

Pantheon Report

Generated at 2018-08-01 15:50:31 (UTC).

Data path: Colombia ppp0 ppp0 (*remote*) → AWS Brazil 2 Ethernet (*local*).

Repeated the test of 17 congestion control schemes 3 times.

Each test lasted for 30 seconds running 1 flow.

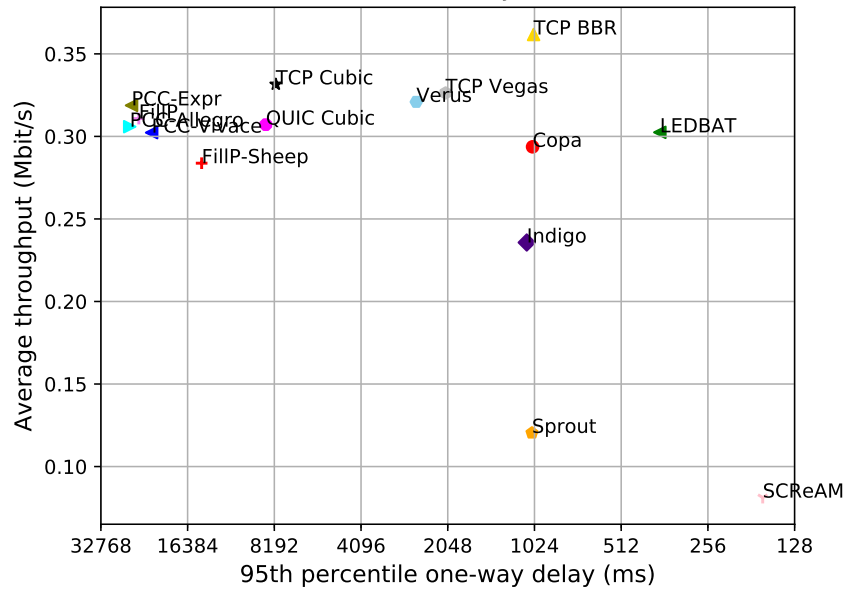
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

NTP offsets were measured against `gps.ntp.br` and have been applied to correct the timestamps in logs.

