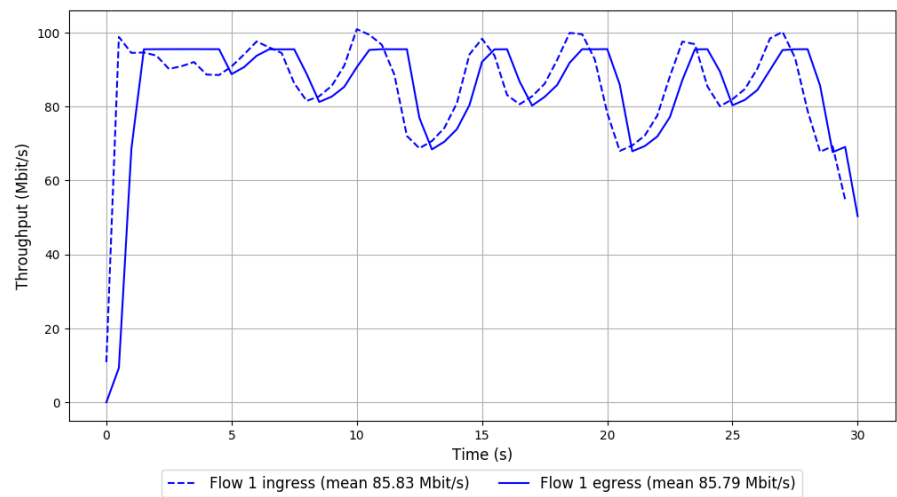


Run 3: Statistics of PCC-Expr

Start at: 2018-10-26 07:16:30
End at: 2018-10-26 07:17:00
Local clock offset: 0.622 ms
Remote clock offset: -1.951 ms

Below is generated by plot.py at 2018-10-26 08:19:47
Datalink statistics
-- Total of 1 flow:
Average throughput: 85.79 Mbit/s
95th percentile per-packet one-way delay: 148.230 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 85.79 Mbit/s
95th percentile per-packet one-way delay: 148.230 ms
Loss rate: 0.26%

Run 3: Report of PCC-Expr — Data Link

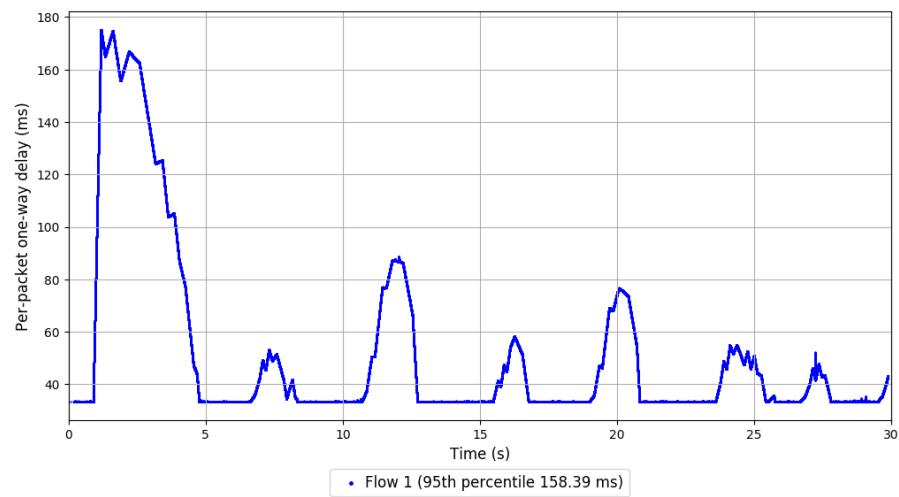
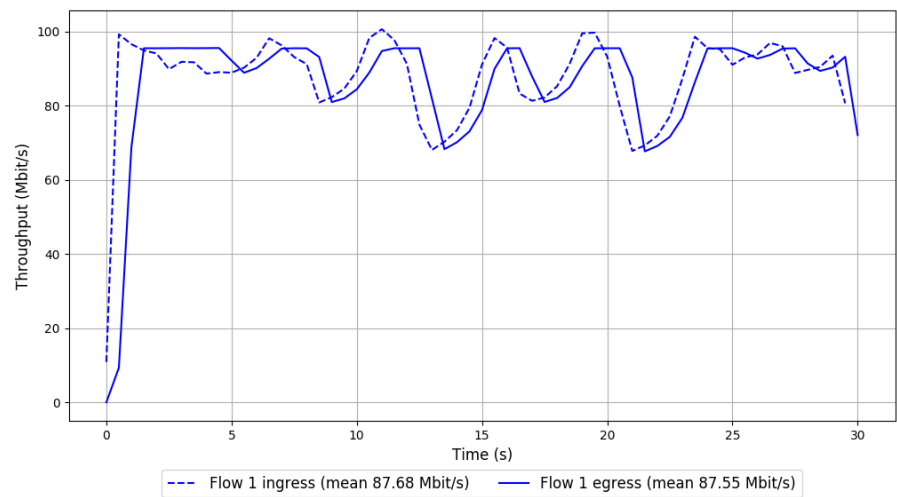


Run 4: Statistics of PCC-Expr

Start at: 2018-10-26 07:40:35
End at: 2018-10-26 07:41:05
Local clock offset: 0.236 ms
Remote clock offset: -1.365 ms

Below is generated by plot.py at 2018-10-26 08:19:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 87.55 Mbit/s
95th percentile per-packet one-way delay: 158.391 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 87.55 Mbit/s
95th percentile per-packet one-way delay: 158.391 ms
Loss rate: 0.36%

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

Start at: 2018-10-26 08:04:58

End at: 2018-10-26 08:05:28

Local clock offset: 0.116 ms

Remote clock offset: -1.248 ms

Below is generated by plot.py at 2018-10-26 08:19:55

Datalink statistics

-- Total of 1 flow:

Average throughput: 86.53 Mbit/s

95th percentile per-packet one-way delay: 145.114 ms

Loss rate: 0.32%

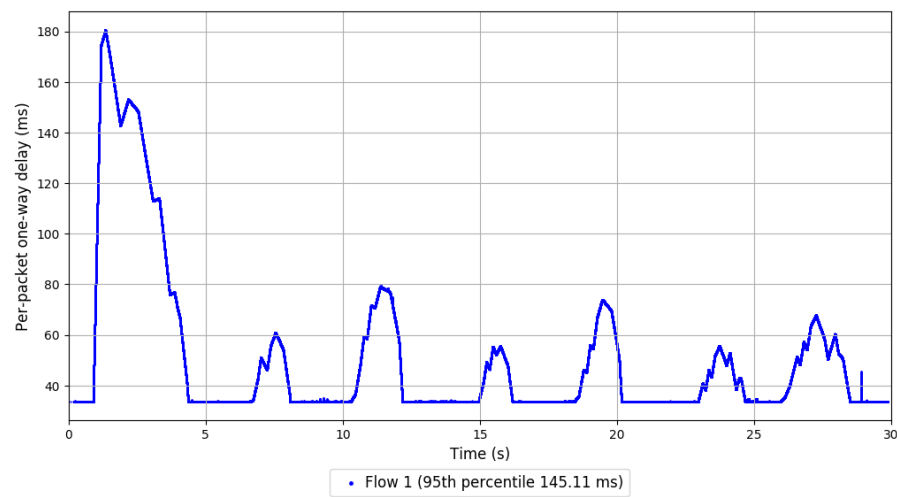
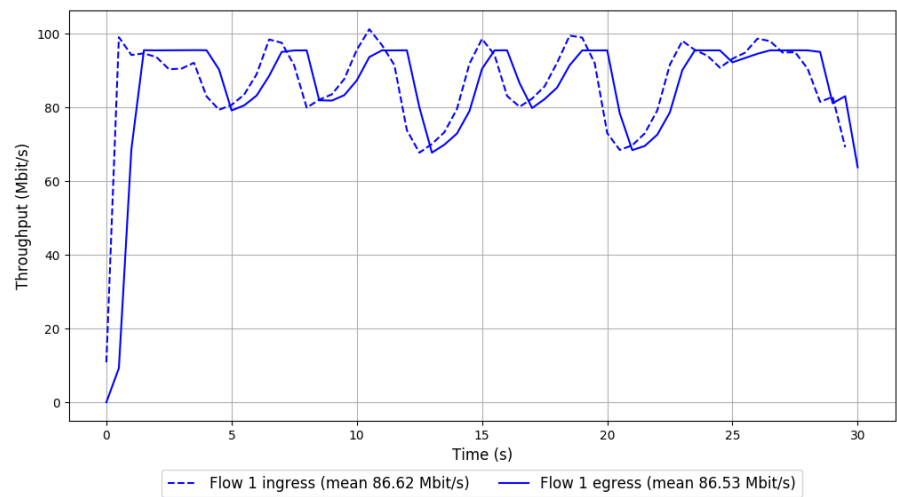
-- Flow 1:

Average throughput: 86.53 Mbit/s

95th percentile per-packet one-way delay: 145.114 ms

Loss rate: 0.32%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2018-10-26 06:09:14

End at: 2018-10-26 06:09:44

Local clock offset: 0.671 ms

Remote clock offset: -2.894 ms

Below is generated by plot.py at 2018-10-26 08:19:55

Datalink statistics

-- Total of 1 flow:

Average throughput: 76.94 Mbit/s

95th percentile per-packet one-way delay: 50.281 ms

Loss rate: 0.31%

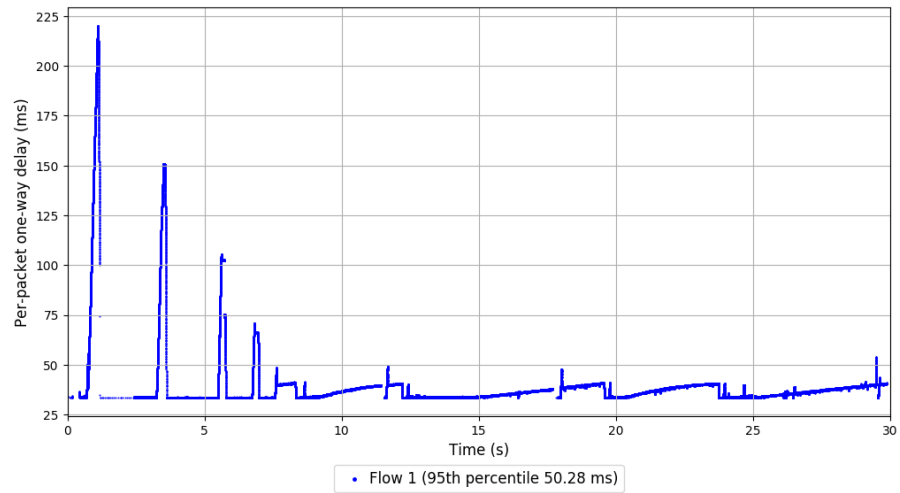
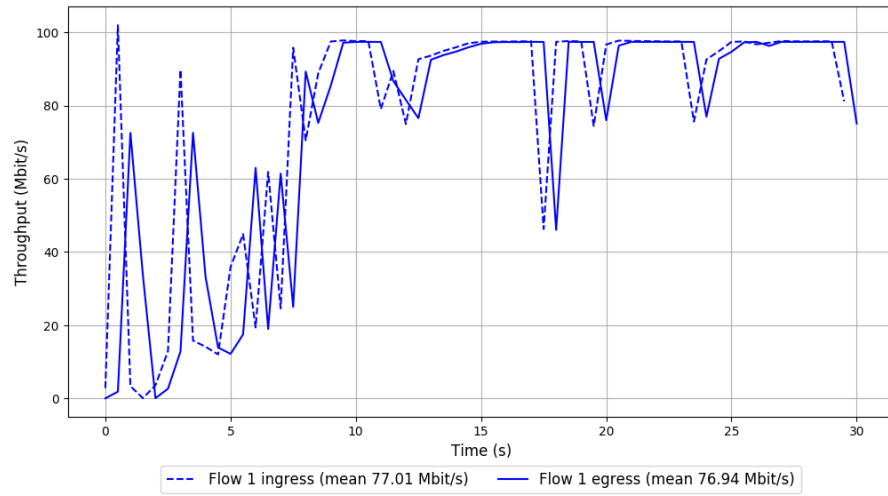
-- Flow 1:

Average throughput: 76.94 Mbit/s

95th percentile per-packet one-way delay: 50.281 ms

Loss rate: 0.31%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-10-26 06:33:29

End at: 2018-10-26 06:33:59

Local clock offset: 0.926 ms

Remote clock offset: -2.558 ms

Below is generated by plot.py at 2018-10-26 08:19:55

Datalink statistics

-- Total of 1 flow:

Average throughput: 76.50 Mbit/s

95th percentile per-packet one-way delay: 50.446 ms

Loss rate: 0.28%

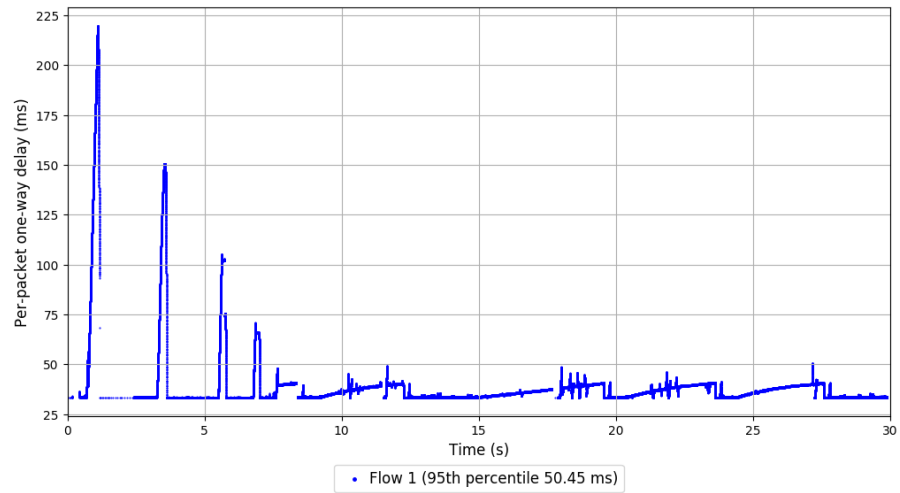
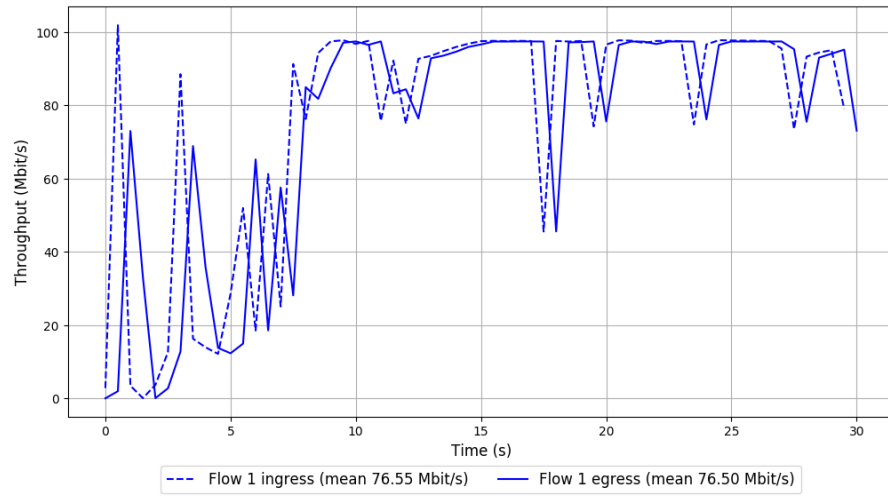
-- Flow 1:

Average throughput: 76.50 Mbit/s

95th percentile per-packet one-way delay: 50.446 ms

Loss rate: 0.28%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-10-26 06:57:52

End at: 2018-10-26 06:58:22

Local clock offset: 2.09 ms

Remote clock offset: -2.029 ms

Below is generated by plot.py at 2018-10-26 08:20:03

Datalink statistics

-- Total of 1 flow:

Average throughput: 84.72 Mbit/s

95th percentile per-packet one-way delay: 40.584 ms

Loss rate: 0.26%

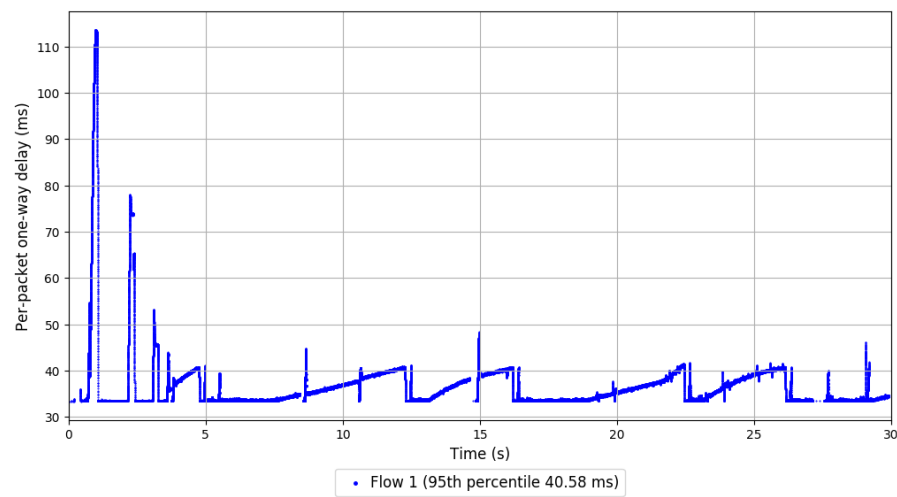
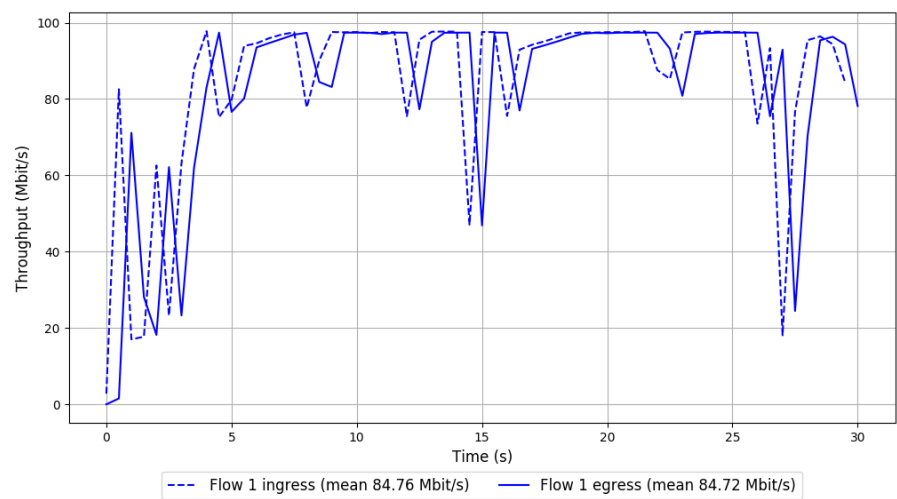
-- Flow 1:

