

Pantheon Report

Generated at 2018-11-30 13:00:05 (UTC).

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

Repeated the test of 19 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:

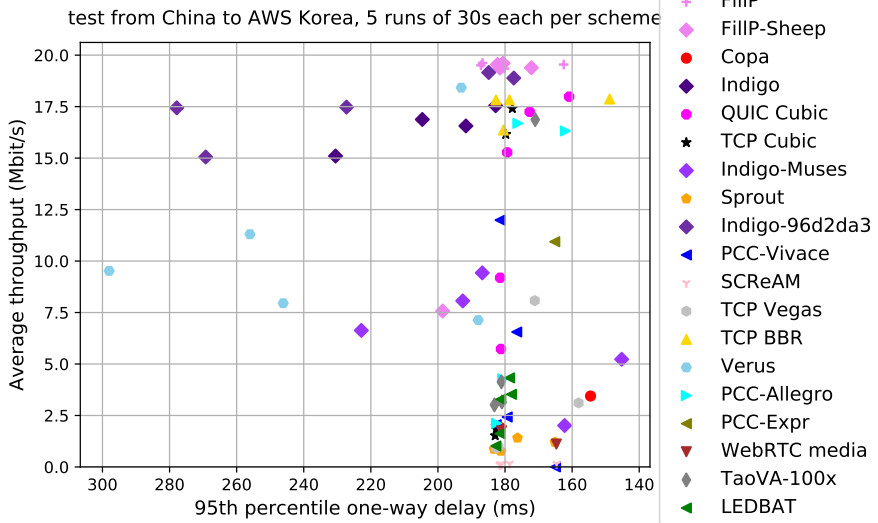
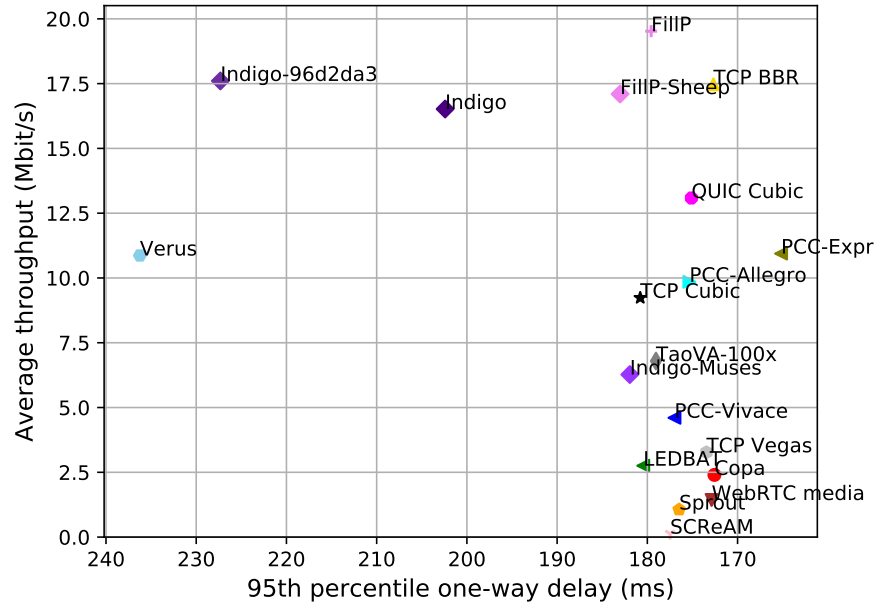
Linux 4.15.0-1027-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

Git summary:

branch: muses @ 7b6dad87cde3ab65f7c4052140eb54098aa58e9d
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py

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

test from China to AWS Korea, 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	4	17.48	172.68	15.89
Copa	3	2.40	172.56	1.08
TCP Cubic	4	9.24	180.79	3.79
FillP	5	19.52	179.58	27.62
FillP-Sheep	5	17.10	183.02	20.61
Indigo	4	16.52	202.41	67.42
Indigo-96d2da3	5	17.60	227.32	58.97
LEDBAT	5	2.76	180.46	1.36
Indigo-Muses	5	6.27	181.94	6.88
PCC-Allegro	4	9.85	175.34	1.21
PCC-Expr	1	10.94	165.18	0.85
QUIC Cubic	5	13.09	175.11	5.05
SCReAM	5	0.13	177.48	1.06
Sprout	4	1.06	176.48	1.11
TaoVA-100x	4	6.79	179.05	1.97
TCP Vegas	4	3.27	173.45	0.89
Verus	5	10.86	236.25	62.16
PCC-Vivace	5	4.60	177.00	1.14
WebRTC media	2	1.43	172.88	0.96

Run 1: Statistics of TCP BBR

Start at: 2018-11-30 11:09:31

End at: 2018-11-30 11:10:01

Local clock offset: 1.854 ms

Remote clock offset: 35.983 ms

Below is generated by plot.py at 2018-11-30 12:58:11

Datalink statistics

-- Total of 1 flow:

Average throughput: 17.87 Mbit/s

95th percentile per-packet one-way delay: 148.814 ms

Loss rate: 15.54%

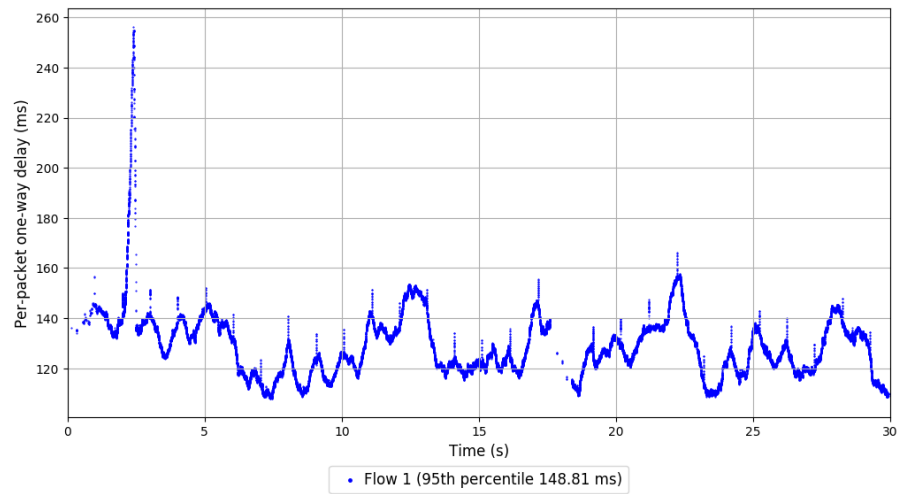
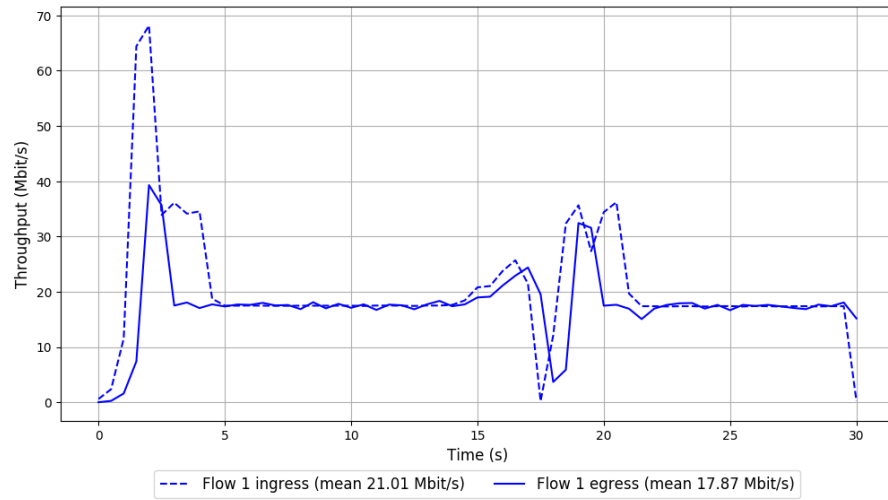
-- Flow 1:

Average throughput: 17.87 Mbit/s

95th percentile per-packet one-way delay: 148.814 ms

Loss rate: 15.54%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-11-30 11:32:36

End at: 2018-11-30 11:33:06

Local clock offset: 0.595 ms

Remote clock offset: 35.264 ms

Below is generated by plot.py at 2018-11-30 12:58:11

Datalink statistics

-- Total of 1 flow:

Average throughput: 17.83 Mbit/s

95th percentile per-packet one-way delay: 178.703 ms

Loss rate: 15.61%

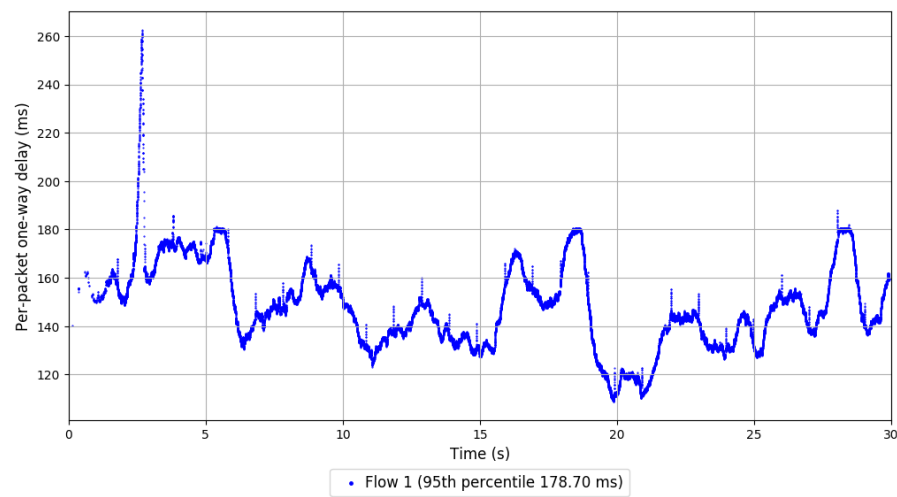
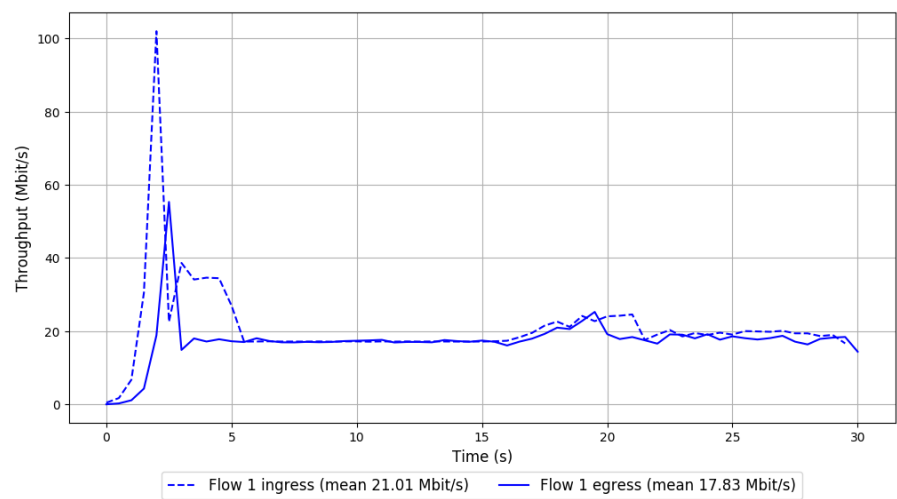
-- Flow 1:

Average throughput: 17.83 Mbit/s

95th percentile per-packet one-way delay: 178.703 ms

Loss rate: 15.61%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-11-30 11:56:27

End at: 2018-11-30 11:56:57

Local clock offset: 0.366 ms

Remote clock offset: 34.08 ms

Below is generated by plot.py at 2018-11-30 12:58:11

Datalink statistics

-- Total of 1 flow:

Average throughput: 16.37 Mbit/s

95th percentile per-packet one-way delay: 180.488 ms

Loss rate: 15.16%

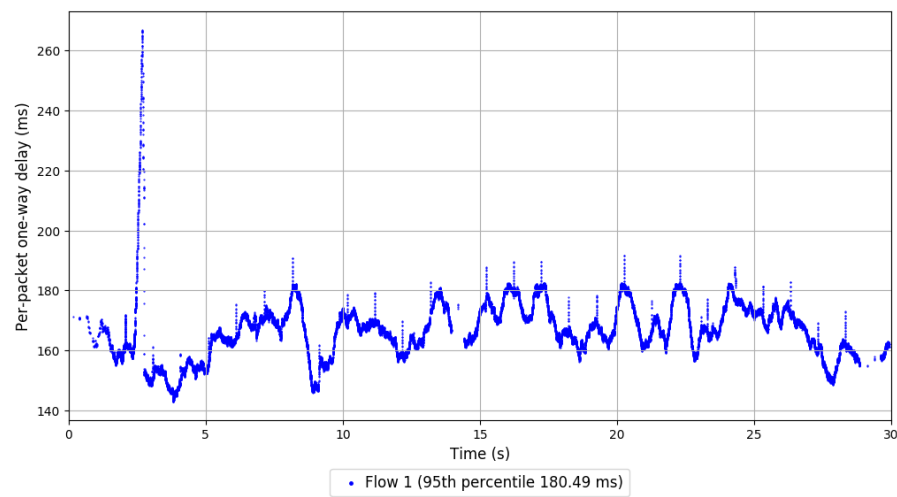
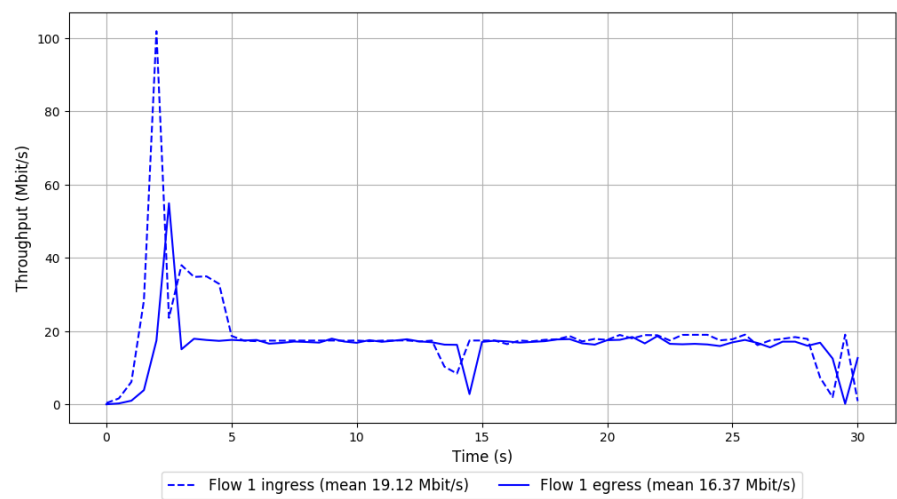
-- Flow 1:

Average throughput: 16.37 Mbit/s

95th percentile per-packet one-way delay: 180.488 ms

Loss rate: 15.16%

Run 3: Report of TCP BBR — Data Link

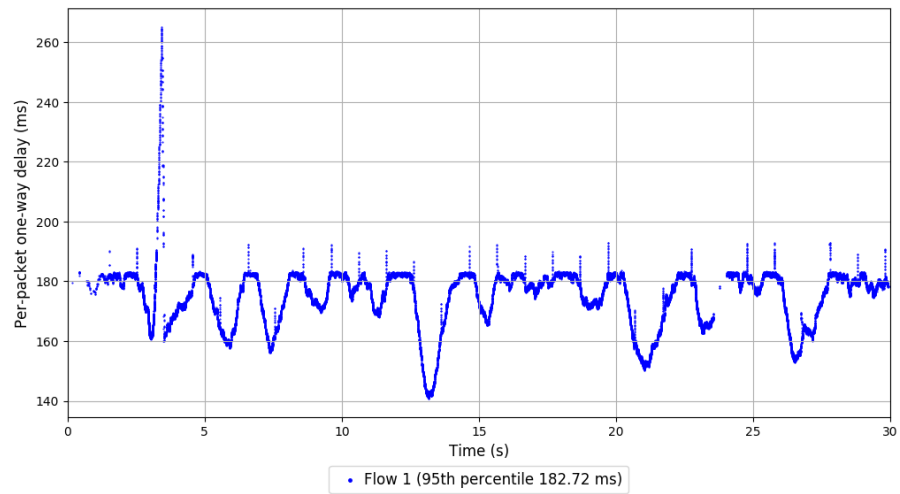
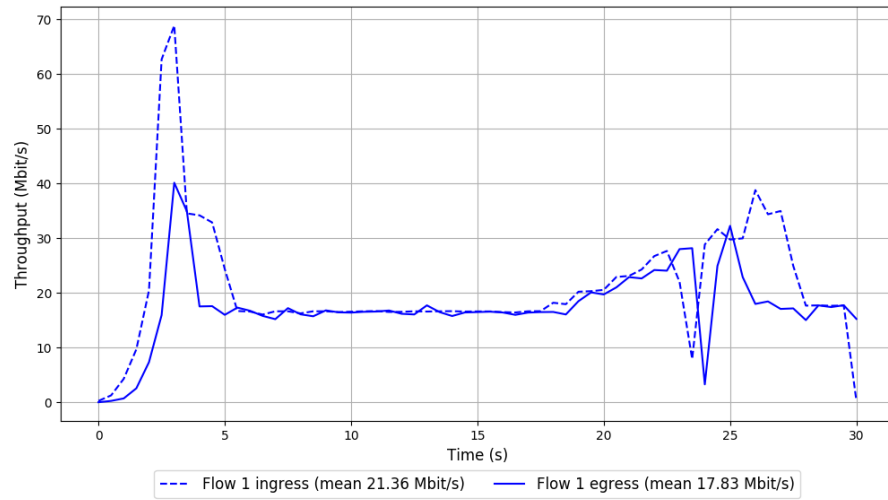


Run 4: Statistics of TCP BBR

Start at: 2018-11-30 12:21:26
End at: 2018-11-30 12:21:56
Local clock offset: 0.05 ms
Remote clock offset: 33.451 ms

Below is generated by plot.py at 2018-11-30 12:58:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 17.83 Mbit/s
95th percentile per-packet one-way delay: 182.715 ms
Loss rate: 17.24%
-- Flow 1:
Average throughput: 17.83 Mbit/s
95th percentile per-packet one-way delay: 182.715 ms
Loss rate: 17.24%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

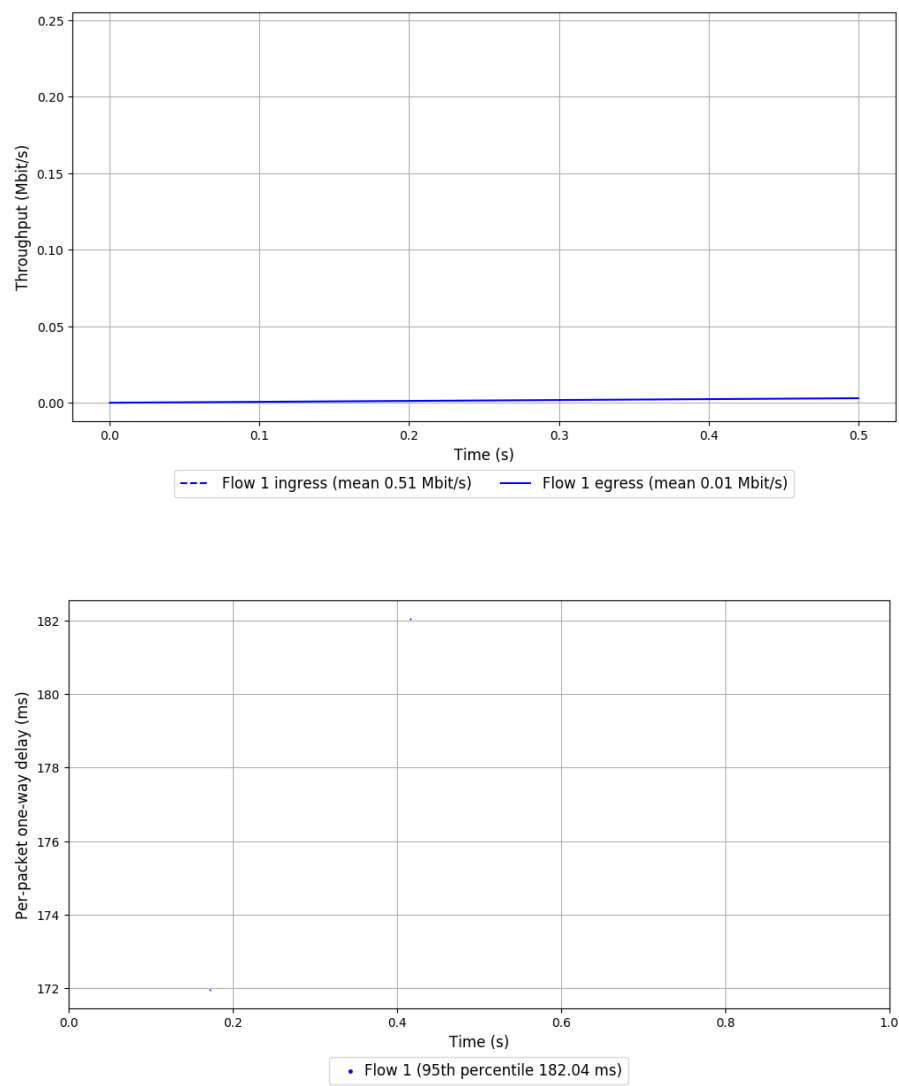
Start at: 2018-11-30 12:47:30

End at: 2018-11-30 12:48:00

Local clock offset: 0.212 ms

Remote clock offset: 32.039 ms

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

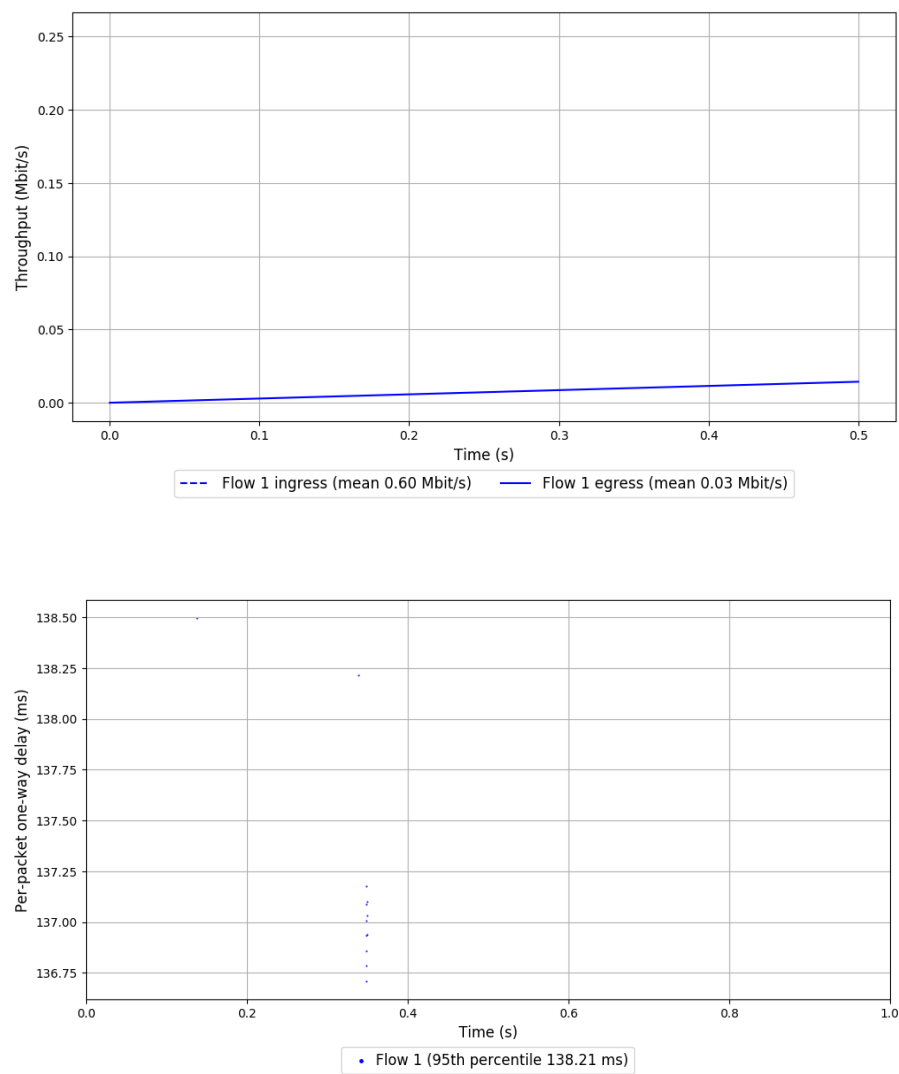
Start at: 2018-11-30 10:58:23

End at: 2018-11-30 10:58:53

Local clock offset: 1.549 ms

Remote clock offset: 31.816 ms

Run 1: Report of Copa — Data Link

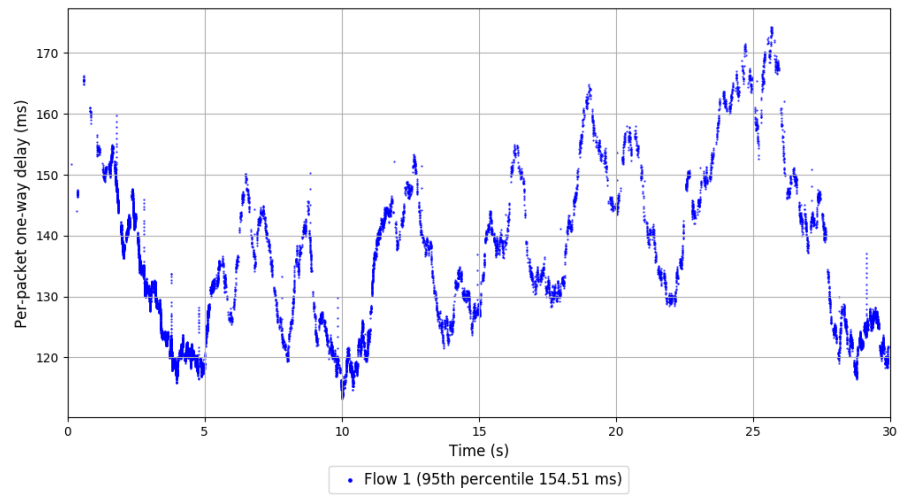
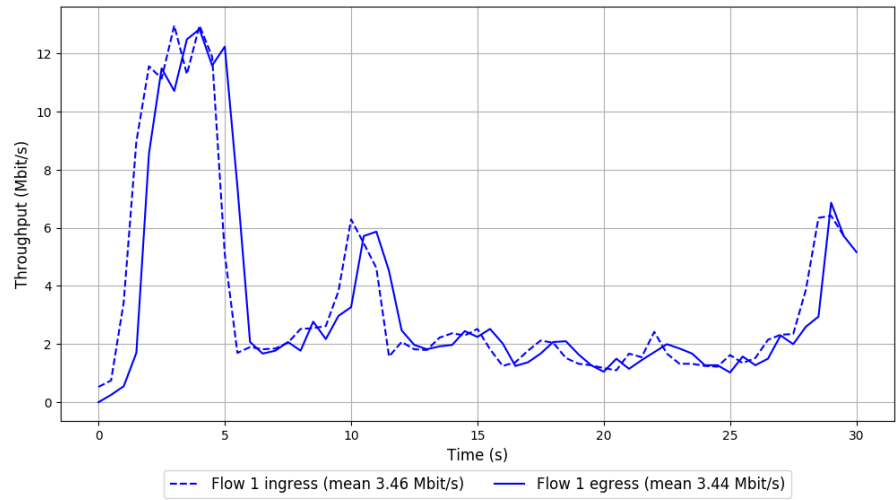


Run 2: Statistics of Copa

Start at: 2018-11-30 11:21:43
End at: 2018-11-30 11:22:13
Local clock offset: 1.132 ms
Remote clock offset: 36.842 ms

Below is generated by plot.py at 2018-11-30 12:58:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.44 Mbit/s
95th percentile per-packet one-way delay: 154.515 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 3.44 Mbit/s
95th percentile per-packet one-way delay: 154.515 ms
Loss rate: 1.05%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

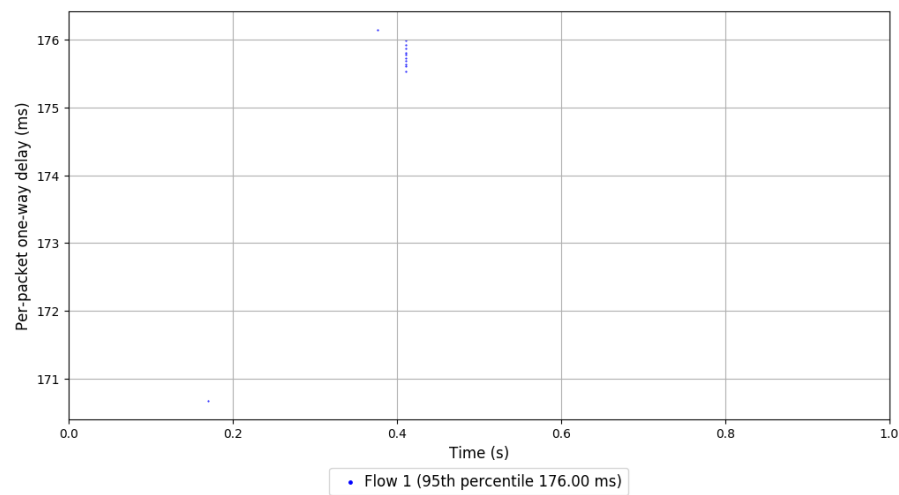
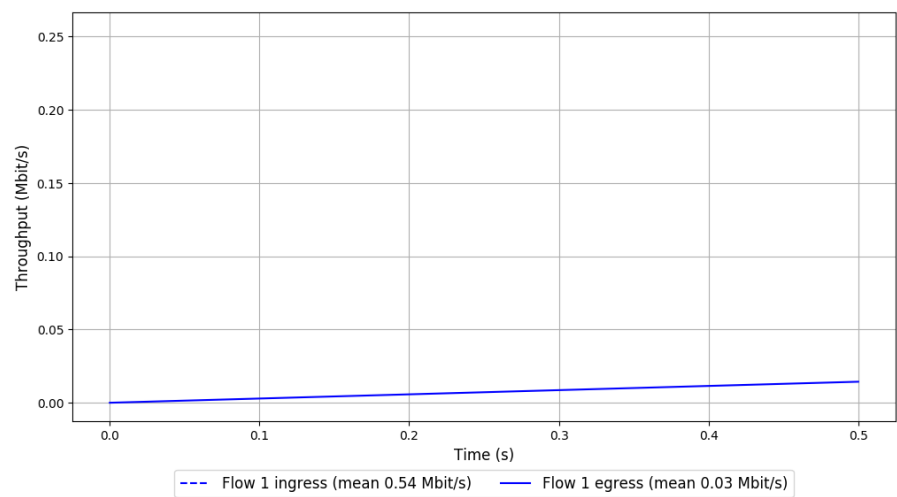
Start at: 2018-11-30 11:45:12

End at: 2018-11-30 11:45:42

Local clock offset: 0.509 ms

Remote clock offset: 33.411 ms

Run 3: Report of Copa — Data Link

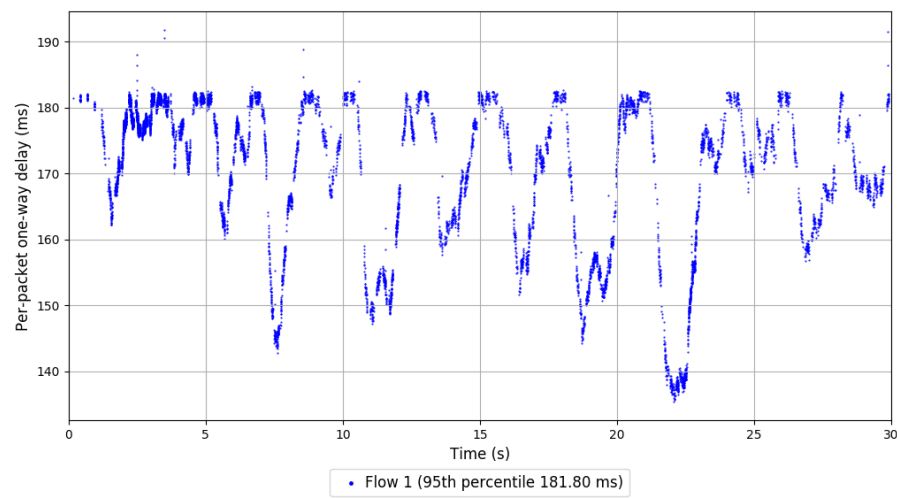
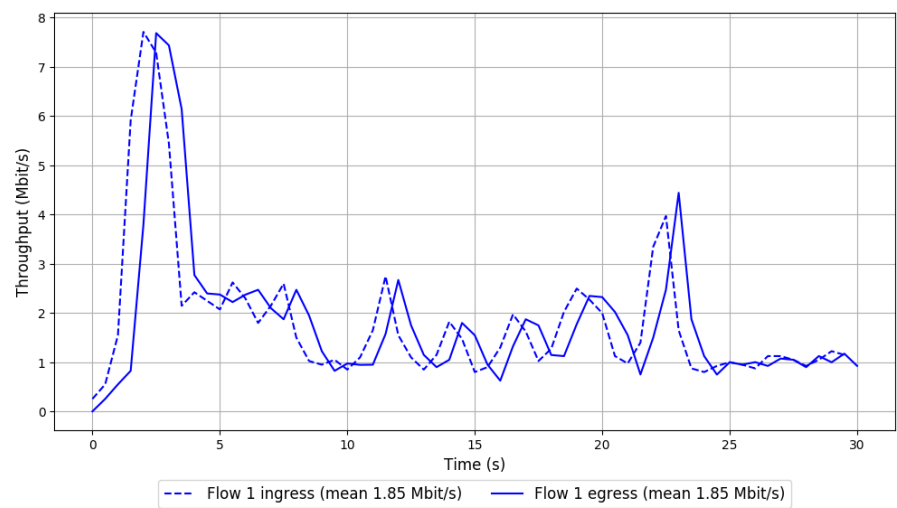


Run 4: Statistics of Copa

Start at: 2018-11-30 12:09:14
End at: 2018-11-30 12:09:44
Local clock offset: 0.442 ms
Remote clock offset: 33.874 ms

Below is generated by plot.py at 2018-11-30 12:58:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.85 Mbit/s
95th percentile per-packet one-way delay: 181.804 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 1.85 Mbit/s
95th percentile per-packet one-way delay: 181.804 ms
Loss rate: 1.07%

Run 4: Report of Copa — Data Link

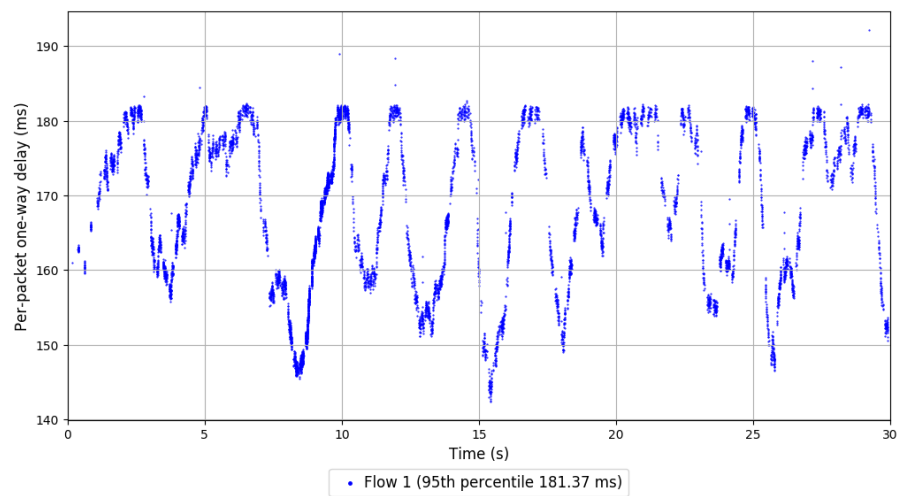
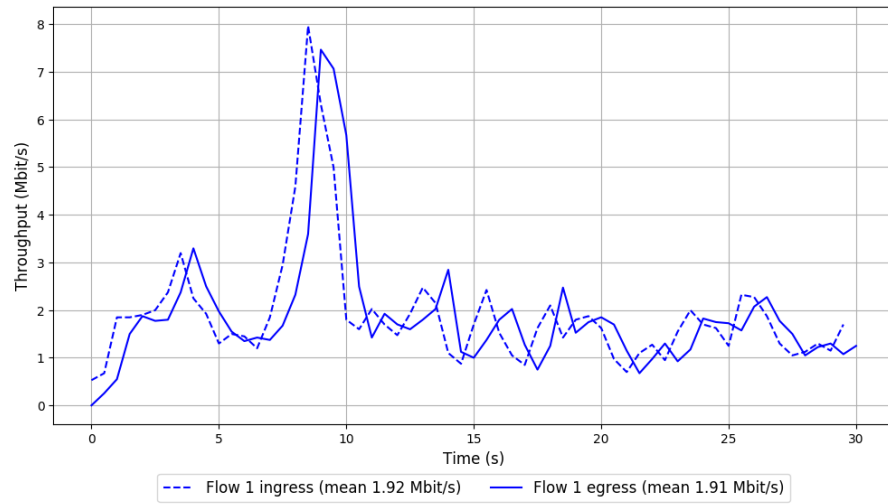


Run 5: Statistics of Copa

Start at: 2018-11-30 12:35:06
End at: 2018-11-30 12:35:36
Local clock offset: -0.282 ms
Remote clock offset: 33.216 ms

Below is generated by plot.py at 2018-11-30 12:58:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.91 Mbit/s
95th percentile per-packet one-way delay: 181.372 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 1.91 Mbit/s
95th percentile per-packet one-way delay: 181.372 ms
Loss rate: 1.12%

