

Pantheon Report

Generated at 2018-08-01 15:45:05 (UTC).

Data path: India ppp0 ppp0 (*remote*) → AWS India 1 Ethernet (*local*).

Repeated the test of 17 congestion control schemes 3 times.

Each test lasted for 30 seconds running 1 flow.

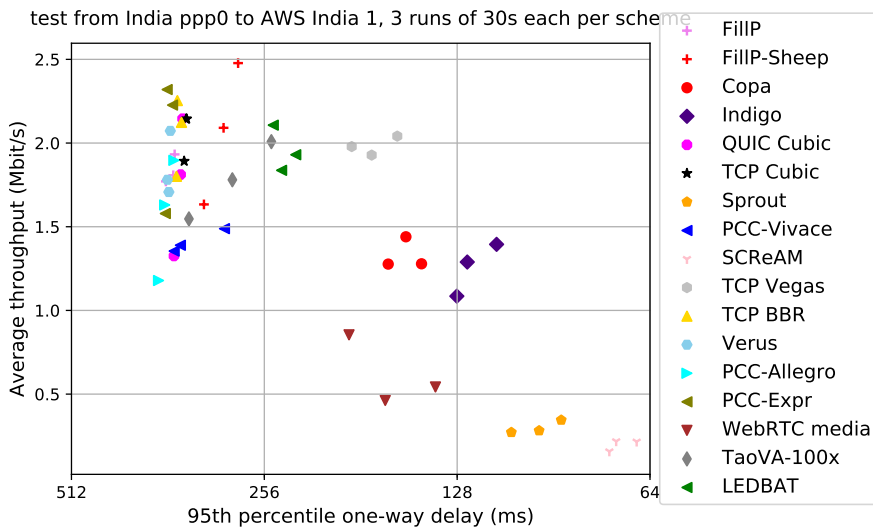
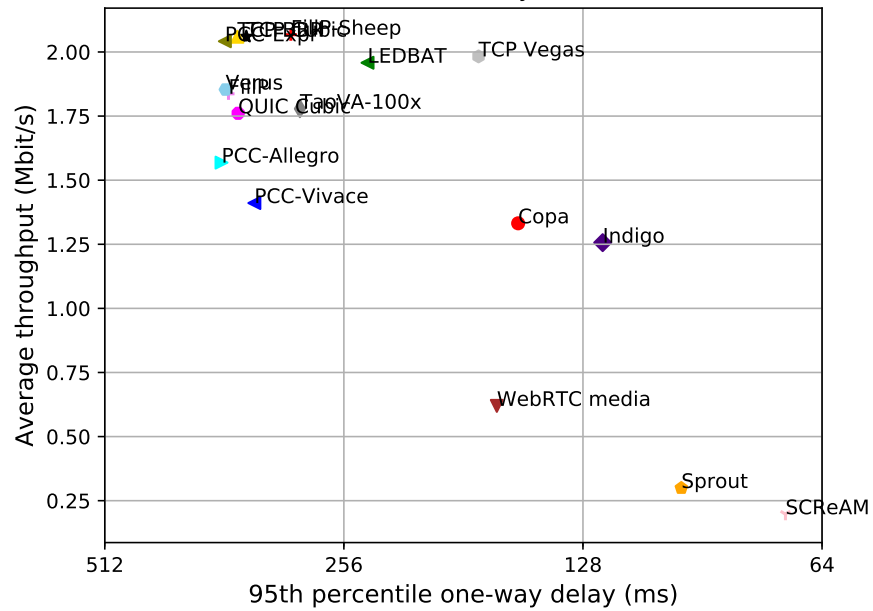
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

NTP offsets were measured against **nets.org.sg** 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-quirk @ 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 India ppp0 to AWS India 1, 3 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	3	2.06	348.57	3.09
Copa	3	1.33	154.46	0.30
TCP Cubic	3	2.06	339.67	1.98
FillP	3	1.84	357.70	30.70
FillP-Sheep	3	2.07	298.57	3.28
Indigo	3	1.26	120.89	1.25
LEDBAT	3	1.96	239.06	0.53
PCC-Allegro	3	1.57	364.98	39.81
PCC-Expr	3	2.04	361.50	48.11
QUIC Cubic	3	1.76	347.83	5.74
SCReAM	3	0.20	71.16	0.64
Sprout	3	0.30	96.24	0.22
TaoVA-100x	3	1.78	290.80	3.72
TCP Vegas	3	1.98	173.25	0.53
Verus	3	1.85	360.78	29.64
PCC-Vivace	3	1.41	331.87	6.38
WebRTC media	3	0.62	164.31	0.67

Run 1: Statistics of TCP BBR

Start at: 2018-08-01 14:50:28

End at: 2018-08-01 14:50:58

Local clock offset: 2.426 ms

Remote clock offset: -5.989 ms

Below is generated by plot.py at 2018-08-01 15:44:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.12 Mbit/s

95th percentile per-packet one-way delay: 344.765 ms

Loss rate: 2.60%

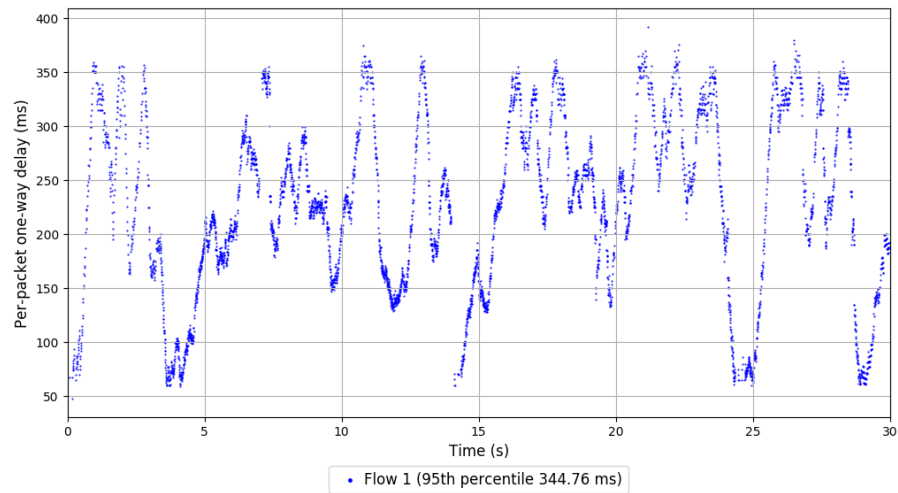
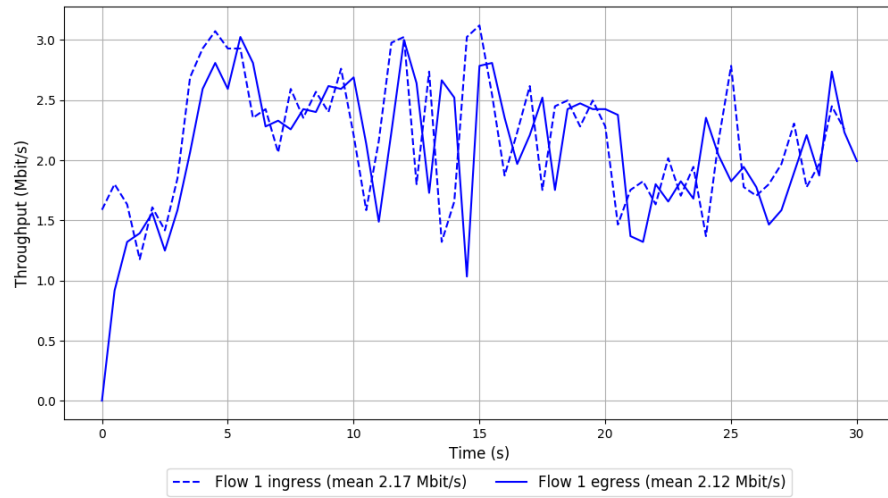
-- Flow 1:

Average throughput: 2.12 Mbit/s

95th percentile per-packet one-way delay: 344.765 ms

Loss rate: 2.60%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-08-01 15:09:07

End at: 2018-08-01 15:09:37

Local clock offset: 1.371 ms

Remote clock offset: -8.096 ms

Below is generated by plot.py at 2018-08-01 15:44:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.80 Mbit/s

95th percentile per-packet one-way delay: 351.045 ms

Loss rate: 3.40%

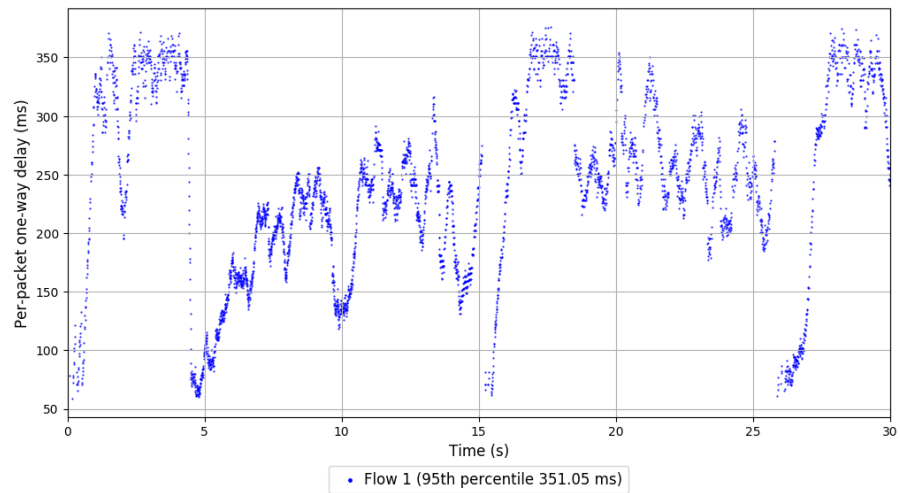
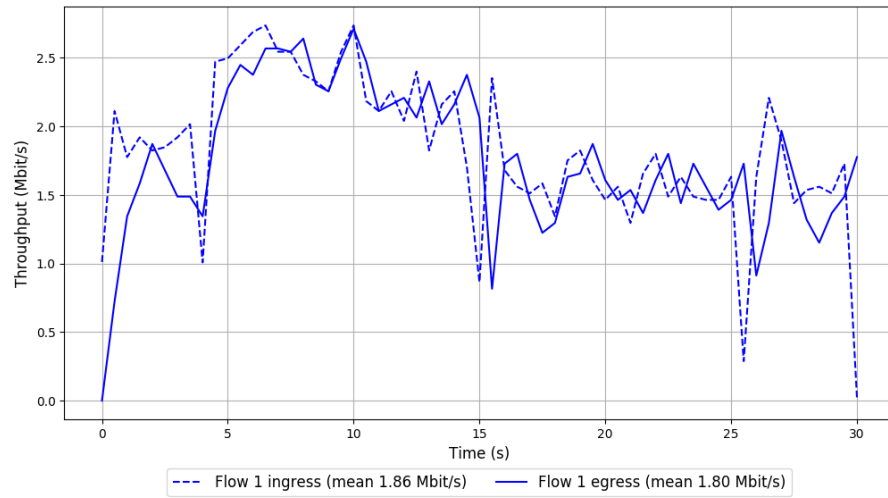
-- Flow 1:

Average throughput: 1.80 Mbit/s

95th percentile per-packet one-way delay: 351.045 ms

Loss rate: 3.40%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-08-01 15:27:34

End at: 2018-08-01 15:28:04

Local clock offset: 2.008 ms

Remote clock offset: -5.413 ms

Below is generated by plot.py at 2018-08-01 15:44:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.25 Mbit/s

95th percentile per-packet one-way delay: 349.892 ms

Loss rate: 3.27%

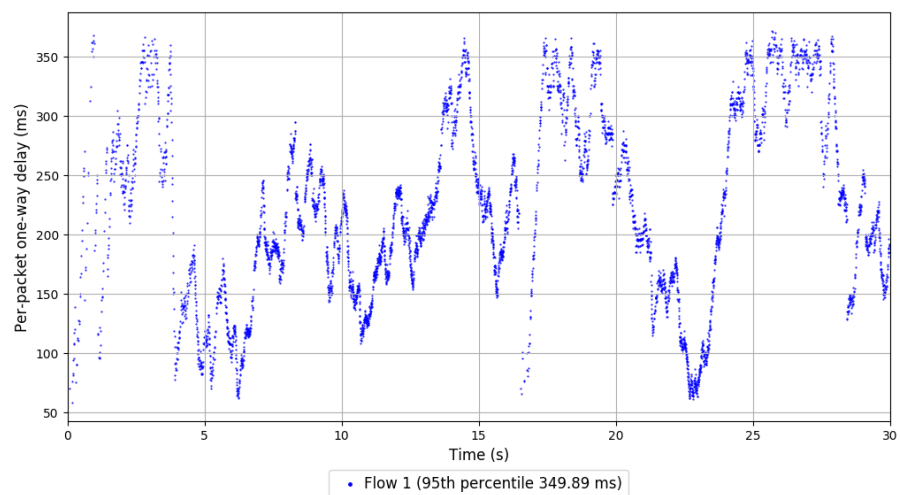
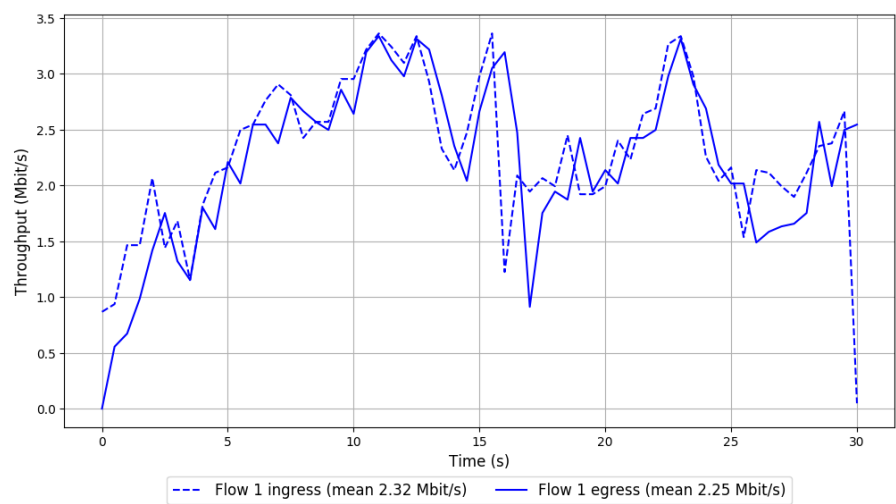
-- Flow 1:

Average throughput: 2.25 Mbit/s

95th percentile per-packet one-way delay: 349.892 ms

Loss rate: 3.27%

Run 3: Report of TCP BBR — Data Link

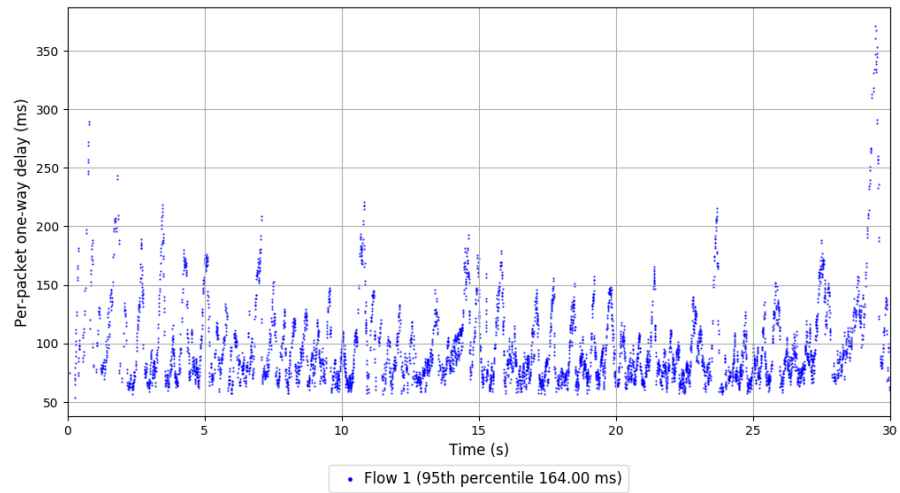
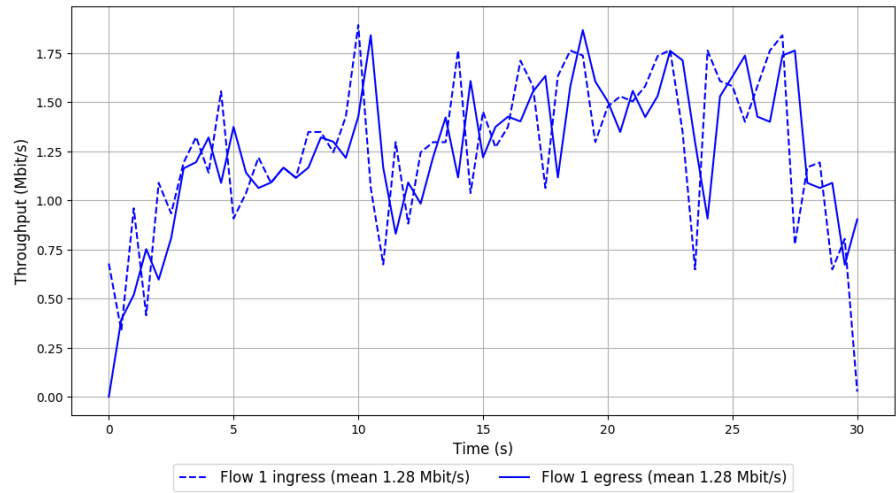


Run 1: Statistics of Copa

Start at: 2018-08-01 15:03:39
End at: 2018-08-01 15:04:09
Local clock offset: 1.168 ms
Remote clock offset: -8.233 ms

Below is generated by plot.py at 2018-08-01 15:44:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 164.001 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 164.001 ms
Loss rate: 0.31%

Run 1: Report of Copa — Data Link

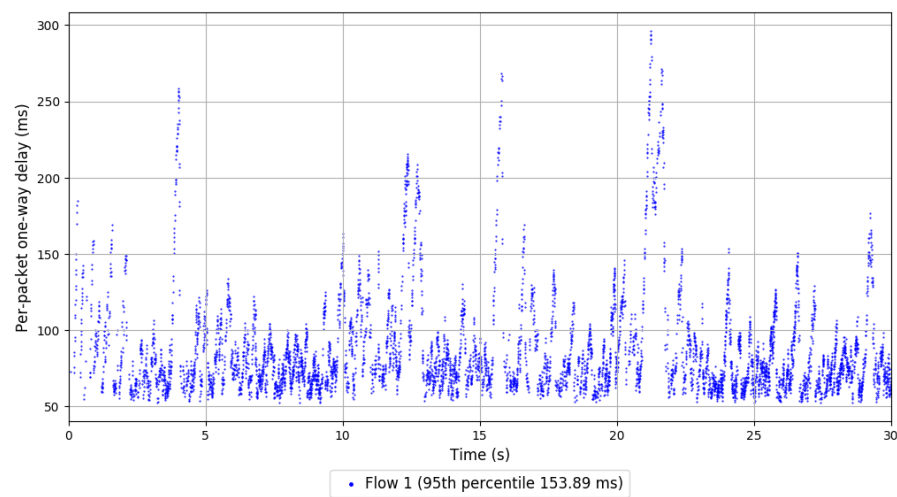
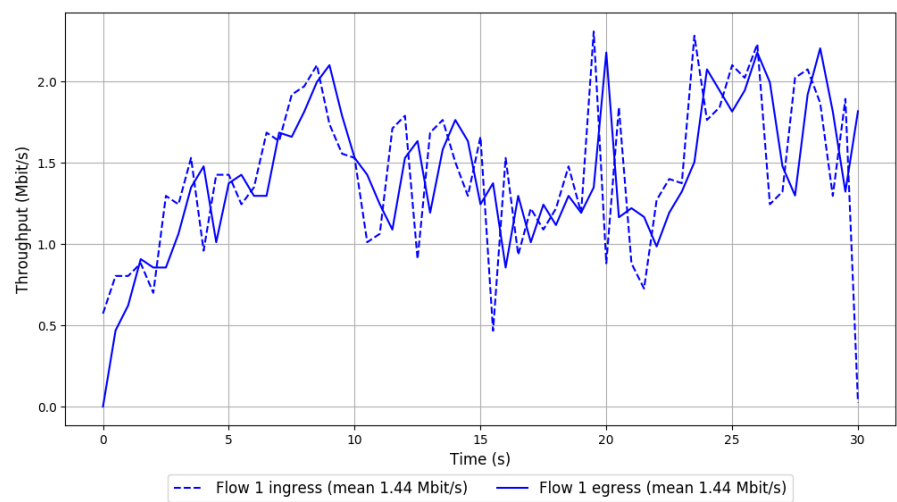


Run 2: Statistics of Copa

Start at: 2018-08-01 15:22:10
End at: 2018-08-01 15:22:40
Local clock offset: -1.337 ms
Remote clock offset: -4.3 ms

Below is generated by plot.py at 2018-08-01 15:44:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.44 Mbit/s
95th percentile per-packet one-way delay: 153.894 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 1.44 Mbit/s
95th percentile per-packet one-way delay: 153.894 ms
Loss rate: 0.42%