Average throughput: 84.72 Mbit/s

95th percentile per-packet one-way delay: 40.584 ms

Loss rate: 0.26%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-10-26 07:21:51

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

Local clock offset: 0.489 ms

Remote clock offset: -1.612 ms

Below is generated by plot.py at 2018-10-26 08:20:16

Datalink statistics

-- Total of 1 flow:

Average throughput: 84.78 Mbit/s

95th percentile per-packet one-way delay: 40.477 ms

Loss rate: 0.28%

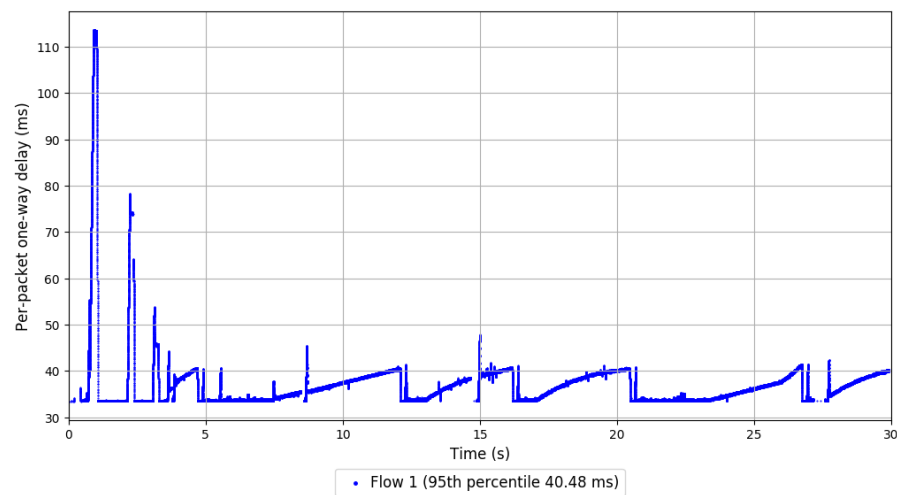
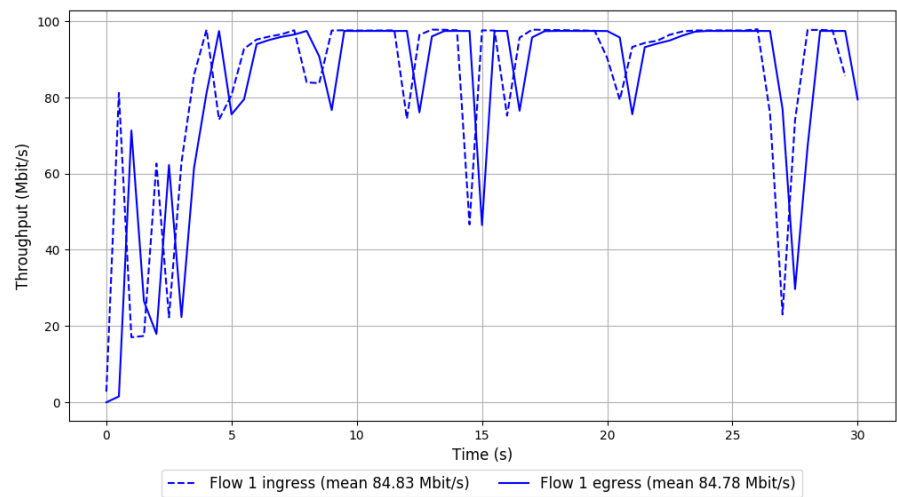
-- Flow 1:

Average throughput: 84.78 Mbit/s

95th percentile per-packet one-way delay: 40.477 ms

Loss rate: 0.28%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-10-26 07:46:09

End at: 2018-10-26 07:46:39

Local clock offset: 0.166 ms

Remote clock offset: -1.221 ms

Below is generated by plot.py at 2018-10-26 08:20:33

Datalink statistics

-- Total of 1 flow:

Average throughput: 76.52 Mbit/s

95th percentile per-packet one-way delay: 49.996 ms

Loss rate: 0.28%

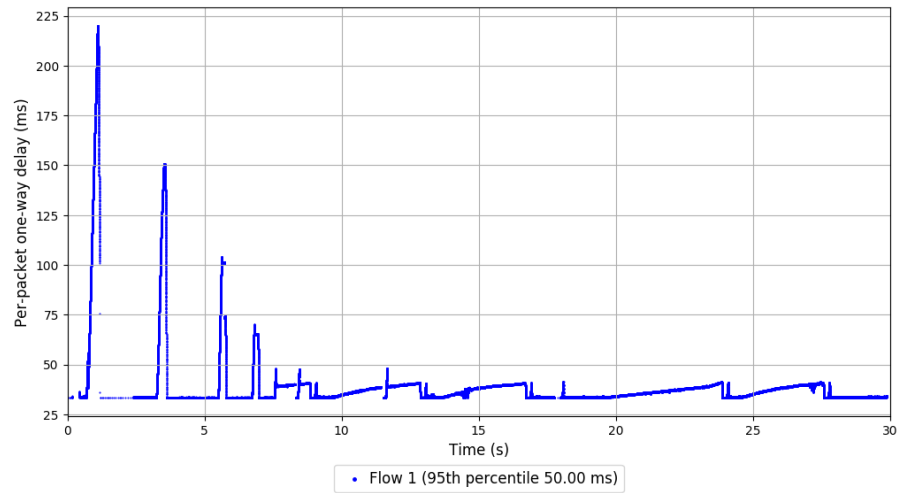
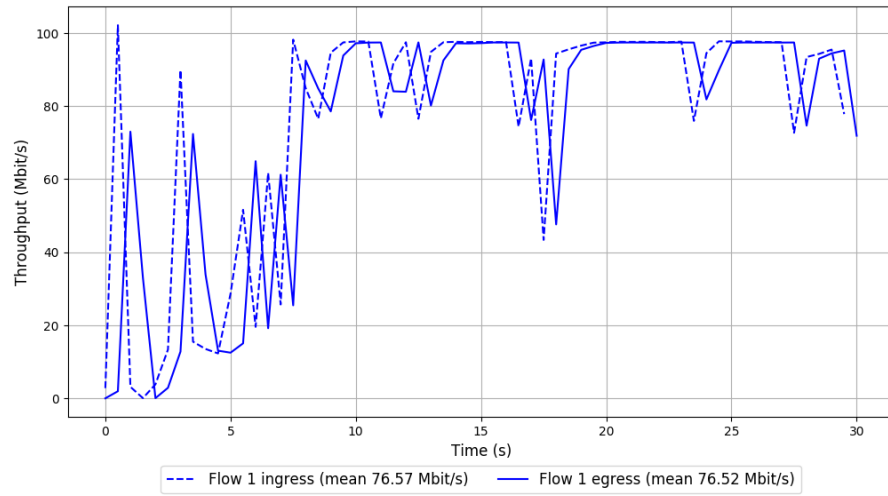
-- Flow 1:

Average throughput: 76.52 Mbit/s

95th percentile per-packet one-way delay: 49.996 ms

Loss rate: 0.28%

Run 5: Report of QUIC Cubic — Data Link

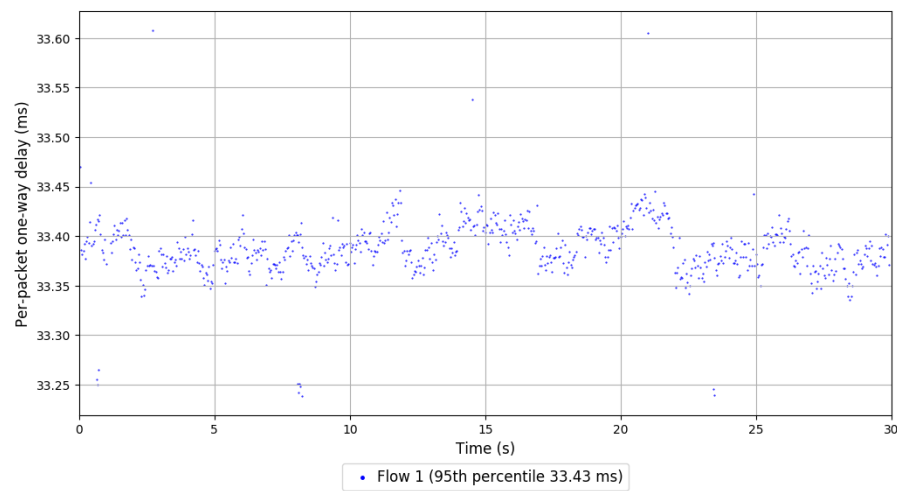
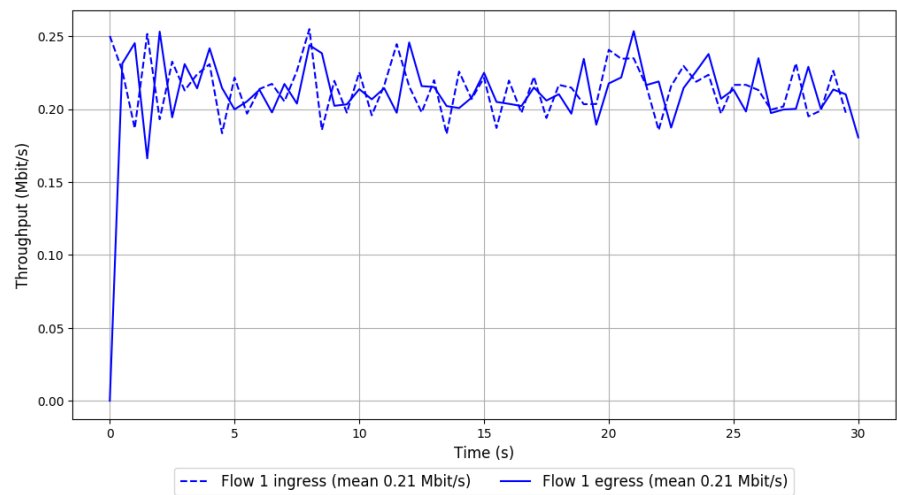


```
Run 1: Statistics of SCReAM

Start at: 2018-10-26 06:15:50
End at: 2018-10-26 06:16:20
Local clock offset: 0.645 ms
Remote clock offset: -2.736 ms

# Below is generated by plot.py at 2018-10-26 08:20:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.426 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.426 ms
Loss rate: 0.26%
```

Run 1: Report of SReAM — Data Link

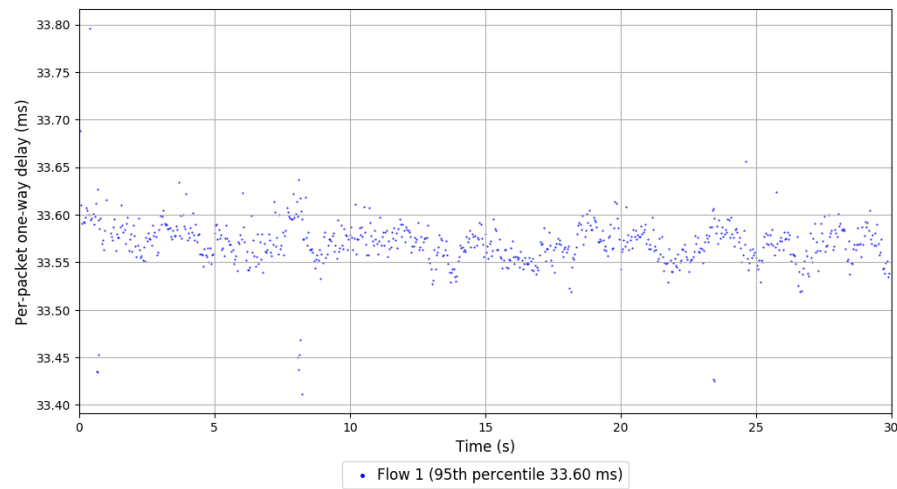
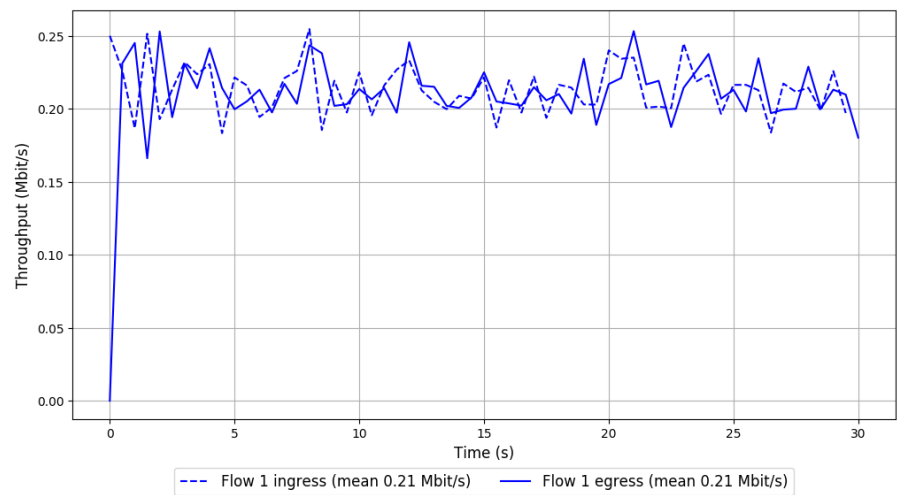


Run 2: Statistics of SCReAM

Start at: 2018-10-26 06:40:05
End at: 2018-10-26 06:40:35
Local clock offset: 1.368 ms
Remote clock offset: -2.536 ms

Below is generated by plot.py at 2018-10-26 08:20:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.601 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.601 ms
Loss rate: 0.26%

Run 2: Report of SReAM — Data Link

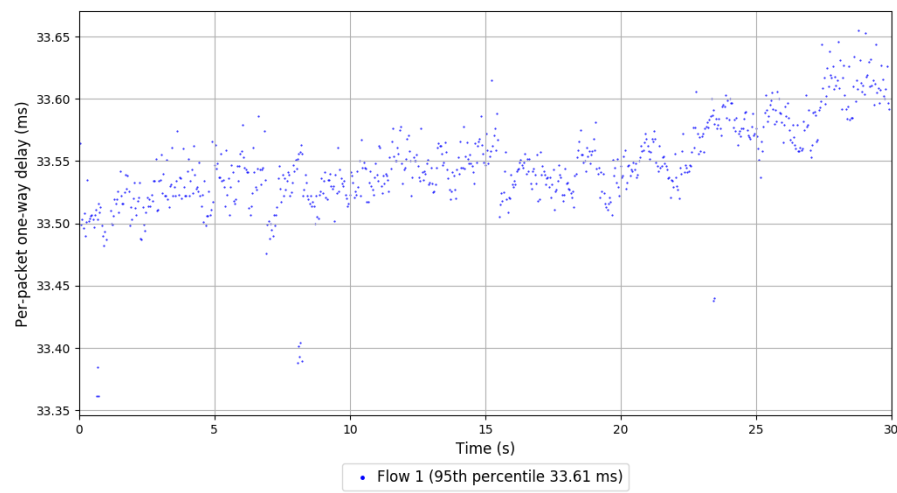
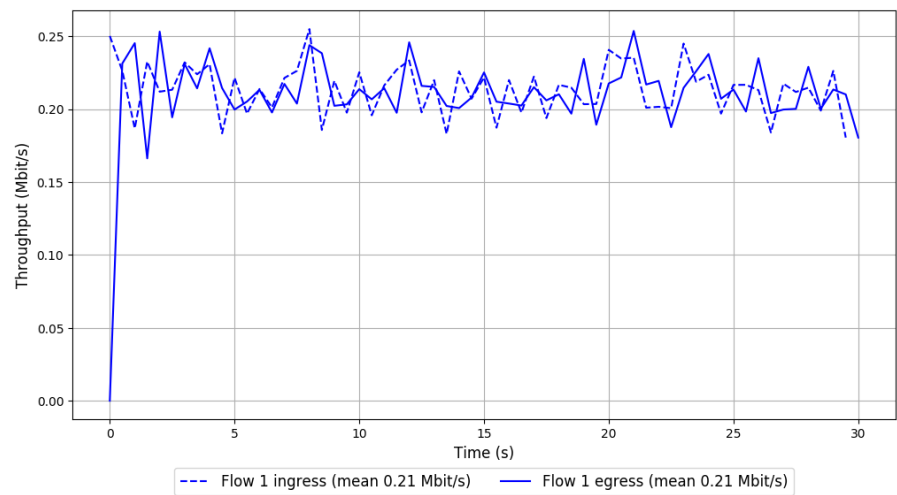


