

Pantheon Report

Generated at 2018-11-30 07:12:33 (UTC).

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

Repeated the test of 19 congestion control schemes 5 times.

Each test lasted for 30 seconds running 1 flow.

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

System info:

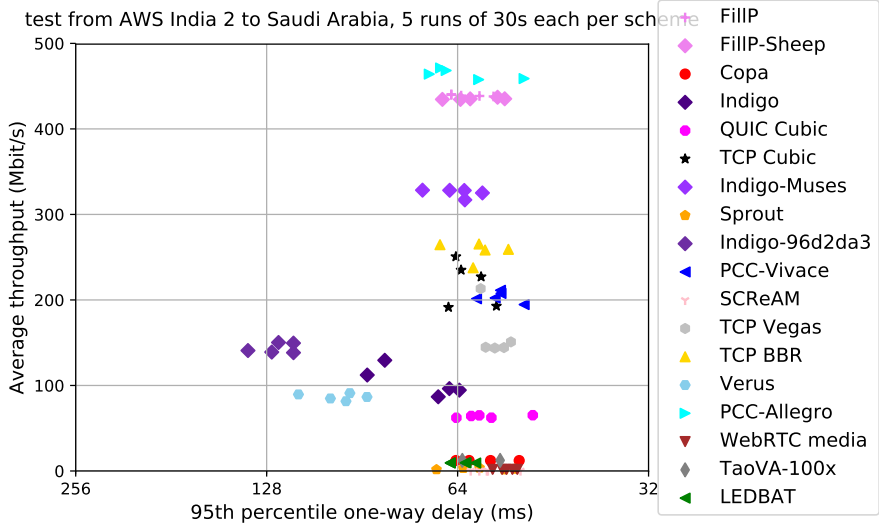
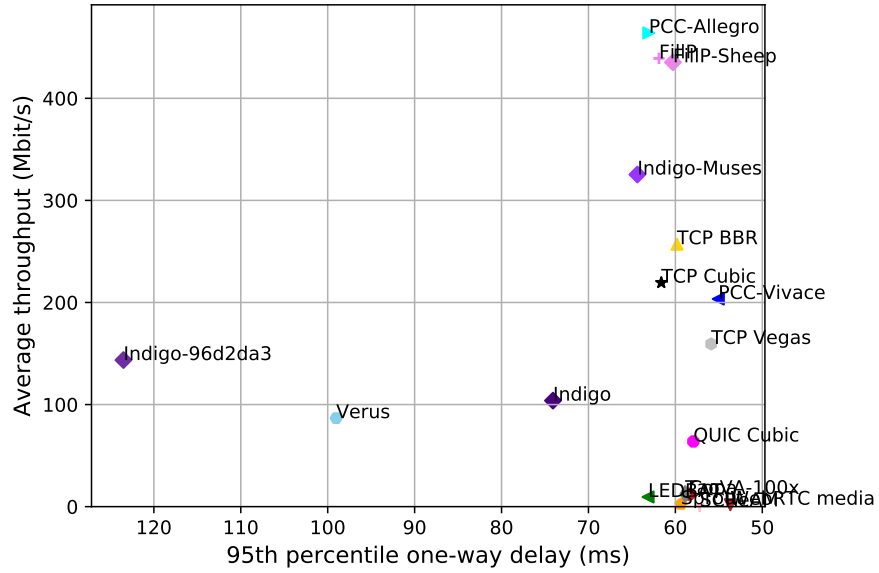
Linux 4.15.0-1023-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

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 AWS India 2 to Saudi Arabia, 5 runs of 30s each per scheme
(mean of all runs by scheme)



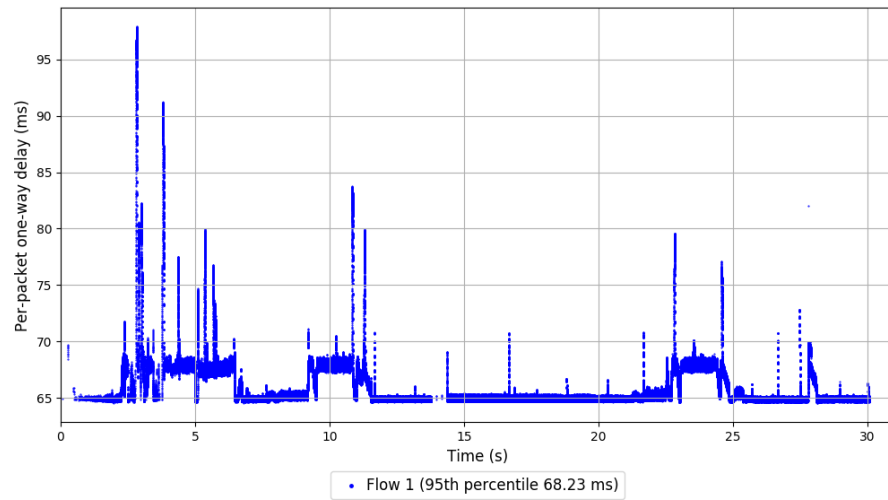
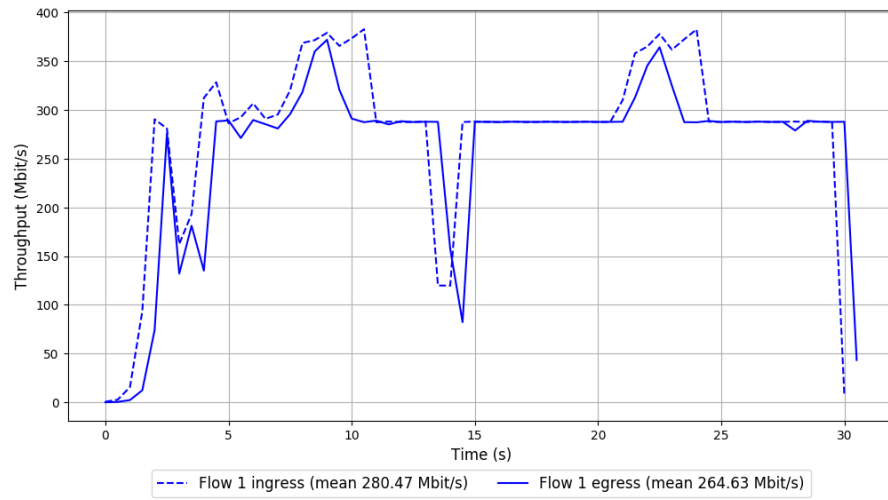
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	257.08	59.82	5.59
Copa	4	12.22	58.43	60.81
TCP Cubic	5	219.42	61.62	0.45
FillP	5	439.14	61.89	5.60
FillP-Sheep	5	435.27	60.28	4.71
Indigo	5	103.86	74.08	0.37
Indigo-96d2da3	5	143.60	123.50	35.98
LEDBAT	5	9.47	63.15	0.00
Indigo-Muses	5	325.35	64.37	30.99
PCC-Allegro	5	464.03	63.06	3.65
PCC-Expr	0	N/A	N/A	N/A
QUIC Cubic	5	63.83	57.94	0.00
SCReAM	5	0.22	57.20	0.00
Sprout	5	2.43	59.38	0.00
TaoVA-100x	2	12.41	58.88	24.38
TCP Vegas	5	159.38	55.88	0.41
Verus	5	86.70	99.03	65.26
PCC-Vivace	5	203.45	55.07	0.91
WebRTC media	5	1.88	53.68	0.00

Run 1: Statistics of TCP BBR

Start at: 2018-11-30 04:11:58
End at: 2018-11-30 04:12:28
Local clock offset: -2.855 ms
Remote clock offset: -36.149 ms

Below is generated by plot.py at 2018-11-30 06:51:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 264.63 Mbit/s
95th percentile per-packet one-way delay: 68.228 ms
Loss rate: 5.65%
-- Flow 1:
Average throughput: 264.63 Mbit/s
95th percentile per-packet one-way delay: 68.228 ms
Loss rate: 5.65%

Run 1: Report of TCP BBR — Data Link

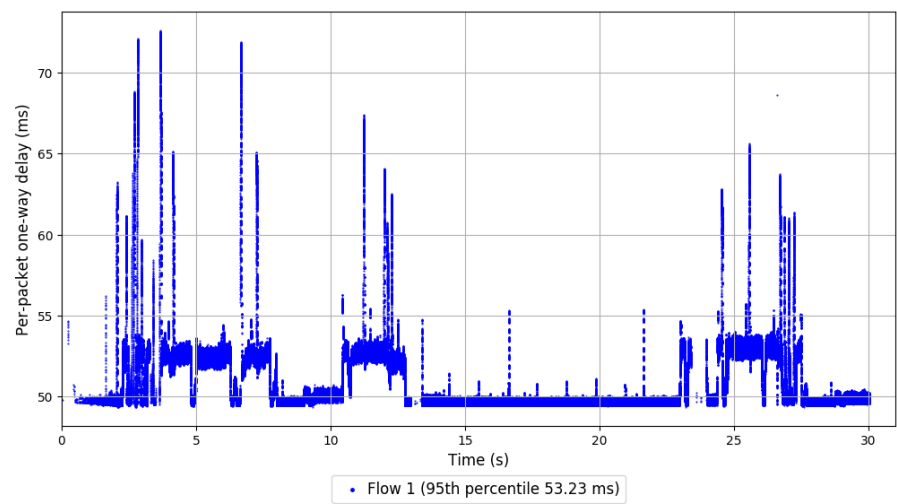
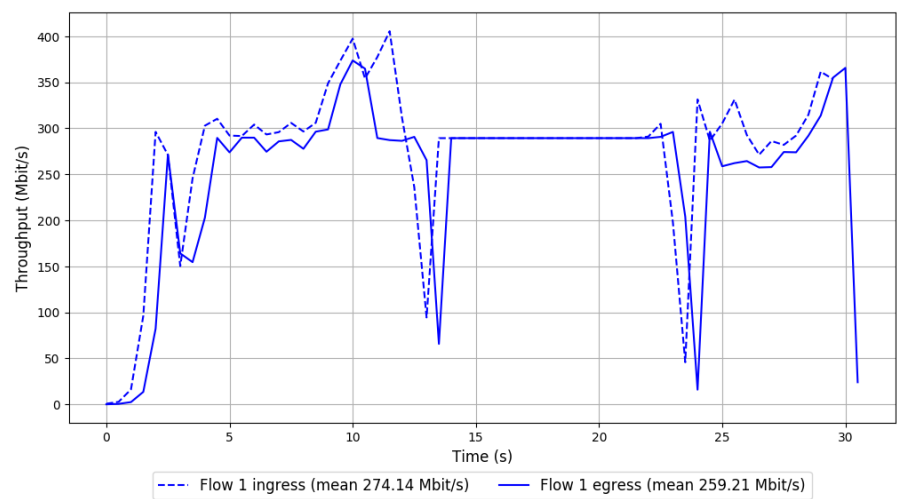


Run 2: Statistics of TCP BBR

Start at: 2018-11-30 04:43:49
End at: 2018-11-30 04:44:19
Local clock offset: 2.028 ms
Remote clock offset: -44.63 ms

Below is generated by plot.py at 2018-11-30 06:51:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 259.21 Mbit/s
95th percentile per-packet one-way delay: 53.225 ms
Loss rate: 5.45%
-- Flow 1:
Average throughput: 259.21 Mbit/s
95th percentile per-packet one-way delay: 53.225 ms
Loss rate: 5.45%

Run 2: Report of TCP BBR — Data Link

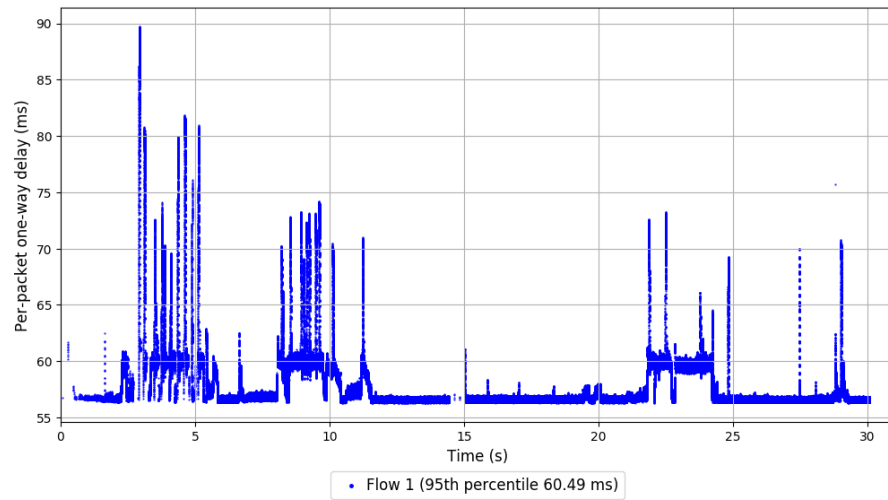
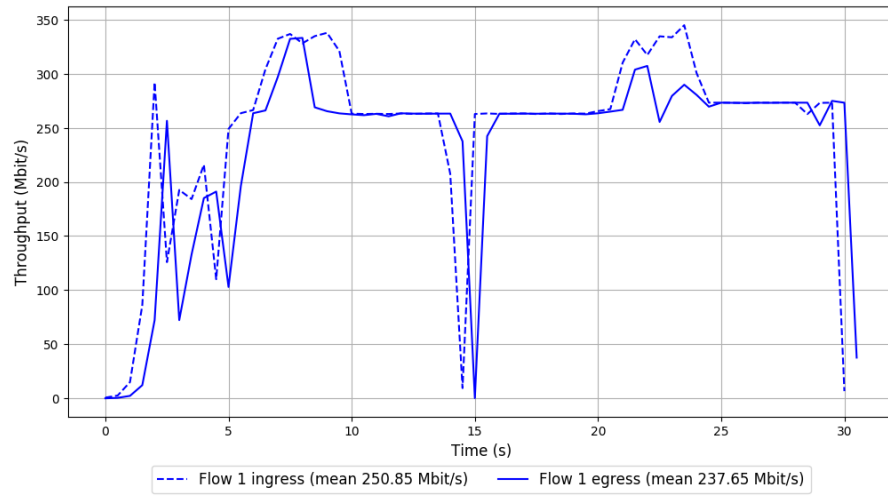


Run 3: Statistics of TCP BBR

Start at: 2018-11-30 05:21:35
End at: 2018-11-30 05:22:05
Local clock offset: -0.04 ms
Remote clock offset: -42.947 ms

Below is generated by plot.py at 2018-11-30 06:51:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 237.65 Mbit/s
95th percentile per-packet one-way delay: 60.495 ms
Loss rate: 5.26%
-- Flow 1:
Average throughput: 237.65 Mbit/s
95th percentile per-packet one-way delay: 60.495 ms
Loss rate: 5.26%

Run 3: Report of TCP BBR — Data Link

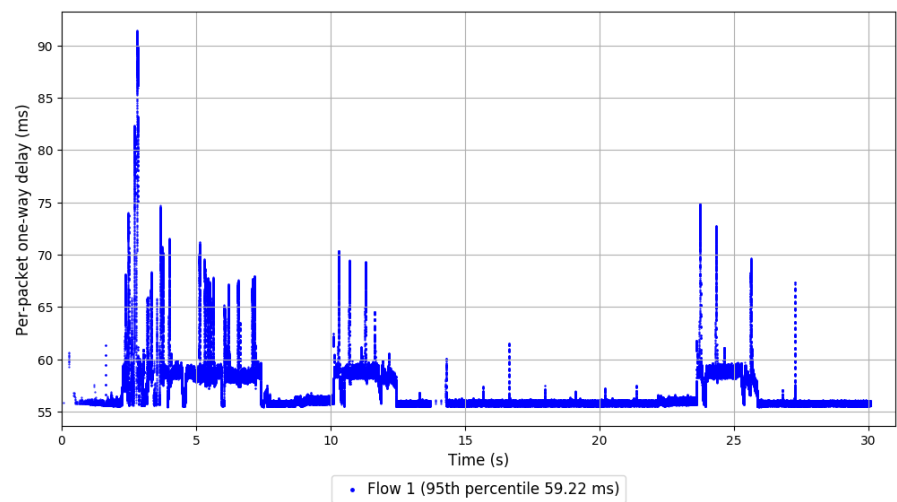
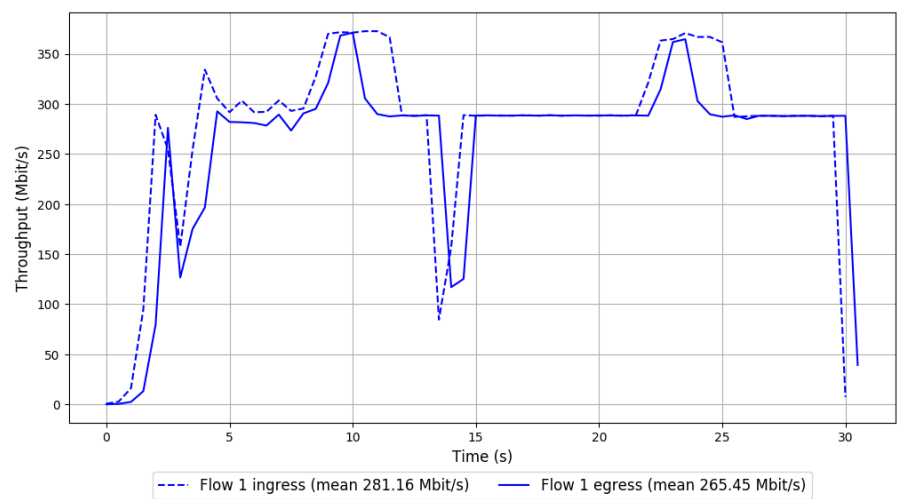


Run 4: Statistics of TCP BBR

Start at: 2018-11-30 05:53:21
End at: 2018-11-30 05:53:51
Local clock offset: -0.921 ms
Remote clock offset: -41.82 ms

Below is generated by plot.py at 2018-11-30 06:51:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 265.45 Mbit/s
95th percentile per-packet one-way delay: 59.216 ms
Loss rate: 5.59%
-- Flow 1:
Average throughput: 265.45 Mbit/s
95th percentile per-packet one-way delay: 59.216 ms
Loss rate: 5.59%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-11-30 06:25:20

End at: 2018-11-30 06:25:50

Local clock offset: 0.784 ms

Remote clock offset: -45.424 ms

Below is generated by plot.py at 2018-11-30 06:51:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 258.45 Mbit/s

95th percentile per-packet one-way delay: 57.921 ms

Loss rate: 6.00%

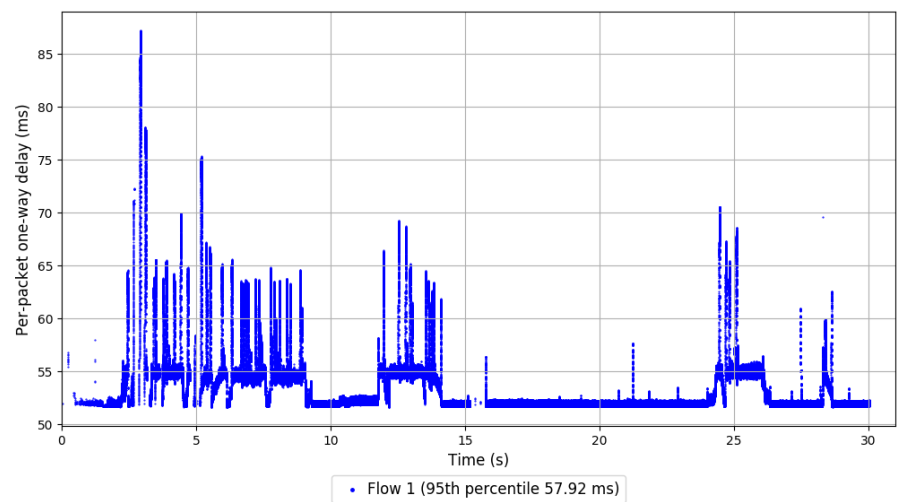
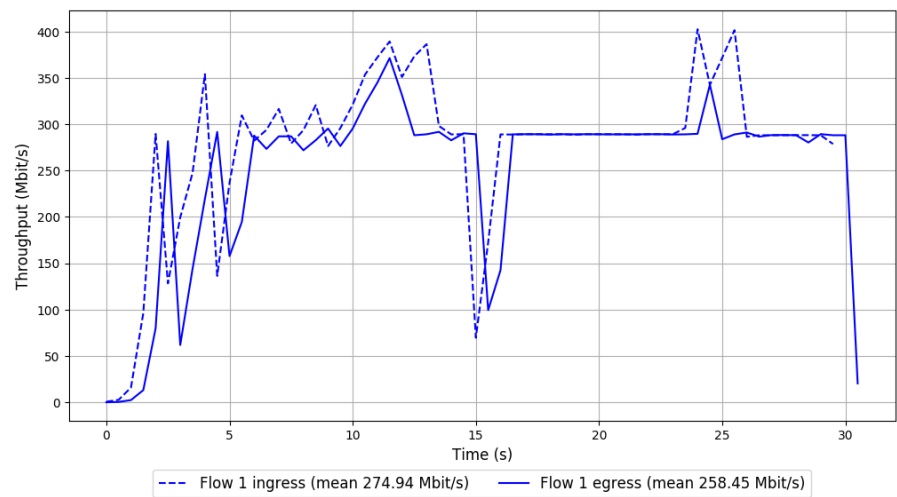
-- Flow 1:

Average throughput: 258.45 Mbit/s

95th percentile per-packet one-way delay: 57.921 ms

Loss rate: 6.00%

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

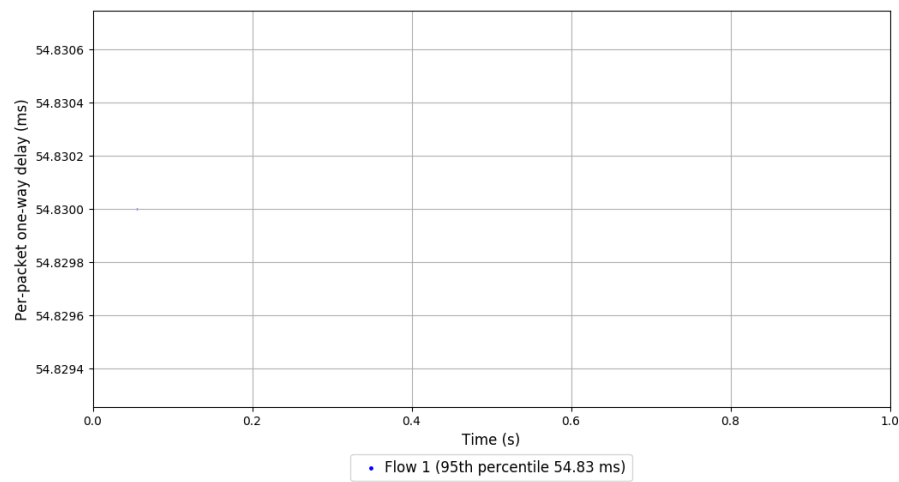
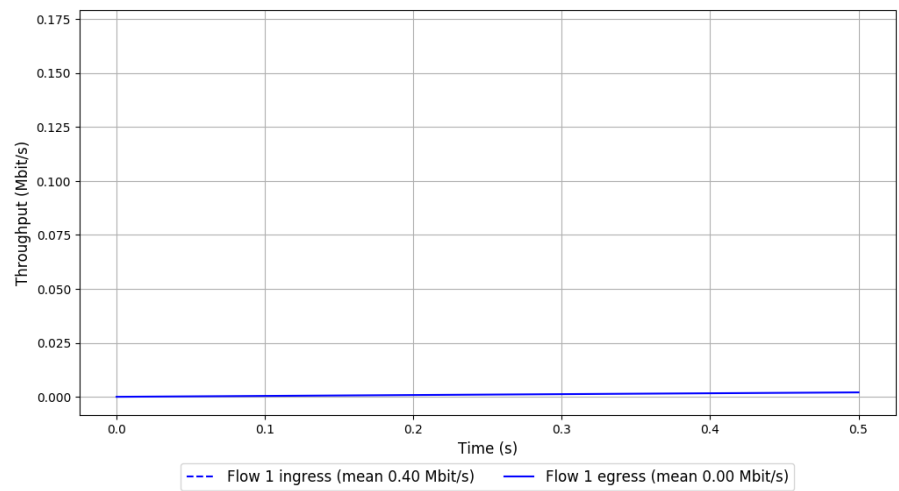
Start at: 2018-11-30 04:14:08

End at: 2018-11-30 04:14:39

Local clock offset: -0.016 ms

Remote clock offset: -43.644 ms

Run 1: Report of Copa — Data Link

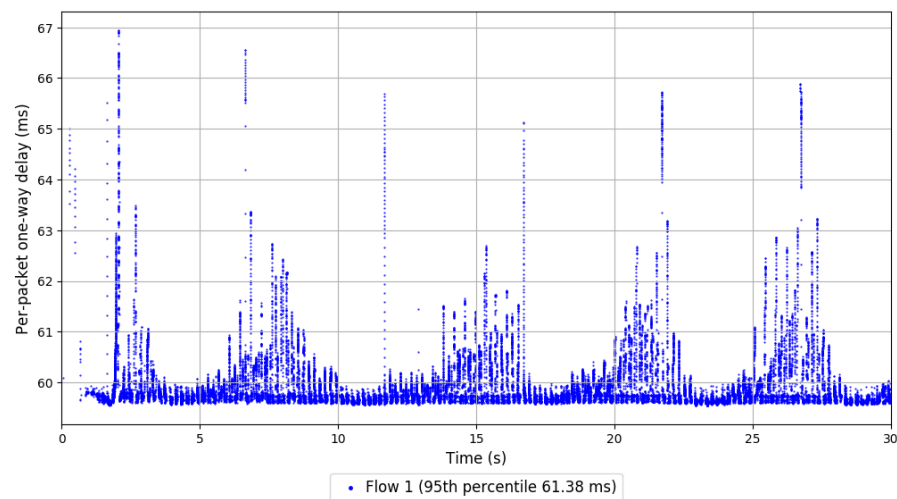
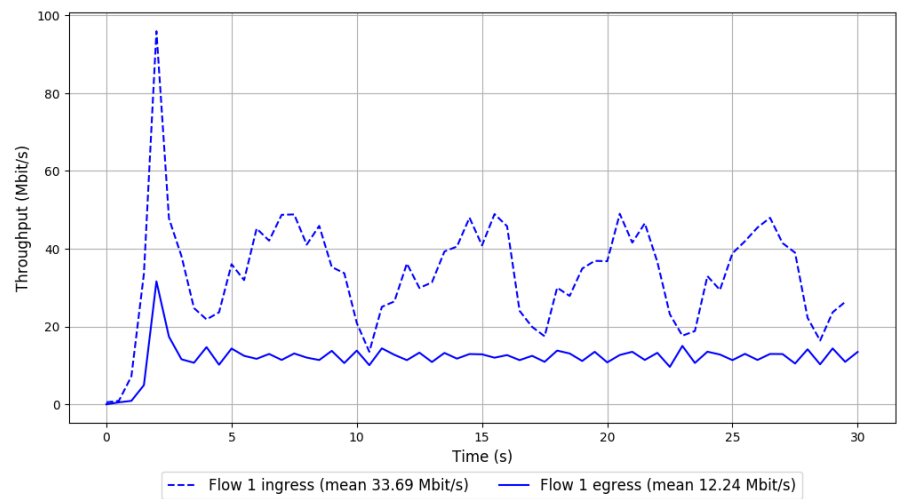


Run 2: Statistics of Copa

Start at: 2018-11-30 04:45:59
End at: 2018-11-30 04:46:29
Local clock offset: -1.464 ms
Remote clock offset: -37.999 ms

Below is generated by plot.py at 2018-11-30 06:51:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.24 Mbit/s
95th percentile per-packet one-way delay: 61.382 ms
Loss rate: 63.66%
-- Flow 1:
Average throughput: 12.24 Mbit/s
95th percentile per-packet one-way delay: 61.382 ms
Loss rate: 63.66%

Run 2: Report of Copa — Data Link

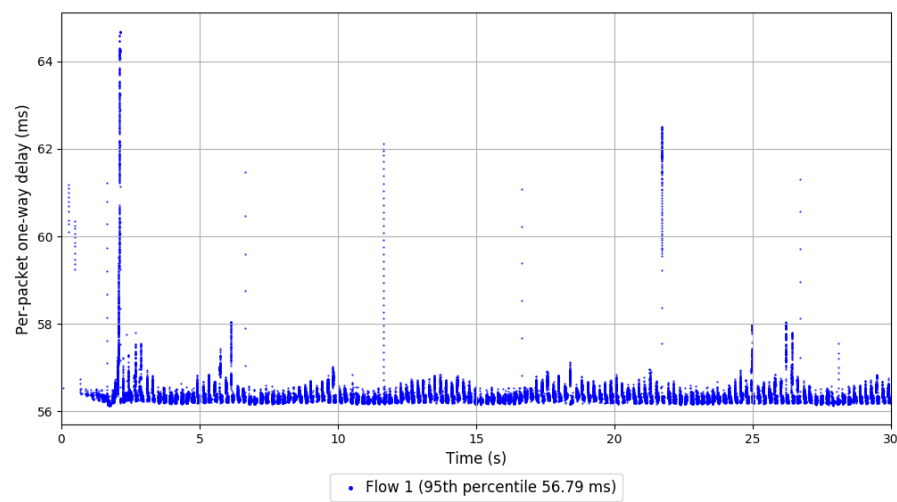
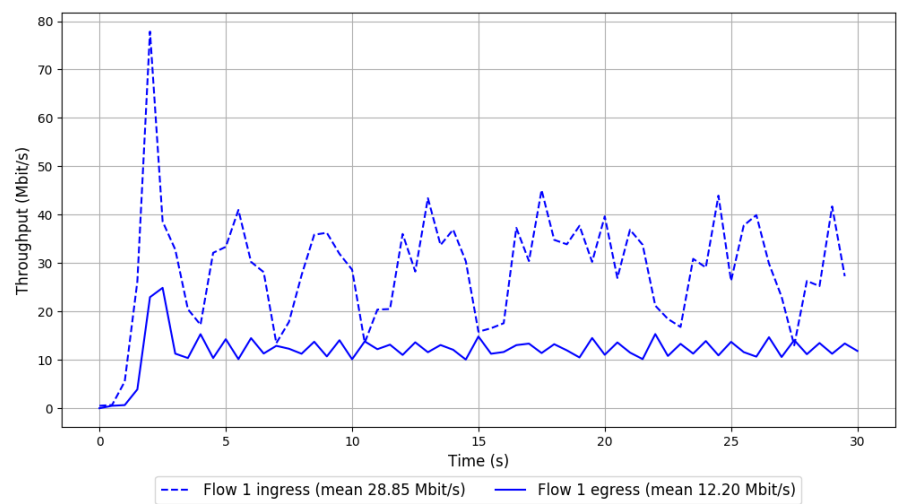


Run 3: Statistics of Copa

Start at: 2018-11-30 05:23:39
End at: 2018-11-30 05:24:09
Local clock offset: 1.28 ms
Remote clock offset: -39.335 ms

Below is generated by plot.py at 2018-11-30 06:51:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.20 Mbit/s
95th percentile per-packet one-way delay: 56.790 ms
Loss rate: 57.72%
-- Flow 1:
Average throughput: 12.20 Mbit/s
95th percentile per-packet one-way delay: 56.790 ms
Loss rate: 57.72%

Run 3: Report of Copa — Data Link

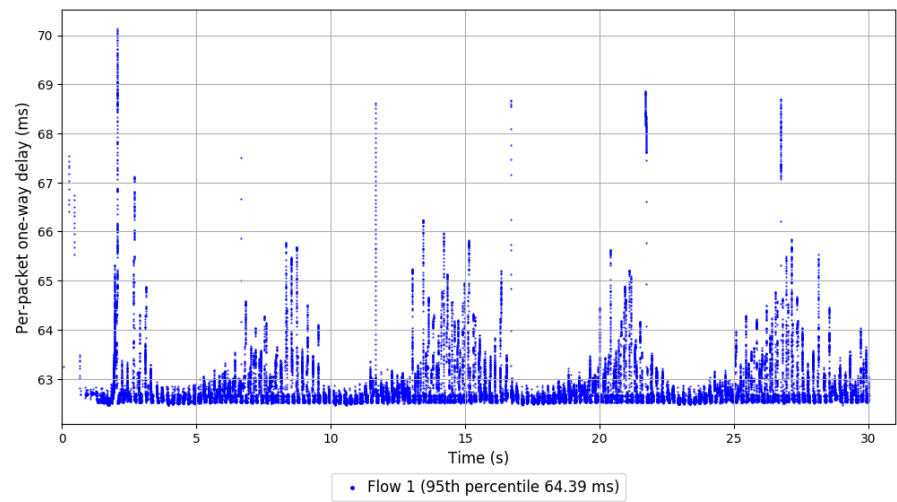
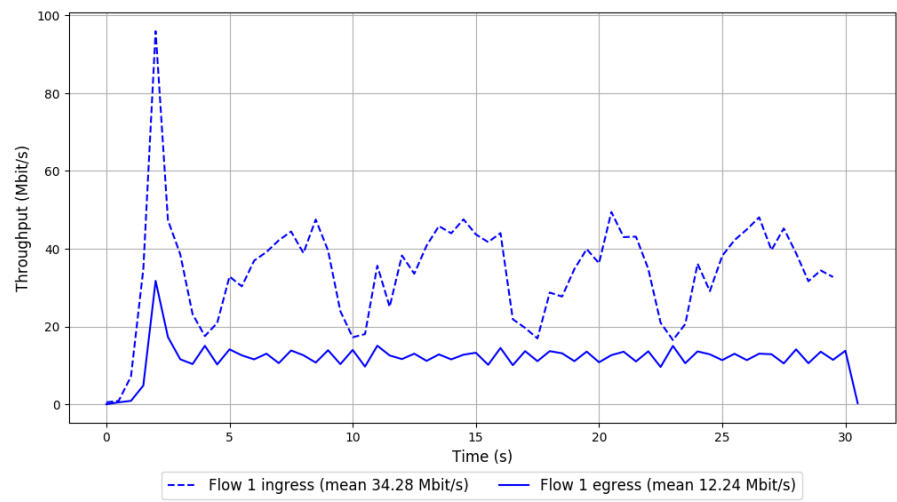


Run 4: Statistics of Copa

Start at: 2018-11-30 05:55:30
End at: 2018-11-30 05:56:01
Local clock offset: 2.083 ms
Remote clock offset: -32.044 ms

Below is generated by plot.py at 2018-11-30 06:51:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.24 Mbit/s
95th percentile per-packet one-way delay: 64.386 ms
Loss rate: 64.29%
-- Flow 1:
Average throughput: 12.24 Mbit/s
95th percentile per-packet one-way delay: 64.386 ms
Loss rate: 64.29%

Run 4: Report of Copa — Data Link

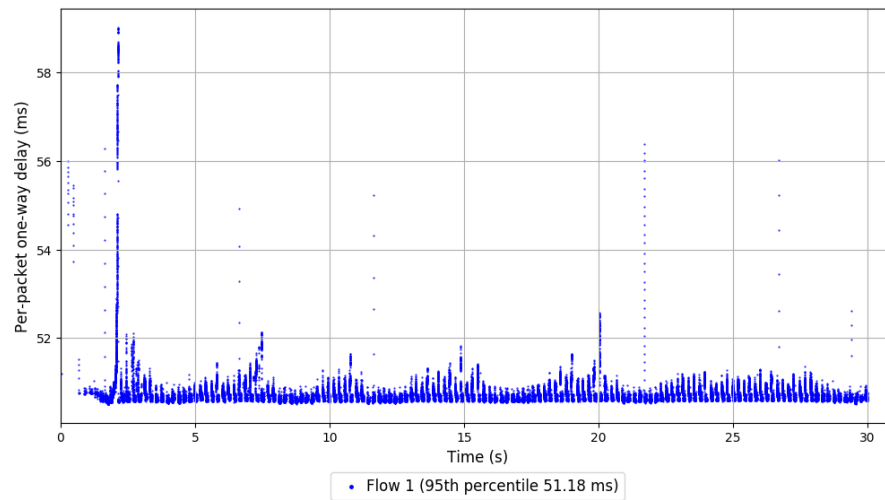
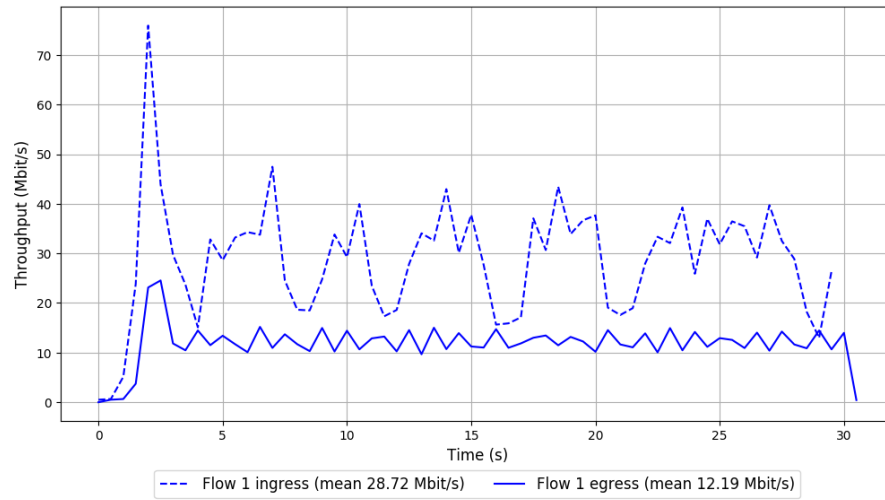


Run 5: Statistics of Copa

Start at: 2018-11-30 06:27:30
End at: 2018-11-30 06:28:00
Local clock offset: 2.082 ms
Remote clock offset: -45.241 ms

Below is generated by plot.py at 2018-11-30 06:51:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.19 Mbit/s
95th percentile per-packet one-way delay: 51.180 ms
Loss rate: 57.55%
-- Flow 1:
Average throughput: 12.19 Mbit/s
95th percentile per-packet one-way delay: 51.180 ms
Loss rate: 57.55%

Run 5: Report of Copa — Data Link

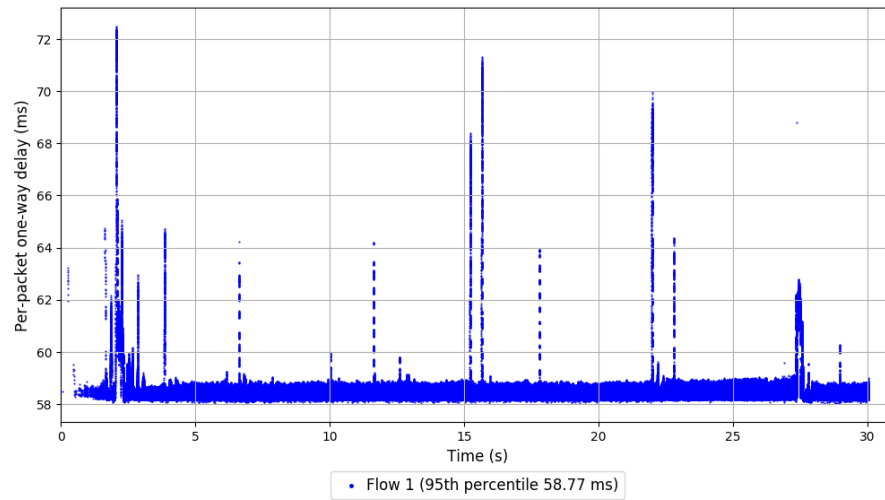
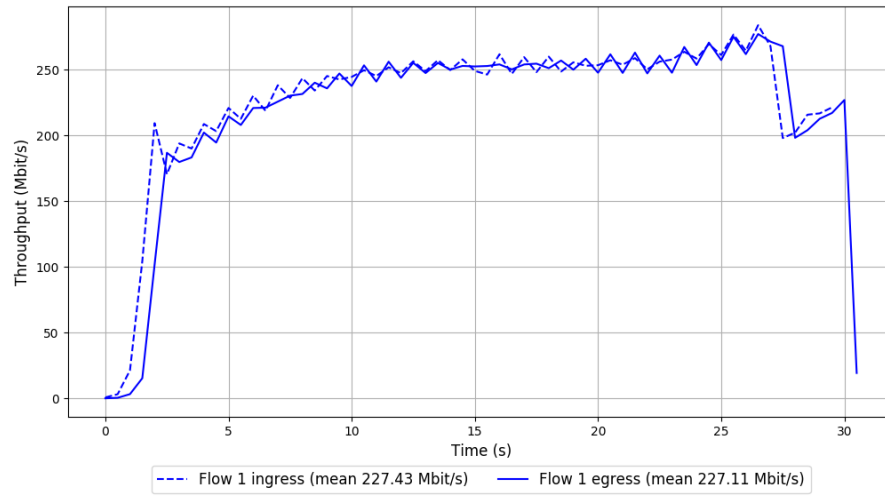