Run 2: Report of Copa — Data Link

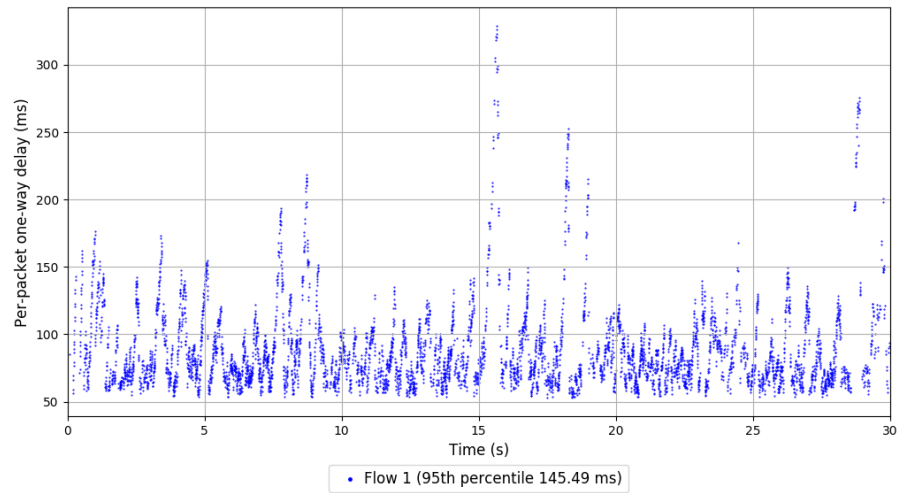
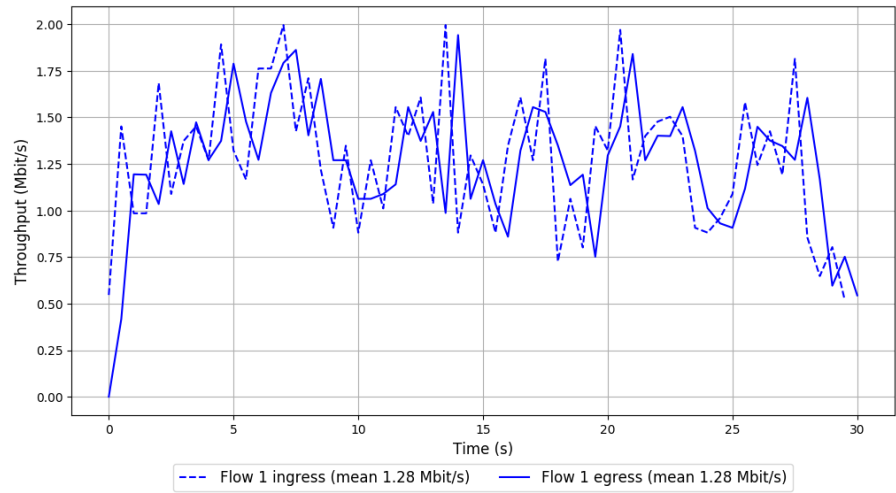


Run 3: Statistics of Copa

Start at: 2018-08-01 15:40:38
End at: 2018-08-01 15:41:08
Local clock offset: -0.631 ms
Remote clock offset: -3.395 ms

Below is generated by plot.py at 2018-08-01 15:44:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 145.490 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 145.490 ms
Loss rate: 0.17%

Run 3: Report of Copa — Data Link

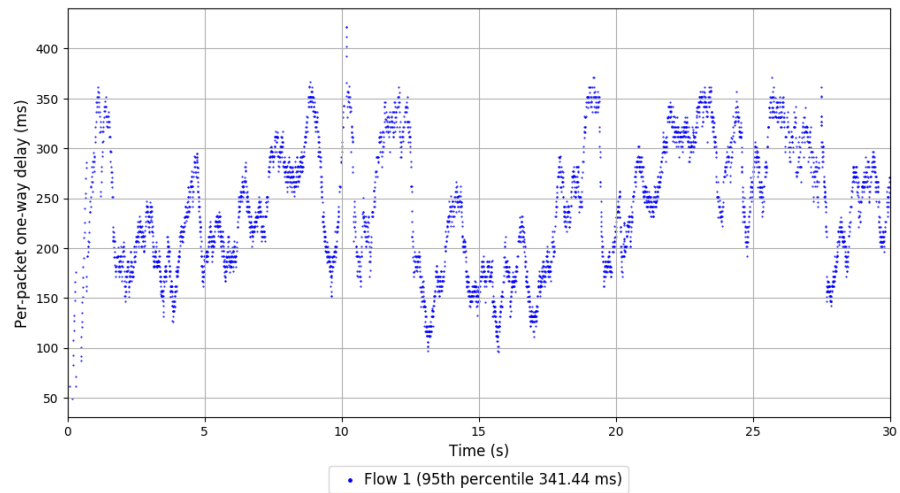
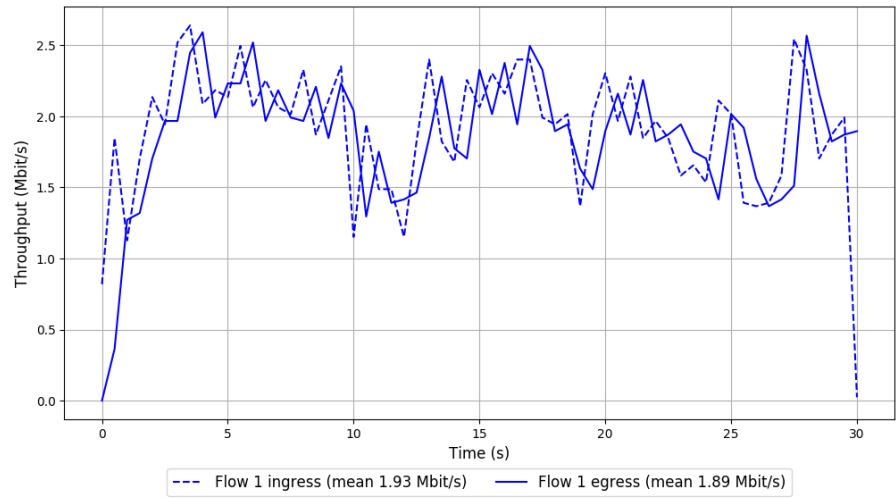


Run 1: Statistics of TCP Cubic

Start at: 2018-08-01 14:53:43
End at: 2018-08-01 14:54:13
Local clock offset: -1.984 ms
Remote clock offset: -8.127 ms

Below is generated by plot.py at 2018-08-01 15:44:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 341.439 ms
Loss rate: 2.30%
-- Flow 1:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 341.439 ms
Loss rate: 2.30%

Run 1: Report of TCP Cubic — Data Link

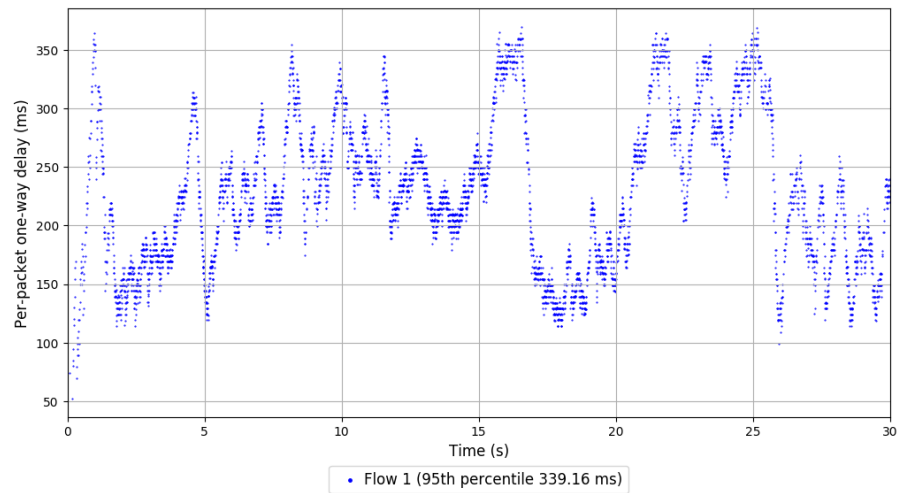
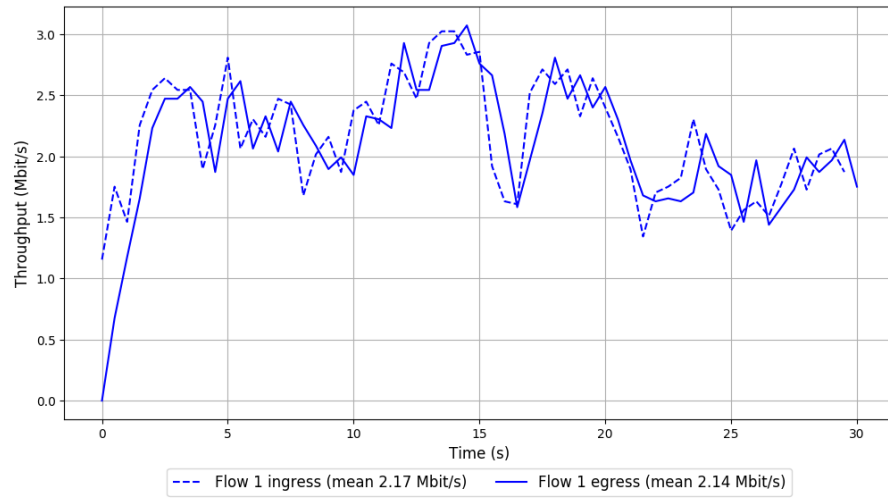


Run 2: Statistics of TCP Cubic

Start at: 2018-08-01 15:12:21
End at: 2018-08-01 15:12:51
Local clock offset: 1.26 ms
Remote clock offset: -7.196 ms

Below is generated by plot.py at 2018-08-01 15:44:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 339.157 ms
Loss rate: 1.31%
-- Flow 1:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 339.157 ms
Loss rate: 1.31%

Run 2: Report of TCP Cubic — Data Link

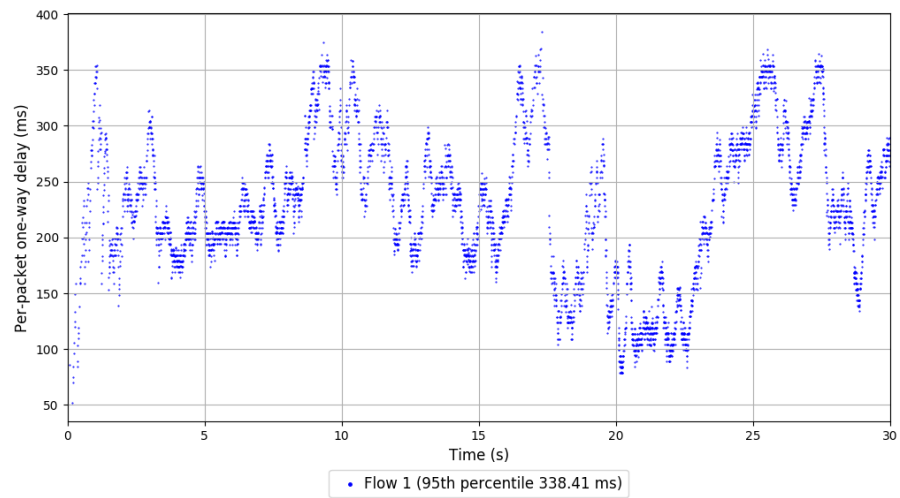
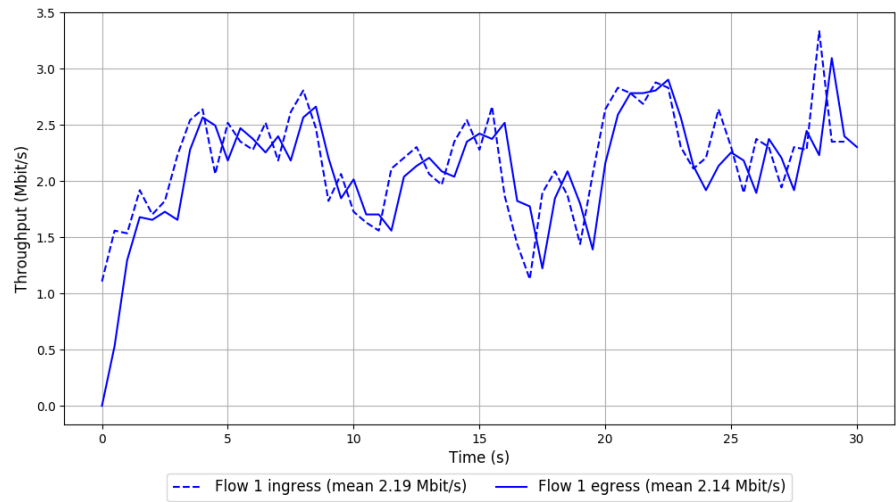


Run 3: Statistics of TCP Cubic

Start at: 2018-08-01 15:30:49
End at: 2018-08-01 15:31:19
Local clock offset: 0.52 ms
Remote clock offset: -6.466 ms

Below is generated by plot.py at 2018-08-01 15:44:36
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 338.410 ms
Loss rate: 2.34%
-- Flow 1:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 338.410 ms
Loss rate: 2.34%

Run 3: Report of TCP Cubic — Data Link

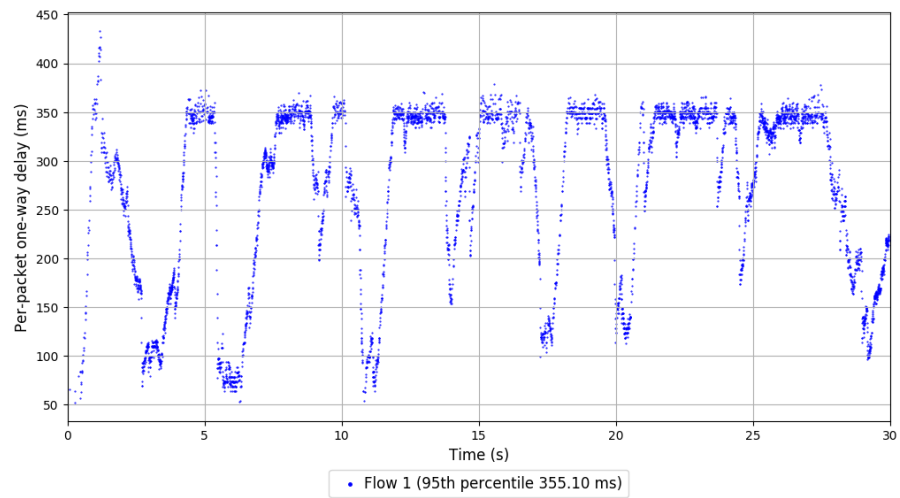
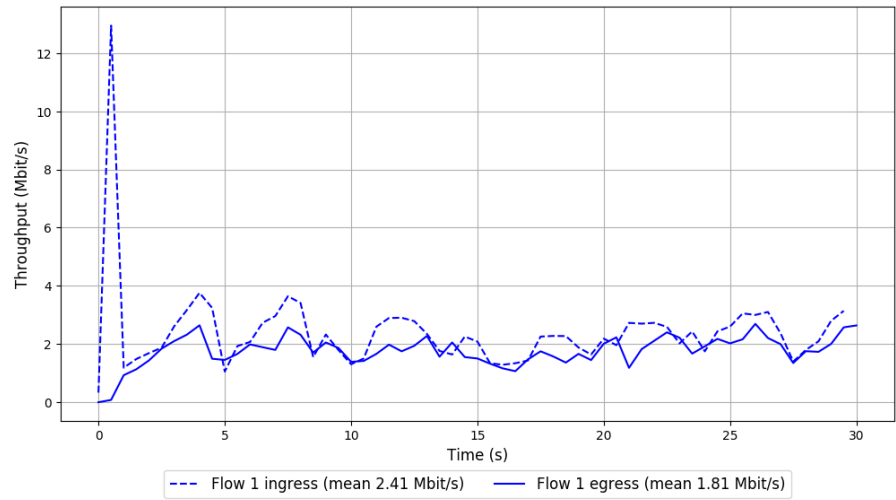


Run 1: Statistics of FillP

Start at: 2018-08-01 14:52:38
End at: 2018-08-01 14:53:08
Local clock offset: -0.577 ms
Remote clock offset: -6.393 ms

Below is generated by plot.py at 2018-08-01 15:44:37
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.81 Mbit/s
95th percentile per-packet one-way delay: 355.103 ms
Loss rate: 25.18%
-- Flow 1:
Average throughput: 1.81 Mbit/s
95th percentile per-packet one-way delay: 355.103 ms
Loss rate: 25.18%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-08-01 15:11:16

End at: 2018-08-01 15:11:47

Local clock offset: -1.883 ms

Remote clock offset: -4.67 ms

Below is generated by plot.py at 2018-08-01 15:44:38

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 353.328 ms

Loss rate: 25.77%

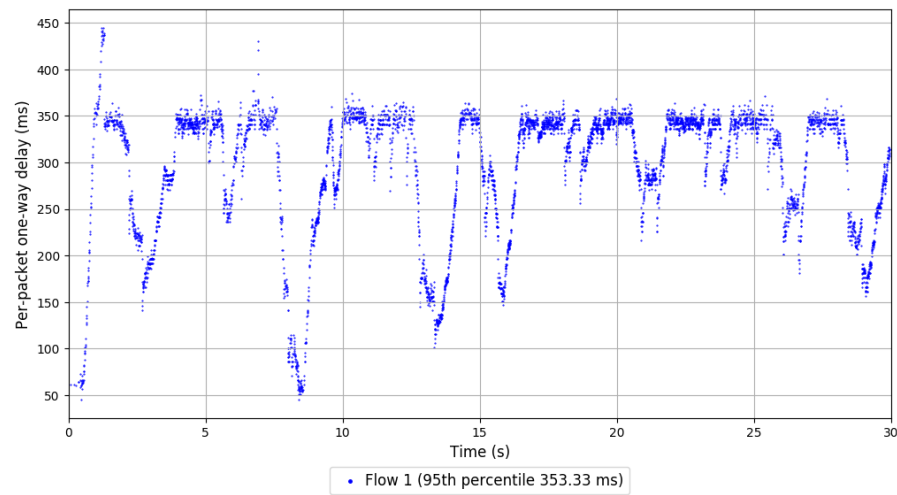
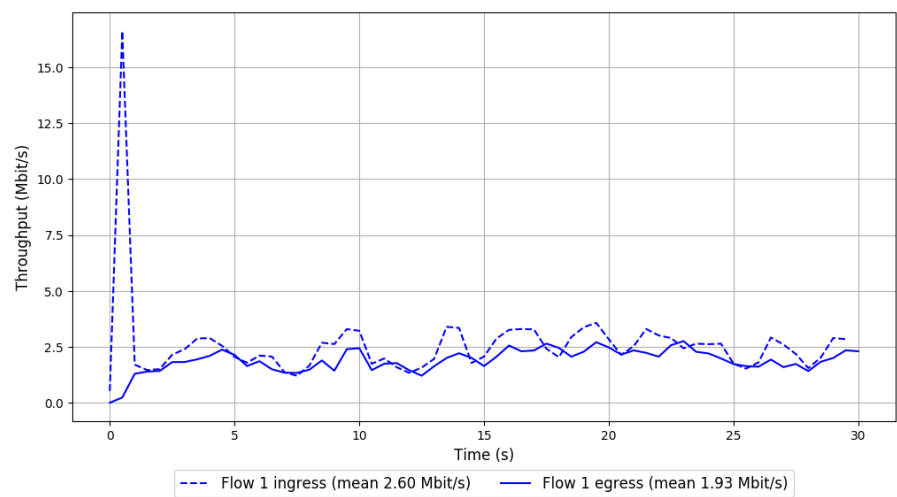
-- Flow 1:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 353.328 ms

Loss rate: 25.77%

Run 2: Report of FillP — Data Link

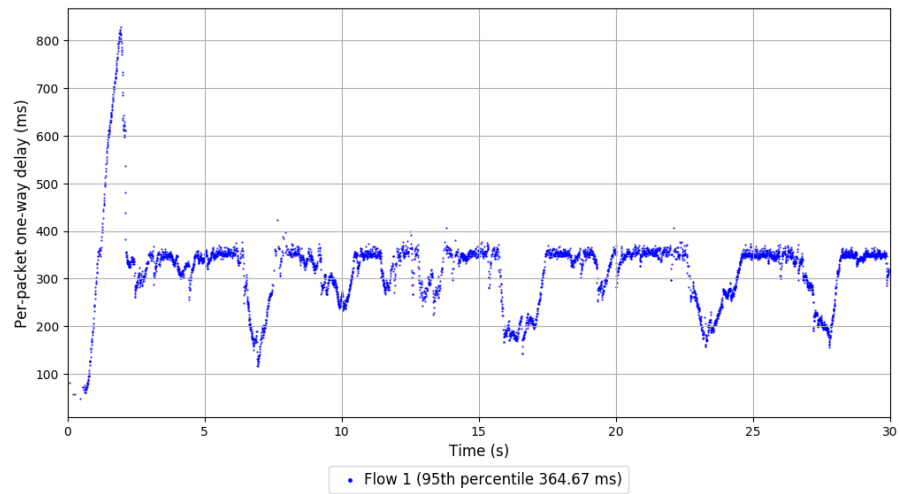
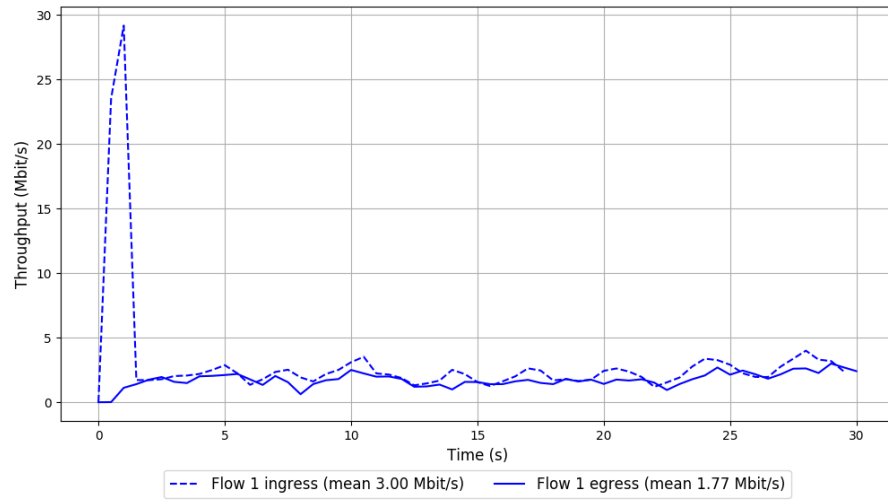


