

Pantheon Report

Generated at 2018-09-25 18:35:11 (UTC).

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

Repeated the test of 19 congestion control schemes 5 times.

Each test lasted for 30 seconds running 1 flow.

NTP offsets were measured against `time.google.com` and have been applied to correct the timestamps in logs.

System info:

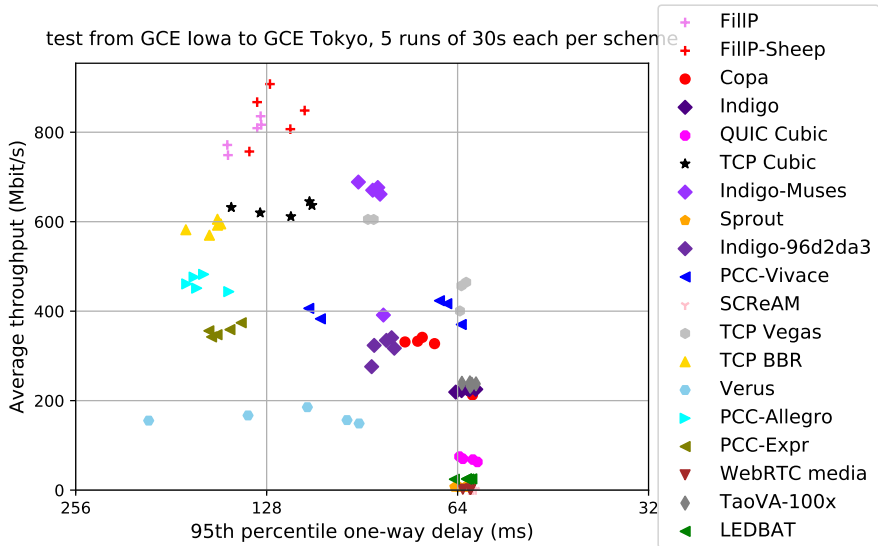
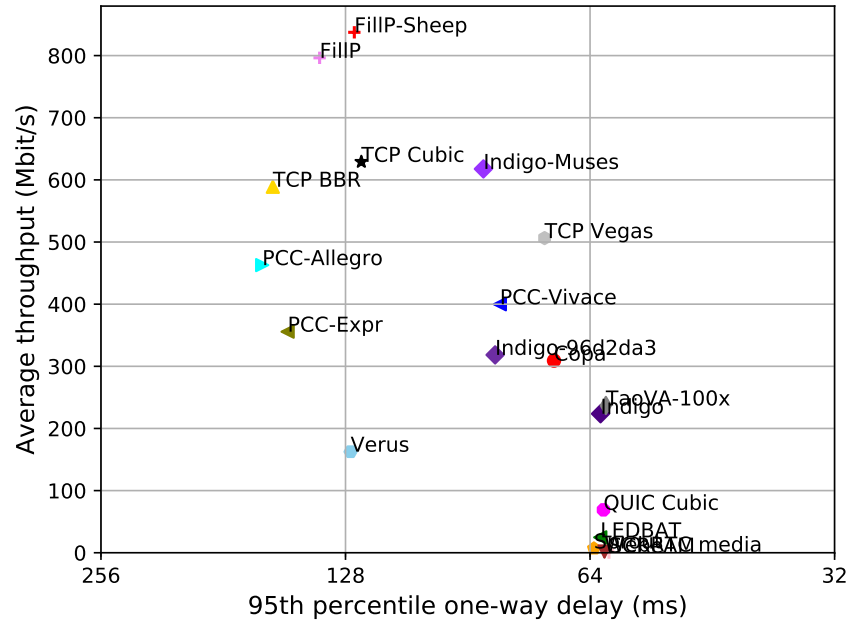
```
Linux 4.15.0-1019-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
net.ipv4.tcp_mem = 190986 254651 381972
```

Git summary:

```
branch: muses @ 90192f6b64ce1a1191dcca0e9ff9ee24950674d7
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a
third_party/pantheon-tunnel @ cbfce6db5ff5740dafa1771f813cd646339e1952
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
```

```
M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

test from GCE Iowa to GCE Tokyo, 5 runs of 30s each per scheme
(mean of all runs by scheme)



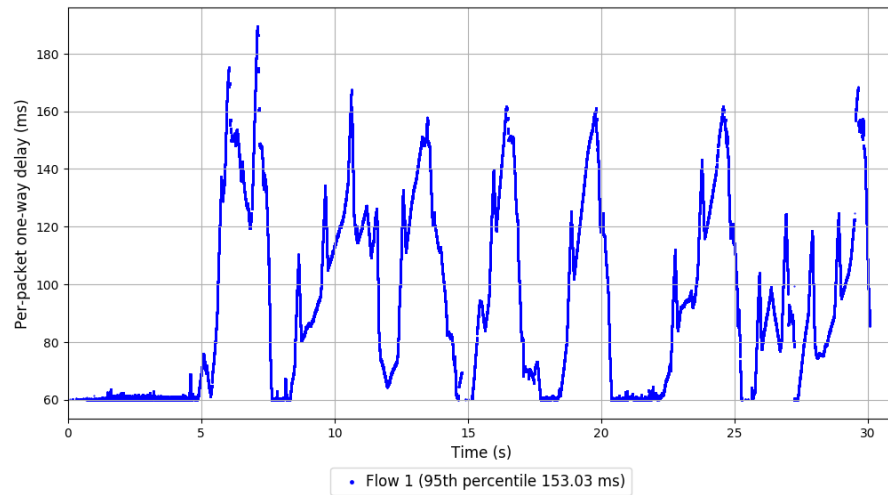
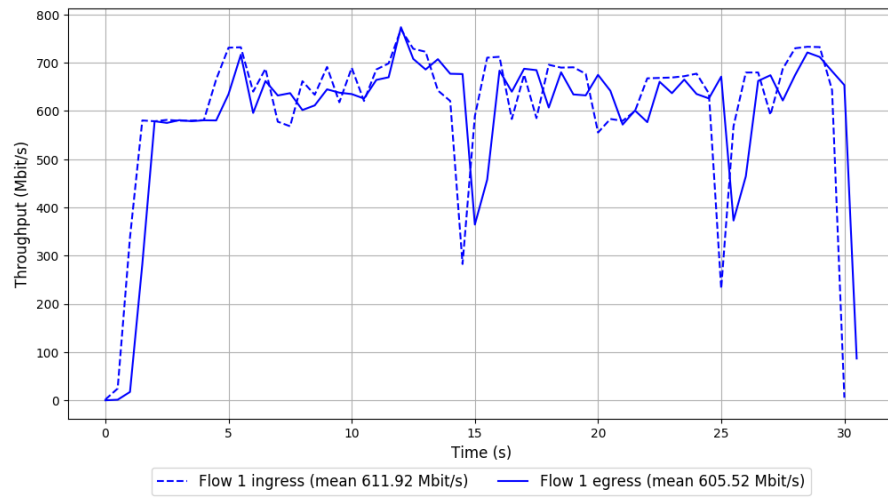
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	588.96	157.28	1.26
Copa	5	309.10	70.89	0.00
TCP Cubic	5	628.97	122.39	0.09
FillP	5	796.38	137.75	5.87
FillP-Sheep	5	837.42	124.84	1.35
Indigo	5	223.64	62.13	0.01
Indigo-96d2da3	5	318.37	83.76	0.01
LEDBAT	5	24.79	62.18	0.00
Indigo-Muses	5	617.63	86.59	0.02
PCC-Allegro	5	462.86	162.09	1.77
PCC-Expr	5	355.74	150.83	2.55
QUIC Cubic	4	69.04	61.61	0.00
SCReAM	5	0.22	60.66	0.00
Sprout	5	6.90	63.31	0.00
TaoVA-100x	5	236.99	61.20	0.01
TCP Vegas	5	506.33	72.81	0.04
Verus	5	162.60	126.18	1.30
PCC-Vivace	5	399.85	82.65	0.03
WebRTC media	5	1.87	61.44	0.00

Run 1: Statistics of TCP BBR

Start at: 2018-09-25 14:45:57
End at: 2018-09-25 14:46:27
Local clock offset: -0.054 ms
Remote clock offset: -1.346 ms

Below is generated by plot.py at 2018-09-25 17:16:21
Datalink statistics
-- Total of 1 flow:
Average throughput: 605.52 Mbit/s
95th percentile per-packet one-way delay: 153.025 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 605.52 Mbit/s
95th percentile per-packet one-way delay: 153.025 ms
Loss rate: 1.04%

Run 1: Report of TCP BBR — Data Link

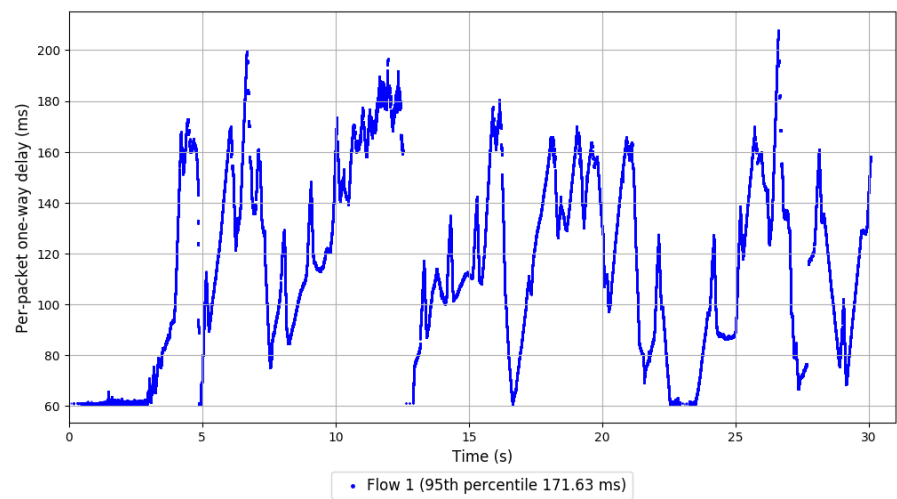
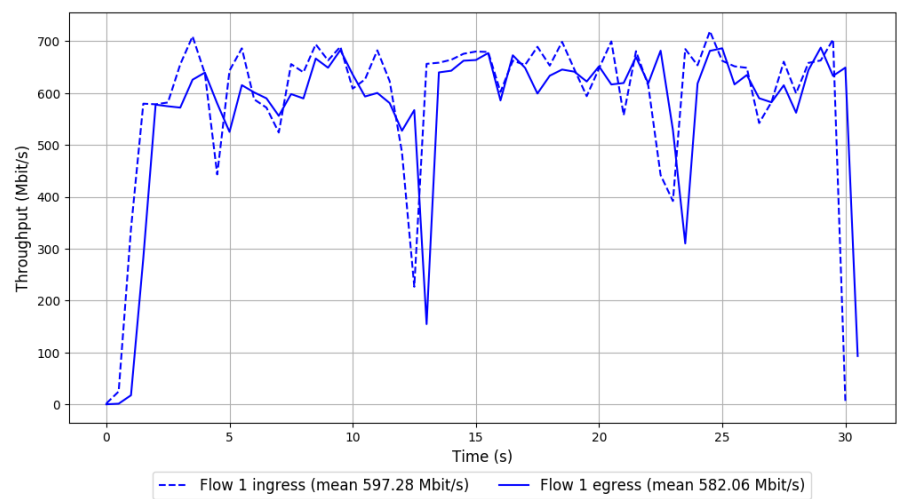


Run 2: Statistics of TCP BBR

Start at: 2018-09-25 15:12:58
End at: 2018-09-25 15:13:28
Local clock offset: -0.073 ms
Remote clock offset: -0.006 ms

Below is generated by plot.py at 2018-09-25 17:16:21
Datalink statistics
-- Total of 1 flow:
Average throughput: 582.06 Mbit/s
95th percentile per-packet one-way delay: 171.628 ms
Loss rate: 2.55%
-- Flow 1:
Average throughput: 582.06 Mbit/s
95th percentile per-packet one-way delay: 171.628 ms
Loss rate: 2.55%

Run 2: Report of TCP BBR — Data Link

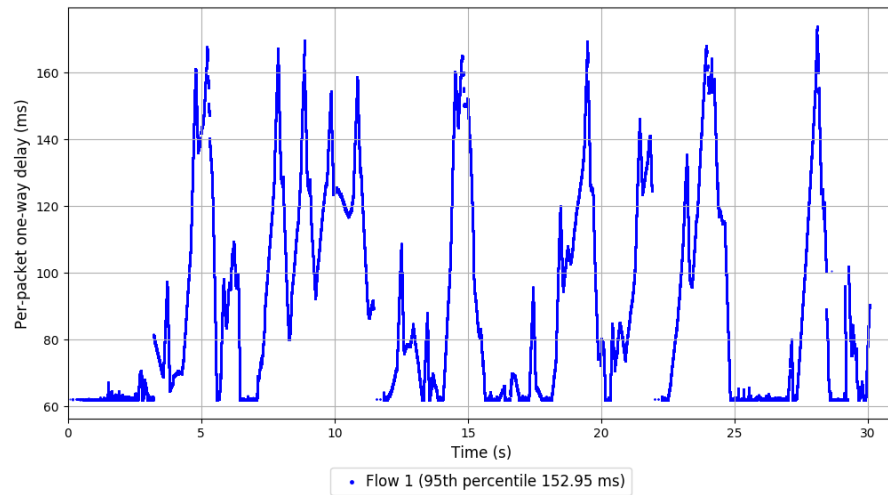
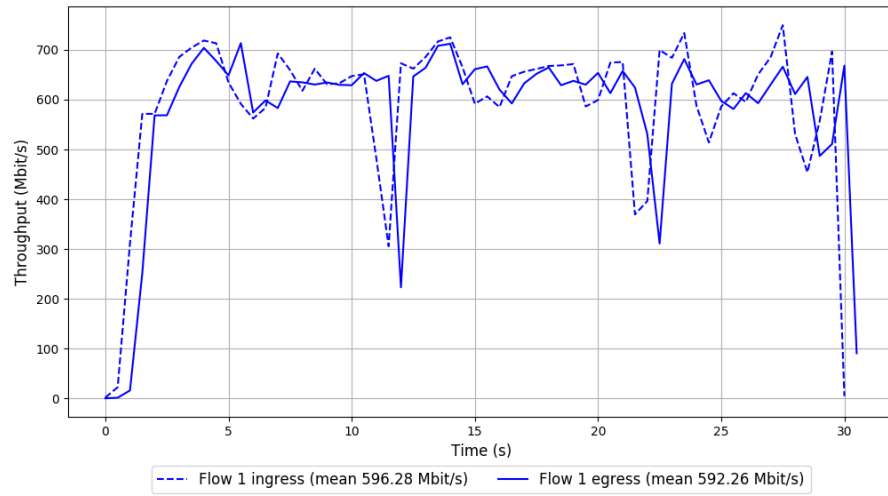


Run 3: Statistics of TCP BBR

Start at: 2018-09-25 15:40:35
End at: 2018-09-25 15:41:05
Local clock offset: -0.009 ms
Remote clock offset: -0.862 ms

Below is generated by plot.py at 2018-09-25 17:16:21
Datalink statistics
-- Total of 1 flow:
Average throughput: 592.26 Mbit/s
95th percentile per-packet one-way delay: 152.954 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 592.26 Mbit/s
95th percentile per-packet one-way delay: 152.954 ms
Loss rate: 0.68%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-09-25 16:07:53

End at: 2018-09-25 16:08:23

Local clock offset: 0.004 ms

Remote clock offset: -0.18 ms

Below is generated by plot.py at 2018-09-25 17:16:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 569.82 Mbit/s

95th percentile per-packet one-way delay: 157.548 ms

Loss rate: 1.36%

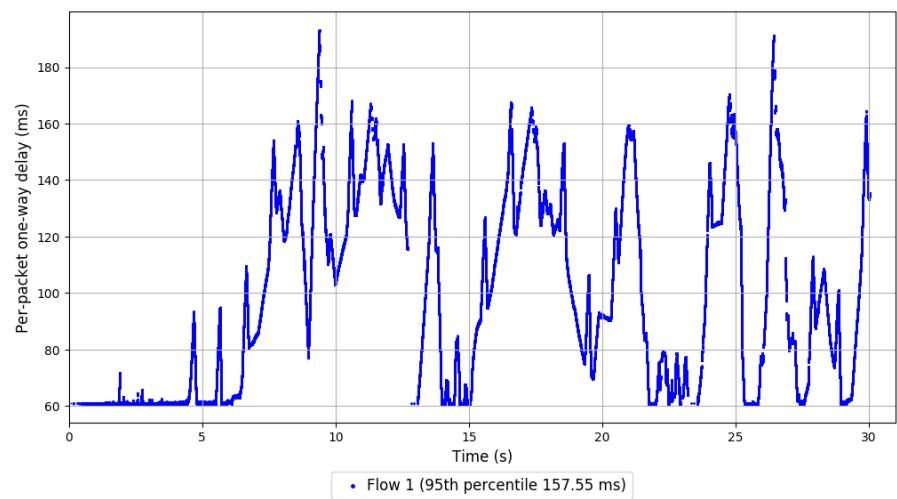
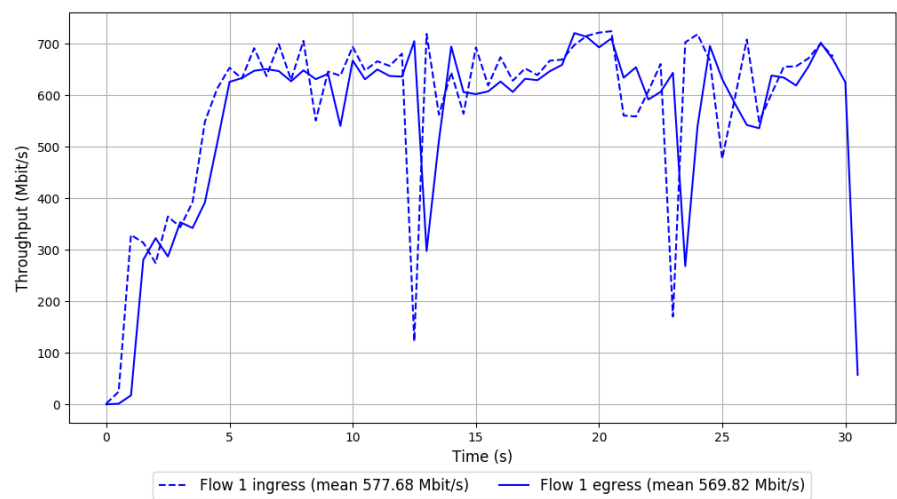
-- Flow 1:

Average throughput: 569.82 Mbit/s

95th percentile per-packet one-way delay: 157.548 ms

Loss rate: 1.36%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-09-25 16:35:23

End at: 2018-09-25 16:35:53

Local clock offset: 0.057 ms

Remote clock offset: -0.24 ms

Below is generated by plot.py at 2018-09-25 17:16:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 595.14 Mbit/s

95th percentile per-packet one-way delay: 151.225 ms

Loss rate: 0.68%

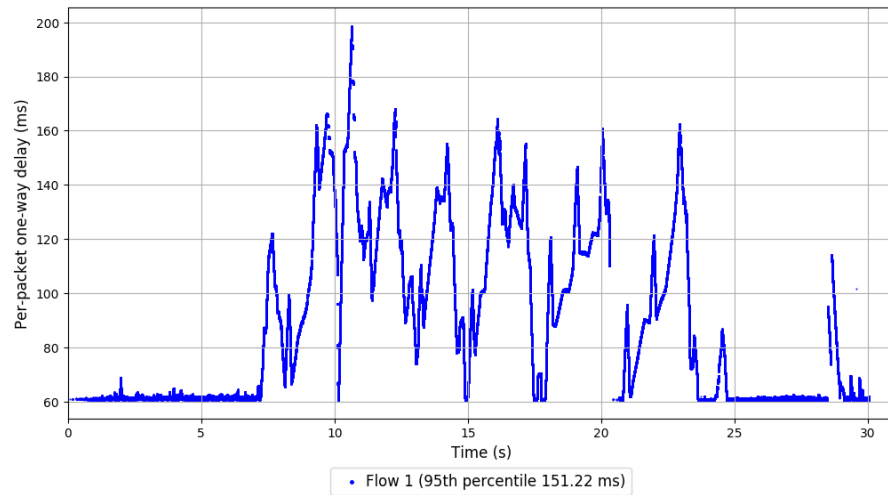
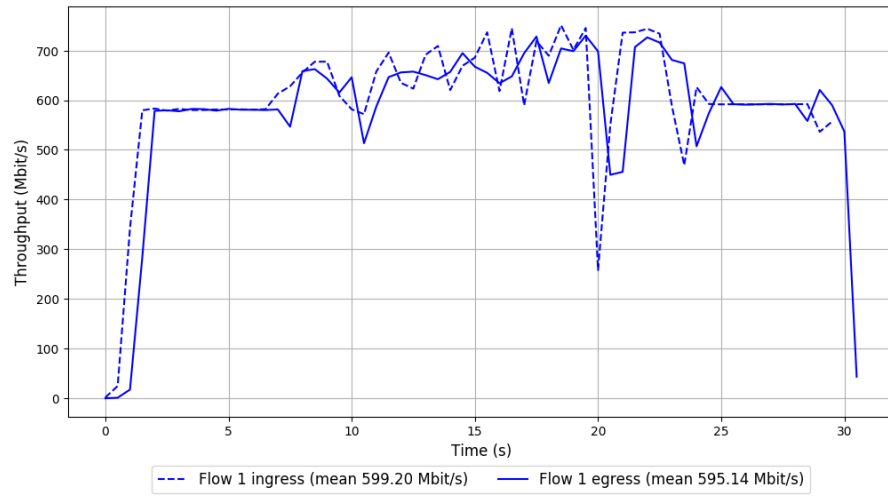
-- Flow 1:

Average throughput: 595.14 Mbit/s

95th percentile per-packet one-way delay: 151.225 ms

Loss rate: 0.68%

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2018-09-25 14:48:44

End at: 2018-09-25 14:49:14

Local clock offset: -0.127 ms

Remote clock offset: -1.74 ms

Below is generated by plot.py at 2018-09-25 17:16:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 212.67 Mbit/s

95th percentile per-packet one-way delay: 60.639 ms

Loss rate: 0.00%

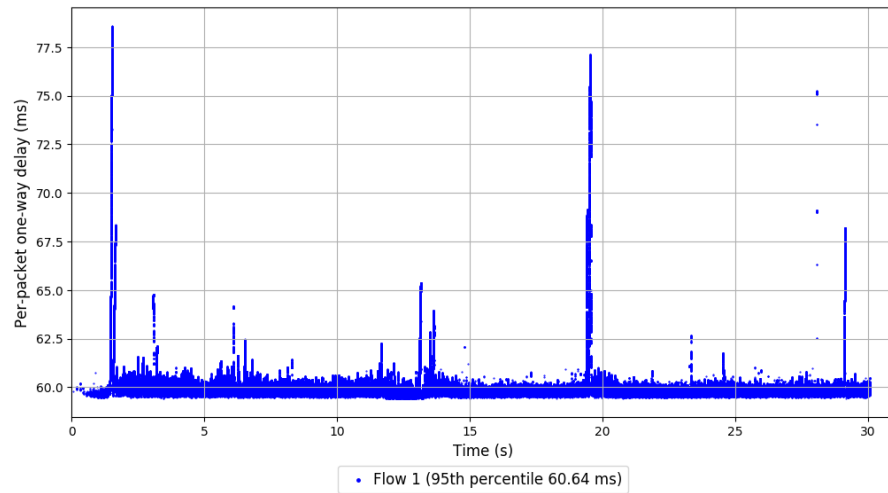
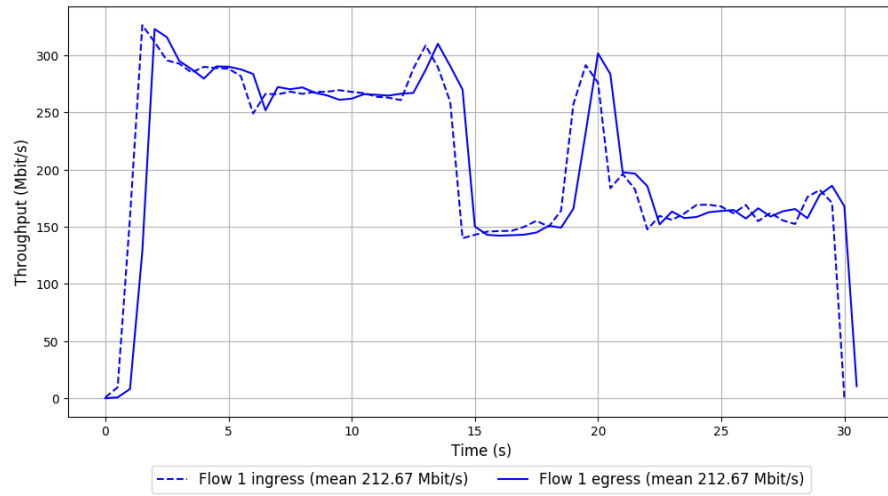
-- Flow 1:

Average throughput: 212.67 Mbit/s

95th percentile per-packet one-way delay: 60.639 ms

Loss rate: 0.00%

Run 1: Report of Copa — Data Link

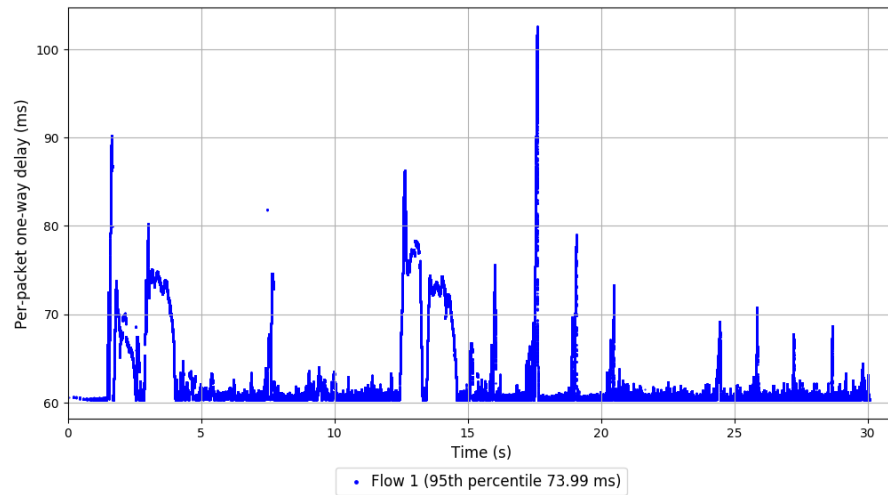
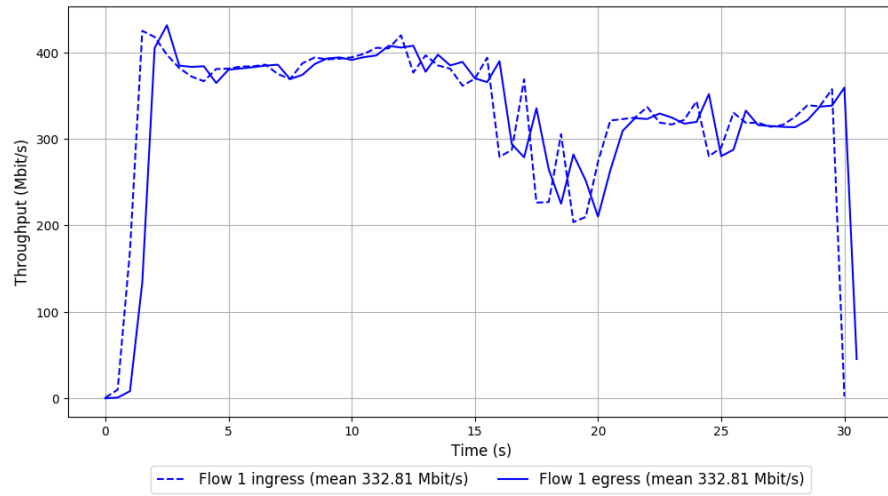


Run 2: Statistics of Copa

Start at: 2018-09-25 15:15:44
End at: 2018-09-25 15:16:14
Local clock offset: -0.027 ms
Remote clock offset: -0.525 ms

Below is generated by plot.py at 2018-09-25 17:16:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 332.81 Mbit/s
95th percentile per-packet one-way delay: 73.986 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 332.81 Mbit/s
95th percentile per-packet one-way delay: 73.986 ms
Loss rate: 0.00%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-09-25 15:43:20

End at: 2018-09-25 15:43:50

Local clock offset: -0.021 ms

Remote clock offset: 0.519 ms

Below is generated by plot.py at 2018-09-25 17:16:33

Datalink statistics

-- Total of 1 flow:

Average throughput: 331.18 Mbit/s

95th percentile per-packet one-way delay: 77.466 ms

Loss rate: 0.00%

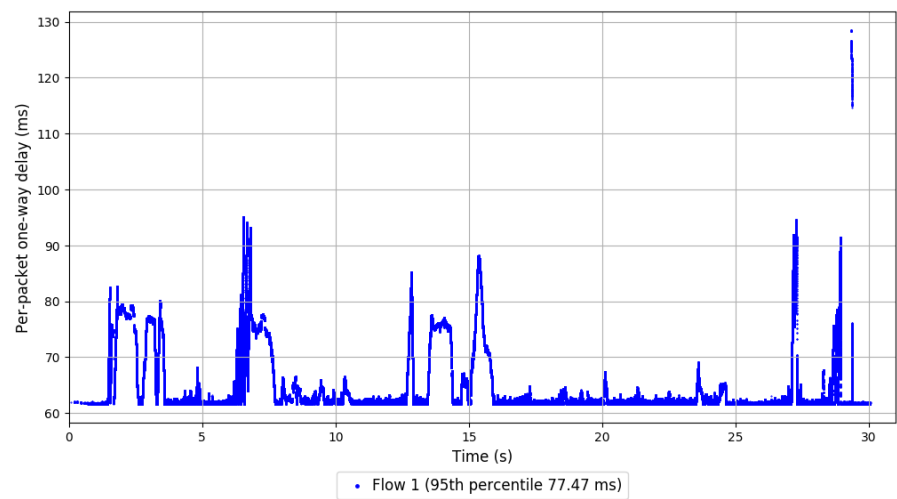
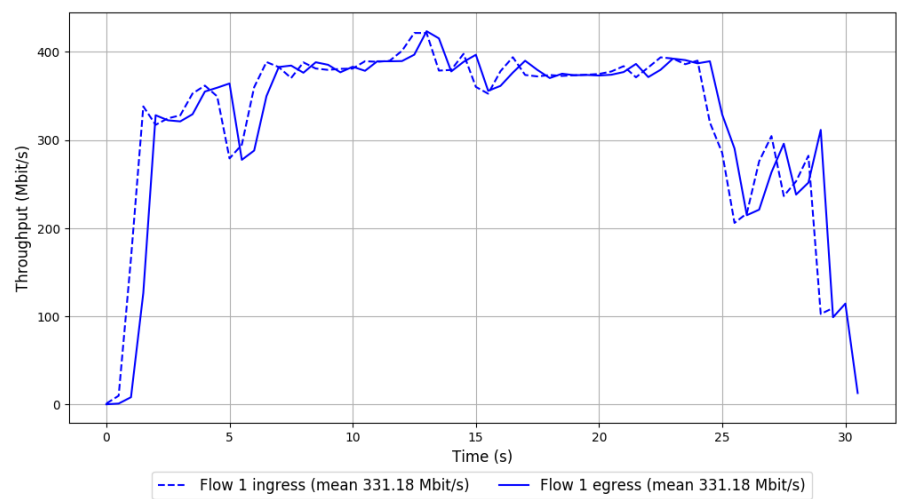
-- Flow 1:

Average throughput: 331.18 Mbit/s

95th percentile per-packet one-way delay: 77.466 ms

Loss rate: 0.00%

Run 3: Report of Copa — Data Link

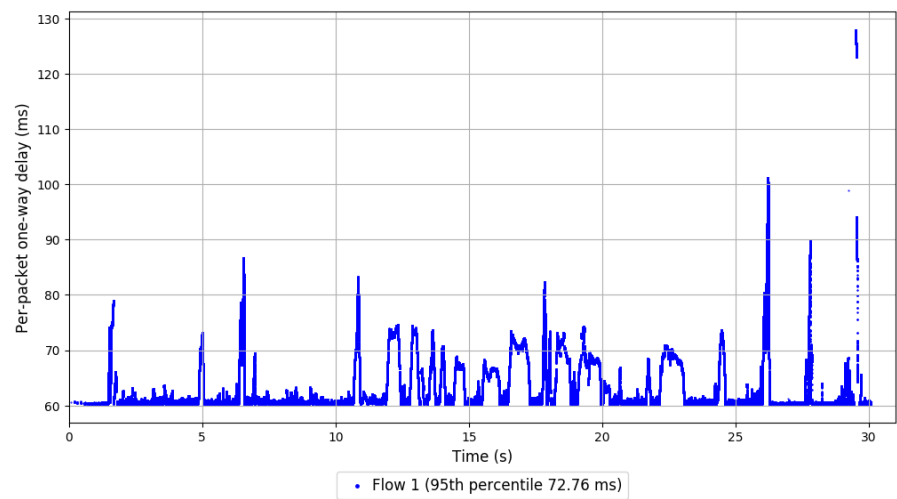
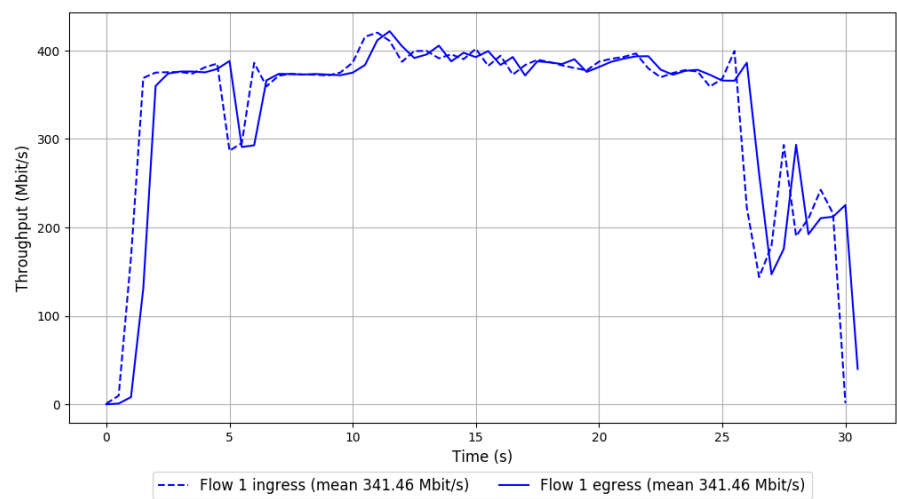


Run 4: Statistics of Copa

Start at: 2018-09-25 16:10:37
End at: 2018-09-25 16:11:07
Local clock offset: 0.044 ms
Remote clock offset: -0.682 ms

Below is generated by plot.py at 2018-09-25 17:24:39
Datalink statistics
-- Total of 1 flow:
Average throughput: 341.46 Mbit/s
95th percentile per-packet one-way delay: 72.761 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 341.46 Mbit/s
95th percentile per-packet one-way delay: 72.761 ms
Loss rate: 0.00%

Run 4: Report of Copa — Data Link

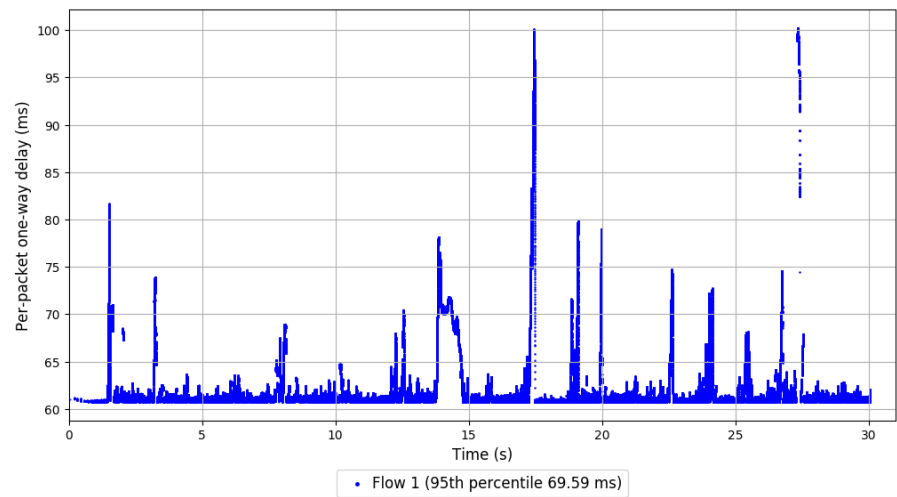
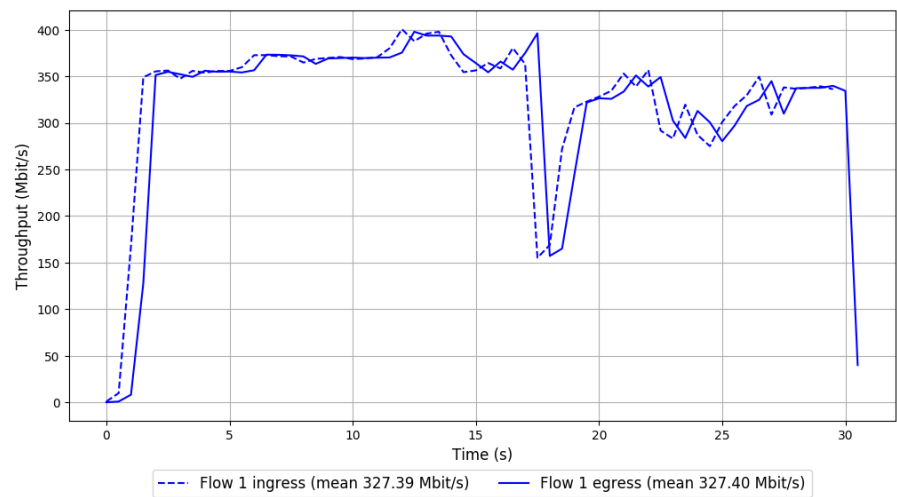


Run 5: Statistics of Copa

Start at: 2018-09-25 16:38:07
End at: 2018-09-25 16:38:37
