

Pantheon Report

Generated at 2019-01-24 23:20:18 (UTC).

Data path: AWS Korea on `ens5` (*local*) → China on `eno1` (*remote*).

Repeated the test of 21 congestion control schemes 5 times.

Each test lasted for 30 seconds running 1 flow.

NTP offsets were measured against `ntp.nict.jp` and have been applied to correct the timestamps in logs.

System info:

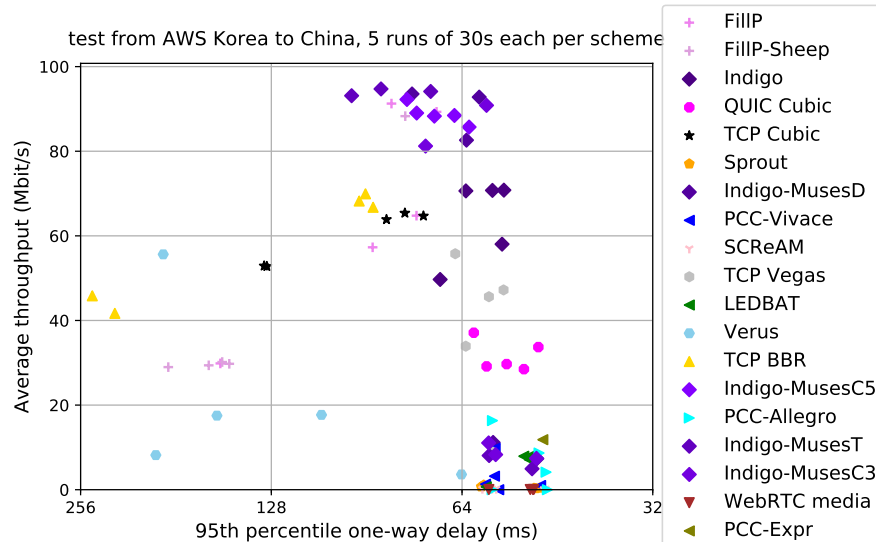
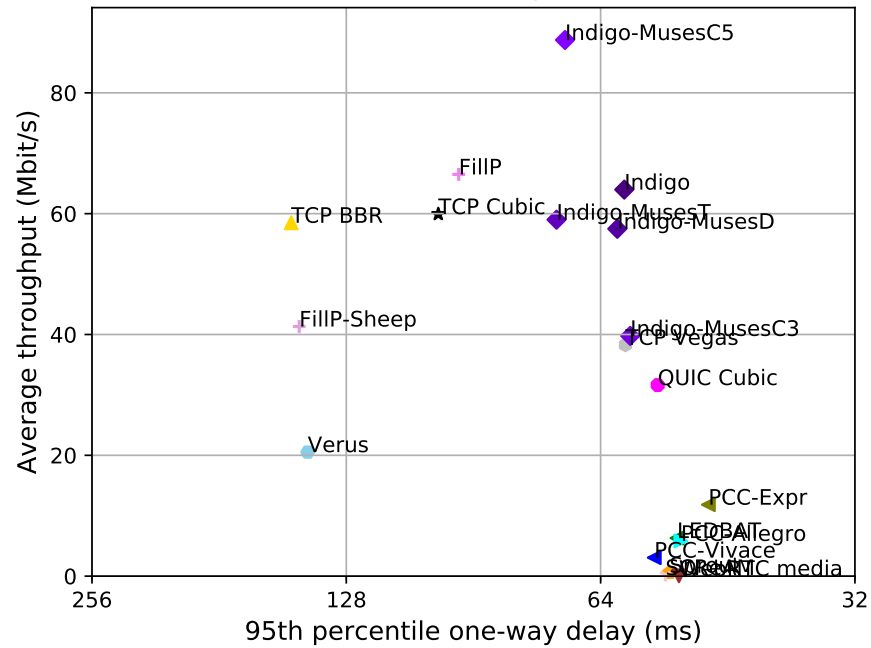
```
Linux 4.15.0-1031-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

```
branch: muses @ 0b8e9a949603c3842368430acf469eec3b941f9f
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ d9c5ea33091330aca25ecd105ab2db6d34d5c40d
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 AWS Korea to China, 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	58.48	148.74	12.19
Copa	0	N/A	N/A	N/A
TCP Cubic	5	59.93	99.62	1.64
FillP	5	66.50	94.21	2.69
FillP-Sheep	5	41.32	145.53	4.64
Indigo	5	63.98	60.00	4.37
Indigo-MusesC3	5	39.77	59.04	0.04
Indigo-MusesC5	5	88.75	70.52	0.00
Indigo-MusesD	5	57.49	61.16	0.00
Indigo-MusesT	5	59.00	72.17	0.01
LEDBAT	5	6.30	51.97	0.00
PCC-Allegro	5	5.83	51.43	0.00
PCC-Expr	1	11.83	47.72	1.76
QUIC Cubic	5	31.63	54.78	0.00
SCReAM	5	0.19	53.64	0.00
Sprout	5	0.57	53.07	0.00
TaoVA-100x	0	N/A	N/A	N/A
TCP Vegas	5	38.28	59.82	1.24
Verus	5	20.52	142.21	9.82
PCC-Vivace	5	3.06	55.30	0.00
WebRTC media	4	0.05	51.70	0.00

Run 1: Statistics of TCP BBR

Start at: 2019-01-24 15:00:50

End at: 2019-01-24 15:01:20

Local clock offset: 0.495 ms

Remote clock offset: 52.788 ms

Below is generated by plot.py at 2019-01-24 23:15:44

Datalink statistics

-- Total of 1 flow:

Average throughput: 66.76 Mbit/s

95th percentile per-packet one-way delay: 88.416 ms

Loss rate: 11.91%

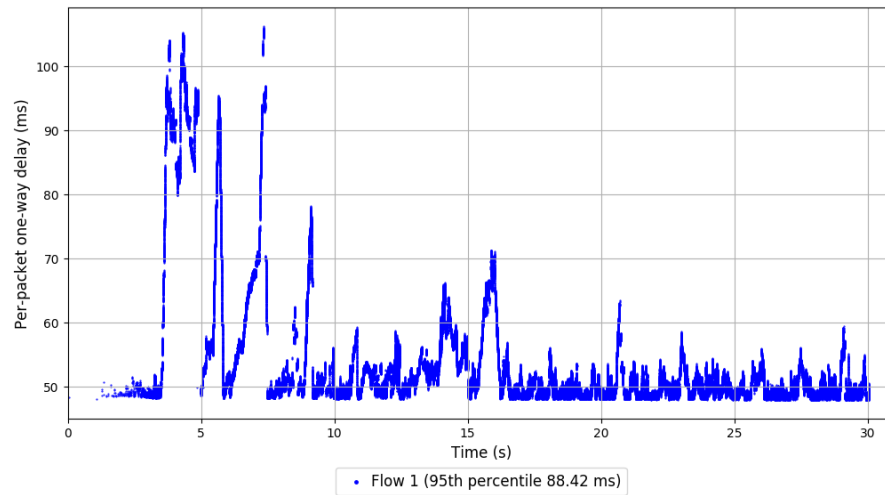
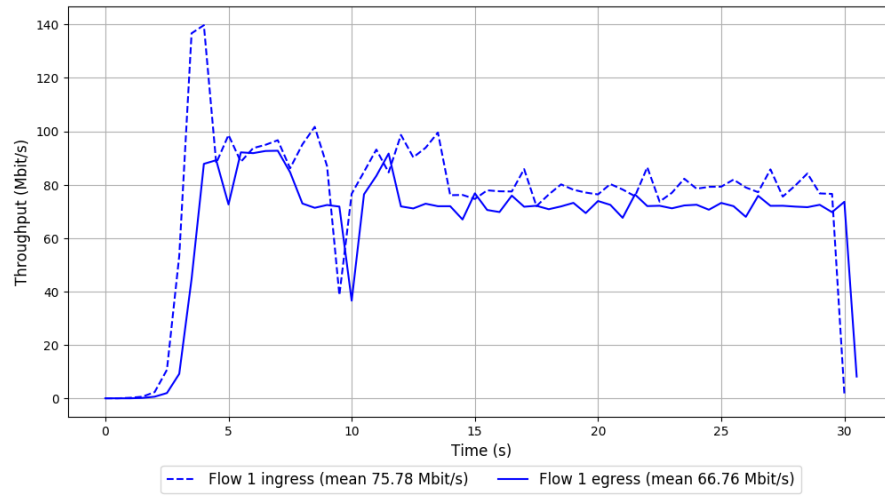
-- Flow 1:

Average throughput: 66.76 Mbit/s

95th percentile per-packet one-way delay: 88.416 ms

Loss rate: 11.91%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2019-01-24 17:45:32

End at: 2019-01-24 17:46:02

Local clock offset: 2.41 ms

Remote clock offset: 48.627 ms

Below is generated by plot.py at 2019-01-24 23:15:45

Datalink statistics

-- Total of 1 flow:

Average throughput: 68.23 Mbit/s

95th percentile per-packet one-way delay: 93.001 ms

Loss rate: 9.75%

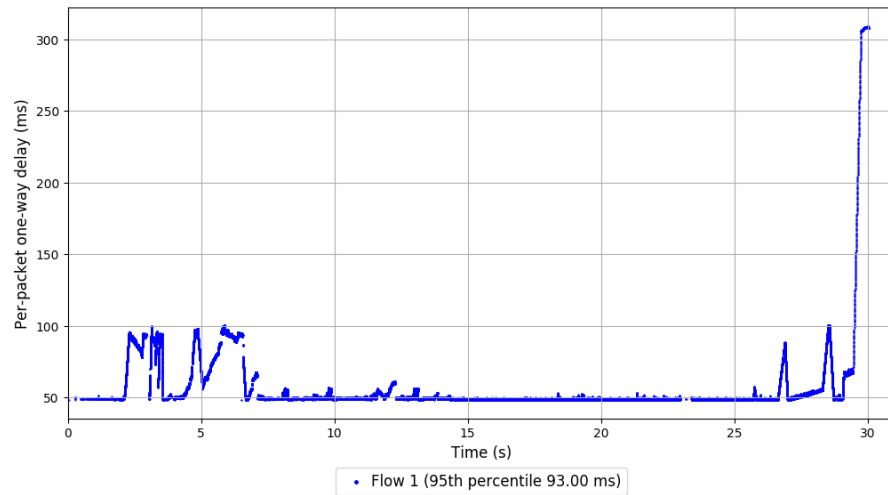
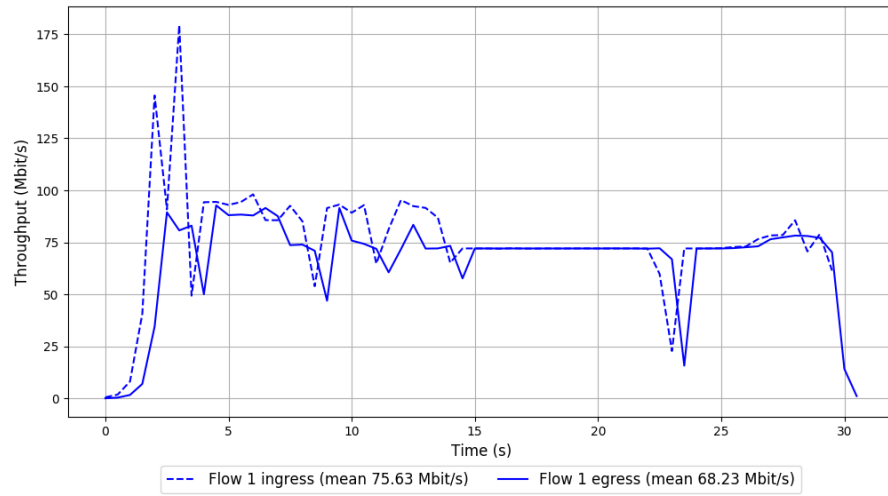
-- Flow 1:

Average throughput: 68.23 Mbit/s

95th percentile per-packet one-way delay: 93.001 ms

Loss rate: 9.75%

Run 2: Report of TCP BBR — Data Link

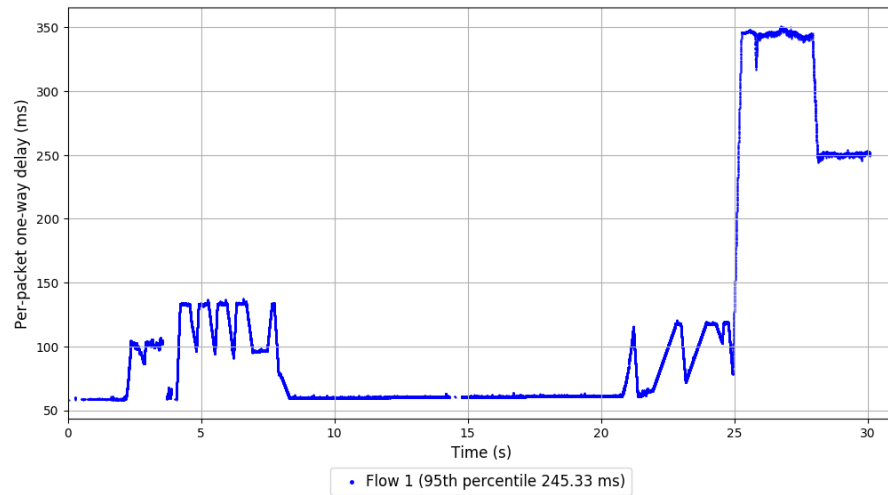
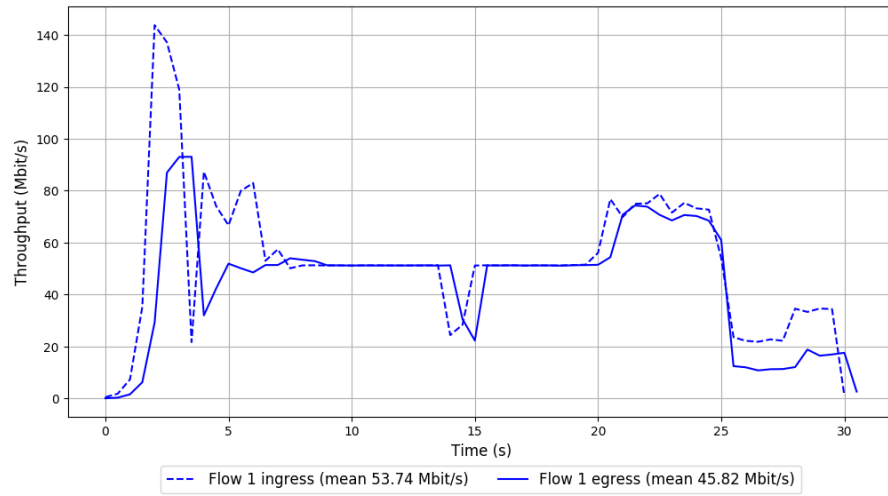


Run 3: Statistics of TCP BBR

Start at: 2019-01-24 19:50:45
End at: 2019-01-24 19:51:15
Local clock offset: -2.708 ms
Remote clock offset: 64.925 ms

Below is generated by plot.py at 2019-01-24 23:15:45
Datalink statistics
-- Total of 1 flow:
Average throughput: 45.82 Mbit/s
95th percentile per-packet one-way delay: 245.329 ms
Loss rate: 14.72%
-- Flow 1:
Average throughput: 45.82 Mbit/s
95th percentile per-packet one-way delay: 245.329 ms
Loss rate: 14.72%

Run 3: Report of TCP BBR — Data Link

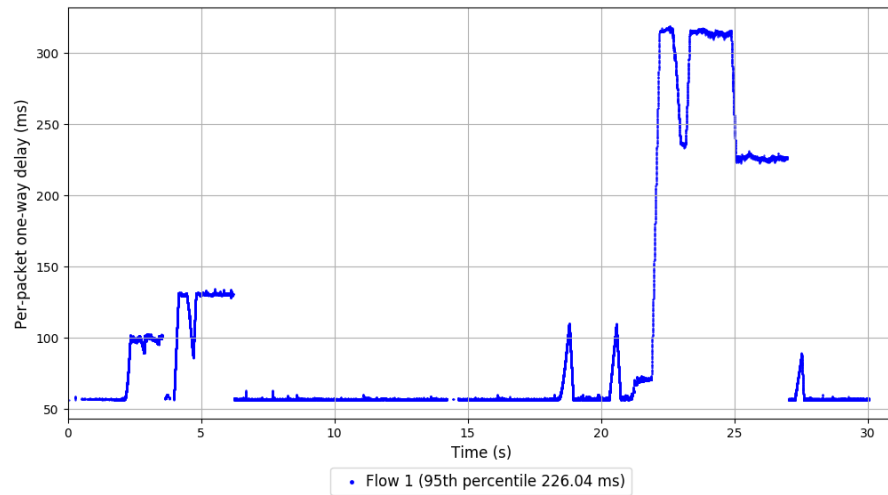
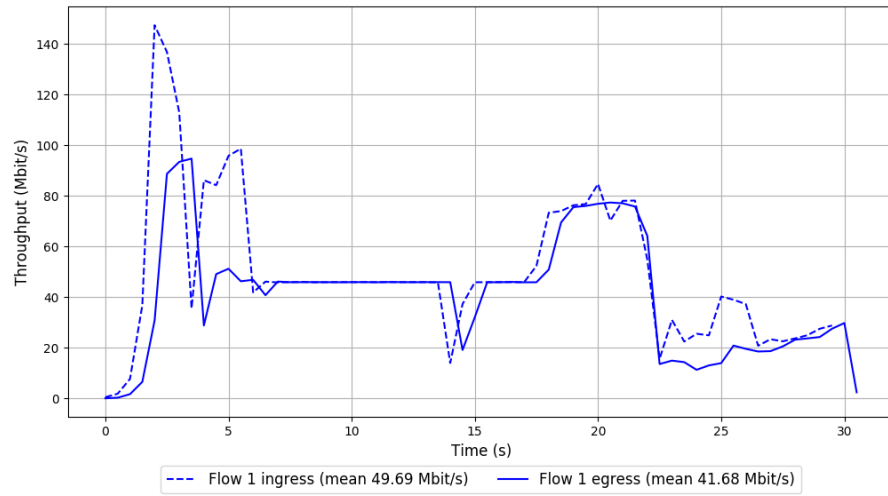


Run 4: Statistics of TCP BBR

Start at: 2019-01-24 21:28:24
End at: 2019-01-24 21:28:54
Local clock offset: -0.724 ms
Remote clock offset: -2.636 ms

Below is generated by plot.py at 2019-01-24 23:15:45
Datalink statistics
-- Total of 1 flow:
Average throughput: 41.68 Mbit/s
95th percentile per-packet one-way delay: 226.037 ms
Loss rate: 16.11%
-- Flow 1:
Average throughput: 41.68 Mbit/s
95th percentile per-packet one-way delay: 226.037 ms
Loss rate: 16.11%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2019-01-24 22:38:35

End at: 2019-01-24 22:39:05

Local clock offset: 0.501 ms

Remote clock offset: 0.008 ms

Below is generated by plot.py at 2019-01-24 23:15:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 69.93 Mbit/s

95th percentile per-packet one-way delay: 90.902 ms

Loss rate: 8.44%

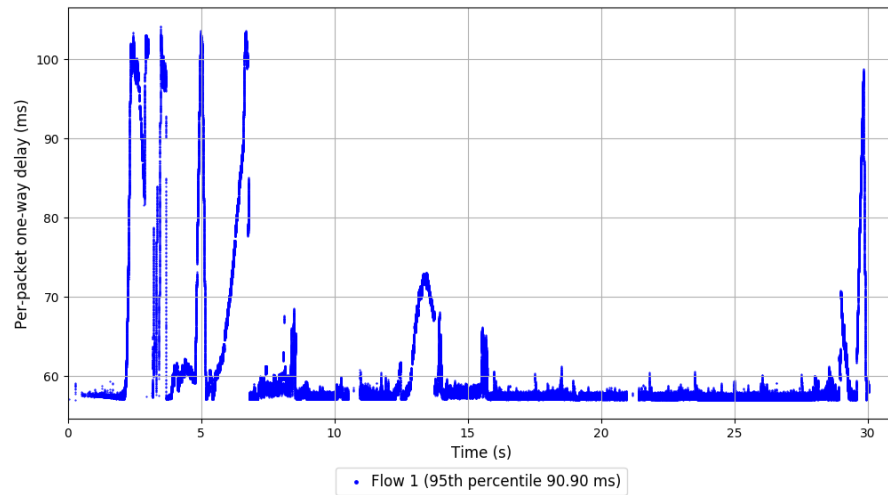
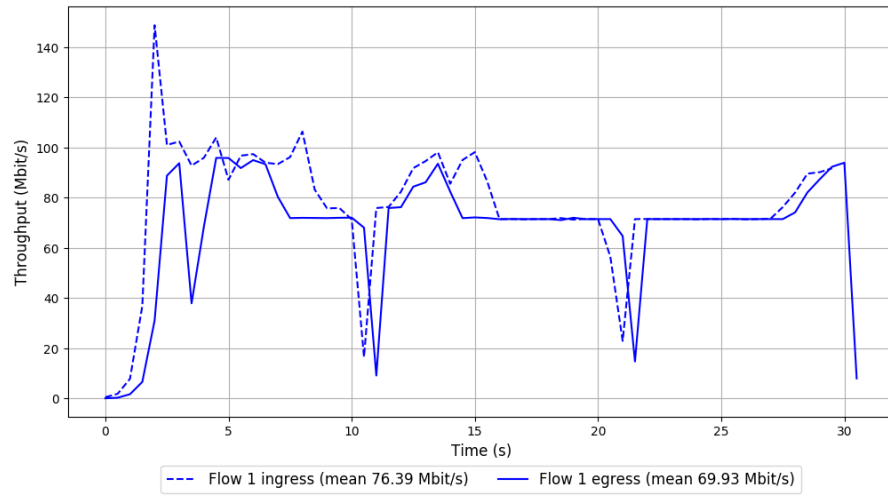
-- Flow 1:

Average throughput: 69.93 Mbit/s

95th percentile per-packet one-way delay: 90.902 ms

Loss rate: 8.44%

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

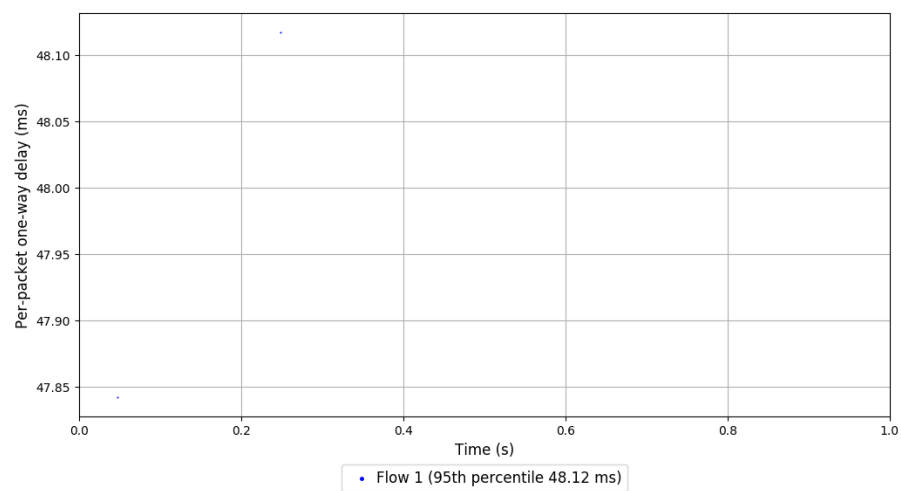
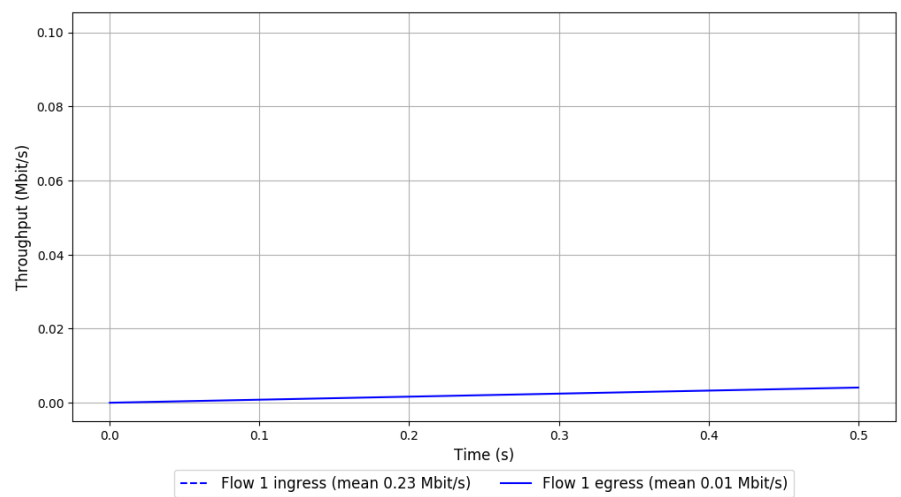
Start at: 2019-01-24 15:54:29

End at: 2019-01-24 15:54:59

Local clock offset: 2.344 ms

Remote clock offset: 47.061 ms

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

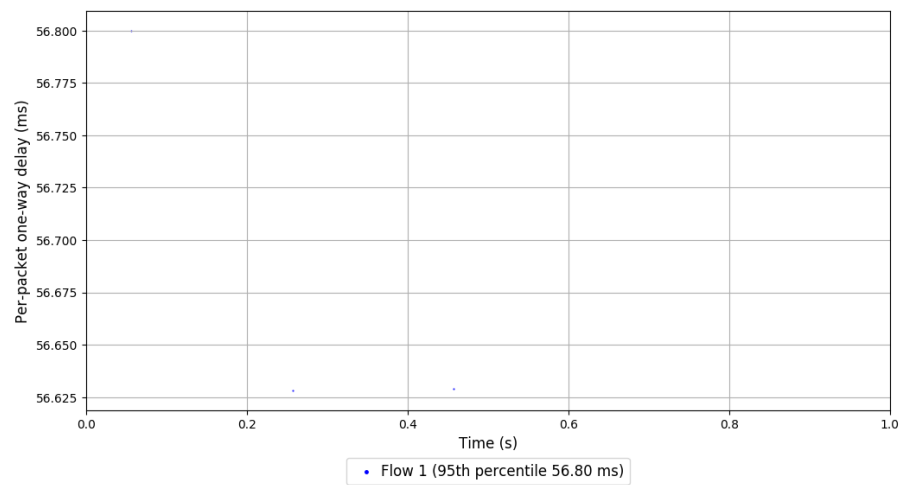
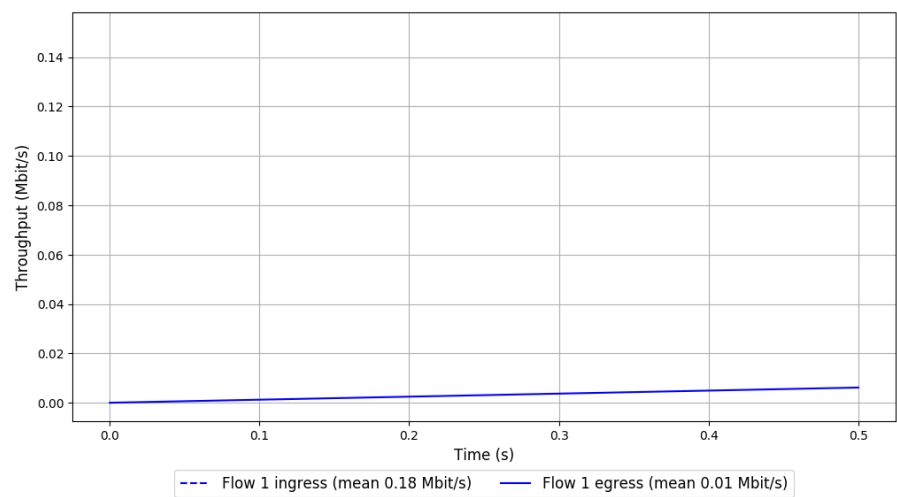
Start at: 2019-01-24 18:22:06

End at: 2019-01-24 18:22:36

Local clock offset: 1.966 ms

Remote clock offset: 31.879 ms

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

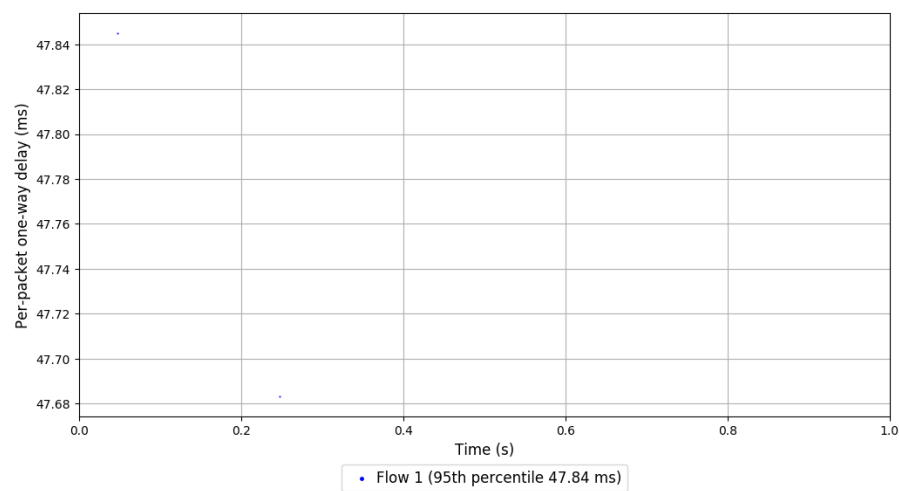
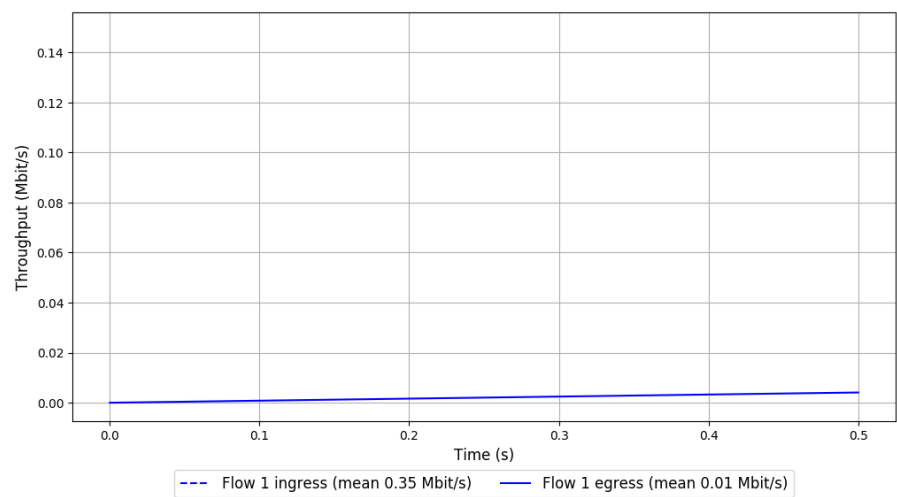
Start at: 2019-01-24 20:18:49

End at: 2019-01-24 20:19:19

Local clock offset: -7.406 ms

Remote clock offset: -26.691 ms

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

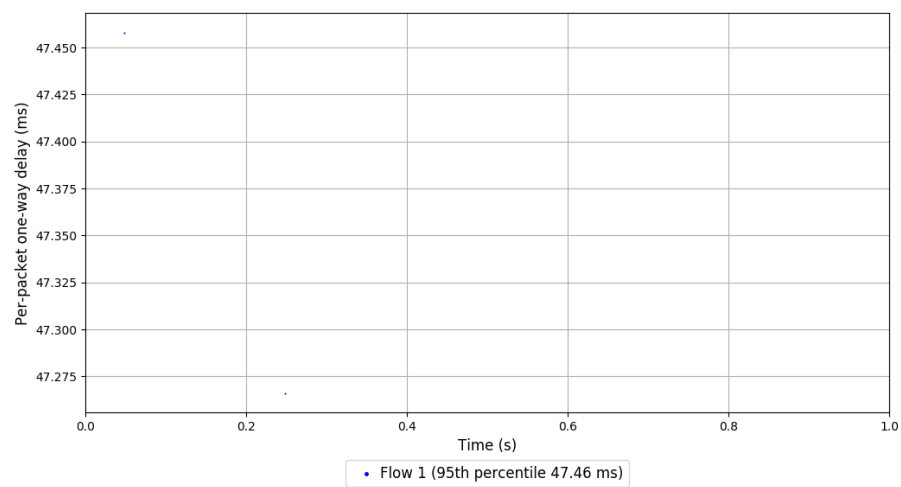
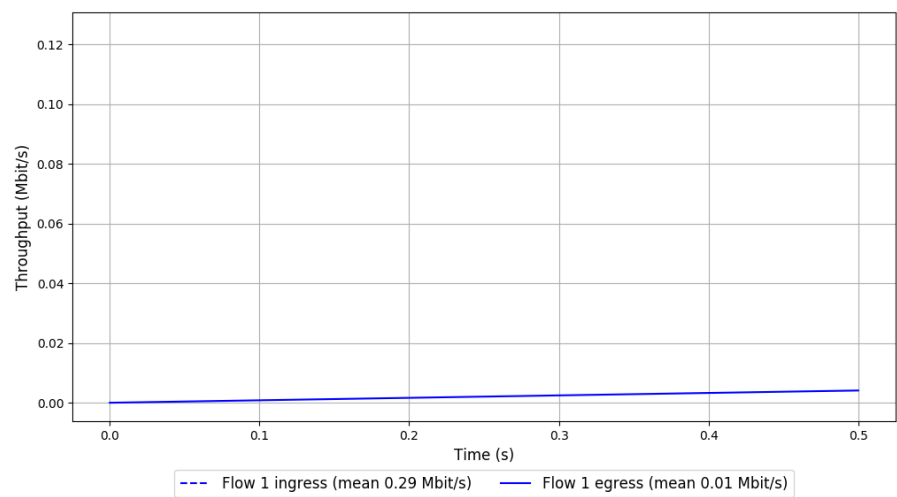
Start at: 2019-01-24 21:54:58

End at: 2019-01-24 21:55:28

Local clock offset: 0.7 ms

Remote clock offset: -1.274 ms

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

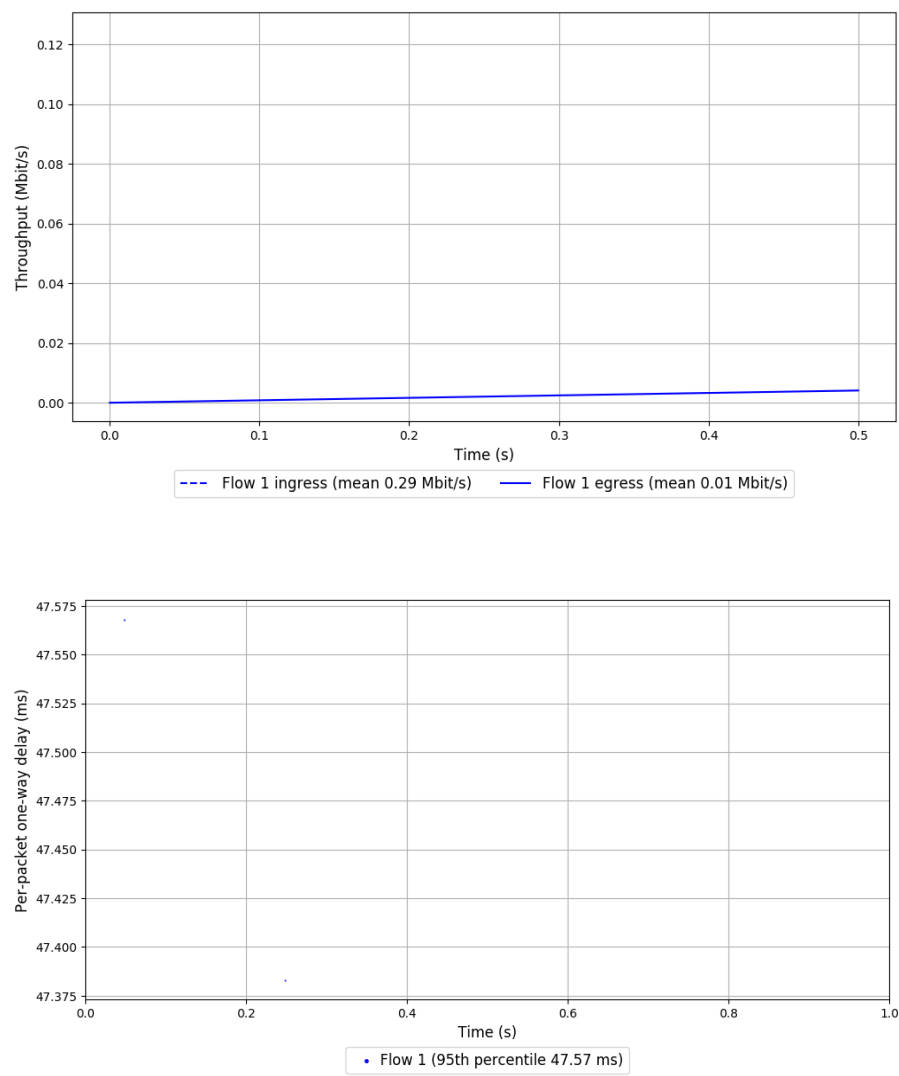
Start at: 2019-01-24 22:58:40

End at: 2019-01-24 22:59:10

Local clock offset: -2.066 ms

Remote clock offset: -0.743 ms

Run 5: Report of Copa — Data Link

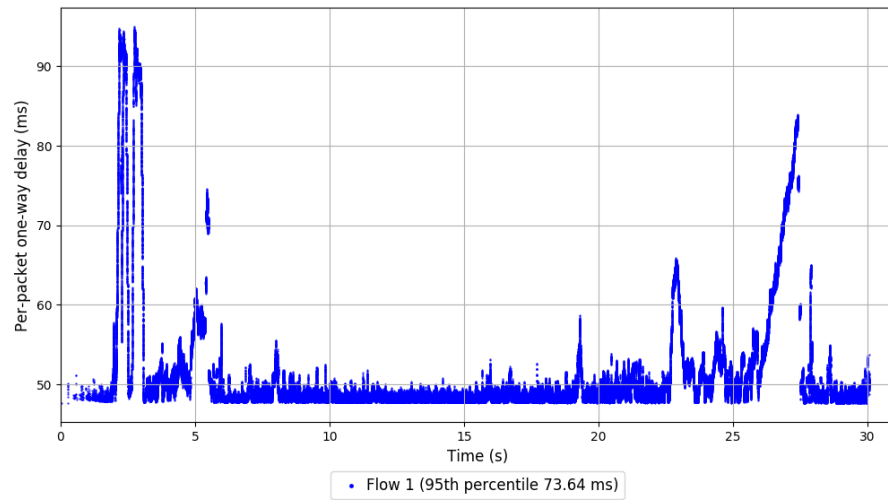
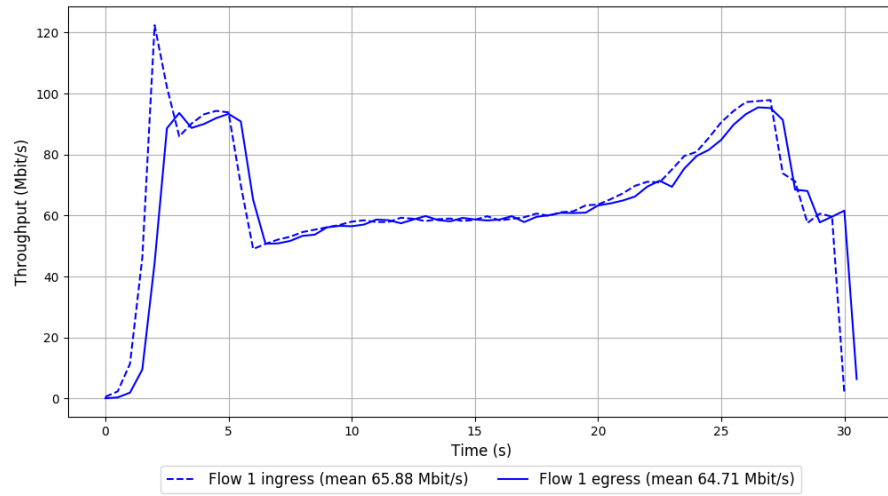


Run 1: Statistics of TCP Cubic

Start at: 2019-01-24 14:29:05
End at: 2019-01-24 14:29:35
Local clock offset: -2.362 ms
Remote clock offset: 50.414 ms

Below is generated by plot.py at 2019-01-24 23:15:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 64.71 Mbit/s
95th percentile per-packet one-way delay: 73.637 ms
Loss rate: 1.77%
-- Flow 1:
Average throughput: 64.71 Mbit/s
95th percentile per-packet one-way delay: 73.637 ms
Loss rate: 1.77%

Run 1: Report of TCP Cubic — Data Link

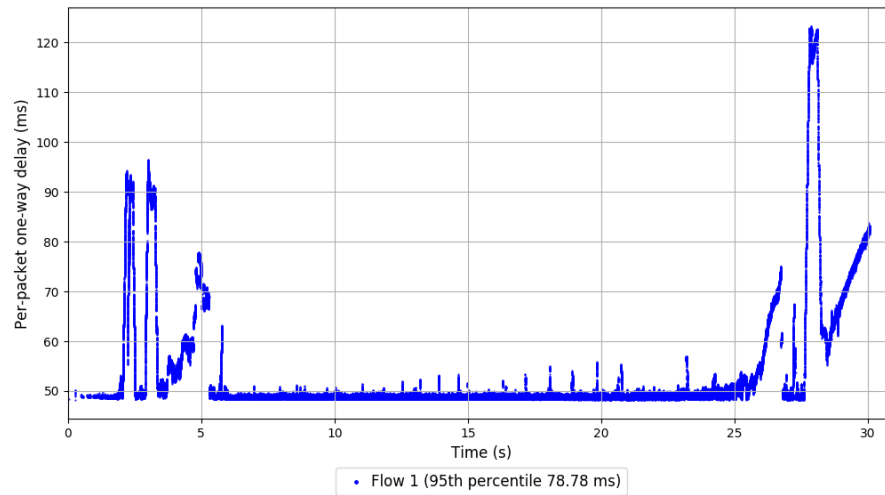
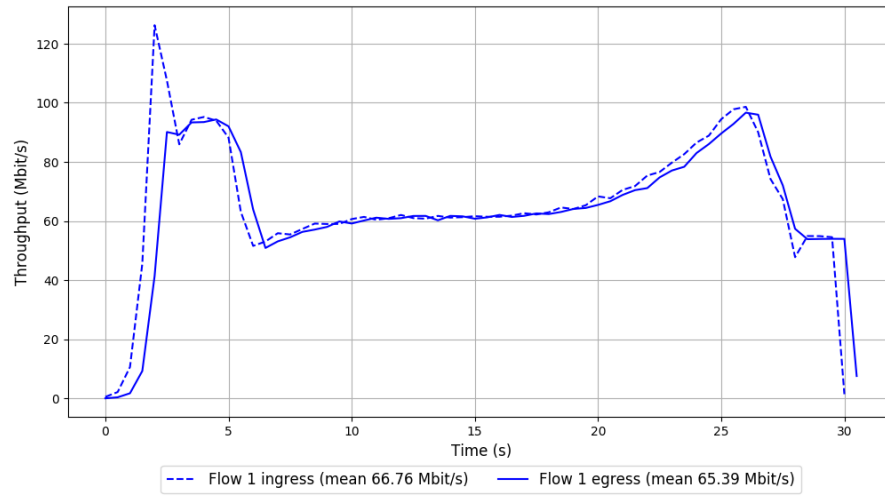


Run 2: Statistics of TCP Cubic

Start at: 2019-01-24 17:01:15
End at: 2019-01-24 17:01:45
Local clock offset: 6.109 ms
Remote clock offset: 47.583 ms

Below is generated by plot.py at 2019-01-24 23:15:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 65.39 Mbit/s
95th percentile per-packet one-way delay: 78.779 ms
Loss rate: 2.02%
-- Flow 1:
Average throughput: 65.39 Mbit/s
95th percentile per-packet one-way delay: 78.779 ms
Loss rate: 2.02%

