

Pantheon Report

Generated at 2018-08-27 20:27:40 (UTC).

Data path: AWS Brazil 2 ens5 (*local*) → Colombia ppp0 ppp0 (*remote*).

Repeated the test of 17 congestion control schemes 3 times.

Each test lasted for 30 seconds running 1 flow.

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

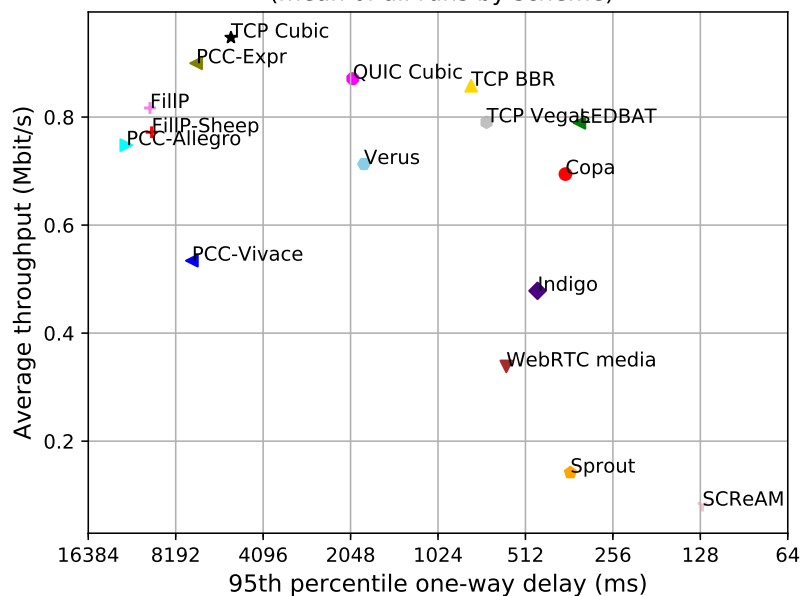
System info:

```
Linux 4.15.0-1019-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

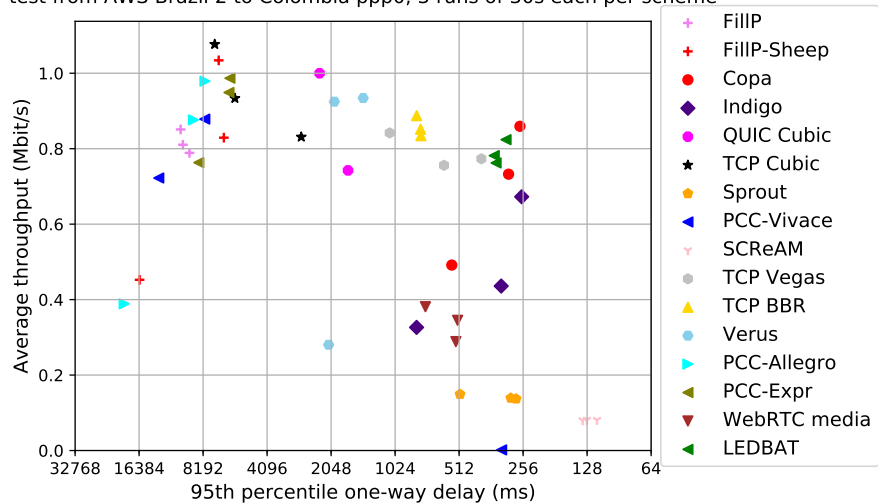
Git summary:

```
branch: master @ 8f31687904b612ba36b45467ab20eda73108da68
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfef58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ 5386469677b75a7fdc5fe25d8daccce7950d8a69
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-quic @ 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 AWS Brazil 2 to Colombia ppp0, 3 runs of 30s each per scheme
(mean of all runs by scheme)



test from AWS Brazil 2 to Colombia ppp0, 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	3	0.86	787.44	1.41
Copa	3	0.69	373.00	0.69
TCP Cubic	3	0.95	5286.91	18.61
FillP	3	0.82	10044.17	96.80
FillP-Sheep	3	0.77	9918.71	16.51
Indigo	3	0.48	465.38	0.44
LEDBAT	3	0.79	333.85	0.61
PCC-Allegro	3	0.75	12122.58	93.35
PCC-Expr	3	0.90	6968.90	83.84
QUIC Cubic	2	0.87	2012.47	5.53
SCReAM	3	0.08	125.90	0.31
Sprout	3	0.14	358.56	0.73
TaoVA-100x	0	N/A	N/A	N/A
TCP Vegas	3	0.79	696.96	0.43
Verus	3	0.71	1842.42	4.35
PCC-Vivace	3	0.53	7205.15	27.56
WebRTC media	3	0.34	596.03	0.27

Run 1: Statistics of TCP BBR

Start at: 2018-08-27 19:34:48

End at: 2018-08-27 19:35:18

Local clock offset: 8.232 ms

Remote clock offset: -2.332 ms

Below is generated by plot.py at 2018-08-27 20:27:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.89 Mbit/s

95th percentile per-packet one-way delay: 811.045 ms

Loss rate: 2.00%

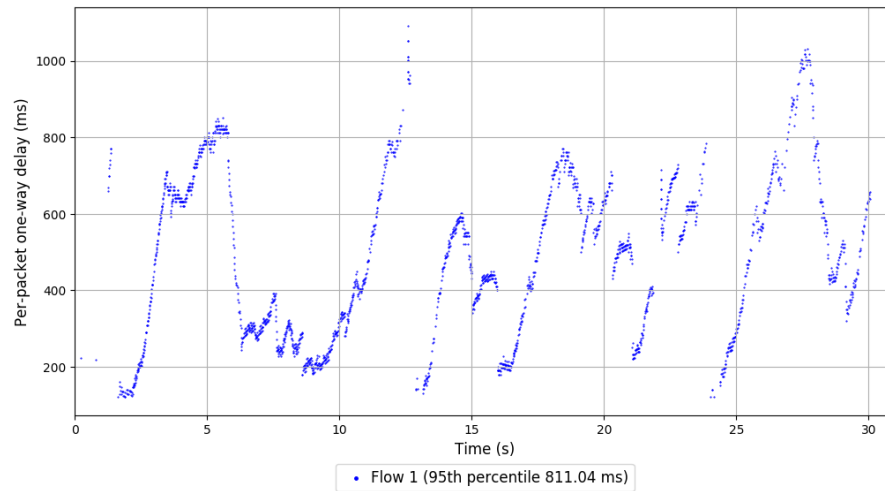
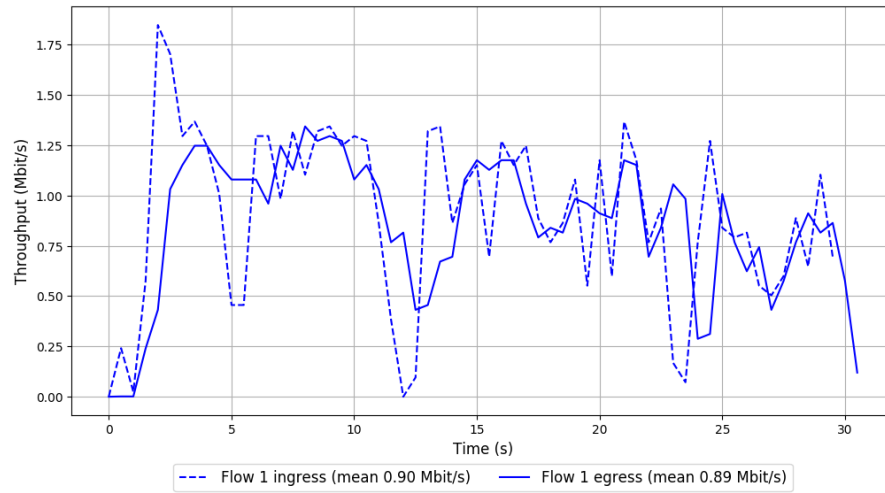
-- Flow 1:

Average throughput: 0.89 Mbit/s

95th percentile per-packet one-way delay: 811.045 ms

Loss rate: 2.00%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-08-27 19:53:55

End at: 2018-08-27 19:54:25

Local clock offset: 6.372 ms

Remote clock offset: -3.395 ms

Below is generated by plot.py at 2018-08-27 20:27:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.85 Mbit/s

95th percentile per-packet one-way delay: 776.920 ms

Loss rate: 0.42%

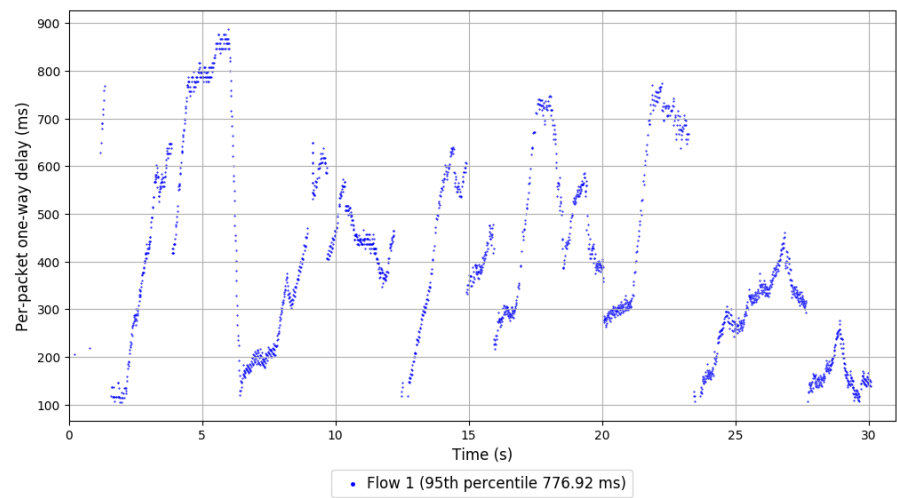
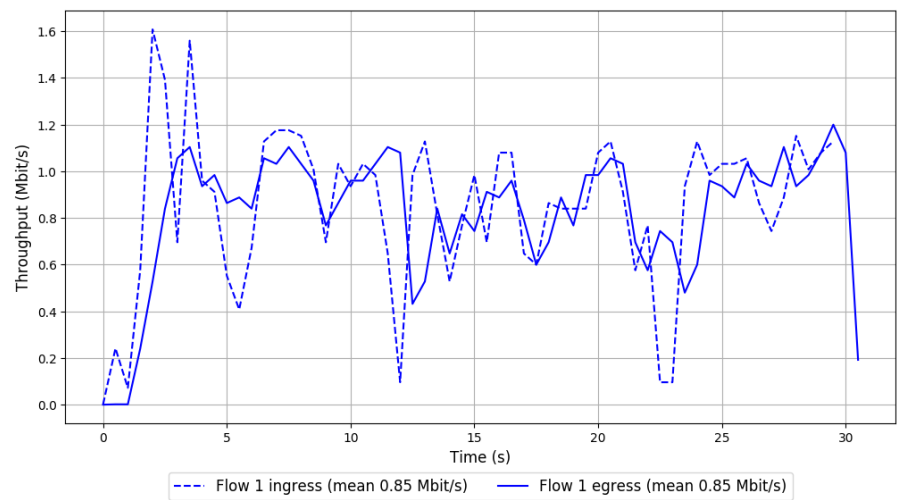
-- Flow 1:

Average throughput: 0.85 Mbit/s

95th percentile per-packet one-way delay: 776.920 ms

Loss rate: 0.42%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-08-27 20:13:00

End at: 2018-08-27 20:13:30

Local clock offset: 6.6 ms

Remote clock offset: -0.597 ms

Below is generated by plot.py at 2018-08-27 20:27:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.83 Mbit/s

95th percentile per-packet one-way delay: 774.342 ms

Loss rate: 1.80%

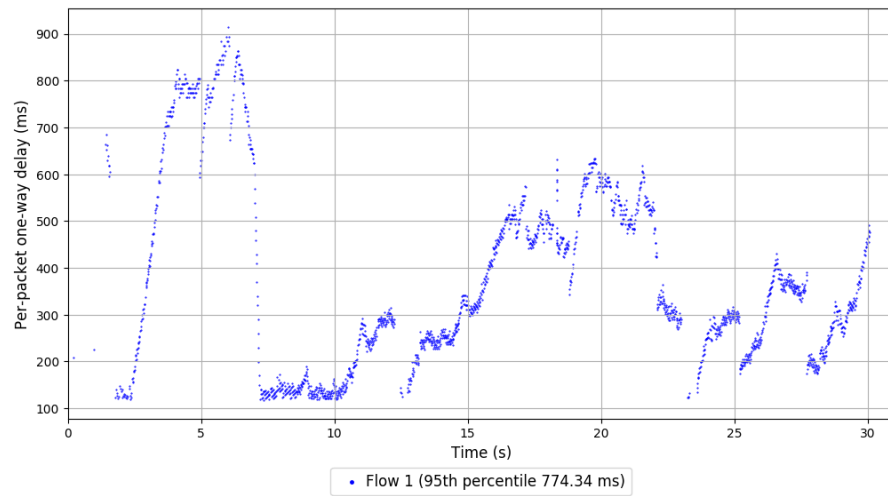
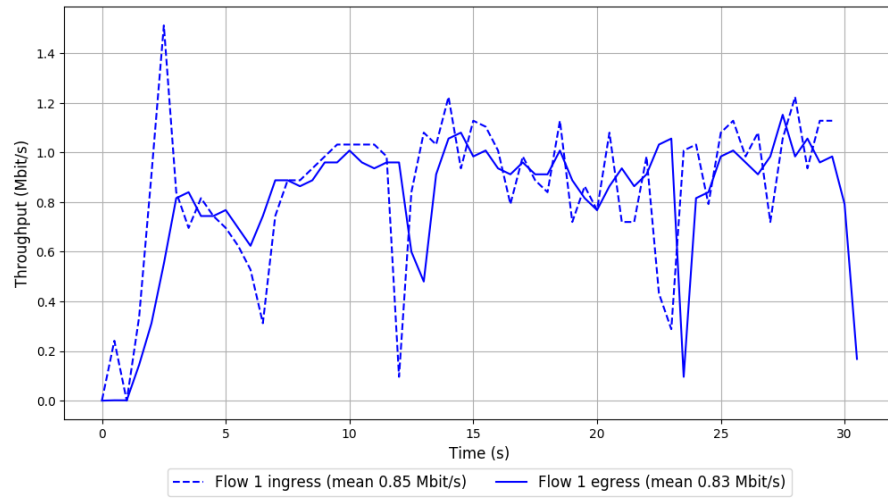
-- Flow 1:

Average throughput: 0.83 Mbit/s

95th percentile per-packet one-way delay: 774.342 ms

Loss rate: 1.80%

Run 3: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2018-08-27 19:40:26

End at: 2018-08-27 19:40:56

Local clock offset: 4.534 ms

Remote clock offset: 1.753 ms

Below is generated by plot.py at 2018-08-27 20:27:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.73 Mbit/s

95th percentile per-packet one-way delay: 299.702 ms

Loss rate: 0.68%

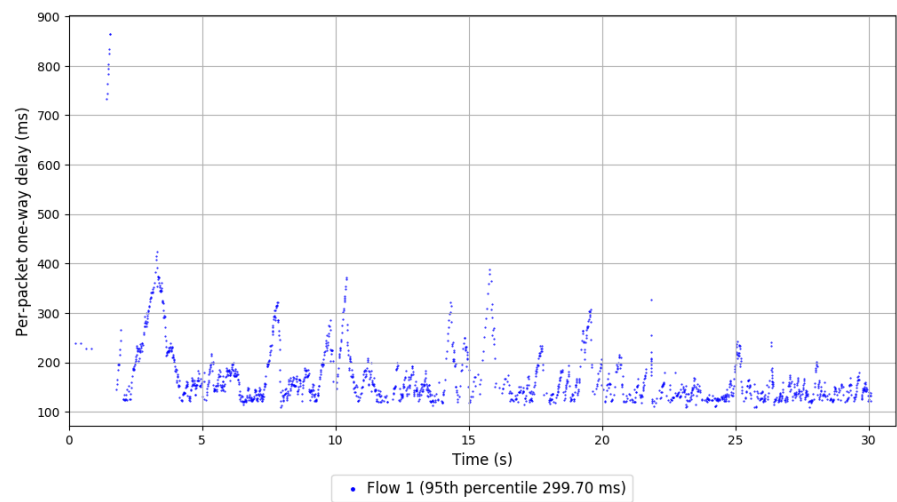
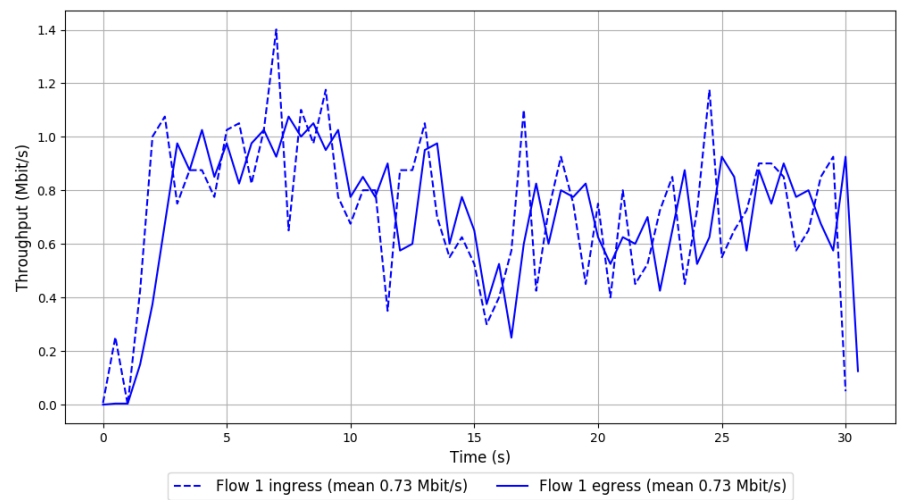
-- Flow 1:

Average throughput: 0.73 Mbit/s

95th percentile per-packet one-way delay: 299.702 ms

Loss rate: 0.68%

Run 1: Report of Copa — Data Link

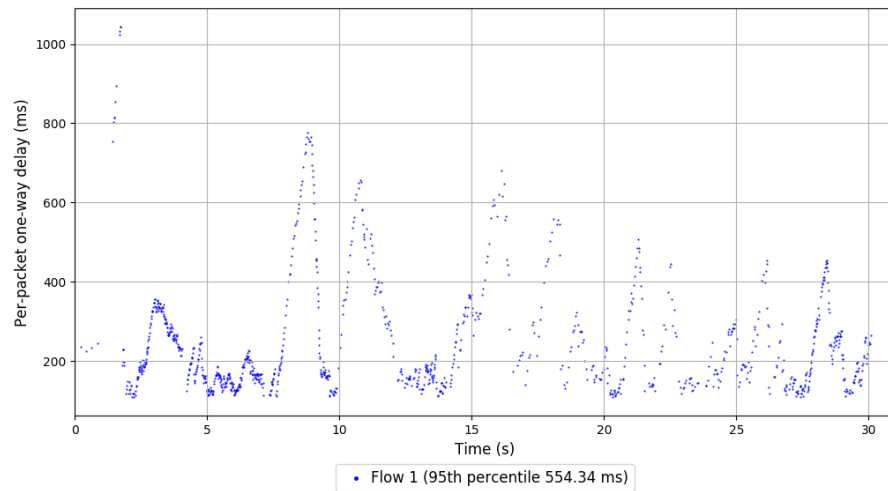
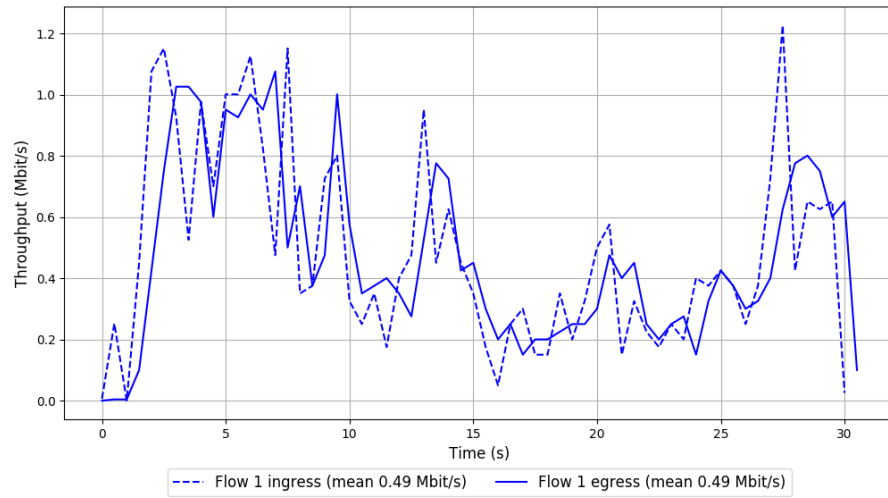


Run 2: Statistics of Copa

Start at: 2018-08-27 19:59:31
End at: 2018-08-27 20:00:01
Local clock offset: 5.803 ms
Remote clock offset: -3.663 ms

Below is generated by plot.py at 2018-08-27 20:27:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 554.339 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 554.339 ms
Loss rate: 0.85%

