

Pantheon Report

Generated at 2018-09-11 01:09:15 (UTC).

Data path: AWS India 2 on **ens5** (*local*) → Saudi Arabia on **enp2s0** (*remote*).

Repeated the test of 18 congestion control schemes 5 times.

Each test lasted for 30 seconds running 1 flow.

NTP offsets were measured against **nets.org.sg** and have been applied to correct the timestamps in logs.

System info:

```
Linux 4.15.0-1020-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
net.ipv4.tcp_mem = 184101 245469 368202
```

Git summary:

```
branch: muses @ f30bceca2aec2ef14a3cf71e25642f4a30905a03
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a
third_party/pantheon-tunnel @ cbfce6db5ff5740dafa1771f813cd646339e1952
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

A scatter plot comparing different congestion control algorithms based on their average throughput and 95th percentile one-way delay. The y-axis represents Average throughput (mbit/s) from 0 to 400, and the x-axis represents 95th percentile one-way delay (ms) from 60 to 100. The algorithms are plotted as follows:

Algorithm	95th percentile one-way delay (ms)	Average throughput (mbit/s)
PCC-Allegro	~62	~450
FILIP-Sheep	~65	~430
FILIP	~78	~400
Indigo-Muses	~68	~320
TCP BBR	~65	~250
PCC-Vivace	~62	~210
CUBIC	~62	~200
TCP Vegas	~60	~130
Indigo	~72	~100
Verus	~98	~80
QUIC Cubic	~58	~60
TBBP-TOR	~60	~10
Sprout	~65	~5
WebDist	~62	~5
Quemlia	~60	~5



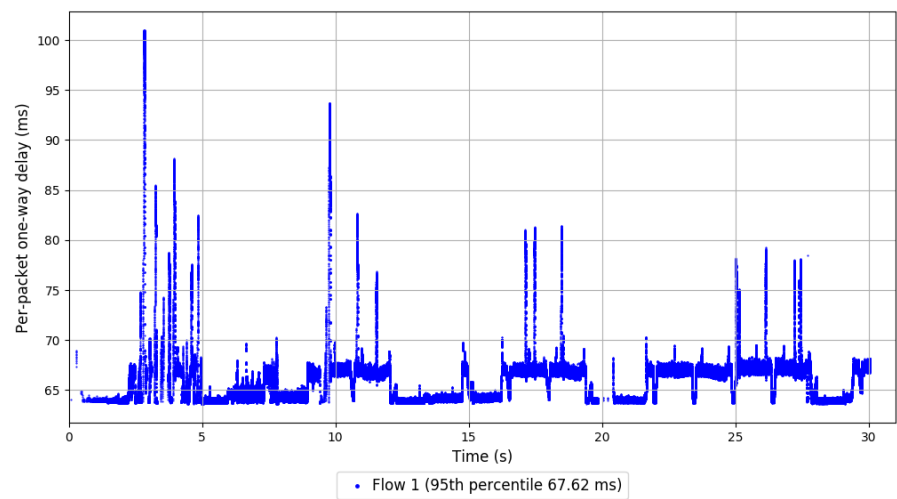
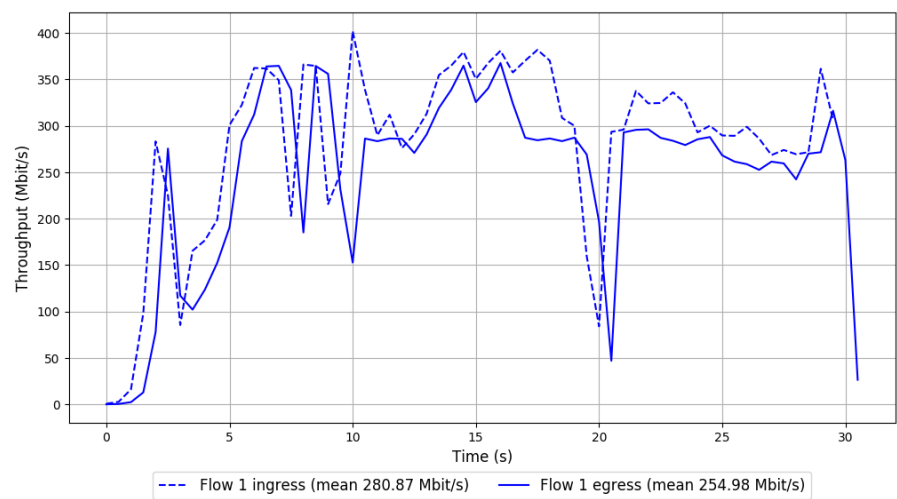
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	245.92	65.29	5.74
Copa	0	N/A	N/A	N/A
TCP Cubic	5	197.40	63.37	0.69
FillP	5	394.10	77.69	22.49
FillP-Sheep	5	426.73	64.85	10.22
Indigo	5	95.08	72.16	0.15
LEDBAT	5	9.54	63.27	0.00
Indigo-Muses	5	317.32	66.26	31.17
PCC-Allegro	5	448.21	63.35	3.92
PCC-Expr	4	12.66	61.68	28.99
QUIC Cubic	5	63.31	60.92	0.00
SCReAM	5	0.22	60.47	0.00
Sprout	5	2.41	67.21	0.00
TaoVA-100x	5	12.39	63.24	22.22
TCP Vegas	5	124.89	62.51	0.66
Verus	5	82.05	100.67	58.31
PCC-Vivace	5	205.65	62.96	0.90
WebRTC media	5	1.88	63.55	0.00

Run 1: Statistics of TCP BBR

Start at: 2018-09-10 22:46:49
End at: 2018-09-10 22:47:19
Local clock offset: 0.726 ms
Remote clock offset: -34.041 ms

Below is generated by plot.py at 2018-09-11 00:50:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 254.98 Mbit/s
95th percentile per-packet one-way delay: 67.623 ms
Loss rate: 9.21%
-- Flow 1:
Average throughput: 254.98 Mbit/s
95th percentile per-packet one-way delay: 67.623 ms
Loss rate: 9.21%

Run 1: Report of TCP BBR — Data Link

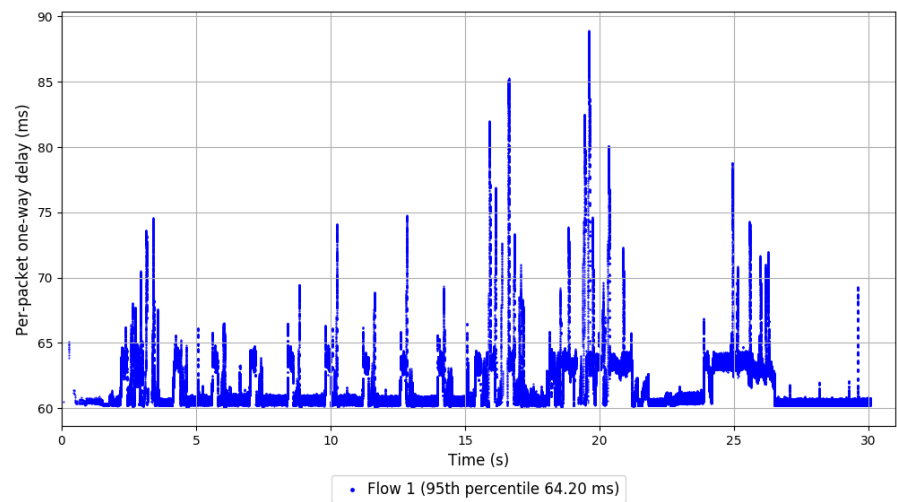
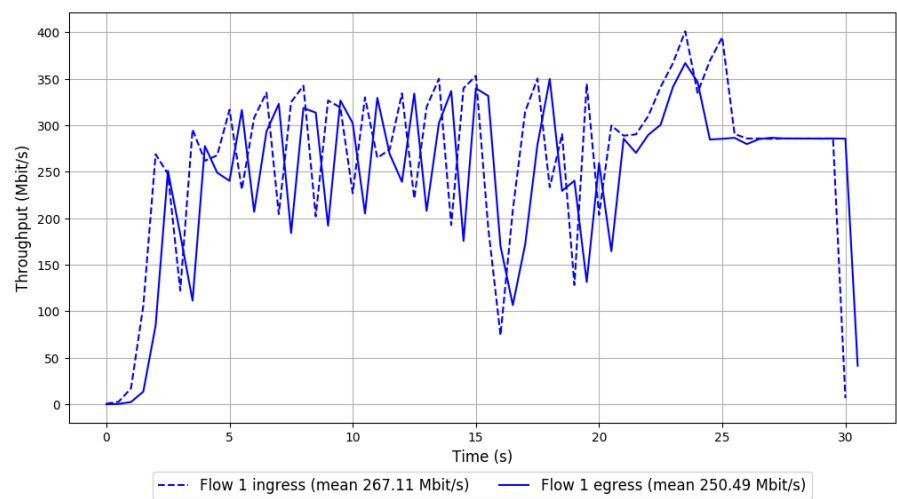


Run 2: Statistics of TCP BBR

Start at: 2018-09-10 23:10:04
End at: 2018-09-10 23:10:34
Local clock offset: 0.066 ms
Remote clock offset: -38.453 ms

Below is generated by plot.py at 2018-09-11 00:50:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 250.49 Mbit/s
95th percentile per-packet one-way delay: 64.202 ms
Loss rate: 6.22%
-- Flow 1:
Average throughput: 250.49 Mbit/s
95th percentile per-packet one-way delay: 64.202 ms
Loss rate: 6.22%

Run 2: Report of TCP BBR — Data Link

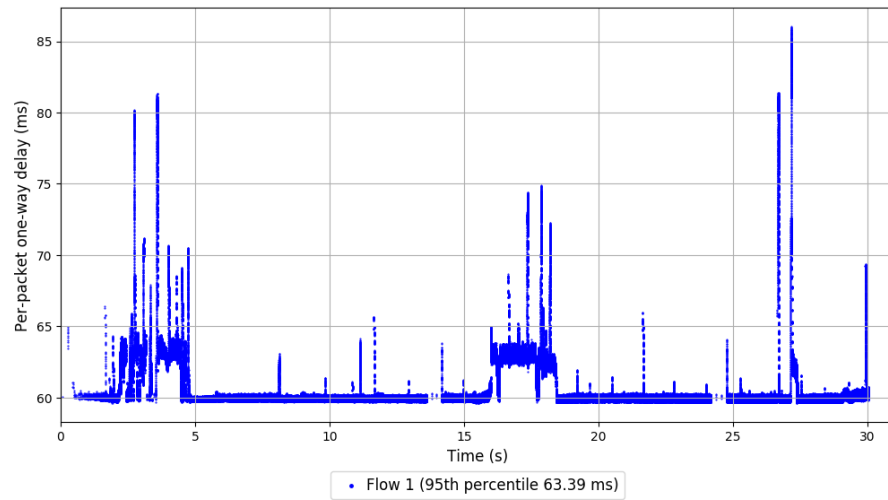
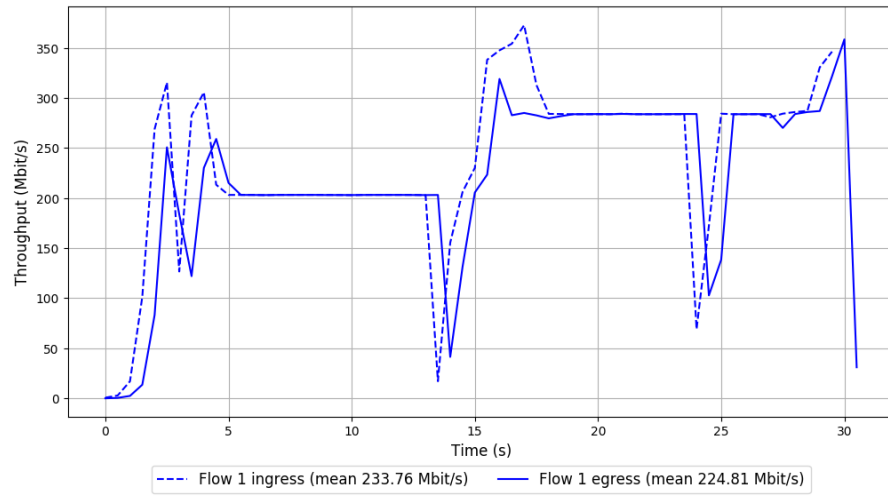


Run 3: Statistics of TCP BBR

Start at: 2018-09-10 23:33:13
End at: 2018-09-10 23:33:43
Local clock offset: 1.857 ms
Remote clock offset: -36.815 ms

Below is generated by plot.py at 2018-09-11 00:50:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 224.81 Mbit/s
95th percentile per-packet one-way delay: 63.386 ms
Loss rate: 3.83%
-- Flow 1:
Average throughput: 224.81 Mbit/s
95th percentile per-packet one-way delay: 63.386 ms
Loss rate: 3.83%

Run 3: Report of TCP BBR — Data Link

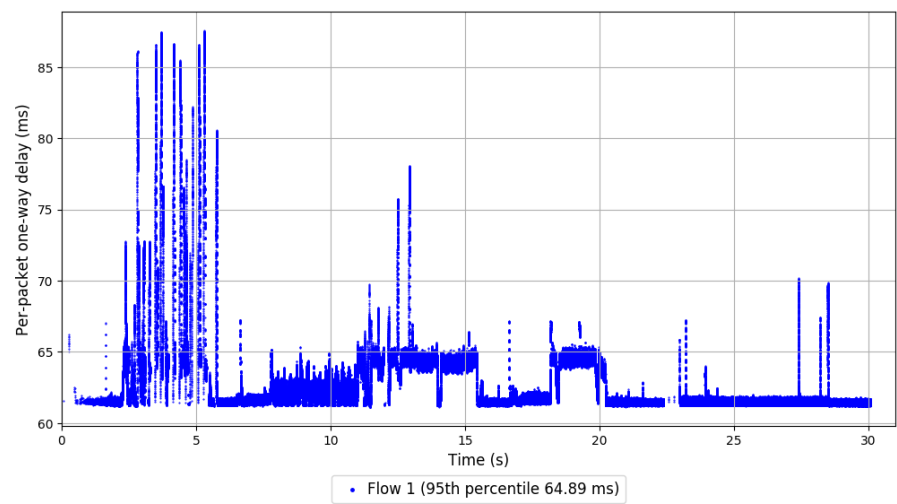
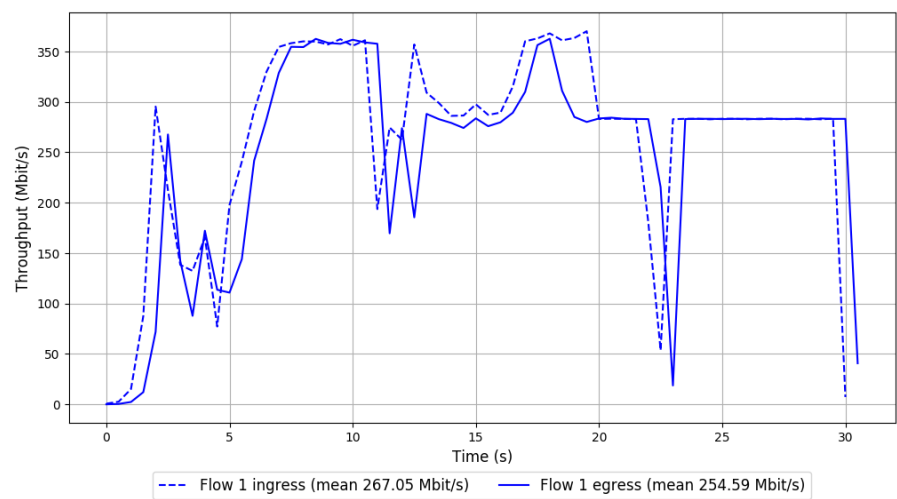


Run 4: Statistics of TCP BBR

Start at: 2018-09-10 23:56:29
End at: 2018-09-10 23:56:59
Local clock offset: -0.194 ms
Remote clock offset: -38.041 ms

Below is generated by plot.py at 2018-09-11 00:50:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 254.59 Mbit/s
95th percentile per-packet one-way delay: 64.895 ms
Loss rate: 4.67%
-- Flow 1:
Average throughput: 254.59 Mbit/s
95th percentile per-packet one-way delay: 64.895 ms
Loss rate: 4.67%

Run 4: Report of TCP BBR — Data Link

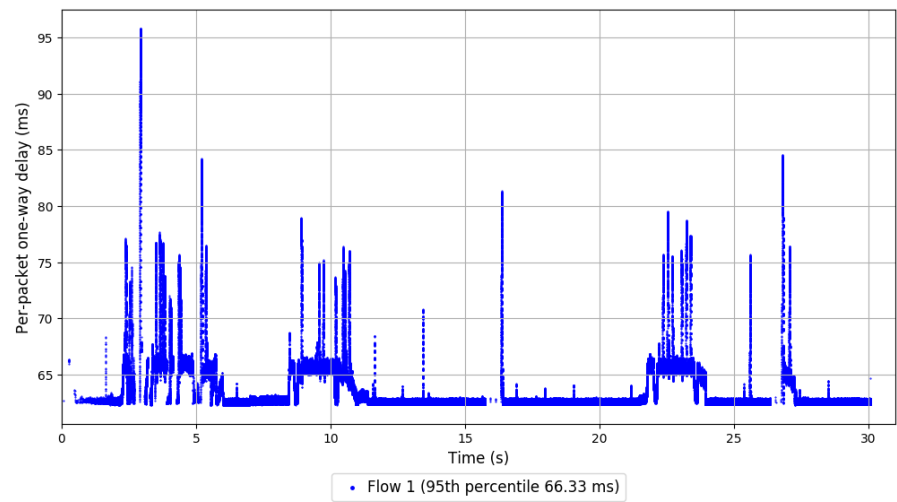
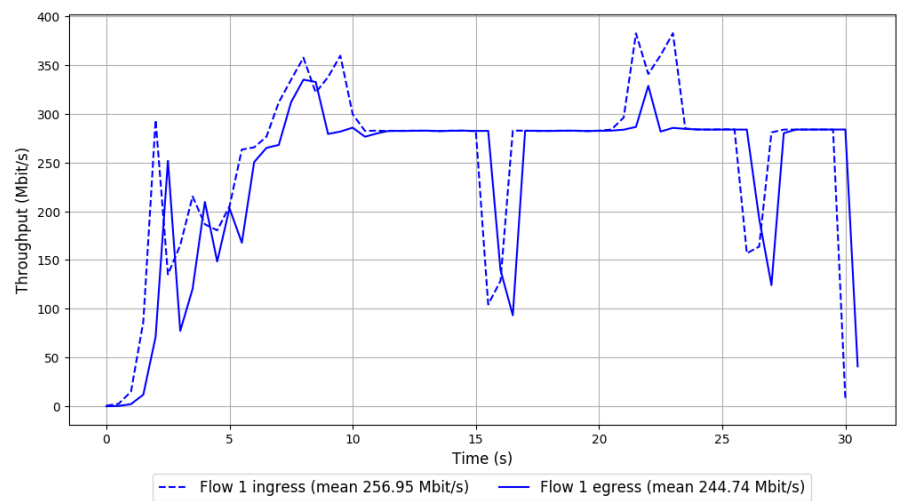


Run 5: Statistics of TCP BBR

Start at: 2018-09-11 00:25:04
End at: 2018-09-11 00:25:34
Local clock offset: 2.712 ms
Remote clock offset: -35.611 ms

Below is generated by plot.py at 2018-09-11 00:50:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 244.74 Mbit/s
95th percentile per-packet one-way delay: 66.333 ms
Loss rate: 4.75%
-- Flow 1:
Average throughput: 244.74 Mbit/s
95th percentile per-packet one-way delay: 66.333 ms
Loss rate: 4.75%

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

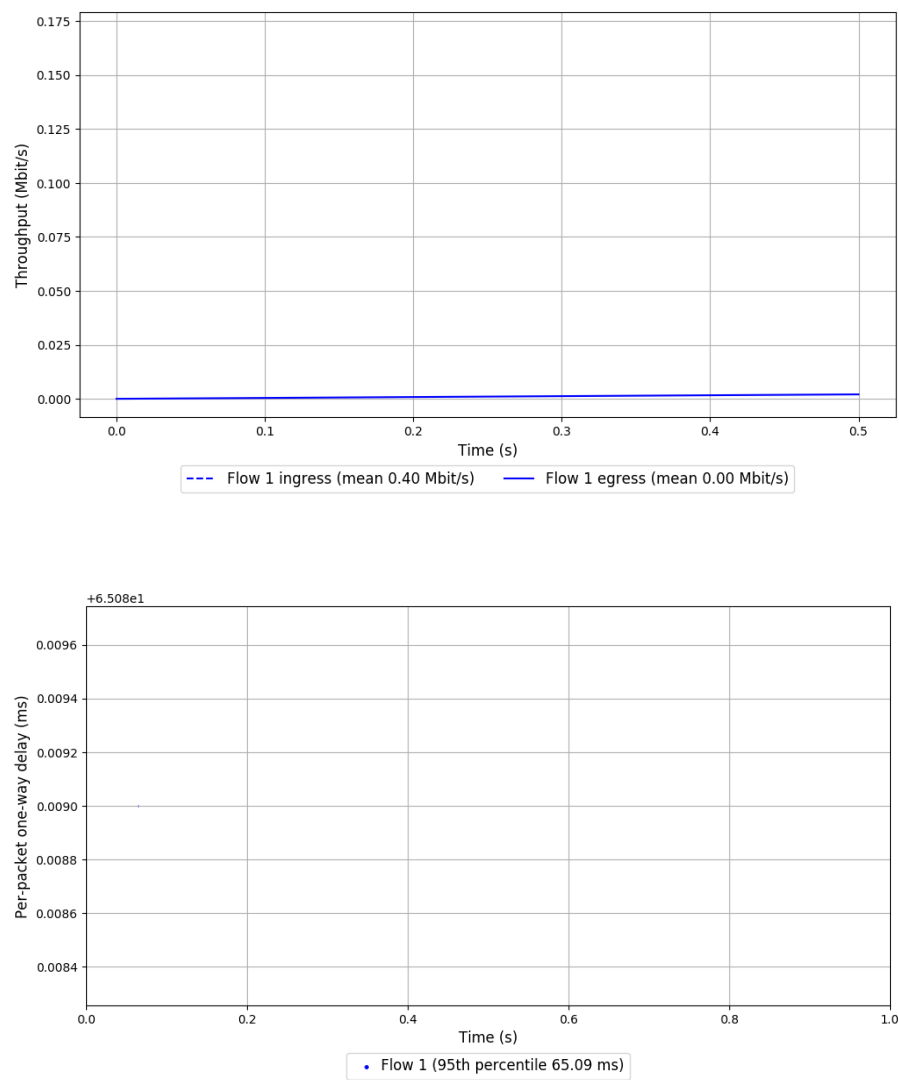
Start at: 2018-09-10 22:44:28

End at: 2018-09-10 22:44:58

Local clock offset: -0.972 ms

Remote clock offset: -34.684 ms

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

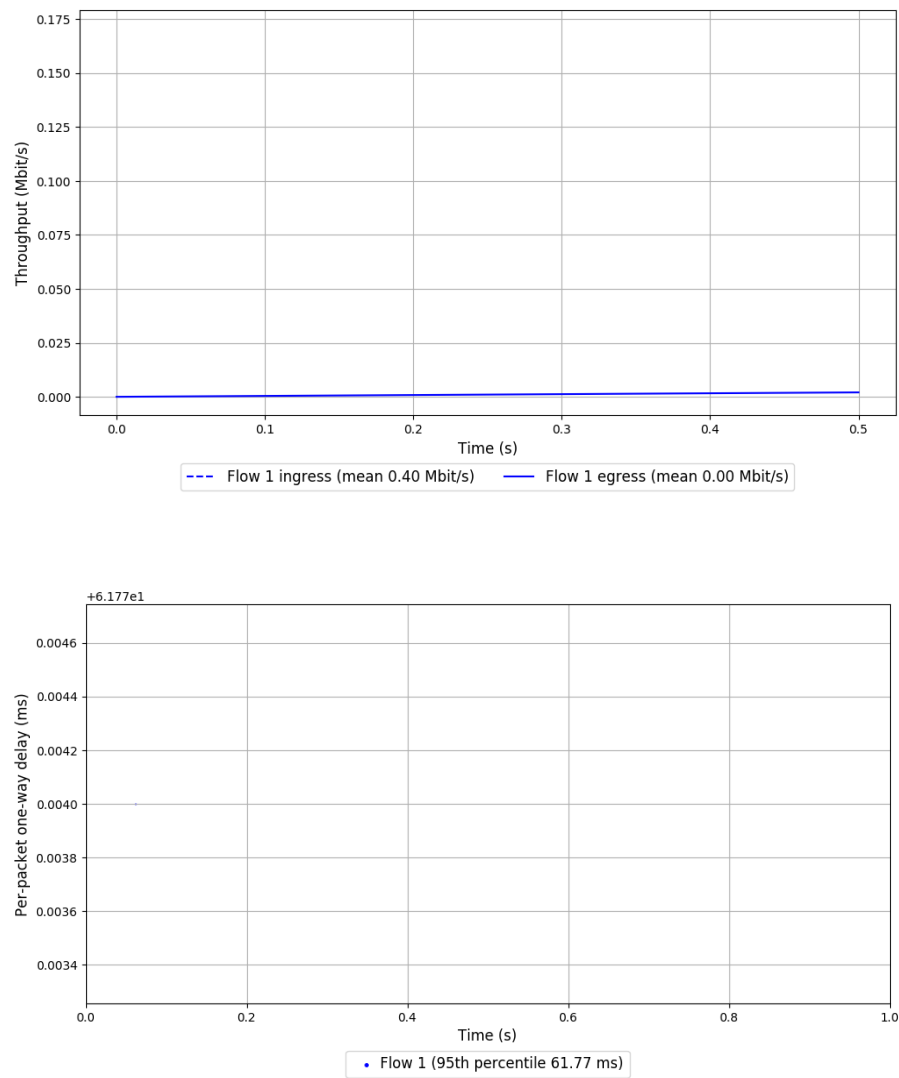
Start at: 2018-09-10 23:07:43

End at: 2018-09-10 23:08:13

Local clock offset: 2.14 ms

Remote clock offset: -35.329 ms

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

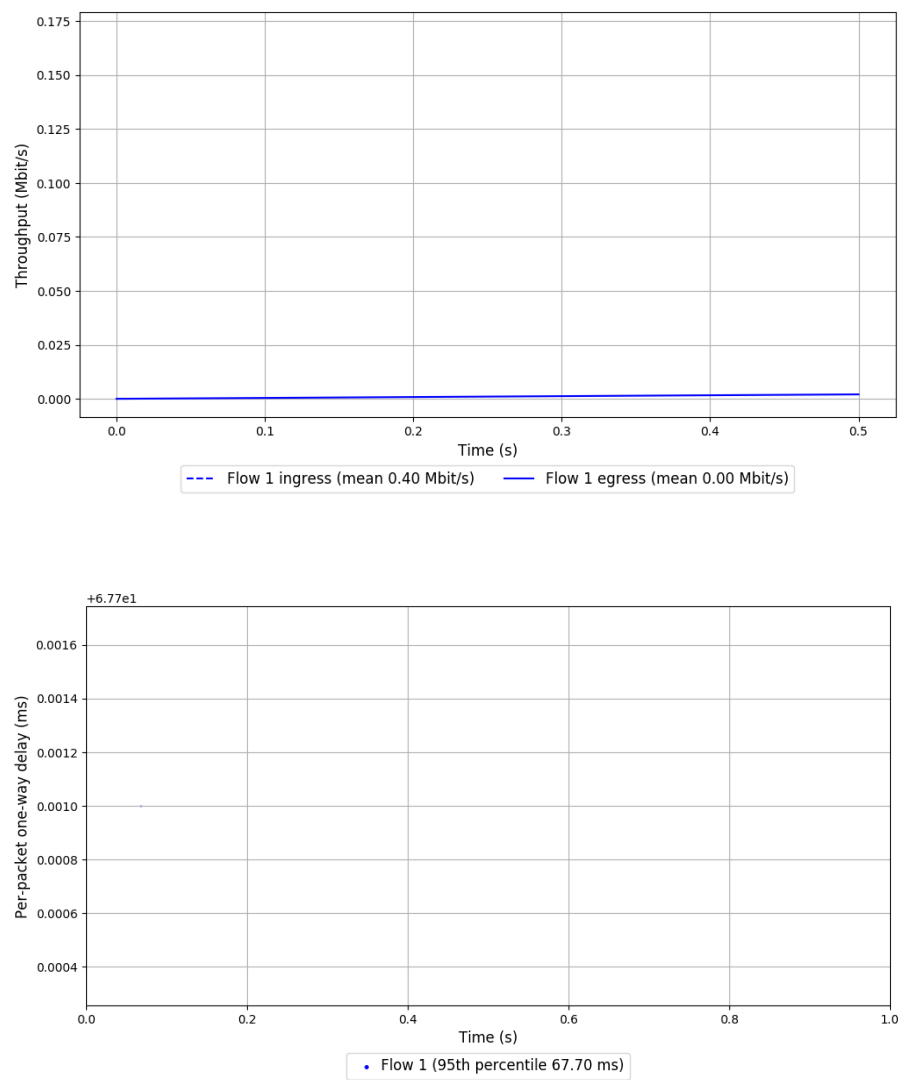
Start at: 2018-09-10 23:30:52

End at: 2018-09-10 23:31:22

Local clock offset: -6.562 ms

Remote clock offset: -37.868 ms

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

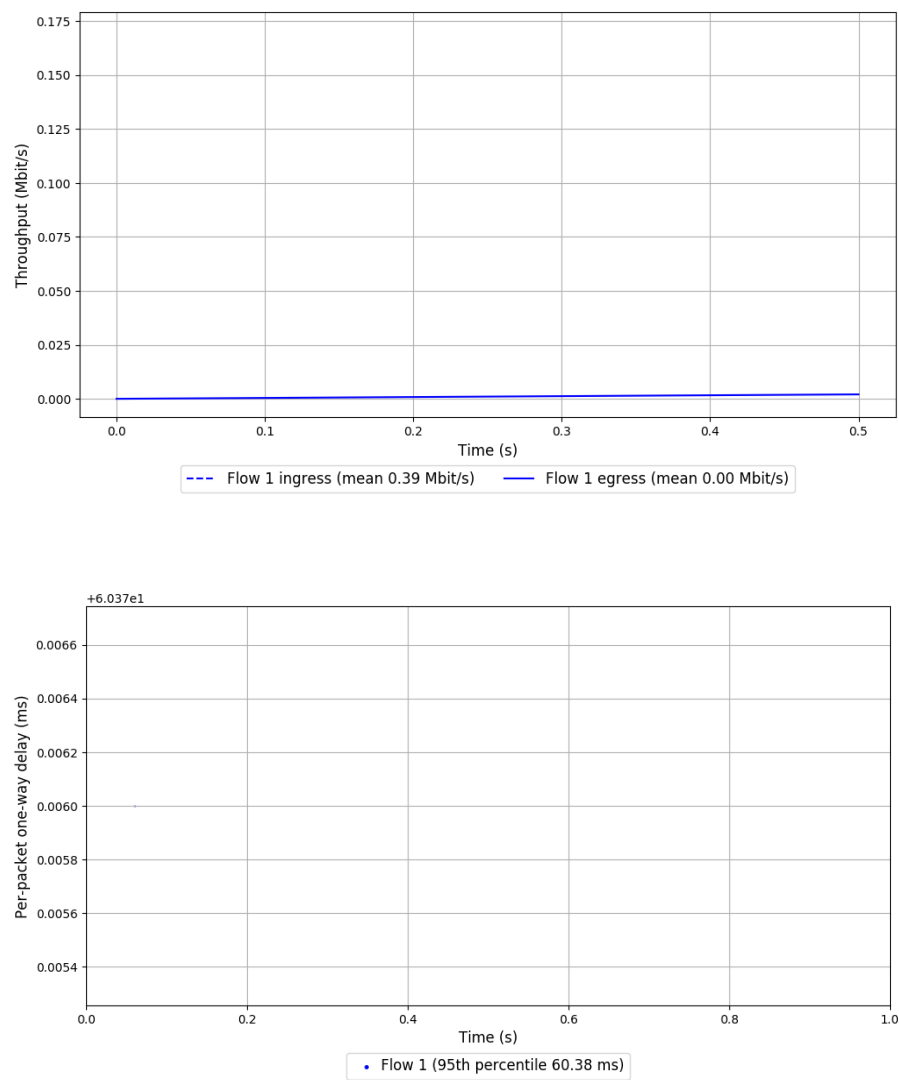
Start at: 2018-09-10 23:54:08

End at: 2018-09-10 23:54:38

Local clock offset: 1.779 ms

Remote clock offset: -37.618 ms

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

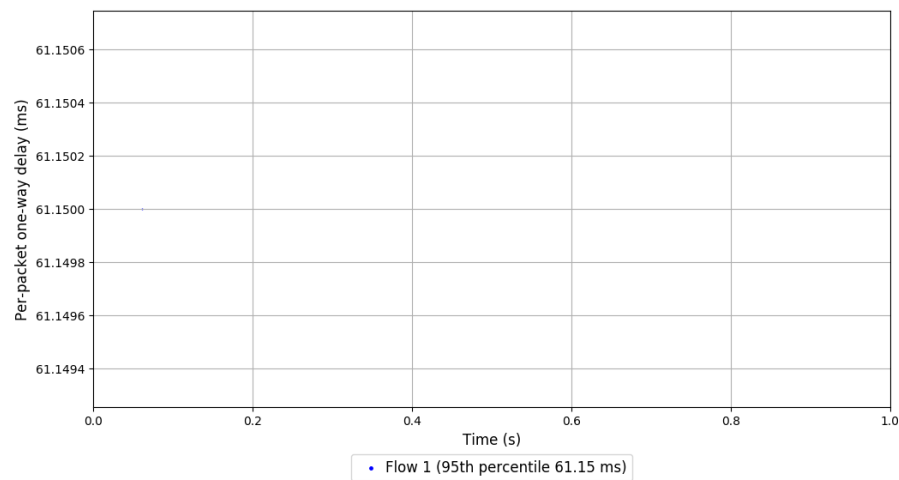
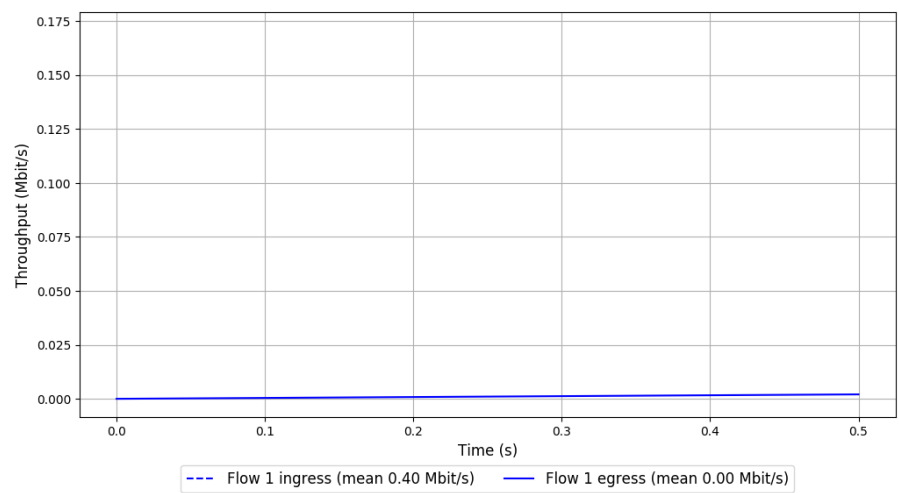
Start at: 2018-09-11 00:22:43

End at: 2018-09-11 00:23:13

Local clock offset: 0.955 ms

Remote clock offset: -36.597 ms

Run 5: Report of Copa — Data Link

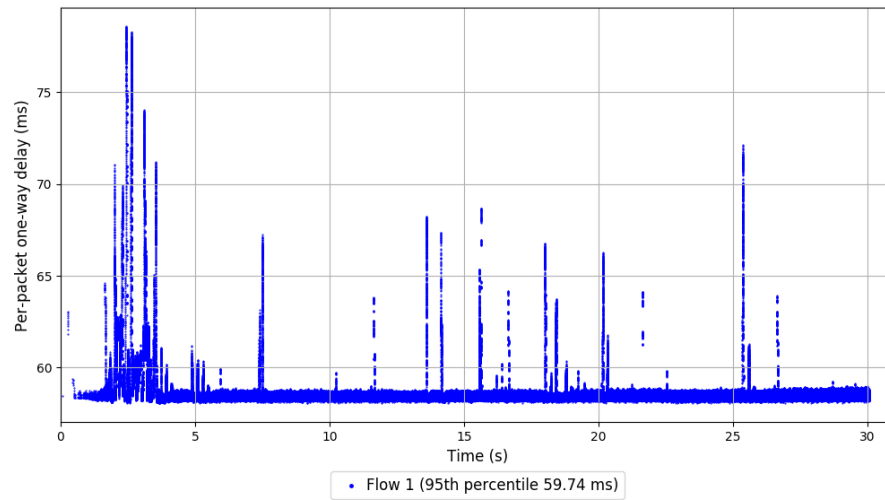
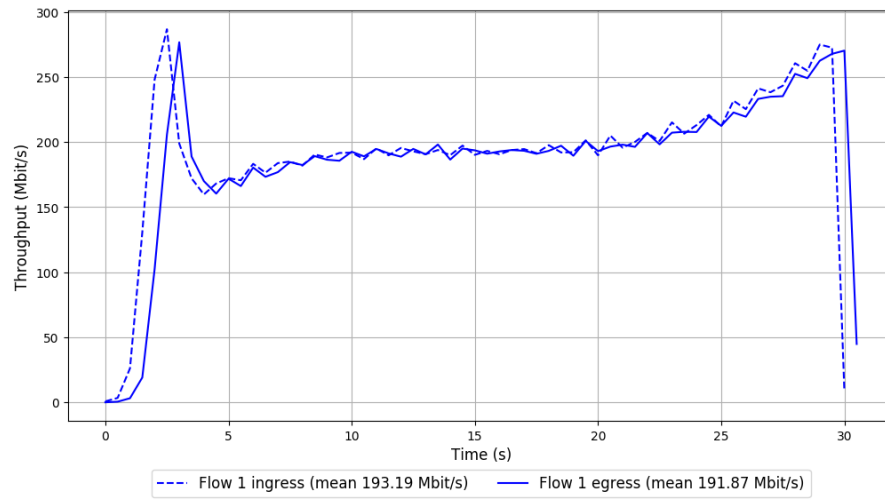


Run 1: Statistics of TCP Cubic

Start at: 2018-09-10 22:49:41
End at: 2018-09-10 22:50:11
Local clock offset: 1.478 ms
Remote clock offset: -38.705 ms

Below is generated by plot.py at 2018-09-11 00:50:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 191.87 Mbit/s
95th percentile per-packet one-way delay: 59.744 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 191.87 Mbit/s
95th percentile per-packet one-way delay: 59.744 ms
Loss rate: 0.68%

Run 1: Report of TCP Cubic — Data Link

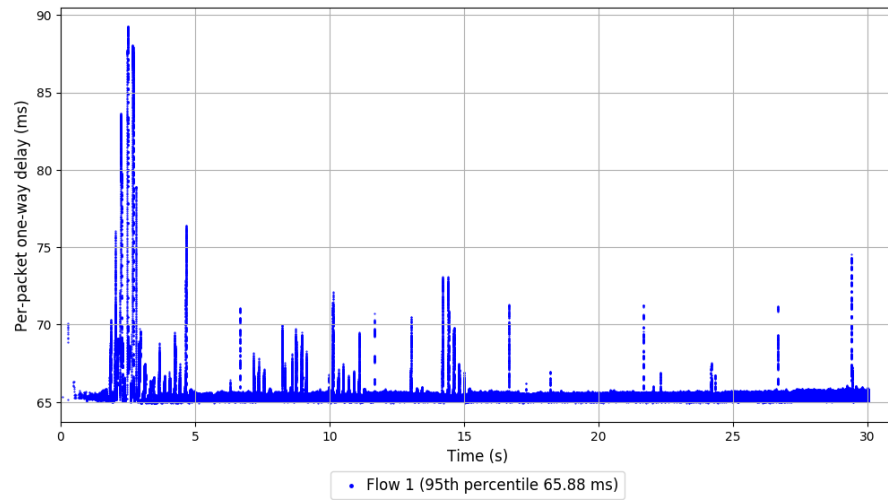
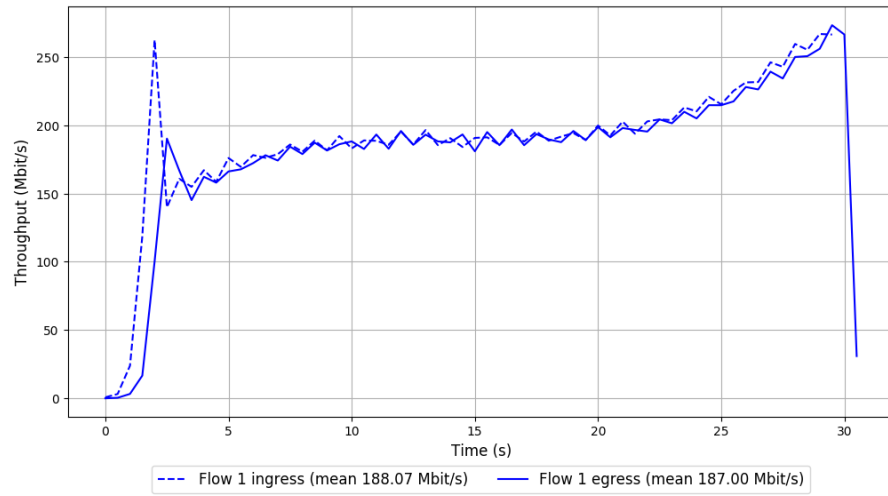


Run 2: Statistics of TCP Cubic

Start at: 2018-09-10 23:12:54
End at: 2018-09-10 23:13:24
Local clock offset: 0.724 ms
Remote clock offset: -33.553 ms

Below is generated by plot.py at 2018-09-11 00:50:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 187.00 Mbit/s
95th percentile per-packet one-way delay: 65.875 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 187.00 Mbit/s
95th percentile per-packet one-way delay: 65.875 ms
Loss rate: 0.56%

Run 2: Report of TCP Cubic — Data Link

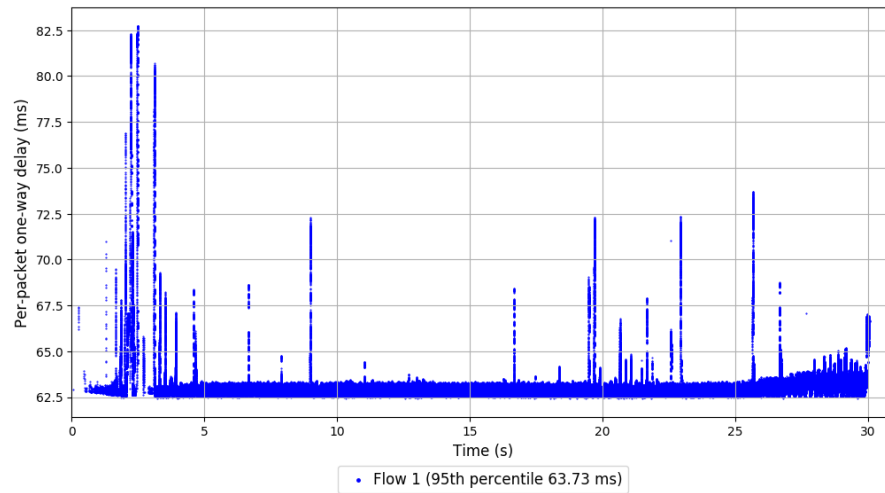
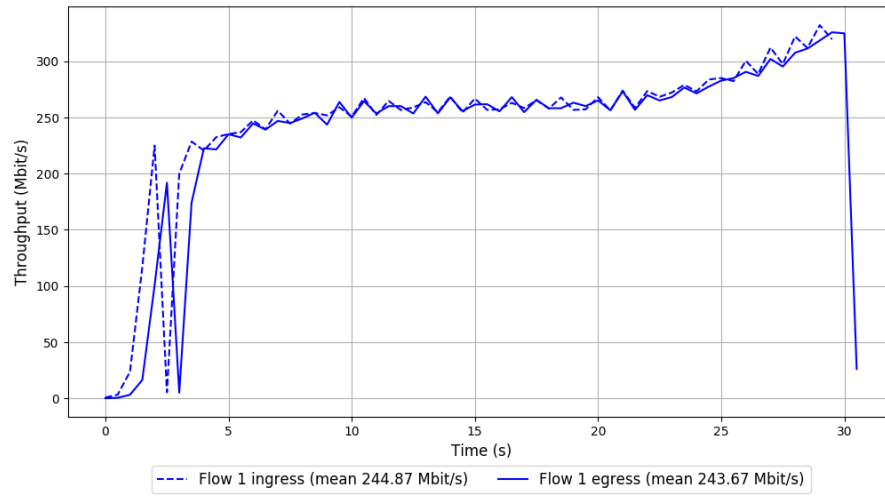


Run 3: Statistics of TCP Cubic

Start at: 2018-09-10 23:36:02
End at: 2018-09-10 23:36:32
Local clock offset: 0.07 ms
Remote clock offset: -35.397 ms

Below is generated by plot.py at 2018-09-11 00:50:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 243.67 Mbit/s
95th percentile per-packet one-way delay: 63.735 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 243.67 Mbit/s
95th percentile per-packet one-way delay: 63.735 ms
Loss rate: 0.48%

Run 3: Report of TCP Cubic — Data Link

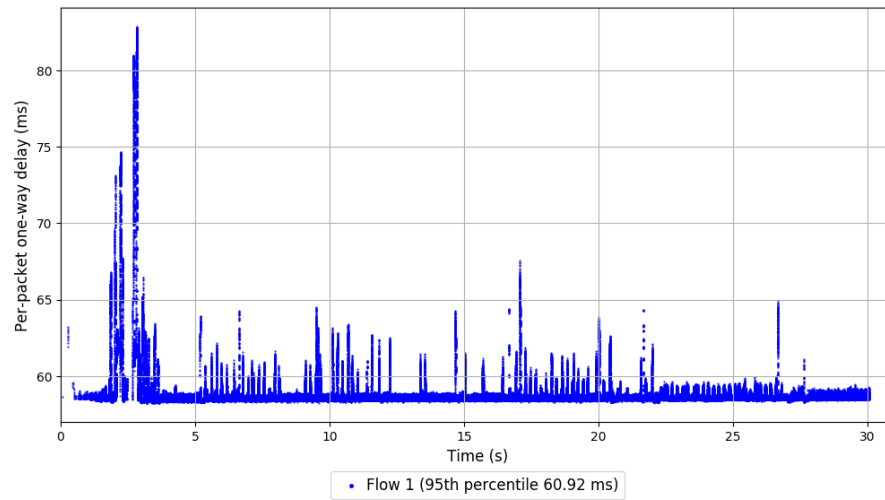
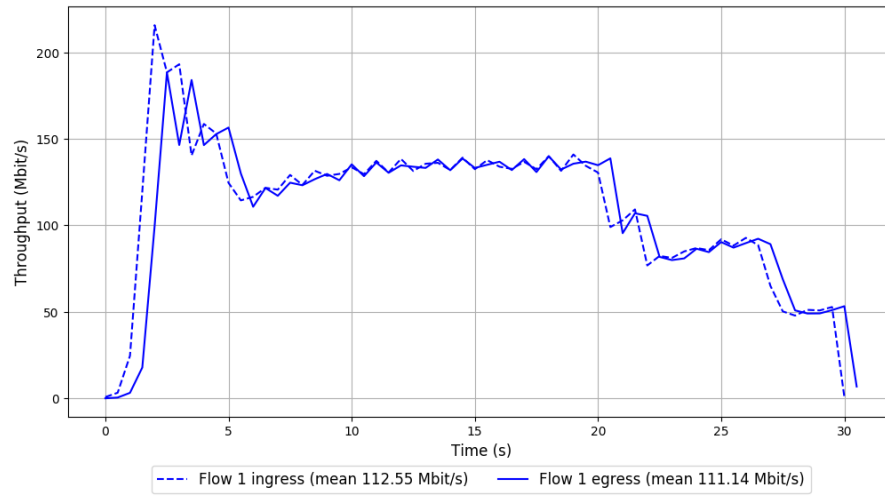


Run 4: Statistics of TCP Cubic

Start at: 2018-09-10 23:59:19
End at: 2018-09-10 23:59:49
Local clock offset: 0.125 ms
Remote clock offset: -38.479 ms

Below is generated by plot.py at 2018-09-11 00:50:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 111.14 Mbit/s
95th percentile per-packet one-way delay: 60.923 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 111.14 Mbit/s
95th percentile per-packet one-way delay: 60.923 ms
Loss rate: 1.25%

Run 4: Report of TCP Cubic — Data Link

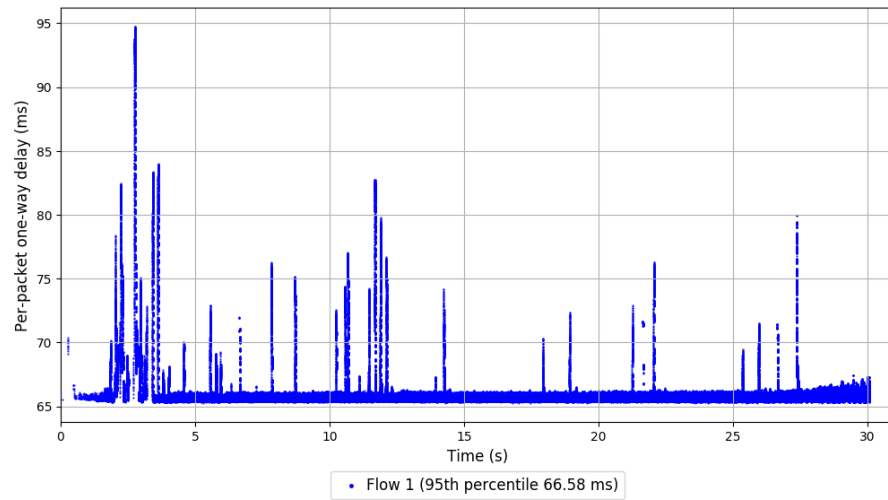
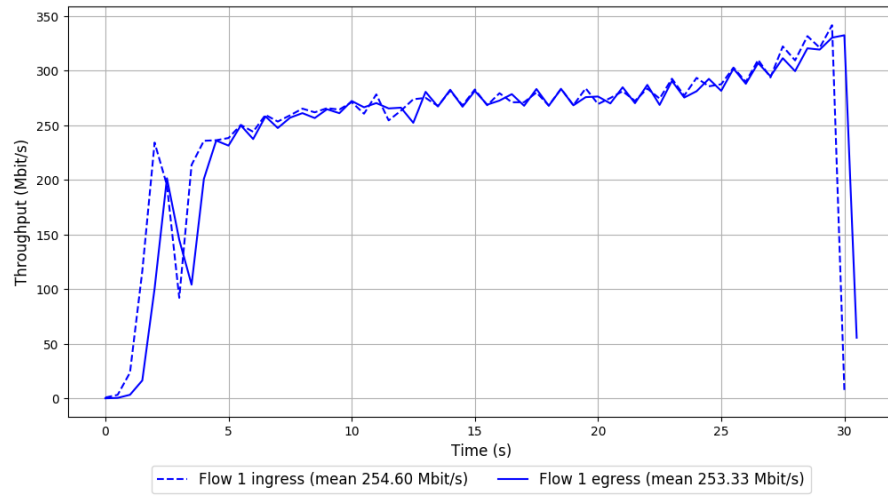


Run 5: Statistics of TCP Cubic

Start at: 2018-09-11 00:27:54
End at: 2018-09-11 00:28:24
Local clock offset: 1.186 ms
Remote clock offset: -34.01 ms

Below is generated by plot.py at 2018-09-11 00:52:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 253.33 Mbit/s
95th percentile per-packet one-way delay: 66.584 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 253.33 Mbit/s
95th percentile per-packet one-way delay: 66.584 ms