Run 2: Report of TCP Cubic — Data Link

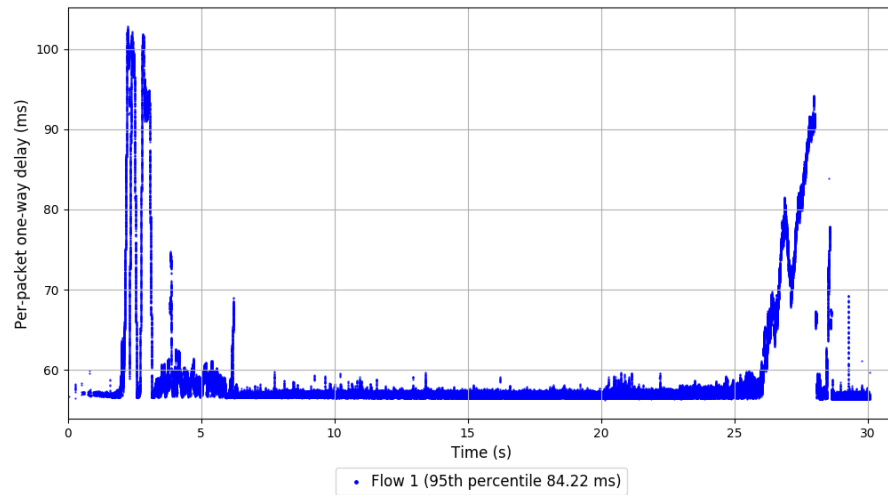
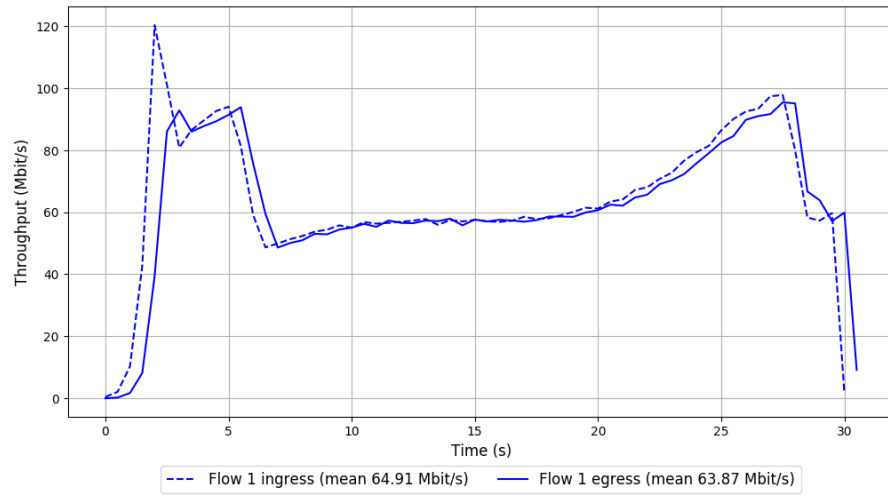


Run 3: Statistics of TCP Cubic

Start at: 2019-01-24 19:15:25
End at: 2019-01-24 19:15:55
Local clock offset: -0.463 ms
Remote clock offset: 56.816 ms

Below is generated by plot.py at 2019-01-24 23:15:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 63.87 Mbit/s
95th percentile per-packet one-way delay: 84.222 ms
Loss rate: 1.60%
-- Flow 1:
Average throughput: 63.87 Mbit/s
95th percentile per-packet one-way delay: 84.222 ms
Loss rate: 1.60%

Run 3: Report of TCP Cubic — Data Link

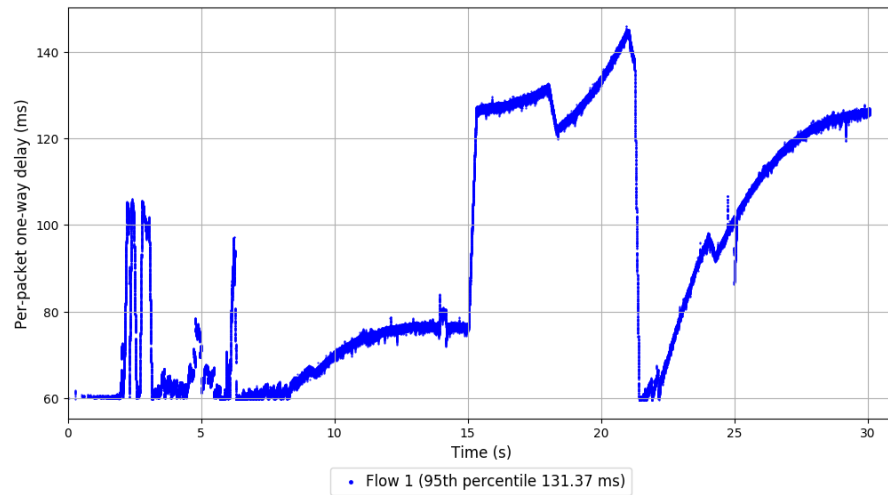
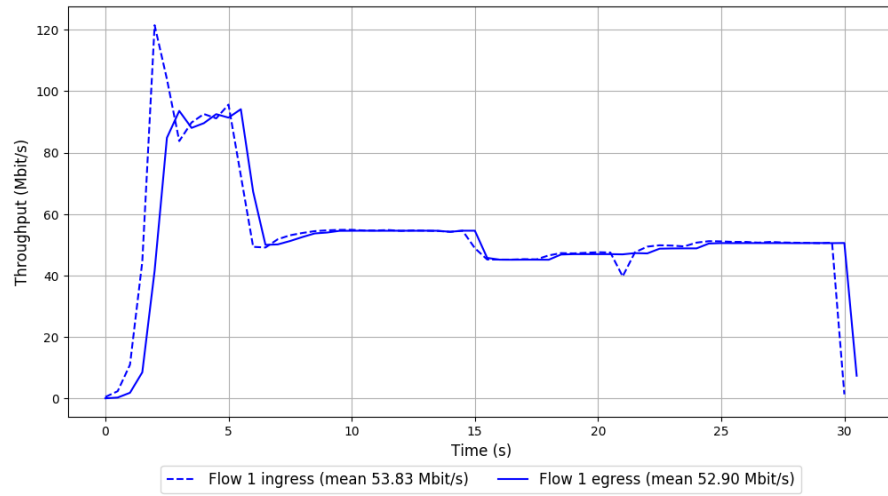


Run 4: Statistics of TCP Cubic

Start at: 2019-01-24 21:01:40
End at: 2019-01-24 21:02:10
Local clock offset: -5.87 ms
Remote clock offset: -9.707 ms

Below is generated by plot.py at 2019-01-24 23:16:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 52.90 Mbit/s
95th percentile per-packet one-way delay: 131.370 ms
Loss rate: 1.72%
-- Flow 1:
Average throughput: 52.90 Mbit/s
95th percentile per-packet one-way delay: 131.370 ms
Loss rate: 1.72%

Run 4: Report of TCP Cubic — Data Link

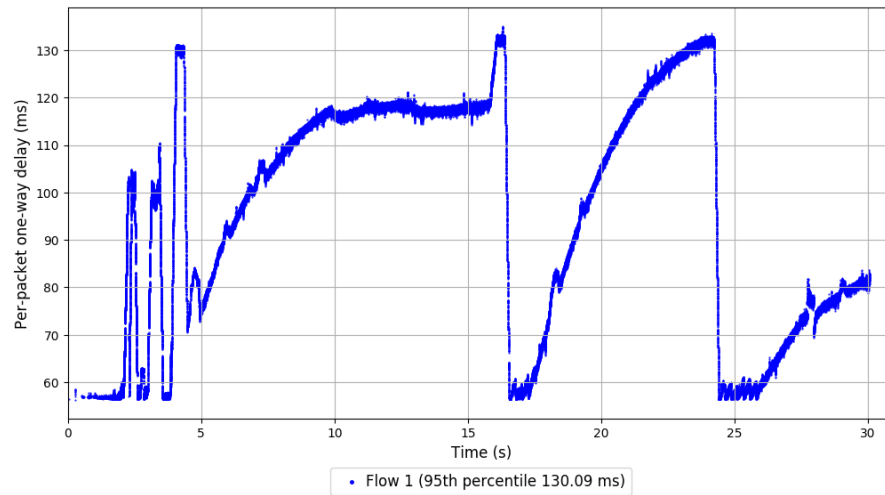
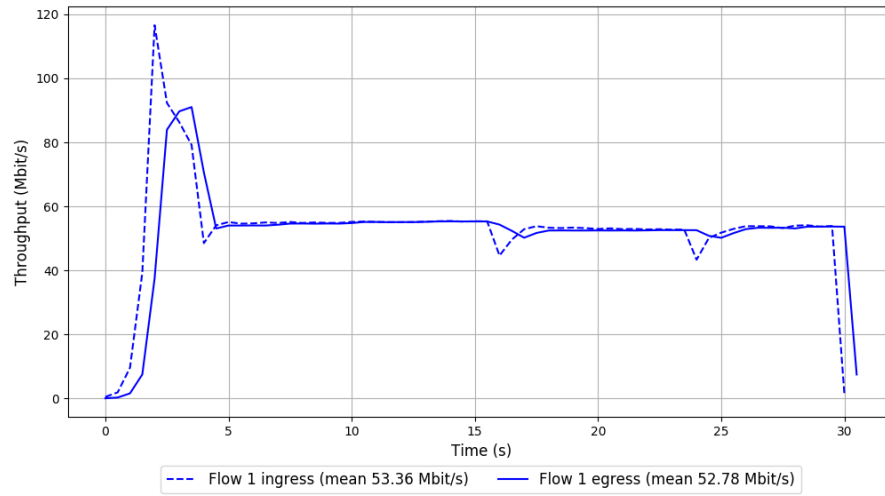


Run 5: Statistics of TCP Cubic

Start at: 2019-01-24 22:22:36
End at: 2019-01-24 22:23:06
Local clock offset: 3.946 ms
Remote clock offset: -0.893 ms

Below is generated by plot.py at 2019-01-24 23:16:06
Datalink statistics
-- Total of 1 flow:
Average throughput: 52.78 Mbit/s
95th percentile per-packet one-way delay: 130.090 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 52.78 Mbit/s
95th percentile per-packet one-way delay: 130.090 ms
Loss rate: 1.07%

Run 5: Report of TCP Cubic — Data Link

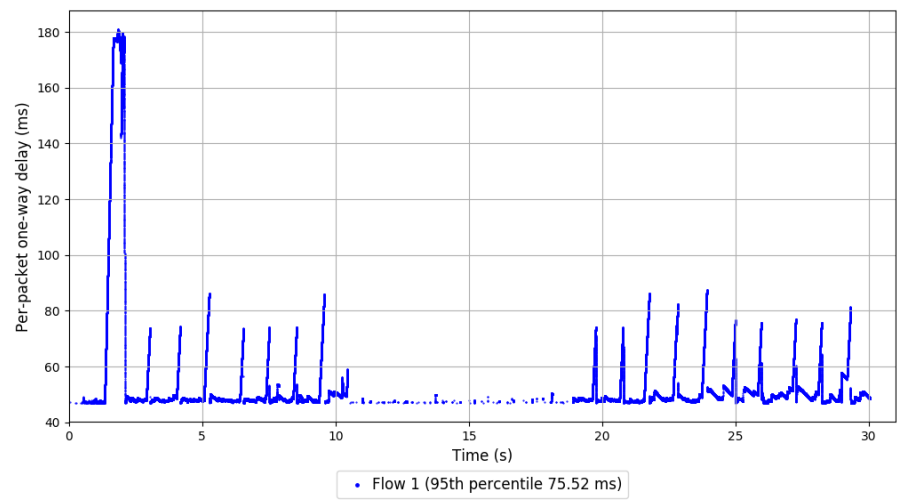
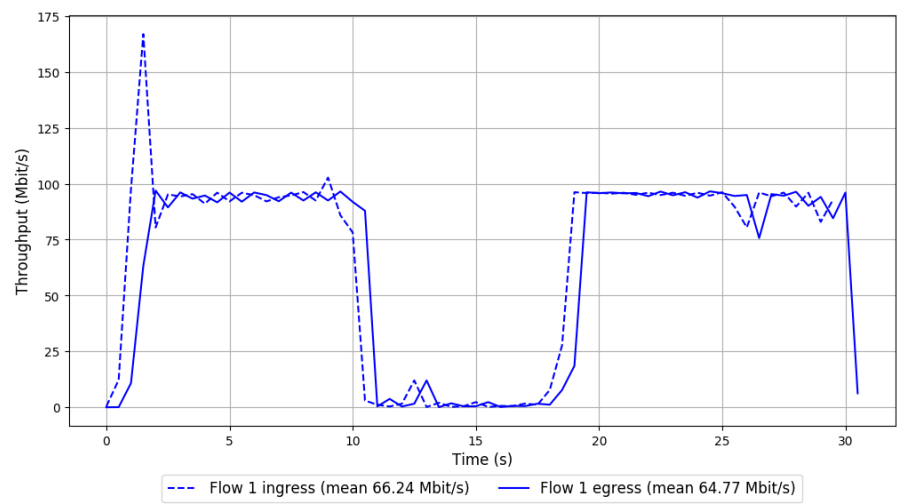


Run 1: Statistics of FillP

Start at: 2019-01-24 15:16:27
End at: 2019-01-24 15:16:57
Local clock offset: -3.738 ms
Remote clock offset: 53.648 ms

Below is generated by plot.py at 2019-01-24 23:16:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 64.77 Mbit/s
95th percentile per-packet one-way delay: 75.522 ms
Loss rate: 2.22%
-- Flow 1:
Average throughput: 64.77 Mbit/s
95th percentile per-packet one-way delay: 75.522 ms
Loss rate: 2.22%

Run 1: Report of FillP — Data Link

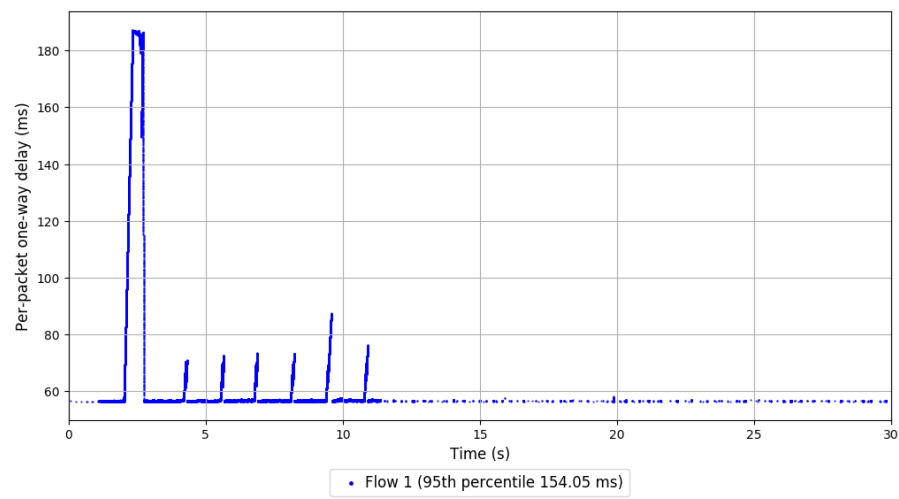
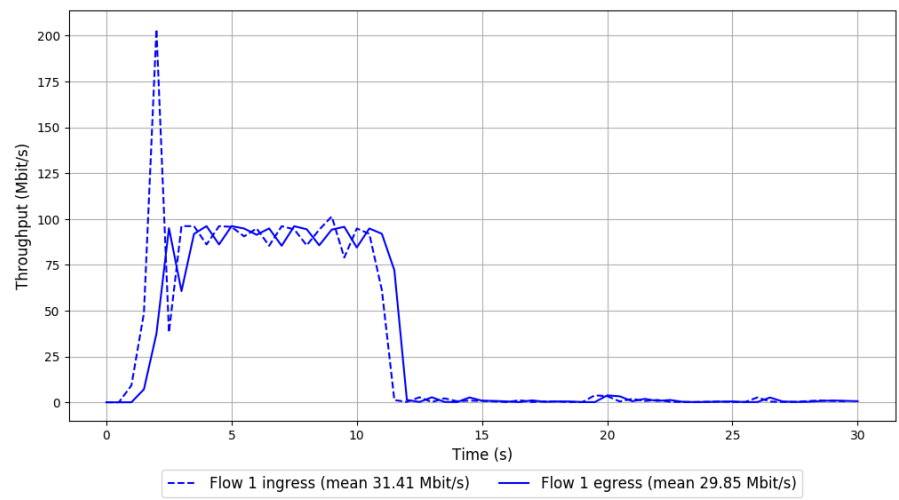


Run 2: Statistics of FillP

Start at: 2019-01-24 18:05:44
End at: 2019-01-24 18:06:14
Local clock offset: 2.296 ms
Remote clock offset: 48.533 ms

Below is generated by plot.py at 2019-01-24 23:16:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 29.85 Mbit/s
95th percentile per-packet one-way delay: 154.053 ms
Loss rate: 4.96%
-- Flow 1:
Average throughput: 29.85 Mbit/s
95th percentile per-packet one-way delay: 154.053 ms
Loss rate: 4.96%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2019-01-24 20:01:14

End at: 2019-01-24 20:01:44

Local clock offset: -3.67 ms

Remote clock offset: 7.973 ms

Below is generated by plot.py at 2019-01-24 23:16:34

Datalink statistics

-- Total of 1 flow:

Average throughput: 57.29 Mbit/s

95th percentile per-packet one-way delay: 88.571 ms

Loss rate: 2.93%

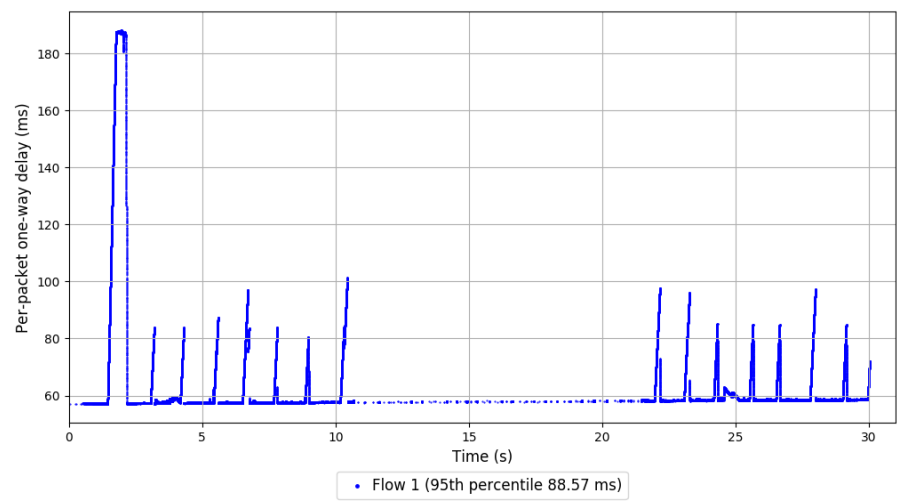
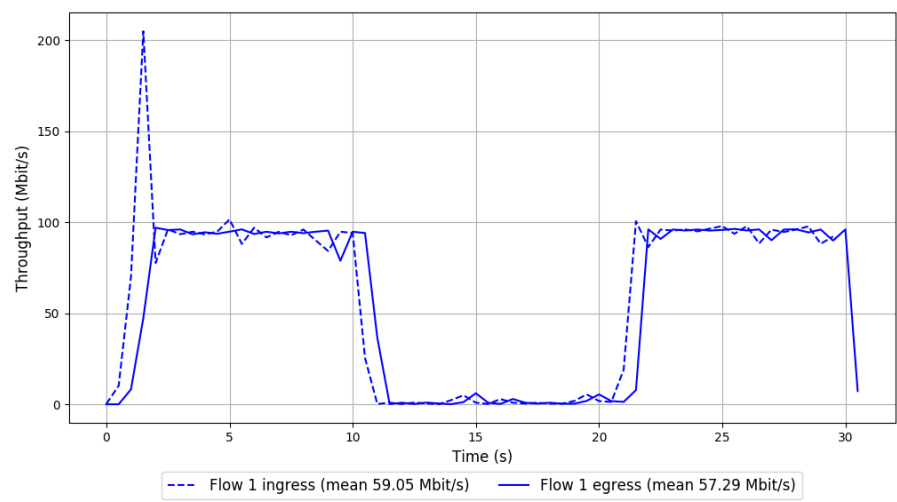
-- Flow 1:

Average throughput: 57.29 Mbit/s

95th percentile per-packet one-way delay: 88.571 ms

Loss rate: 2.93%

Run 3: Report of FillP — Data Link

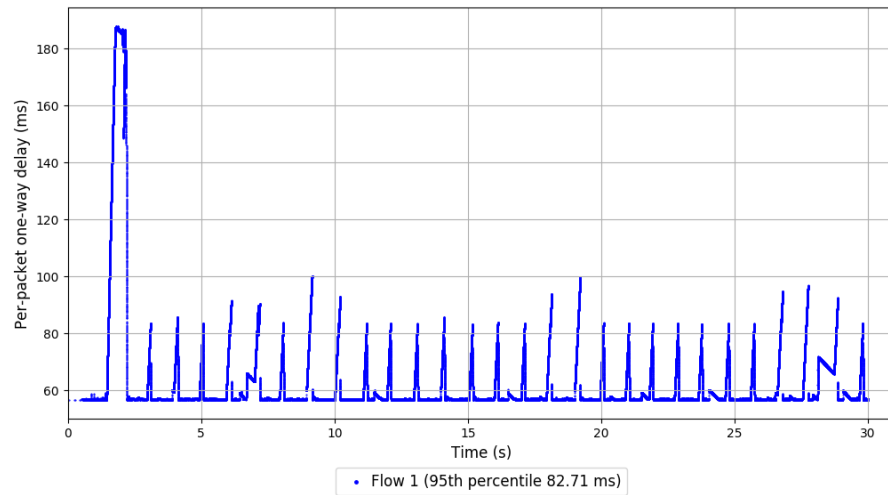
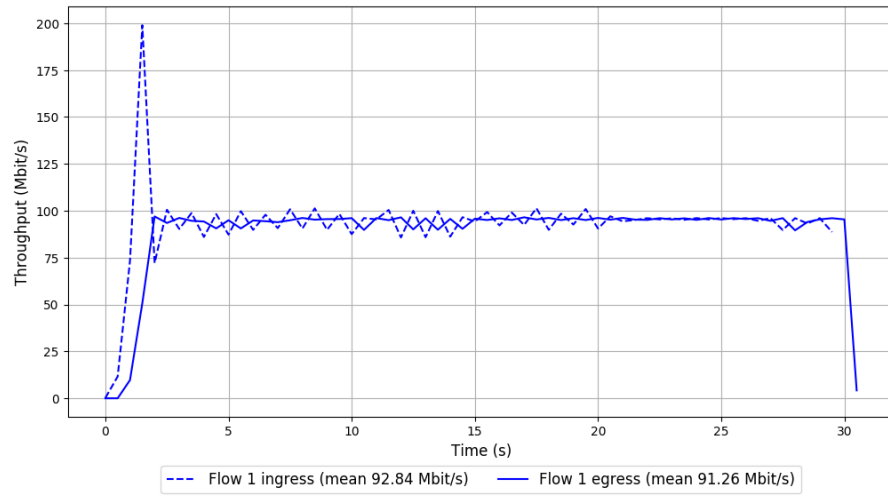


Run 4: Statistics of FillP

Start at: 2019-01-24 21:34:05
End at: 2019-01-24 21:34:35
Local clock offset: -0.44 ms
Remote clock offset: -2.177 ms

Below is generated by plot.py at 2019-01-24 23:17:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 91.26 Mbit/s
95th percentile per-packet one-way delay: 82.712 ms
Loss rate: 1.70%
-- Flow 1:
Average throughput: 91.26 Mbit/s
95th percentile per-packet one-way delay: 82.712 ms
Loss rate: 1.70%

Run 4: Report of FillP — Data Link

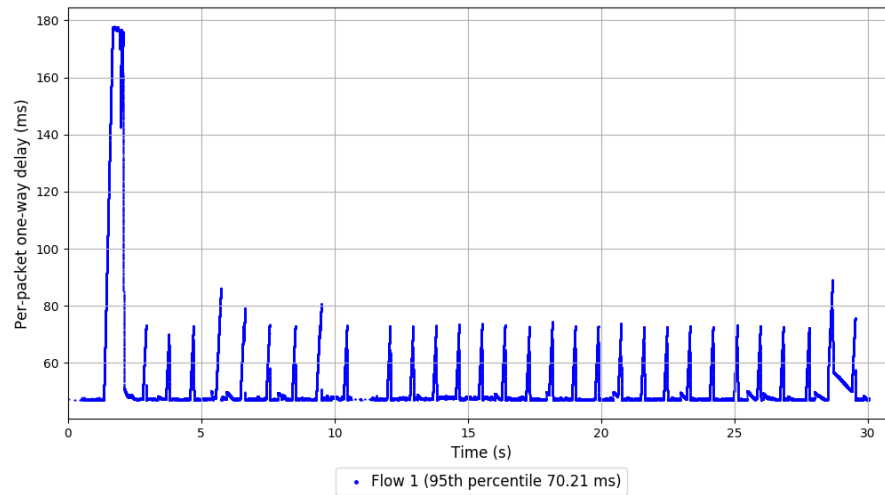
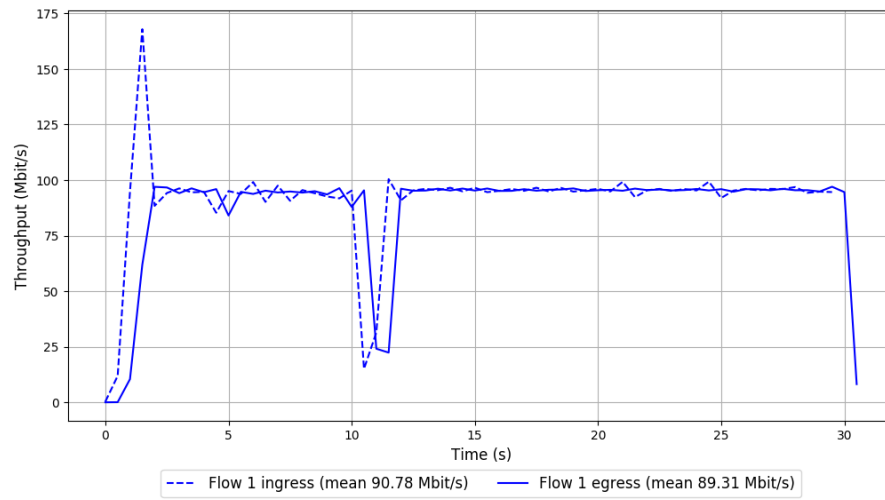


Run 5: Statistics of FillP

Start at: 2019-01-24 22:43:32
End at: 2019-01-24 22:44:02
Local clock offset: -0.623 ms
Remote clock offset: -0.768 ms

Below is generated by plot.py at 2019-01-24 23:17:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 89.31 Mbit/s
95th percentile per-packet one-way delay: 70.209 ms
Loss rate: 1.62%
-- Flow 1:
Average throughput: 89.31 Mbit/s
95th percentile per-packet one-way delay: 70.209 ms
Loss rate: 1.62%

Run 5: Report of FillP — Data Link

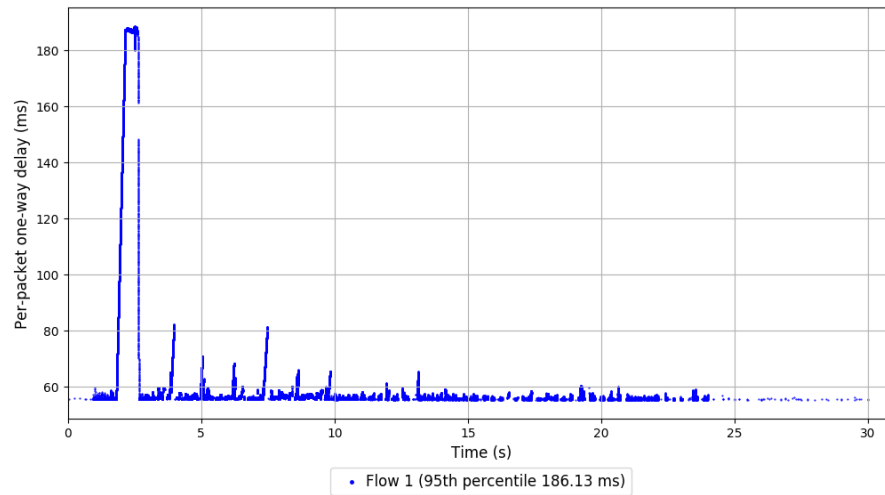
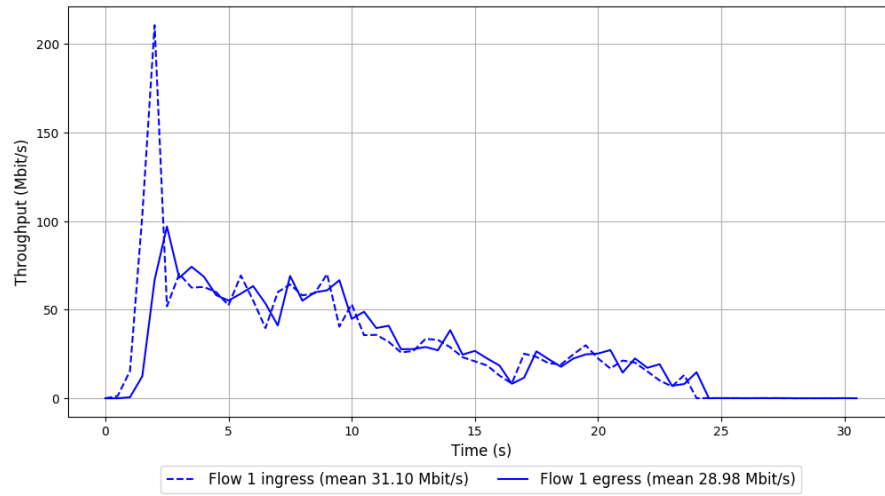


Run 1: Statistics of FillP-Sheep

Start at: 2019-01-24 14:21:17
End at: 2019-01-24 14:21:47
Local clock offset: -2.287 ms
Remote clock offset: 46.655 ms

Below is generated by plot.py at 2019-01-24 23:17:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 28.98 Mbit/s
95th percentile per-packet one-way delay: 186.133 ms
Loss rate: 6.84%
-- Flow 1:
Average throughput: 28.98 Mbit/s
95th percentile per-packet one-way delay: 186.133 ms
Loss rate: 6.84%

Run 1: Report of FillP-Sheep — Data Link

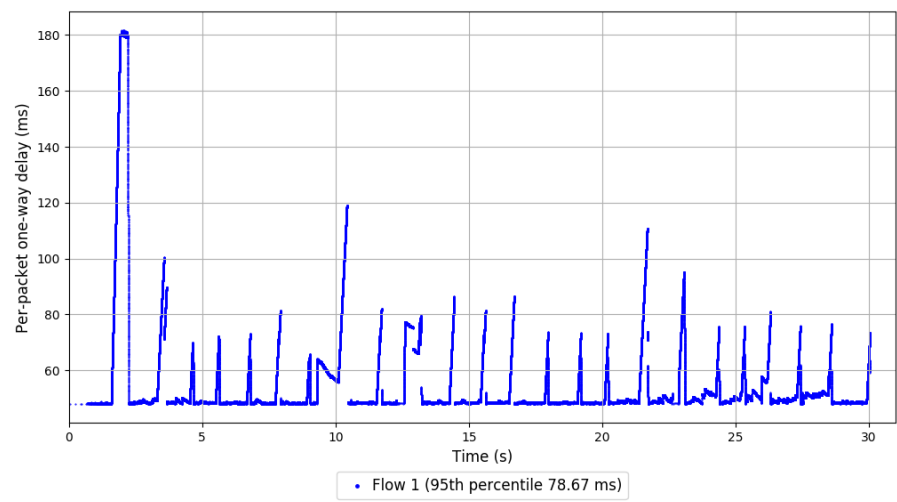
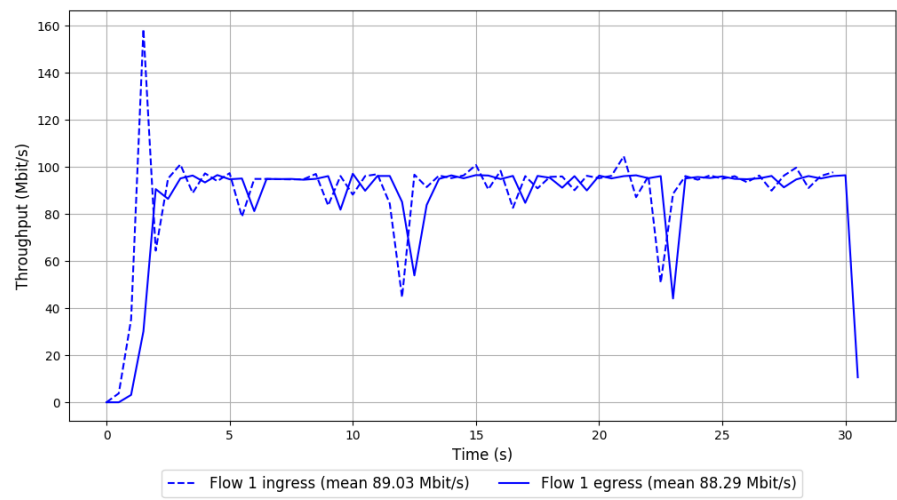


Run 2: Statistics of FillP-Sheep

Start at: 2019-01-24 16:41:11
End at: 2019-01-24 16:41:41
Local clock offset: 4.91 ms
Remote clock offset: 47.605 ms

Below is generated by plot.py at 2019-01-24 23:17:21
Datalink statistics
-- Total of 1 flow:
Average throughput: 88.29 Mbit/s
95th percentile per-packet one-way delay: 78.672 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 88.29 Mbit/s
95th percentile per-packet one-way delay: 78.672 ms
Loss rate: 0.79%

Run 2: Report of FillP-Sheep — Data Link

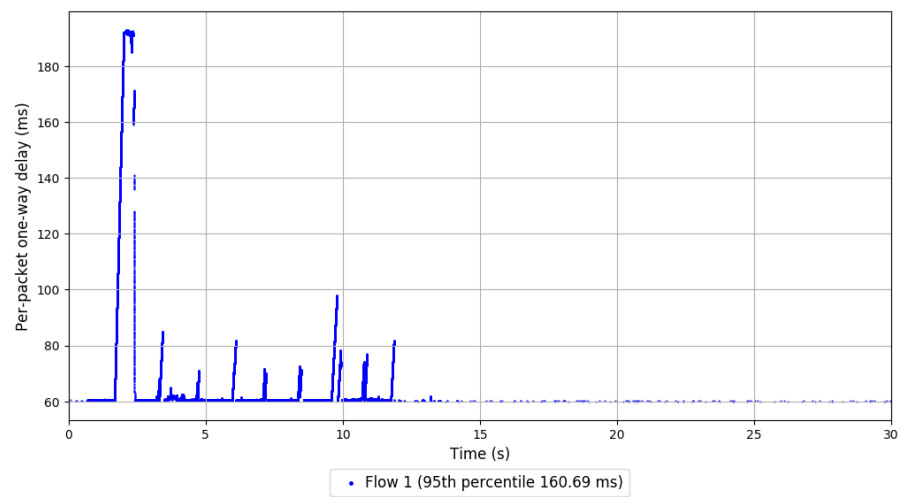
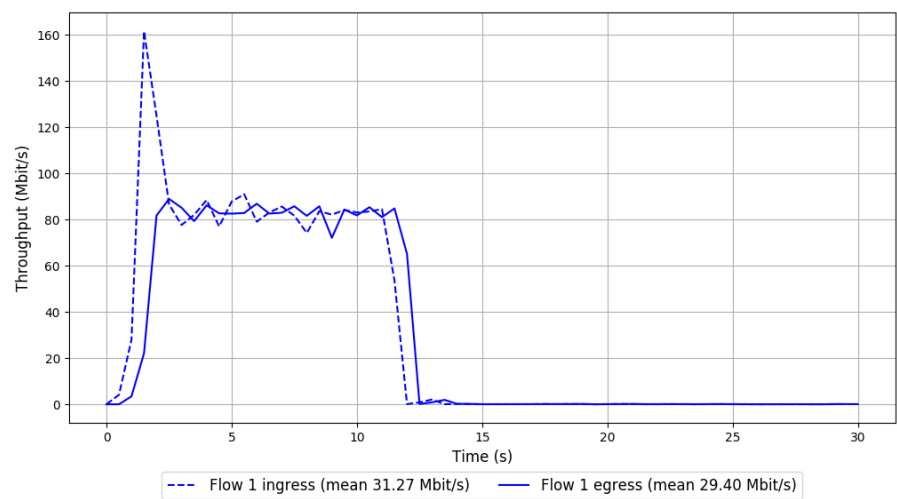


Run 3: Statistics of FillP-Sheep

Start at: 2019-01-24 19:06:56
End at: 2019-01-24 19:07:26
Local clock offset: 1.073 ms
Remote clock offset: 57.969 ms

Below is generated by plot.py at 2019-01-24 23:17:21
Datalink statistics
-- Total of 1 flow:
Average throughput: 29.40 Mbit/s
95th percentile per-packet one-way delay: 160.691 ms
Loss rate: 5.99%
-- Flow 1:
Average throughput: 29.40 Mbit/s
95th percentile per-packet one-way delay: 160.691 ms
Loss rate: 5.99%

Run 3: Report of FillP-Sheep — Data Link

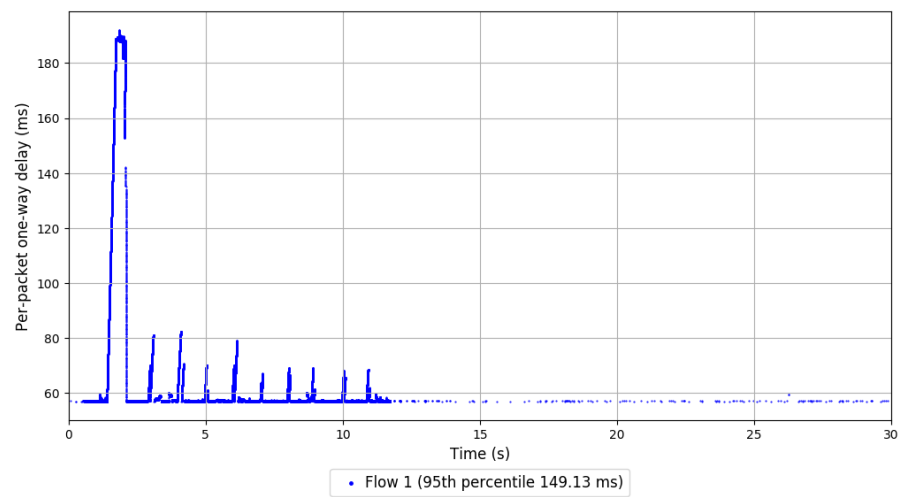
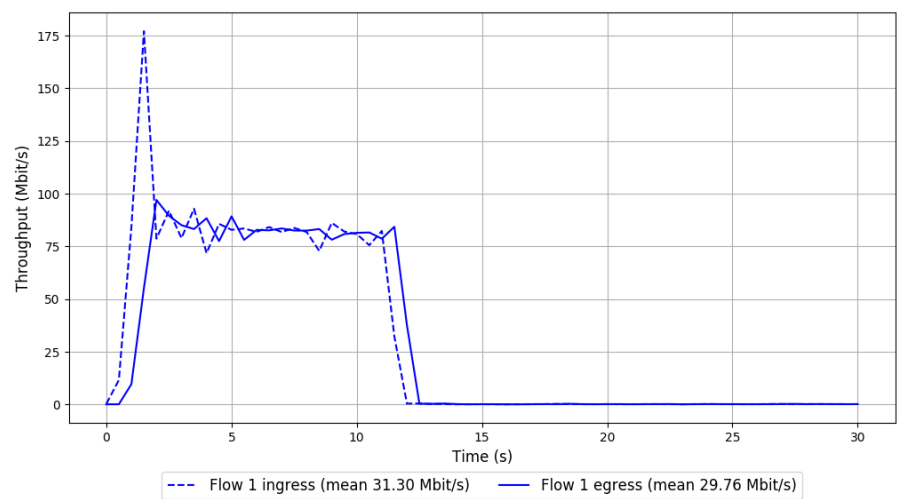


Run 4: Statistics of FillP-Sheep

Start at: 2019-01-24 20:57:09
End at: 2019-01-24 20:57:39
Local clock offset: -6.801 ms
Remote clock offset: -17.151 ms

Below is generated by plot.py at 2019-01-24 23:17:21
Datalink statistics
-- Total of 1 flow:
Average throughput: 29.76 Mbit/s
95th percentile per-packet one-way delay: 149.127 ms
Loss rate: 4.93%
-- Flow 1:
Average throughput: 29.76 Mbit/s
95th percentile per-packet one-way delay: 149.127 ms
Loss rate: 4.93%

Run 4: Report of FillP-Sheep — Data Link



Run 5: Statistics of FillP-Sheep

Start at: 2019-01-24 22:18:53

End at: 2019-01-24 22:19:23

Local clock offset: 3.54 ms

Remote clock offset: -1.059 ms

Below is generated by plot.py at 2019-01-24 23:17:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 30.18 Mbit/s

95th percentile per-packet one-way delay: 153.014 ms

Loss rate: 4.67%

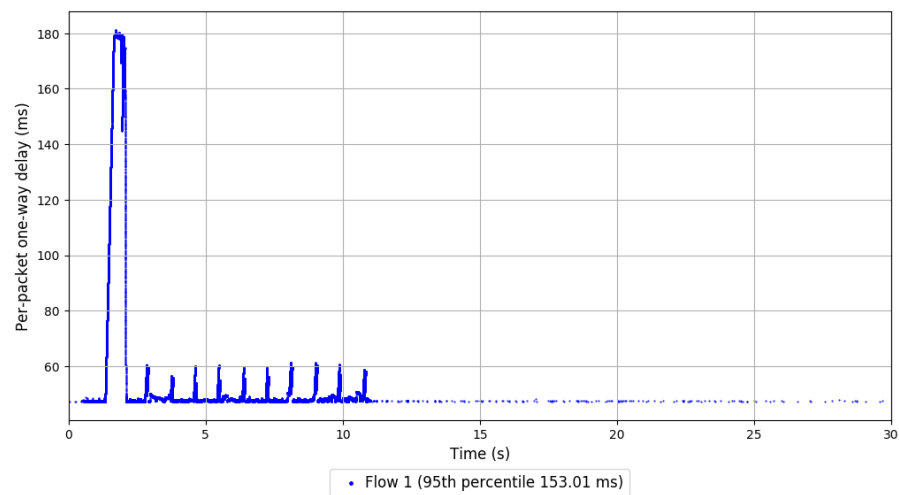
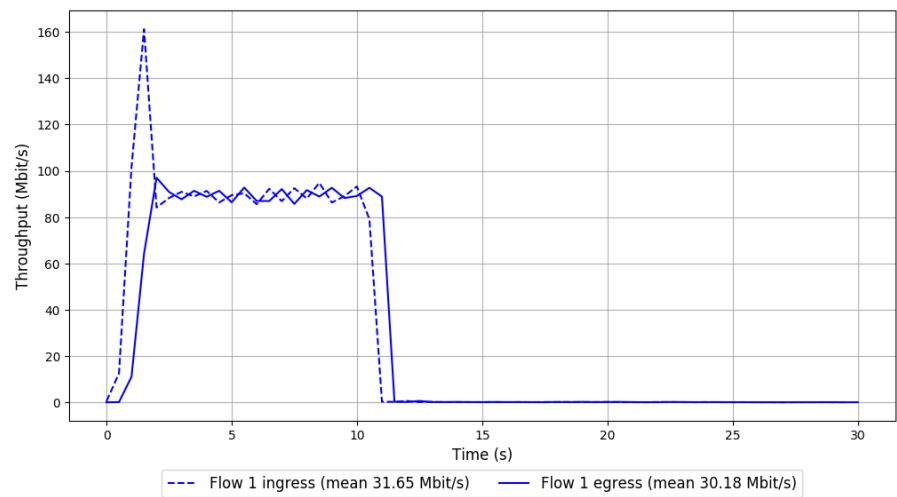
-- Flow 1:

Average throughput: 30.18 Mbit/s

95th percentile per-packet one-way delay: 153.014 ms

Loss rate: 4.67%

Run 5: Report of FillP-Sheep — Data Link

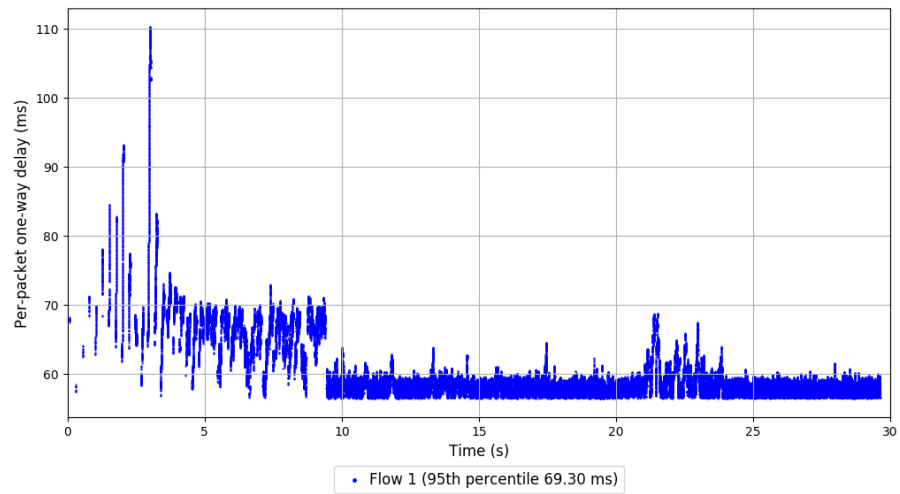
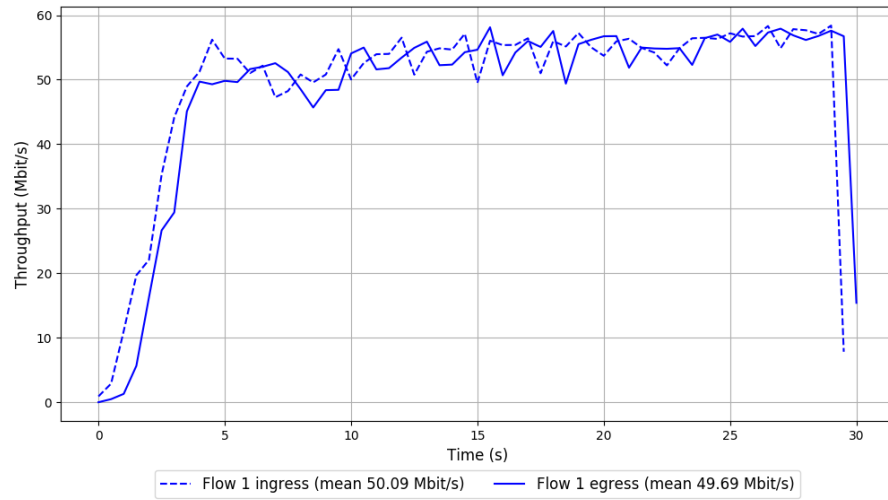


Run 1: Statistics of Indigo

Start at: 2019-01-24 14:49:21
End at: 2019-01-24 14:49:51
Local clock offset: 0.319 ms
Remote clock offset: 52.015 ms

Below is generated by plot.py at 2019-01-24 23:17:21
Datalink statistics
-- Total of 1 flow:
Average throughput: 49.69 Mbit/s
95th percentile per-packet one-way delay: 69.298 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 49.69 Mbit/s
95th percentile per-packet one-way delay: 69.298 ms
Loss rate: 0.83%

Run 1: Report of Indigo — Data Link

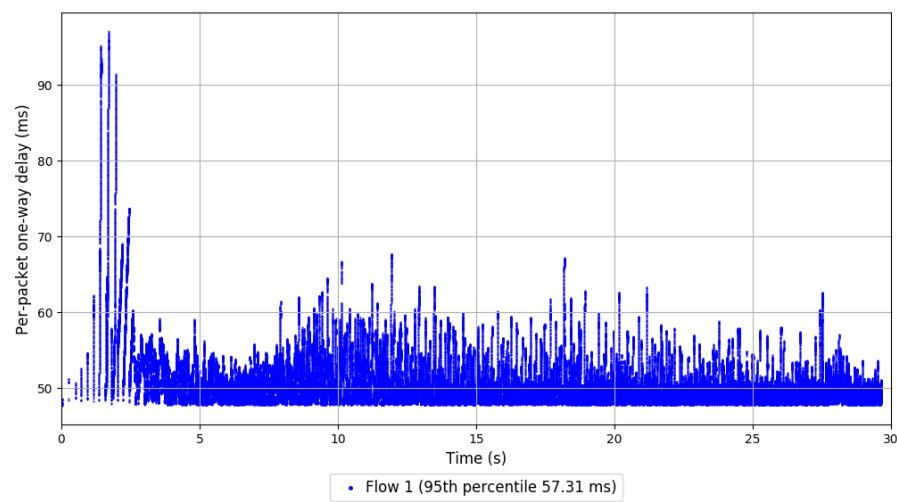
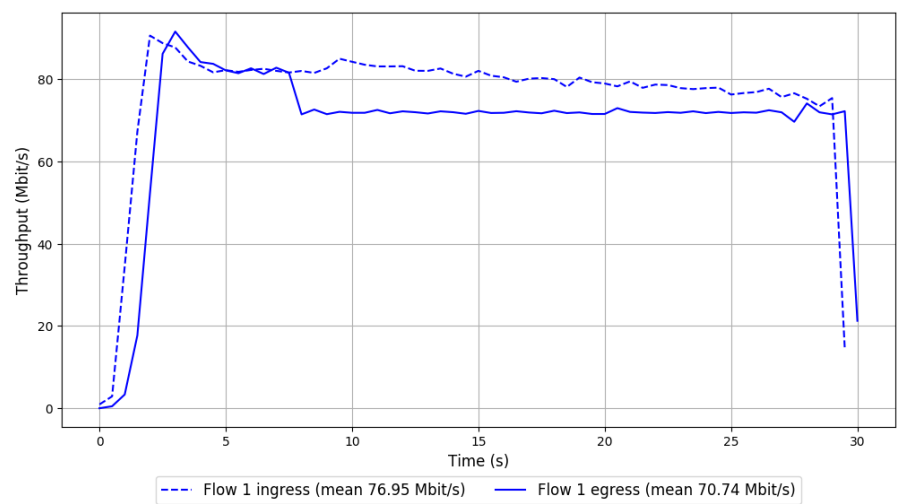


Run 2: Statistics of Indigo

Start at: 2019-01-24 17:24:30
End at: 2019-01-24 17:25:00
Local clock offset: 1.272 ms
Remote clock offset: 46.908 ms

Below is generated by plot.py at 2019-01-24 23:17:24
Datalink statistics
-- Total of 1 flow:
Average throughput: 70.74 Mbit/s
95th percentile per-packet one-way delay: 57.306 ms
Loss rate: 8.06%
-- Flow 1:
Average throughput: 70.74 Mbit/s
95th percentile per-packet one-way delay: 57.306 ms
Loss rate: 8.06%

Run 2: Report of Indigo — Data Link

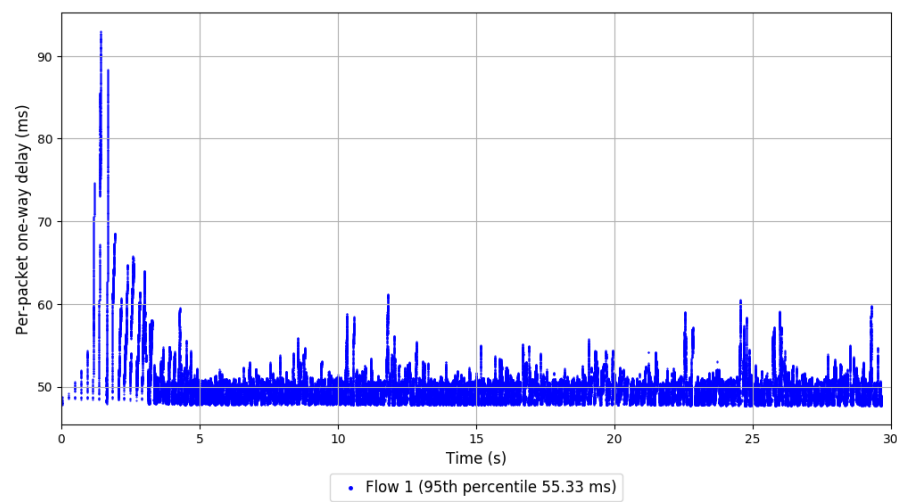
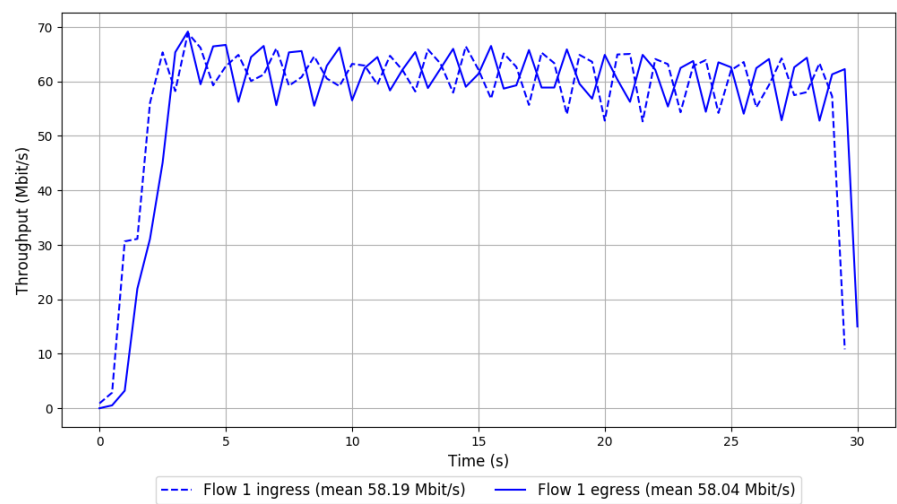


Run 3: Statistics of Indigo

Start at: 2019-01-24 19:35:44
End at: 2019-01-24 19:36:14
Local clock offset: -2.232 ms
Remote clock offset: 63.263 ms

Below is generated by plot.py at 2019-01-24 23:17:24
Datalink statistics
-- Total of 1 flow:
Average throughput: 58.04 Mbit/s
95th percentile per-packet one-way delay: 55.333 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 58.04 Mbit/s
95th percentile per-packet one-way delay: 55.333 ms
Loss rate: 0.25%

Run 3: Report of Indigo — Data Link

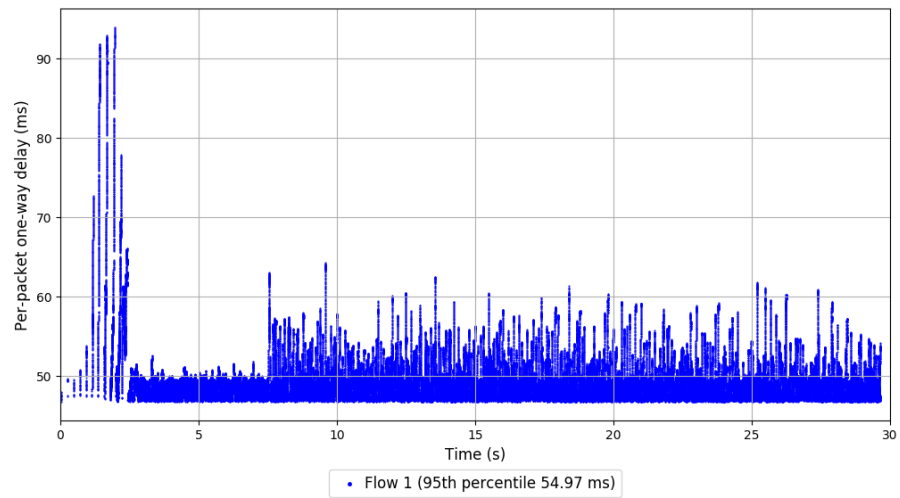
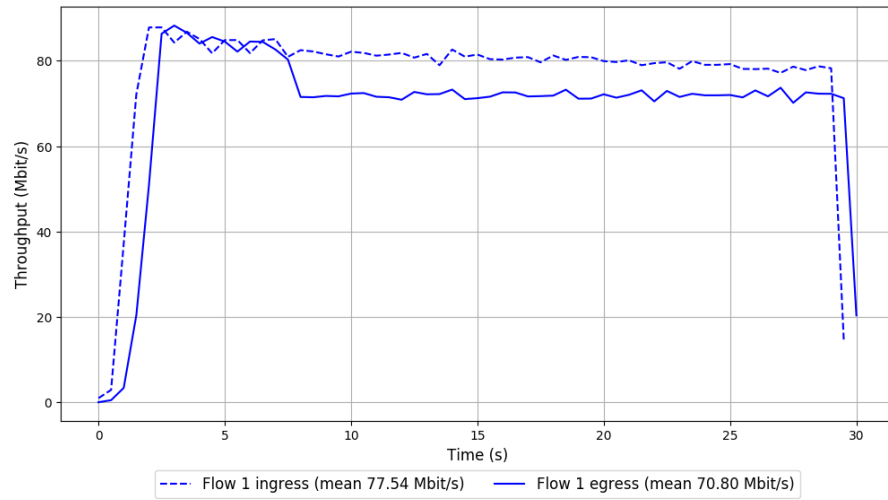


Run 4: Statistics of Indigo

Start at: 2019-01-24 21:19:41
End at: 2019-01-24 21:20:11
Local clock offset: -1.251 ms
Remote clock offset: -2.876 ms

Below is generated by plot.py at 2019-01-24 23:17:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 70.80 Mbit/s
95th percentile per-packet one-way delay: 54.972 ms
Loss rate: 8.69%
-- Flow 1:
Average throughput: 70.80 Mbit/s
95th percentile per-packet one-way delay: 54.972 ms
Loss rate: 8.69%

Run 4: Report of Indigo — Data Link

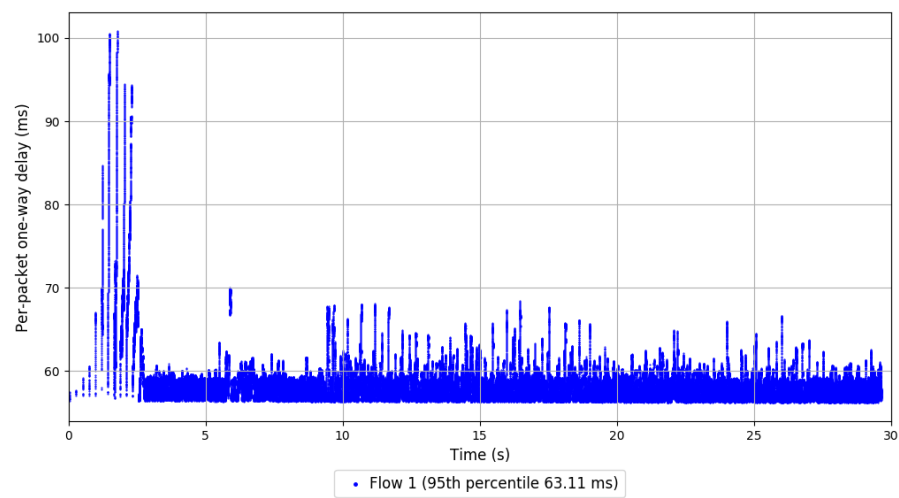
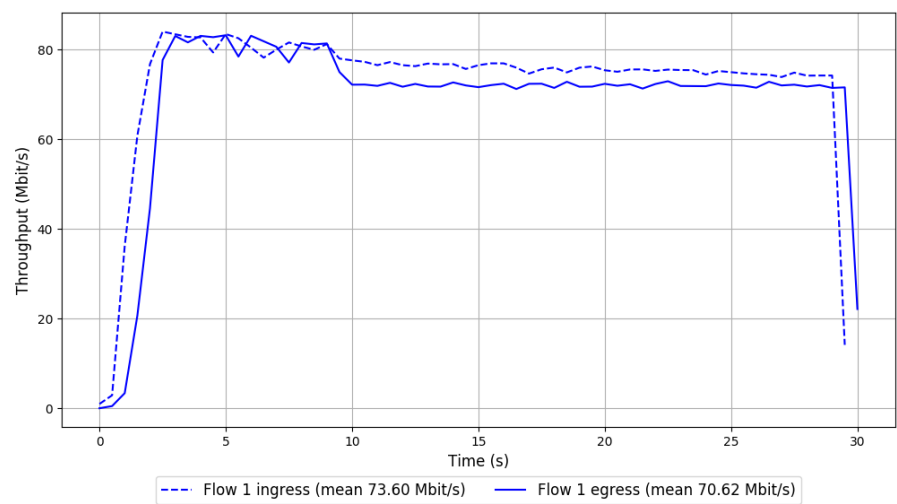


Run 5: Statistics of Indigo

Start at: 2019-01-24 22:33:50
End at: 2019-01-24 22:34:20
Local clock offset: 2.297 ms
Remote clock offset: -0.499 ms

Below is generated by plot.py at 2019-01-24 23:17:27
Datalink statistics
-- Total of 1 flow:
Average throughput: 70.62 Mbit/s
95th percentile per-packet one-way delay: 63.113 ms
Loss rate: 4.04%
-- Flow 1:
Average throughput: 70.62 Mbit/s
95th percentile per-packet one-way delay: 63.113 ms
Loss rate: 4.04%

Run 5: Report of Indigo — Data Link

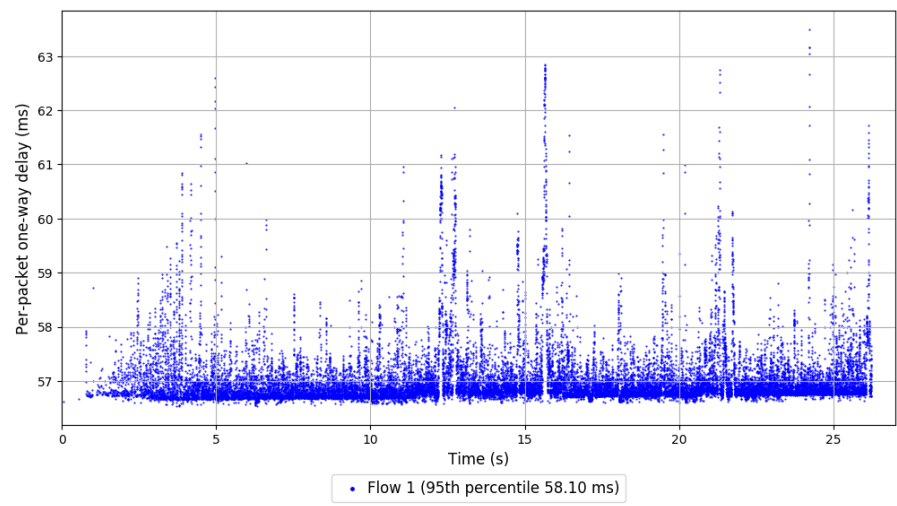
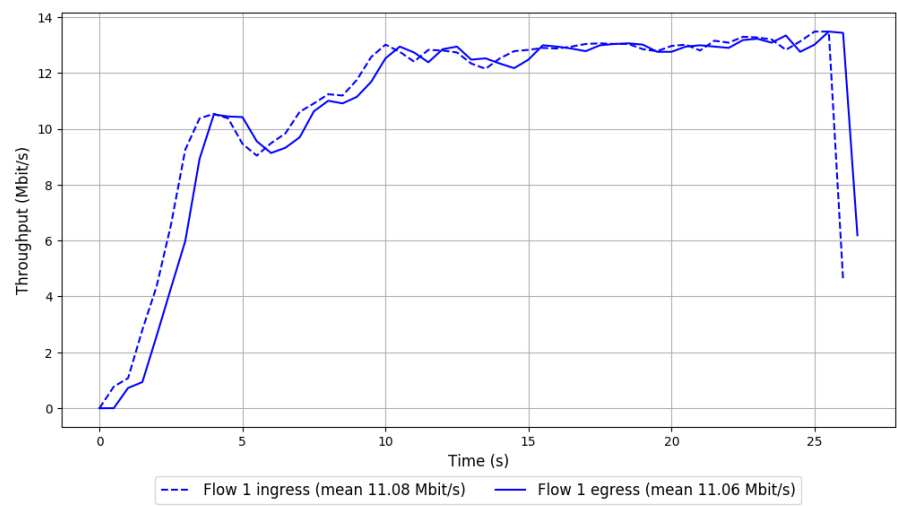


Run 1: Statistics of Indigo-MusesC3

Start at: 2019-01-24 14:46:49
End at: 2019-01-24 14:47:19
Local clock offset: 0.342 ms
Remote clock offset: 52.636 ms

Below is generated by plot.py at 2019-01-24 23:17:27
Datalink statistics
-- Total of 1 flow:
Average throughput: 11.06 Mbit/s
95th percentile per-packet one-way delay: 58.105 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 11.06 Mbit/s
95th percentile per-packet one-way delay: 58.105 ms
Loss rate: 0.21%

Run 1: Report of Indigo-MusesC3 — Data Link

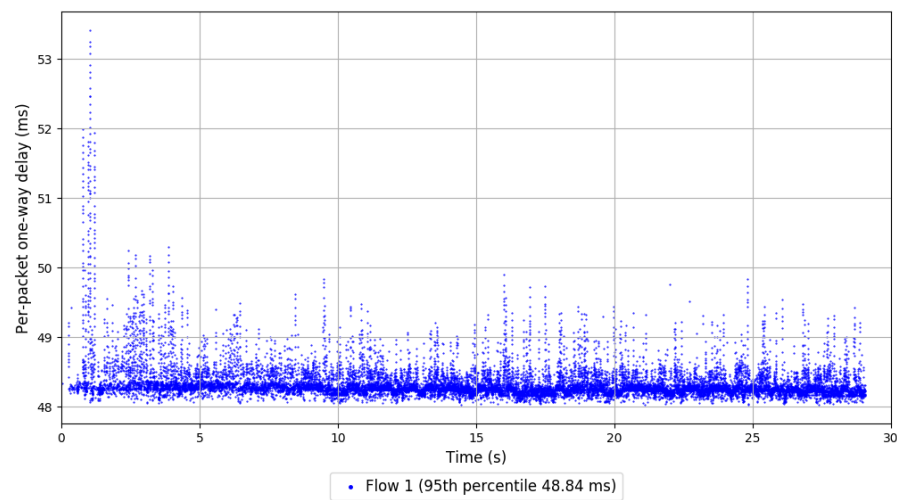
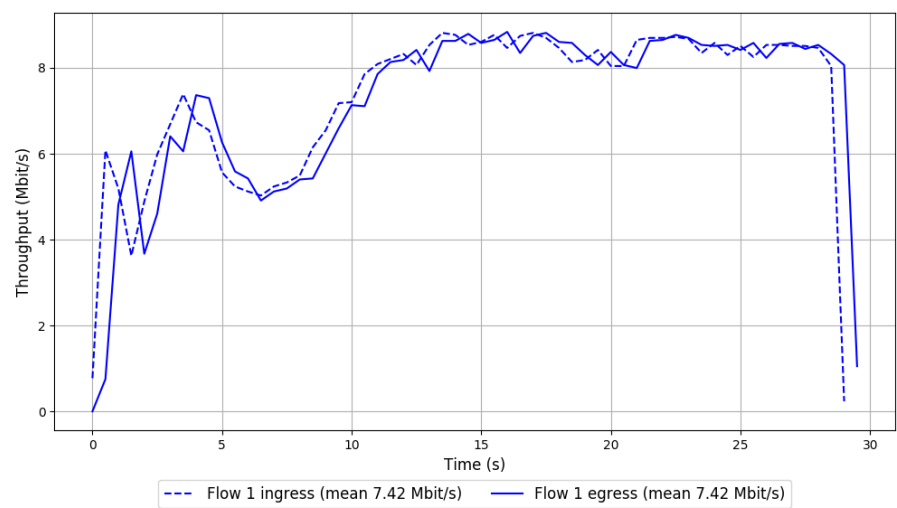


Run 2: Statistics of Indigo-MusesC3

Start at: 2019-01-24 17:21:41
End at: 2019-01-24 17:22:11
Local clock offset: 1.394 ms
Remote clock offset: 47.705 ms

Below is generated by plot.py at 2019-01-24 23:17:27
Datalink statistics
-- Total of 1 flow:
Average throughput: 7.42 Mbit/s
95th percentile per-packet one-way delay: 48.835 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.42 Mbit/s
95th percentile per-packet one-way delay: 48.835 ms
Loss rate: 0.00%

Run 2: Report of Indigo-MusesC3 — Data Link

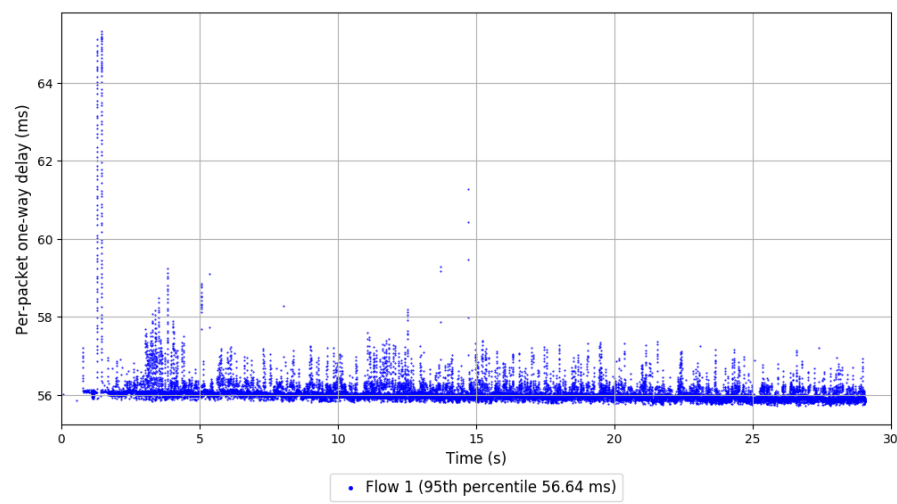
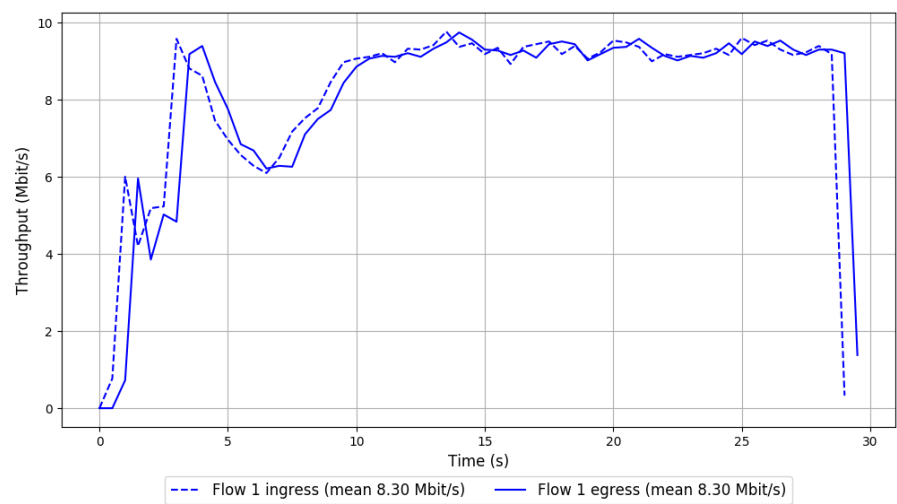


Run 3: Statistics of Indigo-MusesC3

Start at: 2019-01-24 19:32:58
End at: 2019-01-24 19:33:28
Local clock offset: -1.733 ms
Remote clock offset: 62.364 ms

Below is generated by plot.py at 2019-01-24 23:17:27
Datalink statistics
-- Total of 1 flow:
Average throughput: 8.30 Mbit/s
95th percentile per-packet one-way delay: 56.637 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 8.30 Mbit/s
95th percentile per-packet one-way delay: 56.637 ms
Loss rate: 0.00%

Run 3: Report of Indigo-MusesC3 — Data Link

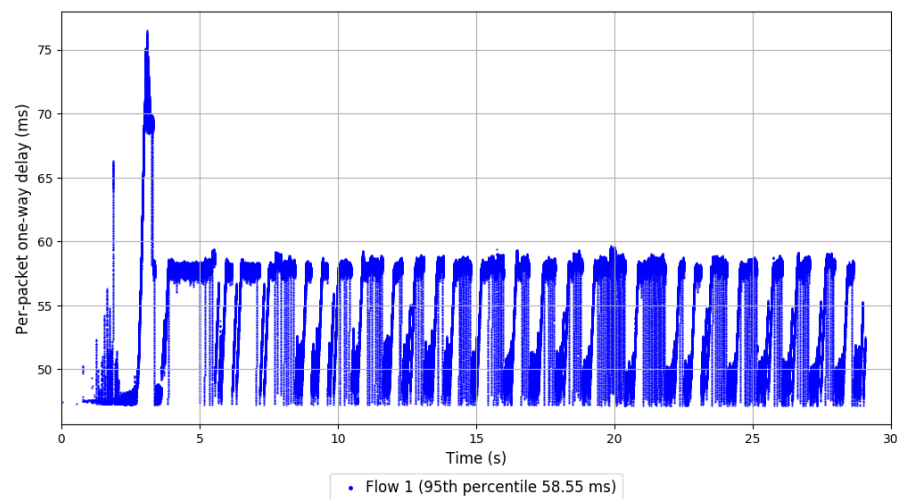
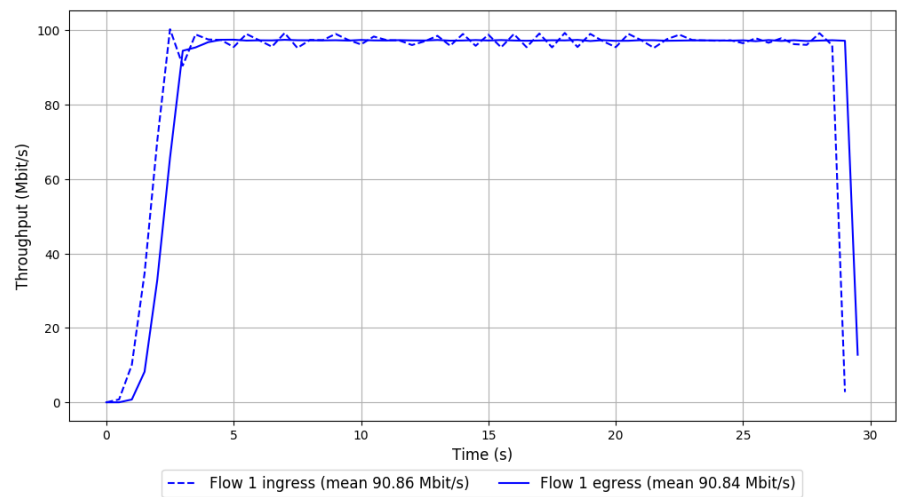


Run 4: Statistics of Indigo-MusesC3

Start at: 2019-01-24 21:10:28
End at: 2019-01-24 21:10:58
Local clock offset: -2.649 ms
Remote clock offset: -4.808 ms

Below is generated by plot.py at 2019-01-24 23:18:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 90.84 Mbit/s
95th percentile per-packet one-way delay: 58.551 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 90.84 Mbit/s
95th percentile per-packet one-way delay: 58.551 ms
Loss rate: 0.00%

Run 4: Report of Indigo-MusesC3 — Data Link

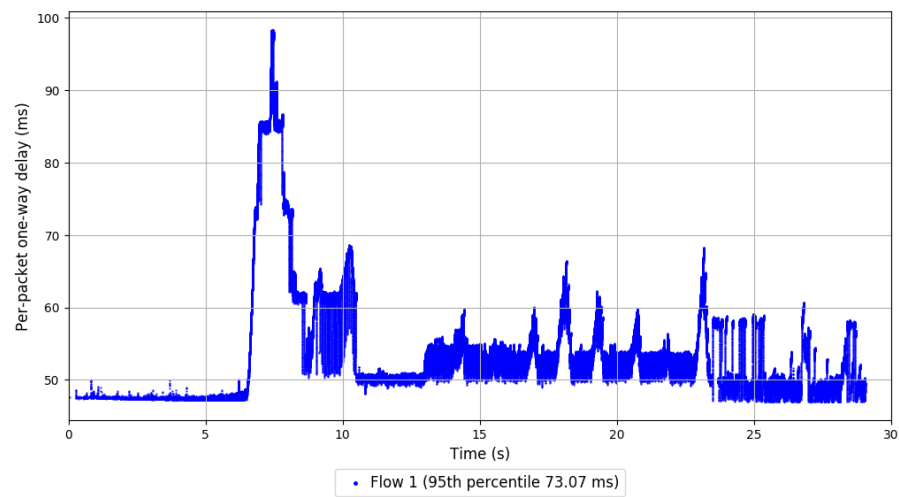
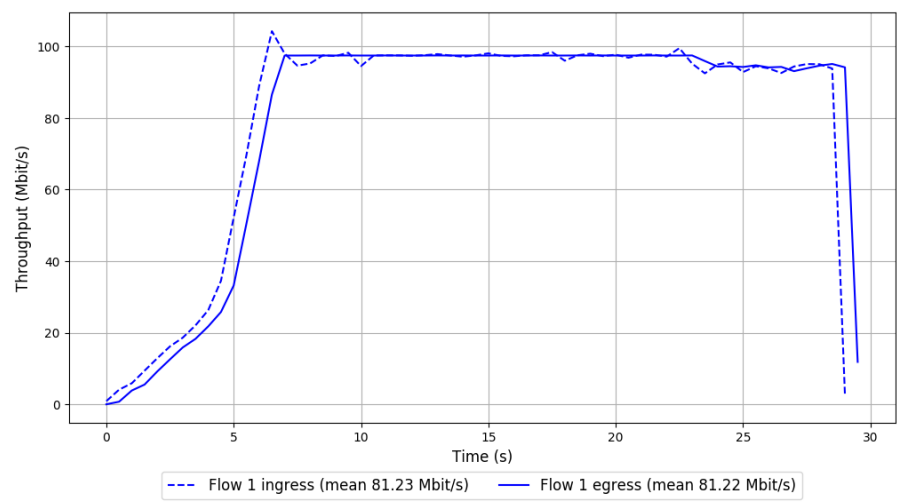


Run 5: Statistics of Indigo-MusesC3

Start at: 2019-01-24 22:29:21
End at: 2019-01-24 22:29:51
Local clock offset: 4.532 ms
Remote clock offset: -0.559 ms

Below is generated by plot.py at 2019-01-24 23:18:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 81.22 Mbit/s
95th percentile per-packet one-way delay: 73.074 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 81.22 Mbit/s
95th percentile per-packet one-way delay: 73.074 ms
Loss rate: 0.00%

Run 5: Report of Indigo-MusesC3 — Data Link



Run 1: Statistics of Indigo-MusesC5

Start at: 2019-01-24 16:16:53

End at: 2019-01-24 16:17:23

Local clock offset: 2.15 ms

Remote clock offset: 46.988 ms

Below is generated by plot.py at 2019-01-24 23:18:12

Datalink statistics

-- Total of 1 flow:

Average throughput: 85.72 Mbit/s

95th percentile per-packet one-way delay: 62.378 ms

Loss rate: 0.00%

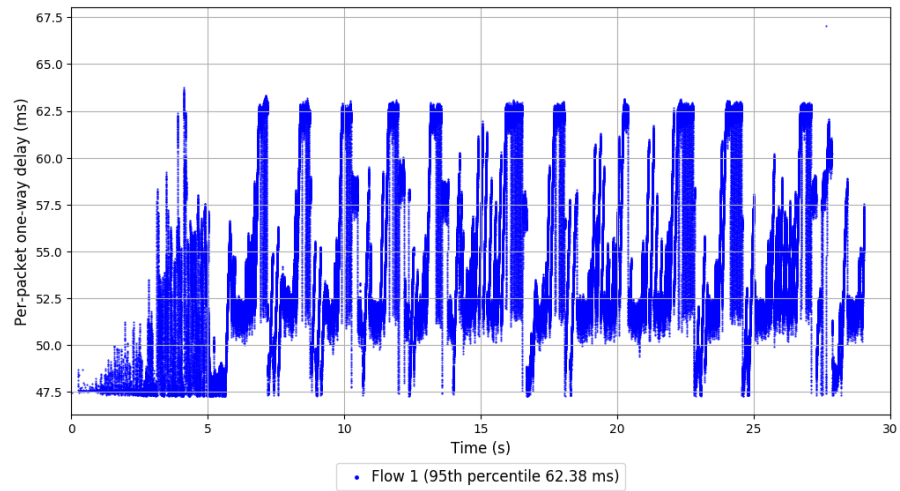
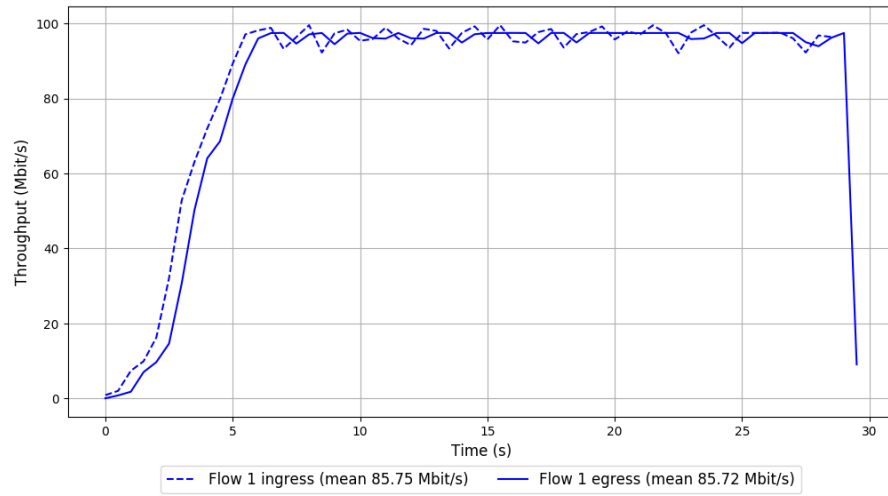
-- Flow 1:

Average throughput: 85.72 Mbit/s

95th percentile per-packet one-way delay: 62.378 ms

Loss rate: 0.00%

Run 1: Report of Indigo-MusesC5 — Data Link

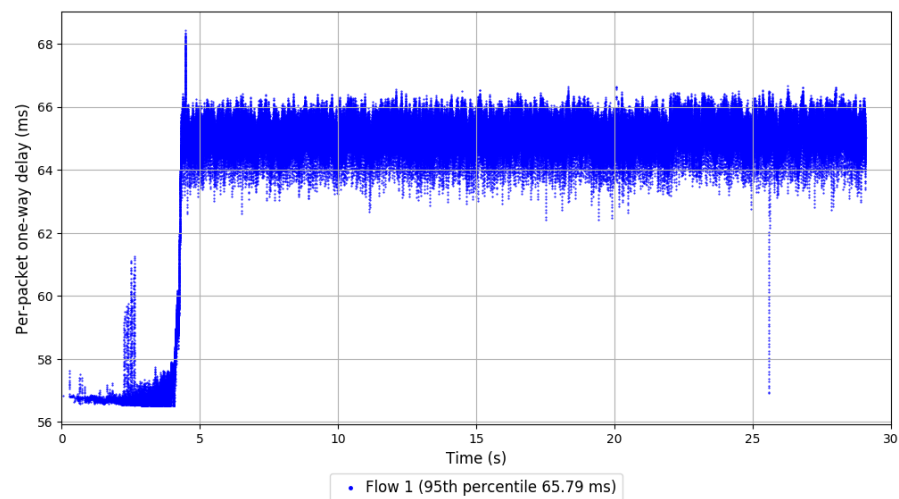
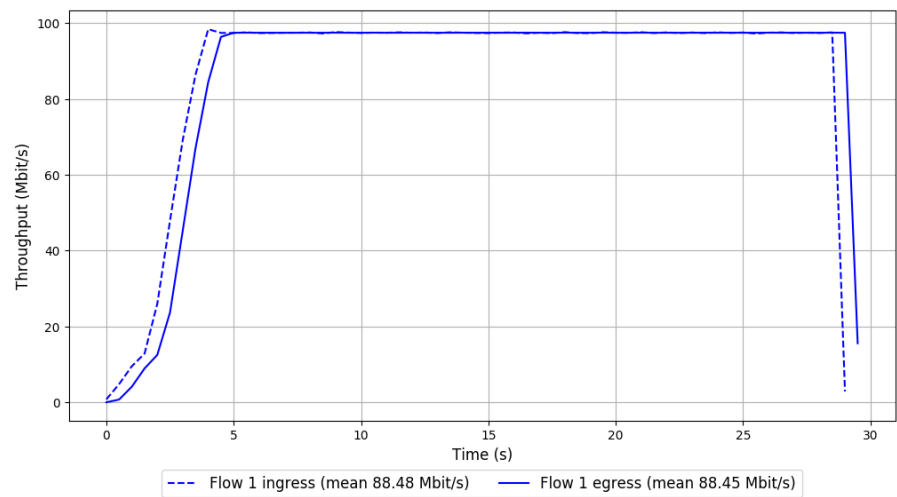


Run 2: Statistics of Indigo-MusesC5

Start at: 2019-01-24 18:40:50
End at: 2019-01-24 18:41:20
Local clock offset: 3.311 ms
Remote clock offset: 25.132 ms

Below is generated by plot.py at 2019-01-24 23:18:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 88.45 Mbit/s
95th percentile per-packet one-way delay: 65.791 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 88.45 Mbit/s
95th percentile per-packet one-way delay: 65.791 ms
Loss rate: 0.00%

Run 2: Report of Indigo-MusesC5 — Data Link

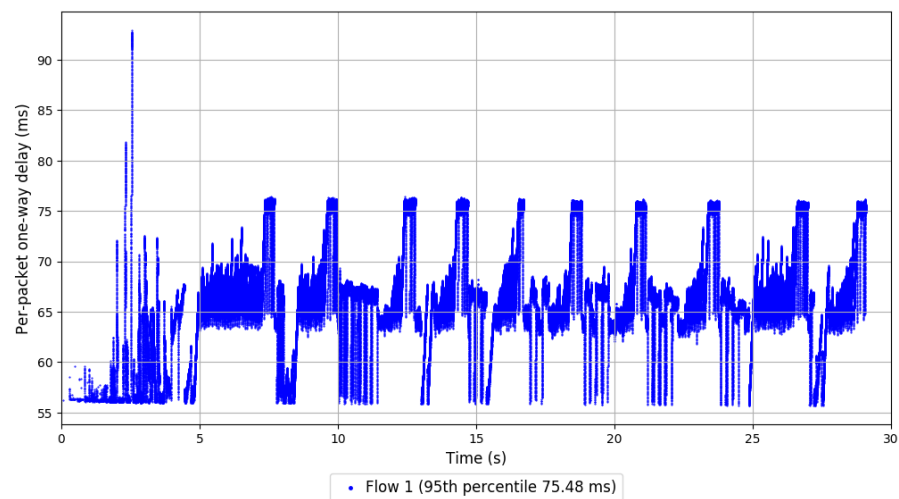
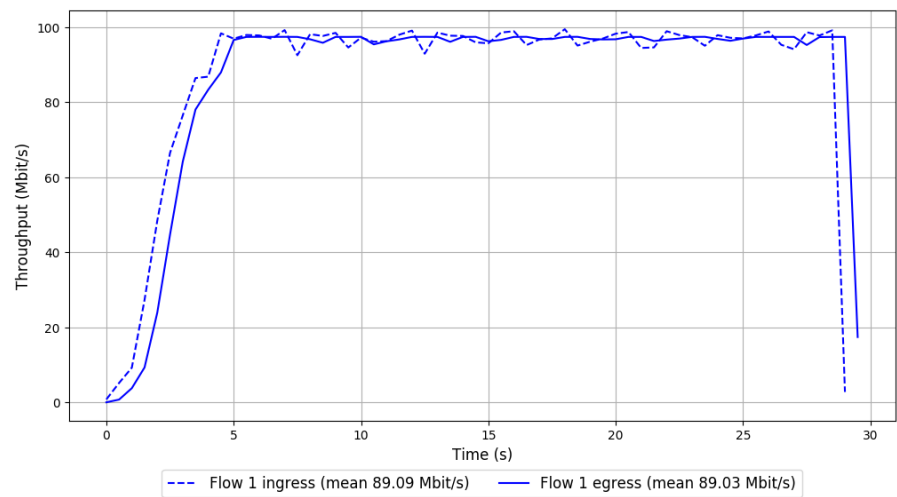


