

Pantheon Report

Generated at 2018-09-26 04:32:25 (UTC).

Data path: GCE Sydney 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:

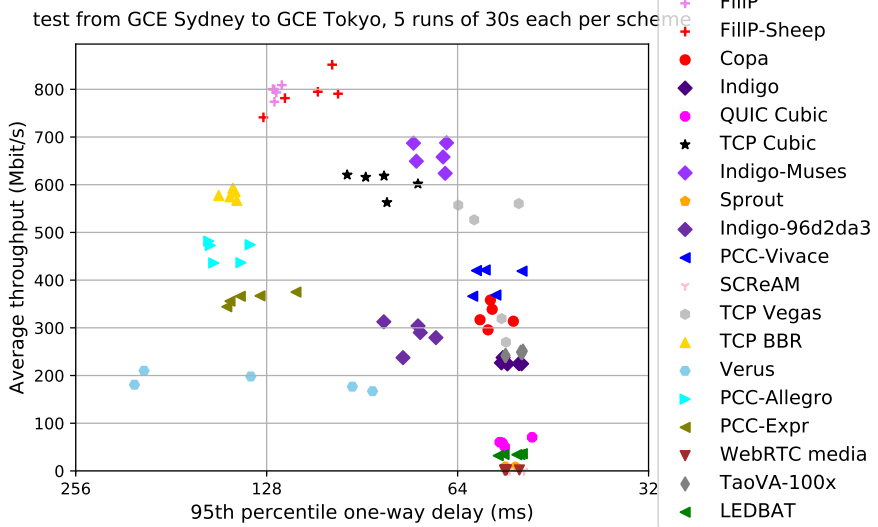
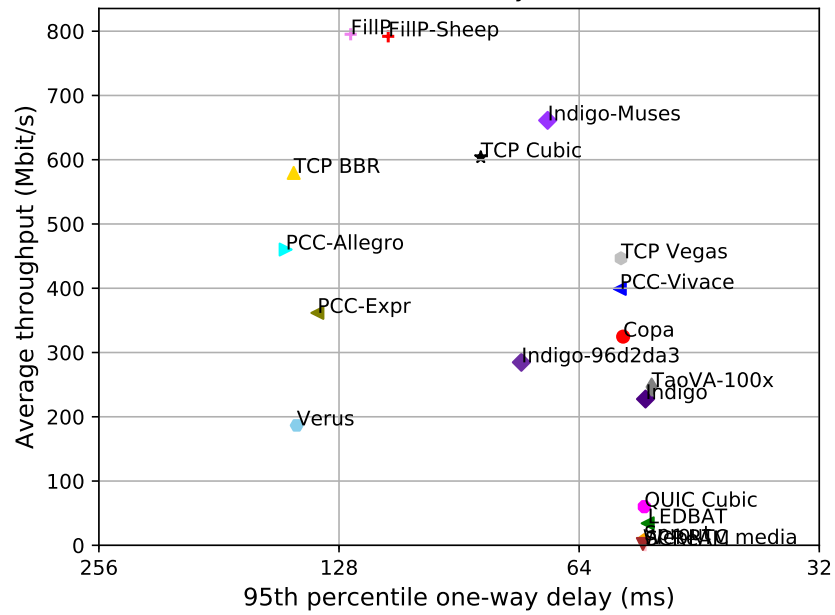
```
Linux 4.15.0-1019-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
net.ipv4.tcp_mem = 190986 254651 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 Sydney 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	579.49	145.89	0.58
Copa	5	324.72	56.37	0.03
TCP Cubic	5	603.88	85.02	0.09
FillP	5	795.21	123.77	2.93
FillP-Sheep	5	791.99	111.05	0.79
Indigo	5	227.61	52.85	0.00
Indigo-96d2da3	5	284.73	75.62	0.00
LEDBAT	5	34.22	52.52	0.00
Indigo-Muses	5	661.23	70.10	0.01
PCC-Allegro	5	460.23	149.31	1.22
PCC-Expr	5	361.66	136.25	1.25
QUIC Cubic	4	60.12	53.02	0.00
SCReAM	5	0.21	52.90	0.00
Sprout	5	8.11	53.06	0.00
TaoVA-100x	5	246.25	51.91	0.00
TCP Vegas	5	446.61	56.72	0.00
Verus	5	186.57	144.62	2.23
PCC-Vivace	5	399.04	56.92	0.00
WebRTC media	5	2.07	53.25	0.00

Run 1: Statistics of TCP BBR

Start at: 2018-09-26 00:52:55

End at: 2018-09-26 00:53:25

Local clock offset: -0.213 ms

Remote clock offset: 0.691 ms

Below is generated by plot.py at 2018-09-26 03:05:37

Datalink statistics

-- Total of 1 flow:

Average throughput: 567.21 Mbit/s

95th percentile per-packet one-way delay: 142.669 ms

Loss rate: 0.27%

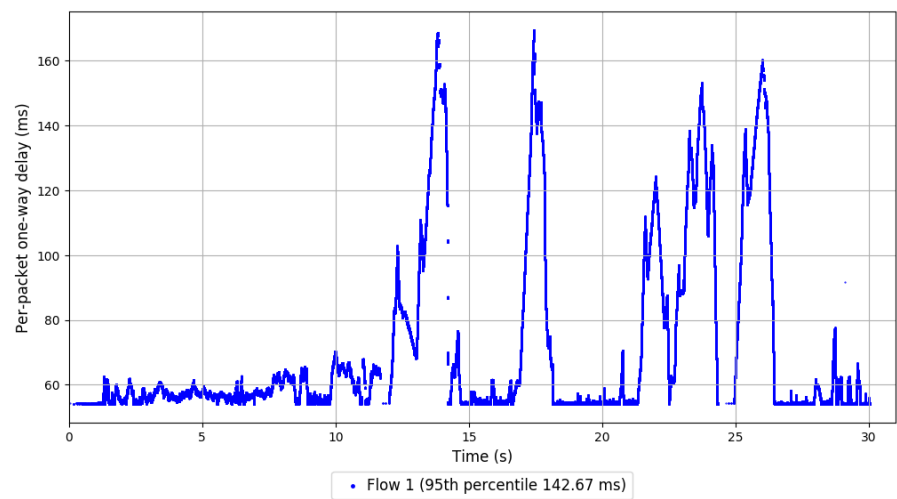
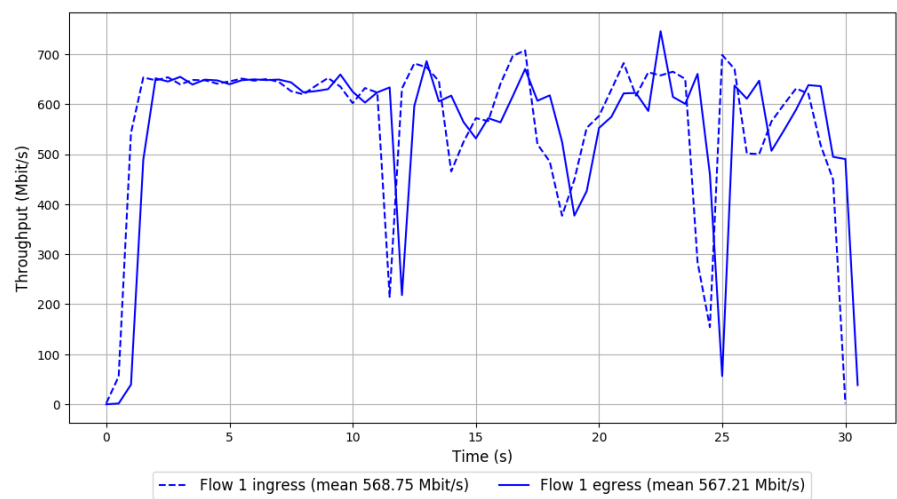
-- Flow 1:

Average throughput: 567.21 Mbit/s

95th percentile per-packet one-way delay: 142.669 ms

Loss rate: 0.27%

Run 1: Report of TCP BBR — Data Link

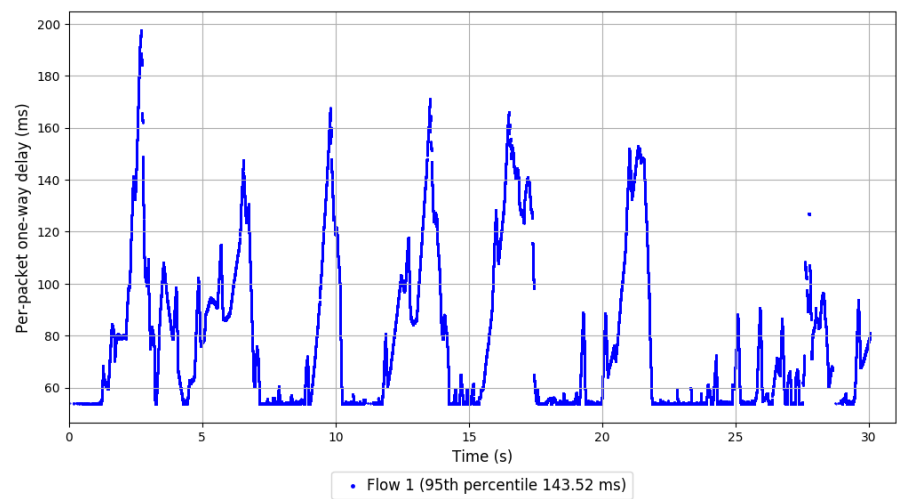
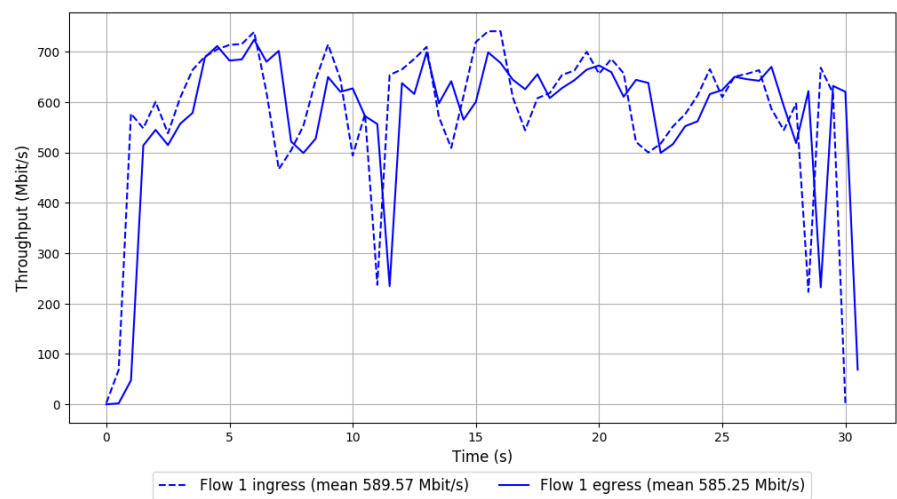


Run 2: Statistics of TCP BBR

Start at: 2018-09-26 01:20:19
End at: 2018-09-26 01:20:49
Local clock offset: -0.322 ms
Remote clock offset: -0.158 ms

Below is generated by plot.py at 2018-09-26 03:05:58
Datalink statistics
-- Total of 1 flow:
Average throughput: 585.25 Mbit/s
95th percentile per-packet one-way delay: 143.516 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 585.25 Mbit/s
95th percentile per-packet one-way delay: 143.516 ms
Loss rate: 0.73%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-09-26 01:47:34

End at: 2018-09-26 01:48:04

Local clock offset: -0.025 ms

Remote clock offset: 0.604 ms

Below is generated by plot.py at 2018-09-26 03:05:58

Datalink statistics

-- Total of 1 flow:

Average throughput: 574.68 Mbit/s

95th percentile per-packet one-way delay: 146.226 ms

Loss rate: 0.48%

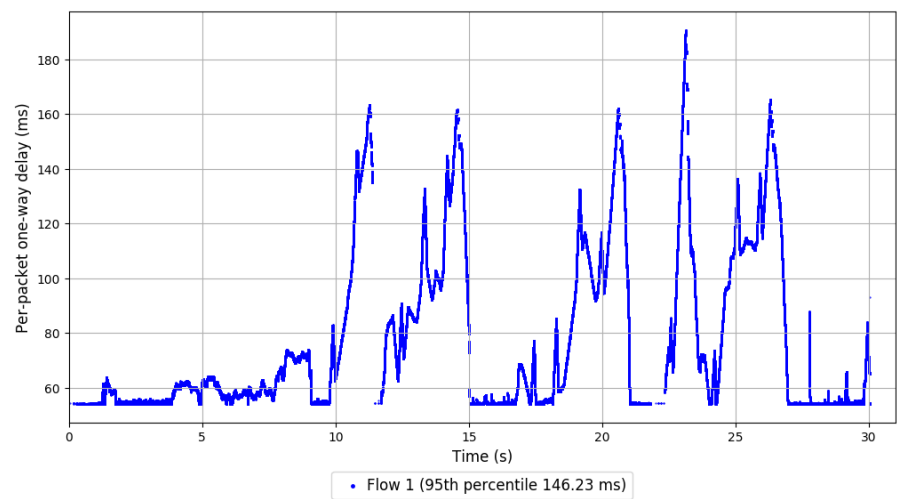
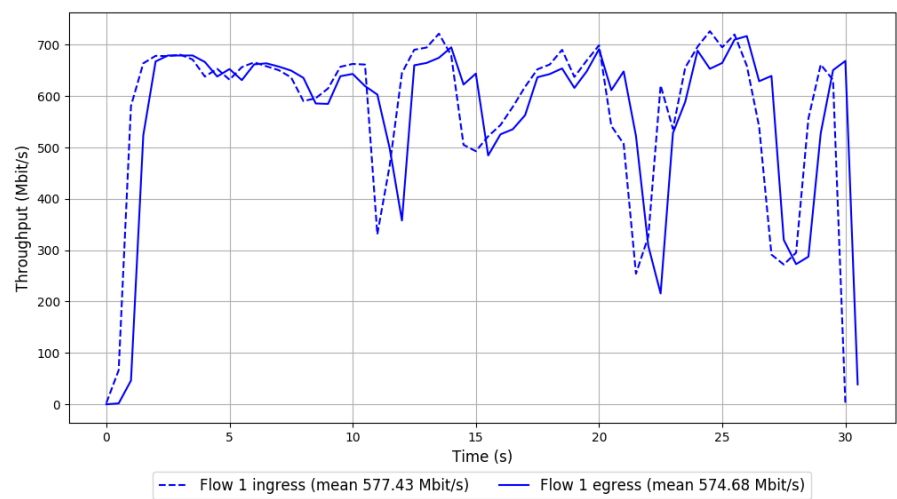
-- Flow 1:

Average throughput: 574.68 Mbit/s

95th percentile per-packet one-way delay: 146.226 ms

Loss rate: 0.48%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-09-26 02:14:48

End at: 2018-09-26 02:15:19

Local clock offset: -0.284 ms

Remote clock offset: 0.537 ms

Below is generated by plot.py at 2018-09-26 03:06:07

Datalink statistics

-- Total of 1 flow:

Average throughput: 592.80 Mbit/s

95th percentile per-packet one-way delay: 144.693 ms

Loss rate: 0.57%

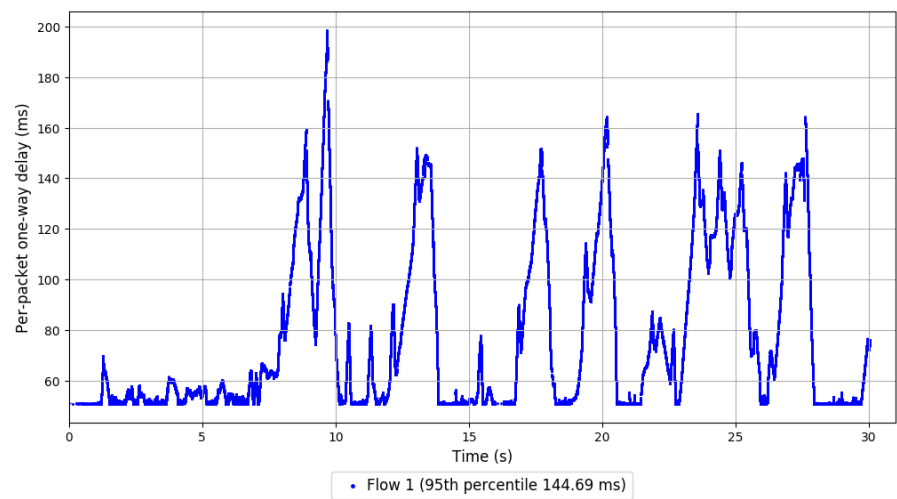
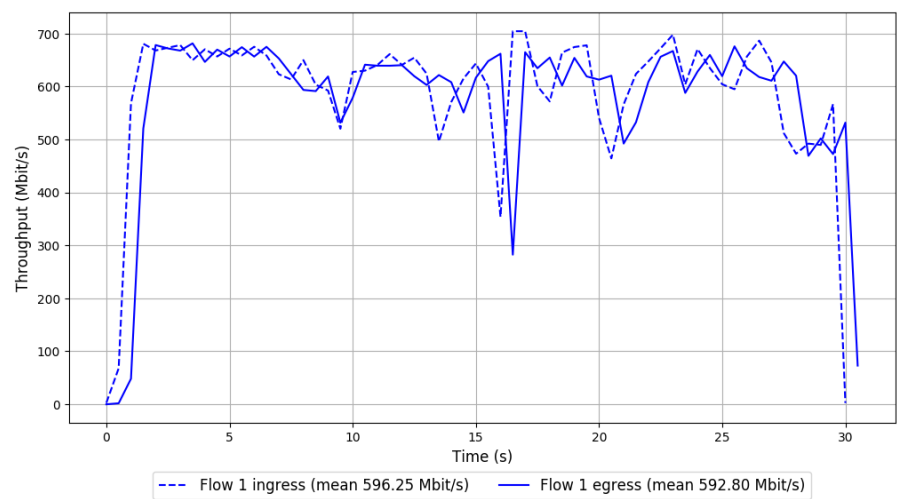
-- Flow 1:

Average throughput: 592.80 Mbit/s

95th percentile per-packet one-way delay: 144.693 ms

Loss rate: 0.57%

Run 4: Report of TCP BBR — Data Link

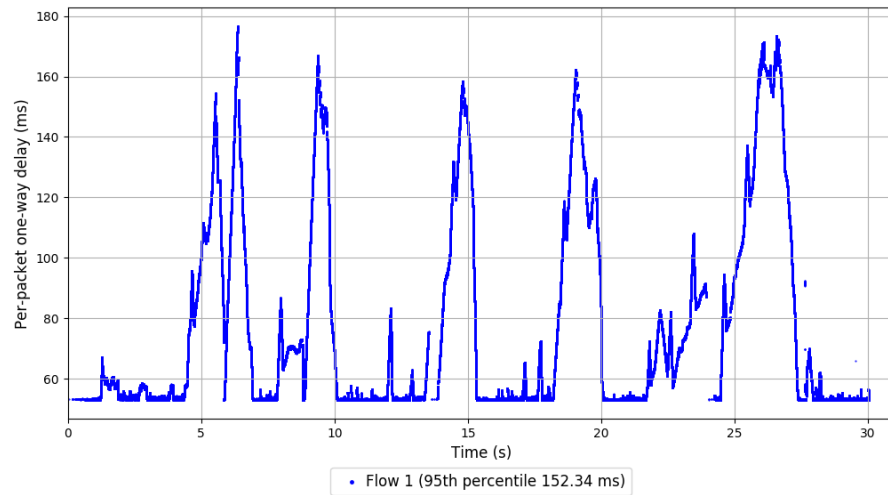
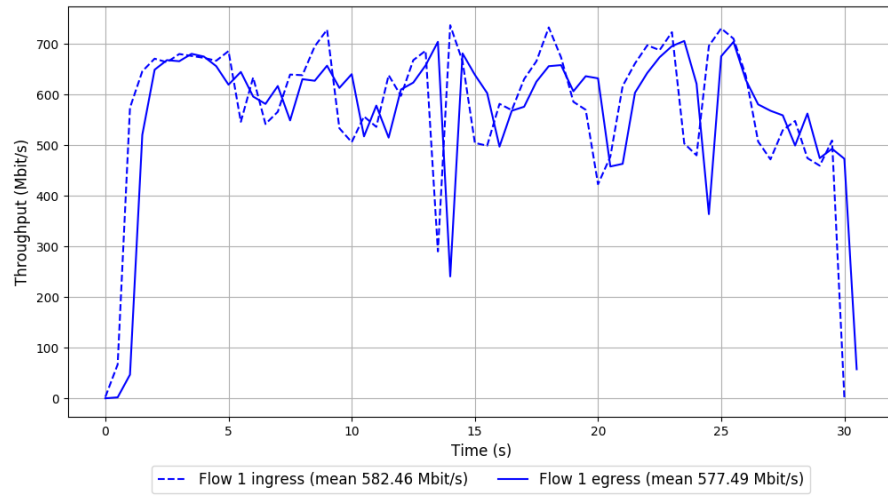


Run 5: Statistics of TCP BBR

Start at: 2018-09-26 02:42:03
End at: 2018-09-26 02:42:33
Local clock offset: -0.146 ms
Remote clock offset: -0.658 ms

Below is generated by plot.py at 2018-09-26 03:06:07
Datalink statistics
-- Total of 1 flow:
Average throughput: 577.49 Mbit/s
95th percentile per-packet one-way delay: 152.342 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 577.49 Mbit/s
95th percentile per-packet one-way delay: 152.342 ms
Loss rate: 0.86%

Run 5: Report of TCP BBR — Data Link

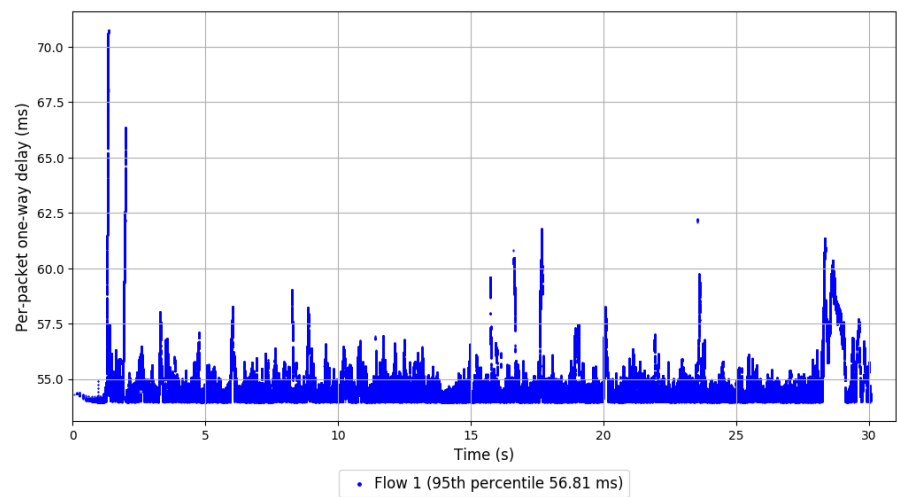
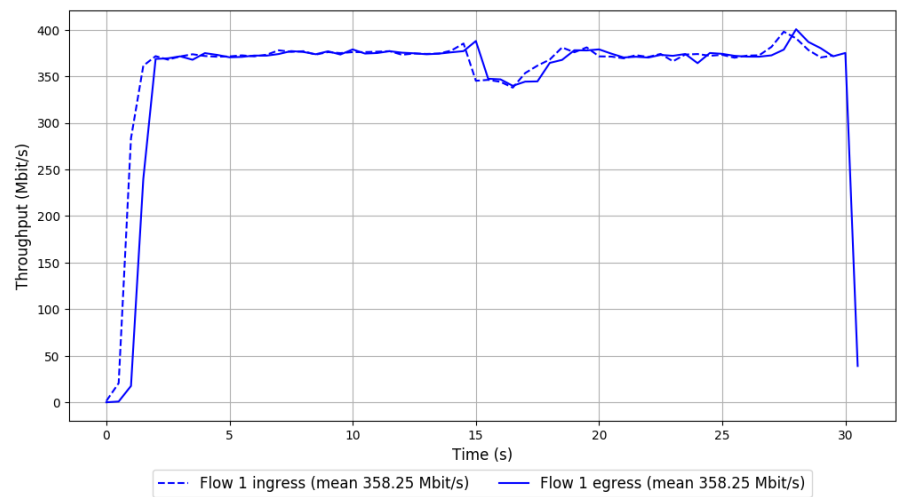


Run 1: Statistics of Copa

Start at: 2018-09-26 00:30:10
End at: 2018-09-26 00:30:40
Local clock offset: -0.103 ms
Remote clock offset: 0.451 ms

Below is generated by plot.py at 2018-09-26 03:07:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 358.25 Mbit/s
95th percentile per-packet one-way delay: 56.813 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 358.25 Mbit/s
95th percentile per-packet one-way delay: 56.813 ms
Loss rate: 0.00%

Run 1: Report of Copa — Data Link

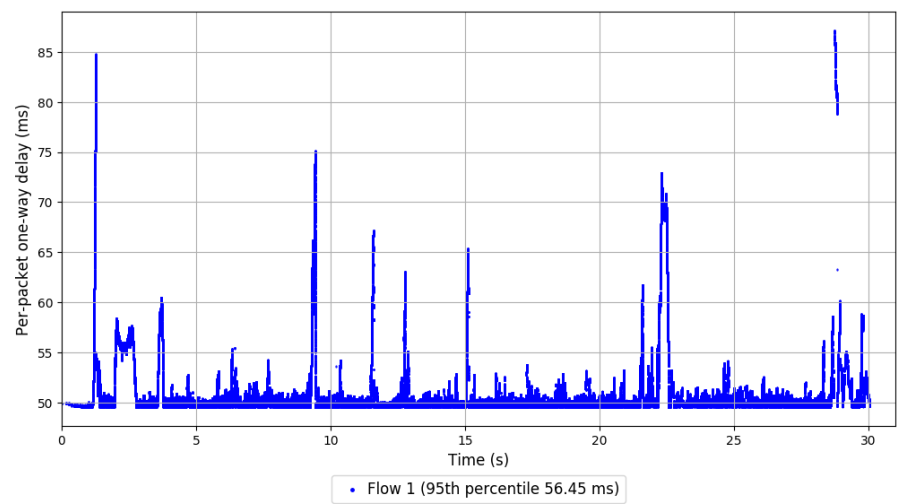
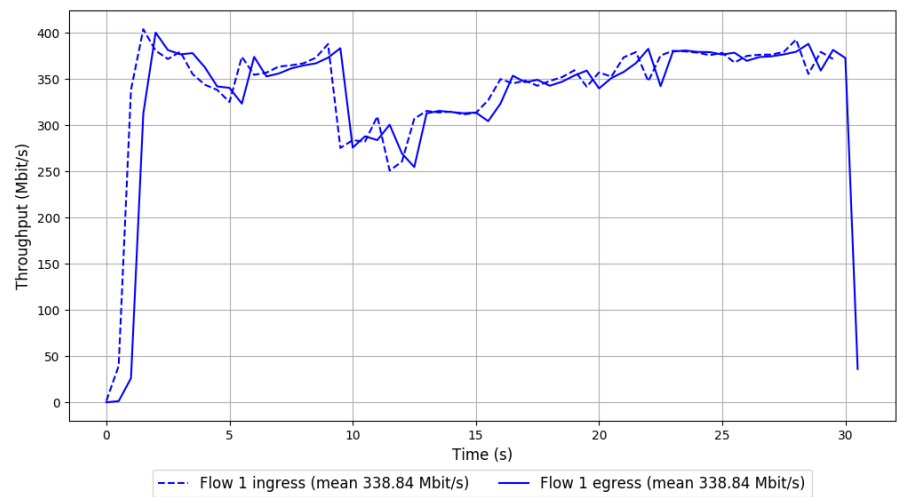


Run 2: Statistics of Copa

Start at: 2018-09-26 00:57:28
End at: 2018-09-26 00:57:58
Local clock offset: -0.169 ms
Remote clock offset: -0.265 ms

Below is generated by plot.py at 2018-09-26 03:07:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 338.84 Mbit/s
95th percentile per-packet one-way delay: 56.450 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 338.84 Mbit/s
95th percentile per-packet one-way delay: 56.450 ms
Loss rate: 0.00%

Run 2: Report of Copa — Data Link

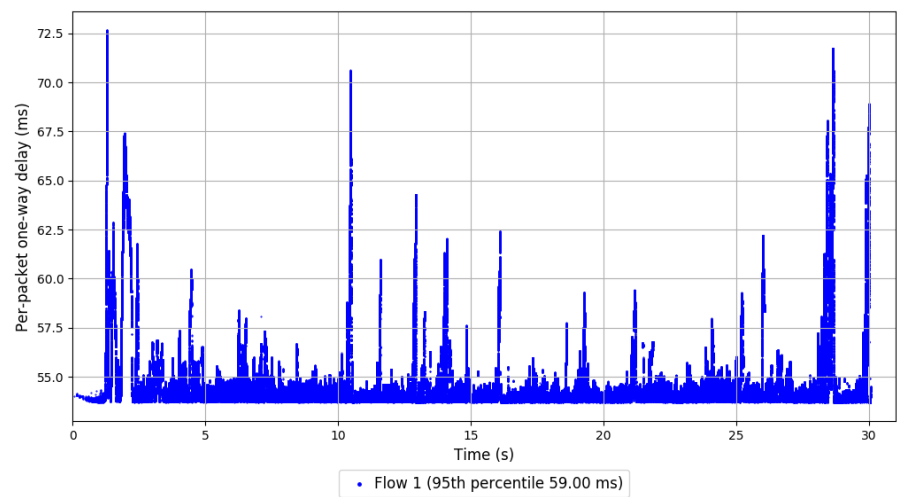
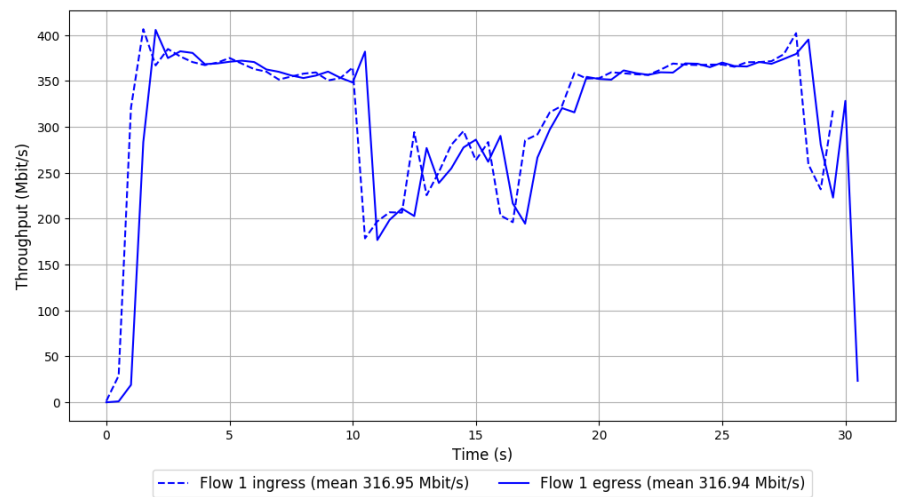


Run 3: Statistics of Copa

Start at: 2018-09-26 01:24:52
End at: 2018-09-26 01:25:22
Local clock offset: -0.388 ms
Remote clock offset: -0.106 ms

Below is generated by plot.py at 2018-09-26 03:07:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 316.94 Mbit/s
95th percentile per-packet one-way delay: 58.998 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 316.94 Mbit/s
95th percentile per-packet one-way delay: 58.998 ms
Loss rate: 0.00%

Run 3: Report of Copa — Data Link

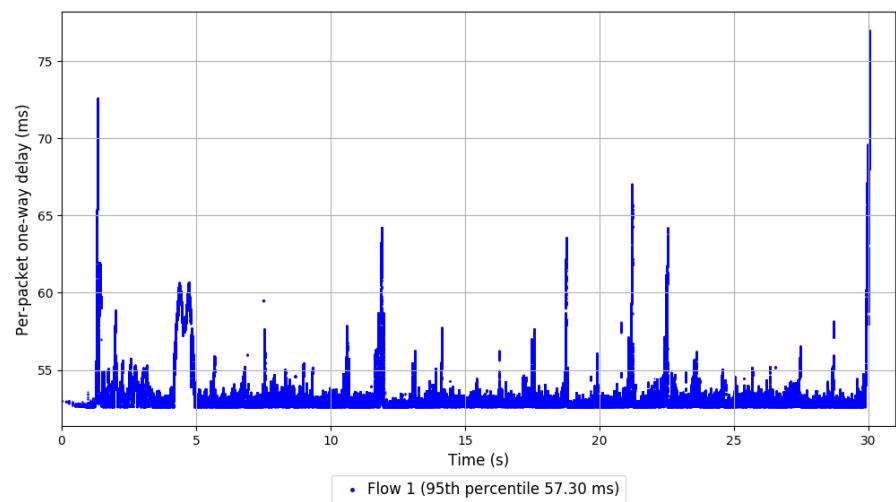
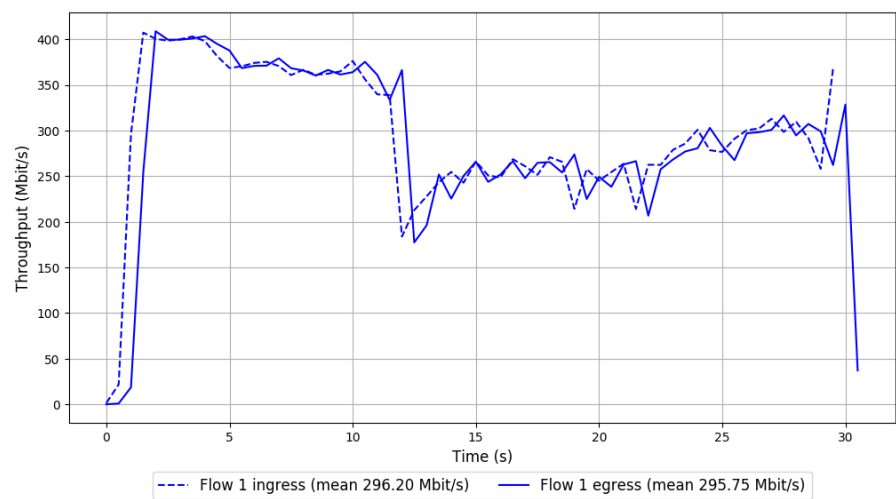


Run 4: Statistics of Copa

Start at: 2018-09-26 01:52:07
End at: 2018-09-26 01:52:37
Local clock offset: -0.043 ms
Remote clock offset: -0.717 ms

Below is generated by plot.py at 2018-09-26 03:15:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 295.75 Mbit/s
95th percentile per-packet one-way delay: 57.305 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 295.75 Mbit/s
95th percentile per-packet one-way delay: 57.305 ms
Loss rate: 0.15%

Run 4: Report of Copa — Data Link

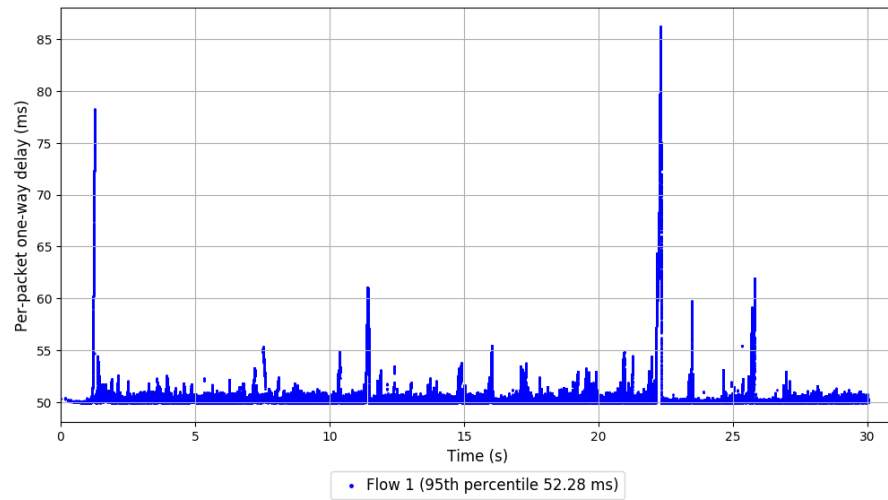
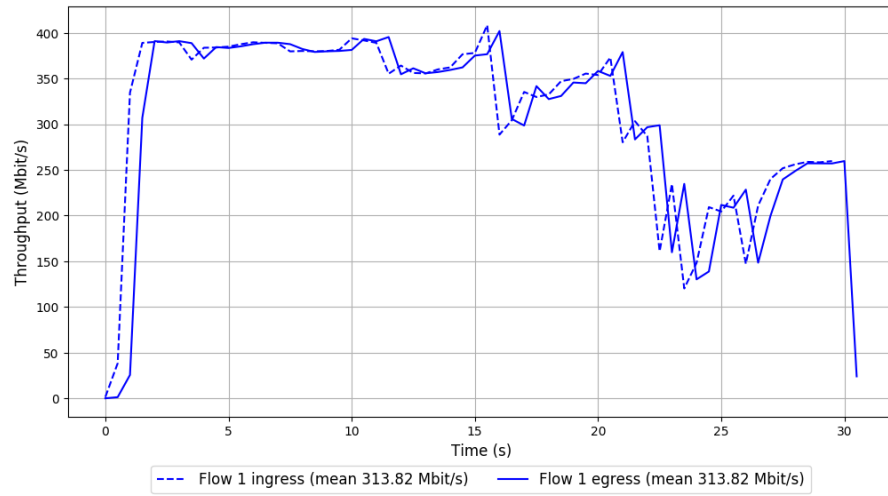


Run 5: Statistics of Copa

Start at: 2018-09-26 02:19:21
End at: 2018-09-26 02:19:51
Local clock offset: -0.214 ms
Remote clock offset: -0.242 ms

Below is generated by plot.py at 2018-09-26 03:16:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 313.82 Mbit/s
95th percentile per-packet one-way delay: 52.276 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 313.82 Mbit/s
95th percentile per-packet one-way delay: 52.276 ms
Loss rate: 0.00%

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-09-26 00:38:46

End at: 2018-09-26 00:39:16

Local clock offset: -0.209 ms

Remote clock offset: 0.023 ms

Below is generated by plot.py at 2018-09-26 03:16:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 615.89 Mbit/s

95th percentile per-packet one-way delay: 89.342 ms

Loss rate: 0.11%