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

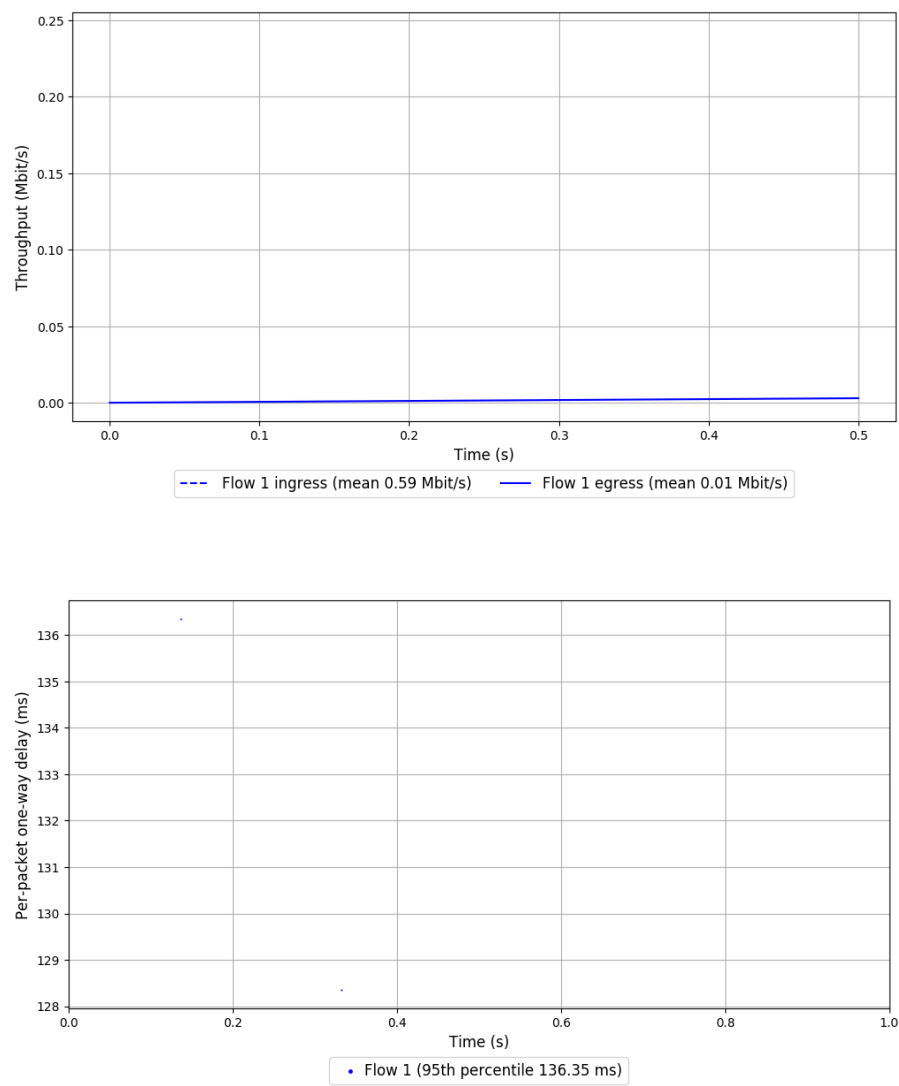
Start at: 2018-11-30 11:08:21

End at: 2018-11-30 11:08:51

Local clock offset: 1.969 ms

Remote clock offset: 35.175 ms

Run 1: Report of TCP Cubic — Data Link

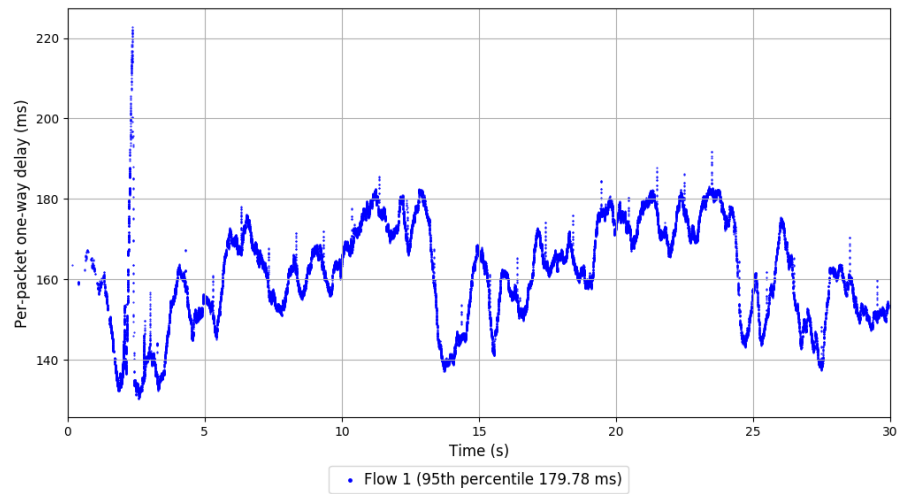
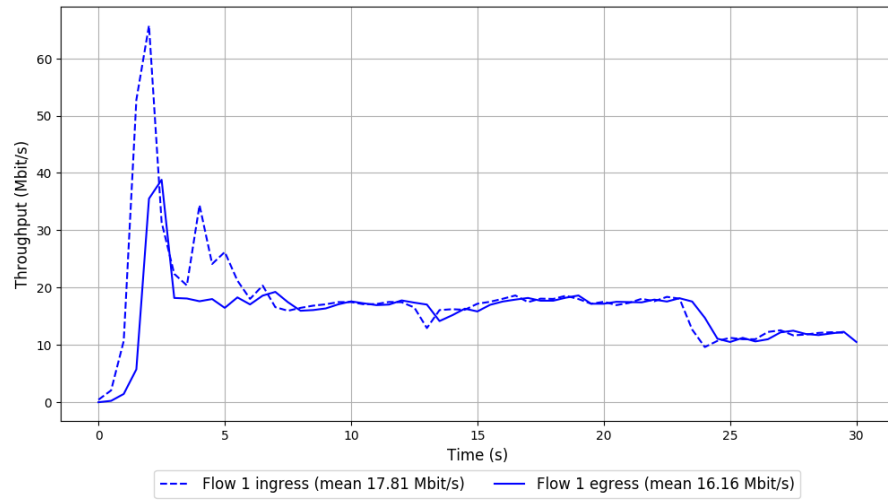


Run 2: Statistics of TCP Cubic

Start at: 2018-11-30 11:31:22
End at: 2018-11-30 11:31:52
Local clock offset: 0.834 ms
Remote clock offset: 33.661 ms

Below is generated by plot.py at 2018-11-30 12:58:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 16.16 Mbit/s
95th percentile per-packet one-way delay: 179.775 ms
Loss rate: 9.99%
-- Flow 1:
Average throughput: 16.16 Mbit/s
95th percentile per-packet one-way delay: 179.775 ms
Loss rate: 9.99%

Run 2: Report of TCP Cubic — Data Link

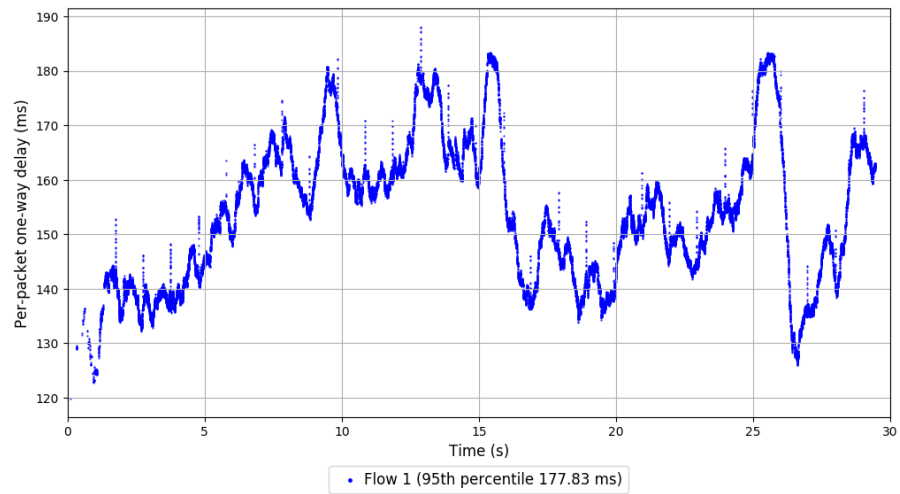
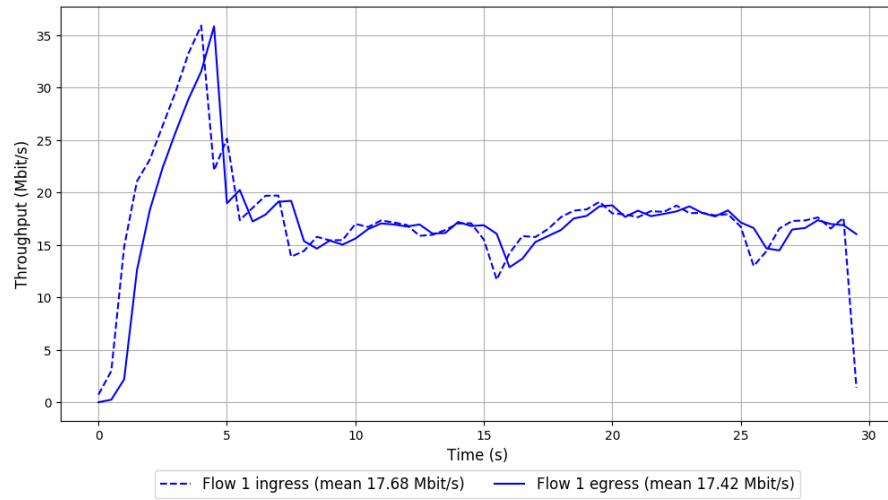


Run 3: Statistics of TCP Cubic

Start at: 2018-11-30 11:55:13
End at: 2018-11-30 11:55:43
Local clock offset: 0.504 ms
Remote clock offset: 33.246 ms

Below is generated by plot.py at 2018-11-30 12:58:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 17.42 Mbit/s
95th percentile per-packet one-way delay: 177.828 ms
Loss rate: 2.13%
-- Flow 1:
Average throughput: 17.42 Mbit/s
95th percentile per-packet one-way delay: 177.828 ms
Loss rate: 2.13%

Run 3: Report of TCP Cubic — Data Link

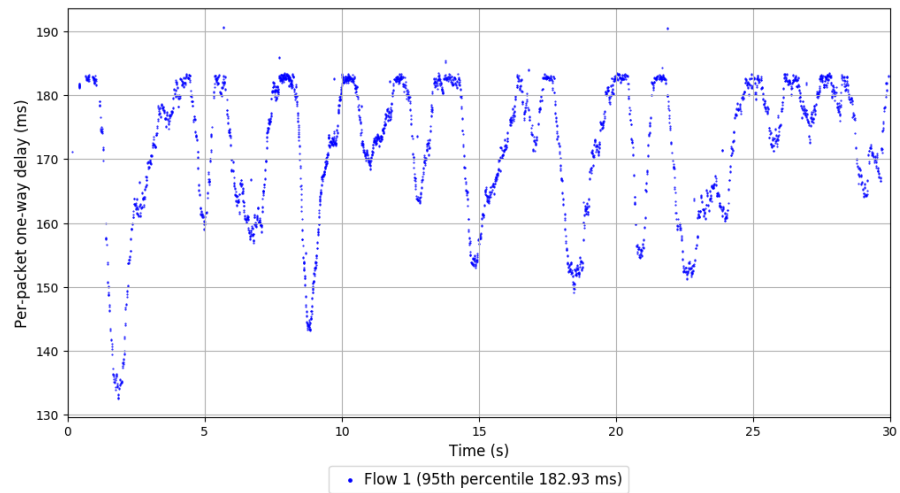
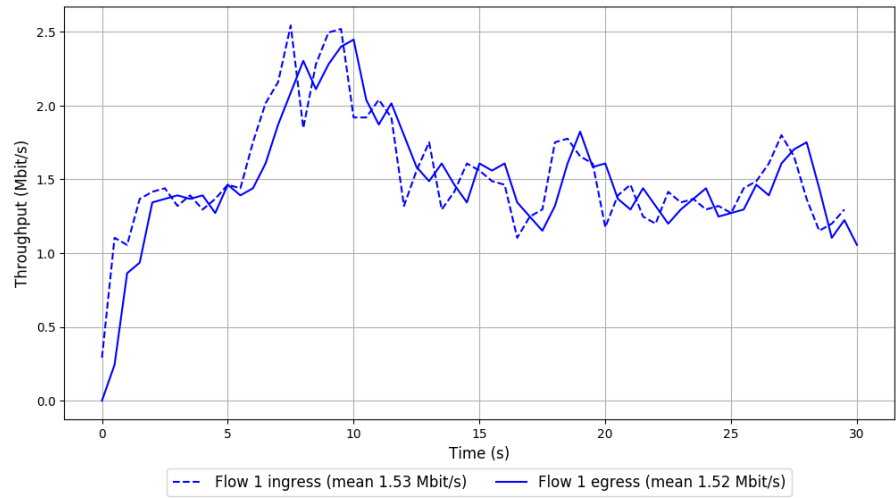


Run 4: Statistics of TCP Cubic

Start at: 2018-11-30 12:20:12
End at: 2018-11-30 12:20:42
Local clock offset: 0.005 ms
Remote clock offset: 33.082 ms

Below is generated by plot.py at 2018-11-30 12:58:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.52 Mbit/s
95th percentile per-packet one-way delay: 182.931 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 1.52 Mbit/s
95th percentile per-packet one-way delay: 182.931 ms
Loss rate: 1.33%

Run 4: Report of TCP Cubic — Data Link

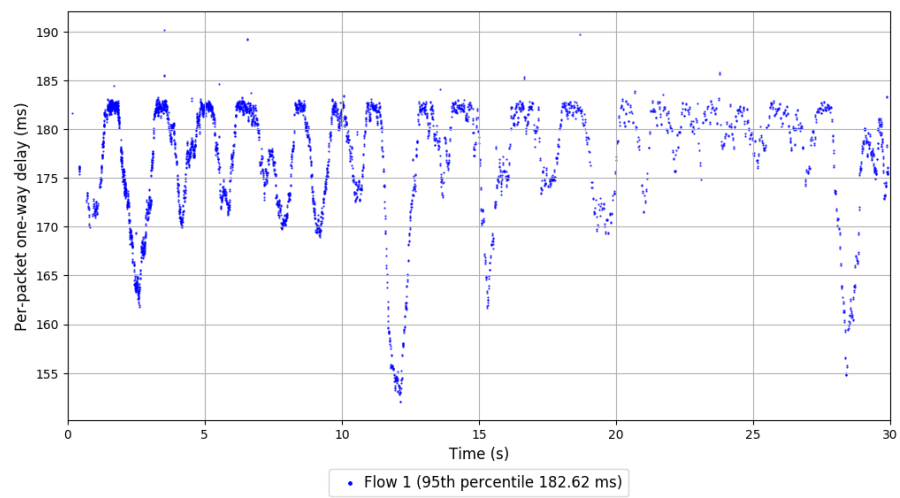
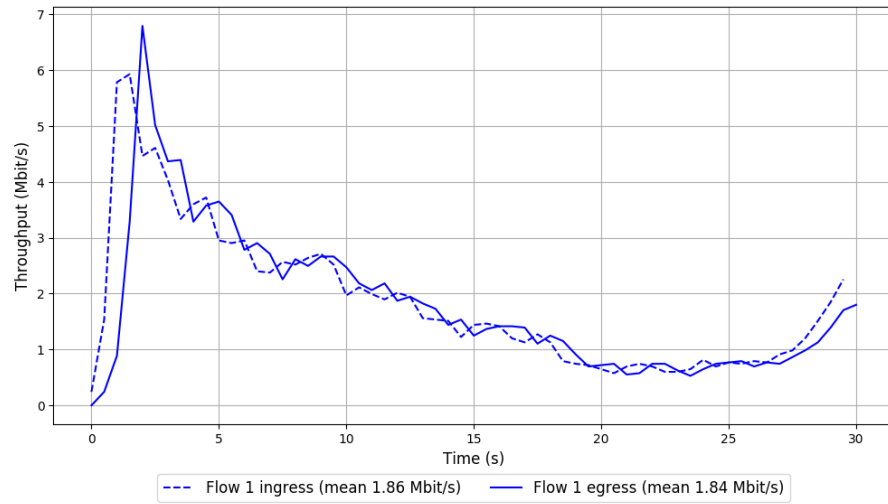


Run 5: Statistics of TCP Cubic

Start at: 2018-11-30 12:46:09
End at: 2018-11-30 12:46:39
Local clock offset: -0.084 ms
Remote clock offset: 32.303 ms

Below is generated by plot.py at 2018-11-30 12:58:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.84 Mbit/s
95th percentile per-packet one-way delay: 182.625 ms
Loss rate: 1.70%
-- Flow 1:
Average throughput: 1.84 Mbit/s
95th percentile per-packet one-way delay: 182.625 ms
Loss rate: 1.70%

Run 5: Report of TCP Cubic — Data Link

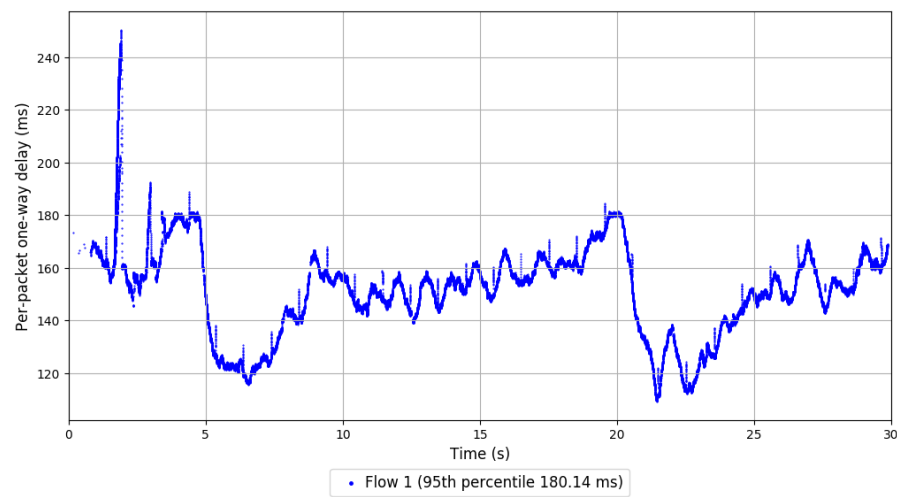
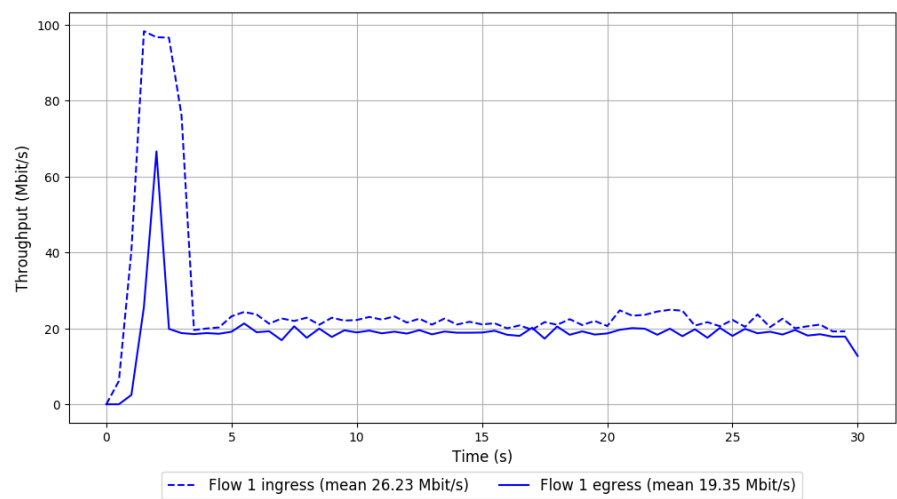


Run 1: Statistics of FillP

Start at: 2018-11-30 10:59:34
End at: 2018-11-30 11:00:04
Local clock offset: 1.538 ms
Remote clock offset: 32.781 ms

Below is generated by plot.py at 2018-11-30 12:58:21
Datalink statistics
-- Total of 1 flow:
Average throughput: 19.35 Mbit/s
95th percentile per-packet one-way delay: 180.137 ms
Loss rate: 26.84%
-- Flow 1:
Average throughput: 19.35 Mbit/s
95th percentile per-packet one-way delay: 180.137 ms
Loss rate: 26.84%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-11-30 11:22:55

End at: 2018-11-30 11:23:25

Local clock offset: 1.059 ms

Remote clock offset: 34.88 ms

Below is generated by plot.py at 2018-11-30 12:58:22

Datalink statistics

-- Total of 1 flow:

Average throughput: 19.54 Mbit/s

95th percentile per-packet one-way delay: 162.507 ms

Loss rate: 28.12%

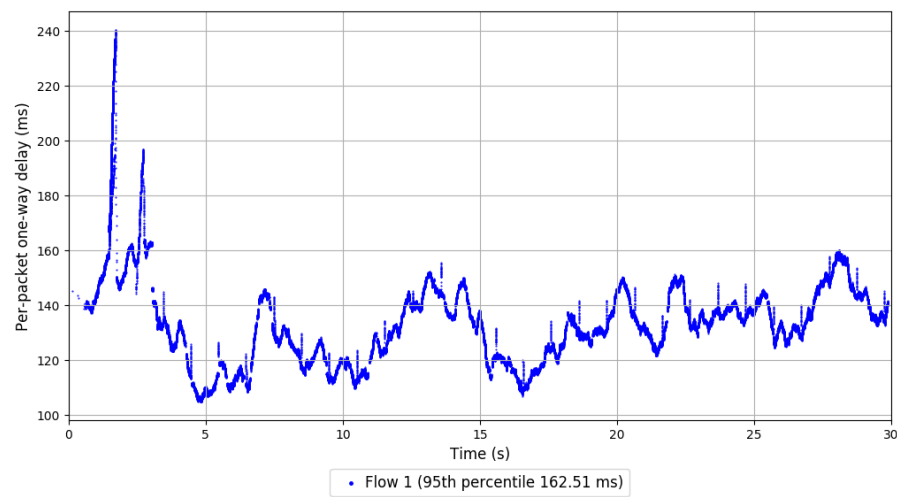
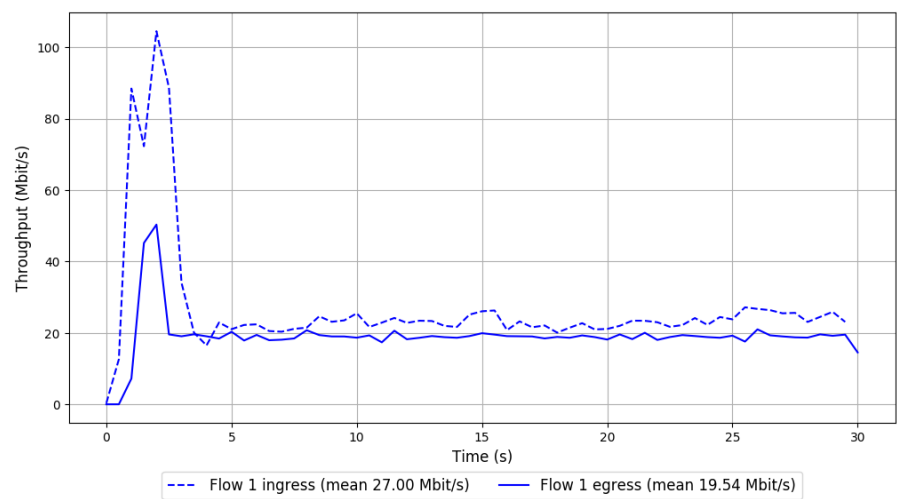
-- Flow 1:

Average throughput: 19.54 Mbit/s

95th percentile per-packet one-way delay: 162.507 ms

Loss rate: 28.12%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-11-30 11:46:22

End at: 2018-11-30 11:46:52

Local clock offset: 0.567 ms

Remote clock offset: 32.54 ms

Below is generated by plot.py at 2018-11-30 12:58:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 19.51 Mbit/s

95th percentile per-packet one-way delay: 187.199 ms

Loss rate: 28.16%

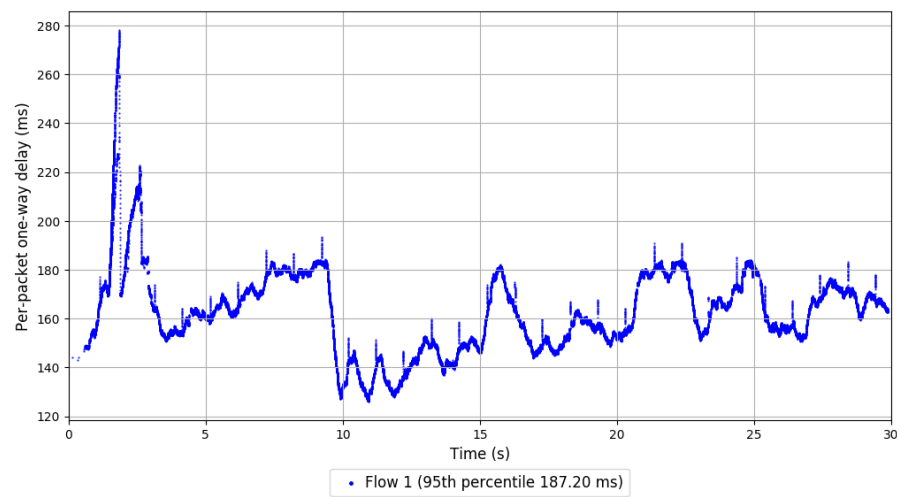
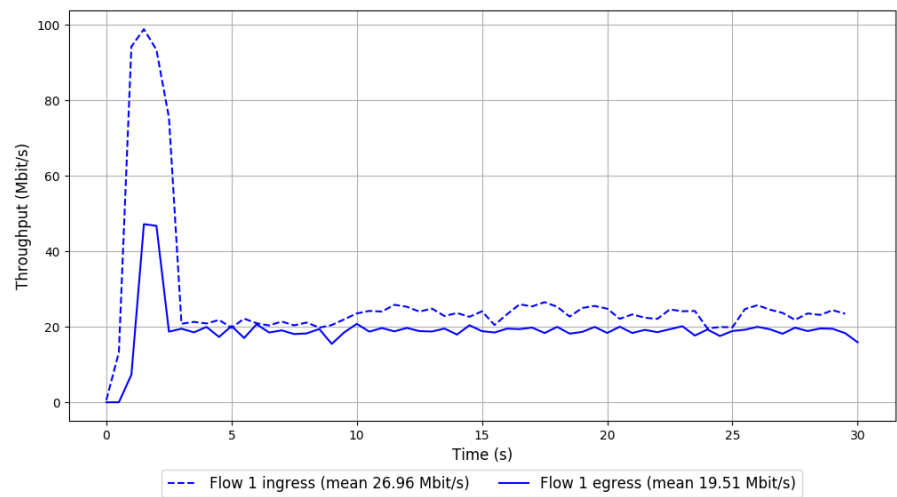
-- Flow 1:

Average throughput: 19.51 Mbit/s

95th percentile per-packet one-way delay: 187.199 ms

Loss rate: 28.16%

Run 3: Report of FillP — Data Link

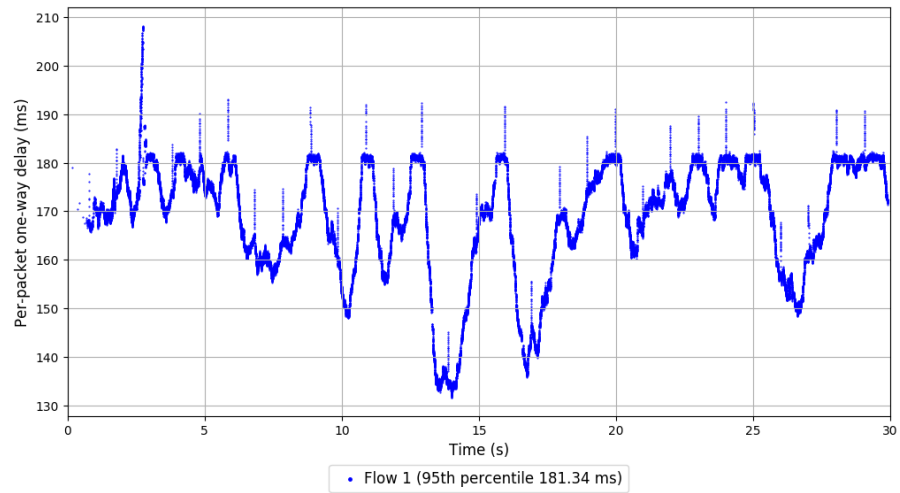
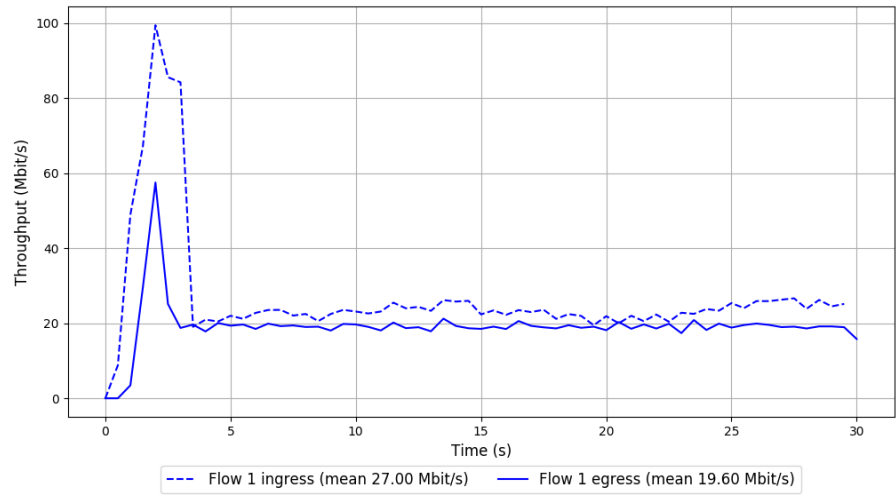


Run 4: Statistics of FillP

Start at: 2018-11-30 12:10:28
End at: 2018-11-30 12:10:58
Local clock offset: 0.498 ms
Remote clock offset: 34.024 ms

Below is generated by plot.py at 2018-11-30 12:58:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 19.60 Mbit/s
95th percentile per-packet one-way delay: 181.335 ms
Loss rate: 28.02%
-- Flow 1:
Average throughput: 19.60 Mbit/s
95th percentile per-packet one-way delay: 181.335 ms
Loss rate: 28.02%

Run 4: Report of FillP — Data Link

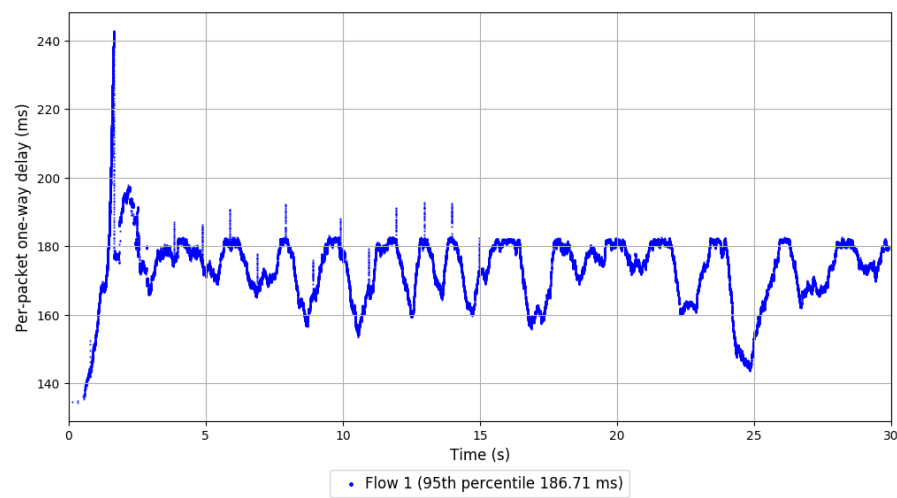
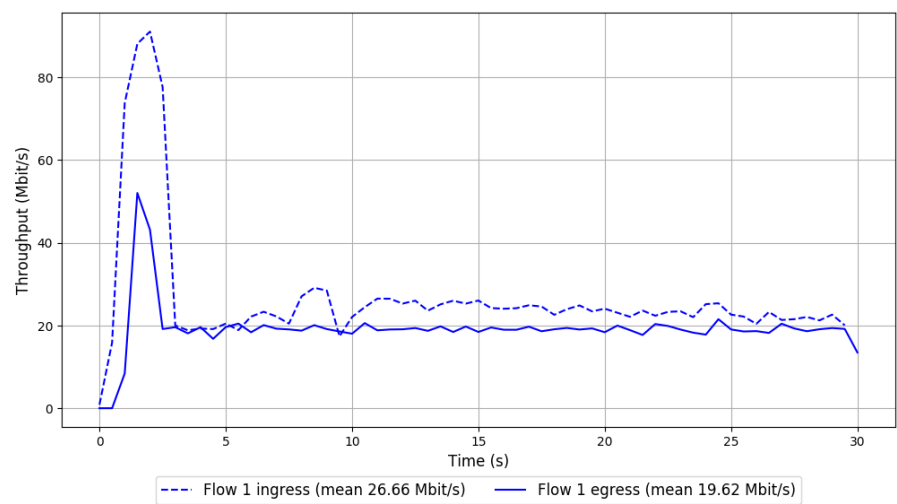


Run 5: Statistics of FillP

Start at: 2018-11-30 12:36:19
End at: 2018-11-30 12:36:49
Local clock offset: -0.223 ms
Remote clock offset: 32.596 ms

Below is generated by plot.py at 2018-11-30 12:58:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 19.62 Mbit/s
95th percentile per-packet one-way delay: 186.705 ms
Loss rate: 26.94%
-- Flow 1:
Average throughput: 19.62 Mbit/s
95th percentile per-packet one-way delay: 186.705 ms
Loss rate: 26.94%

Run 5: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2018-11-30 11:07:08

End at: 2018-11-30 11:07:38

Local clock offset: 1.842 ms

Remote clock offset: 34.394 ms

Below is generated by plot.py at 2018-11-30 12:58:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 7.57 Mbit/s

95th percentile per-packet one-way delay: 198.602 ms

Loss rate: 30.07%

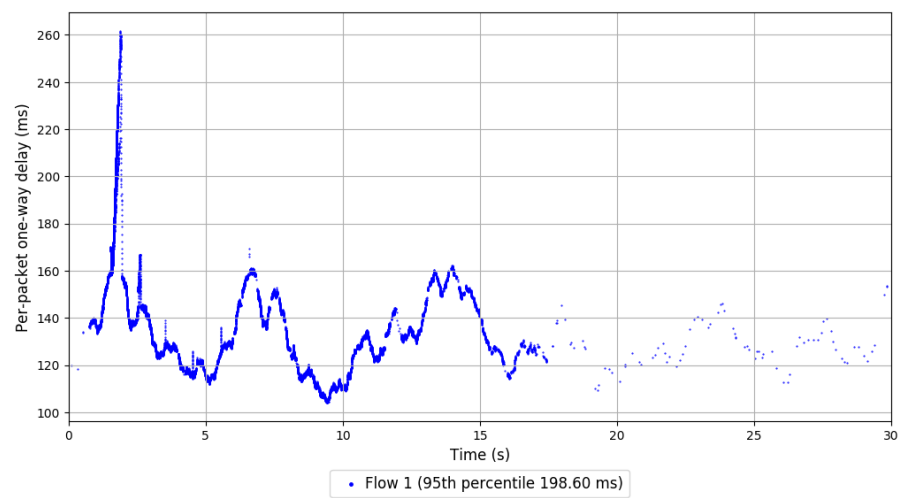
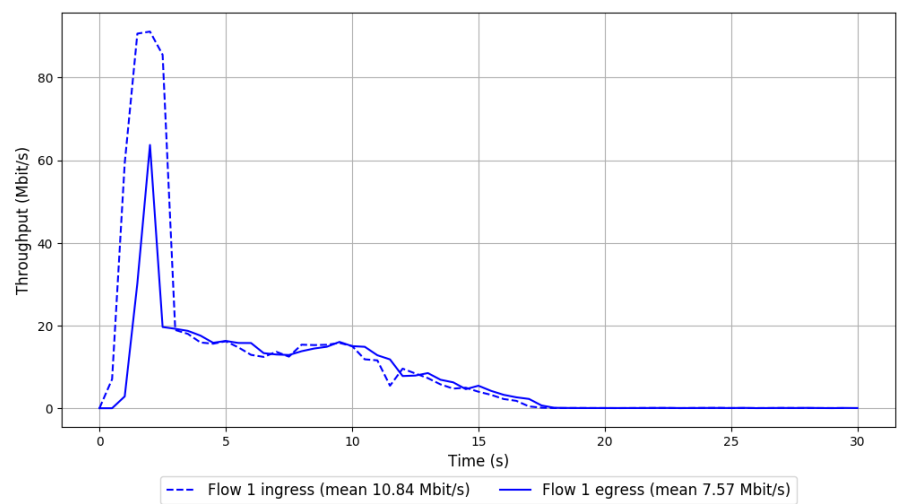
-- Flow 1:

Average throughput: 7.57 Mbit/s

95th percentile per-packet one-way delay: 198.602 ms

Loss rate: 30.07%

Run 1: Report of FillP-Sheep — Data Link



Run 2: Statistics of FillP-Sheep

Start at: 2018-11-30 11:30:07

End at: 2018-11-30 11:30:37

Local clock offset: 0.866 ms

Remote clock offset: 33.321 ms

Below is generated by plot.py at 2018-11-30 12:58:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 19.39 Mbit/s

95th percentile per-packet one-way delay: 172.144 ms

Loss rate: 20.35%

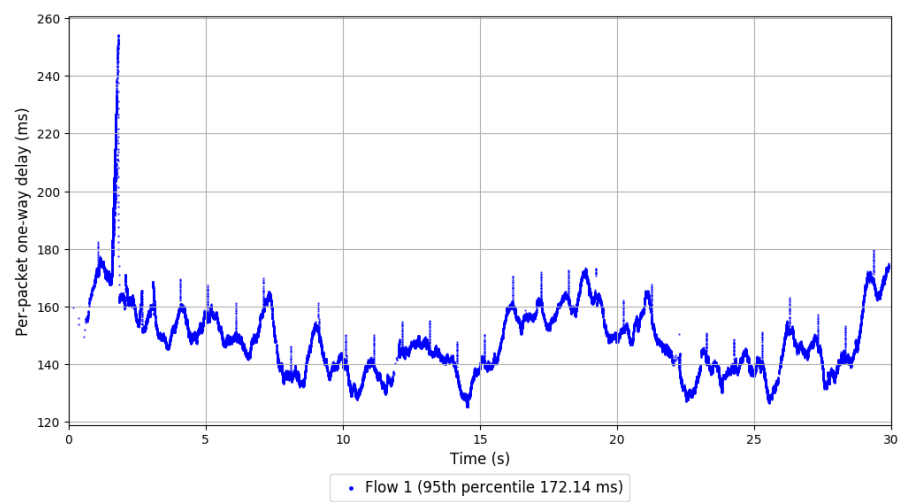
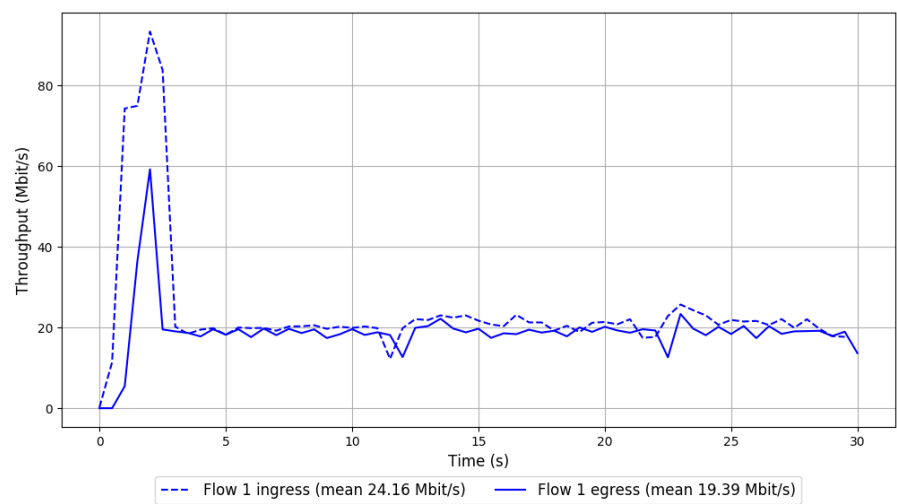
-- Flow 1:

Average throughput: 19.39 Mbit/s

95th percentile per-packet one-way delay: 172.144 ms

Loss rate: 20.35%

Run 2: Report of FillP-Sheep — Data Link

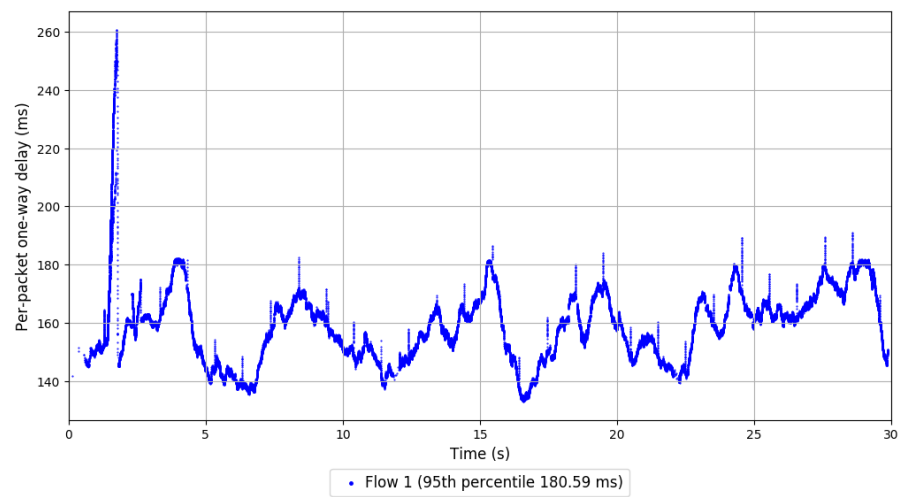
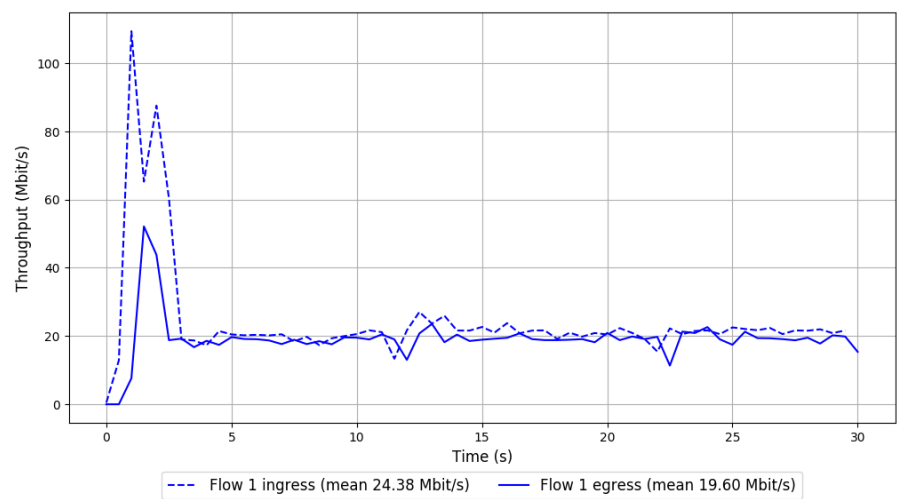


Run 3: Statistics of FillP-Sheep

Start at: 2018-11-30 11:53:59
End at: 2018-11-30 11:54:29
Local clock offset: 0.423 ms
Remote clock offset: 34.156 ms

Below is generated by plot.py at 2018-11-30 12:58:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 19.60 Mbit/s
95th percentile per-packet one-way delay: 180.590 ms
Loss rate: 20.17%
-- Flow 1:
Average throughput: 19.60 Mbit/s
95th percentile per-packet one-way delay: 180.590 ms
Loss rate: 20.17%

Run 3: Report of FillP-Sheep — Data Link

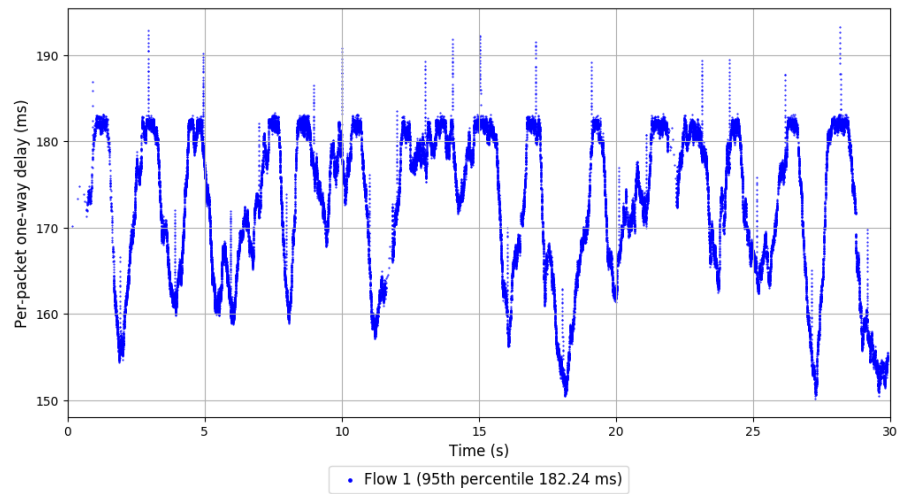
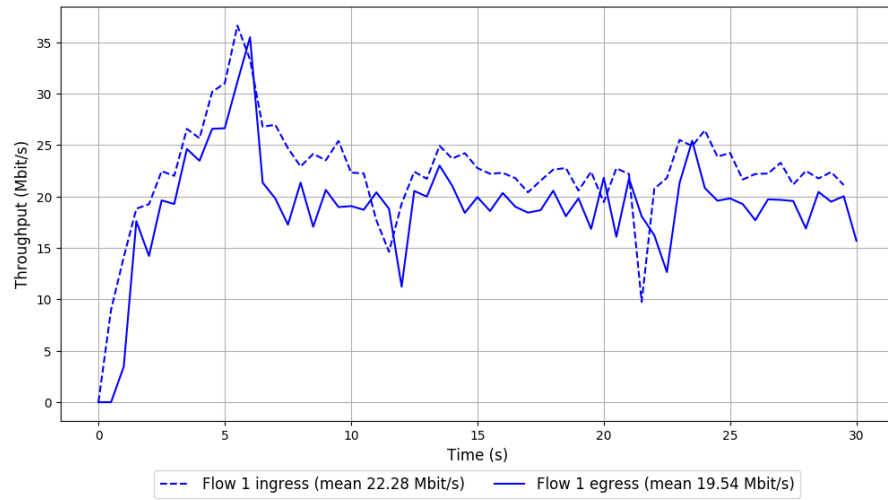


Run 4: Statistics of FillP-Sheep

Start at: 2018-11-30 12:18:36
End at: 2018-11-30 12:19:06
Local clock offset: 0.158 ms
Remote clock offset: 33.277 ms

Below is generated by plot.py at 2018-11-30 12:58:39
Datalink statistics
-- Total of 1 flow:
Average throughput: 19.54 Mbit/s
95th percentile per-packet one-way delay: 182.244 ms
Loss rate: 13.00%
-- Flow 1:
Average throughput: 19.54 Mbit/s
95th percentile per-packet one-way delay: 182.244 ms
Loss rate: 13.00%

Run 4: Report of FillP-Sheep — Data Link

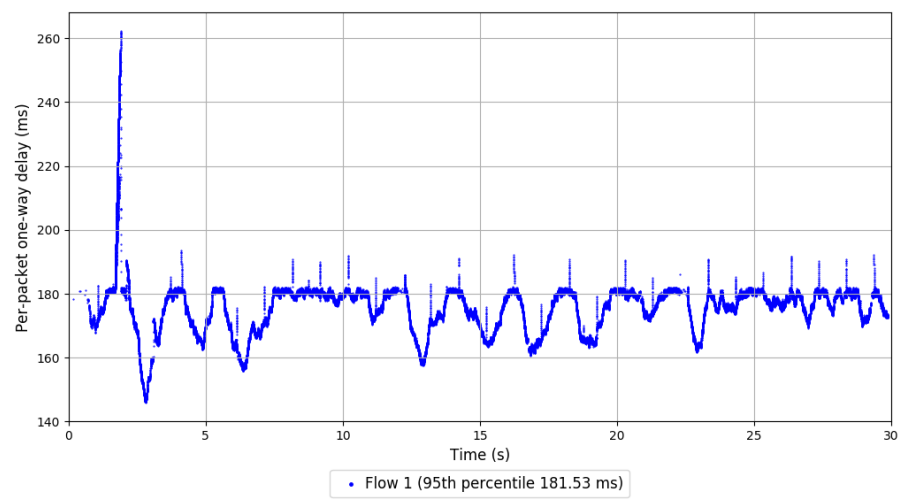
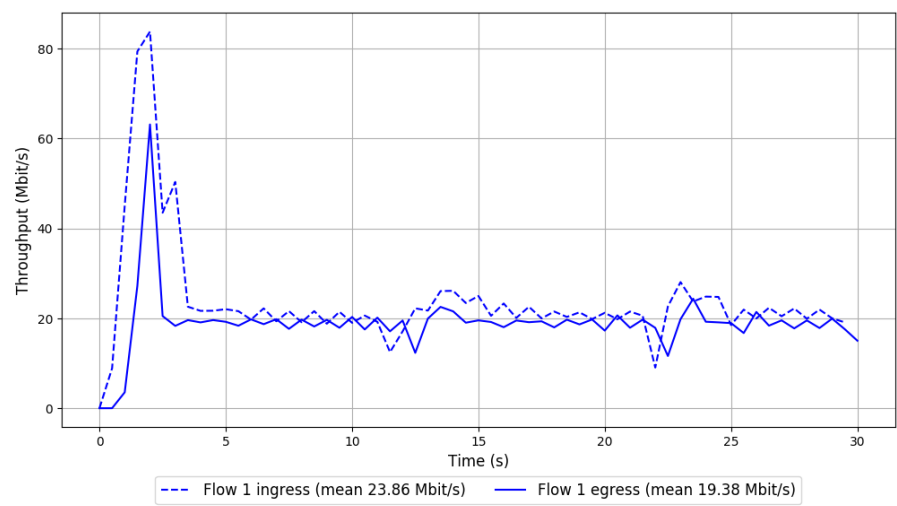


Run 5: Statistics of FillP-Sheep

Start at: 2018-11-30 12:44:25
End at: 2018-11-30 12:44:55
Local clock offset: -0.499 ms
Remote clock offset: 33.161 ms

Below is generated by plot.py at 2018-11-30 12:58:42
Datalink statistics
-- Total of 1 flow:
Average throughput: 19.38 Mbit/s
95th percentile per-packet one-way delay: 181.528 ms
Loss rate: 19.47%
-- Flow 1:
Average throughput: 19.38 Mbit/s
95th percentile per-packet one-way delay: 181.528 ms
Loss rate: 19.47%

Run 5: Report of FillP-Sheep — Data Link



Run 1: Statistics of Indigo

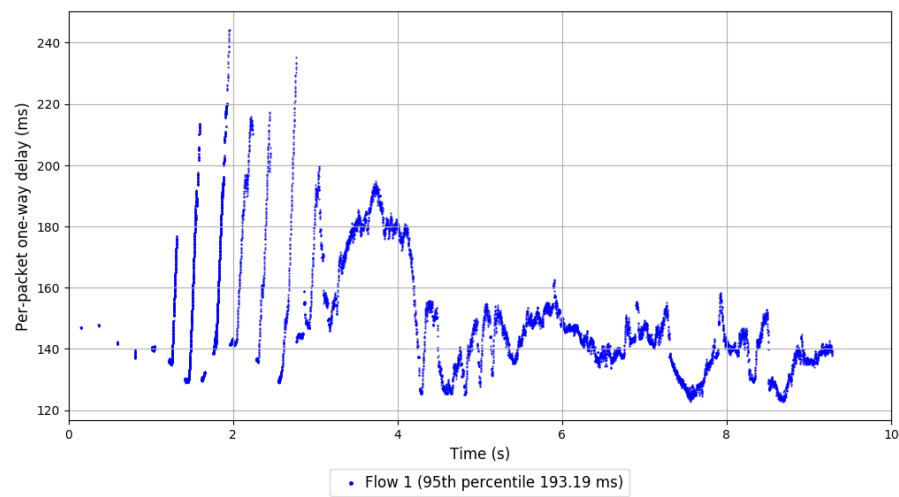
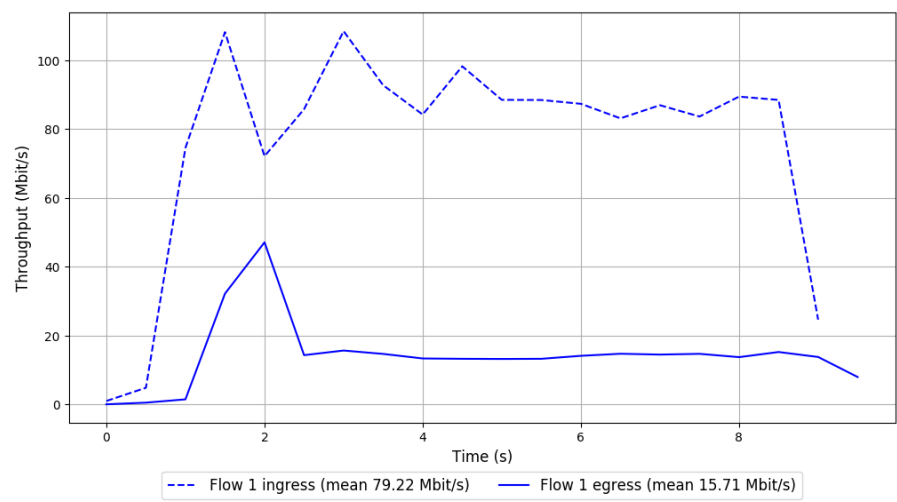
Start at: 2018-11-30 11:16:53

End at: 2018-11-30 11:17:23

Local clock offset: 1.818 ms

Remote clock offset: 38.587 ms

Run 1: Report of Indigo — Data Link

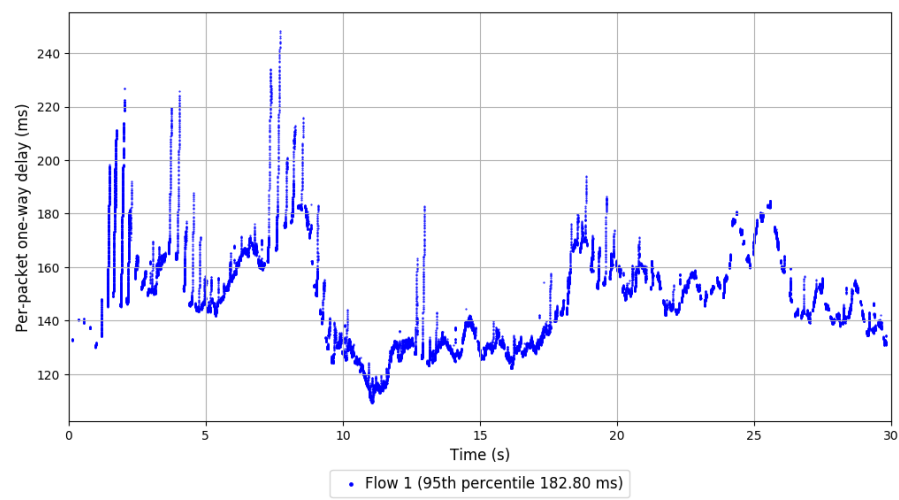
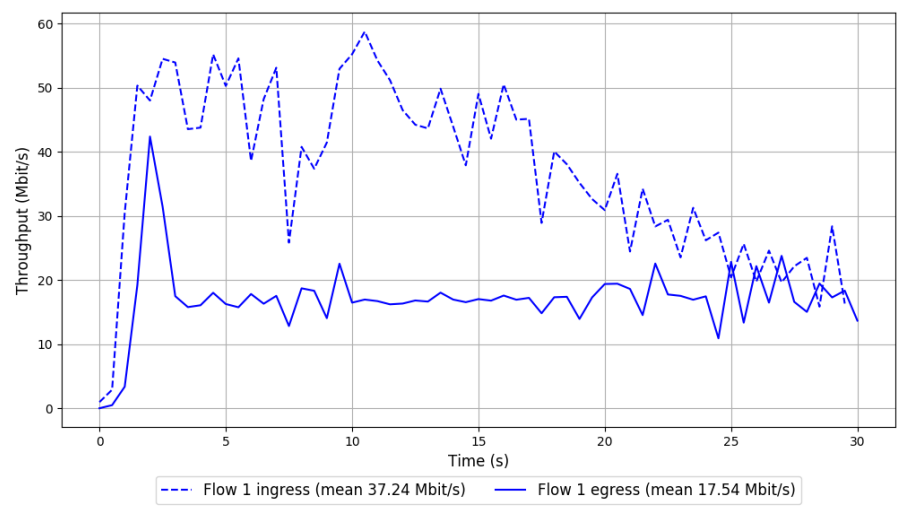


Run 2: Statistics of Indigo

Start at: 2018-11-30 11:40:00
End at: 2018-11-30 11:40:30
Local clock offset: 0.674 ms
Remote clock offset: 32.578 ms

Below is generated by plot.py at 2018-11-30 12:58:47
Datalink statistics
-- Total of 1 flow:
Average throughput: 17.54 Mbit/s
95th percentile per-packet one-way delay: 182.802 ms
Loss rate: 53.21%
-- Flow 1:
Average throughput: 17.54 Mbit/s
95th percentile per-packet one-way delay: 182.802 ms
Loss rate: 53.21%

Run 2: Report of Indigo — Data Link

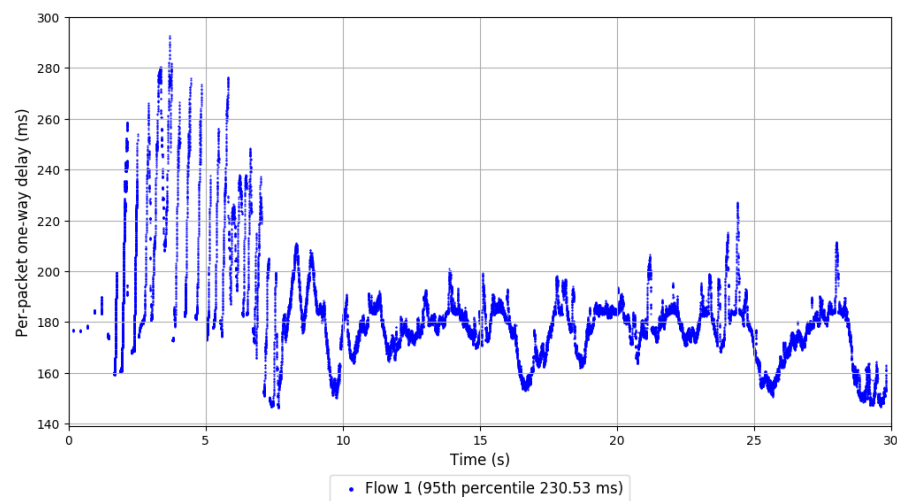
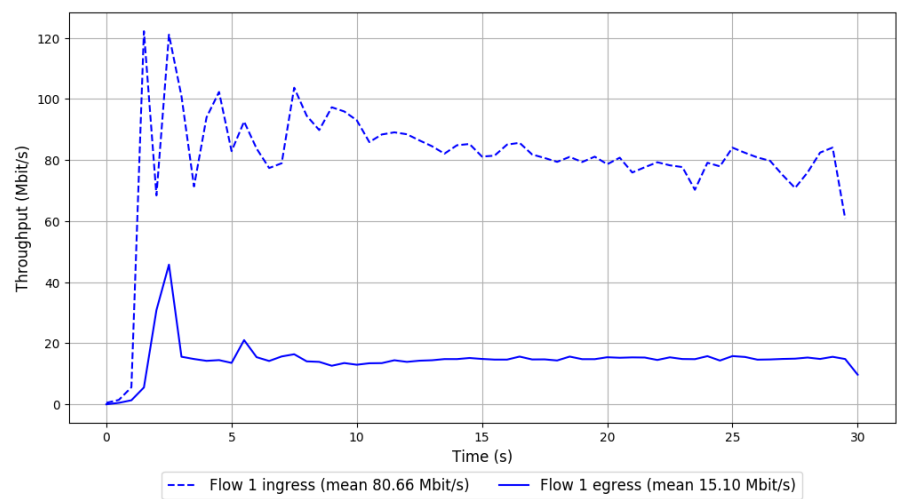


Run 3: Statistics of Indigo

Start at: 2018-11-30 12:04:09
End at: 2018-11-30 12:04:39
Local clock offset: 0.341 ms
Remote clock offset: 32.154 ms

Below is generated by plot.py at 2018-11-30 12:59:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 15.10 Mbit/s
95th percentile per-packet one-way delay: 230.526 ms
Loss rate: 81.43%
-- Flow 1:
Average throughput: 15.10 Mbit/s
95th percentile per-packet one-way delay: 230.526 ms
Loss rate: 81.43%

Run 3: Report of Indigo — Data Link

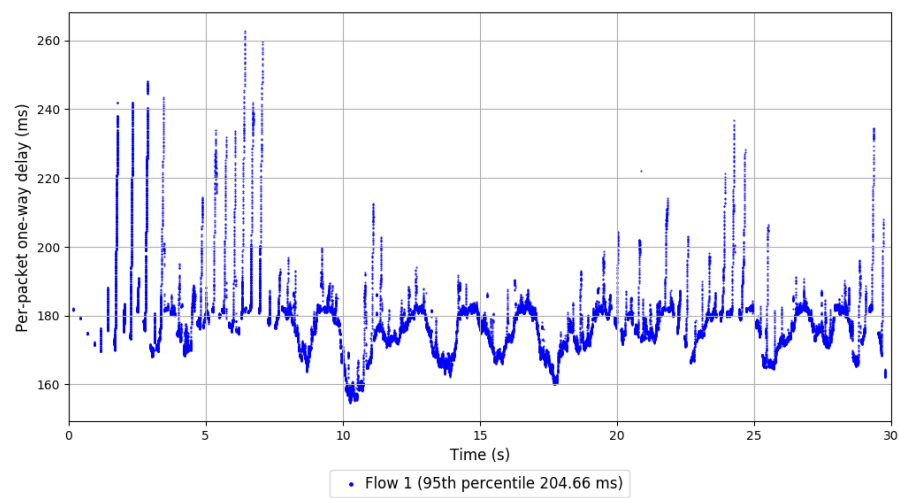
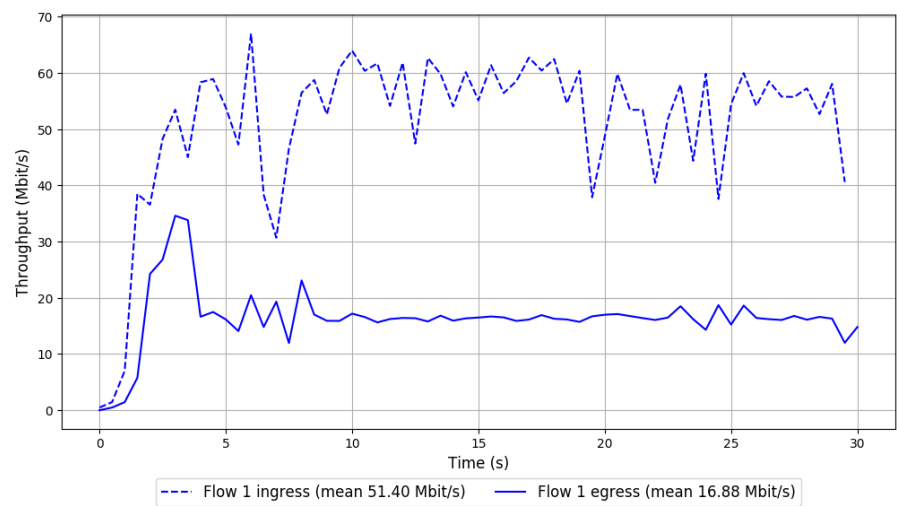


Run 4: Statistics of Indigo

Start at: 2018-11-30 12:29:09
End at: 2018-11-30 12:29:39
Local clock offset: -0.293 ms
Remote clock offset: 33.184 ms

Below is generated by plot.py at 2018-11-30 12:59:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 16.88 Mbit/s
95th percentile per-packet one-way delay: 204.659 ms
Loss rate: 67.46%
-- Flow 1:
Average throughput: 16.88 Mbit/s
95th percentile per-packet one-way delay: 204.659 ms
Loss rate: 67.46%

Run 4: Report of Indigo — Data Link

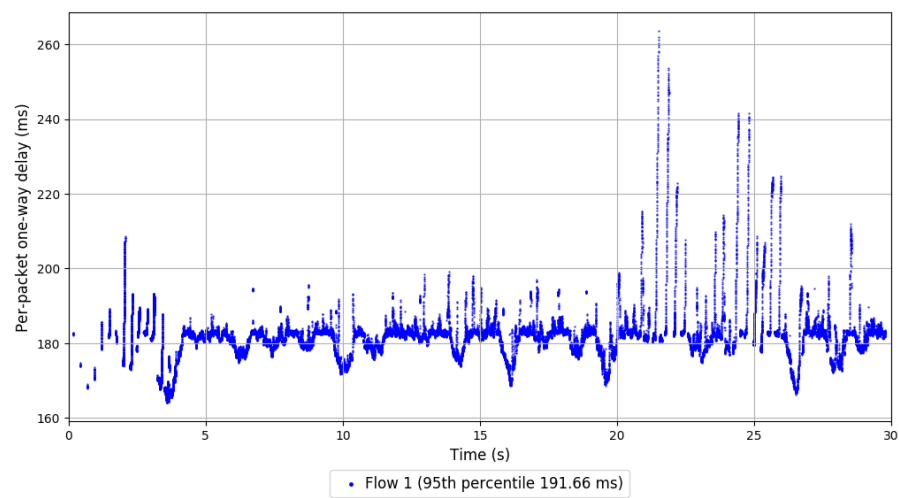
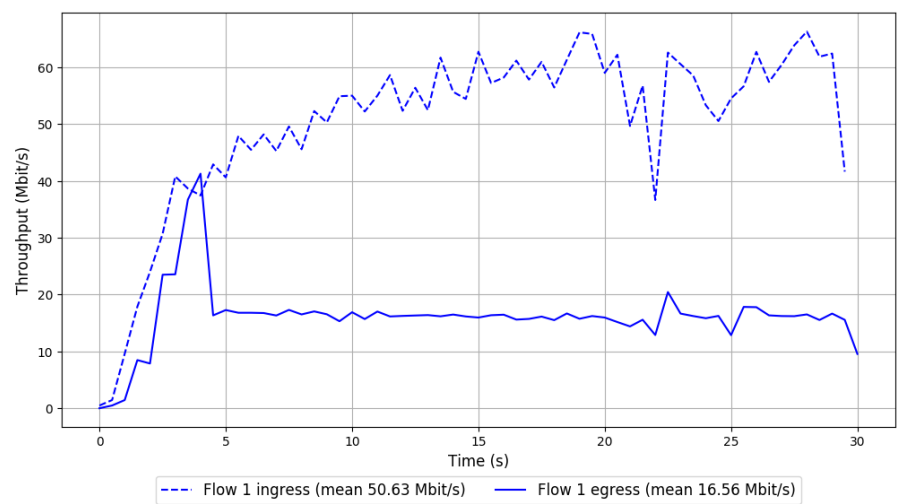


Run 5: Statistics of Indigo

Start at: 2018-11-30 12:55:30
End at: 2018-11-30 12:56:00
Local clock offset: 1.649 ms
Remote clock offset: 31.966 ms

Below is generated by plot.py at 2018-11-30 12:59:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 16.56 Mbit/s
95th percentile per-packet one-way delay: 191.665 ms
Loss rate: 67.57%
-- Flow 1:
Average throughput: 16.56 Mbit/s
95th percentile per-packet one-way delay: 191.665 ms
Loss rate: 67.57%

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-96d2da3

Start at: 2018-11-30 10:57:07

End at: 2018-11-30 10:57:37

Local clock offset: 1.524 ms

Remote clock offset: 30.695 ms

Below is generated by plot.py at 2018-11-30 12:59:02

Datalink statistics

-- Total of 1 flow:

Average throughput: 19.16 Mbit/s

95th percentile per-packet one-way delay: 184.872 ms

Loss rate: 62.50%

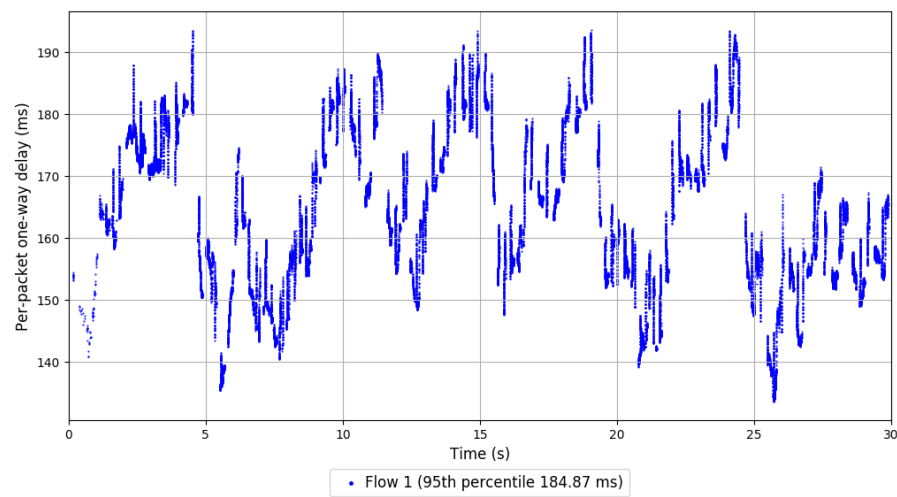
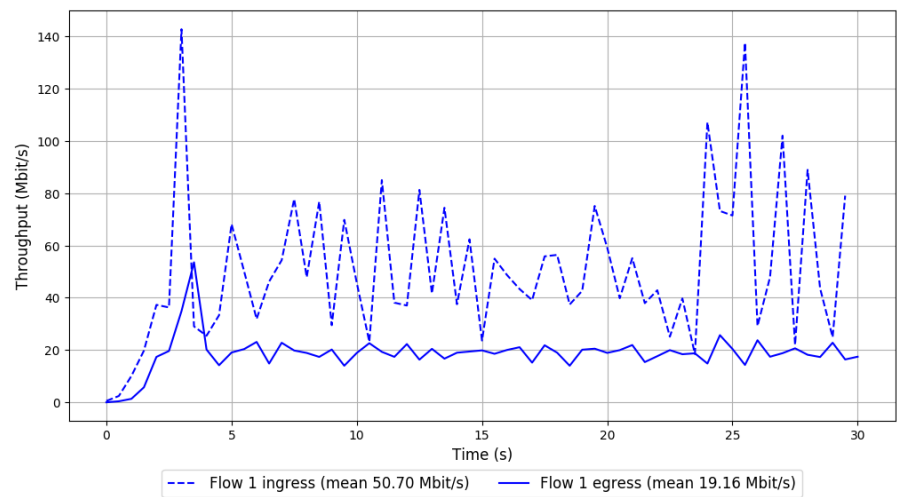
-- Flow 1:

Average throughput: 19.16 Mbit/s

95th percentile per-packet one-way delay: 184.872 ms

Loss rate: 62.50%

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

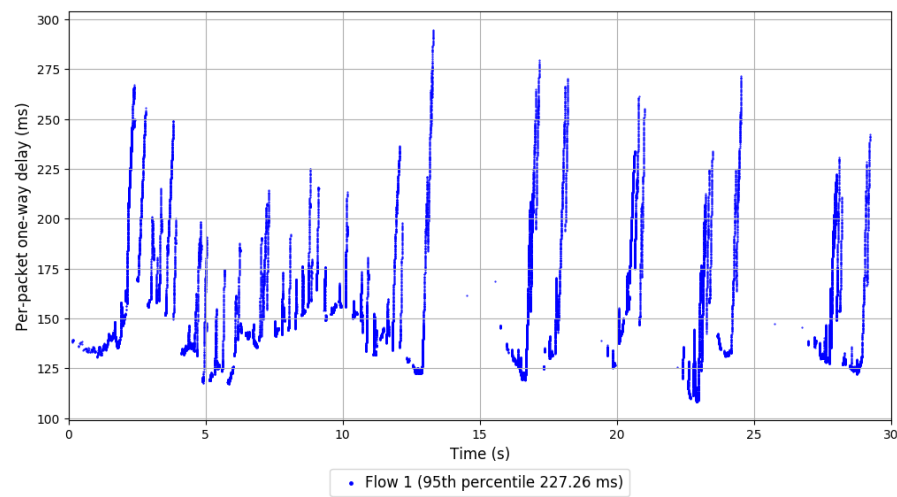
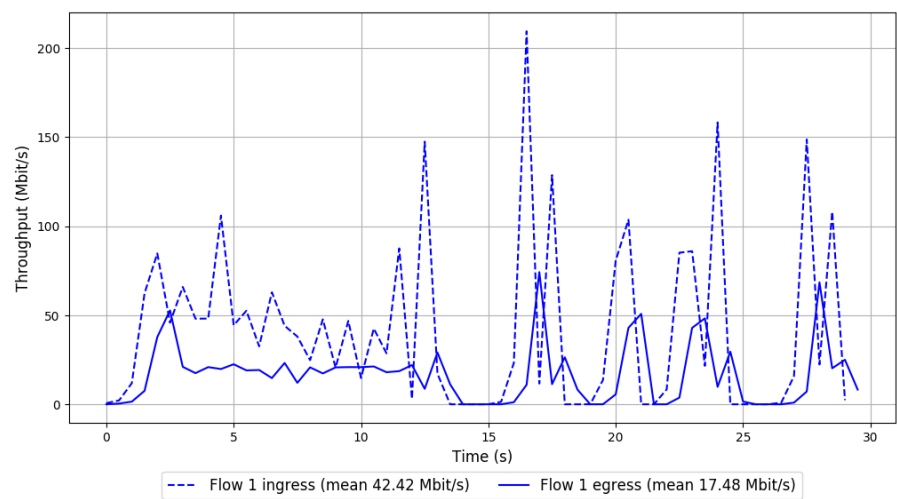


Run 2: Statistics of Indigo-96d2da3

Start at: 2018-11-30 11:20:29
End at: 2018-11-30 11:20:59
Local clock offset: 1.231 ms
Remote clock offset: 38.012 ms

Below is generated by plot.py at 2018-11-30 12:59:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 17.48 Mbit/s
95th percentile per-packet one-way delay: 227.259 ms
Loss rate: 58.69%
-- Flow 1:
Average throughput: 17.48 Mbit/s
95th percentile per-packet one-way delay: 227.259 ms
Loss rate: 58.69%

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

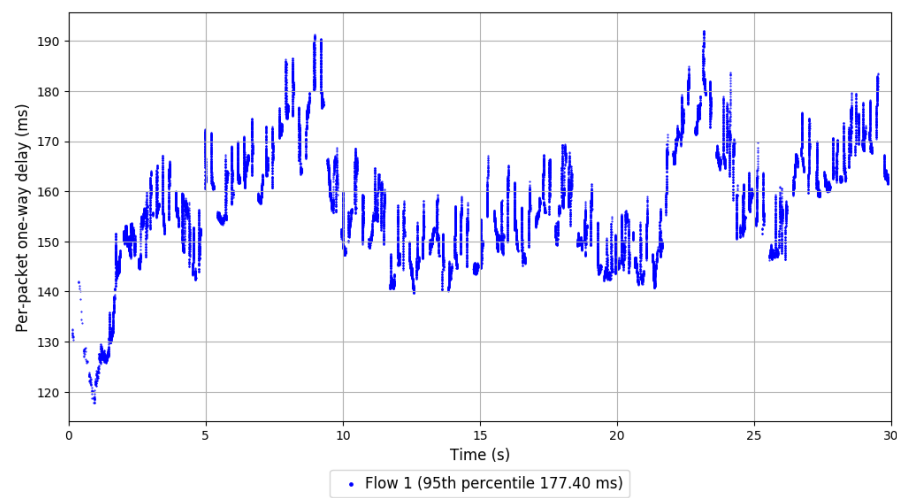
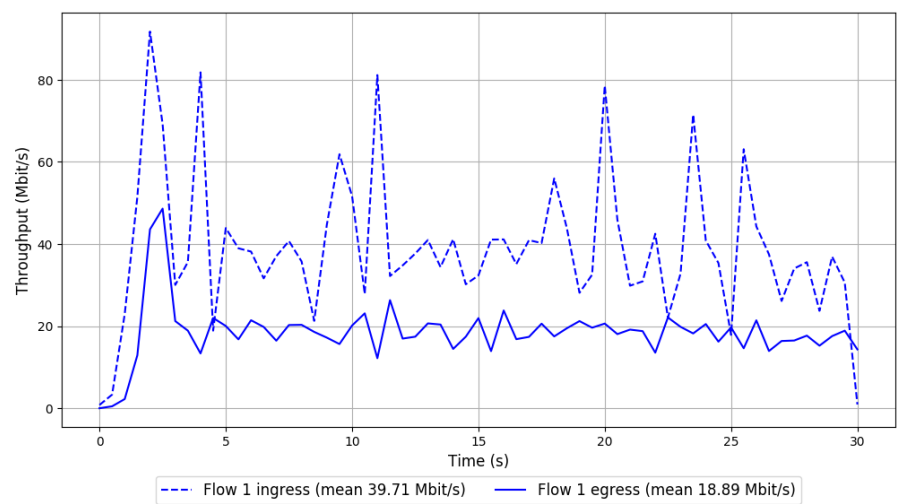


Run 3: Statistics of Indigo-96d2da3

Start at: 2018-11-30 11:43:51
End at: 2018-11-30 11:44:21
Local clock offset: 0.527 ms
Remote clock offset: 32.601 ms

Below is generated by plot.py at 2018-11-30 12:59:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 18.89 Mbit/s
95th percentile per-packet one-way delay: 177.403 ms
Loss rate: 52.84%
-- Flow 1:
Average throughput: 18.89 Mbit/s
95th percentile per-packet one-way delay: 177.403 ms
Loss rate: 52.84%

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

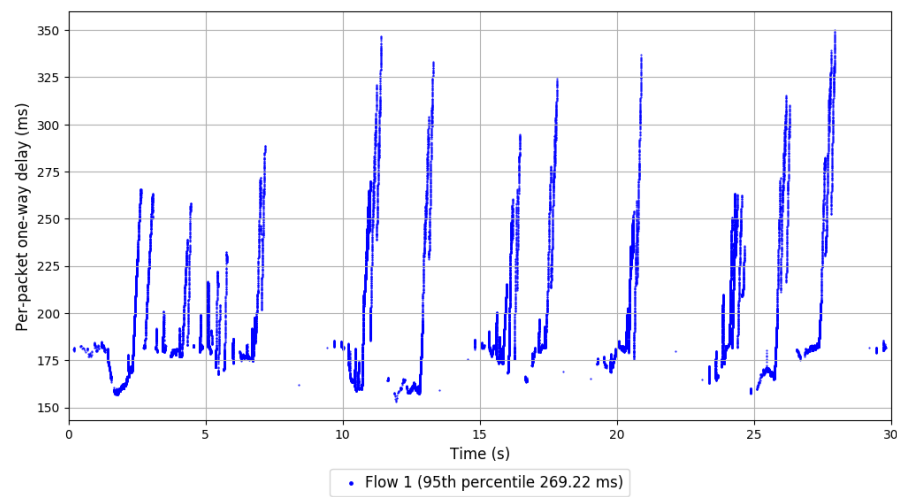
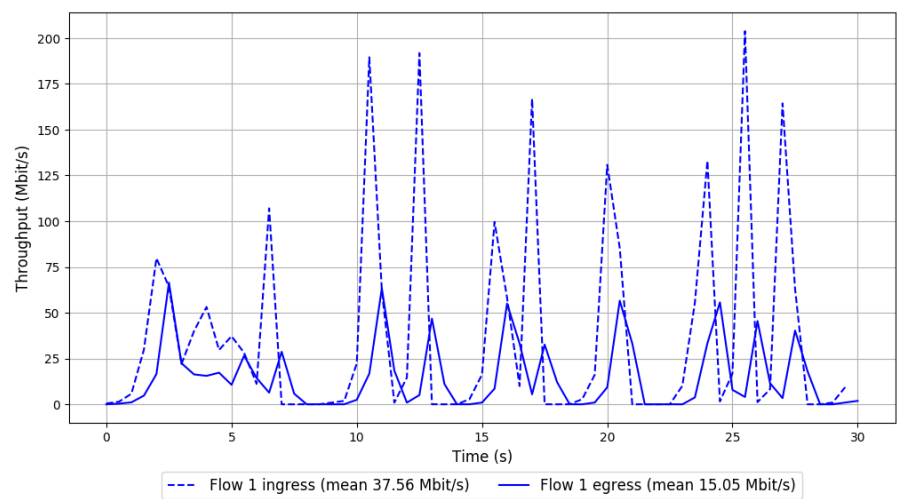


