

Pantheon Report

Generated at 2018-12-20 22:38:54 (UTC).

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

Repeated the test of 19 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.

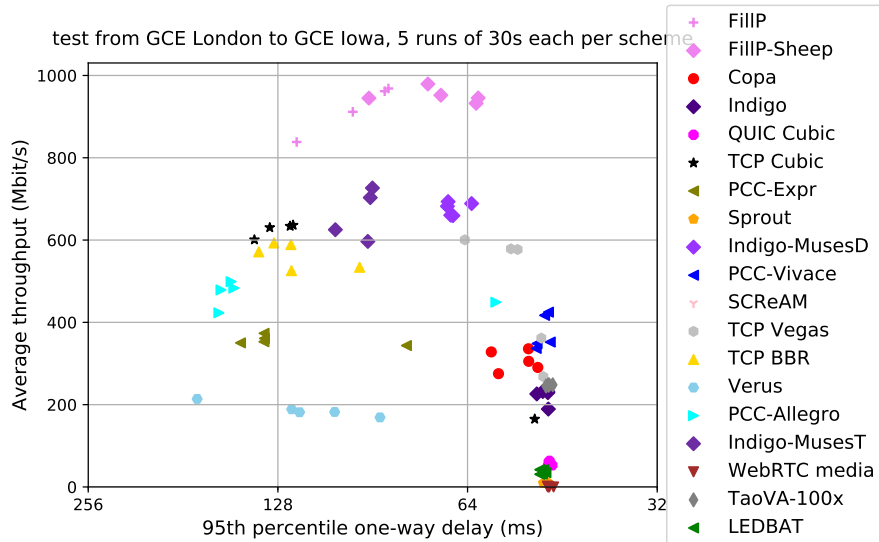
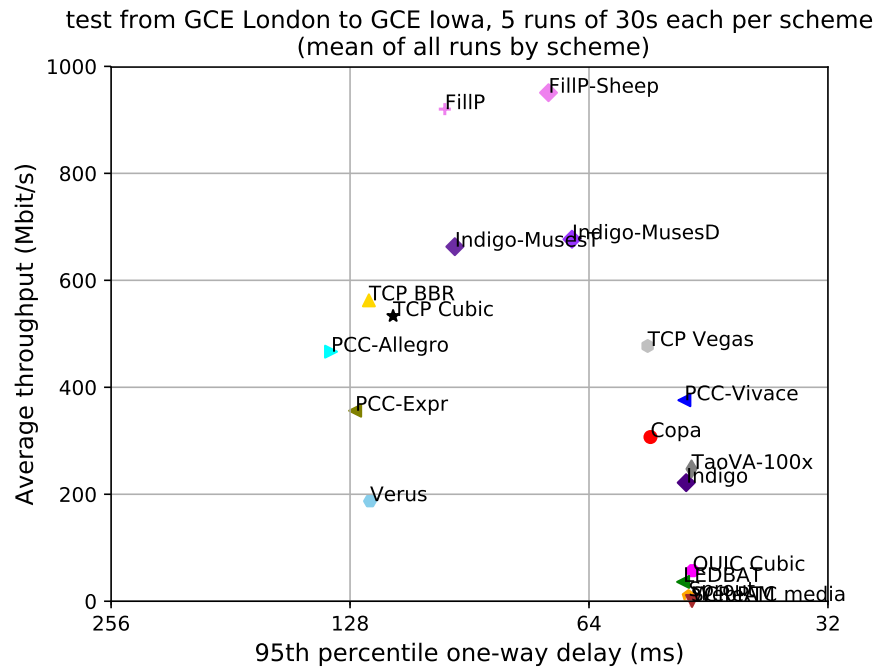
System info:

```
Linux 4.15.0-1025-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 @ c654af0b7d59d4ef4b914cfac404e1fc2e96dc68
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfc58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a
third_party/muses-refactored @ 31f8f0ba8ef8b1da76c2bc0cd0a7850c33ff64fb
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
```

third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851



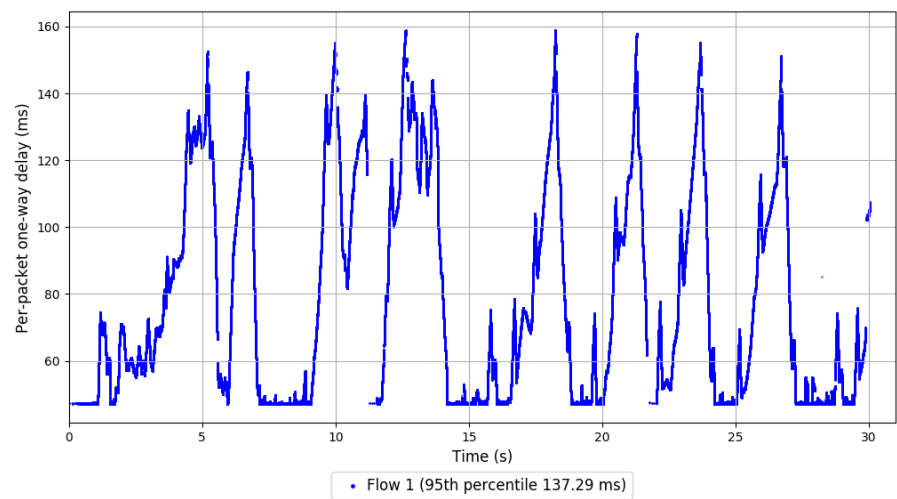
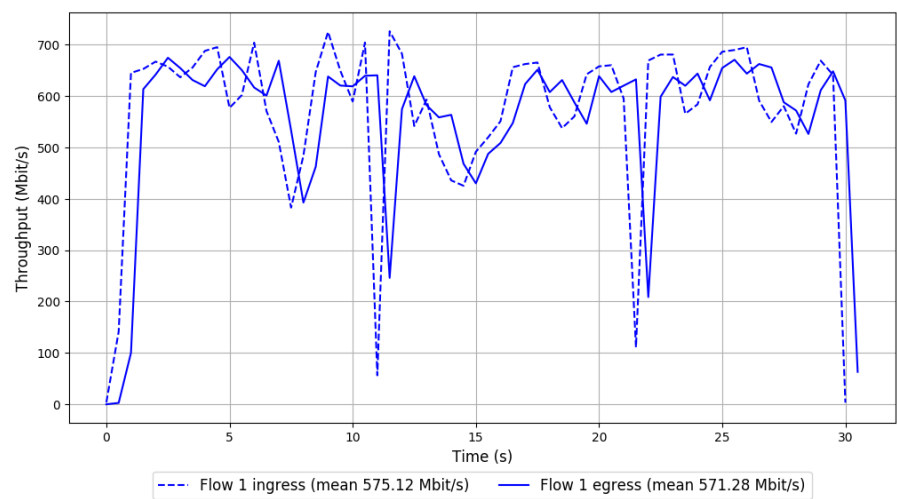
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	562.55	121.19	0.42
Copa	5	306.99	53.55	0.00
TCP Cubic	5	533.26	112.97	0.12
FillP	4	920.05	97.23	0.40
FillP-Sheep	5	950.76	71.98	0.15
Indigo	5	221.66	48.28	0.00
Indigo-MusesD	5	676.83	67.24	0.02
Indigo-MusesT	4	662.88	94.45	0.07
LEDBAT	5	36.16	48.71	0.00
PCC-Allegro	5	466.61	135.25	1.29
PCC-Expr	5	356.21	126.12	1.12
QUIC Cubic	5	57.13	47.39	0.00
SCReAM	5	0.22	47.61	0.00
Sprout	5	9.60	47.96	0.01
TaoVA-100x	5	247.39	47.53	0.00
TCP Vegas	5	477.21	53.99	0.00
Verus	5	187.15	120.80	0.22
PCC-Vivace	5	375.81	48.53	0.00
WebRTC media	5	0.47	47.46	0.00

Run 1: Statistics of TCP BBR

Start at: 2018-12-20 18:28:31
End at: 2018-12-20 18:29:01
Local clock offset: -0.029 ms
Remote clock offset: -0.024 ms

Below is generated by plot.py at 2018-12-20 21:02:23
Datalink statistics
-- Total of 1 flow:
Average throughput: 571.28 Mbit/s
95th percentile per-packet one-way delay: 137.290 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 571.28 Mbit/s
95th percentile per-packet one-way delay: 137.290 ms
Loss rate: 0.67%

Run 1: Report of TCP BBR — Data Link

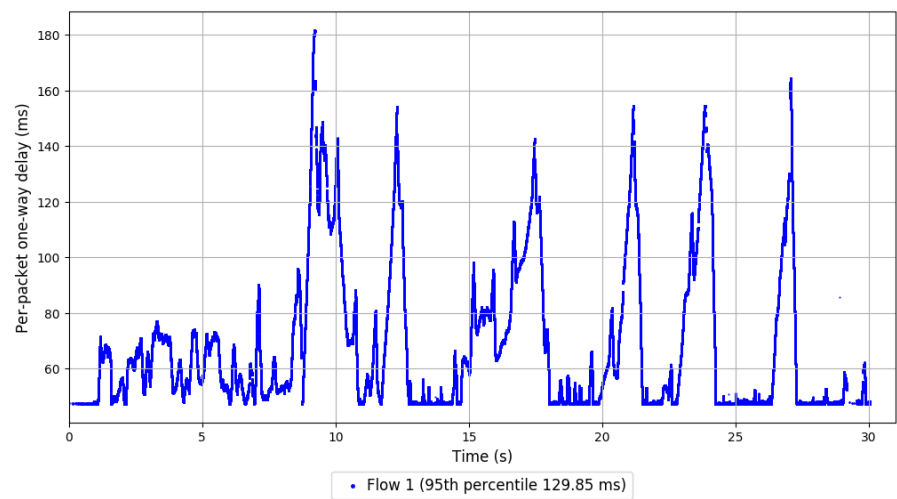
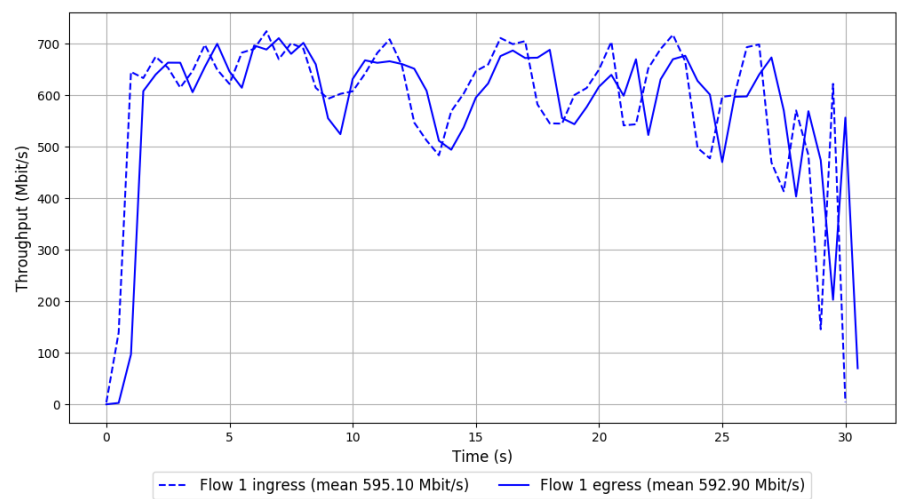


Run 2: Statistics of TCP BBR

Start at: 2018-12-20 18:56:46
End at: 2018-12-20 18:57:16
Local clock offset: -0.077 ms
Remote clock offset: -0.075 ms

Below is generated by plot.py at 2018-12-20 21:02:40
Datalink statistics
-- Total of 1 flow:
Average throughput: 592.90 Mbit/s
95th percentile per-packet one-way delay: 129.855 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 592.90 Mbit/s
95th percentile per-packet one-way delay: 129.855 ms
Loss rate: 0.37%

Run 2: Report of TCP BBR — Data Link

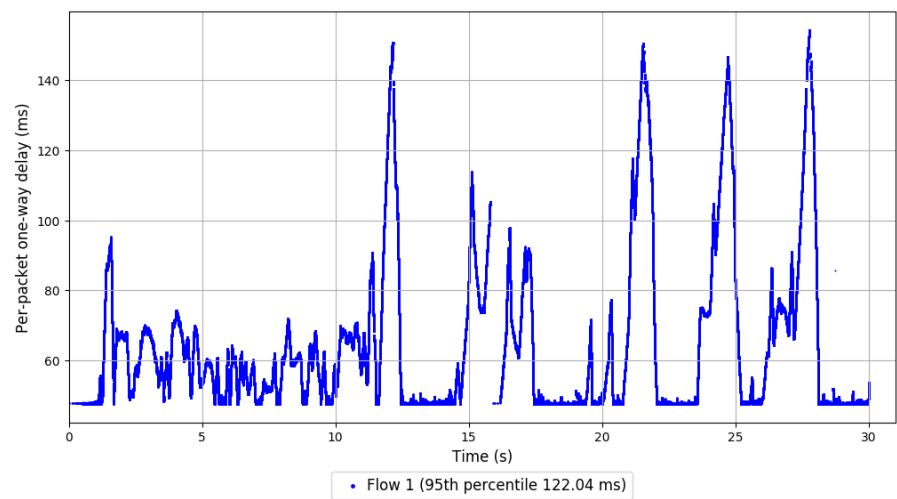
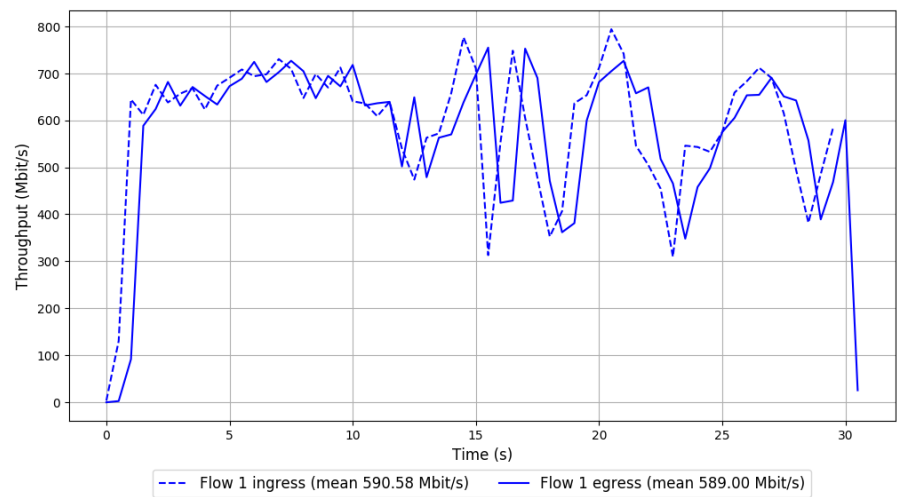


Run 3: Statistics of TCP BBR

Start at: 2018-12-20 19:24:36
End at: 2018-12-20 19:25:06
Local clock offset: -0.407 ms
Remote clock offset: -0.031 ms

Below is generated by plot.py at 2018-12-20 21:02:40
Datalink statistics
-- Total of 1 flow:
Average throughput: 589.00 Mbit/s
95th percentile per-packet one-way delay: 122.044 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 589.00 Mbit/s
95th percentile per-packet one-way delay: 122.044 ms
Loss rate: 0.27%

Run 3: Report of TCP BBR — Data Link

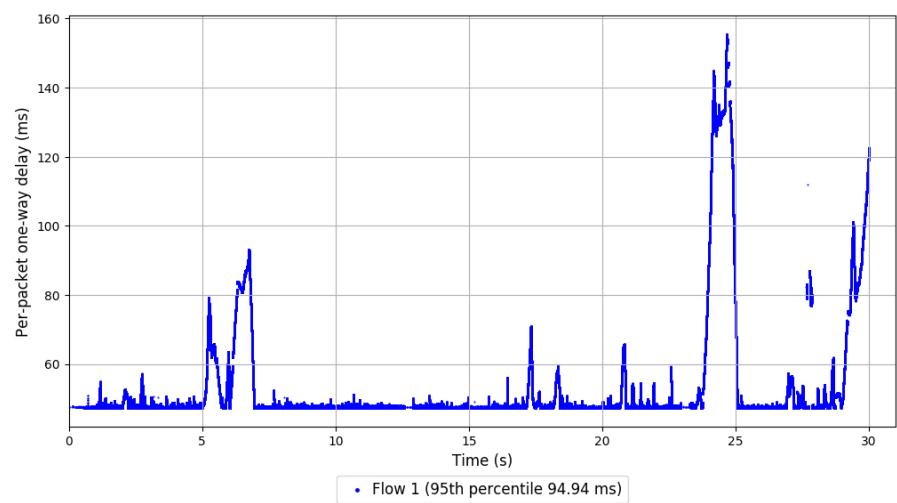
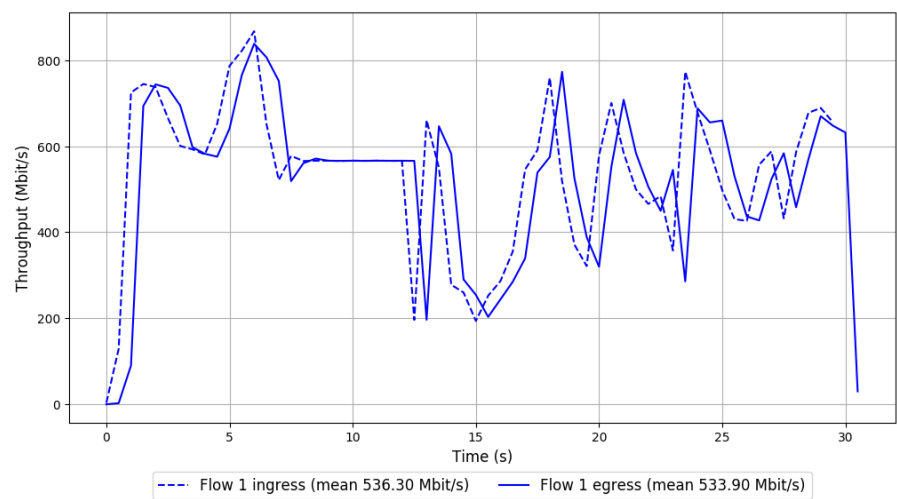


Run 4: Statistics of TCP BBR

Start at: 2018-12-20 19:52:17
End at: 2018-12-20 19:52:47
Local clock offset: -0.057 ms
Remote clock offset: -0.057 ms

Below is generated by plot.py at 2018-12-20 21:02:40
Datalink statistics
-- Total of 1 flow:
Average throughput: 533.90 Mbit/s
95th percentile per-packet one-way delay: 94.942 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 533.90 Mbit/s
95th percentile per-packet one-way delay: 94.942 ms
Loss rate: 0.44%

Run 4: Report of TCP BBR — Data Link

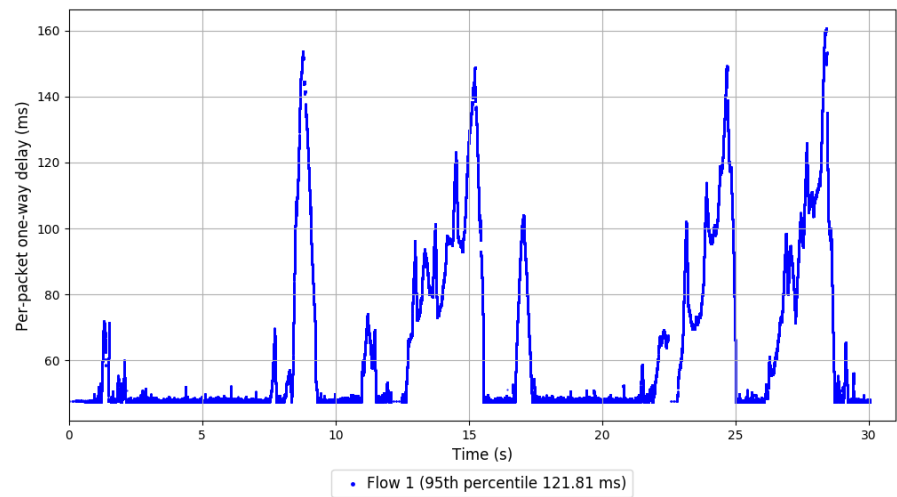
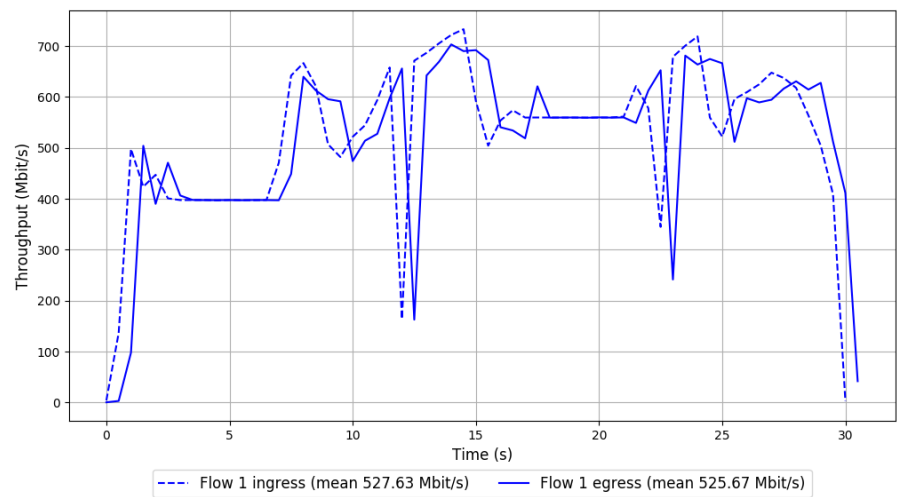


Run 5: Statistics of TCP BBR

Start at: 2018-12-20 20:20:13
End at: 2018-12-20 20:20:43
Local clock offset: -0.077 ms
Remote clock offset: -3.876 ms

Below is generated by plot.py at 2018-12-20 21:02:40
Datalink statistics
-- Total of 1 flow:
Average throughput: 525.67 Mbit/s
95th percentile per-packet one-way delay: 121.815 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 525.67 Mbit/s
95th percentile per-packet one-way delay: 121.815 ms
Loss rate: 0.37%

Run 5: Report of TCP BBR — Data Link

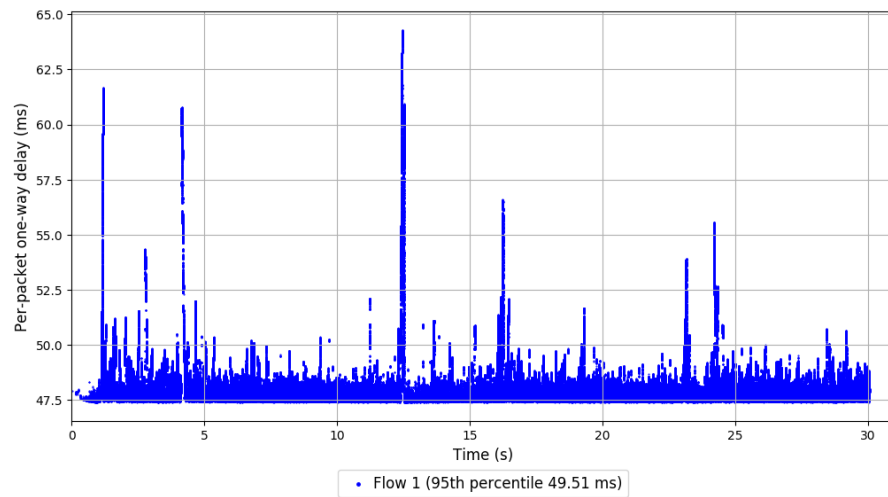
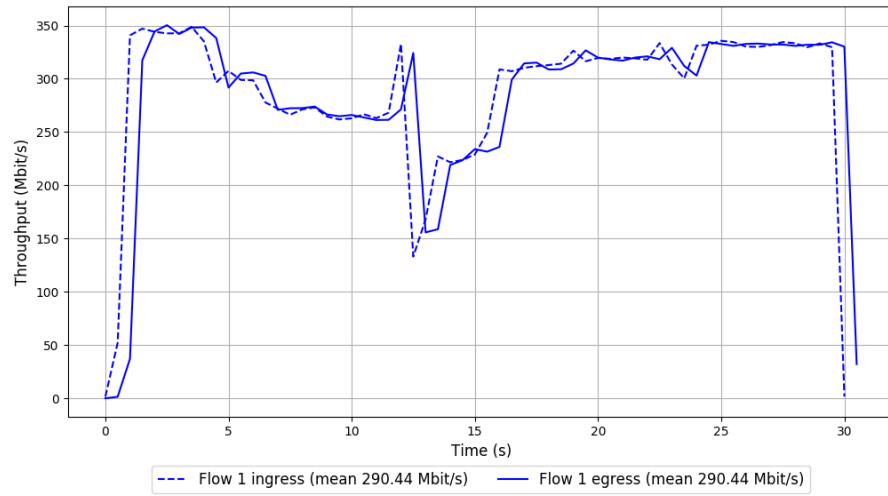


Run 1: Statistics of Copa

Start at: 2018-12-20 18:44:27
End at: 2018-12-20 18:44:57
Local clock offset: -0.086 ms
Remote clock offset: -0.081 ms

Below is generated by plot.py at 2018-12-20 21:02:40
Datalink statistics
-- Total of 1 flow:
Average throughput: 290.44 Mbit/s
95th percentile per-packet one-way delay: 49.507 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 290.44 Mbit/s
95th percentile per-packet one-way delay: 49.507 ms
Loss rate: 0.00%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-12-20 19:12:28

End at: 2018-12-20 19:12:58

Local clock offset: -0.073 ms

Remote clock offset: 0.013 ms

Below is generated by plot.py at 2018-12-20 21:03:11

Datalink statistics

-- Total of 1 flow:

Average throughput: 335.81 Mbit/s

95th percentile per-packet one-way delay: 51.224 ms

Loss rate: 0.00%

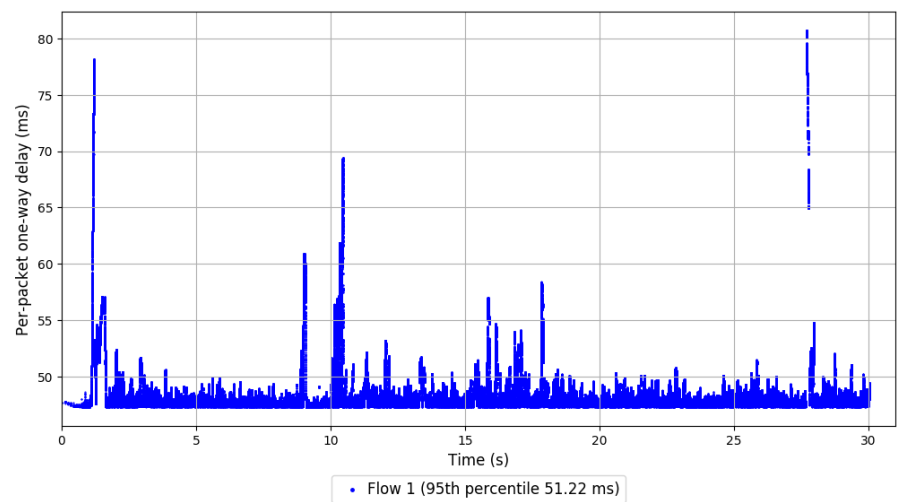
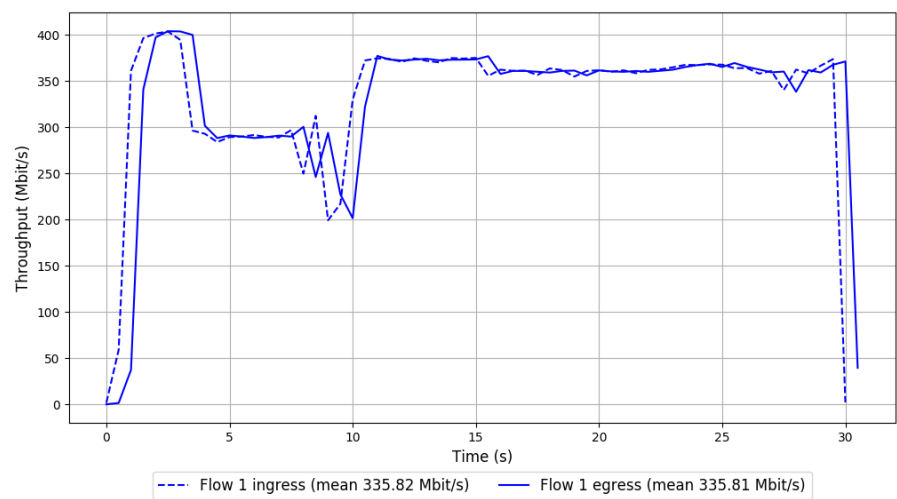
-- Flow 1:

Average throughput: 335.81 Mbit/s

95th percentile per-packet one-way delay: 51.224 ms

Loss rate: 0.00%

Run 2: Report of Copa — Data Link

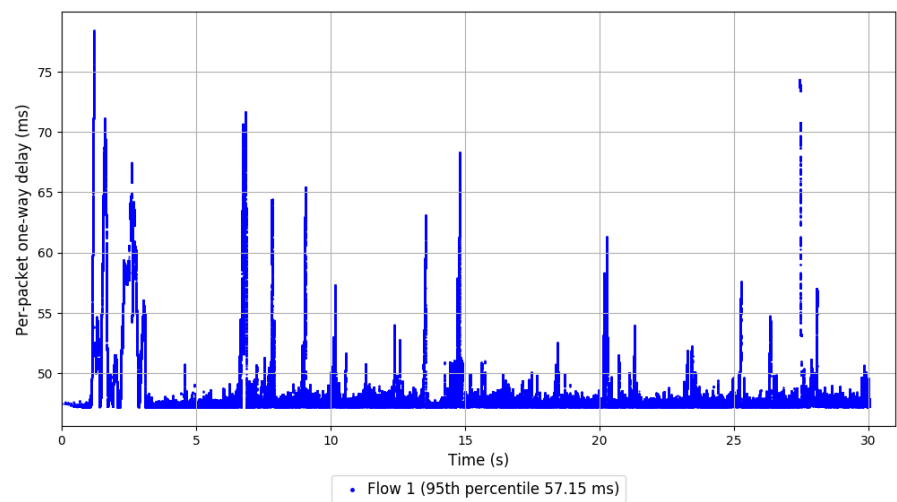
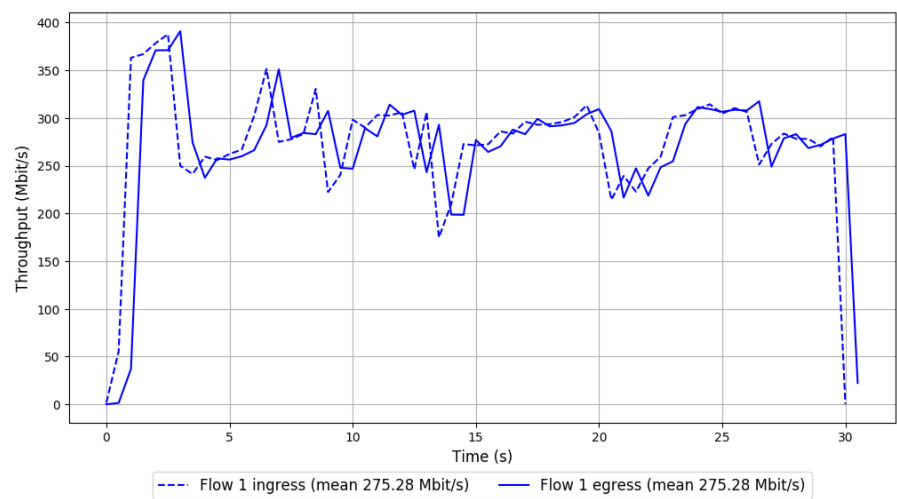


Run 3: Statistics of Copa

Start at: 2018-12-20 19:40:19
End at: 2018-12-20 19:40:49
Local clock offset: -0.029 ms
Remote clock offset: -0.03 ms

Below is generated by plot.py at 2018-12-20 21:03:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 275.28 Mbit/s
95th percentile per-packet one-way delay: 57.153 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 275.28 Mbit/s
95th percentile per-packet one-way delay: 57.153 ms
Loss rate: 0.00%

Run 3: Report of Copa — Data Link

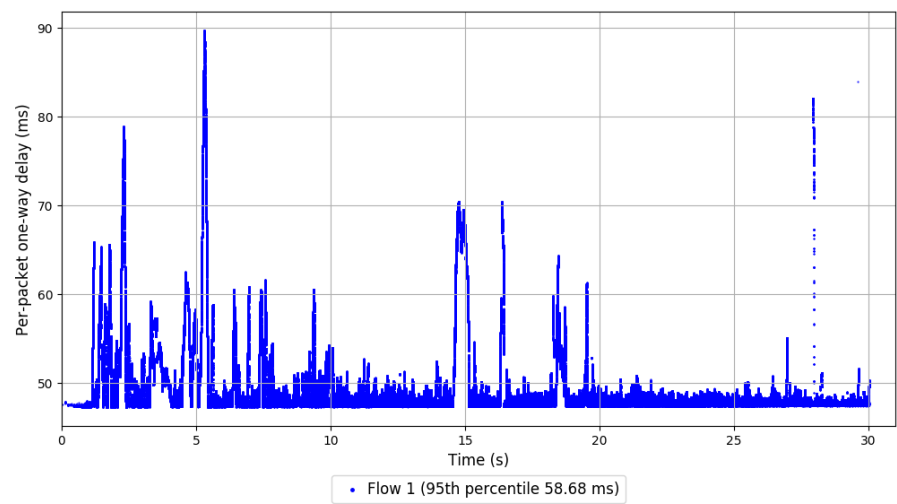
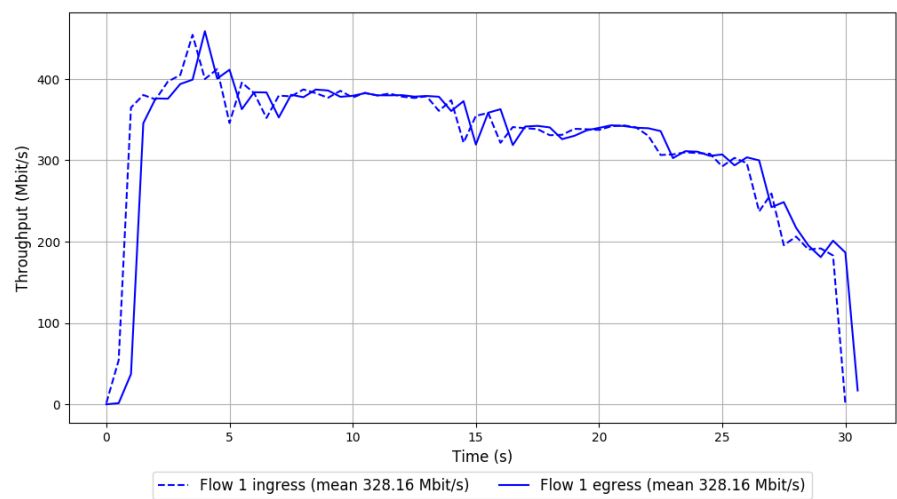


Run 4: Statistics of Copa

Start at: 2018-12-20 20:08:13
End at: 2018-12-20 20:08:43
Local clock offset: -0.051 ms
Remote clock offset: -2.701 ms

Below is generated by plot.py at 2018-12-20 21:12:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 328.16 Mbit/s
95th percentile per-packet one-way delay: 58.681 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 328.16 Mbit/s
95th percentile per-packet one-way delay: 58.681 ms
Loss rate: 0.00%

Run 4: Report of Copa — Data Link

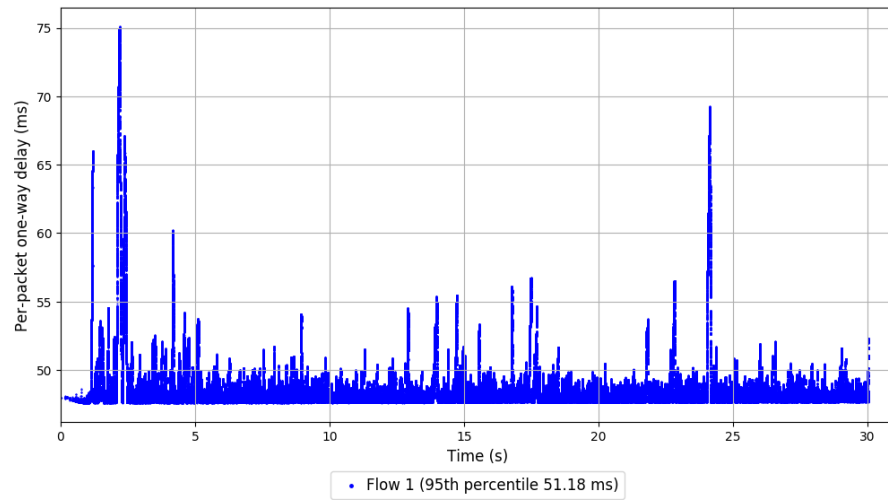
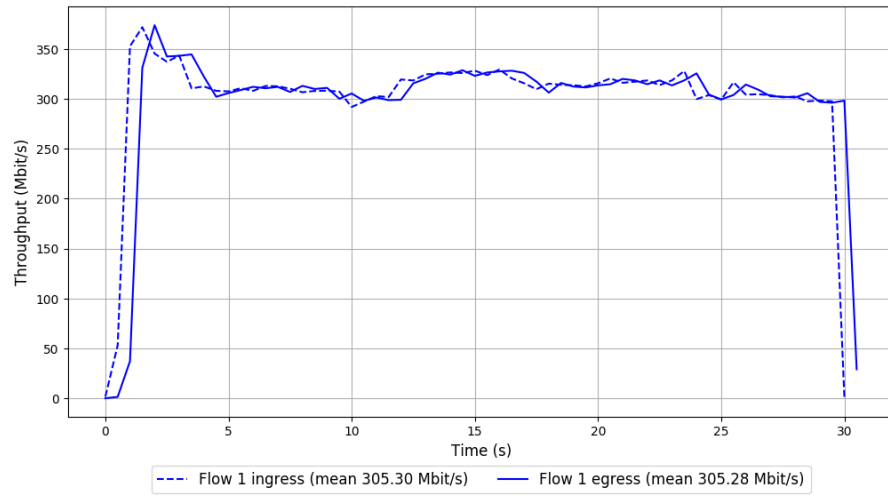


Run 5: Statistics of Copa

Start at: 2018-12-20 20:36:08
End at: 2018-12-20 20:36:38
Local clock offset: -0.464 ms
Remote clock offset: -4.923 ms

Below is generated by plot.py at 2018-12-20 21:12:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 305.28 Mbit/s
95th percentile per-packet one-way delay: 51.180 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 305.28 Mbit/s
95th percentile per-packet one-way delay: 51.180 ms
Loss rate: 0.00%