Local clock offset: -0.003 ms
Remote clock offset: -0.106 ms

Below is generated by plot.py at 2018-09-25 17:25:39
Datalink statistics
-- Total of 1 flow:
Average throughput: 327.40 Mbit/s
95th percentile per-packet one-way delay: 69.586 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 327.40 Mbit/s
95th percentile per-packet one-way delay: 69.586 ms
Loss rate: 0.00%

Run 5: Report of Copa — Data Link

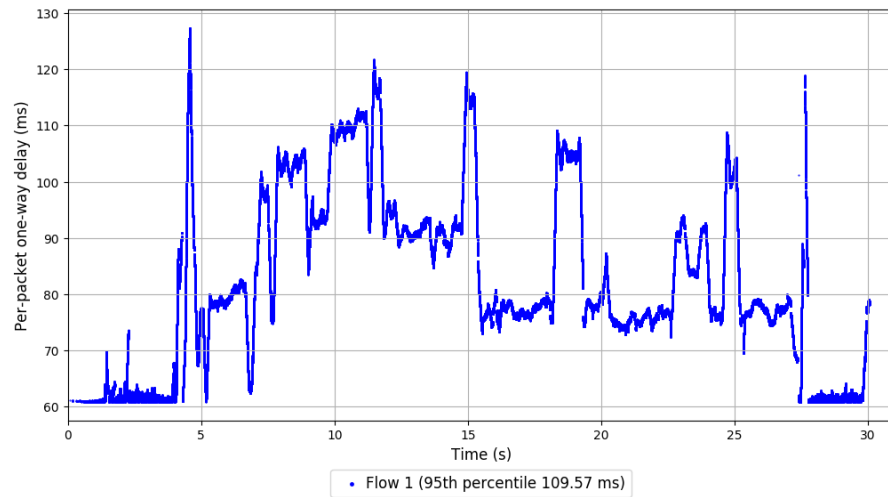
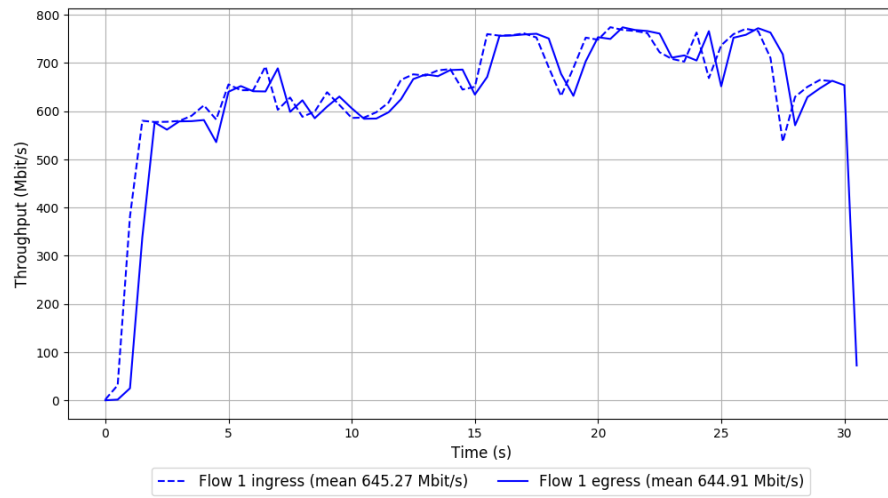


Run 1: Statistics of TCP Cubic

Start at: 2018-09-25 14:38:42
End at: 2018-09-25 14:39:12
Local clock offset: -0.064 ms
Remote clock offset: -0.224 ms

Below is generated by plot.py at 2018-09-25 17:26:10
Datalink statistics
-- Total of 1 flow:
Average throughput: 644.91 Mbit/s
95th percentile per-packet one-way delay: 109.570 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 644.91 Mbit/s
95th percentile per-packet one-way delay: 109.570 ms
Loss rate: 0.05%

Run 1: Report of TCP Cubic — Data Link

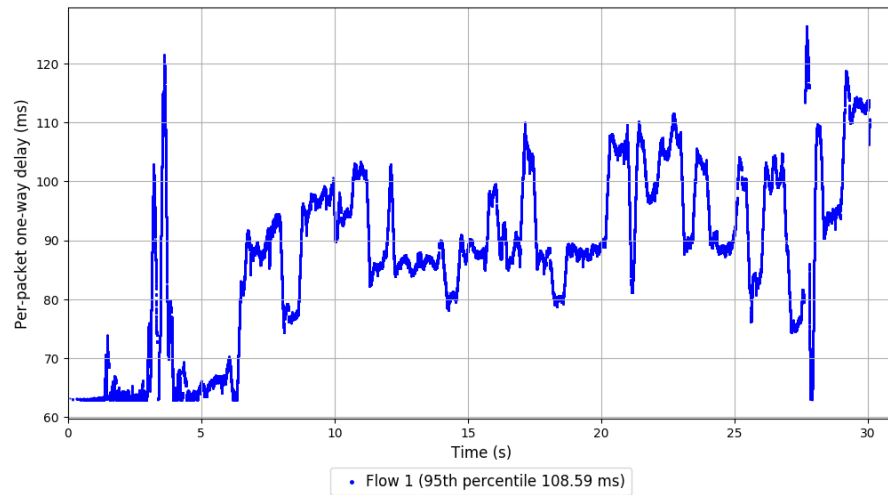
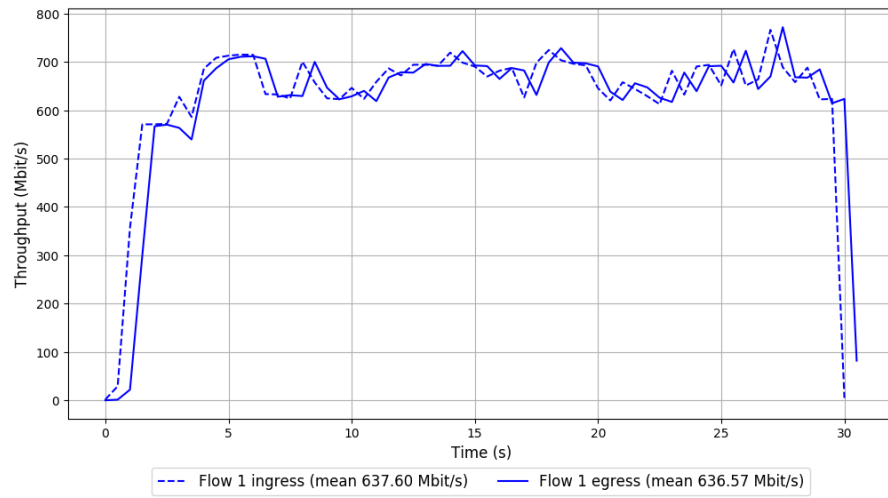


Run 2: Statistics of TCP Cubic

Start at: 2018-09-25 15:05:45
End at: 2018-09-25 15:06:15
Local clock offset: -0.068 ms
Remote clock offset: -0.005 ms

Below is generated by plot.py at 2018-09-25 17:26:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 636.57 Mbit/s
95th percentile per-packet one-way delay: 108.594 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 636.57 Mbit/s
95th percentile per-packet one-way delay: 108.594 ms
Loss rate: 0.17%

Run 2: Report of TCP Cubic — Data Link

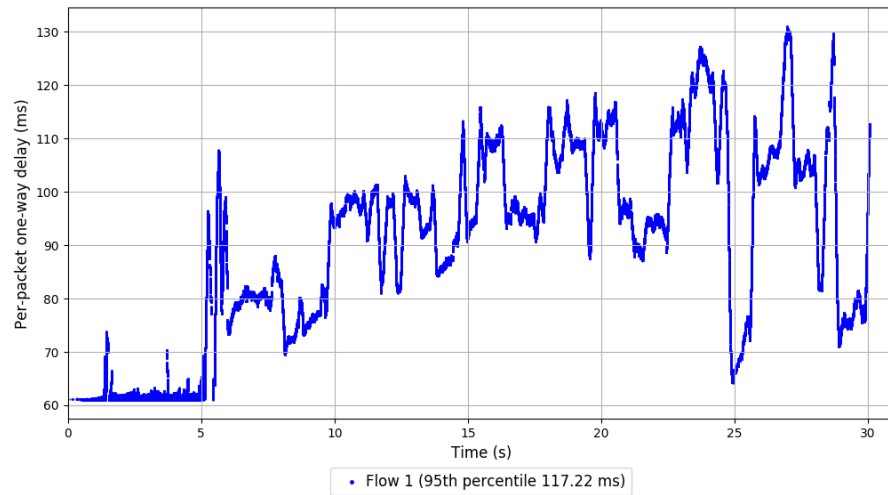
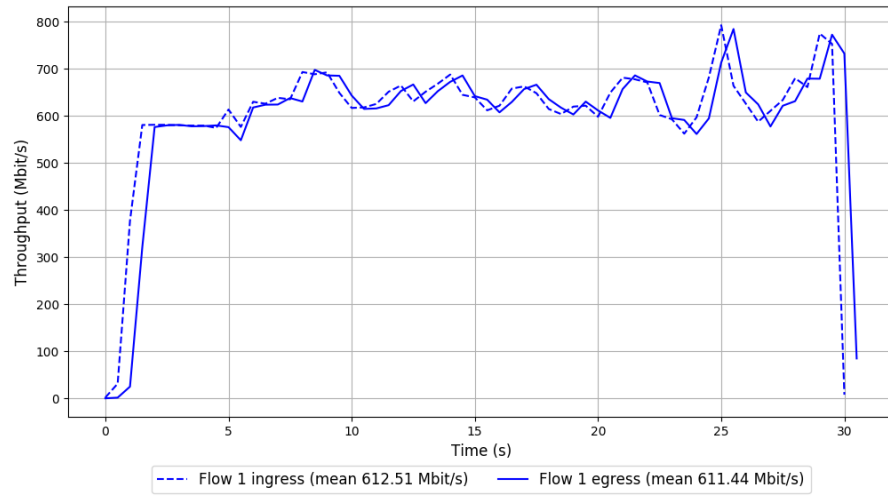


Run 3: Statistics of TCP Cubic

Start at: 2018-09-25 15:33:25
End at: 2018-09-25 15:33:55
Local clock offset: -0.024 ms
Remote clock offset: -0.153 ms

Below is generated by plot.py at 2018-09-25 17:26:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 611.44 Mbit/s
95th percentile per-packet one-way delay: 117.221 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 611.44 Mbit/s
95th percentile per-packet one-way delay: 117.221 ms
Loss rate: 0.17%

Run 3: Report of TCP Cubic — Data Link

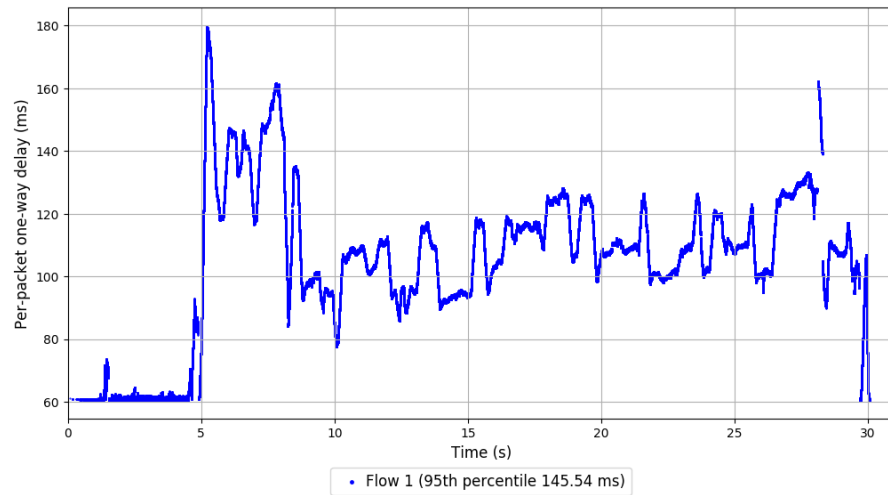
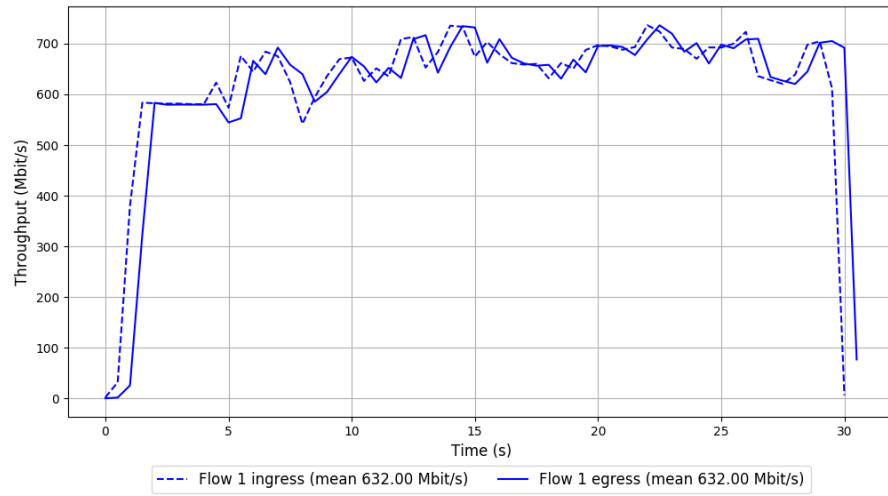


Run 4: Statistics of TCP Cubic

Start at: 2018-09-25 16:00:40
End at: 2018-09-25 16:01:10
Local clock offset: -0.005 ms
Remote clock offset: -0.552 ms

Below is generated by plot.py at 2018-09-25 17:26:20
Datalink statistics
-- Total of 1 flow:
Average throughput: 632.00 Mbit/s
95th percentile per-packet one-way delay: 145.537 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 632.00 Mbit/s
95th percentile per-packet one-way delay: 145.537 ms
Loss rate: 0.00%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-09-25 16:28:12

End at: 2018-09-25 16:28:42

Local clock offset: 0.039 ms

Remote clock offset: 0.255 ms

Below is generated by plot.py at 2018-09-25 17:26:23

Datalink statistics

-- Total of 1 flow:

Average throughput: 619.92 Mbit/s

95th percentile per-packet one-way delay: 131.041 ms

Loss rate: 0.04%

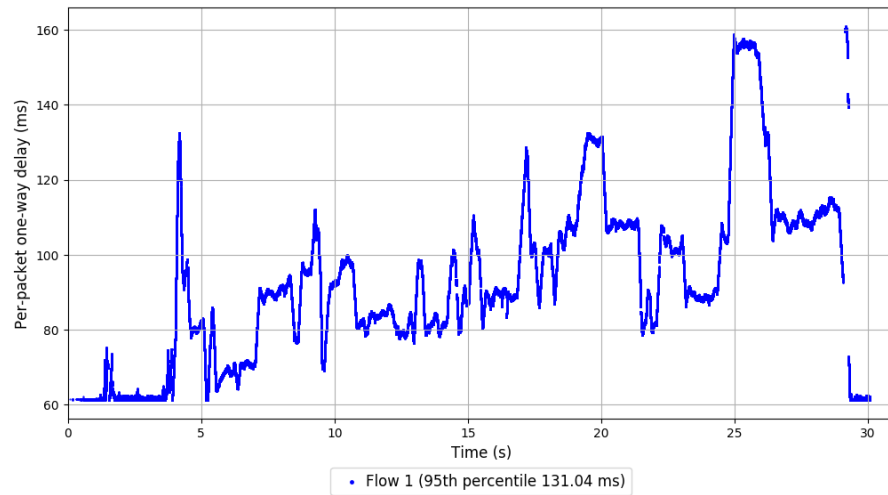
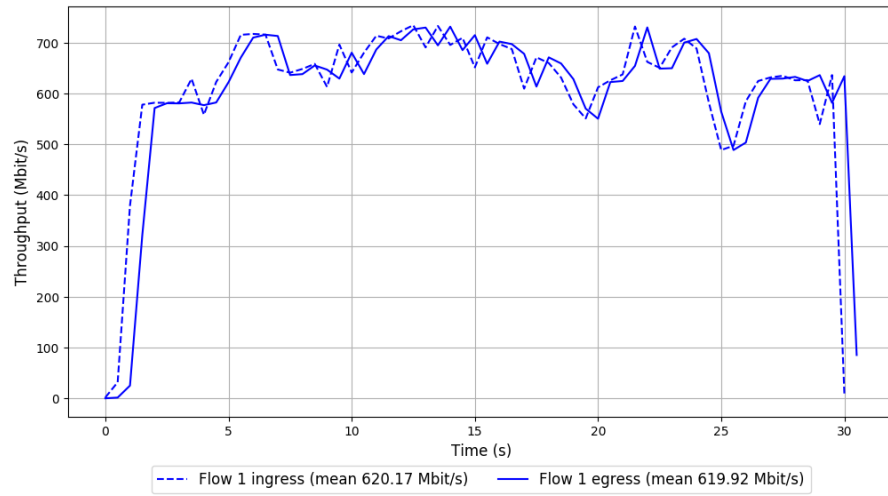
-- Flow 1:

Average throughput: 619.92 Mbit/s

95th percentile per-packet one-way delay: 131.041 ms

Loss rate: 0.04%

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2018-09-25 14:42:57

End at: 2018-09-25 14:43:27

Local clock offset: -0.069 ms

Remote clock offset: 0.939 ms

Below is generated by plot.py at 2018-09-25 17:31:37

Datalink statistics

-- Total of 1 flow:

Average throughput: 835.79 Mbit/s

95th percentile per-packet one-way delay: 130.827 ms

Loss rate: 3.58%

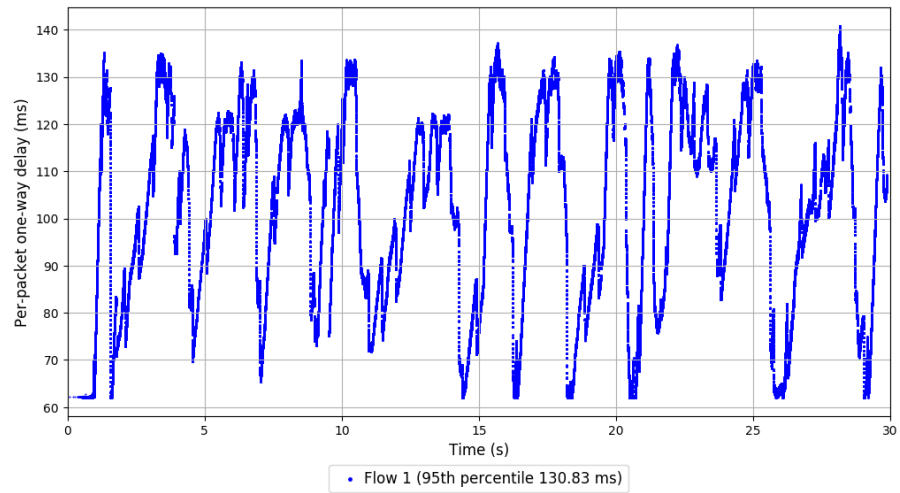
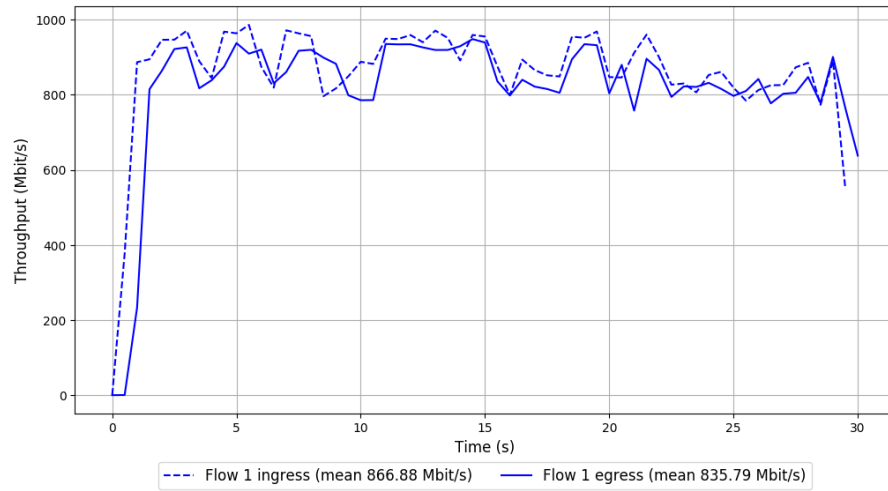
-- Flow 1:

Average throughput: 835.79 Mbit/s

95th percentile per-packet one-way delay: 130.827 ms

Loss rate: 3.58%

Run 1: Report of FillP — Data Link

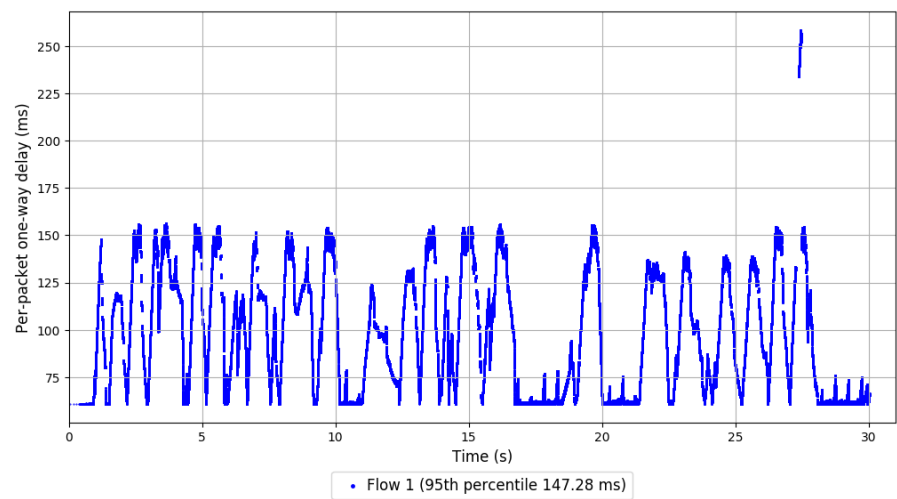
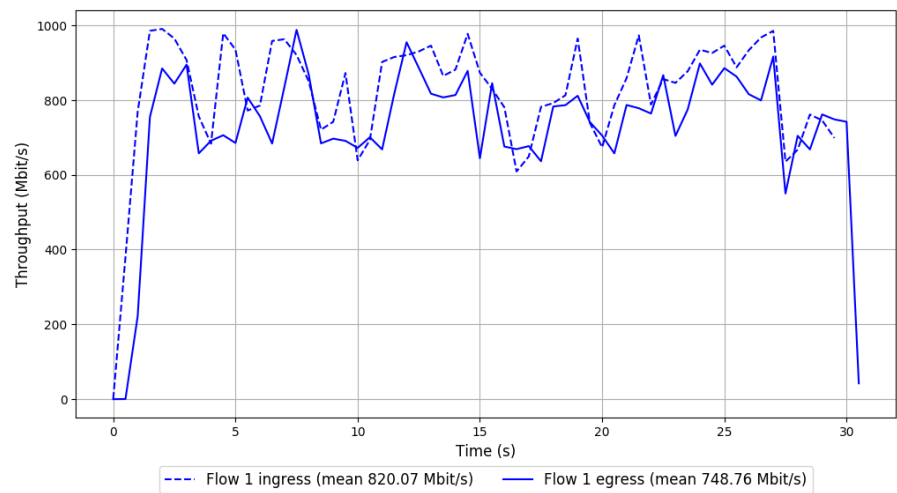


Run 2: Statistics of FillP

Start at: 2018-09-25 15:09:57
End at: 2018-09-25 15:10:27
Local clock offset: -0.042 ms
Remote clock offset: -0.005 ms

Below is generated by plot.py at 2018-09-25 17:40:19
Datalink statistics
-- Total of 1 flow:
Average throughput: 748.76 Mbit/s
95th percentile per-packet one-way delay: 147.280 ms
Loss rate: 8.69%
-- Flow 1:
Average throughput: 748.76 Mbit/s
95th percentile per-packet one-way delay: 147.280 ms
Loss rate: 8.69%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-09-25 15:37:36

End at: 2018-09-25 15:38:06

Local clock offset: -0.027 ms

Remote clock offset: 0.471 ms

Below is generated by plot.py at 2018-09-25 17:41:27

Datalink statistics

-- Total of 1 flow:

Average throughput: 771.52 Mbit/s

95th percentile per-packet one-way delay: 147.645 ms

Loss rate: 8.82%

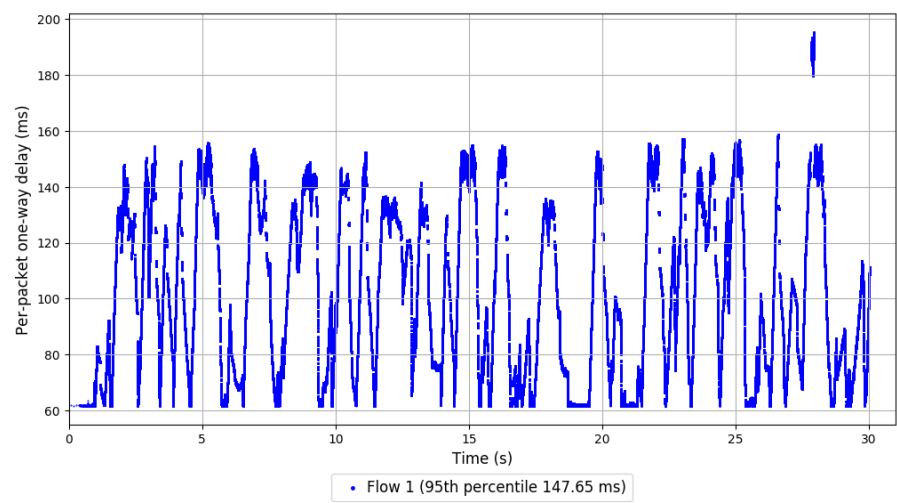
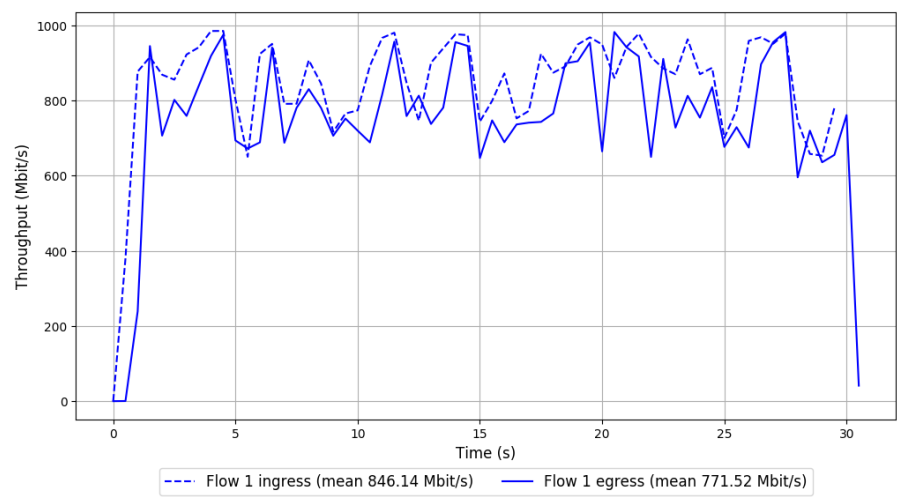
-- Flow 1:

Average throughput: 771.52 Mbit/s

95th percentile per-packet one-way delay: 147.645 ms

Loss rate: 8.82%

Run 3: Report of FillP — Data Link

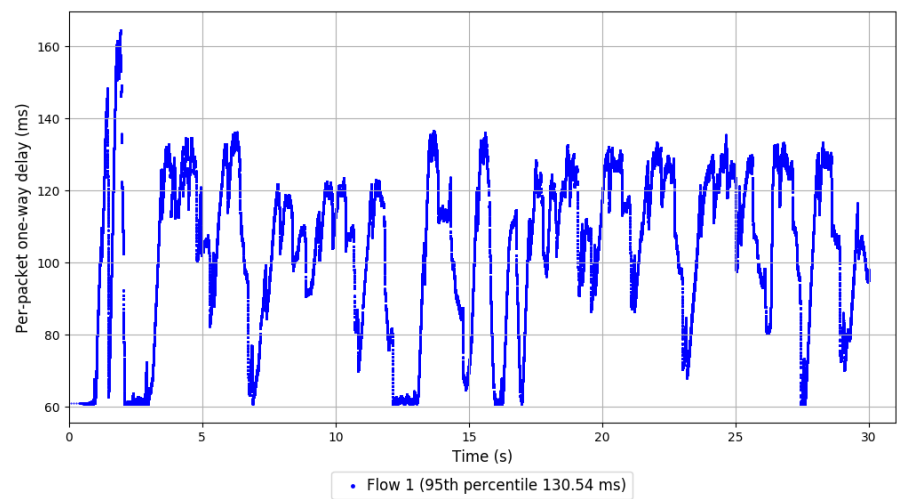
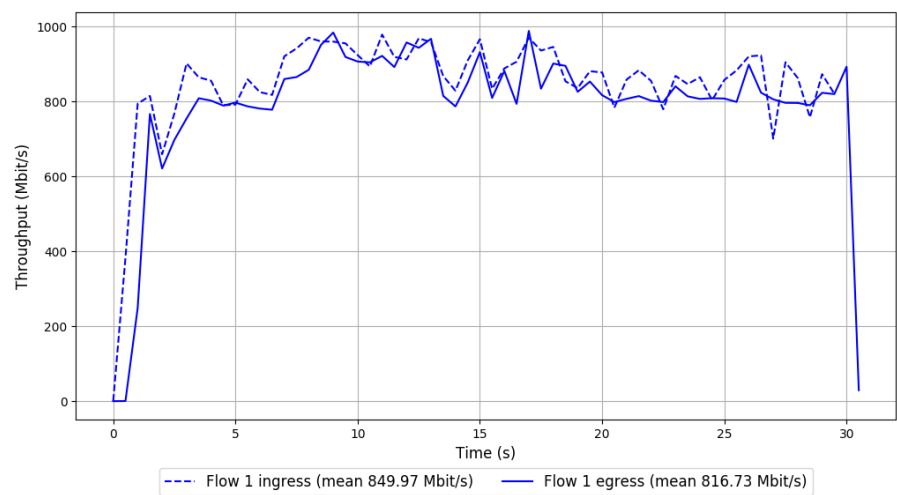


Run 4: Statistics of FillP

Start at: 2018-09-25 16:04:53
End at: 2018-09-25 16:05:23
Local clock offset: -0.022 ms
Remote clock offset: -0.143 ms

Below is generated by plot.py at 2018-09-25 17:42:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 816.73 Mbit/s
95th percentile per-packet one-way delay: 130.542 ms
Loss rate: 3.91%
-- Flow 1:
Average throughput: 816.73 Mbit/s
95th percentile per-packet one-way delay: 130.542 ms
Loss rate: 3.91%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-09-25 16:32:24

End at: 2018-09-25 16:32:54

Local clock offset: 0.047 ms

Remote clock offset: 0.295 ms

Below is generated by plot.py at 2018-09-25 17:42:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 809.11 Mbit/s

95th percentile per-packet one-way delay: 132.461 ms

Loss rate: 4.35%

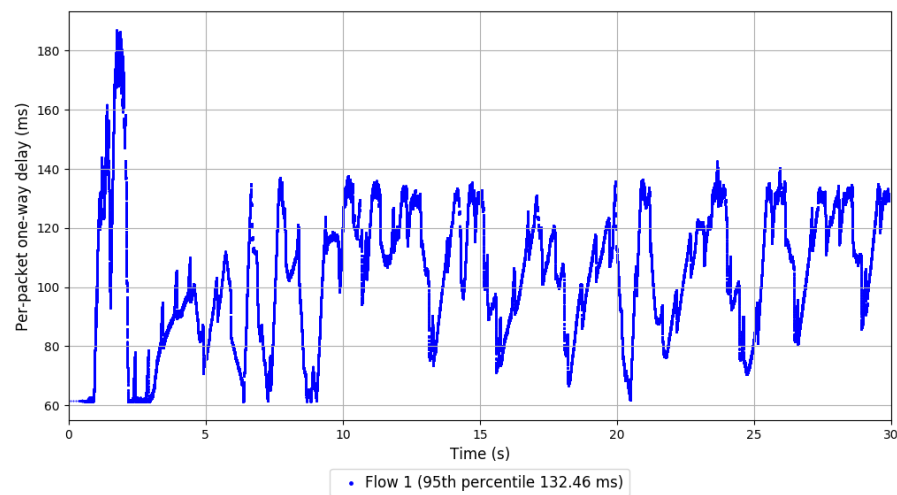
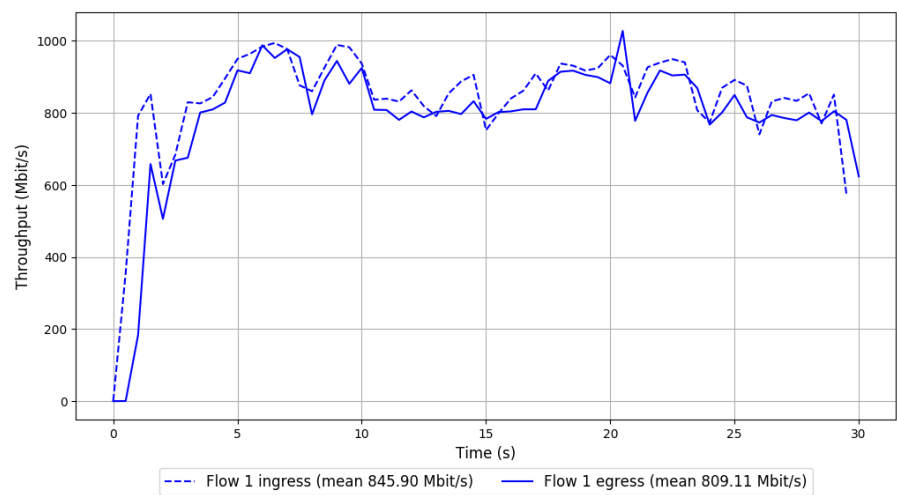
-- Flow 1:

Average throughput: 809.11 Mbit/s

95th percentile per-packet one-way delay: 132.461 ms

Loss rate: 4.35%

Run 5: Report of FillP — Data Link

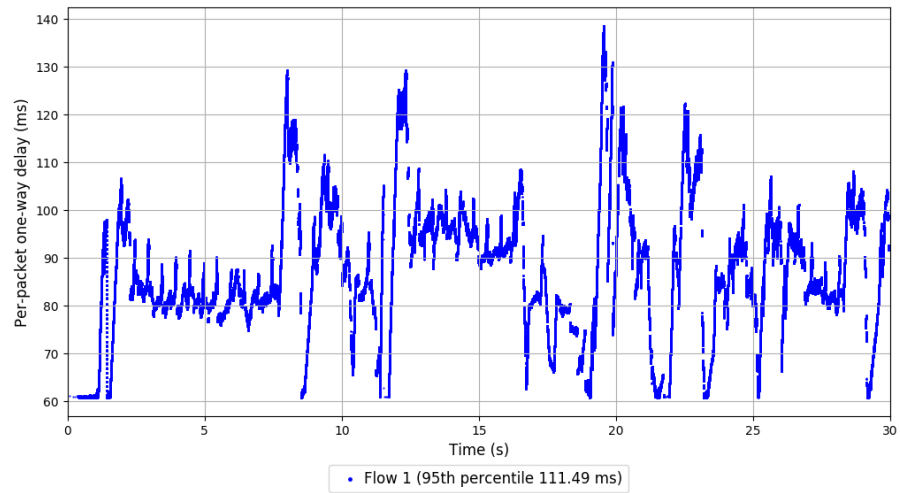
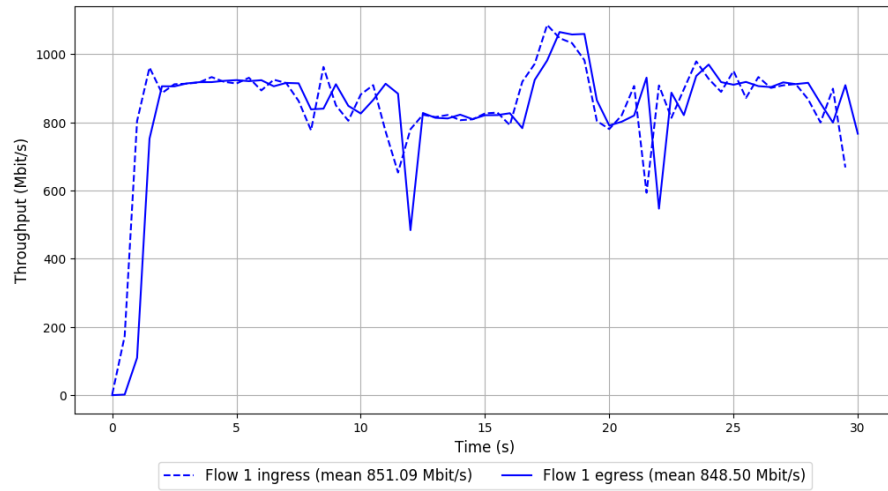


Run 1: Statistics of FillP-Sheep

Start at: 2018-09-25 14:50:10
End at: 2018-09-25 14:50:40
Local clock offset: -0.063 ms
Remote clock offset: -0.262 ms

Below is generated by plot.py at 2018-09-25 17:42:48
Datalink statistics
-- Total of 1 flow:
Average throughput: 848.50 Mbit/s
95th percentile per-packet one-way delay: 111.494 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 848.50 Mbit/s
95th percentile per-packet one-way delay: 111.494 ms
Loss rate: 0.30%

Run 1: Report of FillP-Sheep — Data Link

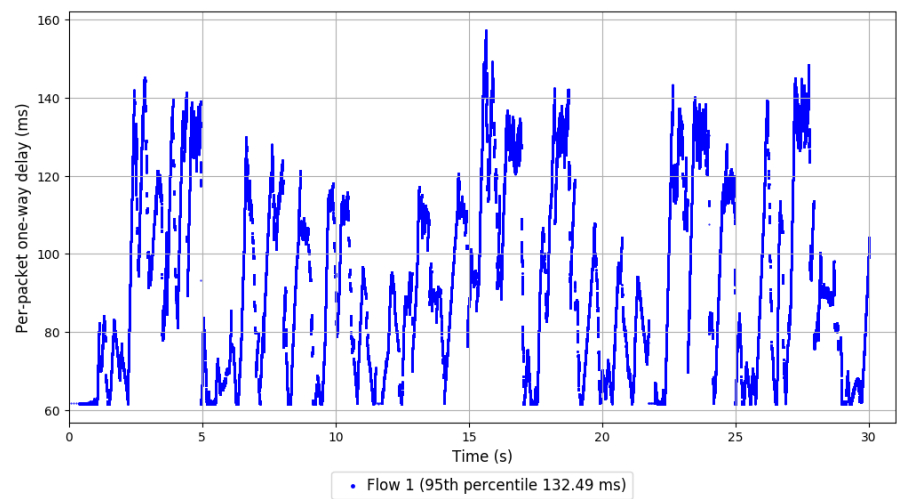
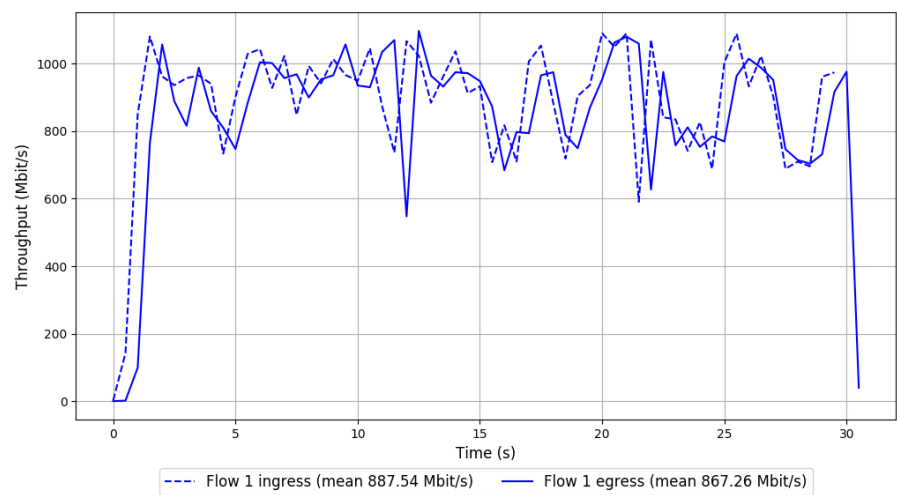


Run 2: Statistics of FillP-Sheep

