

Pantheon Report

Generated at 2018-10-10 15:00:13 (UTC).

Data path: GCE London on *ens4 (local)* → GCE Iowa on *ens4 (remote)*.

Repeated the test of 18 congestion control schemes 5 times.

Each test lasted for 30 seconds running 1 flow.

NTP offsets were measured against `time.google.com` and have been applied to correct the timestamps in logs.

System info:

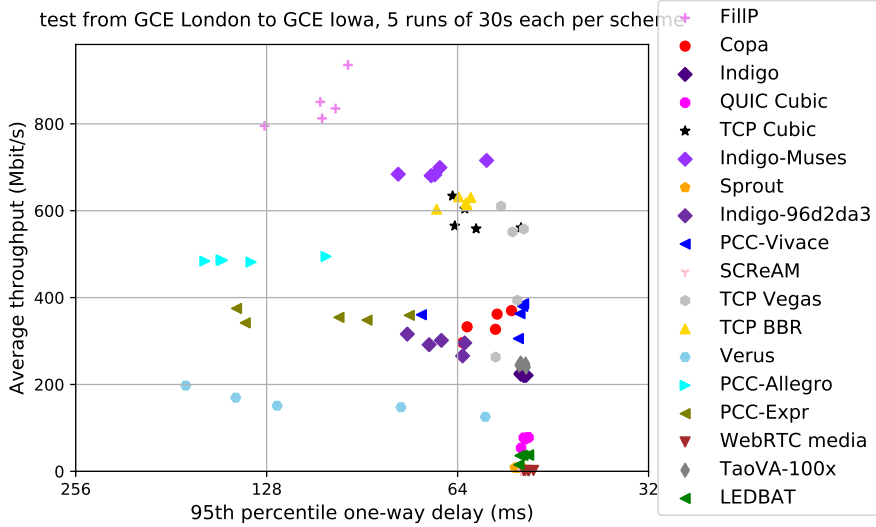
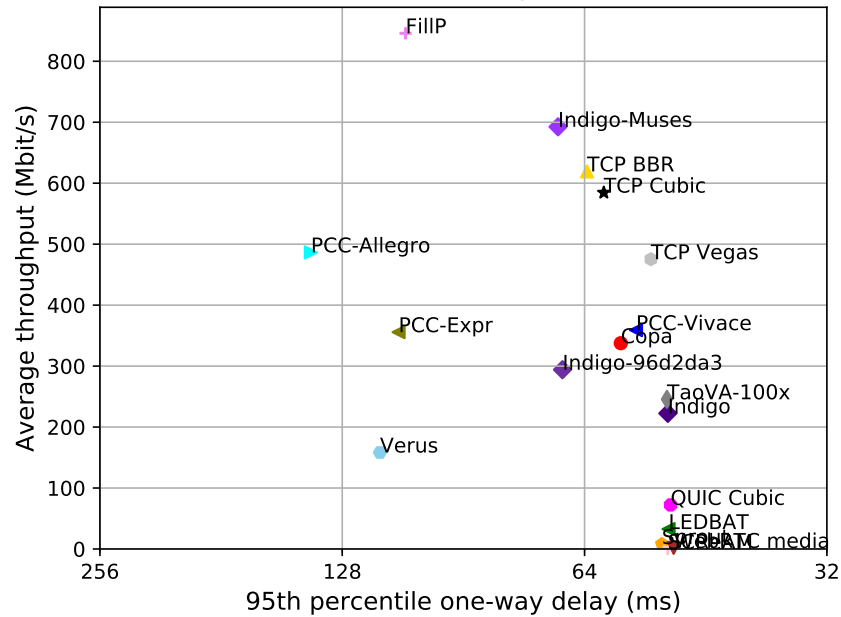
```
Linux 4.15.0-1021-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

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

test from GCE London to GCE Iowa, 5 runs of 30s each per scheme
(mean of all runs by scheme)



scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	619.35	63.55	0.00
Copa	5	337.58	57.70	0.00
TCP Cubic	5	584.48	60.58	0.00
FillP	5	845.88	106.80	0.86
Indigo	5	222.46	50.44	0.00
Indigo-96d2da3	5	294.06	68.18	0.00
LEDBAT	5	32.66	50.34	0.00
Indigo-Muses	5	692.49	69.05	0.00
PCC-Allegro	5	486.51	140.02	0.57
PCC-Expr	5	355.65	108.95	0.71
QUIC Cubic	5	72.29	50.05	0.00
SCReAM	5	0.22	50.44	0.00
Sprout	5	8.21	51.31	0.00
TaoVA-100x	5	245.57	50.56	0.00
TCP Vegas	5	475.30	52.94	0.00
Verus	5	158.25	114.92	0.15
PCC-Vivace	5	358.99	55.25	0.08
WebRTC media	5	1.80	49.60	0.00

Run 1: Statistics of TCP BBR

Start at: 2018-10-10 11:17:36

End at: 2018-10-10 11:18:06

Local clock offset: 0.181 ms

Remote clock offset: 0.018 ms

Below is generated by plot.py at 2018-10-10 13:42:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 618.10 Mbit/s

95th percentile per-packet one-way delay: 62.086 ms

Loss rate: 0.00%

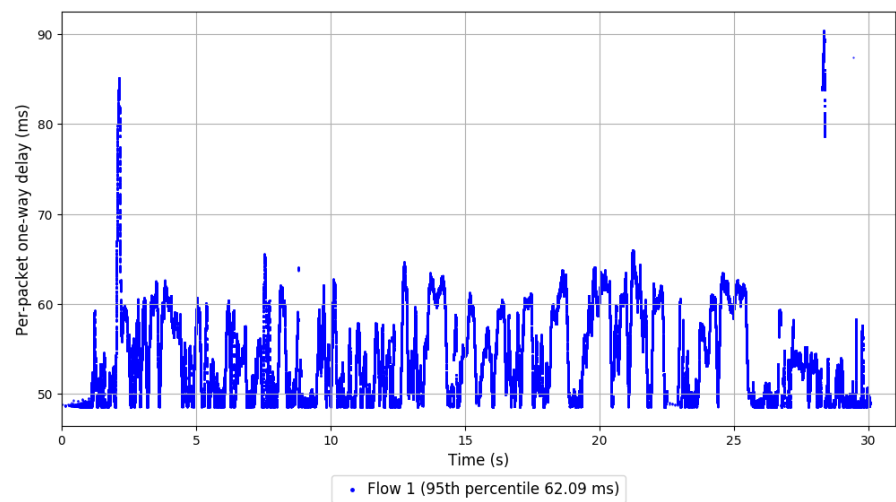
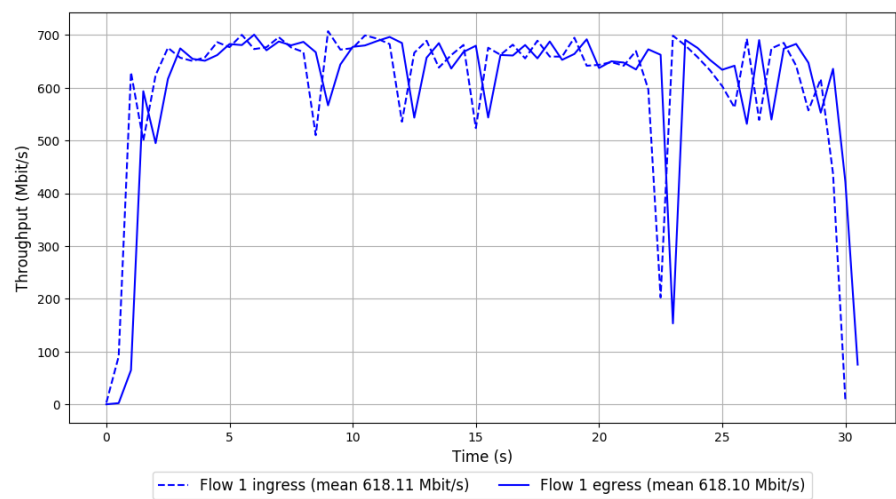
-- Flow 1:

Average throughput: 618.10 Mbit/s

95th percentile per-packet one-way delay: 62.086 ms

Loss rate: 0.00%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-10-10 11:43:22

End at: 2018-10-10 11:43:52

Local clock offset: -0.187 ms

Remote clock offset: 0.012 ms

Below is generated by plot.py at 2018-10-10 13:42:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 631.97 Mbit/s

95th percentile per-packet one-way delay: 63.758 ms

Loss rate: 0.00%

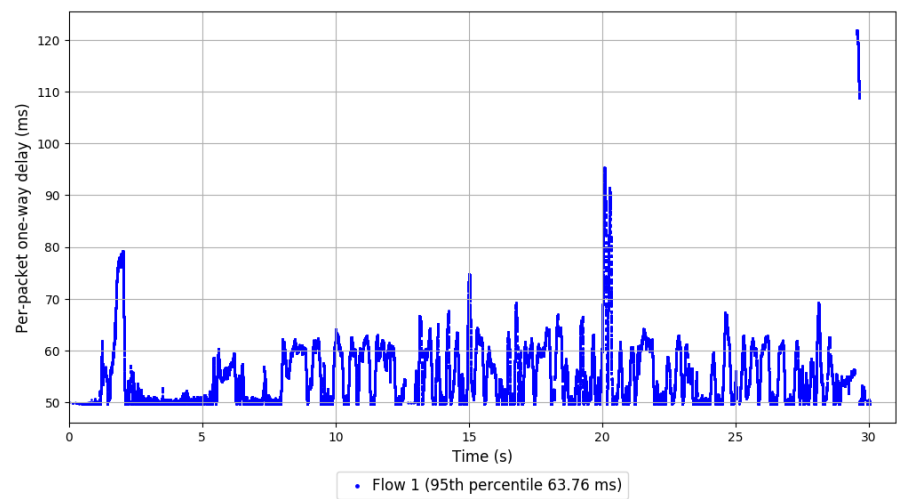
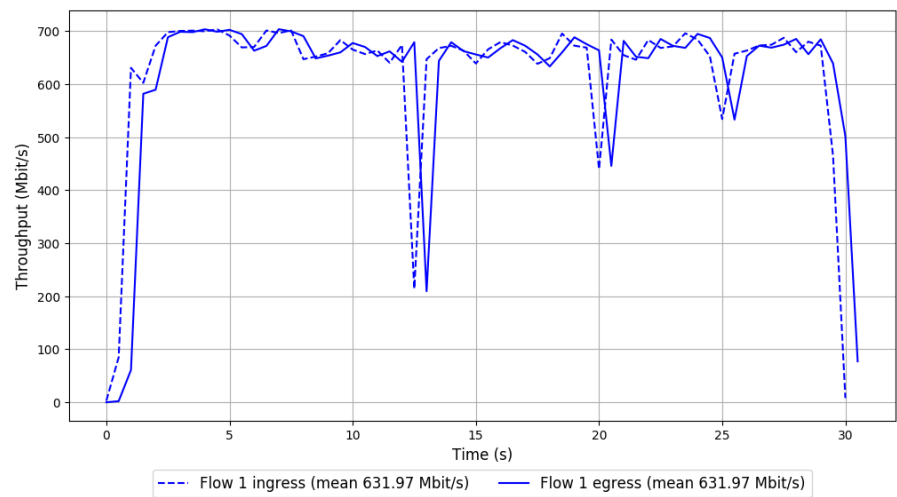
-- Flow 1:

Average throughput: 631.97 Mbit/s

95th percentile per-packet one-way delay: 63.758 ms

Loss rate: 0.00%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-10-10 12:09:06

End at: 2018-10-10 12:09:36

Local clock offset: 0.207 ms

Remote clock offset: 0.058 ms

Below is generated by plot.py at 2018-10-10 13:42:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 612.46 Mbit/s

95th percentile per-packet one-way delay: 61.828 ms

Loss rate: 0.00%

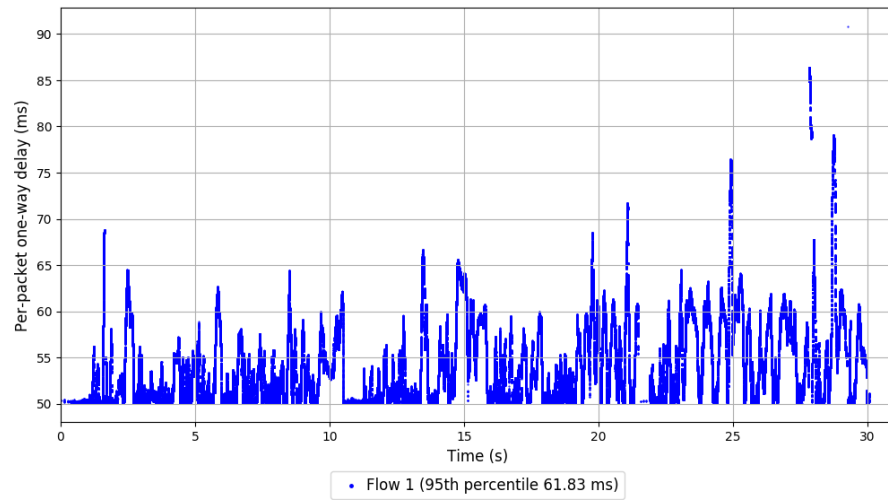
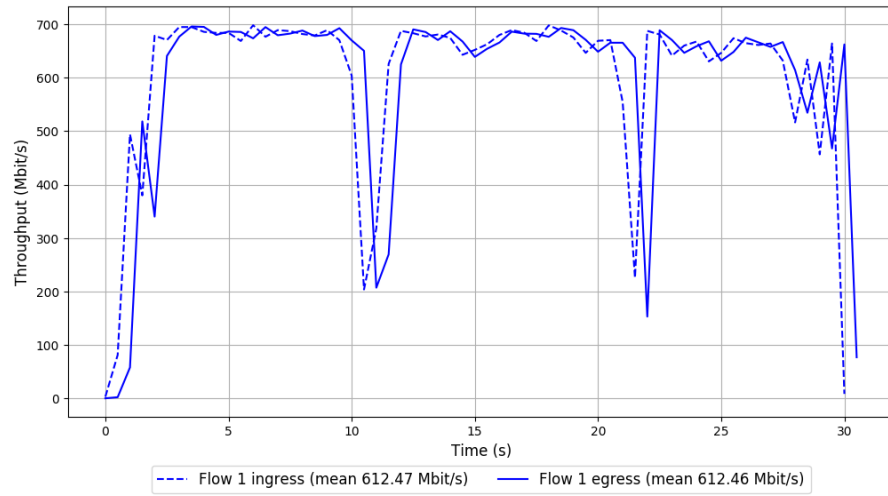
-- Flow 1:

Average throughput: 612.46 Mbit/s

95th percentile per-packet one-way delay: 61.828 ms

Loss rate: 0.00%

Run 3: Report of TCP BBR — Data Link

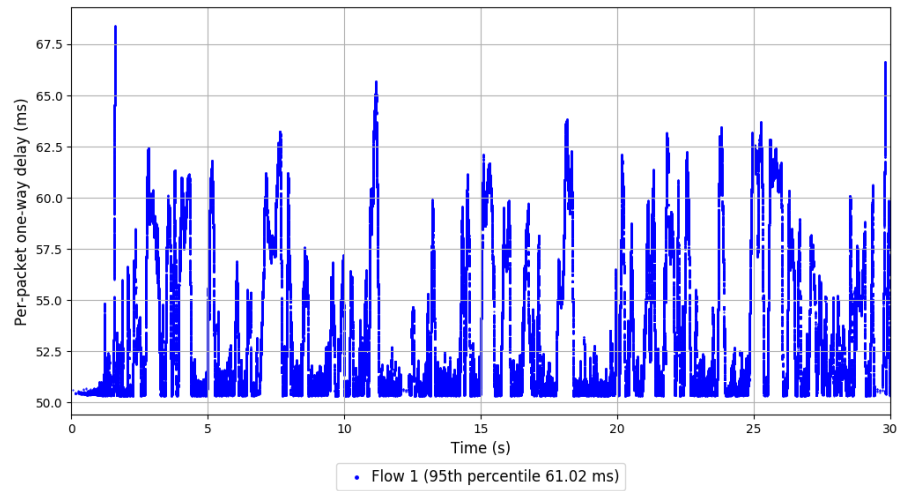
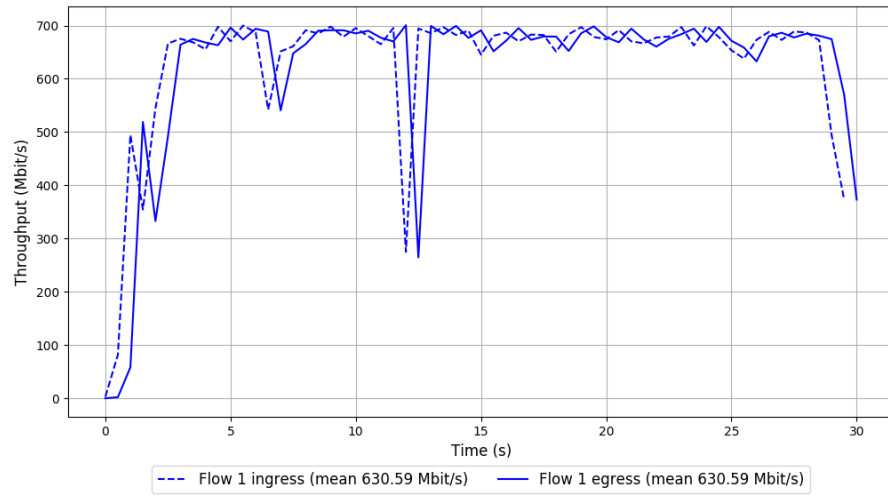


Run 4: Statistics of TCP BBR

Start at: 2018-10-10 12:34:27
End at: 2018-10-10 12:34:57
Local clock offset: -0.126 ms
Remote clock offset: -0.082 ms

Below is generated by plot.py at 2018-10-10 13:42:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 630.59 Mbit/s
95th percentile per-packet one-way delay: 61.019 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 630.59 Mbit/s
95th percentile per-packet one-way delay: 61.019 ms
Loss rate: 0.00%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-10-10 12:59:54

End at: 2018-10-10 13:00:24

Local clock offset: -0.22 ms

Remote clock offset: -0.117 ms

Below is generated by plot.py at 2018-10-10 13:42:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 603.61 Mbit/s

95th percentile per-packet one-way delay: 69.079 ms

Loss rate: 0.00%

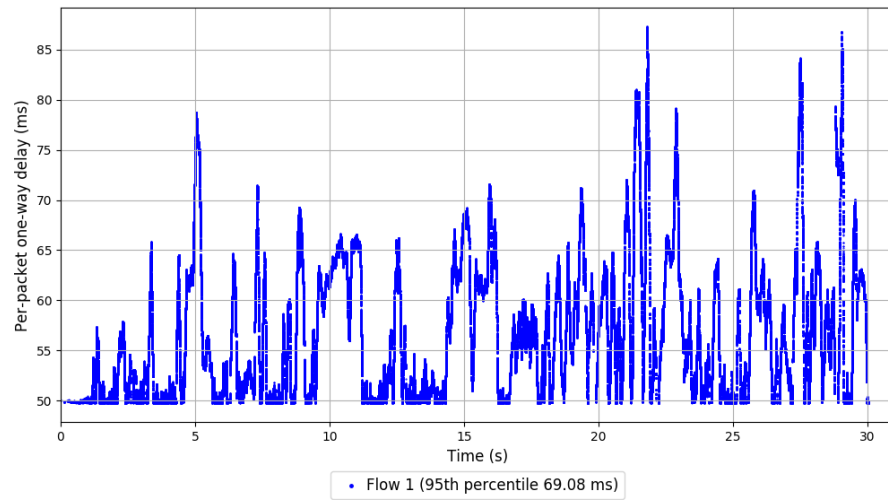
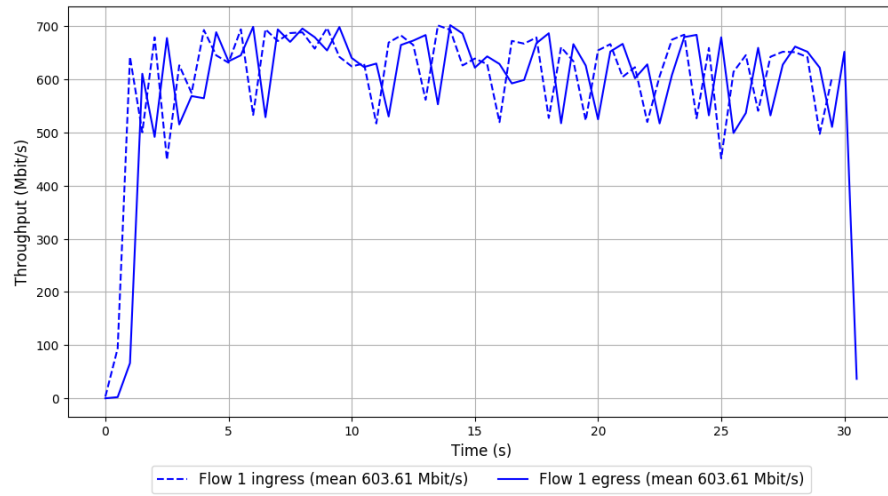
-- Flow 1:

Average throughput: 603.61 Mbit/s

95th percentile per-packet one-way delay: 69.079 ms

Loss rate: 0.00%

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2018-10-10 11:26:36

End at: 2018-10-10 11:27:06

Local clock offset: -0.191 ms

Remote clock offset: 0.066 ms

Below is generated by plot.py at 2018-10-10 13:43:40

Datalink statistics

-- Total of 1 flow:

Average throughput: 370.04 Mbit/s

95th percentile per-packet one-way delay: 52.627 ms

Loss rate: 0.00%

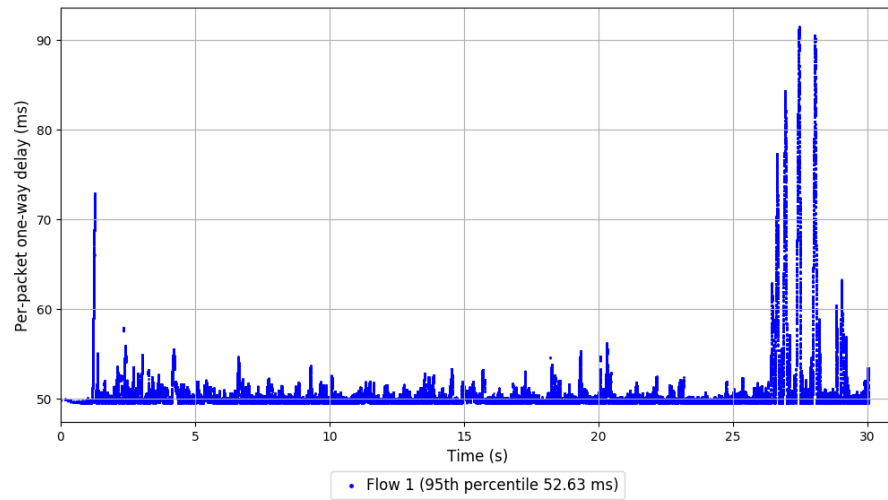
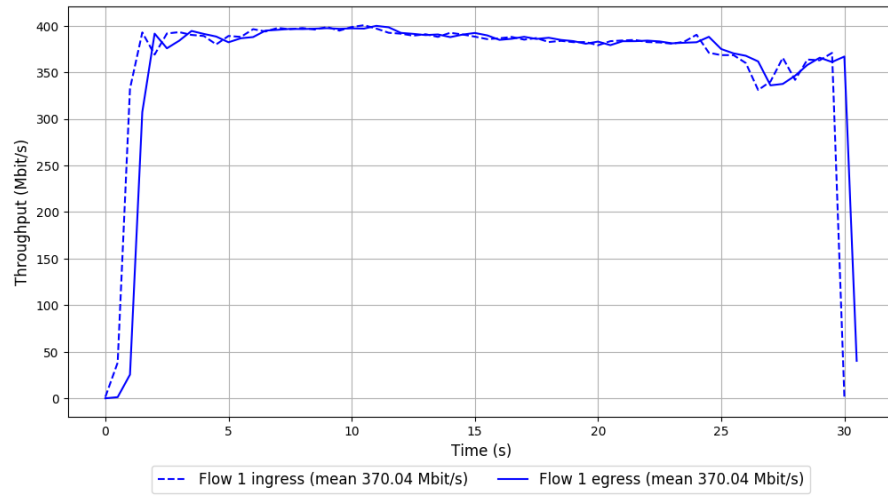
-- Flow 1:

Average throughput: 370.04 Mbit/s

95th percentile per-packet one-way delay: 52.627 ms

Loss rate: 0.00%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-10-10 11:52:18

End at: 2018-10-10 11:52:48

Local clock offset: -0.576 ms

Remote clock offset: 0.039 ms

Below is generated by plot.py at 2018-10-10 13:43:40

Datalink statistics

-- Total of 1 flow:

Average throughput: 361.92 Mbit/s

95th percentile per-packet one-way delay: 55.445 ms

Loss rate: 0.00%

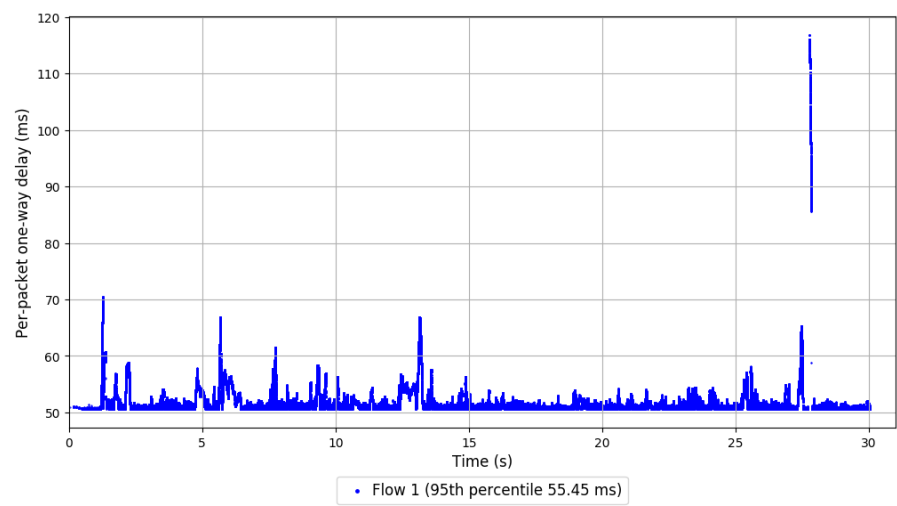
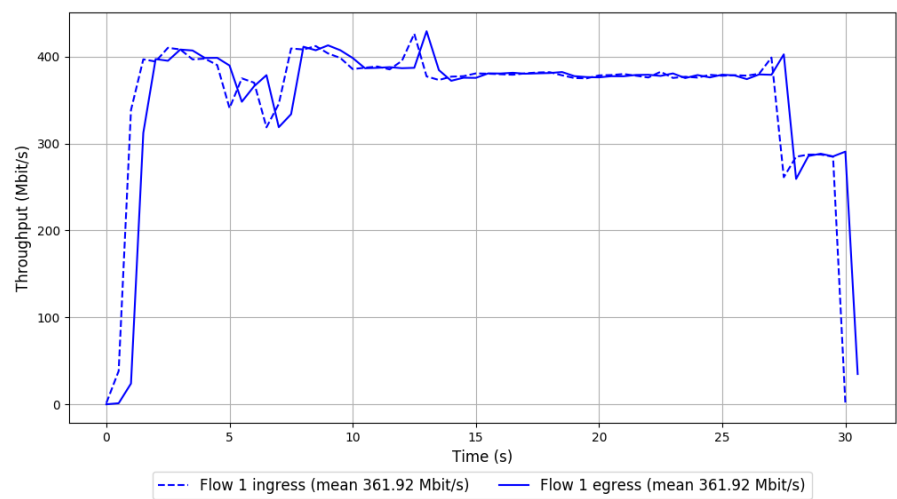
-- Flow 1:

Average throughput: 361.92 Mbit/s

95th percentile per-packet one-way delay: 55.445 ms

Loss rate: 0.00%

Run 2: Report of Copa — Data Link

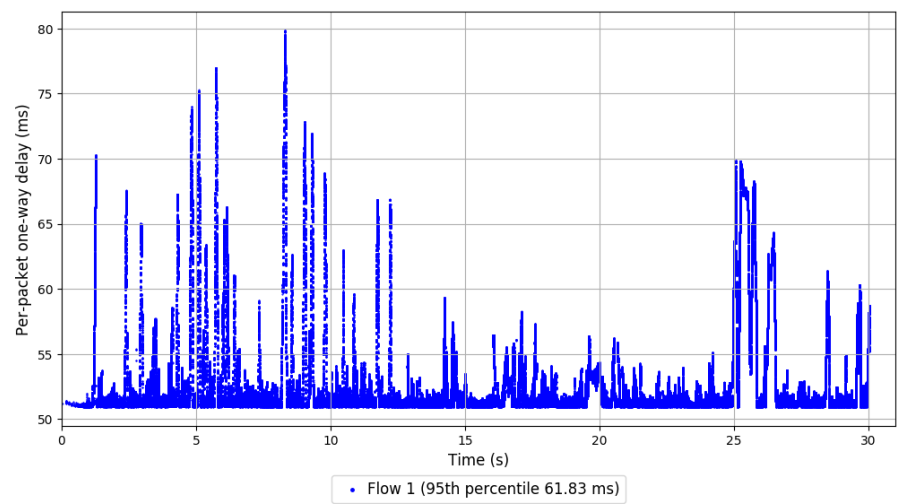
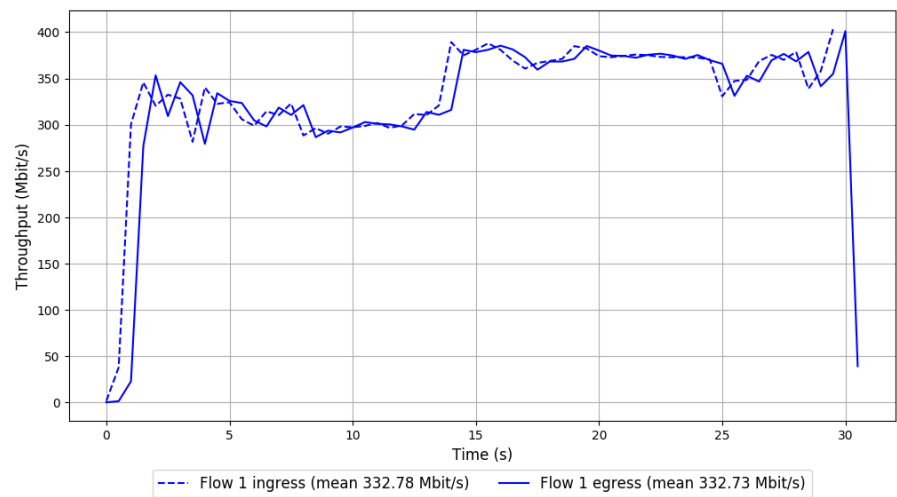


Run 3: Statistics of Copa

Start at: 2018-10-10 12:17:43
End at: 2018-10-10 12:18:13
Local clock offset: -0.521 ms
Remote clock offset: -0.048 ms

Below is generated by plot.py at 2018-10-10 13:43:40
Datalink statistics
-- Total of 1 flow:
Average throughput: 332.73 Mbit/s
95th percentile per-packet one-way delay: 61.832 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 332.73 Mbit/s
95th percentile per-packet one-way delay: 61.832 ms
Loss rate: 0.01%

Run 3: Report of Copa — Data Link

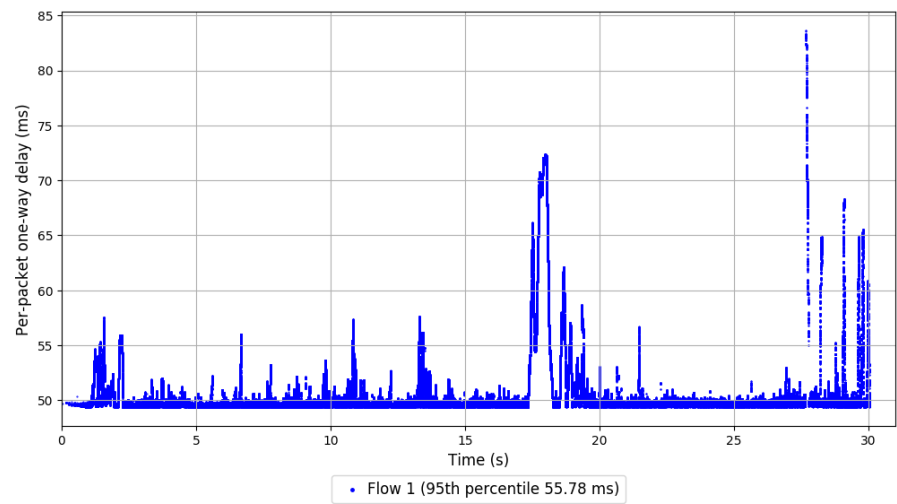
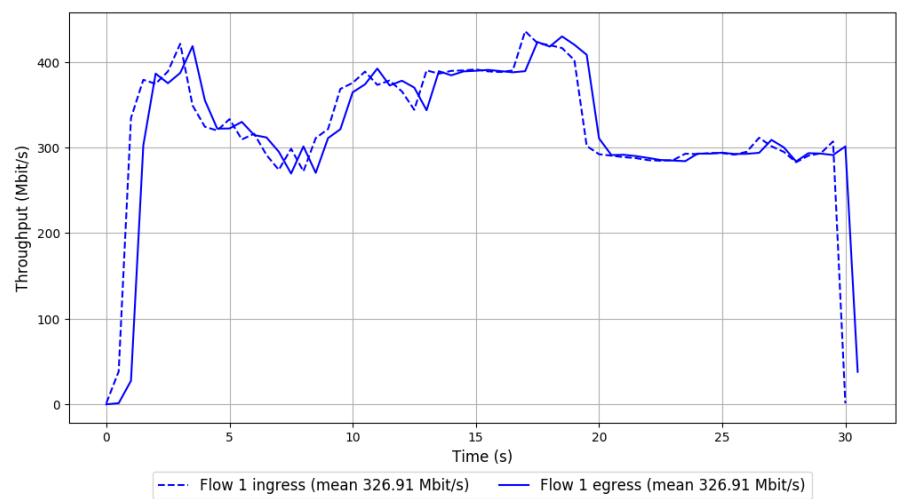


Run 4: Statistics of Copa

Start at: 2018-10-10 12:43:15
End at: 2018-10-10 12:43:45
Local clock offset: -0.099 ms
Remote clock offset: -0.116 ms

Below is generated by plot.py at 2018-10-10 13:53:18
Datalink statistics
-- Total of 1 flow:
Average throughput: 326.91 Mbit/s
95th percentile per-packet one-way delay: 55.777 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 326.91 Mbit/s
95th percentile per-packet one-way delay: 55.777 ms
Loss rate: 0.00%

Run 4: Report of Copa — Data Link