Run 5: Report of Copa — Data Link

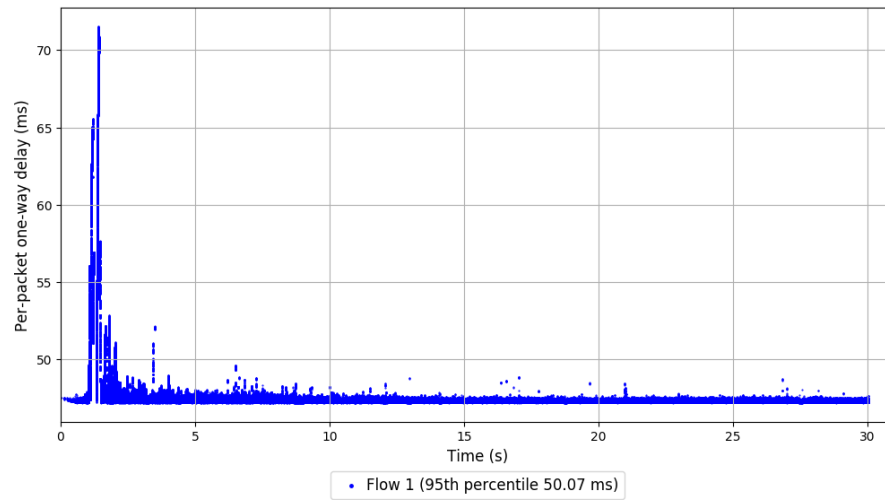
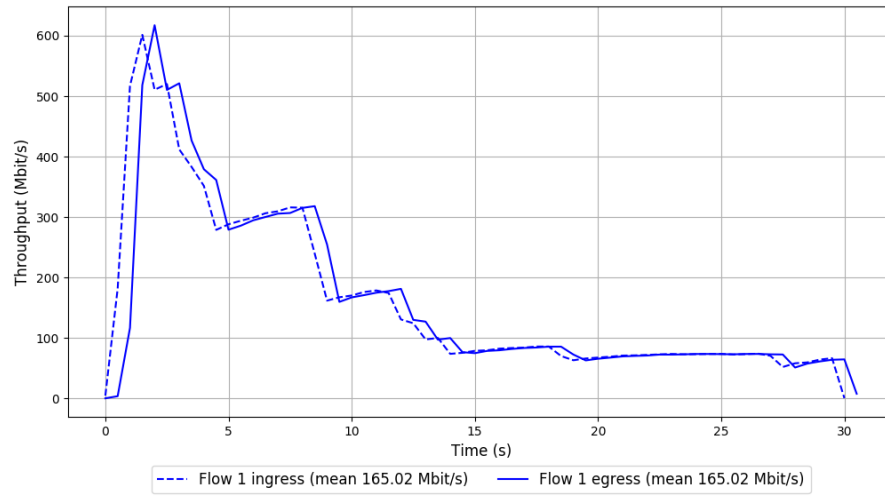


Run 1: Statistics of TCP Cubic

Start at: 2018-12-20 18:22:28
End at: 2018-12-20 18:22:58
Local clock offset: -0.04 ms
Remote clock offset: -0.064 ms

Below is generated by plot.py at 2018-12-20 21:12:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 165.02 Mbit/s
95th percentile per-packet one-way delay: 50.073 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 165.02 Mbit/s
95th percentile per-packet one-way delay: 50.073 ms
Loss rate: 0.00%

Run 1: Report of TCP Cubic — Data Link

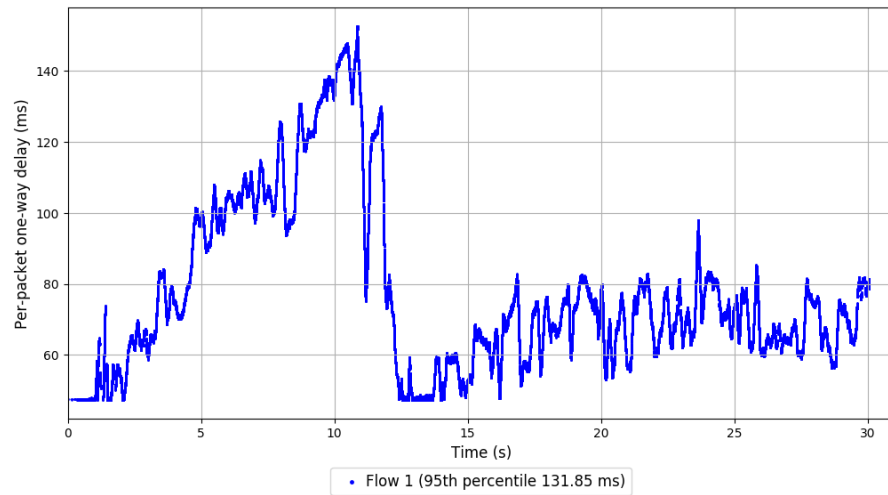
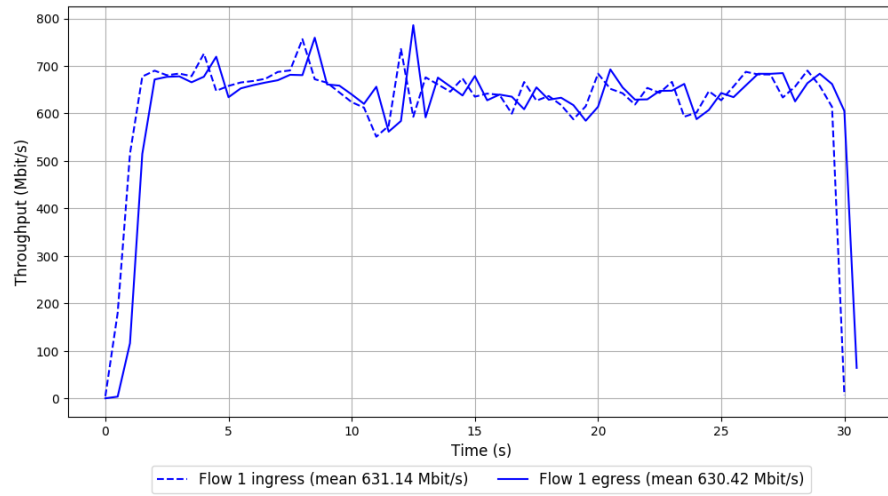


Run 2: Statistics of TCP Cubic

Start at: 2018-12-20 18:50:12
End at: 2018-12-20 18:50:42
Local clock offset: -0.093 ms
Remote clock offset: -0.051 ms

Below is generated by plot.py at 2018-12-20 21:13:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 630.42 Mbit/s
95th percentile per-packet one-way delay: 131.855 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 630.42 Mbit/s
95th percentile per-packet one-way delay: 131.855 ms
Loss rate: 0.11%

Run 2: Report of TCP Cubic — Data Link

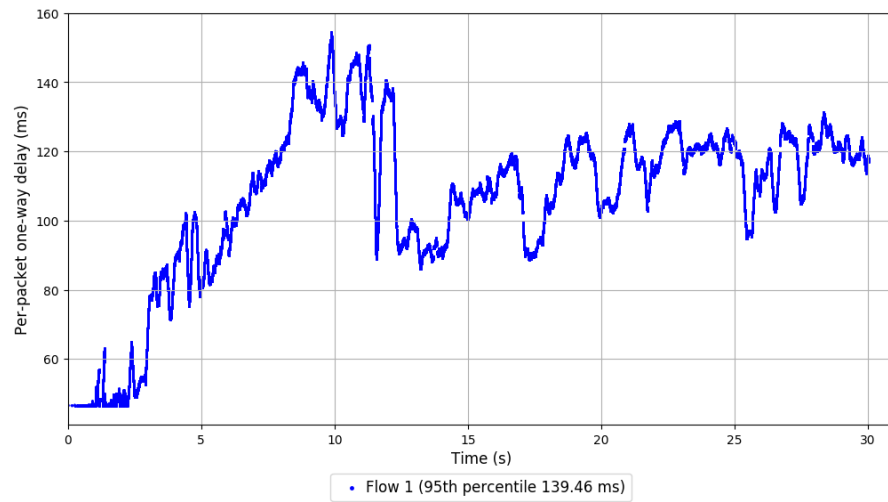
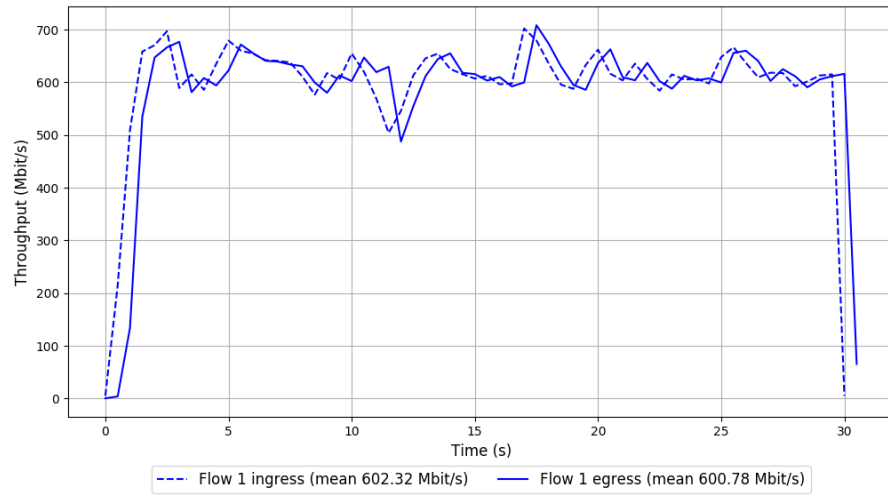


Run 3: Statistics of TCP Cubic

Start at: 2018-12-20 19:18:07
End at: 2018-12-20 19:18:37
Local clock offset: -0.018 ms
Remote clock offset: -0.041 ms

Below is generated by plot.py at 2018-12-20 21:13:21
Datalink statistics
-- Total of 1 flow:
Average throughput: 600.78 Mbit/s
95th percentile per-packet one-way delay: 139.460 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 600.78 Mbit/s
95th percentile per-packet one-way delay: 139.460 ms
Loss rate: 0.25%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-12-20 19:45:51

End at: 2018-12-20 19:46:21

Local clock offset: 0.333 ms

Remote clock offset: -0.03 ms

Below is generated by plot.py at 2018-12-20 21:14:01

Datalink statistics

-- Total of 1 flow:

Average throughput: 633.79 Mbit/s

95th percentile per-packet one-way delay: 122.398 ms

Loss rate: 0.17%

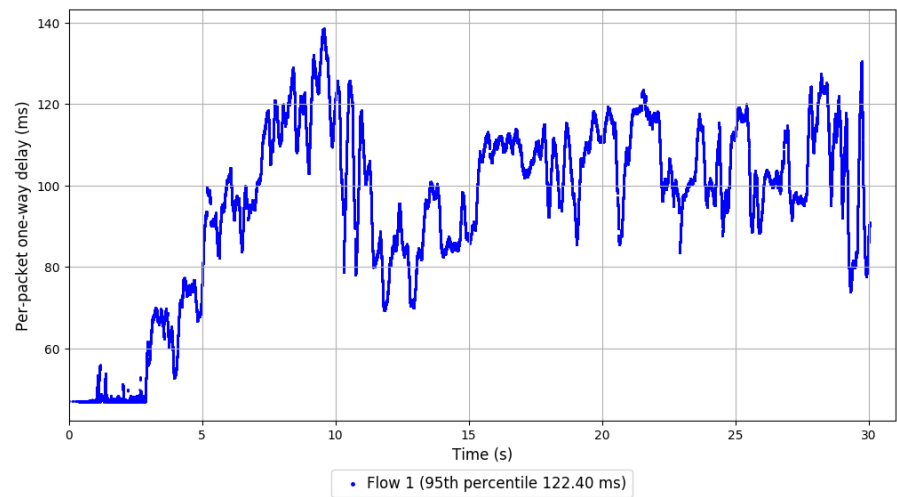
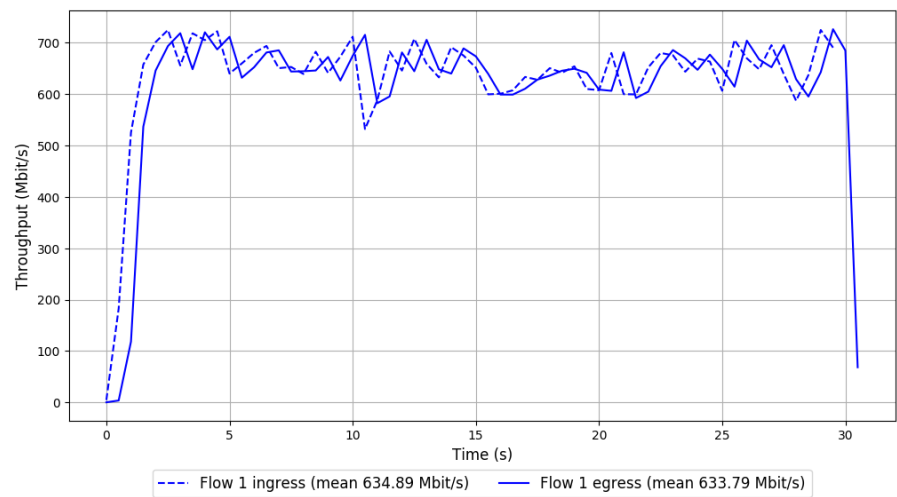
-- Flow 1:

Average throughput: 633.79 Mbit/s

95th percentile per-packet one-way delay: 122.398 ms

Loss rate: 0.17%

Run 4: Report of TCP Cubic — Data Link

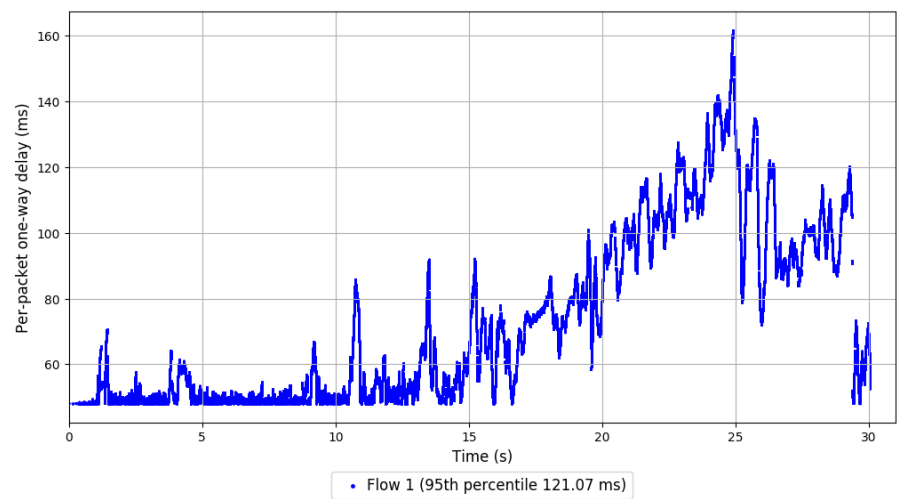
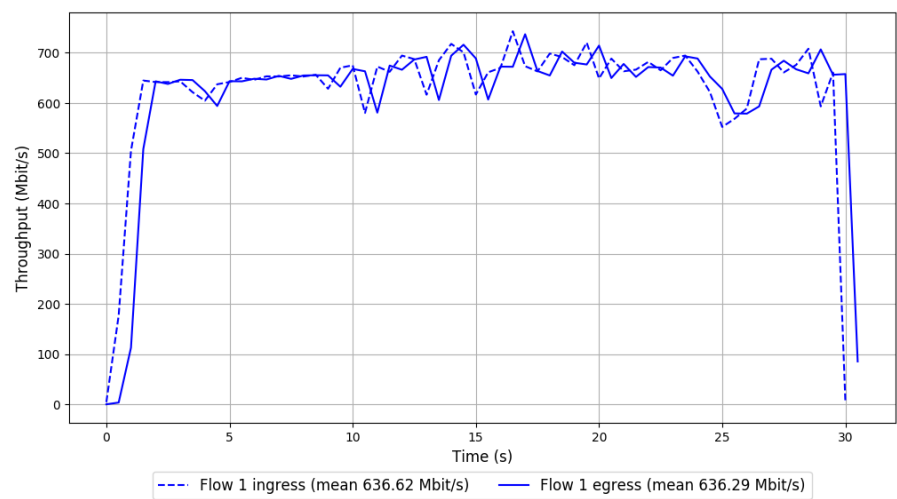


Run 5: Statistics of TCP Cubic

Start at: 2018-12-20 20:13:57
End at: 2018-12-20 20:14:27
Local clock offset: -0.436 ms
Remote clock offset: -4.317 ms

Below is generated by plot.py at 2018-12-20 21:14:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 636.29 Mbit/s
95th percentile per-packet one-way delay: 121.069 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 636.29 Mbit/s
95th percentile per-packet one-way delay: 121.069 ms
Loss rate: 0.05%

Run 5: Report of TCP Cubic — Data Link

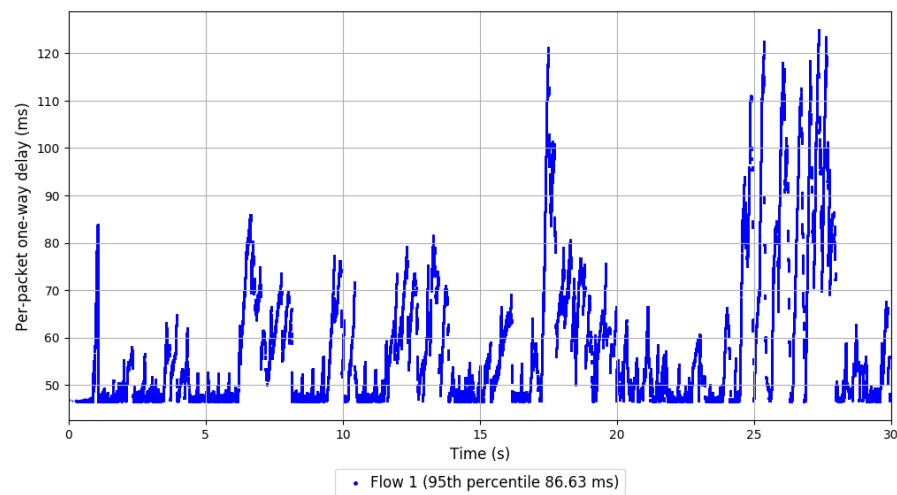
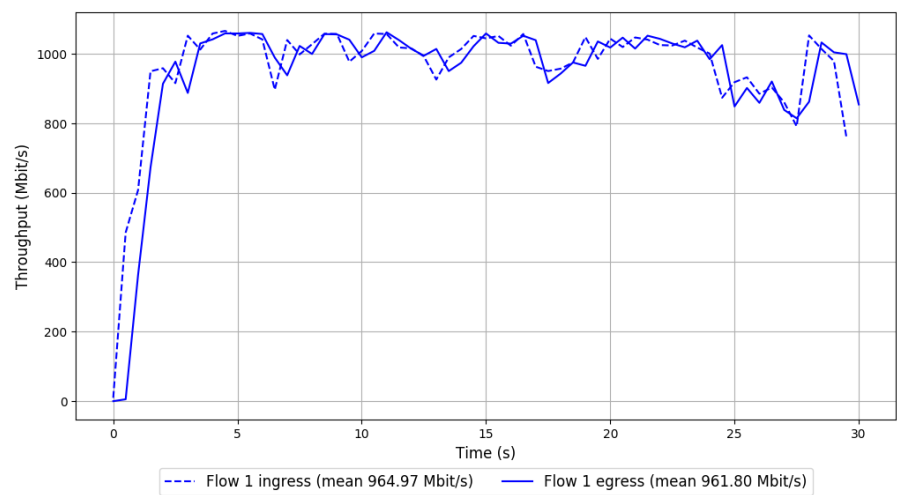


Run 1: Statistics of FillP

Start at: 2018-12-20 18:25:16
End at: 2018-12-20 18:25:46
Local clock offset: -0.084 ms
Remote clock offset: -0.036 ms

Below is generated by plot.py at 2018-12-20 21:23:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 961.80 Mbit/s
95th percentile per-packet one-way delay: 86.633 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 961.80 Mbit/s
95th percentile per-packet one-way delay: 86.633 ms
Loss rate: 0.32%

Run 1: Report of FillP — Data Link

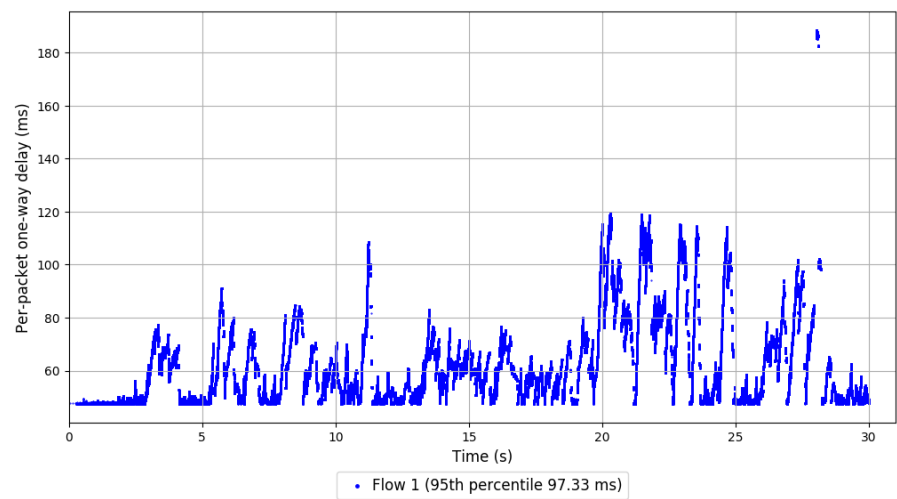
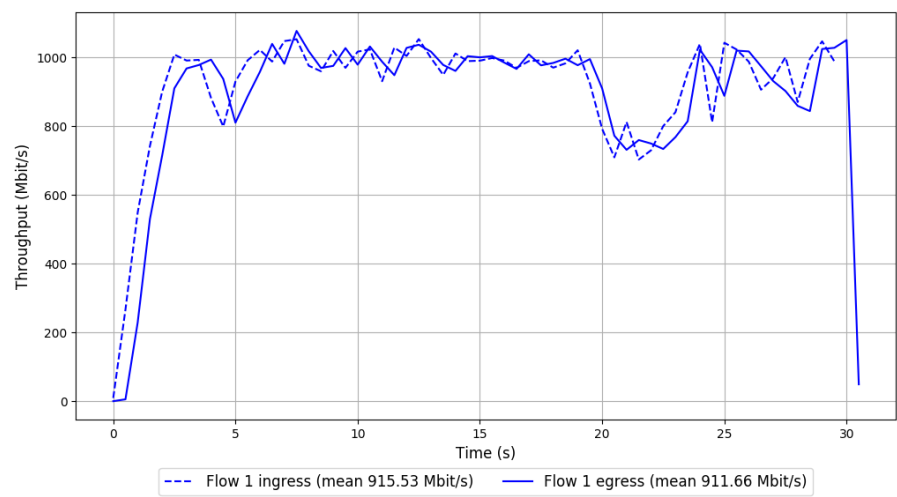


Run 2: Statistics of FillP

Start at: 2018-12-20 18:53:35
End at: 2018-12-20 18:54:05
Local clock offset: -0.072 ms
Remote clock offset: -0.079 ms

Below is generated by plot.py at 2018-12-20 21:23:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 911.66 Mbit/s
95th percentile per-packet one-way delay: 97.334 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 911.66 Mbit/s
95th percentile per-packet one-way delay: 97.334 ms
Loss rate: 0.42%

Run 2: Report of FillP — Data Link

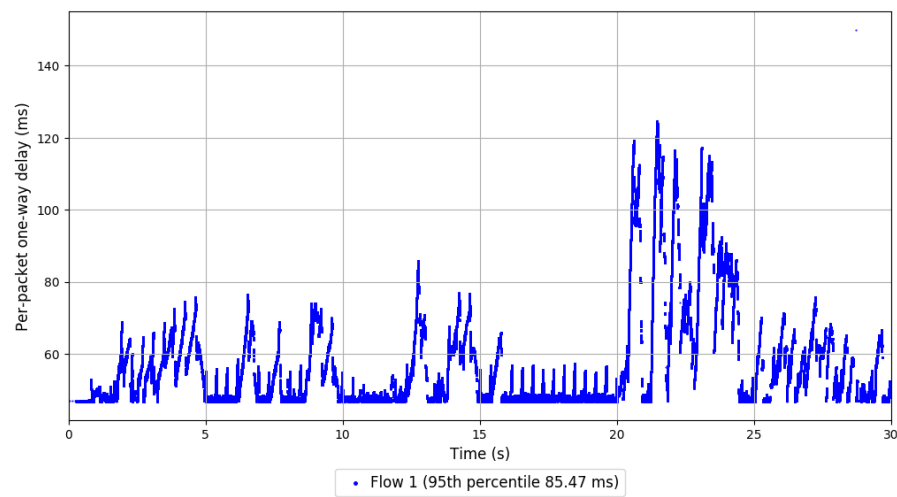
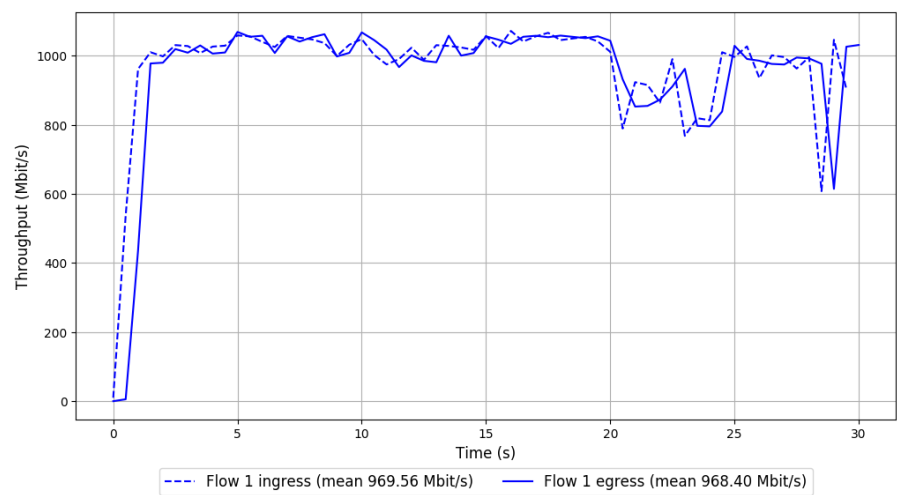


Run 3: Statistics of FillP

Start at: 2018-12-20 19:21:23
End at: 2018-12-20 19:21:53
Local clock offset: -0.433 ms
Remote clock offset: -0.051 ms

Below is generated by plot.py at 2018-12-20 21:34:58
Datalink statistics
-- Total of 1 flow:
Average throughput: 968.40 Mbit/s
95th percentile per-packet one-way delay: 85.467 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 968.40 Mbit/s
95th percentile per-packet one-way delay: 85.467 ms
Loss rate: 0.12%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-12-20 19:49:08

End at: 2018-12-20 19:49:38

Local clock offset: -0.07 ms

Remote clock offset: -0.09 ms

Below is generated by plot.py at 2018-12-20 21:34:58

Datalink statistics

-- Total of 1 flow:

Average throughput: 838.33 Mbit/s

95th percentile per-packet one-way delay: 119.503 ms

Loss rate: 0.73%

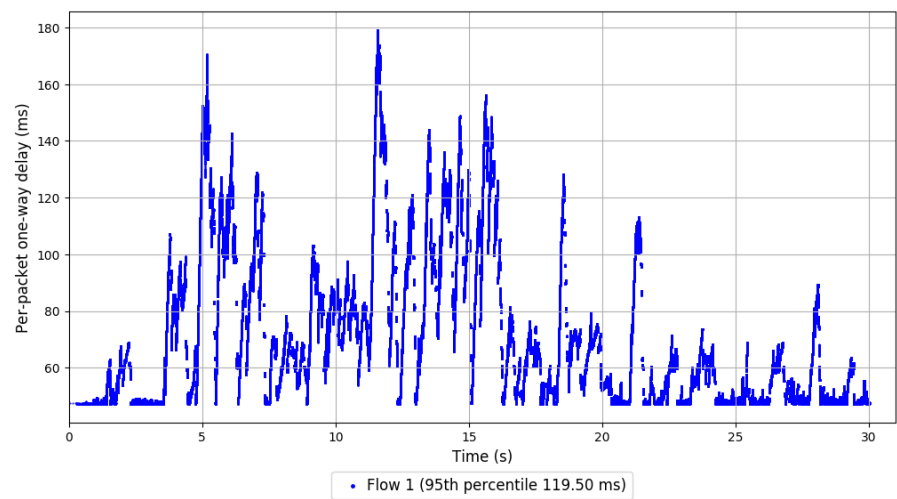
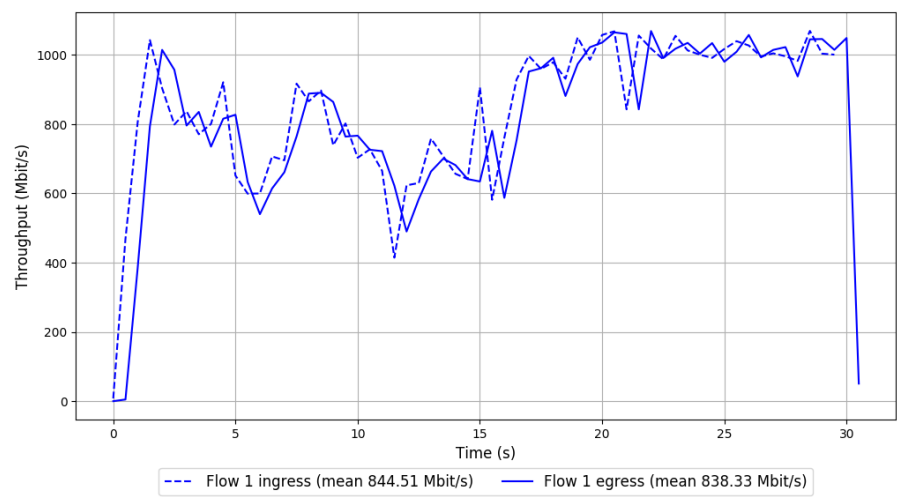
-- Flow 1:

Average throughput: 838.33 Mbit/s

95th percentile per-packet one-way delay: 119.503 ms

Loss rate: 0.73%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

/home/ubuntu/pantheon/data/2018-12-20T18-20-GCE-London-to-GCE-Iowa-5-runs/fillp_stats_run5.1

Run 5: Report of FillP — Data Link

Figure is missing

Figure is missing

Run 1: Statistics of FillP-Sheep

Start at: 2018-12-20 18:39:43

End at: 2018-12-20 18:40:13

Local clock offset: -0.044 ms

Remote clock offset: -0.08 ms

Below is generated by plot.py at 2018-12-20 21:35:16

Datalink statistics

-- Total of 1 flow:

Average throughput: 932.33 Mbit/s

95th percentile per-packet one-way delay: 62.021 ms

Loss rate: 0.09%

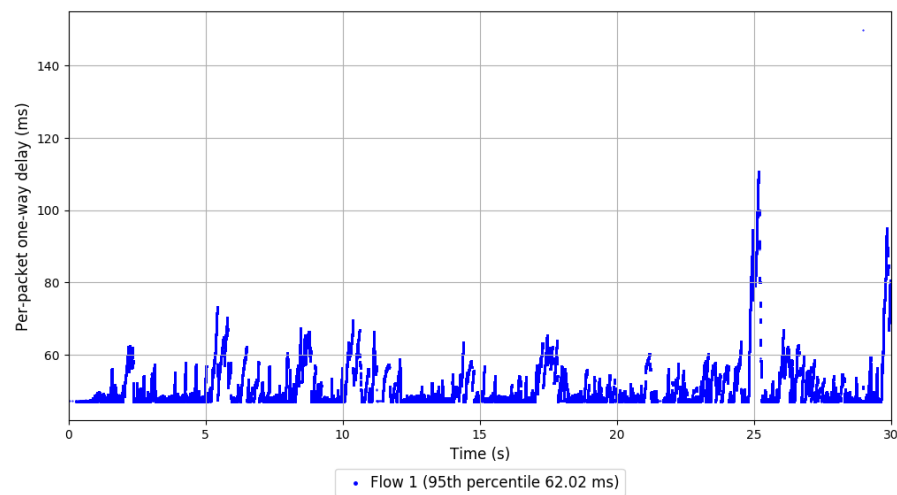
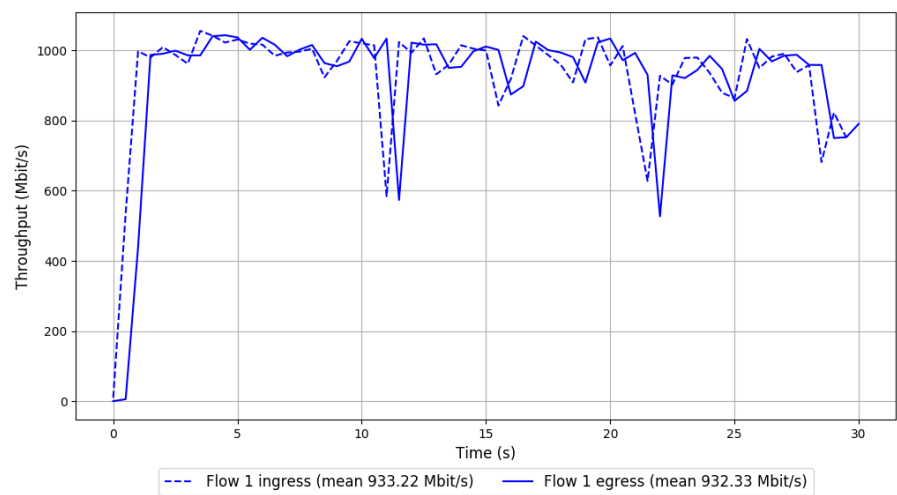
-- Flow 1:

Average throughput: 932.33 Mbit/s

95th percentile per-packet one-way delay: 62.021 ms

Loss rate: 0.09%

Run 1: Report of FillP-Sheep — Data Link

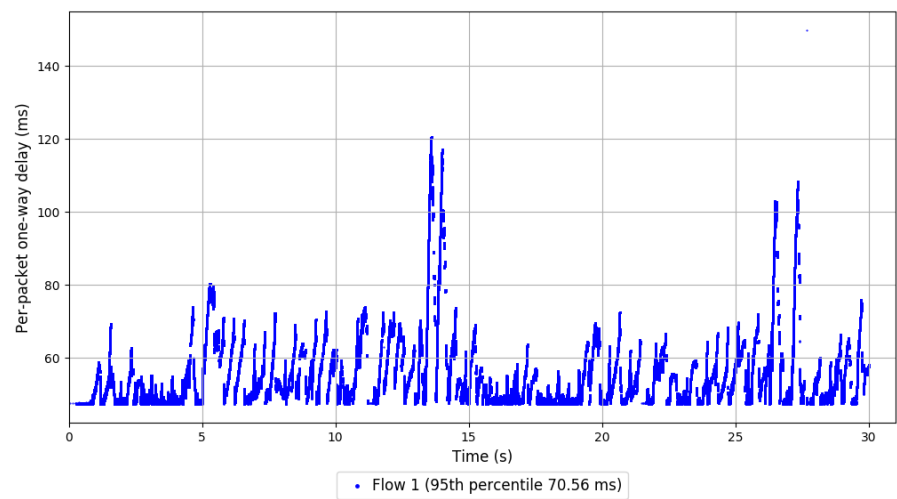
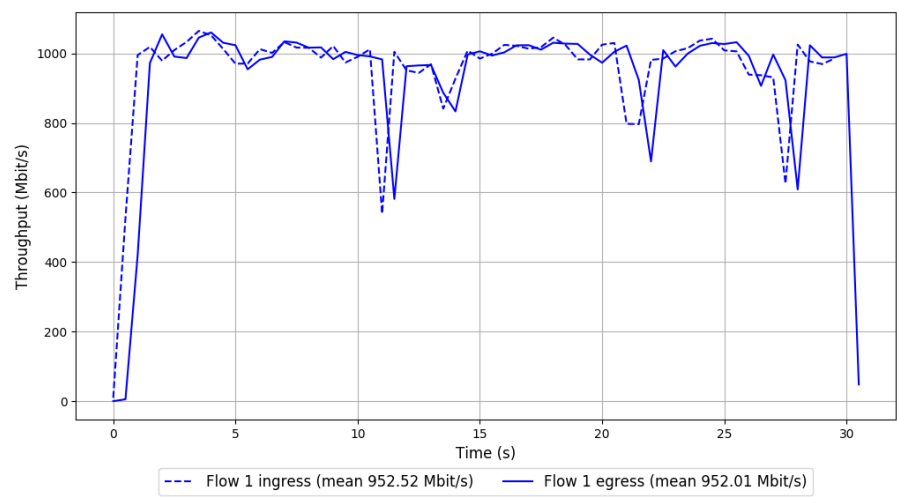


Run 2: Statistics of FillP-Sheep

Start at: 2018-12-20 19:07:42
End at: 2018-12-20 19:08:12
Local clock offset: -0.084 ms
Remote clock offset: -0.085 ms

Below is generated by plot.py at 2018-12-20 21:35:45
Datalink statistics
-- Total of 1 flow:
Average throughput: 952.01 Mbit/s
95th percentile per-packet one-way delay: 70.562 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 952.01 Mbit/s
95th percentile per-packet one-way delay: 70.562 ms
Loss rate: 0.05%

Run 2: Report of FillP-Sheep — Data Link

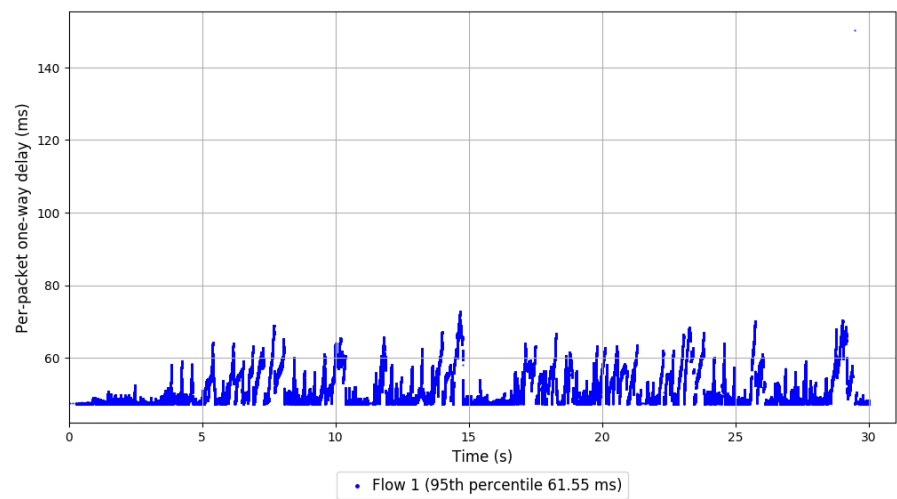
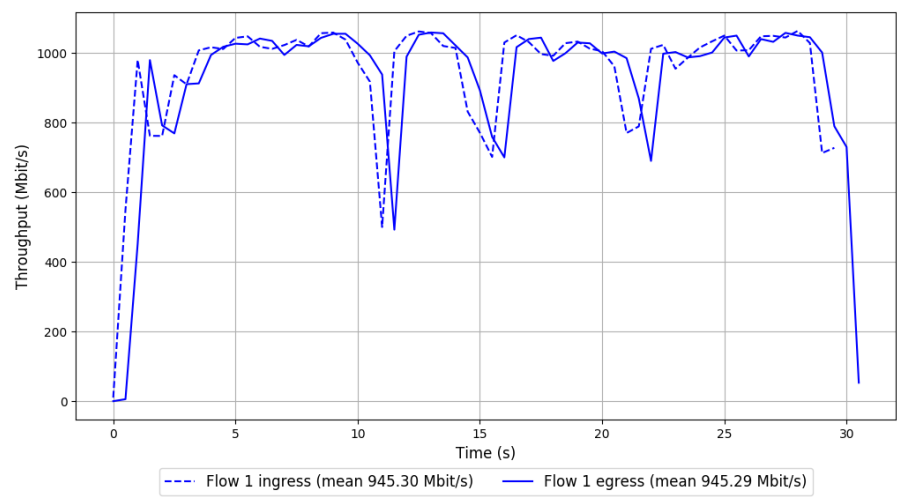


Run 3: Statistics of FillP-Sheep

Start at: 2018-12-20 19:35:32
End at: 2018-12-20 19:36:02
Local clock offset: -0.038 ms
Remote clock offset: -0.033 ms

Below is generated by plot.py at 2018-12-20 21:36:20
Datalink statistics
-- Total of 1 flow:
Average throughput: 945.29 Mbit/s
95th percentile per-packet one-way delay: 61.553 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 945.29 Mbit/s
95th percentile per-packet one-way delay: 61.553 ms
Loss rate: 0.00%