Start at: 2018-09-25 15:17:21
End at: 2018-09-25 15:17:51
Local clock offset: -0.051 ms
Remote clock offset: -1.288 ms

Below is generated by plot.py at 2018-09-25 17:43:20
Datalink statistics
-- Total of 1 flow:
Average throughput: 867.26 Mbit/s
95th percentile per-packet one-way delay: 132.490 ms
Loss rate: 2.29%
-- Flow 1:
Average throughput: 867.26 Mbit/s
95th percentile per-packet one-way delay: 132.490 ms
Loss rate: 2.29%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2018-09-25 15:44:56

End at: 2018-09-25 15:45:26

Local clock offset: 0.004 ms

Remote clock offset: -1.35 ms

Below is generated by plot.py at 2018-09-25 17:43:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 756.85 Mbit/s

95th percentile per-packet one-way delay: 136.293 ms

Loss rate: 2.17%

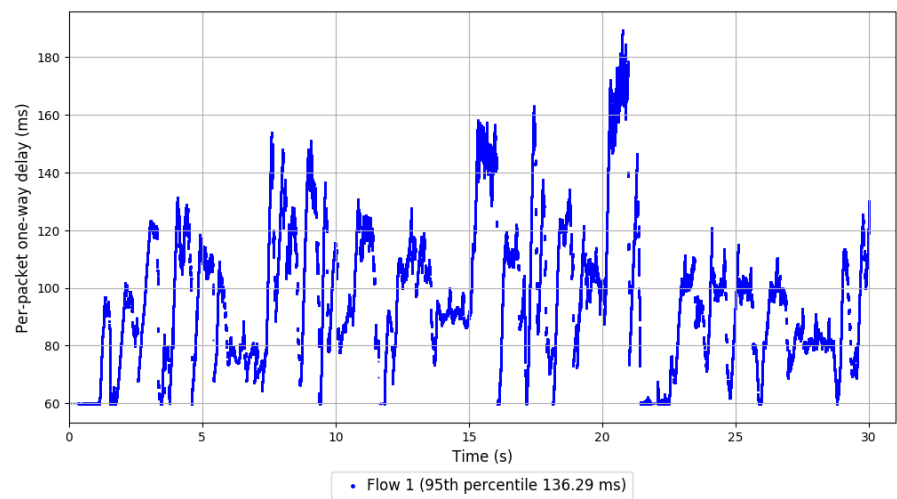
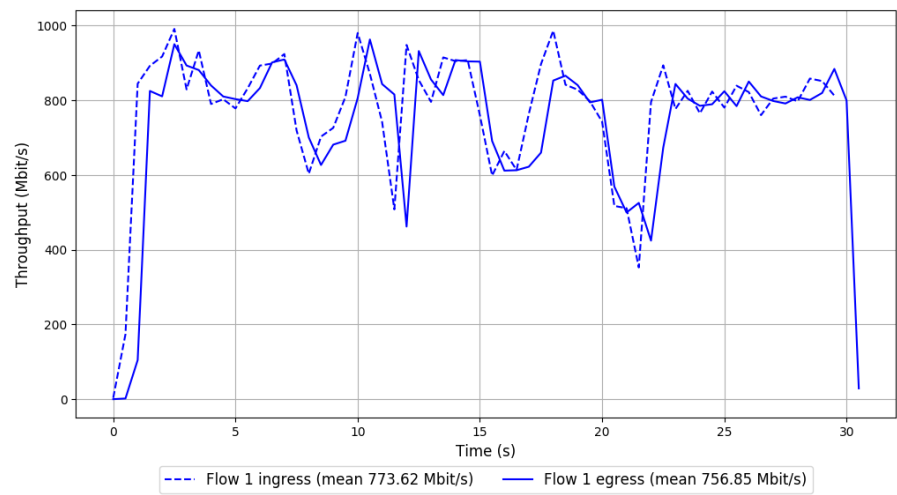
-- Flow 1:

Average throughput: 756.85 Mbit/s

95th percentile per-packet one-way delay: 136.293 ms

Loss rate: 2.17%

Run 3: Report of FillP-Sheep — Data Link



Run 4: Statistics of FillP-Sheep

Start at: 2018-09-25 16:12:14

End at: 2018-09-25 16:12:44

Local clock offset: 0.021 ms

Remote clock offset: -0.32 ms

Below is generated by plot.py at 2018-09-25 17:49:36

Datalink statistics

-- Total of 1 flow:

Average throughput: 806.87 Mbit/s

95th percentile per-packet one-way delay: 117.452 ms

Loss rate: 0.24%

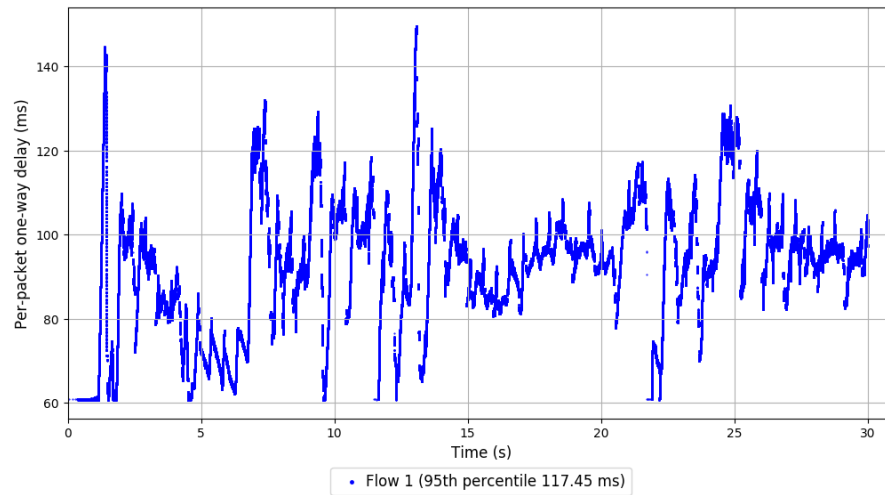
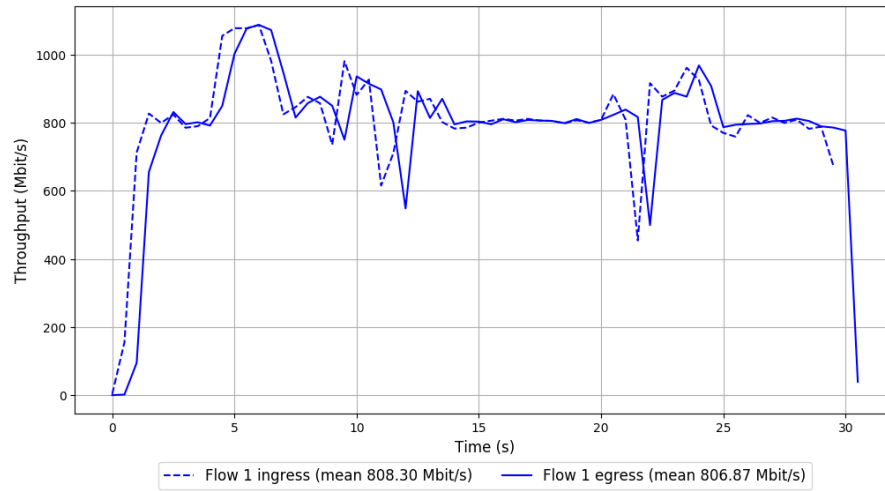
-- Flow 1:

Average throughput: 806.87 Mbit/s

95th percentile per-packet one-way delay: 117.452 ms

Loss rate: 0.24%

Run 4: Report of FillP-Sheep — Data Link

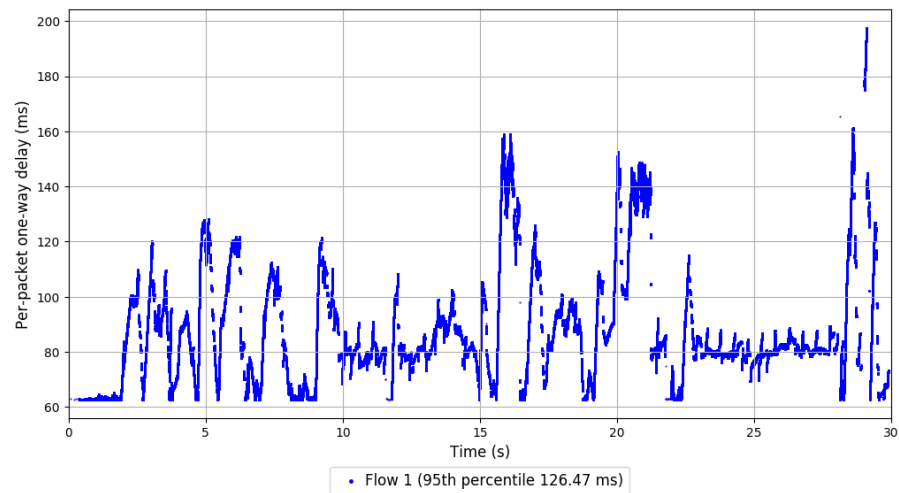
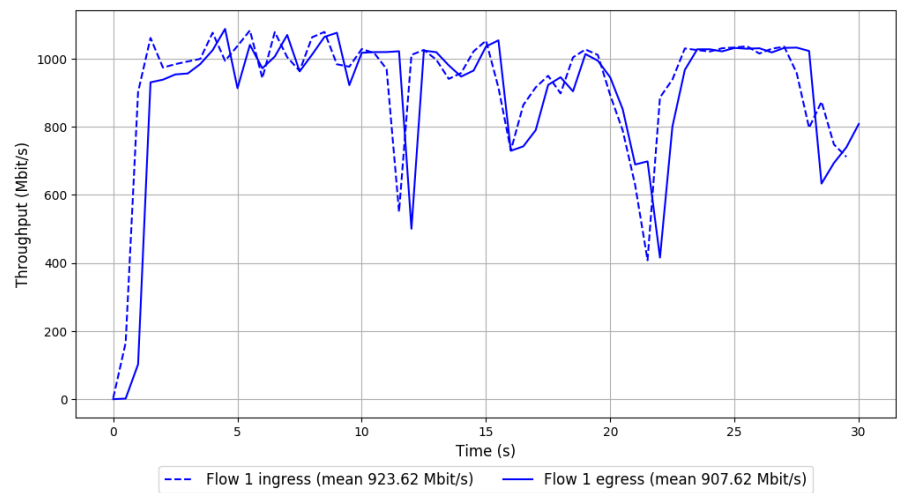


Run 5: Statistics of FillP-Sheep

Start at: 2018-09-25 16:39:43
End at: 2018-09-25 16:40:13
Local clock offset: 0.014 ms
Remote clock offset: -0.127 ms

Below is generated by plot.py at 2018-09-25 17:57:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 907.62 Mbit/s
95th percentile per-packet one-way delay: 126.471 ms
Loss rate: 1.74%
-- Flow 1:
Average throughput: 907.62 Mbit/s
95th percentile per-packet one-way delay: 126.471 ms
Loss rate: 1.74%

Run 5: Report of FillP-Sheep — Data Link

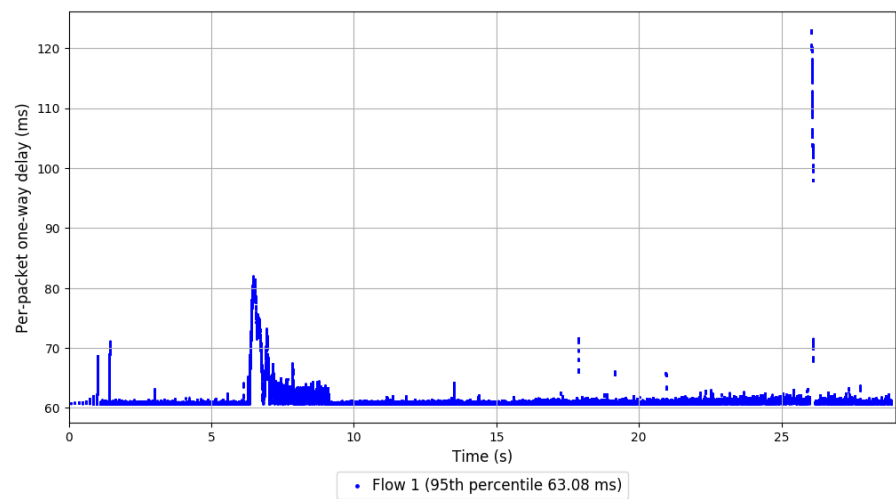
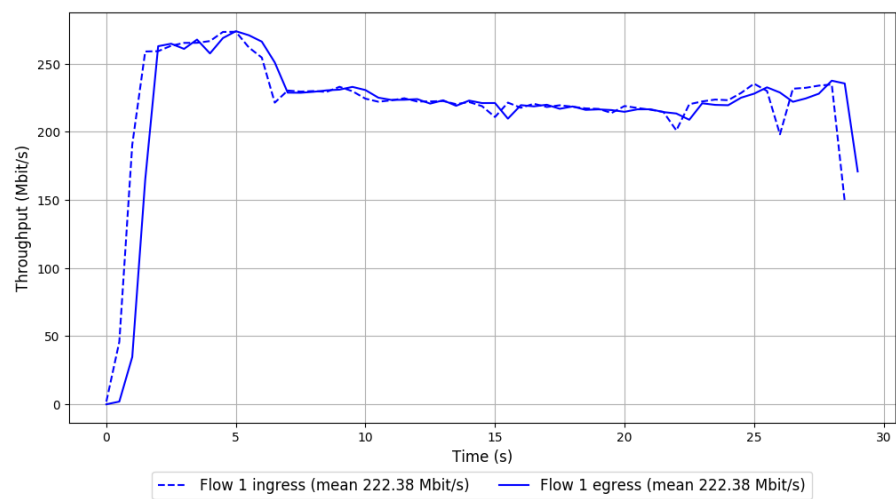


Run 1: Statistics of Indigo

Start at: 2018-09-25 14:57:01
End at: 2018-09-25 14:57:31
Local clock offset: -0.072 ms
Remote clock offset: -0.373 ms

Below is generated by plot.py at 2018-09-25 17:57:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 222.38 Mbit/s
95th percentile per-packet one-way delay: 63.083 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 222.38 Mbit/s
95th percentile per-packet one-way delay: 63.083 ms
Loss rate: 0.00%

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2018-09-25 15:24:35

End at: 2018-09-25 15:25:05

Local clock offset: -0.013 ms

Remote clock offset: 1.247 ms

Below is generated by plot.py at 2018-09-25 17:57:11

Datalink statistics

-- Total of 1 flow:

Average throughput: 219.10 Mbit/s

95th percentile per-packet one-way delay: 64.438 ms

Loss rate: 0.01%

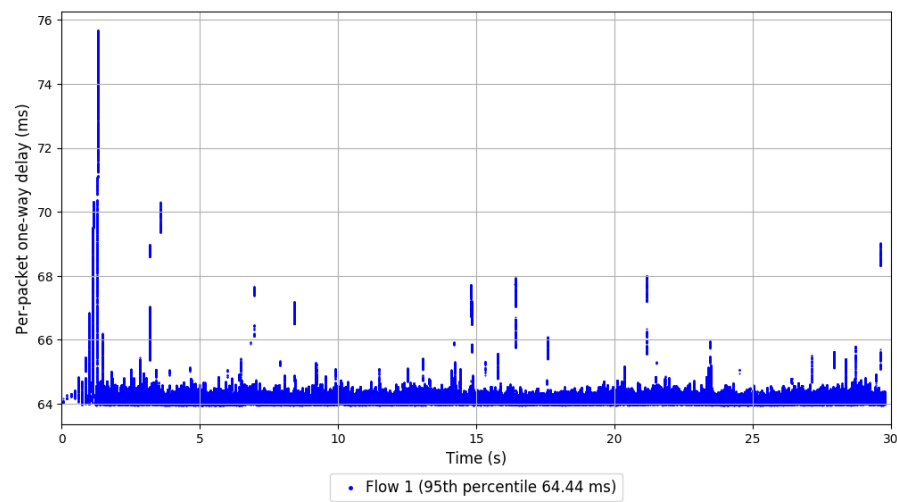
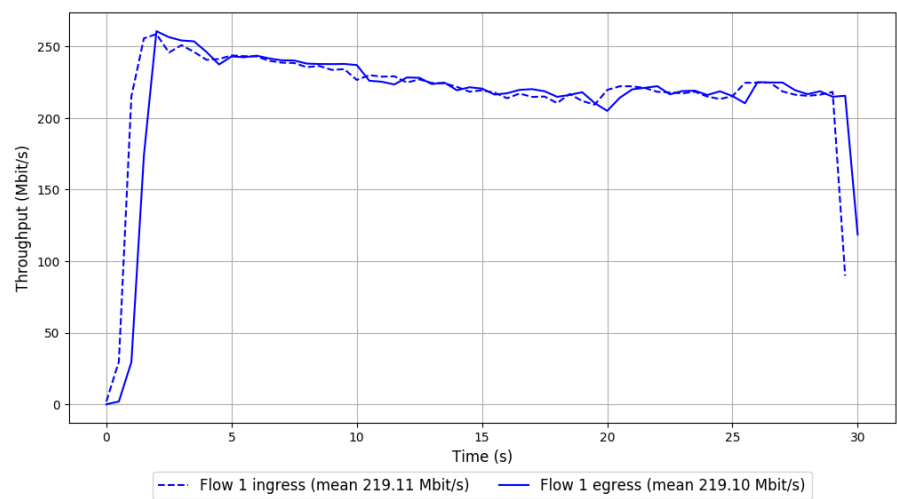
-- Flow 1:

Average throughput: 219.10 Mbit/s

95th percentile per-packet one-way delay: 64.438 ms

Loss rate: 0.01%

Run 2: Report of Indigo — Data Link

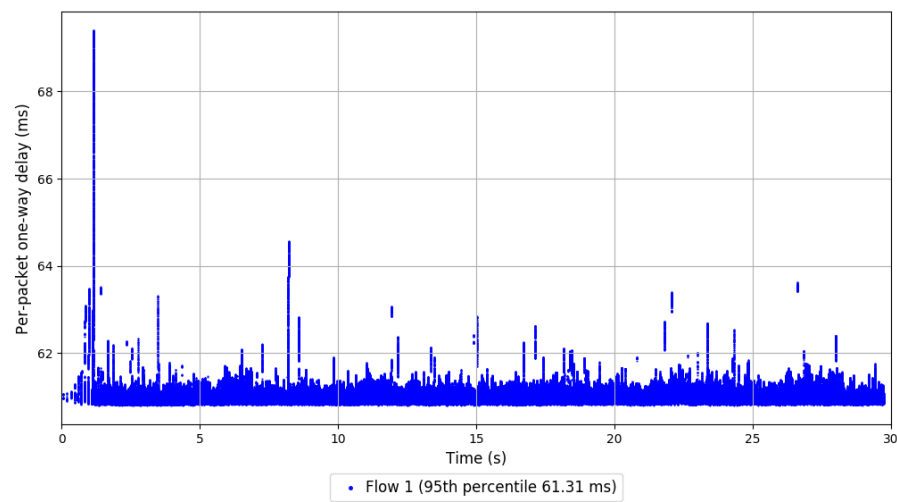
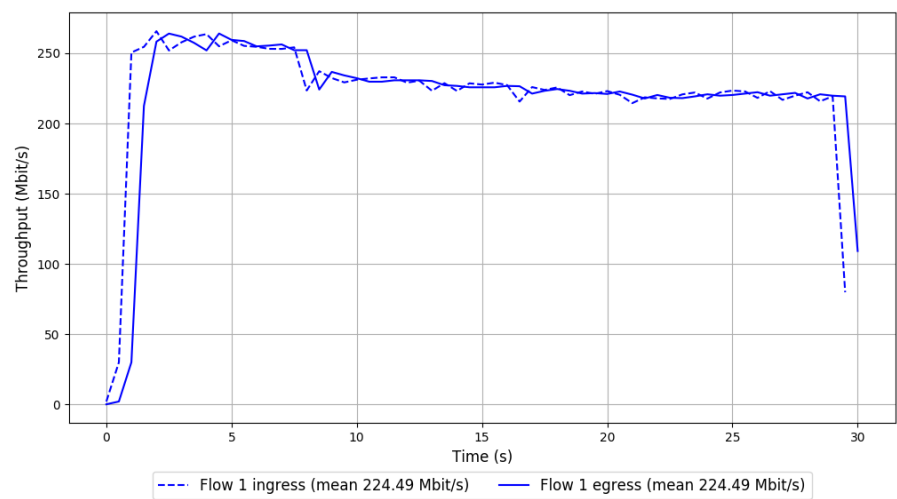


Run 3: Statistics of Indigo

Start at: 2018-09-25 15:51:57
End at: 2018-09-25 15:52:27
Local clock offset: 0.022 ms
Remote clock offset: -0.049 ms

Below is generated by plot.py at 2018-09-25 17:57:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 224.49 Mbit/s
95th percentile per-packet one-way delay: 61.310 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 224.49 Mbit/s
95th percentile per-packet one-way delay: 61.310 ms
Loss rate: 0.00%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2018-09-25 16:19:26

End at: 2018-09-25 16:19:56

Local clock offset: 0.041 ms

Remote clock offset: 0.327 ms

Below is generated by plot.py at 2018-09-25 17:57:11

Datalink statistics

-- Total of 1 flow:

Average throughput: 226.90 Mbit/s

95th percentile per-packet one-way delay: 61.885 ms

Loss rate: 0.06%

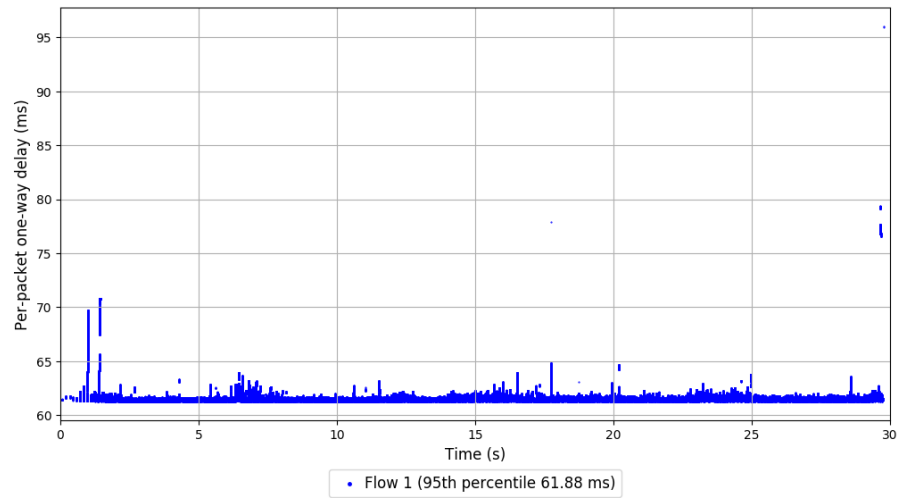
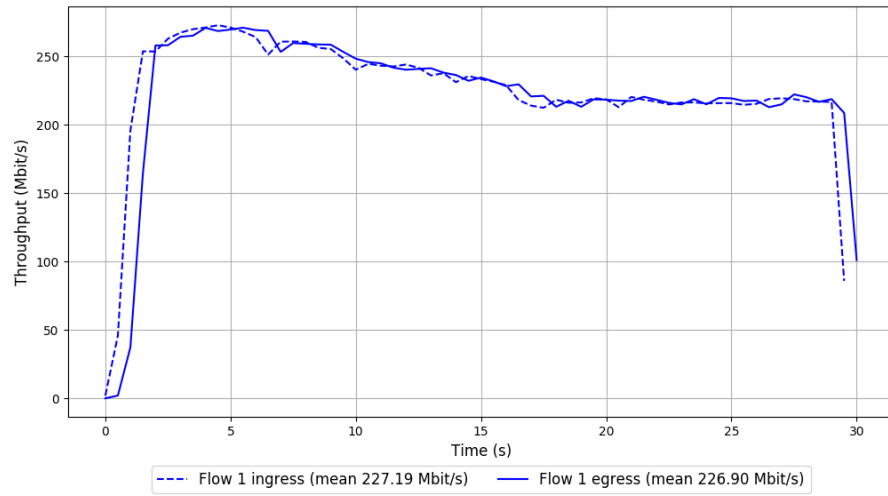
-- Flow 1:

Average throughput: 226.90 Mbit/s

95th percentile per-packet one-way delay: 61.885 ms

Loss rate: 0.06%

Run 4: Report of Indigo — Data Link

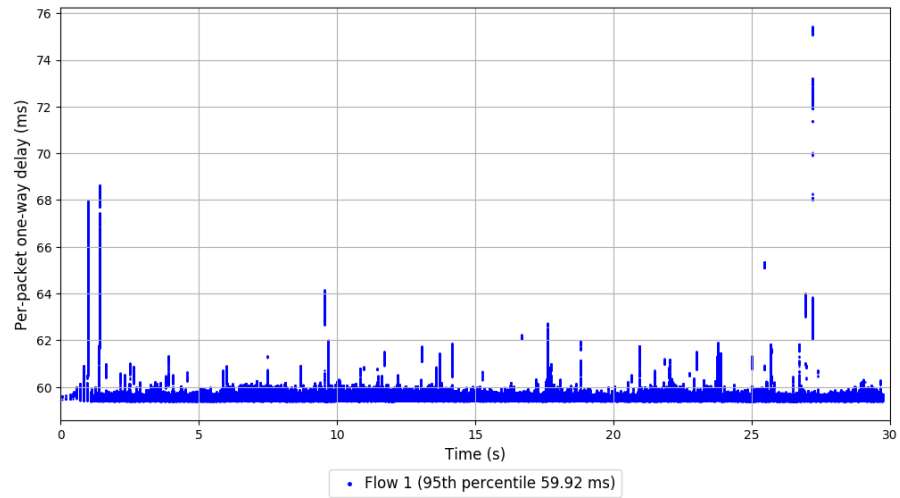
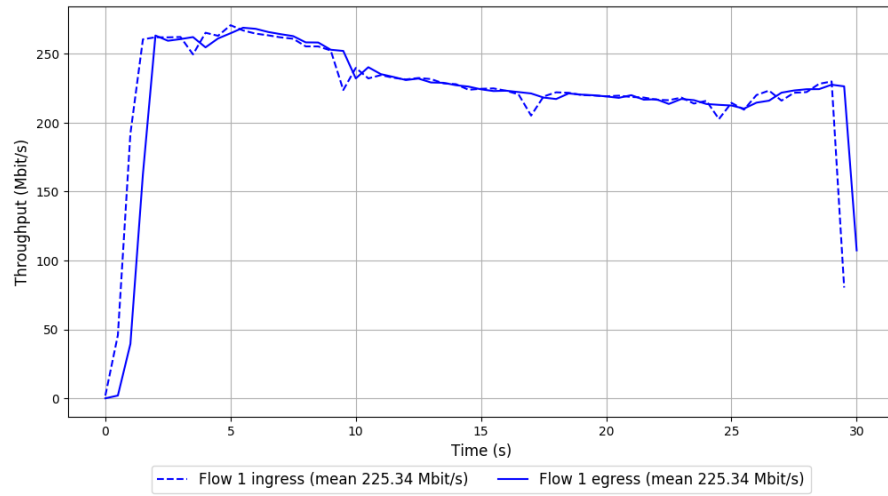


Run 5: Statistics of Indigo

Start at: 2018-09-25 16:46:47
End at: 2018-09-25 16:47:17
Local clock offset: 0.018 ms
Remote clock offset: -1.483 ms

Below is generated by plot.py at 2018-09-25 17:57:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 225.34 Mbit/s
95th percentile per-packet one-way delay: 59.920 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 225.34 Mbit/s
95th percentile per-packet one-way delay: 59.920 ms
Loss rate: 0.00%

Run 5: Report of Indigo — Data Link

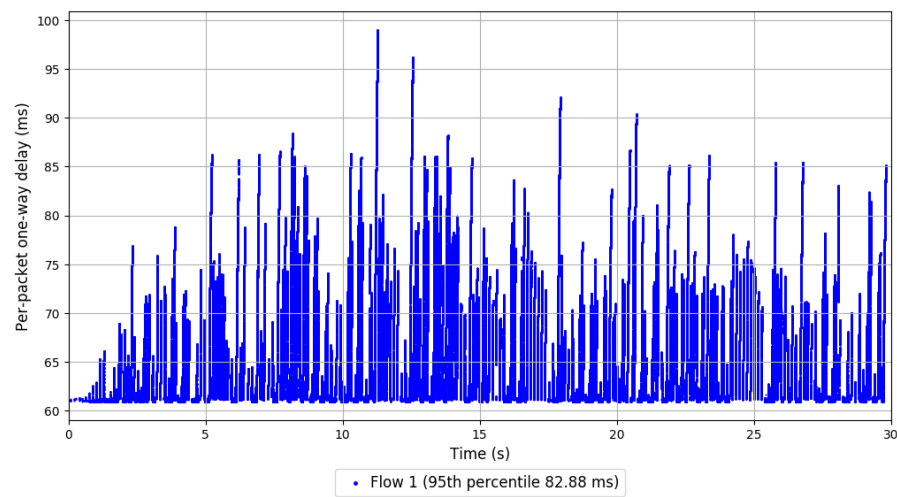
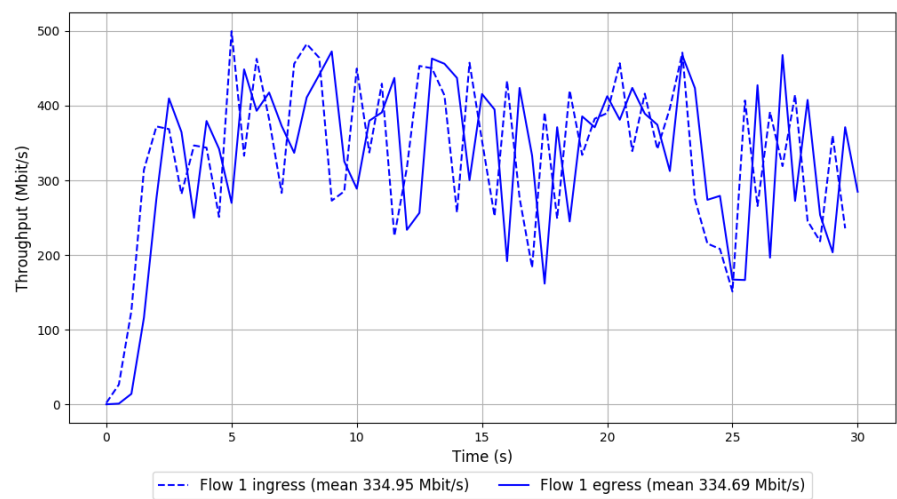


Run 1: Statistics of Indigo-96d2da3

Start at: 2018-09-25 14:58:28
End at: 2018-09-25 14:58:58
Local clock offset: -0.07 ms
Remote clock offset: -0.271 ms

Below is generated by plot.py at 2018-09-25 17:57:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 334.69 Mbit/s
95th percentile per-packet one-way delay: 82.878 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 334.69 Mbit/s
95th percentile per-packet one-way delay: 82.878 ms
Loss rate: 0.00%

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

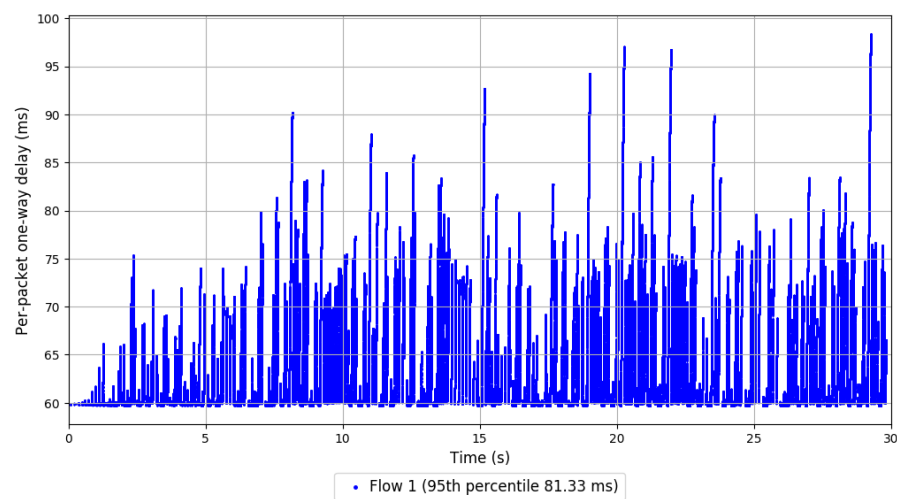
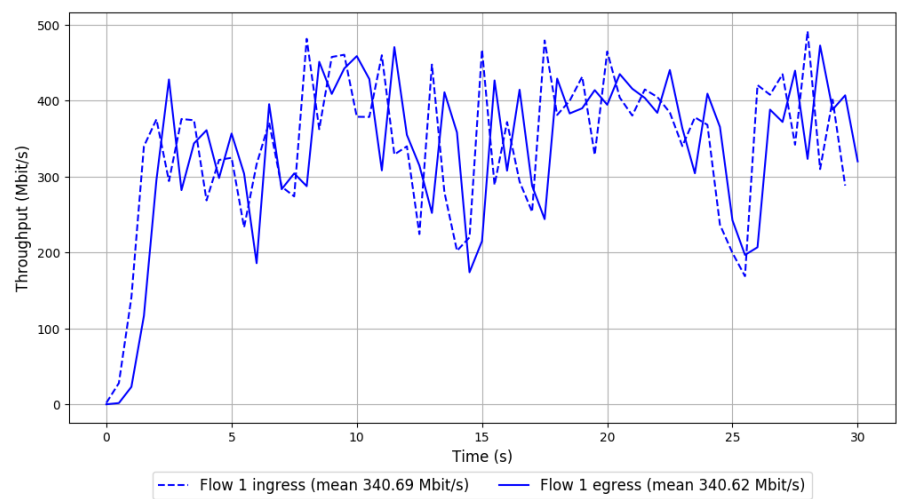


Run 2: Statistics of Indigo-96d2da3

Start at: 2018-09-25 15:26:02
End at: 2018-09-25 15:26:32
Local clock offset: -0.035 ms
Remote clock offset: -1.313 ms

Below is generated by plot.py at 2018-09-25 17:57:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 340.62 Mbit/s
95th percentile per-packet one-way delay: 81.329 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 340.62 Mbit/s
95th percentile per-packet one-way delay: 81.329 ms
Loss rate: 0.00%

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



Run 3: Statistics of Indigo-96d2da3

Start at: 2018-09-25 15:53:23

End at: 2018-09-25 15:53:54

Local clock offset: 0.023 ms

Remote clock offset: -0.213 ms

Below is generated by plot.py at 2018-09-25 17:57:11

Datalink statistics

-- Total of 1 flow:

Average throughput: 323.49 Mbit/s

95th percentile per-packet one-way delay: 86.637 ms

Loss rate: 0.00%

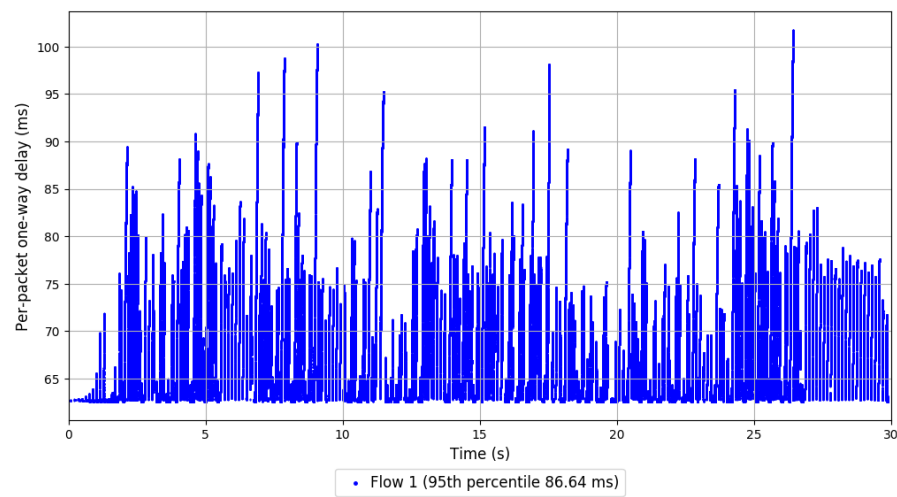
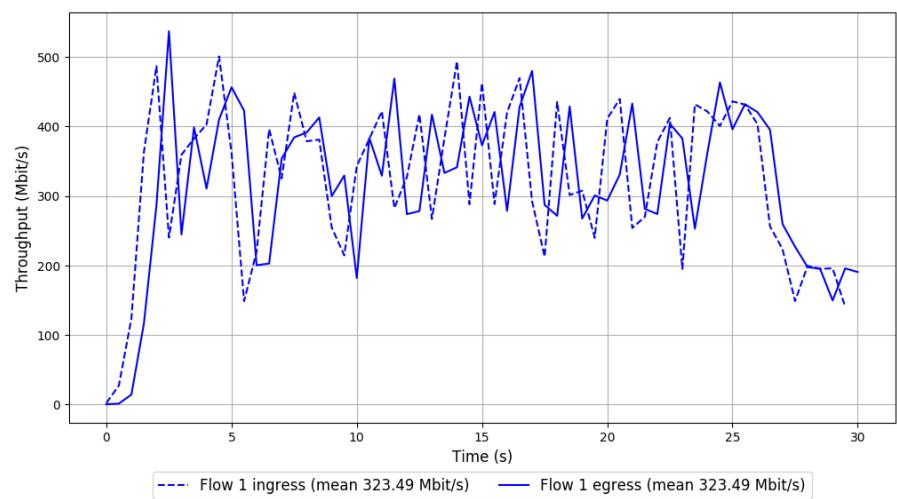
-- Flow 1:

Average throughput: 323.49 Mbit/s

95th percentile per-packet one-way delay: 86.637 ms

Loss rate: 0.00%

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

