

Pantheon Report

Generated at 2017-08-31 14:03:09 (UTC).

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

Repeated the test of 15 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).

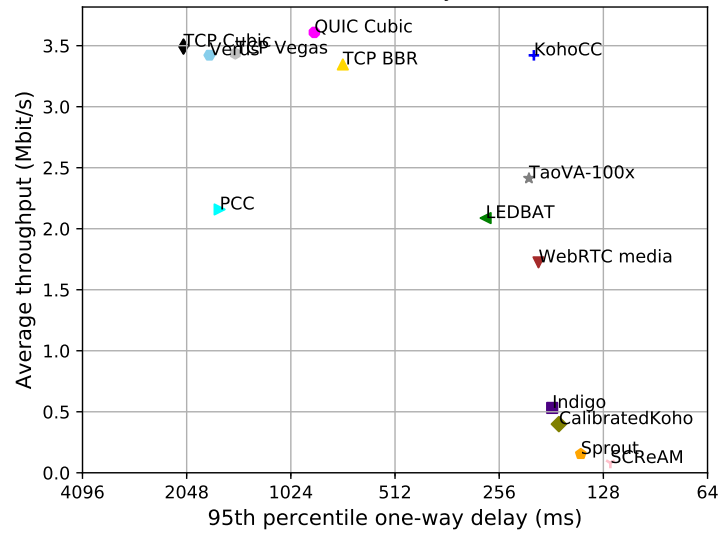
Tested BBR with qdisc of Fair Queuing (**fq**), and other schemes with the default Linux qdisc (**pfifo_fast**).

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

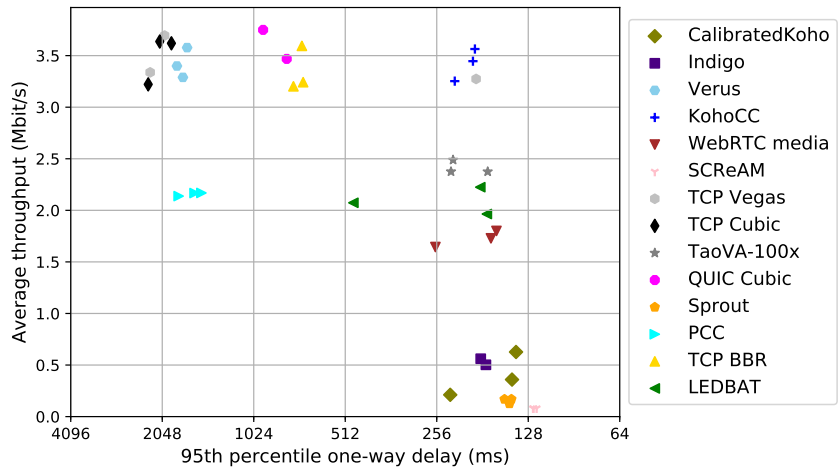
Git summary:

```
branch: master @ 5ea146acdebe79f5b9acfb2d9044554a7d2582ea
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/genericCC @ f7ca42f251bf49b432bb71de6d13fa903515c366
third_party/indigo @ 7ddb4adf480966042c0438984cb22a298bfa635f
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
  M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ baf443516dea3eeddeccaf9b916cc313273ca4f4
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/proto-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaeab30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
  M src/examples/cellsim.cc
  M src/examples/sproutbt2.cc
  M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
  M src/verus.hpp
  M tools/plot.py
third_party/webRTC @ a488197ddd041ace68a42849b2540ad834825f42
```

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



test from AWS Brazil 2 Ethernet 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	3.34	724.53	1.28
CalibratedKoho	3	0.40	172.10	0.04
Copa	0	N/A	N/A	N/A
TCP Cubic	3	3.49	2091.88	8.96
Indigo	2	0.53	179.94	0.29
KohoCC	3	3.42	203.23	0.36
LEDBAT	3	2.08	280.25	0.15
PCC	3	2.16	1644.53	39.40
QUIC Cubic	2	3.61	875.73	3.18
SCReAM	3	0.08	122.17	0.13
Sprout	3	0.16	148.75	0.02
TaoVA-100x	3	2.42	210.02	0.28
TCP Vegas	3	3.44	1481.99	6.90
Verus	3	3.42	1759.90	8.65
WebRTC media	3	1.72	197.09	0.21

Run 1: Statistics of TCP BBR

Start at: 2017-08-31 13:15:07

End at: 2017-08-31 13:15:37

Local clock offset: 0.093 ms

Remote clock offset: -2.049 ms

Below is generated by plot.py at 2017-08-31 14:02:37

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.24 Mbit/s

95th percentile per-packet one-way delay: 704.342 ms

Loss rate: 1.39%

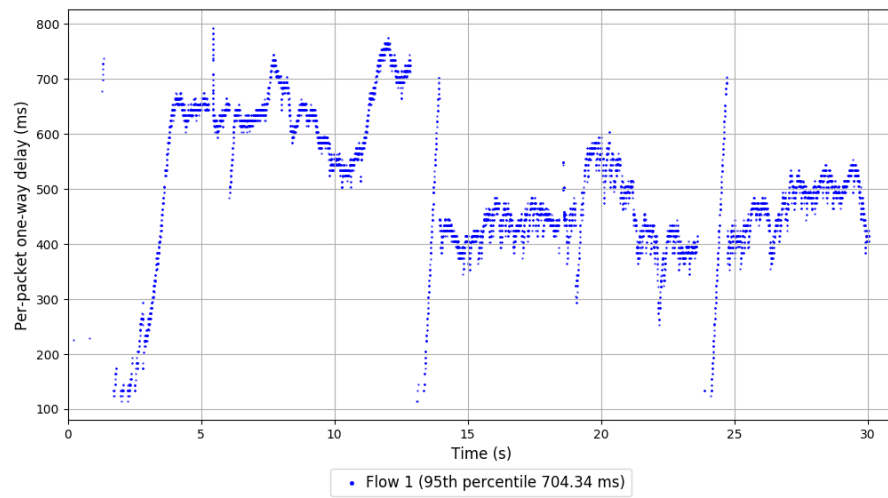
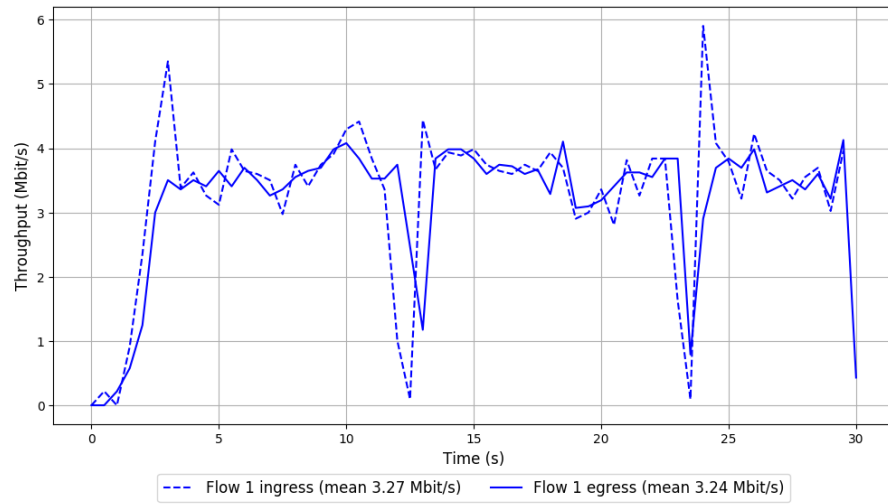
-- Flow 1:

Average throughput: 3.24 Mbit/s

95th percentile per-packet one-way delay: 704.342 ms

Loss rate: 1.39%

Run 1: Report of TCP BBR — Data Link

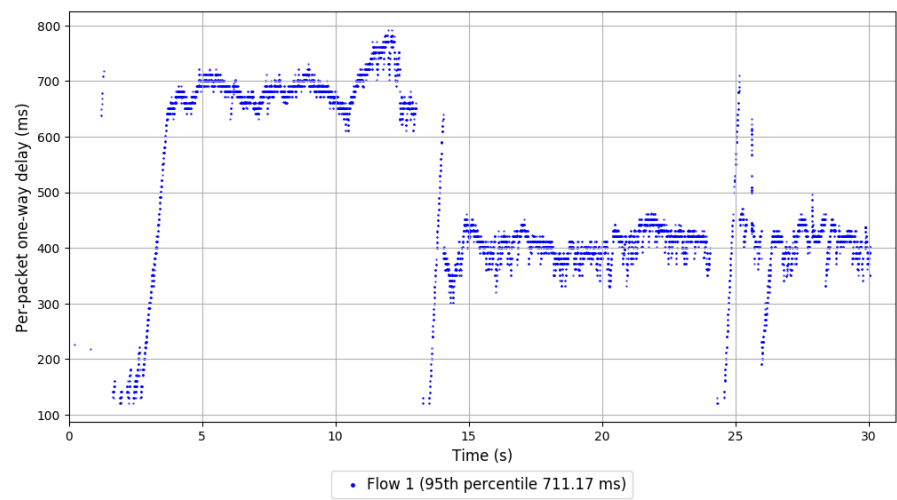
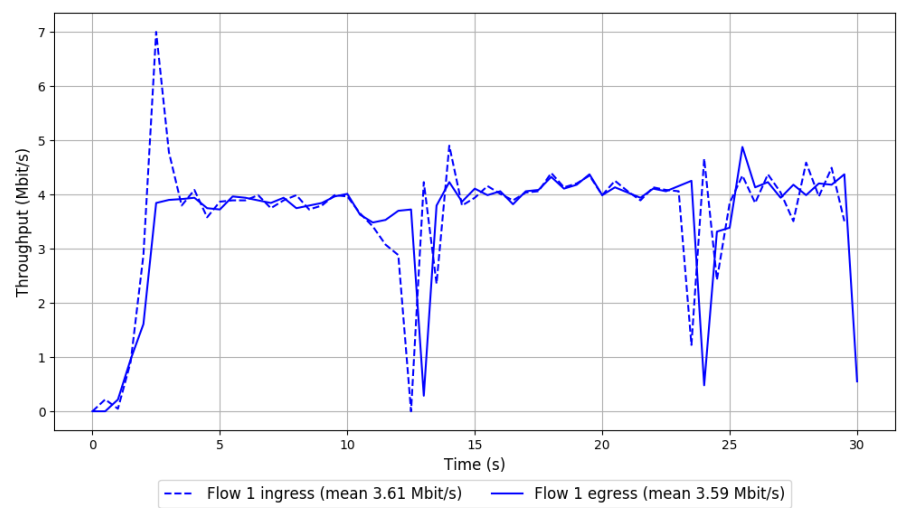


Run 2: Statistics of TCP BBR

Start at: 2017-08-31 13:32:45
End at: 2017-08-31 13:33:15
Local clock offset: 0.089 ms
Remote clock offset: -1.997 ms

Below is generated by plot.py at 2017-08-31 14:02:37
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.59 Mbit/s
95th percentile per-packet one-way delay: 711.172 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 3.59 Mbit/s
95th percentile per-packet one-way delay: 711.172 ms
Loss rate: 0.99%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2017-08-31 13:50:26

End at: 2017-08-31 13:50:56

Local clock offset: 0.076 ms

Remote clock offset: -6.871 ms

Below is generated by plot.py at 2017-08-31 14:02:39

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.20 Mbit/s

95th percentile per-packet one-way delay: 758.083 ms

Loss rate: 1.46%

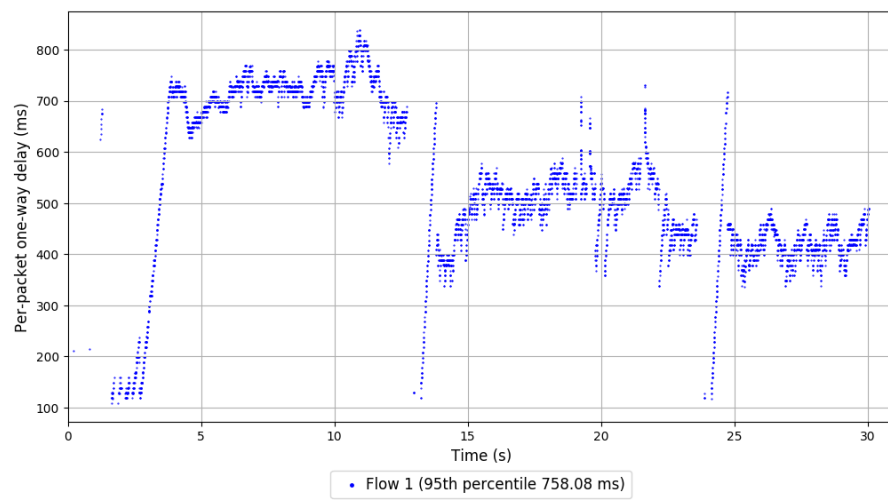
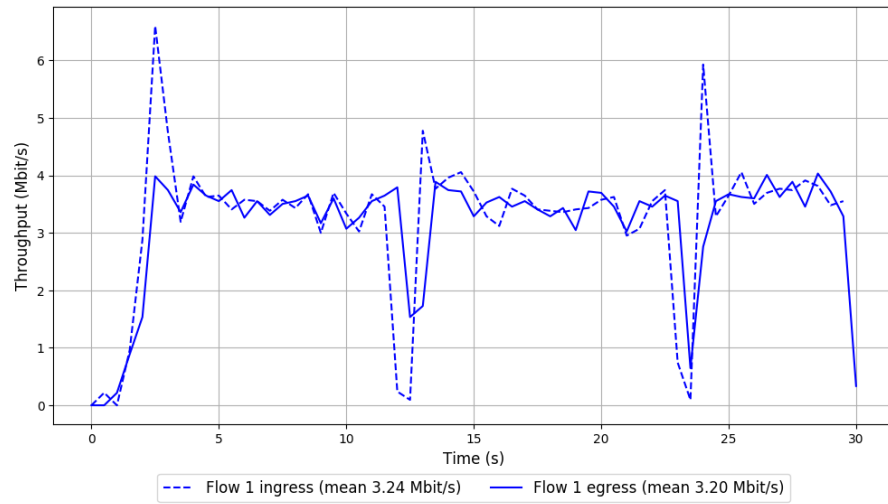
-- Flow 1:

Average throughput: 3.20 Mbit/s

95th percentile per-packet one-way delay: 758.083 ms

Loss rate: 1.46%

Run 3: Report of TCP BBR — Data Link



Run 1: Statistics of CalibratedKoho

Start at: 2017-08-31 13:10:25

End at: 2017-08-31 13:10:55

Local clock offset: -0.02 ms

Remote clock offset: -2.19 ms

Below is generated by plot.py at 2017-08-31 14:02:39

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 231.139 ms

Loss rate: 0.00%

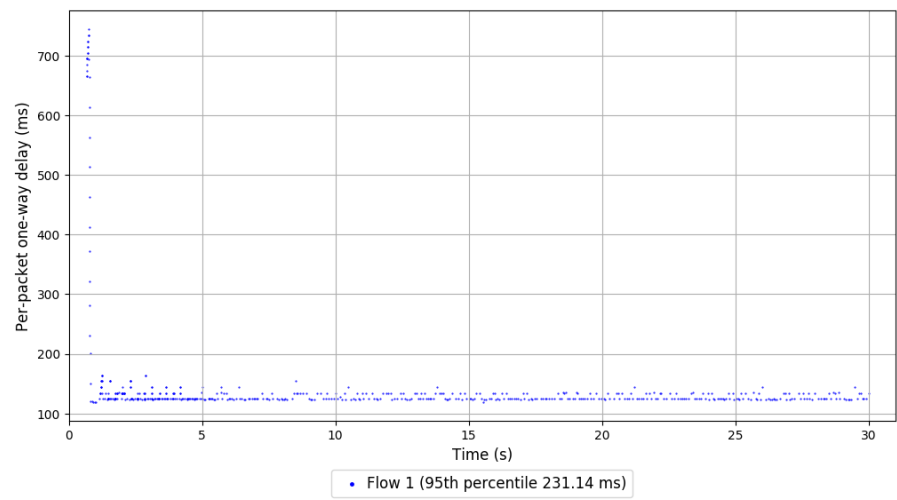
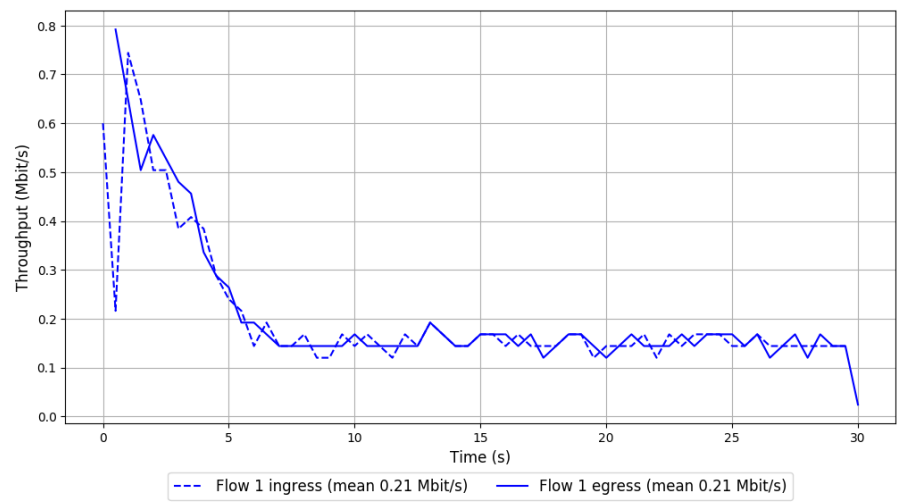
-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 231.139 ms

