

Pantheon Report

Generated at 2018-01-25 18:18:37 (UTC).

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

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).

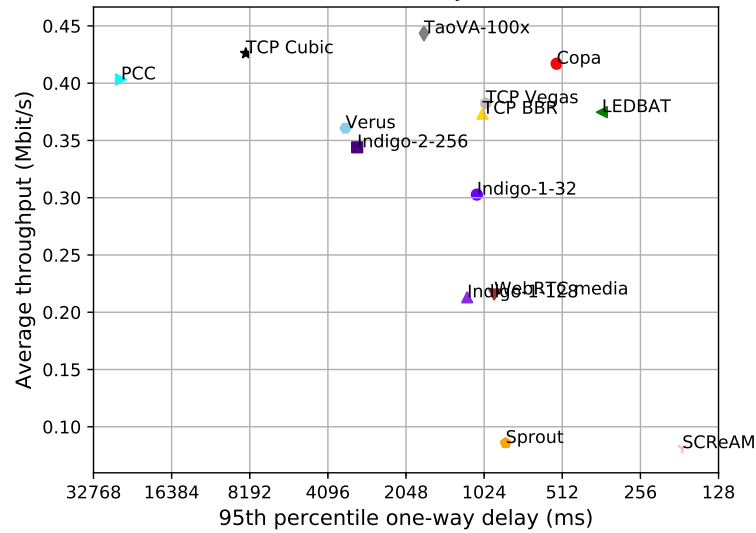
Tested BBR with qdisc of Fair Queuing (**fq**), and other schemes with the default Linux qdisc (**pfifo_fast**).

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

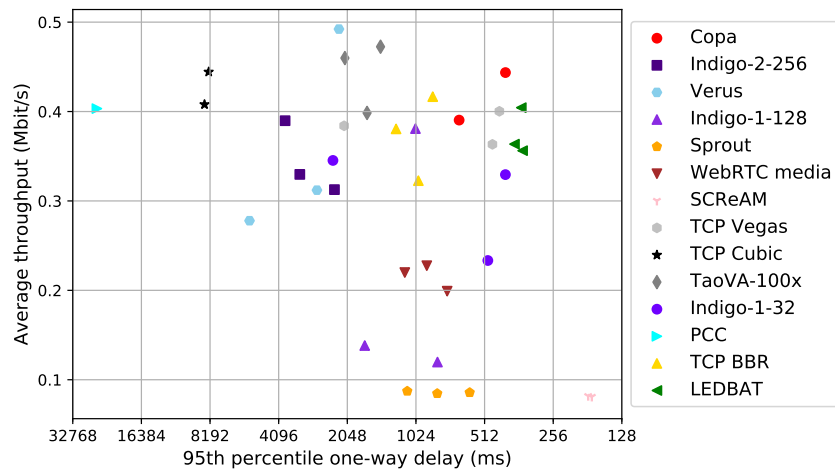
Git summary:

```
branch: master @ f23294ec38436c9f802847d477a41b7343ec76e6
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/fillp @ ec9585325218d5048c4d4152fa42240af54c6e67
third_party/genericCC @ 80b516c448f795fd6e9675f7177b69c622f07da8
third_party/indigo @ a9b2060d39e4da2e8987e893e3eca2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ce8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd3505939528e2a5f
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
  M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
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-quic @ 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/vivace @ 423cbca3e8ea1d599e7b5cf725835e8a2b6bfac6
third_party/webrtc @ a488197ddd041ace68a42849b2540ad834825f42
```

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



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



scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	3	0.37	1038.37	2.13
TCP Cubic	2	0.42	8483.69	31.82
LEDBAT	3	0.37	360.35	1.43
PCC	1	0.40	25680.01	98.77
QUIC Cubic	0	N/A	N/A	N/A
SCReAM	2	0.08	176.61	0.80
WebRTC media	3	0.22	936.84	1.21
Sprout	3	0.09	846.28	1.73
TaoVA-100x	3	0.44	1746.82	3.65
TCP Vegas	3	0.38	1009.74	1.90
Verus	3	0.36	3503.03	8.61
Copa	2	0.42	538.36	1.46
Indigo-2-256	3	0.34	3159.93	21.10
Indigo-1-32	3	0.30	1092.69	3.04
Indigo-1-128	3	0.21	1190.26	6.02

Run 1: Statistics of TCP BBR

Start at: 2018-01-25 16:32:48

End at: 2018-01-25 16:33:18

Local clock offset: 0.641 ms

Remote clock offset: 0.443 ms

Below is generated by plot.py at 2018-01-25 18:18:10

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 1251.538 ms

Loss rate: 1.10%

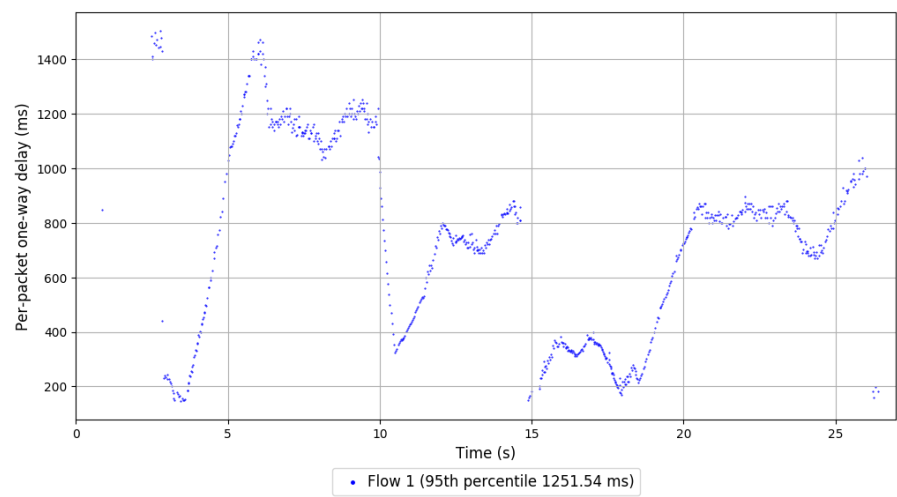
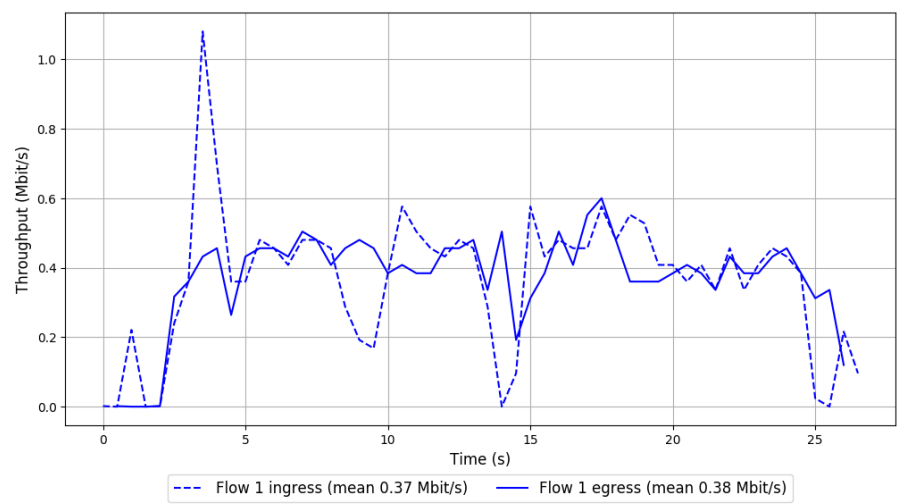
-- Flow 1:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 1251.538 ms

Loss rate: 1.10%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-01-25 16:51:54

End at: 2018-01-25 16:52:24

Local clock offset: 0.65 ms

Remote clock offset: -4.82 ms

Below is generated by plot.py at 2018-01-25 18:18:11

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 864.319 ms

Loss rate: 2.46%

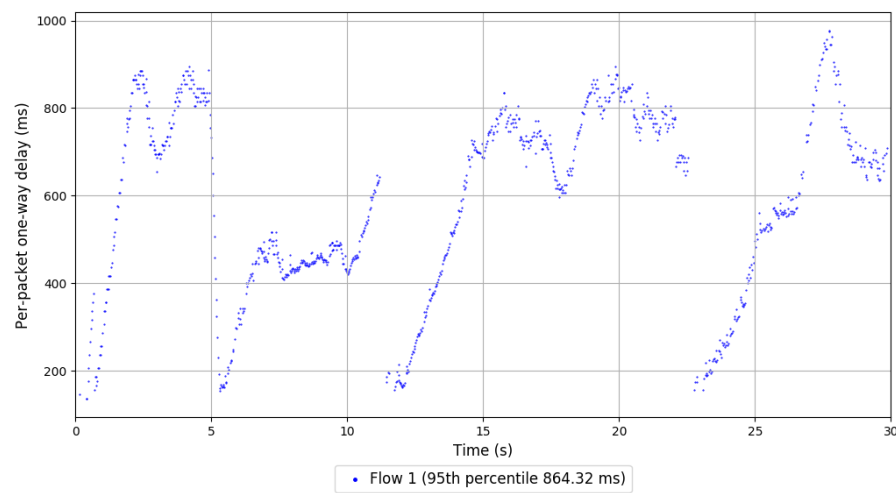
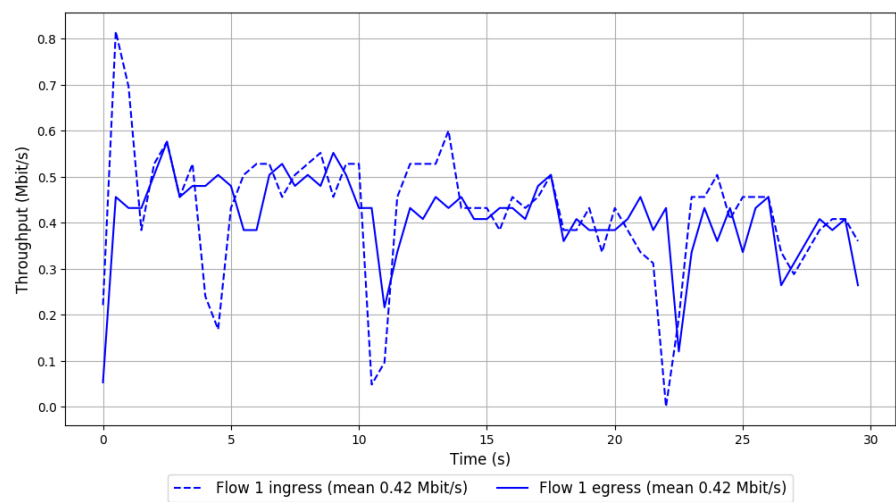
-- Flow 1:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 864.319 ms

Loss rate: 2.46%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-01-25 17:10:56

End at: 2018-01-25 17:11:26

Local clock offset: 0.707 ms

Remote clock offset: -5.324 ms

Below is generated by plot.py at 2018-01-25 18:18:11

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.32 Mbit/s

95th percentile per-packet one-way delay: 999.252 ms

Loss rate: 2.84%

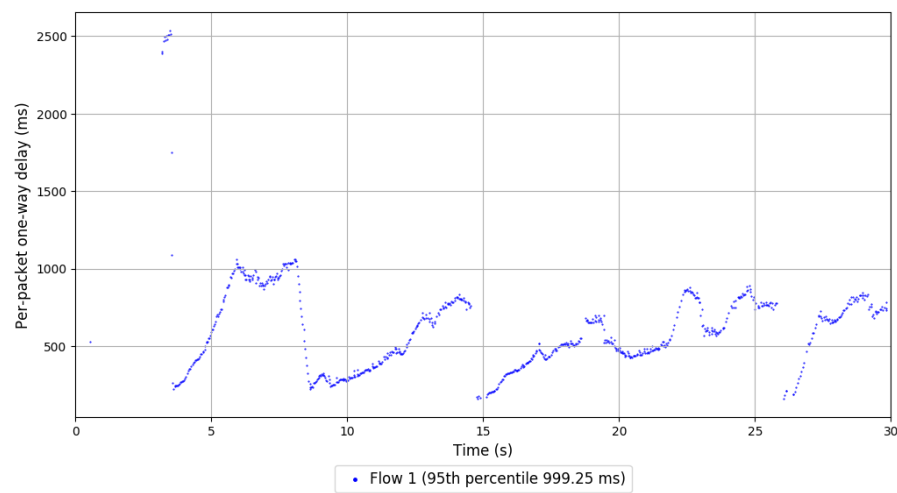
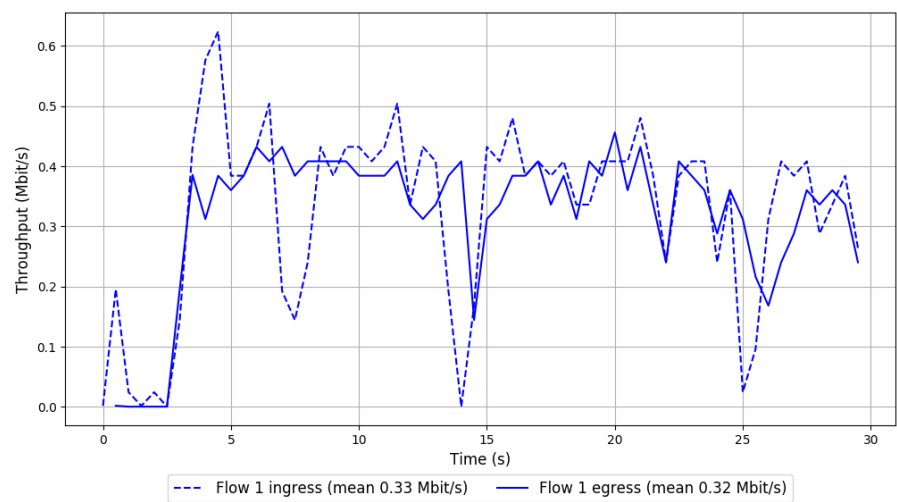
-- Flow 1:

Average throughput: 0.32 Mbit/s

95th percentile per-packet one-way delay: 999.252 ms

Loss rate: 2.84%

Run 3: Report of TCP BBR — Data Link

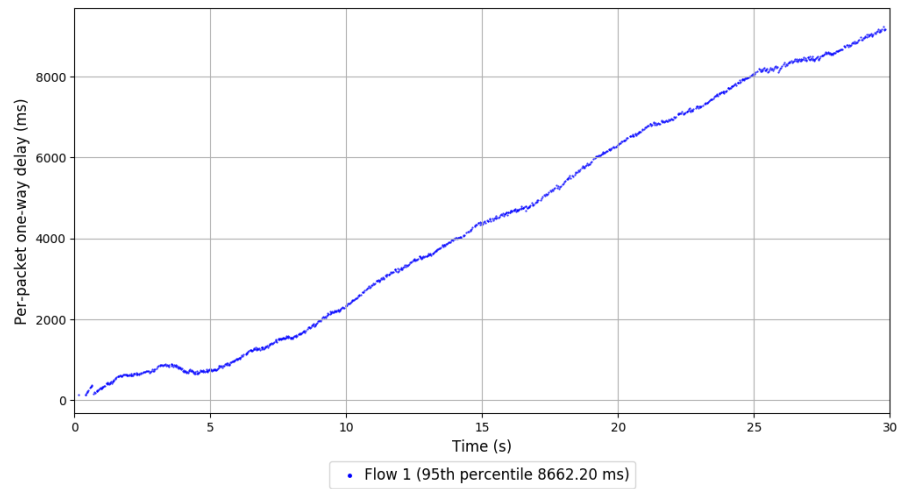
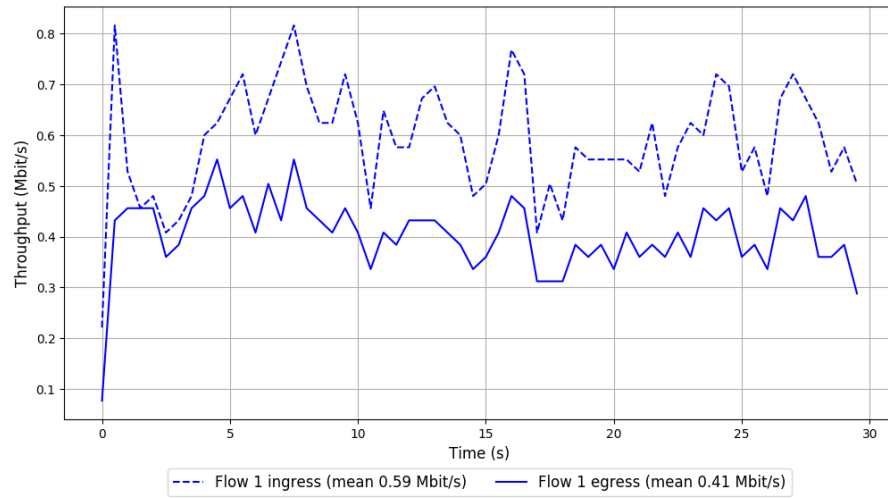


Run 1: Statistics of TCP Cubic

Start at: 2018-01-25 16:37:43
End at: 2018-01-25 16:38:13
Local clock offset: 0.576 ms
Remote clock offset: -5.662 ms

Below is generated by plot.py at 2018-01-25 18:18:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 8662.204 ms
Loss rate: 31.45%
-- Flow 1:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 8662.204 ms
Loss rate: 31.45%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-01-25 16:56:38