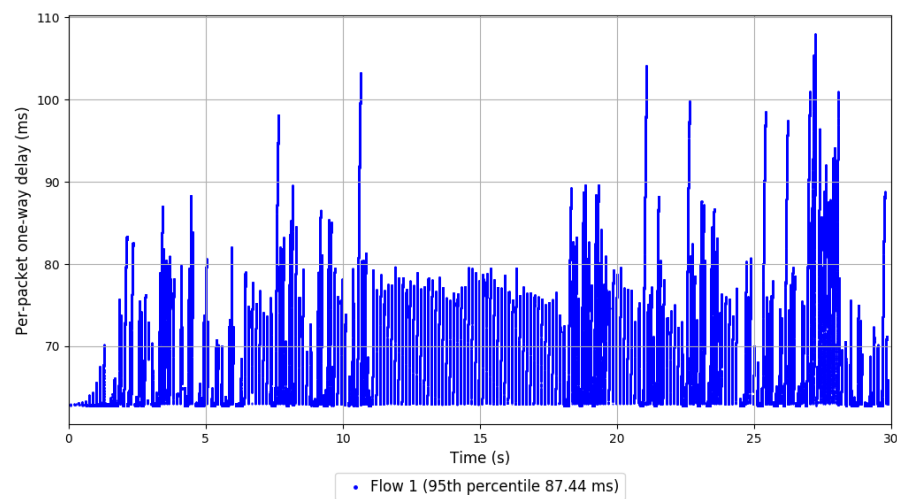
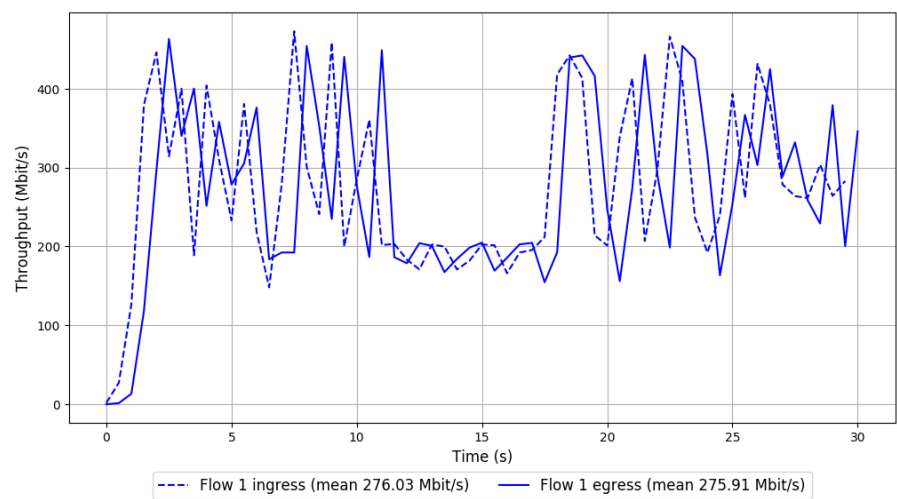


Run 4: Statistics of Indigo-96d2da3

Start at: 2018-09-25 16:20:54
End at: 2018-09-25 16:21:24
Local clock offset: -0.024 ms
Remote clock offset: -0.137 ms

Below is generated by plot.py at 2018-09-25 17:57:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 275.91 Mbit/s
95th percentile per-packet one-way delay: 87.435 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 275.91 Mbit/s
95th percentile per-packet one-way delay: 87.435 ms
Loss rate: 0.05%

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

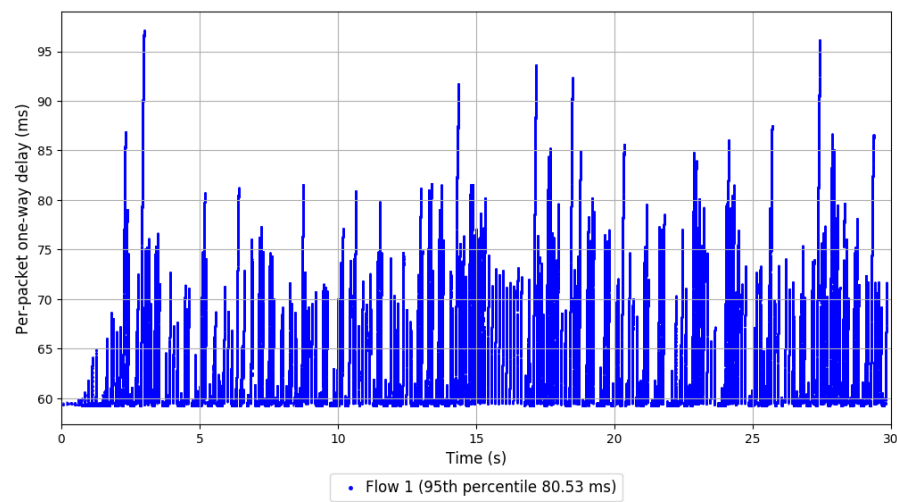
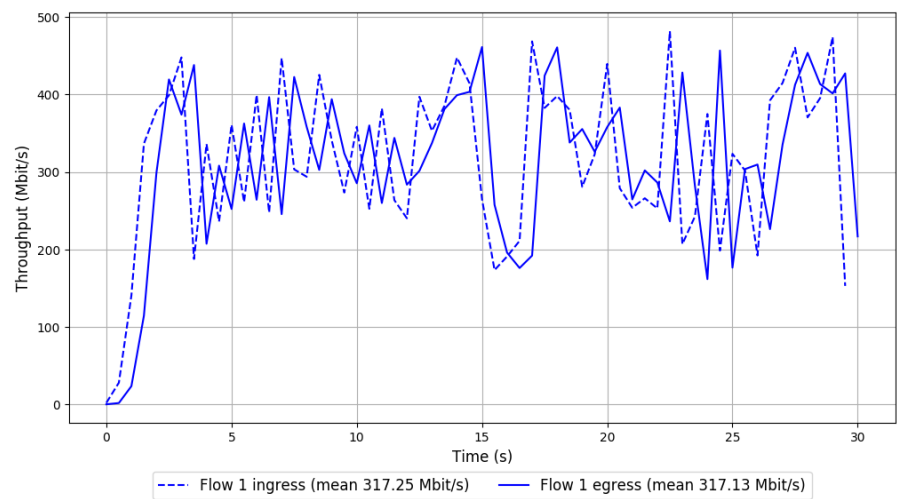


Run 5: Statistics of Indigo-96d2da3

Start at: 2018-09-25 16:48:13
End at: 2018-09-25 16:48:43
Local clock offset: 0.018 ms
Remote clock offset: -1.402 ms

Below is generated by plot.py at 2018-09-25 17:57:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 317.13 Mbit/s
95th percentile per-packet one-way delay: 80.530 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 317.13 Mbit/s
95th percentile per-packet one-way delay: 80.530 ms
Loss rate: 0.00%

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

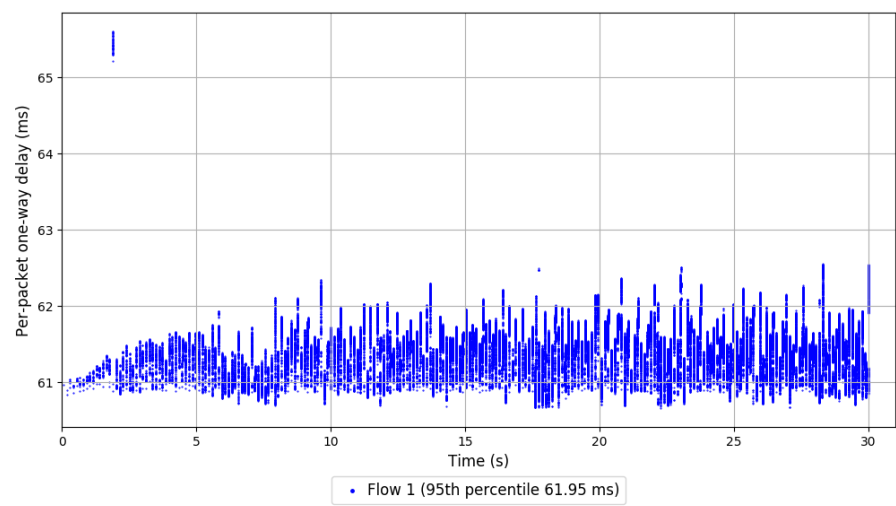
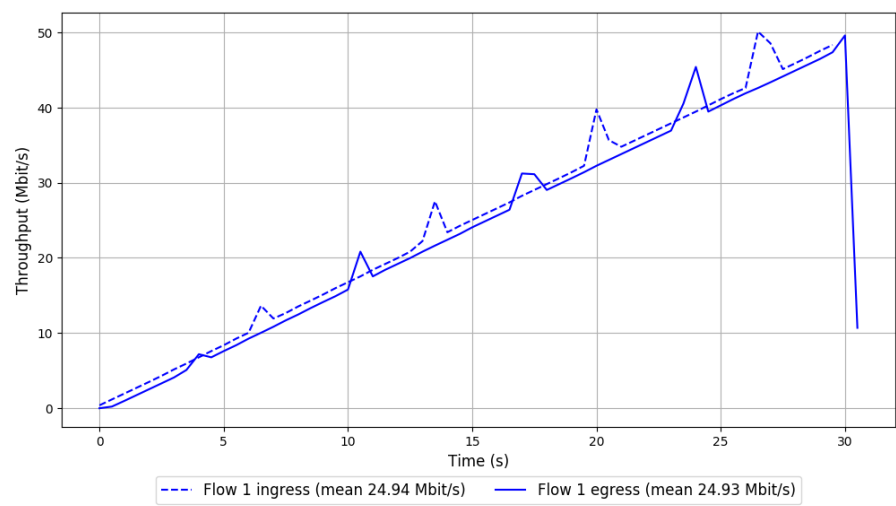


Run 1: Statistics of LEDBAT

Start at: 2018-09-25 14:54:44
End at: 2018-09-25 14:55:15
Local clock offset: -0.124 ms
Remote clock offset: -0.428 ms

Below is generated by plot.py at 2018-09-25 17:57:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.93 Mbit/s
95th percentile per-packet one-way delay: 61.949 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 24.93 Mbit/s
95th percentile per-packet one-way delay: 61.949 ms
Loss rate: 0.00%

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2018-09-25 15:22:18

End at: 2018-09-25 15:22:49

Local clock offset: -0.048 ms

Remote clock offset: 0.566 ms

Below is generated by plot.py at 2018-09-25 17:57:11

Datalink statistics

-- Total of 1 flow:

Average throughput: 24.29 Mbit/s

95th percentile per-packet one-way delay: 64.767 ms

Loss rate: 0.00%

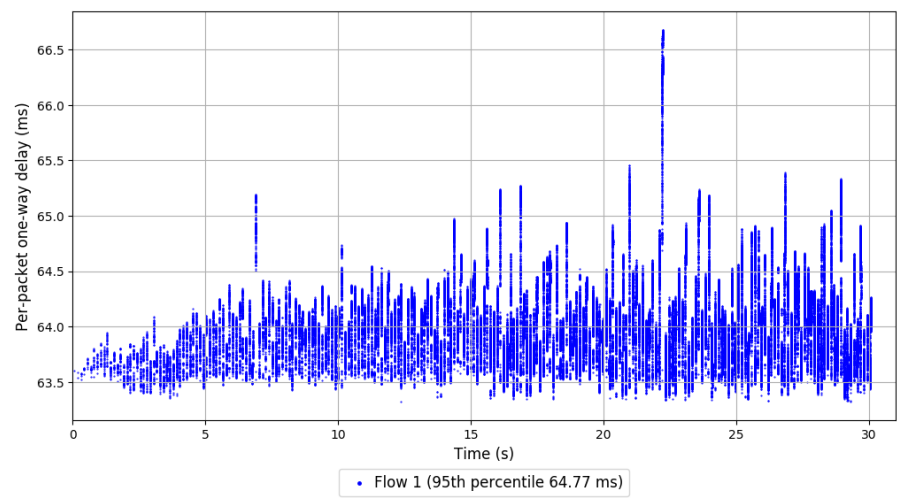
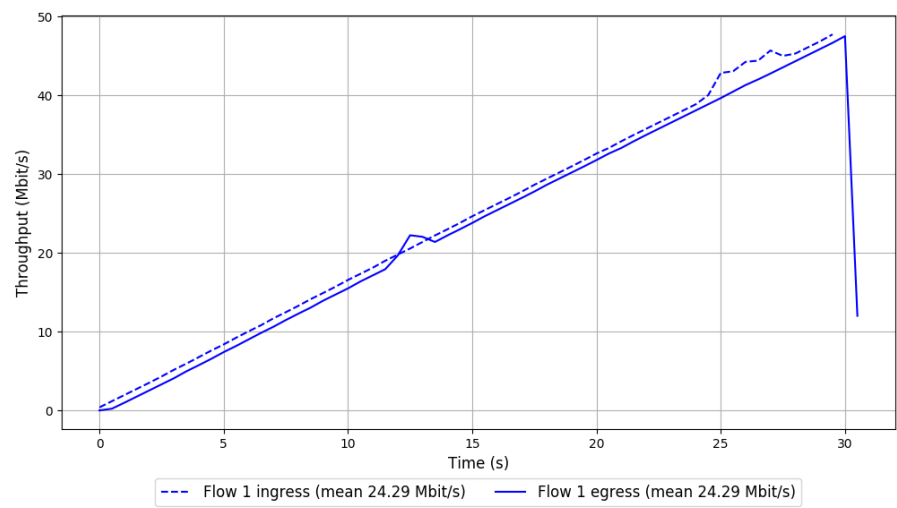
-- Flow 1:

Average throughput: 24.29 Mbit/s

95th percentile per-packet one-way delay: 64.767 ms

Loss rate: 0.00%

Run 2: Report of LEDBAT — Data Link

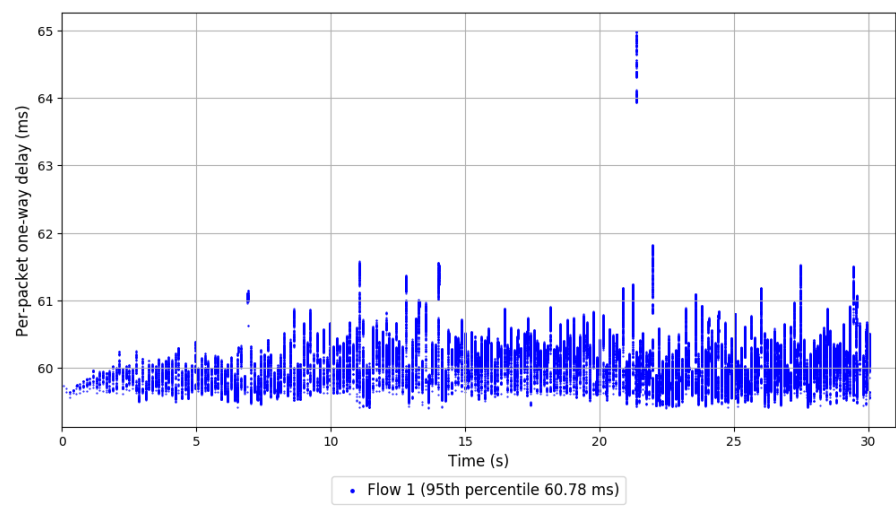
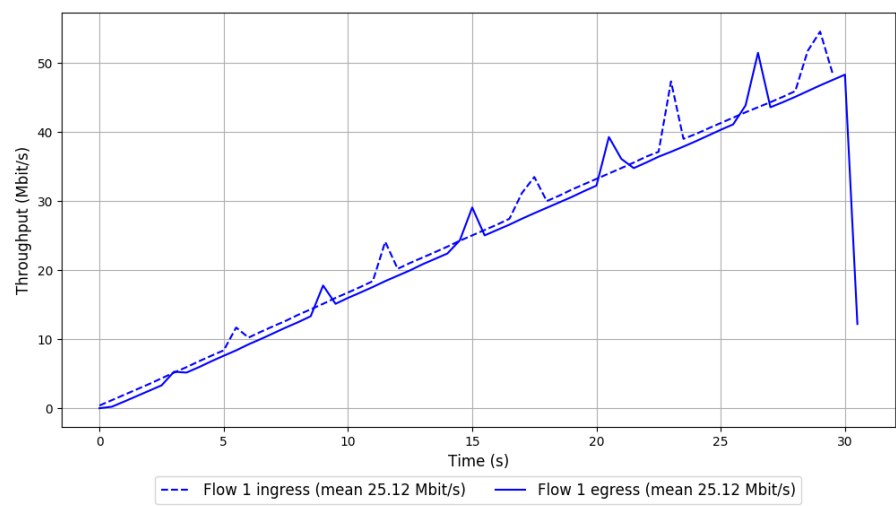


Run 3: Statistics of LEDBAT

Start at: 2018-09-25 15:49:40
End at: 2018-09-25 15:50:10
Local clock offset: 0.13 ms
Remote clock offset: -1.243 ms

Below is generated by plot.py at 2018-09-25 17:57:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 25.12 Mbit/s
95th percentile per-packet one-way delay: 60.782 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 25.12 Mbit/s
95th percentile per-packet one-way delay: 60.782 ms
Loss rate: 0.00%

Run 3: Report of LEDBAT — Data Link

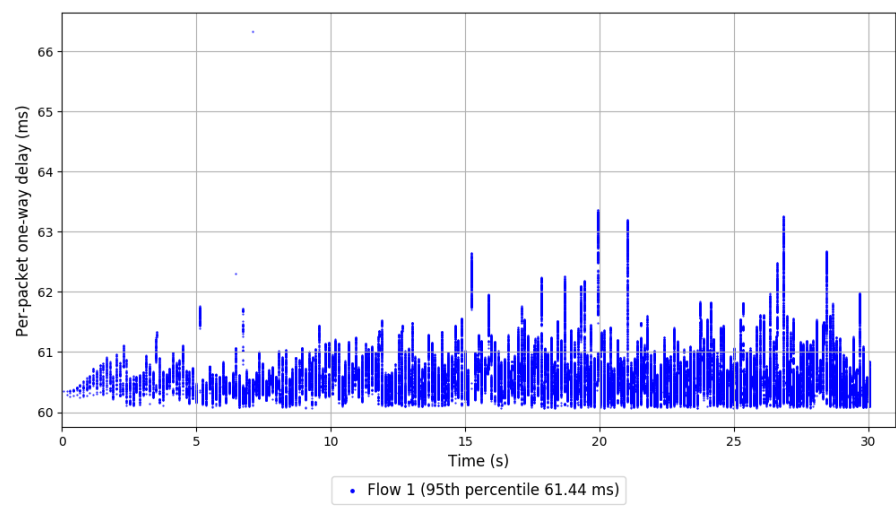
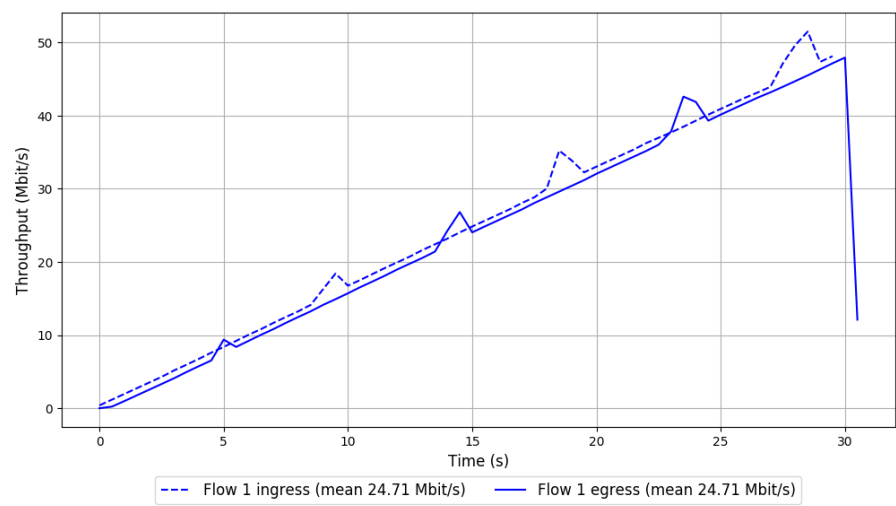


Run 4: Statistics of LEDBAT

Start at: 2018-09-25 16:17:09
End at: 2018-09-25 16:17:39
Local clock offset: 0.014 ms
Remote clock offset: -0.906 ms

Below is generated by plot.py at 2018-09-25 17:57:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.71 Mbit/s
95th percentile per-packet one-way delay: 61.444 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 24.71 Mbit/s
95th percentile per-packet one-way delay: 61.444 ms
Loss rate: 0.00%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-09-25 16:44:30

End at: 2018-09-25 16:45:00

Local clock offset: 0.014 ms

Remote clock offset: 0.01 ms

Below is generated by plot.py at 2018-09-25 17:57:11

Datalink statistics

-- Total of 1 flow:

Average throughput: 24.92 Mbit/s

95th percentile per-packet one-way delay: 61.945 ms

Loss rate: 0.00%

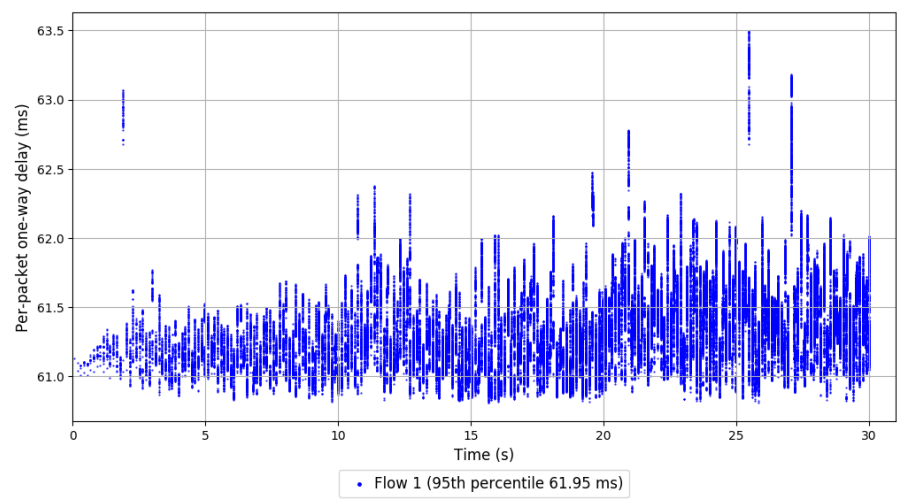
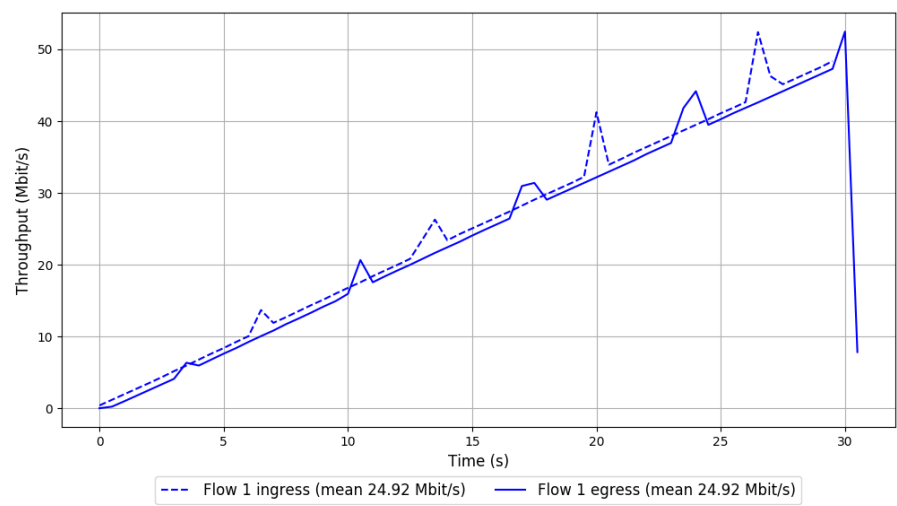
-- Flow 1:

Average throughput: 24.92 Mbit/s

95th percentile per-packet one-way delay: 61.945 ms

Loss rate: 0.00%

Run 5: Report of LEDBAT — Data Link

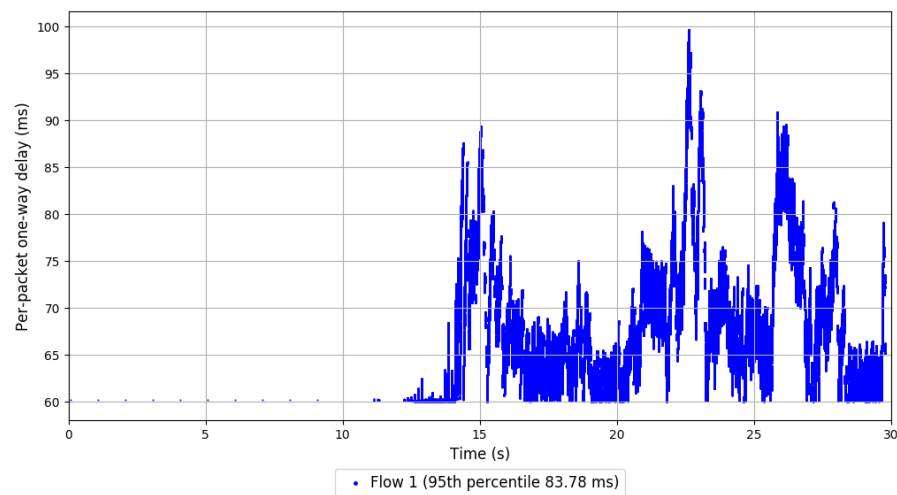
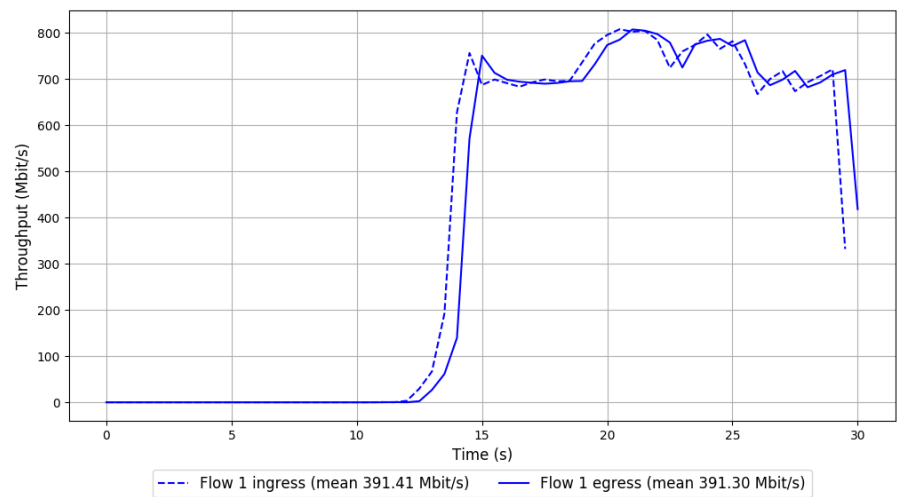



```
Run 1: Statistics of Indigo-Muses

Start at: 2018-09-25 14:53:19
End at: 2018-09-25 14:53:49
Local clock offset: -0.08 ms
Remote clock offset: -1.018 ms

# Below is generated by plot.py at 2018-09-25 17:57:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 391.30 Mbit/s
95th percentile per-packet one-way delay: 83.785 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 391.30 Mbit/s
95th percentile per-packet one-way delay: 83.785 ms
Loss rate: 0.02%
```

Run 1: Report of Indigo-Muses — Data Link



Run 2: Statistics of Indigo-Muses

Start at: 2018-09-25 15:20:39

End at: 2018-09-25 15:21:09

Local clock offset: -0.061 ms

Remote clock offset: 0.67 ms

Below is generated by plot.py at 2018-09-25 18:02:13

Datalink statistics

-- Total of 1 flow:

Average throughput: 688.63 Mbit/s

95th percentile per-packet one-way delay: 91.749 ms

Loss rate: 0.01%

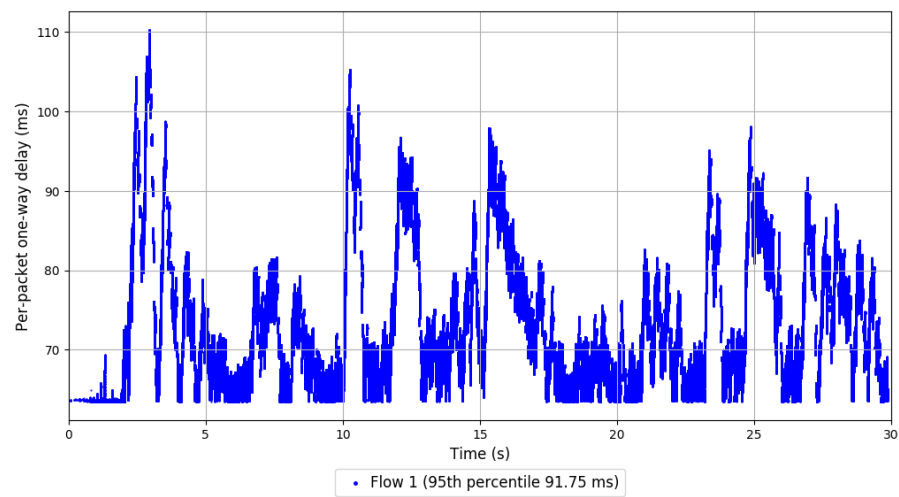
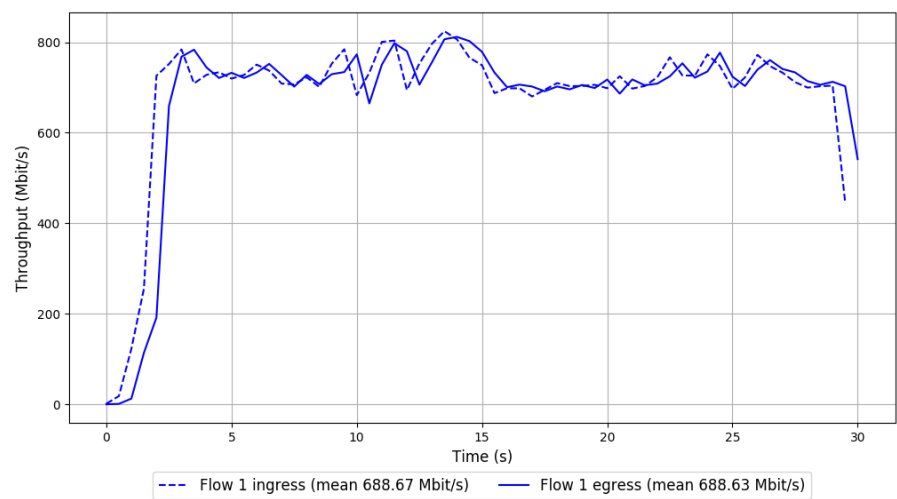
-- Flow 1:

Average throughput: 688.63 Mbit/s

95th percentile per-packet one-way delay: 91.749 ms

Loss rate: 0.01%

Run 2: Report of Indigo-Muses — Data Link

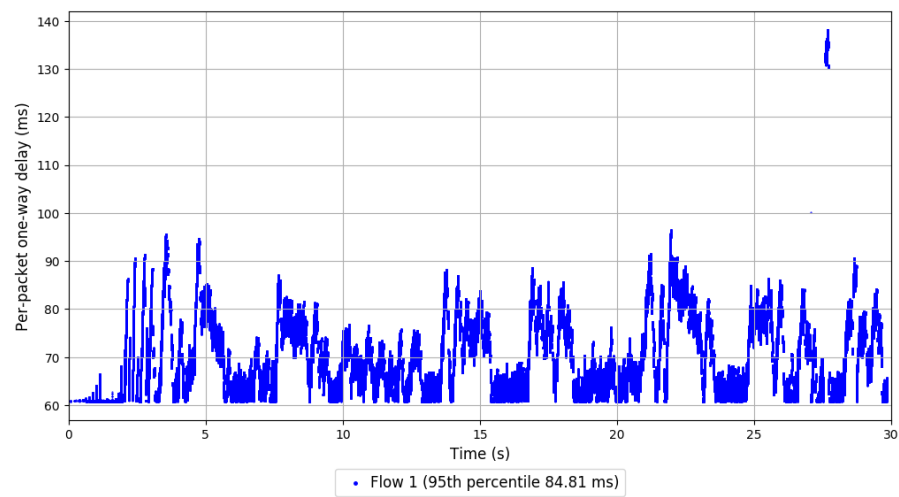
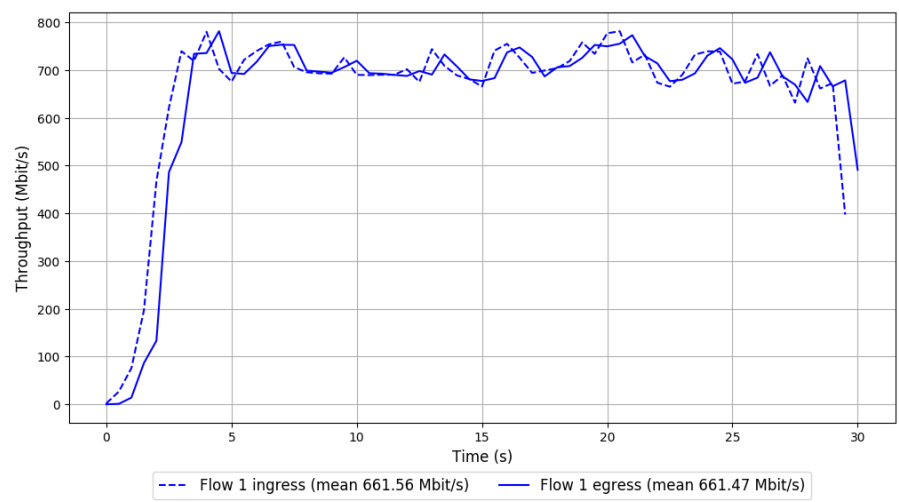


Run 3: Statistics of Indigo-Muses

Start at: 2018-09-25 15:48:02
End at: 2018-09-25 15:48:32
Local clock offset: -0.005 ms
Remote clock offset: -0.075 ms

Below is generated by plot.py at 2018-09-25 18:02:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 661.47 Mbit/s
95th percentile per-packet one-way delay: 84.806 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 661.47 Mbit/s
95th percentile per-packet one-way delay: 84.806 ms
Loss rate: 0.01%

Run 3: Report of Indigo-Muses — Data Link



Run 4: Statistics of Indigo-Muses

Start at: 2018-09-25 16:15:30

End at: 2018-09-25 16:16:00

Local clock offset: 0.02 ms

Remote clock offset: 0.619 ms

Below is generated by plot.py at 2018-09-25 18:04:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 670.37 Mbit/s

95th percentile per-packet one-way delay: 87.099 ms

Loss rate: 0.02%

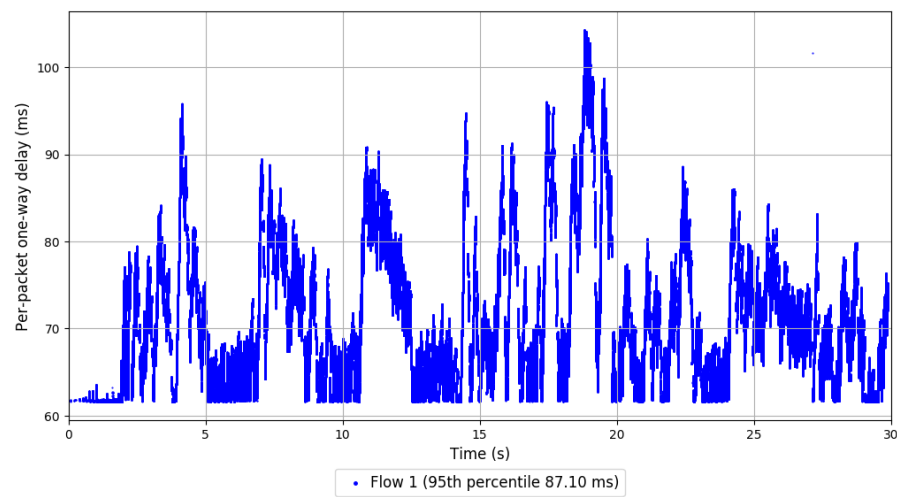
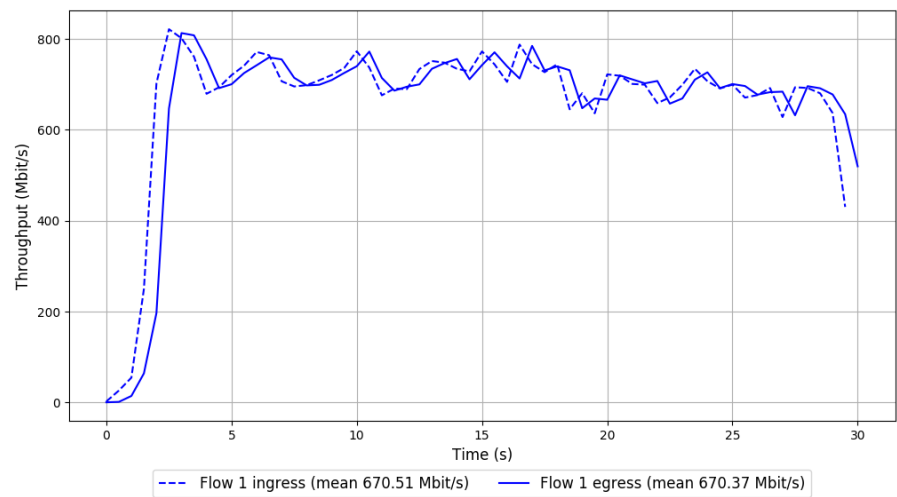
-- Flow 1:

Average throughput: 670.37 Mbit/s

95th percentile per-packet one-way delay: 87.099 ms

Loss rate: 0.02%

Run 4: Report of Indigo-Muses — Data Link



Run 5: Statistics of Indigo-Muses

Start at: 2018-09-25 16:42:51

End at: 2018-09-25 16:43:21

Local clock offset: -0.025 ms

Remote clock offset: 0.424 ms

Below is generated by plot.py at 2018-09-25 18:04:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 676.40 Mbit/s

95th percentile per-packet one-way delay: 85.509 ms

Loss rate: 0.05%

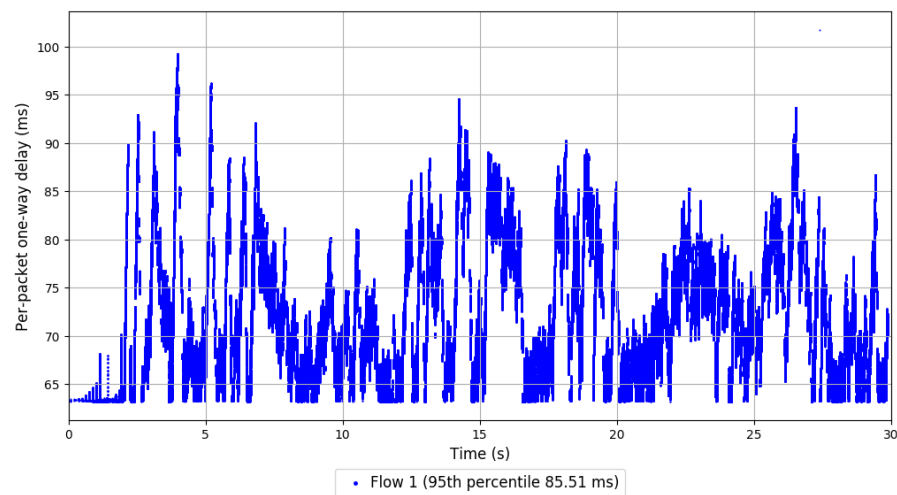
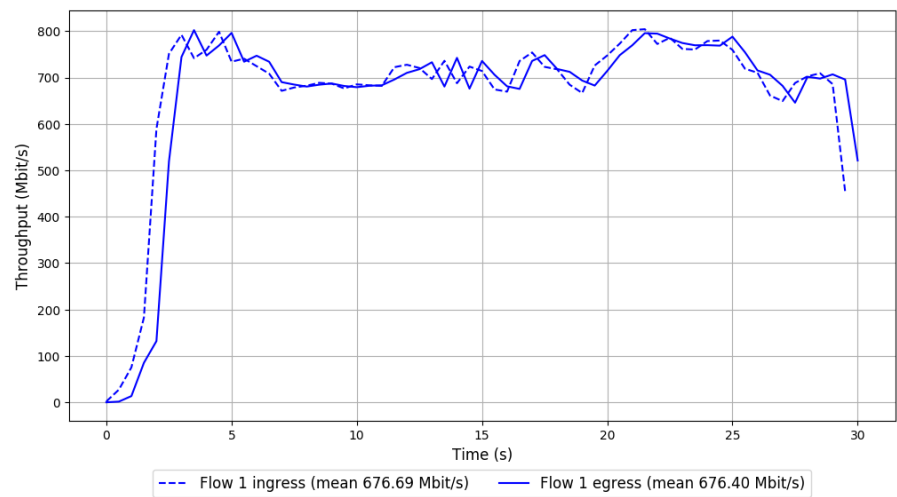
-- Flow 1:

Average throughput: 676.40 Mbit/s

95th percentile per-packet one-way delay: 85.509 ms

Loss rate: 0.05%

Run 5: Report of Indigo-Muses — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2018-09-25 15:03:03

End at: 2018-09-25 15:03:33

Local clock offset: -0.018 ms

Remote clock offset: -0.138 ms

Below is generated by plot.py at 2018-09-25 18:06:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 443.60 Mbit/s

95th percentile per-packet one-way delay: 146.859 ms

Loss rate: 0.64%

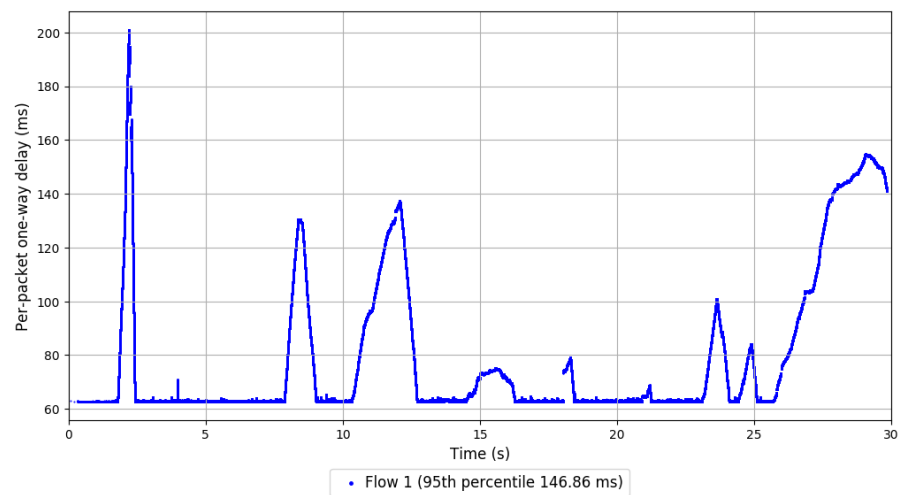
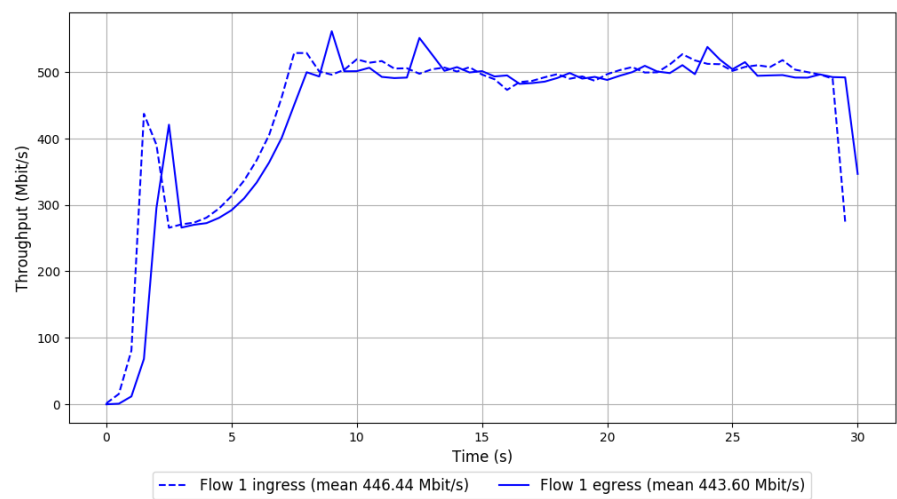
-- Flow 1:

Average throughput: 443.60 Mbit/s

95th percentile per-packet one-way delay: 146.859 ms

Loss rate: 0.64%

Run 1: Report of PCC-Allegro — Data Link

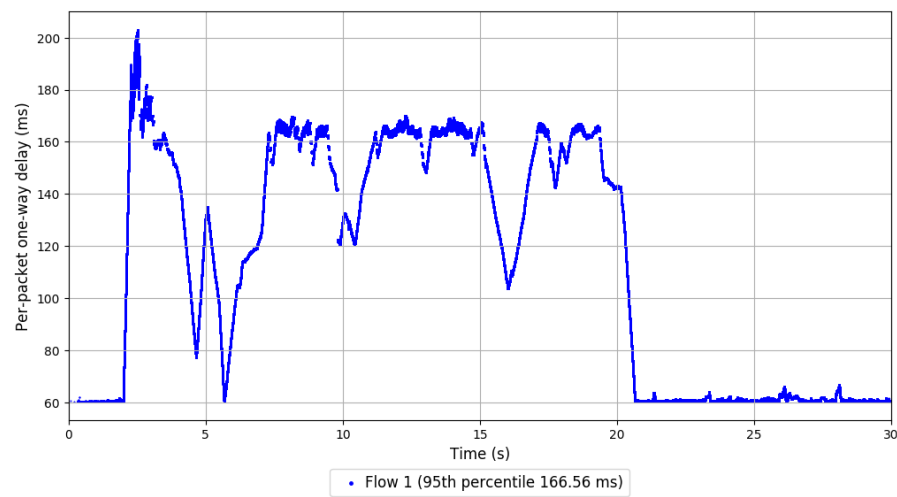
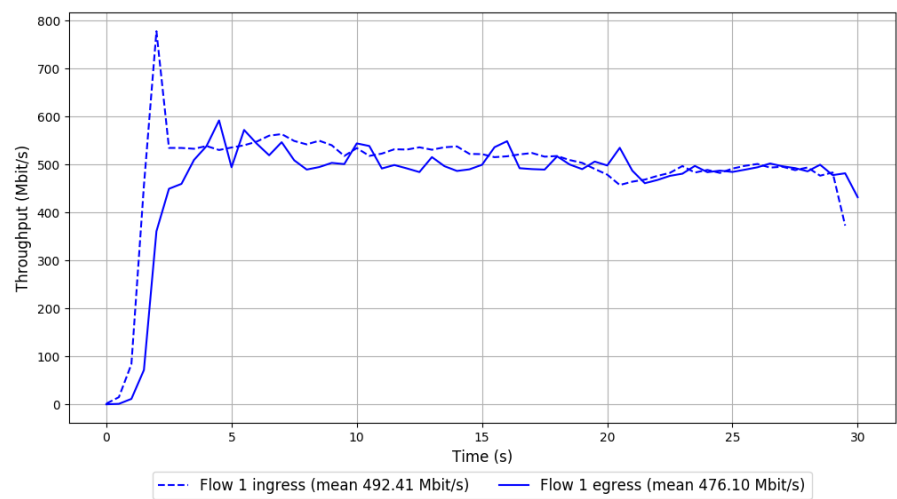


Run 2: Statistics of PCC-Allegro

Start at: 2018-09-25 15:30:38
End at: 2018-09-25 15:31:08
Local clock offset: -0.002 ms
Remote clock offset: -0.502 ms

Below is generated by plot.py at 2018-09-25 18:09:37
Datalink statistics
-- Total of 1 flow:
Average throughput: 476.10 Mbit/s
95th percentile per-packet one-way delay: 166.562 ms
Loss rate: 3.31%
-- Flow 1:
Average throughput: 476.10 Mbit/s
95th percentile per-packet one-way delay: 166.562 ms
Loss rate: 3.31%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-09-25 15:57:54

End at: 2018-09-25 15:58:24

Local clock offset: -0.009 ms

Remote clock offset: 0.168 ms

Below is generated by plot.py at 2018-09-25 18:11:19

Datalink statistics

-- Total of 1 flow:

Average throughput: 451.38 Mbit/s

95th percentile per-packet one-way delay: 165.021 ms

Loss rate: 2.22%

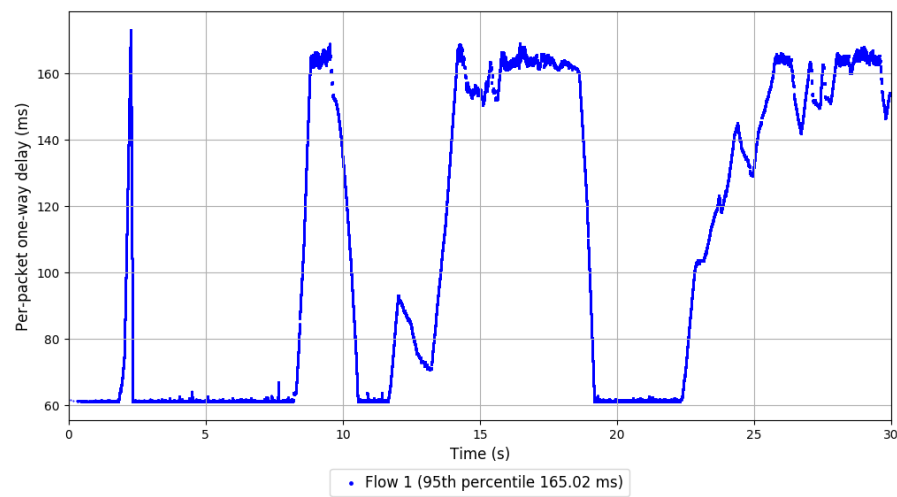
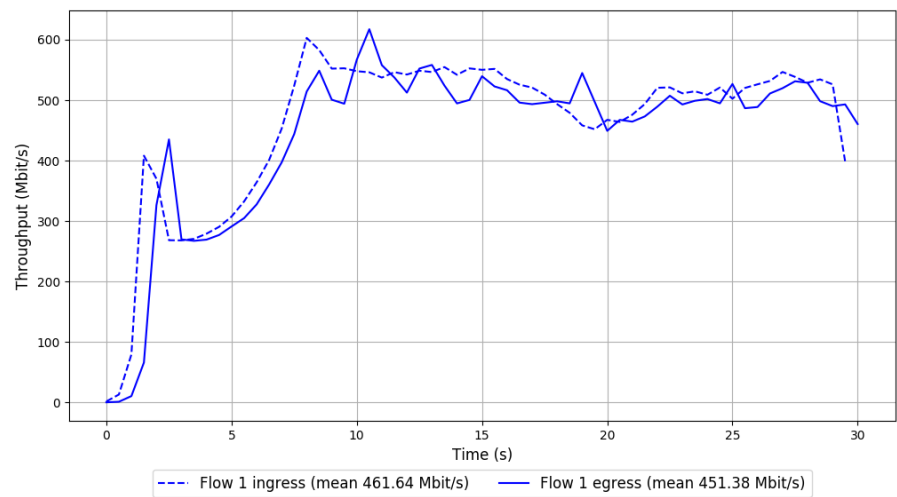
-- Flow 1:

Average throughput: 451.38 Mbit/s

95th percentile per-packet one-way delay: 165.021 ms

Loss rate: 2.22%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-09-25 16:25:25

End at: 2018-09-25 16:25:55

Local clock offset: 0.182 ms

Remote clock offset: -0.772 ms

Below is generated by plot.py at 2018-09-25 18:12:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 460.91 Mbit/s

95th percentile per-packet one-way delay: 171.074 ms

Loss rate: 2.15%

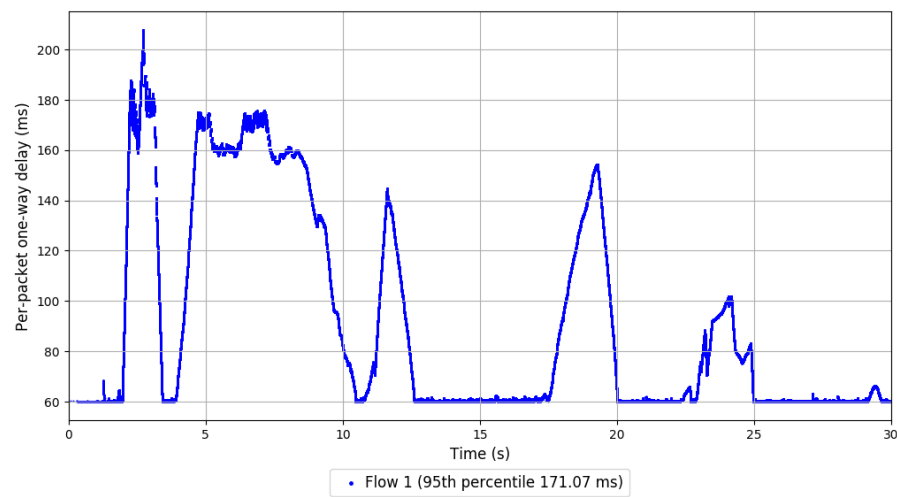
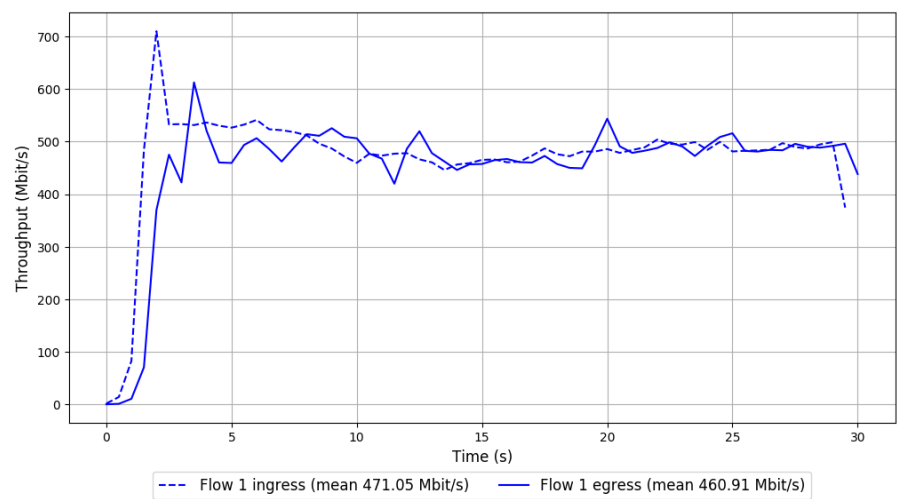
-- Flow 1:

Average throughput: 460.91 Mbit/s

95th percentile per-packet one-way delay: 171.074 ms

Loss rate: 2.15%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-09-25 16:52:47

End at: 2018-09-25 16:53:17

Local clock offset: 0.023 ms

Remote clock offset: -1.351 ms

Below is generated by plot.py at 2018-09-25 18:17:43

Datalink statistics

-- Total of 1 flow:

Average throughput: 482.31 Mbit/s

95th percentile per-packet one-way delay: 160.916 ms

Loss rate: 0.54%

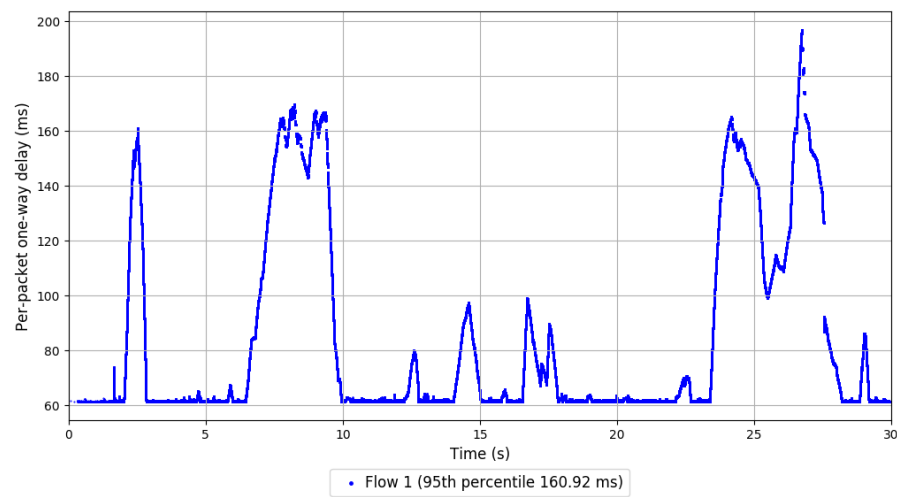
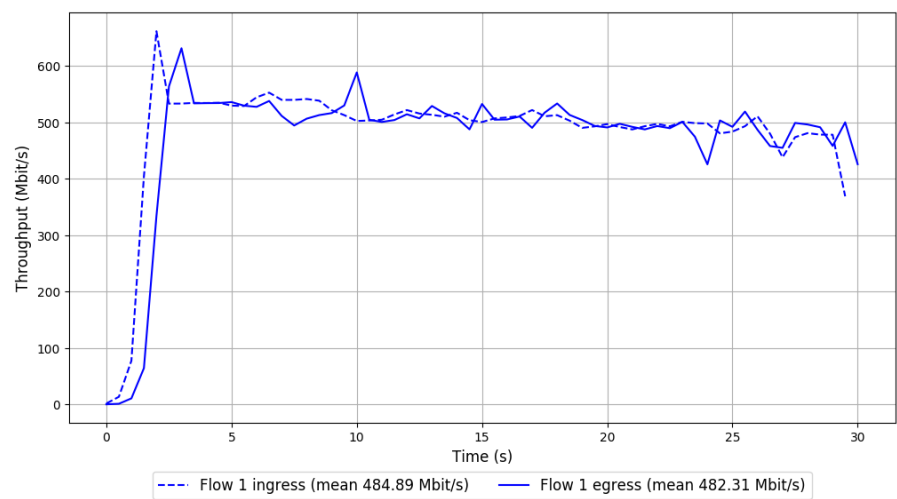
-- Flow 1:

Average throughput: 482.31 Mbit/s

95th percentile per-packet one-way delay: 160.916 ms

Loss rate: 0.54%

Run 5: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

Start at: 2018-09-25 14:59:51

End at: 2018-09-25 15:00:21

Local clock offset: -0.006 ms

Remote clock offset: -0.95 ms

Below is generated by plot.py at 2018-09-25 18:17:43

Datalink statistics

-- Total of 1 flow:

Average throughput: 358.77 Mbit/s

95th percentile per-packet one-way delay: 146.265 ms

Loss rate: 0.85%

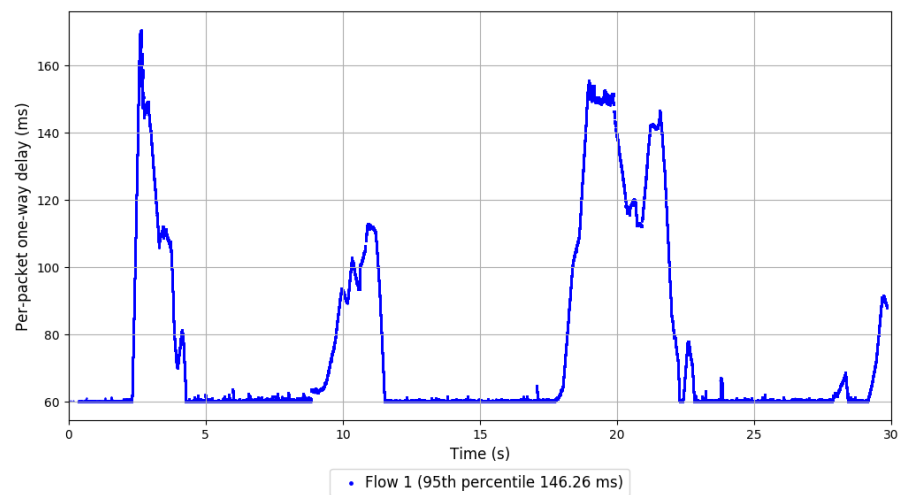
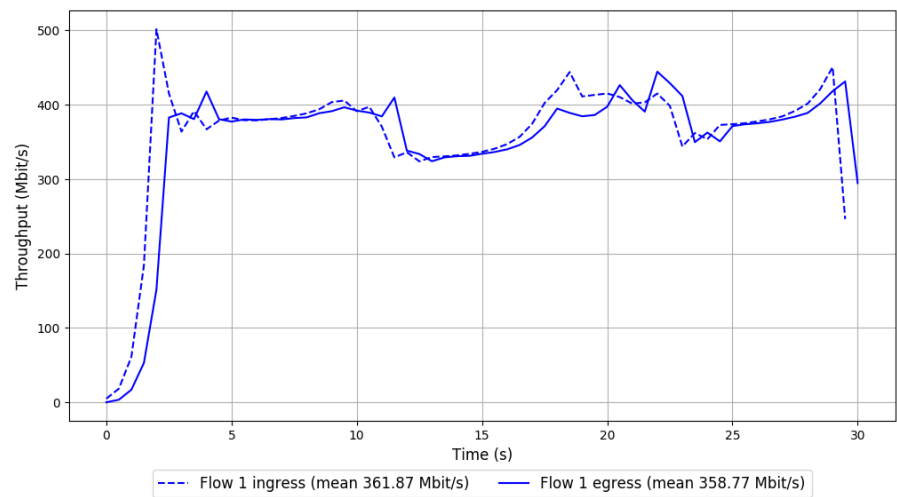
-- Flow 1:

Average throughput: 358.77 Mbit/s

95th percentile per-packet one-way delay: 146.265 ms

Loss rate: 0.85%

Run 1: Report of PCC-Expr — Data Link

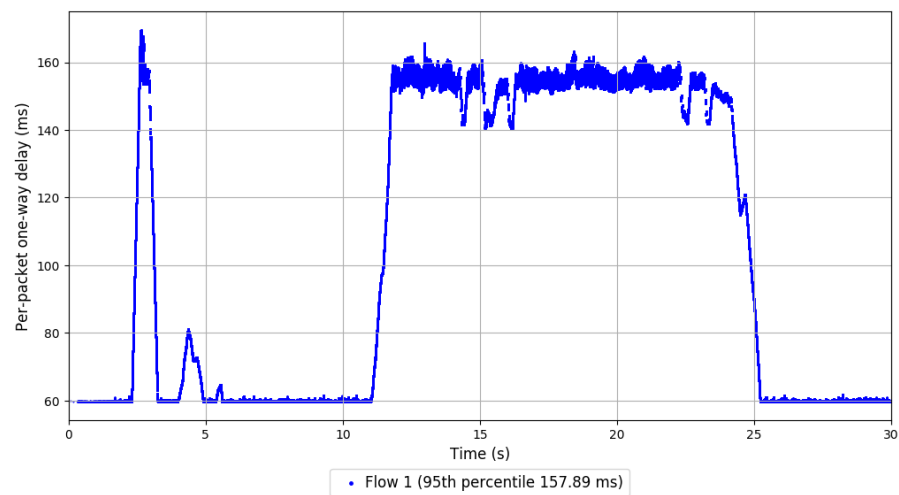
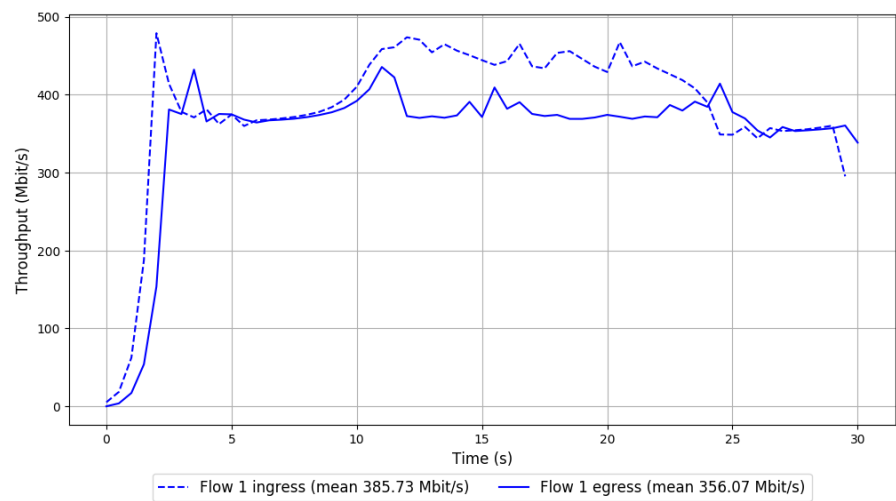


Run 2: Statistics of PCC-Expr

Start at: 2018-09-25 15:27:24
End at: 2018-09-25 15:27:54
Local clock offset: -0.019 ms
Remote clock offset: -1.323 ms

Below is generated by plot.py at 2018-09-25 18:17:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 356.07 Mbit/s
95th percentile per-packet one-way delay: 157.891 ms
Loss rate: 7.69%
-- Flow 1:
Average throughput: 356.07 Mbit/s
95th percentile per-packet one-way delay: 157.891 ms
Loss rate: 7.69%

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2018-09-25 15:54:46

End at: 2018-09-25 15:55:16

Local clock offset: 0.009 ms

Remote clock offset: 0.686 ms

Below is generated by plot.py at 2018-09-25 18:17:43

Datalink statistics

-- Total of 1 flow:

Average throughput: 347.39 Mbit/s

95th percentile per-packet one-way delay: 153.279 ms

Loss rate: 1.13%

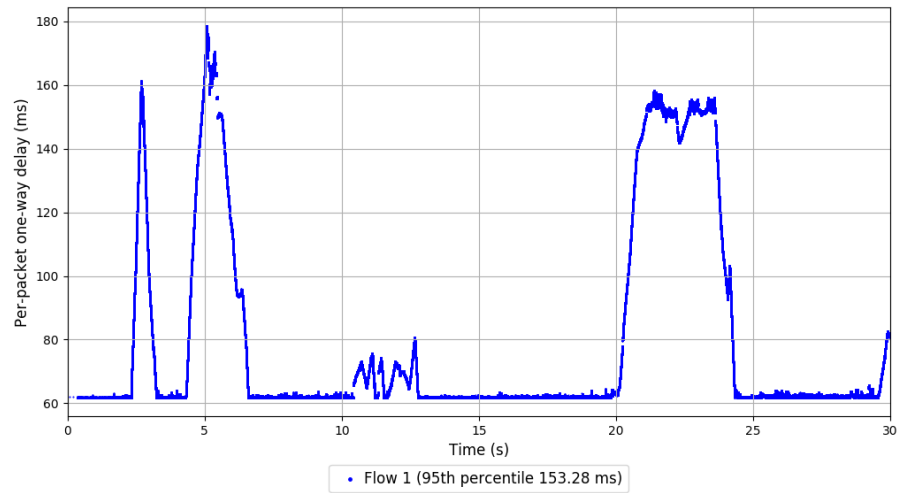
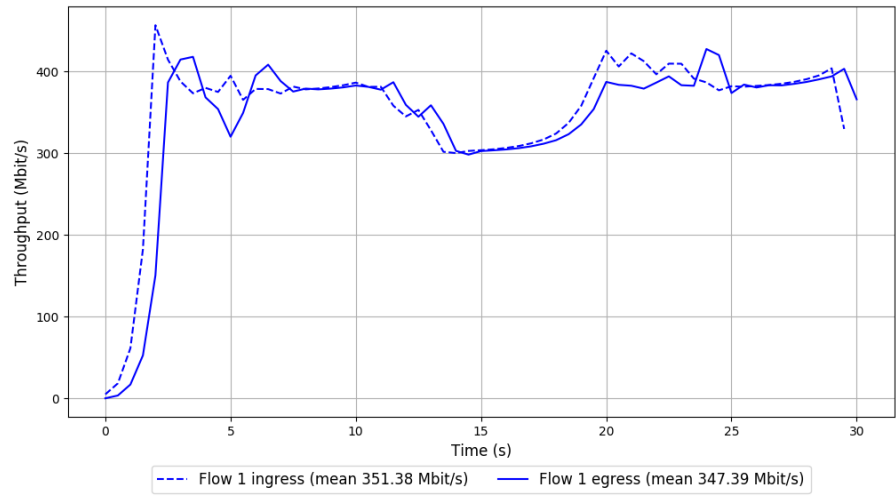
-- Flow 1:

Average throughput: 347.39 Mbit/s

95th percentile per-packet one-way delay: 153.279 ms

Loss rate: 1.13%

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

Start at: 2018-09-25 16:22:14

End at: 2018-09-25 16:22:44

Local clock offset: -0.018 ms

Remote clock offset: -0.0 ms

Below is generated by plot.py at 2018-09-25 18:18:45

Datalink statistics

-- Total of 1 flow:

Average throughput: 342.39 Mbit/s

95th percentile per-packet one-way delay: 156.340 ms

Loss rate: 2.36%

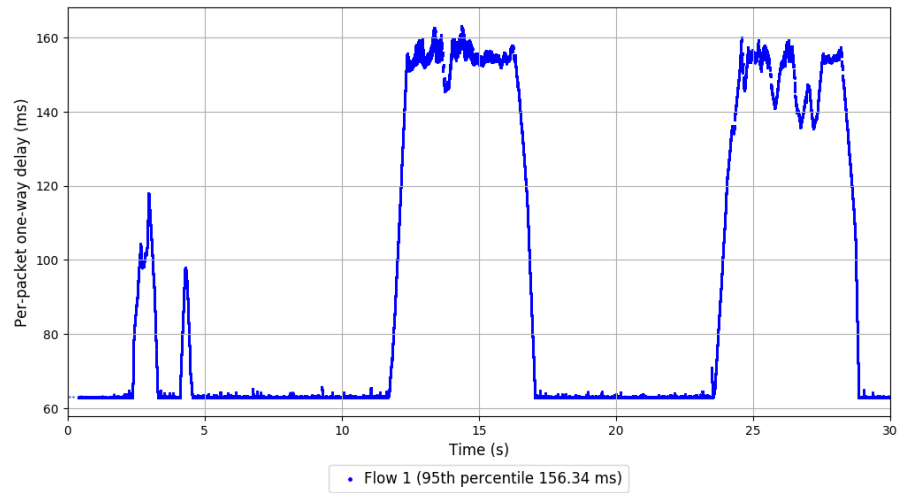
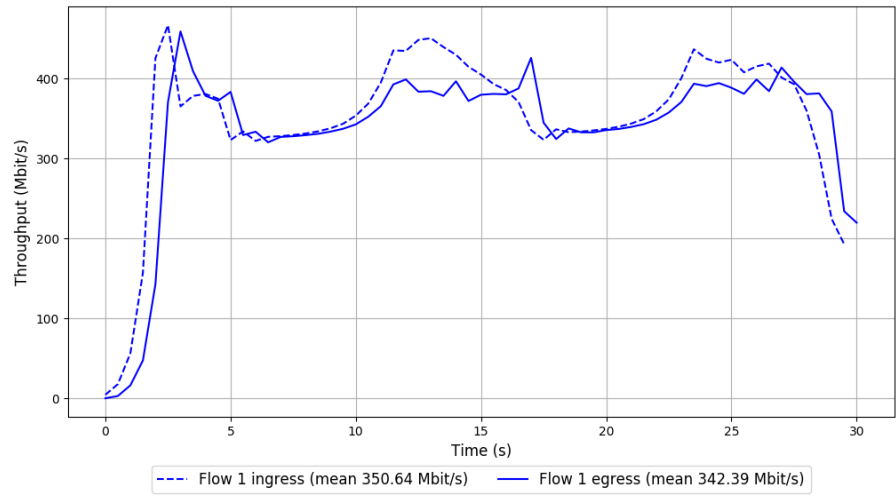
-- Flow 1:

Average throughput: 342.39 Mbit/s

95th percentile per-packet one-way delay: 156.340 ms

Loss rate: 2.36%

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

Start at: 2018-09-25 16:49:35

End at: 2018-09-25 16:50:05

Local clock offset: -0.003 ms

Remote clock offset: 0.353 ms

Below is generated by plot.py at 2018-09-25 18:22:22

Datalink statistics

-- Total of 1 flow:

Average throughput: 374.07 Mbit/s

95th percentile per-packet one-way delay: 140.395 ms

Loss rate: 0.70%

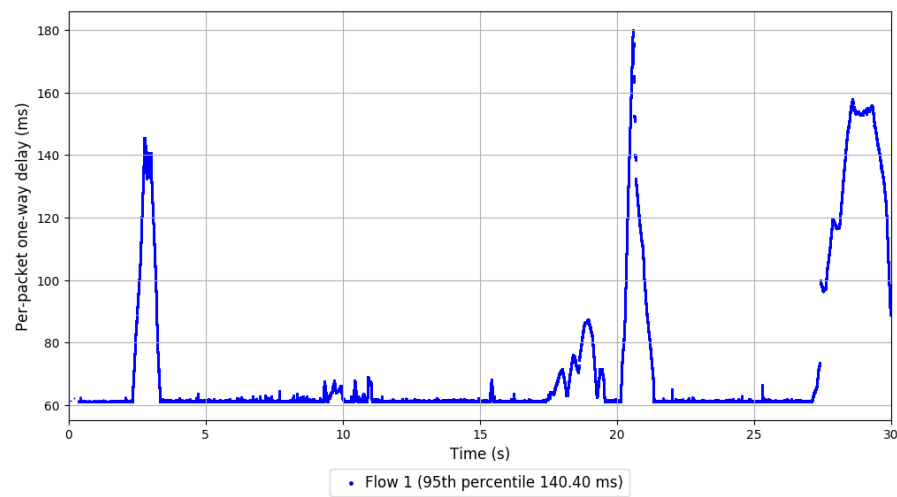
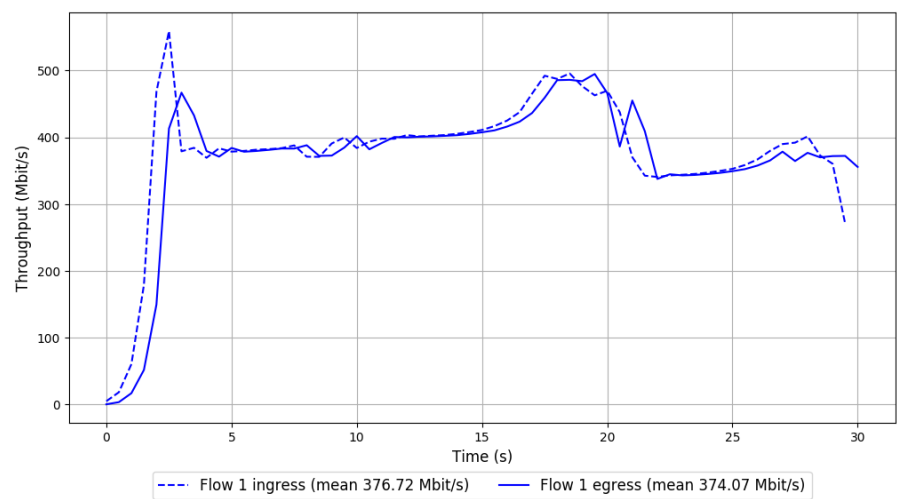
-- Flow 1:

Average throughput: 374.07 Mbit/s

95th percentile per-packet one-way delay: 140.395 ms

Loss rate: 0.70%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

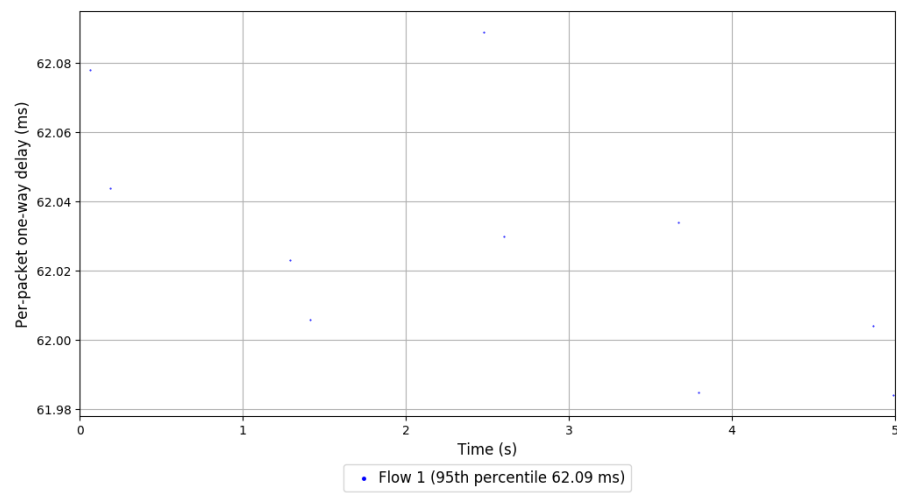
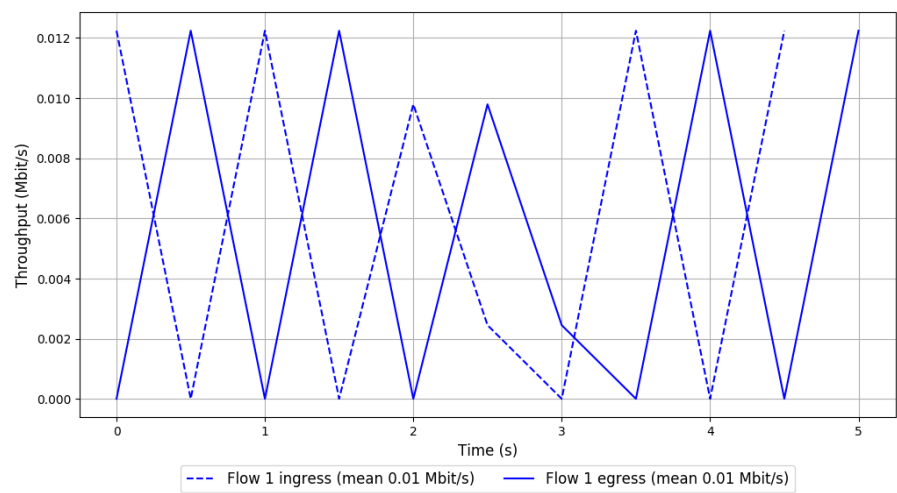
Start at: 2018-09-25 15:04:38

End at: 2018-09-25 15:05:08

Local clock offset: 0.093 ms

Remote clock offset: 1.165 ms

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-09-25 15:32:15

End at: 2018-09-25 15:32:45

Local clock offset: -0.023 ms

Remote clock offset: 0.684 ms

Below is generated by plot.py at 2018-09-25 18:22:22

Datalink statistics

-- Total of 1 flow:

Average throughput: 74.97 Mbit/s

95th percentile per-packet one-way delay: 63.565 ms

Loss rate: 0.00%

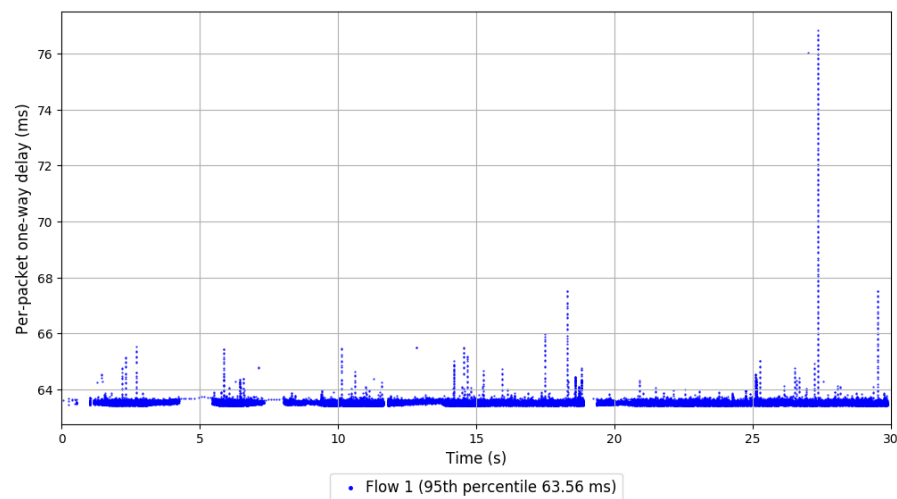
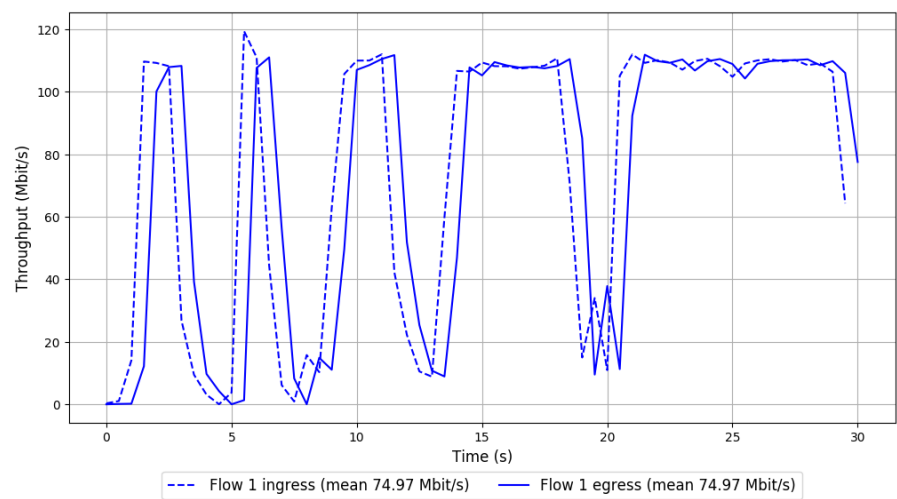
-- Flow 1:

Average throughput: 74.97 Mbit/s

95th percentile per-packet one-way delay: 63.565 ms

Loss rate: 0.00%

Run 2: Report of QUIC Cubic — Data Link

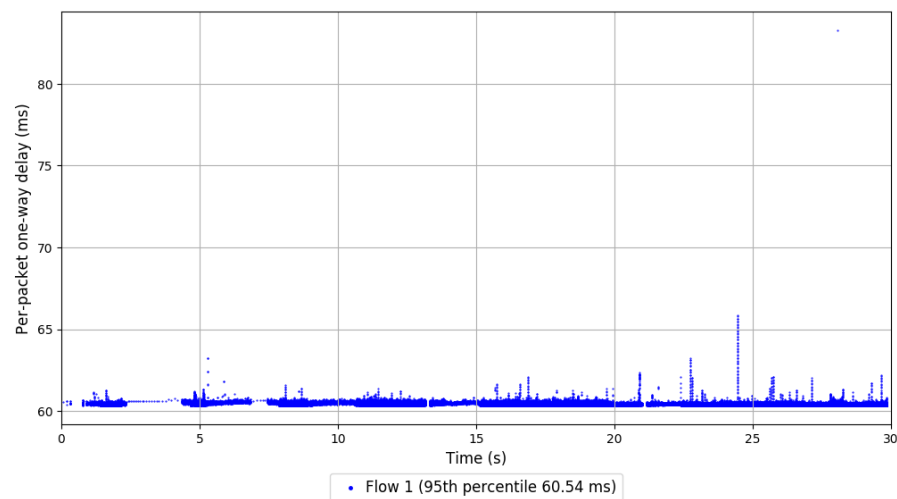
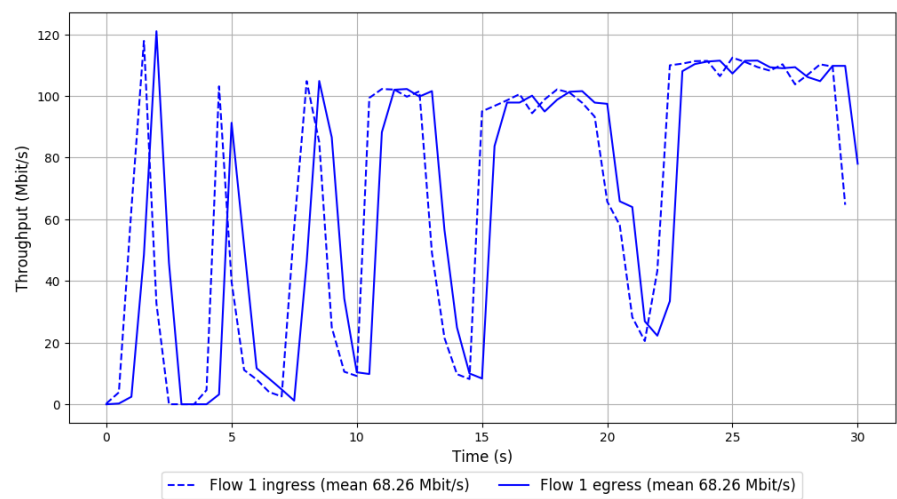


Run 3: Statistics of QUIC Cubic

Start at: 2018-09-25 15:59:30
End at: 2018-09-25 16:00:00