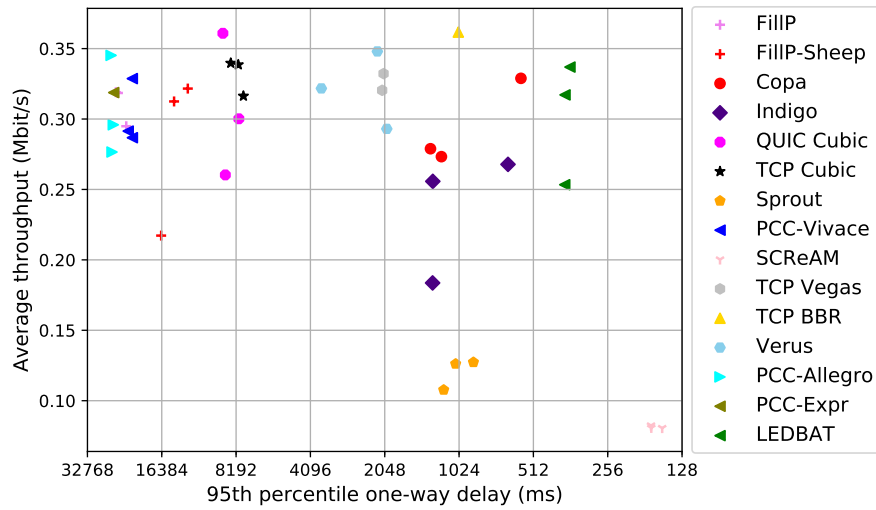
Git summary:

```
branch: master @ 640164b5b17c7c6561fff57729b3b5935d8596ce
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf5e58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ 6f038ed31259d366f9840f65b82cbe8f464b1b39
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
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webRTC @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

test from Colombia ppp0 to AWS Brazil 2, 3 runs of 30s each per scheme
(mean of all runs by scheme)



test from Colombia ppp0 to AWS Brazil 2, 3 runs of 30s each per scheme



scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	1	0.36	1031.20	2.07
Copa	3	0.29	1039.67	1.22
TCP Cubic	3	0.33	8095.41	32.83
FillP	3	0.31	24198.68	77.45
FillP-Sheep	3	0.28	14644.64	39.52
Indigo	3	0.24	1089.27	1.26
LEDBAT	3	0.30	375.99	1.27
PCC-Allegro	3	0.31	26020.27	76.68
PCC-Expr	1	0.32	25651.76	94.36
QUIC Cubic	3	0.31	8768.06	30.62
SCReAM	3	0.08	165.19	0.74
Sprout	3	0.12	1044.91	0.40
TaoVA-100x	0	N/A	N/A	N/A
TCP Vegas	2	0.33	2084.44	2.88
Verus	3	0.32	2633.86	5.20
PCC-Vivace	3	0.30	21844.67	88.39
WebRTC media	0	N/A	N/A	N/A

Run 1: Statistics of TCP BBR

/home/ubuntu/pantheon/data/2018-08-01T14-48-Colombia-ppp0-to-AWS-Brazil-2-3-runs/bbr_stats_1

Run 1: Report of TCP BBR — Data Link

Figure is missing

Figure is missing

Run 2: Statistics of TCP BBR

Start at: 2018-08-01 15:19:23

End at: 2018-08-01 15:19:53

Local clock offset: -0.644 ms

Remote clock offset: 7.902 ms

Below is generated by plot.py at 2018-08-01 15:50:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.36 Mbit/s

95th percentile per-packet one-way delay: 1031.204 ms

Loss rate: 2.07%

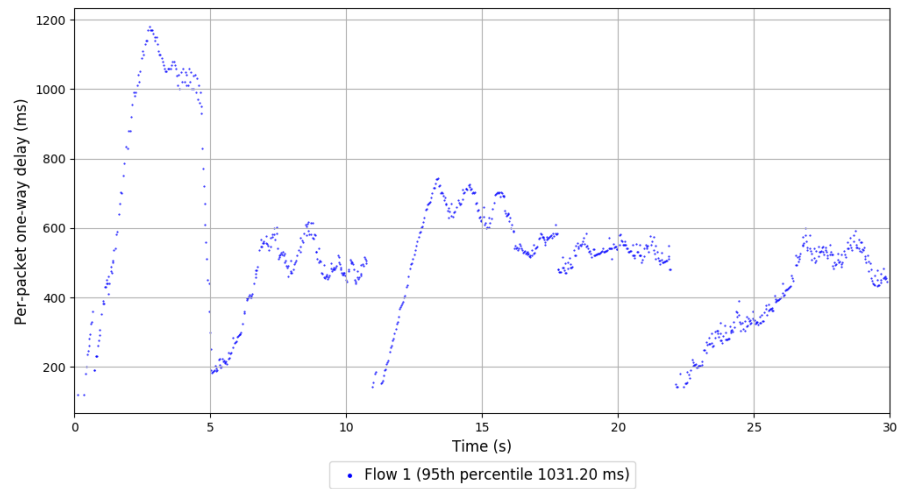
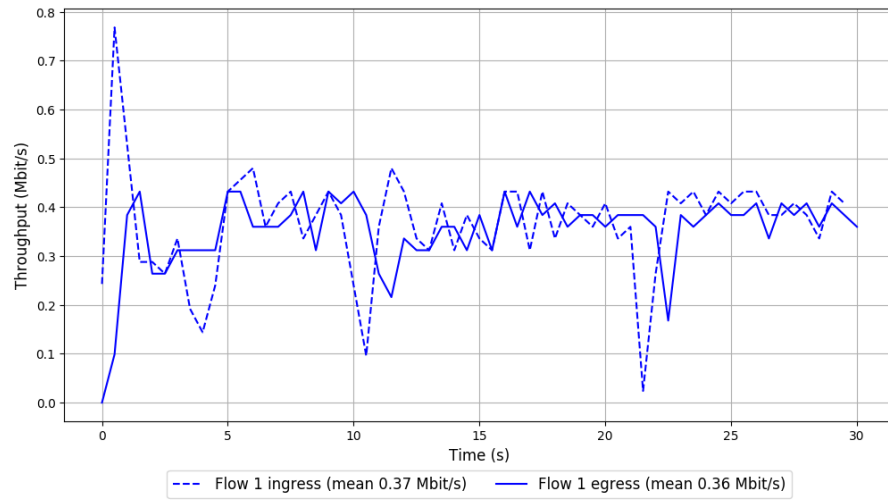
-- Flow 1:

Average throughput: 0.36 Mbit/s

95th percentile per-packet one-way delay: 1031.204 ms

Loss rate: 2.07%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

/home/ubuntu/pantheon/data/2018-08-01T14-48-Colombia-ppp0-to-AWS-Brazil-2-3-runs/bbr_stats_1

Run 3: Report of TCP BBR — Data Link

Figure is missing

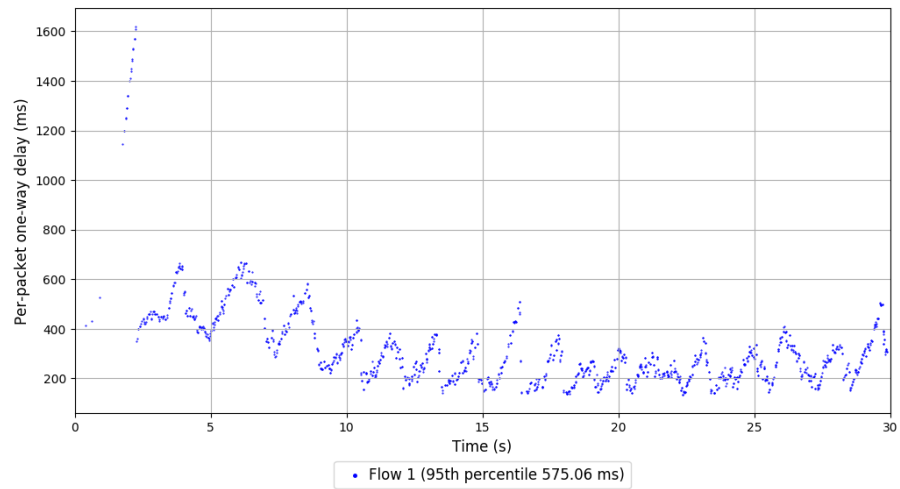
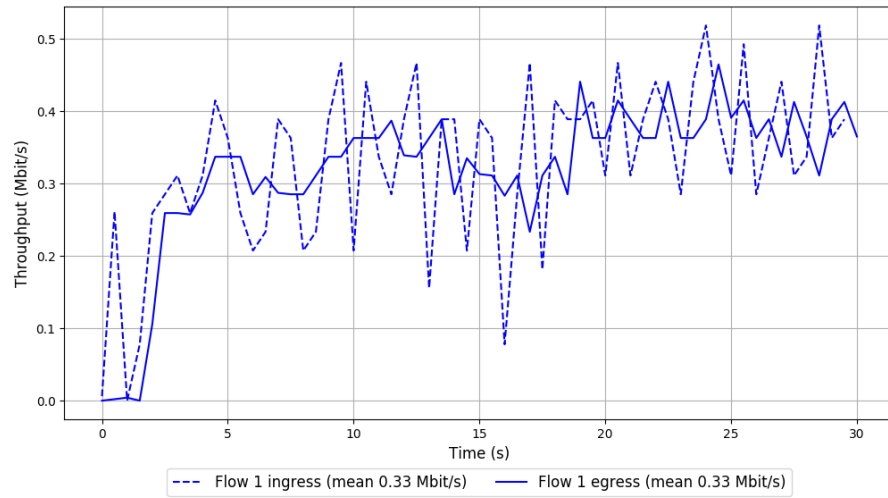
Figure is missing

Run 1: Statistics of Copa

Start at: 2018-08-01 14:56:30
End at: 2018-08-01 14:57:00
Local clock offset: -4.177 ms
Remote clock offset: 11.172 ms

Below is generated by plot.py at 2018-08-01 15:50:10
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 575.057 ms
Loss rate: 1.46%
-- Flow 1:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 575.057 ms
Loss rate: 1.46%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-08-01 15:16:51

End at: 2018-08-01 15:17:21

Local clock offset: -0.872 ms

Remote clock offset: 7.889 ms

Below is generated by plot.py at 2018-08-01 15:50:10

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.28 Mbit/s

95th percentile per-packet one-way delay: 1336.765 ms

Loss rate: 1.25%

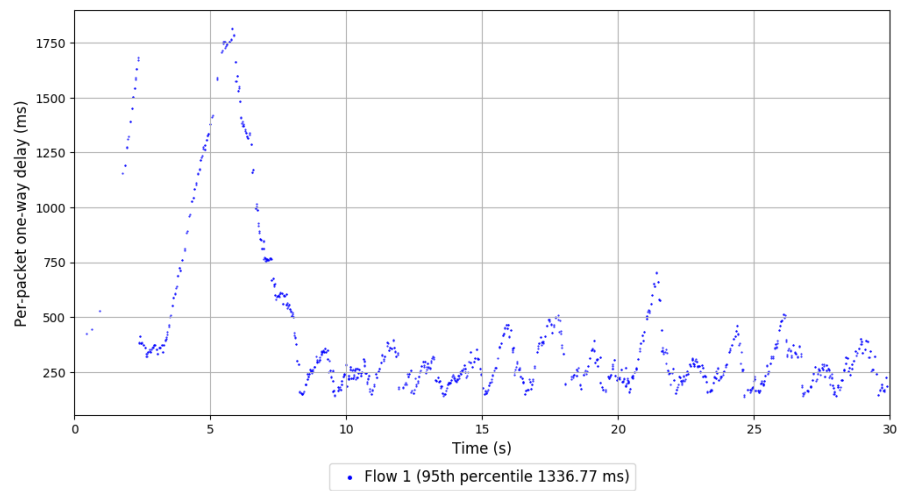
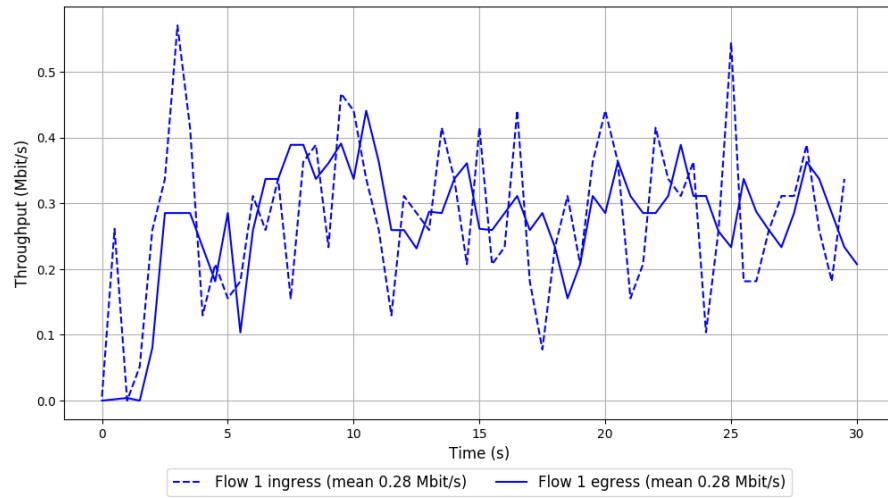
-- Flow 1:

Average throughput: 0.28 Mbit/s

95th percentile per-packet one-way delay: 1336.765 ms

Loss rate: 1.25%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-08-01 15:37:02

End at: 2018-08-01 15:37:32

Local clock offset: 0.476 ms

Remote clock offset: 7.459 ms

Below is generated by plot.py at 2018-08-01 15:50:10

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.27 Mbit/s

95th percentile per-packet one-way delay: 1207.190 ms

Loss rate: 0.96%

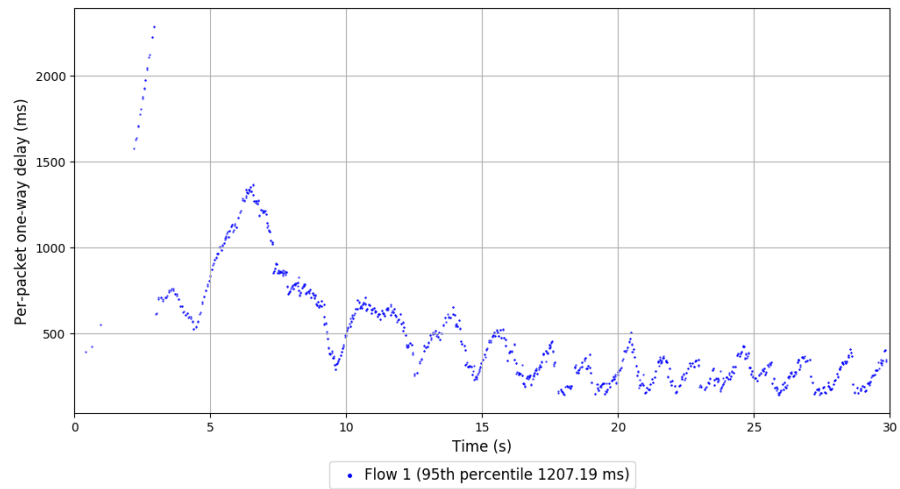
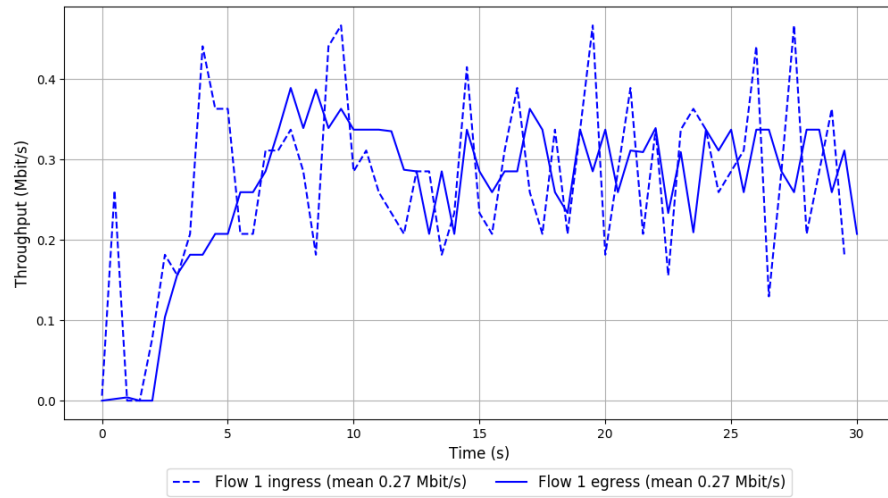
-- Flow 1:

Average throughput: 0.27 Mbit/s

95th percentile per-packet one-way delay: 1207.190 ms

Loss rate: 0.96%

Run 3: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-08-01 14:54:16

End at: 2018-08-01 14:54:46

Local clock offset: -5.091 ms

Remote clock offset: 8.508 ms

Below is generated by plot.py at 2018-08-01 15:50:10

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.34 Mbit/s

95th percentile per-packet one-way delay: 8025.784 ms

Loss rate: 32.52%

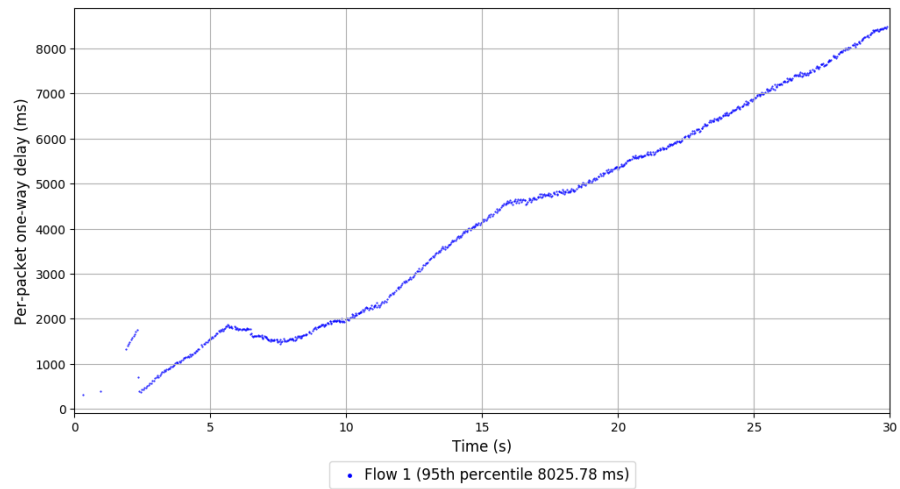
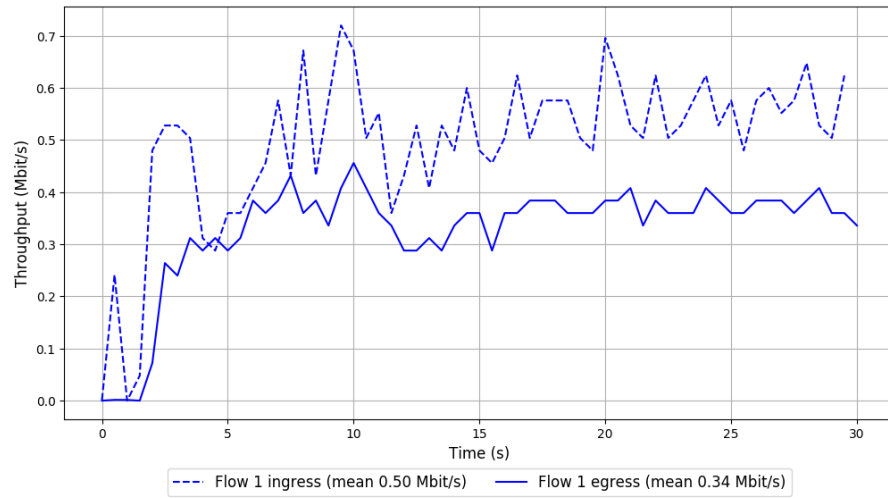
-- Flow 1:

Average throughput: 0.34 Mbit/s

95th percentile per-packet one-way delay: 8025.784 ms

Loss rate: 32.52%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-08-01 15:14:37

End at: 2018-08-01 15:15:07

Local clock offset: -1.009 ms