Run 2: Report of Copa — Data Link

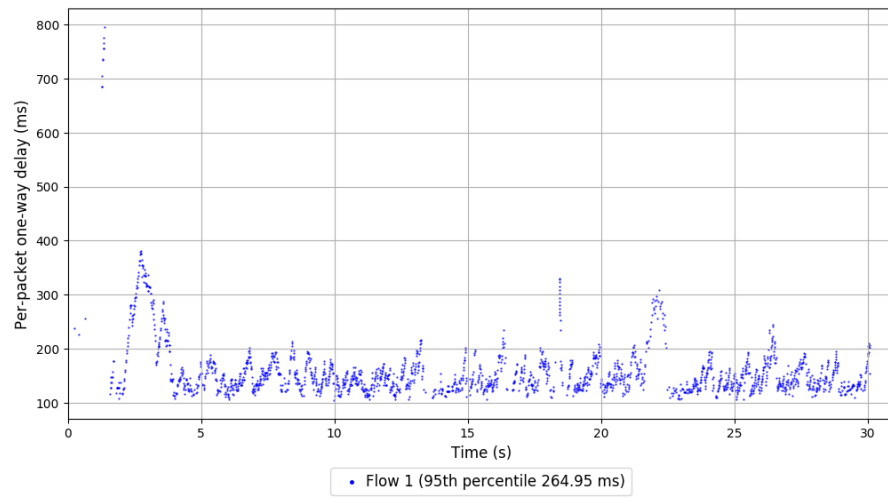
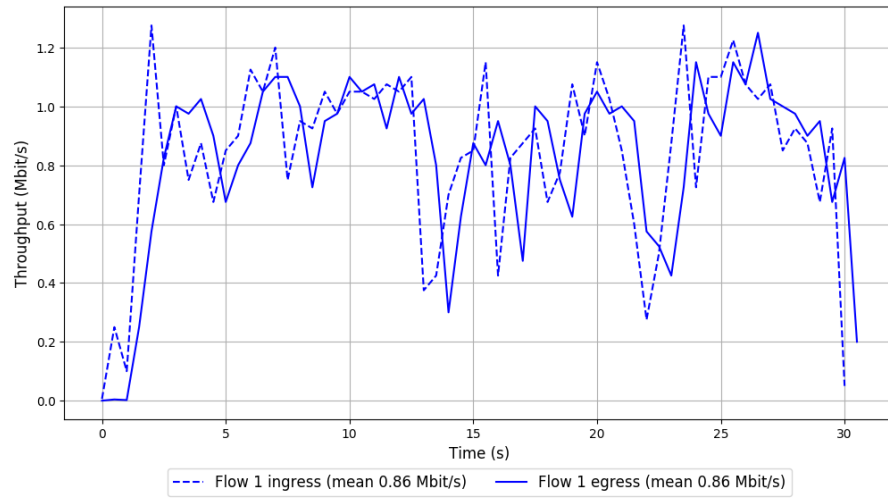


Run 3: Statistics of Copa

Start at: 2018-08-27 20:18:36
End at: 2018-08-27 20:19:06
Local clock offset: 6.405 ms
Remote clock offset: -1.966 ms

Below is generated by plot.py at 2018-08-27 20:27:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.86 Mbit/s
95th percentile per-packet one-way delay: 264.946 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 0.86 Mbit/s
95th percentile per-packet one-way delay: 264.946 ms
Loss rate: 0.53%

Run 3: Report of Copa — Data Link

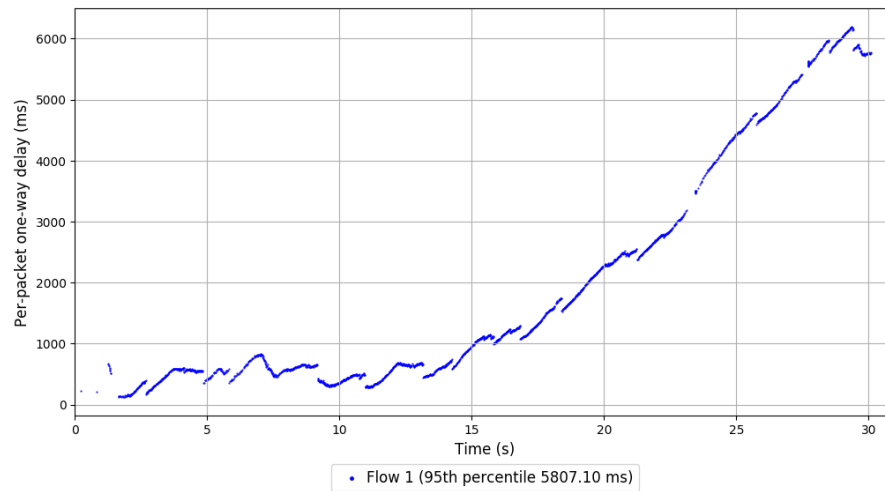
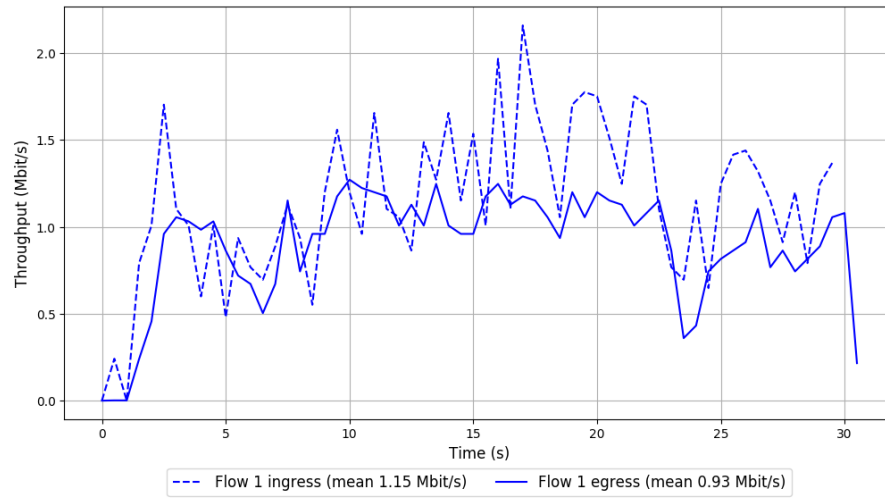


Run 1: Statistics of TCP Cubic

Start at: 2018-08-27 19:44:55
End at: 2018-08-27 19:45:25
Local clock offset: 5.669 ms
Remote clock offset: -2.698 ms

Below is generated by plot.py at 2018-08-27 20:27:10
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.93 Mbit/s
95th percentile per-packet one-way delay: 5807.100 ms
Loss rate: 19.09%
-- Flow 1:
Average throughput: 0.93 Mbit/s
95th percentile per-packet one-way delay: 5807.100 ms
Loss rate: 19.09%

Run 1: Report of TCP Cubic — Data Link

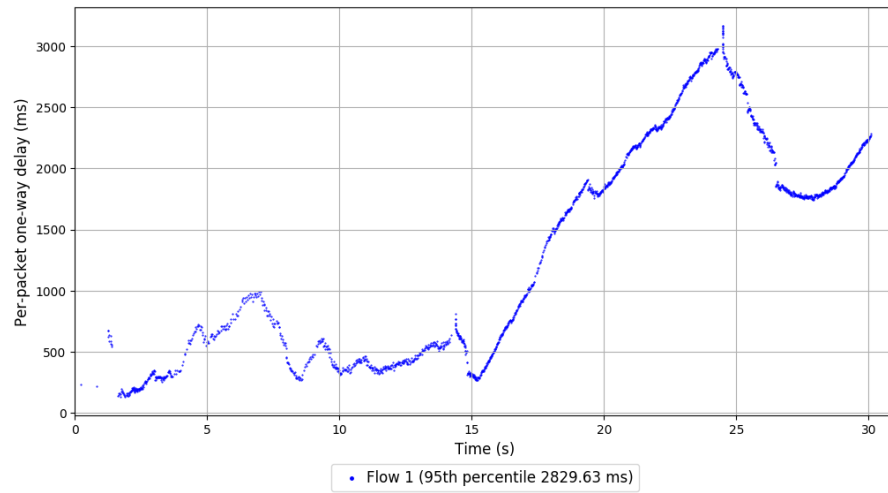
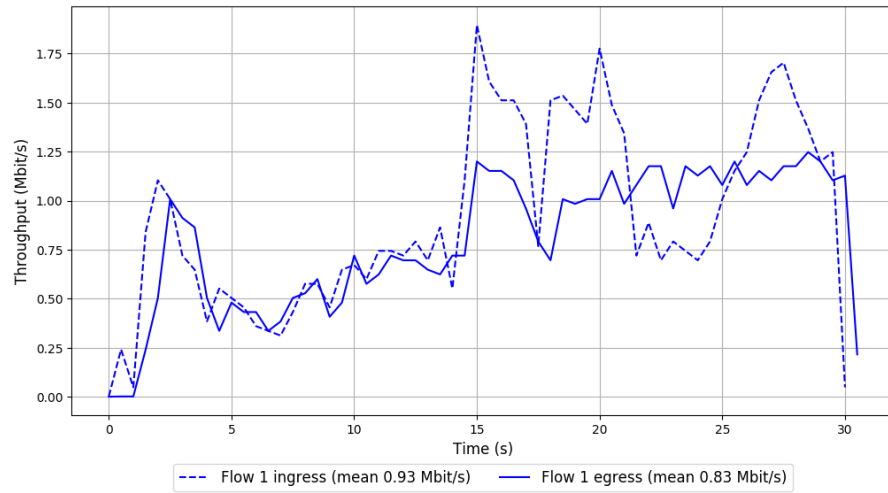


Run 2: Statistics of TCP Cubic

Start at: 2018-08-27 20:04:00
End at: 2018-08-27 20:04:30
Local clock offset: 5.999 ms
Remote clock offset: -1.242 ms

Below is generated by plot.py at 2018-08-27 20:27:10
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.83 Mbit/s
95th percentile per-packet one-way delay: 2829.626 ms
Loss rate: 11.17%
-- Flow 1:
Average throughput: 0.83 Mbit/s
95th percentile per-packet one-way delay: 2829.626 ms
Loss rate: 11.17%

Run 2: Report of TCP Cubic — Data Link

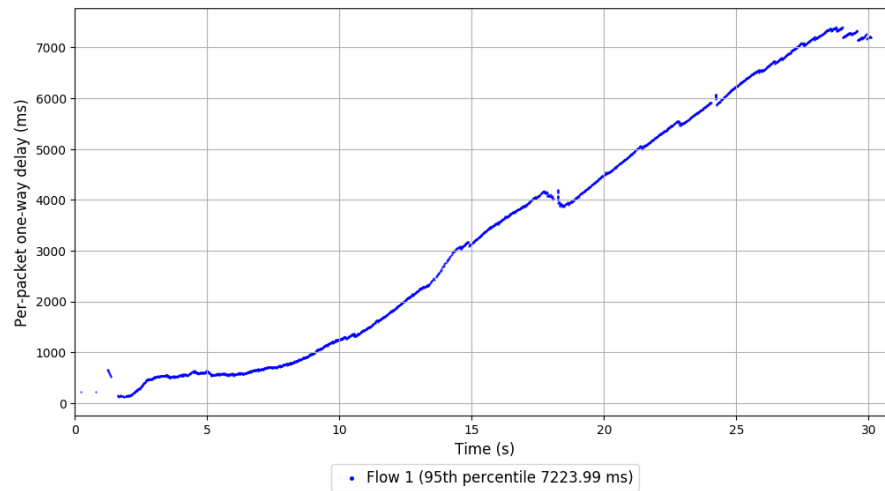
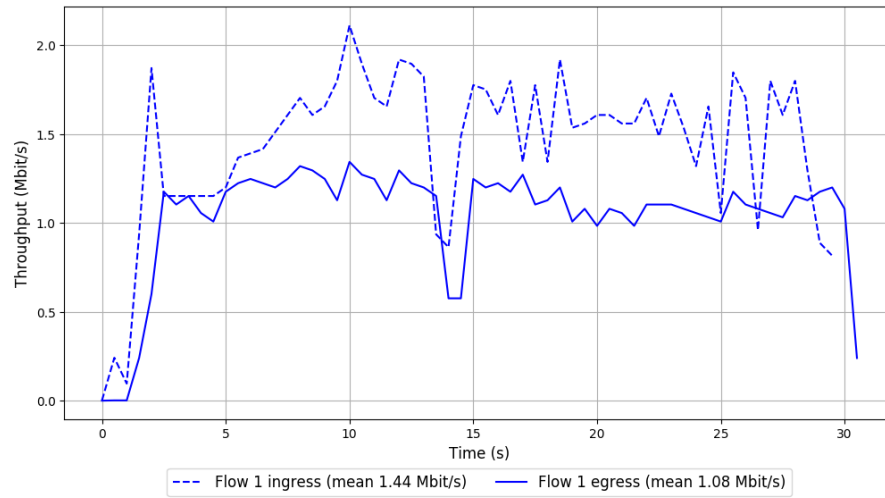


Run 3: Statistics of TCP Cubic

Start at: 2018-08-27 20:23:06
End at: 2018-08-27 20:23:36
Local clock offset: 7.043 ms
Remote clock offset: -2.134 ms

Below is generated by plot.py at 2018-08-27 20:27:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.08 Mbit/s
95th percentile per-packet one-way delay: 7223.992 ms
Loss rate: 25.58%
-- Flow 1:
Average throughput: 1.08 Mbit/s
95th percentile per-packet one-way delay: 7223.992 ms
Loss rate: 25.58%

Run 3: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2018-08-27 19:48:17

End at: 2018-08-27 19:48:47

Local clock offset: 4.919 ms

Remote clock offset: 0.917 ms

Below is generated by plot.py at 2018-08-27 20:27:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.81 Mbit/s

95th percentile per-packet one-way delay: 10192.705 ms

Loss rate: 96.94%

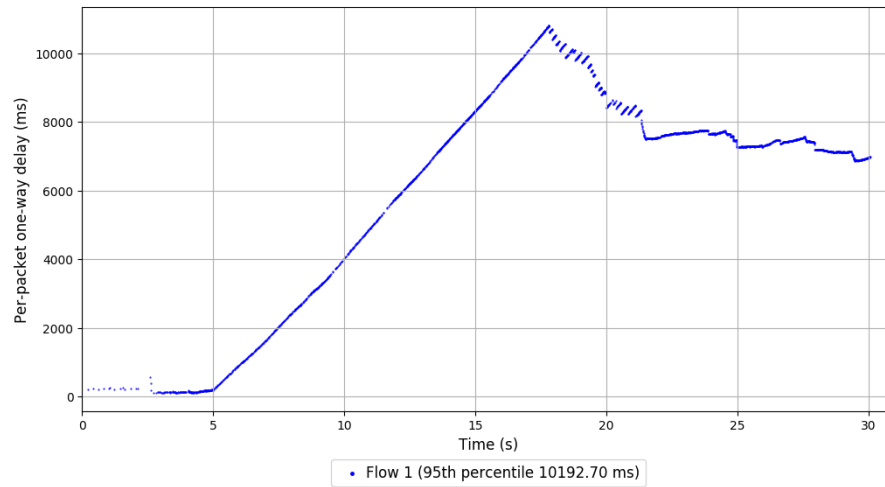
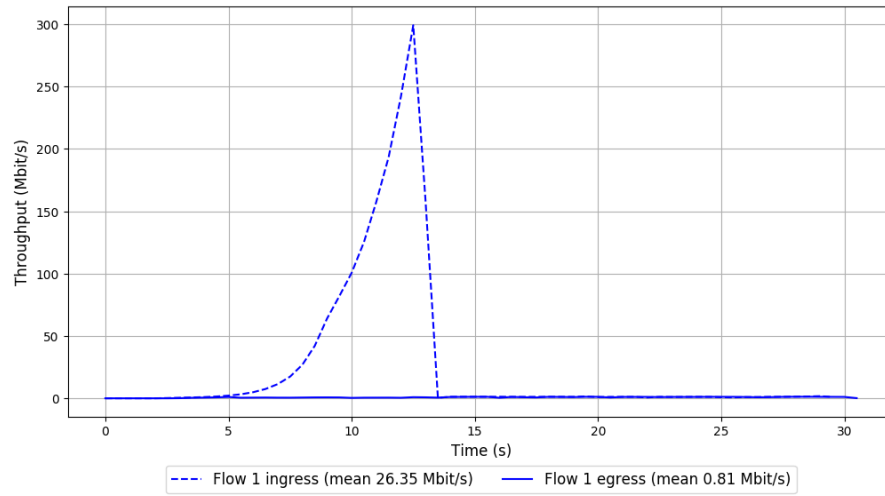
-- Flow 1:

Average throughput: 0.81 Mbit/s

95th percentile per-packet one-way delay: 10192.705 ms

Loss rate: 96.94%

Run 1: Report of FillP — Data Link

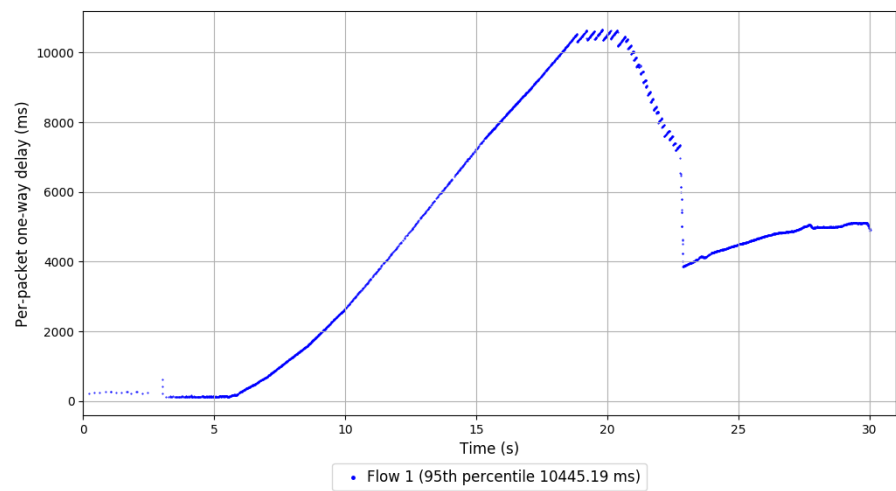
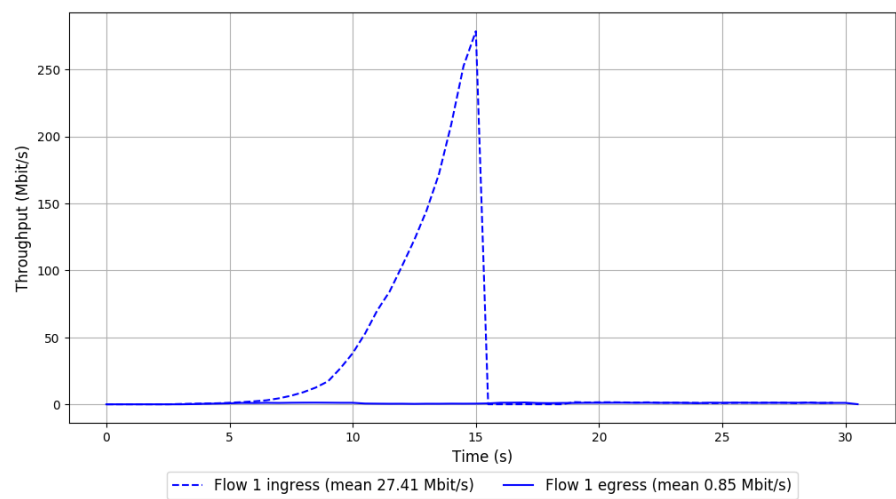


Run 2: Statistics of FillP

Start at: 2018-08-27 20:07:22
End at: 2018-08-27 20:07:52
Local clock offset: 6.464 ms
Remote clock offset: -5.345 ms

Below is generated by plot.py at 2018-08-27 20:27:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.85 Mbit/s
95th percentile per-packet one-way delay: 10445.193 ms
Loss rate: 96.91%
-- Flow 1:
Average throughput: 0.85 Mbit/s
95th percentile per-packet one-way delay: 10445.193 ms
Loss rate: 96.91%

Run 2: Report of FillP — Data Link

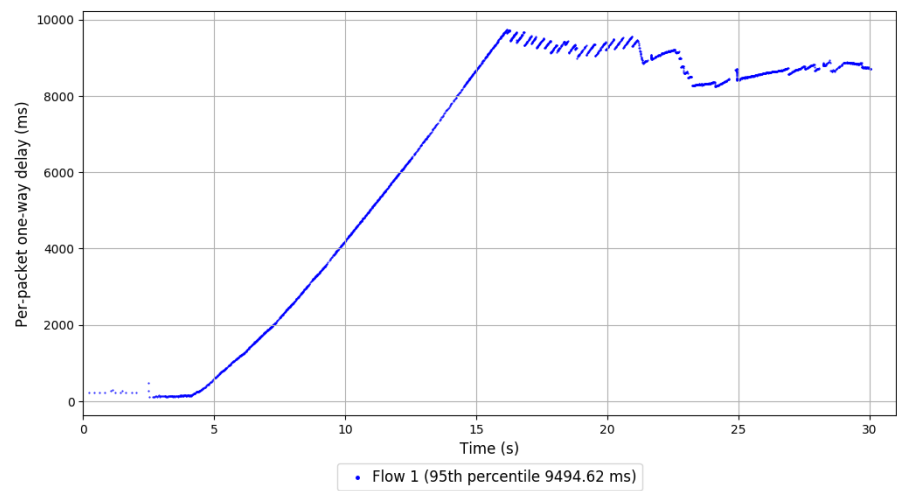
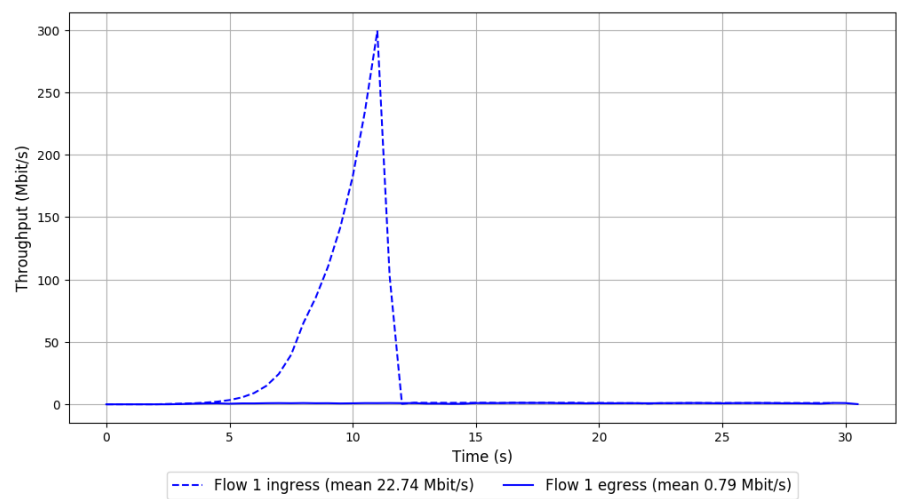