Run 1: Statistics of TCP Cubic

Start at: 2018-11-30 04:04:33
End at: 2018-11-30 04:05:03
Local clock offset: 0.597 ms
Remote clock offset: -39.846 ms

Below is generated by plot.py at 2018-11-30 06:51:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 227.11 Mbit/s
95th percentile per-packet one-way delay: 58.769 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 227.11 Mbit/s
95th percentile per-packet one-way delay: 58.769 ms
Loss rate: 0.14%

Run 1: Report of TCP Cubic — Data Link

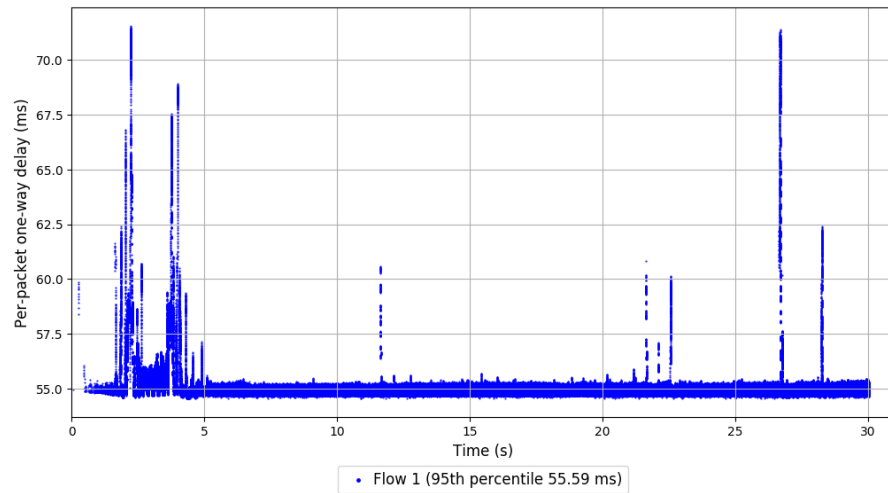
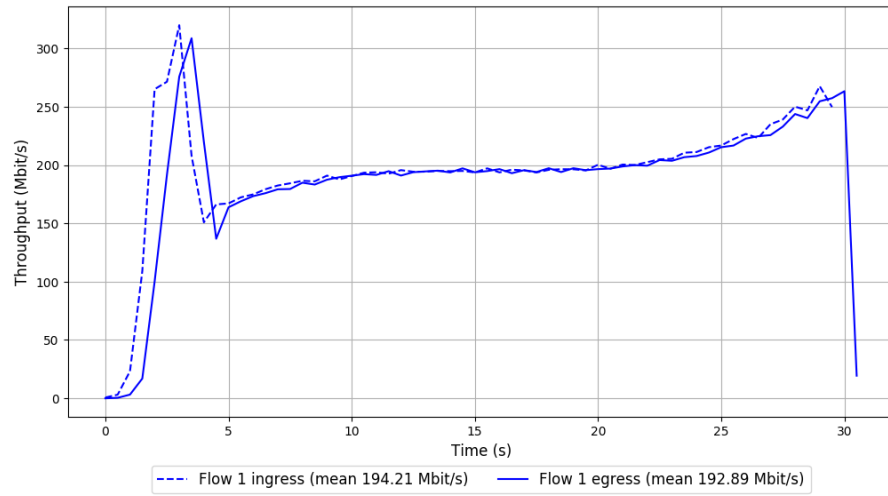


Run 2: Statistics of TCP Cubic

Start at: 2018-11-30 04:42:00
End at: 2018-11-30 04:42:30
Local clock offset: -0.728 ms
Remote clock offset: -44.655 ms

Below is generated by plot.py at 2018-11-30 06:51:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 192.89 Mbit/s
95th percentile per-packet one-way delay: 55.585 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 192.89 Mbit/s
95th percentile per-packet one-way delay: 55.585 ms
Loss rate: 0.68%

Run 2: Report of TCP Cubic — Data Link

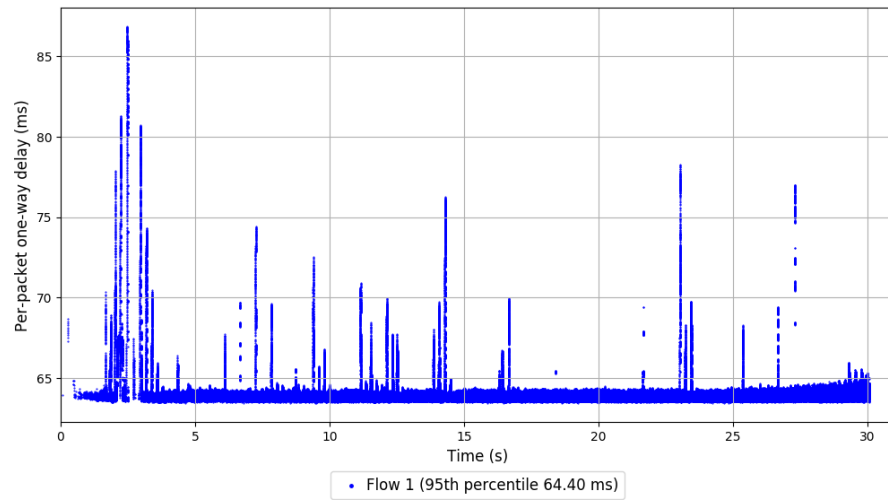
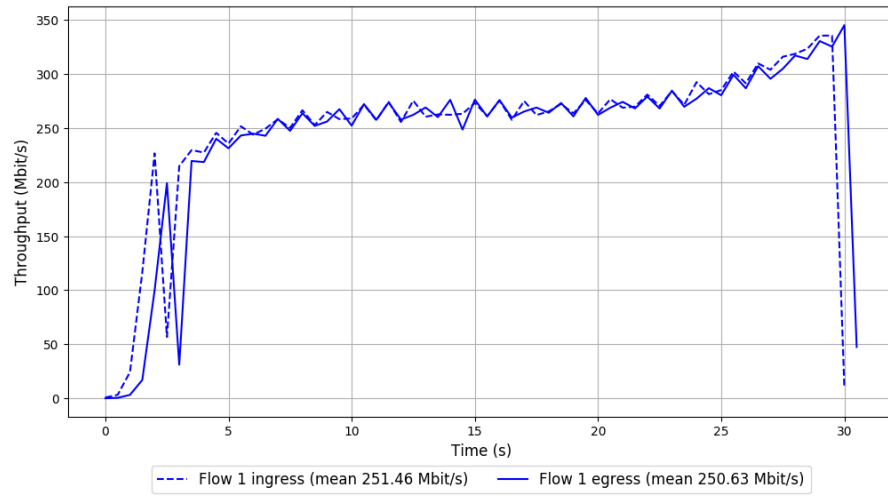


Run 3: Statistics of TCP Cubic

Start at: 2018-11-30 05:19:34
End at: 2018-11-30 05:20:04
Local clock offset: -0.3 ms
Remote clock offset: -33.504 ms

Below is generated by plot.py at 2018-11-30 06:51:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 250.63 Mbit/s
95th percentile per-packet one-way delay: 64.399 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 250.63 Mbit/s
95th percentile per-packet one-way delay: 64.399 ms
Loss rate: 0.33%

Run 3: Report of TCP Cubic — Data Link

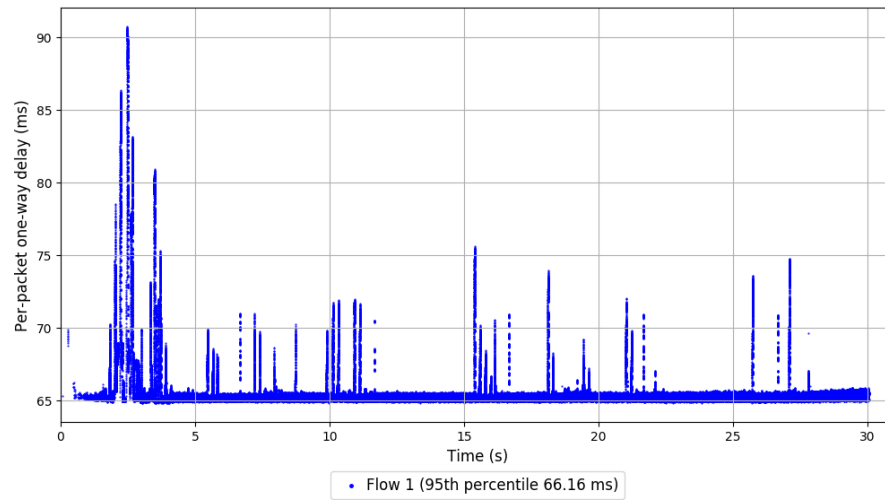
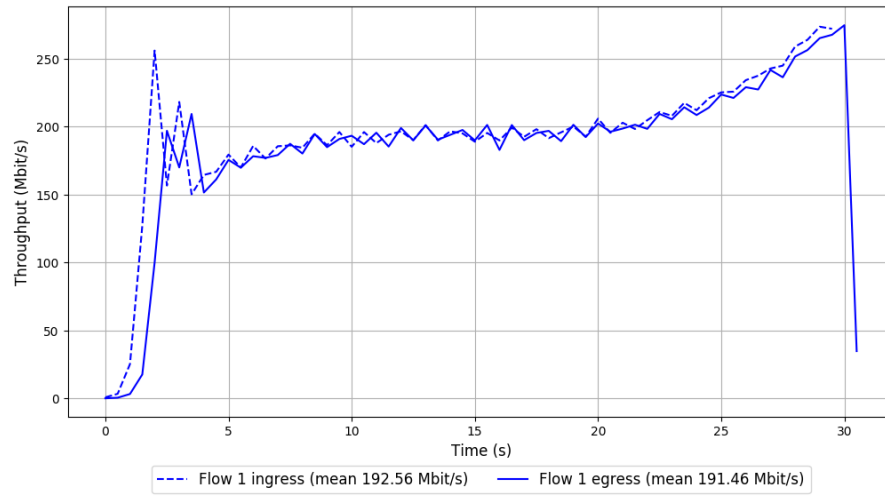


Run 4: Statistics of TCP Cubic

Start at: 2018-11-30 05:51:31
End at: 2018-11-30 05:52:01
Local clock offset: -1.017 ms
Remote clock offset: -32.869 ms

Below is generated by plot.py at 2018-11-30 06:52:58
Datalink statistics
-- Total of 1 flow:
Average throughput: 191.46 Mbit/s
95th percentile per-packet one-way delay: 66.157 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 191.46 Mbit/s
95th percentile per-packet one-way delay: 66.157 ms
Loss rate: 0.58%

Run 4: Report of TCP Cubic — Data Link

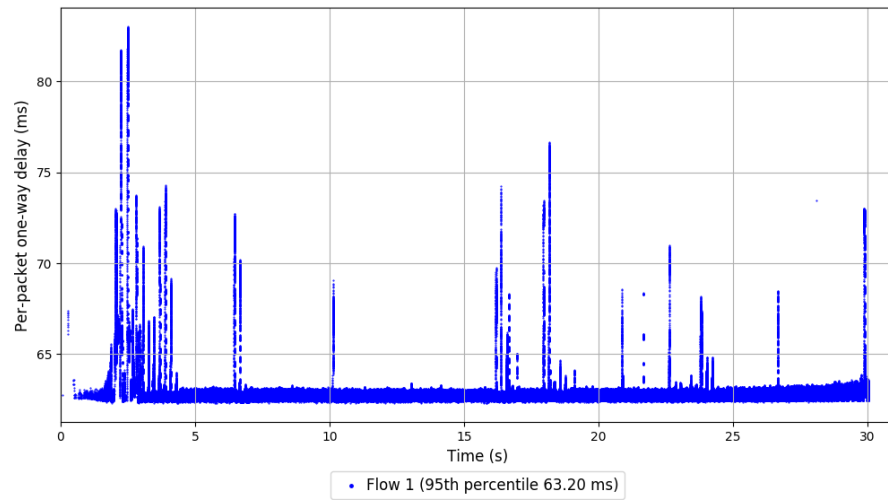
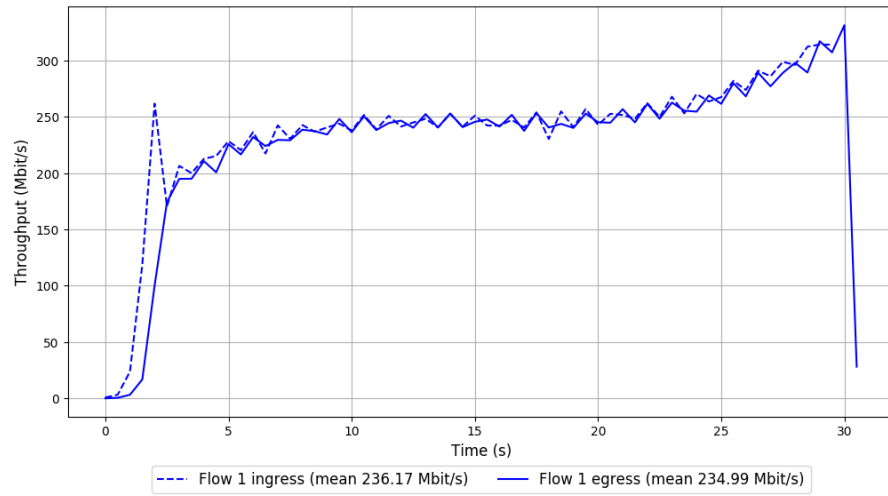


Run 5: Statistics of TCP Cubic

Start at: 2018-11-30 06:23:23
End at: 2018-11-30 06:23:53
Local clock offset: 0.716 ms
Remote clock offset: -34.815 ms

Below is generated by plot.py at 2018-11-30 06:53:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 234.99 Mbit/s
95th percentile per-packet one-way delay: 63.196 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 234.99 Mbit/s
95th percentile per-packet one-way delay: 63.196 ms
Loss rate: 0.50%

Run 5: Report of TCP Cubic — Data Link

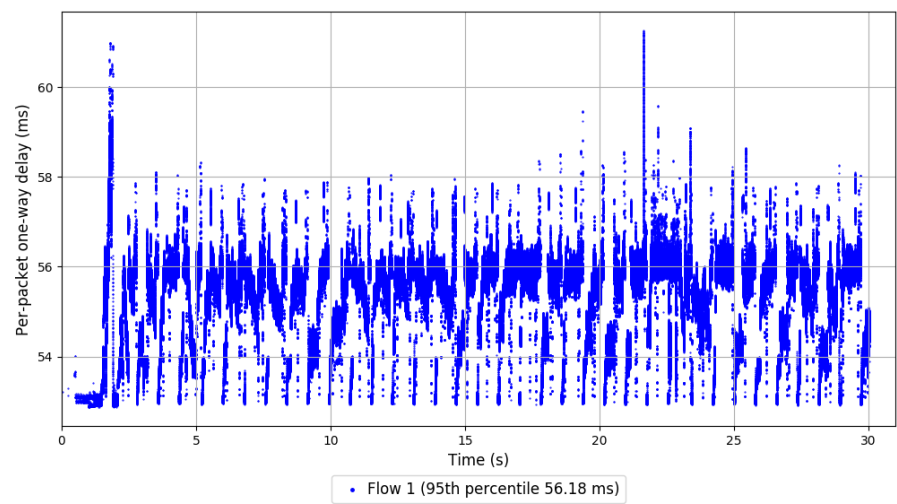
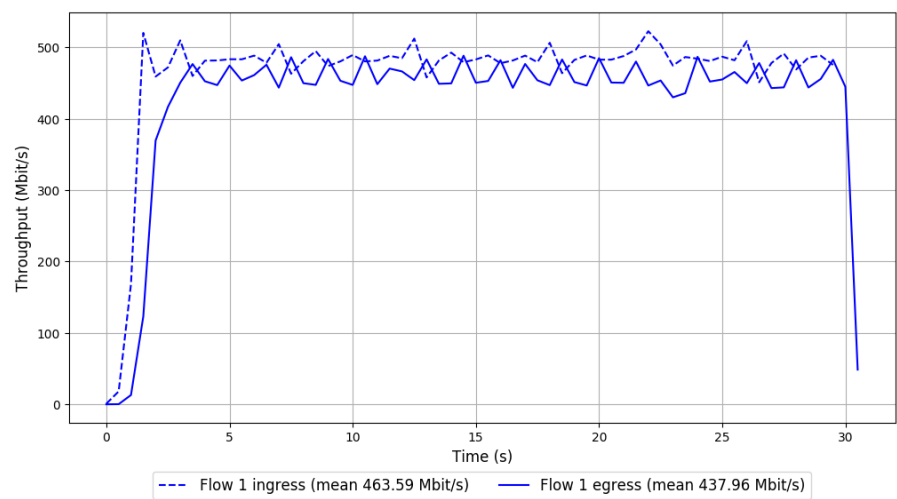


Run 1: Statistics of FillP

Start at: 2018-11-30 04:15:18
End at: 2018-11-30 04:15:48
Local clock offset: 0.155 ms
Remote clock offset: -44.93 ms

Below is generated by plot.py at 2018-11-30 06:57:27
Datalink statistics
-- Total of 1 flow:
Average throughput: 437.96 Mbit/s
95th percentile per-packet one-way delay: 56.181 ms
Loss rate: 5.53%
-- Flow 1:
Average throughput: 437.96 Mbit/s
95th percentile per-packet one-way delay: 56.181 ms
Loss rate: 5.53%

Run 1: Report of FillP — Data Link

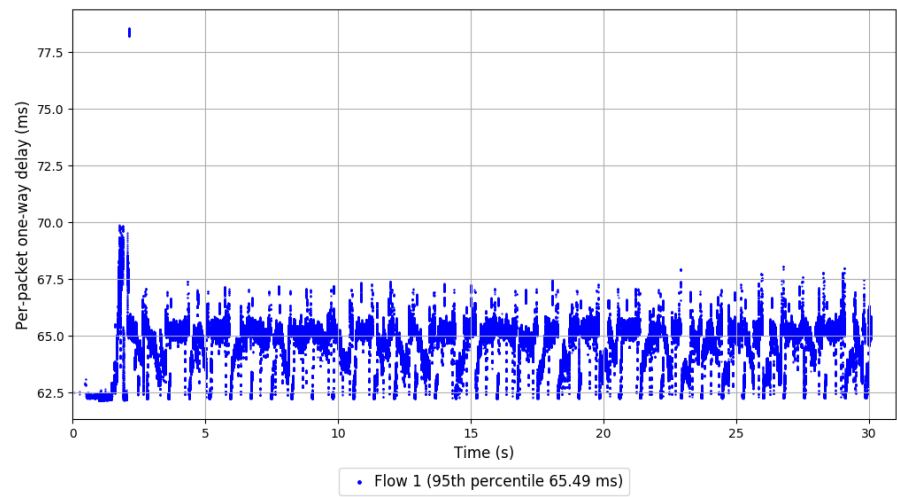
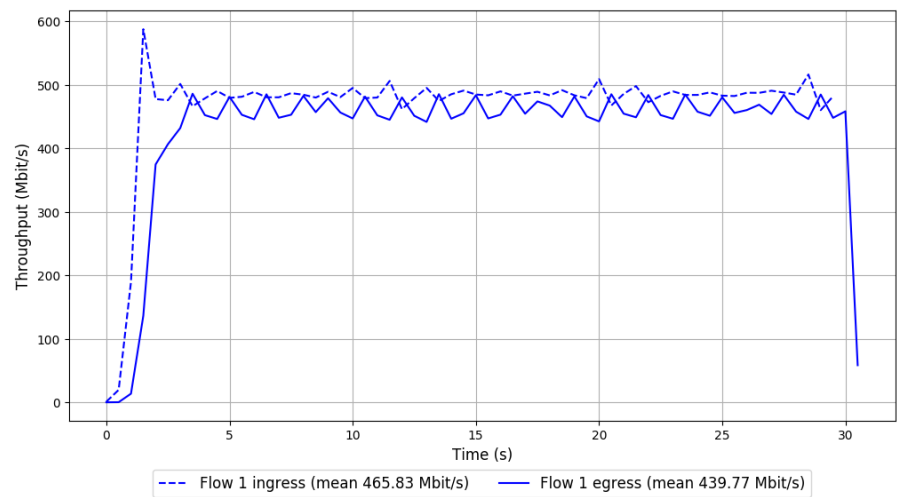


Run 2: Statistics of FillP

Start at: 2018-11-30 04:47:13
End at: 2018-11-30 04:47:43
Local clock offset: 0.36 ms
Remote clock offset: -33.594 ms

Below is generated by plot.py at 2018-11-30 06:57:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 439.77 Mbit/s
95th percentile per-packet one-way delay: 65.489 ms
Loss rate: 5.59%
-- Flow 1:
Average throughput: 439.77 Mbit/s
95th percentile per-packet one-way delay: 65.489 ms
Loss rate: 5.59%

Run 2: Report of FillP — Data Link

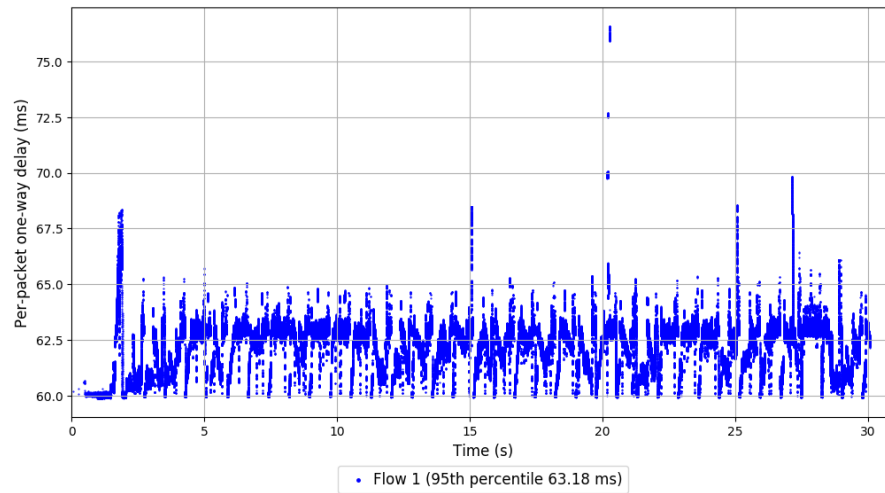
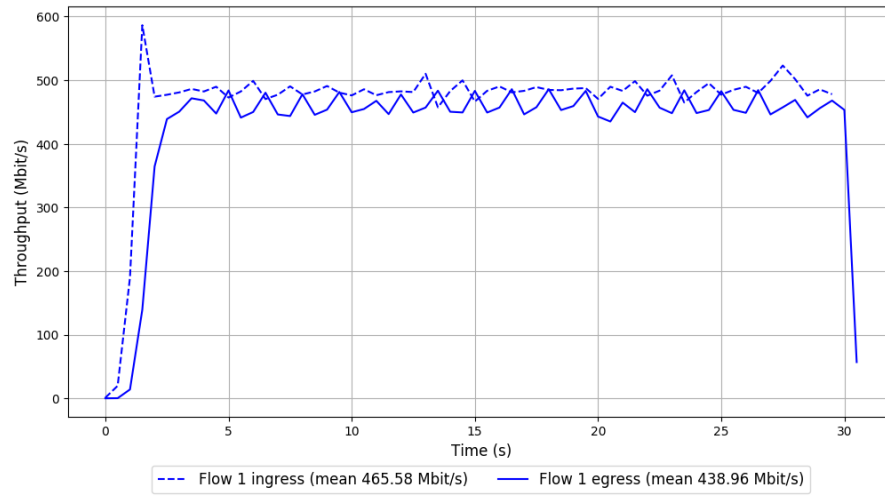


Run 3: Statistics of FillP

Start at: 2018-11-30 05:24:53
End at: 2018-11-30 05:25:23
Local clock offset: -2.115 ms
Remote clock offset: -38.772 ms

Below is generated by plot.py at 2018-11-30 06:57:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 438.96 Mbit/s
95th percentile per-packet one-way delay: 63.177 ms
Loss rate: 5.71%
-- Flow 1:
Average throughput: 438.96 Mbit/s
95th percentile per-packet one-way delay: 63.177 ms
Loss rate: 5.71%

Run 3: Report of FillP — Data Link

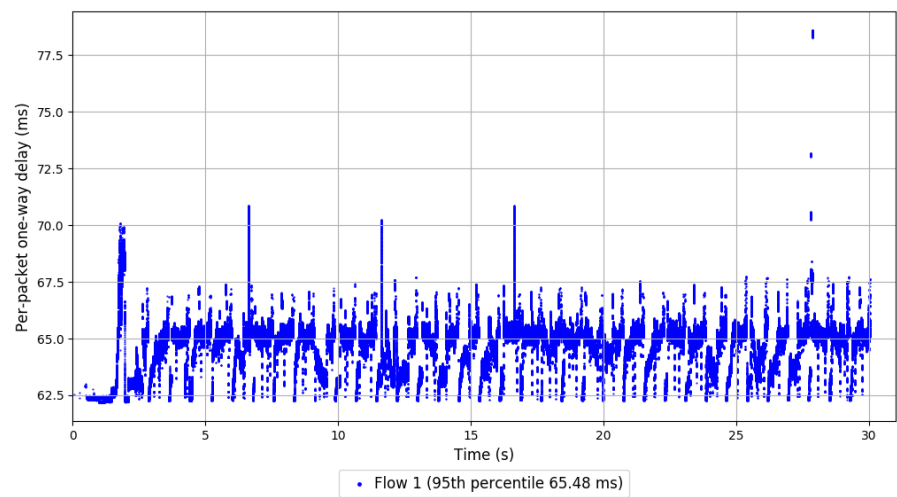
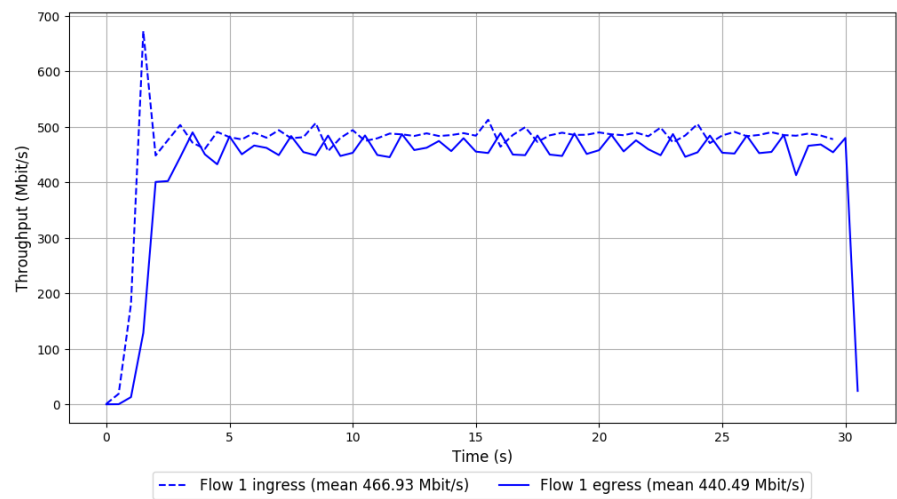


Run 4: Statistics of FillP

Start at: 2018-11-30 05:56:44
End at: 2018-11-30 05:57:14
Local clock offset: 0.762 ms
Remote clock offset: -33.498 ms

Below is generated by plot.py at 2018-11-30 06:57:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 440.49 Mbit/s
95th percentile per-packet one-way delay: 65.476 ms
Loss rate: 5.65%
-- Flow 1:
Average throughput: 440.49 Mbit/s
95th percentile per-packet one-way delay: 65.476 ms
Loss rate: 5.65%

Run 4: Report of FillP — Data Link

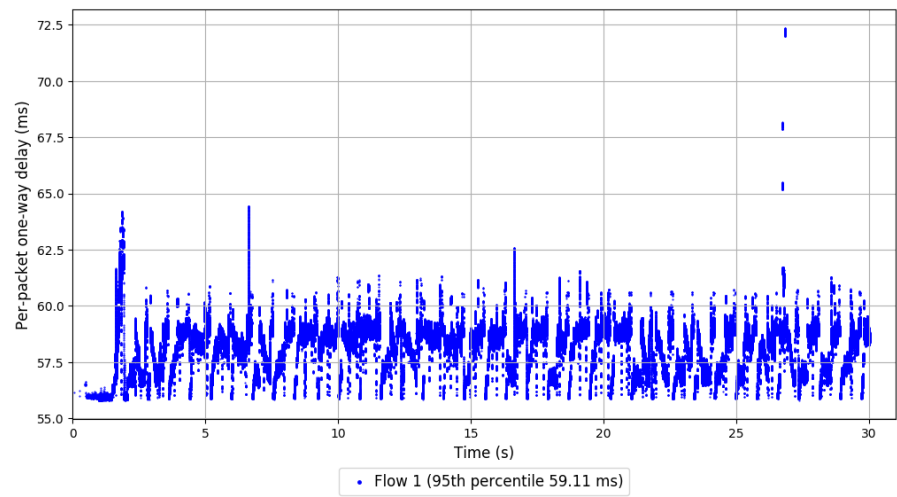
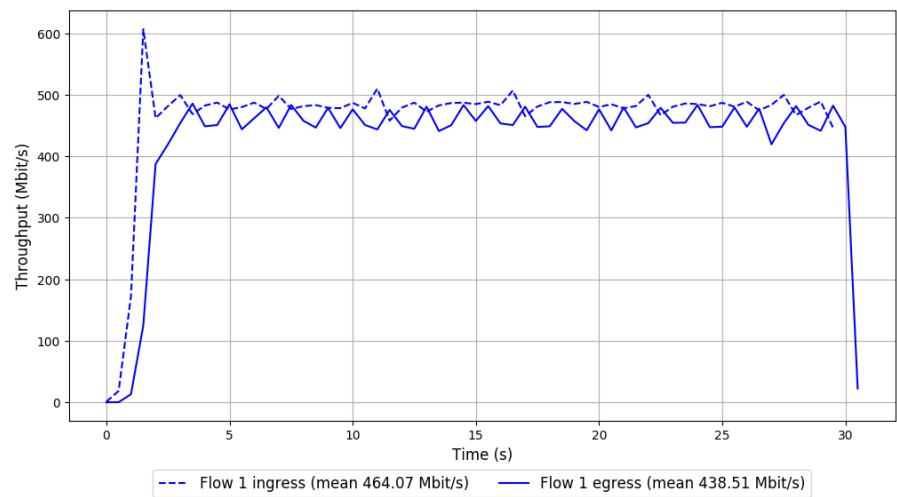


Run 5: Statistics of FillP

Start at: 2018-11-30 06:28:43
End at: 2018-11-30 06:29:13
Local clock offset: 2.978 ms
Remote clock offset: -41.439 ms

Below is generated by plot.py at 2018-11-30 06:57:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 438.51 Mbit/s
95th percentile per-packet one-way delay: 59.113 ms
Loss rate: 5.50%
-- Flow 1:
Average throughput: 438.51 Mbit/s
95th percentile per-packet one-way delay: 59.113 ms
Loss rate: 5.50%

Run 5: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2018-11-30 04:17:44

End at: 2018-11-30 04:18:14

Local clock offset: 1.163 ms

Remote clock offset: -43.188 ms

Below is generated by plot.py at 2018-11-30 06:58:01

Datalink statistics

-- Total of 1 flow:

Average throughput: 435.23 Mbit/s

95th percentile per-packet one-way delay: 53.941 ms

Loss rate: 4.65%

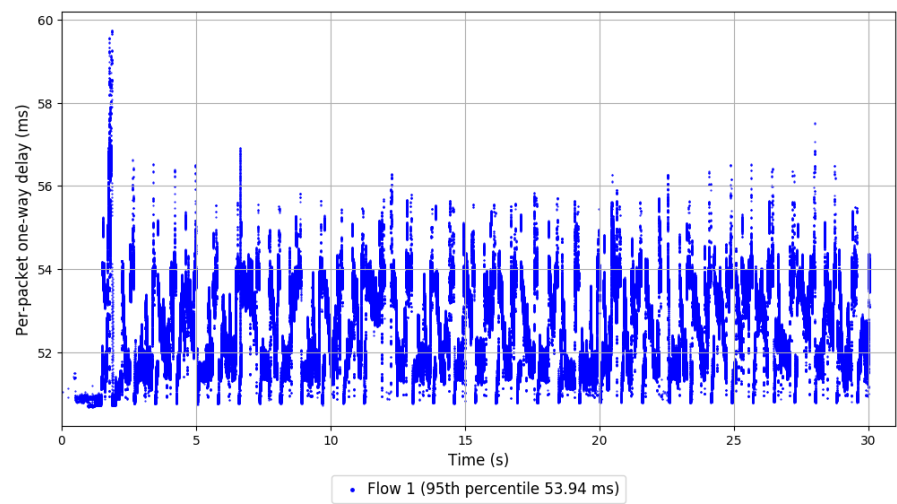
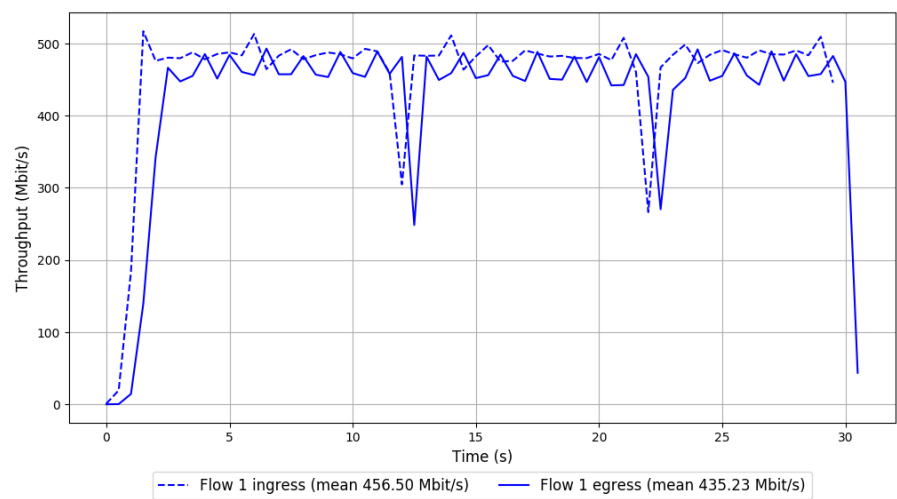
-- Flow 1:

Average throughput: 435.23 Mbit/s

95th percentile per-packet one-way delay: 53.941 ms

Loss rate: 4.65%

Run 1: Report of FillP-Sheep — Data Link

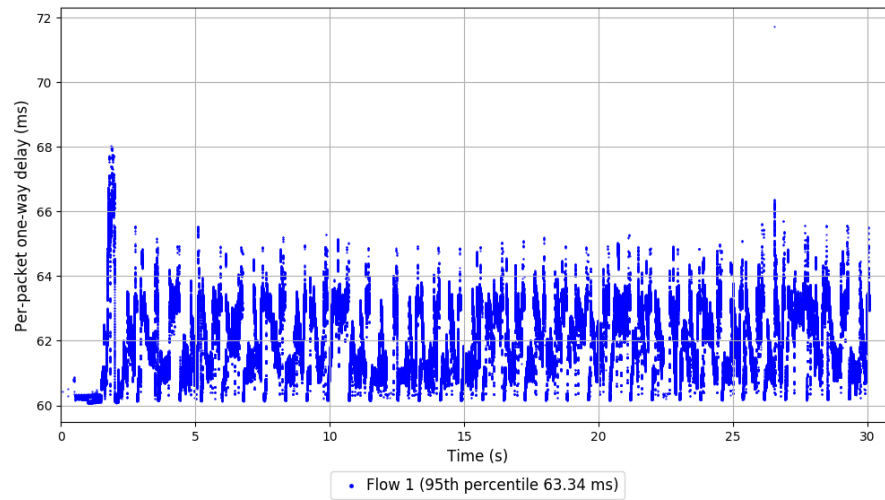
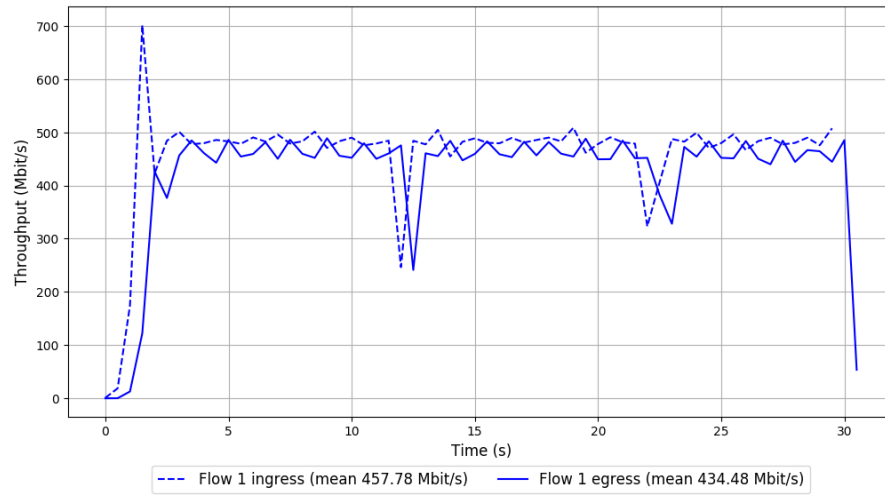


Run 2: Statistics of FillP-Sheep

Start at: 2018-11-30 04:49:39
End at: 2018-11-30 04:50:09
Local clock offset: -1.524 ms
Remote clock offset: -40.022 ms

Below is generated by plot.py at 2018-11-30 06:59:23
Datalink statistics
-- Total of 1 flow:
Average throughput: 434.48 Mbit/s
95th percentile per-packet one-way delay: 63.338 ms
Loss rate: 5.08%
-- Flow 1:
Average throughput: 434.48 Mbit/s
95th percentile per-packet one-way delay: 63.338 ms
Loss rate: 5.08%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2018-11-30 05:27:19

End at: 2018-11-30 05:27:49

Local clock offset: 2.085 ms

Remote clock offset: -42.6 ms

Below is generated by plot.py at 2018-11-30 07:00:03

Datalink statistics

-- Total of 1 flow:

Average throughput: 437.02 Mbit/s

95th percentile per-packet one-way delay: 55.359 ms

Loss rate: 4.08%

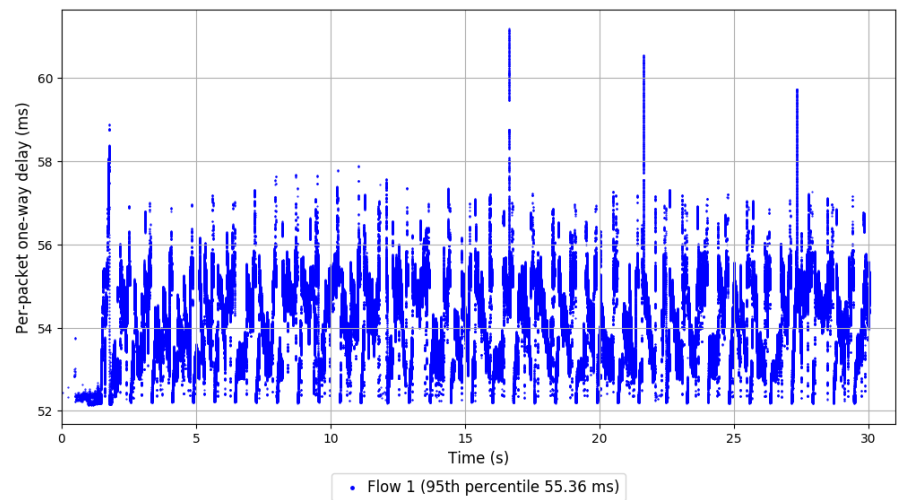
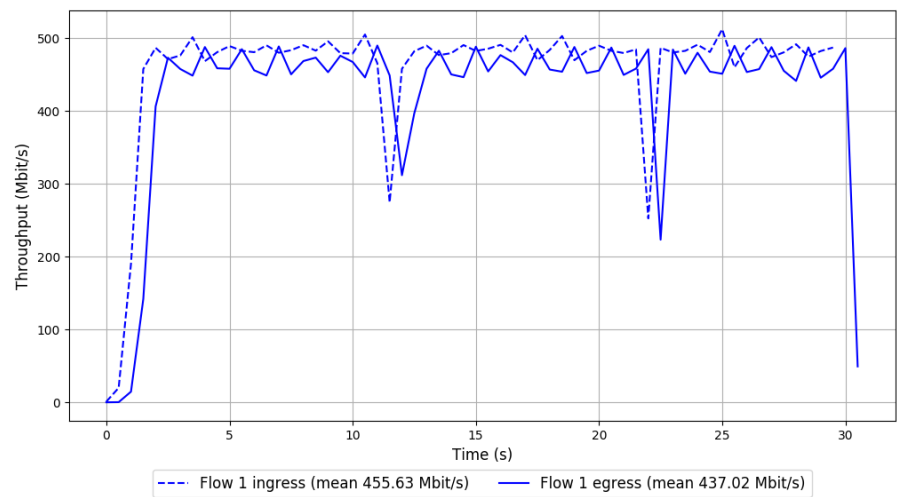
-- Flow 1:

Average throughput: 437.02 Mbit/s

95th percentile per-packet one-way delay: 55.359 ms

Loss rate: 4.08%

Run 3: Report of FillP-Sheep — Data Link

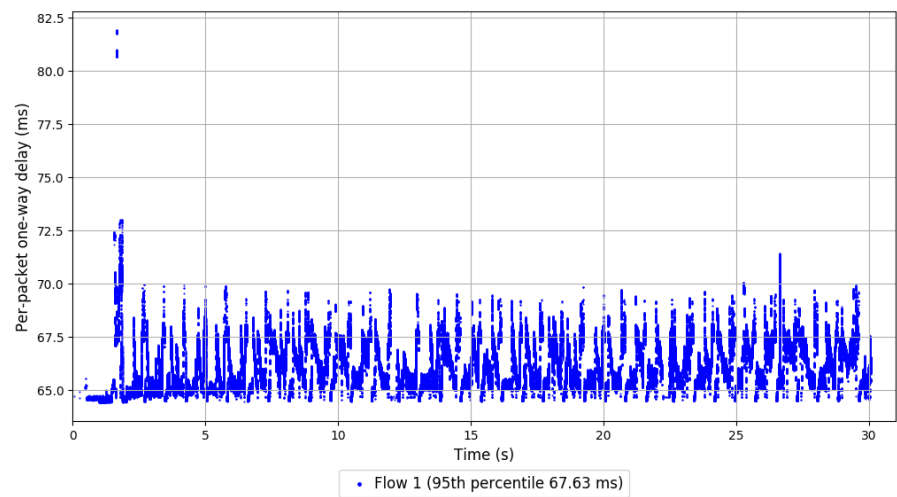
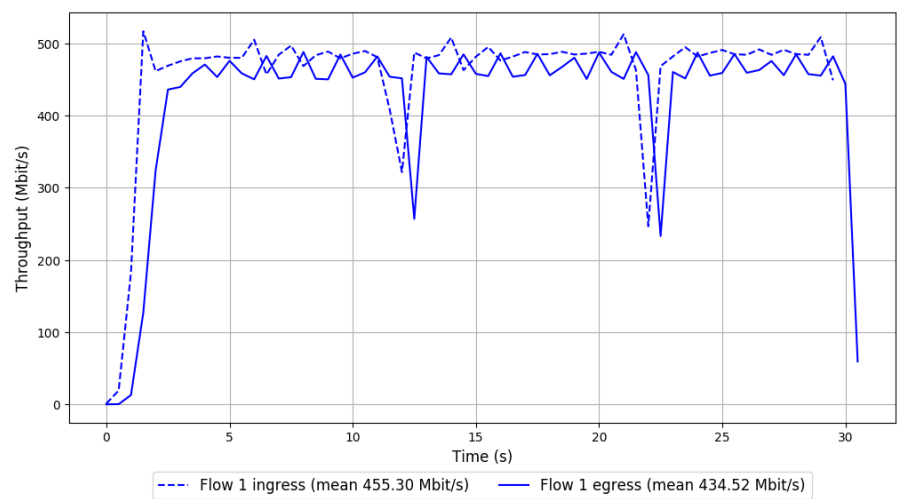


Run 4: Statistics of FillP-Sheep

Start at: 2018-11-30 05:59:10
End at: 2018-11-30 05:59:40
Local clock offset: -2.468 ms
Remote clock offset: -34.51 ms

Below is generated by plot.py at 2018-11-30 07:03:23
Datalink statistics
-- Total of 1 flow:
Average throughput: 434.52 Mbit/s
95th percentile per-packet one-way delay: 67.634 ms
Loss rate: 4.56%
-- Flow 1:
Average throughput: 434.52 Mbit/s
95th percentile per-packet one-way delay: 67.634 ms
Loss rate: 4.56%

Run 4: Report of FillP-Sheep — Data Link

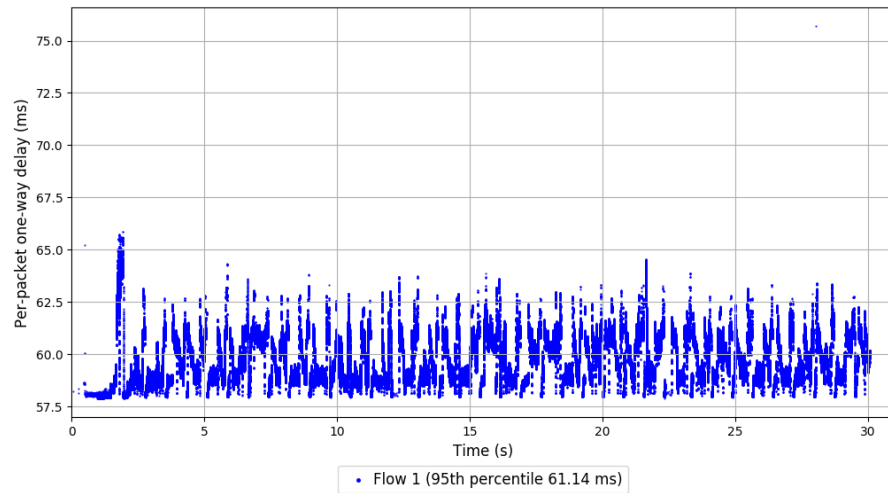
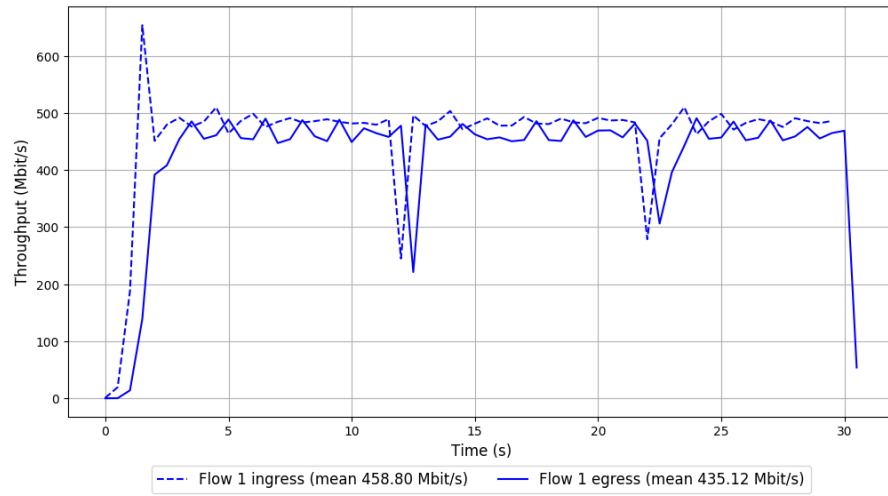


Run 5: Statistics of FillP-Sheep

Start at: 2018-11-30 06:31:10
End at: 2018-11-30 06:31:40
Local clock offset: 0.566 ms
Remote clock offset: -39.438 ms

Below is generated by plot.py at 2018-11-30 07:03:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 435.12 Mbit/s
95th percentile per-packet one-way delay: 61.138 ms
Loss rate: 5.16%
-- Flow 1:
Average throughput: 435.12 Mbit/s
95th percentile per-packet one-way delay: 61.138 ms
Loss rate: 5.16%

Run 5: Report of FillP-Sheep — Data Link

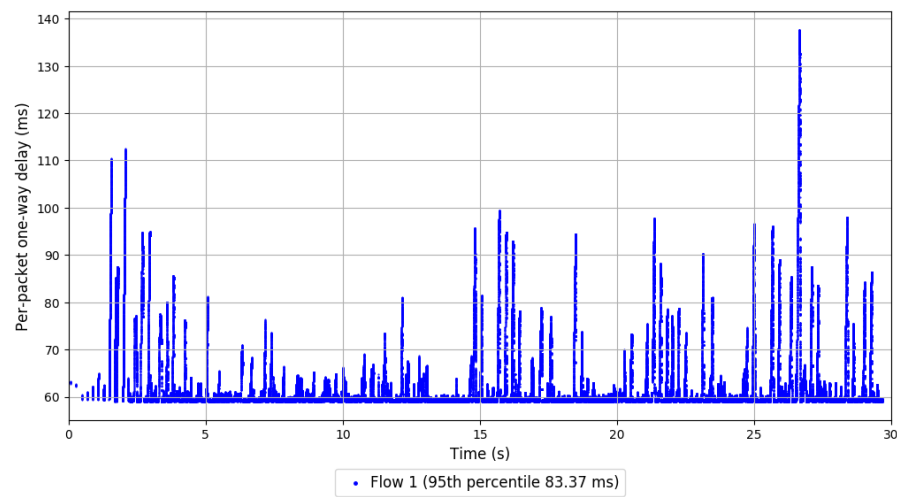
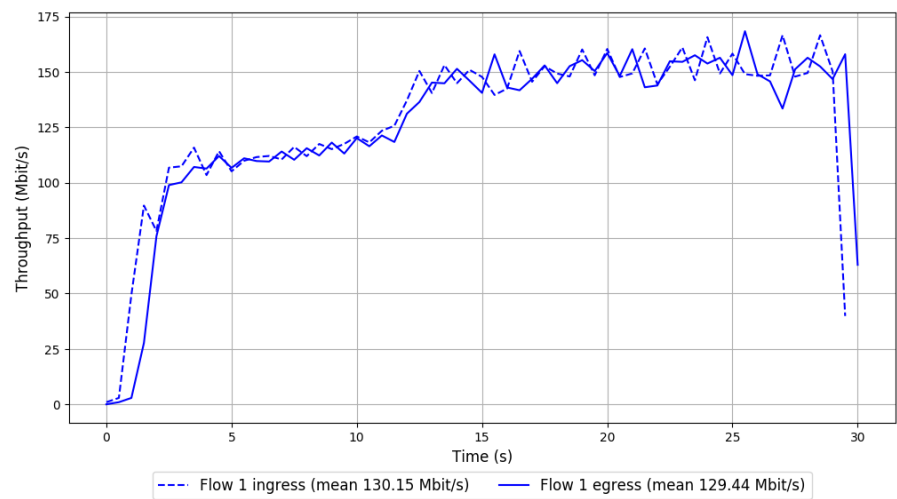


Run 1: Statistics of Indigo

Start at: 2018-11-30 04:25:56
End at: 2018-11-30 04:26:26
Local clock offset: 0.64 ms
Remote clock offset: -38.717 ms

Below is generated by plot.py at 2018-11-30 07:03:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 129.44 Mbit/s
95th percentile per-packet one-way delay: 83.367 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 129.44 Mbit/s
95th percentile per-packet one-way delay: 83.367 ms
Loss rate: 0.55%

Run 1: Report of Indigo — Data Link

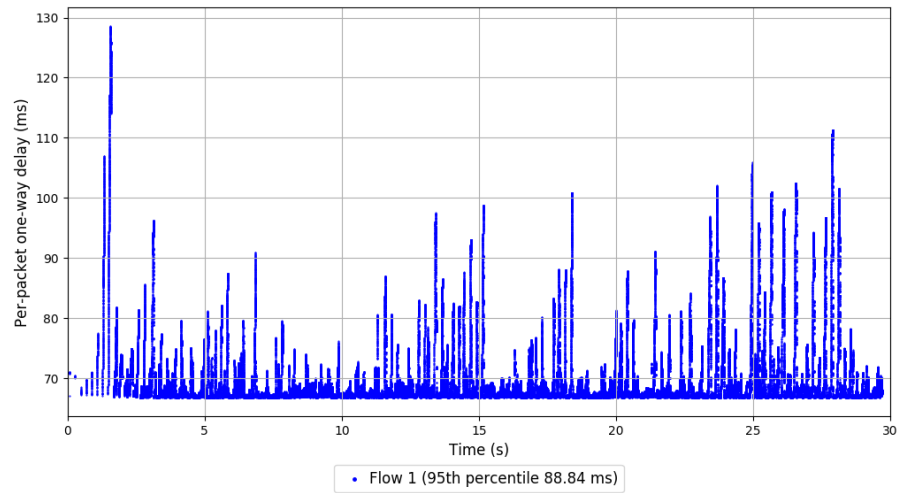
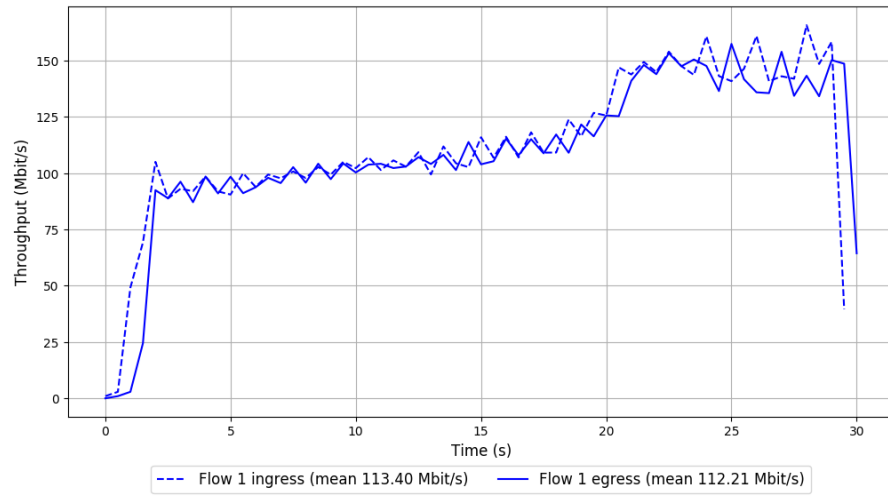


Run 2: Statistics of Indigo

Start at: 2018-11-30 04:57:54
End at: 2018-11-30 04:58:24
Local clock offset: 2.844 ms
Remote clock offset: -29.586 ms

Below is generated by plot.py at 2018-11-30 07:03:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 112.21 Mbit/s
95th percentile per-packet one-way delay: 88.841 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 112.21 Mbit/s
95th percentile per-packet one-way delay: 88.841 ms
Loss rate: 1.04%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2018-11-30 05:35:33

End at: 2018-11-30 05:36:03

Local clock offset: 1.983 ms

Remote clock offset: -38.7 ms

Below is generated by plot.py at 2018-11-30 07:03:43

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.31 Mbit/s

95th percentile per-packet one-way delay: 65.941 ms

Loss rate: 0.03%

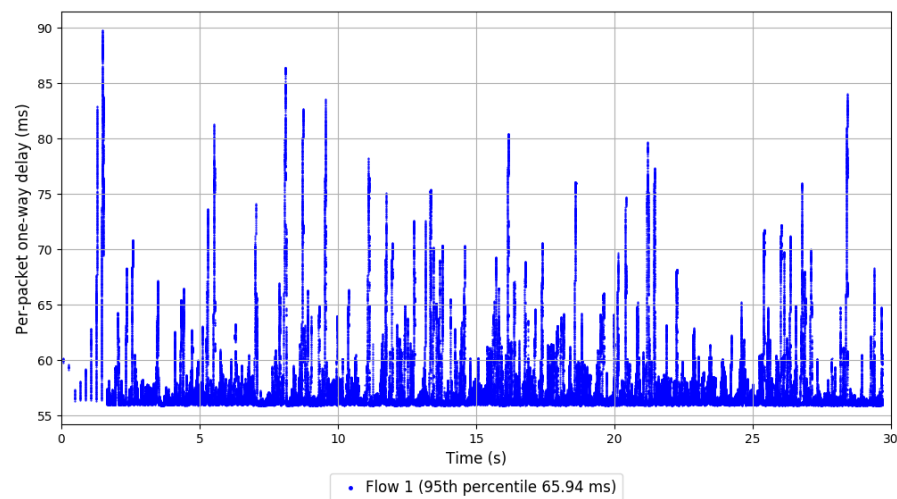
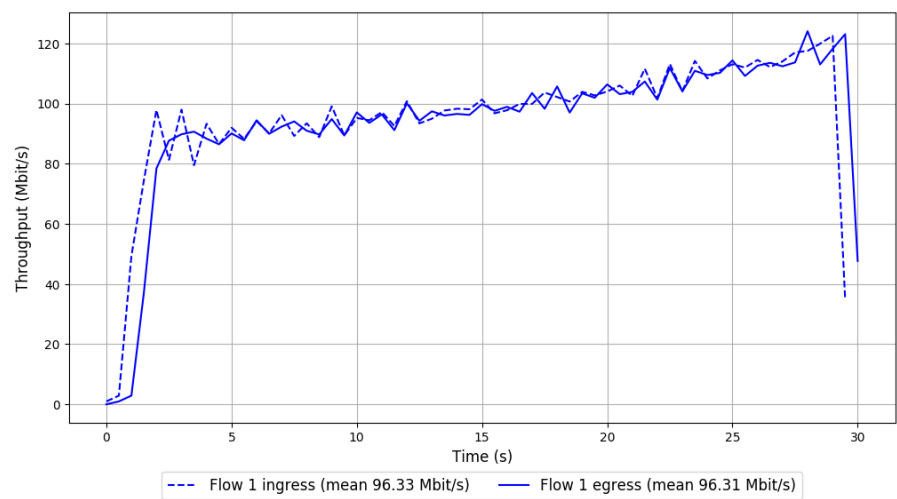
-- Flow 1:

Average throughput: 96.31 Mbit/s

95th percentile per-packet one-way delay: 65.941 ms

Loss rate: 0.03%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2018-11-30 06:07:25

End at: 2018-11-30 06:07:55

Local clock offset: 1.333 ms

Remote clock offset: -39.524 ms

Below is generated by plot.py at 2018-11-30 07:03:43

Datalink statistics

-- Total of 1 flow:

Average throughput: 86.78 Mbit/s

95th percentile per-packet one-way delay: 68.659 ms

Loss rate: 0.22%

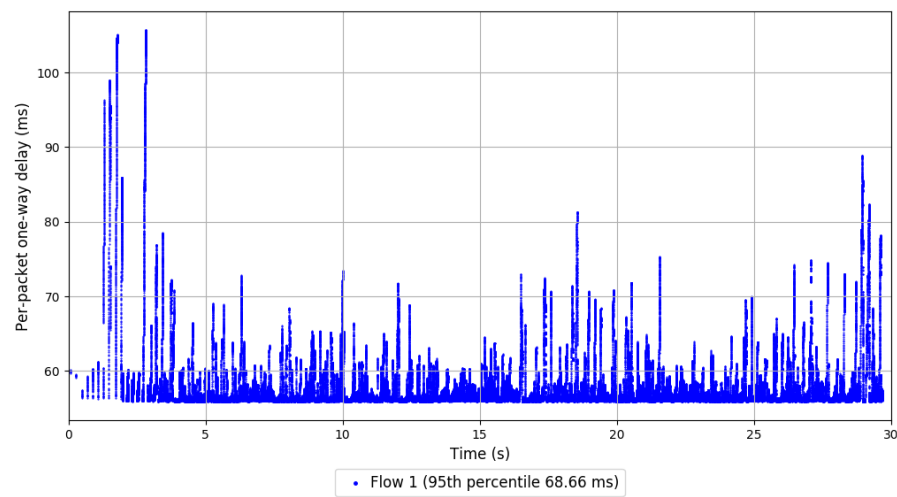
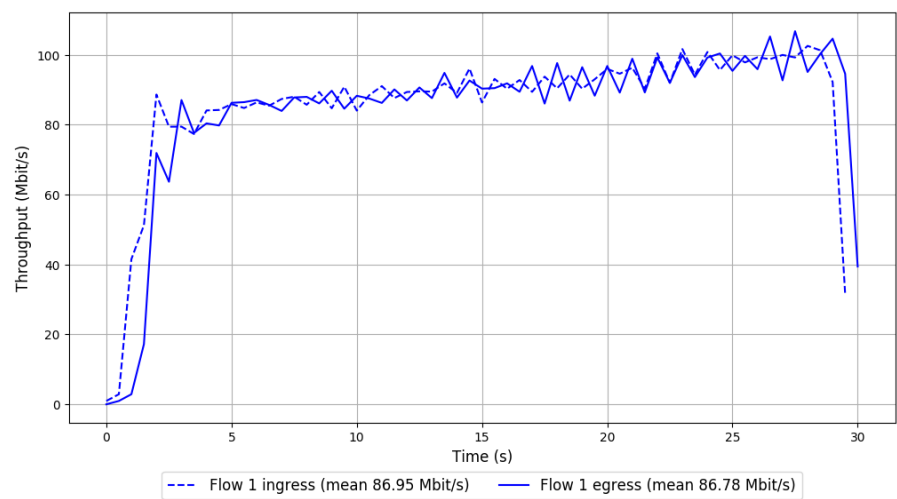
-- Flow 1:

Average throughput: 86.78 Mbit/s

95th percentile per-packet one-way delay: 68.659 ms

Loss rate: 0.22%

Run 4: Report of Indigo — Data Link

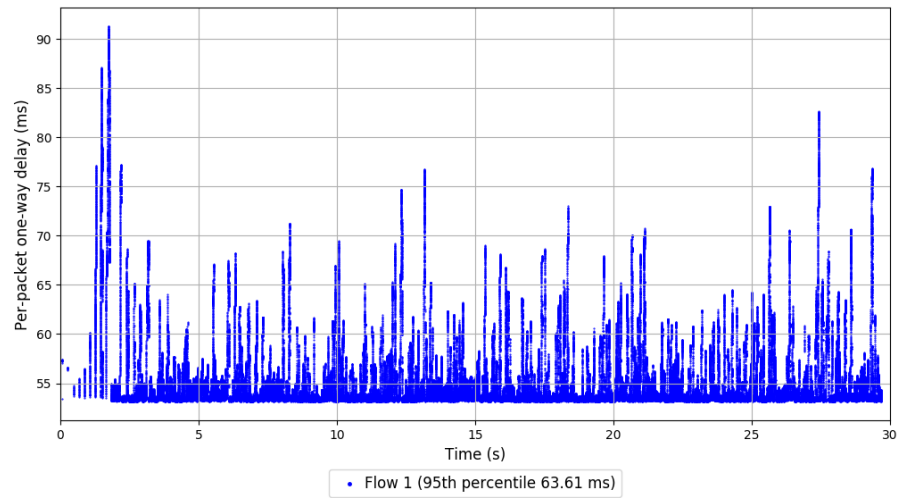
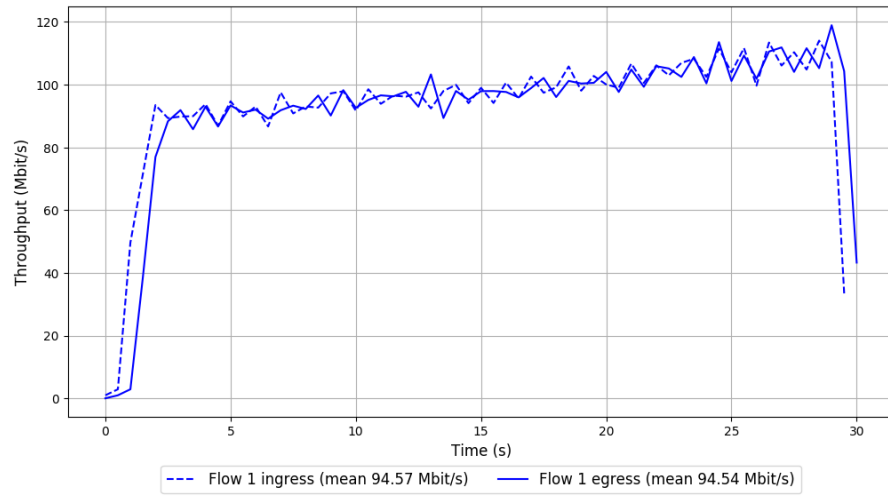


Run 5: Statistics of Indigo

Start at: 2018-11-30 06:39:25
End at: 2018-11-30 06:39:55
Local clock offset: 1.666 ms
Remote clock offset: -43.225 ms

Below is generated by plot.py at 2018-11-30 07:03:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.54 Mbit/s
95th percentile per-packet one-way delay: 63.607 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 94.54 Mbit/s
95th percentile per-packet one-way delay: 63.607 ms
Loss rate: 0.03%

Run 5: Report of Indigo — Data Link

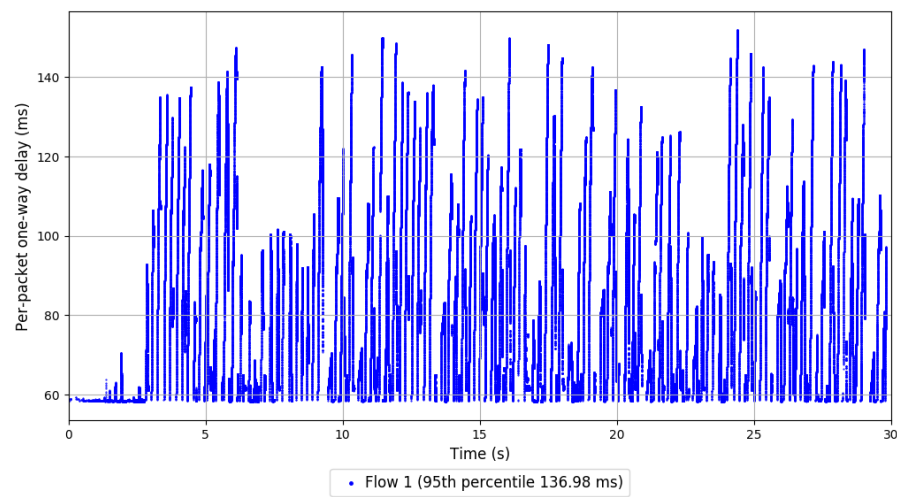
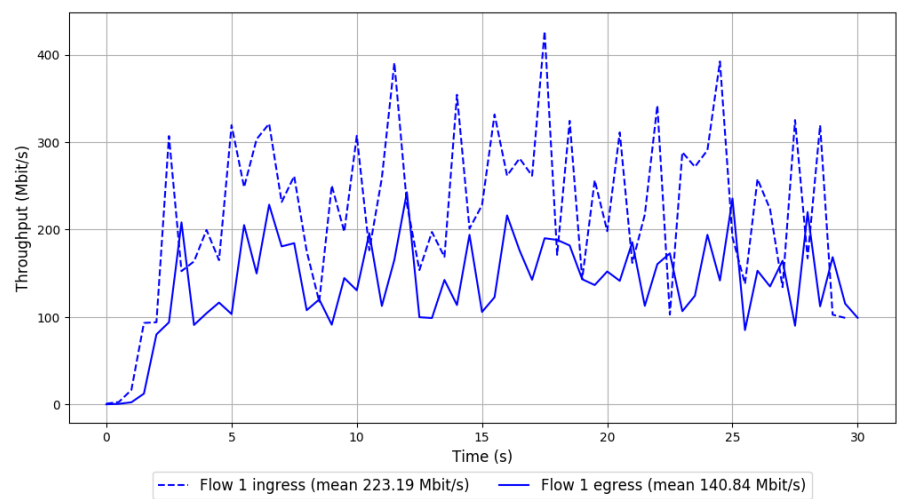


```
Run 1: Statistics of Indigo-96d2da3

Start at: 2018-11-30 04:30:58
End at: 2018-11-30 04:31:28
Local clock offset: 0.716 ms
Remote clock offset: -39.447 ms

# Below is generated by plot.py at 2018-11-30 07:03:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 140.84 Mbit/s
95th percentile per-packet one-way delay: 136.984 ms
Loss rate: 36.82%
-- Flow 1:
Average throughput: 140.84 Mbit/s
95th percentile per-packet one-way delay: 136.984 ms
Loss rate: 36.82%
```

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

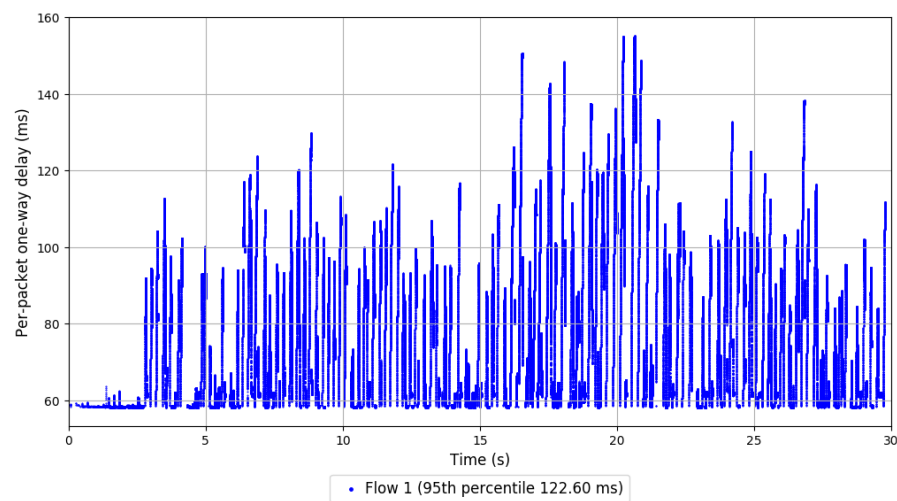
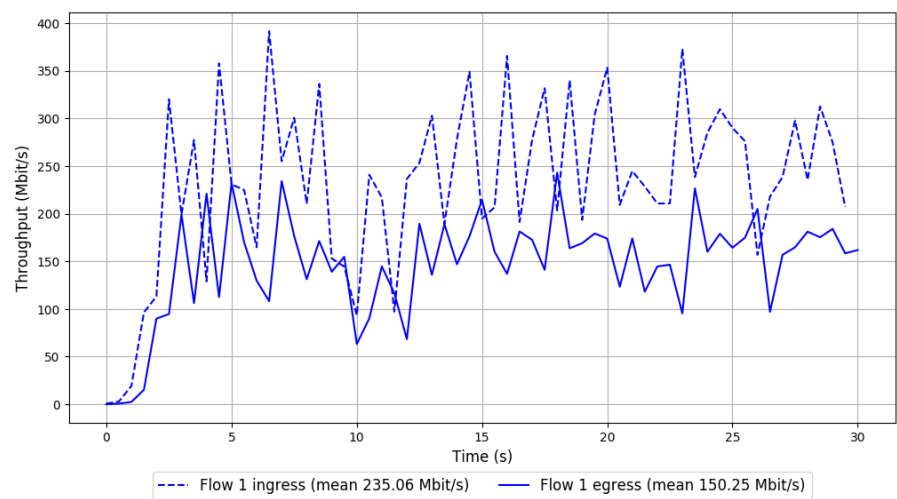


Run 2: Statistics of Indigo-96d2da3

Start at: 2018-11-30 05:08:17
End at: 2018-11-30 05:08:47
Local clock offset: 0.855 ms
Remote clock offset: -38.597 ms

Below is generated by plot.py at 2018-11-30 07:03:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 150.25 Mbit/s
95th percentile per-packet one-way delay: 122.602 ms
Loss rate: 36.00%
-- Flow 1:
Average throughput: 150.25 Mbit/s
95th percentile per-packet one-way delay: 122.602 ms
Loss rate: 36.00%

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

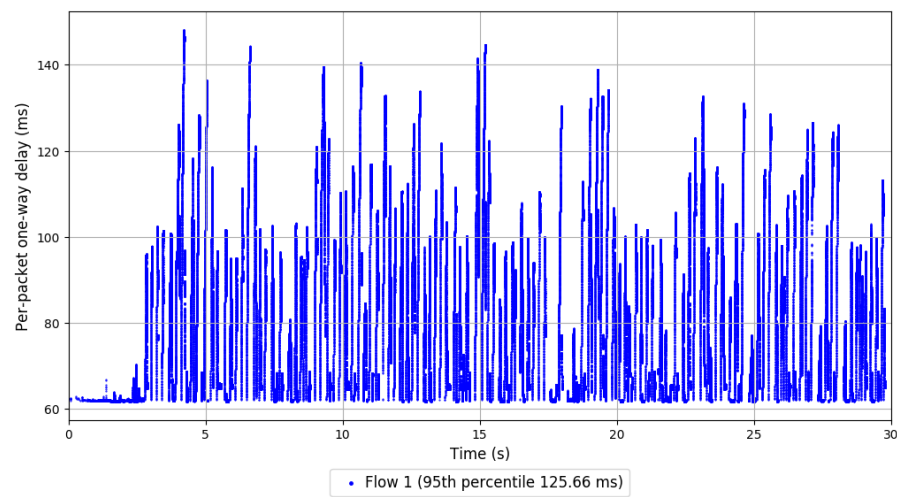
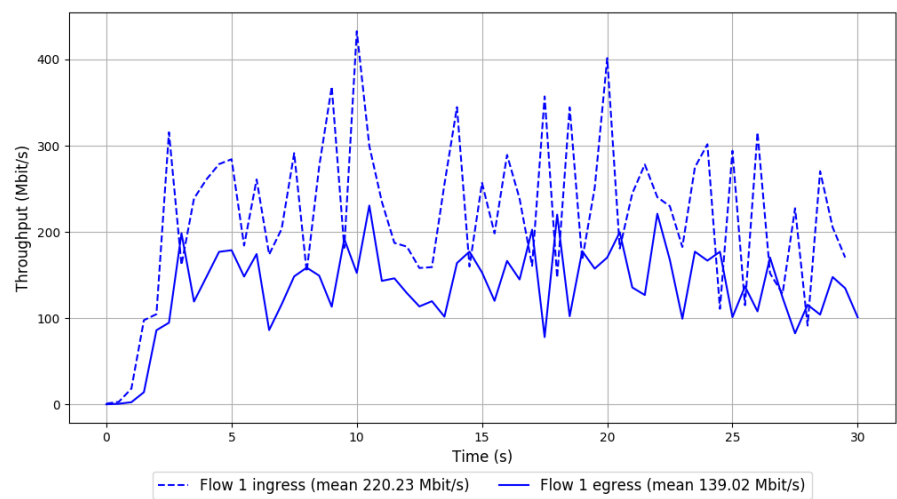


Run 3: Statistics of Indigo-96d2da3

Start at: 2018-11-30 05:40:29
End at: 2018-11-30 05:40:59
Local clock offset: -2.606 ms
Remote clock offset: -37.214 ms

Below is generated by plot.py at 2018-11-30 07:03:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 139.02 Mbit/s
95th percentile per-packet one-way delay: 125.659 ms
Loss rate: 36.86%
-- Flow 1:
Average throughput: 139.02 Mbit/s
95th percentile per-packet one-way delay: 125.659 ms
Loss rate: 36.86%

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

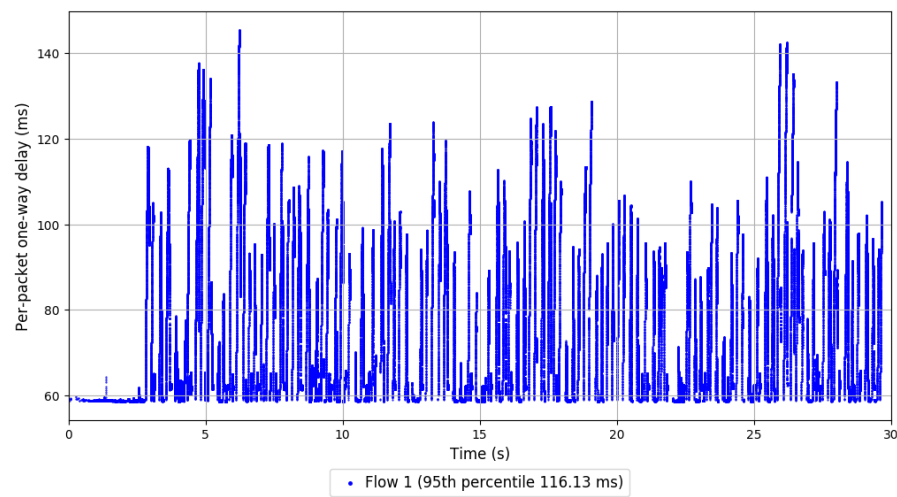
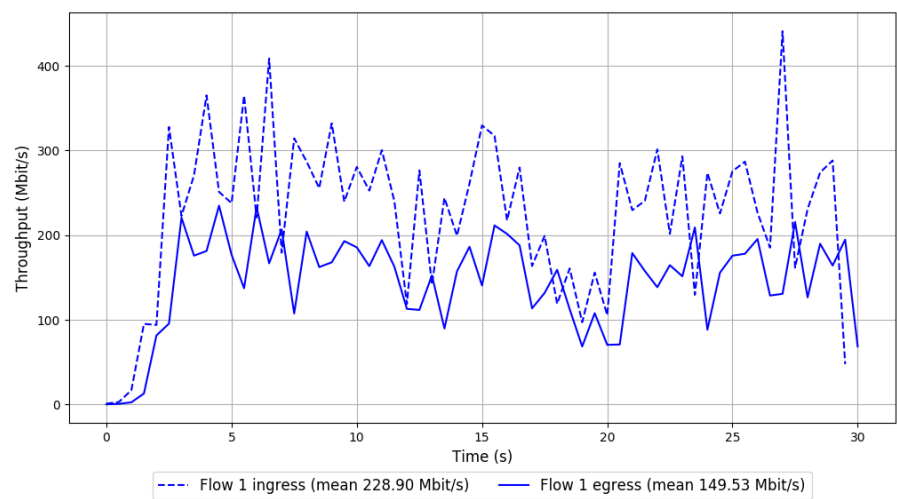


Run 4: Statistics of Indigo-96d2da3

Start at: 2018-11-30 06:12:16
End at: 2018-11-30 06:12:46
Local clock offset: 0.387 ms
Remote clock offset: -37.58 ms

Below is generated by plot.py at 2018-11-30 07:03:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 149.53 Mbit/s
95th percentile per-packet one-way delay: 116.129 ms
Loss rate: 34.58%
-- Flow 1:
Average throughput: 149.53 Mbit/s
95th percentile per-packet one-way delay: 116.129 ms
Loss rate: 34.58%