Remote clock offset: 7.164 ms

Below is generated by plot.py at 2018-08-01 15:50:10

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.32 Mbit/s

95th percentile per-packet one-way delay: 7650.666 ms

Loss rate: 33.27%

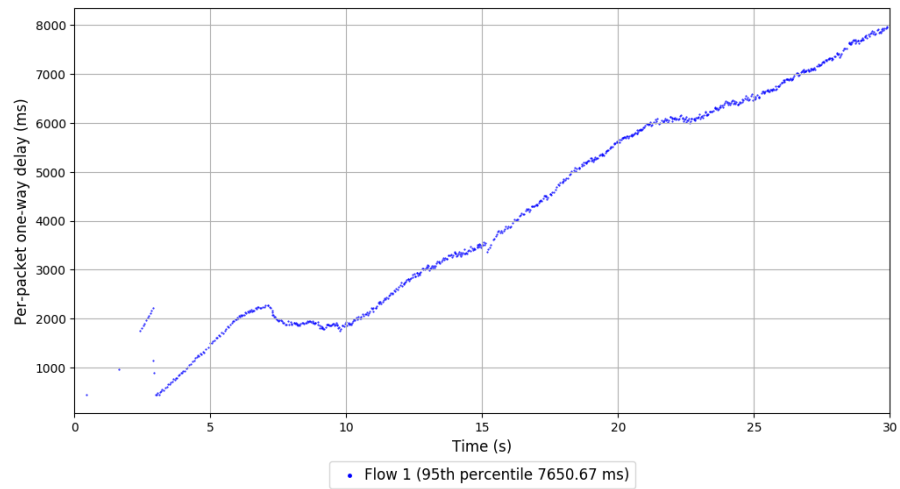
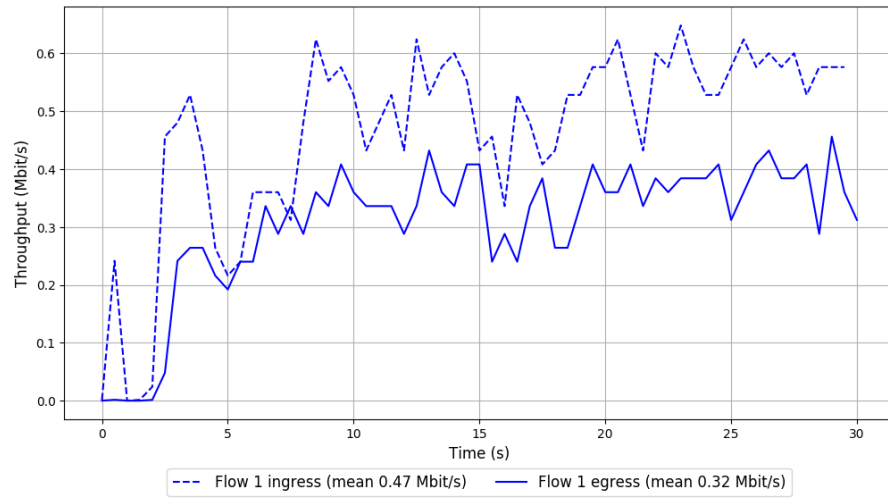
-- Flow 1:

Average throughput: 0.32 Mbit/s

95th percentile per-packet one-way delay: 7650.666 ms

Loss rate: 33.27%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-08-01 15:34:46

End at: 2018-08-01 15:35:16

Local clock offset: 0.344 ms

Remote clock offset: 9.53 ms

Below is generated by plot.py at 2018-08-01 15:50:10

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.34 Mbit/s

95th percentile per-packet one-way delay: 8609.771 ms

Loss rate: 32.71%

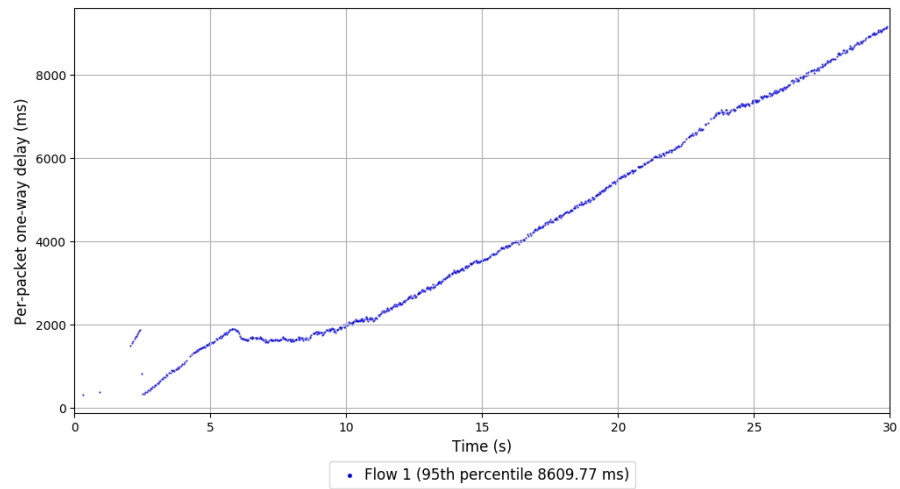
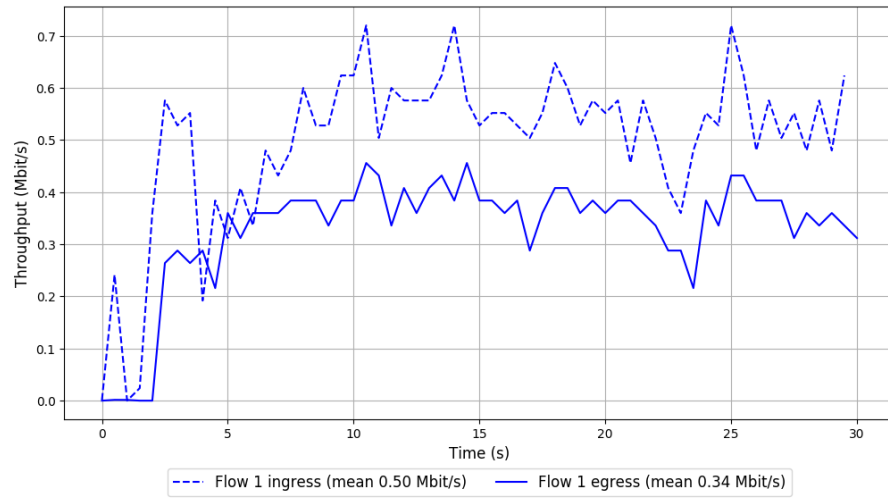
-- Flow 1:

Average throughput: 0.34 Mbit/s

95th percentile per-packet one-way delay: 8609.771 ms

Loss rate: 32.71%

Run 3: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2018-08-01 15:00:16

End at: 2018-08-01 15:00:46

Local clock offset: -3.055 ms

Remote clock offset: 5.721 ms

Below is generated by plot.py at 2018-08-01 15:50:11

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.32 Mbit/s

95th percentile per-packet one-way delay: 24652.908 ms

Loss rate: 78.12%

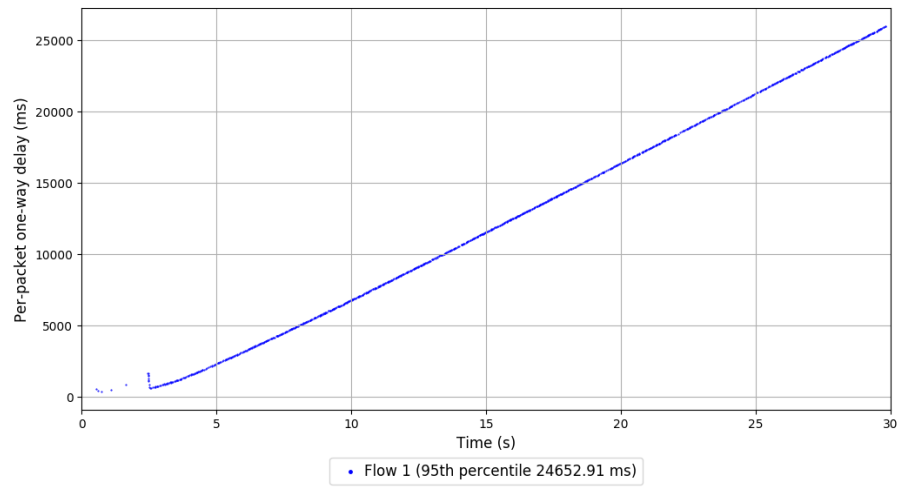
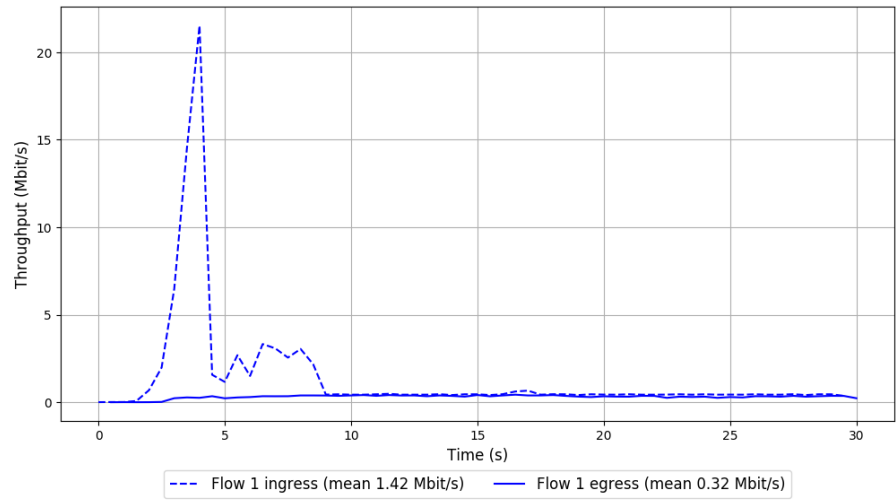
-- Flow 1:

Average throughput: 0.32 Mbit/s

95th percentile per-packet one-way delay: 24652.908 ms

Loss rate: 78.12%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-08-01 15:20:30

End at: 2018-08-01 15:21:00

Local clock offset: -0.544 ms

Remote clock offset: 2.855 ms

Below is generated by plot.py at 2018-08-01 15:50:14

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.32 Mbit/s

95th percentile per-packet one-way delay: 25127.171 ms

Loss rate: 79.19%

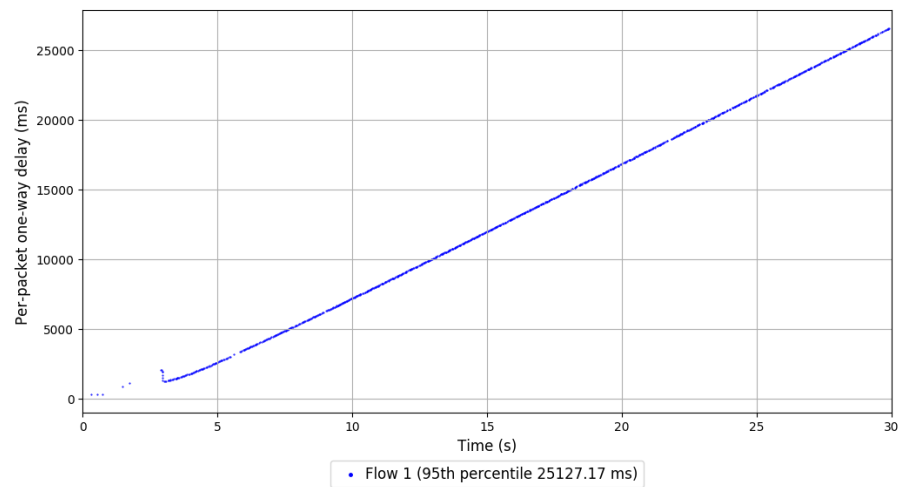
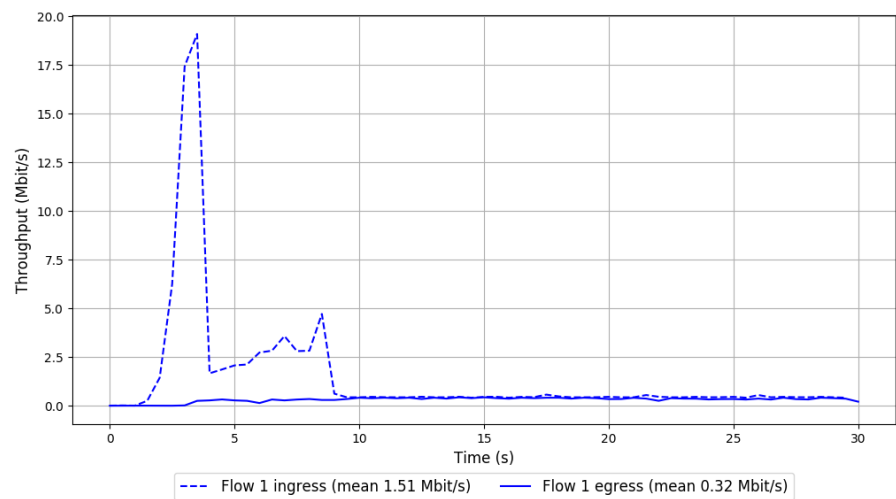
-- Flow 1:

Average throughput: 0.32 Mbit/s

95th percentile per-packet one-way delay: 25127.171 ms

Loss rate: 79.19%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-08-01 15:40:48

End at: 2018-08-01 15:41:18

Local clock offset: 0.667 ms

Remote clock offset: 3.764 ms

Below is generated by plot.py at 2018-08-01 15:50:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.29 Mbit/s

95th percentile per-packet one-way delay: 22815.971 ms

Loss rate: 75.04%

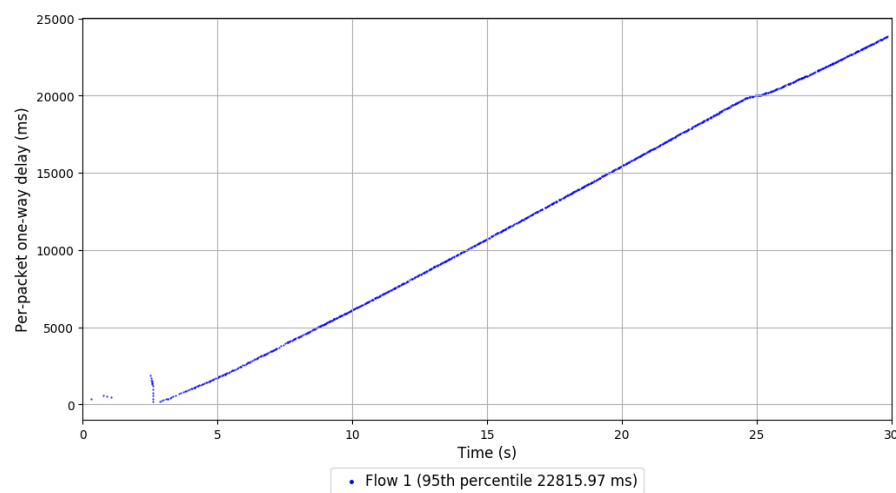
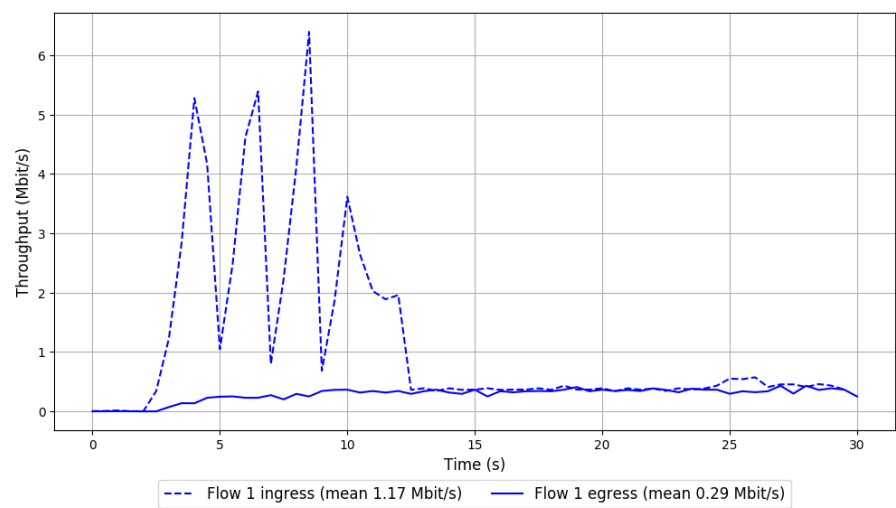
-- Flow 1:

Average throughput: 0.29 Mbit/s

95th percentile per-packet one-way delay: 22815.971 ms

Loss rate: 75.04%

Run 3: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2018-08-01 15:08:35

End at: 2018-08-01 15:09:05

Local clock offset: -1.606 ms

Remote clock offset: 4.0 ms

Below is generated by plot.py at 2018-08-01 15:50:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 16476.901 ms

Loss rate: 45.24%

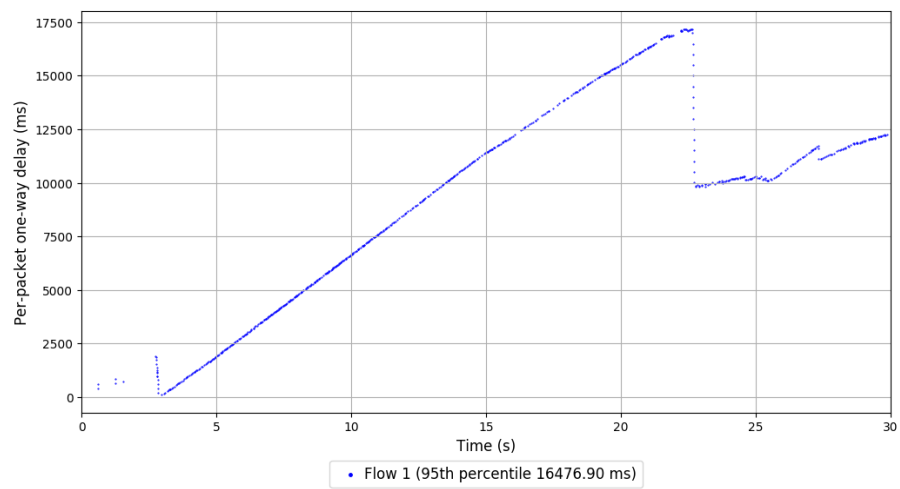
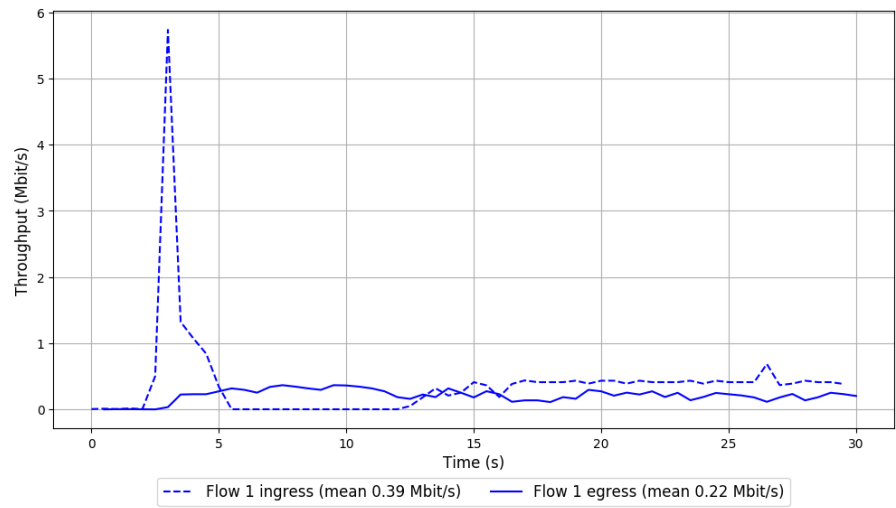
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 16476.901 ms

Loss rate: 45.24%

Run 1: Report of FillP-Sheep — Data Link



Run 2: Statistics of FillP-Sheep

Start at: 2018-08-01 15:28:45

End at: 2018-08-01 15:29:16

Local clock offset: -0.092 ms

Remote clock offset: 3.261 ms

Below is generated by plot.py at 2018-08-01 15:50:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.31 Mbit/s

95th percentile per-packet one-way delay: 14606.056 ms

Loss rate: 39.25%

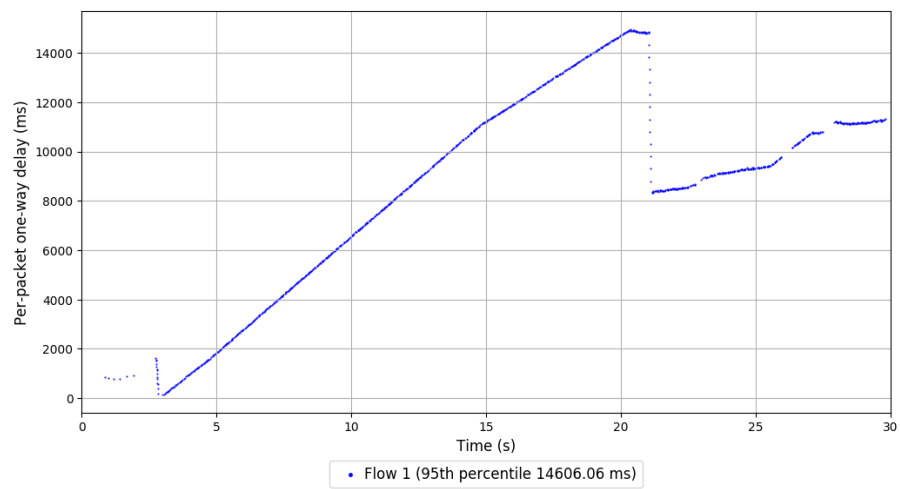
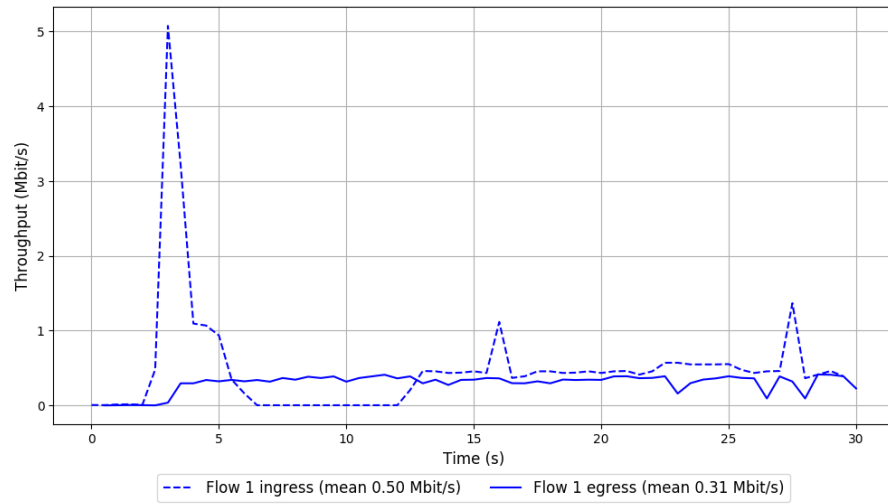
-- Flow 1:

Average throughput: 0.31 Mbit/s

95th percentile per-packet one-way delay: 14606.056 ms

Loss rate: 39.25%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2018-08-01 15:49:32

End at: 2018-08-01 15:50:02

Local clock offset: 1.134 ms

Remote clock offset: 4.966 ms

Below is generated by plot.py at 2018-08-01 15:50:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.32 Mbit/s

95th percentile per-packet one-way delay: 12850.973 ms

Loss rate: 34.07%

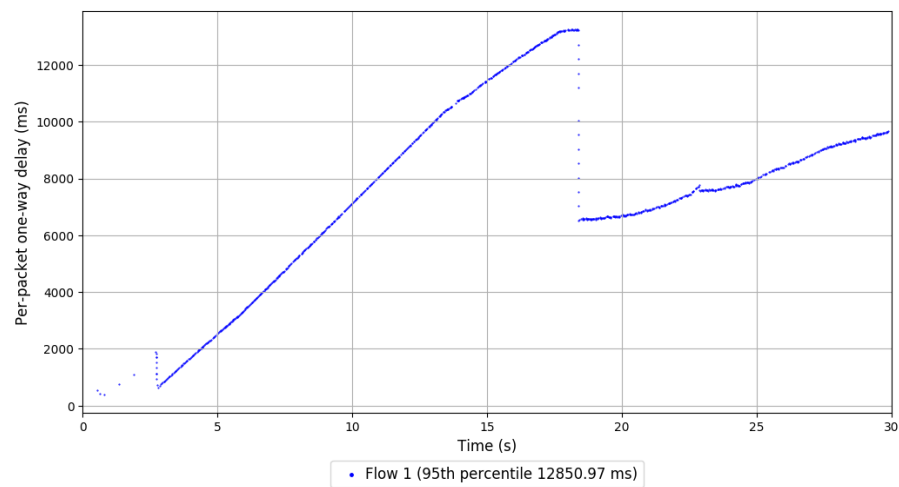
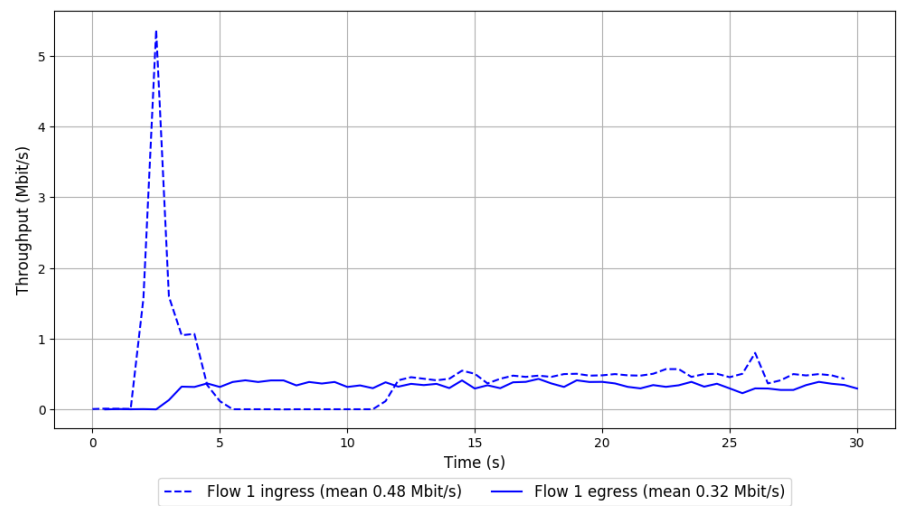
-- Flow 1:

Average throughput: 0.32 Mbit/s

95th percentile per-packet one-way delay: 12850.973 ms

Loss rate: 34.07%

Run 3: Report of FillP-Sheep — Data Link

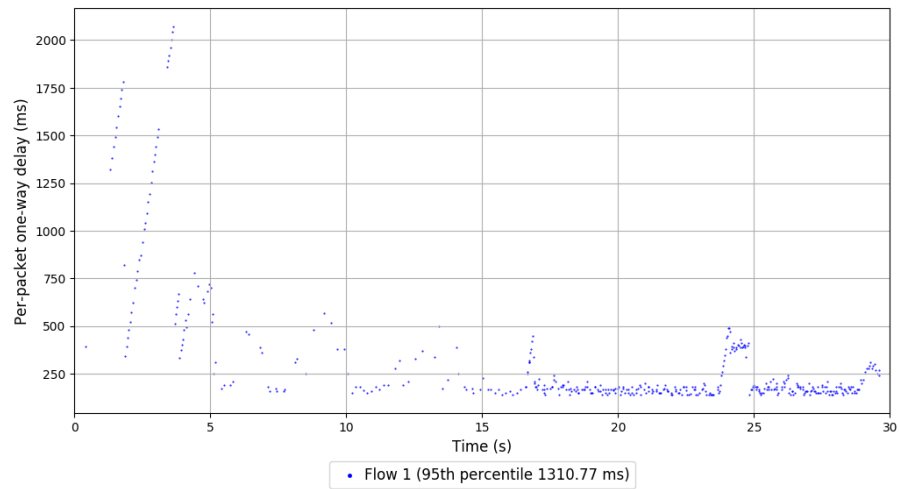
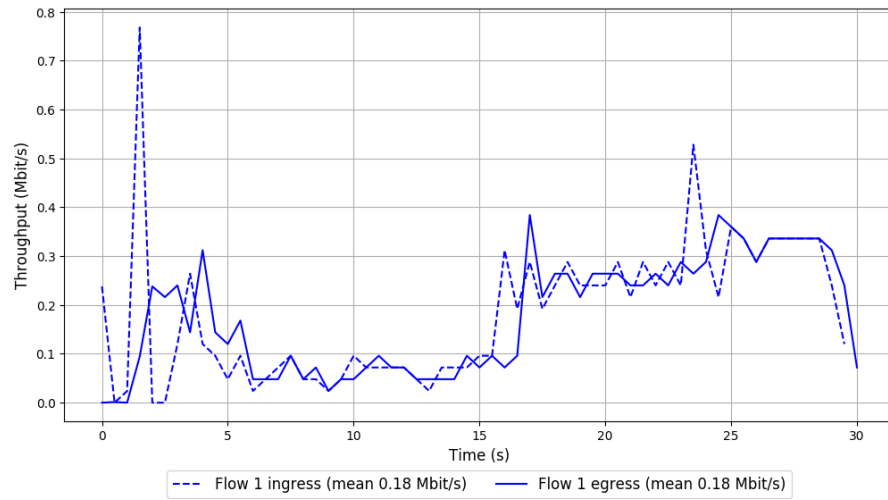