Run 3: Report of FillP-Sheep — Data Link

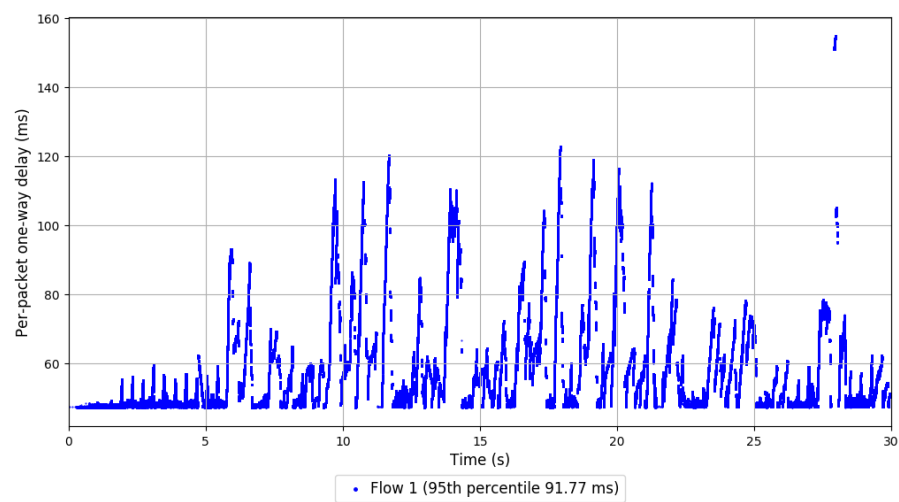
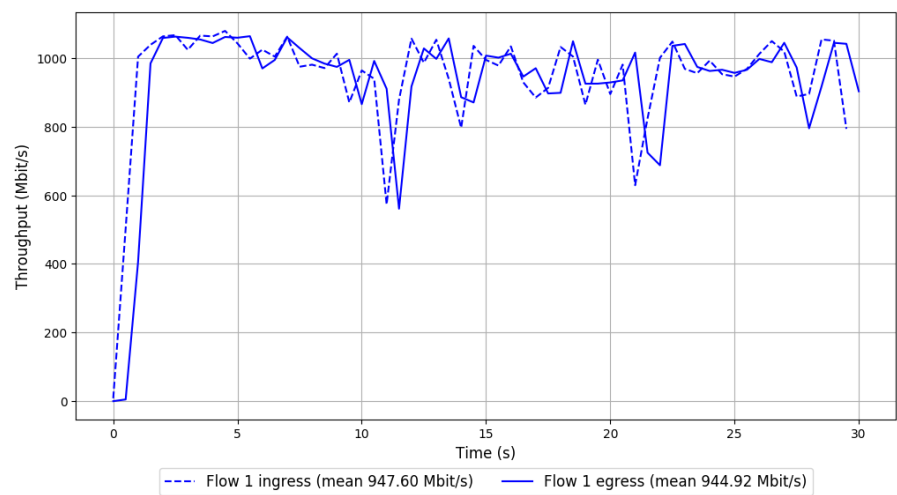


Run 4: Statistics of FillP-Sheep

Start at: 2018-12-20 20:03:24
End at: 2018-12-20 20:03:54
Local clock offset: -0.04 ms
Remote clock offset: -1.299 ms

Below is generated by plot.py at 2018-12-20 21:36:20
Datalink statistics
-- Total of 1 flow:
Average throughput: 944.92 Mbit/s
95th percentile per-packet one-way delay: 91.770 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 944.92 Mbit/s
95th percentile per-packet one-way delay: 91.770 ms
Loss rate: 0.28%

Run 4: Report of FillP-Sheep — Data Link

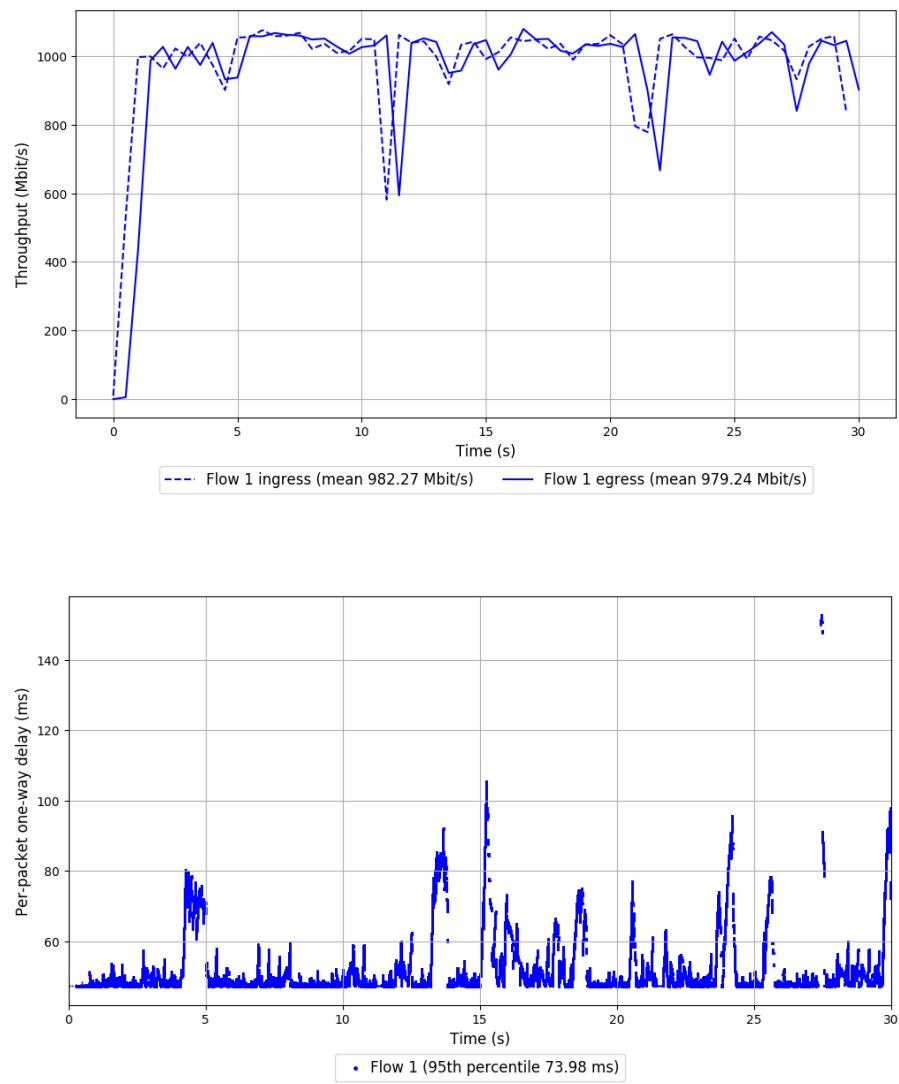


Run 5: Statistics of FillP-Sheep

Start at: 2018-12-20 20:31:17
End at: 2018-12-20 20:31:47
Local clock offset: -0.089 ms
Remote clock offset: -4.162 ms

Below is generated by plot.py at 2018-12-20 21:48:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 979.24 Mbit/s
95th percentile per-packet one-way delay: 73.976 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 979.24 Mbit/s
95th percentile per-packet one-way delay: 73.976 ms
Loss rate: 0.31%

Run 5: Report of FillP-Sheep — Data Link



Run 1: Statistics of Indigo

Start at: 2018-12-20 18:43:04

End at: 2018-12-20 18:43:34

Local clock offset: -0.066 ms

Remote clock offset: -0.074 ms

Below is generated by plot.py at 2018-12-20 21:48:22

Datalink statistics

-- Total of 1 flow:

Average throughput: 189.31 Mbit/s

95th percentile per-packet one-way delay: 47.637 ms

Loss rate: 0.00%

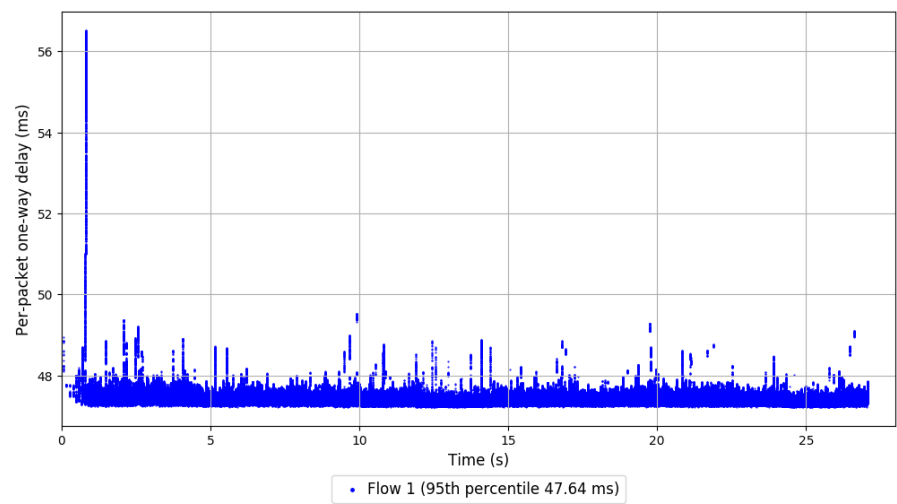
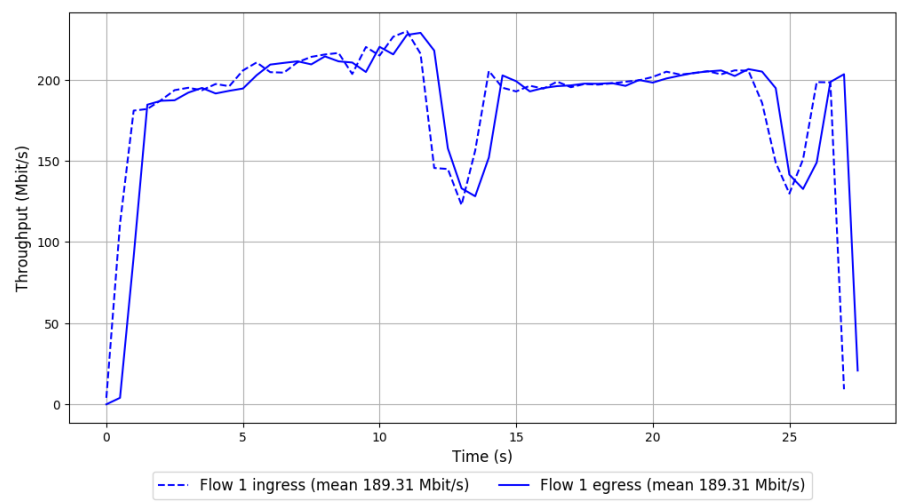
-- Flow 1:

Average throughput: 189.31 Mbit/s

95th percentile per-packet one-way delay: 47.637 ms

Loss rate: 0.00%

Run 1: Report of Indigo — Data Link

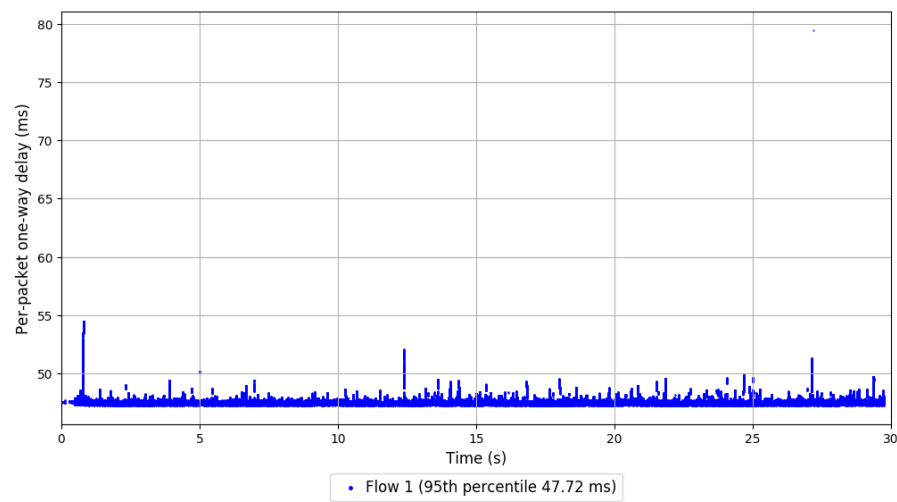
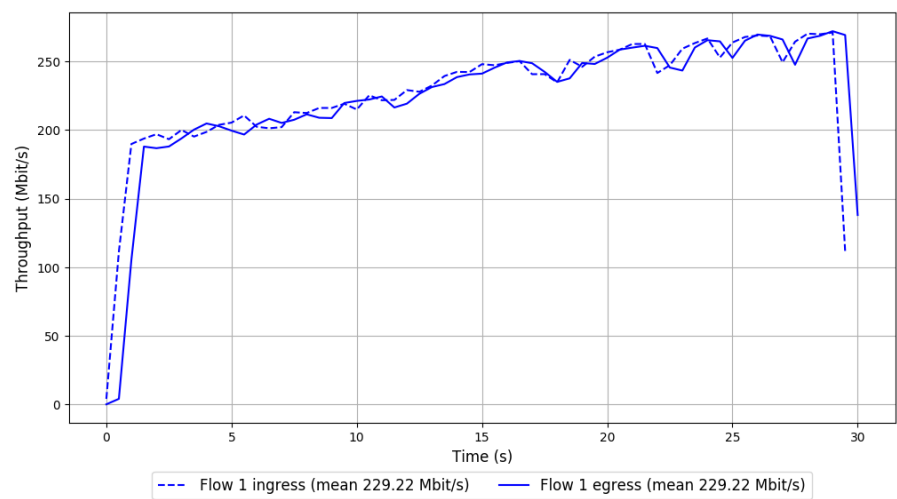


Run 2: Statistics of Indigo

Start at: 2018-12-20 19:11:01
End at: 2018-12-20 19:11:31
Local clock offset: -0.097 ms
Remote clock offset: -0.049 ms

Below is generated by plot.py at 2018-12-20 21:48:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 229.22 Mbit/s
95th percentile per-packet one-way delay: 47.716 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 229.22 Mbit/s
95th percentile per-packet one-way delay: 47.716 ms
Loss rate: 0.00%

Run 2: Report of Indigo — Data Link

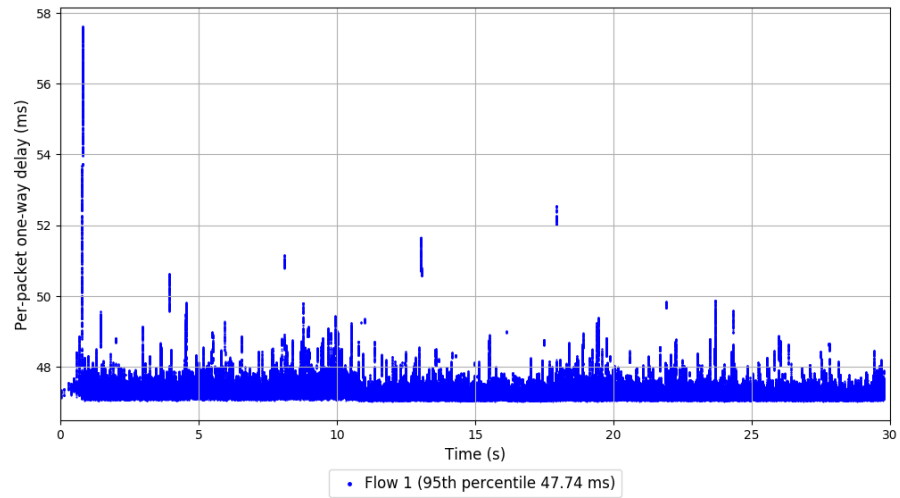
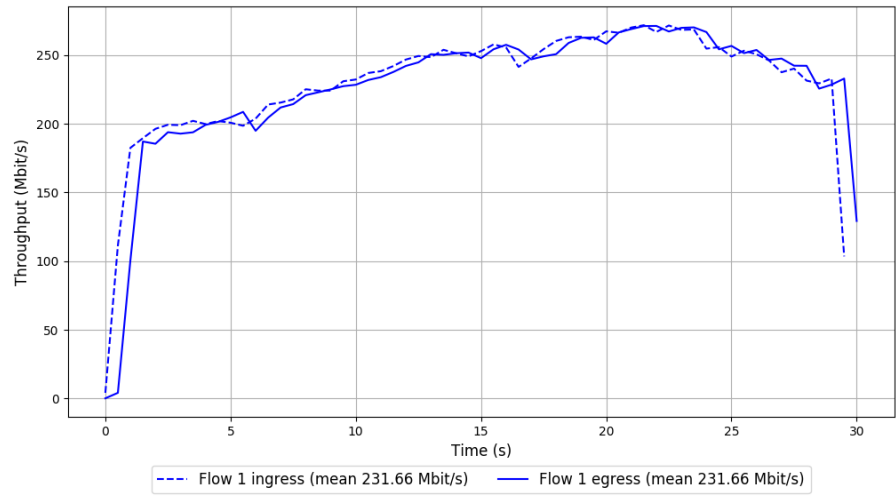


Run 3: Statistics of Indigo

Start at: 2018-12-20 19:38:52
End at: 2018-12-20 19:39:22
Local clock offset: 0.034 ms
Remote clock offset: -0.052 ms

Below is generated by plot.py at 2018-12-20 21:48:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 231.66 Mbit/s
95th percentile per-packet one-way delay: 47.737 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 231.66 Mbit/s
95th percentile per-packet one-way delay: 47.737 ms
Loss rate: 0.00%

Run 3: Report of Indigo — Data Link

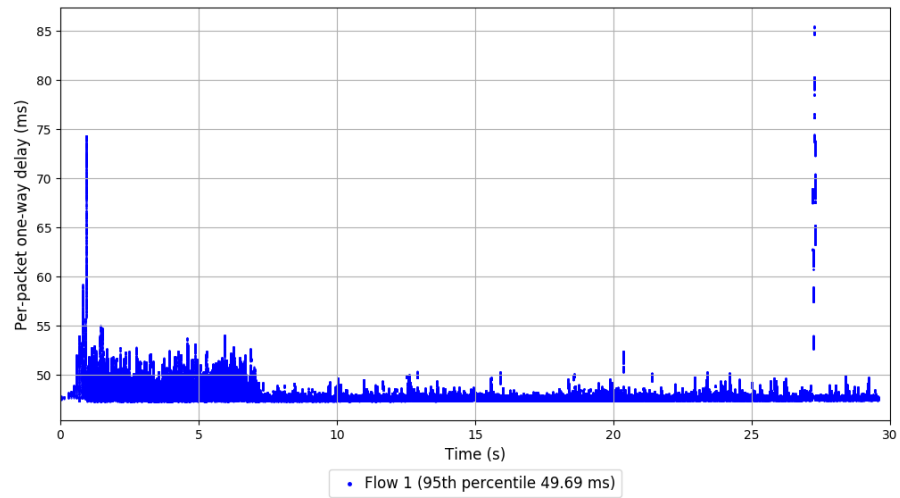
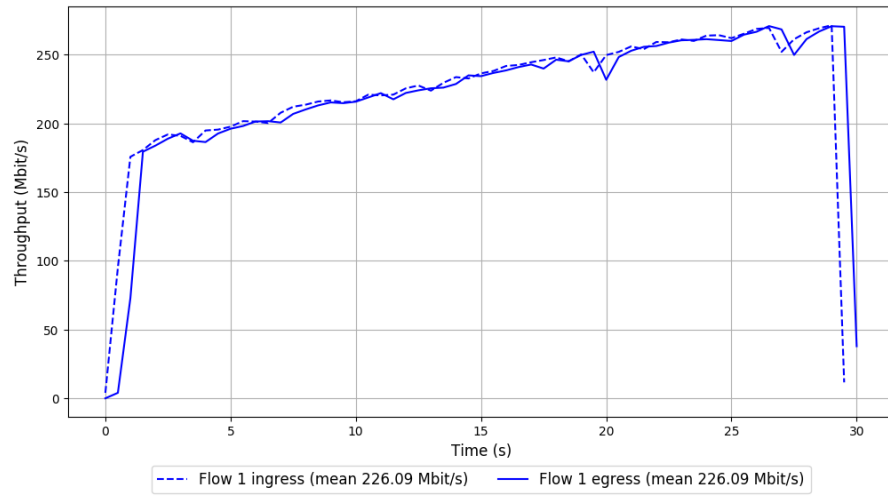


Run 4: Statistics of Indigo

Start at: 2018-12-20 20:06:46
End at: 2018-12-20 20:07:16
Local clock offset: -0.028 ms
Remote clock offset: -2.253 ms

Below is generated by plot.py at 2018-12-20 21:48:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 226.09 Mbit/s
95th percentile per-packet one-way delay: 49.689 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 226.09 Mbit/s
95th percentile per-packet one-way delay: 49.689 ms
Loss rate: 0.00%

Run 4: Report of Indigo — Data Link

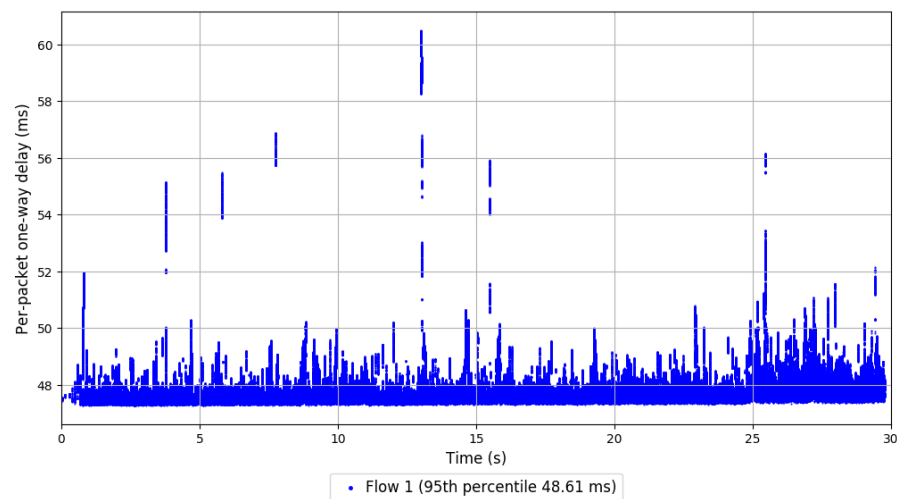
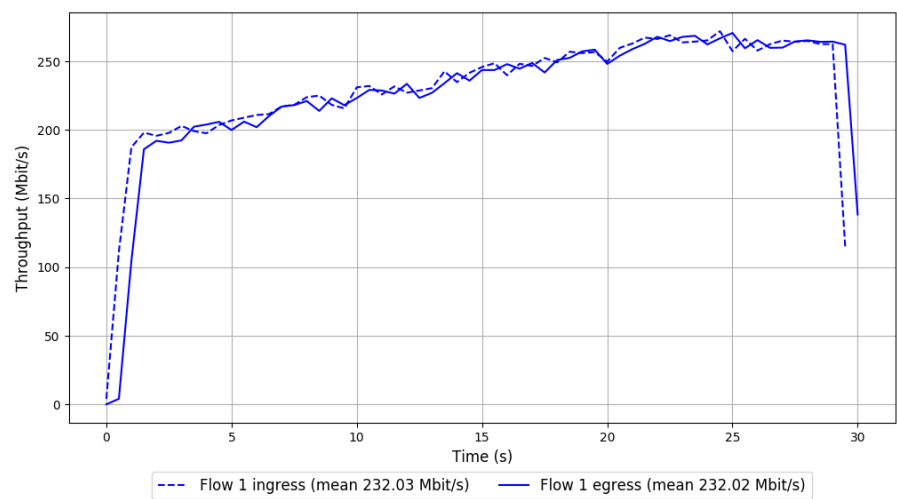


Run 5: Statistics of Indigo

Start at: 2018-12-20 20:34:40
End at: 2018-12-20 20:35:10
Local clock offset: -0.084 ms
Remote clock offset: -4.625 ms

Below is generated by plot.py at 2018-12-20 21:48:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 232.02 Mbit/s
95th percentile per-packet one-way delay: 48.614 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 232.02 Mbit/s
95th percentile per-packet one-way delay: 48.614 ms
Loss rate: 0.00%

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-MusesD

Start at: 2018-12-20 18:30:09

End at: 2018-12-20 18:30:39

Local clock offset: -0.032 ms

Remote clock offset: -0.046 ms

Below is generated by plot.py at 2018-12-20 21:49:01

Datalink statistics

-- Total of 1 flow:

Average throughput: 693.43 Mbit/s

95th percentile per-packet one-way delay: 68.708 ms

Loss rate: 0.00%

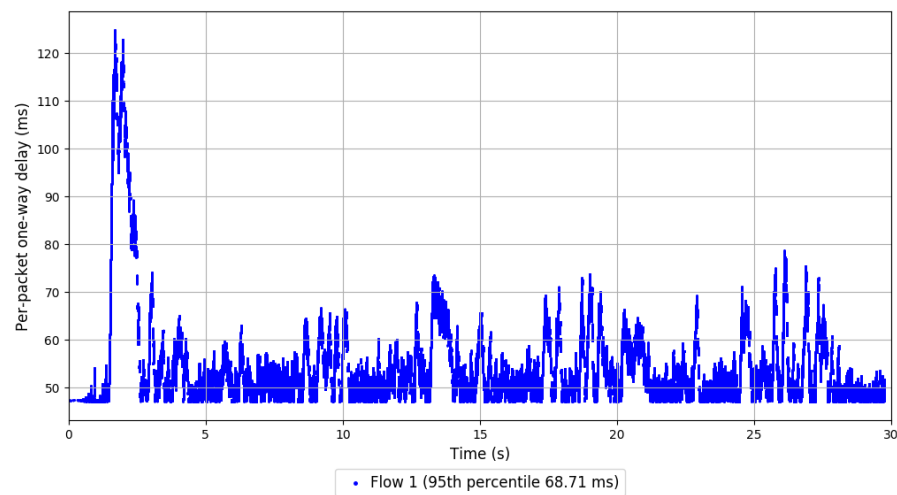
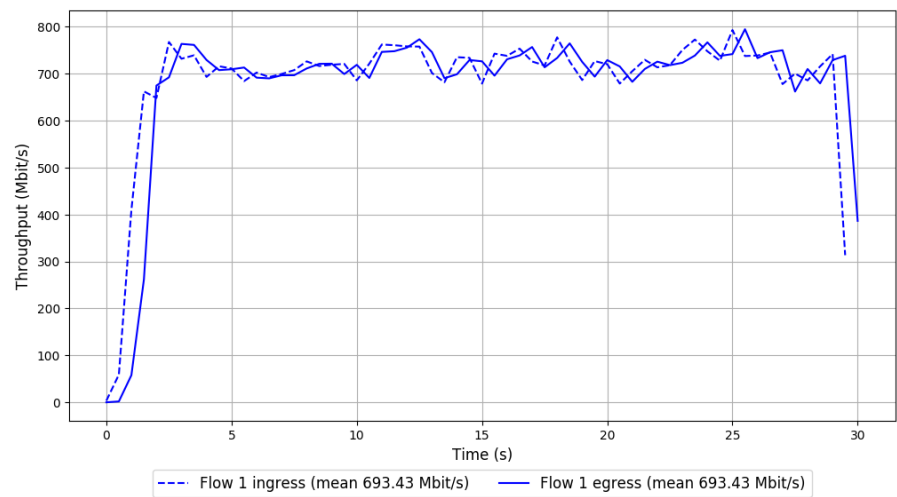
-- Flow 1:

Average throughput: 693.43 Mbit/s

95th percentile per-packet one-way delay: 68.708 ms

Loss rate: 0.00%

Run 1: Report of Indigo-MusesD — Data Link



Run 2: Statistics of Indigo-MusesD

Start at: 2018-12-20 18:58:24

End at: 2018-12-20 18:58:54

Local clock offset: -0.469 ms

Remote clock offset: -0.083 ms

Below is generated by plot.py at 2018-12-20 21:49:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 660.47 Mbit/s

95th percentile per-packet one-way delay: 68.053 ms

Loss rate: 0.01%

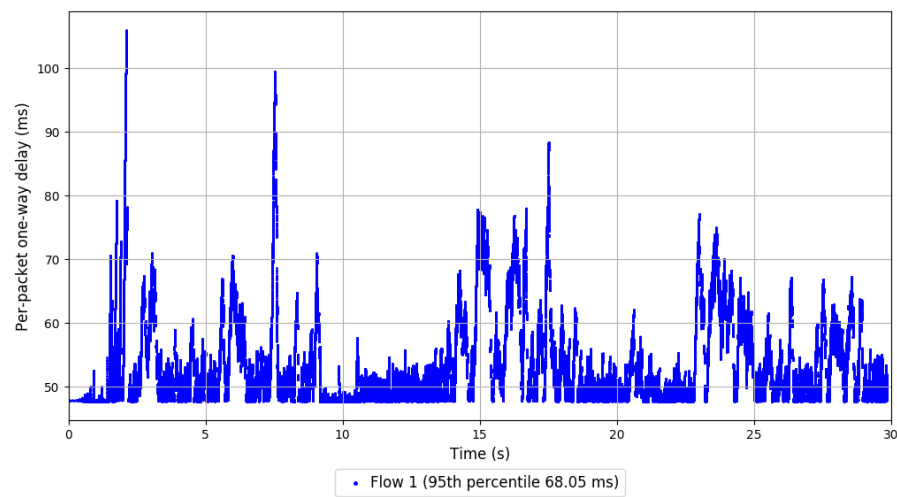
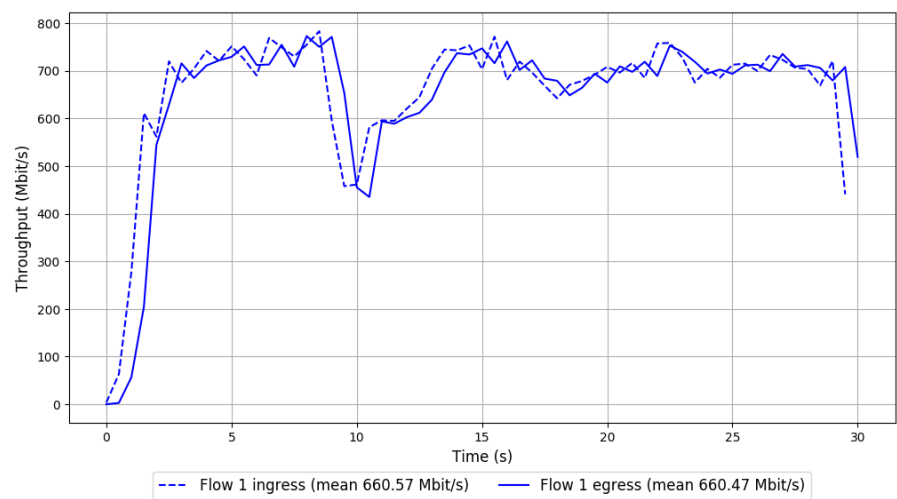
-- Flow 1:

Average throughput: 660.47 Mbit/s

95th percentile per-packet one-way delay: 68.053 ms

Loss rate: 0.01%

Run 2: Report of Indigo-MusesD — Data Link



Run 3: Statistics of Indigo-MusesD

Start at: 2018-12-20 19:26:14

End at: 2018-12-20 19:26:44

Local clock offset: -0.081 ms

Remote clock offset: -0.01 ms

Below is generated by plot.py at 2018-12-20 21:49:27

Datalink statistics

-- Total of 1 flow:

Average throughput: 682.18 Mbit/s

95th percentile per-packet one-way delay: 68.882 ms

Loss rate: 0.02%

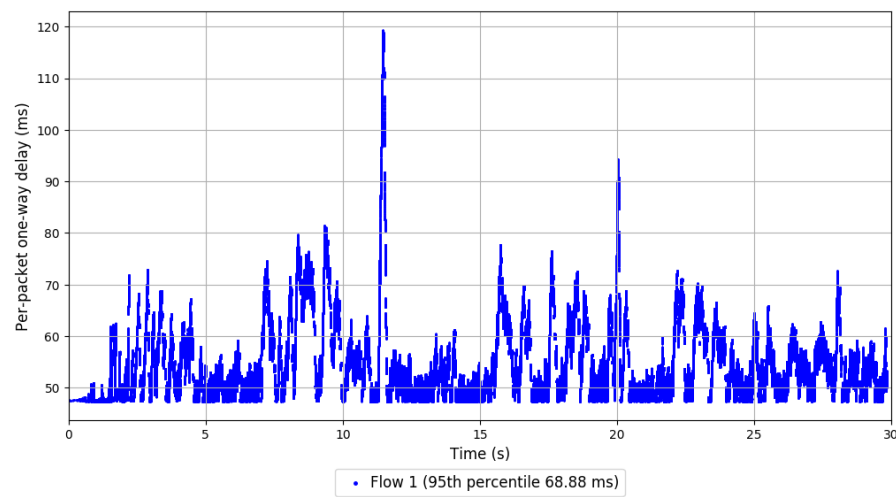
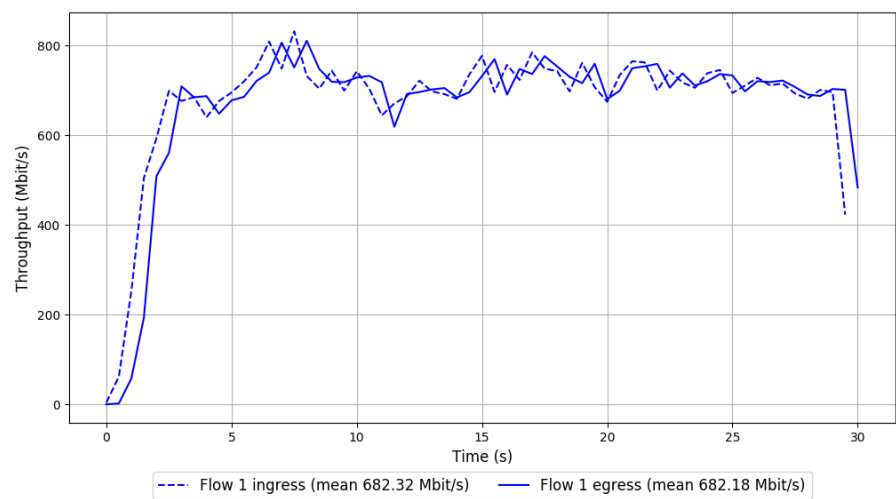
-- Flow 1:

Average throughput: 682.18 Mbit/s

95th percentile per-packet one-way delay: 68.882 ms

Loss rate: 0.02%

Run 3: Report of Indigo-MusesD — Data Link



Run 4: Statistics of Indigo-MusesD

Start at: 2018-12-20 19:53:54

End at: 2018-12-20 19:54:24

Local clock offset: -0.062 ms

Remote clock offset: -0.062 ms

Below is generated by plot.py at 2018-12-20 21:54:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 688.73 Mbit/s

95th percentile per-packet one-way delay: 63.057 ms

Loss rate: 0.06%

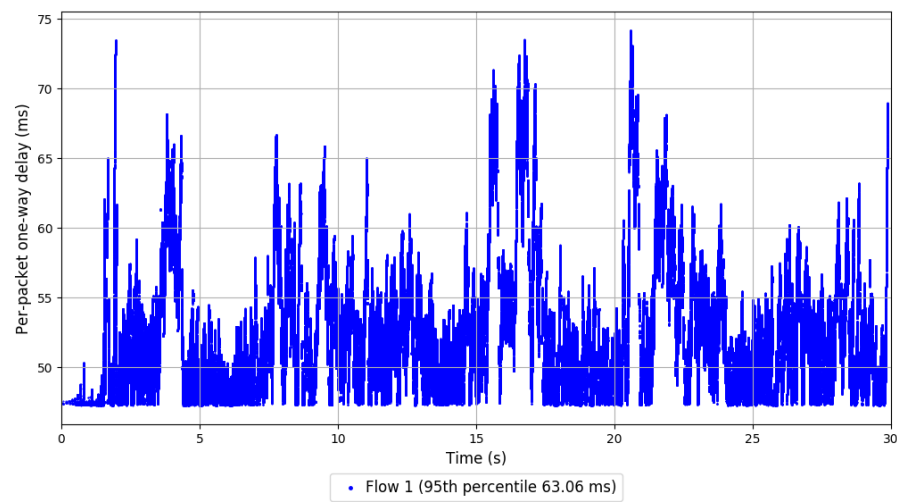
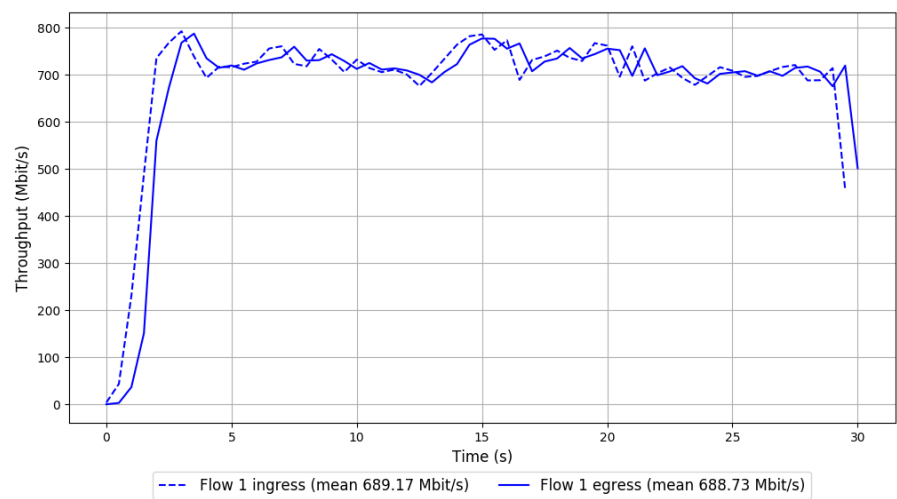
-- Flow 1:

Average throughput: 688.73 Mbit/s

95th percentile per-packet one-way delay: 63.057 ms

Loss rate: 0.06%

Run 4: Report of Indigo-MusesD — Data Link



Run 5: Statistics of Indigo-MusesD

Start at: 2018-12-20 20:21:47

End at: 2018-12-20 20:22:17

Local clock offset: -0.06 ms

Remote clock offset: -3.737 ms

Below is generated by plot.py at 2018-12-20 21:54:34

Datalink statistics

-- Total of 1 flow:

Average throughput: 659.34 Mbit/s

95th percentile per-packet one-way delay: 67.521 ms

Loss rate: 0.01%

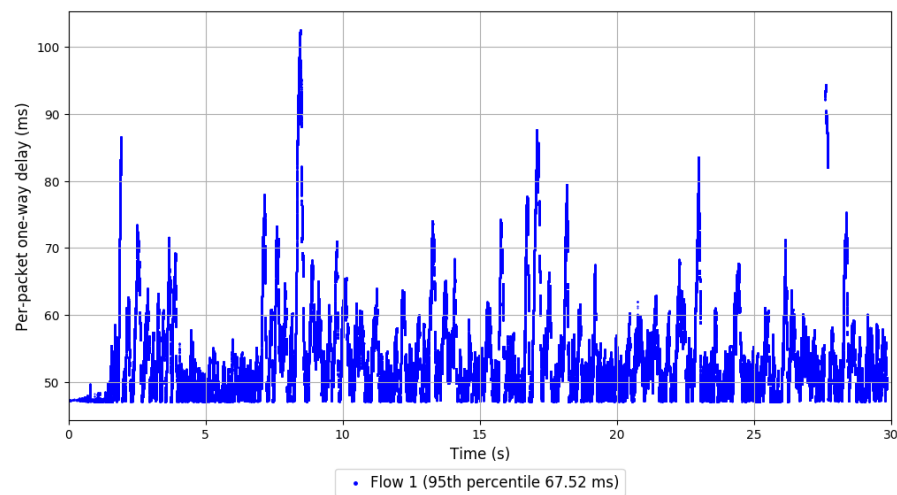
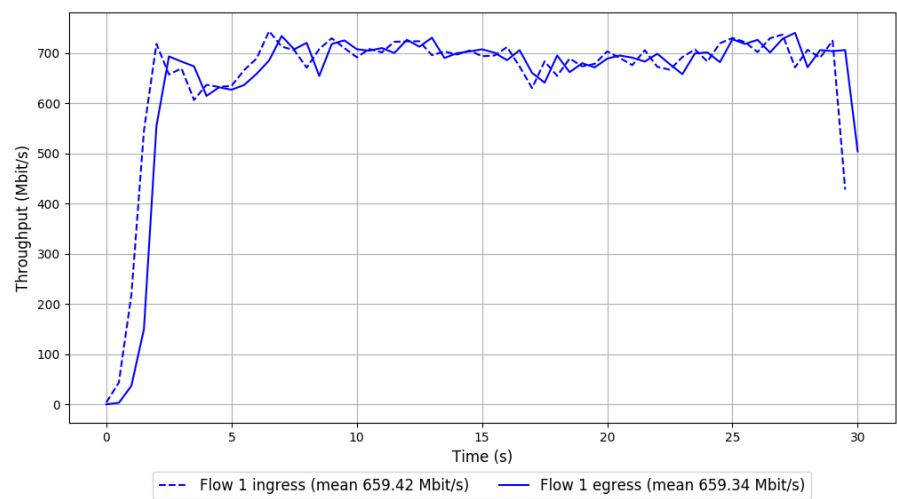
-- Flow 1:

Average throughput: 659.34 Mbit/s

95th percentile per-packet one-way delay: 67.521 ms

Loss rate: 0.01%

Run 5: Report of Indigo-MusesD — Data Link



Run 1: Statistics of Indigo-MusesT

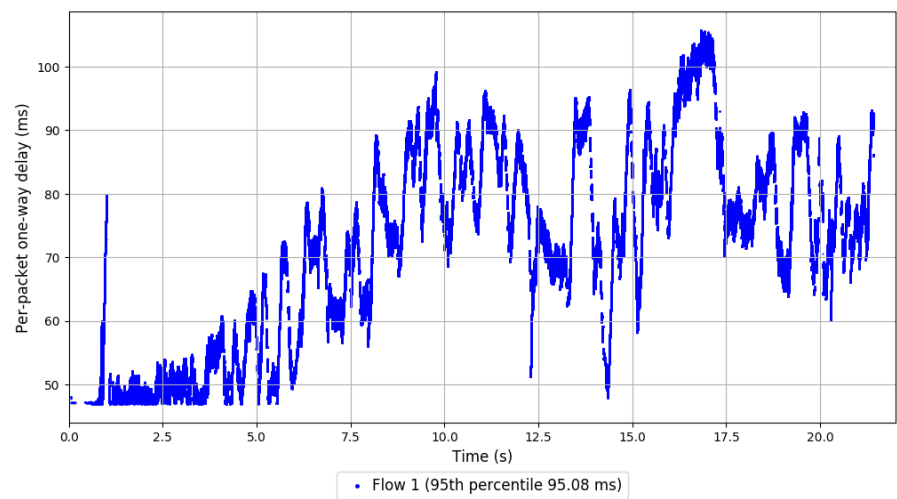
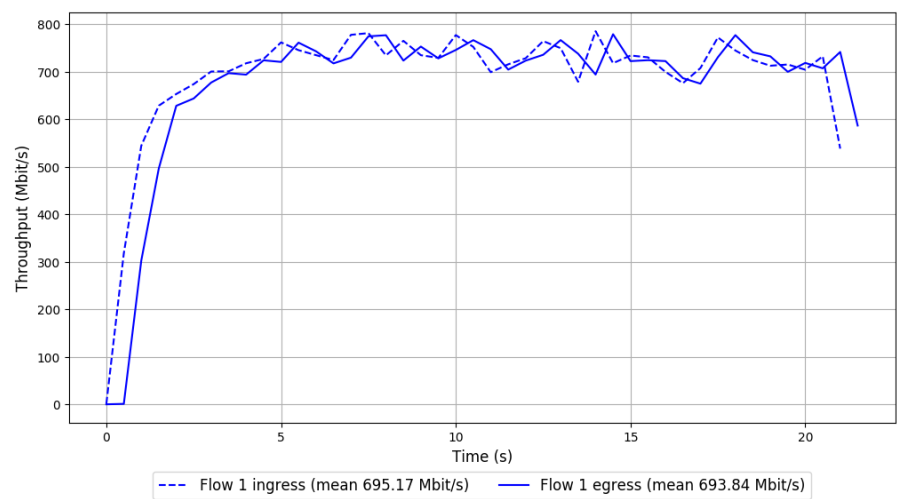
Start at: 2018-12-20 18:23:44

End at: 2018-12-20 18:24:14

Local clock offset: 0.338 ms

Remote clock offset: -0.057 ms

Run 1: Report of Indigo-MusesT — Data Link

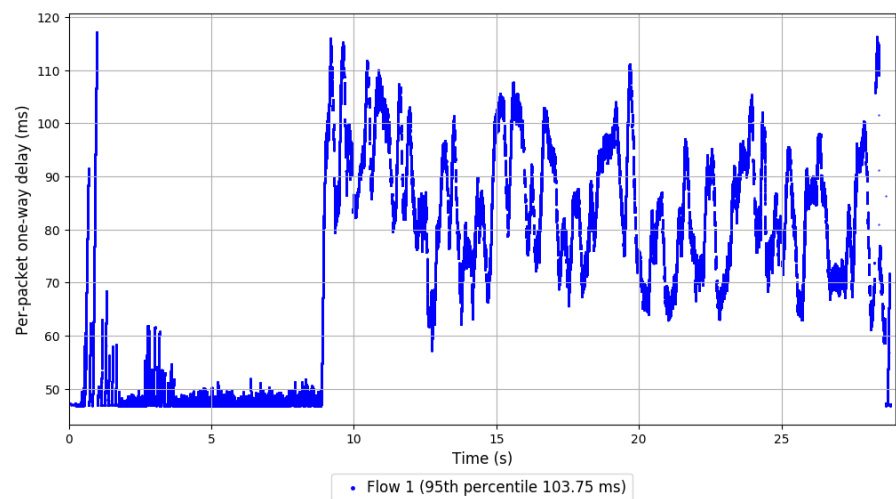
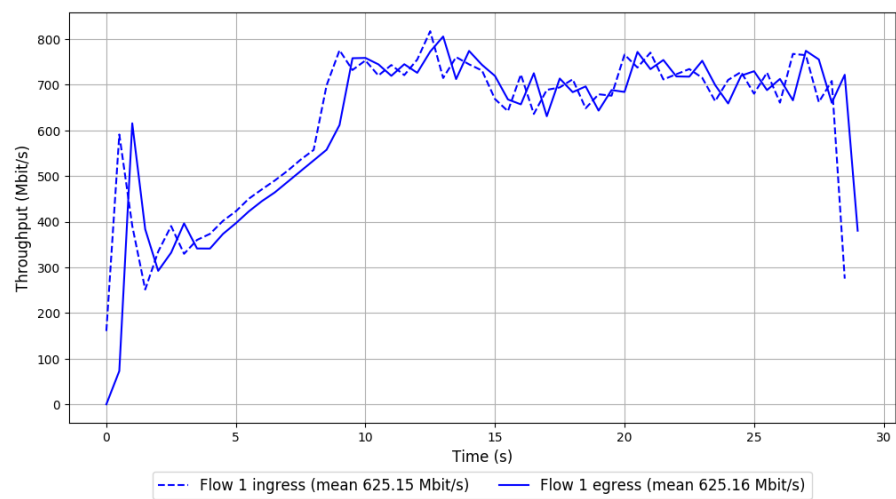


Run 2: Statistics of Indigo-MusesT

Start at: 2018-12-20 18:51:58
End at: 2018-12-20 18:52:28
Local clock offset: -0.413 ms
Remote clock offset: -0.074 ms

Below is generated by plot.py at 2018-12-20 21:55:40
Datalink statistics
-- Total of 1 flow:
Average throughput: 625.16 Mbit/s
95th percentile per-packet one-way delay: 103.750 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 625.16 Mbit/s
95th percentile per-packet one-way delay: 103.750 ms
Loss rate: 0.00%

Run 2: Report of Indigo-MusesT — Data Link



Run 3: Statistics of Indigo-MusesT

Start at: 2018-12-20 19:19:43

End at: 2018-12-20 19:20:13

Local clock offset: 0.288 ms

Remote clock offset: -0.037 ms

Below is generated by plot.py at 2018-12-20 22:01:48

Datalink statistics

-- Total of 1 flow:

Average throughput: 726.55 Mbit/s

95th percentile per-packet one-way delay: 90.600 ms

Loss rate: 0.02%

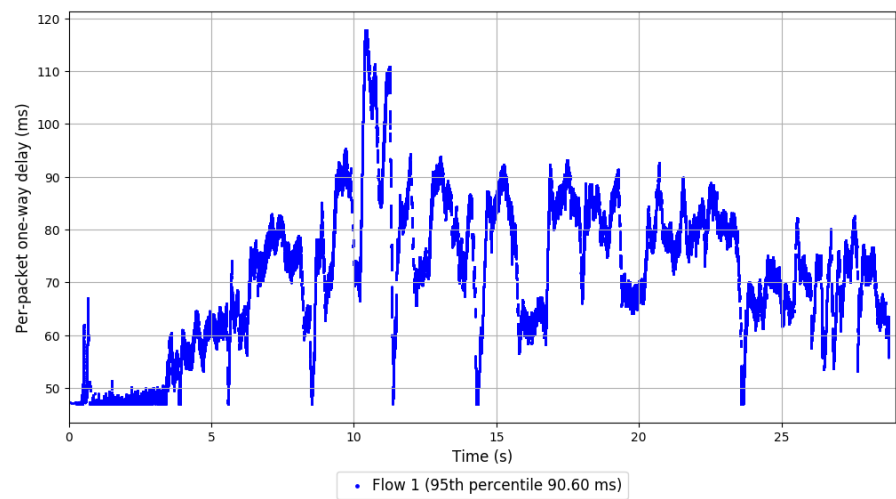
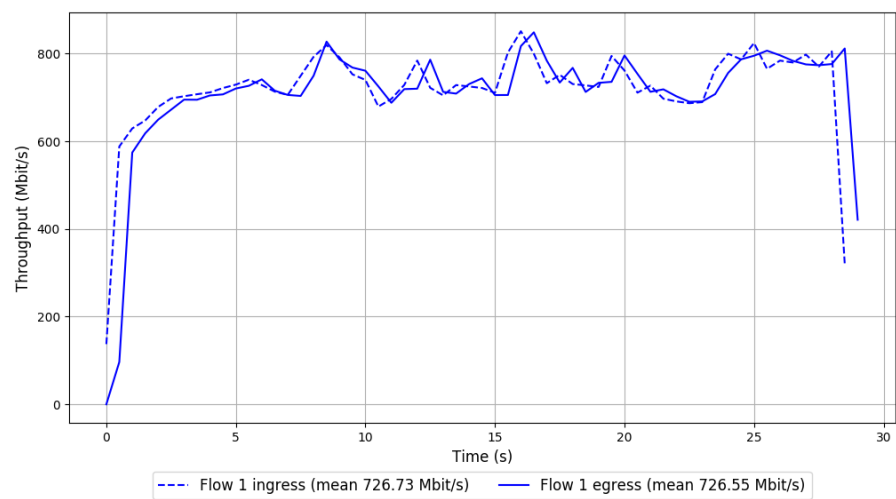
-- Flow 1:

Average throughput: 726.55 Mbit/s

95th percentile per-packet one-way delay: 90.600 ms

Loss rate: 0.02%

Run 3: Report of Indigo-MusesT — Data Link



Run 4: Statistics of Indigo-MusesT

Start at: 2018-12-20 19:47:29

End at: 2018-12-20 19:47:59

Local clock offset: -0.043 ms

Remote clock offset: -0.05 ms

Below is generated by plot.py at 2018-12-20 22:02:11

Datalink statistics

-- Total of 1 flow:

Average throughput: 703.15 Mbit/s

95th percentile per-packet one-way delay: 91.320 ms

Loss rate: 0.07%

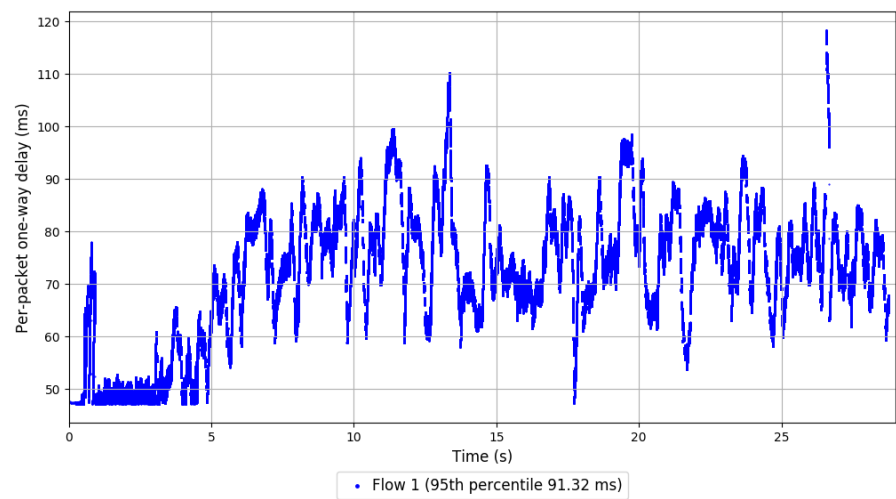
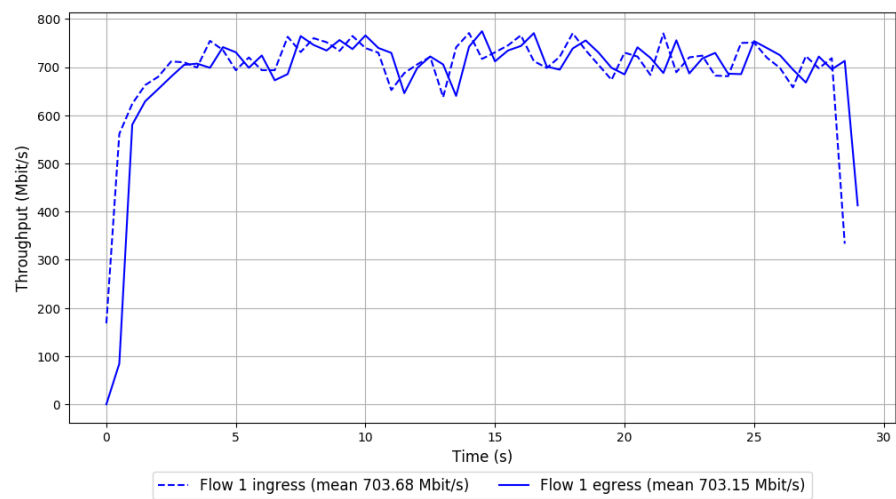
-- Flow 1:

Average throughput: 703.15 Mbit/s

95th percentile per-packet one-way delay: 91.320 ms

Loss rate: 0.07%

Run 4: Report of Indigo-MusesT — Data Link

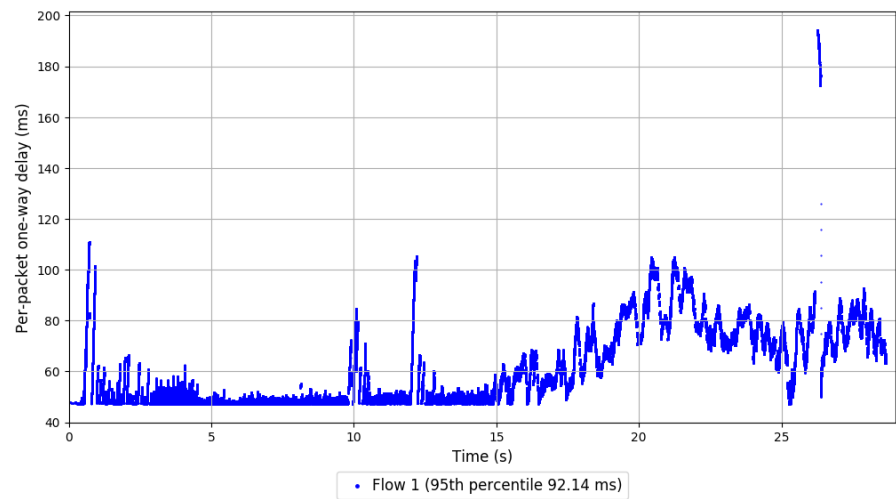
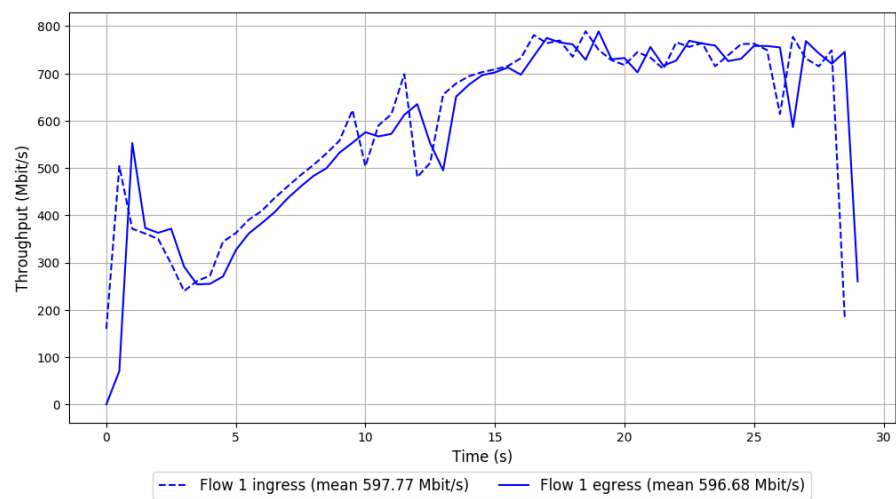


Run 5: Statistics of Indigo-MusesT

Start at: 2018-12-20 20:15:35
End at: 2018-12-20 20:16:05
Local clock offset: -0.071 ms
Remote clock offset: -4.767 ms

Below is generated by plot.py at 2018-12-20 22:02:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 596.68 Mbit/s
95th percentile per-packet one-way delay: 92.138 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 596.68 Mbit/s
95th percentile per-packet one-way delay: 92.138 ms
Loss rate: 0.18%

Run 5: Report of Indigo-MusesT — Data Link

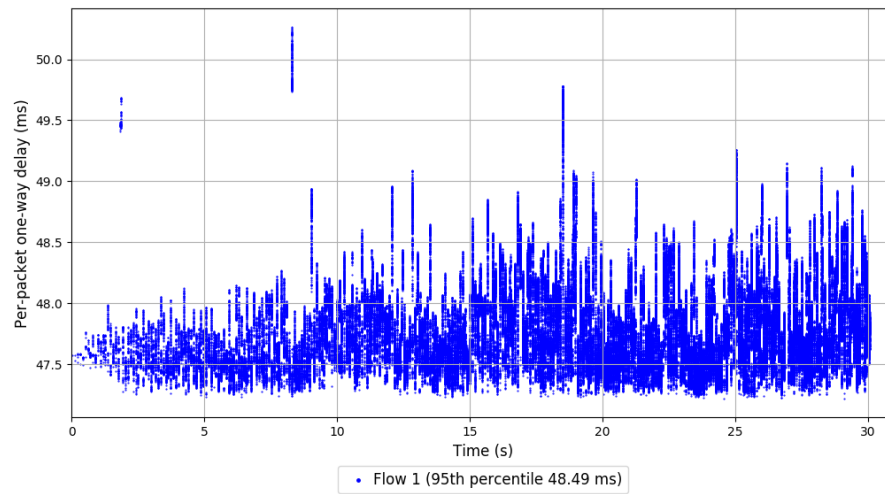
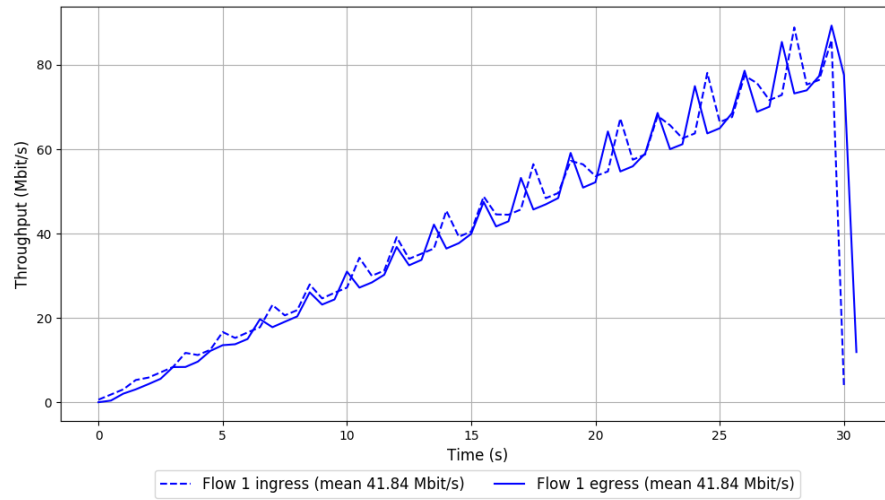


```
Run 1: Statistics of LEDBAT

Start at: 2018-12-20 18:35:45
End at: 2018-12-20 18:36:15
Local clock offset: -0.038 ms
Remote clock offset: -0.046 ms

# Below is generated by plot.py at 2018-12-20 22:02:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 41.84 Mbit/s
95th percentile per-packet one-way delay: 48.486 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 41.84 Mbit/s
95th percentile per-packet one-way delay: 48.486 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link

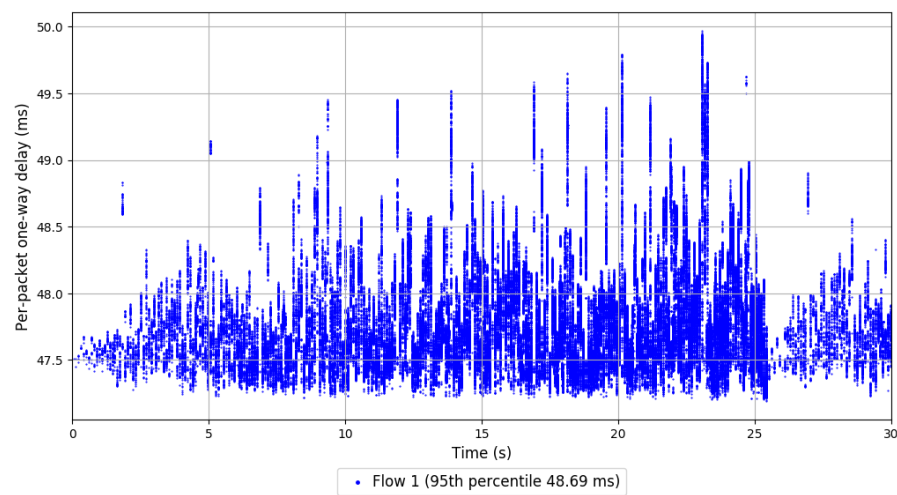
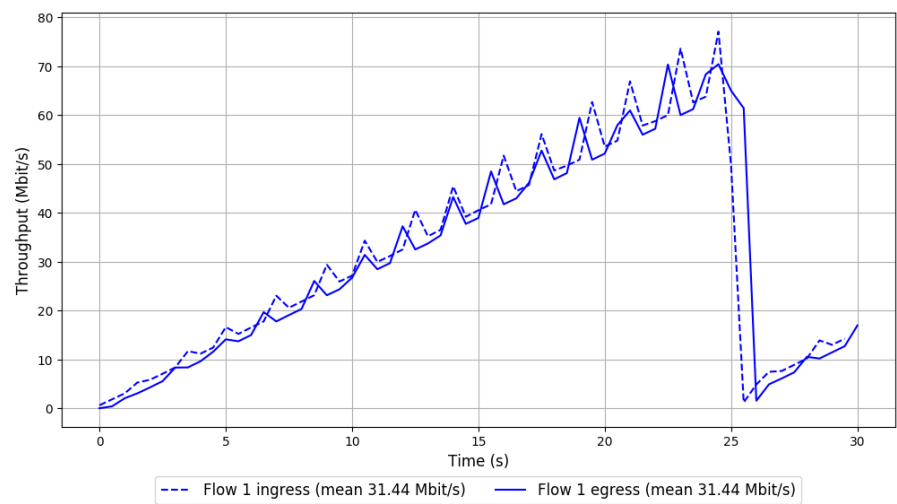


Run 2: Statistics of LEDBAT

Start at: 2018-12-20 19:03:46
End at: 2018-12-20 19:04:16
Local clock offset: -0.103 ms
Remote clock offset: -0.091 ms

Below is generated by plot.py at 2018-12-20 22:02:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 31.44 Mbit/s
95th percentile per-packet one-way delay: 48.687 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 31.44 Mbit/s
95th percentile per-packet one-way delay: 48.687 ms
Loss rate: 0.00%

Run 2: Report of LEDBAT — Data Link

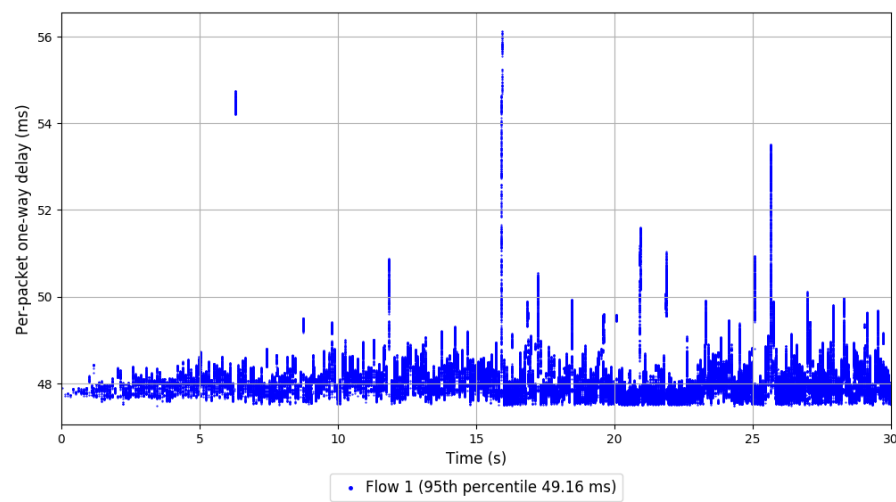
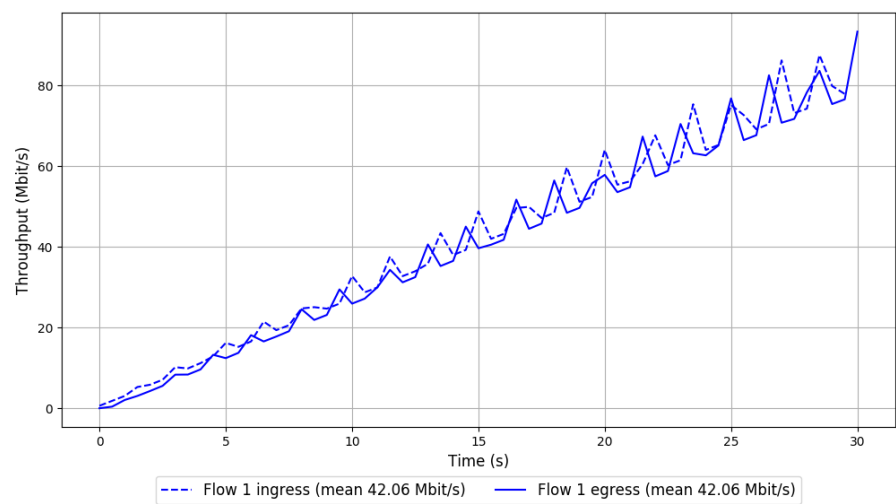


Run 3: Statistics of LEDBAT

Start at: 2018-12-20 19:31:33
End at: 2018-12-20 19:32:03
Local clock offset: -0.4 ms
Remote clock offset: -0.003 ms

Below is generated by plot.py at 2018-12-20 22:02:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 42.06 Mbit/s
95th percentile per-packet one-way delay: 49.161 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 42.06 Mbit/s
95th percentile per-packet one-way delay: 49.161 ms
Loss rate: 0.00%

Run 3: Report of LEDBAT — Data Link

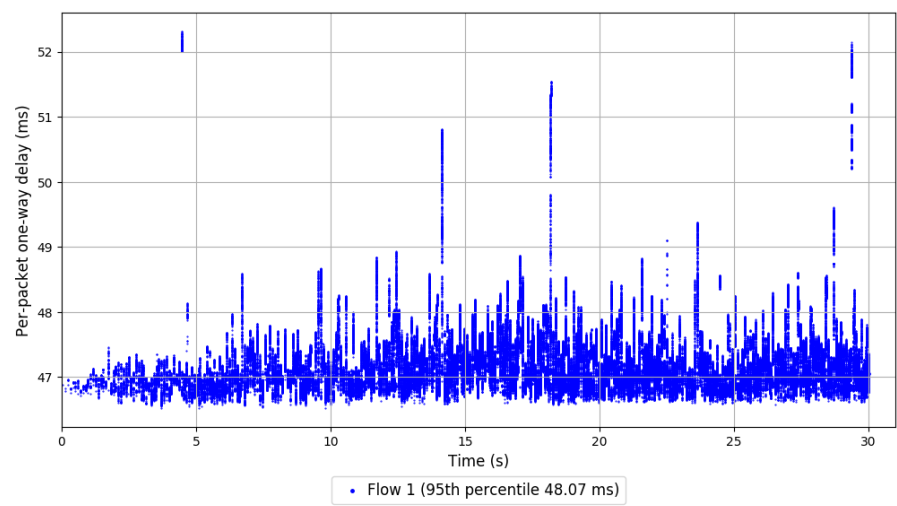
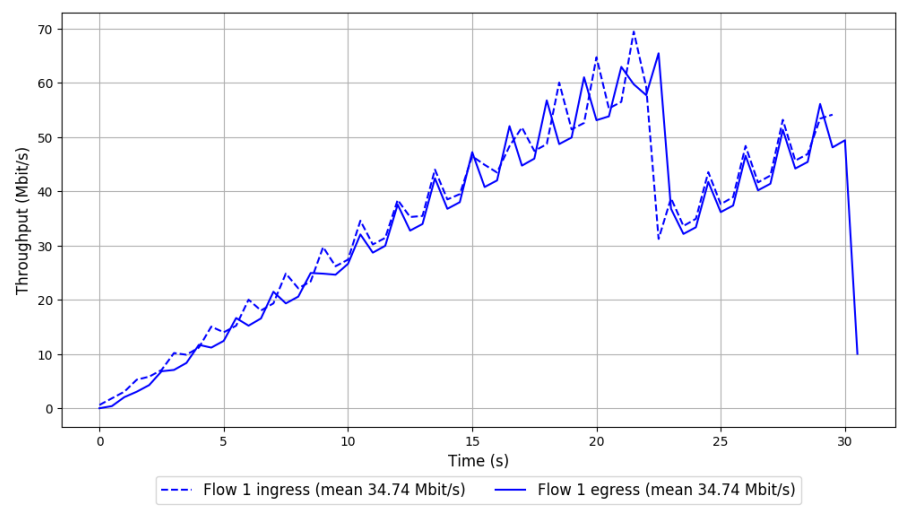


Run 4: Statistics of LEDBAT

Start at: 2018-12-20 19:59:29
End at: 2018-12-20 19:59:59
Local clock offset: -0.044 ms
Remote clock offset: -0.197 ms

Below is generated by plot.py at 2018-12-20 22:02:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 34.74 Mbit/s
95th percentile per-packet one-way delay: 48.066 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 34.74 Mbit/s
95th percentile per-packet one-way delay: 48.066 ms
Loss rate: 0.00%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-12-20 20:27:21

End at: 2018-12-20 20:27:51

Local clock offset: -0.107 ms

Remote clock offset: -3.76 ms

Below is generated by plot.py at 2018-12-20 22:02:11

Datalink statistics

-- Total of 1 flow:

Average throughput: 30.72 Mbit/s

95th percentile per-packet one-way delay: 49.165 ms

Loss rate: 0.00%

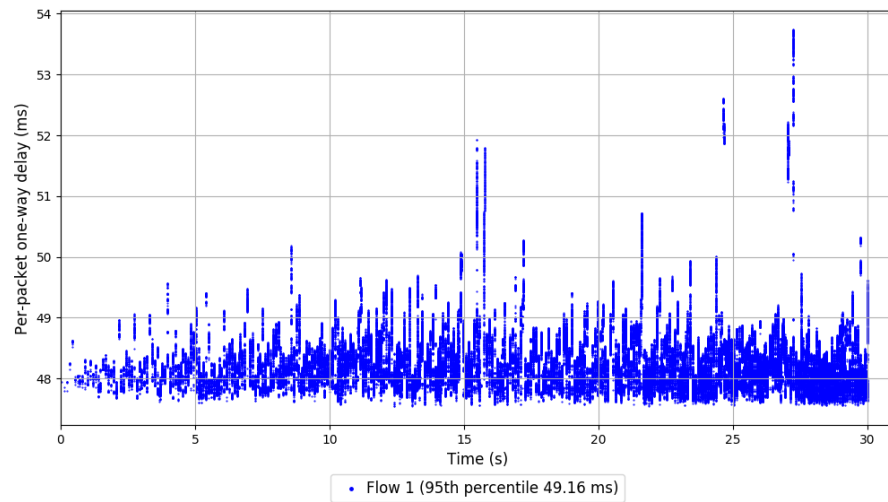
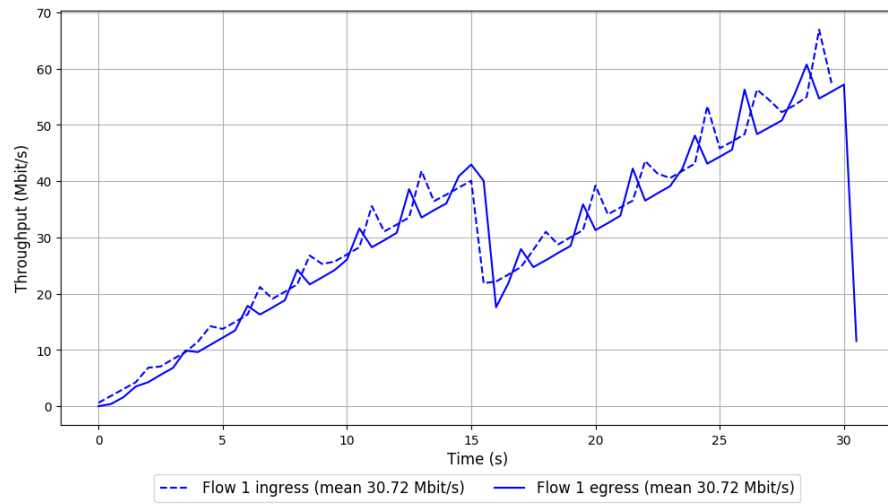
-- Flow 1:

Average throughput: 30.72 Mbit/s

95th percentile per-packet one-way delay: 49.165 ms

Loss rate: 0.00%

Run 5: Report of LEDBAT — Data Link

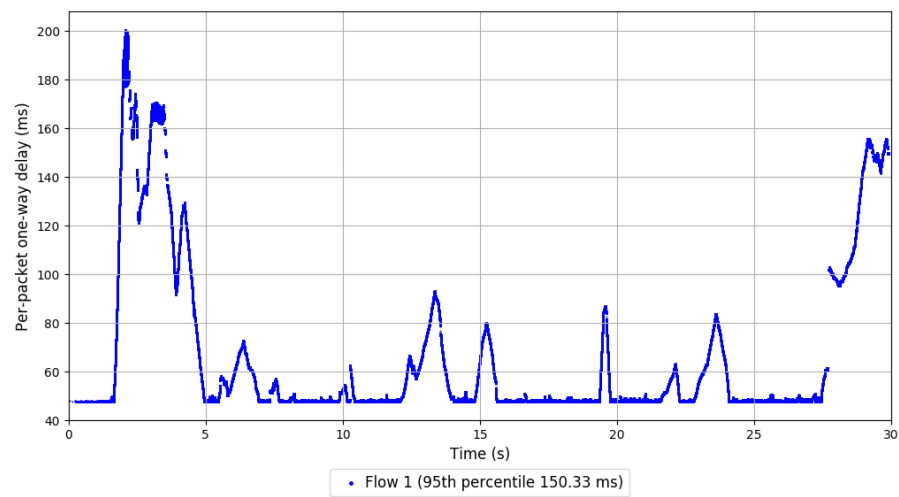
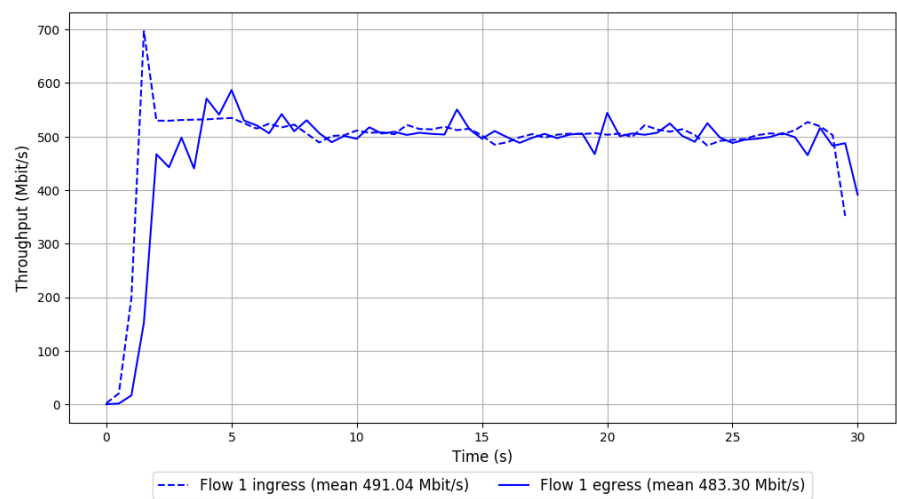


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-12-20 18:41:26
End at: 2018-12-20 18:41:56
Local clock offset: -0.44 ms
Remote clock offset: -0.057 ms

# Below is generated by plot.py at 2018-12-20 22:13:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 483.30 Mbit/s
95th percentile per-packet one-way delay: 150.333 ms
Loss rate: 1.58%
-- Flow 1:
Average throughput: 483.30 Mbit/s
95th percentile per-packet one-way delay: 150.333 ms
Loss rate: 1.58%
```