Loss rate: 0.50%

Run 5: Report of TCP Cubic — Data Link

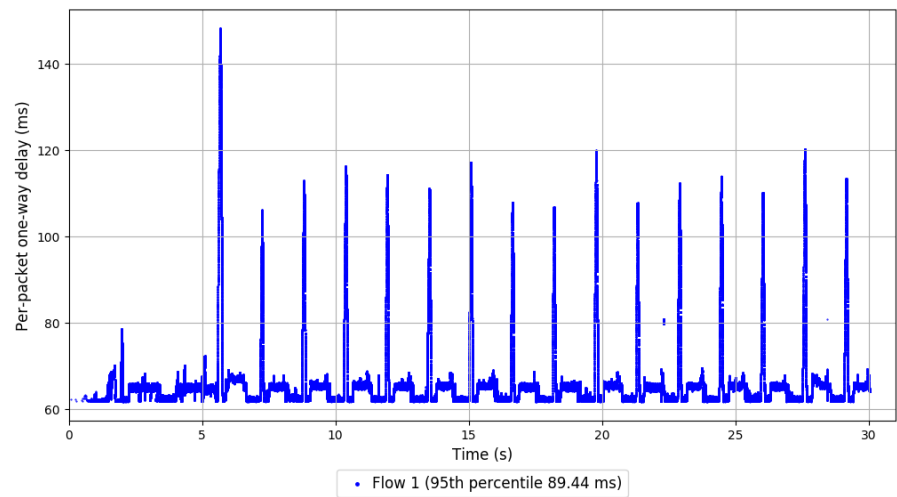
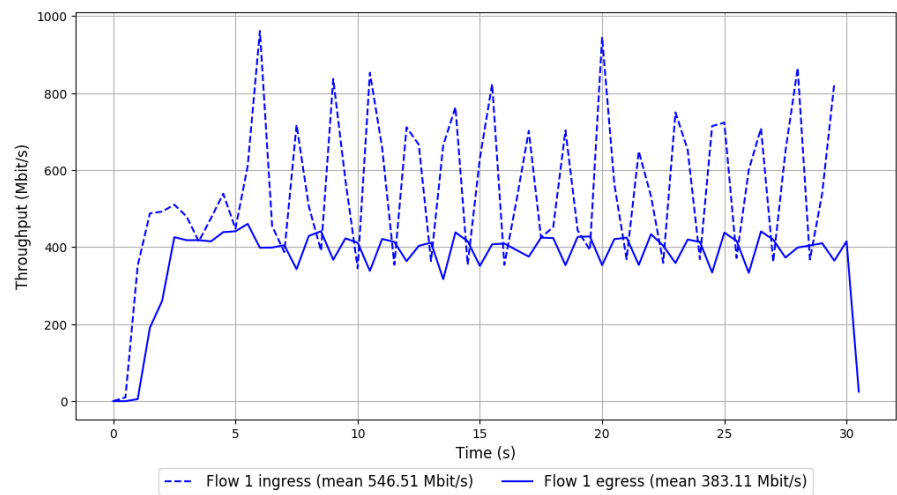


Run 1: Statistics of FillP

Start at: 2018-09-10 22:41:35
End at: 2018-09-10 22:42:05
Local clock offset: -1.683 ms
Remote clock offset: -38.146 ms

Below is generated by plot.py at 2018-09-11 00:56:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 383.11 Mbit/s
95th percentile per-packet one-way delay: 89.441 ms
Loss rate: 29.89%
-- Flow 1:
Average throughput: 383.11 Mbit/s
95th percentile per-packet one-way delay: 89.441 ms
Loss rate: 29.89%

Run 1: Report of FillP — Data Link

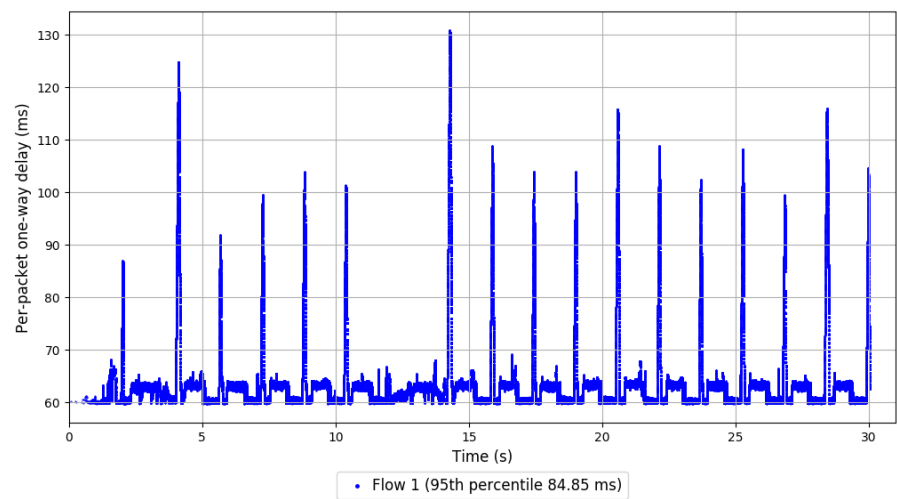
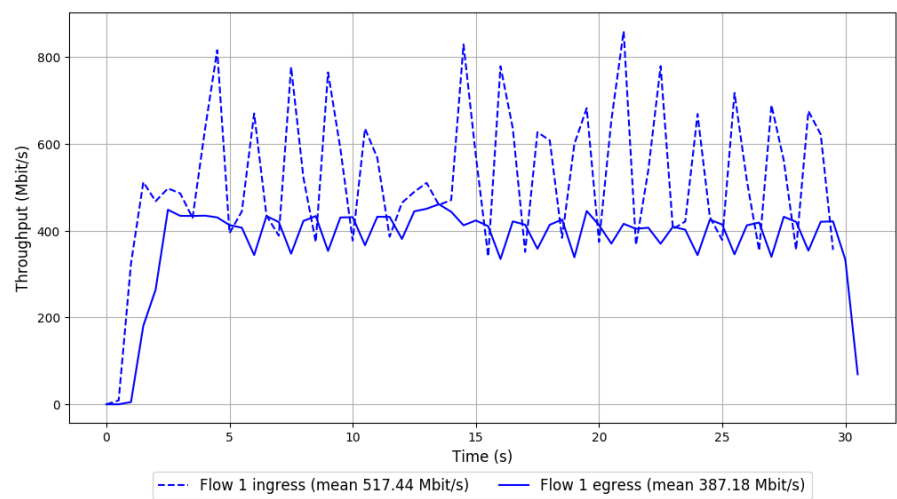


Run 2: Statistics of FillP

Start at: 2018-09-10 23:04:51
End at: 2018-09-10 23:05:21
Local clock offset: 1.005 ms
Remote clock offset: -38.144 ms

Below is generated by plot.py at 2018-09-11 00:56:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 387.18 Mbit/s
95th percentile per-packet one-way delay: 84.853 ms
Loss rate: 25.17%
-- Flow 1:
Average throughput: 387.18 Mbit/s
95th percentile per-packet one-way delay: 84.853 ms
Loss rate: 25.17%

Run 2: Report of FillP — Data Link

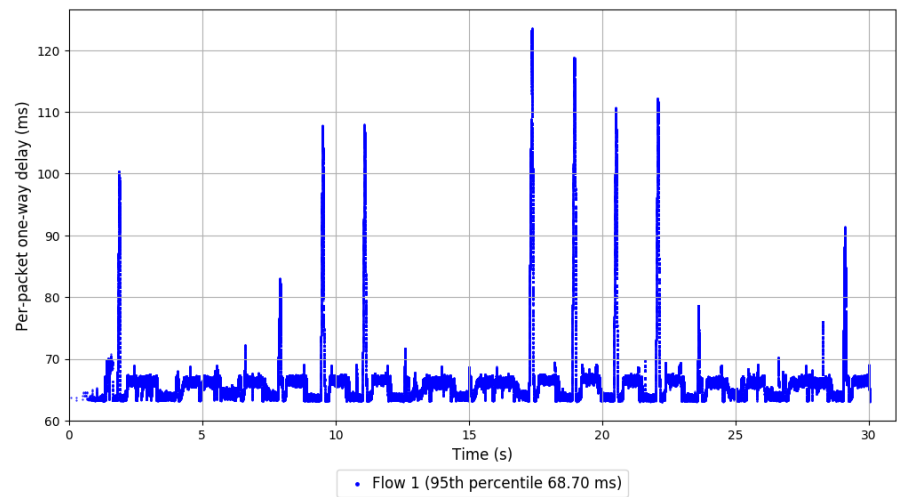
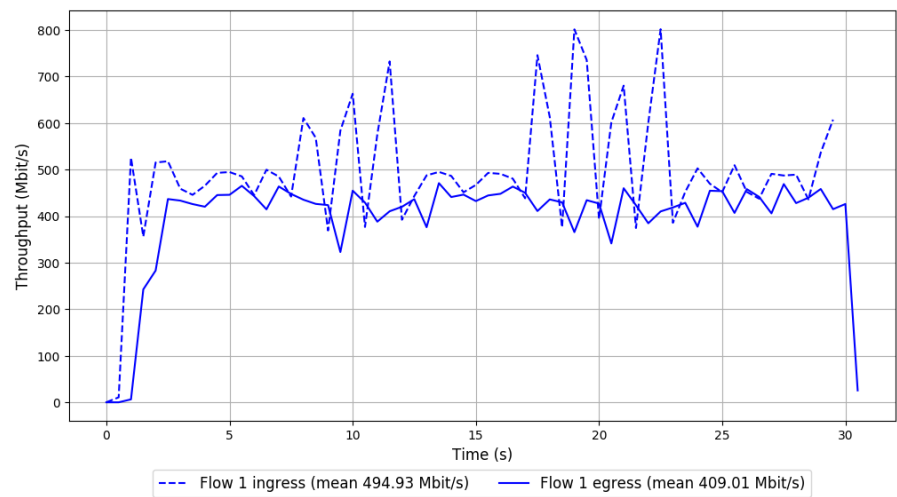


Run 3: Statistics of FillP

Start at: 2018-09-10 23:27:59
End at: 2018-09-10 23:28:29
Local clock offset: 0.514 ms
Remote clock offset: -37.972 ms

Below is generated by plot.py at 2018-09-11 00:56:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 409.01 Mbit/s
95th percentile per-packet one-way delay: 68.705 ms
Loss rate: 17.37%
-- Flow 1:
Average throughput: 409.01 Mbit/s
95th percentile per-packet one-way delay: 68.705 ms
Loss rate: 17.37%

Run 3: Report of FillP — Data Link

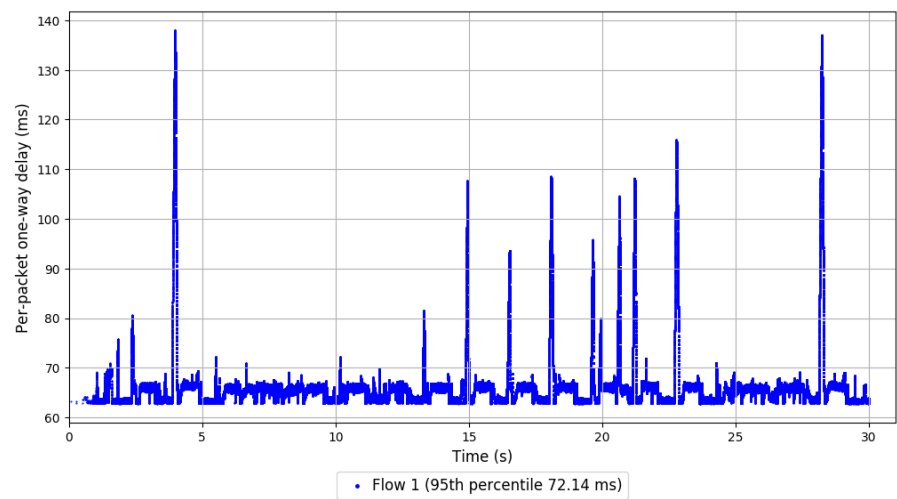
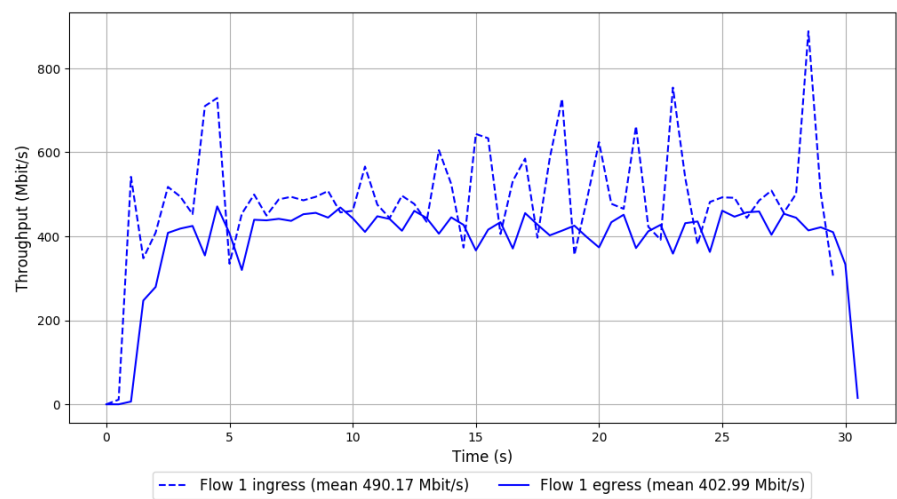


Run 4: Statistics of FillP

Start at: 2018-09-10 23:51:15
End at: 2018-09-10 23:51:45
Local clock offset: -0.277 ms
Remote clock offset: -34.232 ms

Below is generated by plot.py at 2018-09-11 00:56:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 402.99 Mbit/s
95th percentile per-packet one-way delay: 72.136 ms
Loss rate: 17.79%
-- Flow 1:
Average throughput: 402.99 Mbit/s
95th percentile per-packet one-way delay: 72.136 ms
Loss rate: 17.79%

Run 4: Report of FillP — Data Link

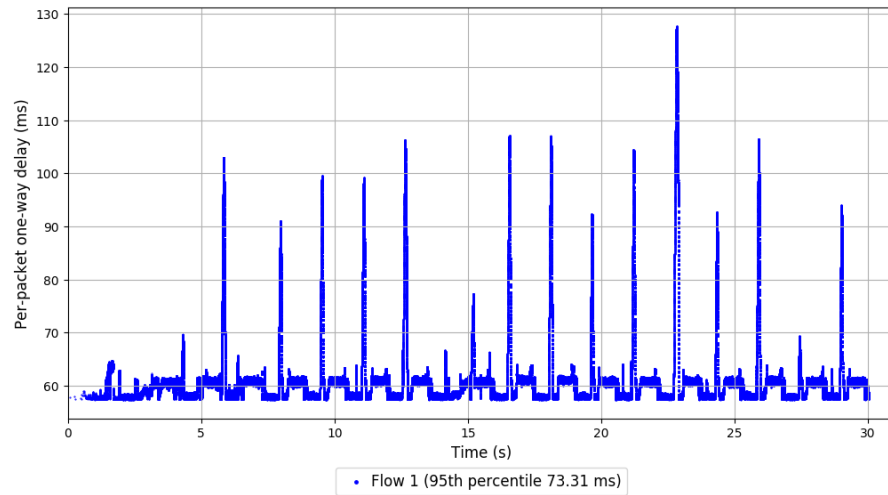
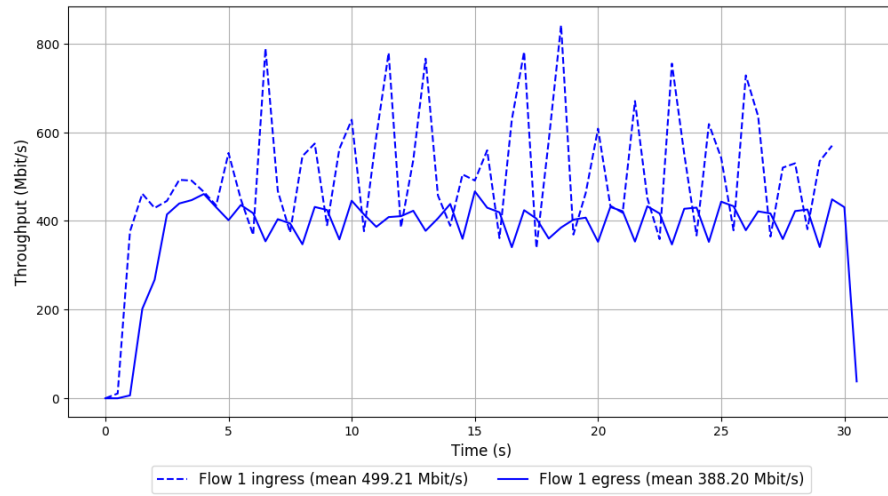


Run 5: Statistics of FillP

Start at: 2018-09-11 00:14:19
End at: 2018-09-11 00:14:49
Local clock offset: 1.94 ms
Remote clock offset: -38.104 ms

Below is generated by plot.py at 2018-09-11 00:56:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 388.20 Mbit/s
95th percentile per-packet one-way delay: 73.315 ms
Loss rate: 22.23%
-- Flow 1:
Average throughput: 388.20 Mbit/s
95th percentile per-packet one-way delay: 73.315 ms
Loss rate: 22.23%

Run 5: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2018-09-10 22:48:13

End at: 2018-09-10 22:48:43

Local clock offset: 0.44 ms

Remote clock offset: -38.53 ms

Below is generated by plot.py at 2018-09-11 00:56:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 426.79 Mbit/s

95th percentile per-packet one-way delay: 65.421 ms

Loss rate: 10.94%

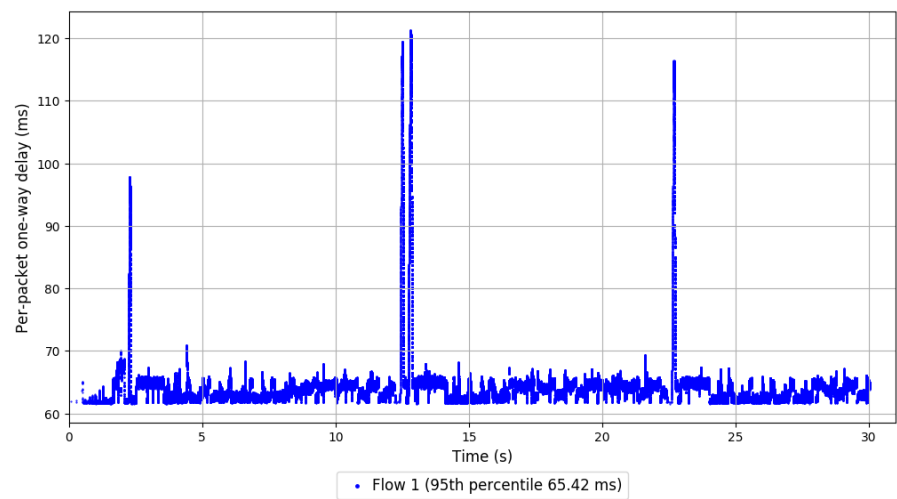
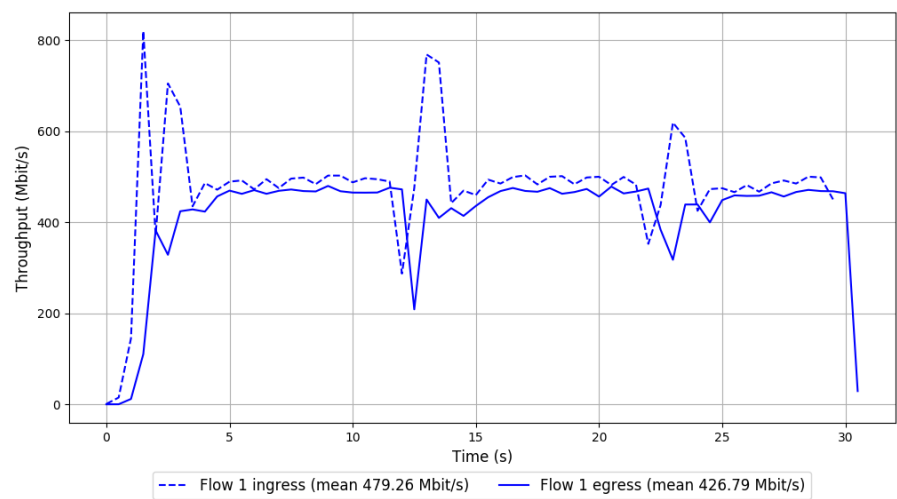
-- Flow 1:

Average throughput: 426.79 Mbit/s

95th percentile per-packet one-way delay: 65.421 ms

Loss rate: 10.94%

Run 1: Report of FillP-Sheep — Data Link

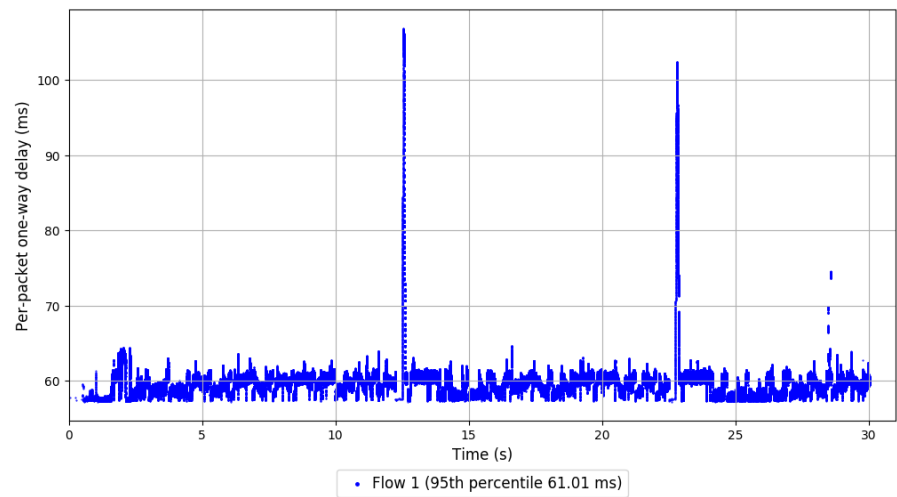
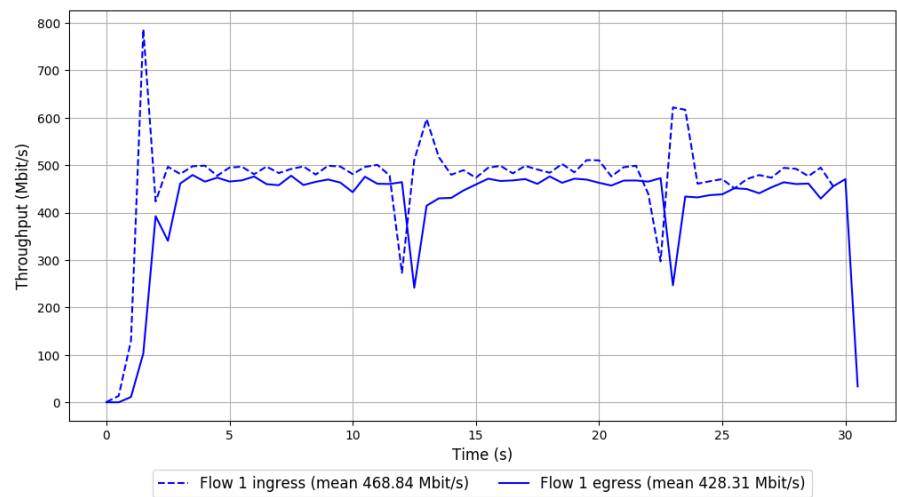


Run 2: Statistics of FillP-Sheep

Start at: 2018-09-10 23:11:27
End at: 2018-09-10 23:11:57
Local clock offset: 3.195 ms
Remote clock offset: -38.493 ms

Below is generated by plot.py at 2018-09-11 00:56:48
Datalink statistics
-- Total of 1 flow:
Average throughput: 428.31 Mbit/s
95th percentile per-packet one-way delay: 61.012 ms
Loss rate: 8.64%
-- Flow 1:
Average throughput: 428.31 Mbit/s
95th percentile per-packet one-way delay: 61.012 ms
Loss rate: 8.64%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2018-09-10 23:34:34

End at: 2018-09-10 23:35:04

Local clock offset: 0.315 ms

Remote clock offset: -38.723 ms

Below is generated by plot.py at 2018-09-11 00:58:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 423.92 Mbit/s

95th percentile per-packet one-way delay: 62.889 ms

Loss rate: 12.20%

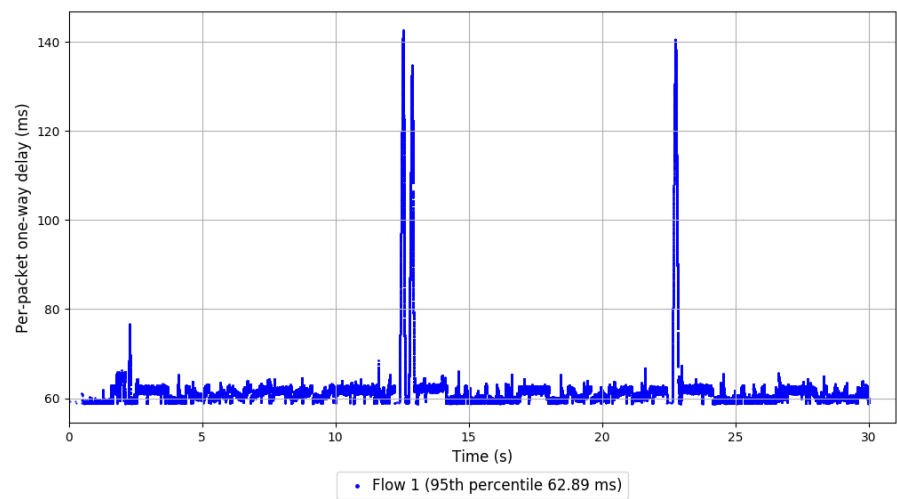
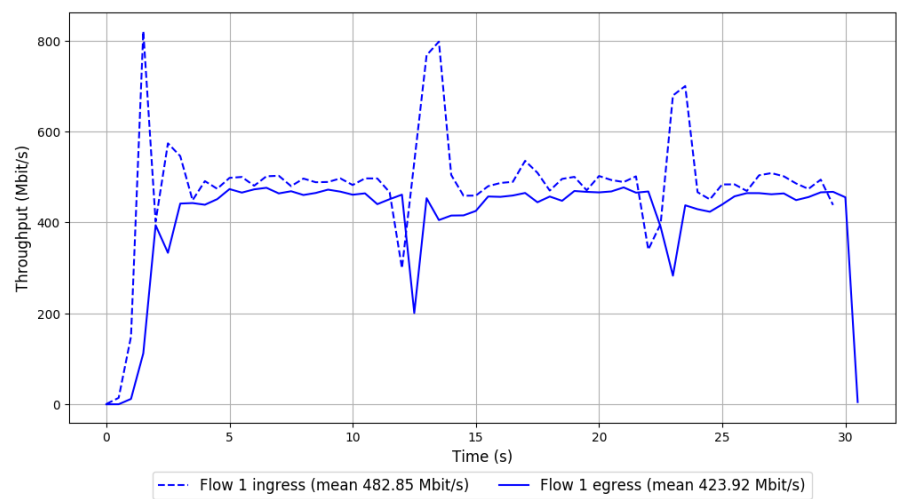
-- Flow 1:

Average throughput: 423.92 Mbit/s

95th percentile per-packet one-way delay: 62.889 ms

Loss rate: 12.20%

Run 3: Report of FillP-Sheep — Data Link

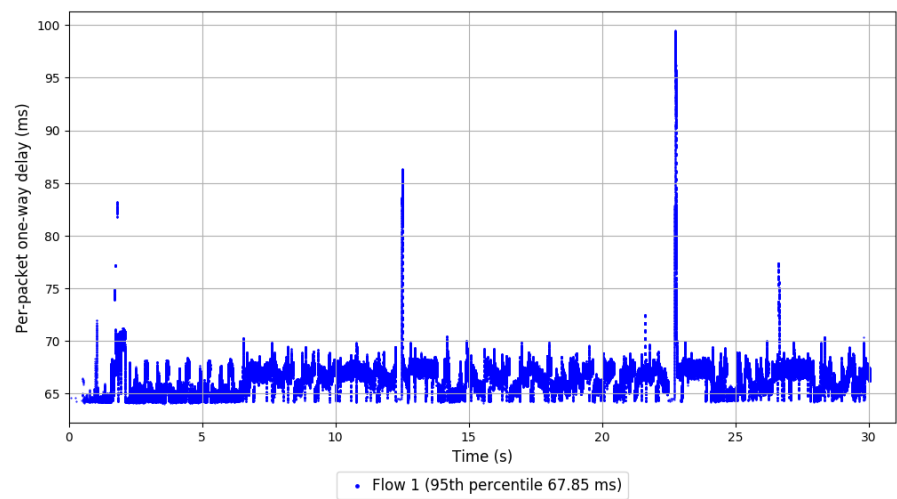
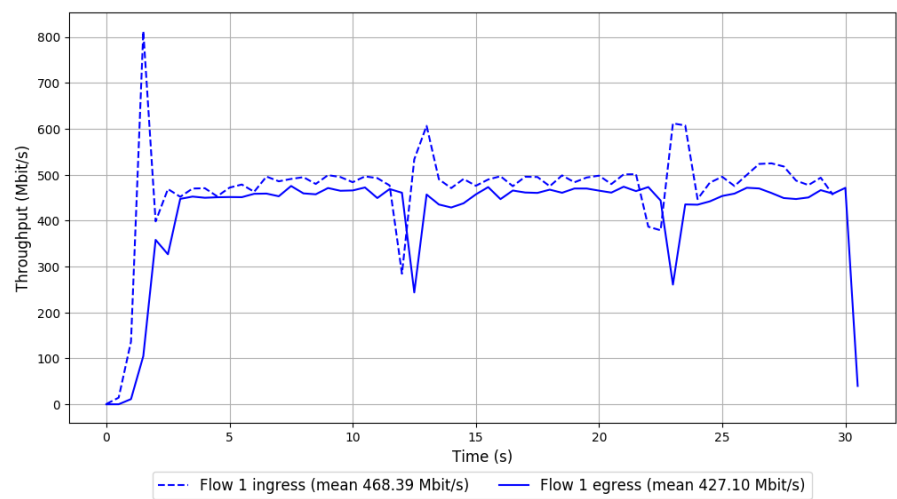


Run 4: Statistics of FillP-Sheep

Start at: 2018-09-10 23:57:52
End at: 2018-09-10 23:58:22
Local clock offset: -0.635 ms
Remote clock offset: -32.991 ms

Below is generated by plot.py at 2018-09-11 01:02:06
Datalink statistics
-- Total of 1 flow:
Average throughput: 427.10 Mbit/s
95th percentile per-packet one-way delay: 67.854 ms
Loss rate: 8.81%
-- Flow 1:
Average throughput: 427.10 Mbit/s
95th percentile per-packet one-way delay: 67.854 ms
Loss rate: 8.81%

Run 4: Report of FillP-Sheep — Data Link



Run 5: Statistics of FillP-Sheep

Start at: 2018-09-11 00:26:27

End at: 2018-09-11 00:26:57

Local clock offset: 0.83 ms

Remote clock offset: -33.773 ms

Below is generated by plot.py at 2018-09-11 01:02:11

Datalink statistics

-- Total of 1 flow:

Average throughput: 427.53 Mbit/s

95th percentile per-packet one-way delay: 67.050 ms

Loss rate: 10.50%

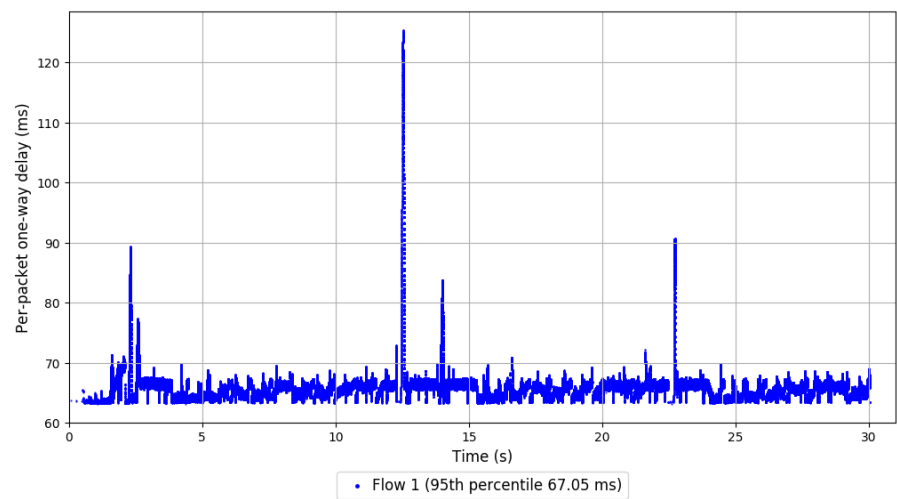
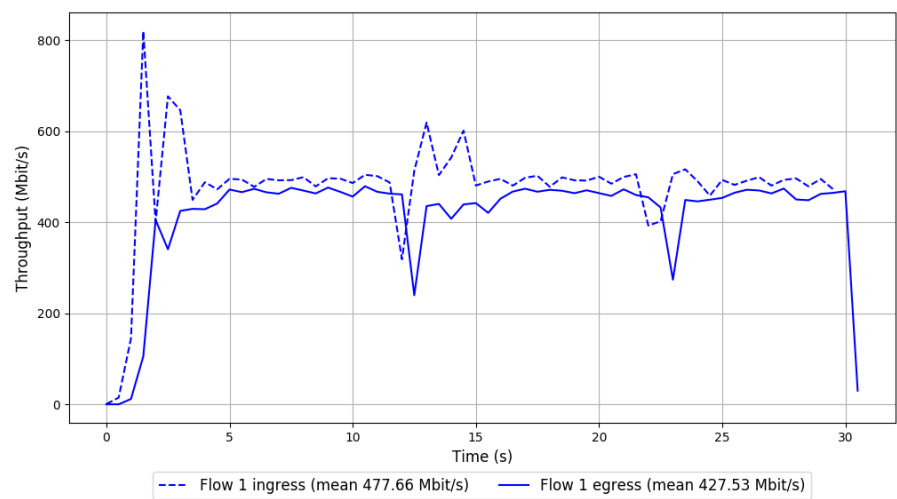
-- Flow 1:

Average throughput: 427.53 Mbit/s

95th percentile per-packet one-way delay: 67.050 ms

Loss rate: 10.50%

Run 5: Report of FillP-Sheep — Data Link

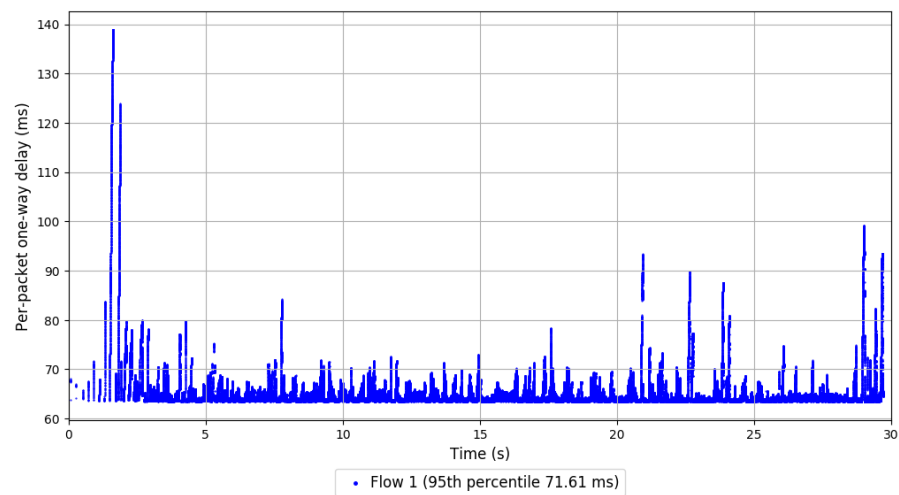
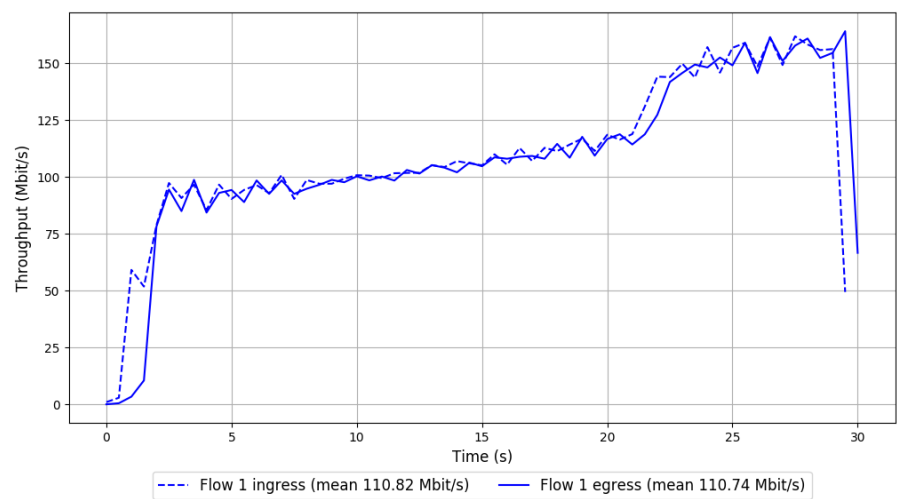


Run 1: Statistics of Indigo

Start at: 2018-09-10 22:33:52
End at: 2018-09-10 22:34:22
Local clock offset: 1.422 ms
Remote clock offset: -33.267 ms

Below is generated by plot.py at 2018-09-11 01:02:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 110.74 Mbit/s
95th percentile per-packet one-way delay: 71.613 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 110.74 Mbit/s
95th percentile per-packet one-way delay: 71.613 ms
Loss rate: 0.07%

Run 1: Report of Indigo — Data Link

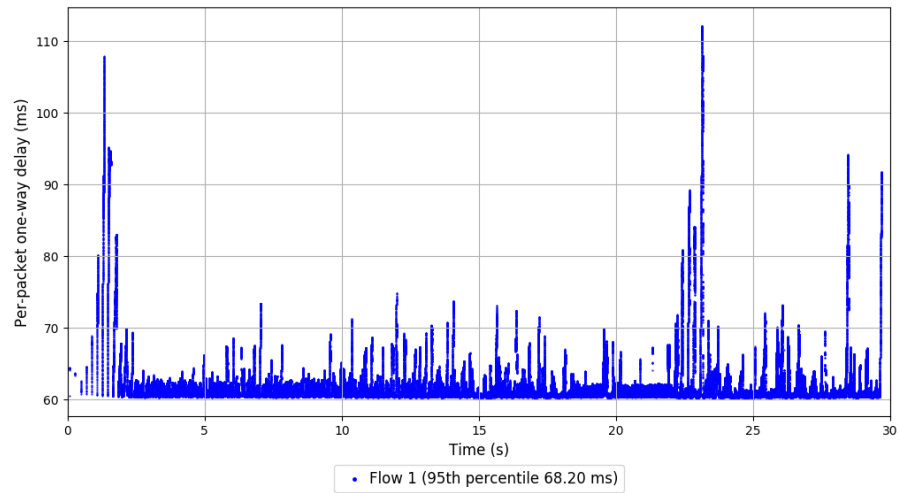
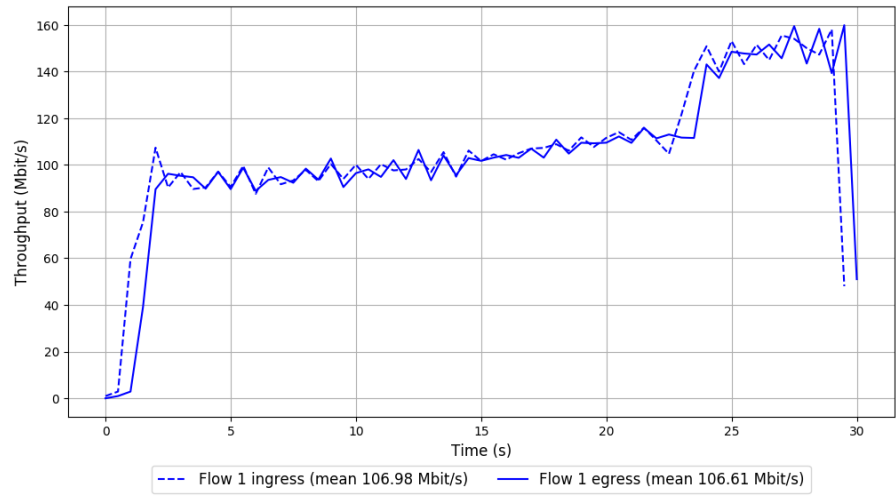


Run 2: Statistics of Indigo

Start at: 2018-09-10 22:57:10
End at: 2018-09-10 22:57:40
Local clock offset: -1.273 ms
Remote clock offset: -39.263 ms

Below is generated by plot.py at 2018-09-11 01:02:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 106.61 Mbit/s
95th percentile per-packet one-way delay: 68.200 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 106.61 Mbit/s
95th percentile per-packet one-way delay: 68.200 ms
Loss rate: 0.34%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2018-09-10 23:20:25

End at: 2018-09-10 23:20:55

Local clock offset: 0.375 ms

Remote clock offset: -34.111 ms

Below is generated by plot.py at 2018-09-11 01:02:11

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.78 Mbit/s

95th percentile per-packet one-way delay: 74.365 ms

Loss rate: 0.05%

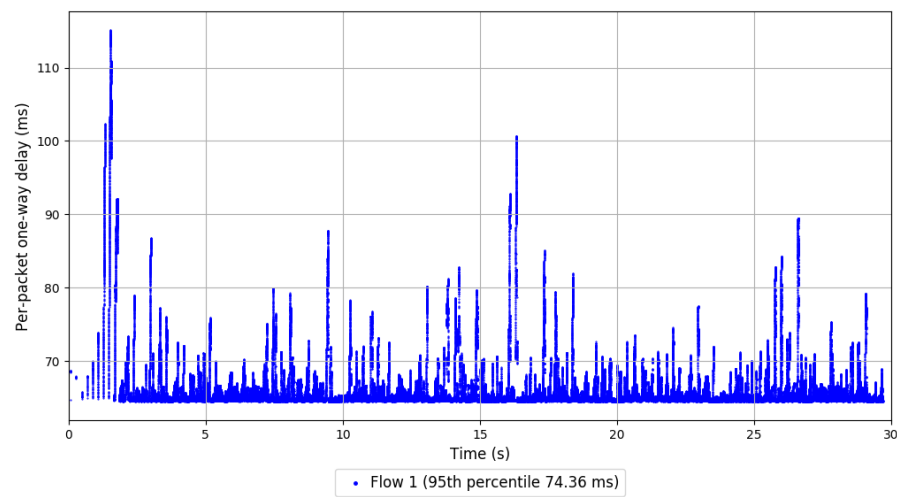
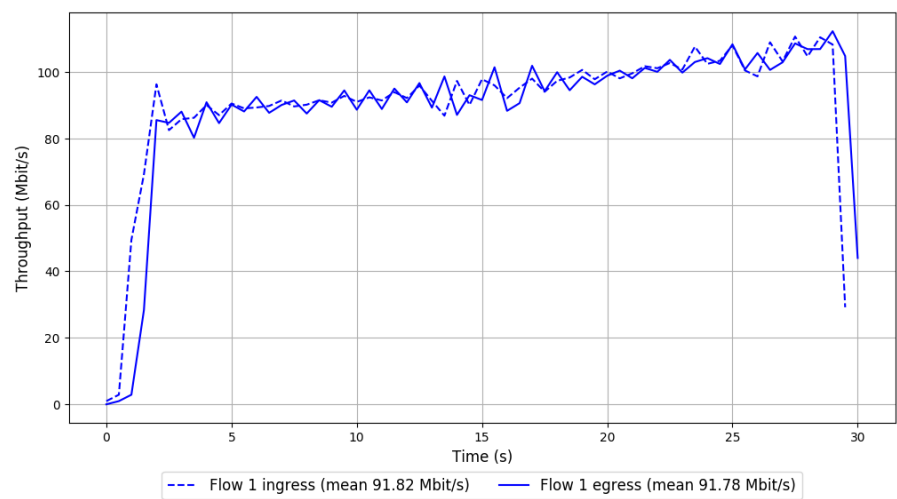
-- Flow 1:

Average throughput: 91.78 Mbit/s

95th percentile per-packet one-way delay: 74.365 ms

Loss rate: 0.05%

Run 3: Report of Indigo — Data Link

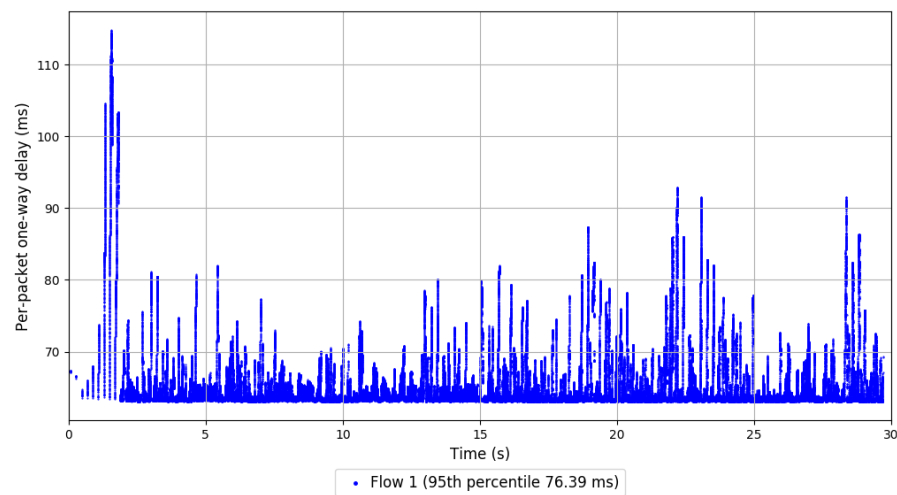
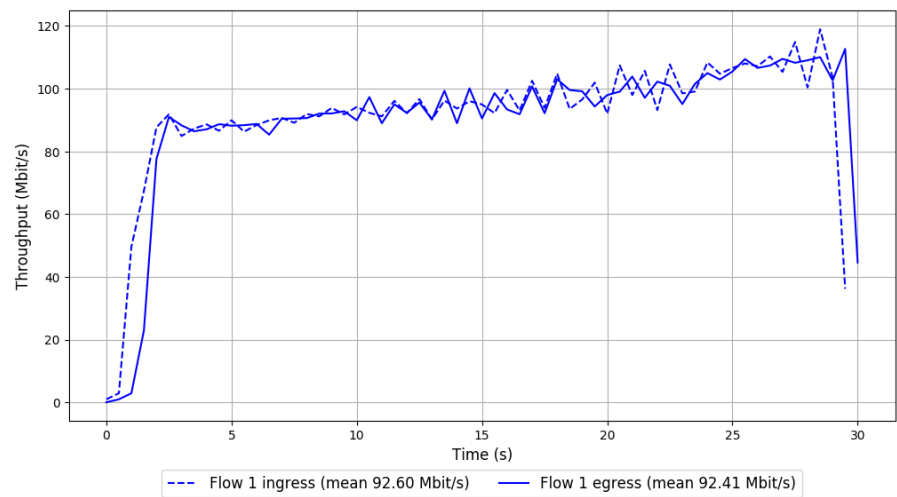


Run 4: Statistics of Indigo

Start at: 2018-09-10 23:43:35
End at: 2018-09-10 23:44:05
Local clock offset: -1.014 ms
Remote clock offset: -37.503 ms

Below is generated by plot.py at 2018-09-11 01:02:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 92.41 Mbit/s
95th percentile per-packet one-way delay: 76.386 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 92.41 Mbit/s
95th percentile per-packet one-way delay: 76.386 ms
Loss rate: 0.21%

Run 4: Report of Indigo — Data Link

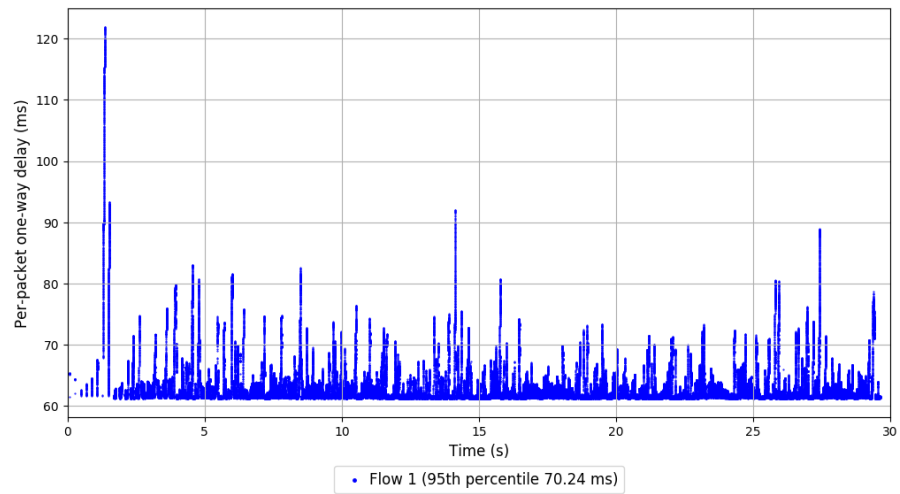
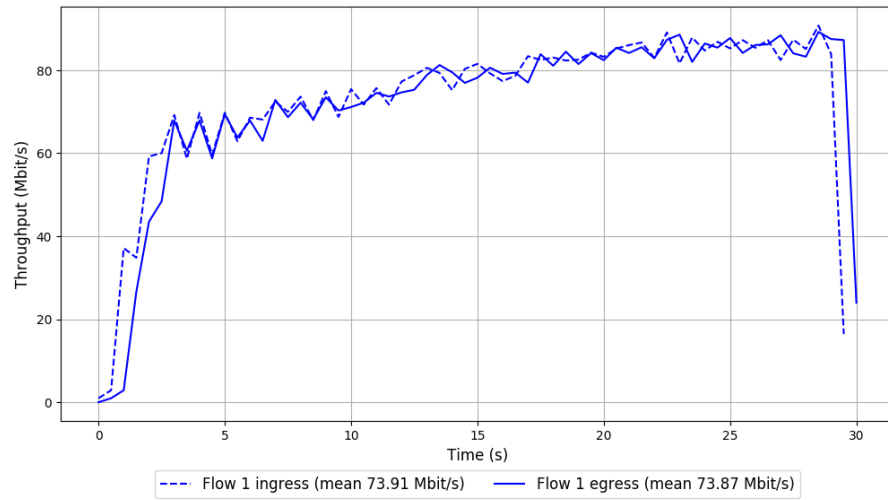


Run 5: Statistics of Indigo

Start at: 2018-09-11 00:06:45
End at: 2018-09-11 00:07:15
Local clock offset: 0.993 ms
Remote clock offset: -37.816 ms

Below is generated by plot.py at 2018-09-11 01:02:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 73.87 Mbit/s
95th percentile per-packet one-way delay: 70.243 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 73.87 Mbit/s
95th percentile per-packet one-way delay: 70.243 ms
Loss rate: 0.06%

Run 5: Report of Indigo — Data Link

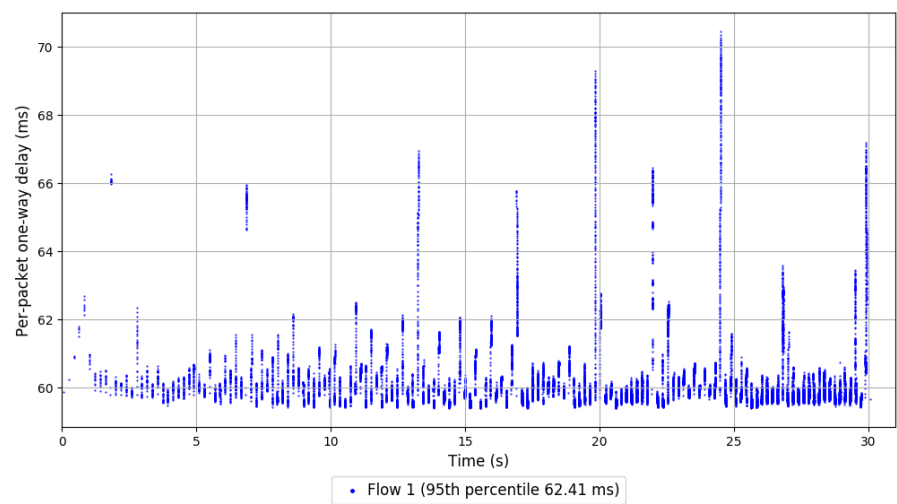
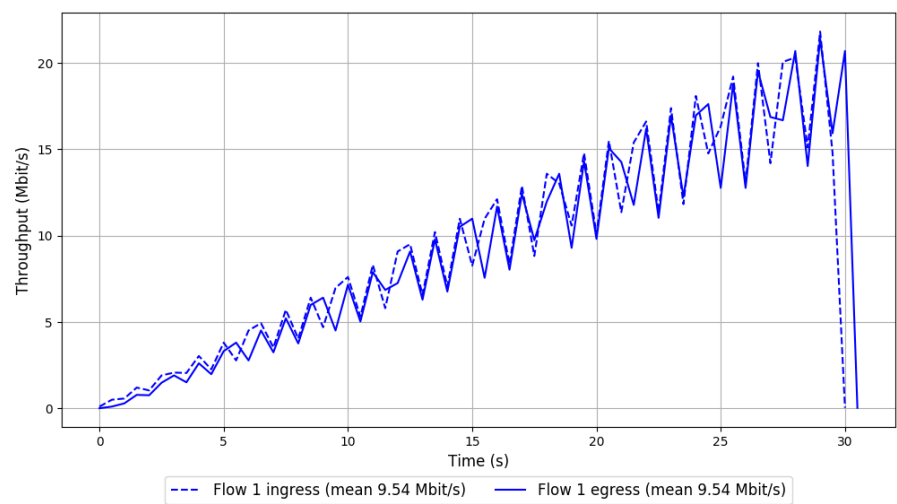