```
Run 1: Statistics of Indigo

Start at: 2018-08-01 15:05:11
End at: 2018-08-01 15:05:41
Local clock offset: -2.092 ms
Remote clock offset: 9.462 ms

# Below is generated by plot.py at 2018-08-01 15:50:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 1310.769 ms
Loss rate: 1.76%
-- Flow 1:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 1310.769 ms
Loss rate: 1.76%
```

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2018-08-01 15:25:24

End at: 2018-08-01 15:25:54

Local clock offset: -0.296 ms

Remote clock offset: 6.382 ms

Below is generated by plot.py at 2018-08-01 15:50:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.26 Mbit/s

95th percentile per-packet one-way delay: 1308.243 ms

Loss rate: 0.95%

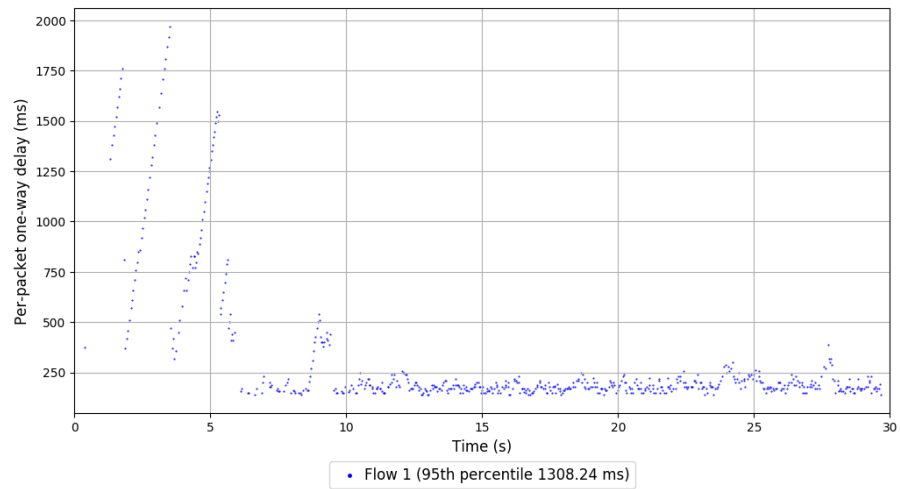
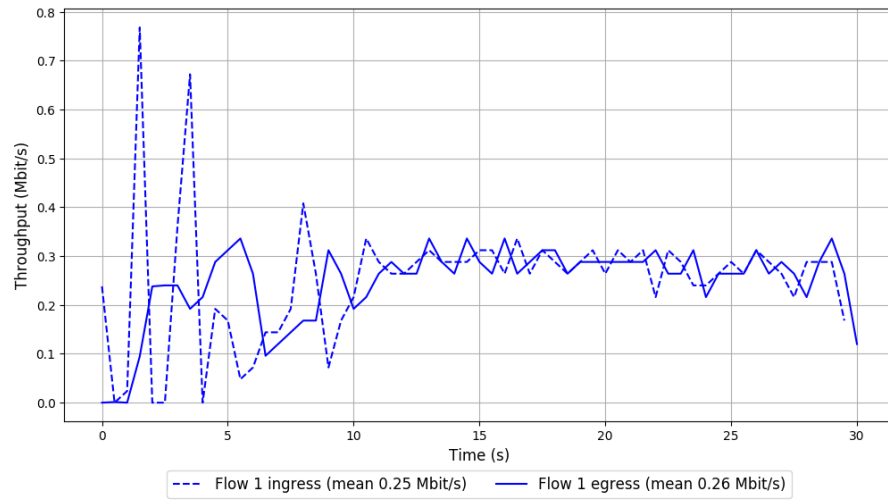
-- Flow 1:

Average throughput: 0.26 Mbit/s

95th percentile per-packet one-way delay: 1308.243 ms

Loss rate: 0.95%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2018-08-01 15:46:10

End at: 2018-08-01 15:46:40

Local clock offset: 0.954 ms

Remote clock offset: 3.837 ms

Below is generated by plot.py at 2018-08-01 15:50:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.27 Mbit/s

95th percentile per-packet one-way delay: 648.812 ms

Loss rate: 1.06%

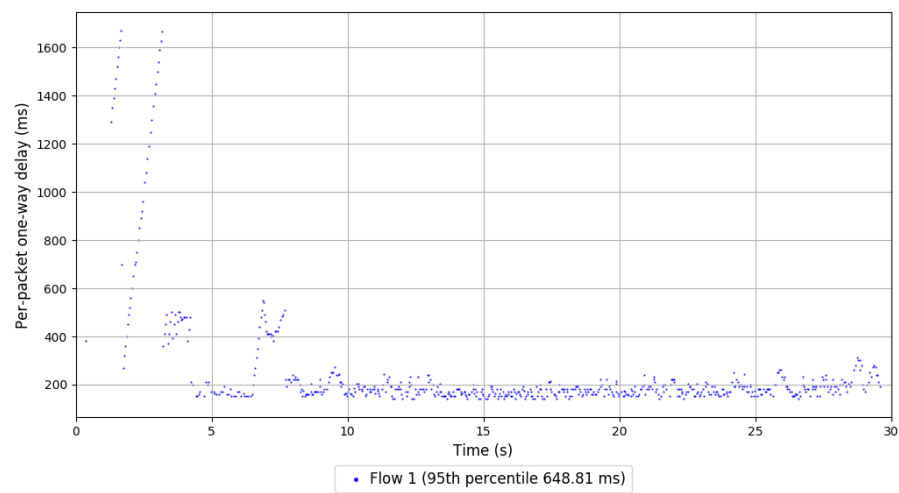
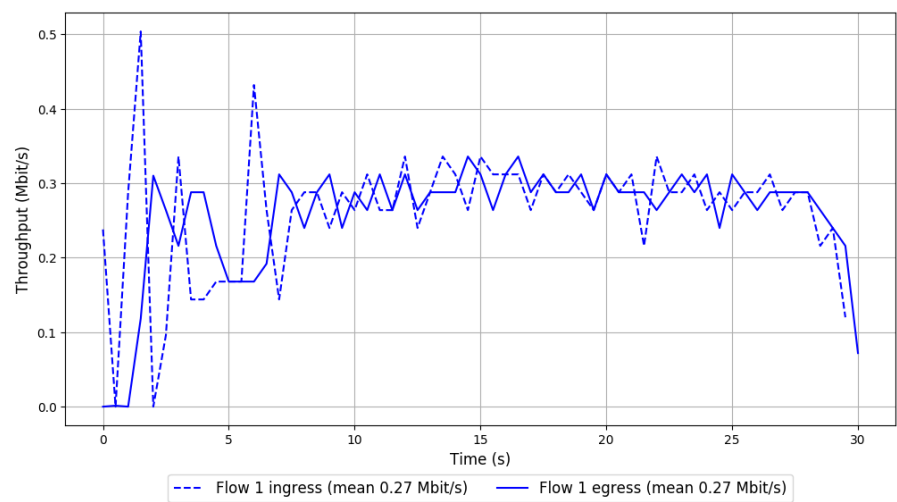
-- Flow 1:

Average throughput: 0.27 Mbit/s

95th percentile per-packet one-way delay: 648.812 ms

Loss rate: 1.06%

Run 3: Report of Indigo — Data Link

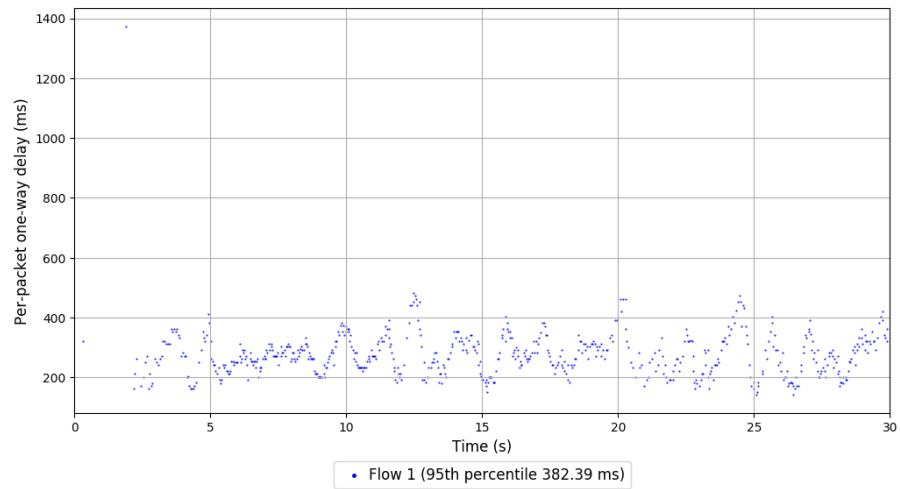
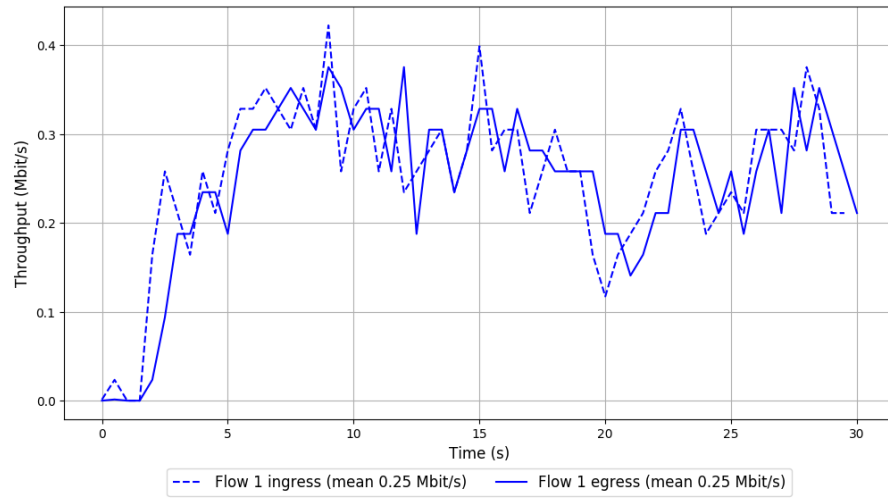


```
Run 1: Statistics of LEDBAT

Start at: 2018-08-01 15:06:20
End at: 2018-08-01 15:06:50
Local clock offset: -1.993 ms
Remote clock offset: 3.213 ms

# Below is generated by plot.py at 2018-08-01 15:50:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 382.388 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 382.388 ms
Loss rate: 0.93%
```

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2018-08-01 15:26:31

End at: 2018-08-01 15:27:01

Local clock offset: -0.162 ms

Remote clock offset: 2.795 ms

Below is generated by plot.py at 2018-08-01 15:50:18

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.34 Mbit/s

95th percentile per-packet one-way delay: 364.216 ms

Loss rate: 1.39%

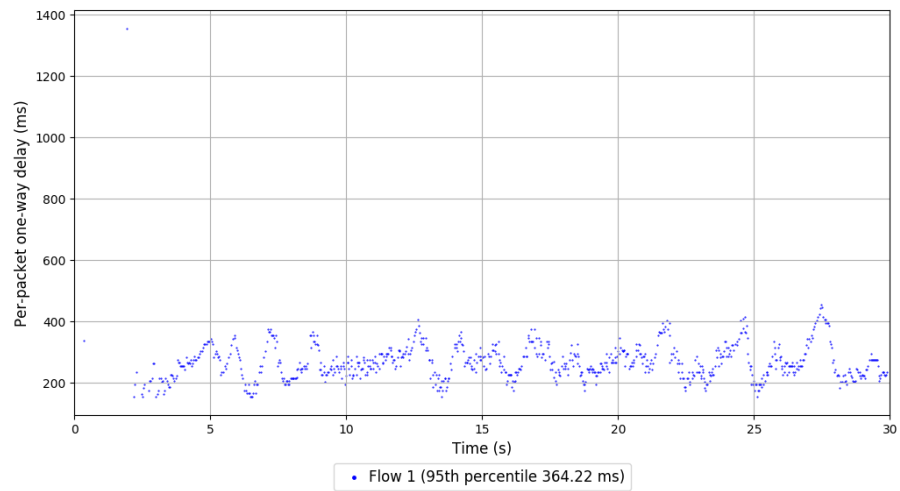
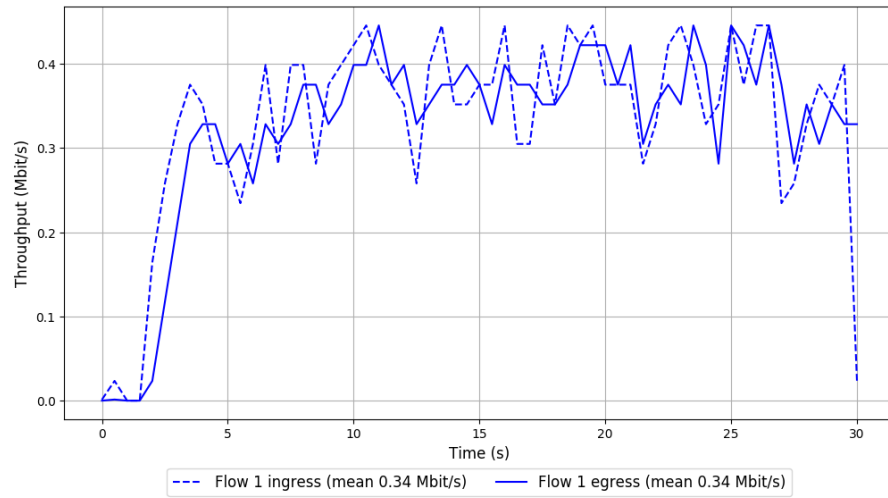
-- Flow 1:

Average throughput: 0.34 Mbit/s

95th percentile per-packet one-way delay: 364.216 ms

Loss rate: 1.39%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-08-01 15:47:17

End at: 2018-08-01 15:47:47

Local clock offset: 0.961 ms

Remote clock offset: 3.822 ms

Below is generated by plot.py at 2018-08-01 15:50:18

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.32 Mbit/s

95th percentile per-packet one-way delay: 381.365 ms

Loss rate: 1.48%

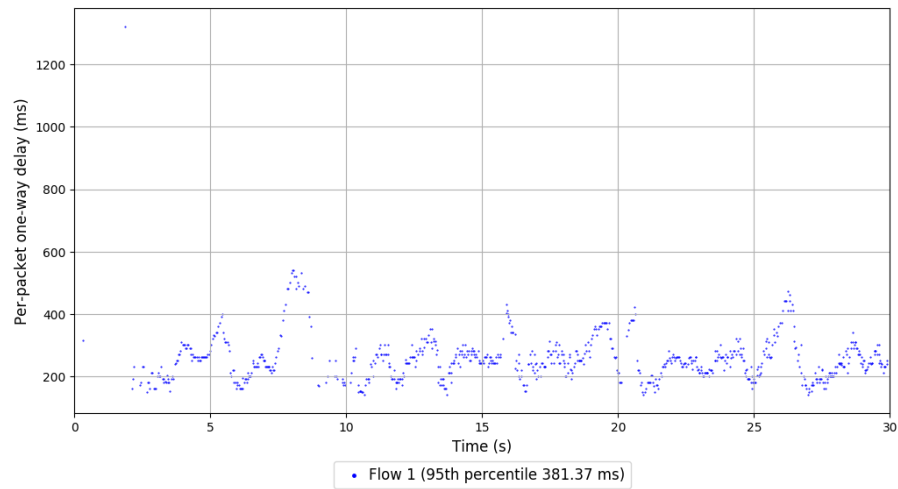
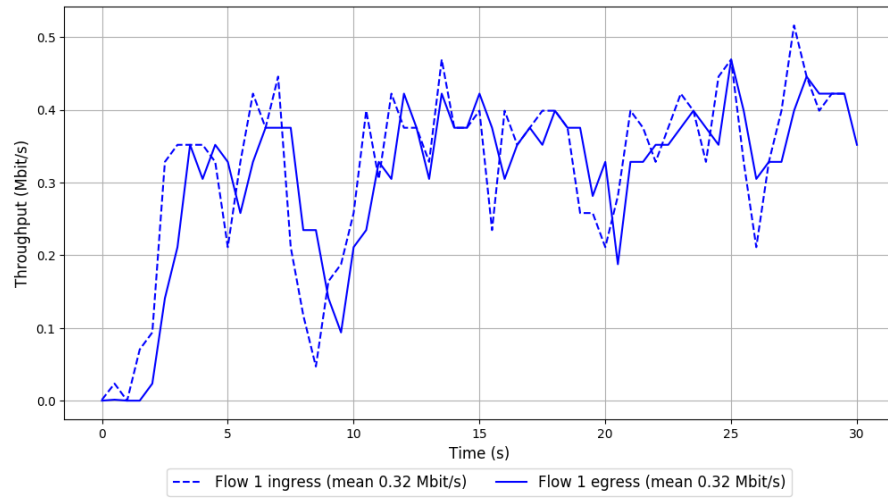
-- Flow 1:

Average throughput: 0.32 Mbit/s

95th percentile per-packet one-way delay: 381.365 ms

Loss rate: 1.48%

Run 3: Report of LEDBAT — Data Link

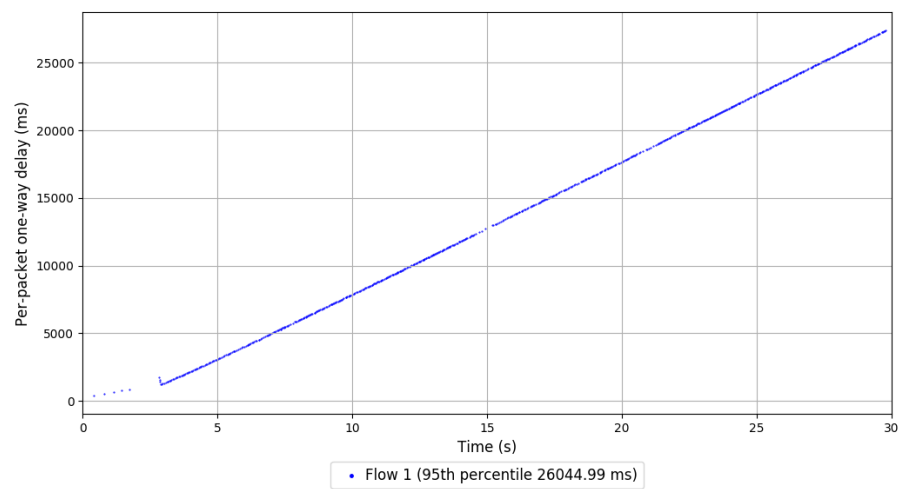
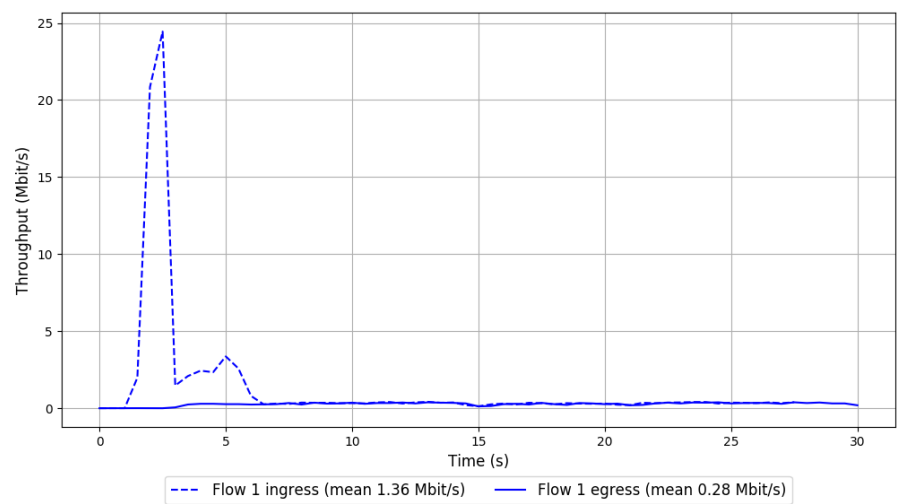


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-08-01 14:57:37
End at: 2018-08-01 14:58:07
Local clock offset: -3.799 ms
Remote clock offset: 5.727 ms

# Below is generated by plot.py at 2018-08-01 15:50:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 26044.987 ms
Loss rate: 78.69%
-- Flow 1:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 26044.987 ms
Loss rate: 78.69%
```