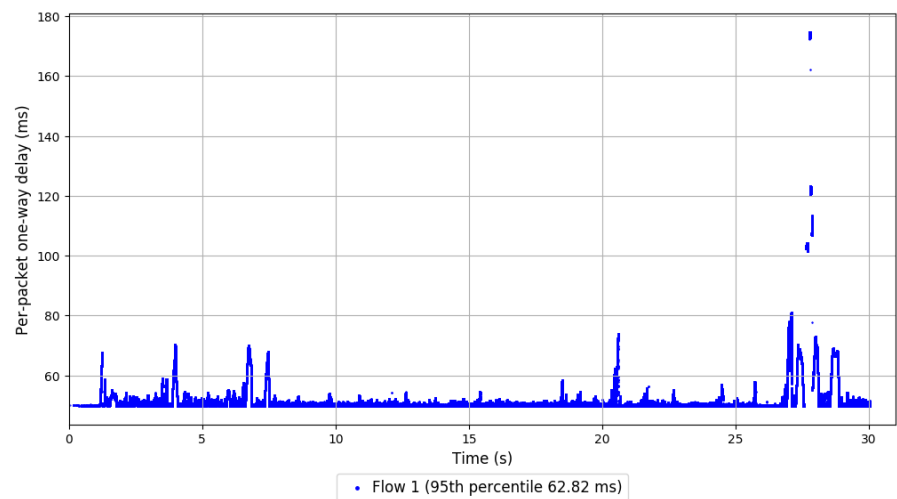
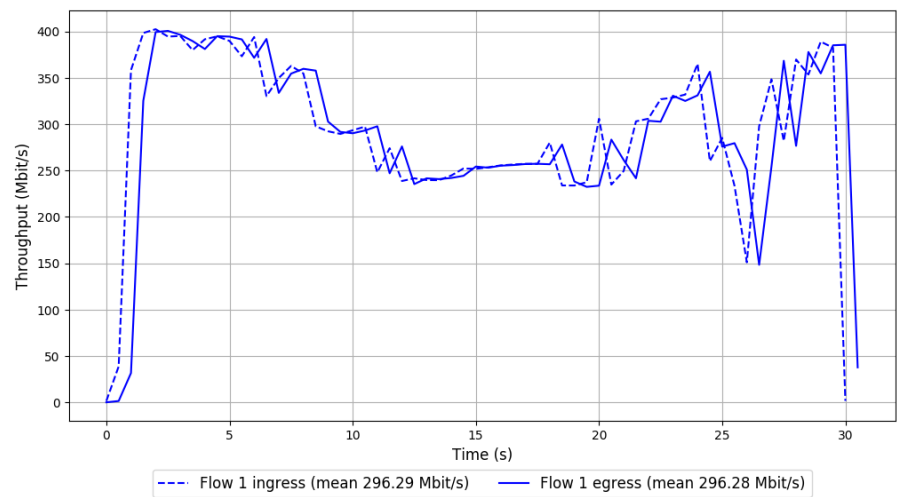


Run 5: Statistics of Copa

Start at: 2018-10-10 13:08:51
End at: 2018-10-10 13:09:21
Local clock offset: -0.578 ms
Remote clock offset: -0.226 ms

Below is generated by plot.py at 2018-10-10 13:53:18
Datalink statistics
-- Total of 1 flow:
Average throughput: 296.28 Mbit/s
95th percentile per-packet one-way delay: 62.818 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 296.28 Mbit/s
95th percentile per-packet one-way delay: 62.818 ms
Loss rate: 0.00%

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-10-10 11:29:22

End at: 2018-10-10 11:29:52

Local clock offset: -0.584 ms

Remote clock offset: 0.01 ms

Below is generated by plot.py at 2018-10-10 13:53:48

Datalink statistics

-- Total of 1 flow:

Average throughput: 633.95 Mbit/s

95th percentile per-packet one-way delay: 65.182 ms

Loss rate: 0.00%

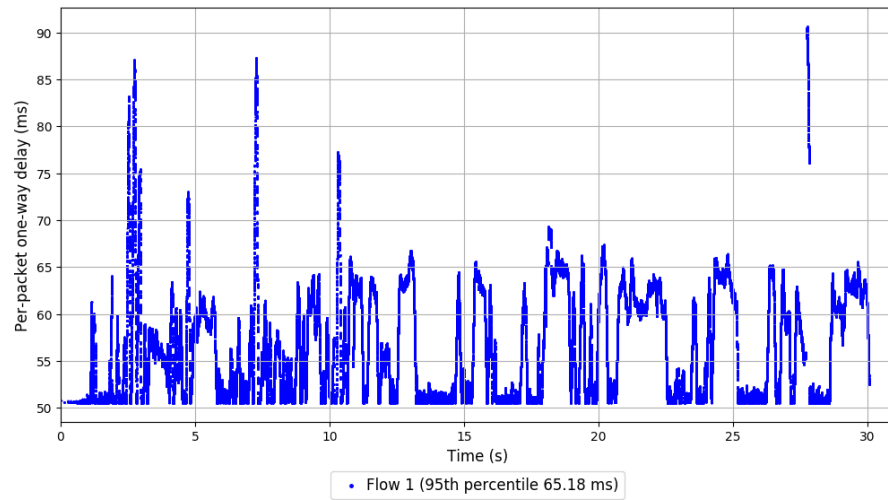
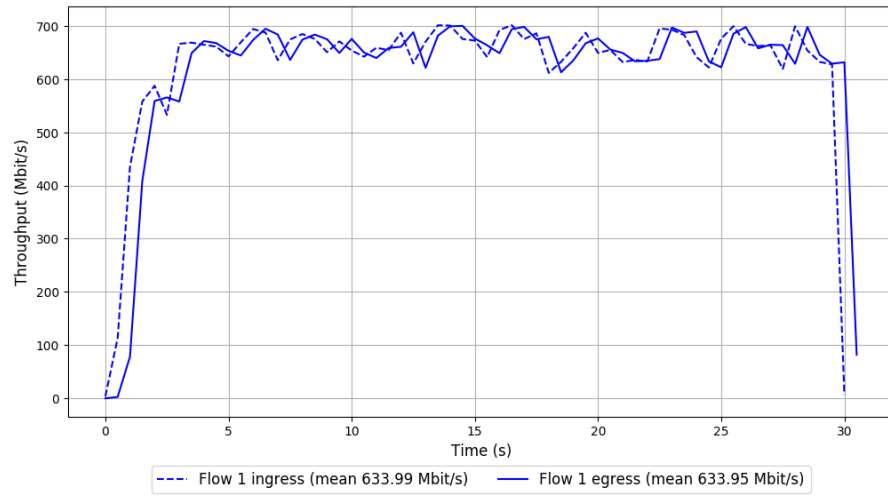
-- Flow 1:

Average throughput: 633.95 Mbit/s

95th percentile per-packet one-way delay: 65.182 ms

Loss rate: 0.00%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-10-10 11:55:03

End at: 2018-10-10 11:55:33

Local clock offset: -0.14 ms

Remote clock offset: 0.055 ms

Below is generated by plot.py at 2018-10-10 13:53:48

Datalink statistics

-- Total of 1 flow:

Average throughput: 558.45 Mbit/s

95th percentile per-packet one-way delay: 59.837 ms

Loss rate: 0.00%

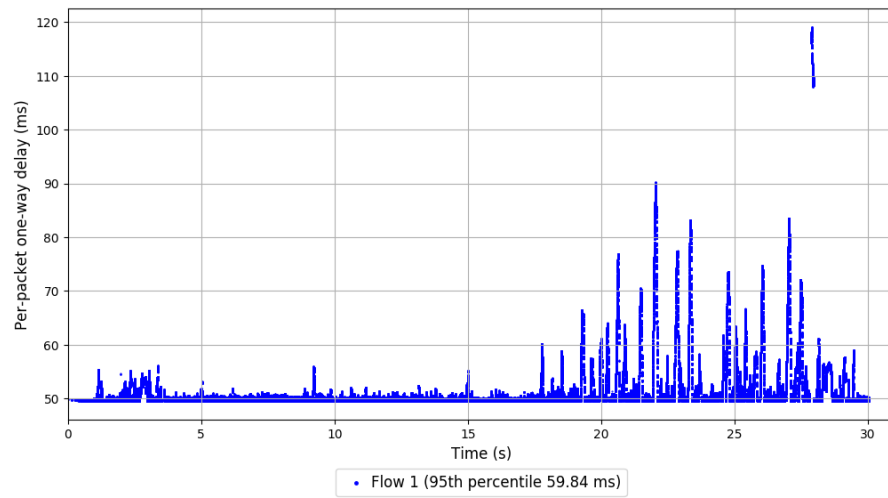
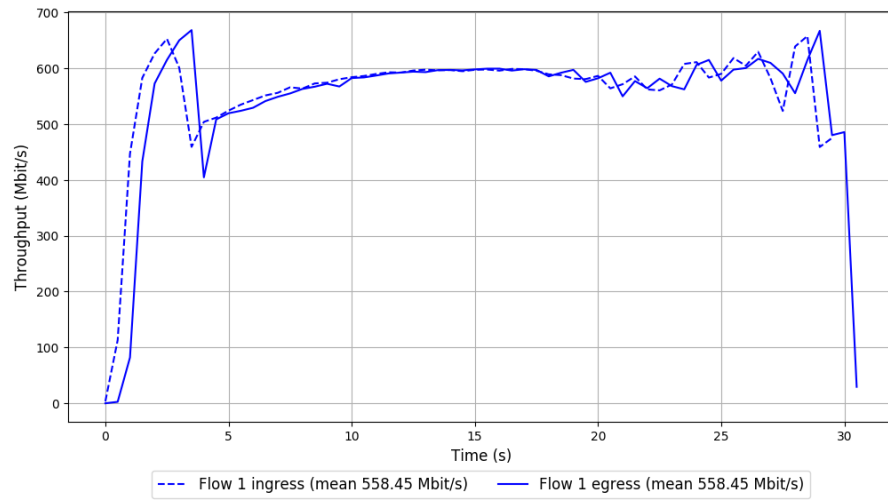
-- Flow 1:

Average throughput: 558.45 Mbit/s

95th percentile per-packet one-way delay: 59.837 ms

Loss rate: 0.00%

Run 2: Report of TCP Cubic — Data Link

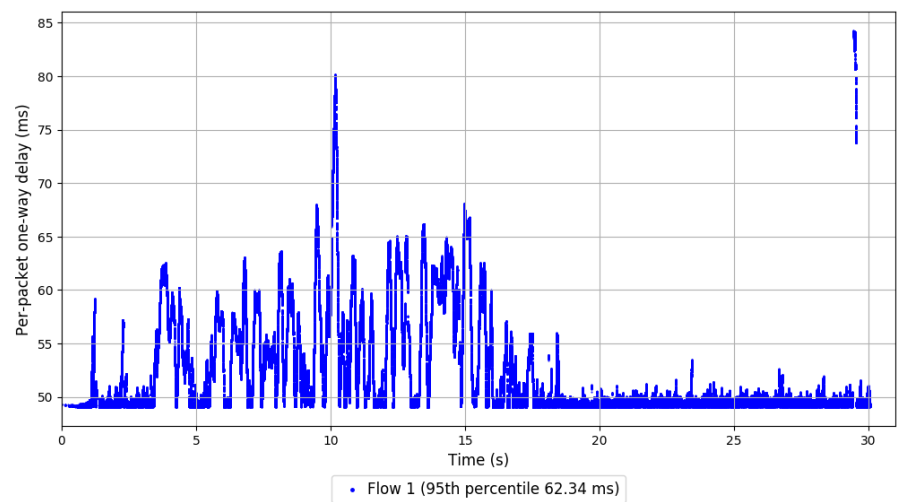
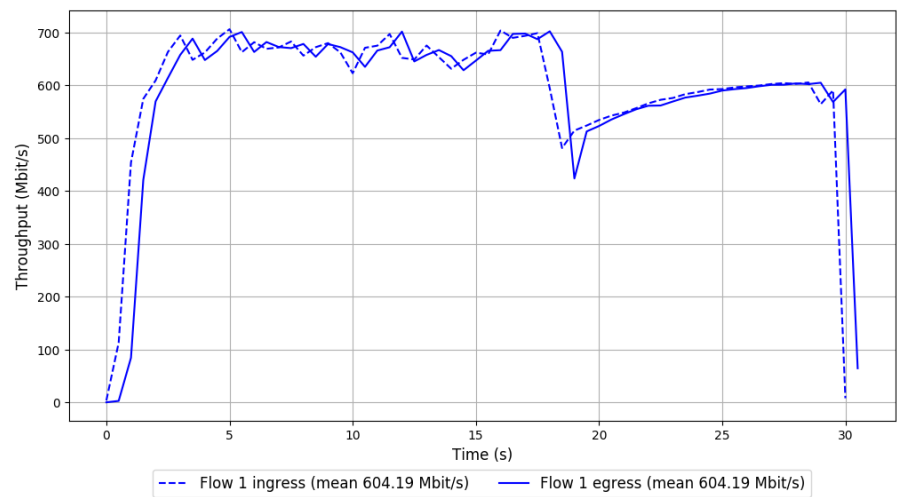


Run 3: Statistics of TCP Cubic

Start at: 2018-10-10 12:20:26
End at: 2018-10-10 12:20:56
Local clock offset: 0.214 ms
Remote clock offset: -0.069 ms

Below is generated by plot.py at 2018-10-10 13:53:48
Datalink statistics
-- Total of 1 flow:
Average throughput: 604.19 Mbit/s
95th percentile per-packet one-way delay: 62.344 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 604.19 Mbit/s
95th percentile per-packet one-way delay: 62.344 ms
Loss rate: 0.00%

Run 3: Report of TCP Cubic — Data Link

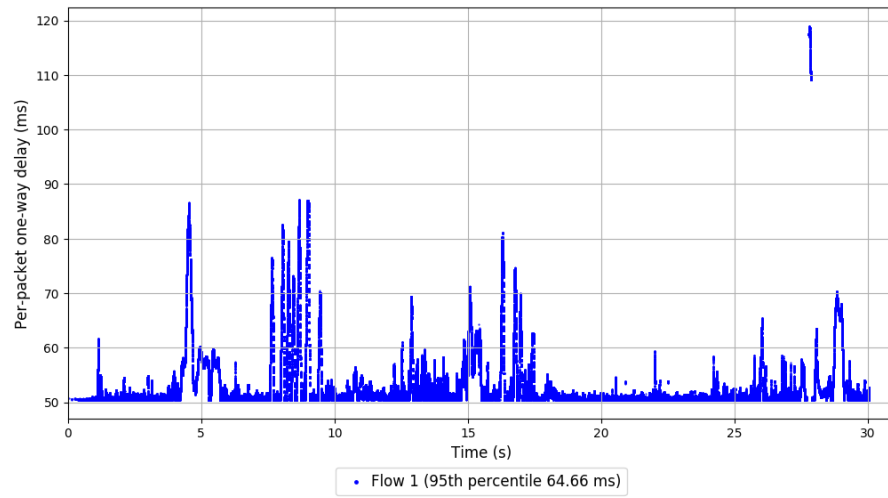
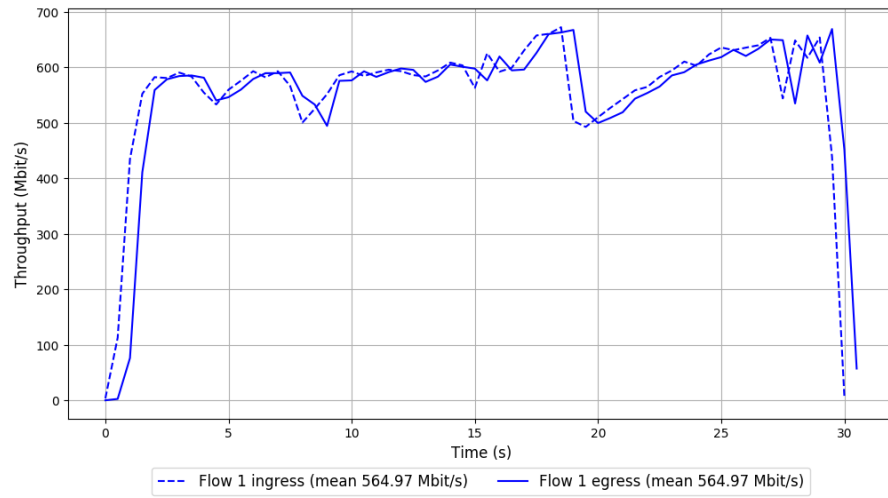


Run 4: Statistics of TCP Cubic

Start at: 2018-10-10 12:45:57
End at: 2018-10-10 12:46:27
Local clock offset: -0.147 ms
Remote clock offset: -0.143 ms

Below is generated by plot.py at 2018-10-10 13:53:48
Datalink statistics
-- Total of 1 flow:
Average throughput: 564.97 Mbit/s
95th percentile per-packet one-way delay: 64.659 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 564.97 Mbit/s
95th percentile per-packet one-way delay: 64.659 ms
Loss rate: 0.00%

Run 4: Report of TCP Cubic — Data Link

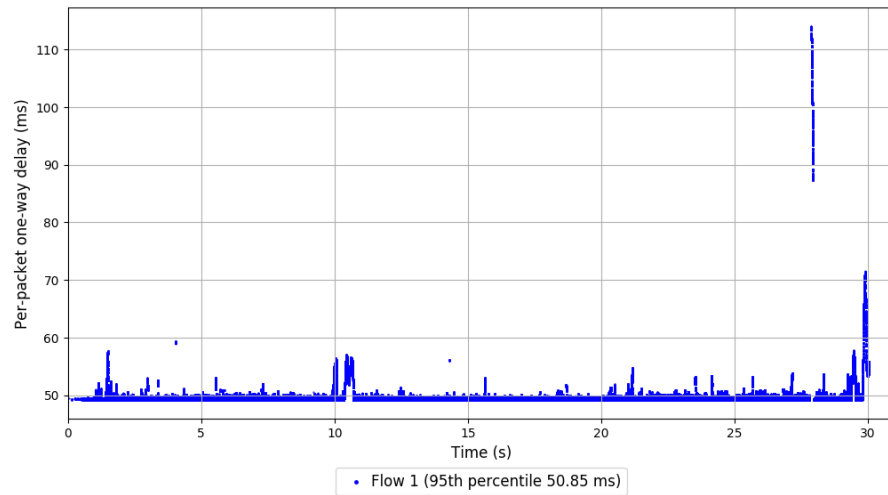
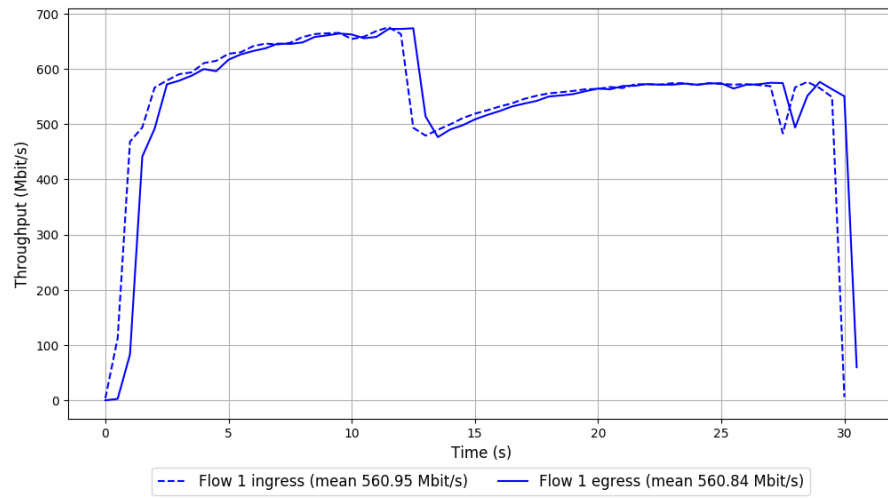


Run 5: Statistics of TCP Cubic

Start at: 2018-10-10 13:11:31
End at: 2018-10-10 13:12:01
Local clock offset: 0.129 ms
Remote clock offset: -0.199 ms

Below is generated by plot.py at 2018-10-10 13:53:48
Datalink statistics
-- Total of 1 flow:
Average throughput: 560.84 Mbit/s
95th percentile per-packet one-way delay: 50.854 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 560.84 Mbit/s
95th percentile per-packet one-way delay: 50.854 ms
Loss rate: 0.02%

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2018-10-10 11:21:54

End at: 2018-10-10 11:22:24

Local clock offset: -0.186 ms

Remote clock offset: 0.111 ms

Below is generated by plot.py at 2018-10-10 14:03:34

Datalink statistics

-- Total of 1 flow:

Average throughput: 935.51 Mbit/s

95th percentile per-packet one-way delay: 95.295 ms

Loss rate: 0.80%

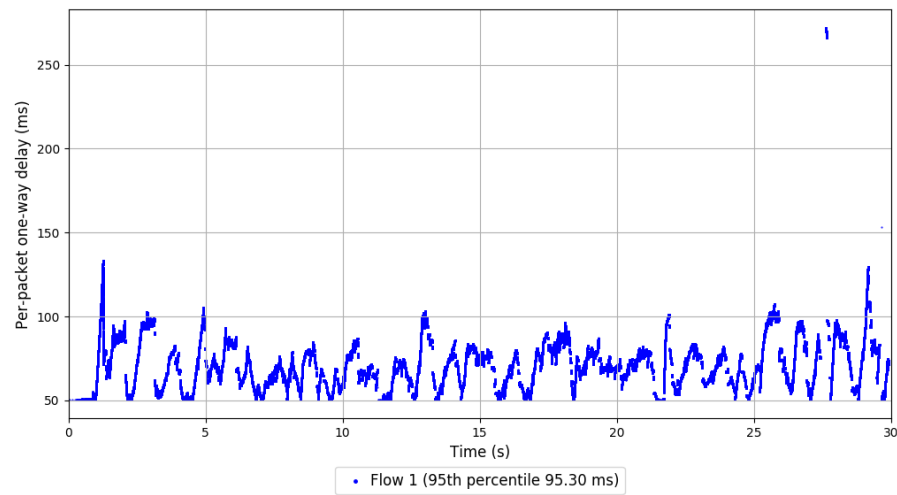
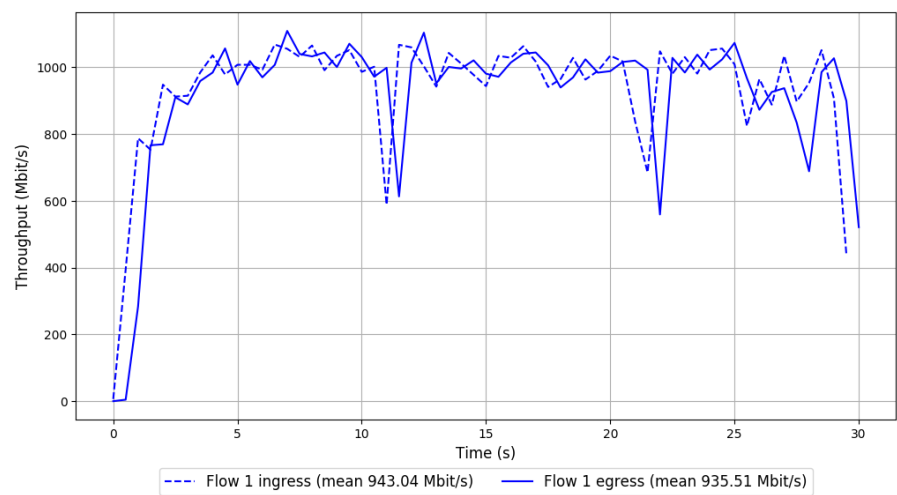
-- Flow 1:

Average throughput: 935.51 Mbit/s

95th percentile per-packet one-way delay: 95.295 ms

Loss rate: 0.80%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-10-10 11:47:42

End at: 2018-10-10 11:48:12

Local clock offset: -0.169 ms

Remote clock offset: 0.08 ms

Below is generated by plot.py at 2018-10-10 14:11:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 850.49 Mbit/s

95th percentile per-packet one-way delay: 105.353 ms

Loss rate: 0.84%

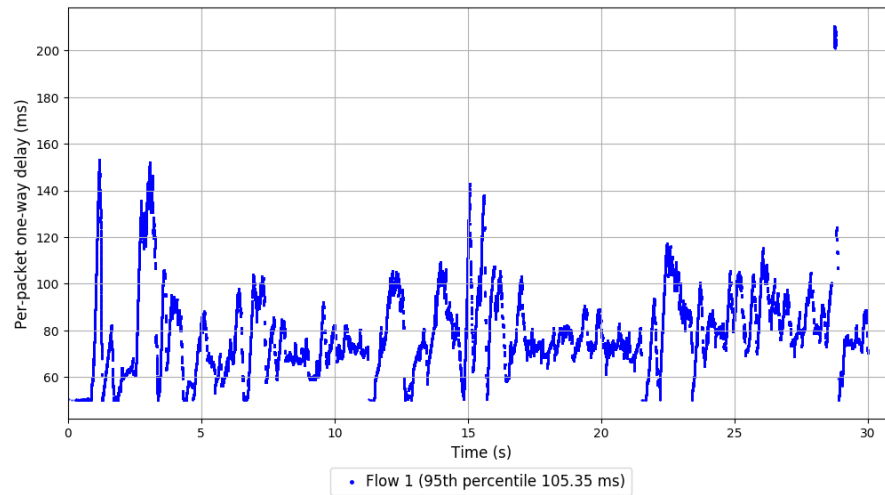
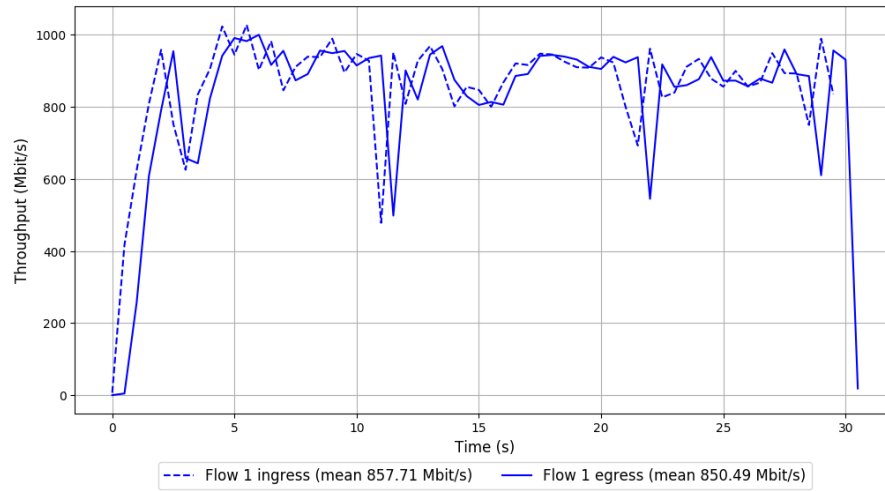
-- Flow 1:

Average throughput: 850.49 Mbit/s

95th percentile per-packet one-way delay: 105.353 ms

Loss rate: 0.84%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-10-10 12:13:11

End at: 2018-10-10 12:13:41

Local clock offset: -0.123 ms

Remote clock offset: -0.01 ms

Below is generated by plot.py at 2018-10-10 14:11:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 835.29 Mbit/s

95th percentile per-packet one-way delay: 99.690 ms

Loss rate: 0.14%

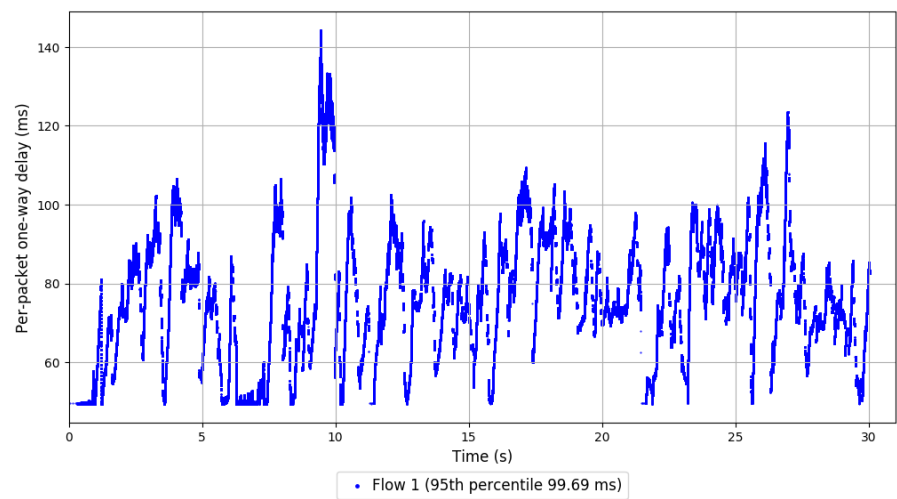
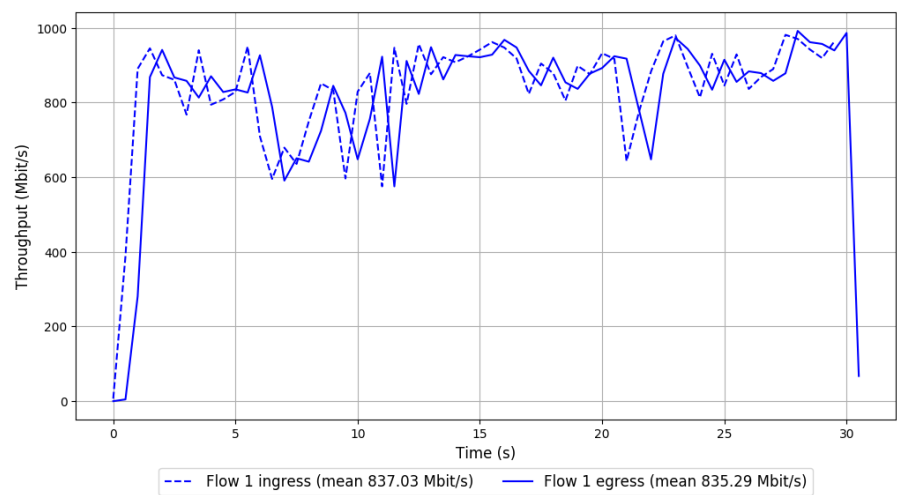
-- Flow 1:

Average throughput: 835.29 Mbit/s

95th percentile per-packet one-way delay: 99.690 ms

Loss rate: 0.14%

Run 3: Report of FillP — Data Link

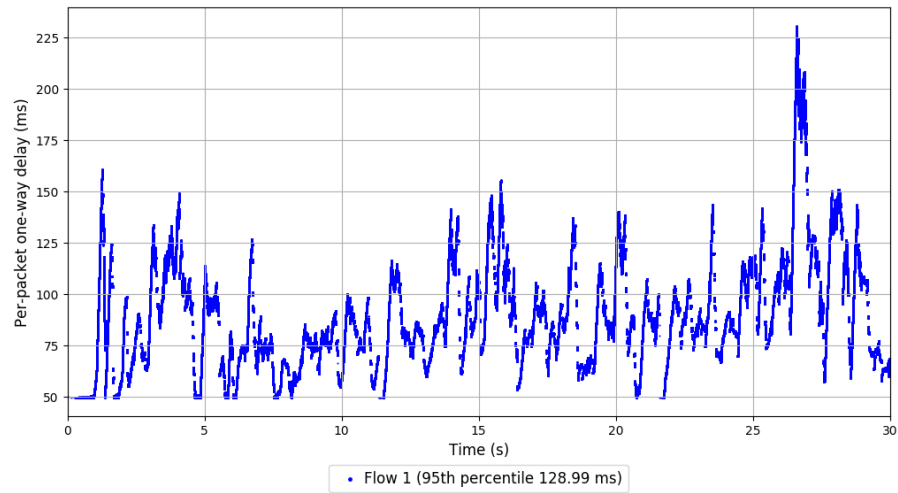
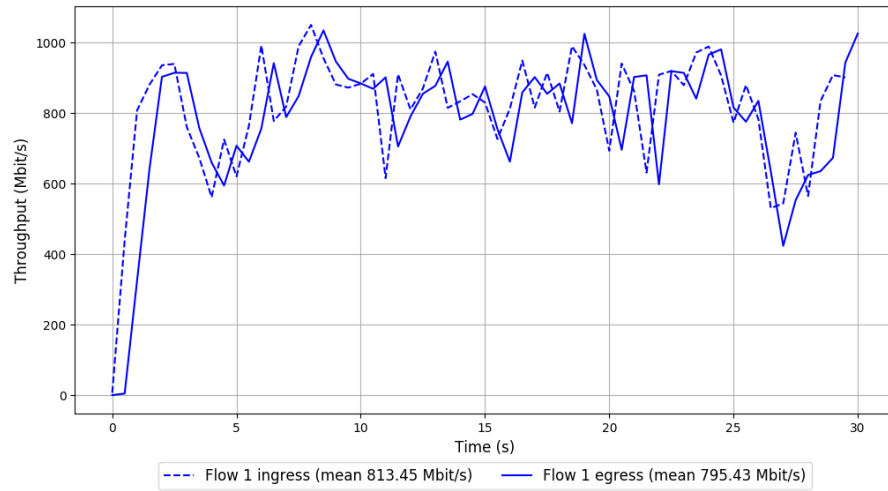


Run 4: Statistics of FillP

Start at: 2018-10-10 12:38:39
End at: 2018-10-10 12:39:09
Local clock offset: -0.127 ms
Remote clock offset: -0.104 ms

Below is generated by plot.py at 2018-10-10 14:11:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 795.43 Mbit/s
95th percentile per-packet one-way delay: 128.993 ms
Loss rate: 2.21%
-- Flow 1:
Average throughput: 795.43 Mbit/s
95th percentile per-packet one-way delay: 128.993 ms
Loss rate: 2.21%

Run 4: Report of FillP — Data Link

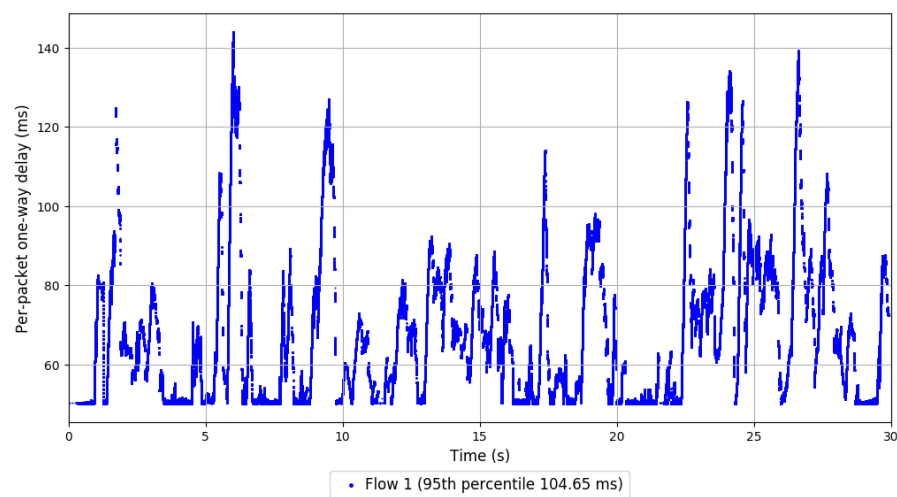
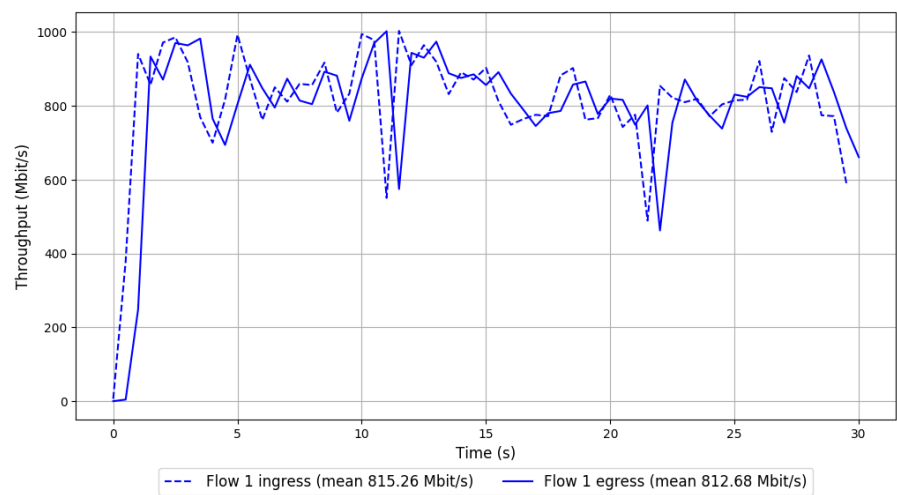


Run 5: Statistics of FillP

Start at: 2018-10-10 13:04:16
End at: 2018-10-10 13:04:46
Local clock offset: -0.199 ms
Remote clock offset: -0.193 ms

Below is generated by plot.py at 2018-10-10 14:11:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 812.68 Mbit/s
95th percentile per-packet one-way delay: 104.650 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 812.68 Mbit/s
95th percentile per-packet one-way delay: 104.650 ms
Loss rate: 0.32%

Run 5: Report of FillP — Data Link

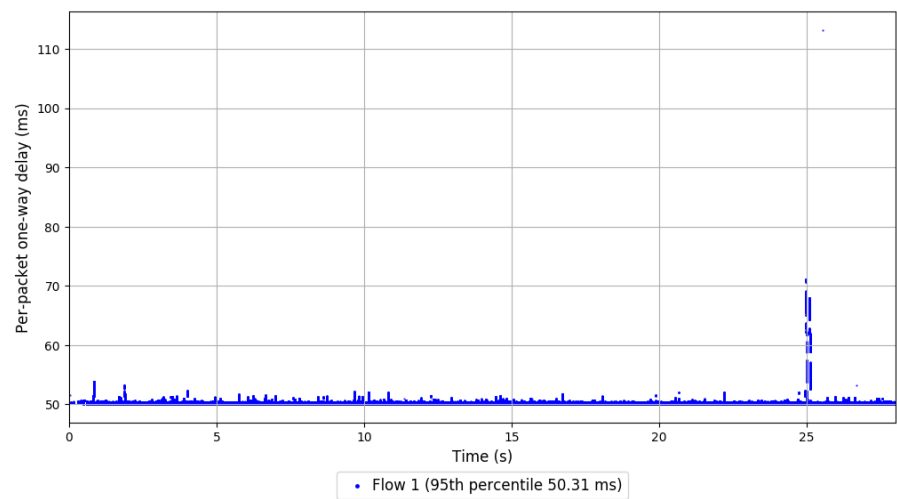
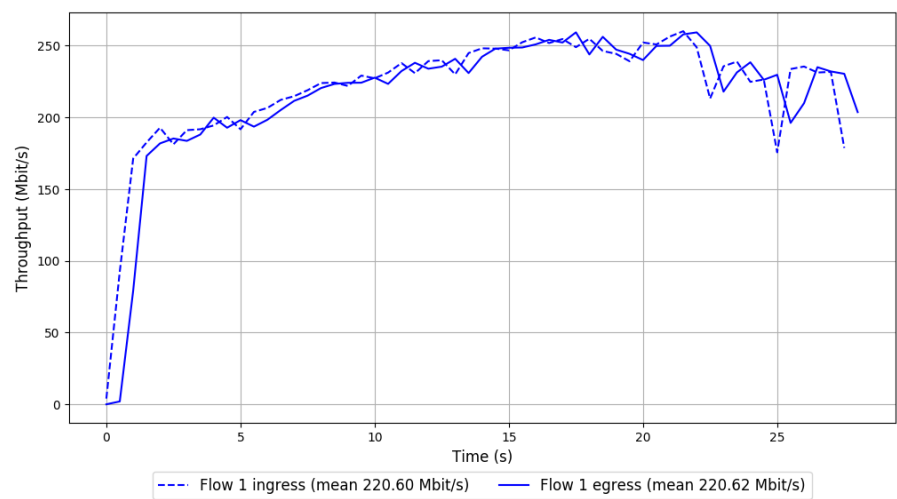