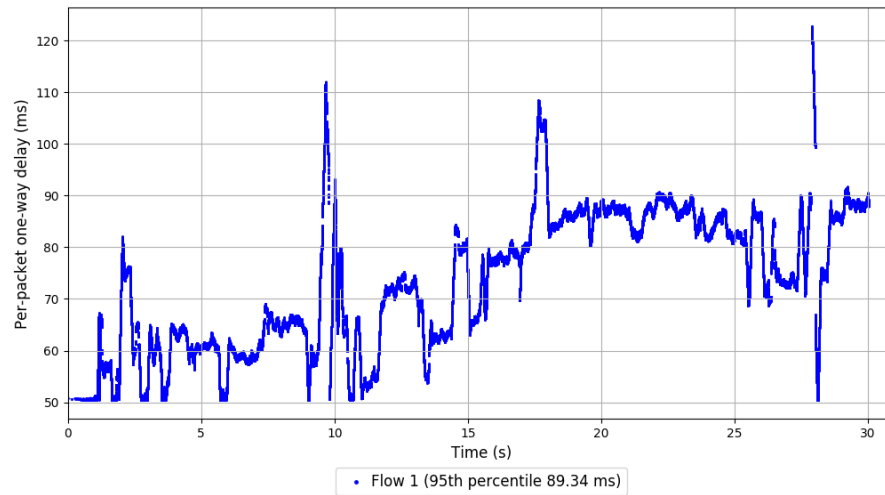
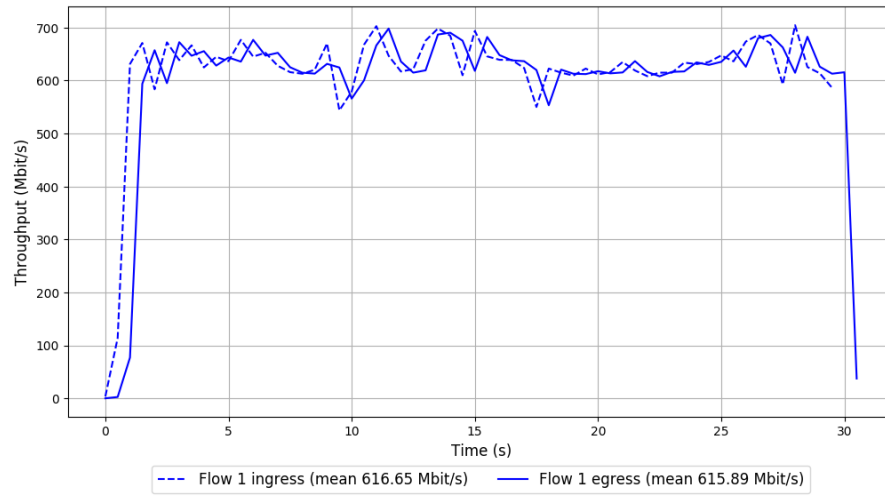
-- Flow 1:

Average throughput: 615.89 Mbit/s

95th percentile per-packet one-way delay: 89.342 ms

Loss rate: 0.11%

Run 1: Report of TCP Cubic — Data Link

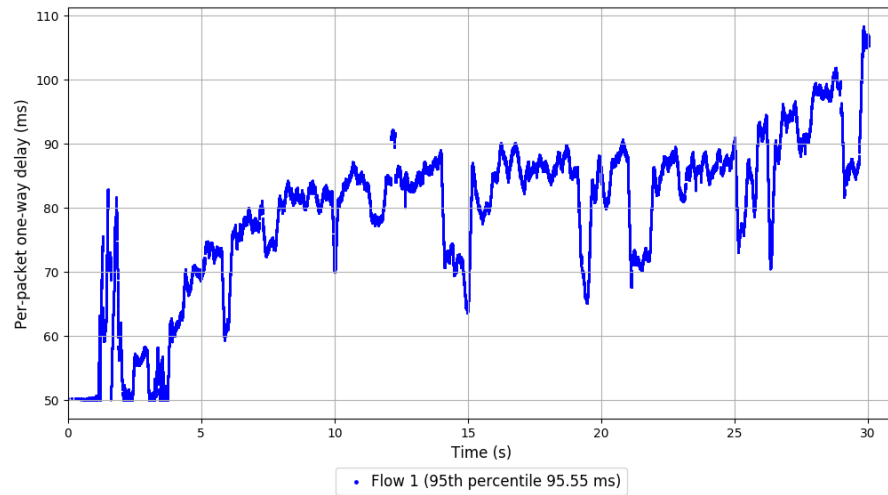
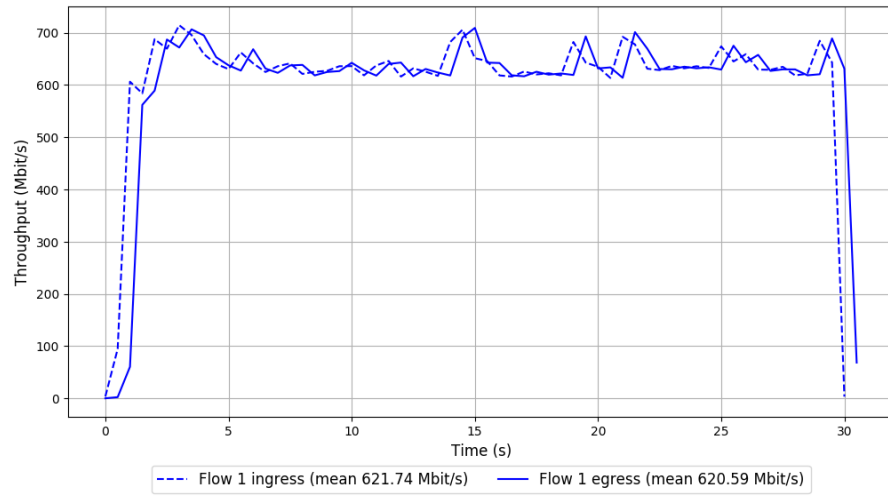


Run 2: Statistics of TCP Cubic

Start at: 2018-09-26 01:06:00
End at: 2018-09-26 01:06:30
Local clock offset: -0.162 ms
Remote clock offset: -0.575 ms

Below is generated by plot.py at 2018-09-26 03:16:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 620.59 Mbit/s
95th percentile per-packet one-way delay: 95.548 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 620.59 Mbit/s
95th percentile per-packet one-way delay: 95.548 ms
Loss rate: 0.17%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-09-26 01:33:12

End at: 2018-09-26 01:33:42

Local clock offset: -0.432 ms

Remote clock offset: 1.161 ms

Below is generated by plot.py at 2018-09-26 03:16:48

Datalink statistics

-- Total of 1 flow:

Average throughput: 618.36 Mbit/s

95th percentile per-packet one-way delay: 83.585 ms

Loss rate: 0.11%

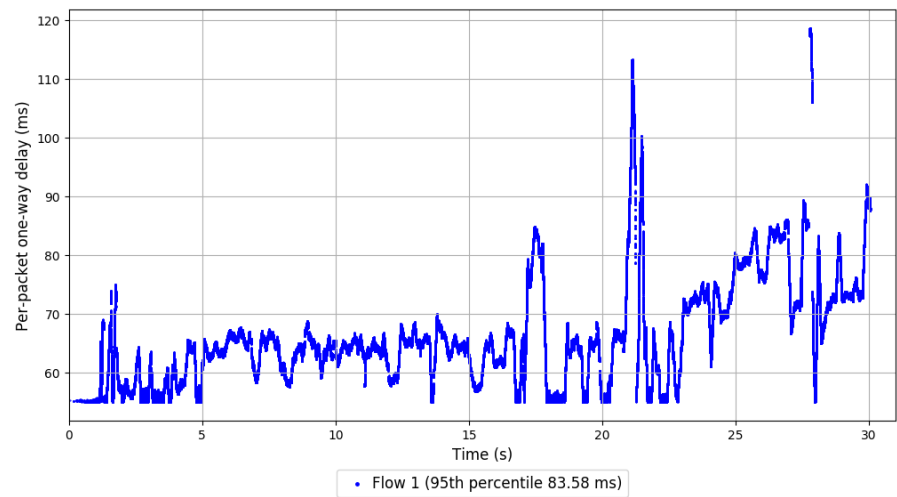
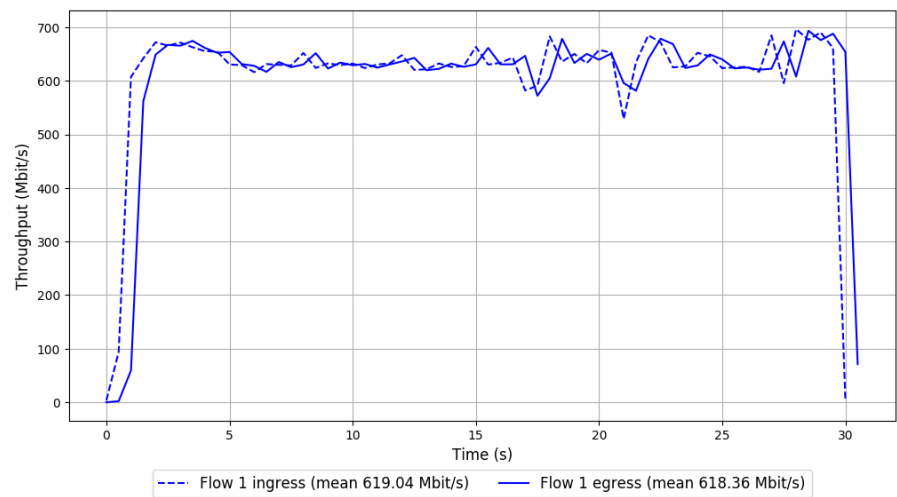
-- Flow 1:

Average throughput: 618.36 Mbit/s

95th percentile per-packet one-way delay: 83.585 ms

Loss rate: 0.11%

Run 3: Report of TCP Cubic — Data Link

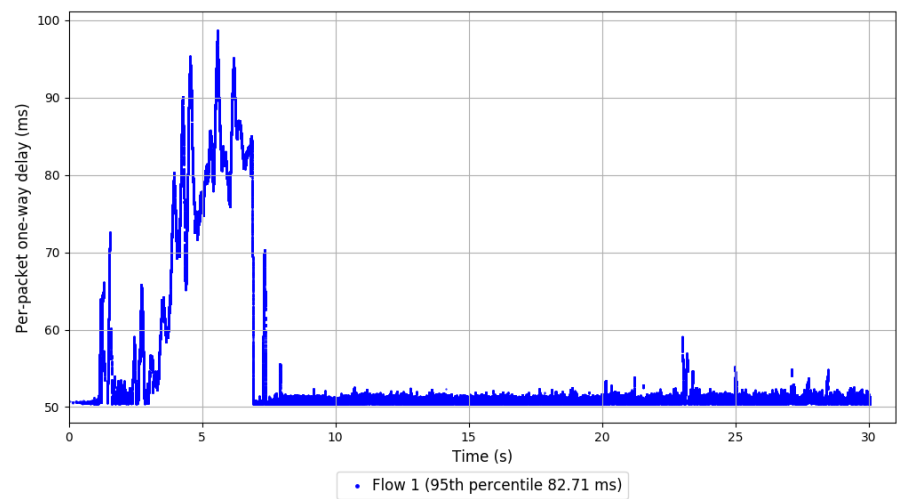
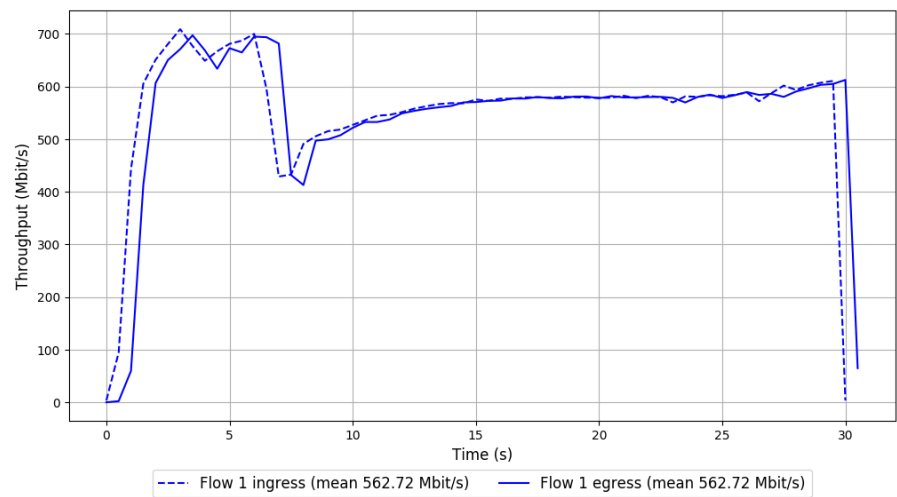


Run 4: Statistics of TCP Cubic

Start at: 2018-09-26 02:00:34
End at: 2018-09-26 02:01:04
Local clock offset: -0.476 ms
Remote clock offset: -0.123 ms

Below is generated by plot.py at 2018-09-26 03:16:48
Datalink statistics
-- Total of 1 flow:
Average throughput: 562.72 Mbit/s
95th percentile per-packet one-way delay: 82.710 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 562.72 Mbit/s
95th percentile per-packet one-way delay: 82.710 ms
Loss rate: 0.00%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-09-26 02:27:43

End at: 2018-09-26 02:28:13

Local clock offset: -0.22 ms

Remote clock offset: 0.02 ms

Below is generated by plot.py at 2018-09-26 03:17:02

Datalink statistics

-- Total of 1 flow:

Average throughput: 601.84 Mbit/s

95th percentile per-packet one-way delay: 73.912 ms

Loss rate: 0.07%

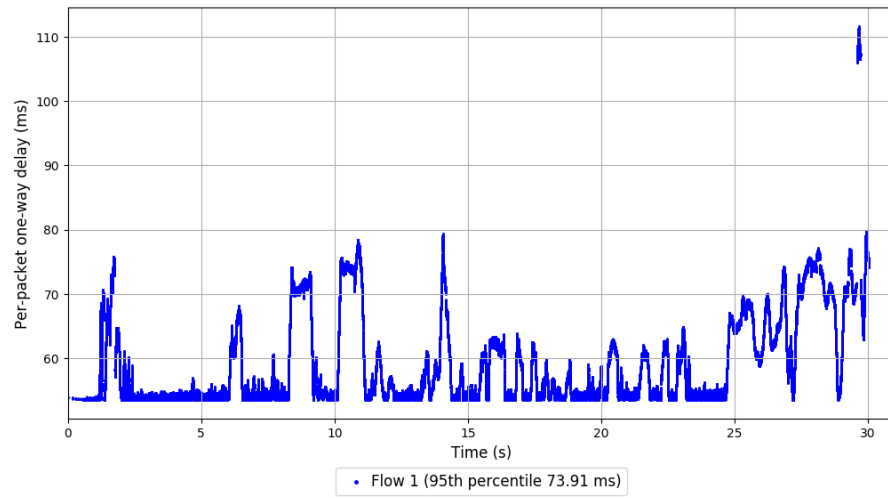
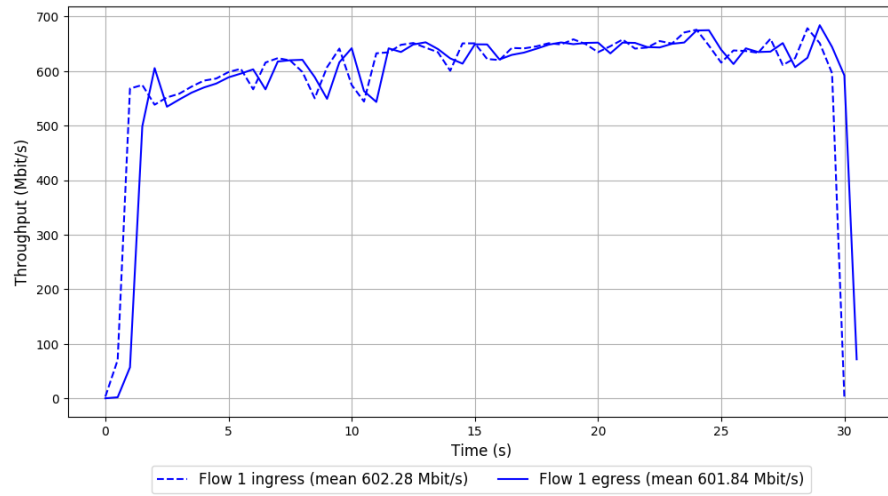
-- Flow 1:

Average throughput: 601.84 Mbit/s

95th percentile per-packet one-way delay: 73.912 ms

Loss rate: 0.07%

Run 5: Report of TCP Cubic — Data Link

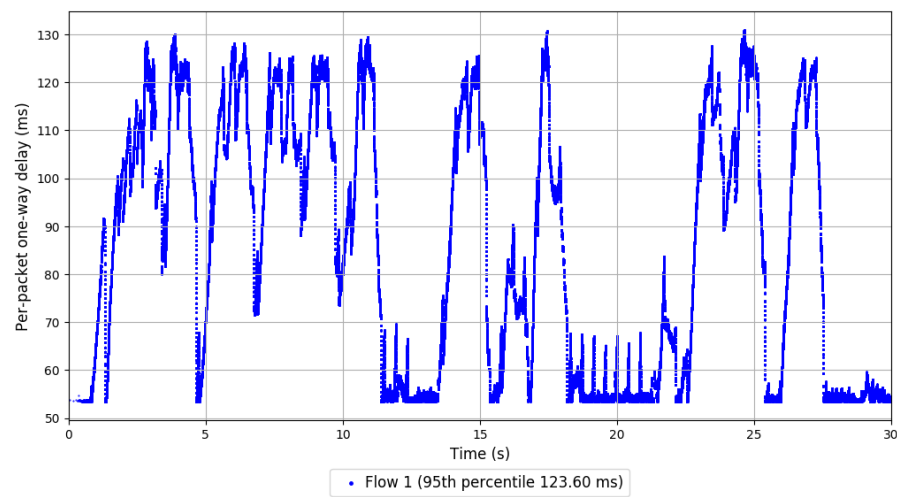
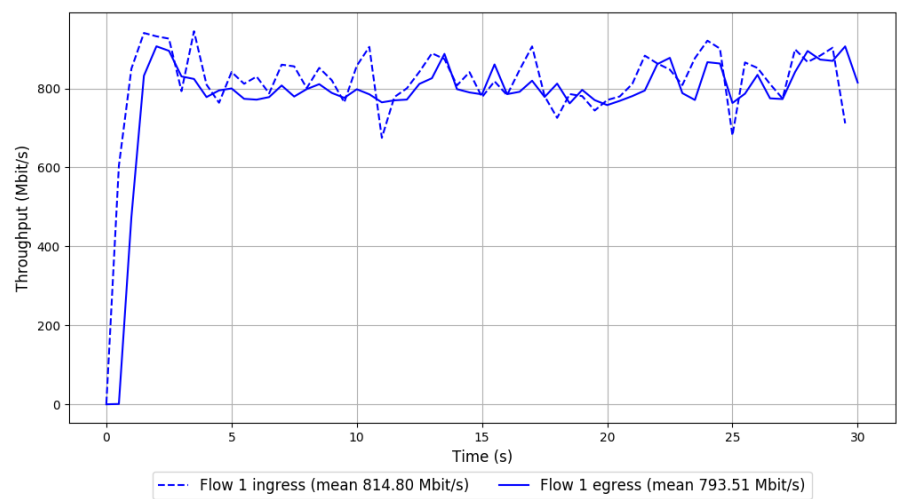


Run 1: Statistics of FillP

Start at: 2018-09-26 00:46:43
End at: 2018-09-26 00:47:14
Local clock offset: -0.208 ms
Remote clock offset: -0.281 ms

Below is generated by plot.py at 2018-09-26 03:23:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 793.51 Mbit/s
95th percentile per-packet one-way delay: 123.599 ms
Loss rate: 2.61%
-- Flow 1:
Average throughput: 793.51 Mbit/s
95th percentile per-packet one-way delay: 123.599 ms
Loss rate: 2.61%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-09-26 01:14:03

End at: 2018-09-26 01:14:33

Local clock offset: -0.054 ms

Remote clock offset: 1.289 ms

Below is generated by plot.py at 2018-09-26 03:32:52

Datalink statistics

-- Total of 1 flow:

Average throughput: 799.46 Mbit/s

95th percentile per-packet one-way delay: 124.533 ms

Loss rate: 2.78%

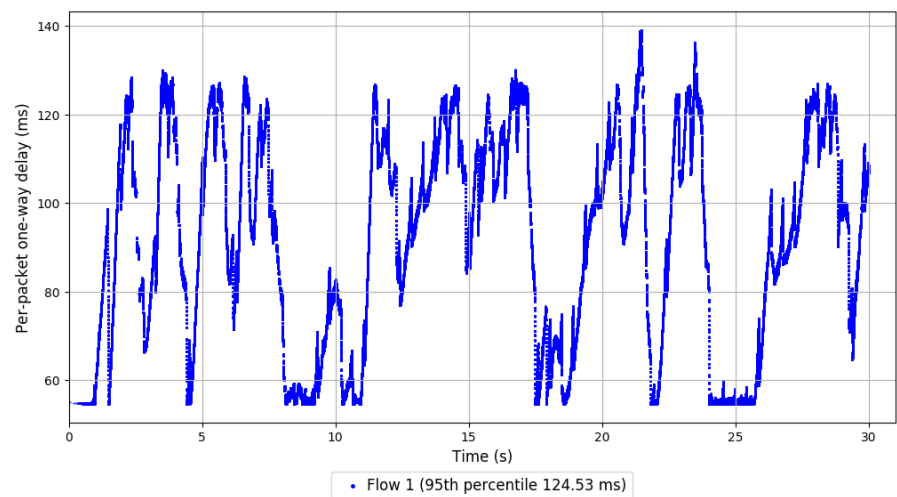
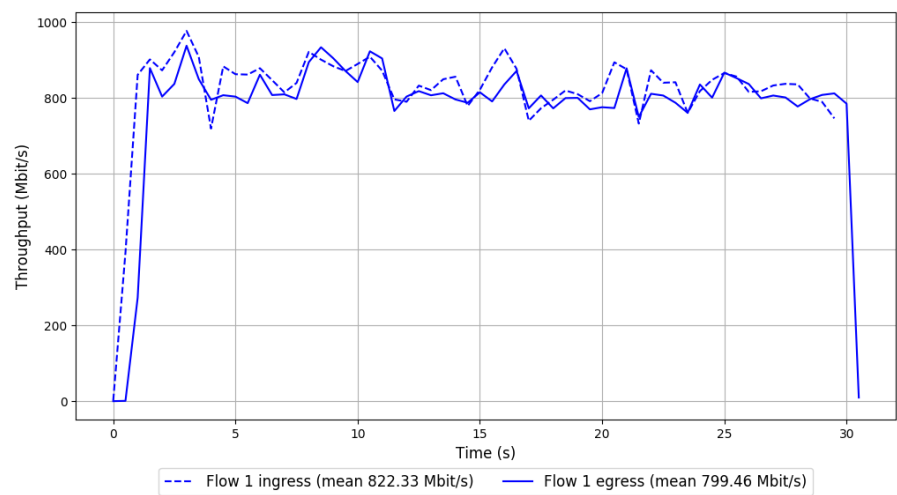
-- Flow 1:

Average throughput: 799.46 Mbit/s

95th percentile per-packet one-way delay: 124.533 ms

Loss rate: 2.78%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-09-26 01:41:15

End at: 2018-09-26 01:41:45

Local clock offset: -0.075 ms

Remote clock offset: 0.675 ms

Below is generated by plot.py at 2018-09-26 03:33:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 808.79 Mbit/s

95th percentile per-packet one-way delay: 121.164 ms

Loss rate: 2.71%

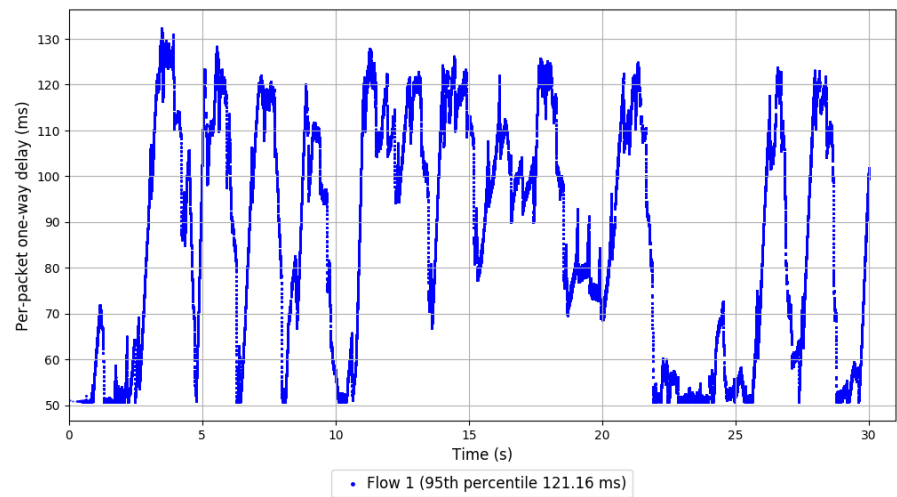
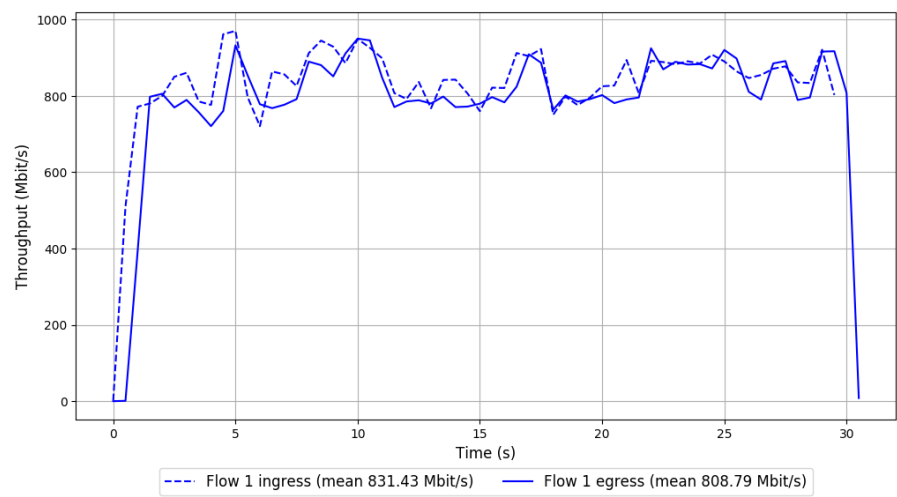
-- Flow 1:

Average throughput: 808.79 Mbit/s

95th percentile per-packet one-way delay: 121.164 ms

Loss rate: 2.71%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-09-26 02:08:34

End at: 2018-09-26 02:09:04

Local clock offset: -0.382 ms

Remote clock offset: -0.71 ms

Below is generated by plot.py at 2018-09-26 03:33:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 773.92 Mbit/s

95th percentile per-packet one-way delay: 124.423 ms

Loss rate: 3.91%

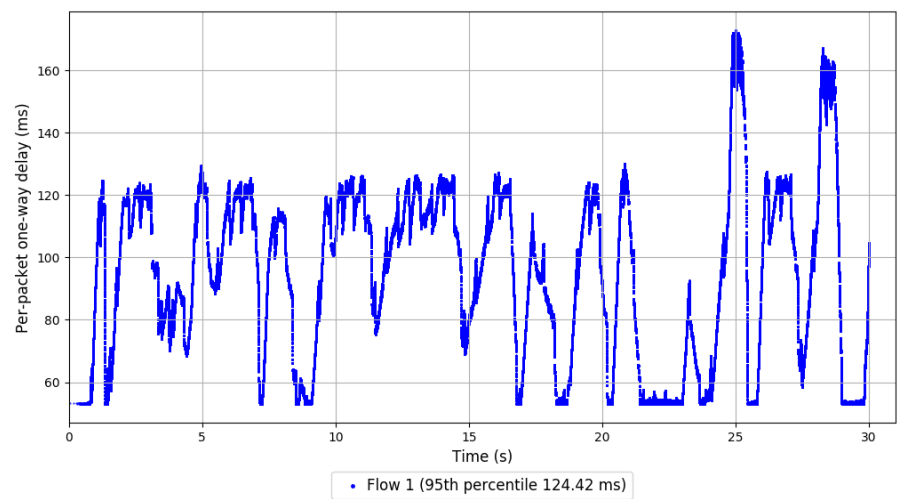
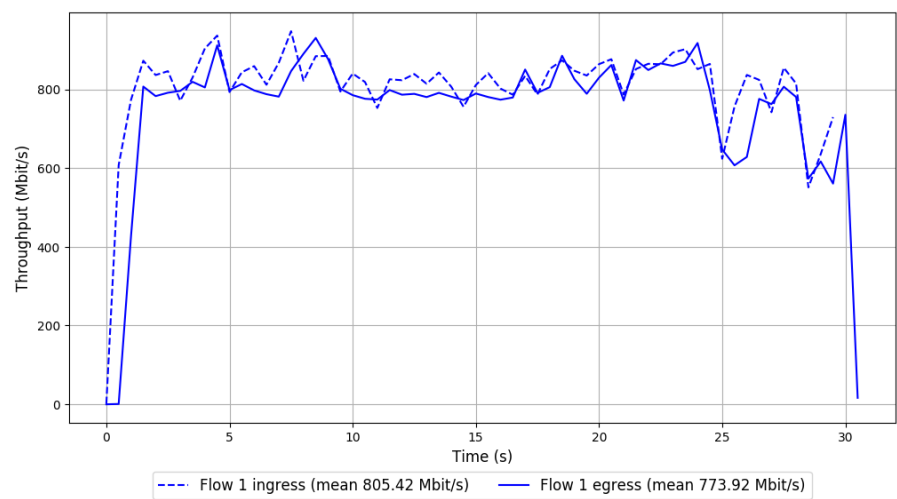
-- Flow 1:

Average throughput: 773.92 Mbit/s

95th percentile per-packet one-way delay: 124.423 ms

Loss rate: 3.91%

Run 4: Report of FillP — Data Link

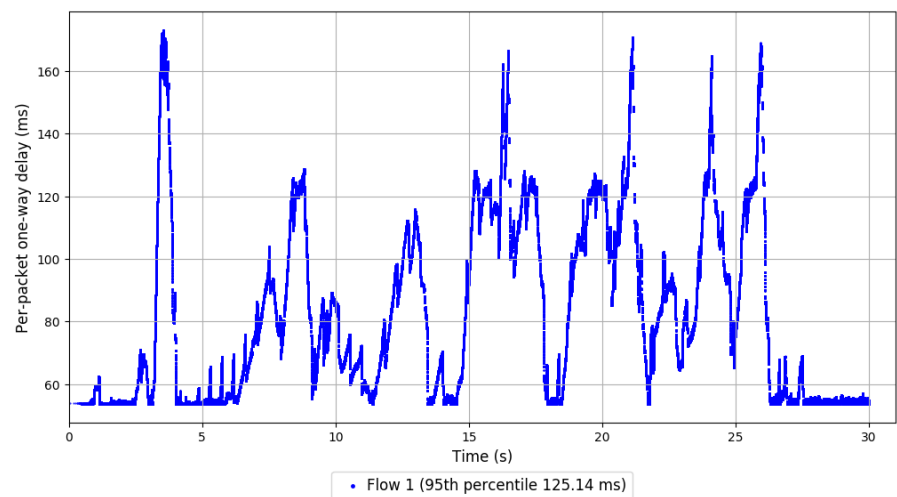
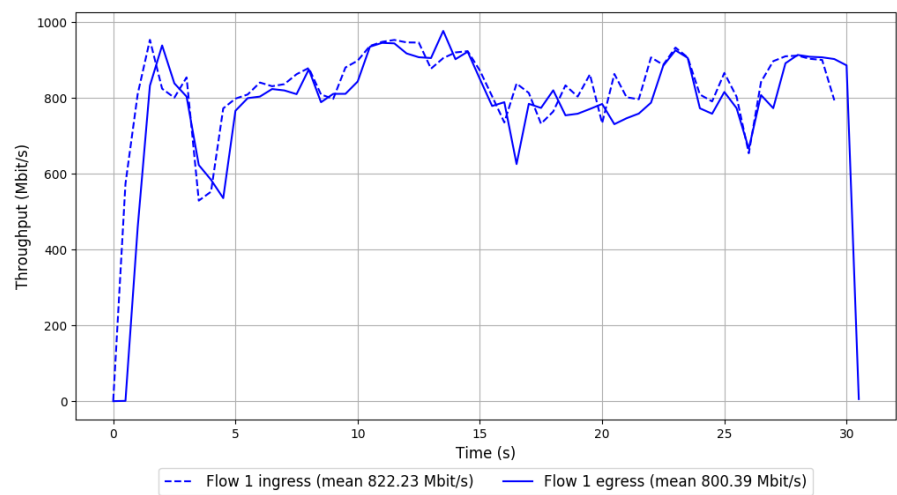


Run 5: Statistics of FillP

Start at: 2018-09-26 02:35:43
End at: 2018-09-26 02:36:13
Local clock offset: -0.316 ms
Remote clock offset: -0.003 ms

Below is generated by plot.py at 2018-09-26 03:33:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 800.39 Mbit/s
95th percentile per-packet one-way delay: 125.139 ms
Loss rate: 2.66%
-- Flow 1:
Average throughput: 800.39 Mbit/s
95th percentile per-packet one-way delay: 125.139 ms
Loss rate: 2.66%

Run 5: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2018-09-26 00:51:20

End at: 2018-09-26 00:51:50

Local clock offset: -0.29 ms

Remote clock offset: 0.349 ms

Below is generated by plot.py at 2018-09-26 03:33:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 741.21 Mbit/s

95th percentile per-packet one-way delay: 129.512 ms

Loss rate: 2.67%

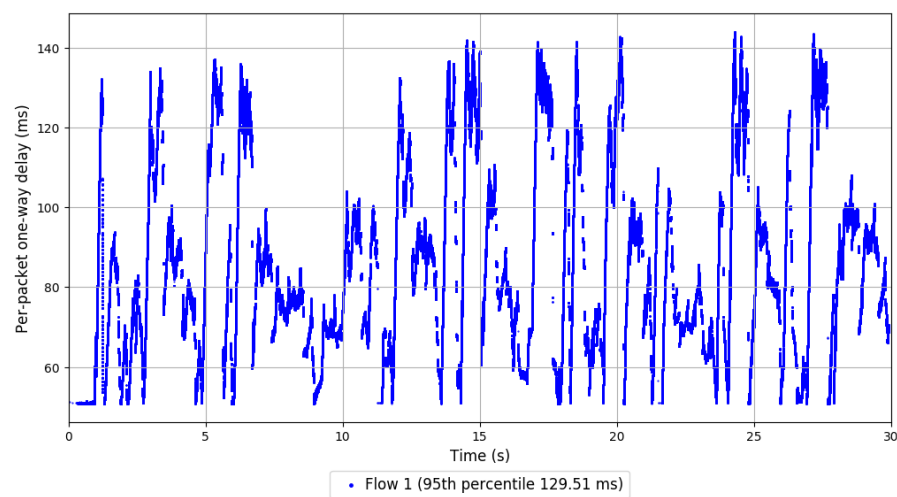
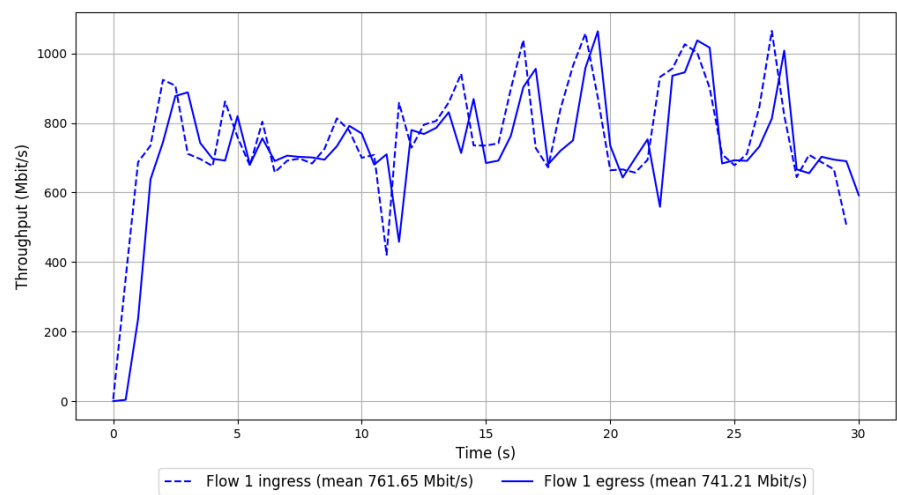
-- Flow 1:

Average throughput: 741.21 Mbit/s

95th percentile per-packet one-way delay: 129.512 ms

Loss rate: 2.67%

Run 1: Report of FillP-Sheep — Data Link

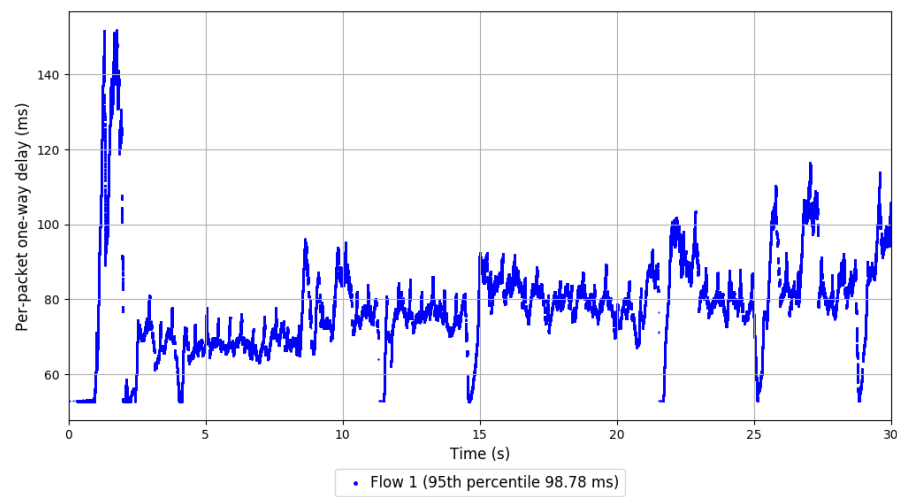
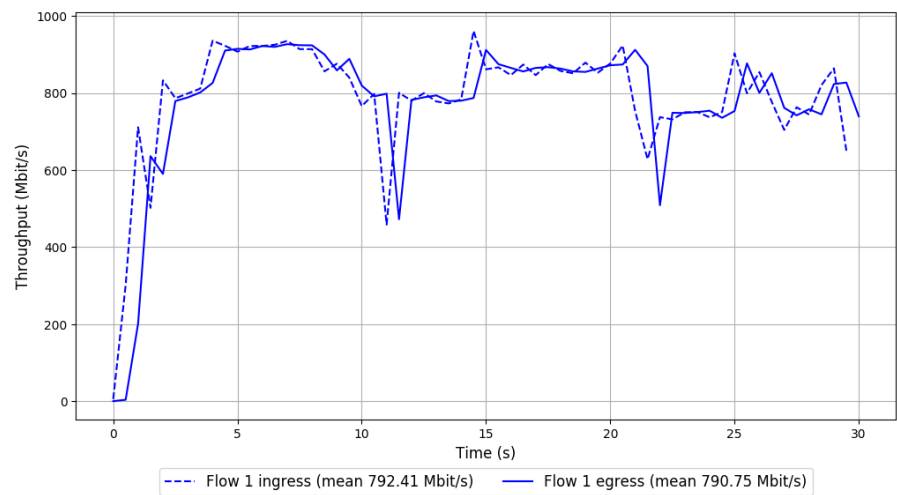


Run 2: Statistics of FillP-Sheep

Start at: 2018-09-26 01:18:42
End at: 2018-09-26 01:19:12
Local clock offset: -0.444 ms
Remote clock offset: -1.063 ms

Below is generated by plot.py at 2018-09-26 03:33:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 790.75 Mbit/s
95th percentile per-packet one-way delay: 98.778 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 790.75 Mbit/s
95th percentile per-packet one-way delay: 98.778 ms
Loss rate: 0.21%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2018-09-26 01:45:54

End at: 2018-09-26 01:46:24

Local clock offset: -0.326 ms

Remote clock offset: 0.59 ms

Below is generated by plot.py at 2018-09-26 03:35:23

Datalink statistics

-- Total of 1 flow:

Average throughput: 851.61 Mbit/s

95th percentile per-packet one-way delay: 100.905 ms

Loss rate: 0.22%

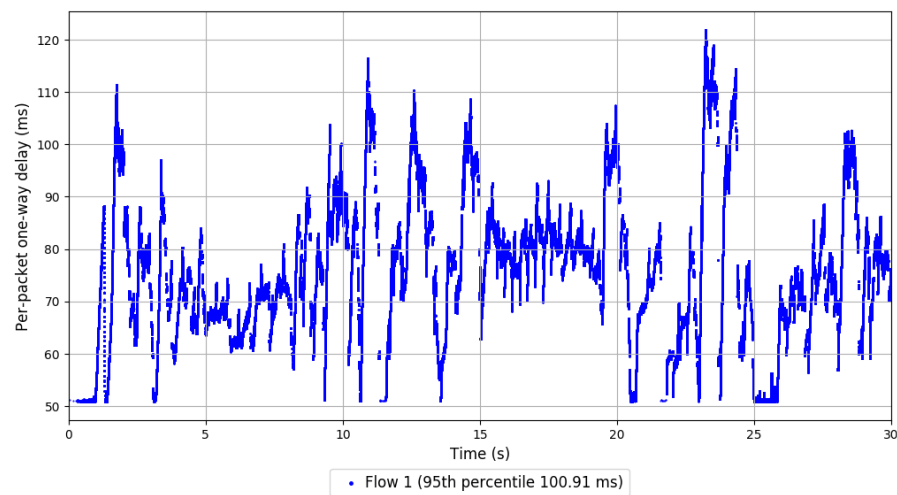
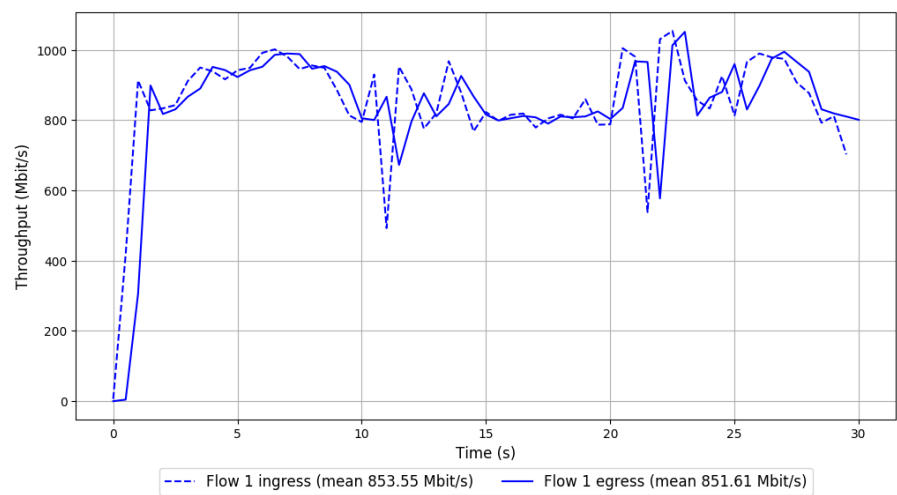
-- Flow 1:

Average throughput: 851.61 Mbit/s

95th percentile per-packet one-way delay: 100.905 ms

Loss rate: 0.22%

Run 3: Report of FillP-Sheep — Data Link