End at: 2018-01-25 16:57:08

Local clock offset: 0.66 ms

Remote clock offset: -1.2 ms

Below is generated by plot.py at 2018-01-25 18:18:12

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 8305.185 ms

Loss rate: 32.19%

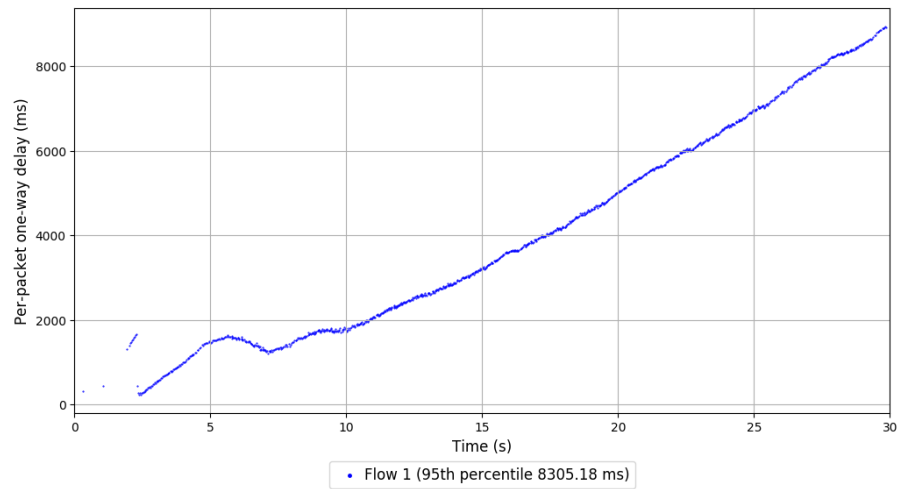
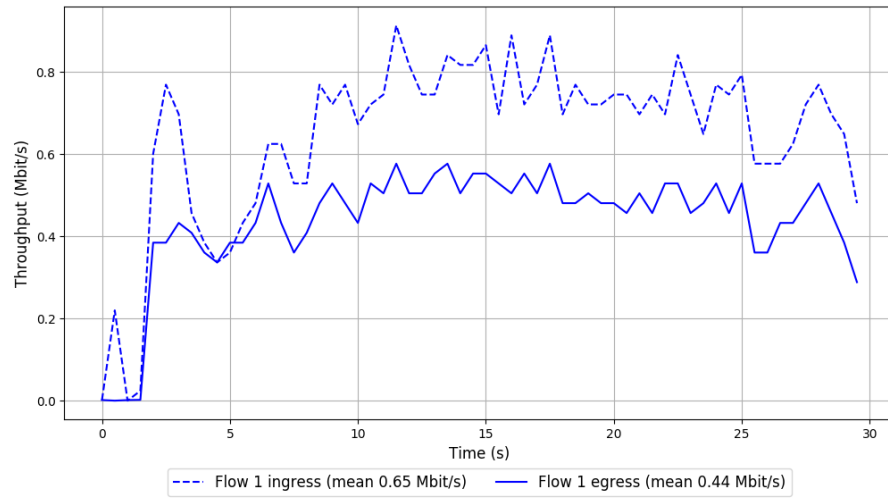
-- Flow 1:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 8305.185 ms

Loss rate: 32.19%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

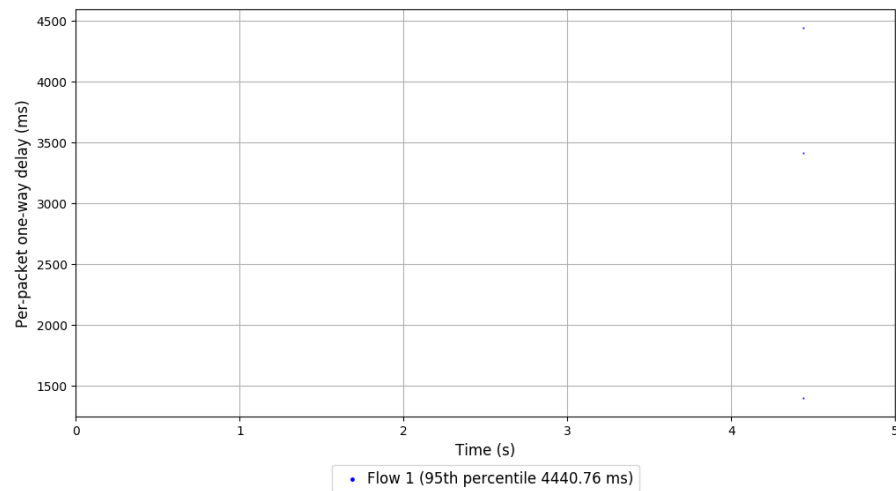
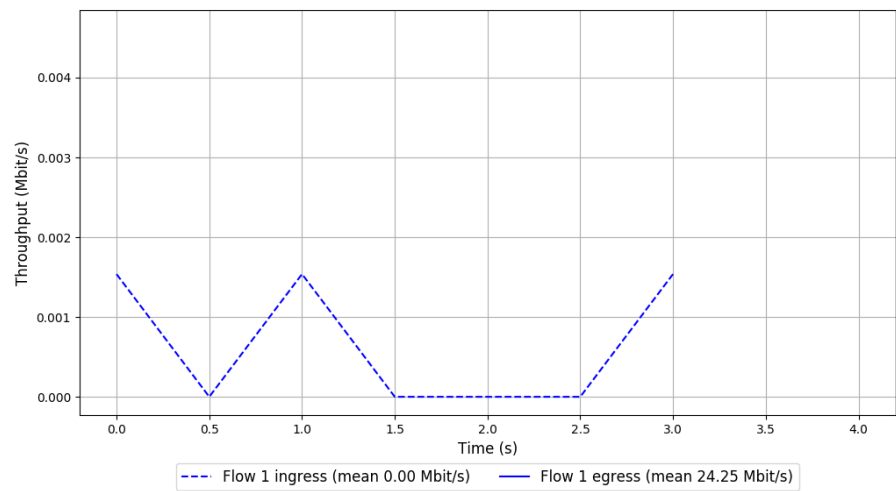
Start at: 2018-01-25 17:15:42

End at: 2018-01-25 17:16:12

Local clock offset: 0.644 ms

Remote clock offset: -0.029 ms

Run 3: Report of TCP Cubic — Data Link

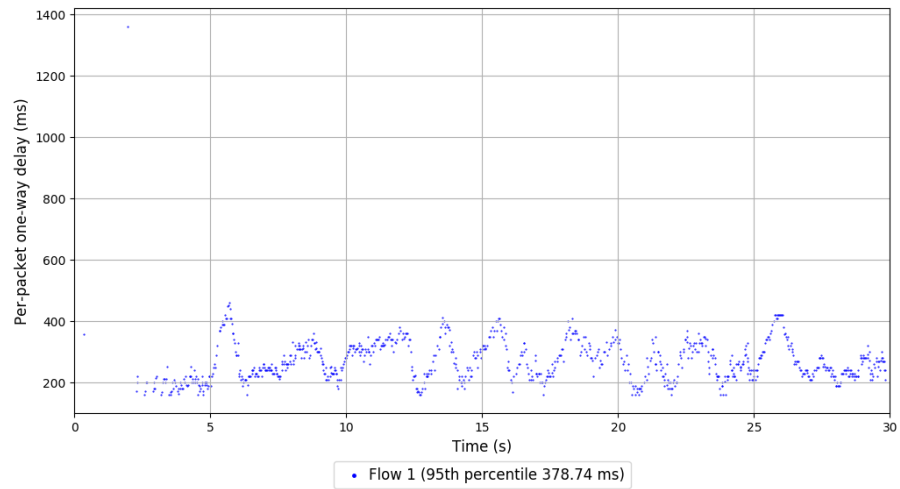
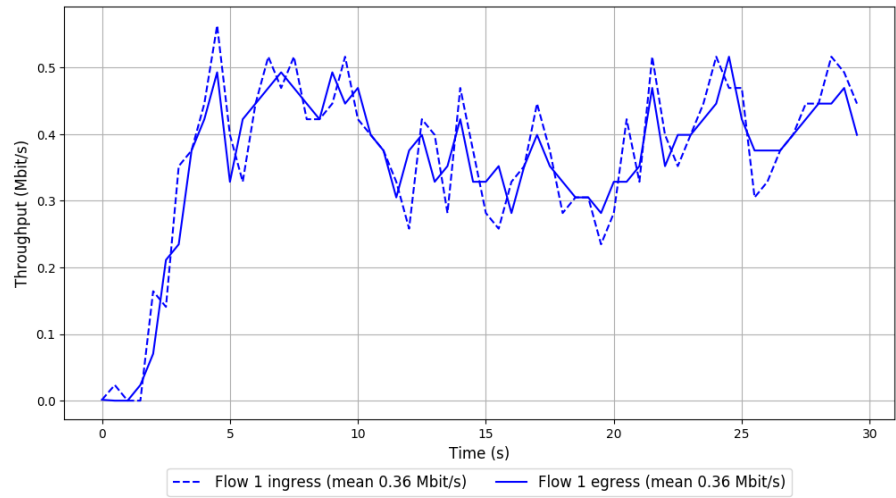


```
Run 1: Statistics of LEDBAT

Start at: 2018-01-25 16:33:59
End at: 2018-01-25 16:34:29
Local clock offset: 0.643 ms
Remote clock offset: -5.69 ms

# Below is generated by plot.py at 2018-01-25 18:18:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 378.738 ms
Loss rate: 1.61%
-- Flow 1:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 378.738 ms
Loss rate: 1.61%
```


Run 1: Report of LEDBAT — Data Link

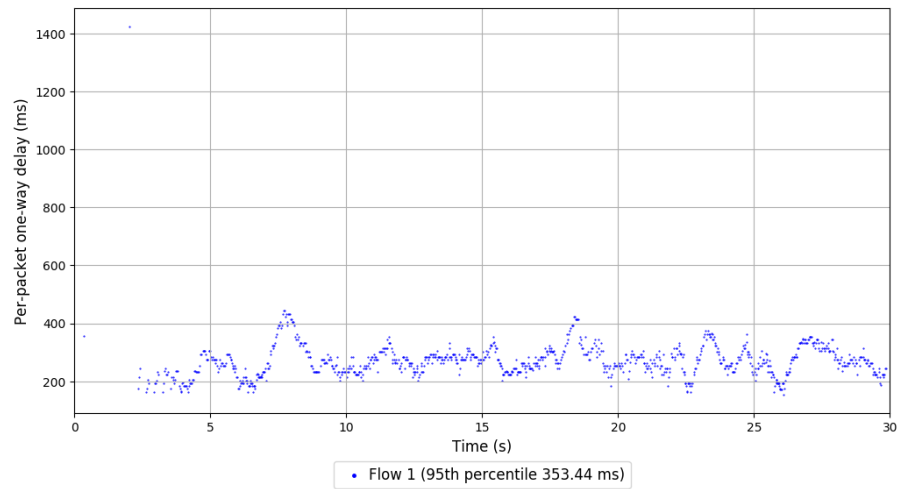
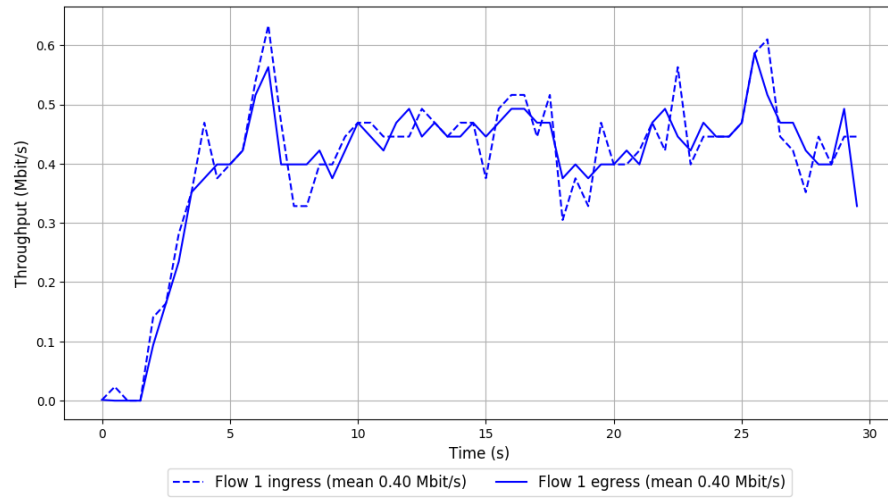


Run 2: Statistics of LEDBAT

Start at: 2018-01-25 16:53:07
End at: 2018-01-25 16:53:37
Local clock offset: 0.58 ms
Remote clock offset: -4.722 ms

Below is generated by plot.py at 2018-01-25 18:18:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 353.442 ms
Loss rate: 1.26%
-- Flow 1:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 353.442 ms
Loss rate: 1.26%

Run 2: Report of LEDBAT — Data Link

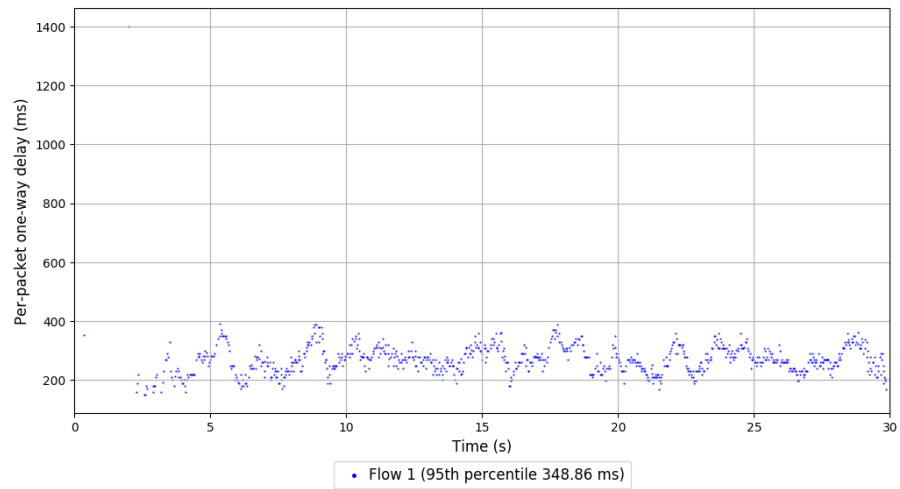
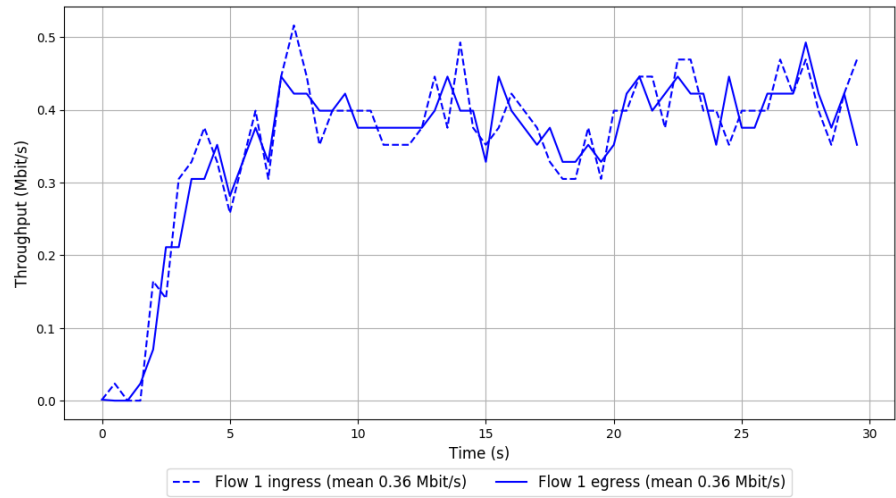


Run 3: Statistics of LEDBAT

Start at: 2018-01-25 17:12:08
End at: 2018-01-25 17:12:38
Local clock offset: 0.713 ms
Remote clock offset: -0.969 ms

Below is generated by plot.py at 2018-01-25 18:18:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 348.856 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 348.856 ms
Loss rate: 1.43%

Run 3: Report of LEDBAT — Data Link

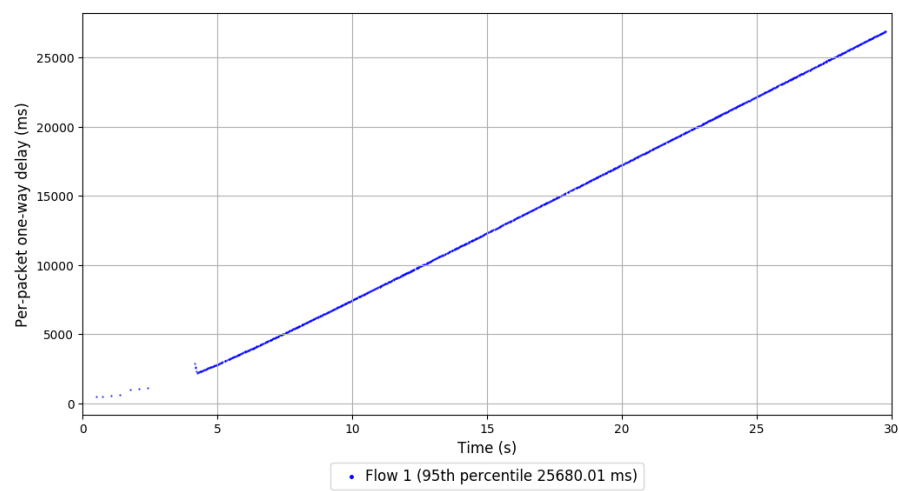
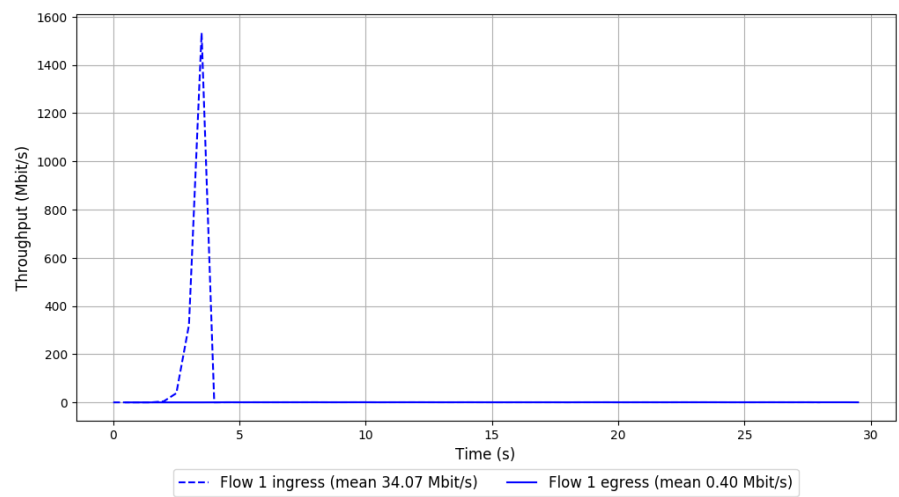


Run 1: Statistics of PCC

Start at: 2018-01-25 16:36:20
End at: 2018-01-25 16:36:50
Local clock offset: 0.626 ms
Remote clock offset: -0.442 ms

Below is generated by plot.py at 2018-01-25 18:18:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 25680.006 ms
Loss rate: 98.77%
-- Flow 1:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 25680.006 ms
Loss rate: 98.77%