Loss rate: 0.00%

Run 1: Report of CalibratedKoho — Data Link

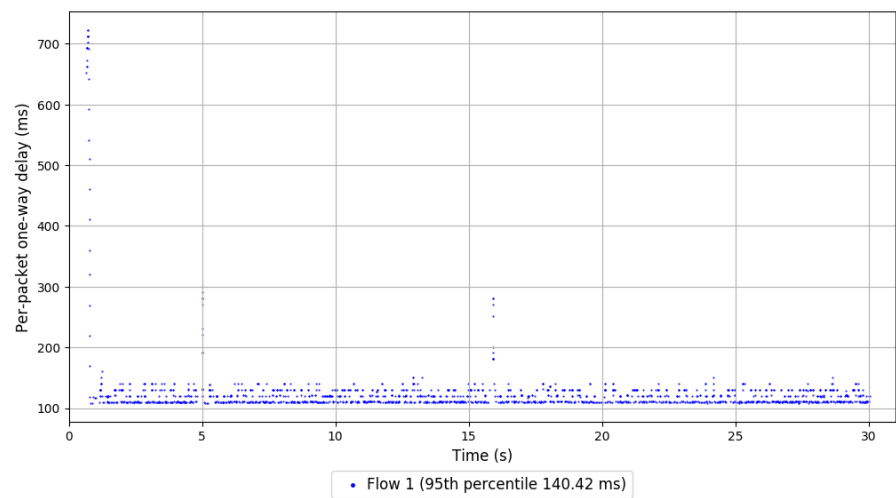
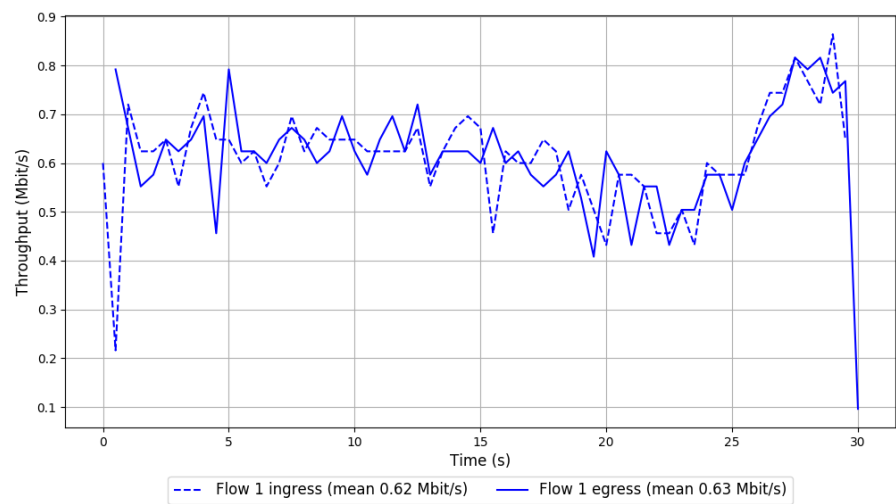


Run 2: Statistics of CalibratedKoho

Start at: 2017-08-31 13:28:02
End at: 2017-08-31 13:28:33
Local clock offset: 0.089 ms
Remote clock offset: -5.842 ms

Below is generated by plot.py at 2017-08-31 14:02:39
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 140.420 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 140.420 ms
Loss rate: 0.00%

Run 2: Report of CalibratedKoho — Data Link

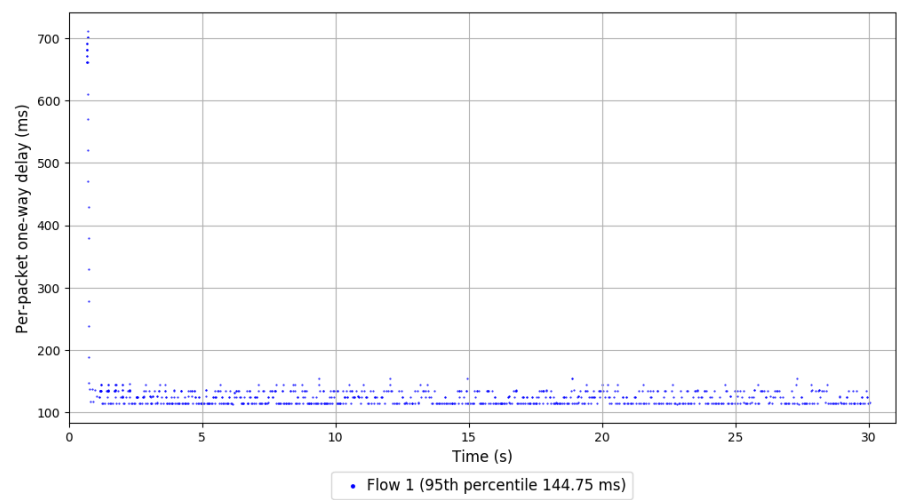
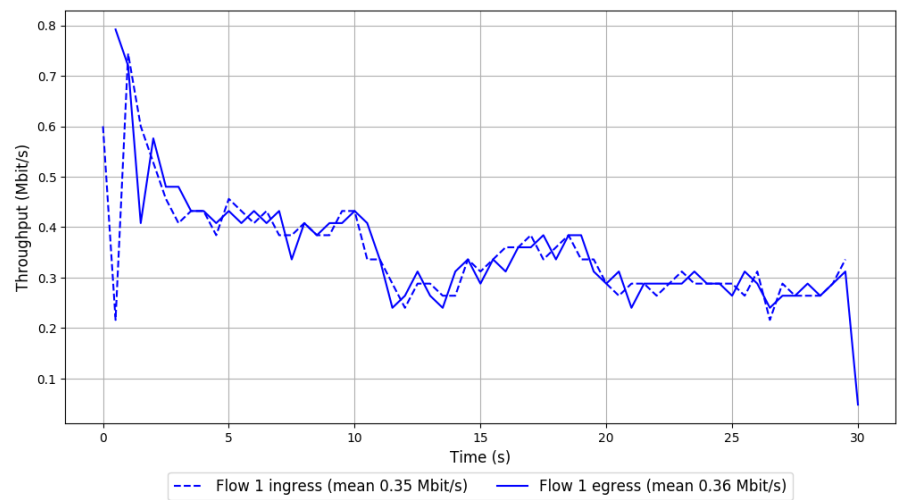


Run 3: Statistics of CalibratedKoho

Start at: 2017-08-31 13:45:42
End at: 2017-08-31 13:46:12
Local clock offset: 0.096 ms
Remote clock offset: -6.833 ms

Below is generated by plot.py at 2017-08-31 14:02:40
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 144.754 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 144.754 ms
Loss rate: 0.11%

Run 3: Report of CalibratedKoho — Data Link



Run 1: Statistics of Copa

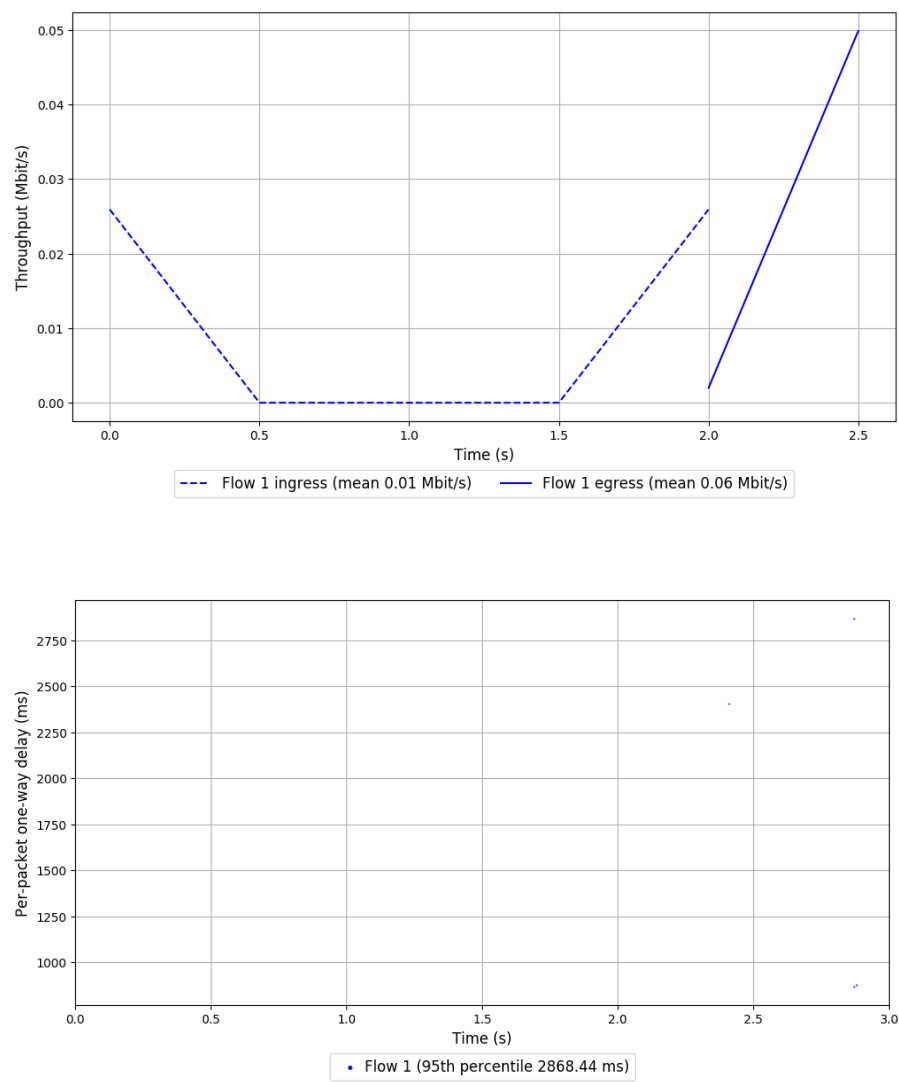
Start at: 2017-08-31 13:18:38

End at: 2017-08-31 13:19:08

Local clock offset: 0.06 ms

Remote clock offset: -6.124 ms

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

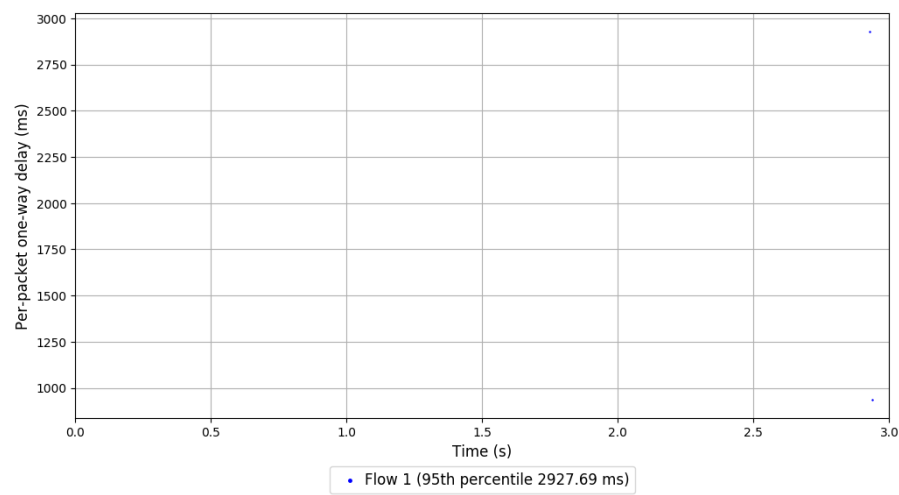
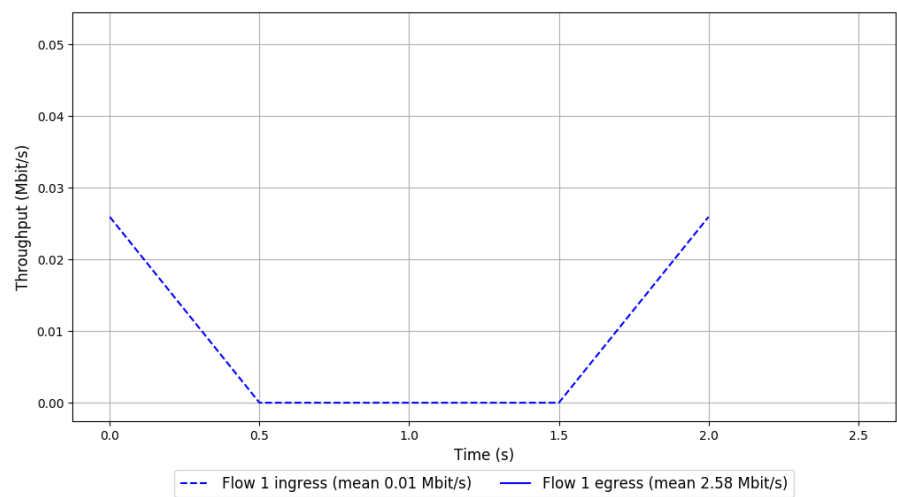
Start at: 2017-08-31 13:36:19

End at: 2017-08-31 13:36:49

Local clock offset: 0.084 ms

Remote clock offset: -6.827 ms

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

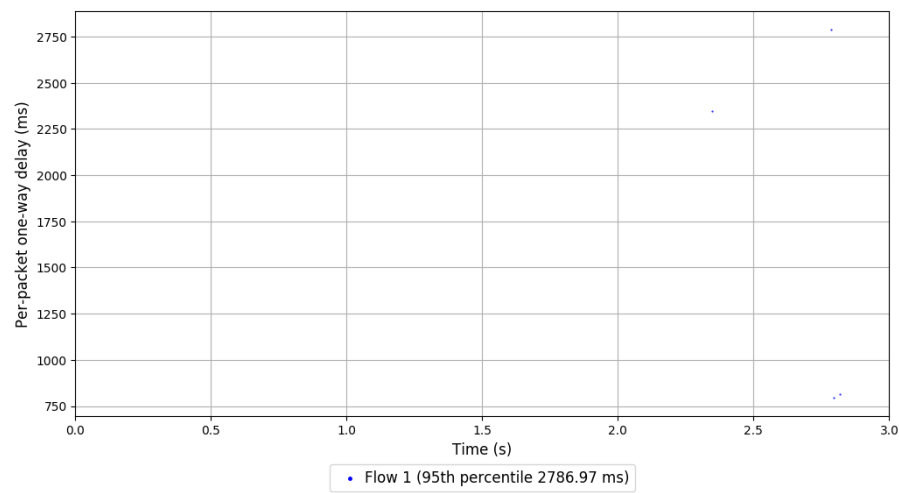
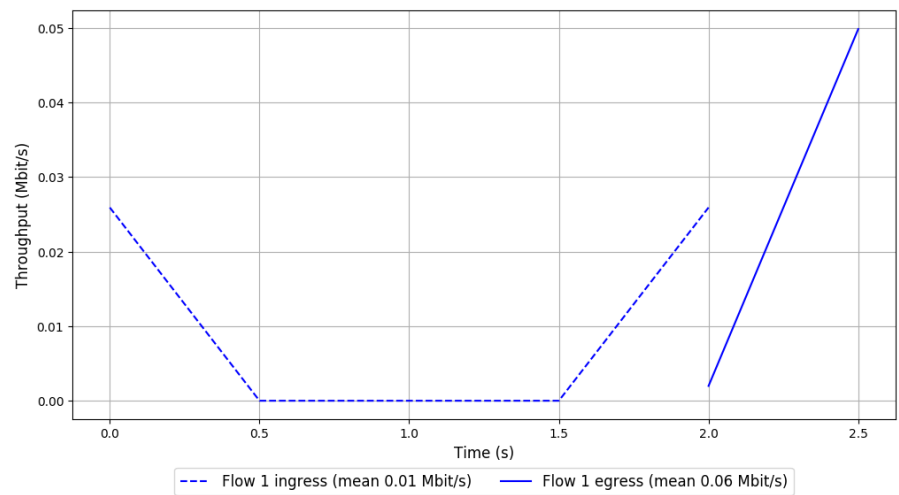
Start at: 2017-08-31 13:53:57

End at: 2017-08-31 13:54:27

Local clock offset: 0.062 ms

Remote clock offset: -6.96 ms

Run 3: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2017-08-31 13:22:09

End at: 2017-08-31 13:22:39

Local clock offset: 0.063 ms

Remote clock offset: -7.02 ms

Below is generated by plot.py at 2017-08-31 14:02:42

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.62 Mbit/s

95th percentile per-packet one-way delay: 1910.517 ms

Loss rate: 6.76%

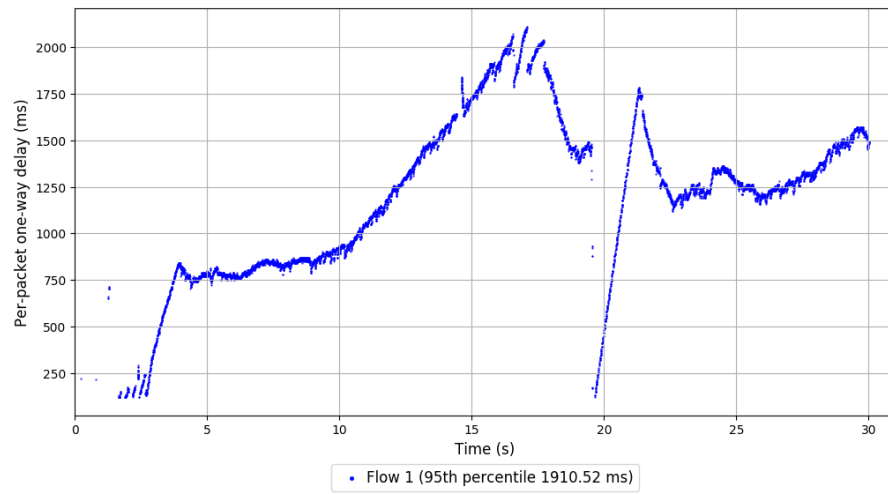
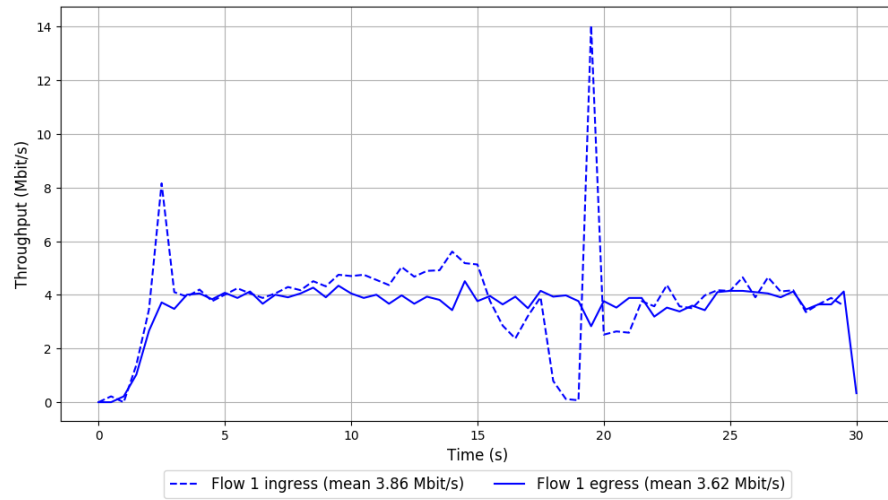
-- Flow 1:

Average throughput: 3.62 Mbit/s

95th percentile per-packet one-way delay: 1910.517 ms

Loss rate: 6.76%

Run 1: Report of TCP Cubic — Data Link

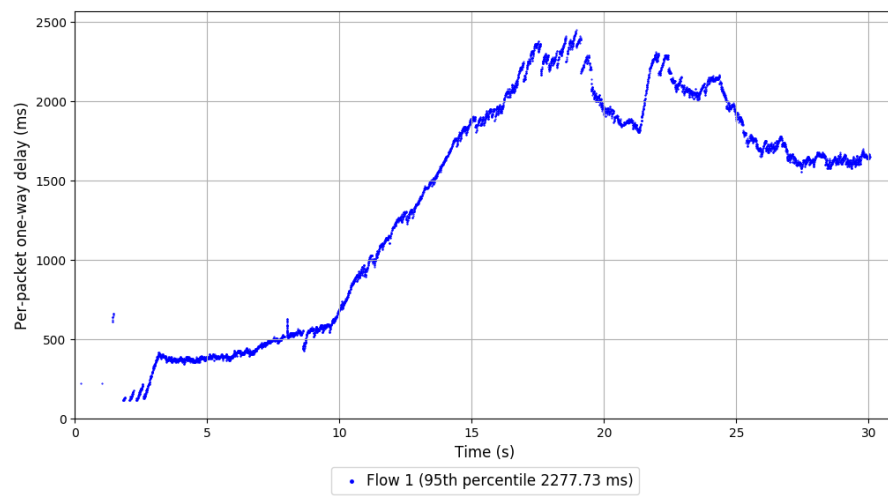
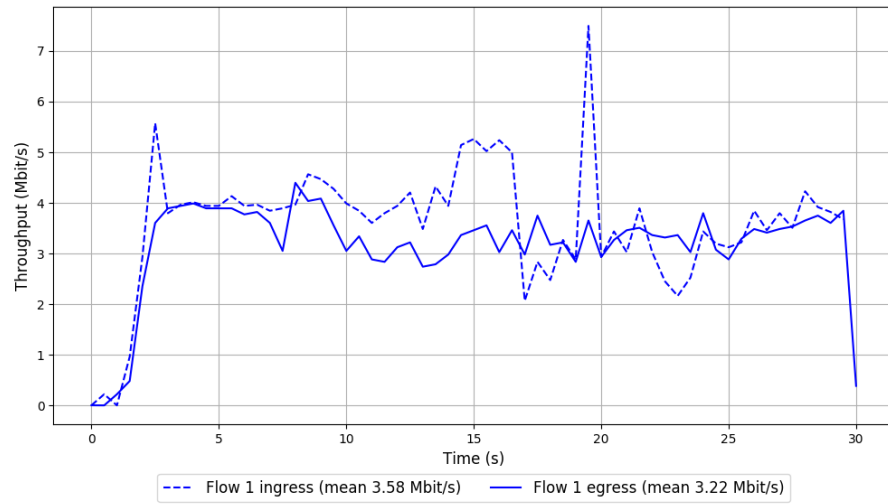


Run 2: Statistics of TCP Cubic

Start at: 2017-08-31 13:39:50
End at: 2017-08-31 13:40:20
Local clock offset: 0.067 ms
Remote clock offset: -5.783 ms

Below is generated by plot.py at 2017-08-31 14:02:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.22 Mbit/s
95th percentile per-packet one-way delay: 2277.733 ms
Loss rate: 10.49%
-- Flow 1:
Average throughput: 3.22 Mbit/s
95th percentile per-packet one-way delay: 2277.733 ms
Loss rate: 10.49%

Run 2: Report of TCP Cubic — Data Link

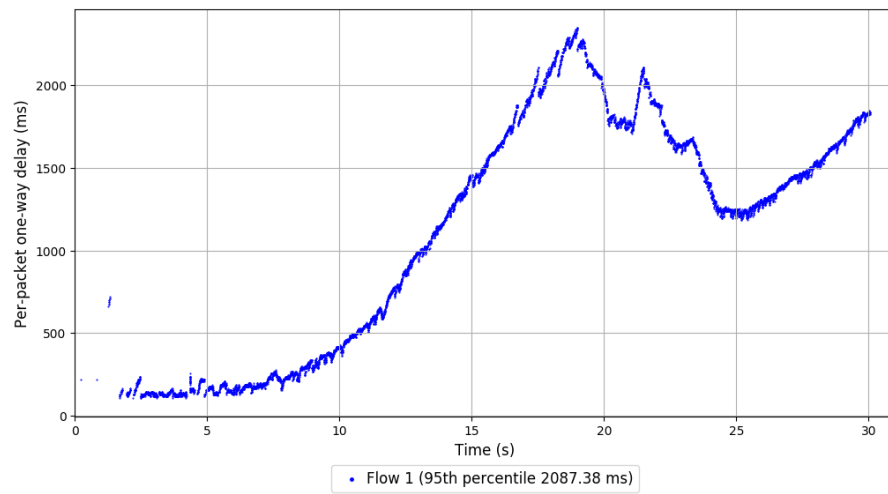
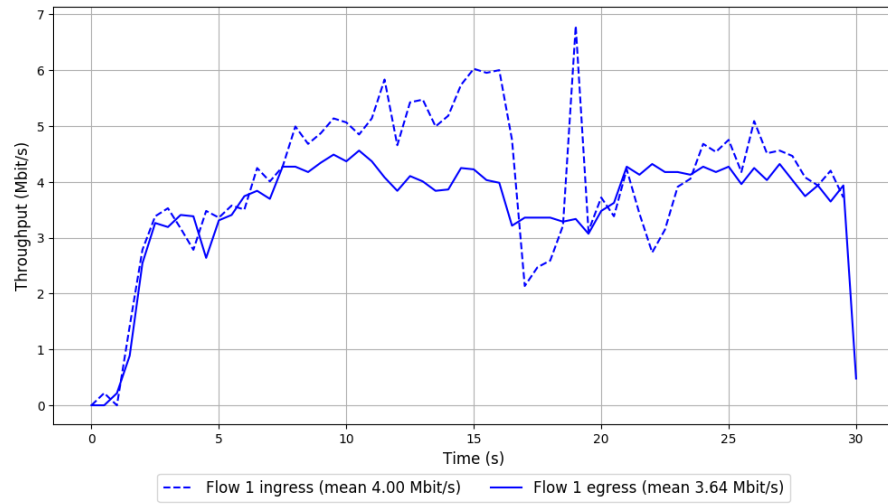


Run 3: Statistics of TCP Cubic

Start at: 2017-08-31 13:57:28
End at: 2017-08-31 13:57:58
Local clock offset: 0.106 ms
Remote clock offset: -5.935 ms

Below is generated by plot.py at 2017-08-31 14:02:45
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.64 Mbit/s
95th percentile per-packet one-way delay: 2087.377 ms
Loss rate: 9.64%
-- Flow 1:
Average throughput: 3.64 Mbit/s
95th percentile per-packet one-way delay: 2087.377 ms
Loss rate: 9.64%

Run 3: Report of TCP Cubic — Data Link

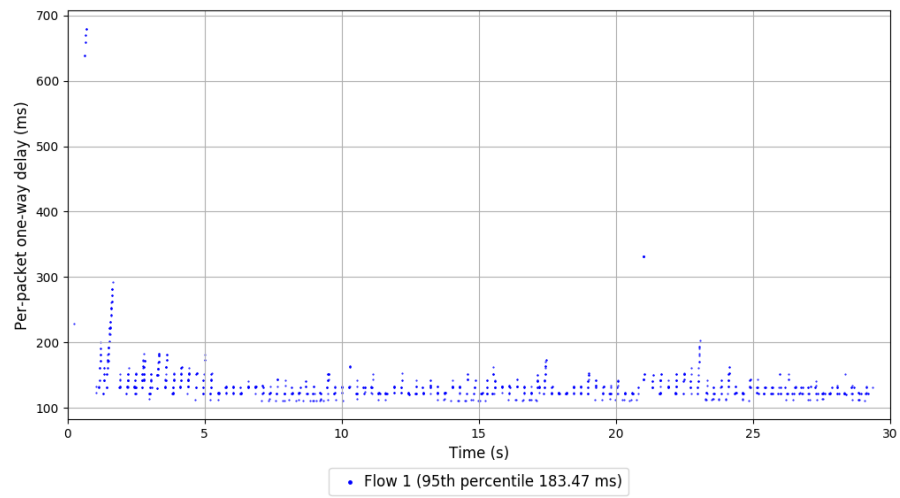
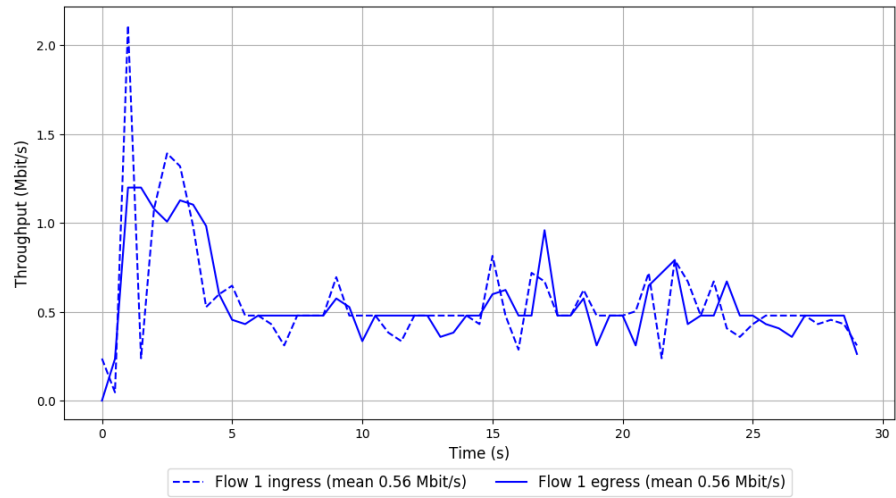


```
Run 1: Statistics of Indigo

Start at: 2017-08-31 13:17:28
End at: 2017-08-31 13:17:58
Local clock offset: 0.059 ms
Remote clock offset: -6.86 ms

# Below is generated by plot.py at 2017-08-31 14:02:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 183.472 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 183.472 ms
Loss rate: 0.51%
```

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2017-08-31 13:35:06

End at: 2017-08-31 13:35:36

Local clock offset: 0.085 ms

Remote clock offset: -6.862 ms

Below is generated by plot.py at 2017-08-31 14:02:45

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.50 Mbit/s

95th percentile per-packet one-way delay: 176.415 ms

Loss rate: 0.08%

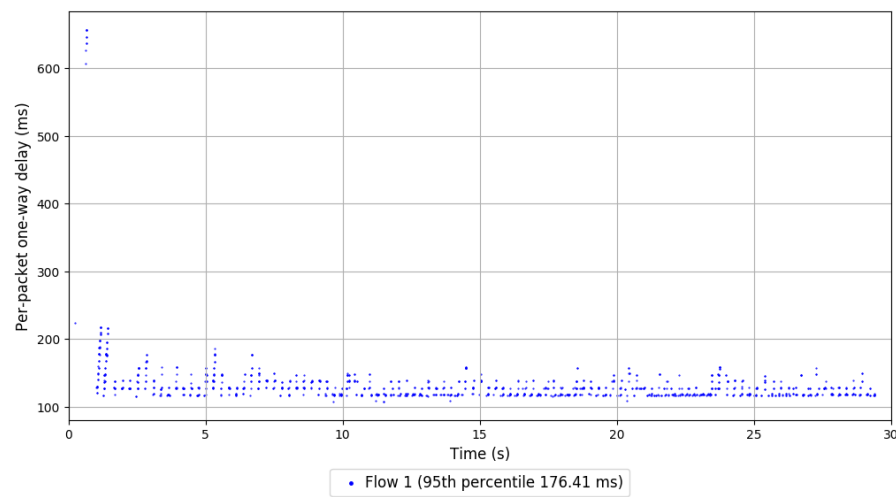
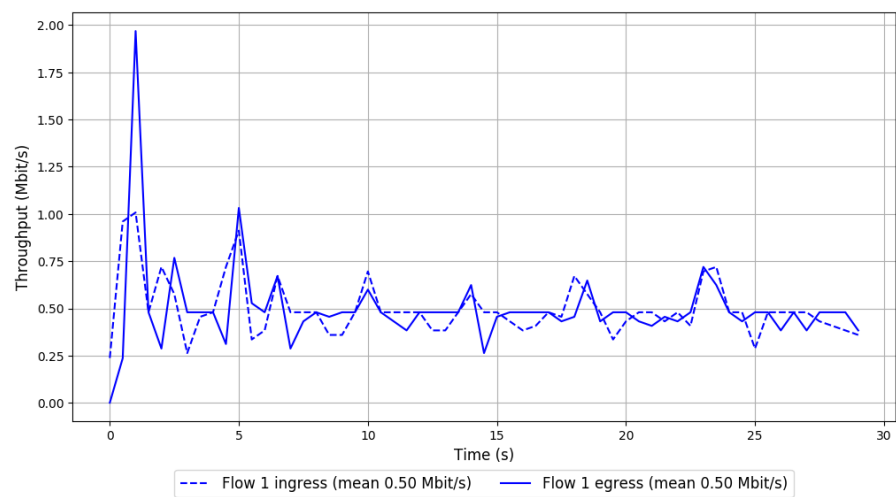
-- Flow 1:

Average throughput: 0.50 Mbit/s

95th percentile per-packet one-way delay: 176.415 ms

Loss rate: 0.08%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

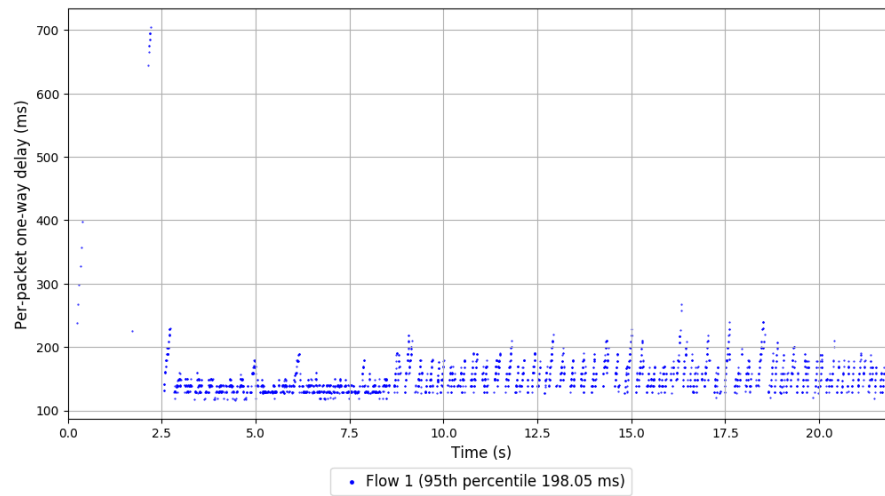
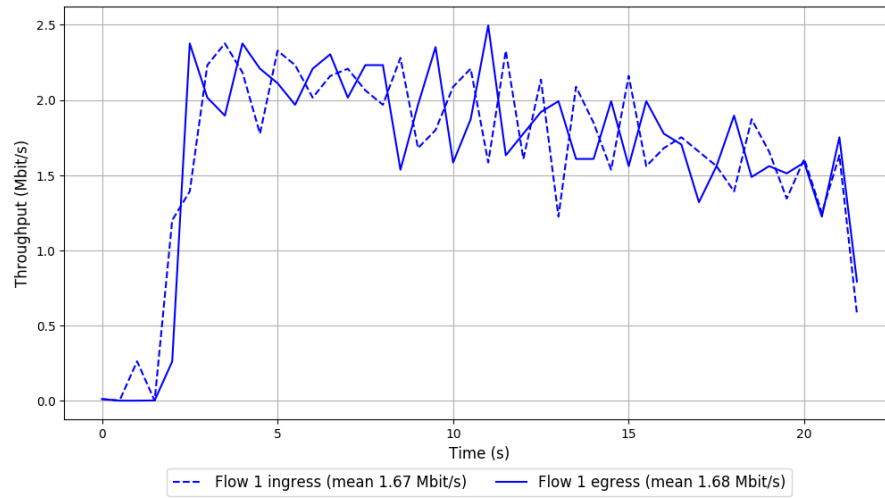
Start at: 2017-08-31 13:52:47

End at: 2017-08-31 13:53:17

Local clock offset: 0.059 ms

Remote clock offset: -6.067 ms

Run 3: Report of Indigo — Data Link

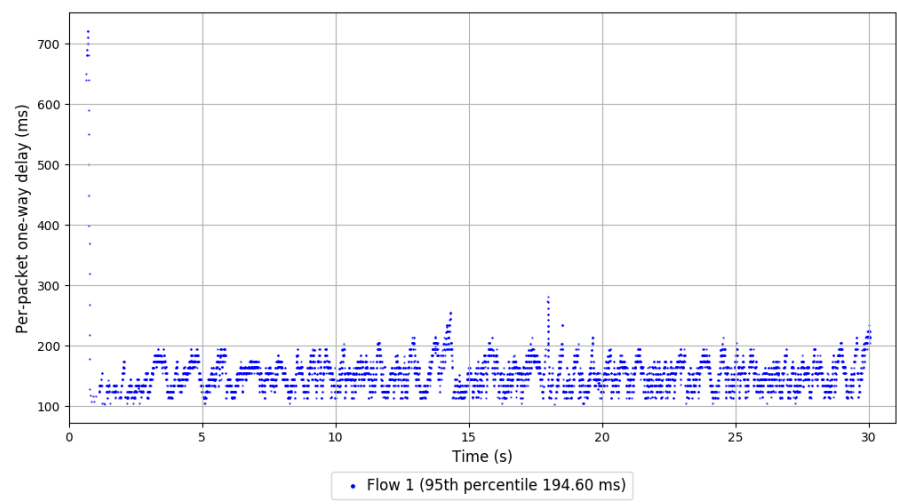
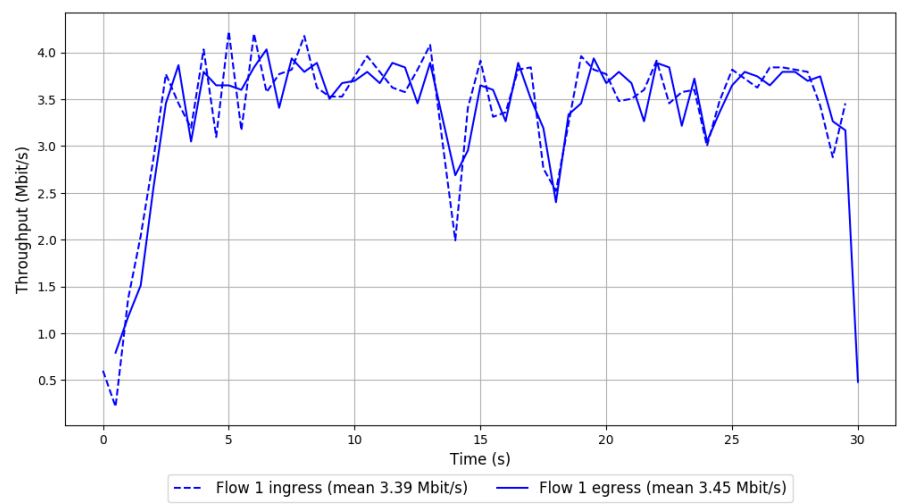


Run 1: Statistics of KohoCC

Start at: 2017-08-31 13:13:56
End at: 2017-08-31 13:14:26
Local clock offset: -0.015 ms
Remote clock offset: -6.946 ms

Below is generated by plot.py at 2017-08-31 14:02:47
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.45 Mbit/s
95th percentile per-packet one-way delay: 194.600 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 3.45 Mbit/s
95th percentile per-packet one-way delay: 194.600 ms
Loss rate: 0.30%

