

Pantheon Report

Generated at 2017-09-17 23:18:41 (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).

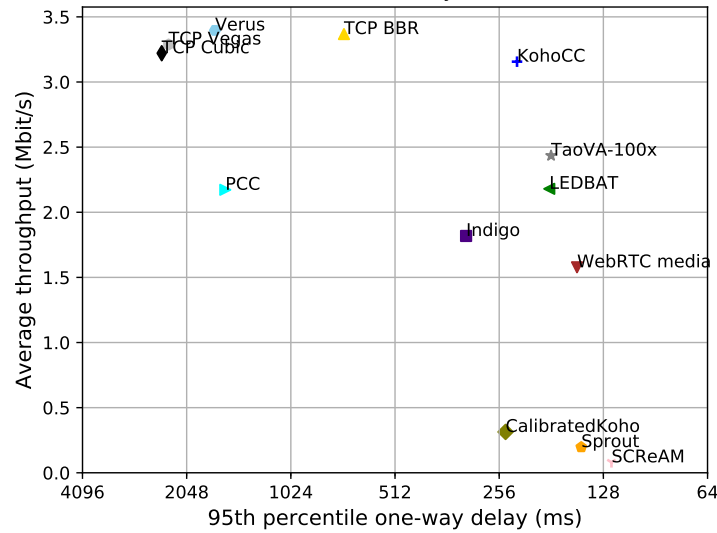
Tested BBR with qdisc of Fair Queuing (**fq**), and other schemes with the default Linux qdisc (**pfifo_fast**).

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

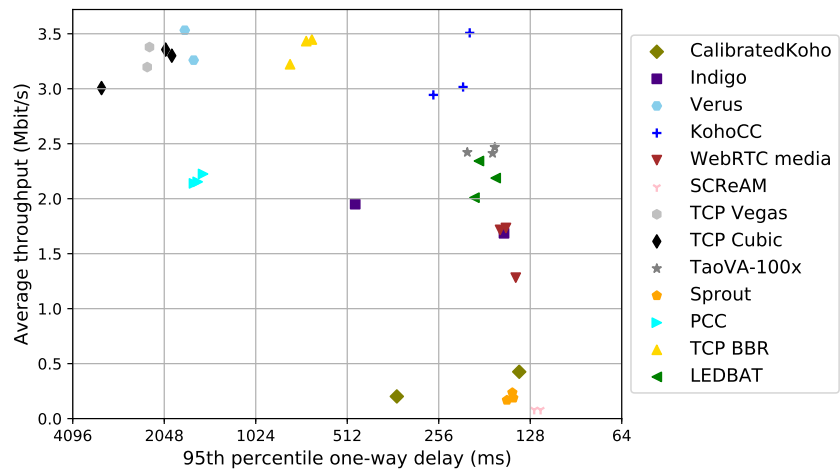
Git summary:

```
branch: master @ 57453dc11f8da93a2e03eea75289fea01b816298
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/genericCC @ f7ca42f251bf49b432bb71de6d13fa903515c366
third_party/indigo @ b19f3730105f9aa95452552af924e3719b03cc55
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 @ f1a14bffe749737437f61b1eaaeb30b267cde681
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	3.37	719.13	1.38
CalibratedKoho	2	0.32	245.41	0.20
Copa	0	N/A	N/A	N/A
TCP Cubic	3	3.22	2418.05	8.91
Indigo	2	1.82	319.10	0.32
KohoCC	3	3.16	227.35	0.41
LEDBAT	3	2.18	183.48	0.09
PCC	3	2.17	1583.53	30.98
QUIC Cubic	0	N/A	N/A	N/A
SCReAM	2	0.08	121.28	0.07
Sprout	3	0.20	148.29	0.01
TaoVA-100x	3	2.43	181.28	0.15
TCP Vegas	2	3.29	2310.19	10.71
Verus	2	3.39	1696.05	4.72
WebRTC media	3	1.58	152.53	0.26

Run 1: Statistics of TCP BBR

Start at: 2017-09-17 22:30:30

End at: 2017-09-17 22:31:00

Local clock offset: -8.22 ms

Remote clock offset: -3.345 ms

Below is generated by plot.py at 2017-09-17 23:18:12

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.22 Mbit/s

95th percentile per-packet one-way delay: 789.536 ms

Loss rate: 1.56%

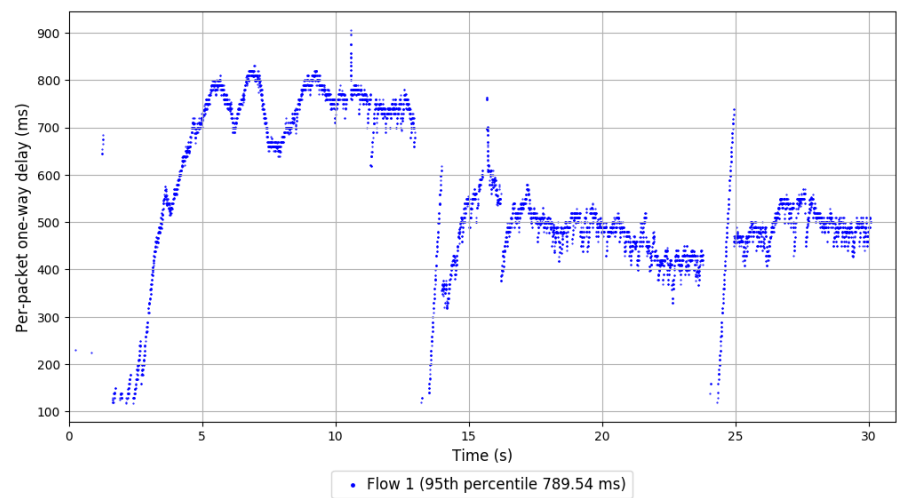
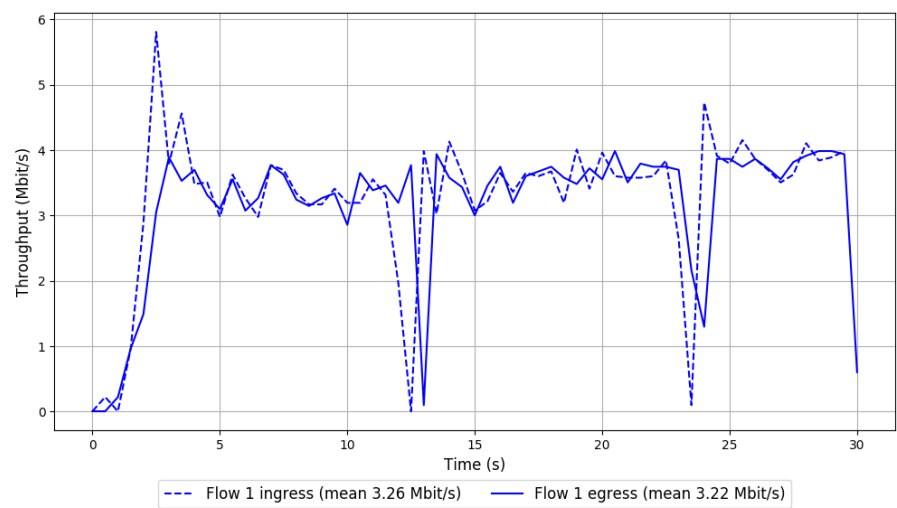
-- Flow 1:

Average throughput: 3.22 Mbit/s

95th percentile per-packet one-way delay: 789.536 ms

Loss rate: 1.56%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2017-09-17 22:48:05

End at: 2017-09-17 22:48:35

Local clock offset: -6.266 ms

Remote clock offset: -8.47 ms

Below is generated by plot.py at 2017-09-17 23:18:13

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.43 Mbit/s

95th percentile per-packet one-way delay: 698.526 ms

Loss rate: 1.29%

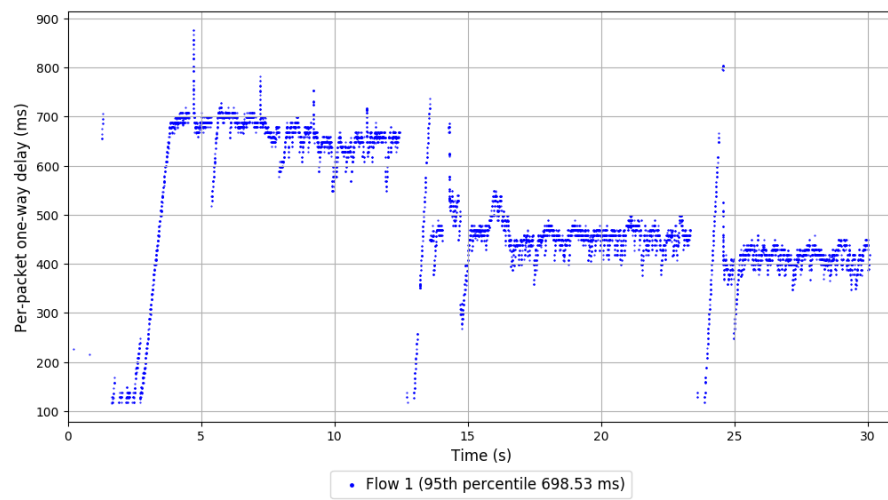
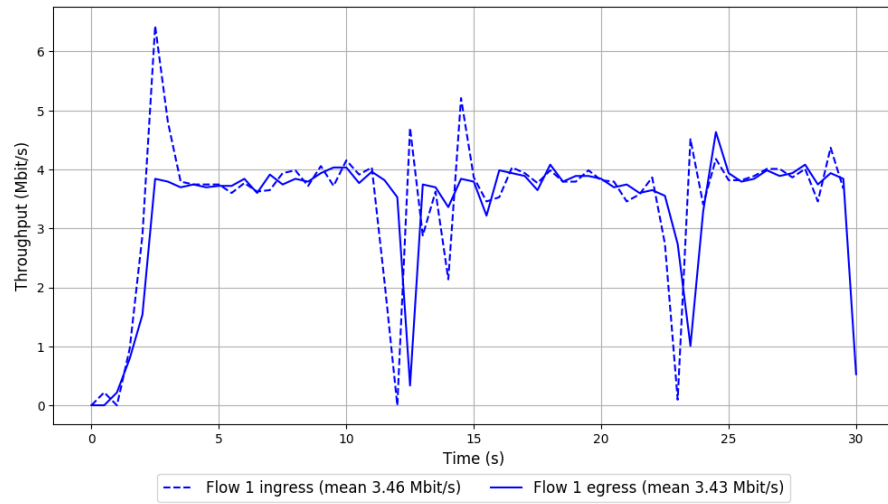
-- Flow 1:

Average throughput: 3.43 Mbit/s

95th percentile per-packet one-way delay: 698.526 ms

Loss rate: 1.29%

Run 2: Report of TCP BBR — Data Link

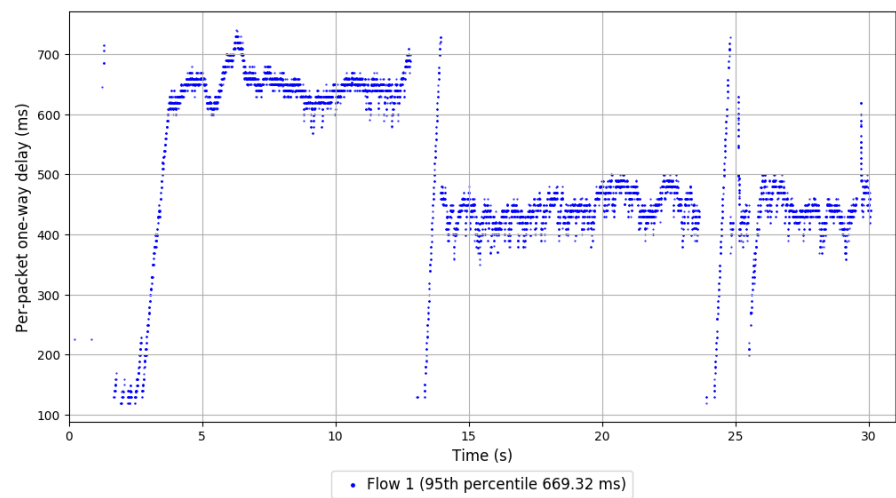
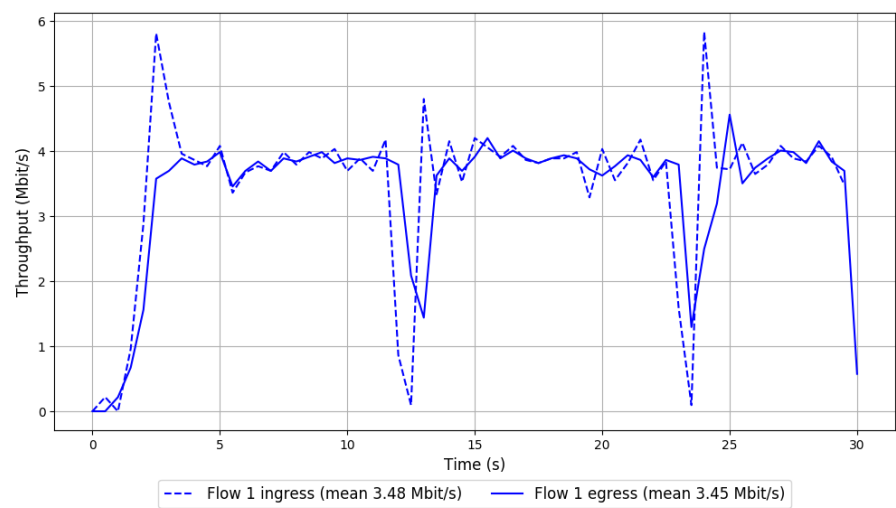


Run 3: Statistics of TCP BBR

Start at: 2017-09-17 23:05:41
End at: 2017-09-17 23:06:11
Local clock offset: -3.225 ms
Remote clock offset: -8.351 ms

Below is generated by plot.py at 2017-09-17 23:18:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.45 Mbit/s
95th percentile per-packet one-way delay: 669.321 ms
Loss rate: 1.29%
-- Flow 1:
Average throughput: 3.45 Mbit/s