Run 3: Statistics of SCReAM

Start at: 2018-10-26 07:04:33
End at: 2018-10-26 07:05:03
Local clock offset: 1.614 ms
Remote clock offset: -1.845 ms

Below is generated by plot.py at 2018-10-26 08:20:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.609 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.609 ms
Loss rate: 0.13%

Run 3: Report of SReAM — Data Link

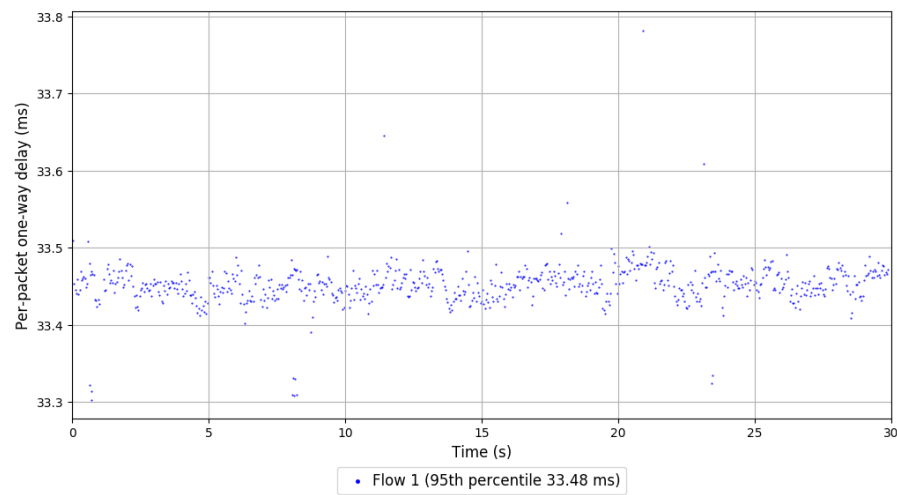
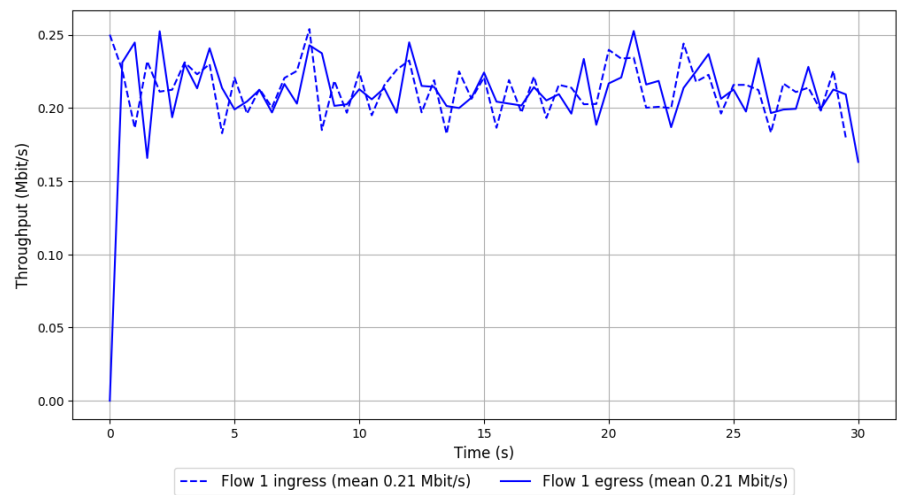


Run 4: Statistics of SCReAM

Start at: 2018-10-26 07:28:26
End at: 2018-10-26 07:28:56
Local clock offset: 0.389 ms
Remote clock offset: -1.511 ms

Below is generated by plot.py at 2018-10-26 08:20:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.481 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.481 ms
Loss rate: 0.26%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2018-10-26 07:52:51

End at: 2018-10-26 07:53:21

Local clock offset: 0.098 ms

Remote clock offset: -1.09 ms

Below is generated by plot.py at 2018-10-26 08:20:33

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 33.569 ms

Loss rate: 0.26%

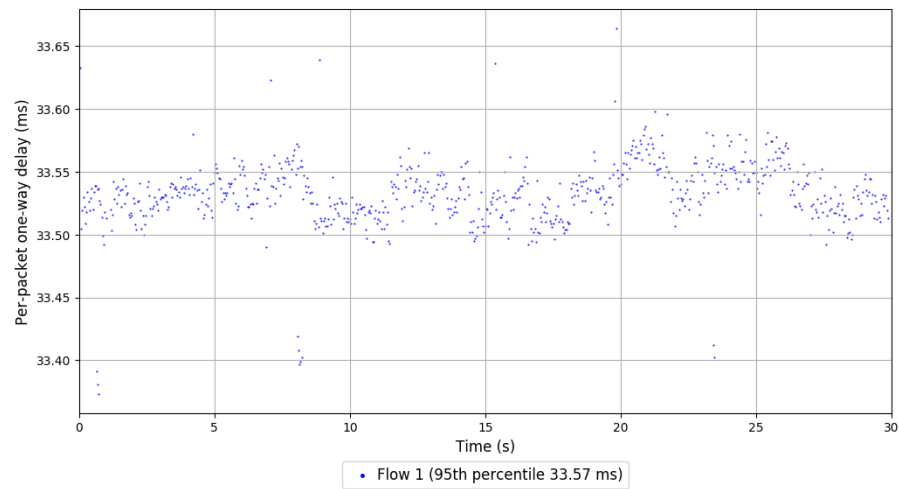
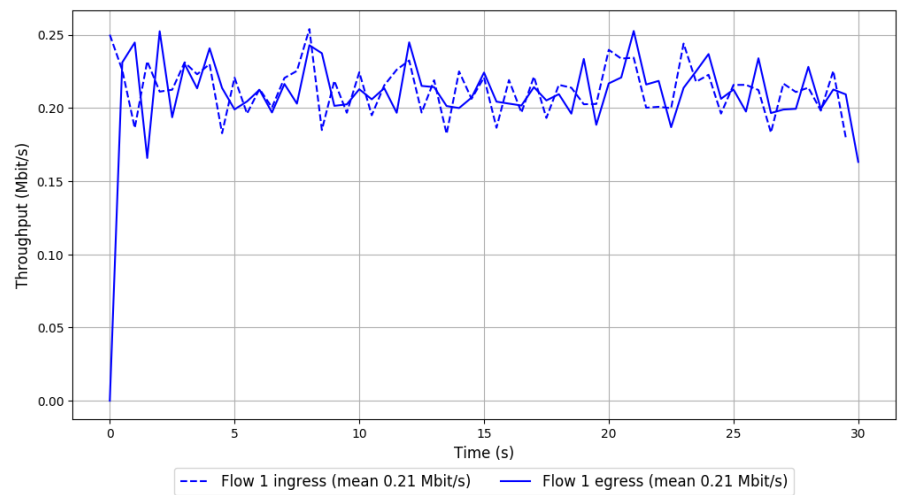
-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 33.569 ms

Loss rate: 0.26%

Run 5: Report of SReAM — Data Link

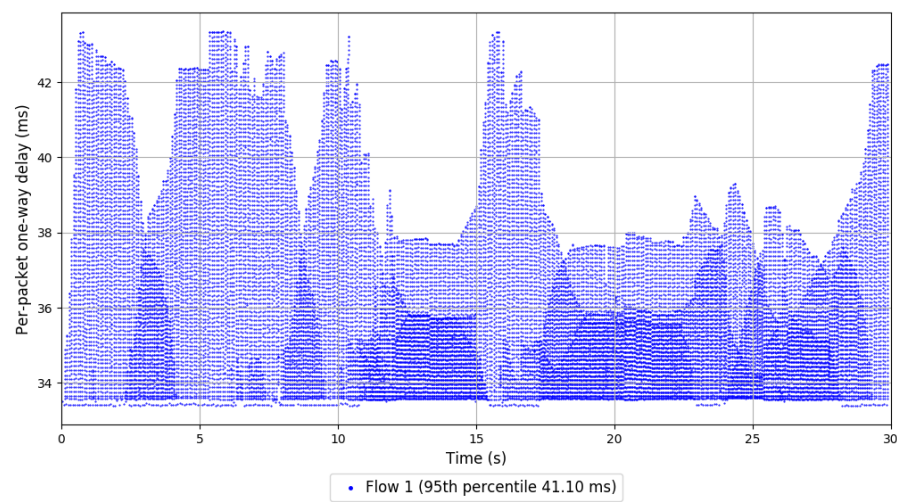
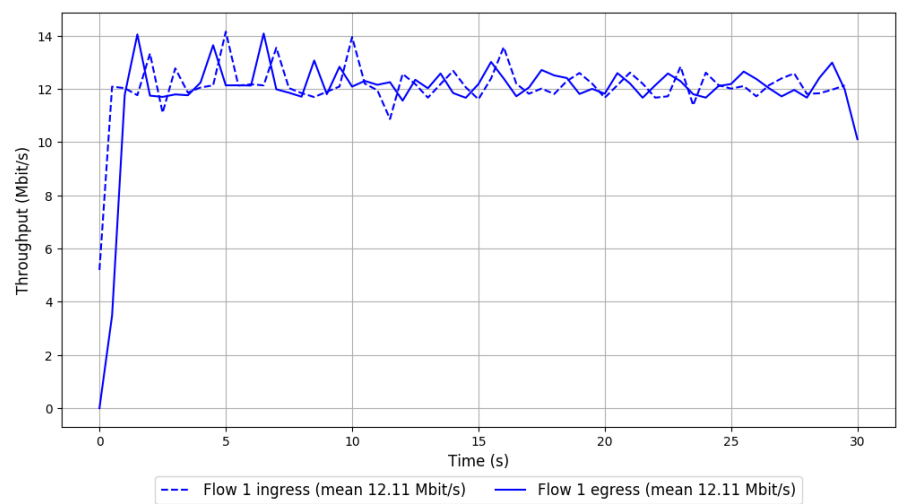


Run 1: Statistics of Sprout

Start at: 2018-10-26 06:11:54
End at: 2018-10-26 06:12:24
Local clock offset: 0.642 ms
Remote clock offset: -2.926 ms

Below is generated by plot.py at 2018-10-26 08:20:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.11 Mbit/s
95th percentile per-packet one-way delay: 41.100 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 12.11 Mbit/s
95th percentile per-packet one-way delay: 41.100 ms
Loss rate: 0.28%

Run 1: Report of Sprout — Data Link

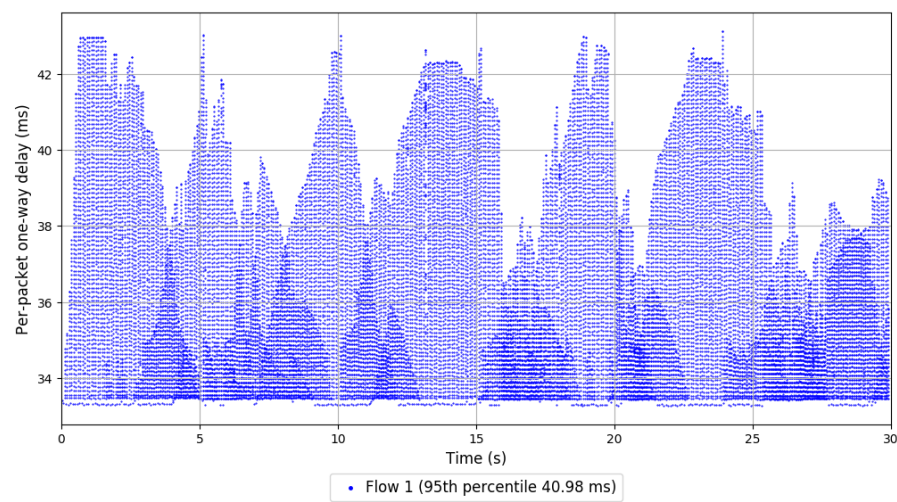
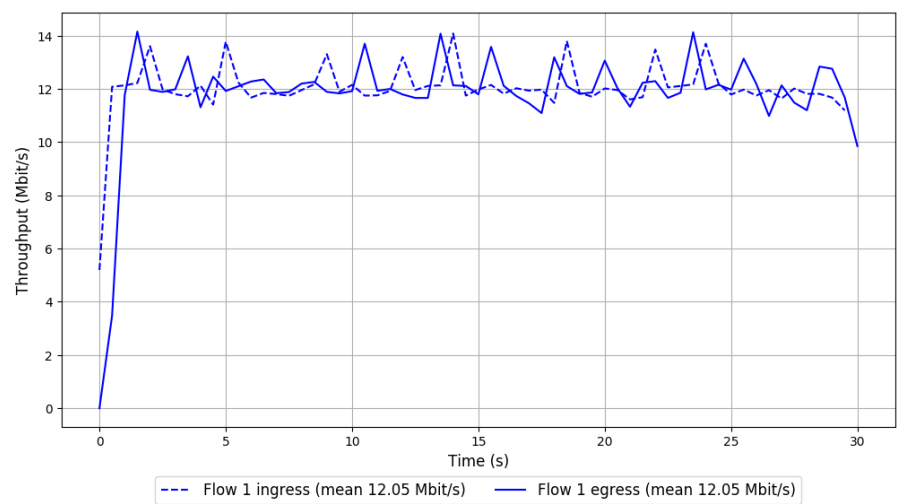


Run 2: Statistics of Sprout

Start at: 2018-10-26 06:36:09
End at: 2018-10-26 06:36:39
Local clock offset: 1.125 ms
Remote clock offset: -2.473 ms

Below is generated by plot.py at 2018-10-26 08:20:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.05 Mbit/s
95th percentile per-packet one-way delay: 40.984 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 12.05 Mbit/s
95th percentile per-packet one-way delay: 40.984 ms
Loss rate: 0.19%

Run 2: Report of Sprout — Data Link

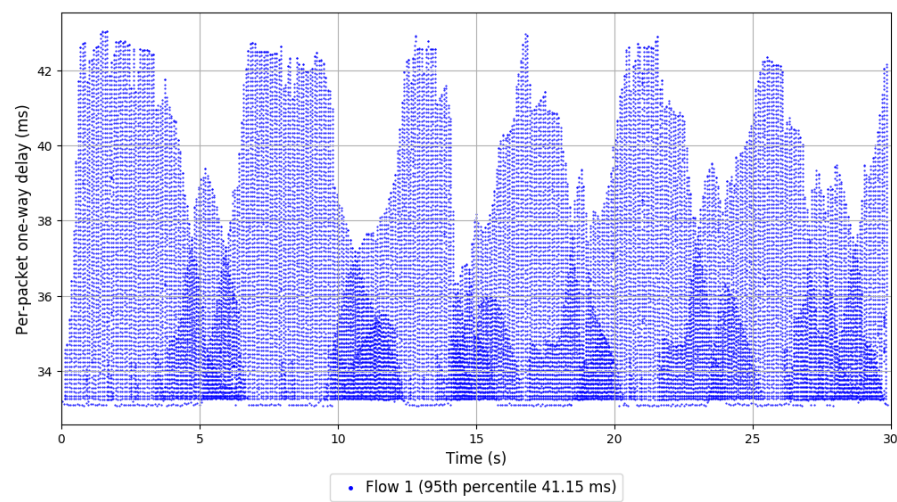
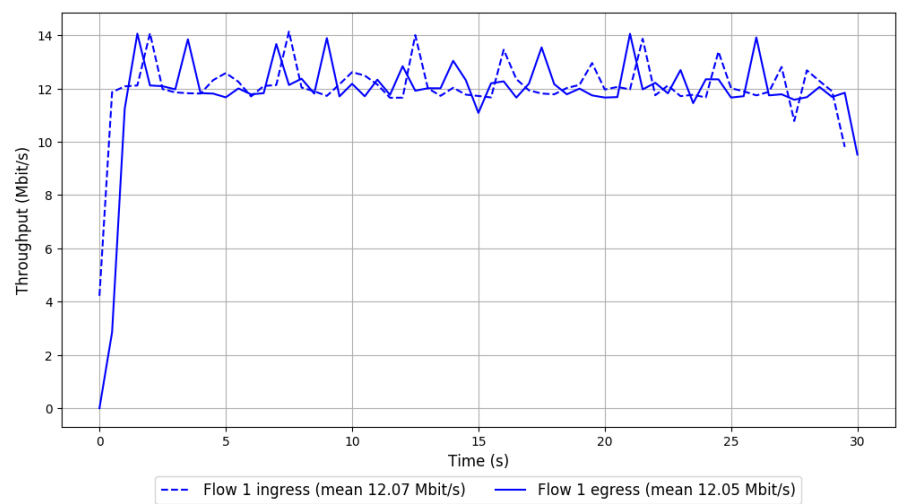


Run 3: Statistics of Sprout

Start at: 2018-10-26 07:00:35
End at: 2018-10-26 07:01:05
Local clock offset: 2.132 ms
Remote clock offset: -1.768 ms

Below is generated by plot.py at 2018-10-26 08:20:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.05 Mbit/s
95th percentile per-packet one-way delay: 41.147 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 12.05 Mbit/s
95th percentile per-packet one-way delay: 41.147 ms
Loss rate: 0.28%

