

## Pantheon Report

Generated at 2017-09-22 09:31:54 (UTC).

Data path: China ppp0 (*remote*) → AWS Korea Ethernet (*local*).

Repeated the test of 13 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).

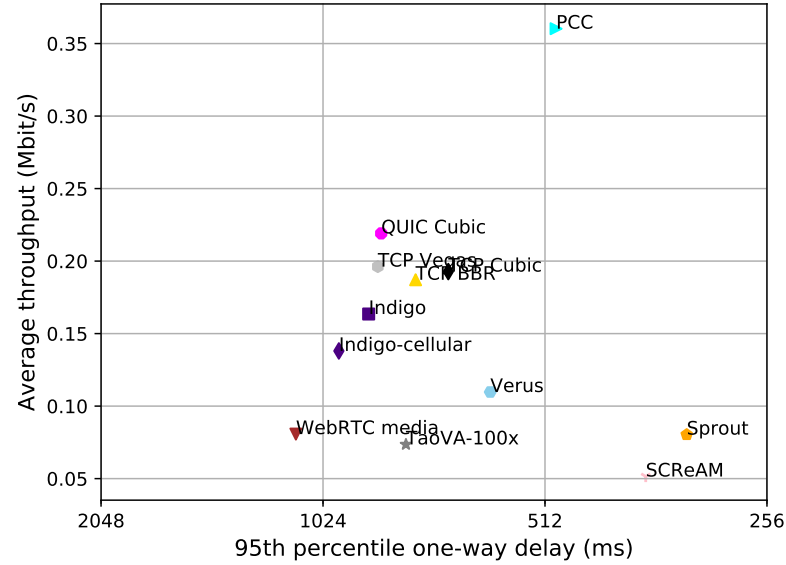
Tested BBR with qdisc of Fair Queuing (**fq**), and other schemes with the default Linux qdisc (**pfifo\_fast**).

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

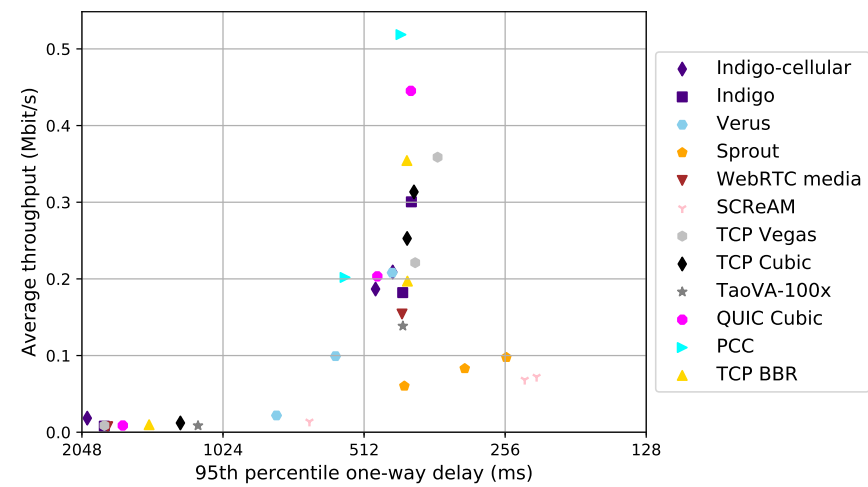
Git summary:

```
branch: indigos @ 46c7c812d4acb71eea4f5fb0b03b3657cea3062f
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/genericCC @ f7ca42f251bf49b432bb71de6d13fa903515c366
third_party/indigo @ b19f3730105f9aa95452552af924e3719b03cc55
third_party/indigo-cellular @ aee99e8eb842cb053f8c9a80e28cd256a930bbc2
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/indigo-no-cwnd @ 3e58442c04028a11d7b02456e137604633ba2d6c
third_party/indigo-no-delivery-rate @ 57caa40858b964906edff4876d5a7e5bfff666c5