```
Run 1: Statistics of Indigo

Start at: 2018-10-10 11:39:00
End at: 2018-10-10 11:39:30
Local clock offset: -0.162 ms
Remote clock offset: 0.045 ms

# Below is generated by plot.py at 2018-10-10 14:11:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 220.62 Mbit/s
95th percentile per-packet one-way delay: 50.313 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 220.62 Mbit/s
95th percentile per-packet one-way delay: 50.313 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2018-10-10 12:04:37

End at: 2018-10-10 12:05:07

Local clock offset: -0.5 ms

Remote clock offset: 0.061 ms

Below is generated by plot.py at 2018-10-10 14:11:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 223.46 Mbit/s

95th percentile per-packet one-way delay: 50.856 ms

Loss rate: 0.00%

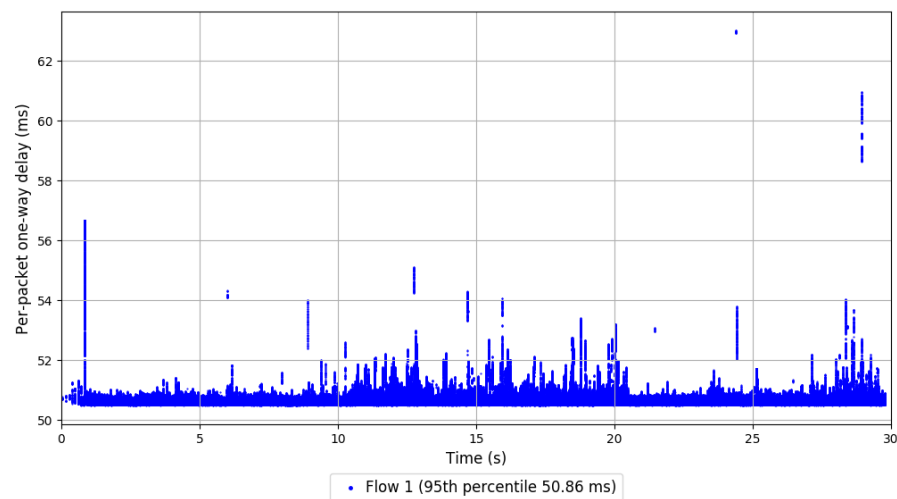
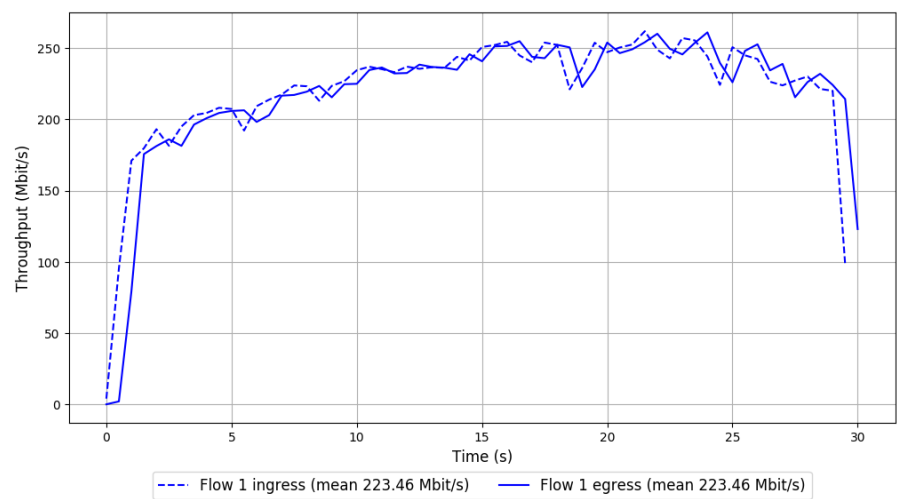
-- Flow 1:

Average throughput: 223.46 Mbit/s

95th percentile per-packet one-way delay: 50.856 ms

Loss rate: 0.00%

Run 2: Report of Indigo — Data Link

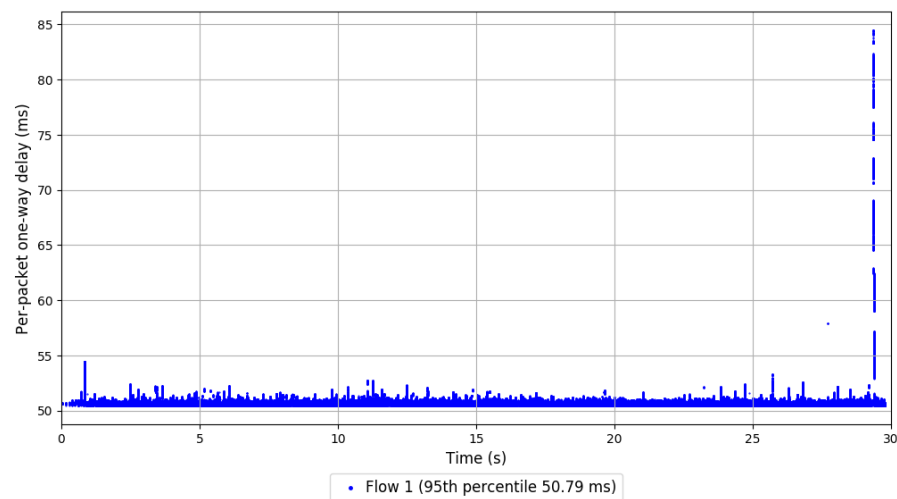
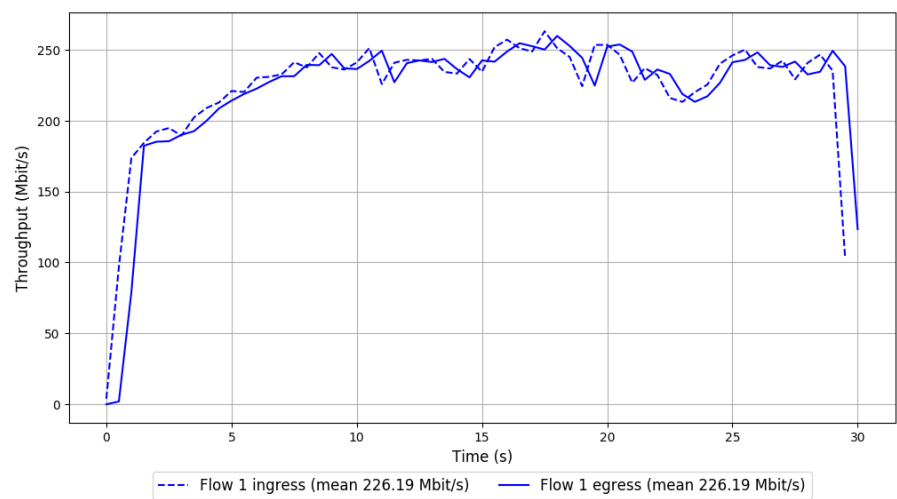


Run 3: Statistics of Indigo

Start at: 2018-10-10 12:30:02
End at: 2018-10-10 12:30:32
Local clock offset: -0.149 ms
Remote clock offset: -0.127 ms

Below is generated by plot.py at 2018-10-10 14:11:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 226.19 Mbit/s
95th percentile per-packet one-way delay: 50.791 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 226.19 Mbit/s
95th percentile per-packet one-way delay: 50.791 ms
Loss rate: 0.00%

Run 3: Report of Indigo — Data Link

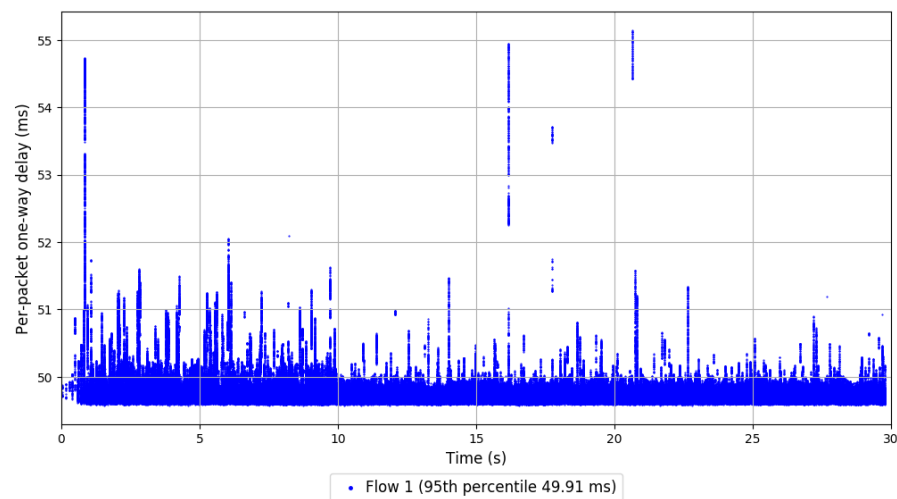
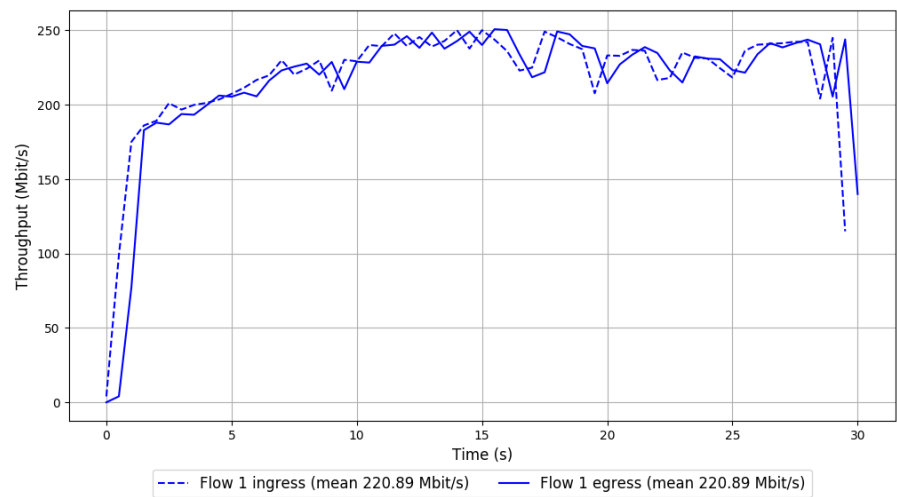


Run 4: Statistics of Indigo

Start at: 2018-10-10 12:55:30
End at: 2018-10-10 12:56:00
Local clock offset: -0.206 ms
Remote clock offset: -0.192 ms

Below is generated by plot.py at 2018-10-10 14:11:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 220.89 Mbit/s
95th percentile per-packet one-way delay: 49.905 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 220.89 Mbit/s
95th percentile per-packet one-way delay: 49.905 ms
Loss rate: 0.00%

Run 4: Report of Indigo — Data Link

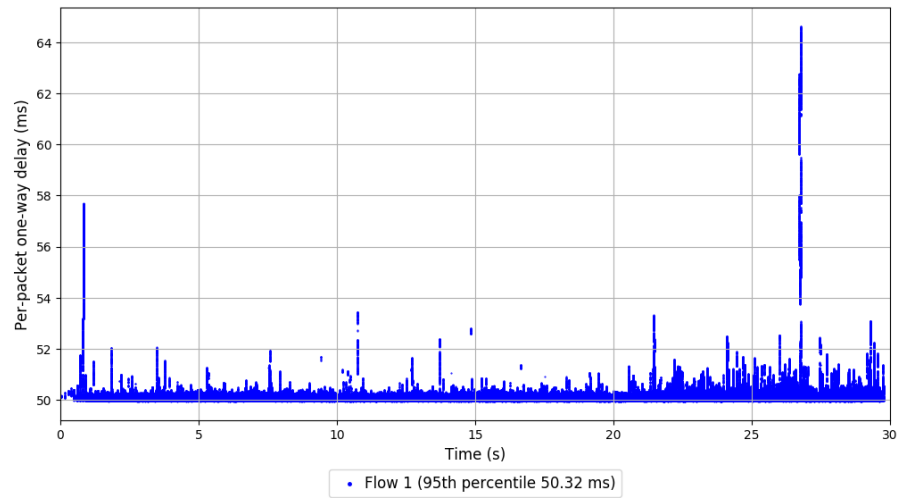
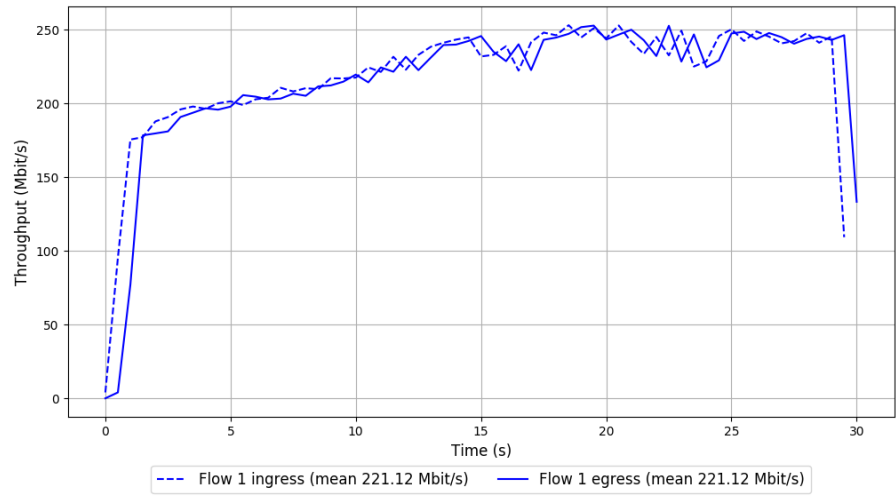


Run 5: Statistics of Indigo

Start at: 2018-10-10 13:21:04
End at: 2018-10-10 13:21:35
Local clock offset: -0.581 ms
Remote clock offset: -0.146 ms

Below is generated by plot.py at 2018-10-10 14:11:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 221.12 Mbit/s
95th percentile per-packet one-way delay: 50.322 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 221.12 Mbit/s
95th percentile per-packet one-way delay: 50.322 ms
Loss rate: 0.00%

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-96d2da3

Start at: 2018-10-10 11:31:00

End at: 2018-10-10 11:31:30

Local clock offset: -0.183 ms

Remote clock offset: 0.039 ms

Below is generated by plot.py at 2018-10-10 14:11:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 265.80 Mbit/s

95th percentile per-packet one-way delay: 62.854 ms

Loss rate: 0.00%

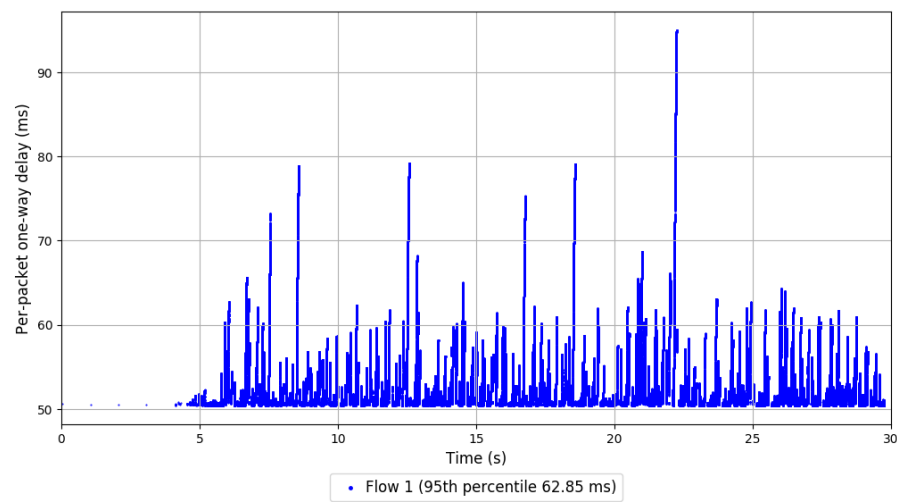
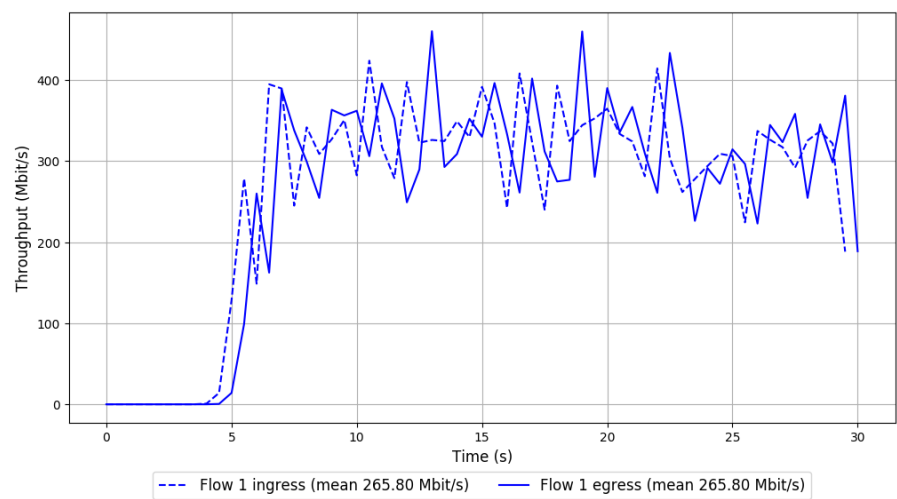
-- Flow 1:

Average throughput: 265.80 Mbit/s

95th percentile per-packet one-way delay: 62.854 ms

Loss rate: 0.00%

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



Run 2: Statistics of Indigo-96d2da3

Start at: 2018-10-10 11:56:36

End at: 2018-10-10 11:57:06

Local clock offset: -0.135 ms

Remote clock offset: 0.095 ms

Below is generated by plot.py at 2018-10-10 14:11:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 291.51 Mbit/s

95th percentile per-packet one-way delay: 70.968 ms

Loss rate: 0.01%

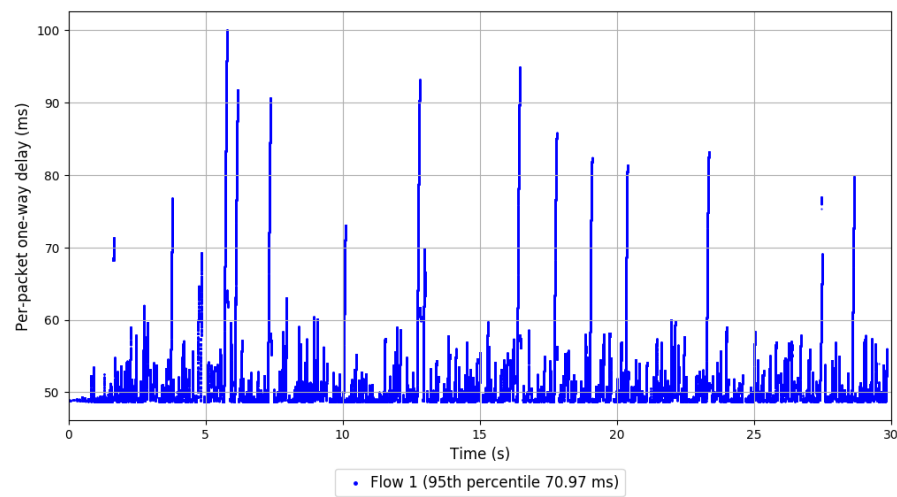
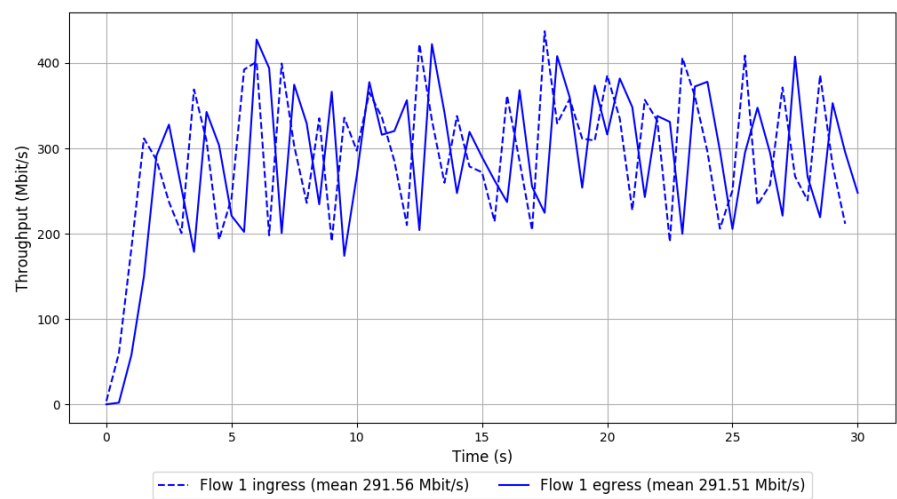
-- Flow 1:

Average throughput: 291.51 Mbit/s

95th percentile per-packet one-way delay: 70.968 ms

Loss rate: 0.01%

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

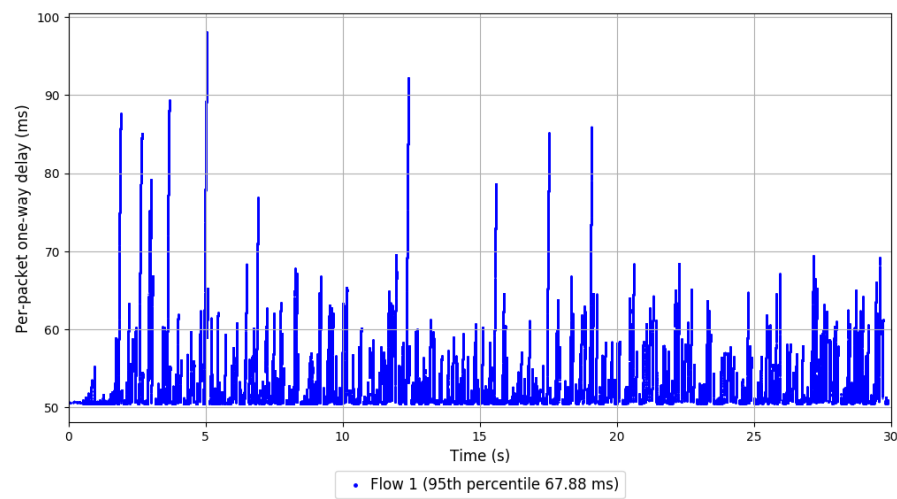
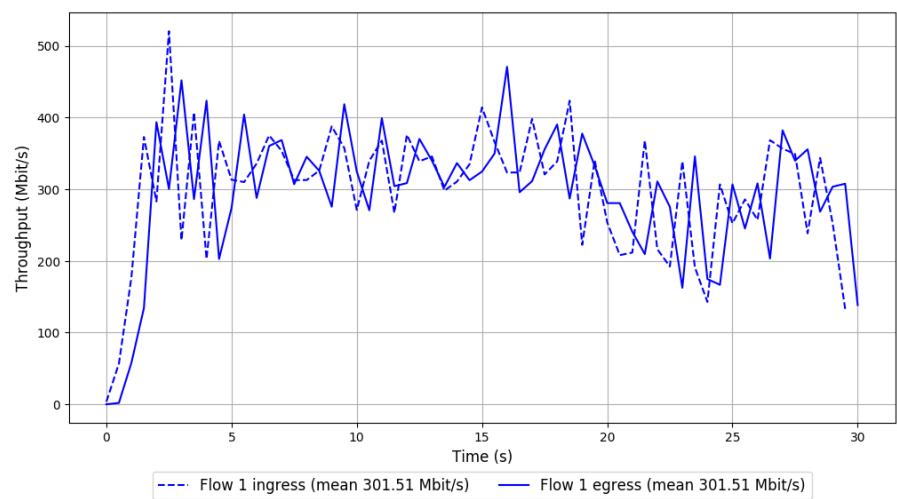


Run 3: Statistics of Indigo-96d2da3

Start at: 2018-10-10 12:22:01
End at: 2018-10-10 12:22:31
Local clock offset: -0.488 ms
Remote clock offset: -0.082 ms

Below is generated by plot.py at 2018-10-10 14:13:07
Datalink statistics
-- Total of 1 flow:
Average throughput: 301.51 Mbit/s
95th percentile per-packet one-way delay: 67.883 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 301.51 Mbit/s
95th percentile per-packet one-way delay: 67.883 ms
Loss rate: 0.00%

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

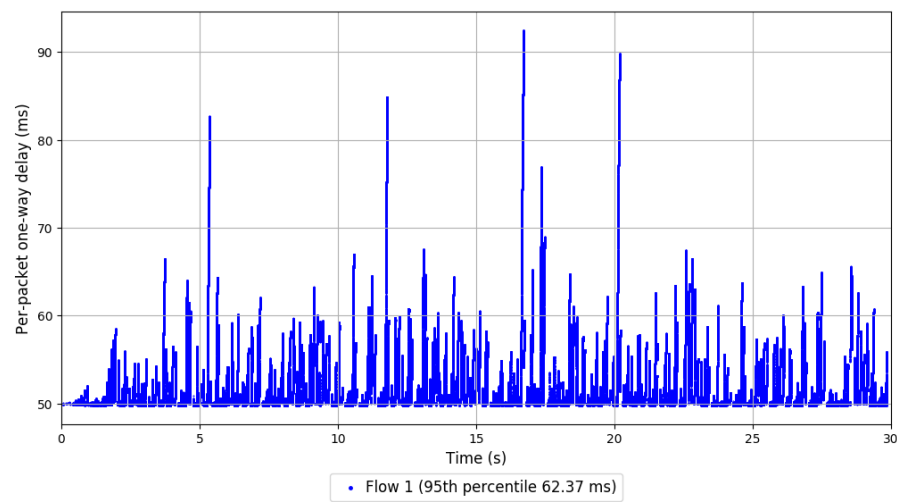
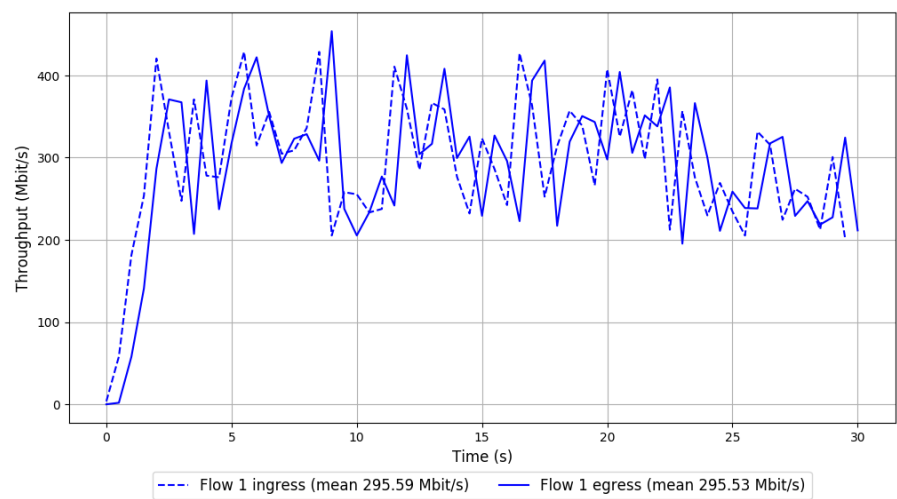


Run 4: Statistics of Indigo-96d2da3

Start at: 2018-10-10 12:47:30
End at: 2018-10-10 12:48:00
Local clock offset: 0.187 ms
Remote clock offset: -0.189 ms

Below is generated by plot.py at 2018-10-10 14:14:23
Datalink statistics
-- Total of 1 flow:
Average throughput: 295.53 Mbit/s
95th percentile per-packet one-way delay: 62.366 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 295.53 Mbit/s
95th percentile per-packet one-way delay: 62.366 ms
Loss rate: 0.00%

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

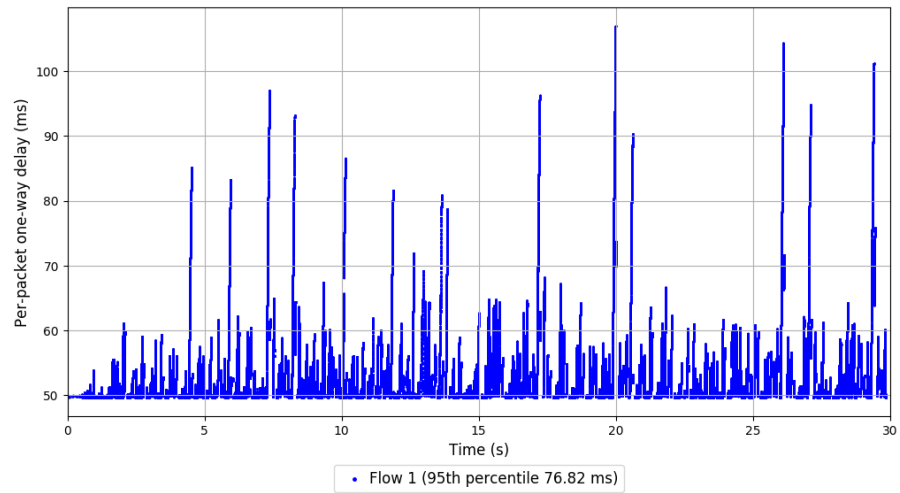
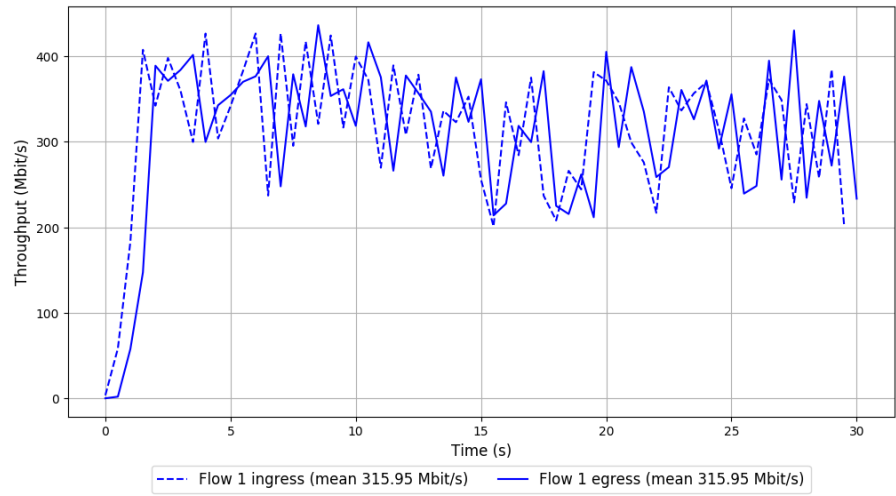


Run 5: Statistics of Indigo-96d2da3

Start at: 2018-10-10 13:13:04
End at: 2018-10-10 13:13:34
Local clock offset: -0.209 ms
Remote clock offset: -0.233 ms

Below is generated by plot.py at 2018-10-10 14:15:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 315.95 Mbit/s
95th percentile per-packet one-way delay: 76.817 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 315.95 Mbit/s
95th percentile per-packet one-way delay: 76.817 ms
Loss rate: 0.00%