Run 4: Statistics of FillP-Sheep

Start at: 2018-09-26 02:13:11

End at: 2018-09-26 02:13:41

Local clock offset: -0.058 ms

Remote clock offset: 1.363 ms

Below is generated by plot.py at 2018-09-26 03:42:57

Datalink statistics

-- Total of 1 flow:

Average throughput: 794.85 Mbit/s

95th percentile per-packet one-way delay: 106.290 ms

Loss rate: 0.23%

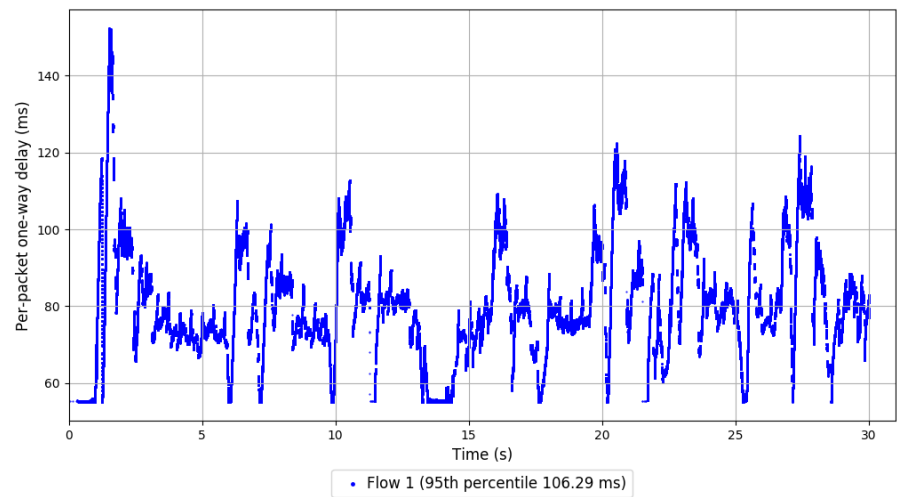
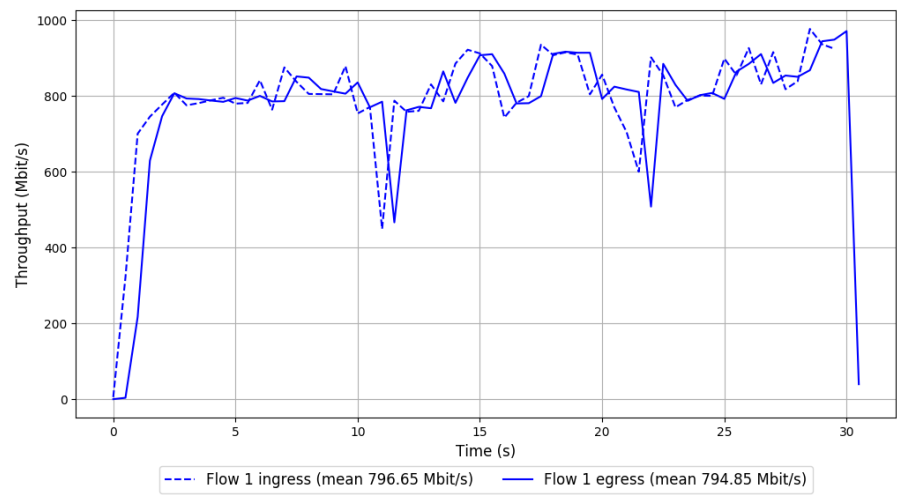
-- Flow 1:

Average throughput: 794.85 Mbit/s

95th percentile per-packet one-way delay: 106.290 ms

Loss rate: 0.23%

Run 4: Report of FillP-Sheep — Data Link



Run 5: Statistics of FillP-Sheep

Start at: 2018-09-26 02:40:25

End at: 2018-09-26 02:40:55

Local clock offset: -0.185 ms

Remote clock offset: 0.631 ms

Below is generated by plot.py at 2018-09-26 03:49:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 781.52 Mbit/s

95th percentile per-packet one-way delay: 119.788 ms

Loss rate: 0.64%

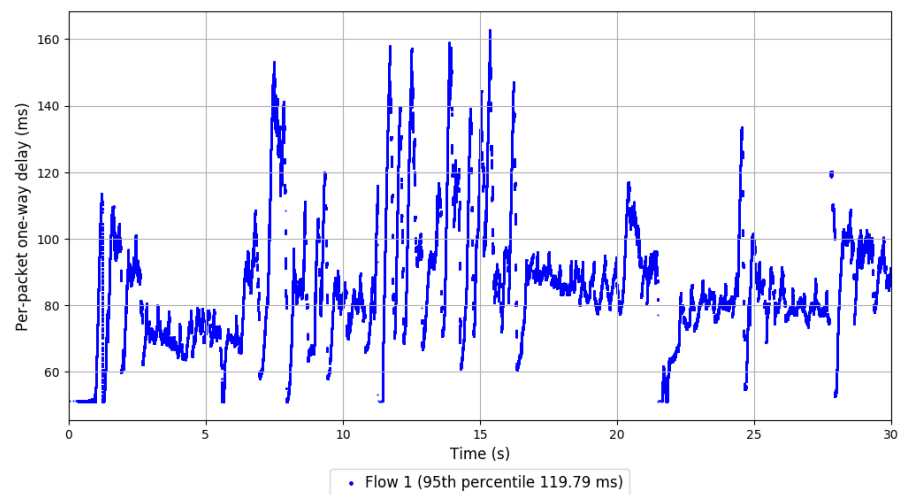
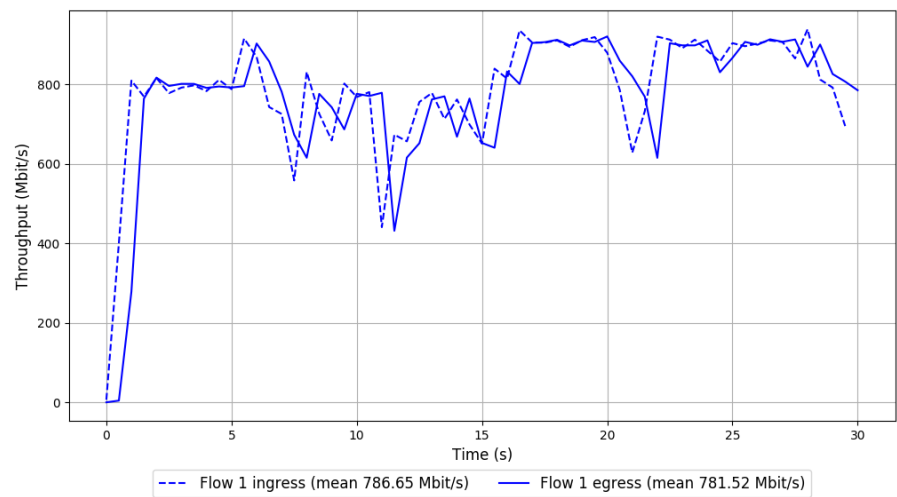
-- Flow 1:

Average throughput: 781.52 Mbit/s

95th percentile per-packet one-way delay: 119.788 ms

Loss rate: 0.64%

Run 5: Report of FillP-Sheep — Data Link

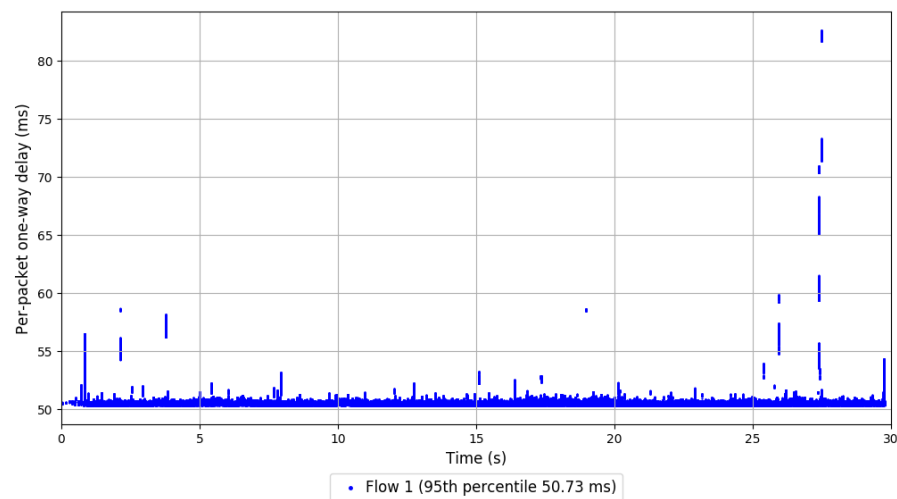
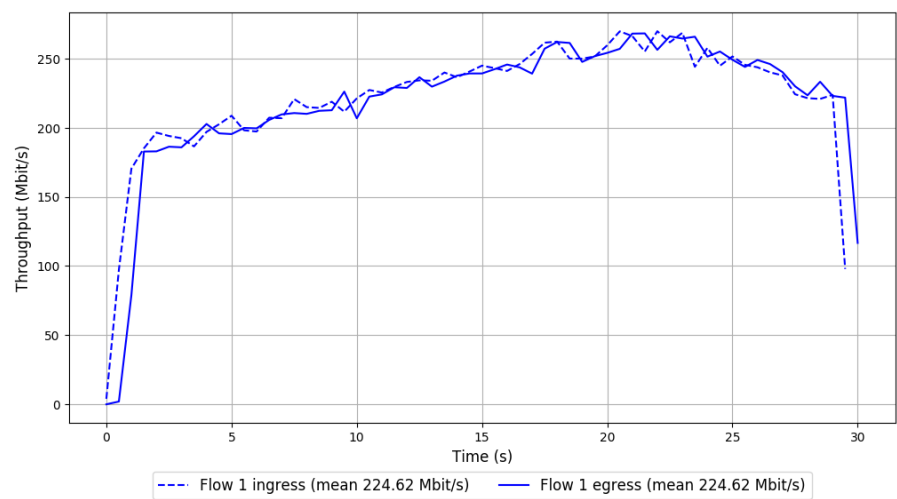


Run 1: Statistics of Indigo

Start at: 2018-09-26 00:54:33
End at: 2018-09-26 00:55:03
Local clock offset: -0.291 ms
Remote clock offset: -0.173 ms

Below is generated by plot.py at 2018-09-26 03:49:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 224.62 Mbit/s
95th percentile per-packet one-way delay: 50.734 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 224.62 Mbit/s
95th percentile per-packet one-way delay: 50.734 ms
Loss rate: 0.00%

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2018-09-26 01:21:56

End at: 2018-09-26 01:22:26

Local clock offset: -0.38 ms

Remote clock offset: 0.674 ms

Below is generated by plot.py at 2018-09-26 03:49:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 226.67 Mbit/s

95th percentile per-packet one-way delay: 54.592 ms

Loss rate: 0.00%

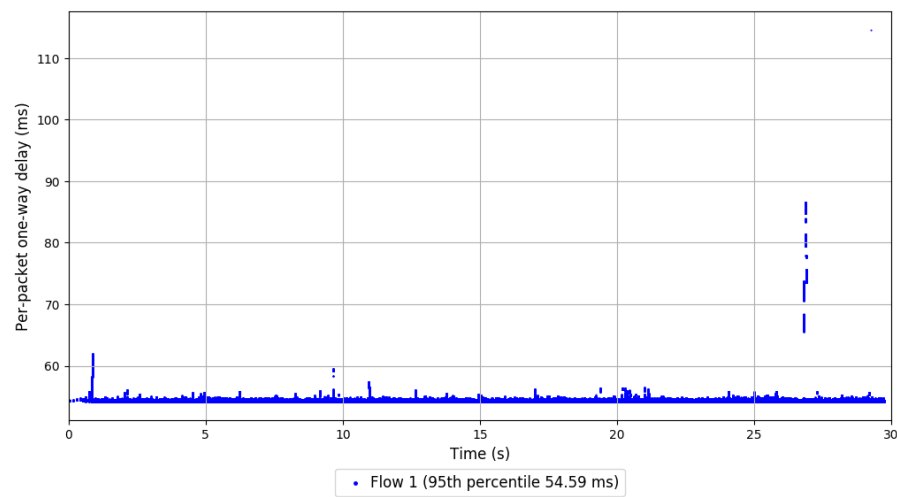
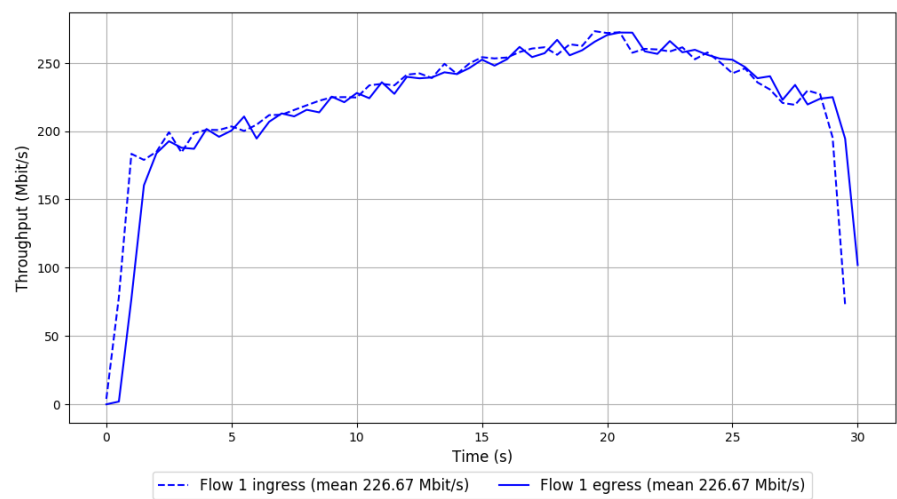
-- Flow 1:

Average throughput: 226.67 Mbit/s

95th percentile per-packet one-way delay: 54.592 ms

Loss rate: 0.00%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2018-09-26 01:49:10

End at: 2018-09-26 01:49:40

Local clock offset: -0.095 ms

Remote clock offset: 0.455 ms

Below is generated by plot.py at 2018-09-26 03:49:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 237.65 Mbit/s

95th percentile per-packet one-way delay: 54.266 ms

Loss rate: 0.00%

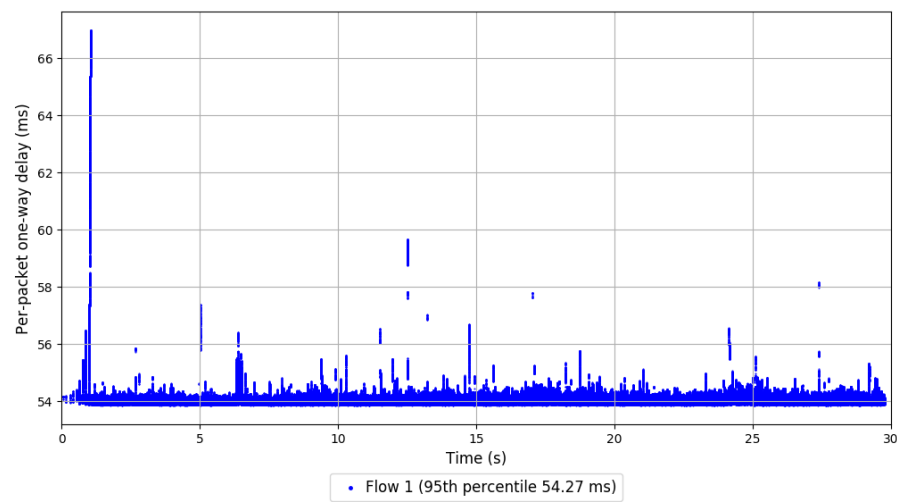
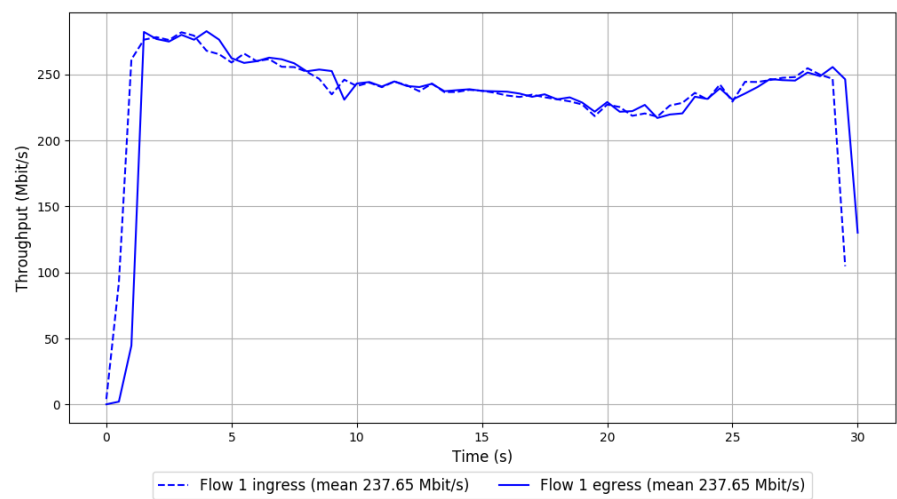
-- Flow 1:

Average throughput: 237.65 Mbit/s

95th percentile per-packet one-way delay: 54.266 ms

Loss rate: 0.00%

Run 3: Report of Indigo — Data Link

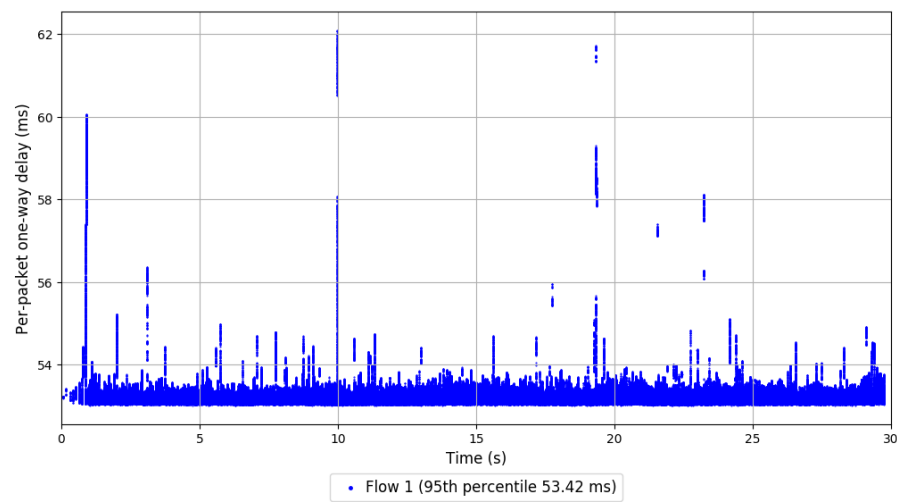
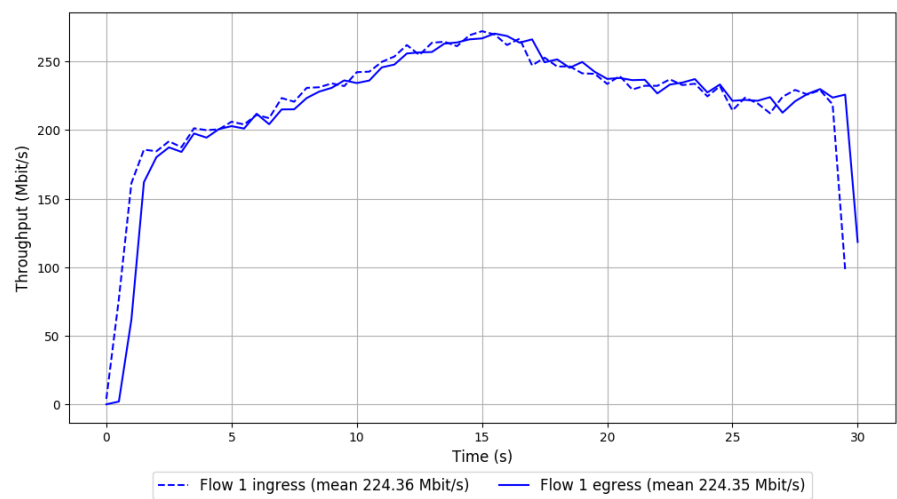


Run 4: Statistics of Indigo

Start at: 2018-09-26 02:16:26
End at: 2018-09-26 02:16:56
Local clock offset: -0.031 ms
Remote clock offset: -0.557 ms

Below is generated by plot.py at 2018-09-26 03:49:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 224.35 Mbit/s
95th percentile per-packet one-way delay: 53.423 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 224.35 Mbit/s
95th percentile per-packet one-way delay: 53.423 ms
Loss rate: 0.00%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2018-09-26 02:43:42

End at: 2018-09-26 02:44:12

Local clock offset: -0.317 ms

Remote clock offset: 0.307 ms

Below is generated by plot.py at 2018-09-26 03:49:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 224.74 Mbit/s

95th percentile per-packet one-way delay: 51.221 ms

Loss rate: 0.00%

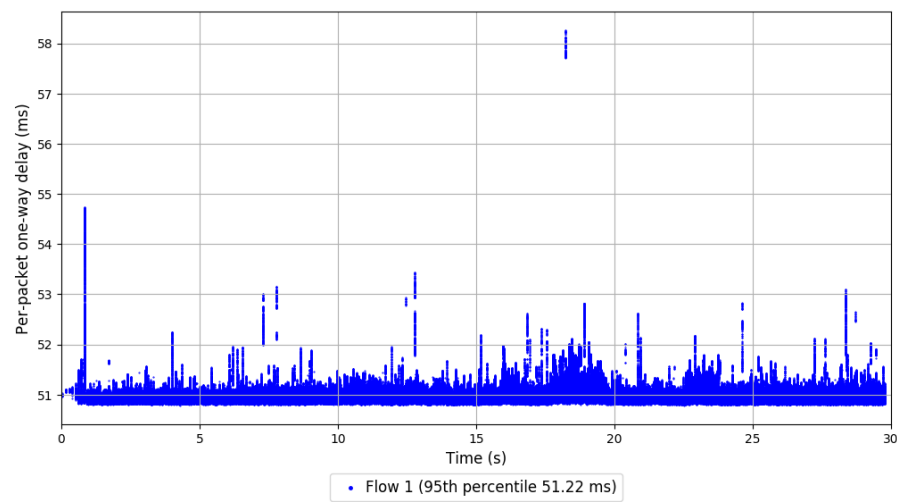
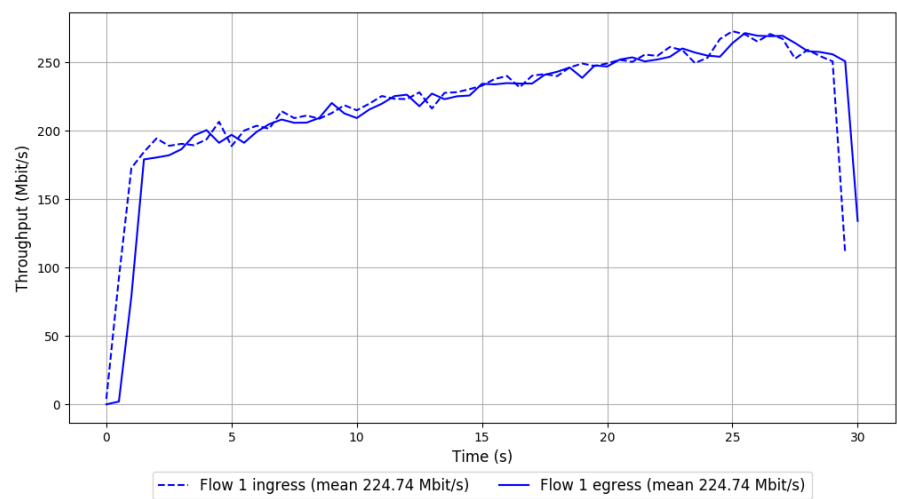
-- Flow 1:

Average throughput: 224.74 Mbit/s

95th percentile per-packet one-way delay: 51.221 ms

Loss rate: 0.00%

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-96d2da3

Start at: 2018-09-26 00:40:23

End at: 2018-09-26 00:40:53

Local clock offset: -0.486 ms

Remote clock offset: 0.074 ms

Below is generated by plot.py at 2018-09-26 03:49:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 237.45 Mbit/s

95th percentile per-packet one-way delay: 78.030 ms

Loss rate: 0.00%

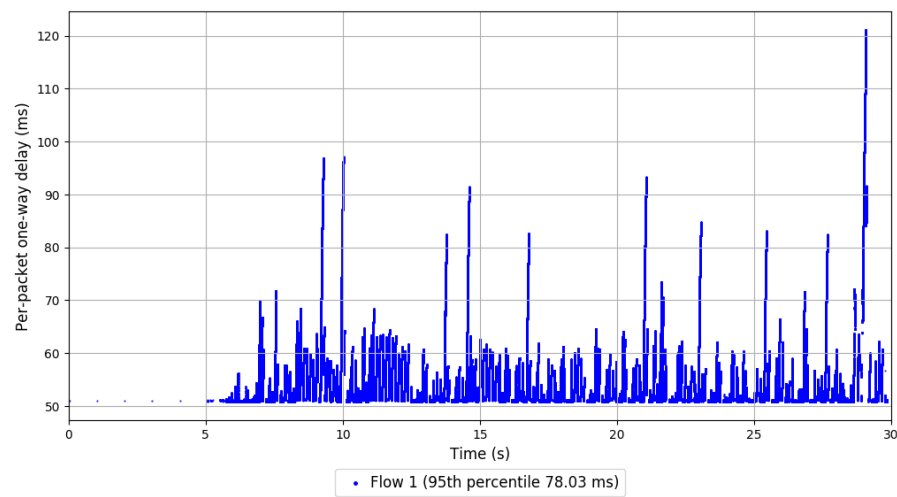
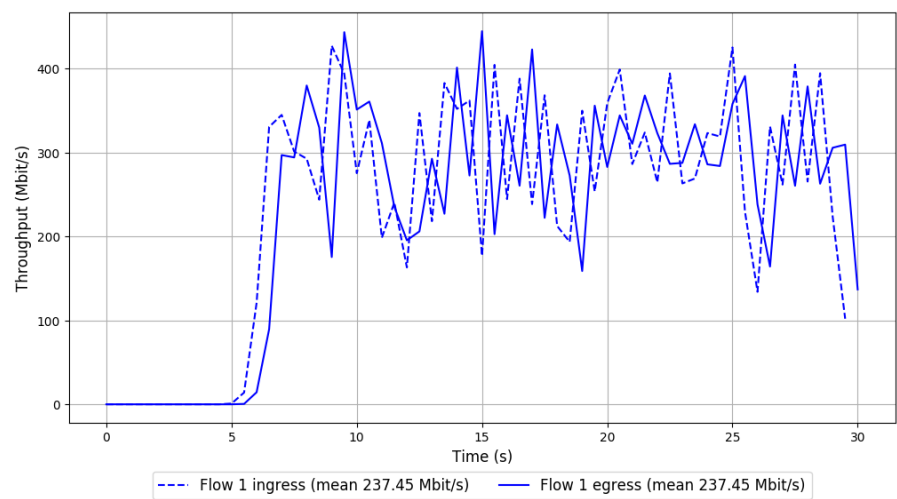
-- Flow 1:

Average throughput: 237.45 Mbit/s

95th percentile per-packet one-way delay: 78.030 ms

Loss rate: 0.00%

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

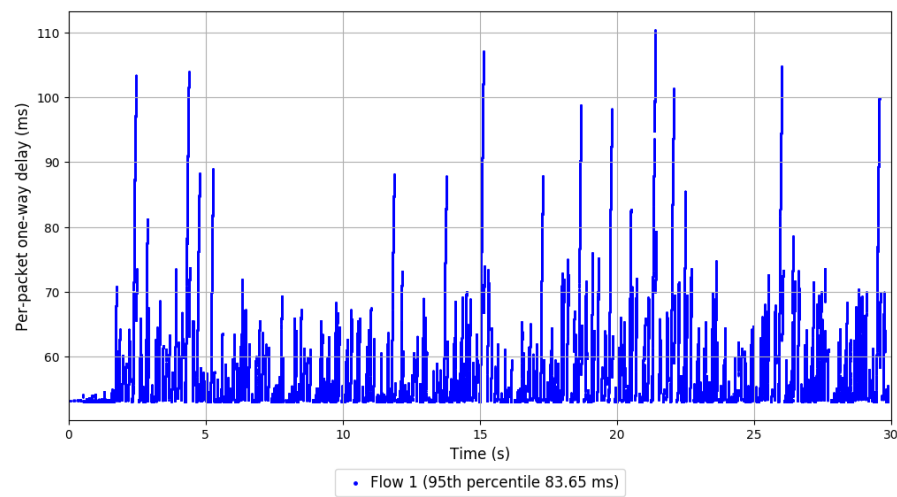
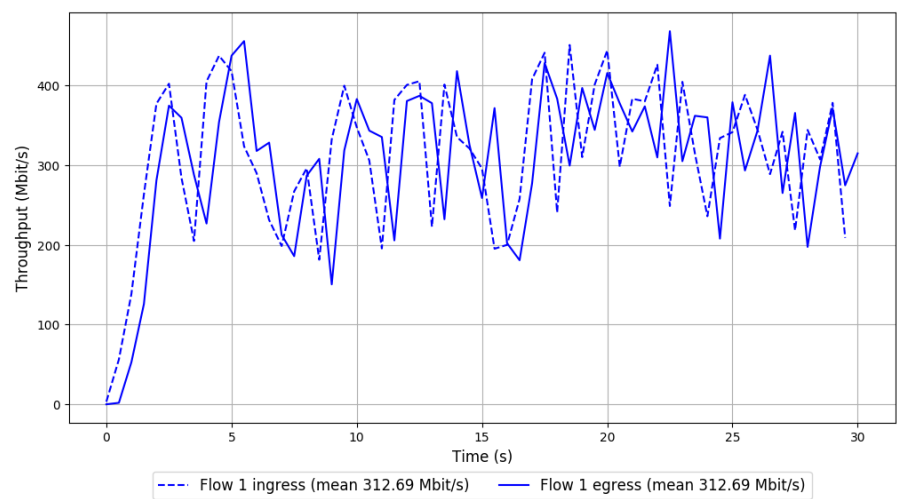


Run 2: Statistics of Indigo-96d2da3

Start at: 2018-09-26 01:07:36
End at: 2018-09-26 01:08:06
Local clock offset: -0.213 ms
Remote clock offset: -0.261 ms

Below is generated by plot.py at 2018-09-26 03:49:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 312.69 Mbit/s
95th percentile per-packet one-way delay: 83.653 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 312.69 Mbit/s
95th percentile per-packet one-way delay: 83.653 ms
Loss rate: 0.00%

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

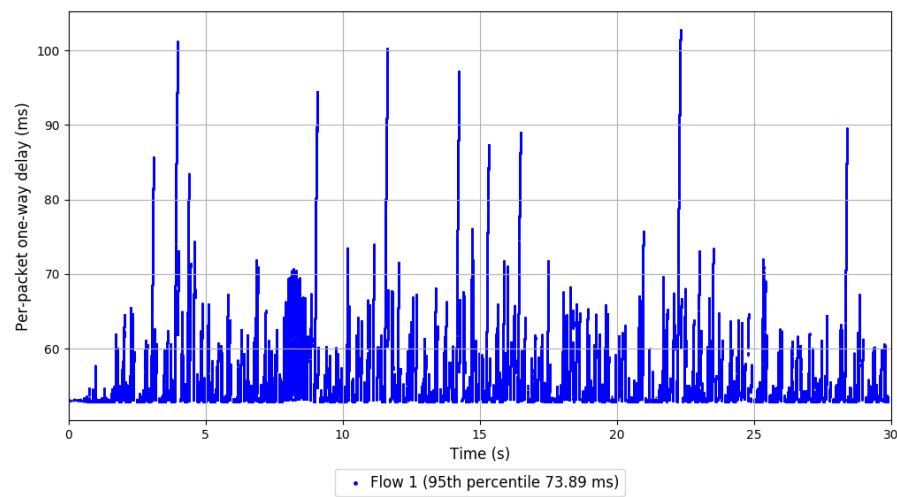
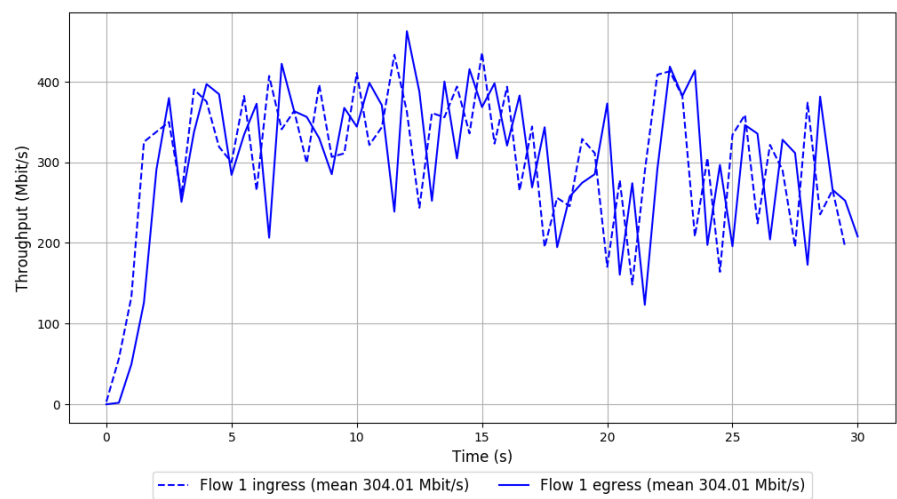


Run 3: Statistics of Indigo-96d2da3

Start at: 2018-09-26 01:34:48
End at: 2018-09-26 01:35:19
Local clock offset: -0.28 ms
Remote clock offset: -0.765 ms

Below is generated by plot.py at 2018-09-26 03:49:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 304.01 Mbit/s
95th percentile per-packet one-way delay: 73.888 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 304.01 Mbit/s
95th percentile per-packet one-way delay: 73.888 ms
Loss rate: 0.00%

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

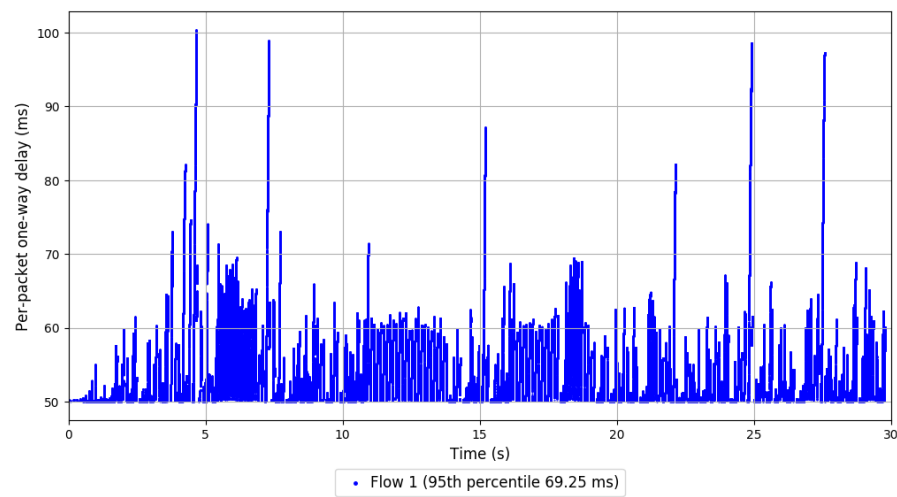
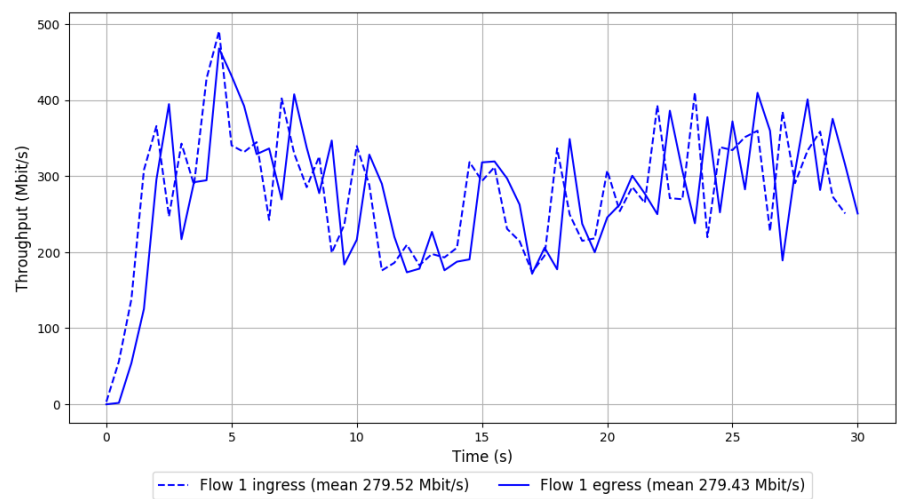


Run 4: Statistics of Indigo-96d2da3

Start at: 2018-09-26 02:02:09
End at: 2018-09-26 02:02:39
Local clock offset: -0.35 ms
Remote clock offset: -0.588 ms

Below is generated by plot.py at 2018-09-26 03:49:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 279.43 Mbit/s
95th percentile per-packet one-way delay: 69.245 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 279.43 Mbit/s
95th percentile per-packet one-way delay: 69.245 ms
Loss rate: 0.00%

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

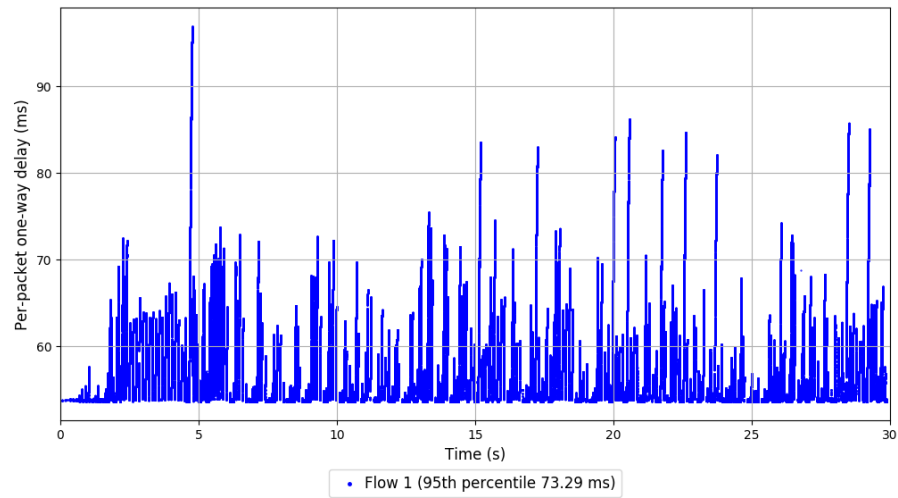
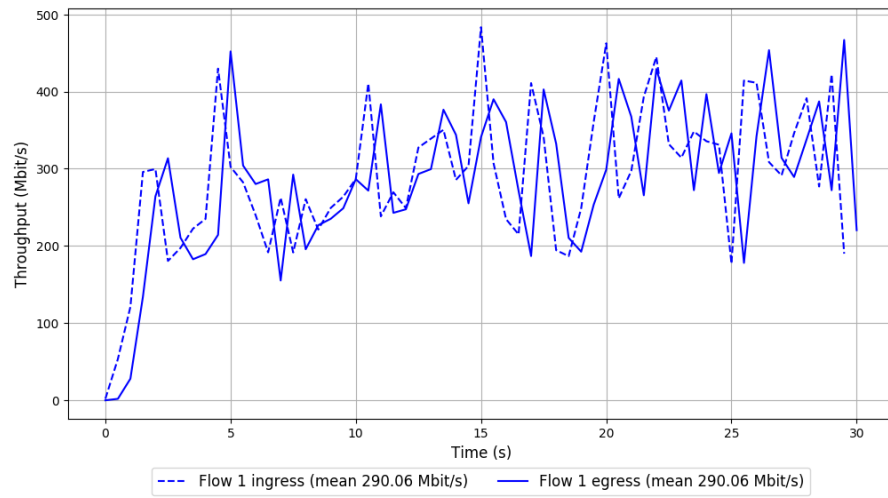


Run 5: Statistics of Indigo-96d2da3

Start at: 2018-09-26 02:29:19
End at: 2018-09-26 02:29:49
Local clock offset: -0.151 ms
Remote clock offset: -0.031 ms

Below is generated by plot.py at 2018-09-26 03:49:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 290.06 Mbit/s
95th percentile per-packet one-way delay: 73.291 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 290.06 Mbit/s
95th percentile per-packet one-way delay: 73.291 ms
Loss rate: 0.00%

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

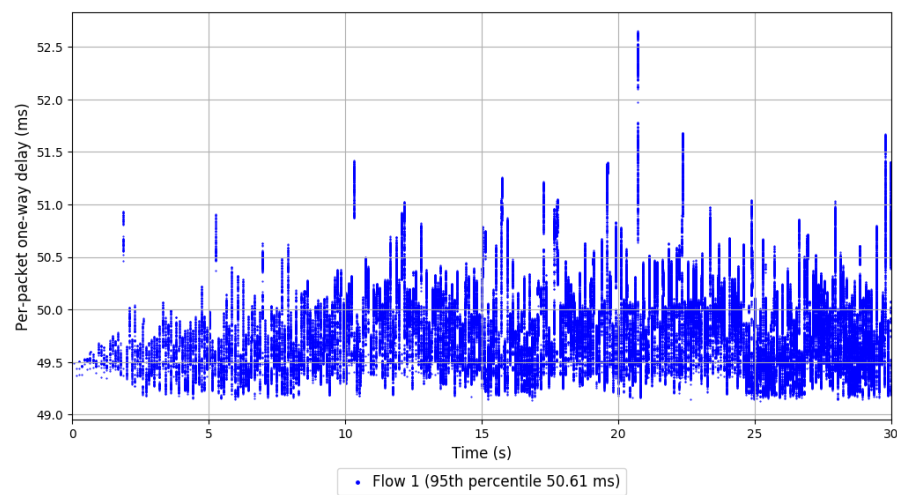
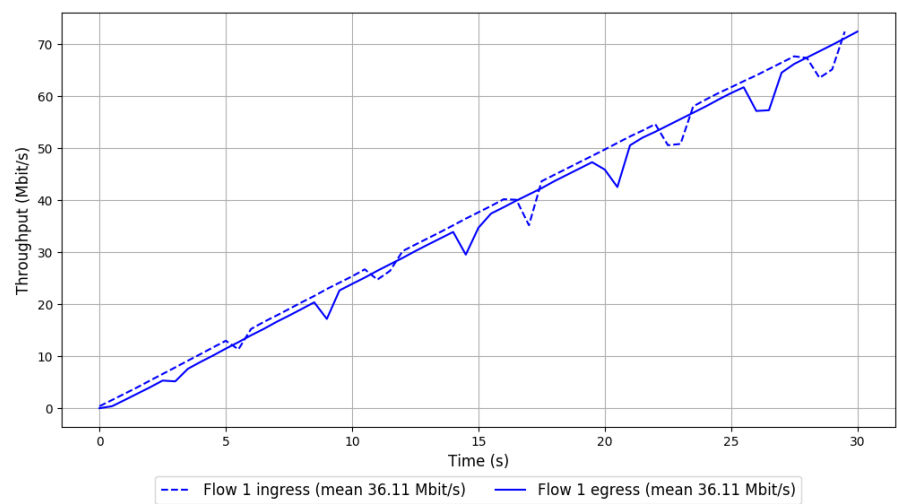