Run 3: Statistics of FillP

Start at: 2018-08-27 20:26:29
End at: 2018-08-27 20:26:59
Local clock offset: 7.552 ms
Remote clock offset: -1.202 ms

Below is generated by plot.py at 2018-08-27 20:27:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.79 Mbit/s
95th percentile per-packet one-way delay: 9494.624 ms
Loss rate: 96.55%
-- Flow 1:
Average throughput: 0.79 Mbit/s
95th percentile per-packet one-way delay: 9494.624 ms
Loss rate: 96.55%

Run 3: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2018-08-27 19:32:34

End at: 2018-08-27 19:33:04

Local clock offset: 9.082 ms

Remote clock offset: -0.745 ms

Below is generated by plot.py at 2018-08-27 20:27:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.45 Mbit/s

95th percentile per-packet one-way delay: 16294.851 ms

Loss rate: 23.26%

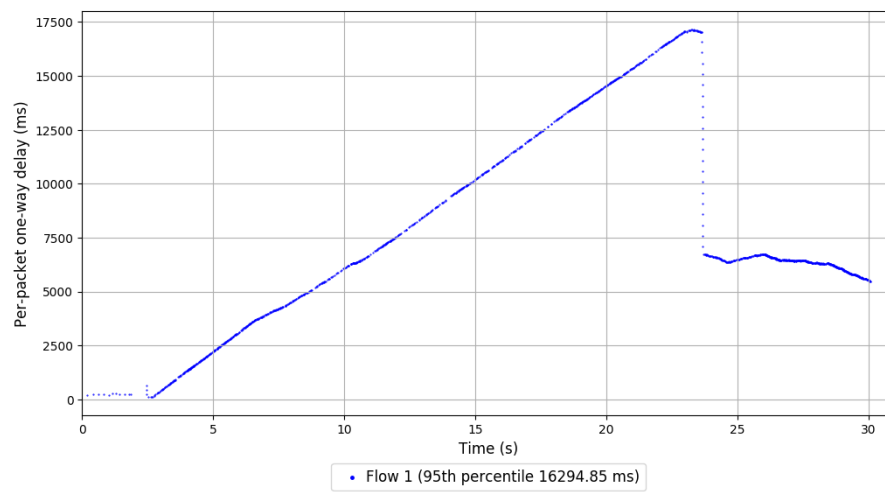
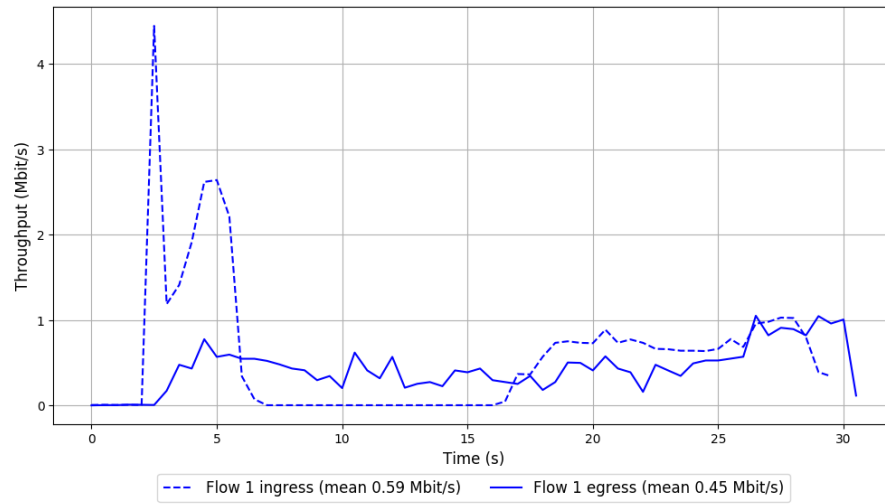
-- Flow 1:

Average throughput: 0.45 Mbit/s

95th percentile per-packet one-way delay: 16294.851 ms

Loss rate: 23.26%

Run 1: Report of FillP-Sheep — Data Link

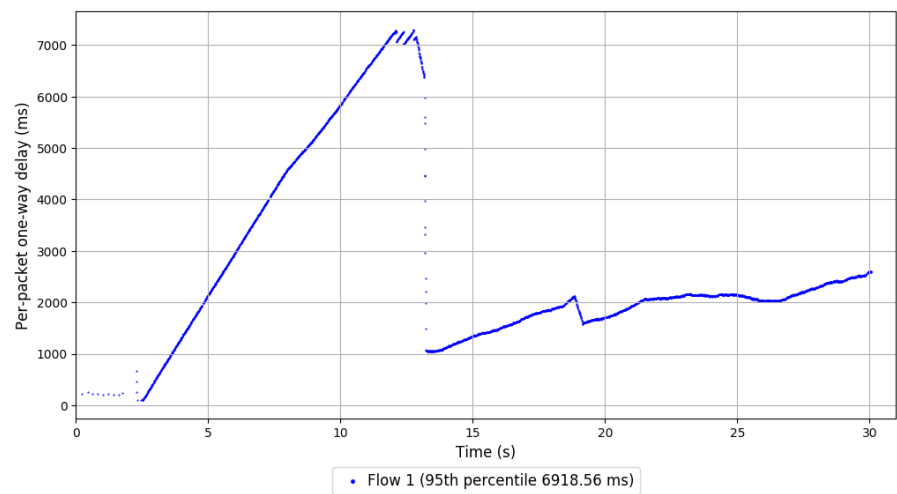
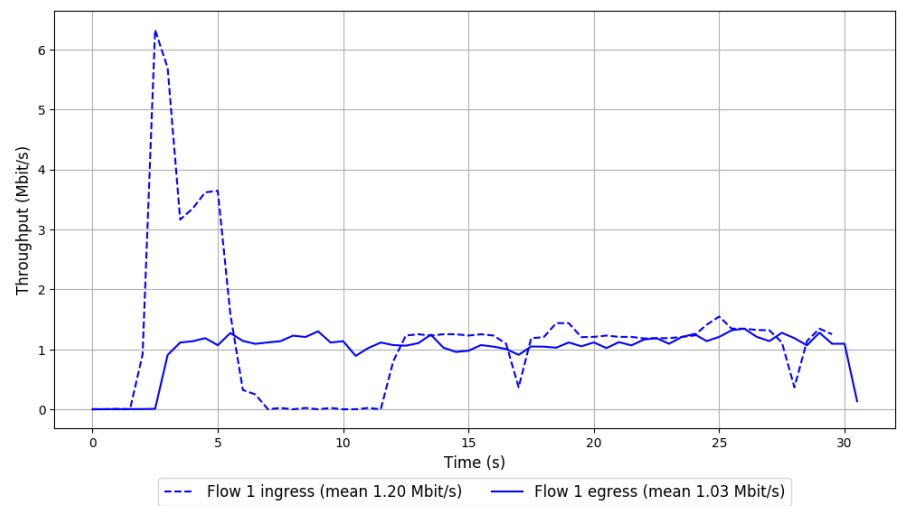


Run 2: Statistics of FillP-Sheep

Start at: 2018-08-27 19:51:40
End at: 2018-08-27 19:52:10
Local clock offset: 4.543 ms
Remote clock offset: -4.339 ms

Below is generated by plot.py at 2018-08-27 20:27:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.03 Mbit/s
95th percentile per-packet one-way delay: 6918.555 ms
Loss rate: 14.32%
-- Flow 1:
Average throughput: 1.03 Mbit/s
95th percentile per-packet one-way delay: 6918.555 ms
Loss rate: 14.32%

Run 2: Report of FillP-Sheep — Data Link

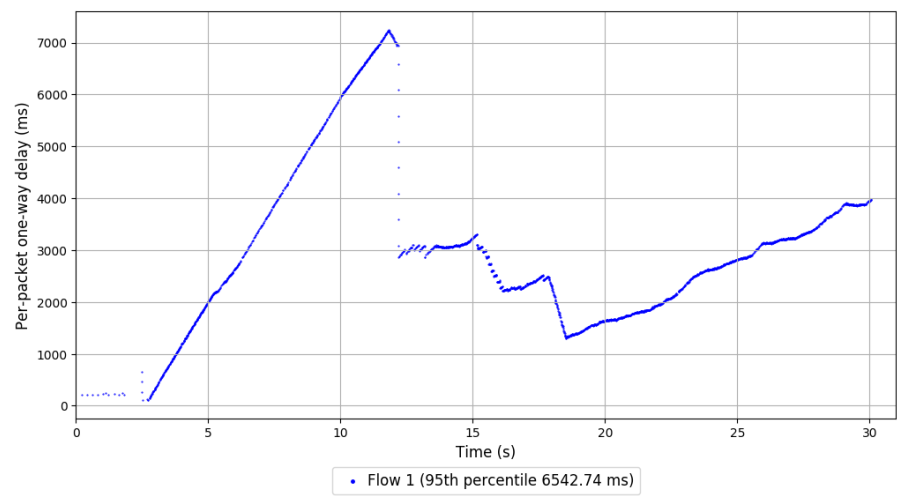
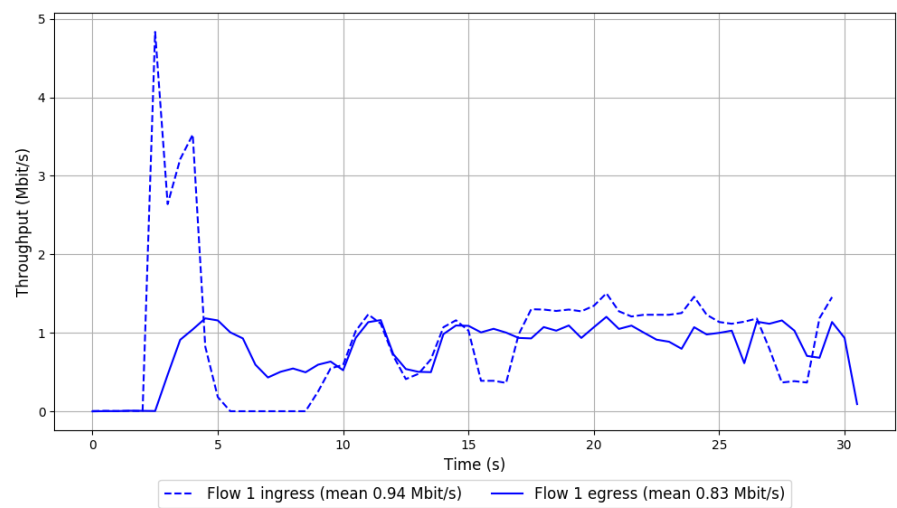


Run 3: Statistics of FillP-Sheep

Start at: 2018-08-27 20:10:45
End at: 2018-08-27 20:11:15
Local clock offset: 6.48 ms
Remote clock offset: -0.393 ms

Below is generated by plot.py at 2018-08-27 20:27:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.83 Mbit/s
95th percentile per-packet one-way delay: 6542.736 ms
Loss rate: 11.96%
-- Flow 1:
Average throughput: 0.83 Mbit/s
95th percentile per-packet one-way delay: 6542.736 ms
Loss rate: 11.96%

Run 3: Report of FillP-Sheep — Data Link



Run 1: Statistics of Indigo

Start at: 2018-08-27 19:41:33

End at: 2018-08-27 19:42:03

Local clock offset: 5.148 ms

Remote clock offset: -3.434 ms

Below is generated by plot.py at 2018-08-27 20:27:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 324.525 ms

Loss rate: 0.38%

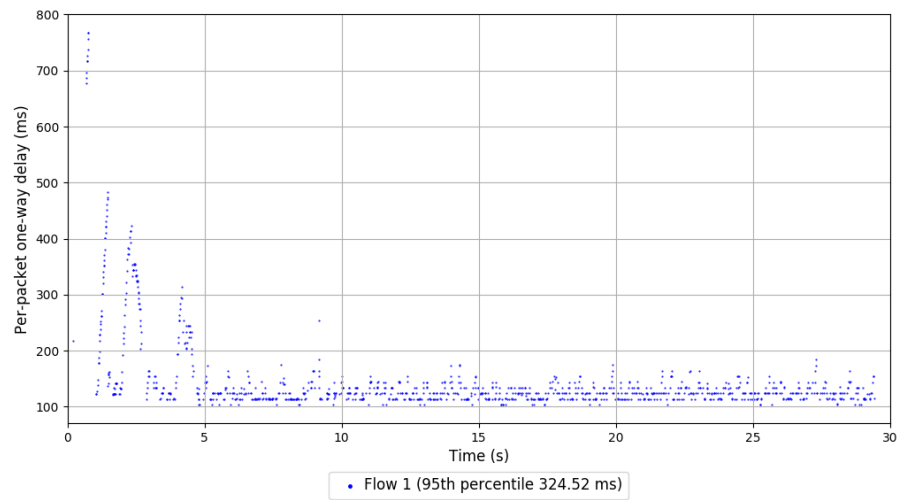
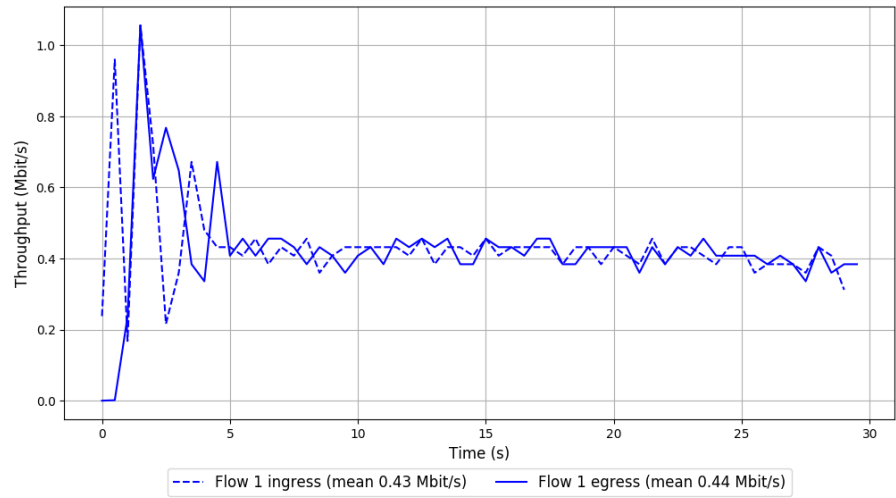
-- Flow 1:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 324.525 ms

Loss rate: 0.38%

Run 1: Report of Indigo — Data Link

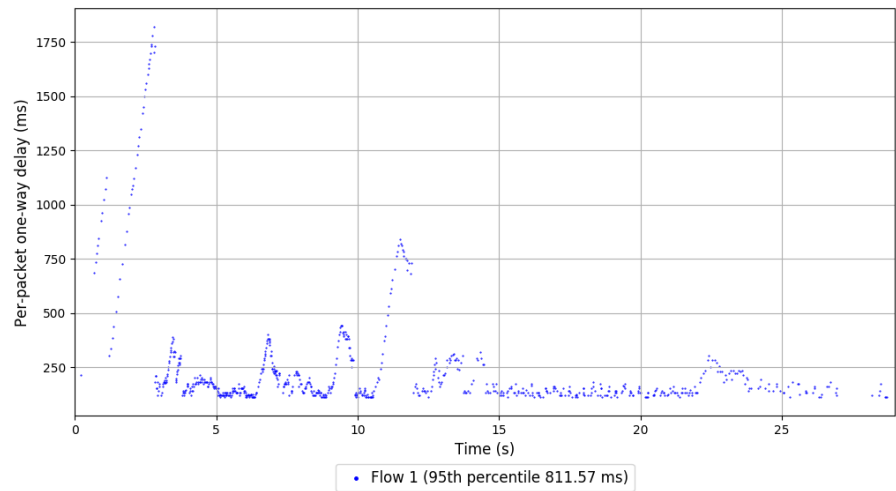
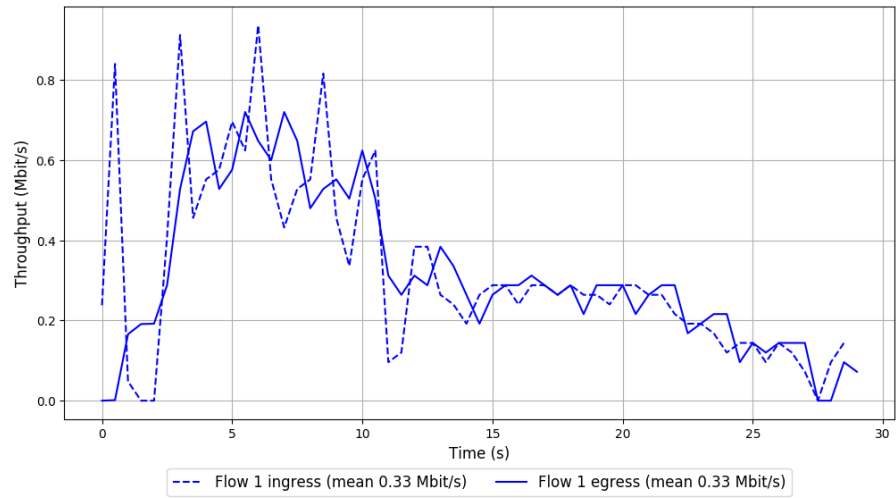


Run 2: Statistics of Indigo

Start at: 2018-08-27 20:00:38
End at: 2018-08-27 20:01:08
Local clock offset: 6.794 ms
Remote clock offset: -4.861 ms

Below is generated by plot.py at 2018-08-27 20:27:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 811.567 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 811.567 ms
Loss rate: 0.77%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2018-08-27 20:19:44

End at: 2018-08-27 20:20:14

Local clock offset: 7.31 ms

Remote clock offset: -5.891 ms

Below is generated by plot.py at 2018-08-27 20:27:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.67 Mbit/s

95th percentile per-packet one-way delay: 260.056 ms

Loss rate: 0.18%

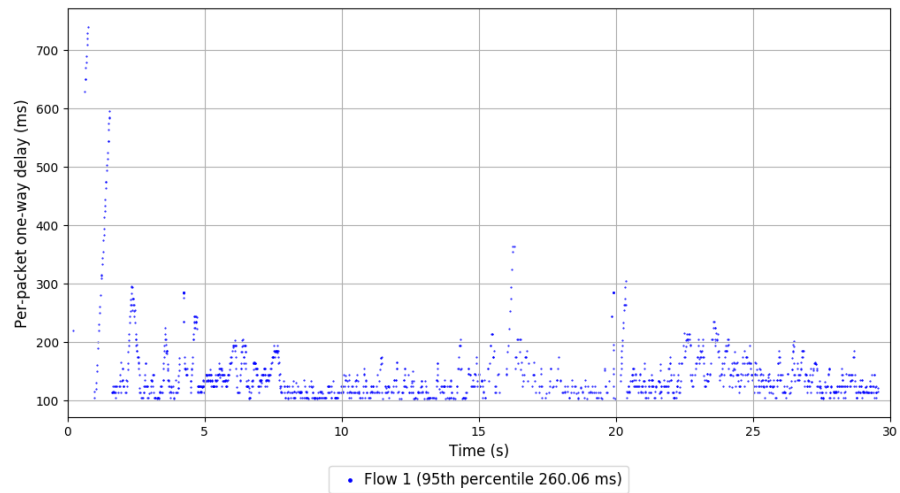
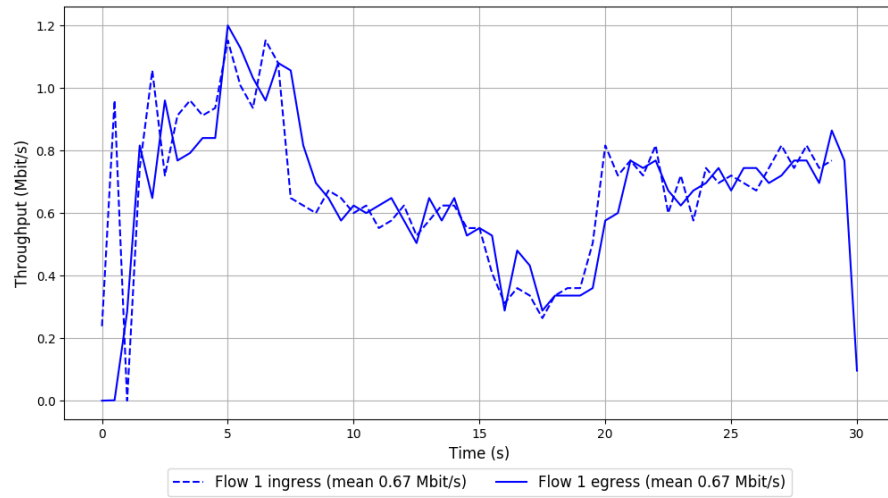
-- Flow 1:

Average throughput: 0.67 Mbit/s

95th percentile per-packet one-way delay: 260.056 ms

Loss rate: 0.18%

Run 3: Report of Indigo — Data Link

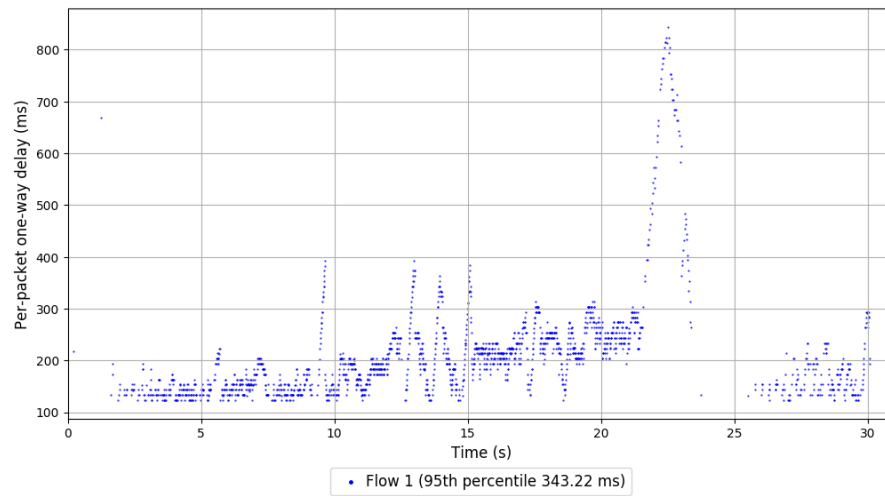
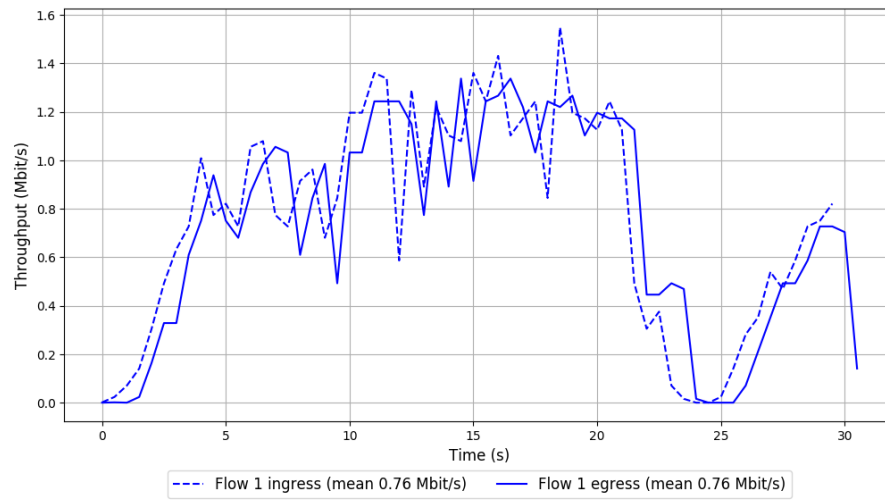


```
Run 1: Statistics of LEDBAT

Start at: 2018-08-27 19:46:02
End at: 2018-08-27 19:46:32
Local clock offset: 4.894 ms
Remote clock offset: 1.068 ms

# Below is generated by plot.py at 2018-08-27 20:27:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.76 Mbit/s
95th percentile per-packet one-way delay: 343.224 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 0.76 Mbit/s
95th percentile per-packet one-way delay: 343.224 ms
Loss rate: 0.56%
```

Run 1: Report of LEDBAT — Data Link

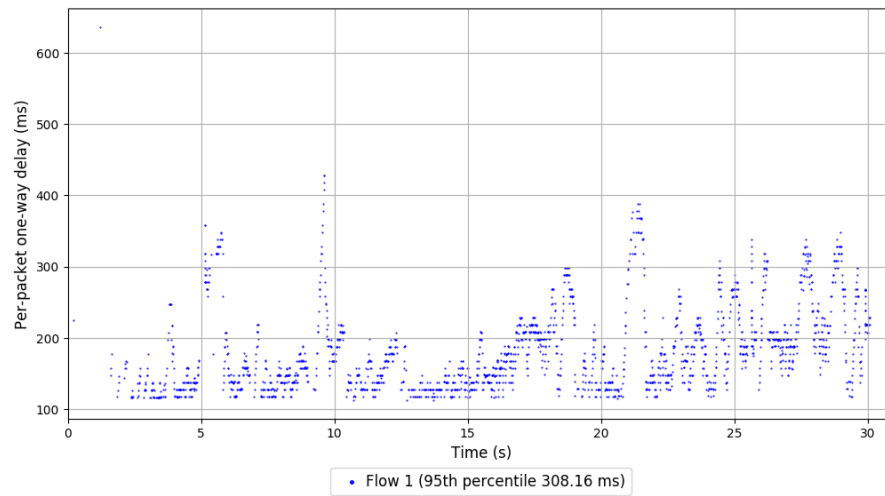
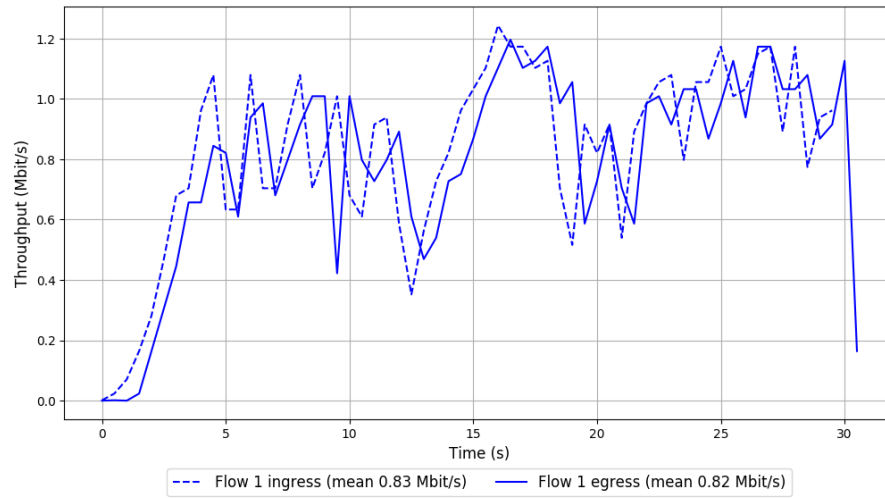


Run 2: Statistics of LEDBAT

Start at: 2018-08-27 20:05:07
End at: 2018-08-27 20:05:37
Local clock offset: 7.418 ms
Remote clock offset: -4.118 ms

Below is generated by plot.py at 2018-08-27 20:27:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.82 Mbit/s
95th percentile per-packet one-way delay: 308.156 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 0.82 Mbit/s
95th percentile per-packet one-way delay: 308.156 ms
Loss rate: 0.47%

Run 2: Report of LEDBAT — Data Link

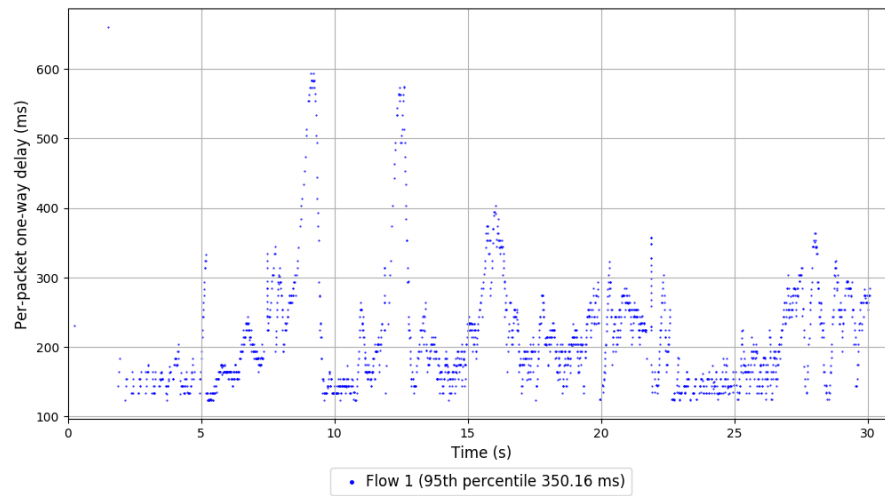
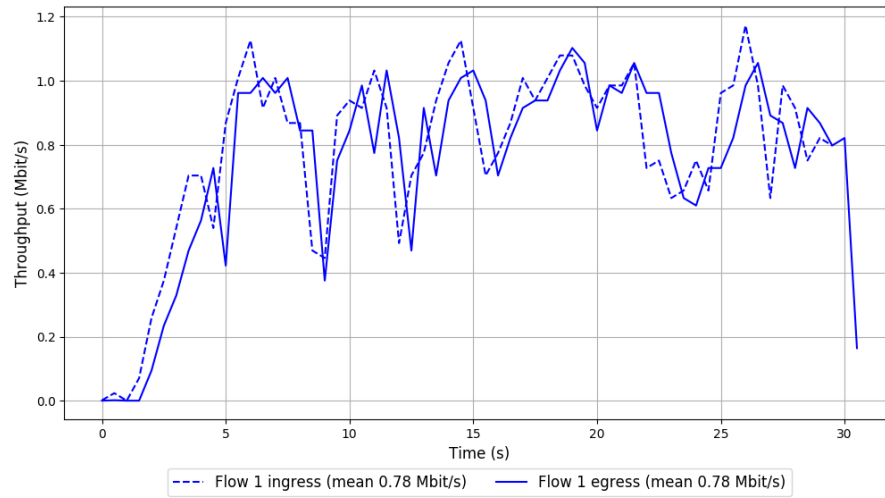


Run 3: Statistics of LEDBAT

Start at: 2018-08-27 20:24:13
End at: 2018-08-27 20:24:43
Local clock offset: 7.176 ms
Remote clock offset: -1.128 ms

Below is generated by plot.py at 2018-08-27 20:27:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.78 Mbit/s
95th percentile per-packet one-way delay: 350.162 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 0.78 Mbit/s
95th percentile per-packet one-way delay: 350.162 ms
Loss rate: 0.80%

Run 3: Report of LEDBAT — Data Link

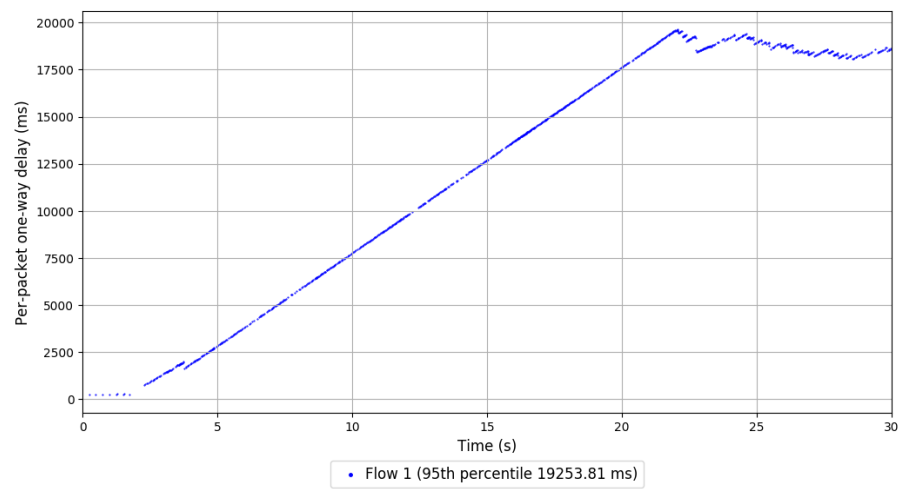
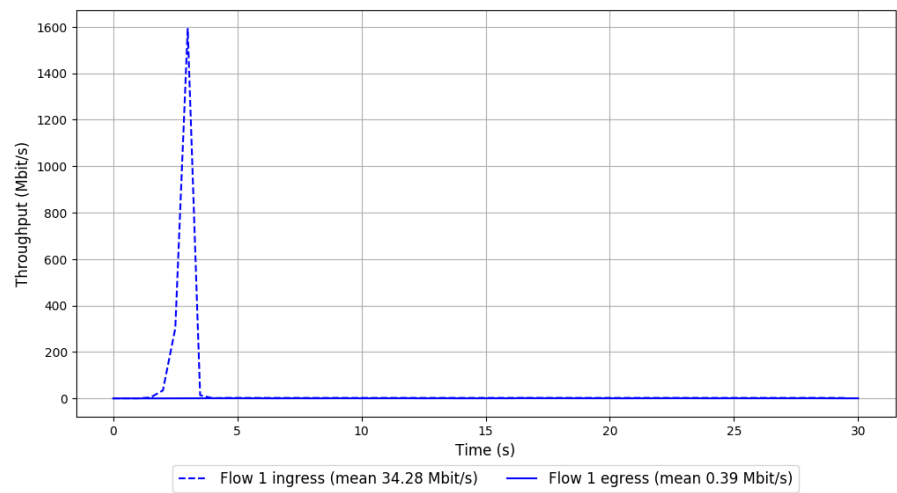


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-08-27 19:31:26
End at: 2018-08-27 19:31:56
Local clock offset: 9.205 ms
Remote clock offset: 2.594 ms