Run 1: Report of PCC-Allegro — Data Link

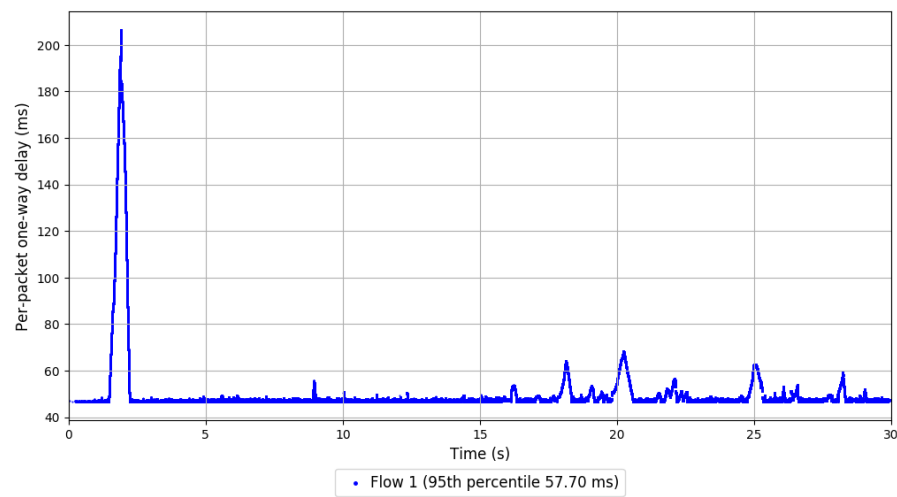
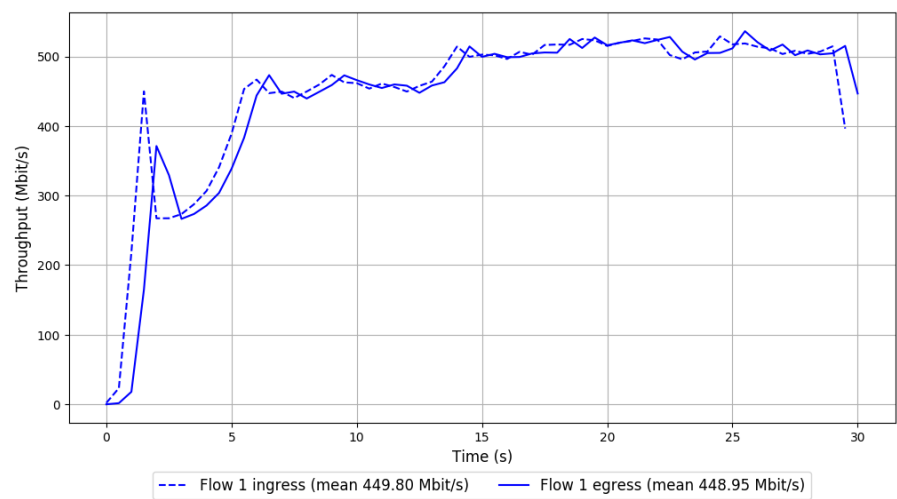


Run 2: Statistics of PCC-Allegro

Start at: 2018-12-20 19:09:25
End at: 2018-12-20 19:09:56
Local clock offset: -0.113 ms
Remote clock offset: -0.058 ms

Below is generated by plot.py at 2018-12-20 22:13:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 448.95 Mbit/s
95th percentile per-packet one-way delay: 57.699 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 448.95 Mbit/s
95th percentile per-packet one-way delay: 57.699 ms
Loss rate: 0.19%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-12-20 19:37:17

End at: 2018-12-20 19:37:47

Local clock offset: -0.046 ms

Remote clock offset: -0.02 ms

Below is generated by plot.py at 2018-12-20 22:13:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 423.14 Mbit/s

95th percentile per-packet one-way delay: 158.786 ms

Loss rate: 0.89%

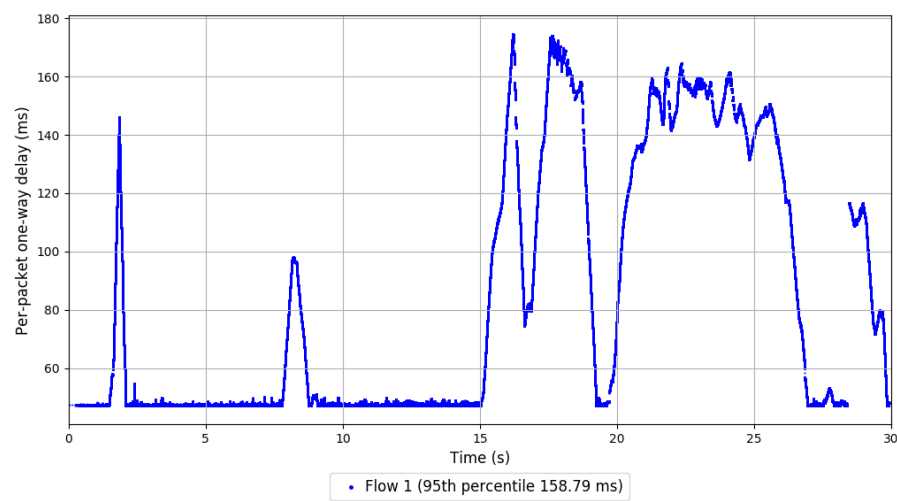
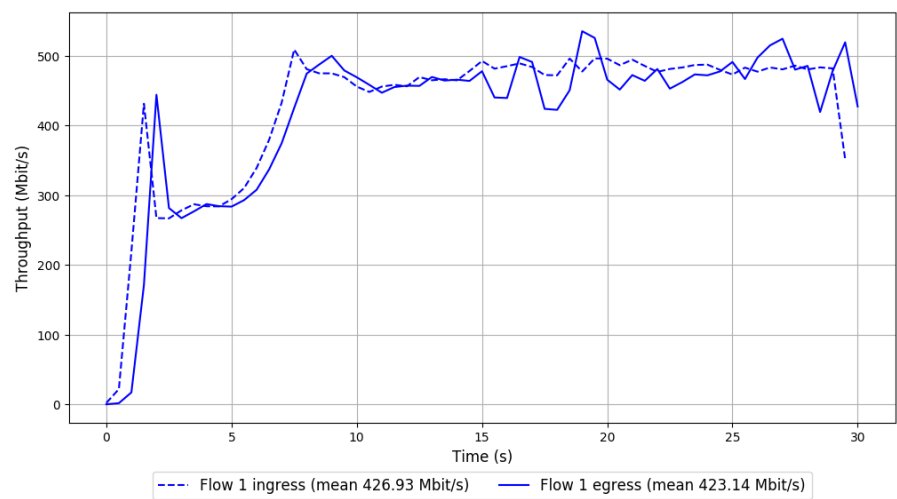
-- Flow 1:

Average throughput: 423.14 Mbit/s

95th percentile per-packet one-way delay: 158.786 ms

Loss rate: 0.89%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-12-20 20:05:07

End at: 2018-12-20 20:05:37

Local clock offset: -0.1 ms

Remote clock offset: -1.762 ms

Below is generated by plot.py at 2018-12-20 22:14:55

Datalink statistics

-- Total of 1 flow:

Average throughput: 498.92 Mbit/s

95th percentile per-packet one-way delay: 151.861 ms

Loss rate: 1.02%

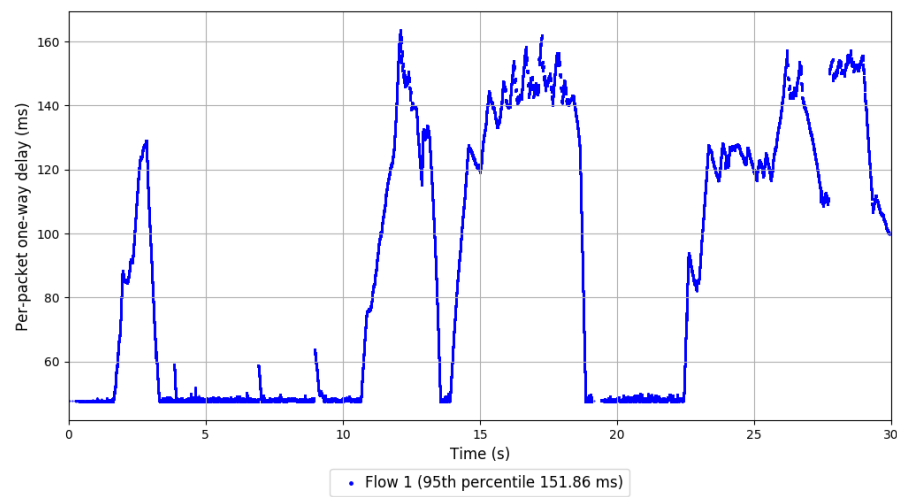
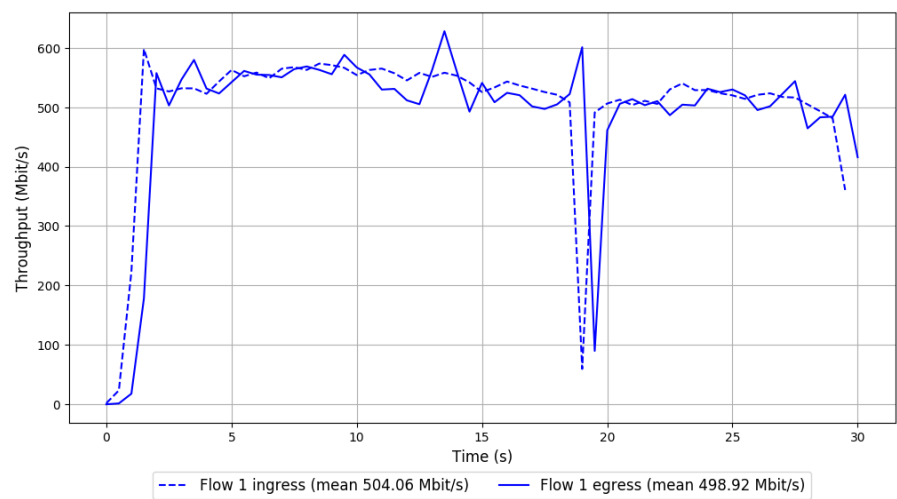
-- Flow 1:

Average throughput: 498.92 Mbit/s

95th percentile per-packet one-way delay: 151.861 ms

Loss rate: 1.02%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-12-20 20:33:03

End at: 2018-12-20 20:33:33

Local clock offset: -0.455 ms

Remote clock offset: -4.453 ms

Below is generated by plot.py at 2018-12-20 22:14:55

Datalink statistics

-- Total of 1 flow:

Average throughput: 478.75 Mbit/s

95th percentile per-packet one-way delay: 157.572 ms

Loss rate: 2.78%

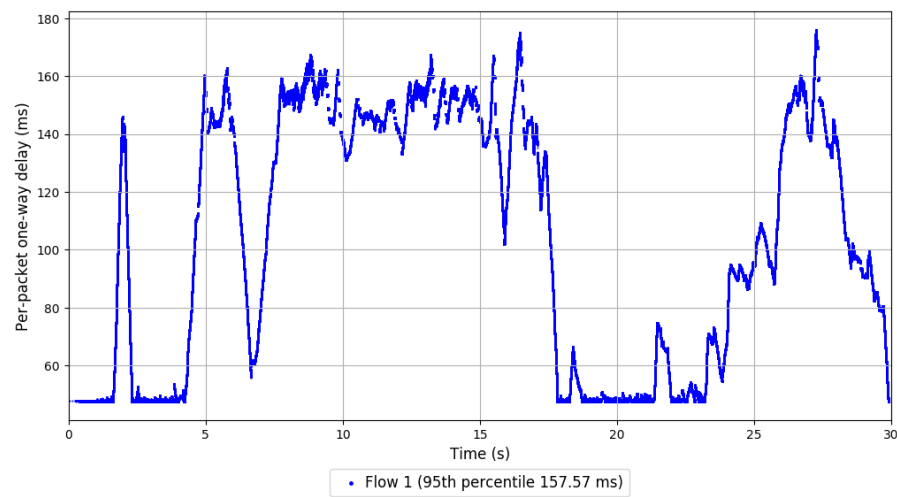
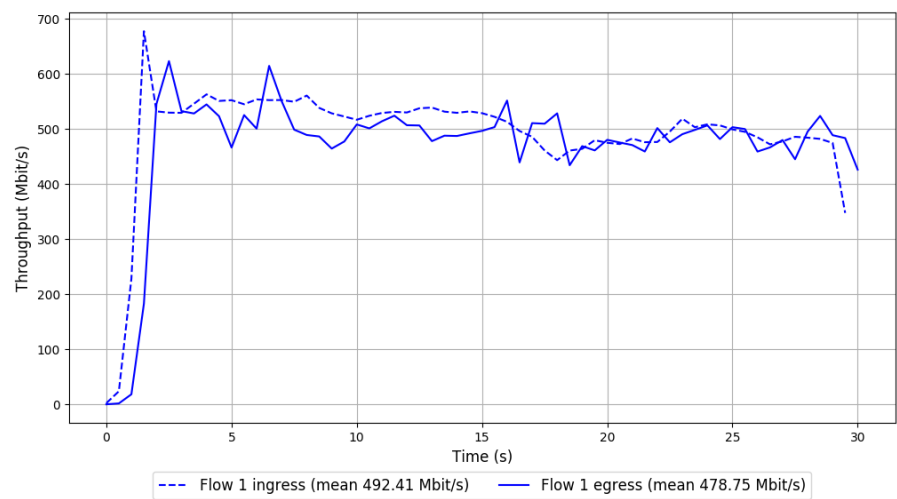
-- Flow 1:

Average throughput: 478.75 Mbit/s

95th percentile per-packet one-way delay: 157.572 ms

Loss rate: 2.78%

Run 5: Report of PCC-Allegro — Data Link

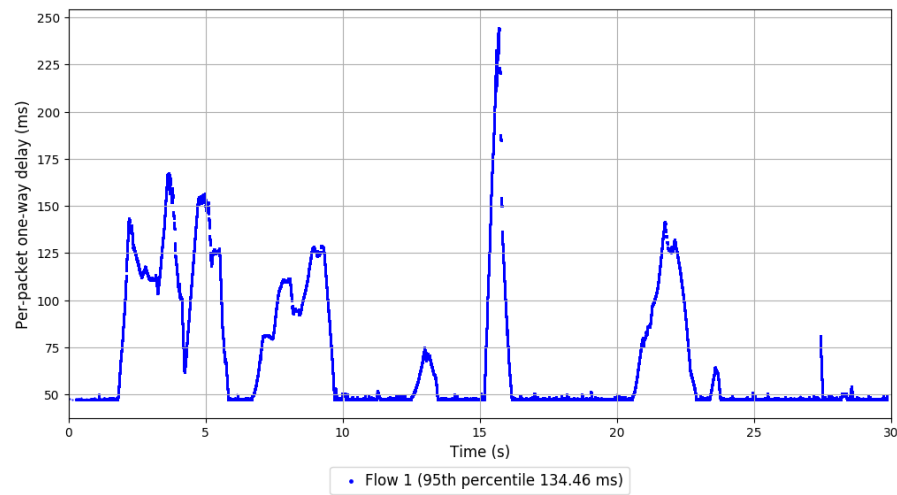
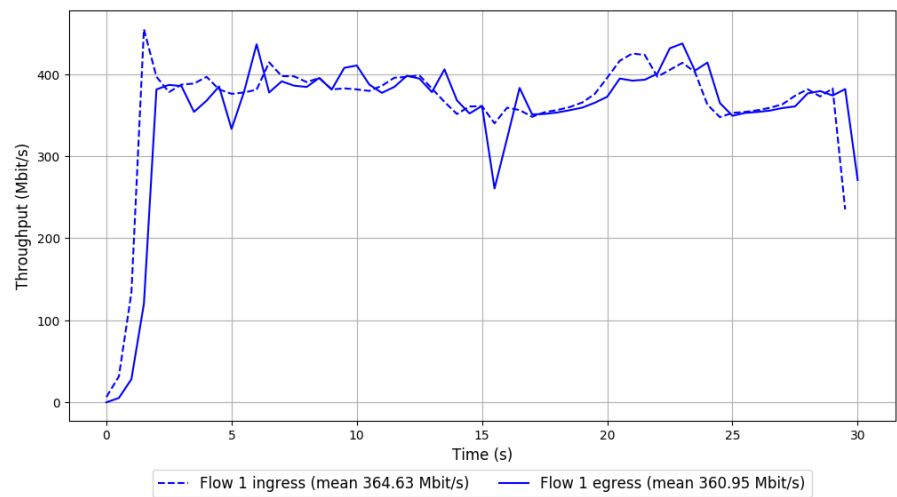



```
Run 1: Statistics of PCC-Expr

Start at: 2018-12-20 18:38:04
End at: 2018-12-20 18:38:34
Local clock offset: -0.07 ms
Remote clock offset: -0.042 ms

# Below is generated by plot.py at 2018-12-20 22:14:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 360.95 Mbit/s
95th percentile per-packet one-way delay: 134.462 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 360.95 Mbit/s
95th percentile per-packet one-way delay: 134.462 ms
Loss rate: 1.01%
```

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2018-12-20 19:06:04

End at: 2018-12-20 19:06:34

Local clock offset: -0.08 ms

Remote clock offset: -0.051 ms

Below is generated by plot.py at 2018-12-20 22:16:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 352.95 Mbit/s

95th percentile per-packet one-way delay: 134.714 ms

Loss rate: 1.96%

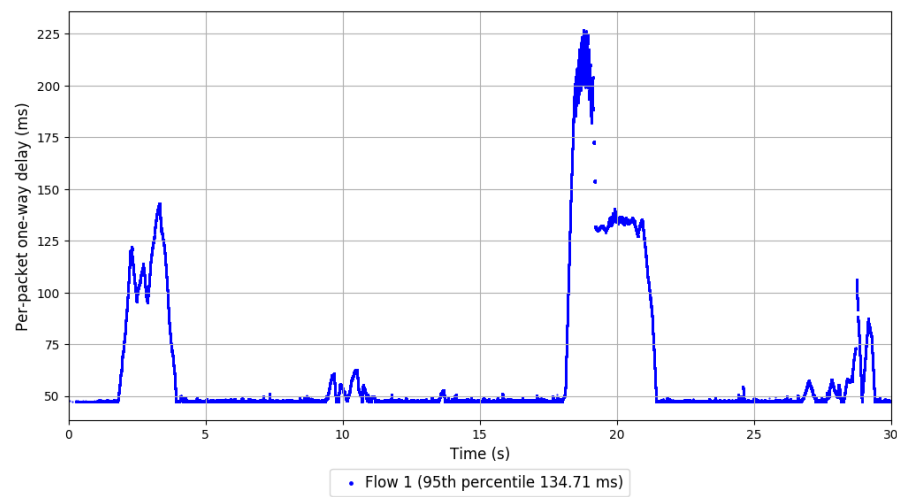
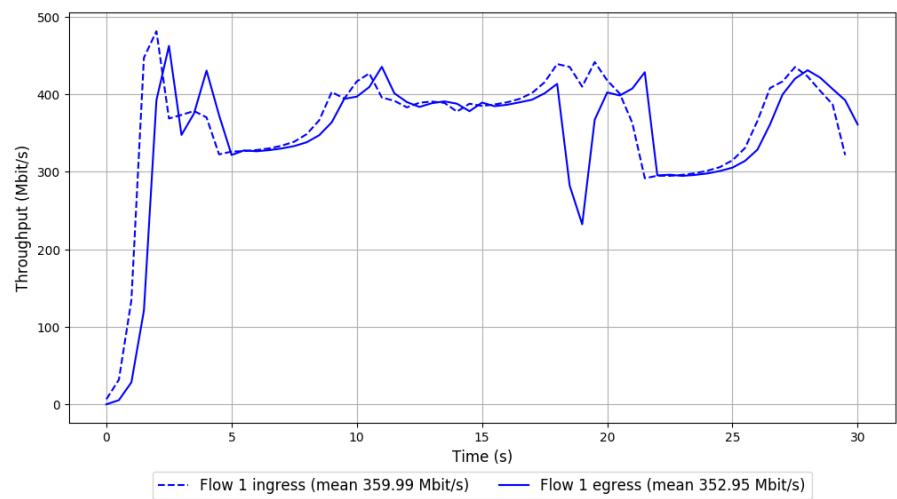
-- Flow 1:

Average throughput: 352.95 Mbit/s

95th percentile per-packet one-way delay: 134.714 ms

Loss rate: 1.96%

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2018-12-20 19:33:51

End at: 2018-12-20 19:34:21

Local clock offset: -0.056 ms

Remote clock offset: -0.05 ms

Below is generated by plot.py at 2018-12-20 22:17:03

Datalink statistics

-- Total of 1 flow:

Average throughput: 373.38 Mbit/s

95th percentile per-packet one-way delay: 134.643 ms

Loss rate: 1.16%

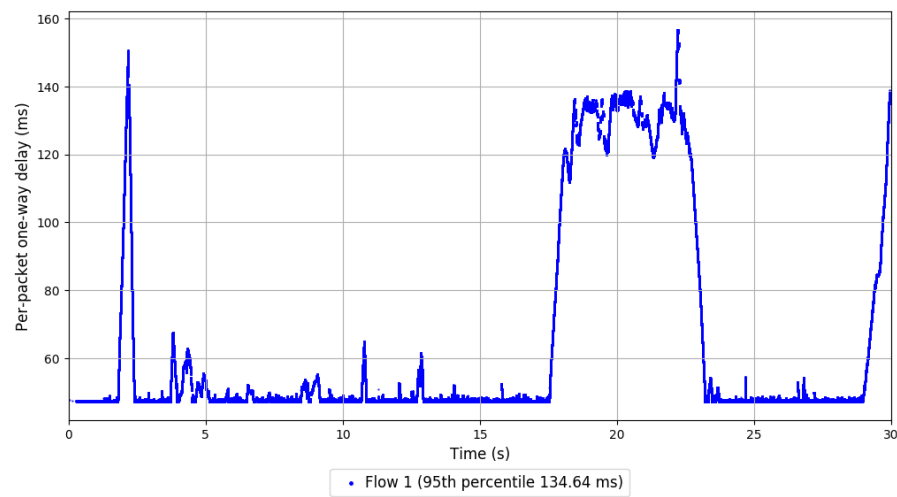
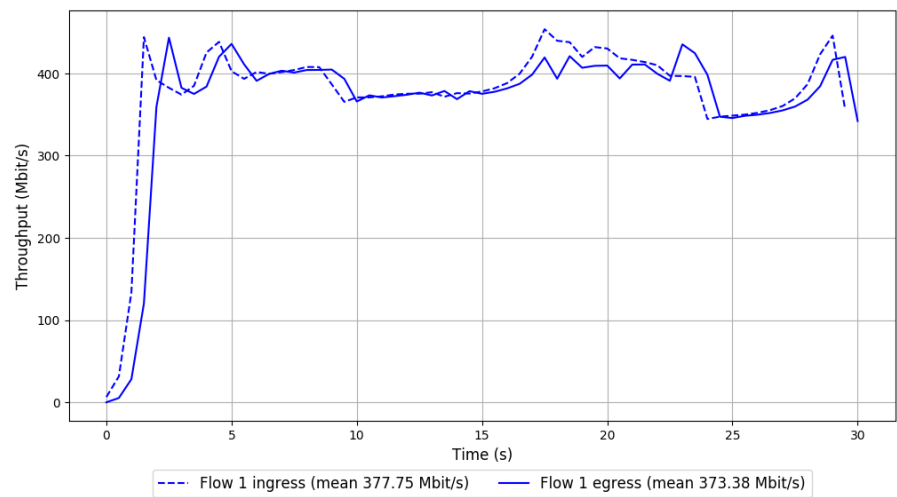
-- Flow 1:

Average throughput: 373.38 Mbit/s

95th percentile per-packet one-way delay: 134.643 ms

Loss rate: 1.16%

Run 3: Report of PCC-Expr — Data Link

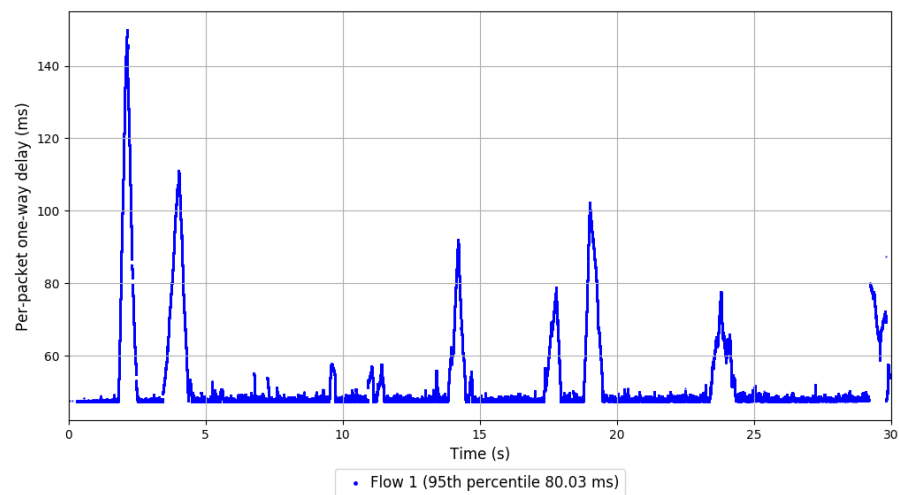
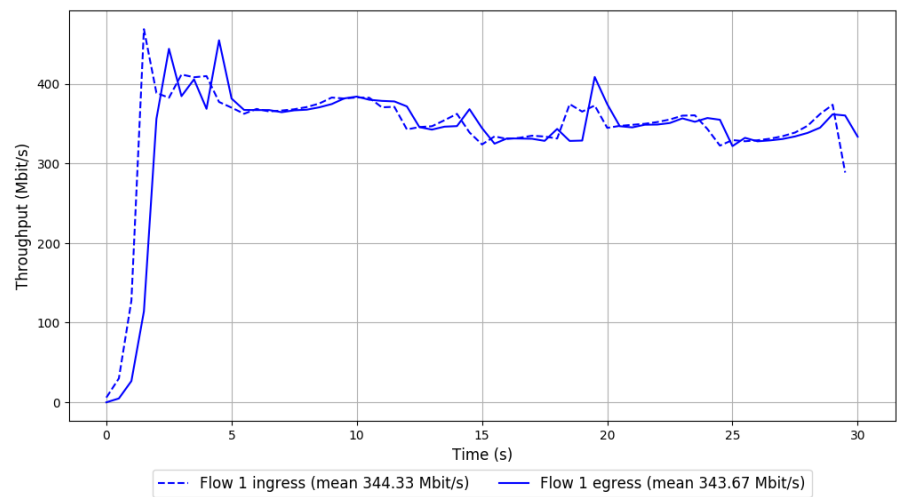


Run 4: Statistics of PCC-Expr

Start at: 2018-12-20 20:01:47
End at: 2018-12-20 20:02:17
Local clock offset: -0.054 ms
Remote clock offset: -0.878 ms

Below is generated by plot.py at 2018-12-20 22:24:05
Datalink statistics
-- Total of 1 flow:
Average throughput: 343.67 Mbit/s
95th percentile per-packet one-way delay: 80.025 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 343.67 Mbit/s
95th percentile per-packet one-way delay: 80.025 ms
Loss rate: 0.19%

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

Start at: 2018-12-20 20:29:39

End at: 2018-12-20 20:30:09

Local clock offset: -0.073 ms

Remote clock offset: -3.98 ms

Below is generated by plot.py at 2018-12-20 22:24:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 350.09 Mbit/s

95th percentile per-packet one-way delay: 146.764 ms

Loss rate: 1.27%

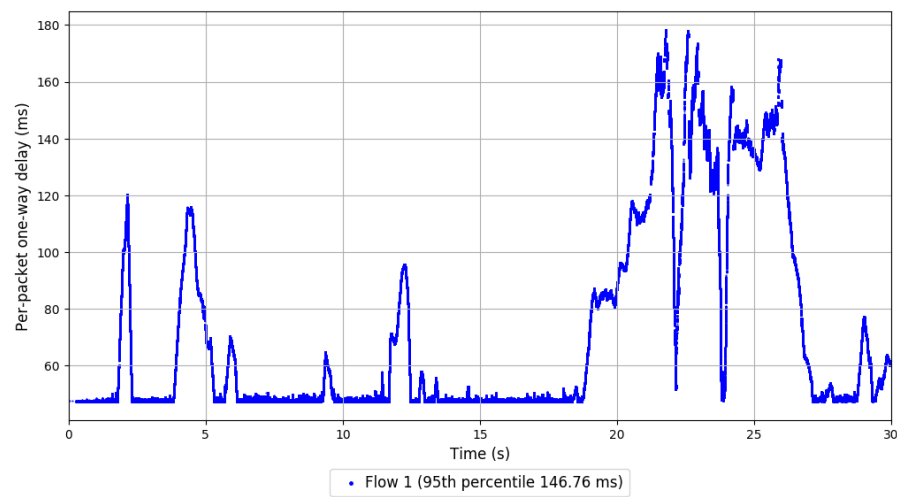
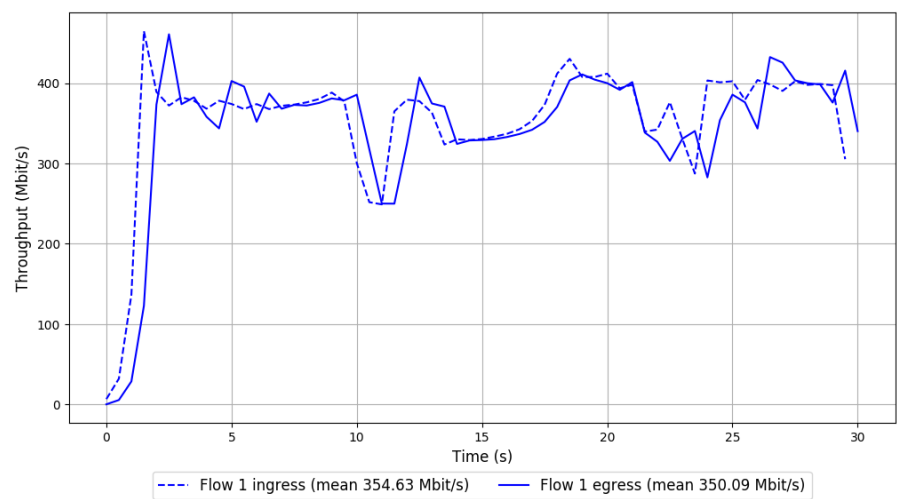
-- Flow 1:

Average throughput: 350.09 Mbit/s

95th percentile per-packet one-way delay: 146.764 ms

Loss rate: 1.27%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2018-12-20 18:33:26

End at: 2018-12-20 18:33:56

Local clock offset: -0.388 ms

Remote clock offset: -0.063 ms

Below is generated by plot.py at 2018-12-20 22:24:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 51.22 Mbit/s

95th percentile per-packet one-way delay: 47.692 ms

Loss rate: 0.00%

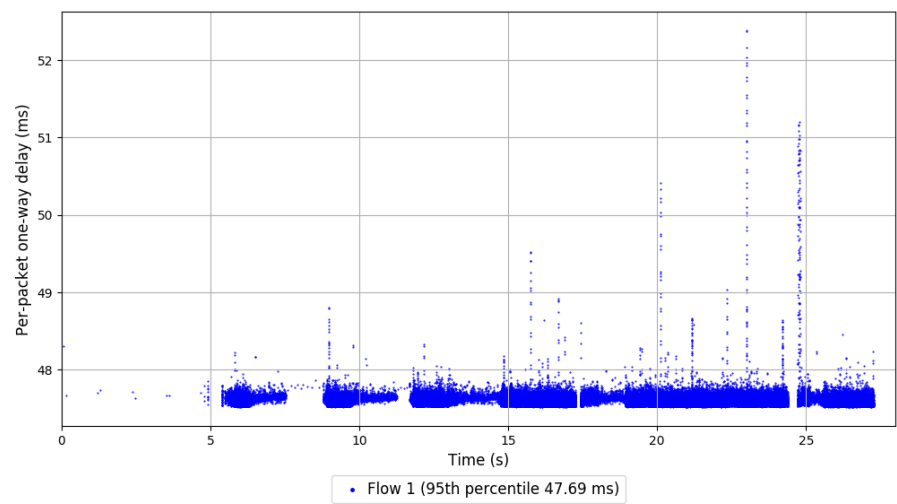
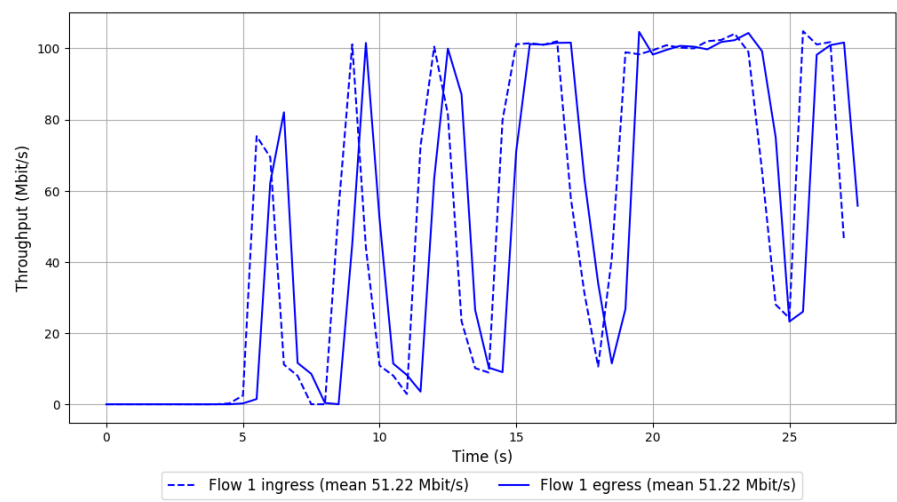
-- Flow 1:

Average throughput: 51.22 Mbit/s

95th percentile per-packet one-way delay: 47.692 ms

Loss rate: 0.00%

Run 1: Report of QUIC Cubic — Data Link

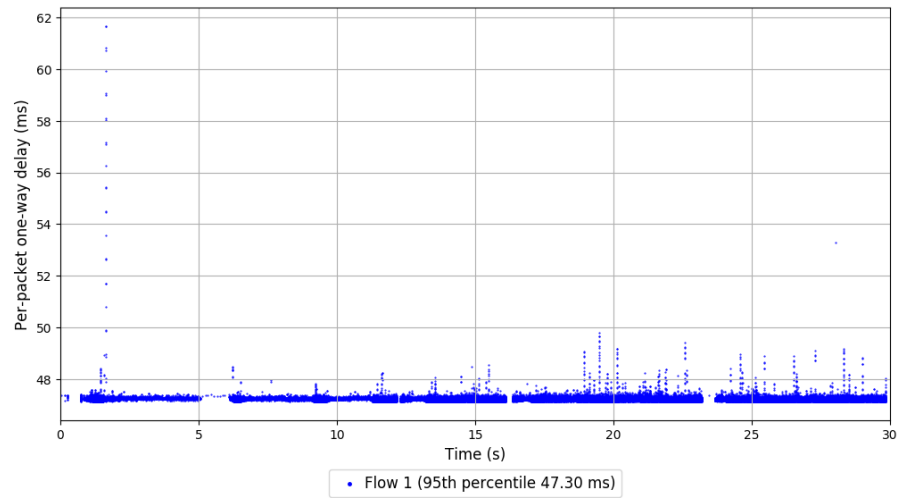
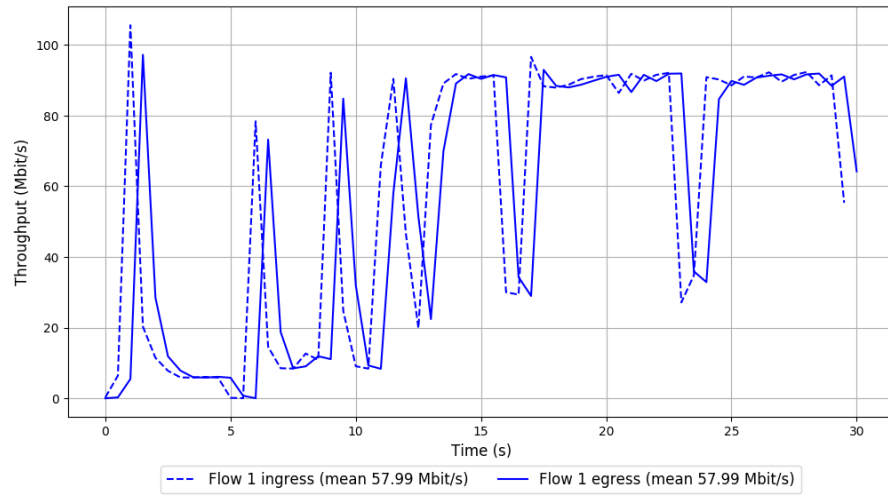


Run 2: Statistics of QUIC Cubic

Start at: 2018-12-20 19:01:27
End at: 2018-12-20 19:01:57
Local clock offset: -0.067 ms
Remote clock offset: -0.139 ms

Below is generated by plot.py at 2018-12-20 22:24:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 57.99 Mbit/s
95th percentile per-packet one-way delay: 47.298 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 57.99 Mbit/s
95th percentile per-packet one-way delay: 47.298 ms
Loss rate: 0.00%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-12-20 19:29:13

End at: 2018-12-20 19:29:43

Local clock offset: -0.045 ms

Remote clock offset: -0.02 ms

Below is generated by plot.py at 2018-12-20 22:24:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 52.78 Mbit/s

95th percentile per-packet one-way delay: 46.958 ms

Loss rate: 0.00%

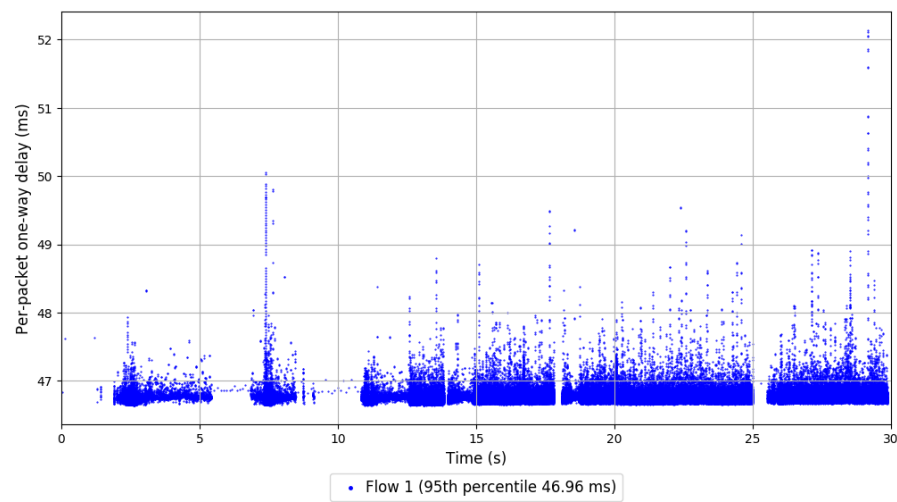
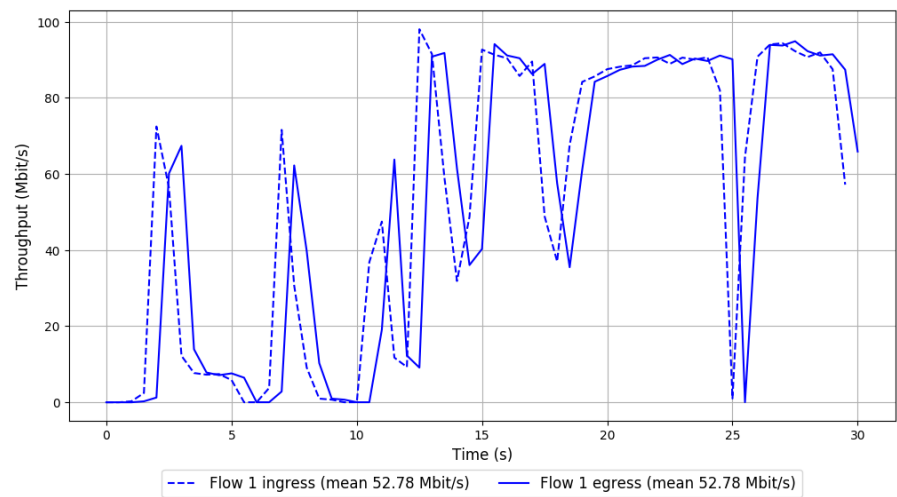
-- Flow 1:

Average throughput: 52.78 Mbit/s

95th percentile per-packet one-way delay: 46.958 ms

Loss rate: 0.00%

Run 3: Report of QUIC Cubic — Data Link

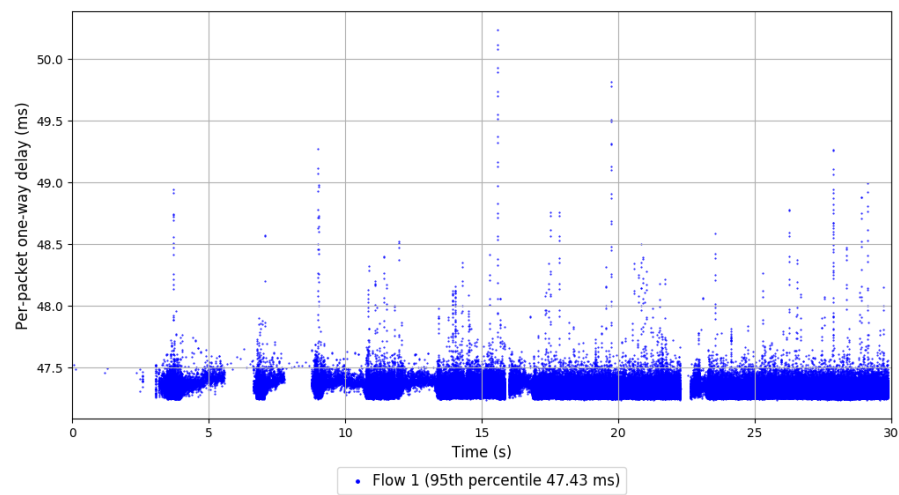
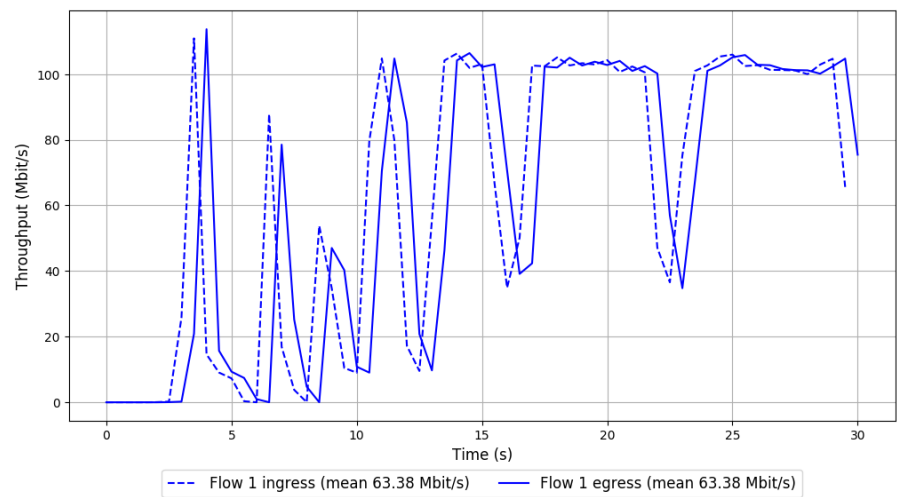


Run 4: Statistics of QUIC Cubic

Start at: 2018-12-20 19:57:10
End at: 2018-12-20 19:57:40
Local clock offset: -0.037 ms
Remote clock offset: -0.066 ms

Below is generated by plot.py at 2018-12-20 22:24:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 63.38 Mbit/s
95th percentile per-packet one-way delay: 47.434 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 63.38 Mbit/s
95th percentile per-packet one-way delay: 47.434 ms
Loss rate: 0.00%

Run 4: Report of QUIC Cubic — Data Link

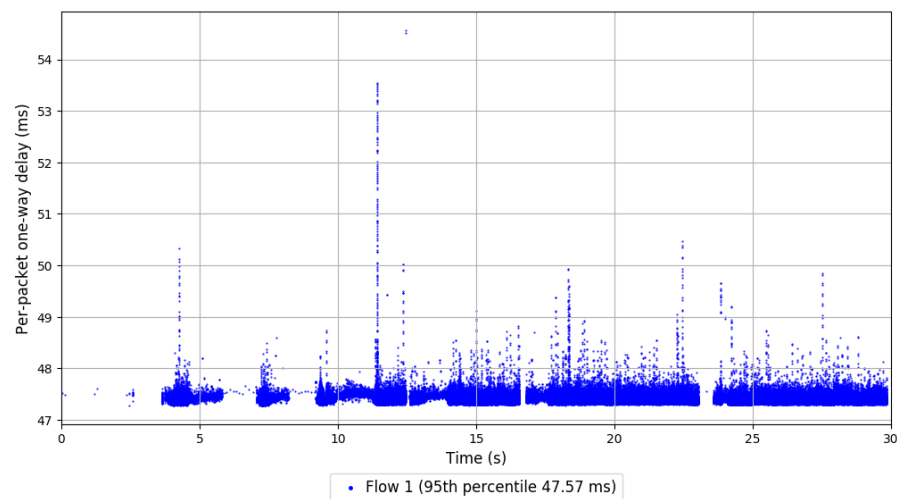
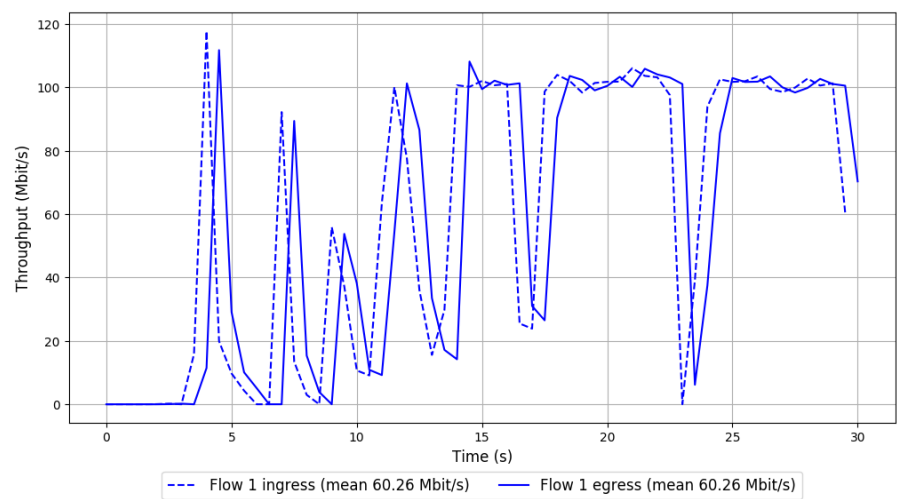


Run 5: Statistics of QUIC Cubic

Start at: 2018-12-20 20:25:01
End at: 2018-12-20 20:25:31
Local clock offset: -0.076 ms
Remote clock offset: -3.659 ms

Below is generated by plot.py at 2018-12-20 22:24:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 60.26 Mbit/s
95th percentile per-packet one-way delay: 47.573 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 60.26 Mbit/s
95th percentile per-packet one-way delay: 47.573 ms
Loss rate: 0.00%

Run 5: Report of QUIC Cubic — Data Link

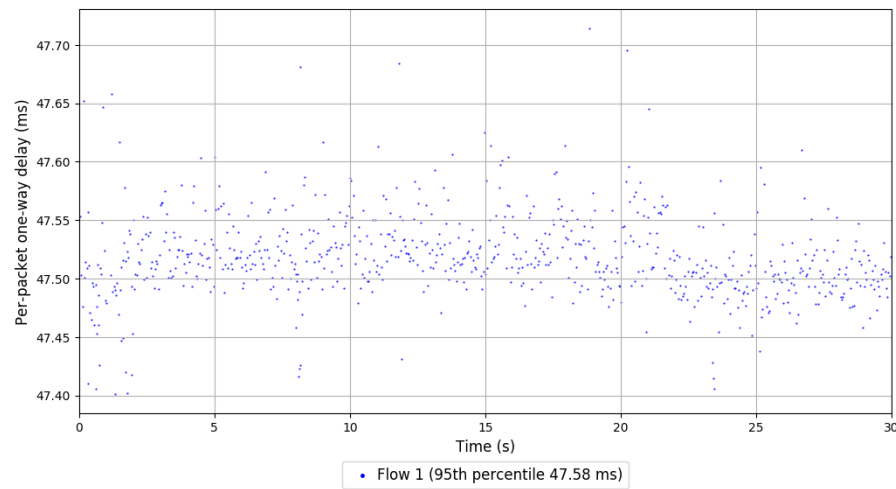
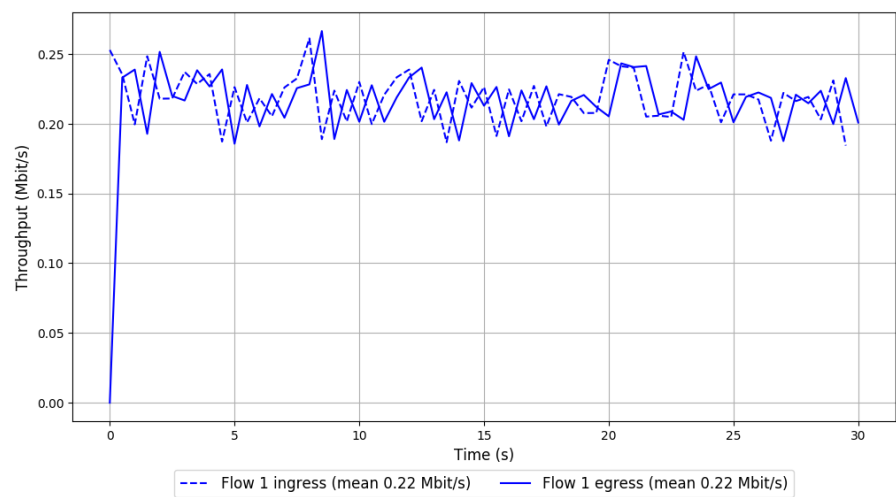


Run 1: Statistics of SCReAM

Start at: 2018-12-20 18:36:56
End at: 2018-12-20 18:37:26
Local clock offset: -0.047 ms
Remote clock offset: -0.052 ms

Below is generated by plot.py at 2018-12-20 22:24:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.579 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.579 ms
Loss rate: 0.00%

Run 1: Report of SReAM — Data Link

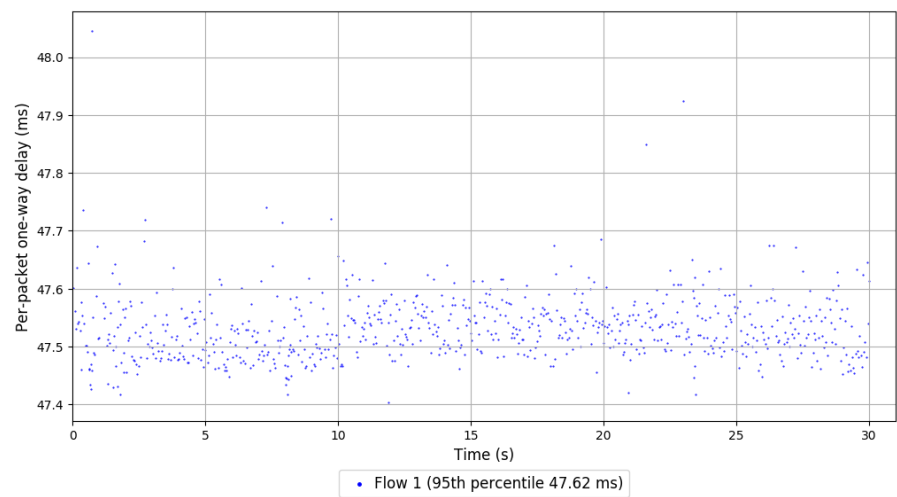
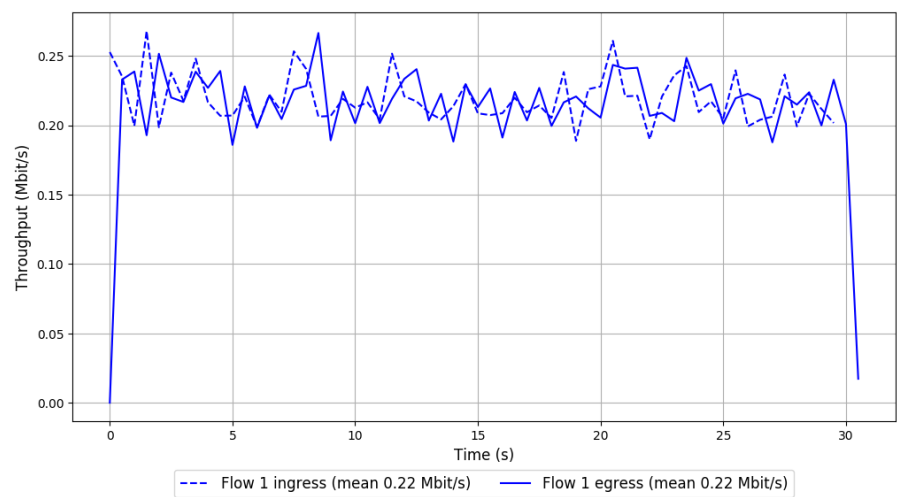


Run 2: Statistics of SCReAM

Start at: 2018-12-20 19:04:57
End at: 2018-12-20 19:05:27
Local clock offset: -0.099 ms
Remote clock offset: -0.088 ms

Below is generated by plot.py at 2018-12-20 22:24:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.620 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.620 ms
Loss rate: 0.00%

Run 2: Report of SReAM — Data Link

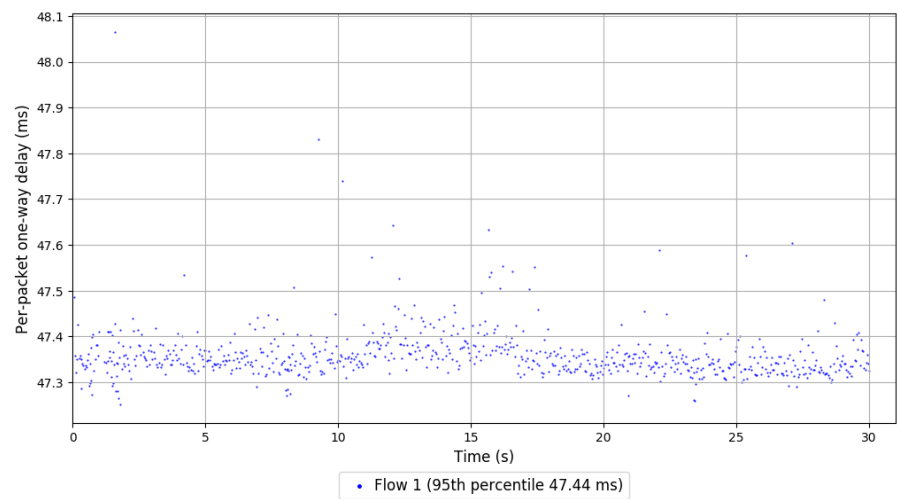
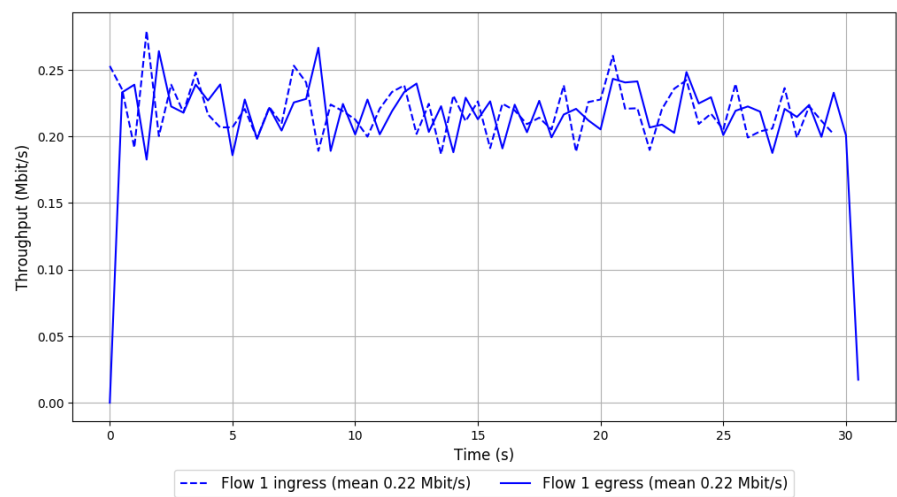


Run 3: Statistics of SCReAM

Start at: 2018-12-20 19:32:44
End at: 2018-12-20 19:33:14
Local clock offset: -0.023 ms
Remote clock offset: -0.001 ms

Below is generated by plot.py at 2018-12-20 22:24:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.437 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.437 ms
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link

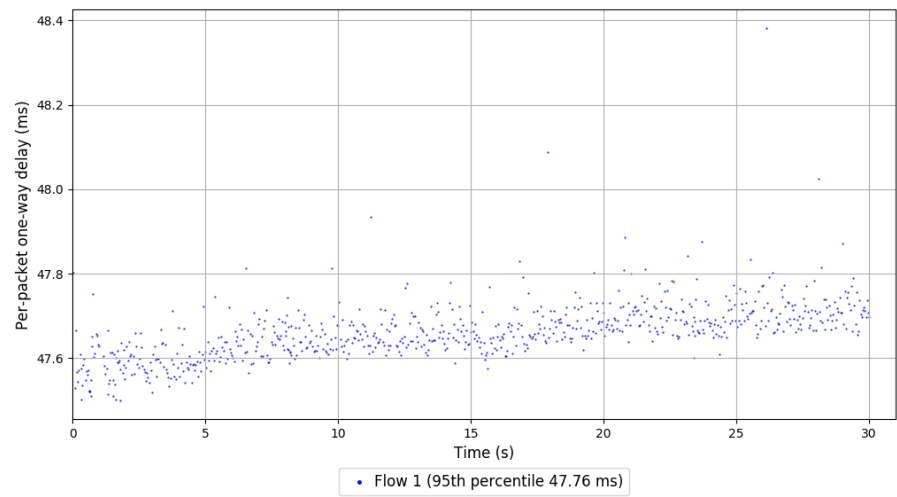
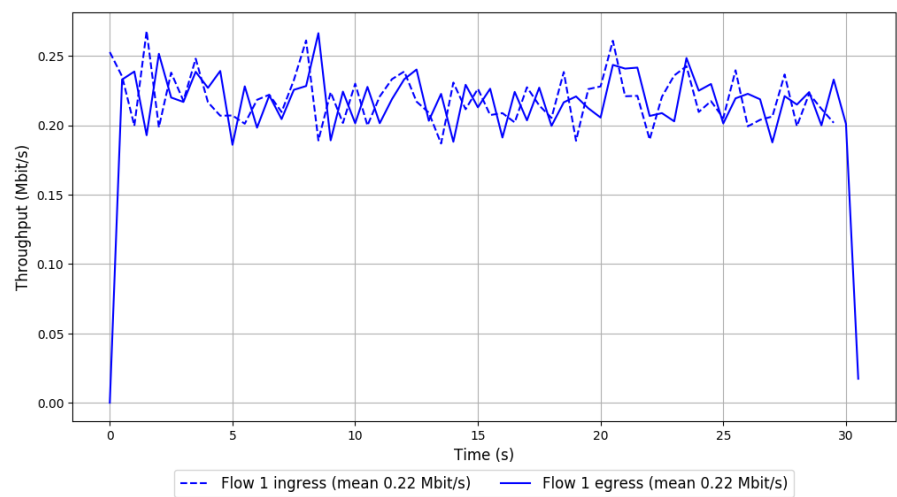


Run 4: Statistics of SCReAM

Start at: 2018-12-20 20:00:40
End at: 2018-12-20 20:01:10
Local clock offset: -0.082 ms
Remote clock offset: -0.528 ms

Below is generated by plot.py at 2018-12-20 22:24:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.762 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.762 ms
Loss rate: 0.00%

Run 4: Report of SReAM — Data Link

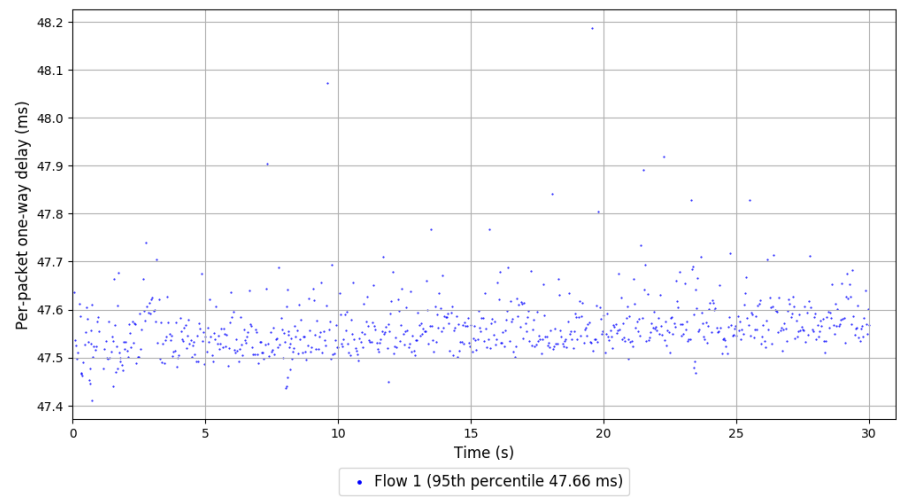
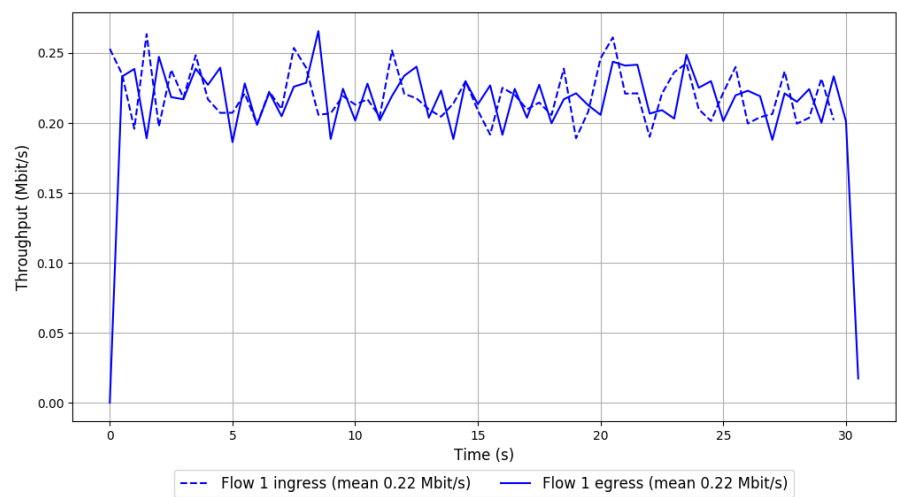


Run 5: Statistics of SCReAM

Start at: 2018-12-20 20:28:31
End at: 2018-12-20 20:29:01
Local clock offset: -0.066 ms
Remote clock offset: -3.887 ms

Below is generated by plot.py at 2018-12-20 22:24:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.664 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.664 ms
Loss rate: 0.00%

Run 5: Report of SReAM — Data Link

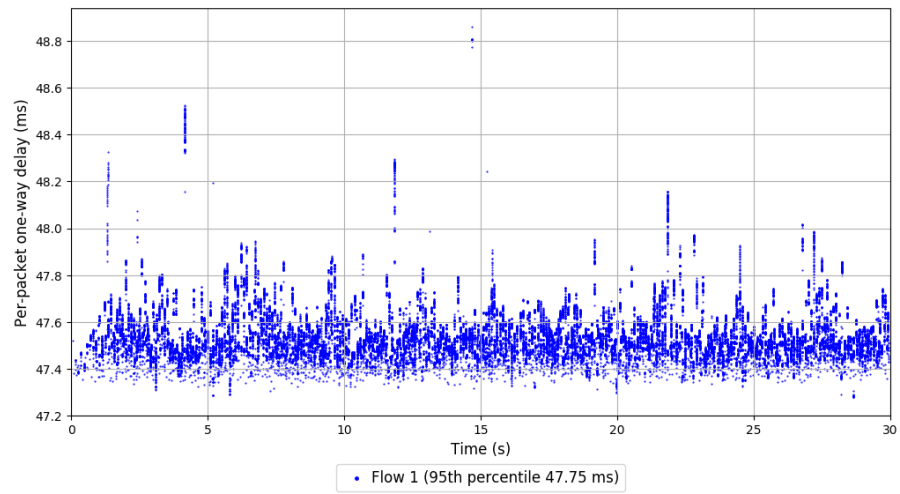
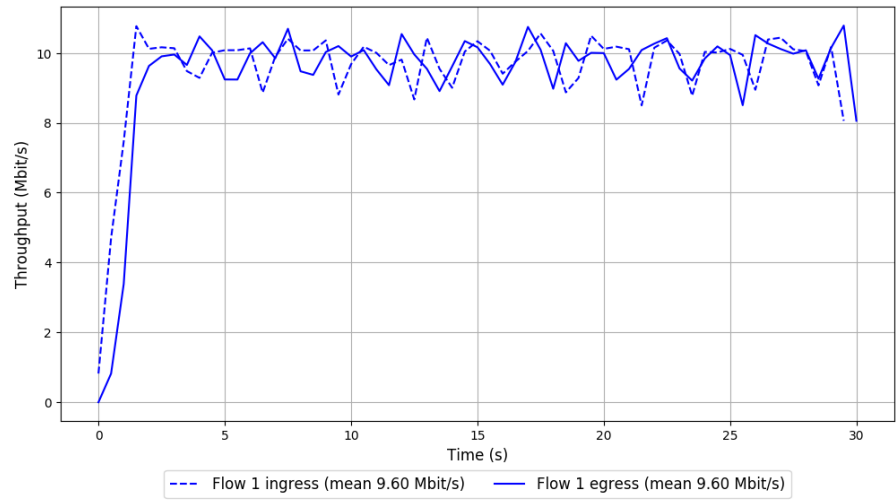


Run 1: Statistics of Sprout

Start at: 2018-12-20 18:34:36
End at: 2018-12-20 18:35:06
Local clock offset: -0.036 ms
Remote clock offset: -0.064 ms

Below is generated by plot.py at 2018-12-20 22:24:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 9.60 Mbit/s
95th percentile per-packet one-way delay: 47.754 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.60 Mbit/s
95th percentile per-packet one-way delay: 47.754 ms
Loss rate: 0.00%

Run 1: Report of Sprout — Data Link

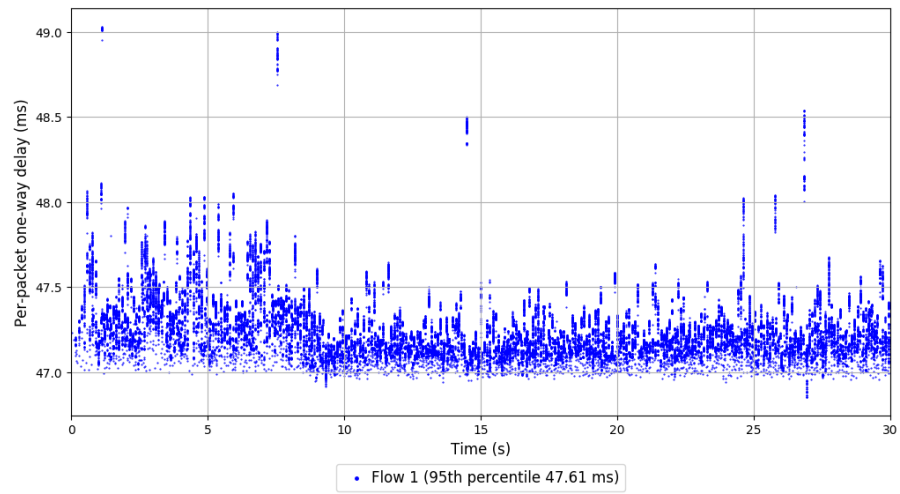
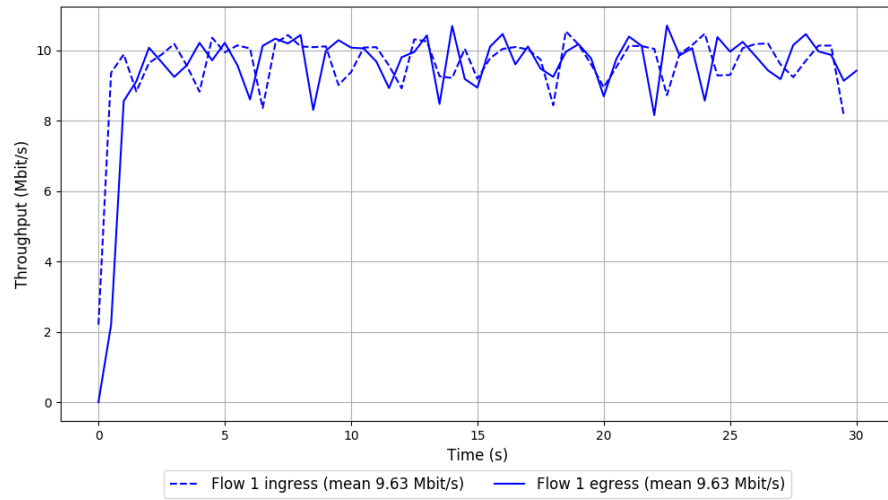


Run 2: Statistics of Sprout

Start at: 2018-12-20 19:02:38
End at: 2018-12-20 19:03:08
Local clock offset: -0.437 ms
Remote clock offset: -0.052 ms

Below is generated by plot.py at 2018-12-20 22:24:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 9.63 Mbit/s
95th percentile per-packet one-way delay: 47.609 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.63 Mbit/s
95th percentile per-packet one-way delay: 47.609 ms
Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

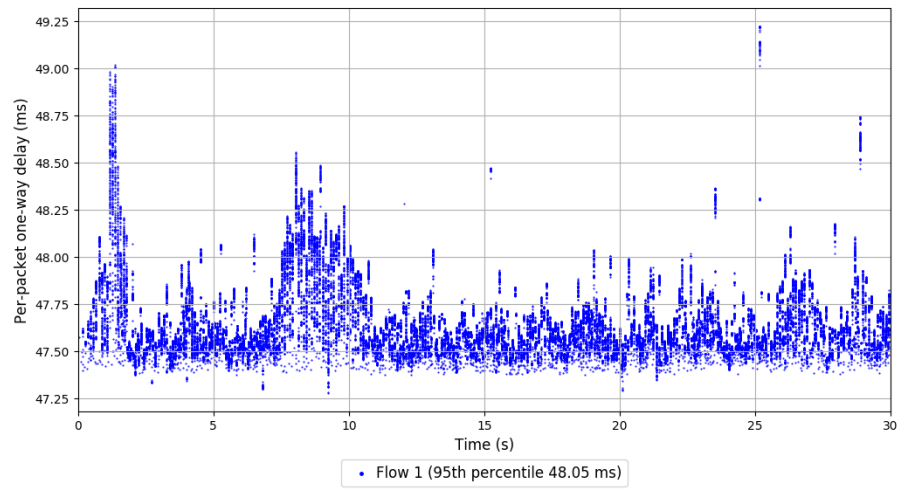
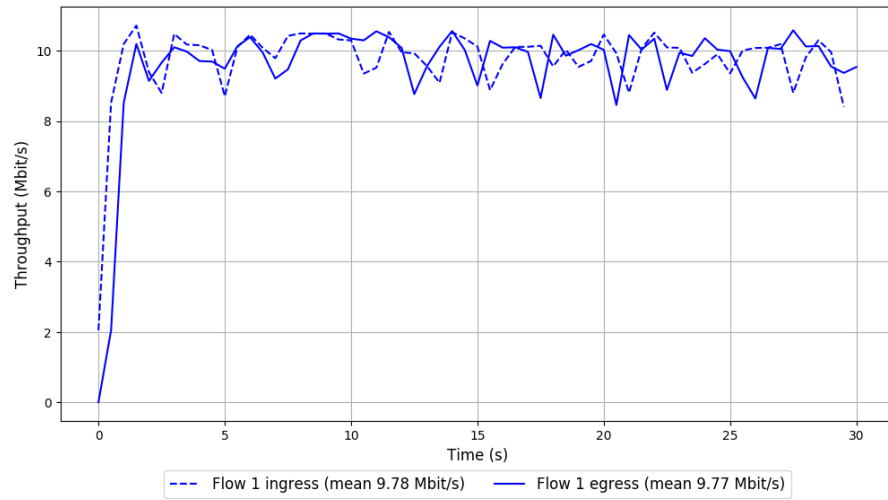


Run 3: Statistics of Sprout

Start at: 2018-12-20 19:30:24
End at: 2018-12-20 19:30:54
Local clock offset: -0.039 ms
Remote clock offset: -0.007 ms

Below is generated by plot.py at 2018-12-20 22:24:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 9.77 Mbit/s
95th percentile per-packet one-way delay: 48.055 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 9.77 Mbit/s
95th percentile per-packet one-way delay: 48.055 ms
Loss rate: 0.04%

Run 3: Report of Sprout — Data Link

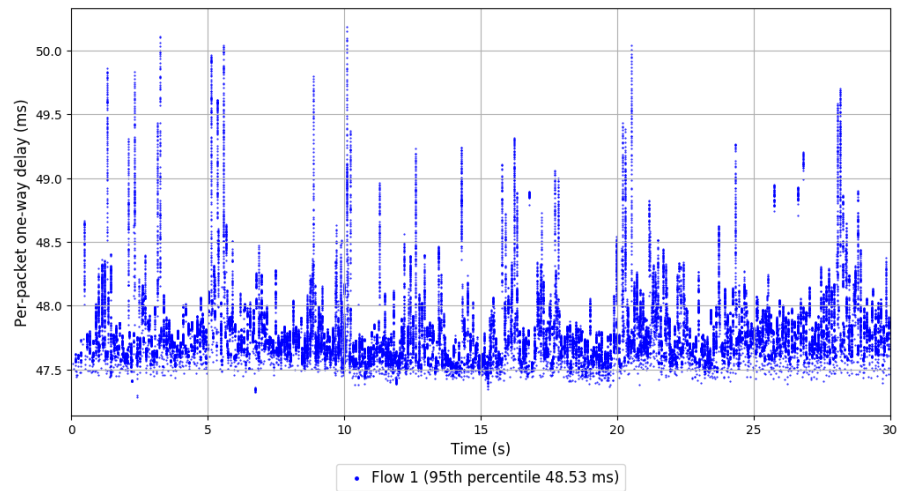
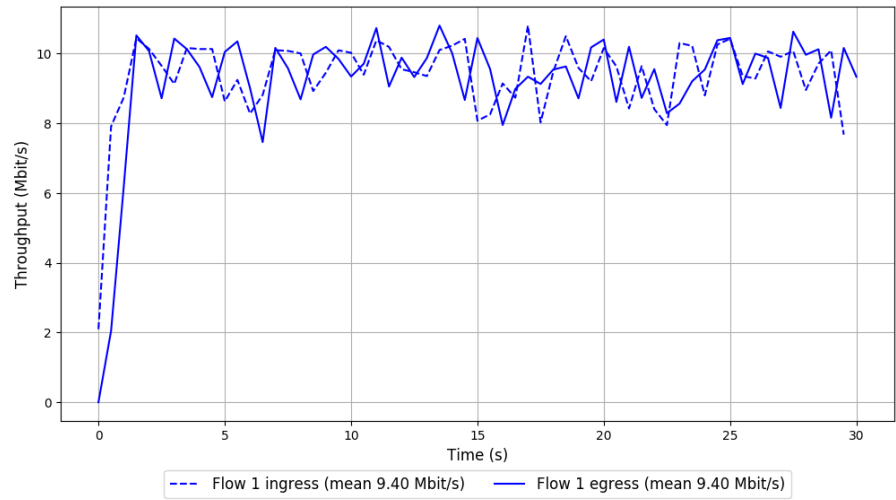


Run 4: Statistics of Sprout

Start at: 2018-12-20 19:58:21
End at: 2018-12-20 19:58:51
Local clock offset: -0.023 ms
Remote clock offset: -0.103 ms

Below is generated by plot.py at 2018-12-20 22:24:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 9.40 Mbit/s
95th percentile per-packet one-way delay: 48.527 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.40 Mbit/s
95th percentile per-packet one-way delay: 48.527 ms
Loss rate: 0.00%

Run 4: Report of Sprout — Data Link

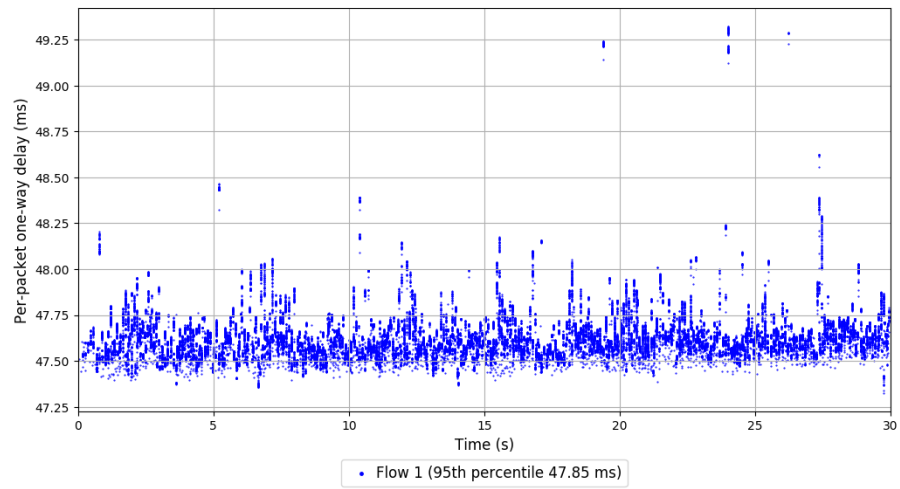
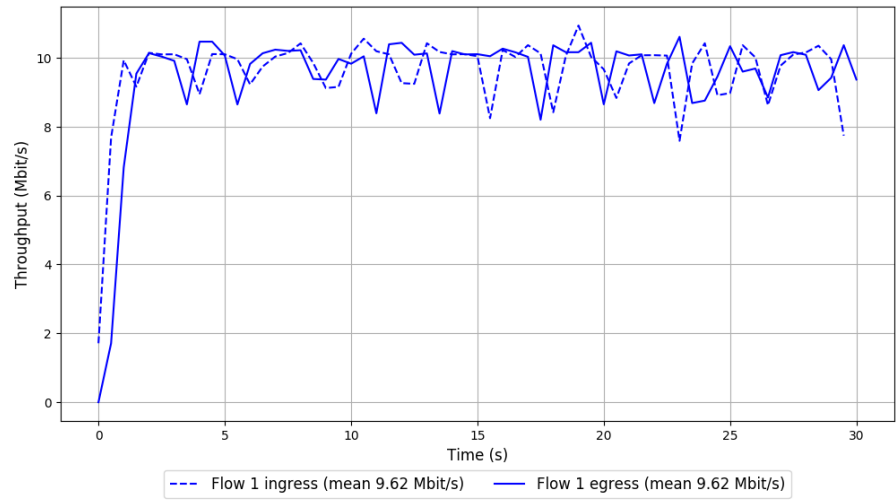


Run 5: Statistics of Sprout

Start at: 2018-12-20 20:26:12
End at: 2018-12-20 20:26:42
Local clock offset: -0.081 ms
Remote clock offset: -3.725 ms

Below is generated by plot.py at 2018-12-20 22:24:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 9.62 Mbit/s
95th percentile per-packet one-way delay: 47.855 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.62 Mbit/s
95th percentile per-packet one-way delay: 47.855 ms
Loss rate: 0.00%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2018-12-20 18:27:02

End at: 2018-12-20 18:27:32

Local clock offset: -0.444 ms

Remote clock offset: -0.084 ms

Below is generated by plot.py at 2018-12-20 22:25:02

Datalink statistics

-- Total of 1 flow:

Average throughput: 245.27 Mbit/s

95th percentile per-packet one-way delay: 48.035 ms

Loss rate: 0.00%

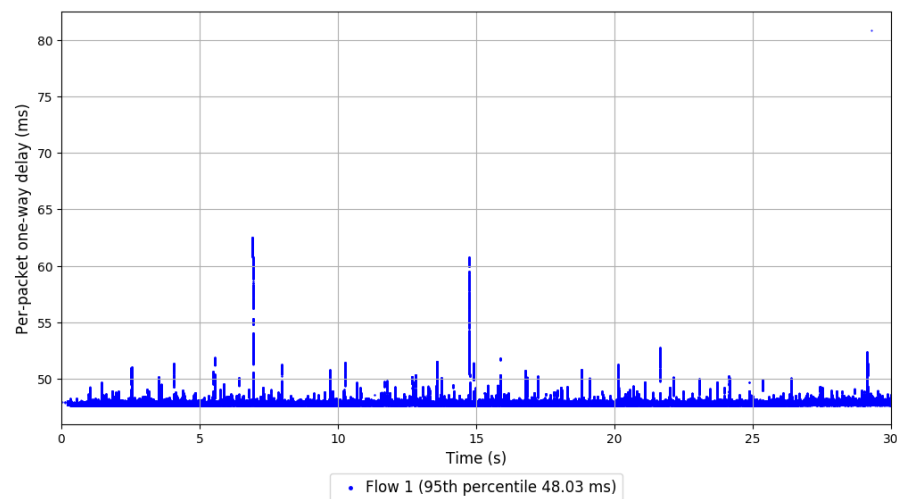
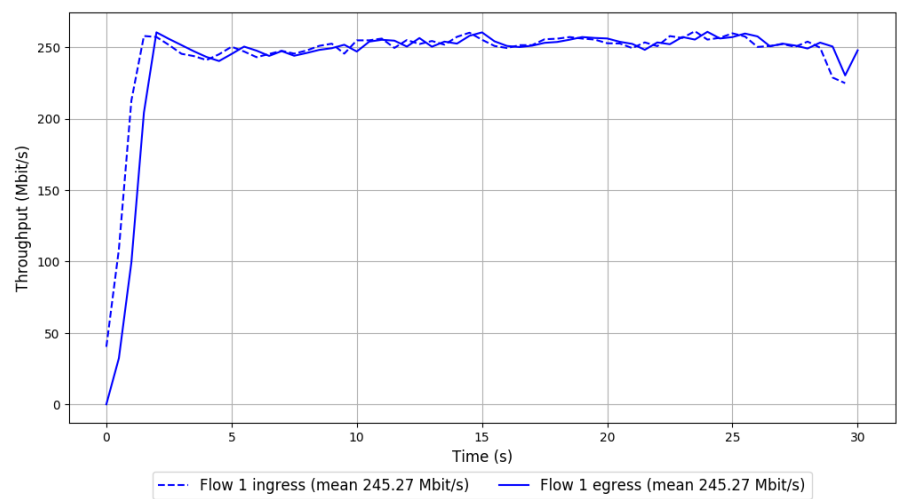
-- Flow 1:

Average throughput: 245.27 Mbit/s

95th percentile per-packet one-way delay: 48.035 ms

Loss rate: 0.00%

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

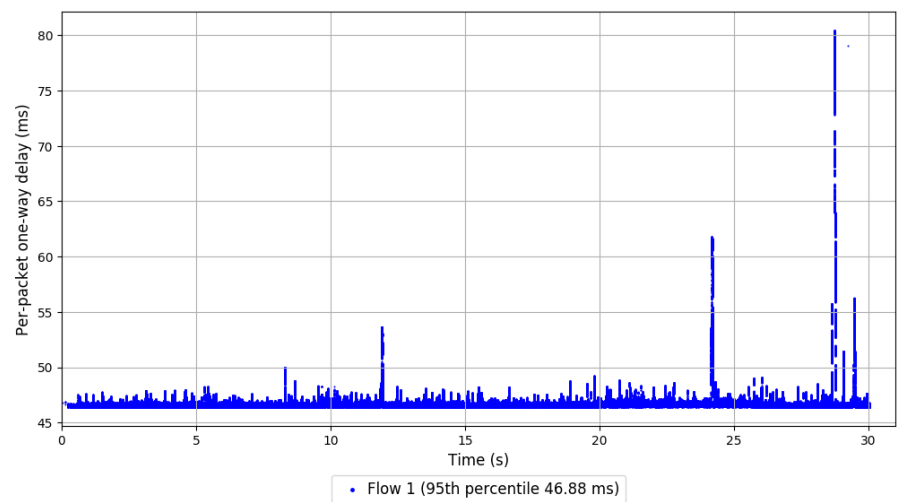
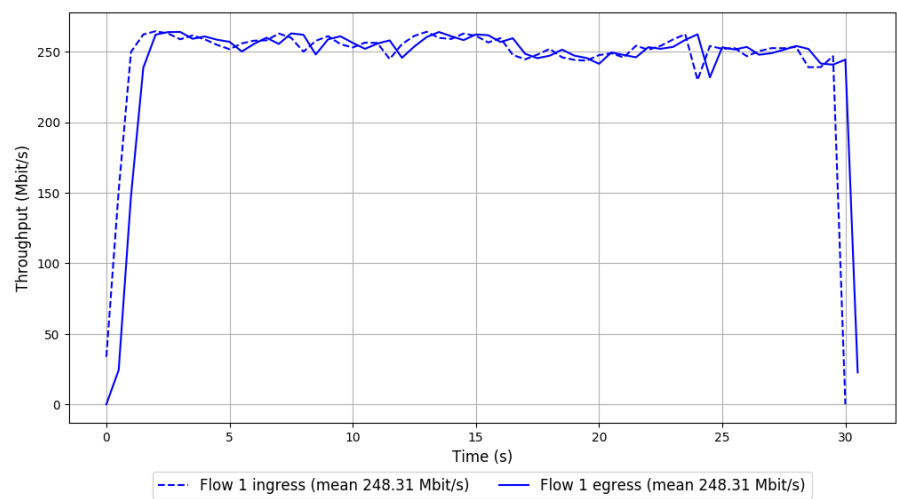


Run 2: Statistics of TaoVA-100x

Start at: 2018-12-20 18:55:17
End at: 2018-12-20 18:55:47
Local clock offset: -0.108 ms
Remote clock offset: -0.078 ms

Below is generated by plot.py at 2018-12-20 22:25:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 248.31 Mbit/s
95th percentile per-packet one-way delay: 46.876 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 248.31 Mbit/s
95th percentile per-packet one-way delay: 46.876 ms
Loss rate: 0.00%

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-12-20 19:23:07

End at: 2018-12-20 19:23:37

Local clock offset: -0.05 ms

Remote clock offset: -0.061 ms

Below is generated by plot.py at 2018-12-20 22:25:16

Datalink statistics

-- Total of 1 flow:

Average throughput: 247.93 Mbit/s

95th percentile per-packet one-way delay: 47.489 ms

Loss rate: 0.00%

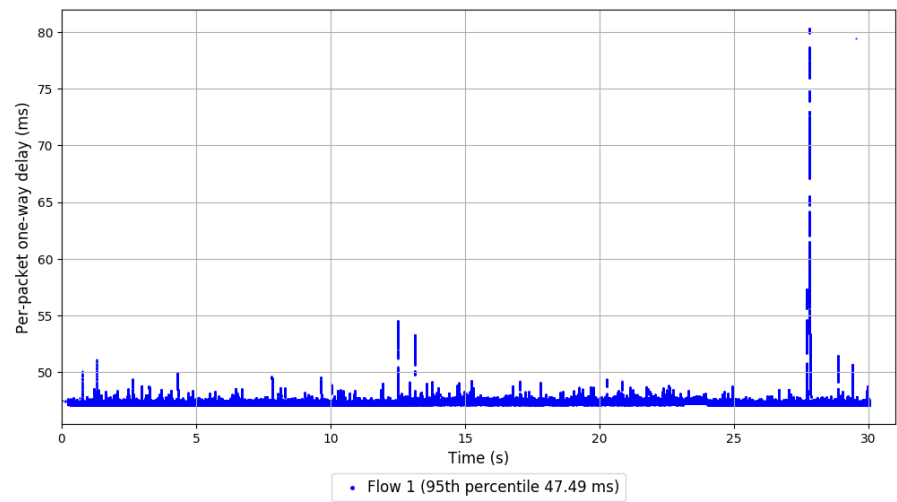
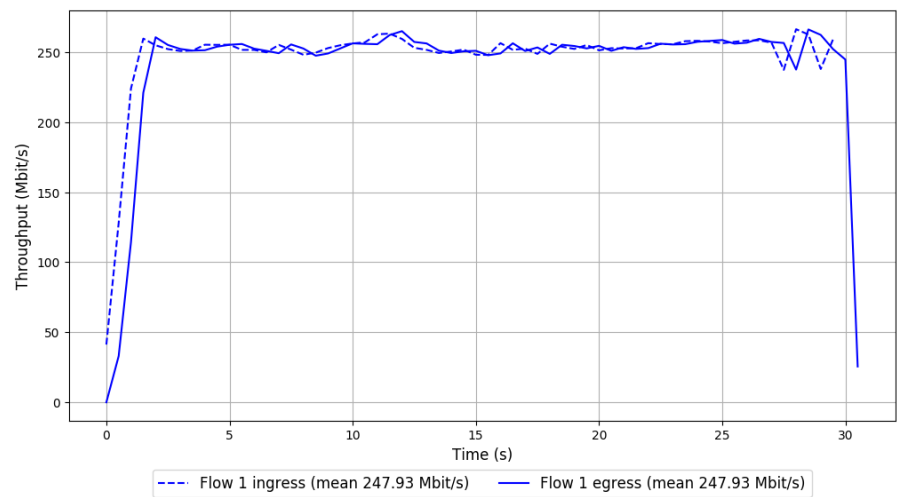
-- Flow 1:

Average throughput: 247.93 Mbit/s

95th percentile per-packet one-way delay: 47.489 ms

Loss rate: 0.00%

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

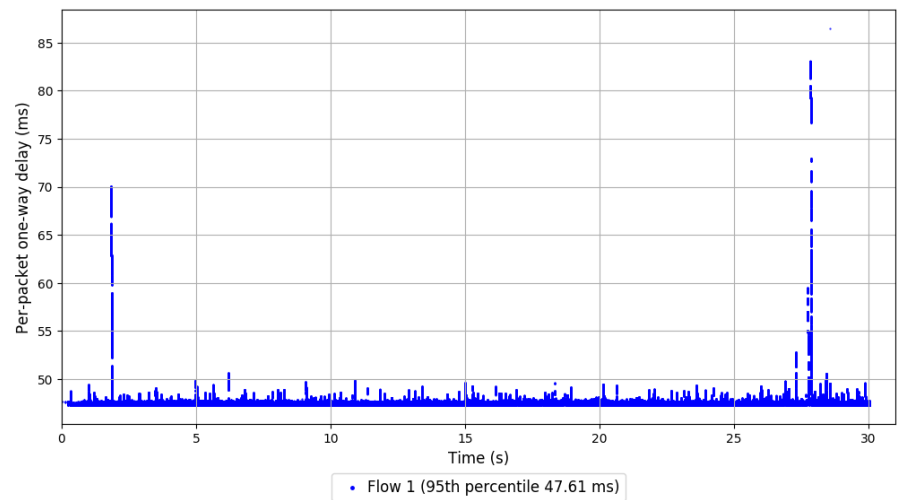
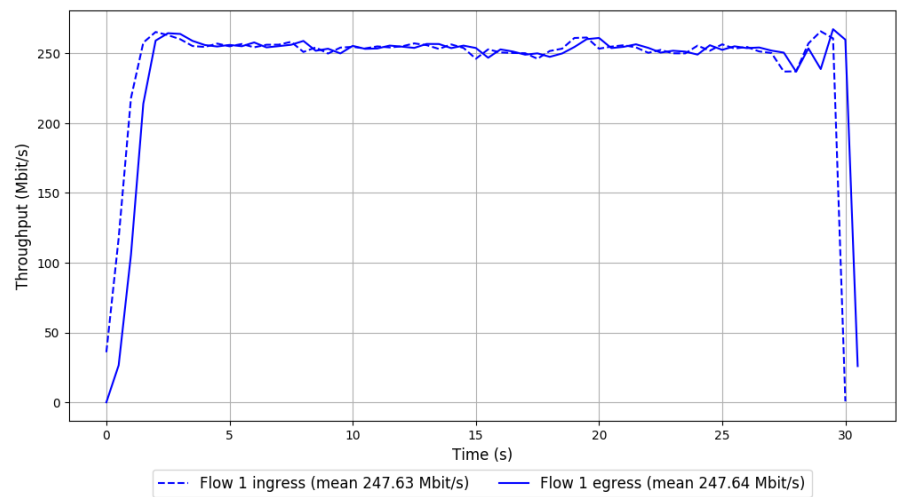


Run 4: Statistics of TaoVA-100x

Start at: 2018-12-20 19:50:48
End at: 2018-12-20 19:51:18
Local clock offset: -0.108 ms
Remote clock offset: -0.034 ms

Below is generated by plot.py at 2018-12-20 22:25:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 247.64 Mbit/s
95th percentile per-packet one-way delay: 47.614 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 247.64 Mbit/s
95th percentile per-packet one-way delay: 47.614 ms
Loss rate: 0.00%

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

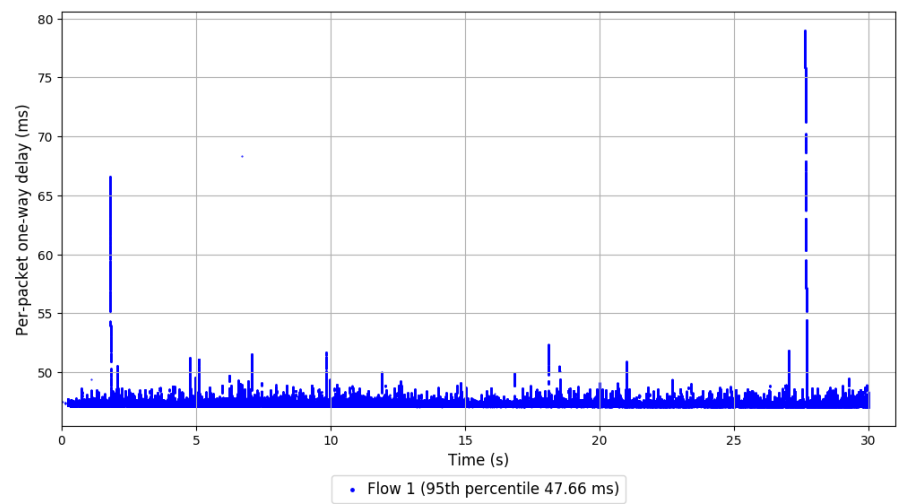
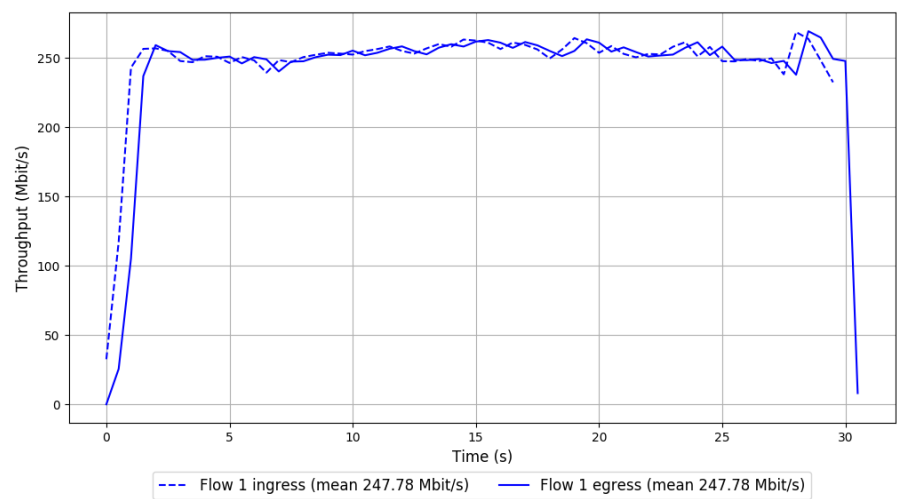


Run 5: Statistics of TaoVA-100x

Start at: 2018-12-20 20:18:43
End at: 2018-12-20 20:19:13
Local clock offset: -0.036 ms
Remote clock offset: -4.088 ms

Below is generated by plot.py at 2018-12-20 22:25:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 247.78 Mbit/s
95th percentile per-packet one-way delay: 47.659 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 247.78 Mbit/s
95th percentile per-packet one-way delay: 47.659 ms
Loss rate: 0.00%

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

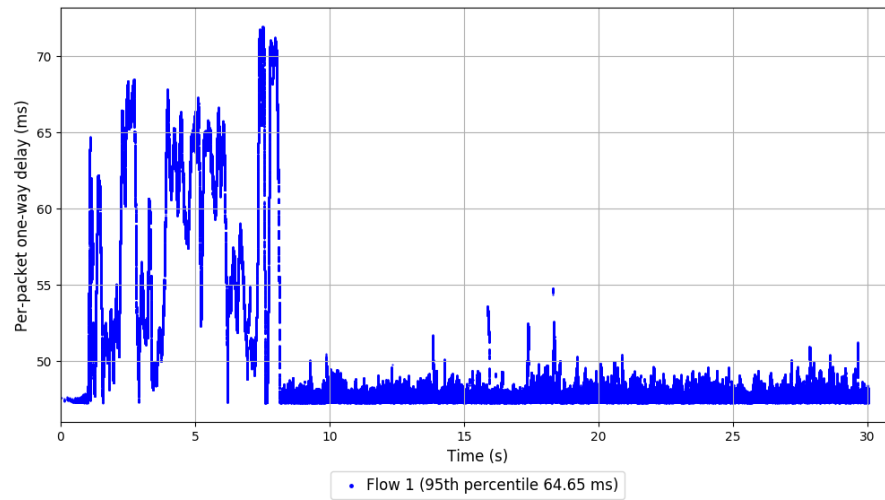
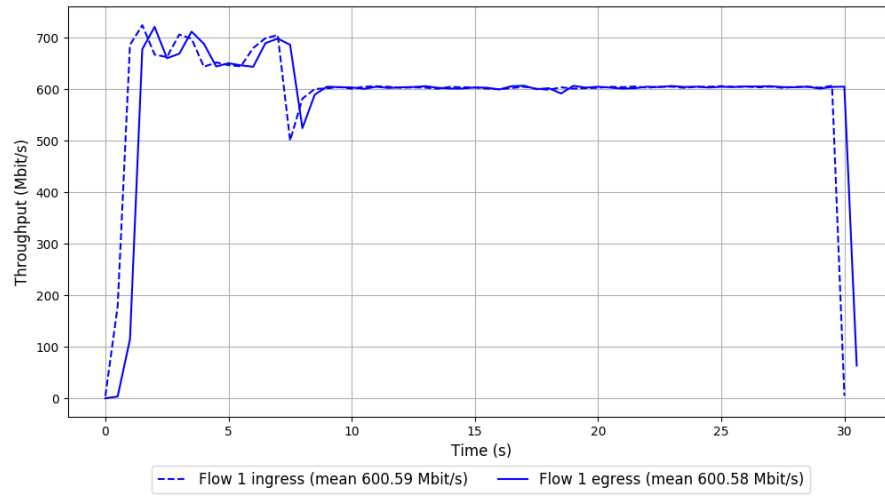


Run 1: Statistics of TCP Vegas

Start at: 2018-12-20 18:31:49
End at: 2018-12-20 18:32:19
Local clock offset: -0.044 ms
Remote clock offset: -0.024 ms

Below is generated by plot.py at 2018-12-20 22:28:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 600.58 Mbit/s
95th percentile per-packet one-way delay: 64.648 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 600.58 Mbit/s
95th percentile per-packet one-way delay: 64.648 ms
Loss rate: 0.00%

Run 1: Report of TCP Vegas — Data Link

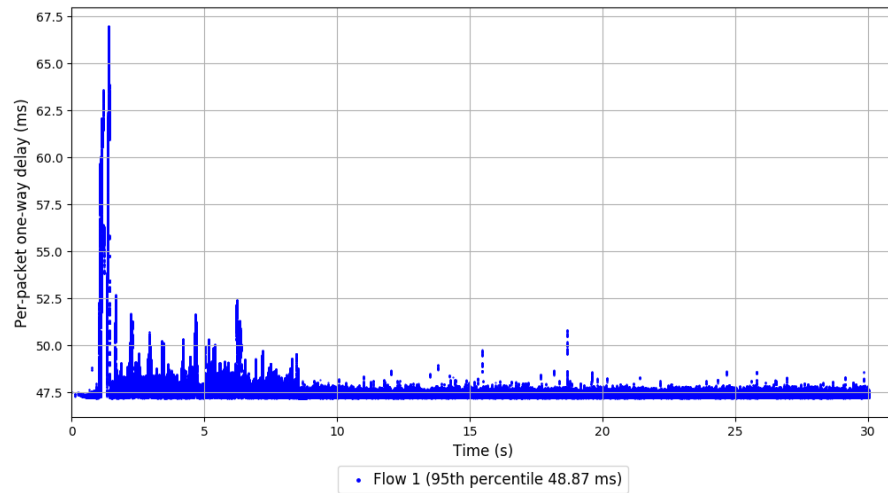
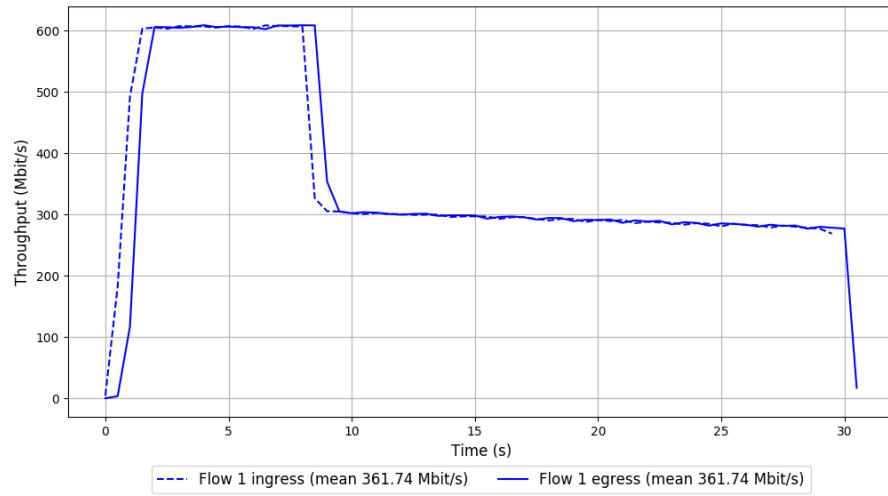


Run 2: Statistics of TCP Vegas

Start at: 2018-12-20 19:00:03
End at: 2018-12-20 19:00:33
Local clock offset: -0.078 ms
Remote clock offset: -0.084 ms

Below is generated by plot.py at 2018-12-20 22:30:27
Datalink statistics
-- Total of 1 flow:
Average throughput: 361.74 Mbit/s
95th percentile per-packet one-way delay: 48.874 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 361.74 Mbit/s
95th percentile per-packet one-way delay: 48.874 ms
Loss rate: 0.00%

Run 2: Report of TCP Vegas — Data Link

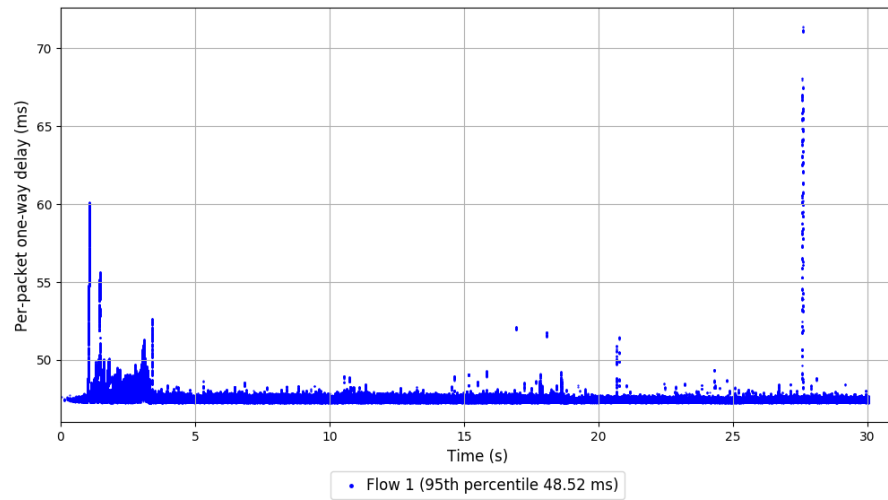
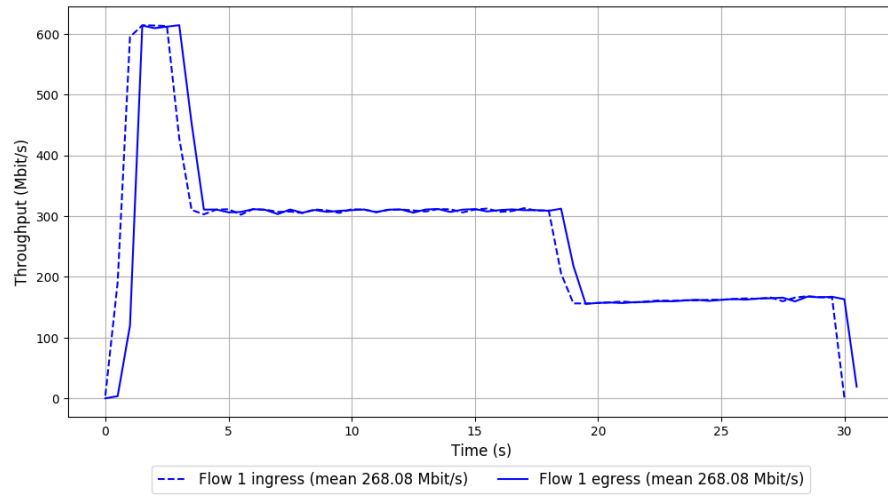


Run 3: Statistics of TCP Vegas

Start at: 2018-12-20 19:27:53
End at: 2018-12-20 19:28:23
Local clock offset: -0.047 ms
Remote clock offset: -0.061 ms

Below is generated by plot.py at 2018-12-20 22:30:27
Datalink statistics
-- Total of 1 flow:
Average throughput: 268.08 Mbit/s
95th percentile per-packet one-way delay: 48.515 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 268.08 Mbit/s
95th percentile per-packet one-way delay: 48.515 ms
Loss rate: 0.00%

Run 3: Report of TCP Vegas — Data Link

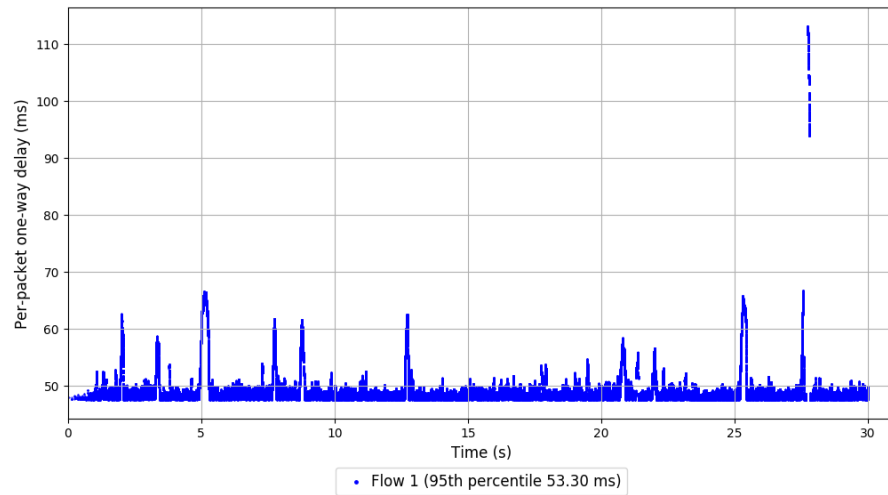
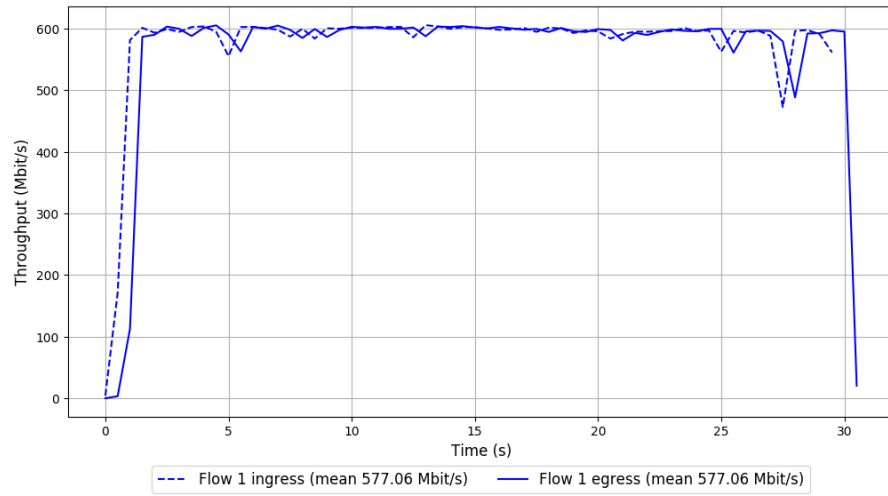


Run 4: Statistics of TCP Vegas

Start at: 2018-12-20 19:55:35
End at: 2018-12-20 19:56:05
Local clock offset: -0.052 ms
Remote clock offset: -0.052 ms

Below is generated by plot.py at 2018-12-20 22:36:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 577.06 Mbit/s
95th percentile per-packet one-way delay: 53.296 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 577.06 Mbit/s
95th percentile per-packet one-way delay: 53.296 ms
Loss rate: 0.00%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-12-20 20:23:26

End at: 2018-12-20 20:23:56

Local clock offset: 0.293 ms

Remote clock offset: -3.65 ms

Below is generated by plot.py at 2018-12-20 22:36:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 578.60 Mbit/s

95th percentile per-packet one-way delay: 54.612 ms

Loss rate: 0.01%

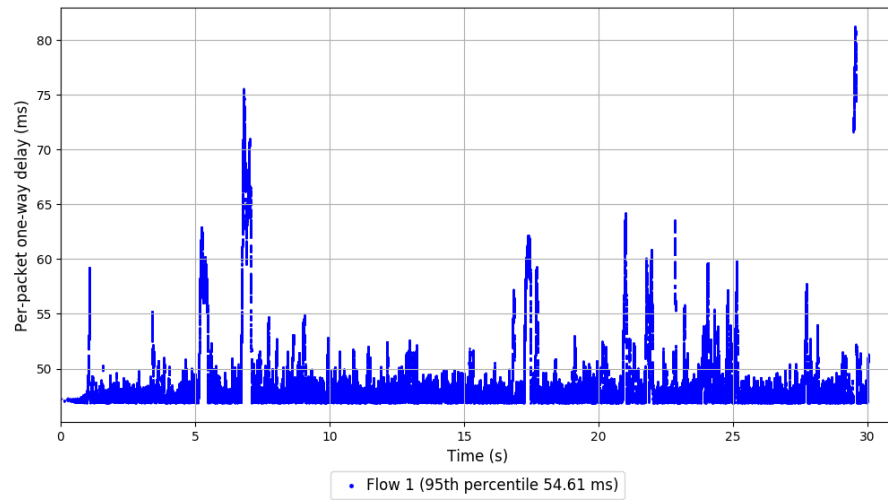
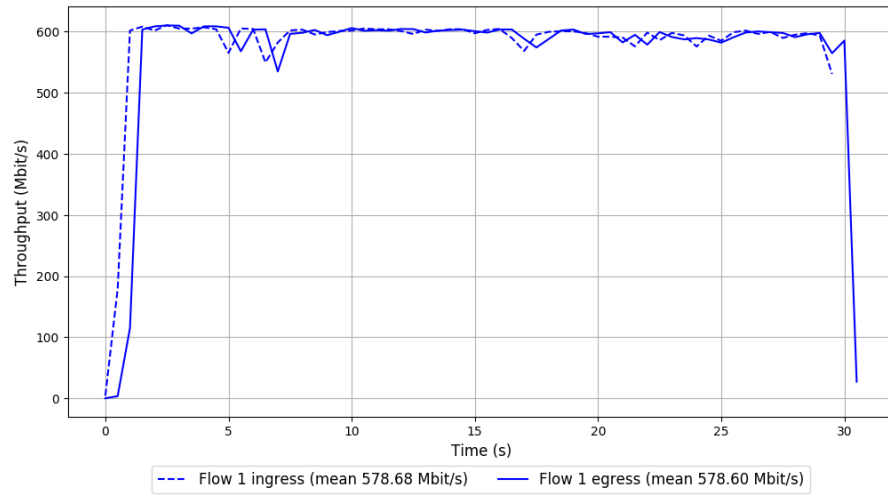
-- Flow 1:

Average throughput: 578.60 Mbit/s

95th percentile per-packet one-way delay: 54.612 ms

Loss rate: 0.01%

Run 5: Report of TCP Vegas — Data Link

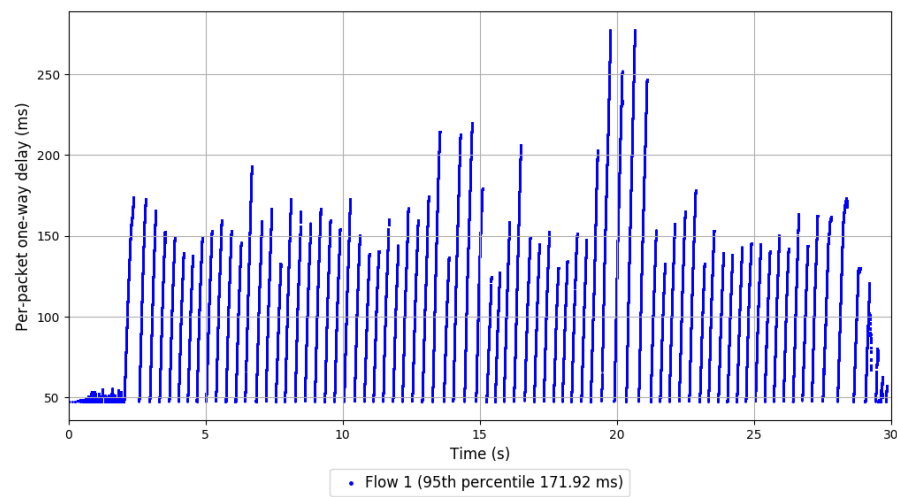
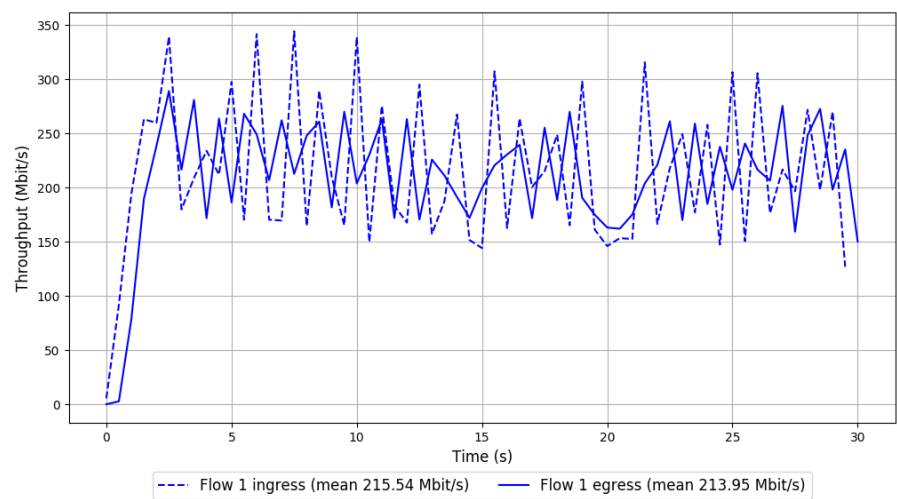


Run 1: Statistics of Verus

Start at: 2018-12-20 18:46:00
End at: 2018-12-20 18:46:30
Local clock offset: -0.067 ms
Remote clock offset: -0.086 ms

Below is generated by plot.py at 2018-12-20 22:36:20
Datalink statistics
-- Total of 1 flow:
Average throughput: 213.95 Mbit/s
95th percentile per-packet one-way delay: 171.916 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 213.95 Mbit/s
95th percentile per-packet one-way delay: 171.916 ms
Loss rate: 0.74%

Run 1: Report of Verus — Data Link

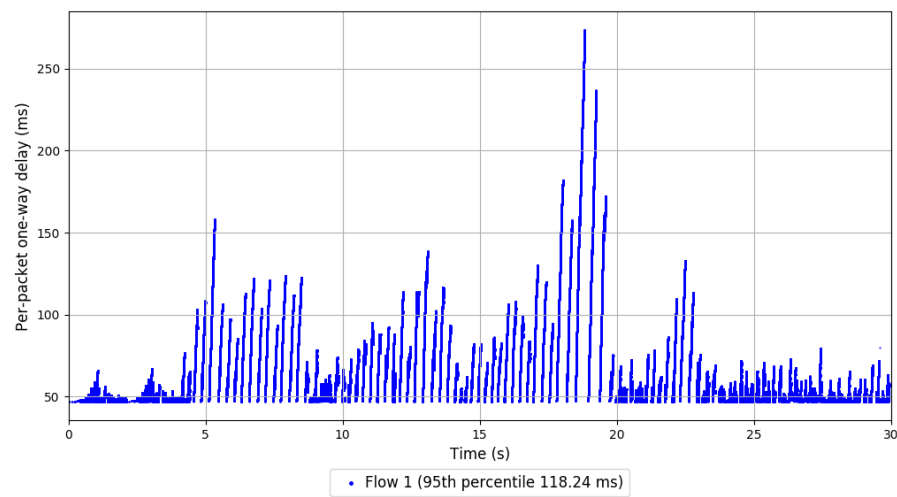
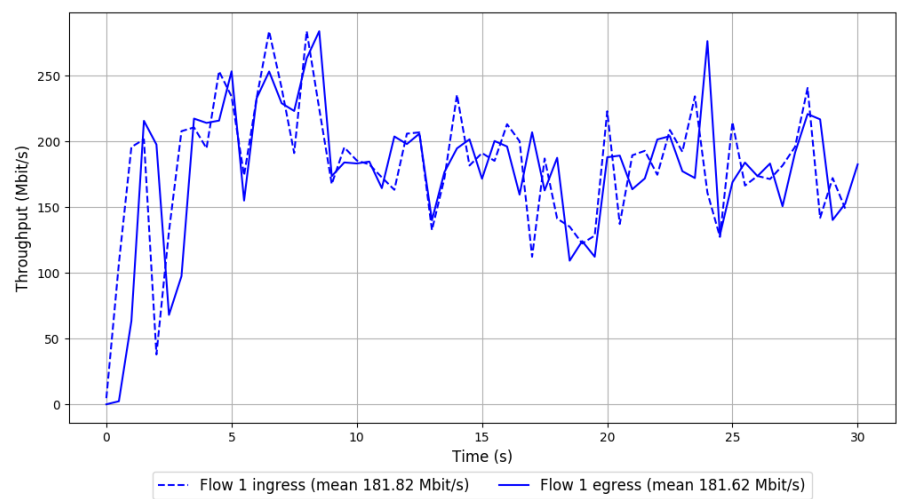


Run 2: Statistics of Verus

Start at: 2018-12-20 19:14:05
End at: 2018-12-20 19:14:35
Local clock offset: 0.321 ms
Remote clock offset: -0.063 ms

Below is generated by plot.py at 2018-12-20 22:36:21
Datalink statistics
-- Total of 1 flow:
Average throughput: 181.62 Mbit/s
95th percentile per-packet one-way delay: 118.237 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 181.62 Mbit/s
95th percentile per-packet one-way delay: 118.237 ms
Loss rate: 0.11%