Run 1: Report of PCC — Data Link



Run 2: Statistics of PCC

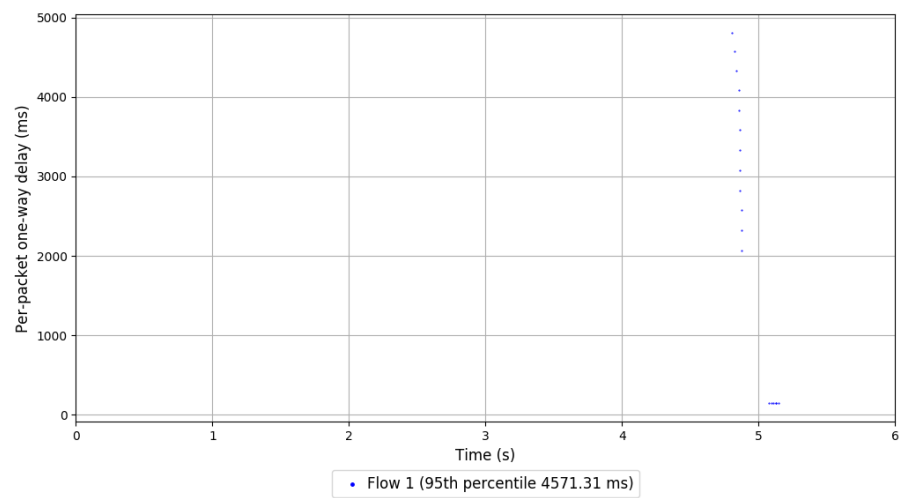
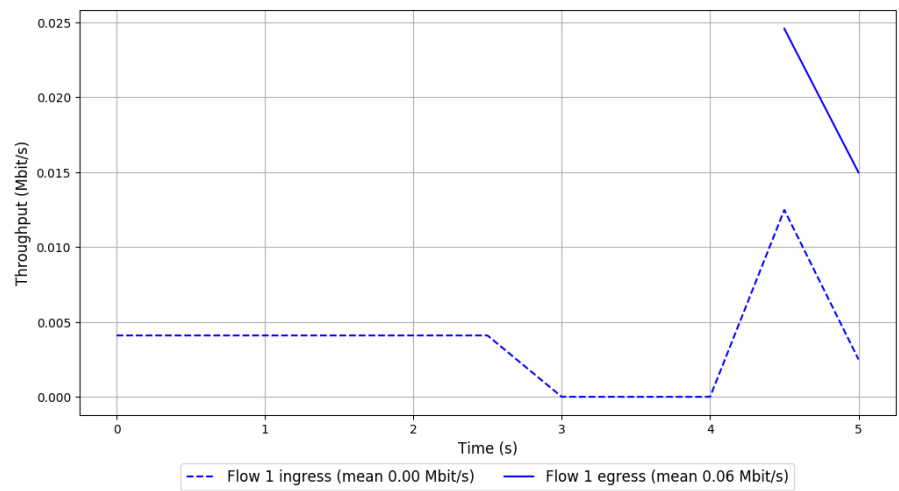
Start at: 2018-01-25 16:55:28

End at: 2018-01-25 16:55:58

Local clock offset: 0.677 ms

Remote clock offset: -5.575 ms

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

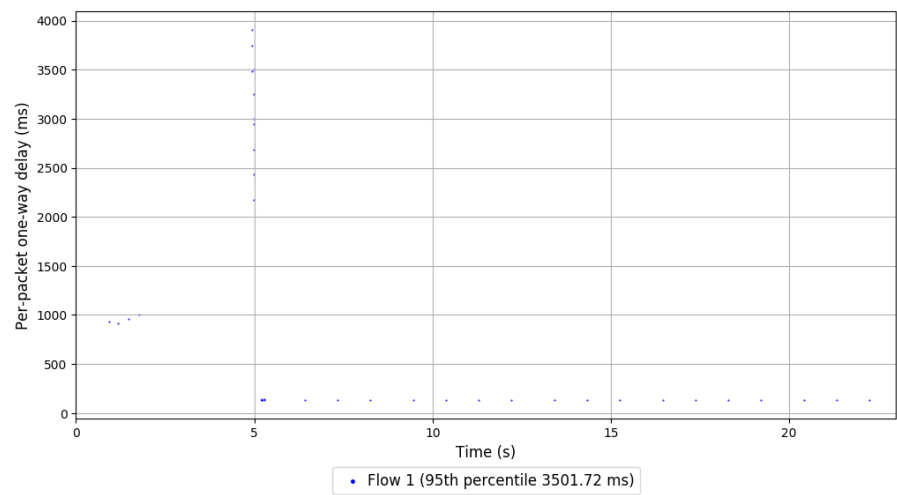
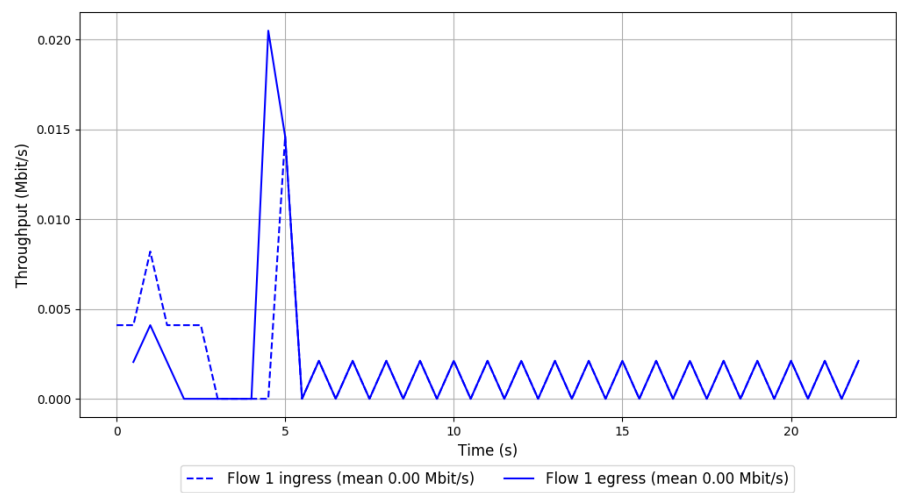
Start at: 2018-01-25 17:14:31

End at: 2018-01-25 17:15:01

Local clock offset: 0.712 ms

Remote clock offset: 0.015 ms

Run 3: Report of PCC — Data Link



Run 1: Statistics of QUIC Cubic

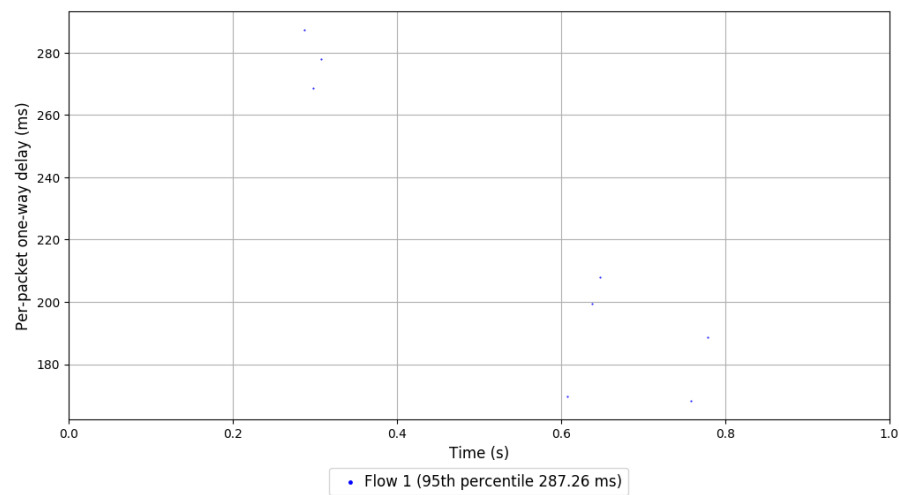
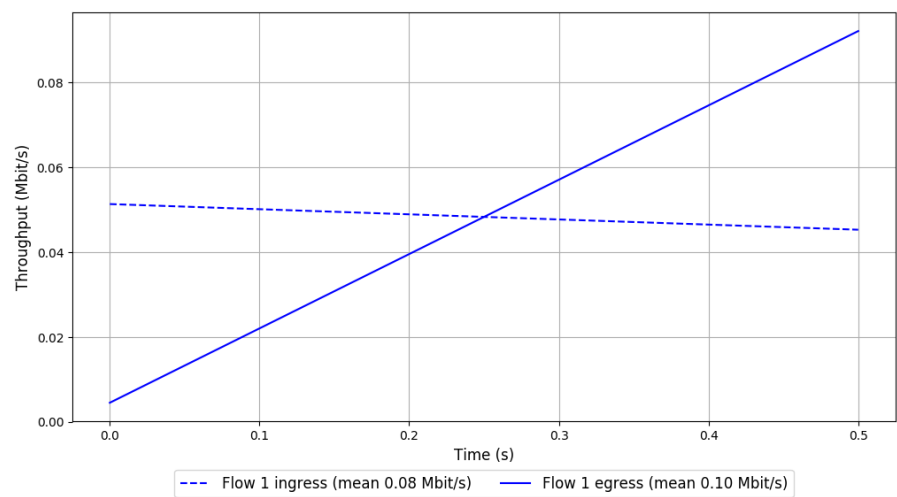
Start at: 2018-01-25 16:26:55

End at: 2018-01-25 16:27:25

Local clock offset: 0.649 ms

Remote clock offset: -5.802 ms

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

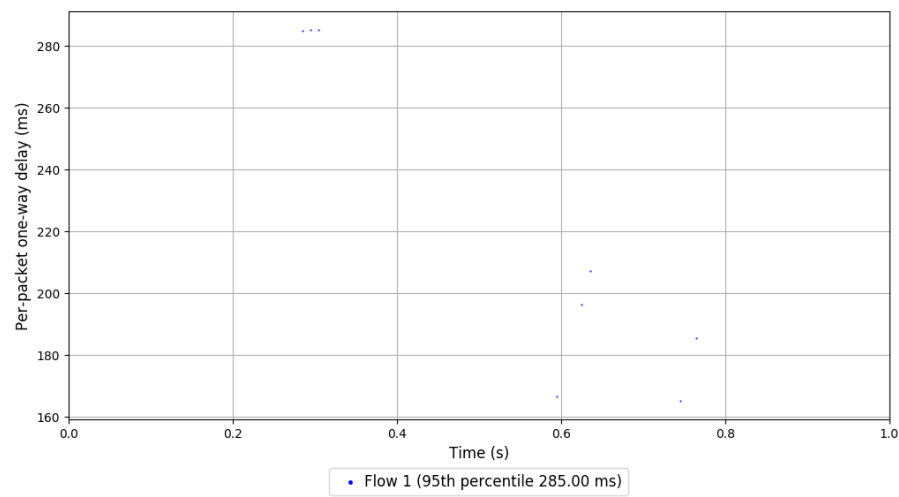
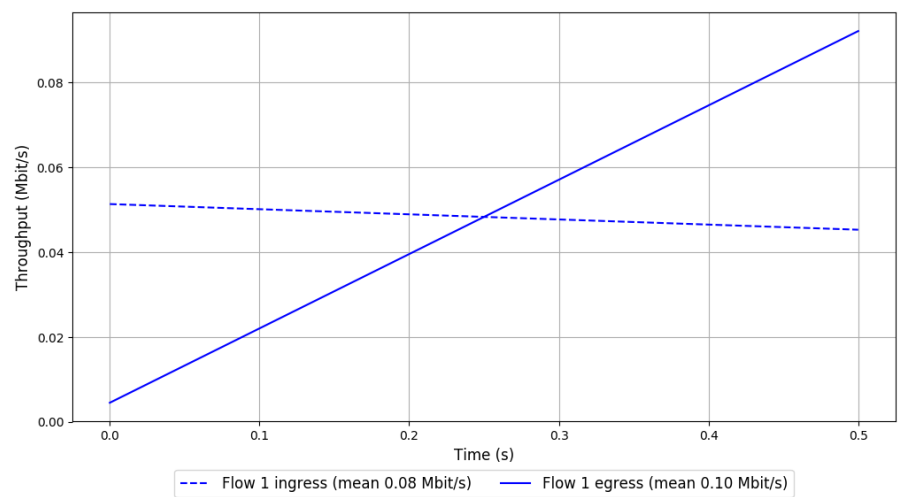
Start at: 2018-01-25 16:45:58

End at: 2018-01-25 16:46:28

Local clock offset: 0.65 ms

Remote clock offset: -4.9 ms

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

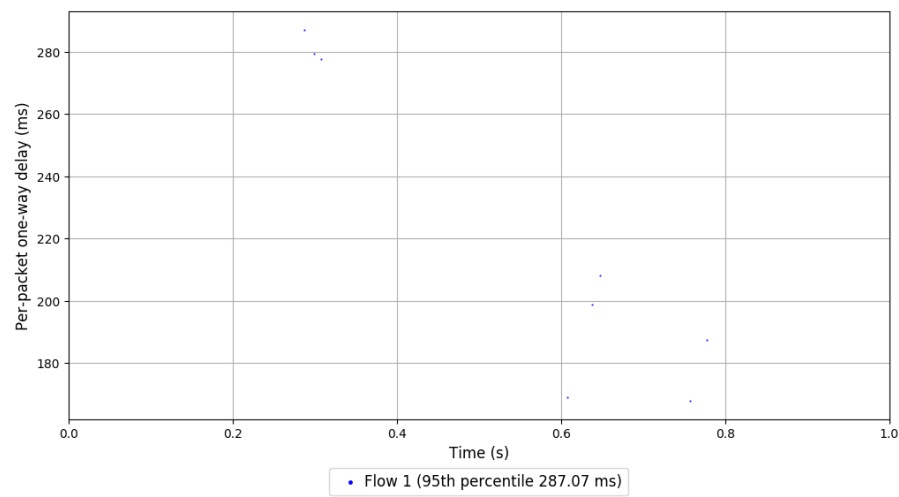
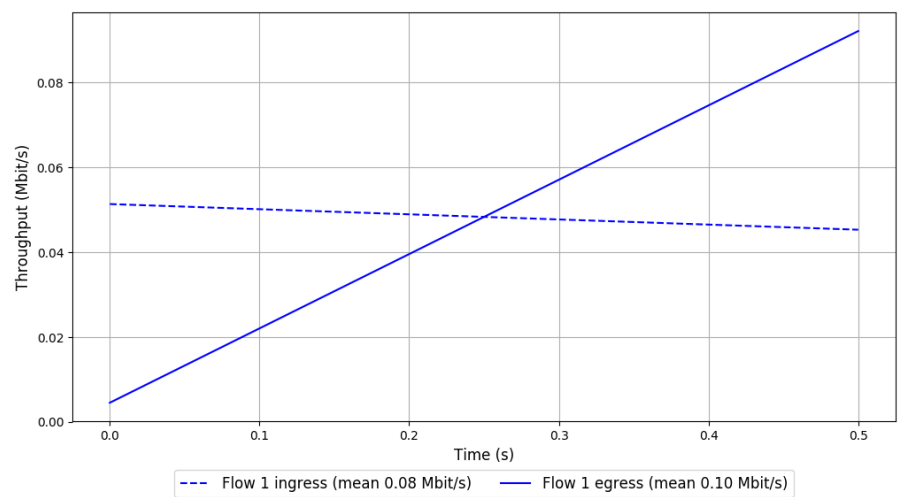
Start at: 2018-01-25 17:04:58

End at: 2018-01-25 17:05:28

Local clock offset: 0.704 ms

Remote clock offset: -4.584 ms

Run 3: Report of QUIC Cubic — Data Link



Run 1: Statistics of SCReAM

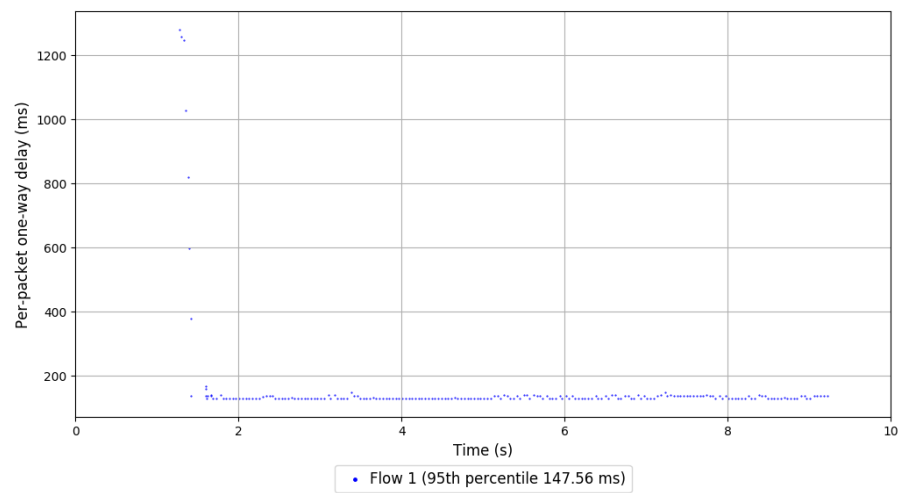
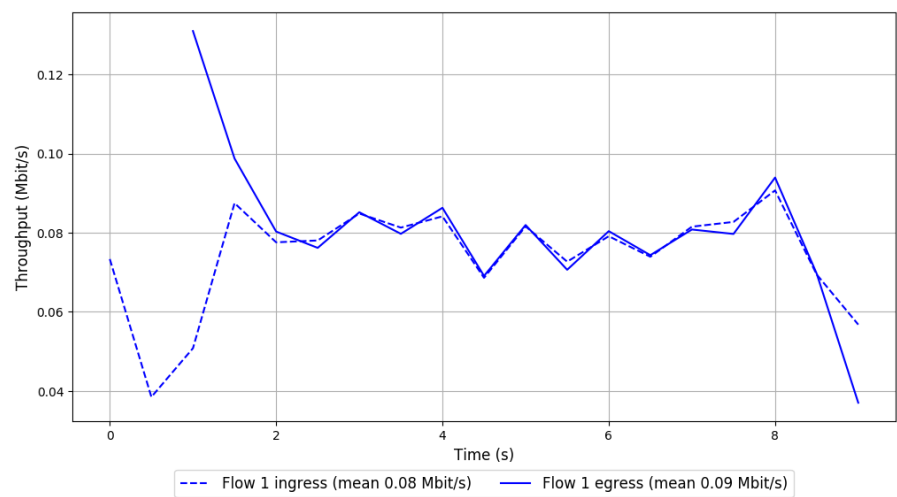
Start at: 2018-01-25 16:41:15