# Below is generated by plot.py at 2018-08-27 20:27:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 19253.810 ms
Loss rate: 98.87%
-- Flow 1:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 19253.810 ms
Loss rate: 98.87%
```

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-08-27 19:50:32

End at: 2018-08-27 19:51:02

Local clock offset: 4.411 ms

Remote clock offset: -0.352 ms

Below is generated by plot.py at 2018-08-27 20:27:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.98 Mbit/s

95th percentile per-packet one-way delay: 8024.696 ms

Loss rate: 89.53%

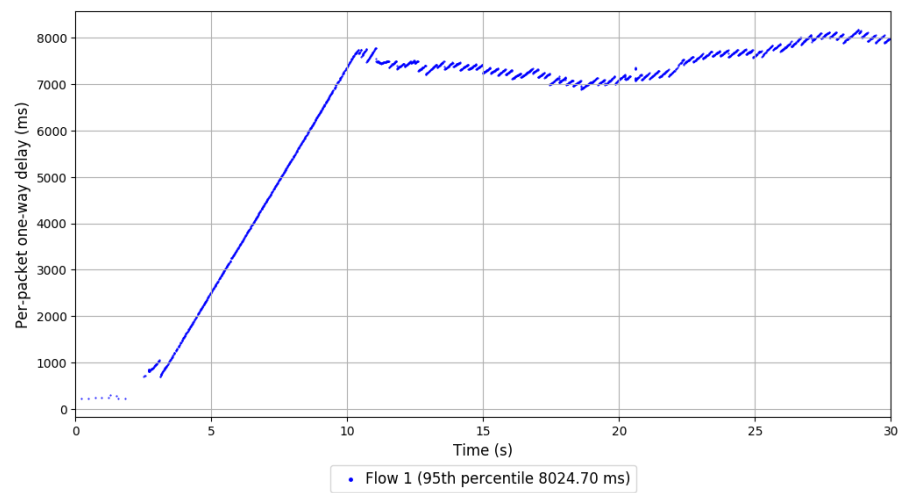
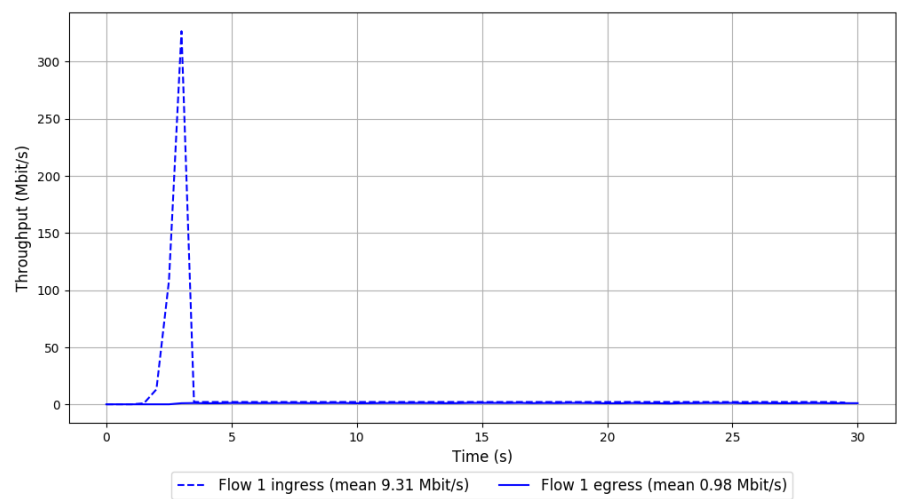
-- Flow 1:

Average throughput: 0.98 Mbit/s

95th percentile per-packet one-way delay: 8024.696 ms

Loss rate: 89.53%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-08-27 20:09:37

End at: 2018-08-27 20:10:07

Local clock offset: 6.45 ms

Remote clock offset: -0.354 ms

Below is generated by plot.py at 2018-08-27 20:27:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.88 Mbit/s

95th percentile per-packet one-way delay: 9089.222 ms

Loss rate: 91.64%

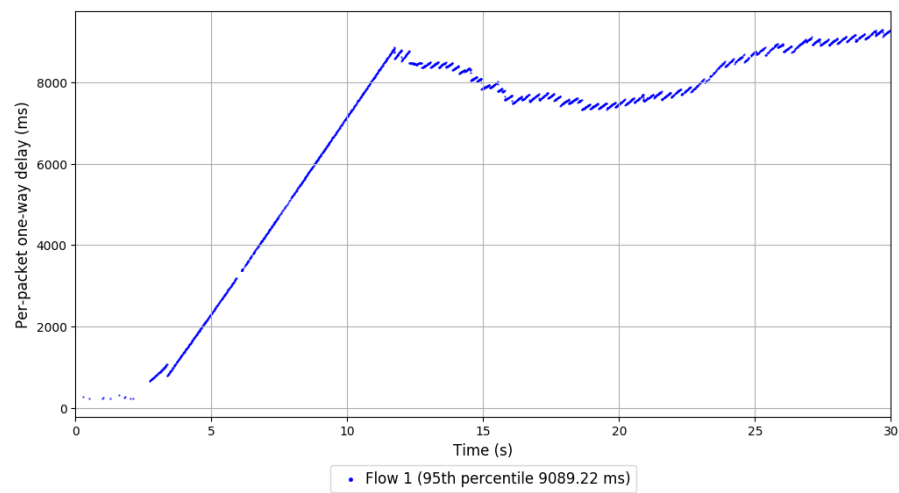
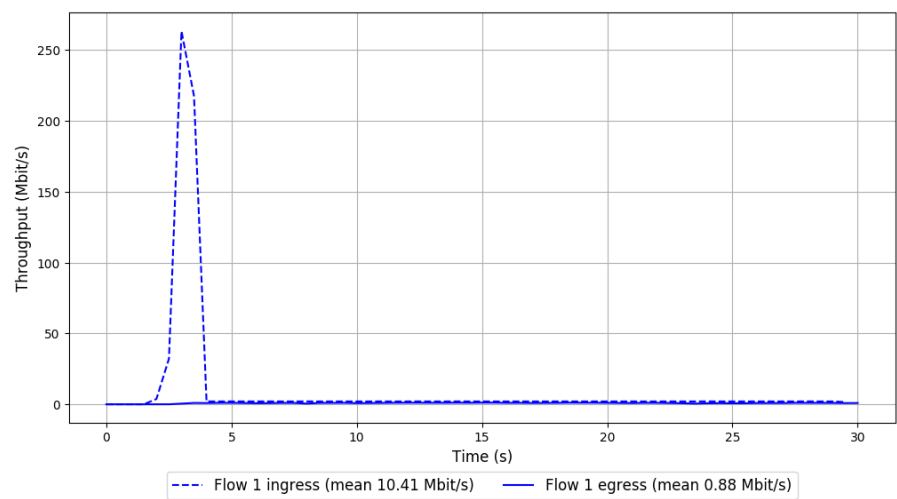
-- Flow 1:

Average throughput: 0.88 Mbit/s

95th percentile per-packet one-way delay: 9089.222 ms

Loss rate: 91.64%

Run 3: Report of PCC-Allegro — Data Link

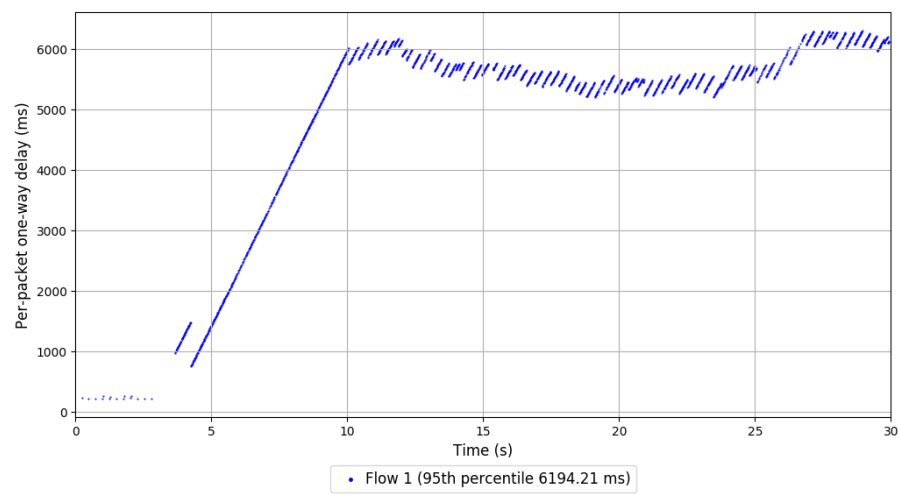
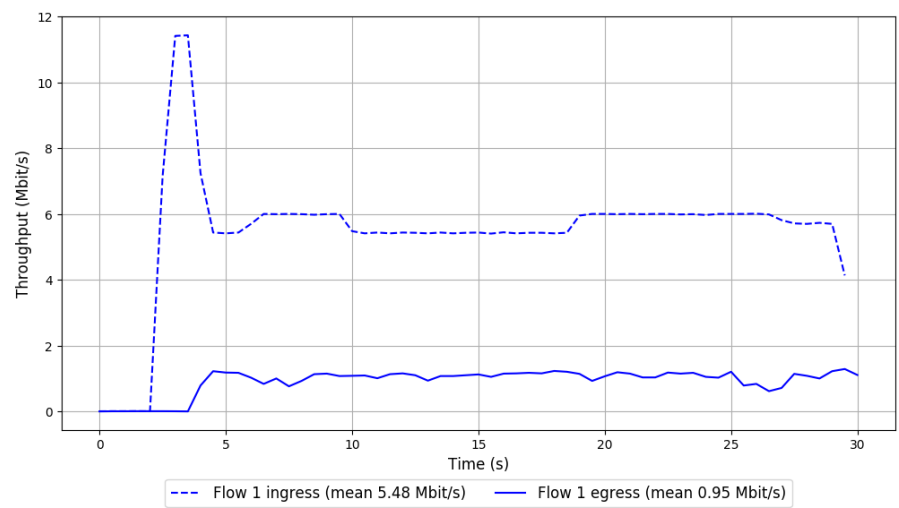


Run 1: Statistics of PCC-Expr

Start at: 2018-08-27 19:42:41
End at: 2018-08-27 19:43:11
Local clock offset: 5.05 ms
Remote clock offset: -3.595 ms

Below is generated by plot.py at 2018-08-27 20:27:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.95 Mbit/s
95th percentile per-packet one-way delay: 6194.206 ms
Loss rate: 82.78%
-- Flow 1:
Average throughput: 0.95 Mbit/s
95th percentile per-packet one-way delay: 6194.206 ms
Loss rate: 82.78%

Run 1: Report of PCC-Expr — Data Link

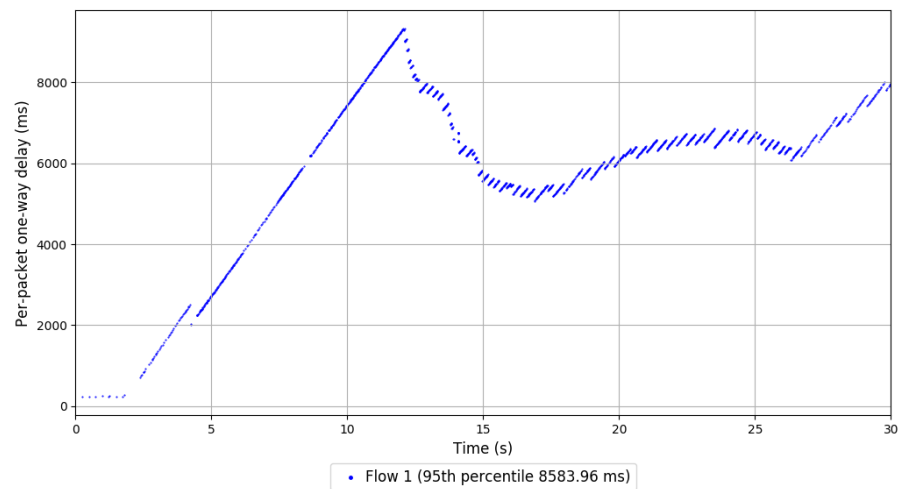
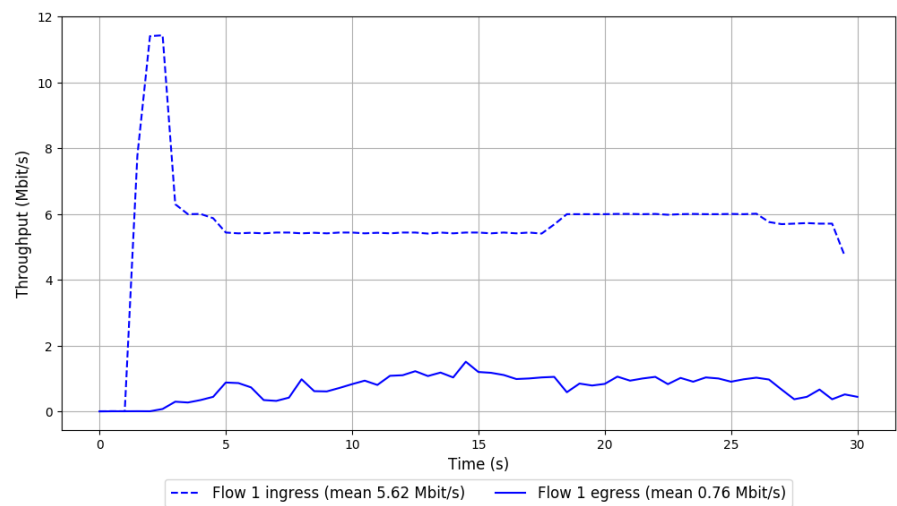


Run 2: Statistics of PCC-Expr

Start at: 2018-08-27 20:01:45
End at: 2018-08-27 20:02:15
Local clock offset: 6.275 ms
Remote clock offset: -1.019 ms

Below is generated by plot.py at 2018-08-27 20:27:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.76 Mbit/s
95th percentile per-packet one-way delay: 8583.960 ms
Loss rate: 86.50%
-- Flow 1:
Average throughput: 0.76 Mbit/s
95th percentile per-packet one-way delay: 8583.960 ms
Loss rate: 86.50%

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2018-08-27 20:20:51

End at: 2018-08-27 20:21:21

Local clock offset: 6.647 ms

Remote clock offset: -0.9 ms

Below is generated by plot.py at 2018-08-27 20:27:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.99 Mbit/s

95th percentile per-packet one-way delay: 6128.530 ms

Loss rate: 82.24%

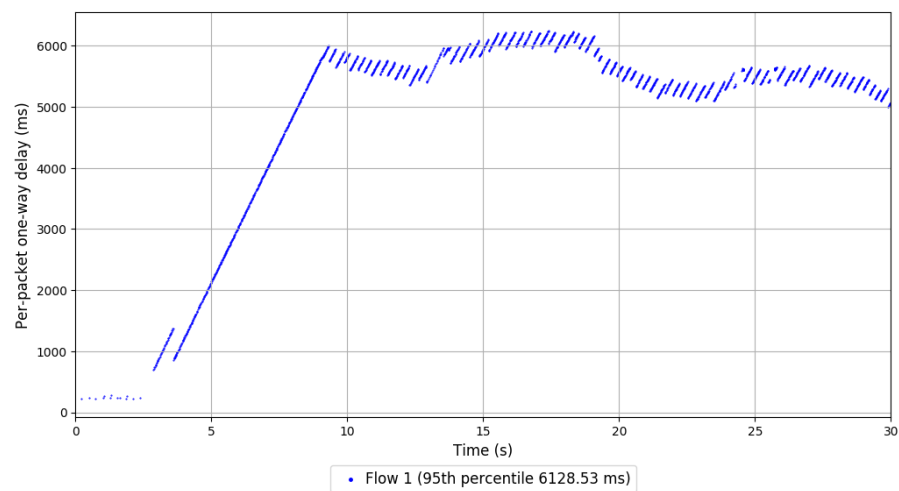
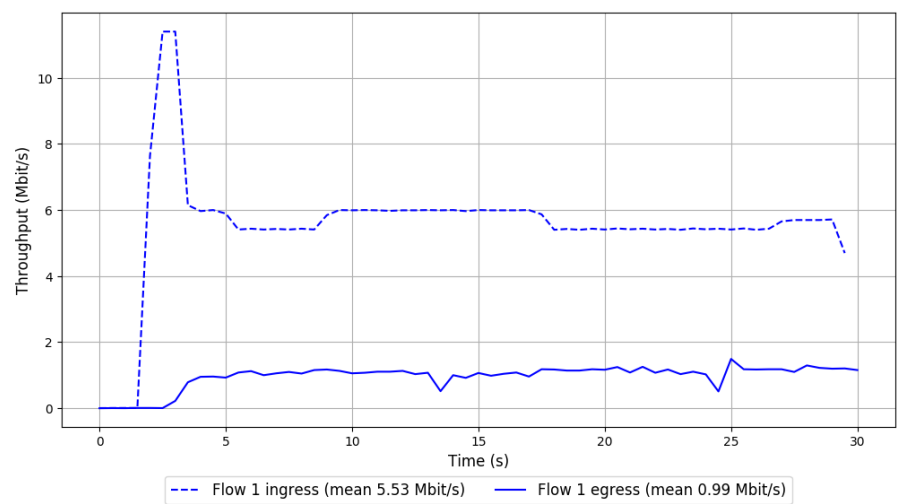
-- Flow 1:

Average throughput: 0.99 Mbit/s

95th percentile per-packet one-way delay: 6128.530 ms

Loss rate: 82.24%

Run 3: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

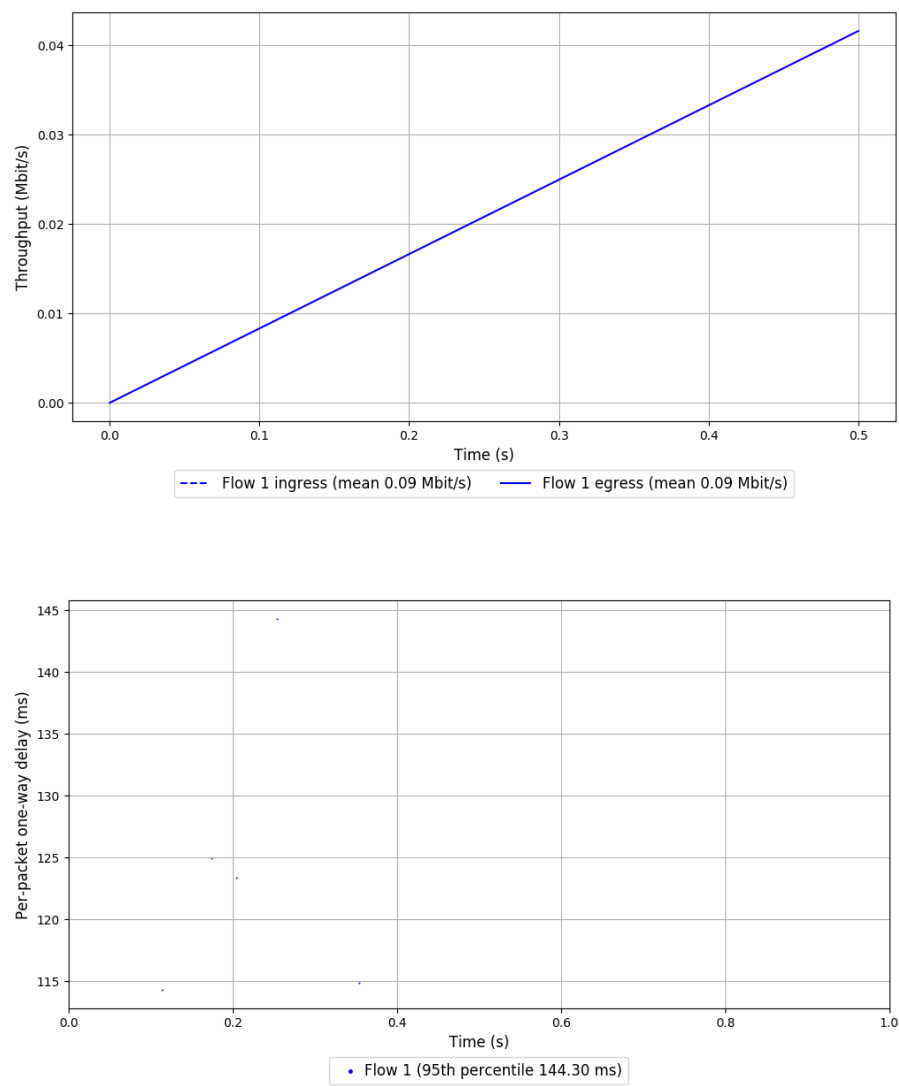
Start at: 2018-08-27 19:35:56

End at: 2018-08-27 19:36:26

Local clock offset: 6.103 ms

Remote clock offset: 1.207 ms

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-08-27 19:55:02

End at: 2018-08-27 19:55:32

Local clock offset: 5.777 ms

Remote clock offset: -4.449 ms

Below is generated by plot.py at 2018-08-27 20:27:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.74 Mbit/s

95th percentile per-packet one-way delay: 1705.207 ms

Loss rate: 4.05%

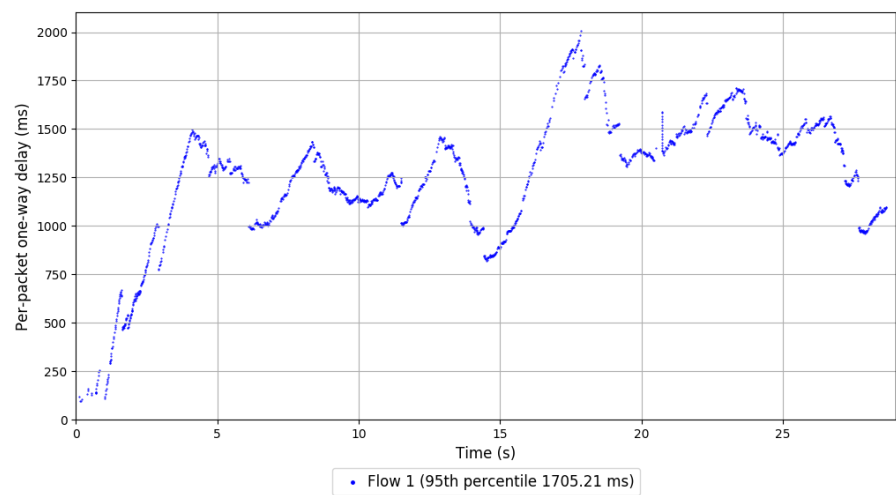
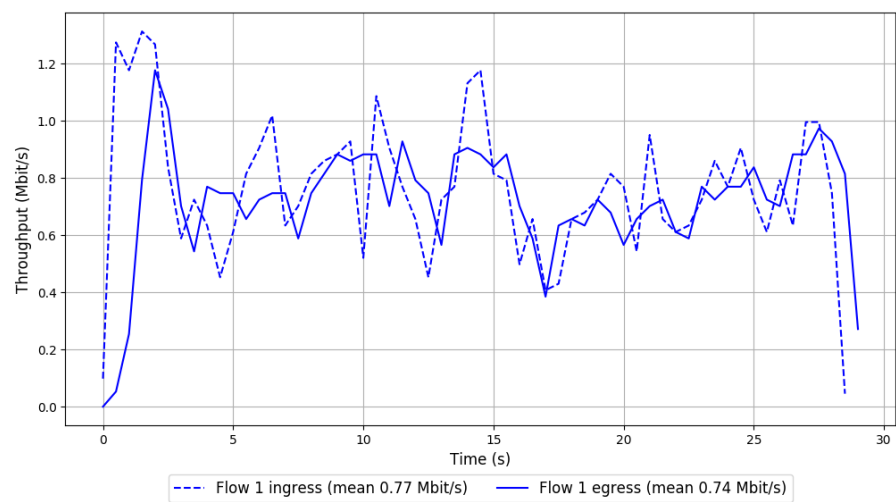
-- Flow 1:

Average throughput: 0.74 Mbit/s

95th percentile per-packet one-way delay: 1705.207 ms

Loss rate: 4.05%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-08-27 20:14:07

End at: 2018-08-27 20:14:37

Local clock offset: 5.914 ms

Remote clock offset: -0.599 ms

Below is generated by plot.py at 2018-08-27 20:27:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.00 Mbit/s

95th percentile per-packet one-way delay: 2319.729 ms

Loss rate: 7.00%

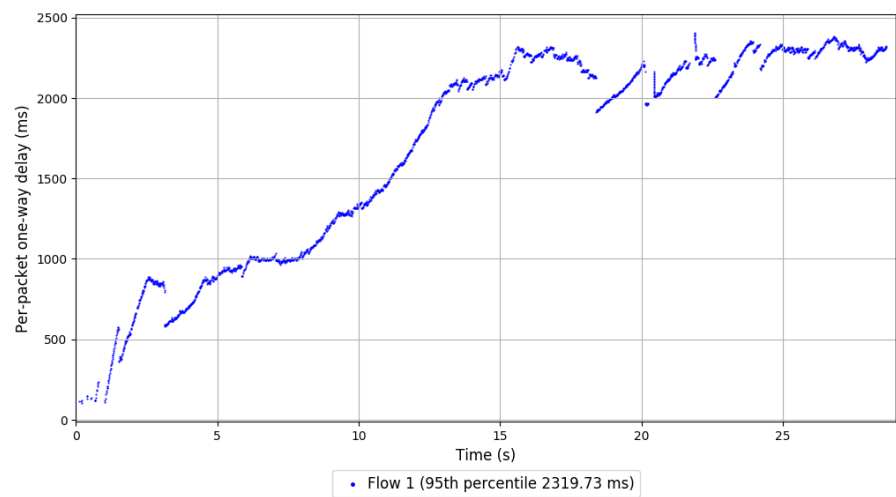
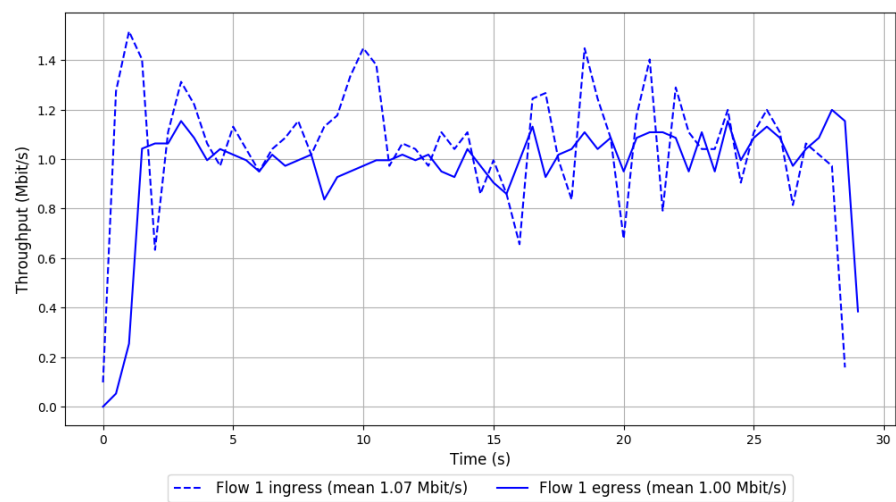
-- Flow 1:

Average throughput: 1.00 Mbit/s

95th percentile per-packet one-way delay: 2319.729 ms

Loss rate: 7.00%

Run 3: Report of QUIC Cubic — Data Link

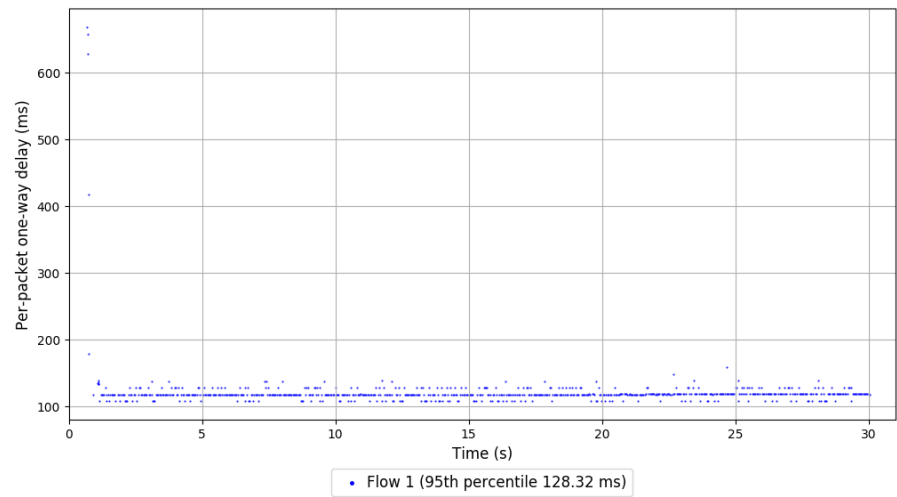
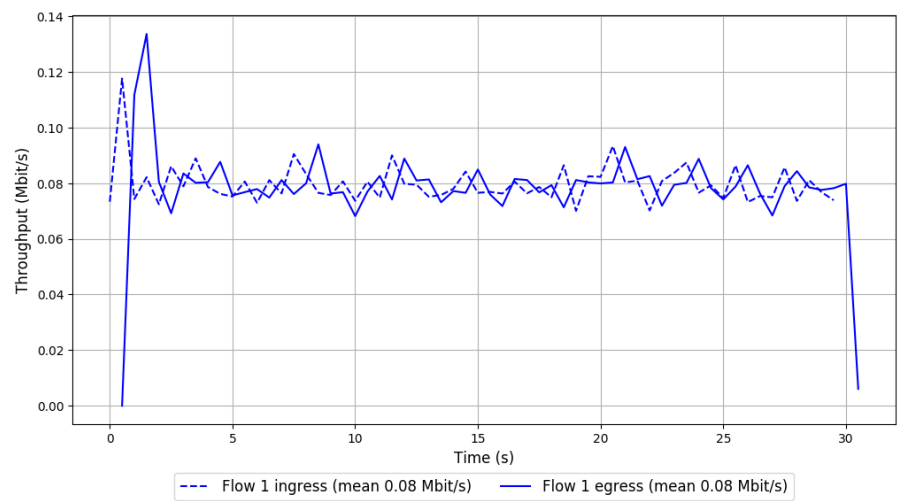