```
Run 1: Statistics of LEDBAT

Start at: 2018-09-26 00:45:33
End at: 2018-09-26 00:46:03
Local clock offset: -0.34 ms
Remote clock offset: -1.395 ms

# Below is generated by plot.py at 2018-09-26 03:49:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 36.11 Mbit/s
95th percentile per-packet one-way delay: 50.610 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 36.11 Mbit/s
95th percentile per-packet one-way delay: 50.610 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link

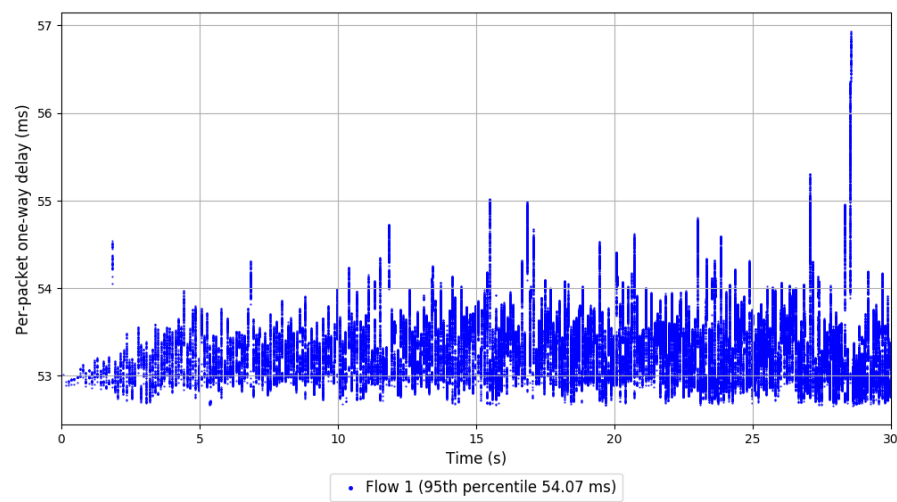
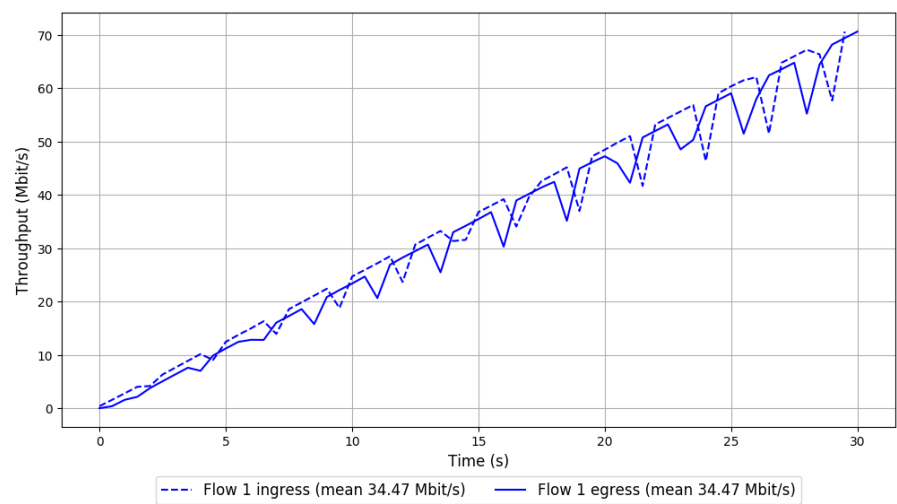


Run 2: Statistics of LEDBAT

Start at: 2018-09-26 01:12:53
End at: 2018-09-26 01:13:23
Local clock offset: -0.117 ms
Remote clock offset: -0.587 ms

Below is generated by plot.py at 2018-09-26 03:49:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 34.47 Mbit/s
95th percentile per-packet one-way delay: 54.071 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 34.47 Mbit/s
95th percentile per-packet one-way delay: 54.071 ms
Loss rate: 0.00%

Run 2: Report of LEDBAT — Data Link

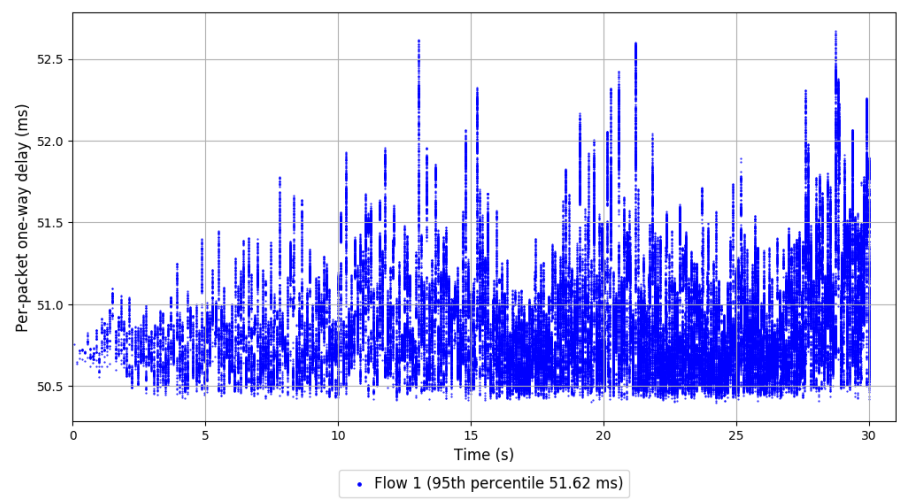
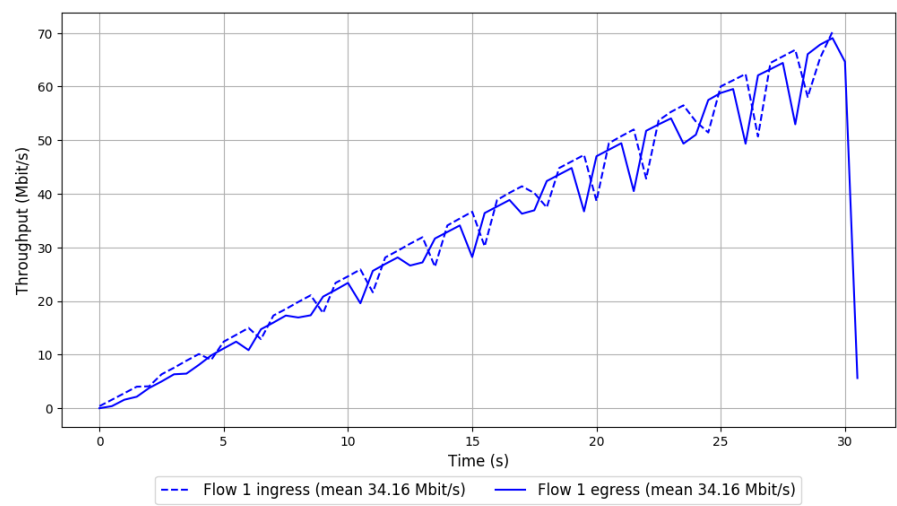


Run 3: Statistics of LEDBAT

Start at: 2018-09-26 01:40:05
End at: 2018-09-26 01:40:35
Local clock offset: -0.253 ms
Remote clock offset: -0.077 ms

Below is generated by plot.py at 2018-09-26 03:49:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 34.16 Mbit/s
95th percentile per-packet one-way delay: 51.623 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 34.16 Mbit/s
95th percentile per-packet one-way delay: 51.623 ms
Loss rate: 0.00%

Run 3: Report of LEDBAT — Data Link

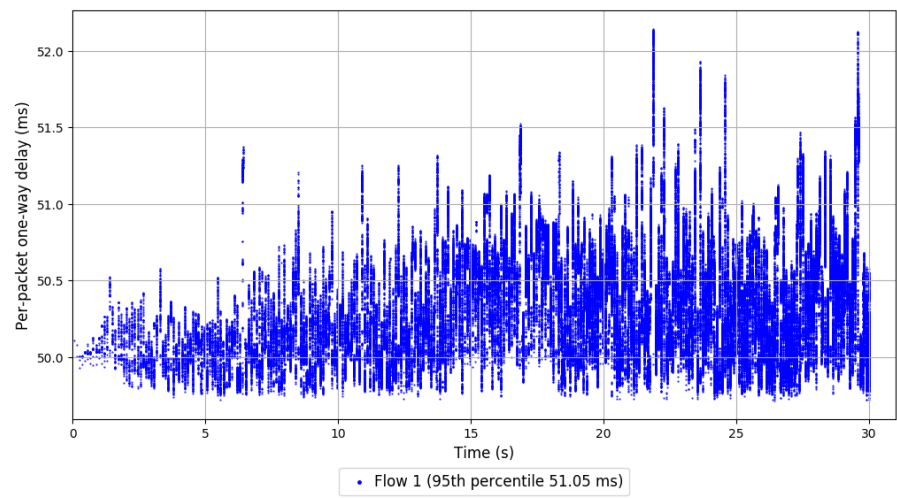
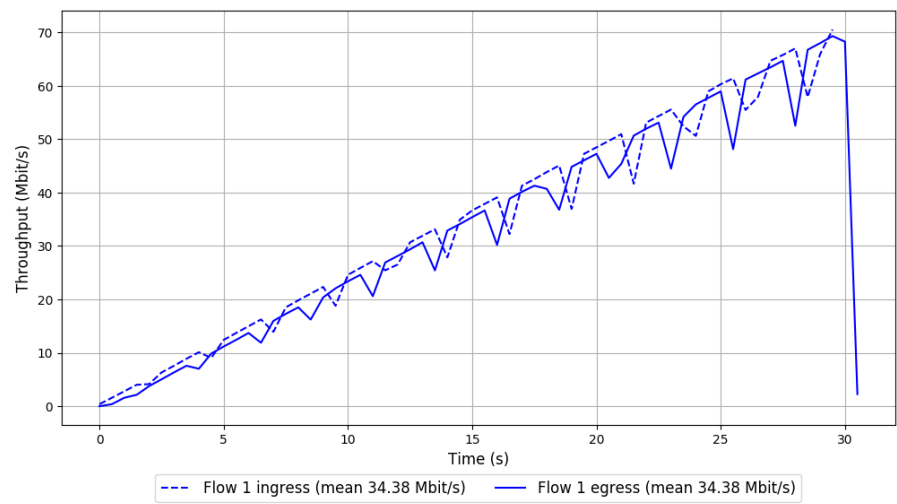


Run 4: Statistics of LEDBAT

Start at: 2018-09-26 02:07:24
End at: 2018-09-26 02:07:54
Local clock offset: -0.129 ms
Remote clock offset: -0.087 ms

Below is generated by plot.py at 2018-09-26 03:49:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 34.38 Mbit/s
95th percentile per-packet one-way delay: 51.054 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 34.38 Mbit/s
95th percentile per-packet one-way delay: 51.054 ms
Loss rate: 0.00%

Run 4: Report of LEDBAT — Data Link

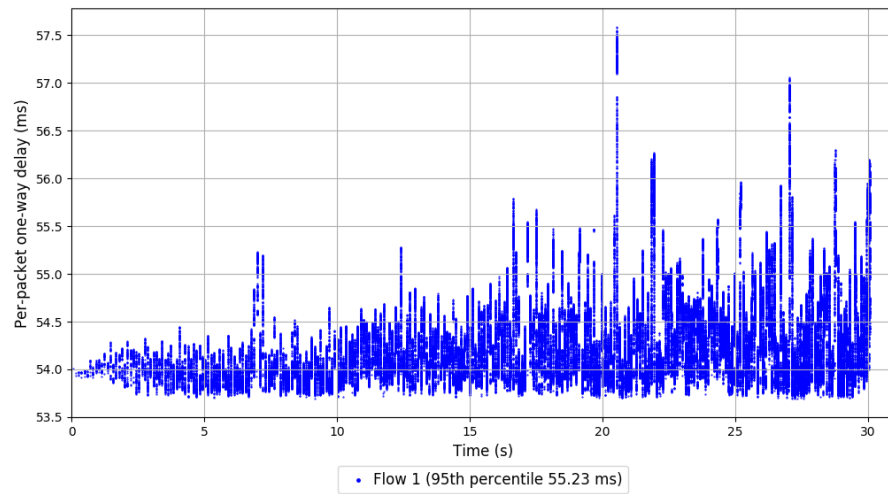
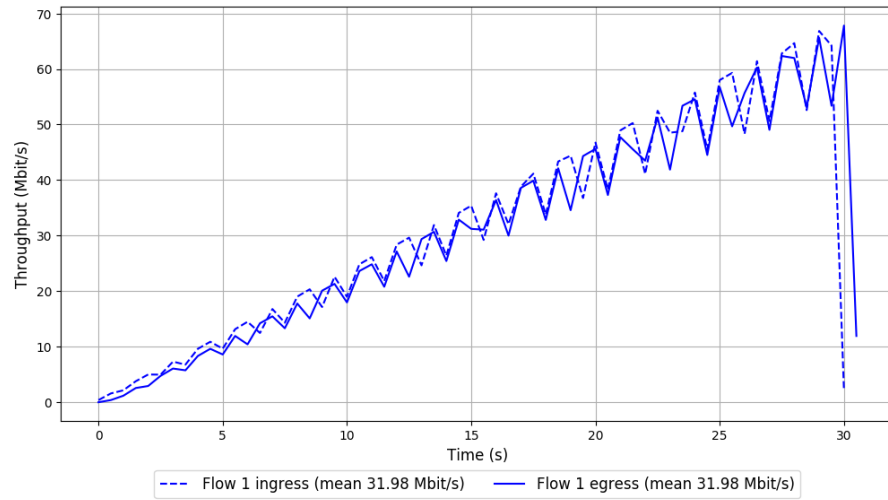


Run 5: Statistics of LEDBAT

Start at: 2018-09-26 02:34:33
End at: 2018-09-26 02:35:03
Local clock offset: -0.409 ms
Remote clock offset: -0.134 ms

Below is generated by plot.py at 2018-09-26 03:49:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 31.98 Mbit/s
95th percentile per-packet one-way delay: 55.228 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 31.98 Mbit/s
95th percentile per-packet one-way delay: 55.228 ms
Loss rate: 0.00%

Run 5: Report of LEDBAT — Data Link

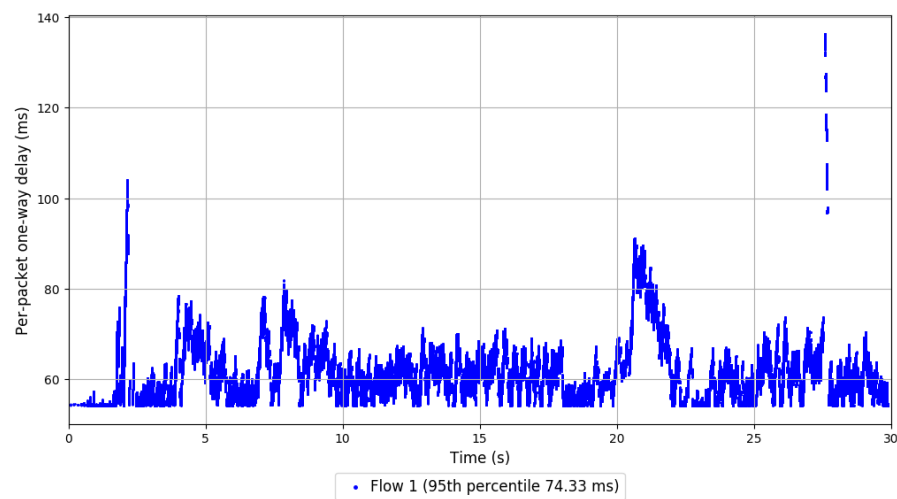
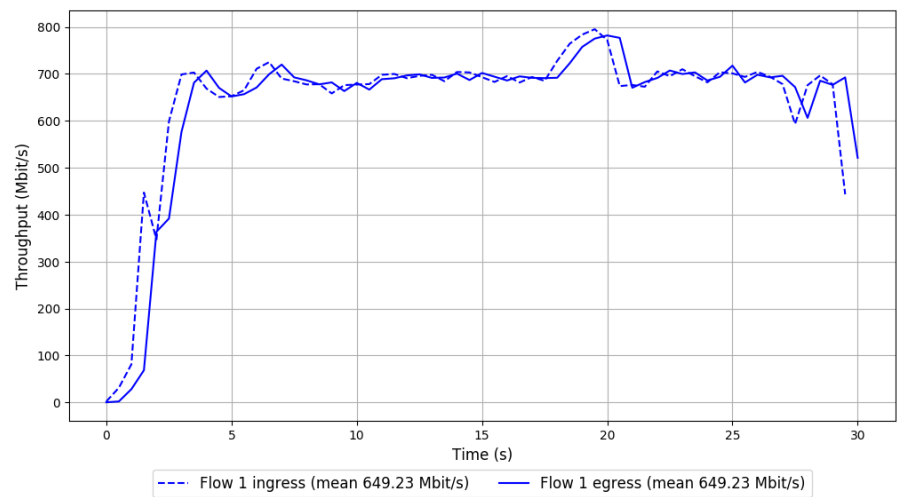



```
Run 1: Statistics of Indigo-Muses

Start at: 2018-09-26 00:42:48
End at: 2018-09-26 00:43:18
Local clock offset: -0.323 ms
Remote clock offset: 0.455 ms

# Below is generated by plot.py at 2018-09-26 03:55:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 649.23 Mbit/s
95th percentile per-packet one-way delay: 74.335 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 649.23 Mbit/s
95th percentile per-packet one-way delay: 74.335 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo-Muses — Data Link

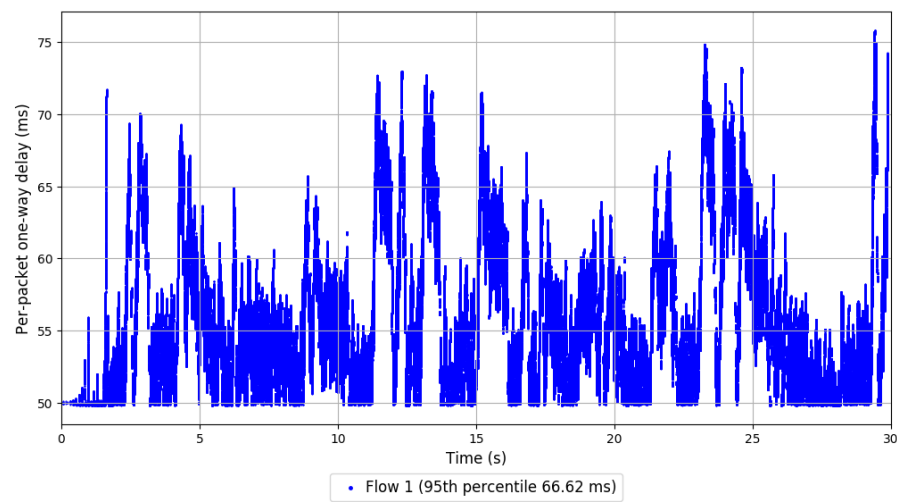
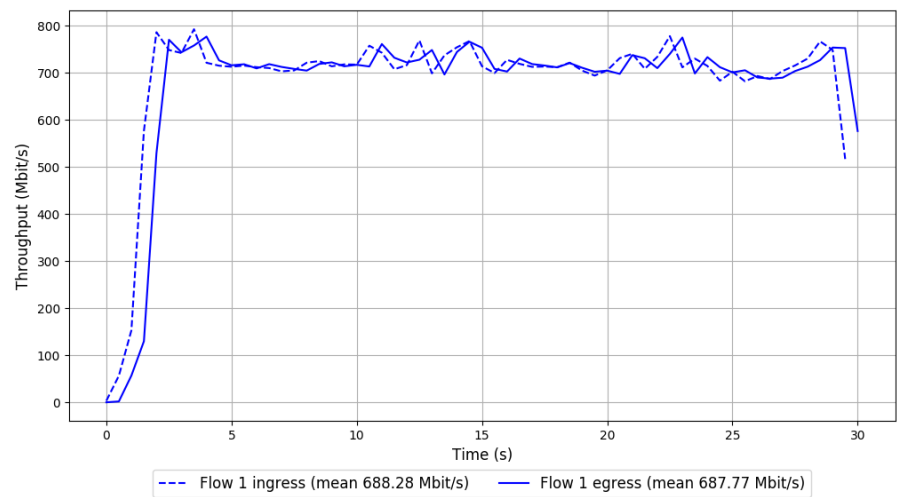


Run 2: Statistics of Indigo-Muses

Start at: 2018-09-26 01:10:07
End at: 2018-09-26 01:10:37
Local clock offset: -0.262 ms
Remote clock offset: -0.484 ms

Below is generated by plot.py at 2018-09-26 03:56:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 687.77 Mbit/s
95th percentile per-packet one-way delay: 66.617 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 687.77 Mbit/s
95th percentile per-packet one-way delay: 66.617 ms
Loss rate: 0.06%

Run 2: Report of Indigo-Muses — Data Link

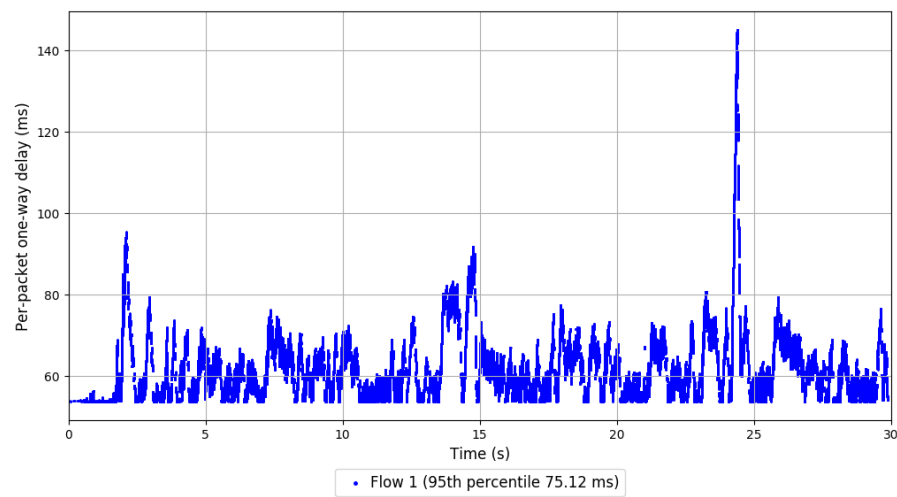
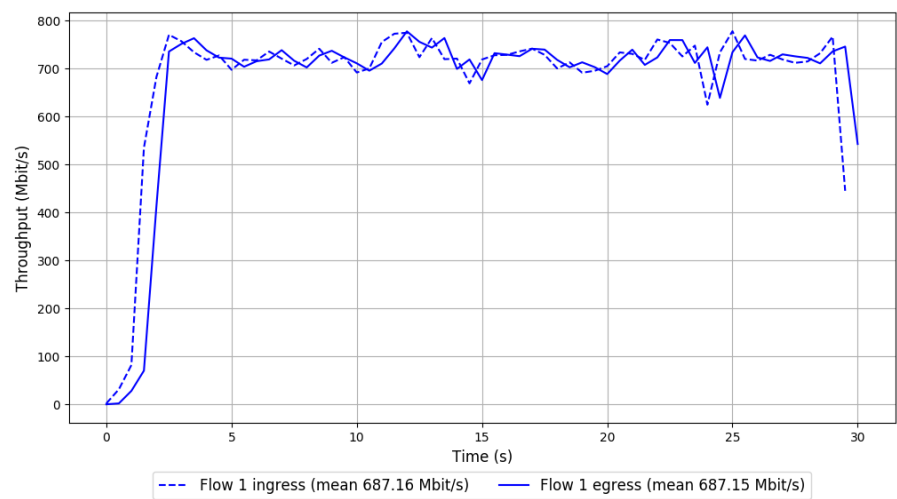


Run 3: Statistics of Indigo-Muses

Start at: 2018-09-26 01:37:20
End at: 2018-09-26 01:37:50
Local clock offset: -0.52 ms
Remote clock offset: -0.142 ms

Below is generated by plot.py at 2018-09-26 03:56:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 687.15 Mbit/s
95th percentile per-packet one-way delay: 75.119 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 687.15 Mbit/s
95th percentile per-packet one-way delay: 75.119 ms
Loss rate: 0.00%

Run 3: Report of Indigo-Muses — Data Link

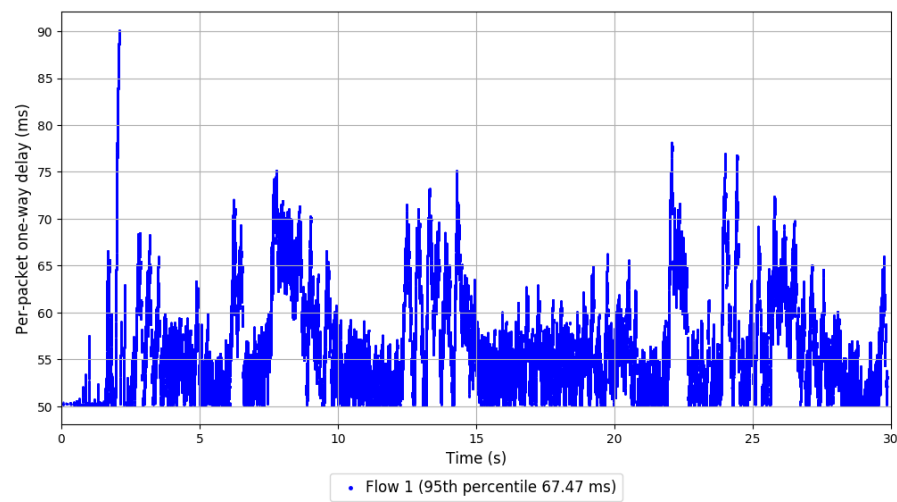
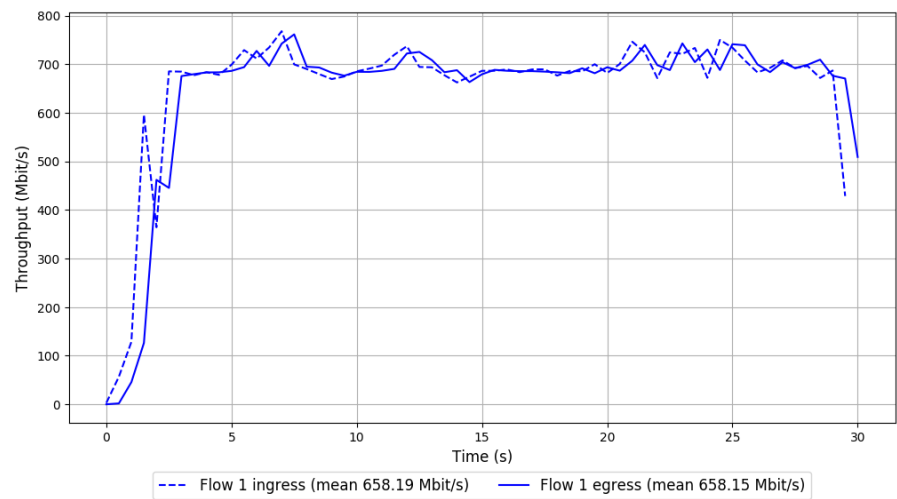


Run 4: Statistics of Indigo-Muses

Start at: 2018-09-26 02:04:39
End at: 2018-09-26 02:05:09
Local clock offset: -0.058 ms
Remote clock offset: -0.046 ms

Below is generated by plot.py at 2018-09-26 03:57:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 658.15 Mbit/s
95th percentile per-packet one-way delay: 67.466 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 658.15 Mbit/s
95th percentile per-packet one-way delay: 67.466 ms
Loss rate: 0.00%

Run 4: Report of Indigo-Muses — Data Link



Run 5: Statistics of Indigo-Muses

Start at: 2018-09-26 02:31:50

End at: 2018-09-26 02:32:20

Local clock offset: -0.186 ms

Remote clock offset: -0.2 ms

Below is generated by plot.py at 2018-09-26 03:57:03

Datalink statistics

-- Total of 1 flow:

Average throughput: 623.84 Mbit/s

95th percentile per-packet one-way delay: 66.950 ms

Loss rate: 0.00%

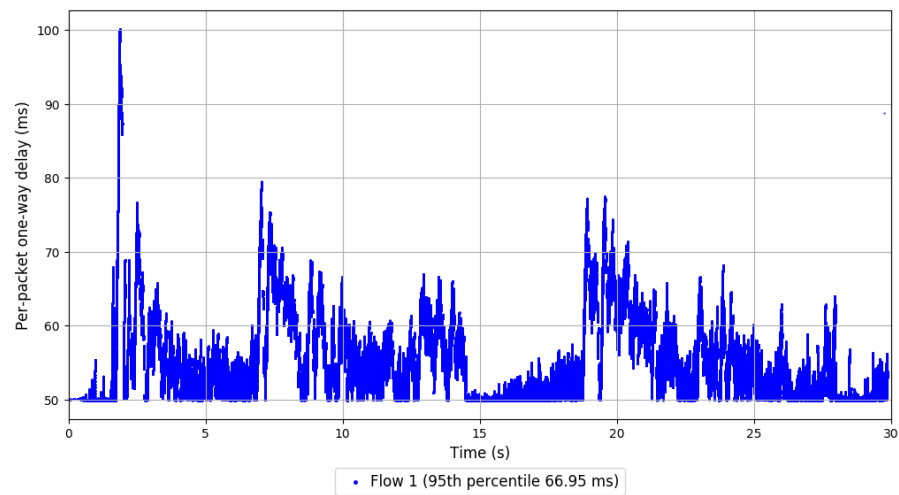
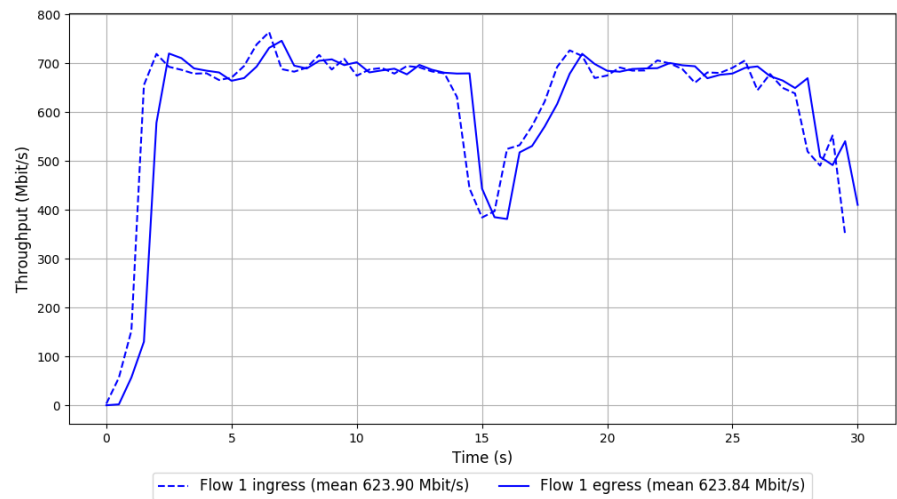
-- Flow 1:

Average throughput: 623.84 Mbit/s

95th percentile per-packet one-way delay: 66.950 ms

Loss rate: 0.00%

Run 5: Report of Indigo-Muses — Data Link

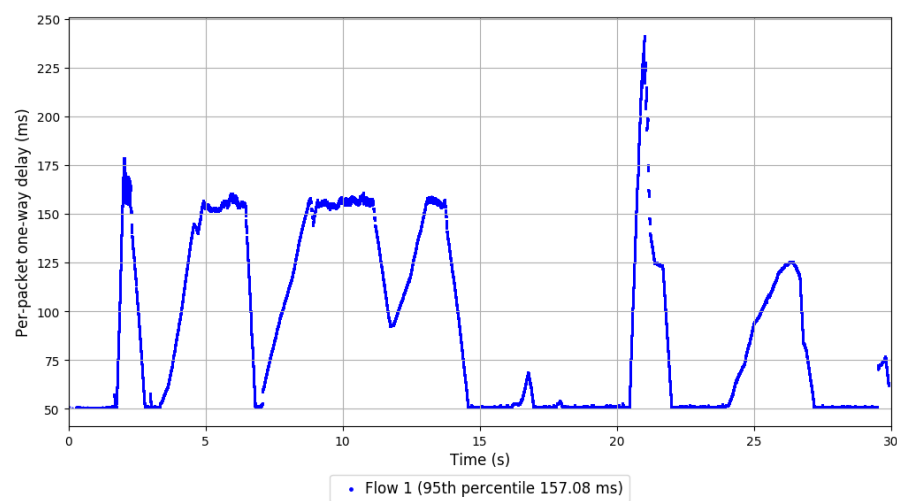
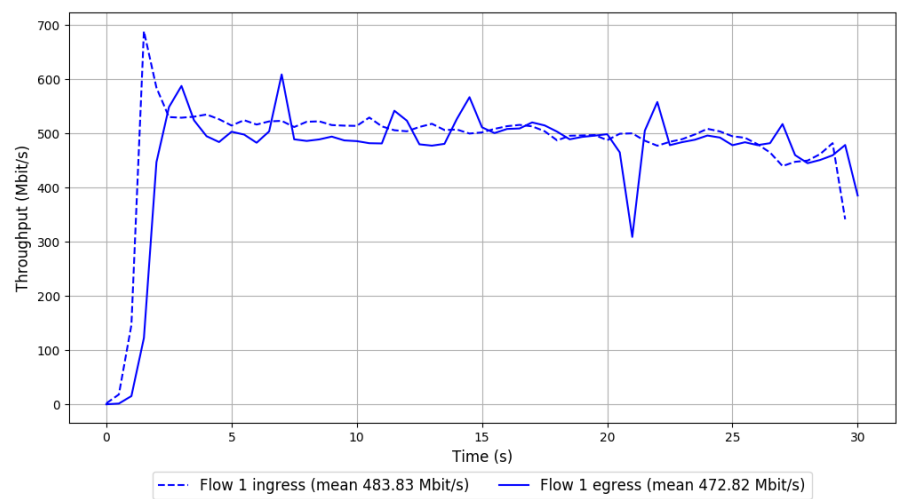


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-09-26 00:33:22
End at: 2018-09-26 00:33:52
Local clock offset: -0.436 ms
Remote clock offset: 0.474 ms

# Below is generated by plot.py at 2018-09-26 04:02:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 472.82 Mbit/s
95th percentile per-packet one-way delay: 157.080 ms
Loss rate: 2.26%
-- Flow 1:
Average throughput: 472.82 Mbit/s
95th percentile per-packet one-way delay: 157.080 ms
Loss rate: 2.26%
```