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

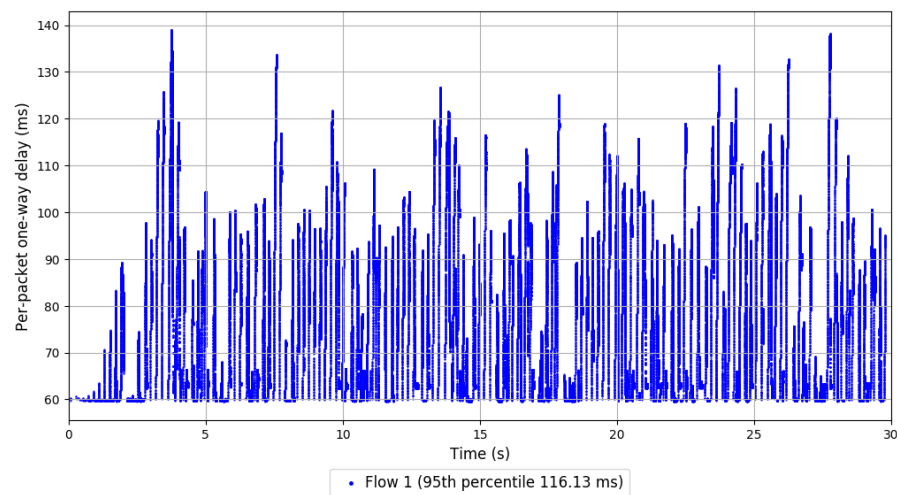
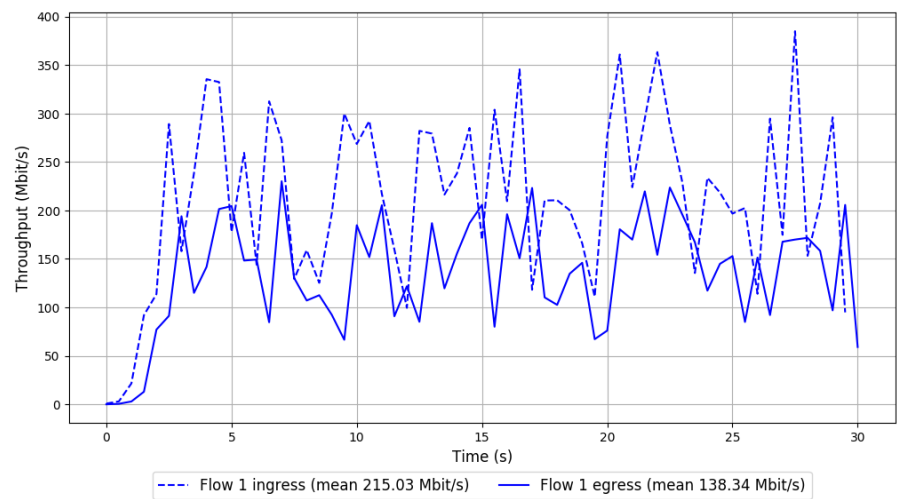


Run 5: Statistics of Indigo-96d2da3

Start at: 2018-11-30 06:44:39
End at: 2018-11-30 06:45:09
Local clock offset: 2.32 ms
Remote clock offset: -36.498 ms

Below is generated by plot.py at 2018-11-30 07:03:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 138.34 Mbit/s
95th percentile per-packet one-way delay: 116.126 ms
Loss rate: 35.66%
-- Flow 1:
Average throughput: 138.34 Mbit/s
95th percentile per-packet one-way delay: 116.126 ms
Loss rate: 35.66%

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

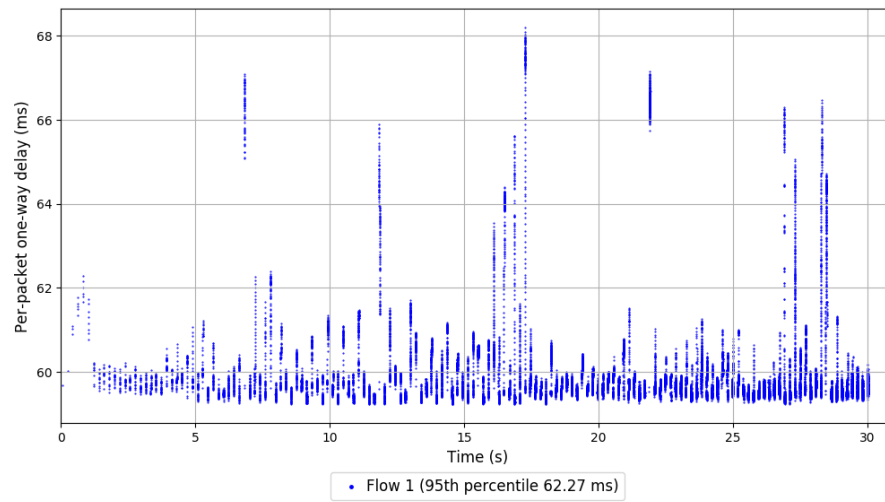
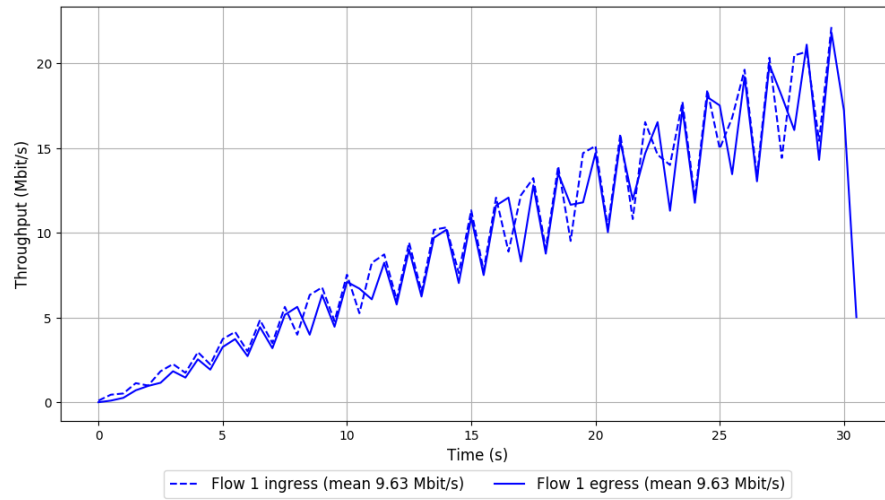


```
Run 1: Statistics of LEDBAT

Start at: 2018-11-30 04:00:48
End at: 2018-11-30 04:01:18
Local clock offset: -1.014 ms
Remote clock offset: -37.64 ms

# Below is generated by plot.py at 2018-11-30 07:03:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.63 Mbit/s
95th percentile per-packet one-way delay: 62.272 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.63 Mbit/s
95th percentile per-packet one-way delay: 62.272 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link

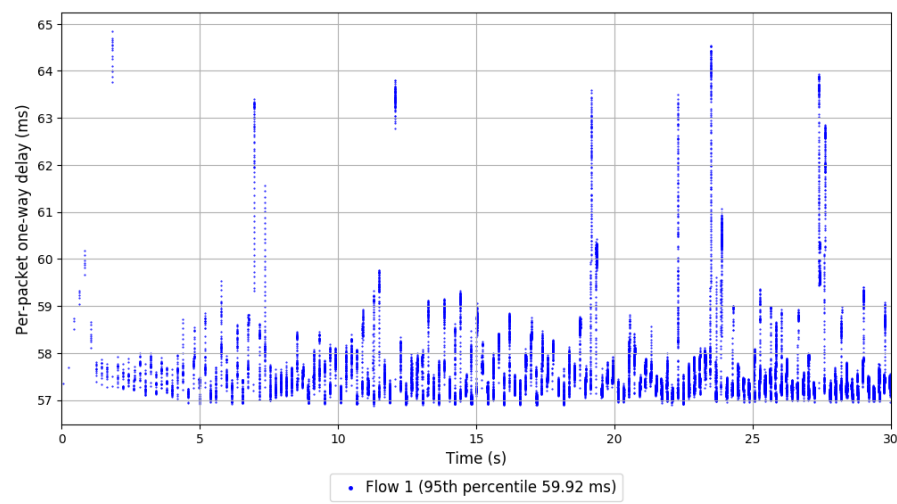
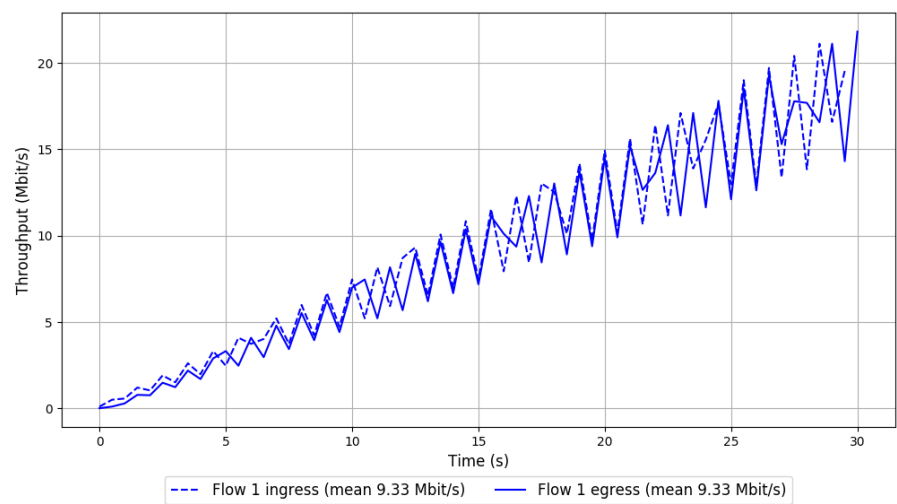


Run 2: Statistics of LEDBAT

Start at: 2018-11-30 04:38:12
End at: 2018-11-30 04:38:42
Local clock offset: 0.784 ms
Remote clock offset: -40.938 ms

Below is generated by plot.py at 2018-11-30 07:03:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 9.33 Mbit/s
95th percentile per-packet one-way delay: 59.925 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.33 Mbit/s
95th percentile per-packet one-way delay: 59.925 ms
Loss rate: 0.00%

Run 2: Report of LEDBAT — Data Link

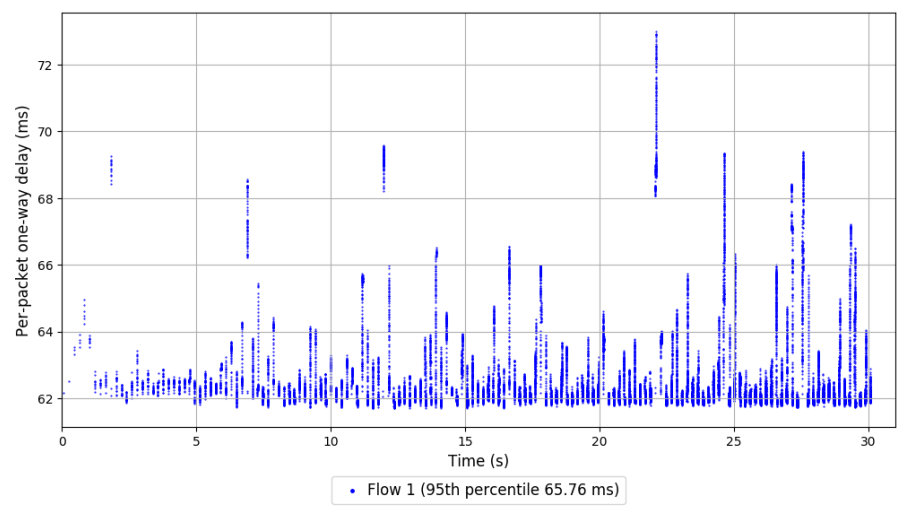
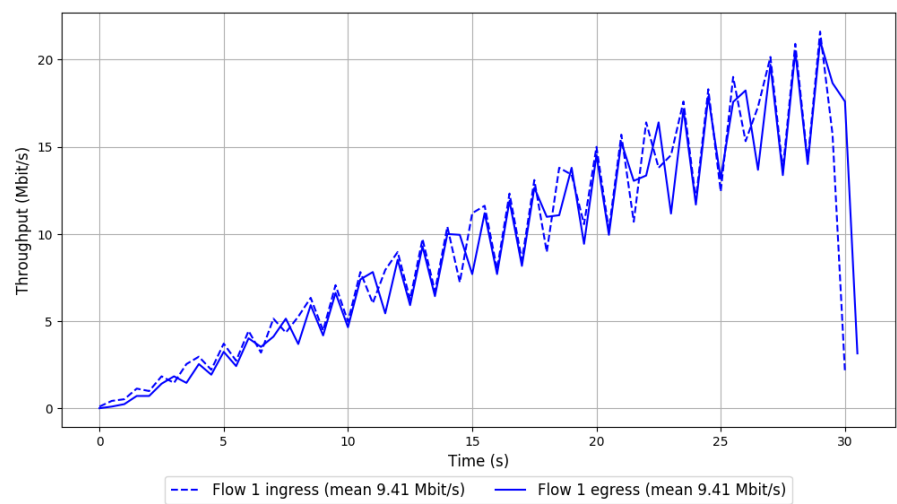


Run 3: Statistics of LEDBAT

Start at: 2018-11-30 05:15:47
End at: 2018-11-30 05:16:17
Local clock offset: 0.192 ms
Remote clock offset: -35.665 ms

Below is generated by plot.py at 2018-11-30 07:03:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 9.41 Mbit/s
95th percentile per-packet one-way delay: 65.756 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.41 Mbit/s
95th percentile per-packet one-way delay: 65.756 ms
Loss rate: 0.00%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-11-30 05:47:42

End at: 2018-11-30 05:48:12

Local clock offset: 0.581 ms

Remote clock offset: -36.2 ms

Below is generated by plot.py at 2018-11-30 07:03:43

Datalink statistics

-- Total of 1 flow:

Average throughput: 9.44 Mbit/s

95th percentile per-packet one-way delay: 65.698 ms

Loss rate: 0.00%

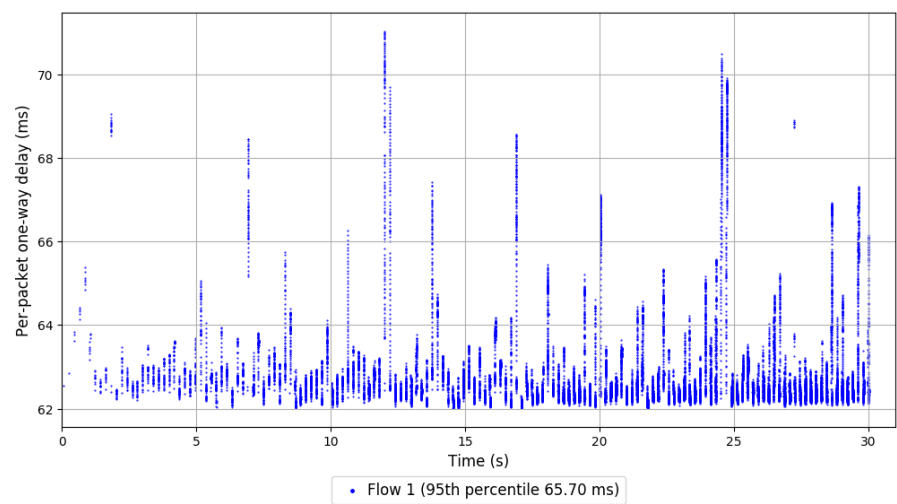
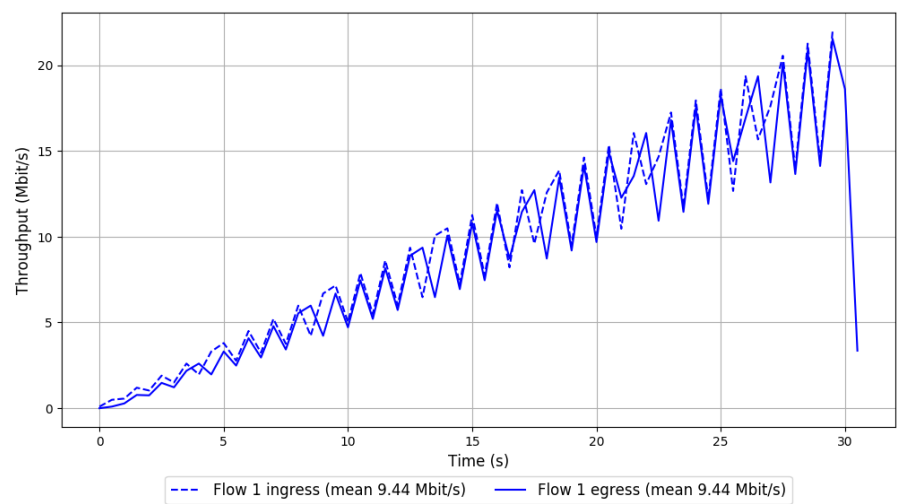
-- Flow 1:

Average throughput: 9.44 Mbit/s

95th percentile per-packet one-way delay: 65.698 ms

Loss rate: 0.00%

Run 4: Report of LEDBAT — Data Link

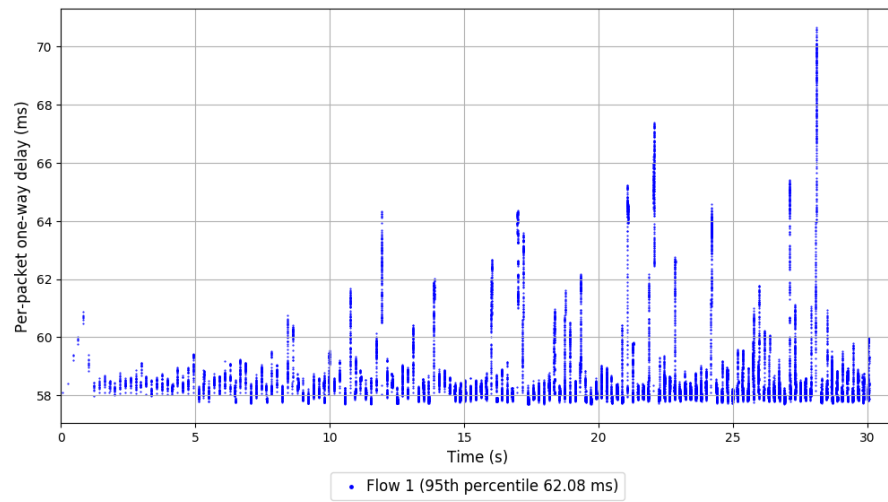
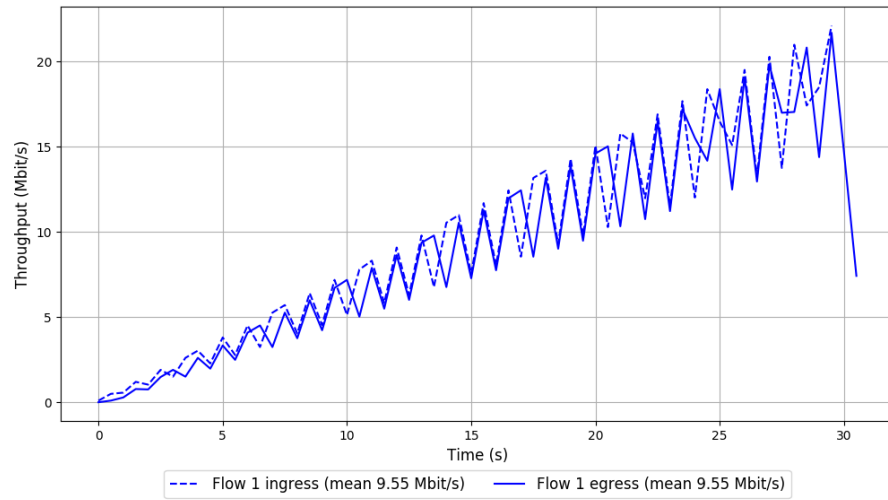


Run 5: Statistics of LEDBAT

Start at: 2018-11-30 06:19:34
End at: 2018-11-30 06:20:04
Local clock offset: -1.115 ms
Remote clock offset: -40.615 ms

Below is generated by plot.py at 2018-11-30 07:03:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 9.55 Mbit/s
95th percentile per-packet one-way delay: 62.076 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.55 Mbit/s
95th percentile per-packet one-way delay: 62.076 ms
Loss rate: 0.00%

Run 5: Report of LEDBAT — Data Link

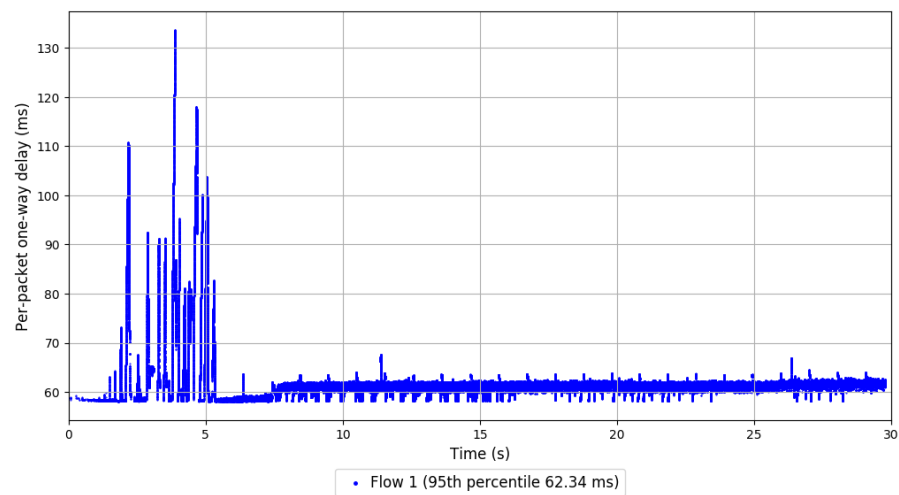
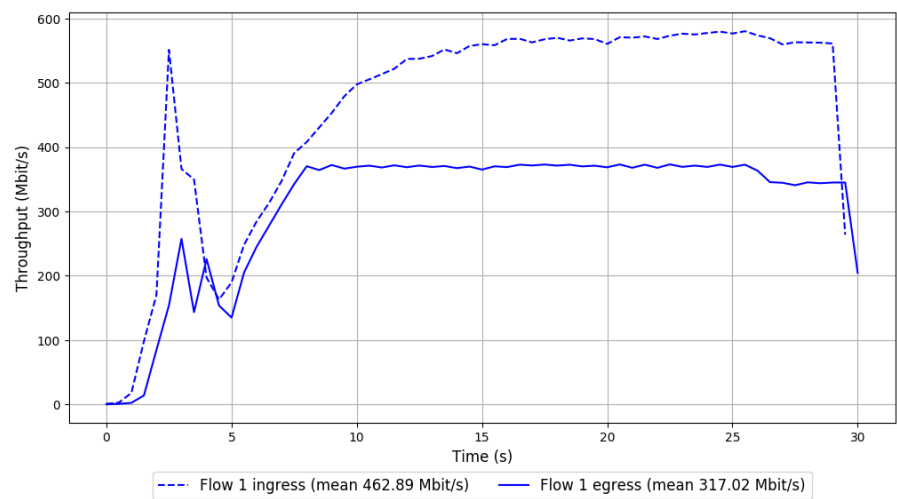


Run 1: Statistics of Indigo-Muses

Start at: 2018-11-30 04:23:39
End at: 2018-11-30 04:24:09
Local clock offset: 0.212 ms
Remote clock offset: -37.624 ms

Below is generated by plot.py at 2018-11-30 07:04:57
Datalink statistics
-- Total of 1 flow:
Average throughput: 317.02 Mbit/s
95th percentile per-packet one-way delay: 62.345 ms
Loss rate: 31.50%
-- Flow 1:
Average throughput: 317.02 Mbit/s
95th percentile per-packet one-way delay: 62.345 ms
Loss rate: 31.50%

Run 1: Report of Indigo-Muses — Data Link

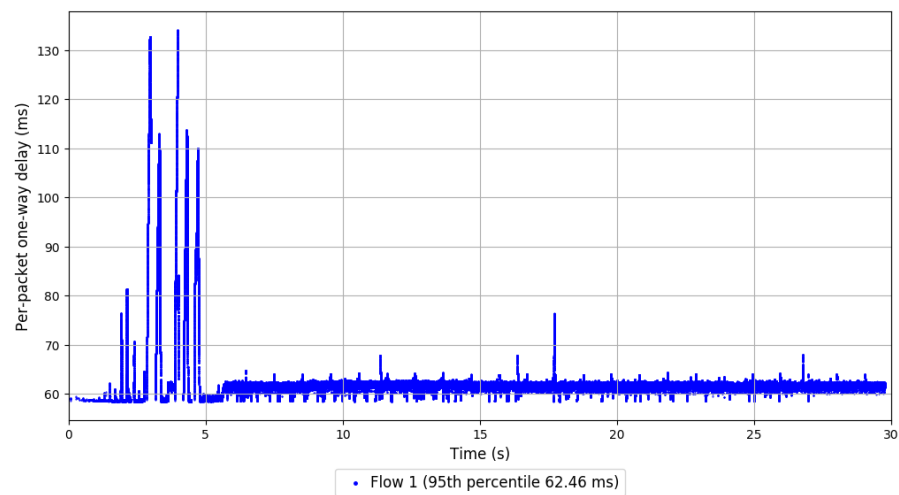
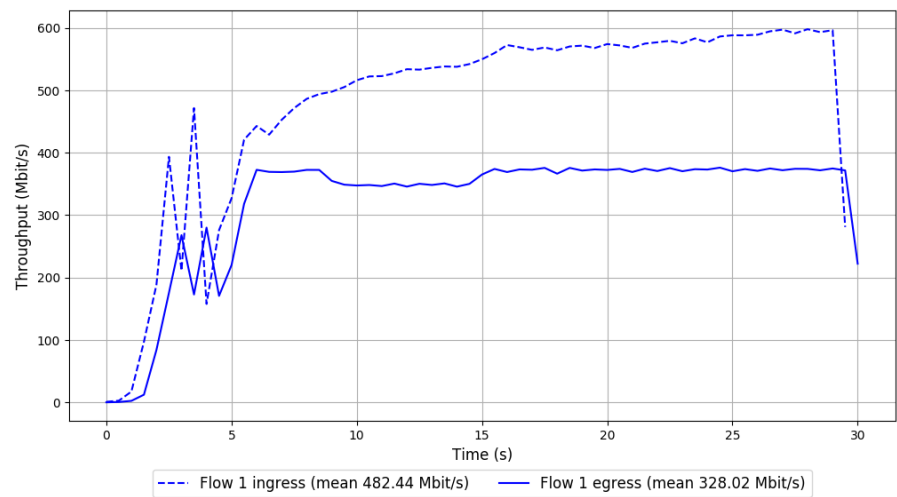


Run 2: Statistics of Indigo-Muses

Start at: 2018-11-30 04:55:34
End at: 2018-11-30 04:56:04
Local clock offset: 1.576 ms
Remote clock offset: -36.766 ms

Below is generated by plot.py at 2018-11-30 07:05:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 328.02 Mbit/s
95th percentile per-packet one-way delay: 62.464 ms
Loss rate: 32.00%
-- Flow 1:
Average throughput: 328.02 Mbit/s
95th percentile per-packet one-way delay: 62.464 ms
Loss rate: 32.00%

Run 2: Report of Indigo-Muses — Data Link

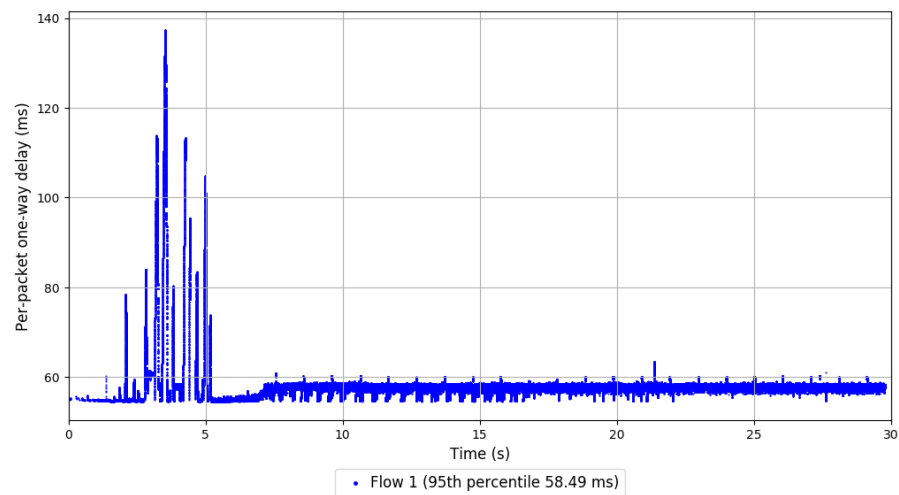
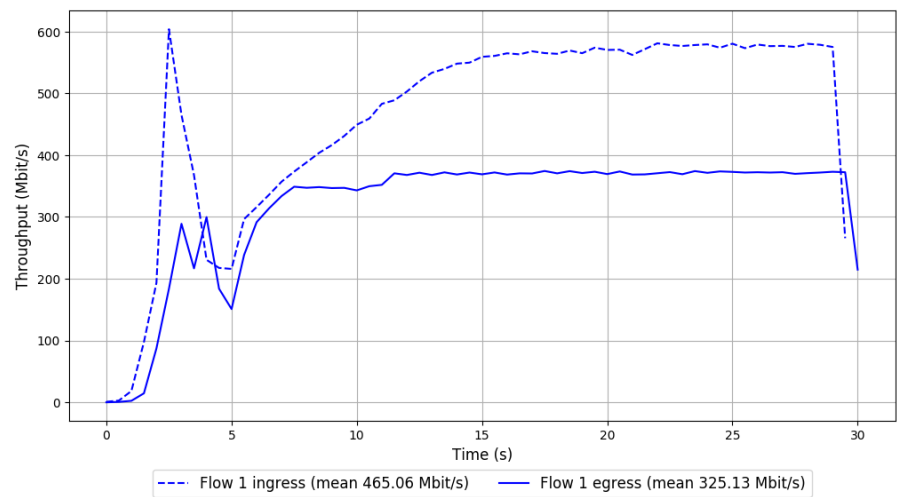


Run 3: Statistics of Indigo-Muses

Start at: 2018-11-30 05:33:14
End at: 2018-11-30 05:33:44
Local clock offset: -0.131 ms
Remote clock offset: -42.287 ms

Below is generated by plot.py at 2018-11-30 07:05:16
Datalink statistics
-- Total of 1 flow:
Average throughput: 325.13 Mbit/s
95th percentile per-packet one-way delay: 58.487 ms
Loss rate: 30.08%
-- Flow 1:
Average throughput: 325.13 Mbit/s
95th percentile per-packet one-way delay: 58.487 ms
Loss rate: 30.08%

Run 3: Report of Indigo-Muses — Data Link

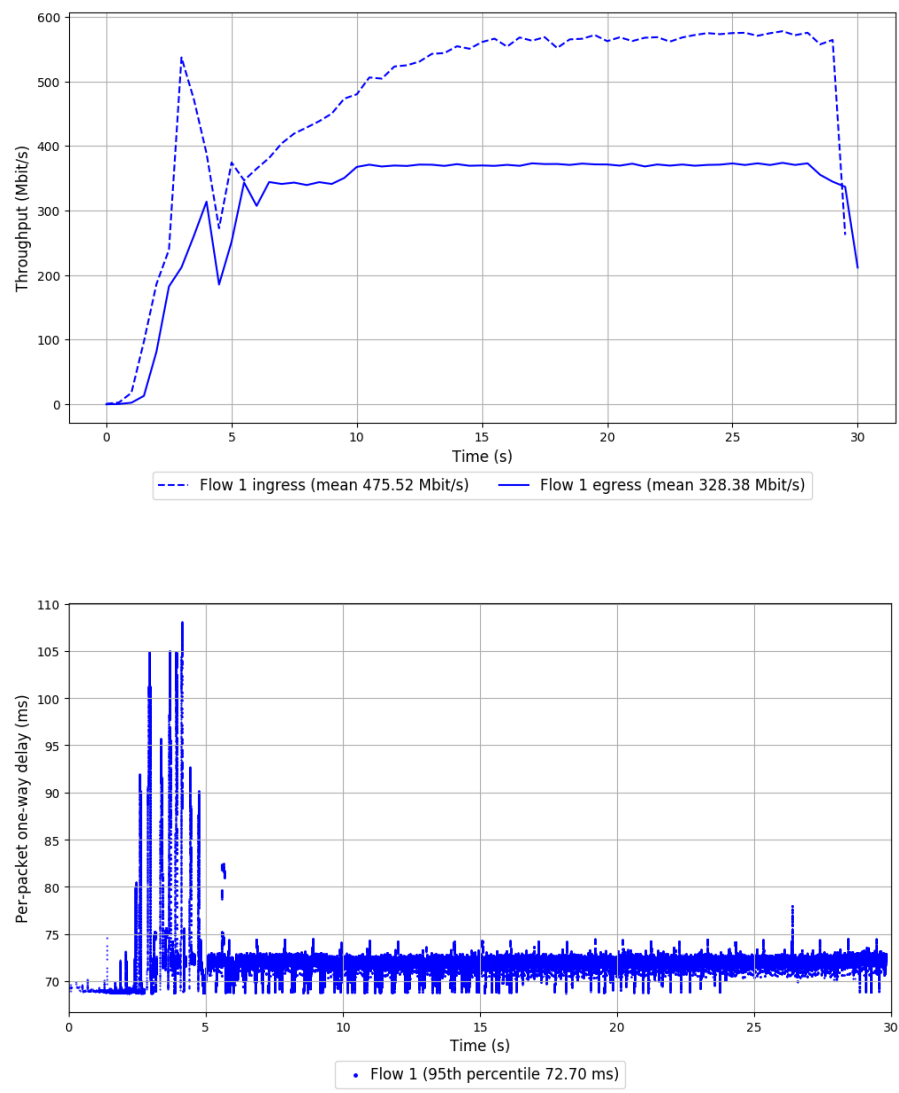


Run 4: Statistics of Indigo-Muses

Start at: 2018-11-30 06:05:05
End at: 2018-11-30 06:05:35
Local clock offset: -0.861 ms
Remote clock offset: -31.499 ms

Below is generated by plot.py at 2018-11-30 07:05:24
Datalink statistics
-- Total of 1 flow:
Average throughput: 328.38 Mbit/s
95th percentile per-packet one-way delay: 72.698 ms
Loss rate: 30.93%
-- Flow 1:
Average throughput: 328.38 Mbit/s
95th percentile per-packet one-way delay: 72.698 ms
Loss rate: 30.93%

Run 4: Report of Indigo-Muses — Data Link

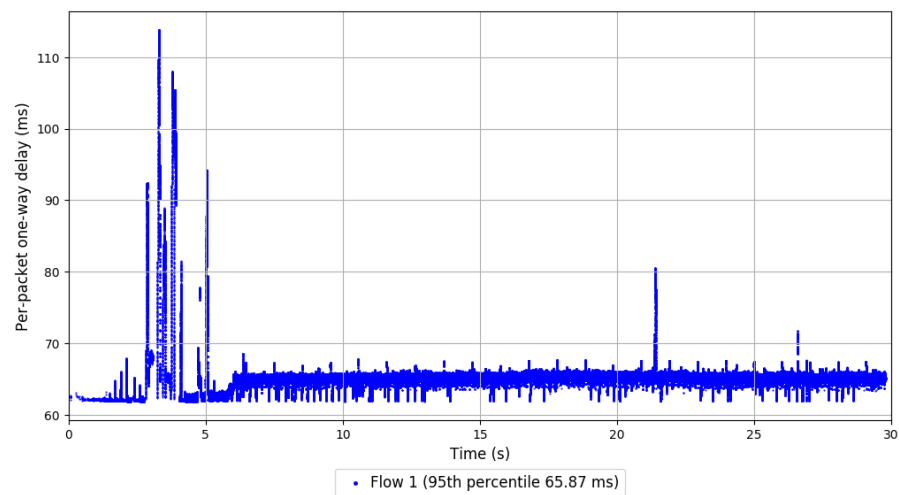
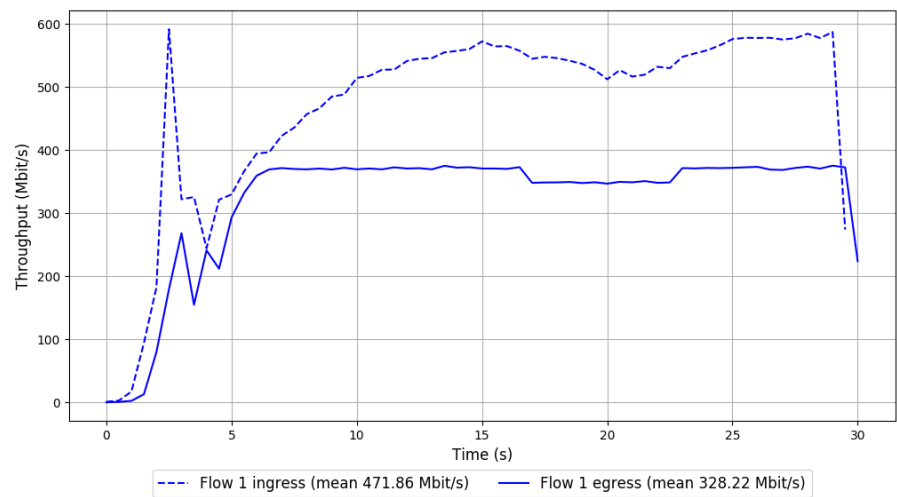


Run 5: Statistics of Indigo-Muses

Start at: 2018-11-30 06:37:05
End at: 2018-11-30 06:37:35
Local clock offset: 0.913 ms
Remote clock offset: -37.672 ms

Below is generated by plot.py at 2018-11-30 07:05:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 328.22 Mbit/s
95th percentile per-packet one-way delay: 65.870 ms
Loss rate: 30.43%
-- Flow 1:
Average throughput: 328.22 Mbit/s
95th percentile per-packet one-way delay: 65.870 ms
Loss rate: 30.43%

Run 5: Report of Indigo-Muses — Data Link

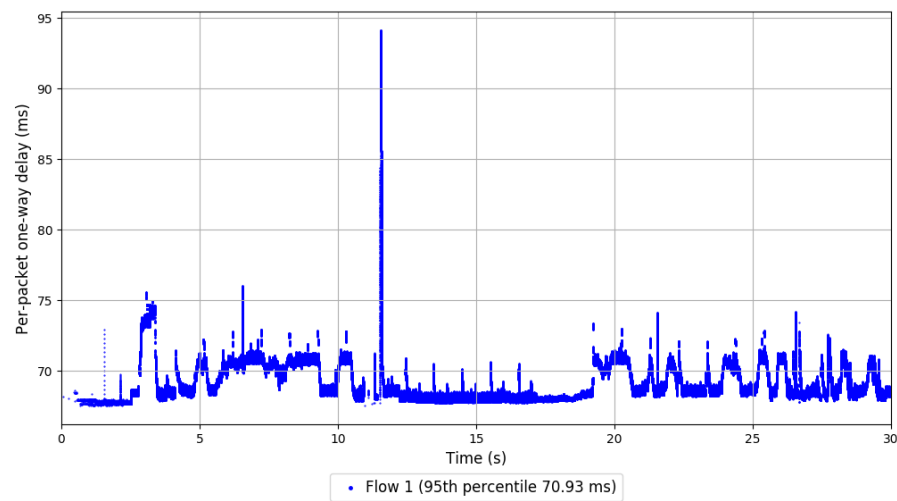
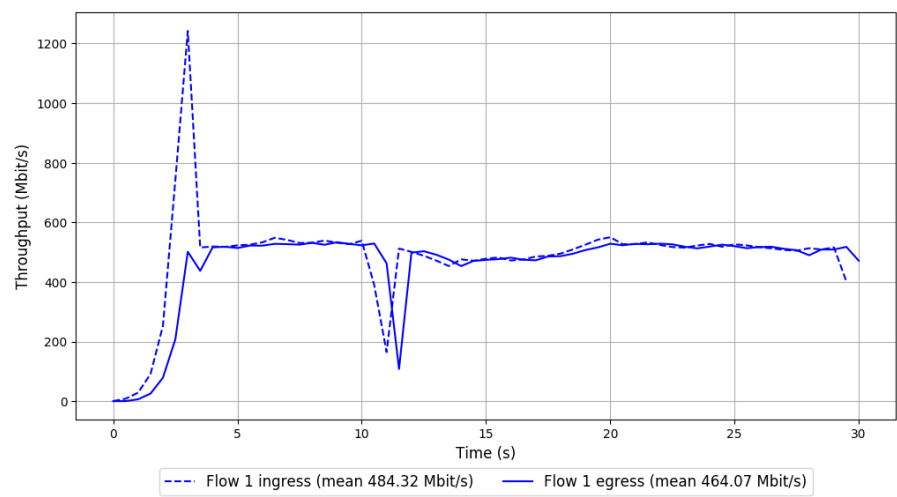


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-11-30 03:56:47
End at: 2018-11-30 03:57:17
Local clock offset: -1.494 ms
Remote clock offset: -31.991 ms

# Below is generated by plot.py at 2018-11-30 07:07:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 464.07 Mbit/s
95th percentile per-packet one-way delay: 70.932 ms
Loss rate: 4.18%
-- Flow 1:
Average throughput: 464.07 Mbit/s
95th percentile per-packet one-way delay: 70.932 ms
Loss rate: 4.18%
```