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-08-01 15:17:58

End at: 2018-08-01 15:18:28

Local clock offset: -0.71 ms

Remote clock offset: 2.009 ms

Below is generated by plot.py at 2018-08-01 15:50:19

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.35 Mbit/s

95th percentile per-packet one-way delay: 26273.577 ms

Loss rate: 73.38%

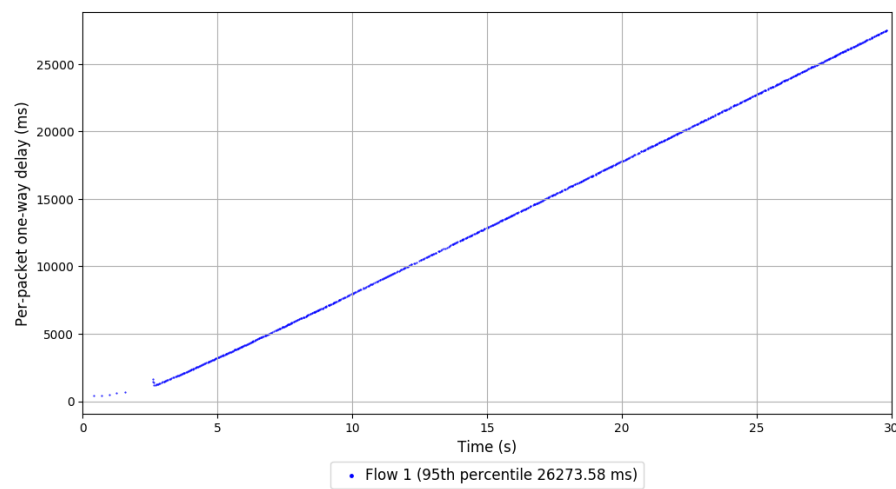
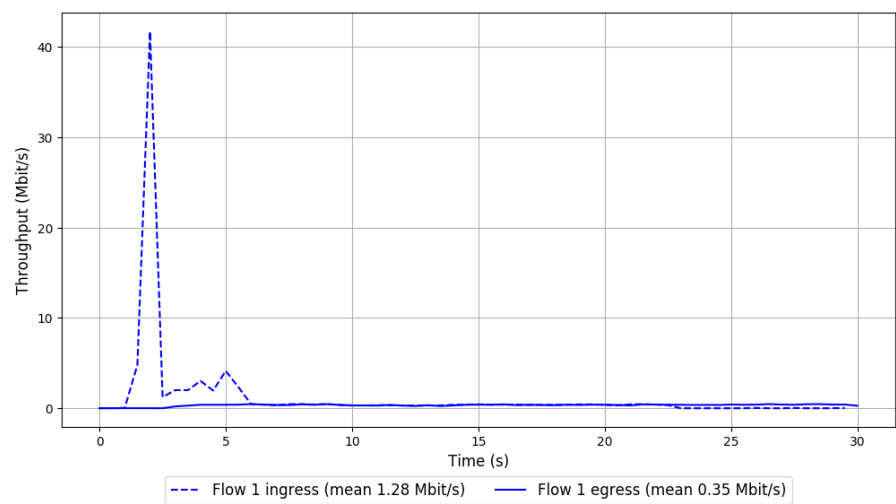
-- Flow 1:

Average throughput: 0.35 Mbit/s

95th percentile per-packet one-way delay: 26273.577 ms

Loss rate: 73.38%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-08-01 15:38:09

End at: 2018-08-01 15:38:39

Local clock offset: 0.528 ms

Remote clock offset: 4.839 ms

Below is generated by plot.py at 2018-08-01 15:50:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.30 Mbit/s

95th percentile per-packet one-way delay: 25742.241 ms

Loss rate: 77.98%

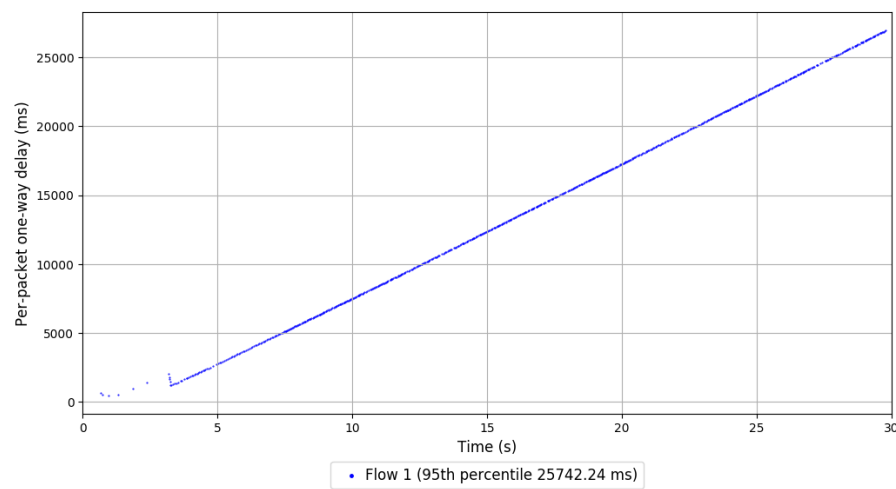
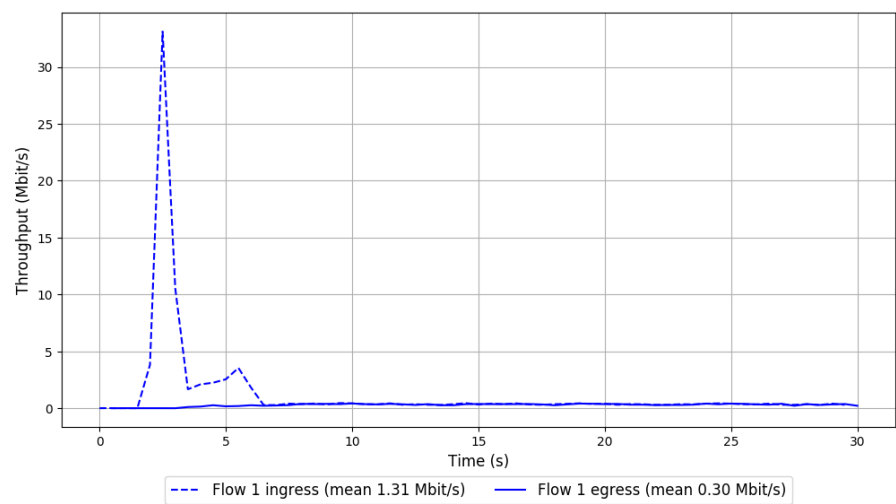
-- Flow 1:

Average throughput: 0.30 Mbit/s

95th percentile per-packet one-way delay: 25742.241 ms

Loss rate: 77.98%

Run 3: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

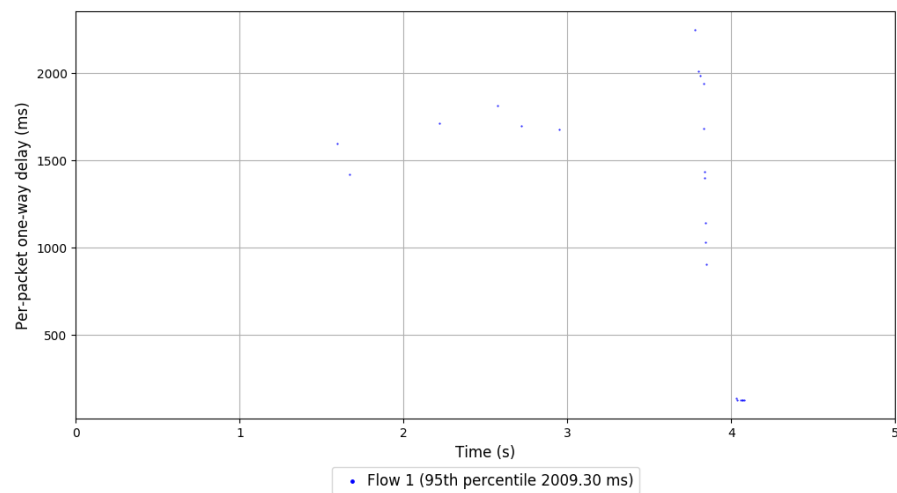
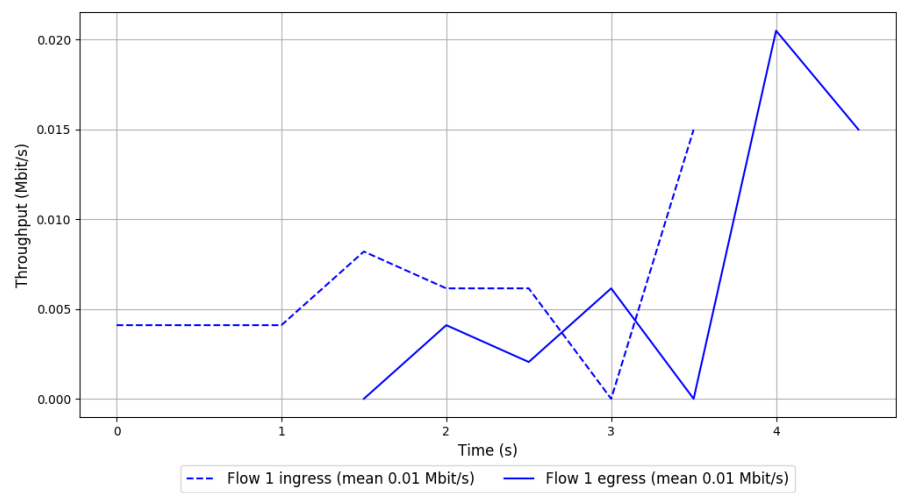
Start at: 2018-08-01 15:02:55

End at: 2018-08-01 15:03:25

Local clock offset: -2.473 ms

Remote clock offset: 5.081 ms

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

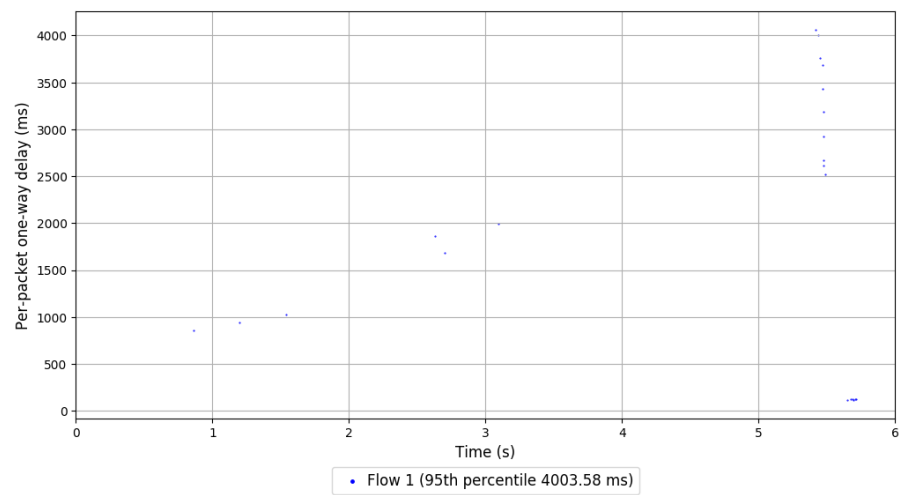
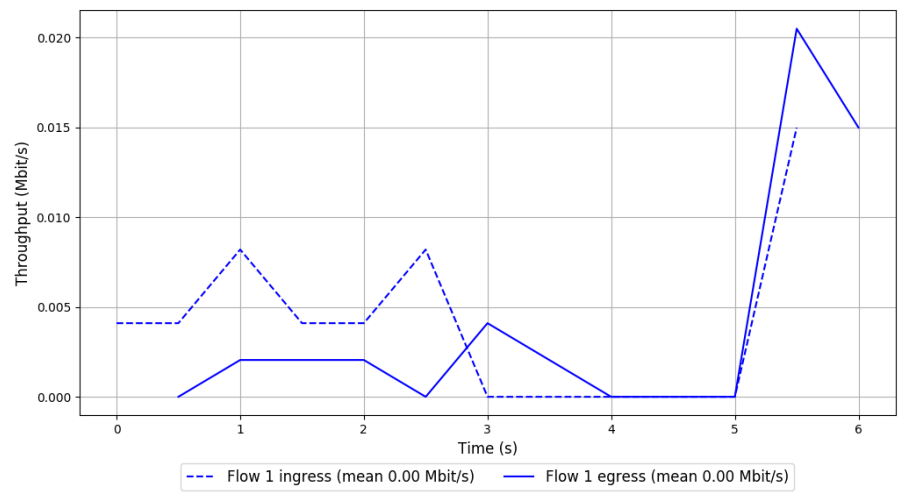
Start at: 2018-08-01 15:23:09

End at: 2018-08-01 15:23:39

Local clock offset: -0.359 ms

Remote clock offset: 8.069 ms

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2018-08-01 15:43:31

End at: 2018-08-01 15:44:01

Local clock offset: 0.814 ms

Remote clock offset: 7.583 ms

Below is generated by plot.py at 2018-08-01 15:50:27

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.32 Mbit/s

95th percentile per-packet one-way delay: 25651.761 ms

Loss rate: 94.36%

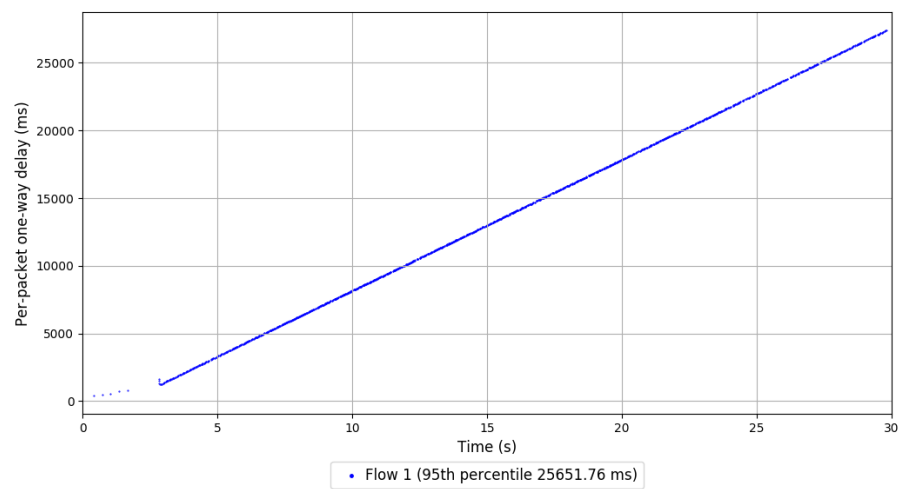
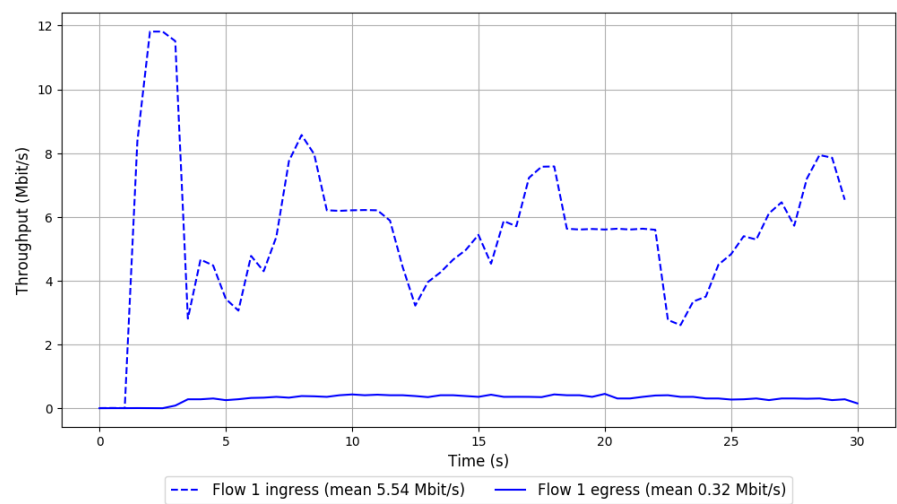
-- Flow 1:

Average throughput: 0.32 Mbit/s

95th percentile per-packet one-way delay: 25651.761 ms

Loss rate: 94.36%

Run 3: Report of PCC-Expr — Data Link

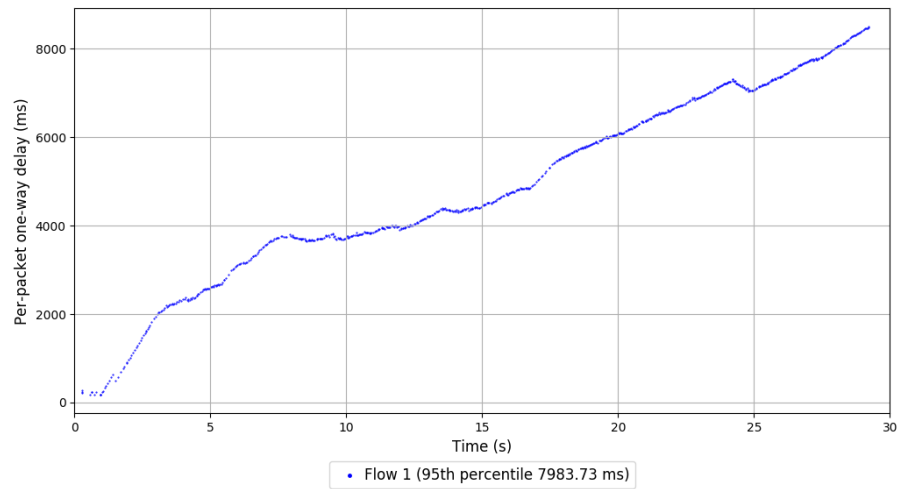
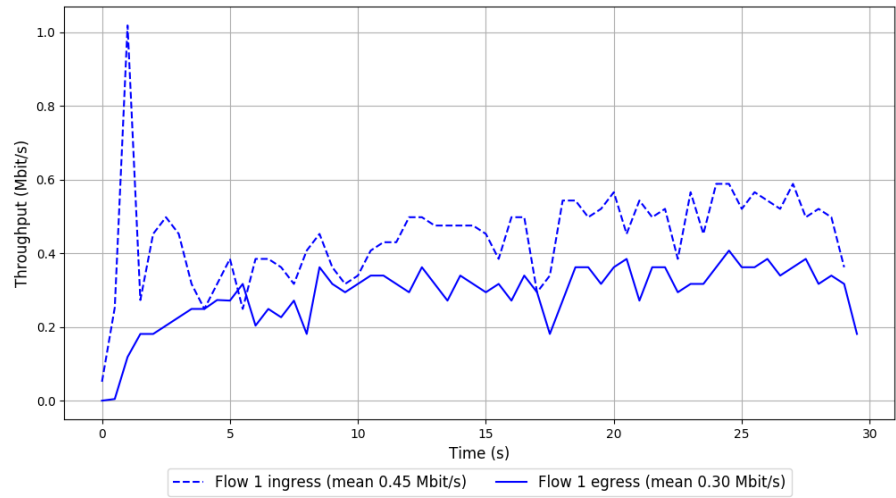


Run 1: Statistics of QUIC Cubic

Start at: 2018-08-01 14:50:27
End at: 2018-08-01 14:50:57
Local clock offset: -5.911 ms
Remote clock offset: 15.033 ms

Below is generated by plot.py at 2018-08-01 15:50:27
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 7983.730 ms
Loss rate: 34.01%
-- Flow 1:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 7983.730 ms
Loss rate: 34.01%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-08-01 15:10:50