Run 3: Statistics of Indigo-MusesC5

Start at: 2019-01-24 20:32:07
End at: 2019-01-24 20:32:37
Local clock offset: -8.003 ms
Remote clock offset: -18.227 ms

Below is generated by plot.py at 2019-01-24 23:18:23
Datalink statistics
-- Total of 1 flow:
Average throughput: 89.03 Mbit/s
95th percentile per-packet one-way delay: 75.476 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 89.03 Mbit/s
95th percentile per-packet one-way delay: 75.476 ms
Loss rate: 0.00%

Run 3: Report of Indigo-MusesC5 — Data Link



Run 4: Statistics of Indigo-MusesC5

Start at: 2019-01-24 22:03:13

End at: 2019-01-24 22:03:43

Local clock offset: 1.626 ms

Remote clock offset: -1.869 ms

Below is generated by plot.py at 2019-01-24 23:18:26

Datalink statistics

-- Total of 1 flow:

Average throughput: 88.29 Mbit/s

95th percentile per-packet one-way delay: 70.776 ms

Loss rate: 0.00%

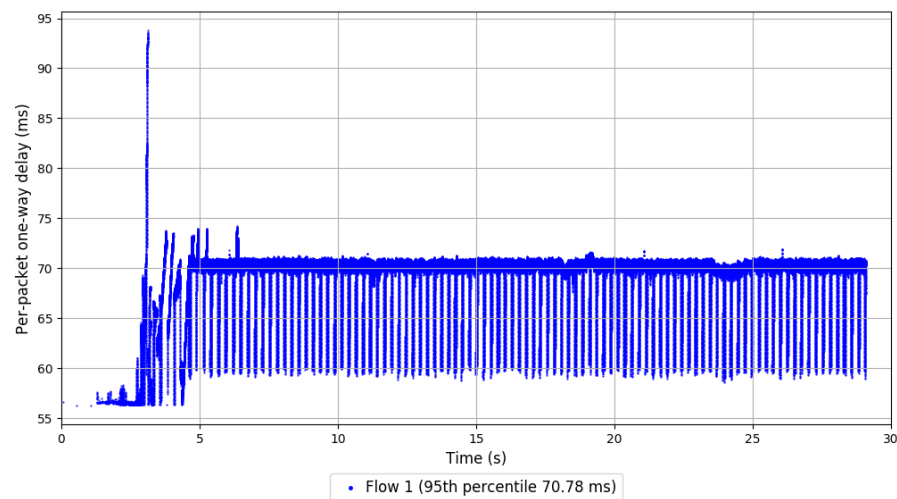
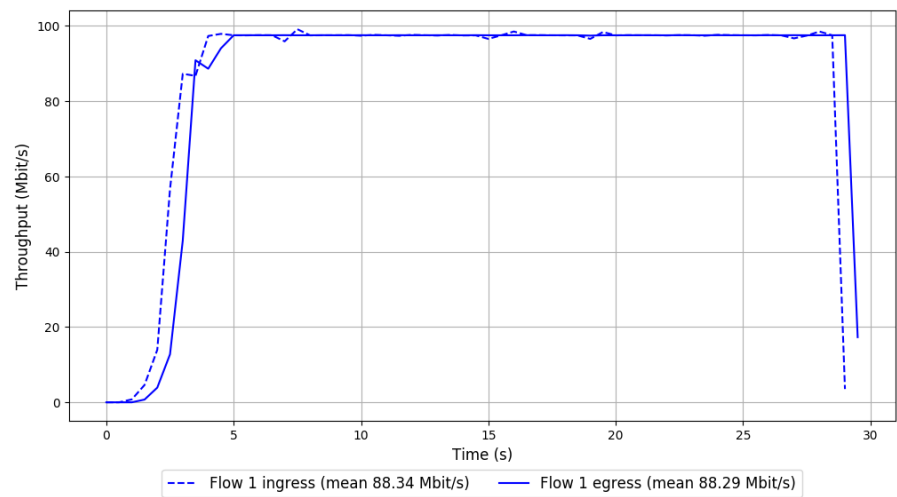
-- Flow 1:

Average throughput: 88.29 Mbit/s

95th percentile per-packet one-way delay: 70.776 ms

Loss rate: 0.00%

Run 4: Report of Indigo-MusesC5 — Data Link

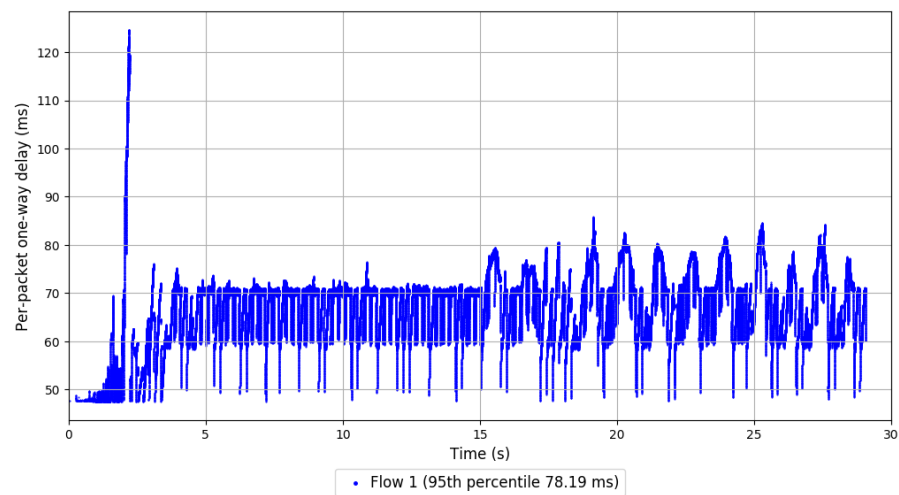
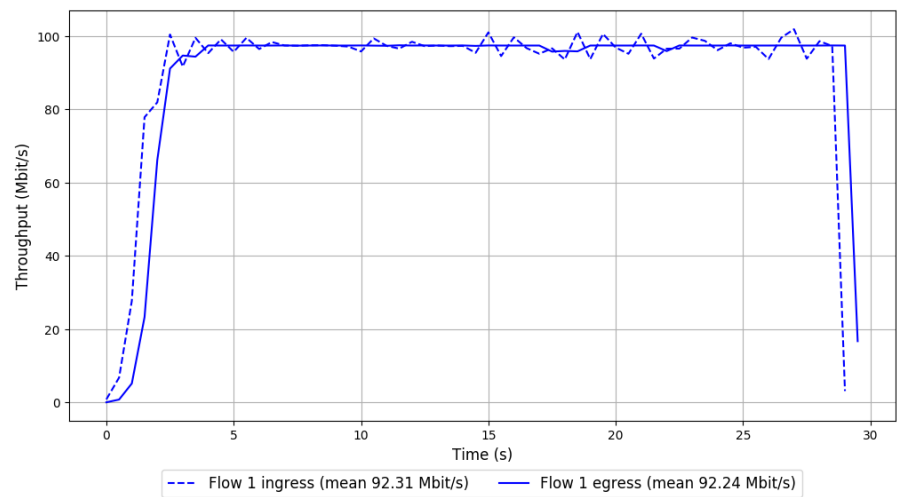


Run 5: Statistics of Indigo-MusesC5

Start at: 2019-01-24 23:03:49
End at: 2019-01-24 23:04:19
Local clock offset: -0.081 ms
Remote clock offset: -0.518 ms

Below is generated by plot.py at 2019-01-24 23:18:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 92.24 Mbit/s
95th percentile per-packet one-way delay: 78.190 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 92.24 Mbit/s
95th percentile per-packet one-way delay: 78.190 ms
Loss rate: 0.00%

Run 5: Report of Indigo-MusesC5 — Data Link

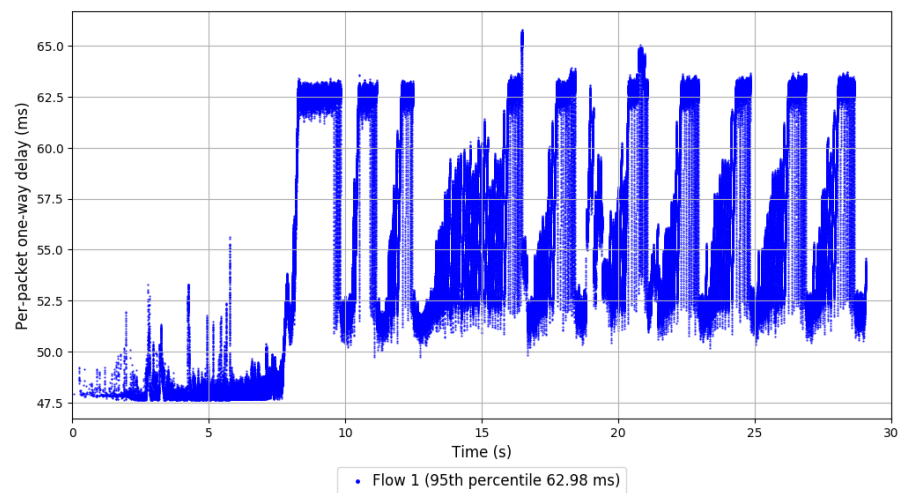
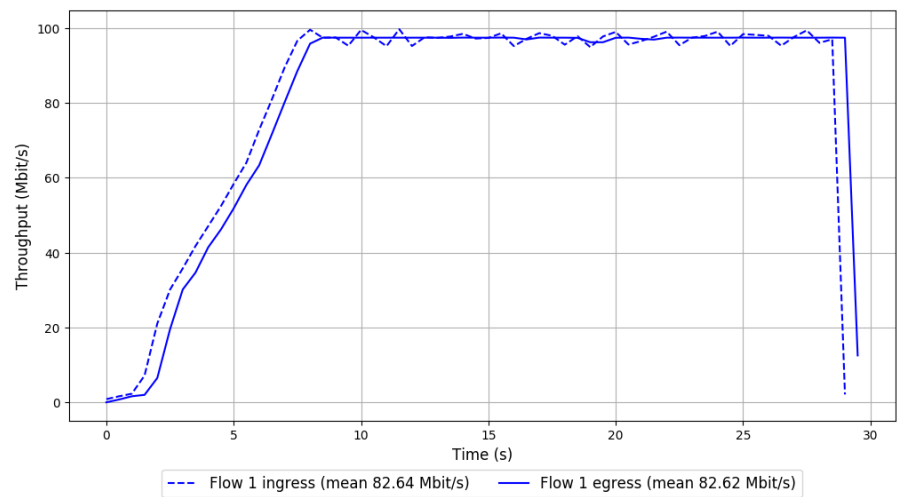


Run 1: Statistics of Indigo-MusesD

Start at: 2019-01-24 15:31:20
End at: 2019-01-24 15:31:50
Local clock offset: -3.81 ms
Remote clock offset: 48.314 ms

Below is generated by plot.py at 2019-01-24 23:18:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 82.62 Mbit/s
95th percentile per-packet one-way delay: 62.976 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 82.62 Mbit/s
95th percentile per-packet one-way delay: 62.976 ms
Loss rate: 0.00%

Run 1: Report of Indigo-MusesD — Data Link

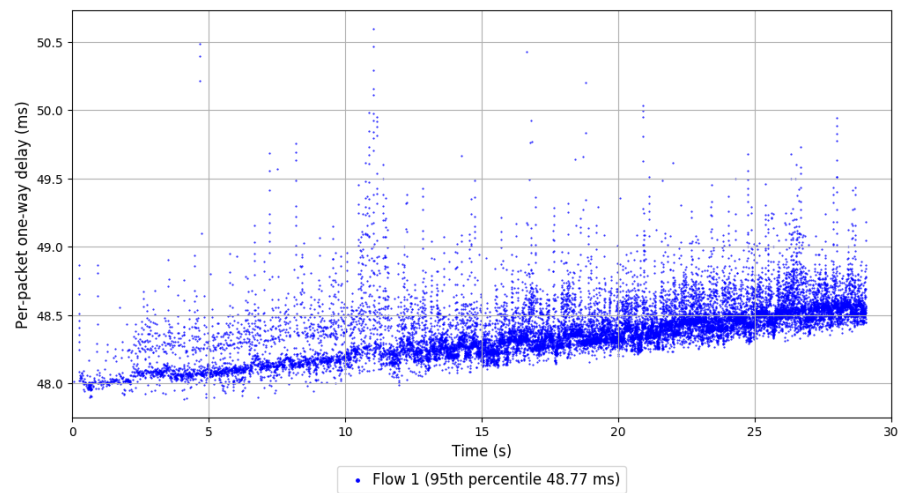
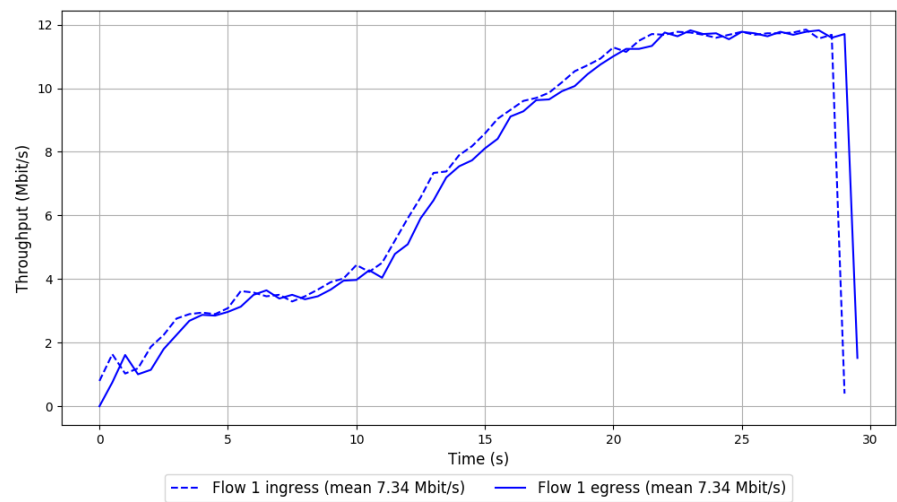


Run 2: Statistics of Indigo-MusesD

Start at: 2019-01-24 18:12:29
End at: 2019-01-24 18:12:59
Local clock offset: 2.208 ms
Remote clock offset: 41.124 ms

Below is generated by plot.py at 2019-01-24 23:18:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 7.34 Mbit/s
95th percentile per-packet one-way delay: 48.771 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.34 Mbit/s
95th percentile per-packet one-way delay: 48.771 ms
Loss rate: 0.00%

Run 2: Report of Indigo-MusesD — Data Link



Run 3: Statistics of Indigo-MusesD

Start at: 2019-01-24 20:10:31

End at: 2019-01-24 20:11:01

Local clock offset: -6.169 ms

Remote clock offset: -15.102 ms

Below is generated by plot.py at 2019-01-24 23:18:33

Datalink statistics

-- Total of 1 flow:

Average throughput: 11.17 Mbit/s

95th percentile per-packet one-way delay: 57.165 ms

Loss rate: 0.00%

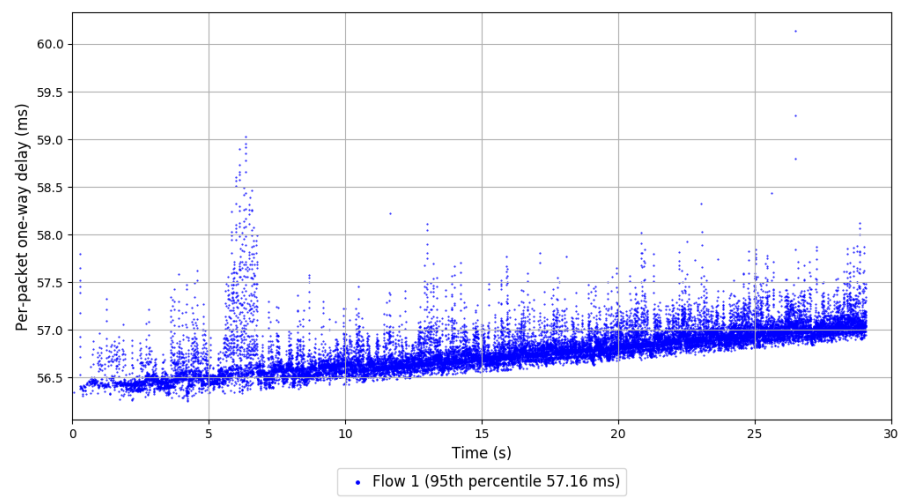
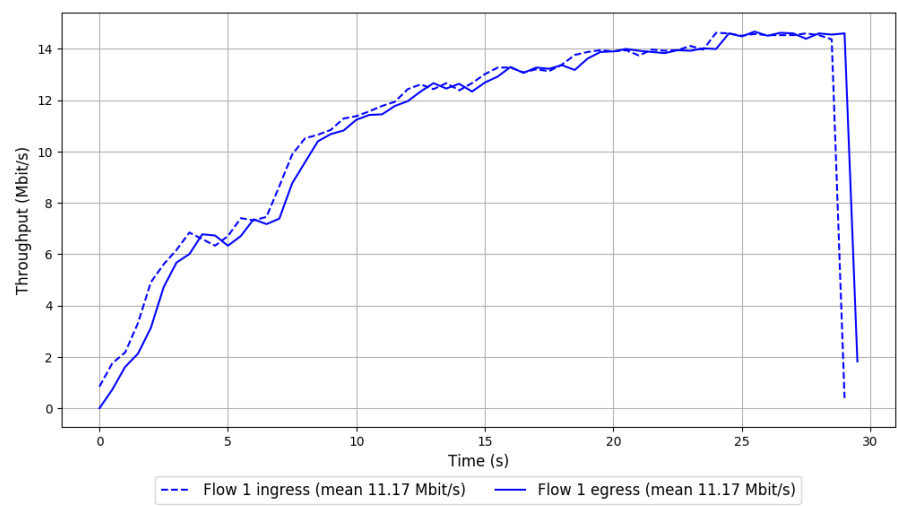
-- Flow 1:

Average throughput: 11.17 Mbit/s

95th percentile per-packet one-way delay: 57.165 ms

Loss rate: 0.00%

Run 3: Report of Indigo-MusesD — Data Link

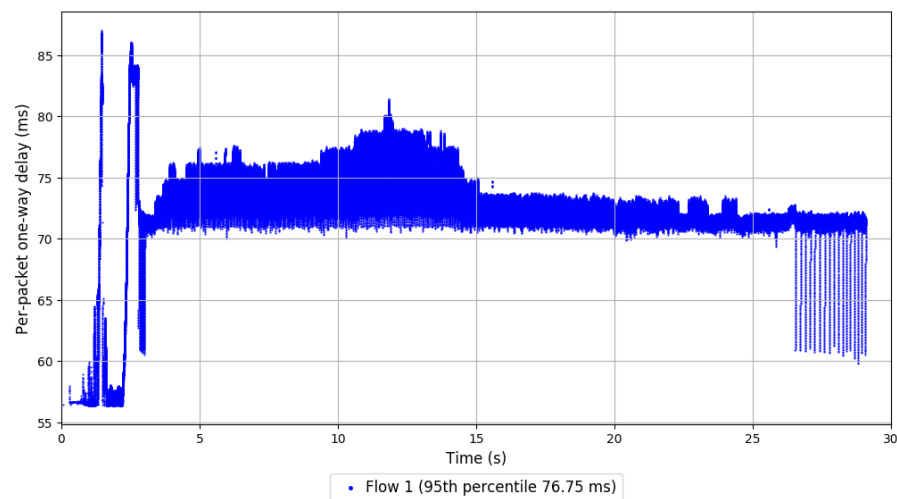
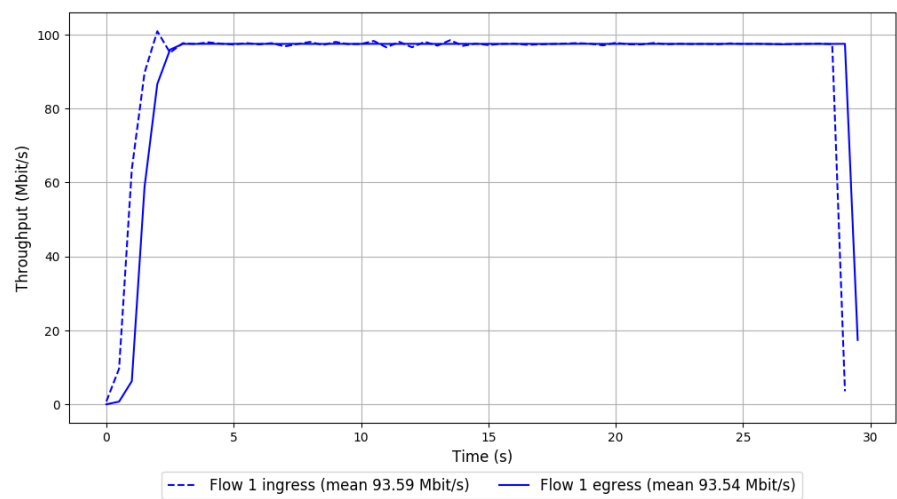


Run 4: Statistics of Indigo-MusesD

Start at: 2019-01-24 21:40:59
End at: 2019-01-24 21:41:29
Local clock offset: -0.093 ms
Remote clock offset: -1.381 ms

Below is generated by plot.py at 2019-01-24 23:19:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 93.54 Mbit/s
95th percentile per-packet one-way delay: 76.748 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 93.54 Mbit/s
95th percentile per-packet one-way delay: 76.748 ms
Loss rate: 0.00%

Run 4: Report of Indigo-MusesD — Data Link



Run 5: Statistics of Indigo-MusesD

Start at: 2019-01-24 22:47:45

End at: 2019-01-24 22:48:15

Local clock offset: -1.159 ms

Remote clock offset: -0.703 ms

Below is generated by plot.py at 2019-01-24 23:19:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 92.79 Mbit/s

95th percentile per-packet one-way delay: 60.123 ms

Loss rate: 0.00%

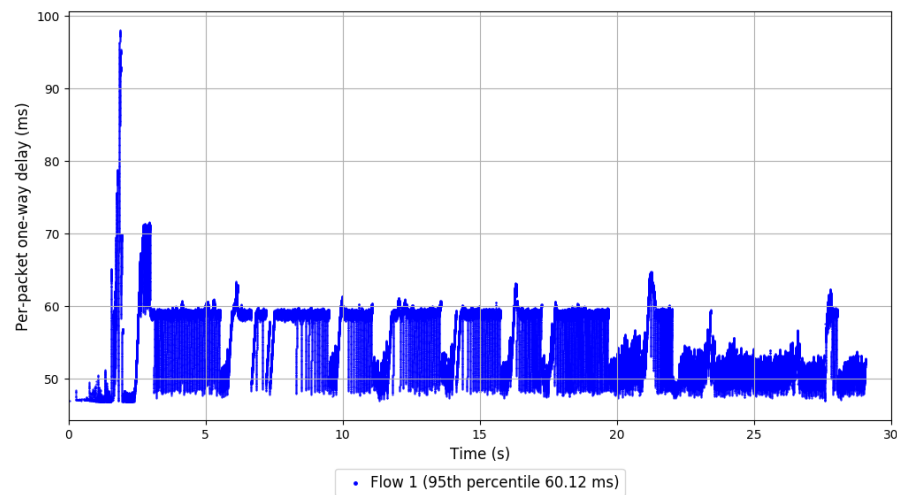
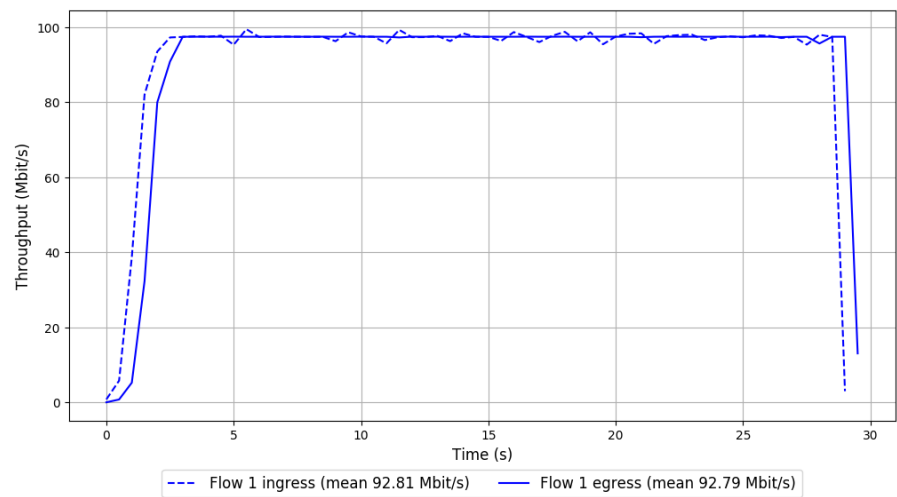
-- Flow 1:

Average throughput: 92.79 Mbit/s

95th percentile per-packet one-way delay: 60.123 ms

Loss rate: 0.00%

Run 5: Report of Indigo-MusesD — Data Link



Run 1: Statistics of Indigo-MusesT

Start at: 2019-01-24 16:35:52

End at: 2019-01-24 16:36:22

Local clock offset: 3.753 ms

Remote clock offset: 47.121 ms

Below is generated by plot.py at 2019-01-24 23:19:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 4.95 Mbit/s

95th percentile per-packet one-way delay: 49.621 ms

Loss rate: 0.00%

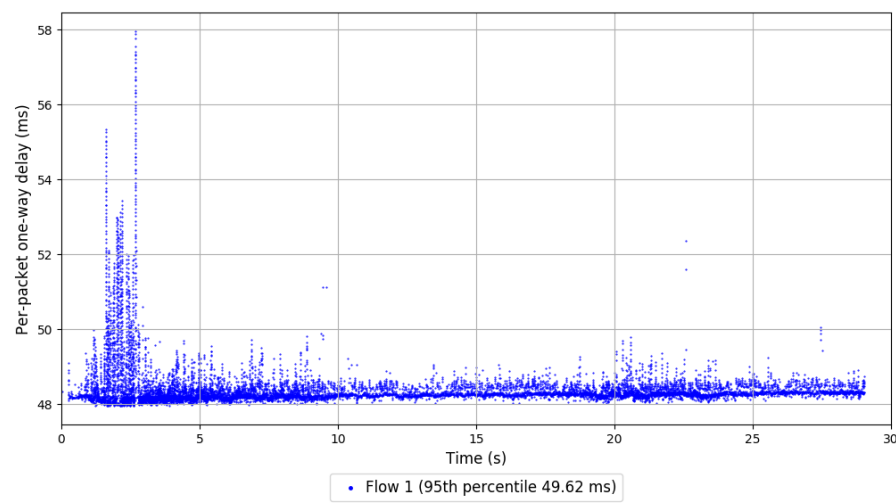
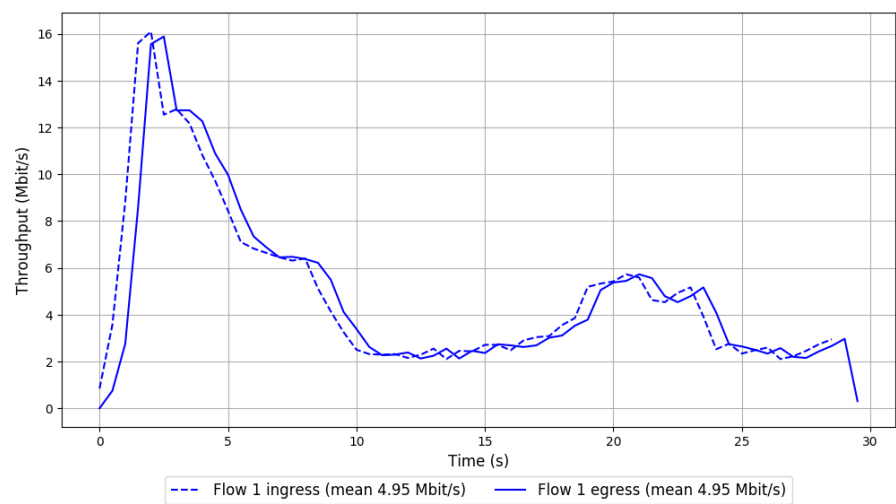
-- Flow 1:

Average throughput: 4.95 Mbit/s

95th percentile per-packet one-way delay: 49.621 ms

Loss rate: 0.00%

Run 1: Report of Indigo-MusesT — Data Link



Run 2: Statistics of Indigo-MusesT

Start at: 2019-01-24 19:02:57

End at: 2019-01-24 19:03:27

Local clock offset: 2.509 ms

Remote clock offset: 51.42 ms

Below is generated by plot.py at 2019-01-24 23:19:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 8.07 Mbit/s

95th percentile per-packet one-way delay: 58.001 ms

Loss rate: 0.00%

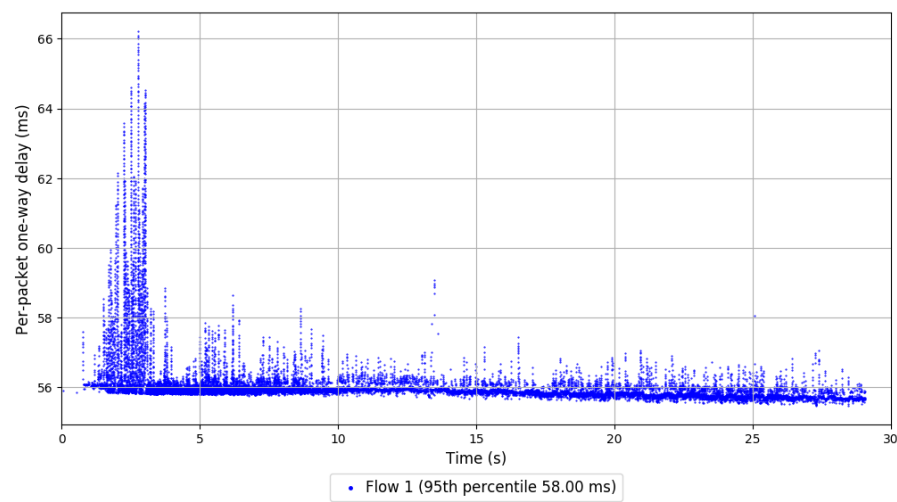
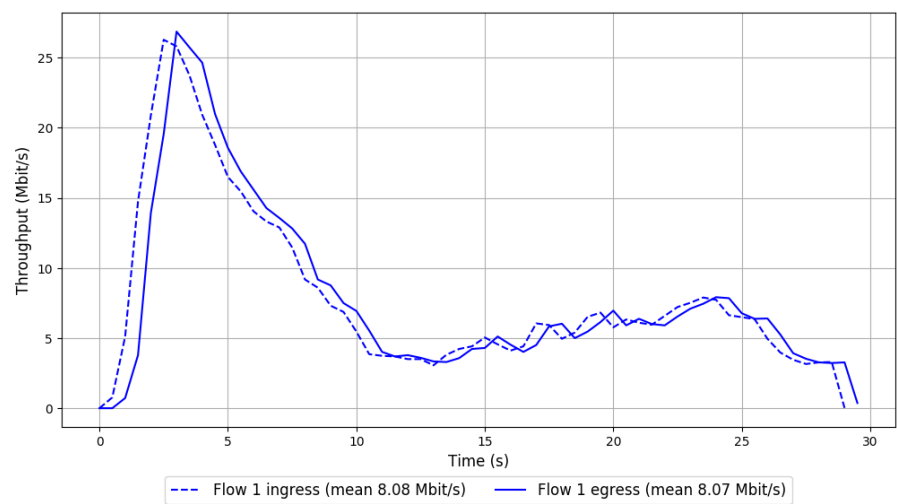
-- Flow 1:

Average throughput: 8.07 Mbit/s

95th percentile per-packet one-way delay: 58.001 ms

Loss rate: 0.00%

Run 2: Report of Indigo-MusesT — Data Link

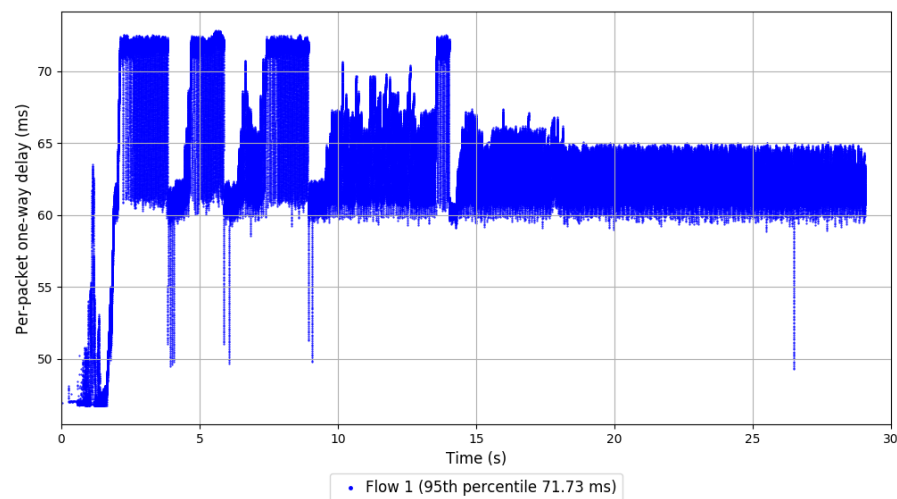
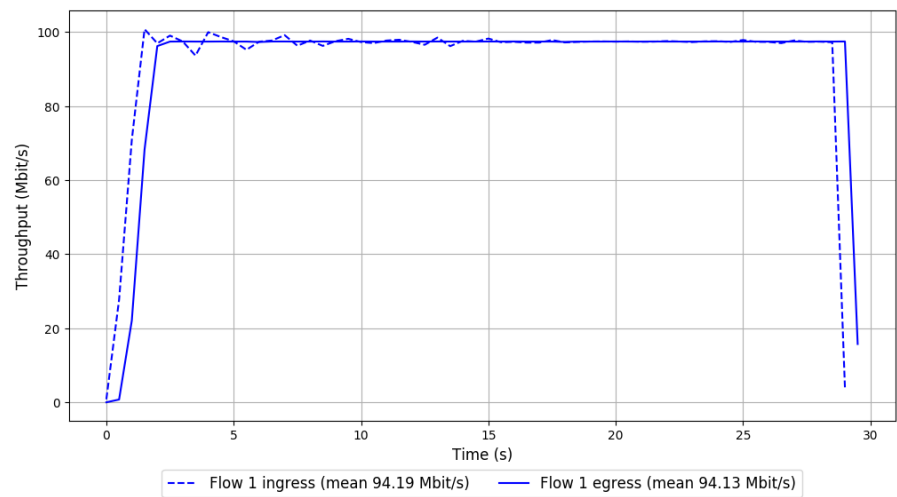


Run 3: Statistics of Indigo-MusesT

Start at: 2019-01-24 20:44:12
End at: 2019-01-24 20:44:42
Local clock offset: -6.832 ms
Remote clock offset: -14.255 ms

Below is generated by plot.py at 2019-01-24 23:19:40
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.13 Mbit/s
95th percentile per-packet one-way delay: 71.726 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 94.13 Mbit/s
95th percentile per-packet one-way delay: 71.726 ms
Loss rate: 0.00%

Run 3: Report of Indigo-MusesT — Data Link



Run 4: Statistics of Indigo-MusesT

Start at: 2019-01-24 22:10:56

End at: 2019-01-24 22:11:26

Local clock offset: 2.86 ms

Remote clock offset: -1.44 ms

Below is generated by plot.py at 2019-01-24 23:19:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 93.12 Mbit/s

95th percentile per-packet one-way delay: 95.601 ms

Loss rate: 0.04%

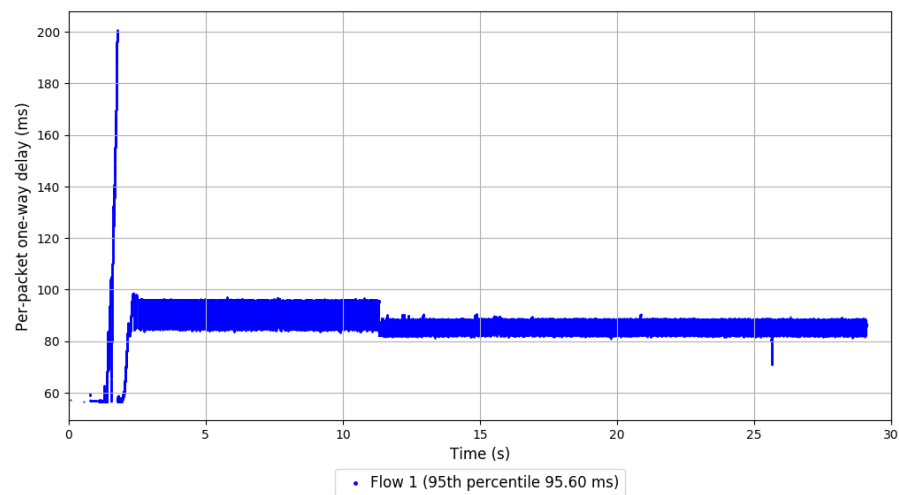
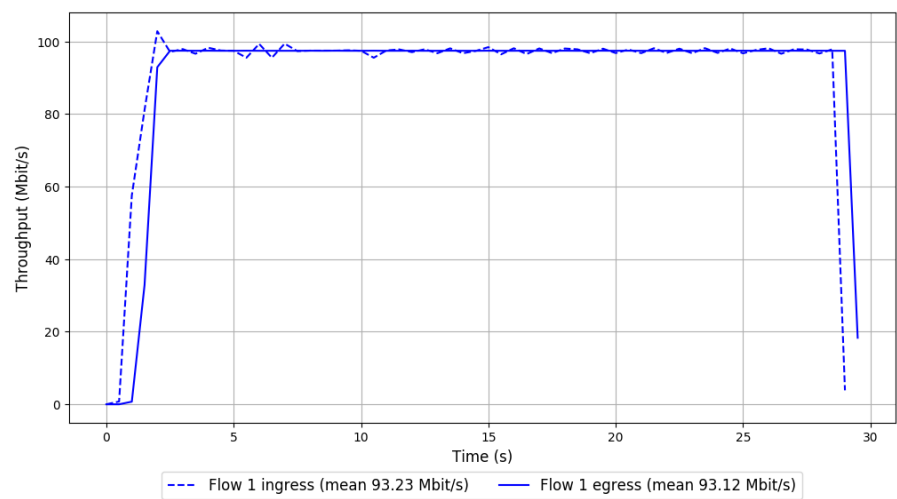
-- Flow 1:

Average throughput: 93.12 Mbit/s

95th percentile per-packet one-way delay: 95.601 ms

Loss rate: 0.04%

Run 4: Report of Indigo-MusesT — Data Link



Run 5: Statistics of Indigo-MusesT

Start at: 2019-01-24 23:09:12

End at: 2019-01-24 23:09:42

Local clock offset: 1.703 ms

Remote clock offset: -0.66 ms

Below is generated by plot.py at 2019-01-24 23:19:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 94.73 Mbit/s

95th percentile per-packet one-way delay: 85.914 ms

Loss rate: 0.00%

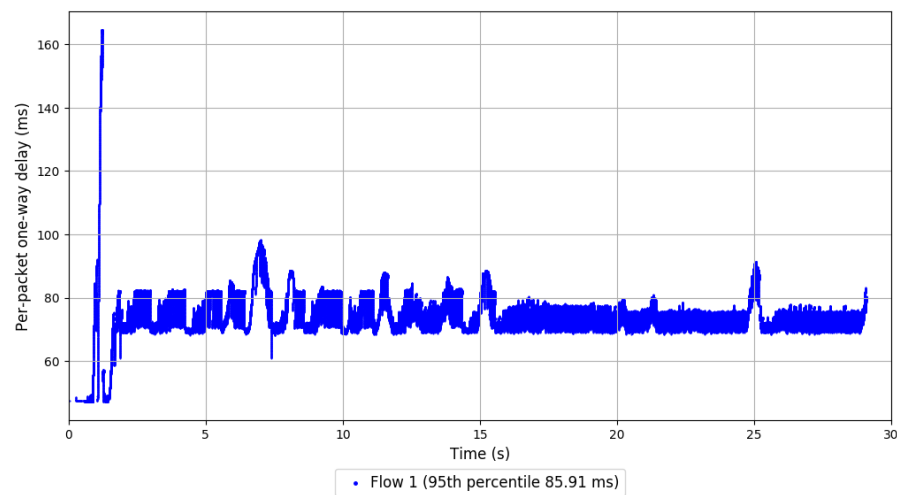
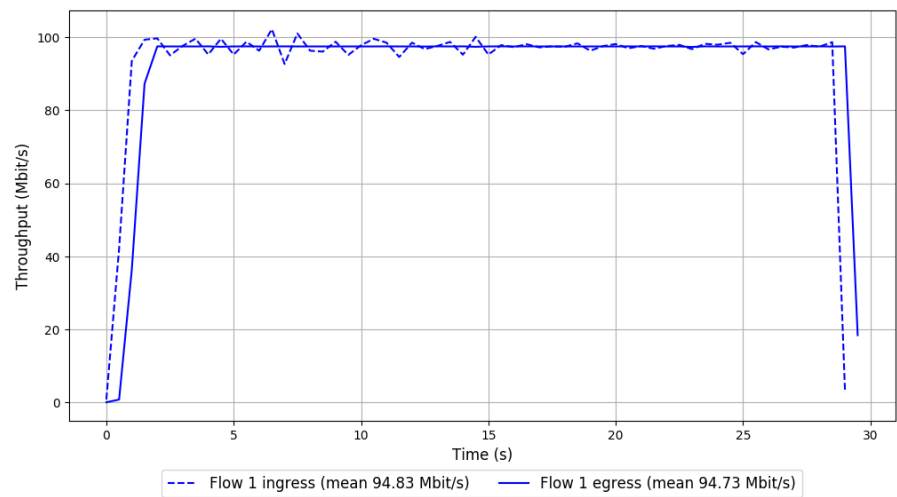
-- Flow 1:

Average throughput: 94.73 Mbit/s

95th percentile per-packet one-way delay: 85.914 ms

Loss rate: 0.00%

Run 5: Report of Indigo-MusesT — Data Link

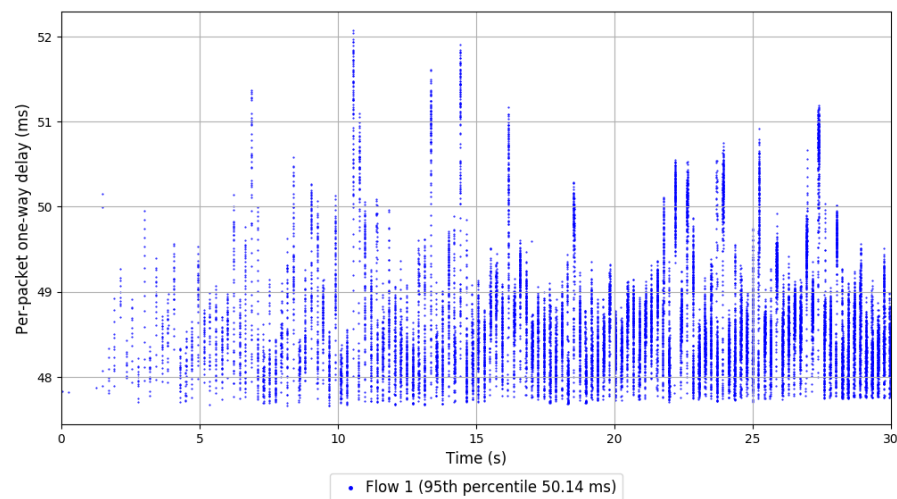
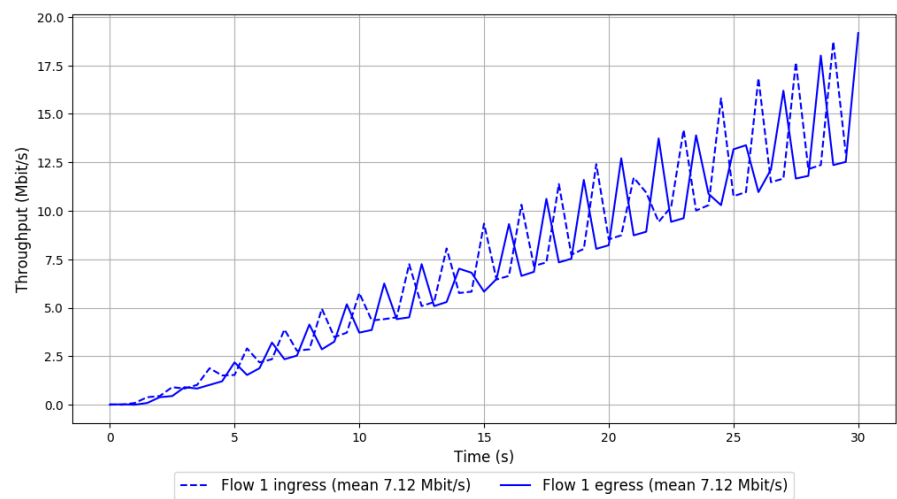


Run 1: Statistics of LEDBAT

Start at: 2019-01-24 16:37:59
End at: 2019-01-24 16:38:29
Local clock offset: 4.406 ms
Remote clock offset: 46.979 ms

Below is generated by plot.py at 2019-01-24 23:19:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 7.12 Mbit/s
95th percentile per-packet one-way delay: 50.137 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.12 Mbit/s
95th percentile per-packet one-way delay: 50.137 ms
Loss rate: 0.00%

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2019-01-24 19:05:32

End at: 2019-01-24 19:06:02

Local clock offset: 1.433 ms

Remote clock offset: 53.73 ms

Below is generated by plot.py at 2019-01-24 23:19:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.68 Mbit/s

95th percentile per-packet one-way delay: 58.617 ms

Loss rate: 0.00%

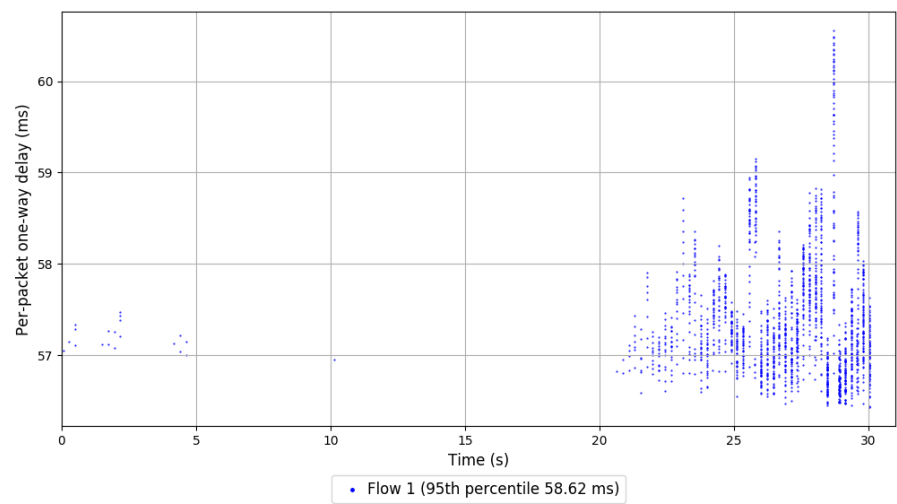
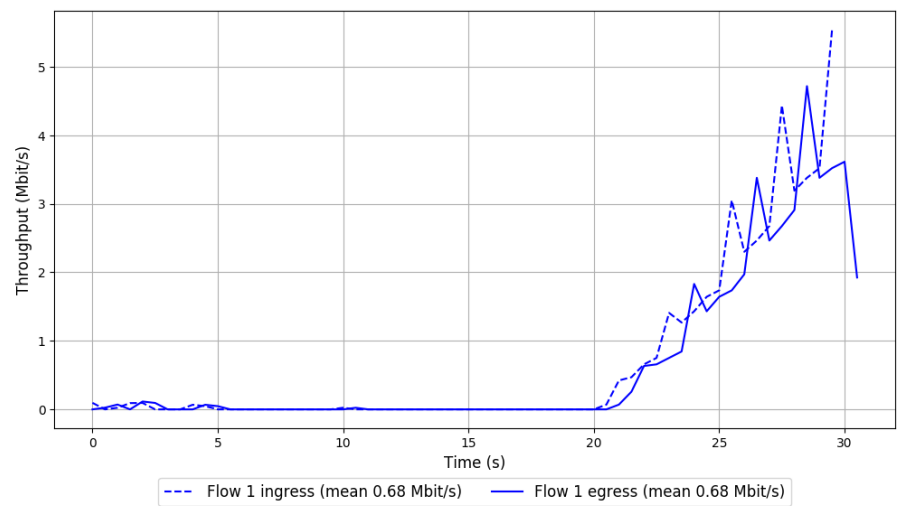
-- Flow 1:

Average throughput: 0.68 Mbit/s

95th percentile per-packet one-way delay: 58.617 ms

Loss rate: 0.00%

Run 2: Report of LEDBAT — Data Link

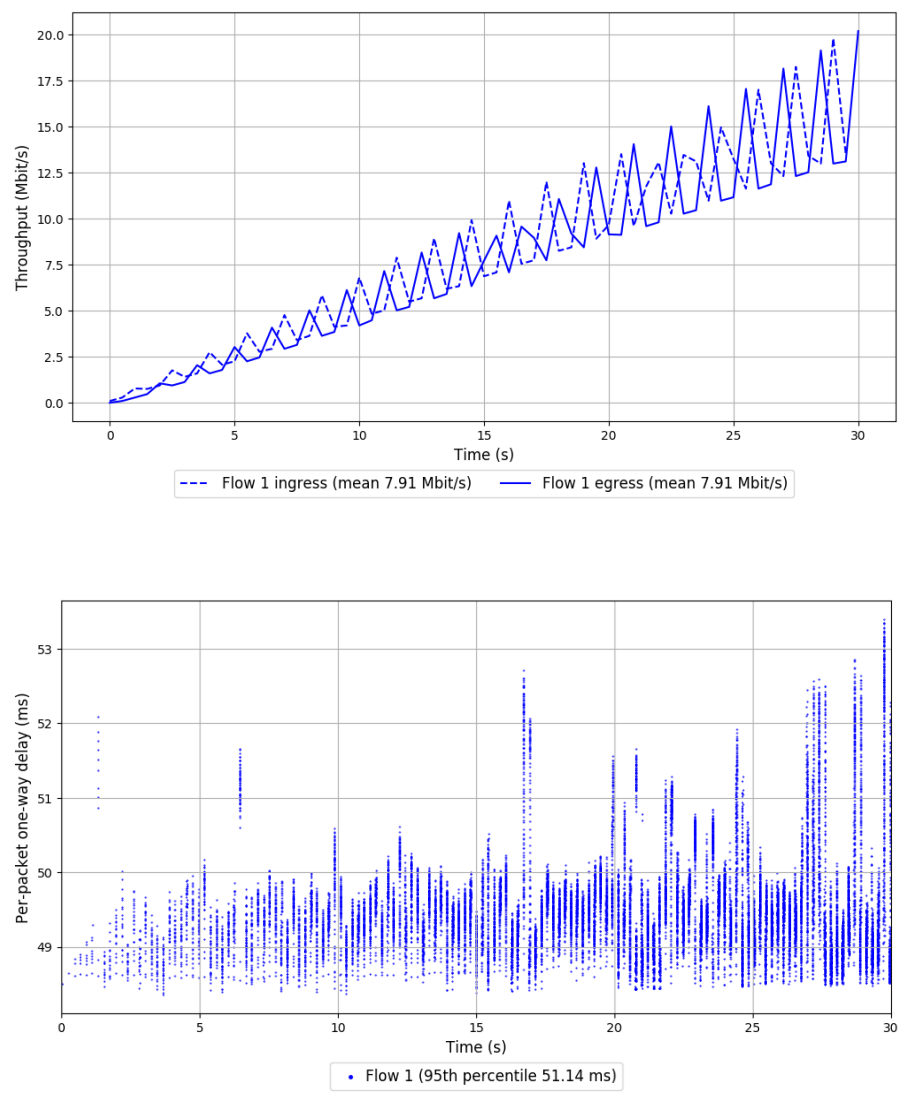


Run 3: Statistics of LEDBAT

Start at: 2019-01-24 20:54:57
End at: 2019-01-24 20:55:28
Local clock offset: -6.928 ms
Remote clock offset: -16.164 ms

Below is generated by plot.py at 2019-01-24 23:19:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 7.91 Mbit/s
95th percentile per-packet one-way delay: 51.136 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.91 Mbit/s
95th percentile per-packet one-way delay: 51.136 ms
Loss rate: 0.00%

Run 3: Report of LEDBAT — Data Link

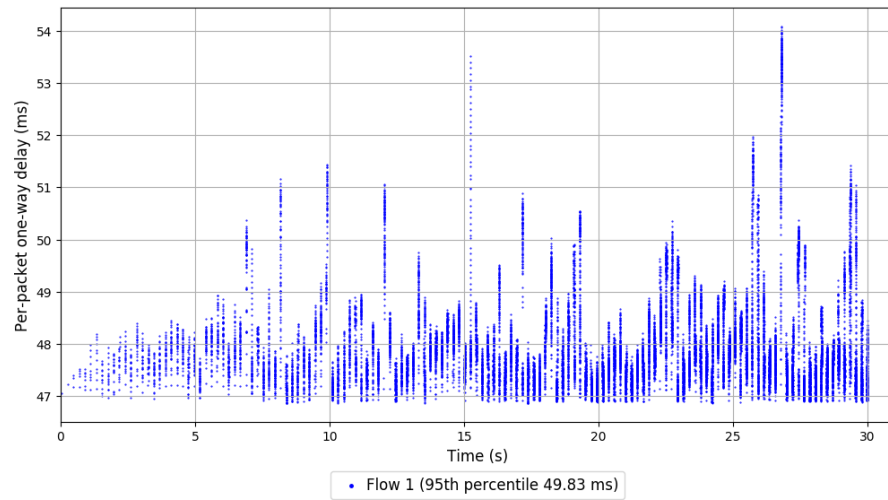
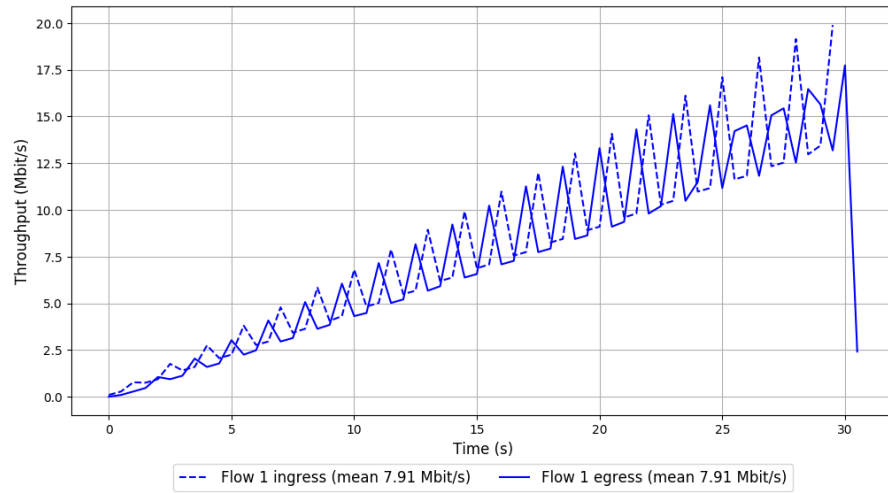


Run 4: Statistics of LEDBAT

Start at: 2019-01-24 22:17:22
End at: 2019-01-24 22:17:52
Local clock offset: 3.628 ms
Remote clock offset: -0.742 ms

Below is generated by plot.py at 2019-01-24 23:19:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 7.91 Mbit/s
95th percentile per-packet one-way delay: 49.831 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.91 Mbit/s
95th percentile per-packet one-way delay: 49.831 ms
Loss rate: 0.00%

Run 4: Report of LEDBAT — Data Link

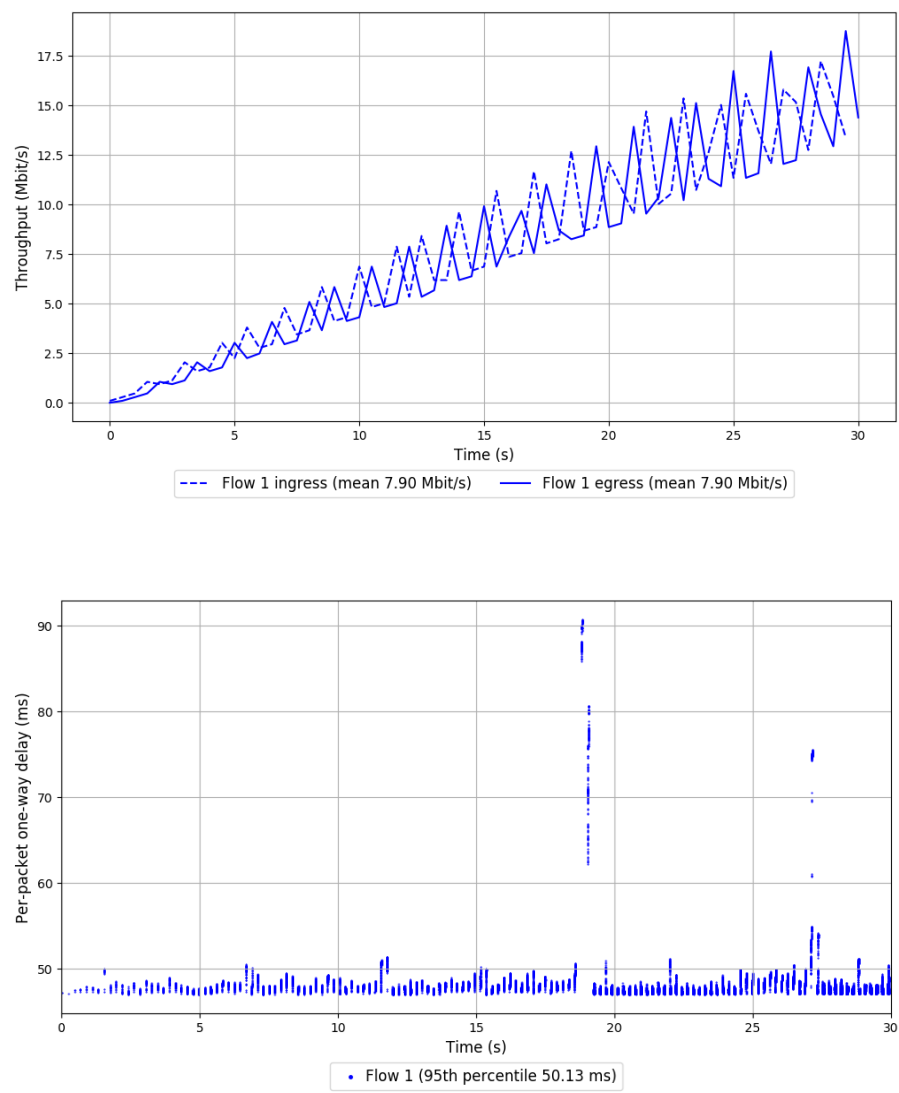


Run 5: Statistics of LEDBAT

Start at: 2019-01-24 23:13:16
End at: 2019-01-24 23:13:46
Local clock offset: 2.351 ms
Remote clock offset: -0.455 ms

Below is generated by plot.py at 2019-01-24 23:19:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 7.90 Mbit/s
95th percentile per-packet one-way delay: 50.128 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.90 Mbit/s
95th percentile per-packet one-way delay: 50.128 ms
Loss rate: 0.00%

Run 5: Report of LEDBAT — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2019-01-24 15:51:54

End at: 2019-01-24 15:52:24

Local clock offset: 2.144 ms

Remote clock offset: 47.534 ms

Below is generated by plot.py at 2019-01-24 23:19:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 57.368 ms

Loss rate: 0.00%

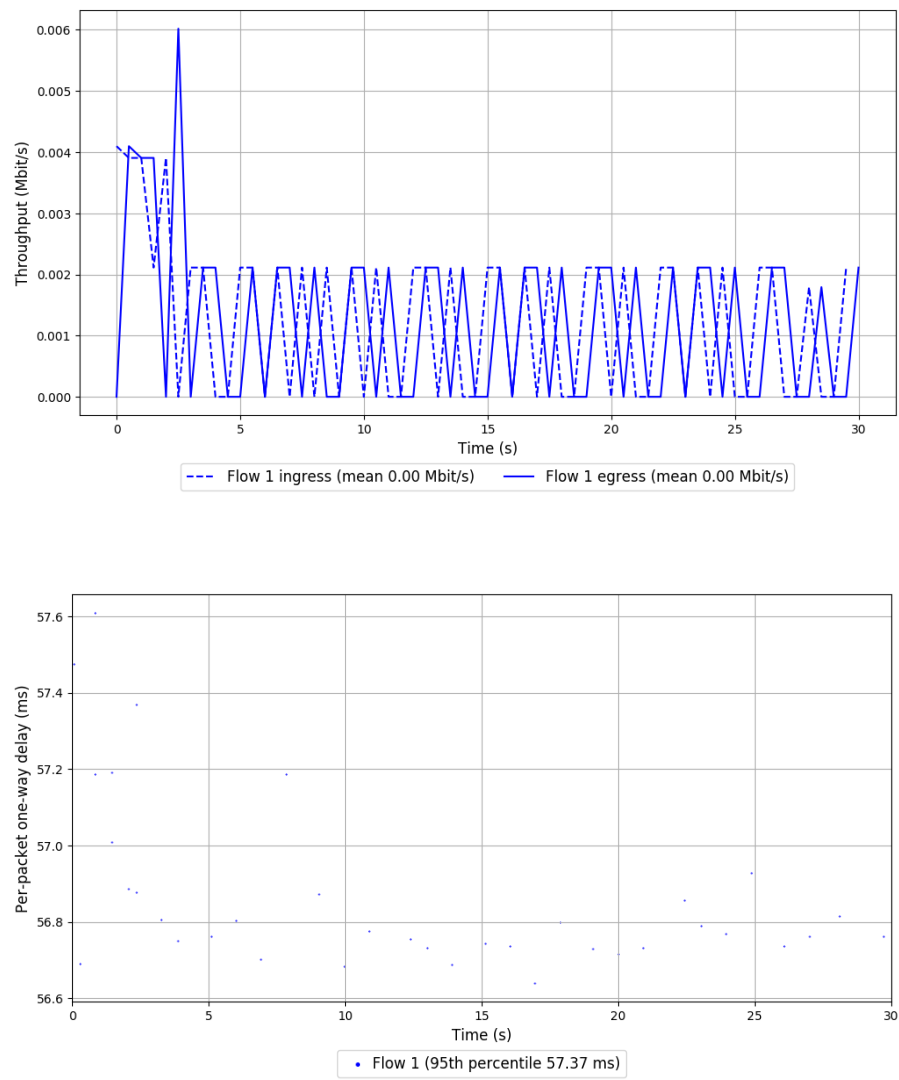
-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 57.368 ms

Loss rate: 0.00%

Run 1: Report of PCC-Allegro — Data Link

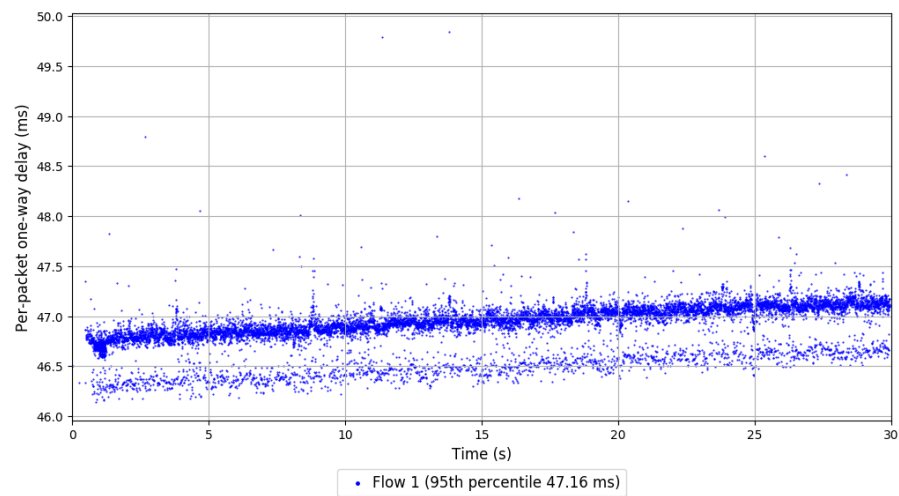
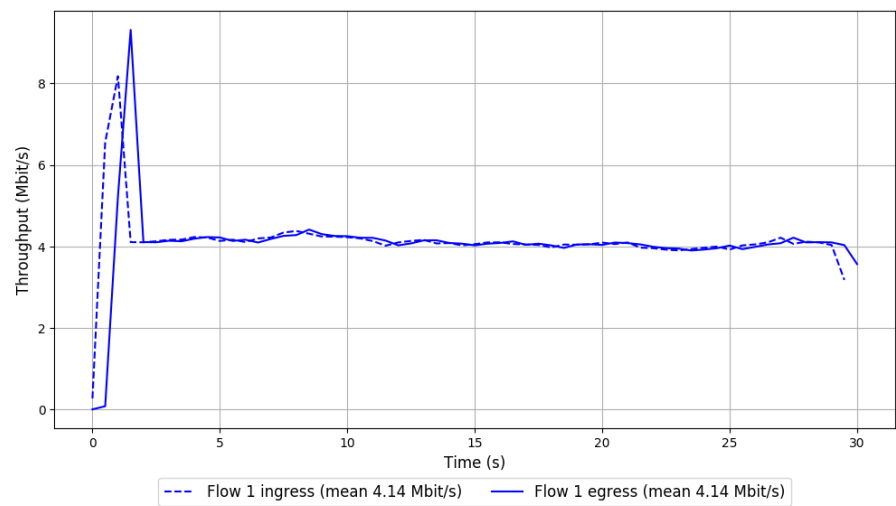


Run 2: Statistics of PCC-Allegro

Start at: 2019-01-24 18:18:39
End at: 2019-01-24 18:19:09
Local clock offset: 2.271 ms
Remote clock offset: 33.792 ms

Below is generated by plot.py at 2019-01-24 23:19:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 4.14 Mbit/s
95th percentile per-packet one-way delay: 47.158 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.14 Mbit/s
95th percentile per-packet one-way delay: 47.158 ms
Loss rate: 0.00%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2019-01-24 20:15:09

End at: 2019-01-24 20:15:39

Local clock offset: -7.131 ms

Remote clock offset: -22.118 ms

Below is generated by plot.py at 2019-01-24 23:19:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 8.67 Mbit/s

95th percentile per-packet one-way delay: 48.372 ms

Loss rate: 0.00%

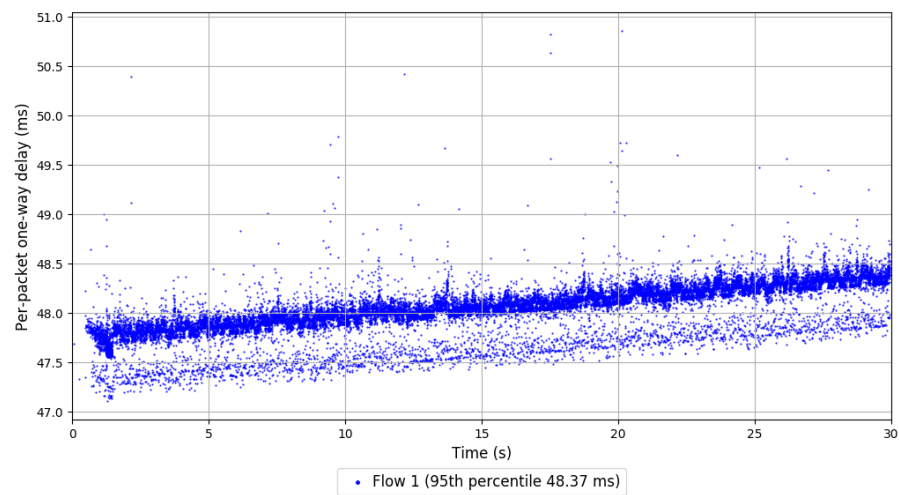
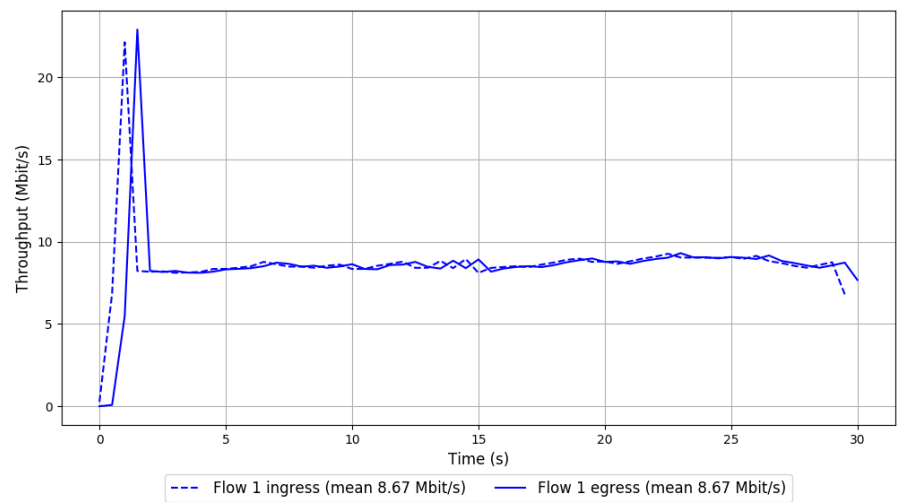
-- Flow 1:

Average throughput: 8.67 Mbit/s

95th percentile per-packet one-way delay: 48.372 ms

Loss rate: 0.00%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2019-01-24 21:51:36

End at: 2019-01-24 21:52:06

Local clock offset: 0.683 ms

Remote clock offset: -0.765 ms

Below is generated by plot.py at 2019-01-24 23:19:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 16.33 Mbit/s

95th percentile per-packet one-way delay: 57.303 ms

Loss rate: 0.00%

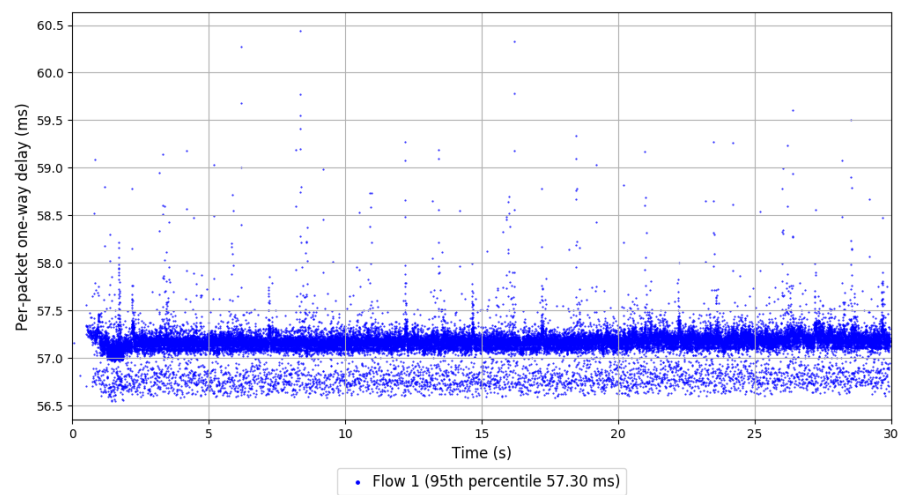
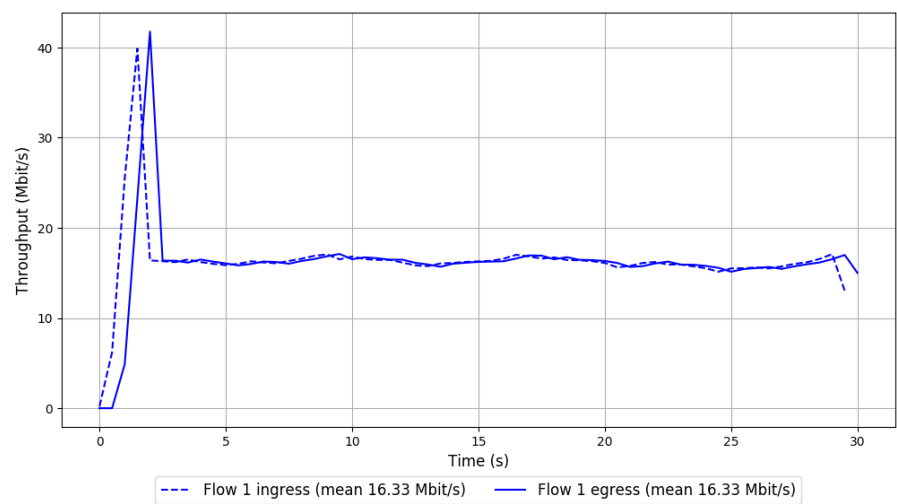
-- Flow 1:

Average throughput: 16.33 Mbit/s

95th percentile per-packet one-way delay: 57.303 ms

Loss rate: 0.00%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2019-01-24 22:56:17

End at: 2019-01-24 22:56:47

Local clock offset: -1.755 ms

Remote clock offset: -0.774 ms

Below is generated by plot.py at 2019-01-24 23:19:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 46.932 ms

Loss rate: 0.00%

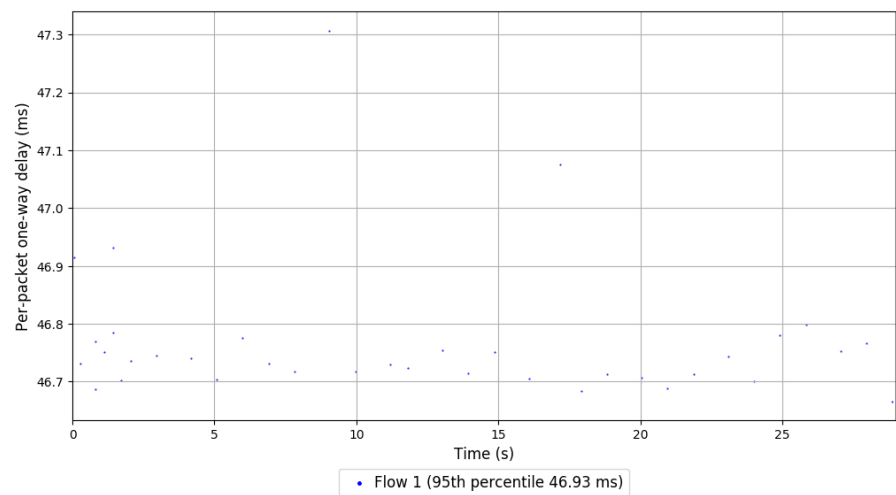
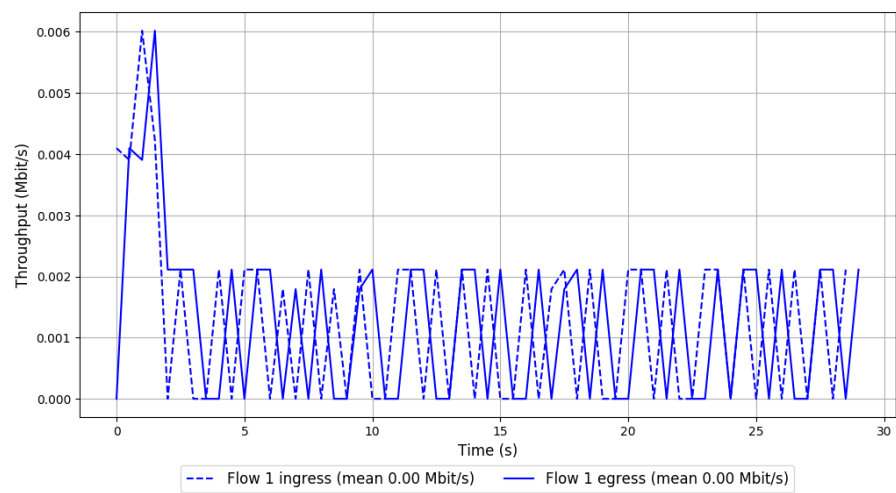
-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 46.932 ms

Loss rate: 0.00%

Run 5: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

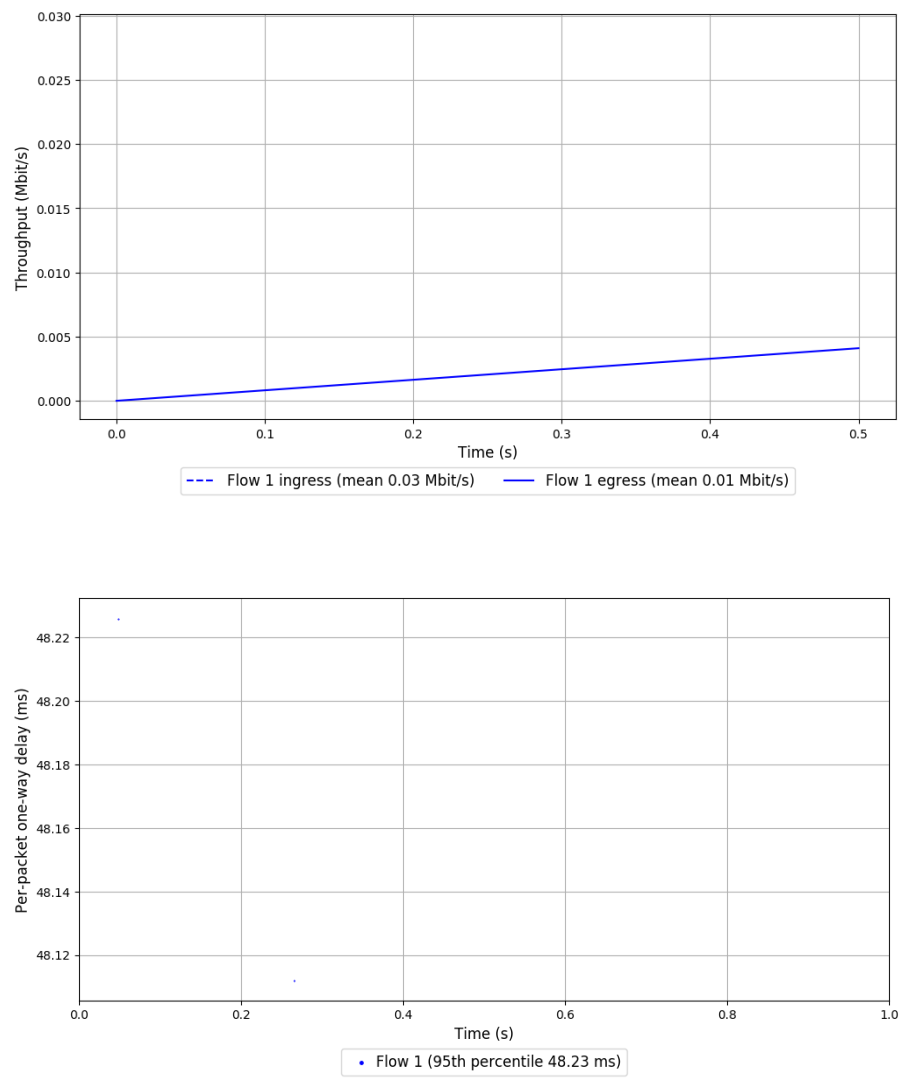
Start at: 2019-01-24 16:34:34

End at: 2019-01-24 16:35:04

Local clock offset: 3.635 ms

Remote clock offset: 47.76 ms

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

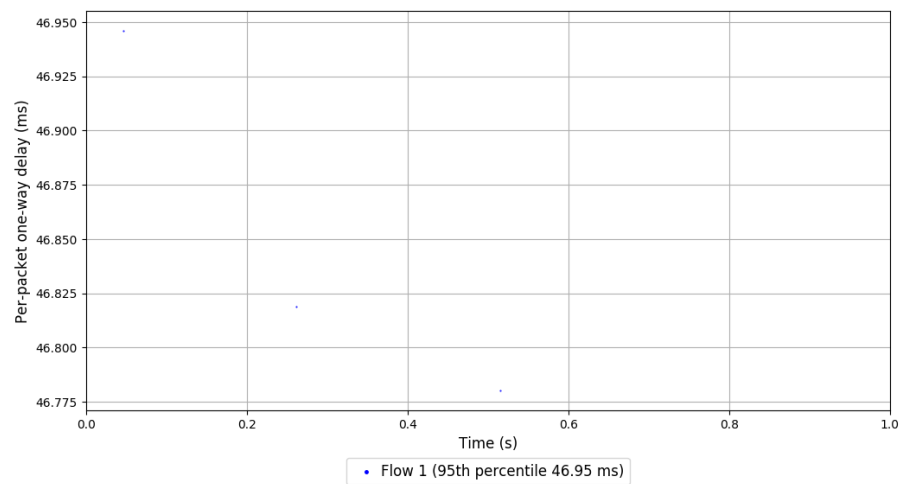
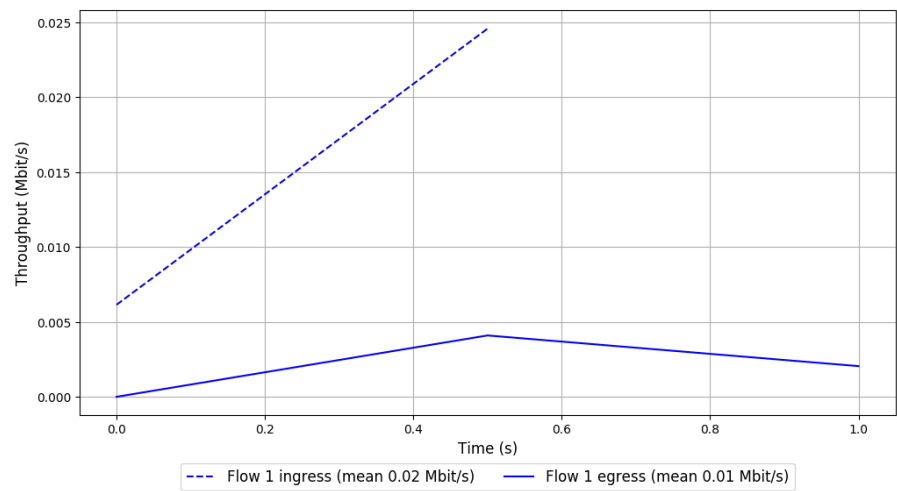
Start at: 2019-01-24 19:01:43

End at: 2019-01-24 19:02:13

Local clock offset: 3.077 ms

Remote clock offset: 50.846 ms

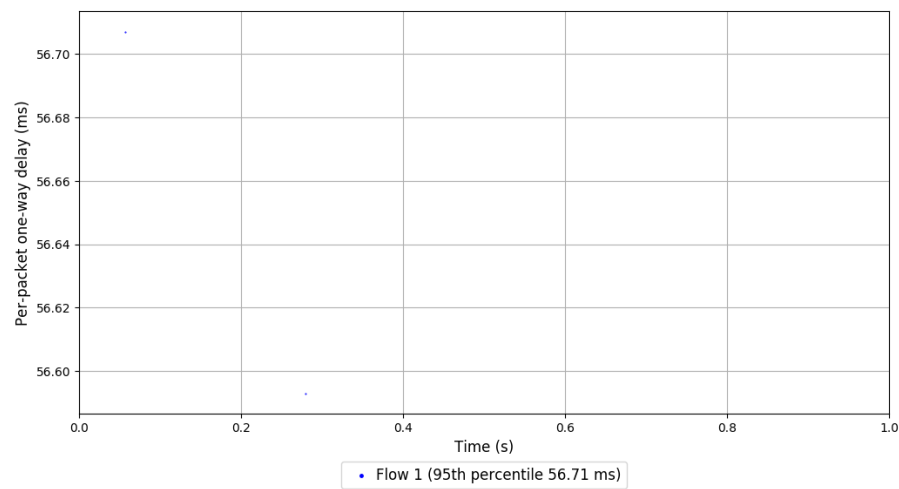
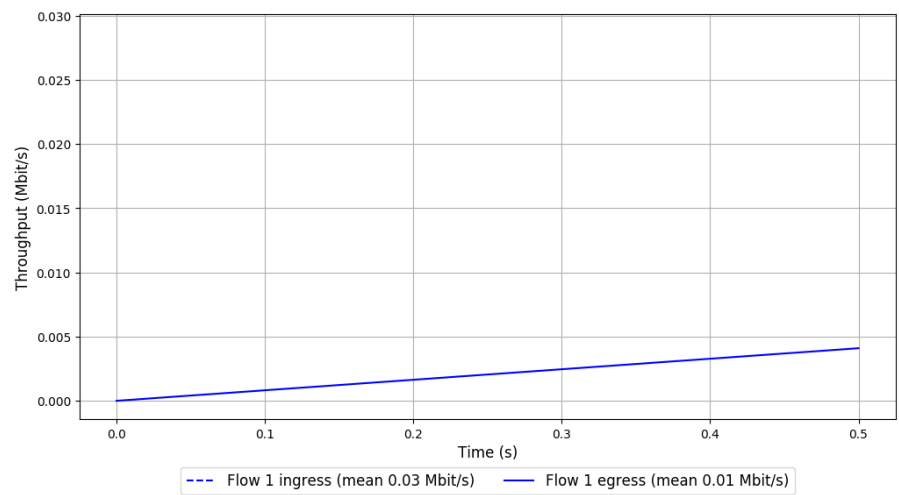
Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2019-01-24 20:43:00
End at: 2019-01-24 20:43:30
Local clock offset: -6.668 ms
Remote clock offset: -13.983 ms

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

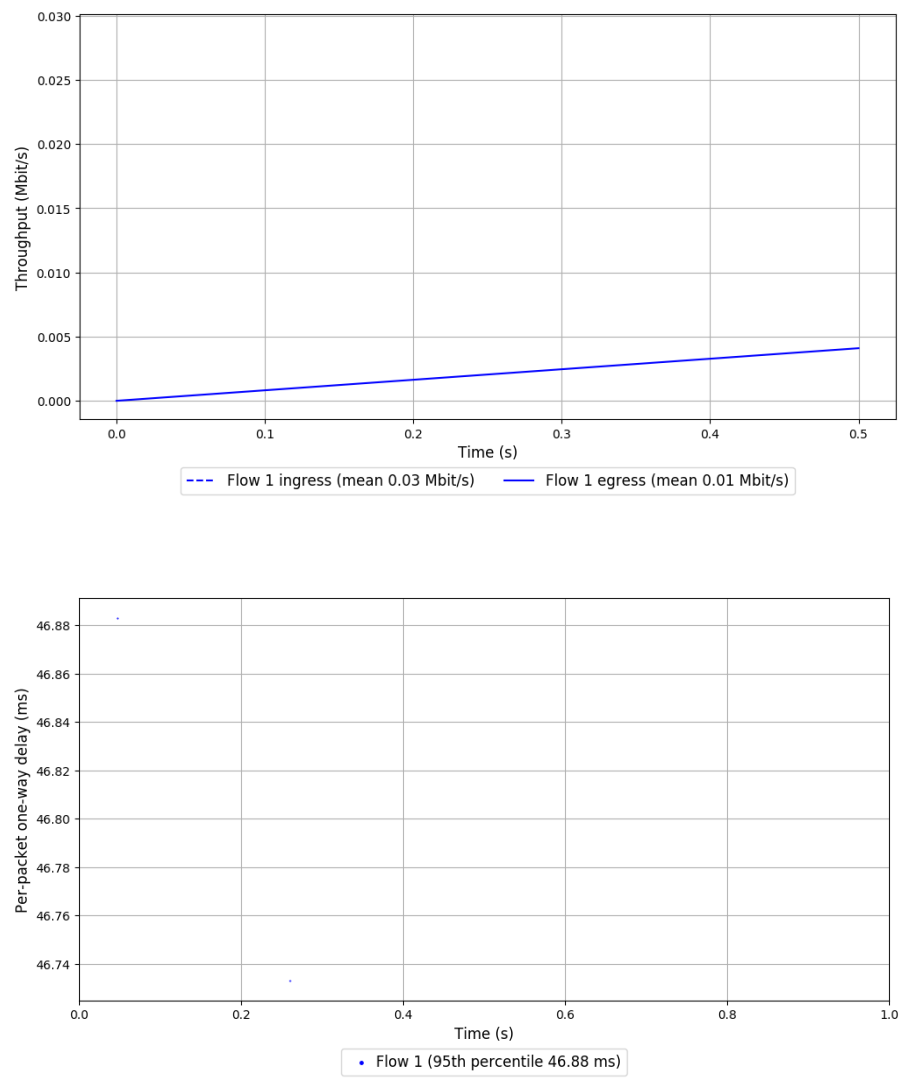
Start at: 2019-01-24 22:09:46

End at: 2019-01-24 22:10:16

Local clock offset: 2.767 ms

Remote clock offset: -1.622 ms

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

Start at: 2019-01-24 23:07:37

End at: 2019-01-24 23:08:07

Local clock offset: 1.179 ms

Remote clock offset: -0.543 ms

Below is generated by plot.py at 2019-01-24 23:19:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 11.83 Mbit/s