third_party/indigo-no-queuing-delay @ 03455460fd1a8ffbdad86fabb936fdca204b80db
third_party/indigo-no-send-rate @ b39dfa6b2c5f19cb7cd89626cb4f5bb81f9fecda
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-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaeeb30b267cde681
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 China ppp0 to AWS Korea Ethernet, 3 runs of 30s each per scheme  
(mean of all runs by scheme)



test from China ppp0 to AWS Korea 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	0.19	766.92	30.37
TCP Cubic	3	0.19	692.47	23.75
LEDBAT	0	N/A	N/A	N/A
PCC	2	0.36	494.56	99.52
QUIC Cubic	3	0.22	853.93	45.31
SCReAM	3	0.05	373.82	15.20
WebRTC media	2	0.08	1114.58	48.63
Sprout	3	0.08	328.93	8.42
TaoVA-100x	2	0.08	790.41	62.02
TCP Vegas	3	0.20	862.94	21.28
Verus	3	0.11	607.40	47.71
Indigo	3	0.16	887.99	65.79
Indigo-cellular	3	0.14	974.55	42.45

Run 1: Statistics of TCP BBR

Start at: 2017-09-22 08:00:47

End at: 2017-09-22 08:01:17

Local clock offset: -2.569 ms

Remote clock offset: 0.056 ms

# Below is generated by plot.py at 2017-09-22 09:31:24

# Datalink statistics

-- Total of 1 flow:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 1472.149 ms

Loss rate: 57.69%

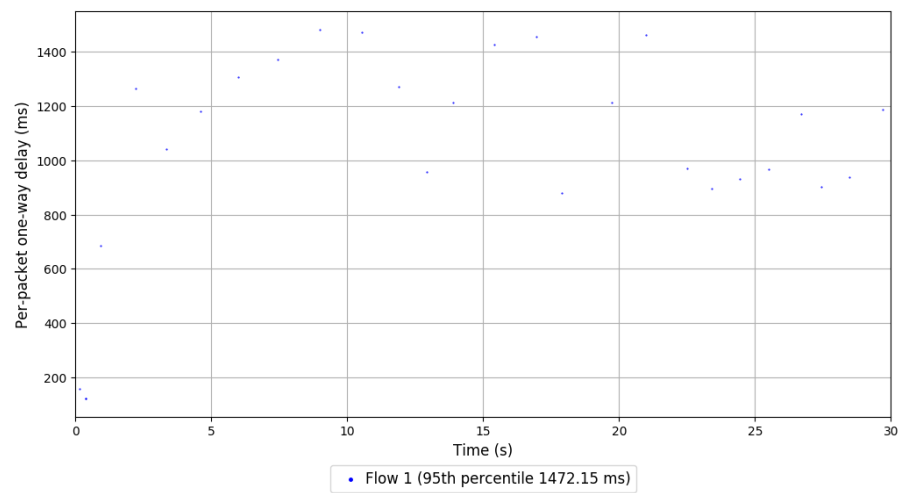
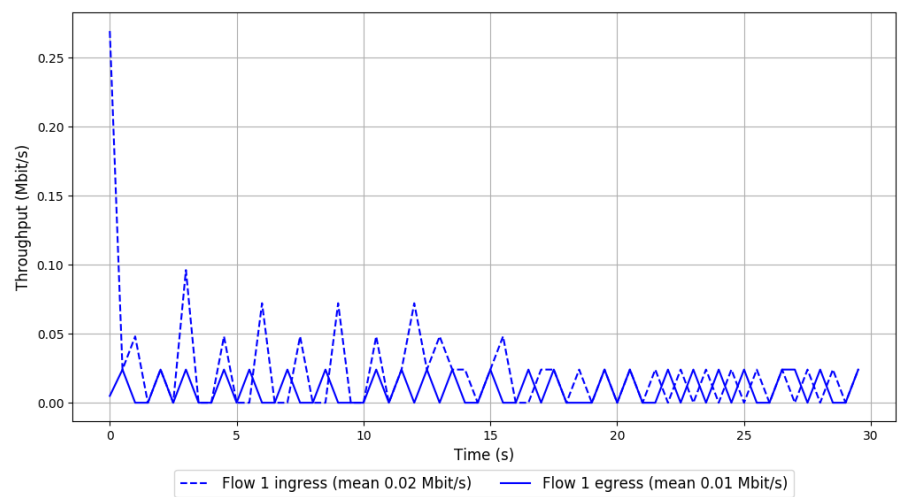
-- Flow 1:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 1472.149 ms

Loss rate: 57.69%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2017-09-22 08:18:19

End at: 2017-09-22 08:18:49

Local clock offset: -1.418 ms

Remote clock offset: 0.12 ms

# Below is generated by plot.py at 2017-09-22 09:31:25

# Datalink statistics

-- Total of 1 flow:

Average throughput: 0.20 Mbit/s

95th percentile per-packet one-way delay: 413.795 ms

Loss rate: 11.27%

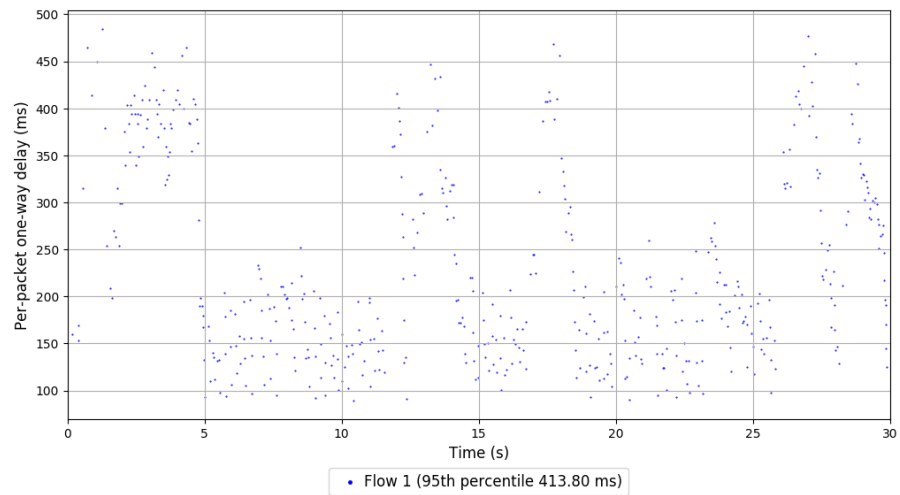
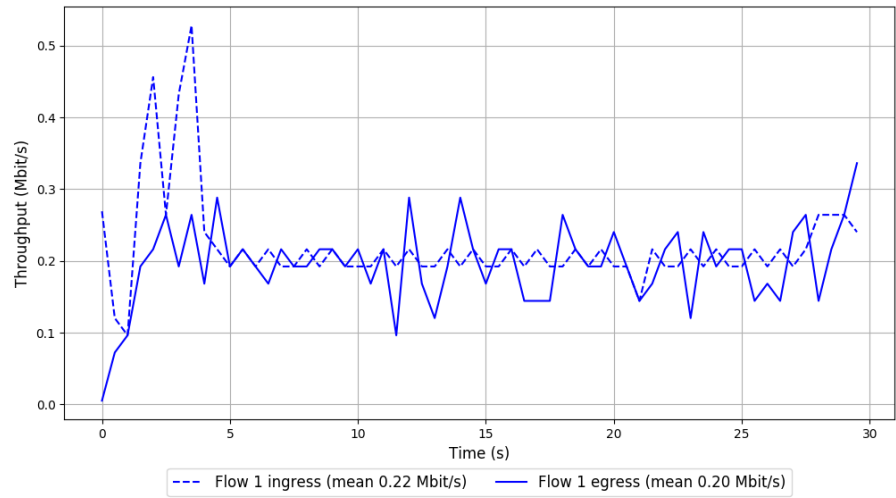
-- Flow 1:

Average throughput: 0.20 Mbit/s

95th percentile per-packet one-way delay: 413.795 ms

Loss rate: 11.27%