95th percentile per-packet one-way delay: 669.321 ms
Loss rate: 1.29%

Run 3: Report of TCP BBR — Data Link

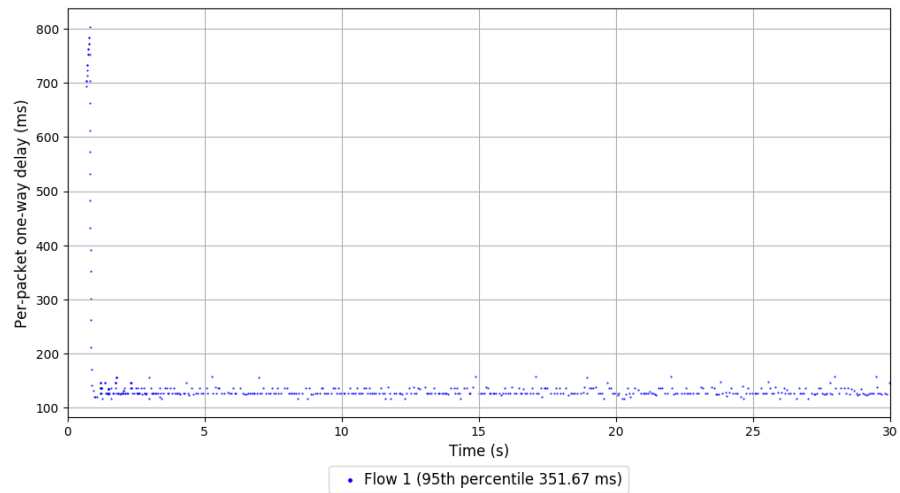
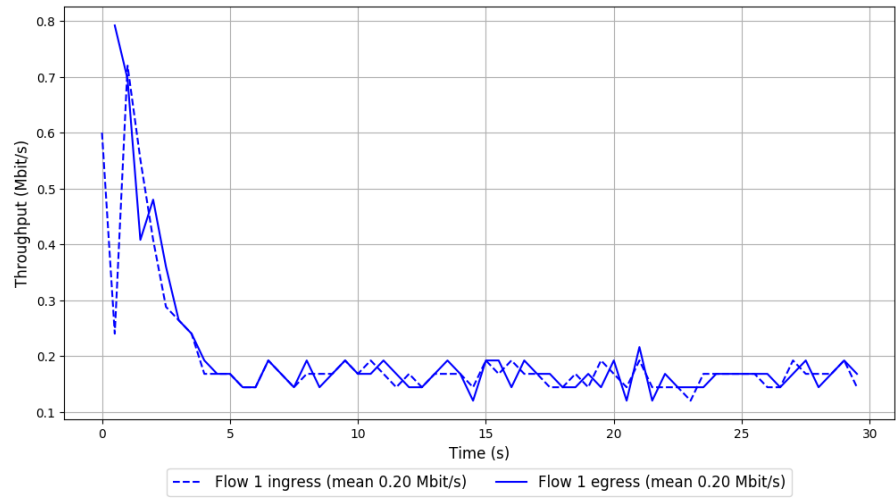


Run 1: Statistics of CalibratedKoho

Start at: 2017-09-17 22:32:51
End at: 2017-09-17 22:33:21
Local clock offset: -8.434 ms
Remote clock offset: -3.394 ms

Below is generated by plot.py at 2017-09-17 23:18:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 351.674 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 351.674 ms
Loss rate: 0.20%

Run 1: Report of CalibratedKoho — Data Link



Run 2: Statistics of CalibratedKoho

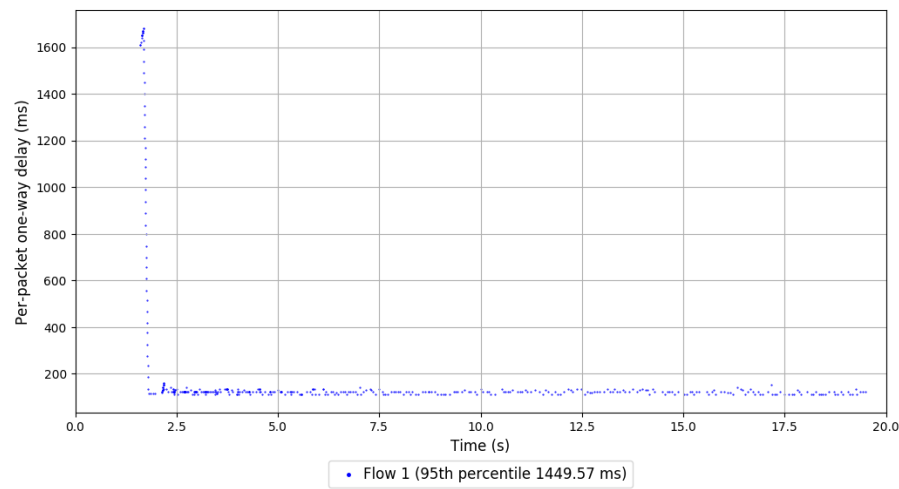
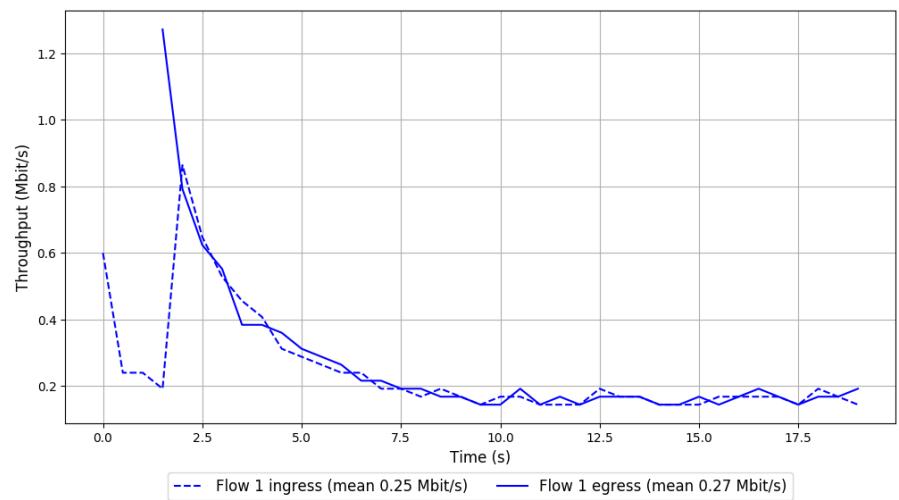
Start at: 2017-09-17 22:50:26

End at: 2017-09-17 22:50:56

Local clock offset: -5.57 ms

Remote clock offset: -8.788 ms

Run 2: Report of CalibratedKoho — Data Link

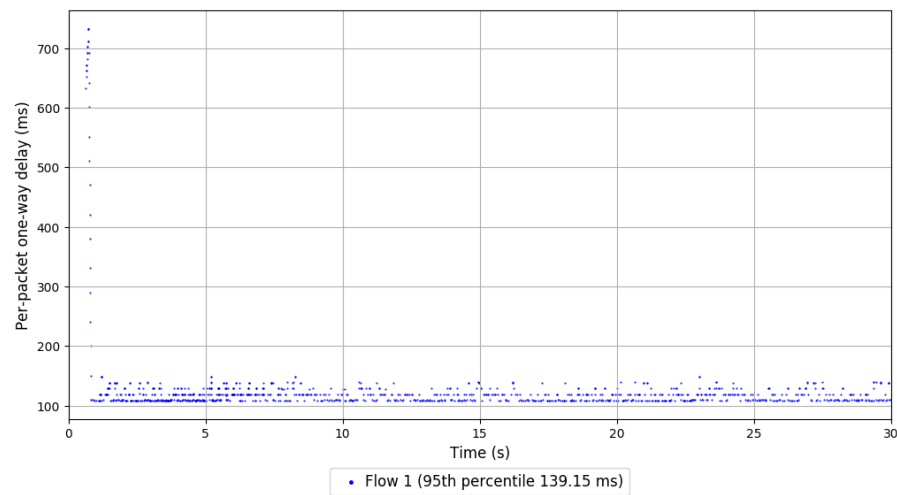
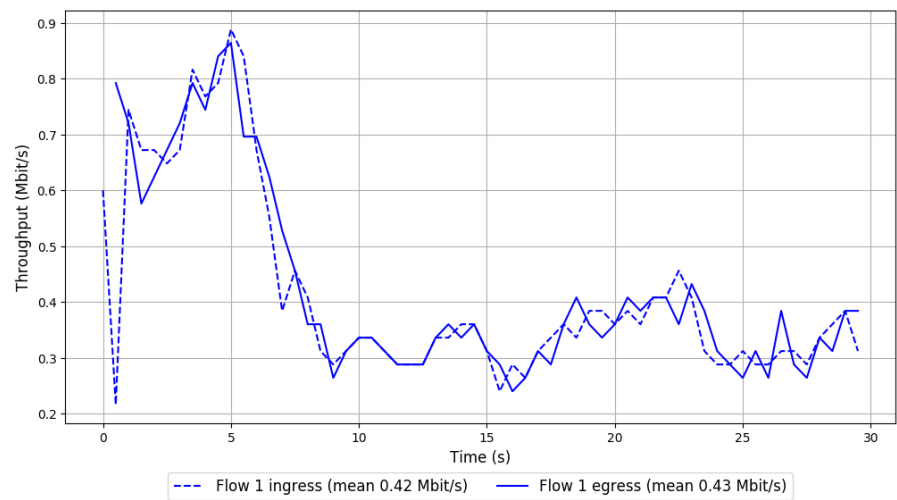


Run 3: Statistics of CalibratedKoho

Start at: 2017-09-17 23:08:01
End at: 2017-09-17 23:08:31
Local clock offset: -3.415 ms
Remote clock offset: -8.282 ms

Below is generated by plot.py at 2017-09-17 23:18:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 139.149 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 139.149 ms
Loss rate: 0.19%

Run 3: Report of CalibratedKoho — Data Link



Run 1: Statistics of Copa

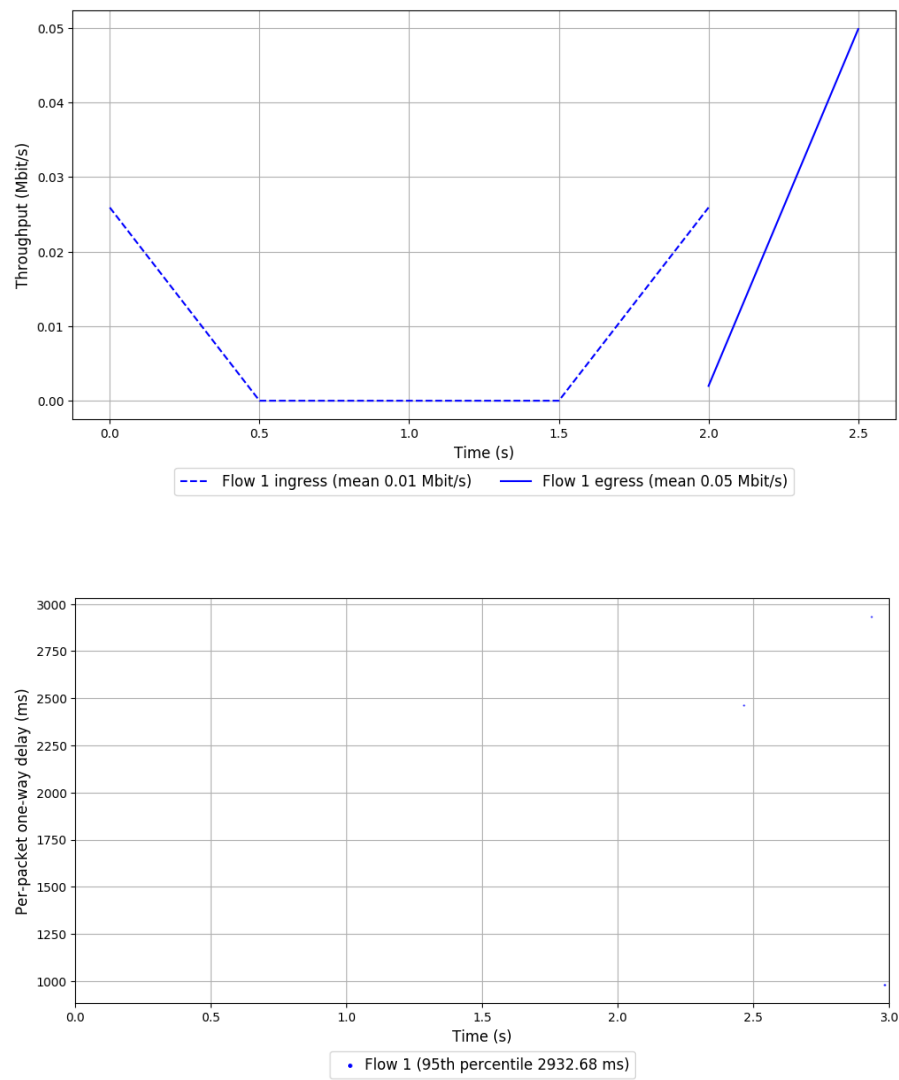
Start at: 2017-09-17 22:28:10

End at: 2017-09-17 22:28:40

Local clock offset: -7.448 ms

Remote clock offset: -3.349 ms

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

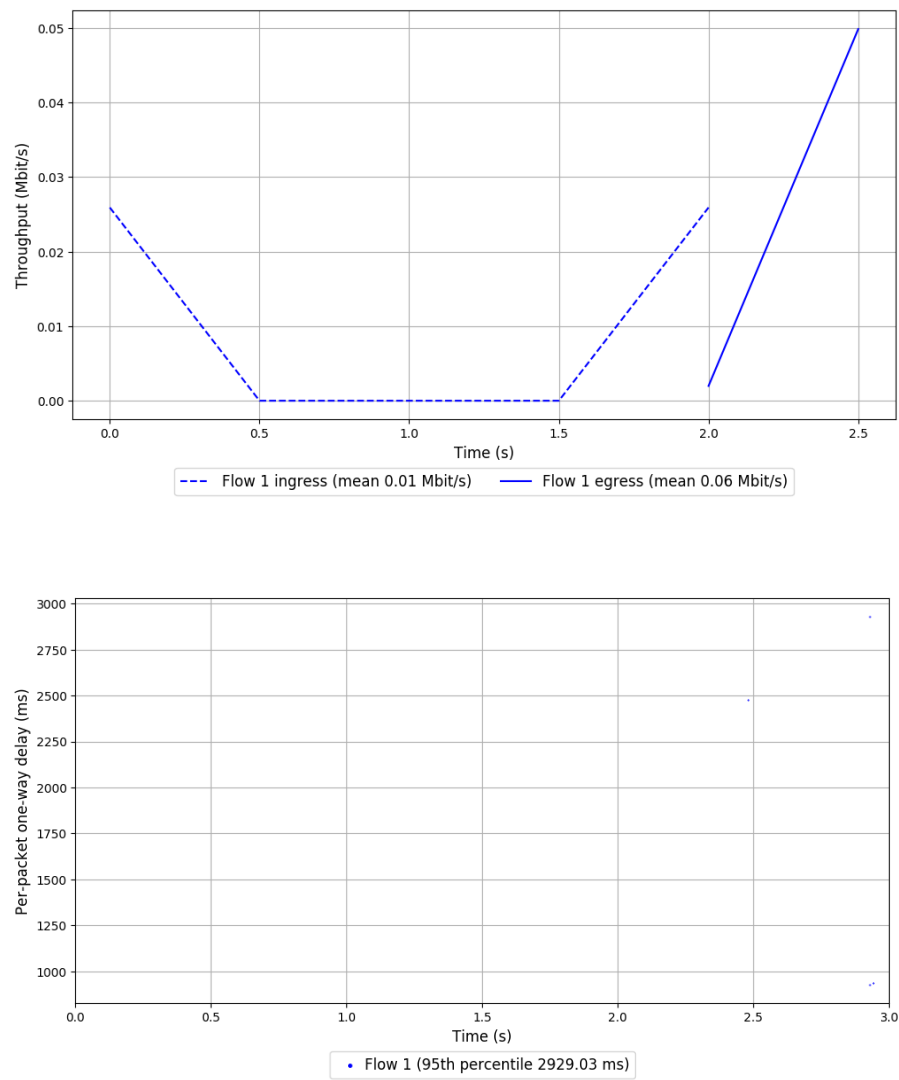
Start at: 2017-09-17 22:45:44

End at: 2017-09-17 22:46:14

Local clock offset: -7.409 ms

Remote clock offset: -8.303 ms

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

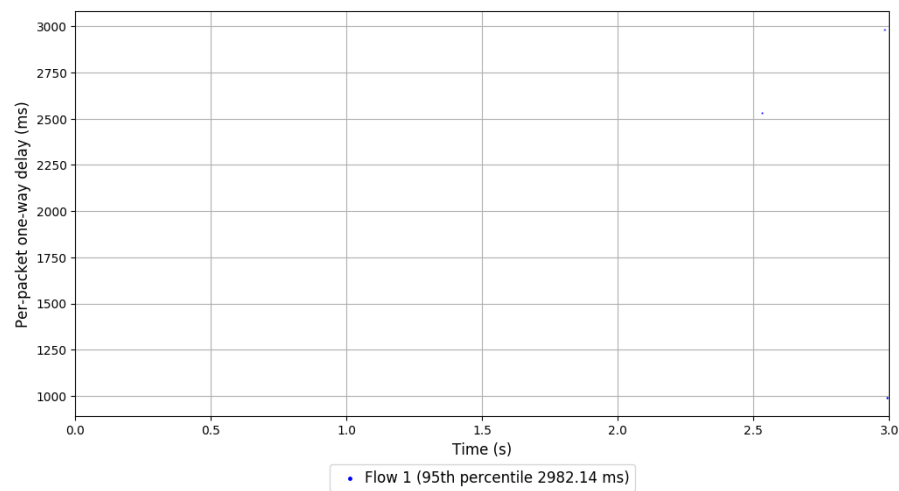
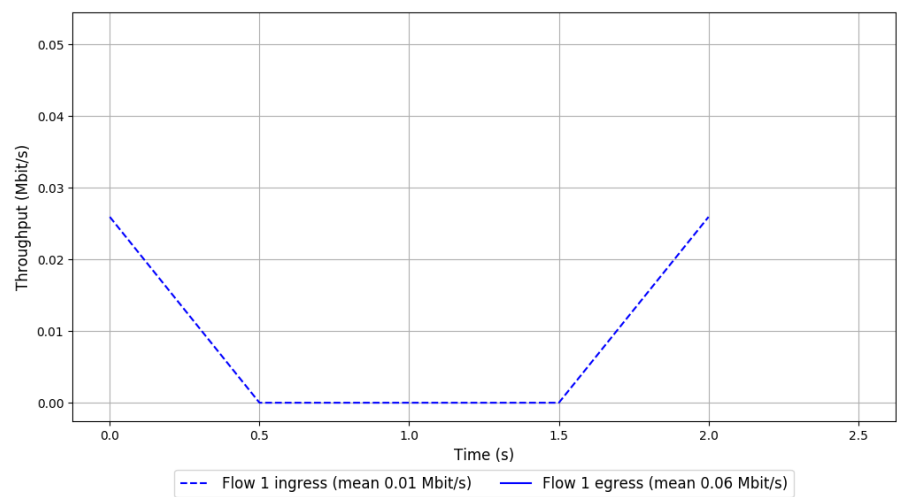
Start at: 2017-09-17 23:03:20

End at: 2017-09-17 23:03:50

Local clock offset: -3.13 ms

Remote clock offset: -8.058 ms

Run 3: Report of Copa — Data Link

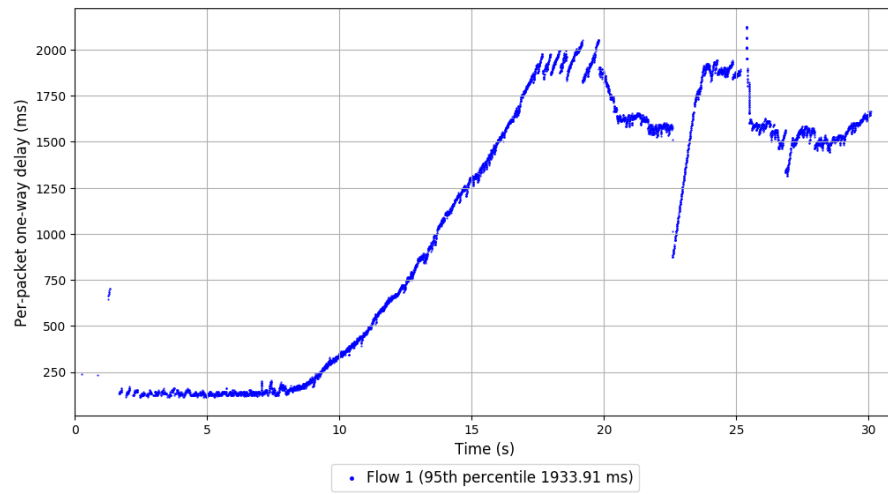
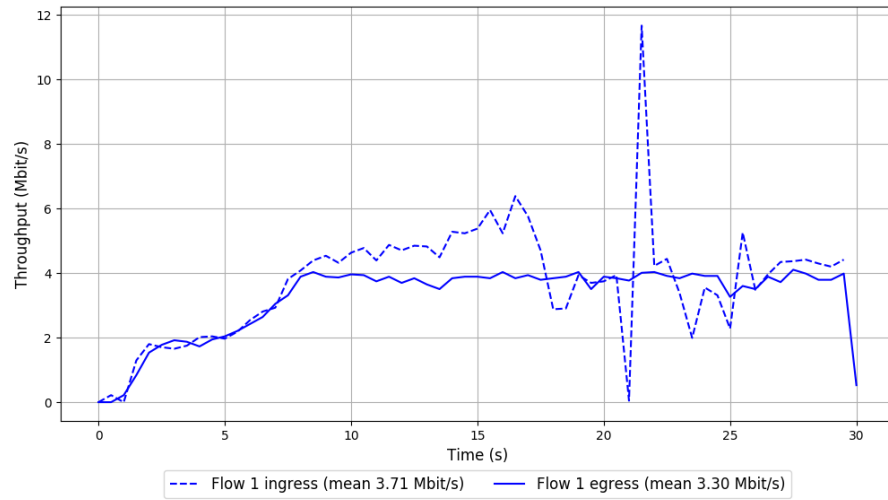


Run 1: Statistics of TCP Cubic

Start at: 2017-09-17 22:34:01
End at: 2017-09-17 22:34:31
Local clock offset: -8.565 ms
Remote clock offset: -3.524 ms

Below is generated by plot.py at 2017-09-17 23:18:16
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.30 Mbit/s
95th percentile per-packet one-way delay: 1933.908 ms
Loss rate: 11.37%
-- Flow 1:
Average throughput: 3.30 Mbit/s
95th percentile per-packet one-way delay: 1933.908 ms
Loss rate: 11.37%

Run 1: Report of TCP Cubic — Data Link

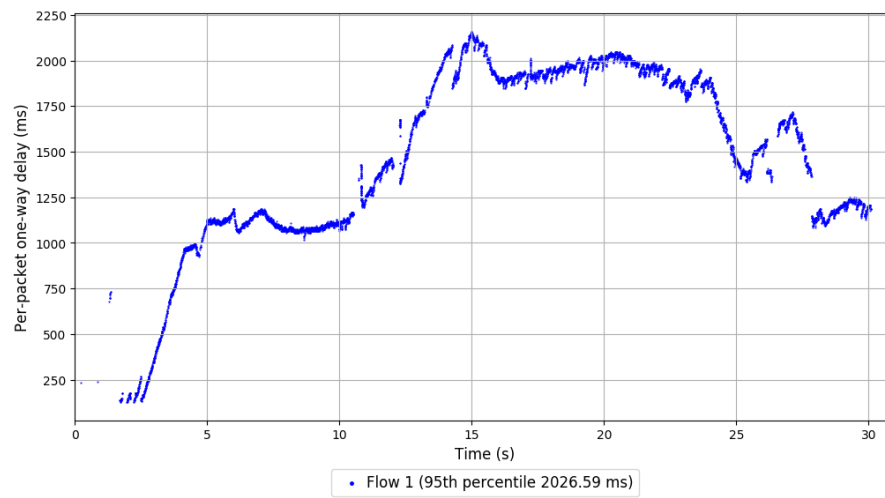
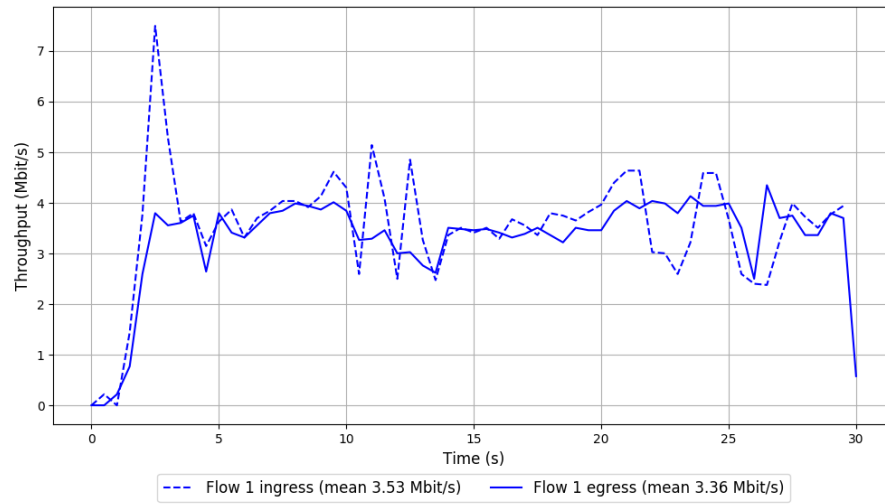


Run 2: Statistics of TCP Cubic

Start at: 2017-09-17 22:51:35