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-11-30 04:34:14

End at: 2018-11-30 04:34:44

Local clock offset: 2.117 ms

Remote clock offset: -46.502 ms

Below is generated by plot.py at 2018-11-30 07:09:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 458.87 Mbit/s

95th percentile per-packet one-way delay: 50.271 ms

Loss rate: 3.57%

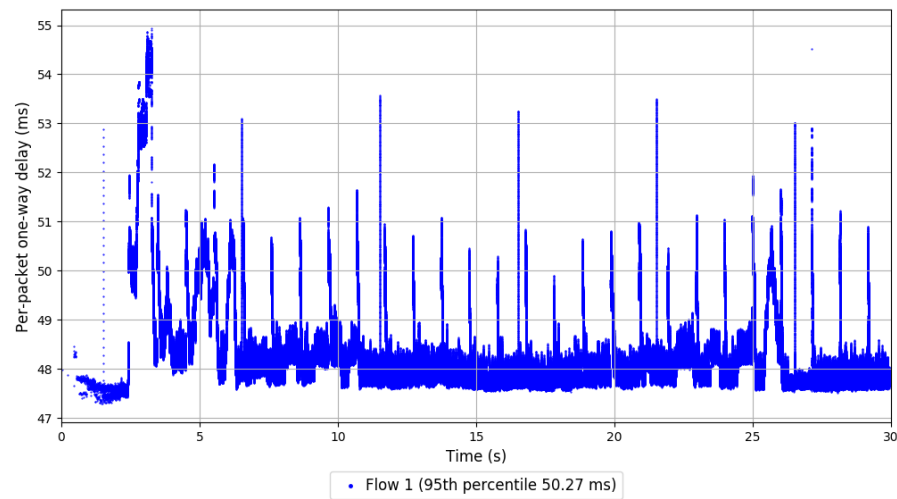
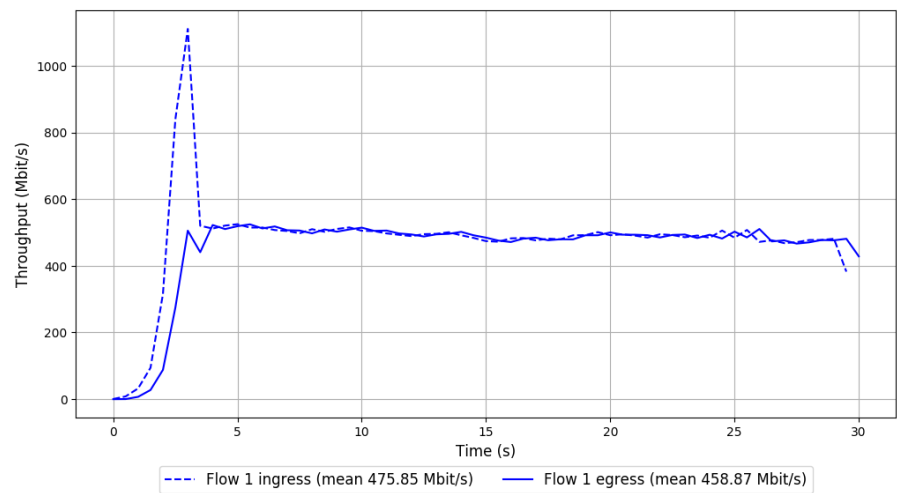
-- Flow 1:

Average throughput: 458.87 Mbit/s

95th percentile per-packet one-way delay: 50.271 ms

Loss rate: 3.57%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-11-30 05:11:35

End at: 2018-11-30 05:12:05

Local clock offset: 0.827 ms

Remote clock offset: -40.178 ms

Below is generated by plot.py at 2018-11-30 07:09:43

Datalink statistics

-- Total of 1 flow:

Average throughput: 457.66 Mbit/s

95th percentile per-packet one-way delay: 59.284 ms

Loss rate: 3.34%

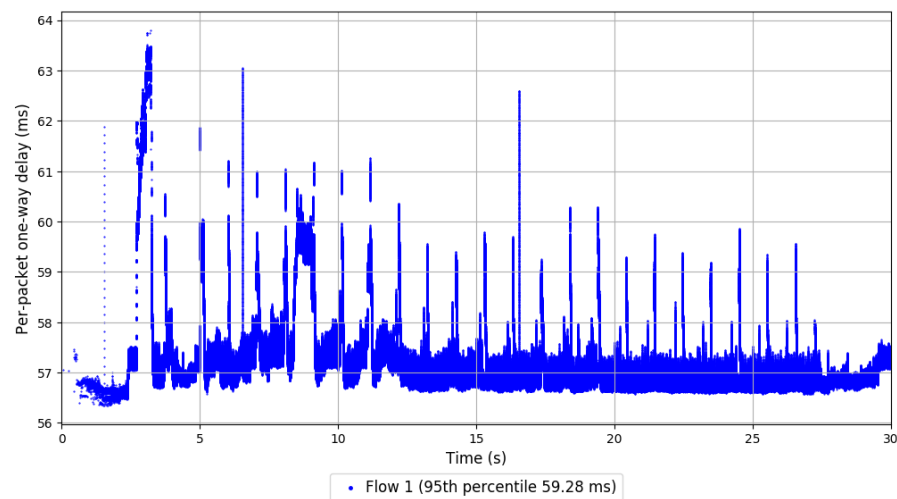
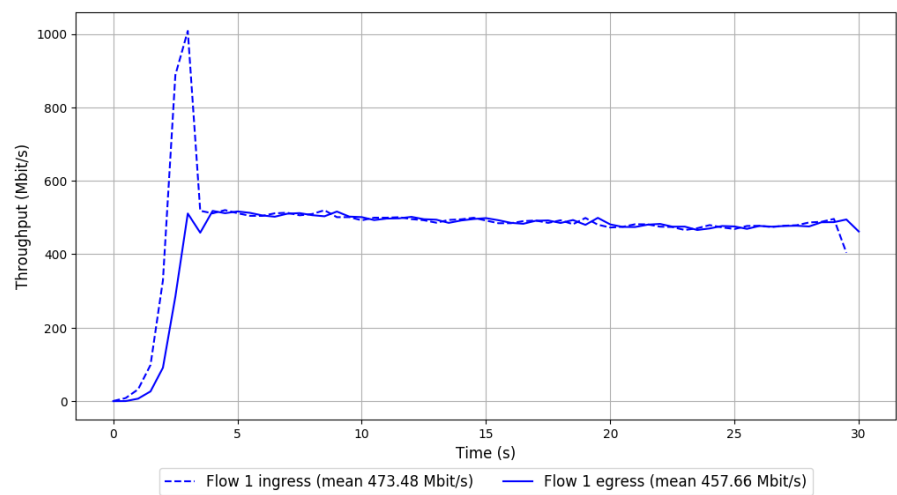
-- Flow 1:

Average throughput: 457.66 Mbit/s

95th percentile per-packet one-way delay: 59.284 ms

Loss rate: 3.34%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-11-30 05:43:43

End at: 2018-11-30 05:44:13

Local clock offset: -0.085 ms

Remote clock offset: -32.54 ms

Below is generated by plot.py at 2018-11-30 07:10:44

Datalink statistics

-- Total of 1 flow:

Average throughput: 468.30 Mbit/s

95th percentile per-packet one-way delay: 66.710 ms

Loss rate: 3.57%

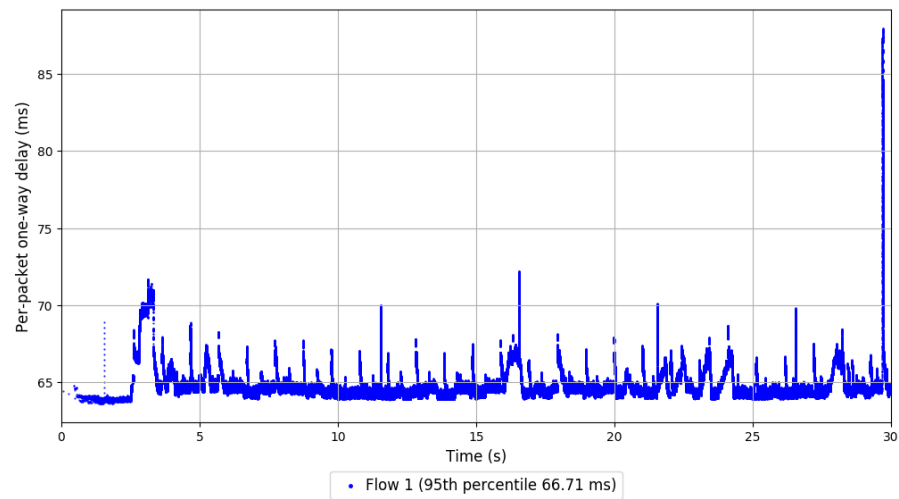
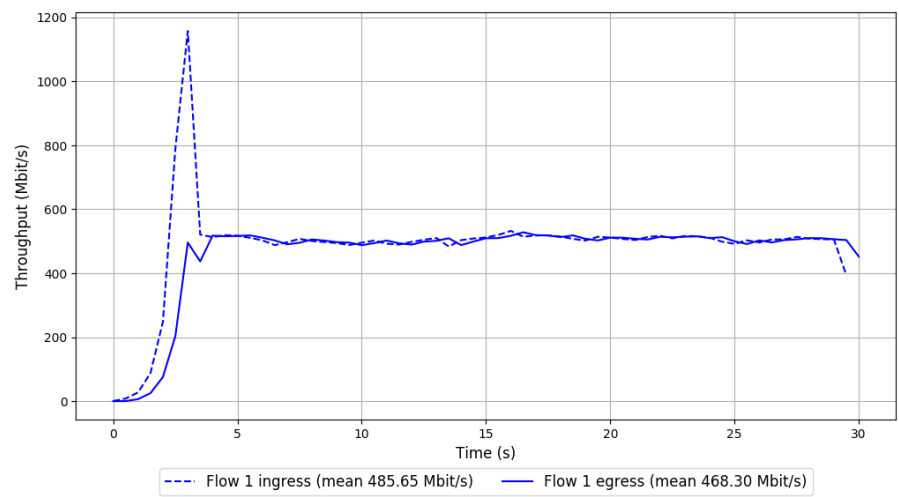
-- Flow 1:

Average throughput: 468.30 Mbit/s

95th percentile per-packet one-way delay: 66.710 ms

Loss rate: 3.57%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-11-30 06:15:34

End at: 2018-11-30 06:16:04

Local clock offset: -0.217 ms

Remote clock offset: -34.752 ms

Below is generated by plot.py at 2018-11-30 07:11:00

Datalink statistics

-- Total of 1 flow:

Average throughput: 471.23 Mbit/s

95th percentile per-packet one-way delay: 68.079 ms

Loss rate: 3.57%

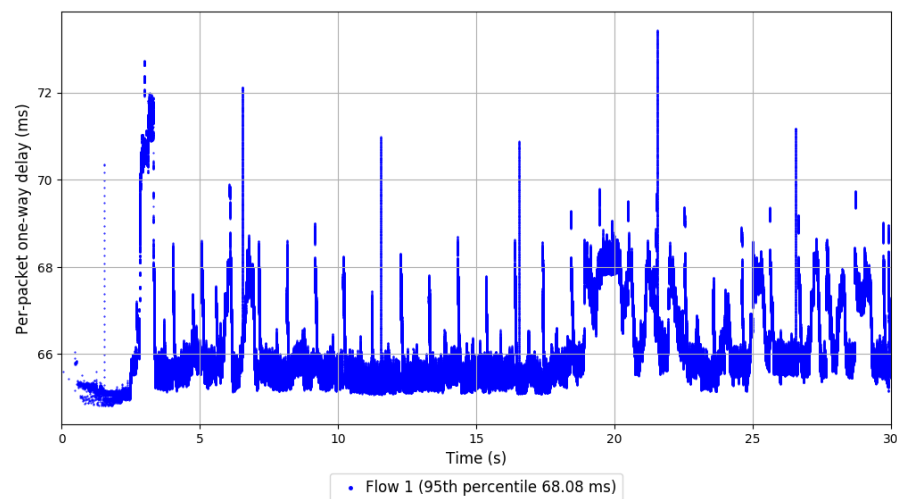
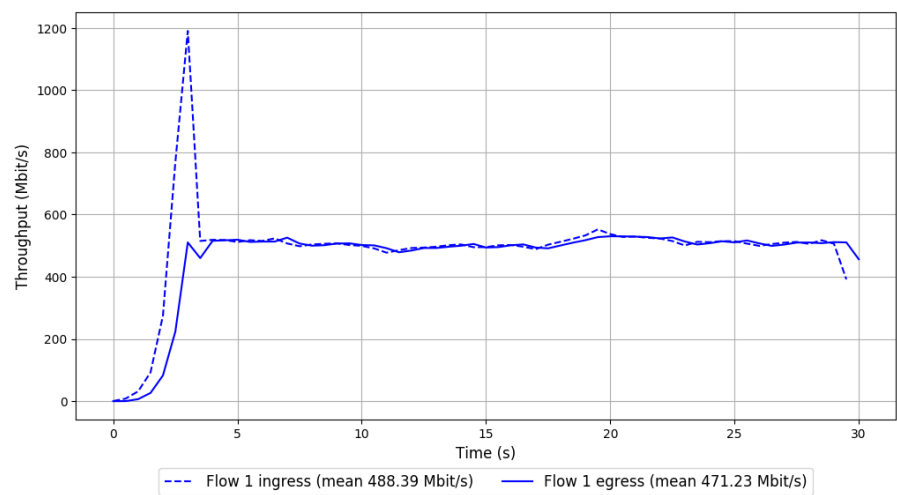
-- Flow 1:

Average throughput: 471.23 Mbit/s

95th percentile per-packet one-way delay: 68.079 ms

Loss rate: 3.57%

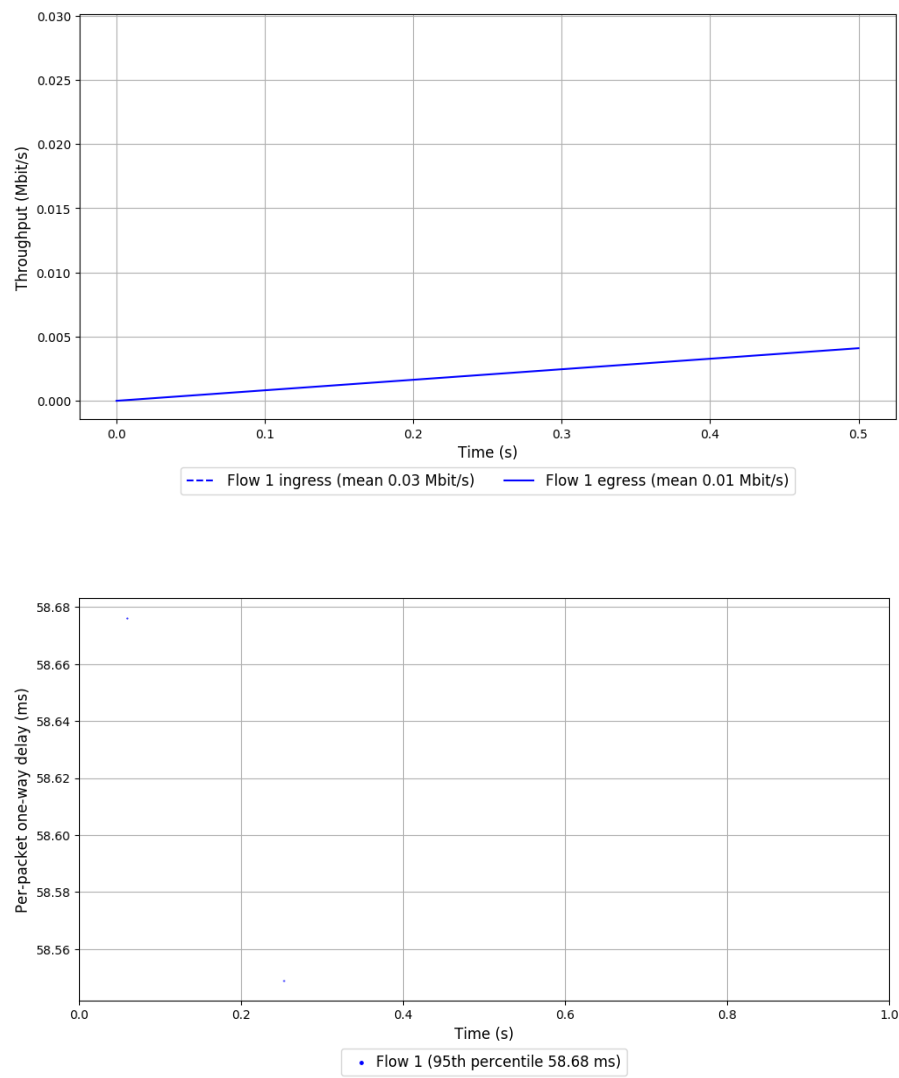
Run 5: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

Start at: 2018-11-30 04:29:49
End at: 2018-11-30 04:30:19
Local clock offset: -0.883 ms
Remote clock offset: -38.472 ms

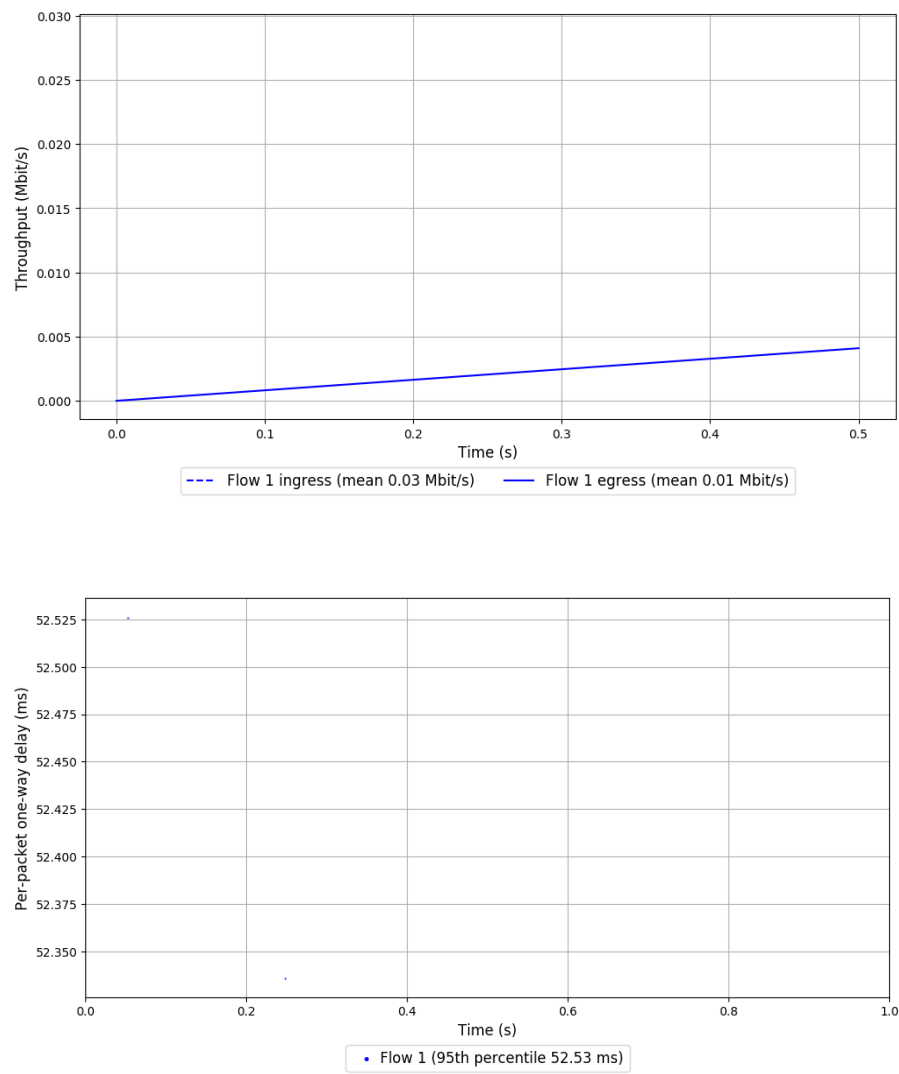
Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2018-11-30 05:07:08
End at: 2018-11-30 05:07:38
Local clock offset: 1.067 ms
Remote clock offset: -44.721 ms

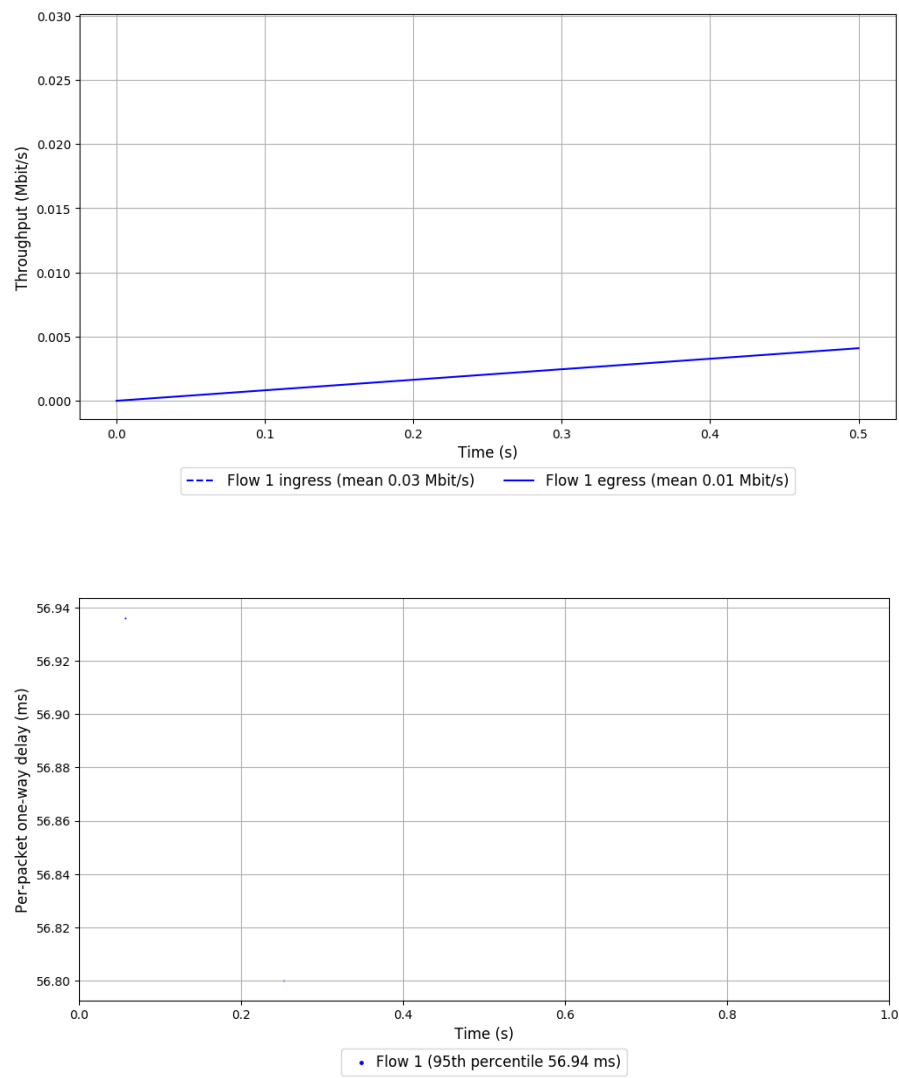
Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2018-11-30 05:39:19
End at: 2018-11-30 05:39:49
Local clock offset: 1.323 ms
Remote clock offset: -39.053 ms

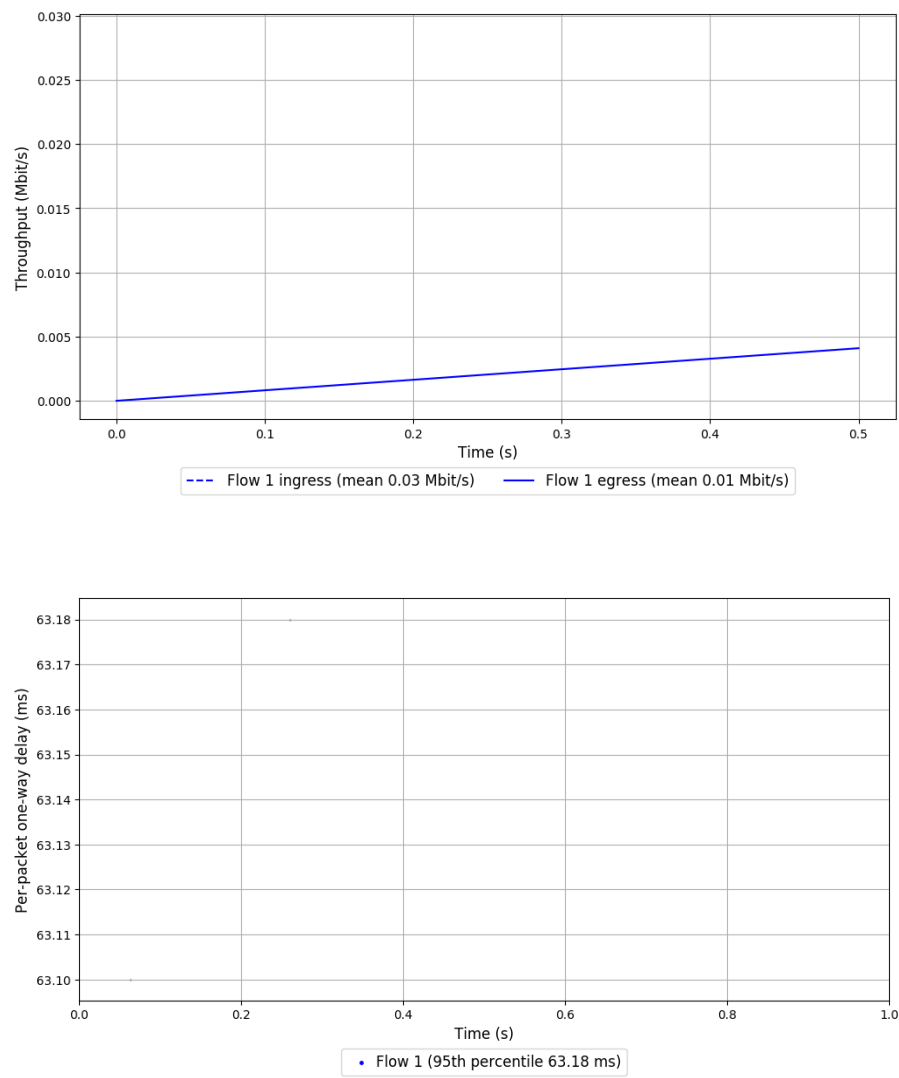
Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

Start at: 2018-11-30 06:11:06
End at: 2018-11-30 06:11:37
Local clock offset: -5.412 ms
Remote clock offset: -42.298 ms

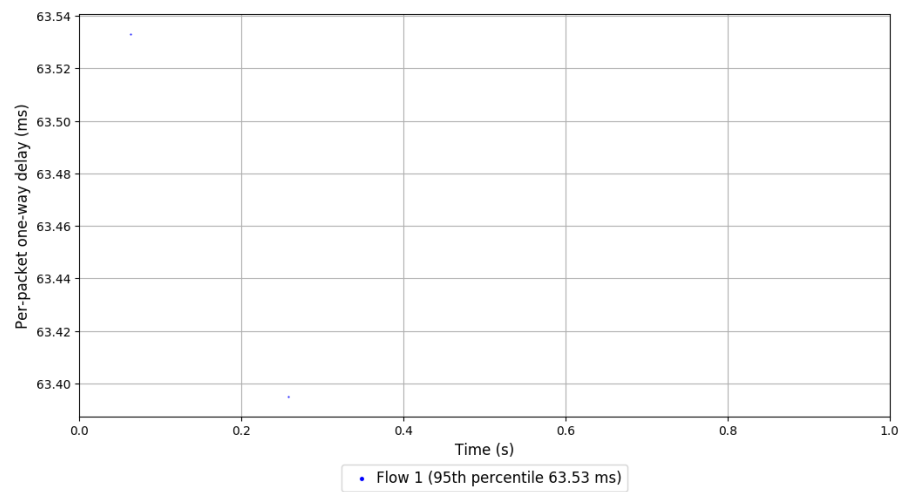
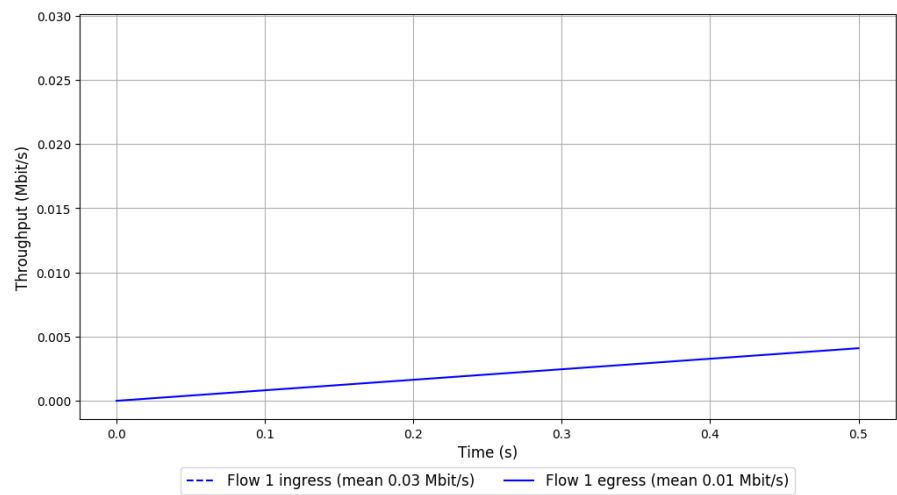
Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

Start at: 2018-11-30 06:43:30
End at: 2018-11-30 06:44:00
Local clock offset: 2.648 ms
Remote clock offset: -32.734 ms

Run 5: Report of PCC-Expr — Data Link

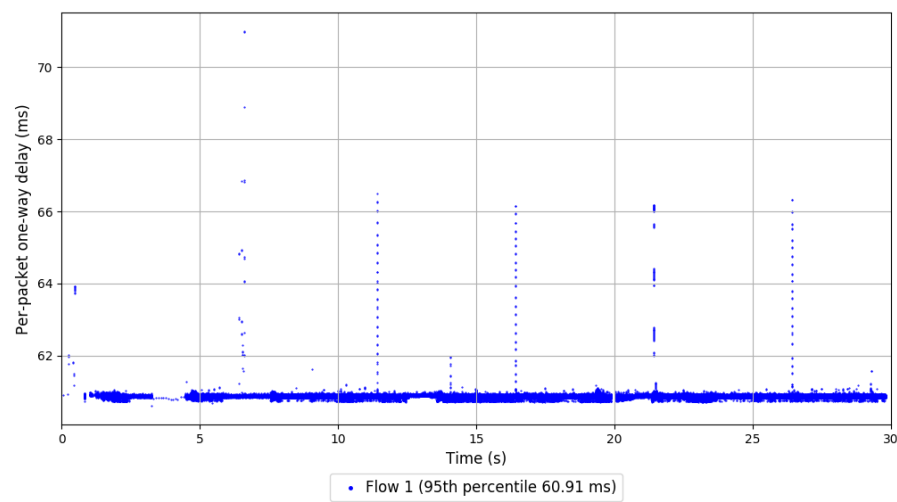
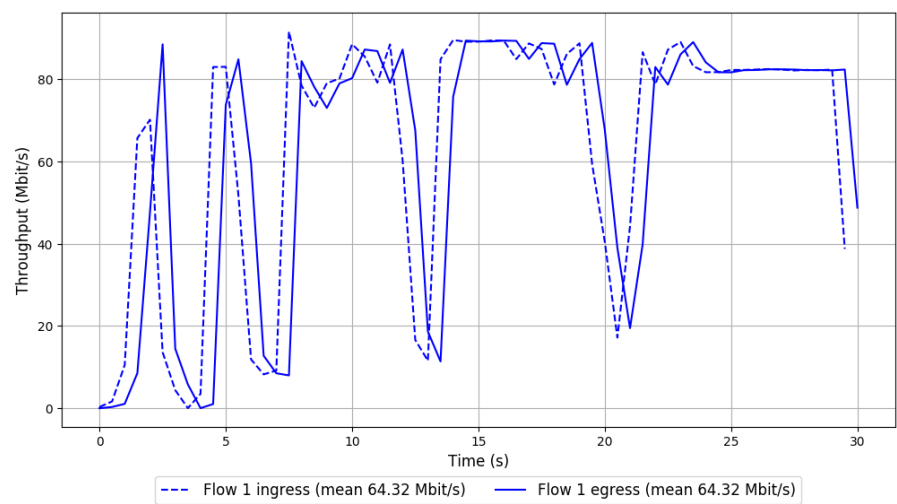


Run 1: Statistics of QUIC Cubic

Start at: 2018-11-30 04:03:10
End at: 2018-11-30 04:03:40
Local clock offset: -0.279 ms
Remote clock offset: -35.031 ms

Below is generated by plot.py at 2018-11-30 07:11:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 64.32 Mbit/s
95th percentile per-packet one-way delay: 60.911 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 64.32 Mbit/s
95th percentile per-packet one-way delay: 60.911 ms
Loss rate: 0.00%

Run 1: Report of QUIC Cubic — Data Link

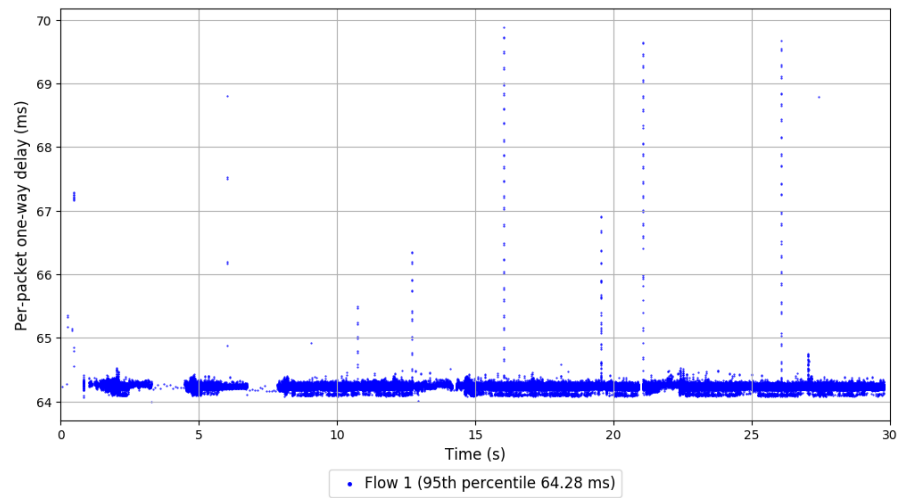
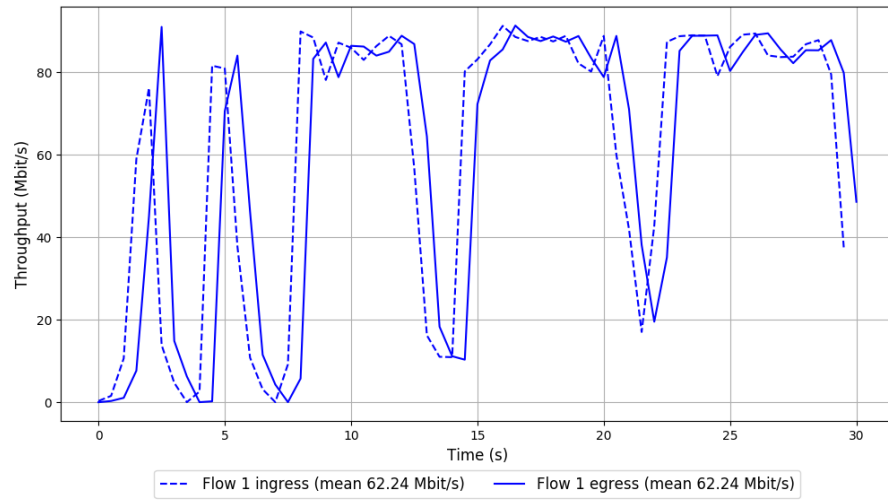


Run 2: Statistics of QUIC Cubic

Start at: 2018-11-30 04:40:37
End at: 2018-11-30 04:41:07
Local clock offset: -1.107 ms
Remote clock offset: -35.369 ms

Below is generated by plot.py at 2018-11-30 07:11:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 62.24 Mbit/s
95th percentile per-packet one-way delay: 64.282 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 62.24 Mbit/s
95th percentile per-packet one-way delay: 64.282 ms
Loss rate: 0.00%

Run 2: Report of QUIC Cubic — Data Link

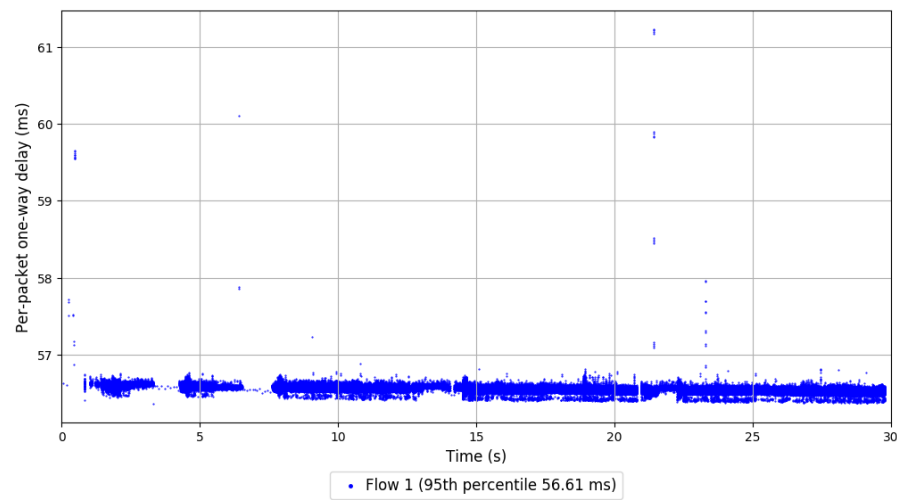
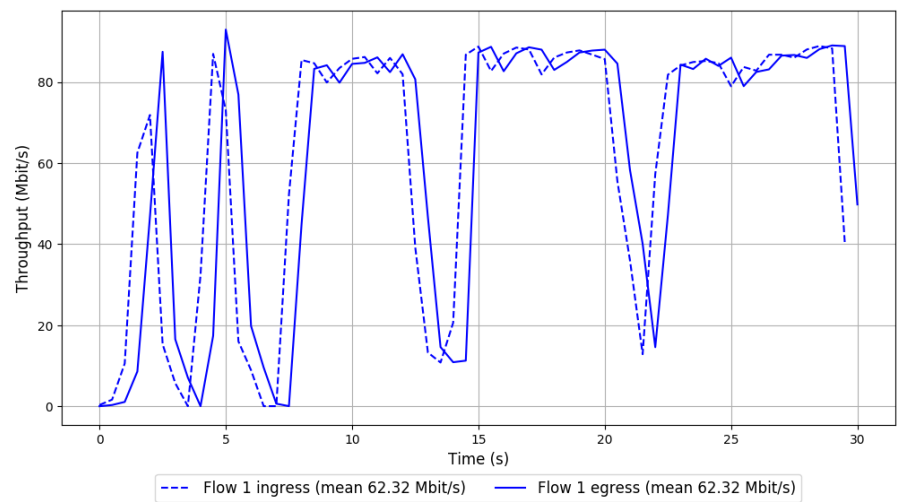