Run 1: Report of KohoCC — Data Link

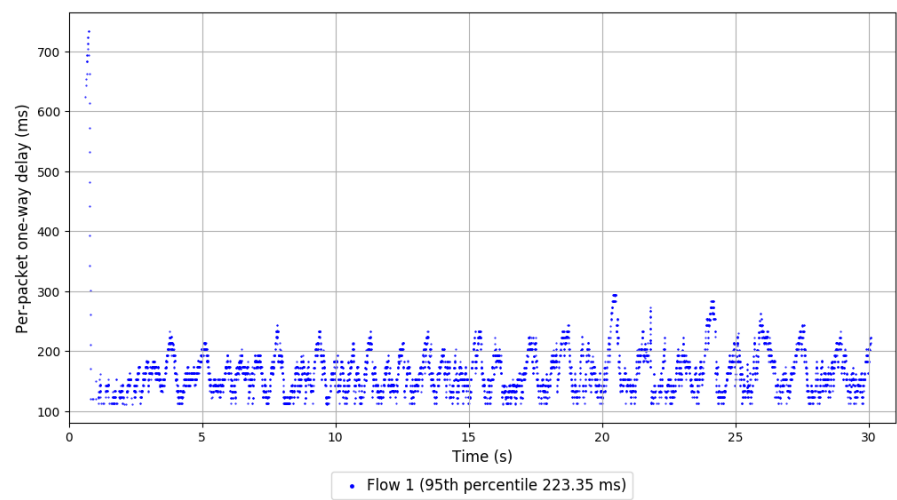
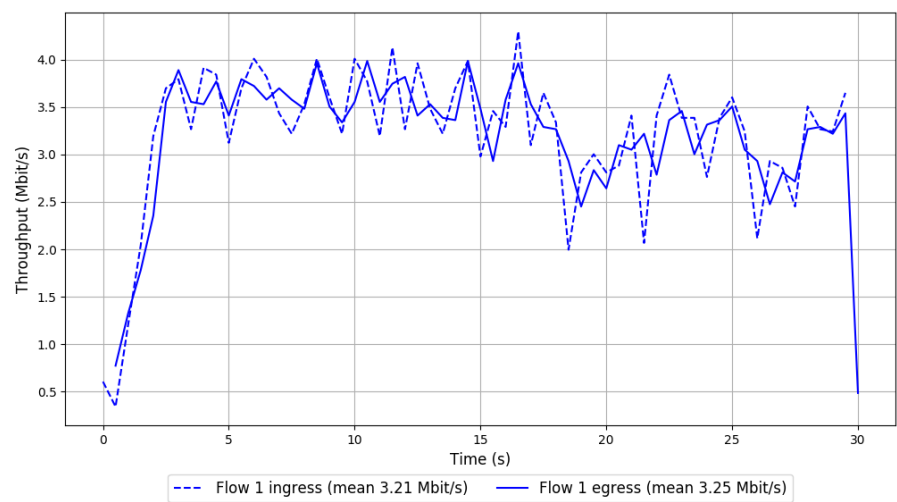


Run 2: Statistics of KohoCC

Start at: 2017-08-31 13:31:34
End at: 2017-08-31 13:32:04
Local clock offset: 0.095 ms
Remote clock offset: -6.013 ms

Below is generated by plot.py at 2017-08-31 14:02:47
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.25 Mbit/s
95th percentile per-packet one-way delay: 223.349 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 3.25 Mbit/s
95th percentile per-packet one-way delay: 223.349 ms
Loss rate: 0.39%

Run 2: Report of KohoCC — Data Link

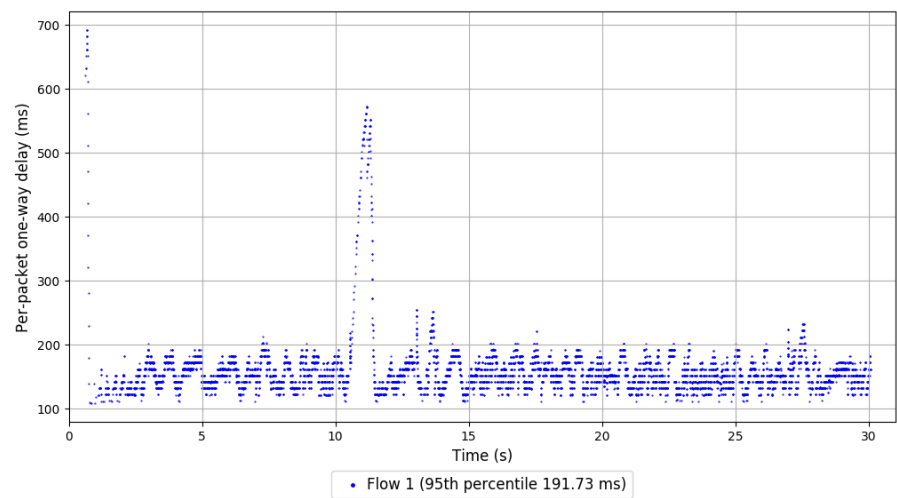
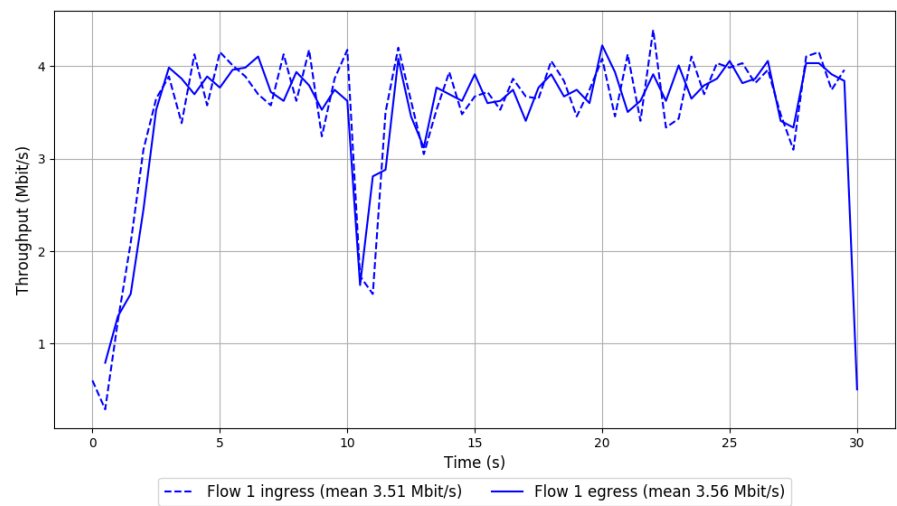


Run 3: Statistics of KohoCC

Start at: 2017-08-31 13:49:14
End at: 2017-08-31 13:49:44
Local clock offset: 0.05 ms
Remote clock offset: -6.816 ms

Below is generated by plot.py at 2017-08-31 14:02:48
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.56 Mbit/s
95th percentile per-packet one-way delay: 191.733 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 3.56 Mbit/s
95th percentile per-packet one-way delay: 191.733 ms
Loss rate: 0.38%

Run 3: Report of KohoCC — Data Link

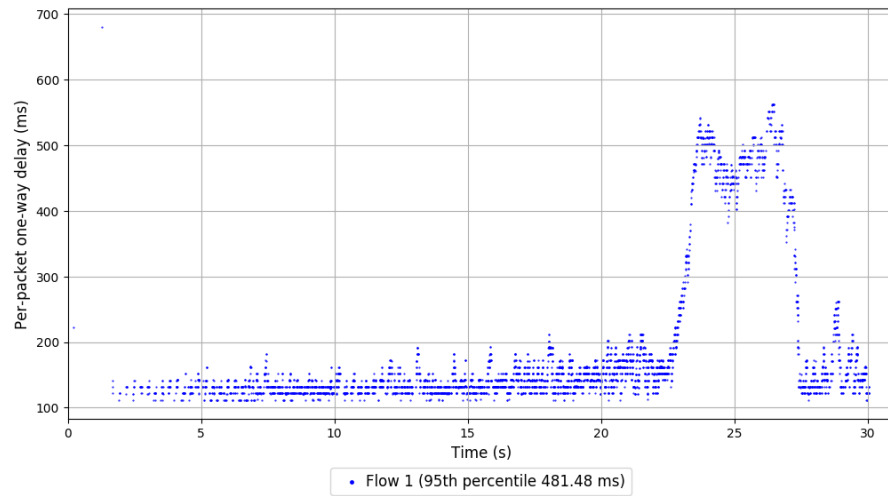
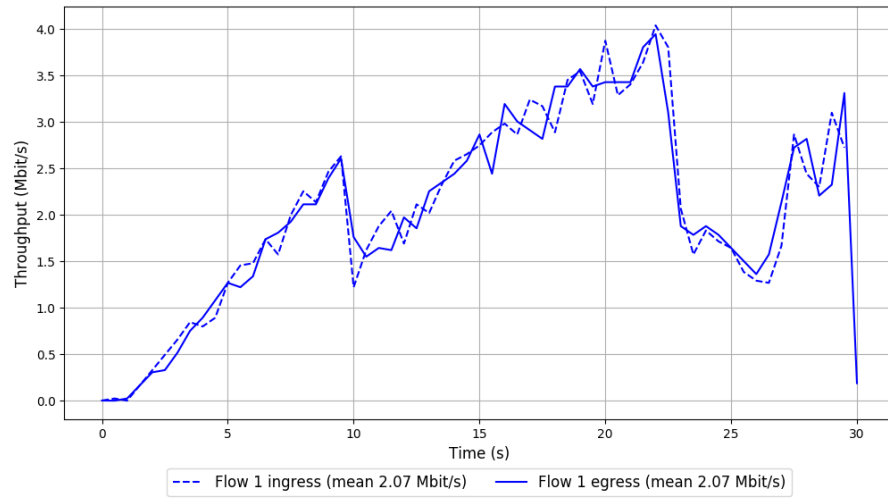


Run 1: Statistics of LEDBAT

Start at: 2017-08-31 13:20:59
End at: 2017-08-31 13:21:29
Local clock offset: 0.072 ms
Remote clock offset: -5.945 ms

Below is generated by plot.py at 2017-08-31 14:02:48
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.07 Mbit/s
95th percentile per-packet one-way delay: 481.482 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 2.07 Mbit/s
95th percentile per-packet one-way delay: 481.482 ms
Loss rate: 0.34%

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2017-08-31 13:38:39

End at: 2017-08-31 13:39:09

Local clock offset: 0.093 ms

Remote clock offset: -1.14 ms

Below is generated by plot.py at 2017-08-31 14:02:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.22 Mbit/s

95th percentile per-packet one-way delay: 184.109 ms

Loss rate: 0.05%

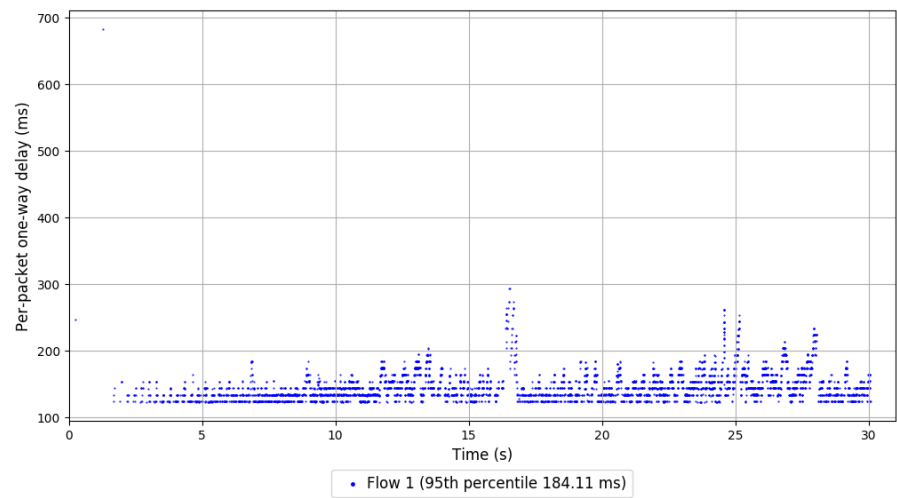
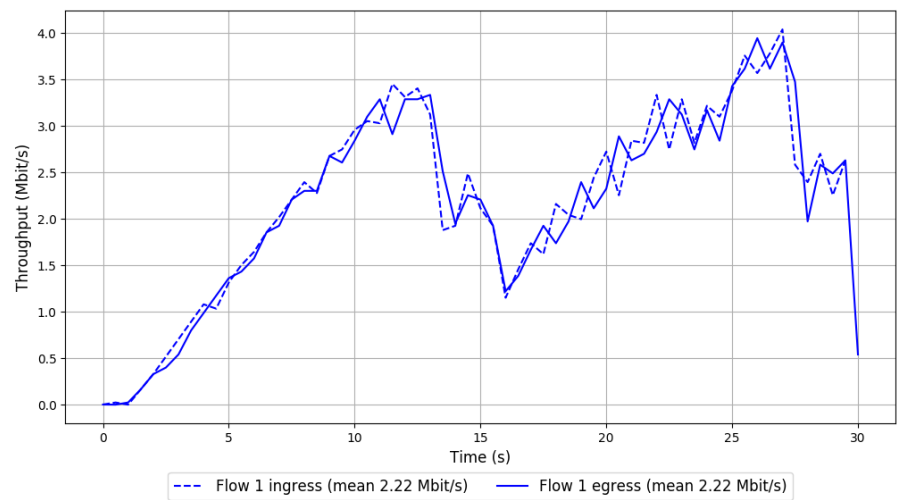
-- Flow 1:

Average throughput: 2.22 Mbit/s

95th percentile per-packet one-way delay: 184.109 ms

Loss rate: 0.05%

Run 2: Report of LEDBAT — Data Link

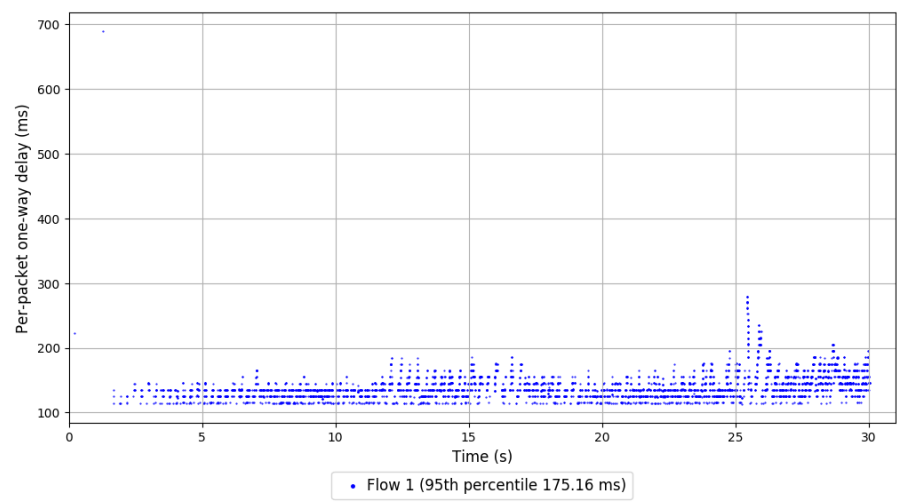
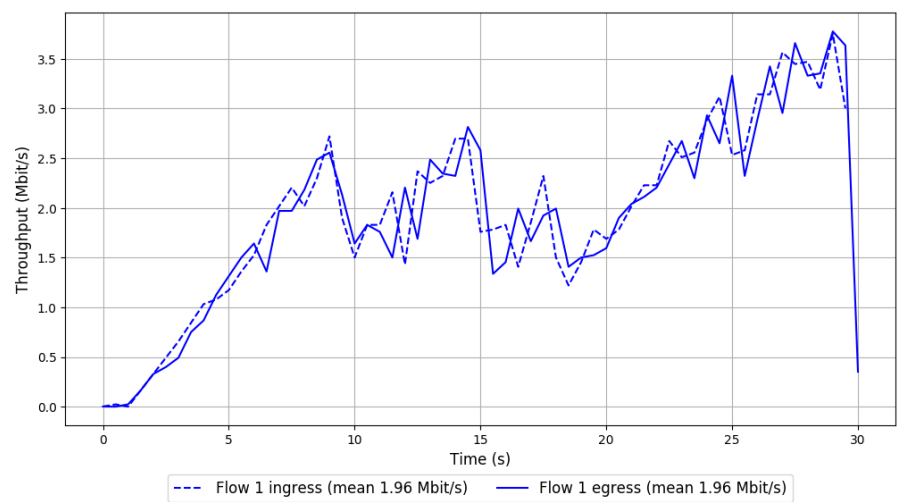


Run 3: Statistics of LEDBAT

Start at: 2017-08-31 13:56:18
End at: 2017-08-31 13:56:48
Local clock offset: 0.074 ms
Remote clock offset: -5.983 ms

Below is generated by plot.py at 2017-08-31 14:02:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 175.163 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 175.163 ms
Loss rate: 0.06%

Run 3: Report of LEDBAT — Data Link

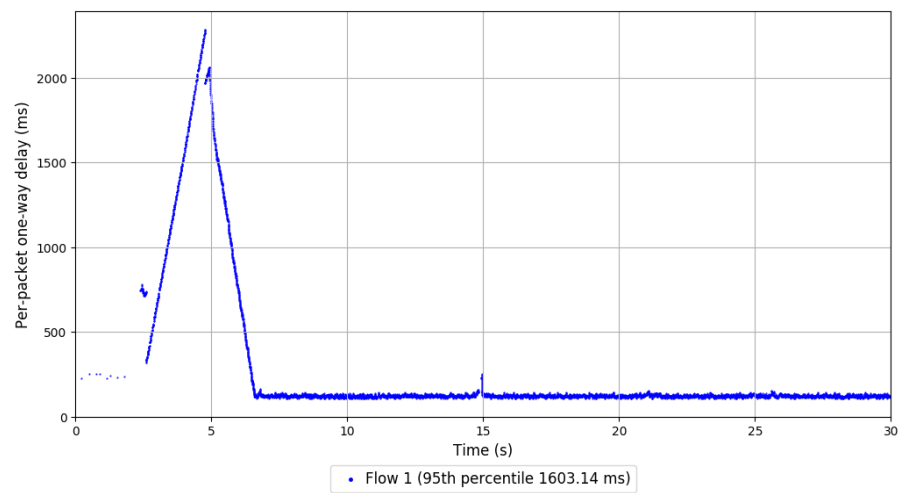
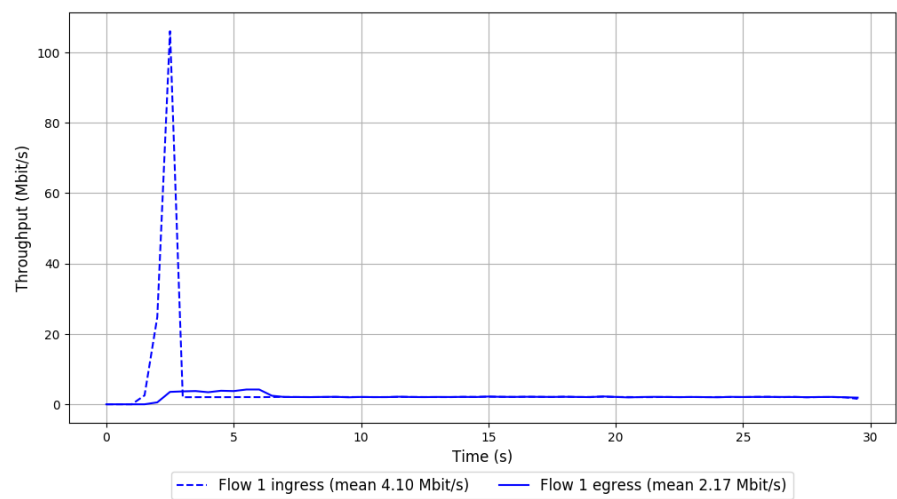


```
Run 1: Statistics of PCC

Start at: 2017-08-31 13:19:48
End at: 2017-08-31 13:20:18
Local clock offset: 0.069 ms
Remote clock offset: -7.035 ms

# Below is generated by plot.py at 2017-08-31 14:02:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.17 Mbit/s
95th percentile per-packet one-way delay: 1603.137 ms
Loss rate: 47.34%
-- Flow 1:
Average throughput: 2.17 Mbit/s
95th percentile per-packet one-way delay: 1603.137 ms
Loss rate: 47.34%
```