```
Run 1: Statistics of SCReAM

Start at: 2018-08-27 19:47:09
End at: 2018-08-27 19:47:39
Local clock offset: 4.174 ms
Remote clock offset: 1.017 ms

# Below is generated by plot.py at 2018-08-27 20:27:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 128.321 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 128.321 ms
Loss rate: 0.41%
```

Run 1: Report of SReAM — Data Link

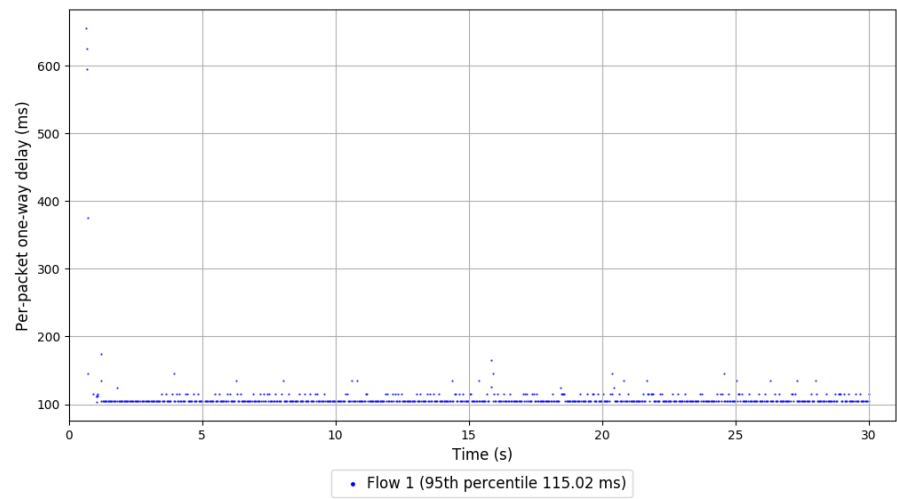
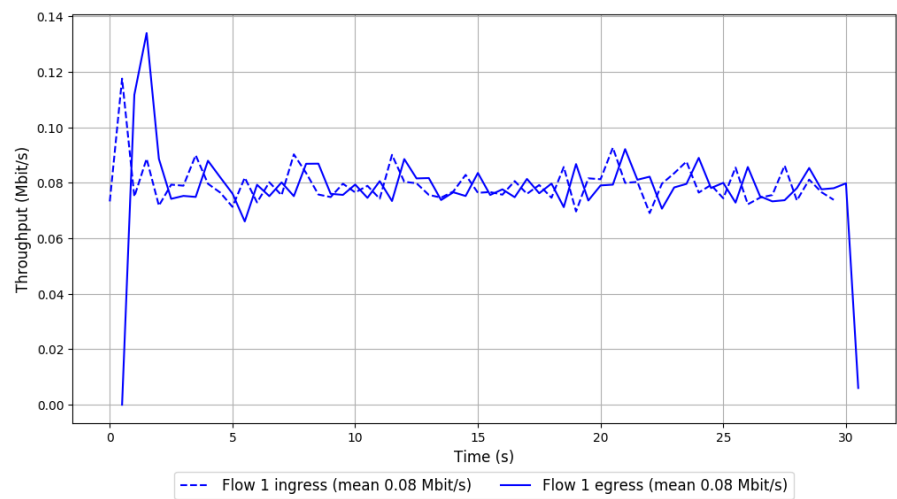


Run 2: Statistics of SCReAM

Start at: 2018-08-27 20:06:15
End at: 2018-08-27 20:06:45
Local clock offset: 5.771 ms
Remote clock offset: -5.233 ms

Below is generated by plot.py at 2018-08-27 20:27:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 115.024 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 115.024 ms
Loss rate: 0.40%

Run 2: Report of SReAM — Data Link

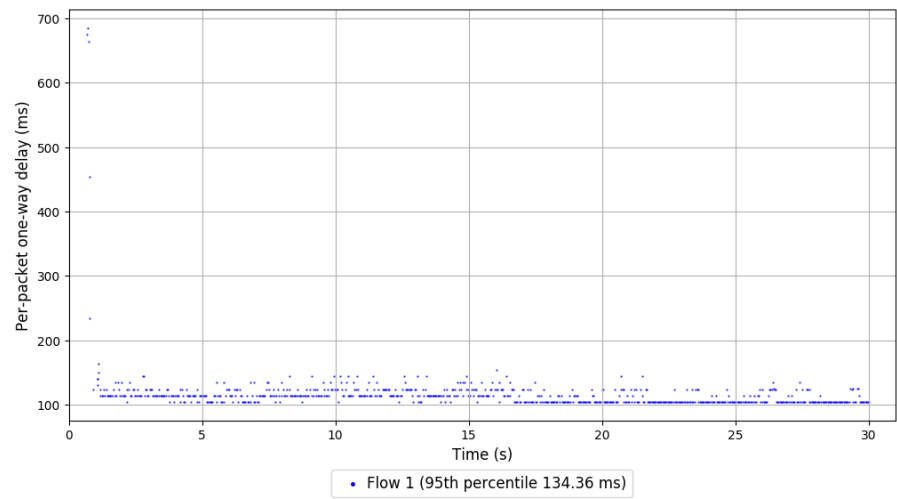
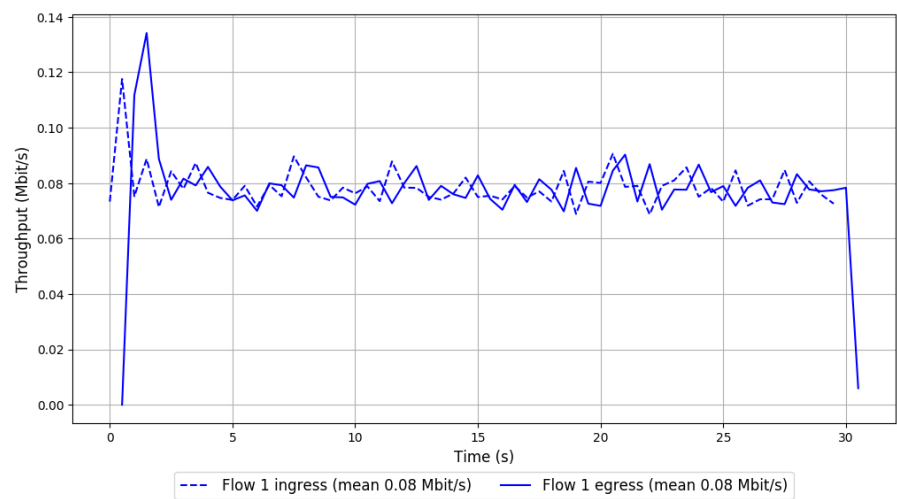


Run 3: Statistics of SCReAM

Start at: 2018-08-27 20:25:21
End at: 2018-08-27 20:25:51
Local clock offset: 8.136 ms
Remote clock offset: -6.208 ms

Below is generated by plot.py at 2018-08-27 20:27:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 134.362 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 134.362 ms
Loss rate: 0.13%

Run 3: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2018-08-27 19:43:47

End at: 2018-08-27 19:44:18

Local clock offset: 4.885 ms

Remote clock offset: 1.247 ms

Below is generated by plot.py at 2018-08-27 20:27:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.15 Mbit/s

95th percentile per-packet one-way delay: 506.958 ms

Loss rate: 0.70%

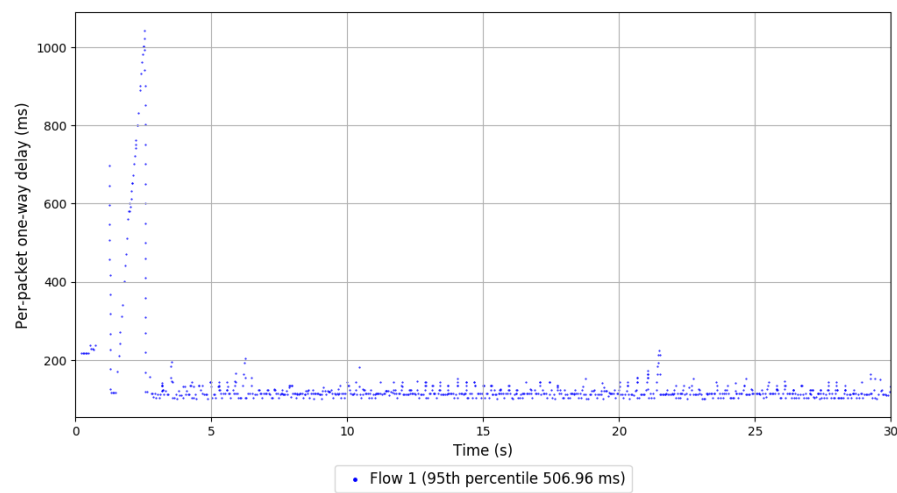
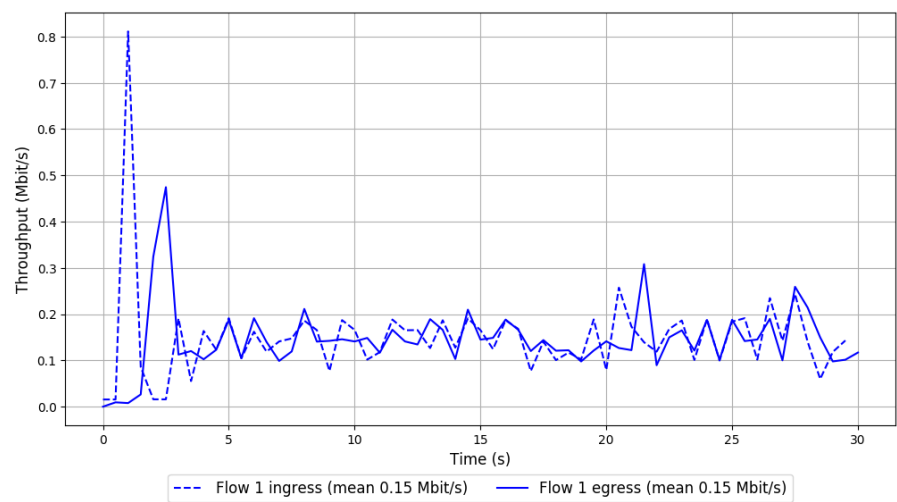
-- Flow 1:

Average throughput: 0.15 Mbit/s

95th percentile per-packet one-way delay: 506.958 ms

Loss rate: 0.70%

Run 1: Report of Sprout — Data Link

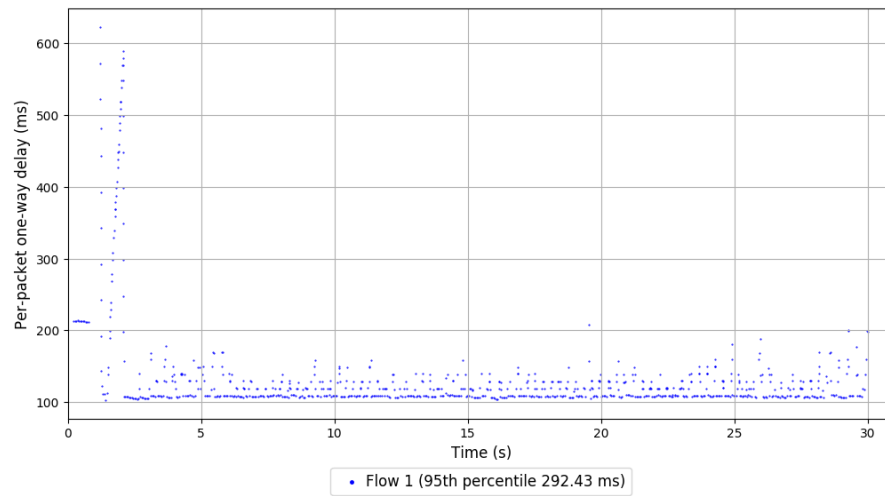
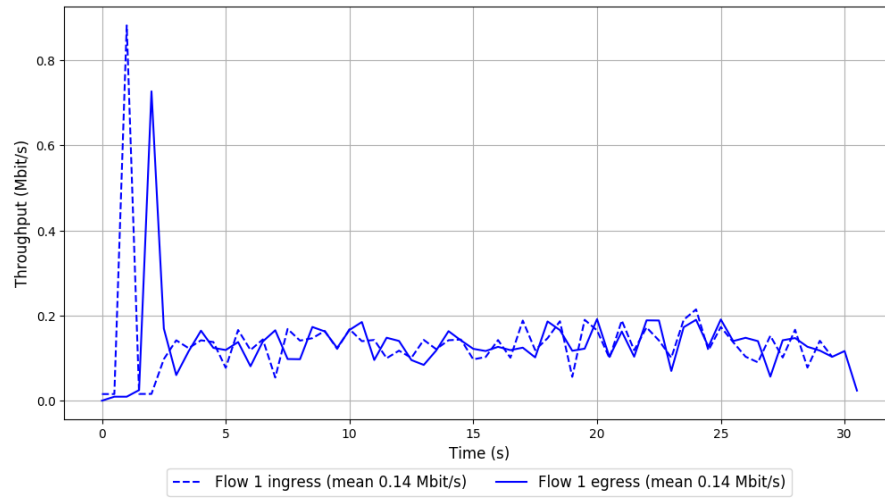


Run 2: Statistics of Sprout

Start at: 2018-08-27 20:02:53
End at: 2018-08-27 20:03:23
Local clock offset: 7.755 ms
Remote clock offset: -1.034 ms

Below is generated by plot.py at 2018-08-27 20:27:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 292.426 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 292.426 ms
Loss rate: 0.04%

Run 2: Report of Sprout — Data Link

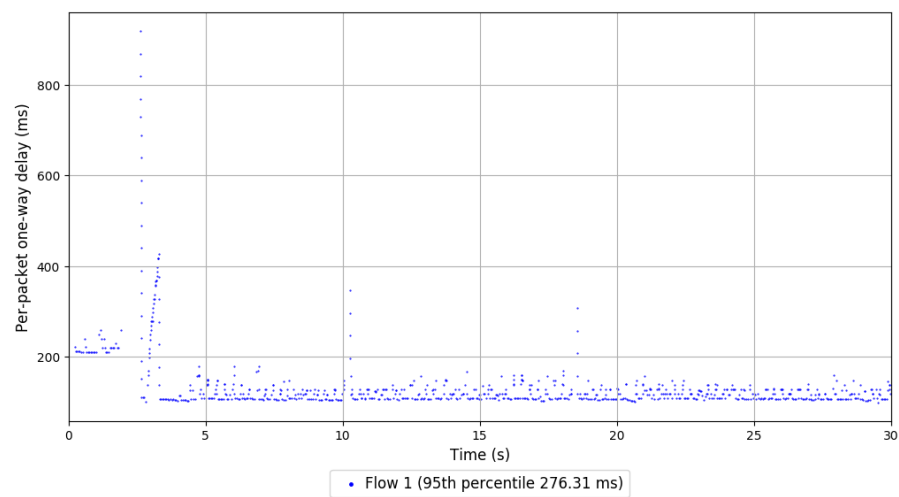
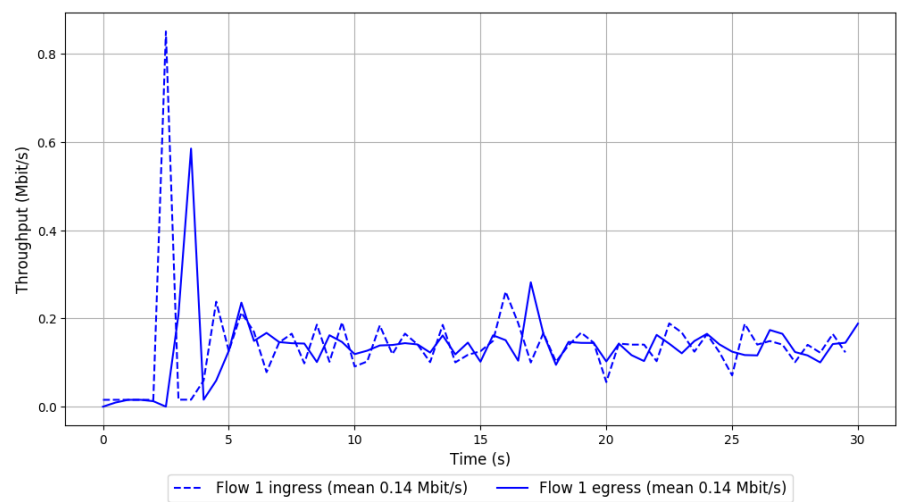


Run 3: Statistics of Sprout

Start at: 2018-08-27 20:21:58
End at: 2018-08-27 20:22:28
Local clock offset: 7.573 ms
Remote clock offset: -4.854 ms

Below is generated by plot.py at 2018-08-27 20:27:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 276.309 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 276.309 ms
Loss rate: 1.45%

Run 3: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

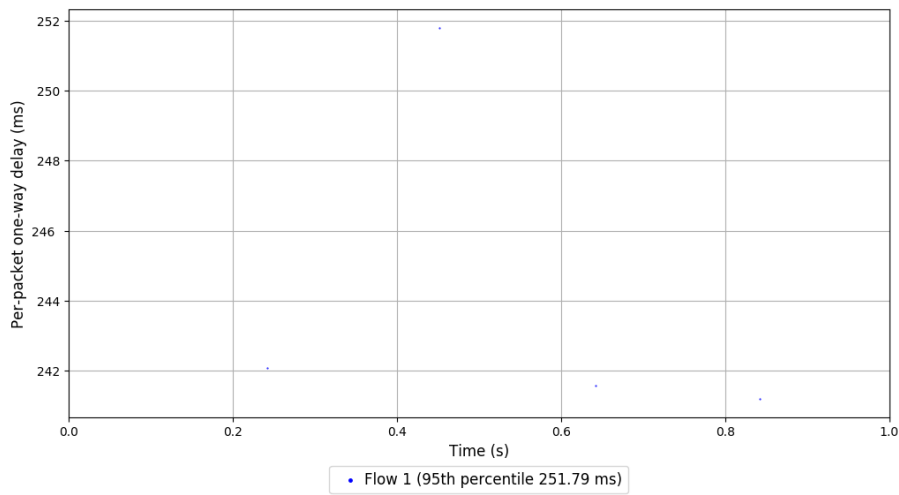
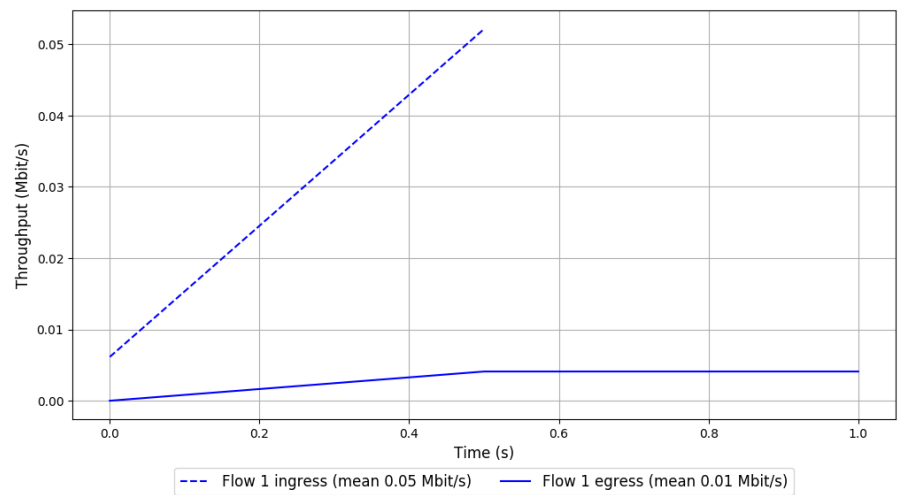
Start at: 2018-08-27 19:37:03

End at: 2018-08-27 19:37:34

Local clock offset: 6.258 ms

Remote clock offset: -1.771 ms

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



Run 2: Statistics of TaoVA-100x

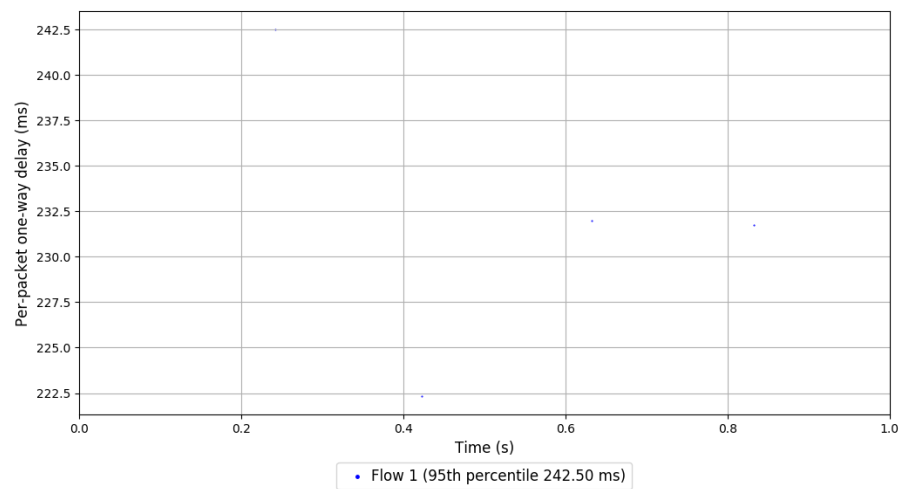
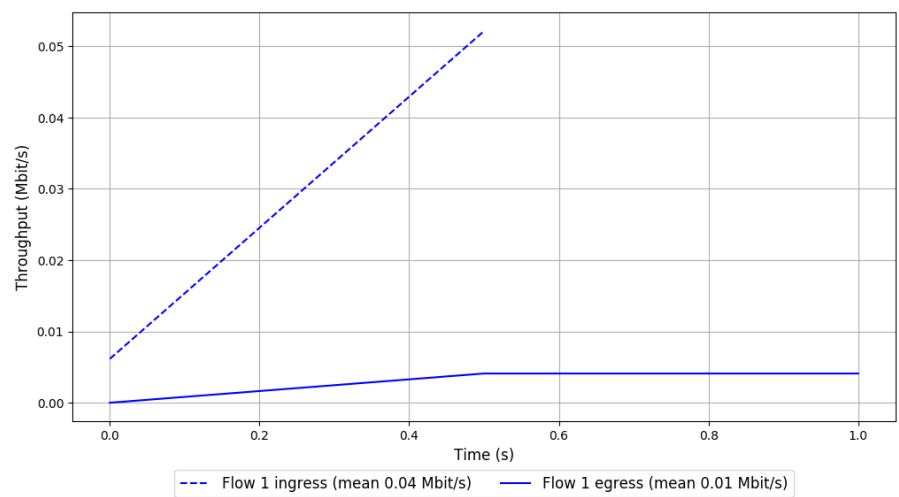
Start at: 2018-08-27 19:56:09

End at: 2018-08-27 19:56:39

Local clock offset: 6.712 ms

Remote clock offset: -3.544 ms