End at: 2018-01-25 16:41:45

Local clock offset: 0.639 ms

Remote clock offset: -0.247 ms

Run 1: Report of SReAM — Data Link

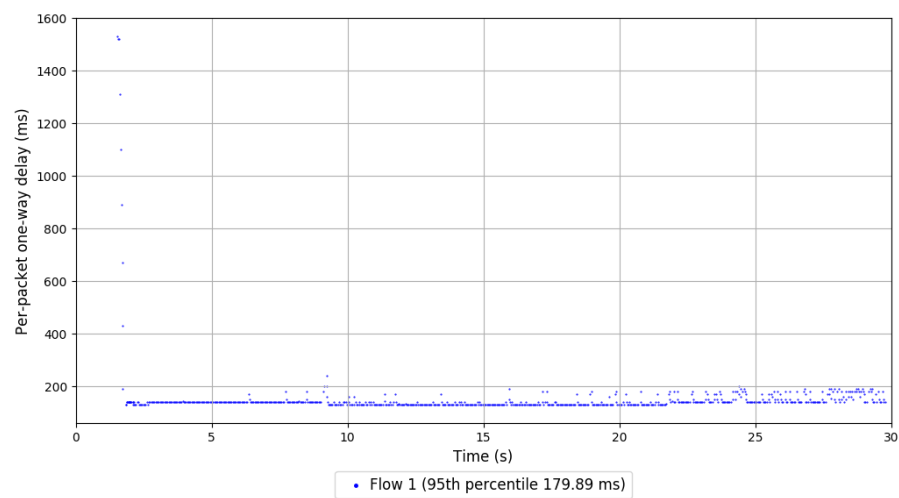
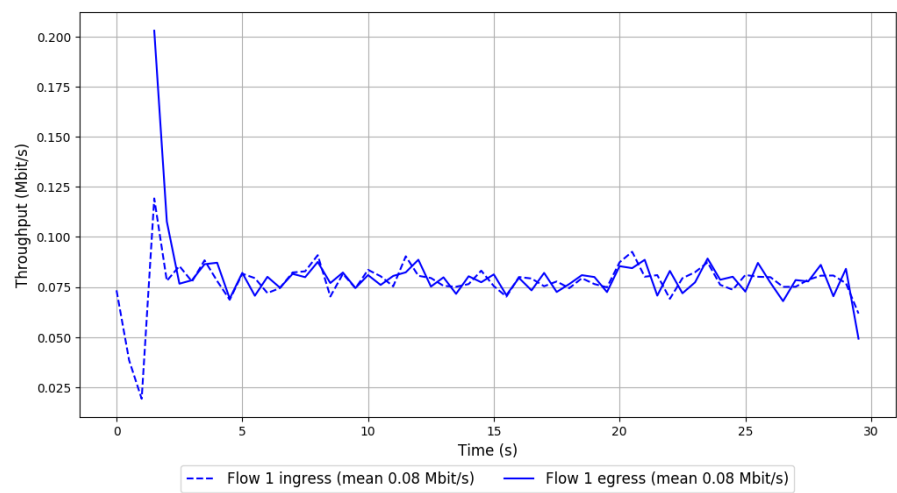


Run 2: Statistics of SCReAM

Start at: 2018-01-25 17:00:12
End at: 2018-01-25 17:00:42
Local clock offset: 0.704 ms
Remote clock offset: -0.285 ms

Below is generated by plot.py at 2018-01-25 18:18:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 179.887 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 179.887 ms
Loss rate: 0.80%

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2018-01-25 17:19:13

End at: 2018-01-25 17:19:43

Local clock offset: 0.639 ms

Remote clock offset: 0.045 ms

Below is generated by plot.py at 2018-01-25 18:18:34

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.08 Mbit/s

95th percentile per-packet one-way delay: 173.335 ms

Loss rate: 0.79%

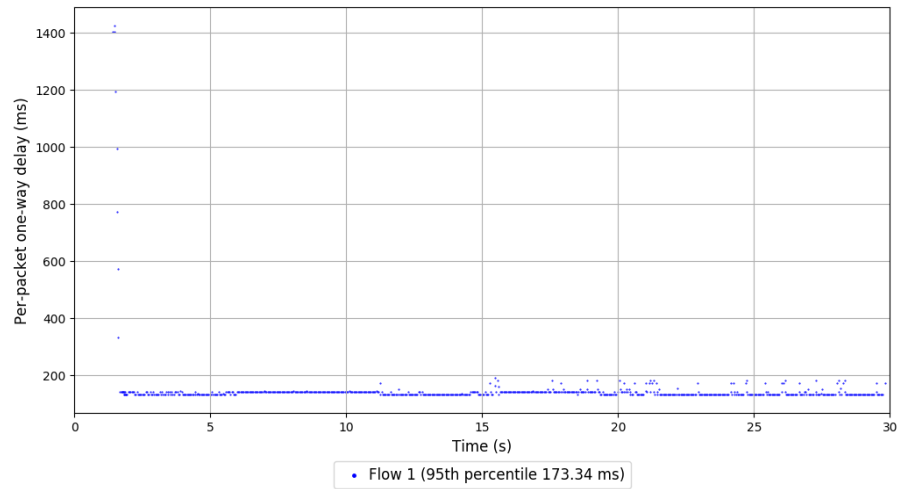
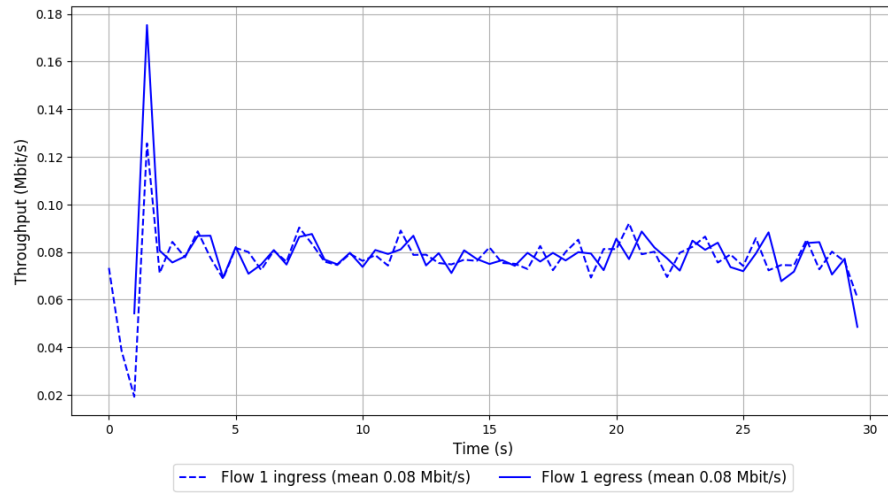
-- Flow 1:

Average throughput: 0.08 Mbit/s

95th percentile per-packet one-way delay: 173.335 ms

Loss rate: 0.79%

Run 3: Report of SReAM — Data Link

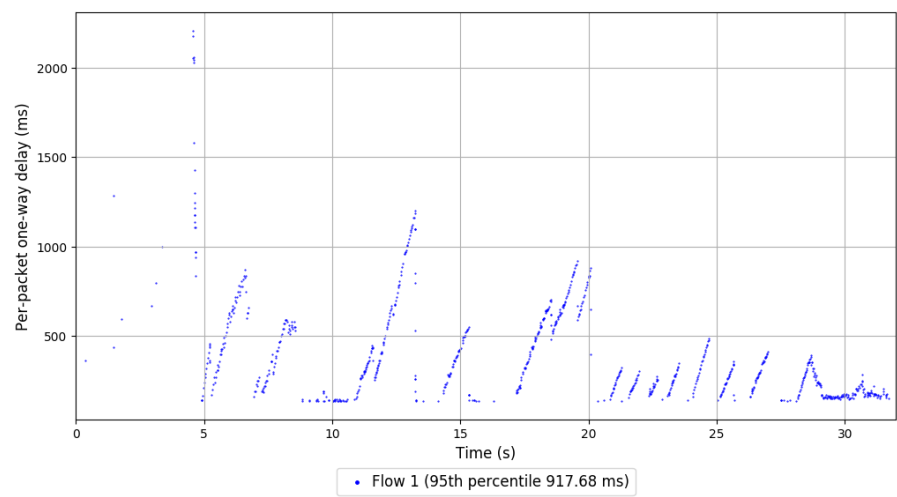
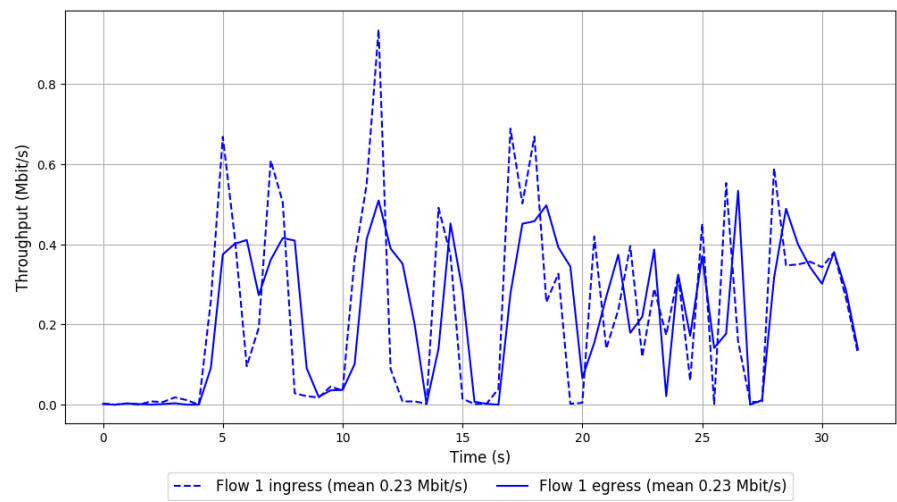


Run 1: Statistics of WebRTC media

Start at: 2018-01-25 16:30:26
End at: 2018-01-25 16:30:56
Local clock offset: 0.594 ms
Remote clock offset: -5.841 ms

Below is generated by plot.py at 2018-01-25 18:18:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 917.680 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 917.680 ms
Loss rate: 0.75%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-01-25 16:49:30

End at: 2018-01-25 16:50:00

Local clock offset: 0.658 ms

Remote clock offset: 0.405 ms

Below is generated by plot.py at 2018-01-25 18:18:34

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1145.914 ms

Loss rate: 1.42%

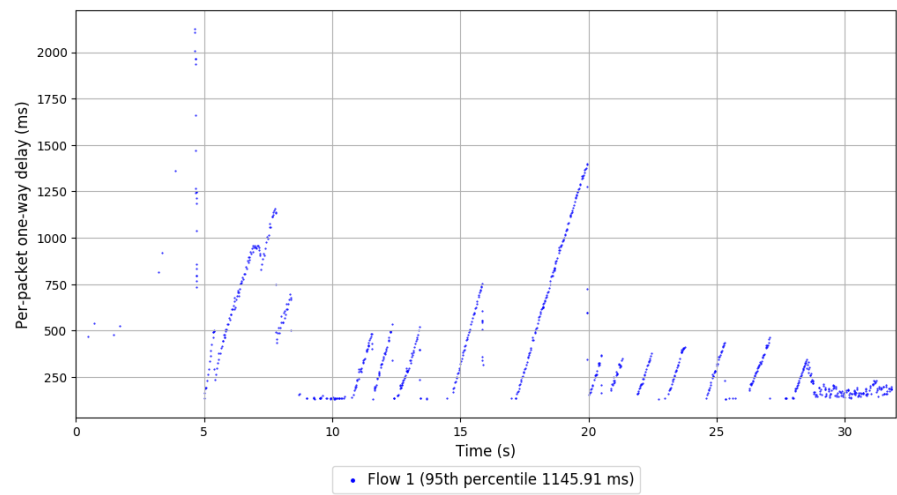
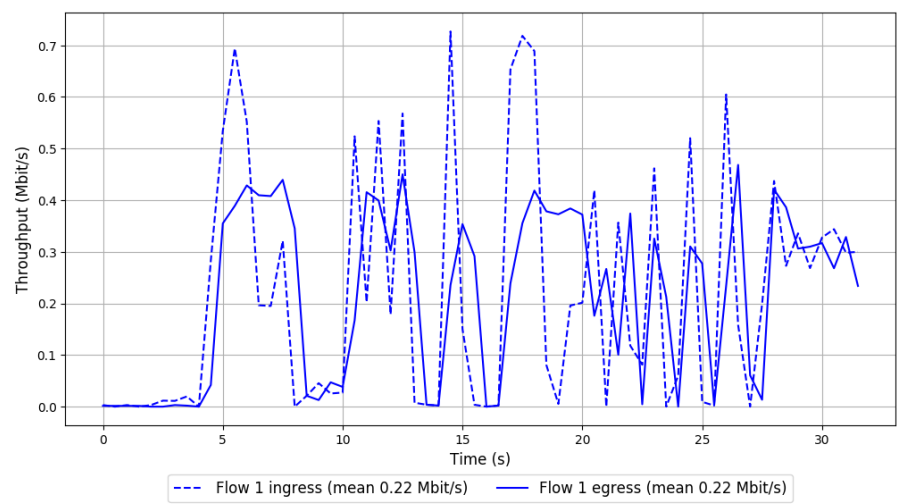
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1145.914 ms

Loss rate: 1.42%

Run 2: Report of WebRTC media — Data Link

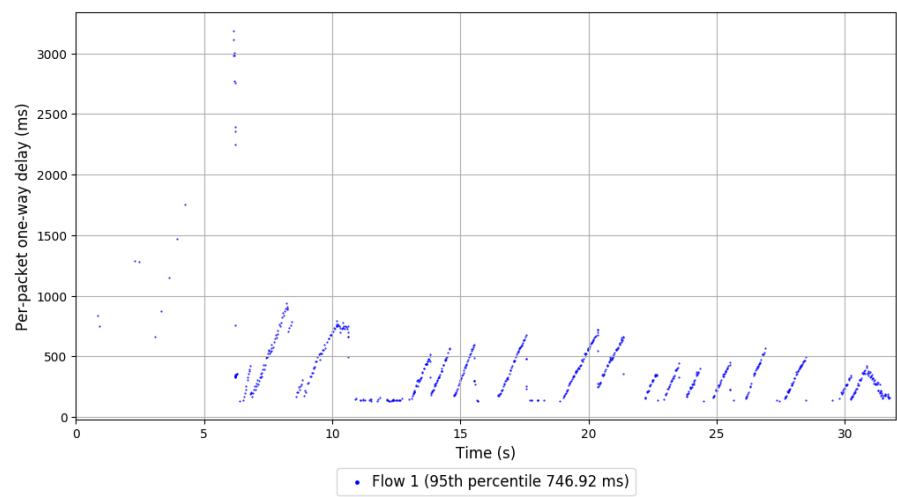
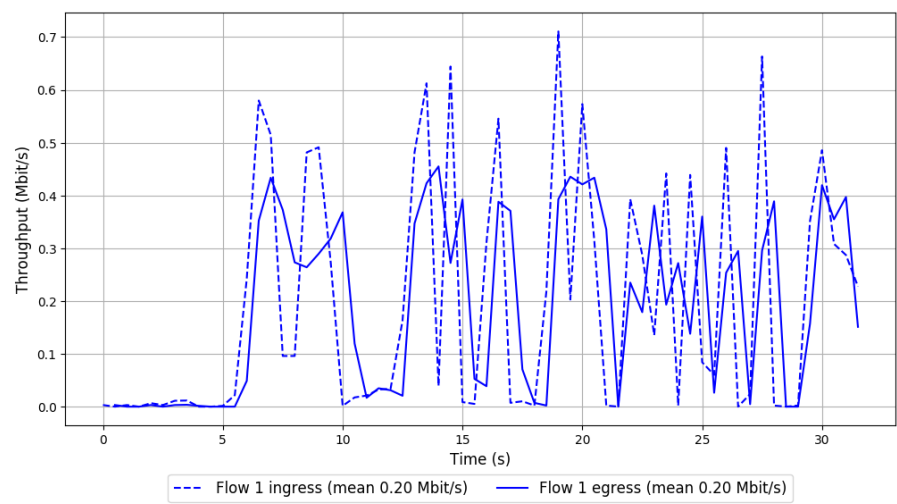


Run 3: Statistics of WebRTC media

Start at: 2018-01-25 17:08:32
End at: 2018-01-25 17:09:02
Local clock offset: 0.717 ms
Remote clock offset: -0.148 ms

Below is generated by plot.py at 2018-01-25 18:18:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 746.923 ms
Loss rate: 1.46%
-- Flow 1:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 746.923 ms
Loss rate: 1.46%

Run 3: Report of WebRTC media — Data Link

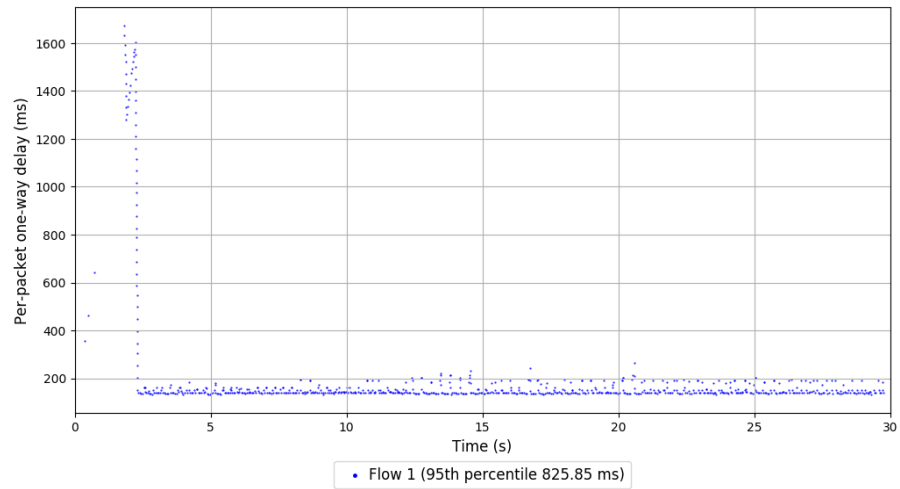
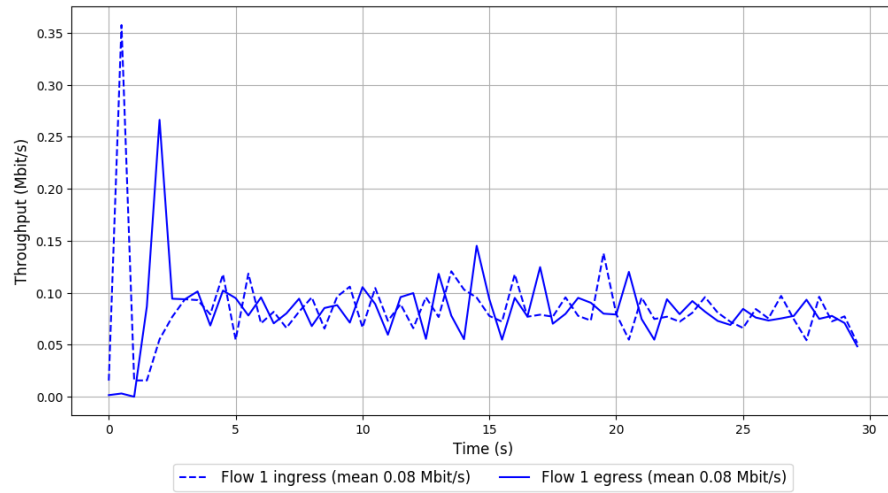