Run 1: Report of PCC — Data Link

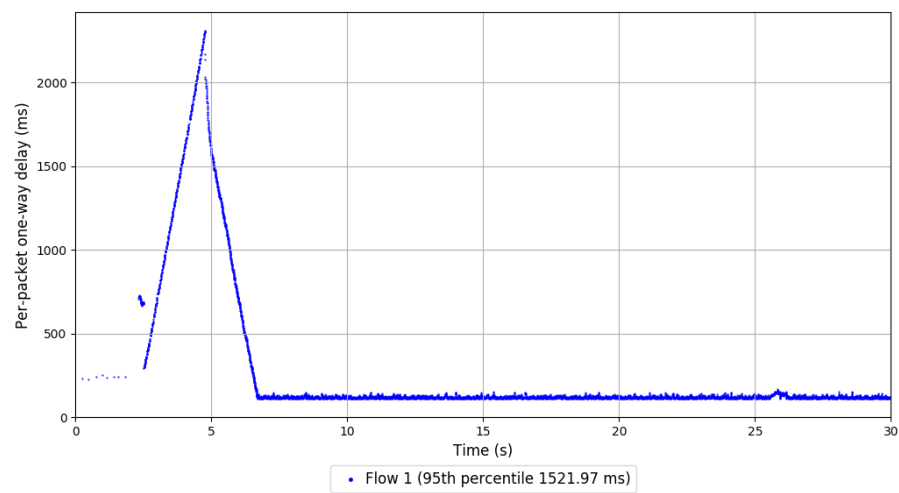
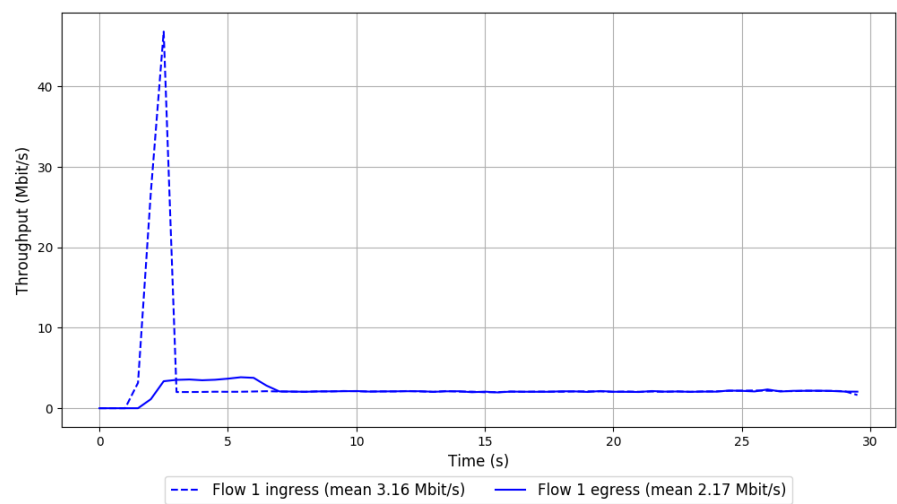


Run 2: Statistics of PCC

Start at: 2017-08-31 13:37:28
End at: 2017-08-31 13:37:59
Local clock offset: 0.019 ms
Remote clock offset: -6.046 ms

Below is generated by plot.py at 2017-08-31 14:02:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.17 Mbit/s
95th percentile per-packet one-way delay: 1521.968 ms
Loss rate: 31.78%
-- Flow 1:
Average throughput: 2.17 Mbit/s
95th percentile per-packet one-way delay: 1521.968 ms
Loss rate: 31.78%

Run 2: Report of PCC — Data Link

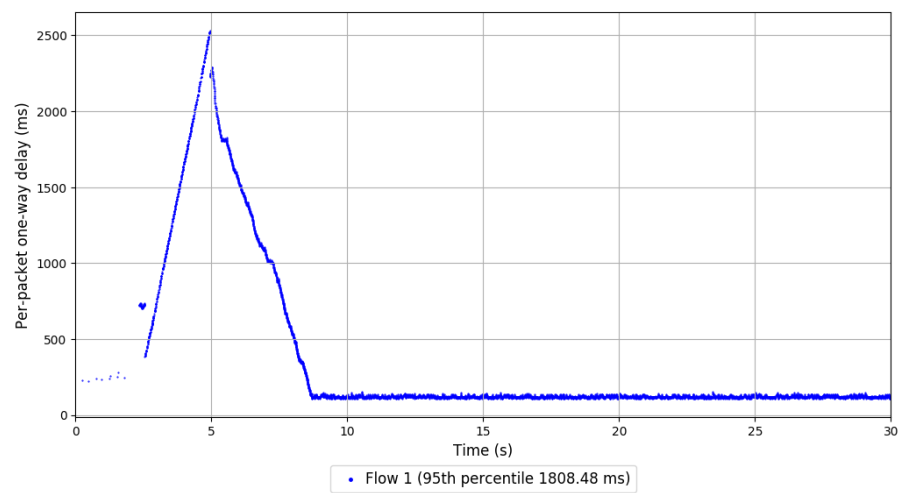
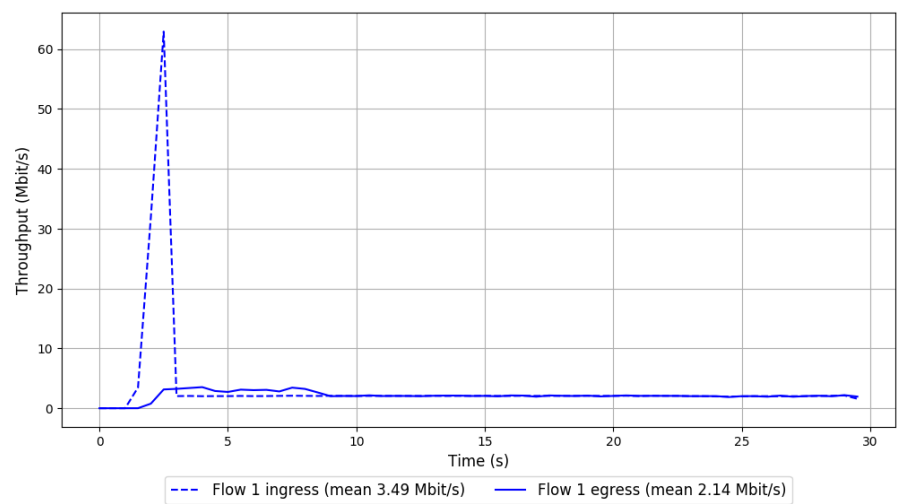


Run 3: Statistics of PCC

Start at: 2017-08-31 13:55:07
End at: 2017-08-31 13:55:37
Local clock offset: 0.015 ms
Remote clock offset: -6.948 ms

Below is generated by plot.py at 2017-08-31 14:02:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 1808.478 ms
Loss rate: 39.08%
-- Flow 1:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 1808.478 ms
Loss rate: 39.08%

Run 3: Report of PCC — Data Link



Run 1: Statistics of QUIC Cubic

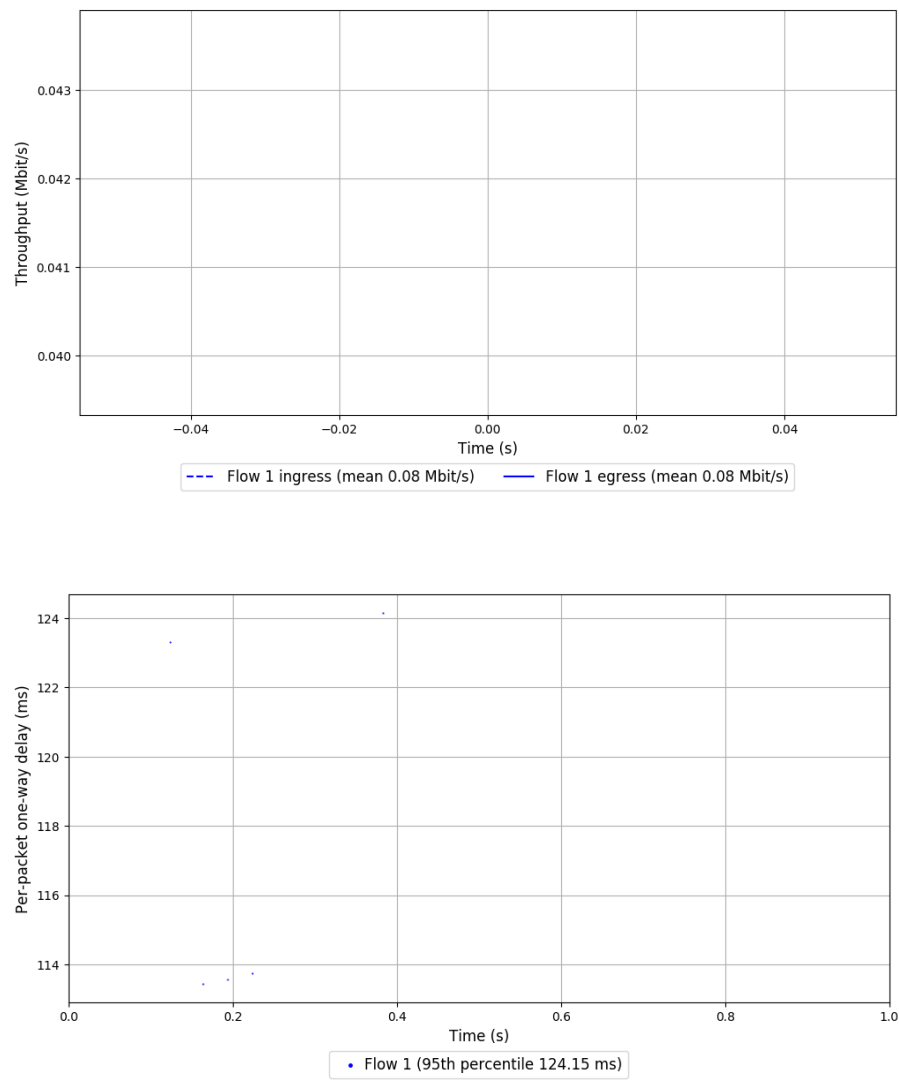
Start at: 2017-08-31 13:09:15

End at: 2017-08-31 13:09:45

Local clock offset: 0.075 ms

Remote clock offset: -5.984 ms

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2017-08-31 13:26:52

End at: 2017-08-31 13:27:22

Local clock offset: 0.104 ms

Remote clock offset: -6.864 ms

Below is generated by plot.py at 2017-08-31 14:02:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.47 Mbit/s

95th percentile per-packet one-way delay: 797.577 ms

Loss rate: 3.14%

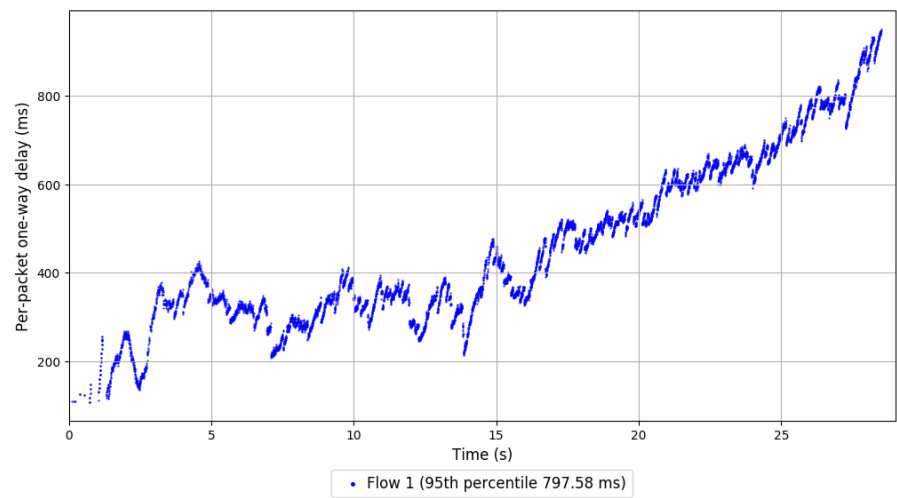
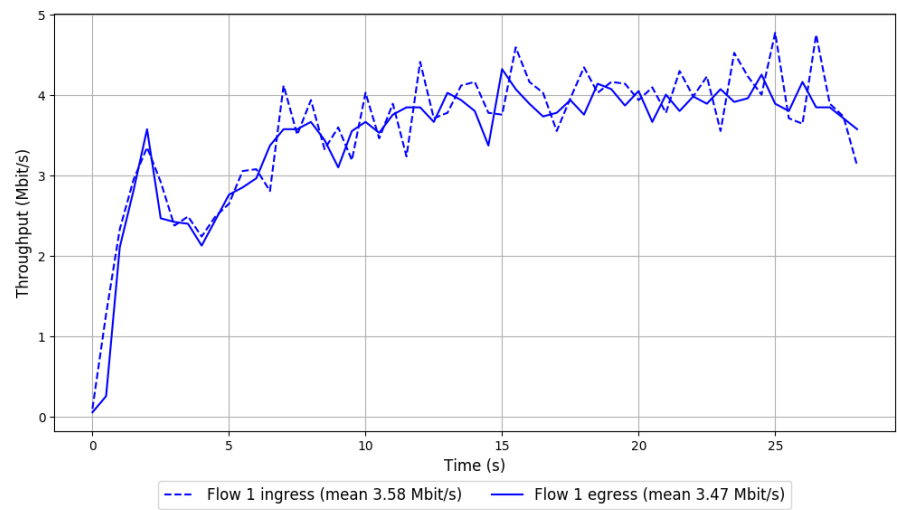
-- Flow 1:

Average throughput: 3.47 Mbit/s

95th percentile per-packet one-way delay: 797.577 ms

Loss rate: 3.14%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2017-08-31 13:44:32

End at: 2017-08-31 13:45:02

Local clock offset: 0.102 ms

Remote clock offset: -0.981 ms

Below is generated by plot.py at 2017-08-31 14:02:55

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.75 Mbit/s

95th percentile per-packet one-way delay: 953.876 ms

Loss rate: 3.22%

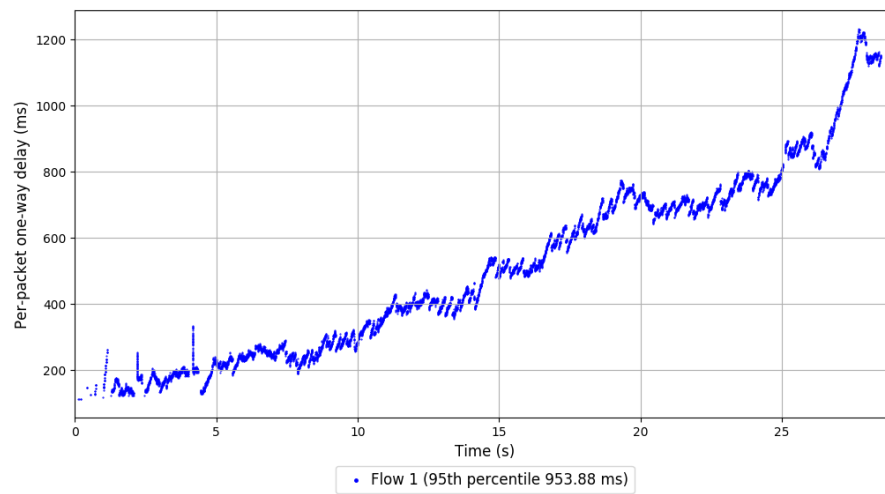
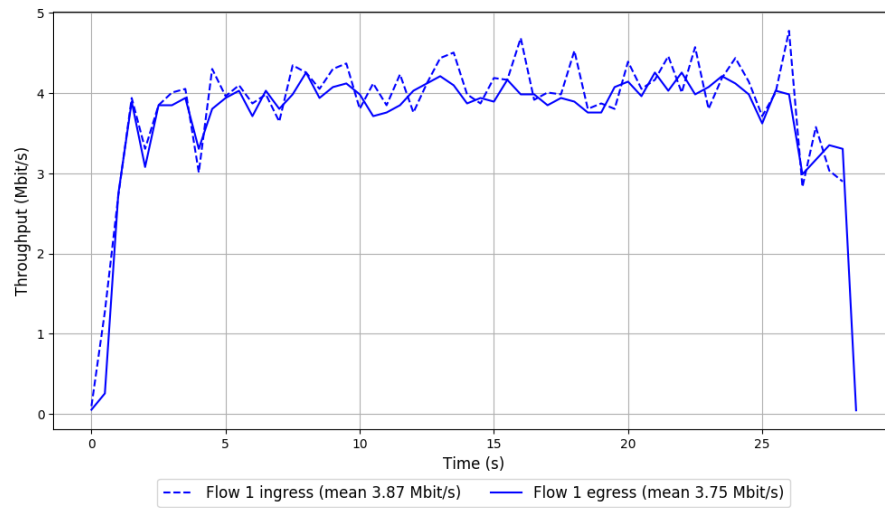
-- Flow 1:

Average throughput: 3.75 Mbit/s

95th percentile per-packet one-way delay: 953.876 ms

Loss rate: 3.22%

Run 3: Report of QUIC Cubic — Data Link

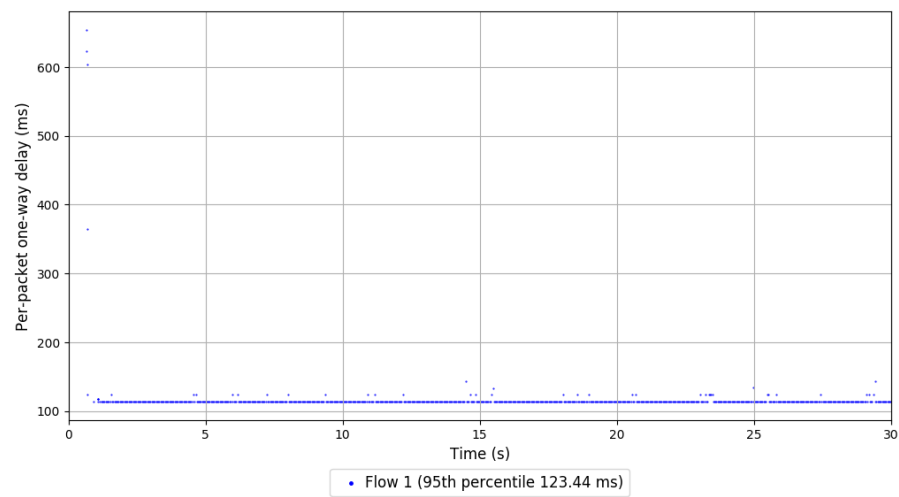
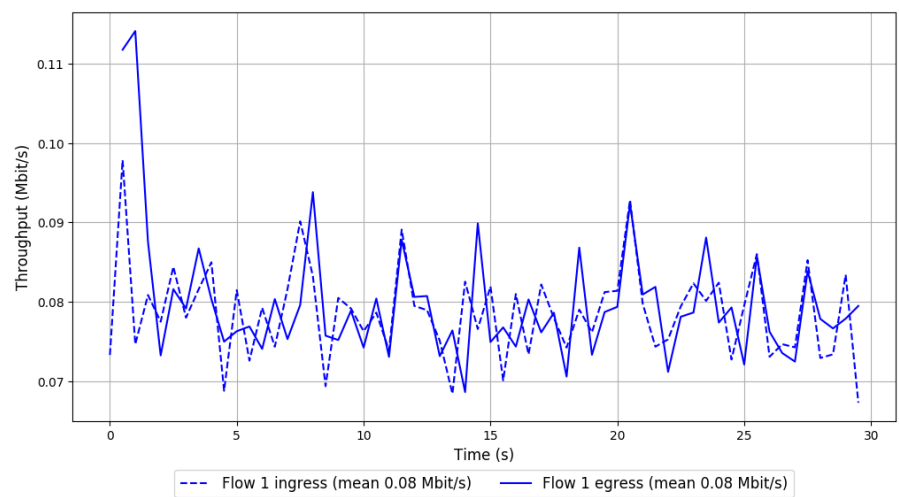


Run 1: Statistics of SCReAM

Start at: 2017-08-31 13:24:30
End at: 2017-08-31 13:25:00
Local clock offset: 0.098 ms
Remote clock offset: -1.909 ms

Below is generated by plot.py at 2017-08-31 14:02:55
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 123.442 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 123.442 ms
Loss rate: 0.13%

Run 1: Report of SReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2017-08-31 13:42:10

End at: 2017-08-31 13:42:40

Local clock offset: 0.073 ms

Remote clock offset: -5.87 ms

Below is generated by plot.py at 2017-08-31 14:02:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.08 Mbit/s

95th percentile per-packet one-way delay: 122.963 ms

Loss rate: 0.13%

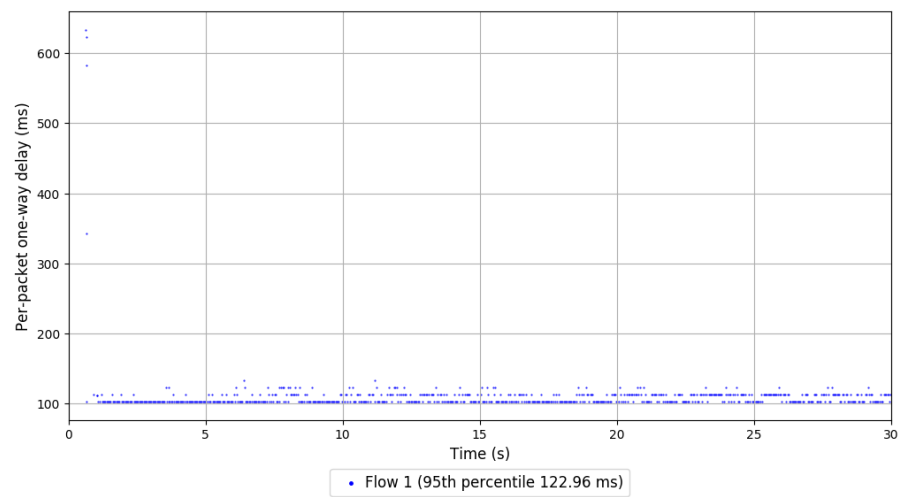
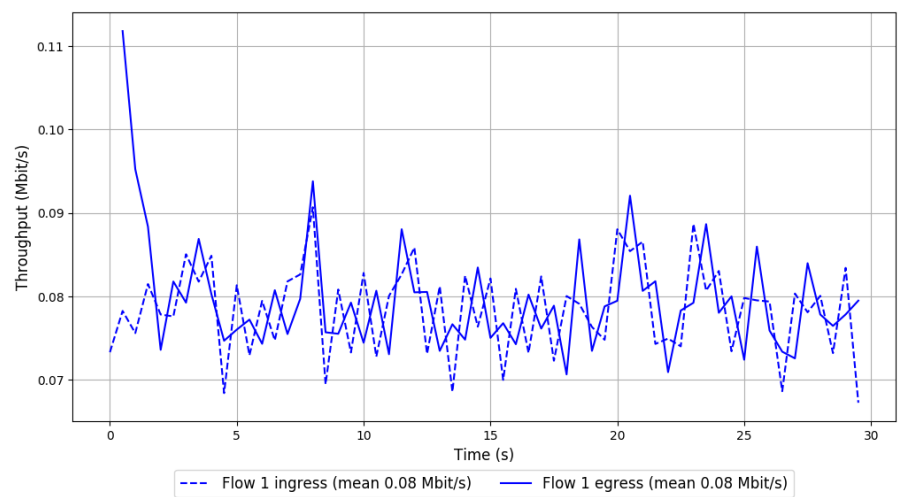
-- Flow 1:

Average throughput: 0.08 Mbit/s

95th percentile per-packet one-way delay: 122.963 ms

Loss rate: 0.13%

Run 2: Report of SReAM — Data Link

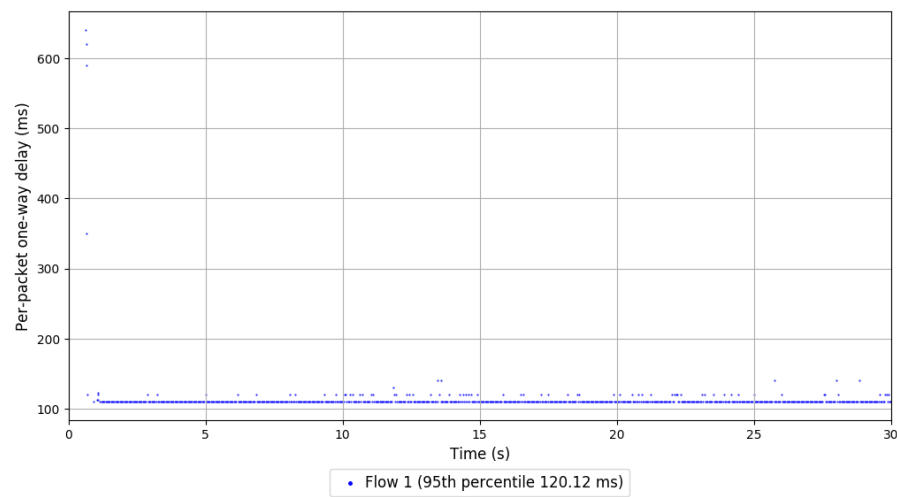
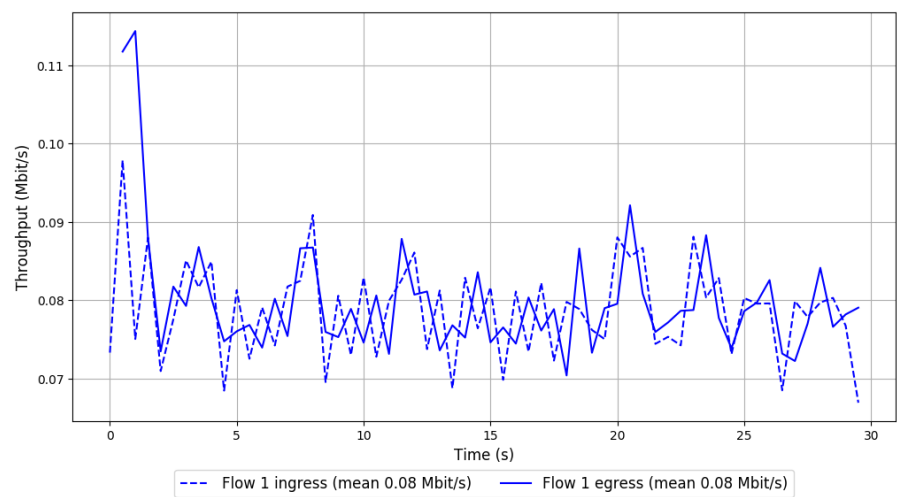


Run 3: Statistics of SCReAM

Start at: 2017-08-31 13:59:49
End at: 2017-08-31 14:00:19
Local clock offset: 0.069 ms
Remote clock offset: -6.704 ms

Below is generated by plot.py at 2017-08-31 14:02:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 120.120 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 120.120 ms
Loss rate: 0.13%

Run 3: Report of SReAM — Data Link

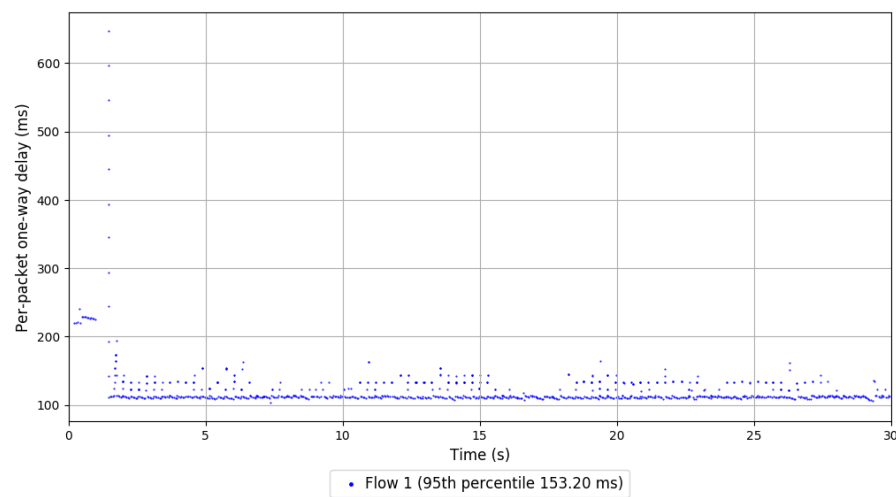
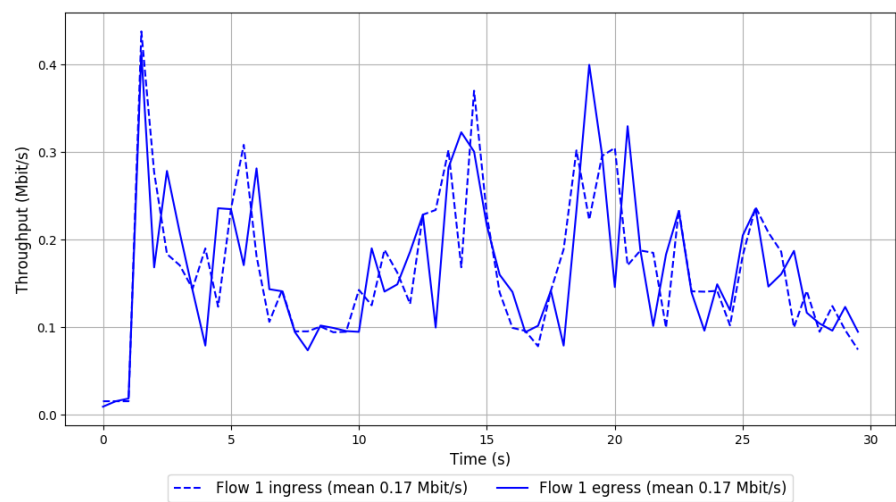


Run 1: Statistics of Sprout

Start at: 2017-08-31 13:23:20
End at: 2017-08-31 13:23:50
Local clock offset: 0.05 ms
Remote clock offset: -6.744 ms

Below is generated by plot.py at 2017-08-31 14:02:57
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 153.200 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 153.200 ms
Loss rate: 0.02%

Run 1: Report of Sprout — Data Link

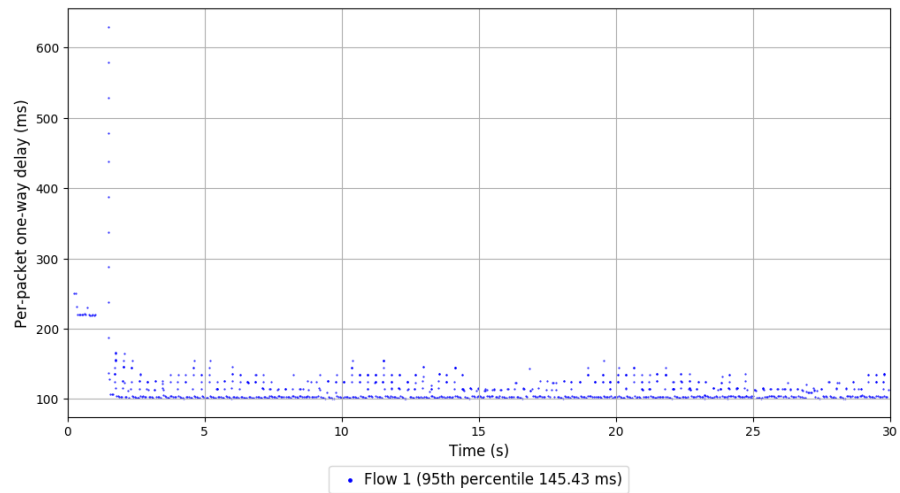
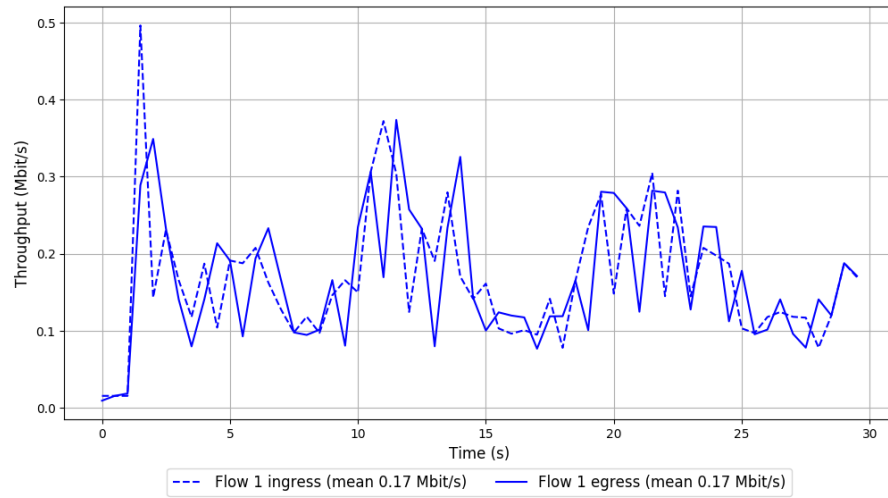


Run 2: Statistics of Sprout

Start at: 2017-08-31 13:41:00
End at: 2017-08-31 13:41:30
Local clock offset: 0.081 ms
Remote clock offset: -6.797 ms

Below is generated by plot.py at 2017-08-31 14:02:57
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 145.430 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 145.430 ms
Loss rate: 0.02%

Run 2: Report of Sprout — Data Link

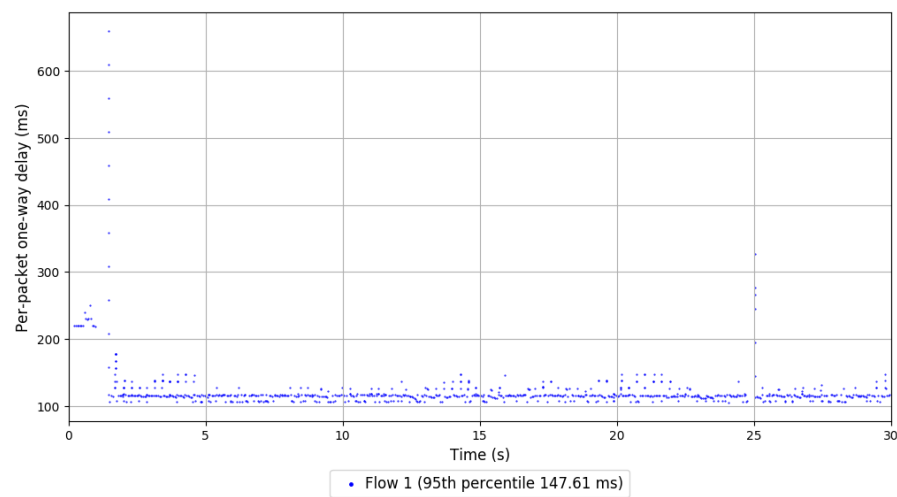
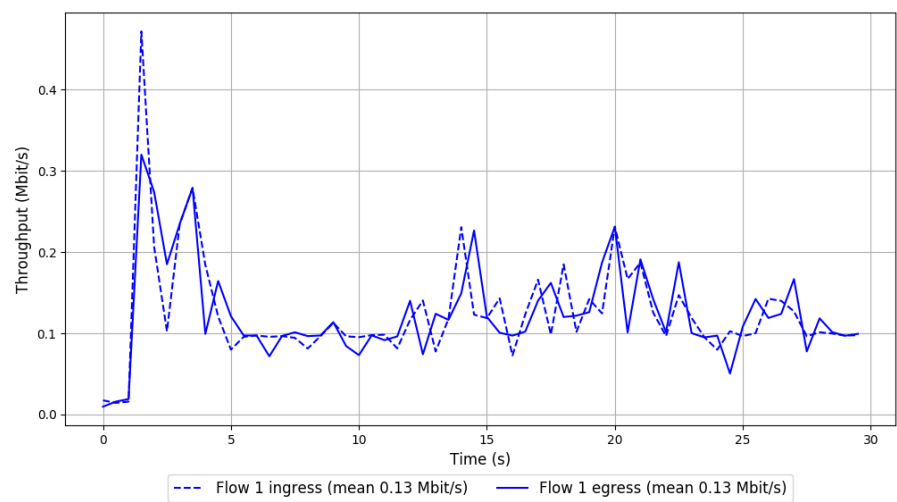


Run 3: Statistics of Sprout

Start at: 2017-08-31 13:58:39
End at: 2017-08-31 13:59:09
Local clock offset: 0.055 ms
Remote clock offset: -5.973 ms

Below is generated by plot.py at 2017-08-31 14:02:58
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 147.607 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 147.607 ms
Loss rate: 0.02%