Run 4: Statistics of Indigo-96d2da3

Start at: 2018-11-30 12:07:55
End at: 2018-11-30 12:08:25
Local clock offset: 0.292 ms
Remote clock offset: 33.006 ms

Below is generated by plot.py at 2018-11-30 12:59:05
Datalink statistics
-- Total of 1 flow:
Average throughput: 15.05 Mbit/s
95th percentile per-packet one-way delay: 269.222 ms
Loss rate: 60.37%
-- Flow 1:
Average throughput: 15.05 Mbit/s
95th percentile per-packet one-way delay: 269.222 ms
Loss rate: 60.37%

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

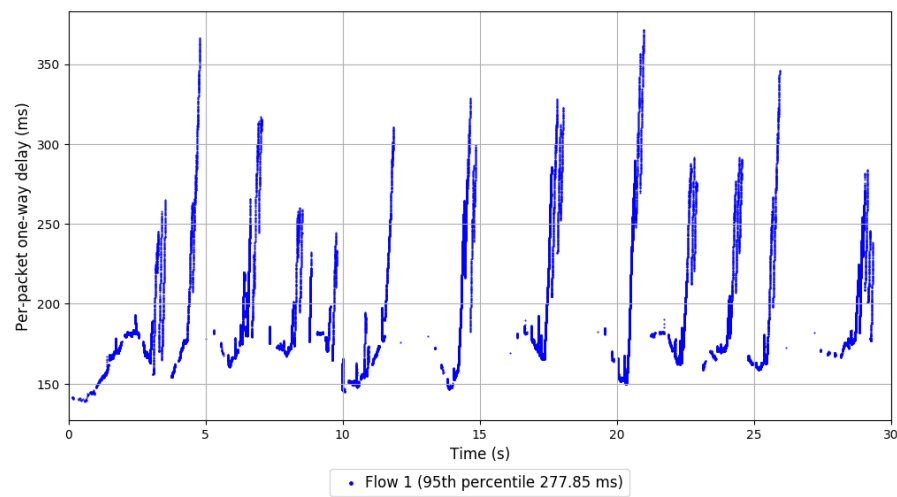
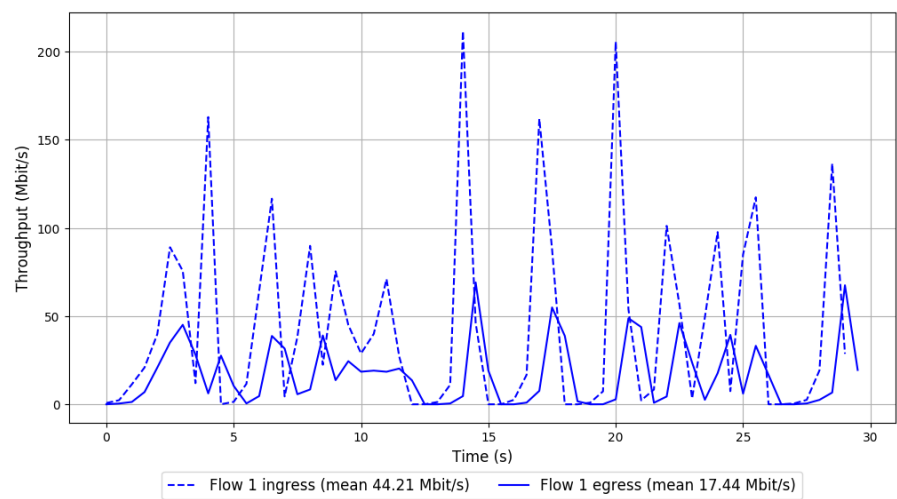


Run 5: Statistics of Indigo-96d2da3

Start at: 2018-11-30 12:33:44
End at: 2018-11-30 12:34:14
Local clock offset: -0.229 ms
Remote clock offset: 33.075 ms

Below is generated by plot.py at 2018-11-30 12:59:18
Datalink statistics
-- Total of 1 flow:
Average throughput: 17.44 Mbit/s
95th percentile per-packet one-way delay: 277.851 ms
Loss rate: 60.43%
-- Flow 1:
Average throughput: 17.44 Mbit/s
95th percentile per-packet one-way delay: 277.851 ms
Loss rate: 60.43%

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

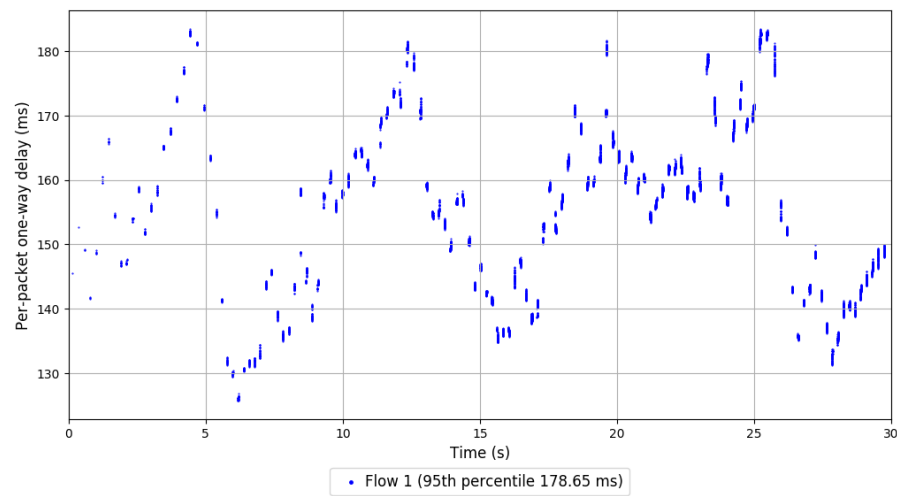
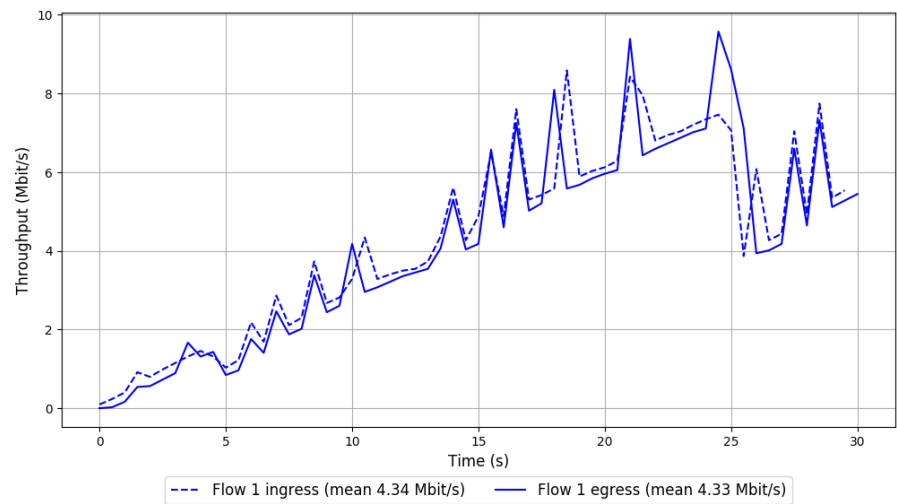


```
Run 1: Statistics of LEDBAT

Start at: 2018-11-30 11:10:46
End at: 2018-11-30 11:11:16
Local clock offset: 2.019 ms
Remote clock offset: 33.266 ms

# Below is generated by plot.py at 2018-11-30 12:59:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.33 Mbit/s
95th percentile per-packet one-way delay: 178.651 ms
Loss rate: 1.13%
-- Flow 1:
Average throughput: 4.33 Mbit/s
95th percentile per-packet one-way delay: 178.651 ms
Loss rate: 1.13%
```

Run 1: Report of LEDBAT — Data Link

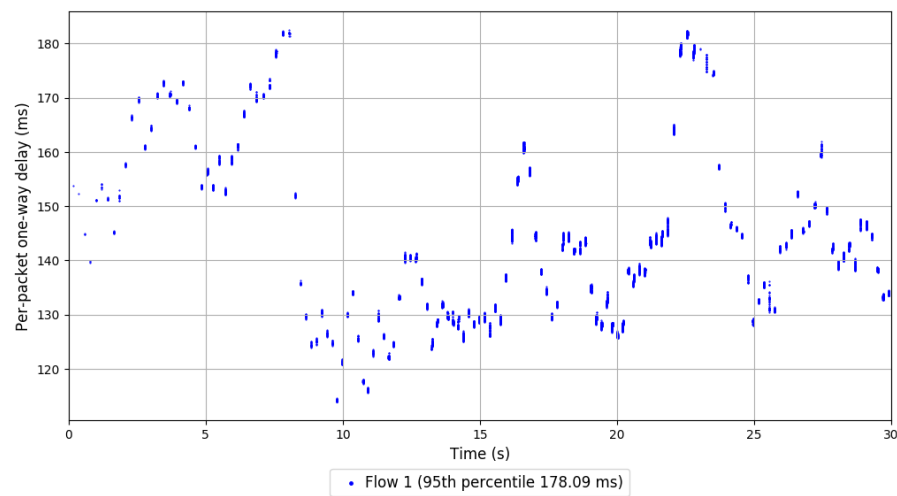
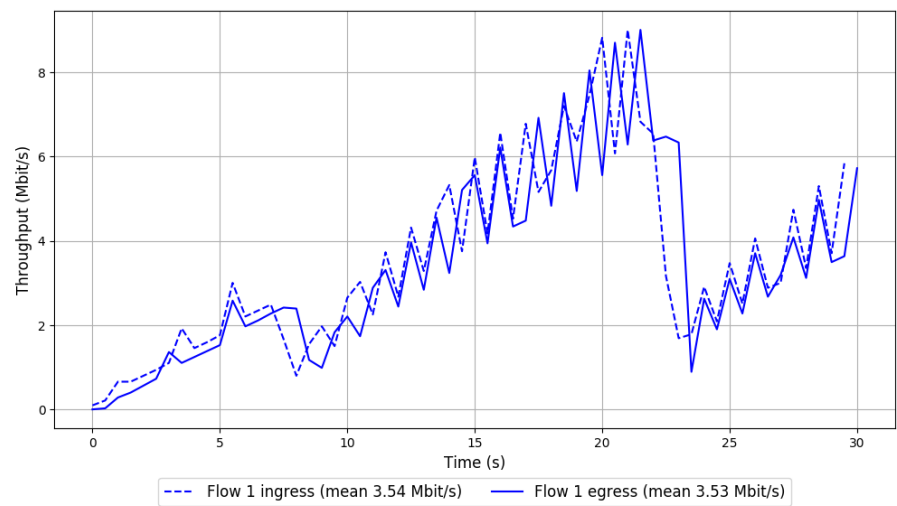


Run 2: Statistics of LEDBAT

Start at: 2018-11-30 11:33:50
End at: 2018-11-30 11:34:20
Local clock offset: 0.696 ms
Remote clock offset: 33.071 ms

Below is generated by plot.py at 2018-11-30 12:59:18
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.53 Mbit/s
95th percentile per-packet one-way delay: 178.089 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 3.53 Mbit/s
95th percentile per-packet one-way delay: 178.089 ms
Loss rate: 1.05%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-11-30 11:57:41

End at: 2018-11-30 11:58:11

Local clock offset: 0.485 ms

Remote clock offset: 34.07 ms

Below is generated by plot.py at 2018-11-30 12:59:18

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.28 Mbit/s

95th percentile per-packet one-way delay: 181.283 ms

Loss rate: 1.55%

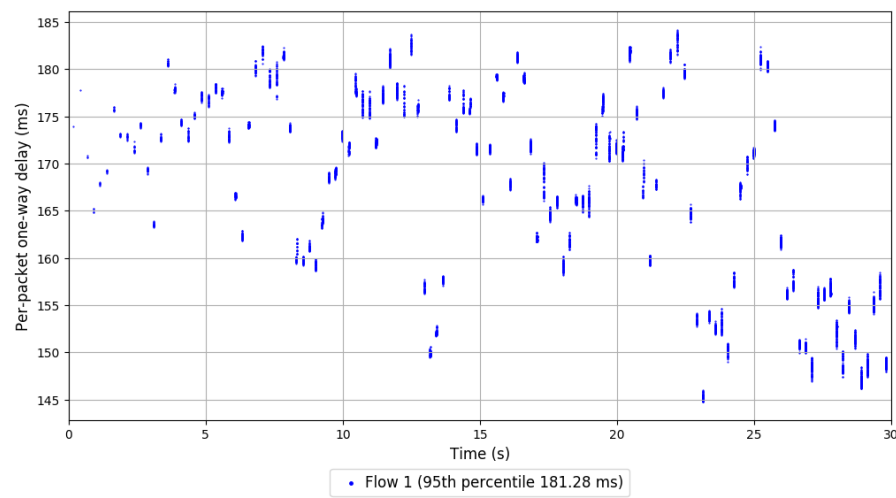
-- Flow 1:

Average throughput: 3.28 Mbit/s

95th percentile per-packet one-way delay: 181.283 ms

Loss rate: 1.55%

Run 3: Report of LEDBAT — Data Link

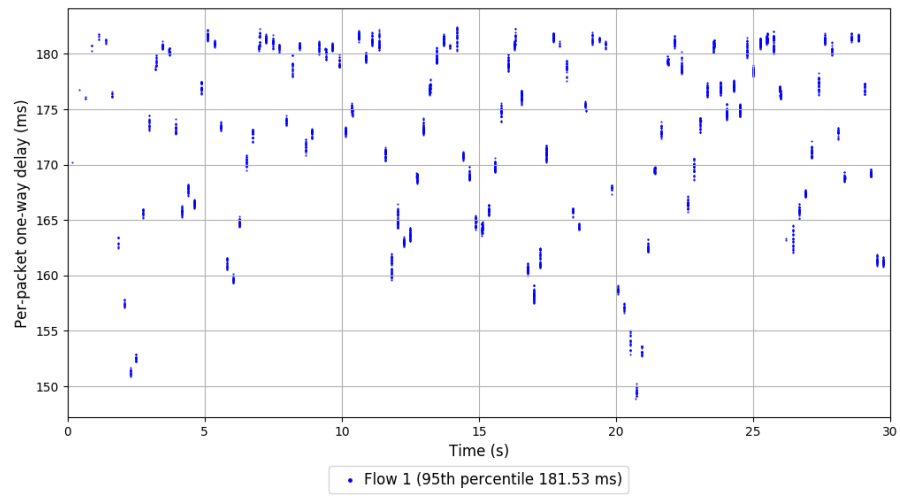
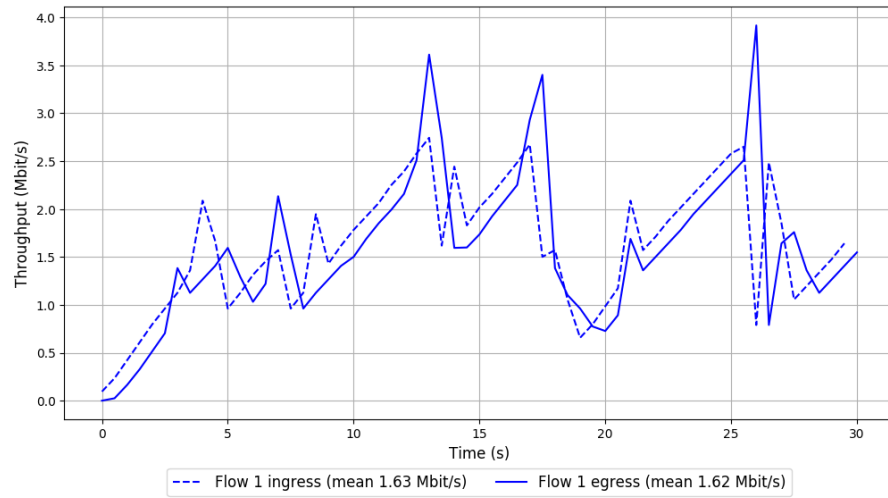


Run 4: Statistics of LEDBAT

Start at: 2018-11-30 12:22:54
End at: 2018-11-30 12:23:24
Local clock offset: -0.083 ms
Remote clock offset: 33.982 ms

Below is generated by plot.py at 2018-11-30 12:59:18
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.62 Mbit/s
95th percentile per-packet one-way delay: 181.528 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 1.62 Mbit/s
95th percentile per-packet one-way delay: 181.528 ms
Loss rate: 1.33%

Run 4: Report of LEDBAT — Data Link

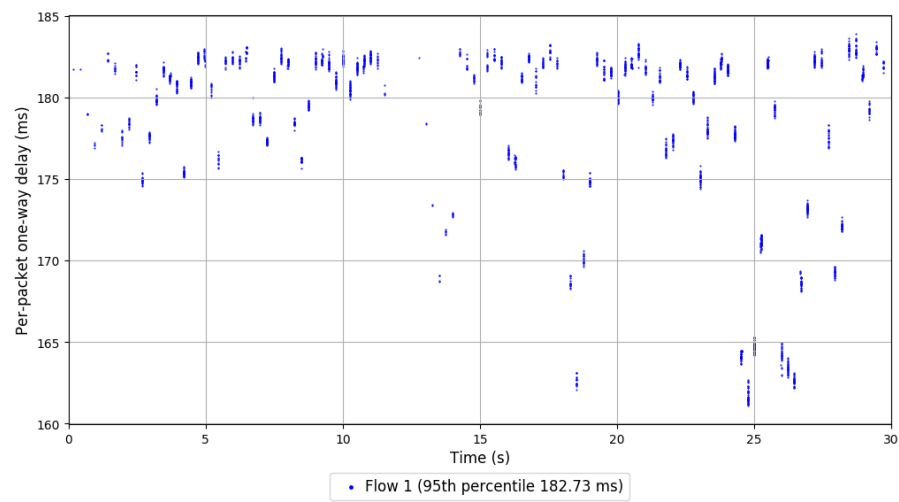
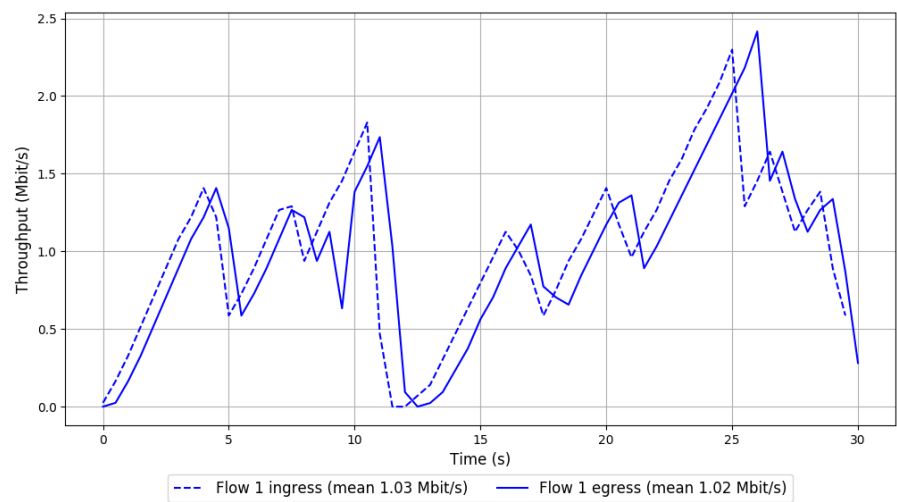


Run 5: Statistics of LEDBAT

Start at: 2018-11-30 12:48:47
End at: 2018-11-30 12:49:17
Local clock offset: 0.691 ms
Remote clock offset: 32.185 ms

Below is generated by plot.py at 2018-11-30 12:59:18
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.02 Mbit/s
95th percentile per-packet one-way delay: 182.730 ms
Loss rate: 1.76%
-- Flow 1:
Average throughput: 1.02 Mbit/s
95th percentile per-packet one-way delay: 182.730 ms
Loss rate: 1.76%

Run 5: Report of LEDBAT — Data Link

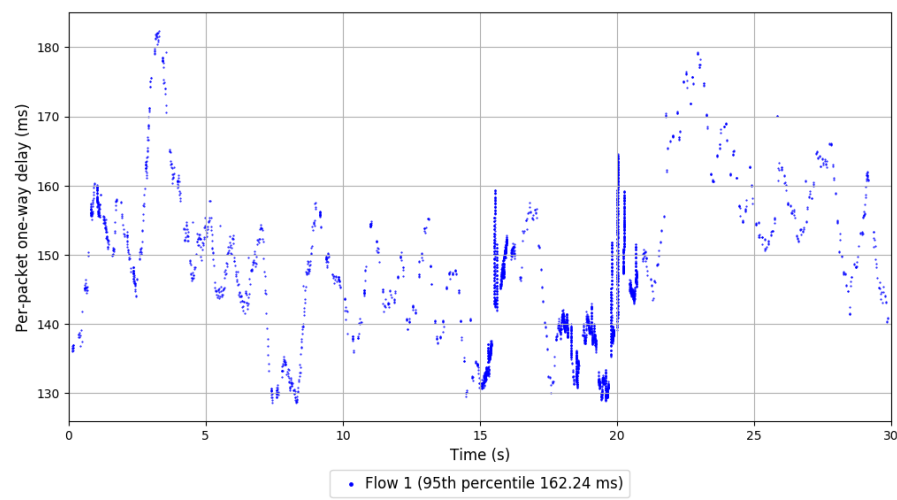
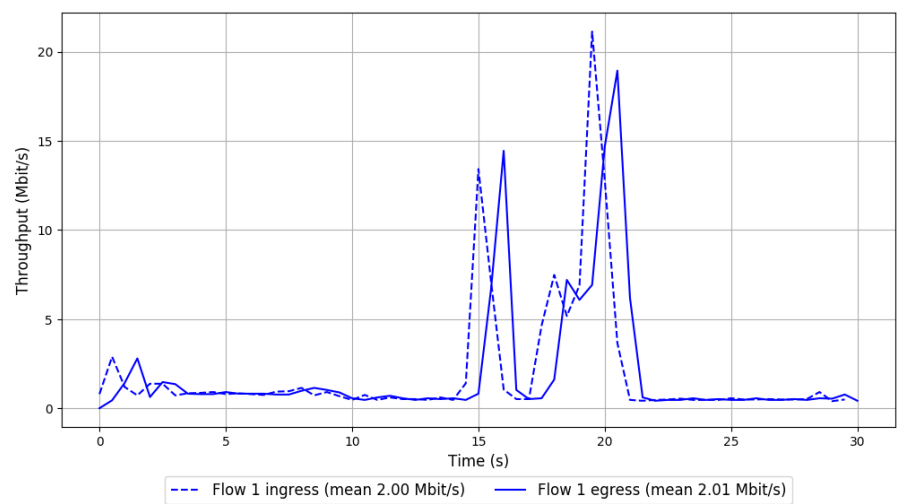


```
Run 1: Statistics of Indigo-Muses

Start at: 2018-11-30 11:04:44
End at: 2018-11-30 11:05:14
Local clock offset: 1.71 ms
Remote clock offset: 32.377 ms

# Below is generated by plot.py at 2018-11-30 12:59:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.01 Mbit/s
95th percentile per-packet one-way delay: 162.244 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 2.01 Mbit/s
95th percentile per-packet one-way delay: 162.244 ms
Loss rate: 0.17%
```

Run 1: Report of Indigo-Muses — Data Link

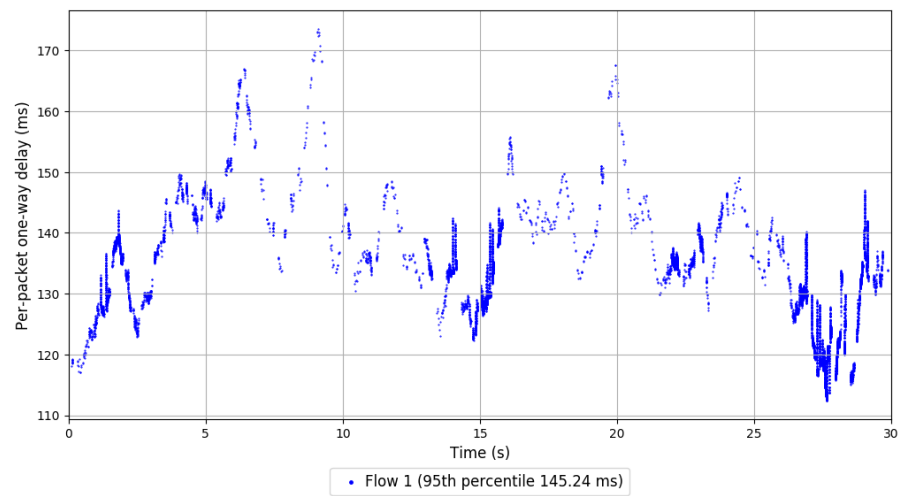
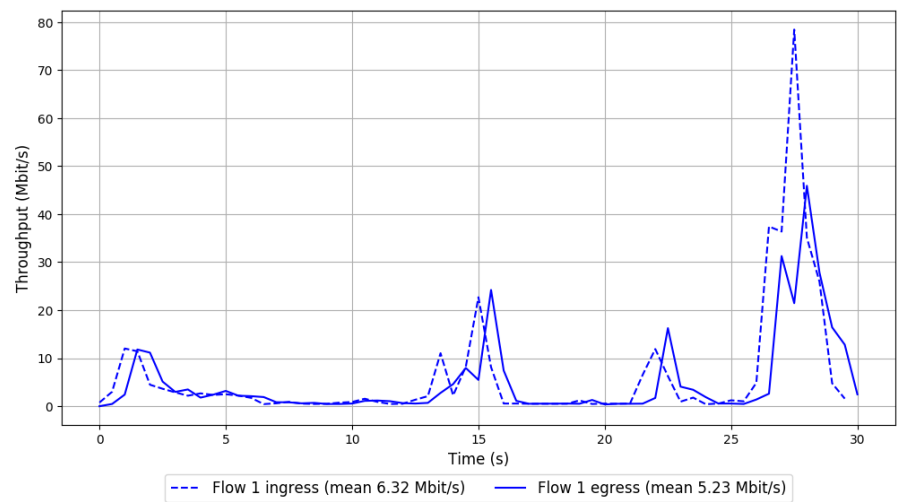


Run 2: Statistics of Indigo-Muses

Start at: 2018-11-30 11:27:44
End at: 2018-11-30 11:28:14
Local clock offset: 0.872 ms
Remote clock offset: 34.493 ms

Below is generated by plot.py at 2018-11-30 12:59:18
Datalink statistics
-- Total of 1 flow:
Average throughput: 5.23 Mbit/s
95th percentile per-packet one-way delay: 145.237 ms
Loss rate: 17.60%
-- Flow 1:
Average throughput: 5.23 Mbit/s
95th percentile per-packet one-way delay: 145.237 ms
Loss rate: 17.60%

Run 2: Report of Indigo-Muses — Data Link

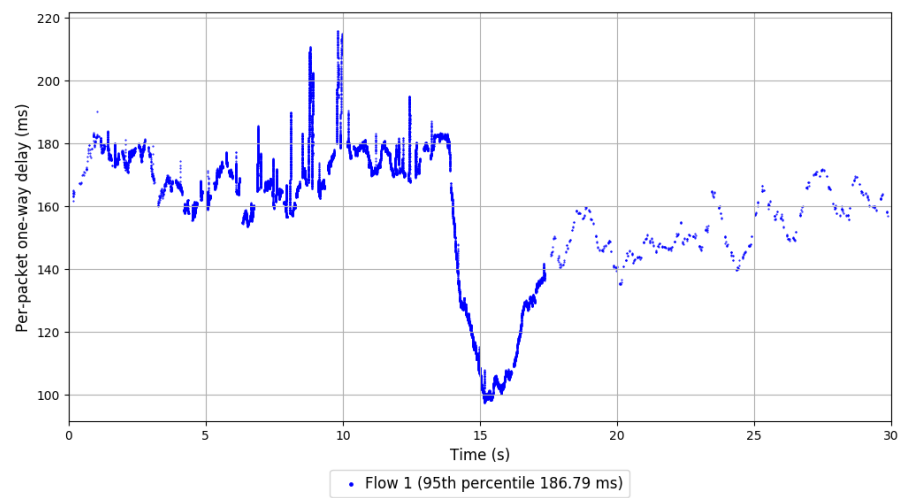
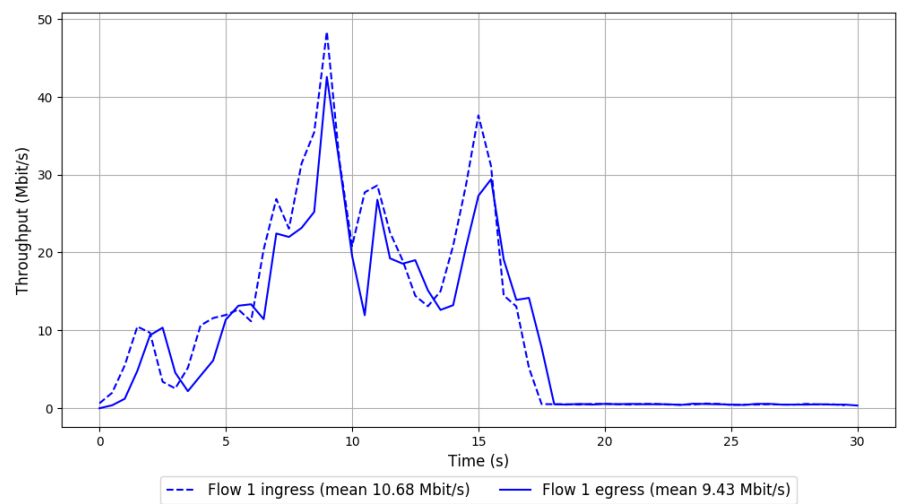


Run 3: Statistics of Indigo-Muses

Start at: 2018-11-30 11:51:33
End at: 2018-11-30 11:52:03
Local clock offset: 0.387 ms
Remote clock offset: 33.527 ms

Below is generated by plot.py at 2018-11-30 12:59:18
Datalink statistics
-- Total of 1 flow:
Average throughput: 9.43 Mbit/s
95th percentile per-packet one-way delay: 186.787 ms
Loss rate: 12.41%
-- Flow 1:
Average throughput: 9.43 Mbit/s
95th percentile per-packet one-way delay: 186.787 ms
Loss rate: 12.41%

Run 3: Report of Indigo-Muses — Data Link

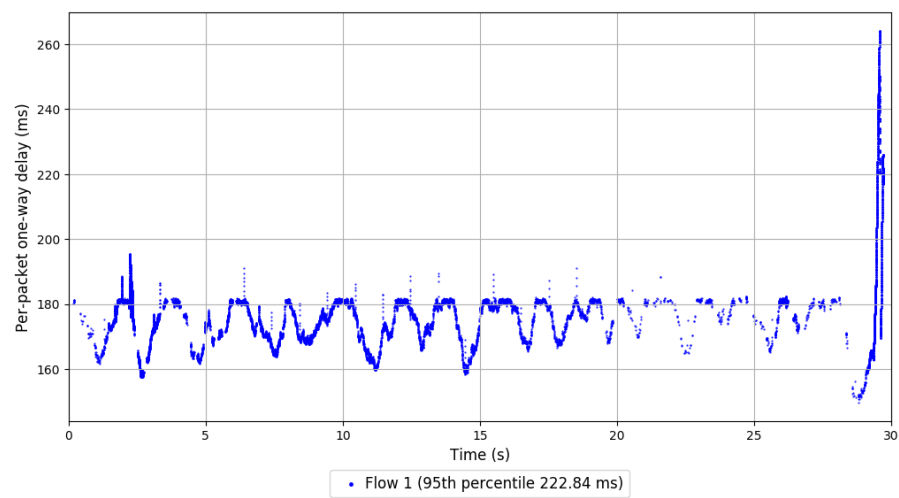
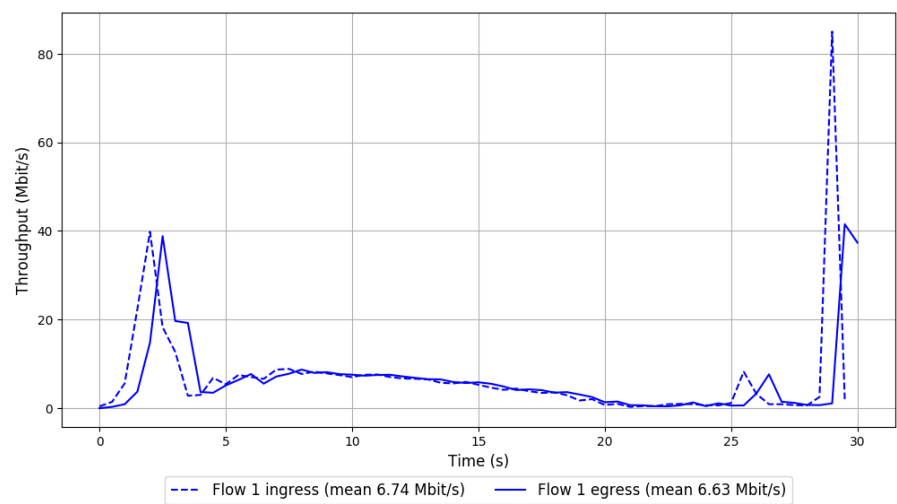


Run 4: Statistics of Indigo-Muses

Start at: 2018-11-30 12:16:07
End at: 2018-11-30 12:16:37
Local clock offset: 0.198 ms
Remote clock offset: 34.249 ms

Below is generated by plot.py at 2018-11-30 12:59:18
Datalink statistics
-- Total of 1 flow:
Average throughput: 6.63 Mbit/s
95th percentile per-packet one-way delay: 222.839 ms
Loss rate: 2.91%
-- Flow 1:
Average throughput: 6.63 Mbit/s
95th percentile per-packet one-way delay: 222.839 ms
Loss rate: 2.91%

Run 4: Report of Indigo-Muses — Data Link

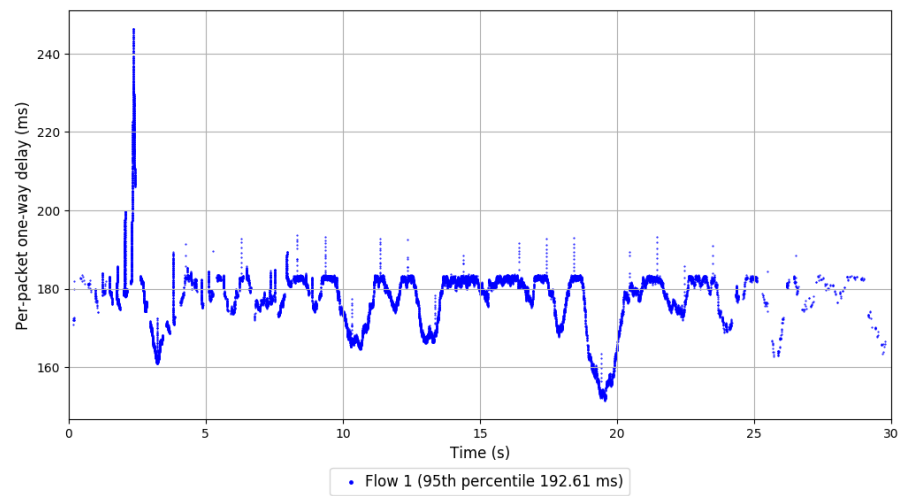
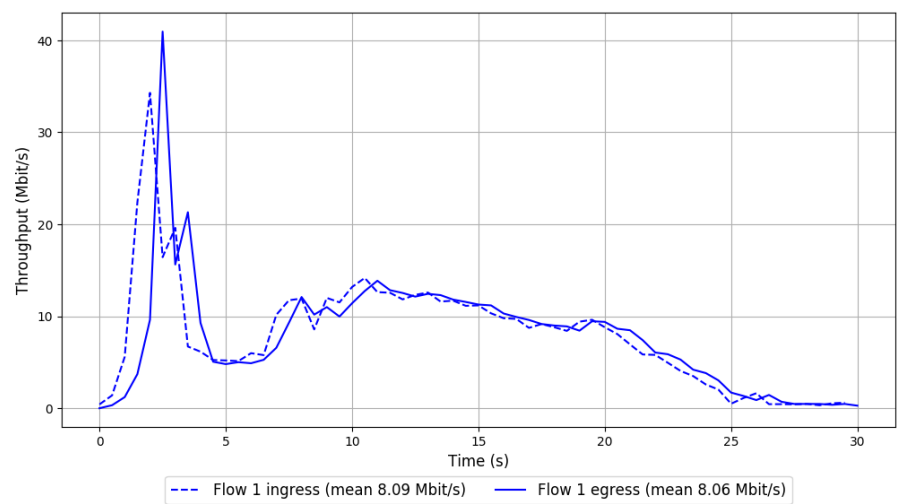


Run 5: Statistics of Indigo-Muses

Start at: 2018-11-30 12:41:52
End at: 2018-11-30 12:42:22
Local clock offset: -0.511 ms
Remote clock offset: 31.782 ms

Below is generated by plot.py at 2018-11-30 12:59:18
Datalink statistics
-- Total of 1 flow:
Average throughput: 8.06 Mbit/s
95th percentile per-packet one-way delay: 192.607 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 8.06 Mbit/s
95th percentile per-packet one-way delay: 192.607 ms
Loss rate: 1.30%

Run 5: Report of Indigo-Muses — Data Link

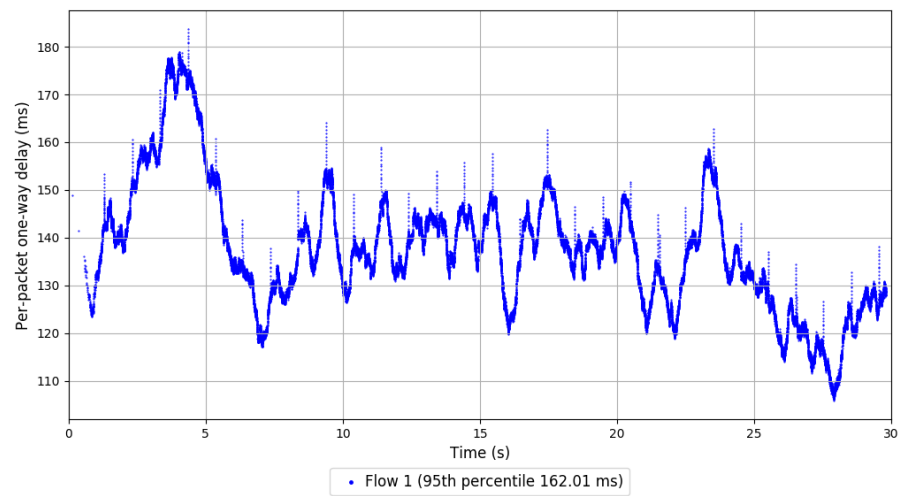
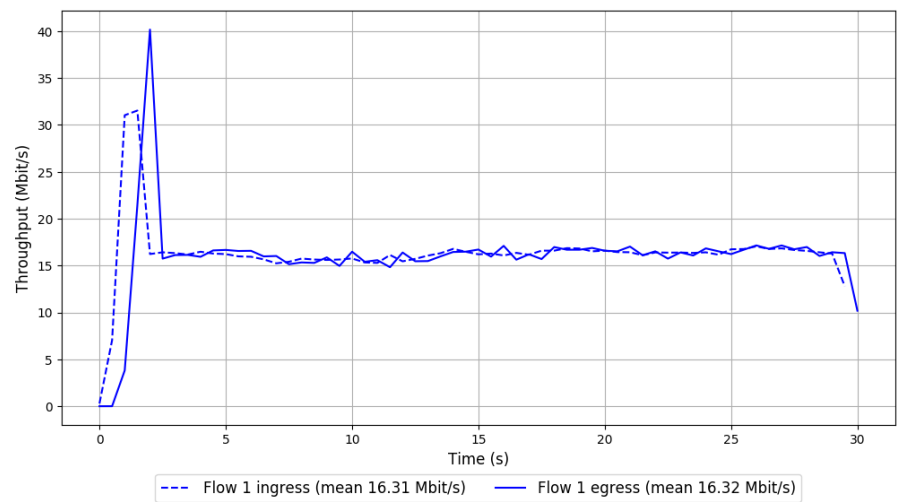