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-09-26 01:00:36

End at: 2018-09-26 01:01:06

Local clock offset: -0.284 ms

Remote clock offset: -0.037 ms

Below is generated by plot.py at 2018-09-26 04:02:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 474.19 Mbit/s

95th percentile per-packet one-way delay: 135.918 ms

Loss rate: 0.35%

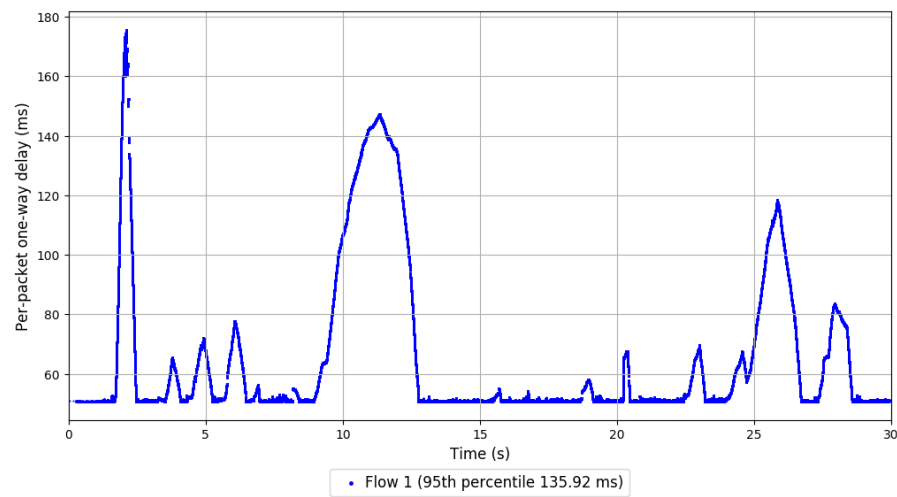
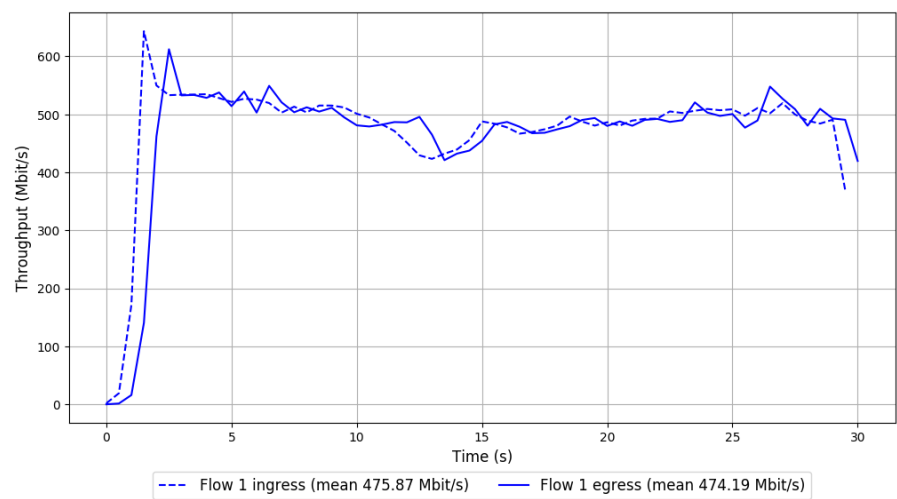
-- Flow 1:

Average throughput: 474.19 Mbit/s

95th percentile per-packet one-way delay: 135.918 ms

Loss rate: 0.35%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-09-26 01:28:02

End at: 2018-09-26 01:28:32

Local clock offset: -0.346 ms

Remote clock offset: 0.48 ms

Below is generated by plot.py at 2018-09-26 04:05:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 435.93 Mbit/s

95th percentile per-packet one-way delay: 155.107 ms

Loss rate: 0.30%

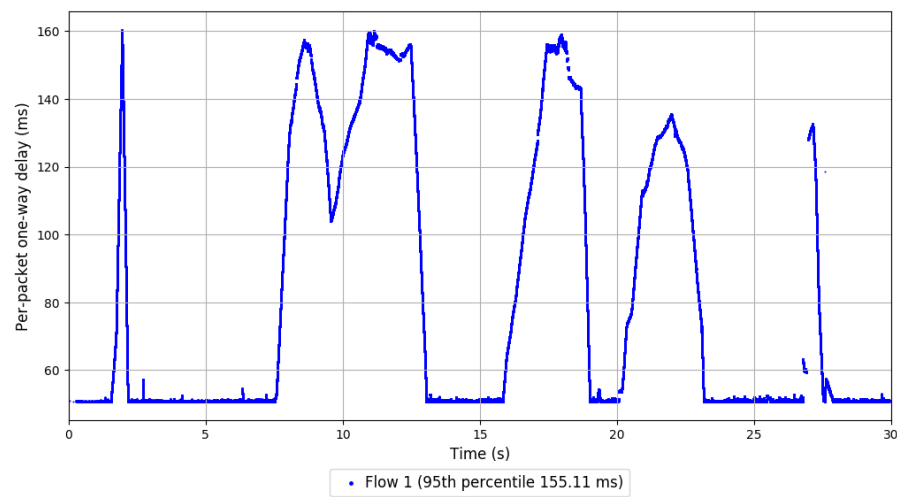
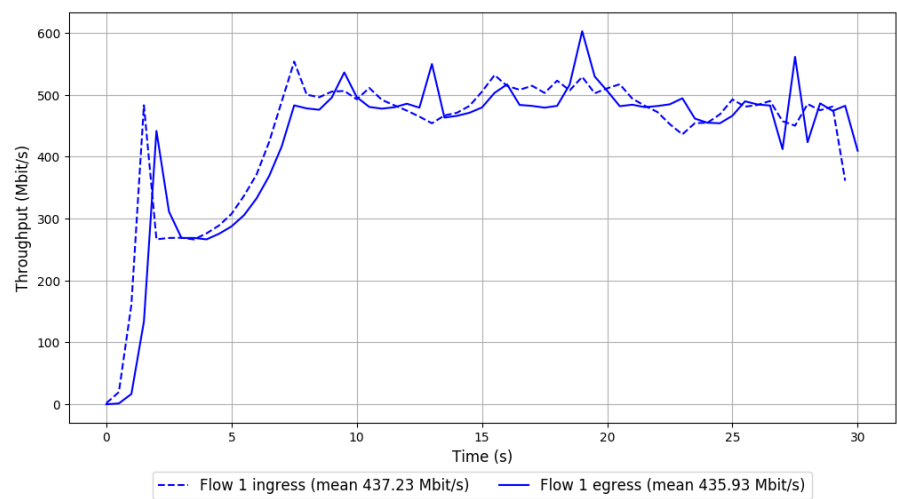
-- Flow 1:

Average throughput: 435.93 Mbit/s

95th percentile per-packet one-way delay: 155.107 ms

Loss rate: 0.30%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-09-26 01:55:12

End at: 2018-09-26 01:55:42

Local clock offset: -0.25 ms

Remote clock offset: -0.069 ms

Below is generated by plot.py at 2018-09-26 04:11:24

Datalink statistics

-- Total of 1 flow:

Average throughput: 436.57 Mbit/s

95th percentile per-packet one-way delay: 140.532 ms

Loss rate: 0.09%

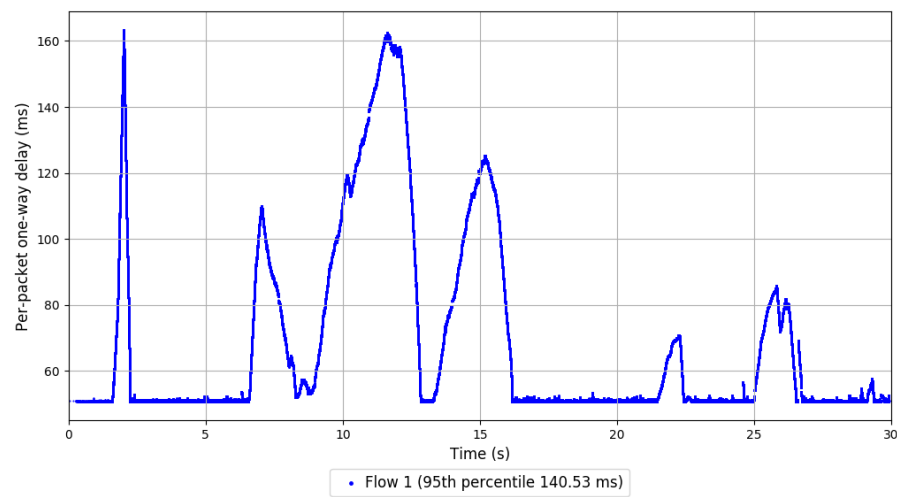
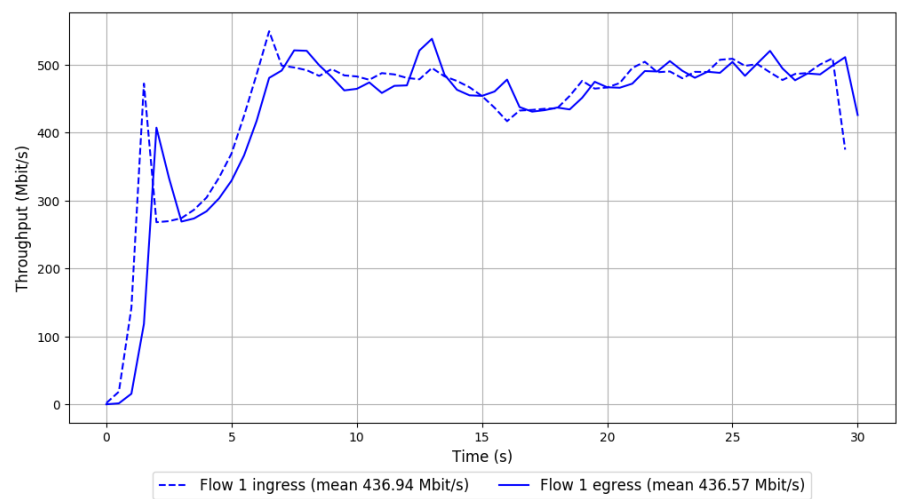
-- Flow 1:

Average throughput: 436.57 Mbit/s

95th percentile per-packet one-way delay: 140.532 ms

Loss rate: 0.09%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-09-26 02:22:31

End at: 2018-09-26 02:23:01

Local clock offset: -0.102 ms

Remote clock offset: 0.096 ms

Below is generated by plot.py at 2018-09-26 04:14:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 481.66 Mbit/s

95th percentile per-packet one-way delay: 157.937 ms

Loss rate: 3.10%

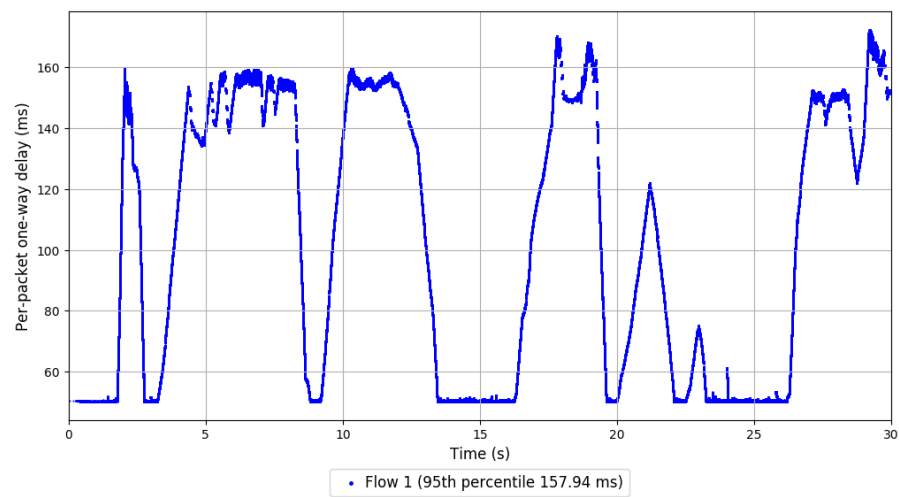
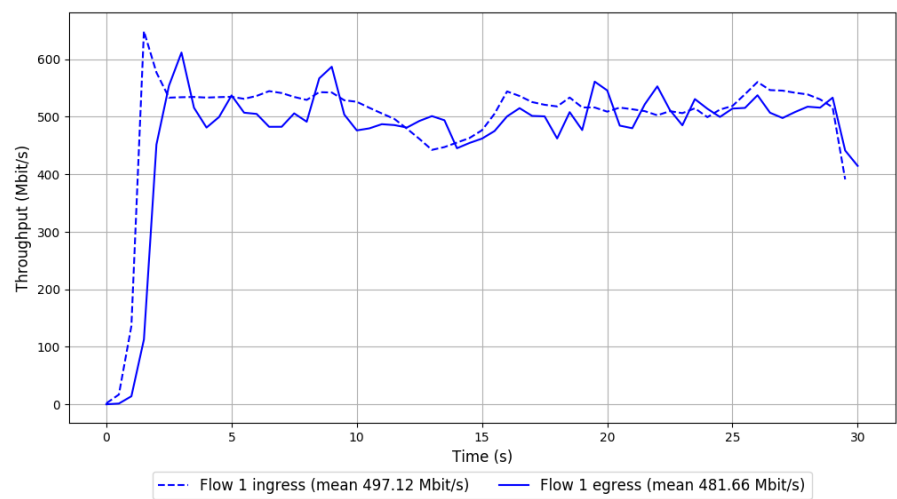
-- Flow 1:

Average throughput: 481.66 Mbit/s

95th percentile per-packet one-way delay: 157.937 ms

Loss rate: 3.10%

Run 5: Report of PCC-Allegro — Data Link

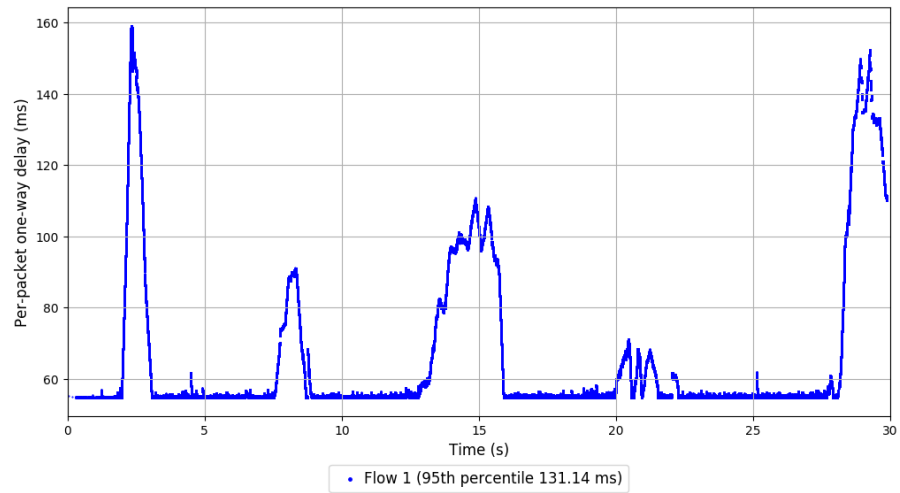
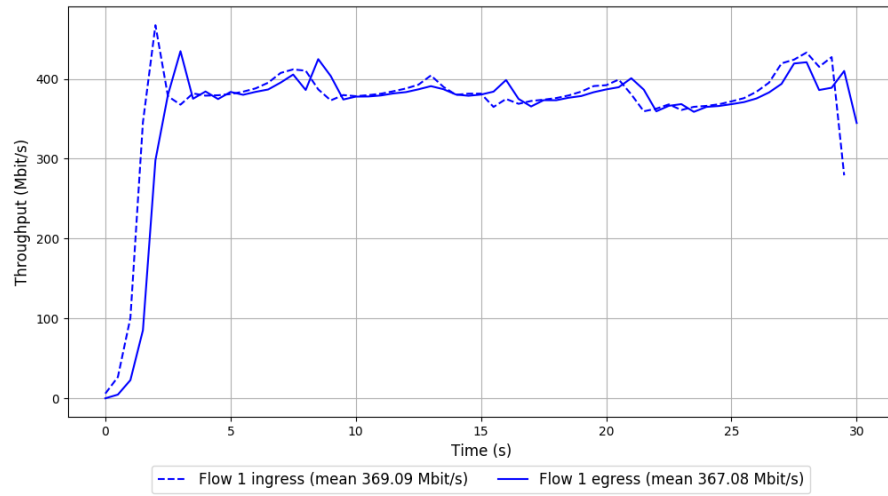


```
Run 1: Statistics of PCC-Expr

Start at: 2018-09-26 00:48:20
End at: 2018-09-26 00:48:50
Local clock offset: -0.255 ms
Remote clock offset: 0.909 ms

# Below is generated by plot.py at 2018-09-26 04:14:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 367.08 Mbit/s
95th percentile per-packet one-way delay: 131.141 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 367.08 Mbit/s
95th percentile per-packet one-way delay: 131.141 ms
Loss rate: 0.54%
```

Run 1: Report of PCC-Expr — Data Link

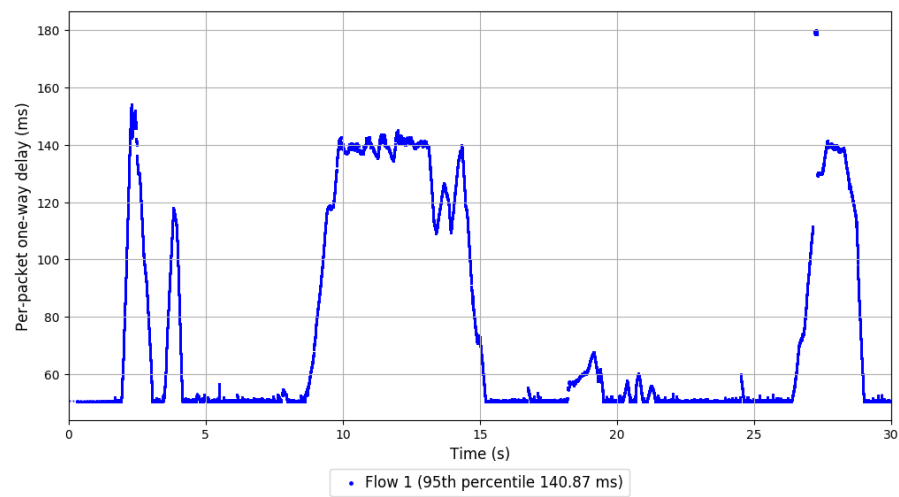
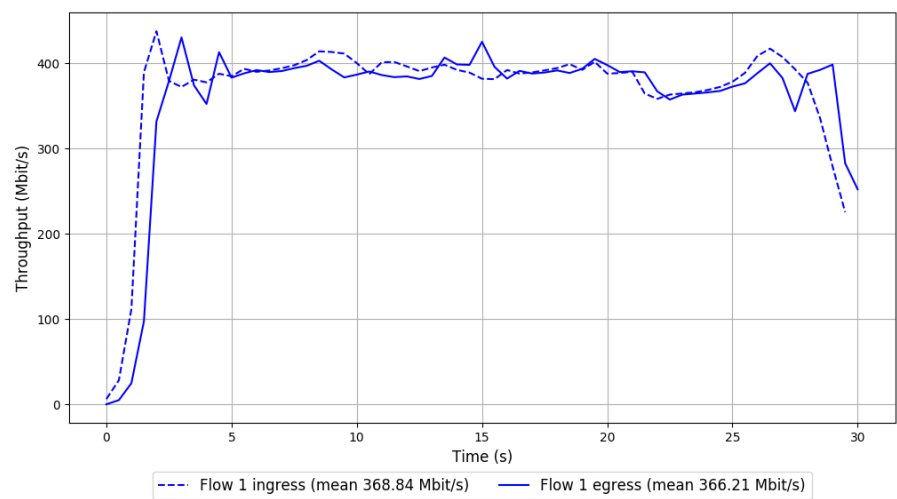


Run 2: Statistics of PCC-Expr

Start at: 2018-09-26 01:15:41
End at: 2018-09-26 01:16:11
Local clock offset: -0.425 ms
Remote clock offset: -0.443 ms

Below is generated by plot.py at 2018-09-26 04:14:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 366.21 Mbit/s
95th percentile per-packet one-way delay: 140.873 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 366.21 Mbit/s
95th percentile per-packet one-way delay: 140.873 ms
Loss rate: 0.72%

Run 2: Report of PCC-Expr — Data Link

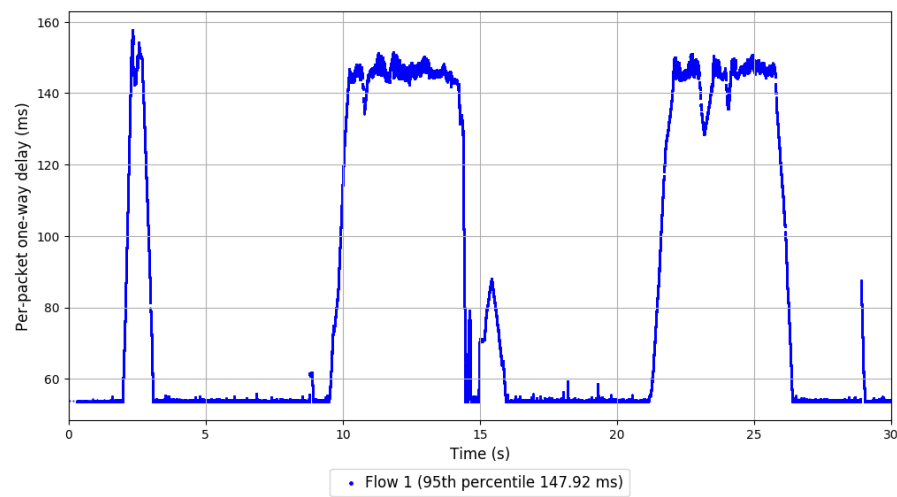
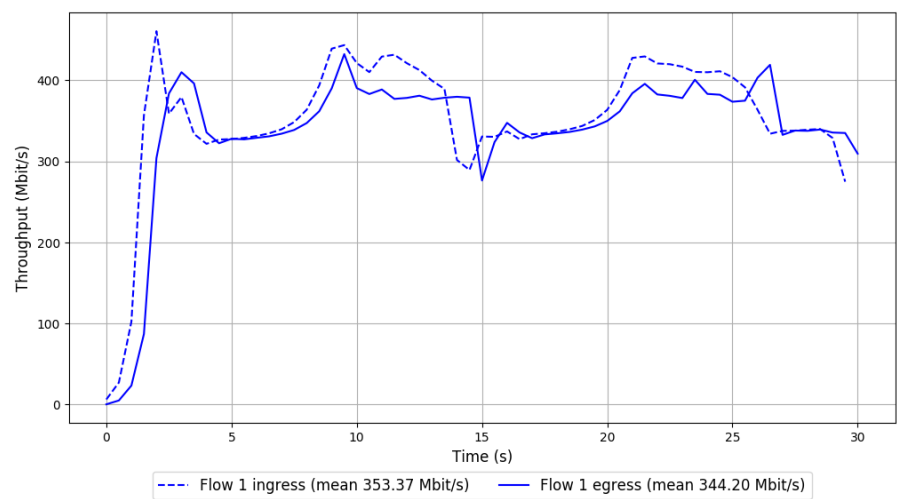


Run 3: Statistics of PCC-Expr

Start at: 2018-09-26 01:42:53
End at: 2018-09-26 01:43:23
Local clock offset: -0.419 ms
Remote clock offset: -0.301 ms

Below is generated by plot.py at 2018-09-26 04:14:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 344.20 Mbit/s
95th percentile per-packet one-way delay: 147.923 ms
Loss rate: 2.60%
-- Flow 1:
Average throughput: 344.20 Mbit/s
95th percentile per-packet one-way delay: 147.923 ms
Loss rate: 2.60%

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

Start at: 2018-09-26 02:10:10

End at: 2018-09-26 02:10:40

Local clock offset: -0.301 ms

Remote clock offset: 1.142 ms

Below is generated by plot.py at 2018-09-26 04:14:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 355.88 Mbit/s

95th percentile per-packet one-way delay: 146.238 ms

Loss rate: 2.26%

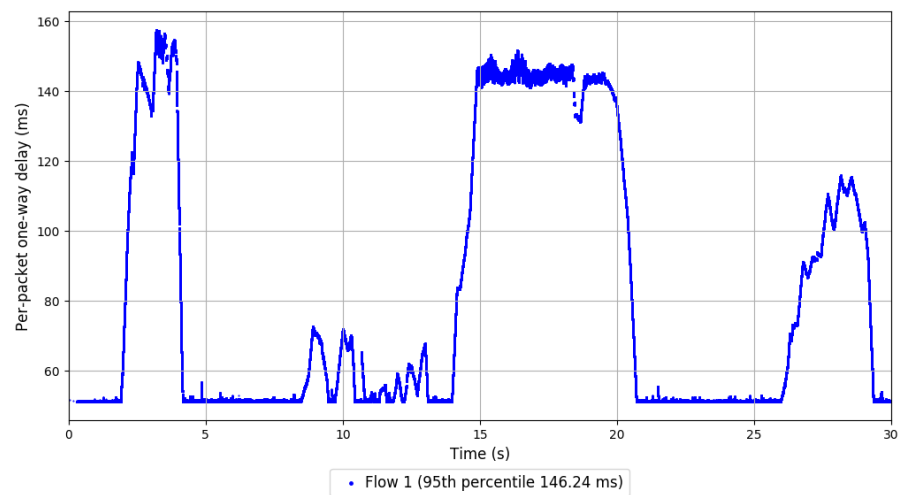
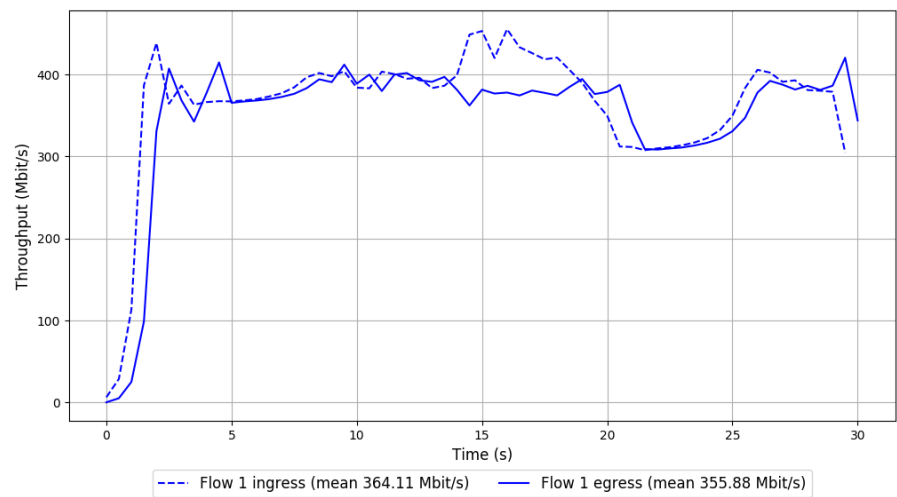
-- Flow 1:

Average throughput: 355.88 Mbit/s

95th percentile per-packet one-way delay: 146.238 ms

Loss rate: 2.26%

Run 4: Report of PCC-Expr — Data Link

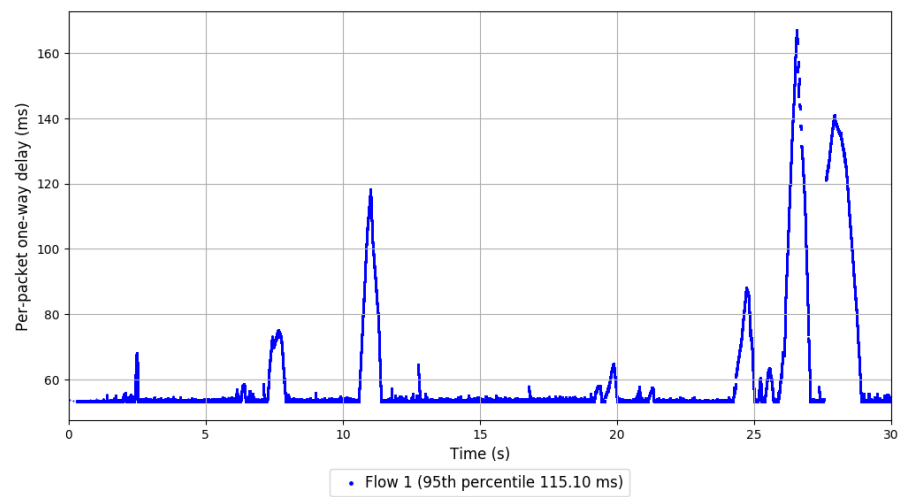
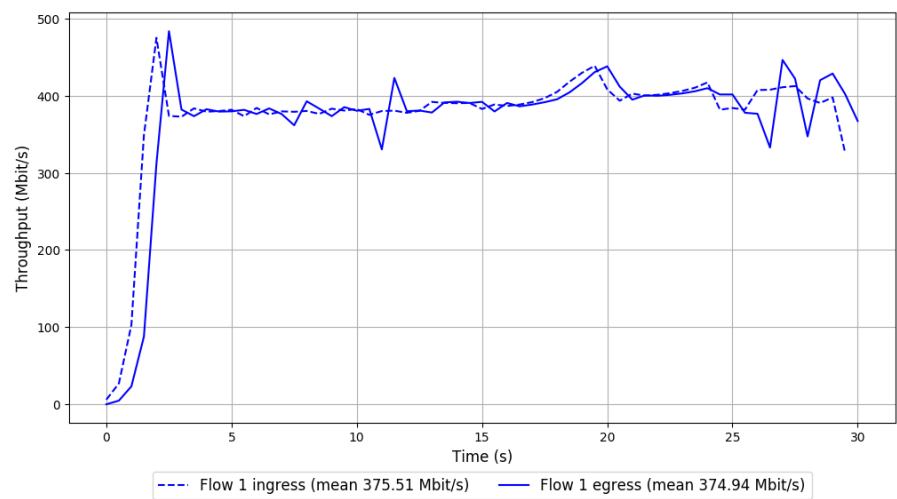


Run 5: Statistics of PCC-Expr

Start at: 2018-09-26 02:37:21
End at: 2018-09-26 02:37:51
Local clock offset: -0.337 ms
Remote clock offset: -0.349 ms

Below is generated by plot.py at 2018-09-26 04:17:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 374.94 Mbit/s
95th percentile per-packet one-way delay: 115.100 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 374.94 Mbit/s
95th percentile per-packet one-way delay: 115.100 ms
Loss rate: 0.15%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

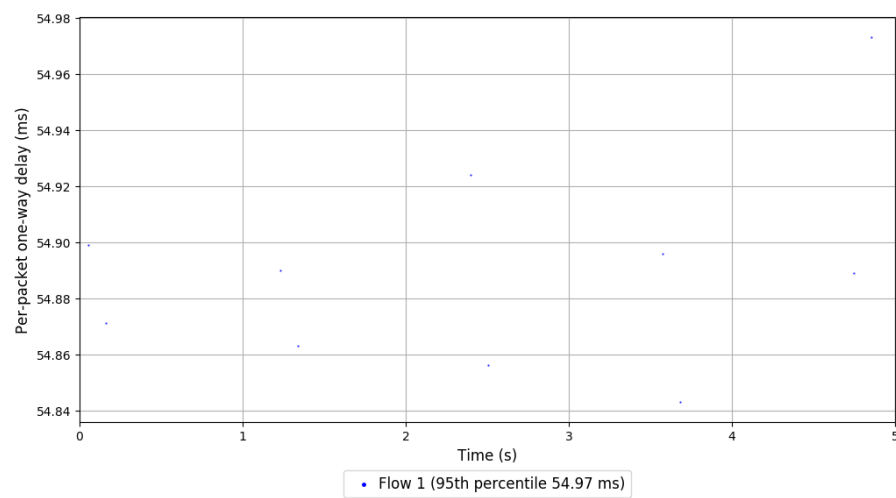
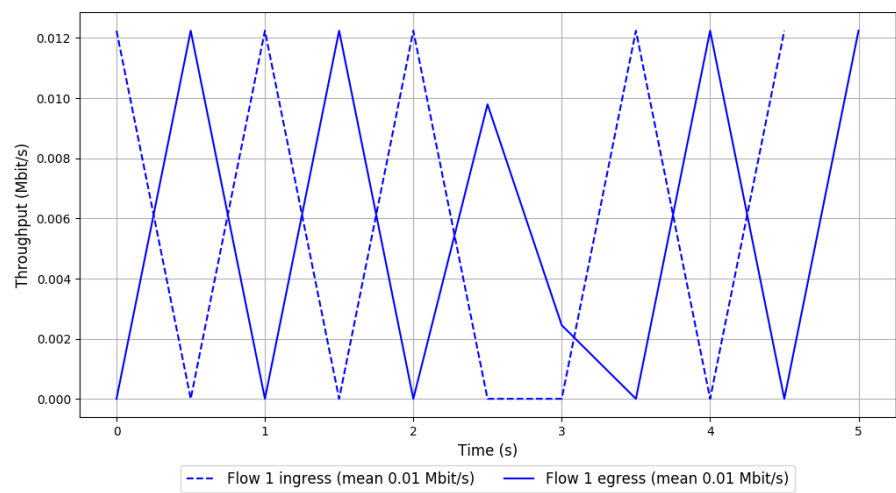
Start at: 2018-09-26 00:41:41

End at: 2018-09-26 00:42:11

Local clock offset: -0.059 ms

Remote clock offset: 1.125 ms

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-09-26 01:08:58

End at: 2018-09-26 01:09:28

Local clock offset: -0.037 ms

Remote clock offset: 0.453 ms

Below is generated by plot.py at 2018-09-26 04:17:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 50.77 Mbit/s

95th percentile per-packet one-way delay: 53.932 ms

Loss rate: 0.00%

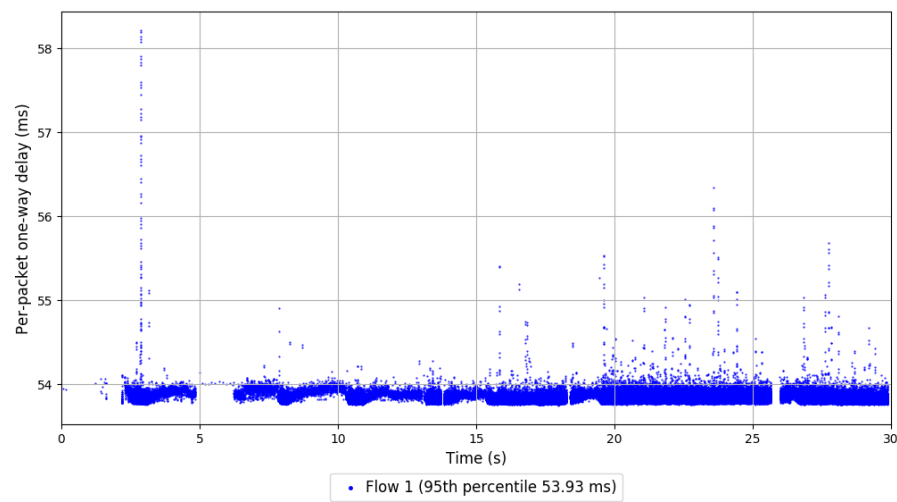
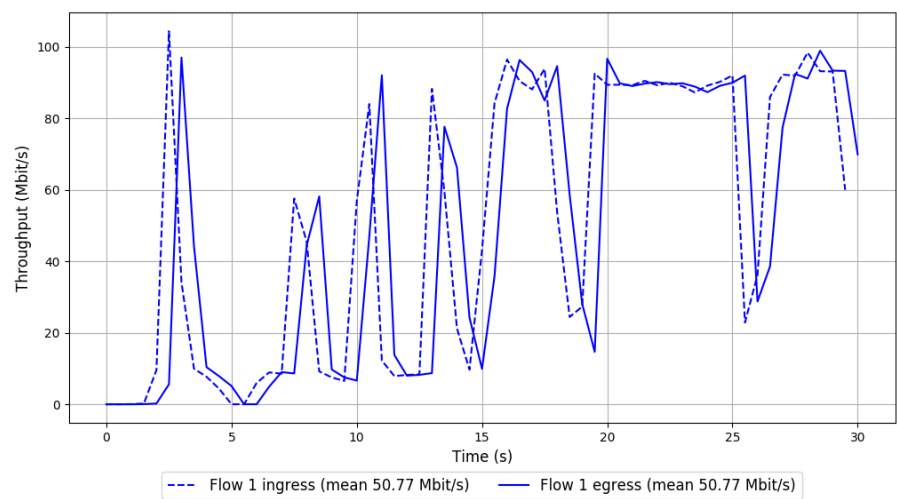
-- Flow 1:

Average throughput: 50.77 Mbit/s

95th percentile per-packet one-way delay: 53.932 ms

Loss rate: 0.00%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-09-26 01:36:10

End at: 2018-09-26 01:36:40

Local clock offset: -0.165 ms

Remote clock offset: 1.291 ms

Below is generated by plot.py at 2018-09-26 04:17:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 60.24 Mbit/s

95th percentile per-packet one-way delay: 54.928 ms

Loss rate: 0.00%

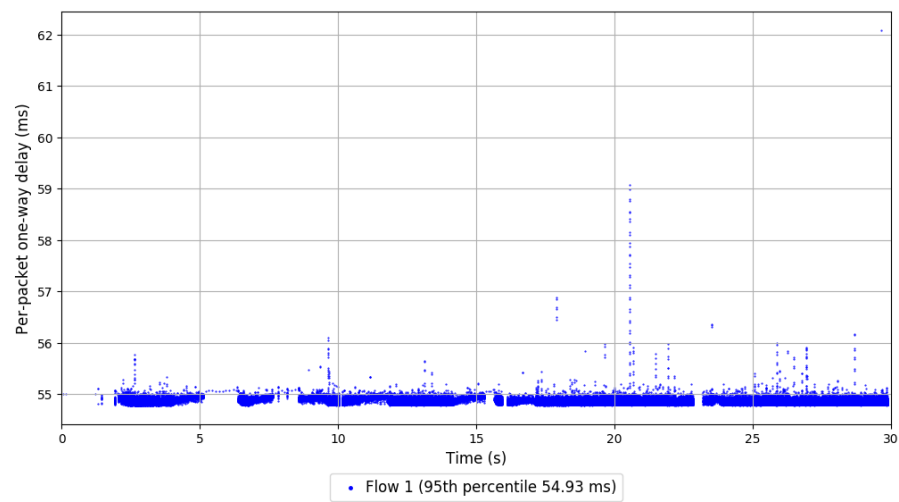
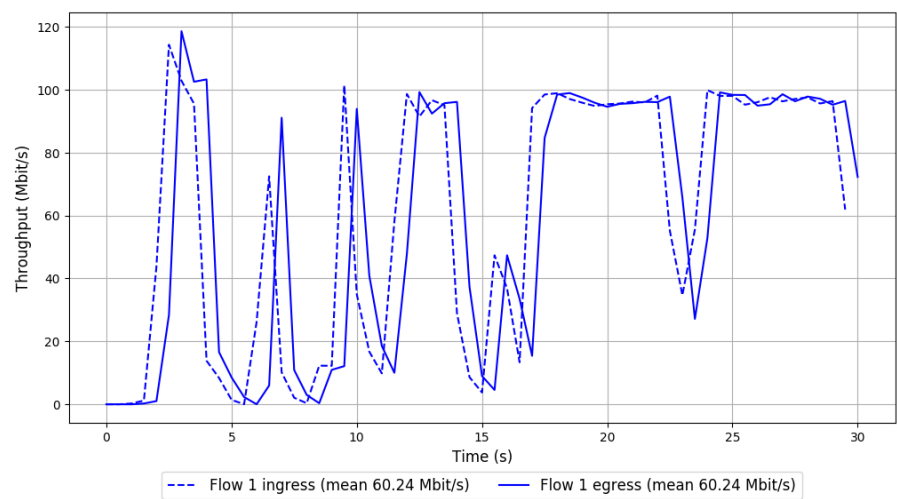
-- Flow 1:

Average throughput: 60.24 Mbit/s

95th percentile per-packet one-way delay: 54.928 ms

Loss rate: 0.00%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-09-26 02:03:29

End at: 2018-09-26 02:03:59

Local clock offset: -0.278 ms

Remote clock offset: 0.676 ms

Below is generated by plot.py at 2018-09-26 04:17:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 58.93 Mbit/s

95th percentile per-packet one-way delay: 54.403 ms

Loss rate: 0.00%

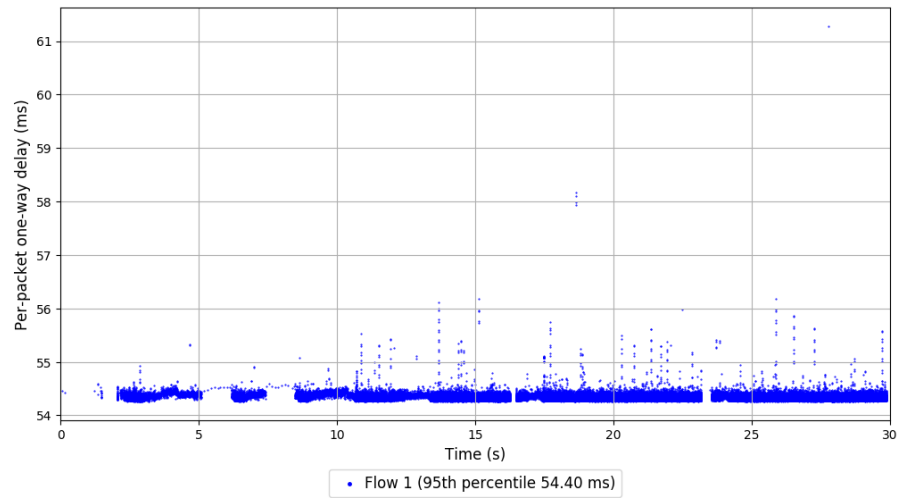
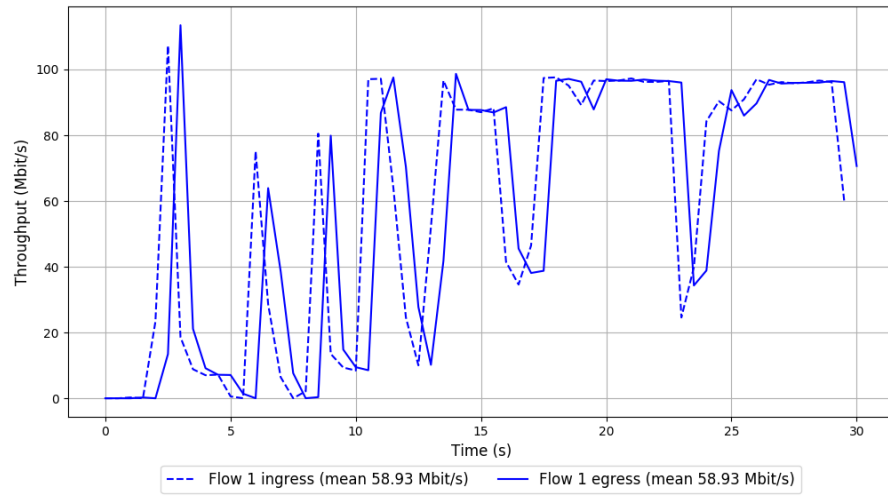
-- Flow 1:

Average throughput: 58.93 Mbit/s

95th percentile per-packet one-way delay: 54.403 ms

Loss rate: 0.00%

Run 4: Report of QUIC Cubic — Data Link

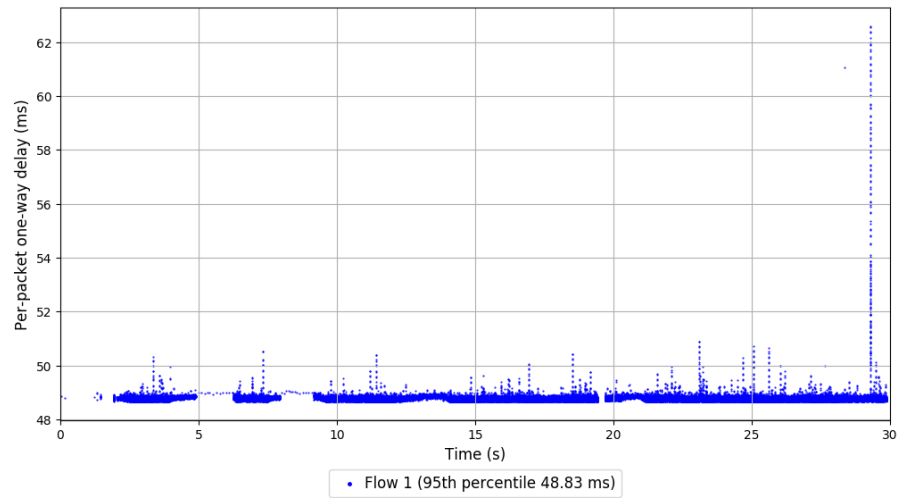
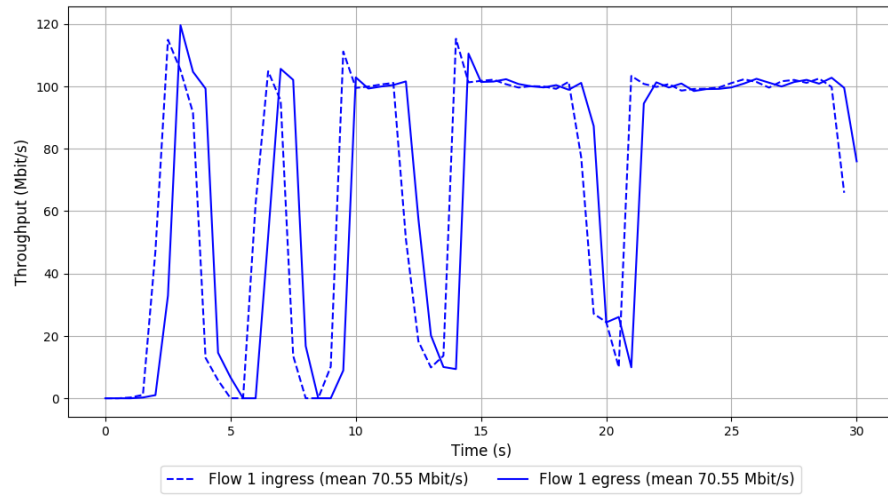


Run 5: Statistics of QUIC Cubic

Start at: 2018-09-26 02:30:39
End at: 2018-09-26 02:31:09
Local clock offset: -0.117 ms
Remote clock offset: -1.457 ms

Below is generated by plot.py at 2018-09-26 04:17:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 70.55 Mbit/s
95th percentile per-packet one-way delay: 48.833 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 70.55 Mbit/s
95th percentile per-packet one-way delay: 48.833 ms
Loss rate: 0.00%

Run 5: Report of QUIC Cubic — Data Link

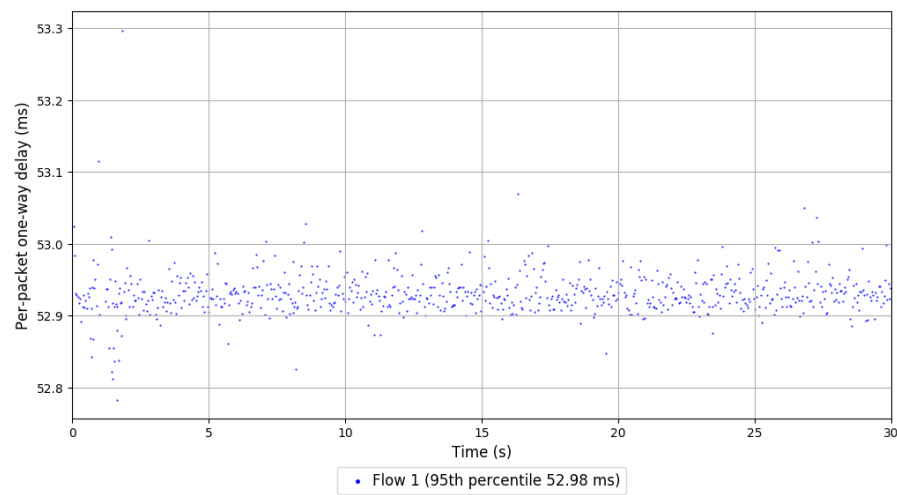
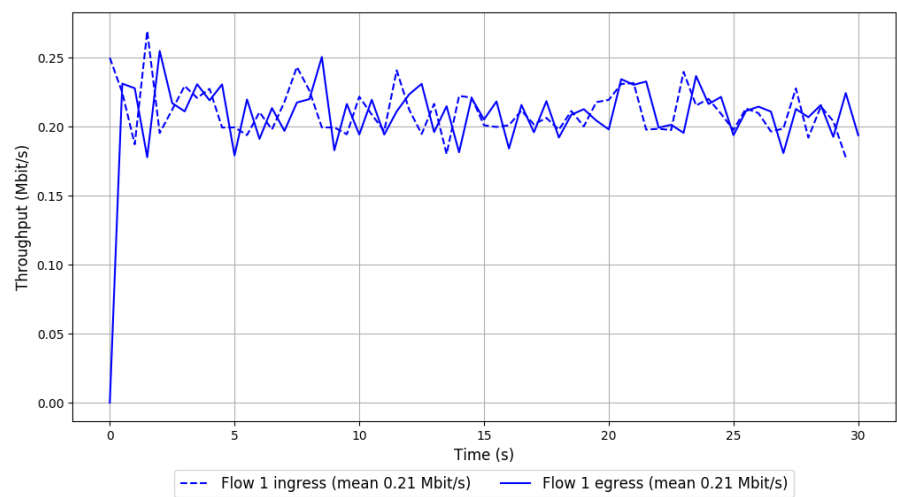


Run 1: Statistics of SCReAM

Start at: 2018-09-26 00:36:06
End at: 2018-09-26 00:36:36
Local clock offset: -0.168 ms
Remote clock offset: -0.447 ms

Below is generated by plot.py at 2018-09-26 04:17:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 52.976 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 52.976 ms
Loss rate: 0.00%

Run 1: Report of SReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2018-09-26 01:03:20

End at: 2018-09-26 01:03:50

Local clock offset: -0.139 ms

Remote clock offset: 0.408 ms

Below is generated by plot.py at 2018-09-26 04:17:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.852 ms

Loss rate: 0.00%

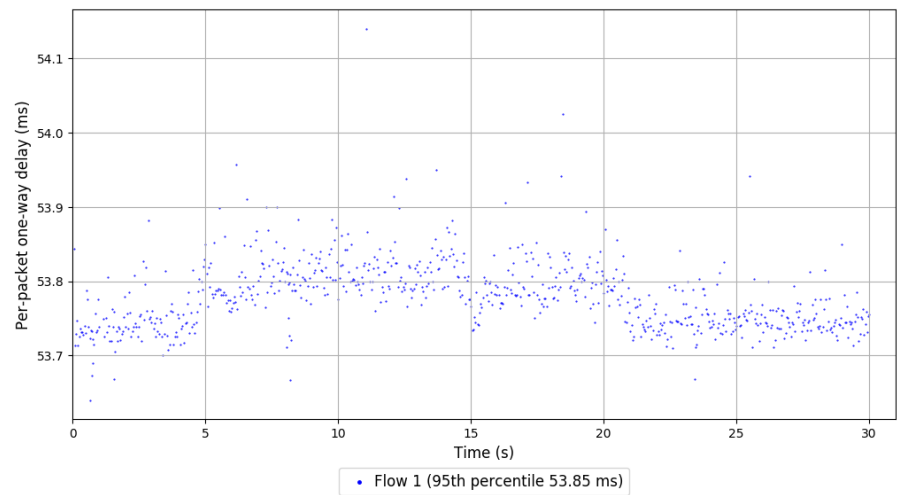
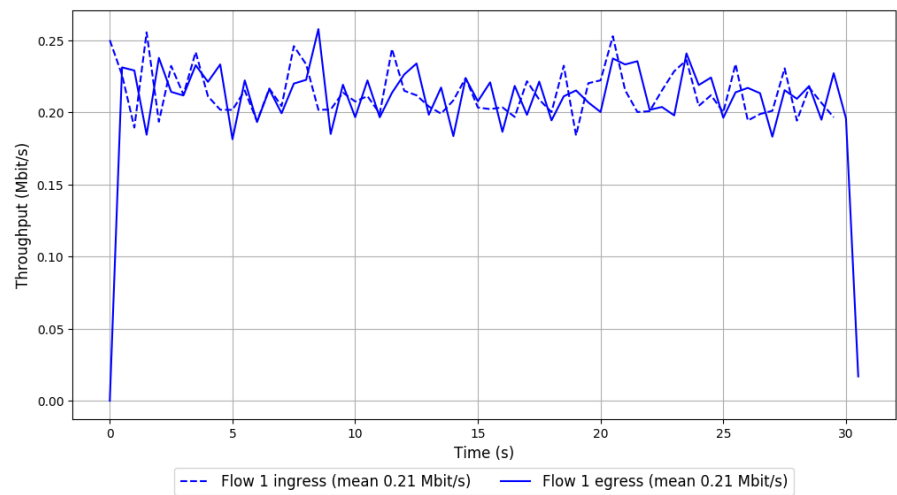
-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.852 ms

Loss rate: 0.00%

Run 2: Report of SReAM — Data Link

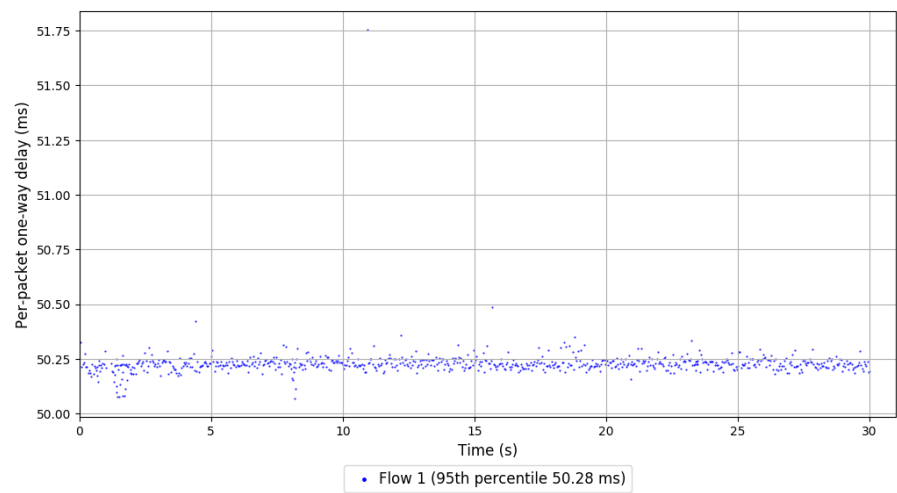
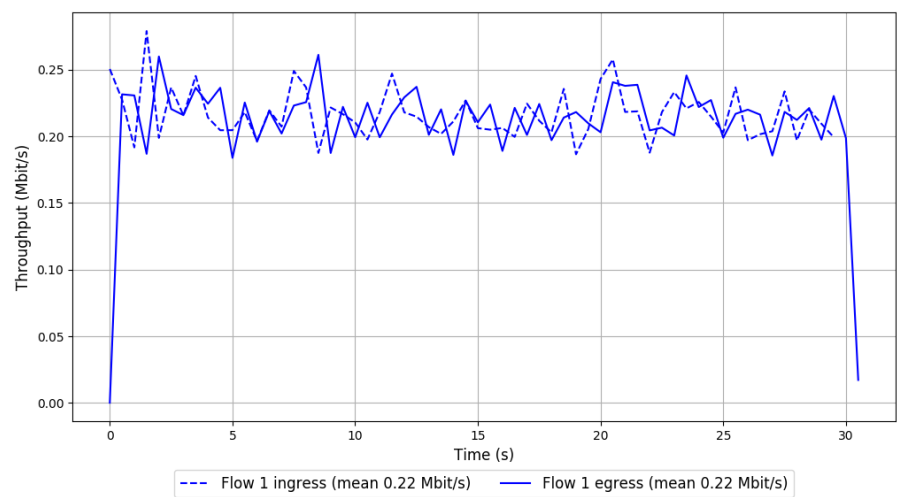


Run 3: Statistics of SCReAM

Start at: 2018-09-26 01:30:43
End at: 2018-09-26 01:31:13
Local clock offset: -0.243 ms
Remote clock offset: -0.193 ms

Below is generated by plot.py at 2018-09-26 04:17:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.281 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.281 ms
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2018-09-26 01:57:55

End at: 2018-09-26 01:58:25

Local clock offset: -0.221 ms

Remote clock offset: 0.562 ms

Below is generated by plot.py at 2018-09-26 04:17:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.861 ms

Loss rate: 0.00%

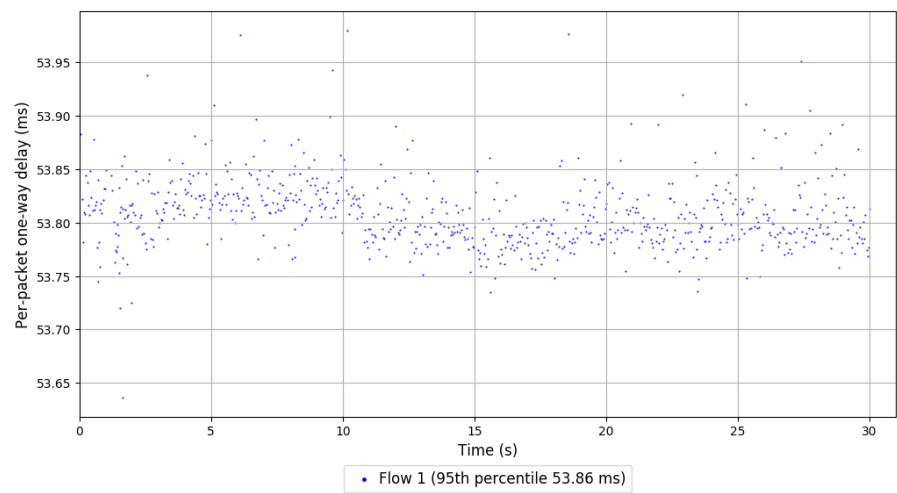
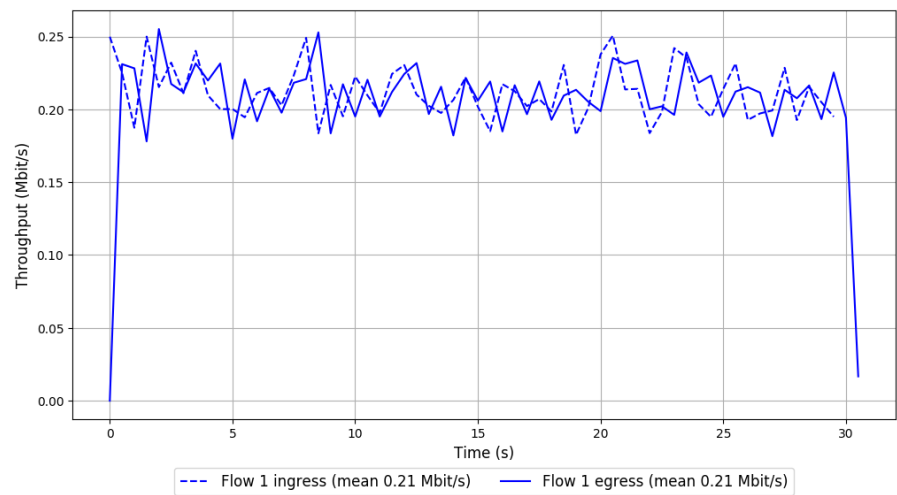
-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.861 ms

Loss rate: 0.00%

Run 4: Report of SReAM — Data Link

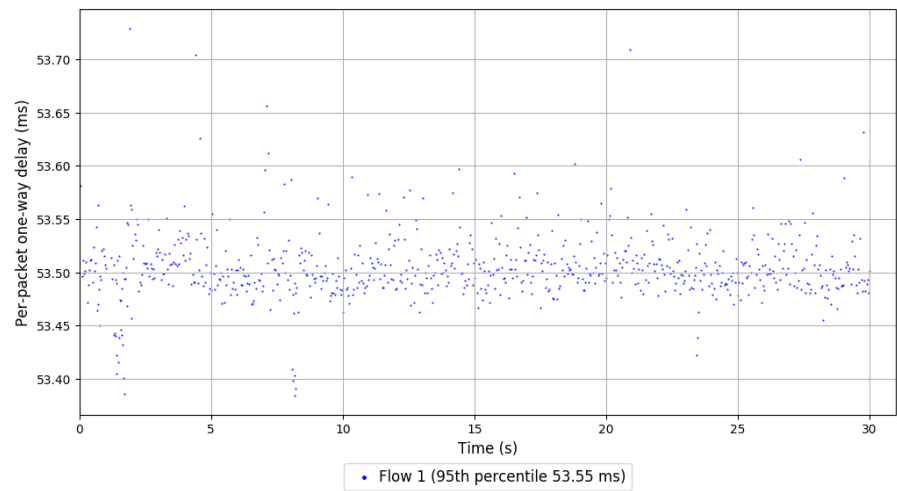
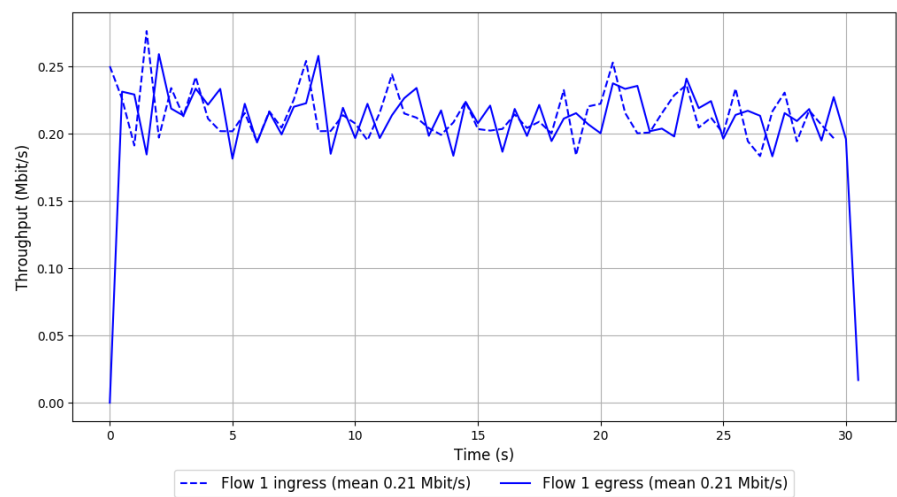


Run 5: Statistics of SCReAM

Start at: 2018-09-26 02:25:16
End at: 2018-09-26 02:25:46
Local clock offset: -0.082 ms
Remote clock offset: -0.126 ms

Below is generated by plot.py at 2018-09-26 04:17:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.555 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.555 ms
Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2018-09-26 00:34:59

End at: 2018-09-26 00:35:29

Local clock offset: -0.45 ms

Remote clock offset: 0.438 ms

Below is generated by plot.py at 2018-09-26 04:17:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 8.24 Mbit/s

95th percentile per-packet one-way delay: 51.738 ms

Loss rate: 0.00%

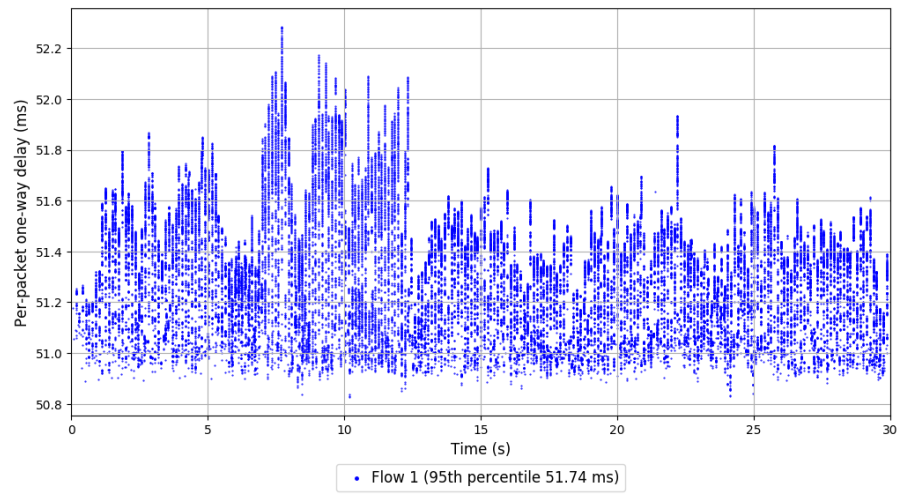
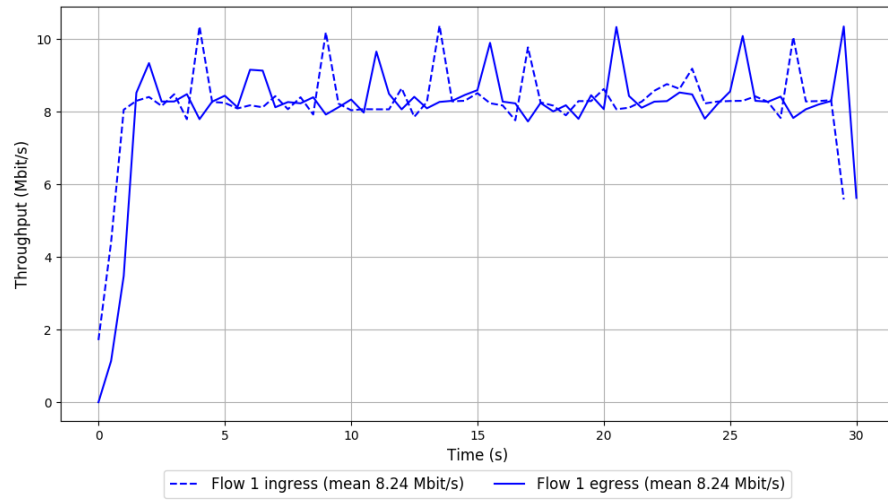
-- Flow 1:

Average throughput: 8.24 Mbit/s

95th percentile per-packet one-way delay: 51.738 ms

Loss rate: 0.00%

Run 1: Report of Sprout — Data Link

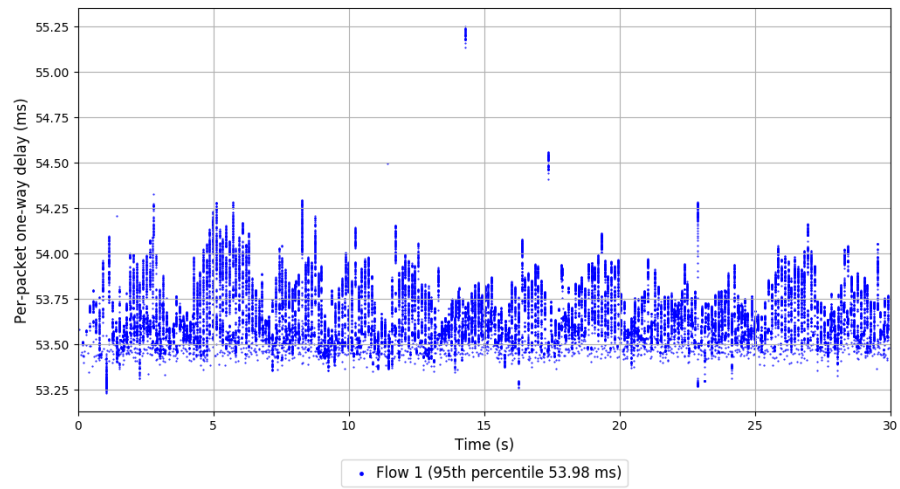
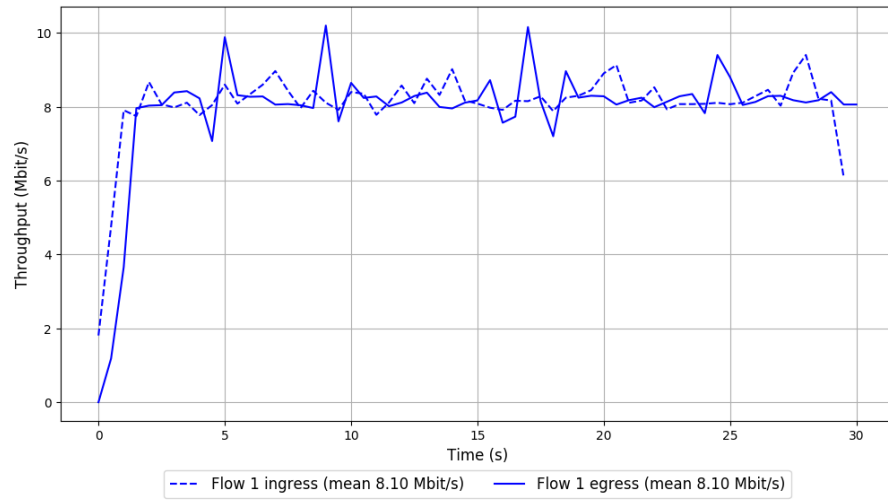


Run 2: Statistics of Sprout

Start at: 2018-09-26 01:02:12
End at: 2018-09-26 01:02:42
Local clock offset: -0.275 ms
Remote clock offset: -0.339 ms

Below is generated by plot.py at 2018-09-26 04:17:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 8.10 Mbit/s
95th percentile per-packet one-way delay: 53.975 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 8.10 Mbit/s
95th percentile per-packet one-way delay: 53.975 ms
Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

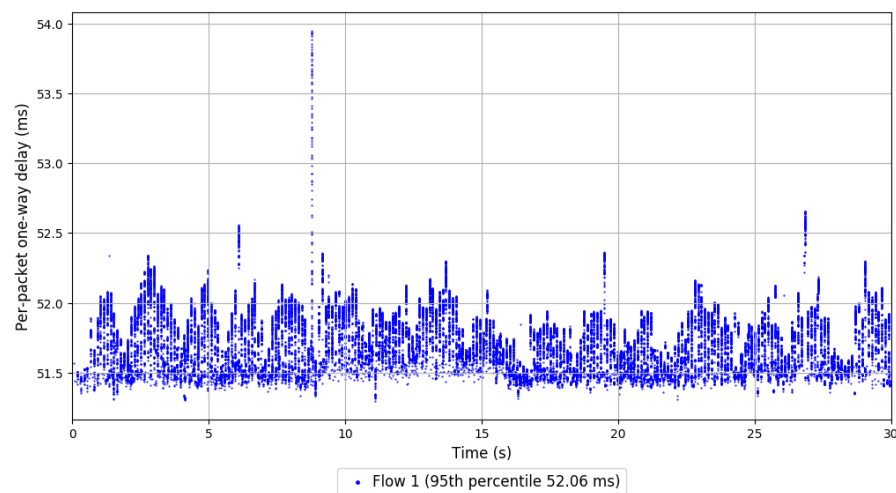
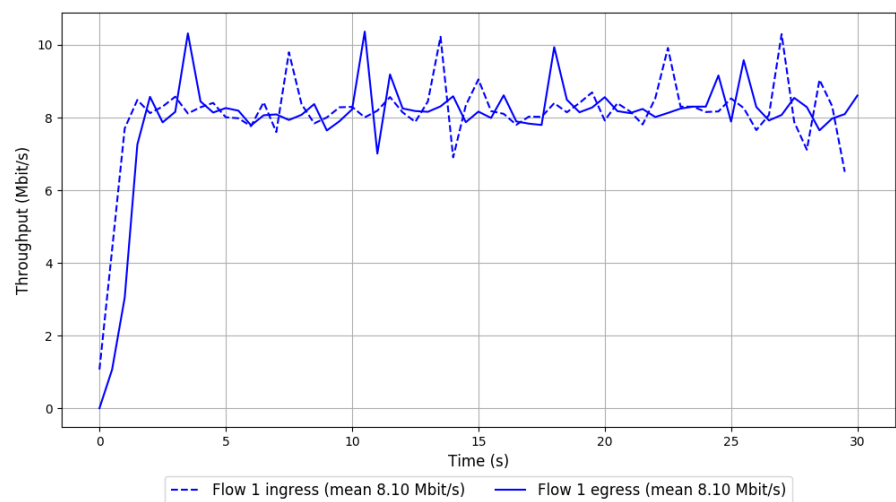


Run 3: Statistics of Sprout

Start at: 2018-09-26 01:29:36
End at: 2018-09-26 01:30:06
Local clock offset: -0.444 ms
Remote clock offset: 0.58 ms

Below is generated by plot.py at 2018-09-26 04:17:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 8.10 Mbit/s
95th percentile per-packet one-way delay: 52.058 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 8.10 Mbit/s
95th percentile per-packet one-way delay: 52.058 ms
Loss rate: 0.00%

Run 3: Report of Sprout — Data Link

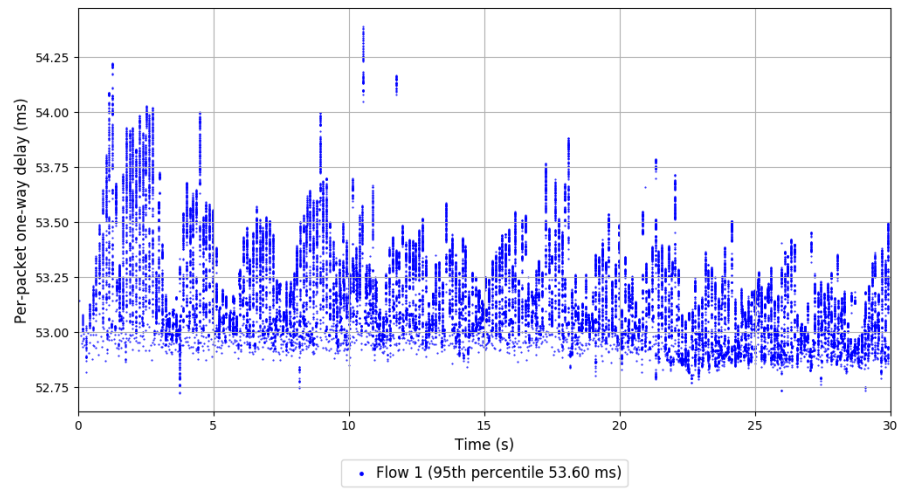
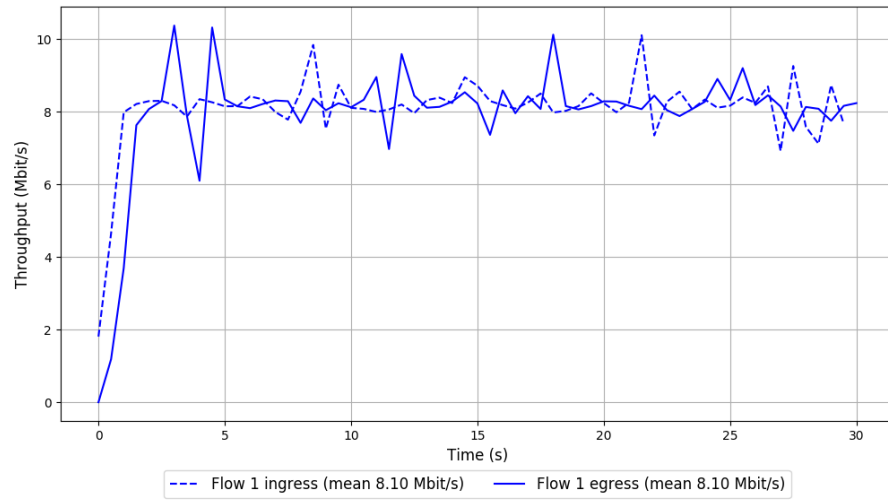


Run 4: Statistics of Sprout

Start at: 2018-09-26 01:56:48
End at: 2018-09-26 01:57:18
Local clock offset: -0.149 ms
Remote clock offset: -0.727 ms

Below is generated by plot.py at 2018-09-26 04:17:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 8.10 Mbit/s
95th percentile per-packet one-way delay: 53.604 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 8.10 Mbit/s
95th percentile per-packet one-way delay: 53.604 ms
Loss rate: 0.00%

Run 4: Report of Sprout — Data Link

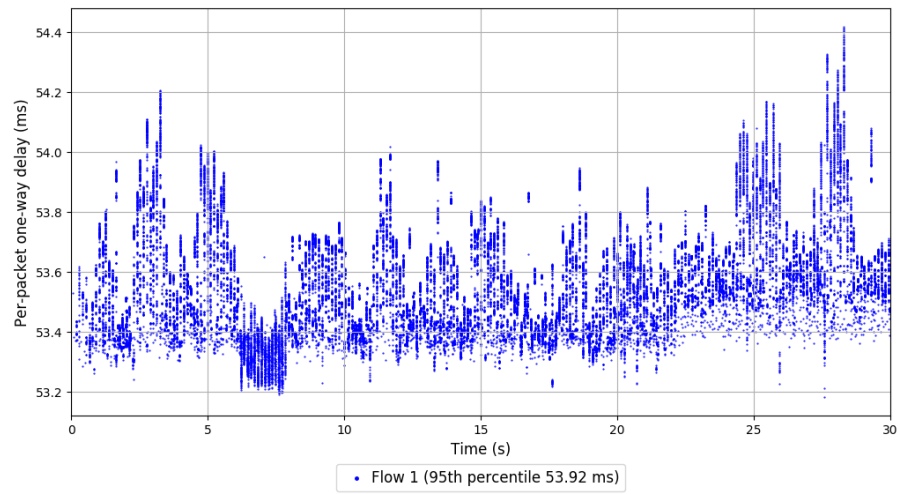
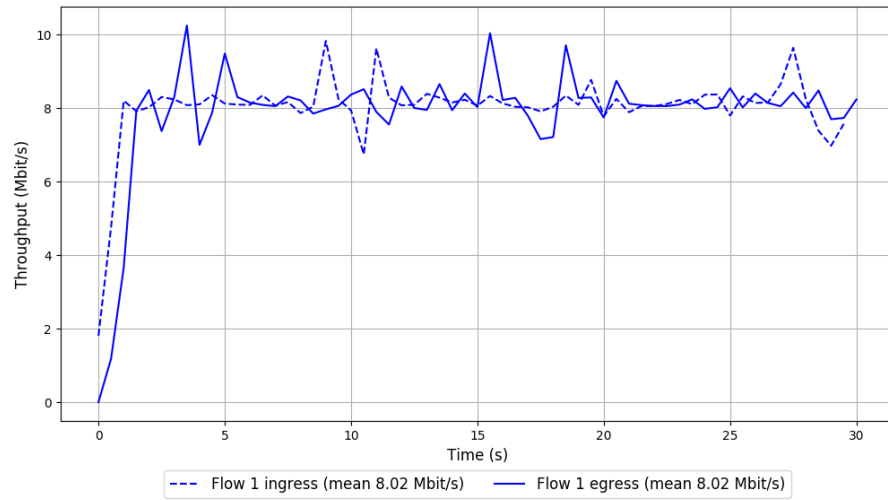


Run 5: Statistics of Sprout

Start at: 2018-09-26 02:24:08
End at: 2018-09-26 02:24:38
Local clock offset: -0.047 ms
Remote clock offset: -0.204 ms

Below is generated by plot.py at 2018-09-26 04:17:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 8.02 Mbit/s
95th percentile per-packet one-way delay: 53.919 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 8.02 Mbit/s
95th percentile per-packet one-way delay: 53.919 ms
Loss rate: 0.00%