## Run 2: Report of TCP BBR — Data Link



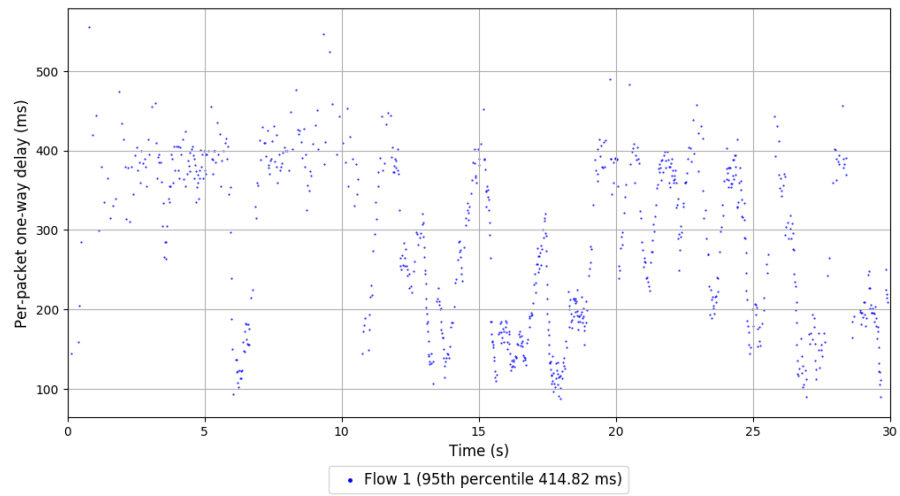
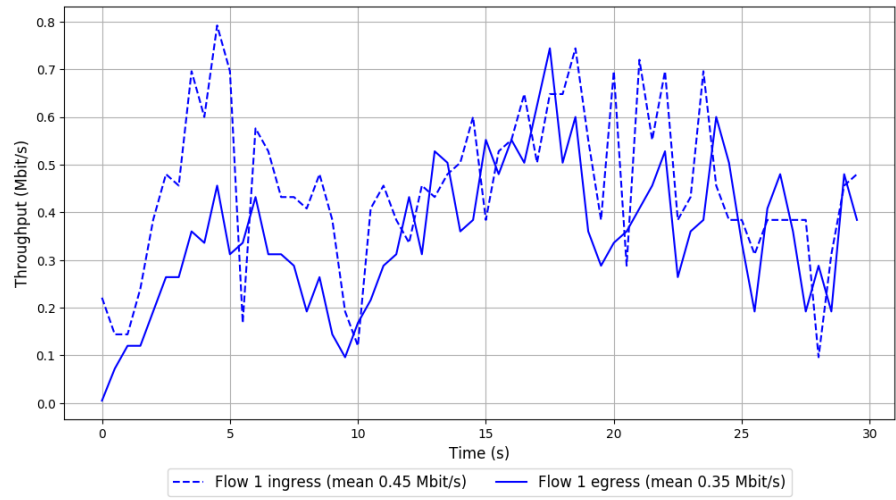
Run 3: Statistics of TCP BBR

Start at: 2017-09-22 08:33:42  
End at: 2017-09-22 08:34:12  
Local clock offset: -2.559 ms  
Remote clock offset: -0.323 ms

# Below is generated by plot.py at 2017-09-22 09:31:25  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 0.35 Mbit/s  
95th percentile per-packet one-way delay: 414.817 ms  
Loss rate: 22.14%  
-- Flow 1:  
Average throughput: 0.35 Mbit/s  
95th percentile per-packet one-way delay: 414.817 ms  
Loss rate: 22.14%



### Run 3: Report of TCP BBR — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2017-09-22 08:01:59

End at: 2017-09-22 08:02:29

Local clock offset: -1.361 ms

Remote clock offset: 0.318 ms

# Below is generated by plot.py at 2017-09-22 09:31:25

# Datalink statistics

-- Total of 1 flow:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 1262.360 ms