Run 3: Report of Sprout — Data Link

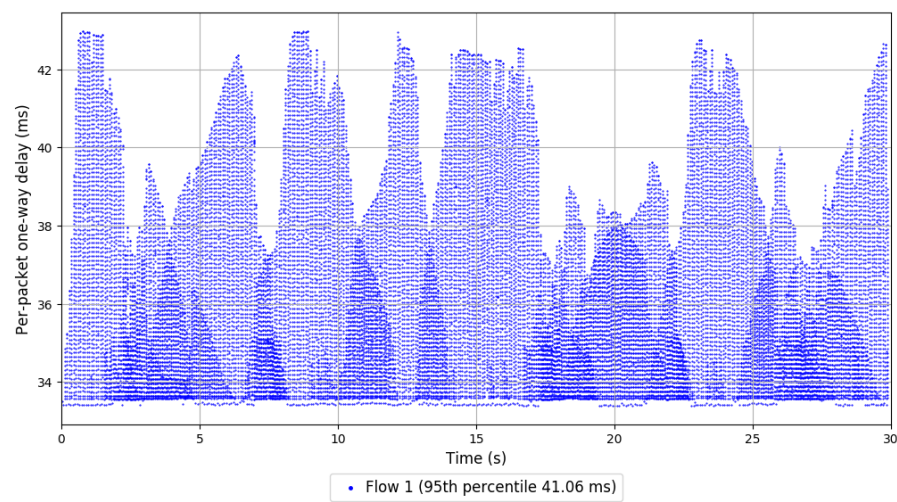
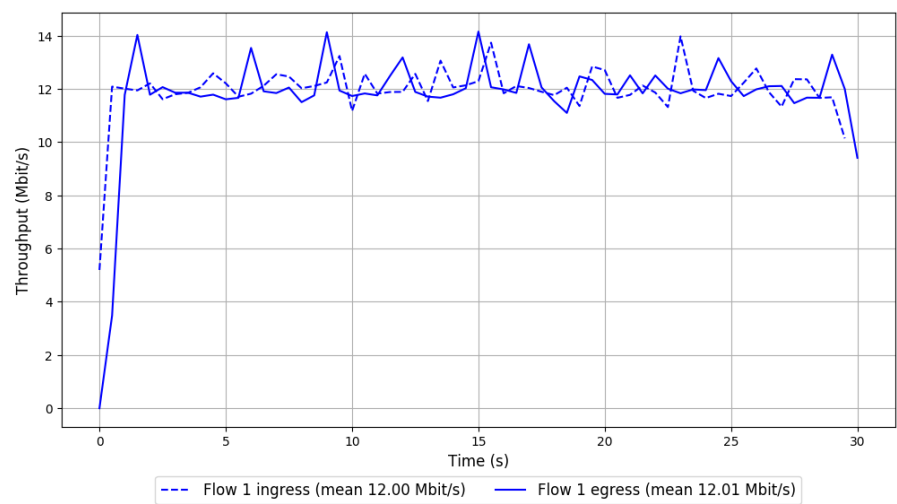


Run 4: Statistics of Sprout

Start at: 2018-10-26 07:24:31
End at: 2018-10-26 07:25:01
Local clock offset: 0.42 ms
Remote clock offset: -1.608 ms

Below is generated by plot.py at 2018-10-26 08:20:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.01 Mbit/s
95th percentile per-packet one-way delay: 41.064 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 12.01 Mbit/s
95th percentile per-packet one-way delay: 41.064 ms
Loss rate: 0.10%

Run 4: Report of Sprout — Data Link

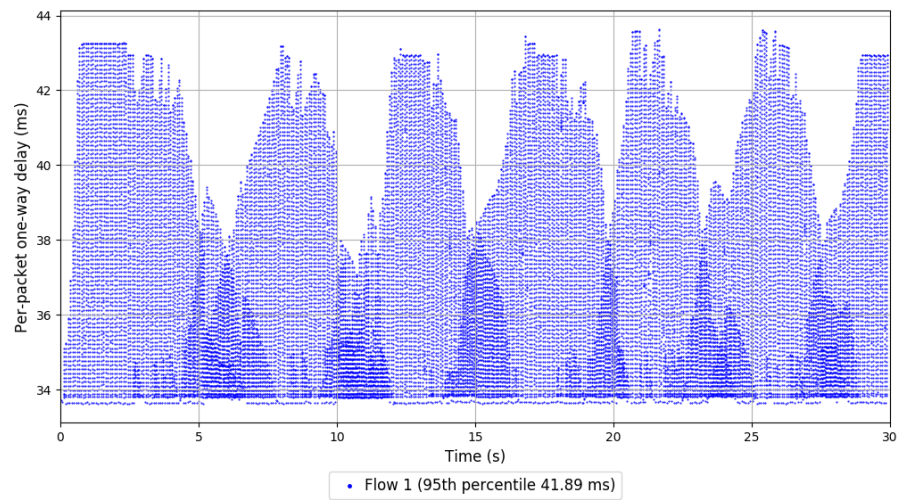
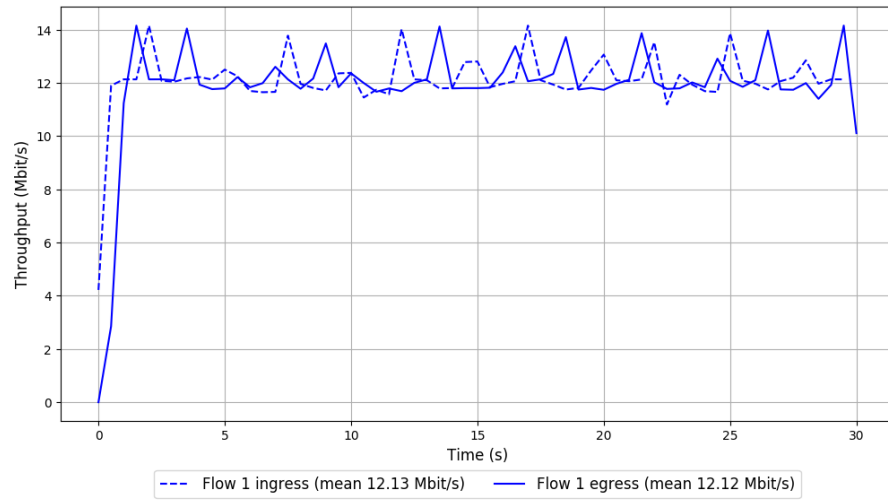


Run 5: Statistics of Sprout

Start at: 2018-10-26 07:48:51
End at: 2018-10-26 07:49:21
Local clock offset: 0.155 ms
Remote clock offset: -1.422 ms

Below is generated by plot.py at 2018-10-26 08:20:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.12 Mbit/s
95th percentile per-packet one-way delay: 41.894 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 12.12 Mbit/s
95th percentile per-packet one-way delay: 41.894 ms
Loss rate: 0.28%

Run 5: Report of Sprout — Data Link

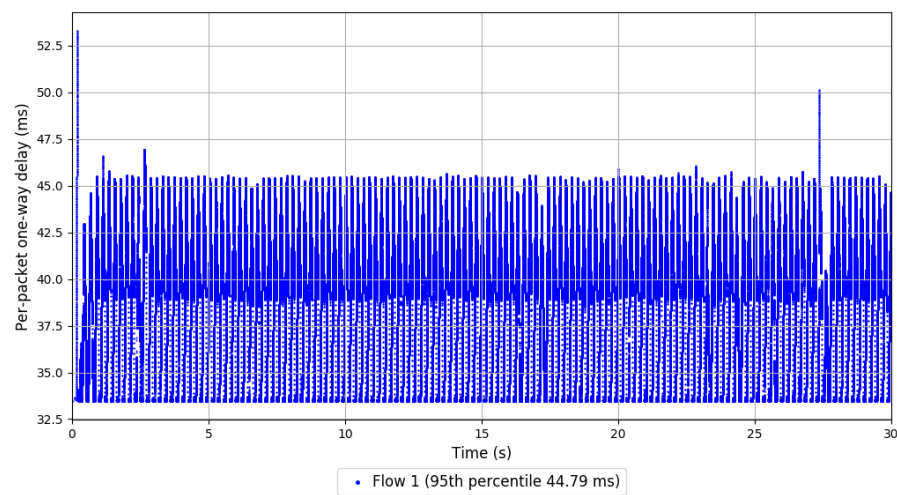
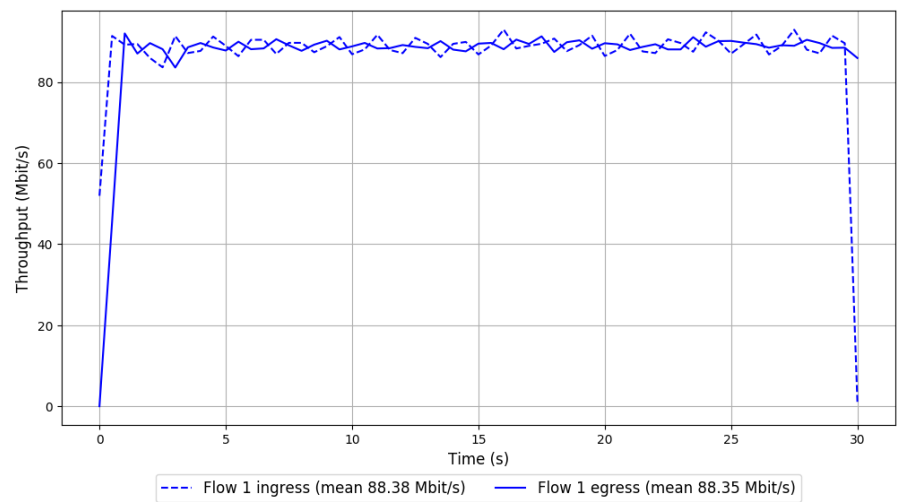


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-10-26 06:19:48
End at: 2018-10-26 06:20:18
Local clock offset: 0.632 ms
Remote clock offset: -2.857 ms