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

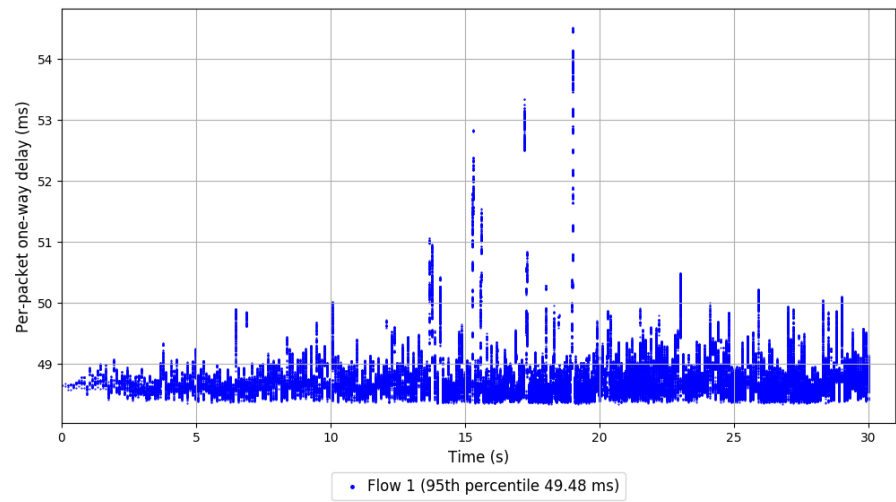
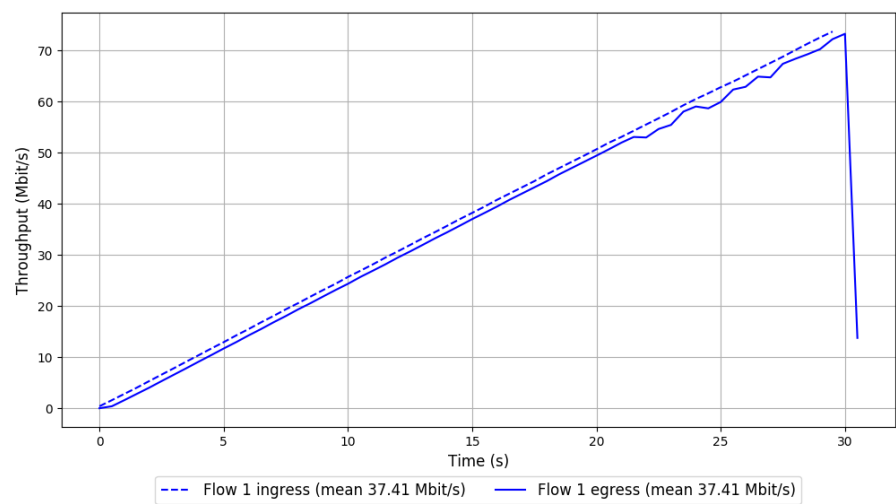


```
Run 1: Statistics of LEDBAT

Start at: 2018-10-10 11:35:05
End at: 2018-10-10 11:35:35
Local clock offset: 0.154 ms
Remote clock offset: 0.075 ms

# Below is generated by plot.py at 2018-10-10 14:15:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 37.41 Mbit/s
95th percentile per-packet one-way delay: 49.476 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 37.41 Mbit/s
95th percentile per-packet one-way delay: 49.476 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2018-10-10 12:00:42

End at: 2018-10-10 12:01:12

Local clock offset: -0.526 ms

Remote clock offset: 0.072 ms

Below is generated by plot.py at 2018-10-10 14:15:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 36.84 Mbit/s

95th percentile per-packet one-way delay: 50.481 ms

Loss rate: 0.00%

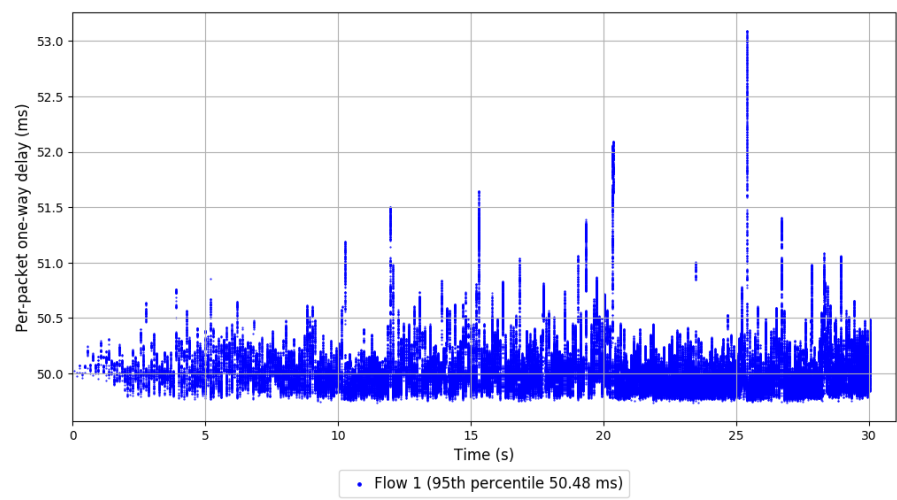
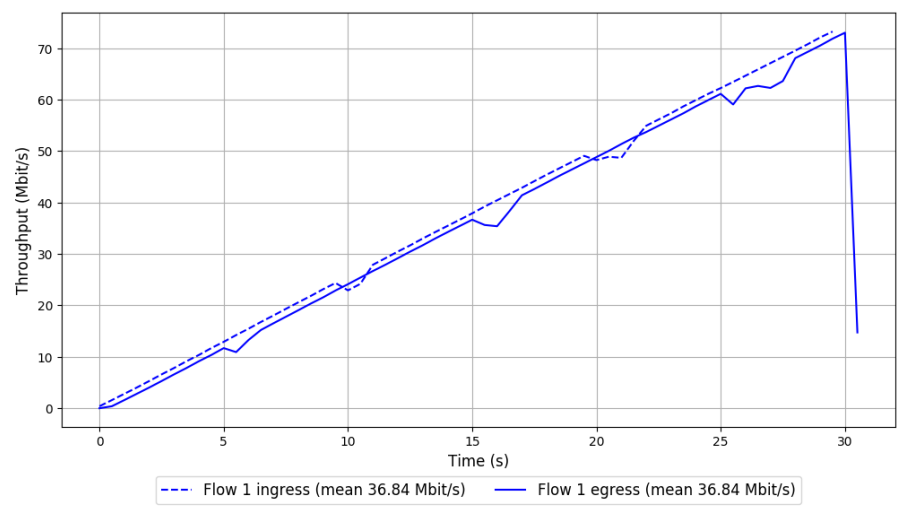
-- Flow 1:

Average throughput: 36.84 Mbit/s

95th percentile per-packet one-way delay: 50.481 ms

Loss rate: 0.00%

Run 2: Report of LEDBAT — Data Link

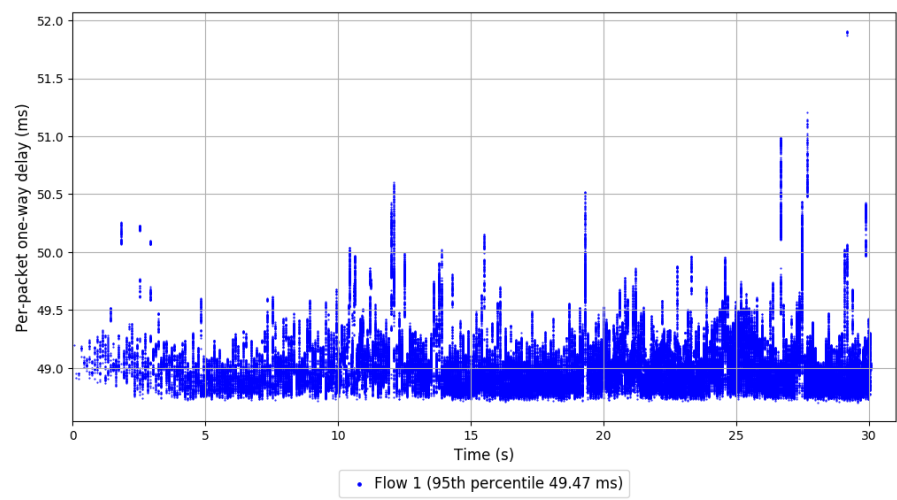
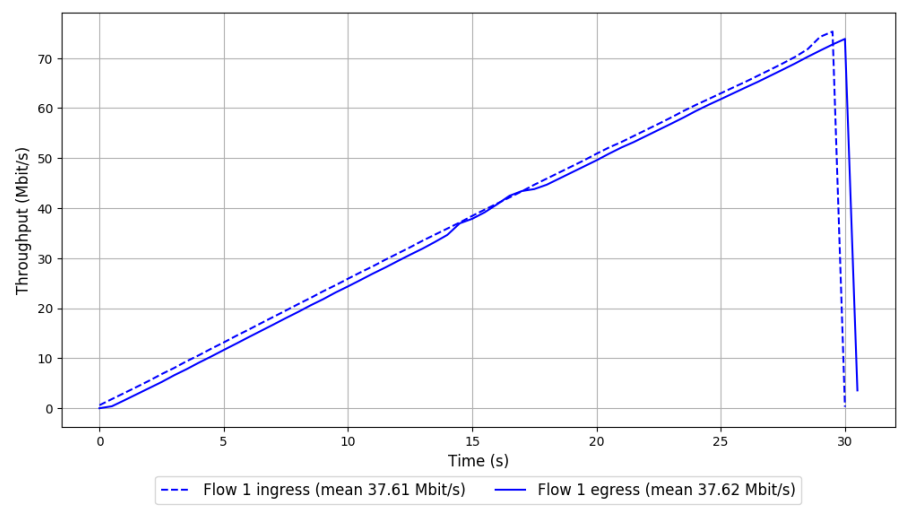


Run 3: Statistics of LEDBAT

Start at: 2018-10-10 12:26:08
End at: 2018-10-10 12:26:38
Local clock offset: -0.134 ms
Remote clock offset: -0.099 ms

Below is generated by plot.py at 2018-10-10 14:15:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 37.62 Mbit/s
95th percentile per-packet one-way delay: 49.470 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 37.62 Mbit/s
95th percentile per-packet one-way delay: 49.470 ms
Loss rate: 0.00%

Run 3: Report of LEDBAT — Data Link

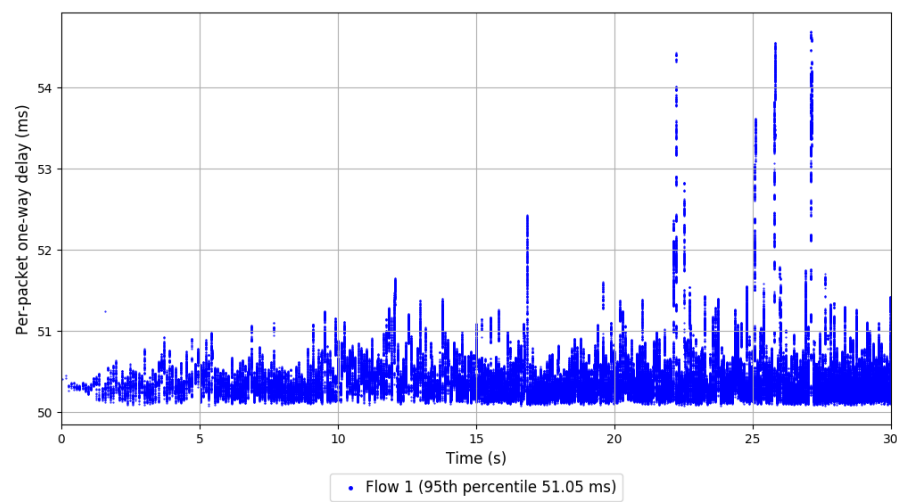
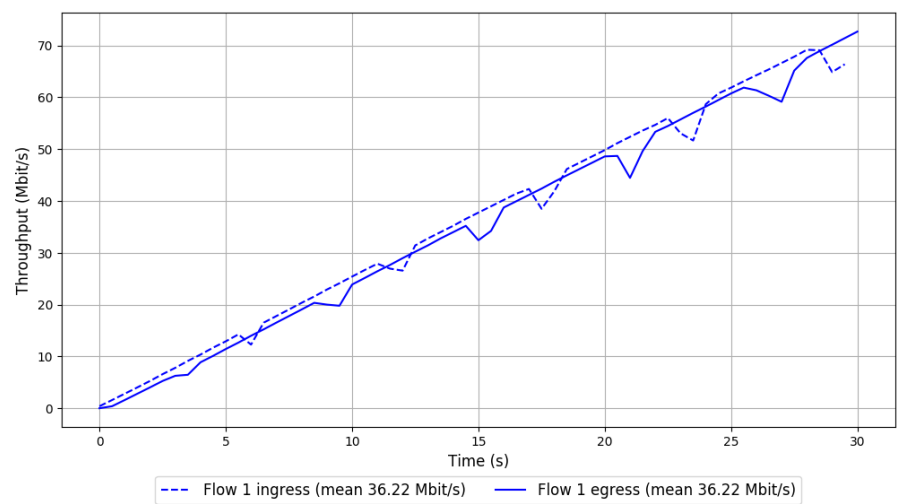


Run 4: Statistics of LEDBAT

Start at: 2018-10-10 12:51:36
End at: 2018-10-10 12:52:06
Local clock offset: -0.184 ms
Remote clock offset: -0.201 ms

Below is generated by plot.py at 2018-10-10 14:15:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 36.22 Mbit/s
95th percentile per-packet one-way delay: 51.049 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 36.22 Mbit/s
95th percentile per-packet one-way delay: 51.049 ms
Loss rate: 0.00%

Run 4: Report of LEDBAT — Data Link

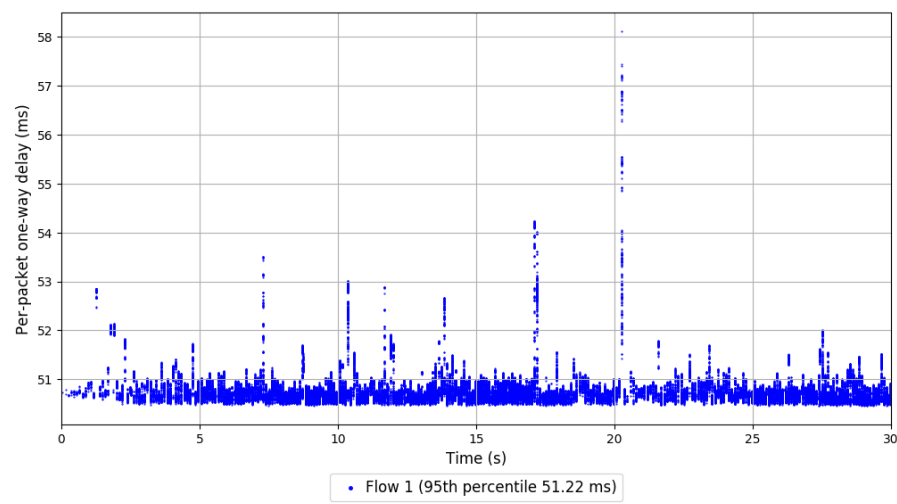
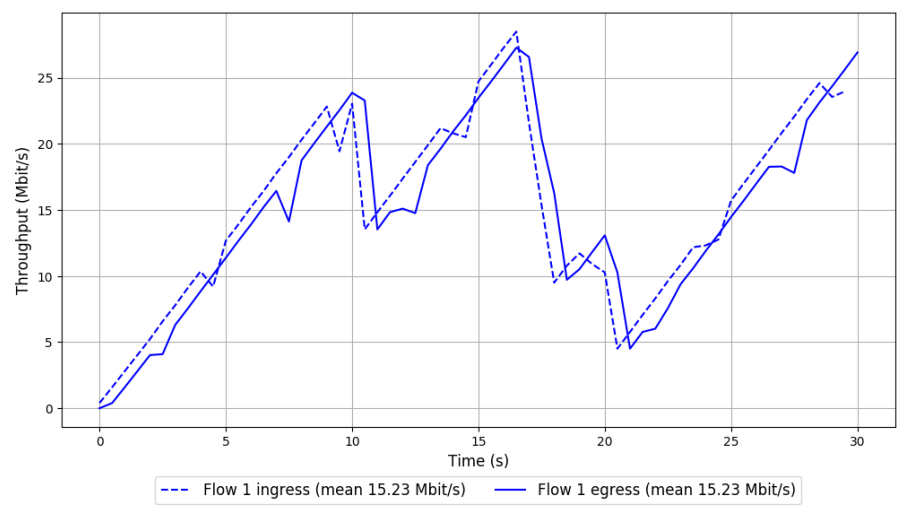


Run 5: Statistics of LEDBAT

Start at: 2018-10-10 13:17:11
End at: 2018-10-10 13:17:41
Local clock offset: -0.19 ms
Remote clock offset: -0.225 ms

Below is generated by plot.py at 2018-10-10 14:15:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 15.23 Mbit/s
95th percentile per-packet one-way delay: 51.218 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 15.23 Mbit/s
95th percentile per-packet one-way delay: 51.218 ms
Loss rate: 0.00%

Run 5: Report of LEDBAT — Data Link

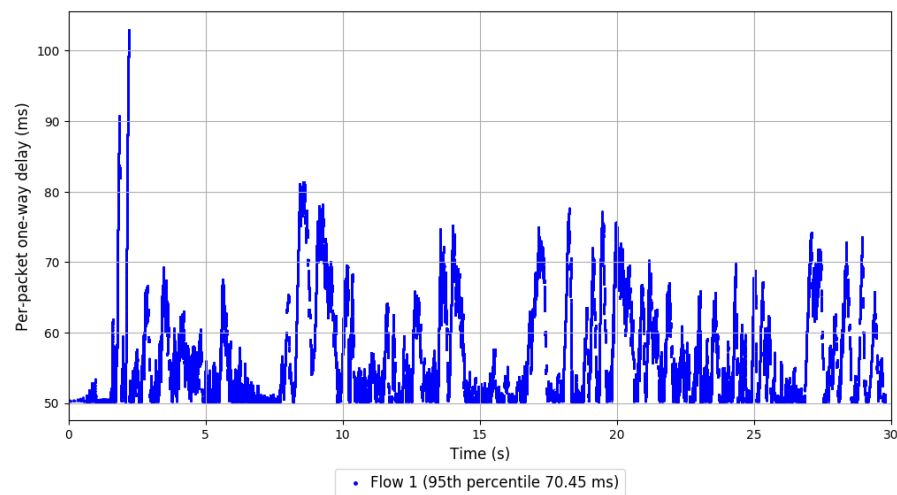
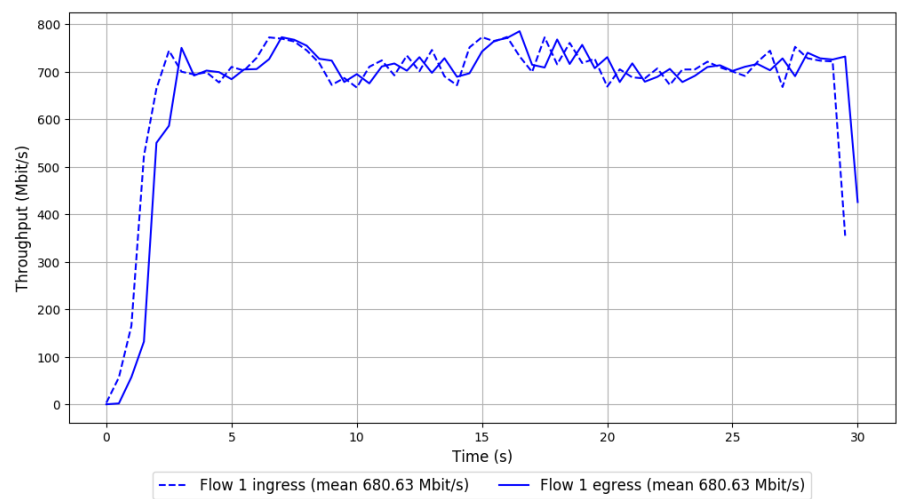


```
Run 1: Statistics of Indigo-Muses

Start at: 2018-10-10 11:33:25
End at: 2018-10-10 11:33:55
Local clock offset: -0.194 ms
Remote clock offset: 0.041 ms

# Below is generated by plot.py at 2018-10-10 14:24:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 680.63 Mbit/s
95th percentile per-packet one-way delay: 70.449 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 680.63 Mbit/s
95th percentile per-packet one-way delay: 70.449 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo-Muses — Data Link



Run 2: Statistics of Indigo-Muses

Start at: 2018-10-10 11:59:03

End at: 2018-10-10 11:59:33

Local clock offset: -0.169 ms

Remote clock offset: 0.043 ms

Below is generated by plot.py at 2018-10-10 14:24:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 699.36 Mbit/s

95th percentile per-packet one-way delay: 68.251 ms

Loss rate: 0.00%

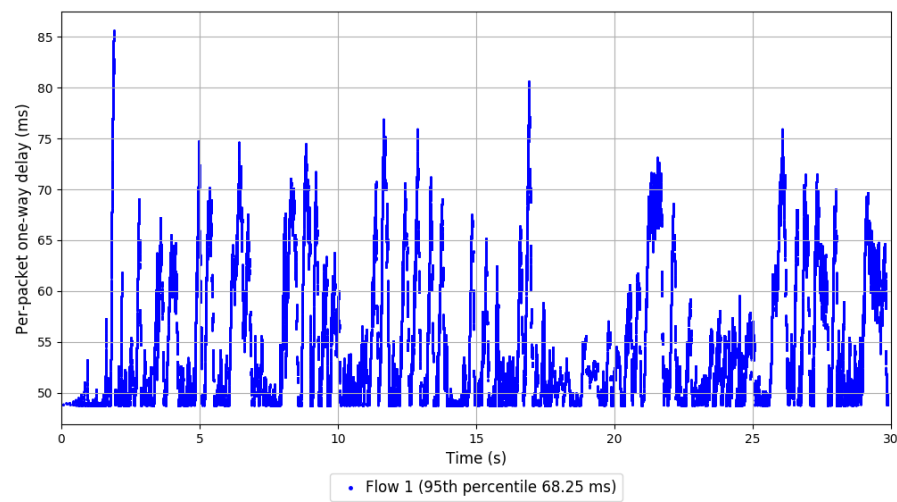
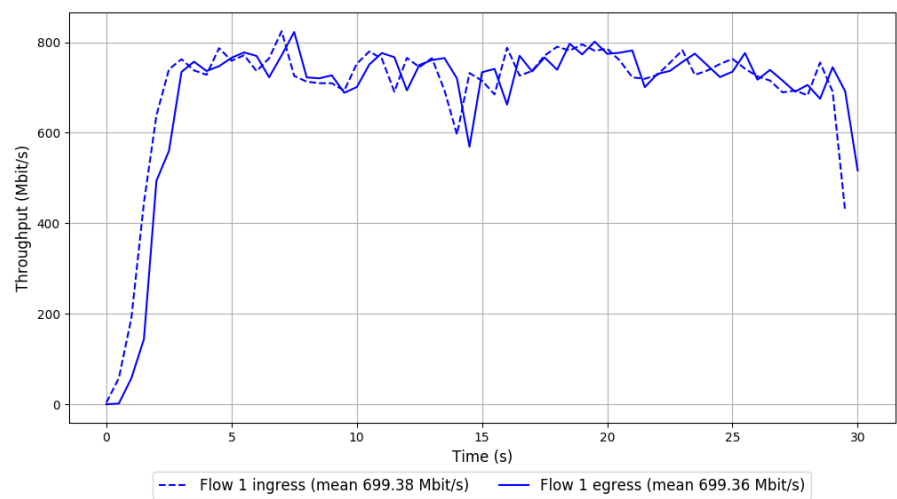
-- Flow 1:

Average throughput: 699.36 Mbit/s

95th percentile per-packet one-way delay: 68.251 ms

Loss rate: 0.00%

Run 2: Report of Indigo-Muses — Data Link

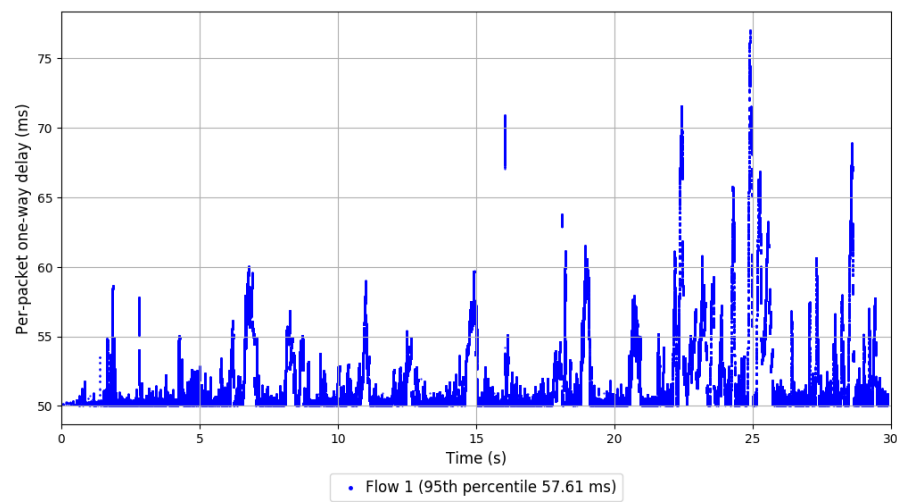
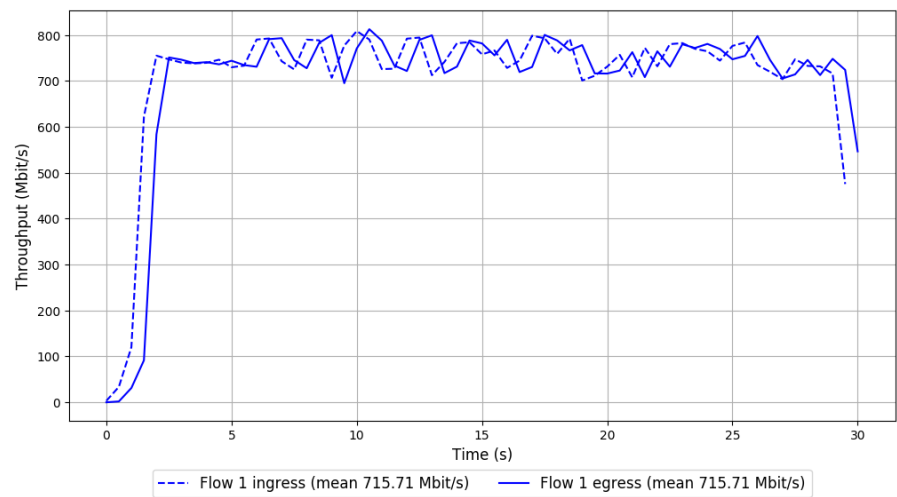


Run 3: Statistics of Indigo-Muses

Start at: 2018-10-10 12:24:28
End at: 2018-10-10 12:24:58
Local clock offset: -0.488 ms
Remote clock offset: -0.069 ms

Below is generated by plot.py at 2018-10-10 14:25:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 715.71 Mbit/s
95th percentile per-packet one-way delay: 57.609 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 715.71 Mbit/s
95th percentile per-packet one-way delay: 57.609 ms
Loss rate: 0.00%

Run 3: Report of Indigo-Muses — Data Link

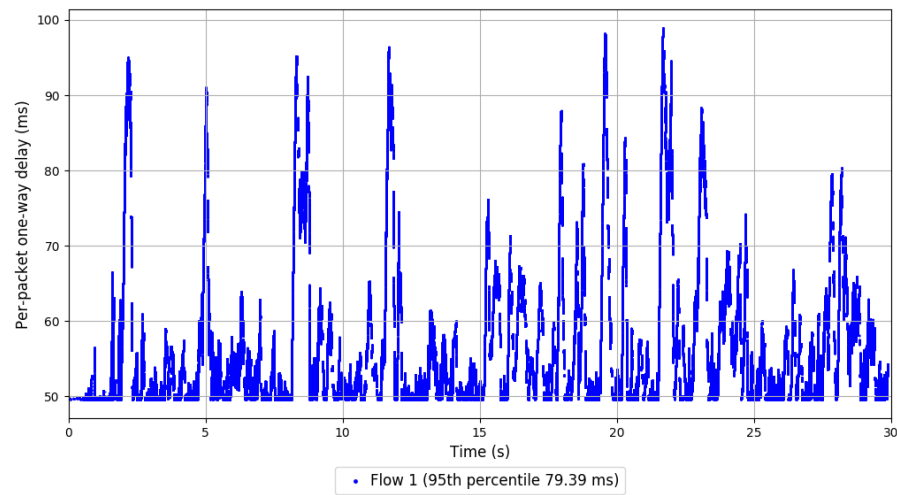
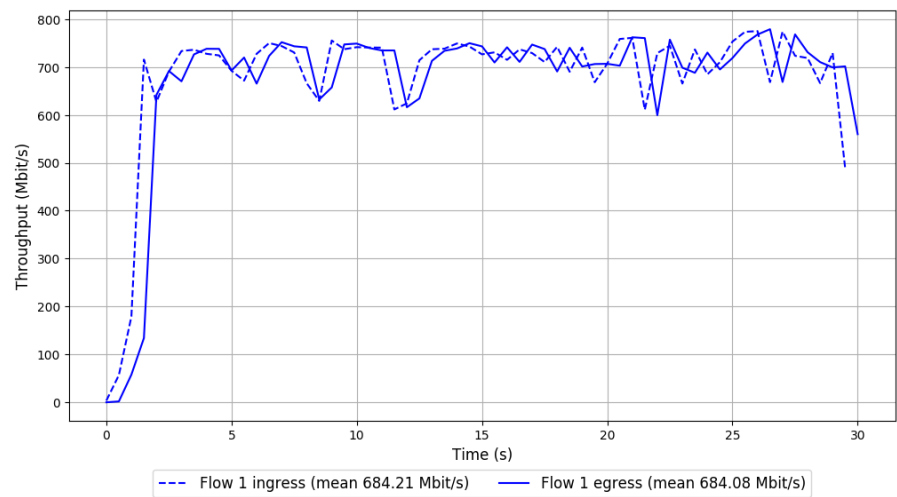


Run 4: Statistics of Indigo-Muses

Start at: 2018-10-10 12:49:56
End at: 2018-10-10 12:50:26
Local clock offset: -0.193 ms
Remote clock offset: -0.167 ms

Below is generated by plot.py at 2018-10-10 14:25:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 684.08 Mbit/s
95th percentile per-packet one-way delay: 79.392 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 684.08 Mbit/s
95th percentile per-packet one-way delay: 79.392 ms
Loss rate: 0.02%

Run 4: Report of Indigo-Muses — Data Link

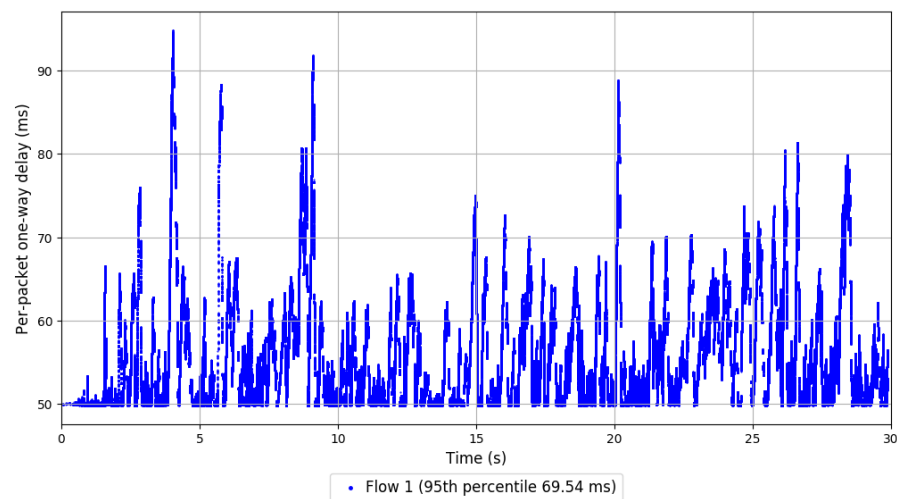
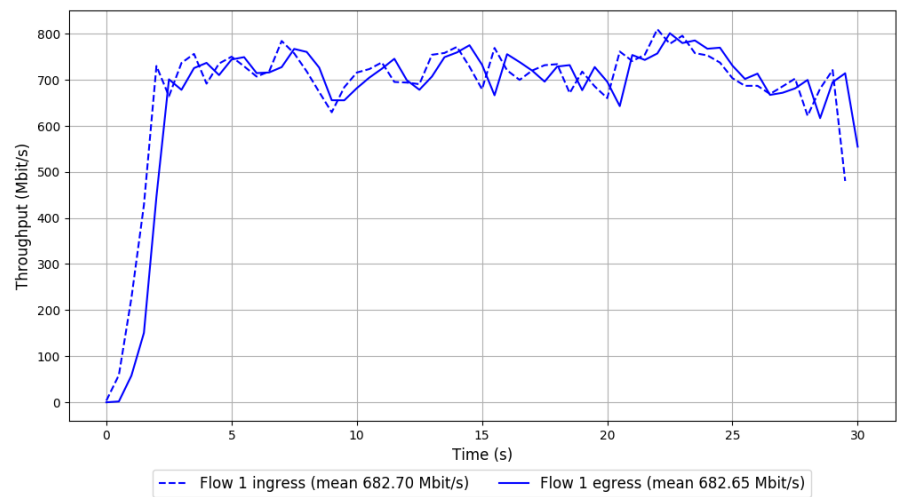


Run 5: Statistics of Indigo-Muses

Start at: 2018-10-10 13:15:32
End at: 2018-10-10 13:16:02
Local clock offset: -0.569 ms
Remote clock offset: -0.214 ms

Below is generated by plot.py at 2018-10-10 14:25:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 682.65 Mbit/s
95th percentile per-packet one-way delay: 69.540 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 682.65 Mbit/s
95th percentile per-packet one-way delay: 69.540 ms
Loss rate: 0.00%

Run 5: Report of Indigo-Muses — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2018-10-10 11:36:14

End at: 2018-10-10 11:36:44

Local clock offset: -0.147 ms

Remote clock offset: 0.051 ms

Below is generated by plot.py at 2018-10-10 14:30:10

Datalink statistics

-- Total of 1 flow:

Average throughput: 494.57 Mbit/s

95th percentile per-packet one-way delay: 103.150 ms

Loss rate: 0.00%

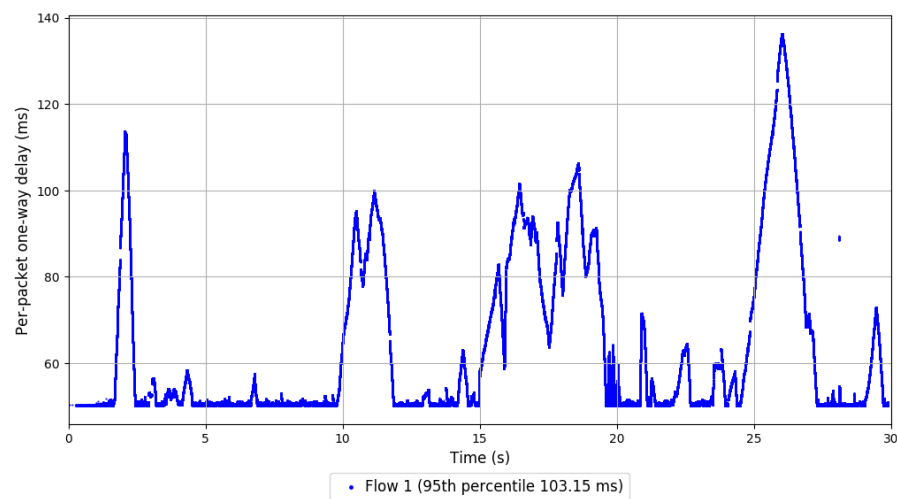
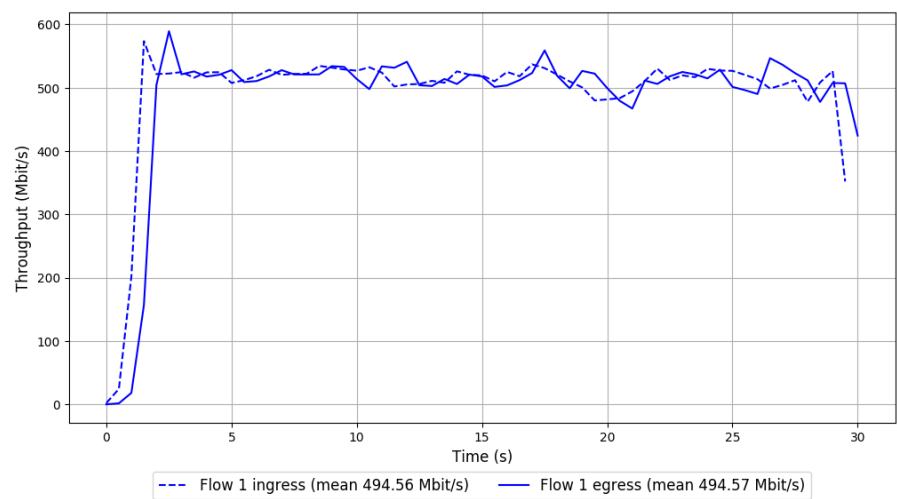
-- Flow 1:

Average throughput: 494.57 Mbit/s

95th percentile per-packet one-way delay: 103.150 ms

Loss rate: 0.00%

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-10-10 12:01:52

End at: 2018-10-10 12:02:22

Local clock offset: -0.464 ms

Remote clock offset: 0.045 ms

Below is generated by plot.py at 2018-10-10 14:30:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 486.59 Mbit/s

95th percentile per-packet one-way delay: 151.005 ms

Loss rate: 0.73%

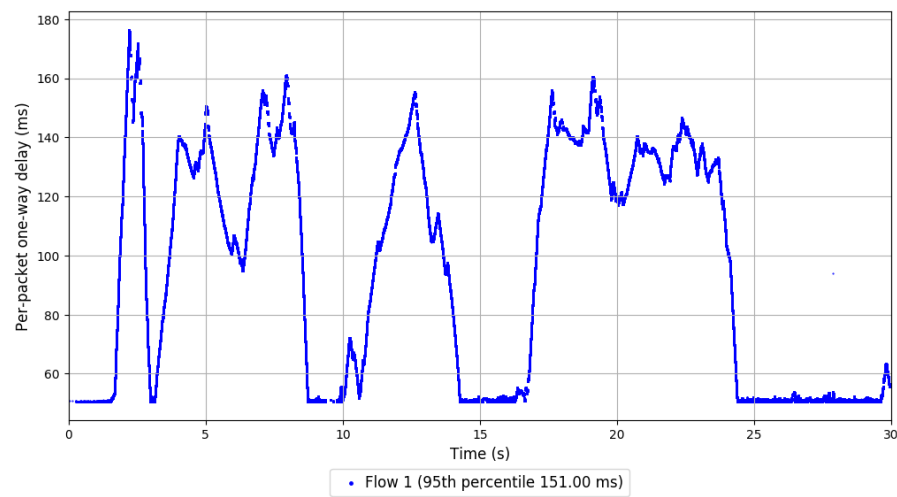
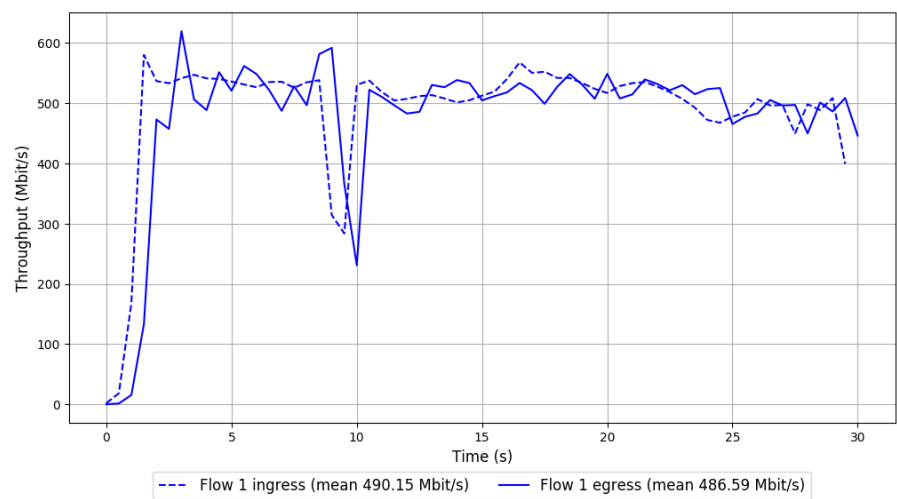
-- Flow 1:

Average throughput: 486.59 Mbit/s

95th percentile per-packet one-way delay: 151.005 ms

Loss rate: 0.73%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-10-10 12:27:18

End at: 2018-10-10 12:27:48

Local clock offset: -0.523 ms

Remote clock offset: -0.117 ms

Below is generated by plot.py at 2018-10-10 14:31:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 481.68 Mbit/s

95th percentile per-packet one-way delay: 135.438 ms

Loss rate: 0.10%

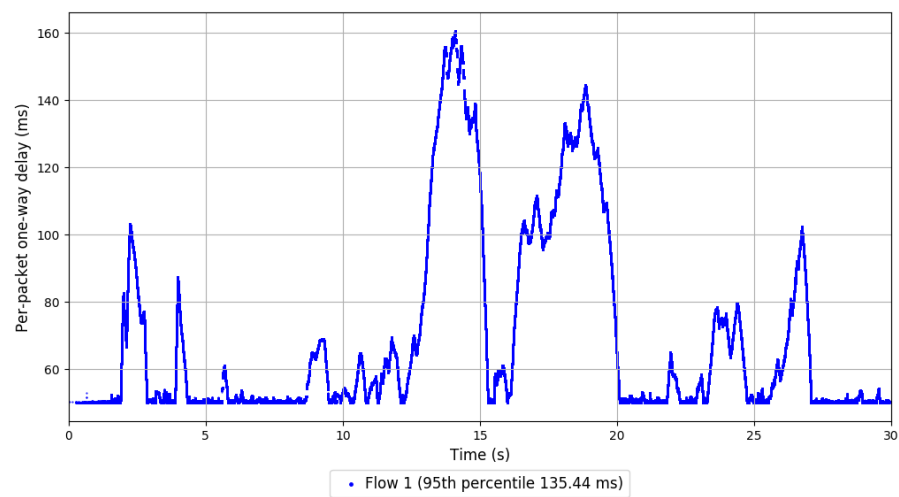
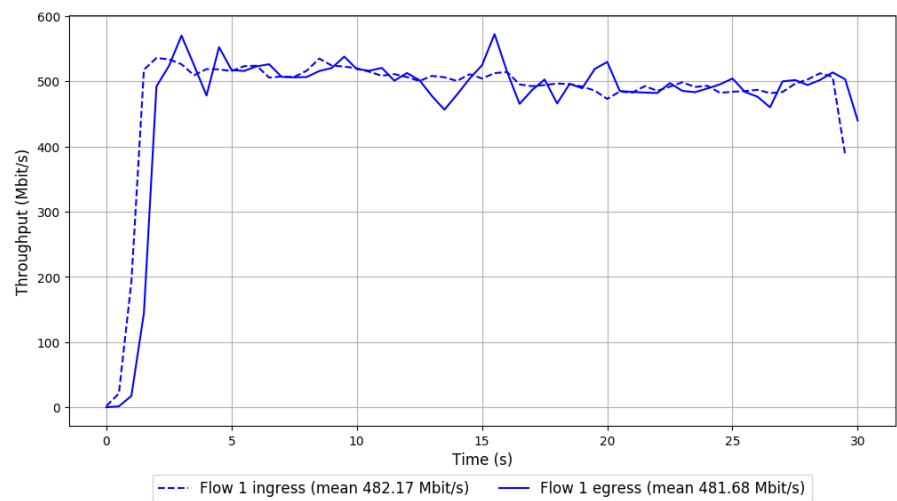
-- Flow 1:

Average throughput: 481.68 Mbit/s

95th percentile per-packet one-way delay: 135.438 ms

Loss rate: 0.10%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-10-10 12:52:45

End at: 2018-10-10 12:53:15

Local clock offset: 0.169 ms

Remote clock offset: -0.178 ms

Below is generated by plot.py at 2018-10-10 14:42:18

Datalink statistics

-- Total of 1 flow:

Average throughput: 483.98 Mbit/s

95th percentile per-packet one-way delay: 160.183 ms

Loss rate: 1.35%

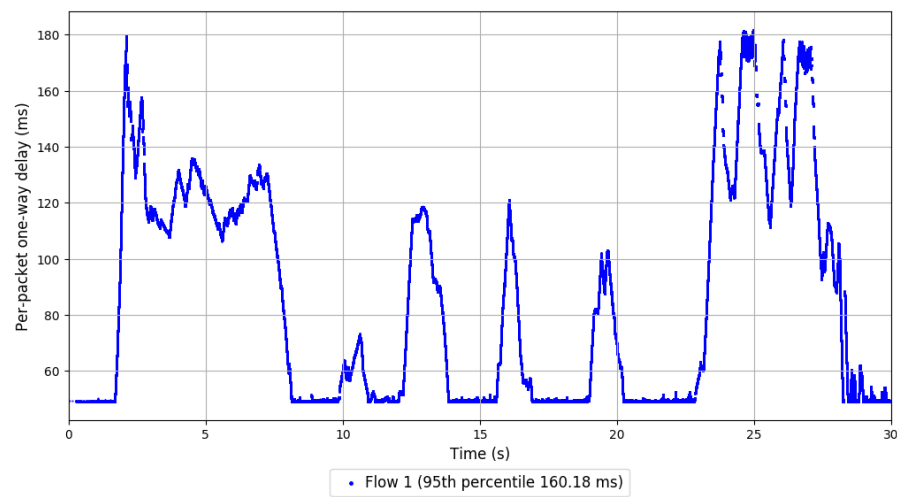
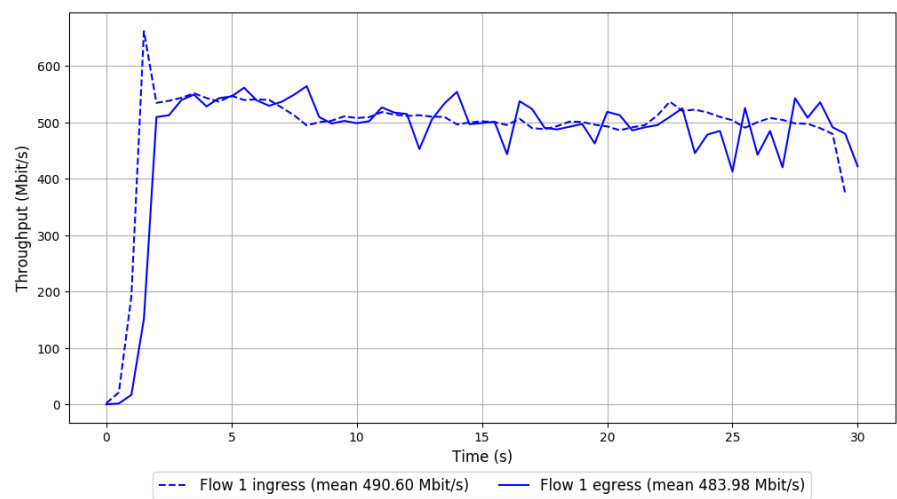
-- Flow 1:

Average throughput: 483.98 Mbit/s

95th percentile per-packet one-way delay: 160.183 ms

Loss rate: 1.35%

Run 4: Report of PCC-Allegro — Data Link

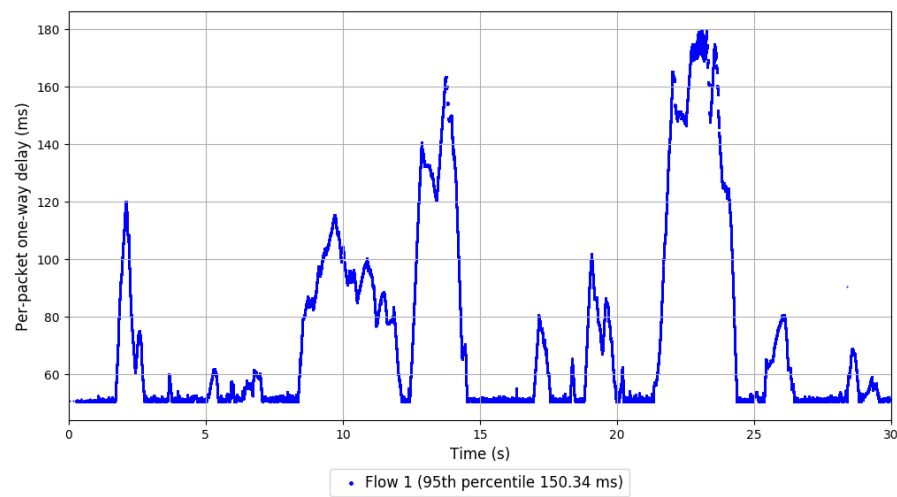
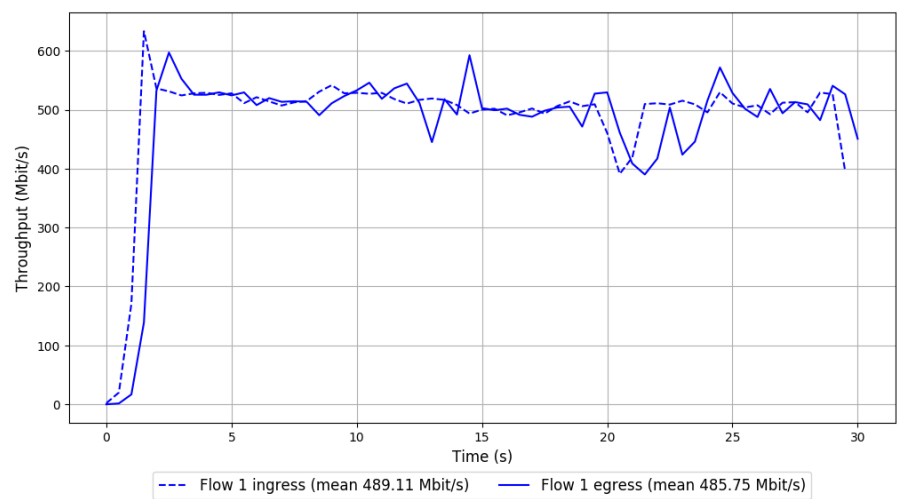


Run 5: Statistics of PCC-Allegro

Start at: 2018-10-10 13:18:19
End at: 2018-10-10 13:18:49
Local clock offset: -0.182 ms
Remote clock offset: -0.127 ms

Below is generated by plot.py at 2018-10-10 14:42:36
Datalink statistics
-- Total of 1 flow:
Average throughput: 485.75 Mbit/s
95th percentile per-packet one-way delay: 150.337 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 485.75 Mbit/s
95th percentile per-packet one-way delay: 150.337 ms
Loss rate: 0.68%

Run 5: Report of PCC-Allegro — Data Link

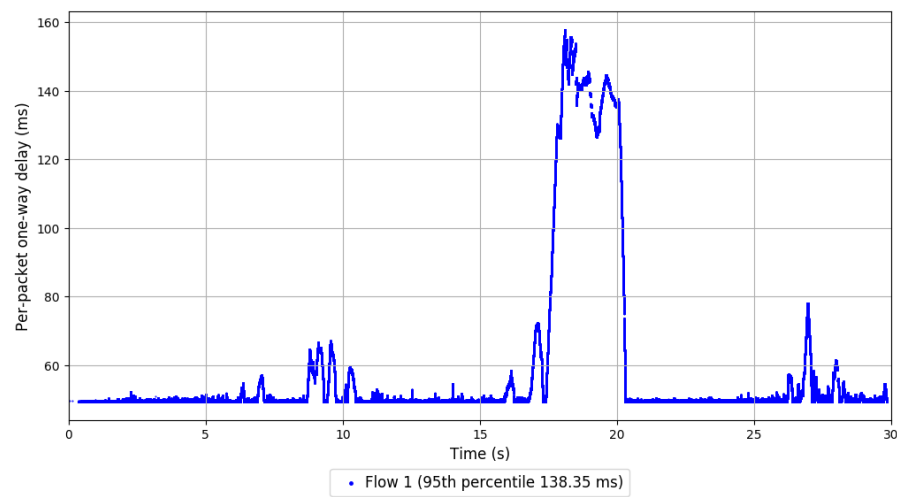
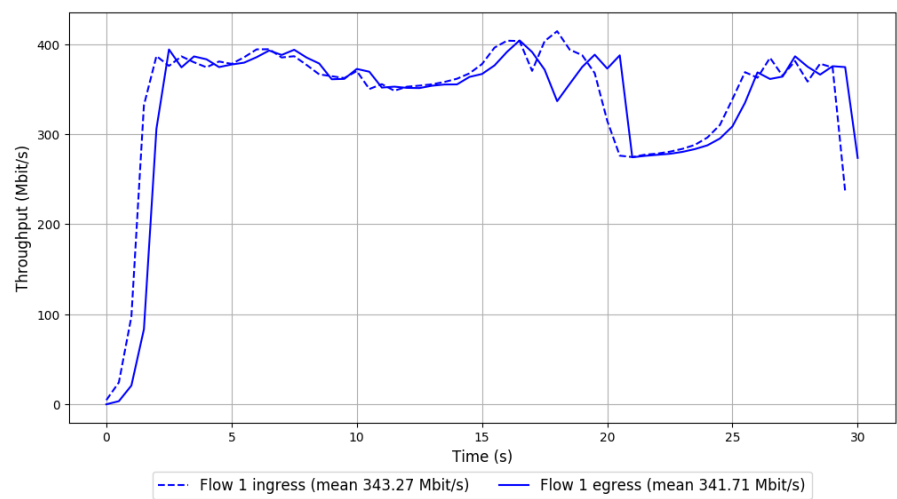


```
Run 1: Statistics of PCC-Expr

Start at: 2018-10-10 11:14:41
End at: 2018-10-10 11:15:11
Local clock offset: -0.162 ms
Remote clock offset: 0.037 ms

# Below is generated by plot.py at 2018-10-10 14:42:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 341.71 Mbit/s
95th percentile per-packet one-way delay: 138.348 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 341.71 Mbit/s
95th percentile per-packet one-way delay: 138.348 ms
Loss rate: 0.45%
```

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2018-10-10 11:40:25

End at: 2018-10-10 11:40:55

Local clock offset: -0.506 ms

Remote clock offset: 0.049 ms

Below is generated by plot.py at 2018-10-10 14:42:36

Datalink statistics

-- Total of 1 flow:

Average throughput: 348.08 Mbit/s

95th percentile per-packet one-way delay: 88.910 ms

Loss rate: 0.01%

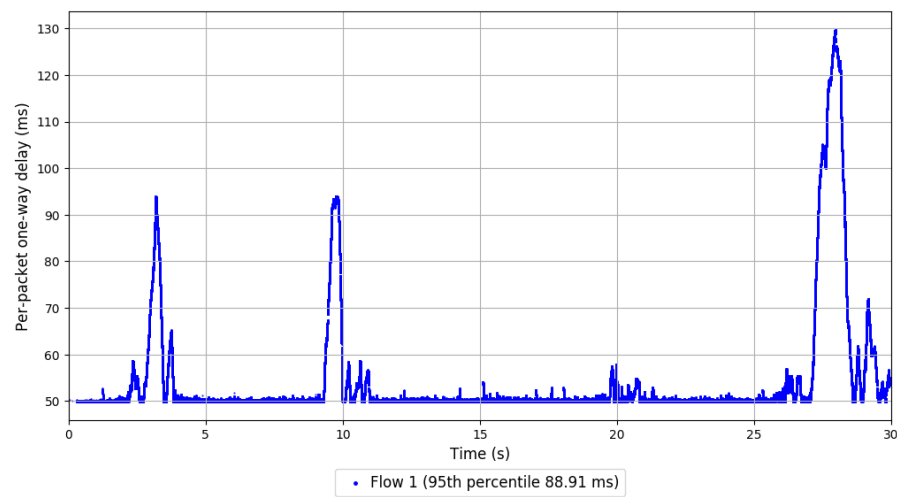
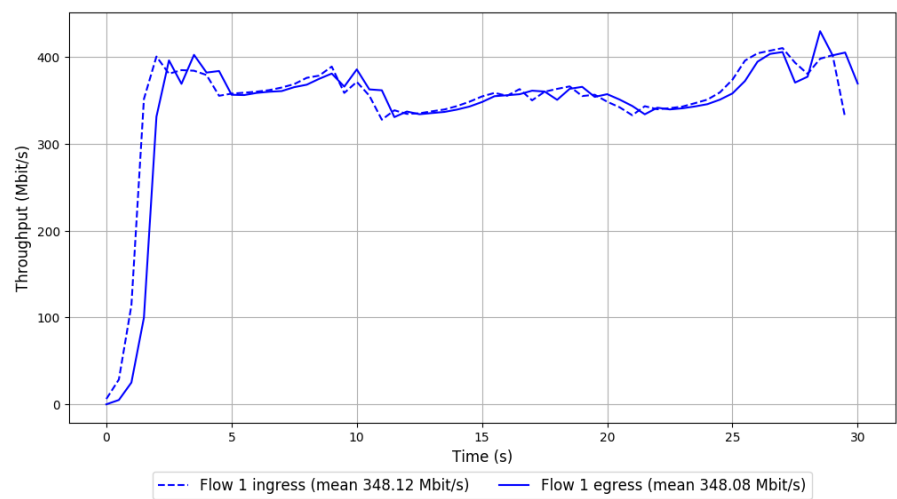
-- Flow 1:

Average throughput: 348.08 Mbit/s

95th percentile per-packet one-way delay: 88.910 ms

Loss rate: 0.01%

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2018-10-10 12:06:03

End at: 2018-10-10 12:06:33

Local clock offset: -0.148 ms

Remote clock offset: 0.091 ms

Below is generated by plot.py at 2018-10-10 14:42:36

Datalink statistics

-- Total of 1 flow:

Average throughput: 374.94 Mbit/s

95th percentile per-packet one-way delay: 142.794 ms

Loss rate: 3.01%

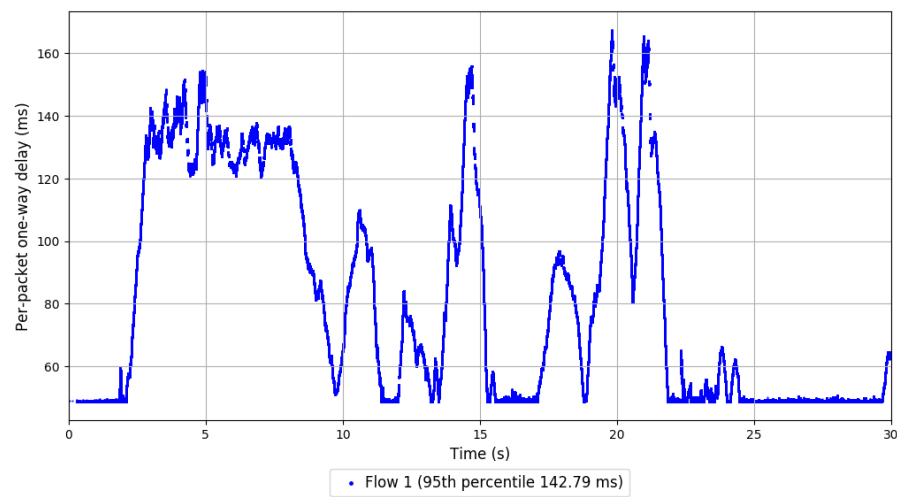
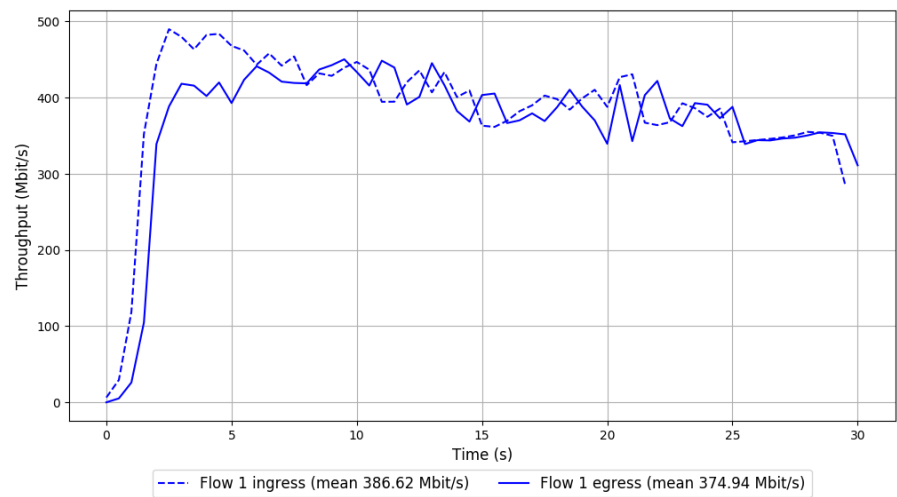
-- Flow 1:

Average throughput: 374.94 Mbit/s

95th percentile per-packet one-way delay: 142.794 ms

Loss rate: 3.01%

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

Start at: 2018-10-10 12:31:28

End at: 2018-10-10 12:31:58

Local clock offset: 0.244 ms

Remote clock offset: -0.09 ms

Below is generated by plot.py at 2018-10-10 14:43:06

Datalink statistics

-- Total of 1 flow:

Average throughput: 359.15 Mbit/s

95th percentile per-packet one-way delay: 76.267 ms

Loss rate: 0.08%

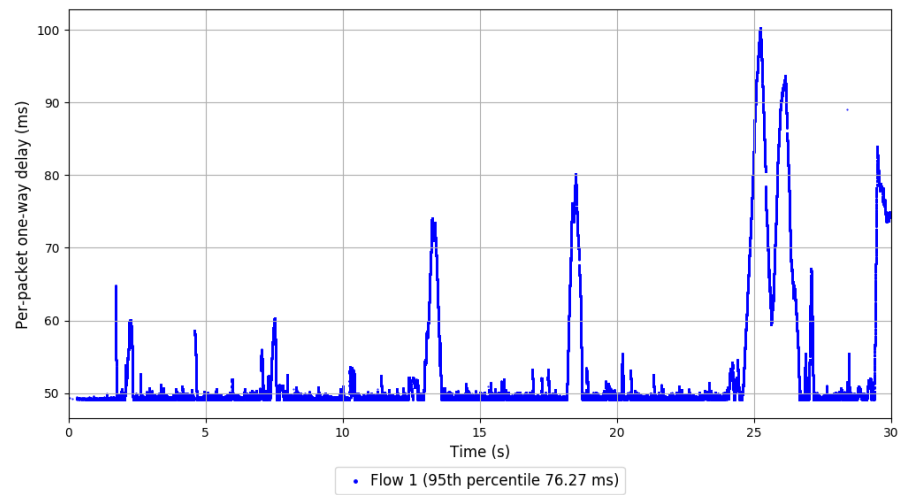
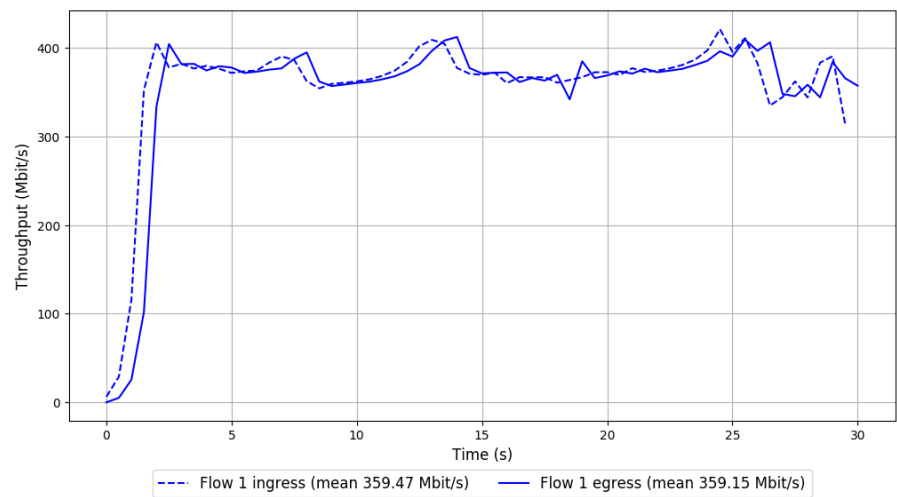
-- Flow 1:

Average throughput: 359.15 Mbit/s

95th percentile per-packet one-way delay: 76.267 ms

Loss rate: 0.08%

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

Start at: 2018-10-10 12:56:56

End at: 2018-10-10 12:57:26

Local clock offset: 0.138 ms

Remote clock offset: -0.201 ms

Below is generated by plot.py at 2018-10-10 14:43:47

Datalink statistics

-- Total of 1 flow:

Average throughput: 354.36 Mbit/s

95th percentile per-packet one-way delay: 98.454 ms

Loss rate: 0.00%

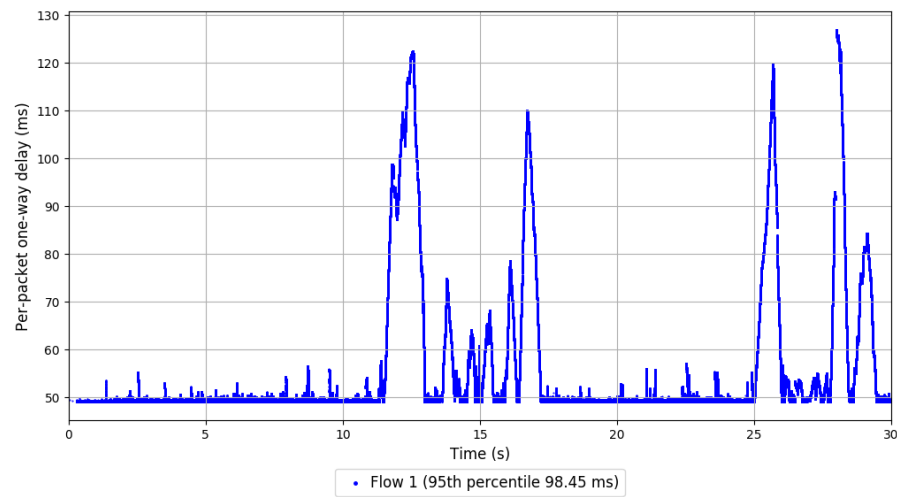
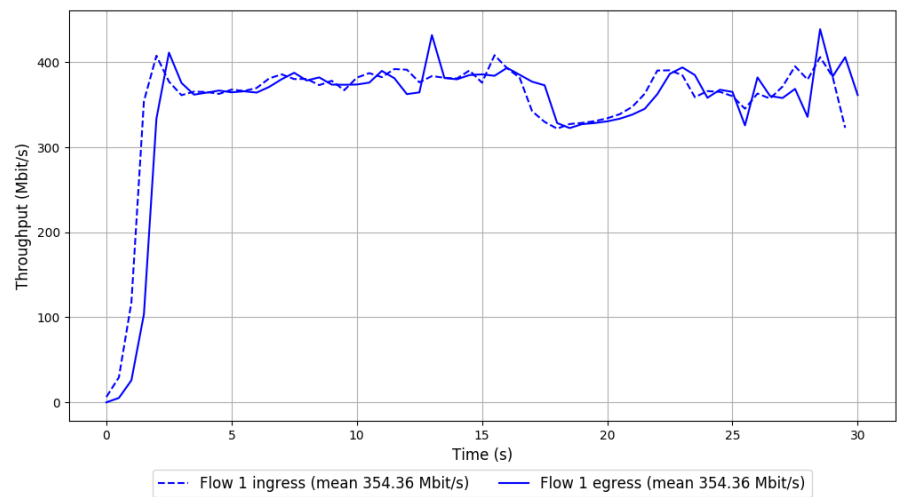
-- Flow 1:

Average throughput: 354.36 Mbit/s

95th percentile per-packet one-way delay: 98.454 ms

Loss rate: 0.00%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2018-10-10 11:19:12

End at: 2018-10-10 11:19:42

Local clock offset: -0.159 ms

Remote clock offset: 0.163 ms

Below is generated by plot.py at 2018-10-10 14:43:47

Datalink statistics

-- Total of 1 flow:

Average throughput: 53.82 Mbit/s

95th percentile per-packet one-way delay: 50.833 ms

Loss rate: 0.00%

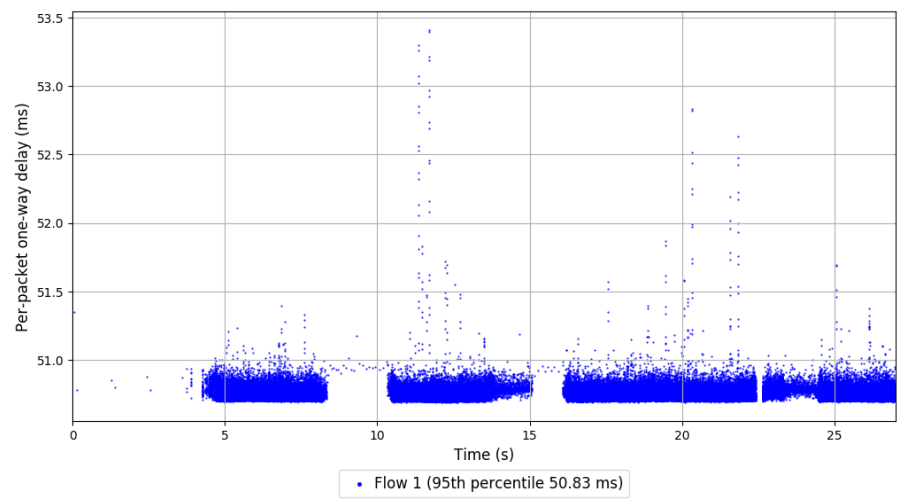
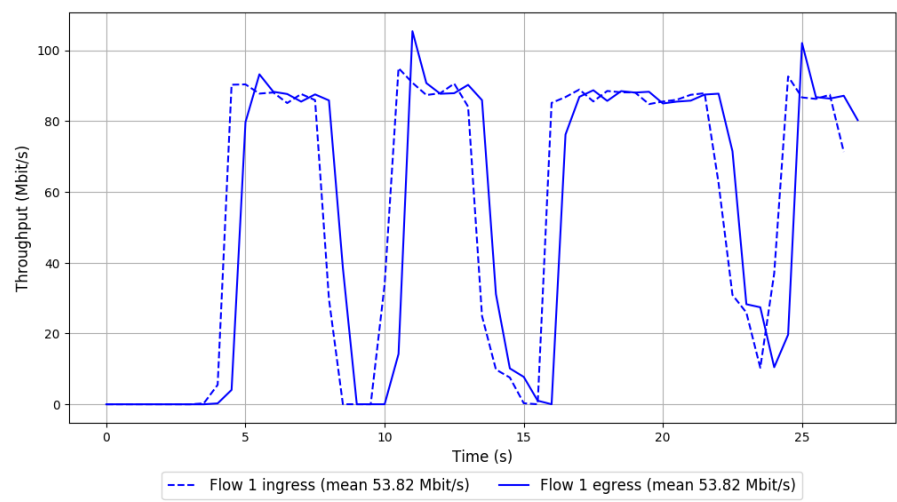
-- Flow 1:

Average throughput: 53.82 Mbit/s

95th percentile per-packet one-way delay: 50.833 ms

Loss rate: 0.00%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-10-10 11:44:58

End at: 2018-10-10 11:45:28

Local clock offset: 0.171 ms

Remote clock offset: 0.094 ms

Below is generated by plot.py at 2018-10-10 14:43:47

Datalink statistics

-- Total of 1 flow:

Average throughput: 77.38 Mbit/s

95th percentile per-packet one-way delay: 50.325 ms

Loss rate: 0.00%

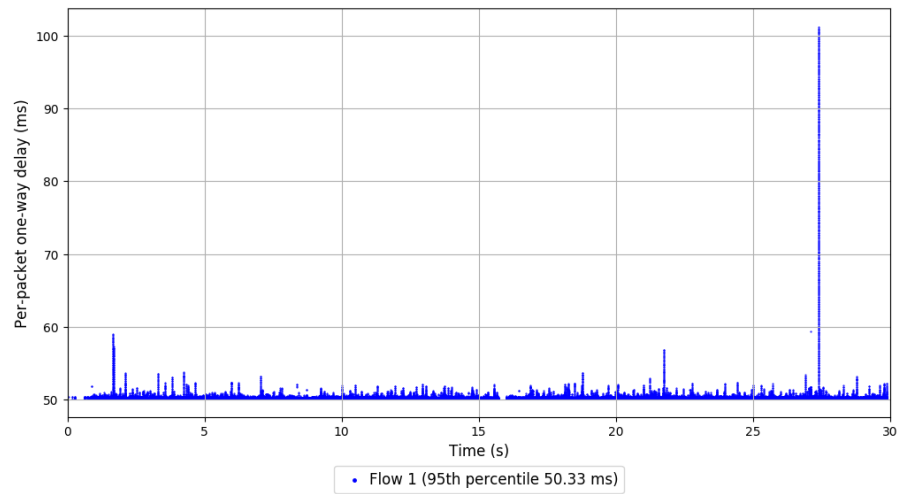
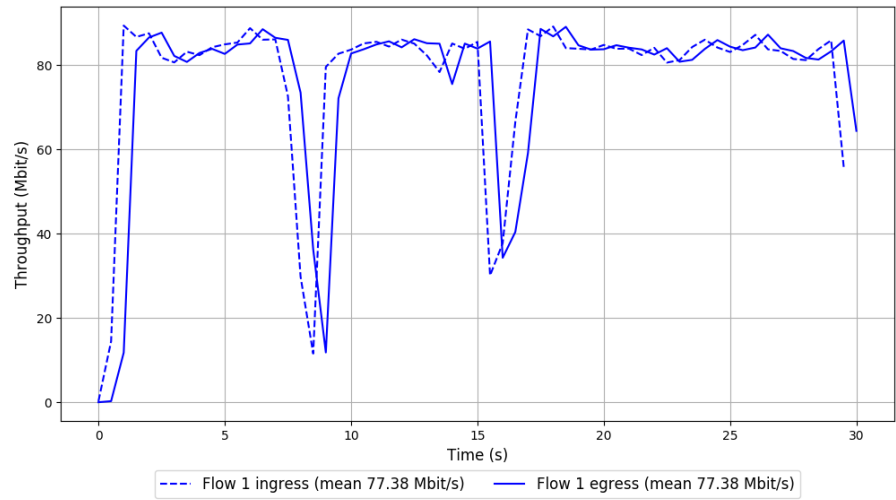
-- Flow 1:

Average throughput: 77.38 Mbit/s

95th percentile per-packet one-way delay: 50.325 ms

Loss rate: 0.00%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-10-10 12:10:42

End at: 2018-10-10 12:11:12

Local clock offset: -0.158 ms

Remote clock offset: 0.016 ms

Below is generated by plot.py at 2018-10-10 14:43:47

Datalink statistics

-- Total of 1 flow:

Average throughput: 78.43 Mbit/s

95th percentile per-packet one-way delay: 49.527 ms

Loss rate: 0.00%

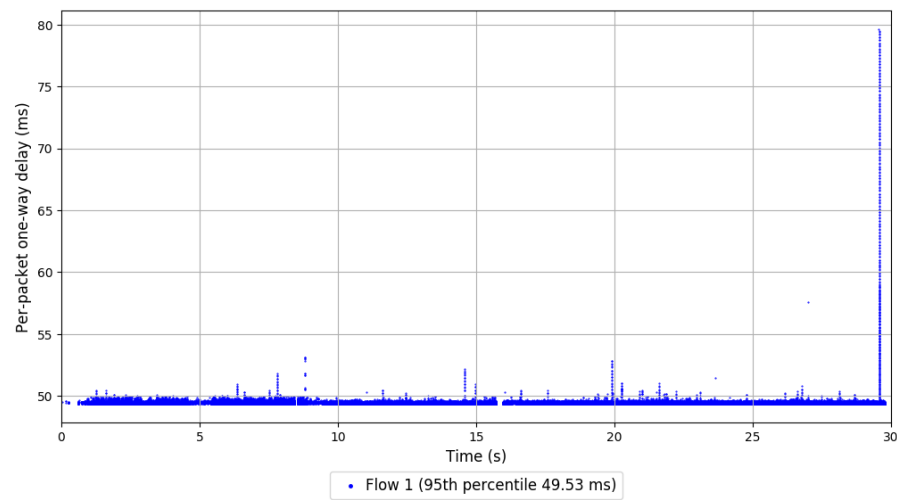
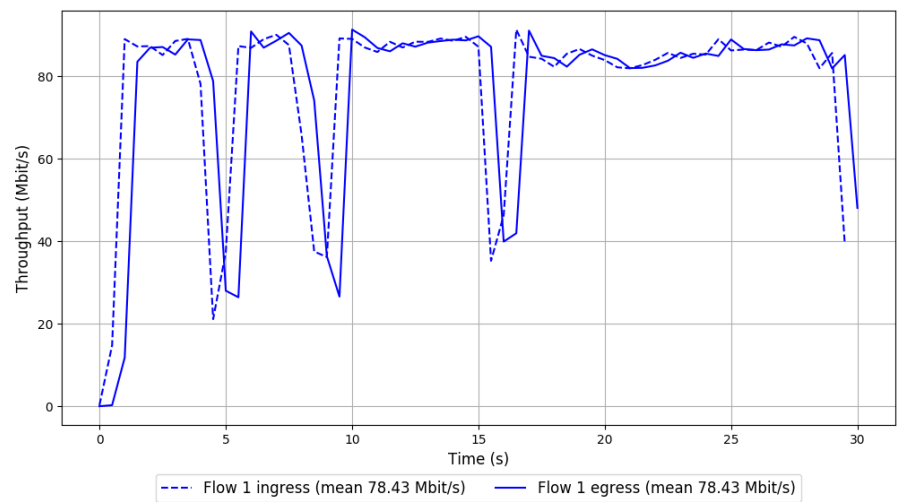
-- Flow 1:

Average throughput: 78.43 Mbit/s

95th percentile per-packet one-way delay: 49.527 ms

Loss rate: 0.00%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-10-10 12:36:03

End at: 2018-10-10 12:36:33

Local clock offset: -0.113 ms

Remote clock offset: -0.143 ms

Below is generated by plot.py at 2018-10-10 14:43:47

Datalink statistics

-- Total of 1 flow:

Average throughput: 77.84 Mbit/s

95th percentile per-packet one-way delay: 49.478 ms

Loss rate: 0.00%

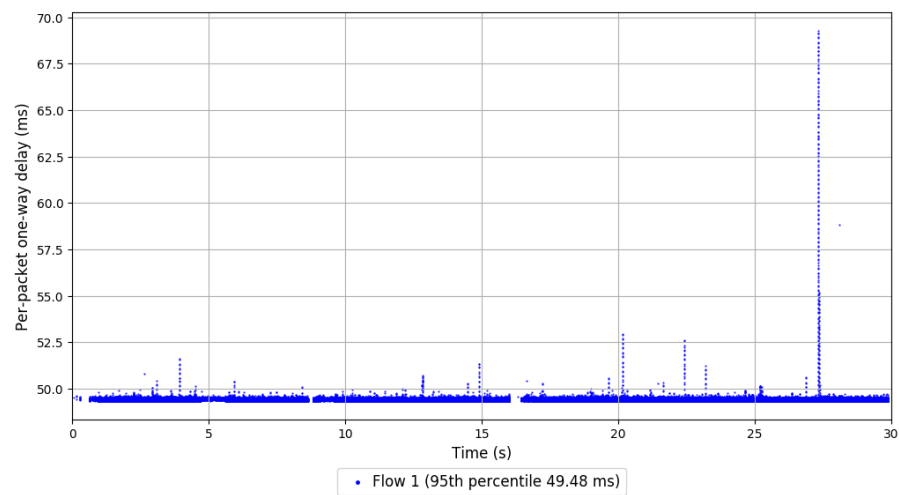
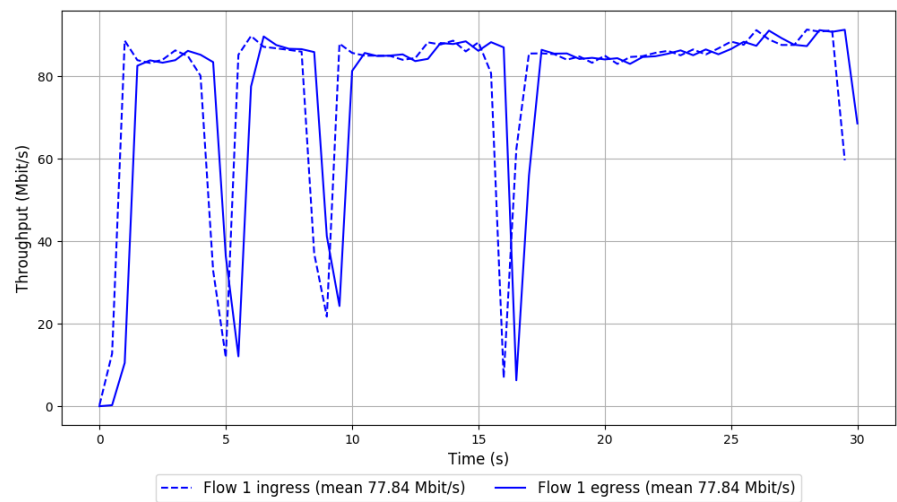
-- Flow 1:

Average throughput: 77.84 Mbit/s

95th percentile per-packet one-way delay: 49.478 ms

Loss rate: 0.00%

Run 4: Report of QUIC Cubic — Data Link

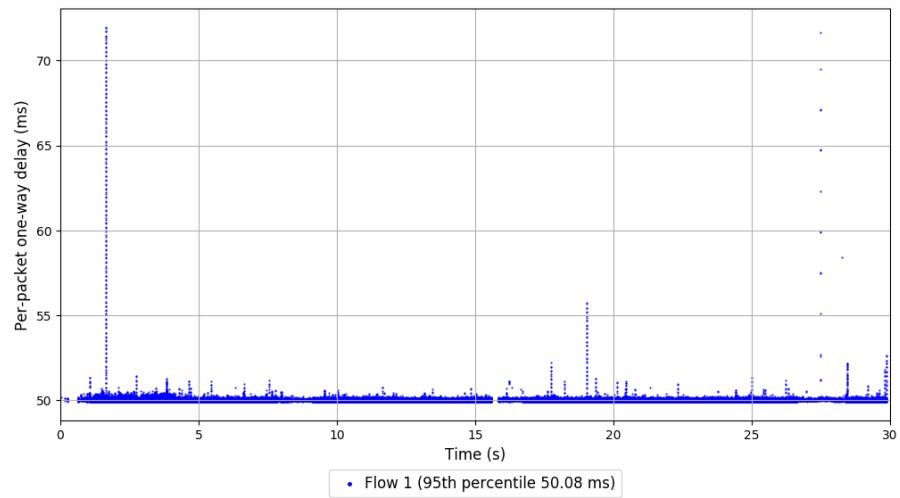
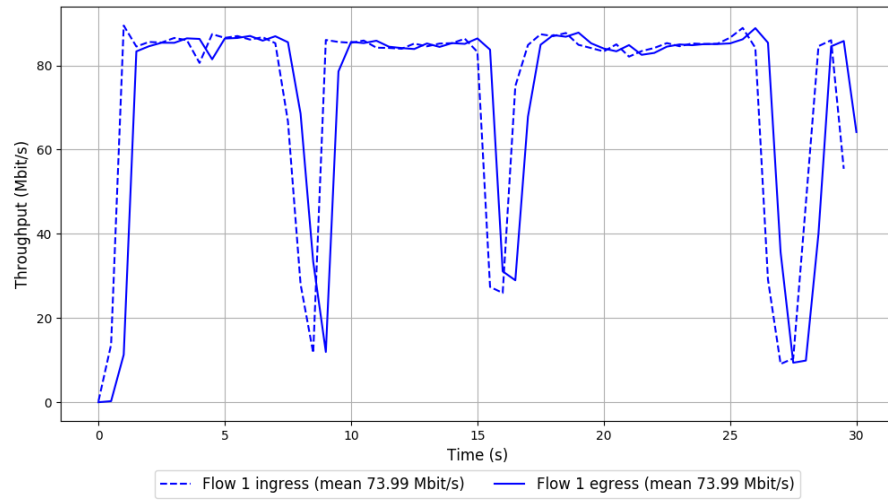