Loss rate: 55.89%

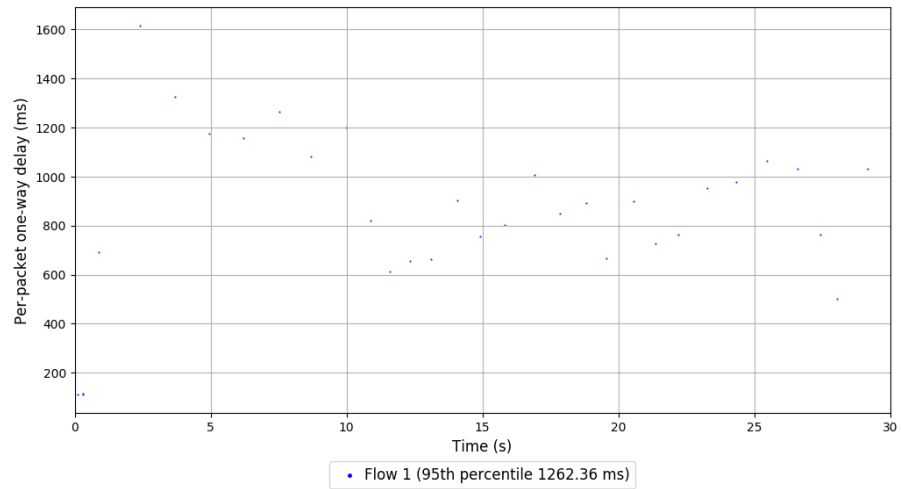
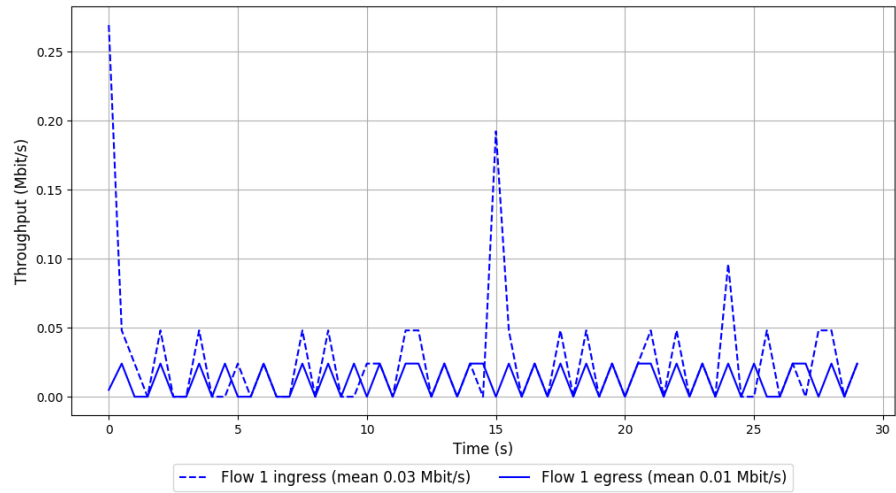
-- Flow 1:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 1262.360 ms

Loss rate: 55.89%

## Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2017-09-22 08:19:27

End at: 2017-09-22 08:19:57

Local clock offset: -2.366 ms

Remote clock offset: 0.246 ms

# Below is generated by plot.py at 2017-09-22 09:31:25

# Datalink statistics

-- Total of 1 flow:

Average throughput: 0.25 Mbit/s

95th percentile per-packet one-way delay: 414.368 ms

Loss rate: 8.61%

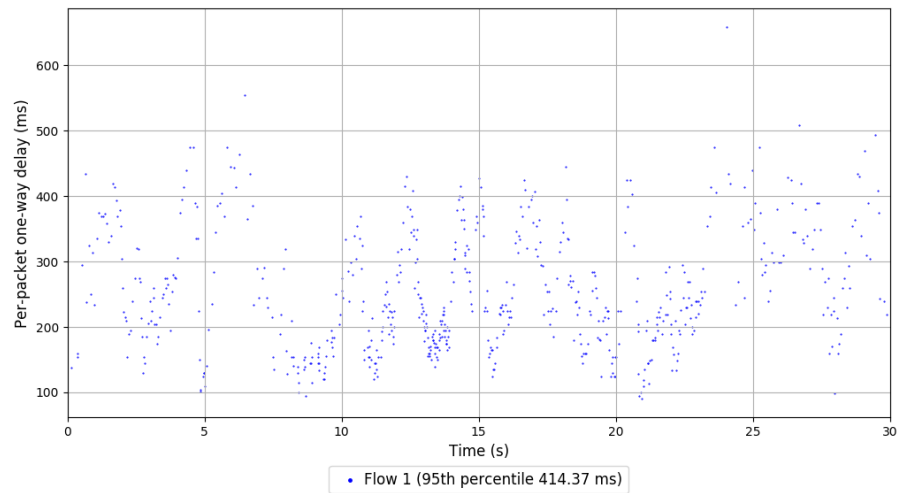
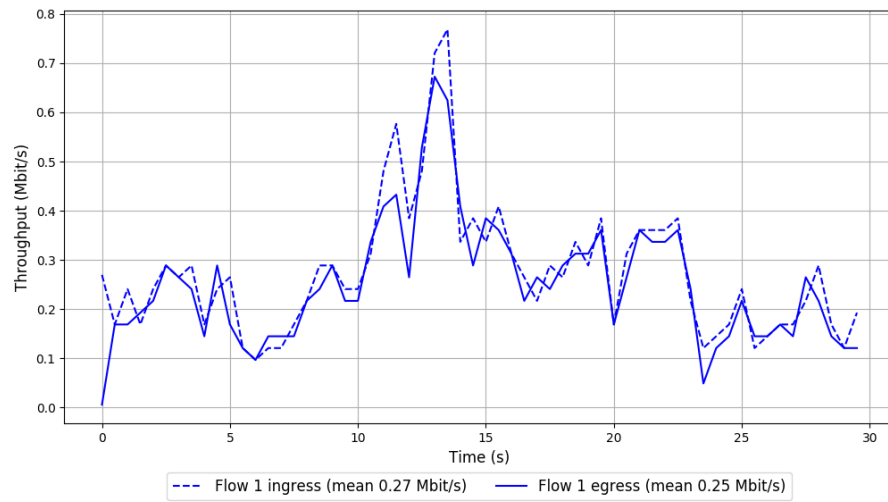
-- Flow 1:

Average throughput: 0.25 Mbit/s

95th percentile per-packet one-way delay: 414.368 ms

Loss rate: 8.61%

## Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2017-09-22 08:34:51

End at: 2017-09-22 08:35:21

Local clock offset: -2.582 ms

Remote clock offset: 0.089 ms