End at: 2018-08-01 15:11:20

Local clock offset: -1.451 ms

Remote clock offset: 7.379 ms

Below is generated by plot.py at 2018-08-01 15:50:27

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.26 Mbit/s

95th percentile per-packet one-way delay: 9055.798 ms

Loss rate: 23.49%

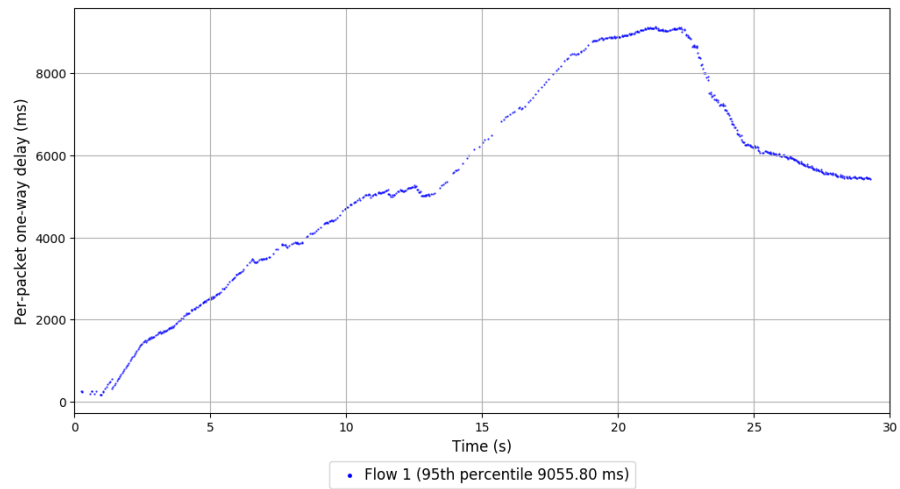
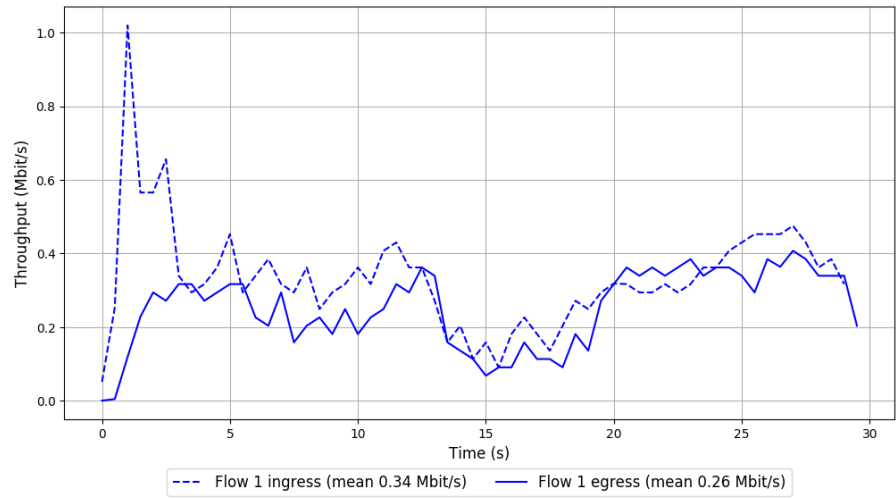
-- Flow 1:

Average throughput: 0.26 Mbit/s

95th percentile per-packet one-way delay: 9055.798 ms

Loss rate: 23.49%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-08-01 15:31:00

End at: 2018-08-01 15:31:30

Local clock offset: 0.109 ms

Remote clock offset: 8.223 ms

Below is generated by plot.py at 2018-08-01 15:50:27

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.36 Mbit/s

95th percentile per-packet one-way delay: 9264.649 ms

Loss rate: 34.36%

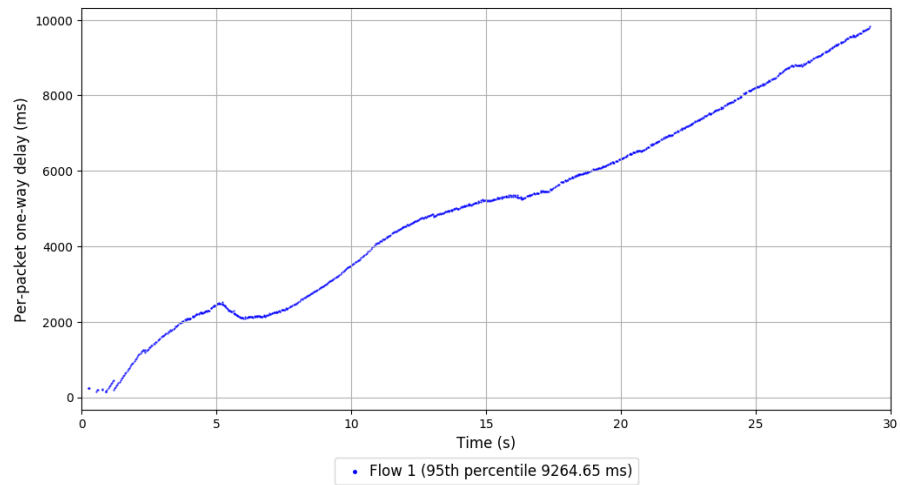
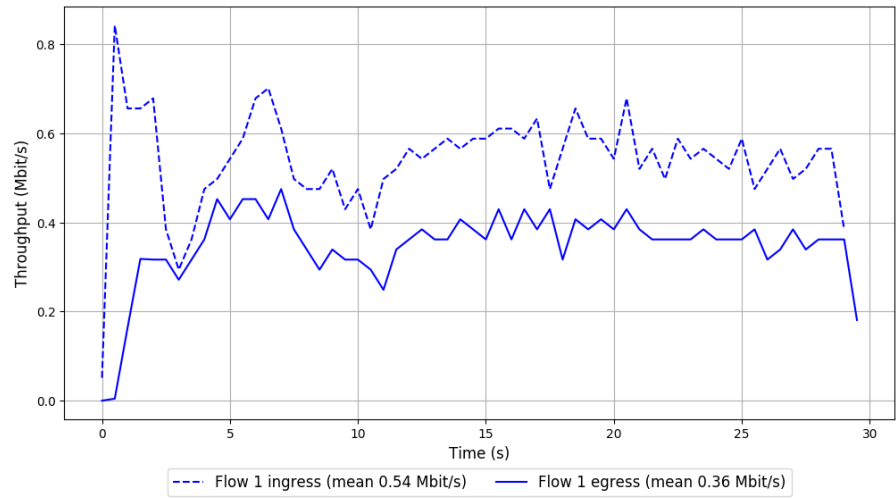
-- Flow 1:

Average throughput: 0.36 Mbit/s

95th percentile per-packet one-way delay: 9264.649 ms

Loss rate: 34.36%

Run 3: Report of QUIC Cubic — Data Link

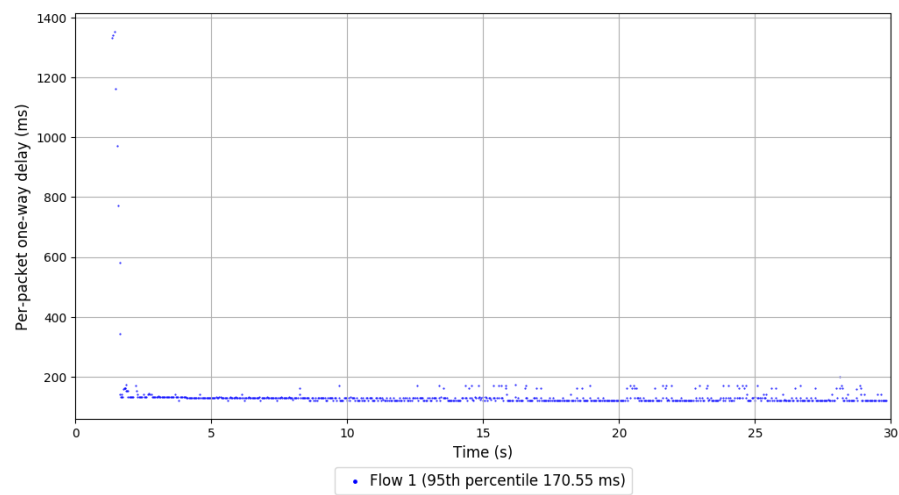
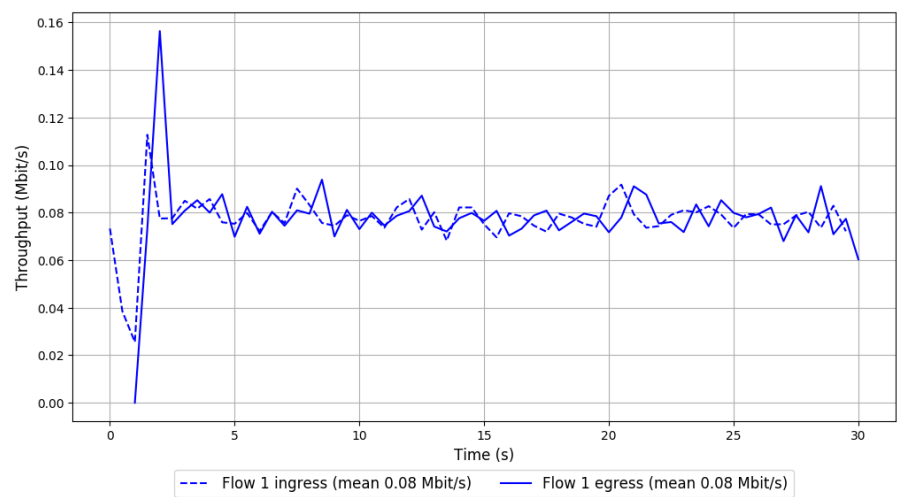


Run 1: Statistics of SCReAM

Start at: 2018-08-01 14:55:23
End at: 2018-08-01 14:55:53
Local clock offset: -4.596 ms
Remote clock offset: 11.626 ms

Below is generated by plot.py at 2018-08-01 15:50:27
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 170.547 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 170.547 ms
Loss rate: 0.78%

Run 1: Report of SReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2018-08-01 15:15:44

End at: 2018-08-01 15:16:14

Local clock offset: -0.907 ms

Remote clock offset: 3.166 ms

Below is generated by plot.py at 2018-08-01 15:50:27

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.08 Mbit/s

95th percentile per-packet one-way delay: 170.969 ms

Loss rate: 0.65%

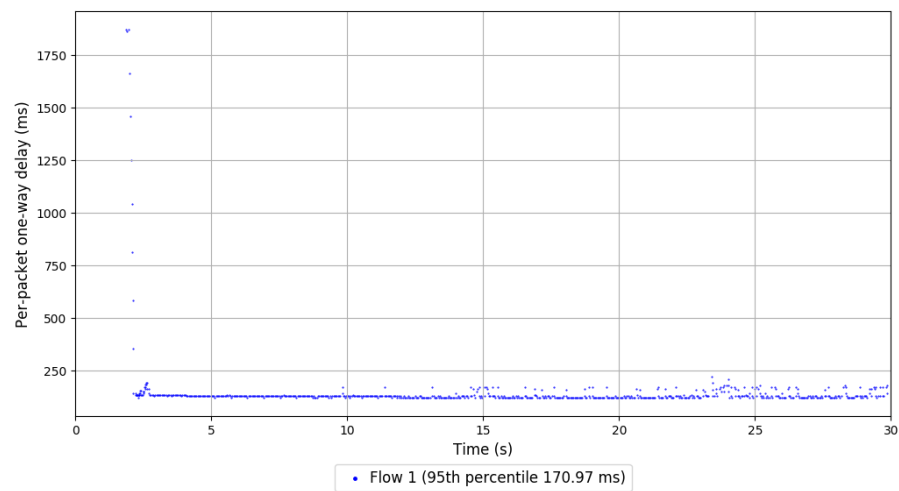
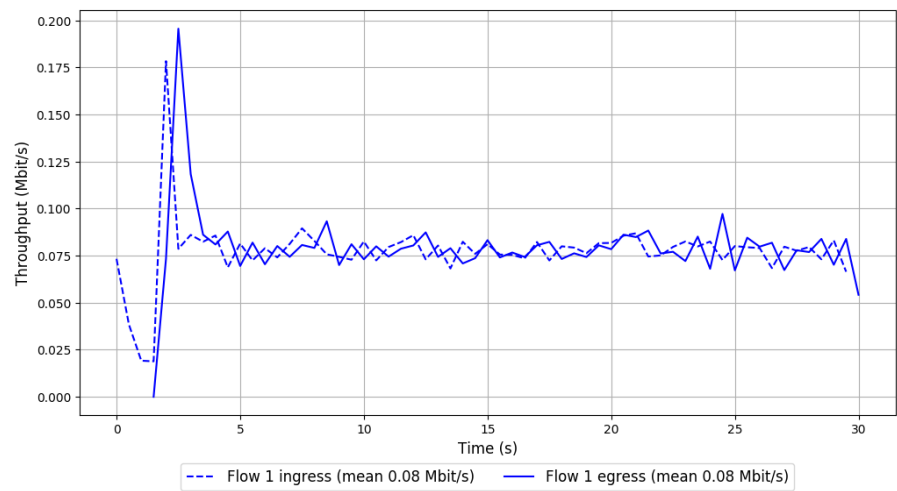
-- Flow 1:

Average throughput: 0.08 Mbit/s

95th percentile per-packet one-way delay: 170.969 ms

Loss rate: 0.65%

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2018-08-01 15:35:53

End at: 2018-08-01 15:36:23

Local clock offset: 0.409 ms

Remote clock offset: 9.498 ms

Below is generated by plot.py at 2018-08-01 15:50:27

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.08 Mbit/s

95th percentile per-packet one-way delay: 154.061 ms

Loss rate: 0.79%

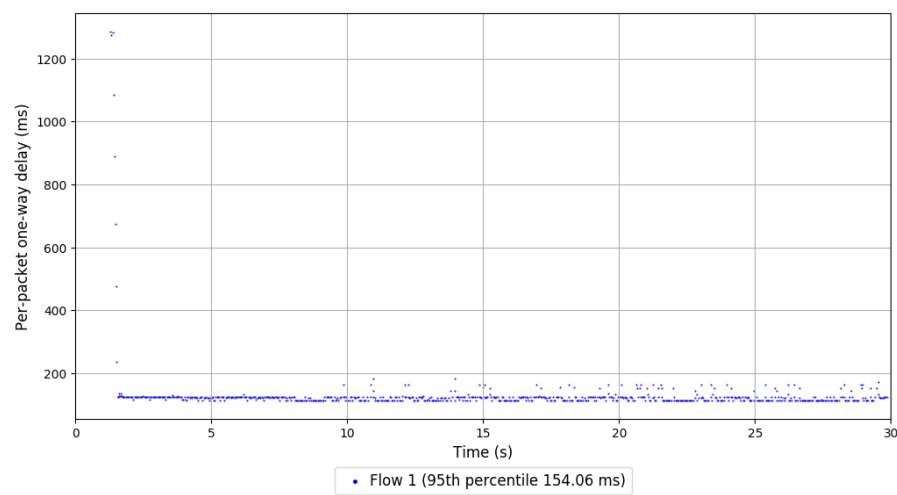
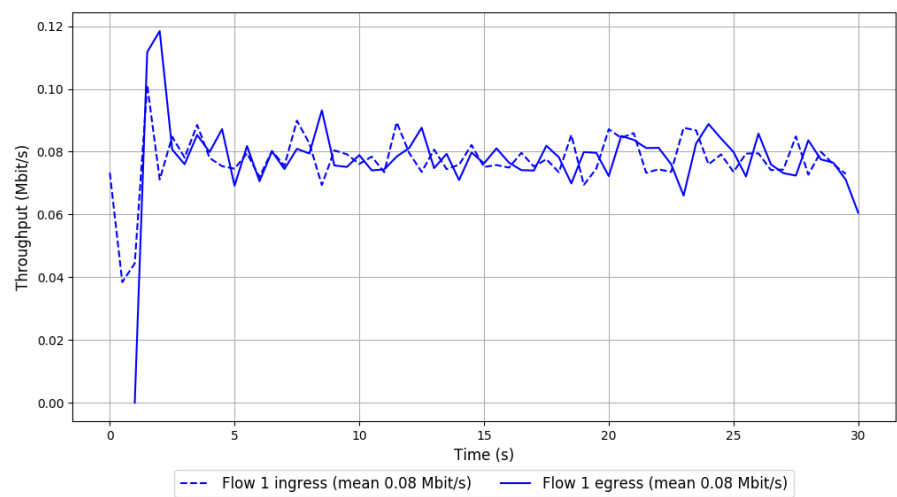
-- Flow 1:

Average throughput: 0.08 Mbit/s

95th percentile per-packet one-way delay: 154.061 ms

Loss rate: 0.79%

Run 3: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2018-08-01 14:49:20

End at: 2018-08-01 14:49:50

Local clock offset: -5.845 ms

Remote clock offset: 14.92 ms

Below is generated by plot.py at 2018-08-01 15:50:27

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 895.653 ms

Loss rate: 0.40%

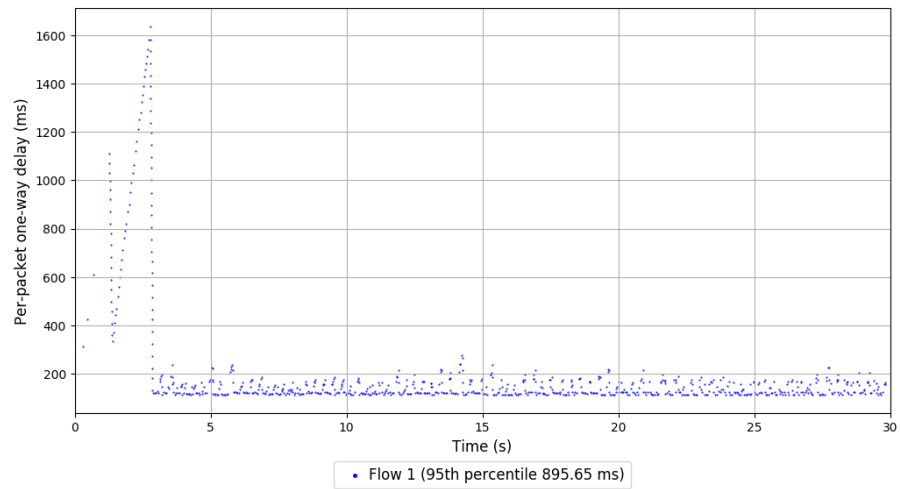
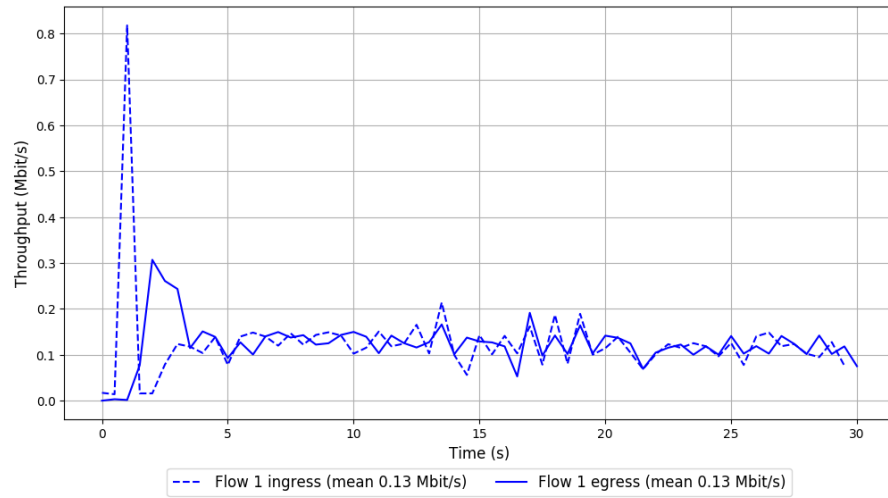
-- Flow 1:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 895.653 ms