Run 3: Statistics of QUIC Cubic

Start at: 2018-11-30 05:18:11
End at: 2018-11-30 05:18:41
Local clock offset: -1.401 ms
Remote clock offset: -42.374 ms

Below is generated by plot.py at 2018-11-30 07:11:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 62.32 Mbit/s
95th percentile per-packet one-way delay: 56.613 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 62.32 Mbit/s
95th percentile per-packet one-way delay: 56.613 ms
Loss rate: 0.00%

Run 3: Report of QUIC Cubic — Data Link

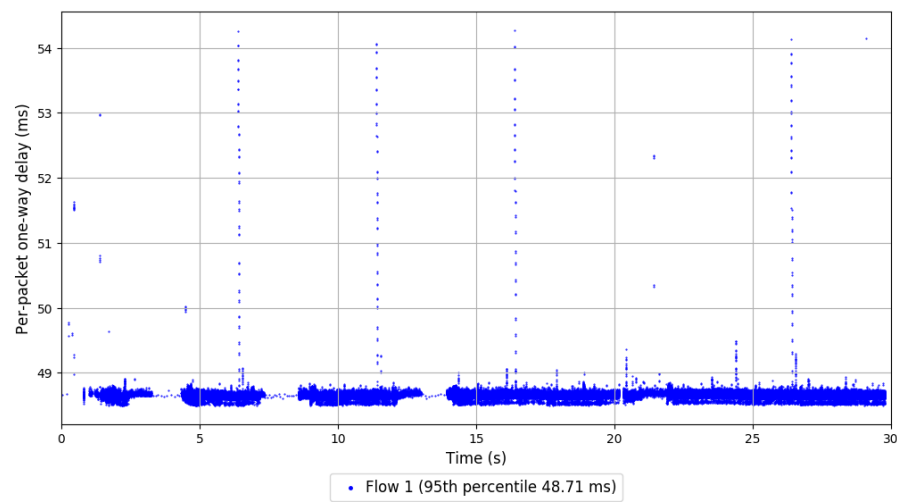
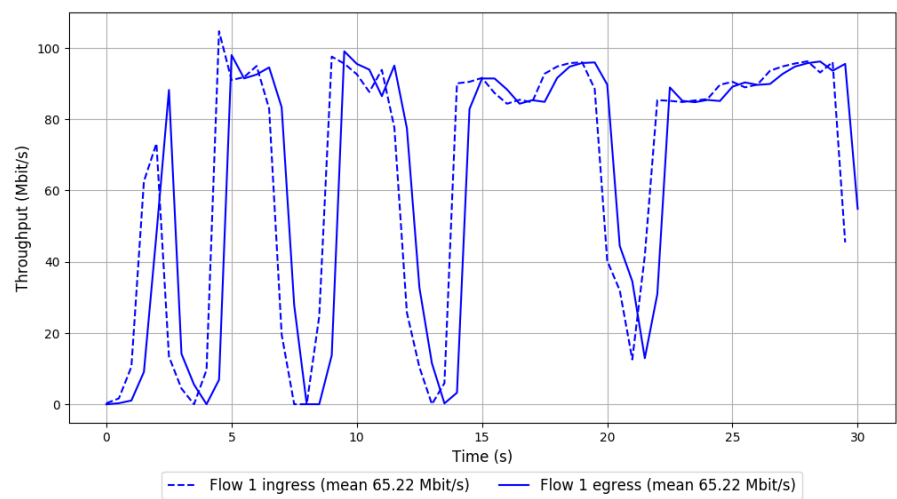


Run 4: Statistics of QUIC Cubic

Start at: 2018-11-30 05:50:08
End at: 2018-11-30 05:50:38
Local clock offset: 2.612 ms
Remote clock offset: -45.391 ms

Below is generated by plot.py at 2018-11-30 07:11:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 65.22 Mbit/s
95th percentile per-packet one-way delay: 48.713 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 65.22 Mbit/s
95th percentile per-packet one-way delay: 48.713 ms
Loss rate: 0.00%

Run 4: Report of QUIC Cubic — Data Link

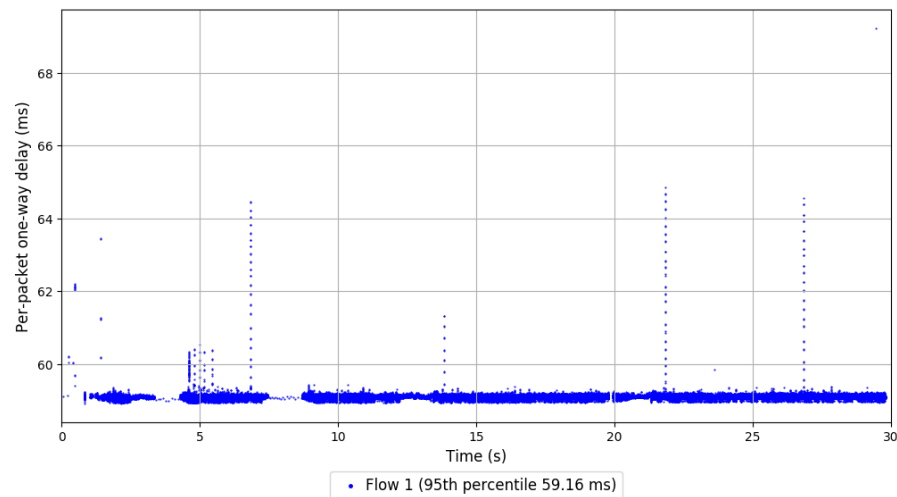
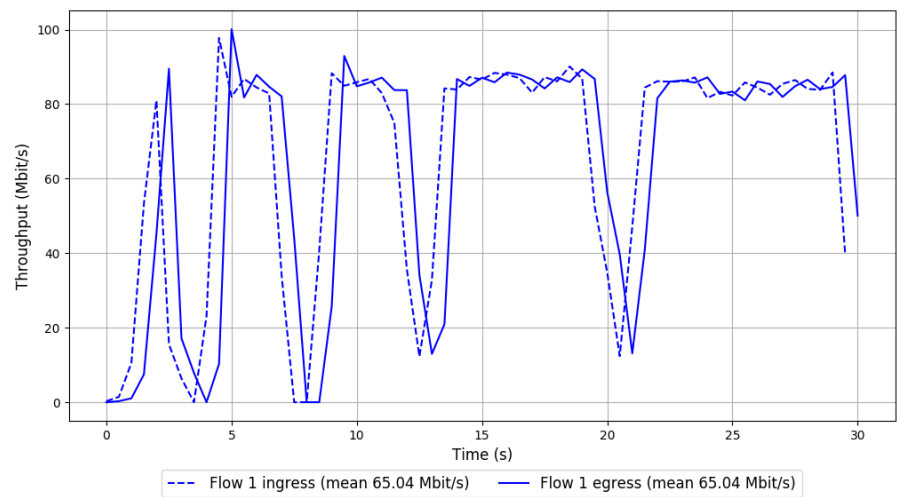


Run 5: Statistics of QUIC Cubic

Start at: 2018-11-30 06:21:59
End at: 2018-11-30 06:22:29
Local clock offset: 2.033 ms
Remote clock offset: -38.849 ms

Below is generated by plot.py at 2018-11-30 07:11:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 65.04 Mbit/s
95th percentile per-packet one-way delay: 59.158 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 65.04 Mbit/s
95th percentile per-packet one-way delay: 59.158 ms
Loss rate: 0.00%

Run 5: Report of QUIC Cubic — Data Link

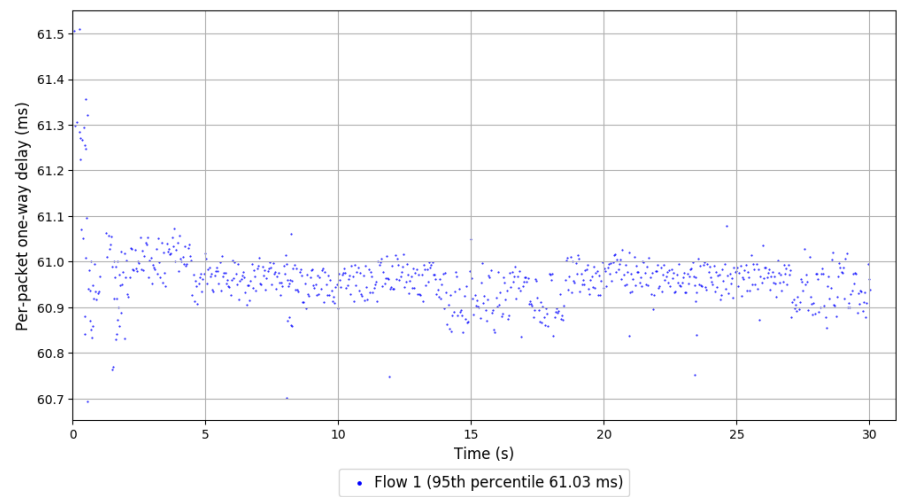
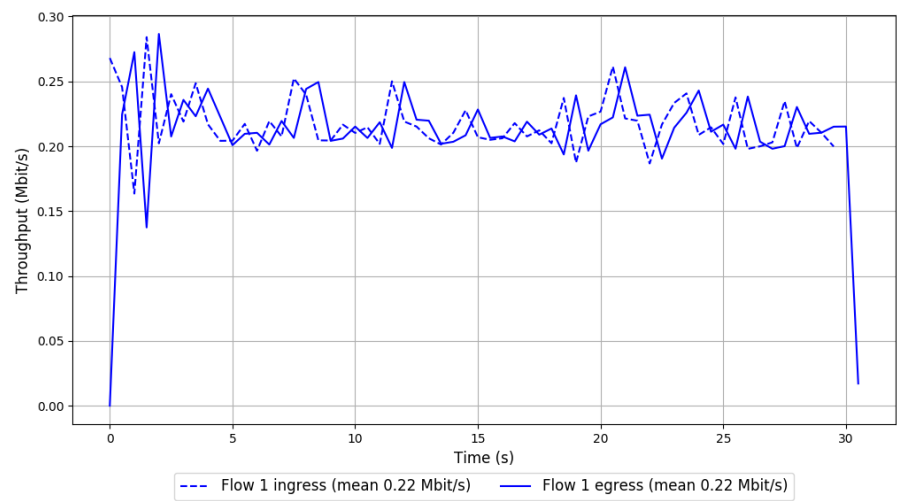


Run 1: Statistics of SCReAM

Start at: 2018-11-30 04:21:19
End at: 2018-11-30 04:21:49
Local clock offset: -1.345 ms
Remote clock offset: -36.417 ms

Below is generated by plot.py at 2018-11-30 07:11:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.029 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.029 ms
Loss rate: 0.00%

Run 1: Report of SReAM — Data Link

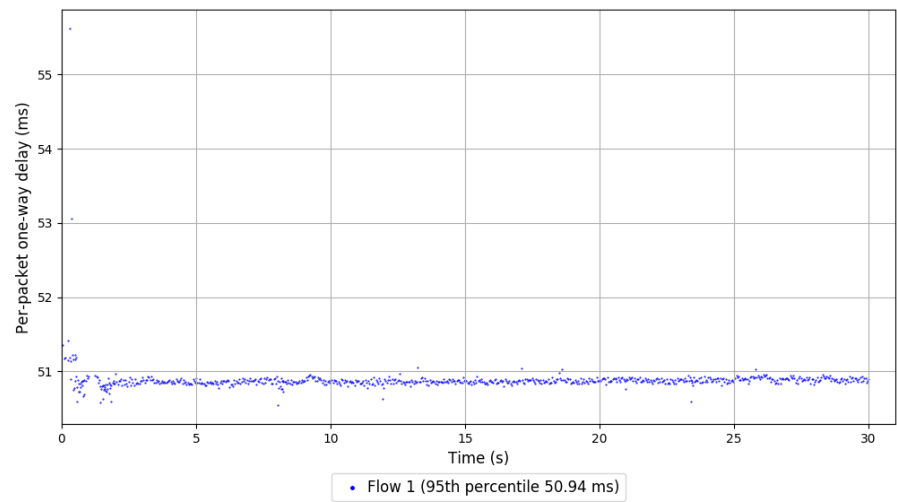
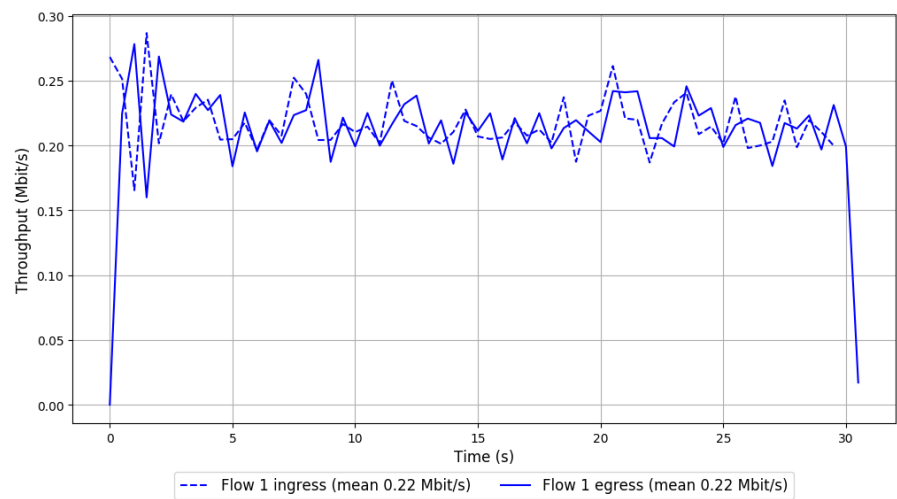


Run 2: Statistics of SCReAM

Start at: 2018-11-30 04:53:14
End at: 2018-11-30 04:53:44
Local clock offset: 1.116 ms
Remote clock offset: -44.934 ms

Below is generated by plot.py at 2018-11-30 07:11:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.935 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.935 ms
Loss rate: 0.00%

Run 2: Report of SReAM — Data Link

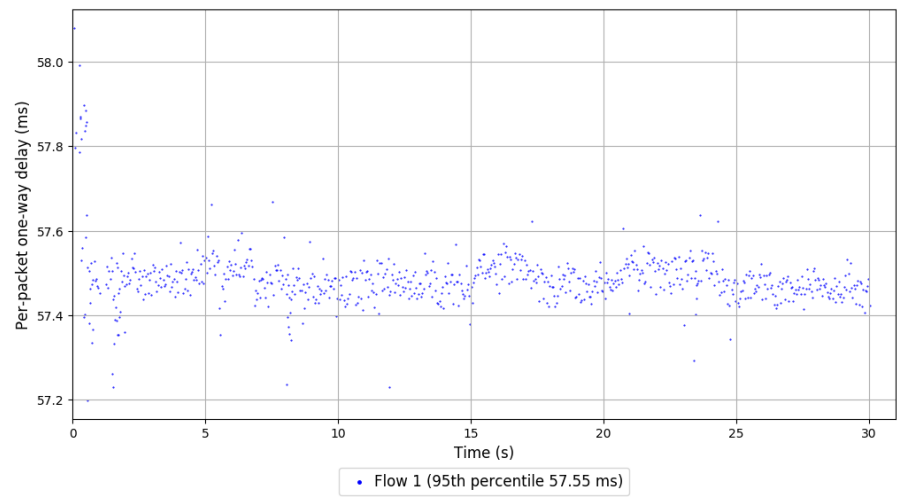
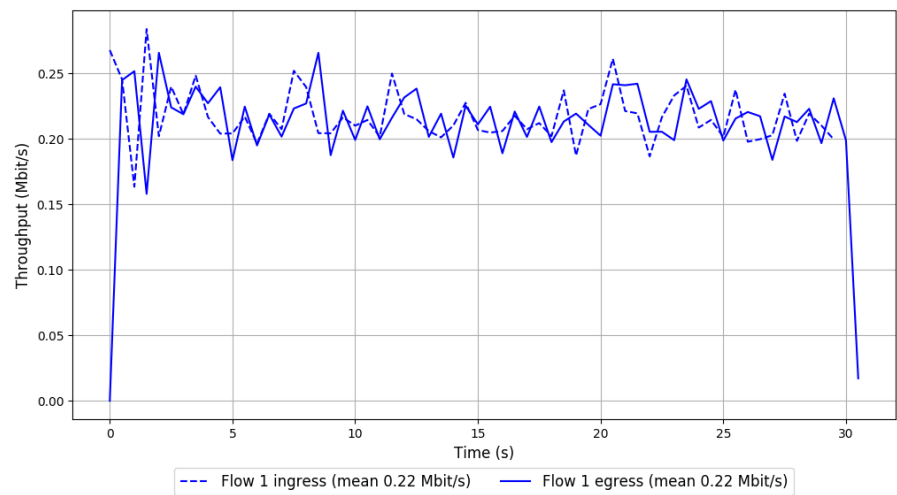


Run 3: Statistics of SCReAM

Start at: 2018-11-30 05:30:54
End at: 2018-11-30 05:31:24
Local clock offset: -2.103 ms
Remote clock offset: -41.288 ms

Below is generated by plot.py at 2018-11-30 07:11:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.554 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.554 ms
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link

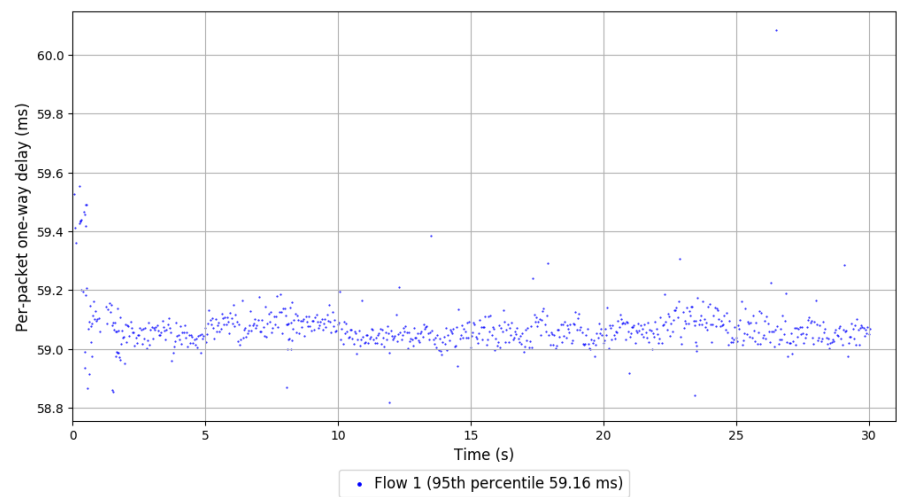
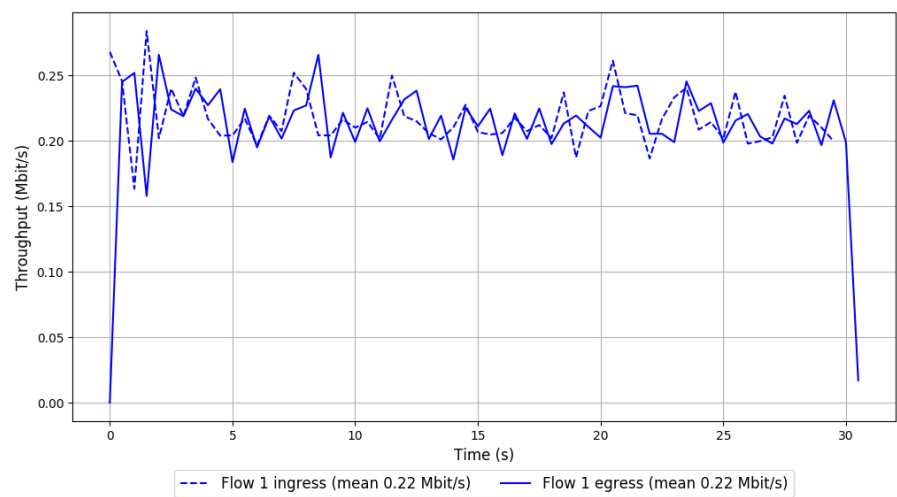


Run 4: Statistics of SCReAM

Start at: 2018-11-30 06:02:45
End at: 2018-11-30 06:03:15
Local clock offset: -0.238 ms
Remote clock offset: -38.621 ms

Below is generated by plot.py at 2018-11-30 07:11:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 59.158 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 59.158 ms
Loss rate: 0.00%

Run 4: Report of SReAM — Data Link

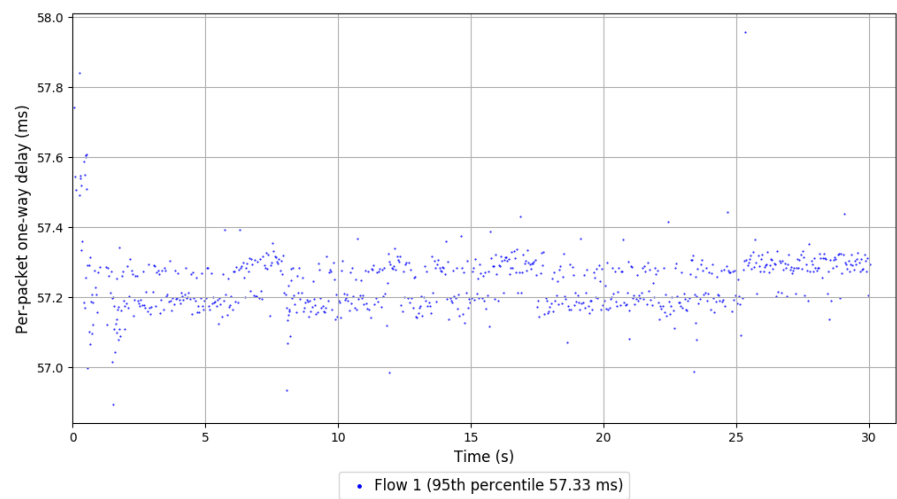
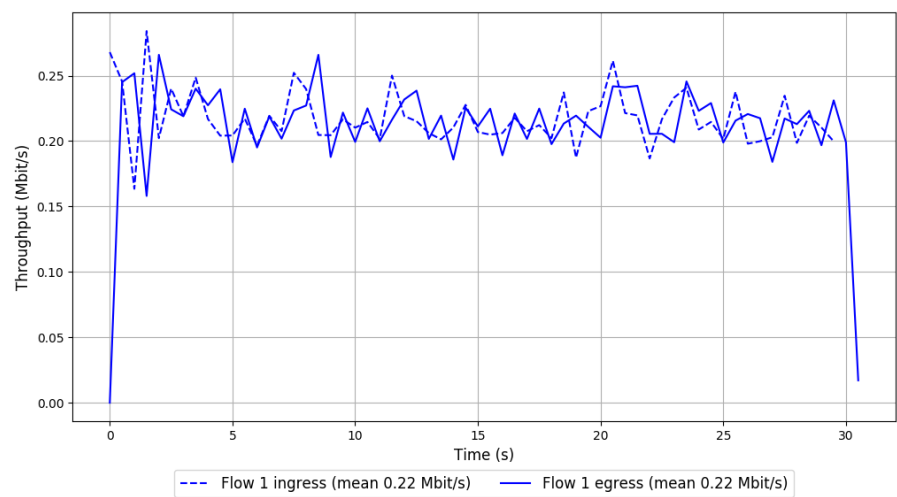


Run 5: Statistics of SCReAM

Start at: 2018-11-30 06:34:45
End at: 2018-11-30 06:35:15
Local clock offset: 2.007 ms
Remote clock offset: -38.735 ms

Below is generated by plot.py at 2018-11-30 07:11:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.331 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.331 ms
Loss rate: 0.00%

Run 5: Report of SReAM — Data Link

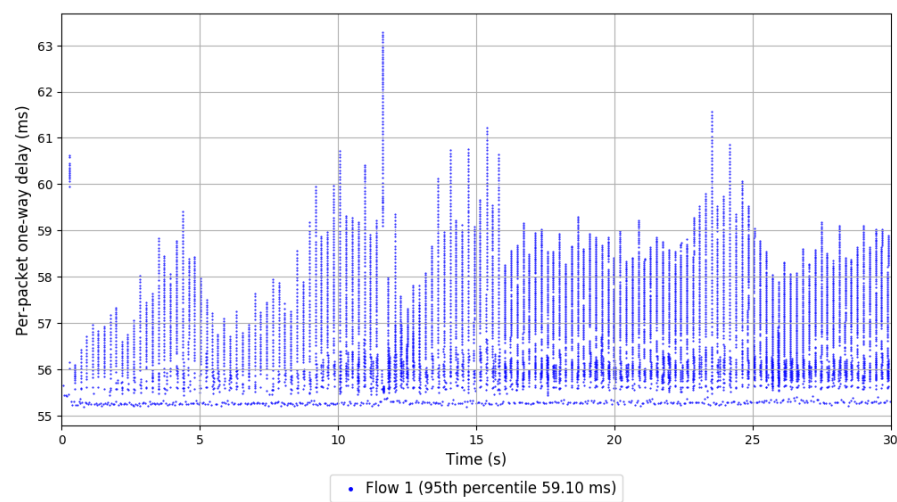
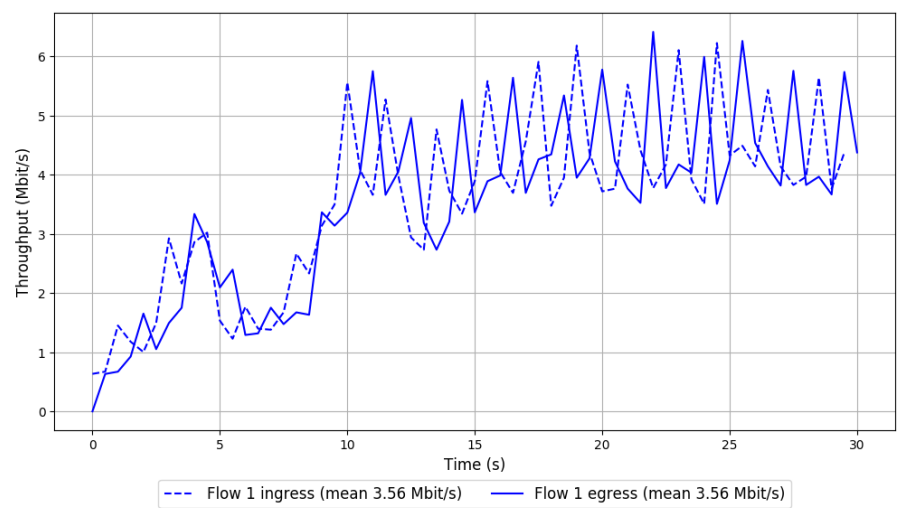


Run 1: Statistics of Sprout

Start at: 2018-11-30 04:22:29
End at: 2018-11-30 04:22:59
Local clock offset: -2.588 ms
Remote clock offset: -43.392 ms

Below is generated by plot.py at 2018-11-30 07:11:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.56 Mbit/s
95th percentile per-packet one-way delay: 59.098 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 3.56 Mbit/s
95th percentile per-packet one-way delay: 59.098 ms
Loss rate: 0.00%

Run 1: Report of Sprout — Data Link

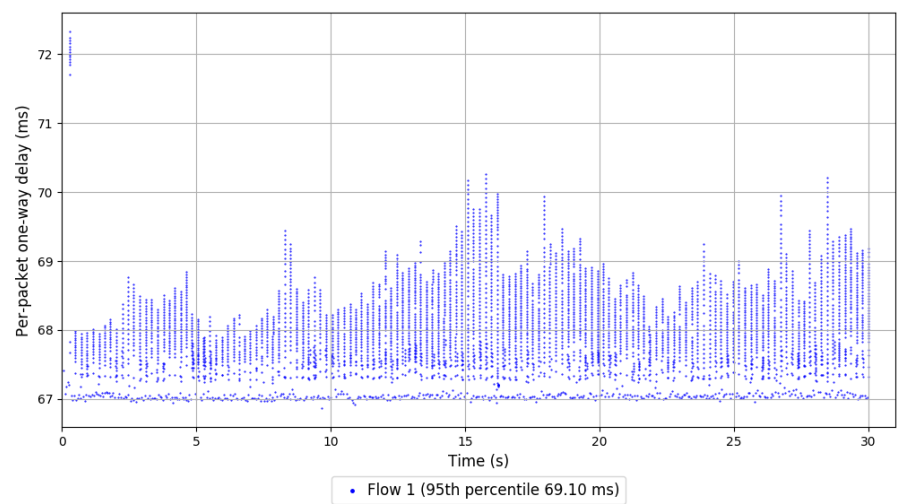
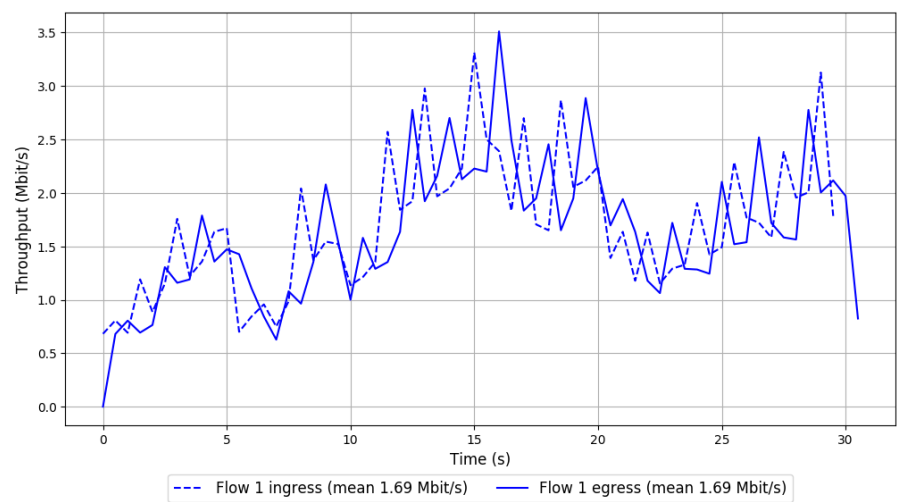


Run 2: Statistics of Sprout

Start at: 2018-11-30 04:54:24
End at: 2018-11-30 04:54:54
Local clock offset: -0.127 ms
Remote clock offset: -30.121 ms

Below is generated by plot.py at 2018-11-30 07:11:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 69.098 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 69.098 ms
Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

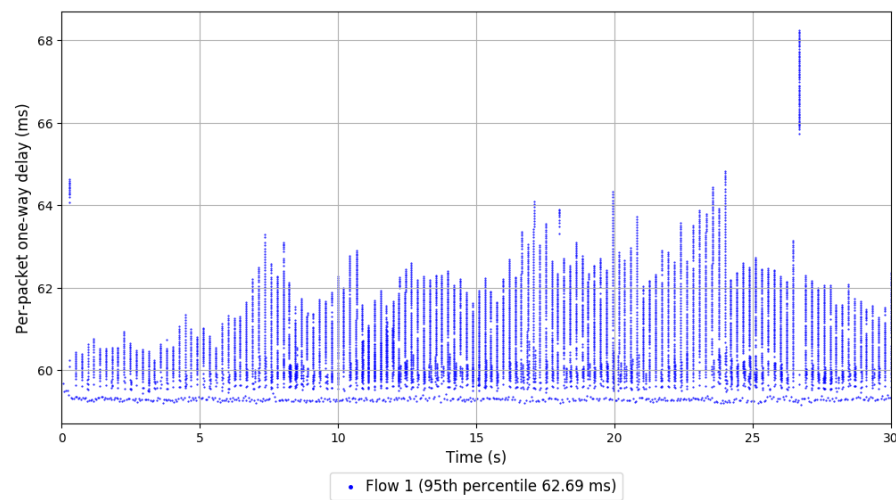
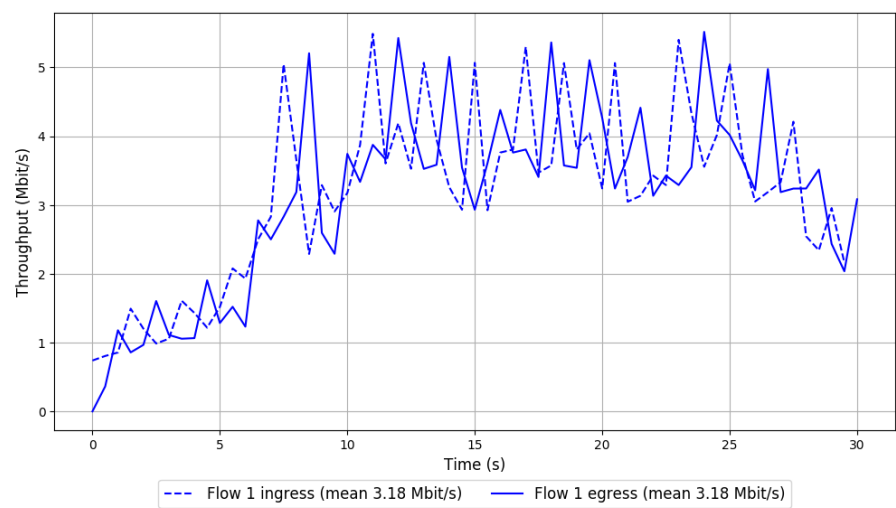


Run 3: Statistics of Sprout

Start at: 2018-11-30 05:32:04
End at: 2018-11-30 05:32:34
Local clock offset: 0.429 ms
Remote clock offset: -39.138 ms

Below is generated by plot.py at 2018-11-30 07:11:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.18 Mbit/s
95th percentile per-packet one-way delay: 62.686 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 3.18 Mbit/s
95th percentile per-packet one-way delay: 62.686 ms
Loss rate: 0.00%

Run 3: Report of Sprout — Data Link

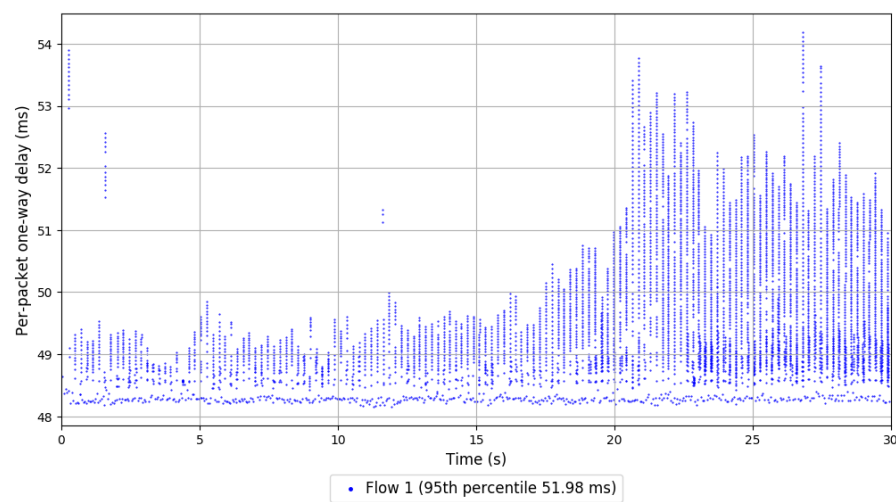
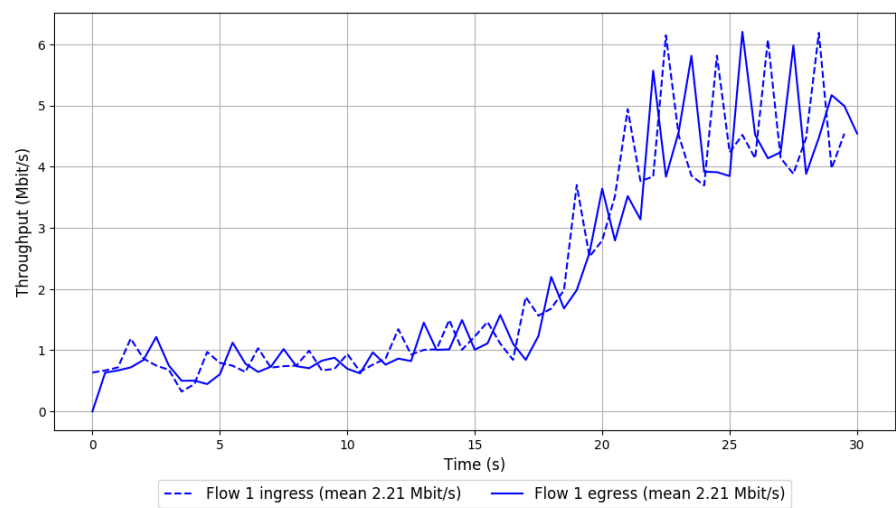


Run 4: Statistics of Sprout

Start at: 2018-11-30 06:03:55
End at: 2018-11-30 06:04:25
Local clock offset: 3.25 ms
Remote clock offset: -45.254 ms

Below is generated by plot.py at 2018-11-30 07:11:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 51.985 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 51.985 ms
Loss rate: 0.00%

Run 4: Report of Sprout — Data Link

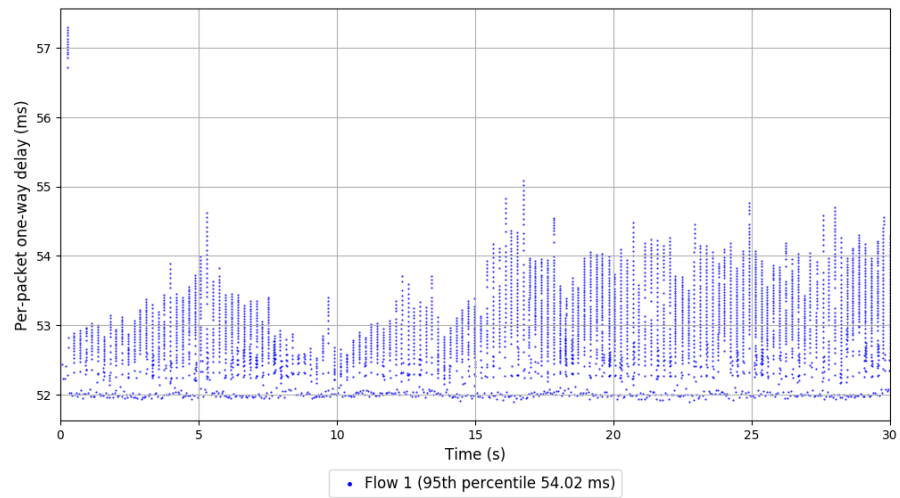
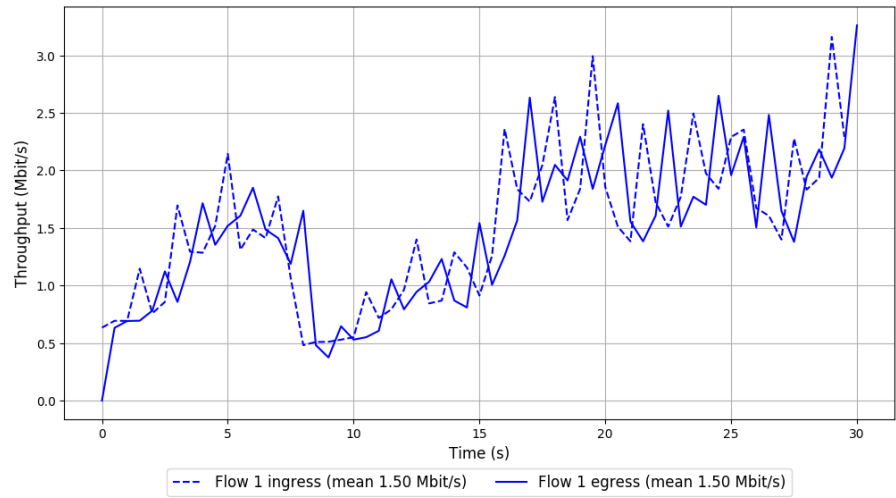


Run 5: Statistics of Sprout

Start at: 2018-11-30 06:35:54
End at: 2018-11-30 06:36:24
Local clock offset: 0.817 ms
Remote clock offset: -45.212 ms

Below is generated by plot.py at 2018-11-30 07:11:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.50 Mbit/s
95th percentile per-packet one-way delay: 54.019 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.50 Mbit/s
95th percentile per-packet one-way delay: 54.019 ms
Loss rate: 0.00%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