Run 3: Statistics of FillP

Start at: 2018-08-01 15:29:44
End at: 2018-08-01 15:30:14
Local clock offset: 1.441 ms
Remote clock offset: -5.984 ms

Below is generated by plot.py at 2018-08-01 15:44:39
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.77 Mbit/s
95th percentile per-packet one-way delay: 364.667 ms
Loss rate: 41.15%
-- Flow 1:
Average throughput: 1.77 Mbit/s
95th percentile per-packet one-way delay: 364.667 ms
Loss rate: 41.15%

Run 3: Report of FillP — Data Link

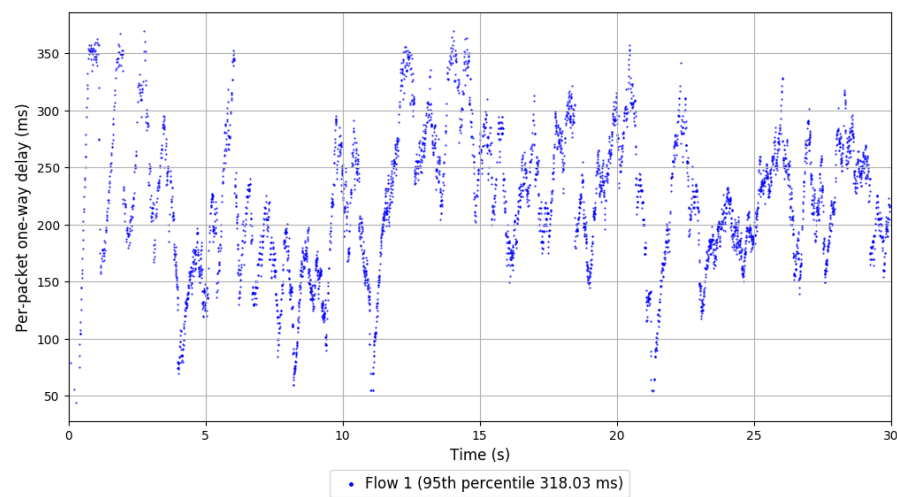
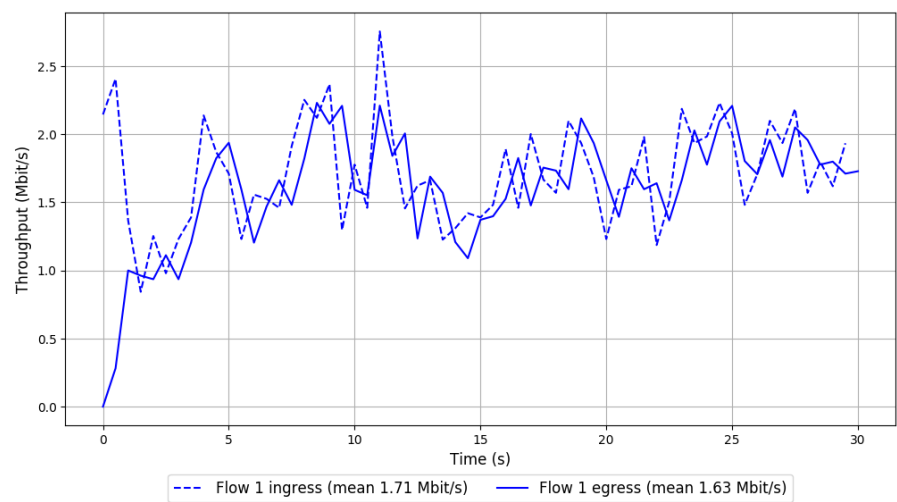


Run 1: Statistics of FillP-Sheep

Start at: 2018-08-01 15:00:10
End at: 2018-08-01 15:00:40
Local clock offset: -1.613 ms
Remote clock offset: -5.069 ms

Below is generated by plot.py at 2018-08-01 15:44:39
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.63 Mbit/s
95th percentile per-packet one-way delay: 318.031 ms
Loss rate: 4.94%
-- Flow 1:
Average throughput: 1.63 Mbit/s
95th percentile per-packet one-way delay: 318.031 ms
Loss rate: 4.94%

Run 1: Report of FillP-Sheep — Data Link

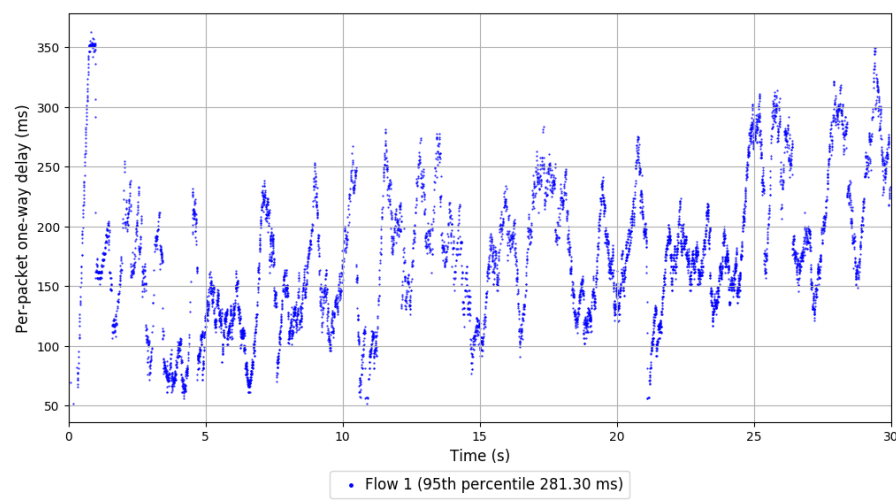
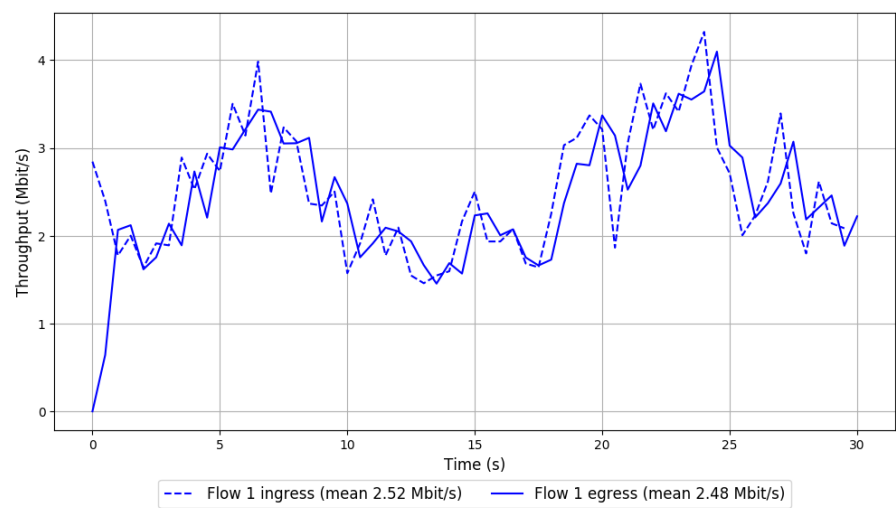


Run 2: Statistics of FillP-Sheep

Start at: 2018-08-01 15:18:55
End at: 2018-08-01 15:19:25
Local clock offset: 0.369 ms
Remote clock offset: -3.963 ms

Below is generated by plot.py at 2018-08-01 15:44:40
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.48 Mbit/s
95th percentile per-packet one-way delay: 281.298 ms
Loss rate: 1.92%
-- Flow 1:
Average throughput: 2.48 Mbit/s
95th percentile per-packet one-way delay: 281.298 ms
Loss rate: 1.92%

Run 2: Report of FillP-Sheep — Data Link

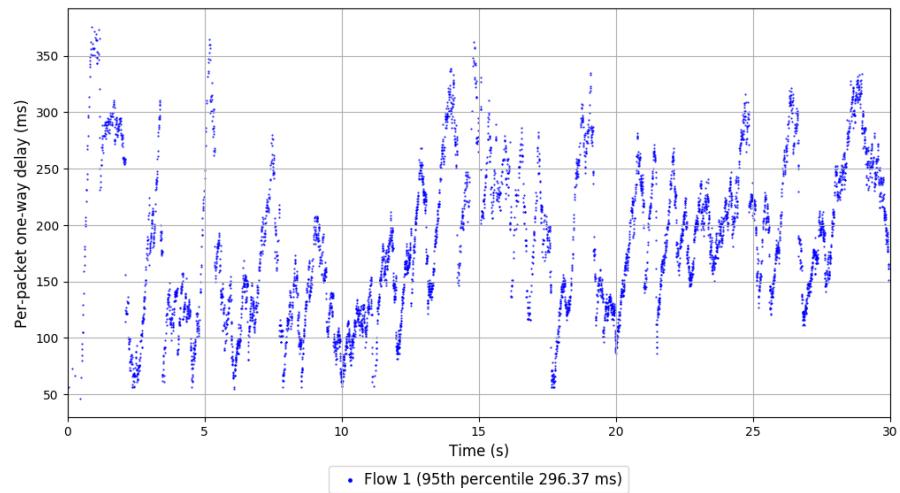
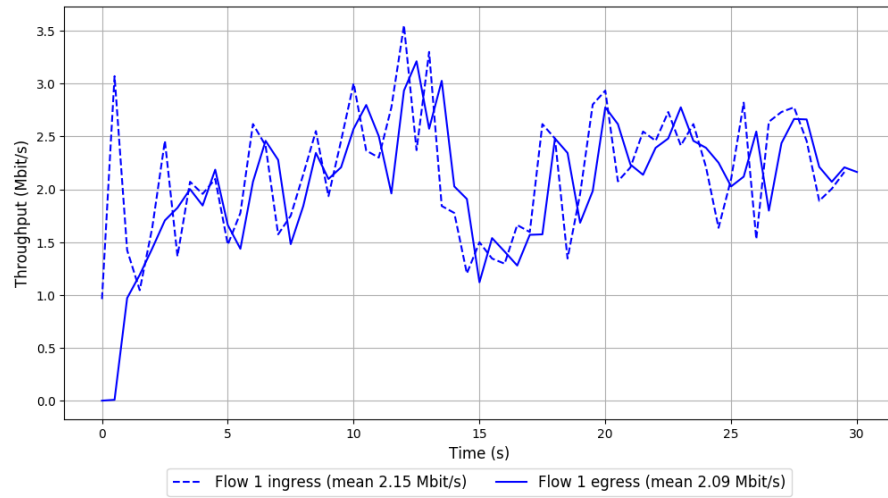


Run 3: Statistics of FillP-Sheep

Start at: 2018-08-01 15:37:22
End at: 2018-08-01 15:37:52
Local clock offset: -0.988 ms
Remote clock offset: -4.959 ms

Below is generated by plot.py at 2018-08-01 15:44:40
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.09 Mbit/s
95th percentile per-packet one-way delay: 296.371 ms
Loss rate: 2.98%
-- Flow 1:
Average throughput: 2.09 Mbit/s
95th percentile per-packet one-way delay: 296.371 ms
Loss rate: 2.98%

Run 3: Report of FillP-Sheep — Data Link

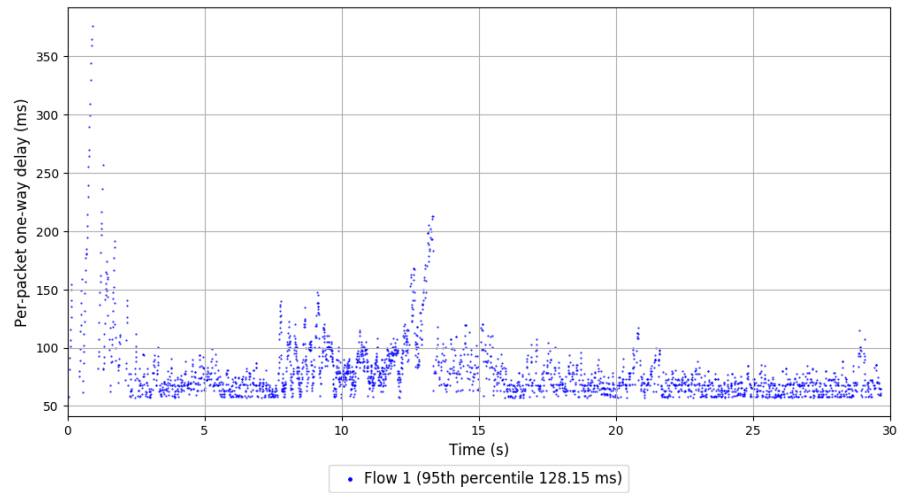
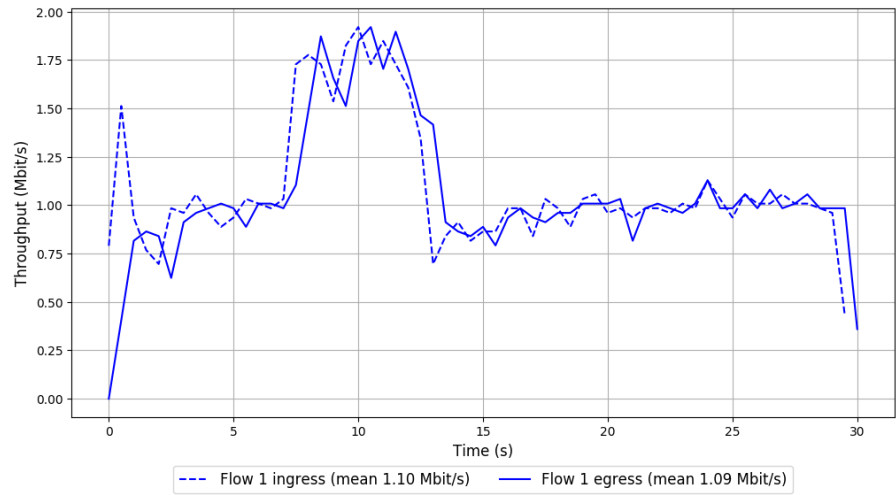


```
Run 1: Statistics of Indigo

Start at: 2018-08-01 14:59:06
End at: 2018-08-01 14:59:36
Local clock offset: -2.72 ms
Remote clock offset: -8.867 ms

# Below is generated by plot.py at 2018-08-01 15:44:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.09 Mbit/s
95th percentile per-packet one-way delay: 128.147 ms
Loss rate: 1.94%
-- Flow 1:
Average throughput: 1.09 Mbit/s
95th percentile per-packet one-way delay: 128.147 ms
Loss rate: 1.94%
```

Run 1: Report of Indigo — Data Link

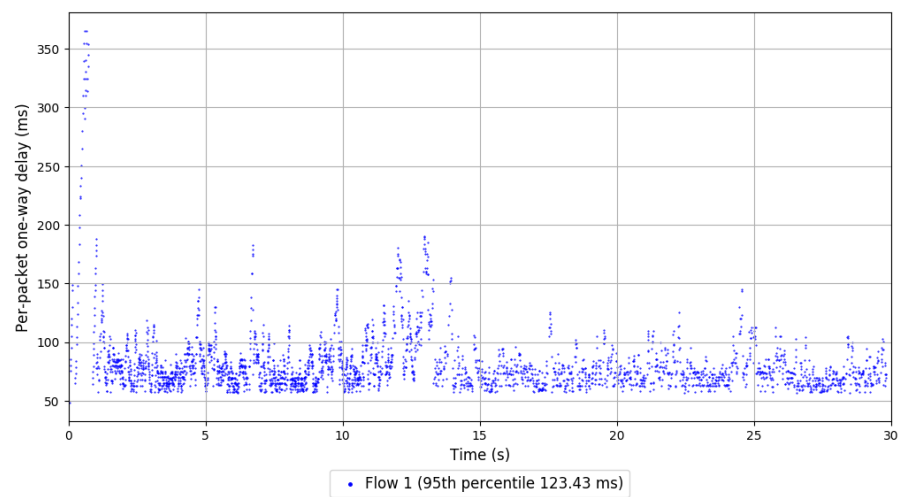
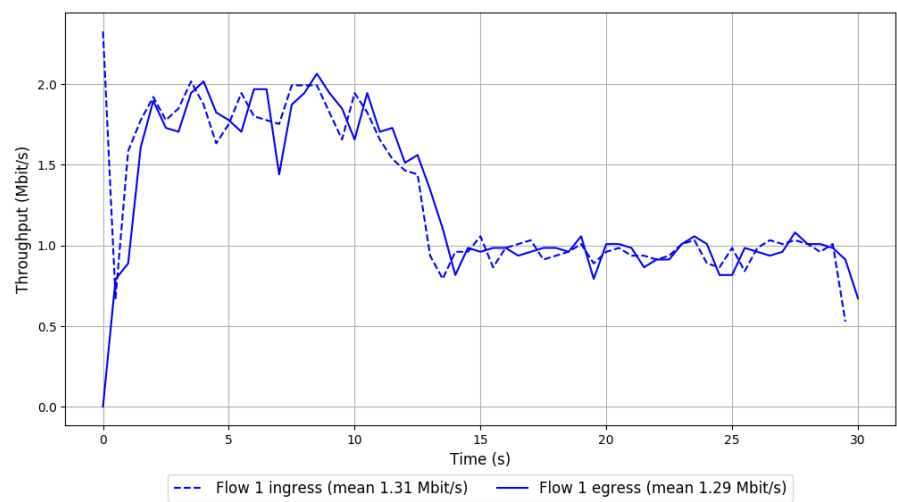


Run 2: Statistics of Indigo

Start at: 2018-08-01 15:17:45
End at: 2018-08-01 15:18:15
Local clock offset: 0.329 ms
Remote clock offset: -4.819 ms

Below is generated by plot.py at 2018-08-01 15:44:40
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.29 Mbit/s
95th percentile per-packet one-way delay: 123.431 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 1.29 Mbit/s
95th percentile per-packet one-way delay: 123.431 ms
Loss rate: 1.45%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2018-08-01 15:36:12

End at: 2018-08-01 15:36:42

Local clock offset: 1.7 ms

Remote clock offset: -3.987 ms

Below is generated by plot.py at 2018-08-01 15:44:40

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.39 Mbit/s

95th percentile per-packet one-way delay: 111.087 ms

Loss rate: 0.35%

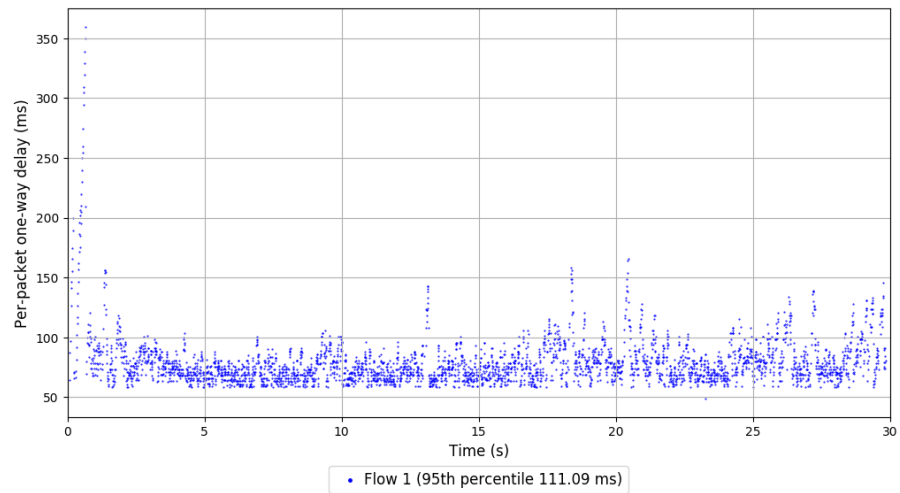
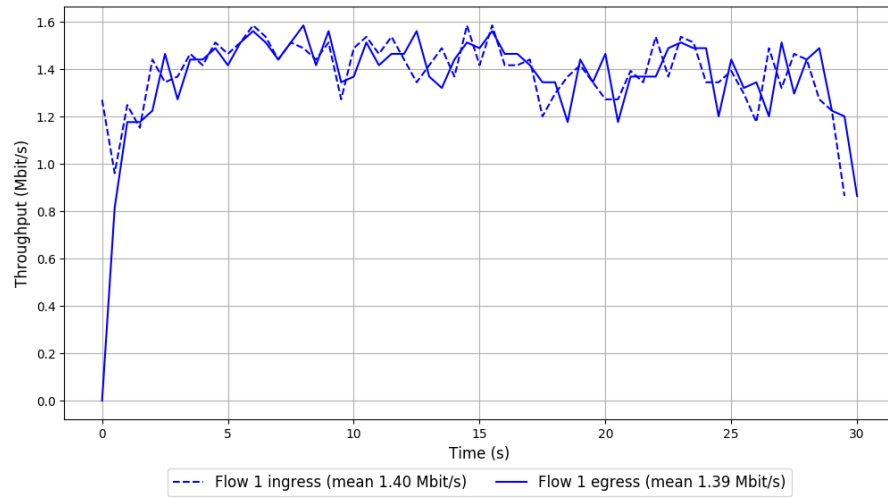
-- Flow 1:

Average throughput: 1.39 Mbit/s

95th percentile per-packet one-way delay: 111.087 ms

Loss rate: 0.35%

Run 3: Report of Indigo — Data Link

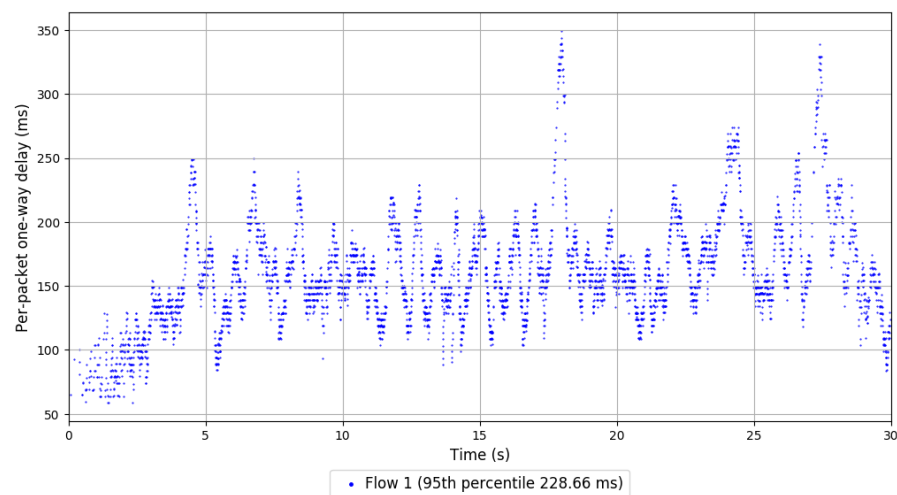
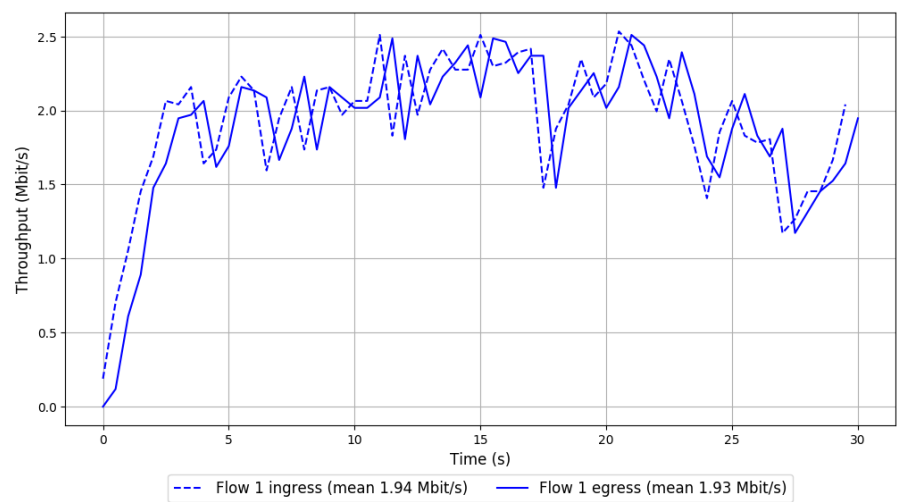


Run 1: Statistics of LEDBAT

Start at: 2018-08-01 15:05:54
End at: 2018-08-01 15:06:24
Local clock offset: -1.05 ms
Remote clock offset: -7.736 ms

Below is generated by plot.py at 2018-08-01 15:44:42
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 228.658 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 228.658 ms
Loss rate: 0.51%

Run 1: Report of LEDBAT — Data Link

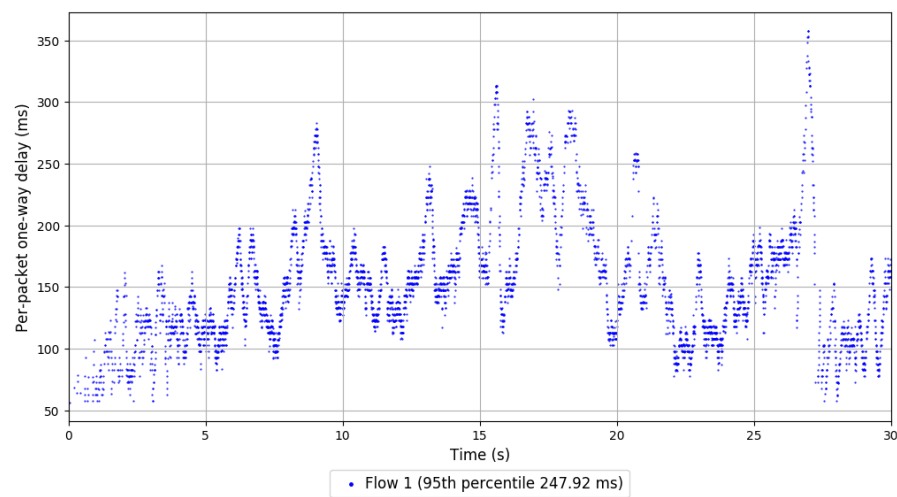
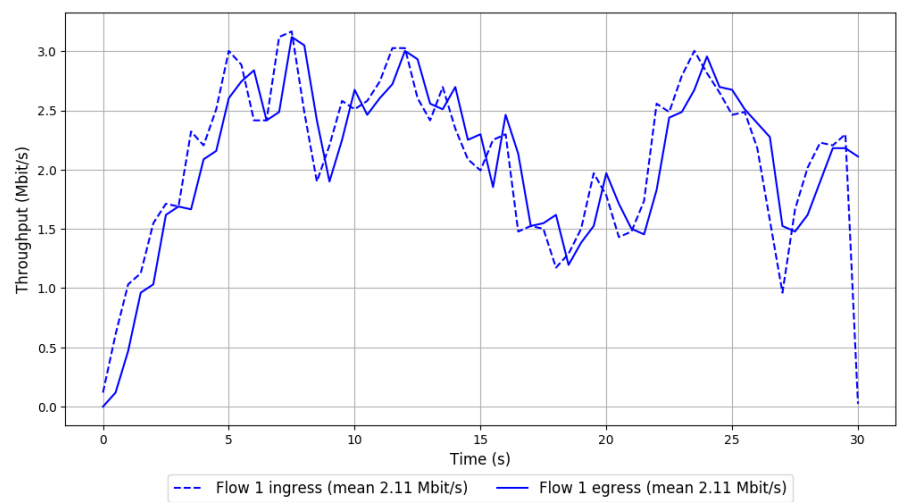


Run 2: Statistics of LEDBAT

Start at: 2018-08-01 15:24:20
End at: 2018-08-01 15:24:50
Local clock offset: -1.977 ms
Remote clock offset: -6.459 ms

Below is generated by plot.py at 2018-08-01 15:44:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.11 Mbit/s
95th percentile per-packet one-way delay: 247.917 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 2.11 Mbit/s
95th percentile per-packet one-way delay: 247.917 ms
Loss rate: 0.59%

Run 2: Report of LEDBAT — Data Link

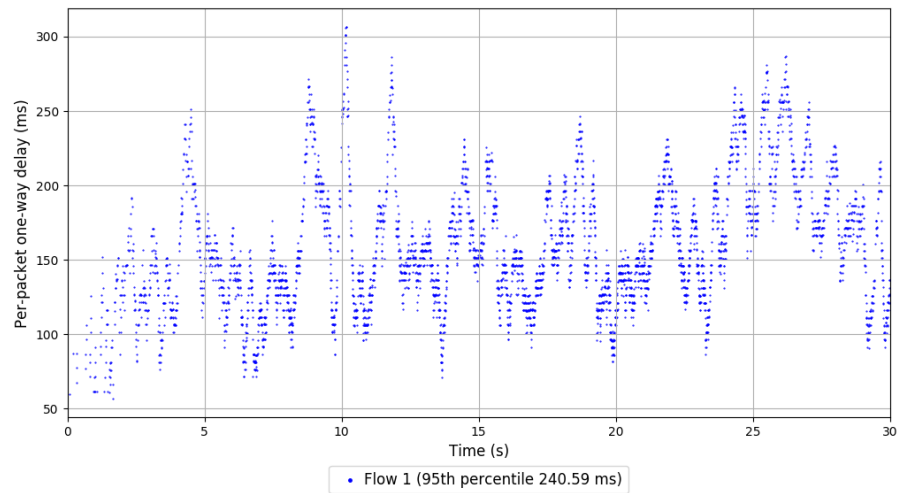
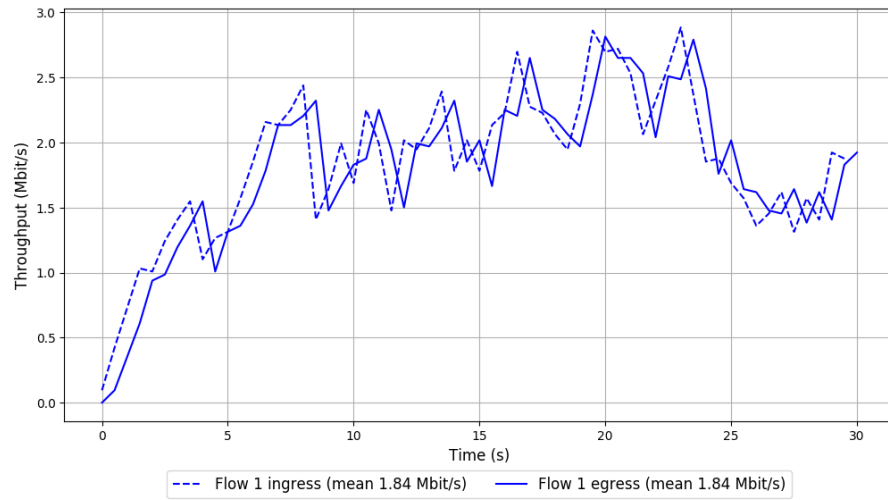


Run 3: Statistics of LEDBAT

Start at: 2018-08-01 15:42:48
End at: 2018-08-01 15:43:18
Local clock offset: -0.803 ms
Remote clock offset: -3.394 ms

Below is generated by plot.py at 2018-08-01 15:44:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.84 Mbit/s
95th percentile per-packet one-way delay: 240.592 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 1.84 Mbit/s
95th percentile per-packet one-way delay: 240.592 ms
Loss rate: 0.49%

Run 3: Report of LEDBAT — Data Link

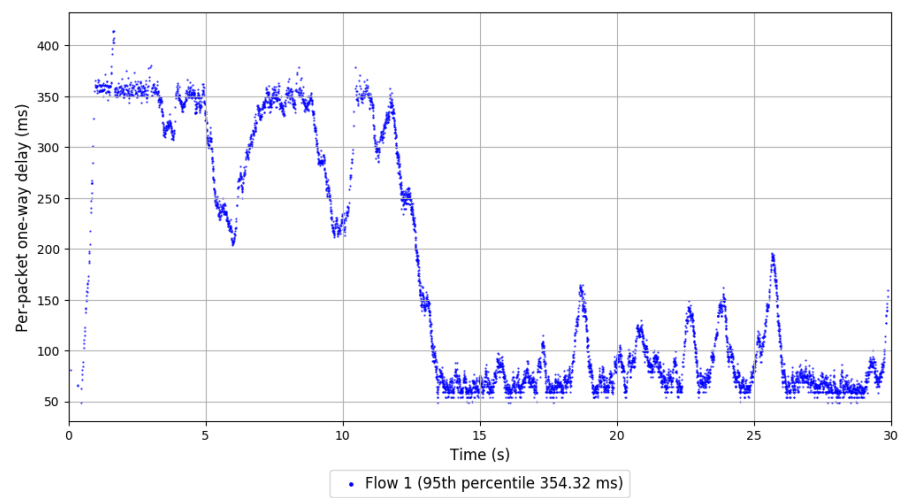
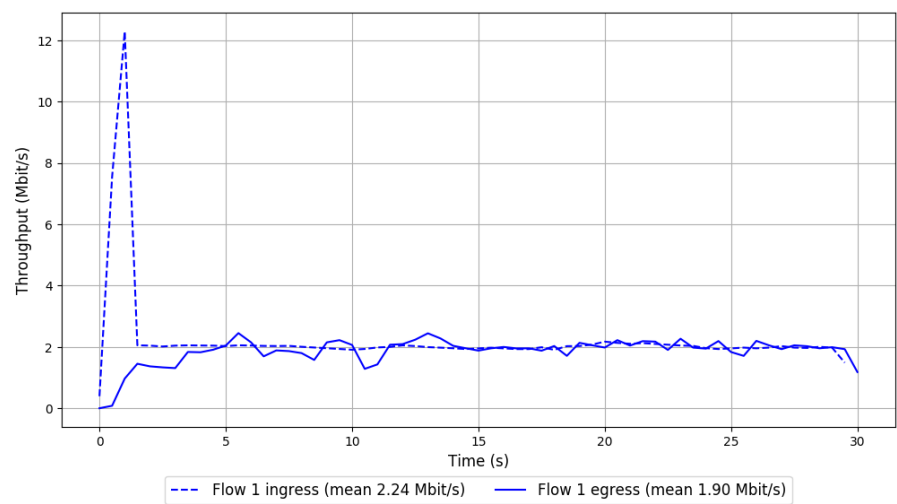


Run 1: Statistics of PCC-Allegro

Start at: 2018-08-01 14:58:01
End at: 2018-08-01 14:58:31
Local clock offset: 1.057 ms
Remote clock offset: -6.264 ms

Below is generated by plot.py at 2018-08-01 15:44:45
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 354.316 ms
Loss rate: 15.68%
-- Flow 1:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 354.316 ms
Loss rate: 15.68%

Run 1: Report of PCC-Allegro — Data Link

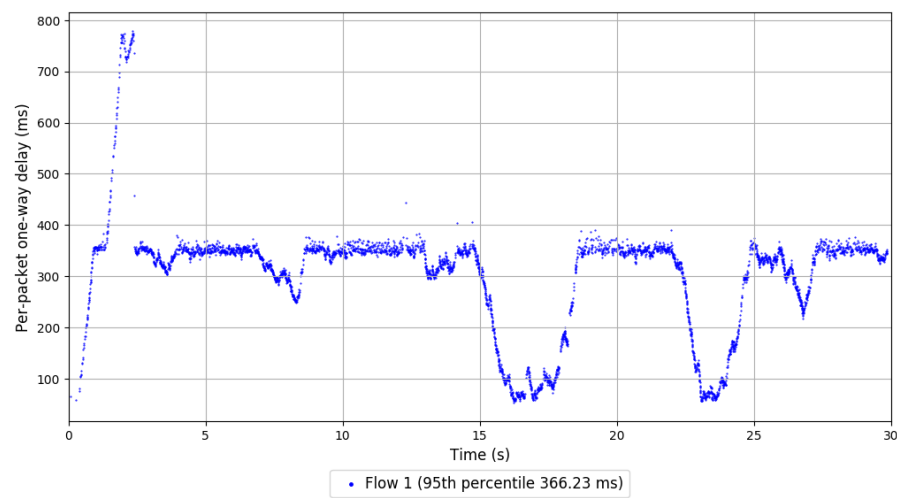
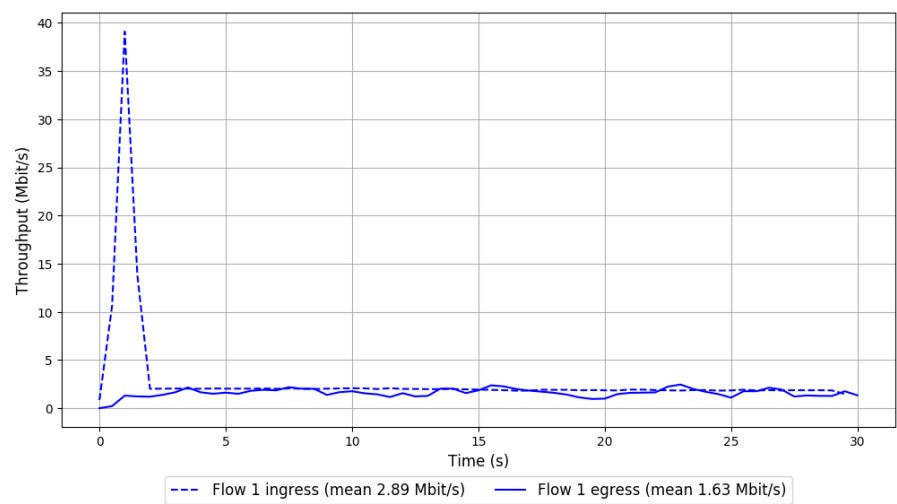


Run 2: Statistics of PCC-Allegro

Start at: 2018-08-01 15:16:40
End at: 2018-08-01 15:17:10
Local clock offset: -0.091 ms
Remote clock offset: -5.968 ms

Below is generated by plot.py at 2018-08-01 15:44:45
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.63 Mbit/s
95th percentile per-packet one-way delay: 366.230 ms
Loss rate: 43.82%
-- Flow 1:
Average throughput: 1.63 Mbit/s
95th percentile per-packet one-way delay: 366.230 ms
Loss rate: 43.82%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

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

End at: 2018-08-01 15:35:38

Local clock offset: 0.186 ms

Remote clock offset: -5.19 ms

Below is generated by plot.py at 2018-08-01 15:44:45

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.18 Mbit/s

95th percentile per-packet one-way delay: 374.401 ms

Loss rate: 59.94%

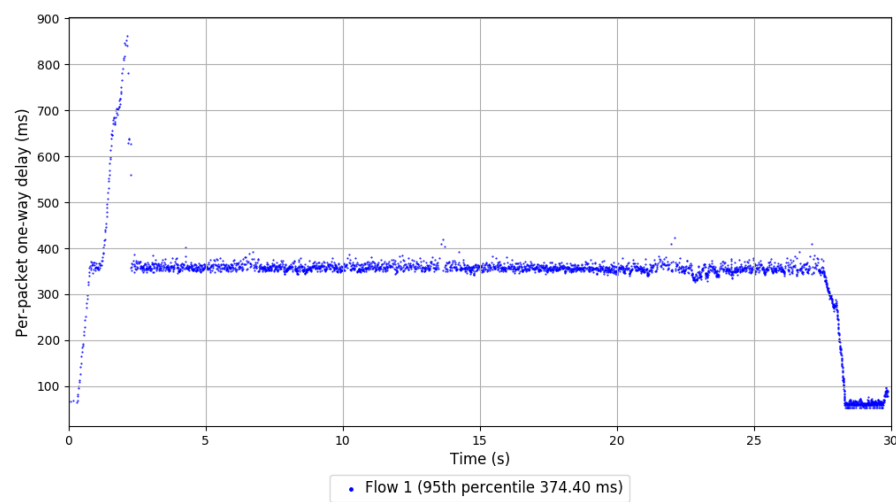
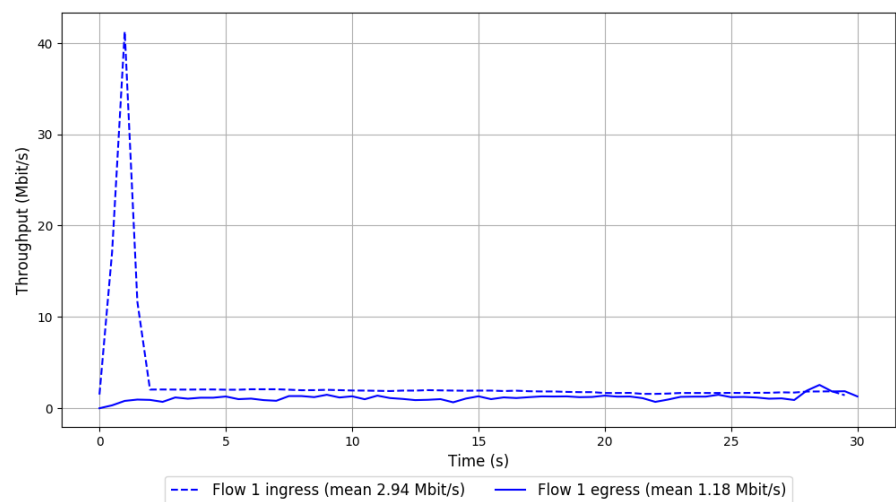
-- Flow 1:

Average throughput: 1.18 Mbit/s

95th percentile per-packet one-way delay: 374.401 ms

Loss rate: 59.94%

Run 3: Report of PCC-Allegro — Data Link

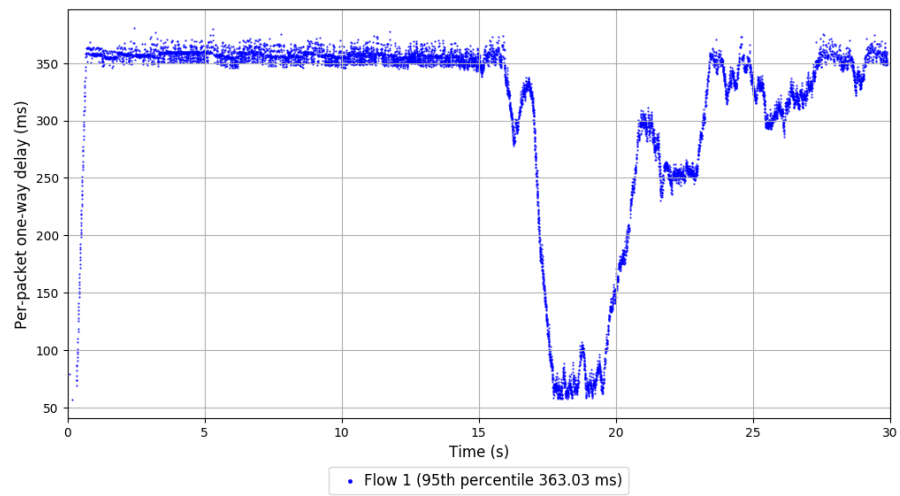
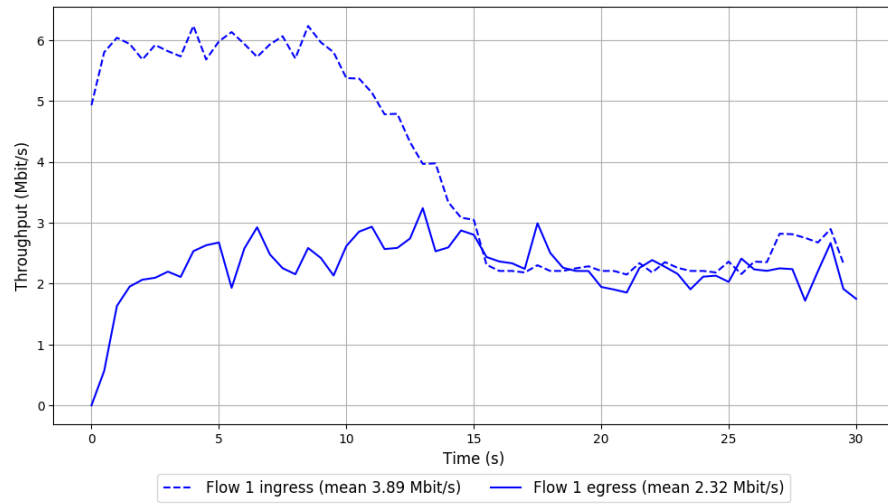


Run 1: Statistics of PCC-Expr

Start at: 2018-08-01 15:01:15
End at: 2018-08-01 15:01:45
Local clock offset: 2.127 ms
Remote clock offset: -8.147 ms

Below is generated by plot.py at 2018-08-01 15:44:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.32 Mbit/s
95th percentile per-packet one-way delay: 363.029 ms
Loss rate: 40.46%
-- Flow 1:
Average throughput: 2.32 Mbit/s
95th percentile per-packet one-way delay: 363.029 ms
Loss rate: 40.46%

Run 1: Report of PCC-Expr — Data Link

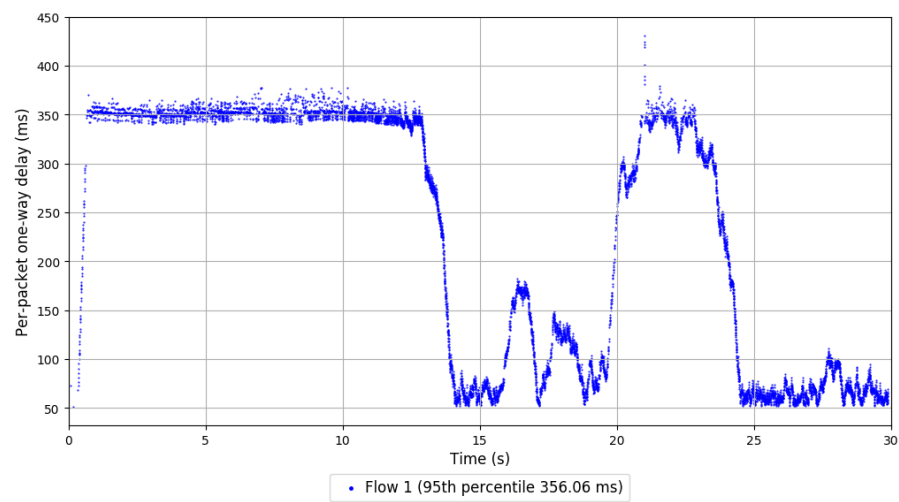
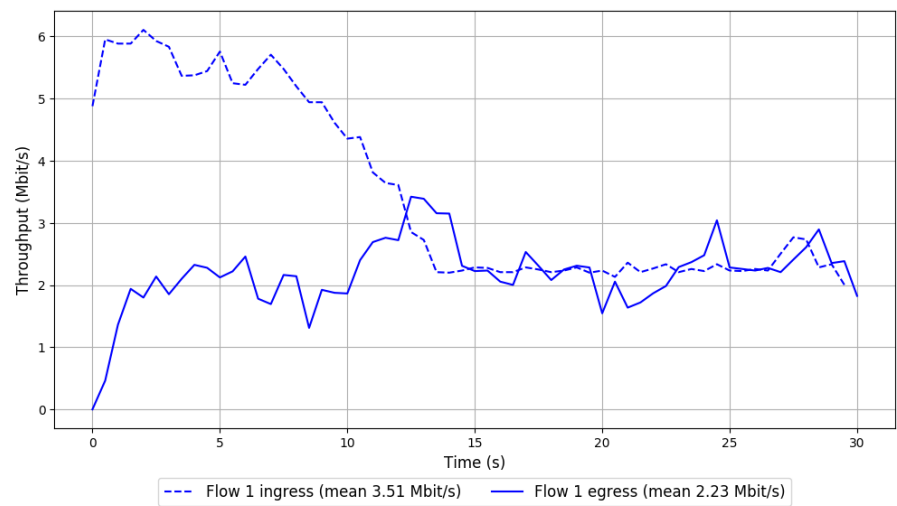


Run 2: Statistics of PCC-Expr

Start at: 2018-08-01 15:20:00
End at: 2018-08-01 15:20:30
Local clock offset: -1.007 ms
Remote clock offset: -3.713 ms

Below is generated by plot.py at 2018-08-01 15:44:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 356.057 ms
Loss rate: 36.70%
-- Flow 1:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 356.057 ms
Loss rate: 36.70%

Run 2: Report of PCC-Expr — Data Link

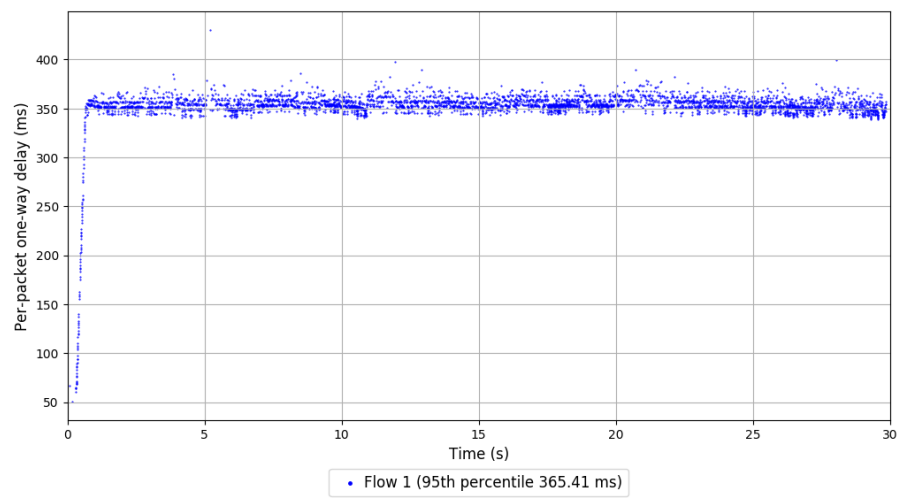
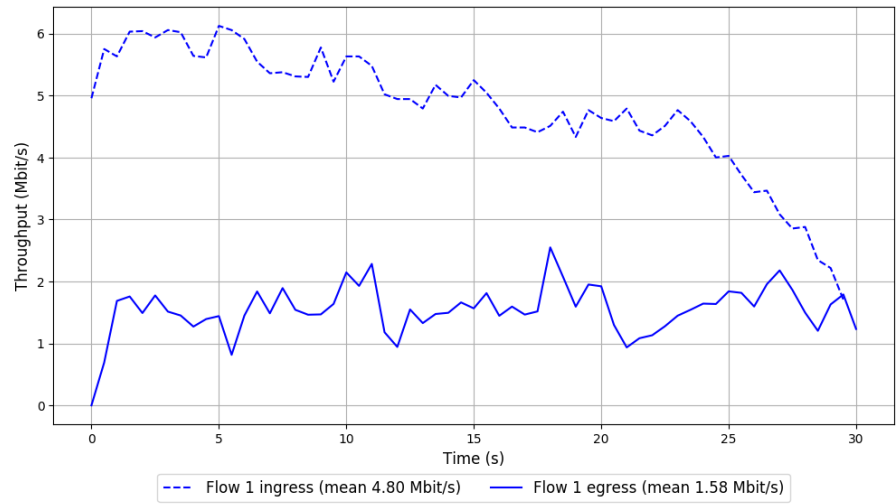


Run 3: Statistics of PCC-Expr

Start at: 2018-08-01 15:38:27
End at: 2018-08-01 15:38:57
Local clock offset: -2.971 ms
Remote clock offset: -5.101 ms

Below is generated by plot.py at 2018-08-01 15:44:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.58 Mbit/s
95th percentile per-packet one-way delay: 365.412 ms
Loss rate: 67.18%
-- Flow 1:
Average throughput: 1.58 Mbit/s
95th percentile per-packet one-way delay: 365.412 ms
Loss rate: 67.18%

Run 3: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2018-08-01 14:49:24

End at: 2018-08-01 14:49:54

Local clock offset: -0.344 ms

Remote clock offset: -5.969 ms

Below is generated by plot.py at 2018-08-01 15:44:52

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.15 Mbit/s

95th percentile per-packet one-way delay: 343.441 ms

Loss rate: 3.89%

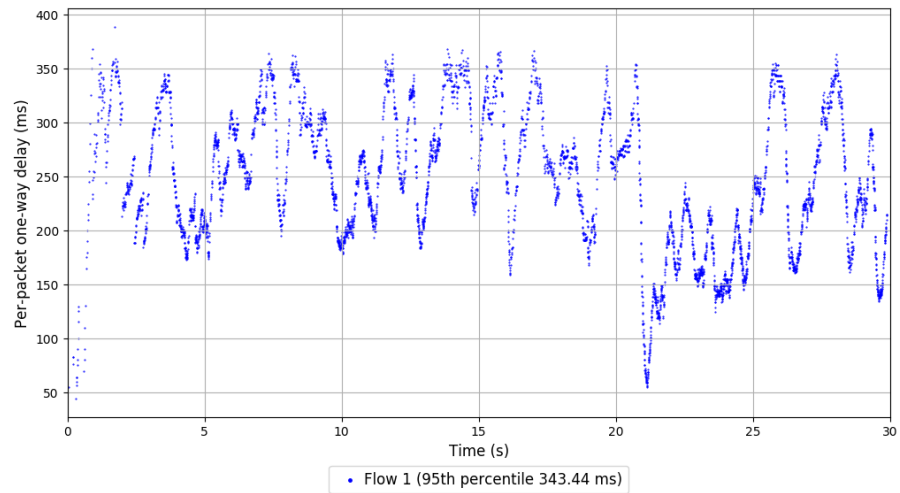
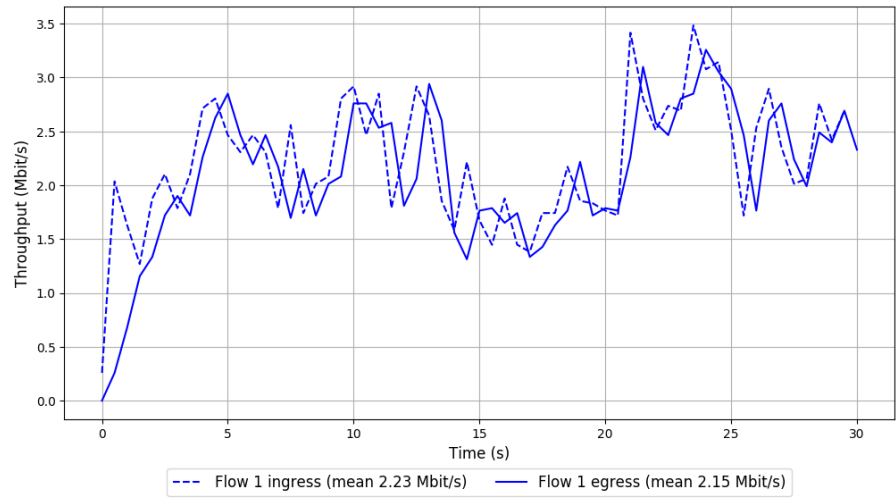
-- Flow 1:

Average throughput: 2.15 Mbit/s

95th percentile per-packet one-way delay: 343.441 ms

Loss rate: 3.89%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

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

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

Local clock offset: -1.992 ms

Remote clock offset: -4.772 ms

Below is generated by plot.py at 2018-08-01 15:44:52

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.81 Mbit/s

95th percentile per-packet one-way delay: 345.818 ms

Loss rate: 5.75%

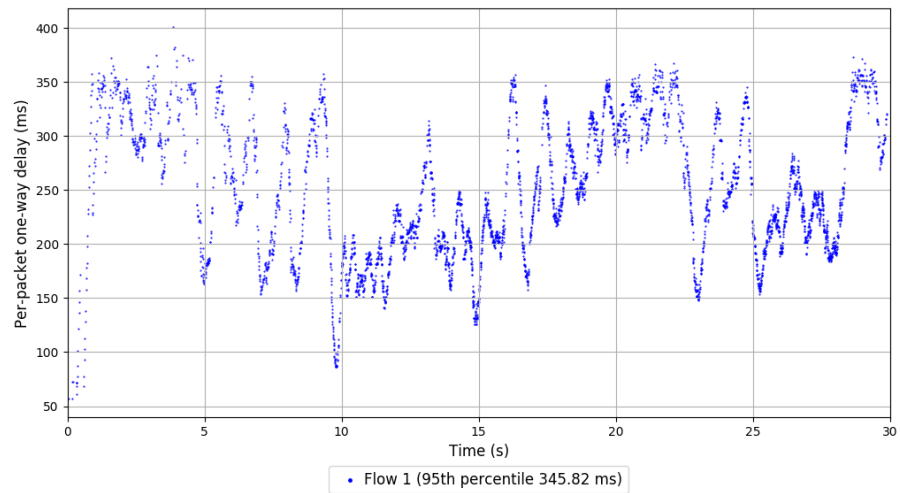
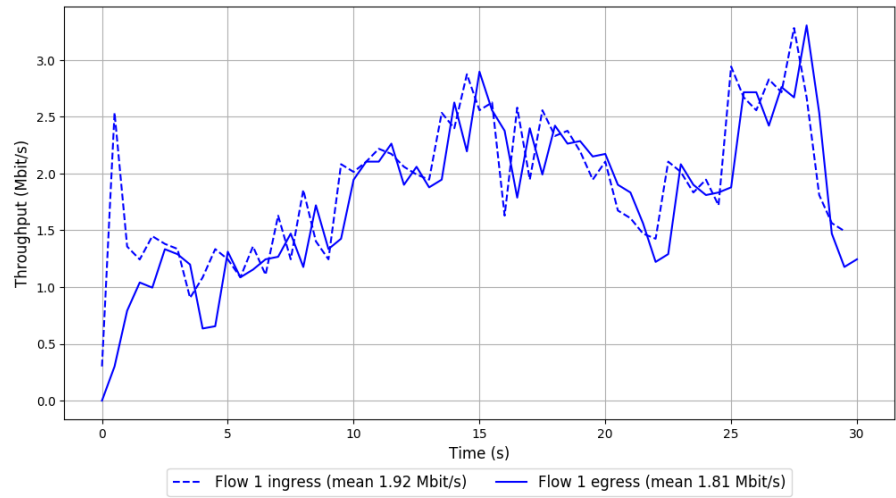
-- Flow 1:

Average throughput: 1.81 Mbit/s

95th percentile per-packet one-way delay: 345.818 ms

Loss rate: 5.75%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-08-01 15:26:30

End at: 2018-08-01 15:27:00

Local clock offset: 1.73 ms

Remote clock offset: -6.777 ms

Below is generated by plot.py at 2018-08-01 15:44:52

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.33 Mbit/s

95th percentile per-packet one-way delay: 354.220 ms

Loss rate: 7.58%

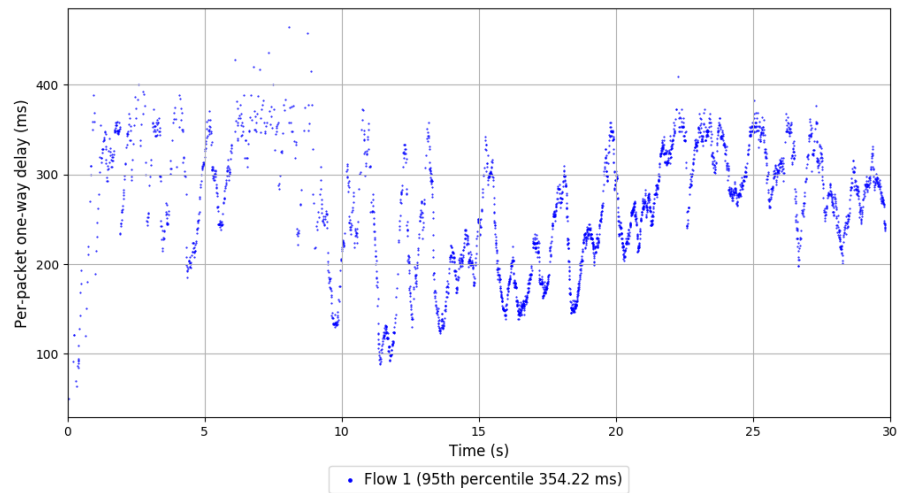
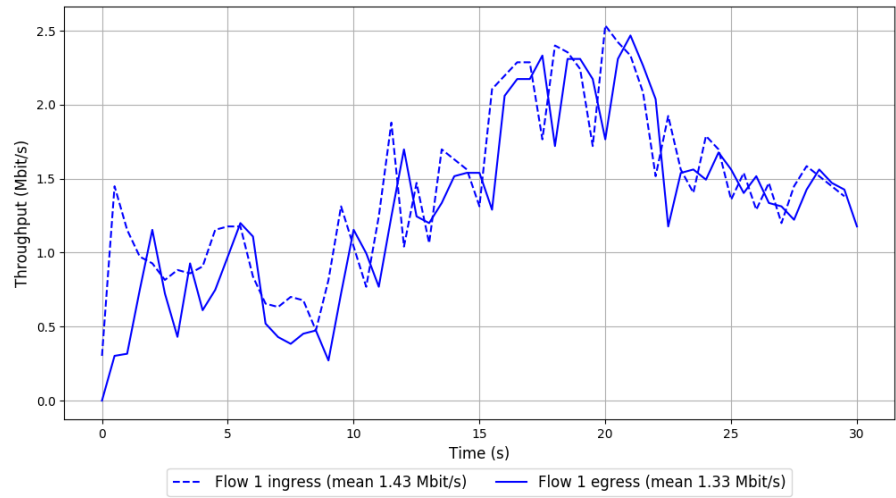
-- Flow 1:

Average throughput: 1.33 Mbit/s

95th percentile per-packet one-way delay: 354.220 ms

Loss rate: 7.58%

Run 3: Report of QUIC Cubic — Data Link

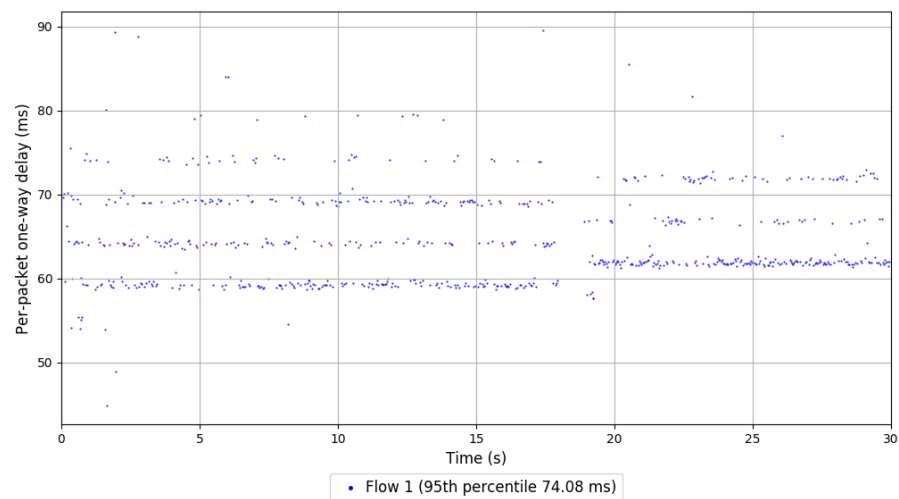
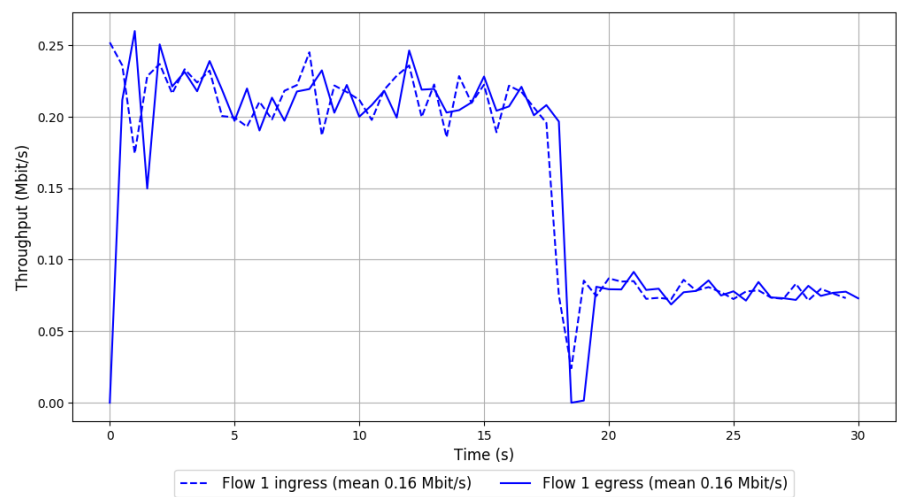