Run 2: Report of Verus — Data Link

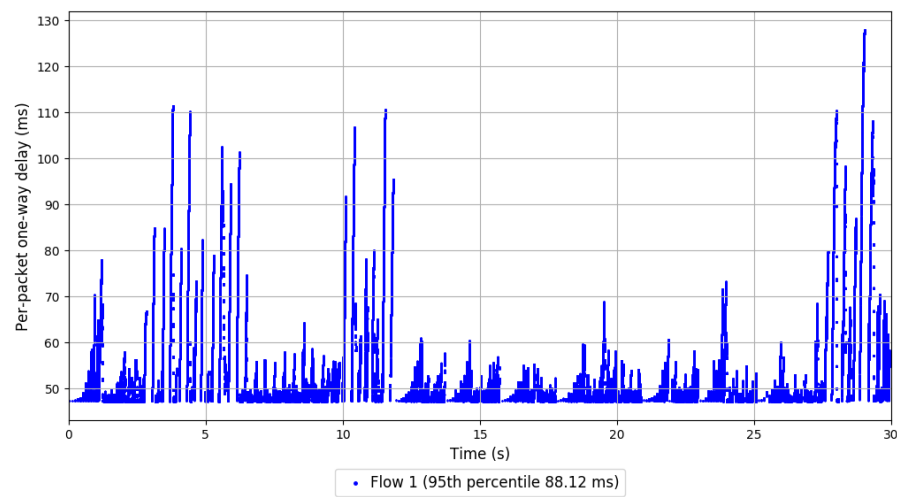
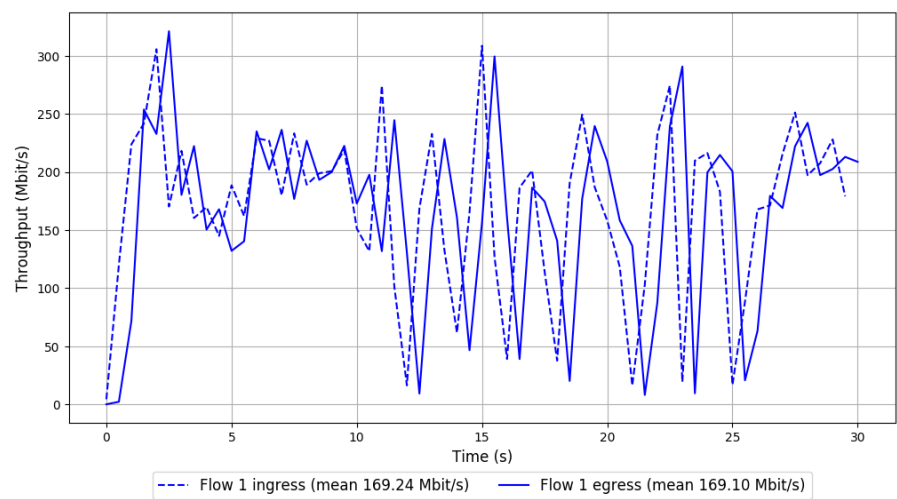


Run 3: Statistics of Verus

Start at: 2018-12-20 19:41:51
End at: 2018-12-20 19:42:21
Local clock offset: 0.025 ms
Remote clock offset: -0.042 ms

Below is generated by plot.py at 2018-12-20 22:36:21
Datalink statistics
-- Total of 1 flow:
Average throughput: 169.10 Mbit/s
95th percentile per-packet one-way delay: 88.120 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 169.10 Mbit/s
95th percentile per-packet one-way delay: 88.120 ms
Loss rate: 0.08%

Run 3: Report of Verus — Data Link

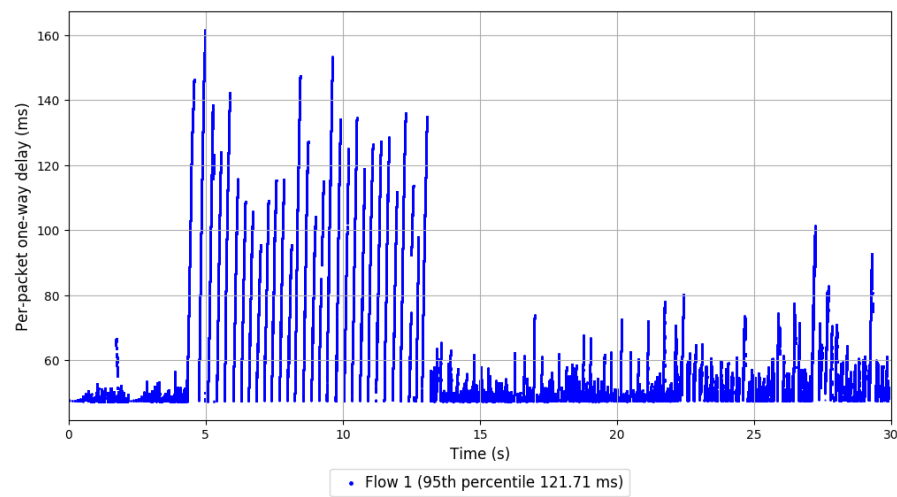
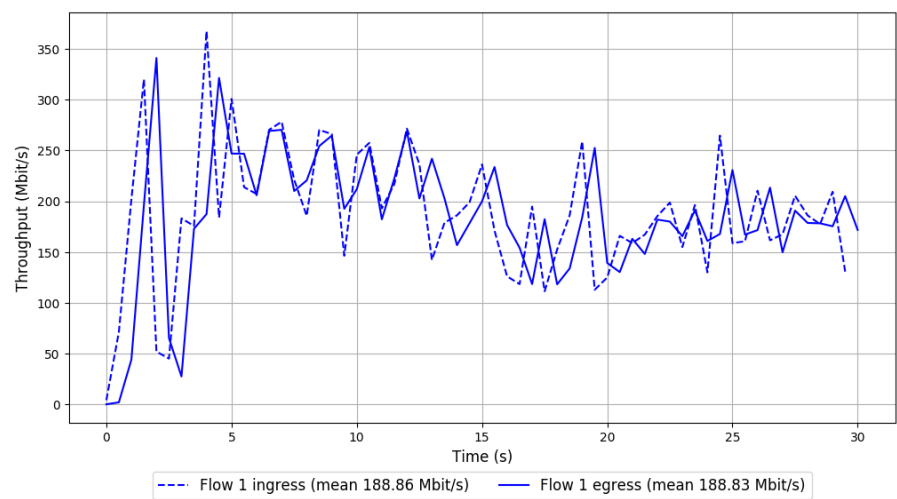


Run 4: Statistics of Verus

Start at: 2018-12-20 20:09:50
End at: 2018-12-20 20:10:20
Local clock offset: -0.064 ms
Remote clock offset: -3.172 ms

Below is generated by plot.py at 2018-12-20 22:36:21
Datalink statistics
-- Total of 1 flow:
Average throughput: 188.83 Mbit/s
95th percentile per-packet one-way delay: 121.709 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 188.83 Mbit/s
95th percentile per-packet one-way delay: 121.709 ms
Loss rate: 0.00%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-12-20 20:37:44

End at: 2018-12-20 20:38:14

Local clock offset: -0.067 ms

Remote clock offset: -5.14 ms

Below is generated by plot.py at 2018-12-20 22:36:27

Datalink statistics

-- Total of 1 flow:

Average throughput: 182.24 Mbit/s

95th percentile per-packet one-way delay: 104.017 ms

Loss rate: 0.15%

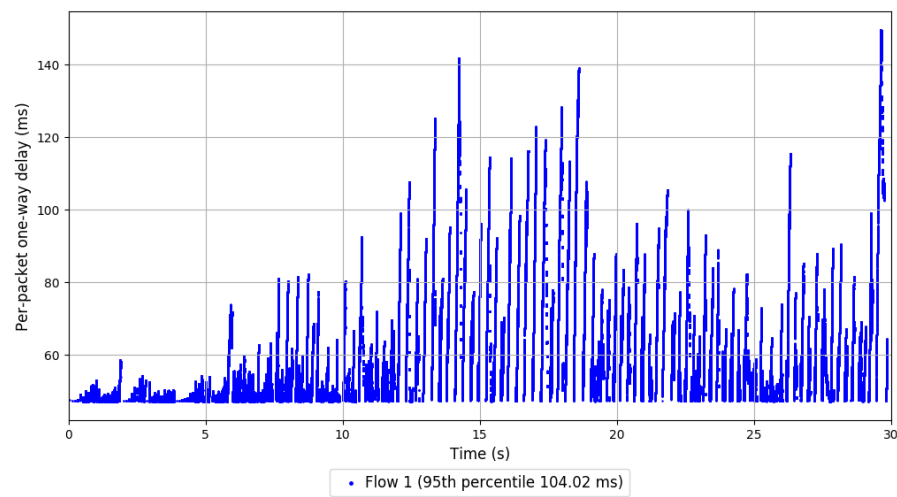
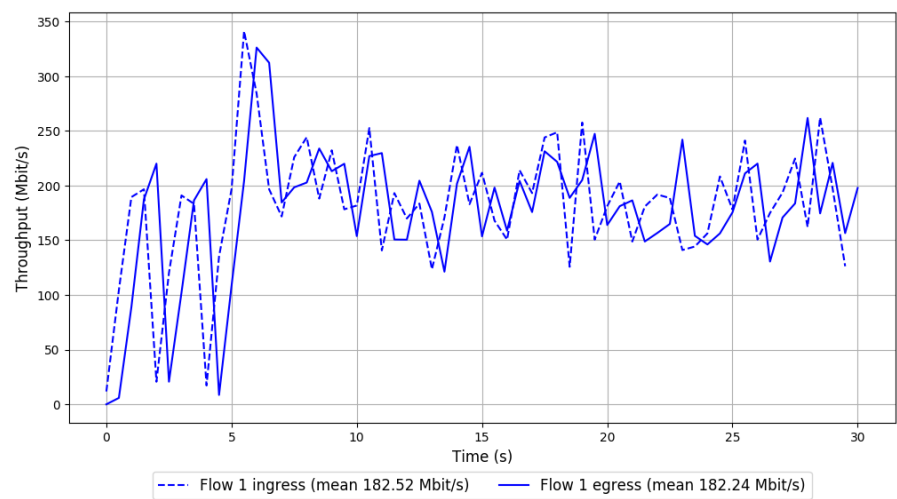
-- Flow 1:

Average throughput: 182.24 Mbit/s

95th percentile per-packet one-way delay: 104.017 ms

Loss rate: 0.15%

Run 5: Report of Verus — Data Link

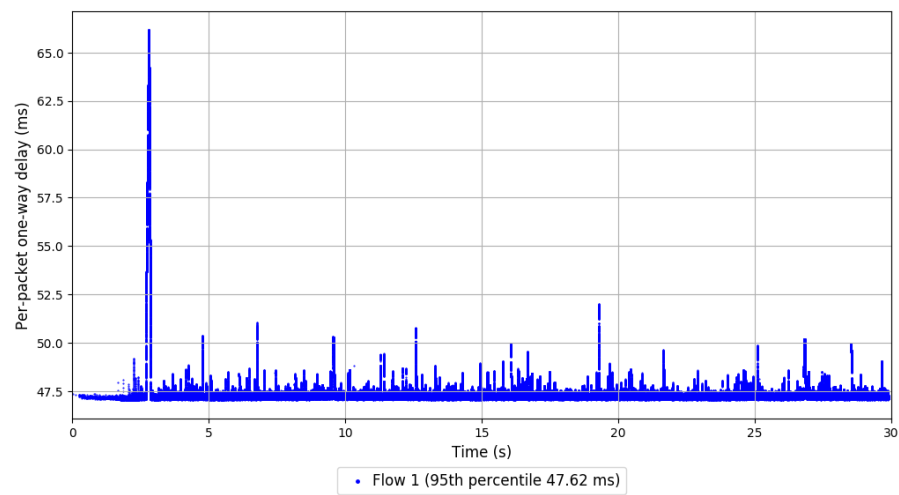
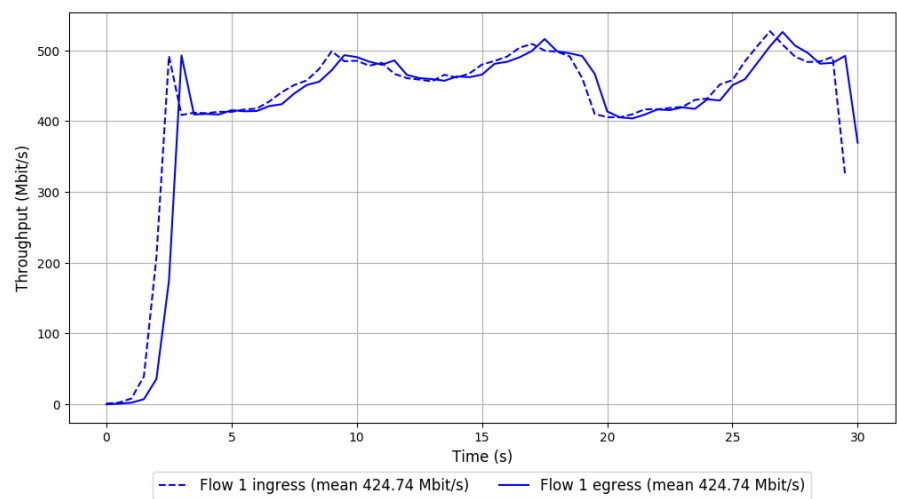


Run 1: Statistics of PCC-Vivace

Start at: 2018-12-20 18:47:27
End at: 2018-12-20 18:47:57
Local clock offset: -0.066 ms
Remote clock offset: -0.082 ms

Below is generated by plot.py at 2018-12-20 22:38:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 424.74 Mbit/s
95th percentile per-packet one-way delay: 47.620 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 424.74 Mbit/s
95th percentile per-packet one-way delay: 47.620 ms
Loss rate: 0.00%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2018-12-20 19:15:29

End at: 2018-12-20 19:15:59

Local clock offset: -0.077 ms

Remote clock offset: -0.07 ms

Below is generated by plot.py at 2018-12-20 22:38:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 352.13 Mbit/s

95th percentile per-packet one-way delay: 47.309 ms

Loss rate: 0.00%

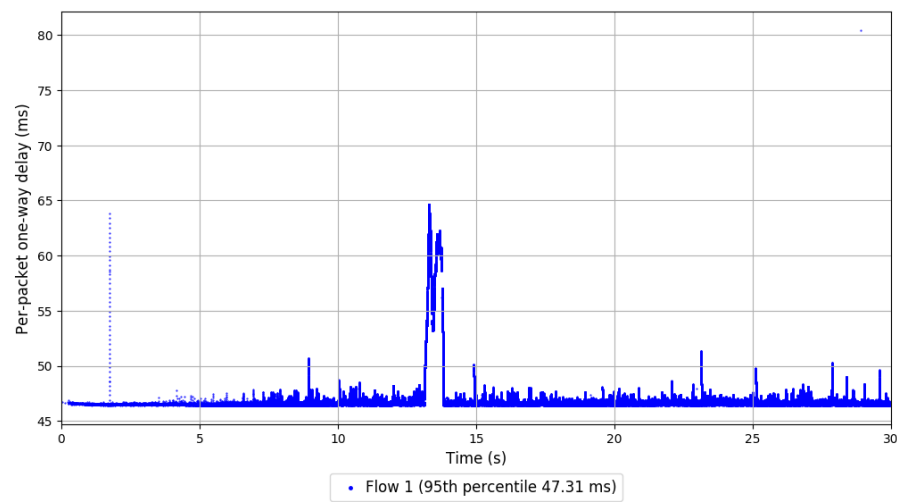
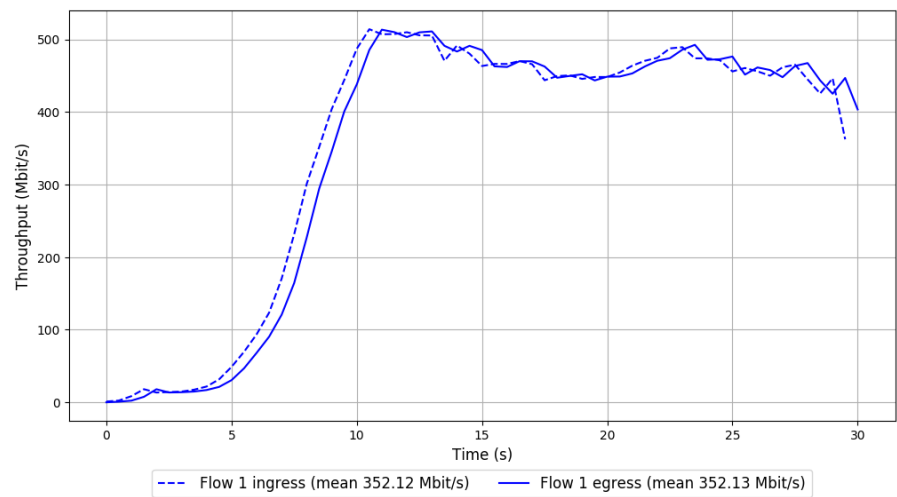
-- Flow 1:

Average throughput: 352.13 Mbit/s

95th percentile per-packet one-way delay: 47.309 ms

Loss rate: 0.00%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2018-12-20 19:43:14

End at: 2018-12-20 19:43:44

Local clock offset: -0.03 ms

Remote clock offset: -0.023 ms

Below is generated by plot.py at 2018-12-20 22:38:14

Datalink statistics

-- Total of 1 flow:

Average throughput: 348.48 Mbit/s

95th percentile per-packet one-way delay: 49.643 ms

Loss rate: 0.00%

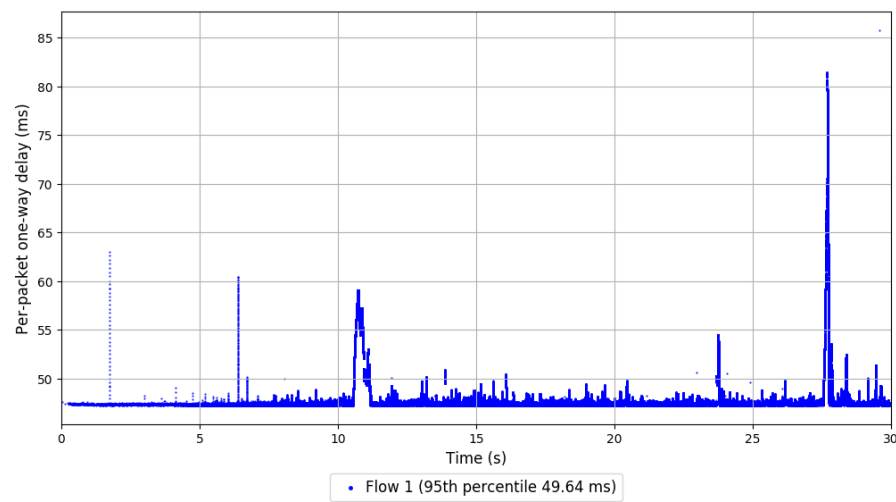
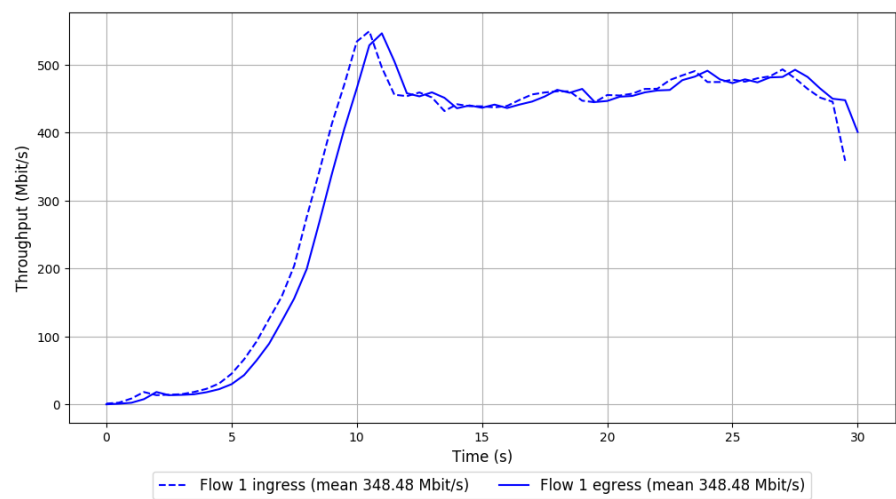
-- Flow 1:

Average throughput: 348.48 Mbit/s

95th percentile per-packet one-way delay: 49.643 ms

Loss rate: 0.00%

Run 3: Report of PCC-Vivace — Data Link

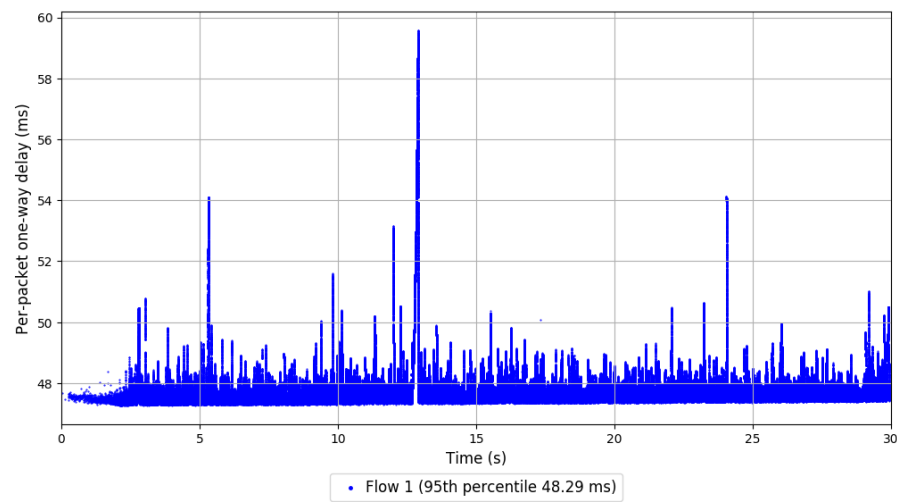
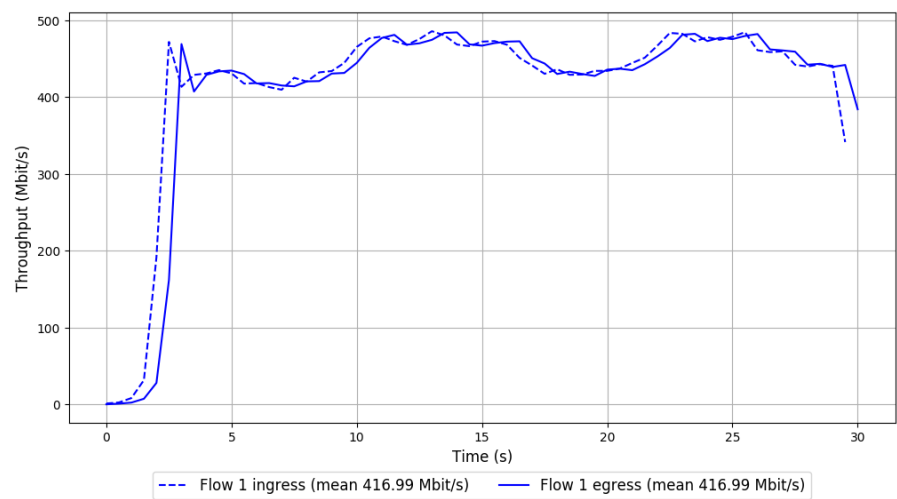


Run 4: Statistics of PCC-Vivace

Start at: 2018-12-20 20:11:14
End at: 2018-12-20 20:11:44
Local clock offset: -0.012 ms
Remote clock offset: -3.562 ms

Below is generated by plot.py at 2018-12-20 22:38:48
Datalink statistics
-- Total of 1 flow:
Average throughput: 416.99 Mbit/s
95th percentile per-packet one-way delay: 48.294 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 416.99 Mbit/s
95th percentile per-packet one-way delay: 48.294 ms
Loss rate: 0.00%

Run 4: Report of PCC-Vivace — Data Link

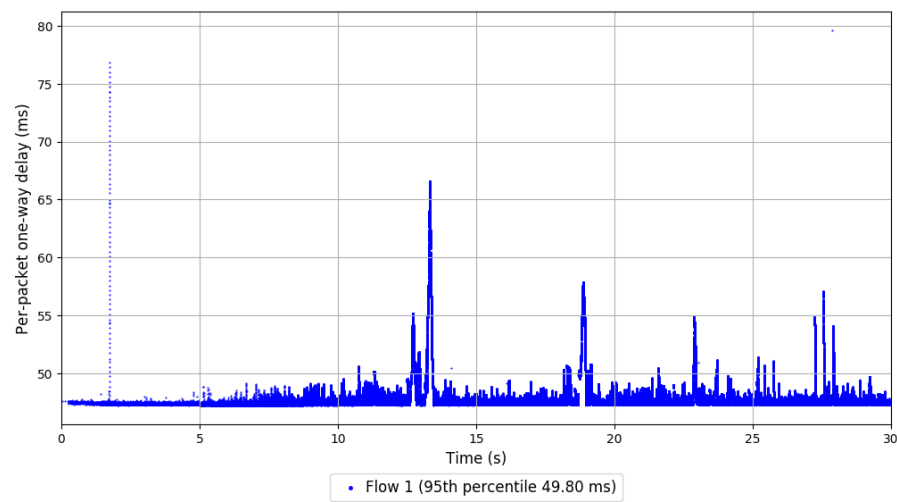
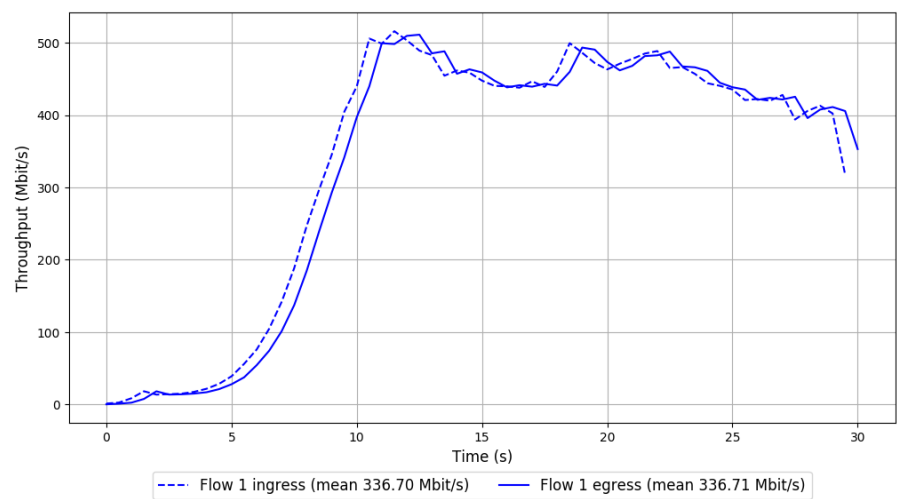


Run 5: Statistics of PCC-Vivace

Start at: 2018-12-20 20:39:08
End at: 2018-12-20 20:39:38
Local clock offset: -0.066 ms
Remote clock offset: -5.432 ms

Below is generated by plot.py at 2018-12-20 22:38:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 336.71 Mbit/s
95th percentile per-packet one-way delay: 49.799 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 336.71 Mbit/s
95th percentile per-packet one-way delay: 49.799 ms
Loss rate: 0.00%

Run 5: Report of PCC-Vivace — Data Link

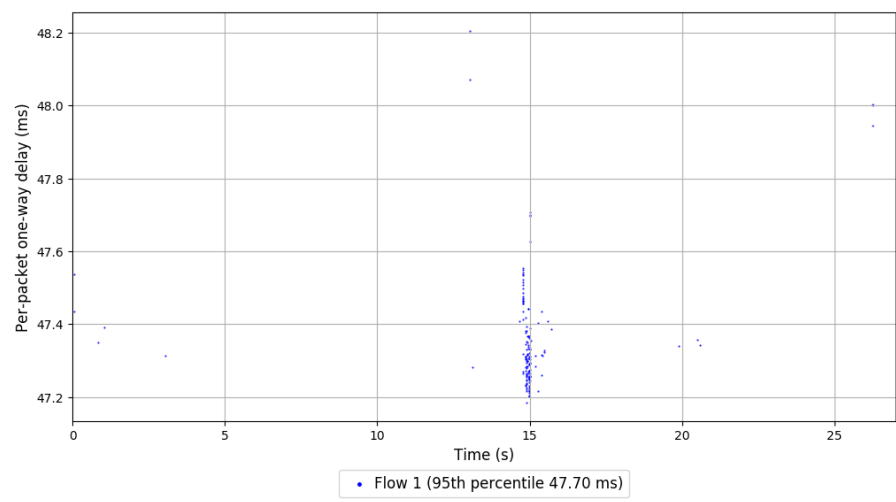
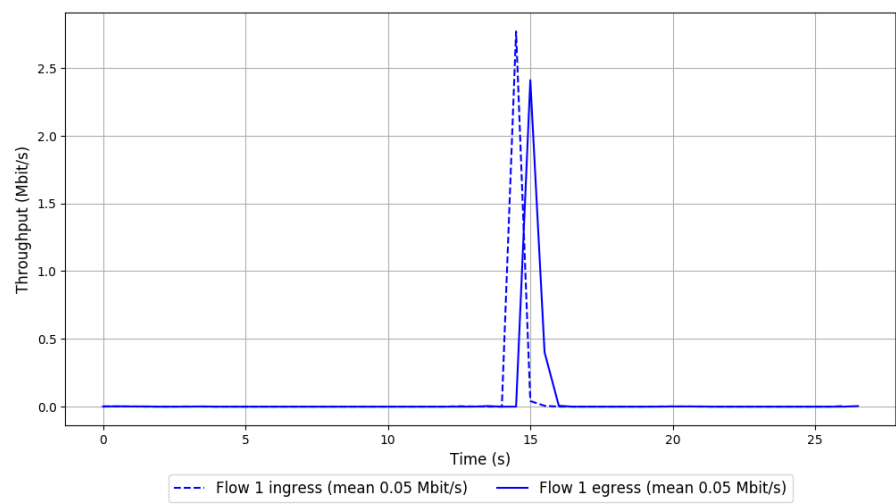


Run 1: Statistics of WebRTC media

Start at: 2018-12-20 18:21:20
End at: 2018-12-20 18:21:50
Local clock offset: -0.049 ms
Remote clock offset: -0.085 ms

Below is generated by plot.py at 2018-12-20 22:38:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.697 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.697 ms
Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link

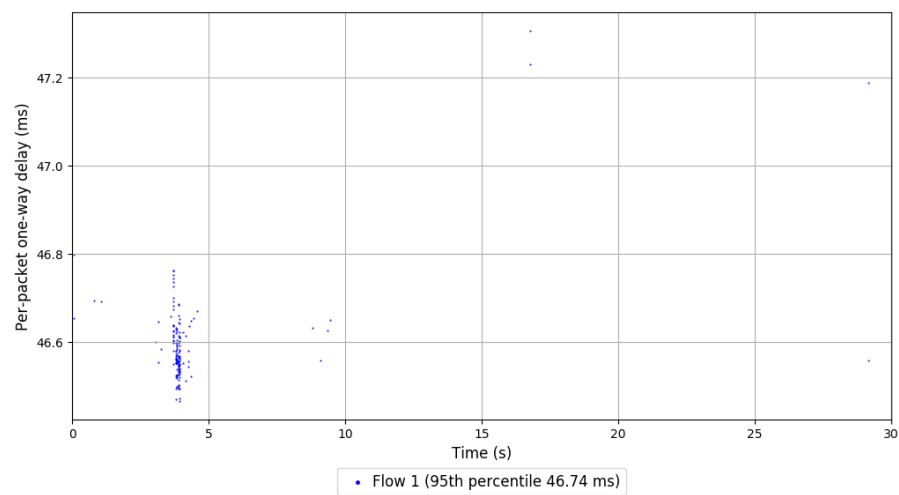
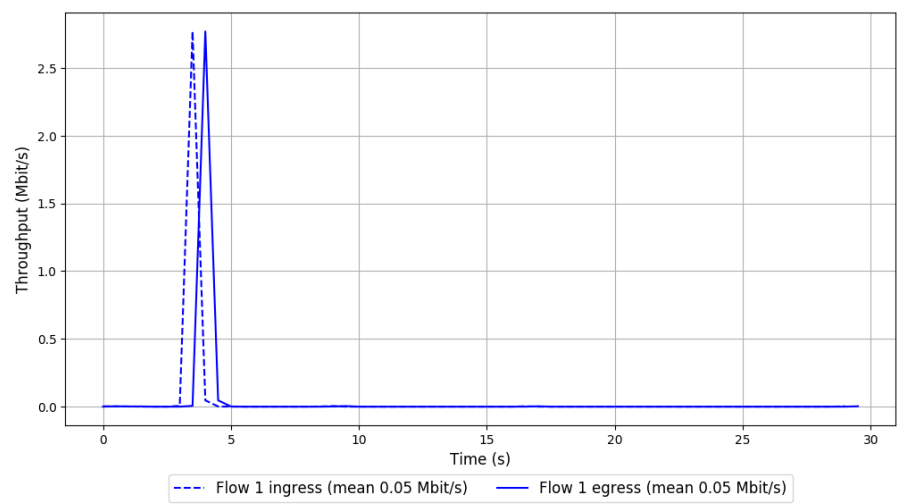


Run 2: Statistics of WebRTC media

Start at: 2018-12-20 18:49:05
End at: 2018-12-20 18:49:35
Local clock offset: -0.103 ms
Remote clock offset: -0.079 ms

Below is generated by plot.py at 2018-12-20 22:38:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 46.736 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 46.736 ms
Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link

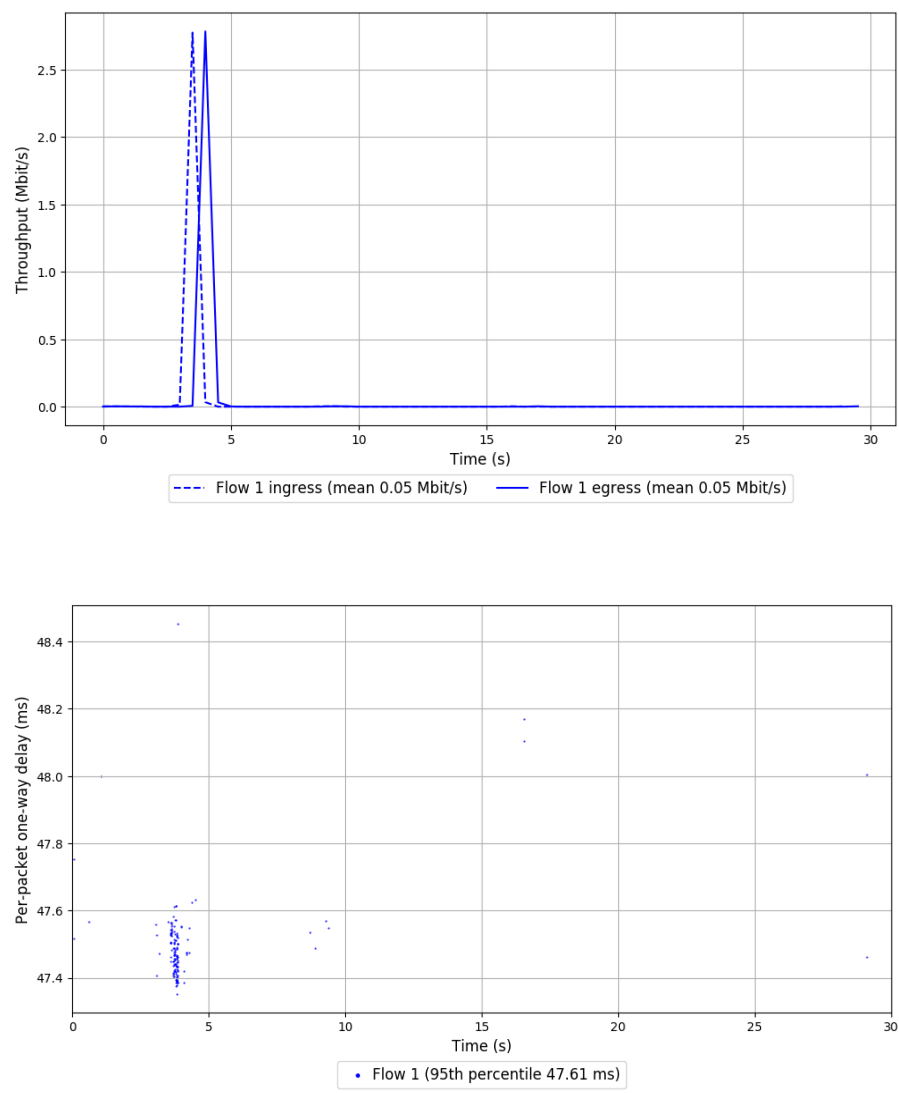


Run 3: Statistics of WebRTC media

Start at: 2018-12-20 19:17:00
End at: 2018-12-20 19:17:30
Local clock offset: -0.067 ms
Remote clock offset: -0.036 ms

Below is generated by plot.py at 2018-12-20 22:38:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.614 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.614 ms
Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

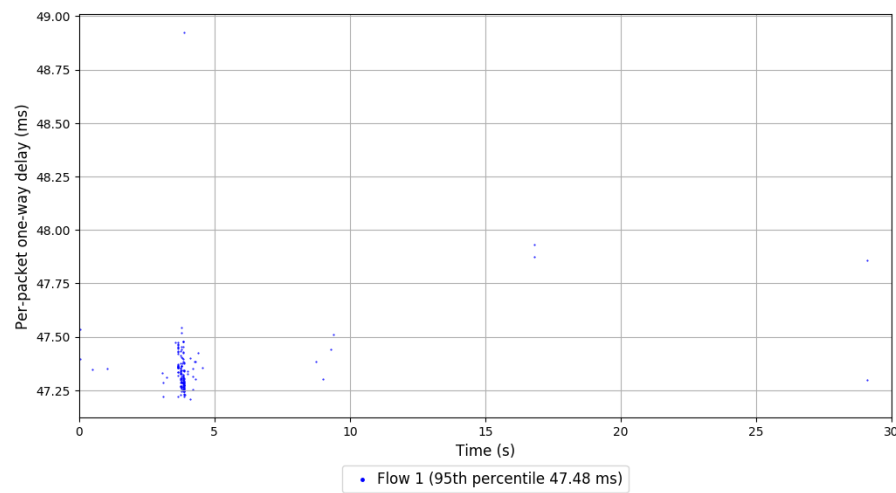
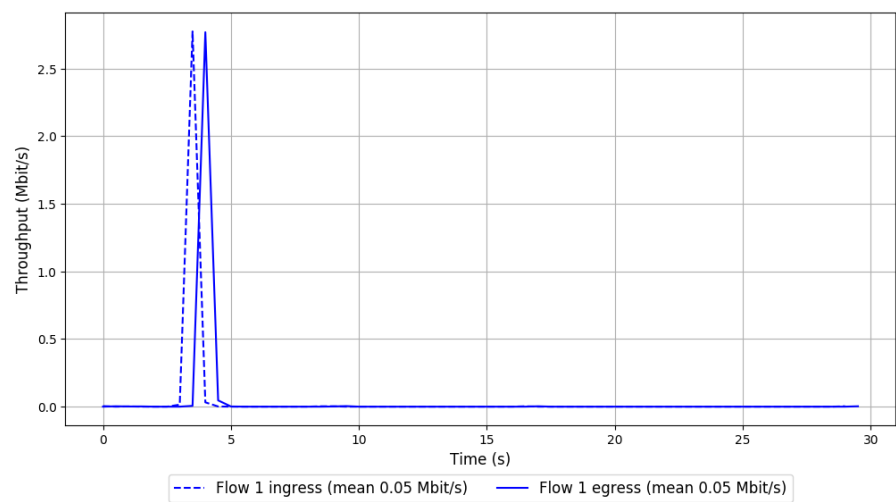


Run 4: Statistics of WebRTC media

Start at: 2018-12-20 19:44:44
End at: 2018-12-20 19:45:14
Local clock offset: -0.038 ms
Remote clock offset: -0.038 ms

Below is generated by plot.py at 2018-12-20 22:38:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.479 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.479 ms
Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-12-20 20:12:49
End at: 2018-12-20 20:13:19
Local clock offset: -0.092 ms
Remote clock offset: -3.963 ms

Below is generated by plot.py at 2018-12-20 22:38:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.13 Mbit/s
95th percentile per-packet one-way delay: 47.797 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.13 Mbit/s
95th percentile per-packet one-way delay: 47.797 ms
Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