Run 5: Statistics of QUIC Cubic

Start at: 2018-10-10 13:01:30
End at: 2018-10-10 13:02:00
Local clock offset: -0.572 ms
Remote clock offset: -0.181 ms

Below is generated by plot.py at 2018-10-10 14:43:47
Datalink statistics
-- Total of 1 flow:
Average throughput: 73.99 Mbit/s
95th percentile per-packet one-way delay: 50.083 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 73.99 Mbit/s
95th percentile per-packet one-way delay: 50.083 ms
Loss rate: 0.00%

Run 5: Report of QUIC Cubic — Data Link

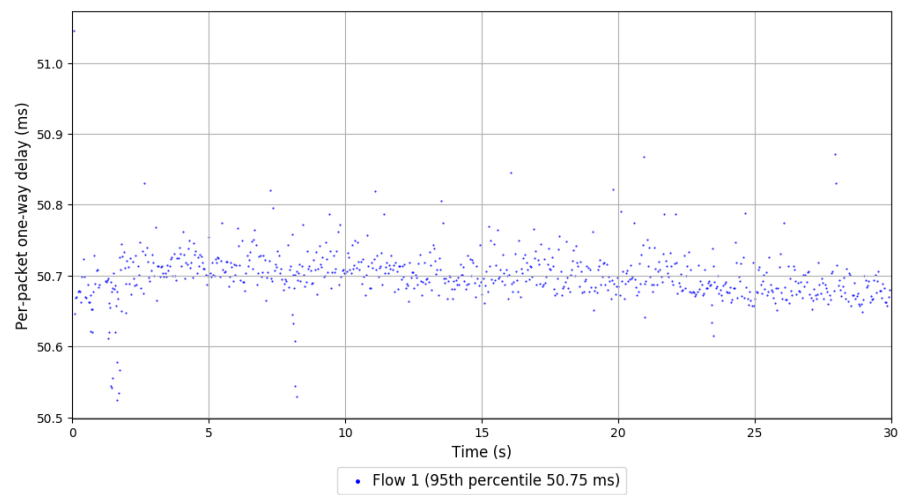
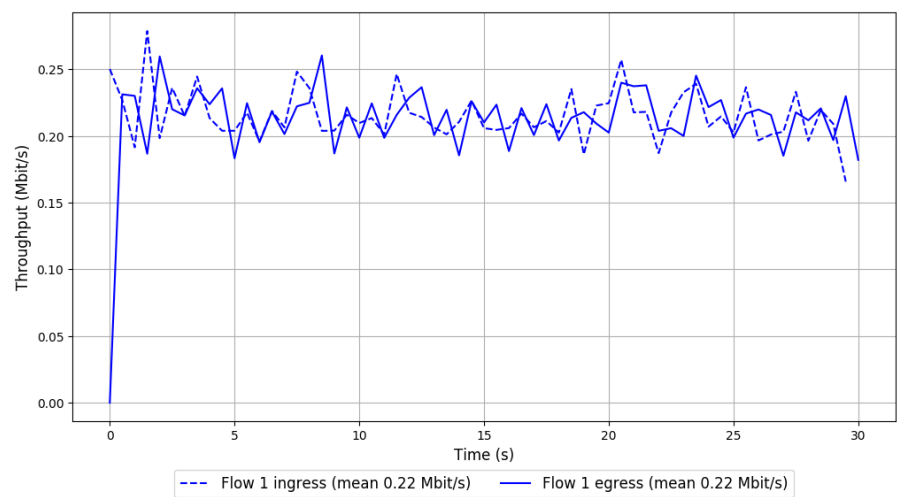


```
Run 1: Statistics of SCReAM

Start at: 2018-10-10 11:32:19
End at: 2018-10-10 11:32:49
Local clock offset: -0.509 ms
Remote clock offset: 0.053 ms

# Below is generated by plot.py at 2018-10-10 14:43:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.750 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.750 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2018-10-10 11:57:56

End at: 2018-10-10 11:58:26

Local clock offset: -0.163 ms

Remote clock offset: 0.064 ms

Below is generated by plot.py at 2018-10-10 14:43:47

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.516 ms

Loss rate: 0.00%

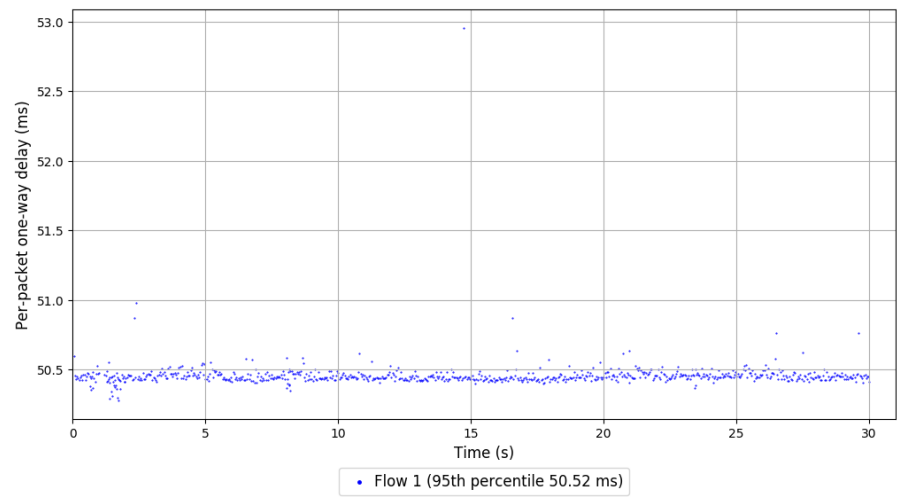
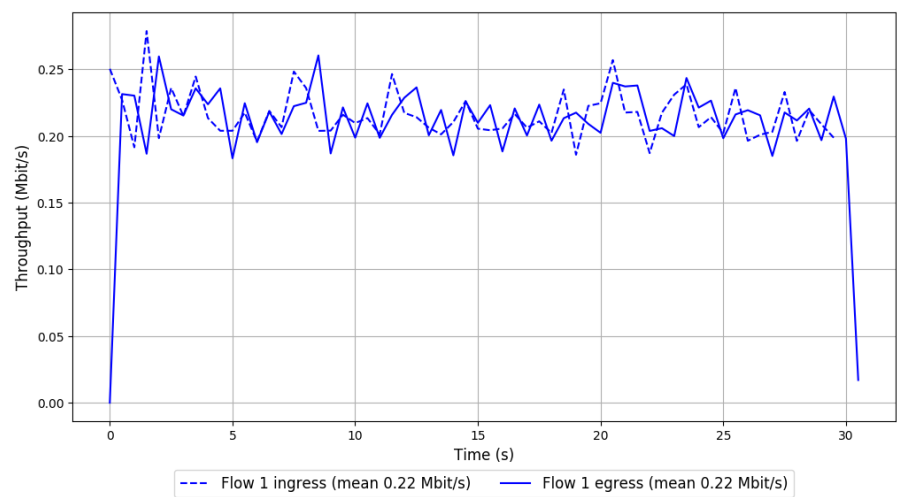
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.516 ms

Loss rate: 0.00%

Run 2: Report of SReAM — Data Link

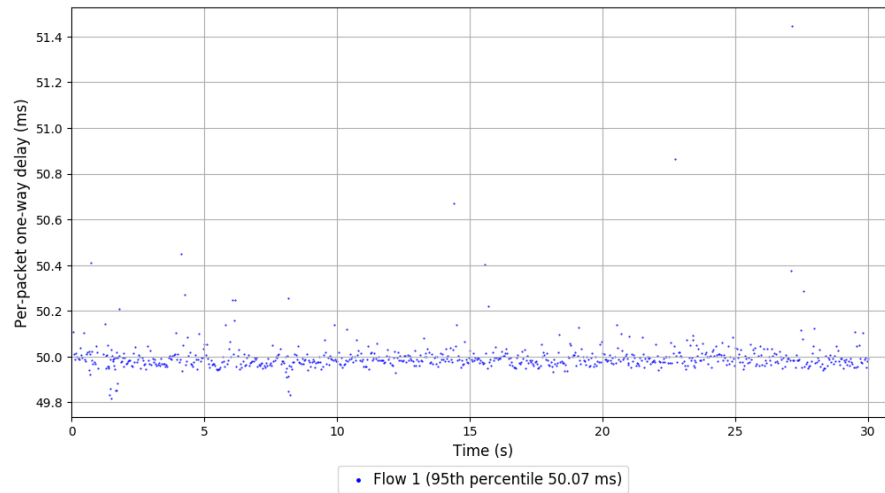
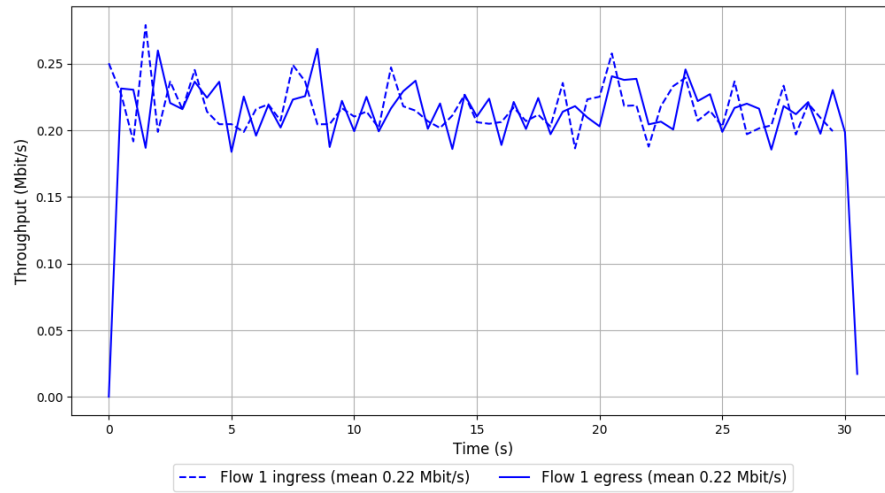


Run 3: Statistics of SCReAM

Start at: 2018-10-10 12:23:22
End at: 2018-10-10 12:23:52
Local clock offset: 0.232 ms
Remote clock offset: -0.093 ms

Below is generated by plot.py at 2018-10-10 14:43:47
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.073 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.073 ms
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link

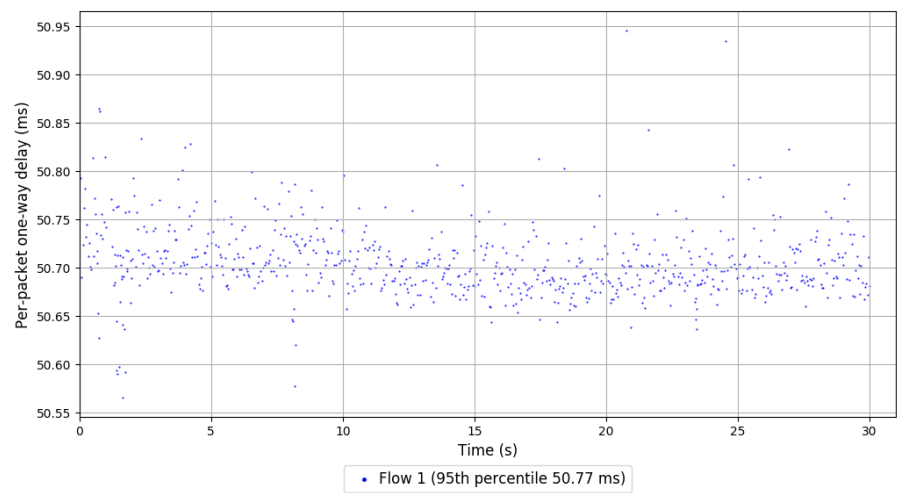
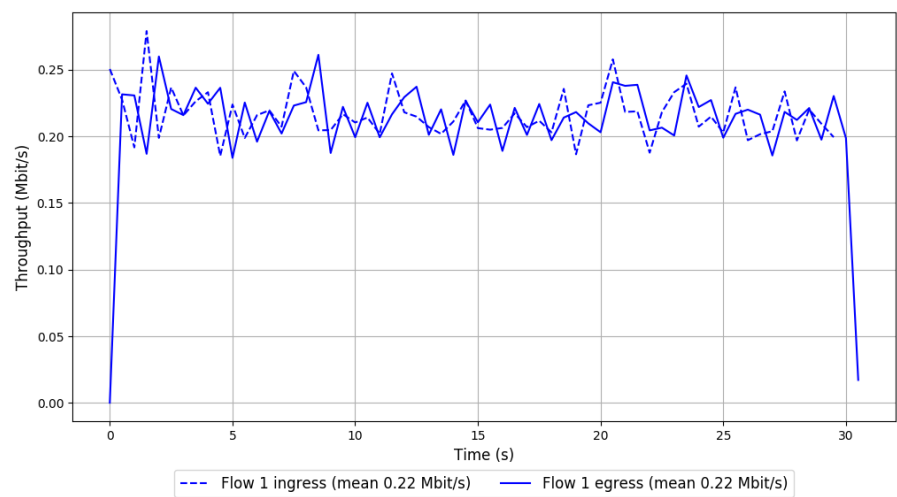


Run 4: Statistics of SCReAM

Start at: 2018-10-10 12:48:50
End at: 2018-10-10 12:49:20
Local clock offset: -0.202 ms
Remote clock offset: -0.162 ms

Below is generated by plot.py at 2018-10-10 14:43:47
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.768 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.768 ms
Loss rate: 0.00%

Run 4: Report of SReAM — Data Link

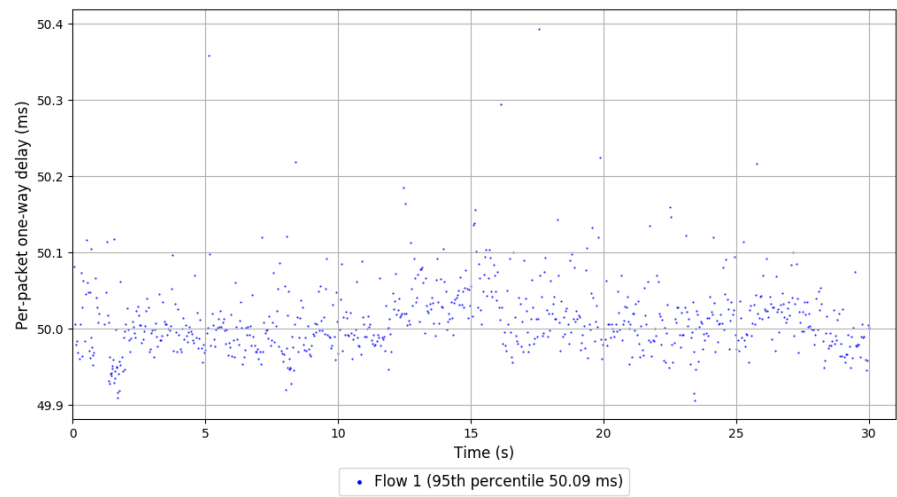
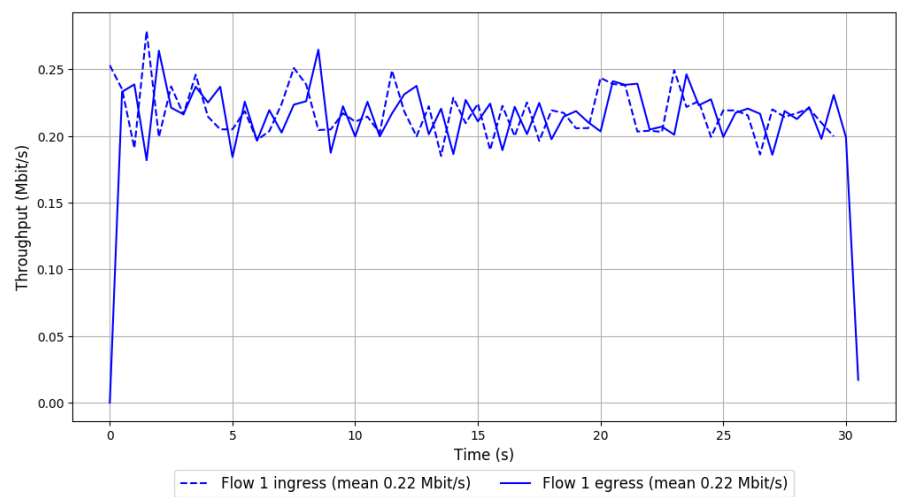


Run 5: Statistics of SCReAM

Start at: 2018-10-10 13:14:25
End at: 2018-10-10 13:14:55
Local clock offset: 0.147 ms
Remote clock offset: -0.214 ms

Below is generated by plot.py at 2018-10-10 14:43:47
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.093 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.093 ms
Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2018-10-10 11:37:53

End at: 2018-10-10 11:38:23

Local clock offset: -0.536 ms

Remote clock offset: 0.023 ms

Below is generated by plot.py at 2018-10-10 14:43:47

Datalink statistics

-- Total of 1 flow:

Average throughput: 8.15 Mbit/s

95th percentile per-packet one-way delay: 51.579 ms

Loss rate: 0.00%

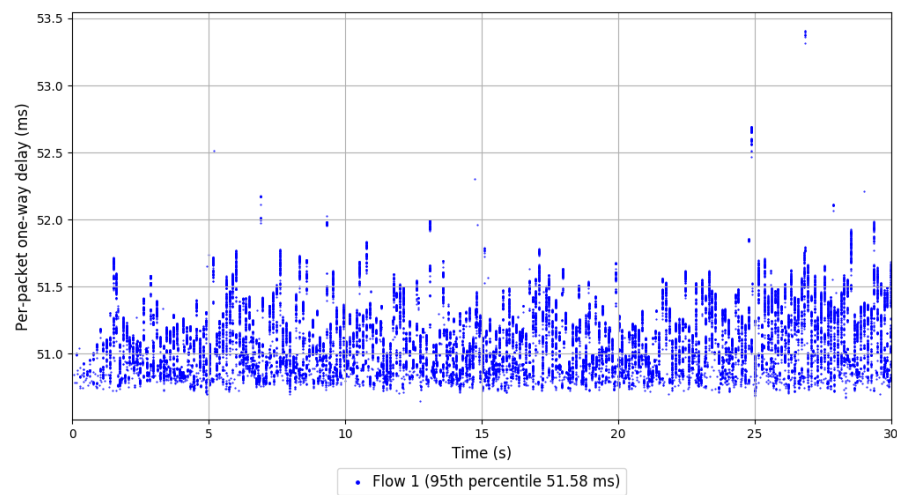
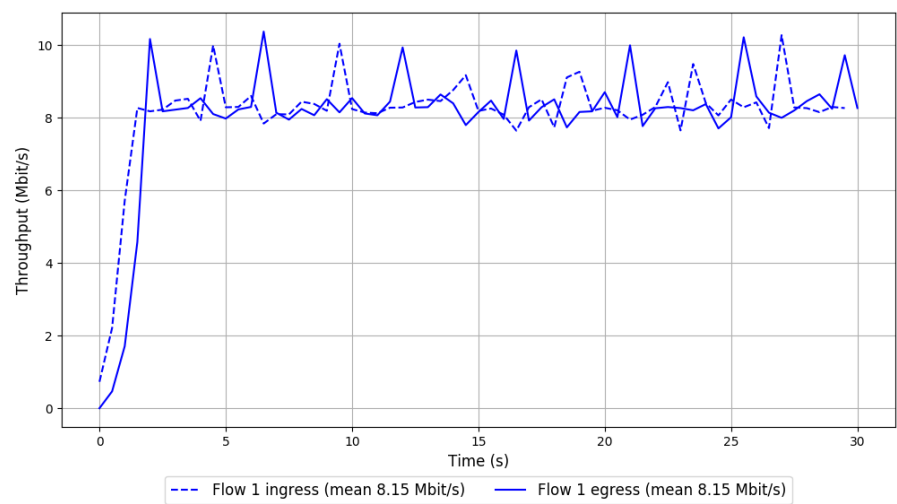
-- Flow 1:

Average throughput: 8.15 Mbit/s

95th percentile per-packet one-way delay: 51.579 ms

Loss rate: 0.00%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-10-10 12:03:29

End at: 2018-10-10 12:03:59

Local clock offset: -0.102 ms

Remote clock offset: 0.075 ms

Below is generated by plot.py at 2018-10-10 14:43:47

Datalink statistics

-- Total of 1 flow:

Average throughput: 8.26 Mbit/s

95th percentile per-packet one-way delay: 50.806 ms

Loss rate: 0.00%

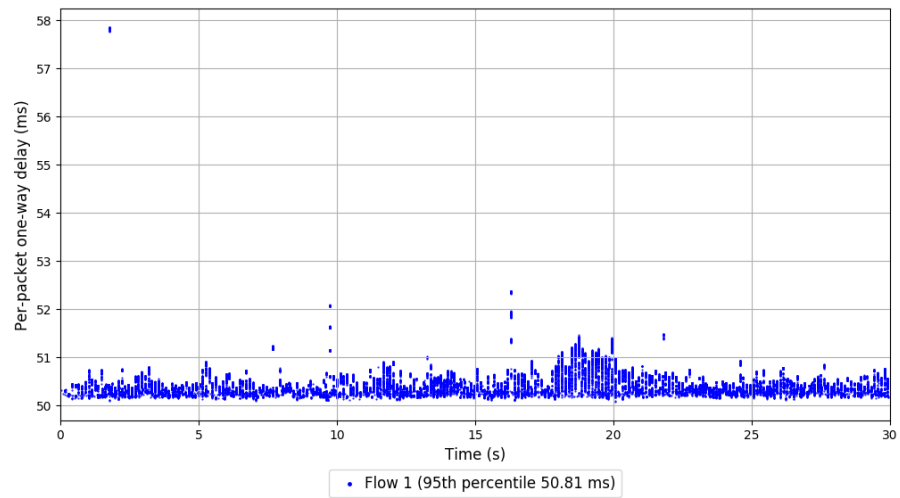
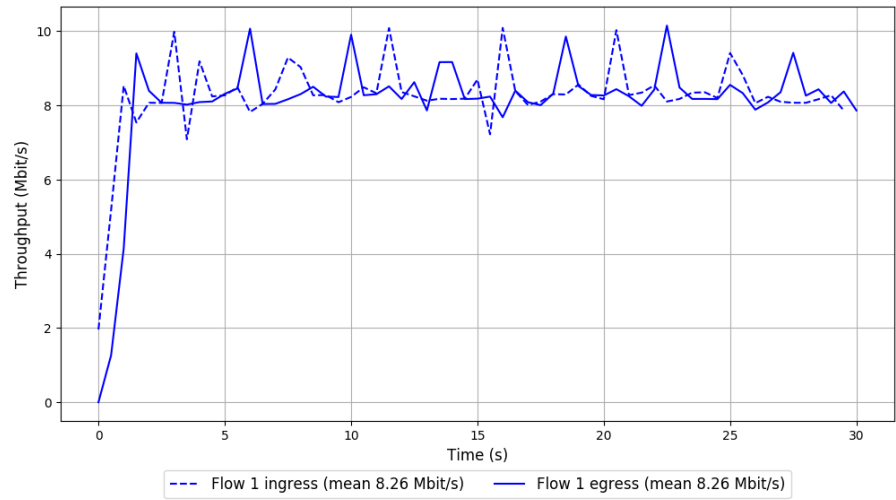
-- Flow 1:

Average throughput: 8.26 Mbit/s

95th percentile per-packet one-way delay: 50.806 ms

Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

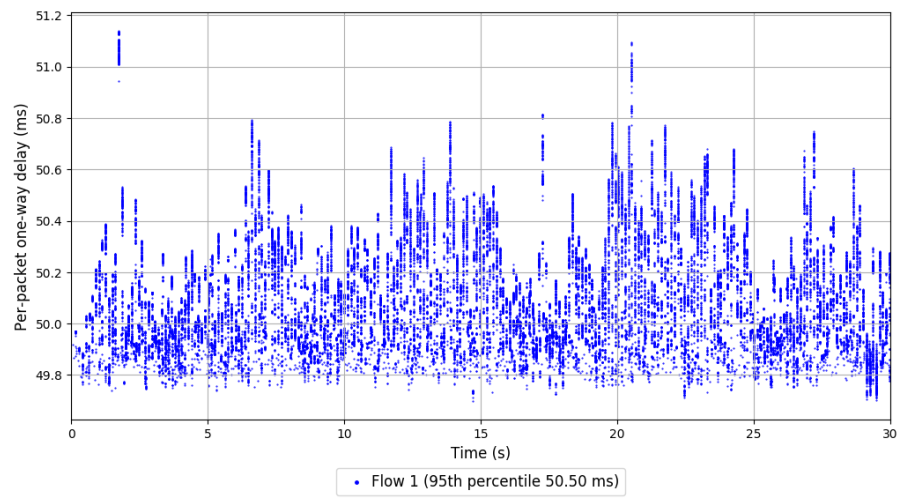
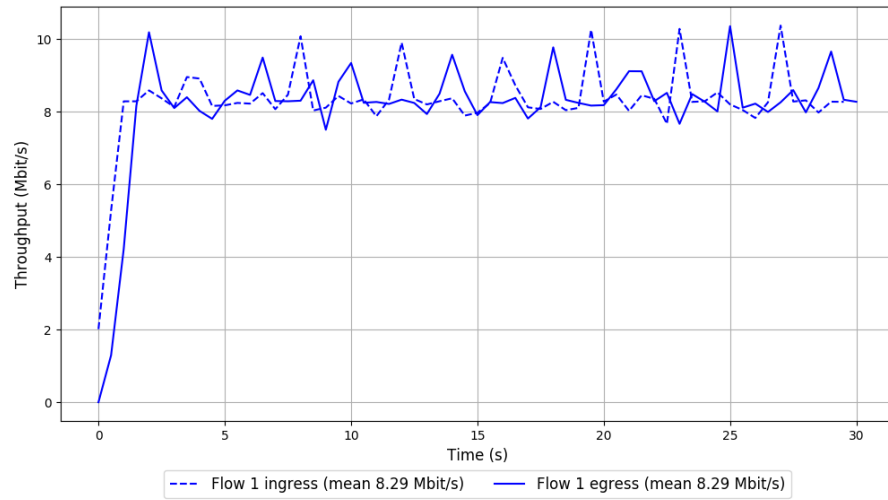


Run 3: Statistics of Sprout

Start at: 2018-10-10 12:28:54
End at: 2018-10-10 12:29:24
Local clock offset: -0.157 ms
Remote clock offset: -0.104 ms

Below is generated by plot.py at 2018-10-10 14:43:47
Datalink statistics
-- Total of 1 flow:
Average throughput: 8.29 Mbit/s
95th percentile per-packet one-way delay: 50.504 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 8.29 Mbit/s
95th percentile per-packet one-way delay: 50.504 ms
Loss rate: 0.00%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2018-10-10 12:54:23

End at: 2018-10-10 12:54:53

Local clock offset: -0.532 ms

Remote clock offset: -0.21 ms

Below is generated by plot.py at 2018-10-10 14:43:47

Datalink statistics

-- Total of 1 flow:

Average throughput: 8.21 Mbit/s

95th percentile per-packet one-way delay: 52.010 ms

Loss rate: 0.00%

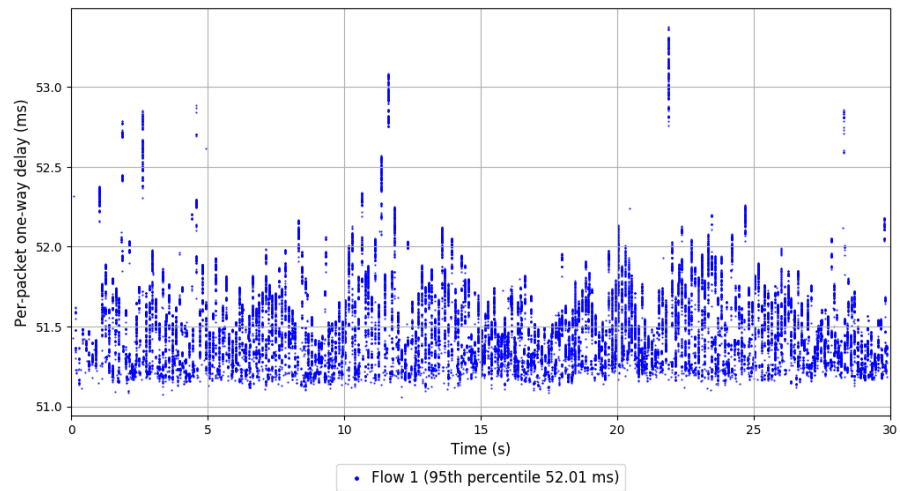
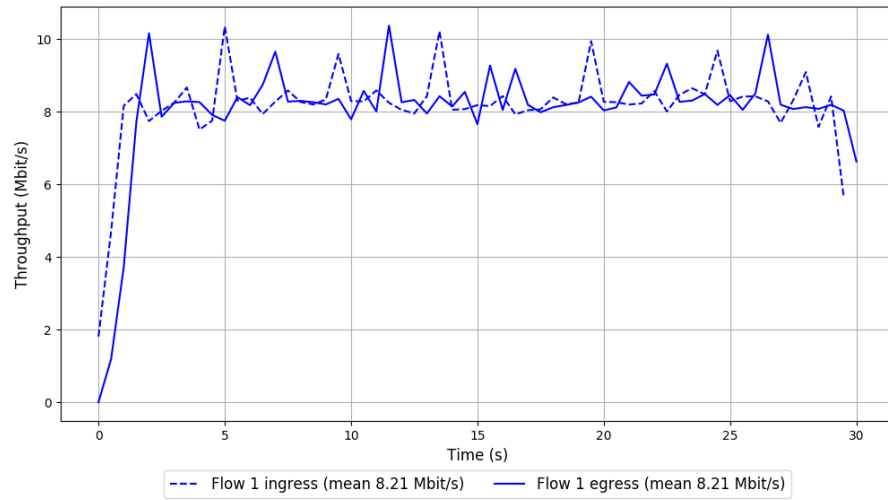
-- Flow 1:

Average throughput: 8.21 Mbit/s

95th percentile per-packet one-way delay: 52.010 ms

Loss rate: 0.00%

Run 4: Report of Sprout — Data Link

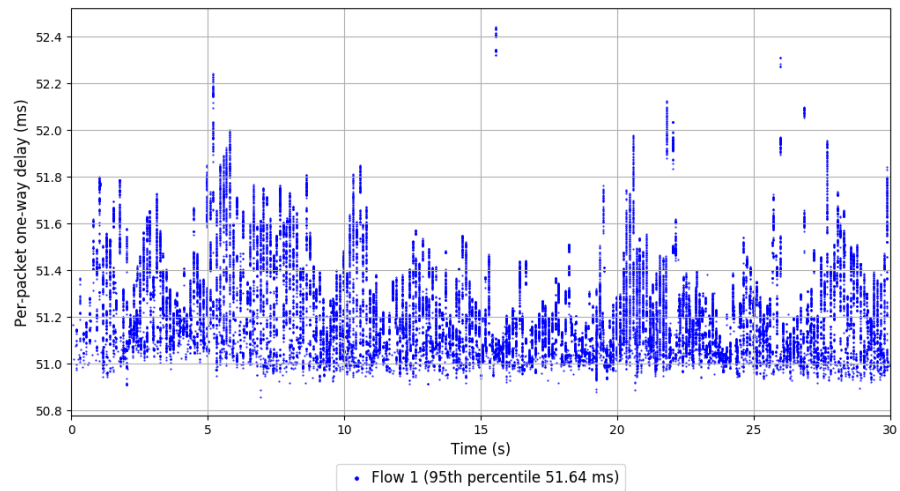
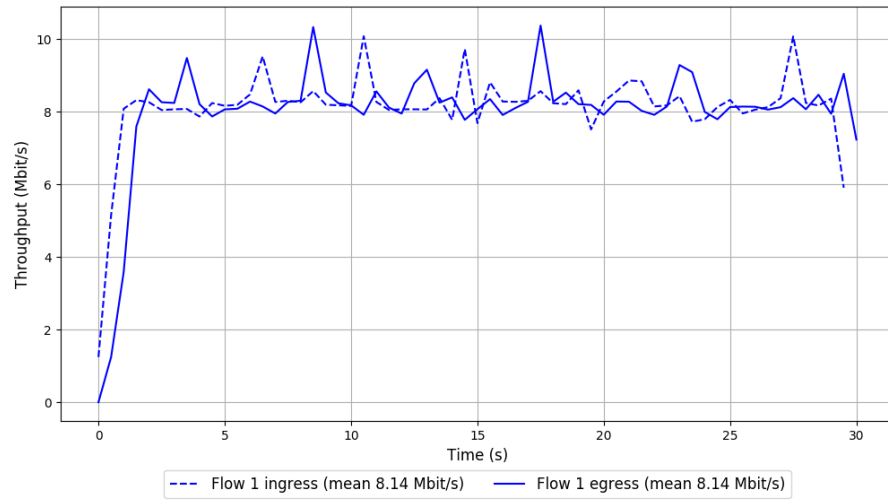


Run 5: Statistics of Sprout

Start at: 2018-10-10 13:19:57
End at: 2018-10-10 13:20:27
Local clock offset: -0.583 ms
Remote clock offset: -0.129 ms

Below is generated by plot.py at 2018-10-10 14:43:47
Datalink statistics
-- Total of 1 flow:
Average throughput: 8.14 Mbit/s
95th percentile per-packet one-way delay: 51.636 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 8.14 Mbit/s
95th percentile per-packet one-way delay: 51.636 ms
Loss rate: 0.00%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2018-10-10 11:23:37

End at: 2018-10-10 11:24:07

Local clock offset: -0.499 ms

Remote clock offset: 0.034 ms

Below is generated by plot.py at 2018-10-10 14:47:13

Datalink statistics

-- Total of 1 flow:

Average throughput: 247.01 Mbit/s

95th percentile per-packet one-way delay: 50.009 ms

Loss rate: 0.00%

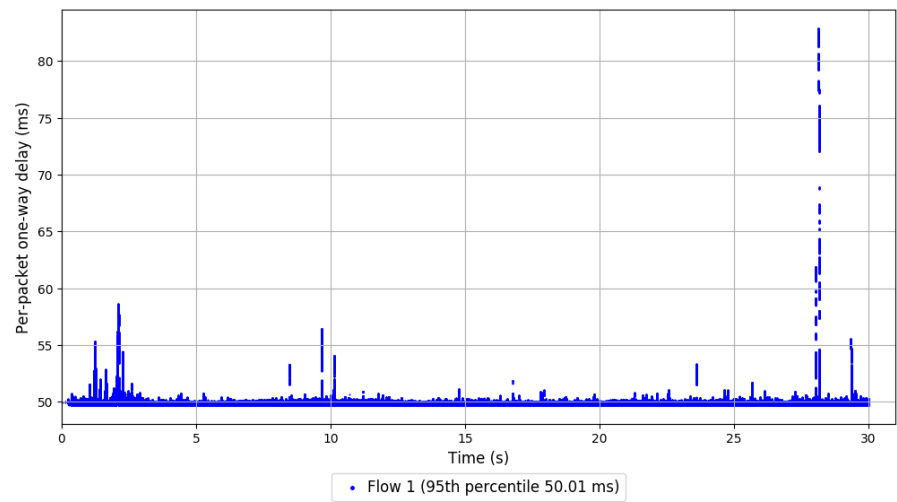
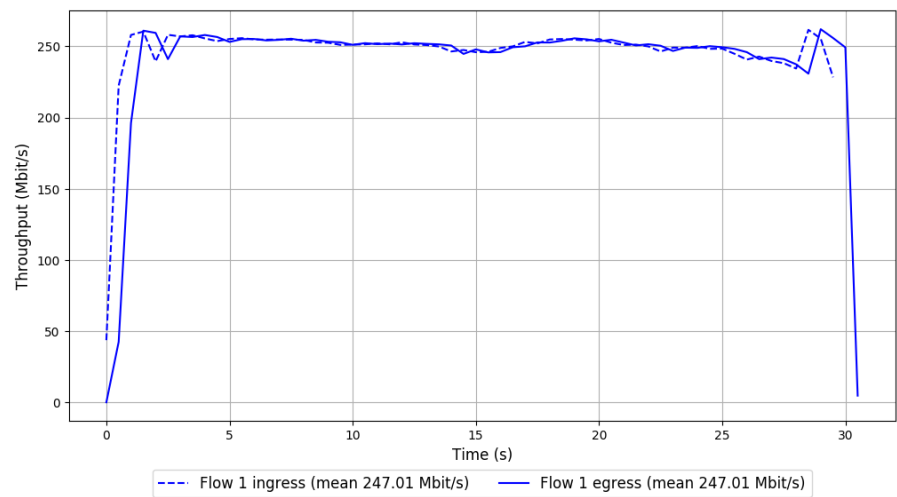
-- Flow 1:

Average throughput: 247.01 Mbit/s

95th percentile per-packet one-way delay: 50.009 ms

Loss rate: 0.00%

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



Run 2: Statistics of TaoVA-100x

Start at: 2018-10-10 11:49:21

End at: 2018-10-10 11:49:51

Local clock offset: 0.182 ms

Remote clock offset: 0.073 ms

Below is generated by plot.py at 2018-10-10 14:47:13

Datalink statistics

-- Total of 1 flow:

Average throughput: 239.77 Mbit/s

95th percentile per-packet one-way delay: 49.922 ms