Local clock offset: 0.022 ms
Remote clock offset: -0.351 ms

Below is generated by plot.py at 2018-09-25 18:22:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 68.26 Mbit/s
95th percentile per-packet one-way delay: 60.540 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 68.26 Mbit/s
95th percentile per-packet one-way delay: 60.540 ms
Loss rate: 0.00%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-09-25 16:27:01

End at: 2018-09-25 16:27:31

Local clock offset: 0.017 ms

Remote clock offset: -1.46 ms

Below is generated by plot.py at 2018-09-25 18:22:22

Datalink statistics

-- Total of 1 flow:

Average throughput: 62.92 Mbit/s

95th percentile per-packet one-way delay: 59.562 ms

Loss rate: 0.00%

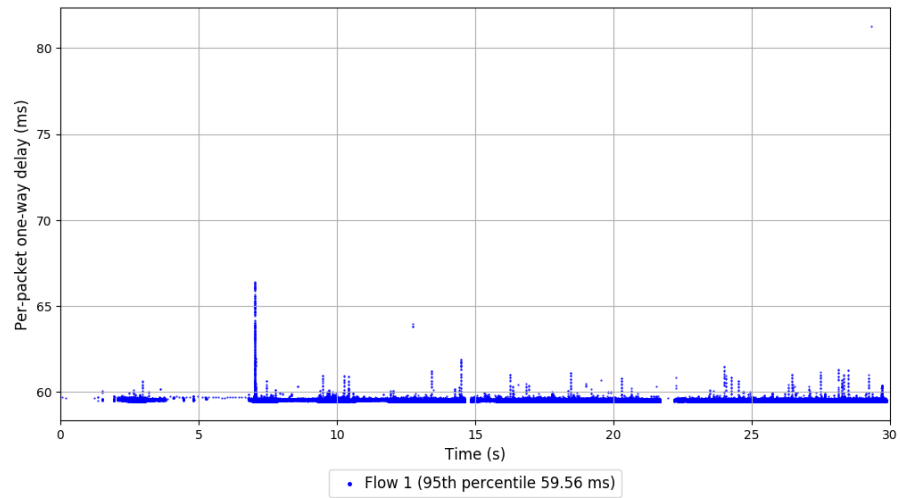
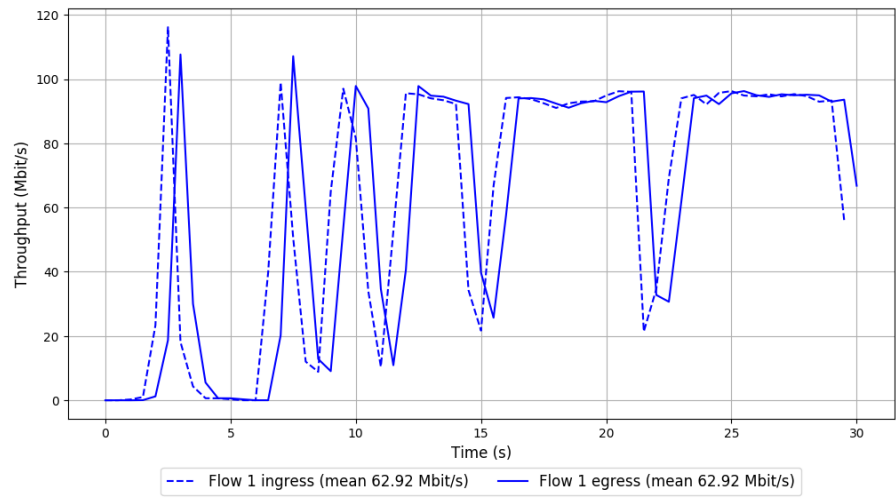
-- Flow 1:

Average throughput: 62.92 Mbit/s

95th percentile per-packet one-way delay: 59.562 ms

Loss rate: 0.00%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-09-25 16:54:24

End at: 2018-09-25 16:54:54

Local clock offset: 0.026 ms

Remote clock offset: -0.021 ms

Below is generated by plot.py at 2018-09-25 18:22:22

Datalink statistics

-- Total of 1 flow:

Average throughput: 69.99 Mbit/s

95th percentile per-packet one-way delay: 62.789 ms

Loss rate: 0.01%

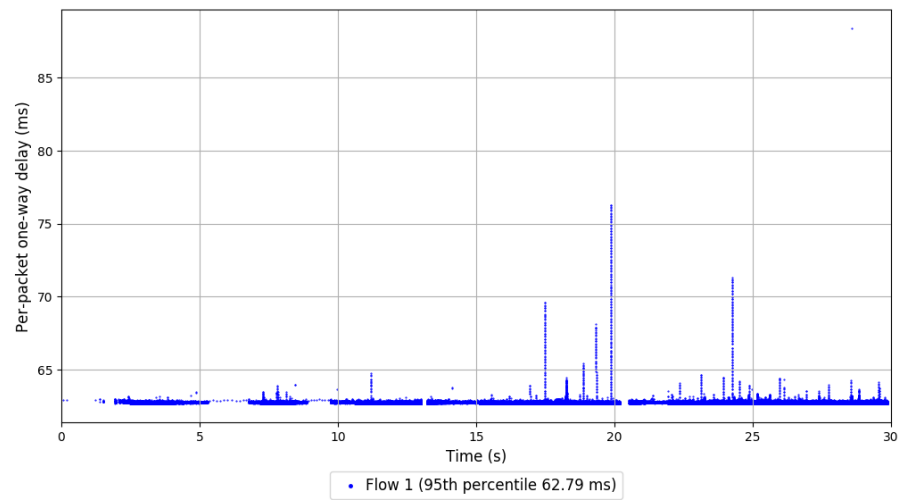
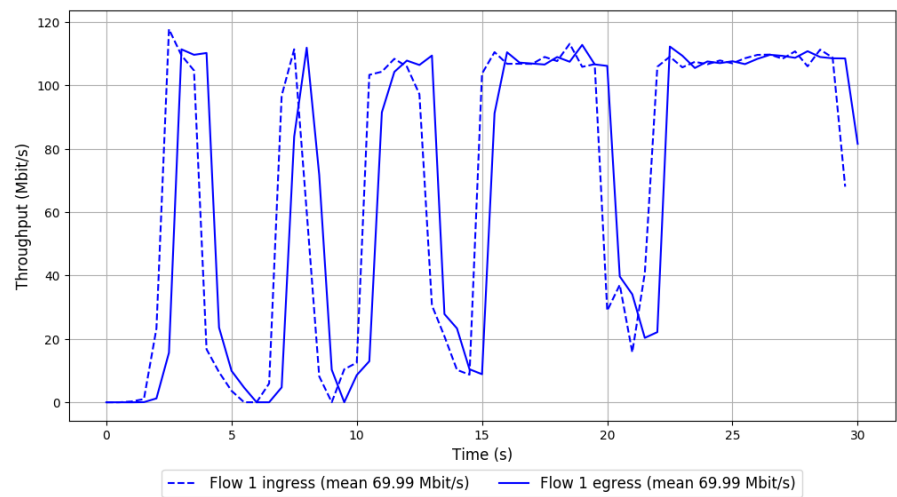
-- Flow 1:

Average throughput: 69.99 Mbit/s

95th percentile per-packet one-way delay: 62.789 ms

Loss rate: 0.01%

Run 5: Report of QUIC Cubic — Data Link

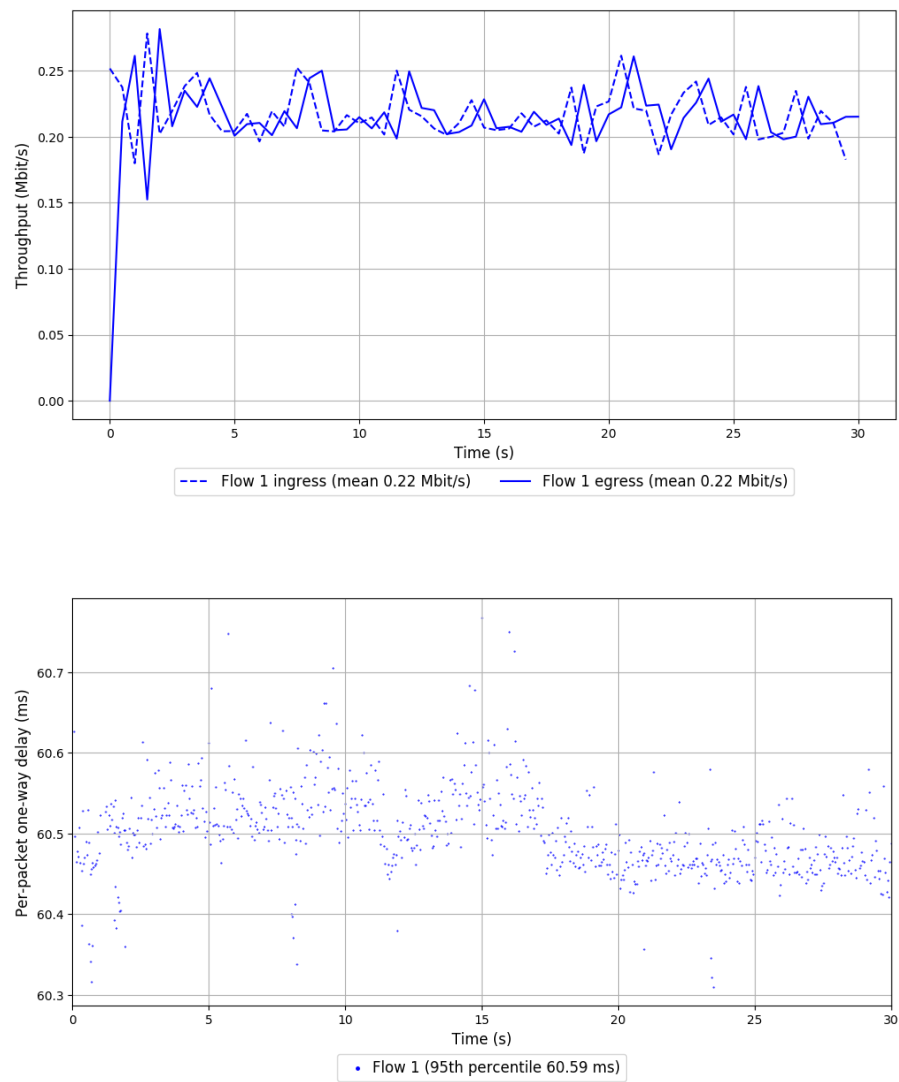


Run 1: Statistics of SCReAM

Start at: 2018-09-25 14:41:51
End at: 2018-09-25 14:42:21
Local clock offset: -0.129 ms
Remote clock offset: -0.878 ms

Below is generated by plot.py at 2018-09-25 18:22:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.589 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.589 ms
Loss rate: 0.00%

Run 1: Report of SReAM — Data Link

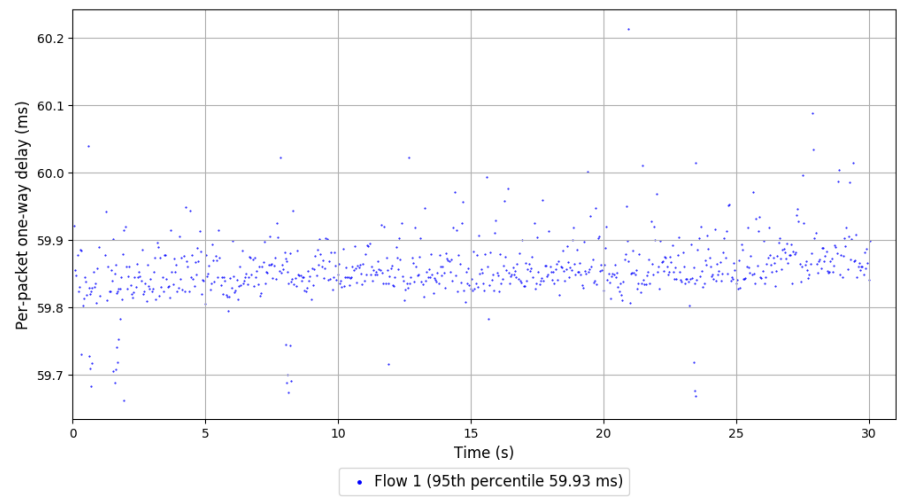
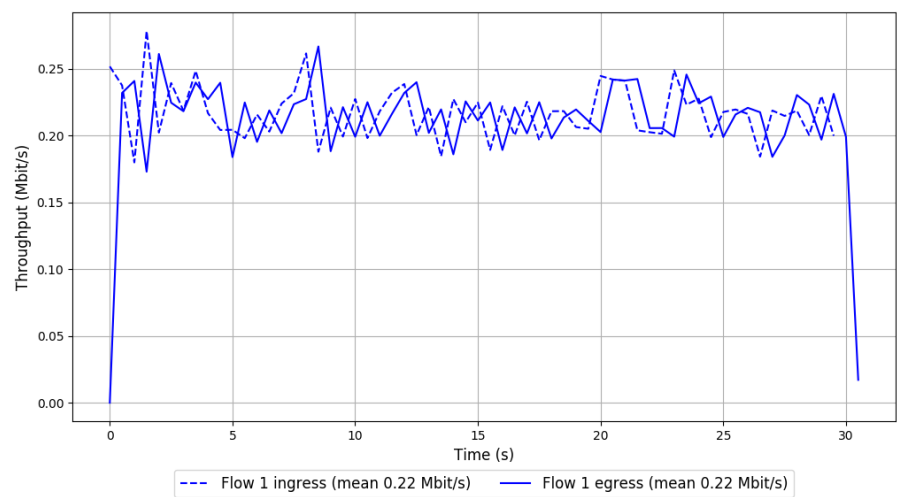


Run 2: Statistics of SCReAM

Start at: 2018-09-25 15:08:50
End at: 2018-09-25 15:09:20
Local clock offset: -0.034 ms
Remote clock offset: -1.145 ms

Below is generated by plot.py at 2018-09-25 18:22:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 59.928 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 59.928 ms
Loss rate: 0.00%

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2018-09-25 15:36:30

End at: 2018-09-25 15:37:00

Local clock offset: -0.015 ms

Remote clock offset: 0.05 ms

Below is generated by plot.py at 2018-09-25 18:22:22

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 61.385 ms

Loss rate: 0.00%

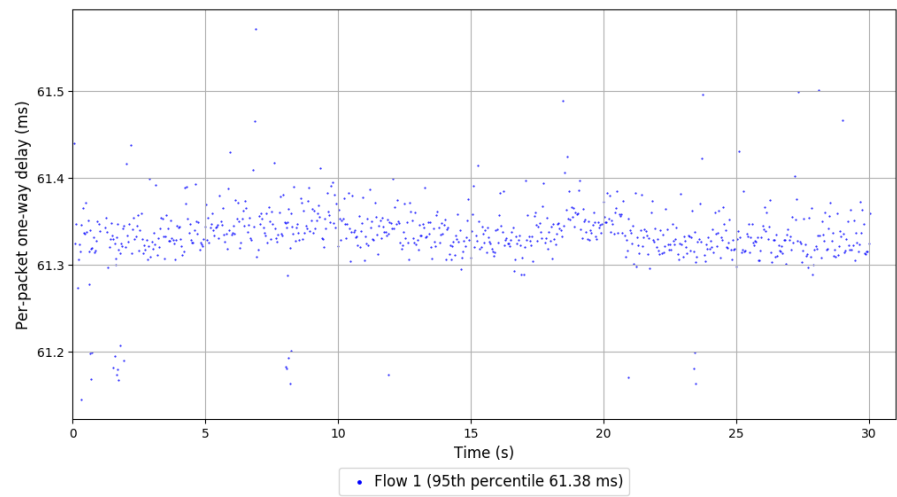
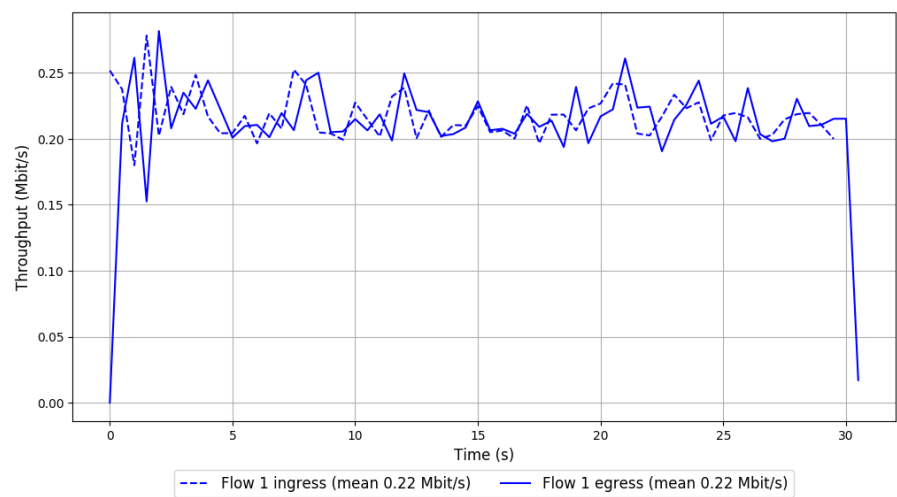
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 61.385 ms

Loss rate: 0.00%

Run 3: Report of SReAM — Data Link

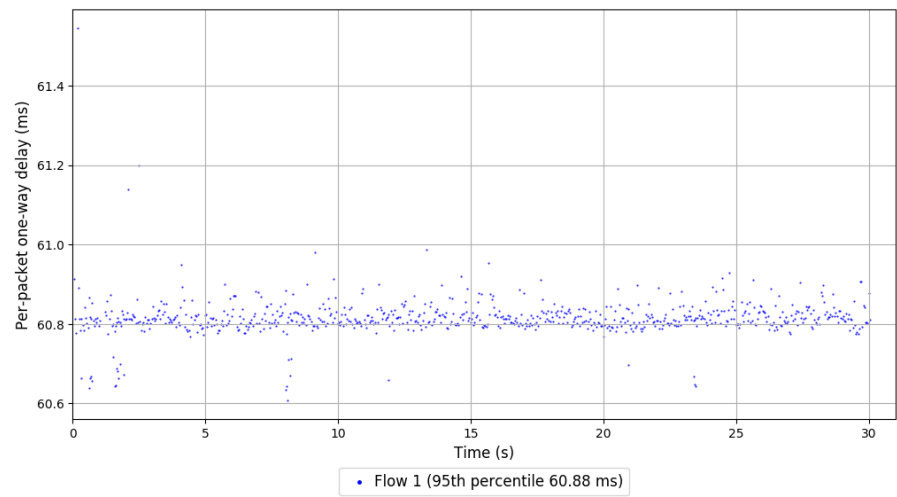
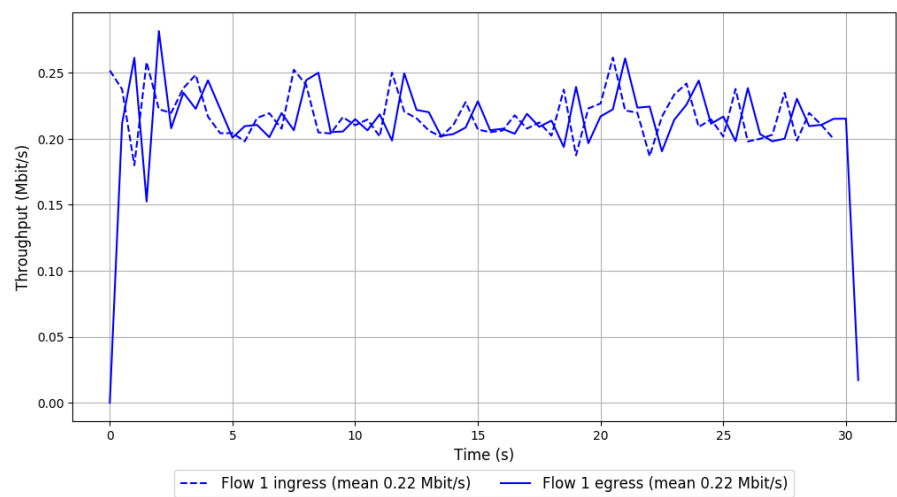


Run 4: Statistics of SCReAM

Start at: 2018-09-25 16:03:46
End at: 2018-09-25 16:04:16
Local clock offset: 0.007 ms
Remote clock offset: -0.196 ms

Below is generated by plot.py at 2018-09-25 18:22:23
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.879 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.879 ms
Loss rate: 0.00%

Run 4: Report of SReAM — Data Link

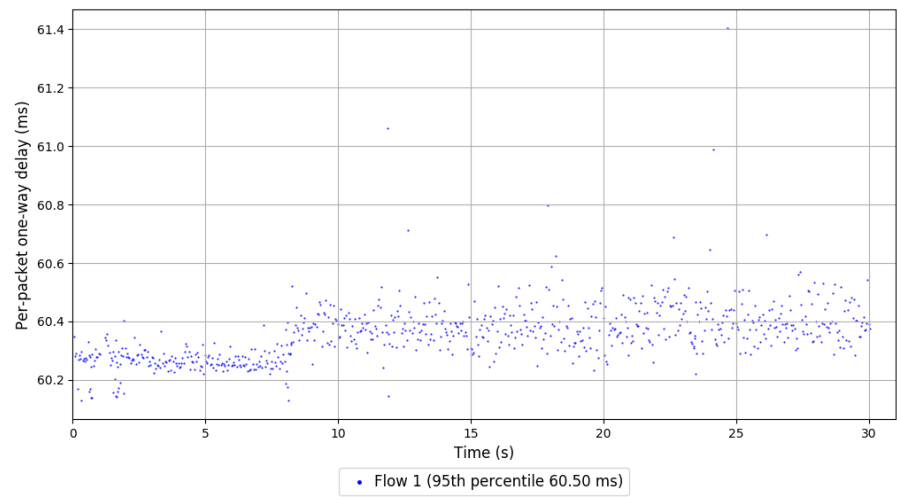
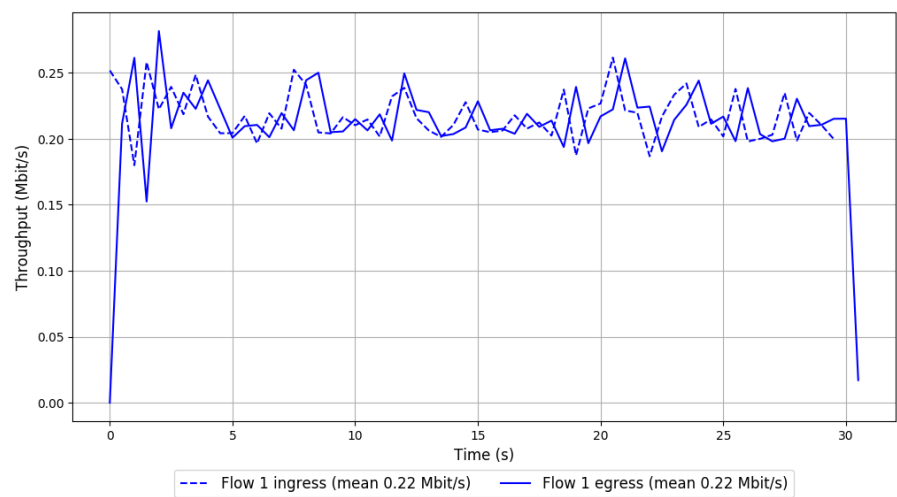


Run 5: Statistics of SCReAM

Start at: 2018-09-25 16:31:17
End at: 2018-09-25 16:31:47
Local clock offset: 0.024 ms
Remote clock offset: -0.986 ms

Below is generated by plot.py at 2018-09-25 18:22:23
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.504 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.504 ms
Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2018-09-25 14:55:54

End at: 2018-09-25 14:56:24

Local clock offset: -0.035 ms

Remote clock offset: 0.339 ms

Below is generated by plot.py at 2018-09-25 18:22:23

Datalink statistics

-- Total of 1 flow:

Average throughput: 6.82 Mbit/s

95th percentile per-packet one-way delay: 62.343 ms

Loss rate: 0.00%

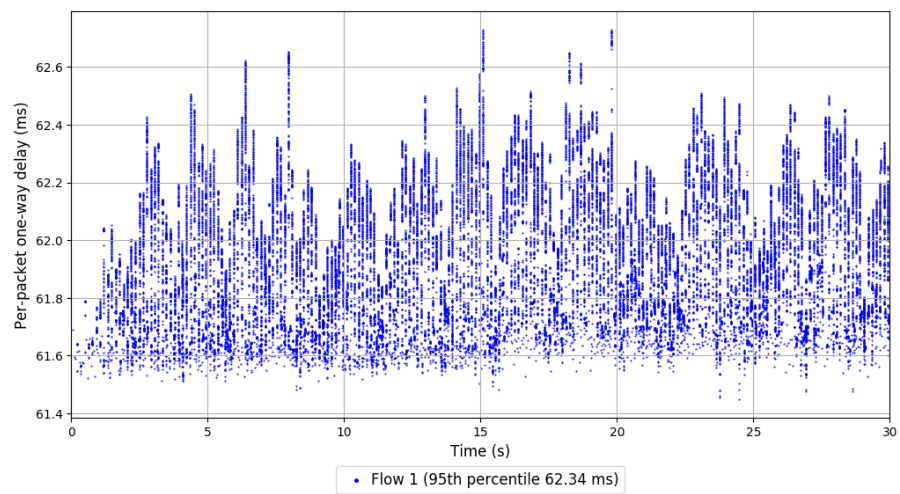
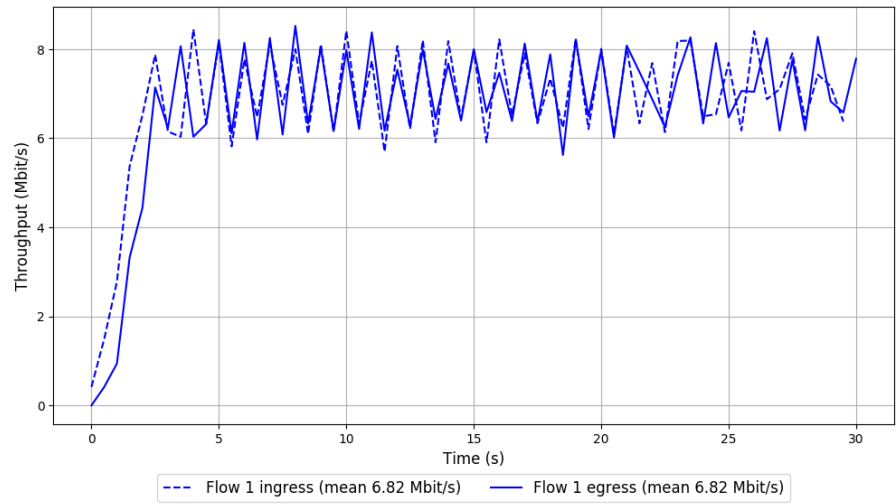
-- Flow 1:

Average throughput: 6.82 Mbit/s

95th percentile per-packet one-way delay: 62.343 ms

Loss rate: 0.00%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-09-25 15:23:28

End at: 2018-09-25 15:23:58

Local clock offset: -0.031 ms

Remote clock offset: 0.704 ms

Below is generated by plot.py at 2018-09-25 18:22:23

Datalink statistics

-- Total of 1 flow:

Average throughput: 6.79 Mbit/s

95th percentile per-packet one-way delay: 64.692 ms

Loss rate: 0.00%

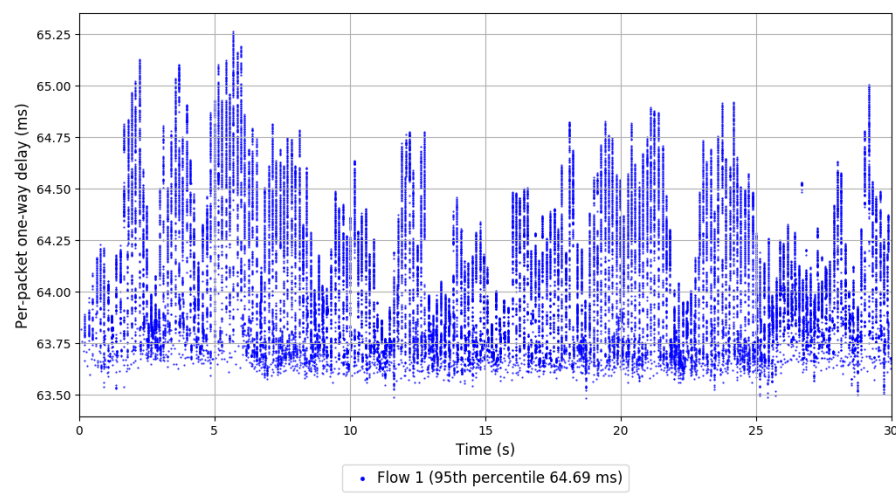
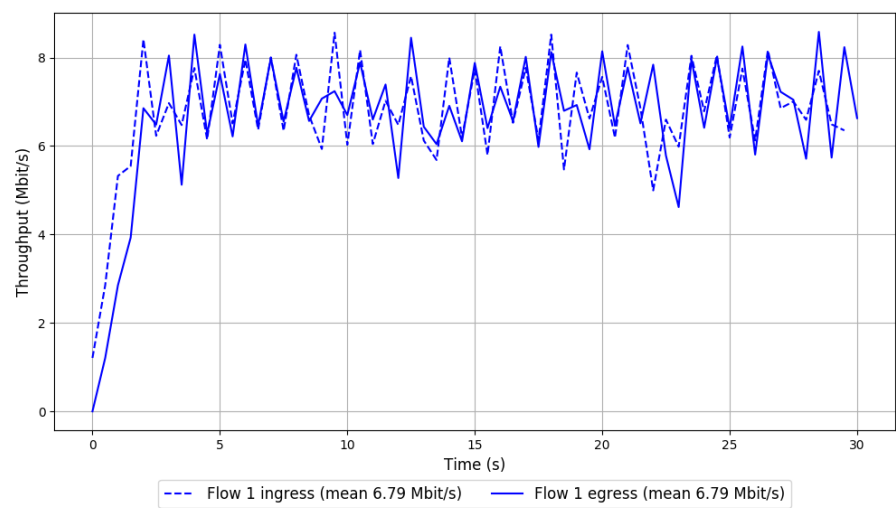
-- Flow 1:

Average throughput: 6.79 Mbit/s

95th percentile per-packet one-way delay: 64.692 ms

Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

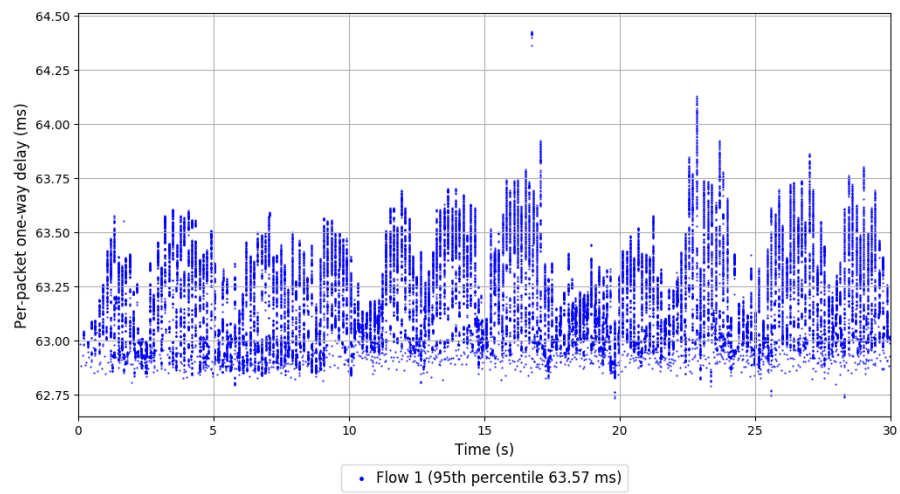
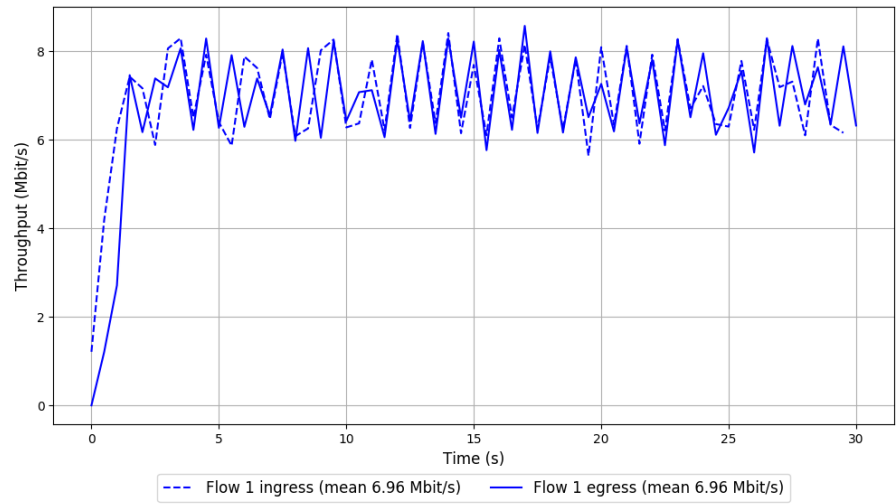


Run 3: Statistics of Sprout

Start at: 2018-09-25 15:50:49
End at: 2018-09-25 15:51:19
Local clock offset: 0.009 ms
Remote clock offset: -0.047 ms

Below is generated by plot.py at 2018-09-25 18:22:23
Datalink statistics
-- Total of 1 flow:
Average throughput: 6.96 Mbit/s
95th percentile per-packet one-way delay: 63.573 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.96 Mbit/s
95th percentile per-packet one-way delay: 63.573 ms
Loss rate: 0.00%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2018-09-25 16:18:19

End at: 2018-09-25 16:18:49

Local clock offset: 0.044 ms

Remote clock offset: 0.178 ms

Below is generated by plot.py at 2018-09-25 18:22:23

Datalink statistics

-- Total of 1 flow:

Average throughput: 7.01 Mbit/s

95th percentile per-packet one-way delay: 62.105 ms

Loss rate: 0.00%

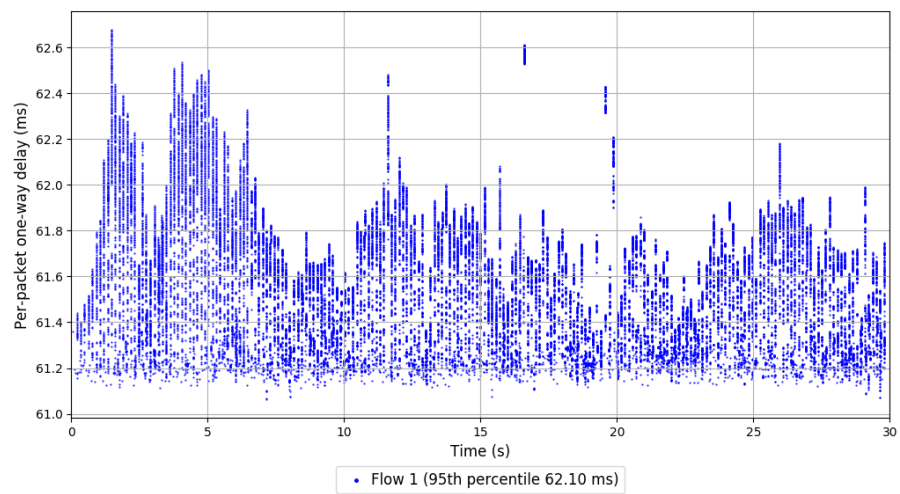
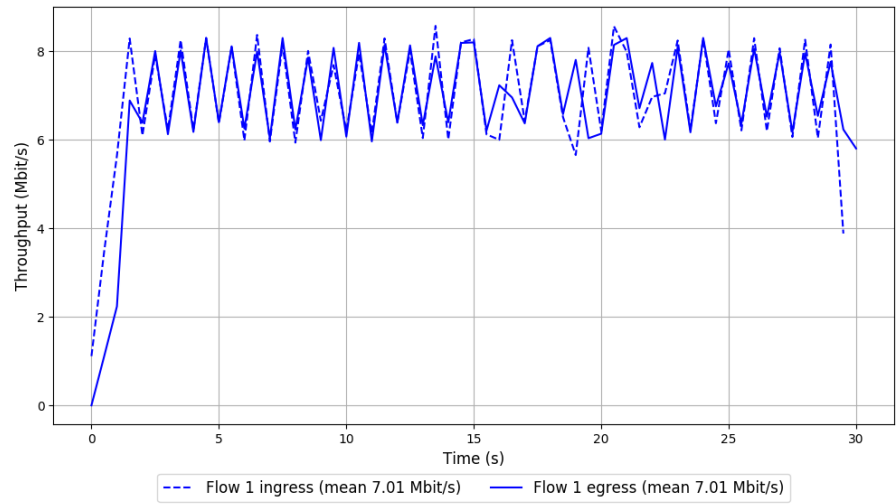
-- Flow 1:

Average throughput: 7.01 Mbit/s

95th percentile per-packet one-way delay: 62.105 ms

Loss rate: 0.00%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-09-25 16:45:39

End at: 2018-09-25 16:46:09

Local clock offset: 0.082 ms

Remote clock offset: 0.281 ms

Below is generated by plot.py at 2018-09-25 18:22:23

Datalink statistics

-- Total of 1 flow:

Average throughput: 6.94 Mbit/s

95th percentile per-packet one-way delay: 63.824 ms

Loss rate: 0.00%

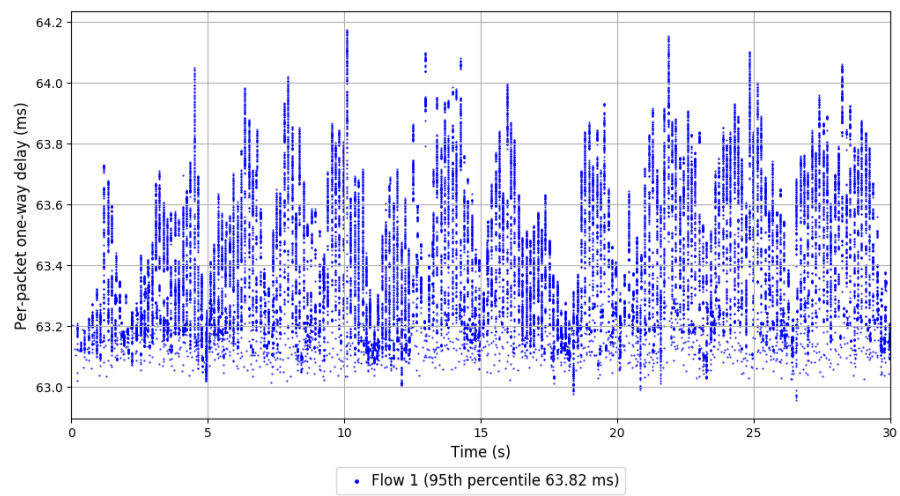
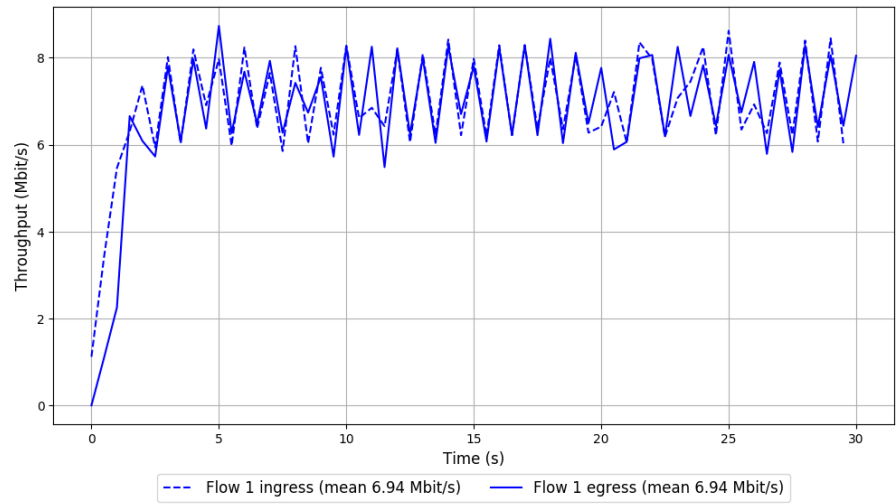
-- Flow 1:

Average throughput: 6.94 Mbit/s

95th percentile per-packet one-way delay: 63.824 ms

Loss rate: 0.00%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2018-09-25 14:40:23

End at: 2018-09-25 14:40:53

Local clock offset: -0.033 ms

Remote clock offset: -0.28 ms

Below is generated by plot.py at 2018-09-25 18:22:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 232.18 Mbit/s

95th percentile per-packet one-way delay: 61.126 ms