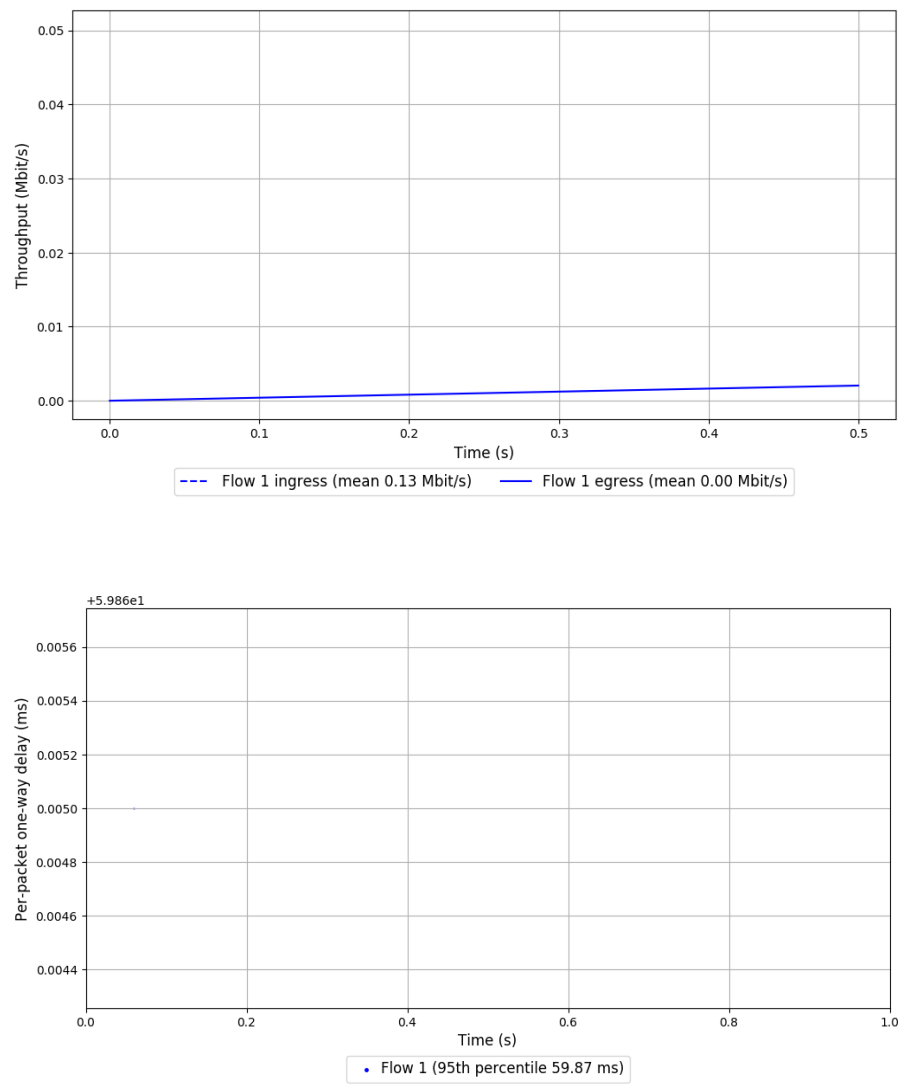
Start at: 2018-11-30 04:02:00

End at: 2018-11-30 04:02:30

Local clock offset: -0.58 ms

Remote clock offset: -37.099 ms

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

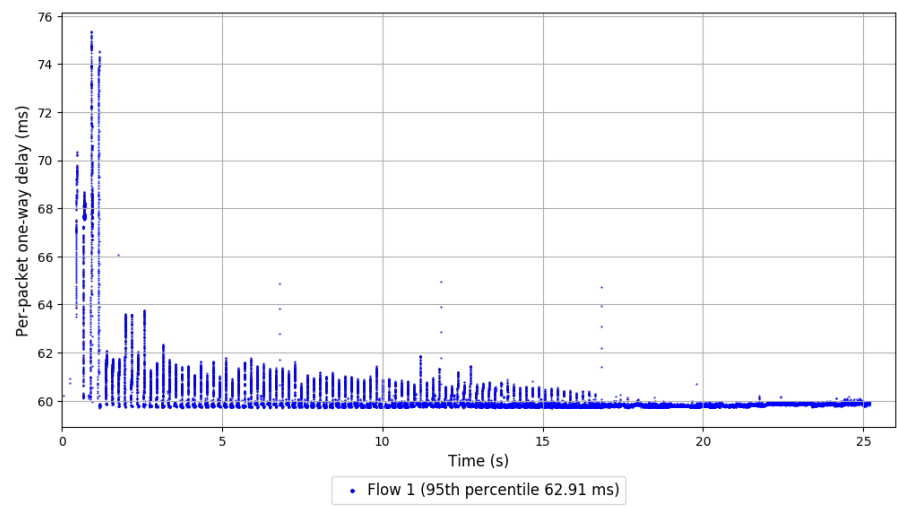
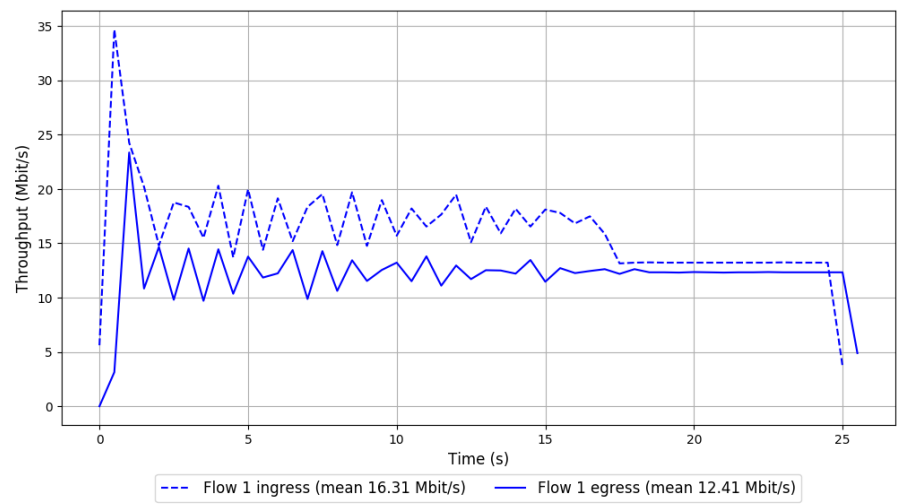


Run 2: Statistics of TaoVA-100x

Start at: 2018-11-30 04:39:24
End at: 2018-11-30 04:39:54
Local clock offset: 0.571 ms
Remote clock offset: -35.943 ms

Below is generated by plot.py at 2018-11-30 07:11:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.41 Mbit/s
95th percentile per-packet one-way delay: 62.912 ms
Loss rate: 23.96%
-- Flow 1:
Average throughput: 12.41 Mbit/s
95th percentile per-packet one-way delay: 62.912 ms
Loss rate: 23.96%

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



Run 3: Statistics of TaoVA-100x

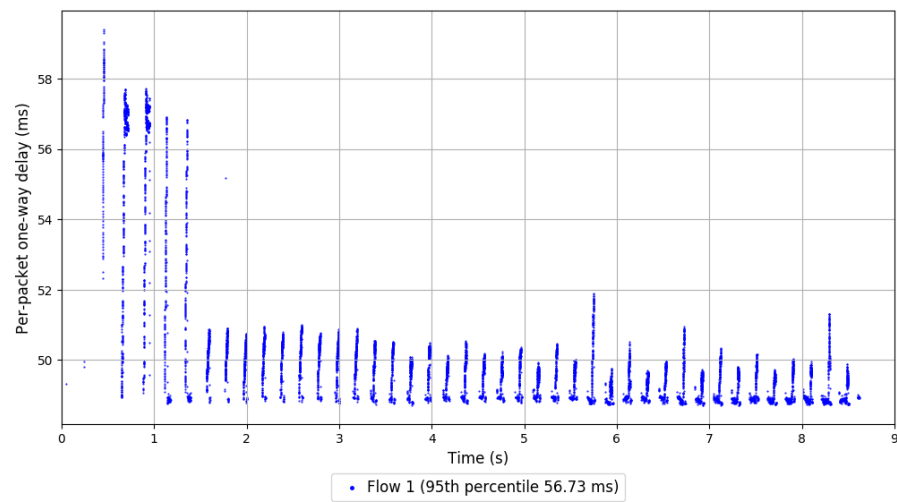
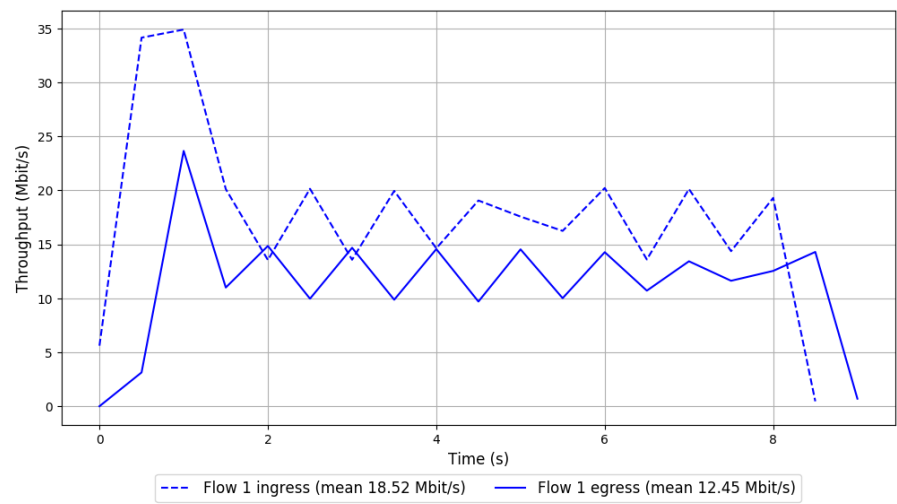
Start at: 2018-11-30 05:17:00

End at: 2018-11-30 05:17:30

Local clock offset: 4.047 ms

Remote clock offset: -44.732 ms

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

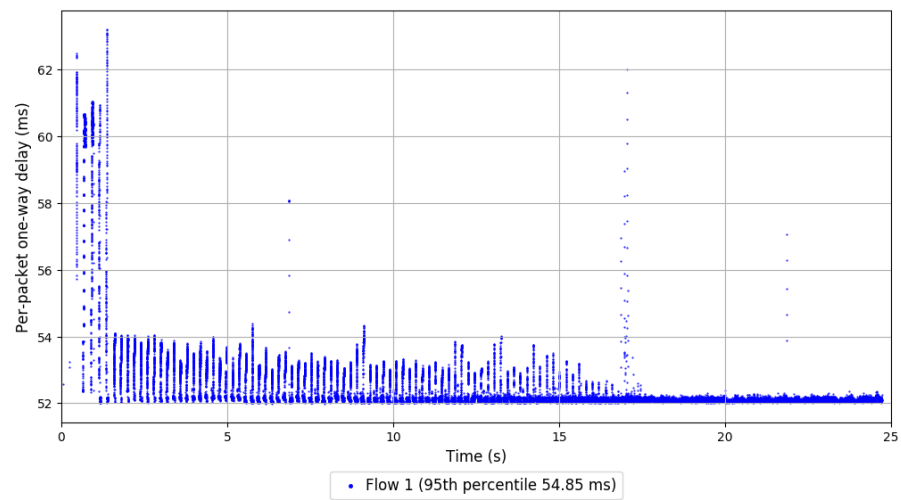
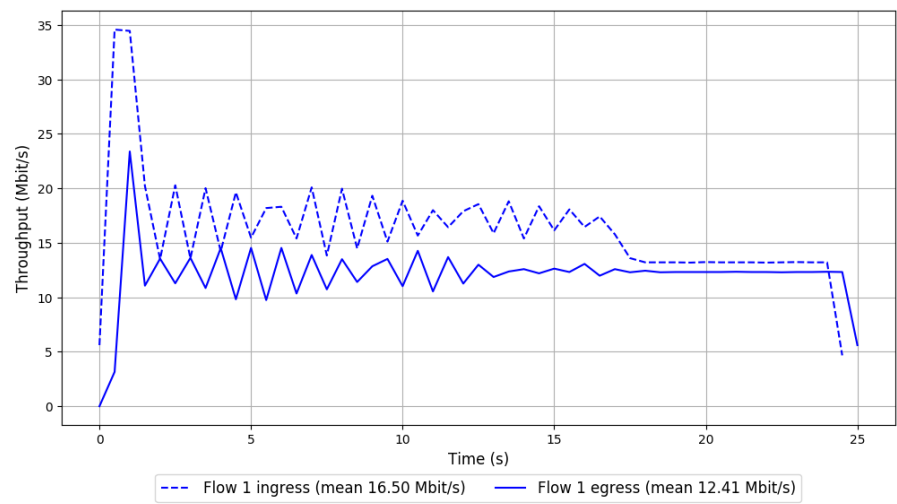


Run 4: Statistics of TaoVA-100x

Start at: 2018-11-30 05:48:55
End at: 2018-11-30 05:49:25
Local clock offset: -0.502 ms
Remote clock offset: -44.935 ms

Below is generated by plot.py at 2018-11-30 07:11:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.41 Mbit/s
95th percentile per-packet one-way delay: 54.847 ms
Loss rate: 24.80%
-- Flow 1:
Average throughput: 12.41 Mbit/s
95th percentile per-packet one-way delay: 54.847 ms
Loss rate: 24.80%

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



Run 5: Statistics of TaoVA-100x

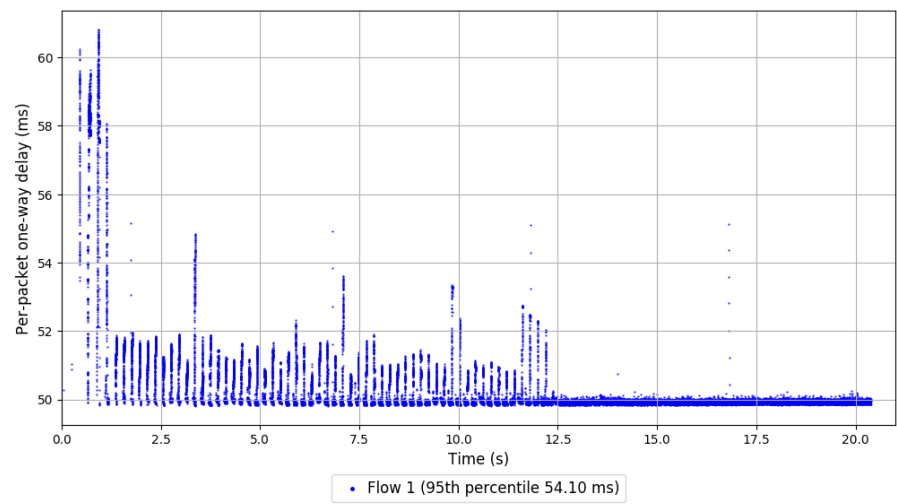
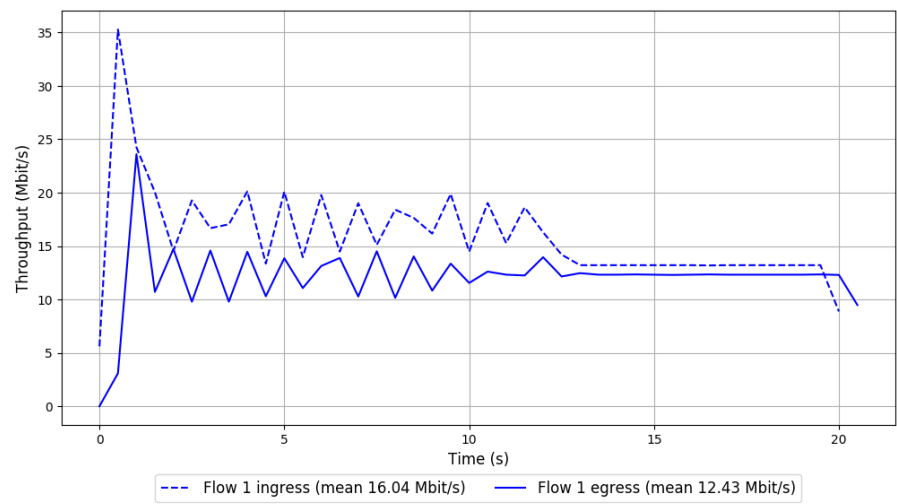
Start at: 2018-11-30 06:20:47

End at: 2018-11-30 06:21:17

Local clock offset: 2.502 ms

Remote clock offset: -45.142 ms

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

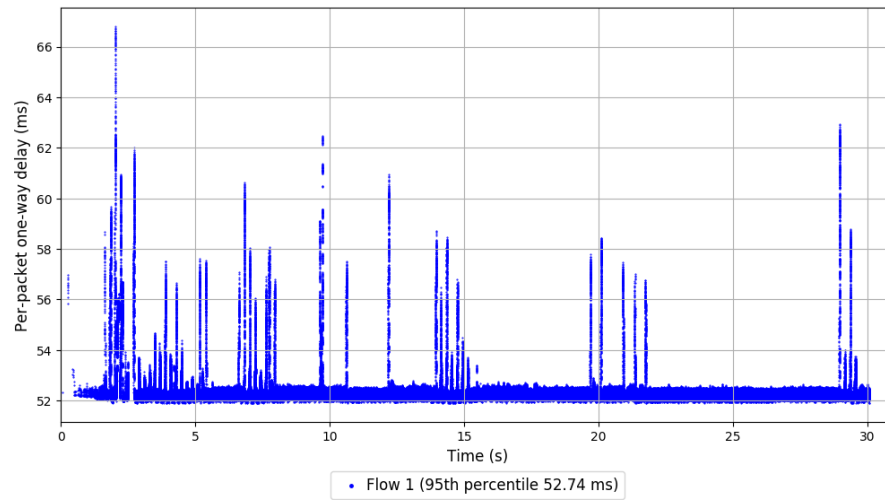
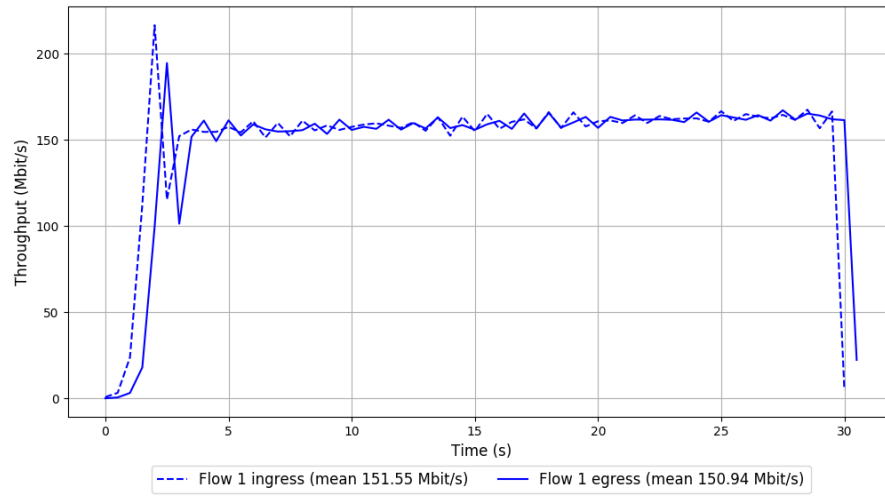


Run 1: Statistics of TCP Vegas

Start at: 2018-11-30 03:59:07
End at: 2018-11-30 03:59:37
Local clock offset: 0.742 ms
Remote clock offset: -43.191 ms

Below is generated by plot.py at 2018-11-30 07:11:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 150.94 Mbit/s
95th percentile per-packet one-way delay: 52.736 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 150.94 Mbit/s
95th percentile per-packet one-way delay: 52.736 ms
Loss rate: 0.40%

Run 1: Report of TCP Vegas — Data Link

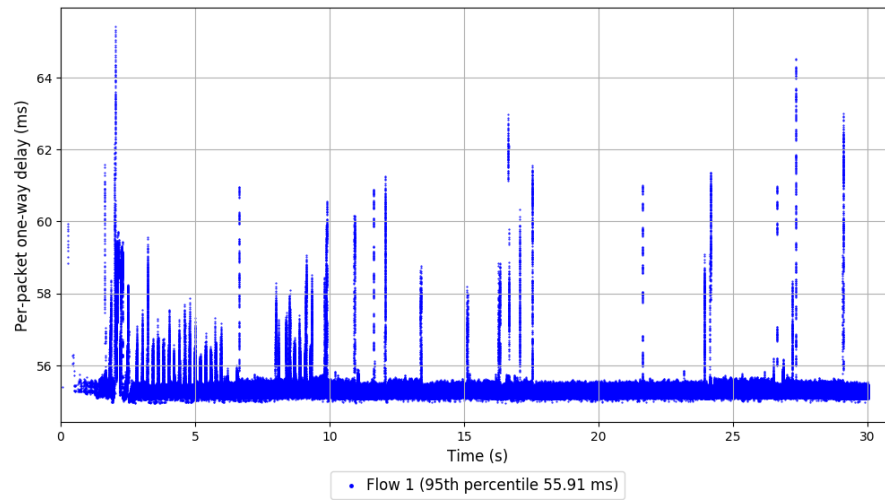
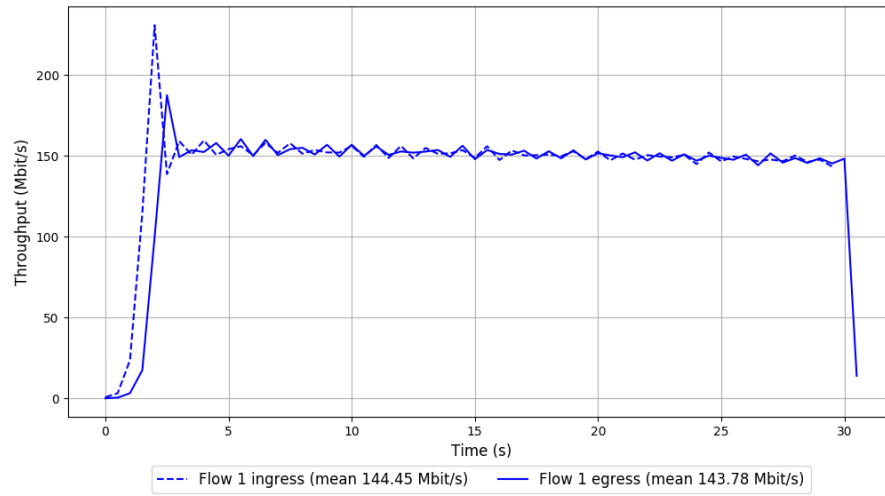


Run 2: Statistics of TCP Vegas

Start at: 2018-11-30 04:36:33
End at: 2018-11-30 04:37:03
Local clock offset: -1.311 ms
Remote clock offset: -42.769 ms

Below is generated by plot.py at 2018-11-30 07:11:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 143.78 Mbit/s
95th percentile per-packet one-way delay: 55.915 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 143.78 Mbit/s
95th percentile per-packet one-way delay: 55.915 ms
Loss rate: 0.46%

Run 2: Report of TCP Vegas — Data Link

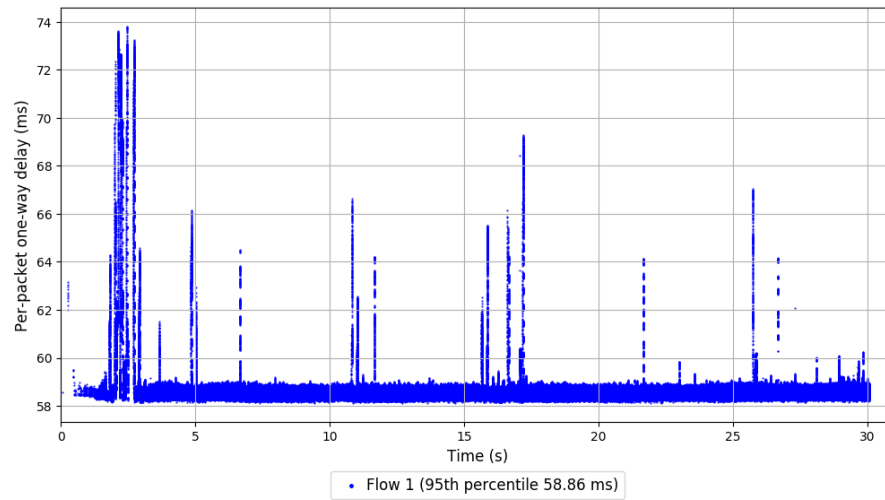
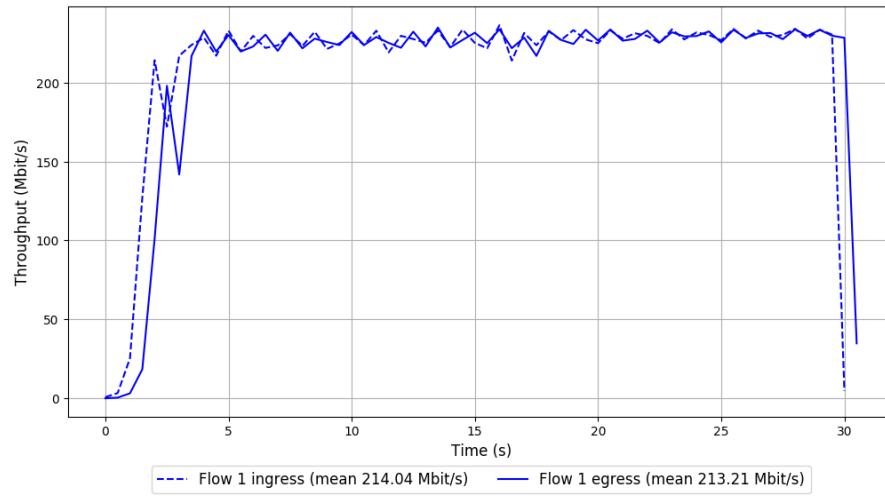


Run 3: Statistics of TCP Vegas

Start at: 2018-11-30 05:13:54
End at: 2018-11-30 05:14:24
Local clock offset: 2.216 ms
Remote clock offset: -37.079 ms

Below is generated by plot.py at 2018-11-30 07:11:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 213.21 Mbit/s
95th percentile per-packet one-way delay: 58.861 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 213.21 Mbit/s
95th percentile per-packet one-way delay: 58.861 ms
Loss rate: 0.39%

Run 3: Report of TCP Vegas — Data Link

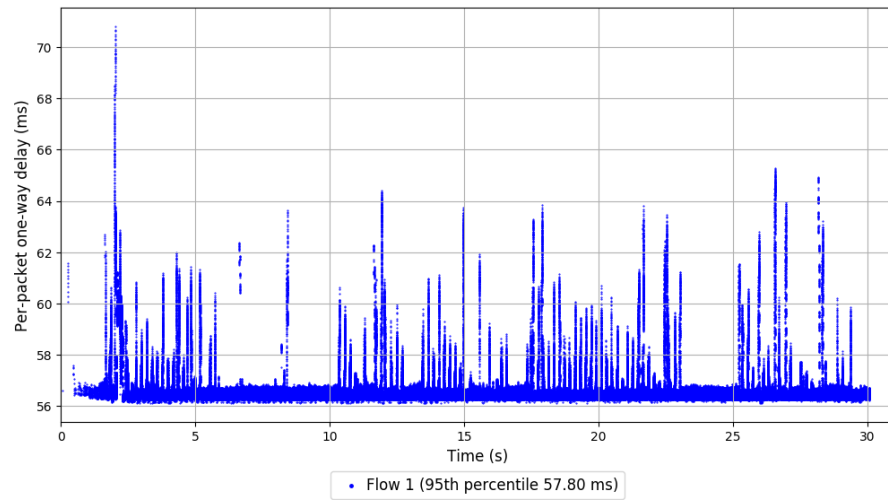
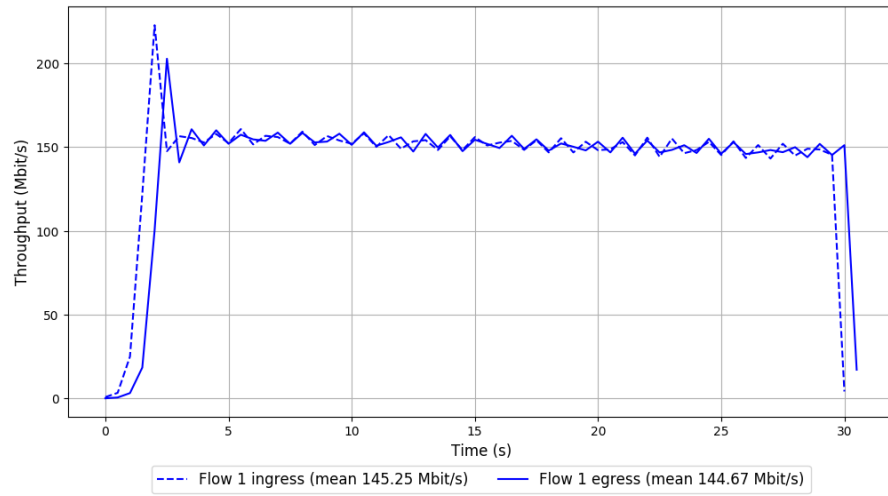


Run 4: Statistics of TCP Vegas

Start at: 2018-11-30 05:46:03
End at: 2018-11-30 05:46:33
Local clock offset: -1.406 ms
Remote clock offset: -41.924 ms

Below is generated by plot.py at 2018-11-30 07:11:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 144.67 Mbit/s
95th percentile per-packet one-way delay: 57.802 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 144.67 Mbit/s
95th percentile per-packet one-way delay: 57.802 ms
Loss rate: 0.40%

Run 4: Report of TCP Vegas — Data Link

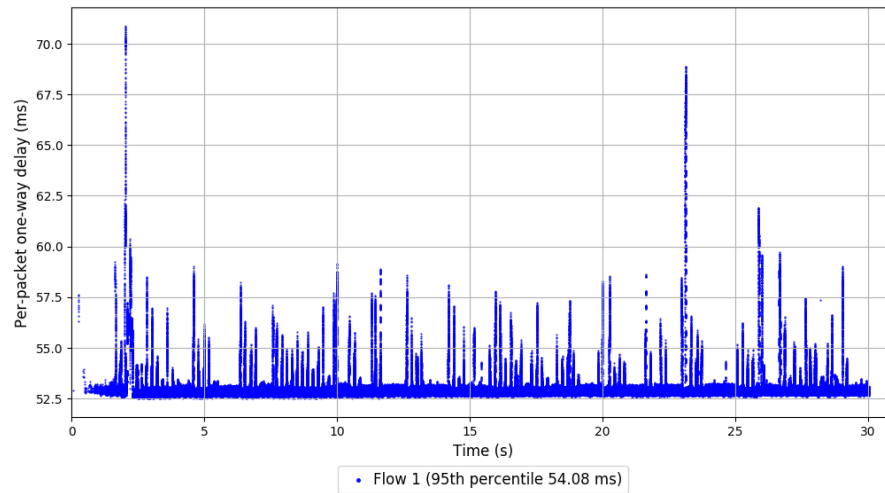
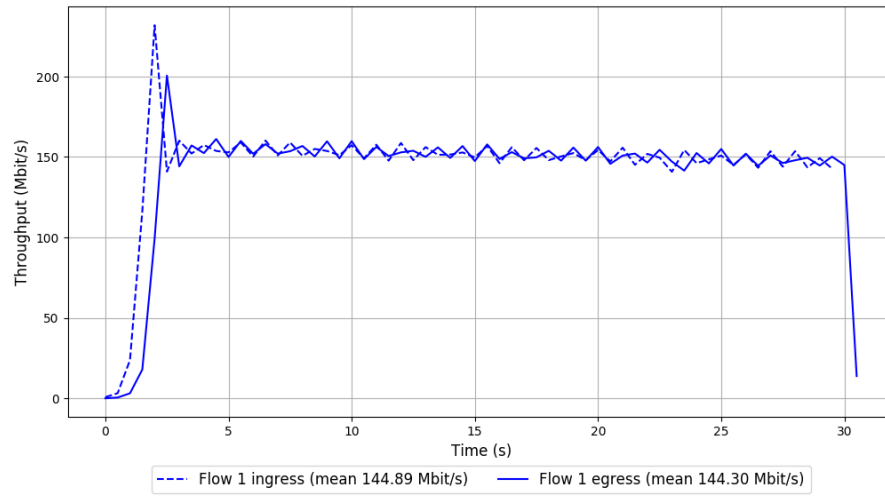


Run 5: Statistics of TCP Vegas

Start at: 2018-11-30 06:17:55
End at: 2018-11-30 06:18:25
Local clock offset: 1.845 ms
Remote clock offset: -42.821 ms

Below is generated by plot.py at 2018-11-30 07:11:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 144.30 Mbit/s
95th percentile per-packet one-way delay: 54.084 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 144.30 Mbit/s
95th percentile per-packet one-way delay: 54.084 ms
Loss rate: 0.40%

Run 5: Report of TCP Vegas — Data Link

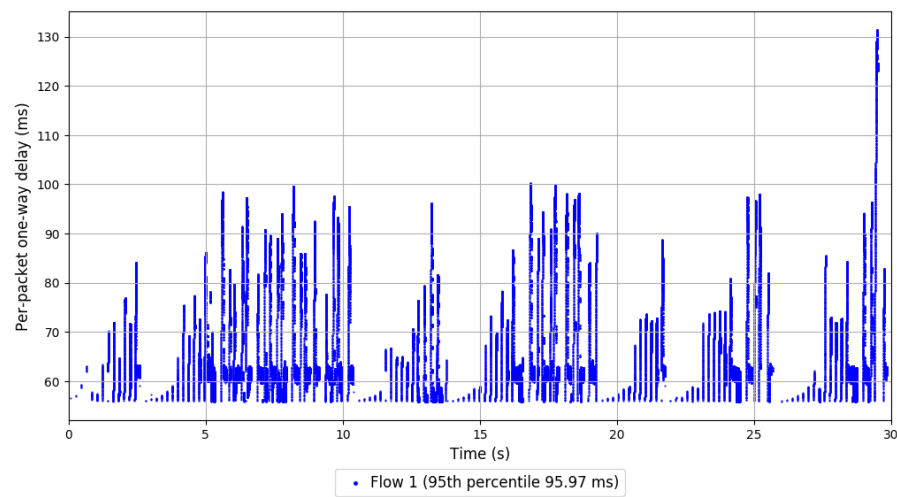
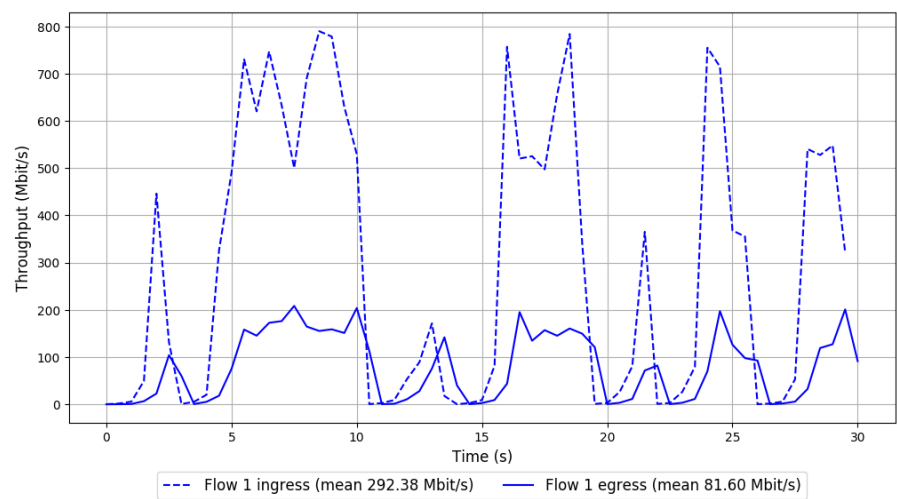


Run 1: Statistics of Verus

Start at: 2018-11-30 03:55:12
End at: 2018-11-30 03:55:42
Local clock offset: -0.014 ms
Remote clock offset: -40.451 ms

Below is generated by plot.py at 2018-11-30 07:11:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 81.60 Mbit/s
95th percentile per-packet one-way delay: 95.974 ms
Loss rate: 72.09%
-- Flow 1:
Average throughput: 81.60 Mbit/s
95th percentile per-packet one-way delay: 95.974 ms
Loss rate: 72.09%

Run 1: Report of Verus — Data Link

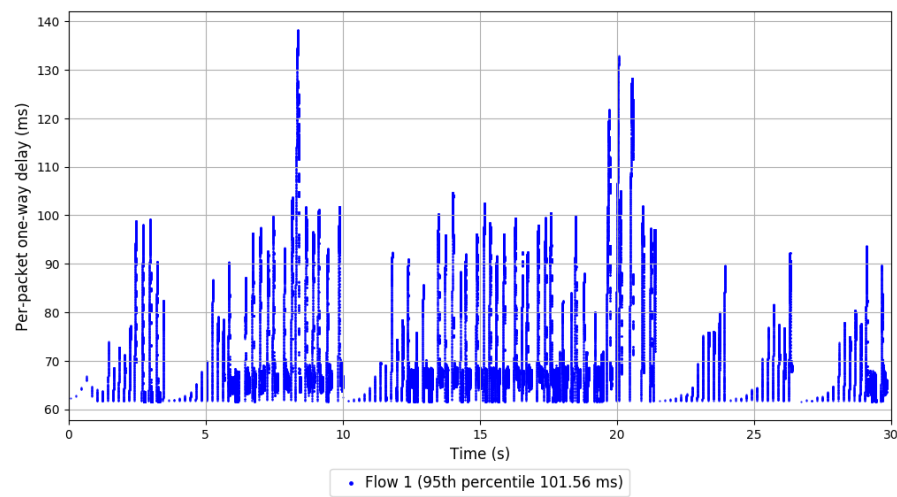
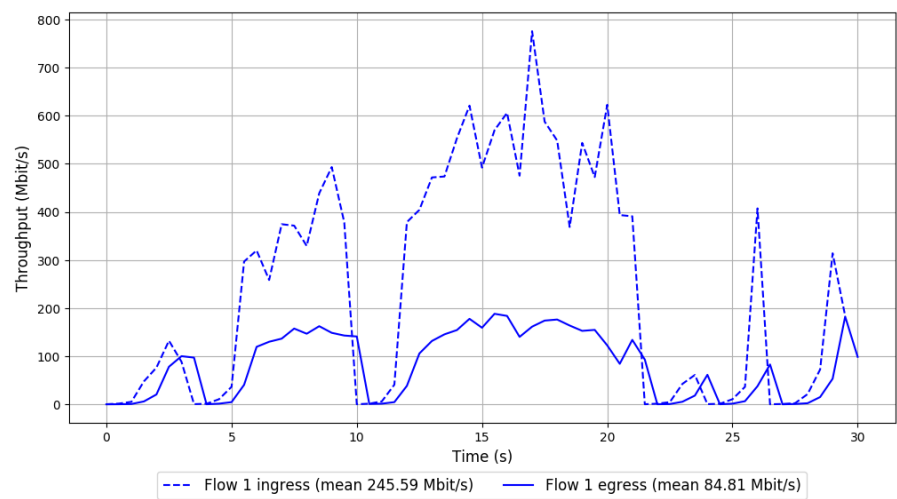


Run 2: Statistics of Verus

Start at: 2018-11-30 04:32:39
End at: 2018-11-30 04:33:09
Local clock offset: -1.38 ms
Remote clock offset: -36.141 ms

Below is generated by plot.py at 2018-11-30 07:11:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 84.81 Mbit/s
95th percentile per-packet one-way delay: 101.560 ms
Loss rate: 65.46%
-- Flow 1:
Average throughput: 84.81 Mbit/s
95th percentile per-packet one-way delay: 101.560 ms
Loss rate: 65.46%