# Below is generated by plot.py at 2018-10-26 08:21:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.35 Mbit/s
95th percentile per-packet one-way delay: 44.791 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 88.35 Mbit/s
95th percentile per-packet one-way delay: 44.791 ms
Loss rate: 0.25%
```

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



Run 2: Statistics of TaoVA-100x

Start at: 2018-10-26 06:44:11

End at: 2018-10-26 06:44:41

Local clock offset: 1.563 ms

Remote clock offset: -2.53 ms

Below is generated by plot.py at 2018-10-26 08:22:00

Datalink statistics

-- Total of 1 flow:

Average throughput: 88.51 Mbit/s

95th percentile per-packet one-way delay: 44.935 ms

Loss rate: 0.21%

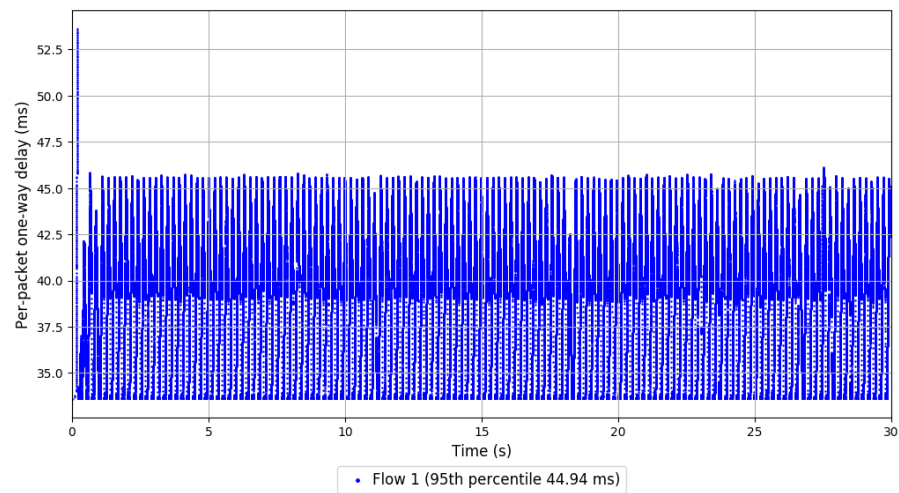
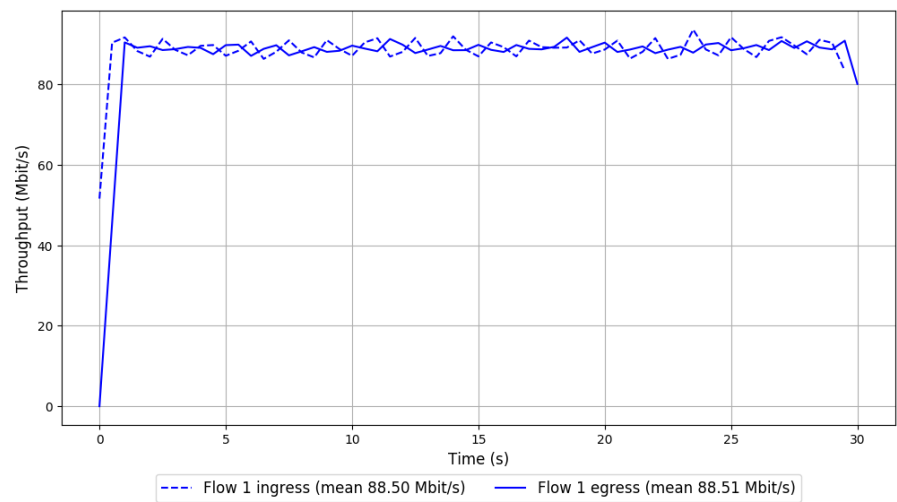
-- Flow 1:

Average throughput: 88.51 Mbit/s

95th percentile per-packet one-way delay: 44.935 ms

Loss rate: 0.21%

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

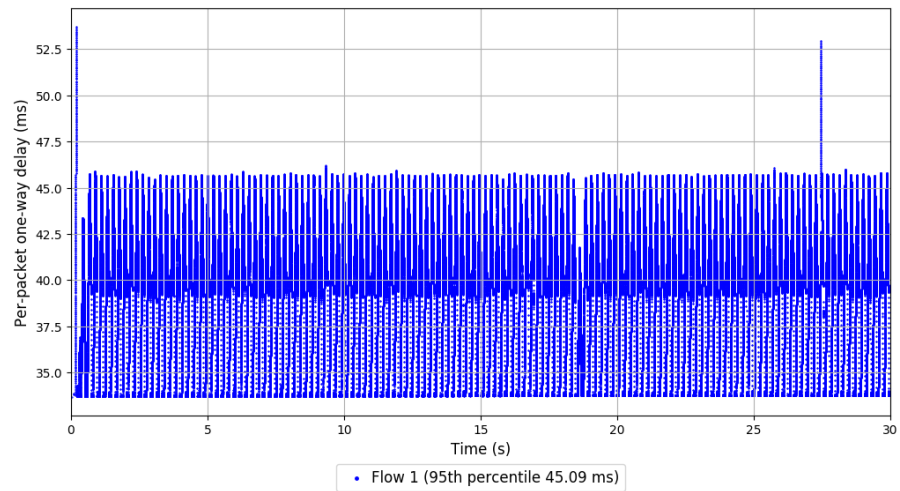
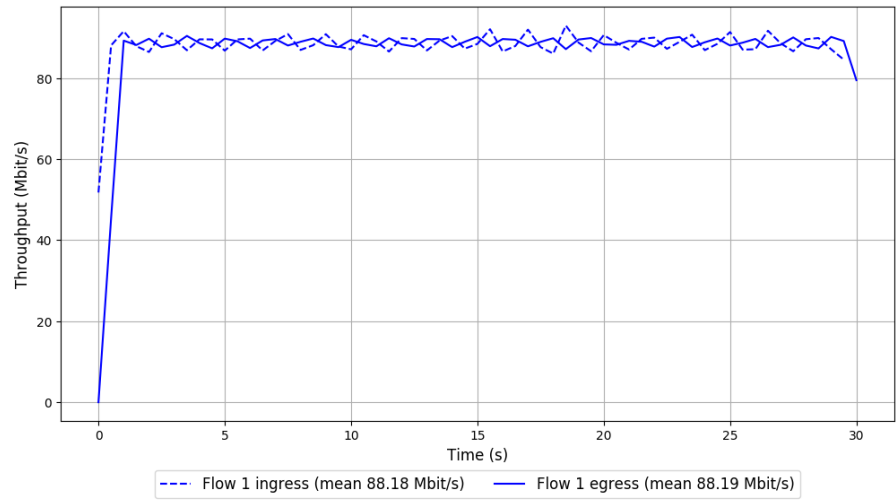


Run 3: Statistics of TaoVA-100x

Start at: 2018-10-26 07:08:31
End at: 2018-10-26 07:09:01
Local clock offset: 1.16 ms
Remote clock offset: -2.036 ms

Below is generated by plot.py at 2018-10-26 08:22:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 88.19 Mbit/s
95th percentile per-packet one-way delay: 45.095 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 88.19 Mbit/s
95th percentile per-packet one-way delay: 45.095 ms
Loss rate: 0.21%

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-10-26 07:32:24

End at: 2018-10-26 07:32:54

Local clock offset: 0.359 ms

Remote clock offset: -1.473 ms

Below is generated by plot.py at 2018-10-26 08:22:02

Datalink statistics

-- Total of 1 flow:

Average throughput: 88.08 Mbit/s

95th percentile per-packet one-way delay: 44.816 ms

Loss rate: 0.23%

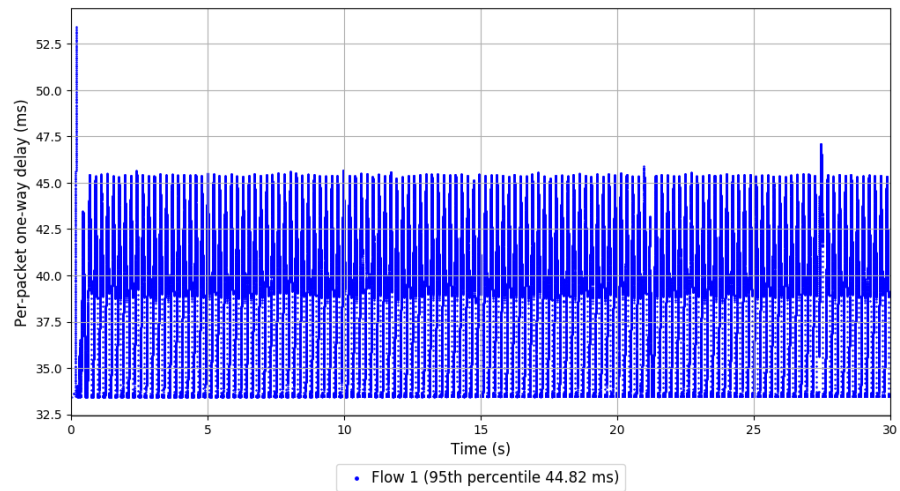
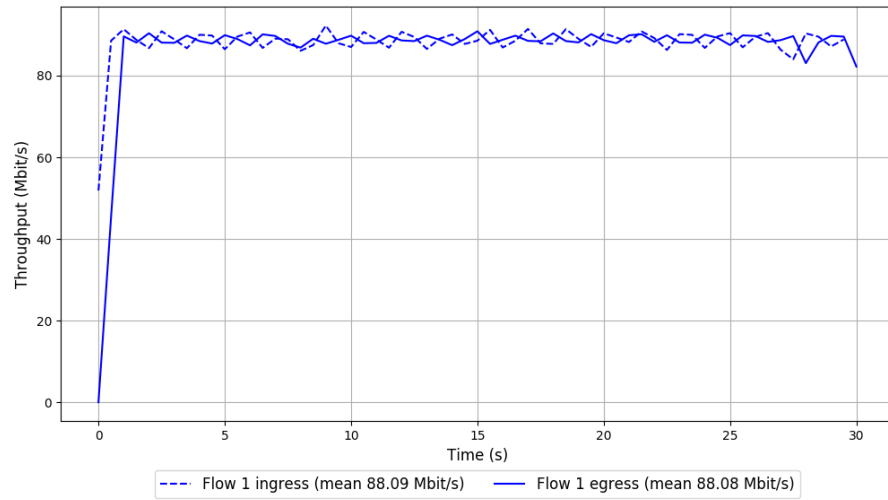
-- Flow 1:

Average throughput: 88.08 Mbit/s

95th percentile per-packet one-way delay: 44.816 ms

Loss rate: 0.23%

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

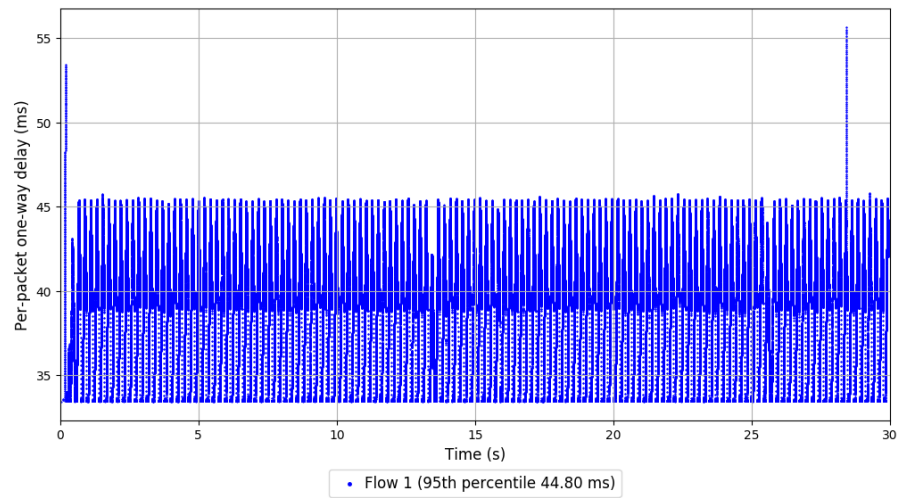
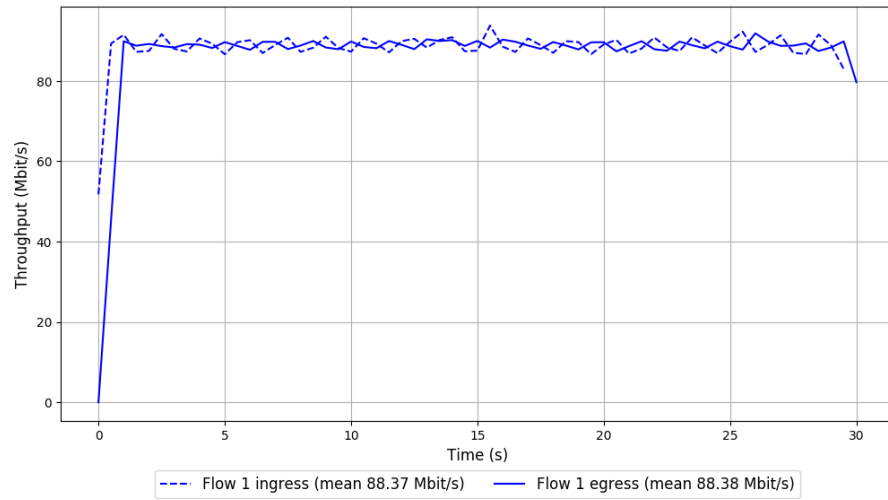


Run 5: Statistics of TaoVA-100x

Start at: 2018-10-26 07:56:51
End at: 2018-10-26 07:57:21
Local clock offset: 0.055 ms
Remote clock offset: -1.066 ms

Below is generated by plot.py at 2018-10-26 08:22:05
Datalink statistics
-- Total of 1 flow:
Average throughput: 88.38 Mbit/s
95th percentile per-packet one-way delay: 44.798 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 88.38 Mbit/s
95th percentile per-packet one-way delay: 44.798 ms
Loss rate: 0.20%

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

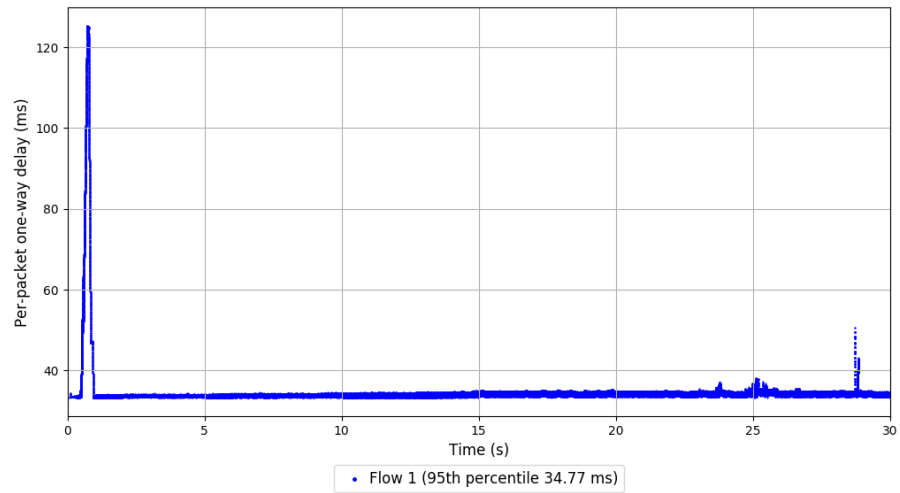
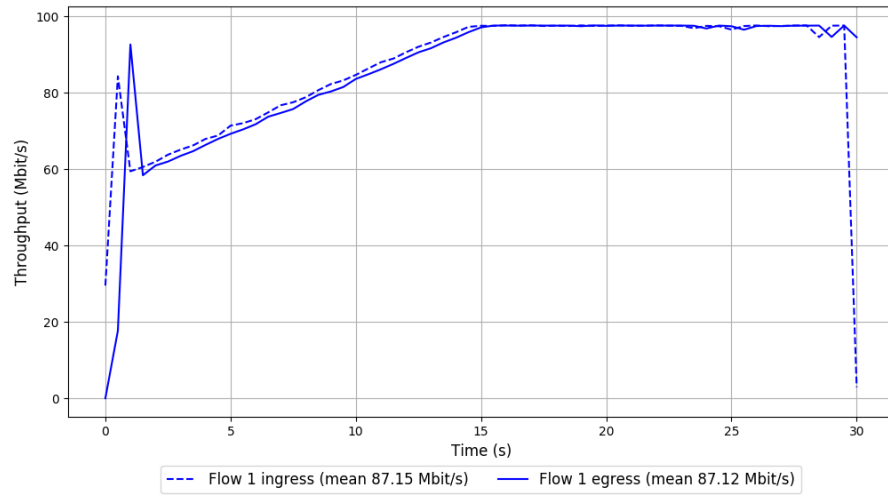


Run 1: Statistics of TCP Vegas

Start at: 2018-10-26 06:21:14
End at: 2018-10-26 06:21:44
Local clock offset: 0.66 ms
Remote clock offset: -2.676 ms

Below is generated by plot.py at 2018-10-26 08:22:05
Datalink statistics
-- Total of 1 flow:
Average throughput: 87.12 Mbit/s
95th percentile per-packet one-way delay: 34.766 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 87.12 Mbit/s
95th percentile per-packet one-way delay: 34.766 ms
Loss rate: 0.24%

Run 1: Report of TCP Vegas — Data Link

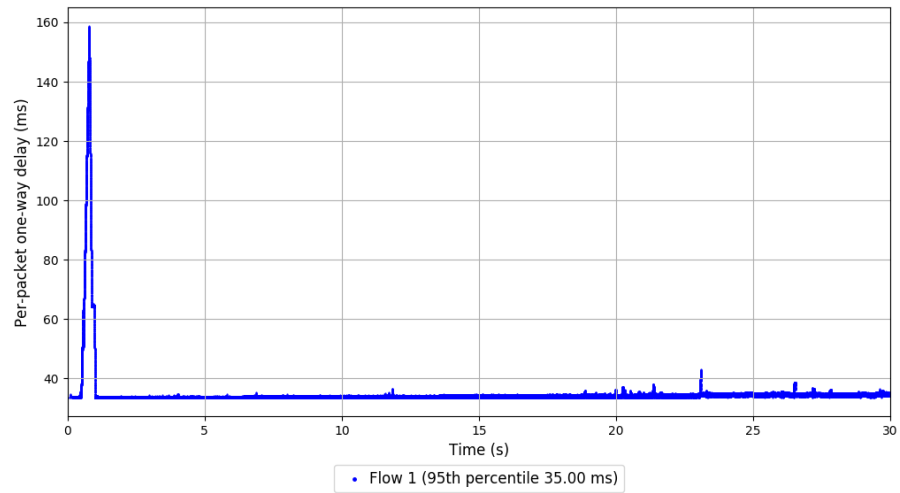
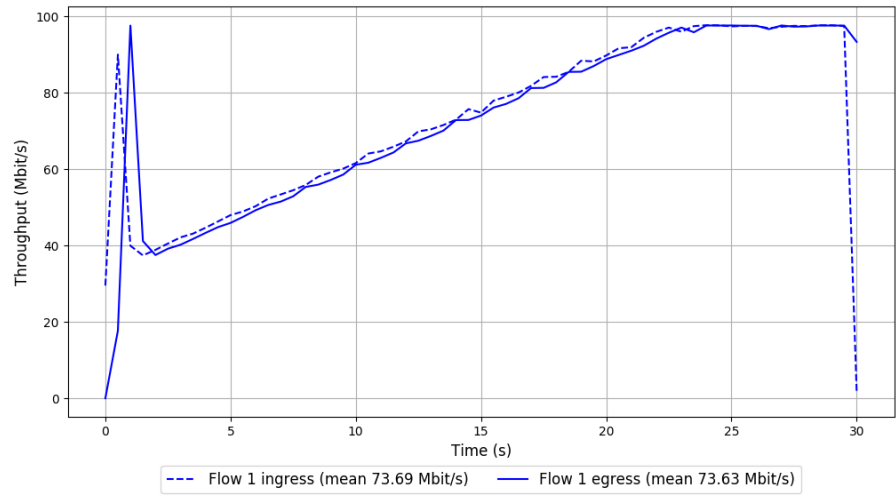


Run 2: Statistics of TCP Vegas

Start at: 2018-10-26 06:45:35
End at: 2018-10-26 06:46:05
Local clock offset: 1.649 ms