Run 5: Report of Sprout — Data Link

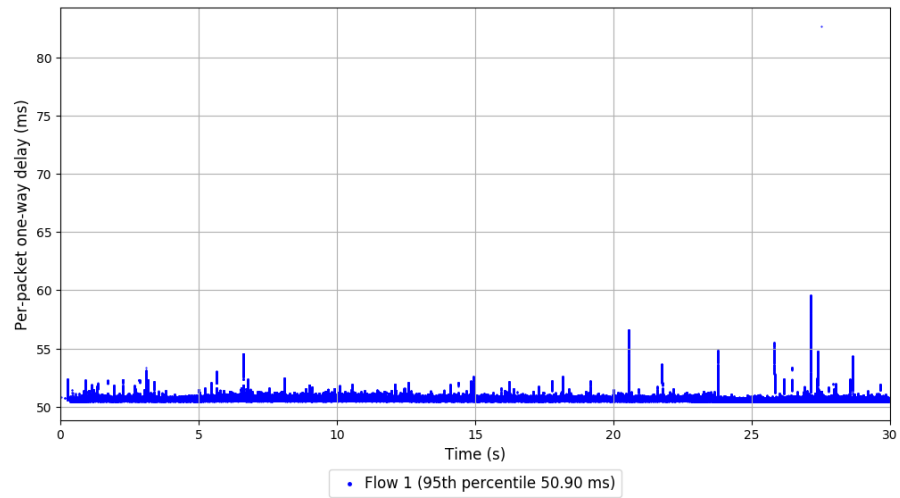
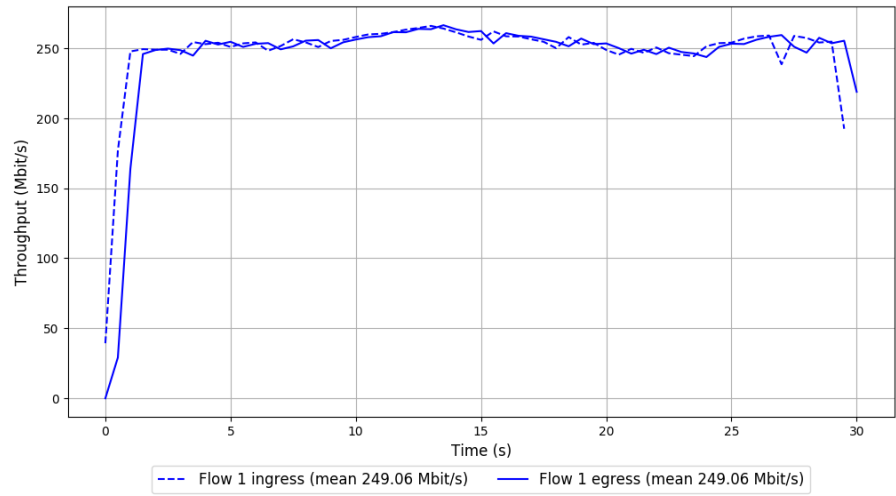


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-09-26 00:28:40
End at: 2018-09-26 00:29:10
Local clock offset: -0.323 ms
Remote clock offset: 0.47 ms