End at: 2017-09-17 22:52:05
Local clock offset: -5.218 ms
Remote clock offset: -3.514 ms

Below is generated by plot.py at 2017-09-17 23:18:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.36 Mbit/s
95th percentile per-packet one-way delay: 2026.588 ms
Loss rate: 5.28%
-- Flow 1:
Average throughput: 3.36 Mbit/s
95th percentile per-packet one-way delay: 2026.588 ms
Loss rate: 5.28%

Run 2: Report of TCP Cubic — Data Link

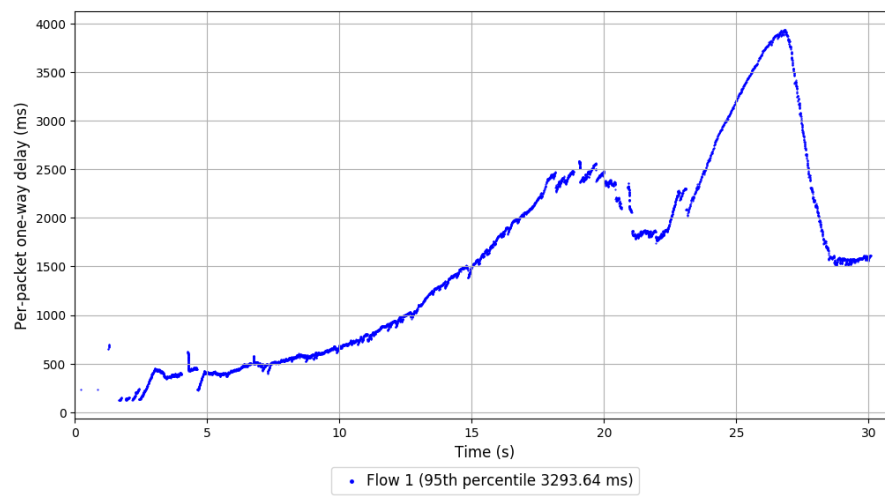
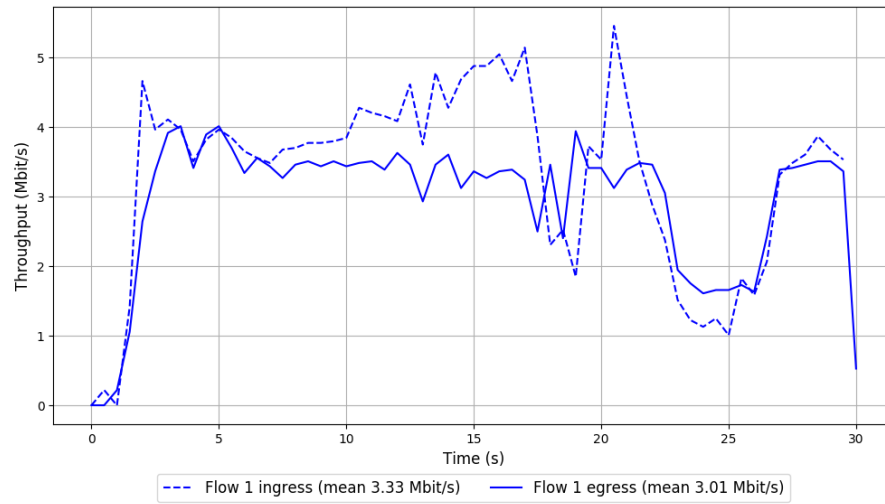


Run 3: Statistics of TCP Cubic

Start at: 2017-09-17 23:09:12
End at: 2017-09-17 23:09:42
Local clock offset: -3.448 ms
Remote clock offset: -2.644 ms

Below is generated by plot.py at 2017-09-17 23:18:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.01 Mbit/s
95th percentile per-packet one-way delay: 3293.640 ms
Loss rate: 10.07%
-- Flow 1:
Average throughput: 3.01 Mbit/s
95th percentile per-packet one-way delay: 3293.640 ms
Loss rate: 10.07%

Run 3: Report of TCP Cubic — Data Link



Run 1: Statistics of Indigo

Start at: 2017-09-17 22:26:59

End at: 2017-09-17 22:27:29

Local clock offset: -7.091 ms

Remote clock offset: -7.805 ms

Below is generated by plot.py at 2017-09-17 23:18:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.95 Mbit/s

95th percentile per-packet one-way delay: 482.066 ms

Loss rate: 0.63%

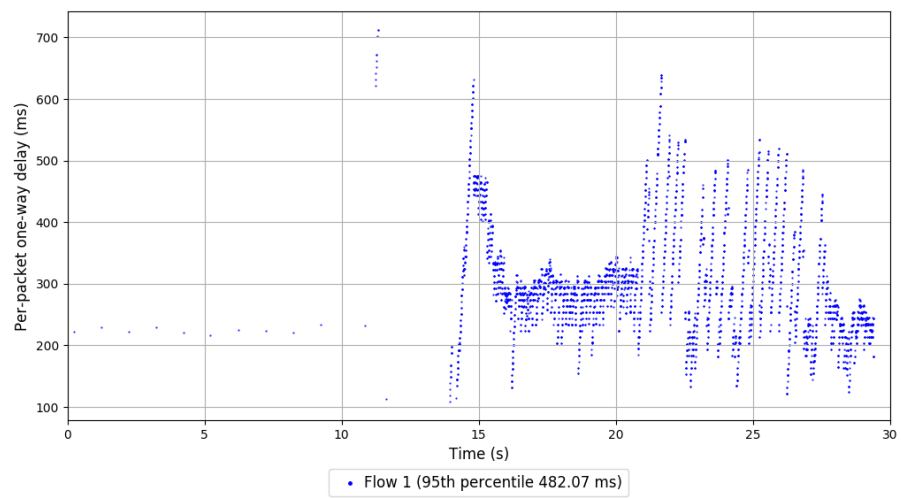
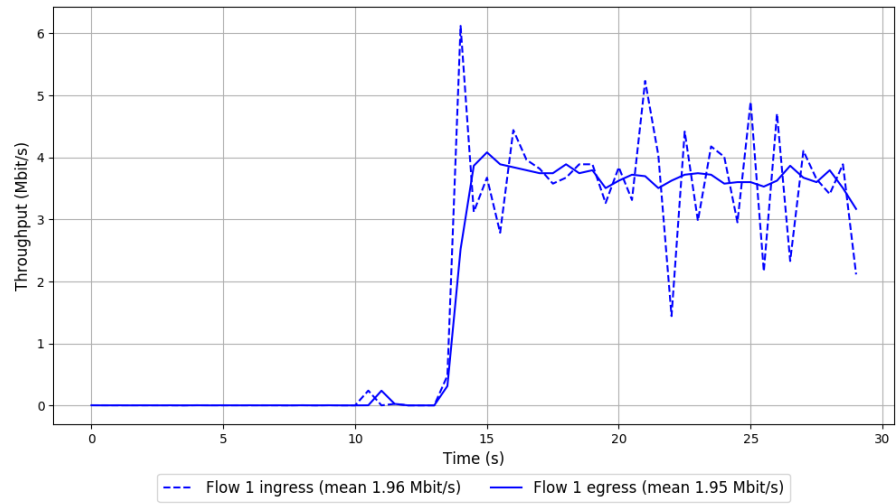
-- Flow 1:

Average throughput: 1.95 Mbit/s

95th percentile per-packet one-way delay: 482.066 ms

Loss rate: 0.63%

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

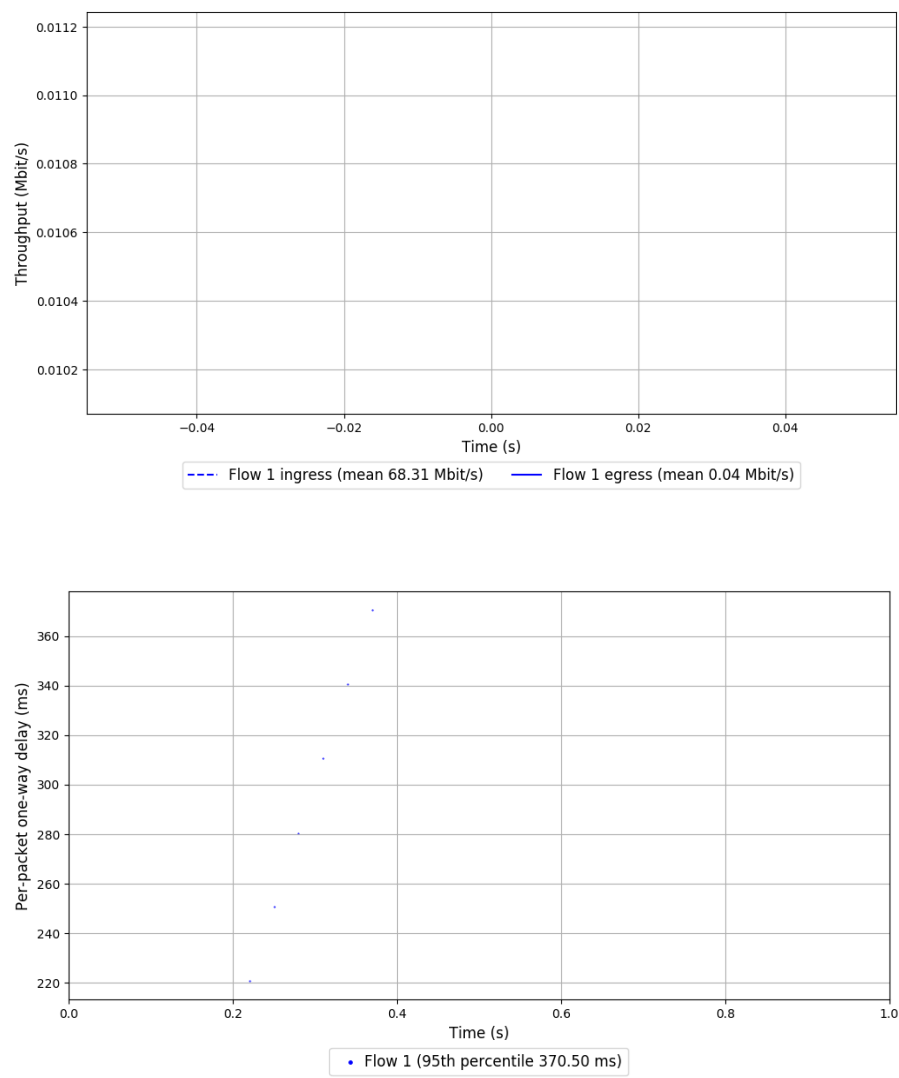
Start at: 2017-09-17 22:44:34

End at: 2017-09-17 22:45:05

Local clock offset: -8.009 ms

Remote clock offset: -3.784 ms

Run 2: Report of Indigo — Data Link

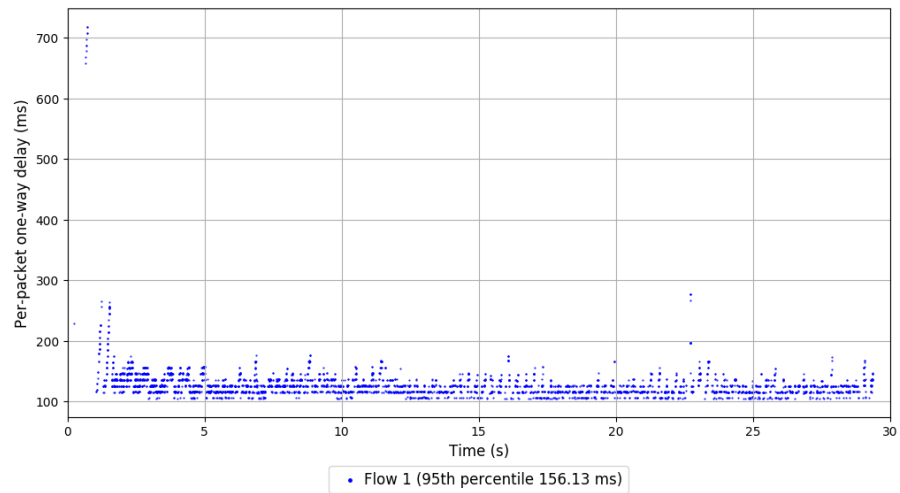
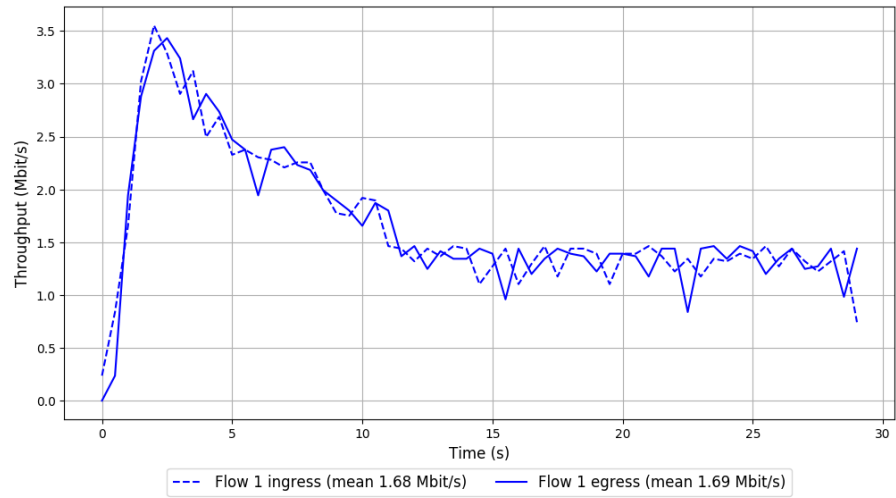


Run 3: Statistics of Indigo

Start at: 2017-09-17 23:02:10
End at: 2017-09-17 23:02:40
Local clock offset: -3.147 ms
Remote clock offset: -8.287 ms

Below is generated by plot.py at 2017-09-17 23:18:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 156.135 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 156.135 ms
Loss rate: 0.00%

Run 3: Report of Indigo — Data Link



Run 1: Statistics of KohoCC

Start at: 2017-09-17 22:24:38

End at: 2017-09-17 22:25:08

Local clock offset: -6.47 ms

Remote clock offset: -3.331 ms

Below is generated by plot.py at 2017-09-17 23:18:19

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.02 Mbit/s

95th percentile per-packet one-way delay: 212.893 ms

Loss rate: 0.54%

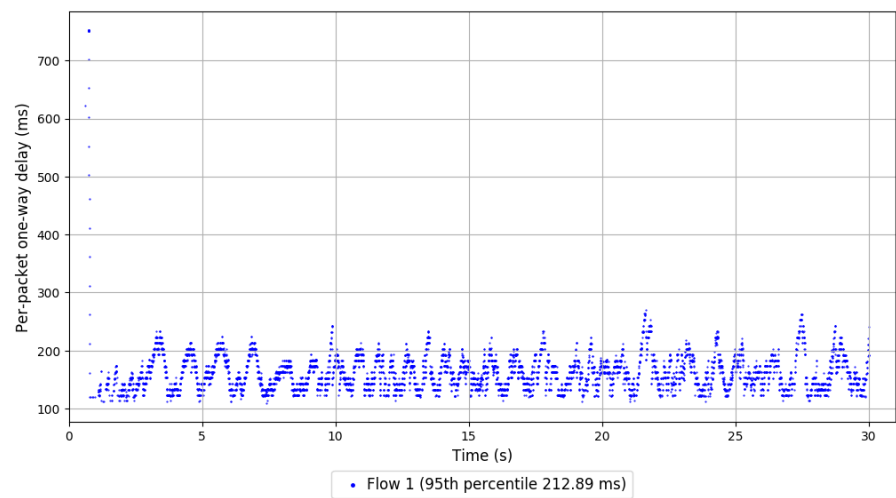
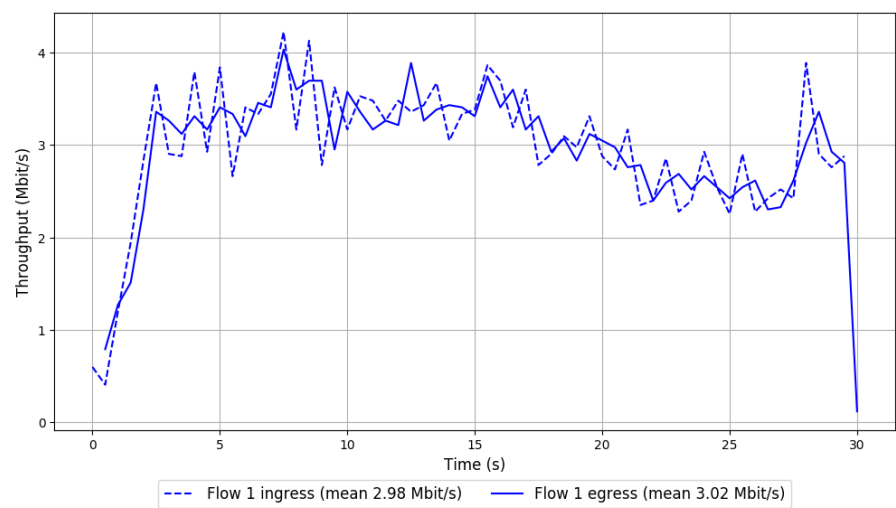
-- Flow 1:

Average throughput: 3.02 Mbit/s