Loss rate: 0.00%

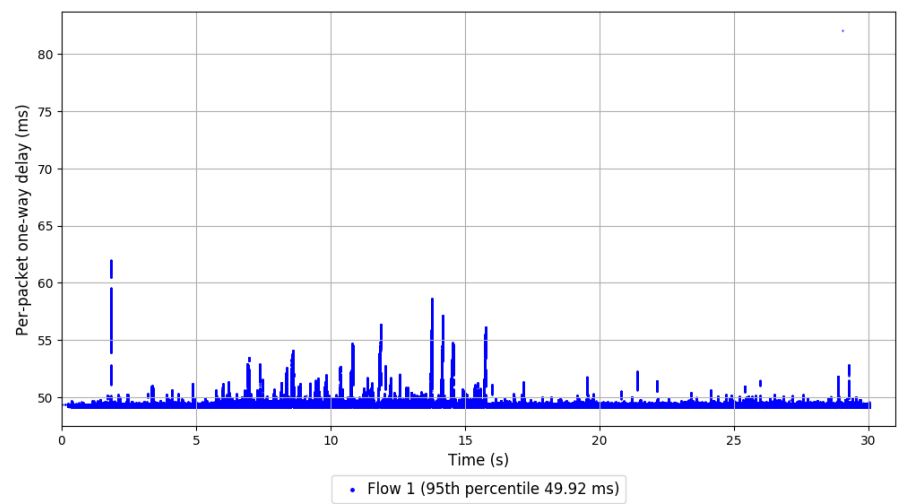
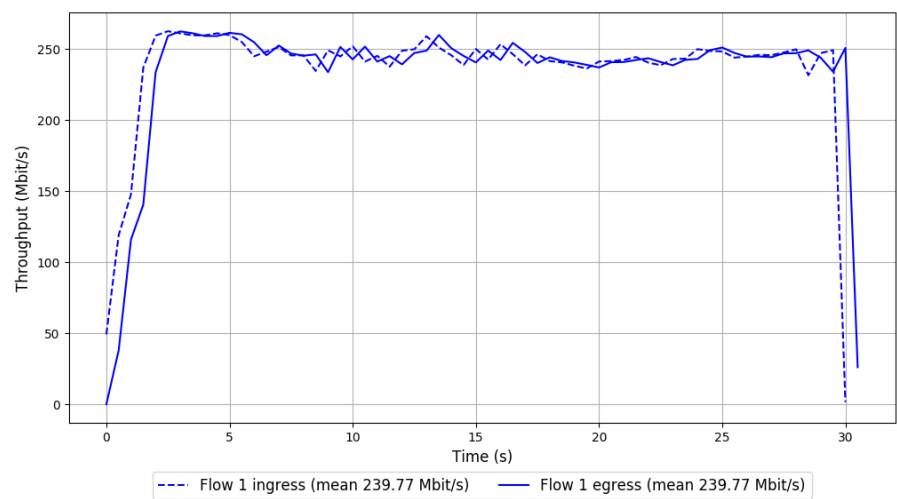
-- Flow 1:

Average throughput: 239.77 Mbit/s

95th percentile per-packet one-way delay: 49.922 ms

Loss rate: 0.00%

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

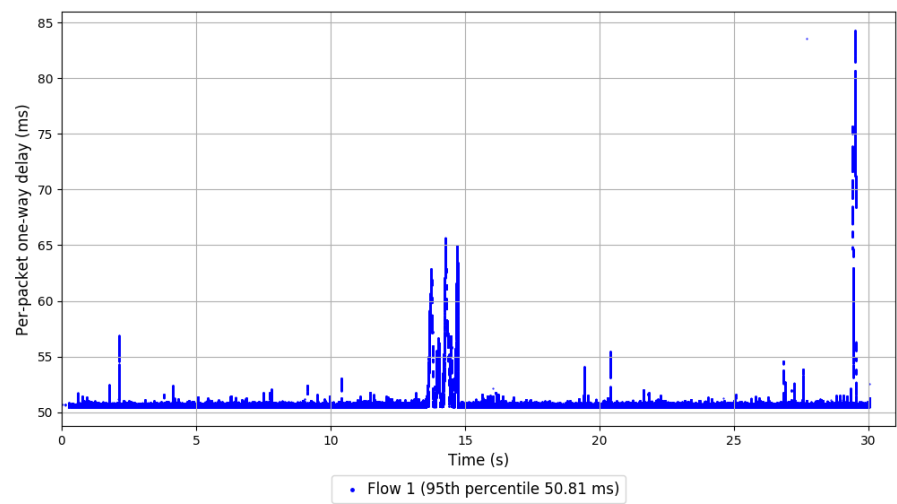
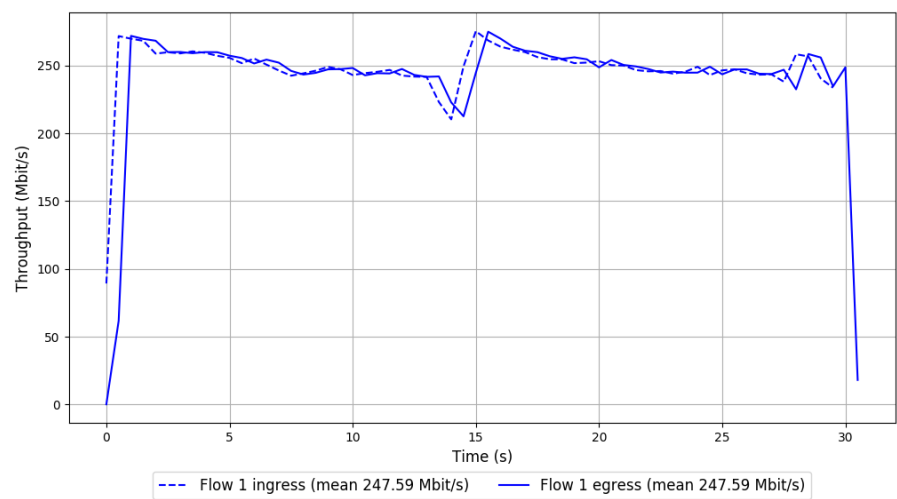


Run 3: Statistics of TaoVA-100x

Start at: 2018-10-10 12:14:49
End at: 2018-10-10 12:15:19
Local clock offset: -0.137 ms
Remote clock offset: -0.082 ms

Below is generated by plot.py at 2018-10-10 14:47:20
Datalink statistics
-- Total of 1 flow:
Average throughput: 247.59 Mbit/s
95th percentile per-packet one-way delay: 50.813 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 247.59 Mbit/s
95th percentile per-packet one-way delay: 50.813 ms
Loss rate: 0.00%

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

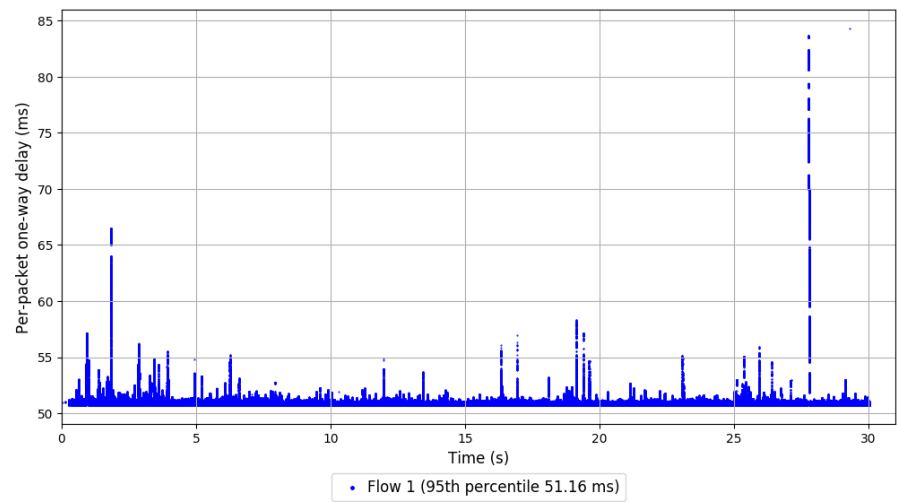
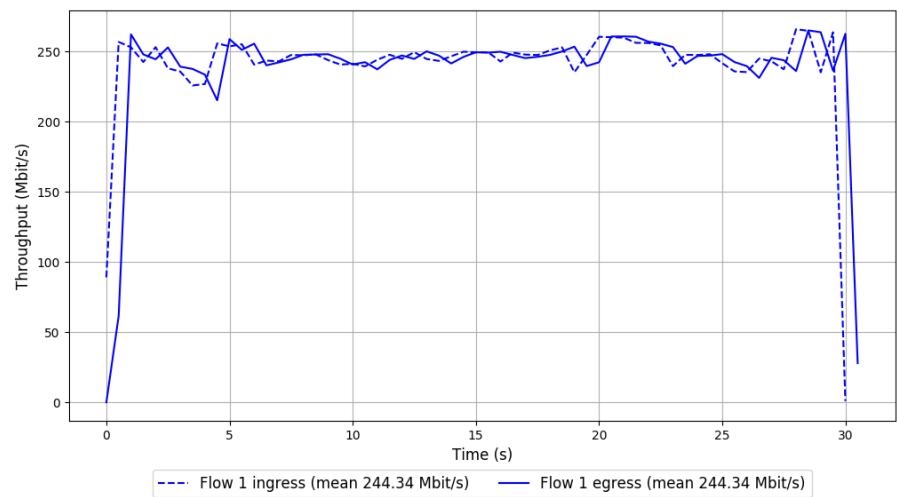


Run 4: Statistics of TaoVA-100x

Start at: 2018-10-10 12:40:16
End at: 2018-10-10 12:40:46
Local clock offset: -0.474 ms
Remote clock offset: -0.123 ms

Below is generated by plot.py at 2018-10-10 14:47:21
Datalink statistics
-- Total of 1 flow:
Average throughput: 244.34 Mbit/s
95th percentile per-packet one-way delay: 51.156 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 244.34 Mbit/s
95th percentile per-packet one-way delay: 51.156 ms
Loss rate: 0.00%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-10-10 13:05:53

End at: 2018-10-10 13:06:23

Local clock offset: -0.574 ms

Remote clock offset: -0.205 ms

Below is generated by plot.py at 2018-10-10 14:51:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 249.15 Mbit/s

95th percentile per-packet one-way delay: 50.915 ms

Loss rate: 0.00%

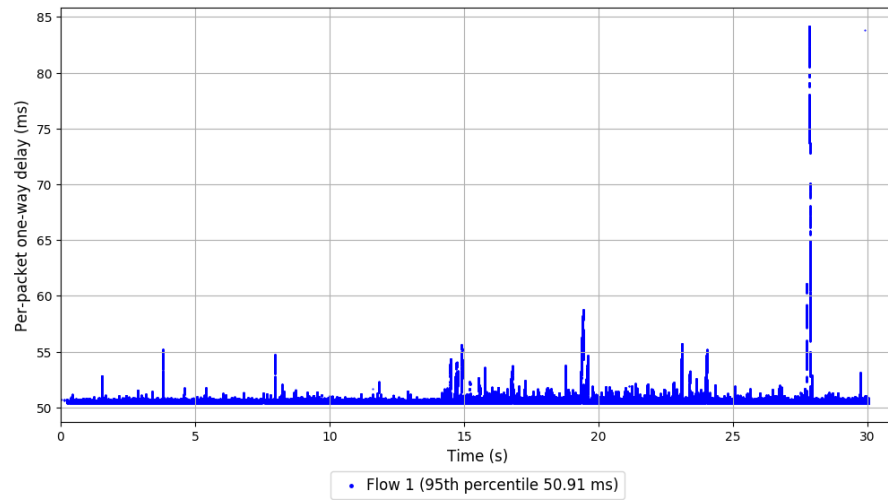
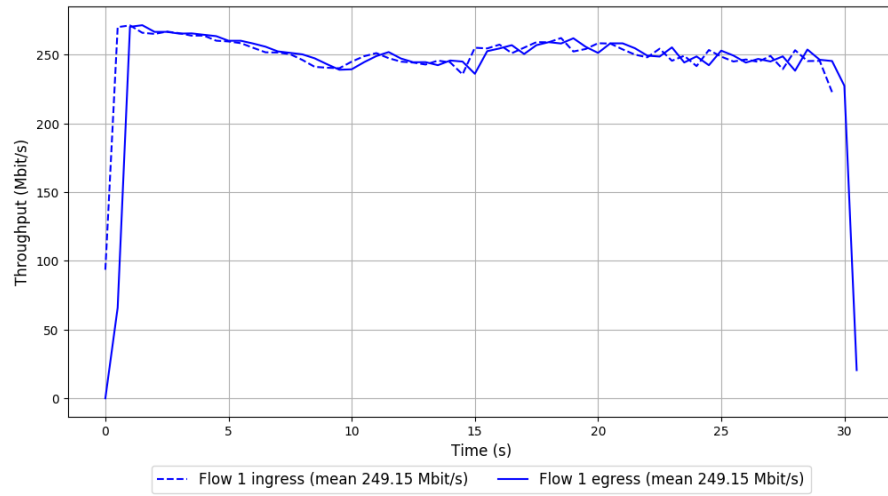
-- Flow 1:

Average throughput: 249.15 Mbit/s

95th percentile per-packet one-way delay: 50.915 ms

Loss rate: 0.00%

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



Run 1: Statistics of TCP Vegas

Start at: 2018-10-10 11:20:21

End at: 2018-10-10 11:20:51

Local clock offset: 0.179 ms

Remote clock offset: 0.018 ms

Below is generated by plot.py at 2018-10-10 14:53:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 557.79 Mbit/s

95th percentile per-packet one-way delay: 50.332 ms

Loss rate: 0.00%

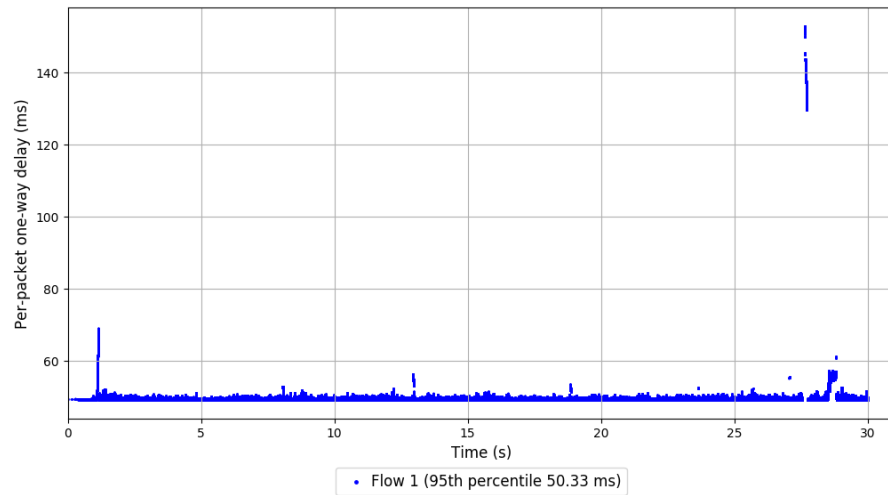
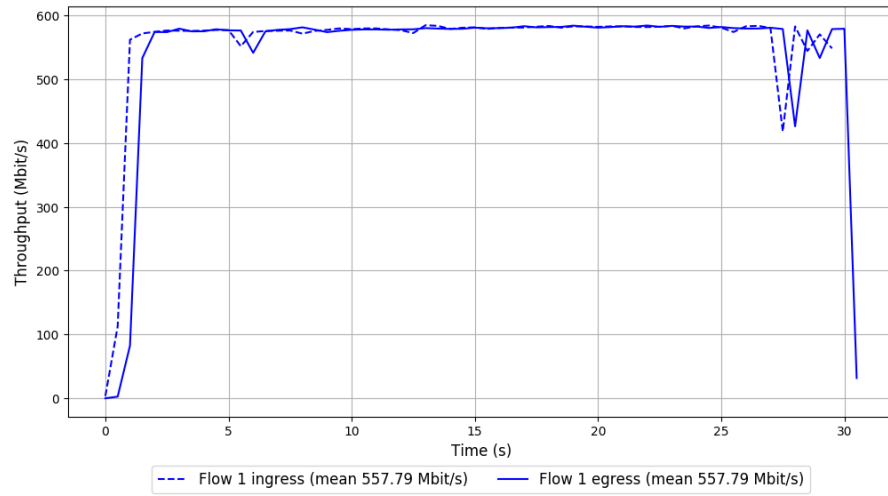
-- Flow 1:

Average throughput: 557.79 Mbit/s

95th percentile per-packet one-way delay: 50.332 ms

Loss rate: 0.00%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-10-10 11:46:09

End at: 2018-10-10 11:46:39

Local clock offset: -0.188 ms

Remote clock offset: 0.114 ms

Below is generated by plot.py at 2018-10-10 14:53:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 551.22 Mbit/s

95th percentile per-packet one-way delay: 52.441 ms

Loss rate: 0.00%

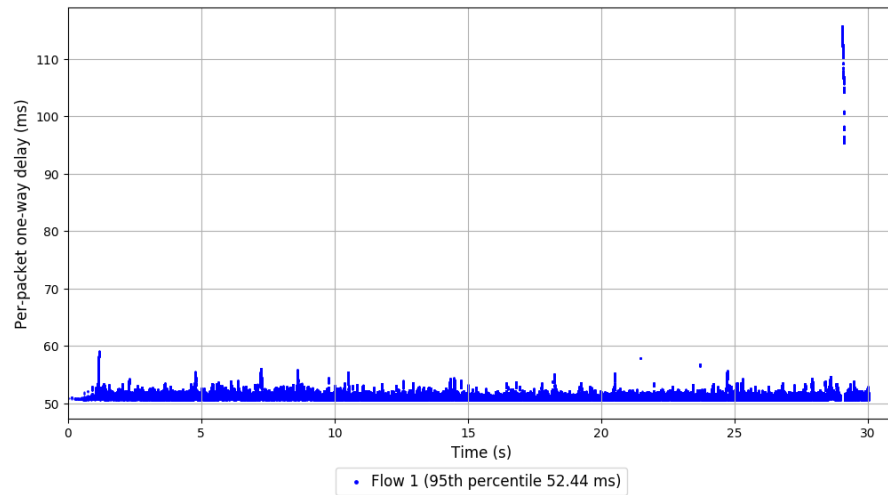
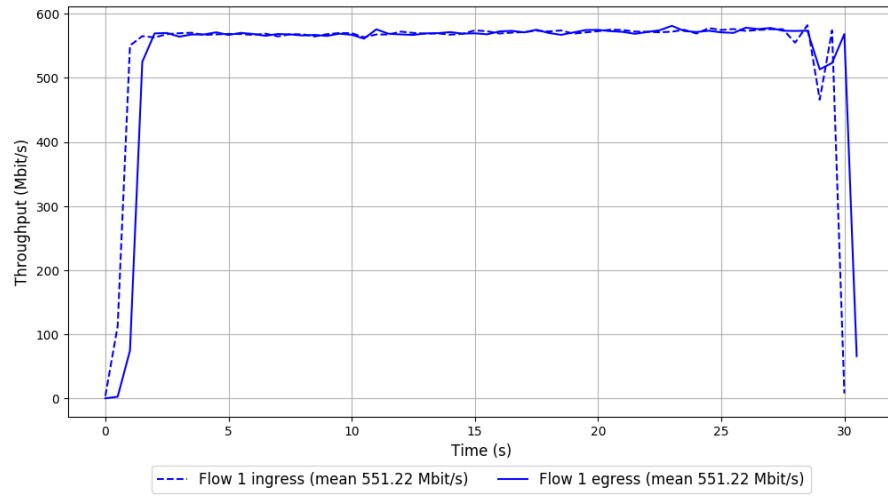
-- Flow 1:

Average throughput: 551.22 Mbit/s

95th percentile per-packet one-way delay: 52.441 ms

Loss rate: 0.00%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-10-10 12:11:52

End at: 2018-10-10 12:12:22

Local clock offset: -0.153 ms

Remote clock offset: 0.024 ms

Below is generated by plot.py at 2018-10-10 14:53:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 262.99 Mbit/s

95th percentile per-packet one-way delay: 55.751 ms

Loss rate: 0.00%

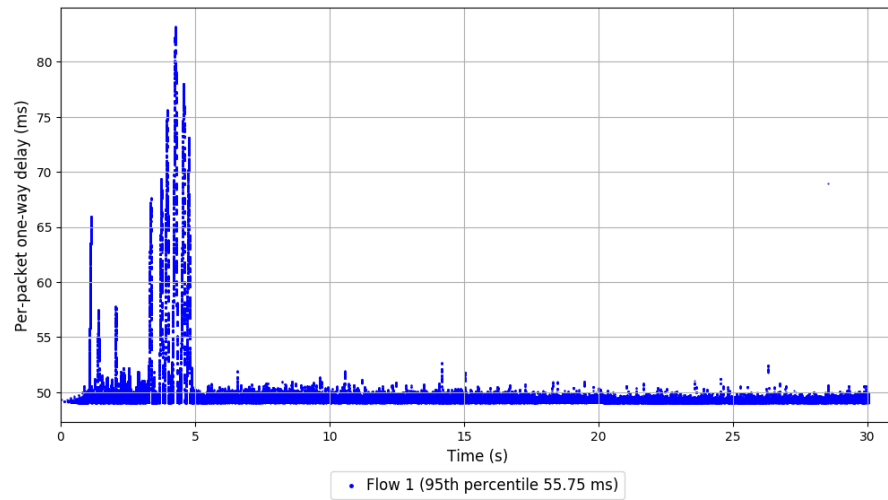
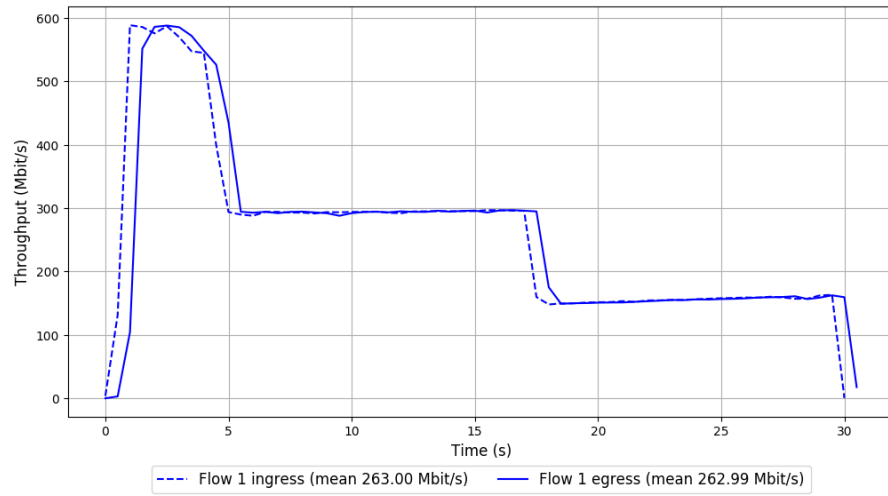
-- Flow 1:

Average throughput: 262.99 Mbit/s

95th percentile per-packet one-way delay: 55.751 ms

Loss rate: 0.00%

Run 3: Report of TCP Vegas — Data Link

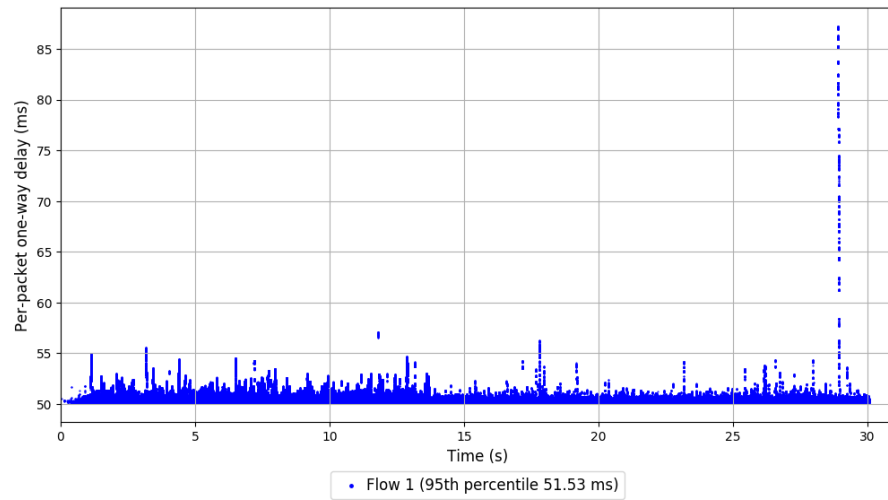
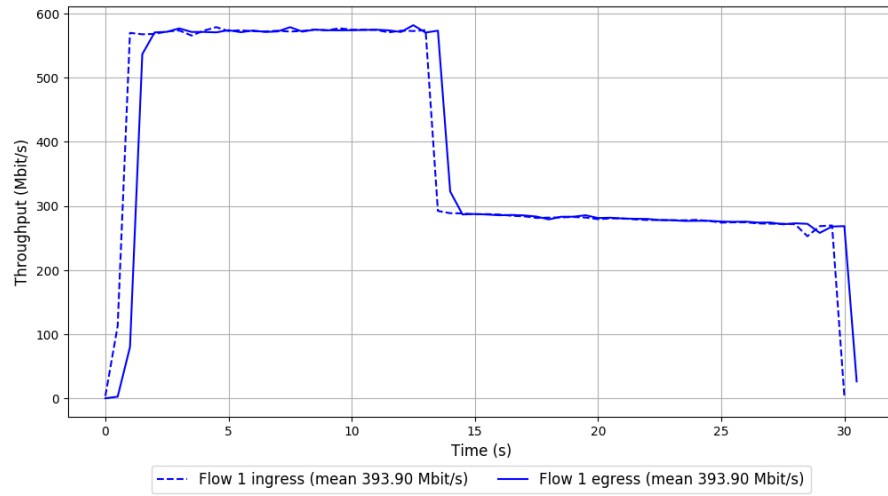


Run 4: Statistics of TCP Vegas

Start at: 2018-10-10 12:37:14
End at: 2018-10-10 12:37:44
Local clock offset: -0.486 ms
Remote clock offset: -0.081 ms

Below is generated by plot.py at 2018-10-10 14:54:47
Datalink statistics
-- Total of 1 flow:
Average throughput: 393.90 Mbit/s
95th percentile per-packet one-way delay: 51.531 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 393.90 Mbit/s
95th percentile per-packet one-way delay: 51.531 ms
Loss rate: 0.00%

Run 4: Report of TCP Vegas — Data Link

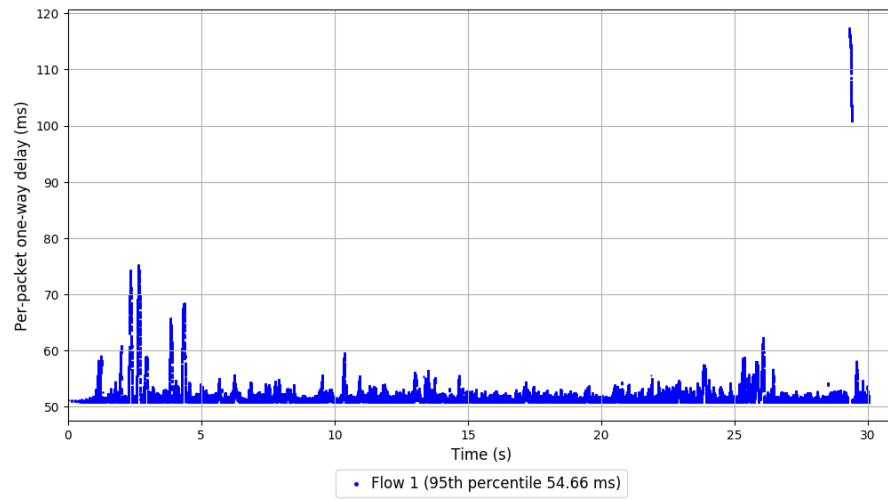
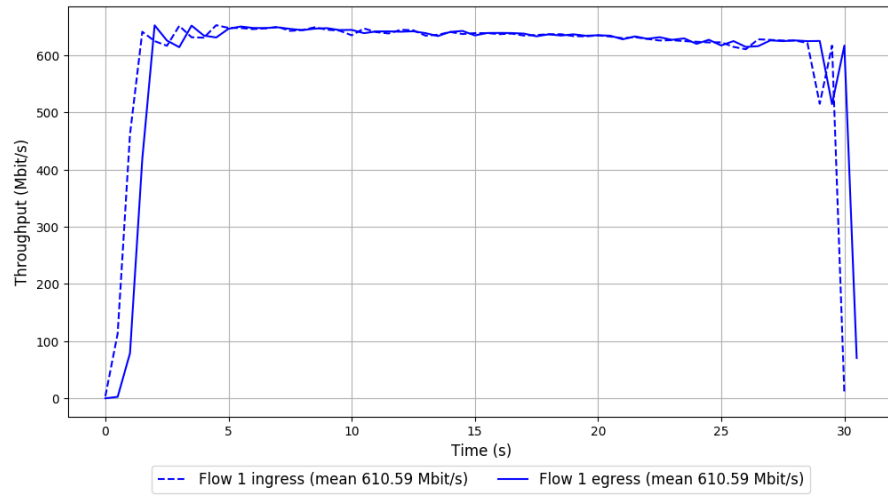


Run 5: Statistics of TCP Vegas

Start at: 2018-10-10 13:02:40
End at: 2018-10-10 13:03:10
Local clock offset: -0.567 ms
Remote clock offset: -0.216 ms

Below is generated by plot.py at 2018-10-10 14:59:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 610.59 Mbit/s
95th percentile per-packet one-way delay: 54.658 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 610.59 Mbit/s
95th percentile per-packet one-way delay: 54.658 ms
Loss rate: 0.00%

Run 5: Report of TCP Vegas — Data Link

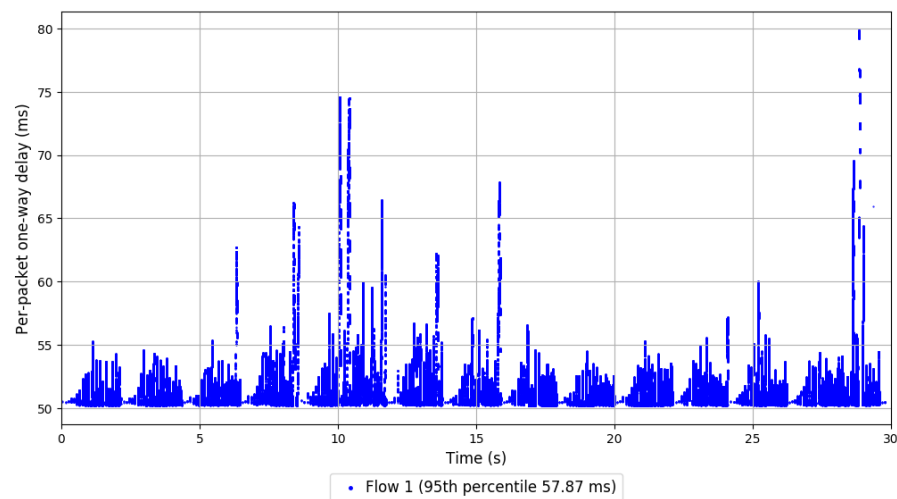
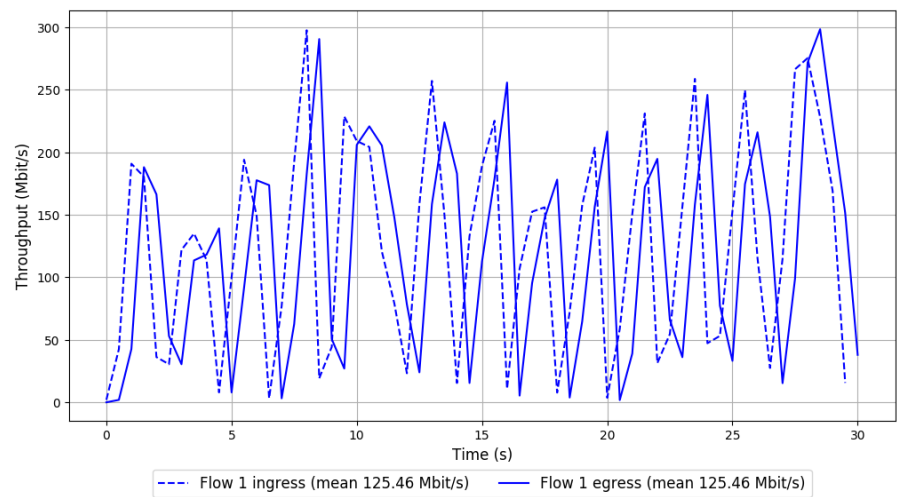


Run 1: Statistics of Verus

Start at: 2018-10-10 11:16:18
End at: 2018-10-10 11:16:48
Local clock offset: -0.226 ms
Remote clock offset: -0.034 ms

Below is generated by plot.py at 2018-10-10 14:59:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 125.46 Mbit/s
95th percentile per-packet one-way delay: 57.870 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 125.46 Mbit/s
95th percentile per-packet one-way delay: 57.870 ms
Loss rate: 0.00%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-10-10 11:42:02

End at: 2018-10-10 11:42:32

Local clock offset: -0.201 ms

Remote clock offset: 0.04 ms

Below is generated by plot.py at 2018-10-10 14:59:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 147.63 Mbit/s

95th percentile per-packet one-way delay: 78.607 ms

Loss rate: 0.02%

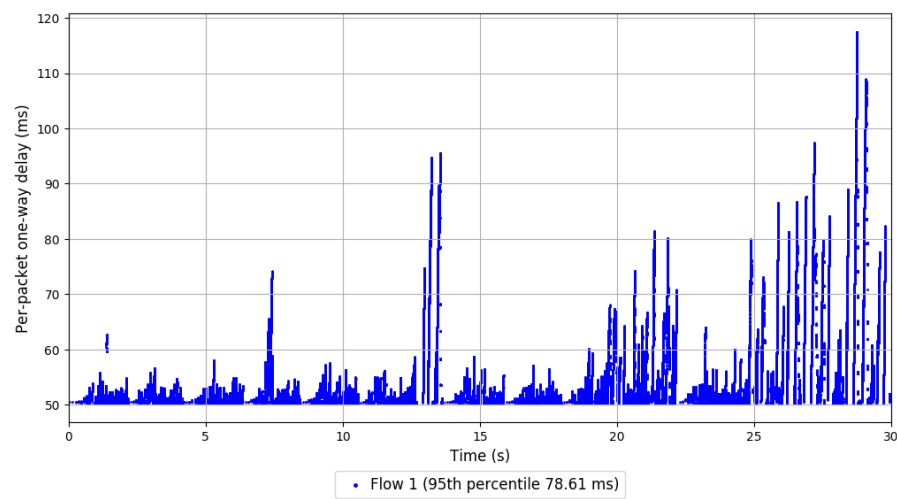
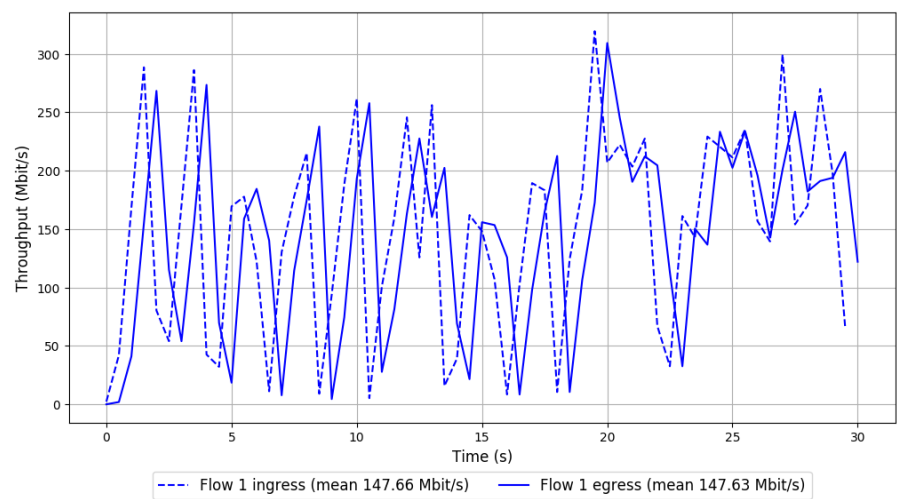
-- Flow 1:

Average throughput: 147.63 Mbit/s

95th percentile per-packet one-way delay: 78.607 ms

Loss rate: 0.02%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-10-10 12:07:42

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

Local clock offset: -0.522 ms

Remote clock offset: 0.003 ms

Below is generated by plot.py at 2018-10-10 14:59:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 197.53 Mbit/s

95th percentile per-packet one-way delay: 171.672 ms

Loss rate: 0.74%

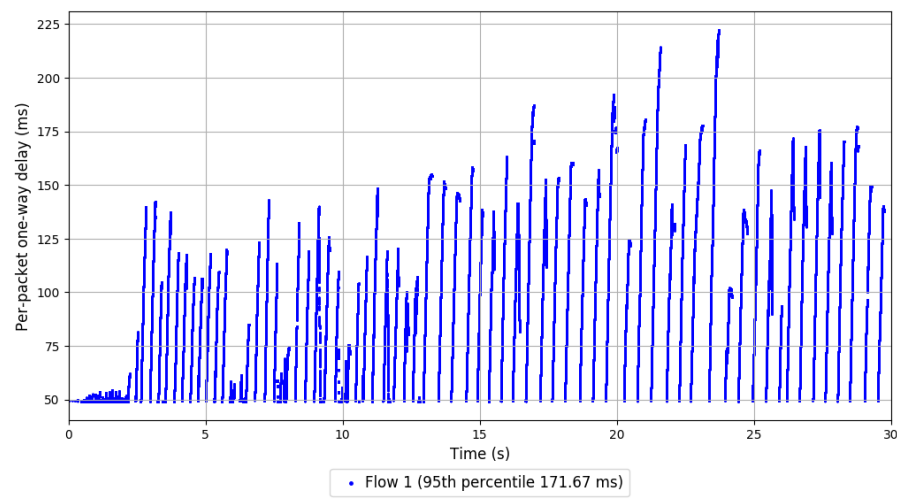
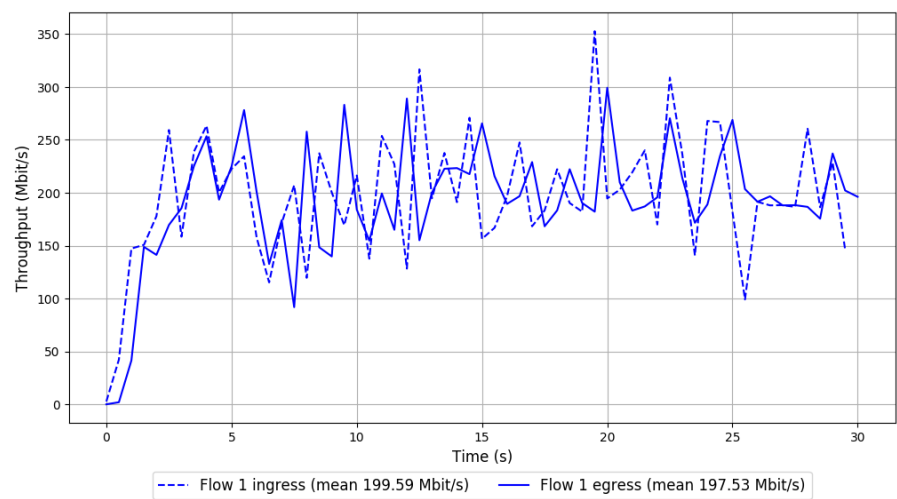
-- Flow 1:

Average throughput: 197.53 Mbit/s

95th percentile per-packet one-way delay: 171.672 ms