Loss rate: 0.00%

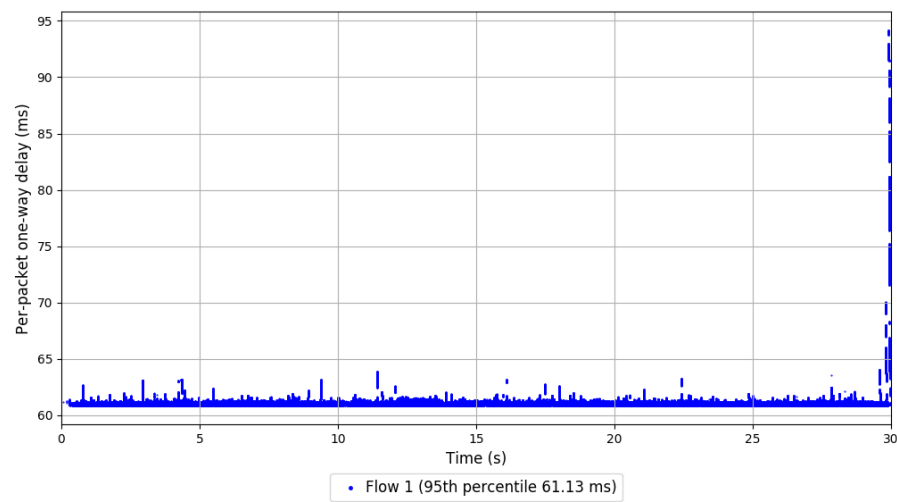
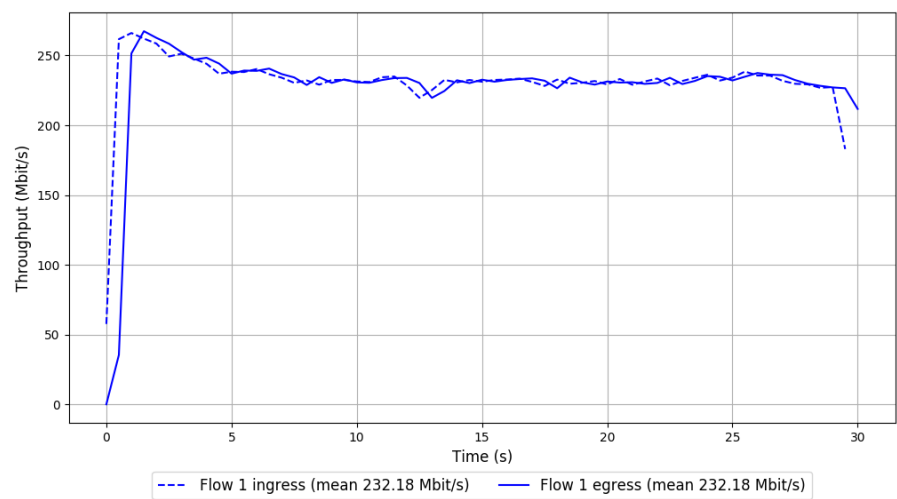
-- Flow 1:

Average throughput: 232.18 Mbit/s

95th percentile per-packet one-way delay: 61.126 ms

Loss rate: 0.00%

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



Run 2: Statistics of TaoVA-100x

Start at: 2018-09-25 15:07:22

End at: 2018-09-25 15:07:52

Local clock offset: -0.05 ms

Remote clock offset: -0.128 ms

Below is generated by plot.py at 2018-09-25 18:22:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 238.84 Mbit/s

95th percentile per-packet one-way delay: 63.013 ms

Loss rate: 0.01%

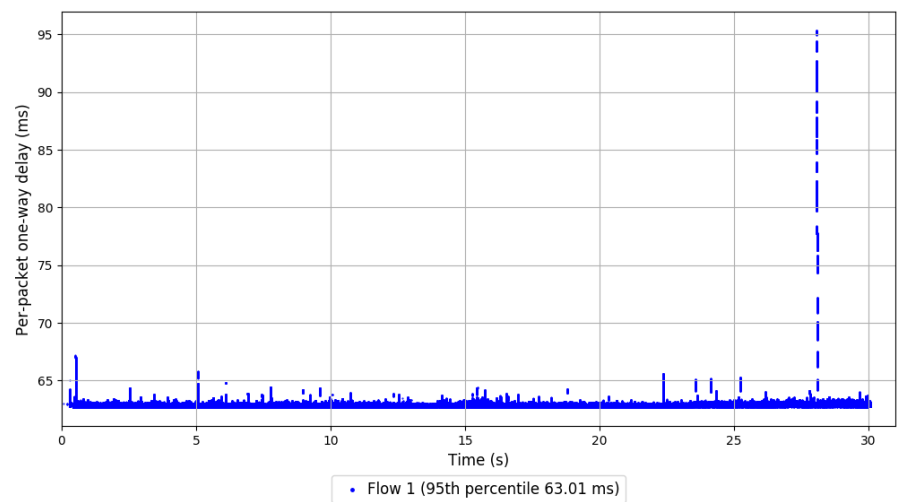
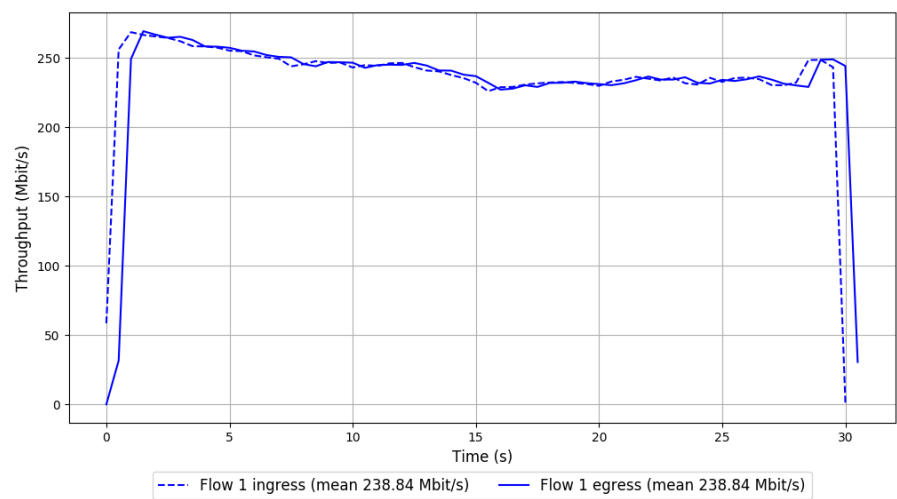
-- Flow 1:

Average throughput: 238.84 Mbit/s

95th percentile per-packet one-way delay: 63.013 ms

Loss rate: 0.01%

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

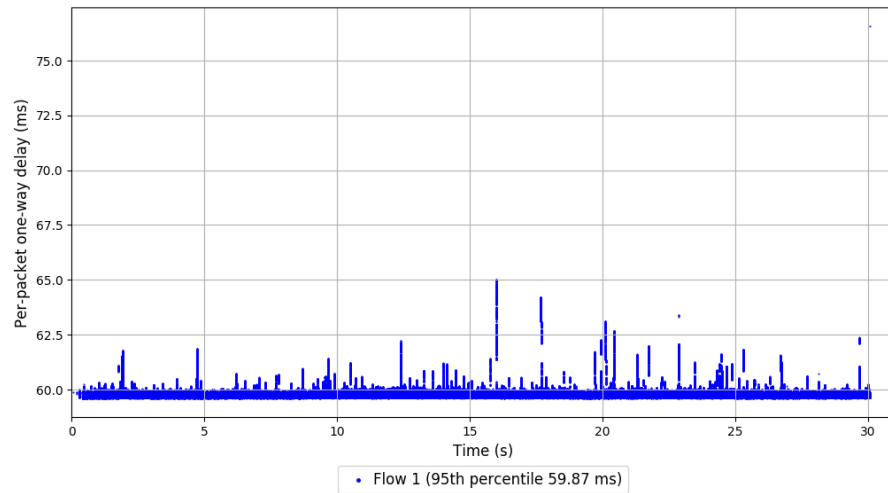
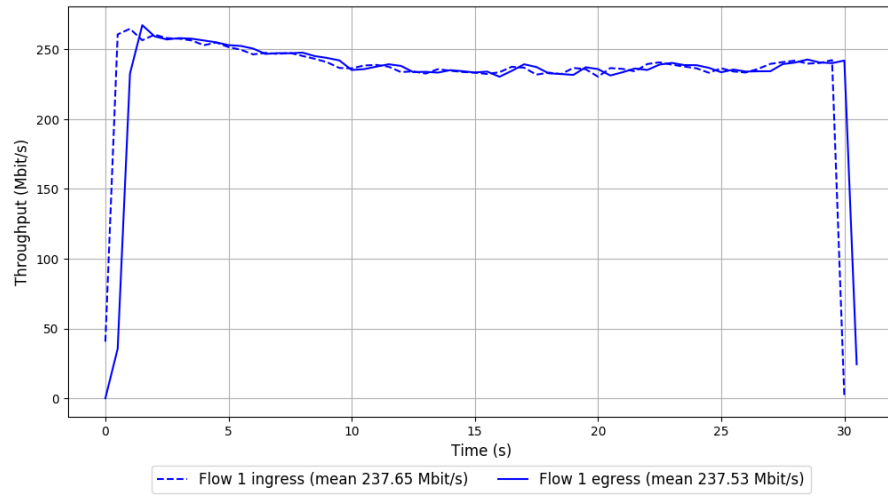


Run 3: Statistics of TaoVA-100x

Start at: 2018-09-25 15:35:01
End at: 2018-09-25 15:35:31
Local clock offset: -0.001 ms
Remote clock offset: -1.429 ms

Below is generated by plot.py at 2018-09-25 18:22:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 237.53 Mbit/s
95th percentile per-packet one-way delay: 59.865 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 237.53 Mbit/s
95th percentile per-packet one-way delay: 59.865 ms
Loss rate: 0.03%

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

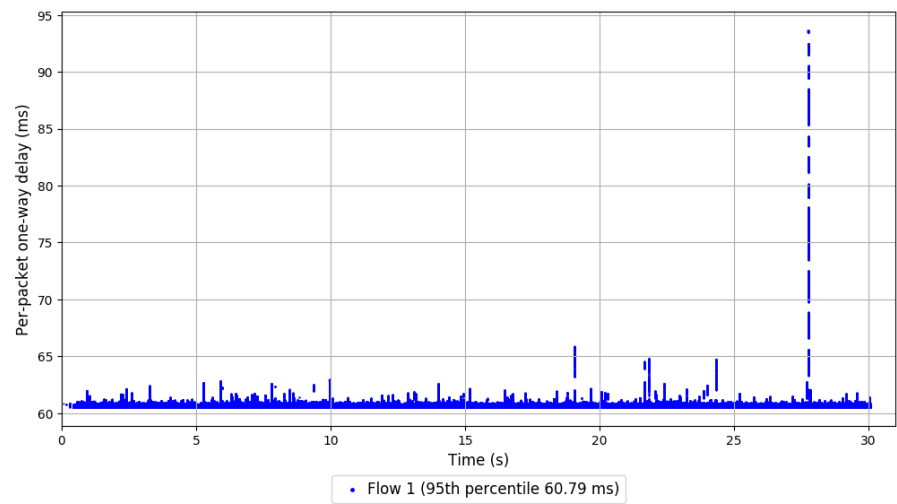
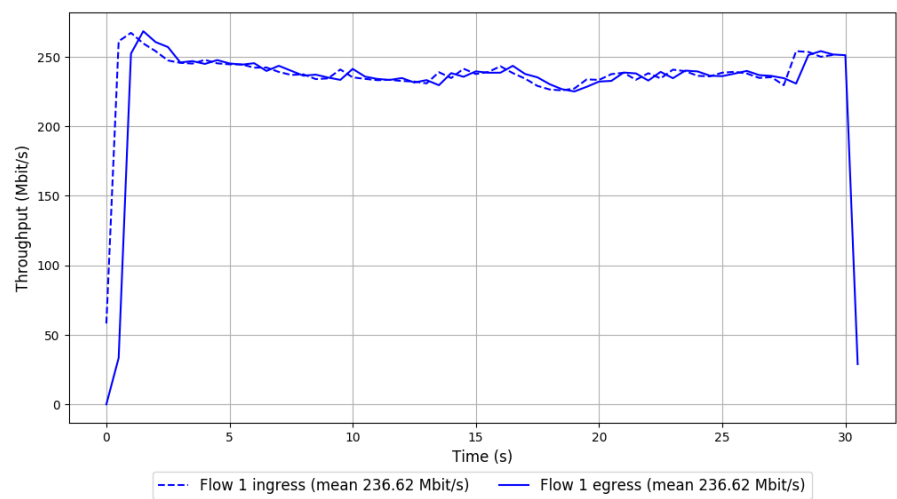


Run 4: Statistics of TaoVA-100x

Start at: 2018-09-25 16:02:18
End at: 2018-09-25 16:02:48
Local clock offset: -0.002 ms
Remote clock offset: -0.188 ms

Below is generated by plot.py at 2018-09-25 18:23:19
Datalink statistics
-- Total of 1 flow:
Average throughput: 236.62 Mbit/s
95th percentile per-packet one-way delay: 60.787 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 236.62 Mbit/s
95th percentile per-packet one-way delay: 60.787 ms
Loss rate: 0.00%

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

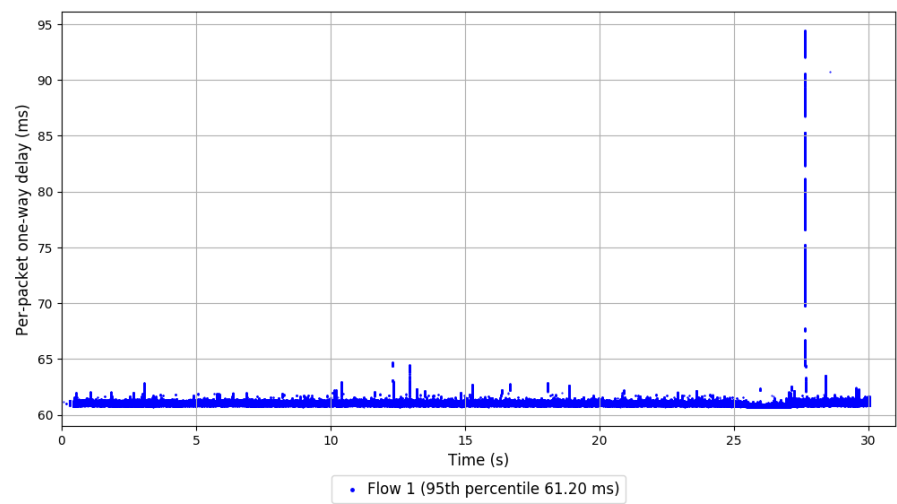
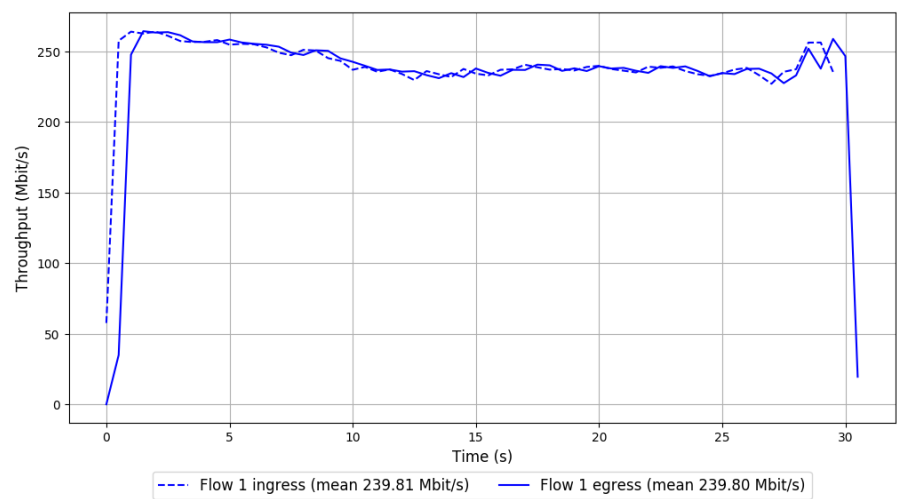


Run 5: Statistics of TaoVA-100x

Start at: 2018-09-25 16:29:48
End at: 2018-09-25 16:30:18
Local clock offset: 0.029 ms
Remote clock offset: -0.193 ms

Below is generated by plot.py at 2018-09-25 18:24:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 239.80 Mbit/s
95th percentile per-packet one-way delay: 61.200 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 239.80 Mbit/s
95th percentile per-packet one-way delay: 61.200 ms
Loss rate: 0.01%

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

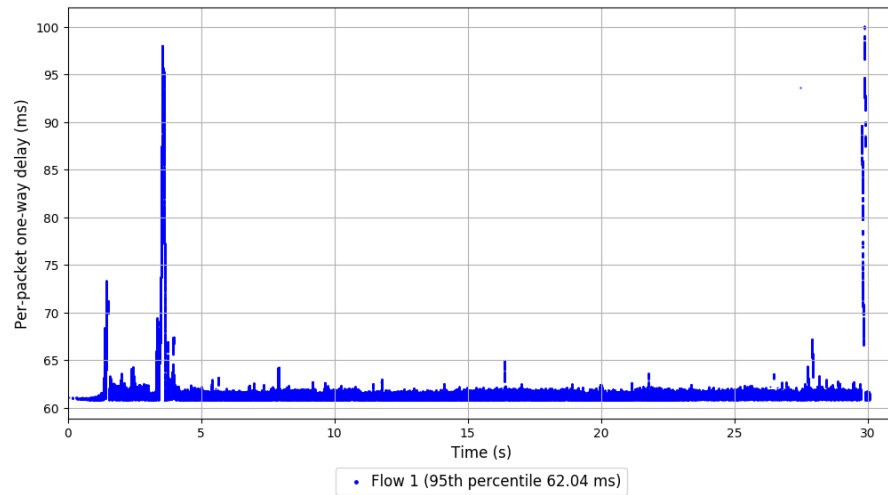
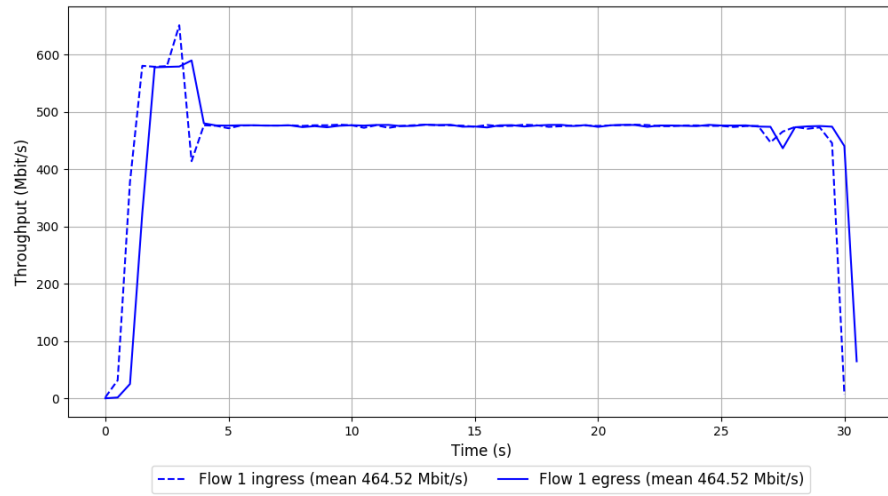


Run 1: Statistics of TCP Vegas

Start at: 2018-09-25 14:51:50
End at: 2018-09-25 14:52:20
Local clock offset: -0.077 ms
Remote clock offset: -0.359 ms

Below is generated by plot.py at 2018-09-25 18:25:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 464.52 Mbit/s
95th percentile per-packet one-way delay: 62.036 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 464.52 Mbit/s
95th percentile per-packet one-way delay: 62.036 ms
Loss rate: 0.00%

Run 1: Report of TCP Vegas — Data Link

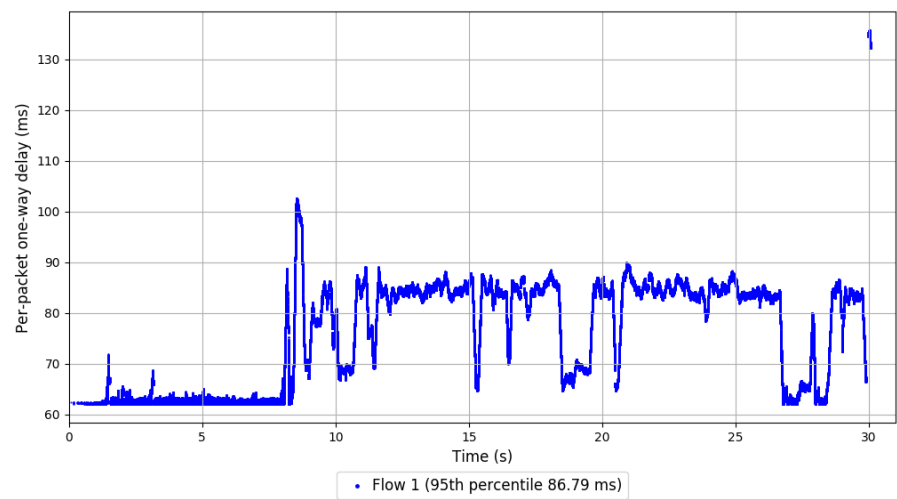
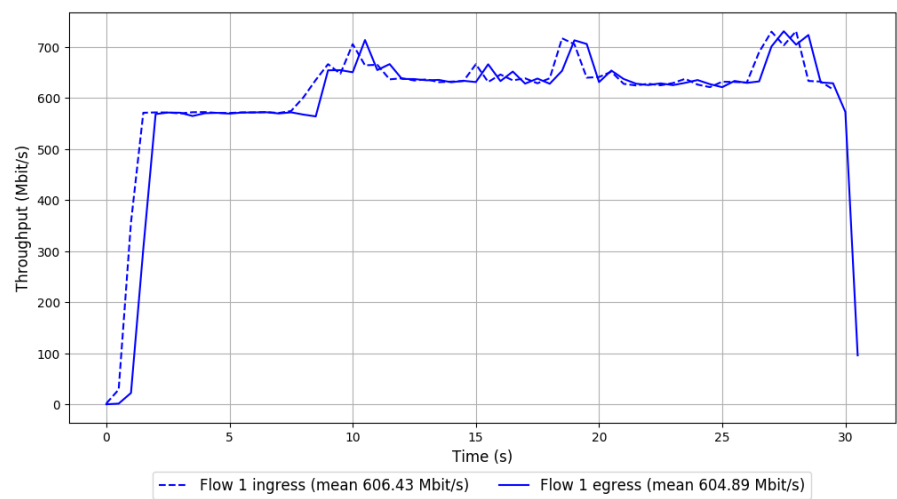


Run 2: Statistics of TCP Vegas

Start at: 2018-09-25 15:19:02
End at: 2018-09-25 15:19:32
Local clock offset: -0.032 ms
Remote clock offset: -0.756 ms

Below is generated by plot.py at 2018-09-25 18:29:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 604.89 Mbit/s
95th percentile per-packet one-way delay: 86.790 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 604.89 Mbit/s
95th percentile per-packet one-way delay: 86.790 ms
Loss rate: 0.15%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-09-25 15:46:33

End at: 2018-09-25 15:47:03

Local clock offset: 0.005 ms

Remote clock offset: 1.169 ms

Below is generated by plot.py at 2018-09-25 18:30:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 456.76 Mbit/s

95th percentile per-packet one-way delay: 63.120 ms

Loss rate: 0.00%

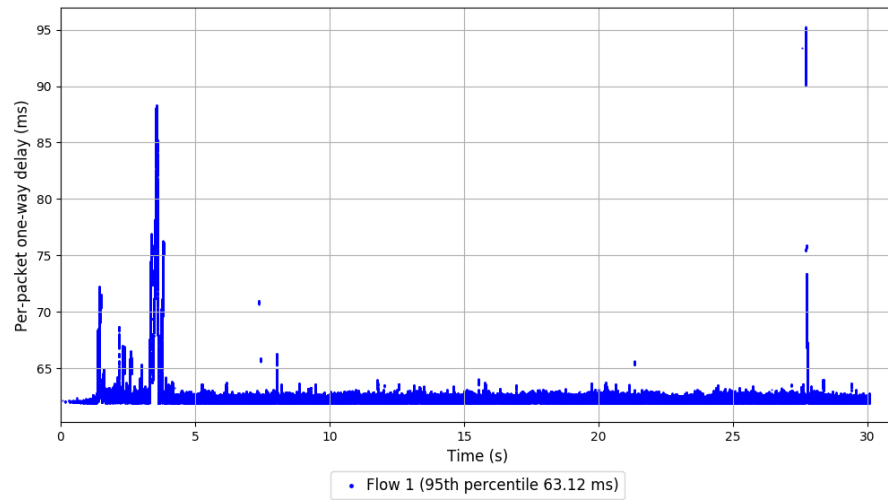
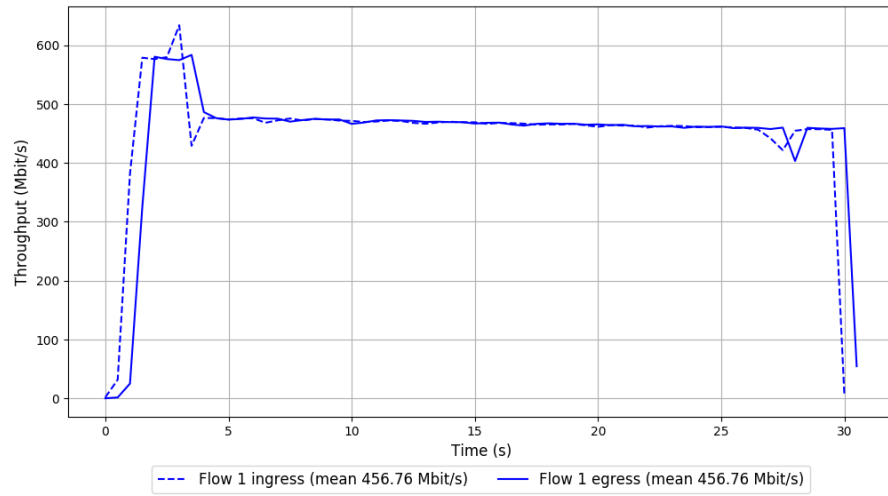
-- Flow 1:

Average throughput: 456.76 Mbit/s

95th percentile per-packet one-way delay: 63.120 ms

Loss rate: 0.00%

Run 3: Report of TCP Vegas — Data Link

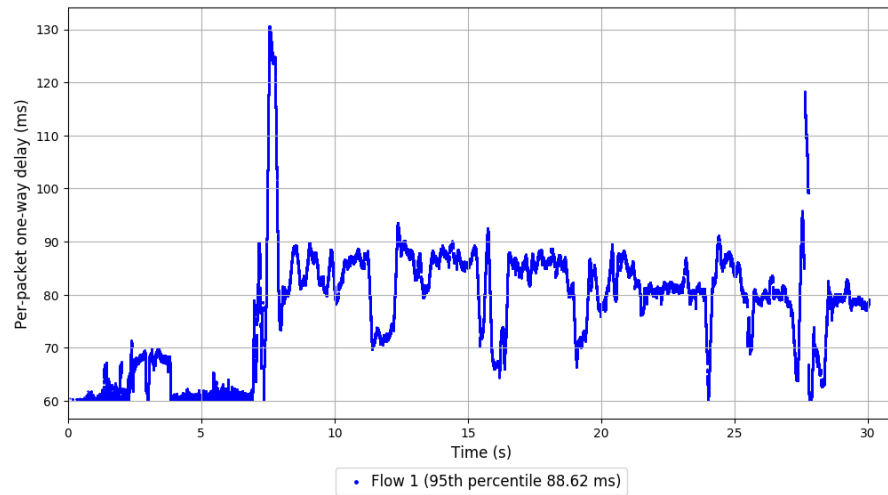
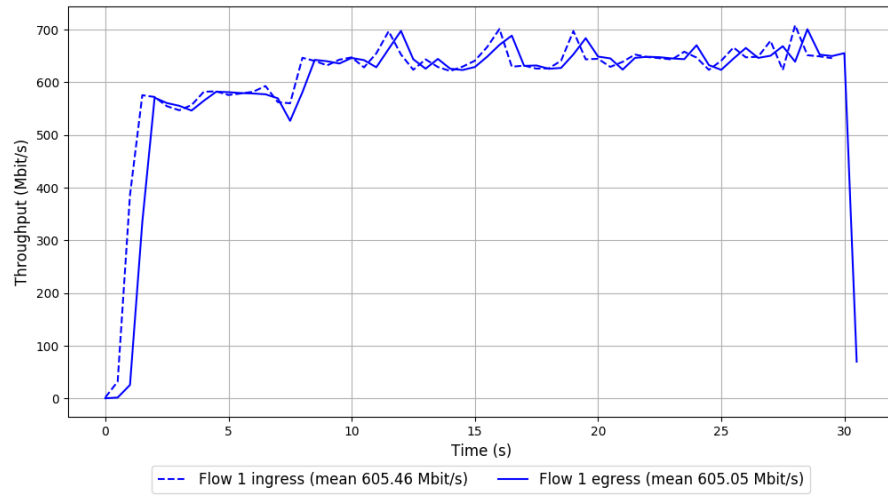


Run 4: Statistics of TCP Vegas

Start at: 2018-09-25 16:13:53
End at: 2018-09-25 16:14:23
Local clock offset: 0.055 ms
Remote clock offset: -0.8 ms

Below is generated by plot.py at 2018-09-25 18:32:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 605.05 Mbit/s
95th percentile per-packet one-way delay: 88.622 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 605.05 Mbit/s
95th percentile per-packet one-way delay: 88.622 ms
Loss rate: 0.07%

Run 4: Report of TCP Vegas — Data Link

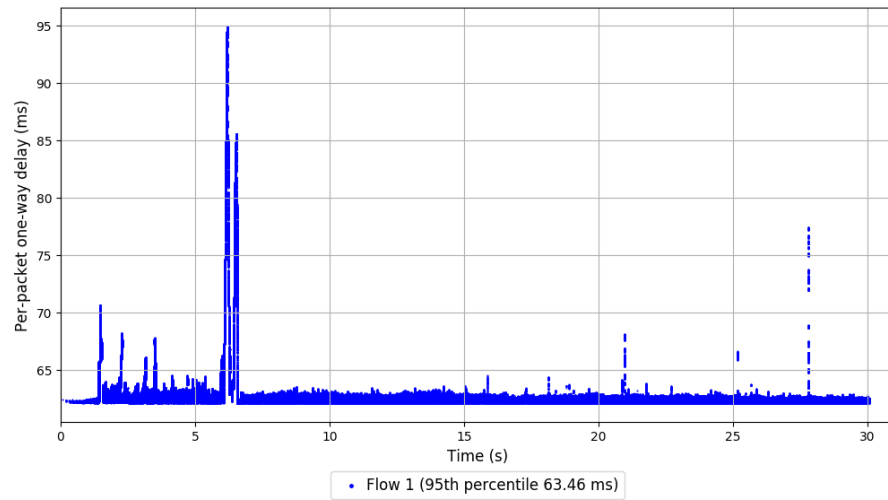
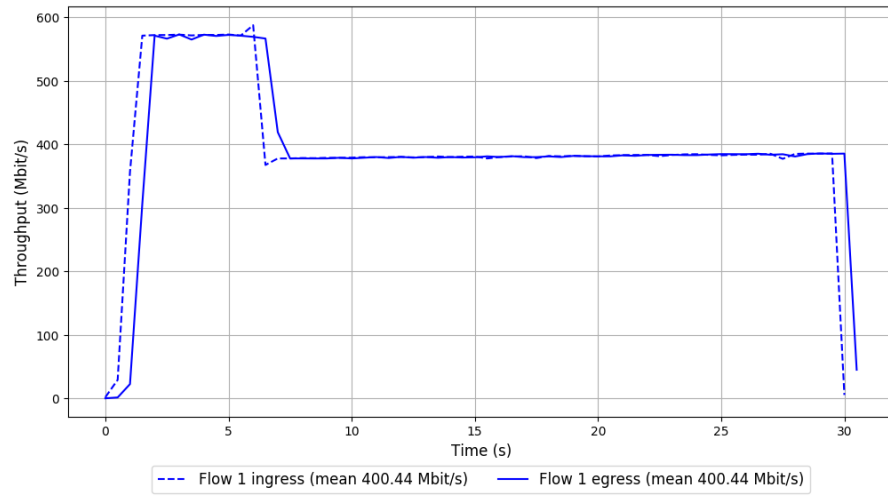


Run 5: Statistics of TCP Vegas

Start at: 2018-09-25 16:41:25
End at: 2018-09-25 16:41:55
Local clock offset: -0.007 ms
Remote clock offset: -0.661 ms

Below is generated by plot.py at 2018-09-25 18:32:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 400.44 Mbit/s
95th percentile per-packet one-way delay: 63.460 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 400.44 Mbit/s
95th percentile per-packet one-way delay: 63.460 ms
Loss rate: 0.00%

Run 5: Report of TCP Vegas — Data Link

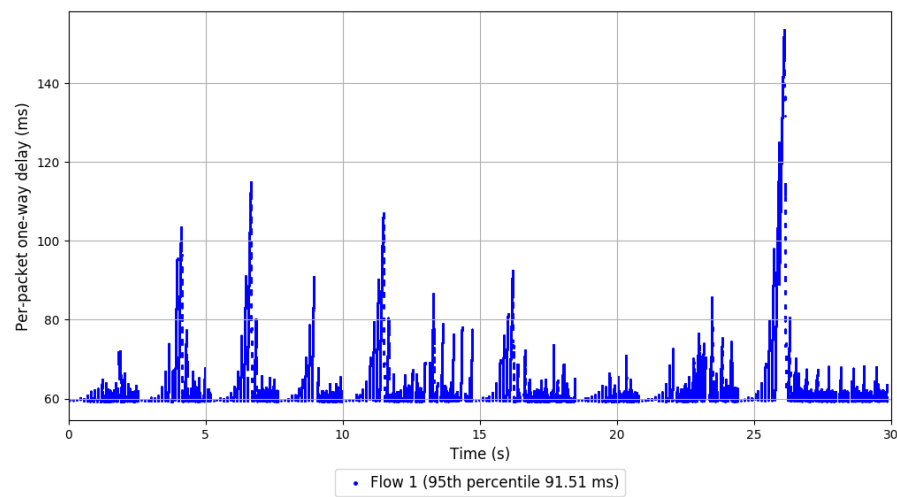
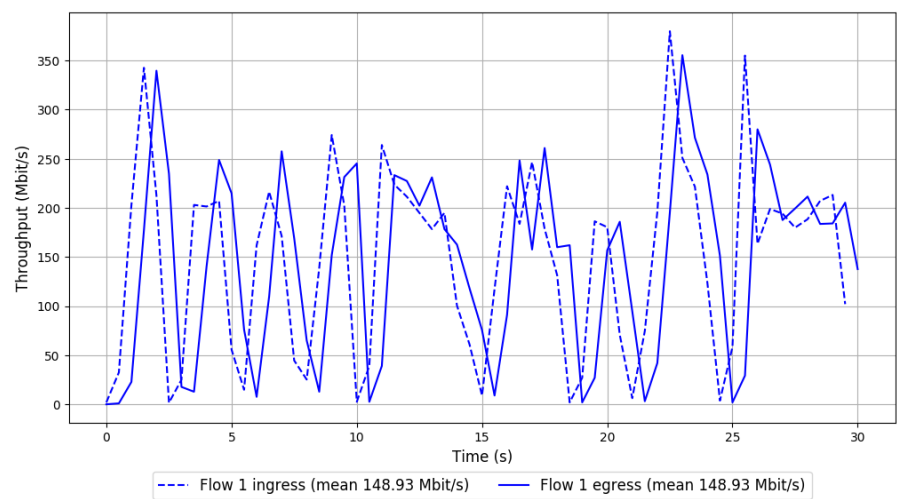


Run 1: Statistics of Verus

Start at: 2018-09-25 14:44:37
End at: 2018-09-25 14:45:07
Local clock offset: -0.05 ms
Remote clock offset: -1.809 ms

Below is generated by plot.py at 2018-09-25 18:32:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 148.93 Mbit/s
95th percentile per-packet one-way delay: 91.507 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 148.93 Mbit/s
95th percentile per-packet one-way delay: 91.507 ms
Loss rate: 0.00%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-09-25 15:11:34

End at: 2018-09-25 15:12:04

Local clock offset: -0.009 ms

Remote clock offset: -1.4 ms

Below is generated by plot.py at 2018-09-25 18:32:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 185.33 Mbit/s

95th percentile per-packet one-way delay: 110.409 ms

Loss rate: 0.00%

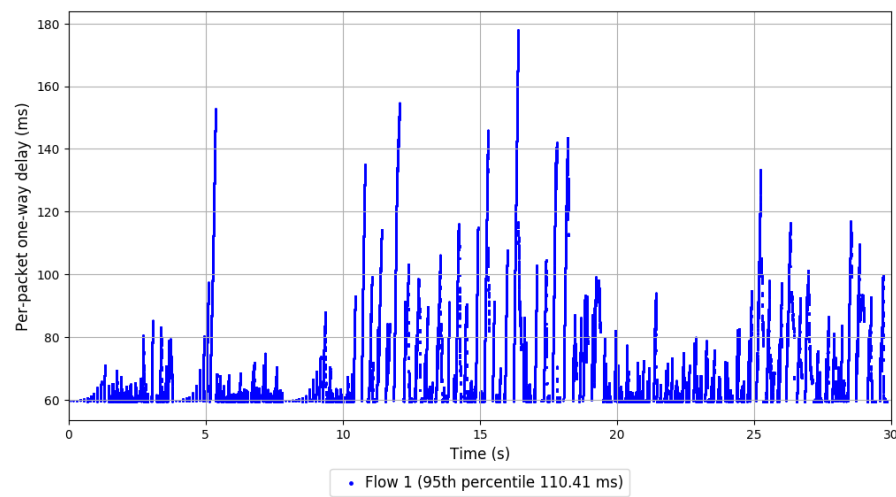
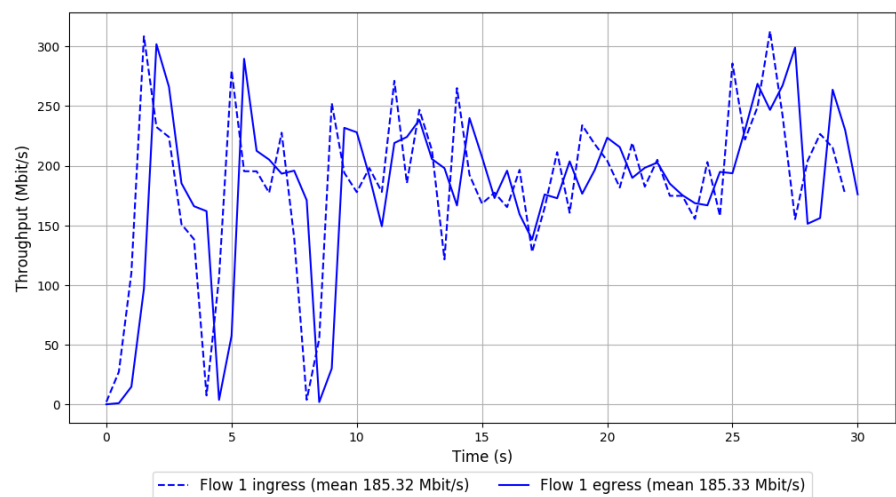
-- Flow 1:

Average throughput: 185.33 Mbit/s

95th percentile per-packet one-way delay: 110.409 ms

Loss rate: 0.00%

Run 2: Report of Verus — Data Link

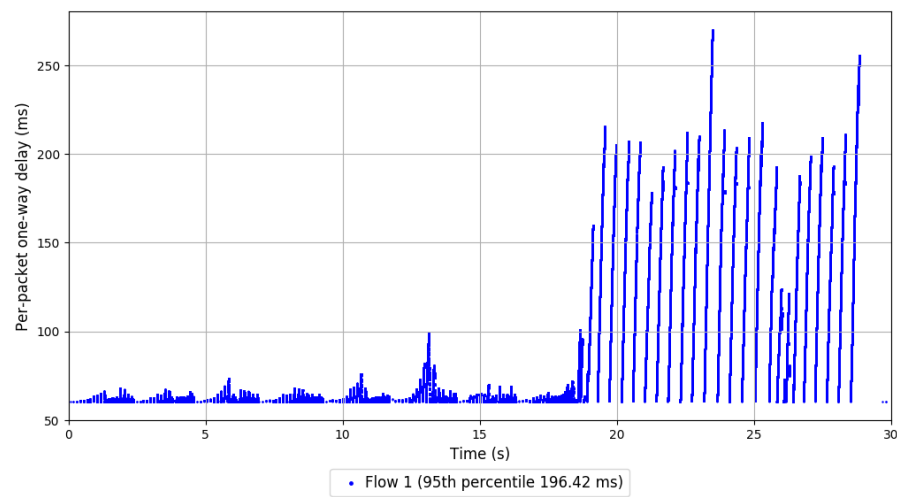
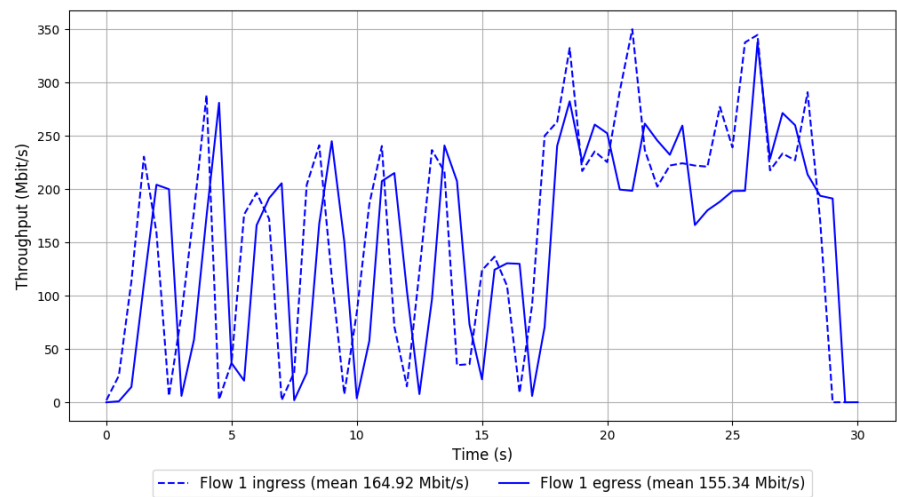


Run 3: Statistics of Verus

Start at: 2018-09-25 15:39:14
End at: 2018-09-25 15:39:44
Local clock offset: 0.036 ms