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



Run 3: Statistics of TaoVA-100x

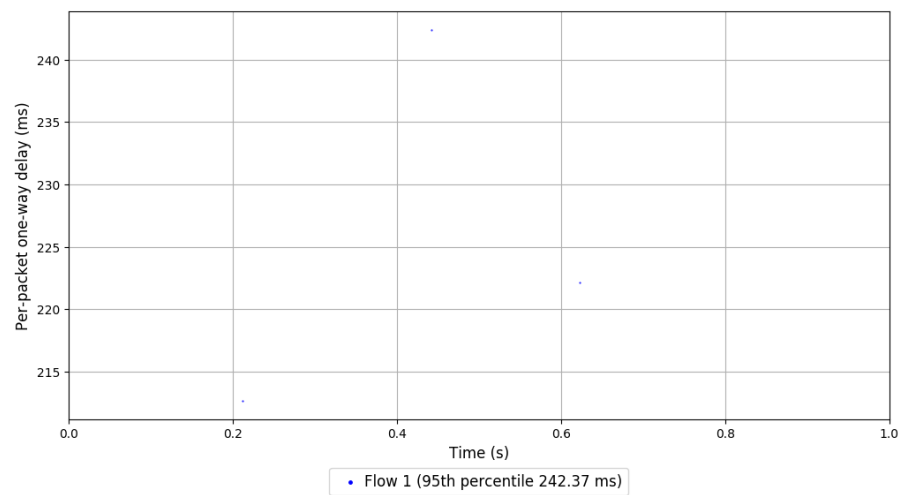
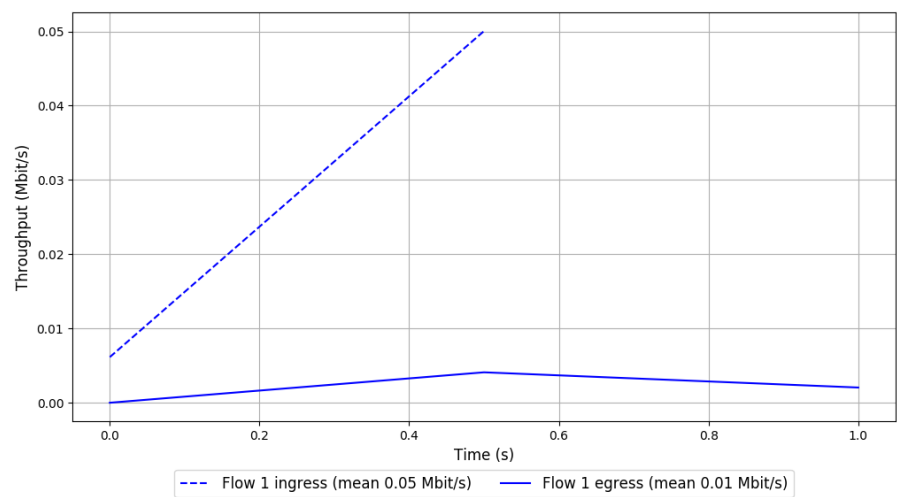
Start at: 2018-08-27 20:15:14

End at: 2018-08-27 20:15:45

Local clock offset: 7.535 ms

Remote clock offset: -4.522 ms

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



Run 1: Statistics of TCP Vegas

Start at: 2018-08-27 19:39:18

End at: 2018-08-27 19:39:48

Local clock offset: 5.578 ms

Remote clock offset: 1.895 ms

Below is generated by plot.py at 2018-08-27 20:27:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.77 Mbit/s

95th percentile per-packet one-way delay: 402.252 ms

Loss rate: 0.47%

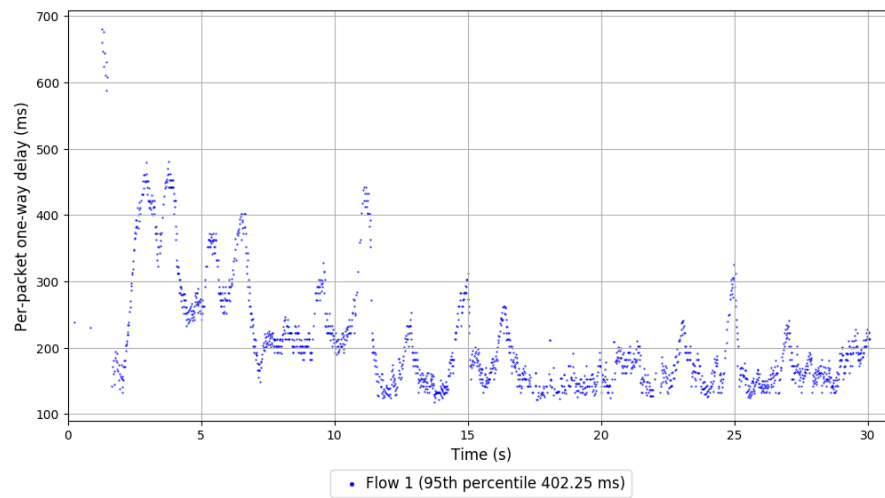
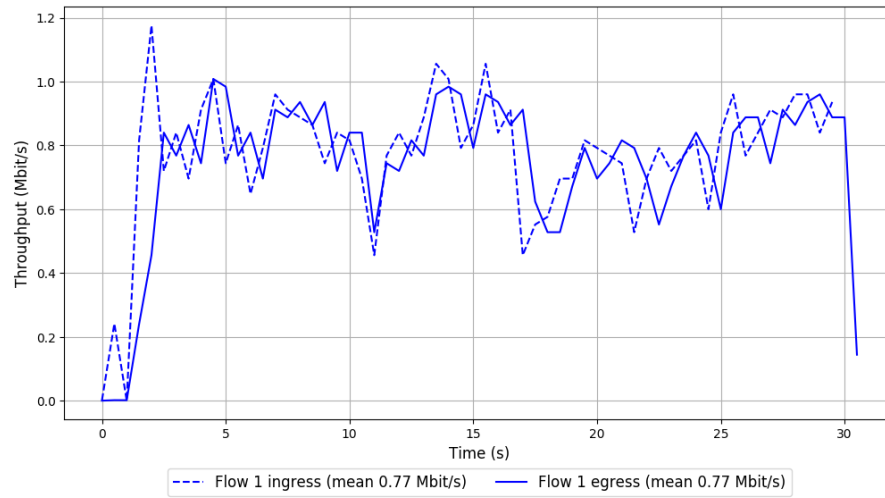
-- Flow 1:

Average throughput: 0.77 Mbit/s

95th percentile per-packet one-way delay: 402.252 ms

Loss rate: 0.47%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-08-27 19:58:24

End at: 2018-08-27 19:58:54

Local clock offset: 7.126 ms

Remote clock offset: 0.239 ms

Below is generated by plot.py at 2018-08-27 20:27:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.76 Mbit/s

95th percentile per-packet one-way delay: 602.935 ms

Loss rate: 0.48%

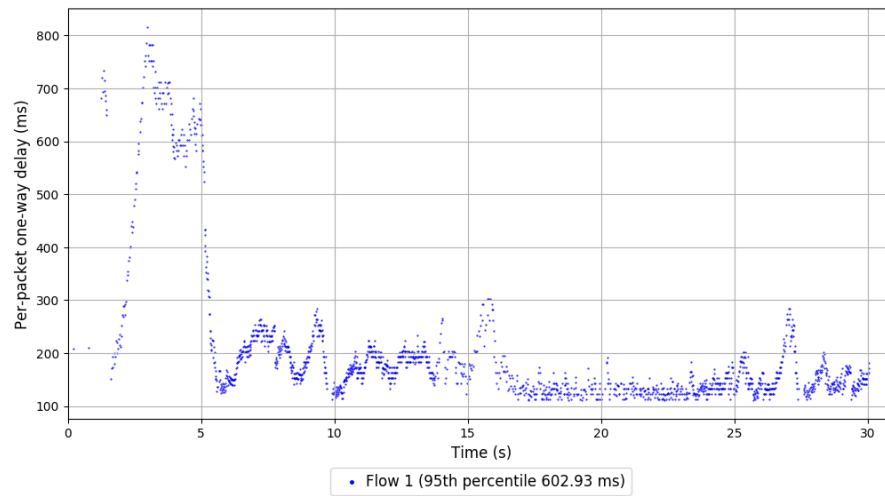
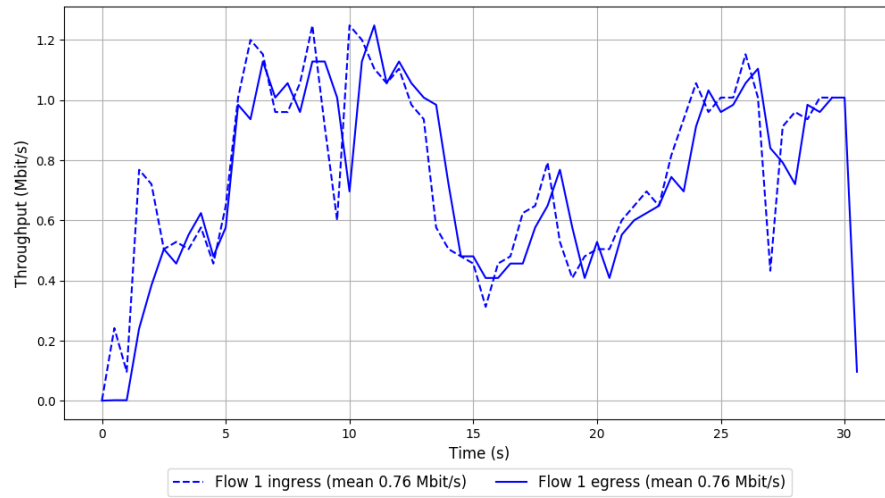
-- Flow 1:

Average throughput: 0.76 Mbit/s

95th percentile per-packet one-way delay: 602.935 ms

Loss rate: 0.48%

Run 2: Report of TCP Vegas — Data Link

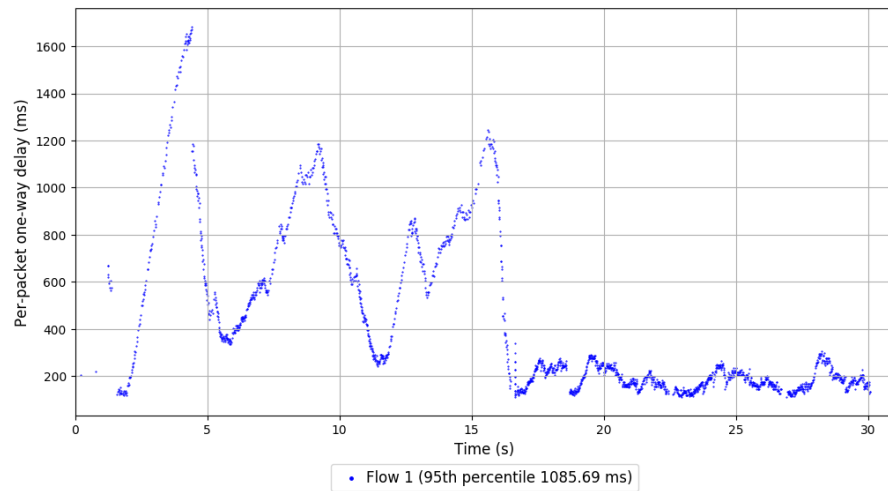
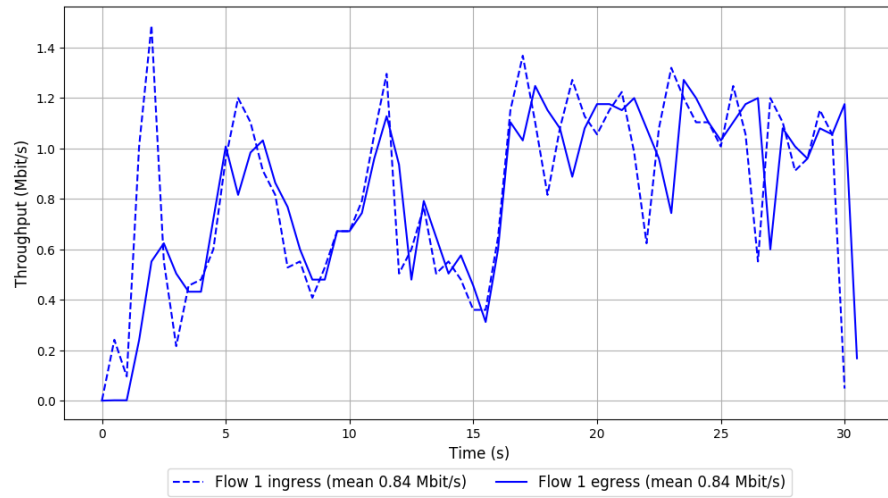


Run 3: Statistics of TCP Vegas

Start at: 2018-08-27 20:17:29
End at: 2018-08-27 20:17:59
Local clock offset: 7.813 ms
Remote clock offset: -5.814 ms

Below is generated by plot.py at 2018-08-27 20:27:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.84 Mbit/s
95th percentile per-packet one-way delay: 1085.688 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 0.84 Mbit/s
95th percentile per-packet one-way delay: 1085.688 ms
Loss rate: 0.33%

Run 3: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2018-08-27 19:30:19

End at: 2018-08-27 19:30:49

Local clock offset: 8.853 ms

Remote clock offset: 2.911 ms

Below is generated by plot.py at 2018-08-27 20:27:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.28 Mbit/s

95th percentile per-packet one-way delay: 2103.004 ms

Loss rate: 4.31%

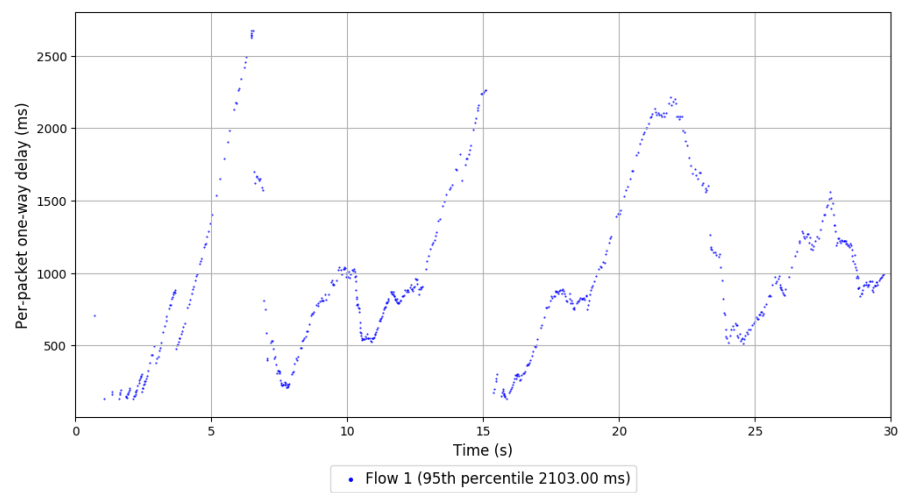
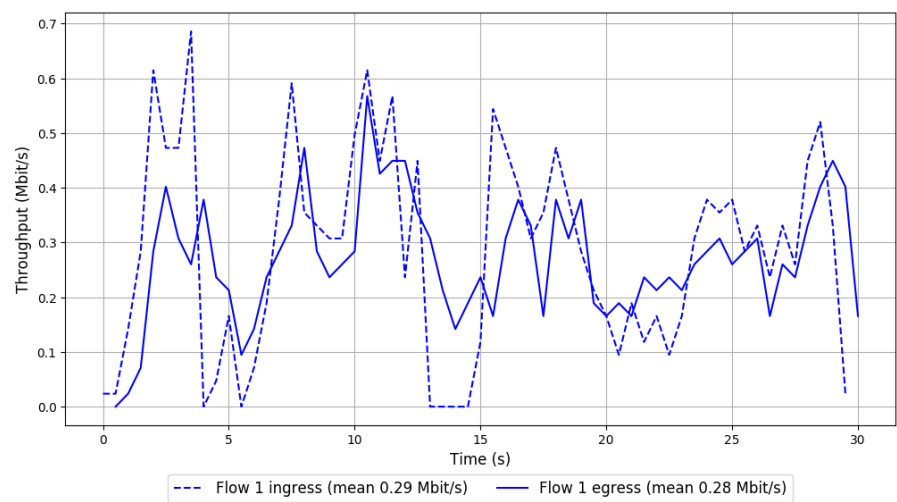
-- Flow 1:

Average throughput: 0.28 Mbit/s

95th percentile per-packet one-way delay: 2103.004 ms

Loss rate: 4.31%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-08-27 19:49:25

End at: 2018-08-27 19:49:55

Local clock offset: 5.819 ms

Remote clock offset: 0.776 ms

Below is generated by plot.py at 2018-08-27 20:27:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.92 Mbit/s

95th percentile per-packet one-way delay: 1977.449 ms

Loss rate: 4.93%

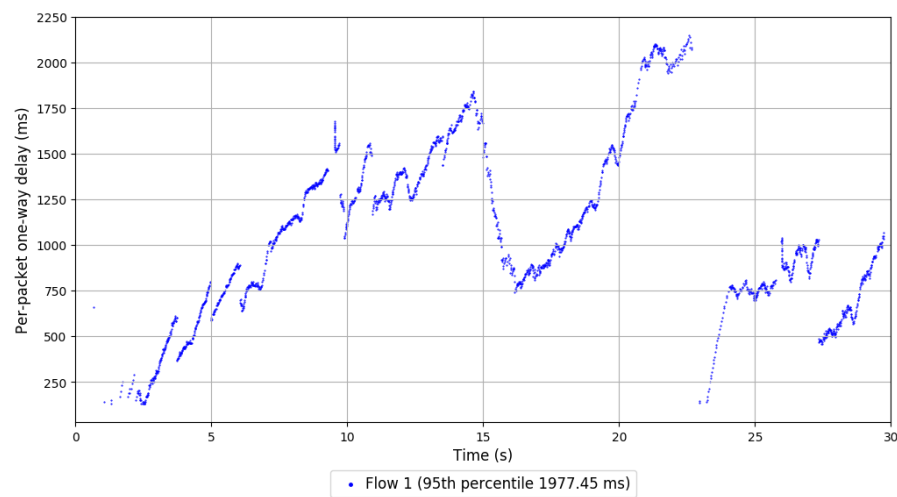
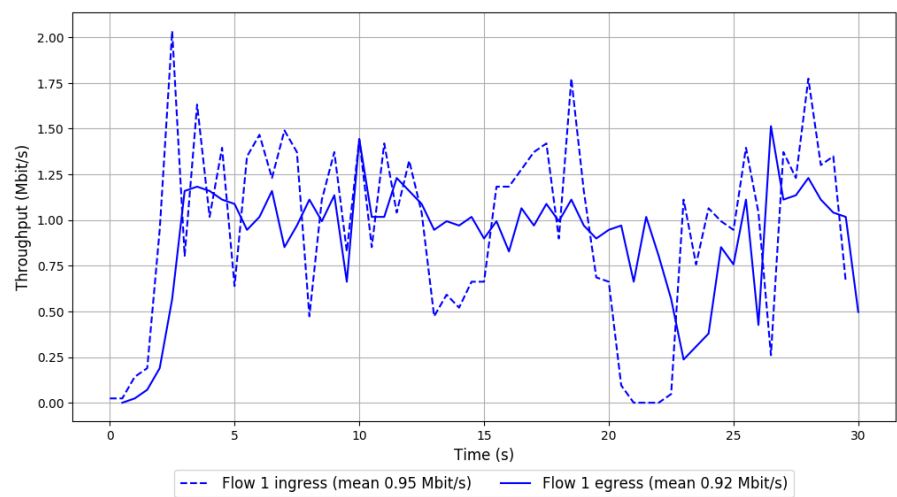
-- Flow 1:

Average throughput: 0.92 Mbit/s

95th percentile per-packet one-way delay: 1977.449 ms

Loss rate: 4.93%

Run 2: Report of Verus — Data Link

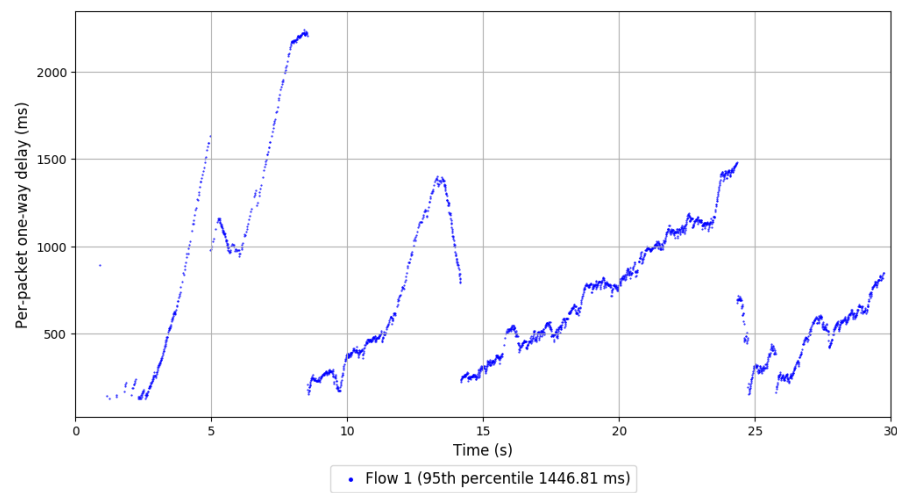
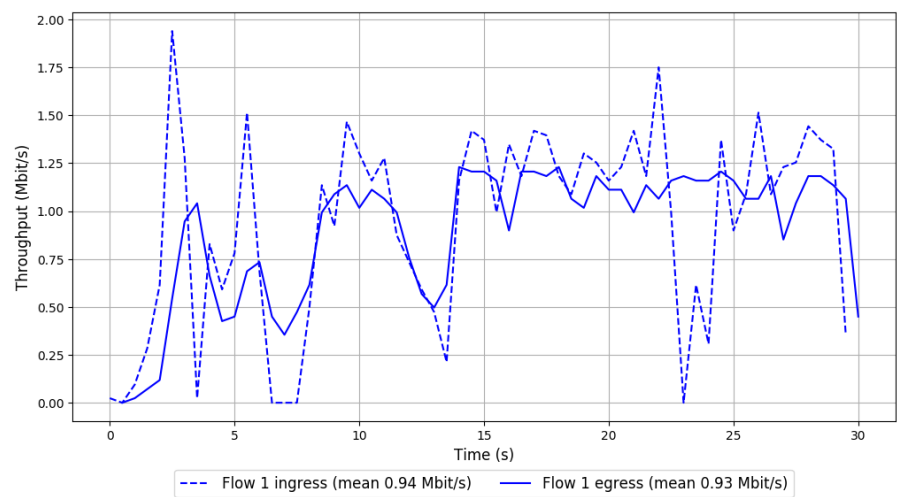


Run 3: Statistics of Verus

Start at: 2018-08-27 20:08:30
End at: 2018-08-27 20:09:00