# Below is generated by plot.py at 2018-09-26 04:19:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 249.06 Mbit/s
95th percentile per-packet one-way delay: 50.896 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 249.06 Mbit/s
95th percentile per-packet one-way delay: 50.896 ms
Loss rate: 0.00%
```

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

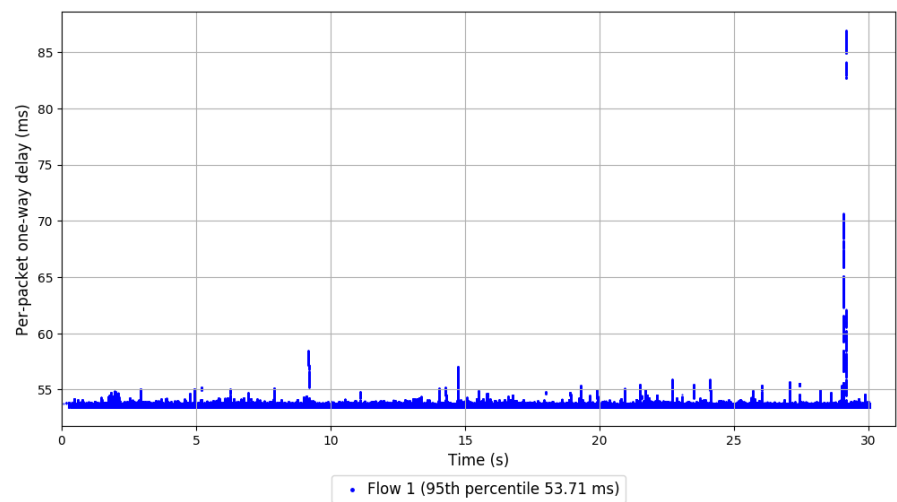
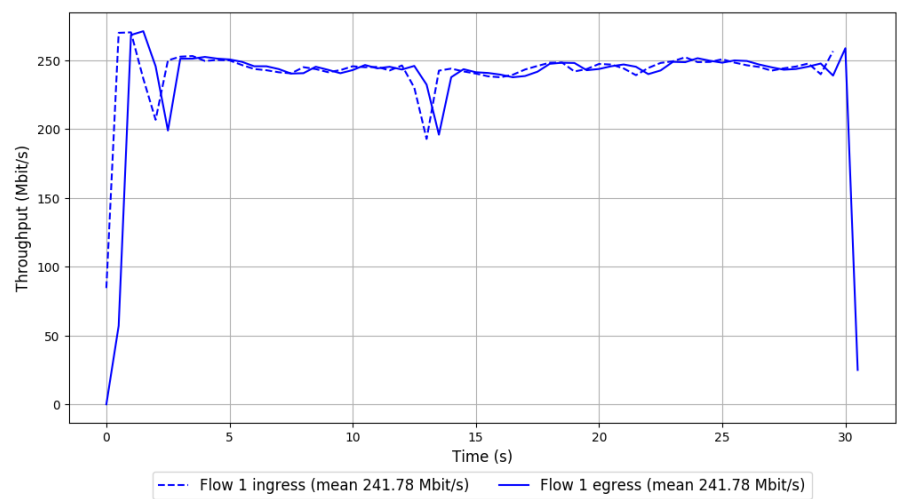


Run 2: Statistics of TaoVA-100x

Start at: 2018-09-26 00:56:00
End at: 2018-09-26 00:56:30
Local clock offset: -0.394 ms
Remote clock offset: -0.239 ms

Below is generated by plot.py at 2018-09-26 04:19:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 241.78 Mbit/s
95th percentile per-packet one-way delay: 53.714 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 241.78 Mbit/s
95th percentile per-packet one-way delay: 53.714 ms
Loss rate: 0.00%

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

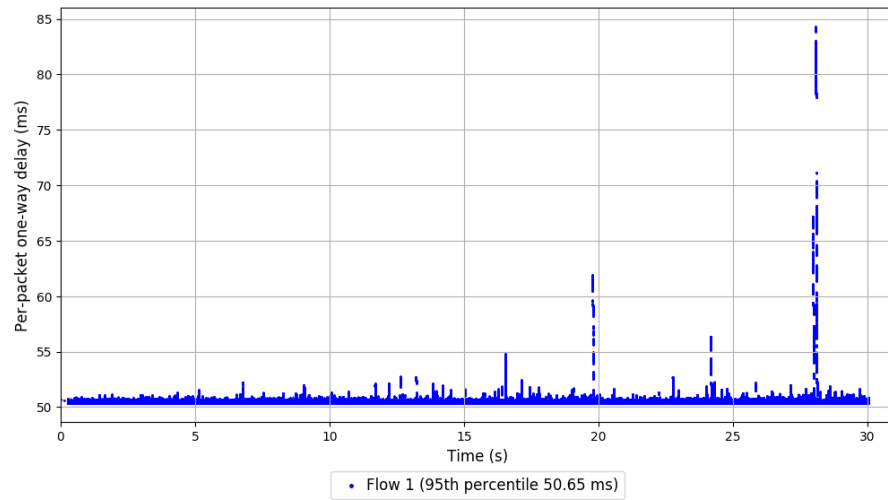
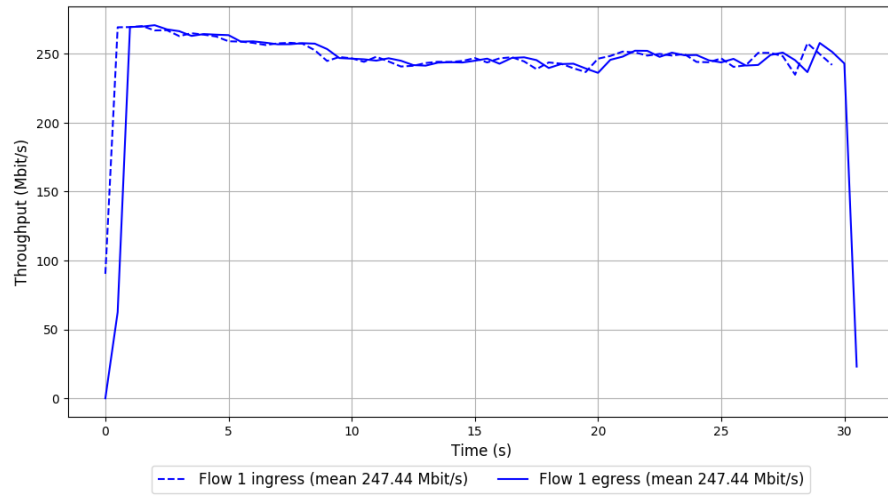


Run 3: Statistics of TaoVA-100x

Start at: 2018-09-26 01:23:23
End at: 2018-09-26 01:23:53
Local clock offset: -0.342 ms
Remote clock offset: -0.185 ms

Below is generated by plot.py at 2018-09-26 04:19:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 247.44 Mbit/s
95th percentile per-packet one-way delay: 50.647 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 247.44 Mbit/s
95th percentile per-packet one-way delay: 50.647 ms
Loss rate: 0.00%

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-09-26 01:50:38

End at: 2018-09-26 01:51:08

Local clock offset: -0.031 ms

Remote clock offset: 0.224 ms

Below is generated by plot.py at 2018-09-26 04:19:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 251.27 Mbit/s

95th percentile per-packet one-way delay: 50.463 ms

Loss rate: 0.00%

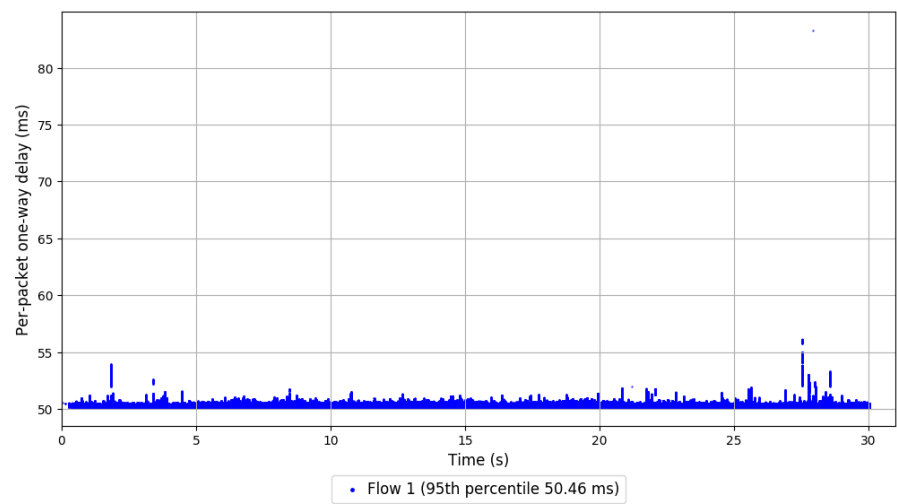
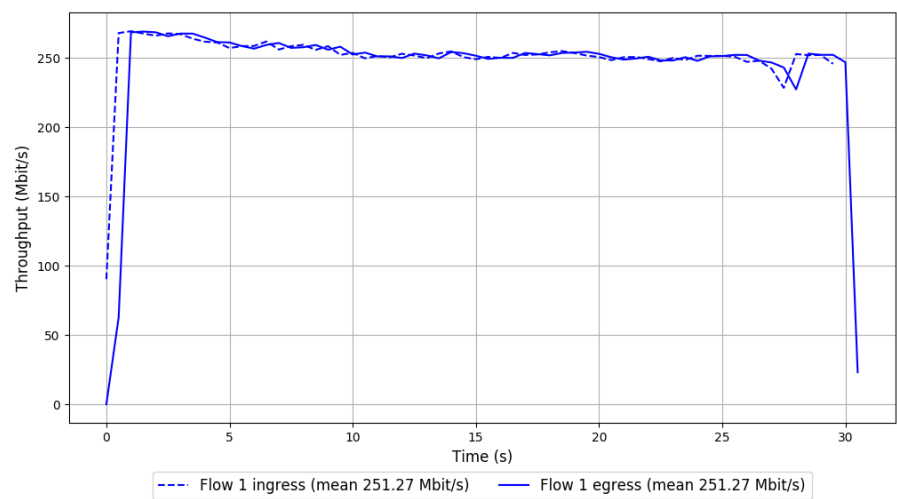
-- Flow 1:

Average throughput: 251.27 Mbit/s

95th percentile per-packet one-way delay: 50.463 ms

Loss rate: 0.00%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-09-26 02:17:53

End at: 2018-09-26 02:18:23

Local clock offset: -0.177 ms

Remote clock offset: -0.09 ms

Below is generated by plot.py at 2018-09-26 04:19:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 241.69 Mbit/s

95th percentile per-packet one-way delay: 53.854 ms

Loss rate: 0.00%

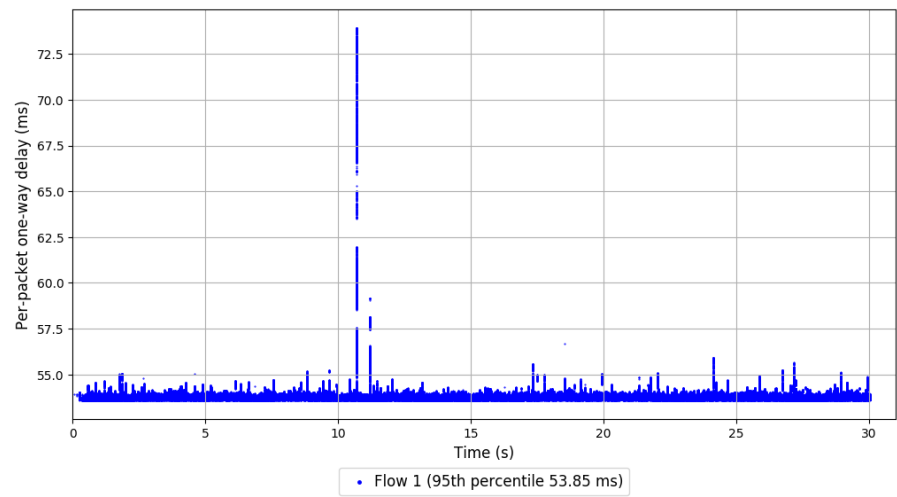
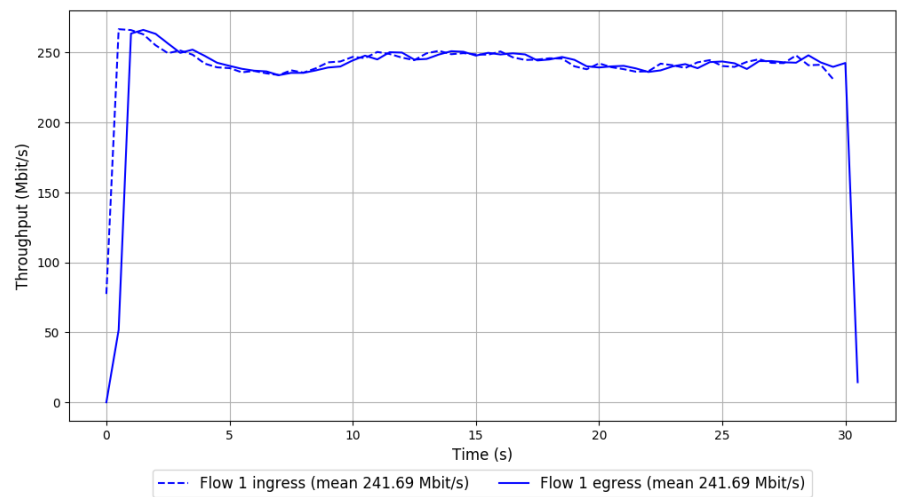
-- Flow 1:

Average throughput: 241.69 Mbit/s

95th percentile per-packet one-way delay: 53.854 ms

Loss rate: 0.00%

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

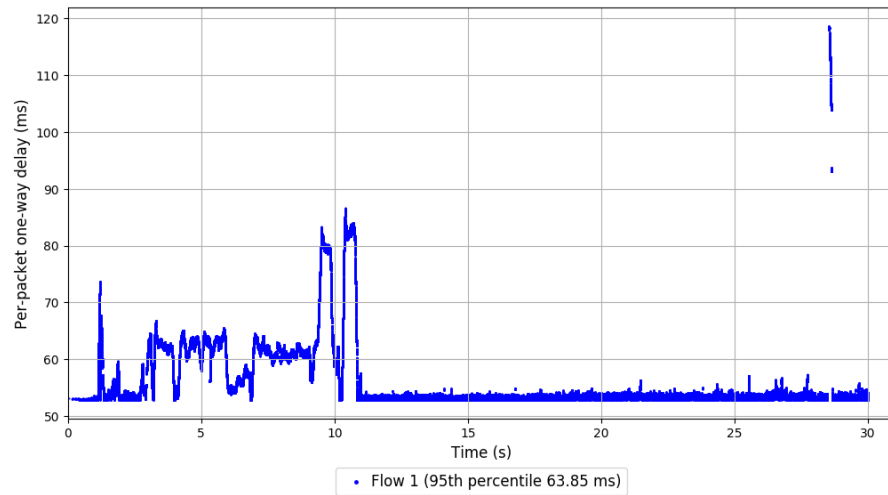
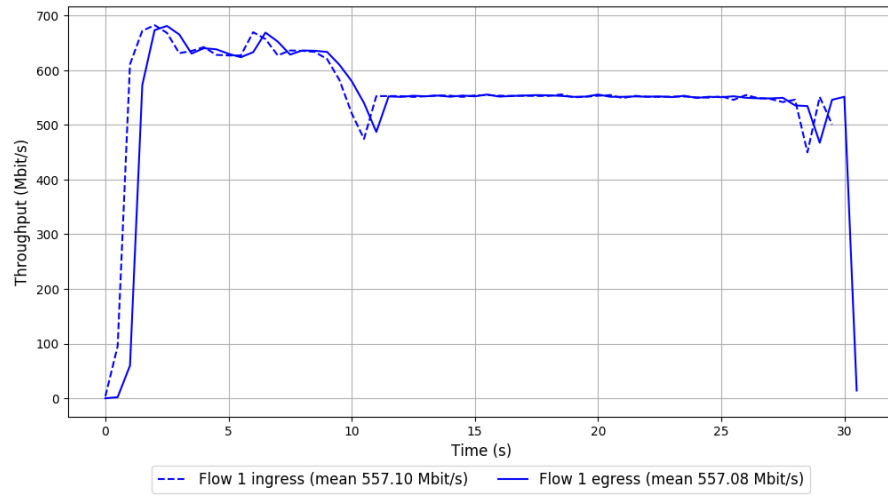


Run 1: Statistics of TCP Vegas

Start at: 2018-09-26 00:37:13
End at: 2018-09-26 00:37:43
Local clock offset: -0.098 ms
Remote clock offset: -0.607 ms

Below is generated by plot.py at 2018-09-26 04:24:48
Datalink statistics
-- Total of 1 flow:
Average throughput: 557.08 Mbit/s
95th percentile per-packet one-way delay: 63.847 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 557.08 Mbit/s
95th percentile per-packet one-way delay: 63.847 ms
Loss rate: 0.00%

Run 1: Report of TCP Vegas — Data Link

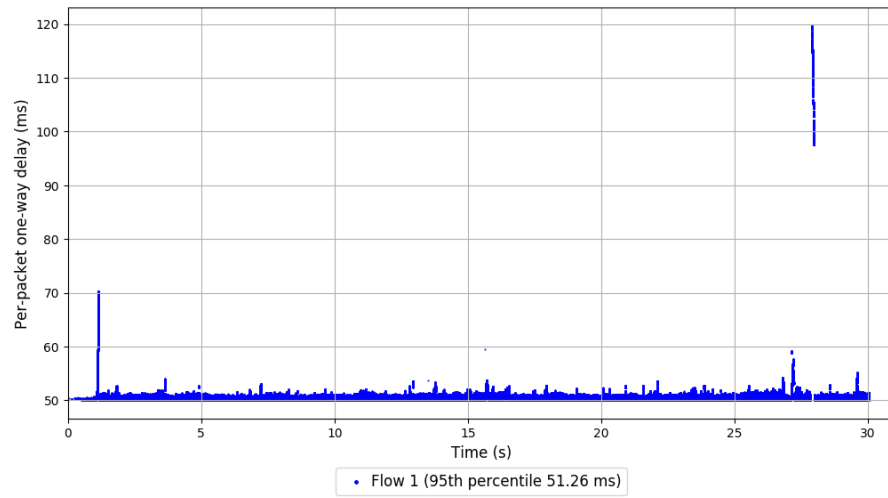
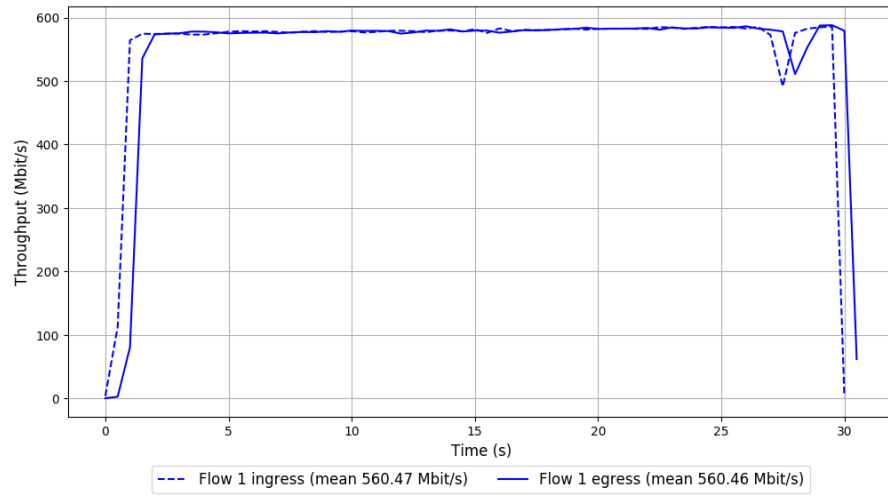


Run 2: Statistics of TCP Vegas

Start at: 2018-09-26 01:04:26
End at: 2018-09-26 01:04:56
Local clock offset: -0.397 ms
Remote clock offset: -0.267 ms

Below is generated by plot.py at 2018-09-26 04:25:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 560.46 Mbit/s
95th percentile per-packet one-way delay: 51.262 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 560.46 Mbit/s
95th percentile per-packet one-way delay: 51.262 ms
Loss rate: 0.00%

Run 2: Report of TCP Vegas — Data Link

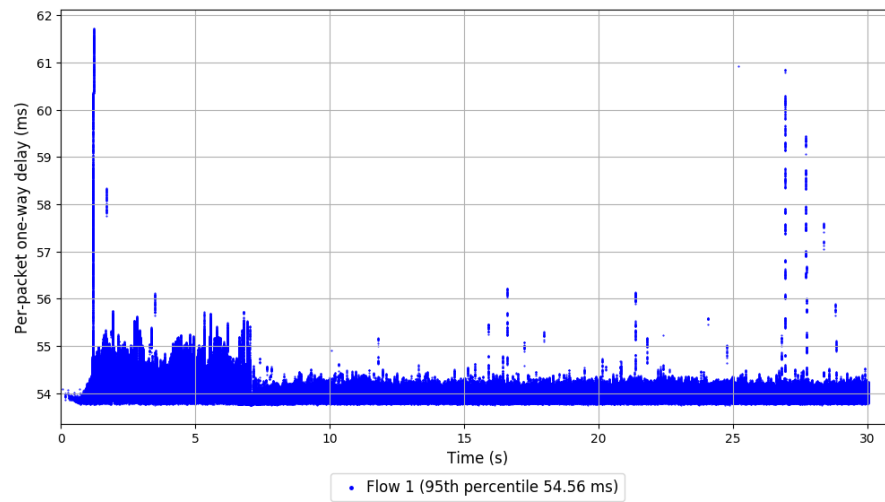
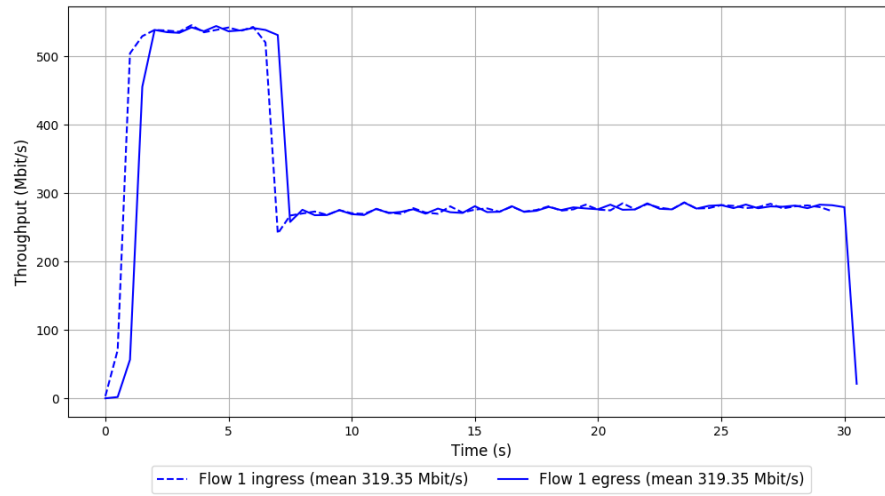


Run 3: Statistics of TCP Vegas

Start at: 2018-09-26 01:31:50
End at: 2018-09-26 01:32:20
Local clock offset: -0.264 ms
Remote clock offset: 0.016 ms

Below is generated by plot.py at 2018-09-26 04:25:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 319.35 Mbit/s
95th percentile per-packet one-way delay: 54.556 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 319.35 Mbit/s
95th percentile per-packet one-way delay: 54.556 ms
Loss rate: 0.00%

Run 3: Report of TCP Vegas — Data Link

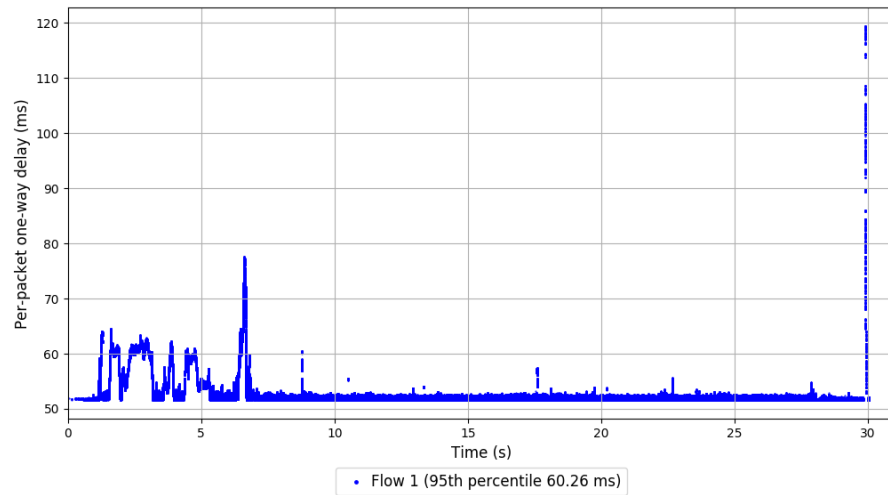
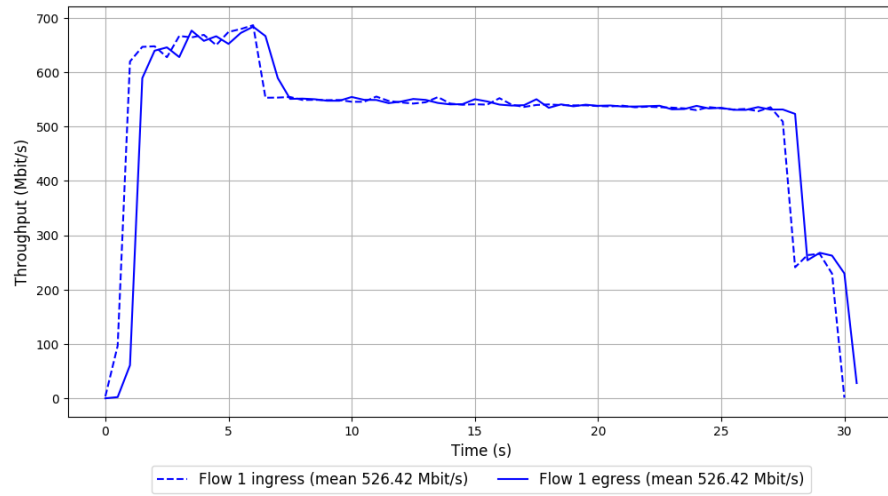


Run 4: Statistics of TCP Vegas

Start at: 2018-09-26 01:59:02
End at: 2018-09-26 01:59:32
Local clock offset: -0.14 ms
Remote clock offset: -1.383 ms

Below is generated by plot.py at 2018-09-26 04:28:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 526.42 Mbit/s
95th percentile per-packet one-way delay: 60.255 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 526.42 Mbit/s
95th percentile per-packet one-way delay: 60.255 ms
Loss rate: 0.00%

Run 4: Report of TCP Vegas — Data Link

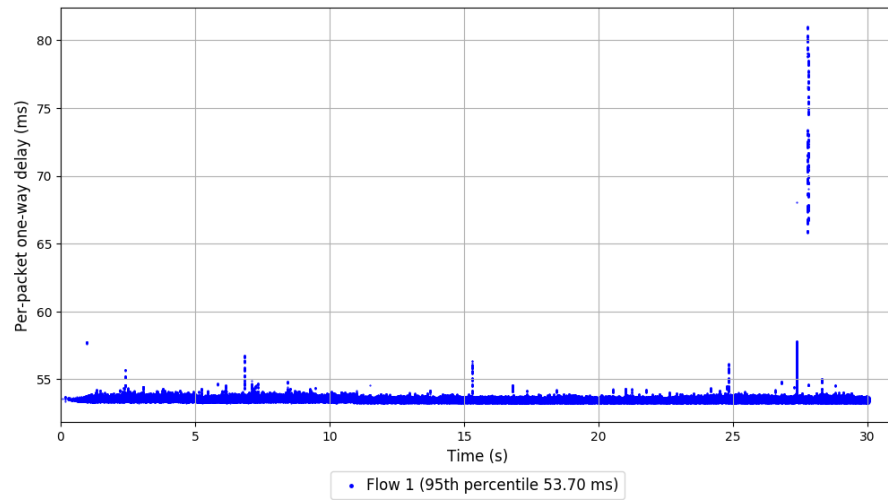
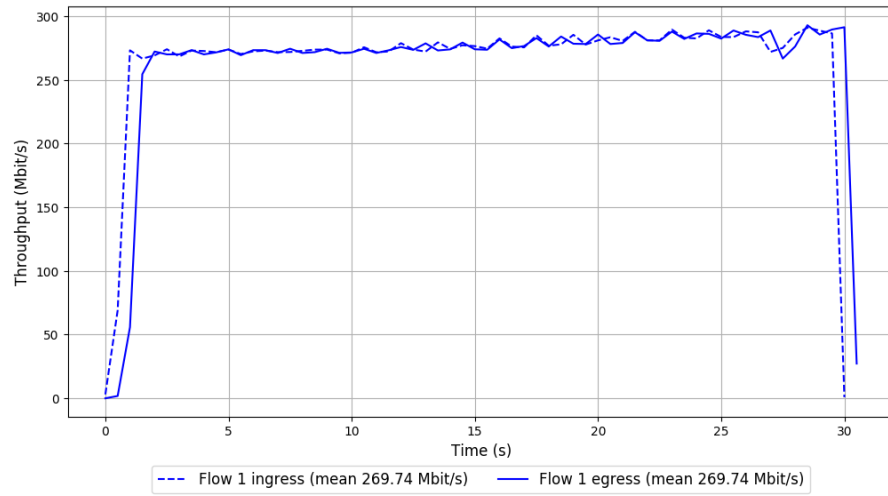


Run 5: Statistics of TCP Vegas

Start at: 2018-09-26 02:26:22
End at: 2018-09-26 02:26:53
Local clock offset: -0.317 ms
Remote clock offset: -0.627 ms

Below is generated by plot.py at 2018-09-26 04:28:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 269.74 Mbit/s
95th percentile per-packet one-way delay: 53.700 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 269.74 Mbit/s
95th percentile per-packet one-way delay: 53.700 ms
Loss rate: 0.00%

Run 5: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2018-09-26 00:49:58

End at: 2018-09-26 00:50:28

Local clock offset: -0.4 ms

Remote clock offset: 0.046 ms

Below is generated by plot.py at 2018-09-26 04:28:43

Datalink statistics

-- Total of 1 flow:

Average throughput: 167.26 Mbit/s

95th percentile per-packet one-way delay: 87.157 ms

Loss rate: 0.00%

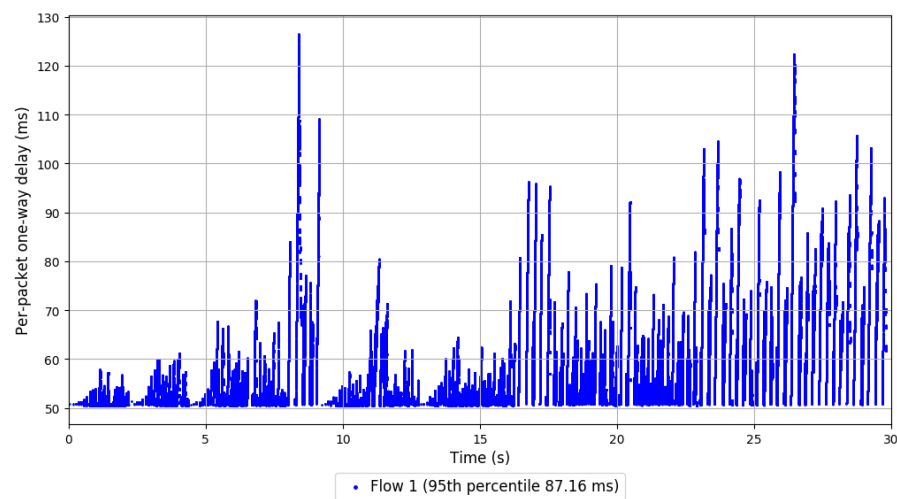
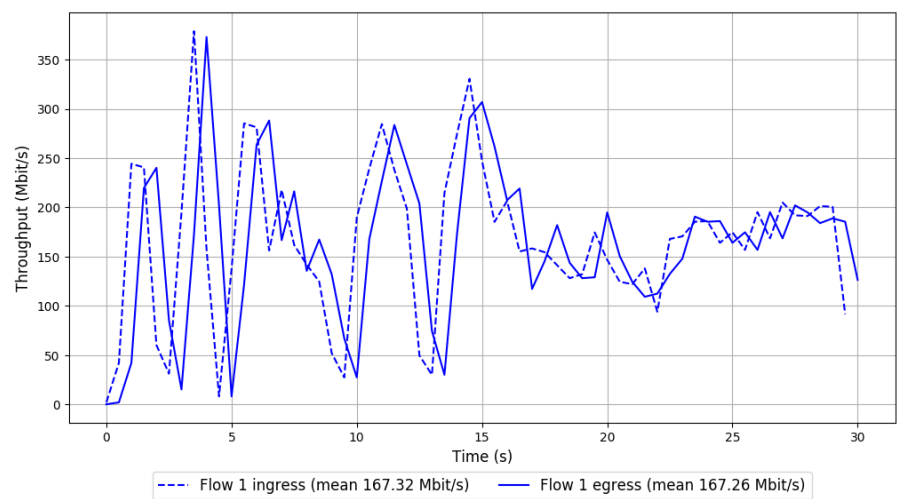
-- Flow 1:

Average throughput: 167.26 Mbit/s

95th percentile per-packet one-way delay: 87.157 ms

Loss rate: 0.00%

Run 1: Report of Verus — Data Link

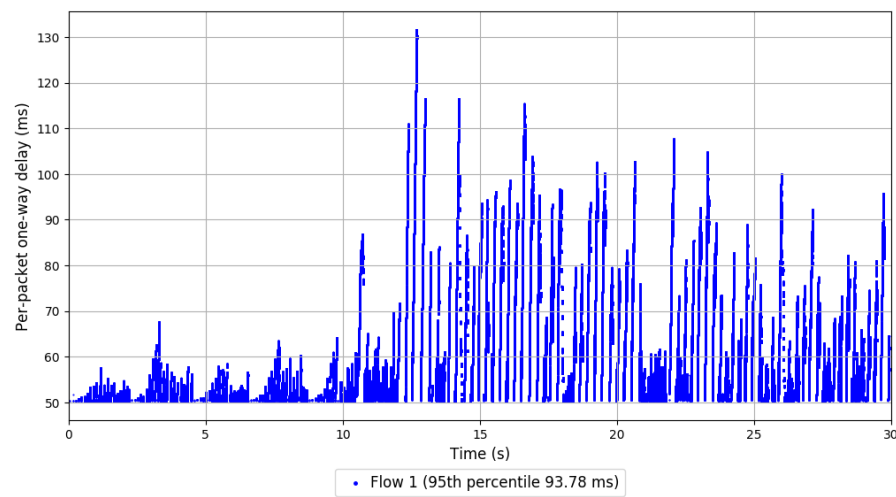
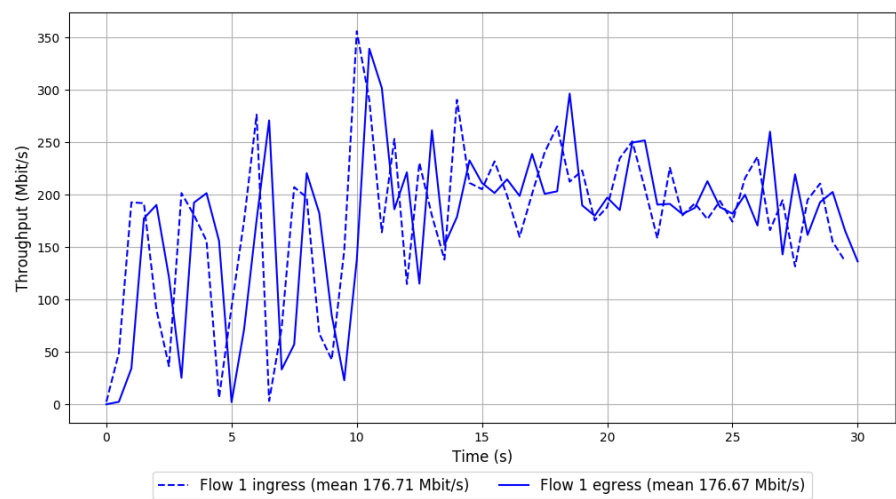


Run 2: Statistics of Verus

Start at: 2018-09-26 01:17:19
End at: 2018-09-26 01:17:49
Local clock offset: -0.231 ms
Remote clock offset: -0.118 ms

Below is generated by plot.py at 2018-09-26 04:28:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 176.67 Mbit/s
95th percentile per-packet one-way delay: 93.779 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 176.67 Mbit/s
95th percentile per-packet one-way delay: 93.779 ms
Loss rate: 0.00%

Run 2: Report of Verus — Data Link

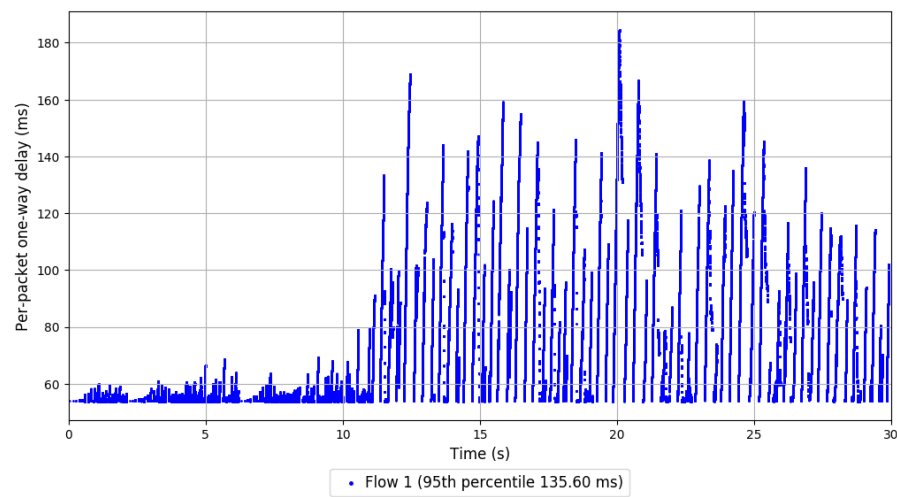
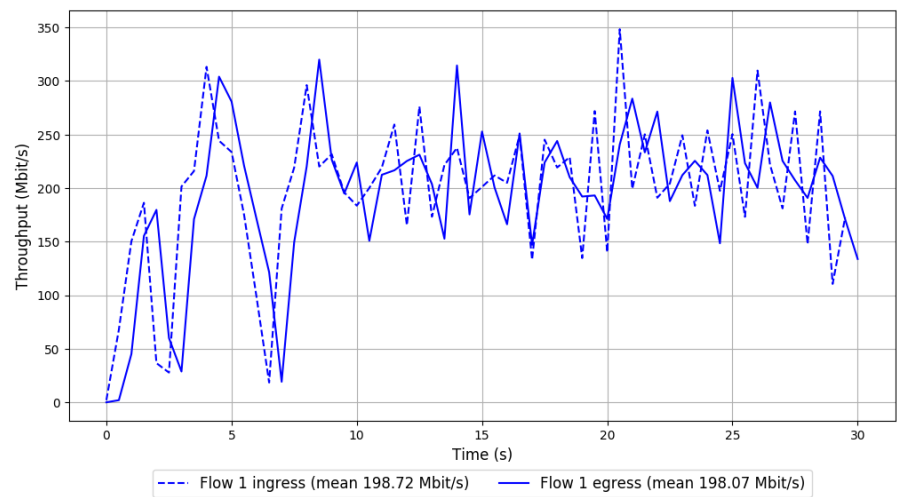


Run 3: Statistics of Verus

Start at: 2018-09-26 01:44:30
End at: 2018-09-26 01:45:00
Local clock offset: -0.505 ms
Remote clock offset: -0.199 ms

Below is generated by plot.py at 2018-09-26 04:28:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 198.07 Mbit/s
95th percentile per-packet one-way delay: 135.597 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 198.07 Mbit/s
95th percentile per-packet one-way delay: 135.597 ms
Loss rate: 0.33%

Run 3: Report of Verus — Data Link

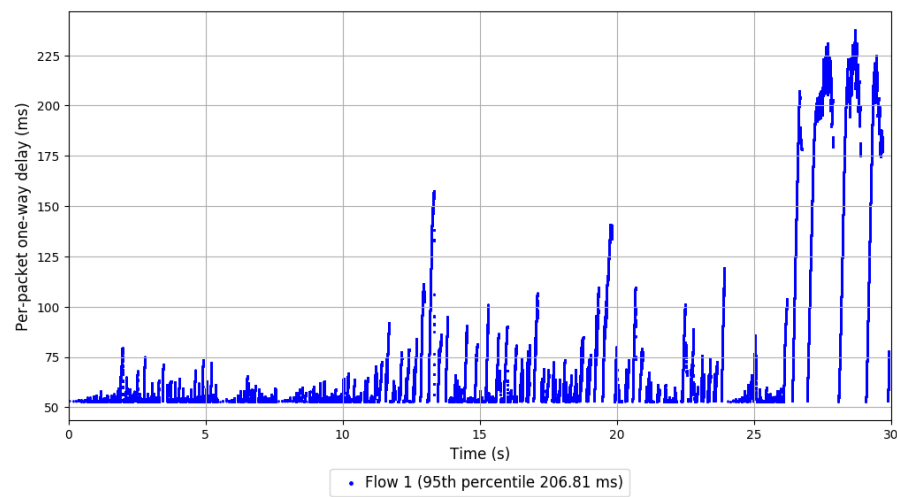
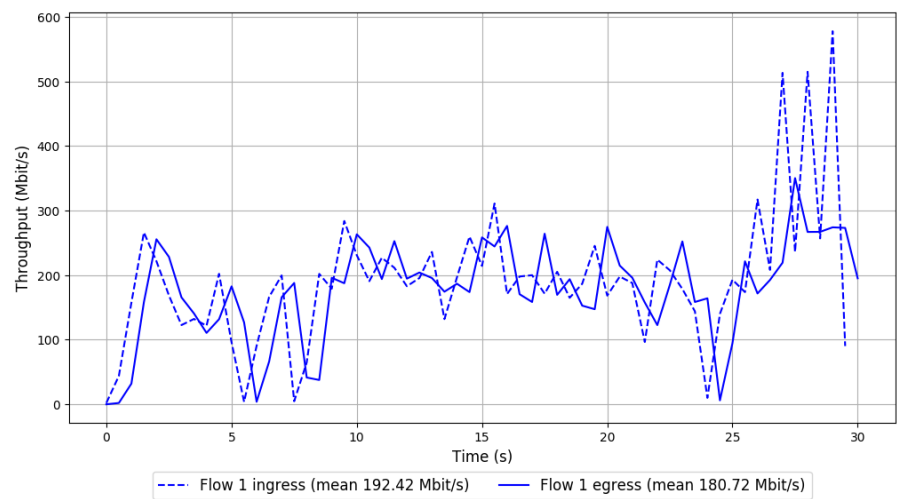


Run 4: Statistics of Verus

Start at: 2018-09-26 02:11:48
End at: 2018-09-26 02:12:18
Local clock offset: -0.002 ms
Remote clock offset: -0.231 ms

Below is generated by plot.py at 2018-09-26 04:29:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 180.72 Mbit/s
95th percentile per-packet one-way delay: 206.814 ms
Loss rate: 6.08%
-- Flow 1:
Average throughput: 180.72 Mbit/s
95th percentile per-packet one-way delay: 206.814 ms
Loss rate: 6.08%

Run 4: Report of Verus — Data Link

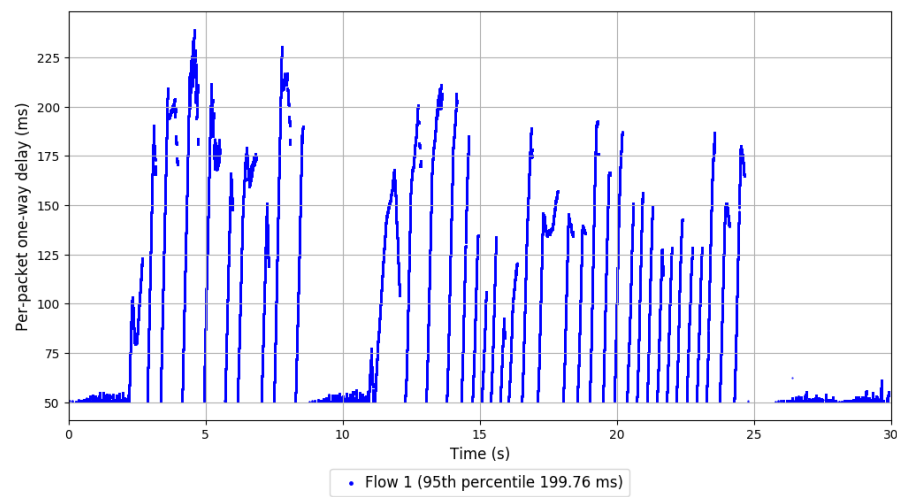
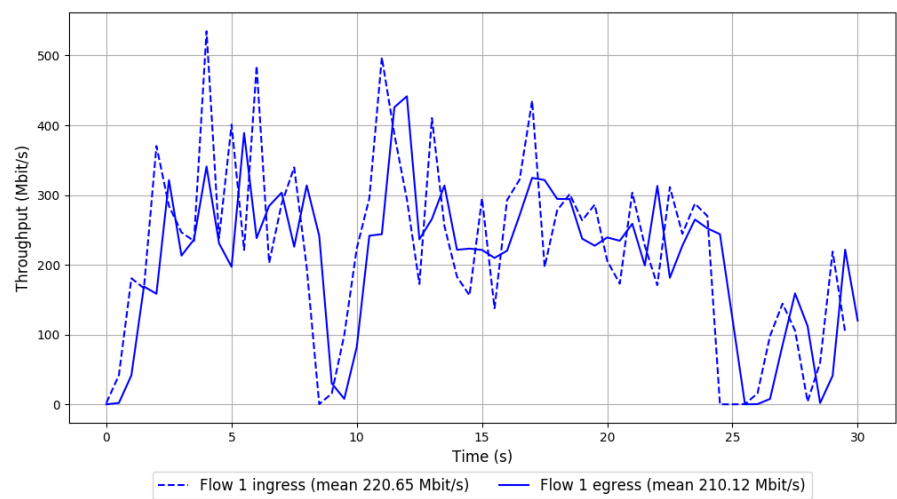


Run 5: Statistics of Verus

Start at: 2018-09-26 02:38:59
End at: 2018-09-26 02:39:29
Local clock offset: -0.249 ms
Remote clock offset: -0.205 ms

Below is generated by plot.py at 2018-09-26 04:31:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 210.12 Mbit/s
95th percentile per-packet one-way delay: 199.765 ms
Loss rate: 4.76%
-- Flow 1:
Average throughput: 210.12 Mbit/s
95th percentile per-packet one-way delay: 199.765 ms
Loss rate: 4.76%

Run 5: Report of Verus — Data Link

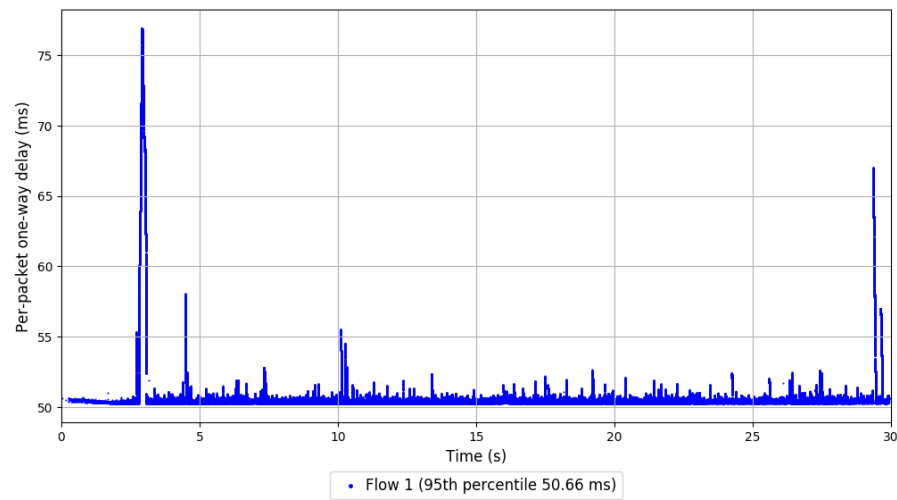
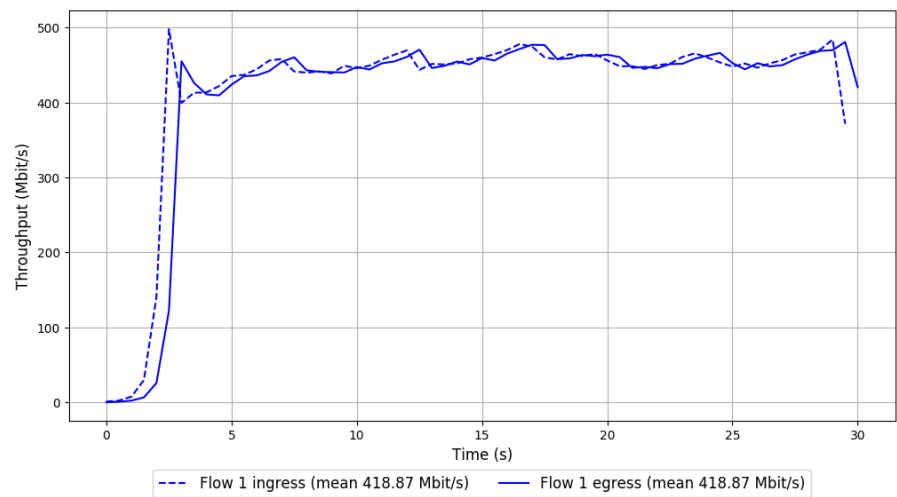


Run 1: Statistics of PCC-Vivace

Start at: 2018-09-26 00:31:48
End at: 2018-09-26 00:32:18
Local clock offset: -0.293 ms
Remote clock offset: -0.246 ms

Below is generated by plot.py at 2018-09-26 04:31:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 418.87 Mbit/s
95th percentile per-packet one-way delay: 50.655 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 418.87 Mbit/s
95th percentile per-packet one-way delay: 50.655 ms
Loss rate: 0.00%

Run 1: Report of PCC-Vivace — Data Link

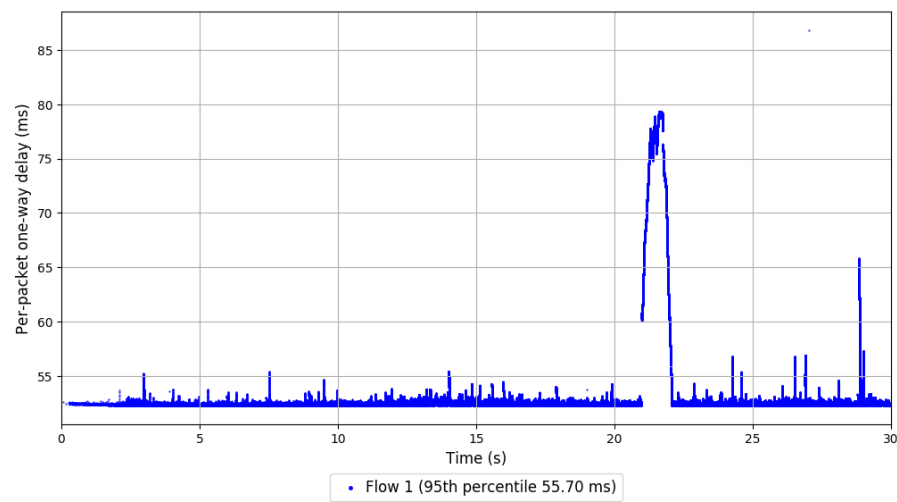
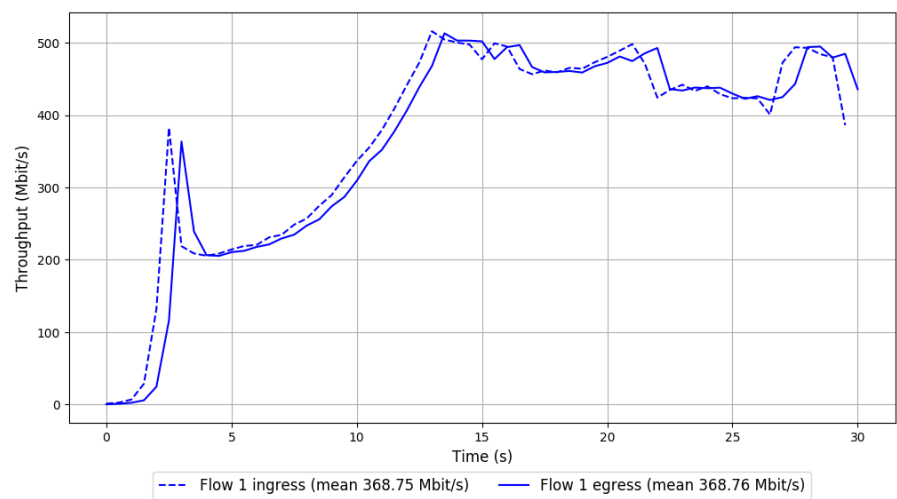


Run 2: Statistics of PCC-Vivace

Start at: 2018-09-26 00:59:06
End at: 2018-09-26 00:59:36
Local clock offset: -0.341 ms
Remote clock offset: -1.471 ms

Below is generated by plot.py at 2018-09-26 04:31:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 368.76 Mbit/s
95th percentile per-packet one-way delay: 55.696 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 368.76 Mbit/s
95th percentile per-packet one-way delay: 55.696 ms
Loss rate: 0.00%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2018-09-26 01:26:27

End at: 2018-09-26 01:26:58

Local clock offset: -0.148 ms

Remote clock offset: -1.0 ms

Below is generated by plot.py at 2018-09-26 04:32:18

Datalink statistics

-- Total of 1 flow:

Average throughput: 420.05 Mbit/s

95th percentile per-packet one-way delay: 59.768 ms

Loss rate: 0.00%

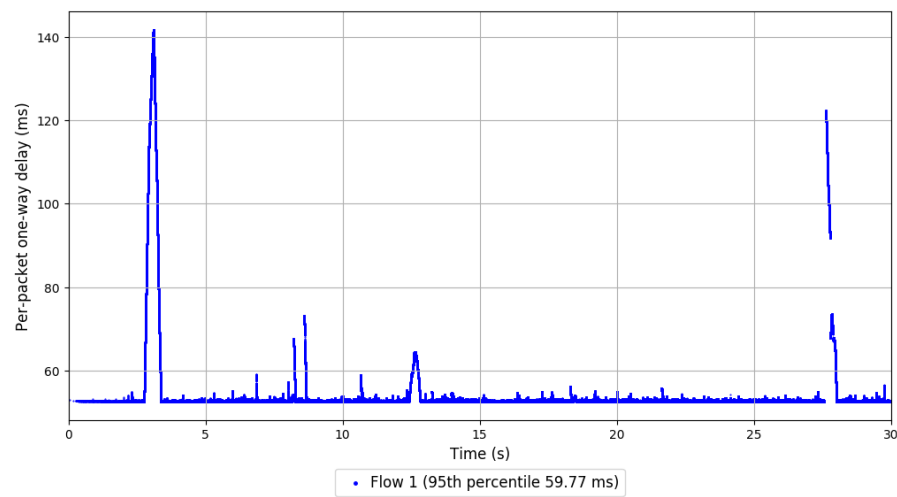
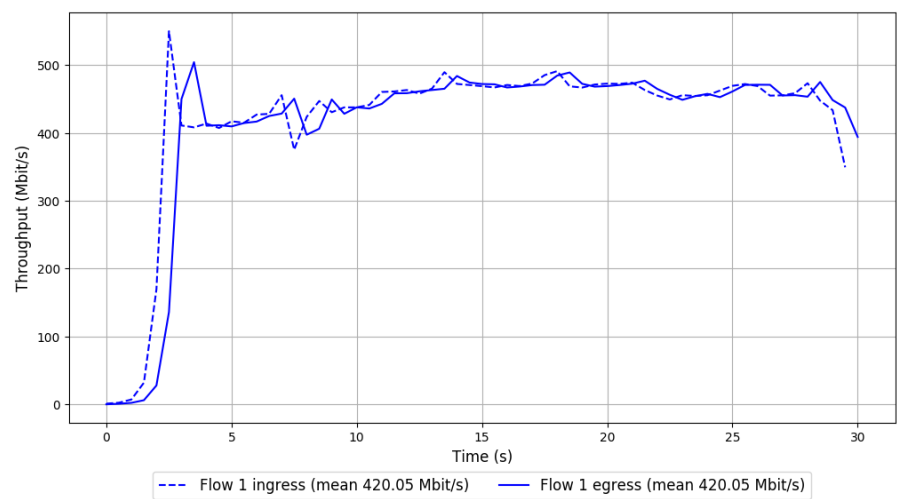
-- Flow 1:

Average throughput: 420.05 Mbit/s

95th percentile per-packet one-way delay: 59.768 ms

Loss rate: 0.00%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2018-09-26 01:53:40

End at: 2018-09-26 01:54:10

Local clock offset: -0.219 ms

Remote clock offset: 0.498 ms

Below is generated by plot.py at 2018-09-26 04:32:18

Datalink statistics

-- Total of 1 flow:

Average throughput: 366.24 Mbit/s

95th percentile per-packet one-way delay: 60.591 ms

Loss rate: 0.00%

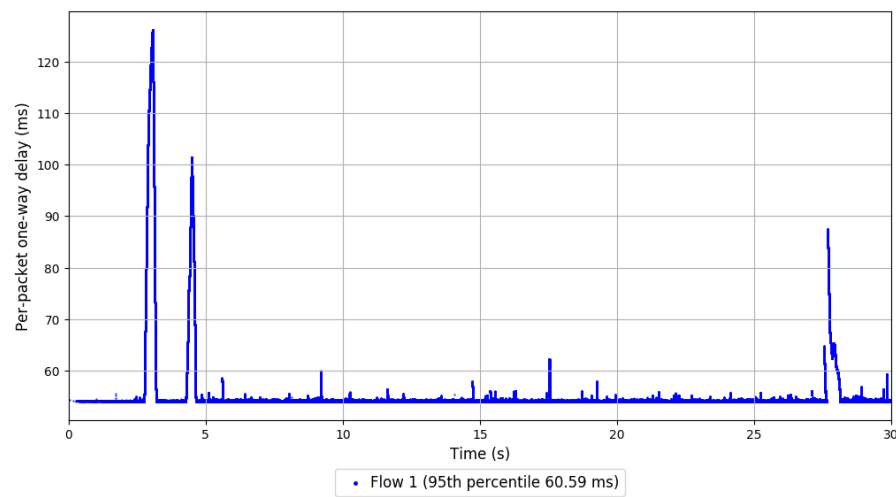
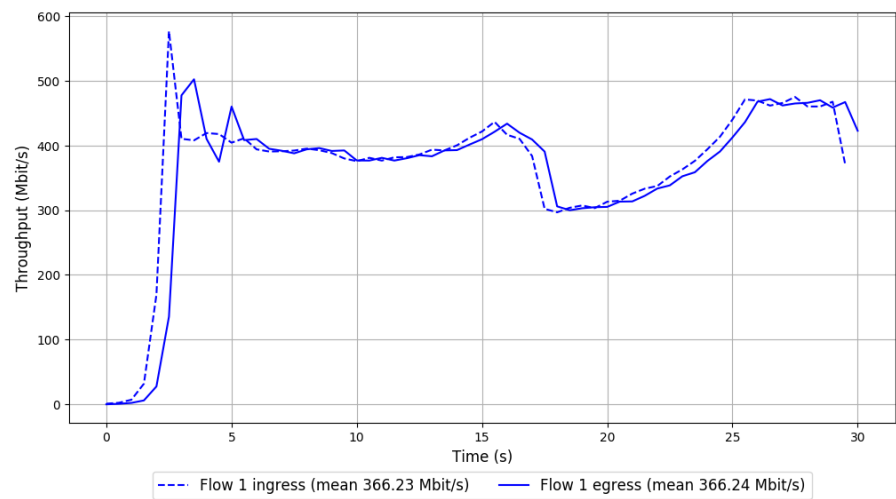
-- Flow 1:

Average throughput: 366.24 Mbit/s

95th percentile per-packet one-way delay: 60.591 ms

Loss rate: 0.00%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2018-09-26 02:20:56

End at: 2018-09-26 02:21:26

Local clock offset: -0.32 ms

Remote clock offset: 0.706 ms

Below is generated by plot.py at 2018-09-26 04:32:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 421.30 Mbit/s

95th percentile per-packet one-way delay: 57.908 ms

Loss rate: 0.00%

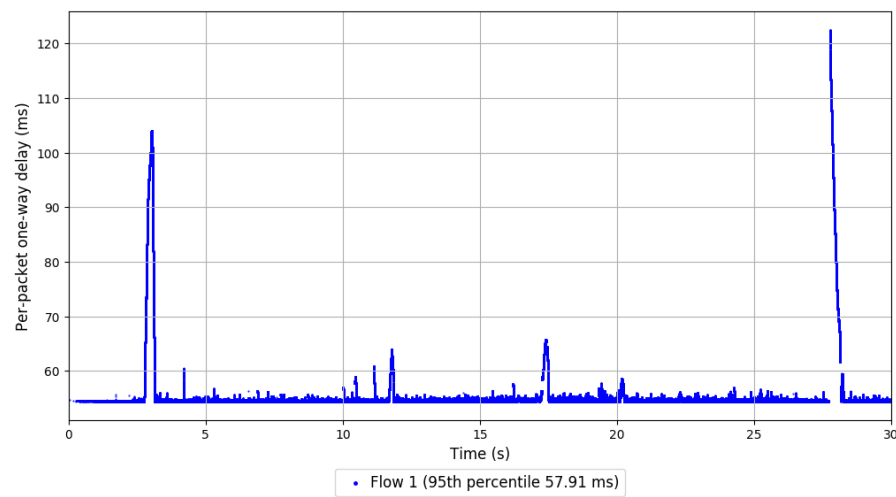
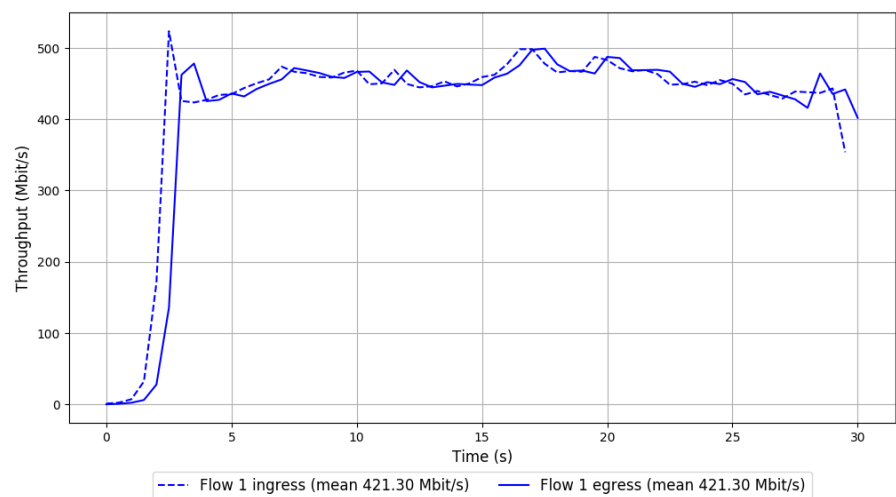
-- Flow 1:

Average throughput: 421.30 Mbit/s

95th percentile per-packet one-way delay: 57.908 ms

Loss rate: 0.00%

Run 5: Report of PCC-Vivace — Data Link

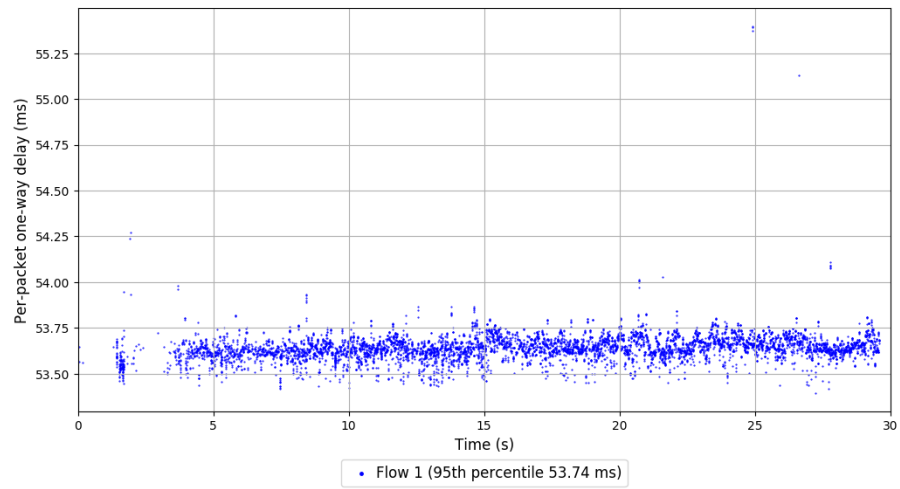
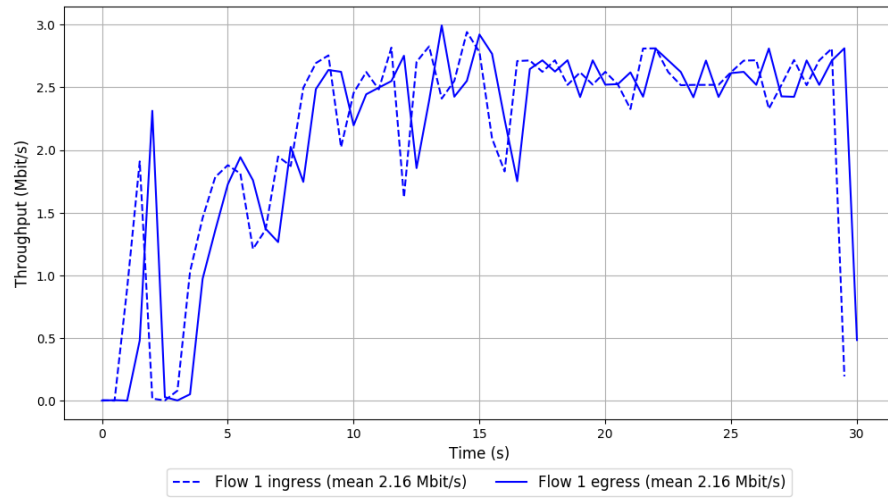


Run 1: Statistics of WebRTC media

Start at: 2018-09-26 00:44:26
End at: 2018-09-26 00:44:56
Local clock offset: -0.448 ms
Remote clock offset: -0.312 ms

Below is generated by plot.py at 2018-09-26 04:32:21
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.16 Mbit/s
95th percentile per-packet one-way delay: 53.736 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.16 Mbit/s
95th percentile per-packet one-way delay: 53.736 ms
Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link

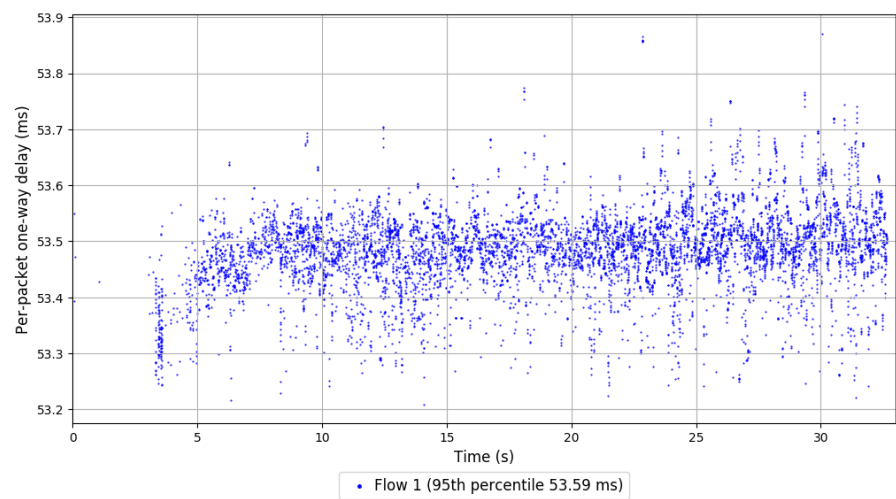
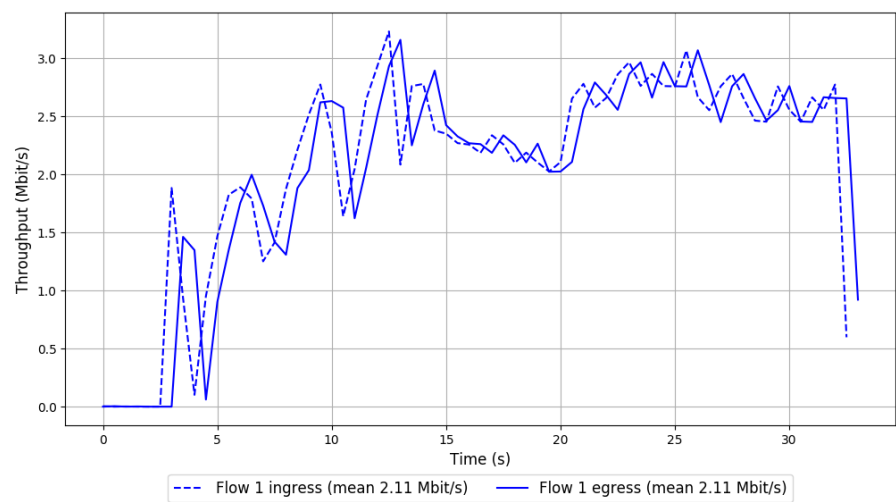


Run 2: Statistics of WebRTC media

Start at: 2018-09-26 01:11:46
End at: 2018-09-26 01:12:16
Local clock offset: -0.532 ms
Remote clock offset: -0.258 ms

Below is generated by plot.py at 2018-09-26 04:32:21
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.11 Mbit/s
95th percentile per-packet one-way delay: 53.589 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.11 Mbit/s
95th percentile per-packet one-way delay: 53.589 ms
Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-09-26 01:38:58

End at: 2018-09-26 01:39:29

Local clock offset: -0.437 ms

Remote clock offset: 0.675 ms

Below is generated by plot.py at 2018-09-26 04:32:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.02 Mbit/s

95th percentile per-packet one-way delay: 51.141 ms

Loss rate: 0.00%

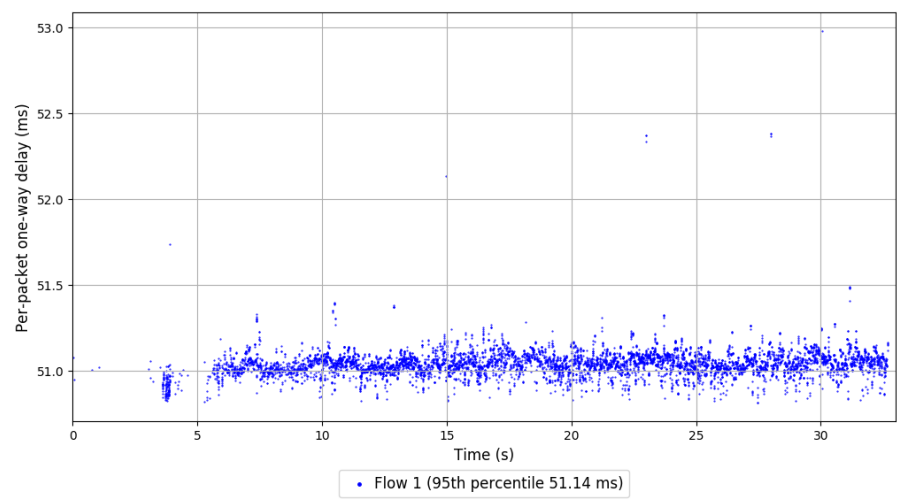
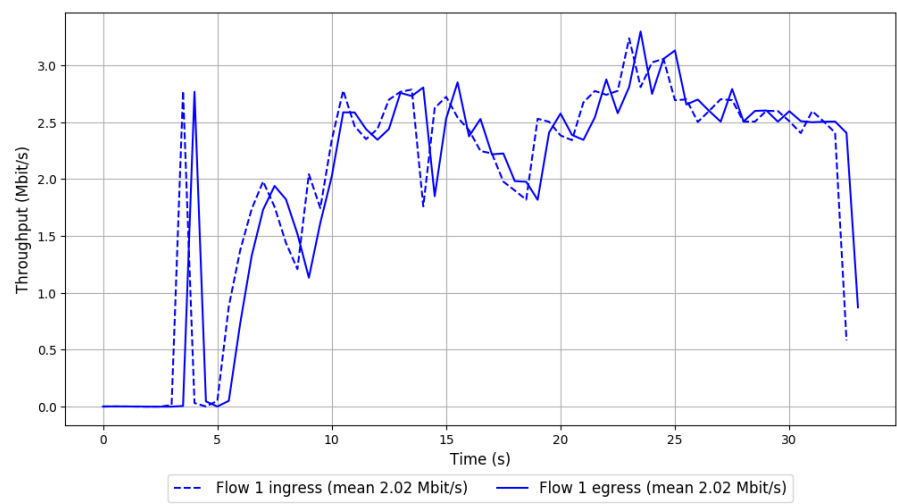
-- Flow 1:

Average throughput: 2.02 Mbit/s

95th percentile per-packet one-way delay: 51.141 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-09-26 02:06:17

End at: 2018-09-26 02:06:47

Local clock offset: -0.239 ms

Remote clock offset: 0.463 ms

Below is generated by plot.py at 2018-09-26 04:32:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.00 Mbit/s

95th percentile per-packet one-way delay: 53.825 ms

Loss rate: 0.00%

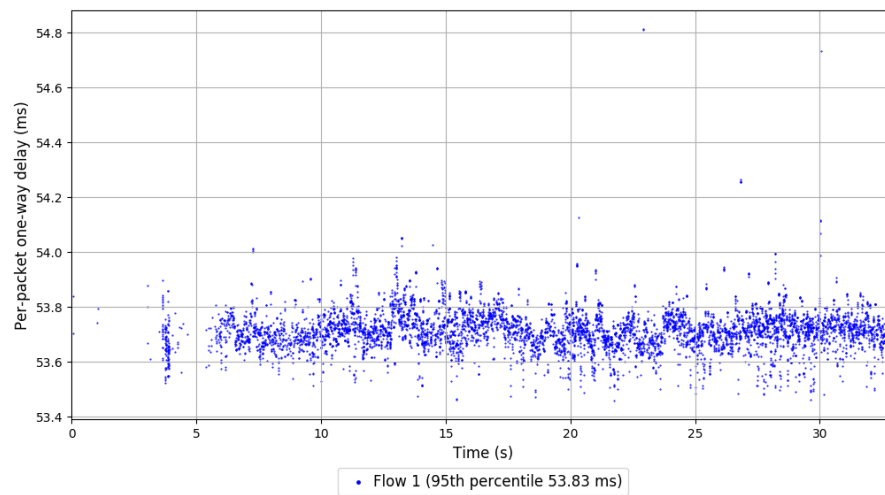
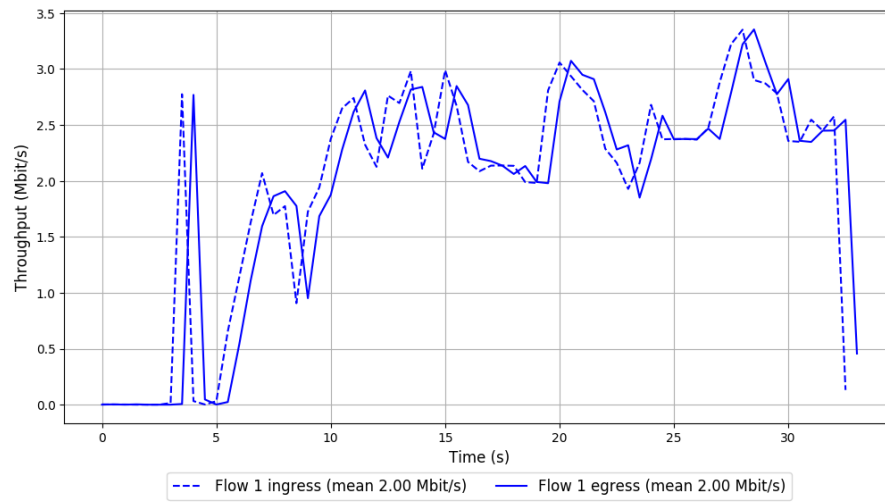
-- Flow 1:

Average throughput: 2.00 Mbit/s

95th percentile per-packet one-way delay: 53.825 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-09-26 02:33:26
End at: 2018-09-26 02:33:56
Local clock offset: -0.378 ms
Remote clock offset: -0.037 ms

Below is generated by plot.py at 2018-09-26 04:32:21
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.04 Mbit/s
95th percentile per-packet one-way delay: 53.961 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.04 Mbit/s
95th percentile per-packet one-way delay: 53.961 ms
Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