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-11-30 11:05:56
End at: 2018-11-30 11:06:26
Local clock offset: 1.944 ms
Remote clock offset: 35.953 ms

# Below is generated by plot.py at 2018-11-30 12:59:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 16.32 Mbit/s
95th percentile per-packet one-way delay: 162.015 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 16.32 Mbit/s
95th percentile per-packet one-way delay: 162.015 ms
Loss rate: 0.69%
```

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

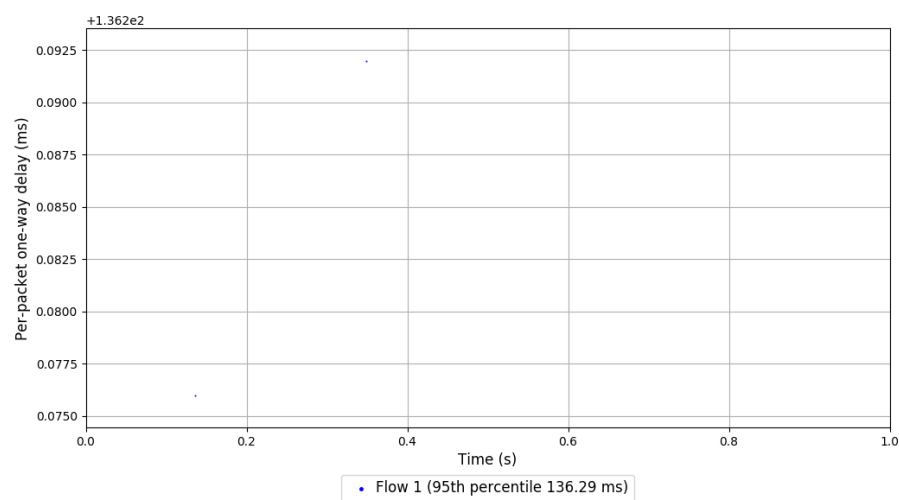
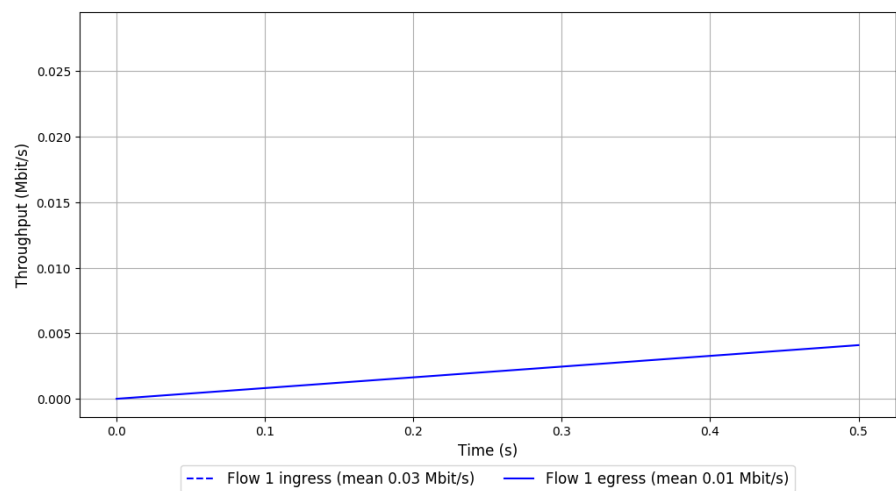
Start at: 2018-11-30 11:28:57

End at: 2018-11-30 11:29:27

Local clock offset: 0.917 ms

Remote clock offset: 35.251 ms

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-11-30 11:52:46

End at: 2018-11-30 11:53:16

Local clock offset: 0.652 ms

Remote clock offset: 34.45 ms

Below is generated by plot.py at 2018-11-30 12:59:26

Datalink statistics

-- Total of 1 flow:

Average throughput: 16.69 Mbit/s

95th percentile per-packet one-way delay: 176.173 ms

Loss rate: 0.88%

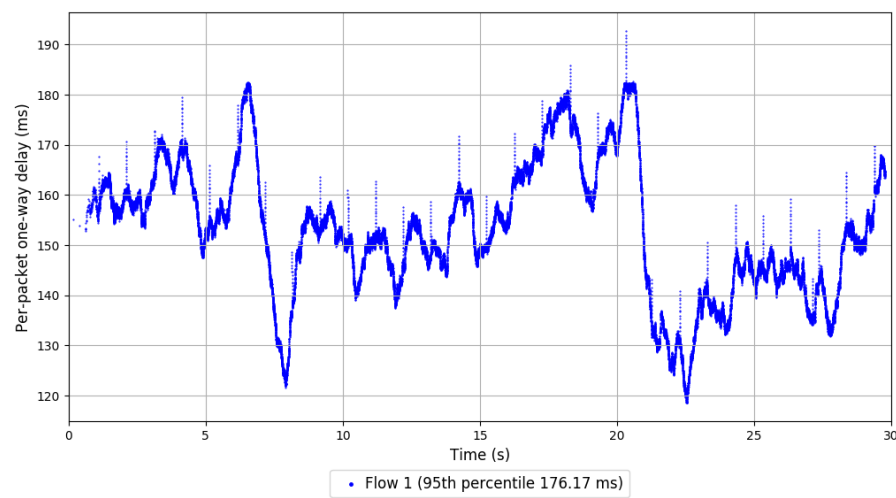
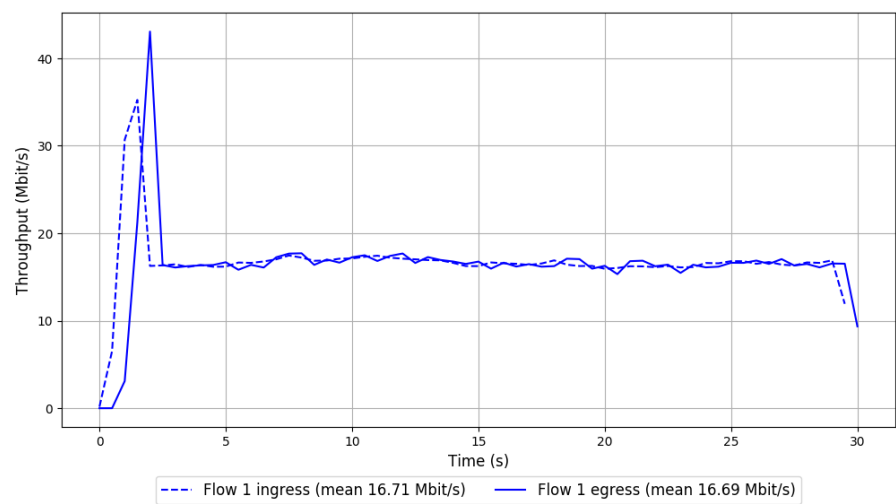
-- Flow 1:

Average throughput: 16.69 Mbit/s

95th percentile per-packet one-way delay: 176.173 ms

Loss rate: 0.88%

Run 3: Report of PCC-Allegro — Data Link

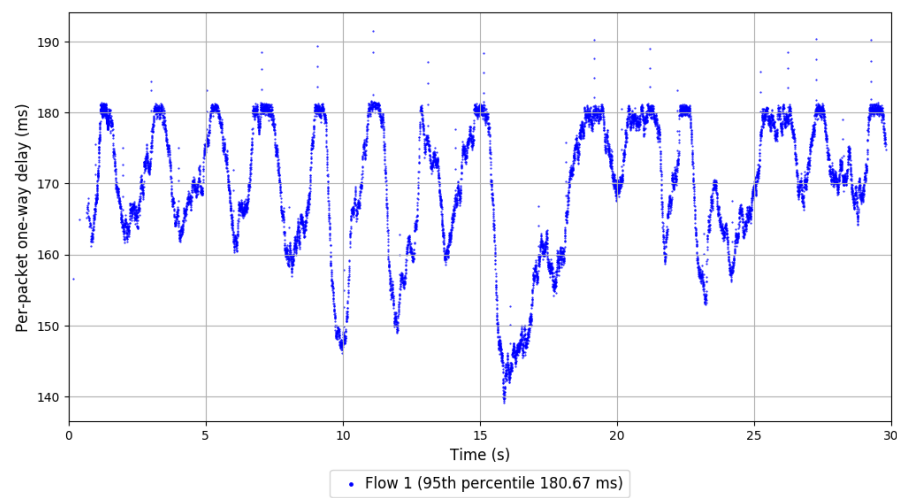
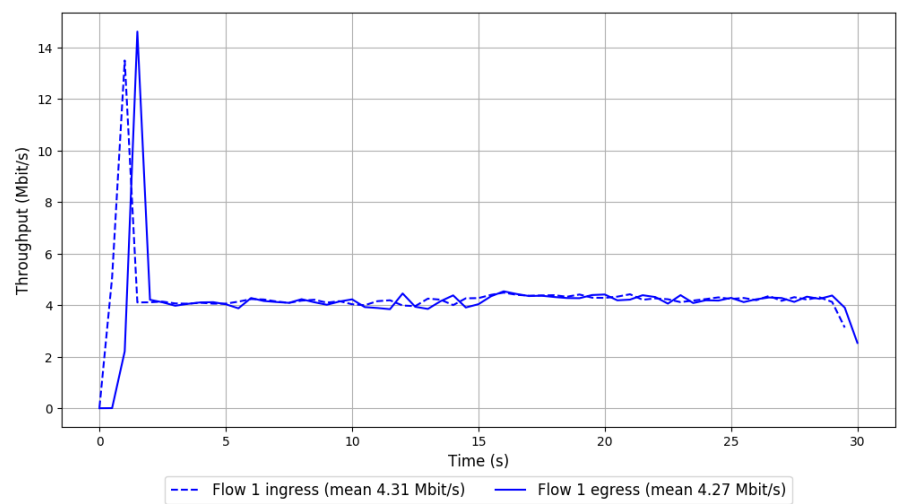


Run 4: Statistics of PCC-Allegro

Start at: 2018-11-30 12:17:21
End at: 2018-11-30 12:17:51
Local clock offset: 0.336 ms
Remote clock offset: 35.303 ms

Below is generated by plot.py at 2018-11-30 12:59:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 4.27 Mbit/s
95th percentile per-packet one-way delay: 180.666 ms
Loss rate: 1.53%
-- Flow 1:
Average throughput: 4.27 Mbit/s
95th percentile per-packet one-way delay: 180.666 ms
Loss rate: 1.53%

Run 4: Report of PCC-Allegro — Data Link

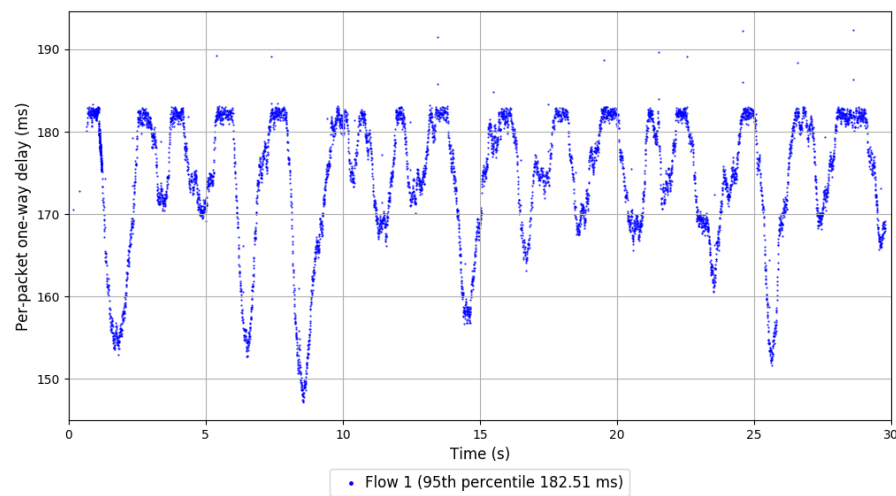
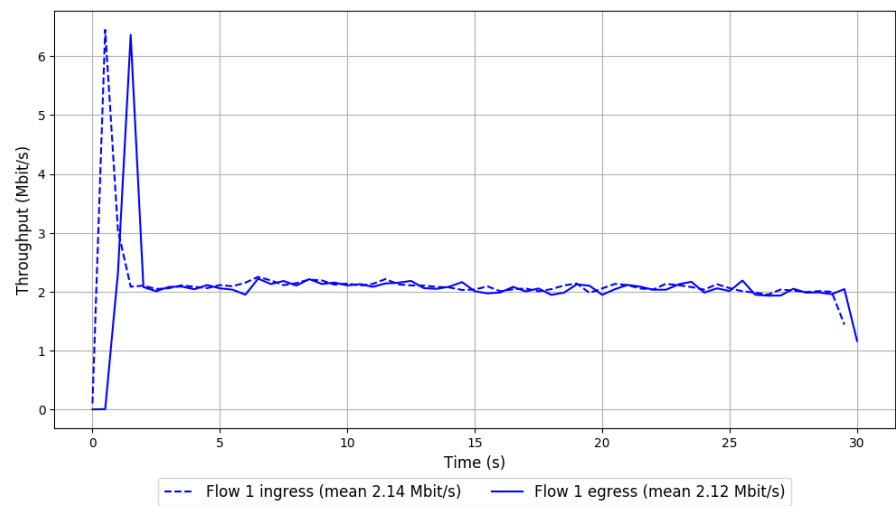


Run 5: Statistics of PCC-Allegro

Start at: 2018-11-30 12:43:11
End at: 2018-11-30 12:43:41
Local clock offset: -0.295 ms
Remote clock offset: 32.548 ms

Below is generated by plot.py at 2018-11-30 12:59:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.12 Mbit/s
95th percentile per-packet one-way delay: 182.510 ms
Loss rate: 1.74%
-- Flow 1:
Average throughput: 2.12 Mbit/s
95th percentile per-packet one-way delay: 182.510 ms
Loss rate: 1.74%

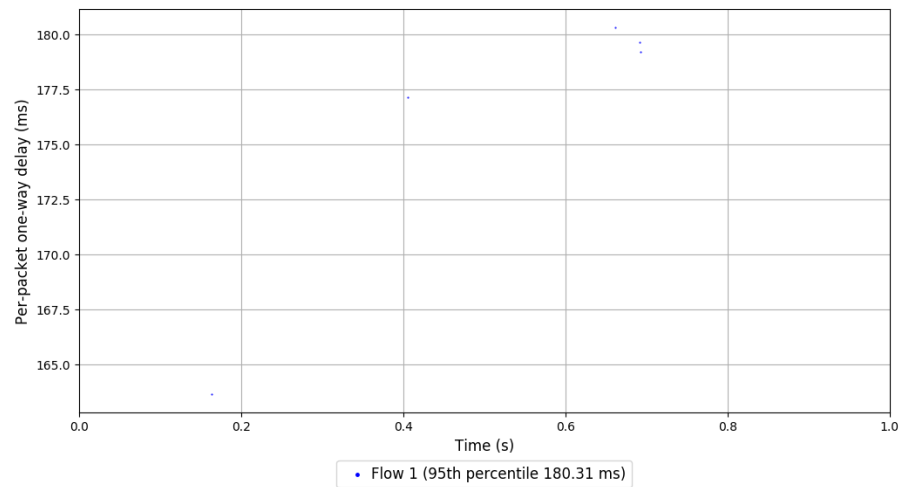
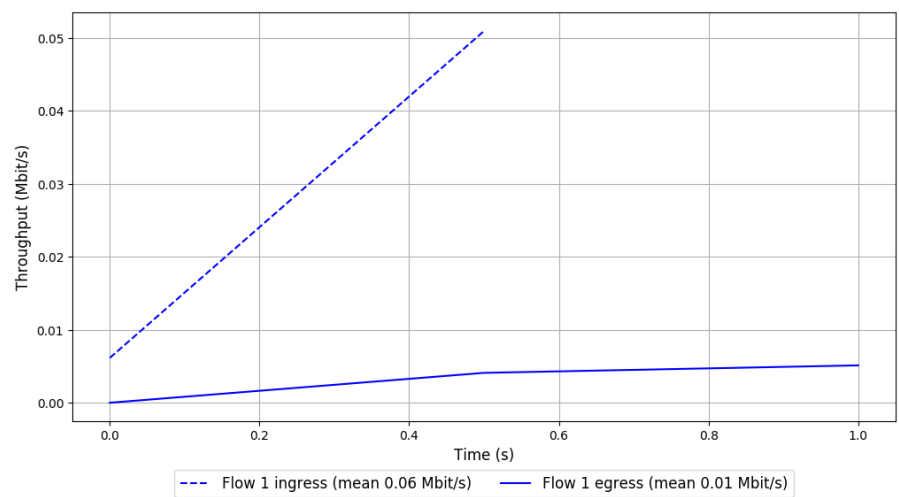
Run 5: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

Start at: 2018-11-30 11:14:24
End at: 2018-11-30 11:14:54
Local clock offset: 1.704 ms
Remote clock offset: 36.386 ms

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2018-11-30 11:37:29

End at: 2018-11-30 11:37:59

Local clock offset: 0.516 ms

Remote clock offset: 34.79 ms

Below is generated by plot.py at 2018-11-30 12:59:36

Datalink statistics

-- Total of 1 flow:

Average throughput: 10.94 Mbit/s

95th percentile per-packet one-way delay: 165.180 ms

Loss rate: 0.85%

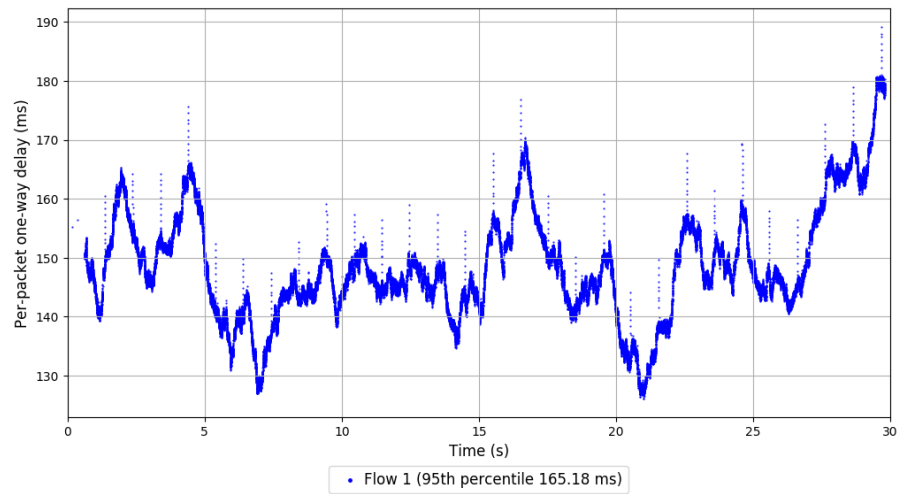
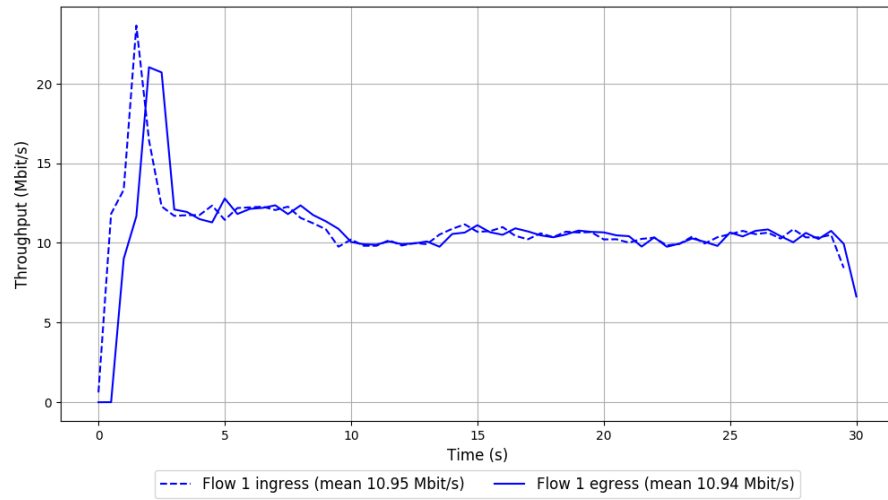
-- Flow 1:

Average throughput: 10.94 Mbit/s

95th percentile per-packet one-way delay: 165.180 ms

Loss rate: 0.85%

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

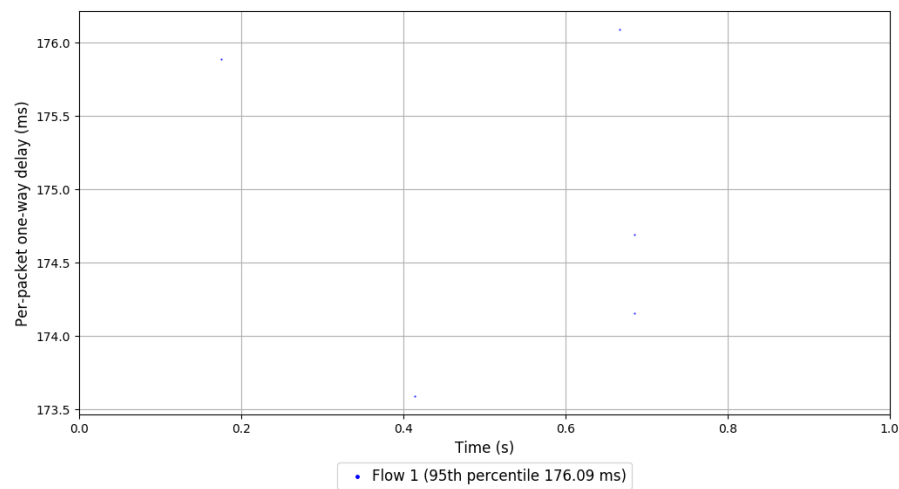
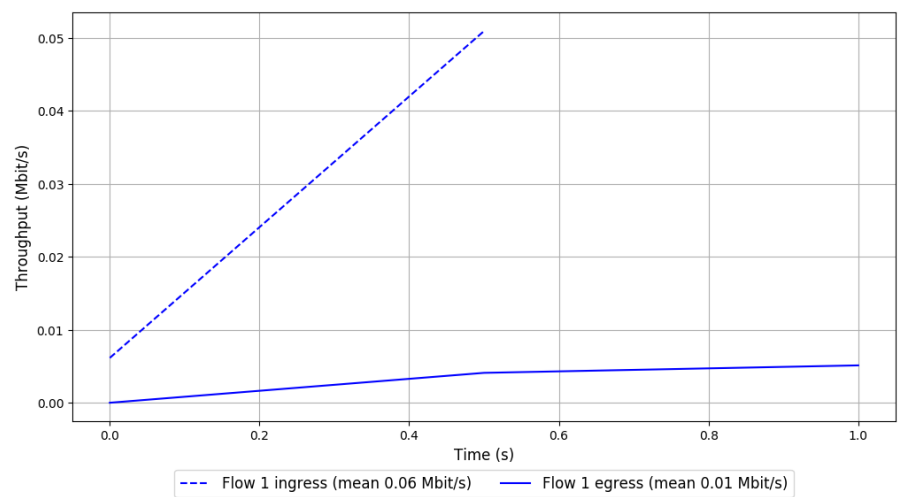
Start at: 2018-11-30 12:01:37

End at: 2018-11-30 12:02:07

Local clock offset: 0.348 ms

Remote clock offset: 33.259 ms

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

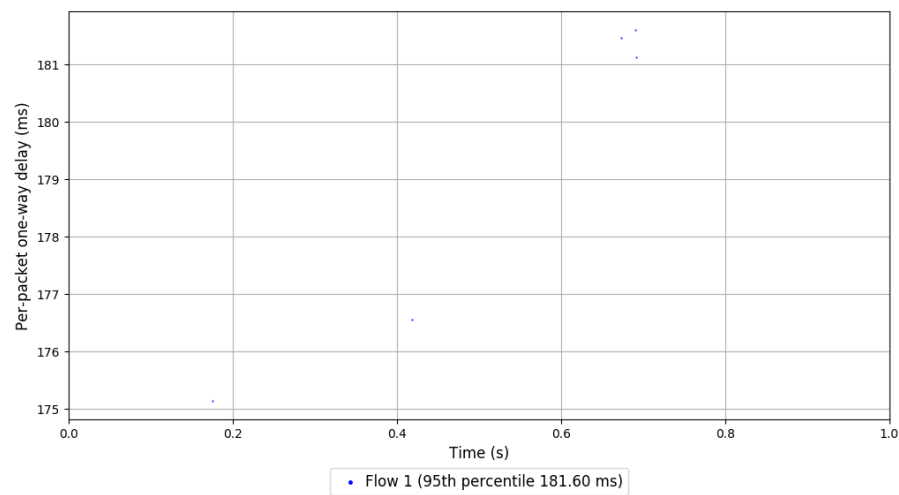
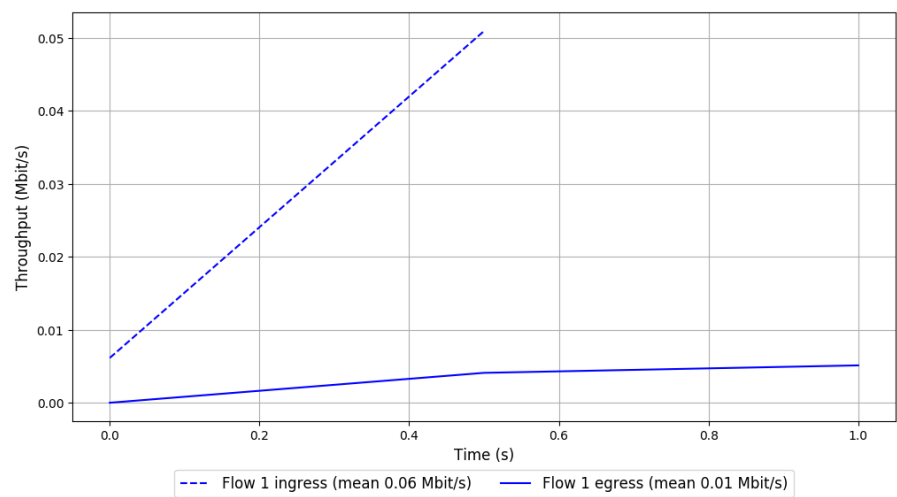
Start at: 2018-11-30 12:26:33

End at: 2018-11-30 12:27:03

Local clock offset: -0.033 ms

Remote clock offset: 33.818 ms

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

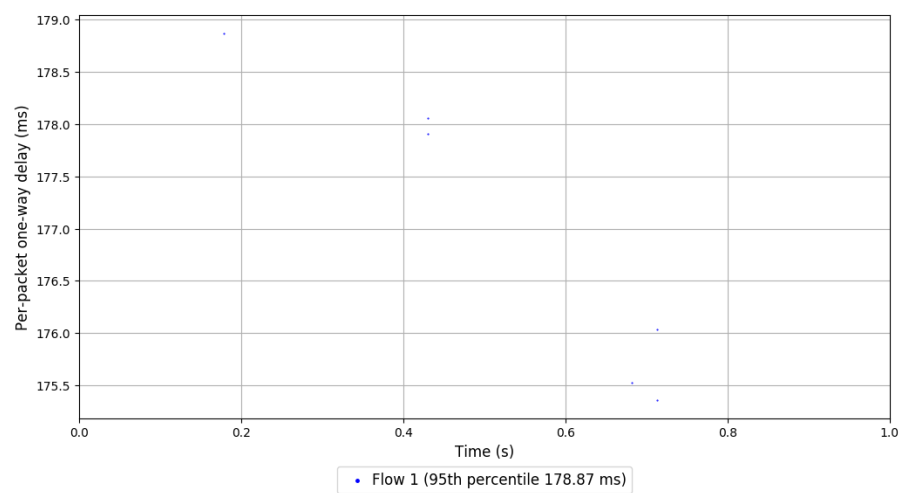
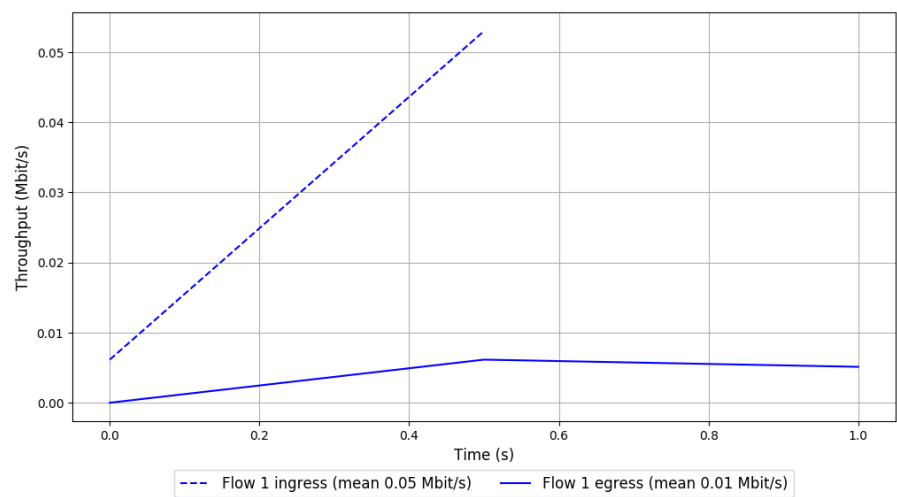
Start at: 2018-11-30 12:52:48

End at: 2018-11-30 12:53:18

Local clock offset: 1.385 ms

Remote clock offset: 33.368 ms

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2018-11-30 11:03:27

End at: 2018-11-30 11:03:57

Local clock offset: 1.734 ms

Remote clock offset: 33.312 ms

Below is generated by plot.py at 2018-11-30 12:59:36

Datalink statistics

-- Total of 1 flow:

Average throughput: 17.25 Mbit/s

95th percentile per-packet one-way delay: 172.660 ms

Loss rate: 9.89%

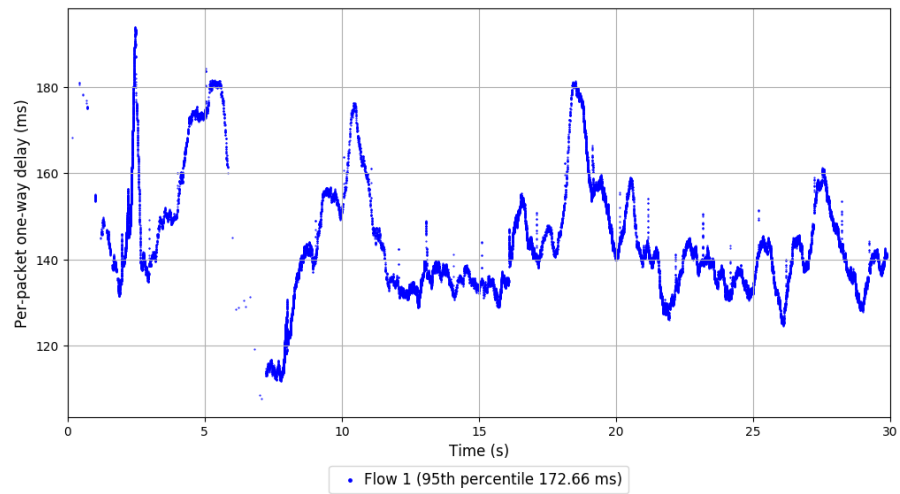
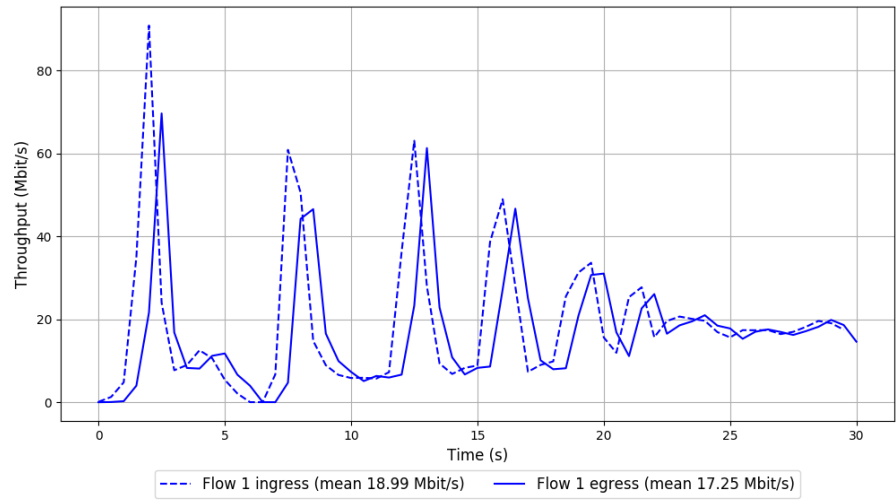
-- Flow 1:

Average throughput: 17.25 Mbit/s

95th percentile per-packet one-way delay: 172.660 ms

Loss rate: 9.89%

Run 1: Report of QUIC Cubic — Data Link

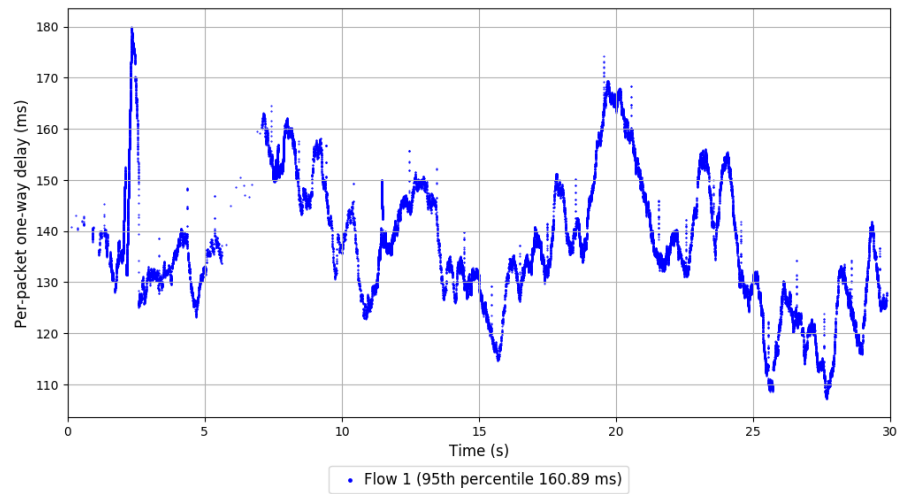
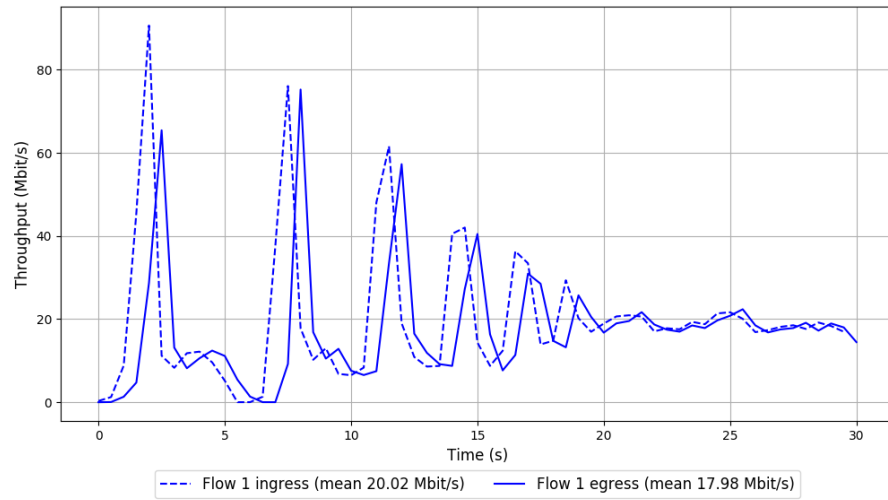


Run 2: Statistics of QUIC Cubic

Start at: 2018-11-30 11:26:31
End at: 2018-11-30 11:27:01
Local clock offset: 1.006 ms
Remote clock offset: 35.633 ms

Below is generated by plot.py at 2018-11-30 12:59:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 17.98 Mbit/s
95th percentile per-packet one-way delay: 160.893 ms
Loss rate: 10.81%
-- Flow 1:
Average throughput: 17.98 Mbit/s
95th percentile per-packet one-way delay: 160.893 ms
Loss rate: 10.81%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-11-30 11:50:15

End at: 2018-11-30 11:50:45

Local clock offset: 0.537 ms

Remote clock offset: 34.385 ms

Below is generated by plot.py at 2018-11-30 12:59:38

Datalink statistics

-- Total of 1 flow:

Average throughput: 15.28 Mbit/s

95th percentile per-packet one-way delay: 179.363 ms

Loss rate: 2.42%

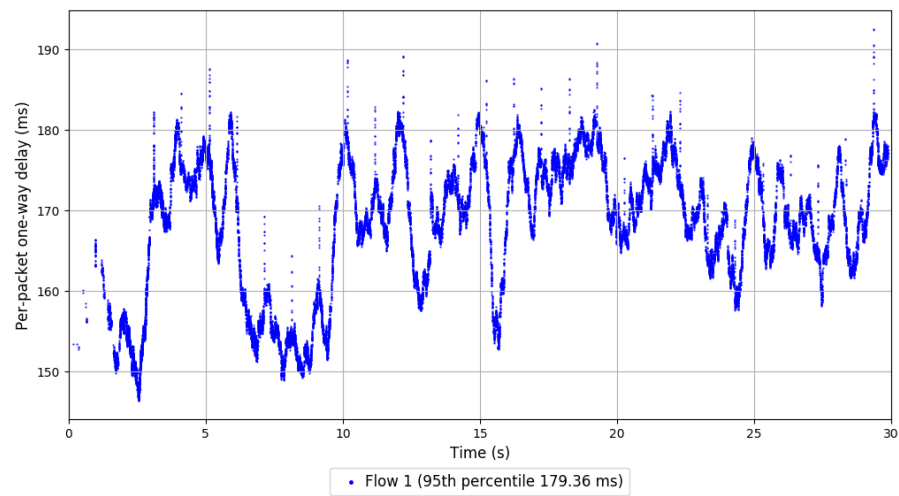
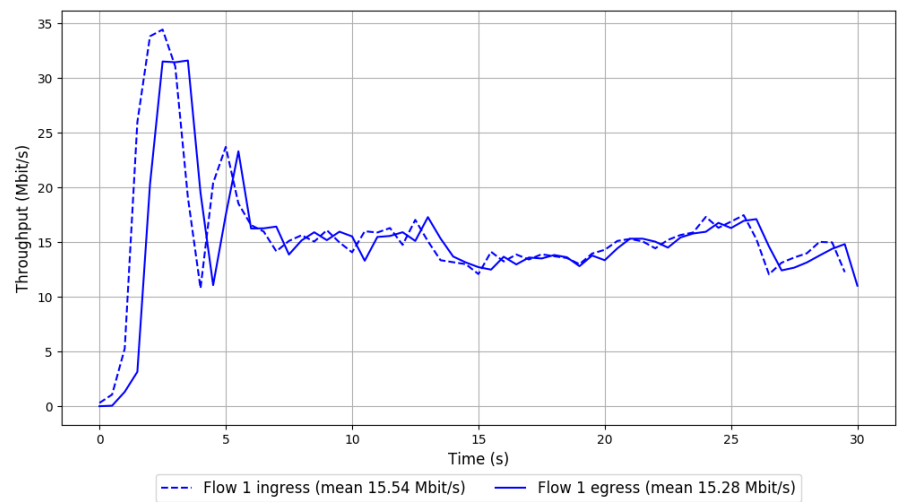
-- Flow 1:

Average throughput: 15.28 Mbit/s

95th percentile per-packet one-way delay: 179.363 ms

Loss rate: 2.42%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-11-30 12:14:53

End at: 2018-11-30 12:15:23

Local clock offset: 0.188 ms

Remote clock offset: 34.389 ms

Below is generated by plot.py at 2018-11-30 12:59:38

Datalink statistics

-- Total of 1 flow:

Average throughput: 5.73 Mbit/s