Run 2: Report of Verus — Data Link

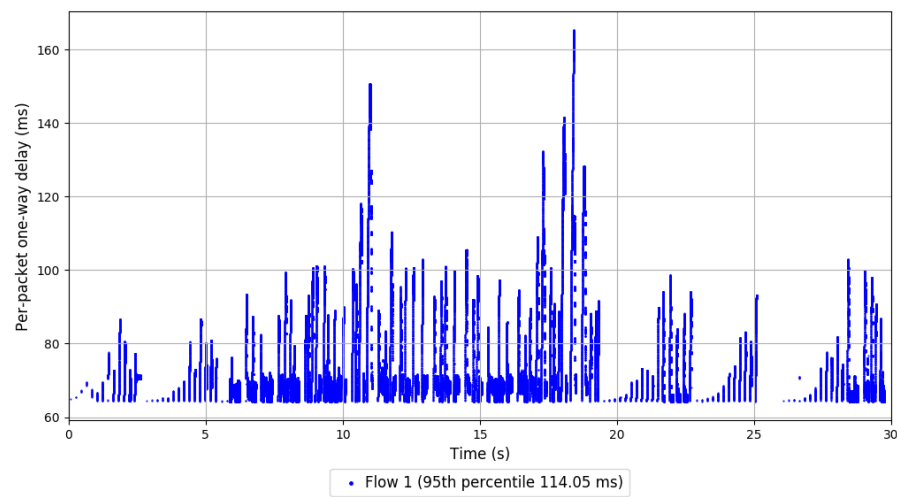
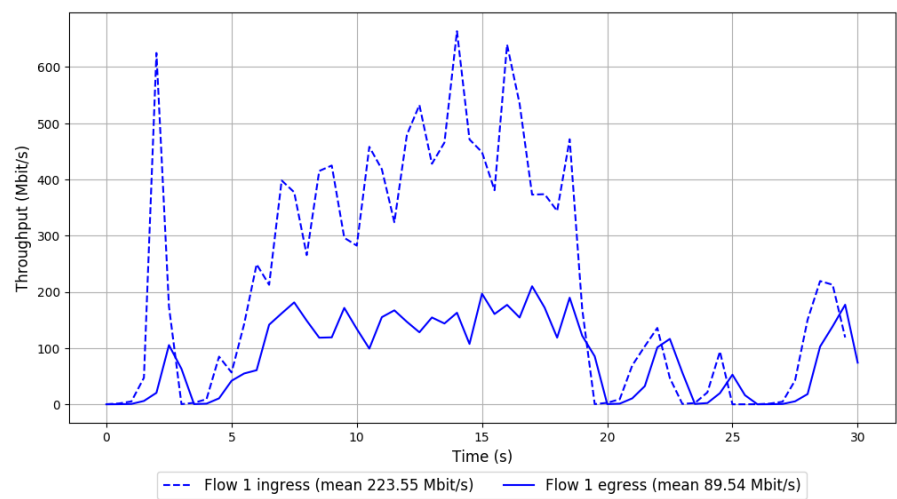


Run 3: Statistics of Verus

Start at: 2018-11-30 05:09:59
End at: 2018-11-30 05:10:29
Local clock offset: 2.07 ms
Remote clock offset: -30.953 ms

Below is generated by plot.py at 2018-11-30 07:11:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 89.54 Mbit/s
95th percentile per-packet one-way delay: 114.045 ms
Loss rate: 59.95%
-- Flow 1:
Average throughput: 89.54 Mbit/s
95th percentile per-packet one-way delay: 114.045 ms
Loss rate: 59.95%

Run 3: Report of Verus — Data Link

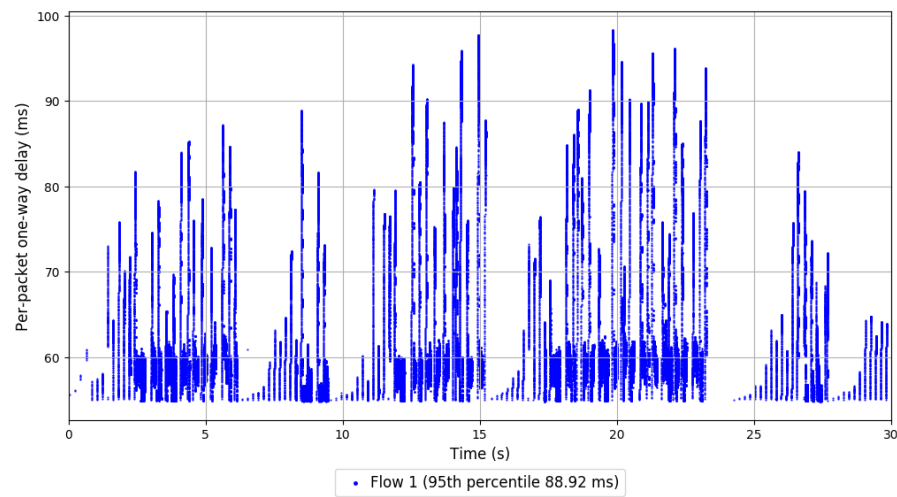
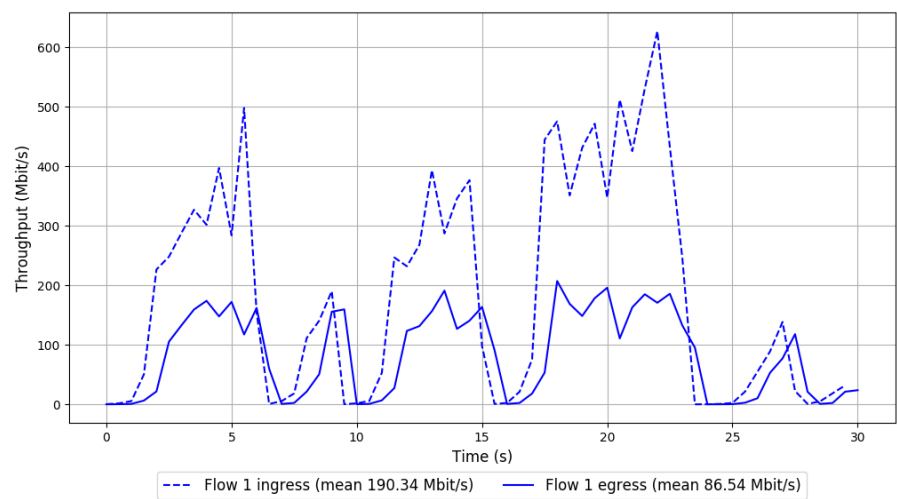


Run 4: Statistics of Verus

Start at: 2018-11-30 05:42:08
End at: 2018-11-30 05:42:38
Local clock offset: 1.768 ms
Remote clock offset: -39.775 ms

Below is generated by plot.py at 2018-11-30 07:11:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 86.54 Mbit/s
95th percentile per-packet one-way delay: 88.922 ms
Loss rate: 54.53%
-- Flow 1:
Average throughput: 86.54 Mbit/s
95th percentile per-packet one-way delay: 88.922 ms
Loss rate: 54.53%

Run 4: Report of Verus — Data Link

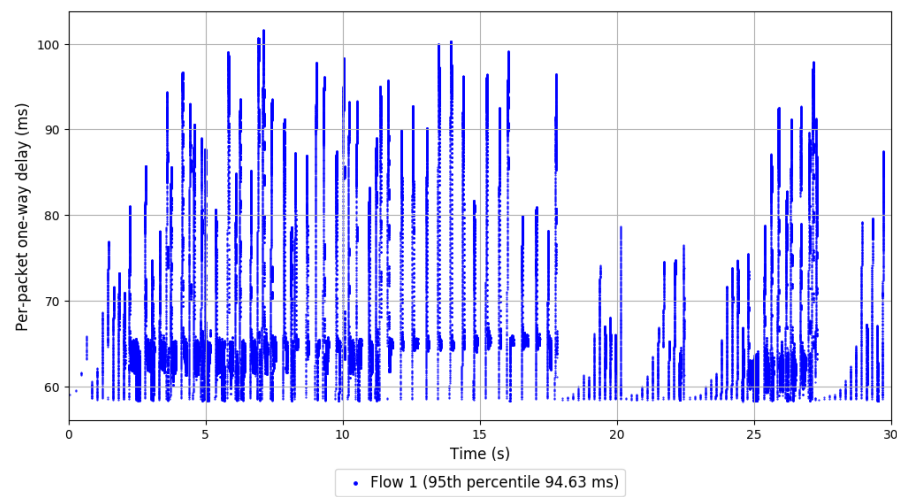
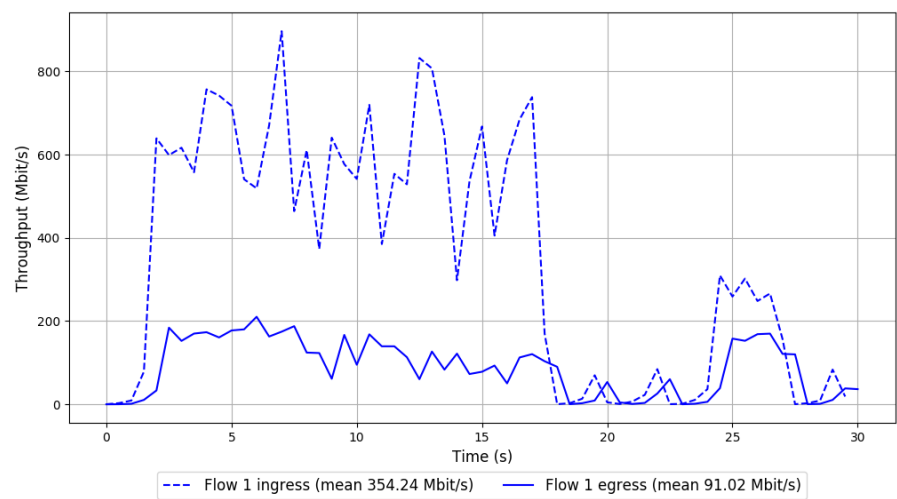


Run 5: Statistics of Verus

Start at: 2018-11-30 06:13:57
End at: 2018-11-30 06:14:27
Local clock offset: 0.839 ms
Remote clock offset: -37.923 ms

Below is generated by plot.py at 2018-11-30 07:11:27
Datalink statistics
-- Total of 1 flow:
Average throughput: 91.02 Mbit/s
95th percentile per-packet one-way delay: 94.632 ms
Loss rate: 74.28%
-- Flow 1:
Average throughput: 91.02 Mbit/s
95th percentile per-packet one-way delay: 94.632 ms
Loss rate: 74.28%

Run 5: Report of Verus — Data Link

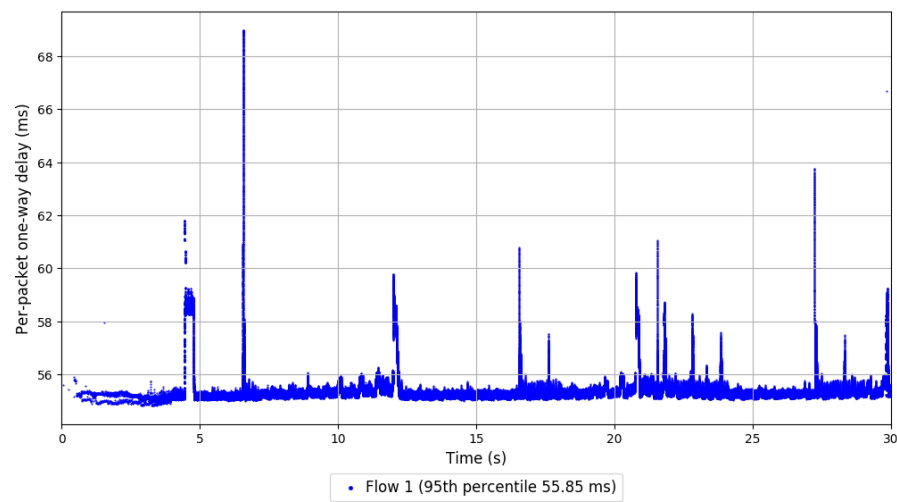
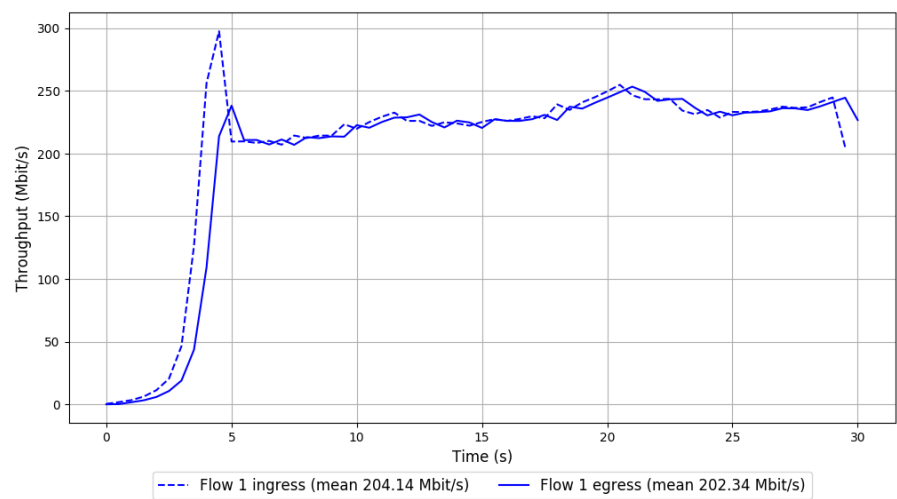


Run 1: Statistics of PCC-Vivace

Start at: 2018-11-30 04:27:41
End at: 2018-11-30 04:28:11
Local clock offset: -0.61 ms
Remote clock offset: -44.086 ms

Below is generated by plot.py at 2018-11-30 07:12:27
Datalink statistics
-- Total of 1 flow:
Average throughput: 202.34 Mbit/s
95th percentile per-packet one-way delay: 55.850 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 202.34 Mbit/s
95th percentile per-packet one-way delay: 55.850 ms
Loss rate: 0.88%

Run 1: Report of PCC-Vivace — Data Link

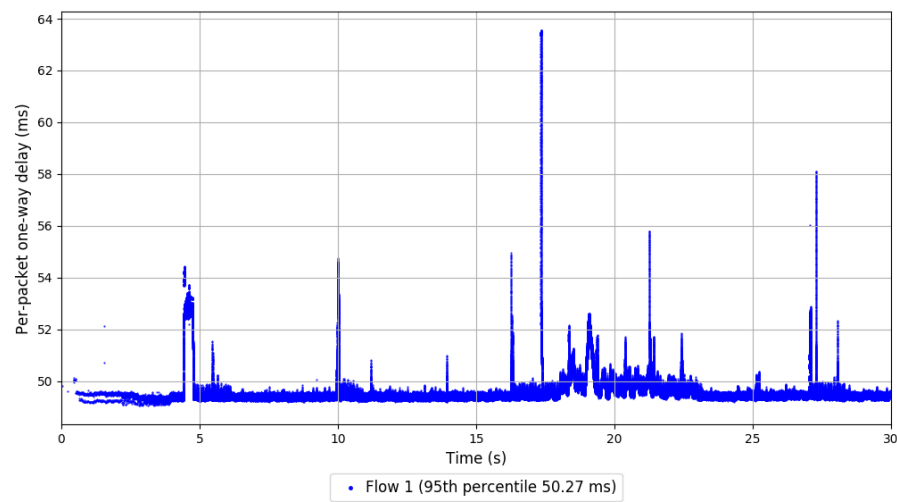
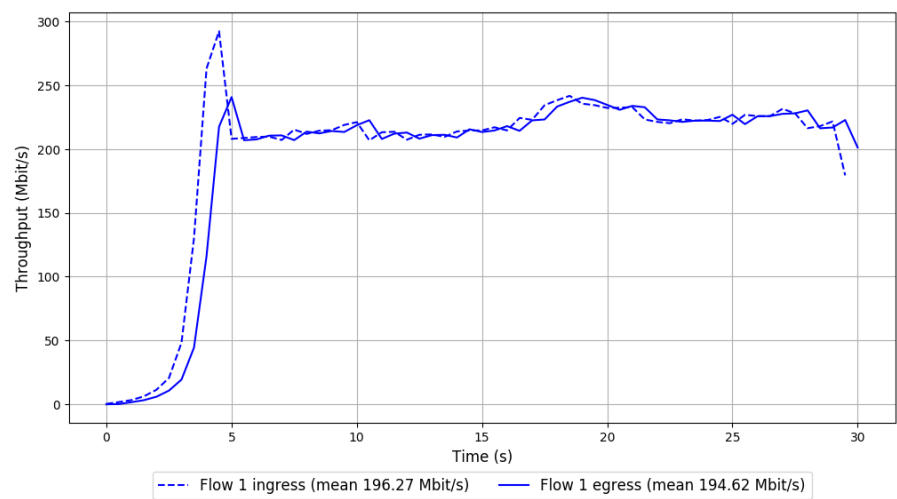


Run 2: Statistics of PCC-Vivace

Start at: 2018-11-30 04:59:35
End at: 2018-11-30 05:00:05
Local clock offset: 2.906 ms
Remote clock offset: -44.731 ms

Below is generated by plot.py at 2018-11-30 07:12:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 194.62 Mbit/s
95th percentile per-packet one-way delay: 50.272 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 194.62 Mbit/s
95th percentile per-packet one-way delay: 50.272 ms
Loss rate: 0.84%

Run 2: Report of PCC-Vivace — Data Link

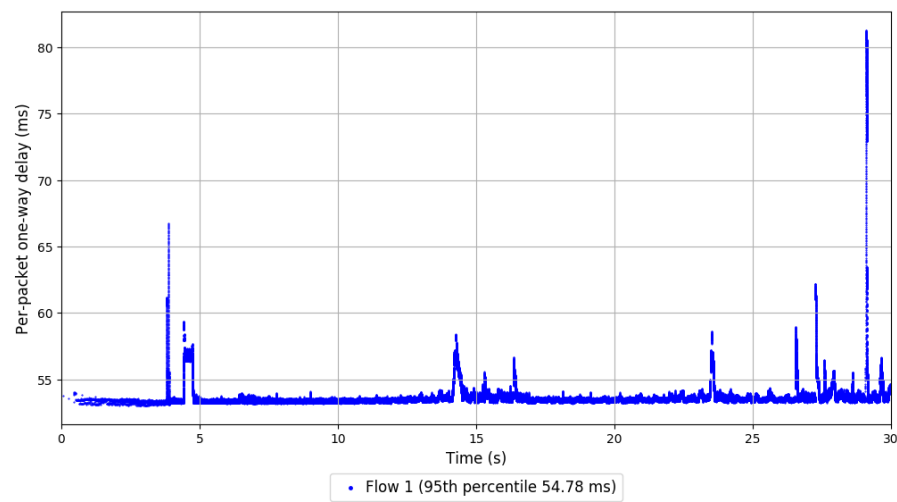
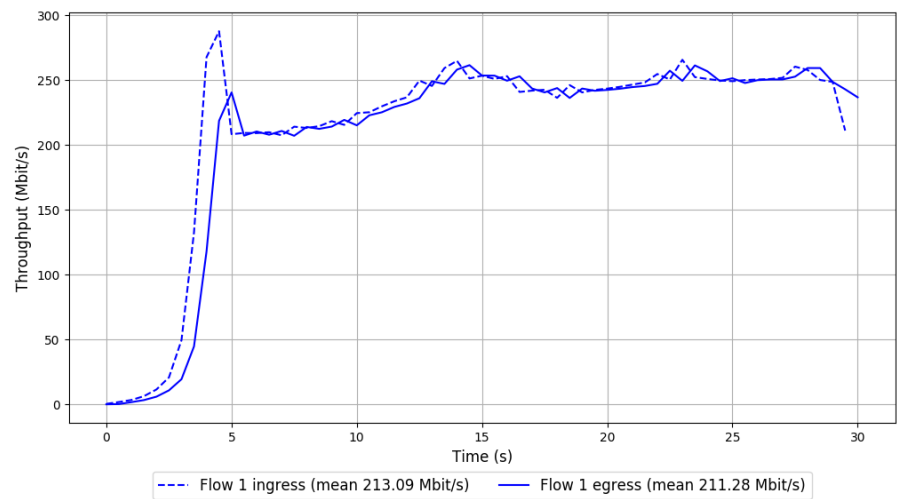


Run 3: Statistics of PCC-Vivace

Start at: 2018-11-30 05:37:09
End at: 2018-11-30 05:37:39
Local clock offset: 1.056 ms
Remote clock offset: -42.376 ms

Below is generated by plot.py at 2018-11-30 07:12:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 211.28 Mbit/s
95th percentile per-packet one-way delay: 54.778 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 211.28 Mbit/s
95th percentile per-packet one-way delay: 54.778 ms
Loss rate: 0.85%

Run 3: Report of PCC-Vivace — Data Link

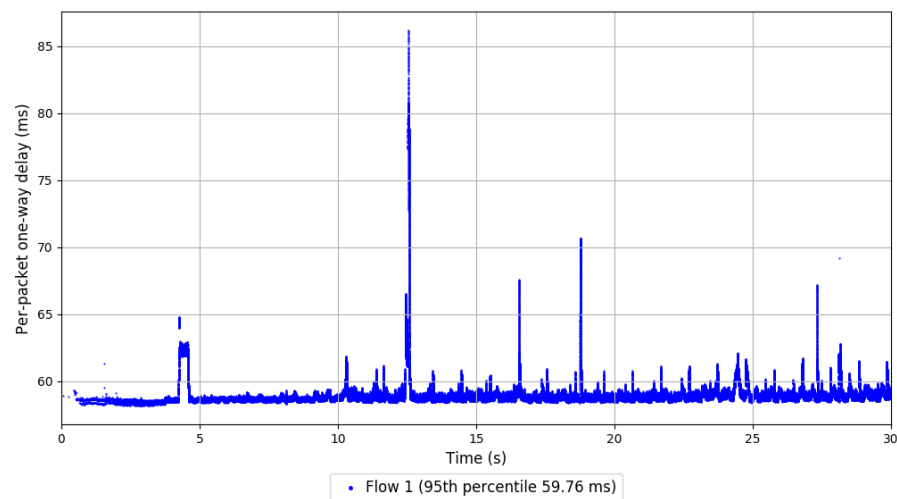
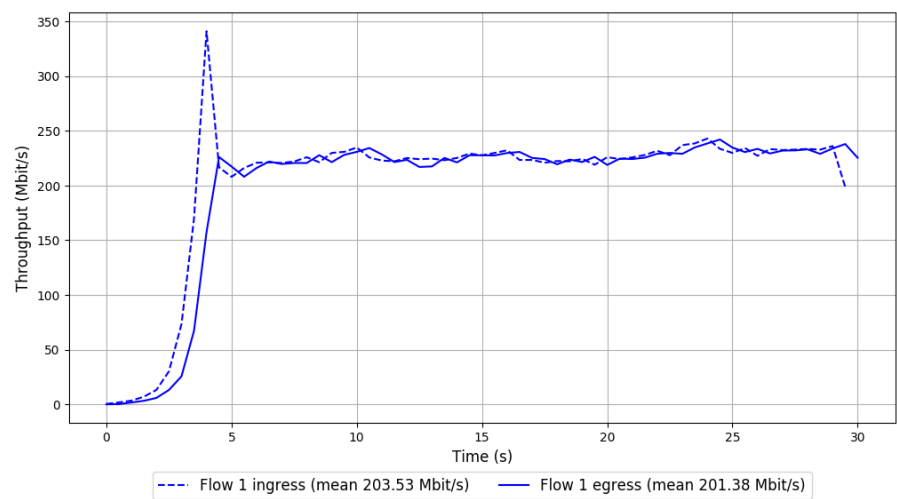


Run 4: Statistics of PCC-Vivace

Start at: 2018-11-30 06:08:59
End at: 2018-11-30 06:09:29
Local clock offset: 0.117 ms
Remote clock offset: -38.528 ms

Below is generated by plot.py at 2018-11-30 07:12:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 201.38 Mbit/s
95th percentile per-packet one-way delay: 59.758 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 201.38 Mbit/s
95th percentile per-packet one-way delay: 59.758 ms
Loss rate: 1.06%

Run 4: Report of PCC-Vivace — Data Link

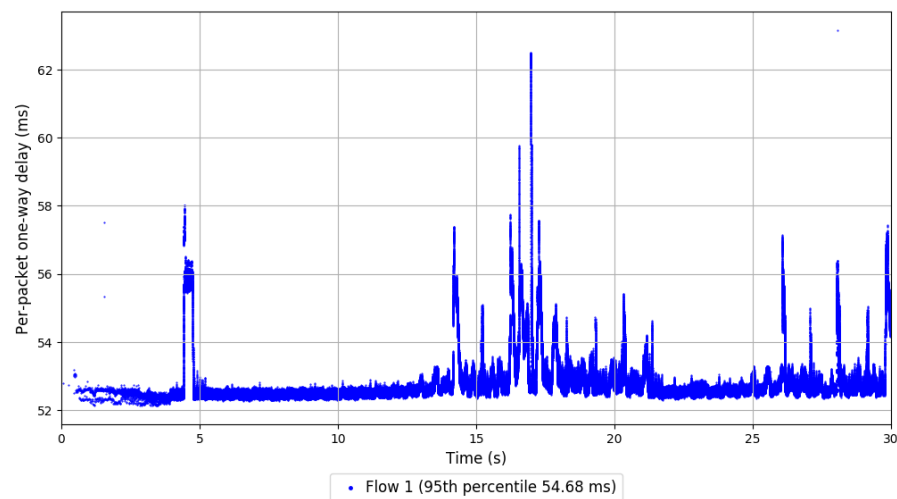
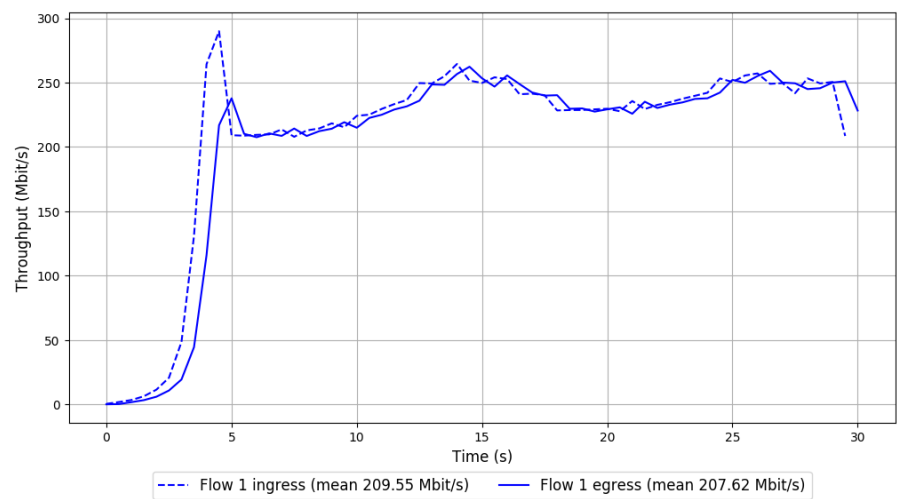


Run 5: Statistics of PCC-Vivace

Start at: 2018-11-30 06:41:20
End at: 2018-11-30 06:41:50
Local clock offset: 2.28 ms
Remote clock offset: -43.461 ms

Below is generated by plot.py at 2018-11-30 07:12:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 207.62 Mbit/s
95th percentile per-packet one-way delay: 54.683 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 207.62 Mbit/s
95th percentile per-packet one-way delay: 54.683 ms
Loss rate: 0.92%

Run 5: Report of PCC-Vivace — Data Link

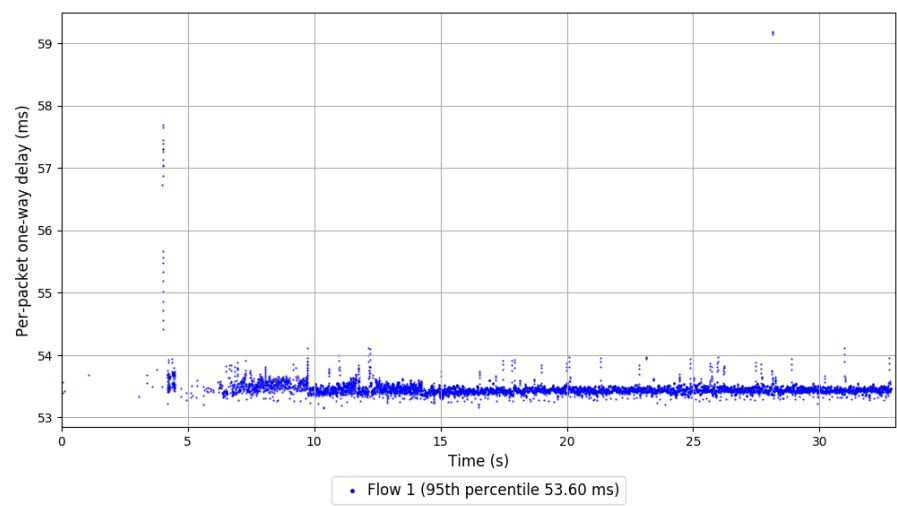
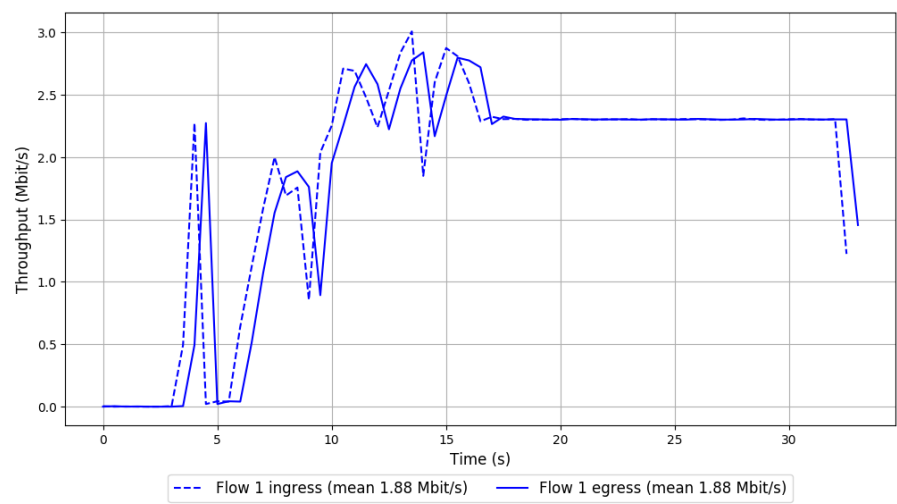


Run 1: Statistics of WebRTC media

Start at: 2018-11-30 04:20:09
End at: 2018-11-30 04:20:39
Local clock offset: 0.026 ms
Remote clock offset: -42.435 ms

Below is generated by plot.py at 2018-11-30 07:12:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.88 Mbit/s
95th percentile per-packet one-way delay: 53.604 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.88 Mbit/s
95th percentile per-packet one-way delay: 53.604 ms
Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link

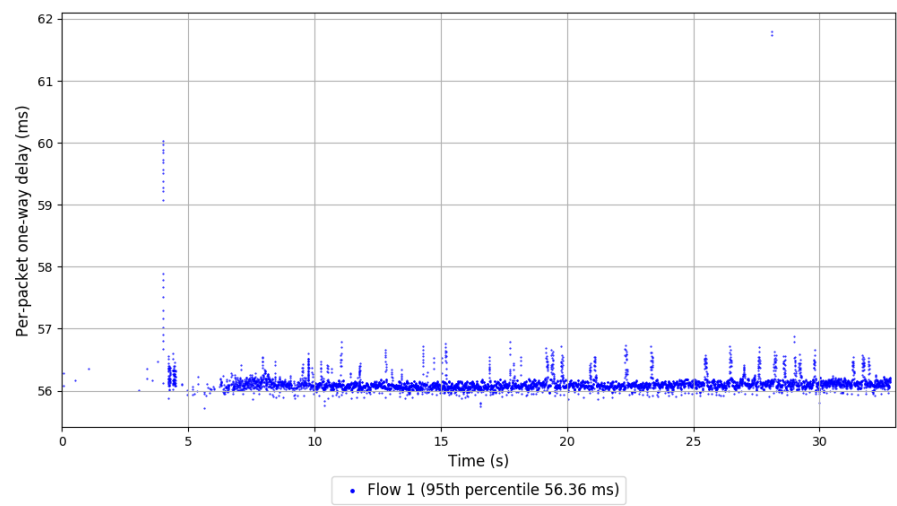
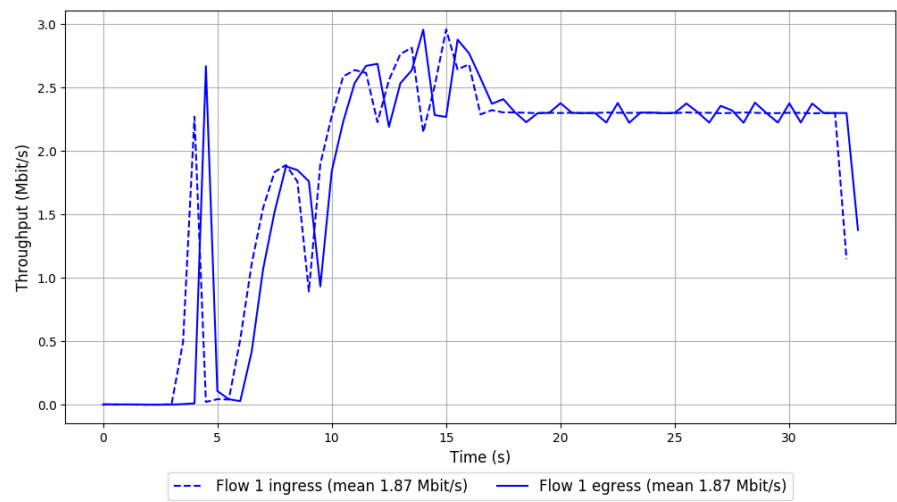


Run 2: Statistics of WebRTC media

Start at: 2018-11-30 04:52:04
End at: 2018-11-30 04:52:34
Local clock offset: -2.086 ms
Remote clock offset: -45.237 ms

Below is generated by plot.py at 2018-11-30 07:12:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 56.363 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 56.363 ms
Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link

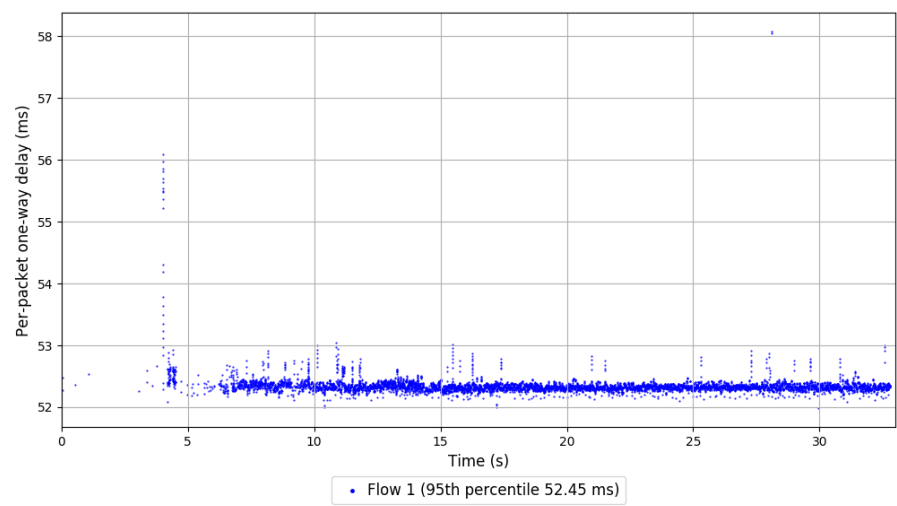
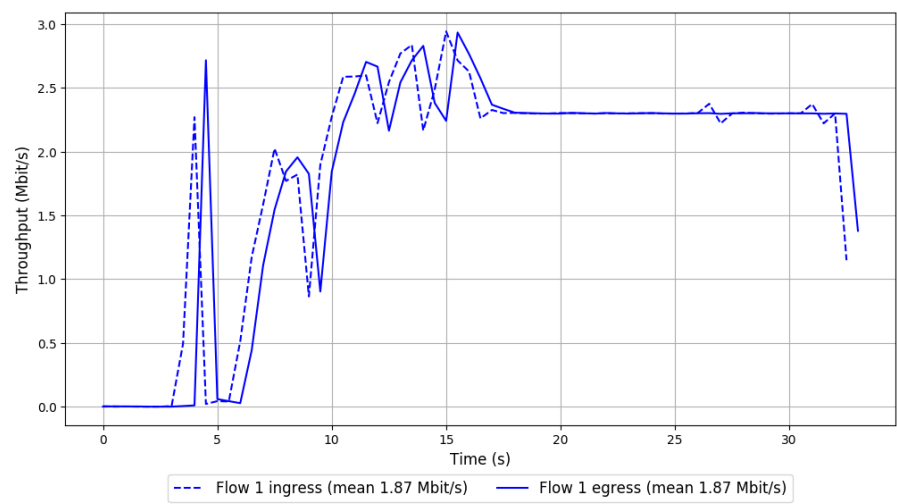


Run 3: Statistics of WebRTC media

Start at: 2018-11-30 05:29:43
End at: 2018-11-30 05:30:13
Local clock offset: 1.571 ms
Remote clock offset: -43.12 ms

Below is generated by plot.py at 2018-11-30 07:12:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 52.453 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 52.453 ms
Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

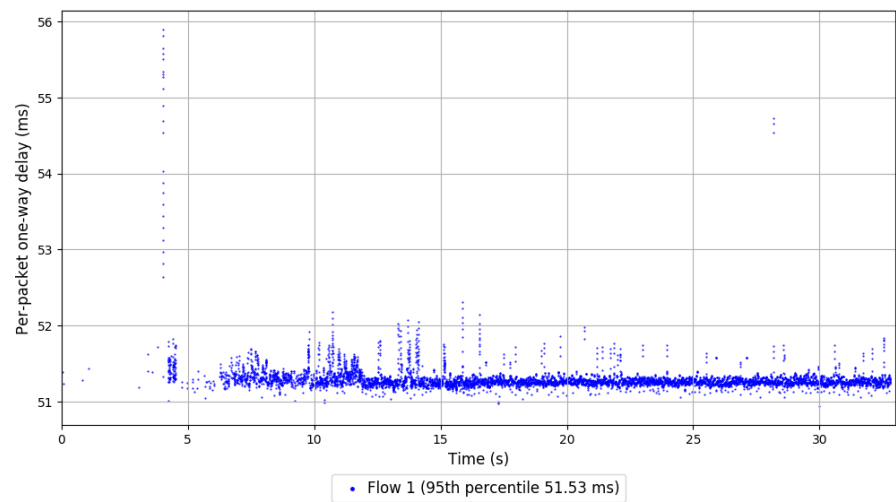
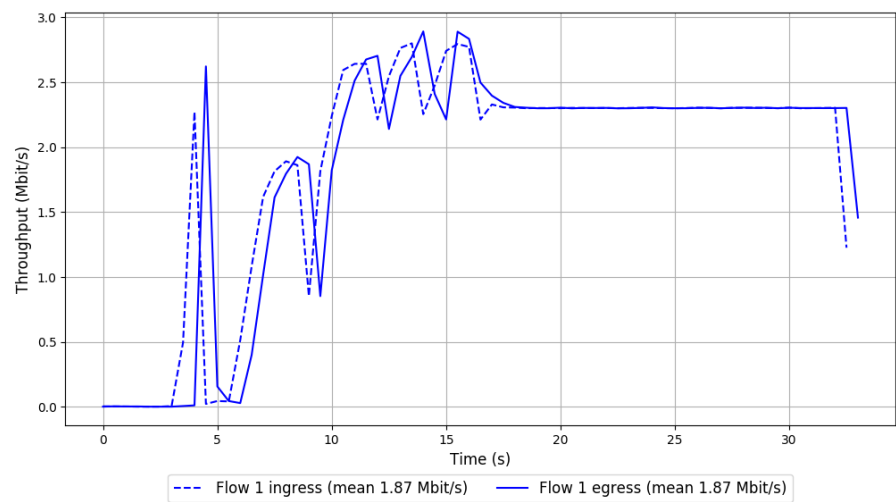


Run 4: Statistics of WebRTC media

Start at: 2018-11-30 06:01:35
End at: 2018-11-30 06:02:05
Local clock offset: 1.306 ms
Remote clock offset: -44.39 ms

Below is generated by plot.py at 2018-11-30 07:12:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 51.529 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 51.529 ms
Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-11-30 06:33:34
End at: 2018-11-30 06:34:04
Local clock offset: 3.846 ms
Remote clock offset: -40.365 ms

Below is generated by plot.py at 2018-11-30 07:12:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 54.442 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 54.442 ms
Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