```
Run 1: Statistics of LEDBAT

Start at: 2018-09-10 22:52:23
End at: 2018-09-10 22:52:53
Local clock offset: 2.673 ms
Remote clock offset: -36.147 ms

# Below is generated by plot.py at 2018-09-11 01:02:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.54 Mbit/s
95th percentile per-packet one-way delay: 62.411 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.54 Mbit/s
95th percentile per-packet one-way delay: 62.411 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link

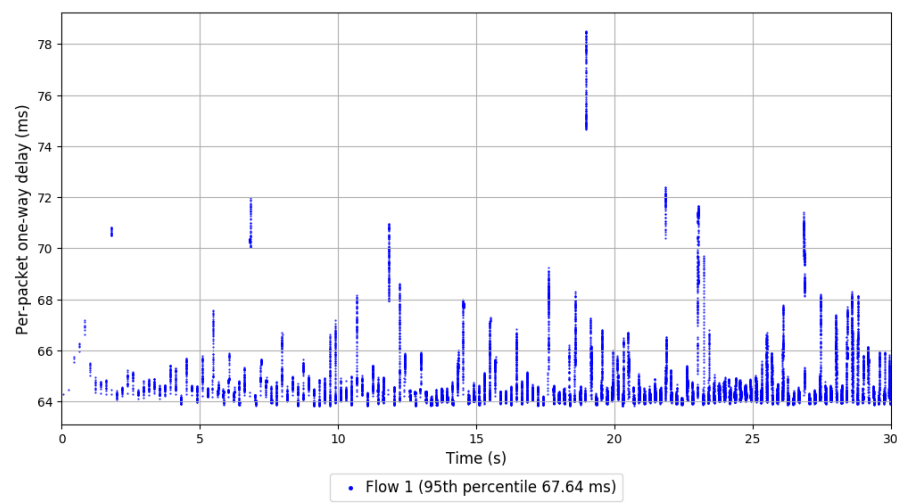
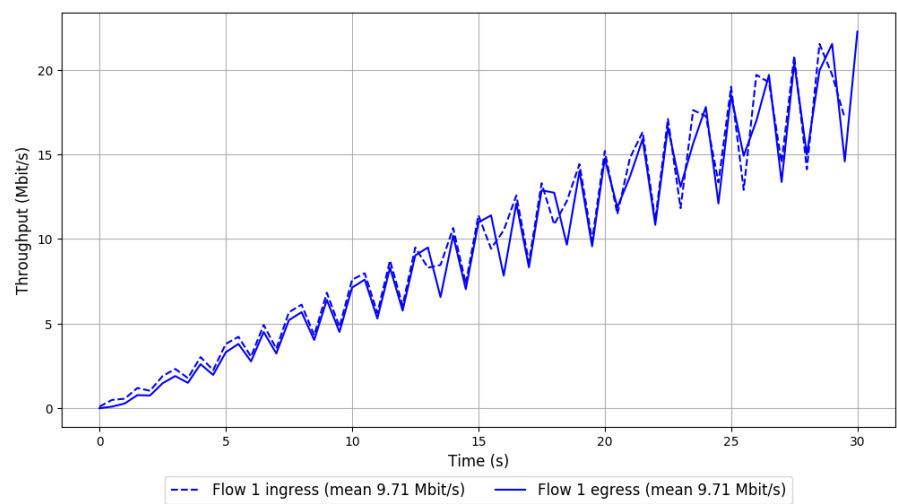


Run 2: Statistics of LEDBAT

Start at: 2018-09-10 23:15:36
End at: 2018-09-10 23:16:07
Local clock offset: -0.896 ms
Remote clock offset: -36.045 ms

Below is generated by plot.py at 2018-09-11 01:02:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 9.71 Mbit/s
95th percentile per-packet one-way delay: 67.639 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.71 Mbit/s
95th percentile per-packet one-way delay: 67.639 ms
Loss rate: 0.00%

Run 2: Report of LEDBAT — Data Link

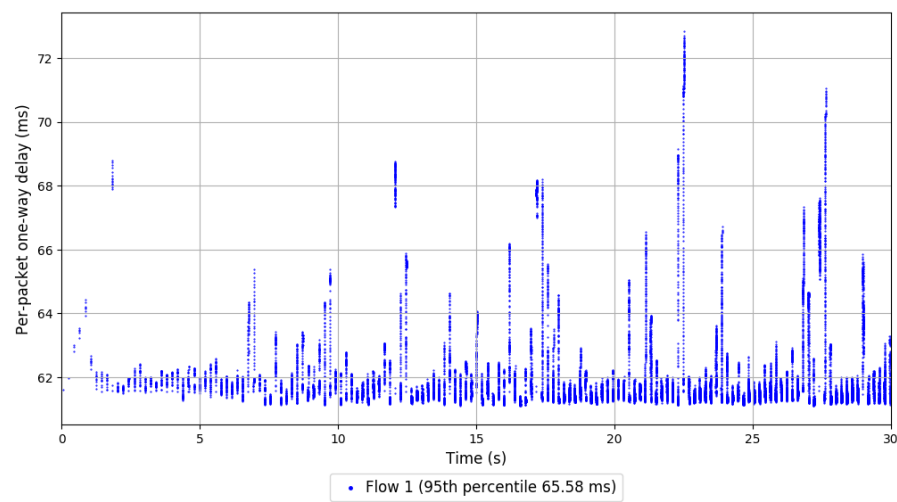
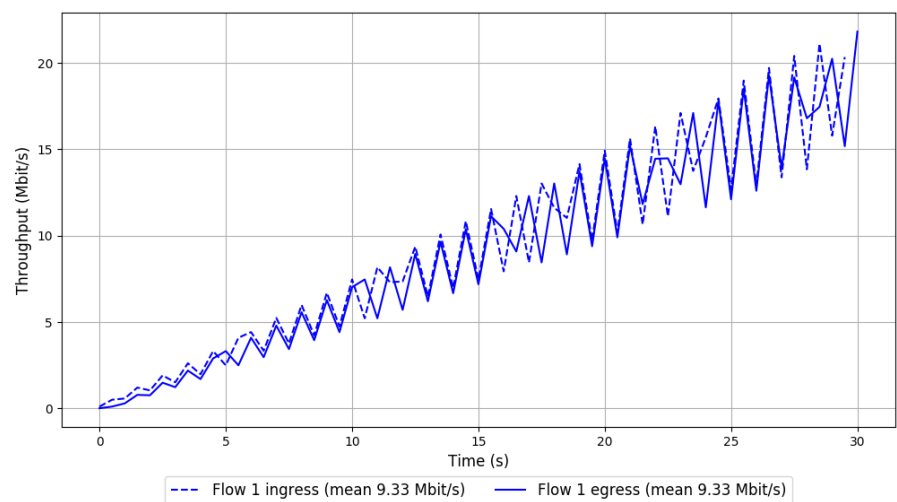


Run 3: Statistics of LEDBAT

Start at: 2018-09-10 23:38:47
End at: 2018-09-10 23:39:17
Local clock offset: 1.43 ms
Remote clock offset: -37.445 ms

Below is generated by plot.py at 2018-09-11 01:02:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 9.33 Mbit/s
95th percentile per-packet one-way delay: 65.579 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.33 Mbit/s
95th percentile per-packet one-way delay: 65.579 ms
Loss rate: 0.00%