Remote clock offset: -2.348 ms

Below is generated by plot.py at 2018-10-26 08:22:05
Datalink statistics
-- Total of 1 flow:
Average throughput: 73.63 Mbit/s
95th percentile per-packet one-way delay: 34.999 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 73.63 Mbit/s
95th percentile per-packet one-way delay: 34.999 ms
Loss rate: 0.29%

Run 2: Report of TCP Vegas — Data Link

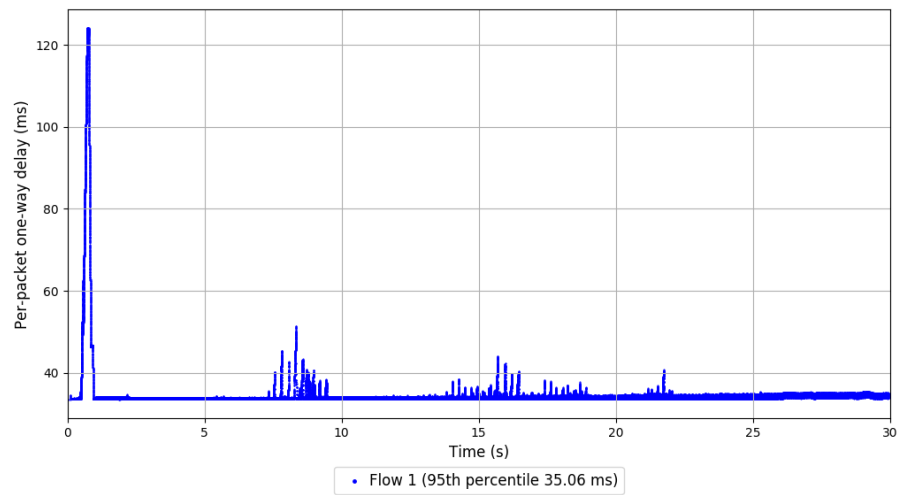
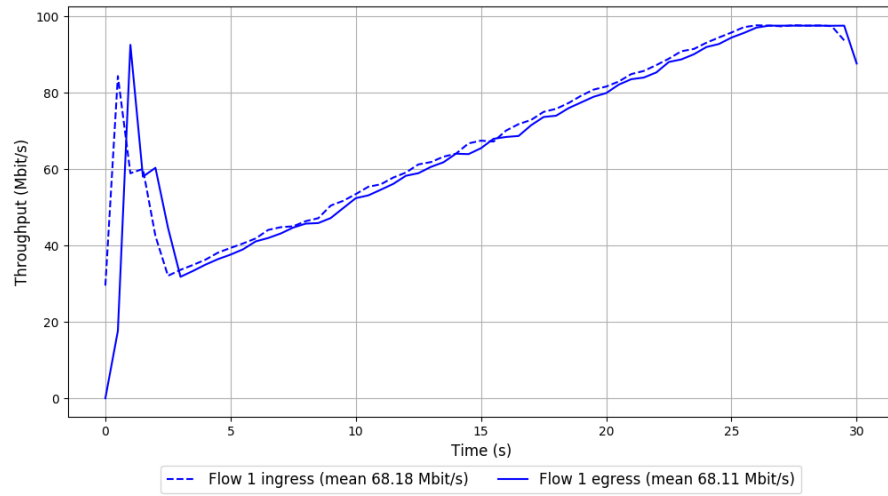


Run 3: Statistics of TCP Vegas

Start at: 2018-10-26 07:09:53
End at: 2018-10-26 07:10:23
Local clock offset: 1.021 ms
Remote clock offset: -1.836 ms

Below is generated by plot.py at 2018-10-26 08:22:05
Datalink statistics
-- Total of 1 flow:
Average throughput: 68.11 Mbit/s
95th percentile per-packet one-way delay: 35.058 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 68.11 Mbit/s
95th percentile per-packet one-way delay: 35.058 ms
Loss rate: 0.32%

Run 3: Report of TCP Vegas — Data Link

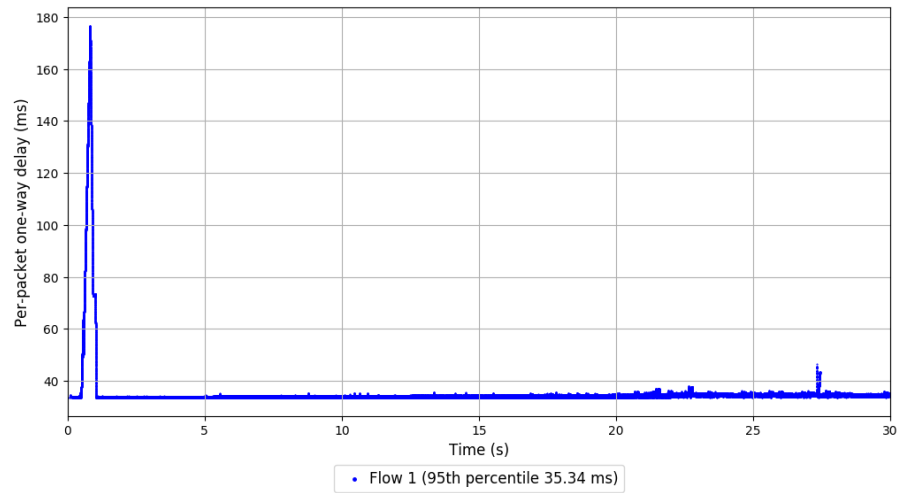
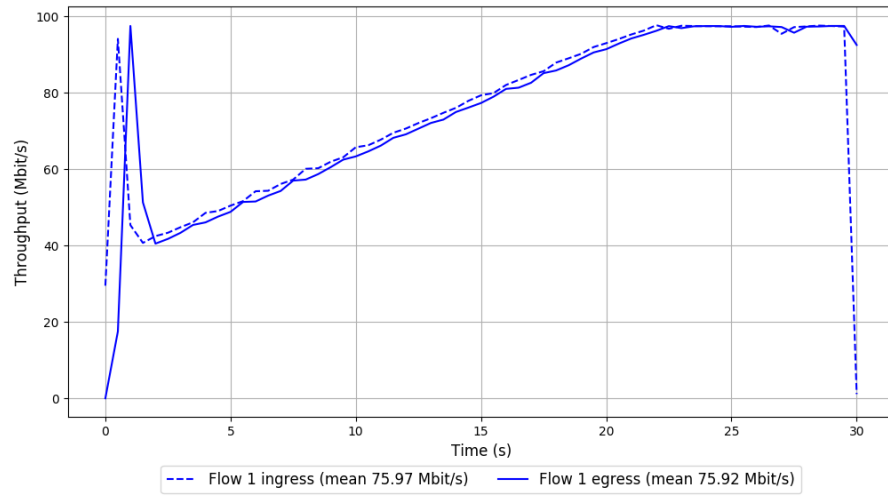


Run 4: Statistics of TCP Vegas

Start at: 2018-10-26 07:33:47
End at: 2018-10-26 07:34:17
Local clock offset: 0.344 ms
Remote clock offset: -1.652 ms

Below is generated by plot.py at 2018-10-26 08:22:05
Datalink statistics
-- Total of 1 flow:
Average throughput: 75.92 Mbit/s
95th percentile per-packet one-way delay: 35.344 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 75.92 Mbit/s
95th percentile per-packet one-way delay: 35.344 ms
Loss rate: 0.28%

Run 4: Report of TCP Vegas — Data Link

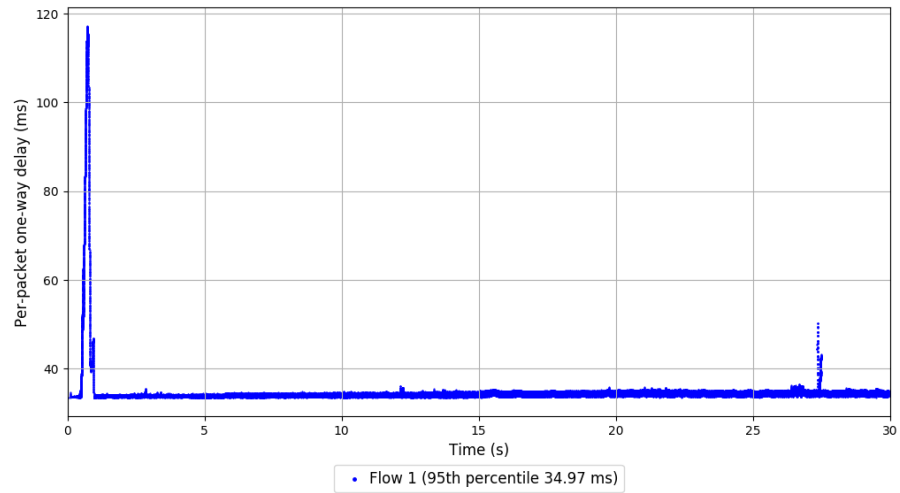
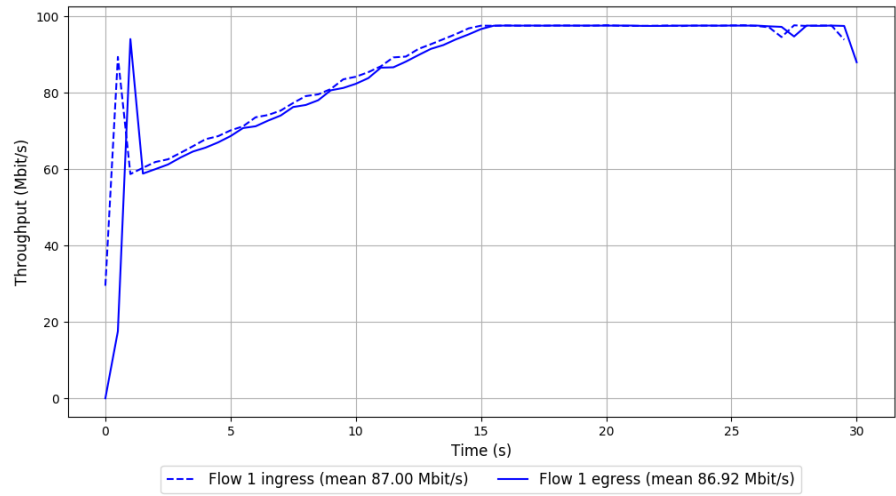


Run 5: Statistics of TCP Vegas

Start at: 2018-10-26 07:58:16
End at: 2018-10-26 07:58:46
Local clock offset: 0.057 ms
Remote clock offset: -1.101 ms

Below is generated by plot.py at 2018-10-26 08:22:16
Datalink statistics
-- Total of 1 flow:
Average throughput: 86.92 Mbit/s
95th percentile per-packet one-way delay: 34.972 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 86.92 Mbit/s
95th percentile per-packet one-way delay: 34.972 ms
Loss rate: 0.31%

Run 5: Report of TCP Vegas — Data Link

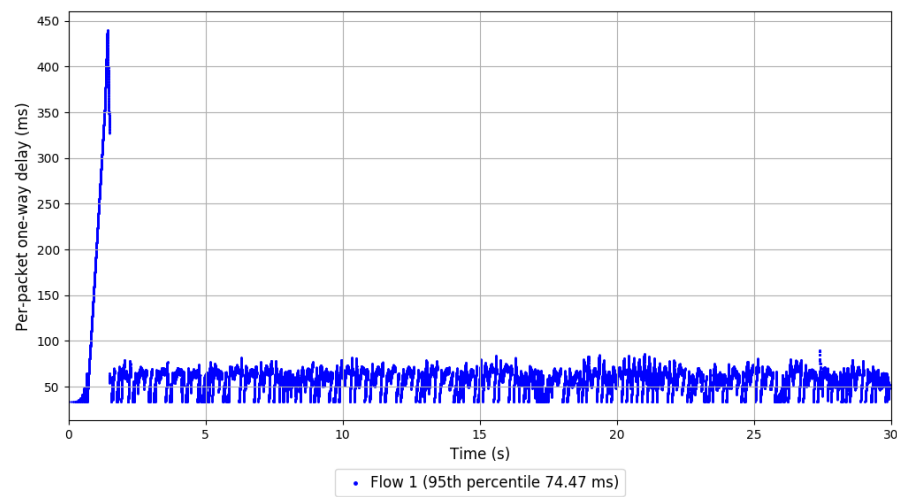
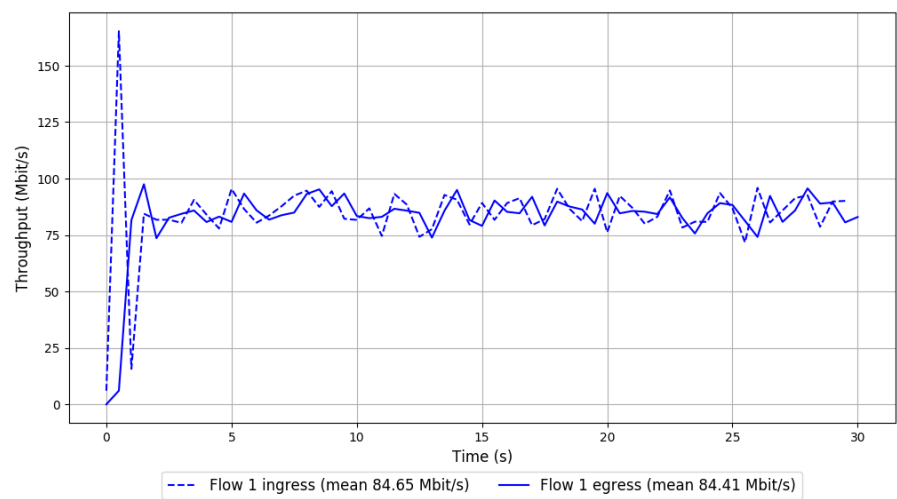


Run 1: Statistics of Verus

Start at: 2018-10-26 06:29:27
End at: 2018-10-26 06:29:57
Local clock offset: 0.734 ms
Remote clock offset: -2.579 ms

Below is generated by plot.py at 2018-10-26 08:22:27
Datalink statistics
-- Total of 1 flow:
Average throughput: 84.41 Mbit/s
95th percentile per-packet one-way delay: 74.466 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 84.41 Mbit/s
95th percentile per-packet one-way delay: 74.466 ms
Loss rate: 0.49%

Run 1: Report of Verus — Data Link

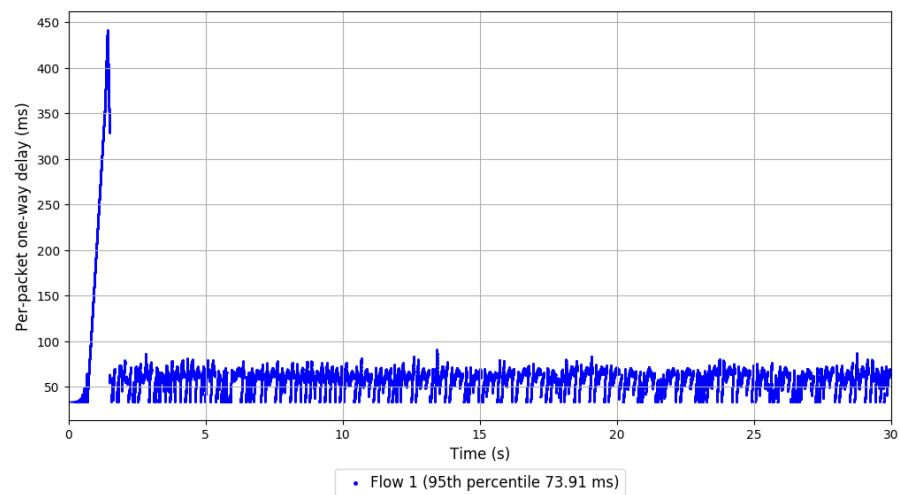
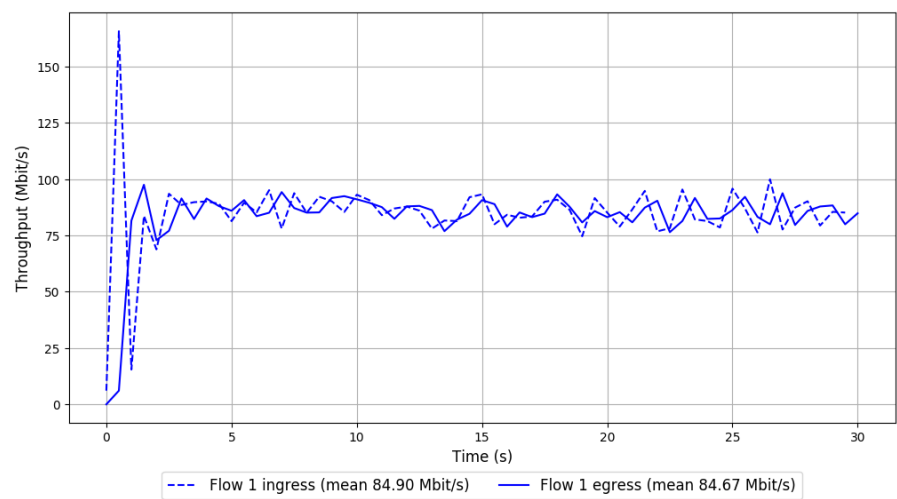


Run 2: Statistics of Verus

Start at: 2018-10-26 06:53:43
End at: 2018-10-26 06:54:13
Local clock offset: 1.966 ms
Remote clock offset: -2.194 ms

Below is generated by plot.py at 2018-10-26 08:22:58
Datalink statistics
-- Total of 1 flow:
Average throughput: 84.67 Mbit/s
95th percentile per-packet one-way delay: 73.912 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 84.67 Mbit/s
95th percentile per-packet one-way delay: 73.912 ms
Loss rate: 0.38%

Run 2: Report of Verus — Data Link

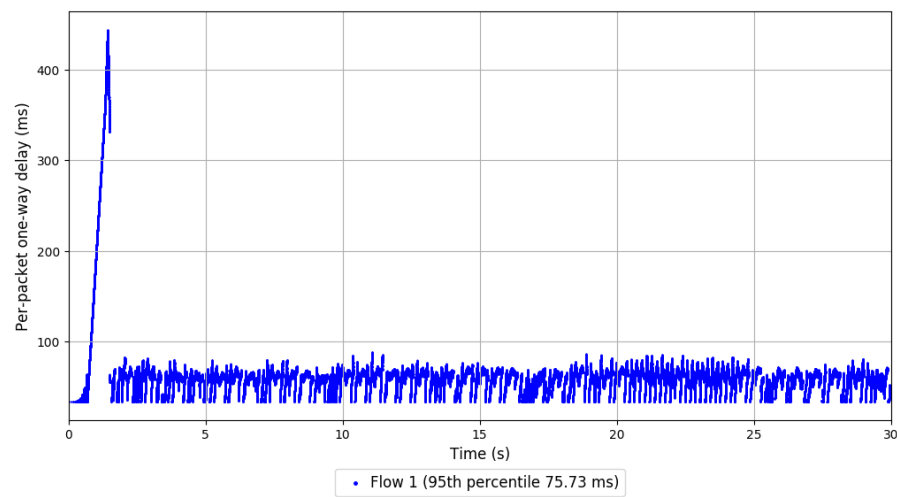
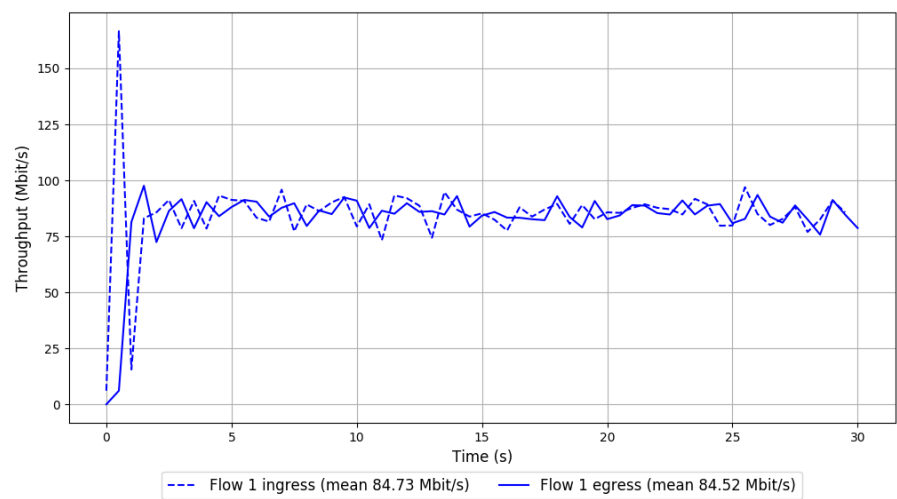


Run 3: Statistics of Verus

Start at: 2018-10-26 07:17:52
End at: 2018-10-26 07:18:22
Local clock offset: 0.569 ms
Remote clock offset: -1.674 ms