Run 1: Statistics of SCReAM

Start at: 2018-08-01 14:55:52
End at: 2018-08-01 14:56:22
Local clock offset: 0.118 ms
Remote clock offset: -8.252 ms

Below is generated by plot.py at 2018-08-01 15:44:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 74.075 ms
Loss rate: 1.41%
-- Flow 1:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 74.075 ms
Loss rate: 1.41%

Run 1: Report of SReAM — Data Link

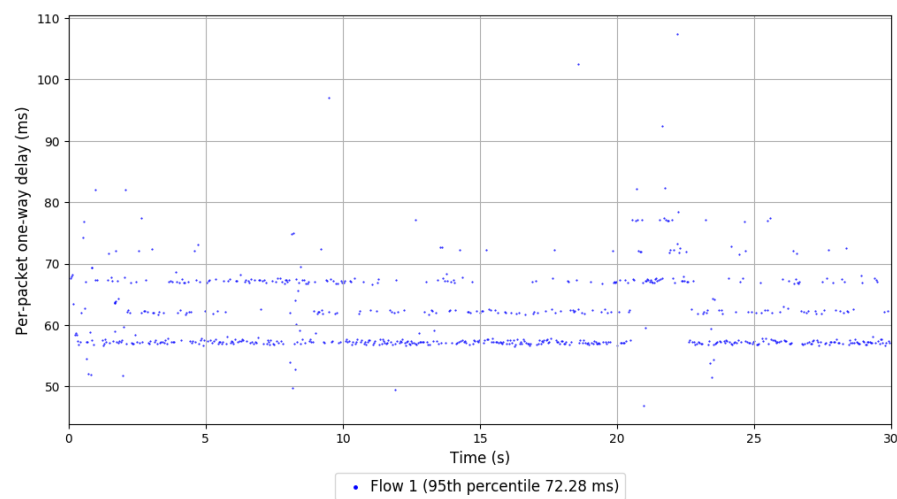
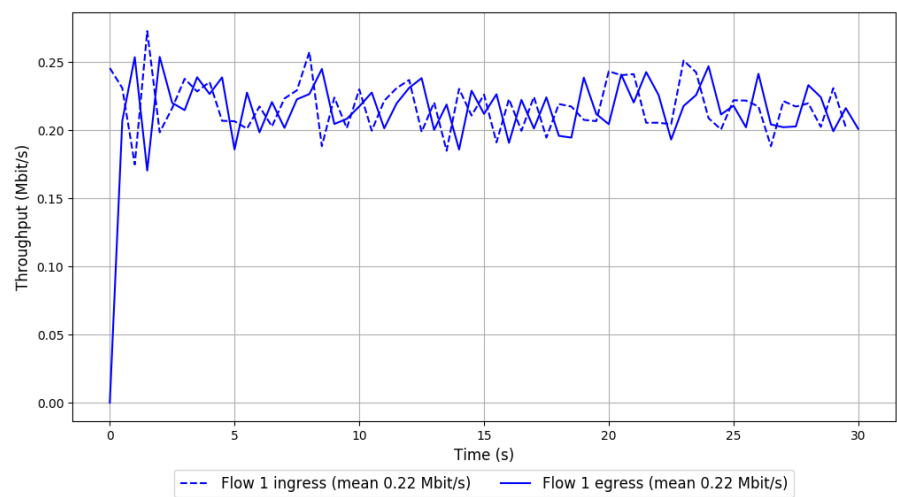


Run 2: Statistics of SCReAM

Start at: 2018-08-01 15:14:31
End at: 2018-08-01 15:15:01
Local clock offset: 1.42 ms
Remote clock offset: -5.499 ms

Below is generated by plot.py at 2018-08-01 15:44:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 72.275 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 72.275 ms
Loss rate: 0.26%

Run 2: Report of SReAM — Data Link

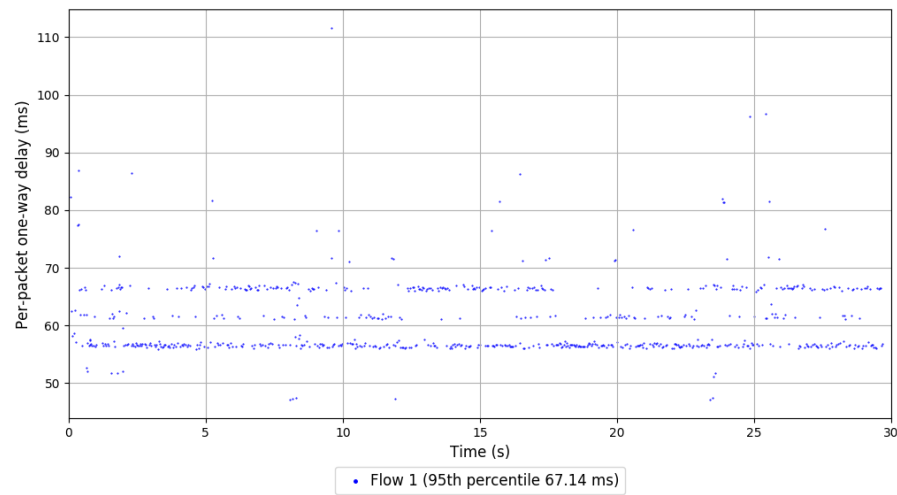
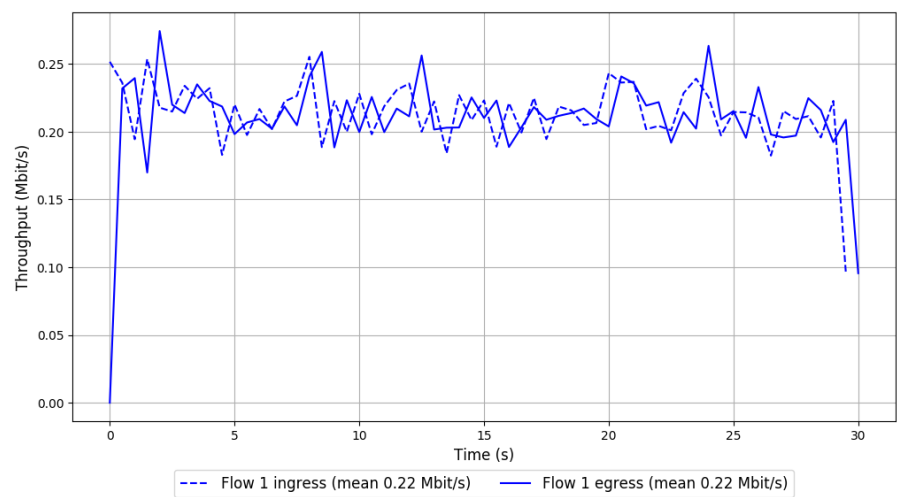


Run 3: Statistics of SCReAM

Start at: 2018-08-01 15:32:59
End at: 2018-08-01 15:33:29
Local clock offset: -0.891 ms
Remote clock offset: -5.042 ms

Below is generated by plot.py at 2018-08-01 15:44:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 67.142 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 67.142 ms
Loss rate: 0.25%

Run 3: Report of SReAM — Data Link

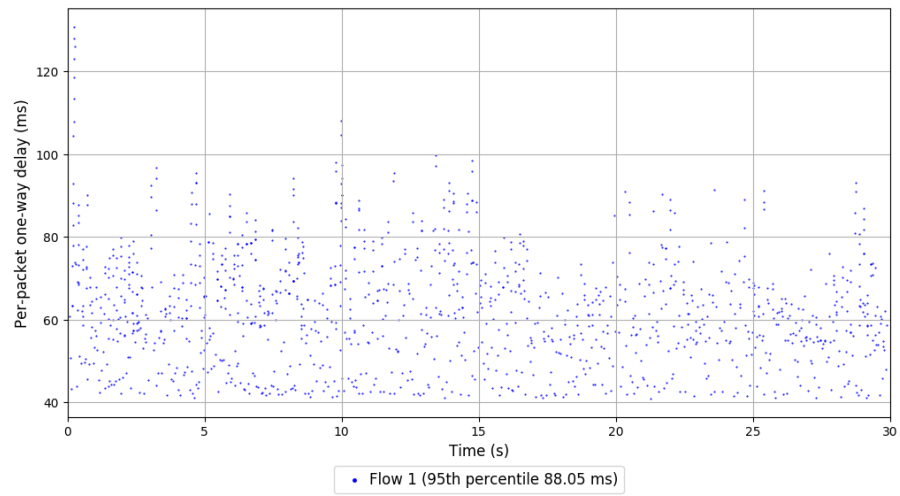
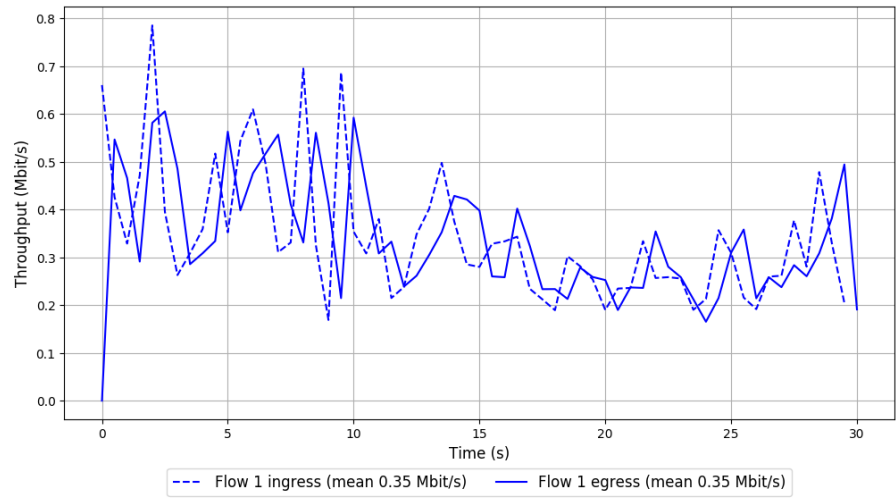


Run 1: Statistics of Sprout

Start at: 2018-08-01 14:56:56
End at: 2018-08-01 14:57:26
Local clock offset: -2.129 ms
Remote clock offset: -6.136 ms

Below is generated by plot.py at 2018-08-01 15:44:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 88.053 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 88.053 ms
Loss rate: 0.18%

Run 1: Report of Sprout — Data Link

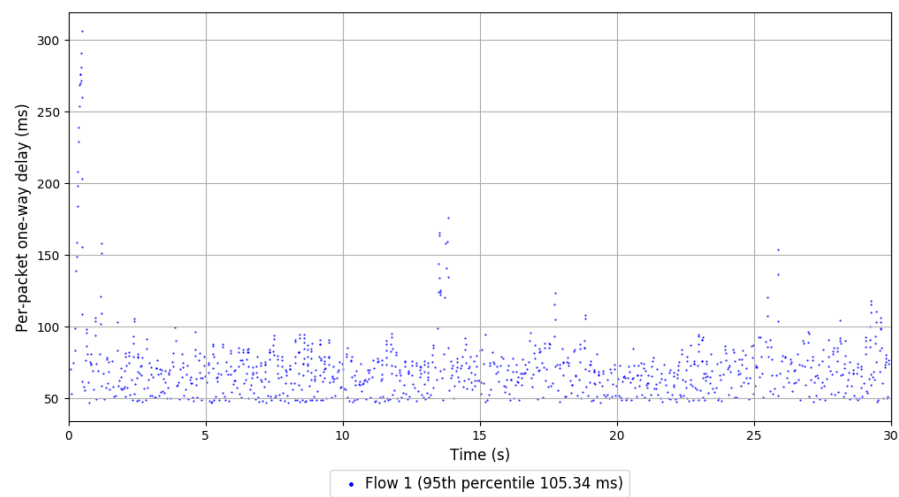
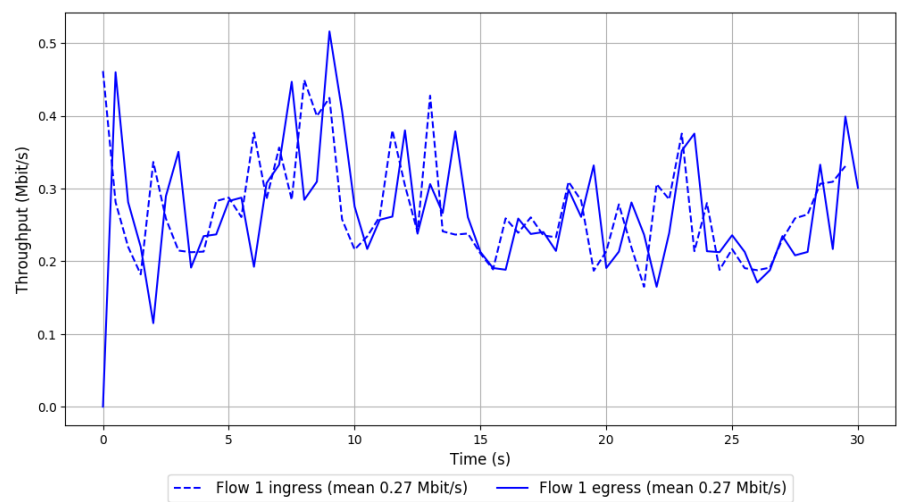


Run 2: Statistics of Sprout

Start at: 2018-08-01 15:15:35
End at: 2018-08-01 15:16:05
Local clock offset: 1.169 ms
Remote clock offset: -7.835 ms

Below is generated by plot.py at 2018-08-01 15:44:53
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 105.344 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 105.344 ms
Loss rate: 0.19%

Run 2: Report of Sprout — Data Link

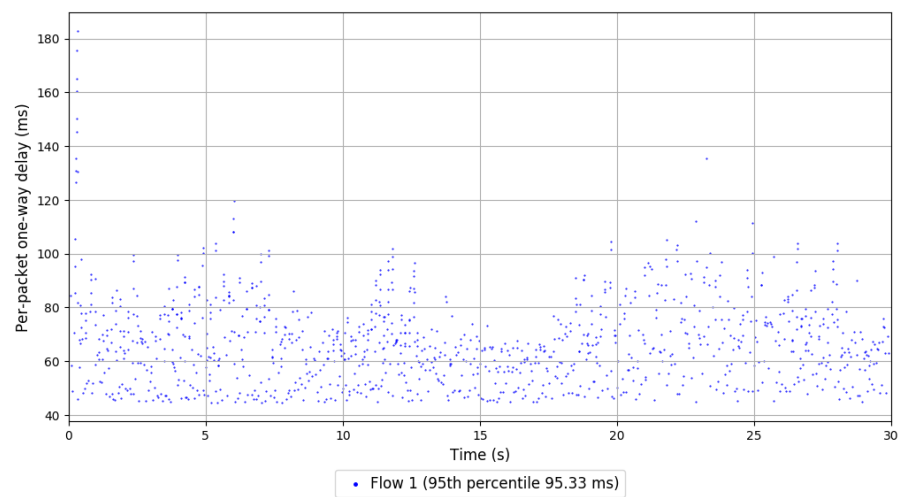
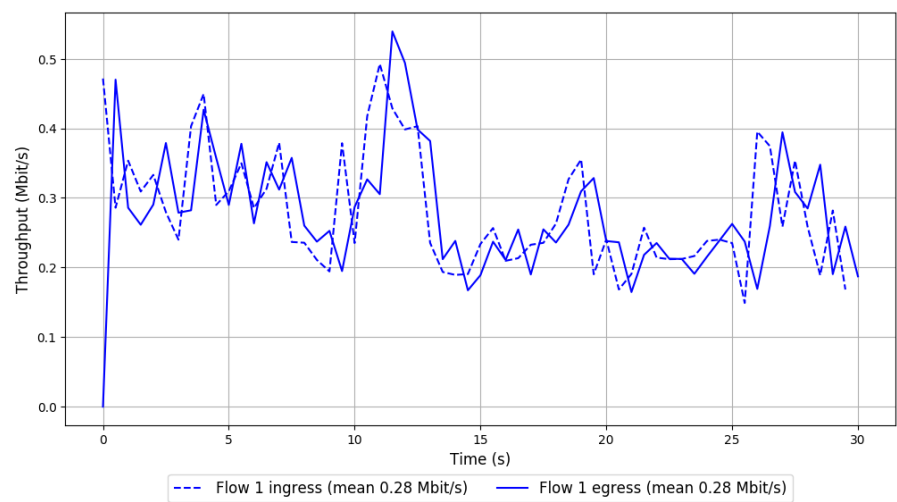


Run 3: Statistics of Sprout

Start at: 2018-08-01 15:34:03
End at: 2018-08-01 15:34:33
Local clock offset: -0.818 ms
Remote clock offset: -5.882 ms

Below is generated by plot.py at 2018-08-01 15:44:53
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 95.334 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 95.334 ms
Loss rate: 0.30%

Run 3: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2018-08-01 15:04:44

End at: 2018-08-01 15:05:14

Local clock offset: 0.767 ms

Remote clock offset: -6.289 ms

Below is generated by plot.py at 2018-08-01 15:44:59

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.01 Mbit/s

95th percentile per-packet one-way delay: 249.589 ms

Loss rate: 5.33%

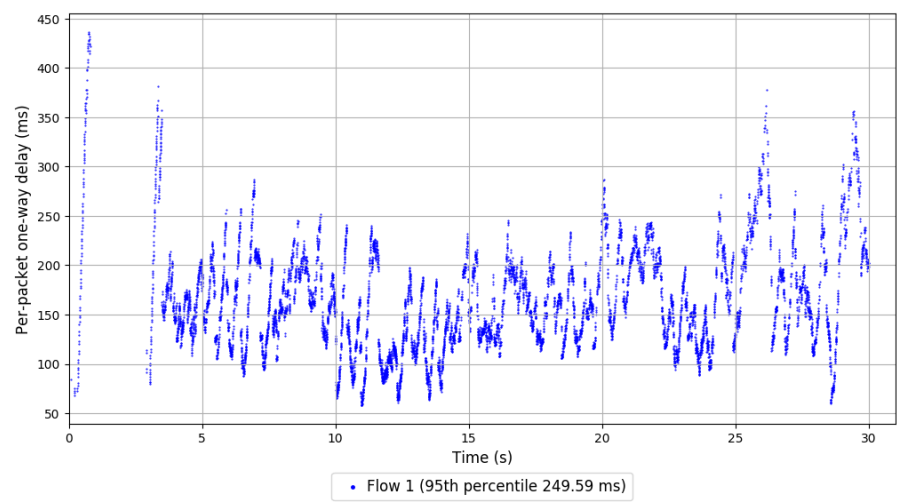
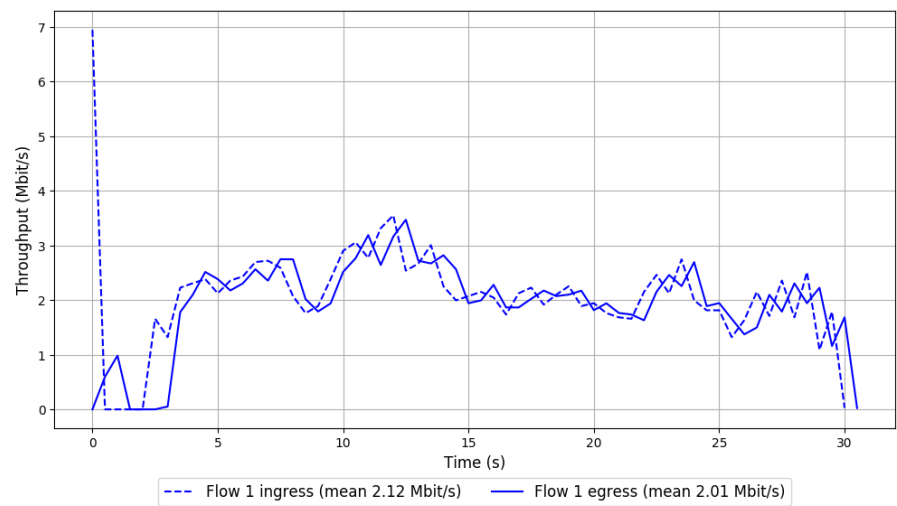
-- Flow 1:

Average throughput: 2.01 Mbit/s

95th percentile per-packet one-way delay: 249.589 ms

Loss rate: 5.33%

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

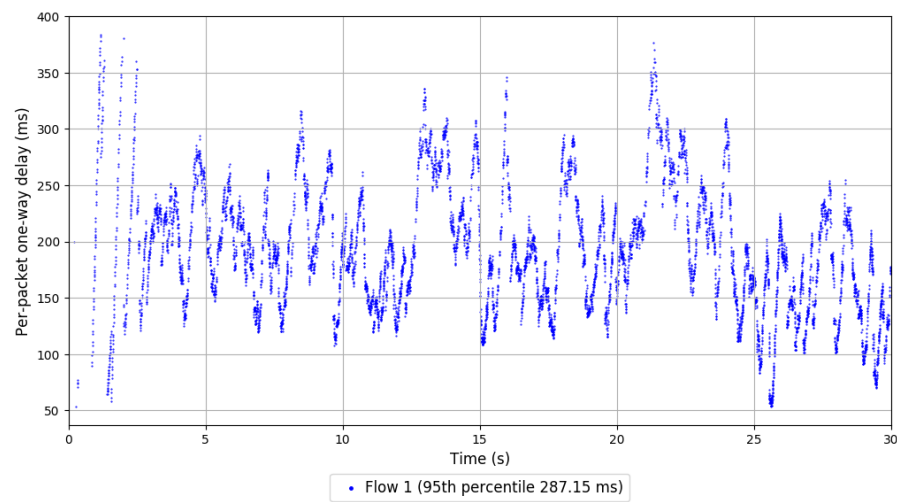
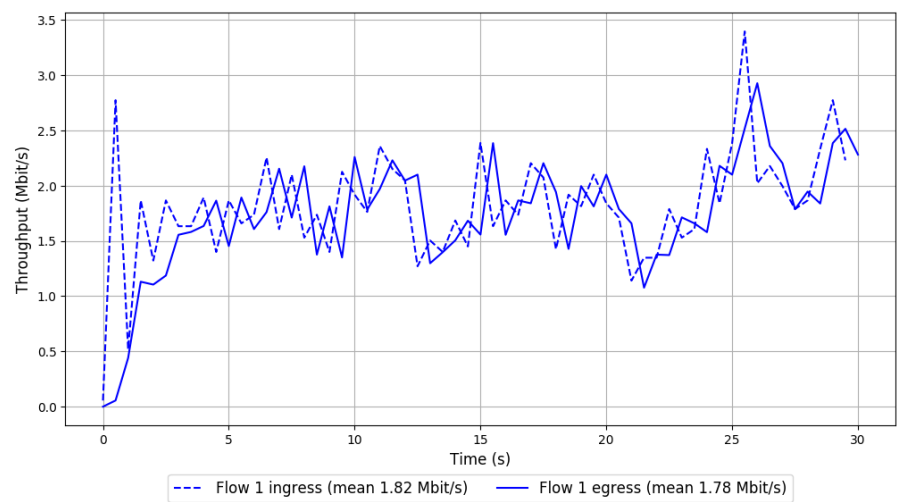


Run 2: Statistics of TaoVA-100x

Start at: 2018-08-01 15:23:15
End at: 2018-08-01 15:23:45
Local clock offset: -1.238 ms
Remote clock offset: -4.439 ms

Below is generated by plot.py at 2018-08-01 15:44:59
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.78 Mbit/s
95th percentile per-packet one-way delay: 287.149 ms
Loss rate: 2.81%
-- Flow 1:
Average throughput: 1.78 Mbit/s
95th percentile per-packet one-way delay: 287.149 ms
Loss rate: 2.81%

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

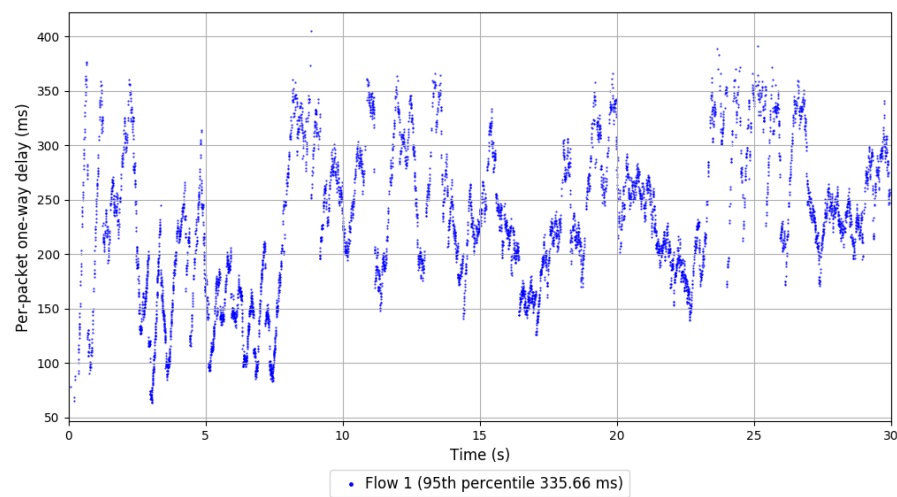
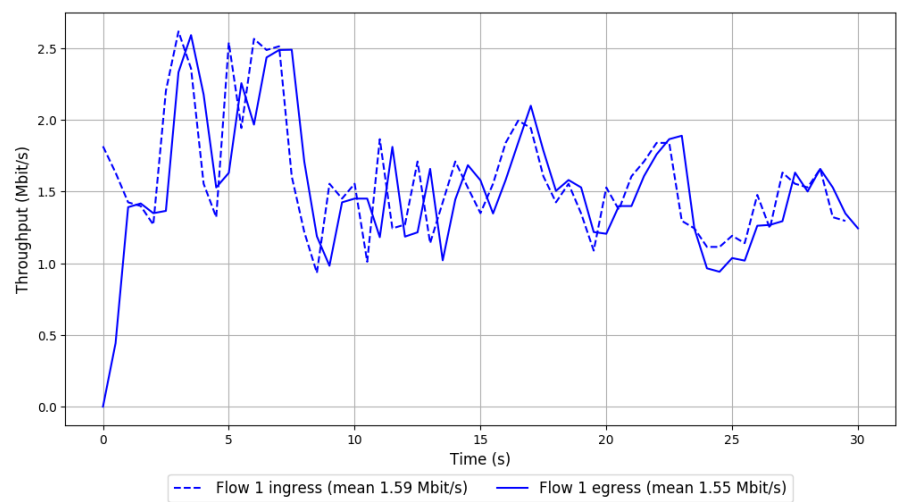


Run 3: Statistics of TaoVA-100x

Start at: 2018-08-01 15:41:43
End at: 2018-08-01 15:42:13
Local clock offset: -1.274 ms
Remote clock offset: -4.401 ms

Below is generated by plot.py at 2018-08-01 15:44:59
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.55 Mbit/s
95th percentile per-packet one-way delay: 335.658 ms
Loss rate: 3.02%
-- Flow 1:
Average throughput: 1.55 Mbit/s
95th percentile per-packet one-way delay: 335.658 ms
Loss rate: 3.02%

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

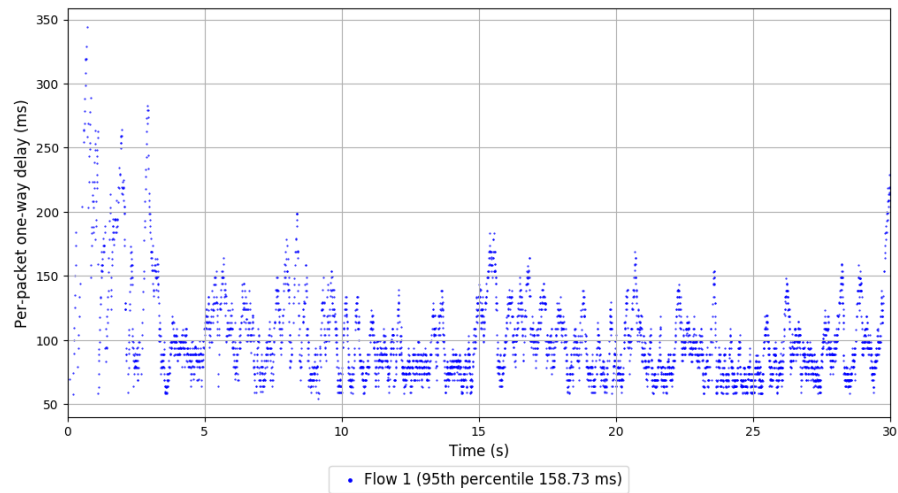
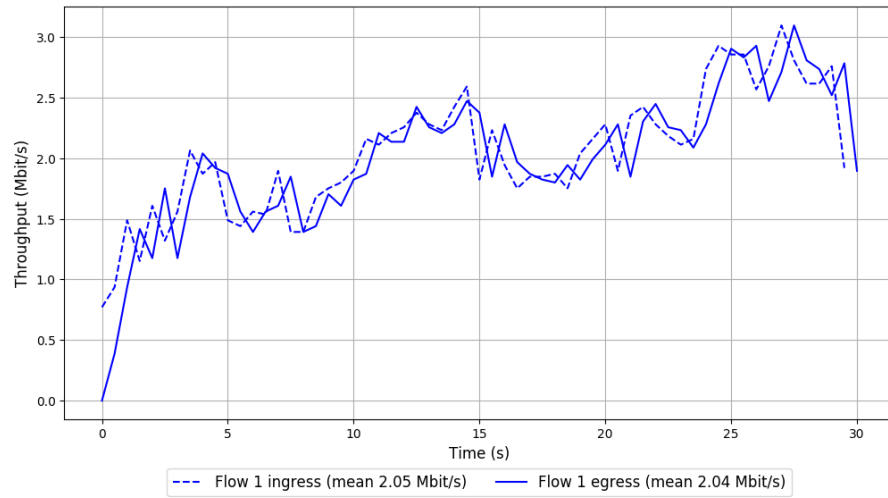


Run 1: Statistics of TCP Vegas

Start at: 2018-08-01 15:02:34
End at: 2018-08-01 15:03:04
Local clock offset: -0.029 ms
Remote clock offset: -5.656 ms

Below is generated by plot.py at 2018-08-01 15:44:59
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.04 Mbit/s
95th percentile per-packet one-way delay: 158.733 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 2.04 Mbit/s
95th percentile per-packet one-way delay: 158.733 ms
Loss rate: 0.43%

Run 1: Report of TCP Vegas — Data Link

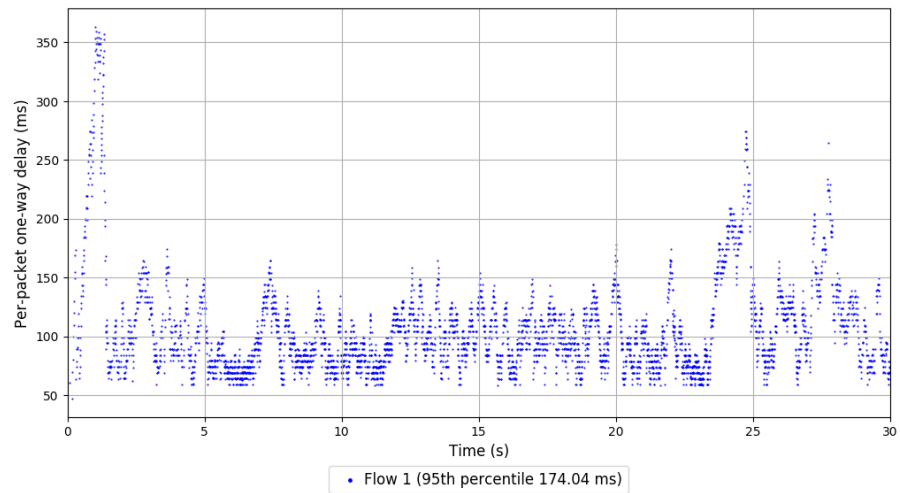
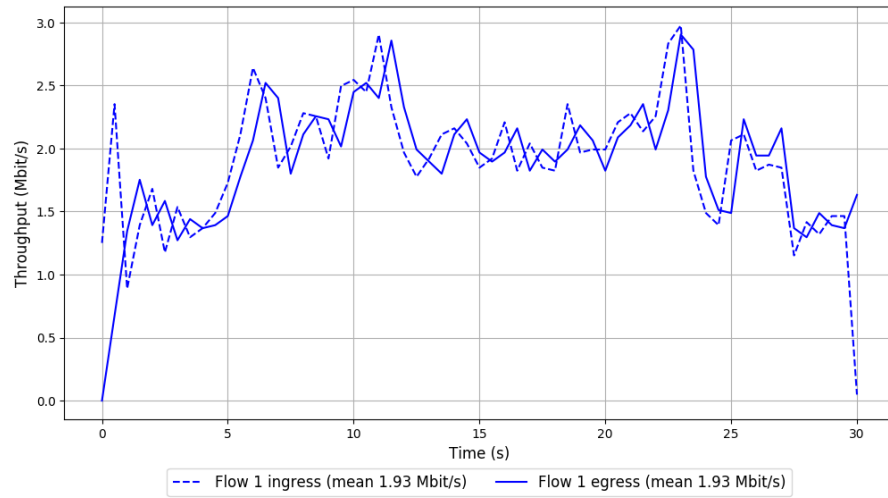


Run 2: Statistics of TCP Vegas

Start at: 2018-08-01 15:21:05
End at: 2018-08-01 15:21:35
Local clock offset: -1.437 ms
Remote clock offset: -6.063 ms

Below is generated by plot.py at 2018-08-01 15:44:59
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 174.040 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 174.040 ms
Loss rate: 0.60%

Run 2: Report of TCP Vegas — Data Link

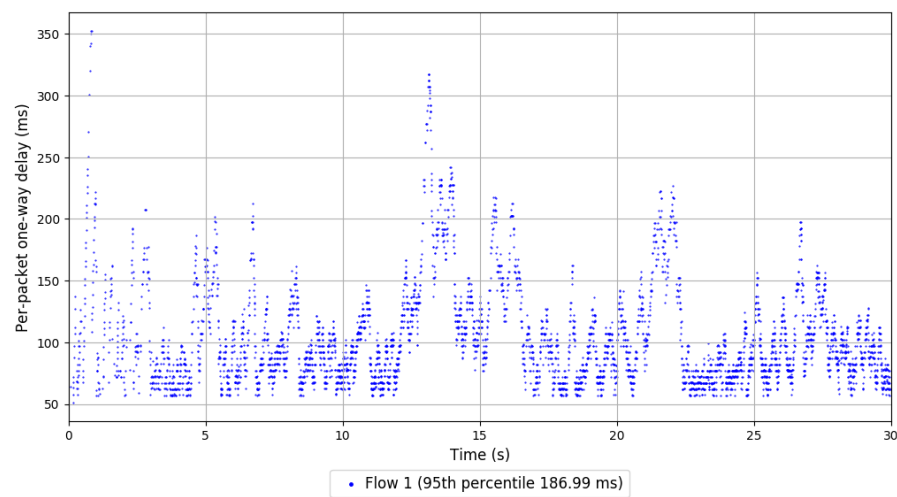
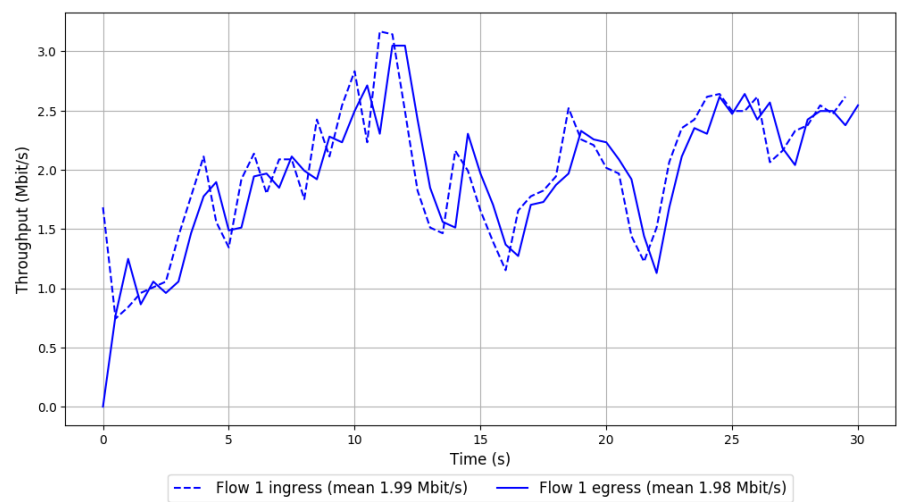


Run 3: Statistics of TCP Vegas

Start at: 2018-08-01 15:39:34
End at: 2018-08-01 15:40:04
Local clock offset: -1.681 ms
Remote clock offset: -4.477 ms

Below is generated by plot.py at 2018-08-01 15:44:59
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 186.985 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 186.985 ms
Loss rate: 0.56%

Run 3: Report of TCP Vegas — Data Link

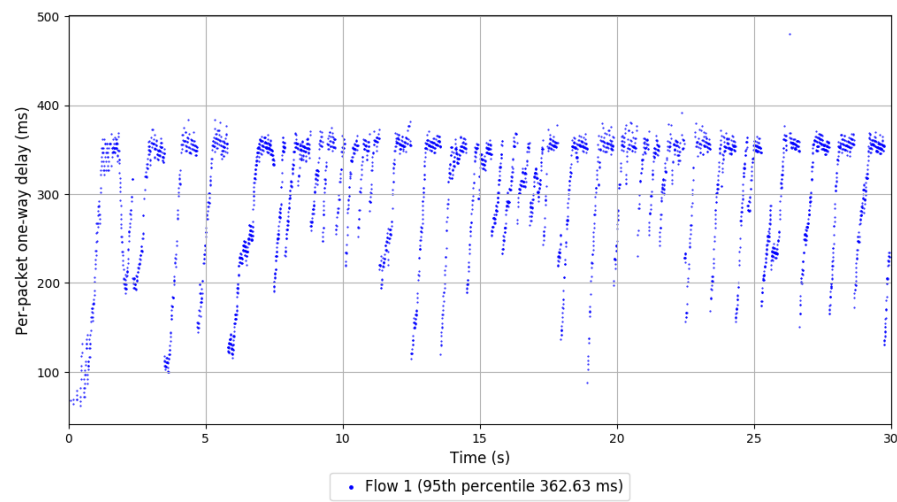
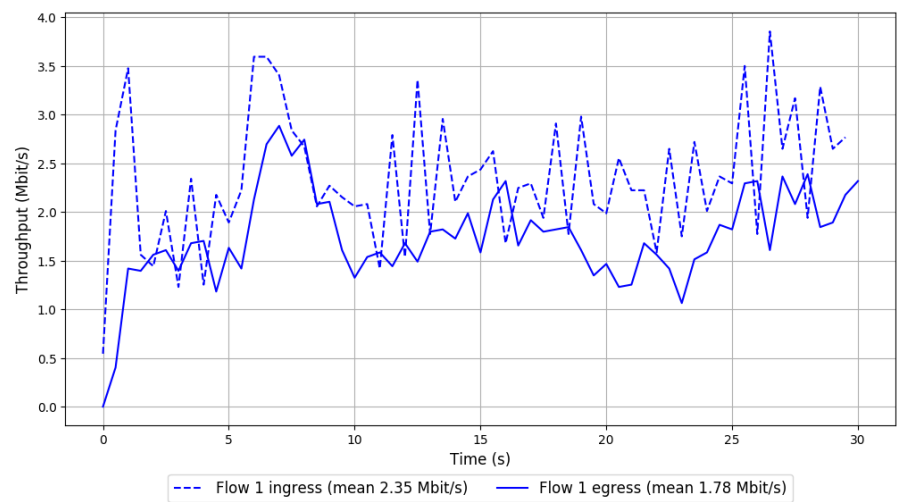


Run 1: Statistics of Verus

Start at: 2018-08-01 14:51:33
End at: 2018-08-01 14:52:03
Local clock offset: 1.873 ms
Remote clock offset: -8.619 ms

Below is generated by plot.py at 2018-08-01 15:44:59
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.78 Mbit/s
95th percentile per-packet one-way delay: 362.630 ms
Loss rate: 24.52%
-- Flow 1:
Average throughput: 1.78 Mbit/s
95th percentile per-packet one-way delay: 362.630 ms
Loss rate: 24.52%

Run 1: Report of Verus — Data Link

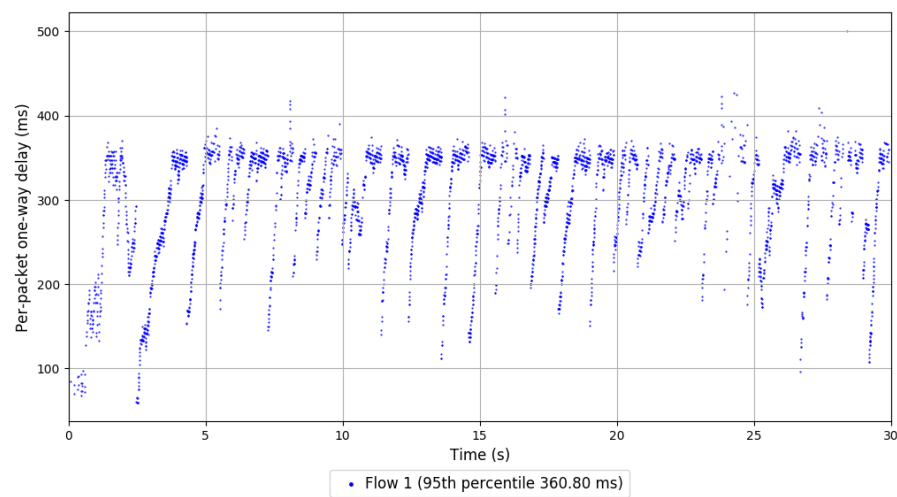
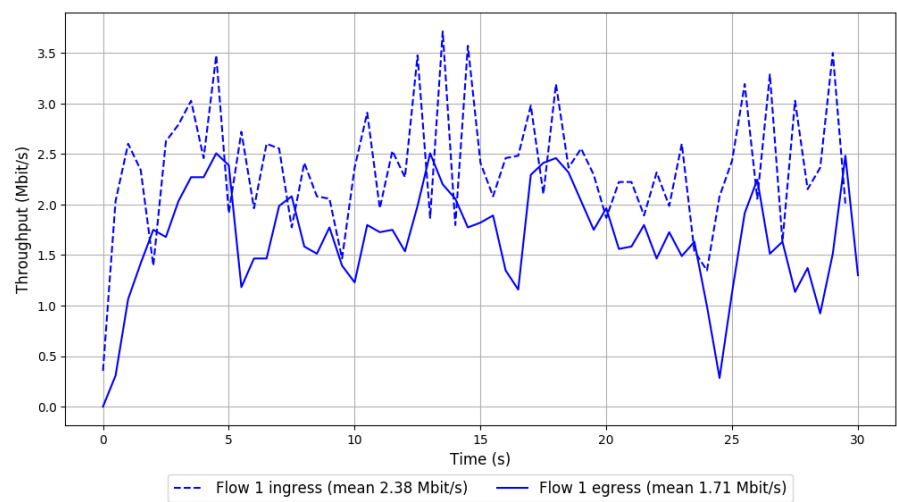