Run 3: Report of LEDBAT — Data Link

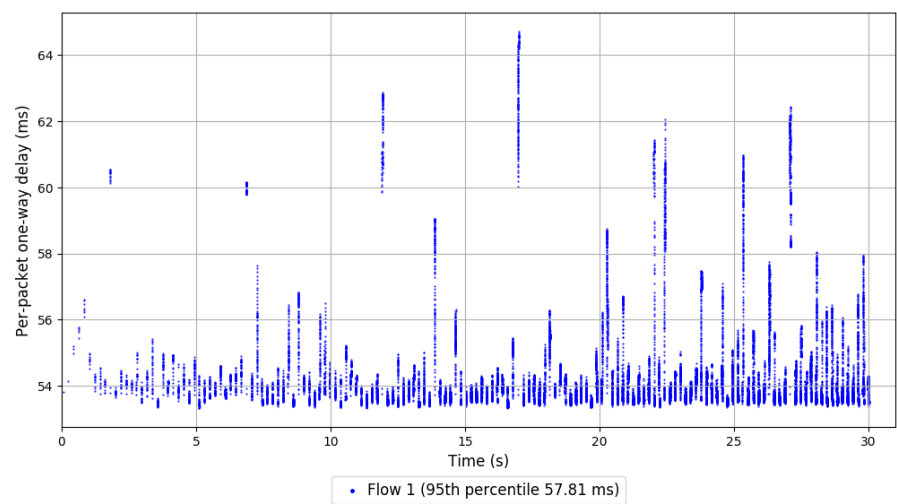
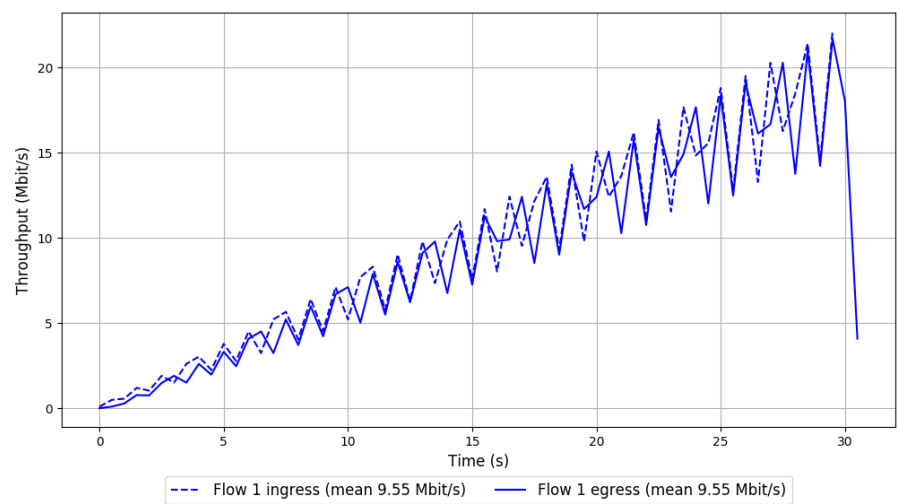


Run 4: Statistics of LEDBAT

Start at: 2018-09-11 00:01:57
End at: 2018-09-11 00:02:27
Local clock offset: 1.922 ms
Remote clock offset: -41.936 ms

Below is generated by plot.py at 2018-09-11 01:02:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 9.55 Mbit/s
95th percentile per-packet one-way delay: 57.813 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.55 Mbit/s
95th percentile per-packet one-way delay: 57.813 ms
Loss rate: 0.00%

Run 4: Report of LEDBAT — Data Link

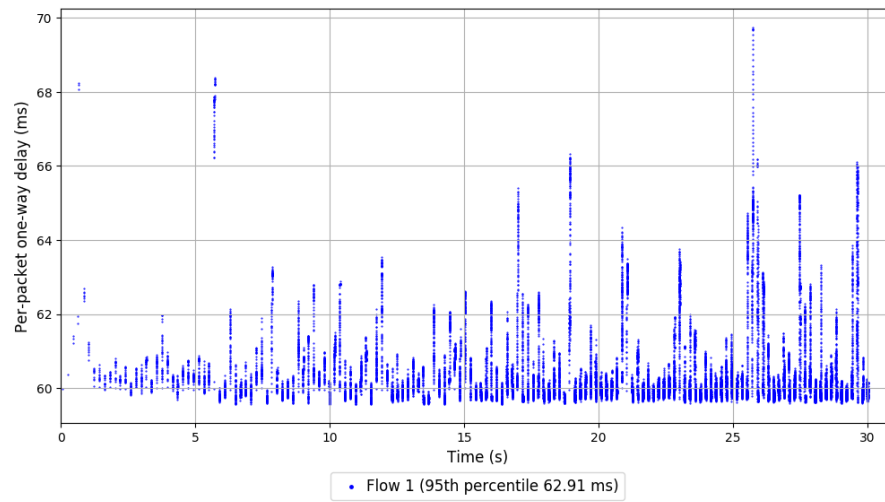
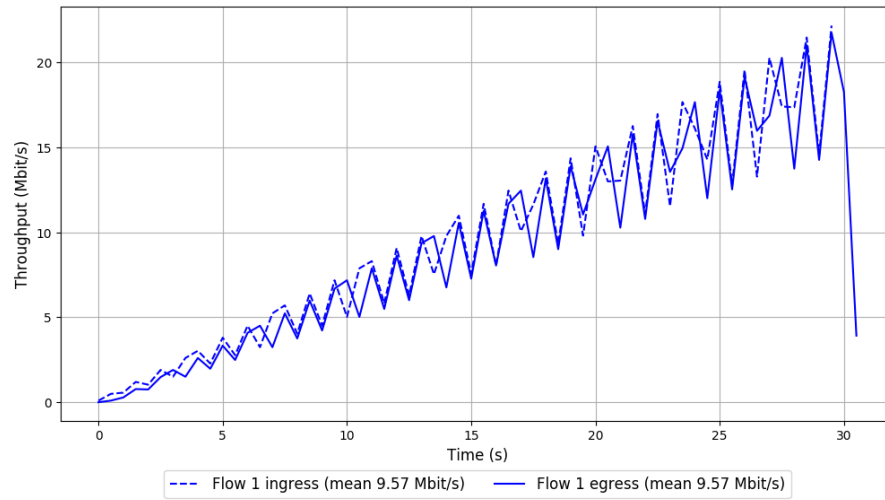


Run 5: Statistics of LEDBAT

Start at: 2018-09-11 00:40:28
End at: 2018-09-11 00:40:58
Local clock offset: 2.74 ms
Remote clock offset: -34.875 ms

Below is generated by plot.py at 2018-09-11 01:02:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 9.57 Mbit/s
95th percentile per-packet one-way delay: 62.913 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.57 Mbit/s
95th percentile per-packet one-way delay: 62.913 ms
Loss rate: 0.00%

Run 5: Report of LEDBAT — Data Link

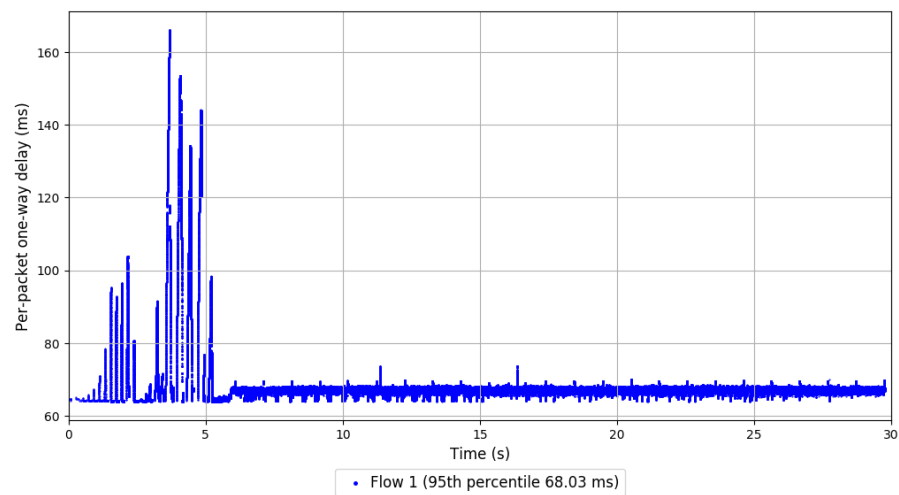
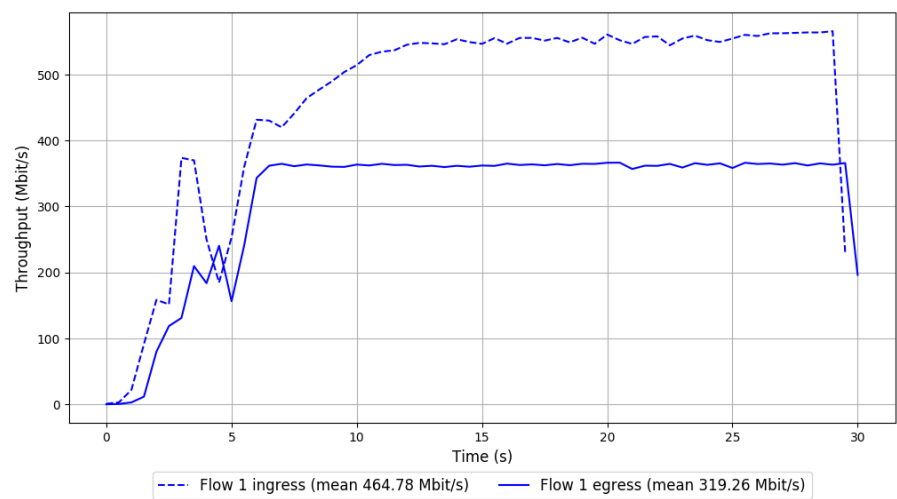


```
Run 1: Statistics of Indigo-Muses

Start at: 2018-09-10 22:40:08
End at: 2018-09-10 22:40:38
Local clock offset: -1.841 ms
Remote clock offset: -36.113 ms

# Below is generated by plot.py at 2018-09-11 01:02:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 319.26 Mbit/s
95th percentile per-packet one-way delay: 68.026 ms
Loss rate: 31.30%
-- Flow 1:
Average throughput: 319.26 Mbit/s
95th percentile per-packet one-way delay: 68.026 ms
Loss rate: 31.30%
```

Run 1: Report of Indigo-Muses — Data Link

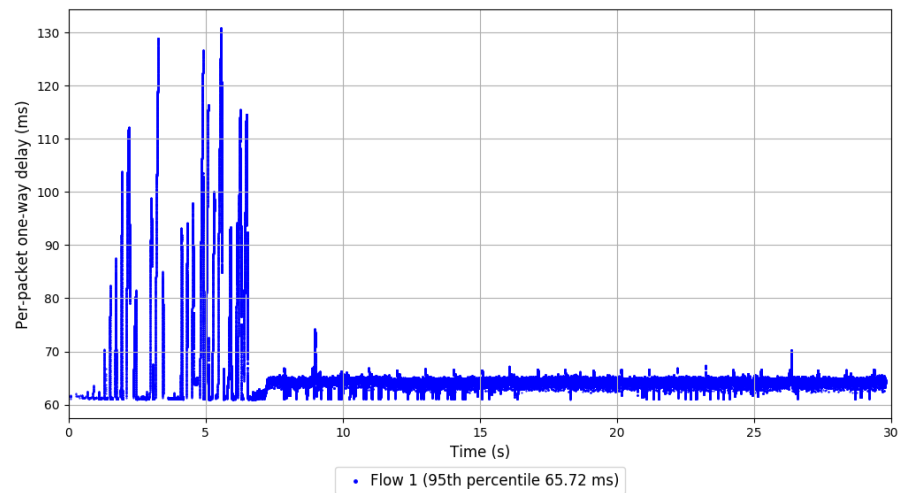
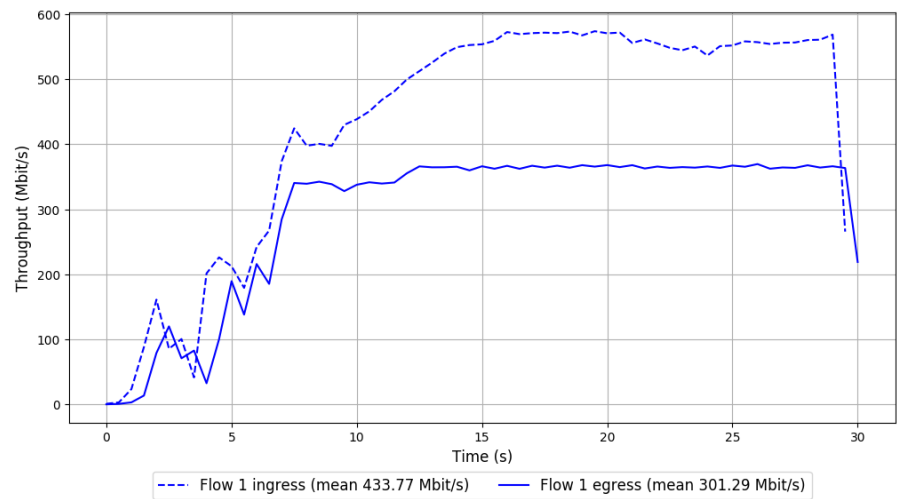


Run 2: Statistics of Indigo-Muses

Start at: 2018-09-10 23:03:24
End at: 2018-09-10 23:03:54
Local clock offset: 1.215 ms
Remote clock offset: -39.303 ms

Below is generated by plot.py at 2018-09-11 01:02:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 301.29 Mbit/s
95th percentile per-packet one-way delay: 65.724 ms
Loss rate: 30.53%
-- Flow 1:
Average throughput: 301.29 Mbit/s
95th percentile per-packet one-way delay: 65.724 ms
Loss rate: 30.53%

Run 2: Report of Indigo-Muses — Data Link

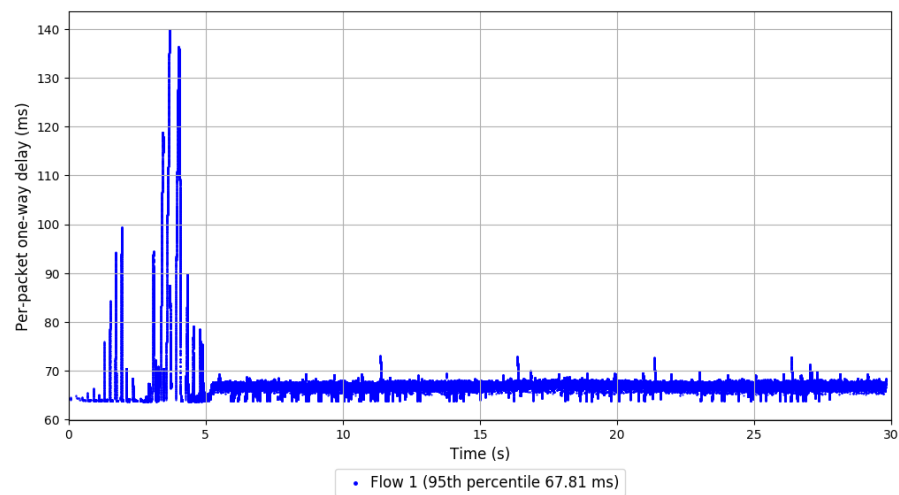
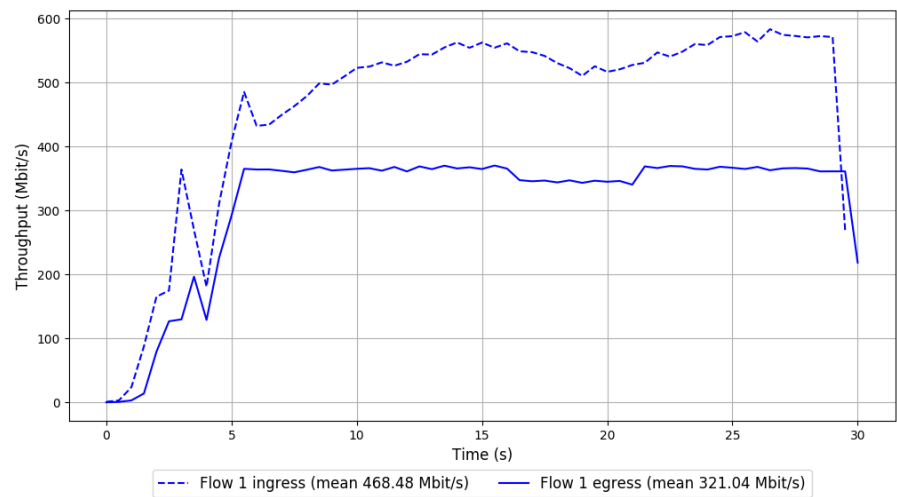


Run 3: Statistics of Indigo-Muses

Start at: 2018-09-10 23:26:33
End at: 2018-09-10 23:27:03
Local clock offset: 2.388 ms
Remote clock offset: -35.467 ms

Below is generated by plot.py at 2018-09-11 01:02:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 321.04 Mbit/s
95th percentile per-packet one-way delay: 67.808 ms
Loss rate: 31.47%
-- Flow 1:
Average throughput: 321.04 Mbit/s
95th percentile per-packet one-way delay: 67.808 ms
Loss rate: 31.47%

Run 3: Report of Indigo-Muses — Data Link

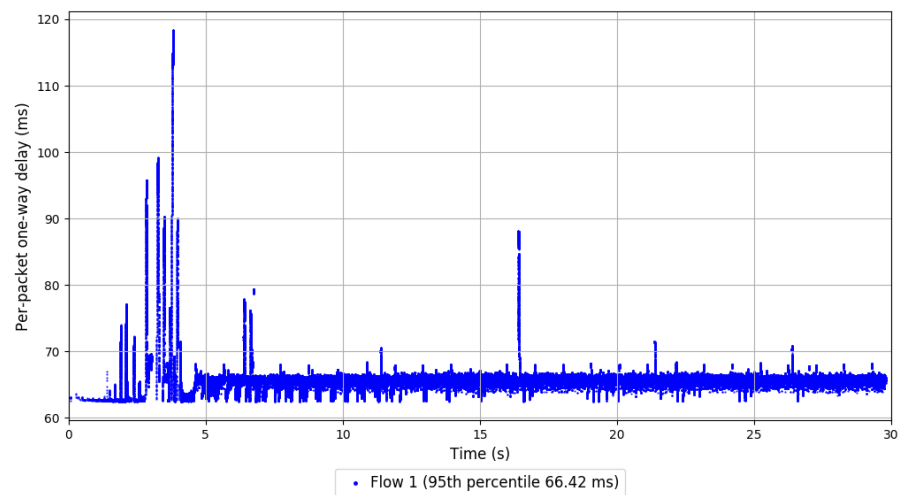
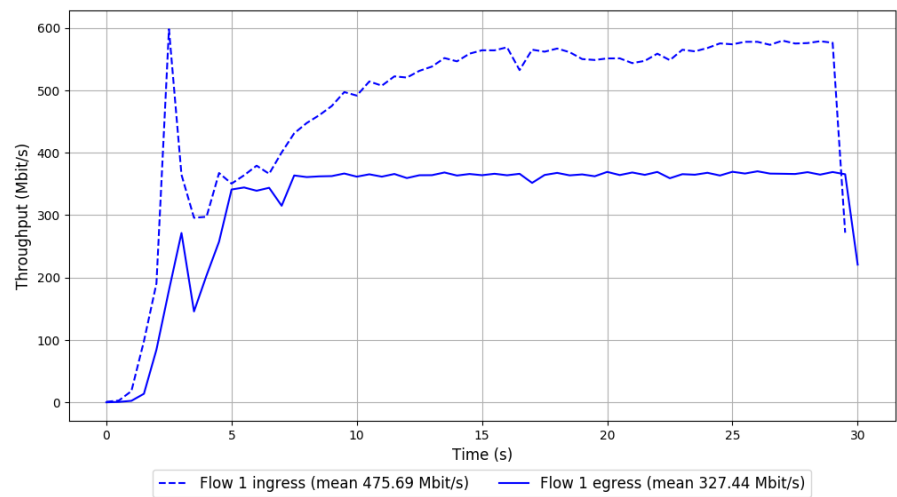


Run 4: Statistics of Indigo-Muses

Start at: 2018-09-10 23:49:47
End at: 2018-09-10 23:50:17
Local clock offset: -0.354 ms
Remote clock offset: -34.963 ms

Below is generated by plot.py at 2018-09-11 01:02:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 327.44 Mbit/s
95th percentile per-packet one-way delay: 66.423 ms
Loss rate: 31.16%
-- Flow 1:
Average throughput: 327.44 Mbit/s
95th percentile per-packet one-way delay: 66.423 ms
Loss rate: 31.16%

Run 4: Report of Indigo-Muses — Data Link

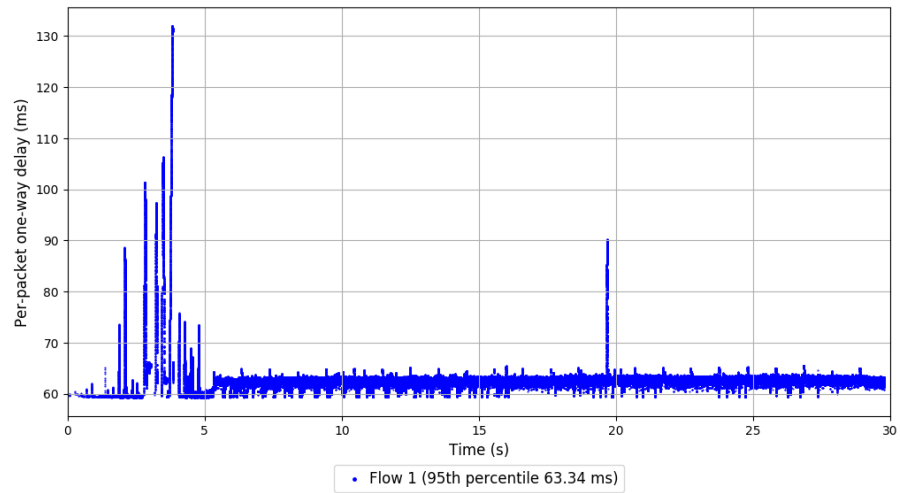
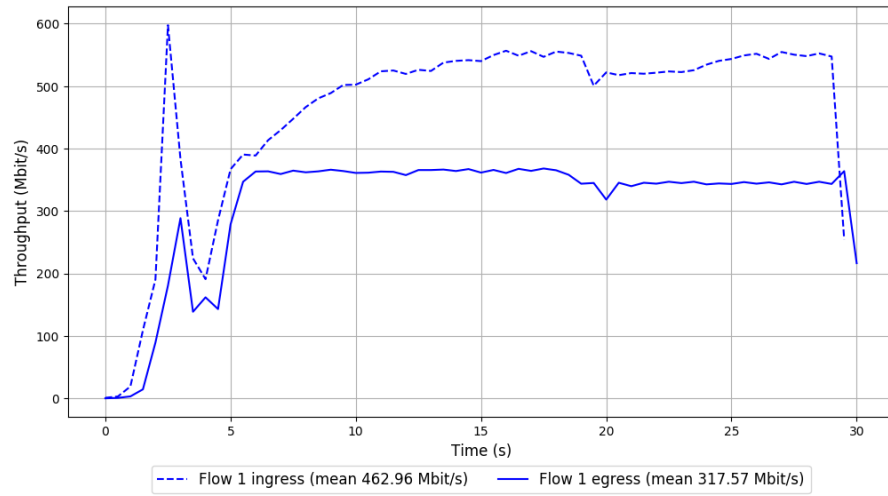


Run 5: Statistics of Indigo-Muses

Start at: 2018-09-11 00:12:53
End at: 2018-09-11 00:13:23
Local clock offset: 0.659 ms
Remote clock offset: -37.596 ms

Below is generated by plot.py at 2018-09-11 01:02:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 317.57 Mbit/s
95th percentile per-packet one-way delay: 63.342 ms
Loss rate: 31.40%
-- Flow 1:
Average throughput: 317.57 Mbit/s
95th percentile per-packet one-way delay: 63.342 ms
Loss rate: 31.40%

Run 5: Report of Indigo-Muses — Data Link

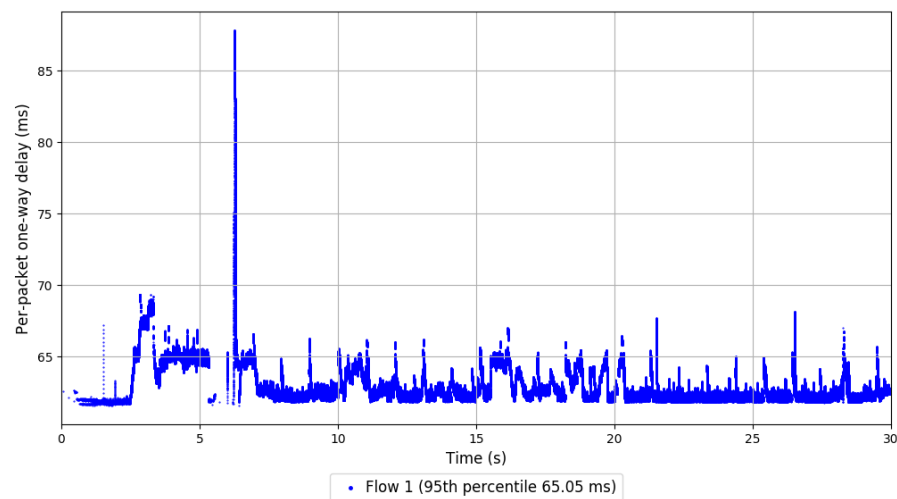
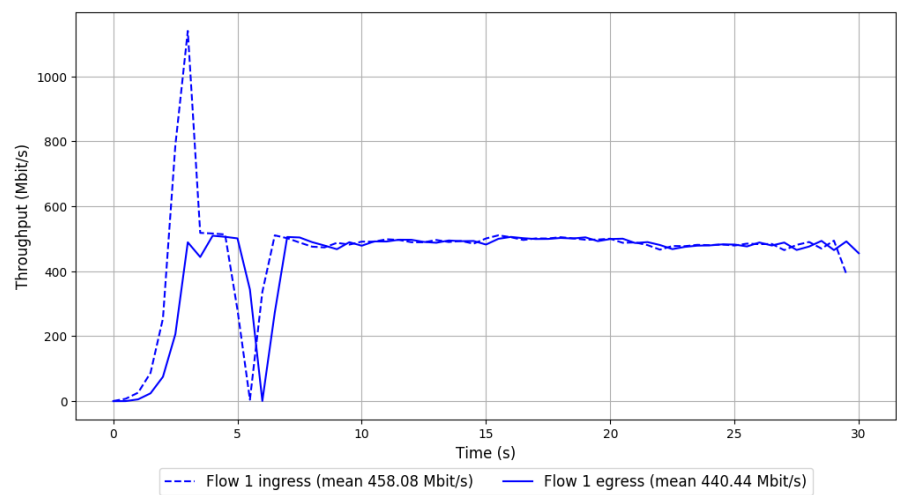


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-09-10 22:43:02
End at: 2018-09-10 22:43:32
Local clock offset: 0.546 ms
Remote clock offset: -35.801 ms

# Below is generated by plot.py at 2018-09-11 01:03:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 440.44 Mbit/s
95th percentile per-packet one-way delay: 65.048 ms
Loss rate: 3.85%
-- Flow 1:
Average throughput: 440.44 Mbit/s
95th percentile per-packet one-way delay: 65.048 ms
Loss rate: 3.85%
```

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-09-10 23:06:18

End at: 2018-09-10 23:06:48

Local clock offset: 1.122 ms

Remote clock offset: -34.019 ms

Below is generated by plot.py at 2018-09-11 01:07:02

Datalink statistics

-- Total of 1 flow:

Average throughput: 444.43 Mbit/s

95th percentile per-packet one-way delay: 66.969 ms

Loss rate: 3.99%

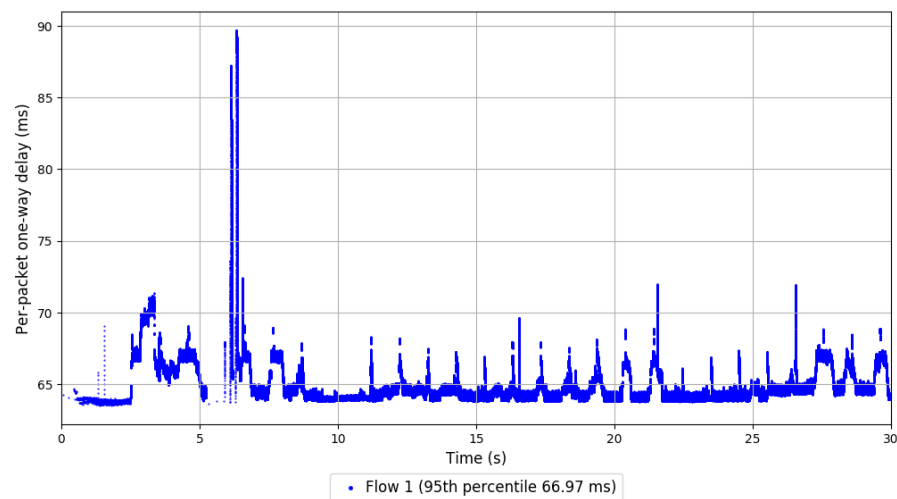
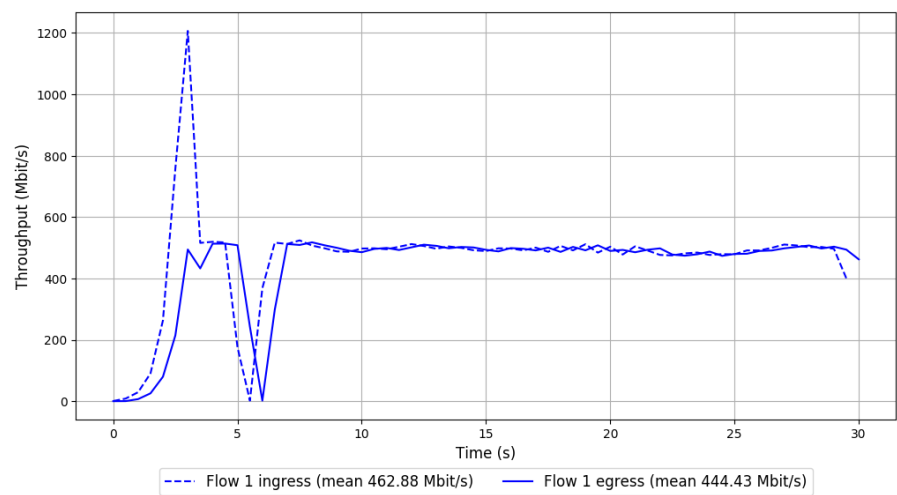
-- Flow 1:

Average throughput: 444.43 Mbit/s

95th percentile per-packet one-way delay: 66.969 ms

Loss rate: 3.99%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-09-10 23:29:27

End at: 2018-09-10 23:29:57

Local clock offset: 0.724 ms

Remote clock offset: -42.865 ms

Below is generated by plot.py at 2018-09-11 01:07:12

Datalink statistics

-- Total of 1 flow:

Average throughput: 443.70 Mbit/s

95th percentile per-packet one-way delay: 58.460 ms

Loss rate: 3.95%

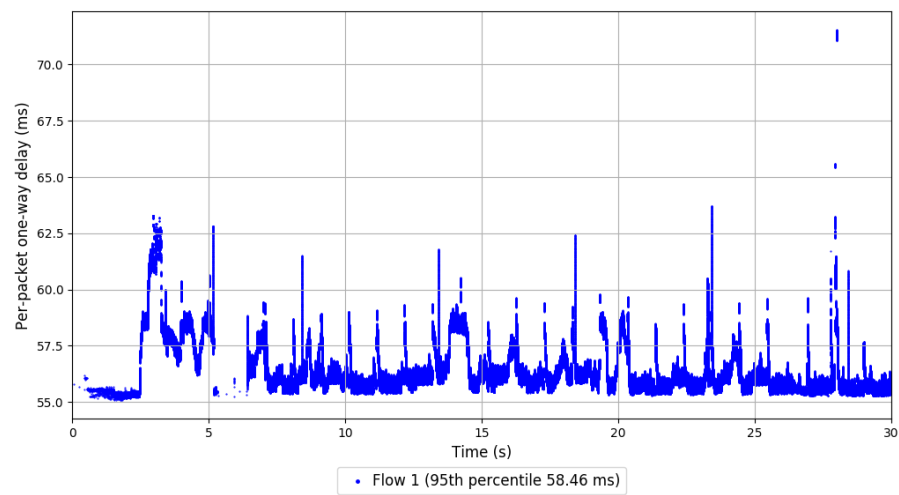
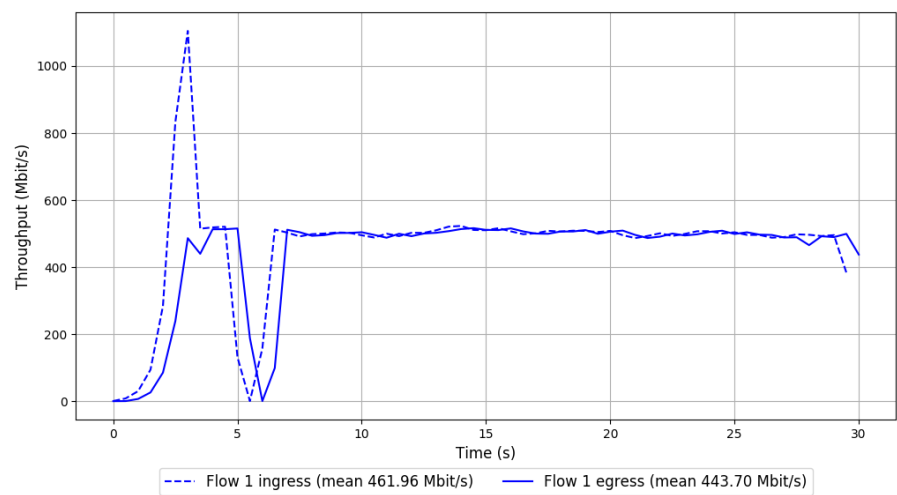
-- Flow 1:

Average throughput: 443.70 Mbit/s

95th percentile per-packet one-way delay: 58.460 ms

Loss rate: 3.95%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-09-10 23:52:42

End at: 2018-09-10 23:53:12

Local clock offset: 0.162 ms

Remote clock offset: -38.725 ms

Below is generated by plot.py at 2018-09-11 01:07:26

Datalink statistics

-- Total of 1 flow:

Average throughput: 460.14 Mbit/s

95th percentile per-packet one-way delay: 60.838 ms

Loss rate: 3.72%

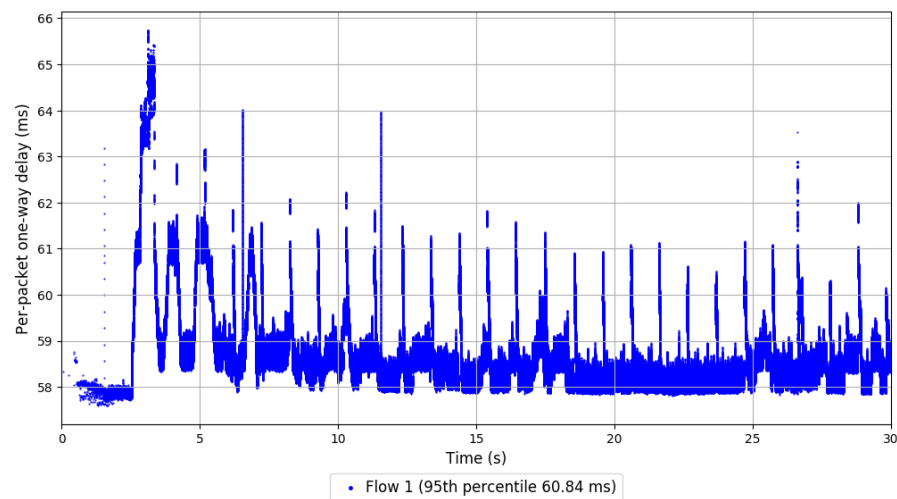
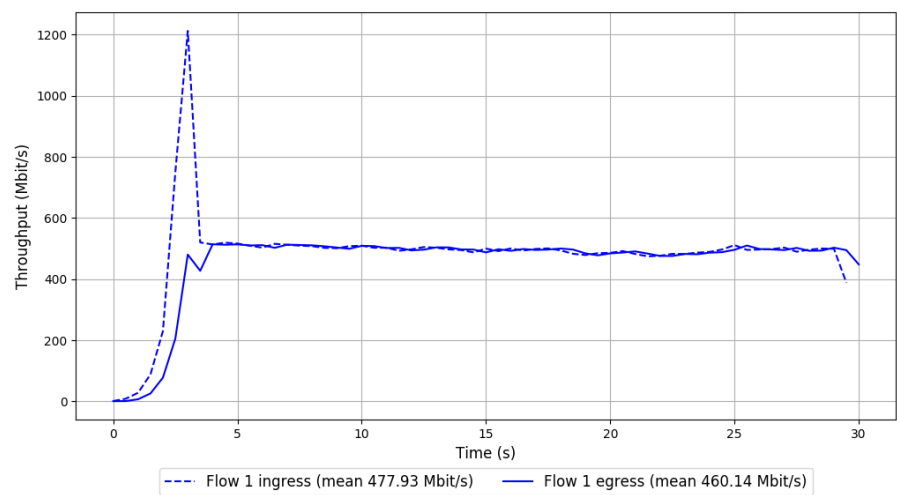
-- Flow 1:

Average throughput: 460.14 Mbit/s

95th percentile per-packet one-way delay: 60.838 ms

Loss rate: 3.72%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-09-11 00:21:15

End at: 2018-09-11 00:21:45

Local clock offset: 0.91 ms

Remote clock offset: -37.545 ms

Below is generated by plot.py at 2018-09-11 01:07:26

Datalink statistics

-- Total of 1 flow:

Average throughput: 452.33 Mbit/s

95th percentile per-packet one-way delay: 65.453 ms

Loss rate: 4.07%

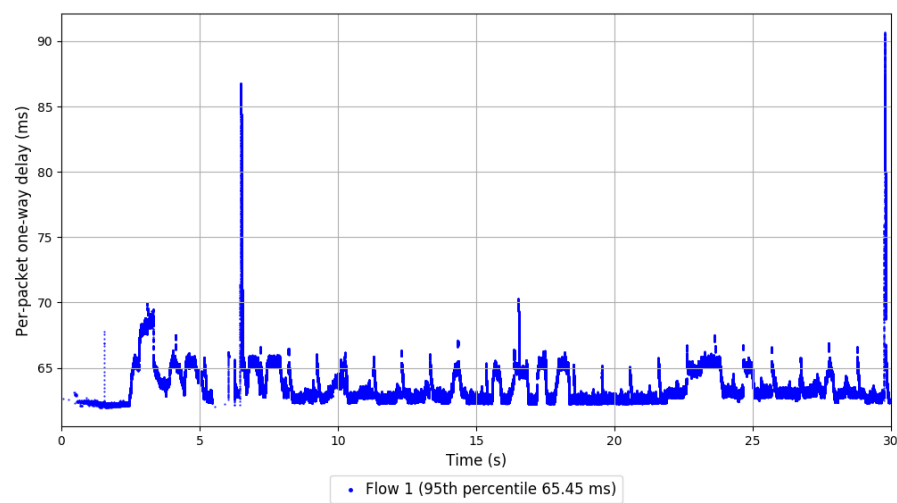
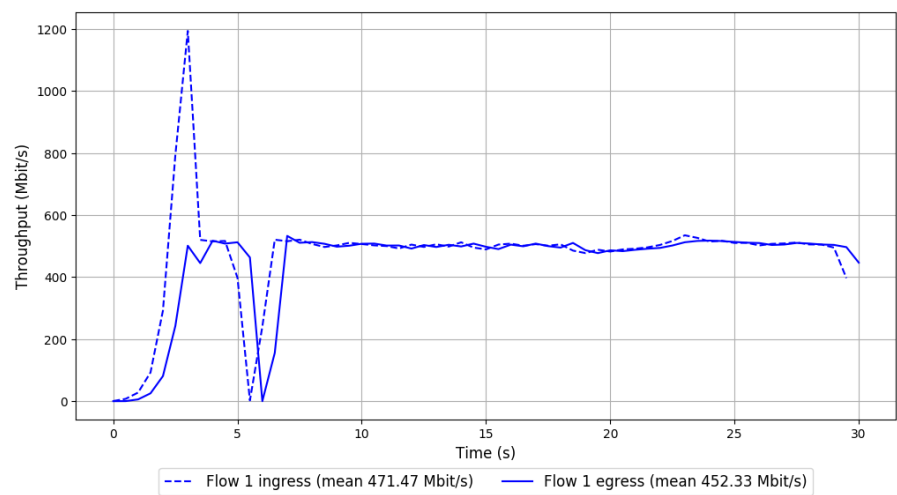
-- Flow 1:

Average throughput: 452.33 Mbit/s

95th percentile per-packet one-way delay: 65.453 ms

Loss rate: 4.07%

Run 5: Report of PCC-Allegro — Data Link

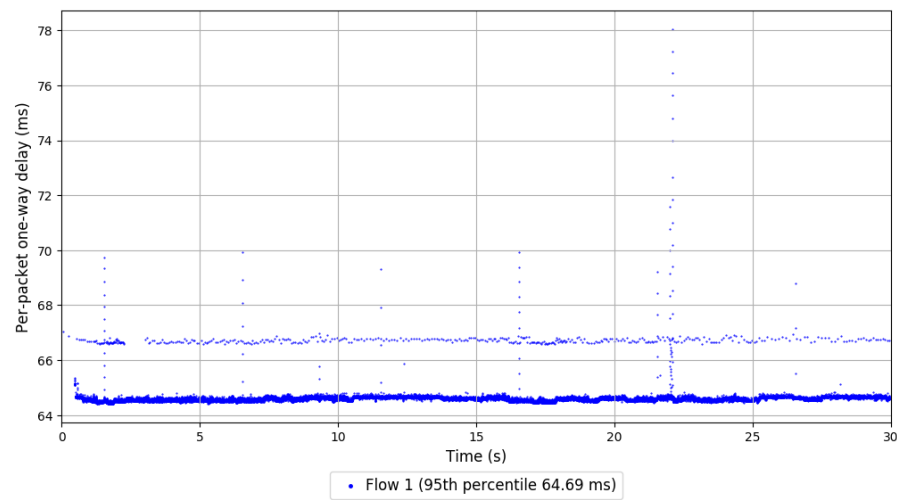
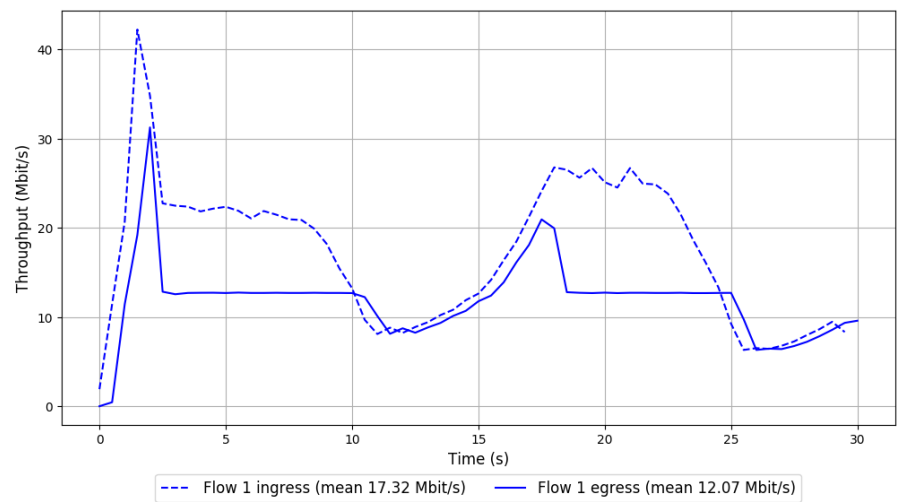