95th percentile per-packet one-way delay: 47.718 ms

Loss rate: 1.76%

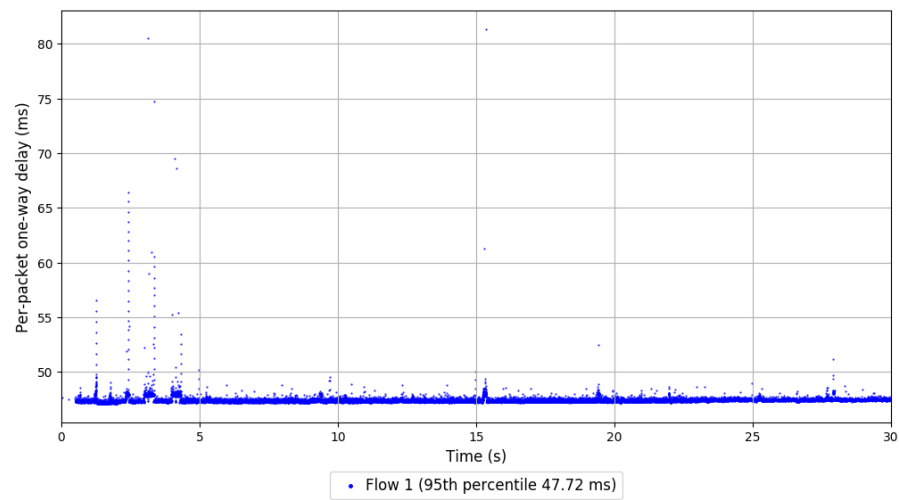
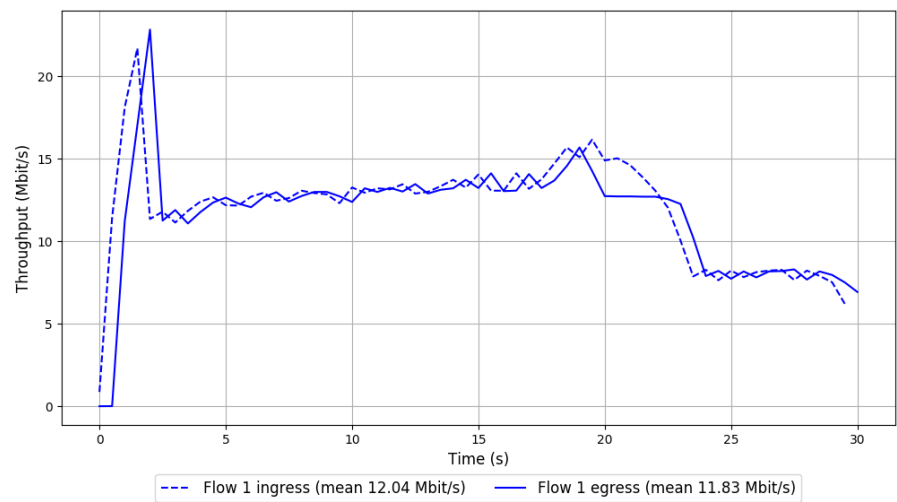
-- Flow 1:

Average throughput: 11.83 Mbit/s

95th percentile per-packet one-way delay: 47.718 ms

Loss rate: 1.76%

Run 5: Report of PCC-Expr — Data Link

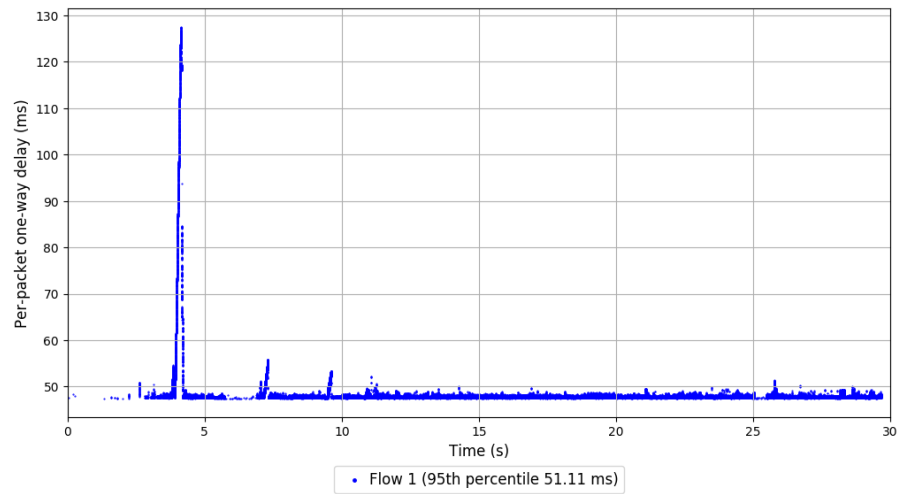
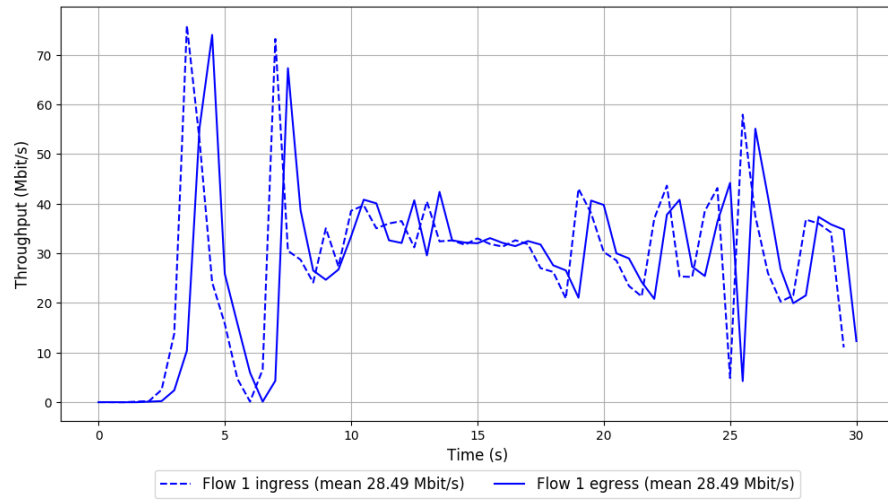


Run 1: Statistics of QUIC Cubic

Start at: 2019-01-24 15:55:41
End at: 2019-01-24 15:56:11
Local clock offset: 2.401 ms
Remote clock offset: 47.125 ms

Below is generated by plot.py at 2019-01-24 23:19:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 28.49 Mbit/s
95th percentile per-packet one-way delay: 51.108 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 28.49 Mbit/s
95th percentile per-packet one-way delay: 51.108 ms
Loss rate: 0.00%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2019-01-24 18:23:21

End at: 2019-01-24 18:23:51

Local clock offset: 1.841 ms

Remote clock offset: 31.169 ms

Below is generated by plot.py at 2019-01-24 23:19:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 29.14 Mbit/s

95th percentile per-packet one-way delay: 58.537 ms

Loss rate: 0.00%

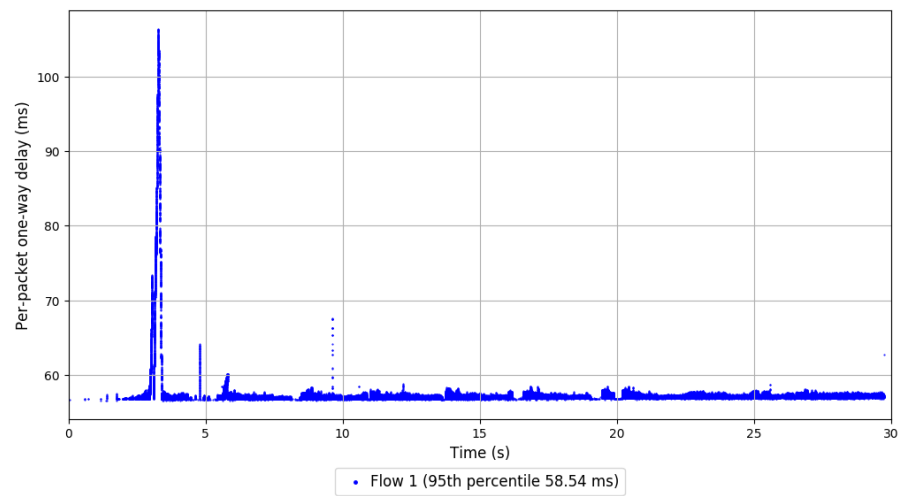
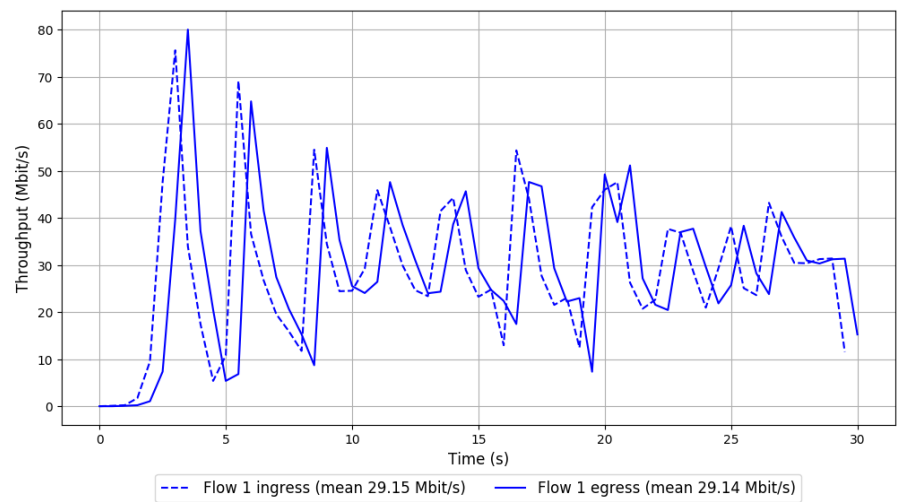
-- Flow 1:

Average throughput: 29.14 Mbit/s

95th percentile per-packet one-way delay: 58.537 ms

Loss rate: 0.00%

Run 2: Report of QUIC Cubic — Data Link

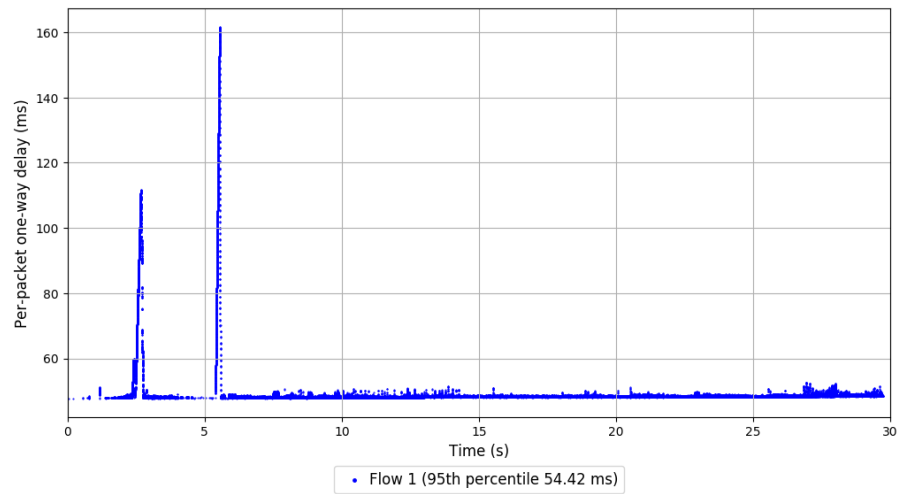
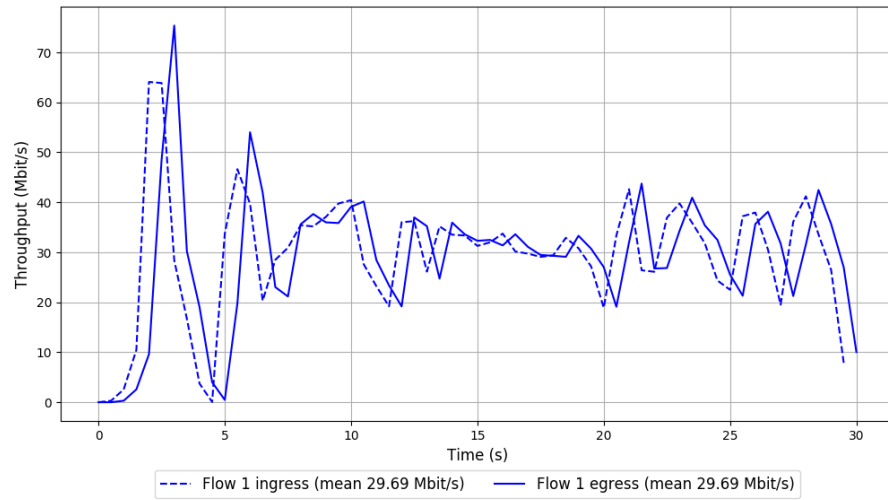


Run 3: Statistics of QUIC Cubic

Start at: 2019-01-24 20:20:01
End at: 2019-01-24 20:20:31
Local clock offset: -7.511 ms
Remote clock offset: -28.187 ms

Below is generated by plot.py at 2019-01-24 23:19:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 29.69 Mbit/s
95th percentile per-packet one-way delay: 54.424 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 29.69 Mbit/s
95th percentile per-packet one-way delay: 54.424 ms
Loss rate: 0.00%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2019-01-24 21:56:09

End at: 2019-01-24 21:56:39

Local clock offset: 0.605 ms

Remote clock offset: -1.736 ms

Below is generated by plot.py at 2019-01-24 23:19:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 33.71 Mbit/s

95th percentile per-packet one-way delay: 48.498 ms

Loss rate: 0.00%

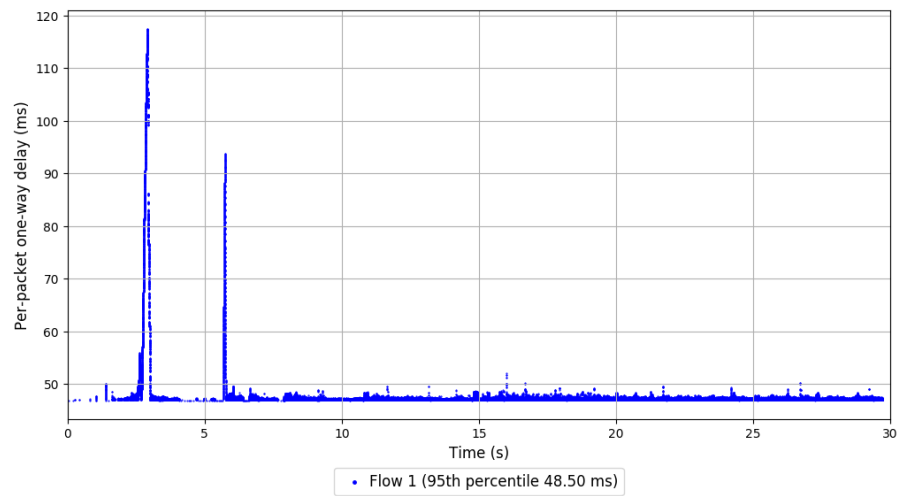
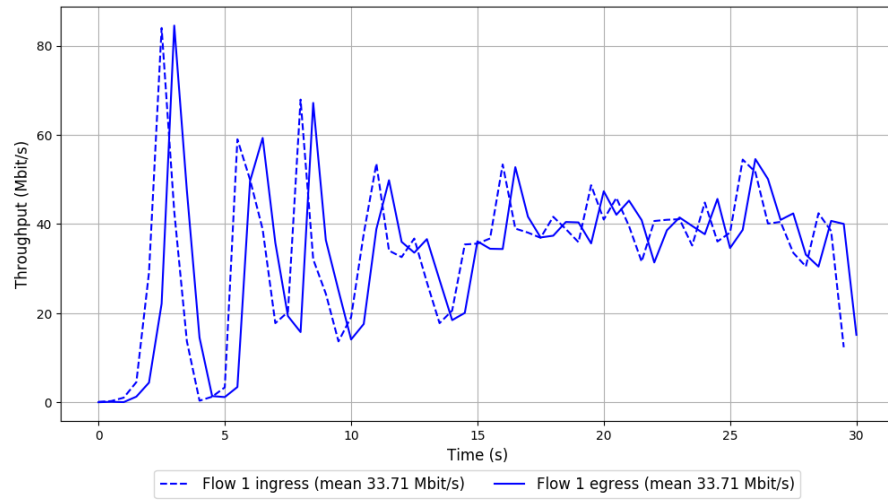
-- Flow 1:

Average throughput: 33.71 Mbit/s

95th percentile per-packet one-way delay: 48.498 ms

Loss rate: 0.00%

Run 4: Report of QUIC Cubic — Data Link

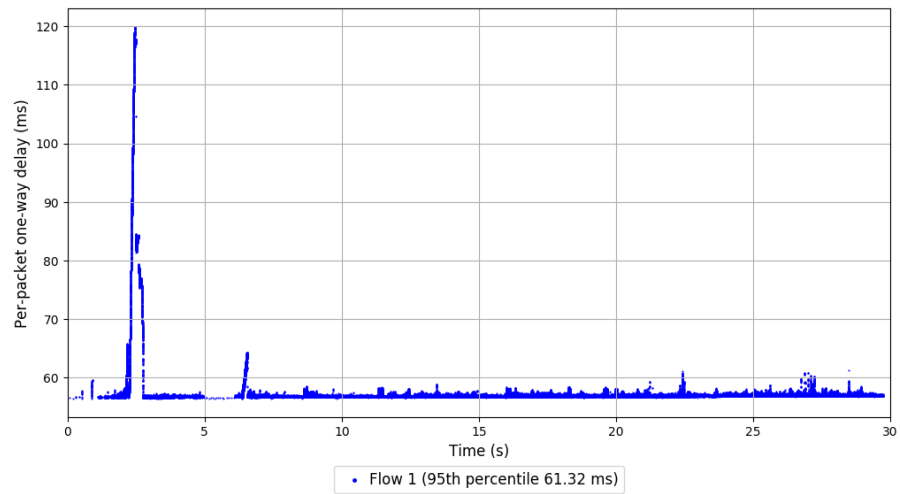
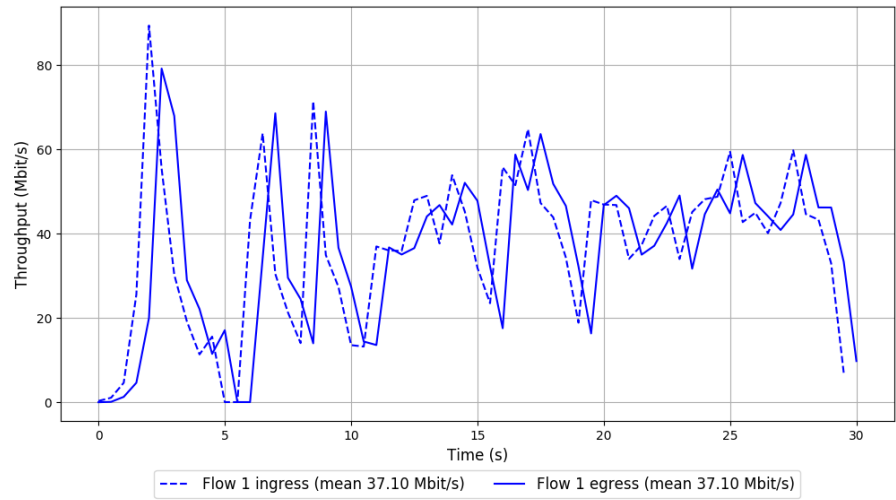


Run 5: Statistics of QUIC Cubic

Start at: 2019-01-24 22:59:51
End at: 2019-01-24 23:00:21
Local clock offset: -1.973 ms
Remote clock offset: -0.541 ms

Below is generated by plot.py at 2019-01-24 23:19:53
Datalink statistics
-- Total of 1 flow:
Average throughput: 37.10 Mbit/s
95th percentile per-packet one-way delay: 61.322 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 37.10 Mbit/s
95th percentile per-packet one-way delay: 61.322 ms
Loss rate: 0.00%

Run 5: Report of QUIC Cubic — Data Link

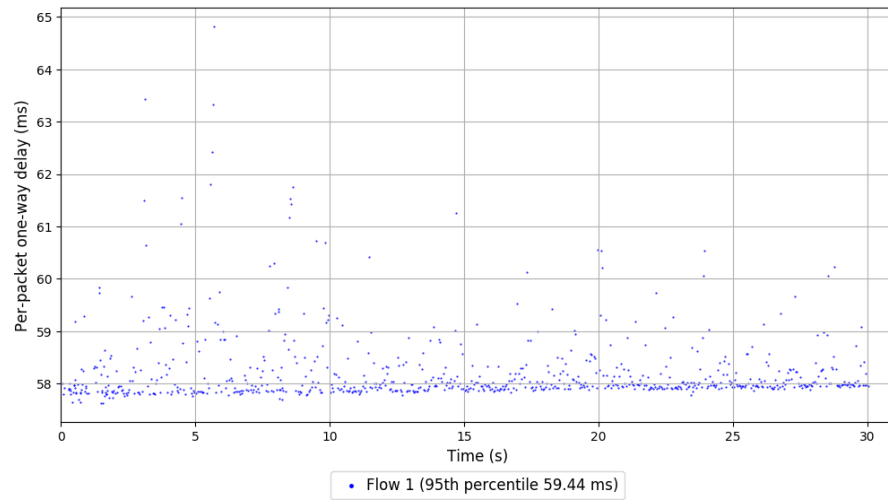
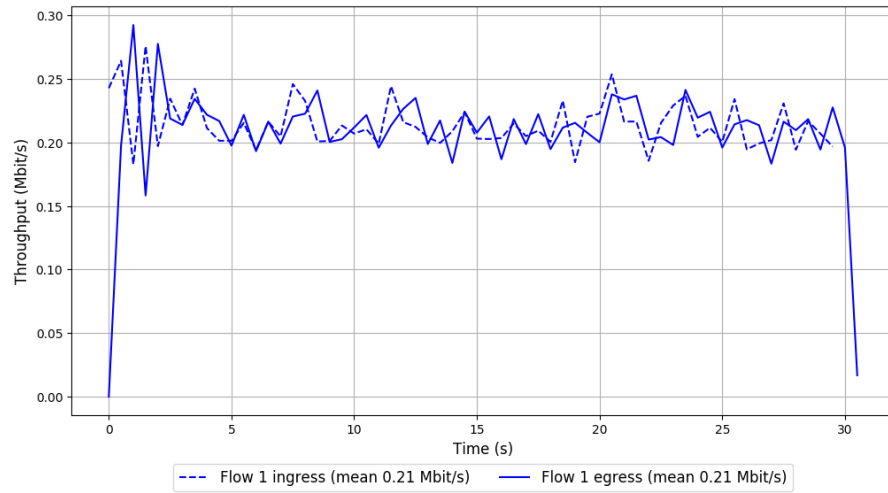


Run 1: Statistics of SCReAM

Start at: 2019-01-24 14:45:31
End at: 2019-01-24 14:46:01
Local clock offset: -0.023 ms
Remote clock offset: 54.037 ms

Below is generated by plot.py at 2019-01-24 23:19:53
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 59.437 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 59.437 ms
Loss rate: 0.00%

Run 1: Report of SReAM — Data Link

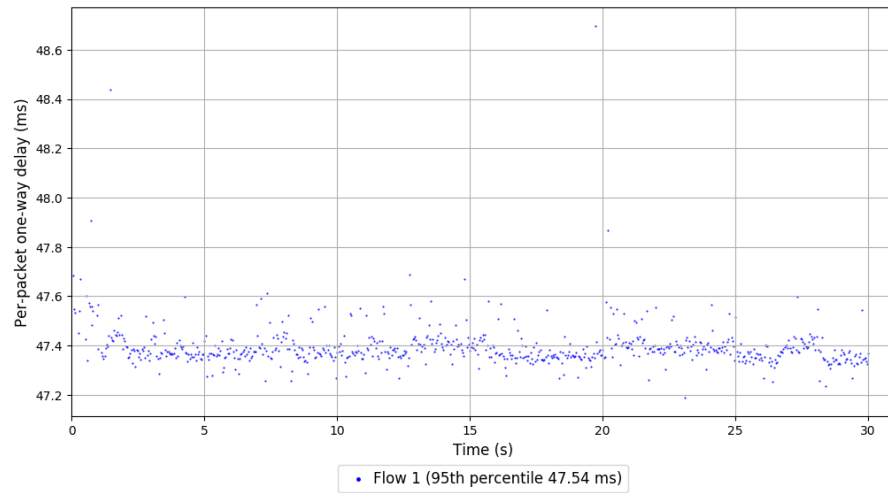
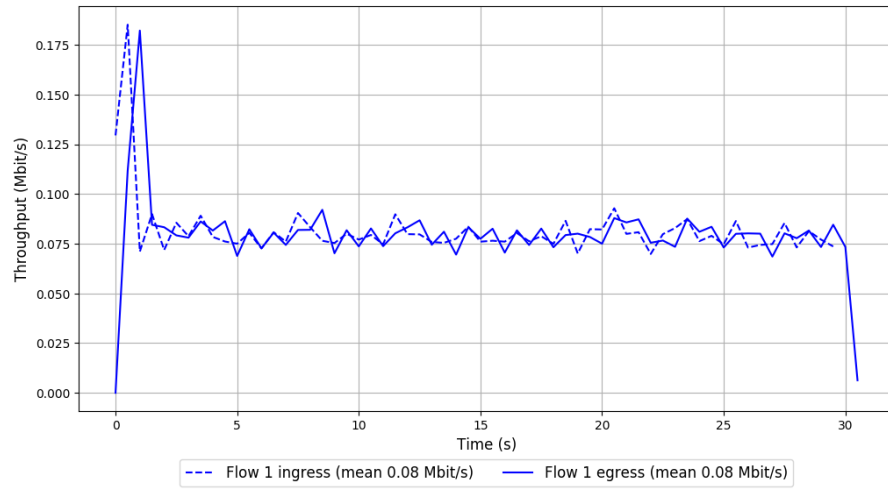


Run 2: Statistics of SCReAM

Start at: 2019-01-24 17:20:23
End at: 2019-01-24 17:20:53
Local clock offset: 1.448 ms
Remote clock offset: 46.787 ms

Below is generated by plot.py at 2019-01-24 23:19:53
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 47.540 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 47.540 ms
Loss rate: 0.00%

Run 2: Report of SReAM — Data Link

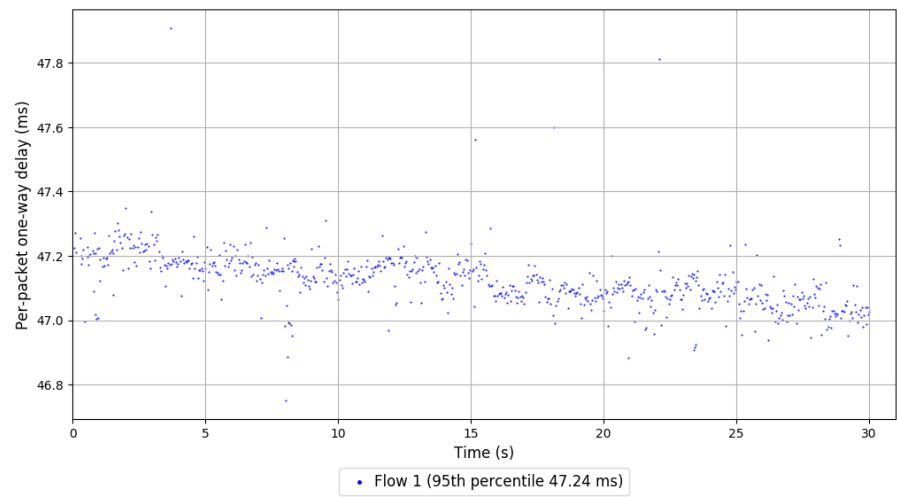
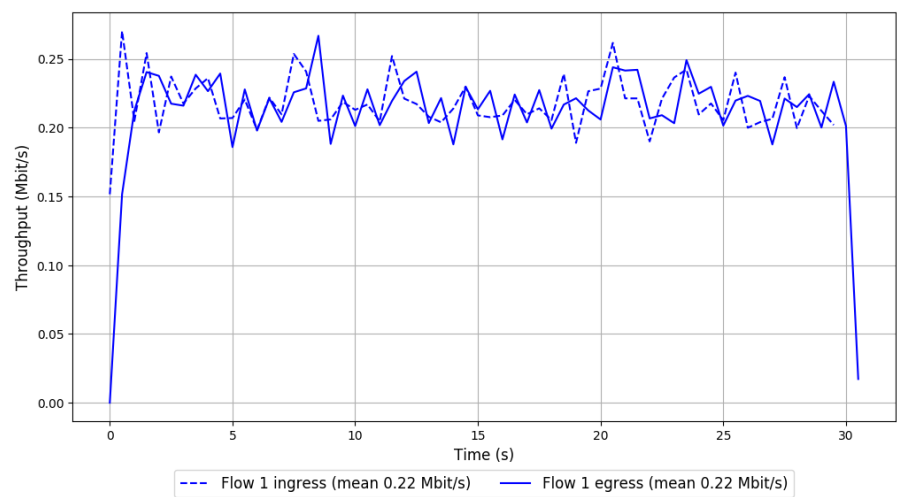


Run 3: Statistics of SCReAM

Start at: 2019-01-24 19:31:38
End at: 2019-01-24 19:32:08
Local clock offset: -1.809 ms
Remote clock offset: 62.064 ms

Below is generated by plot.py at 2019-01-24 23:19:53
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.238 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.238 ms
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link

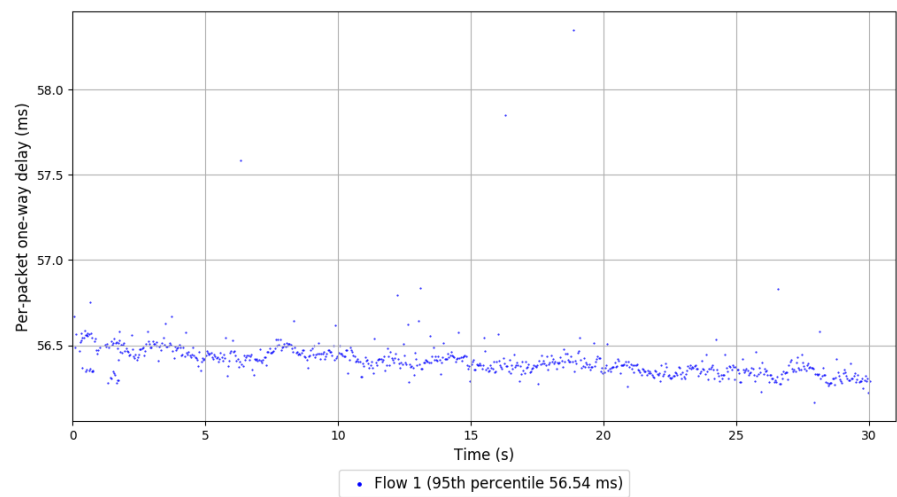
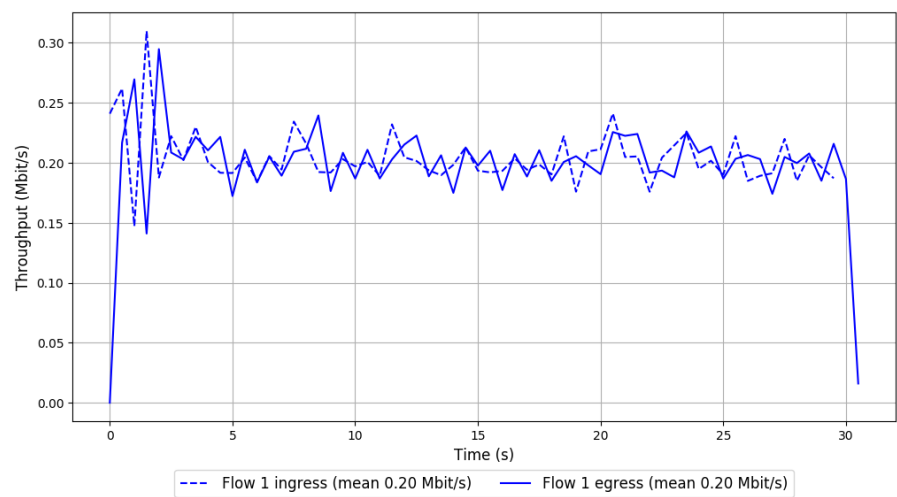


Run 4: Statistics of SCReAM

Start at: 2019-01-24 21:09:13
End at: 2019-01-24 21:09:43
Local clock offset: -3.041 ms
Remote clock offset: -5.762 ms

Below is generated by plot.py at 2019-01-24 23:19:53
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 56.542 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 56.542 ms
Loss rate: 0.00%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2019-01-24 22:28:08

End at: 2019-01-24 22:28:38

Local clock offset: 4.478 ms

Remote clock offset: 0.044 ms

Below is generated by plot.py at 2019-01-24 23:19:53

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 57.418 ms

Loss rate: 0.00%

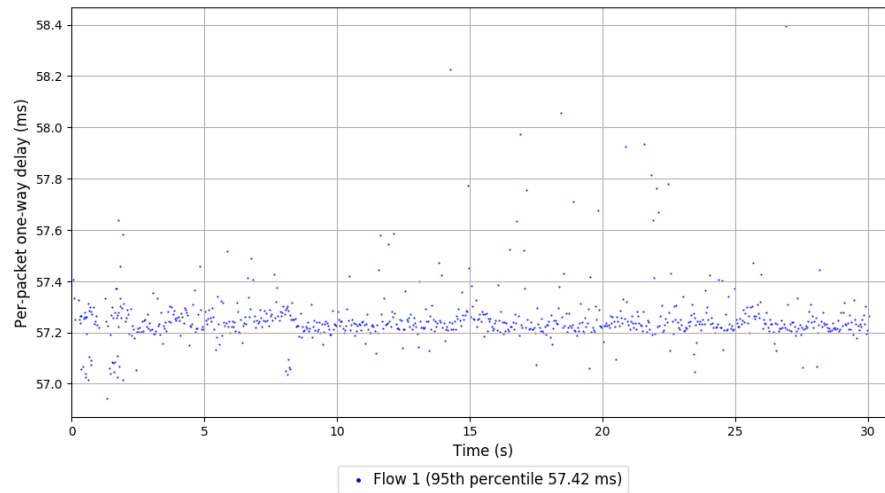
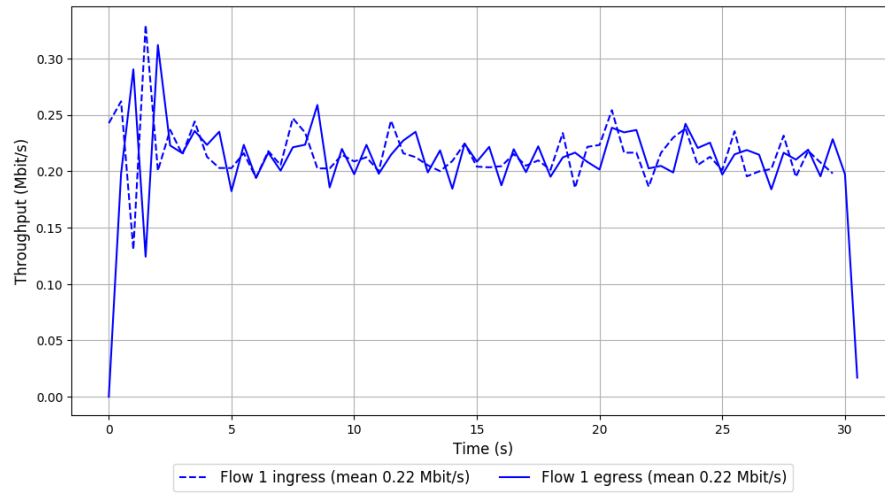
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 57.418 ms

Loss rate: 0.00%

Run 5: Report of SReAM — Data Link

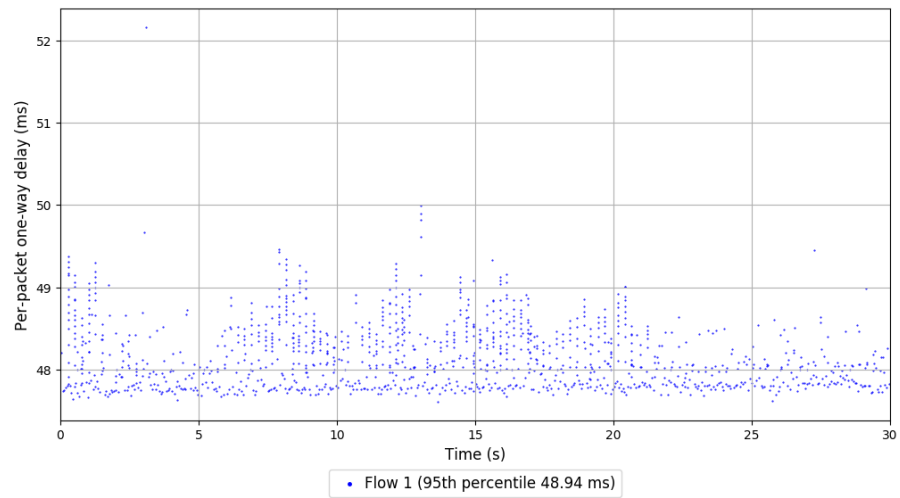
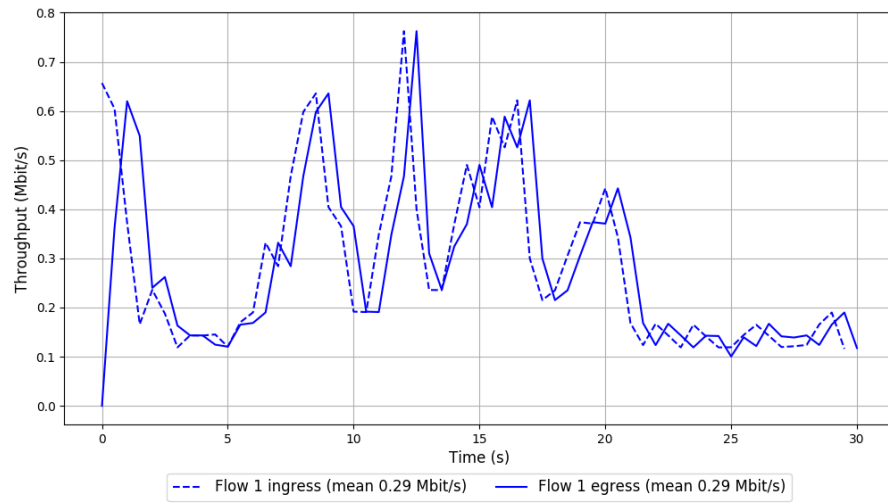


Run 1: Statistics of Sprout

Start at: 2019-01-24 15:53:08
End at: 2019-01-24 15:53:38
Local clock offset: 2.242 ms
Remote clock offset: 47.256 ms

Below is generated by plot.py at 2019-01-24 23:19:53
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 48.941 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 48.941 ms
Loss rate: 0.00%

Run 1: Report of Sprout — Data Link

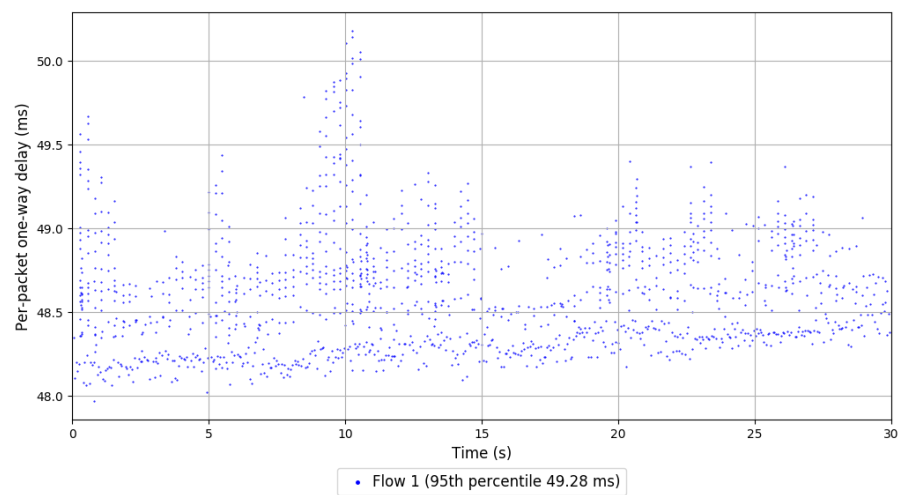
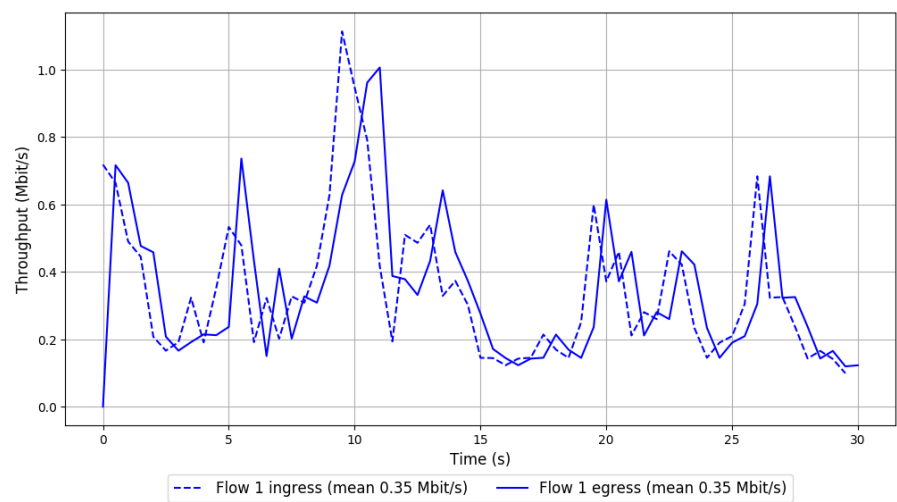


Run 2: Statistics of Sprout

Start at: 2019-01-24 18:20:43
End at: 2019-01-24 18:21:13
Local clock offset: 2.188 ms
Remote clock offset: 33.687 ms

Below is generated by plot.py at 2019-01-24 23:19:53
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 49.279 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 49.279 ms
Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