Remote clock offset: -0.436 ms

Below is generated by plot.py at 2018-09-25 18:32:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 155.34 Mbit/s
95th percentile per-packet one-way delay: 196.423 ms
Loss rate: 5.81%
-- Flow 1:
Average throughput: 155.34 Mbit/s
95th percentile per-packet one-way delay: 196.423 ms
Loss rate: 5.81%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-09-25 16:06:31

End at: 2018-09-25 16:07:01

Local clock offset: 0.001 ms

Remote clock offset: 0.601 ms

Below is generated by plot.py at 2018-09-25 18:32:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 166.88 Mbit/s

95th percentile per-packet one-way delay: 136.946 ms

Loss rate: 0.68%

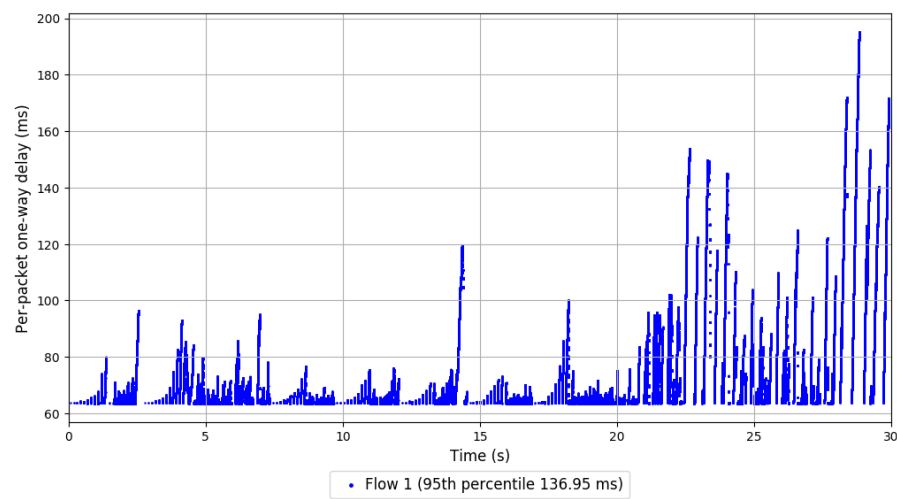
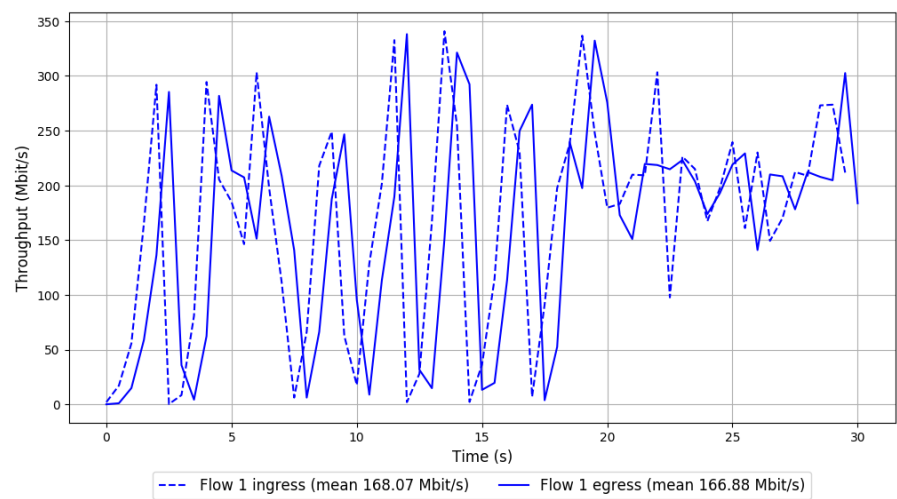
-- Flow 1:

Average throughput: 166.88 Mbit/s

95th percentile per-packet one-way delay: 136.946 ms

Loss rate: 0.68%

Run 4: Report of Verus — Data Link

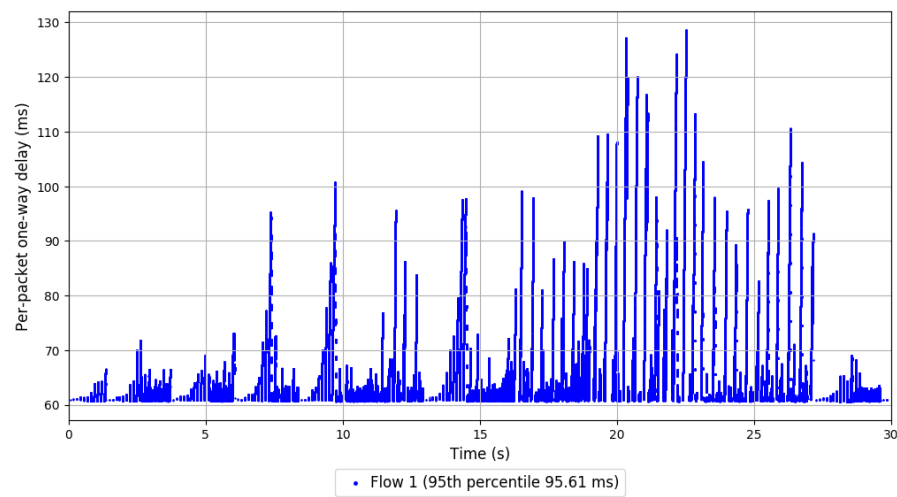
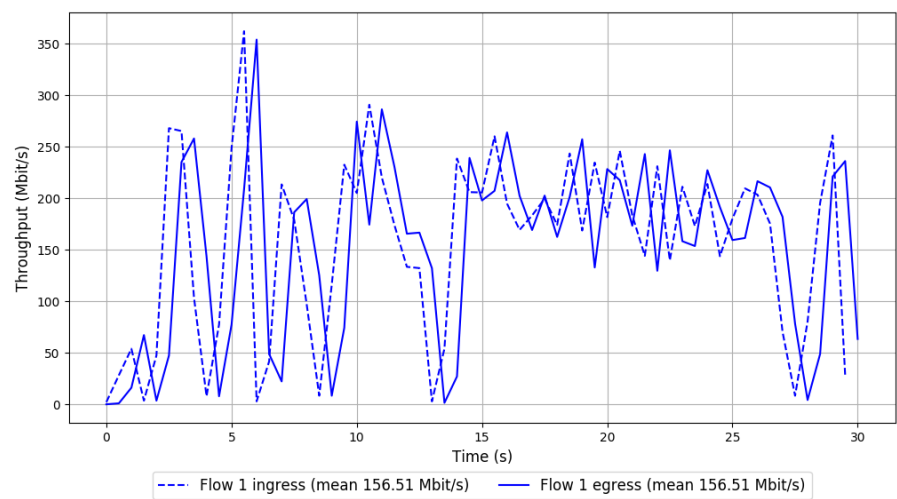


Run 5: Statistics of Verus

Start at: 2018-09-25 16:34:02
End at: 2018-09-25 16:34:32
Local clock offset: 0.022 ms
Remote clock offset: -0.338 ms

Below is generated by plot.py at 2018-09-25 18:32:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 156.51 Mbit/s
95th percentile per-packet one-way delay: 95.608 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 156.51 Mbit/s
95th percentile per-packet one-way delay: 95.608 ms
Loss rate: 0.00%

Run 5: Report of Verus — Data Link

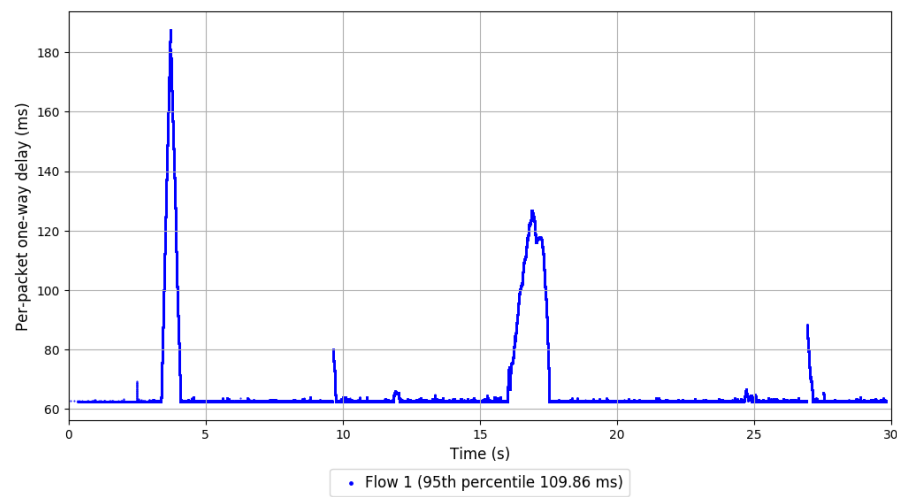
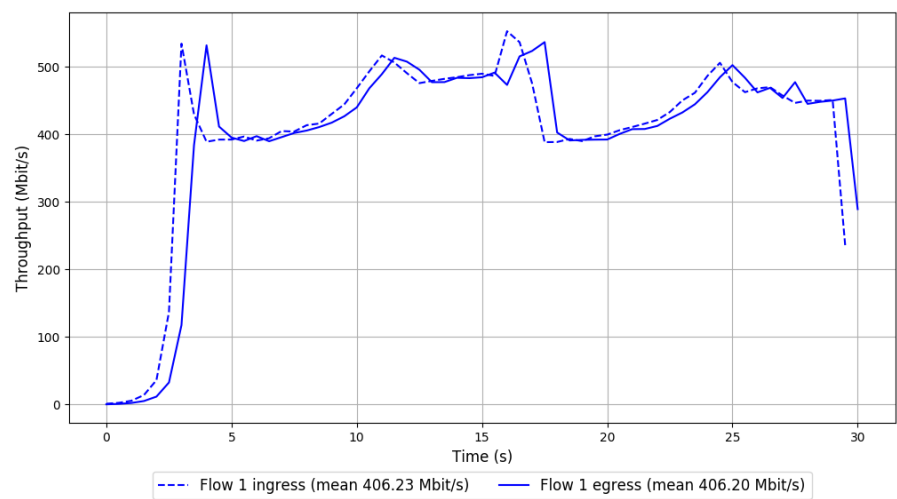


Run 1: Statistics of PCC-Vivace

Start at: 2018-09-25 15:01:29
End at: 2018-09-25 15:01:59
Local clock offset: -0.071 ms
Remote clock offset: -0.375 ms

Below is generated by plot.py at 2018-09-25 18:34:58
Datalink statistics
-- Total of 1 flow:
Average throughput: 406.20 Mbit/s
95th percentile per-packet one-way delay: 109.858 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 406.20 Mbit/s
95th percentile per-packet one-way delay: 109.858 ms
Loss rate: 0.01%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2018-09-25 15:29:03

End at: 2018-09-25 15:29:33

Local clock offset: -0.04 ms

Remote clock offset: -1.332 ms

Below is generated by plot.py at 2018-09-25 18:35:07

Datalink statistics

-- Total of 1 flow:

Average throughput: 423.35 Mbit/s

95th percentile per-packet one-way delay: 68.364 ms

Loss rate: 0.00%

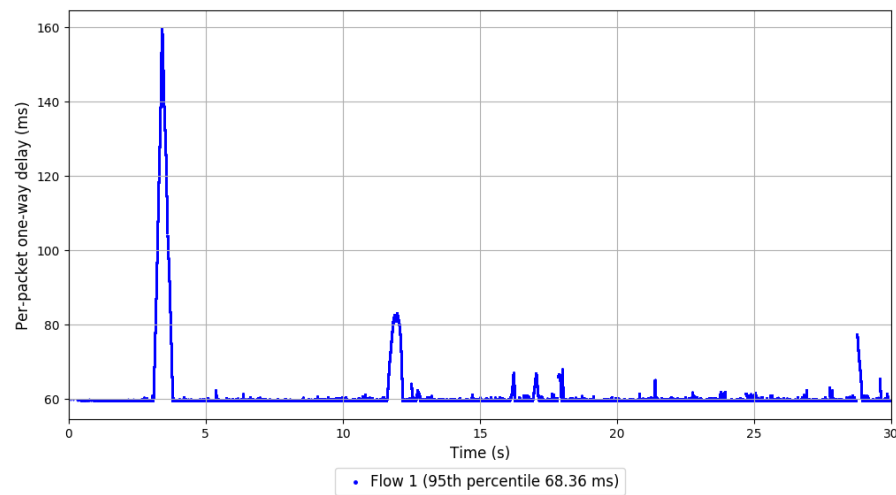
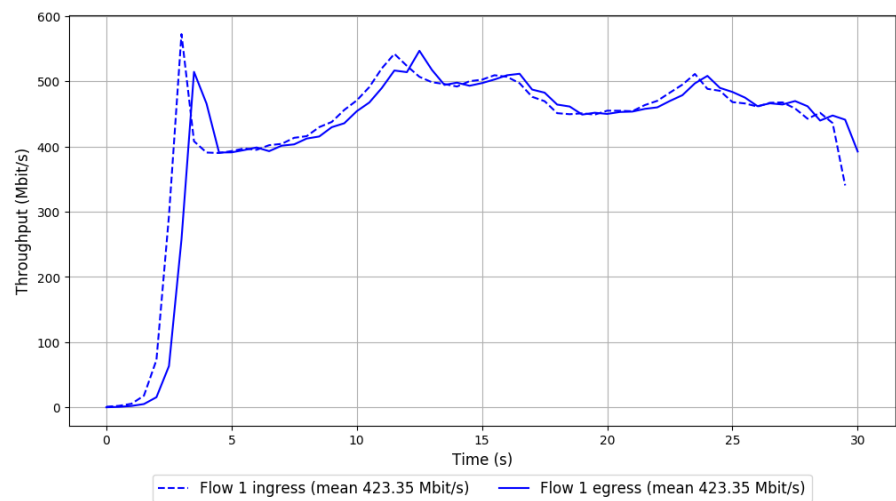
-- Flow 1:

Average throughput: 423.35 Mbit/s

95th percentile per-packet one-way delay: 68.364 ms

Loss rate: 0.00%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2018-09-25 15:56:22

End at: 2018-09-25 15:56:52

Local clock offset: 0.051 ms

Remote clock offset: 0.679 ms

Below is generated by plot.py at 2018-09-25 18:35:07

Datalink statistics

-- Total of 1 flow:

Average throughput: 382.88 Mbit/s

95th percentile per-packet one-way delay: 105.317 ms

Loss rate: 0.00%

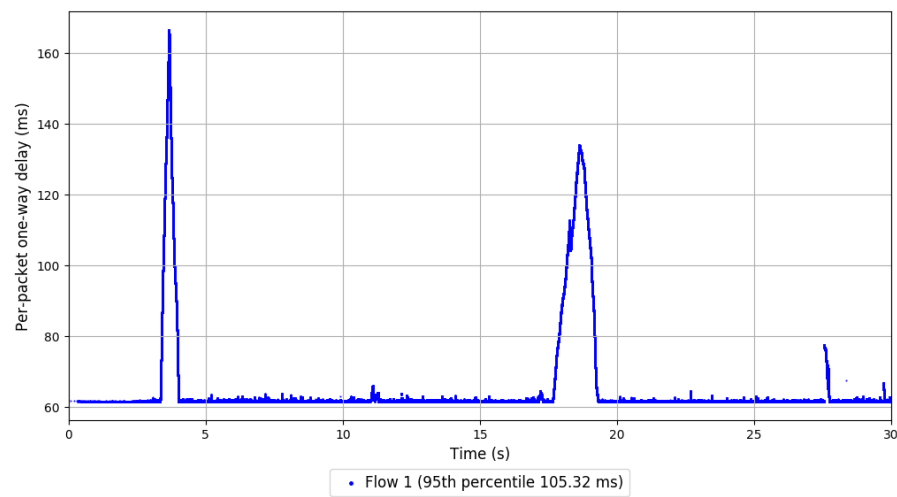
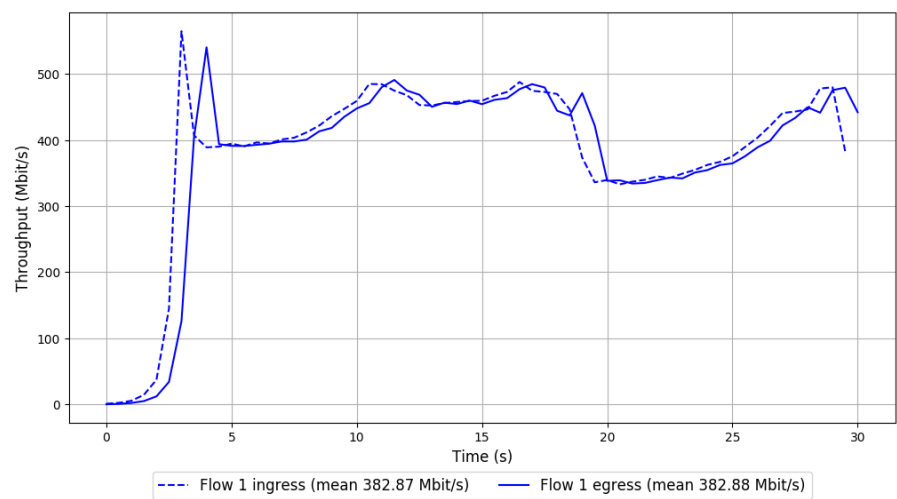
-- Flow 1:

Average throughput: 382.88 Mbit/s

95th percentile per-packet one-way delay: 105.317 ms

Loss rate: 0.00%

Run 3: Report of PCC-Vivace — Data Link

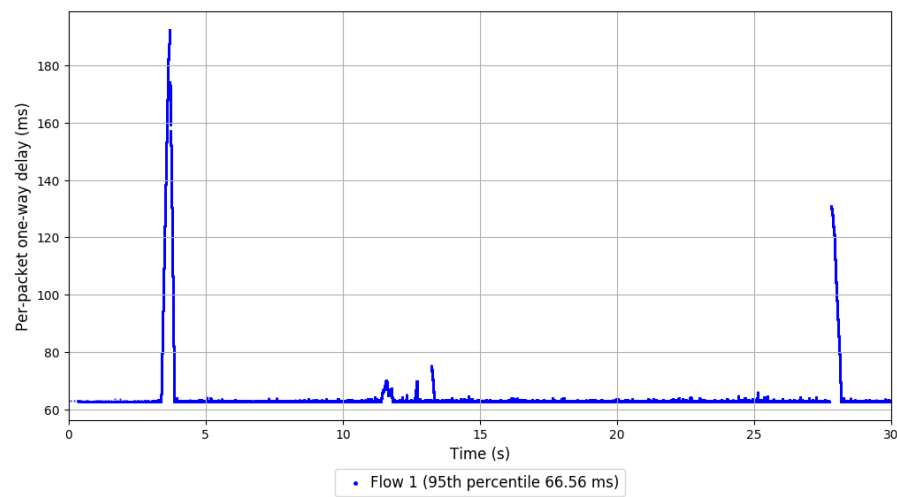
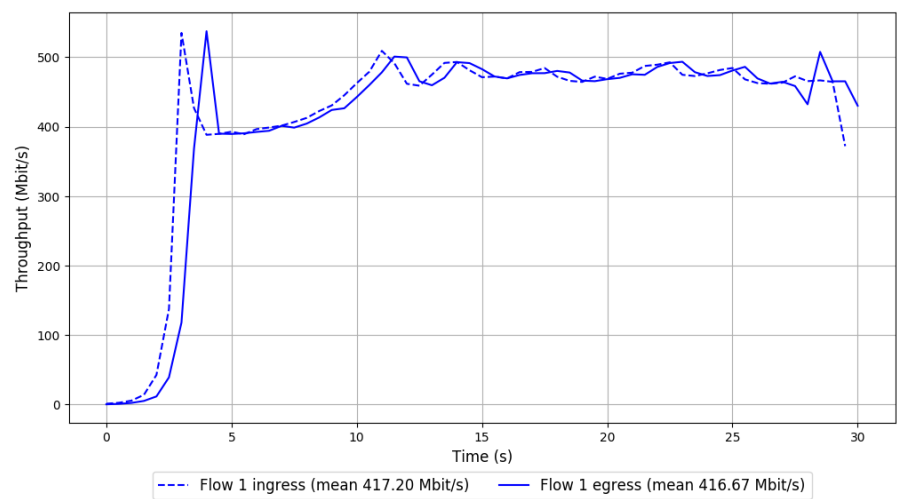


Run 4: Statistics of PCC-Vivace

Start at: 2018-09-25 16:23:51
End at: 2018-09-25 16:24:21
Local clock offset: 0.026 ms
Remote clock offset: -0.104 ms

Below is generated by plot.py at 2018-09-25 18:35:07
Datalink statistics
-- Total of 1 flow:
Average throughput: 416.67 Mbit/s
95th percentile per-packet one-way delay: 66.560 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 416.67 Mbit/s
95th percentile per-packet one-way delay: 66.560 ms
Loss rate: 0.13%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2018-09-25 16:51:15

End at: 2018-09-25 16:51:45

Local clock offset: -0.002 ms

Remote clock offset: 0.275 ms

Below is generated by plot.py at 2018-09-25 18:35:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 370.17 Mbit/s

95th percentile per-packet one-way delay: 63.162 ms

Loss rate: 0.00%

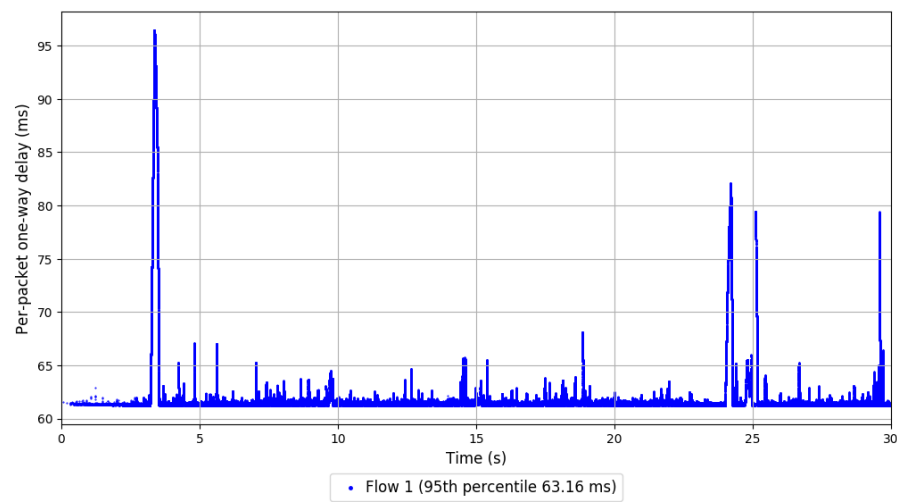
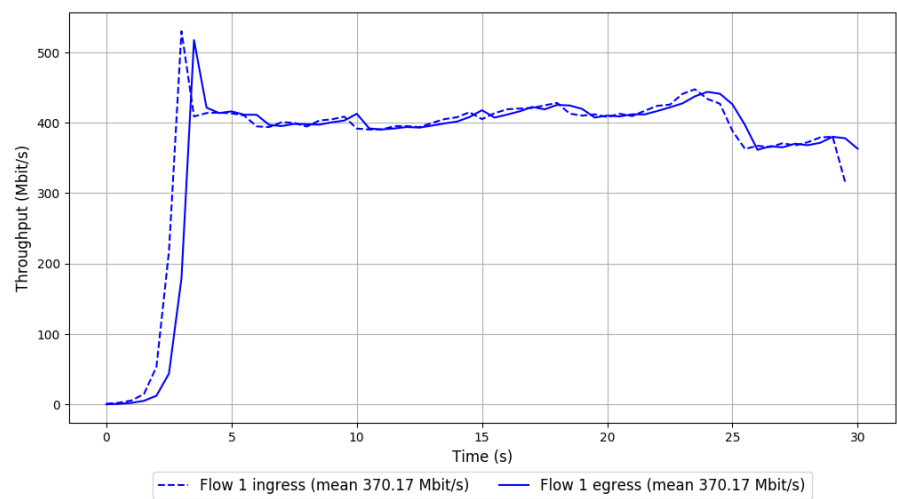
-- Flow 1:

Average throughput: 370.17 Mbit/s

95th percentile per-packet one-way delay: 63.162 ms

Loss rate: 0.00%

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2018-09-25 14:47:37

End at: 2018-09-25 14:48:07

Local clock offset: -0.07 ms

Remote clock offset: -0.57 ms

Below is generated by plot.py at 2018-09-25 18:35:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.56 Mbit/s

95th percentile per-packet one-way delay: 61.072 ms

Loss rate: 0.02%

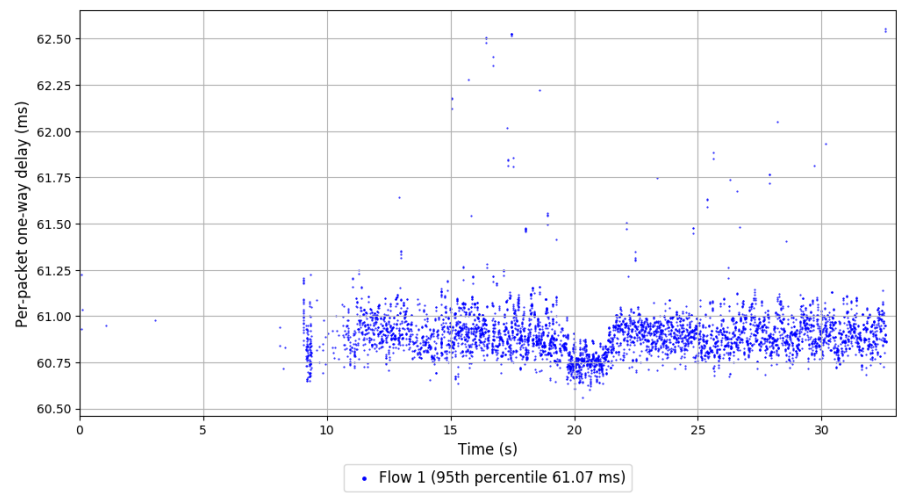
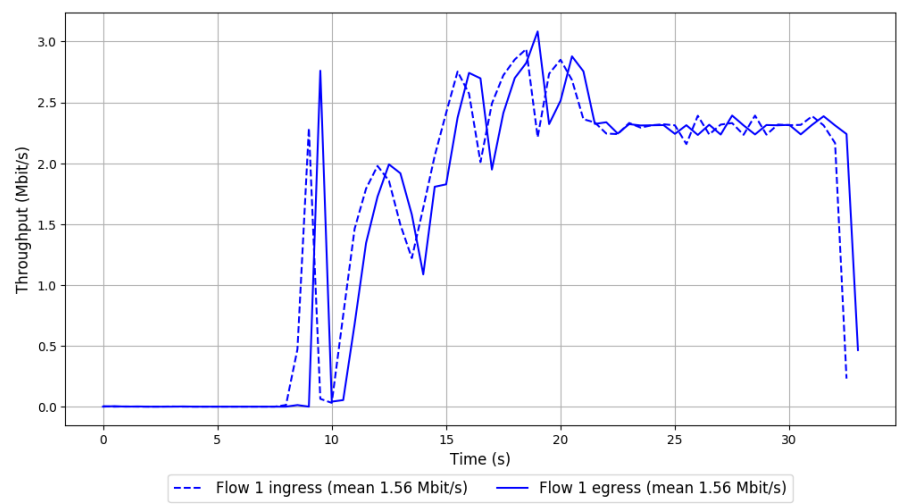
-- Flow 1:

Average throughput: 1.56 Mbit/s

95th percentile per-packet one-way delay: 61.072 ms

Loss rate: 0.02%

Run 1: Report of WebRTC media — Data Link

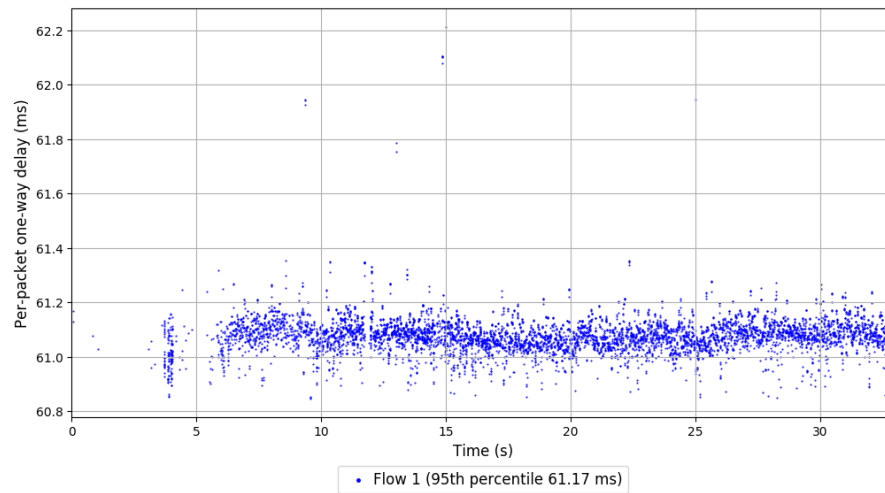
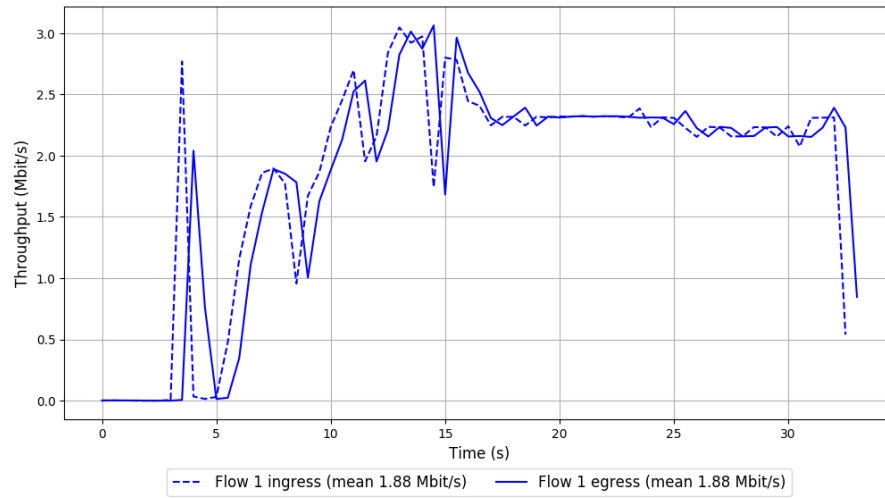


Run 2: Statistics of WebRTC media

Start at: 2018-09-25 15:14:37
End at: 2018-09-25 15:15:07
Local clock offset: -0.023 ms
Remote clock offset: -0.006 ms

Below is generated by plot.py at 2018-09-25 18:35:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.88 Mbit/s
95th percentile per-packet one-way delay: 61.166 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.88 Mbit/s
95th percentile per-packet one-way delay: 61.166 ms
Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link

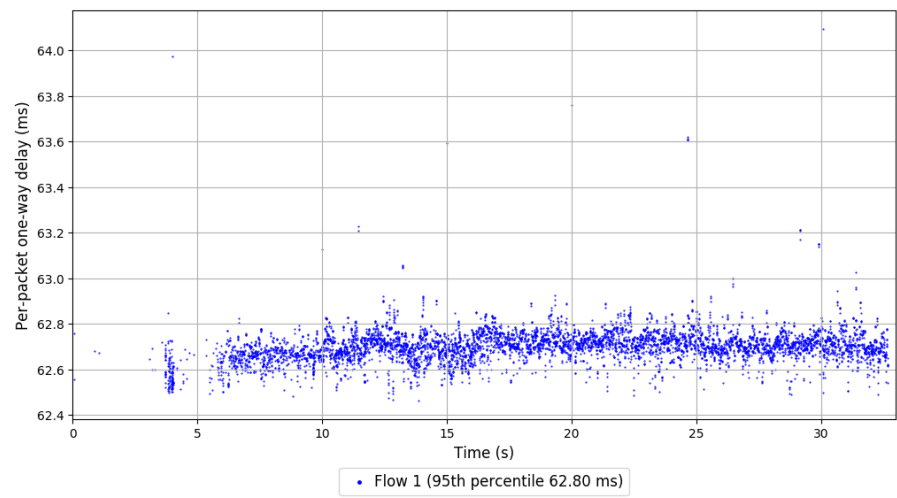
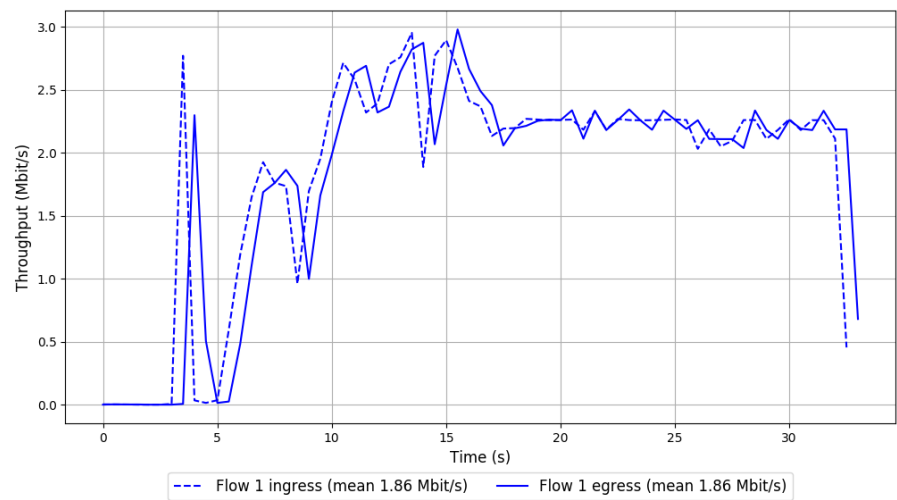


Run 3: Statistics of WebRTC media

Start at: 2018-09-25 15:42:13
End at: 2018-09-25 15:42:43
Local clock offset: 0.013 ms
Remote clock offset: -0.315 ms

Below is generated by plot.py at 2018-09-25 18:35:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.86 Mbit/s
95th percentile per-packet one-way delay: 62.798 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.86 Mbit/s
95th percentile per-packet one-way delay: 62.798 ms
Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

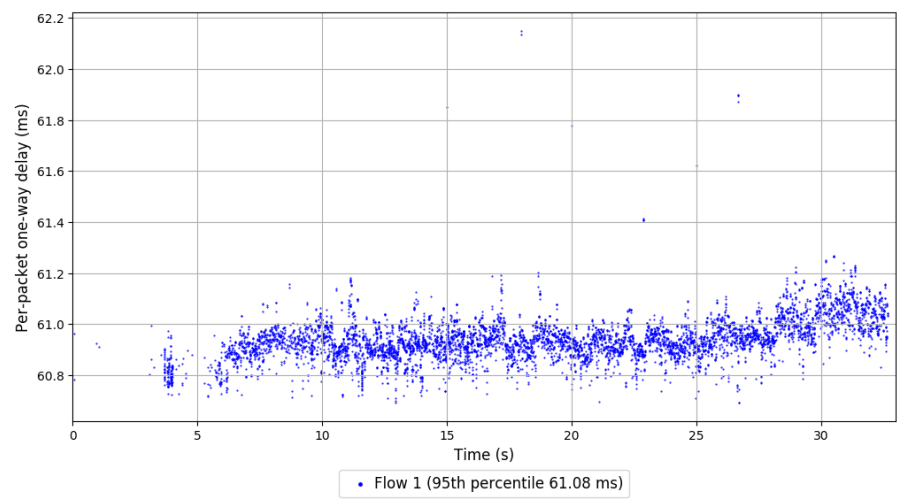
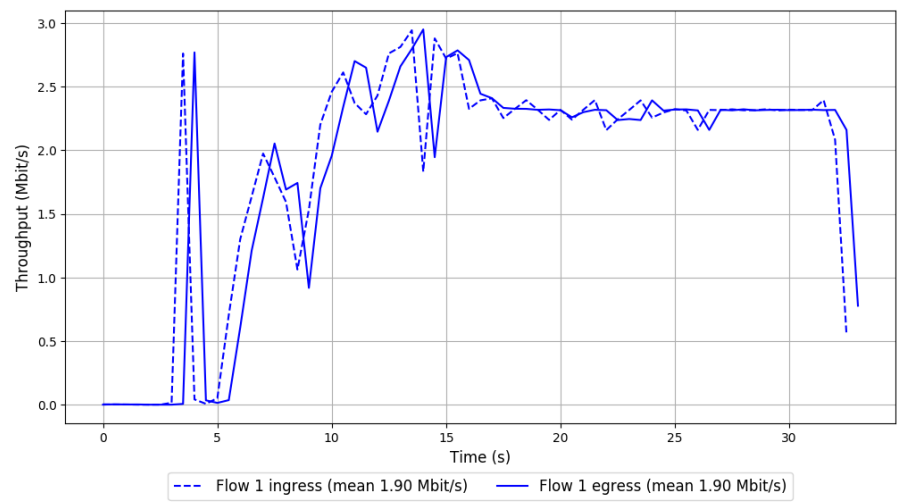


Run 4: Statistics of WebRTC media

Start at: 2018-09-25 16:09:30
End at: 2018-09-25 16:10:00
Local clock offset: 0.055 ms
Remote clock offset: -0.221 ms

Below is generated by plot.py at 2018-09-25 18:35:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 61.083 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 61.083 ms
Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-09-25 16:37:00
End at: 2018-09-25 16:37:30
Local clock offset: 0.024 ms
Remote clock offset: -0.136 ms

Below is generated by plot.py at 2018-09-25 18:35:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 61.065 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 61.065 ms
Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