```
Run 1: Statistics of PCC-Expr

Start at: 2018-09-10 22:53:34
End at: 2018-09-10 22:54:04
Local clock offset: 0.0 ms
Remote clock offset: -34.201 ms

# Below is generated by plot.py at 2018-09-11 01:07:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.07 Mbit/s
95th percentile per-packet one-way delay: 64.690 ms
Loss rate: 30.30%
-- Flow 1:
Average throughput: 12.07 Mbit/s
95th percentile per-packet one-way delay: 64.690 ms
Loss rate: 30.30%
```

Run 1: Report of PCC-Expr — Data Link

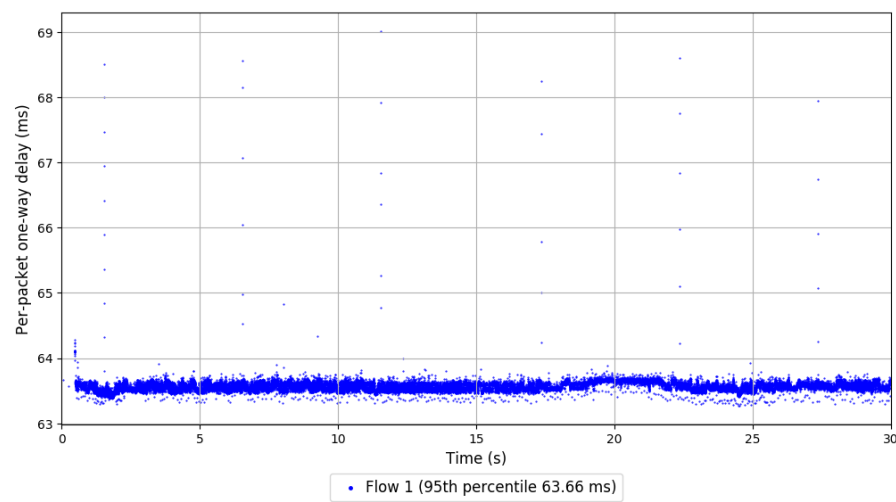
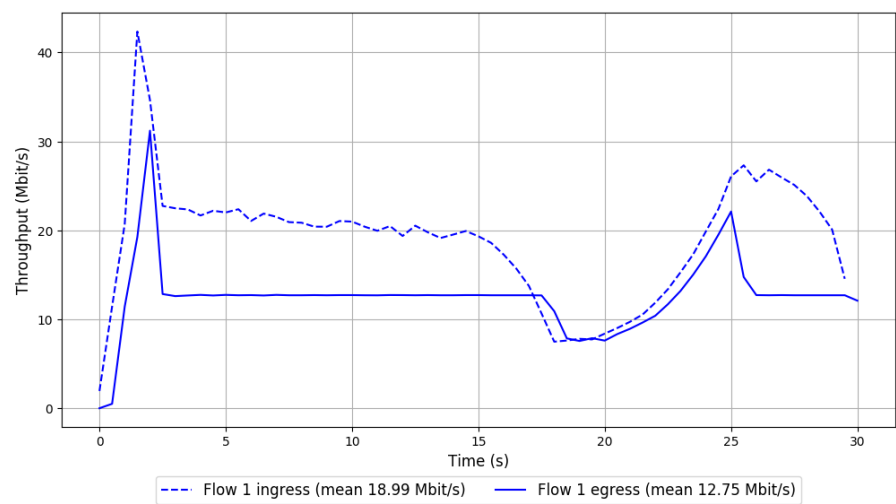


Run 2: Statistics of PCC-Expr

Start at: 2018-09-10 23:16:48
End at: 2018-09-10 23:17:18
Local clock offset: 0.317 ms
Remote clock offset: -35.348 ms

Below is generated by plot.py at 2018-09-11 01:07:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.75 Mbit/s
95th percentile per-packet one-way delay: 63.663 ms
Loss rate: 32.88%
-- Flow 1:
Average throughput: 12.75 Mbit/s
95th percentile per-packet one-way delay: 63.663 ms
Loss rate: 32.88%

Run 2: Report of PCC-Expr — Data Link

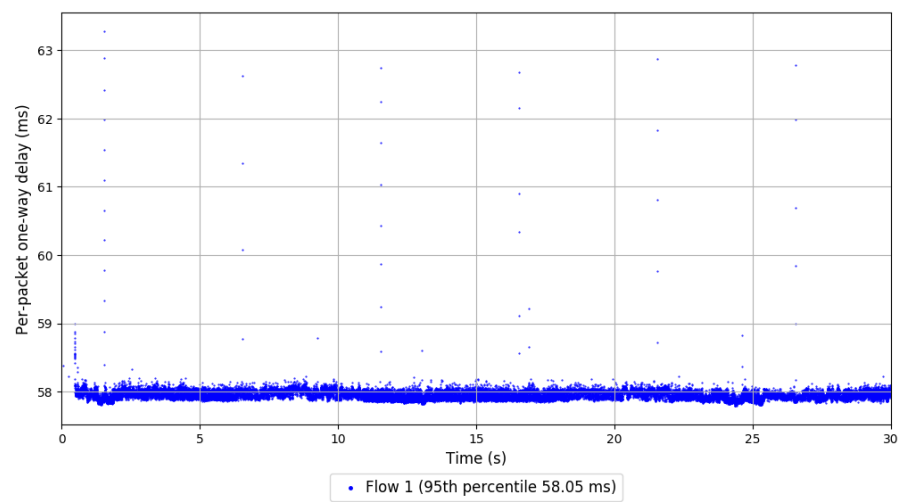
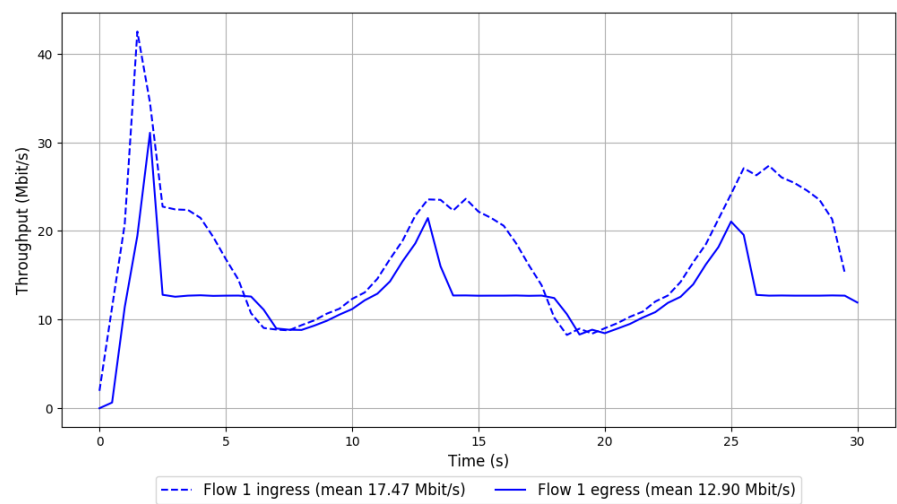


Run 3: Statistics of PCC-Expr

Start at: 2018-09-10 23:39:58
End at: 2018-09-10 23:40:28
Local clock offset: 1.396 ms
Remote clock offset: -38.195 ms

Below is generated by plot.py at 2018-09-11 01:07:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.90 Mbit/s
95th percentile per-packet one-way delay: 58.051 ms
Loss rate: 26.12%
-- Flow 1:
Average throughput: 12.90 Mbit/s
95th percentile per-packet one-way delay: 58.051 ms
Loss rate: 26.12%

Run 3: Report of PCC-Expr — Data Link

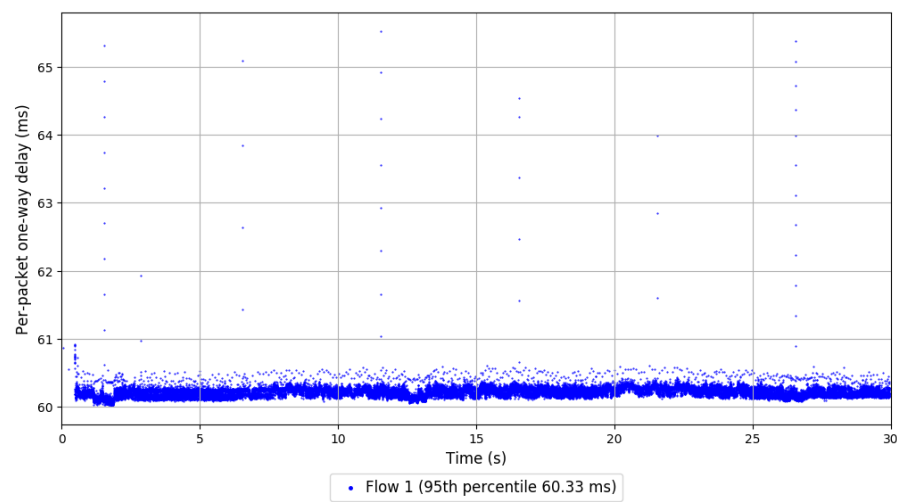
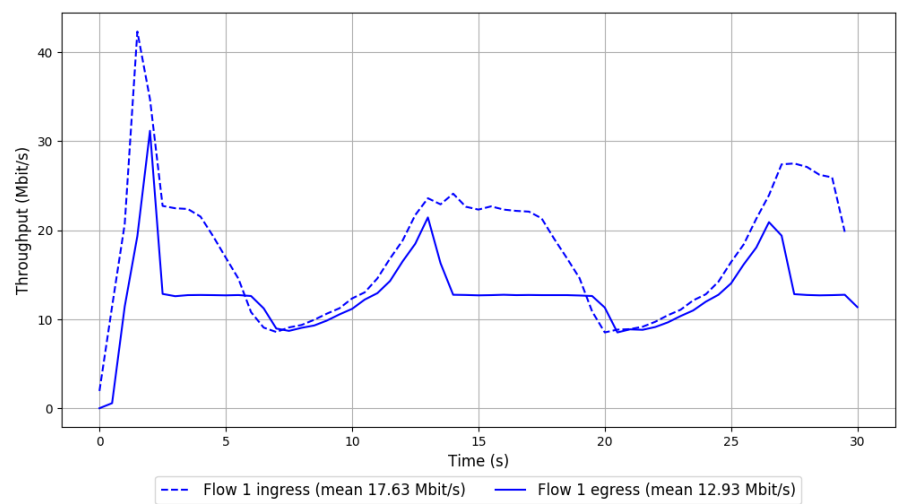


Run 4: Statistics of PCC-Expr

Start at: 2018-09-11 00:03:09
End at: 2018-09-11 00:03:39
Local clock offset: 0.21 ms
Remote clock offset: -37.032 ms

Below is generated by plot.py at 2018-09-11 01:07:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.93 Mbit/s
95th percentile per-packet one-way delay: 60.328 ms
Loss rate: 26.65%
-- Flow 1:
Average throughput: 12.93 Mbit/s
95th percentile per-packet one-way delay: 60.328 ms
Loss rate: 26.65%

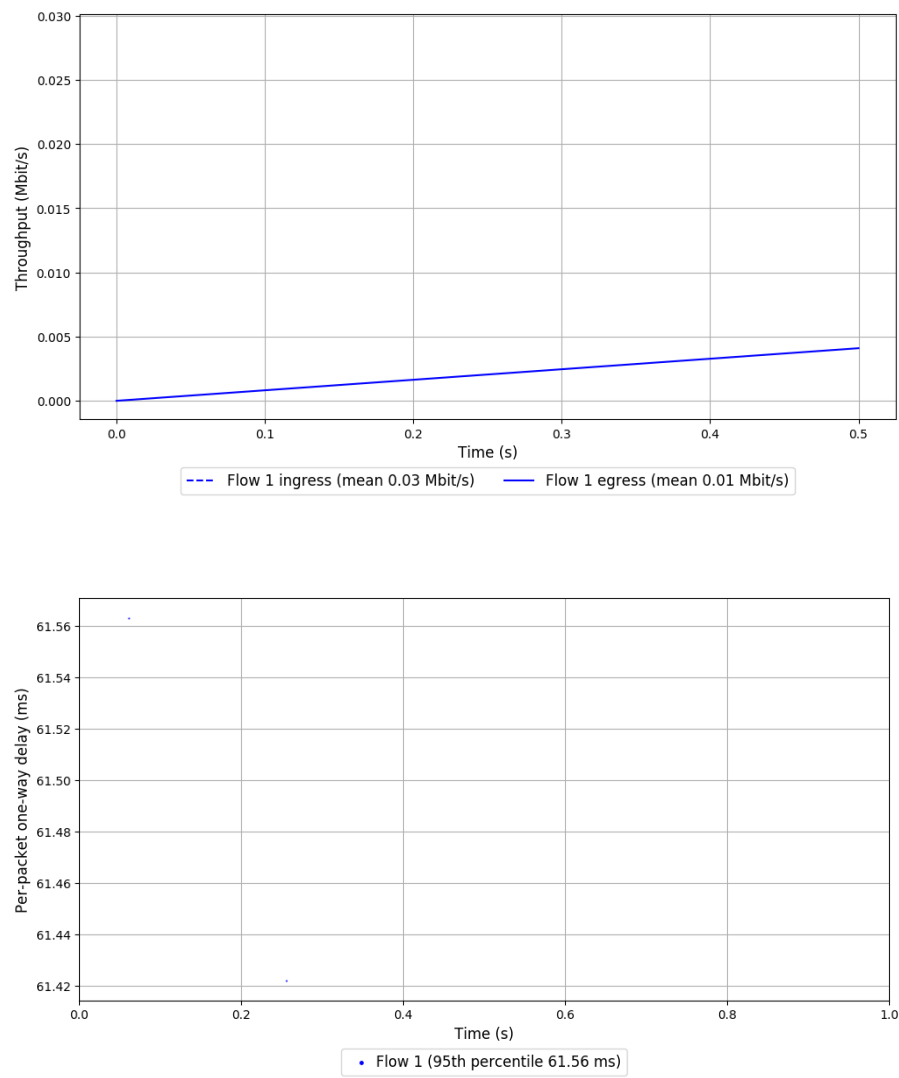
Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

Start at: 2018-09-11 00:41:45
End at: 2018-09-11 00:42:15
Local clock offset: 1.781 ms
Remote clock offset: -34.376 ms

Run 5: Report of PCC-Expr — Data Link

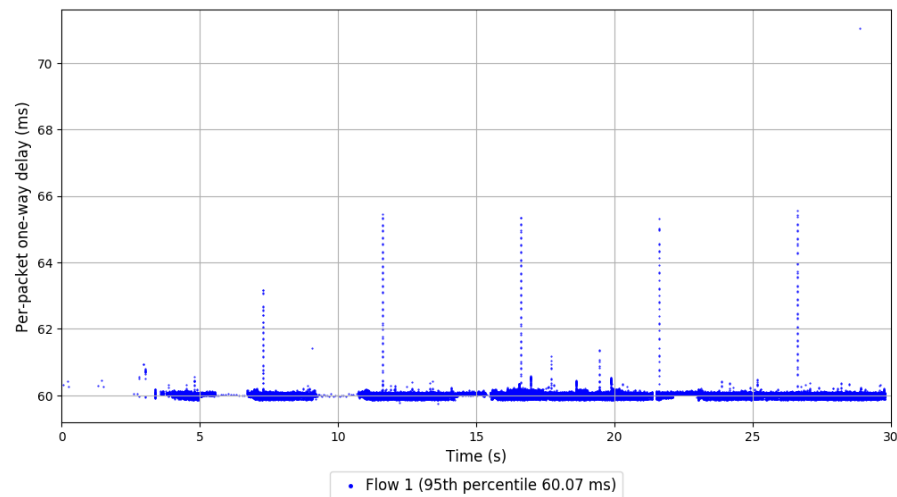
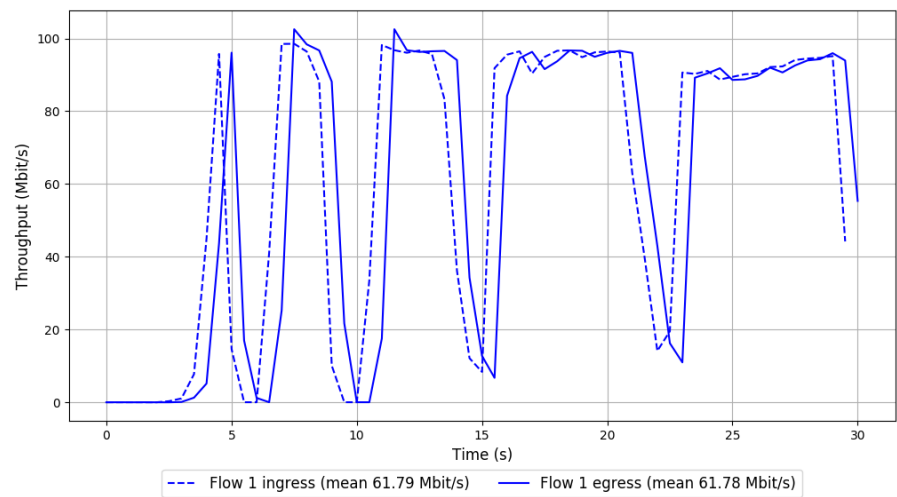


Run 1: Statistics of QUIC Cubic

Start at: 2018-09-10 22:55:56
End at: 2018-09-10 22:56:26
Local clock offset: 2.004 ms
Remote clock offset: -38.854 ms

Below is generated by plot.py at 2018-09-11 01:07:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 61.78 Mbit/s
95th percentile per-packet one-way delay: 60.069 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 61.78 Mbit/s
95th percentile per-packet one-way delay: 60.069 ms
Loss rate: 0.01%

Run 1: Report of QUIC Cubic — Data Link

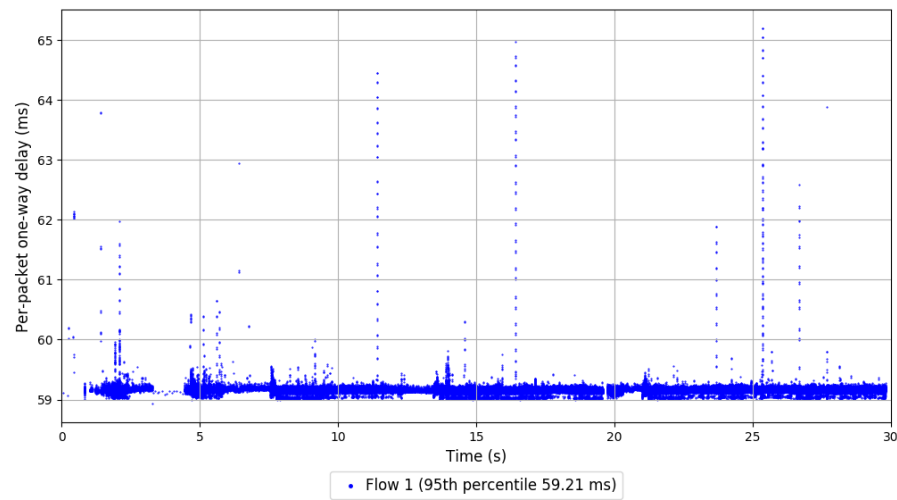
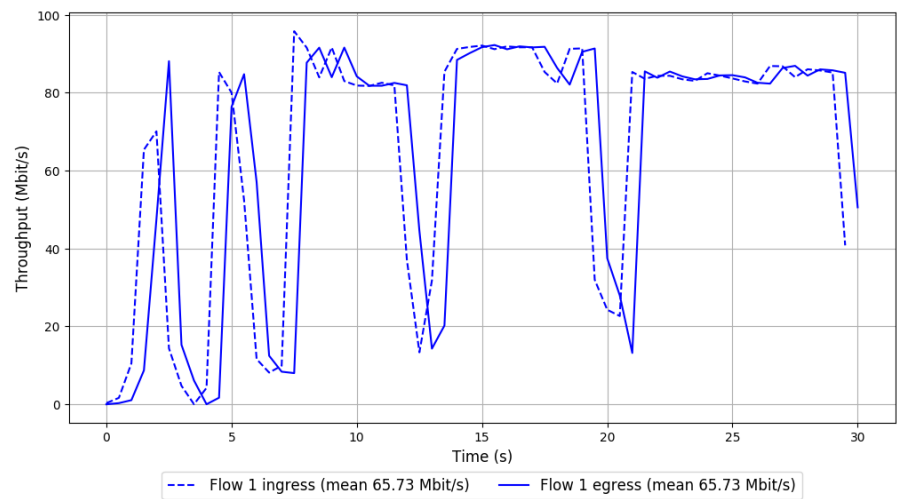


Run 2: Statistics of QUIC Cubic

Start at: 2018-09-10 23:19:10
End at: 2018-09-10 23:19:40
Local clock offset: 0.349 ms
Remote clock offset: -39.411 ms

Below is generated by plot.py at 2018-09-11 01:07:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 65.73 Mbit/s
95th percentile per-packet one-way delay: 59.210 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 65.73 Mbit/s
95th percentile per-packet one-way delay: 59.210 ms
Loss rate: 0.00%

Run 2: Report of QUIC Cubic — Data Link

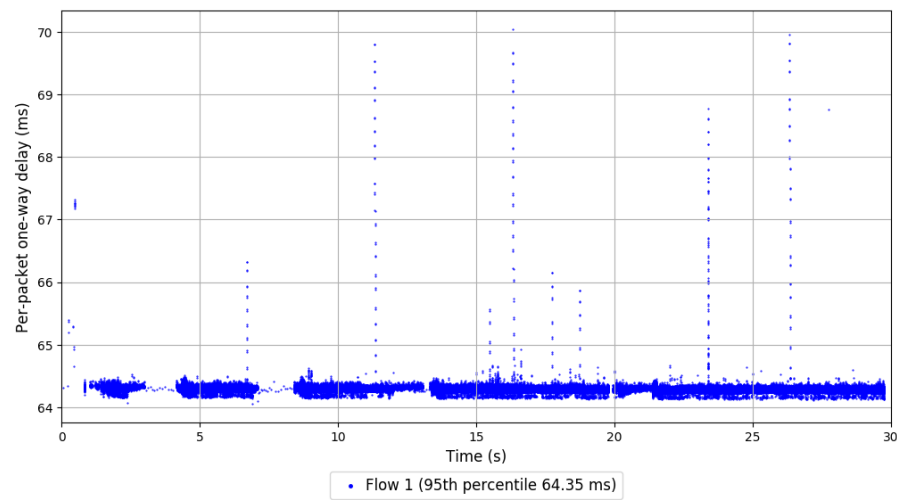
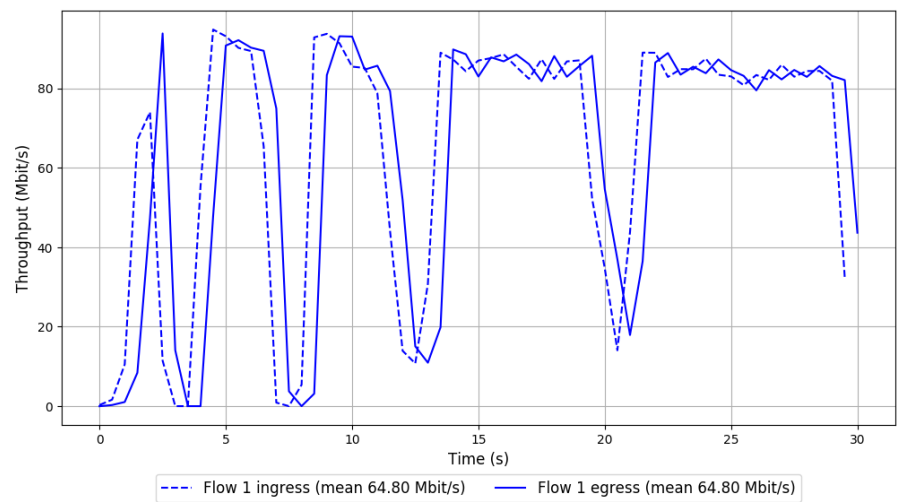


Run 3: Statistics of QUIC Cubic

Start at: 2018-09-10 23:42:21
End at: 2018-09-10 23:42:51
Local clock offset: -0.619 ms
Remote clock offset: -33.584 ms

Below is generated by plot.py at 2018-09-11 01:07:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 64.80 Mbit/s
95th percentile per-packet one-way delay: 64.347 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 64.80 Mbit/s
95th percentile per-packet one-way delay: 64.347 ms
Loss rate: 0.00%

Run 3: Report of QUIC Cubic — Data Link

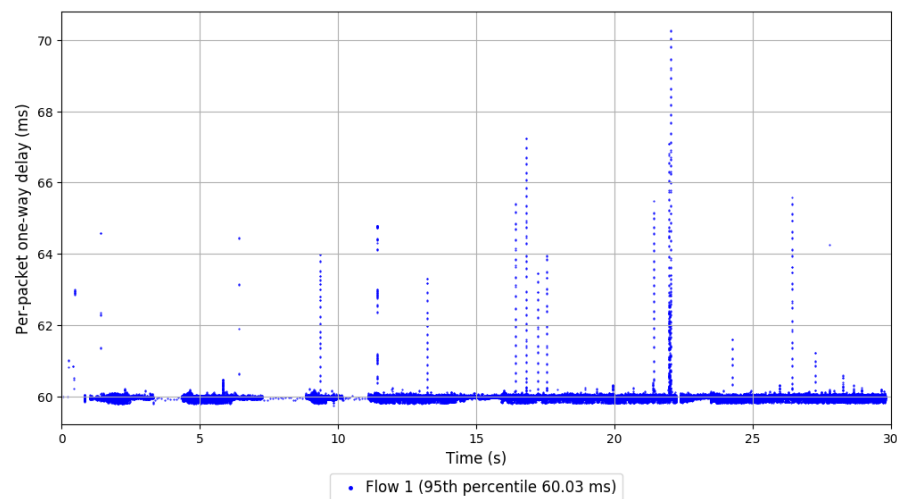
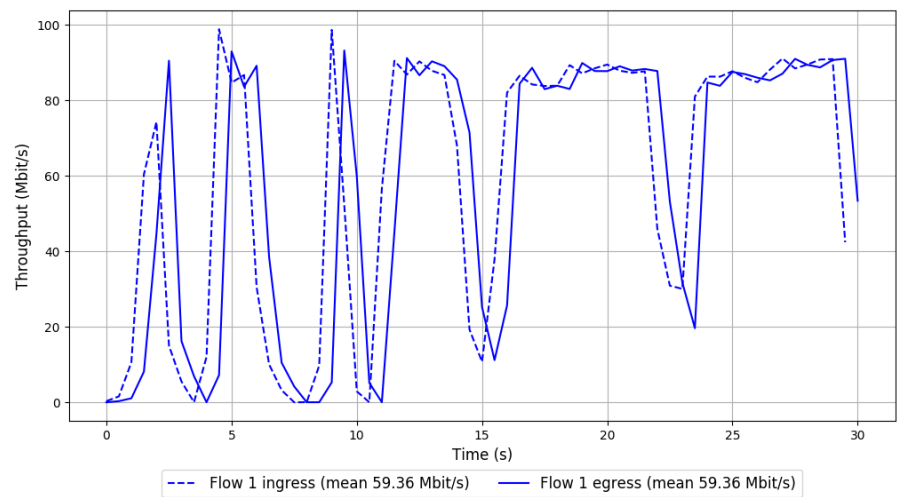


Run 4: Statistics of QUIC Cubic

Start at: 2018-09-11 00:05:31
End at: 2018-09-11 00:06:01
Local clock offset: 0.174 ms
Remote clock offset: -37.456 ms

Below is generated by plot.py at 2018-09-11 01:07:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 59.36 Mbit/s
95th percentile per-packet one-way delay: 60.028 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 59.36 Mbit/s
95th percentile per-packet one-way delay: 60.028 ms
Loss rate: 0.00%

Run 4: Report of QUIC Cubic — Data Link

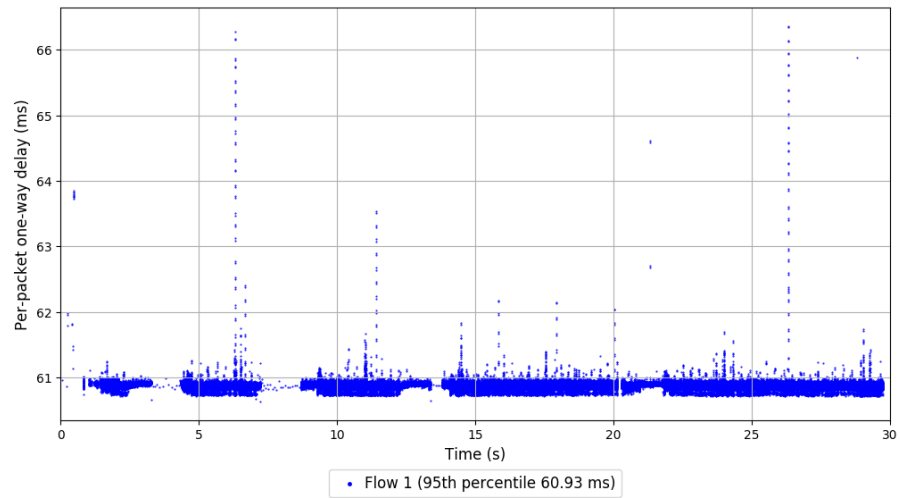
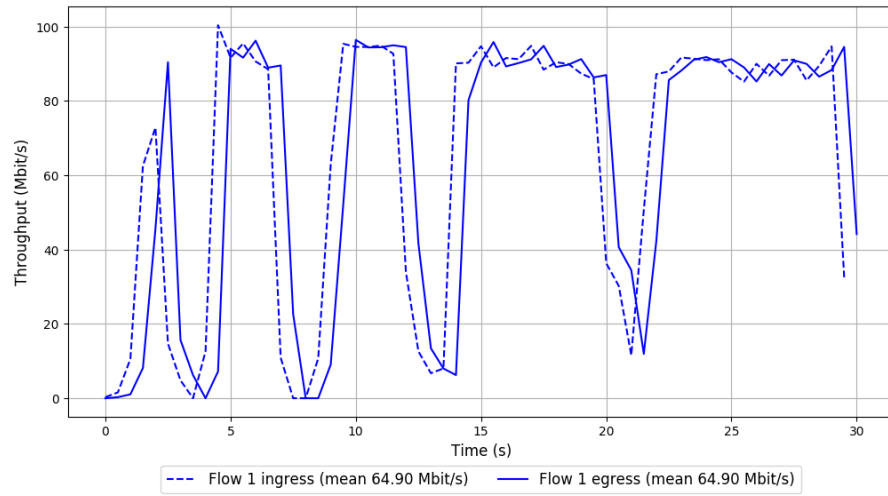


Run 5: Statistics of QUIC Cubic

Start at: 2018-09-11 00:44:05
End at: 2018-09-11 00:44:35
Local clock offset: 1.134 ms
Remote clock offset: -35.124 ms

Below is generated by plot.py at 2018-09-11 01:07:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 64.90 Mbit/s
95th percentile per-packet one-way delay: 60.929 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 64.90 Mbit/s
95th percentile per-packet one-way delay: 60.929 ms
Loss rate: 0.00%

Run 5: Report of QUIC Cubic — Data Link

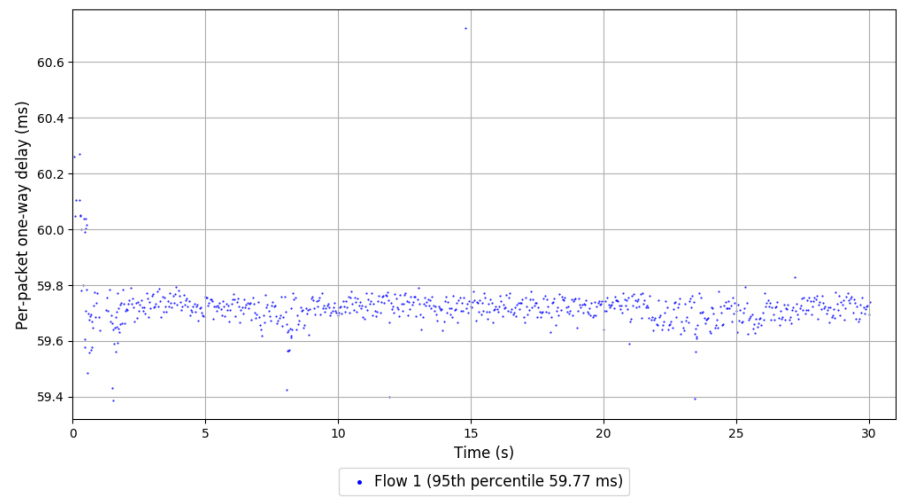
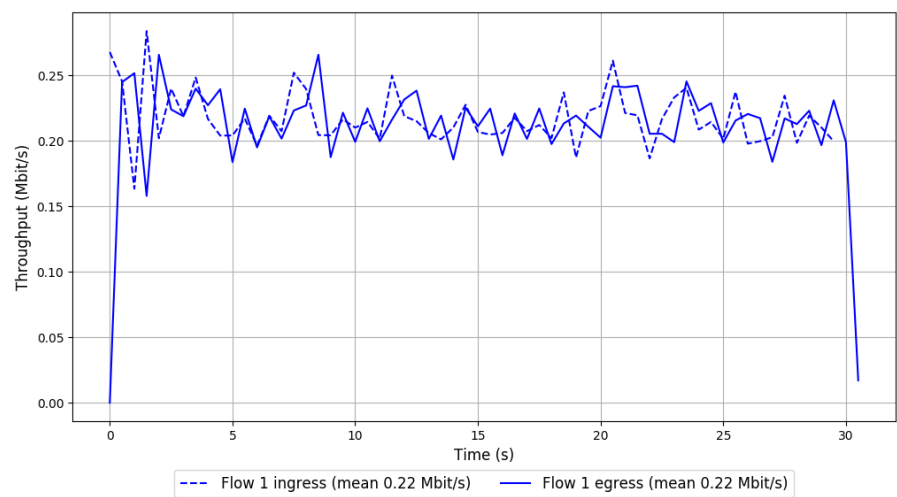