95th percentile per-packet one-way delay: 181.203 ms

Loss rate: 1.25%

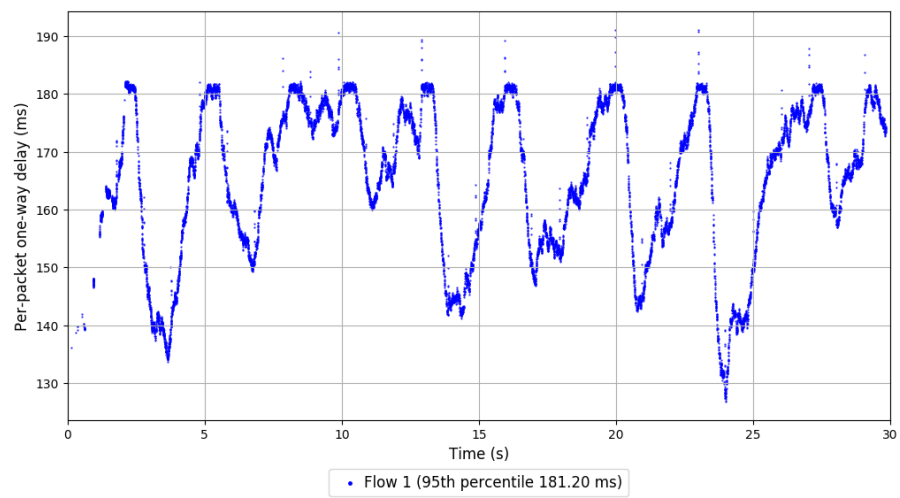
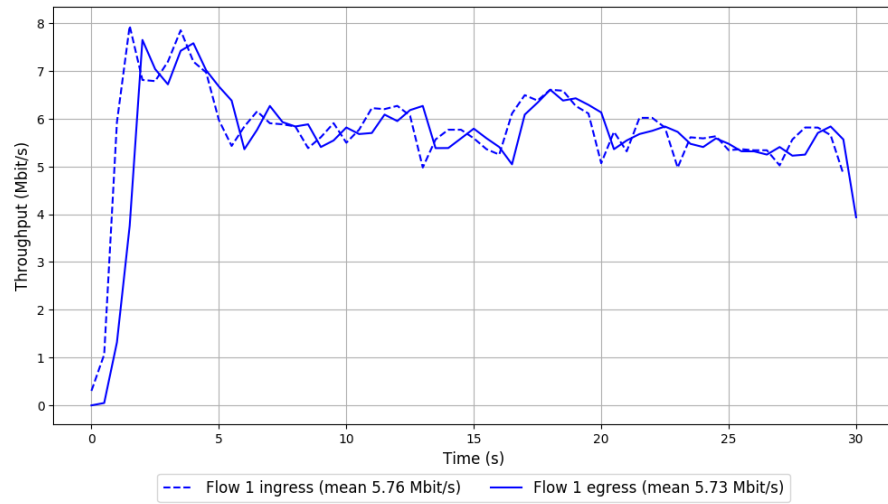
-- Flow 1:

Average throughput: 5.73 Mbit/s

95th percentile per-packet one-way delay: 181.203 ms

Loss rate: 1.25%

Run 4: Report of QUIC Cubic — Data Link

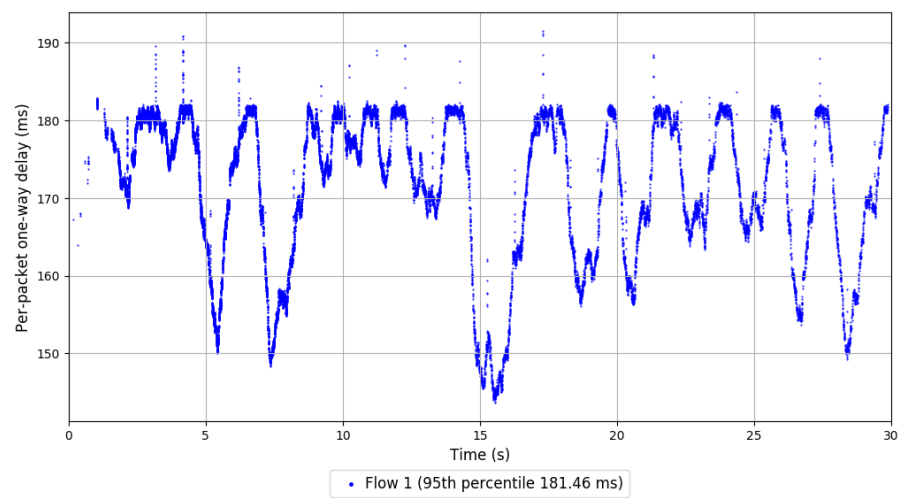
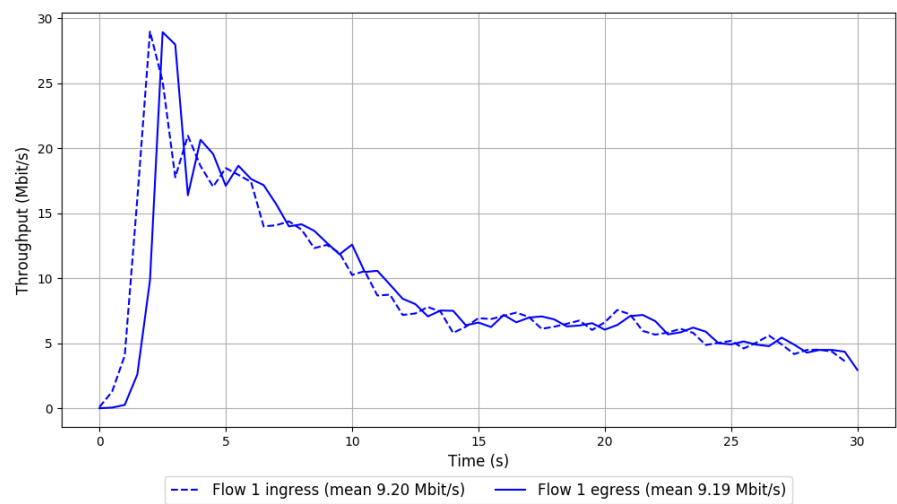


Run 5: Statistics of QUIC Cubic

Start at: 2018-11-30 12:40:21
End at: 2018-11-30 12:40:51
Local clock offset: -0.577 ms
Remote clock offset: 33.254 ms

Below is generated by plot.py at 2018-11-30 12:59:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 9.19 Mbit/s
95th percentile per-packet one-way delay: 181.456 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 9.19 Mbit/s
95th percentile per-packet one-way delay: 181.456 ms
Loss rate: 0.86%

Run 5: Report of QUIC Cubic — Data Link

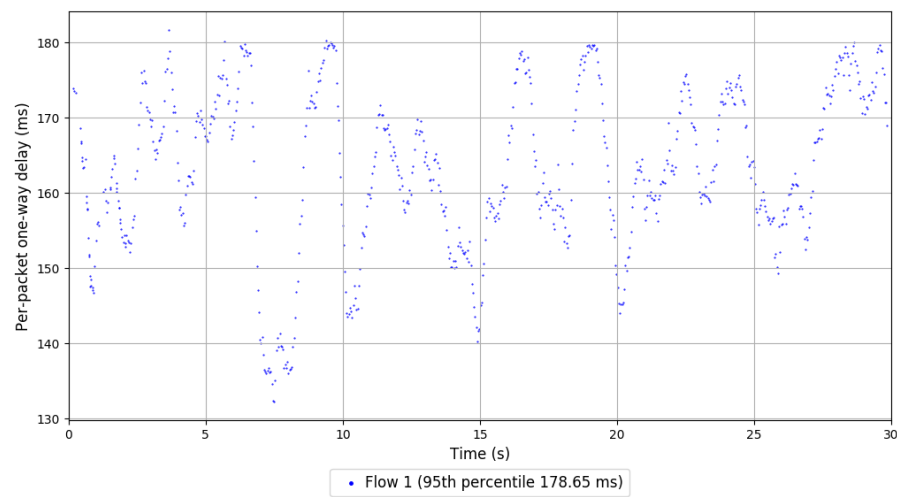
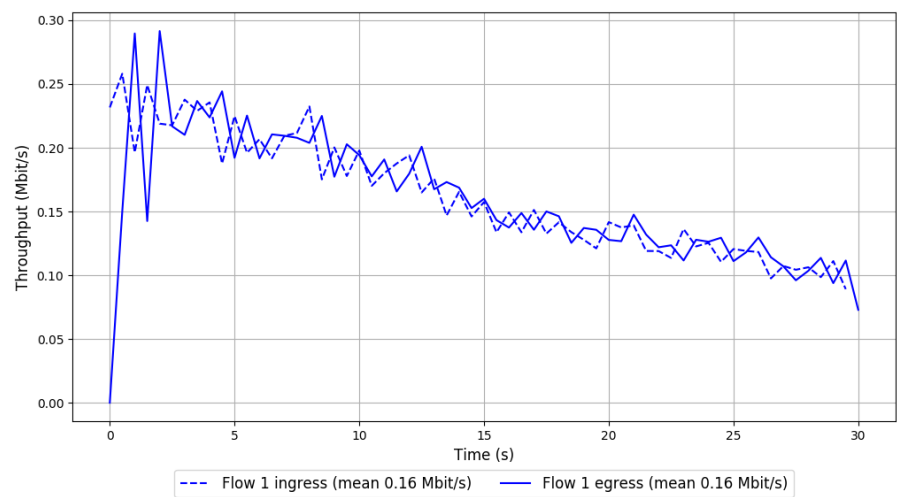


Run 1: Statistics of SCReAM

Start at: 2018-11-30 11:13:13
End at: 2018-11-30 11:13:43
Local clock offset: 1.835 ms
Remote clock offset: 36.725 ms

Below is generated by plot.py at 2018-11-30 12:59:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 178.646 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 178.646 ms
Loss rate: 0.50%

Run 1: Report of SReAM — Data Link

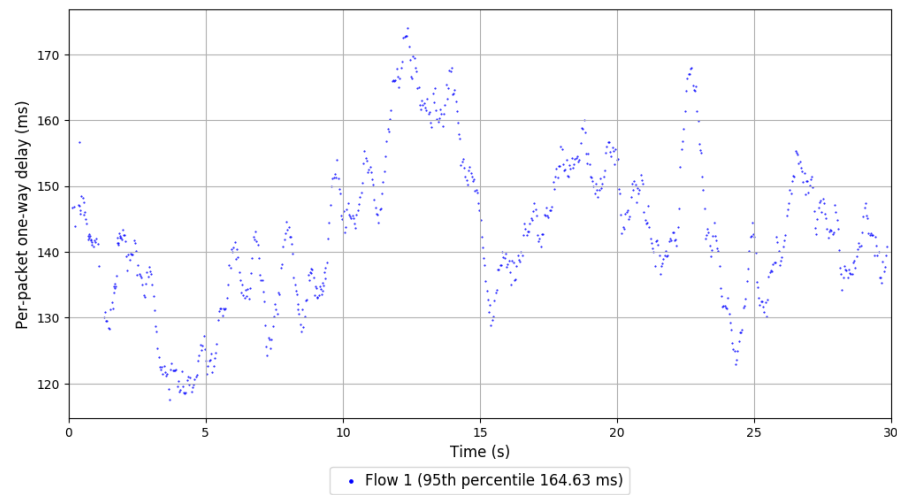
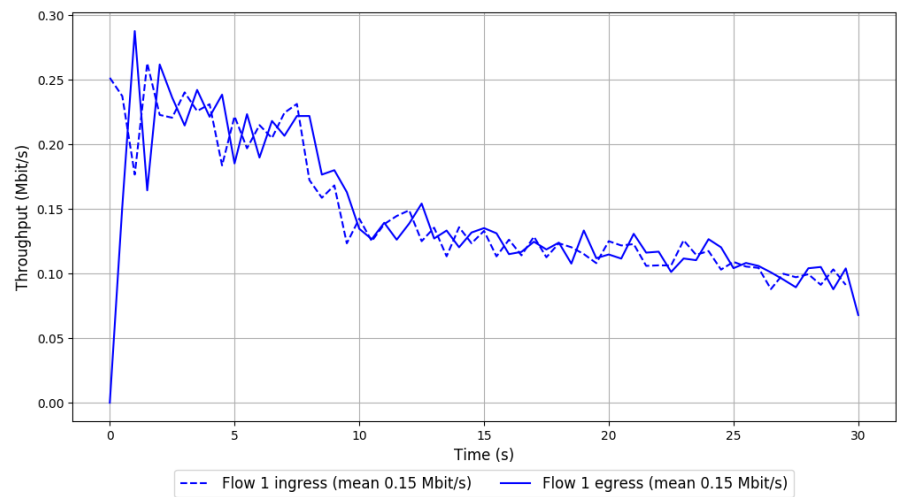


Run 2: Statistics of SCReAM

Start at: 2018-11-30 11:36:18
End at: 2018-11-30 11:36:48
Local clock offset: 0.78 ms
Remote clock offset: 33.692 ms

Below is generated by plot.py at 2018-11-30 12:59:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 164.634 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 164.634 ms
Loss rate: 0.52%

Run 2: Report of SReAM — Data Link

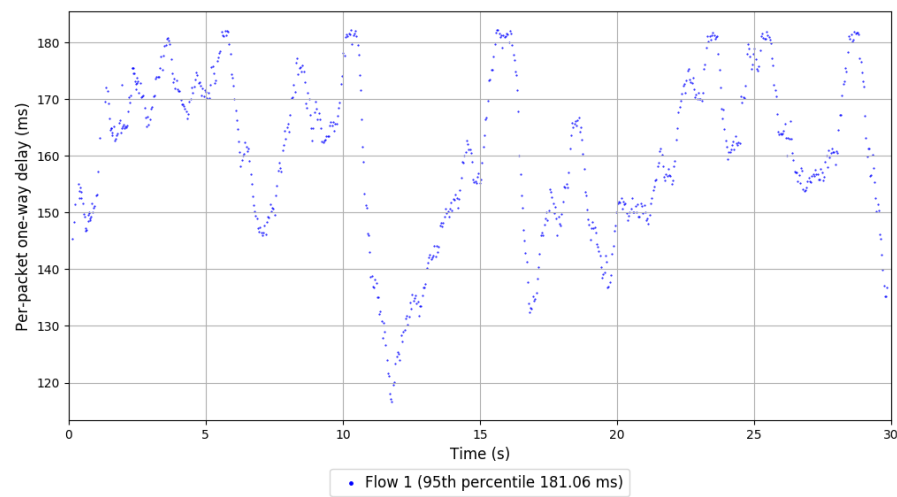
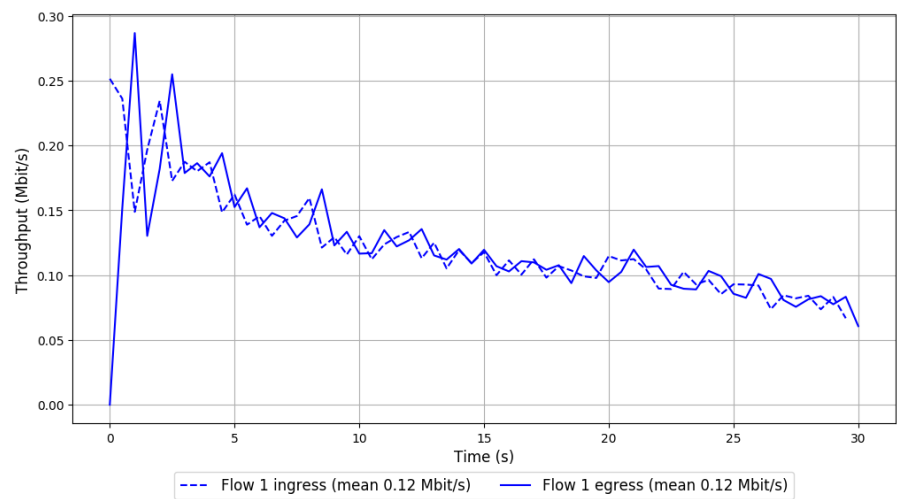


Run 3: Statistics of SCReAM

Start at: 2018-11-30 12:00:27
End at: 2018-11-30 12:00:57
Local clock offset: 0.449 ms
Remote clock offset: 33.816 ms

Below is generated by plot.py at 2018-11-30 12:59:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 181.056 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 181.056 ms
Loss rate: 0.41%

Run 3: Report of SReAM — Data Link

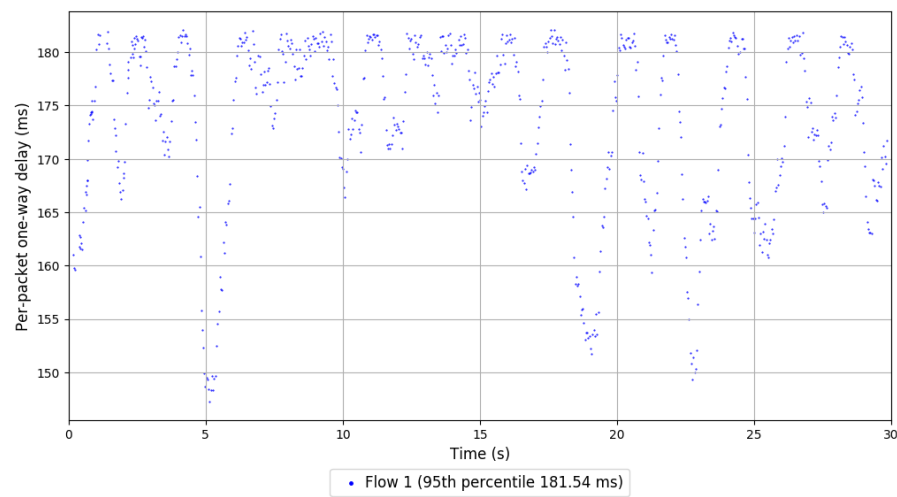
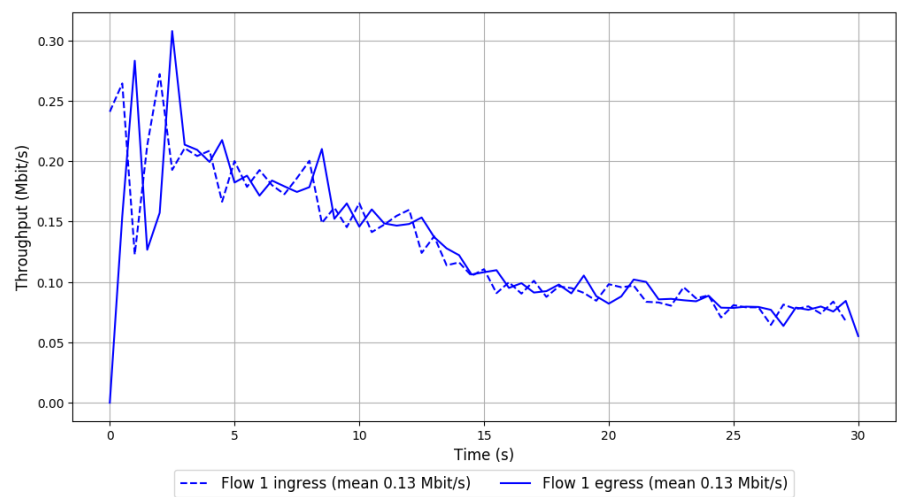


Run 4: Statistics of SCReAM

Start at: 2018-11-30 12:25:22
End at: 2018-11-30 12:25:52
Local clock offset: -0.178 ms
Remote clock offset: 33.866 ms

Below is generated by plot.py at 2018-11-30 12:59:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 181.545 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 181.545 ms
Loss rate: 1.09%

Run 4: Report of SReAM — Data Link

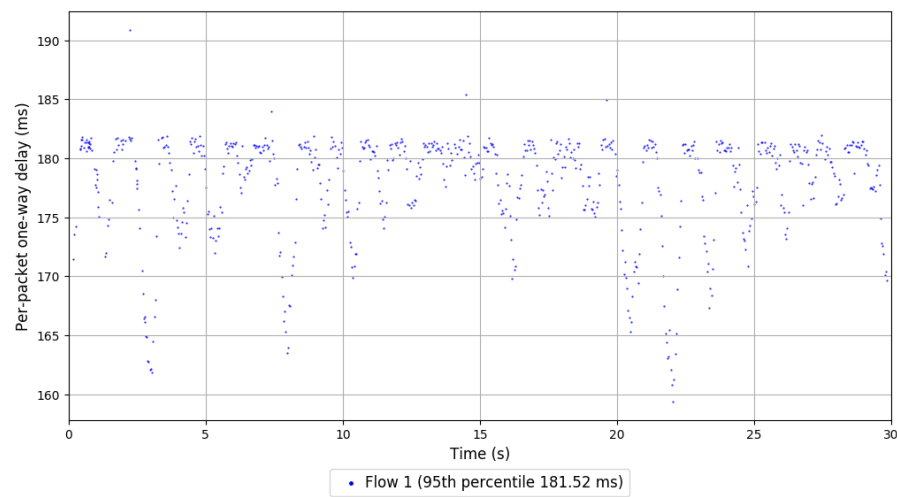
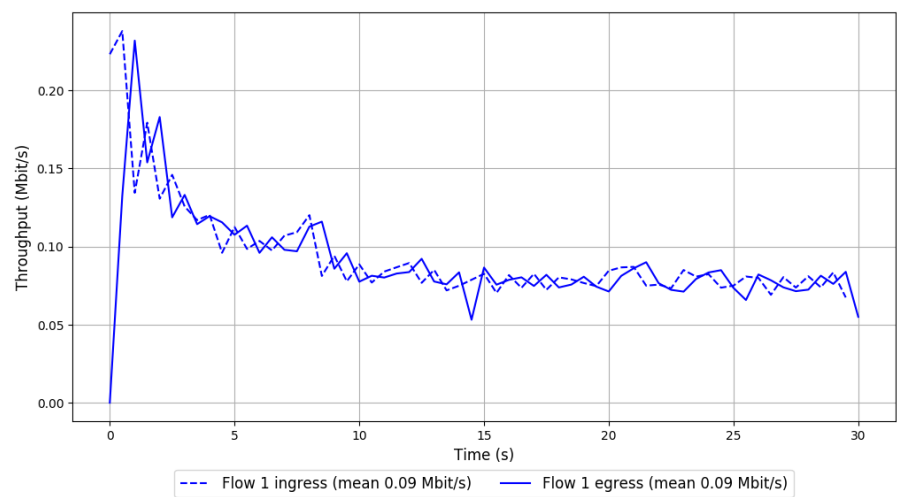


Run 5: Statistics of SCReAM

Start at: 2018-11-30 12:51:32
End at: 2018-11-30 12:52:02
Local clock offset: 1.032 ms
Remote clock offset: 32.909 ms

Below is generated by plot.py at 2018-11-30 12:59:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 181.516 ms
Loss rate: 2.77%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 181.516 ms
Loss rate: 2.77%

Run 5: Report of SReAM — Data Link



Run 1: Statistics of Sprout

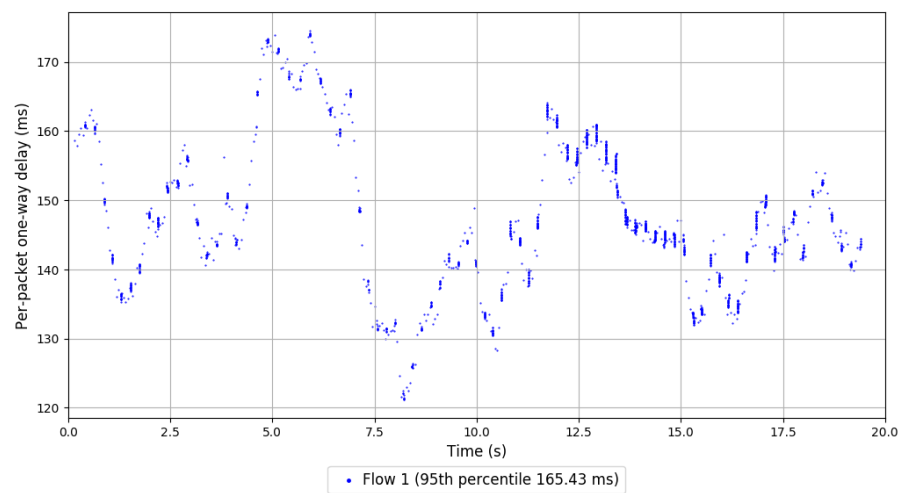
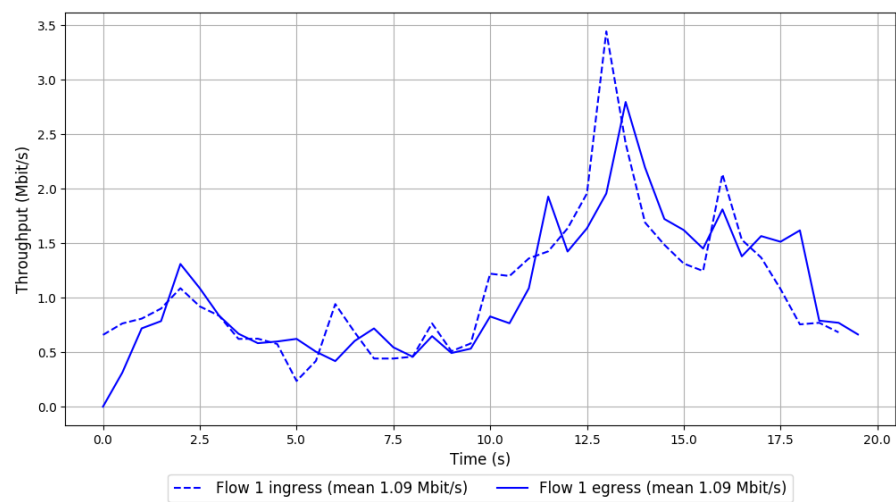
Start at: 2018-11-30 11:02:10

End at: 2018-11-30 11:02:40

Local clock offset: 1.79 ms

Remote clock offset: 32.171 ms

Run 1: Report of Sprout — Data Link

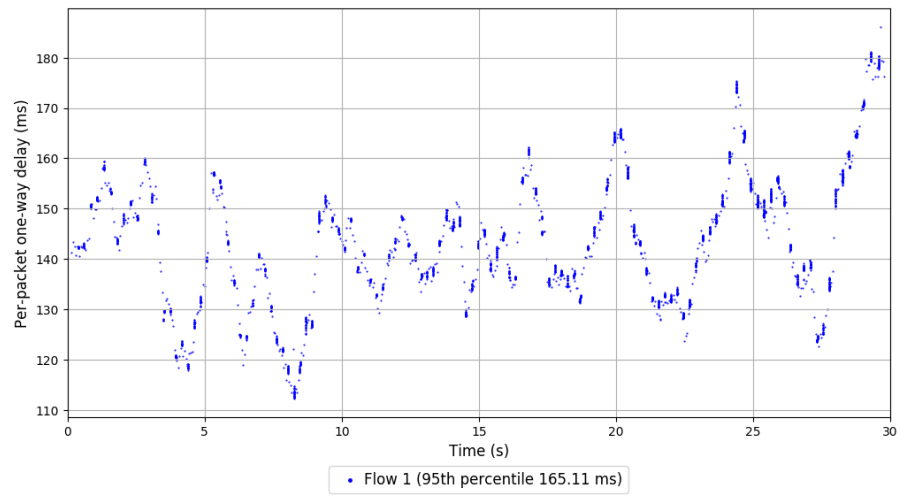
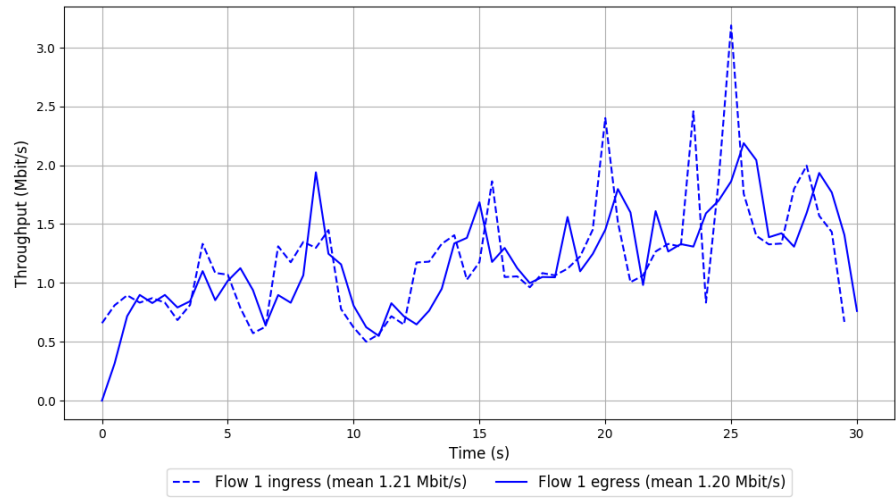


Run 2: Statistics of Sprout

Start at: 2018-11-30 11:25:20
End at: 2018-11-30 11:25:50
Local clock offset: 0.927 ms
Remote clock offset: 35.298 ms

Below is generated by plot.py at 2018-11-30 12:59:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.20 Mbit/s
95th percentile per-packet one-way delay: 165.109 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 1.20 Mbit/s
95th percentile per-packet one-way delay: 165.109 ms
Loss rate: 0.92%

Run 2: Report of Sprout — Data Link

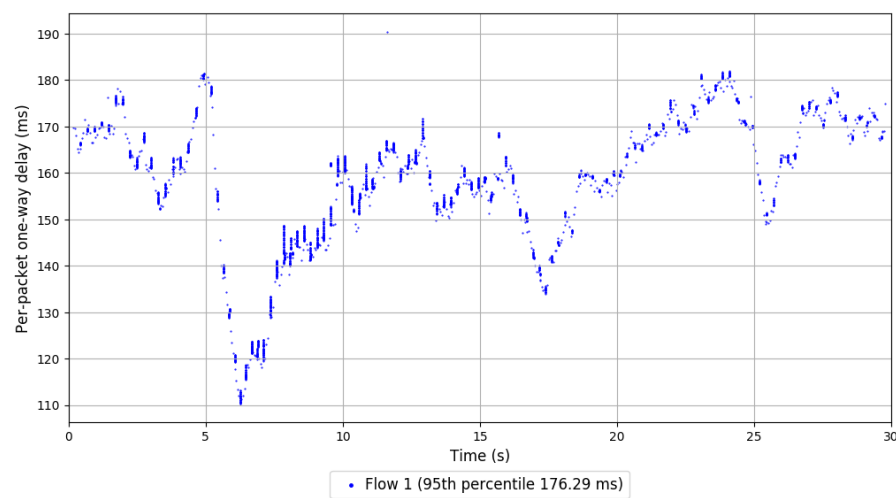
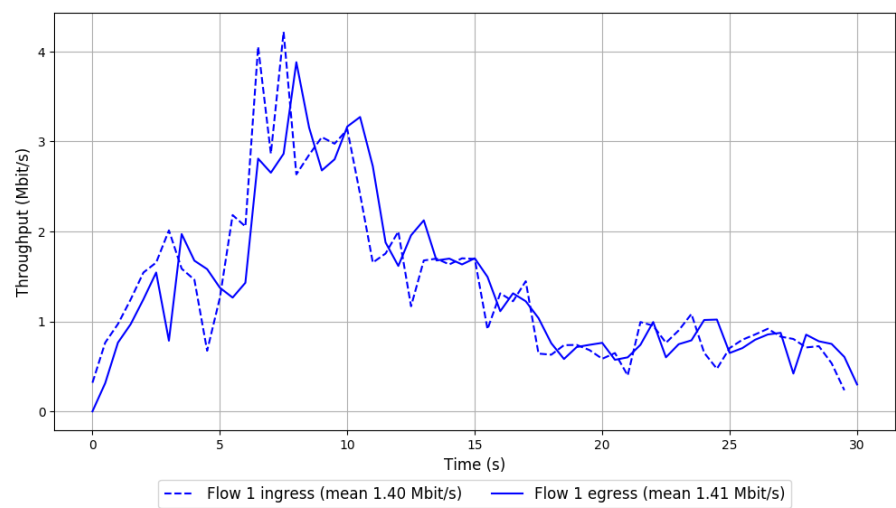


Run 3: Statistics of Sprout

Start at: 2018-11-30 11:49:03
End at: 2018-11-30 11:49:33
Local clock offset: 0.569 ms
Remote clock offset: 35.179 ms

Below is generated by plot.py at 2018-11-30 12:59:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.41 Mbit/s
95th percentile per-packet one-way delay: 176.288 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 1.41 Mbit/s
95th percentile per-packet one-way delay: 176.288 ms
Loss rate: 0.22%

Run 3: Report of Sprout — Data Link

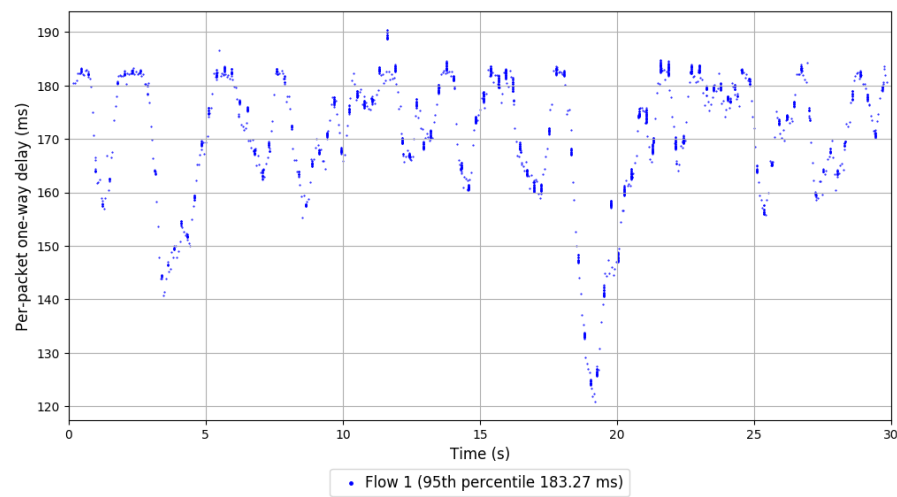
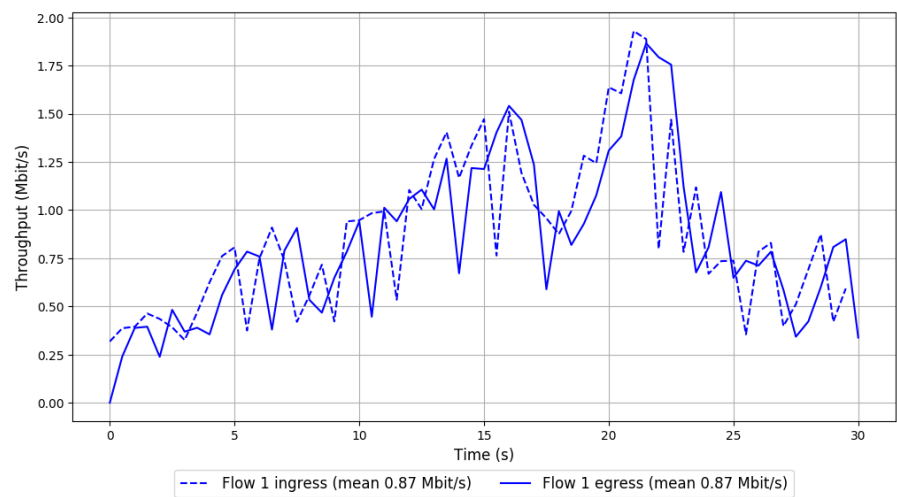


Run 4: Statistics of Sprout

Start at: 2018-11-30 12:13:35
End at: 2018-11-30 12:14:05
Local clock offset: 0.426 ms
Remote clock offset: 32.978 ms

Below is generated by plot.py at 2018-11-30 12:59:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.87 Mbit/s
95th percentile per-packet one-way delay: 183.271 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 0.87 Mbit/s
95th percentile per-packet one-way delay: 183.271 ms
Loss rate: 1.33%

Run 4: Report of Sprout — Data Link

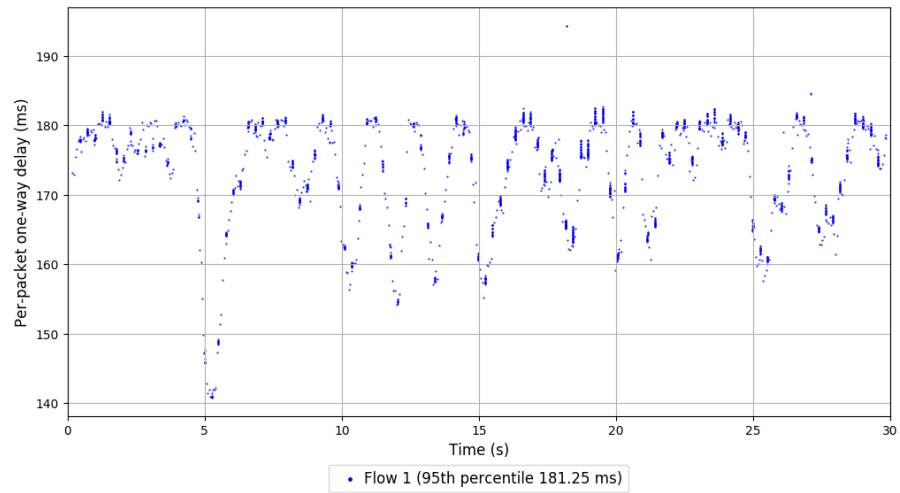
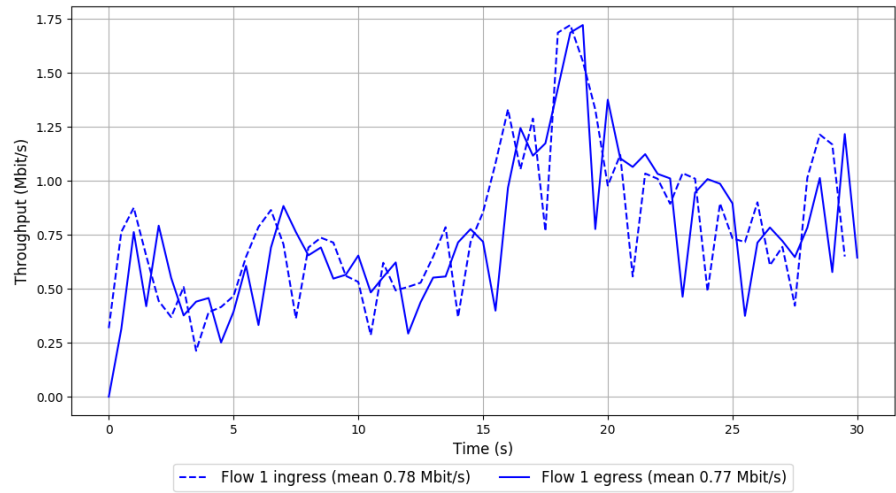


Run 5: Statistics of Sprout

Start at: 2018-11-30 12:39:06
End at: 2018-11-30 12:39:36
Local clock offset: -0.284 ms
Remote clock offset: 34.245 ms

Below is generated by plot.py at 2018-11-30 12:59:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.77 Mbit/s
95th percentile per-packet one-way delay: 181.247 ms
Loss rate: 1.99%
-- Flow 1:
Average throughput: 0.77 Mbit/s
95th percentile per-packet one-way delay: 181.247 ms
Loss rate: 1.99%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2018-11-30 11:15:35

End at: 2018-11-30 11:16:05

Local clock offset: 1.729 ms

Remote clock offset: 36.624 ms

Below is generated by plot.py at 2018-11-30 13:00:02

Datalink statistics

-- Total of 1 flow:

Average throughput: 16.87 Mbit/s

95th percentile per-packet one-way delay: 170.998 ms