# Below is generated by plot.py at 2017-09-22 09:31:25

# Datalink statistics

-- Total of 1 flow:

Average throughput: 0.31 Mbit/s

95th percentile per-packet one-way delay: 400.688 ms

Loss rate: 6.76%

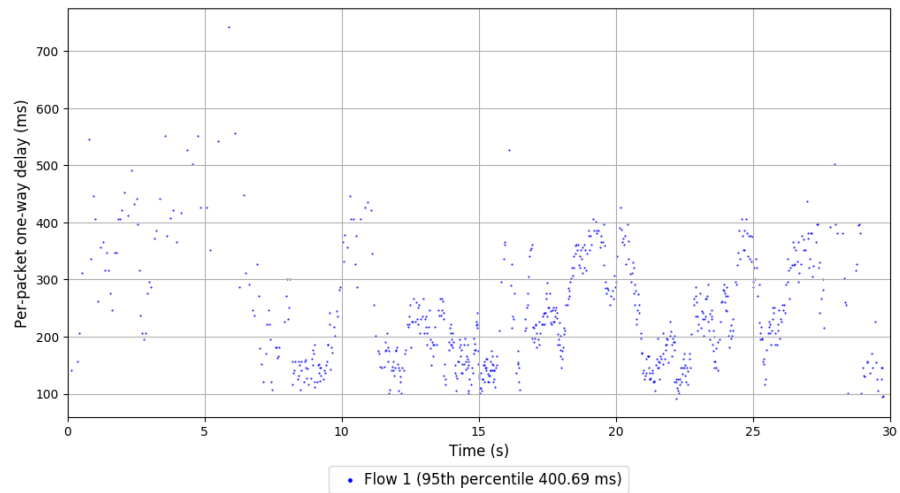
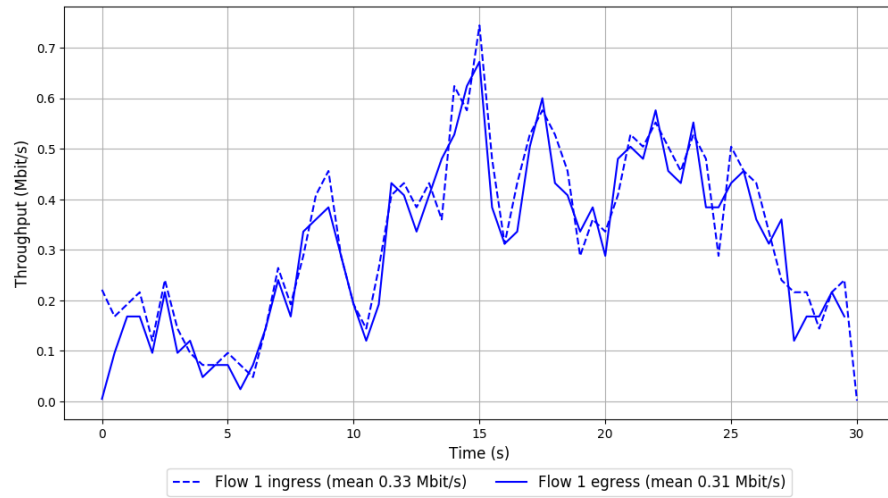
-- Flow 1:

Average throughput: 0.31 Mbit/s

95th percentile per-packet one-way delay: 400.688 ms

Loss rate: 6.76%

### Run 3: Report of TCP Cubic — Data Link



Run 1: Statistics of LEDBAT

Start at: 2017-09-22 08:13:32

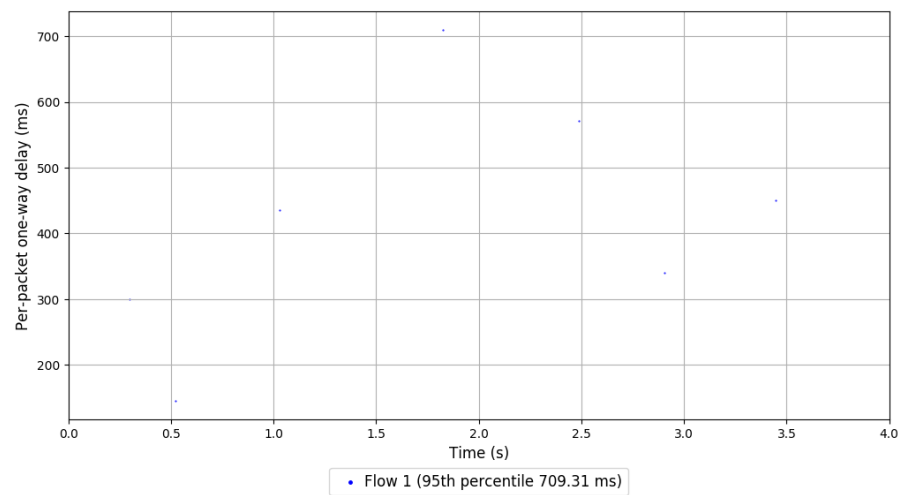
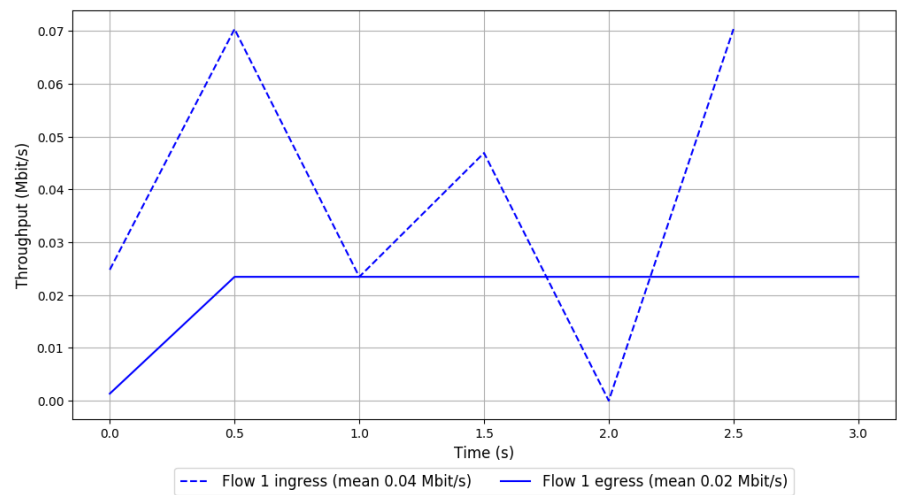
End at: 2017-09-22 08:14:02

Local clock offset: -2.513 ms

Remote clock offset: 0.132 ms



Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2017-09-22 08:29:47

End at: 2017-09-22 08:30:17

Local clock offset: -2.47 ms

Remote clock offset: 0.074 ms

Run 2: Report of LEDBAT — Data Link

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Run 3: Statistics of LEDBAT

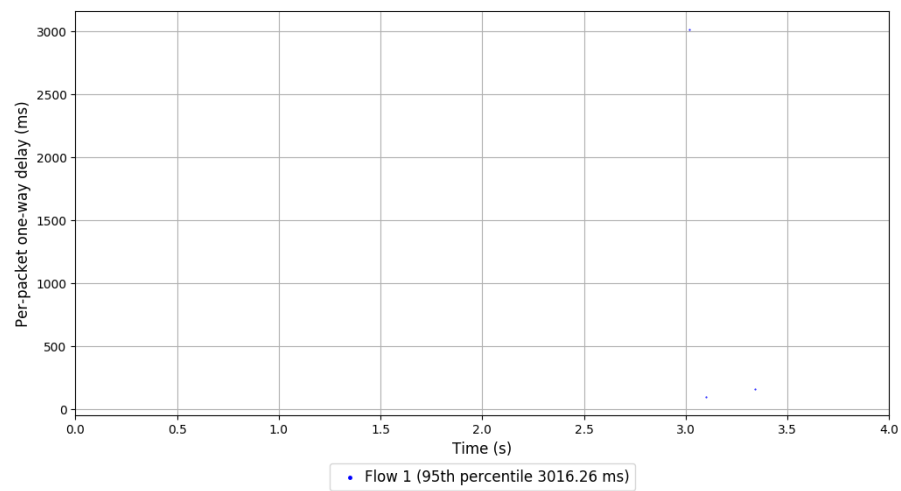