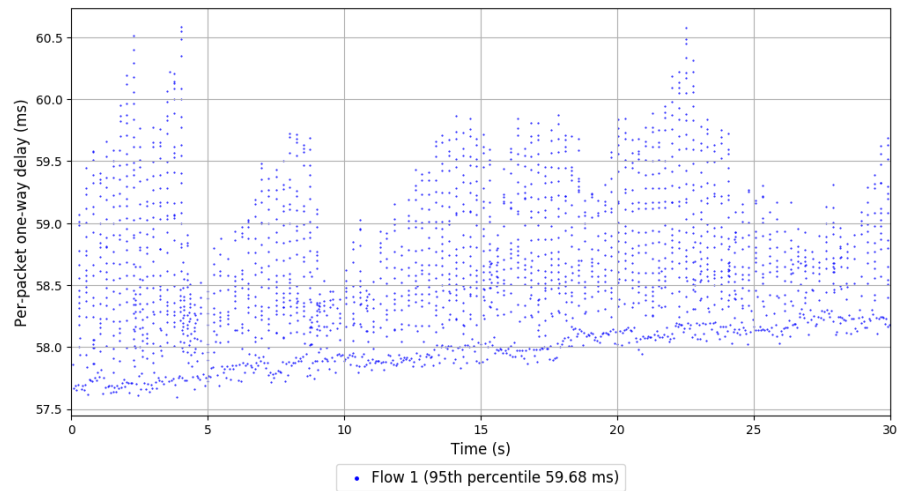
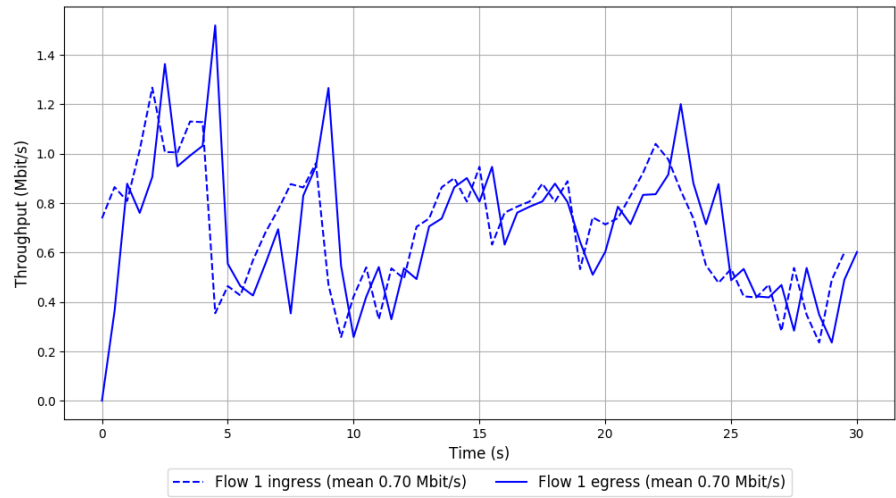


Run 3: Statistics of Sprout

Start at: 2019-01-24 20:17:30
End at: 2019-01-24 20:18:00
Local clock offset: -7.425 ms
Remote clock offset: -24.288 ms

Below is generated by plot.py at 2019-01-24 23:19:53
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.70 Mbit/s
95th percentile per-packet one-way delay: 59.684 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.70 Mbit/s
95th percentile per-packet one-way delay: 59.684 ms
Loss rate: 0.00%

Run 3: Report of Sprout — Data Link

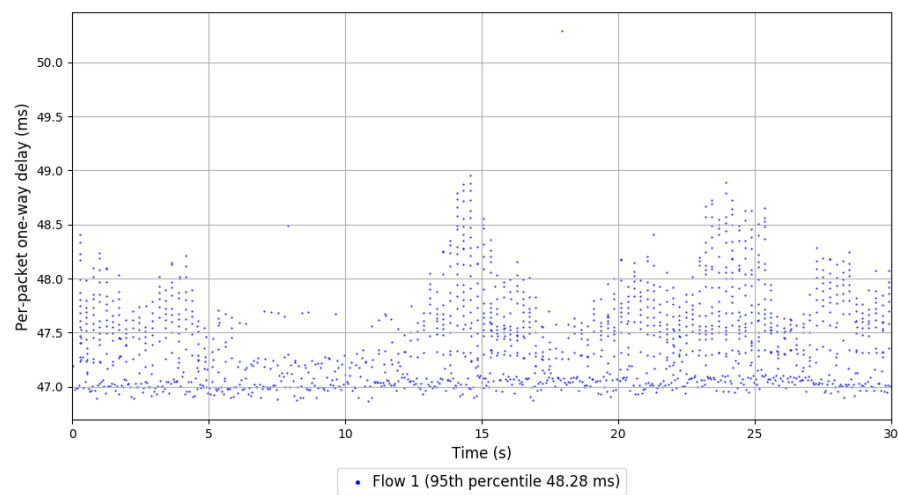
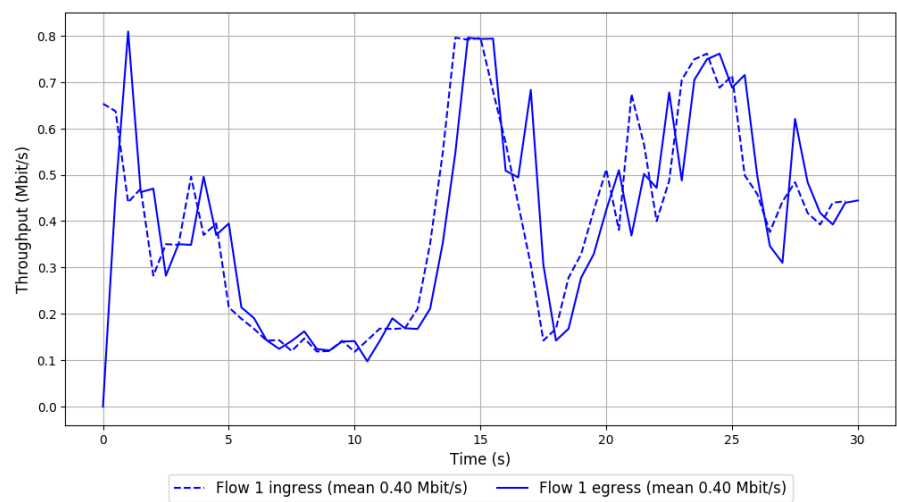


Run 4: Statistics of Sprout

Start at: 2019-01-24 21:53:45
End at: 2019-01-24 21:54:15
Local clock offset: 0.675 ms
Remote clock offset: -1.494 ms

Below is generated by plot.py at 2019-01-24 23:19:53
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 48.282 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 48.282 ms
Loss rate: 0.00%

Run 4: Report of Sprout — Data Link

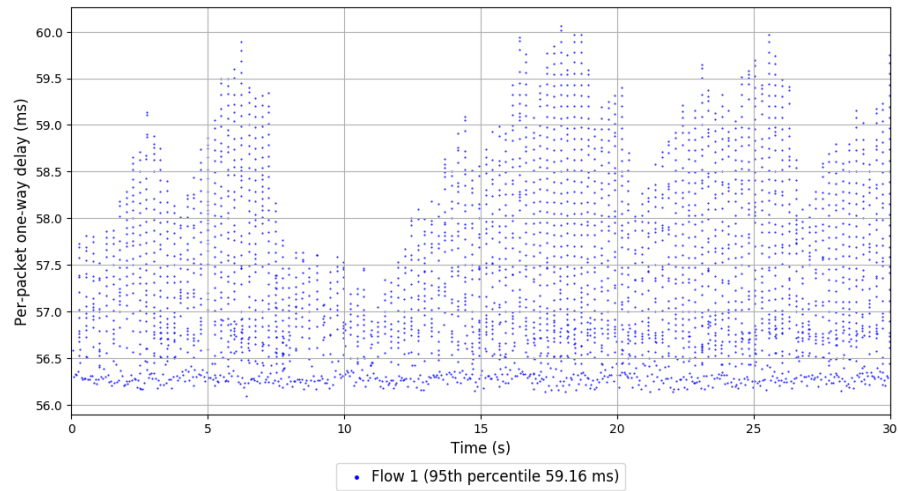
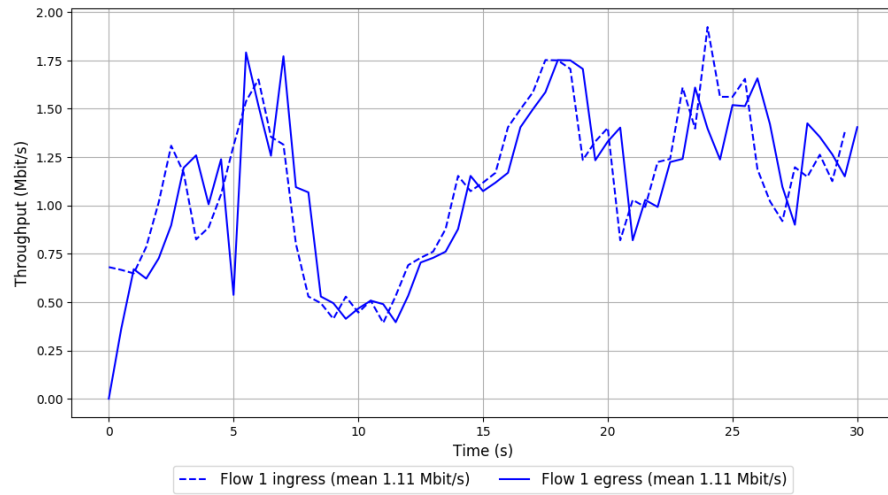


Run 5: Statistics of Sprout

Start at: 2019-01-24 22:57:27
End at: 2019-01-24 22:57:57
Local clock offset: -1.869 ms
Remote clock offset: -0.547 ms

Below is generated by plot.py at 2019-01-24 23:19:53
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 59.155 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 59.155 ms
Loss rate: 0.00%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

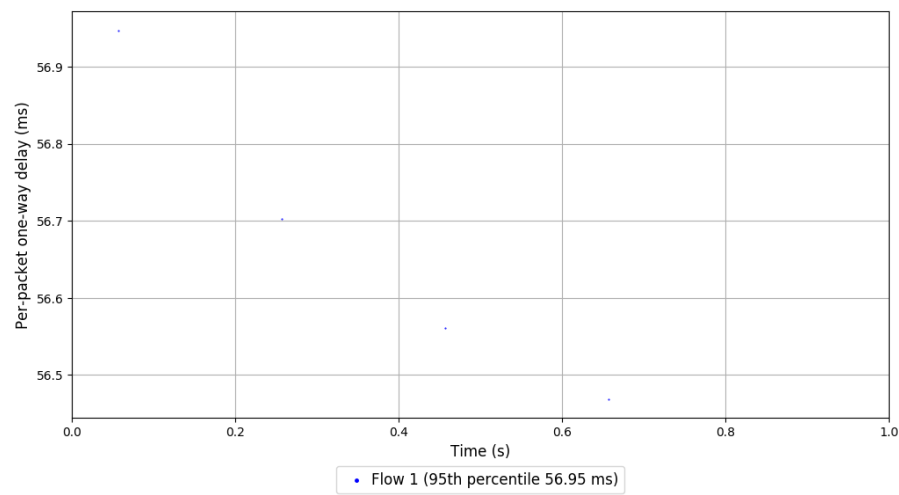
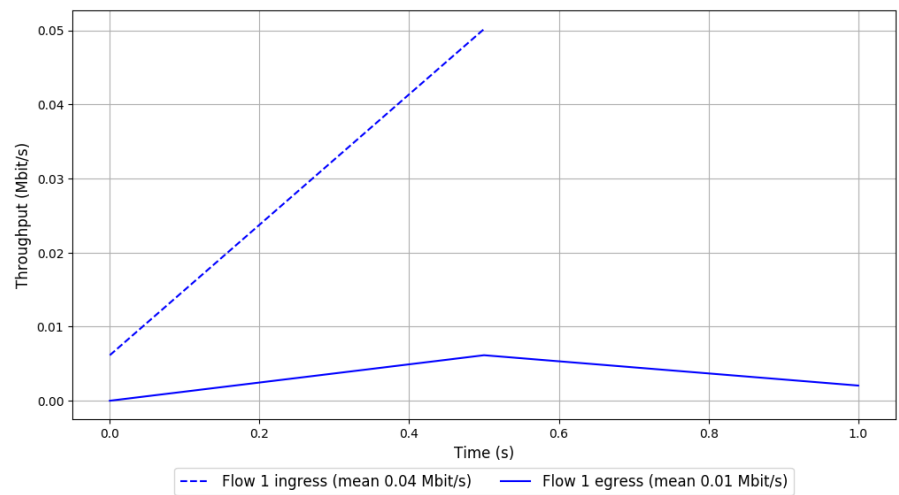
Start at: 2019-01-24 14:27:45

End at: 2019-01-24 14:28:15

Local clock offset: -2.464 ms

Remote clock offset: 50.054 ms

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



Run 2: Statistics of TaoVA-100x

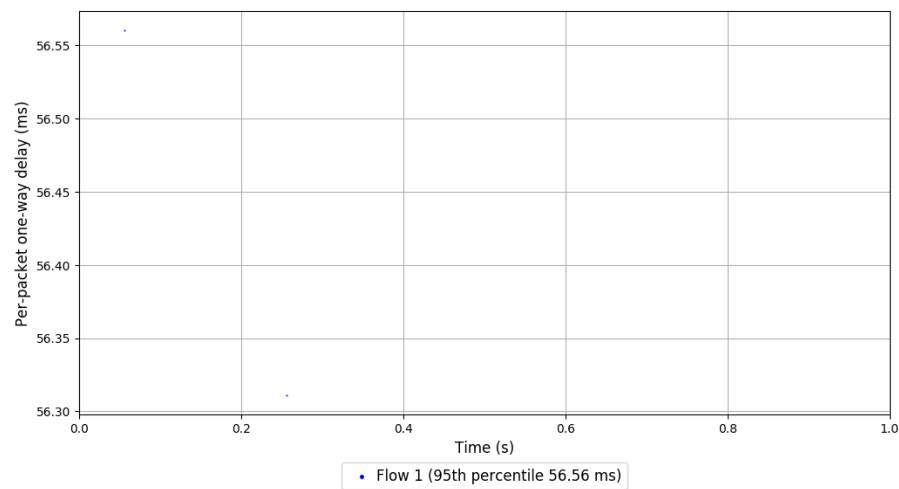
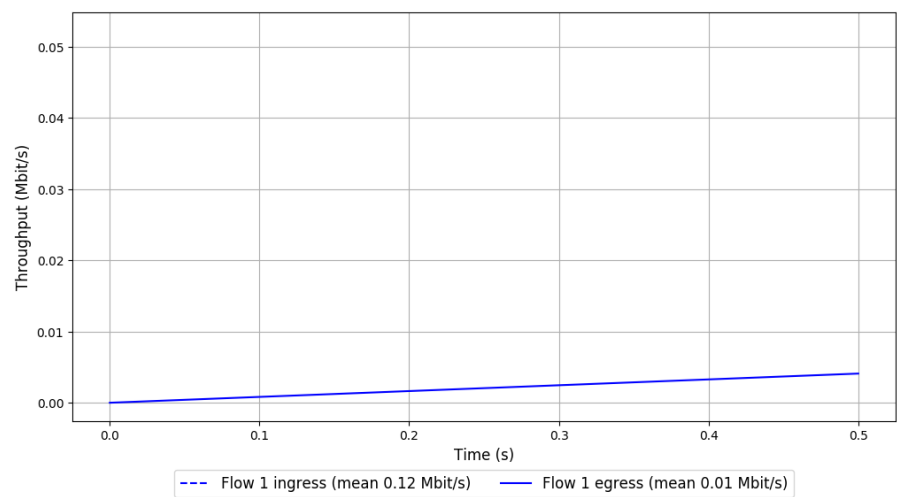
Start at: 2019-01-24 16:59:59

End at: 2019-01-24 17:00:29

Local clock offset: 6.871 ms

Remote clock offset: 46.854 ms

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



Run 3: Statistics of TaoVA-100x

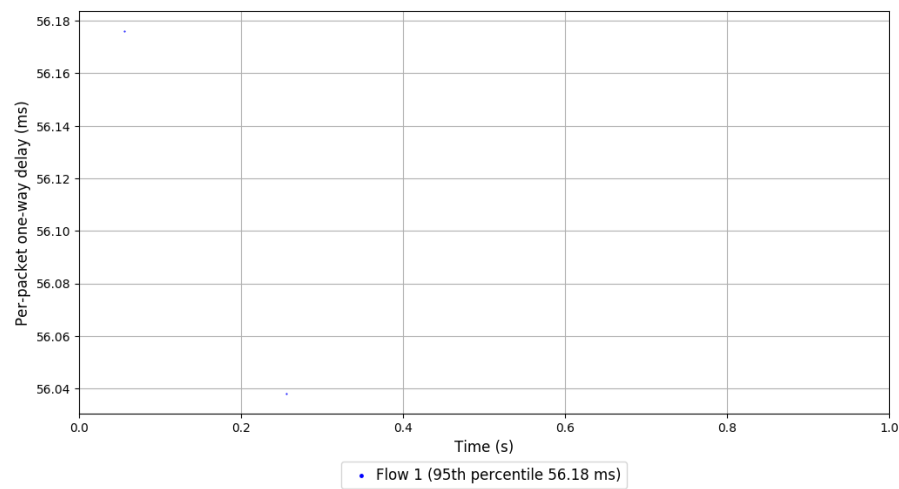
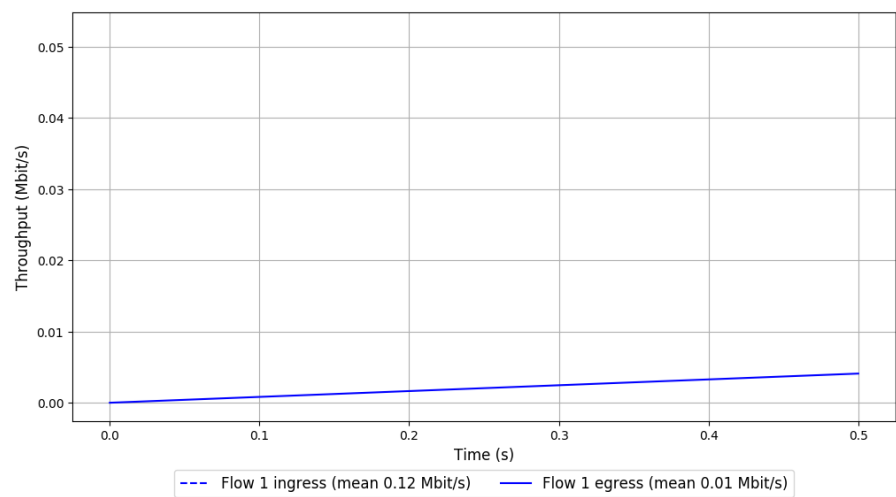
Start at: 2019-01-24 19:14:12

End at: 2019-01-24 19:14:42

Local clock offset: -0.406 ms

Remote clock offset: 56.016 ms

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



Run 4: Statistics of TaoVA-100x

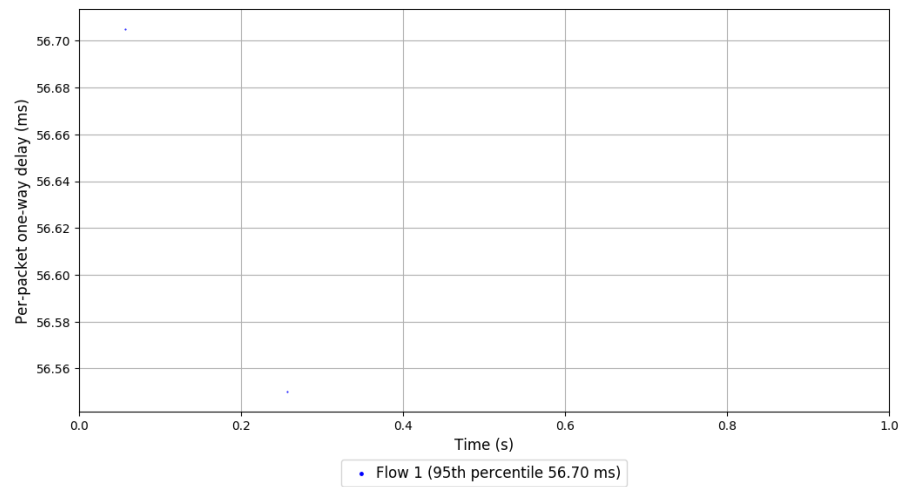
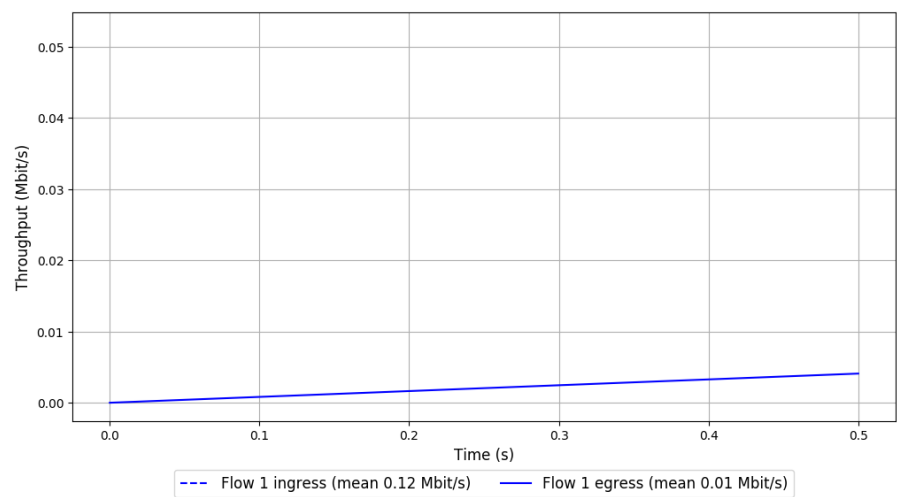
Start at: 2019-01-24 21:00:28

End at: 2019-01-24 21:00:58

Local clock offset: -6.515 ms

Remote clock offset: -15.373 ms

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



Run 5: Statistics of TaoVA-100x

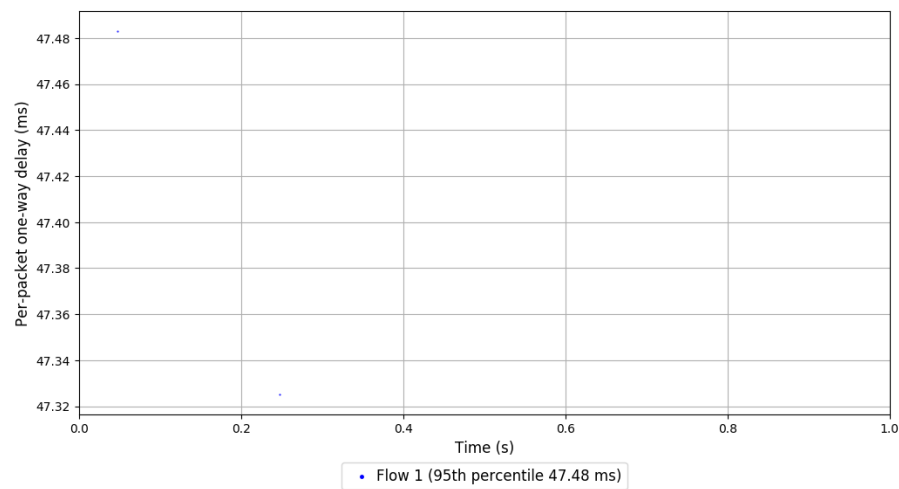
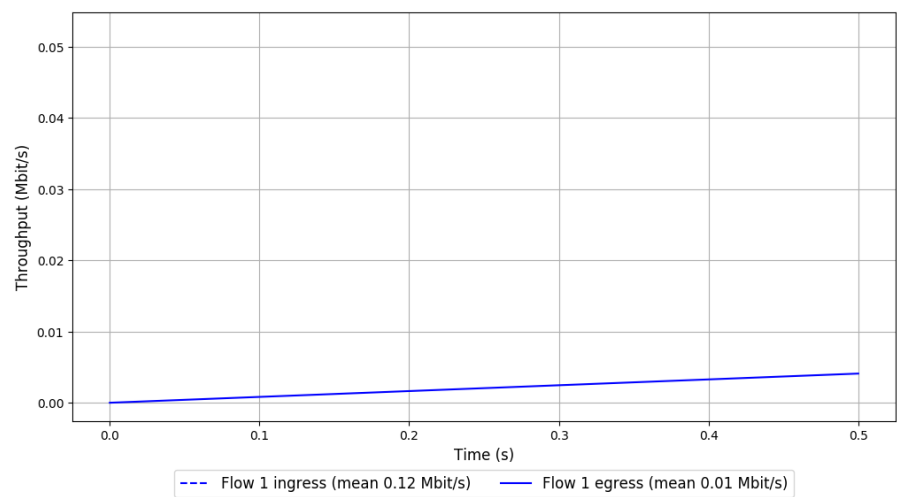
Start at: 2019-01-24 22:21:24

End at: 2019-01-24 22:21:54

Local clock offset: 3.841 ms

Remote clock offset: -0.593 ms

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

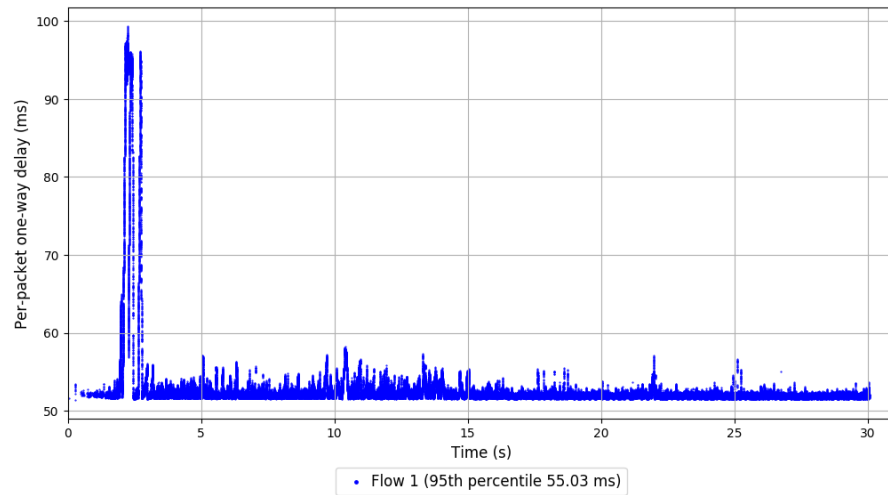
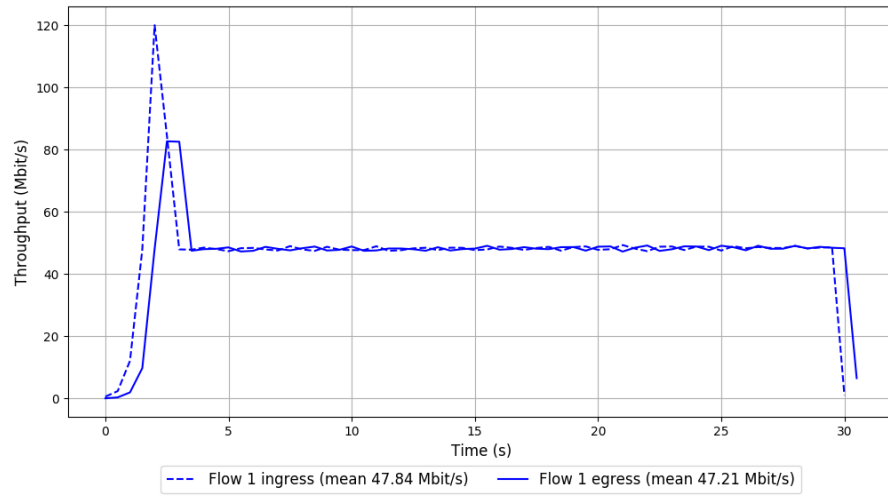


Run 1: Statistics of TCP Vegas

Start at: 2019-01-24 16:02:02
End at: 2019-01-24 16:02:32
Local clock offset: 2.682 ms
Remote clock offset: 51.067 ms

Below is generated by plot.py at 2019-01-24 23:20:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 47.21 Mbit/s
95th percentile per-packet one-way delay: 55.034 ms
Loss rate: 1.31%
-- Flow 1:
Average throughput: 47.21 Mbit/s
95th percentile per-packet one-way delay: 55.034 ms
Loss rate: 1.31%

Run 1: Report of TCP Vegas — Data Link

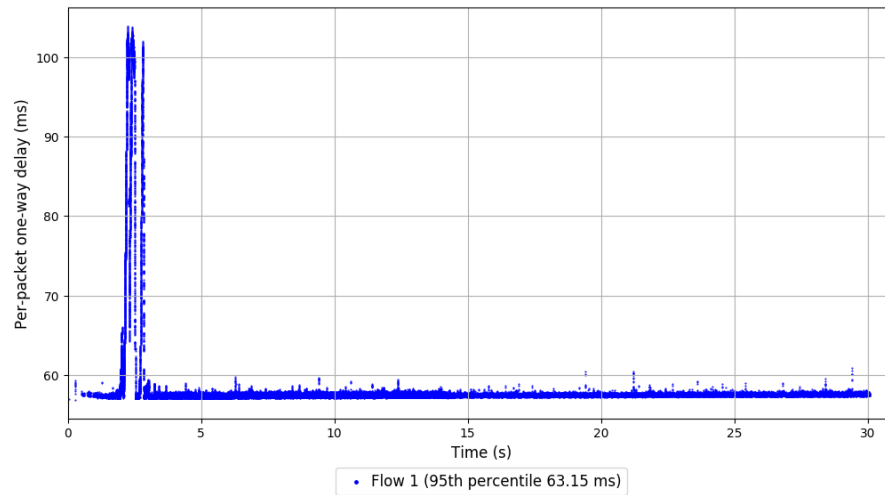
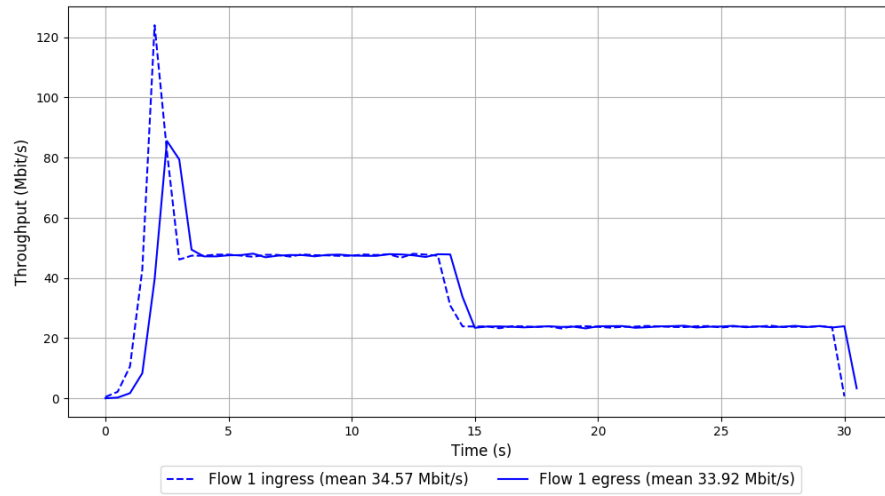


Run 2: Statistics of TCP Vegas

Start at: 2019-01-24 18:31:21
End at: 2019-01-24 18:31:51
Local clock offset: 2.103 ms
Remote clock offset: 27.815 ms

Below is generated by plot.py at 2019-01-24 23:20:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 33.92 Mbit/s
95th percentile per-packet one-way delay: 63.145 ms
Loss rate: 1.88%
-- Flow 1:
Average throughput: 33.92 Mbit/s
95th percentile per-packet one-way delay: 63.145 ms
Loss rate: 1.88%

Run 2: Report of TCP Vegas — Data Link

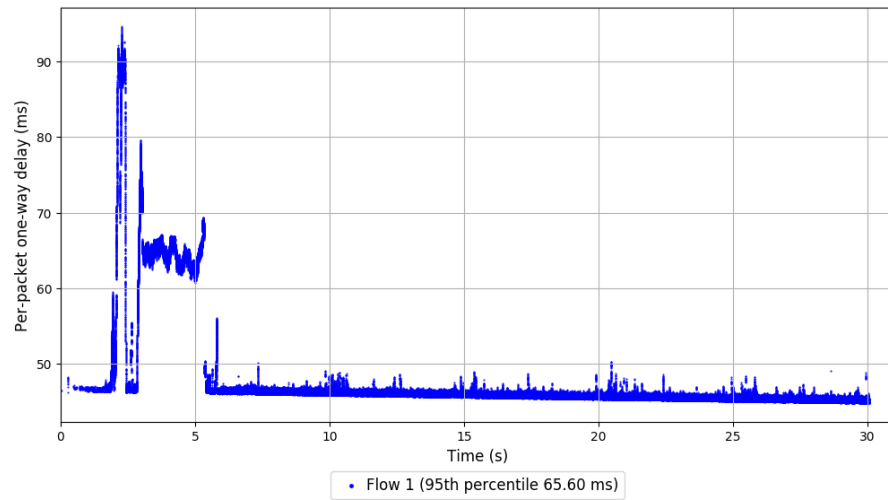
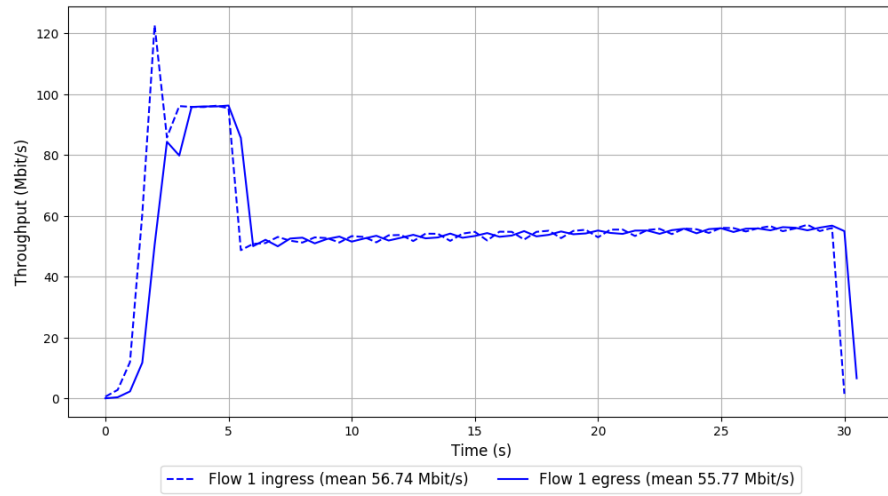


Run 3: Statistics of TCP Vegas

Start at: 2019-01-24 20:24:51
End at: 2019-01-24 20:25:21
Local clock offset: -8.098 ms
Remote clock offset: -33.178 ms

Below is generated by plot.py at 2019-01-24 23:20:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 55.77 Mbit/s
95th percentile per-packet one-way delay: 65.601 ms
Loss rate: 1.71%
-- Flow 1:
Average throughput: 55.77 Mbit/s
95th percentile per-packet one-way delay: 65.601 ms
Loss rate: 1.71%

Run 3: Report of TCP Vegas — Data Link

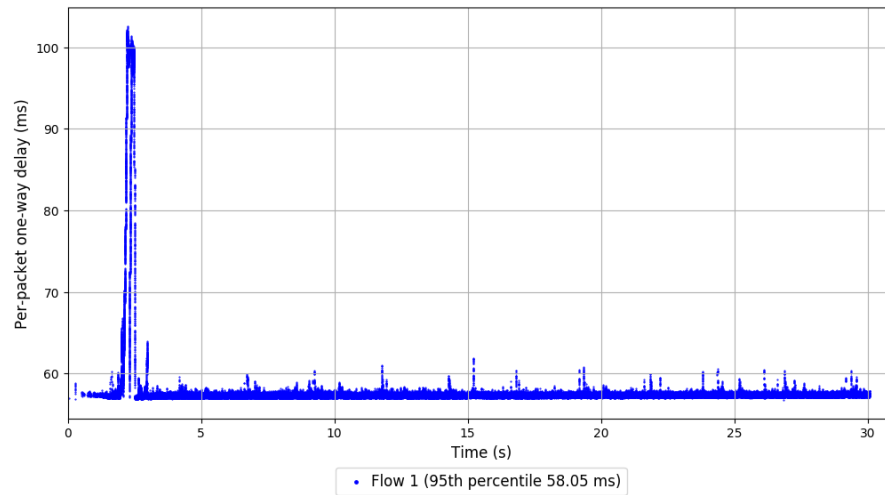
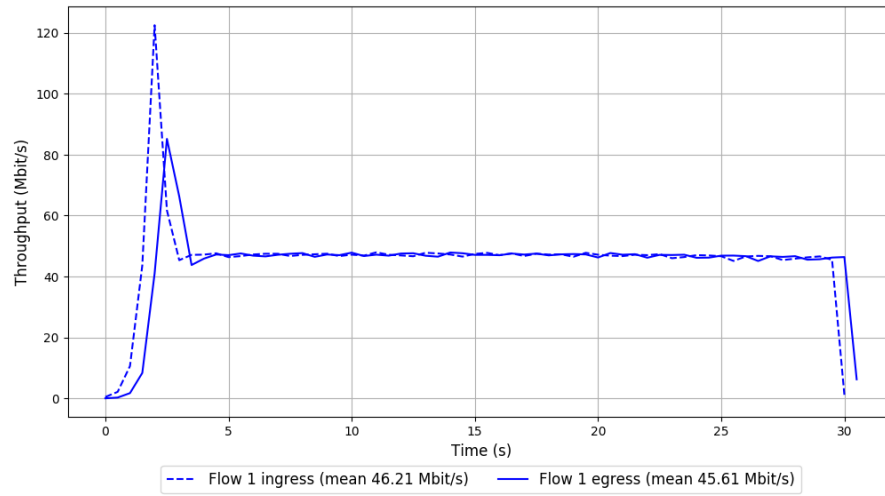


Run 4: Statistics of TCP Vegas

Start at: 2019-01-24 21:59:23
End at: 2019-01-24 21:59:53
Local clock offset: 0.875 ms
Remote clock offset: -1.347 ms

Below is generated by plot.py at 2019-01-24 23:20:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 45.61 Mbit/s
95th percentile per-packet one-way delay: 58.045 ms
Loss rate: 1.28%
-- Flow 1:
Average throughput: 45.61 Mbit/s
95th percentile per-packet one-way delay: 58.045 ms
Loss rate: 1.28%

Run 4: Report of TCP Vegas — Data Link

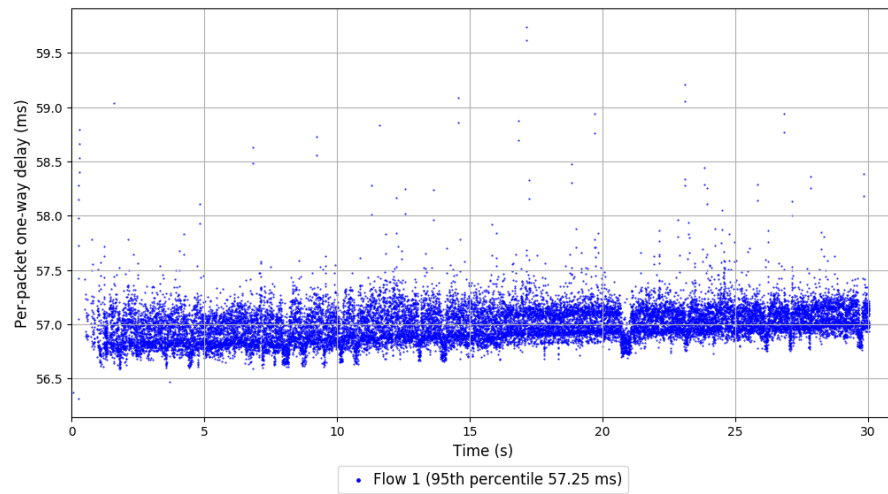
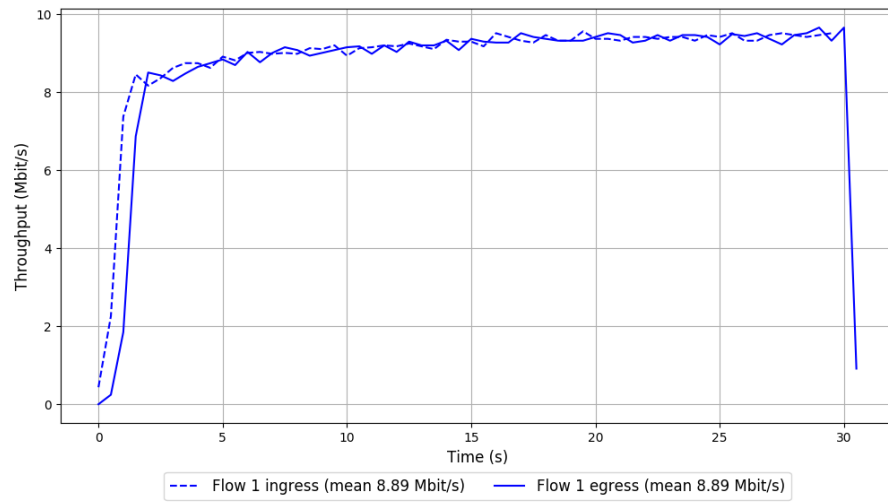


Run 5: Statistics of TCP Vegas

Start at: 2019-01-24 23:02:26
End at: 2019-01-24 23:02:56
Local clock offset: -0.504 ms
Remote clock offset: -0.652 ms

Below is generated by plot.py at 2019-01-24 23:20:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 8.89 Mbit/s
95th percentile per-packet one-way delay: 57.251 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 8.89 Mbit/s
95th percentile per-packet one-way delay: 57.251 ms
Loss rate: 0.00%

Run 5: Report of TCP Vegas — Data Link

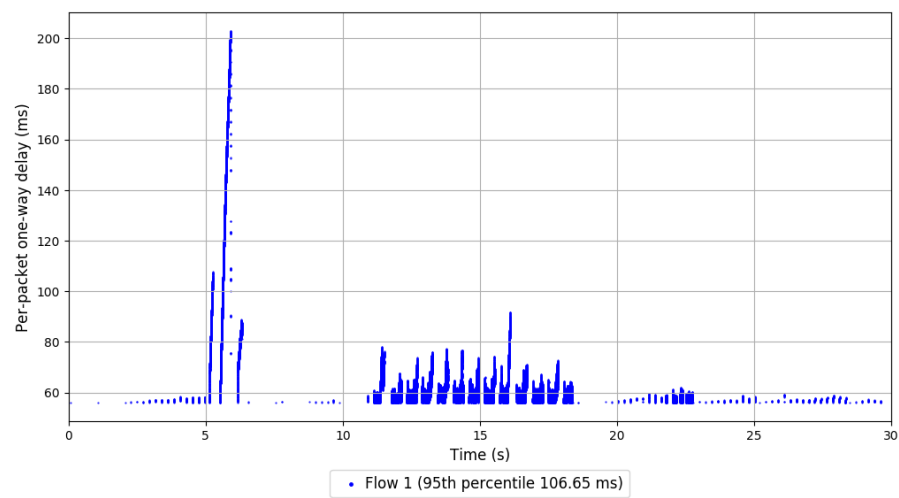
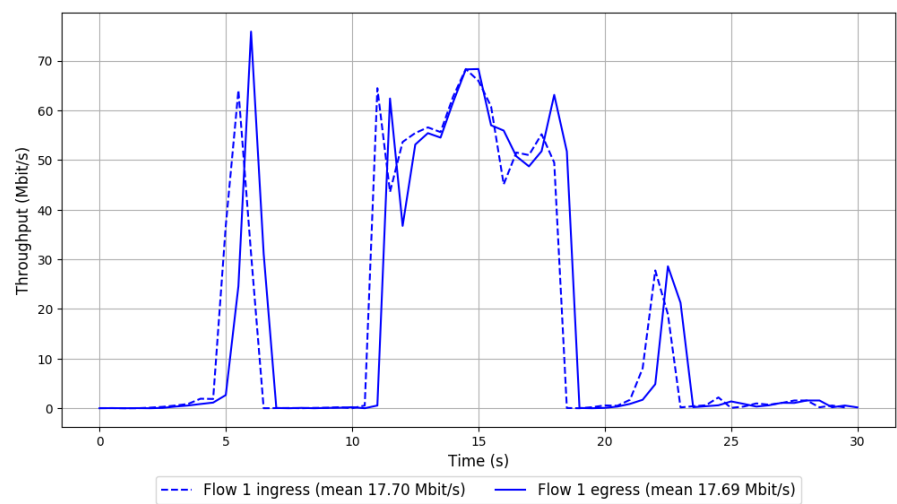