Run 1: Statistics of Sprout

Start at: 2018-01-25 16:25:44
End at: 2018-01-25 16:26:14
Local clock offset: 0.667 ms
Remote clock offset: -5.946 ms

Below is generated by plot.py at 2018-01-25 18:18:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 825.851 ms
Loss rate: 1.73%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 825.851 ms
Loss rate: 1.73%

Run 1: Report of Sprout — Data Link

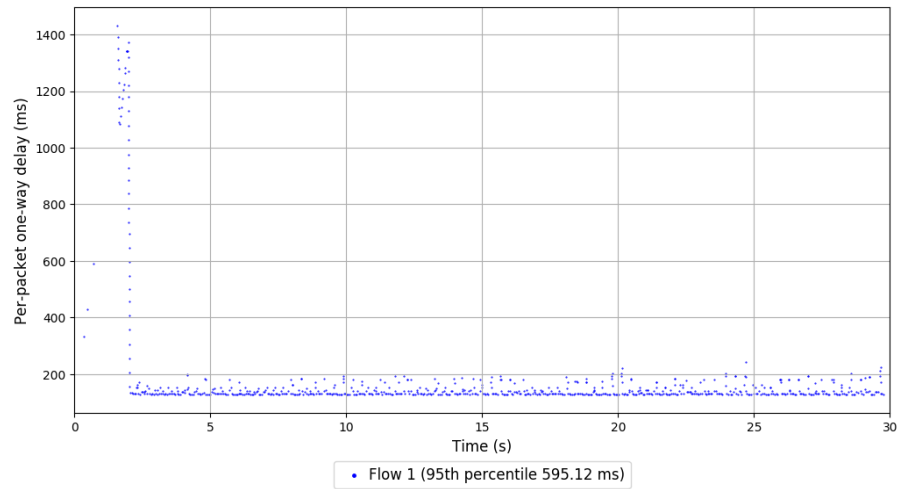
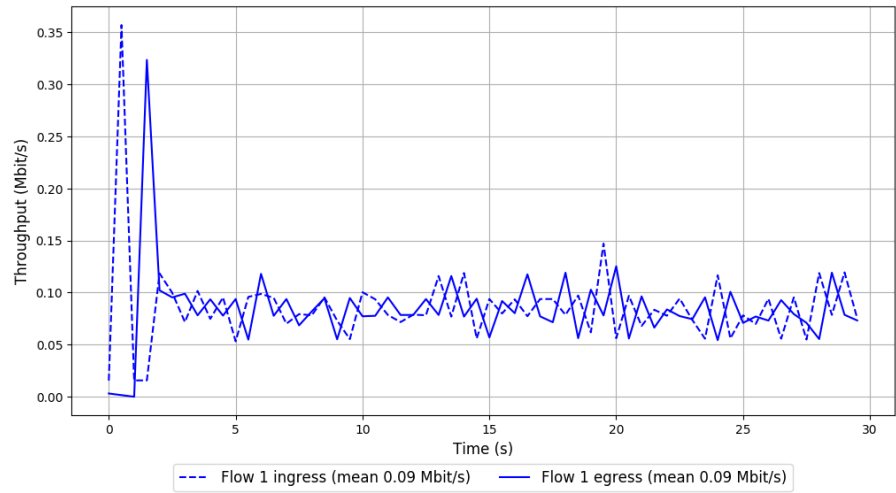


Run 2: Statistics of Sprout

Start at: 2018-01-25 16:44:47
End at: 2018-01-25 16:45:17
Local clock offset: 0.628 ms
Remote clock offset: -0.532 ms

Below is generated by plot.py at 2018-01-25 18:18:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 595.117 ms
Loss rate: 2.28%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 595.117 ms
Loss rate: 2.28%

Run 2: Report of Sprout — Data Link

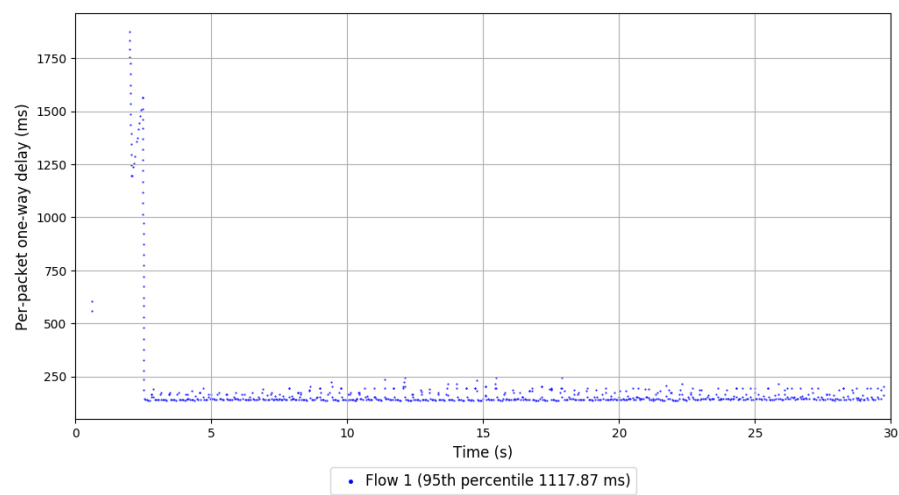
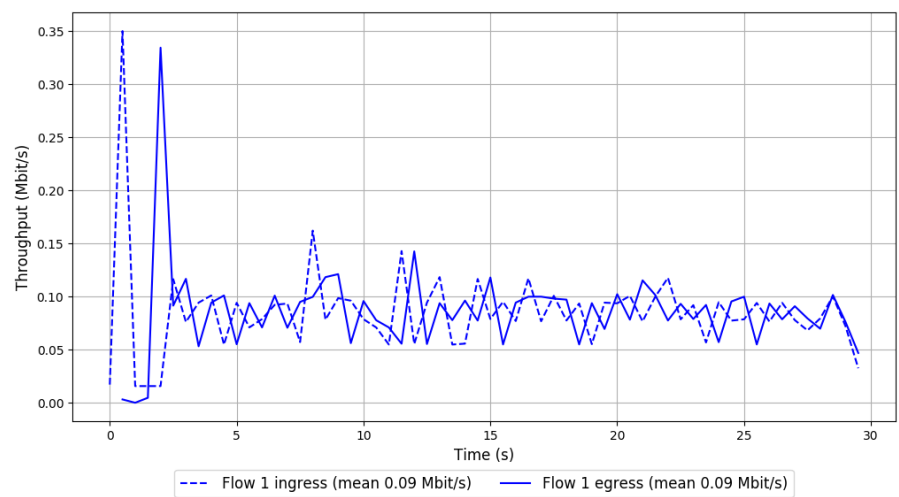


Run 3: Statistics of Sprout

Start at: 2018-01-25 17:03:47
End at: 2018-01-25 17:04:17
Local clock offset: 0.707 ms
Remote clock offset: -5.449 ms

Below is generated by plot.py at 2018-01-25 18:18:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 1117.867 ms
Loss rate: 1.19%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 1117.867 ms
Loss rate: 1.19%

Run 3: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2018-01-25 16:42:26

End at: 2018-01-25 16:42:56

Local clock offset: 0.634 ms

Remote clock offset: -0.138 ms

Below is generated by plot.py at 2018-01-25 18:18:34

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.46 Mbit/s

95th percentile per-packet one-way delay: 2098.625 ms

Loss rate: 3.63%

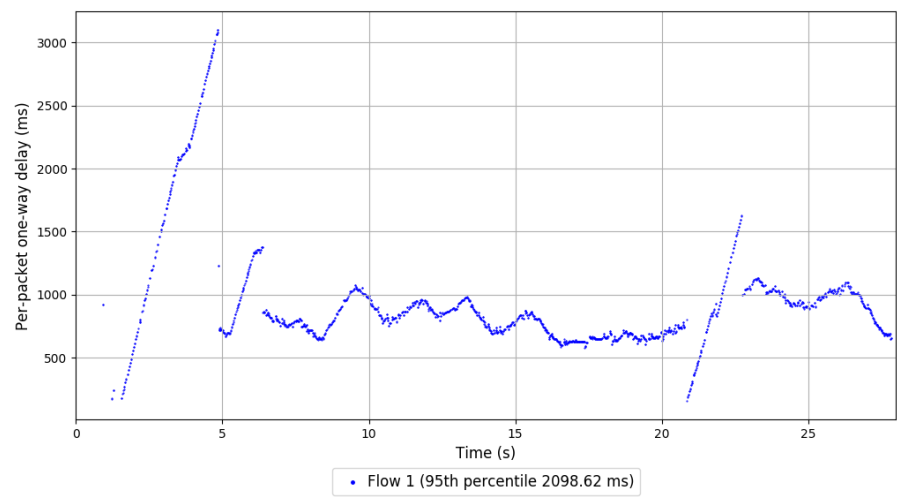
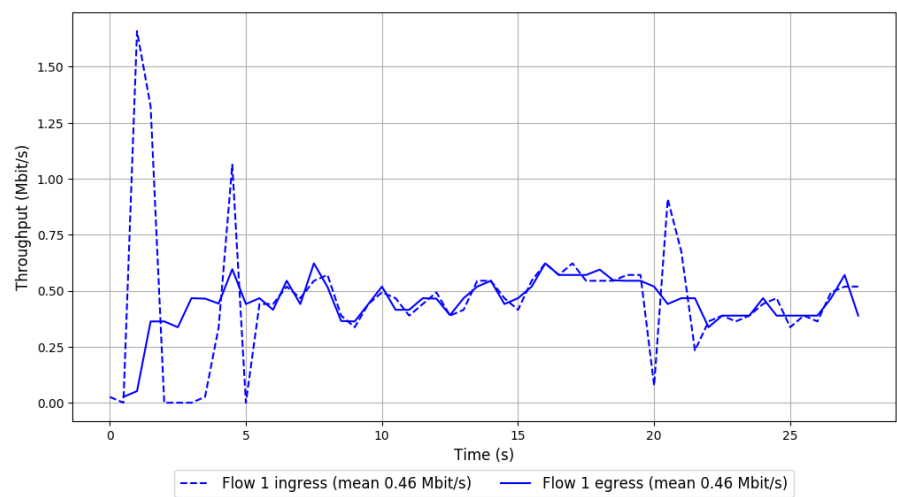
-- Flow 1:

Average throughput: 0.46 Mbit/s

95th percentile per-packet one-way delay: 2098.625 ms

Loss rate: 3.63%

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



Run 2: Statistics of TaoVA-100x

Start at: 2018-01-25 17:01:25

End at: 2018-01-25 17:01:55

Local clock offset: 0.693 ms

Remote clock offset: -4.554 ms

Below is generated by plot.py at 2018-01-25 18:18:34

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 1677.647 ms

Loss rate: 4.08%

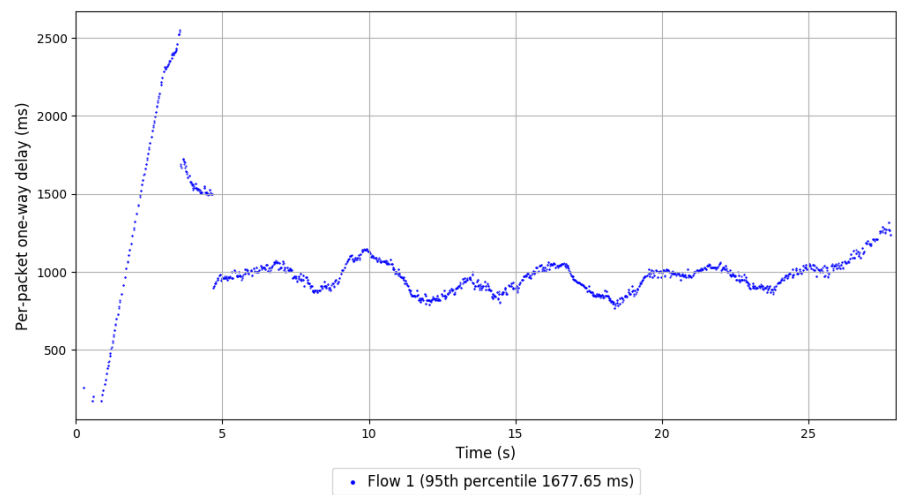
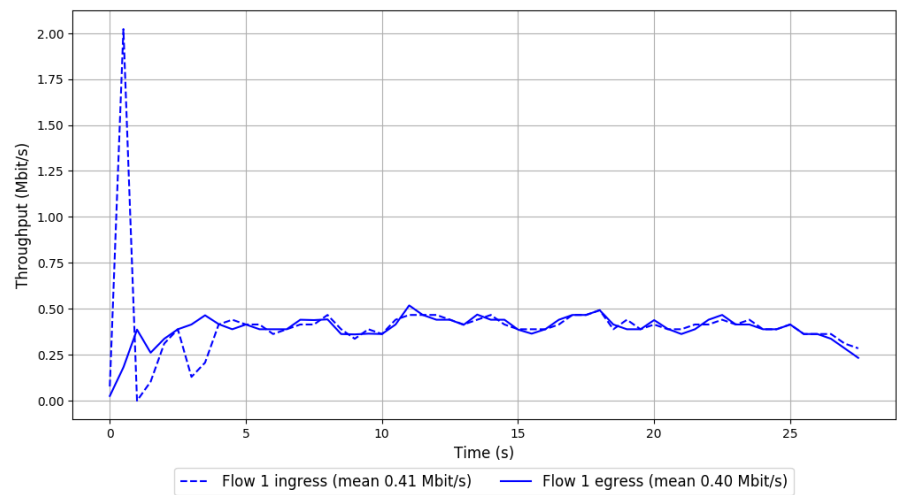
-- Flow 1:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 1677.647 ms

Loss rate: 4.08%

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-01-25 17:20:24

End at: 2018-01-25 17:20:54

Local clock offset: 0.695 ms

Remote clock offset: 0.918 ms

Below is generated by plot.py at 2018-01-25 18:18:34

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.47 Mbit/s

95th percentile per-packet one-way delay: 1464.187 ms

Loss rate: 3.25%

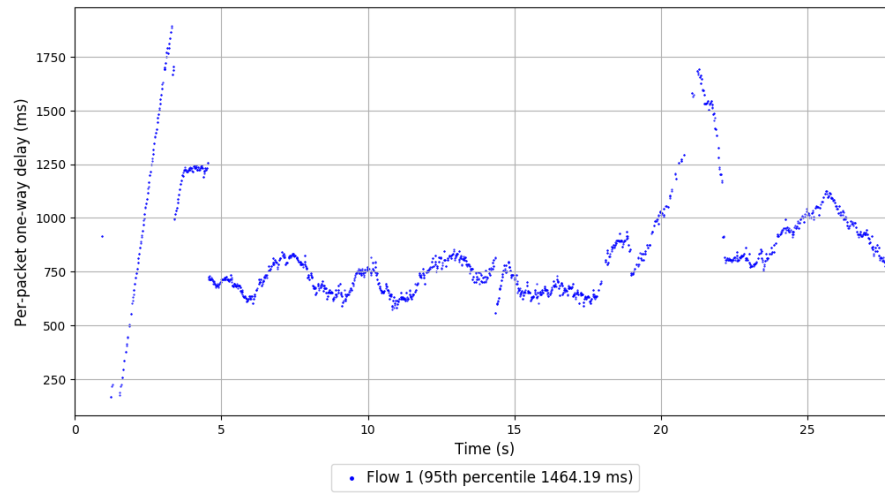
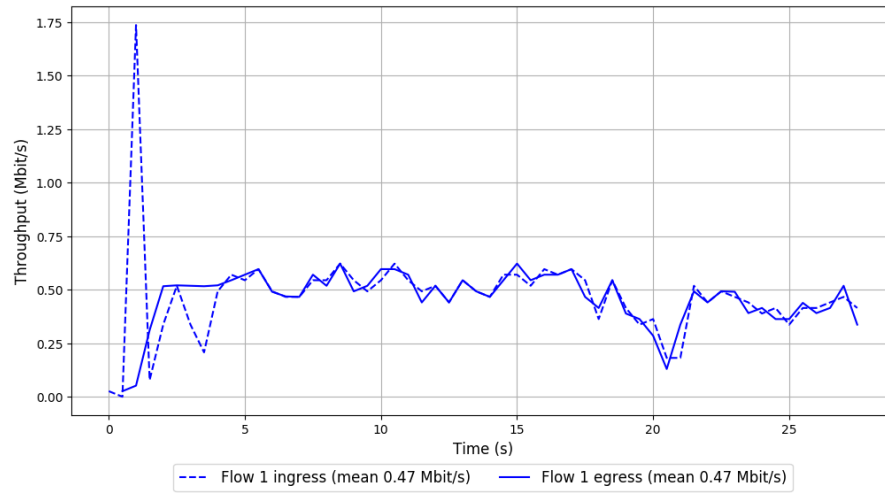
-- Flow 1:

Average throughput: 0.47 Mbit/s

95th percentile per-packet one-way delay: 1464.187 ms

Loss rate: 3.25%

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

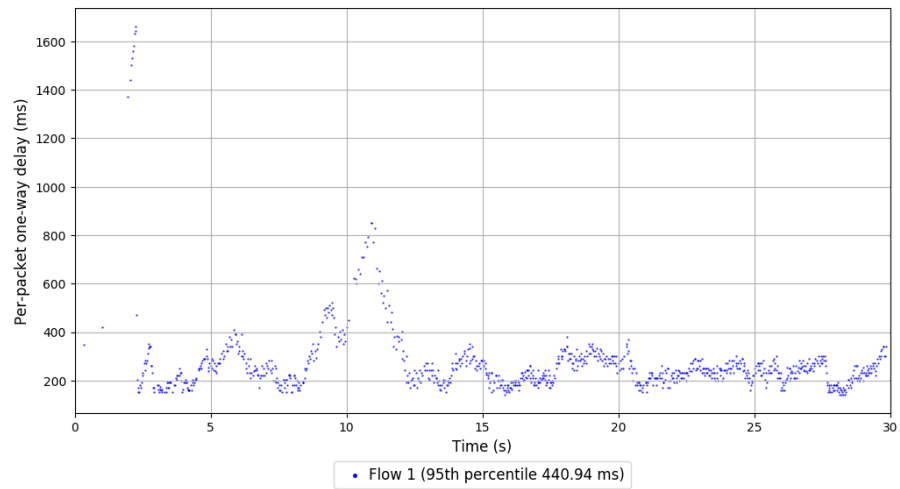
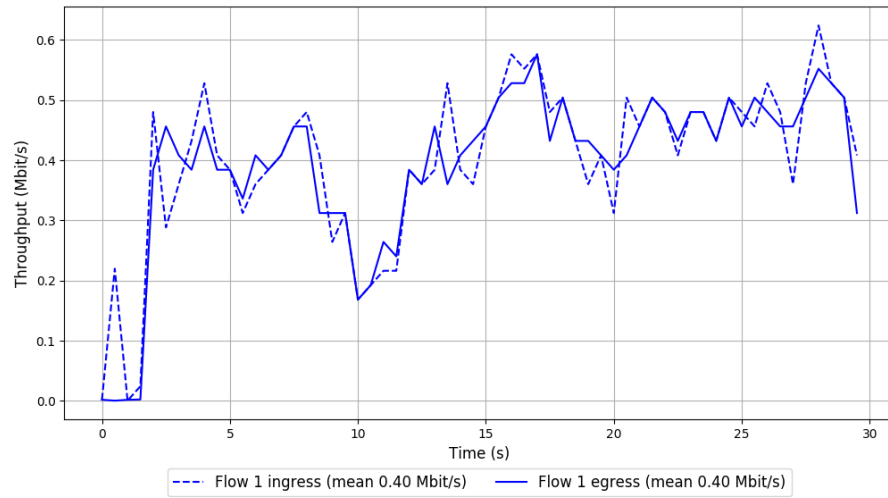


Run 1: Statistics of TCP Vegas

Start at: 2018-01-25 16:29:15
End at: 2018-01-25 16:29:45
Local clock offset: 0.65 ms
Remote clock offset: -0.524 ms

Below is generated by plot.py at 2018-01-25 18:18:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 440.943 ms
Loss rate: 1.60%
-- Flow 1:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 440.943 ms
Loss rate: 1.60%

Run 1: Report of TCP Vegas — Data Link

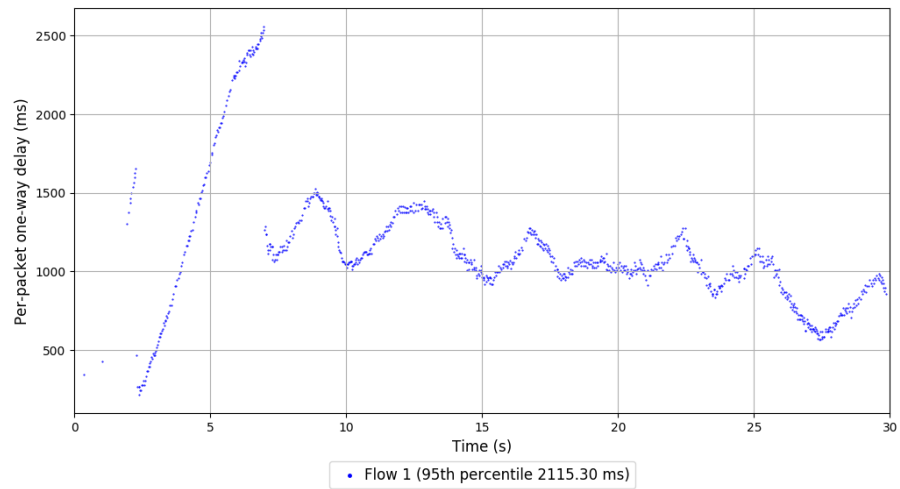
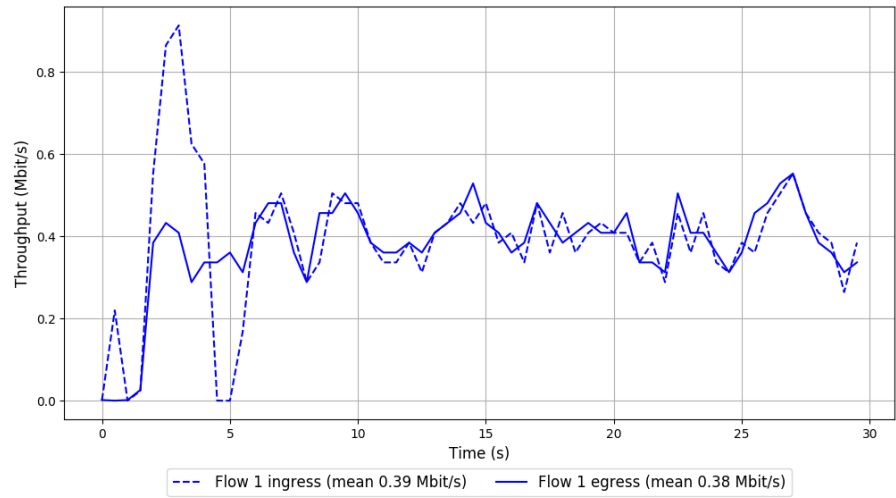


Run 2: Statistics of TCP Vegas

Start at: 2018-01-25 16:48:19
End at: 2018-01-25 16:48:49
Local clock offset: 0.637 ms
Remote clock offset: -0.433 ms

Below is generated by plot.py at 2018-01-25 18:18:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 2115.301 ms
Loss rate: 2.88%
-- Flow 1:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 2115.301 ms
Loss rate: 2.88%

Run 2: Report of TCP Vegas — Data Link

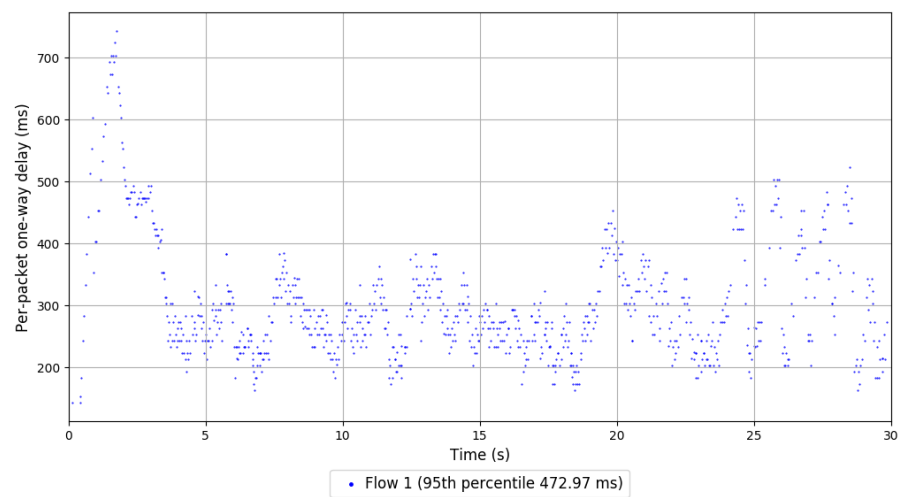
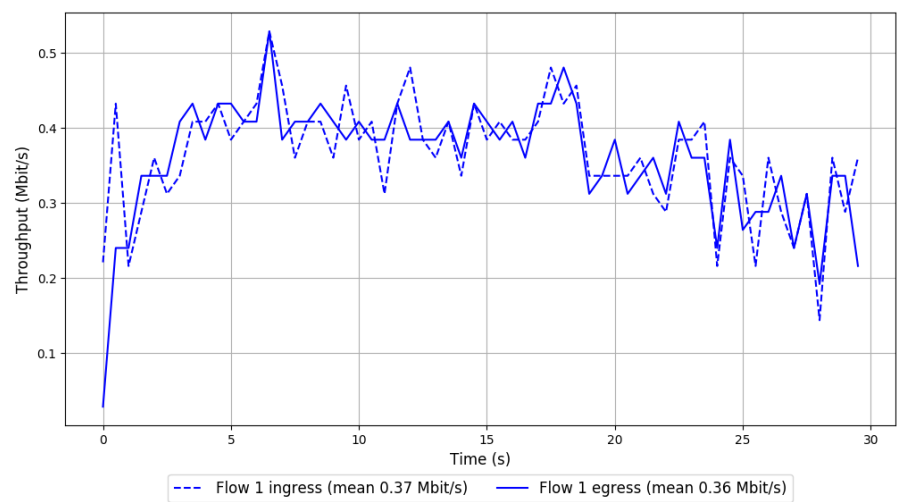


Run 3: Statistics of TCP Vegas

Start at: 2018-01-25 17:07:21
End at: 2018-01-25 17:07:51
Local clock offset: 0.719 ms
Remote clock offset: -5.414 ms

Below is generated by plot.py at 2018-01-25 18:18:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 472.967 ms
Loss rate: 1.21%
-- Flow 1:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 472.967 ms
Loss rate: 1.21%

Run 3: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2018-01-25 16:28:05

End at: 2018-01-25 16:28:35

Local clock offset: 0.654 ms

Remote clock offset: -5.91 ms

Below is generated by plot.py at 2018-01-25 18:18:34

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.49 Mbit/s

95th percentile per-packet one-way delay: 2228.242 ms

Loss rate: 4.29%

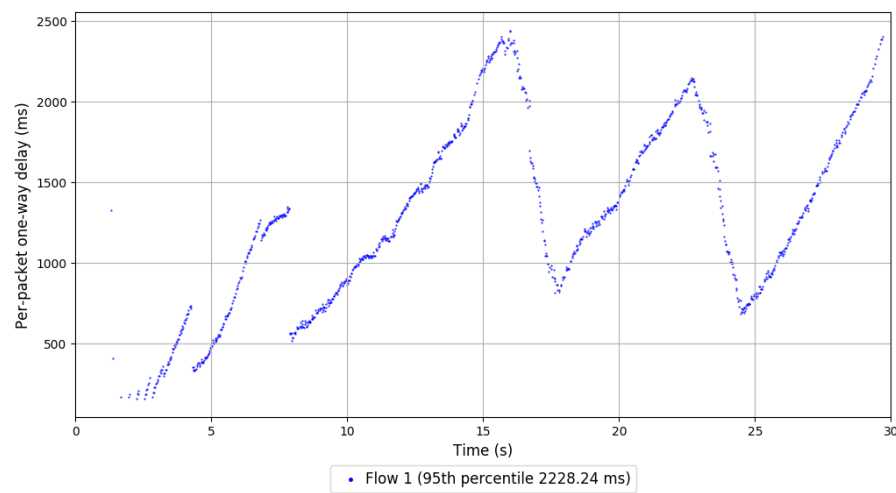
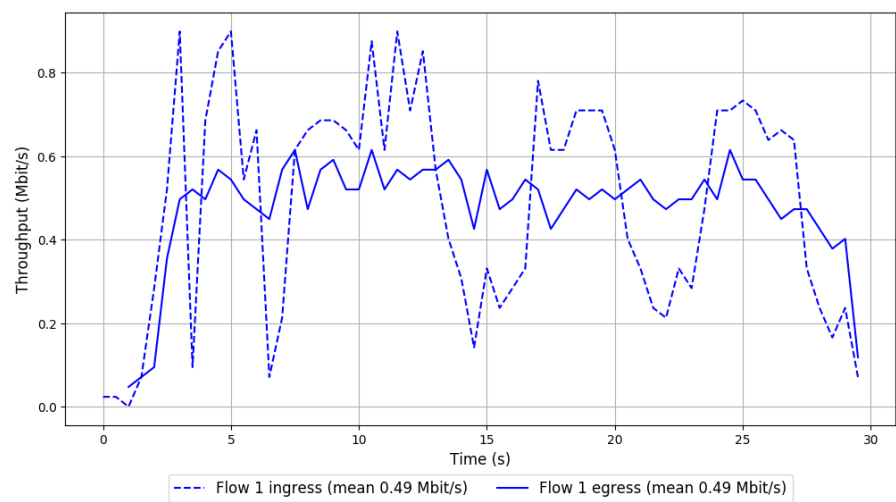
-- Flow 1:

Average throughput: 0.49 Mbit/s

95th percentile per-packet one-way delay: 2228.242 ms

Loss rate: 4.29%

Run 1: Report of Verus — Data Link

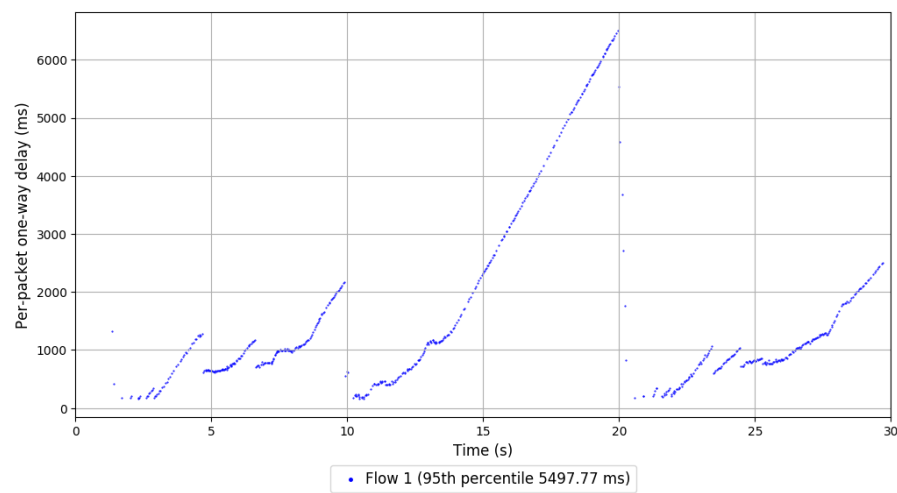
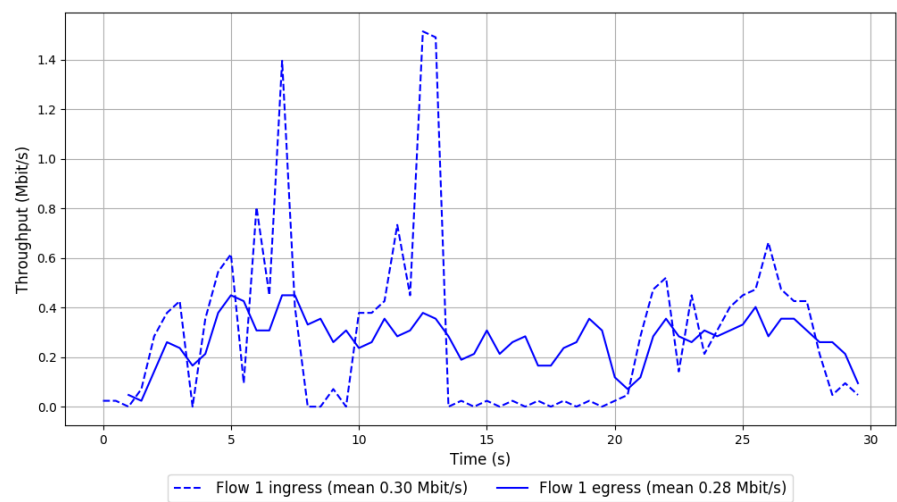


Run 2: Statistics of Verus

Start at: 2018-01-25 16:47:09
End at: 2018-01-25 16:47:39
Local clock offset: 0.649 ms
Remote clock offset: -5.765 ms

Below is generated by plot.py at 2018-01-25 18:18:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 5497.775 ms
Loss rate: 10.47%
-- Flow 1:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 5497.775 ms
Loss rate: 10.47%

Run 2: Report of Verus — Data Link

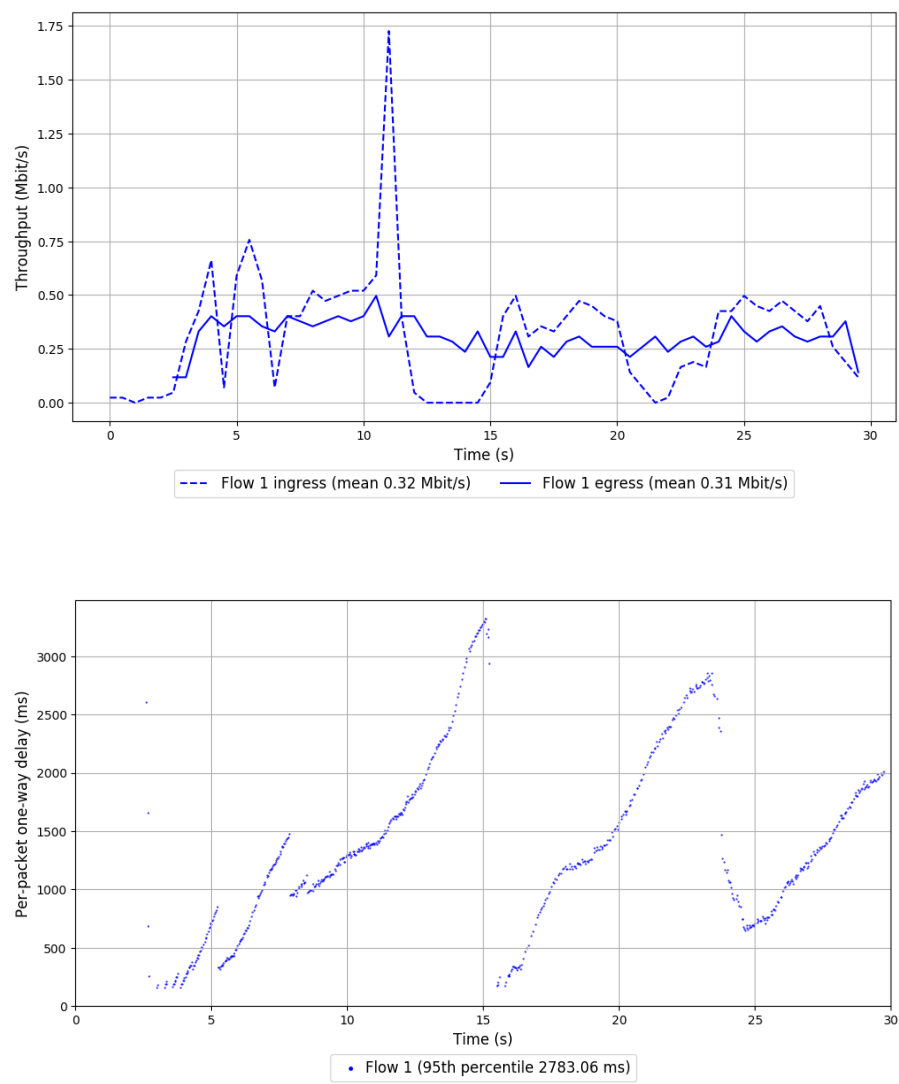


Run 3: Statistics of Verus

Start at: 2018-01-25 17:06:08
End at: 2018-01-25 17:06:38
Local clock offset: 0.614 ms
Remote clock offset: -5.463 ms