95th percentile per-packet one-way delay: 212.893 ms

Loss rate: 0.54%

Run 1: Report of KohoCC — Data Link

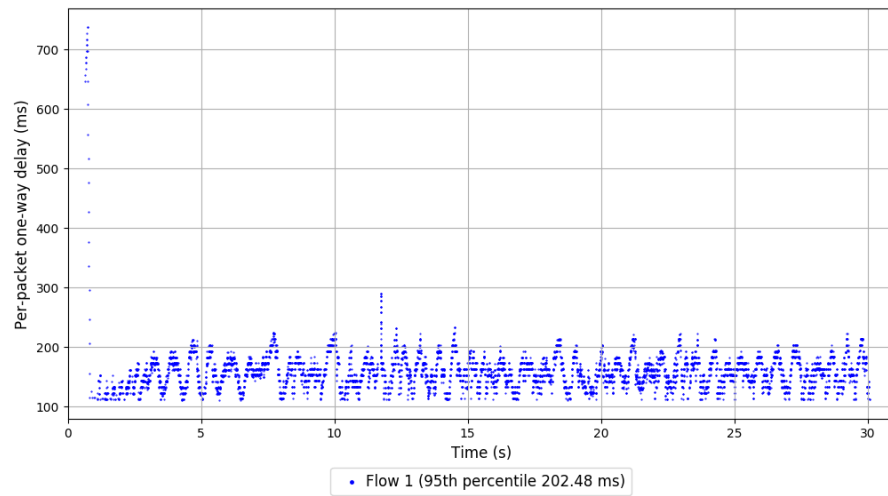
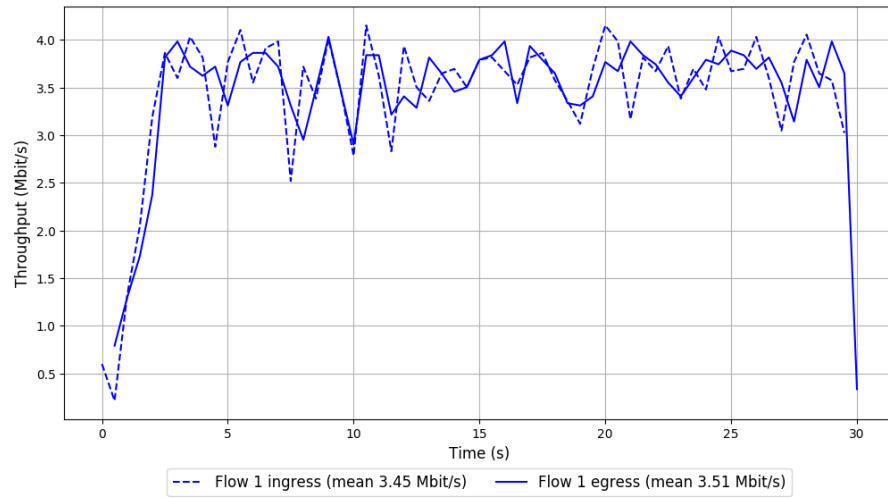


Run 2: Statistics of KohoCC

Start at: 2017-09-17 22:42:13
End at: 2017-09-17 22:42:43
Local clock offset: -9.523 ms
Remote clock offset: -8.277 ms

Below is generated by plot.py at 2017-09-17 23:18:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.51 Mbit/s
95th percentile per-packet one-way delay: 202.480 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 3.51 Mbit/s
95th percentile per-packet one-way delay: 202.480 ms
Loss rate: 0.13%

Run 2: Report of KohoCC — Data Link

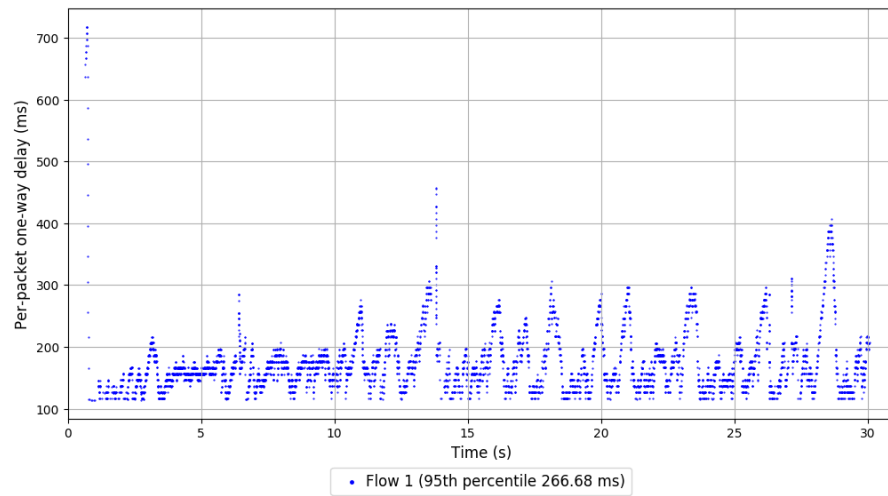
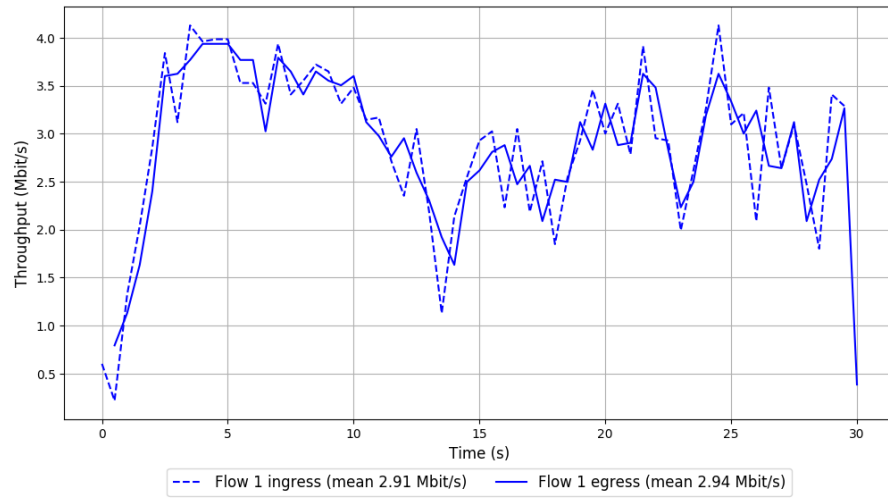


Run 3: Statistics of KohoCC

Start at: 2017-09-17 22:59:49
End at: 2017-09-17 23:00:19
Local clock offset: -3.178 ms
Remote clock offset: -7.884 ms

Below is generated by plot.py at 2017-09-17 23:18:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.94 Mbit/s
95th percentile per-packet one-way delay: 266.680 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 2.94 Mbit/s
95th percentile per-packet one-way delay: 266.680 ms
Loss rate: 0.56%

Run 3: Report of KohoCC — Data Link

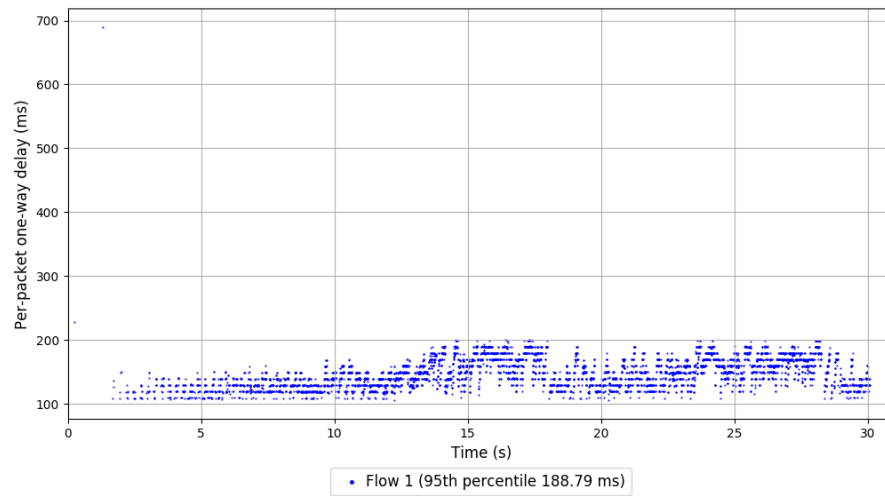
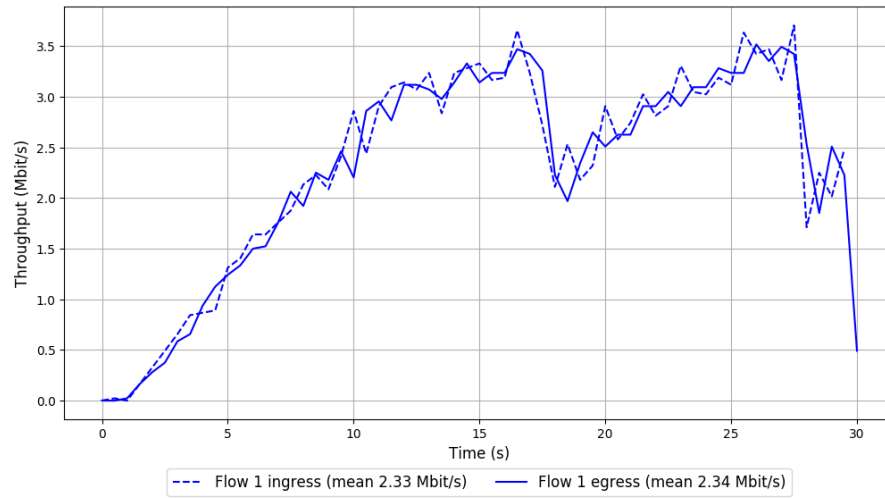


Run 1: Statistics of LEDBAT

Start at: 2017-09-17 22:25:49
End at: 2017-09-17 22:26:19
Local clock offset: -6.781 ms
Remote clock offset: -7.951 ms

Below is generated by plot.py at 2017-09-17 23:18:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.34 Mbit/s
95th percentile per-packet one-way delay: 188.790 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 2.34 Mbit/s
95th percentile per-packet one-way delay: 188.790 ms
Loss rate: 0.05%

Run 1: Report of LEDBAT — Data Link

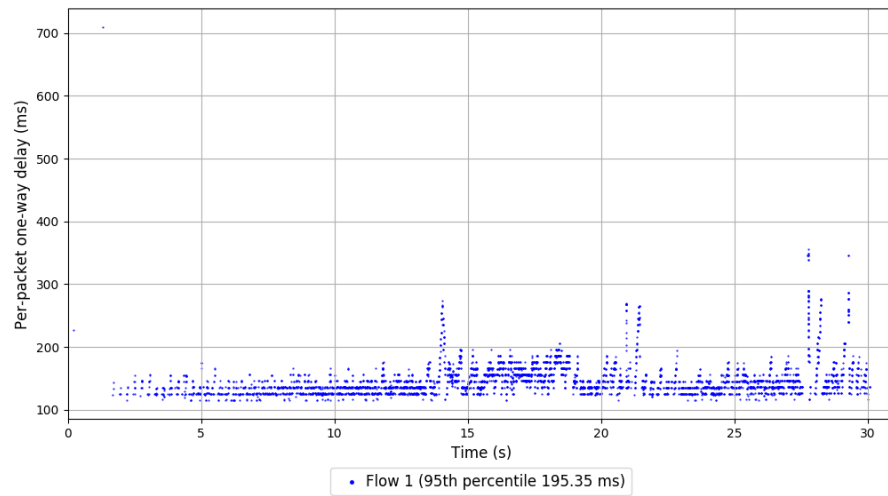
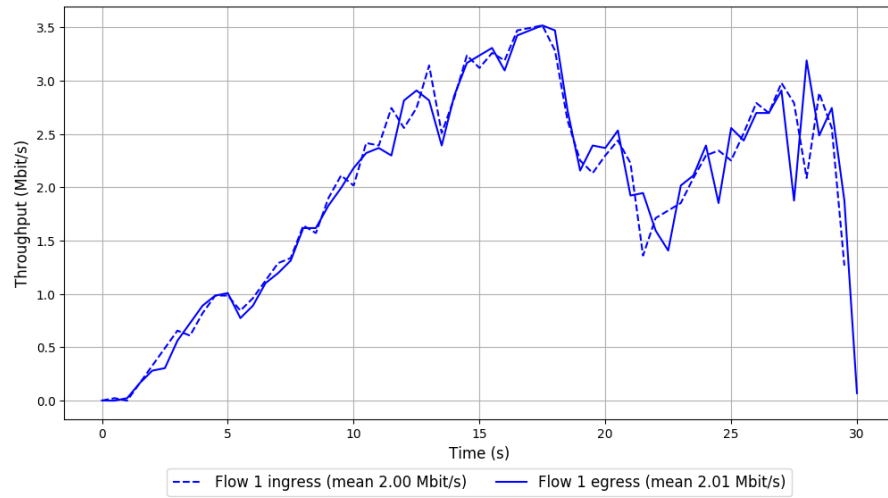


Run 2: Statistics of LEDBAT

Start at: 2017-09-17 22:43:24
End at: 2017-09-17 22:43:54
Local clock offset: -8.802 ms
Remote clock offset: -8.779 ms

Below is generated by plot.py at 2017-09-17 23:18:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.01 Mbit/s
95th percentile per-packet one-way delay: 195.346 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 2.01 Mbit/s
95th percentile per-packet one-way delay: 195.346 ms
Loss rate: 0.10%

Run 2: Report of LEDBAT — Data Link

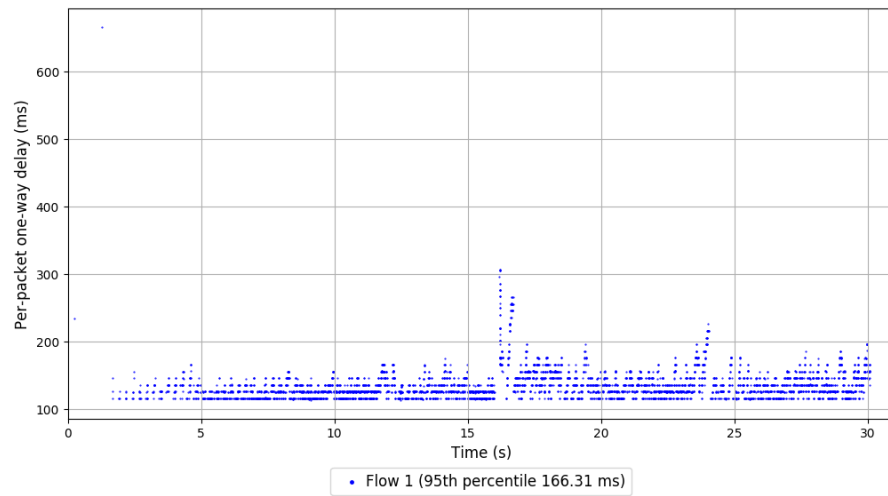
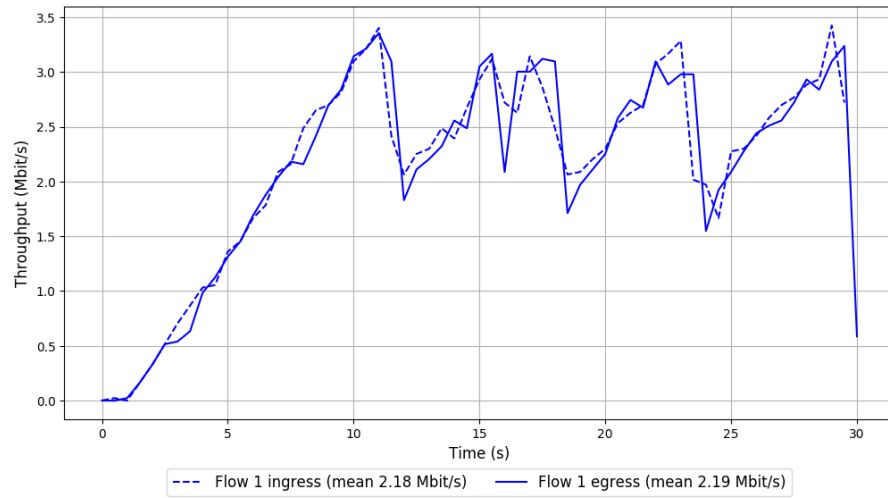


Run 3: Statistics of LEDBAT

Start at: 2017-09-17 23:01:00
End at: 2017-09-17 23:01:30
Local clock offset: -3.2 ms
Remote clock offset: -2.843 ms

Below is generated by plot.py at 2017-09-17 23:18:24
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.19 Mbit/s