Run 1: Statistics of Verus

Start at: 2019-01-24 15:46:34
End at: 2019-01-24 15:47:04
Local clock offset: 1.636 ms
Remote clock offset: 47.197 ms

Below is generated by plot.py at 2019-01-24 23:20:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 17.69 Mbit/s
95th percentile per-packet one-way delay: 106.653 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 17.69 Mbit/s
95th percentile per-packet one-way delay: 106.653 ms
Loss rate: 0.04%

Run 1: Report of Verus — Data Link

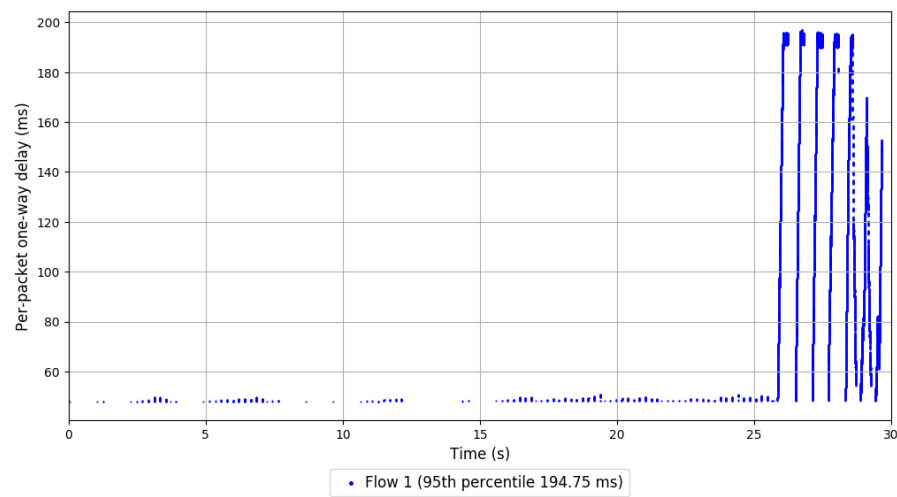
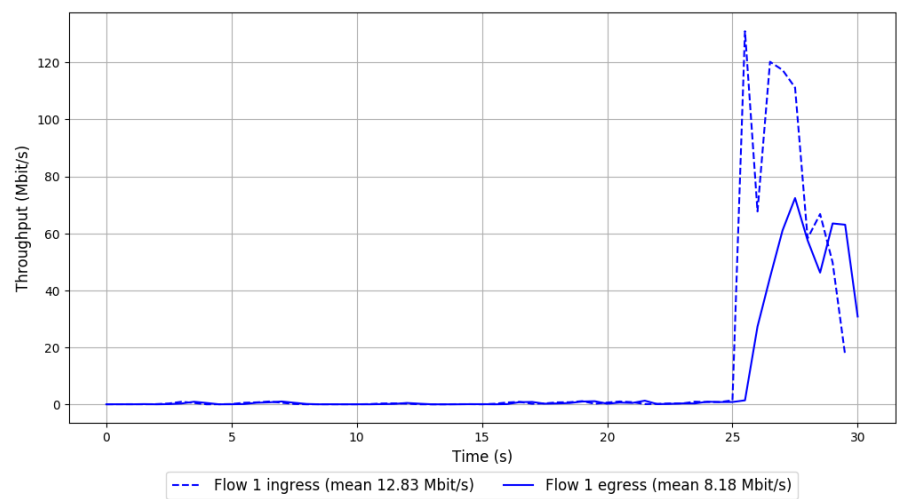


Run 2: Statistics of Verus

Start at: 2019-01-24 18:15:02
End at: 2019-01-24 18:15:32
Local clock offset: 2.115 ms
Remote clock offset: 37.609 ms

Below is generated by plot.py at 2019-01-24 23:20:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 8.18 Mbit/s
95th percentile per-packet one-way delay: 194.747 ms
Loss rate: 36.05%
-- Flow 1:
Average throughput: 8.18 Mbit/s
95th percentile per-packet one-way delay: 194.747 ms
Loss rate: 36.05%

Run 2: Report of Verus — Data Link

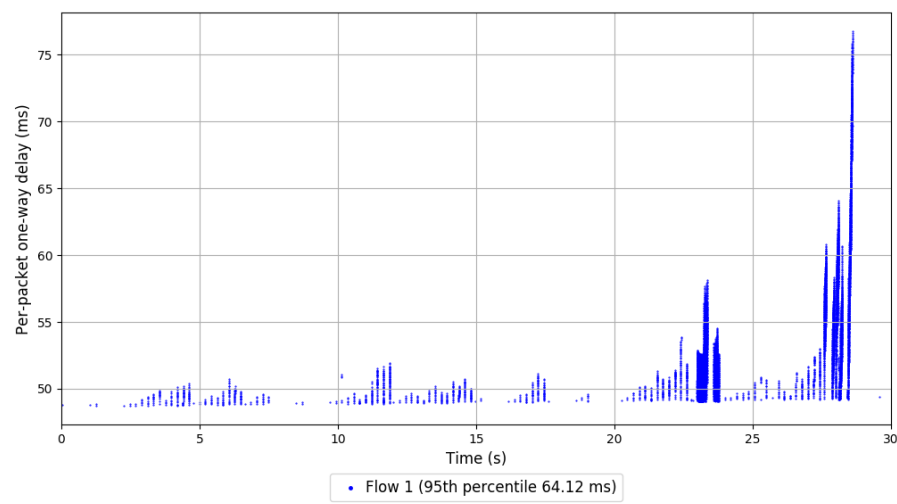
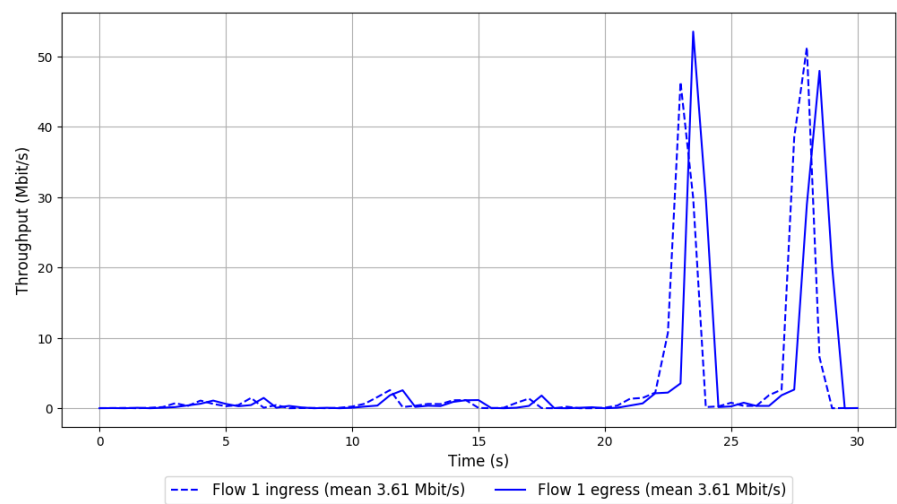


Run 3: Statistics of Verus

Start at: 2019-01-24 20:13:16
End at: 2019-01-24 20:13:46
Local clock offset: -6.84 ms
Remote clock offset: -18.583 ms

Below is generated by plot.py at 2019-01-24 23:20:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.61 Mbit/s
95th percentile per-packet one-way delay: 64.123 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 3.61 Mbit/s
95th percentile per-packet one-way delay: 64.123 ms
Loss rate: 0.00%

Run 3: Report of Verus — Data Link

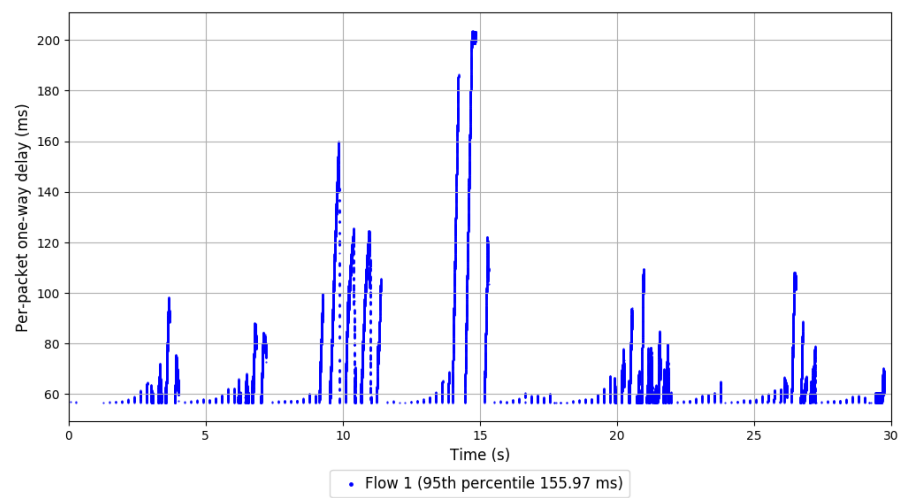
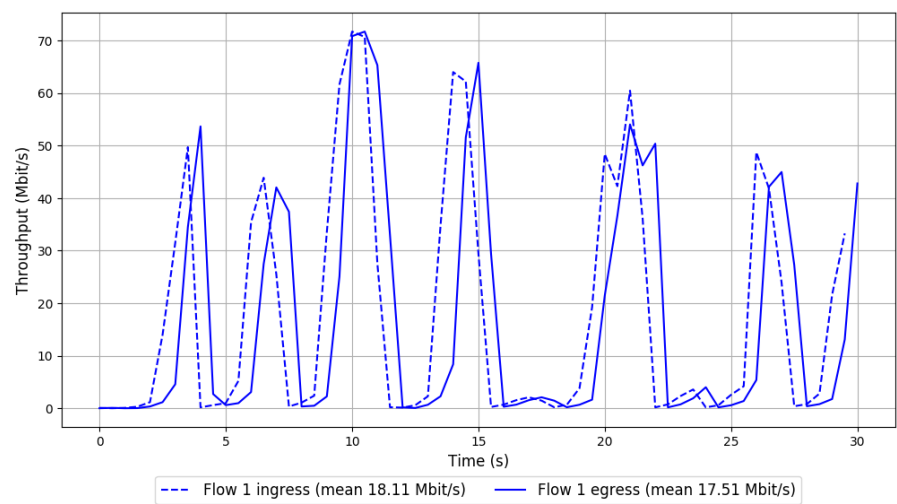


Run 4: Statistics of Verus

Start at: 2019-01-24 21:48:44
End at: 2019-01-24 21:49:14
Local clock offset: 0.415 ms
Remote clock offset: -1.509 ms

Below is generated by plot.py at 2019-01-24 23:20:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 17.51 Mbit/s
95th percentile per-packet one-way delay: 155.970 ms
Loss rate: 3.29%
-- Flow 1:
Average throughput: 17.51 Mbit/s
95th percentile per-packet one-way delay: 155.970 ms
Loss rate: 3.29%

Run 4: Report of Verus — Data Link

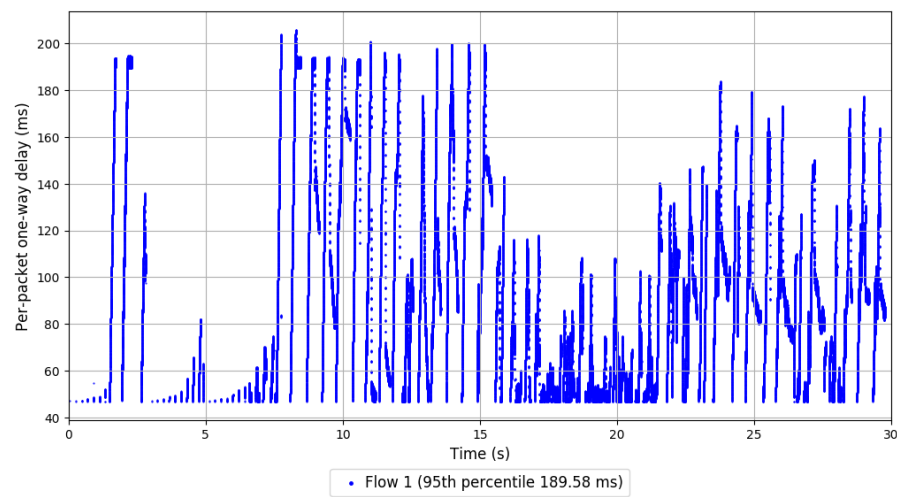
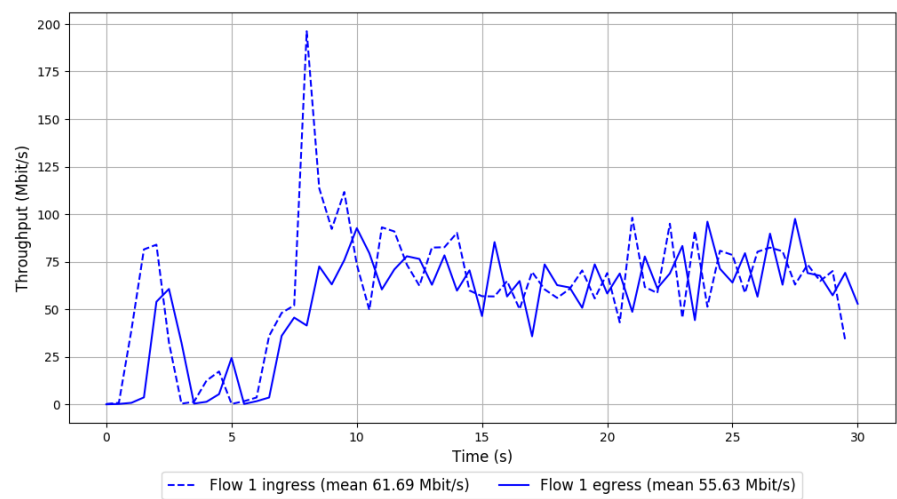


Run 5: Statistics of Verus

Start at: 2019-01-24 22:52:27
End at: 2019-01-24 22:52:57
Local clock offset: -1.508 ms
Remote clock offset: -0.717 ms

Below is generated by plot.py at 2019-01-24 23:20:16
Datalink statistics
-- Total of 1 flow:
Average throughput: 55.63 Mbit/s
95th percentile per-packet one-way delay: 189.581 ms
Loss rate: 9.70%
-- Flow 1:
Average throughput: 55.63 Mbit/s
95th percentile per-packet one-way delay: 189.581 ms
Loss rate: 9.70%

Run 5: Report of Verus — Data Link

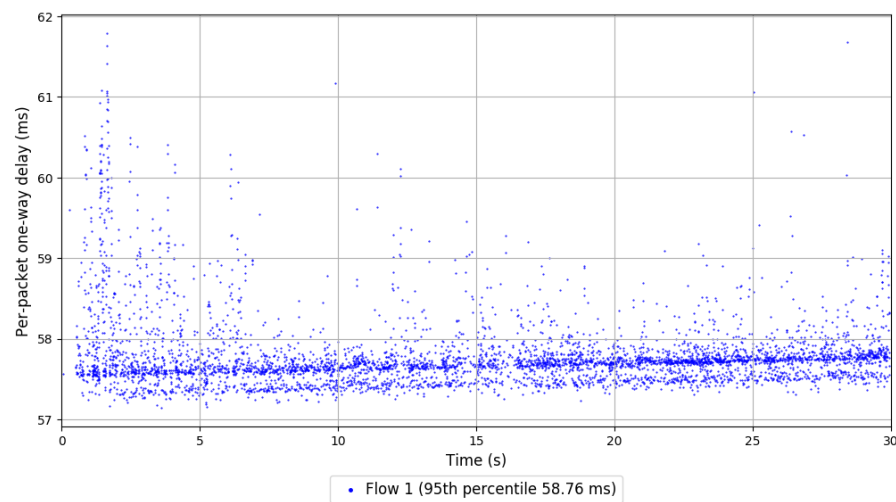
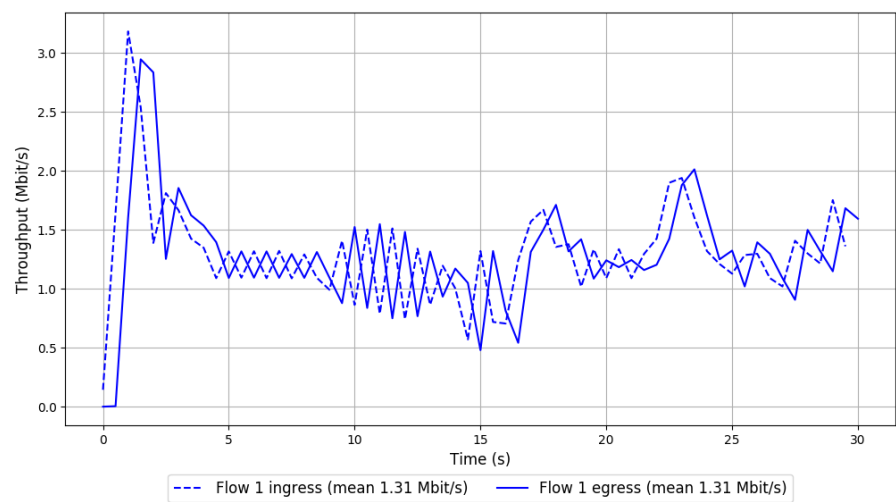


Run 1: Statistics of PCC-Vivace

Start at: 2019-01-24 14:43:54
End at: 2019-01-24 14:44:24
Local clock offset: -0.049 ms
Remote clock offset: 53.886 ms

Below is generated by plot.py at 2019-01-24 23:20:16
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.31 Mbit/s
95th percentile per-packet one-way delay: 58.763 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.31 Mbit/s
95th percentile per-packet one-way delay: 58.763 ms
Loss rate: 0.00%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2019-01-24 17:18:44

End at: 2019-01-24 17:19:14

Local clock offset: 1.637 ms

Remote clock offset: 47.187 ms

Below is generated by plot.py at 2019-01-24 23:20:16

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.00 Mbit/s

95th percentile per-packet one-way delay: 48.103 ms

Loss rate: 0.00%

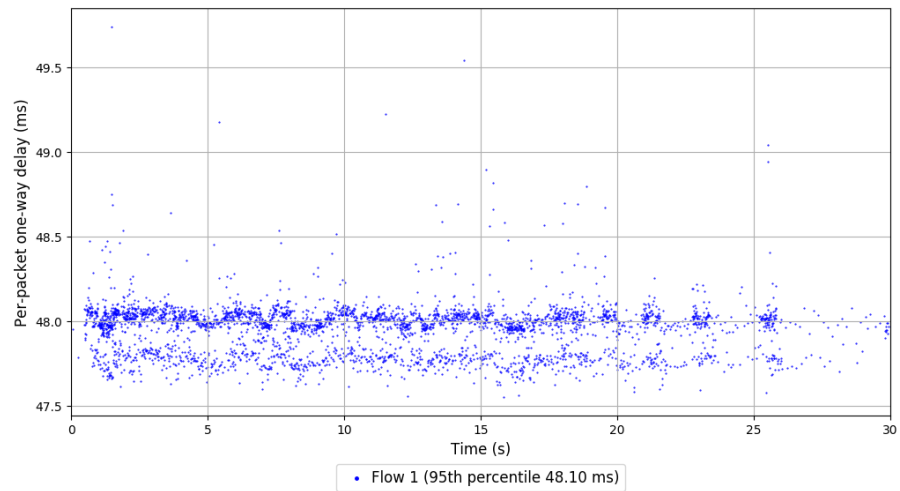
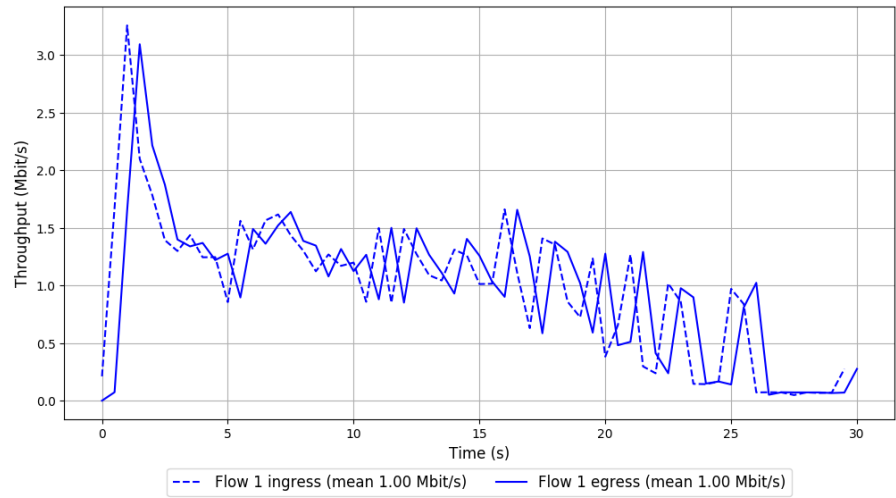
-- Flow 1:

Average throughput: 1.00 Mbit/s

95th percentile per-packet one-way delay: 48.103 ms

Loss rate: 0.00%

Run 2: Report of PCC-Vivace — Data Link

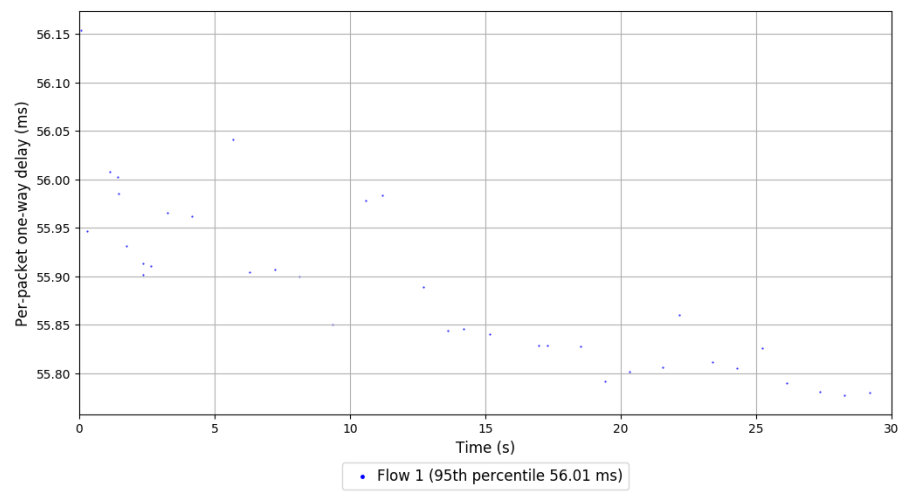
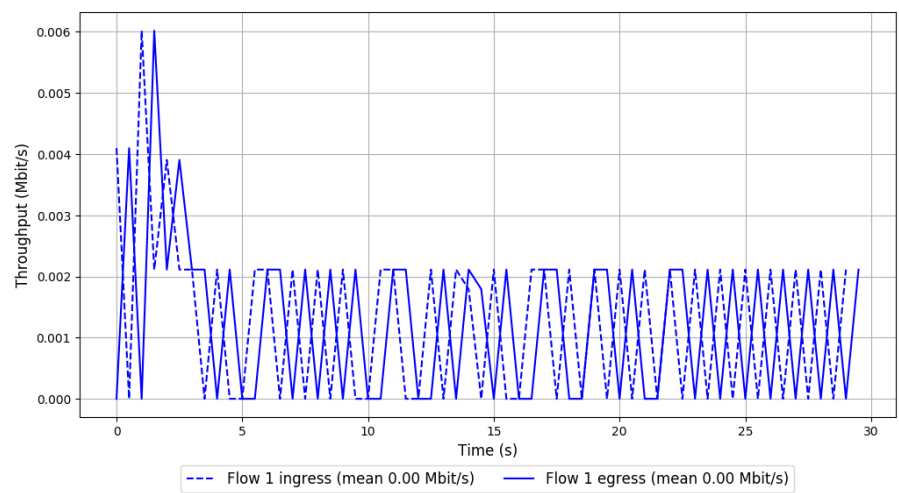


Run 3: Statistics of PCC-Vivace

Start at: 2019-01-24 19:30:24
End at: 2019-01-24 19:30:54
Local clock offset: -1.685 ms
Remote clock offset: 61.299 ms

Below is generated by plot.py at 2019-01-24 23:20:16
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 56.008 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 56.008 ms
Loss rate: 0.00%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2019-01-24 21:07:30

End at: 2019-01-24 21:08:00

Local clock offset: -3.406 ms

Remote clock offset: -7.13 ms

Below is generated by plot.py at 2019-01-24 23:20:16

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.20 Mbit/s

95th percentile per-packet one-way delay: 56.882 ms

Loss rate: 0.00%

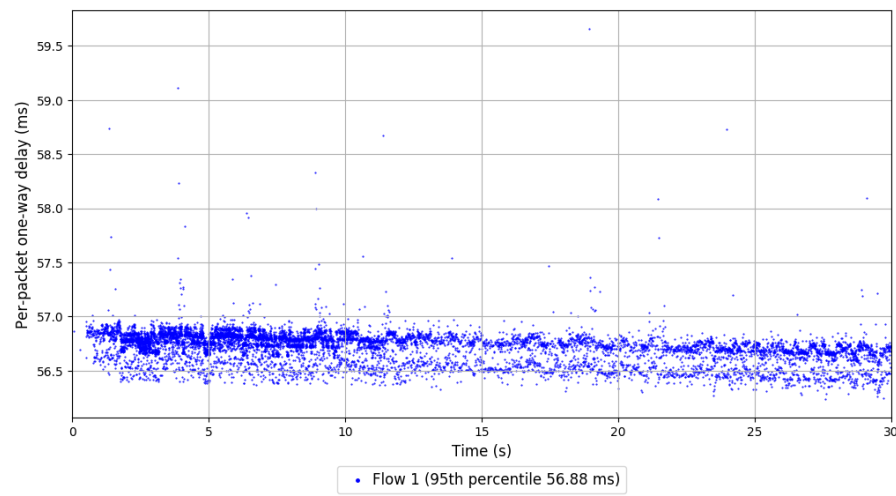
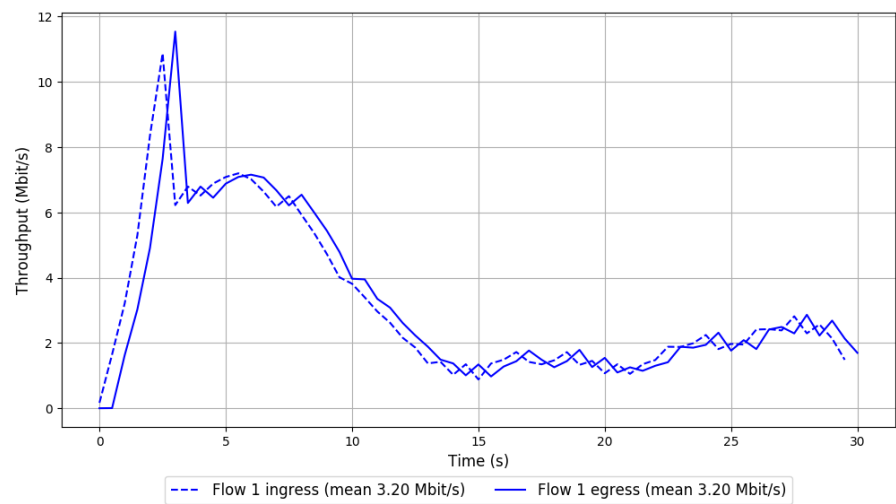
-- Flow 1:

Average throughput: 3.20 Mbit/s

95th percentile per-packet one-way delay: 56.882 ms

Loss rate: 0.00%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2019-01-24 22:26:18

End at: 2019-01-24 22:26:49

Local clock offset: 4.131 ms

Remote clock offset: -0.607 ms

Below is generated by plot.py at 2019-01-24 23:20:16

Datalink statistics

-- Total of 1 flow:

Average throughput: 9.79 Mbit/s

95th percentile per-packet one-way delay: 56.751 ms

Loss rate: 0.00%

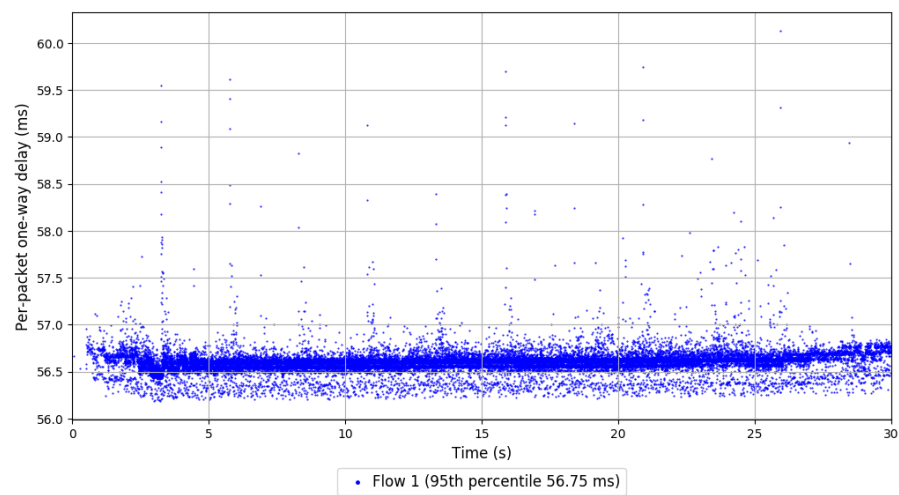
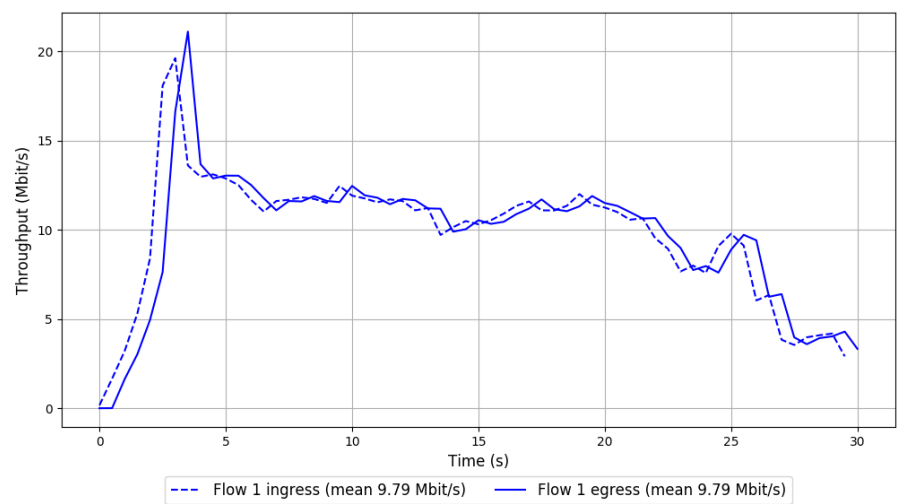
-- Flow 1:

Average throughput: 9.79 Mbit/s

95th percentile per-packet one-way delay: 56.751 ms

Loss rate: 0.00%

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

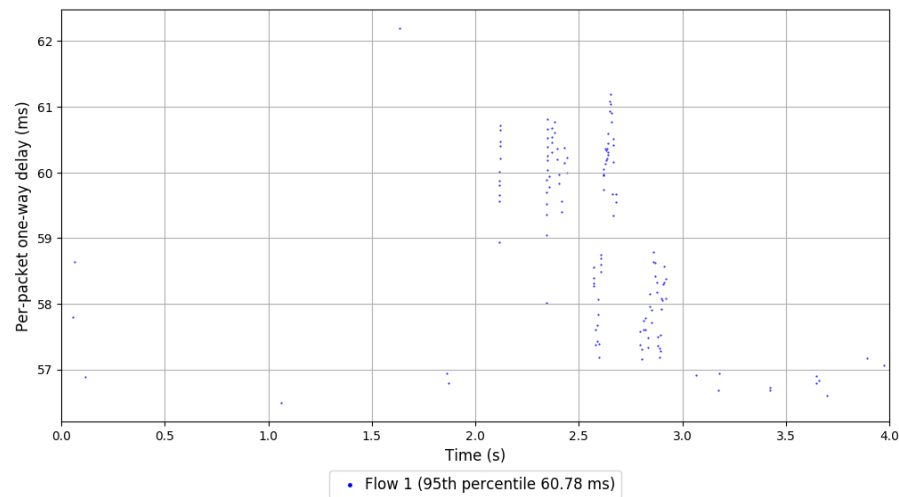
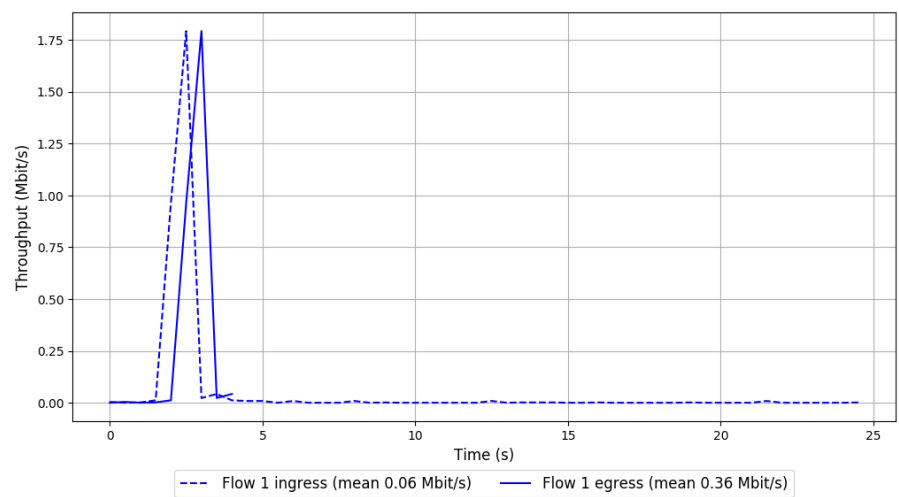
Start at: 2019-01-24 15:15:12

End at: 2019-01-24 15:15:42

Local clock offset: -3.483 ms

Remote clock offset: 53.563 ms

Run 1: Report of WebRTC media — Data Link

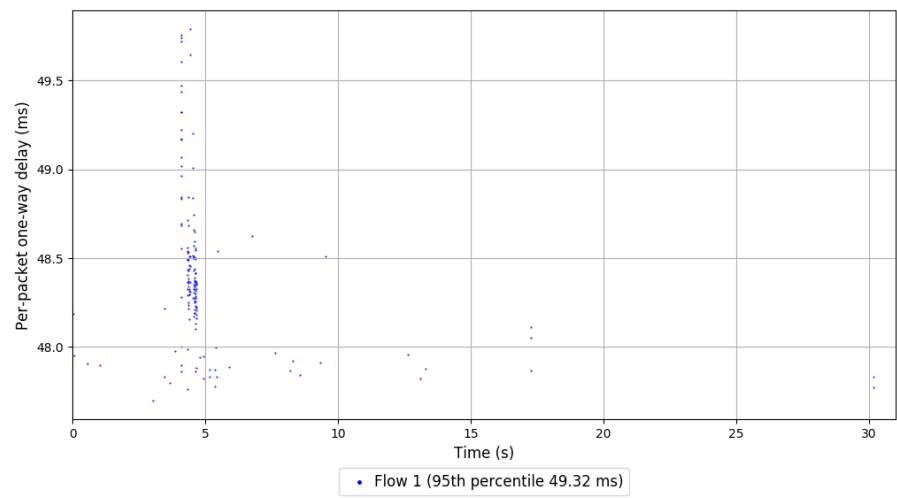
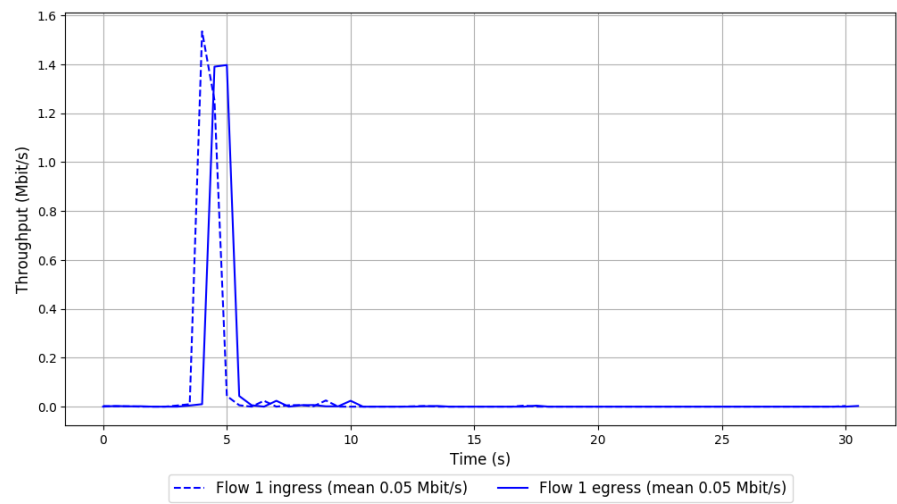


Run 2: Statistics of WebRTC media

Start at: 2019-01-24 18:04:29
End at: 2019-01-24 18:04:59
Local clock offset: 2.53 ms
Remote clock offset: 48.945 ms

Below is generated by plot.py at 2019-01-24 23:20:16
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 49.324 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 49.324 ms
Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link

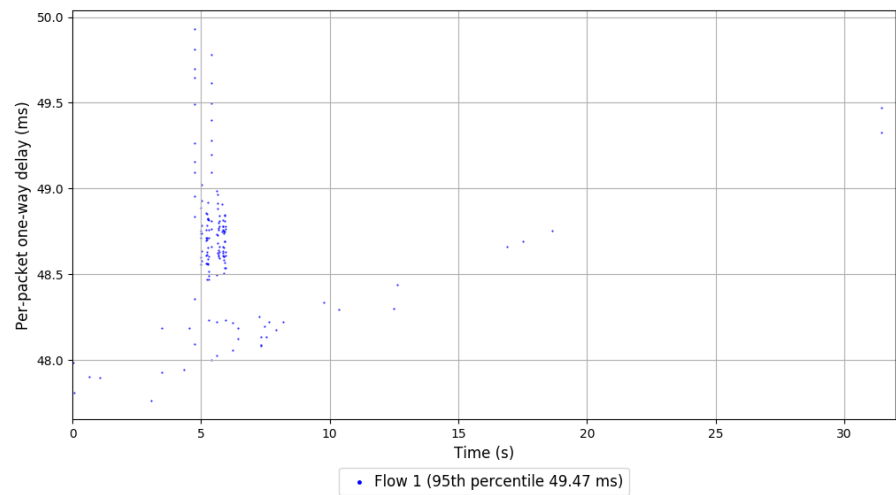
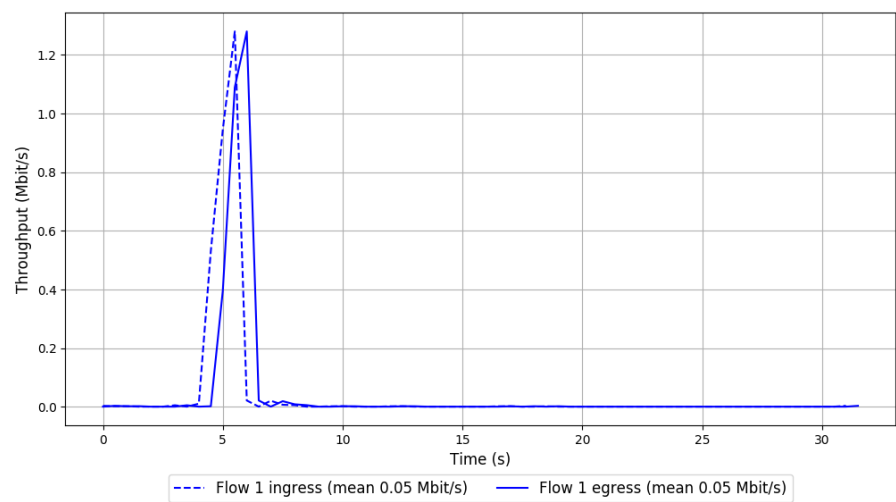


Run 3: Statistics of WebRTC media

Start at: 2019-01-24 20:00:00
End at: 2019-01-24 20:00:30
Local clock offset: -3.233 ms
Remote clock offset: 11.723 ms

Below is generated by plot.py at 2019-01-24 23:20:16
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 49.471 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 49.471 ms
Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

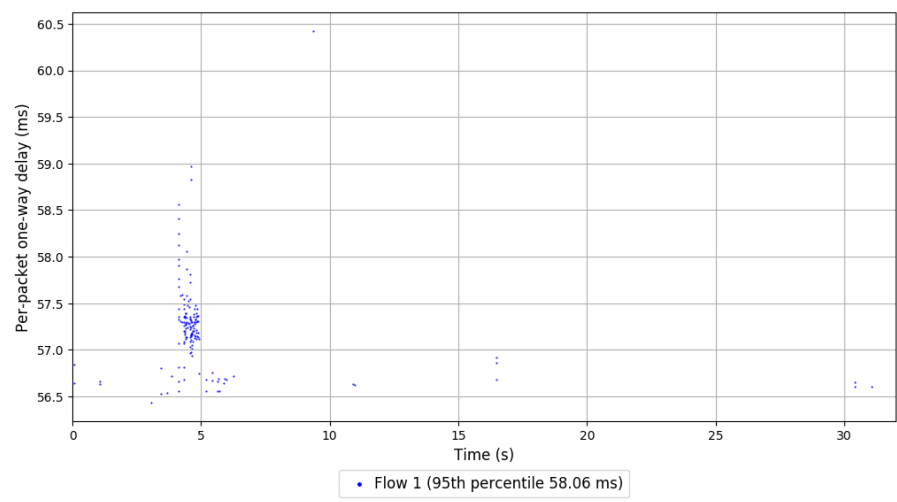
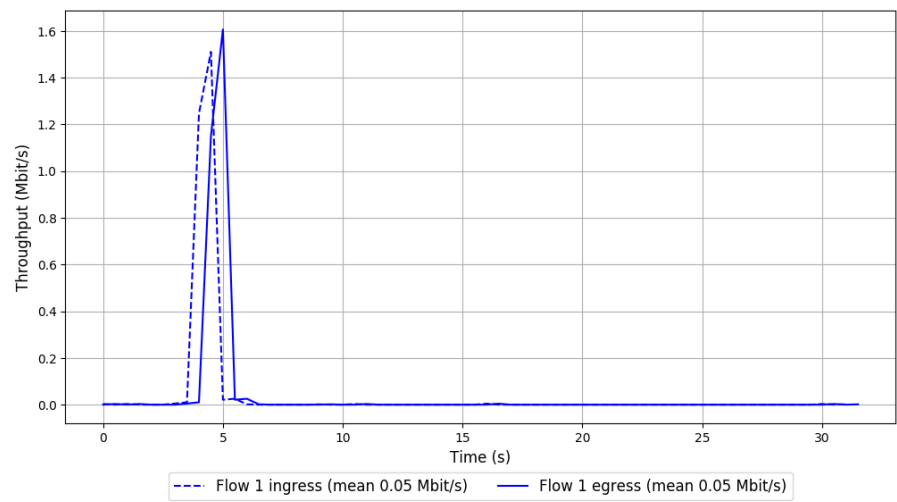


Run 4: Statistics of WebRTC media

Start at: 2019-01-24 21:32:54
End at: 2019-01-24 21:33:24
Local clock offset: -0.297 ms
Remote clock offset: -2.323 ms

Below is generated by plot.py at 2019-01-24 23:20:16
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 58.056 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 58.056 ms
Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2019-01-24 22:42:22

End at: 2019-01-24 22:42:52

Local clock offset: -0.638 ms

Remote clock offset: 0.163 ms

Below is generated by plot.py at 2019-01-24 23:20:16

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 49.942 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 49.942 ms

Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