Loss rate: 0.74%

Run 3: Report of Verus — Data Link

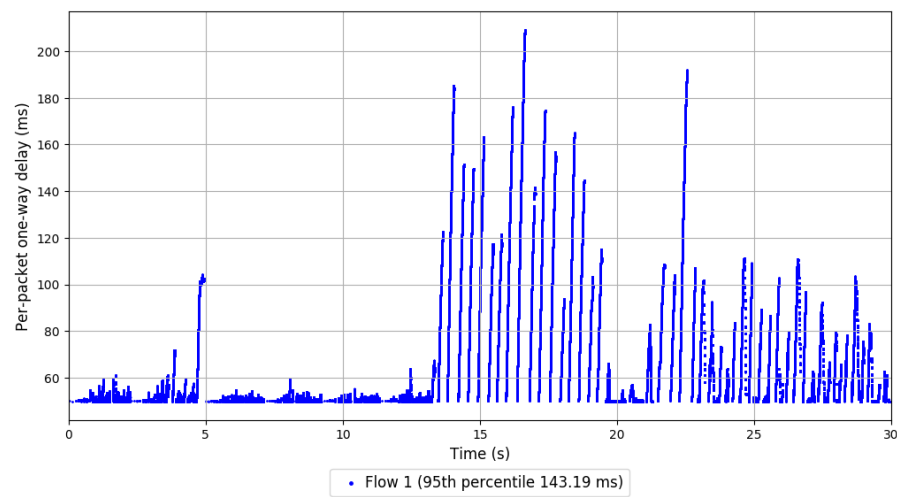
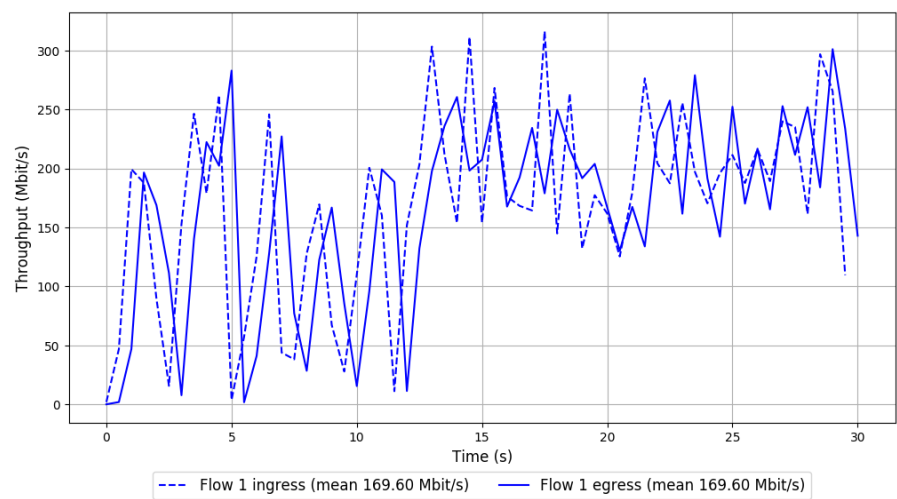


Run 4: Statistics of Verus

Start at: 2018-10-10 12:33:05
End at: 2018-10-10 12:33:35
Local clock offset: 0.219 ms
Remote clock offset: -0.167 ms

Below is generated by plot.py at 2018-10-10 14:59:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 169.60 Mbit/s
95th percentile per-packet one-way delay: 143.194 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 169.60 Mbit/s
95th percentile per-packet one-way delay: 143.194 ms
Loss rate: 0.00%

Run 4: Report of Verus — Data Link

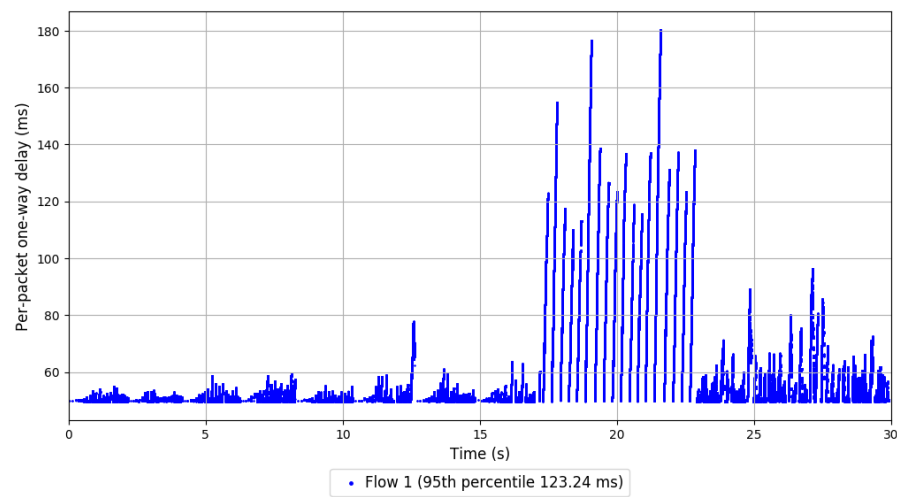
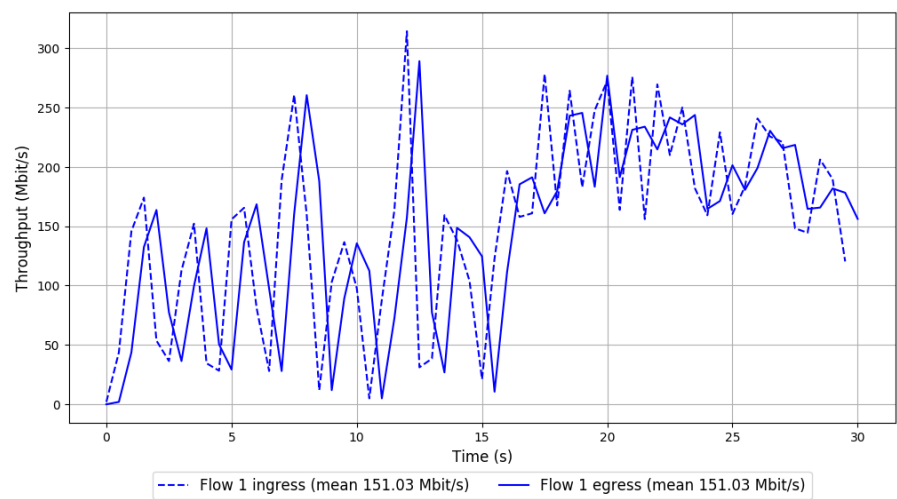


Run 5: Statistics of Verus

Start at: 2018-10-10 12:58:34
End at: 2018-10-10 12:59:04
Local clock offset: -0.211 ms
Remote clock offset: -0.165 ms

Below is generated by plot.py at 2018-10-10 14:59:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 151.03 Mbit/s
95th percentile per-packet one-way delay: 123.239 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 151.03 Mbit/s
95th percentile per-packet one-way delay: 123.239 ms
Loss rate: 0.00%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2018-10-10 11:25:05

End at: 2018-10-10 11:25:35

Local clock offset: -0.537 ms

Remote clock offset: 0.048 ms

Below is generated by plot.py at 2018-10-10 14:59:43

Datalink statistics

-- Total of 1 flow:

Average throughput: 379.71 Mbit/s

95th percentile per-packet one-way delay: 50.534 ms

Loss rate: 0.00%

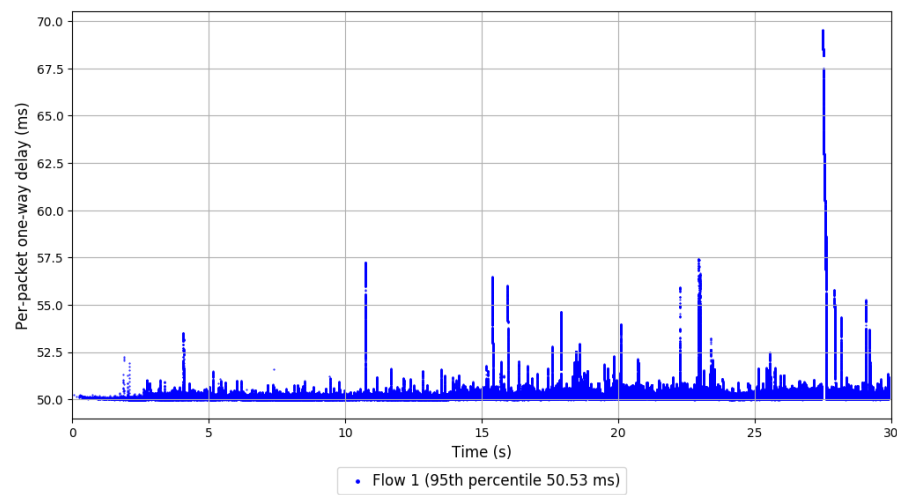
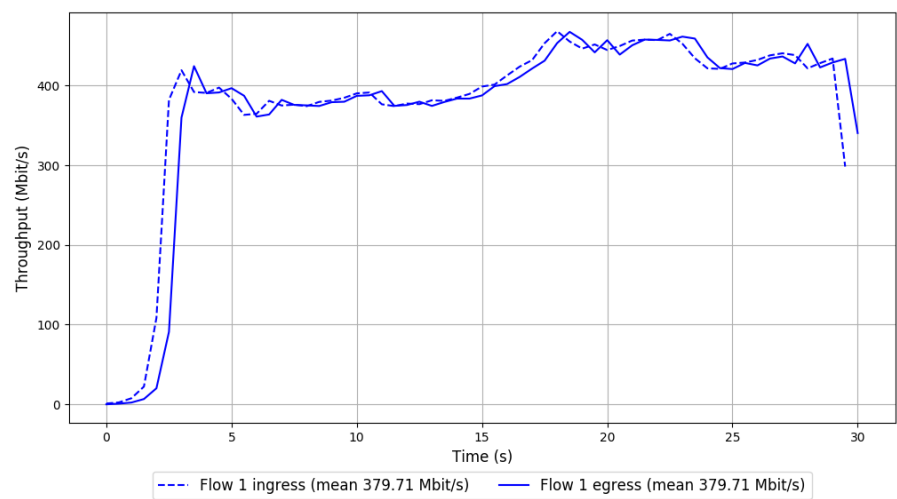
-- Flow 1:

Average throughput: 379.71 Mbit/s

95th percentile per-packet one-way delay: 50.534 ms

Loss rate: 0.00%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2018-10-10 11:50:48

End at: 2018-10-10 11:51:18

Local clock offset: -0.164 ms

Remote clock offset: 0.058 ms

Below is generated by plot.py at 2018-10-10 14:59:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 360.48 Mbit/s

95th percentile per-packet one-way delay: 72.996 ms

Loss rate: 0.41%

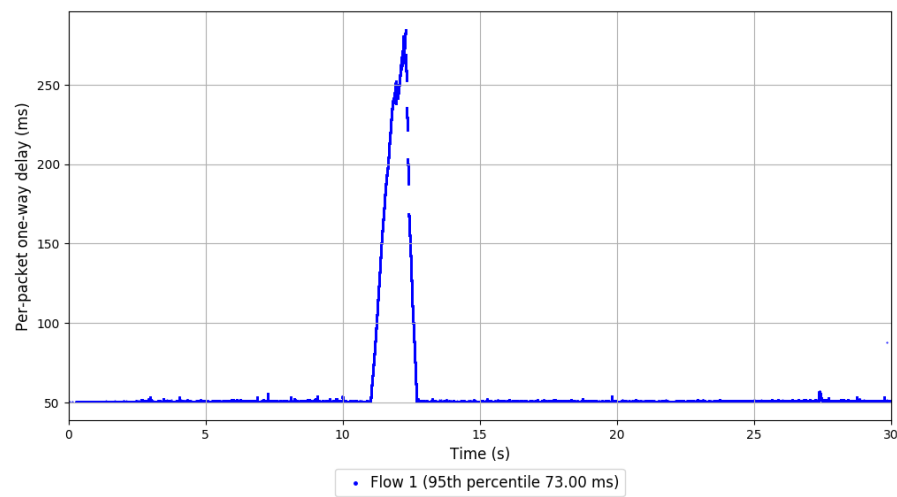
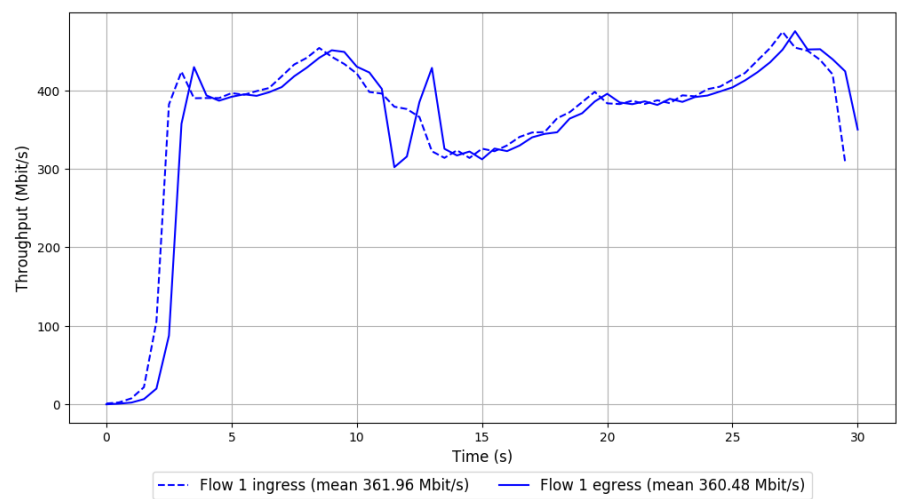
-- Flow 1:

Average throughput: 360.48 Mbit/s

95th percentile per-packet one-way delay: 72.996 ms

Loss rate: 0.41%

Run 2: Report of PCC-Vivace — Data Link

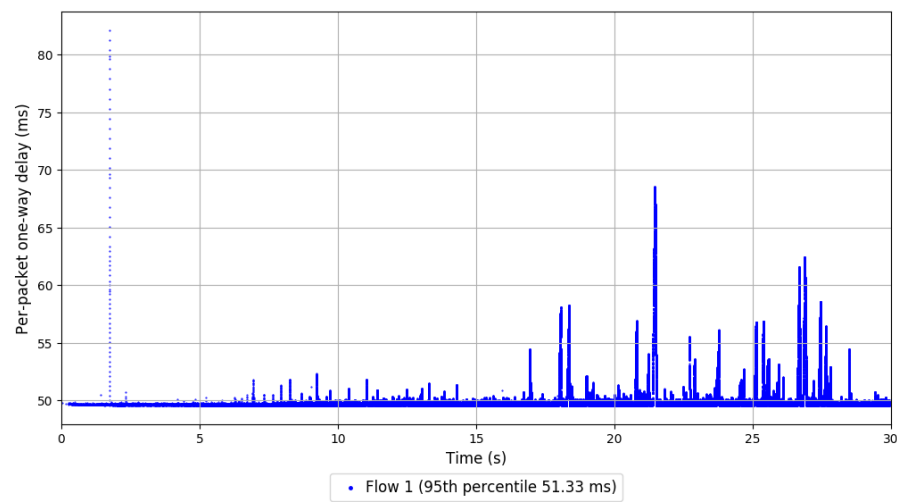
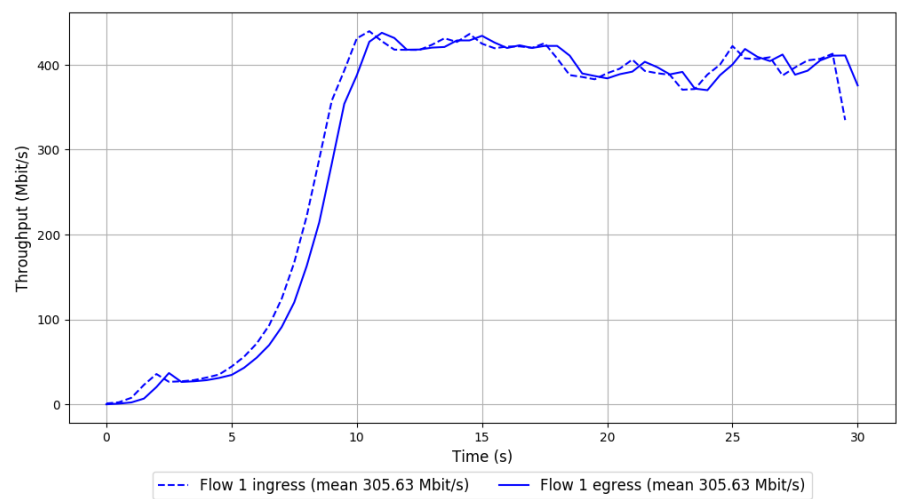


Run 3: Statistics of PCC-Vivace

Start at: 2018-10-10 12:16:17
End at: 2018-10-10 12:16:47
Local clock offset: -0.121 ms
Remote clock offset: -0.045 ms

Below is generated by plot.py at 2018-10-10 14:59:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 305.63 Mbit/s
95th percentile per-packet one-way delay: 51.331 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 305.63 Mbit/s
95th percentile per-packet one-way delay: 51.331 ms
Loss rate: 0.00%

Run 3: Report of PCC-Vivace — Data Link

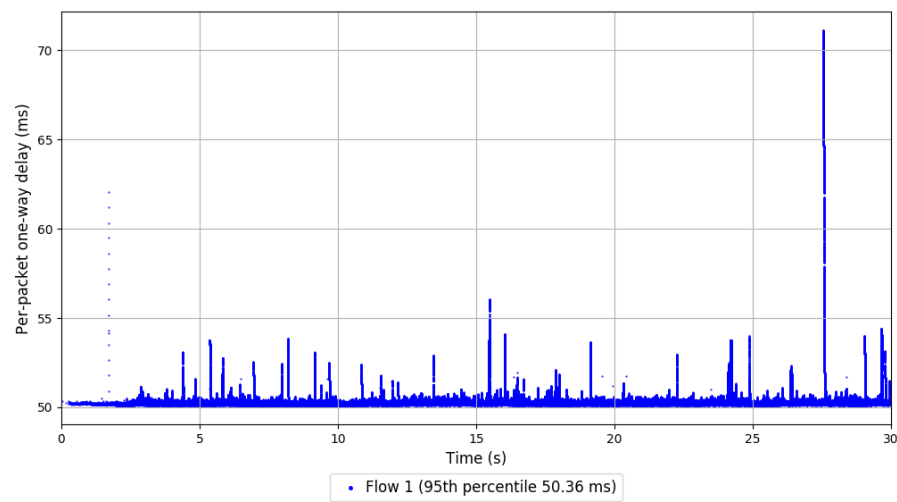
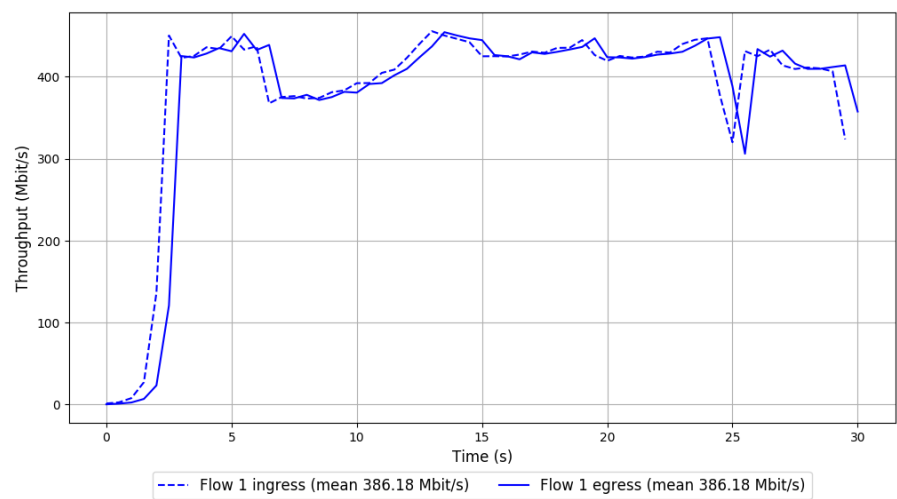


Run 4: Statistics of PCC-Vivace

Start at: 2018-10-10 12:41:44
End at: 2018-10-10 12:42:14
Local clock offset: -0.129 ms
Remote clock offset: -0.169 ms

Below is generated by plot.py at 2018-10-10 14:59:57
Datalink statistics
-- Total of 1 flow:
Average throughput: 386.18 Mbit/s
95th percentile per-packet one-way delay: 50.356 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 386.18 Mbit/s
95th percentile per-packet one-way delay: 50.356 ms
Loss rate: 0.00%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2018-10-10 13:07:21

End at: 2018-10-10 13:07:51

Local clock offset: -0.583 ms

Remote clock offset: -0.24 ms

Below is generated by plot.py at 2018-10-10 15:00:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 362.94 Mbit/s

95th percentile per-packet one-way delay: 51.038 ms

Loss rate: 0.00%

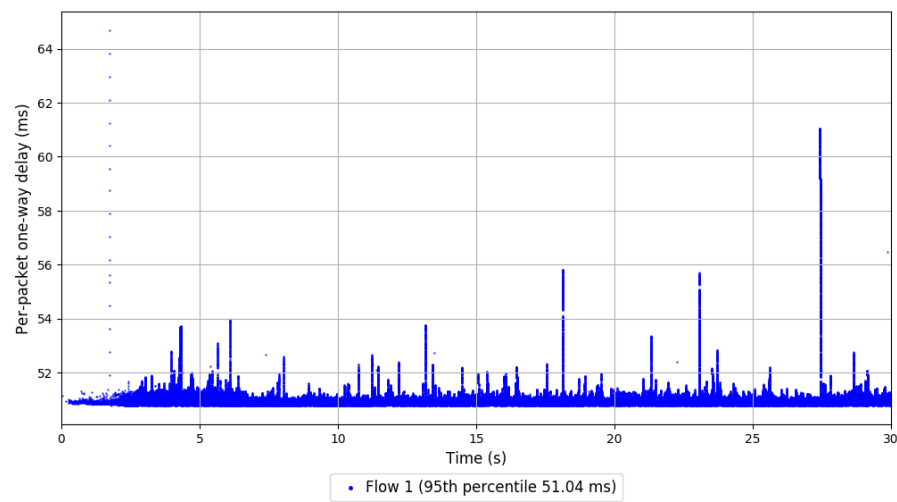
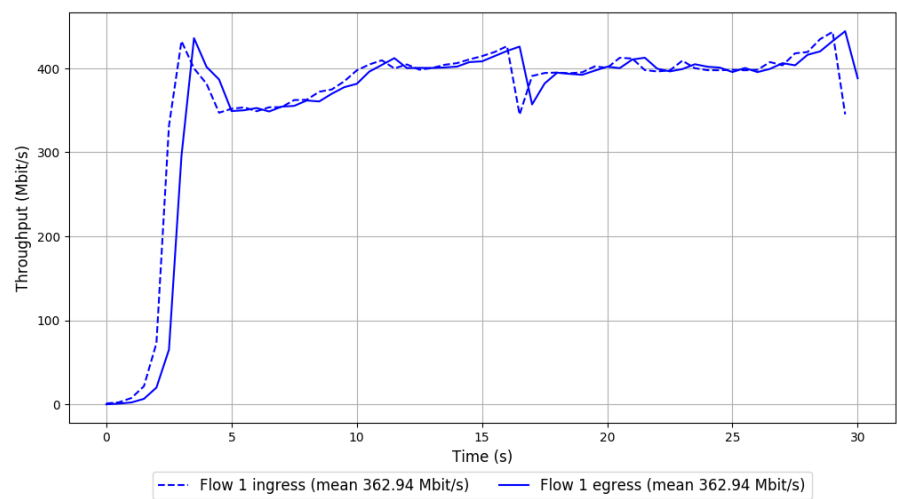
-- Flow 1:

Average throughput: 362.94 Mbit/s

95th percentile per-packet one-way delay: 51.038 ms

Loss rate: 0.00%

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2018-10-10 11:28:16

End at: 2018-10-10 11:28:46

Local clock offset: -0.191 ms

Remote clock offset: 0.059 ms

Below is generated by plot.py at 2018-10-10 15:00:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.26 Mbit/s

95th percentile per-packet one-way delay: 49.427 ms

Loss rate: 0.00%

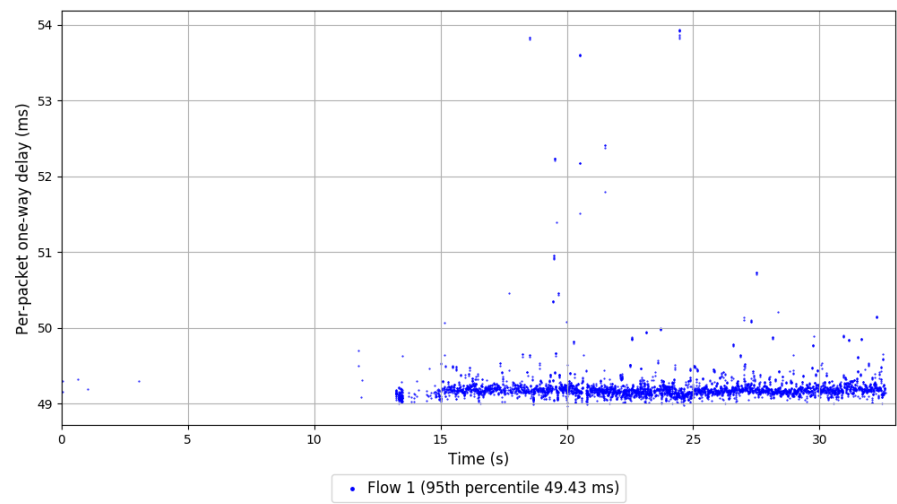
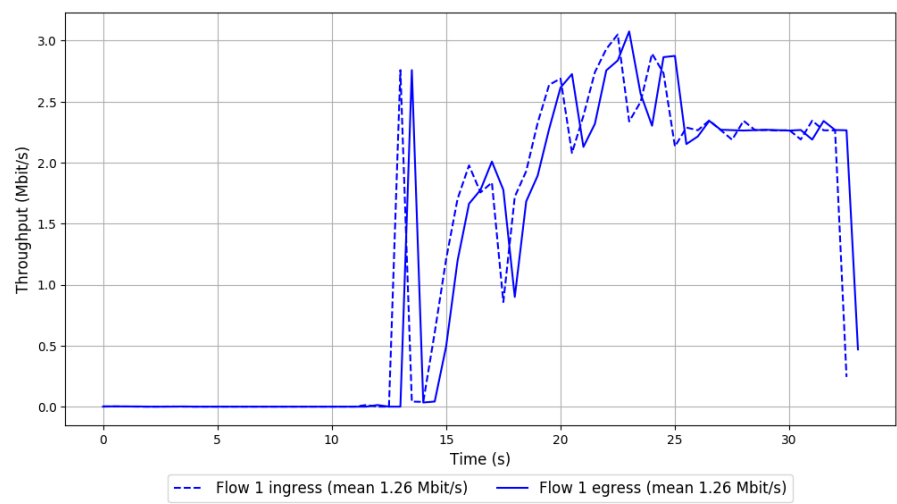
-- Flow 1:

Average throughput: 1.26 Mbit/s

95th percentile per-packet one-way delay: 49.427 ms

Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-10-10 11:53:57

End at: 2018-10-10 11:54:27

Local clock offset: 0.202 ms

Remote clock offset: 0.052 ms

Below is generated by plot.py at 2018-10-10 15:00:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.89 Mbit/s

95th percentile per-packet one-way delay: 50.107 ms

Loss rate: 0.00%

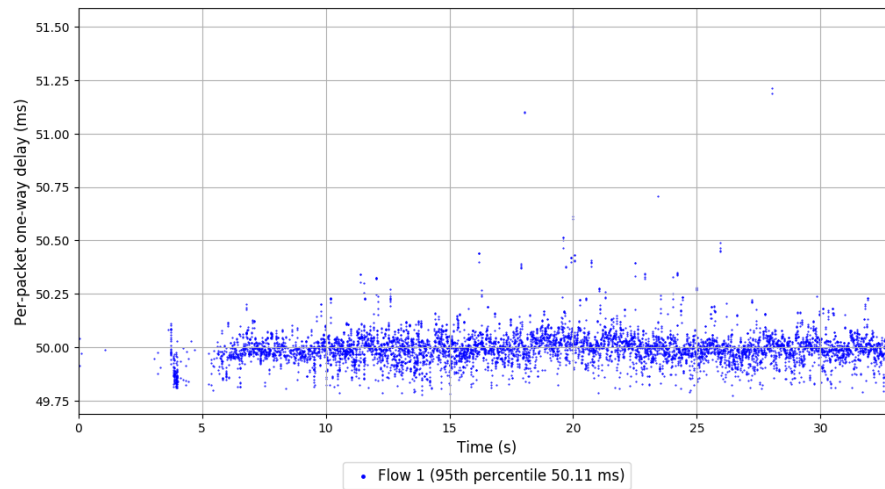
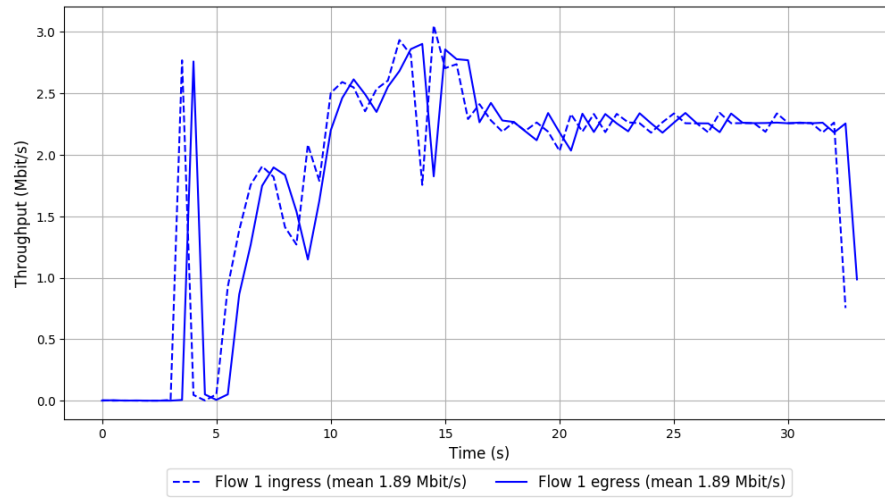
-- Flow 1:

Average throughput: 1.89 Mbit/s

95th percentile per-packet one-way delay: 50.107 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link

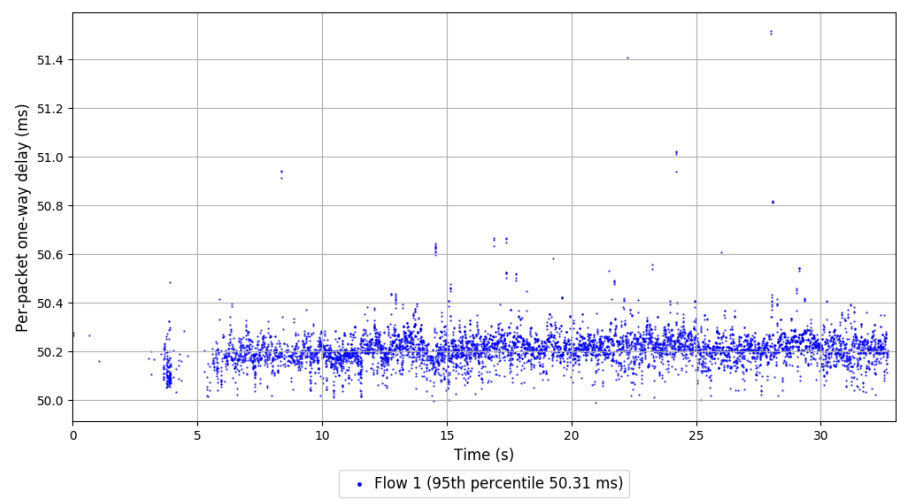
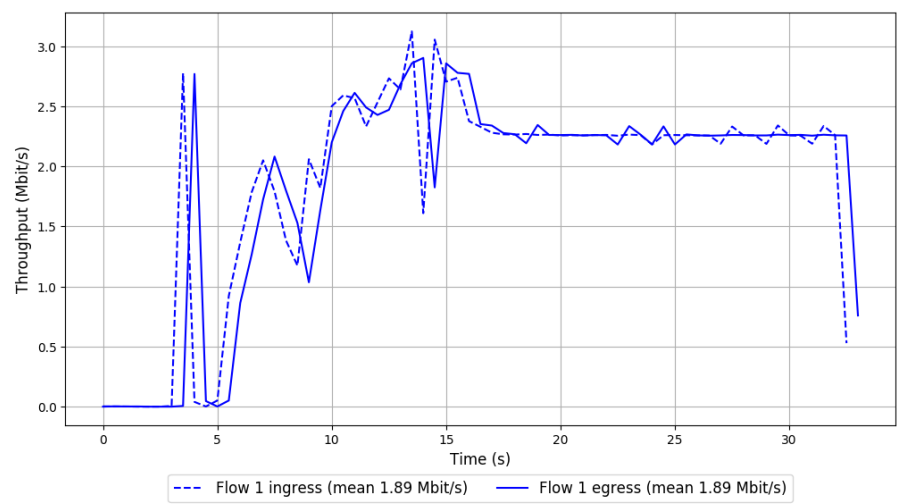


Run 3: Statistics of WebRTC media

Start at: 2018-10-10 12:19:19
End at: 2018-10-10 12:19:49
Local clock offset: -0.476 ms
Remote clock offset: -0.056 ms

Below is generated by plot.py at 2018-10-10 15:00:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 50.308 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 50.308 ms
Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

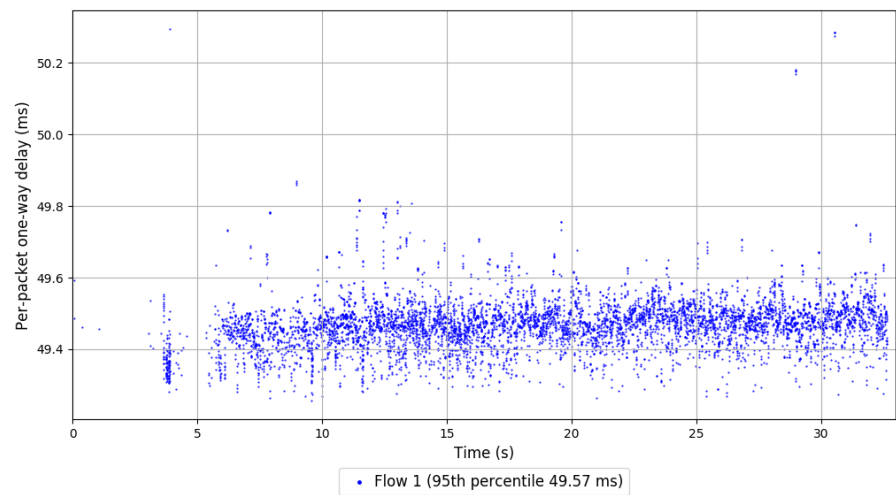
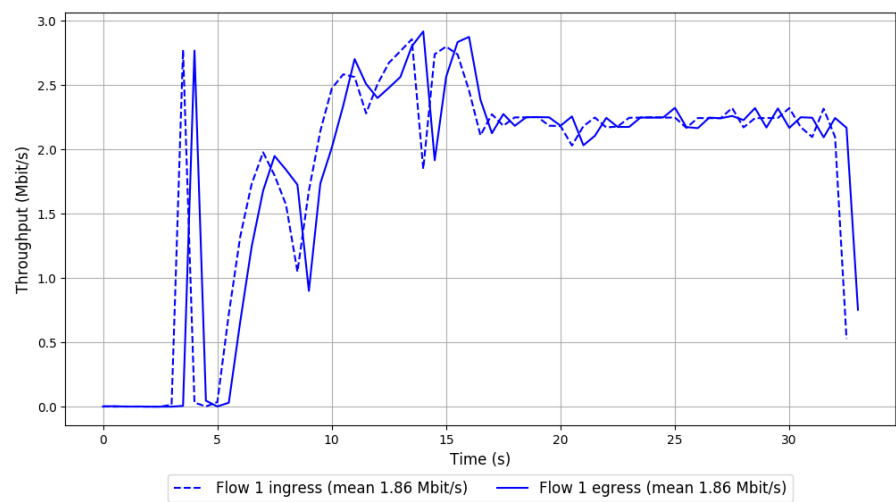


Run 4: Statistics of WebRTC media

Start at: 2018-10-10 12:44:50
End at: 2018-10-10 12:45:20
Local clock offset: 0.187 ms
Remote clock offset: -0.122 ms

Below is generated by plot.py at 2018-10-10 15:00:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.86 Mbit/s
95th percentile per-packet one-way delay: 49.571 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.86 Mbit/s
95th percentile per-packet one-way delay: 49.571 ms
Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-10-10 13:10:24
End at: 2018-10-10 13:10:54
Local clock offset: 0.155 ms
Remote clock offset: -0.256 ms

Below is generated by plot.py at 2018-10-10 15:00:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 48.593 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 48.593 ms
Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