95th percentile per-packet one-way delay: 166.307 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 2.19 Mbit/s
95th percentile per-packet one-way delay: 166.307 ms
Loss rate: 0.13%

Run 3: Report of LEDBAT — Data Link

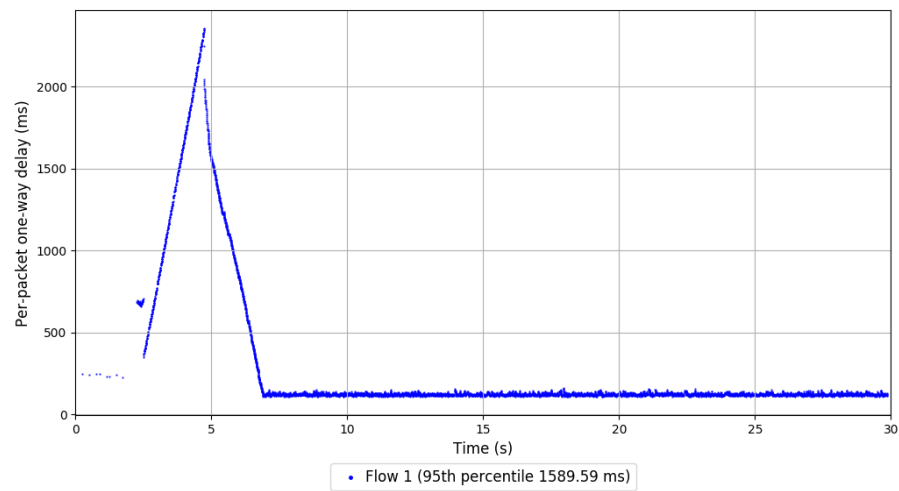
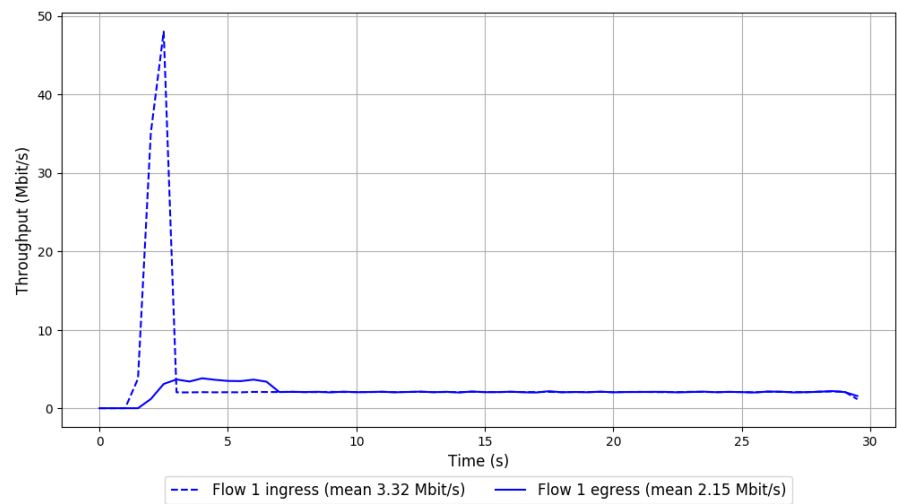


Run 1: Statistics of PCC

Start at: 2017-09-17 22:36:21
End at: 2017-09-17 22:36:51
Local clock offset: -8.85 ms
Remote clock offset: -8.546 ms

Below is generated by plot.py at 2017-09-17 23:18:27
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.15 Mbit/s
95th percentile per-packet one-way delay: 1589.588 ms
Loss rate: 35.46%
-- Flow 1:
Average throughput: 2.15 Mbit/s
95th percentile per-packet one-way delay: 1589.588 ms
Loss rate: 35.46%

Run 1: Report of PCC — Data Link

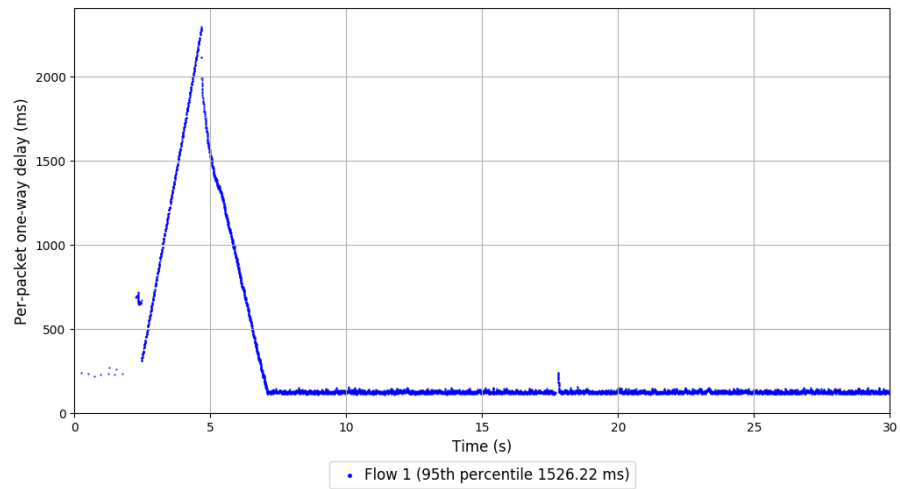
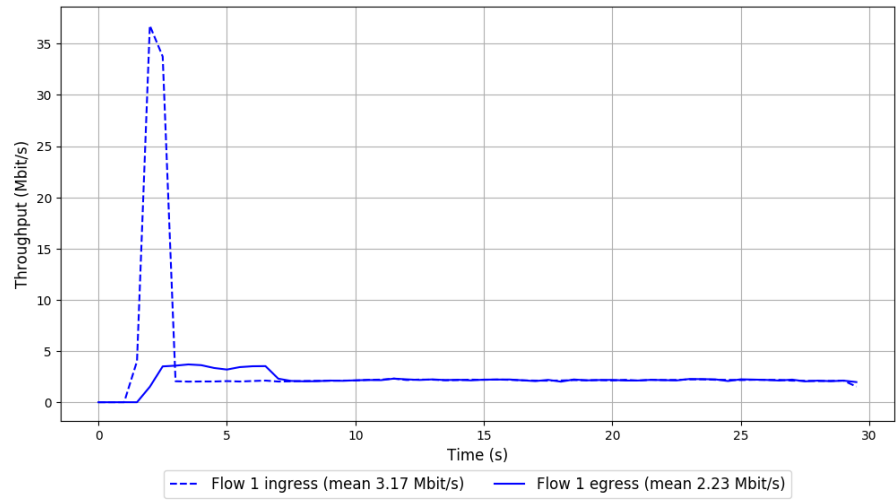


Run 2: Statistics of PCC

Start at: 2017-09-17 22:53:56
End at: 2017-09-17 22:54:26
Local clock offset: -3.992 ms
Remote clock offset: -3.798 ms

Below is generated by plot.py at 2017-09-17 23:18:27
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 1526.220 ms
Loss rate: 30.25%
-- Flow 1:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 1526.220 ms
Loss rate: 30.25%

Run 2: Report of PCC — Data Link

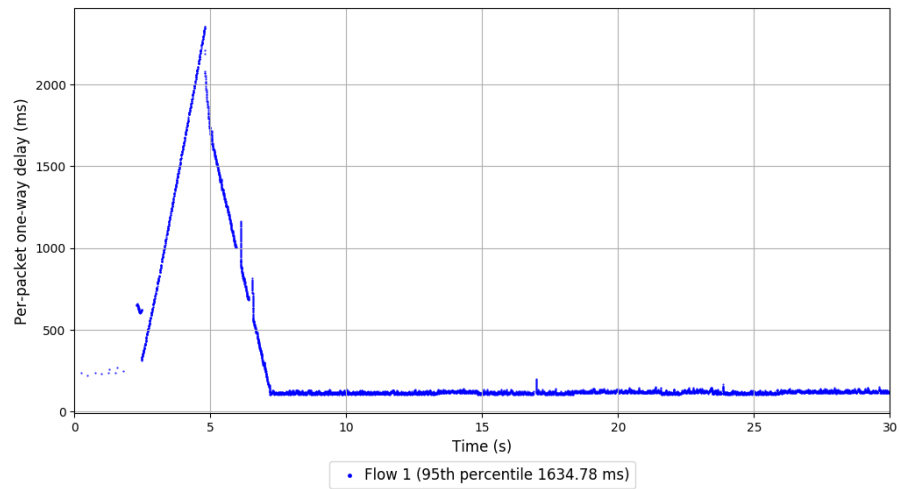
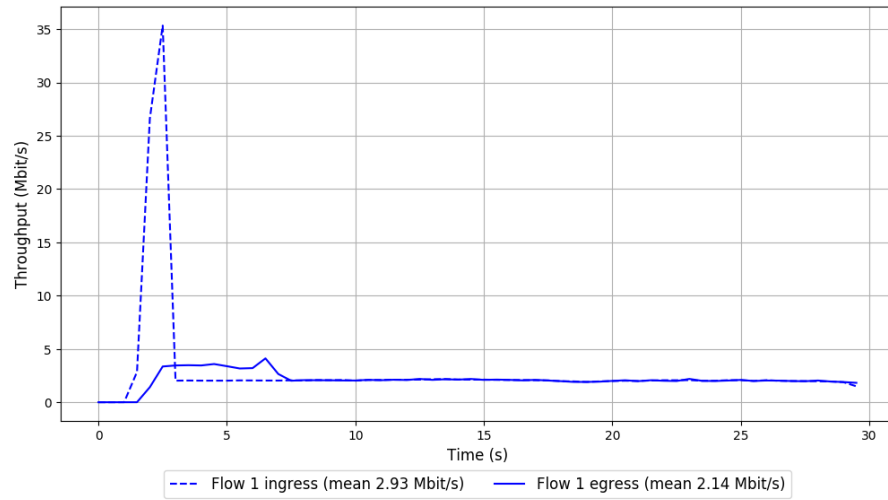


Run 3: Statistics of PCC

Start at: 2017-09-17 23:11:32
End at: 2017-09-17 23:12:02
Local clock offset: -3.663 ms
Remote clock offset: -7.882 ms

Below is generated by plot.py at 2017-09-17 23:18:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 1634.784 ms
Loss rate: 27.24%
-- Flow 1:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 1634.784 ms
Loss rate: 27.24%

Run 3: Report of PCC — Data Link



Run 1: Statistics of QUIC Cubic

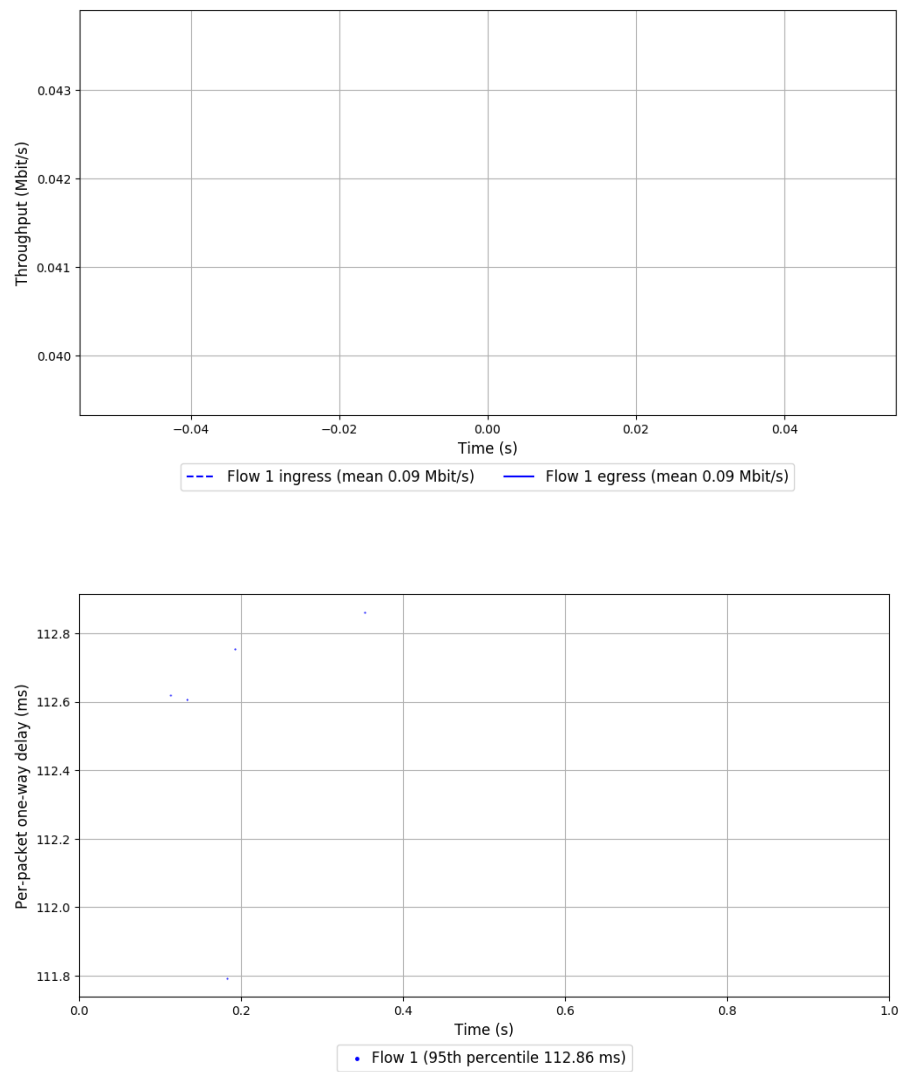
Start at: 2017-09-17 22:31:41

End at: 2017-09-17 22:32:11

Local clock offset: -8.384 ms

Remote clock offset: -3.759 ms

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

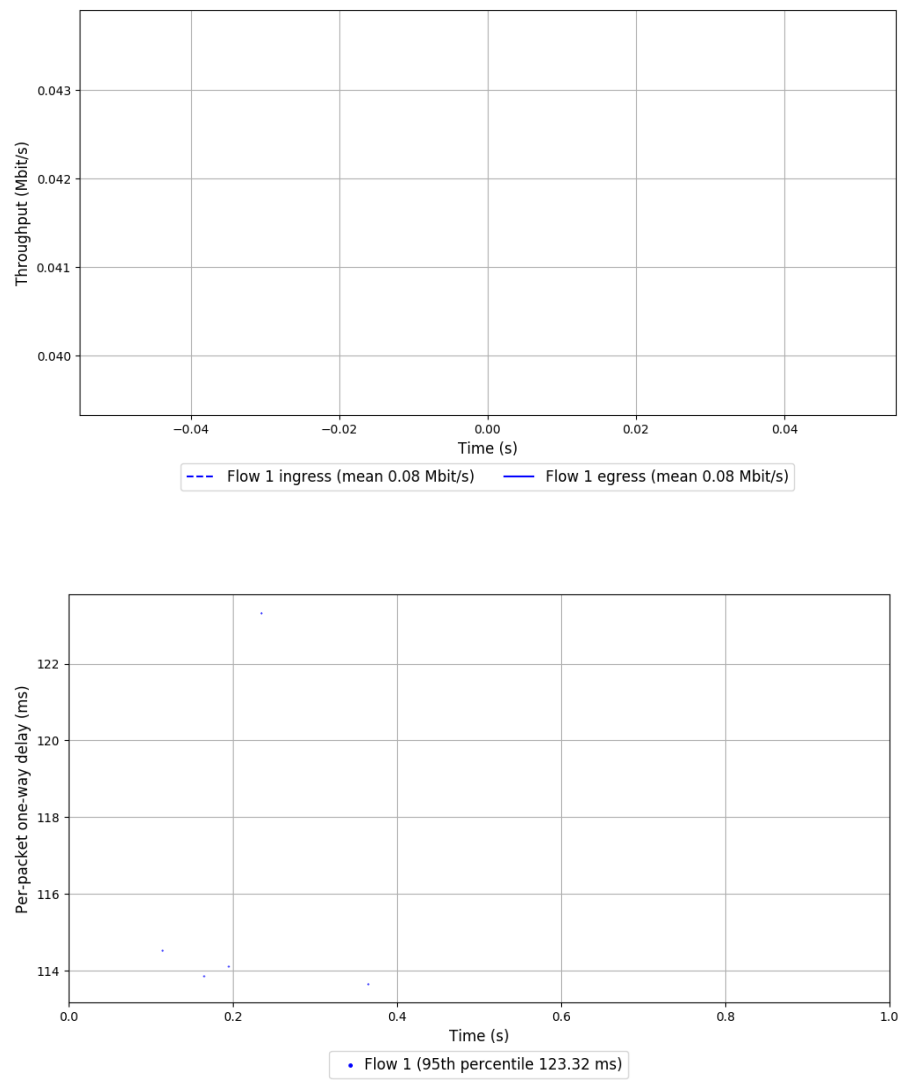
Start at: 2017-09-17 22:49:16

End at: 2017-09-17 22:49:46

Local clock offset: -5.872 ms

Remote clock offset: -3.744 ms

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

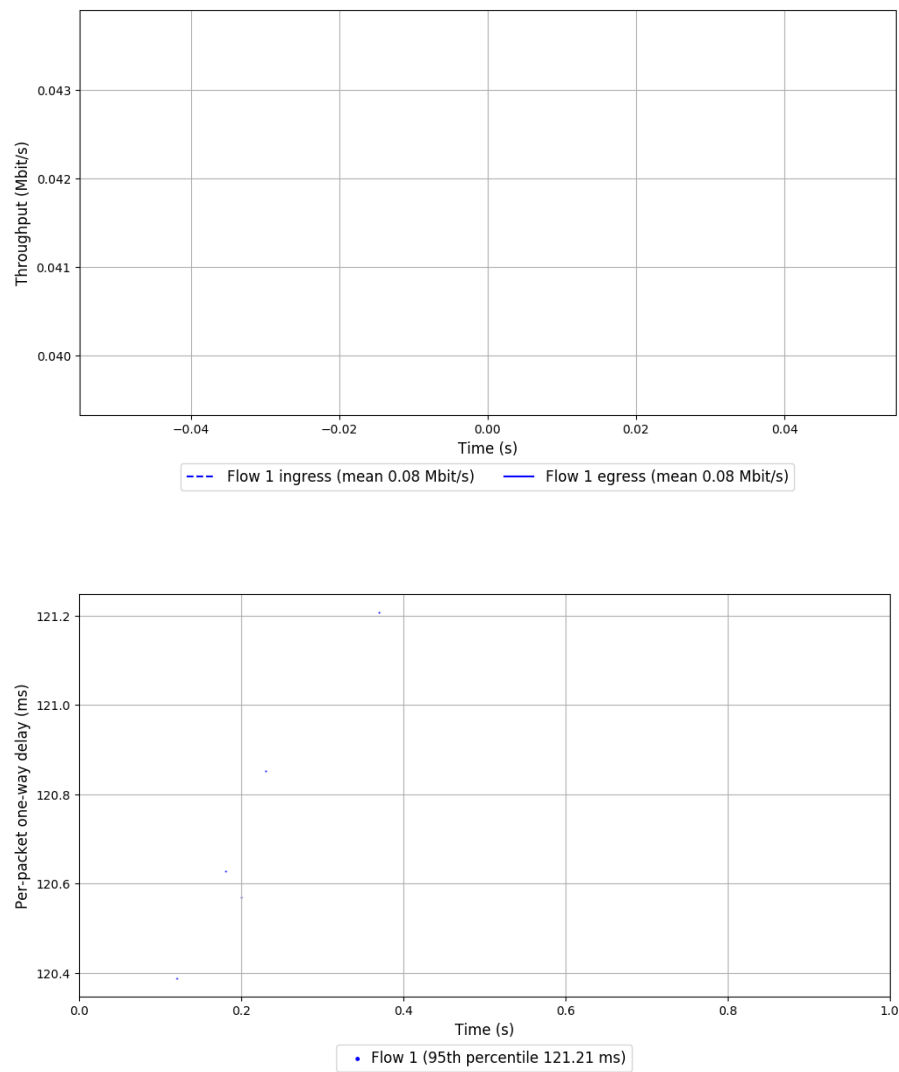
Start at: 2017-09-17 23:06:52

End at: 2017-09-17 23:07:22

Local clock offset: -3.291 ms

Remote clock offset: -3.096 ms

Run 3: Report of QUIC Cubic — Data Link

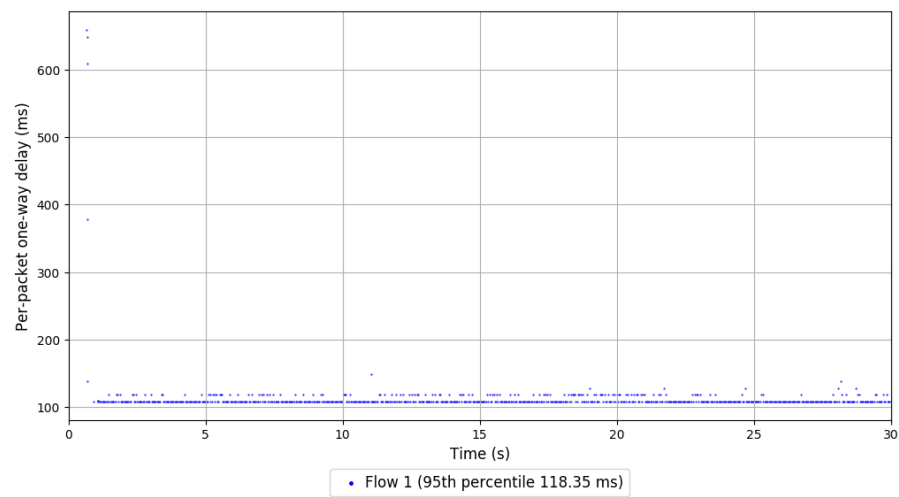
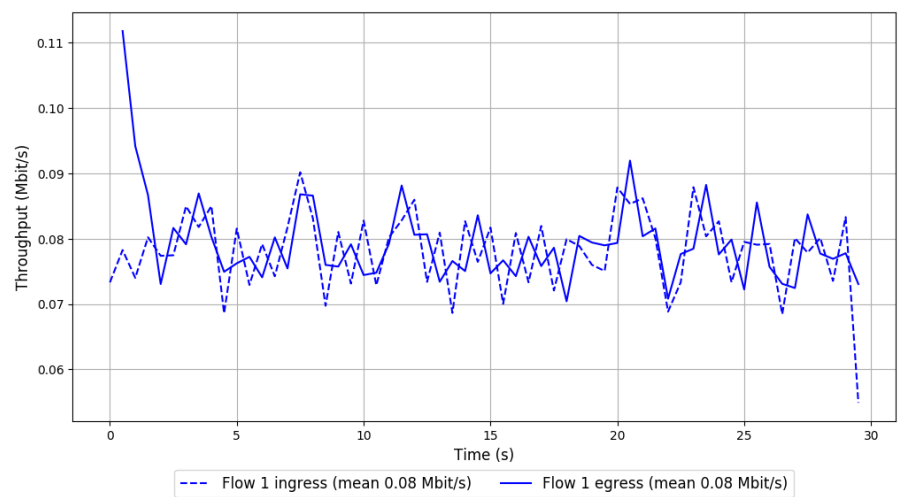


Run 1: Statistics of SCReAM

Start at: 2017-09-17 22:35:11
End at: 2017-09-17 22:35:41
Local clock offset: -8.606 ms
Remote clock offset: -8.356 ms

Below is generated by plot.py at 2017-09-17 23:18:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 118.352 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 118.352 ms