Loss rate: 3.37%

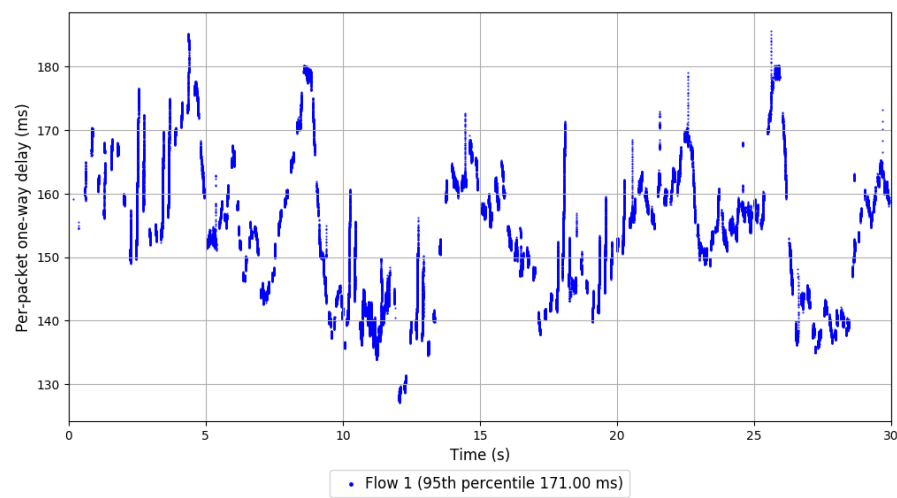
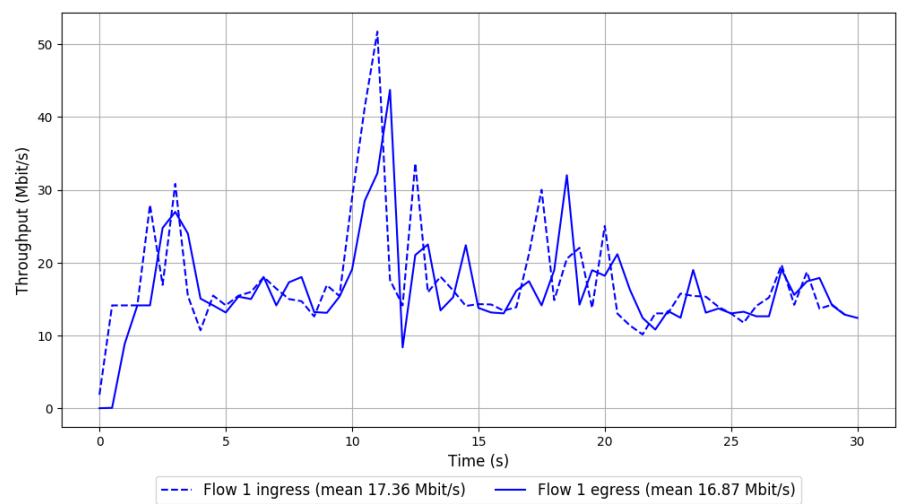
-- Flow 1:

Average throughput: 16.87 Mbit/s

95th percentile per-packet one-way delay: 170.998 ms

Loss rate: 3.37%

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



Run 2: Statistics of TaoVA-100x

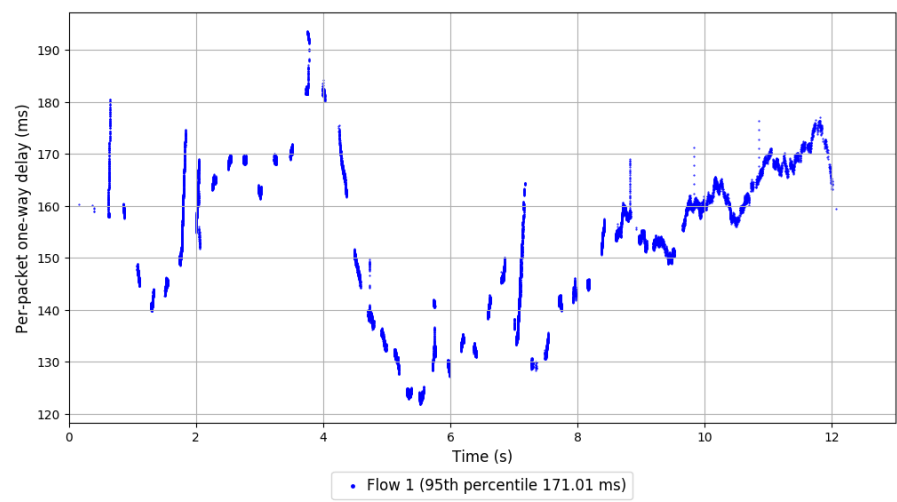
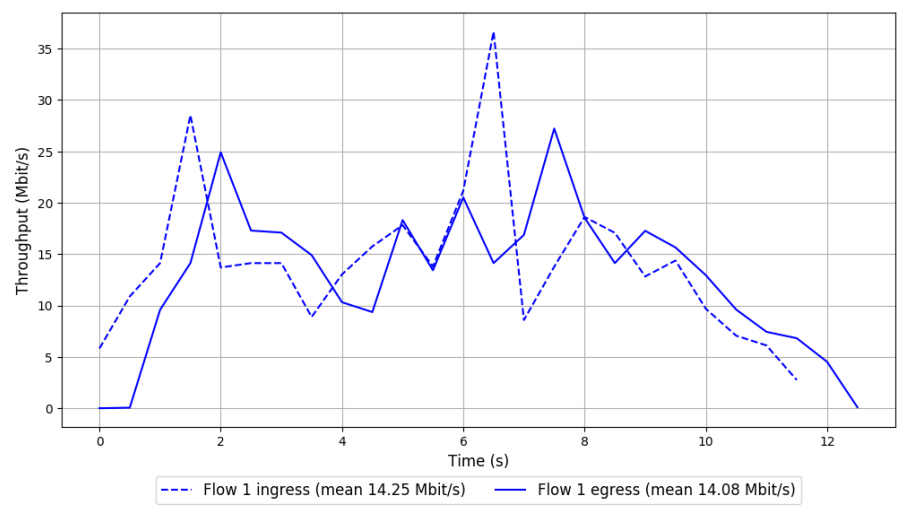
Start at: 2018-11-30 11:38:46

End at: 2018-11-30 11:39:16

Local clock offset: 0.694 ms

Remote clock offset: 32.821 ms

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-11-30 12:02:48

End at: 2018-11-30 12:03:18

Local clock offset: 0.365 ms

Remote clock offset: 33.783 ms

Below is generated by plot.py at 2018-11-30 13:00:02

Datalink statistics

-- Total of 1 flow:

Average throughput: 4.13 Mbit/s

95th percentile per-packet one-way delay: 181.085 ms

Loss rate: 0.69%

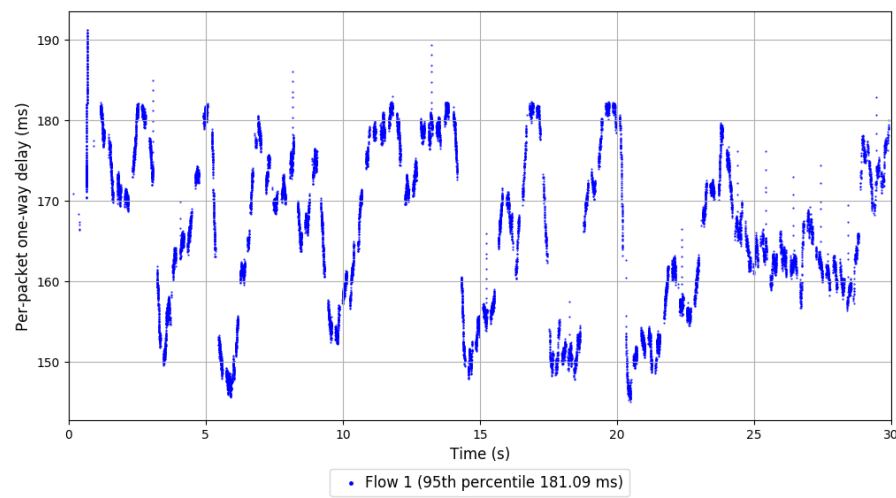
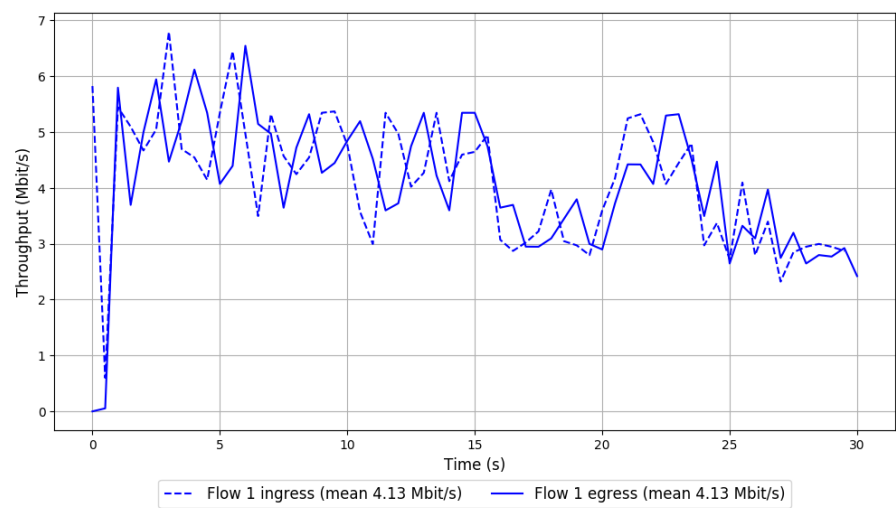
-- Flow 1:

Average throughput: 4.13 Mbit/s

95th percentile per-packet one-way delay: 181.085 ms

Loss rate: 0.69%

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

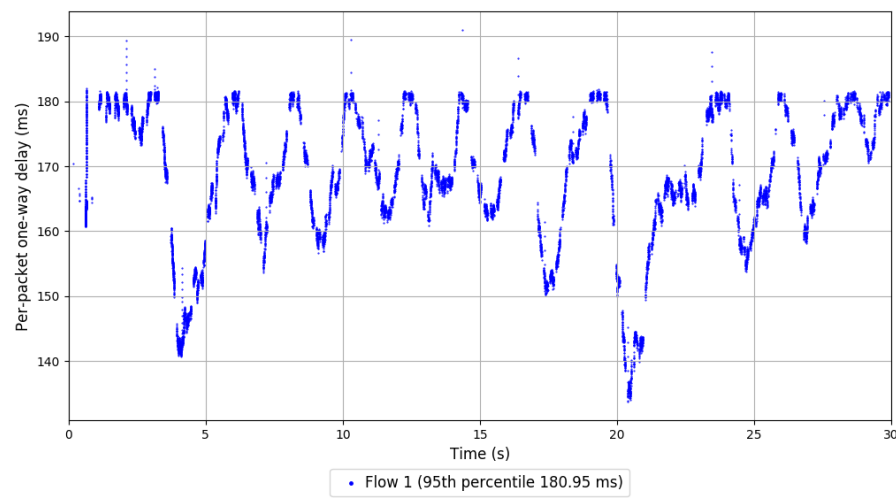
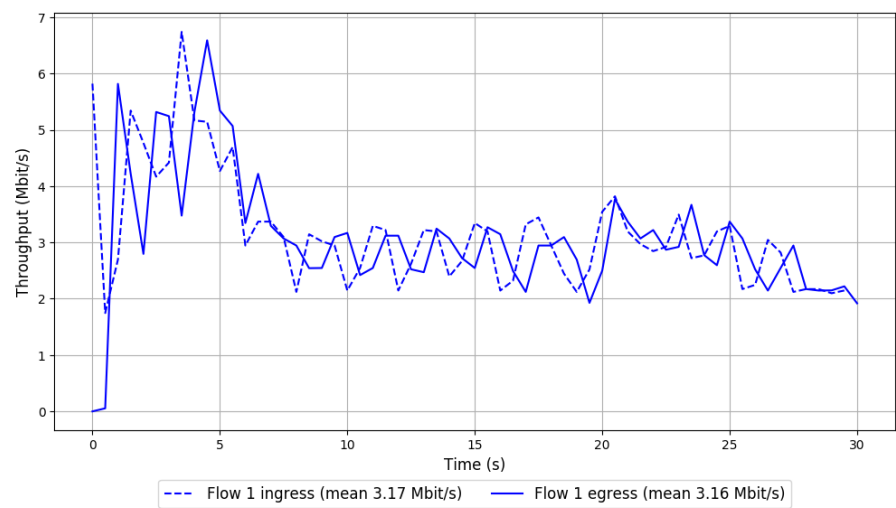


Run 4: Statistics of TaoVA-100x

Start at: 2018-11-30 12:27:49
End at: 2018-11-30 12:28:19
Local clock offset: -0.189 ms
Remote clock offset: 34.166 ms

Below is generated by plot.py at 2018-11-30 13:00:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.16 Mbit/s
95th percentile per-packet one-way delay: 180.948 ms
Loss rate: 1.13%
-- Flow 1:
Average throughput: 3.16 Mbit/s
95th percentile per-packet one-way delay: 180.948 ms
Loss rate: 1.13%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-11-30 12:54:04

End at: 2018-11-30 12:54:34

Local clock offset: 1.571 ms

Remote clock offset: 32.165 ms

Below is generated by plot.py at 2018-11-30 13:00:02

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.01 Mbit/s

95th percentile per-packet one-way delay: 183.155 ms

Loss rate: 2.67%

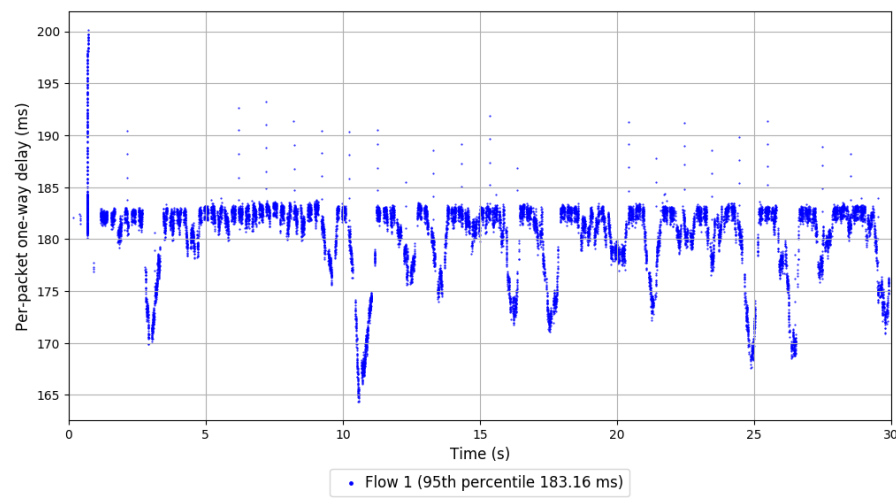
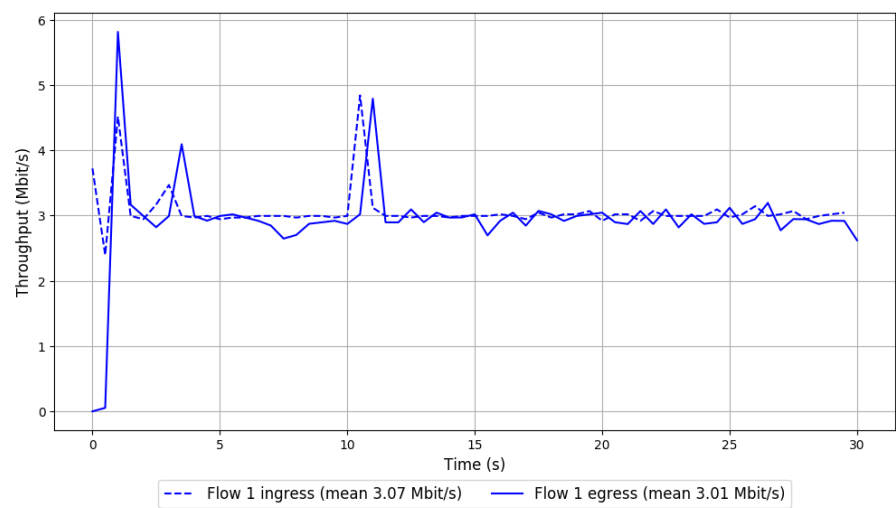
-- Flow 1:

Average throughput: 3.01 Mbit/s

95th percentile per-packet one-way delay: 183.155 ms

Loss rate: 2.67%

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



Run 1: Statistics of TCP Vegas

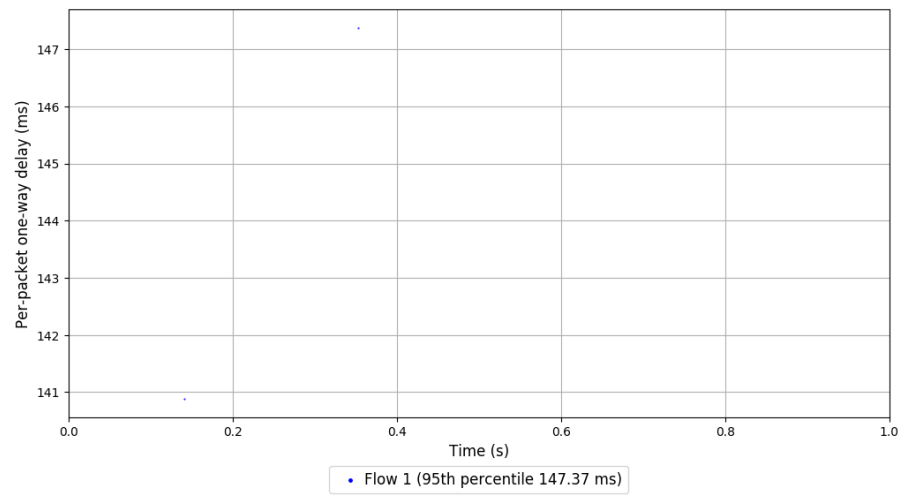
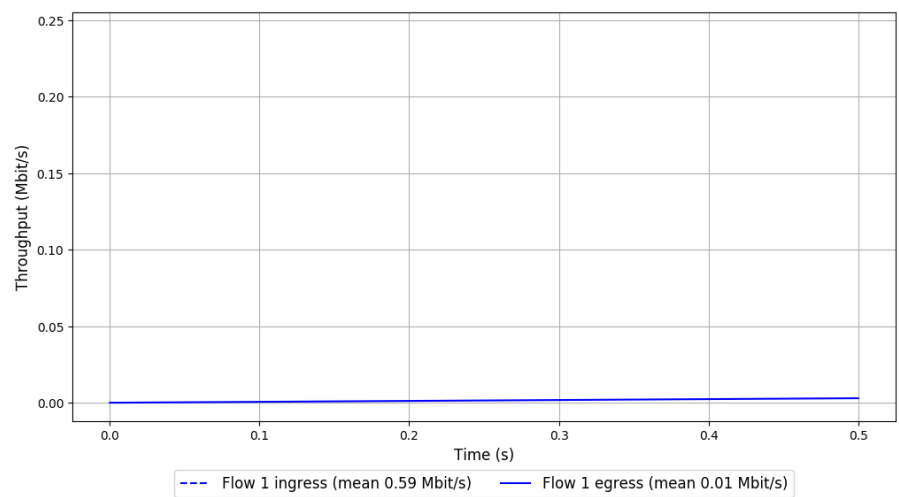
Start at: 2018-11-30 10:54:39

End at: 2018-11-30 10:55:09

Local clock offset: 1.387 ms

Remote clock offset: 30.218 ms

Run 1: Report of TCP Vegas — Data Link

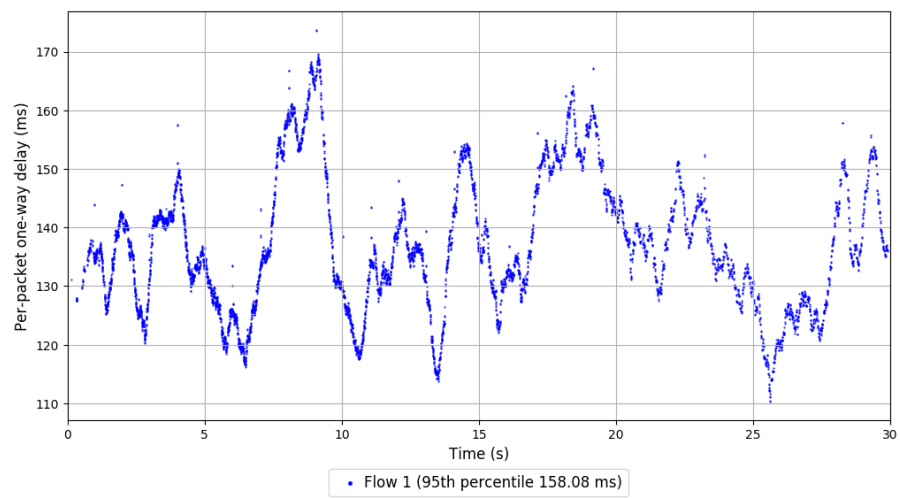
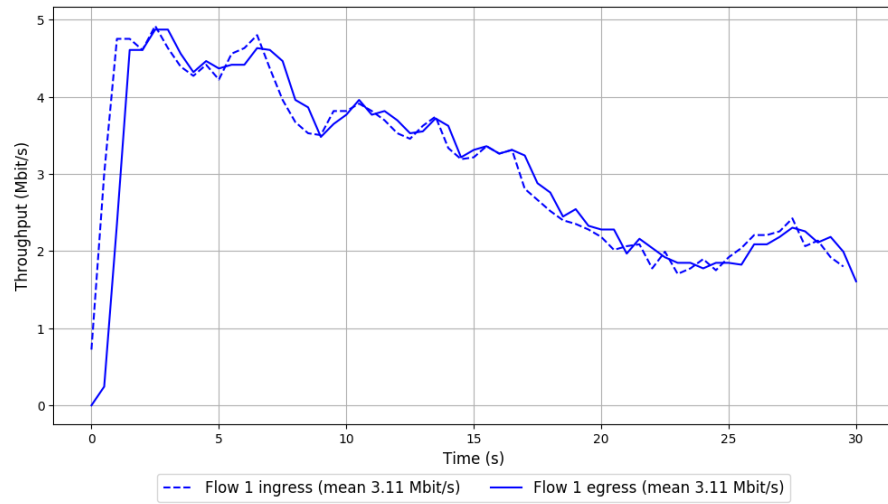


Run 2: Statistics of TCP Vegas

Start at: 2018-11-30 11:18:07
End at: 2018-11-30 11:18:37
Local clock offset: 1.571 ms
Remote clock offset: 37.622 ms

Below is generated by plot.py at 2018-11-30 13:00:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.11 Mbit/s
95th percentile per-packet one-way delay: 158.076 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 3.11 Mbit/s
95th percentile per-packet one-way delay: 158.076 ms
Loss rate: 0.40%

Run 2: Report of TCP Vegas — Data Link

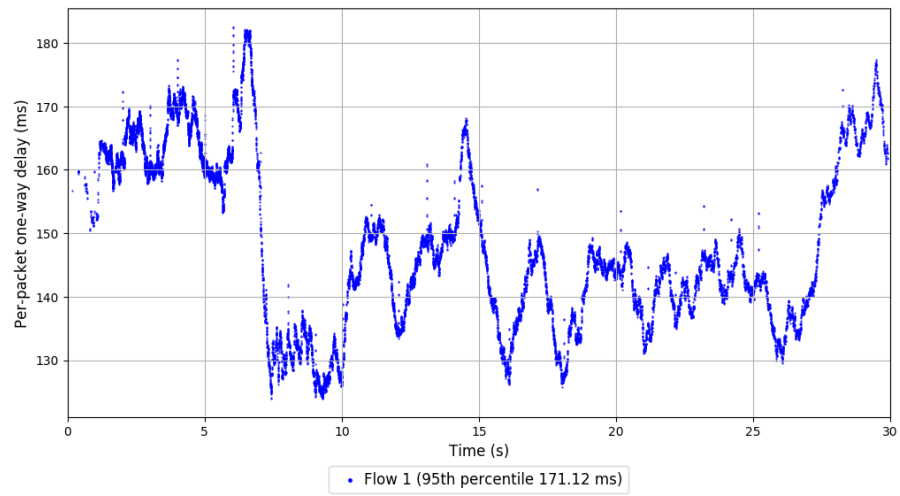
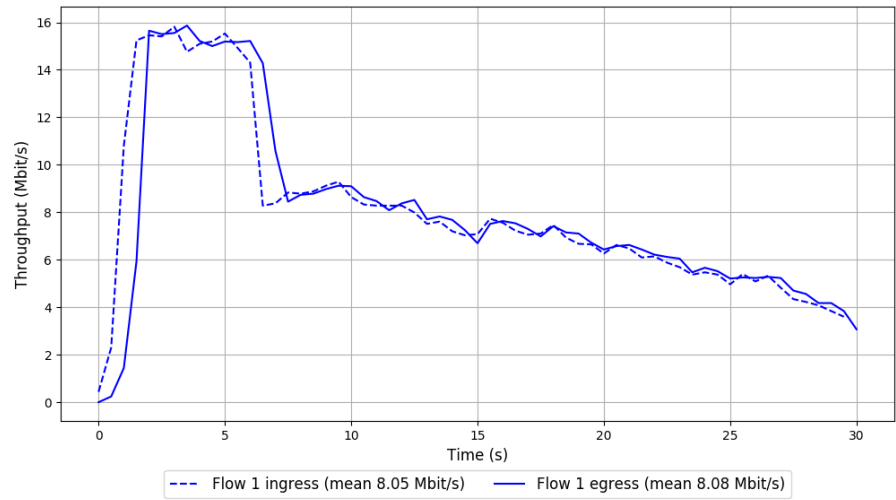


Run 3: Statistics of TCP Vegas

Start at: 2018-11-30 11:41:15
End at: 2018-11-30 11:41:45
Local clock offset: 0.562 ms
Remote clock offset: 34.046 ms

Below is generated by plot.py at 2018-11-30 13:00:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 8.08 Mbit/s
95th percentile per-packet one-way delay: 171.125 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 8.08 Mbit/s
95th percentile per-packet one-way delay: 171.125 ms
Loss rate: 0.44%

Run 3: Report of TCP Vegas — Data Link

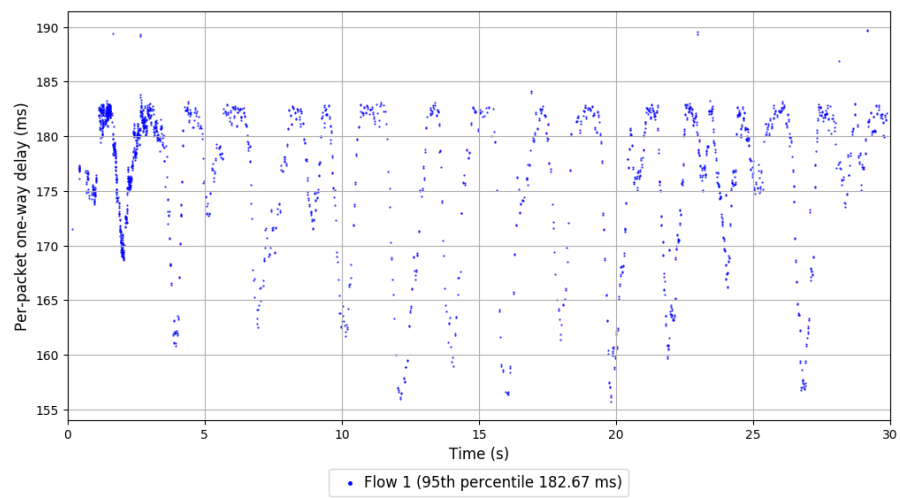
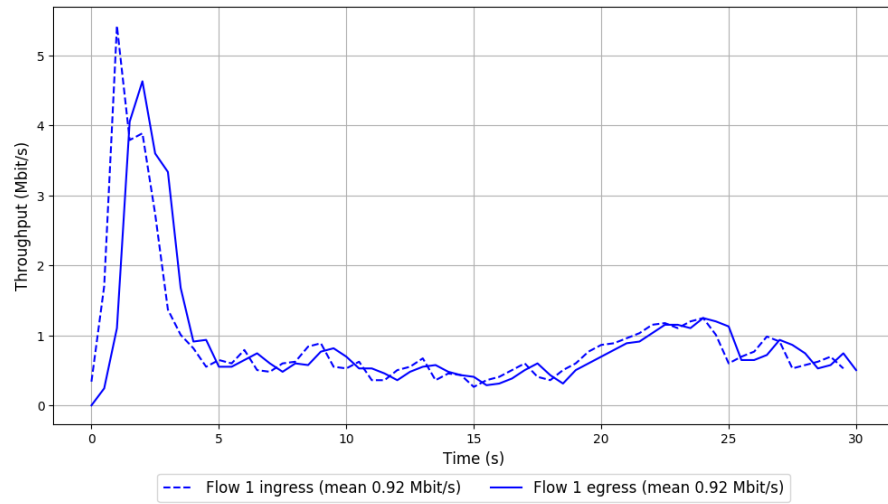


Run 4: Statistics of TCP Vegas

Start at: 2018-11-30 12:05:30
End at: 2018-11-30 12:06:00
Local clock offset: 0.414 ms
Remote clock offset: 33.797 ms

Below is generated by plot.py at 2018-11-30 13:00:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.92 Mbit/s
95th percentile per-packet one-way delay: 182.672 ms
Loss rate: 1.52%
-- Flow 1:
Average throughput: 0.92 Mbit/s
95th percentile per-packet one-way delay: 182.672 ms
Loss rate: 1.52%

Run 4: Report of TCP Vegas — Data Link

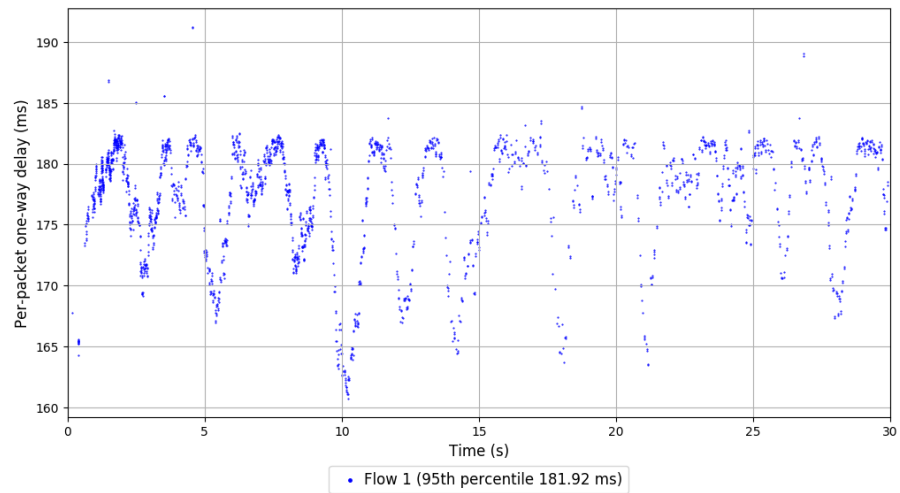
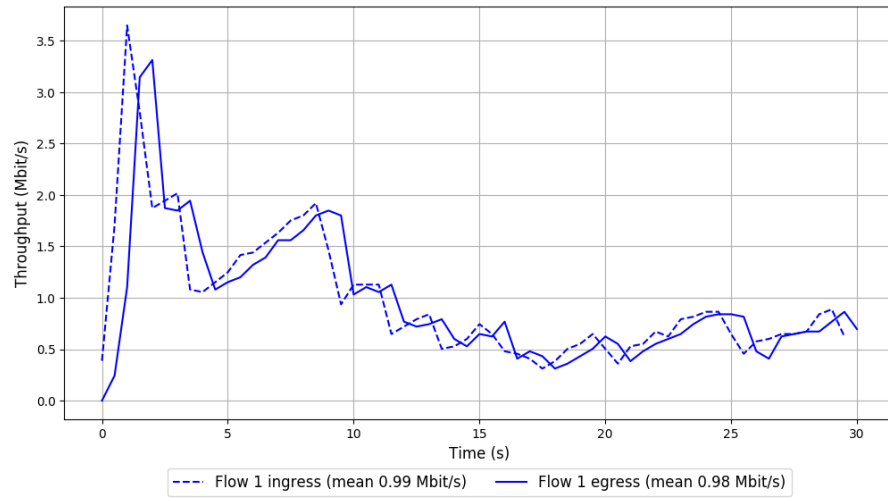


Run 5: Statistics of TCP Vegas

Start at: 2018-11-30 12:31:02
End at: 2018-11-30 12:31:32
Local clock offset: -0.151 ms
Remote clock offset: 33.871 ms

Below is generated by plot.py at 2018-11-30 13:00:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.98 Mbit/s
95th percentile per-packet one-way delay: 181.920 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 0.98 Mbit/s
95th percentile per-packet one-way delay: 181.920 ms
Loss rate: 1.18%

Run 5: Report of TCP Vegas — Data Link

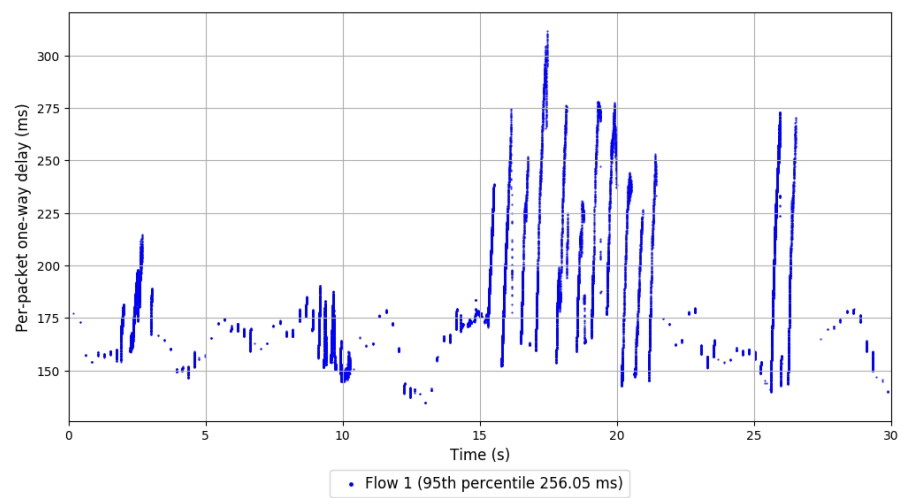
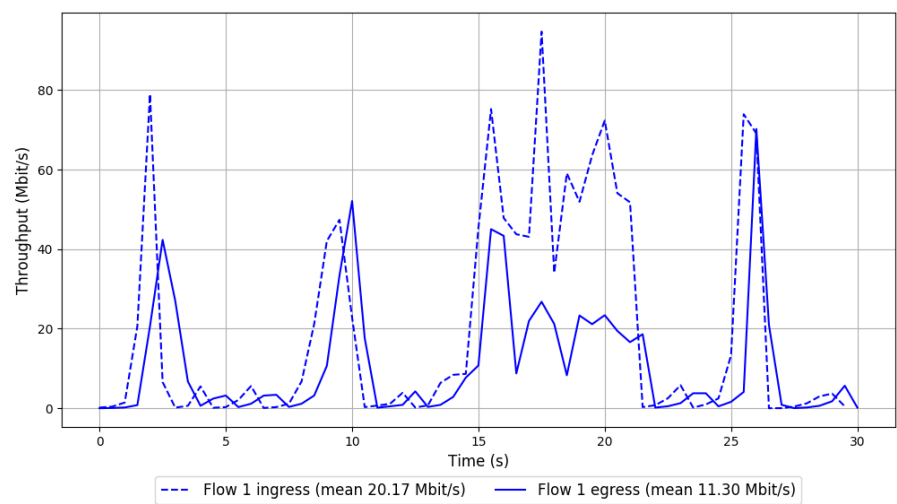


Run 1: Statistics of Verus

Start at: 2018-11-30 11:11:59
End at: 2018-11-30 11:12:29
Local clock offset: 1.754 ms
Remote clock offset: 38.619 ms

Below is generated by plot.py at 2018-11-30 13:00:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 11.30 Mbit/s
95th percentile per-packet one-way delay: 256.045 ms
Loss rate: 44.41%
-- Flow 1:
Average throughput: 11.30 Mbit/s
95th percentile per-packet one-way delay: 256.045 ms
Loss rate: 44.41%

Run 1: Report of Verus — Data Link

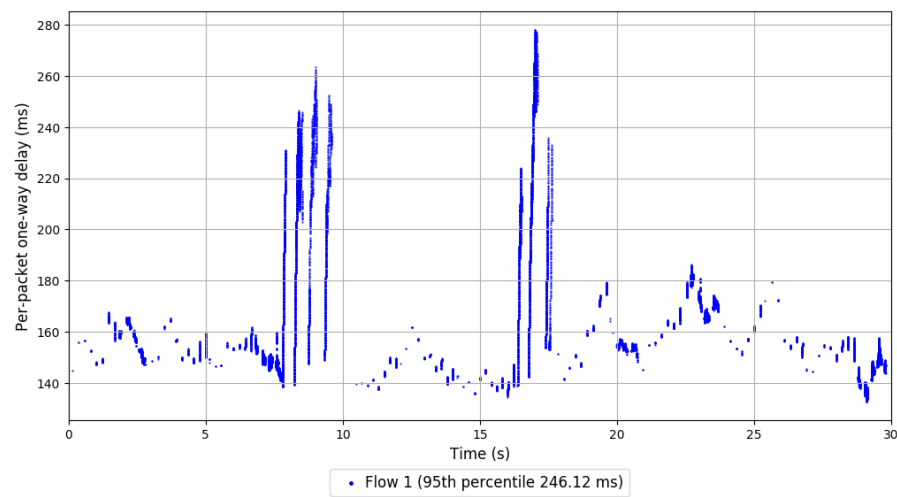
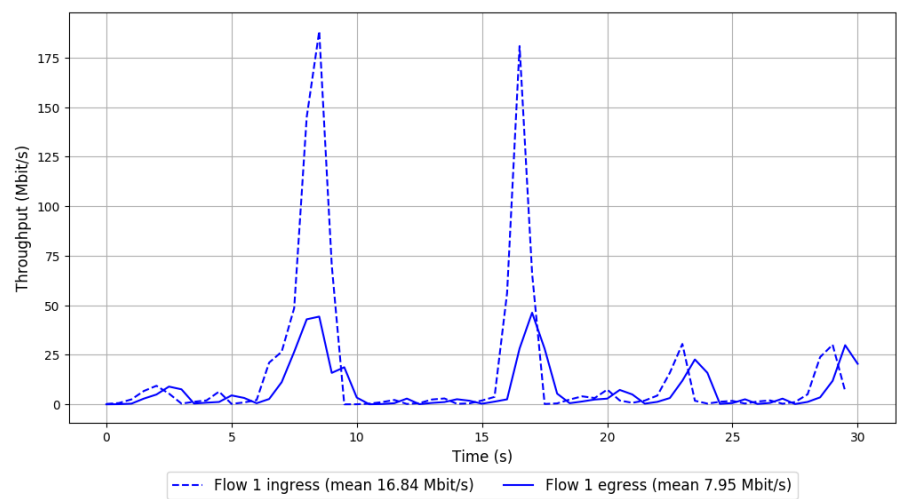


Run 2: Statistics of Verus

Start at: 2018-11-30 11:35:03
End at: 2018-11-30 11:35:33
Local clock offset: 0.639 ms
Remote clock offset: 33.804 ms

Below is generated by plot.py at 2018-11-30 13:00:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 7.95 Mbit/s
95th percentile per-packet one-way delay: 246.124 ms
Loss rate: 53.11%
-- Flow 1:
Average throughput: 7.95 Mbit/s
95th percentile per-packet one-way delay: 246.124 ms
Loss rate: 53.11%

Run 2: Report of Verus — Data Link

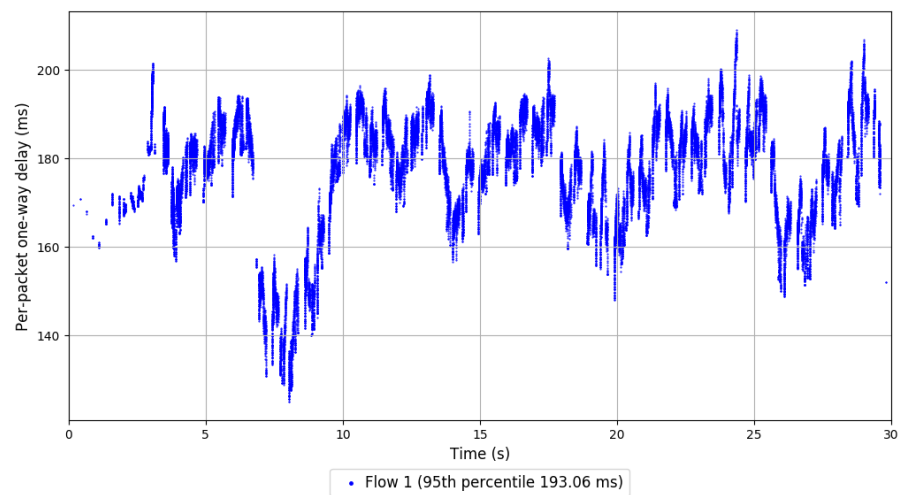