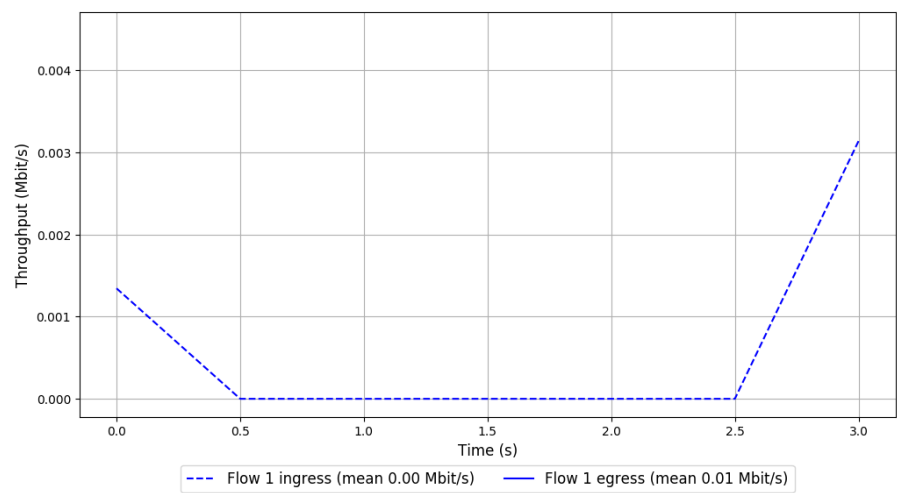
Start at: 2017-09-22 08:45:13

End at: 2017-09-22 08:45:43

Local clock offset: -2.569 ms

Remote clock offset: -0.232 ms

Run 3: Report of LEDBAT — Data Link



Run 1: Statistics of PCC

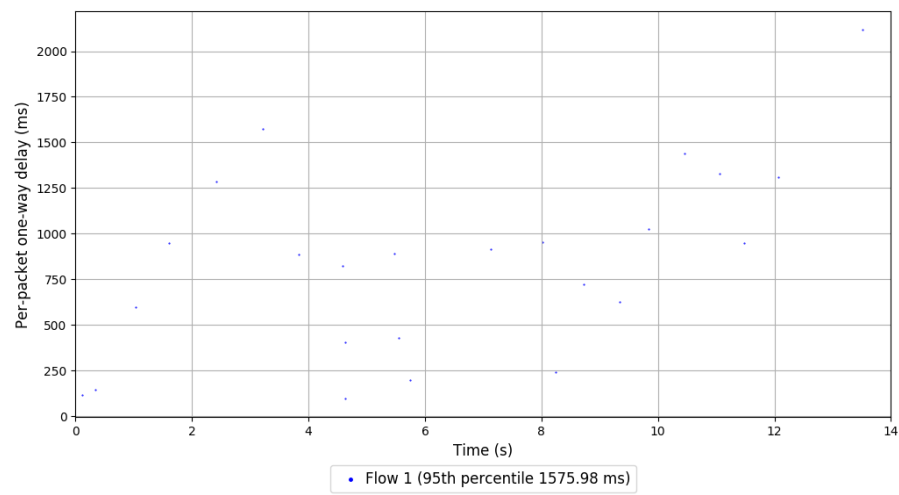
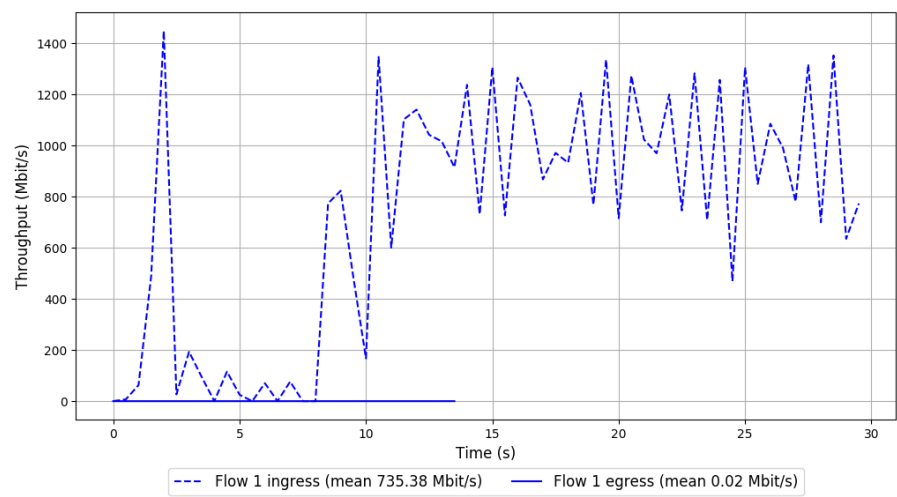
Start at: 2017-09-22 07:54:56

End at: 2017-09-22 07:55:26

Local clock offset: -1.157 ms

Remote clock offset: 0.19 ms

Run 1: Report of PCC — Data Link



Run 2: Statistics of PCC

Start at: 2017-09-22 08:16:16

End at: 2017-09-22 08:16:46

Local clock offset: -1.264 ms

Remote clock offset: 0.17 ms

# Below is generated by plot.py at 2017-09-22 09:31:52

# Datalink statistics

-- Total of 1 flow:

Average throughput: 0.20 Mbit/s

95th percentile per-packet one-way delay: 562.043 ms

Loss rate: 99.69%

-- Flow 1:

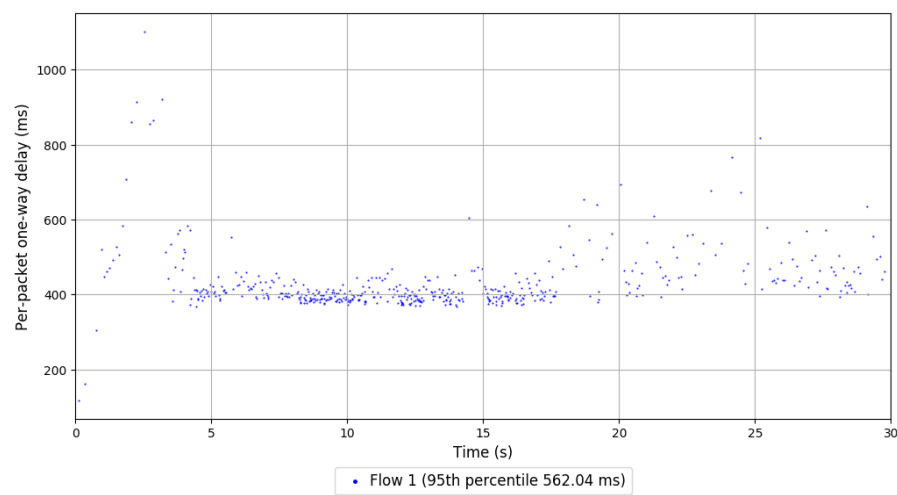
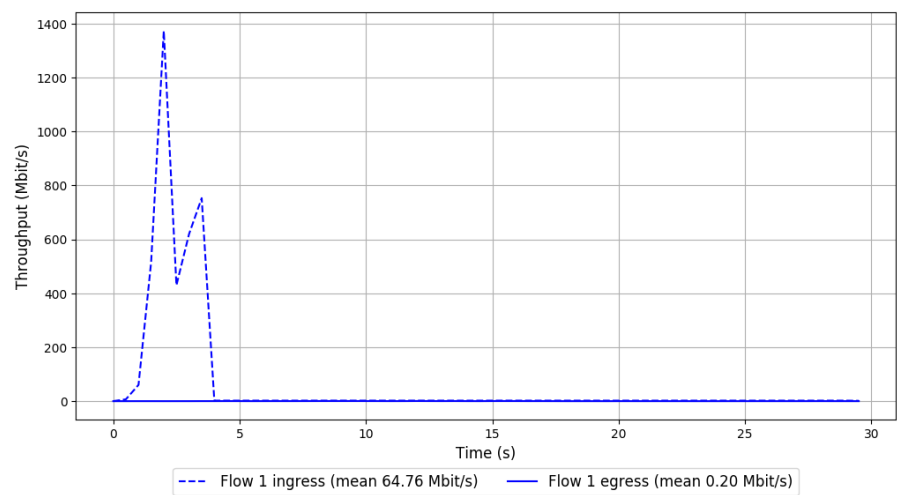
Average throughput: 0.20 Mbit/s

95th percentile per-packet one-way delay: 562.043 ms