Run 3: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2017-08-31 13:16:18

End at: 2017-08-31 13:16:48

Local clock offset: 0.057 ms

Remote clock offset: -6.103 ms

Below is generated by plot.py at 2017-08-31 14:02:58

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.38 Mbit/s

95th percentile per-packet one-way delay: 229.802 ms

Loss rate: 0.17%

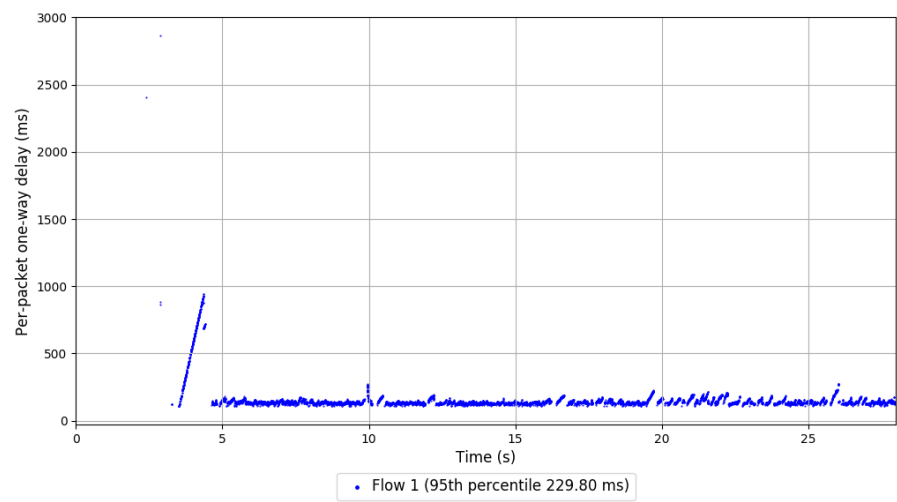
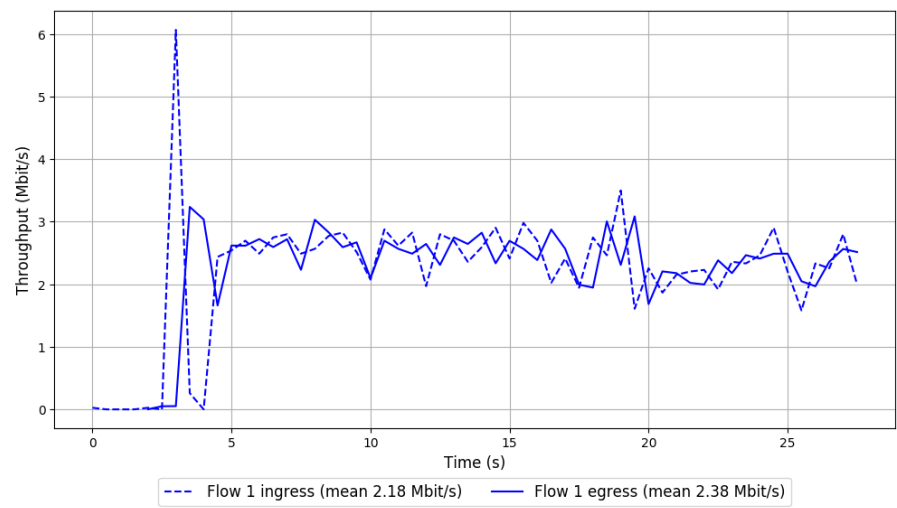
-- Flow 1:

Average throughput: 2.38 Mbit/s

95th percentile per-packet one-way delay: 229.802 ms

Loss rate: 0.17%

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



Run 2: Statistics of TaoVA-100x

Start at: 2017-08-31 13:33:56

End at: 2017-08-31 13:34:26

Local clock offset: 0.067 ms

Remote clock offset: -6.832 ms

Below is generated by plot.py at 2017-08-31 14:02:59

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.38 Mbit/s

95th percentile per-packet one-way delay: 174.049 ms

Loss rate: 0.38%

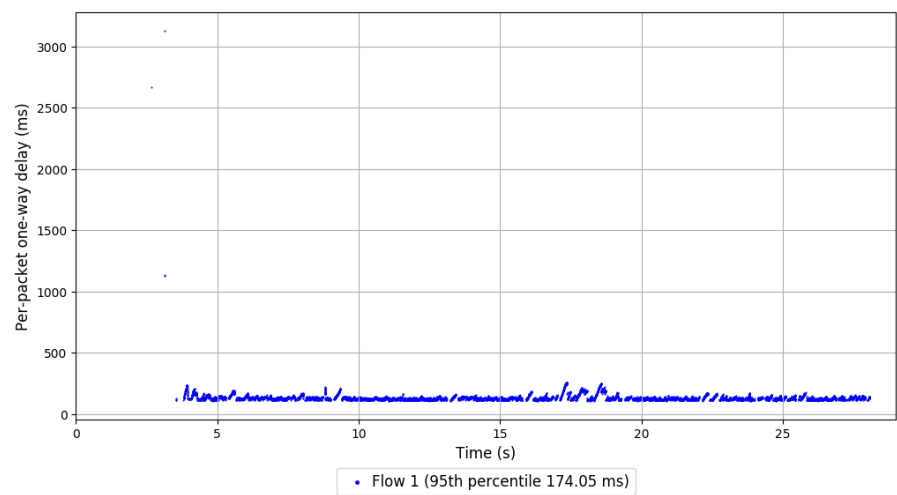
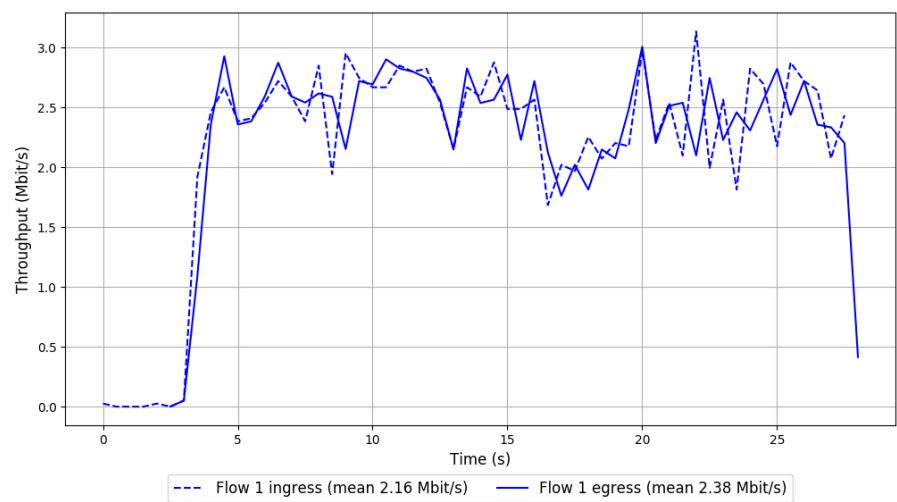
-- Flow 1:

Average throughput: 2.38 Mbit/s

95th percentile per-packet one-way delay: 174.049 ms

Loss rate: 0.38%

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



Run 3: Statistics of TaoVA-100x

Start at: 2017-08-31 13:51:36

End at: 2017-08-31 13:52:06

Local clock offset: 0.079 ms

Remote clock offset: -5.916 ms

Below is generated by plot.py at 2017-08-31 14:03:00

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.49 Mbit/s

95th percentile per-packet one-way delay: 226.213 ms

Loss rate: 0.29%

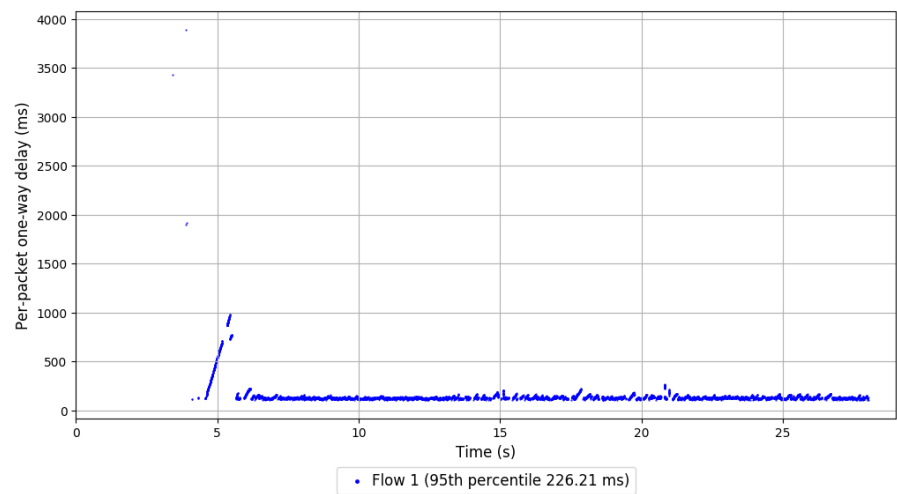
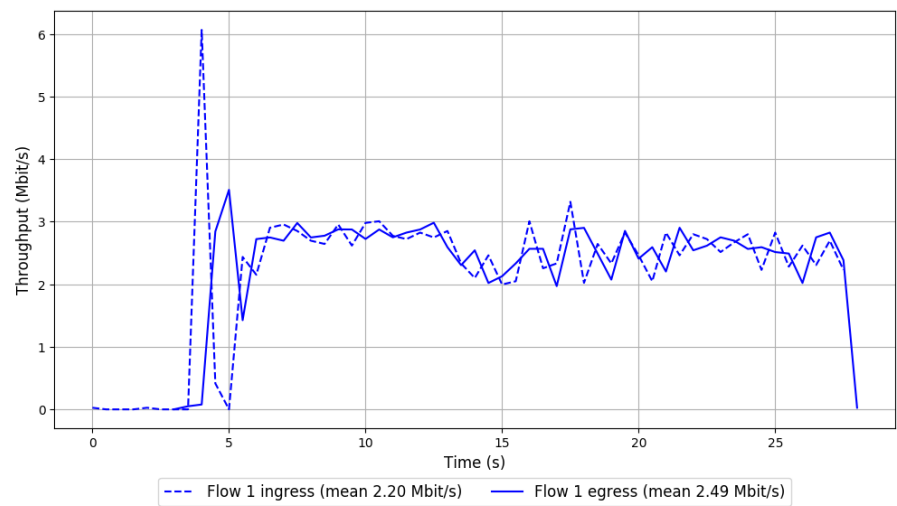
-- Flow 1:

Average throughput: 2.49 Mbit/s

95th percentile per-packet one-way delay: 226.213 ms

Loss rate: 0.29%

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

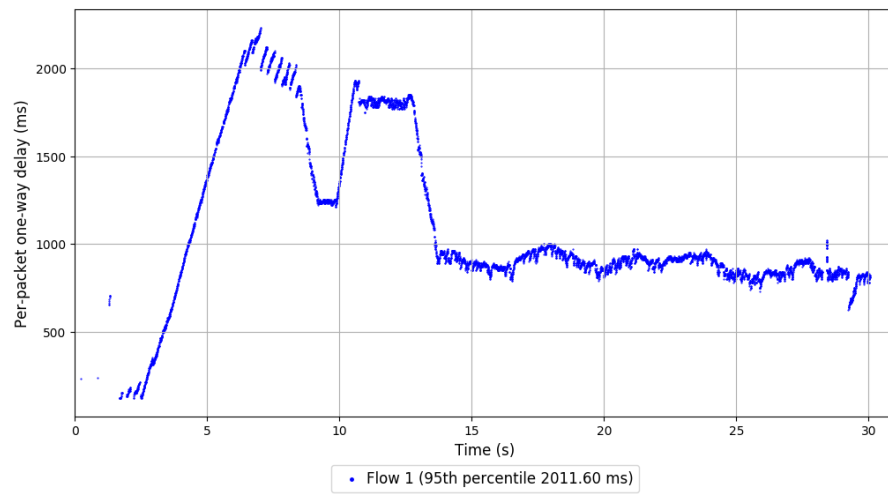
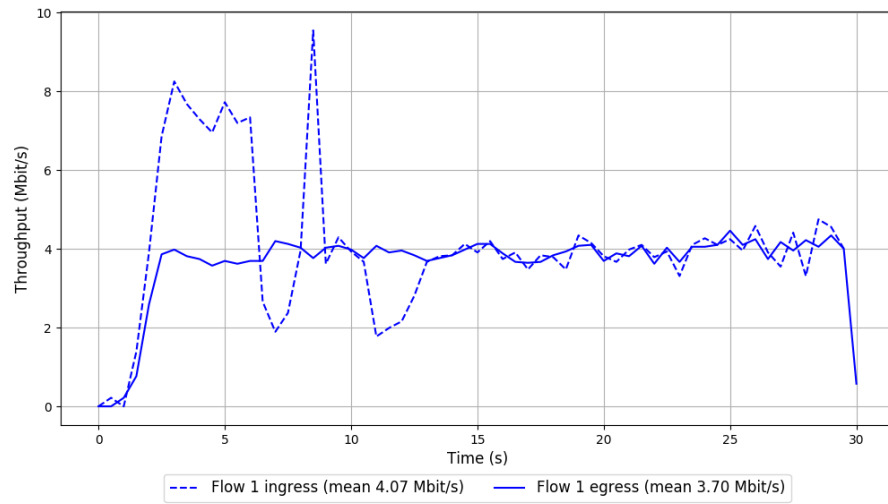


Run 1: Statistics of TCP Vegas

Start at: 2017-08-31 13:11:35
End at: 2017-08-31 13:12:05
Local clock offset: 0.026 ms
Remote clock offset: -6.753 ms

Below is generated by plot.py at 2017-08-31 14:03:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.70 Mbit/s
95th percentile per-packet one-way delay: 2011.595 ms
Loss rate: 9.79%
-- Flow 1:
Average throughput: 3.70 Mbit/s
95th percentile per-packet one-way delay: 2011.595 ms
Loss rate: 9.79%

Run 1: Report of TCP Vegas — Data Link

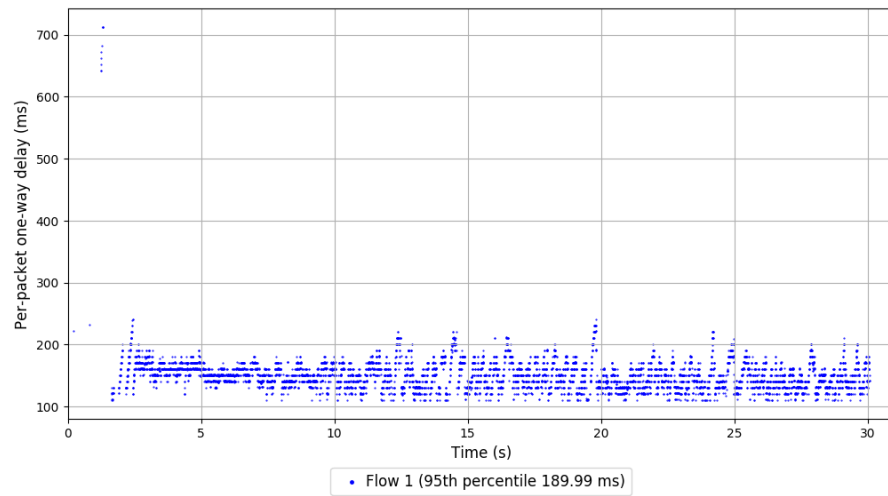
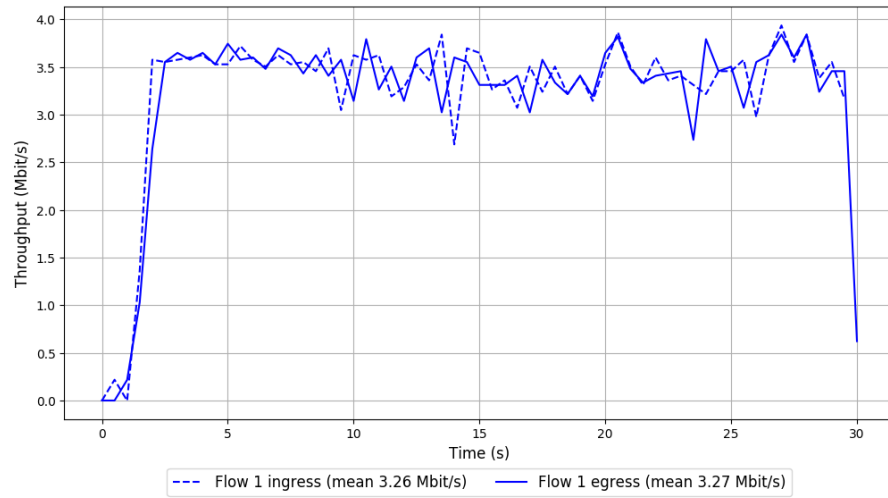


Run 2: Statistics of TCP Vegas

Start at: 2017-08-31 13:29:13
End at: 2017-08-31 13:29:43
Local clock offset: 0.099 ms
Remote clock offset: -6.049 ms

Below is generated by plot.py at 2017-08-31 14:03:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.27 Mbit/s
95th percentile per-packet one-way delay: 189.991 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 3.27 Mbit/s
95th percentile per-packet one-way delay: 189.991 ms
Loss rate: 0.15%

Run 2: Report of TCP Vegas — Data Link

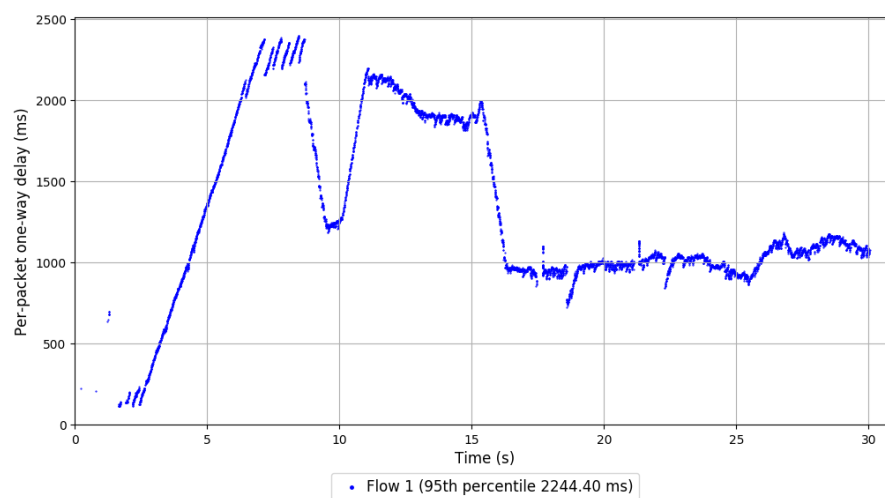
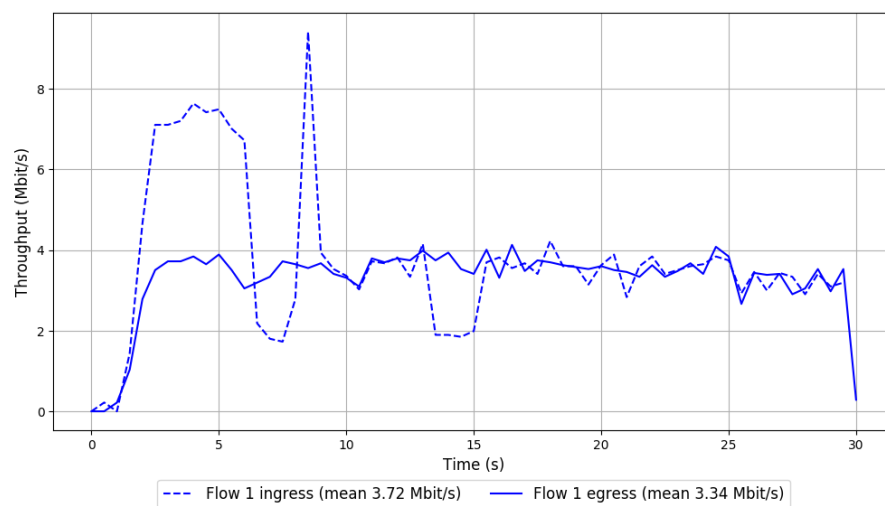