Below is generated by plot.py at 2018-10-26 08:22:59
Datalink statistics
-- Total of 1 flow:
Average throughput: 84.52 Mbit/s
95th percentile per-packet one-way delay: 75.735 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 84.52 Mbit/s
95th percentile per-packet one-way delay: 75.735 ms
Loss rate: 0.46%

Run 3: Report of Verus — Data Link

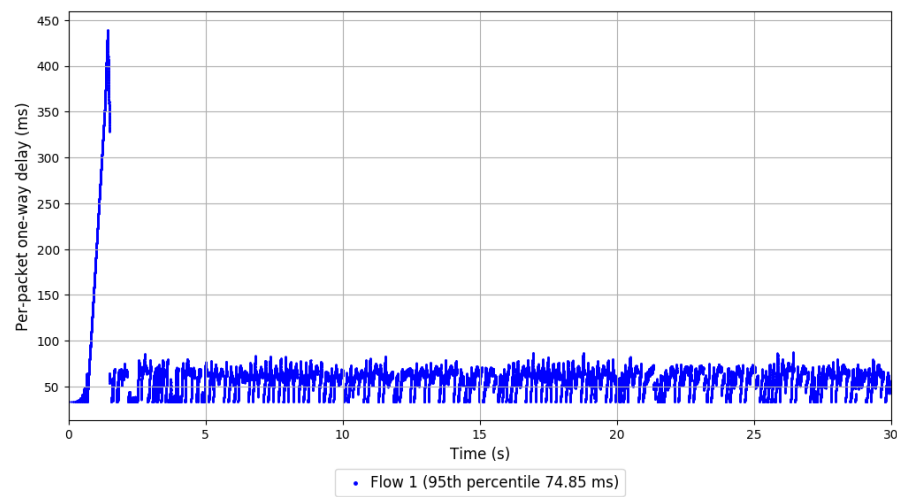
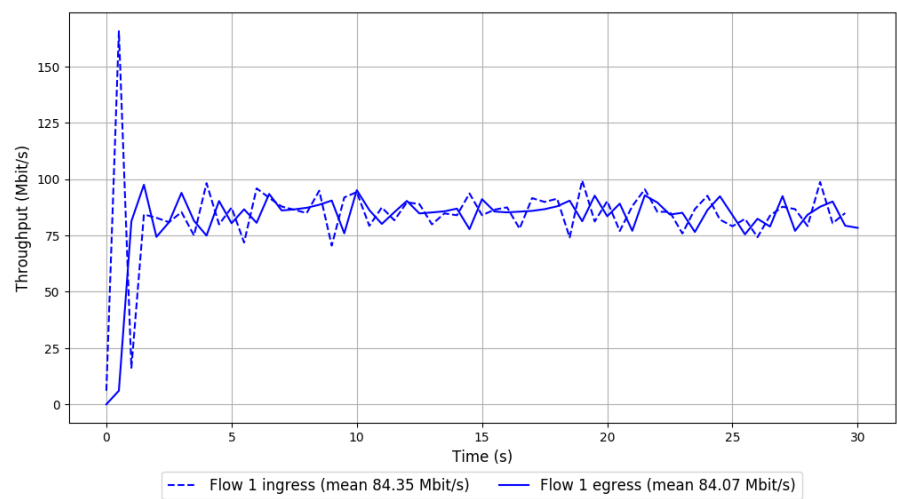


Run 4: Statistics of Verus

Start at: 2018-10-26 07:42:01
End at: 2018-10-26 07:42:31
Local clock offset: 0.213 ms
Remote clock offset: -1.281 ms

Below is generated by plot.py at 2018-10-26 08:23:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 84.07 Mbit/s
95th percentile per-packet one-way delay: 74.850 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 84.07 Mbit/s
95th percentile per-packet one-way delay: 74.850 ms
Loss rate: 0.54%

Run 4: Report of Verus — Data Link

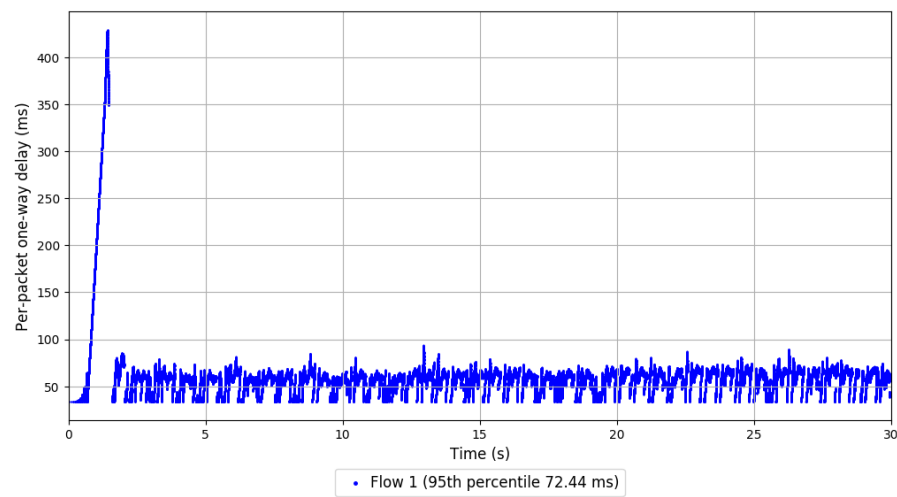
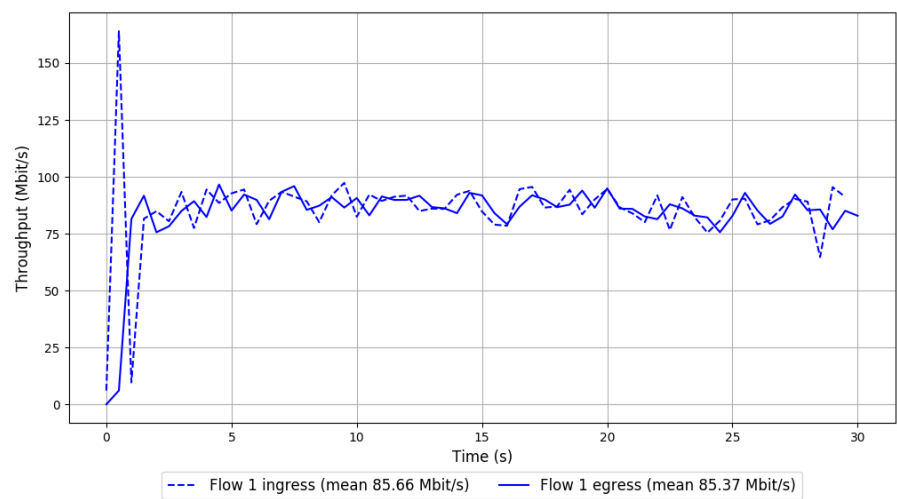


Run 5: Statistics of Verus

Start at: 2018-10-26 08:06:21
End at: 2018-10-26 08:06:51
Local clock offset: 0.139 ms
Remote clock offset: -1.246 ms

Below is generated by plot.py at 2018-10-26 08:23:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 85.37 Mbit/s
95th percentile per-packet one-way delay: 72.437 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 85.37 Mbit/s
95th percentile per-packet one-way delay: 72.437 ms
Loss rate: 0.55%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2018-10-26 06:30:48

End at: 2018-10-26 06:31:18

Local clock offset: 0.744 ms

Remote clock offset: -2.564 ms

Below is generated by plot.py at 2018-10-26 08:23:12

Datalink statistics

-- Total of 1 flow:

Average throughput: 84.86 Mbit/s

95th percentile per-packet one-way delay: 35.459 ms

Loss rate: 0.25%

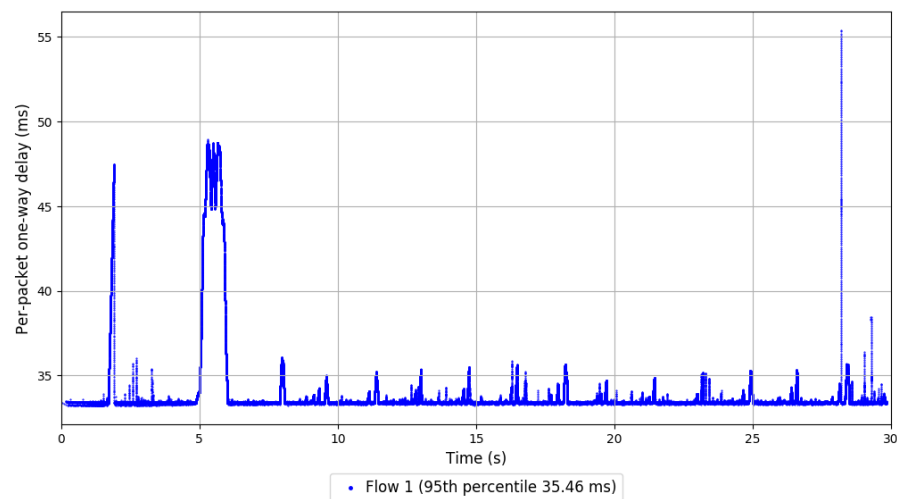
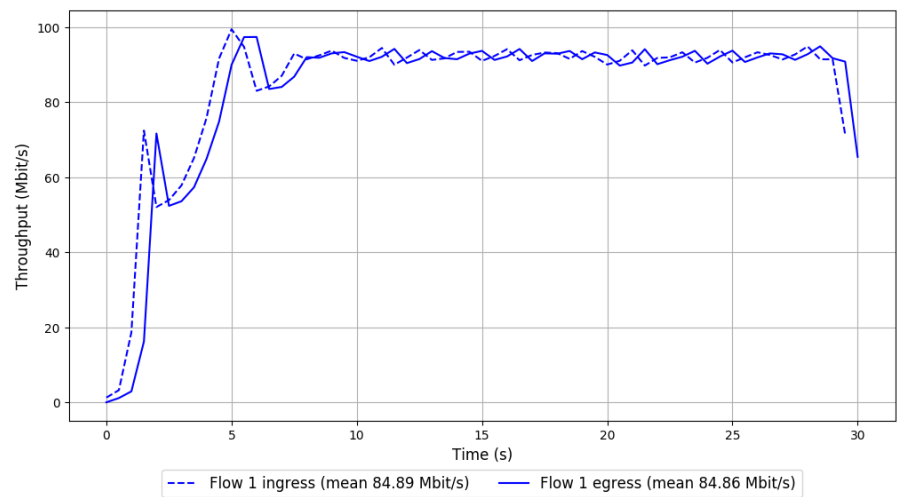
-- Flow 1:

Average throughput: 84.86 Mbit/s

95th percentile per-packet one-way delay: 35.459 ms

Loss rate: 0.25%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2018-10-26 06:55:05

End at: 2018-10-26 06:55:35

Local clock offset: 2.003 ms

Remote clock offset: -2.078 ms

Below is generated by plot.py at 2018-10-26 08:23:12

Datalink statistics

-- Total of 1 flow:

Average throughput: 84.93 Mbit/s

95th percentile per-packet one-way delay: 35.706 ms

Loss rate: 0.23%

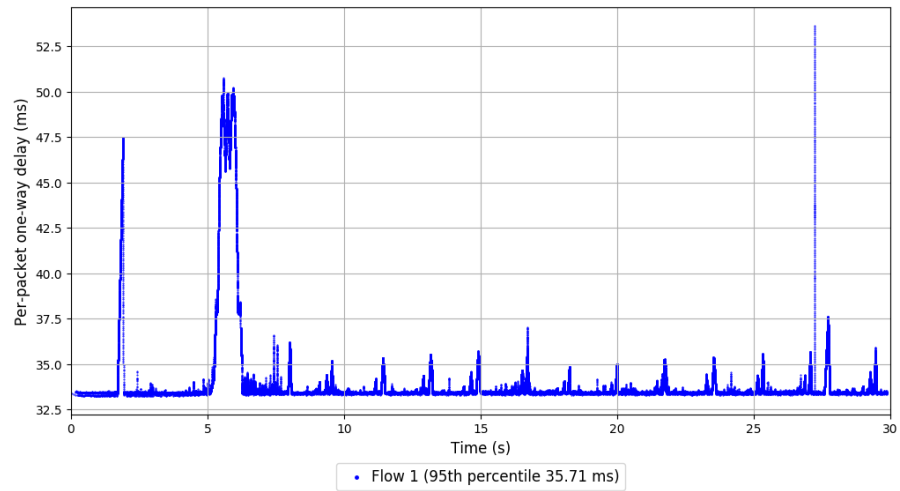
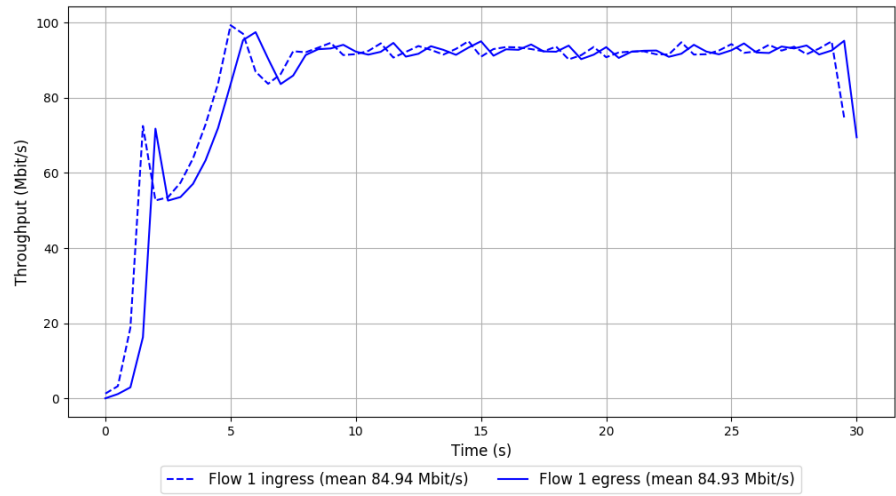
-- Flow 1:

Average throughput: 84.93 Mbit/s

95th percentile per-packet one-way delay: 35.706 ms

Loss rate: 0.23%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2018-10-26 07:19:12

End at: 2018-10-26 07:19:42

Local clock offset: 0.534 ms

Remote clock offset: -1.833 ms

Below is generated by plot.py at 2018-10-26 08:23:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 85.32 Mbit/s

95th percentile per-packet one-way delay: 34.875 ms

Loss rate: 0.24%

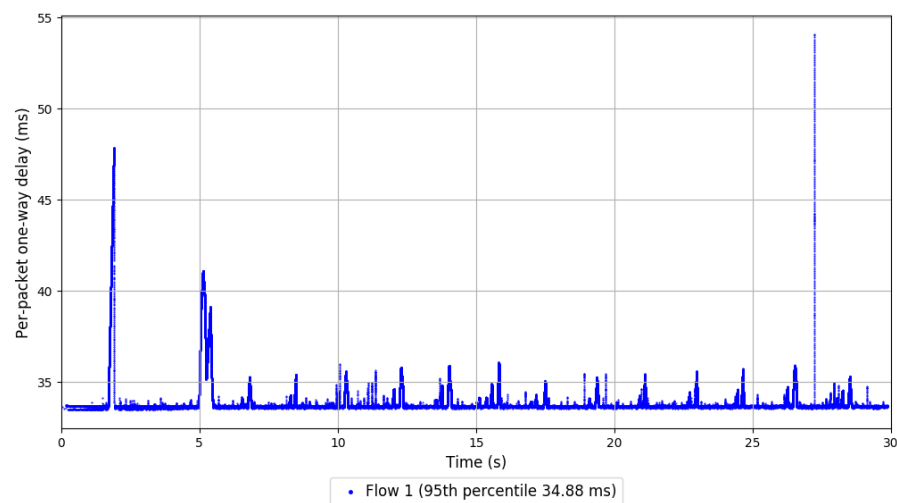
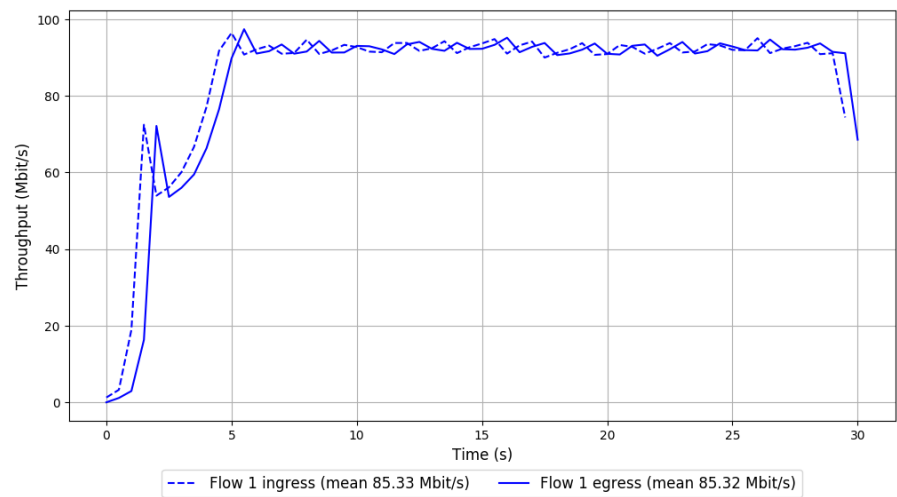
-- Flow 1:

Average throughput: 85.32 Mbit/s

95th percentile per-packet one-way delay: 34.875 ms

Loss rate: 0.24%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2018-10-26 07:43:25

End at: 2018-10-26 07:43:55

Local clock offset: 0.227 ms

Remote clock offset: -1.296 ms

Below is generated by plot.py at 2018-10-26 08:23:19

Datalink statistics

-- Total of 1 flow:

Average throughput: 85.23 Mbit/s

95th percentile per-packet one-way delay: 35.368 ms

Loss rate: 0.23%