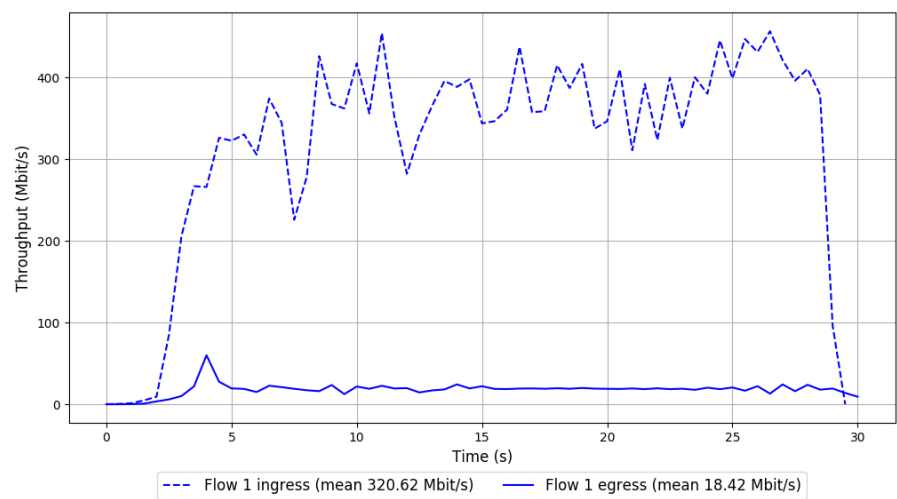


Run 3: Statistics of Verus

Start at: 2018-11-30 11:58:53
End at: 2018-11-30 11:59:23
Local clock offset: 0.464 ms
Remote clock offset: 33.171 ms

Below is generated by plot.py at 2018-11-30 13:00:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 18.42 Mbit/s
95th percentile per-packet one-way delay: 193.062 ms
Loss rate: 94.30%
-- Flow 1:
Average throughput: 18.42 Mbit/s
95th percentile per-packet one-way delay: 193.062 ms
Loss rate: 94.30%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-11-30 12:24:06

End at: 2018-11-30 12:24:36

Local clock offset: -0.046 ms

Remote clock offset: 33.87 ms

Below is generated by plot.py at 2018-11-30 13:00:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 7.13 Mbit/s

95th percentile per-packet one-way delay: 188.001 ms

Loss rate: 75.83%

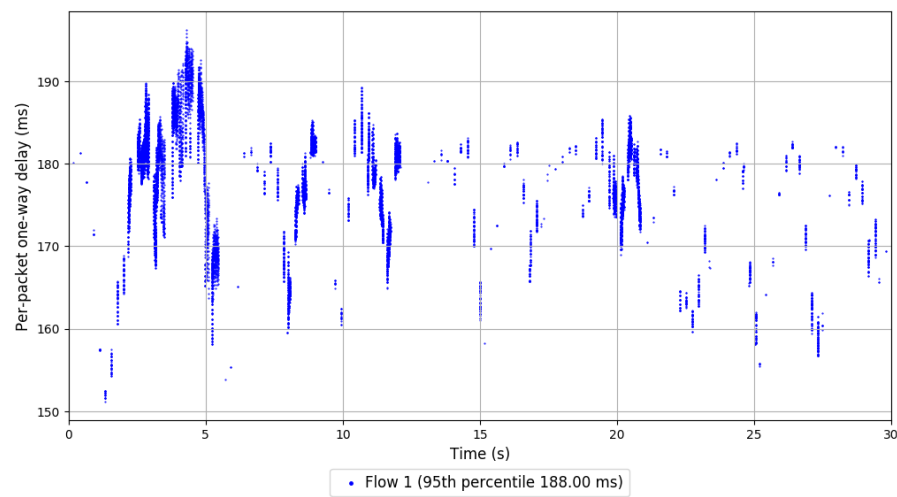
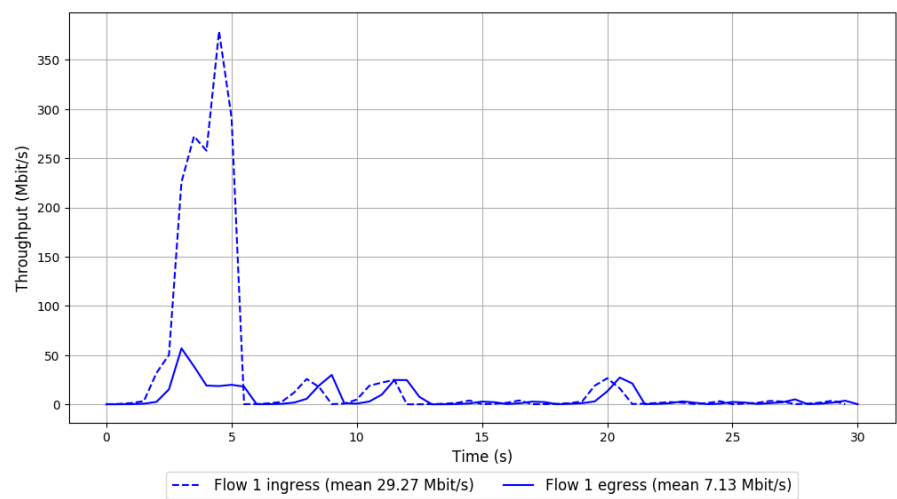
-- Flow 1:

Average throughput: 7.13 Mbit/s

95th percentile per-packet one-way delay: 188.001 ms

Loss rate: 75.83%

Run 4: Report of Verus — Data Link

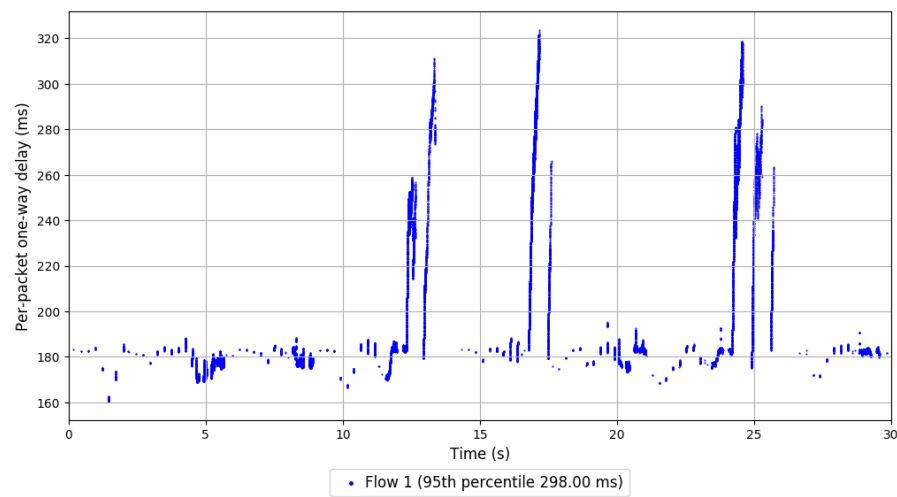
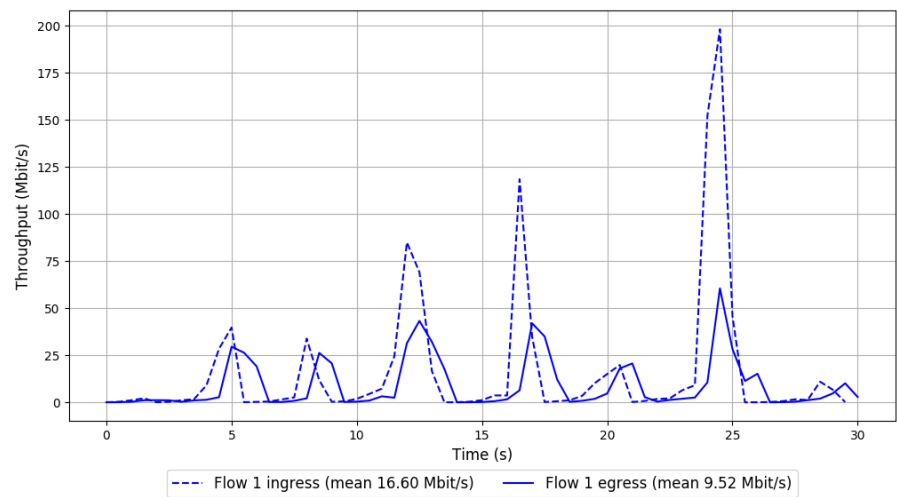


Run 5: Statistics of Verus

Start at: 2018-11-30 12:50:01
End at: 2018-11-30 12:50:31
Local clock offset: 0.962 ms
Remote clock offset: 31.753 ms

Below is generated by plot.py at 2018-11-30 13:00:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 9.52 Mbit/s
95th percentile per-packet one-way delay: 297.996 ms
Loss rate: 43.13%
-- Flow 1:
Average throughput: 9.52 Mbit/s
95th percentile per-packet one-way delay: 297.996 ms
Loss rate: 43.13%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2018-11-30 10:55:49

End at: 2018-11-30 10:56:19

Local clock offset: 1.521 ms

Remote clock offset: 30.837 ms

Below is generated by plot.py at 2018-11-30 13:00:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.43 Mbit/s

95th percentile per-packet one-way delay: 179.365 ms

Loss rate: 1.63%

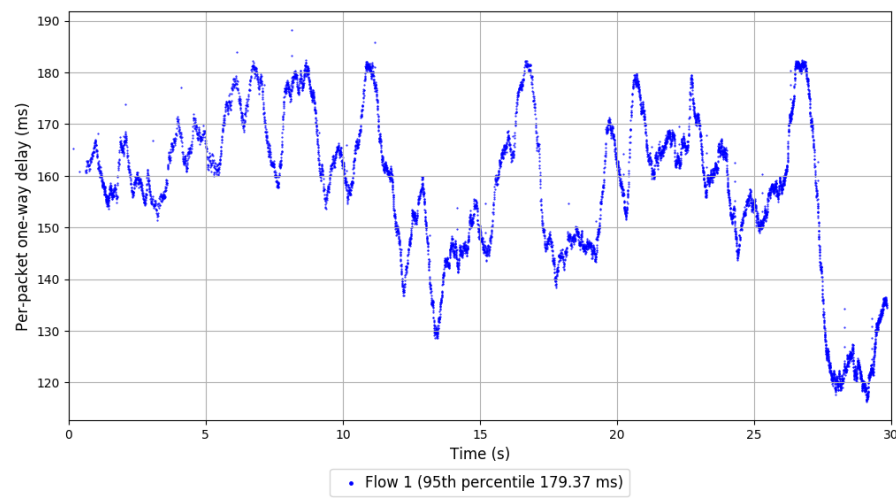
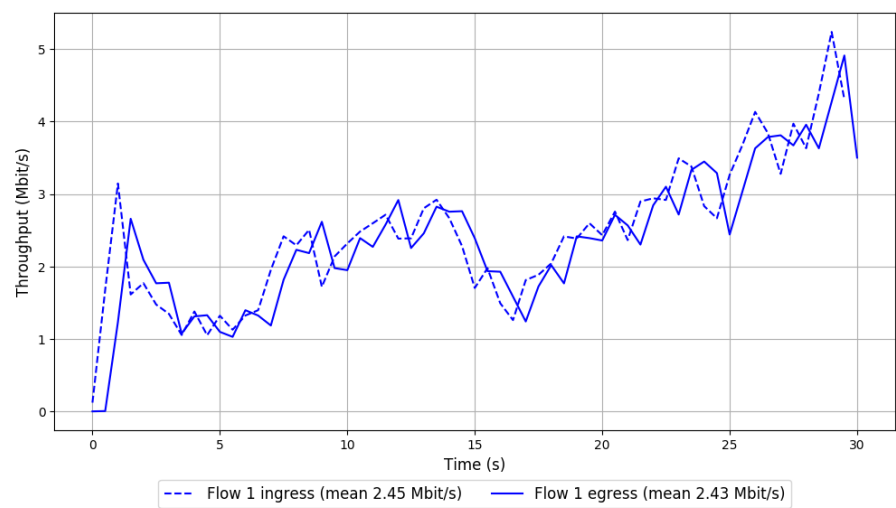
-- Flow 1:

Average throughput: 2.43 Mbit/s

95th percentile per-packet one-way delay: 179.365 ms

Loss rate: 1.63%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2018-11-30 11:19:19

End at: 2018-11-30 11:19:49

Local clock offset: 1.231 ms

Remote clock offset: 37.42 ms

Below is generated by plot.py at 2018-11-30 13:00:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 164.976 ms

Loss rate: 0.00%

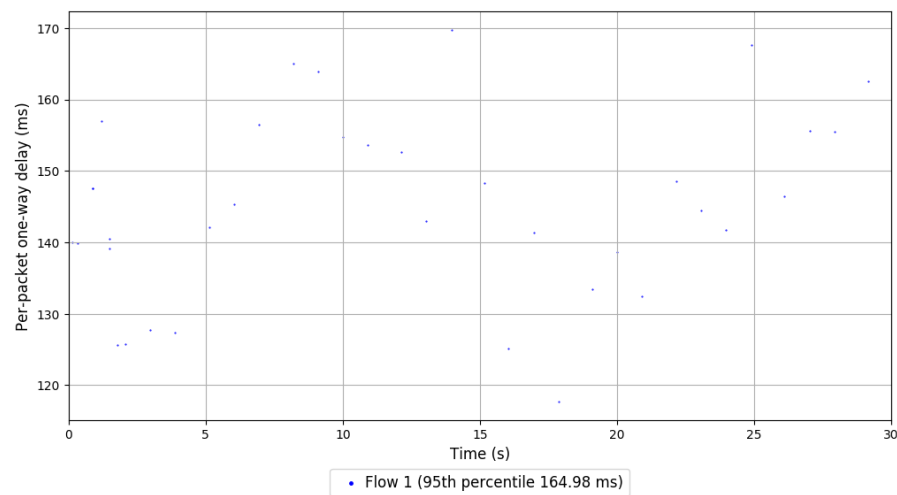
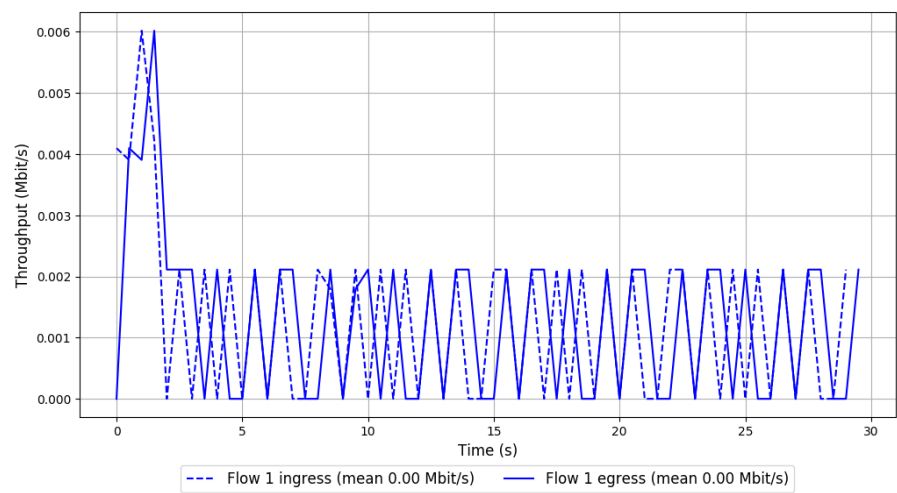
-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 164.976 ms

Loss rate: 0.00%

Run 2: Report of PCC-Vivace — Data Link

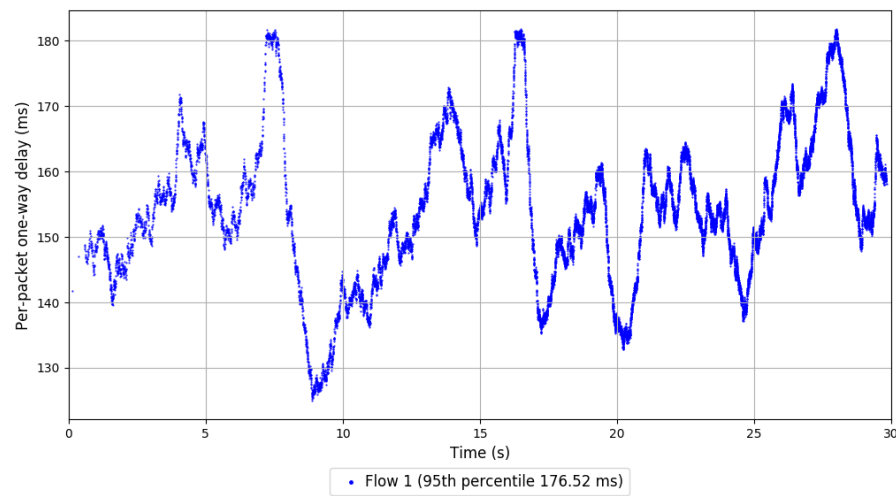
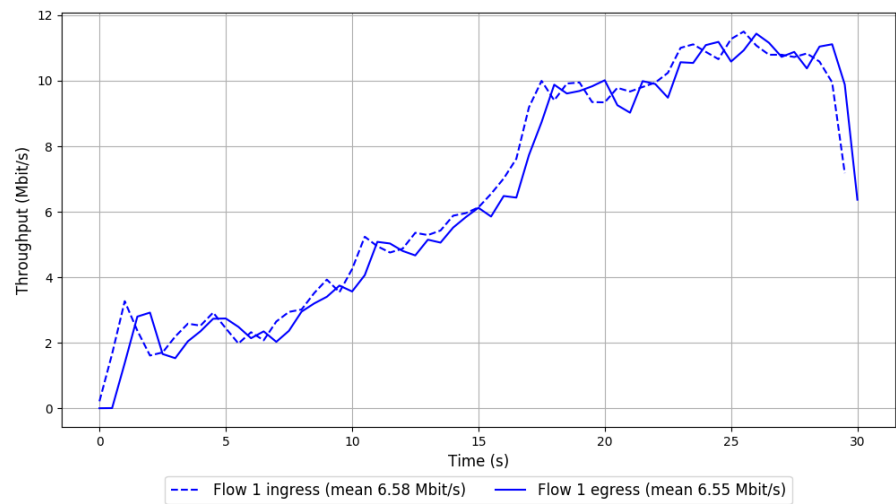


Run 3: Statistics of PCC-Vivace

Start at: 2018-11-30 11:42:33
End at: 2018-11-30 11:43:03
Local clock offset: 0.683 ms
Remote clock offset: 34.391 ms

Below is generated by plot.py at 2018-11-30 13:00:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 6.55 Mbit/s
95th percentile per-packet one-way delay: 176.521 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 6.55 Mbit/s
95th percentile per-packet one-way delay: 176.521 ms
Loss rate: 1.06%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2018-11-30 12:06:42

End at: 2018-11-30 12:07:12

Local clock offset: 0.504 ms

Remote clock offset: 33.674 ms

Below is generated by plot.py at 2018-11-30 13:00:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.05 Mbit/s

95th percentile per-packet one-way delay: 182.646 ms

Loss rate: 1.97%

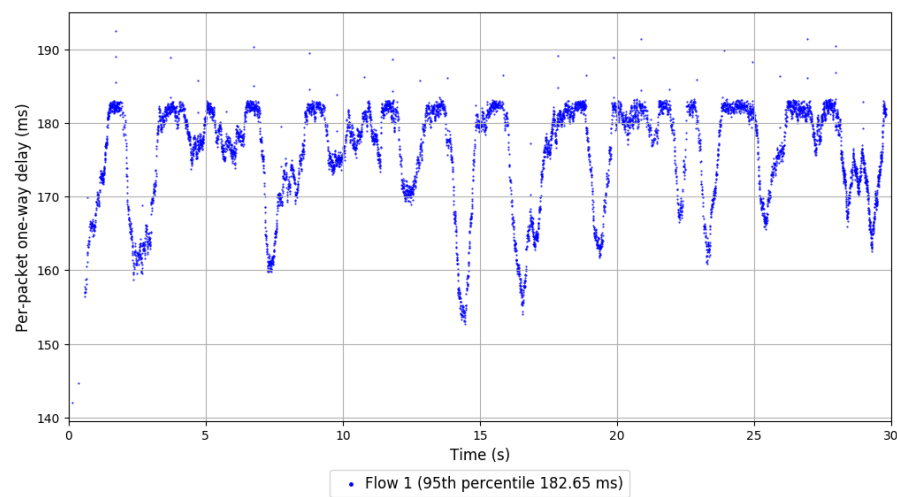
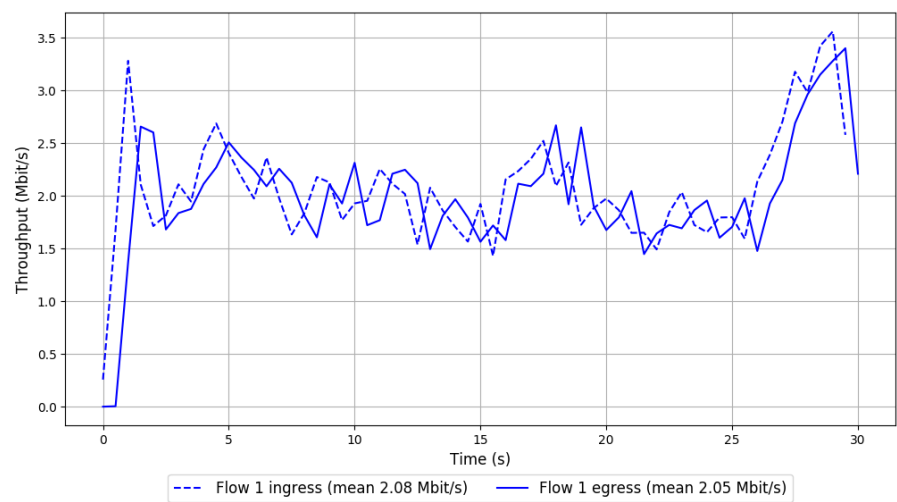
-- Flow 1:

Average throughput: 2.05 Mbit/s

95th percentile per-packet one-way delay: 182.646 ms

Loss rate: 1.97%

Run 4: Report of PCC-Vivace — Data Link

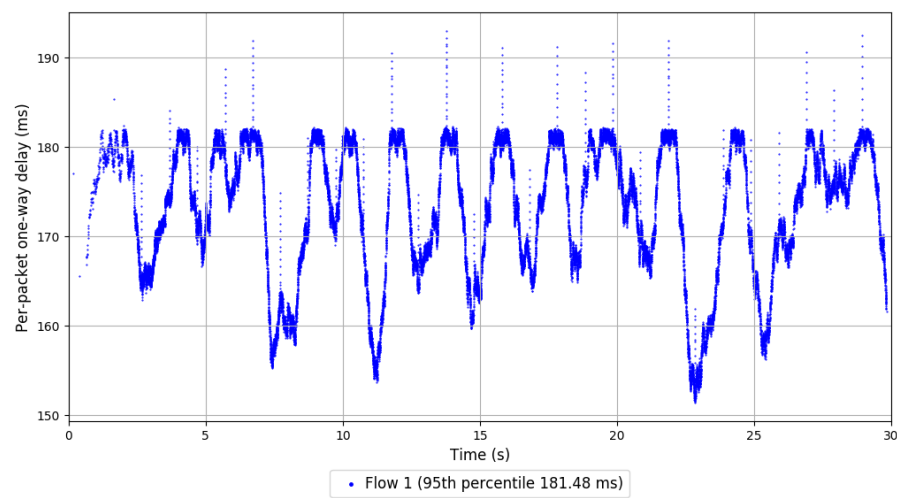
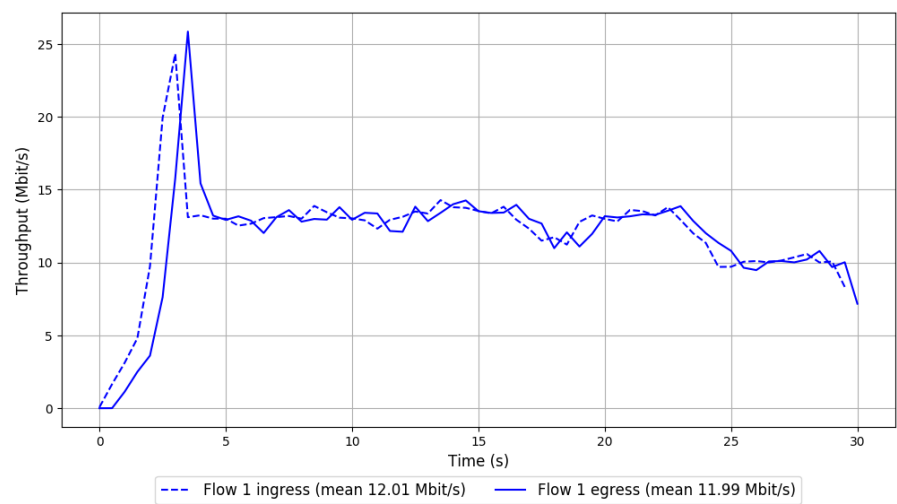


Run 5: Statistics of PCC-Vivace

Start at: 2018-11-30 12:32:18
End at: 2018-11-30 12:32:48
Local clock offset: -0.316 ms
Remote clock offset: 33.613 ms

Below is generated by plot.py at 2018-11-30 13:00:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 11.99 Mbit/s
95th percentile per-packet one-way delay: 181.480 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 11.99 Mbit/s
95th percentile per-packet one-way delay: 181.480 ms
Loss rate: 1.02%

Run 5: Report of PCC-Vivace — Data Link

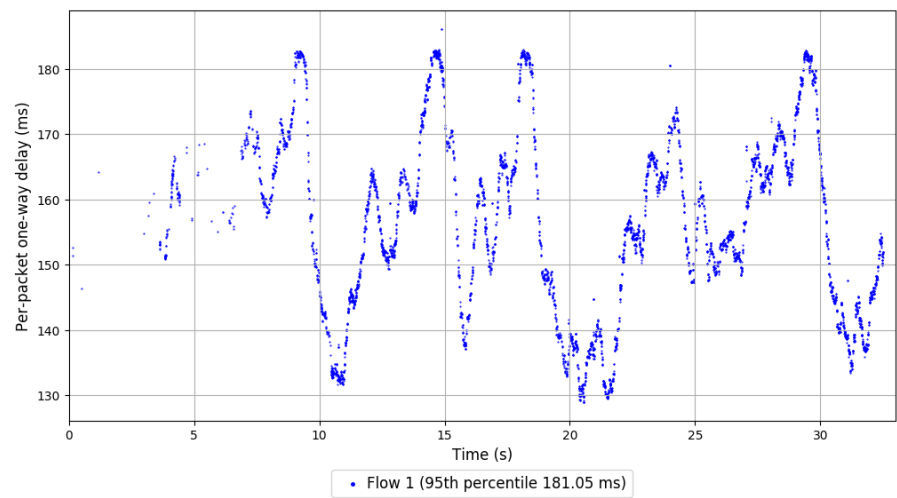
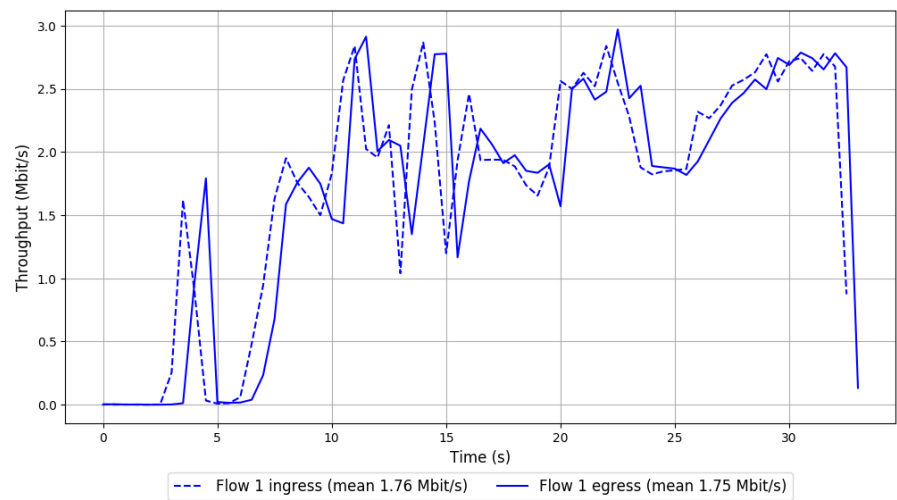


Run 1: Statistics of WebRTC media

Start at: 2018-11-30 11:00:51
End at: 2018-11-30 11:01:21
Local clock offset: 1.497 ms
Remote clock offset: 31.554 ms

Below is generated by plot.py at 2018-11-30 13:00:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.75 Mbit/s
95th percentile per-packet one-way delay: 181.051 ms
Loss rate: 1.41%
-- Flow 1:
Average throughput: 1.75 Mbit/s
95th percentile per-packet one-way delay: 181.051 ms
Loss rate: 1.41%

Run 1: Report of WebRTC media — Data Link

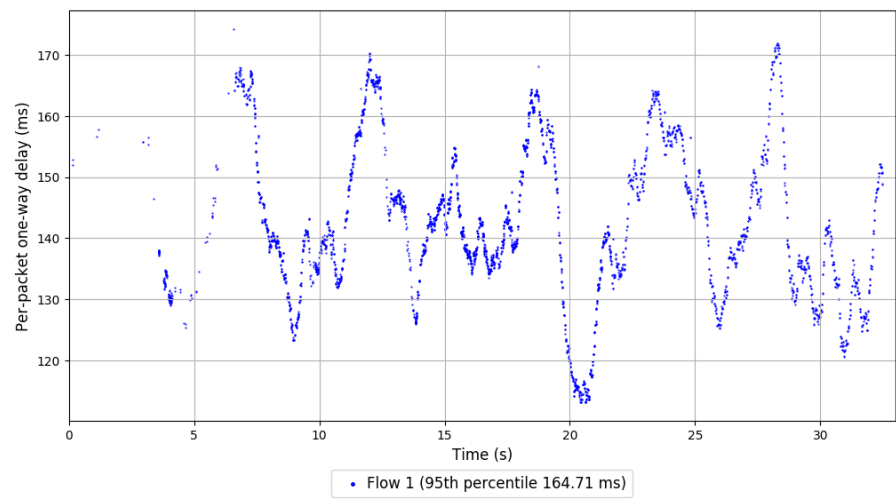
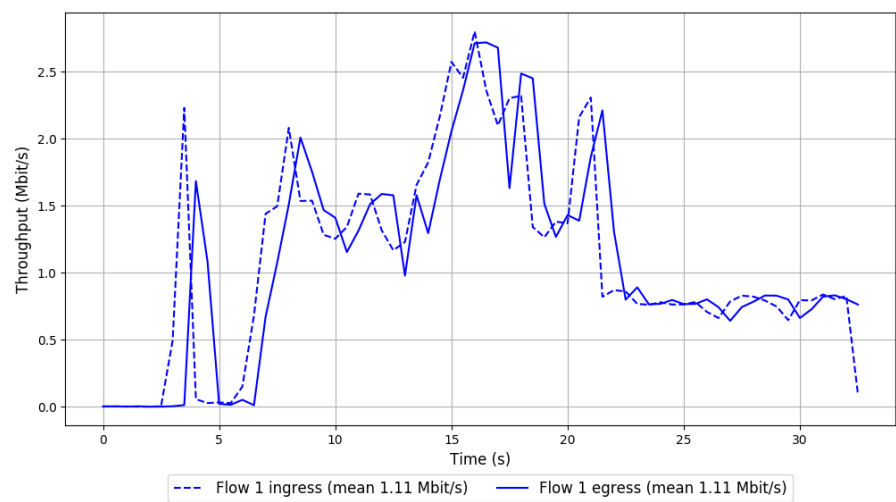


Run 2: Statistics of WebRTC media

Start at: 2018-11-30 11:24:09
End at: 2018-11-30 11:24:39
Local clock offset: 1.046 ms
Remote clock offset: 35.449 ms

Below is generated by plot.py at 2018-11-30 13:00:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 164.707 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 164.707 ms
Loss rate: 0.51%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

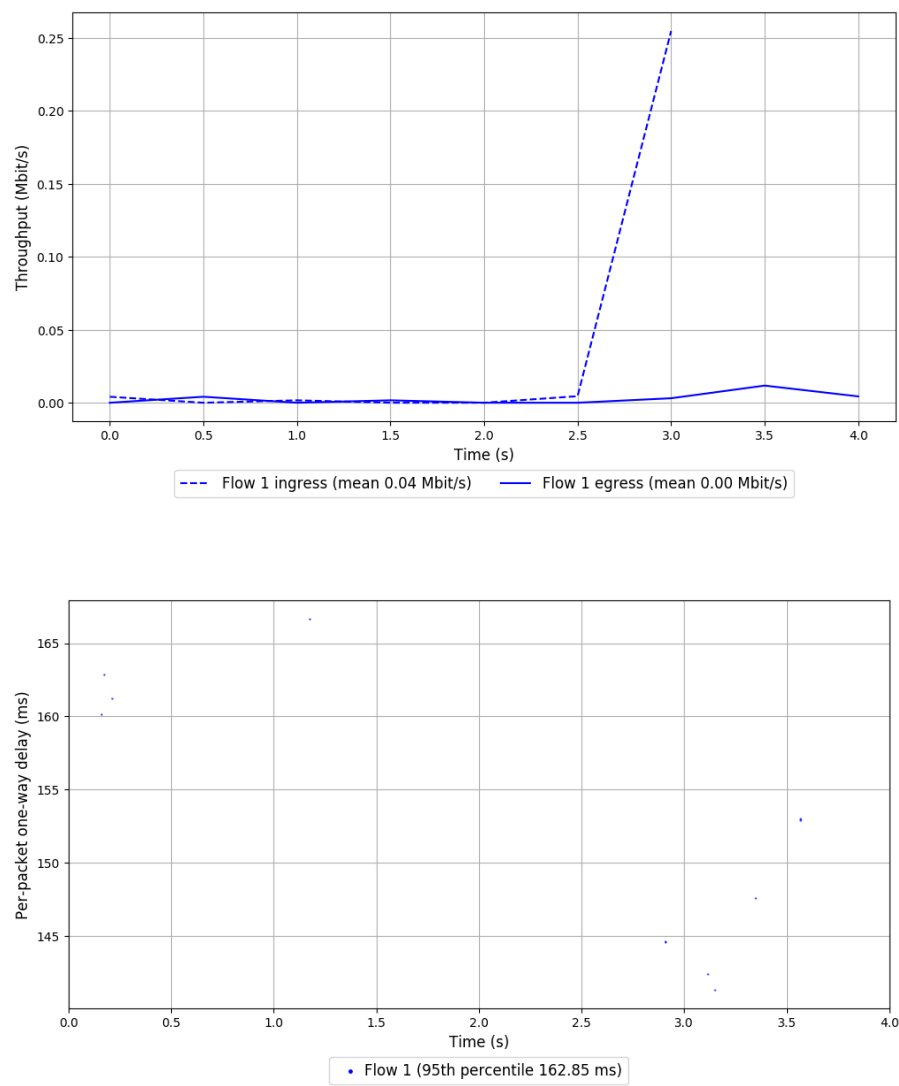
Start at: 2018-11-30 11:47:52

End at: 2018-11-30 11:48:22

Local clock offset: 0.354 ms

Remote clock offset: 34.195 ms

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

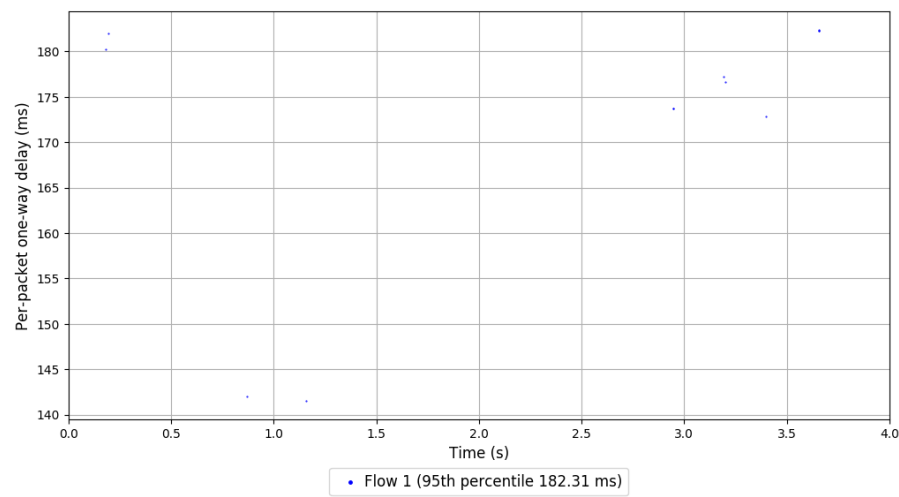
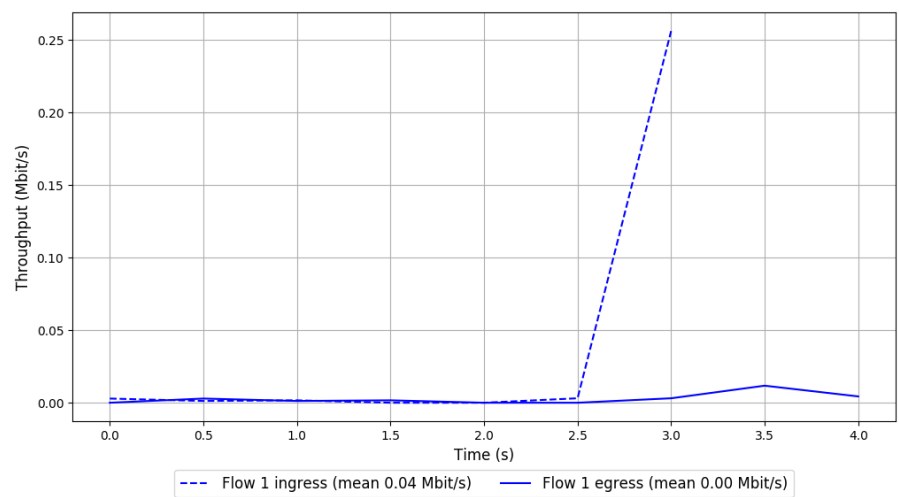
Start at: 2018-11-30 12:12:23

End at: 2018-11-30 12:12:53

Local clock offset: 0.194 ms

Remote clock offset: 33.269 ms

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-11-30 12:37:54

End at: 2018-11-30 12:38:25

Local clock offset: -0.531 ms

Remote clock offset: 32.399 ms

Run 5: Report of WebRTC media — Data Link