Run 3: Statistics of TCP Vegas

Start at: 2017-08-31 13:46:52
End at: 2017-08-31 13:47:22
Local clock offset: 0.095 ms
Remote clock offset: -6.911 ms

Below is generated by plot.py at 2017-08-31 14:03:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.34 Mbit/s
95th percentile per-packet one-way delay: 2244.398 ms
Loss rate: 10.76%
-- Flow 1:
Average throughput: 3.34 Mbit/s
95th percentile per-packet one-way delay: 2244.398 ms
Loss rate: 10.76%

Run 3: Report of TCP Vegas — Data Link

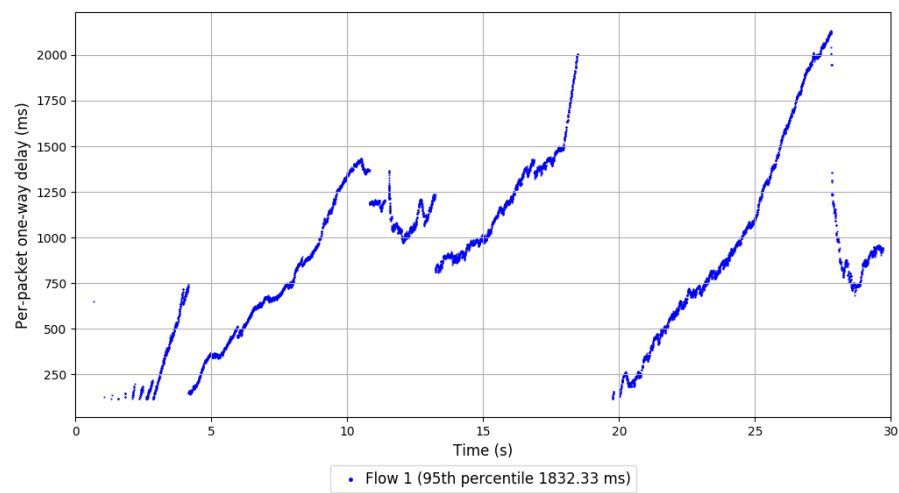
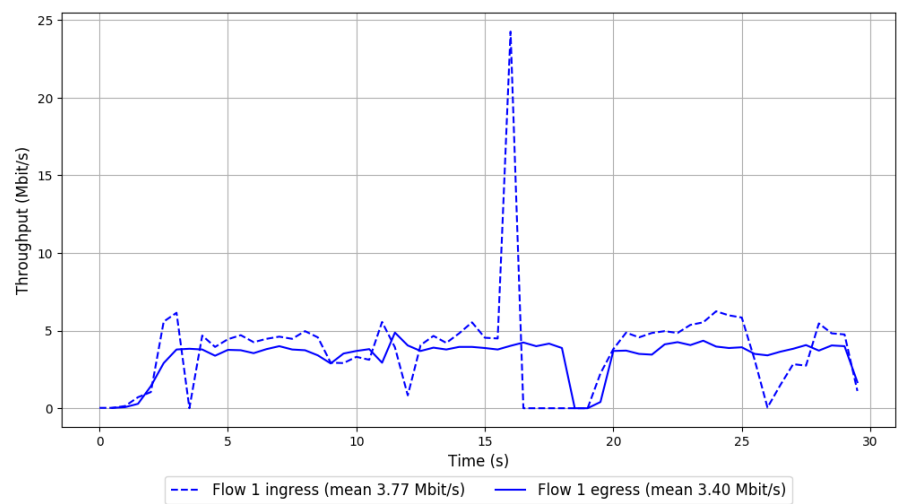


Run 1: Statistics of Verus

Start at: 2017-08-31 13:12:45
End at: 2017-08-31 13:13:15
Local clock offset: 0.063 ms
Remote clock offset: -6.105 ms

Below is generated by plot.py at 2017-08-31 14:03:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.40 Mbit/s
95th percentile per-packet one-way delay: 1832.328 ms
Loss rate: 11.65%
-- Flow 1:
Average throughput: 3.40 Mbit/s
95th percentile per-packet one-way delay: 1832.328 ms
Loss rate: 11.65%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2017-08-31 13:30:23

End at: 2017-08-31 13:30:53

Local clock offset: 0.081 ms

Remote clock offset: -5.94 ms

Below is generated by plot.py at 2017-08-31 14:03:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.29 Mbit/s

95th percentile per-packet one-way delay: 1751.065 ms

Loss rate: 3.68%

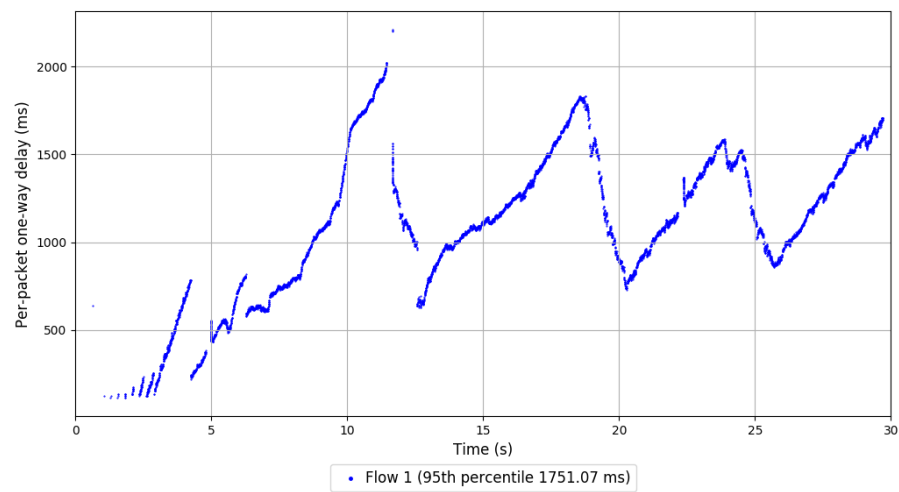
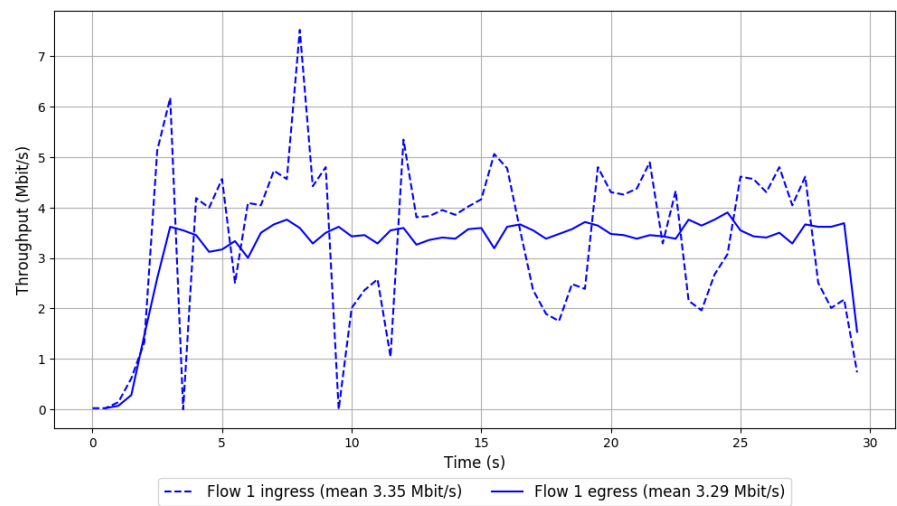
-- Flow 1:

Average throughput: 3.29 Mbit/s

95th percentile per-packet one-way delay: 1751.065 ms

Loss rate: 3.68%

Run 2: Report of Verus — Data Link

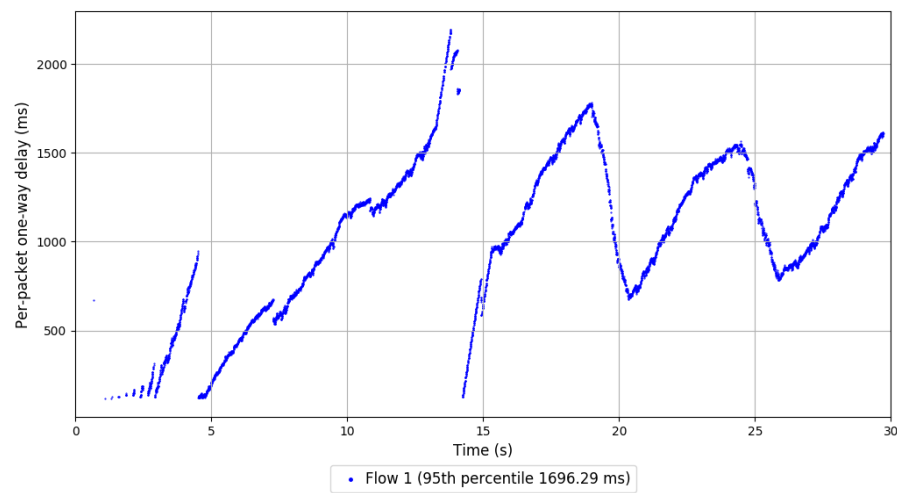
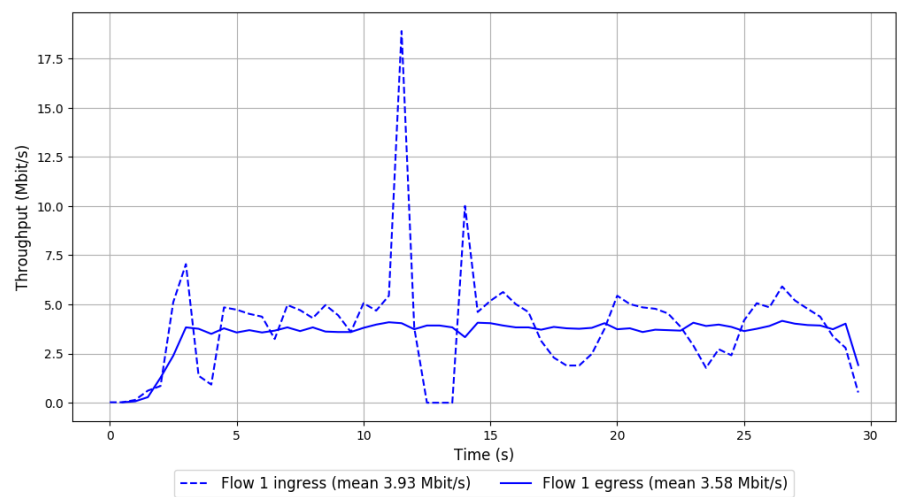


Run 3: Statistics of Verus

Start at: 2017-08-31 13:48:03
End at: 2017-08-31 13:48:33
Local clock offset: -0.006 ms
Remote clock offset: -1.222 ms

Below is generated by plot.py at 2017-08-31 14:03:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.58 Mbit/s
95th percentile per-packet one-way delay: 1696.293 ms
Loss rate: 10.61%
-- Flow 1:
Average throughput: 3.58 Mbit/s
95th percentile per-packet one-way delay: 1696.293 ms
Loss rate: 10.61%

Run 3: Report of Verus — Data Link

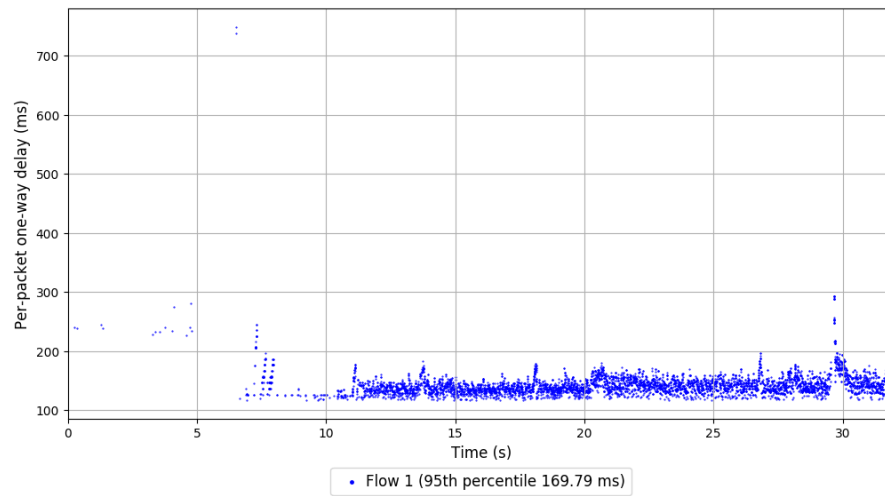
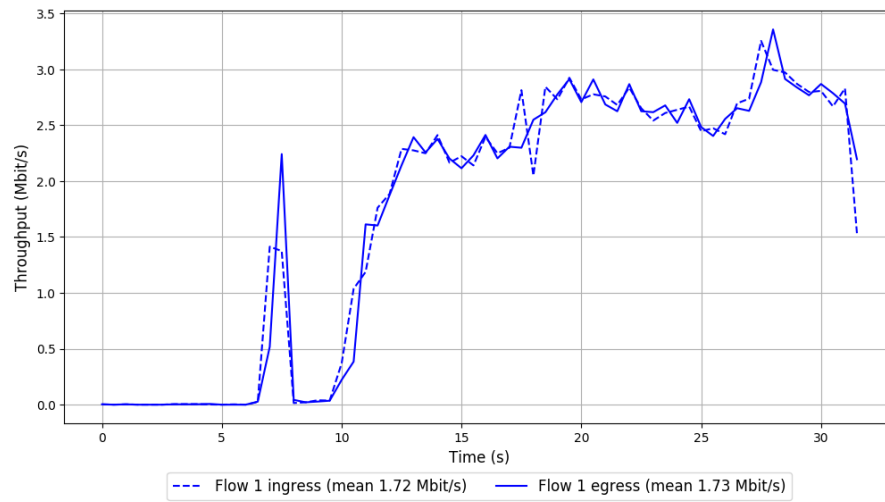


Run 1: Statistics of WebRTC media

Start at: 2017-08-31 13:25:40
End at: 2017-08-31 13:26:10
Local clock offset: 0.121 ms
Remote clock offset: -2.041 ms

Below is generated by plot.py at 2017-08-31 14:03:05
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.73 Mbit/s
95th percentile per-packet one-way delay: 169.792 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 1.73 Mbit/s
95th percentile per-packet one-way delay: 169.792 ms
Loss rate: 0.20%

Run 1: Report of WebRTC media — Data Link

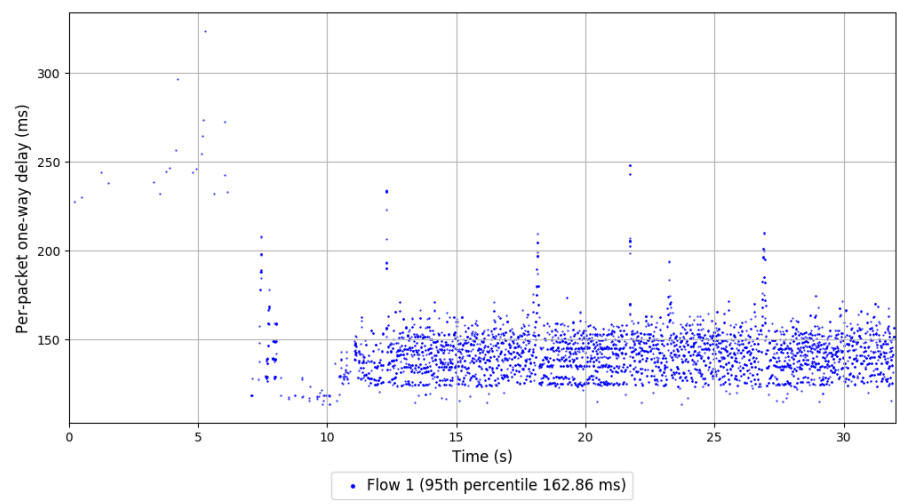
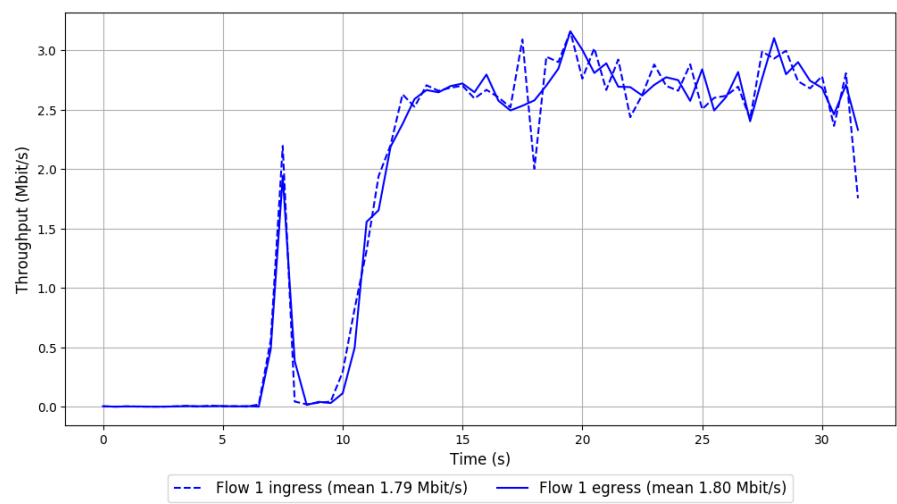


Run 2: Statistics of WebRTC media

Start at: 2017-08-31 13:43:21
End at: 2017-08-31 13:43:51
Local clock offset: 0.069 ms
Remote clock offset: -1.942 ms

Below is generated by plot.py at 2017-08-31 14:03:06
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.80 Mbit/s
95th percentile per-packet one-way delay: 162.858 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 1.80 Mbit/s
95th percentile per-packet one-way delay: 162.858 ms
Loss rate: 0.18%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2017-08-31 14:01:00
End at: 2017-08-31 14:01:30
Local clock offset: 0.074 ms
Remote clock offset: -3.063 ms

Below is generated by plot.py at 2017-08-31 14:03:06
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.64 Mbit/s
95th percentile per-packet one-way delay: 258.606 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 1.64 Mbit/s
95th percentile per-packet one-way delay: 258.606 ms
Loss rate: 0.26%

Run 3: Report of WebRTC media — Data Link