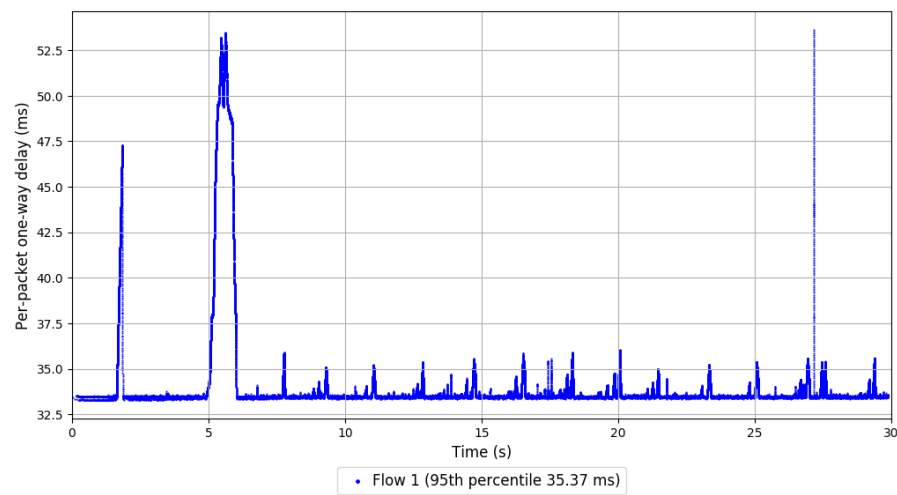
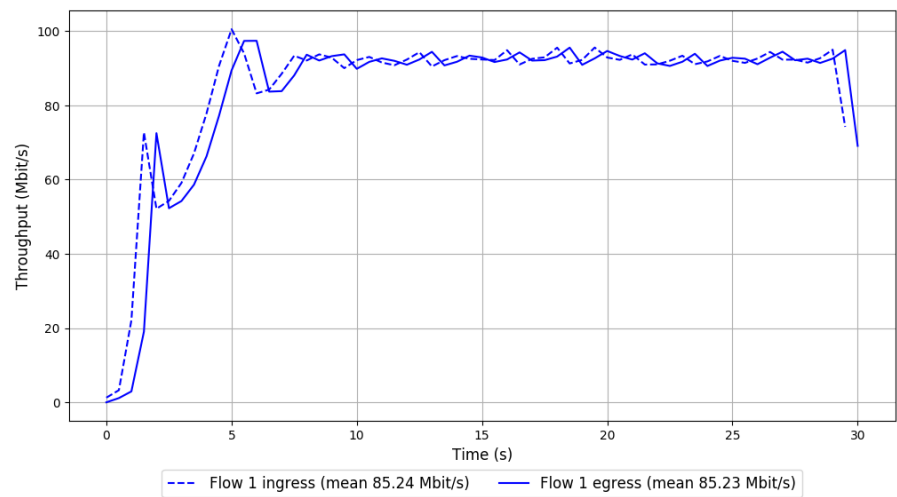
-- Flow 1:

Average throughput: 85.23 Mbit/s

95th percentile per-packet one-way delay: 35.368 ms

Loss rate: 0.23%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2018-10-26 08:07:42

End at: 2018-10-26 08:08:12

Local clock offset: 0.165 ms

Remote clock offset: -1.057 ms

Below is generated by plot.py at 2018-10-26 08:23:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 84.35 Mbit/s

95th percentile per-packet one-way delay: 36.342 ms

Loss rate: 0.24%

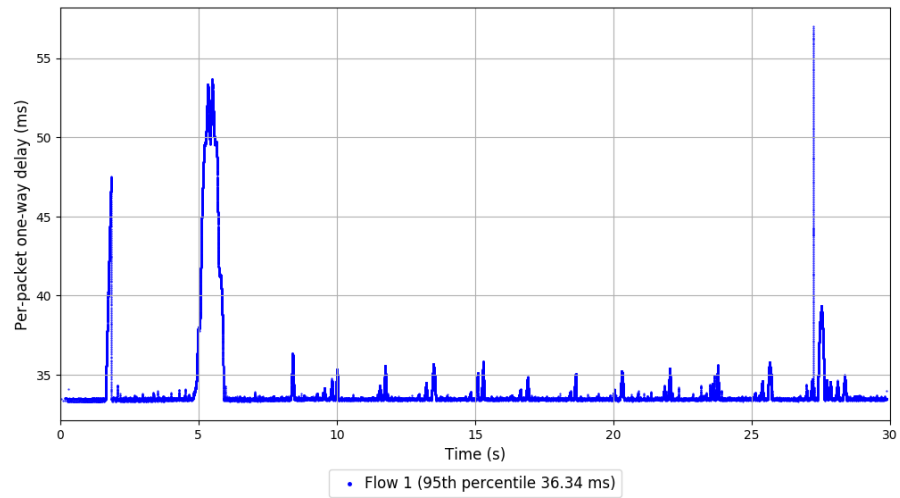
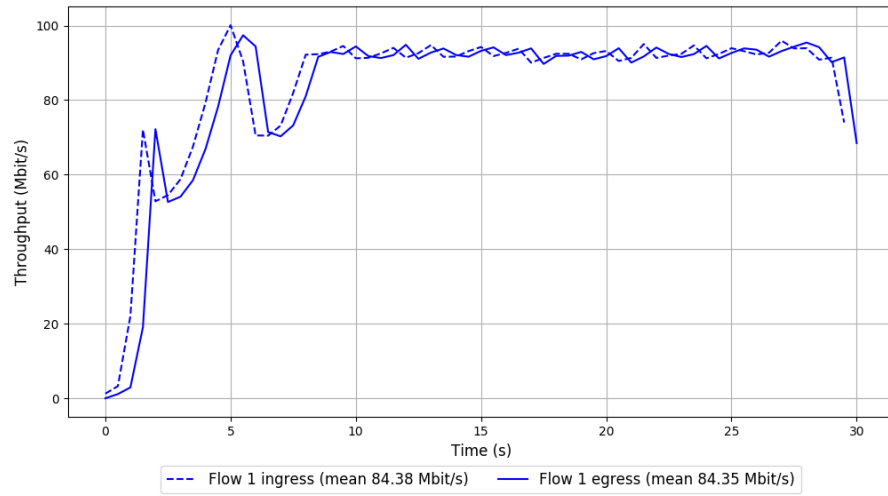
-- Flow 1:

Average throughput: 84.35 Mbit/s

95th percentile per-packet one-way delay: 36.342 ms

Loss rate: 0.24%

Run 5: Report of PCC-Vivace — Data Link

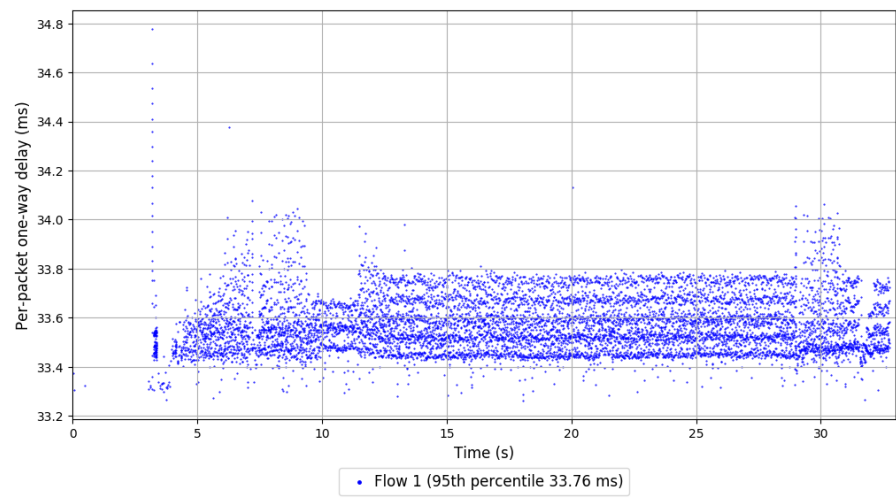
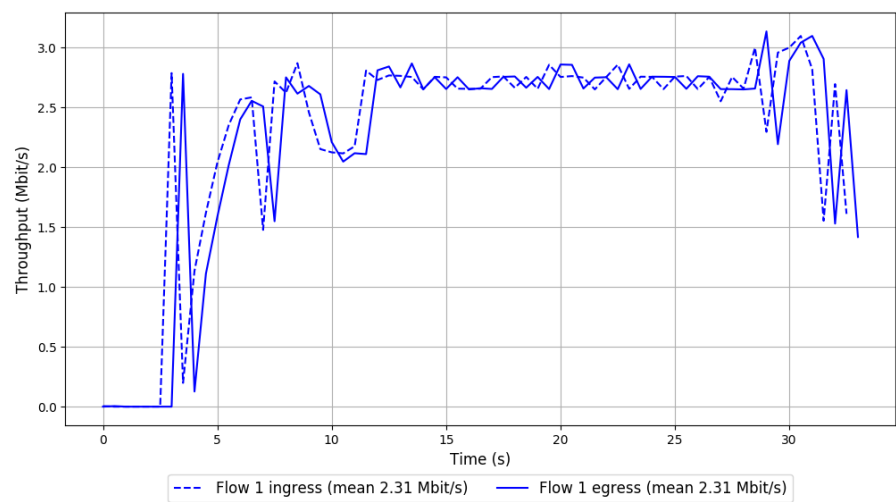


Run 1: Statistics of WebRTC media

Start at: 2018-10-26 06:22:35
End at: 2018-10-26 06:23:05
Local clock offset: 0.68 ms
Remote clock offset: -2.702 ms

Below is generated by plot.py at 2018-10-26 08:23:21
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.31 Mbit/s
95th percentile per-packet one-way delay: 33.763 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 2.31 Mbit/s
95th percentile per-packet one-way delay: 33.763 ms
Loss rate: 0.25%

Run 1: Report of WebRTC media — Data Link

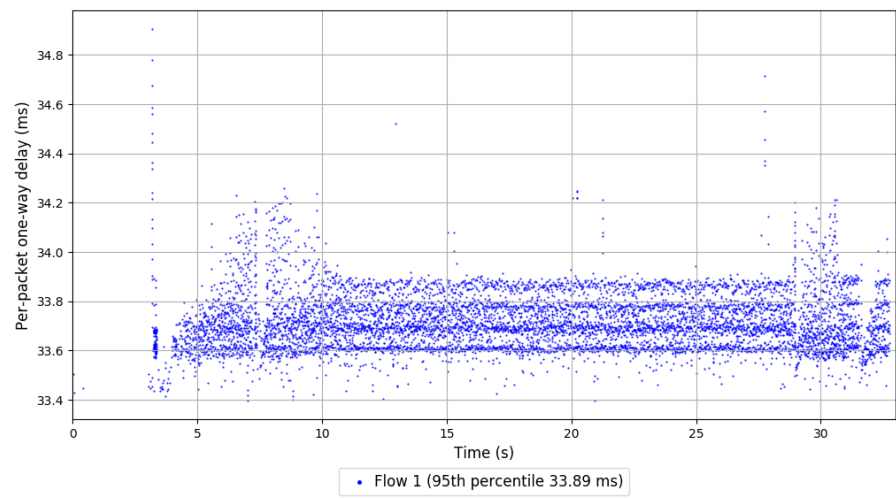
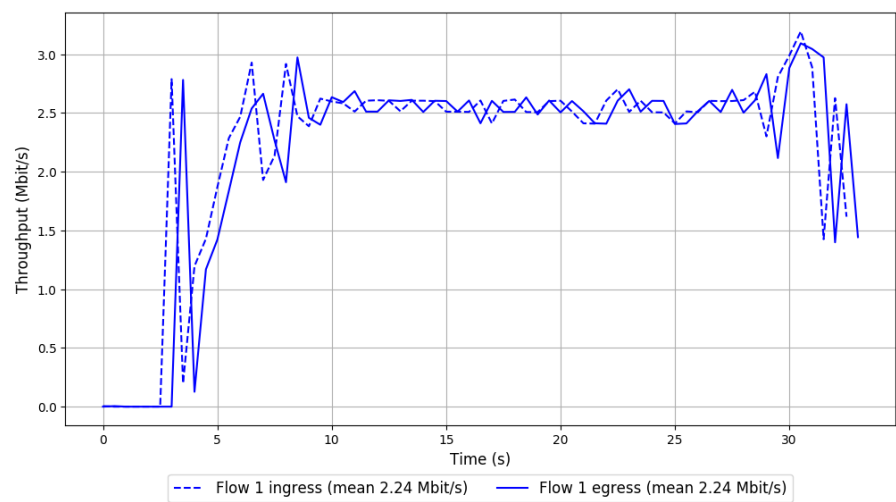


Run 2: Statistics of WebRTC media

Start at: 2018-10-26 06:46:55
End at: 2018-10-26 06:47:25
Local clock offset: 1.694 ms
Remote clock offset: -2.482 ms

Below is generated by plot.py at 2018-10-26 08:23:21
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.24 Mbit/s
95th percentile per-packet one-way delay: 33.889 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 2.24 Mbit/s
95th percentile per-packet one-way delay: 33.889 ms
Loss rate: 0.25%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-10-26 07:11:12

End at: 2018-10-26 07:11:42

Local clock offset: 0.907 ms

Remote clock offset: -1.83 ms

Below is generated by plot.py at 2018-10-26 08:23:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.25 Mbit/s

95th percentile per-packet one-way delay: 33.908 ms

Loss rate: 0.27%

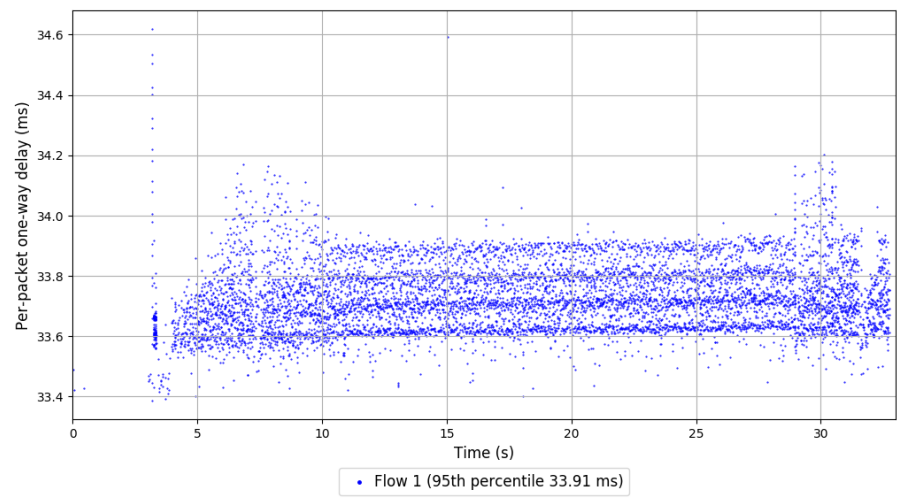
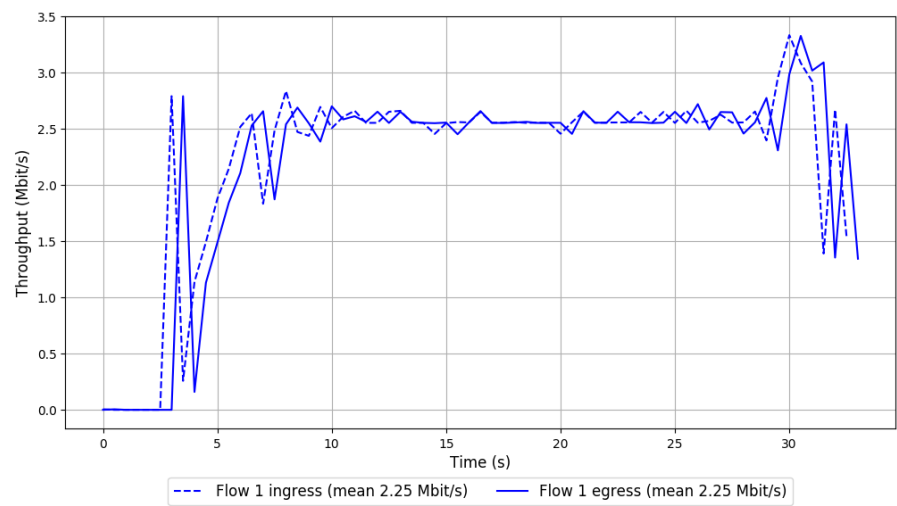
-- Flow 1:

Average throughput: 2.25 Mbit/s

95th percentile per-packet one-way delay: 33.908 ms

Loss rate: 0.27%

Run 3: Report of WebRTC media — Data Link

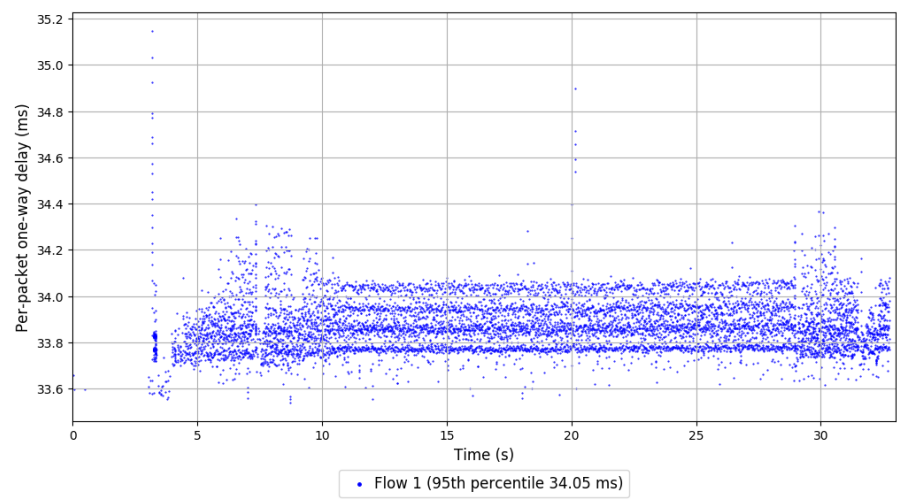
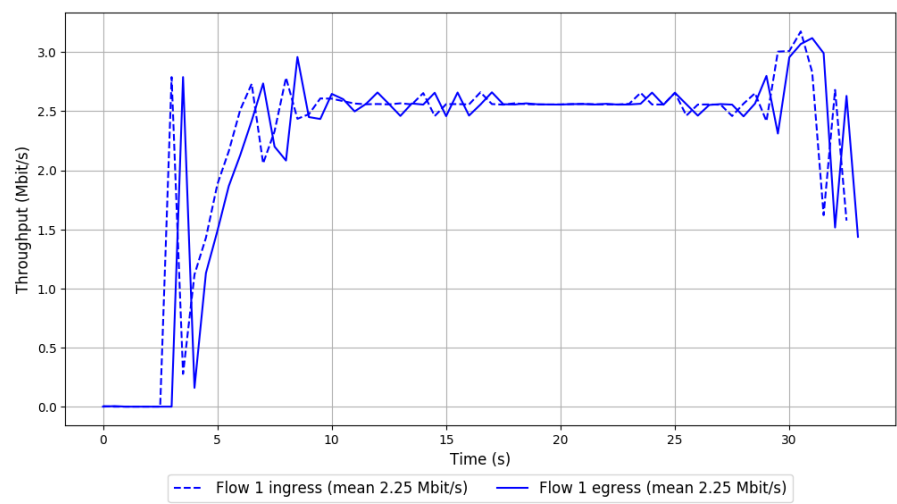


Run 4: Statistics of WebRTC media

Start at: 2018-10-26 07:35:06
End at: 2018-10-26 07:35:36
Local clock offset: 0.316 ms
Remote clock offset: -1.636 ms

Below is generated by plot.py at 2018-10-26 08:23:21
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.25 Mbit/s
95th percentile per-packet one-way delay: 34.055 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 2.25 Mbit/s
95th percentile per-packet one-way delay: 34.055 ms
Loss rate: 0.22%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-10-26 07:59:36

End at: 2018-10-26 08:00:06

Local clock offset: 0.041 ms

Remote clock offset: -1.06 ms

Below is generated by plot.py at 2018-10-26 08:23:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.11 Mbit/s

95th percentile per-packet one-way delay: 33.642 ms

Loss rate: 0.23%

-- Flow 1:

Average throughput: 2.11 Mbit/s

95th percentile per-packet one-way delay: 33.642 ms

Loss rate: 0.23%

Run 5: Report of WebRTC media — Data Link