```
Run 1: Statistics of SCReAM

Start at: 2018-09-10 22:35:17
End at: 2018-09-10 22:35:47
Local clock offset: 1.053 ms
Remote clock offset: -38.073 ms

# Below is generated by plot.py at 2018-09-11 01:07:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 59.771 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 59.771 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link

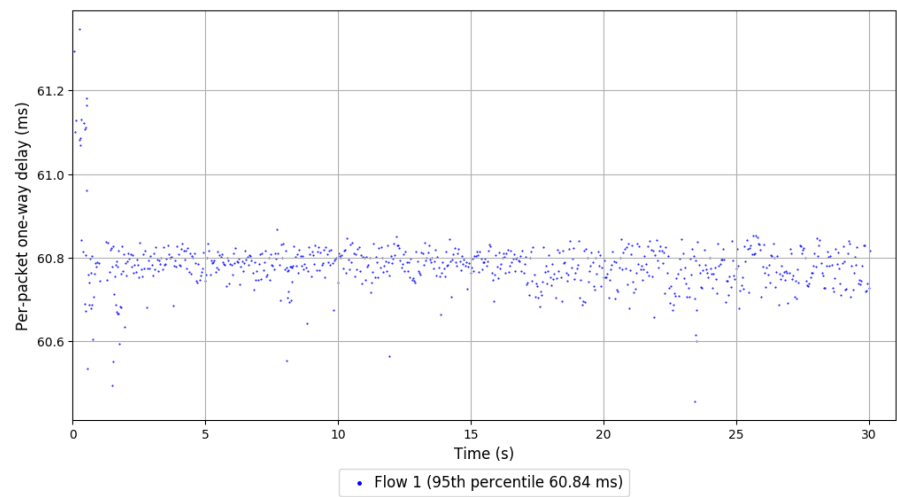
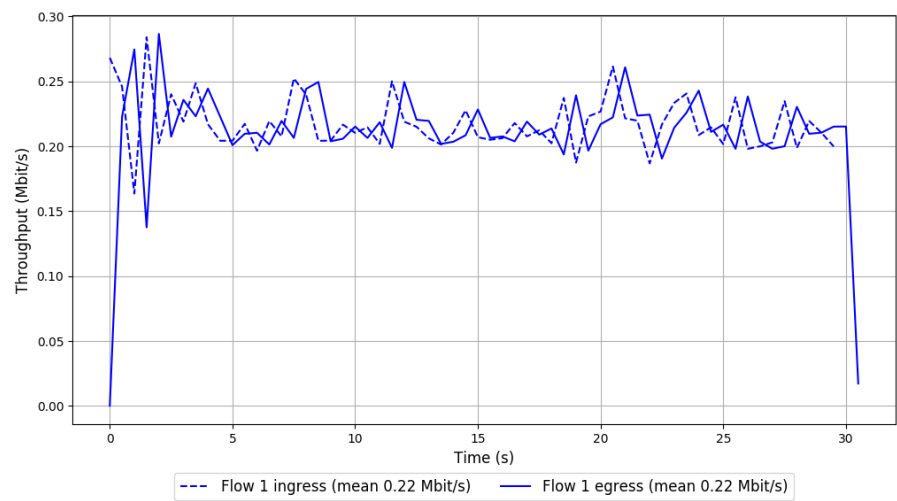


Run 2: Statistics of SCReAM

Start at: 2018-09-10 22:58:27
End at: 2018-09-10 22:58:57
Local clock offset: -0.319 ms
Remote clock offset: -38.176 ms

Below is generated by plot.py at 2018-09-11 01:07:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.835 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.835 ms
Loss rate: 0.00%

Run 2: Report of SReAM — Data Link

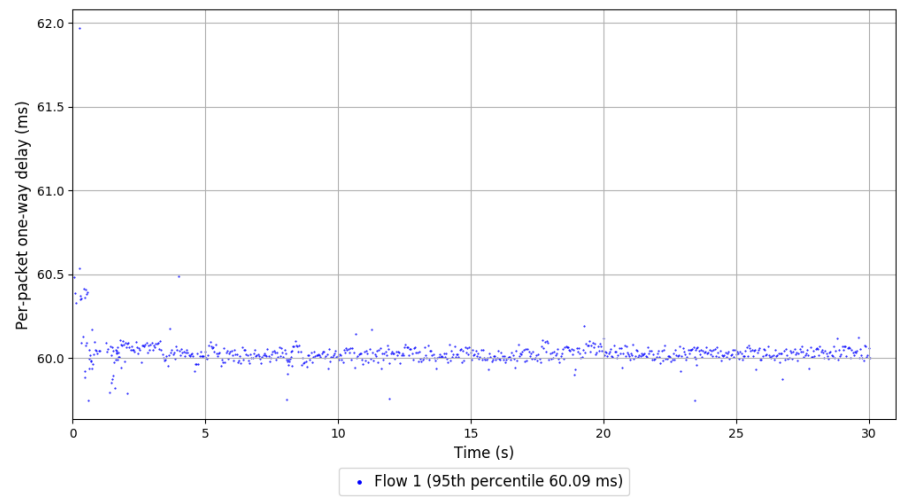
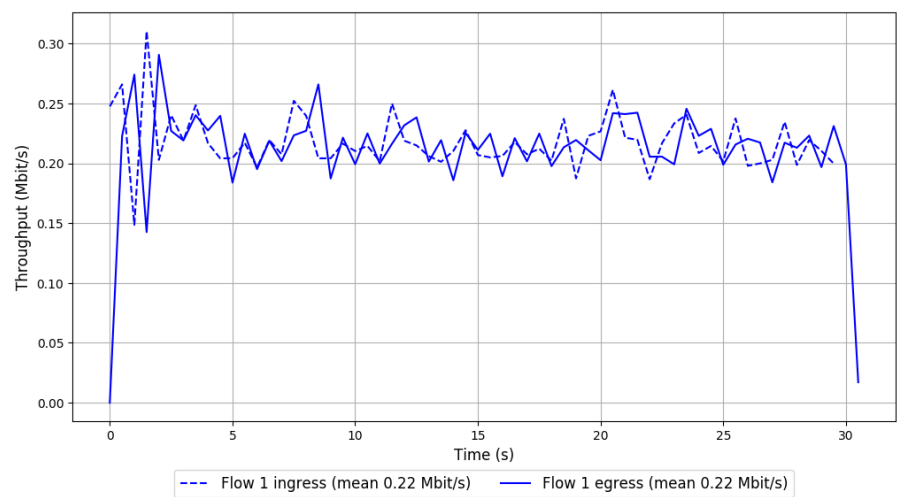


Run 3: Statistics of SCReAM

Start at: 2018-09-10 23:21:41
End at: 2018-09-10 23:22:11
Local clock offset: 1.017 ms
Remote clock offset: -38.284 ms

Below is generated by plot.py at 2018-09-11 01:07:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.089 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.089 ms
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link

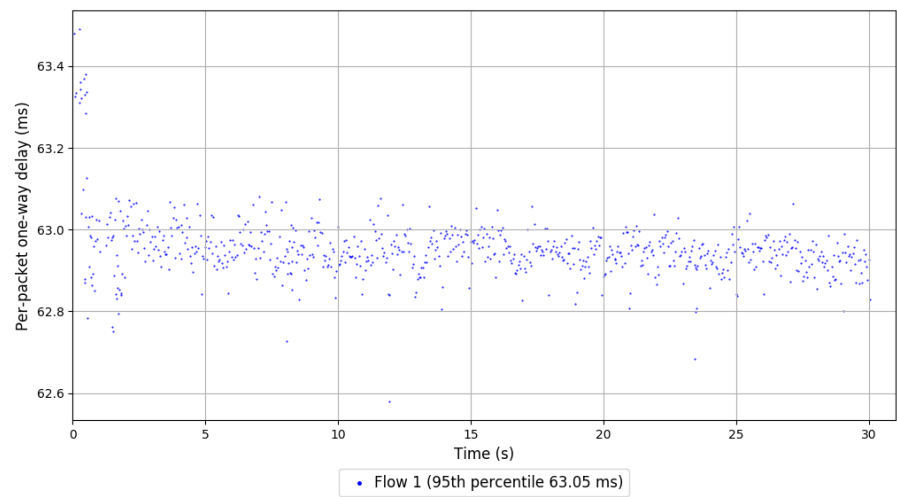
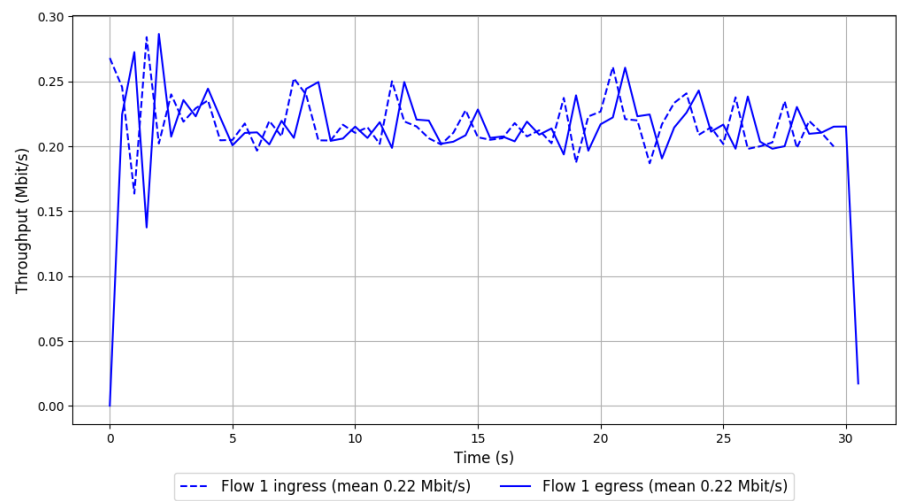


Run 4: Statistics of SCReAM

Start at: 2018-09-10 23:44:51
End at: 2018-09-10 23:45:21
Local clock offset: -0.426 ms
Remote clock offset: -35.022 ms

Below is generated by plot.py at 2018-09-11 01:07:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.046 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.046 ms
Loss rate: 0.00%

Run 4: Report of SReAM — Data Link

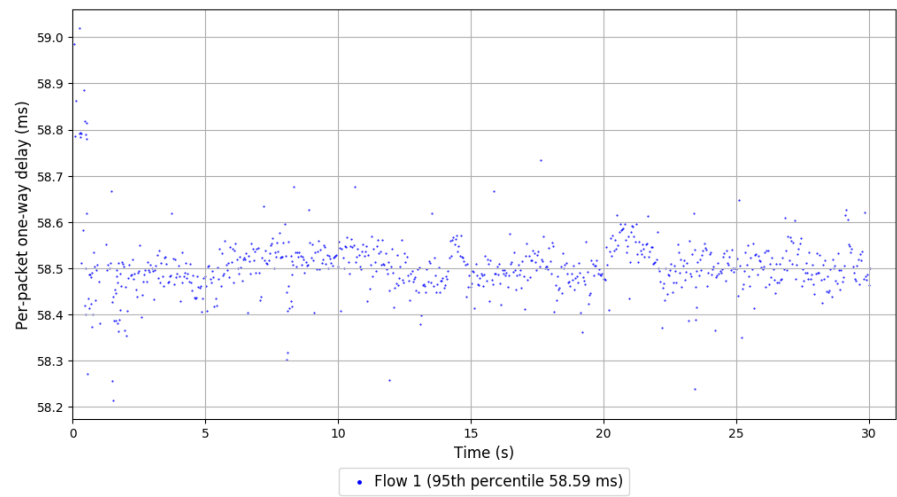
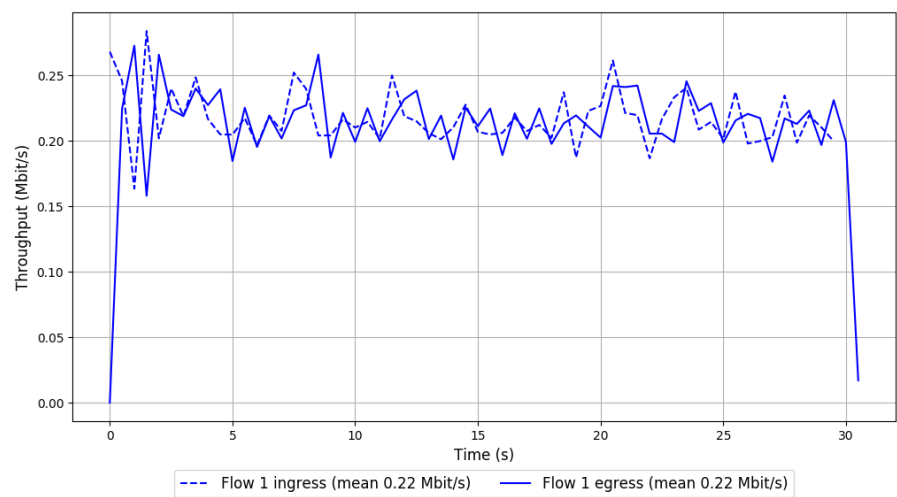


Run 5: Statistics of SCReAM

Start at: 2018-09-11 00:08:00
End at: 2018-09-11 00:08:30
Local clock offset: 1.756 ms
Remote clock offset: -37.313 ms

Below is generated by plot.py at 2018-09-11 01:07:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 58.586 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 58.586 ms
Loss rate: 0.00%

Run 5: Report of SReAM — Data Link

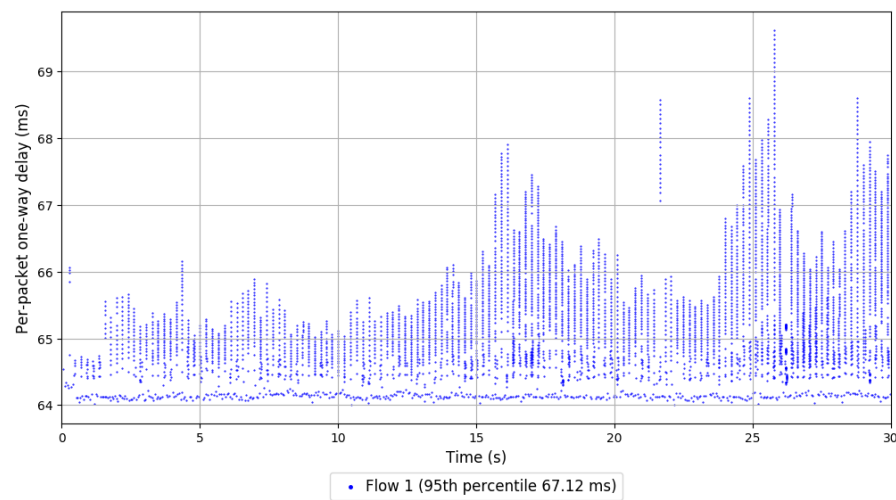
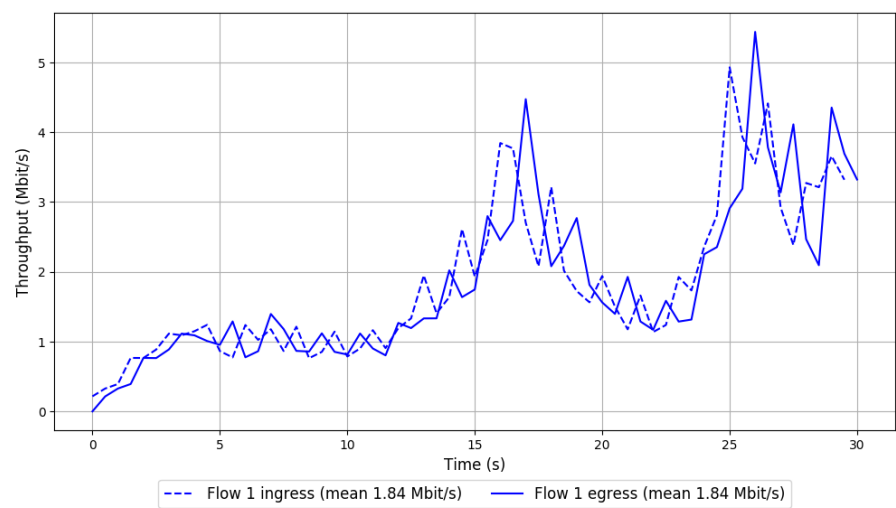


Run 1: Statistics of Sprout

Start at: 2018-09-10 22:54:46
End at: 2018-09-10 22:55:16
Local clock offset: -1.311 ms
Remote clock offset: -35.678 ms

Below is generated by plot.py at 2018-09-11 01:07:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.84 Mbit/s
95th percentile per-packet one-way delay: 67.120 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.84 Mbit/s
95th percentile per-packet one-way delay: 67.120 ms
Loss rate: 0.00%

Run 1: Report of Sprout — Data Link

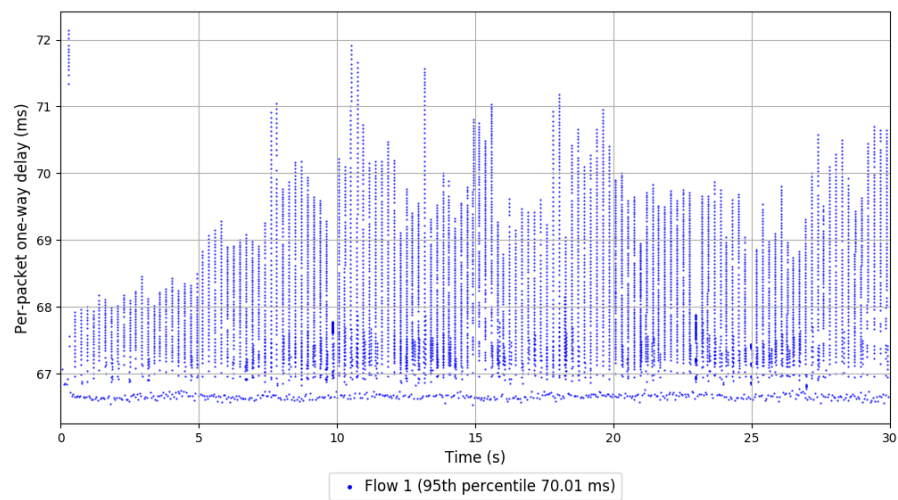
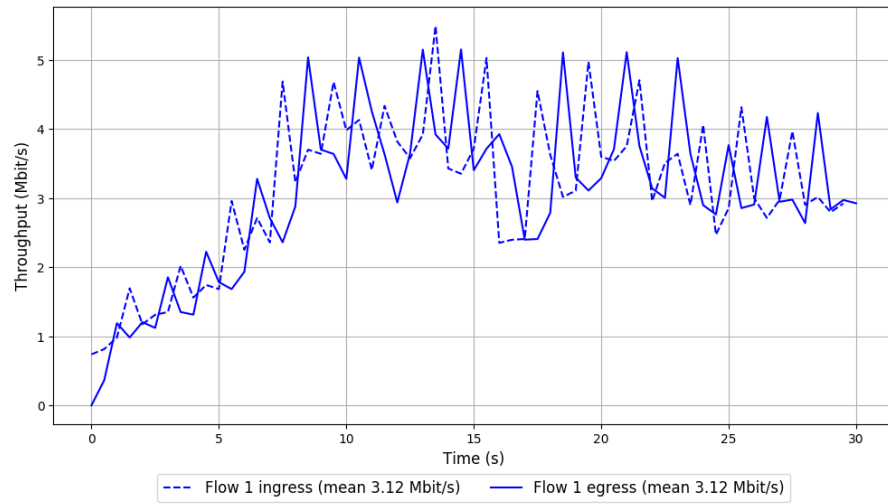


Run 2: Statistics of Sprout

Start at: 2018-09-10 23:18:00
End at: 2018-09-10 23:18:30
Local clock offset: 1.037 ms
Remote clock offset: -33.941 ms

Below is generated by plot.py at 2018-09-11 01:07:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.12 Mbit/s
95th percentile per-packet one-way delay: 70.006 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 3.12 Mbit/s
95th percentile per-packet one-way delay: 70.006 ms
Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

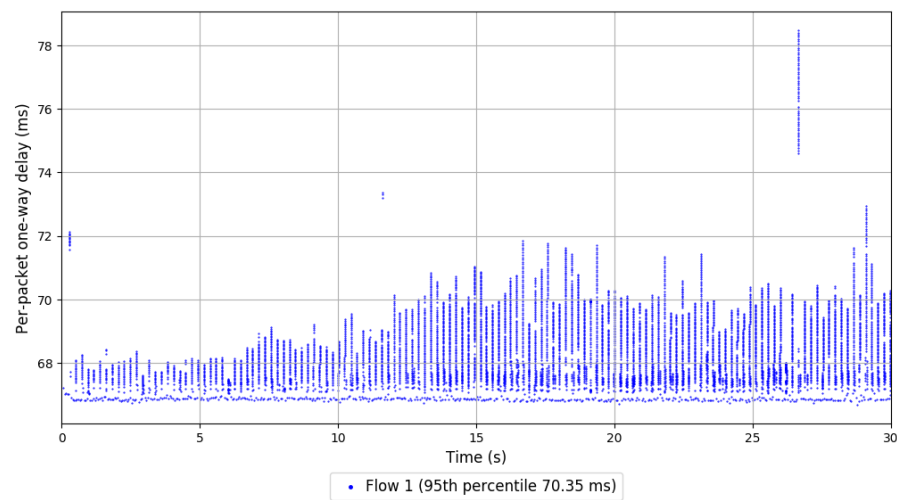
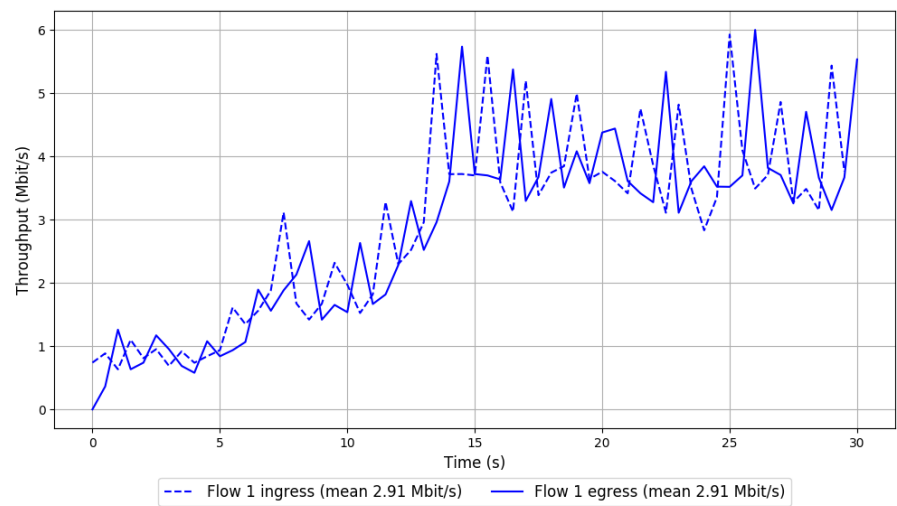


Run 3: Statistics of Sprout

Start at: 2018-09-10 23:41:10
End at: 2018-09-10 23:41:40
Local clock offset: -0.74 ms
Remote clock offset: -33.678 ms

Below is generated by plot.py at 2018-09-11 01:07:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.91 Mbit/s
95th percentile per-packet one-way delay: 70.346 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.91 Mbit/s
95th percentile per-packet one-way delay: 70.346 ms
Loss rate: 0.00%

Run 3: Report of Sprout — Data Link

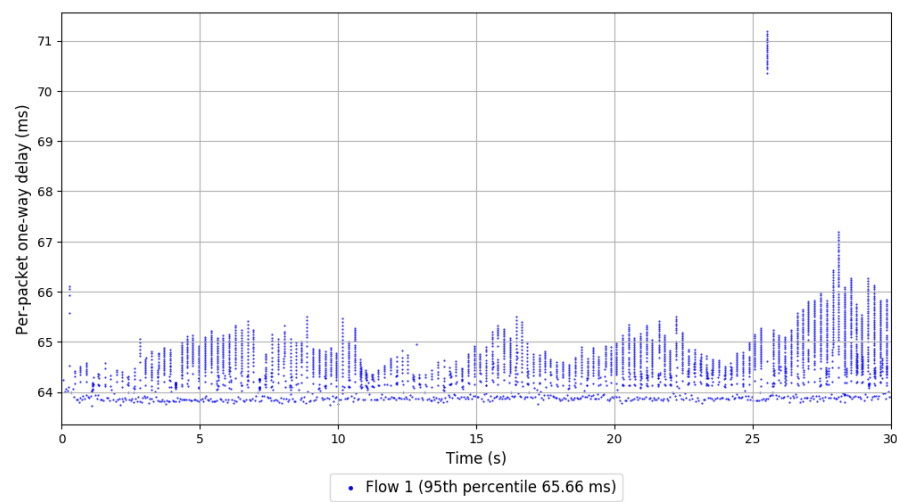
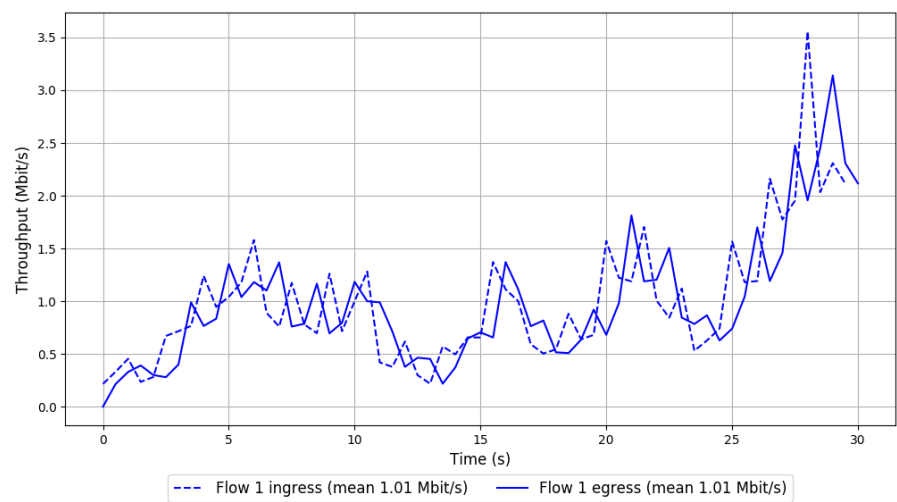


Run 4: Statistics of Sprout

Start at: 2018-09-11 00:04:21
End at: 2018-09-11 00:04:51
Local clock offset: 0.061 ms
Remote clock offset: -33.707 ms

Below is generated by plot.py at 2018-09-11 01:07:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.01 Mbit/s
95th percentile per-packet one-way delay: 65.664 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.01 Mbit/s
95th percentile per-packet one-way delay: 65.664 ms
Loss rate: 0.00%

Run 4: Report of Sprout — Data Link

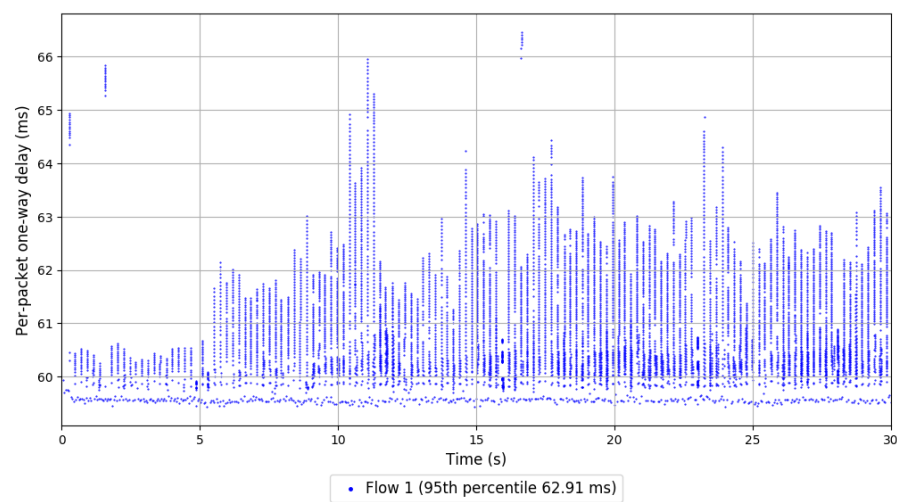
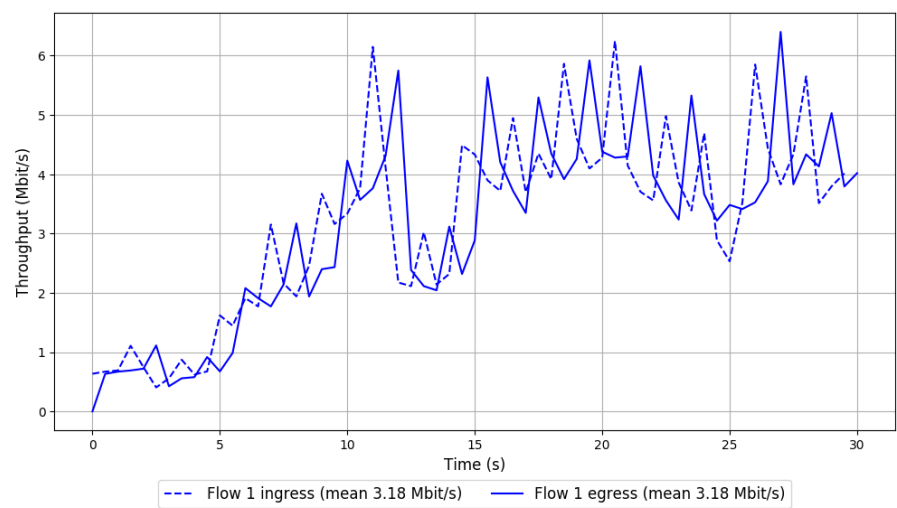


Run 5: Statistics of Sprout

Start at: 2018-09-11 00:42:54
End at: 2018-09-11 00:43:24
Local clock offset: 0.35 ms
Remote clock offset: -37.245 ms

Below is generated by plot.py at 2018-09-11 01:07:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.18 Mbit/s
95th percentile per-packet one-way delay: 62.914 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 3.18 Mbit/s
95th percentile per-packet one-way delay: 62.914 ms
Loss rate: 0.00%

Run 5: Report of Sprout — Data Link

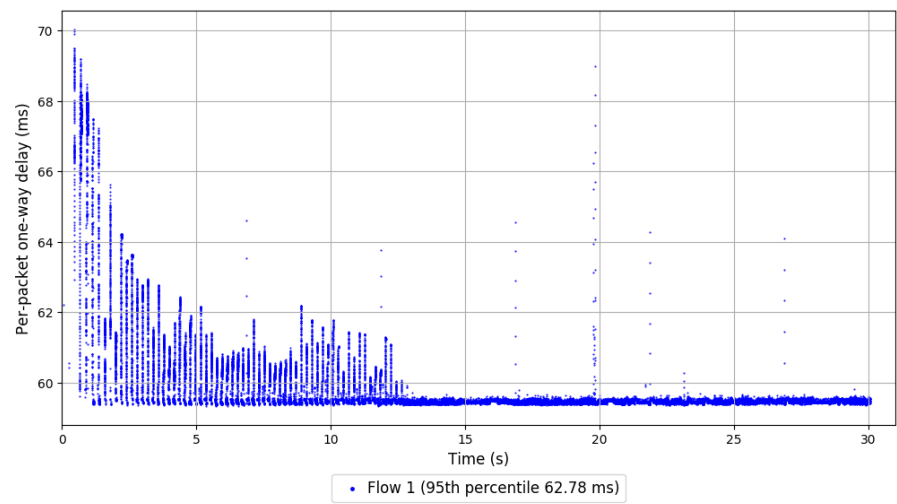
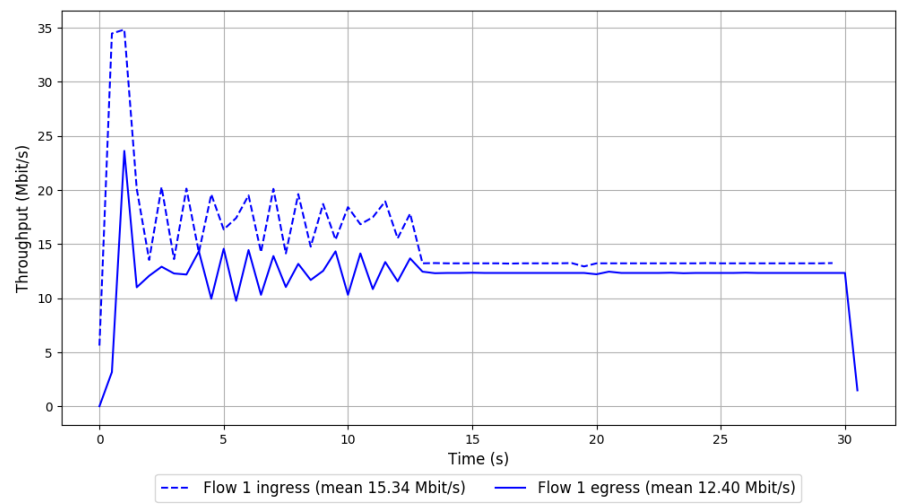


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-09-10 22:45:37
End at: 2018-09-10 22:46:07
Local clock offset: 0.556 ms
Remote clock offset: -38.654 ms