Local clock offset: 6.455 ms
Remote clock offset: -1.481 ms

Below is generated by plot.py at 2018-08-27 20:27:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.93 Mbit/s
95th percentile per-packet one-way delay: 1446.810 ms
Loss rate: 3.80%
-- Flow 1:
Average throughput: 0.93 Mbit/s
95th percentile per-packet one-way delay: 1446.810 ms
Loss rate: 3.80%

Run 3: Report of Verus — Data Link

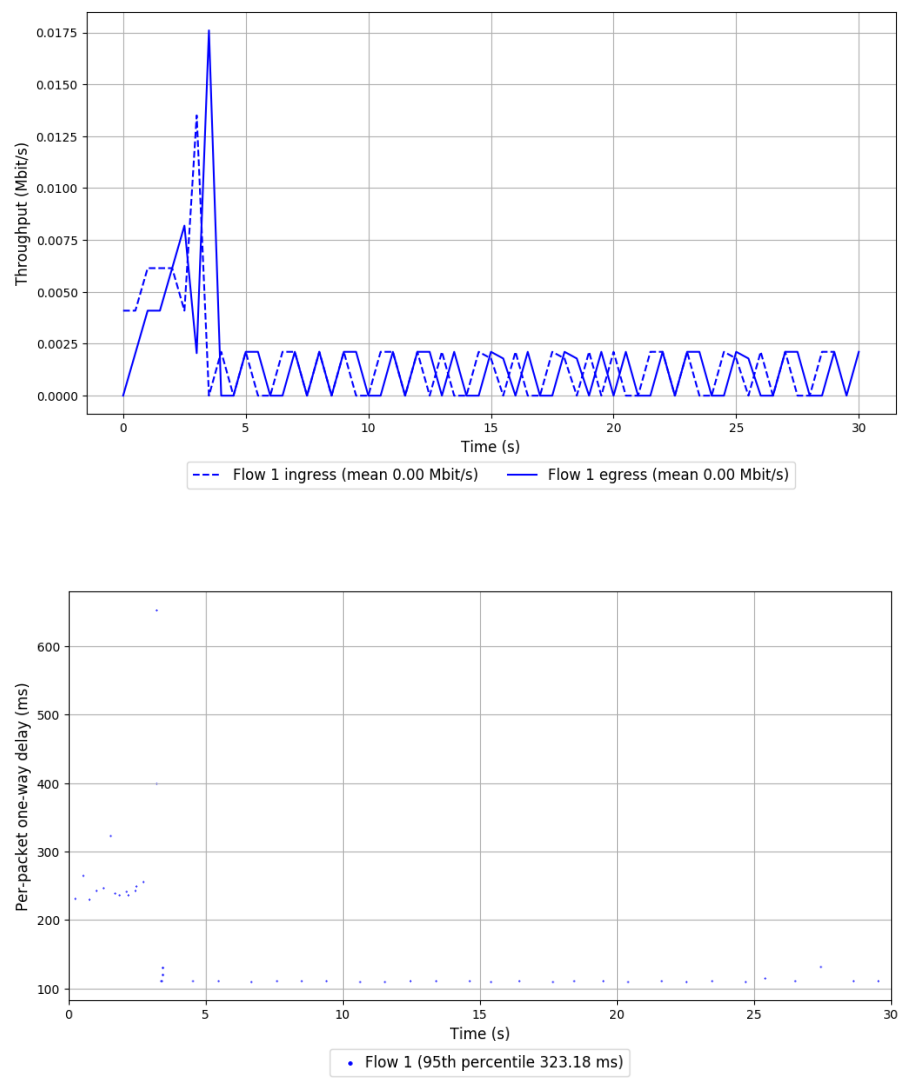


Run 1: Statistics of PCC-Vivace

Start at: 2018-08-27 19:33:41
End at: 2018-08-27 19:34:11
Local clock offset: 7.544 ms
Remote clock offset: -0.921 ms

Below is generated by plot.py at 2018-08-27 20:27:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 323.181 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 323.181 ms
Loss rate: 0.00%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2018-08-27 19:52:47

End at: 2018-08-27 19:53:17

Local clock offset: 4.68 ms

Remote clock offset: 0.48 ms

Below is generated by plot.py at 2018-08-27 20:27:37

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.72 Mbit/s

95th percentile per-packet one-way delay: 13245.854 ms

Loss rate: 51.87%

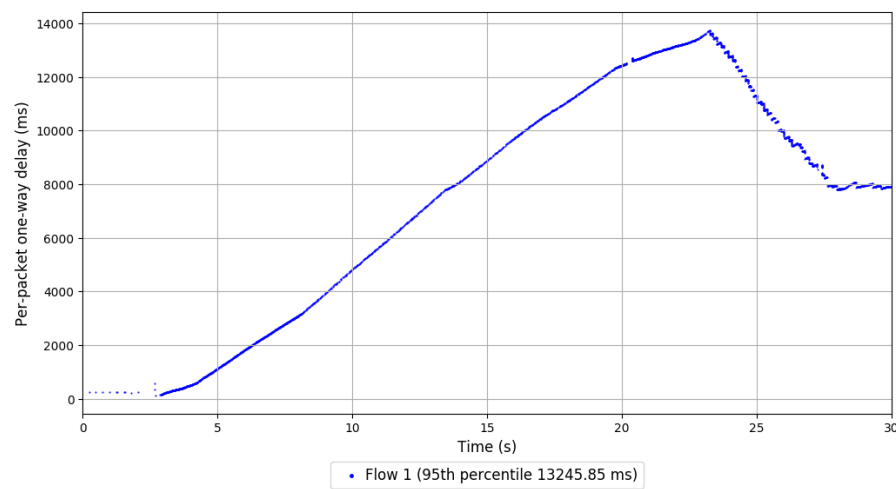
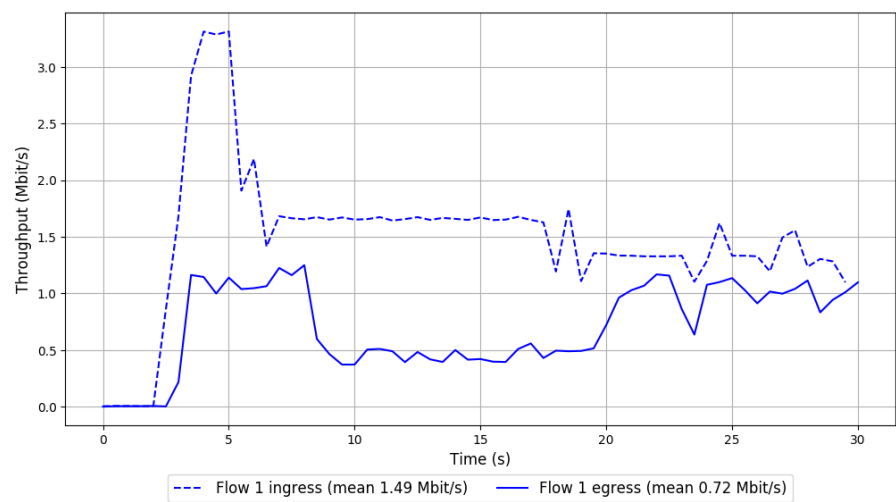
-- Flow 1:

Average throughput: 0.72 Mbit/s

95th percentile per-packet one-way delay: 13245.854 ms

Loss rate: 51.87%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2018-08-27 20:11:52

End at: 2018-08-27 20:12:22

Local clock offset: 6.482 ms

Remote clock offset: -1.592 ms

Below is generated by plot.py at 2018-08-27 20:27:38

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.88 Mbit/s

95th percentile per-packet one-way delay: 8046.403 ms

Loss rate: 30.82%

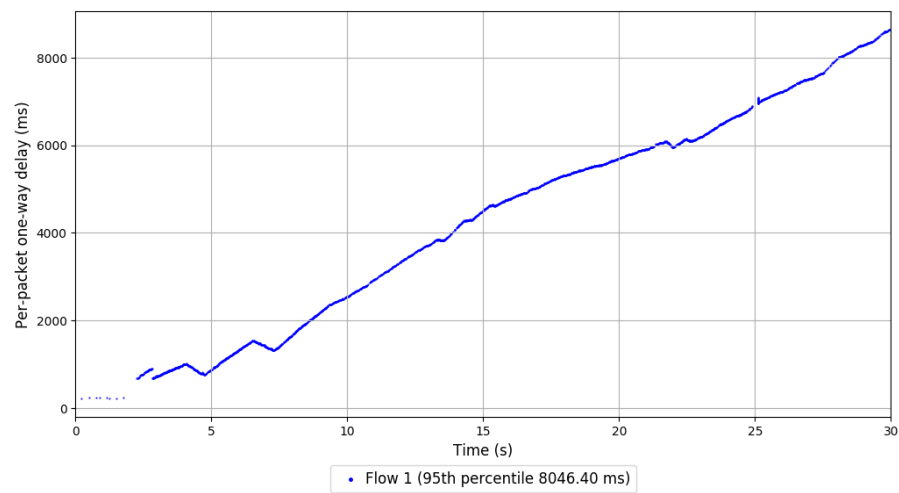
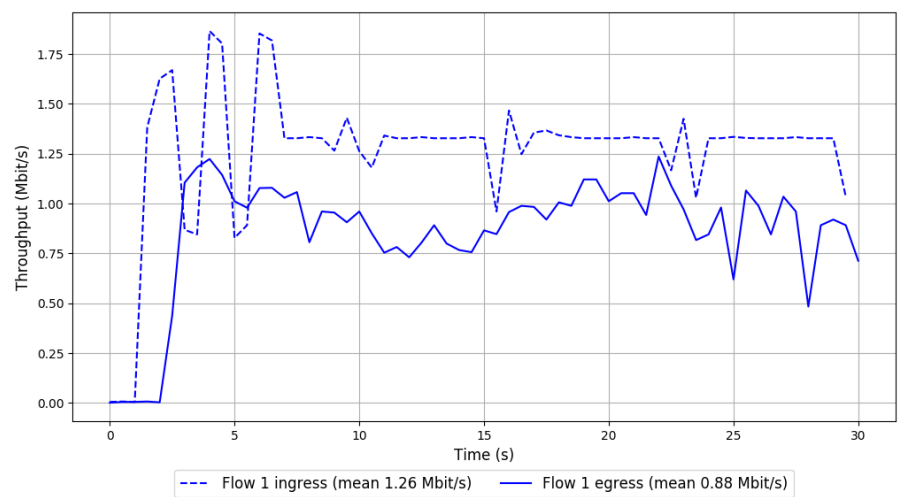
-- Flow 1:

Average throughput: 0.88 Mbit/s

95th percentile per-packet one-way delay: 8046.403 ms

Loss rate: 30.82%

Run 3: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2018-08-27 19:38:11

End at: 2018-08-27 19:38:41

Local clock offset: 5.217 ms

Remote clock offset: 2.12 ms

Below is generated by plot.py at 2018-08-27 20:27:38

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 737.390 ms

Loss rate: 0.13%

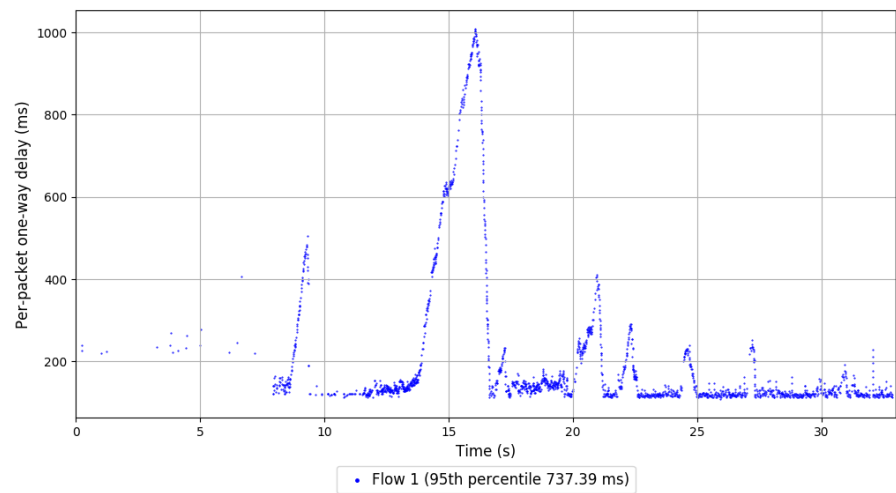
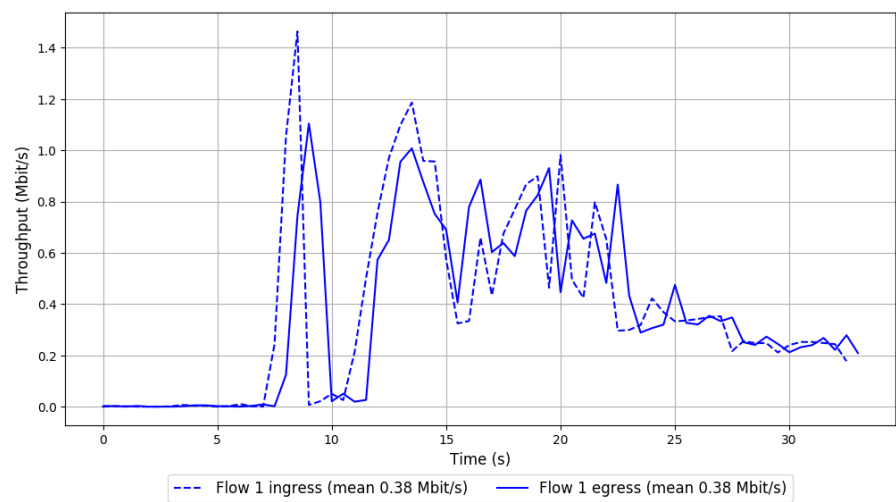
-- Flow 1:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 737.390 ms

Loss rate: 0.13%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-08-27 19:57:16

End at: 2018-08-27 19:57:46

Local clock offset: 5.412 ms

Remote clock offset: 0.343 ms

Below is generated by plot.py at 2018-08-27 20:27:38

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.29 Mbit/s

95th percentile per-packet one-way delay: 530.239 ms

Loss rate: 0.52%

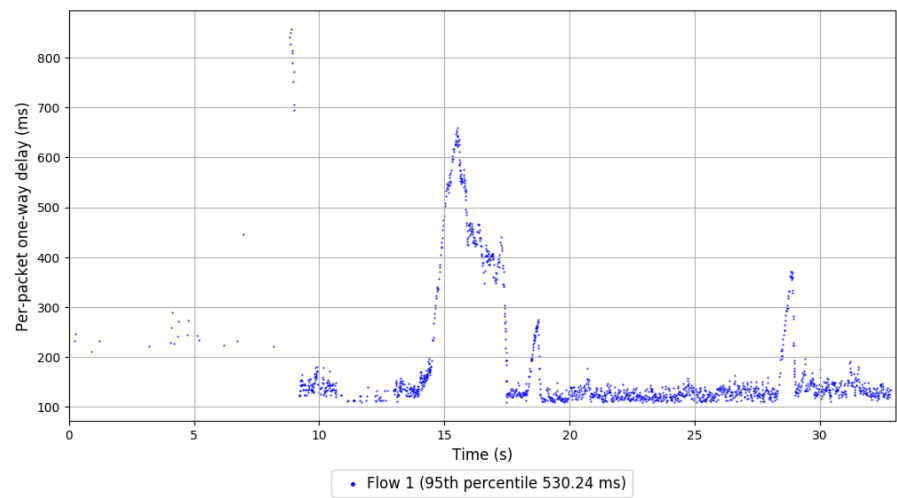
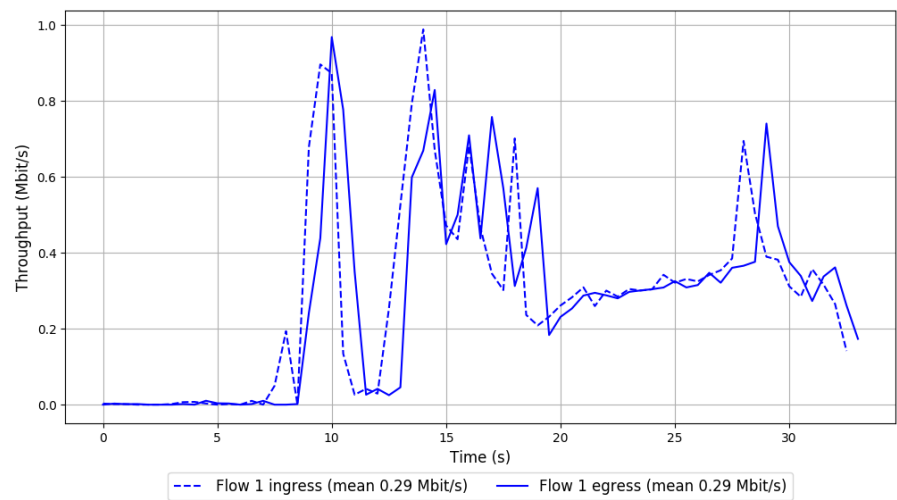
-- Flow 1:

Average throughput: 0.29 Mbit/s

95th percentile per-packet one-way delay: 530.239 ms

Loss rate: 0.52%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-08-27 20:16:22
End at: 2018-08-27 20:16:52
Local clock offset: 6.861 ms
Remote clock offset: -0.723 ms

Below is generated by plot.py at 2018-08-27 20:27:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 520.451 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 520.451 ms
Loss rate: 0.17%

Run 3: Report of WebRTC media — Data Link