Loss rate: 0.00%

Run 1: Report of SReAM — Data Link

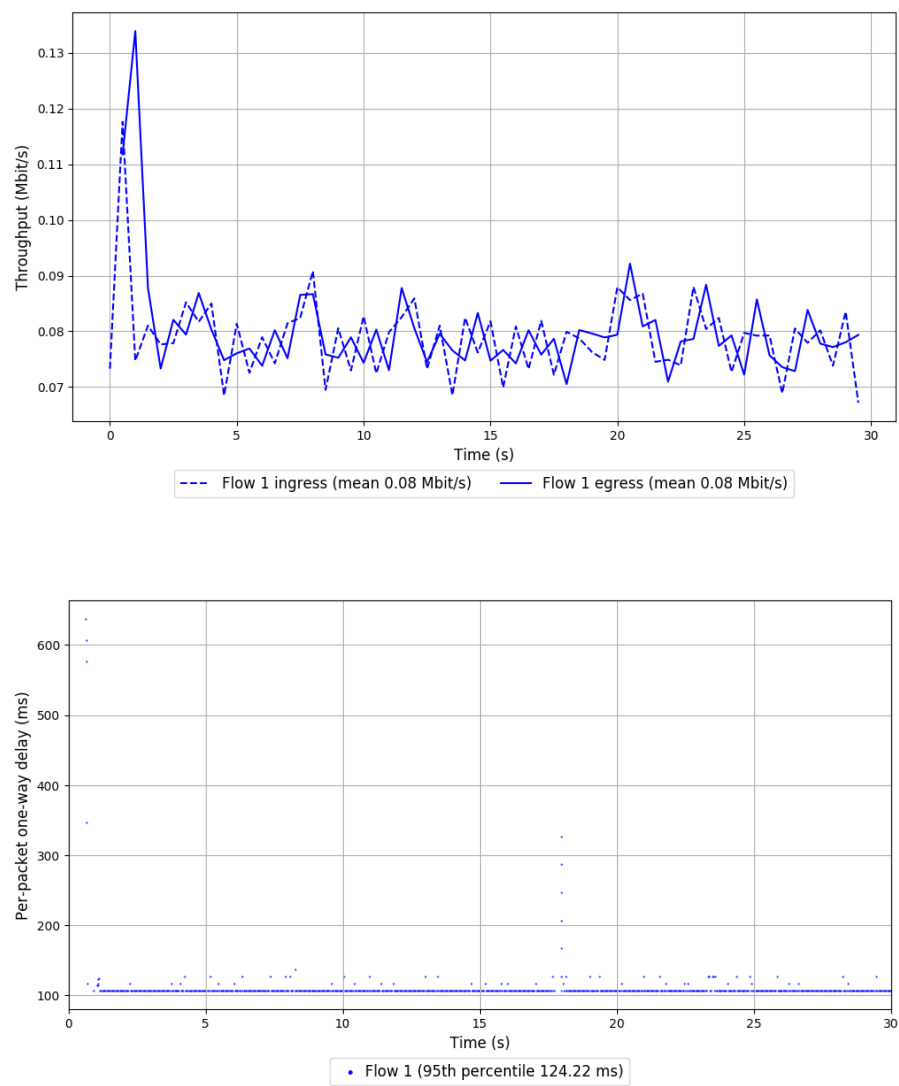


Run 2: Statistics of SCReAM

Start at: 2017-09-17 22:52:46
End at: 2017-09-17 22:53:16
Local clock offset: -4.896 ms
Remote clock offset: -7.922 ms

Below is generated by plot.py at 2017-09-17 23:18:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 124.216 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 124.216 ms
Loss rate: 0.13%

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

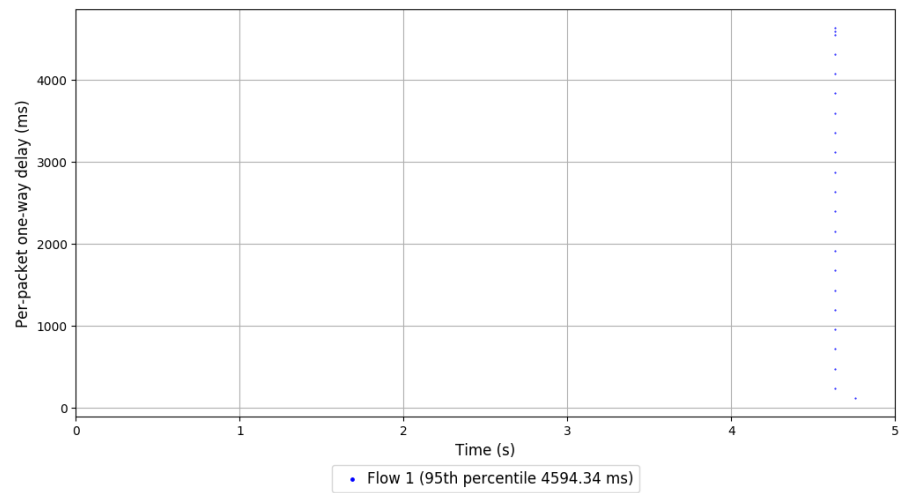
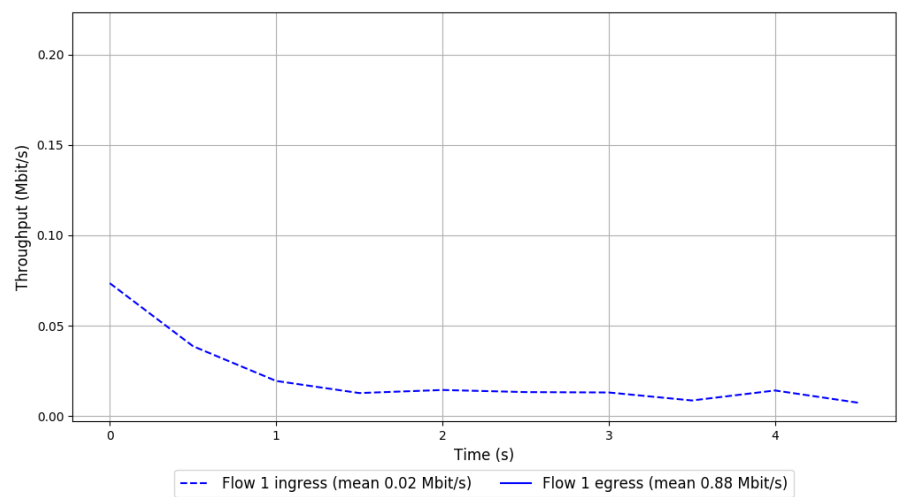
Start at: 2017-09-17 23:10:22

End at: 2017-09-17 23:10:52

Local clock offset: -3.501 ms

Remote clock offset: -7.857 ms

Run 3: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2017-09-17 22:39:52

End at: 2017-09-17 22:40:23

Local clock offset: -9.397 ms

Remote clock offset: -8.39 ms

Below is generated by plot.py at 2017-09-17 23:18:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.17 Mbit/s

95th percentile per-packet one-way delay: 152.764 ms

Loss rate: 0.02%

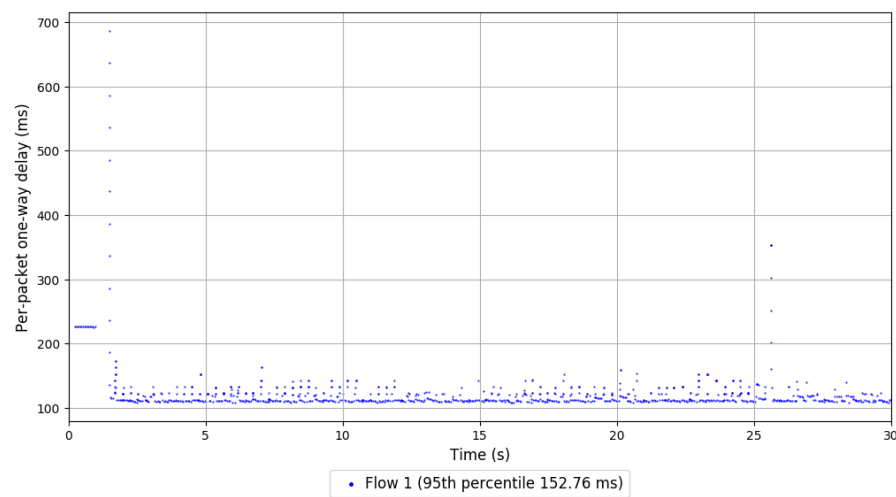
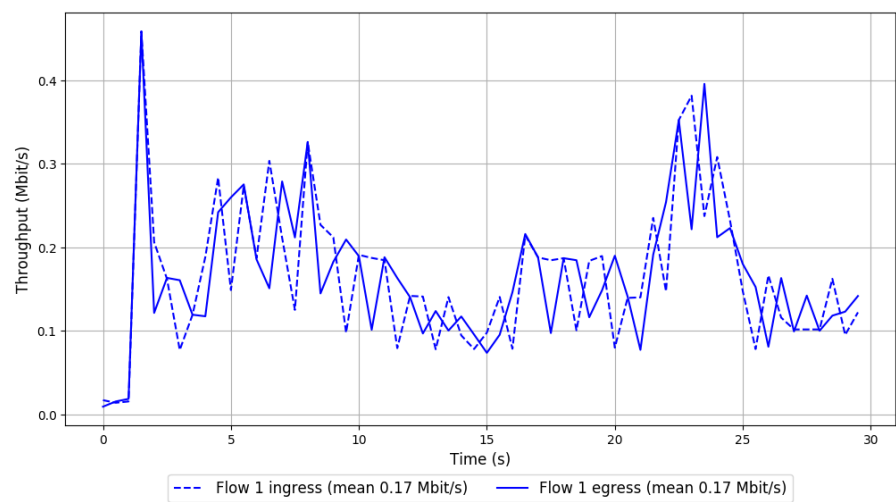
-- Flow 1:

Average throughput: 0.17 Mbit/s

95th percentile per-packet one-way delay: 152.764 ms

Loss rate: 0.02%

Run 1: Report of Sprout — Data Link

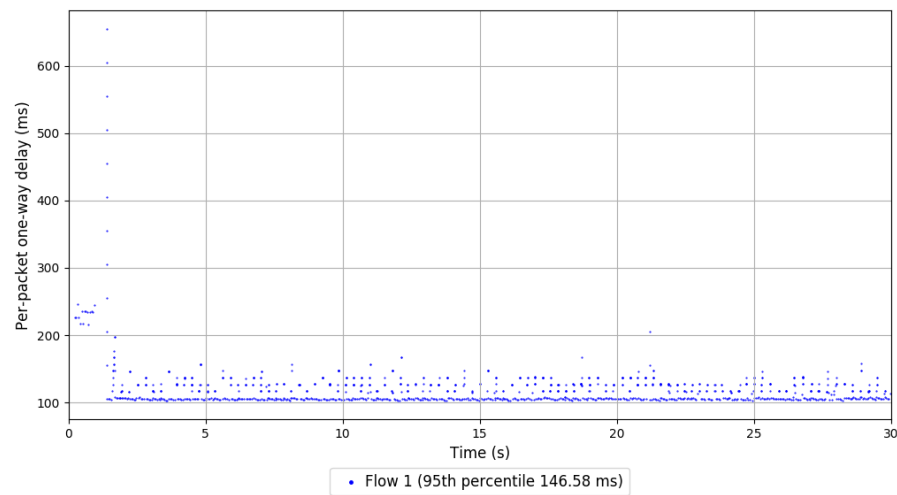
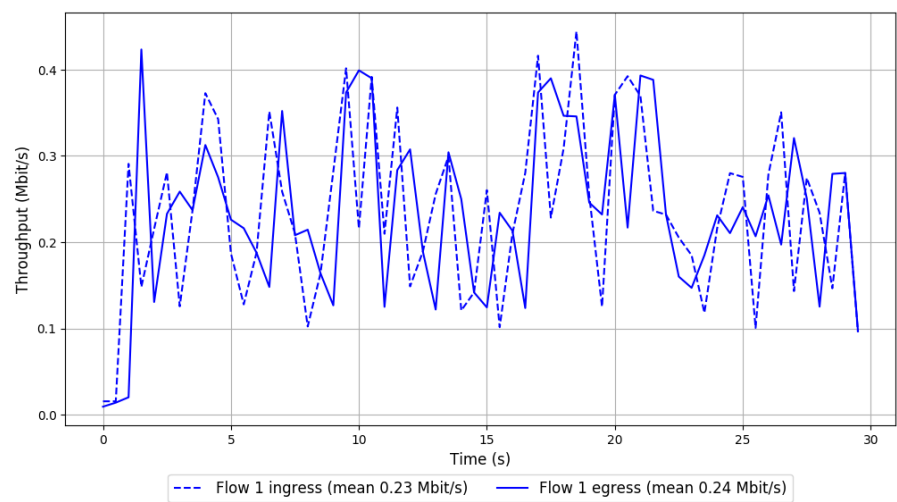


Run 2: Statistics of Sprout

Start at: 2017-09-17 22:57:28
End at: 2017-09-17 22:57:58
Local clock offset: -3.178 ms
Remote clock offset: -8.678 ms

Below is generated by plot.py at 2017-09-17 23:18:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 146.580 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 146.580 ms
Loss rate: 0.01%

Run 2: Report of Sprout — Data Link

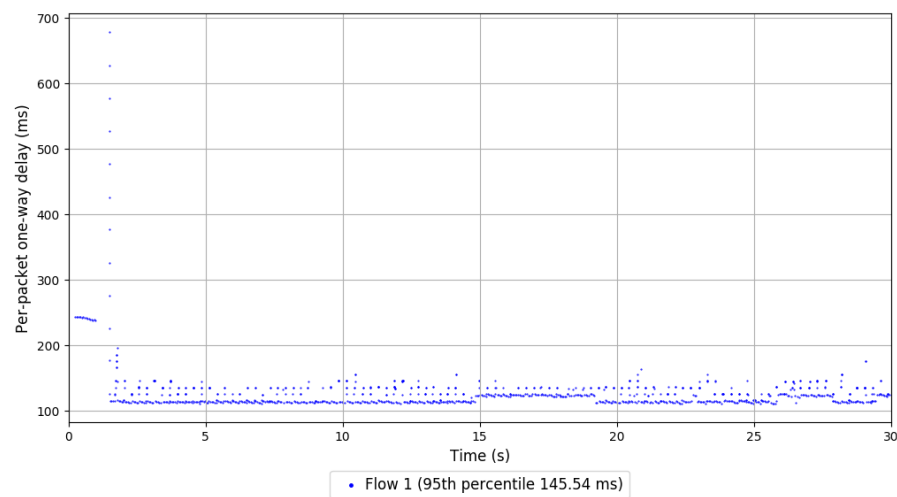
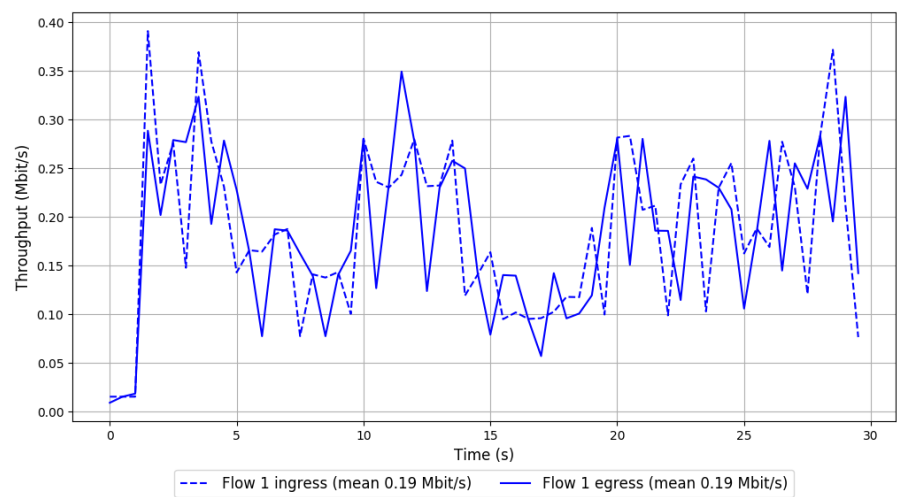


Run 3: Statistics of Sprout

Start at: 2017-09-17 23:15:04
End at: 2017-09-17 23:15:34
Local clock offset: -3.983 ms
Remote clock offset: -2.874 ms

Below is generated by plot.py at 2017-09-17 23:18:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 145.536 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 145.536 ms
Loss rate: 0.01%

Run 3: Report of Sprout — Data Link

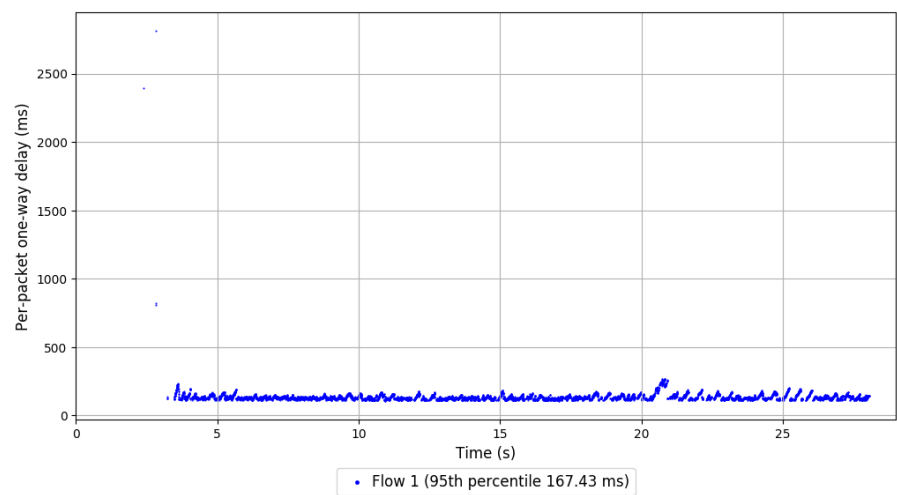
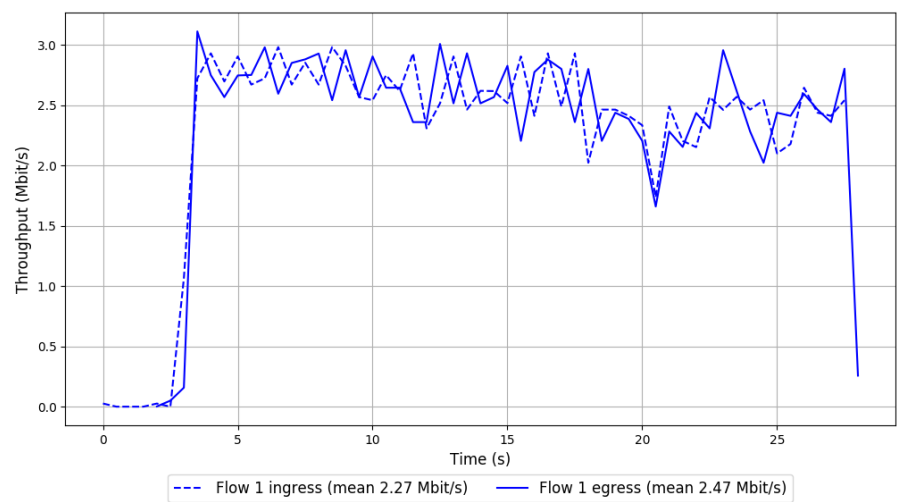


Run 1: Statistics of TaoVA-100x

Start at: 2017-09-17 22:38:42
End at: 2017-09-17 22:39:12
Local clock offset: -9.224 ms
Remote clock offset: -8.607 ms

Below is generated by plot.py at 2017-09-17 23:18:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.47 Mbit/s
95th percentile per-packet one-way delay: 167.428 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 2.47 Mbit/s