# Below is generated by plot.py at 2018-09-11 01:07:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.40 Mbit/s
95th percentile per-packet one-way delay: 62.782 ms
Loss rate: 19.20%
-- Flow 1:
Average throughput: 12.40 Mbit/s
95th percentile per-packet one-way delay: 62.782 ms
Loss rate: 19.20%
```

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

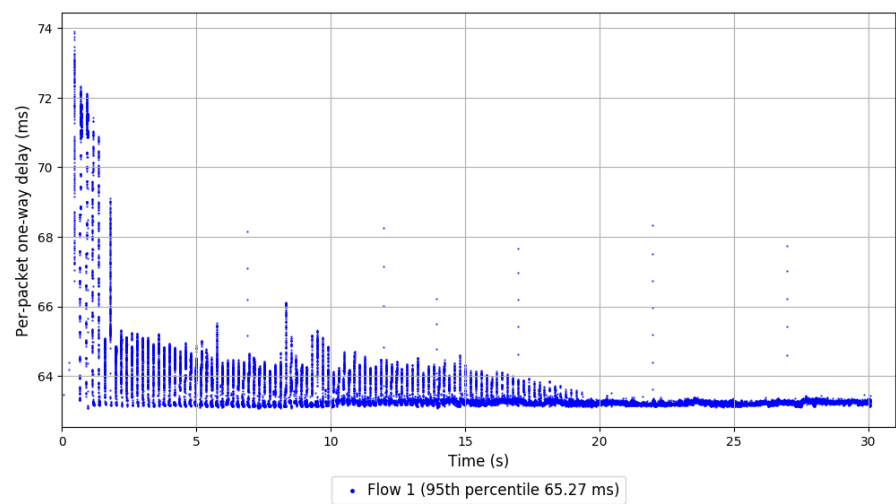
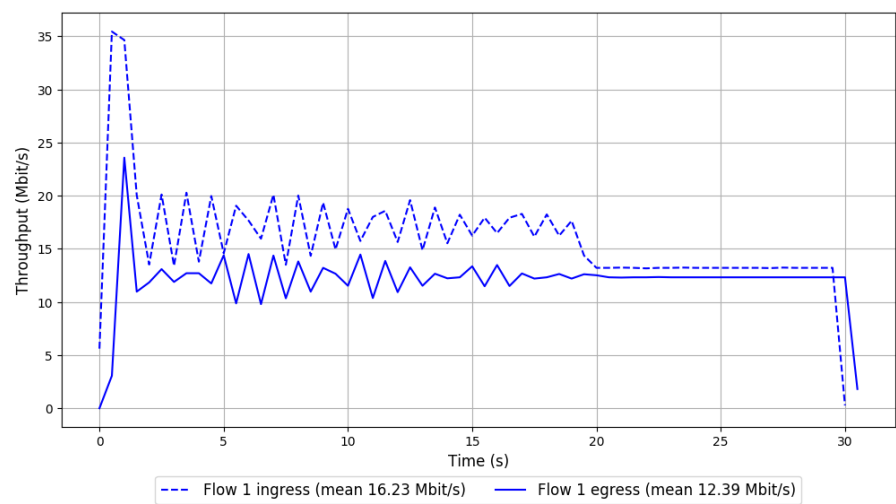


Run 2: Statistics of TaoVA-100x

Start at: 2018-09-10 23:08:52
End at: 2018-09-10 23:09:22
Local clock offset: 1.283 ms
Remote clock offset: -34.531 ms

Below is generated by plot.py at 2018-09-11 01:07:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.39 Mbit/s
95th percentile per-packet one-way delay: 65.274 ms
Loss rate: 23.64%
-- Flow 1:
Average throughput: 12.39 Mbit/s
95th percentile per-packet one-way delay: 65.274 ms
Loss rate: 23.64%

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

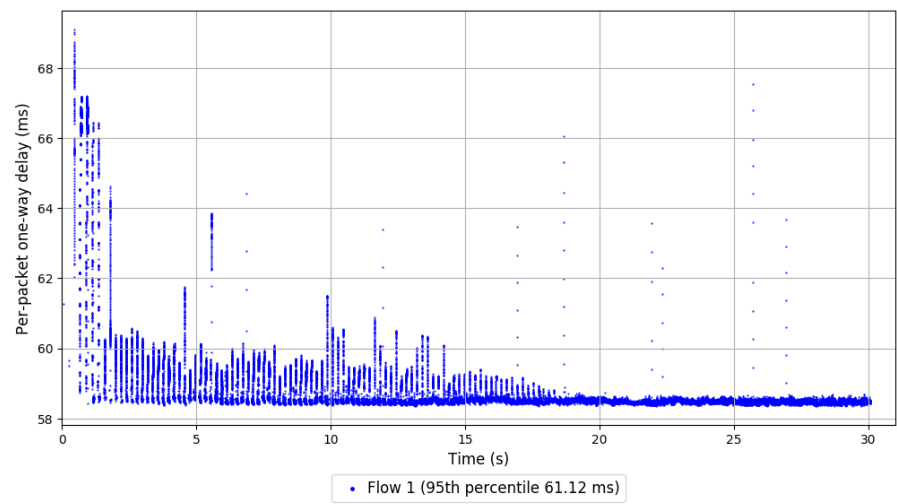
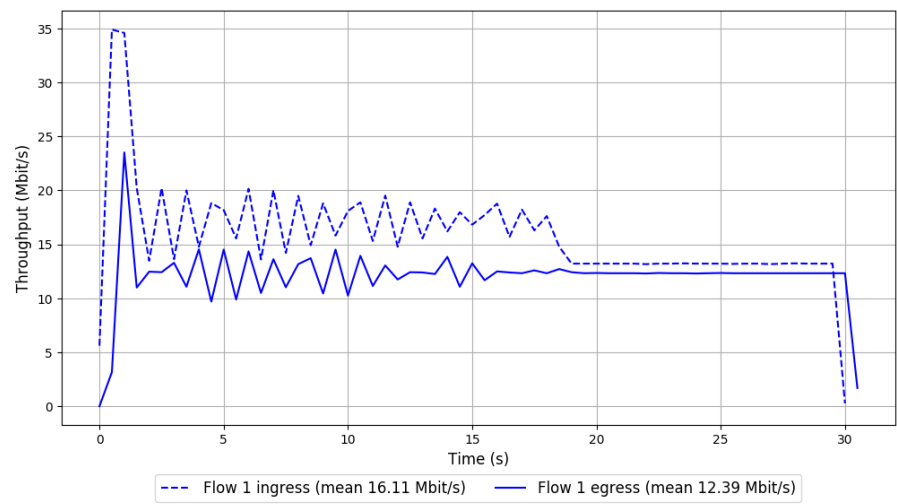


Run 3: Statistics of TaoVA-100x

Start at: 2018-09-10 23:32:01
End at: 2018-09-10 23:32:31
Local clock offset: 2.415 ms
Remote clock offset: -37.726 ms

Below is generated by plot.py at 2018-09-11 01:07:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.39 Mbit/s
95th percentile per-packet one-way delay: 61.120 ms
Loss rate: 23.09%
-- Flow 1:
Average throughput: 12.39 Mbit/s
95th percentile per-packet one-way delay: 61.120 ms
Loss rate: 23.09%

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

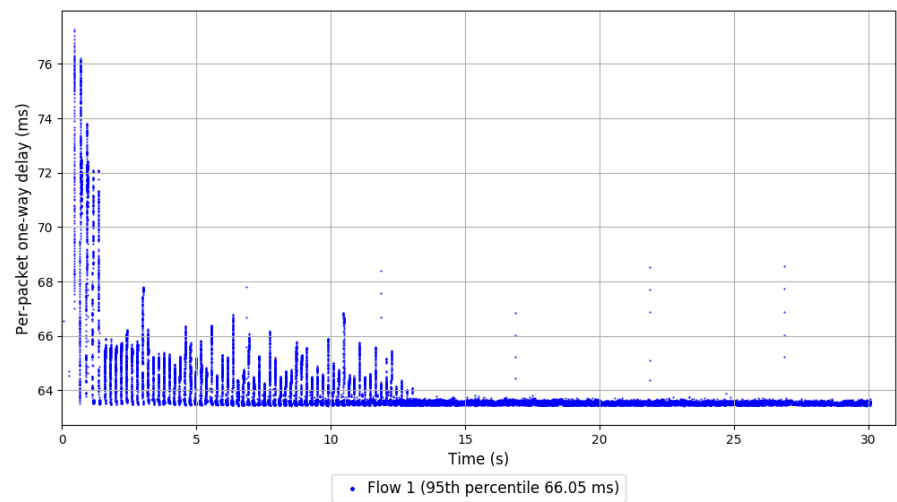
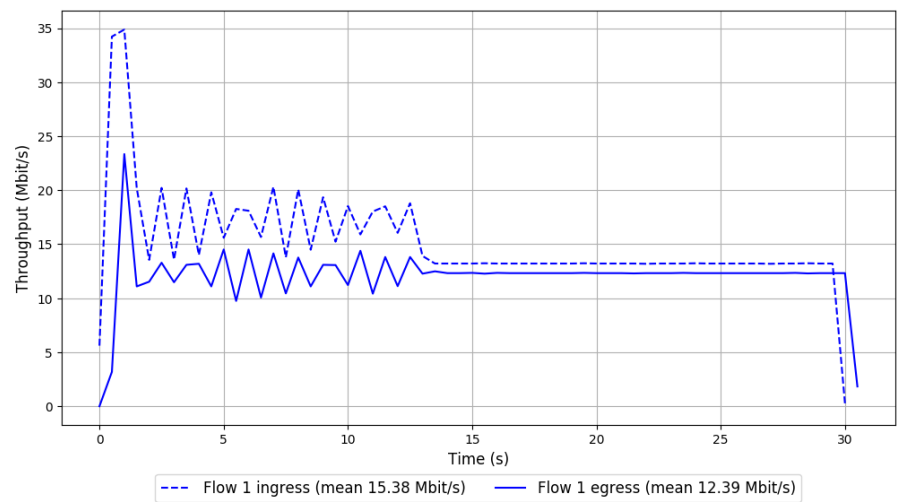


Run 4: Statistics of TaoVA-100x

Start at: 2018-09-10 23:55:17
End at: 2018-09-10 23:55:47
Local clock offset: -0.318 ms
Remote clock offset: -33.569 ms

Below is generated by plot.py at 2018-09-11 01:07:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.39 Mbit/s
95th percentile per-packet one-way delay: 66.046 ms
Loss rate: 19.43%
-- Flow 1:
Average throughput: 12.39 Mbit/s
95th percentile per-packet one-way delay: 66.046 ms
Loss rate: 19.43%

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

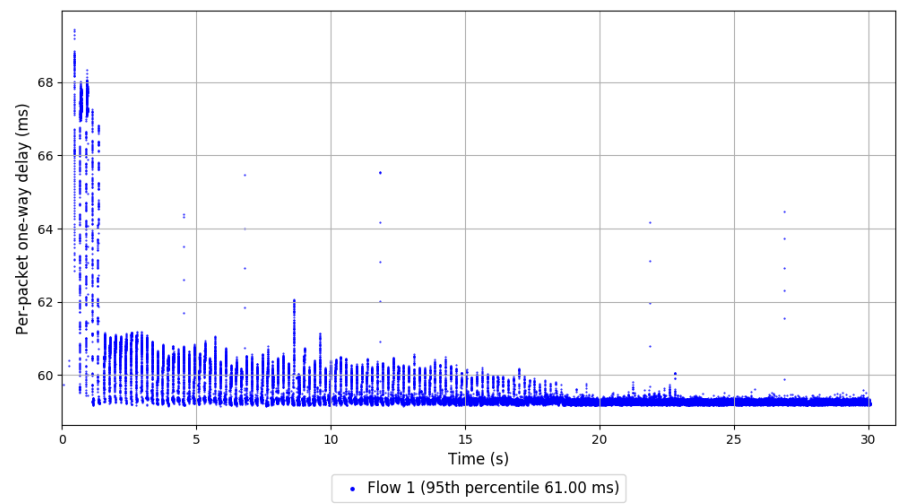
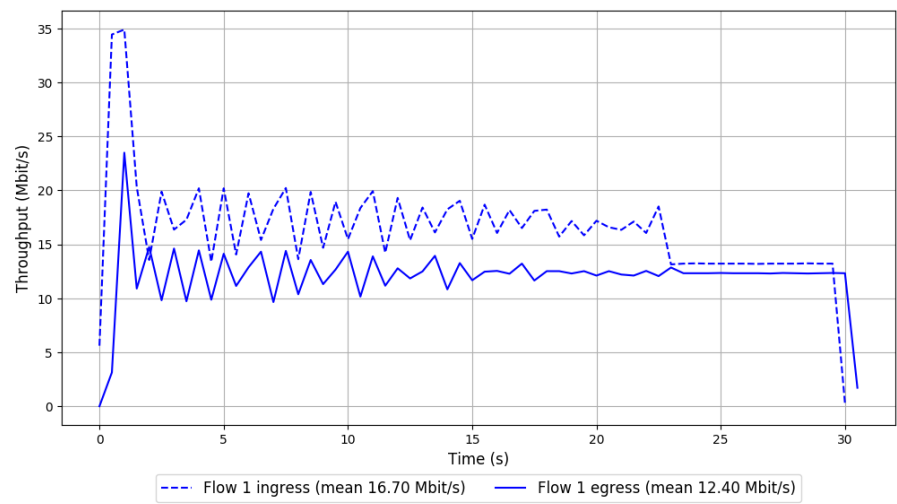


Run 5: Statistics of TaoVA-100x

Start at: 2018-09-11 00:23:52
End at: 2018-09-11 00:24:22
Local clock offset: 0.712 ms
Remote clock offset: -38.132 ms

Below is generated by plot.py at 2018-09-11 01:07:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.40 Mbit/s
95th percentile per-packet one-way delay: 61.003 ms
Loss rate: 25.76%
-- Flow 1:
Average throughput: 12.40 Mbit/s
95th percentile per-packet one-way delay: 61.003 ms
Loss rate: 25.76%

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

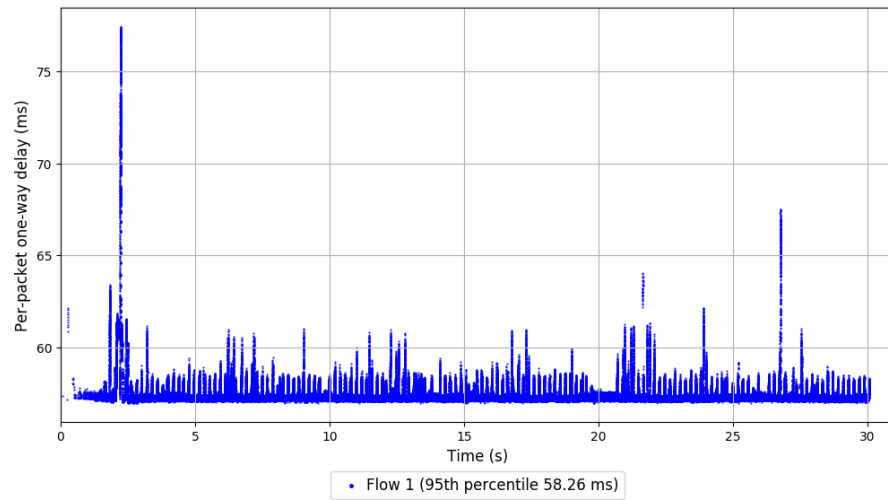
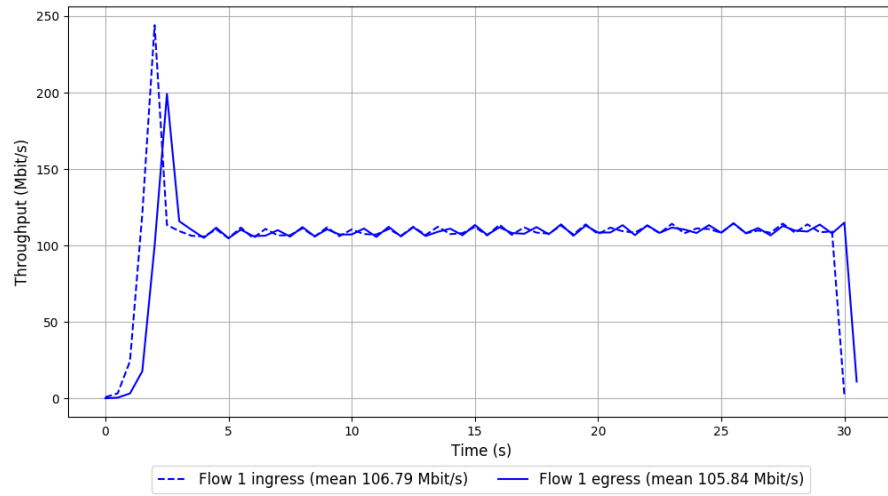


Run 1: Statistics of TCP Vegas

Start at: 2018-09-10 22:38:52
End at: 2018-09-10 22:39:22
Local clock offset: 2.667 ms
Remote clock offset: -38.543 ms

Below is generated by plot.py at 2018-09-11 01:07:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 105.84 Mbit/s
95th percentile per-packet one-way delay: 58.260 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 105.84 Mbit/s
95th percentile per-packet one-way delay: 58.260 ms
Loss rate: 0.88%

Run 1: Report of TCP Vegas — Data Link

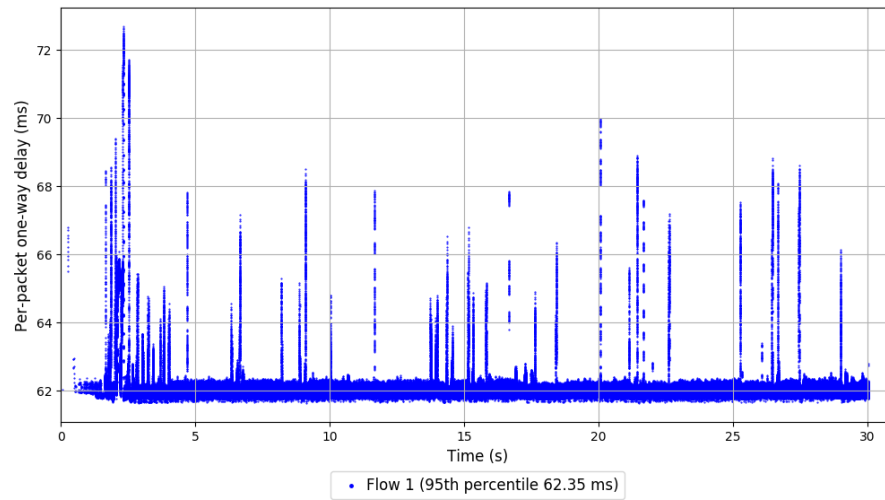
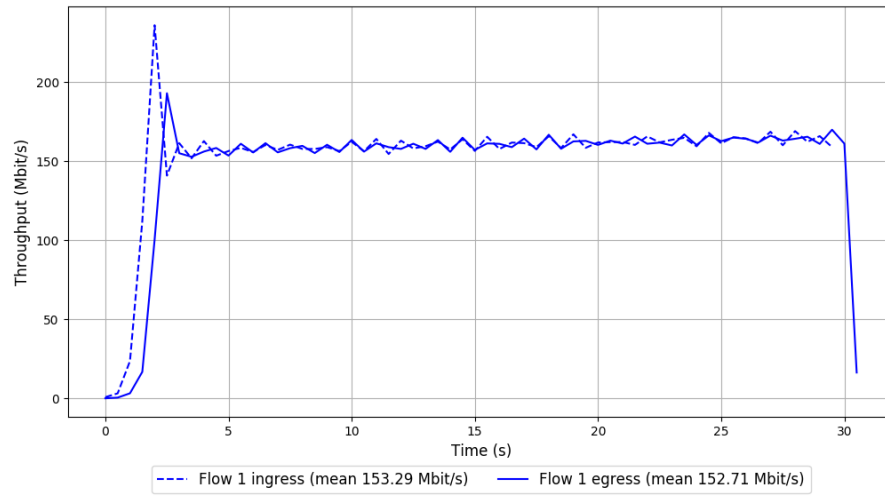


Run 2: Statistics of TCP Vegas

Start at: 2018-09-10 23:02:06
End at: 2018-09-10 23:02:36
Local clock offset: 1.035 ms
Remote clock offset: -38.242 ms

Below is generated by plot.py at 2018-09-11 01:07:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 152.71 Mbit/s
95th percentile per-packet one-way delay: 62.354 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 152.71 Mbit/s
95th percentile per-packet one-way delay: 62.354 ms
Loss rate: 0.38%

Run 2: Report of TCP Vegas — Data Link

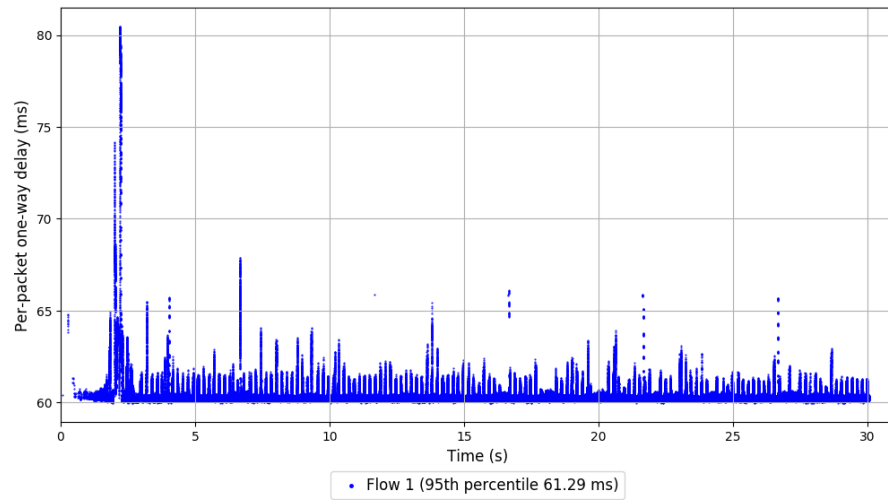
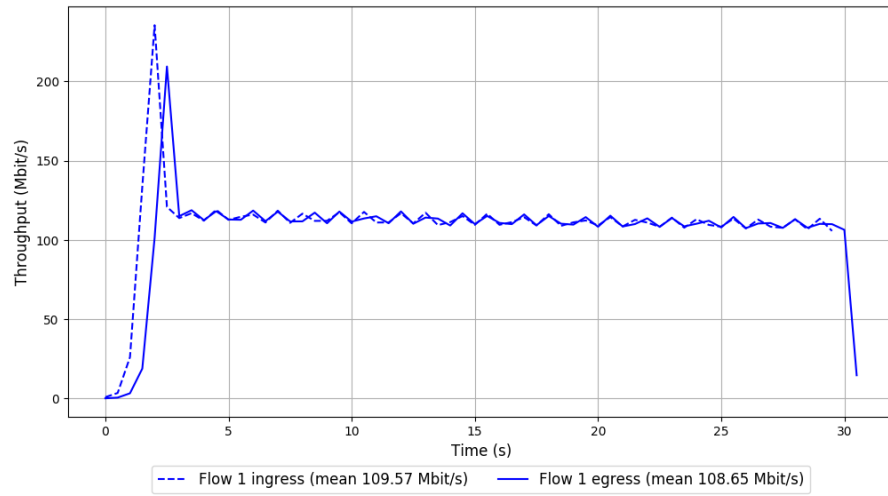


Run 3: Statistics of TCP Vegas

Start at: 2018-09-10 23:25:17
End at: 2018-09-10 23:25:47
Local clock offset: 0.697 ms
Remote clock offset: -38.487 ms

Below is generated by plot.py at 2018-09-11 01:07:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 108.65 Mbit/s
95th percentile per-packet one-way delay: 61.292 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 108.65 Mbit/s
95th percentile per-packet one-way delay: 61.292 ms
Loss rate: 0.85%

Run 3: Report of TCP Vegas — Data Link

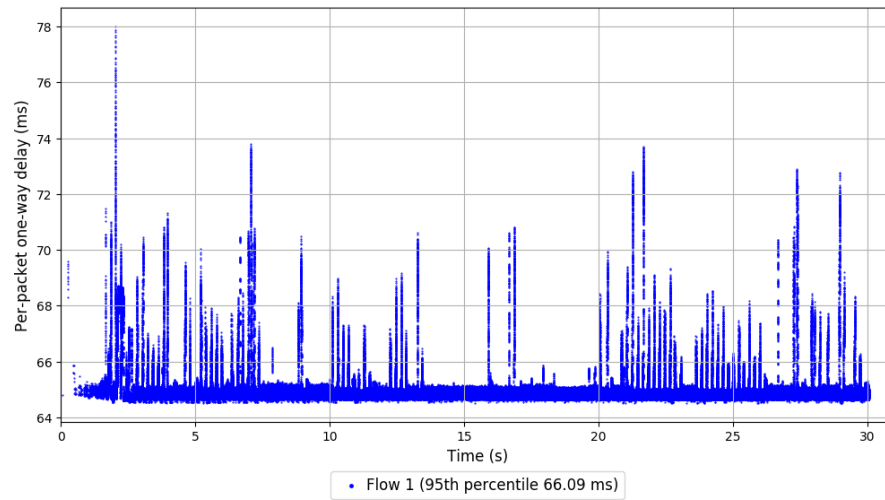
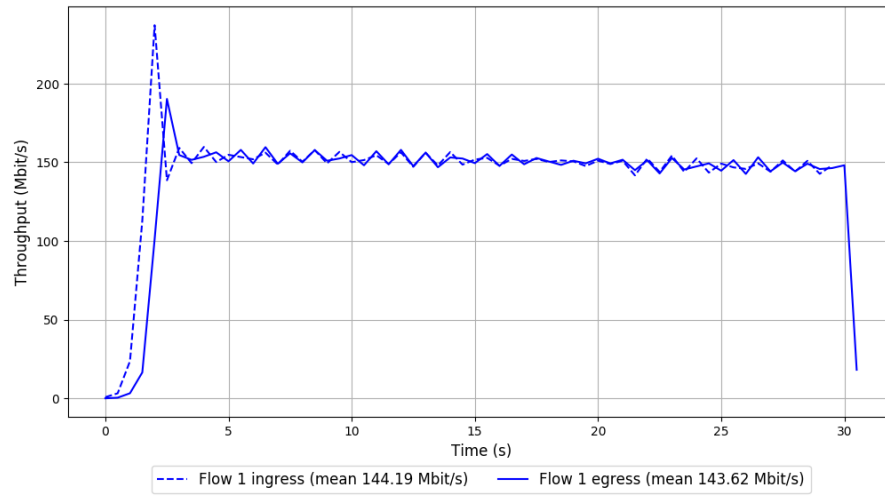


Run 4: Statistics of TCP Vegas

Start at: 2018-09-10 23:48:30
End at: 2018-09-10 23:49:00
Local clock offset: -0.555 ms
Remote clock offset: -35.348 ms

Below is generated by plot.py at 2018-09-11 01:07:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 143.62 Mbit/s
95th percentile per-packet one-way delay: 66.092 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 143.62 Mbit/s
95th percentile per-packet one-way delay: 66.092 ms
Loss rate: 0.40%

Run 4: Report of TCP Vegas — Data Link

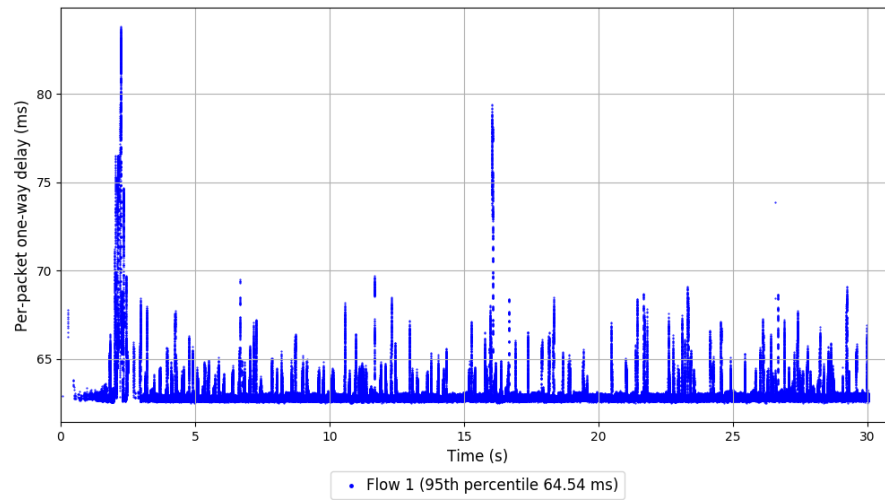
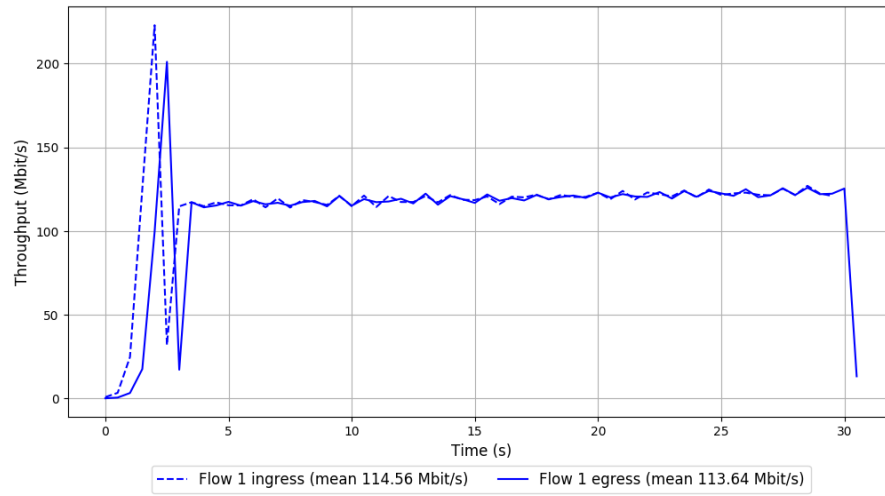


Run 5: Statistics of TCP Vegas

Start at: 2018-09-11 00:11:37
End at: 2018-09-11 00:12:07
Local clock offset: 0.812 ms
Remote clock offset: -34.311 ms

Below is generated by plot.py at 2018-09-11 01:07:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 113.64 Mbit/s
95th percentile per-packet one-way delay: 64.539 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 113.64 Mbit/s
95th percentile per-packet one-way delay: 64.539 ms
Loss rate: 0.80%

Run 5: Report of TCP Vegas — Data Link

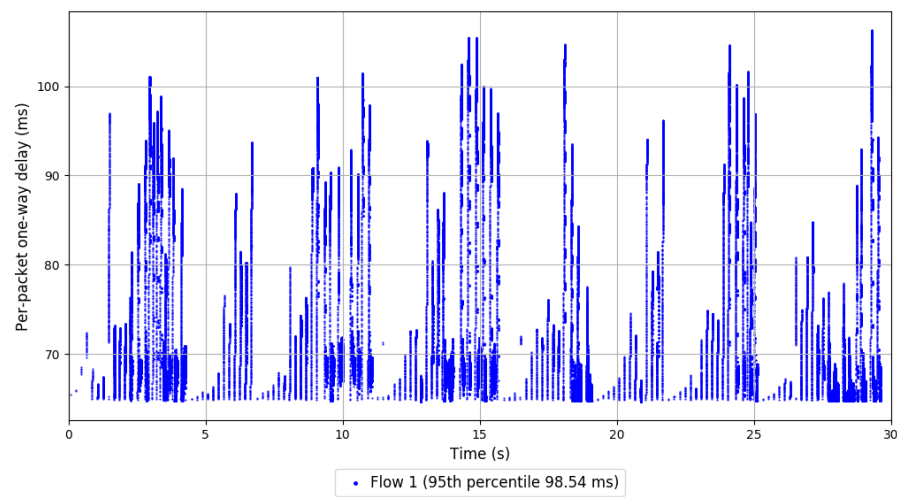
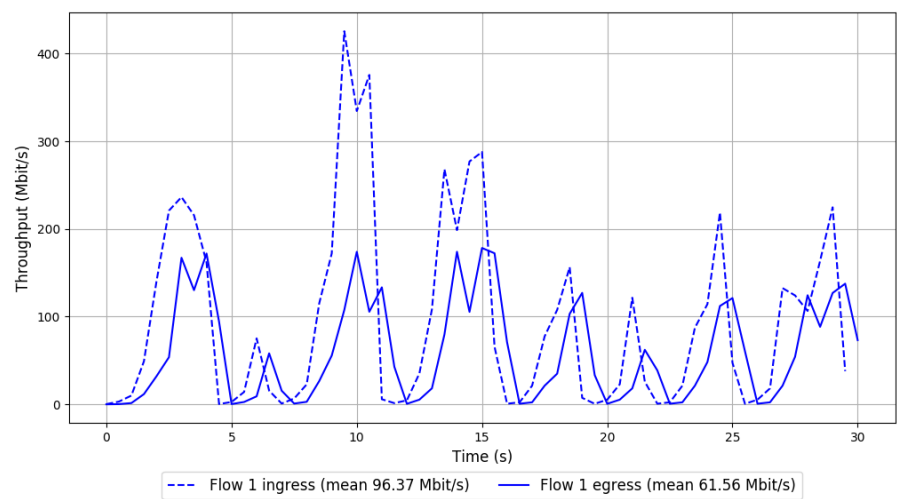


Run 1: Statistics of Verus

Start at: 2018-09-10 22:37:37
End at: 2018-09-10 22:38:07
Local clock offset: 2.551 ms
Remote clock offset: -33.429 ms

Below is generated by plot.py at 2018-09-11 01:07:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 61.56 Mbit/s
95th percentile per-packet one-way delay: 98.540 ms
Loss rate: 36.12%
-- Flow 1:
Average throughput: 61.56 Mbit/s
95th percentile per-packet one-way delay: 98.540 ms
Loss rate: 36.12%

Run 1: Report of Verus — Data Link

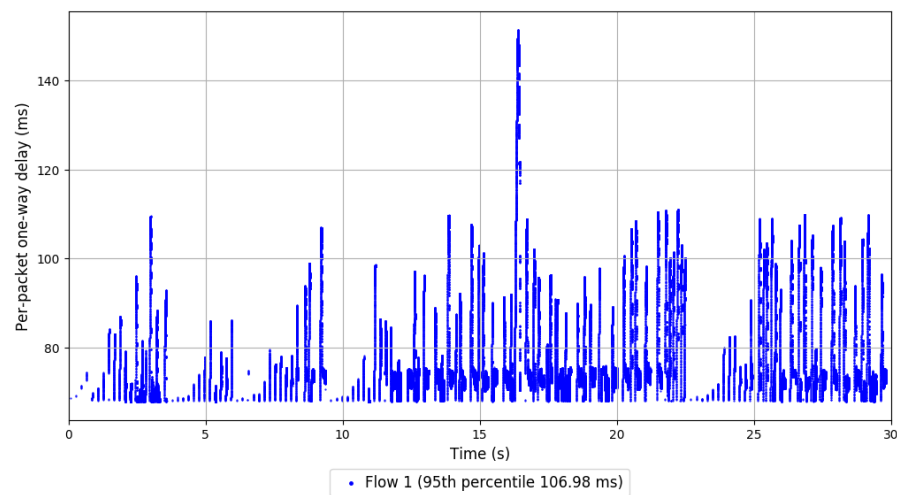
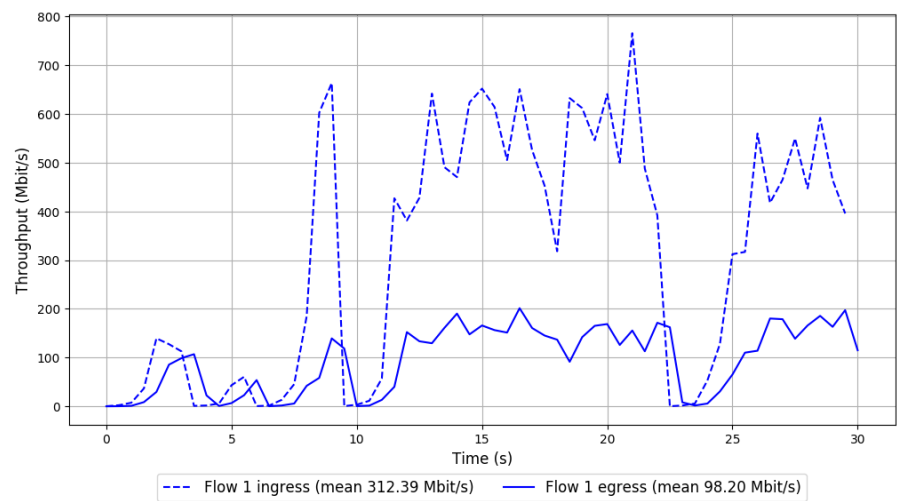


Run 2: Statistics of Verus

Start at: 2018-09-10 23:00:47
End at: 2018-09-10 23:01:17
Local clock offset: -1.309 ms
Remote clock offset: -34.345 ms

Below is generated by plot.py at 2018-09-11 01:07:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 98.20 Mbit/s
95th percentile per-packet one-way delay: 106.977 ms
Loss rate: 68.56%
-- Flow 1:
Average throughput: 98.20 Mbit/s
95th percentile per-packet one-way delay: 106.977 ms
Loss rate: 68.56%

Run 2: Report of Verus — Data Link

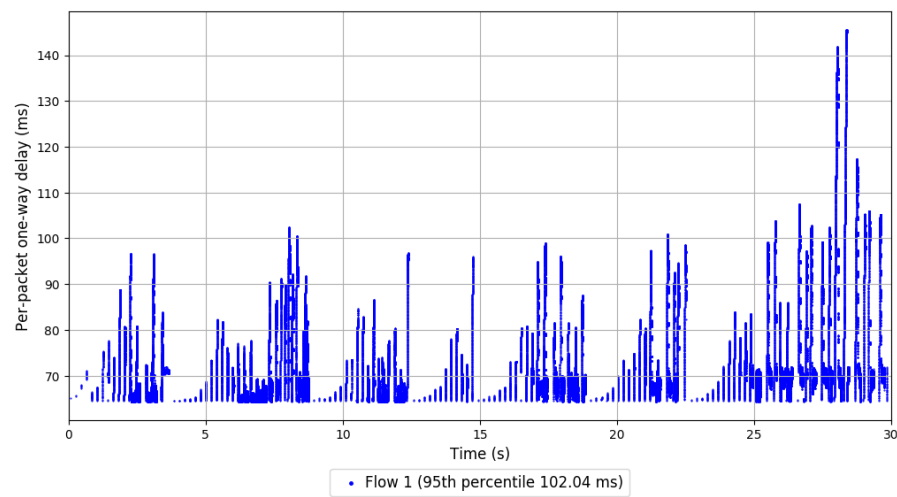
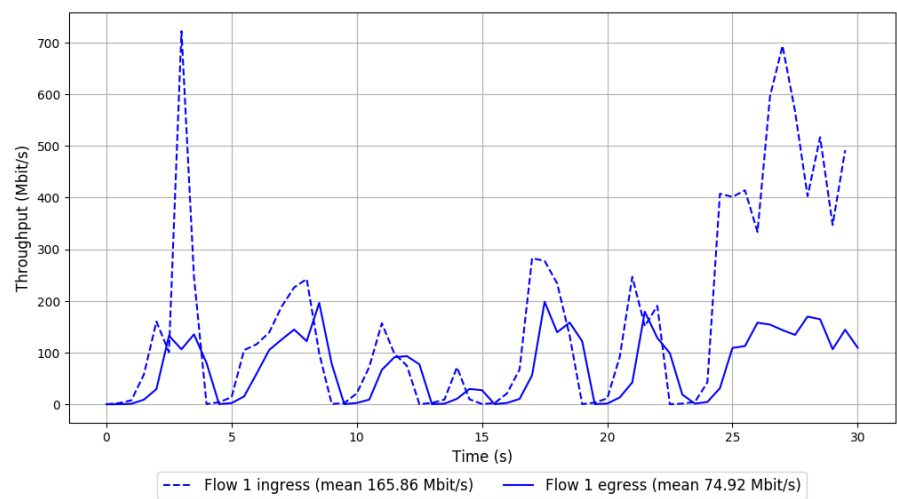