Run 2: Statistics of Verus

Start at: 2018-08-01 15:10:12
End at: 2018-08-01 15:10:42
Local clock offset: 0.224 ms
Remote clock offset: -5.54 ms

Below is generated by plot.py at 2018-08-01 15:44:59
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 360.795 ms
Loss rate: 28.16%
-- Flow 1:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 360.795 ms
Loss rate: 28.16%

Run 2: Report of Verus — Data Link

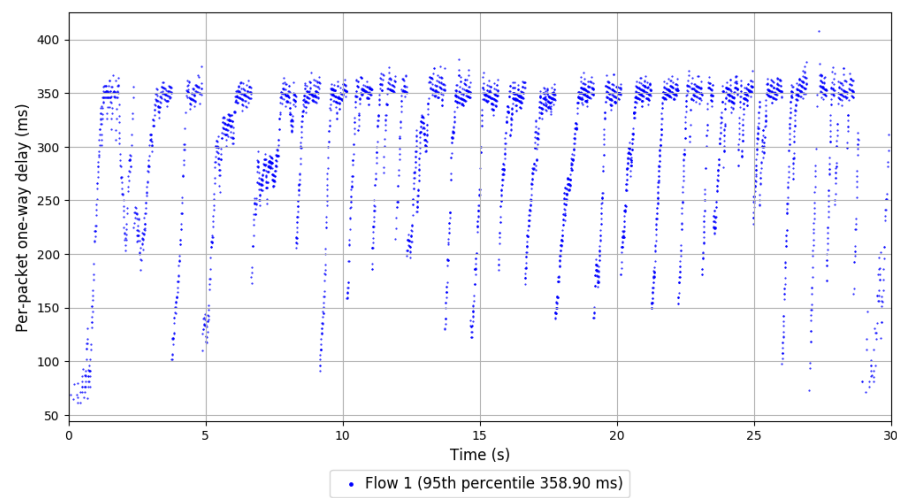
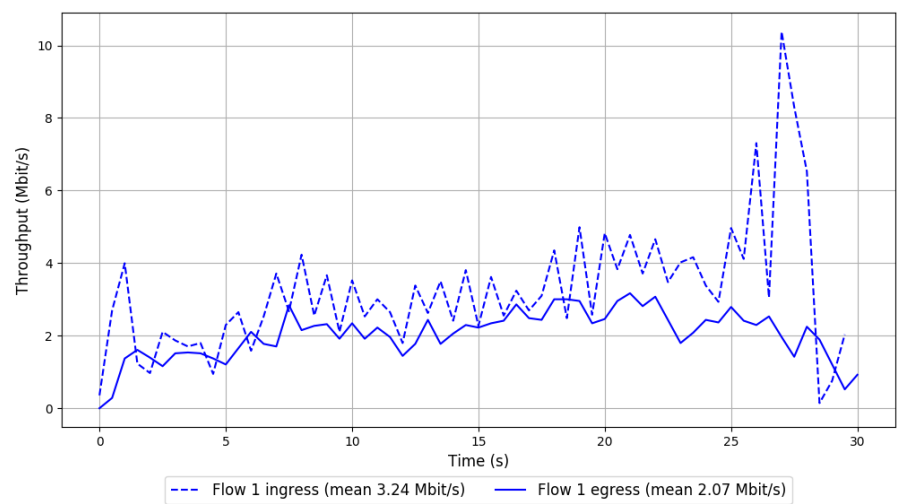


Run 3: Statistics of Verus

Start at: 2018-08-01 15:28:39
End at: 2018-08-01 15:29:09
Local clock offset: -0.525 ms
Remote clock offset: -4.135 ms

Below is generated by plot.py at 2018-08-01 15:45:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.07 Mbit/s
95th percentile per-packet one-way delay: 358.905 ms
Loss rate: 36.25%
-- Flow 1:
Average throughput: 2.07 Mbit/s
95th percentile per-packet one-way delay: 358.905 ms
Loss rate: 36.25%

Run 3: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2018-08-01 15:06:58

End at: 2018-08-01 15:07:28

Local clock offset: -2.066 ms

Remote clock offset: -5.802 ms

Below is generated by plot.py at 2018-08-01 15:45:03

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.39 Mbit/s

95th percentile per-packet one-way delay: 346.170 ms

Loss rate: 5.78%

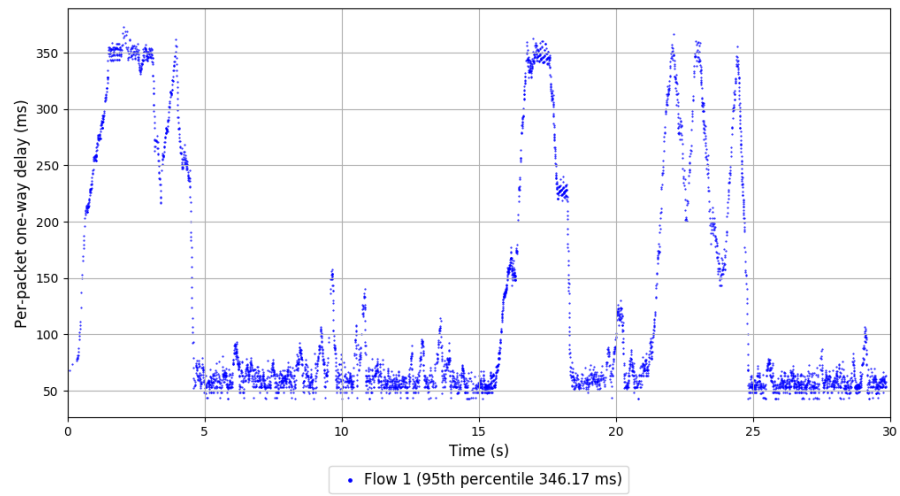
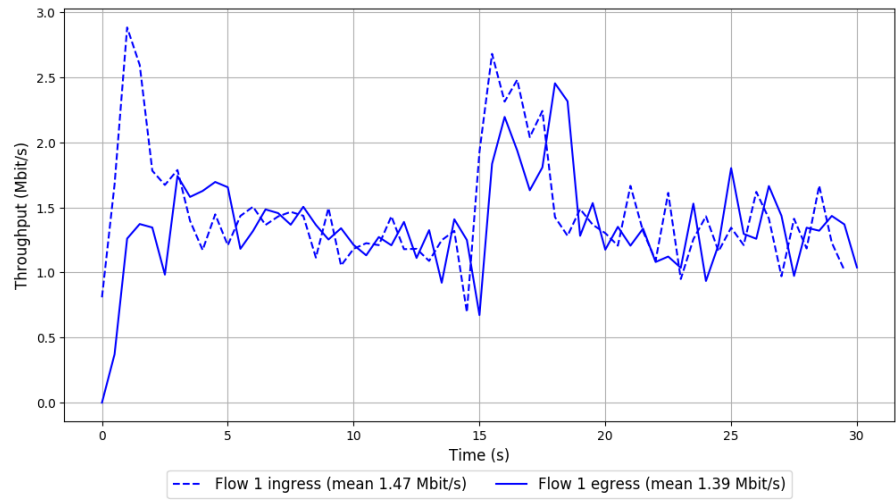
-- Flow 1:

Average throughput: 1.39 Mbit/s

95th percentile per-packet one-way delay: 346.170 ms

Loss rate: 5.78%

Run 1: Report of PCC-Vivace — Data Link

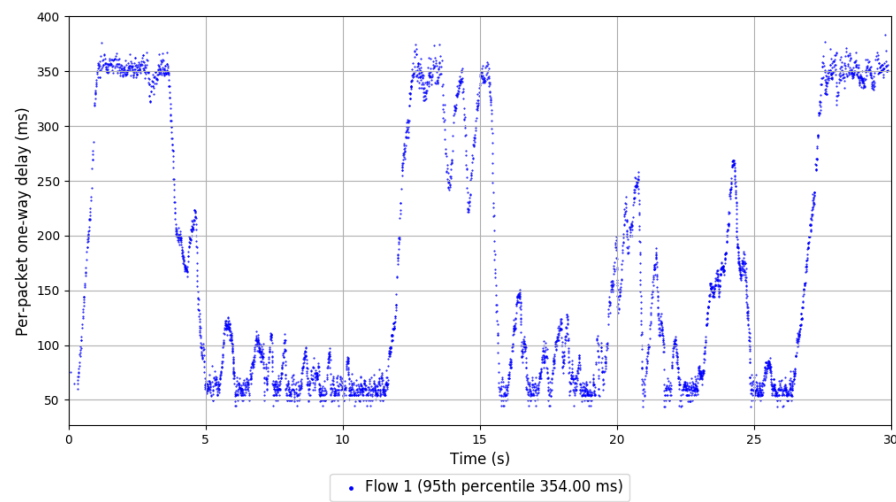
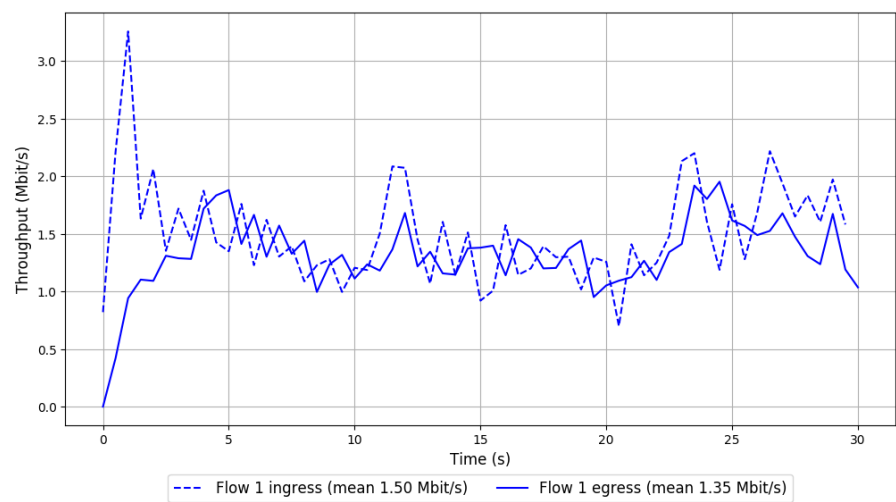


Run 2: Statistics of PCC-Vivace

Start at: 2018-08-01 15:25:25
End at: 2018-08-01 15:25:55
Local clock offset: -2.296 ms
Remote clock offset: -5.947 ms

Below is generated by plot.py at 2018-08-01 15:45:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.35 Mbit/s
95th percentile per-packet one-way delay: 354.000 ms
Loss rate: 10.22%
-- Flow 1:
Average throughput: 1.35 Mbit/s
95th percentile per-packet one-way delay: 354.000 ms
Loss rate: 10.22%

Run 2: Report of PCC-Vivace — Data Link

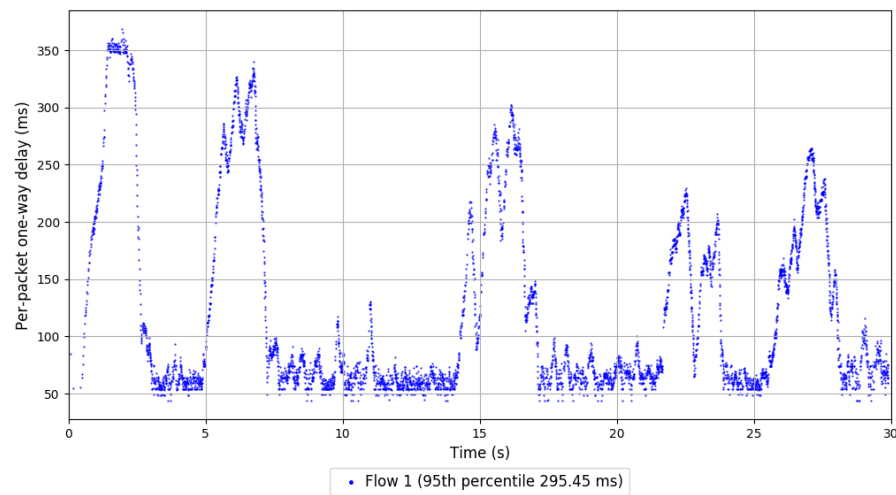
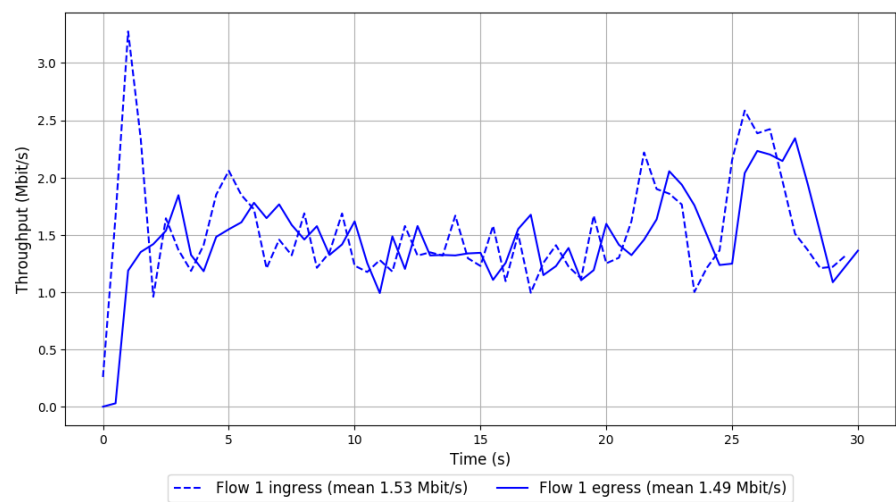


Run 3: Statistics of PCC-Vivace

Start at: 2018-08-01 15:43:52
End at: 2018-08-01 15:44:22
Local clock offset: -0.424 ms
Remote clock offset: -3.311 ms

Below is generated by plot.py at 2018-08-01 15:45:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.49 Mbit/s
95th percentile per-packet one-way delay: 295.453 ms
Loss rate: 3.13%
-- Flow 1:
Average throughput: 1.49 Mbit/s
95th percentile per-packet one-way delay: 295.453 ms
Loss rate: 3.13%

Run 3: Report of PCC-Vivace — Data Link

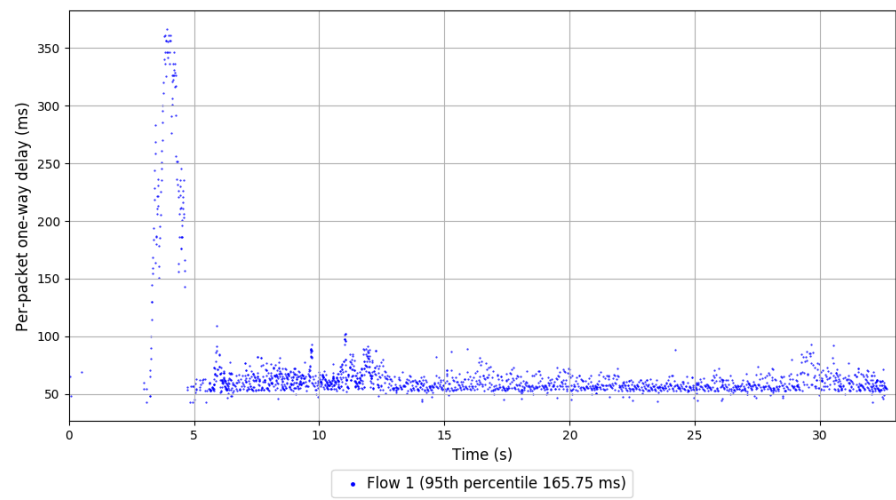
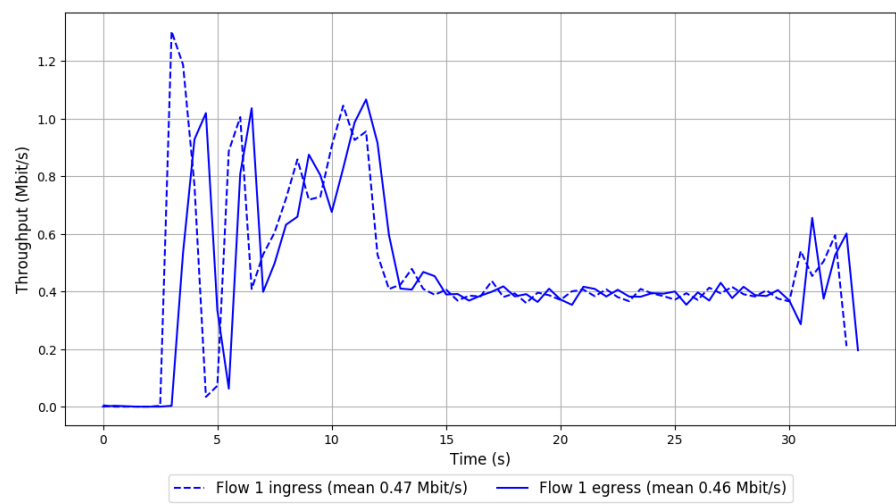


Run 1: Statistics of WebRTC media

Start at: 2018-08-01 14:54:47
End at: 2018-08-01 14:55:17
Local clock offset: -1.519 ms
Remote clock offset: -7.273 ms

Below is generated by plot.py at 2018-08-01 15:45:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 165.751 ms
Loss rate: 1.82%
-- Flow 1:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 165.751 ms
Loss rate: 1.82%

Run 1: Report of WebRTC media — Data Link

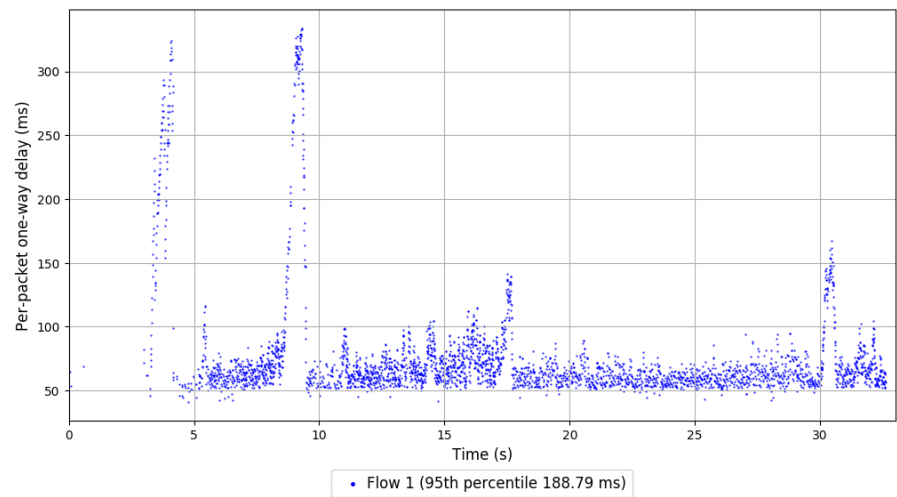
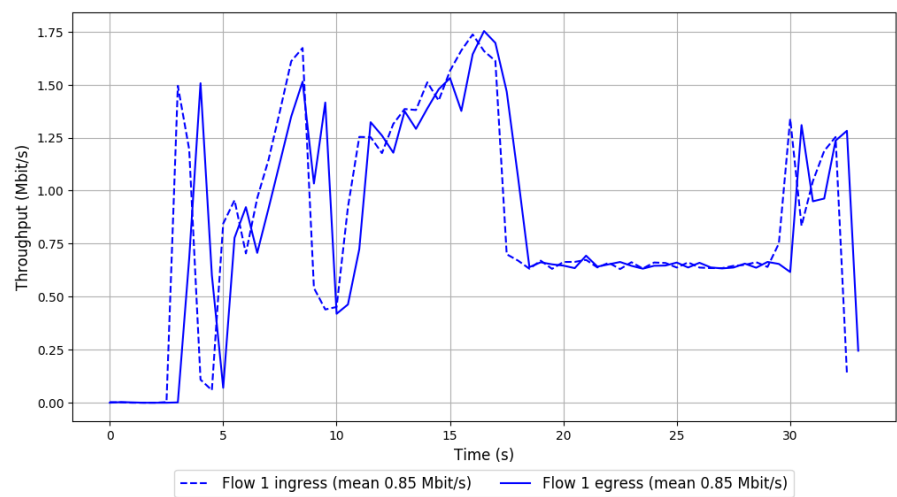


Run 2: Statistics of WebRTC media

Start at: 2018-08-01 15:13:26
End at: 2018-08-01 15:13:56
Local clock offset: -1.934 ms
Remote clock offset: -5.366 ms

Below is generated by plot.py at 2018-08-01 15:45:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.85 Mbit/s
95th percentile per-packet one-way delay: 188.794 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 0.85 Mbit/s
95th percentile per-packet one-way delay: 188.794 ms
Loss rate: 0.04%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-08-01 15:31:54

End at: 2018-08-01 15:32:24

Local clock offset: 0.978 ms

Remote clock offset: -5.696 ms

Below is generated by plot.py at 2018-08-01 15:45:03

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.54 Mbit/s

95th percentile per-packet one-way delay: 138.384 ms

Loss rate: 0.14%

-- Flow 1:

Average throughput: 0.54 Mbit/s

95th percentile per-packet one-way delay: 138.384 ms

Loss rate: 0.14%

Run 3: Report of WebRTC media — Data Link