Below is generated by plot.py at 2018-01-25 18:18:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 2783.061 ms
Loss rate: 11.06%
-- Flow 1:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 2783.061 ms
Loss rate: 11.06%

Run 3: Report of Verus — Data Link



Run 1: Statistics of Copa

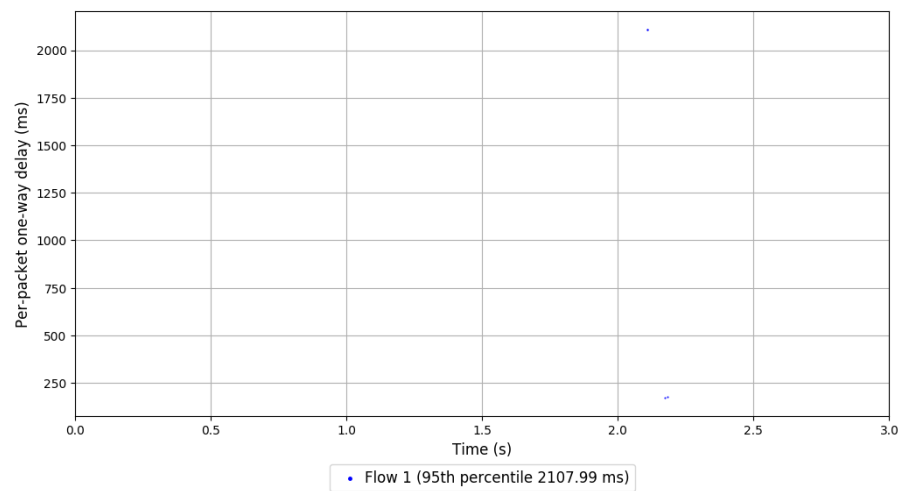
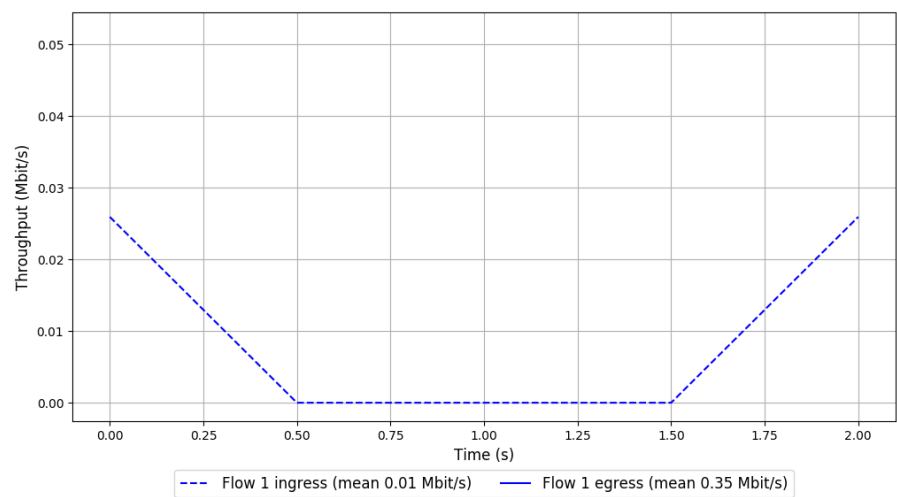
Start at: 2018-01-25 16:35:09

End at: 2018-01-25 16:35:39

Local clock offset: 0.614 ms

Remote clock offset: -4.831 ms

Run 1: Report of Copa — Data Link

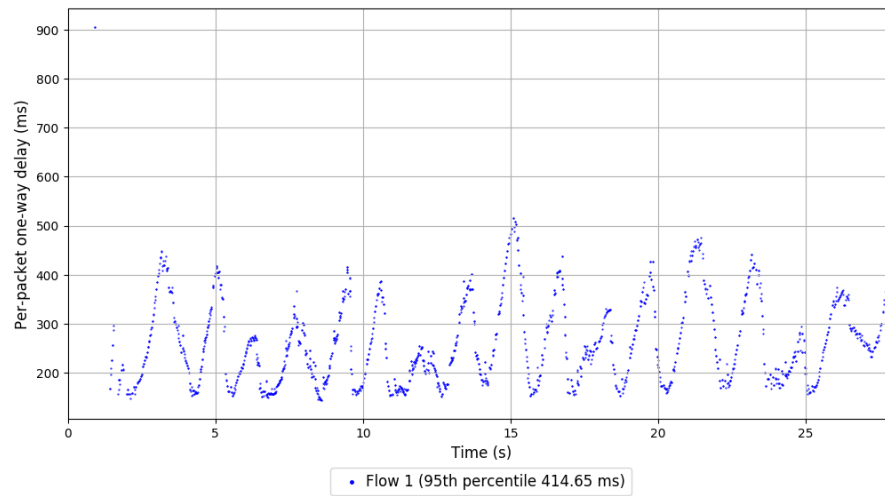
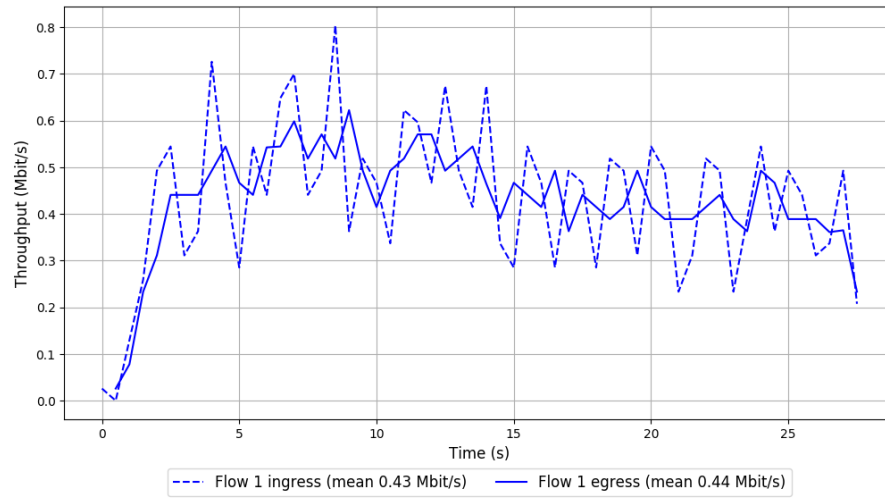


Run 2: Statistics of Copa

Start at: 2018-01-25 16:54:17
End at: 2018-01-25 16:54:47
Local clock offset: 0.666 ms
Remote clock offset: -4.703 ms

Below is generated by plot.py at 2018-01-25 18:18:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 414.655 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 414.655 ms
Loss rate: 1.18%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-01-25 17:13:20

End at: 2018-01-25 17:13:50

Local clock offset: 0.644 ms

Remote clock offset: -0.92 ms

Below is generated by plot.py at 2018-01-25 18:18:34

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.39 Mbit/s

95th percentile per-packet one-way delay: 662.058 ms

Loss rate: 1.73%

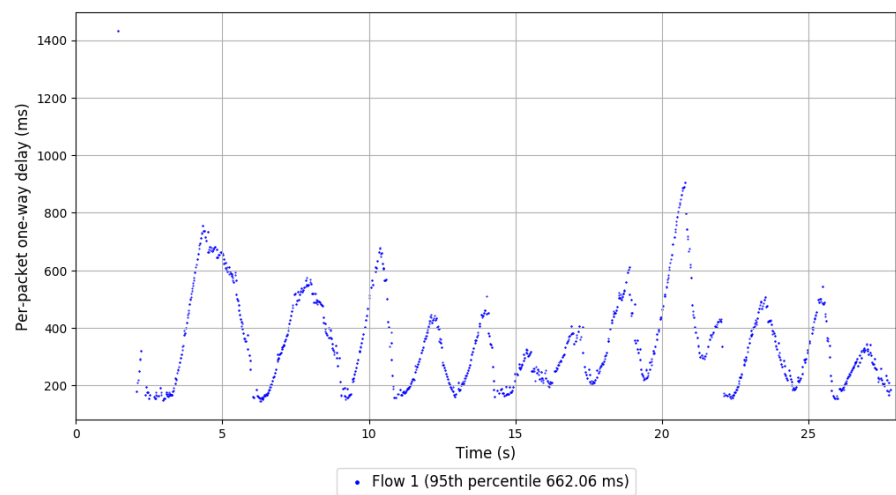
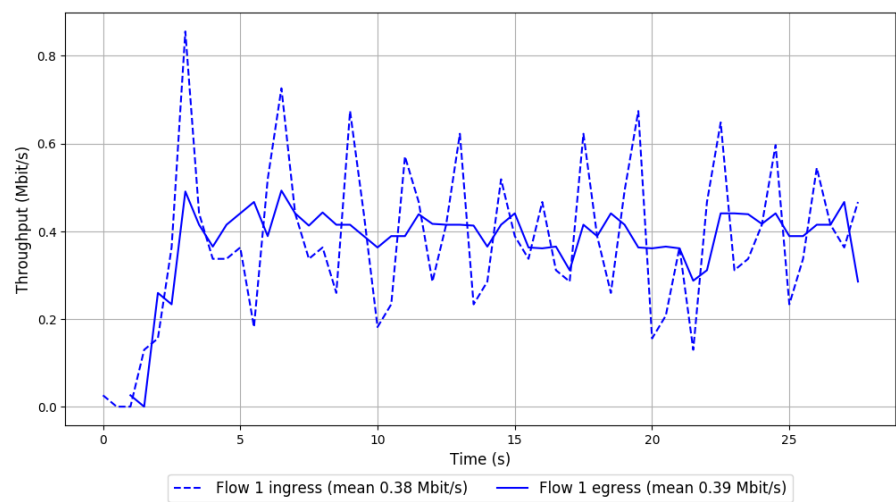
-- Flow 1:

Average throughput: 0.39 Mbit/s

95th percentile per-packet one-way delay: 662.058 ms

Loss rate: 1.73%

Run 3: Report of Copa — Data Link

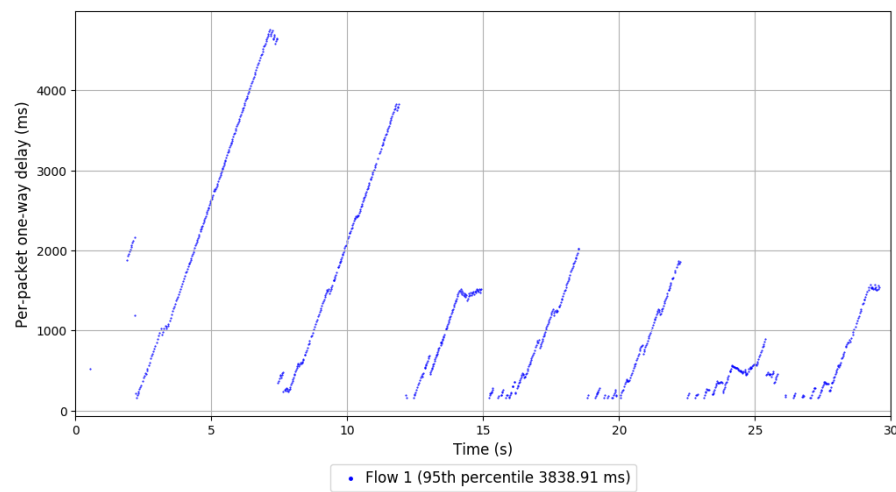
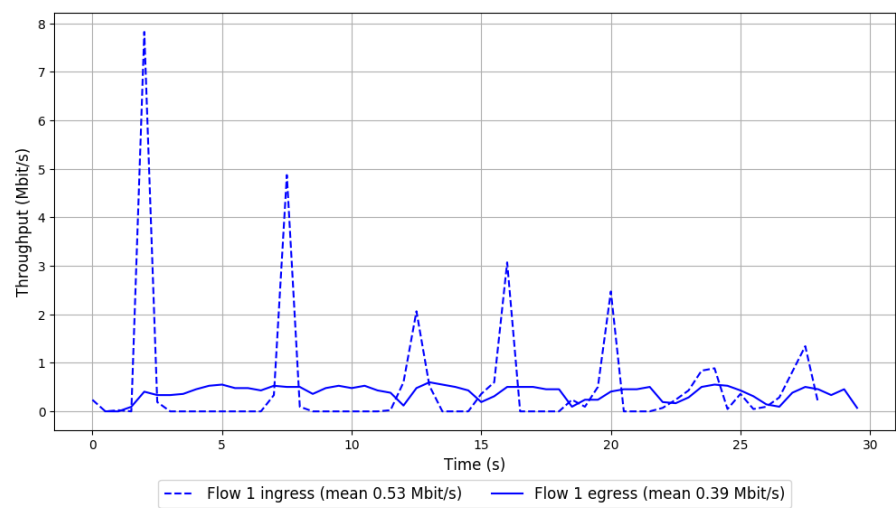


Run 1: Statistics of Indigo-2-256

Start at: 2018-01-25 16:40:05
End at: 2018-01-25 16:40:35
Local clock offset: 0.632 ms
Remote clock offset: -5.563 ms

Below is generated by plot.py at 2018-01-25 18:18:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 3838.907 ms
Loss rate: 24.01%
-- Flow 1:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 3838.907 ms
Loss rate: 24.01%

Run 1: Report of Indigo-2-256 — Data Link

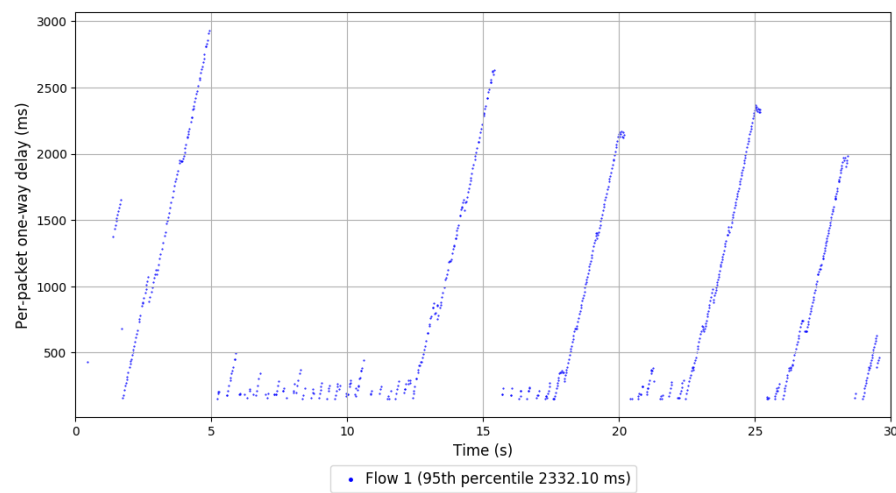
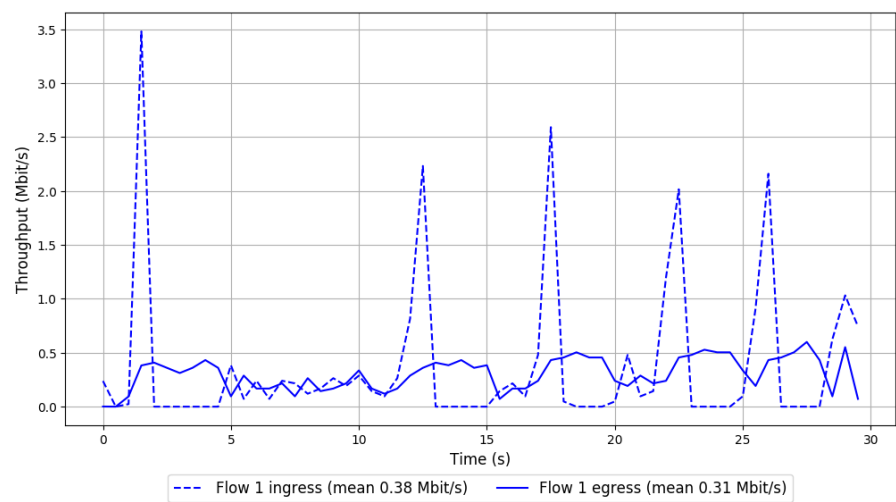


Run 2: Statistics of Indigo-2-256

Start at: 2018-01-25 16:59:01
End at: 2018-01-25 16:59:31
Local clock offset: 0.684 ms
Remote clock offset: -0.226 ms

Below is generated by plot.py at 2018-01-25 18:18:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 2332.098 ms
Loss rate: 19.68%
-- Flow 1:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 2332.098 ms
Loss rate: 19.68%

Run 2: Report of Indigo-2-256 — Data Link



Run 3: Statistics of Indigo-2-256

Start at: 2018-01-25 17:18:02

End at: 2018-01-25 17:18:32

Local clock offset: 0.704 ms

Remote clock offset: -0.93 ms

Below is generated by plot.py at 2018-01-25 18:18:34

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.33 Mbit/s

95th percentile per-packet one-way delay: 3308.792 ms

Loss rate: 19.61%

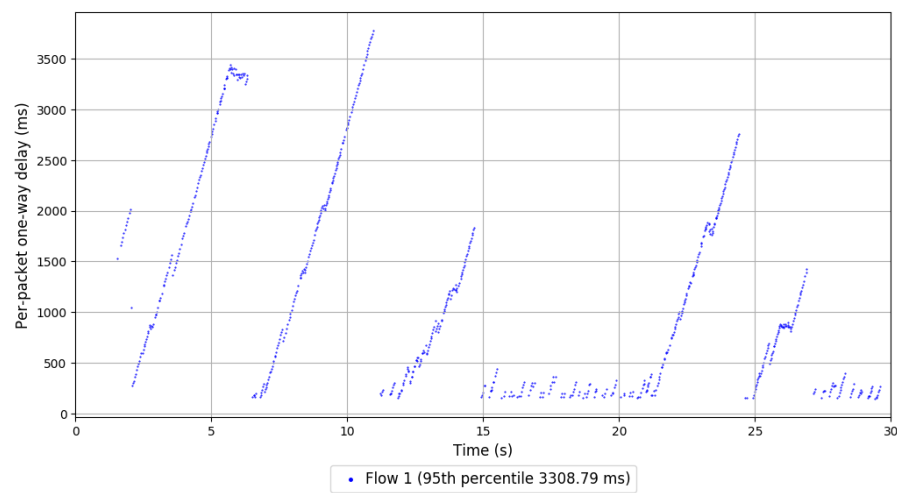
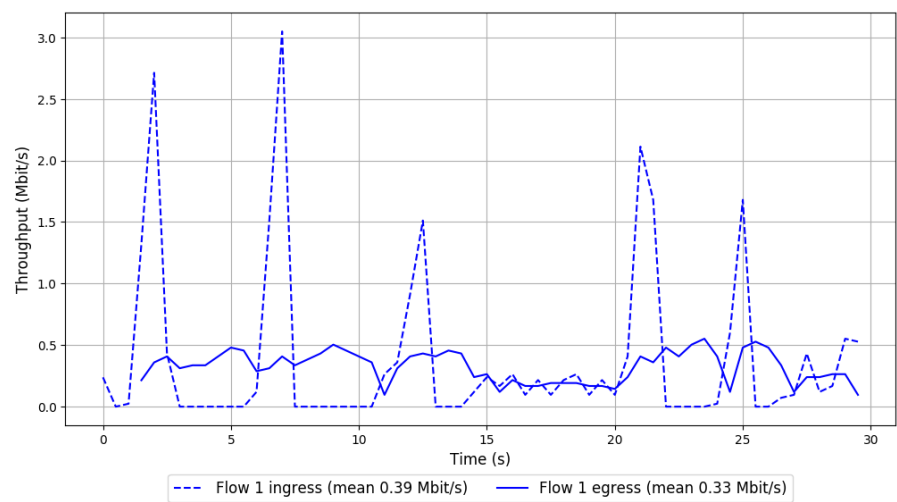
-- Flow 1:

Average throughput: 0.33 Mbit/s

95th percentile per-packet one-way delay: 3308.792 ms

Loss rate: 19.61%

Run 3: Report of Indigo-2-256 — Data Link



Run 1: Statistics of Indigo-1-32

Start at: 2018-01-25 16:24:33

End at: 2018-01-25 16:25:03

Local clock offset: 0.685 ms

Remote clock offset: 0.299 ms

Below is generated by plot.py at 2018-01-25 18:18:34

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.35 Mbit/s

95th percentile per-packet one-way delay: 2367.796 ms

Loss rate: 6.34%

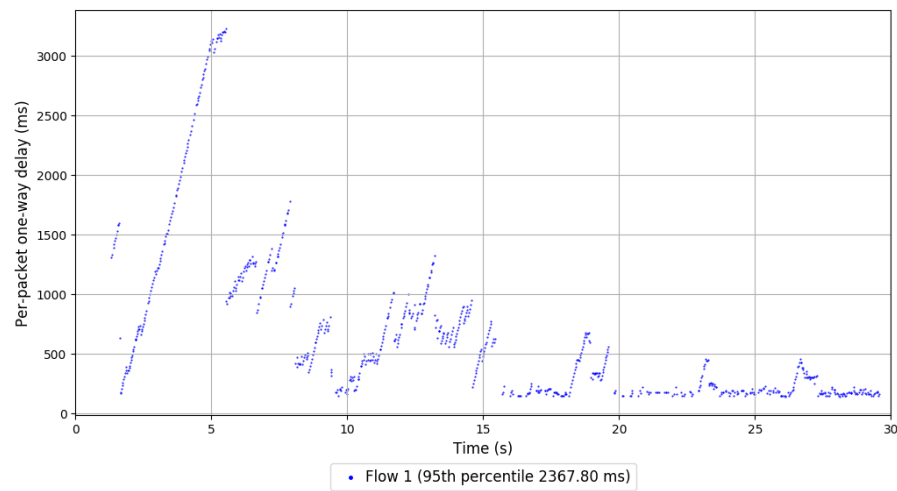
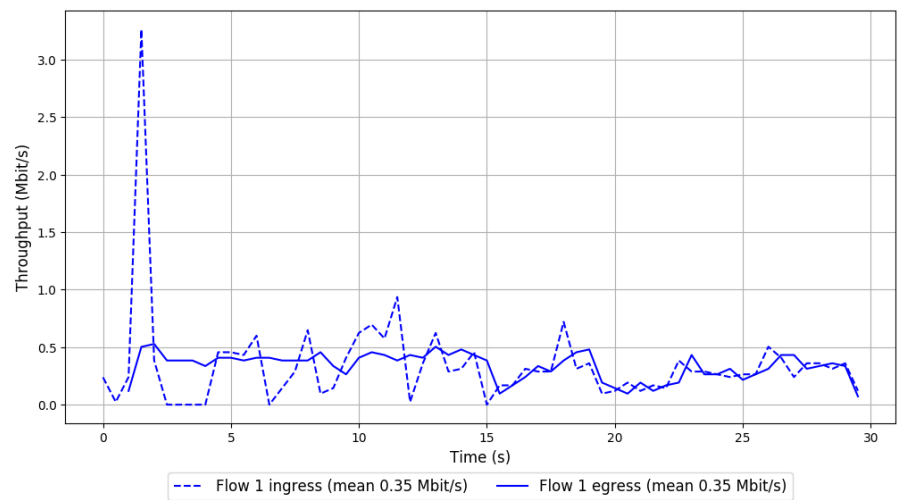
-- Flow 1:

Average throughput: 0.35 Mbit/s

95th percentile per-packet one-way delay: 2367.796 ms

Loss rate: 6.34%

Run 1: Report of Indigo-1-32 — Data Link

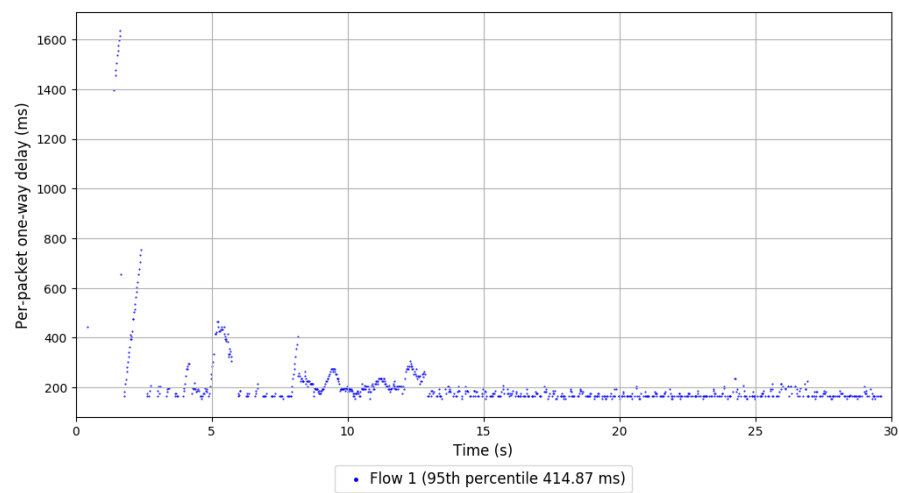
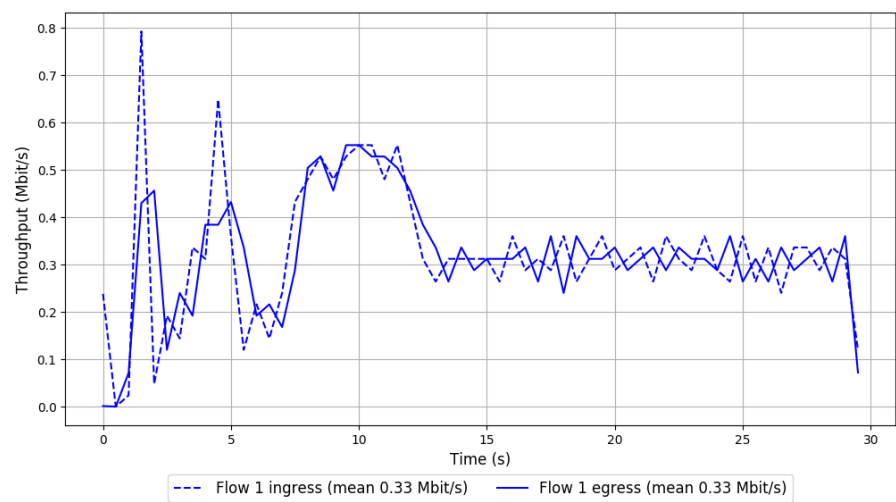


Run 2: Statistics of Indigo-1-32

Start at: 2018-01-25 16:43:37
End at: 2018-01-25 16:44:07
Local clock offset: 0.627 ms
Remote clock offset: -5.457 ms

Below is generated by plot.py at 2018-01-25 18:18:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 414.868 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 414.868 ms
Loss rate: 1.23%

Run 2: Report of Indigo-1-32 — Data Link

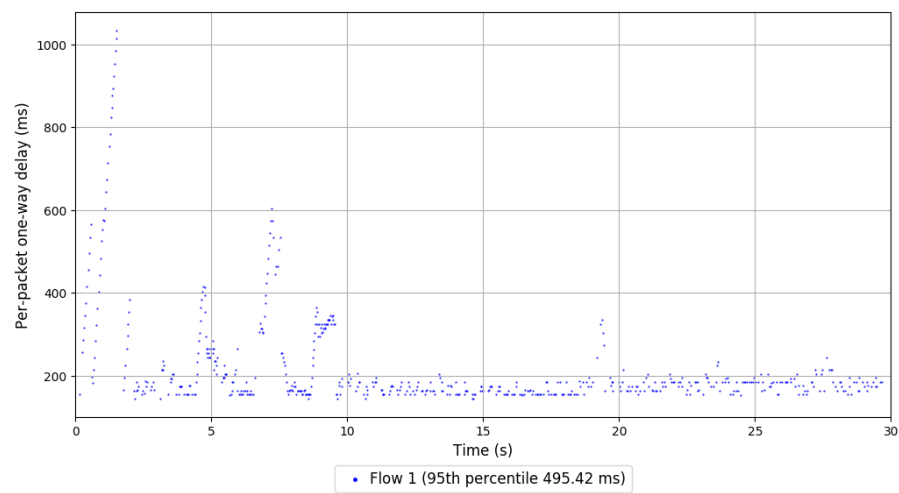
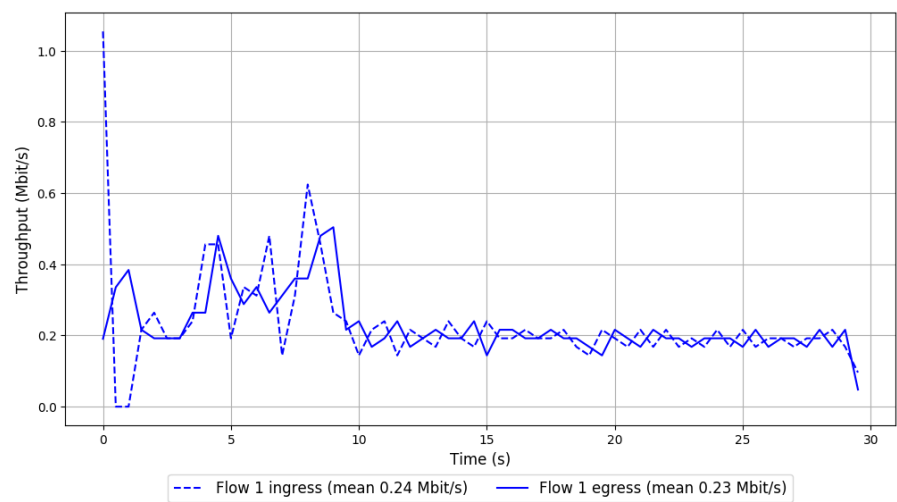


Run 3: Statistics of Indigo-1-32

Start at: 2018-01-25 17:02:37
End at: 2018-01-25 17:03:07
Local clock offset: 0.706 ms
Remote clock offset: -1.143 ms

Below is generated by plot.py at 2018-01-25 18:18:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 495.420 ms
Loss rate: 1.54%
-- Flow 1:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 495.420 ms
Loss rate: 1.54%

Run 3: Report of Indigo-1-32 — Data Link



Run 1: Statistics of Indigo-1-128

Start at: 2018-01-25 16:31:37

End at: 2018-01-25 16:32:07

Local clock offset: 0.559 ms

Remote clock offset: -0.512 ms

Below is generated by plot.py at 2018-01-25 18:18:34

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 1029.205 ms

Loss rate: 2.59%

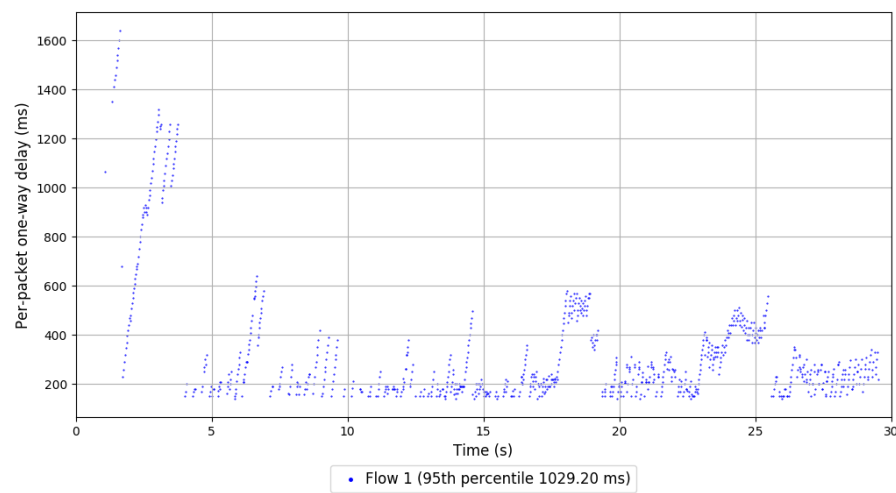
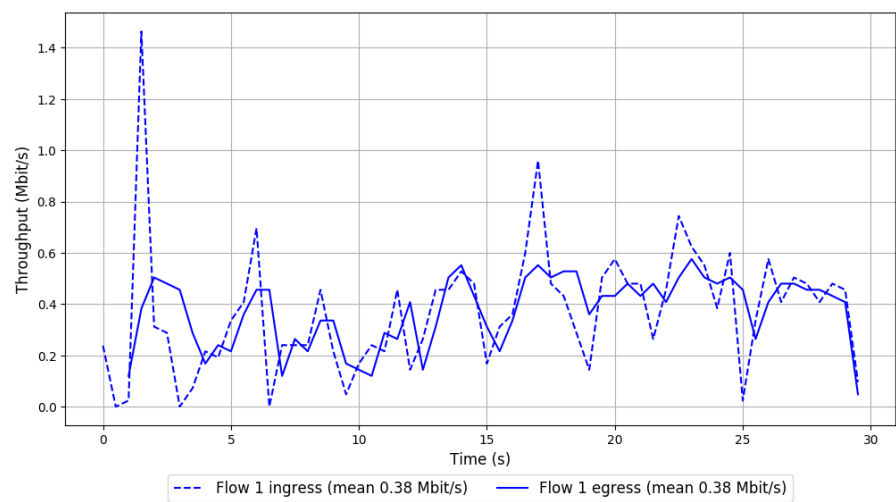
-- Flow 1:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 1029.205 ms

Loss rate: 2.59%

Run 1: Report of Indigo-1-128 — Data Link

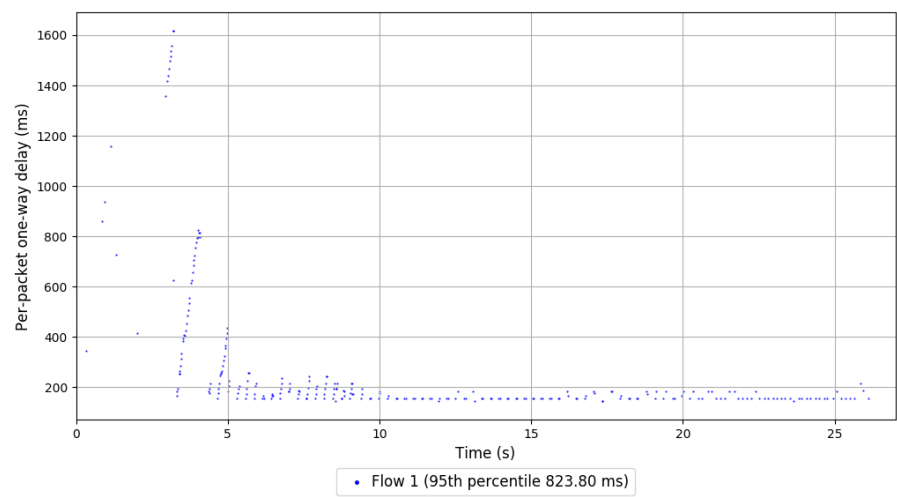
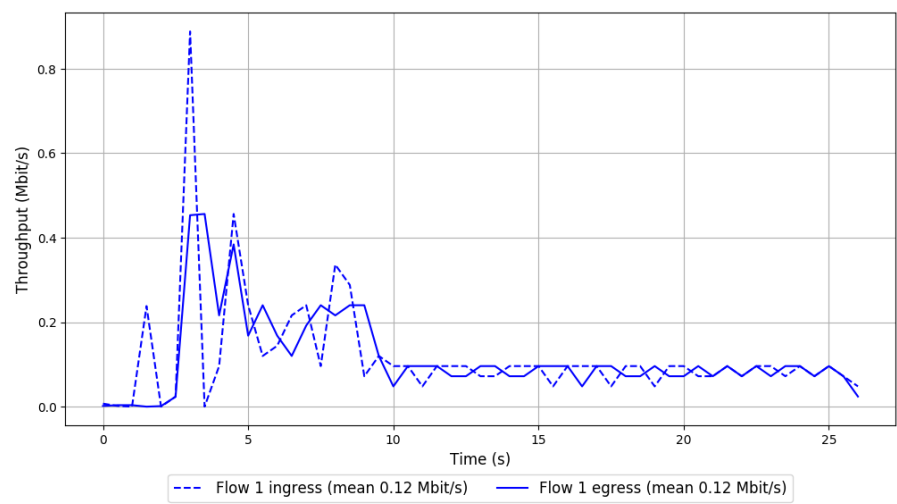


Run 2: Statistics of Indigo-1-128

Start at: 2018-01-25 16:50:41
End at: 2018-01-25 16:51:11
Local clock offset: 0.581 ms
Remote clock offset: -5.632 ms

Below is generated by plot.py at 2018-01-25 18:18:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 823.801 ms
Loss rate: 2.28%
-- Flow 1:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 823.801 ms
Loss rate: 2.28%

Run 2: Report of Indigo-1-128 — Data Link



Run 3: Statistics of Indigo-1-128

Start at: 2018-01-25 17:09:46

End at: 2018-01-25 17:10:16

Local clock offset: 0.715 ms

Remote clock offset: -0.134 ms

Below is generated by plot.py at 2018-01-25 18:18:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 1717.762 ms

Loss rate: 13.19%

-- Flow 1:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 1717.762 ms

Loss rate: 13.19%

Run 3: Report of Indigo-1-128 — Data Link