95th percentile per-packet one-way delay: 167.428 ms
Loss rate: 0.12%

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

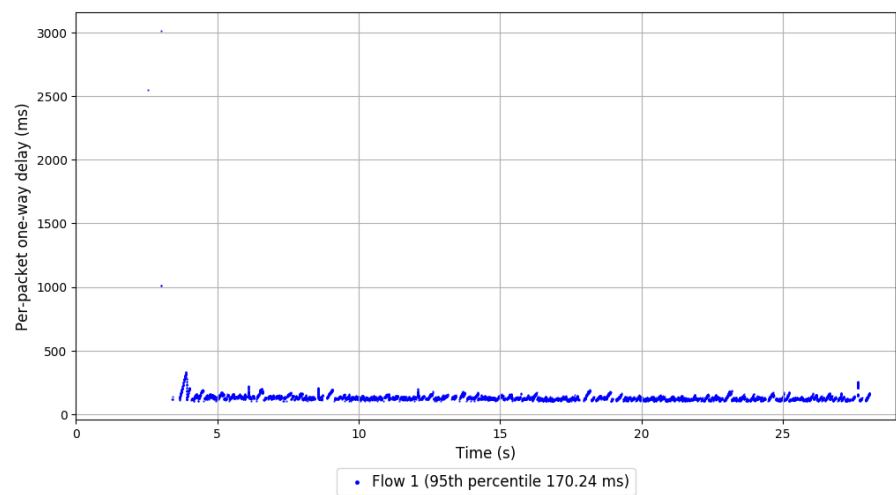
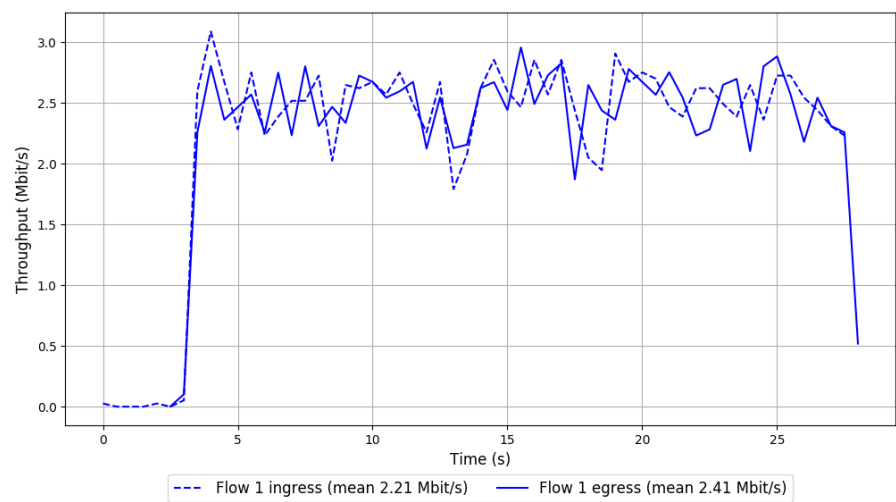


Run 2: Statistics of TaoVA-100x

Start at: 2017-09-17 22:56:17
End at: 2017-09-17 22:56:47
Local clock offset: -3.264 ms
Remote clock offset: -8.411 ms

Below is generated by plot.py at 2017-09-17 23:18:36
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 170.240 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 170.240 ms
Loss rate: 0.33%

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



Run 3: Statistics of TaoVA-100x

Start at: 2017-09-17 23:13:53

End at: 2017-09-17 23:14:23

Local clock offset: -3.893 ms

Remote clock offset: -7.94 ms

Below is generated by plot.py at 2017-09-17 23:18:37

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.42 Mbit/s

95th percentile per-packet one-way delay: 206.173 ms

Loss rate: 0.00%

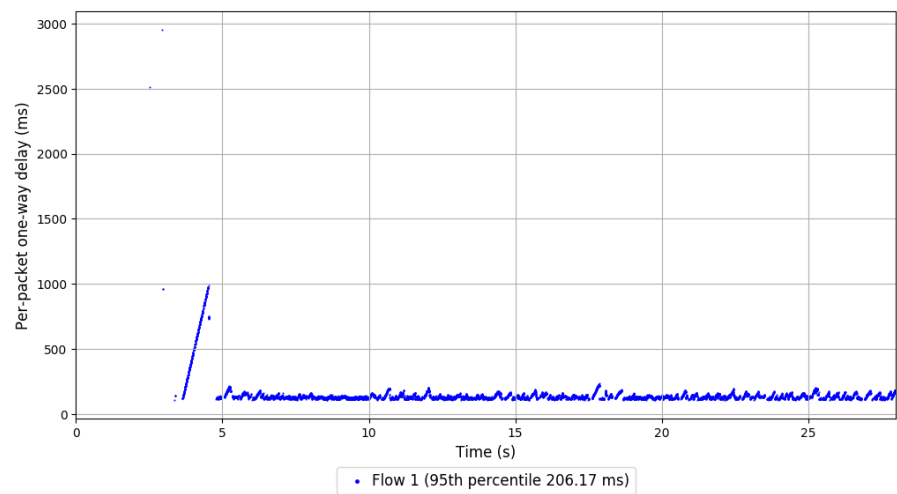
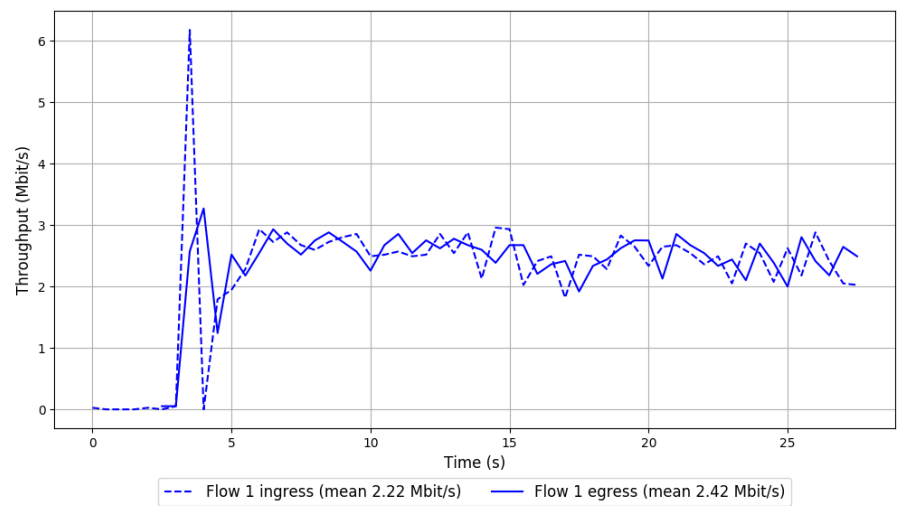
-- Flow 1:

Average throughput: 2.42 Mbit/s

95th percentile per-packet one-way delay: 206.173 ms

Loss rate: 0.00%

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

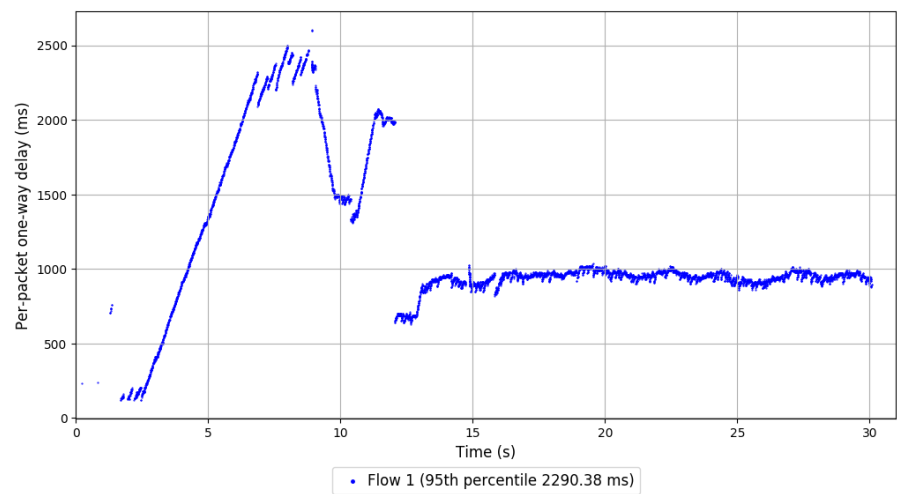
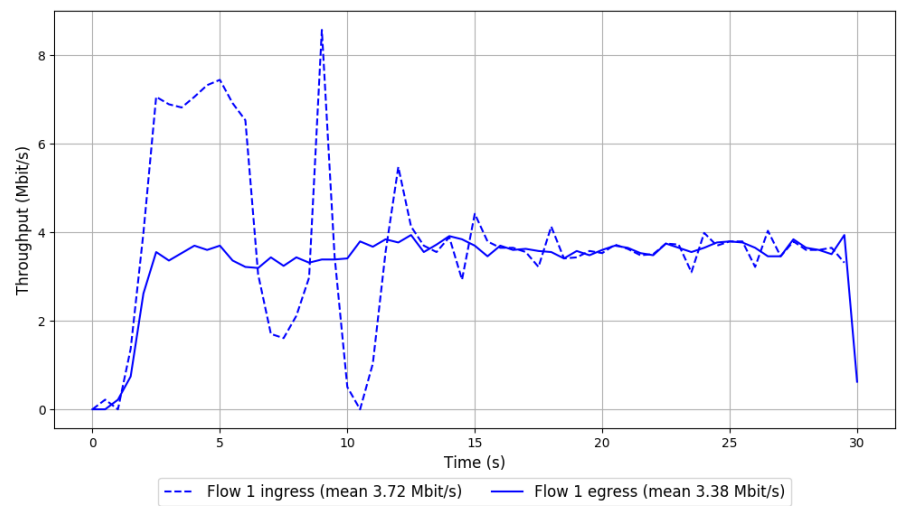


Run 1: Statistics of TCP Vegas

Start at: 2017-09-17 22:41:03
End at: 2017-09-17 22:41:33
Local clock offset: -9.682 ms
Remote clock offset: -3.437 ms

Below is generated by plot.py at 2017-09-17 23:18:37
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.38 Mbit/s
95th percentile per-packet one-way delay: 2290.377 ms
Loss rate: 9.56%
-- Flow 1:
Average throughput: 3.38 Mbit/s
95th percentile per-packet one-way delay: 2290.377 ms
Loss rate: 9.56%

Run 1: Report of TCP Vegas — Data Link

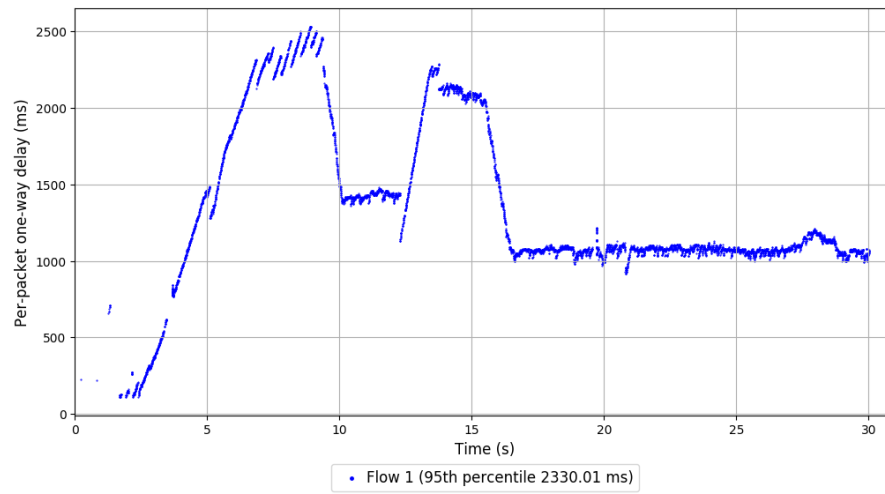
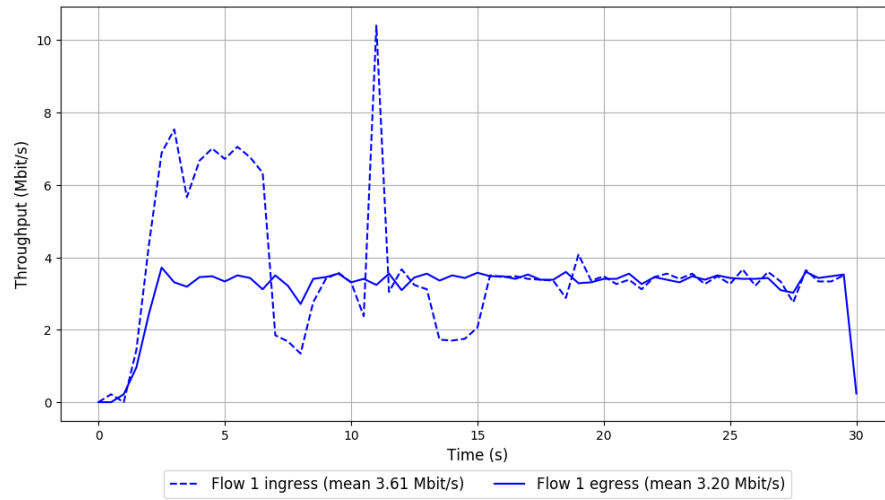


Run 2: Statistics of TCP Vegas

Start at: 2017-09-17 22:58:38
End at: 2017-09-17 22:59:08
Local clock offset: -3.108 ms
Remote clock offset: -8.612 ms

Below is generated by plot.py at 2017-09-17 23:18:37
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.20 Mbit/s
95th percentile per-packet one-way delay: 2330.008 ms
Loss rate: 11.86%
-- Flow 1:
Average throughput: 3.20 Mbit/s
95th percentile per-packet one-way delay: 2330.008 ms
Loss rate: 11.86%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

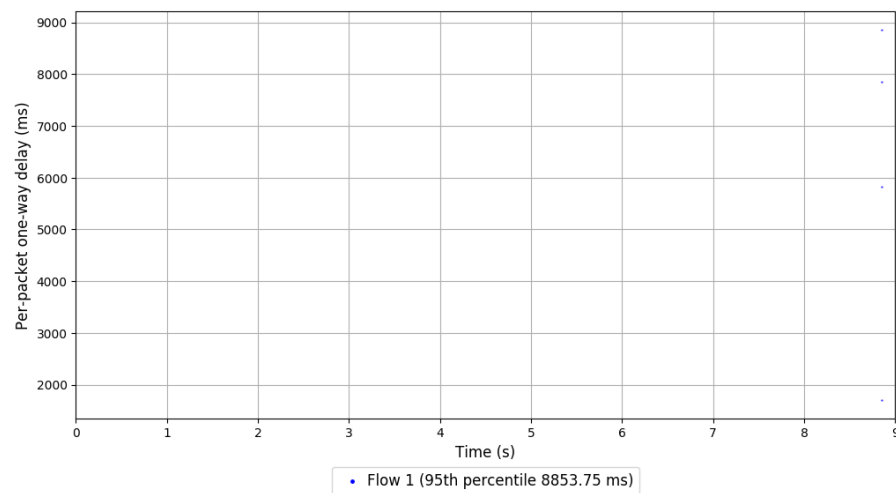
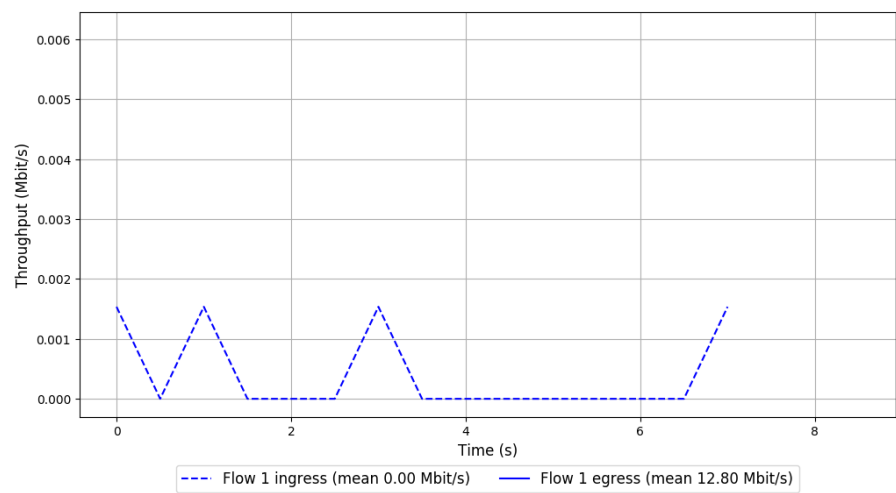
Start at: 2017-09-17 23:16:14

End at: 2017-09-17 23:16:44

Local clock offset: -4.072 ms

Remote clock offset: -3.216 ms

Run 3: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

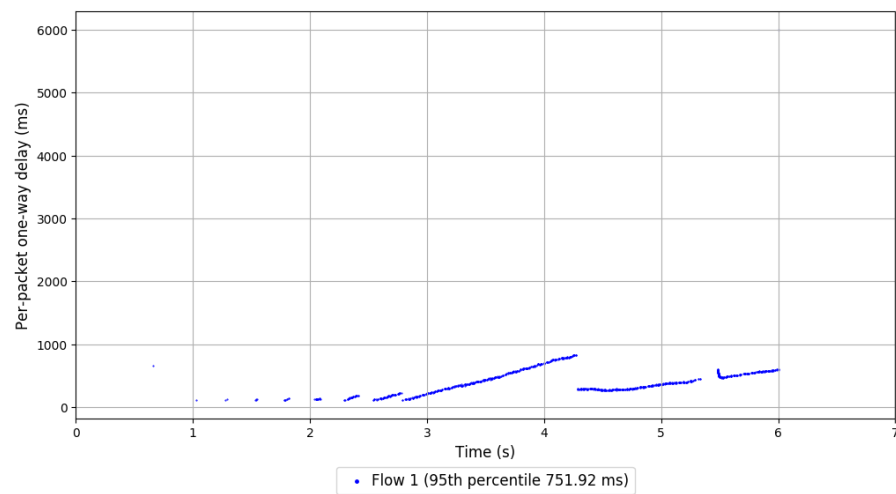
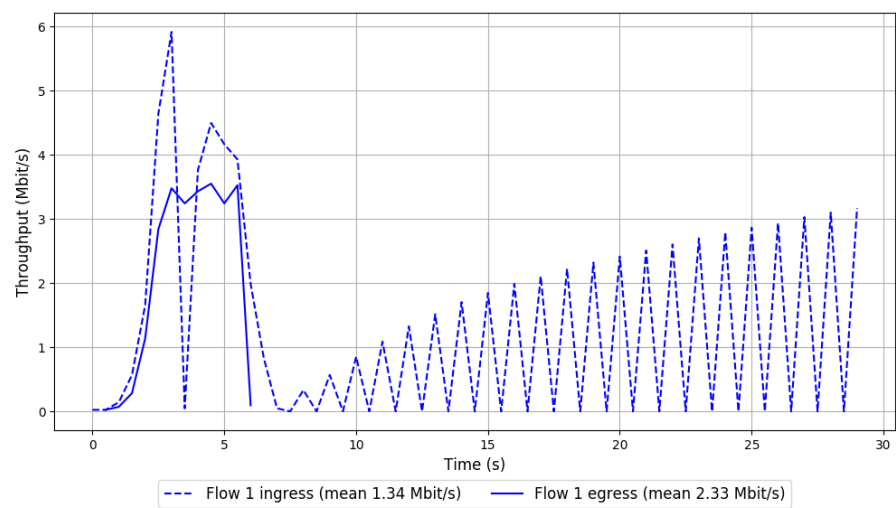
Start at: 2017-09-17 22:37:32

End at: 2017-09-17 22:38:02