Run 3: Statistics of Verus

Start at: 2018-09-10 23:24:01
End at: 2018-09-10 23:24:31
Local clock offset: 1.705 ms
Remote clock offset: -33.118 ms

Below is generated by plot.py at 2018-09-11 01:07:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 74.92 Mbit/s
95th percentile per-packet one-way delay: 102.037 ms
Loss rate: 54.82%
-- Flow 1:
Average throughput: 74.92 Mbit/s
95th percentile per-packet one-way delay: 102.037 ms
Loss rate: 54.82%

Run 3: Report of Verus — Data Link

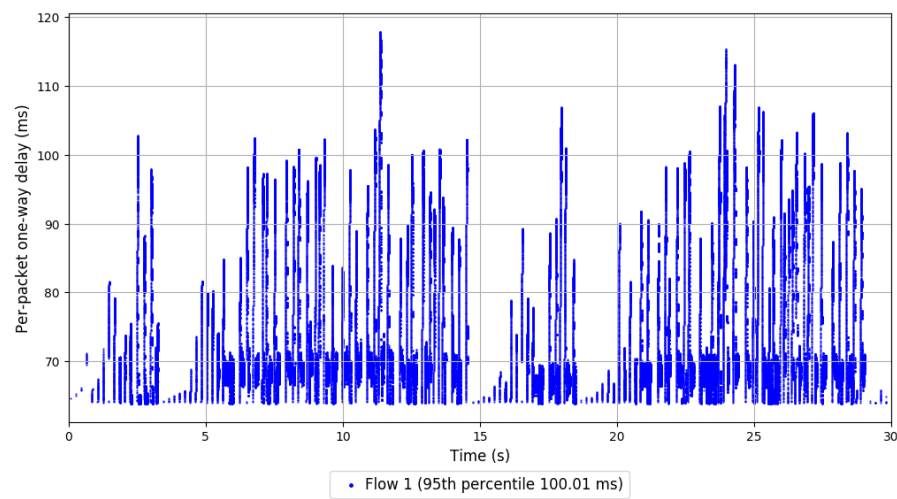
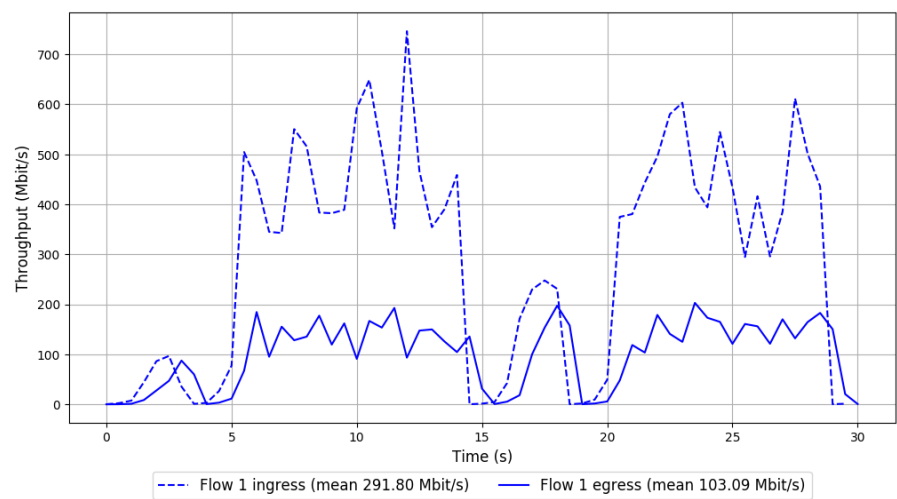


Run 4: Statistics of Verus

Start at: 2018-09-10 23:47:11
End at: 2018-09-10 23:47:41
Local clock offset: 1.264 ms
Remote clock offset: -34.461 ms

Below is generated by plot.py at 2018-09-11 01:08:07
Datalink statistics
-- Total of 1 flow:
Average throughput: 103.09 Mbit/s
95th percentile per-packet one-way delay: 100.010 ms
Loss rate: 64.67%
-- Flow 1:
Average throughput: 103.09 Mbit/s
95th percentile per-packet one-way delay: 100.010 ms
Loss rate: 64.67%

Run 4: Report of Verus — Data Link

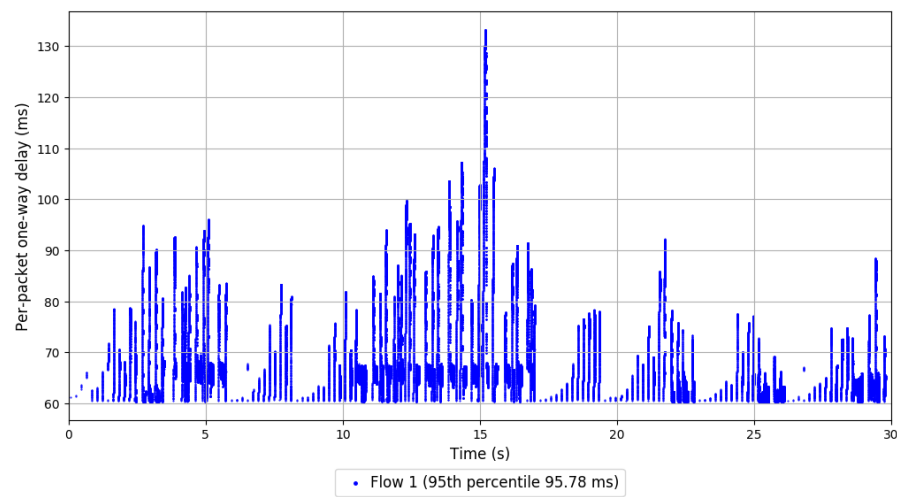
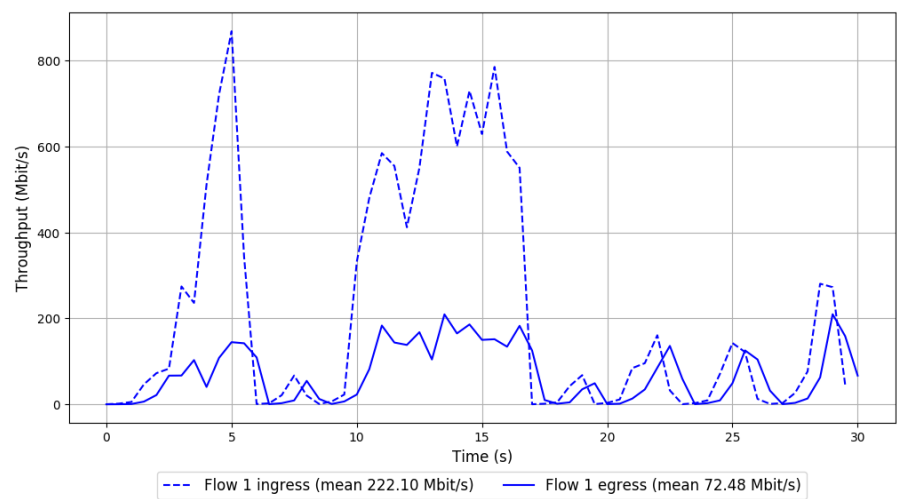


Run 5: Statistics of Verus

Start at: 2018-09-11 00:10:20
End at: 2018-09-11 00:10:50
Local clock offset: 0.298 ms
Remote clock offset: -37.352 ms

Below is generated by plot.py at 2018-09-11 01:08:07
Datalink statistics
-- Total of 1 flow:
Average throughput: 72.48 Mbit/s
95th percentile per-packet one-way delay: 95.782 ms
Loss rate: 67.36%
-- Flow 1:
Average throughput: 72.48 Mbit/s
95th percentile per-packet one-way delay: 95.782 ms
Loss rate: 67.36%

Run 5: Report of Verus — Data Link

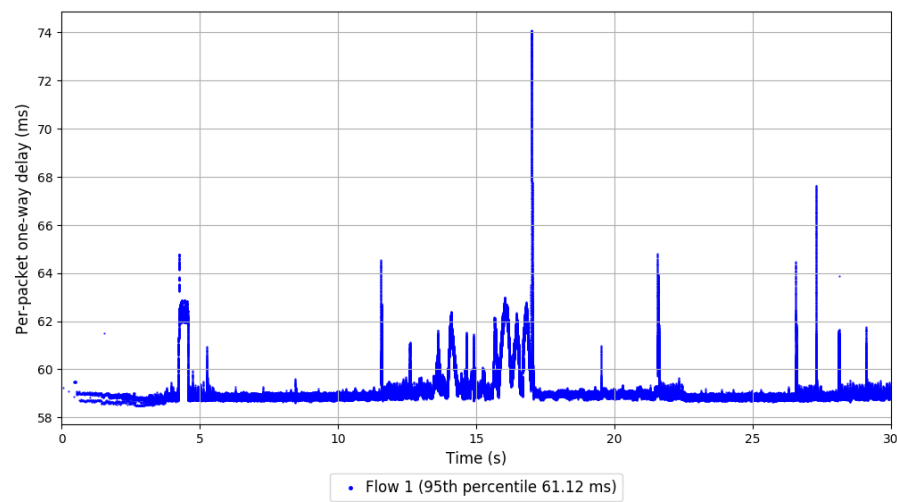
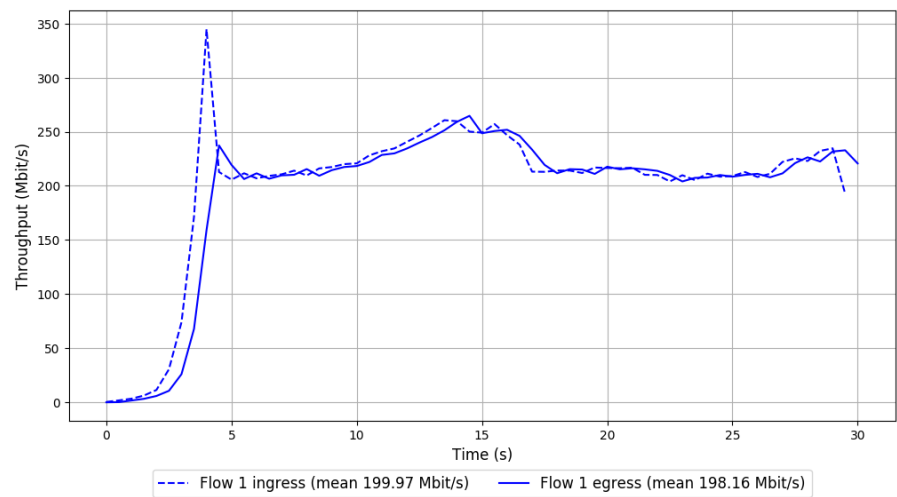


Run 1: Statistics of PCC-Vivace

Start at: 2018-09-10 22:51:00
End at: 2018-09-10 22:51:30
Local clock offset: 0.863 ms
Remote clock offset: -38.929 ms

Below is generated by plot.py at 2018-09-11 01:09:05
Datalink statistics
-- Total of 1 flow:
Average throughput: 198.16 Mbit/s
95th percentile per-packet one-way delay: 61.115 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 198.16 Mbit/s
95th percentile per-packet one-way delay: 61.115 ms
Loss rate: 0.90%

Run 1: Report of PCC-Vivace — Data Link

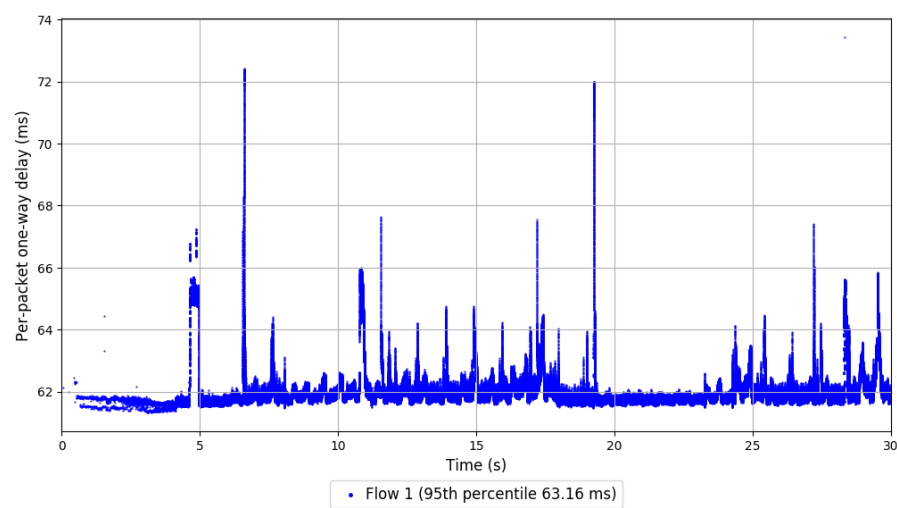
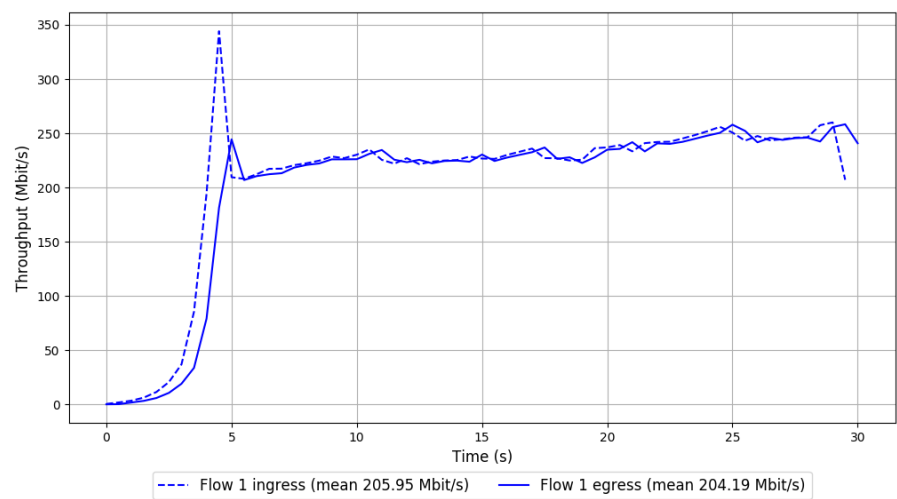


Run 2: Statistics of PCC-Vivace

Start at: 2018-09-10 23:14:13
End at: 2018-09-10 23:14:43
Local clock offset: 1.117 ms
Remote clock offset: -36.202 ms

Below is generated by plot.py at 2018-09-11 01:09:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 204.19 Mbit/s
95th percentile per-packet one-way delay: 63.163 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 204.19 Mbit/s
95th percentile per-packet one-way delay: 63.163 ms
Loss rate: 0.86%

Run 2: Report of PCC-Vivace — Data Link

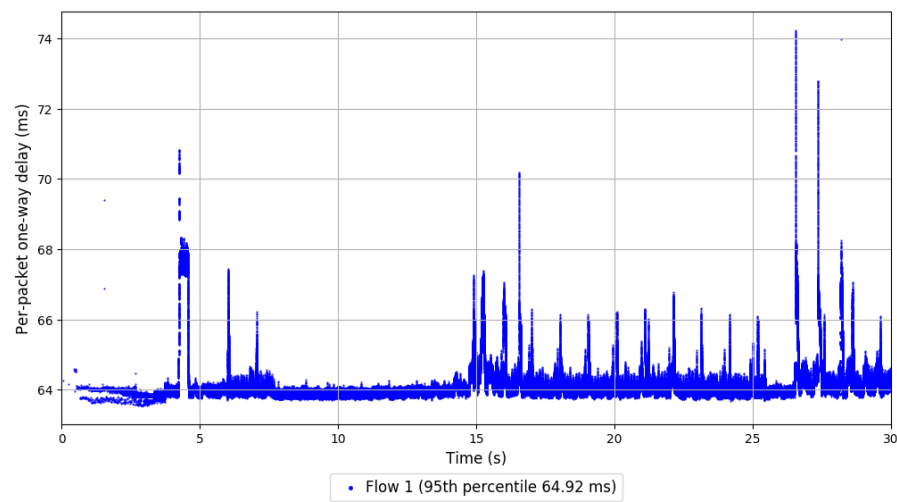
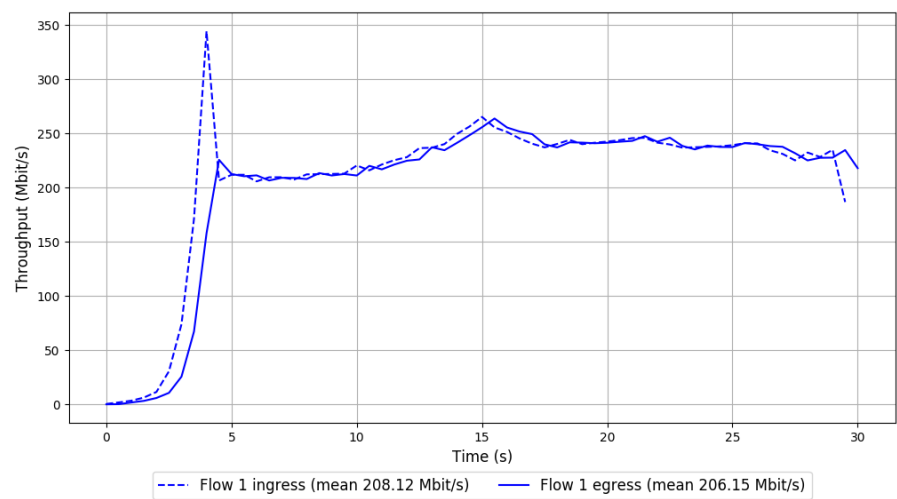


Run 3: Statistics of PCC-Vivace

Start at: 2018-09-10 23:37:23
End at: 2018-09-10 23:37:53
Local clock offset: 0.051 ms
Remote clock offset: -33.979 ms

Below is generated by plot.py at 2018-09-11 01:09:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 206.15 Mbit/s
95th percentile per-packet one-way delay: 64.915 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 206.15 Mbit/s
95th percentile per-packet one-way delay: 64.915 ms
Loss rate: 0.95%

Run 3: Report of PCC-Vivace — Data Link

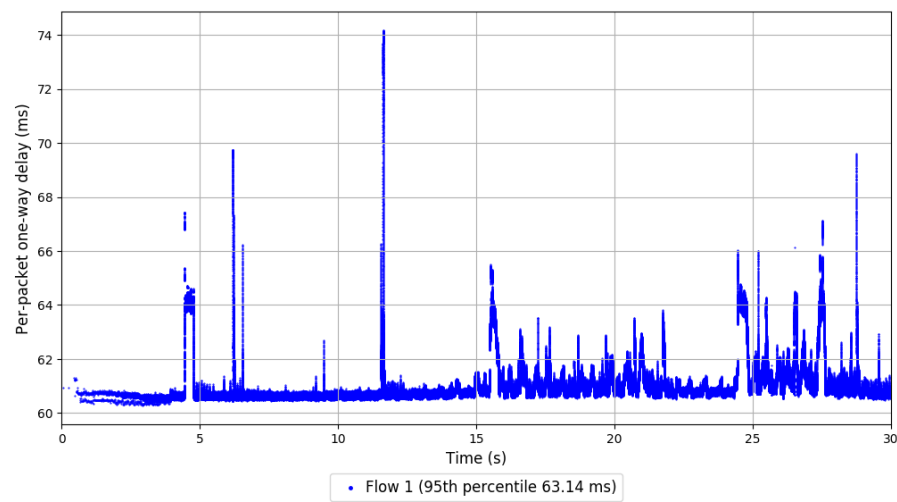
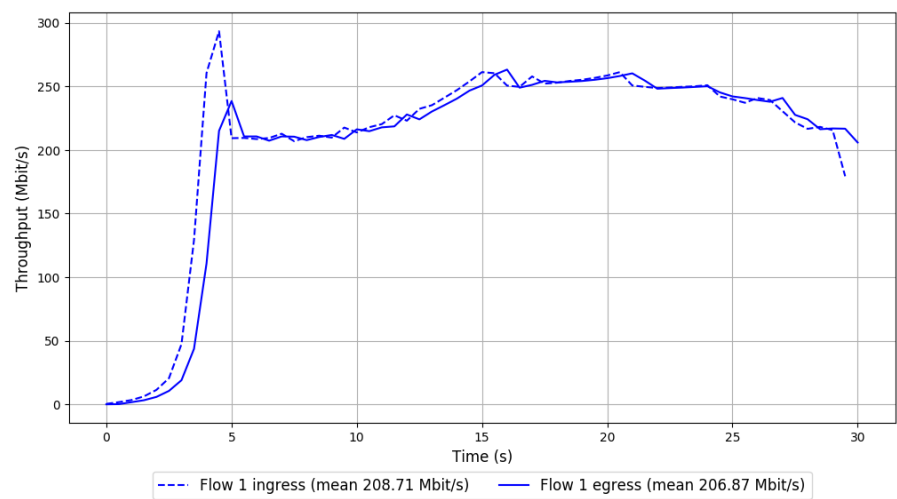


Run 4: Statistics of PCC-Vivace

Start at: 2018-09-11 00:00:34
End at: 2018-09-11 00:01:04
Local clock offset: -0.724 ms
Remote clock offset: -37.451 ms

Below is generated by plot.py at 2018-09-11 01:09:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 206.87 Mbit/s
95th percentile per-packet one-way delay: 63.136 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 206.87 Mbit/s
95th percentile per-packet one-way delay: 63.136 ms
Loss rate: 0.88%

Run 4: Report of PCC-Vivace — Data Link

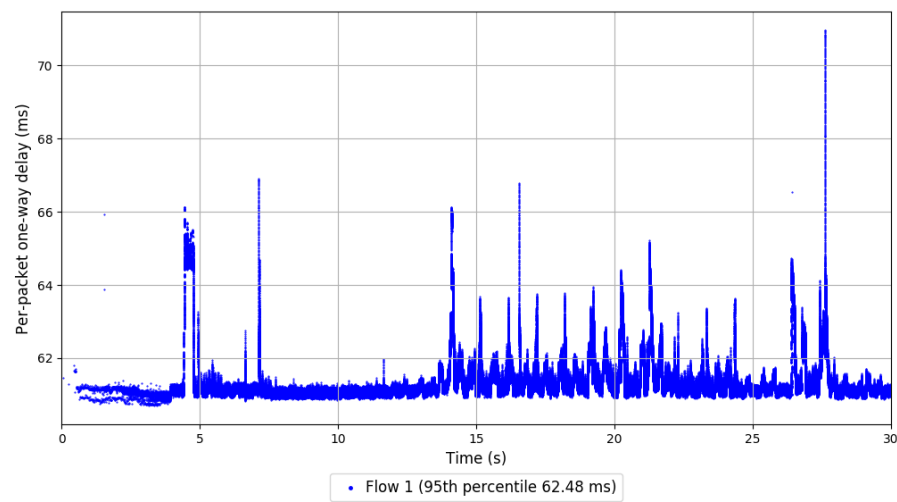
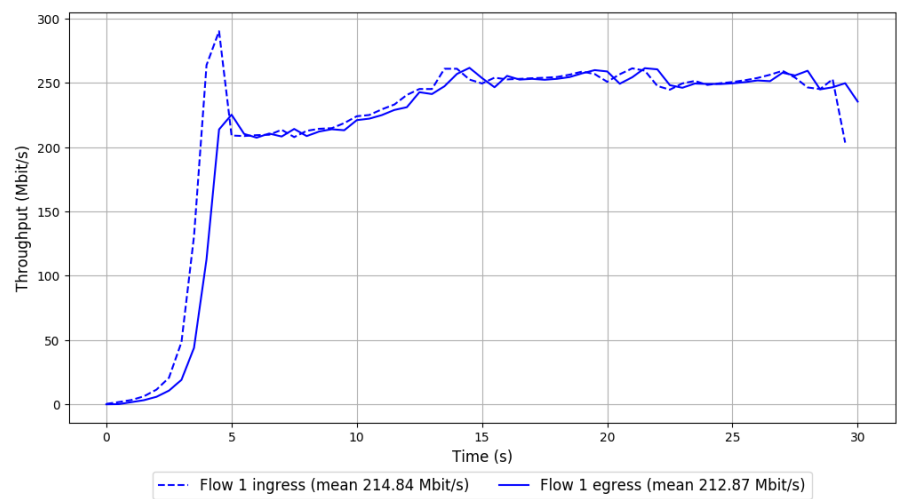


Run 5: Statistics of PCC-Vivace

Start at: 2018-09-11 00:29:16
End at: 2018-09-11 00:29:46
Local clock offset: 3.444 ms
Remote clock offset: -33.531 ms

Below is generated by plot.py at 2018-09-11 01:09:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 212.87 Mbit/s
95th percentile per-packet one-way delay: 62.483 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 212.87 Mbit/s
95th percentile per-packet one-way delay: 62.483 ms
Loss rate: 0.92%

Run 5: Report of PCC-Vivace — Data Link

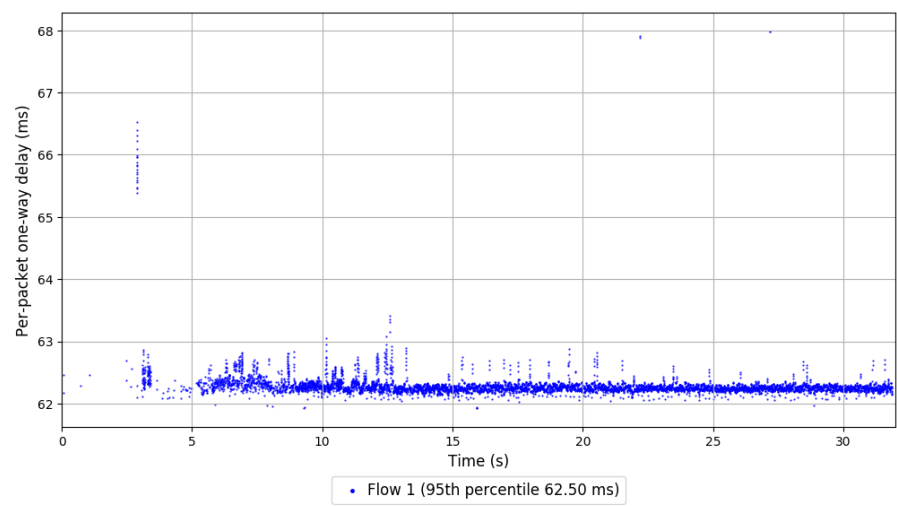
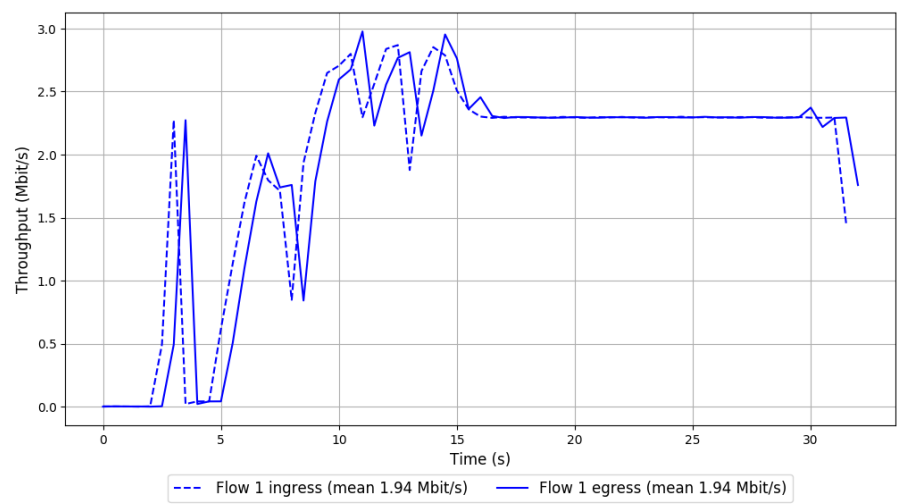


Run 1: Statistics of WebRTC media

Start at: 2018-09-10 22:36:27
End at: 2018-09-10 22:36:57
Local clock offset: -2.025 ms
Remote clock offset: -40.563 ms

Below is generated by plot.py at 2018-09-11 01:09:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 62.496 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 62.496 ms
Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link

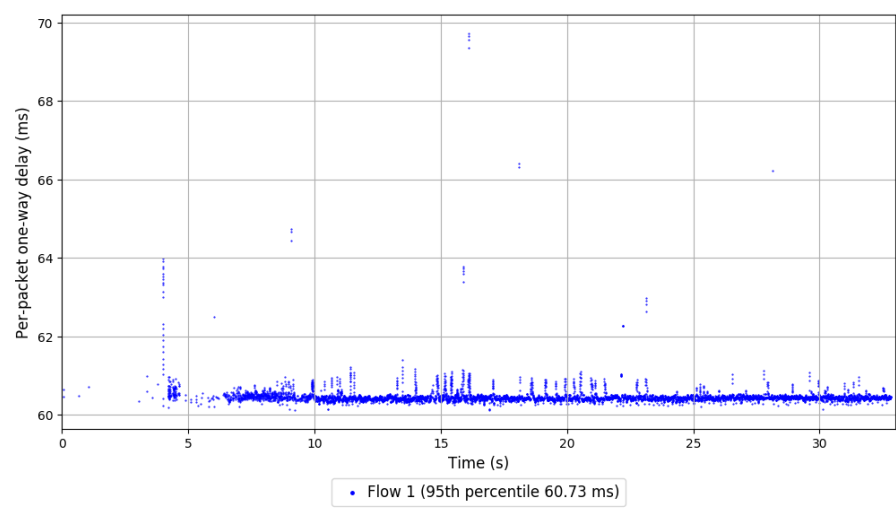
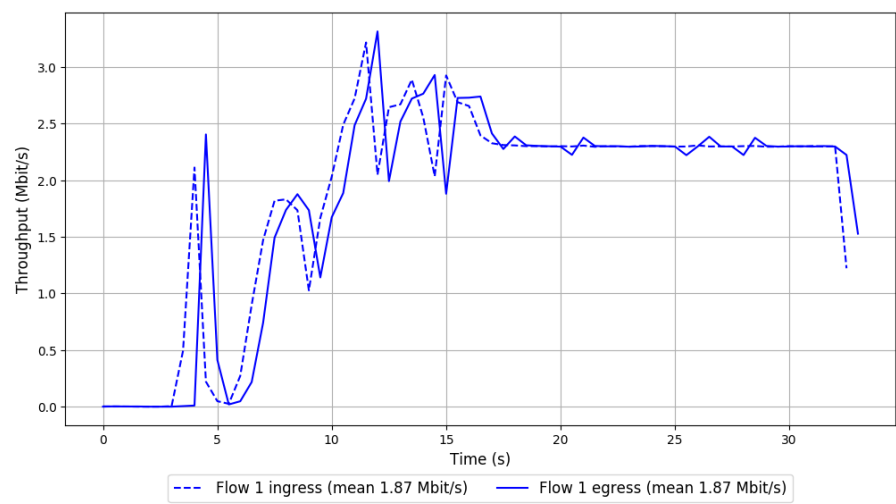


Run 2: Statistics of WebRTC media

Start at: 2018-09-10 22:59:37
End at: 2018-09-10 23:00:07
Local clock offset: 2.265 ms
Remote clock offset: -38.883 ms

Below is generated by plot.py at 2018-09-11 01:09:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 60.733 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 60.733 ms
Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link

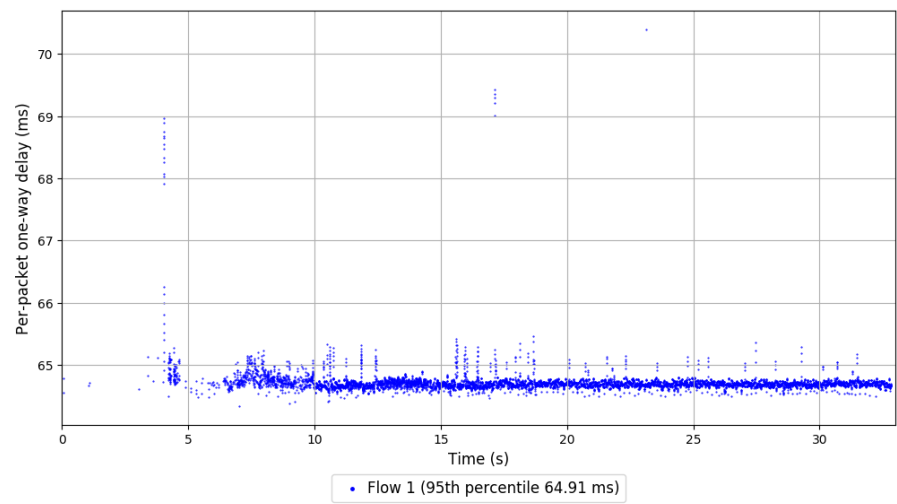
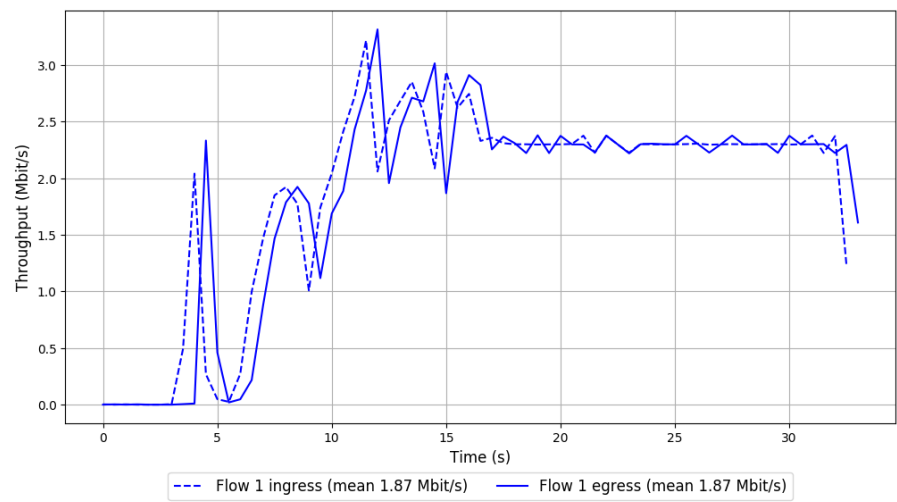


Run 3: Statistics of WebRTC media

Start at: 2018-09-10 23:22:50
End at: 2018-09-10 23:23:20
Local clock offset: -1.185 ms
Remote clock offset: -38.571 ms

Below is generated by plot.py at 2018-09-11 01:09:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 64.909 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 64.909 ms
Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-09-10 23:46:01

End at: 2018-09-10 23:46:31

Local clock offset: 1.245 ms

Remote clock offset: -34.241 ms

Below is generated by plot.py at 2018-09-11 01:09:14

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.87 Mbit/s

95th percentile per-packet one-way delay: 65.042 ms

Loss rate: 0.00%

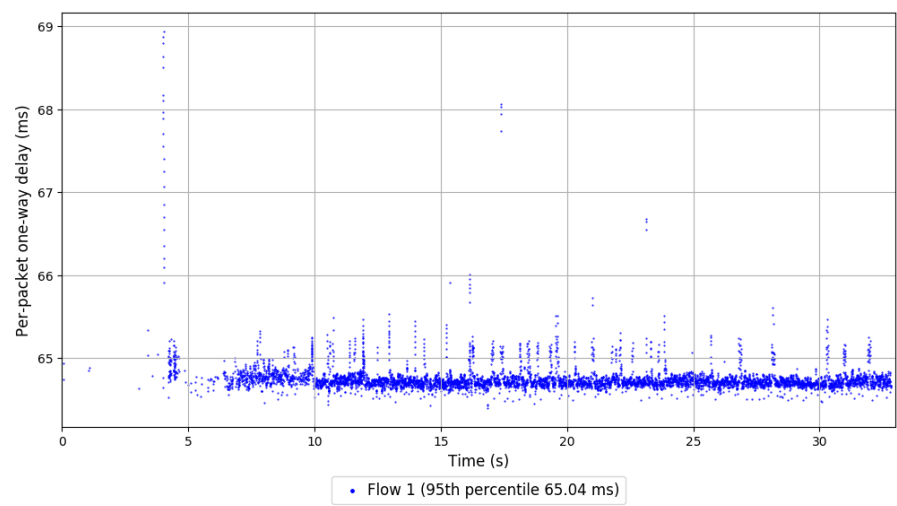
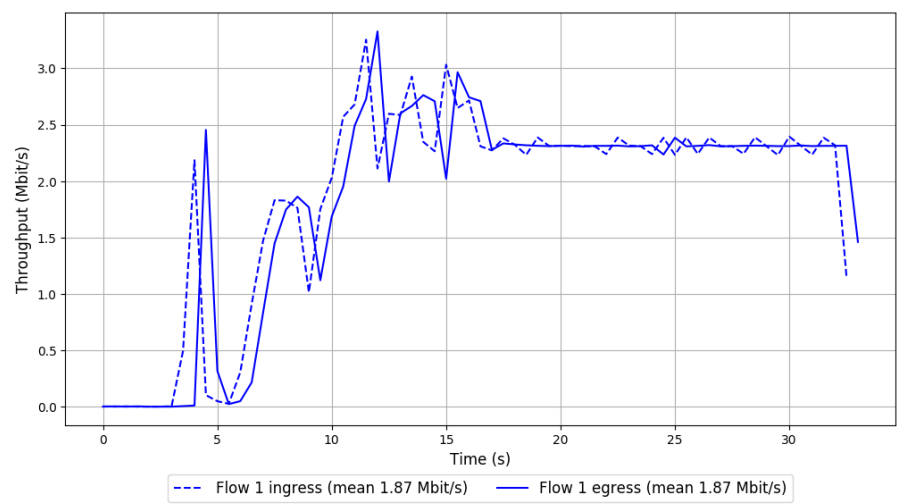
-- Flow 1:

Average throughput: 1.87 Mbit/s

95th percentile per-packet one-way delay: 65.042 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-09-11 00:09:10
End at: 2018-09-11 00:09:40
Local clock offset: 0.499 ms
Remote clock offset: -32.776 ms

Below is generated by plot.py at 2018-09-11 01:09:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 64.560 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 64.560 ms
Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