Loss rate: 0.40%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-08-01 15:09:42

End at: 2018-08-01 15:10:12

Local clock offset: -1.512 ms

Remote clock offset: 3.785 ms

Below is generated by plot.py at 2018-08-01 15:50:27

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.11 Mbit/s

95th percentile per-packet one-way delay: 1181.900 ms

Loss rate: 0.39%

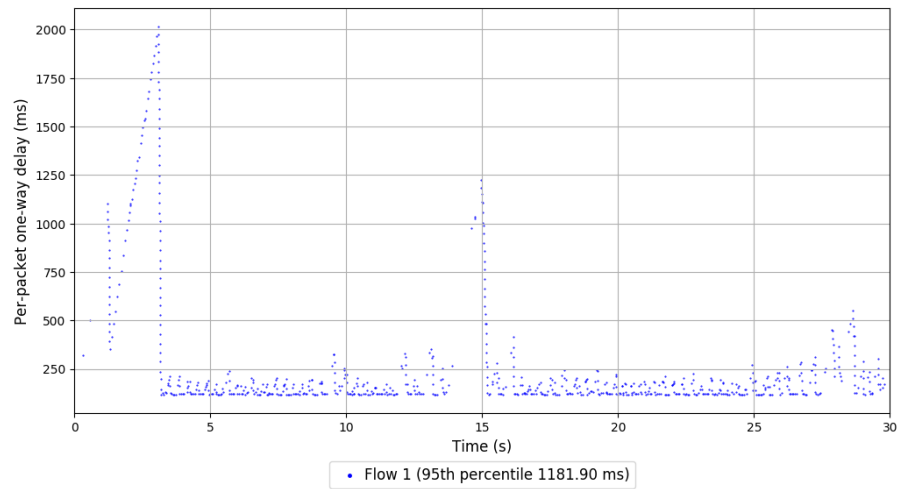
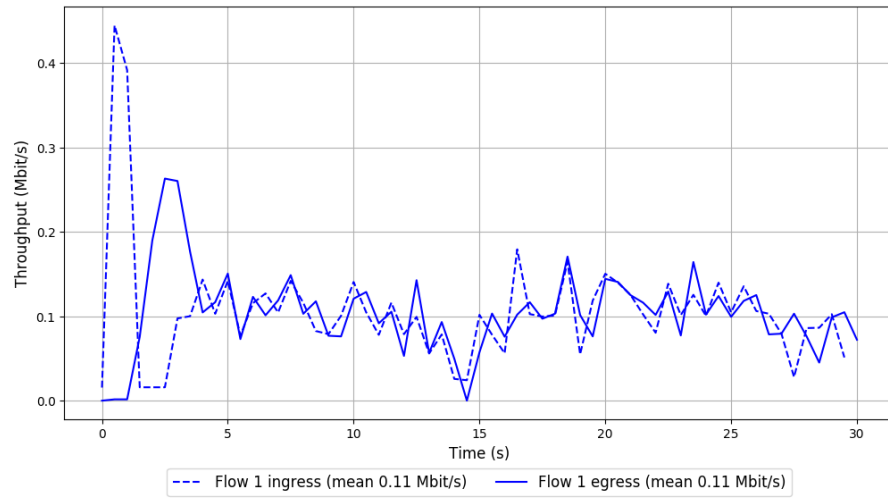
-- Flow 1:

Average throughput: 0.11 Mbit/s

95th percentile per-packet one-way delay: 1181.900 ms

Loss rate: 0.39%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-08-01 15:29:53

End at: 2018-08-01 15:30:23

Local clock offset: 0.046 ms

Remote clock offset: 9.254 ms

Below is generated by plot.py at 2018-08-01 15:50:27

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 1057.183 ms

Loss rate: 0.42%

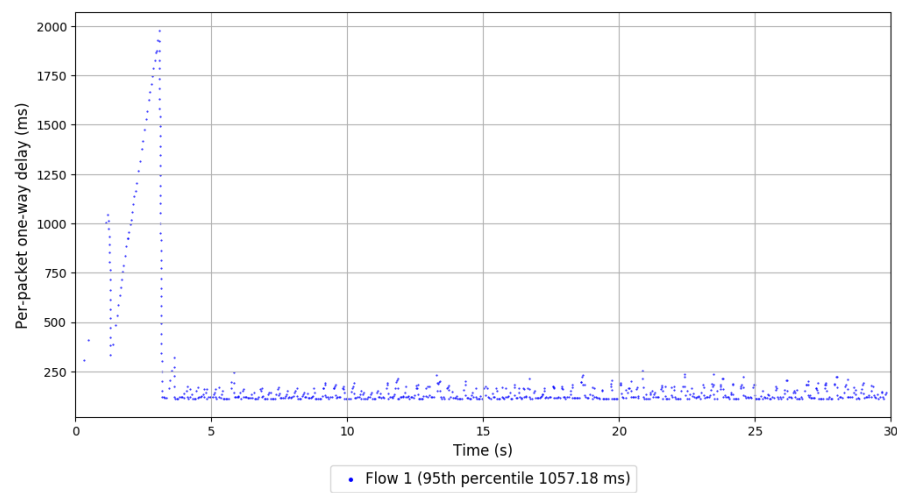
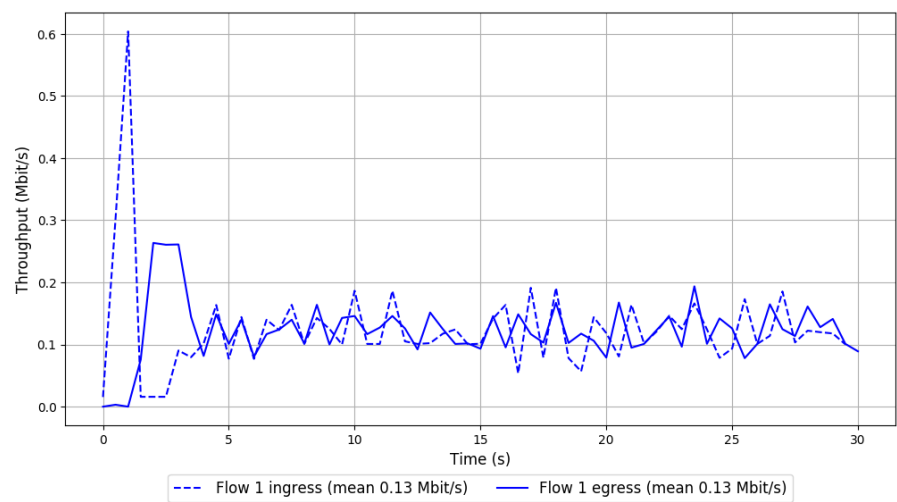
-- Flow 1:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 1057.183 ms

Loss rate: 0.42%

Run 3: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

/home/ubuntu/pantheon/data/2018-08-01T14-48-Colombia-ppp0-to-AWS-Brazil-2-3-runs/taova_stats

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

Figure is missing

Figure is missing

Run 2: Statistics of TaoVA-100x

/home/ubuntu/pantheon/data/2018-08-01T14-48-Colombia-ppp0-to-AWS-Brazil-2-3-runs/taova_stats

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

Figure is missing

Figure is missing

Run 3: Statistics of TaoVA-100x

/home/ubuntu/pantheon/data/2018-08-01T14-48-Colombia-ppp0-to-AWS-Brazil-2-3-runs/taova_stats

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

Figure is missing

Figure is missing

Run 1: Statistics of TCP Vegas

Start at: 2018-08-01 15:04:03

End at: 2018-08-01 15:04:33

Local clock offset: -2.268 ms

Remote clock offset: 9.753 ms

Below is generated by plot.py at 2018-08-01 15:50:27

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.33 Mbit/s

95th percentile per-packet one-way delay: 2070.599 ms

Loss rate: 3.89%

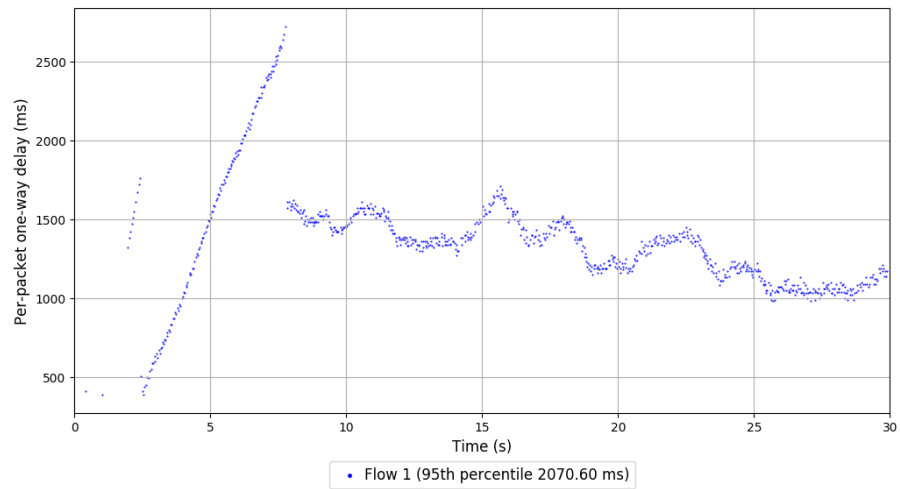
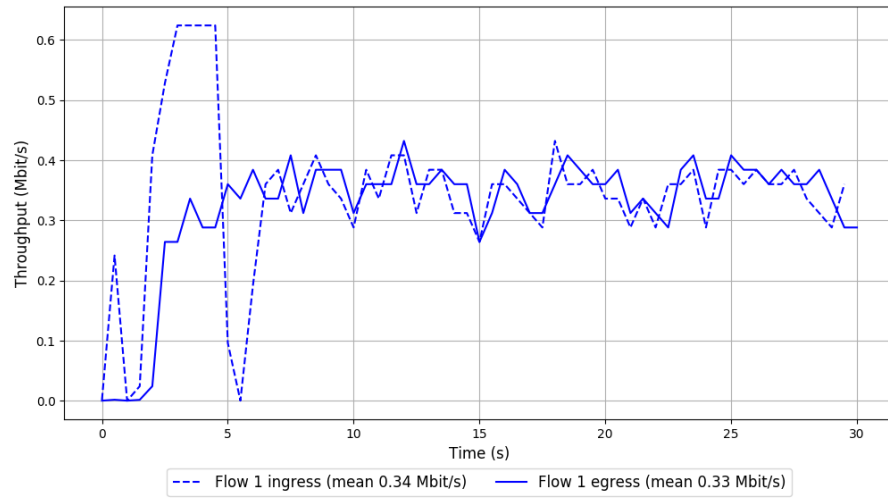
-- Flow 1:

Average throughput: 0.33 Mbit/s

95th percentile per-packet one-way delay: 2070.599 ms

Loss rate: 3.89%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-08-01 15:24:16

End at: 2018-08-01 15:24:46

Local clock offset: -0.298 ms

Remote clock offset: 8.425 ms

Below is generated by plot.py at 2018-08-01 15:50:27

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.32 Mbit/s

95th percentile per-packet one-way delay: 2098.290 ms

Loss rate: 1.86%

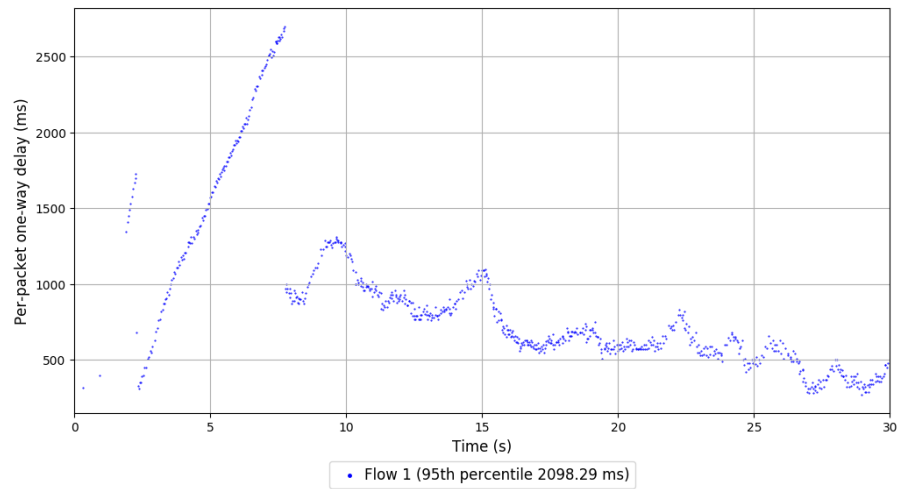
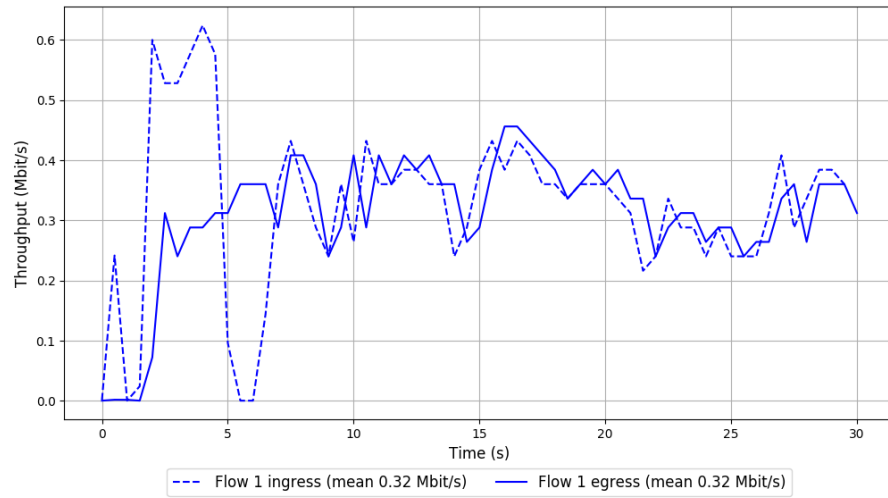
-- Flow 1:

Average throughput: 0.32 Mbit/s

95th percentile per-packet one-way delay: 2098.290 ms

Loss rate: 1.86%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

/home/ubuntu/pantheon/data/2018-08-01T14-48-Colombia-ppp0-to-AWS-Brazil-2-3-runs/vegas_stats

Run 3: Report of TCP Vegas — Data Link

Figure is missing

Figure is missing

Run 1: Statistics of Verus

Start at: 2018-08-01 15:07:27

End at: 2018-08-01 15:07:57

Local clock offset: -1.832 ms

Remote clock offset: 7.898 ms

Below is generated by plot.py at 2018-08-01 15:50:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.32 Mbit/s

95th percentile per-packet one-way delay: 3698.121 ms

Loss rate: 8.42%

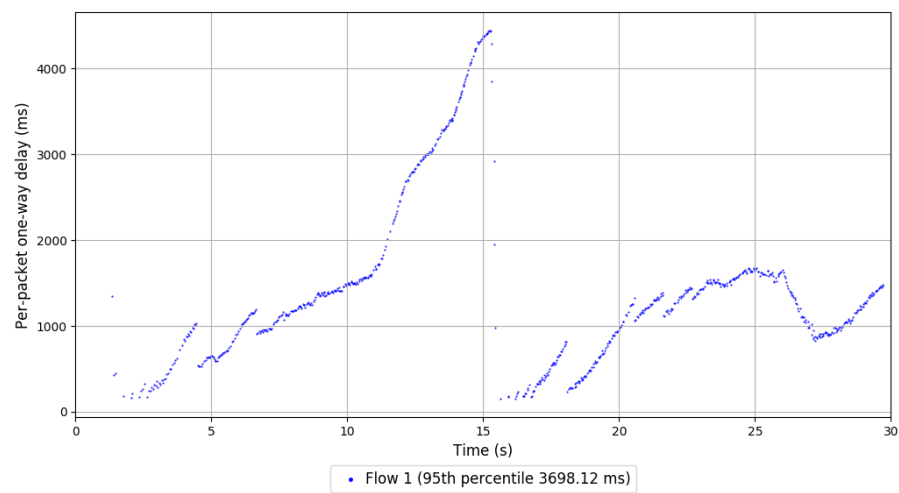
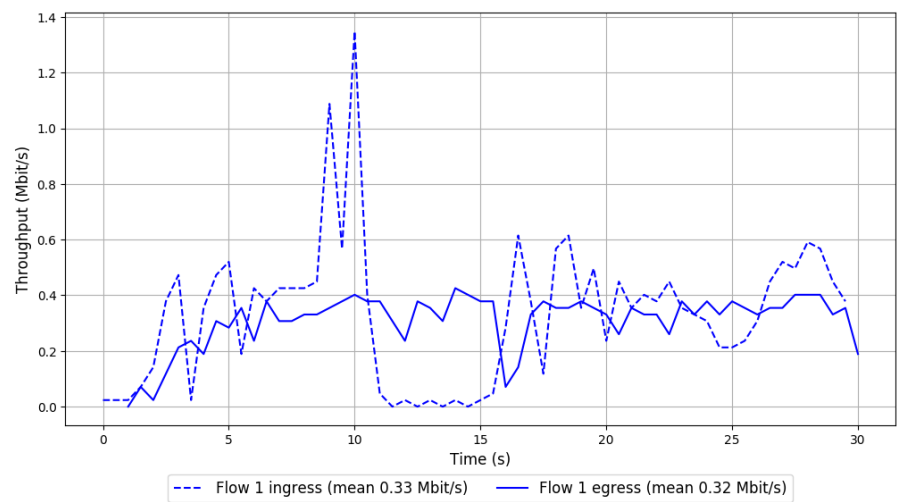
-- Flow 1:

Average throughput: 0.32 Mbit/s

95th percentile per-packet one-way delay: 3698.121 ms

Loss rate: 8.42%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-08-01 15:27:38

End at: 2018-08-01 15:28:08

Local clock offset: -0.151 ms

Remote clock offset: 4.103 ms

Below is generated by plot.py at 2018-08-01 15:50:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.35 Mbit/s

95th percentile per-packet one-way delay: 2194.059 ms

Loss rate: 1.18%

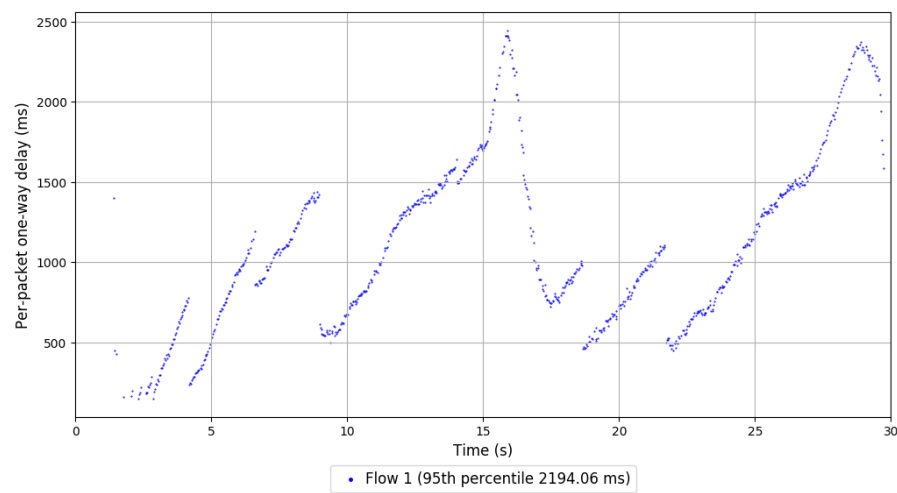
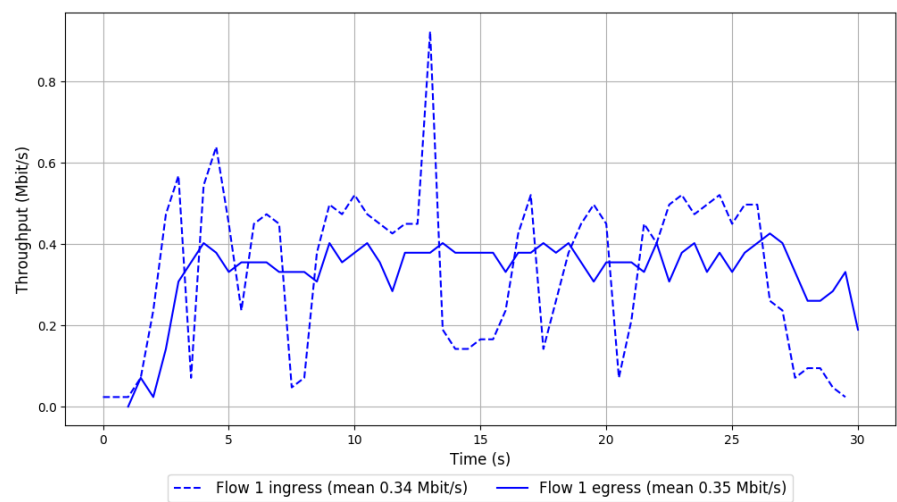
-- Flow 1:

Average throughput: 0.35 Mbit/s

95th percentile per-packet one-way delay: 2194.059 ms

Loss rate: 1.18%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-08-01 15:48:25

End at: 2018-08-01 15:48:55

Local clock offset: 1.079 ms

Remote clock offset: 4.873 ms

Below is generated by plot.py at 2018-08-01 15:50:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.29 Mbit/s

95th percentile per-packet one-way delay: 2009.394 ms

Loss rate: 6.01%

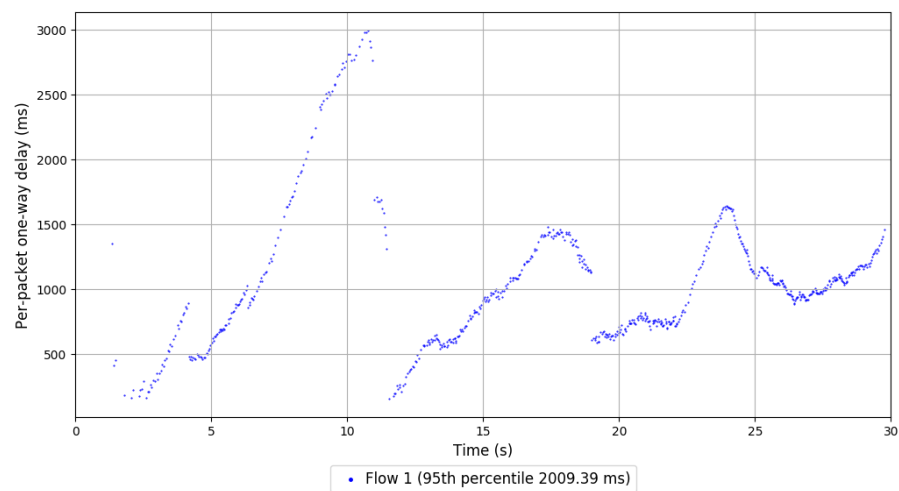
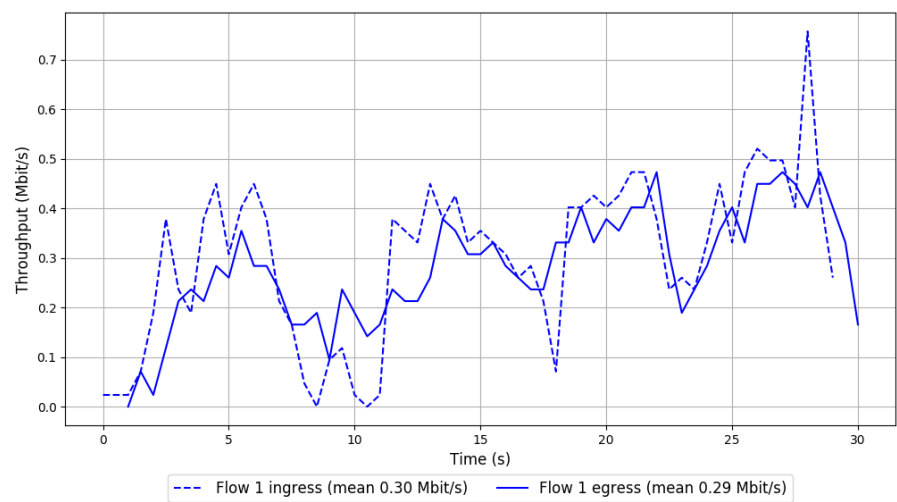
-- Flow 1:

Average throughput: 0.29 Mbit/s

95th percentile per-packet one-way delay: 2009.394 ms

Loss rate: 6.01%

Run 3: Report of Verus — Data Link

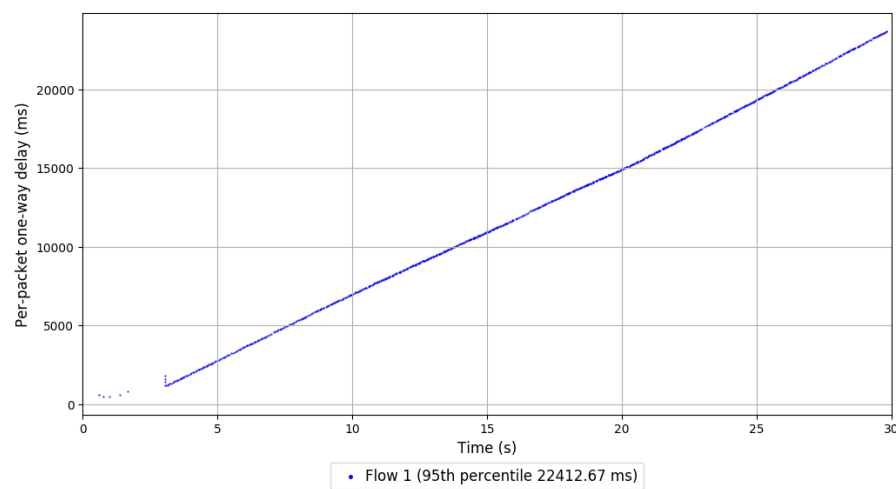
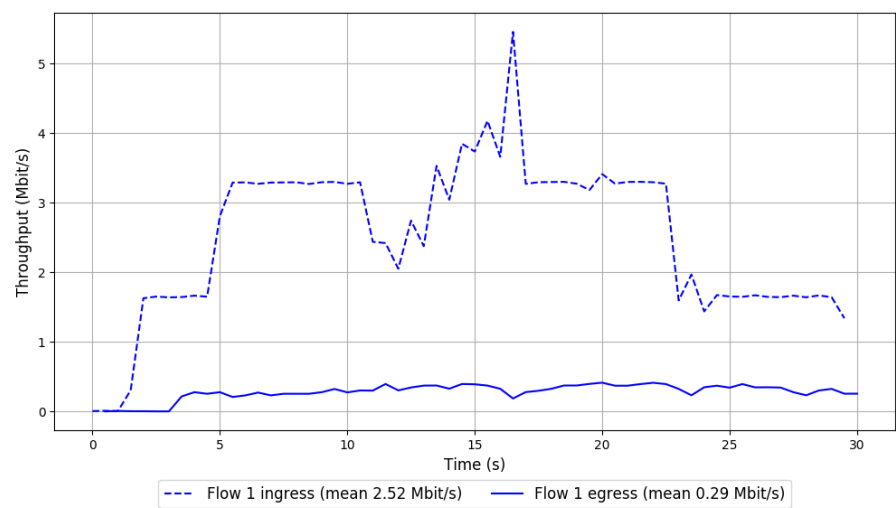


Run 1: Statistics of PCC-Vivace

Start at: 2018-08-01 14:51:34
End at: 2018-08-01 14:52:04
Local clock offset: -5.852 ms
Remote clock offset: 14.329 ms

Below is generated by plot.py at 2018-08-01 15:50:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 22412.670 ms
Loss rate: 88.72%
-- Flow 1:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 22412.670 ms
Loss rate: 88.72%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2018-08-01 15:11:57

End at: 2018-08-01 15:12:27

Local clock offset: -1.246 ms

Remote clock offset: 8.469 ms

Below is generated by plot.py at 2018-08-01 15:50:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.33 Mbit/s

95th percentile per-packet one-way delay: 21566.469 ms

Loss rate: 86.58%

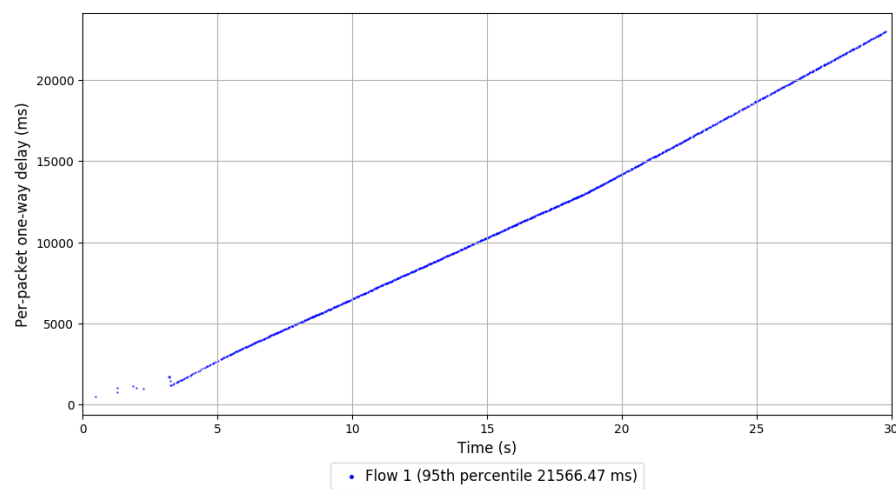
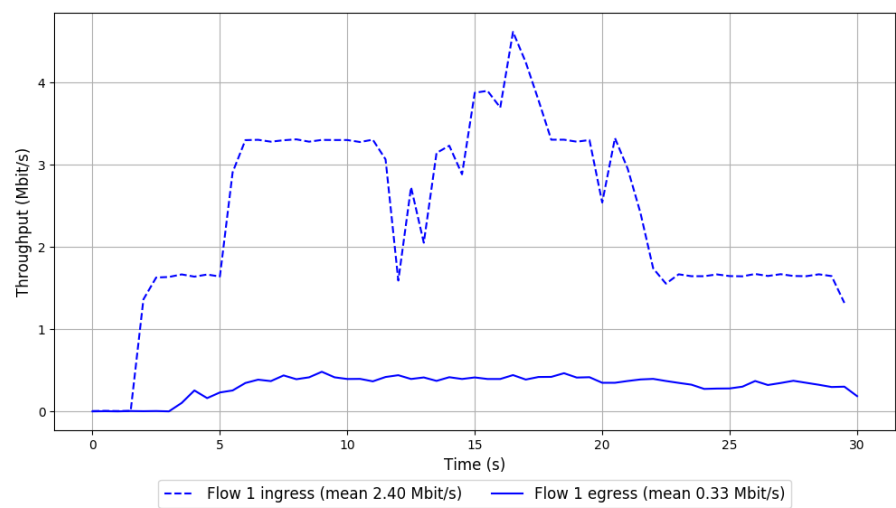
-- Flow 1:

Average throughput: 0.33 Mbit/s

95th percentile per-packet one-way delay: 21566.469 ms

Loss rate: 86.58%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2018-08-01 15:32:07

End at: 2018-08-01 15:32:37

Local clock offset: 0.159 ms

Remote clock offset: 4.561 ms

Below is generated by plot.py at 2018-08-01 15:50:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.29 Mbit/s

95th percentile per-packet one-way delay: 21554.872 ms

Loss rate: 89.86%

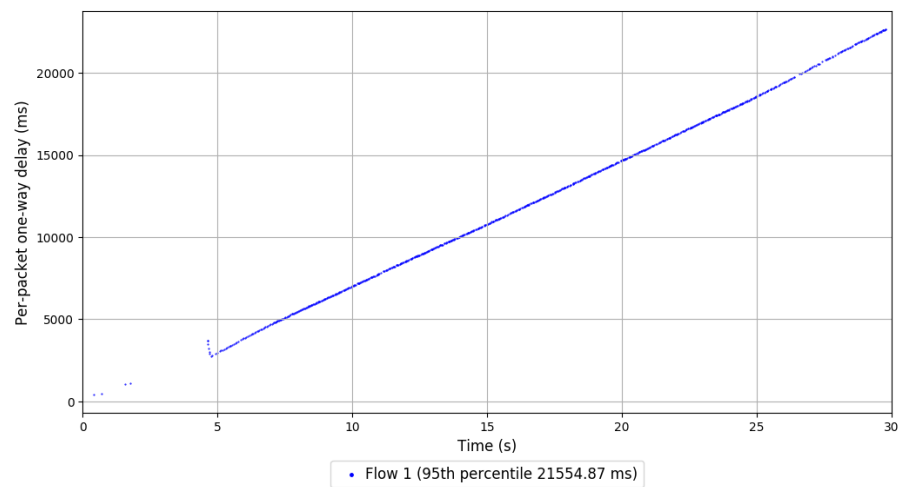
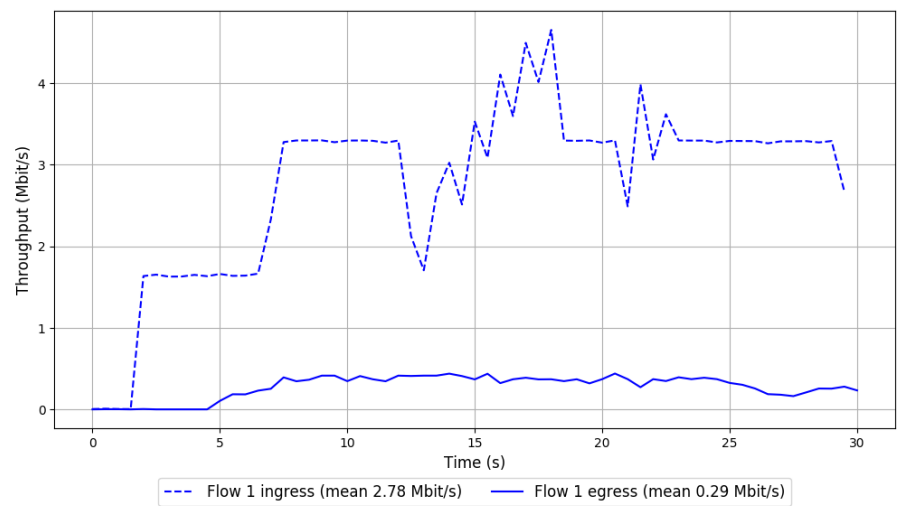
-- Flow 1:

Average throughput: 0.29 Mbit/s

95th percentile per-packet one-way delay: 21554.872 ms

Loss rate: 89.86%

Run 3: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

/home/ubuntu/pantheon/data/2018-08-01T14-48-Colombia-ppp0-to-AWS-Brazil-2-3-runs/webrtc_stat

Run 1: Report of WebRTC media — Data Link

Figure is missing

Figure is missing

Run 2: Statistics of WebRTC media

/home/ubuntu/pantheon/data/2018-08-01T14-48-Colombia-ppp0-to-AWS-Brazil-2-3-runs/webrtc_stat

Run 2: Report of WebRTC media — Data Link

Figure is missing

Figure is missing

Run 3: Statistics of WebRTC media

/home/ubuntu/pantheon/data/2018-08-01T14-48-Colombia-ppp0-to-AWS-Brazil-2-3-runs/webrtc_stat

Run 3: Report of WebRTC media — Data Link

Figure is missing

Figure is missing