Local clock offset: -8.964 ms

Remote clock offset: -8.039 ms

Run 1: Report of Verus — Data Link

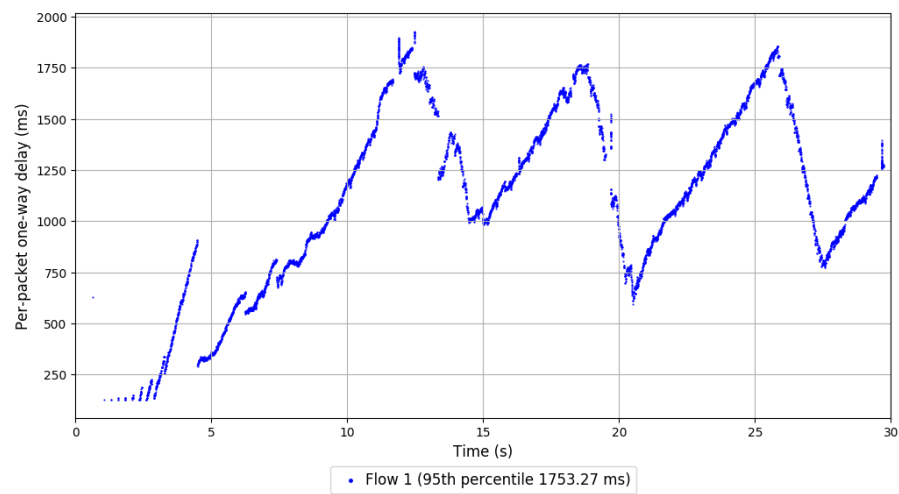
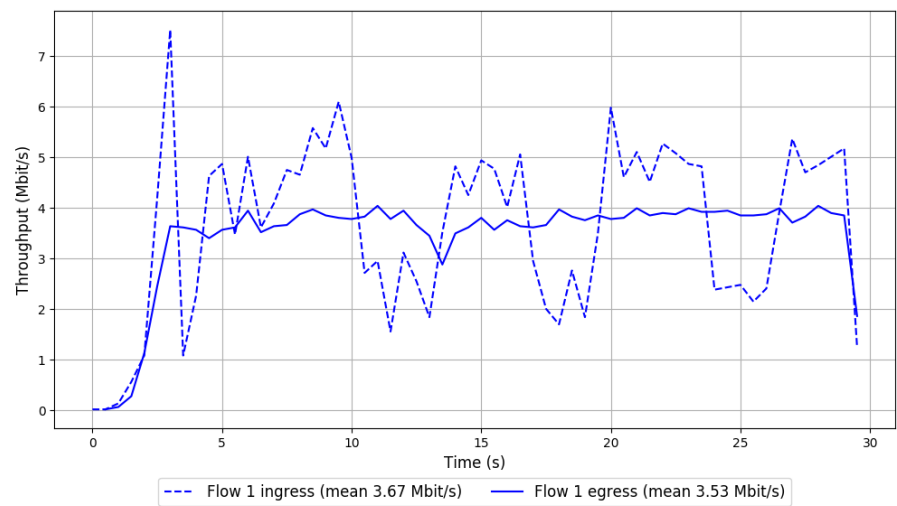


Run 2: Statistics of Verus

Start at: 2017-09-17 22:55:06
End at: 2017-09-17 22:55:36
Local clock offset: -3.259 ms
Remote clock offset: -3.919 ms

Below is generated by plot.py at 2017-09-17 23:18:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.53 Mbit/s
95th percentile per-packet one-way delay: 1753.265 ms
Loss rate: 5.42%
-- Flow 1:
Average throughput: 3.53 Mbit/s
95th percentile per-packet one-way delay: 1753.265 ms
Loss rate: 5.42%

Run 2: Report of Verus — Data Link

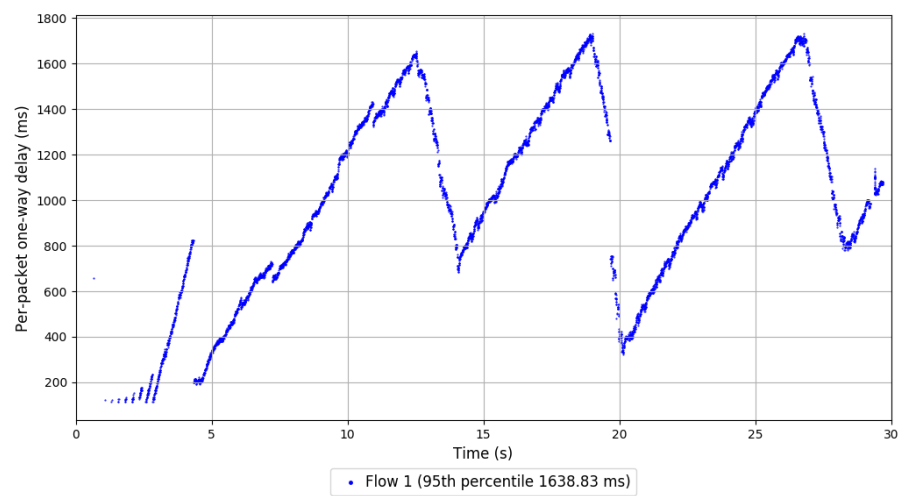
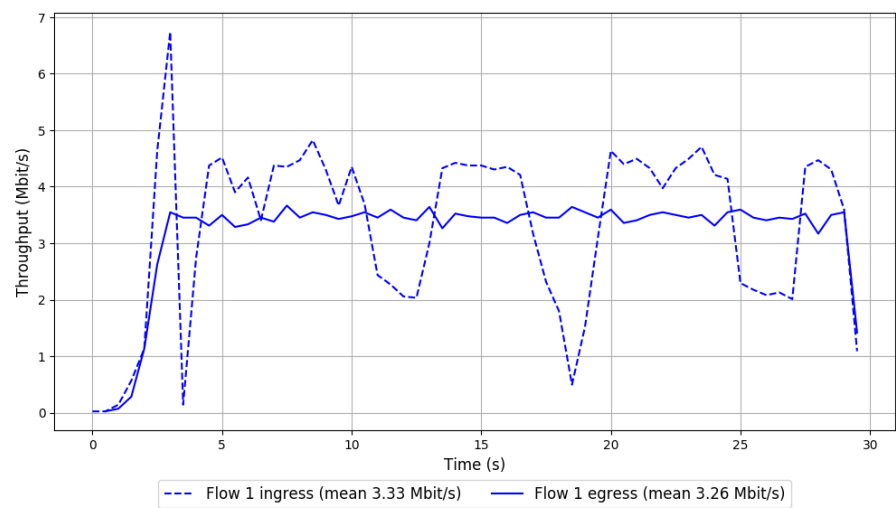


Run 3: Statistics of Verus

Start at: 2017-09-17 23:12:43
End at: 2017-09-17 23:13:13
Local clock offset: -3.773 ms
Remote clock offset: -3.084 ms

Below is generated by plot.py at 2017-09-17 23:18:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.26 Mbit/s
95th percentile per-packet one-way delay: 1638.827 ms
Loss rate: 4.03%
-- Flow 1:
Average throughput: 3.26 Mbit/s
95th percentile per-packet one-way delay: 1638.827 ms
Loss rate: 4.03%

Run 3: Report of Verus — Data Link

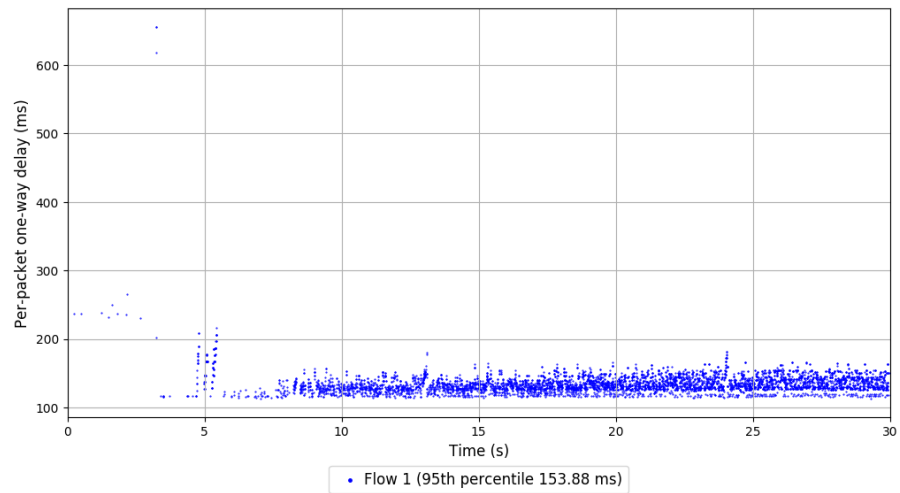
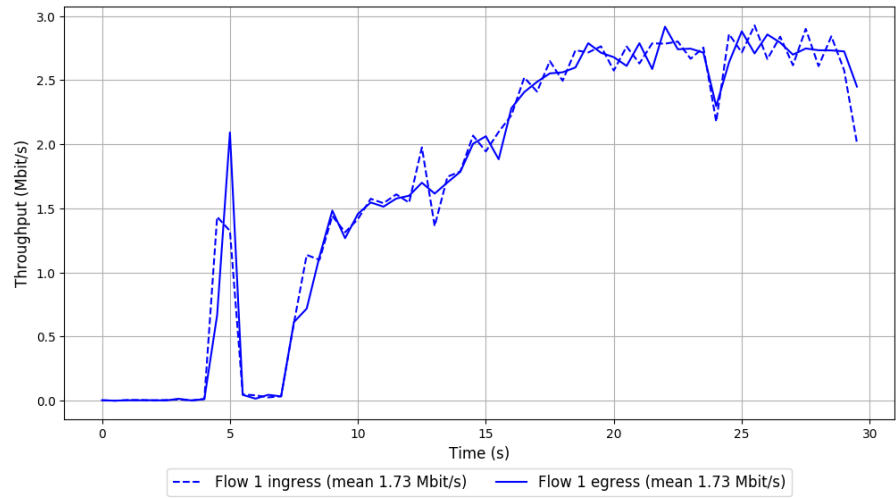


Run 1: Statistics of WebRTC media

Start at: 2017-09-17 22:29:20
End at: 2017-09-17 22:29:50
Local clock offset: -7.864 ms
Remote clock offset: -3.389 ms

Below is generated by plot.py at 2017-09-17 23:18:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.73 Mbit/s
95th percentile per-packet one-way delay: 153.880 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 1.73 Mbit/s
95th percentile per-packet one-way delay: 153.880 ms
Loss rate: 0.20%

Run 1: Report of WebRTC media — Data Link

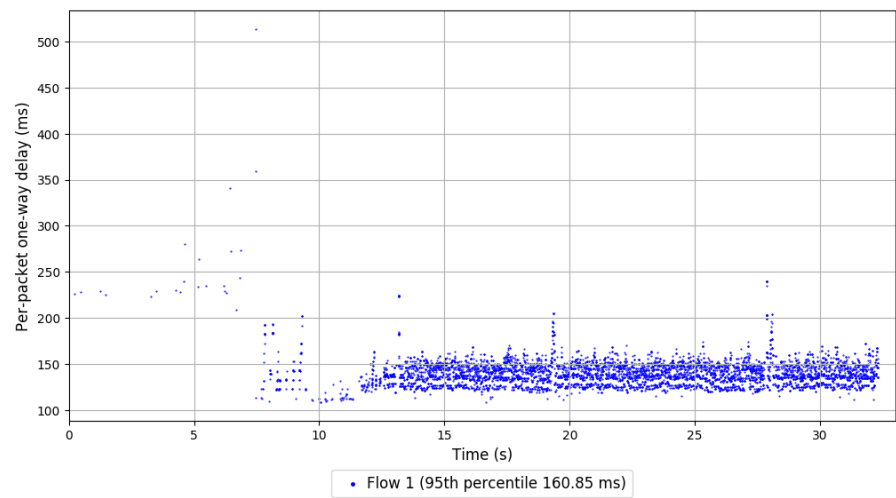
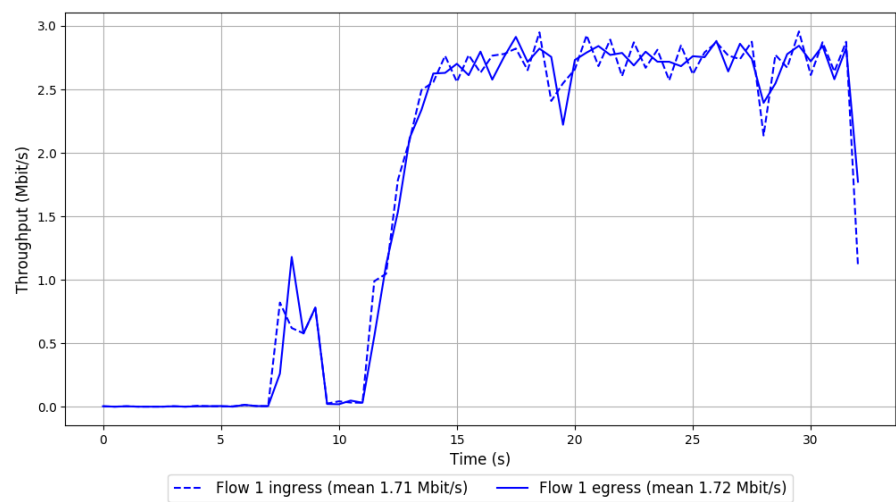


Run 2: Statistics of WebRTC media

Start at: 2017-09-17 22:46:54
End at: 2017-09-17 22:47:24
Local clock offset: -6.634 ms
Remote clock offset: -3.103 ms

Below is generated by plot.py at 2017-09-17 23:18:39
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.72 Mbit/s
95th percentile per-packet one-way delay: 160.853 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 1.72 Mbit/s
95th percentile per-packet one-way delay: 160.853 ms
Loss rate: 0.20%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2017-09-17 23:04:30
End at: 2017-09-17 23:05:00
Local clock offset: -3.175 ms
Remote clock offset: -8.451 ms

Below is generated by plot.py at 2017-09-17 23:18:39
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 142.862 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 142.862 ms
Loss rate: 0.39%

Run 3: Report of WebRTC media — Data Link