Loss rate: 99.69%



Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2017-09-22 08:32:09

End at: 2017-09-22 08:32:39

Local clock offset: -1.274 ms

Remote clock offset: 0.08 ms

# Below is generated by plot.py at 2017-09-22 09:31:52

# Datalink statistics

-- Total of 1 flow:

Average throughput: 0.52 Mbit/s

95th percentile per-packet one-way delay: 427.086 ms

Loss rate: 99.35%

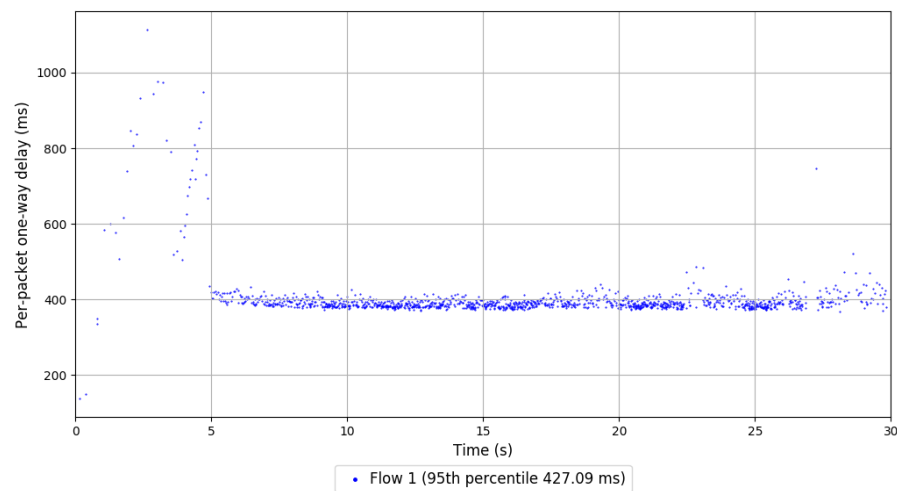
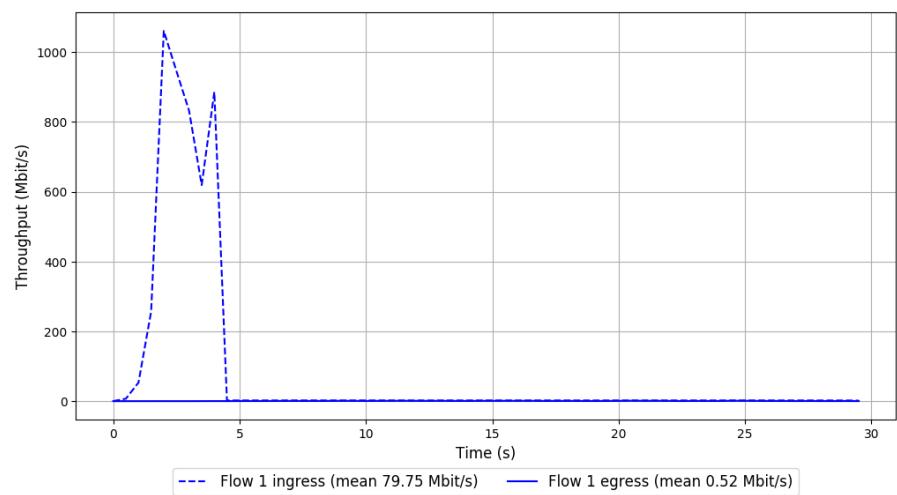
-- Flow 1:

Average throughput: 0.52 Mbit/s

95th percentile per-packet one-way delay: 427.086 ms

Loss rate: 99.35%

Run 3: Report of PCC — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2017-09-22 08:03:37

End at: 2017-09-22 08:04:07

Local clock offset: -2.522 ms

Remote clock offset: 0.298 ms

# Below is generated by plot.py at 2017-09-22 09:31:52

# Datalink statistics

-- Total of 1 flow:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 1675.260 ms

Loss rate: 87.08%

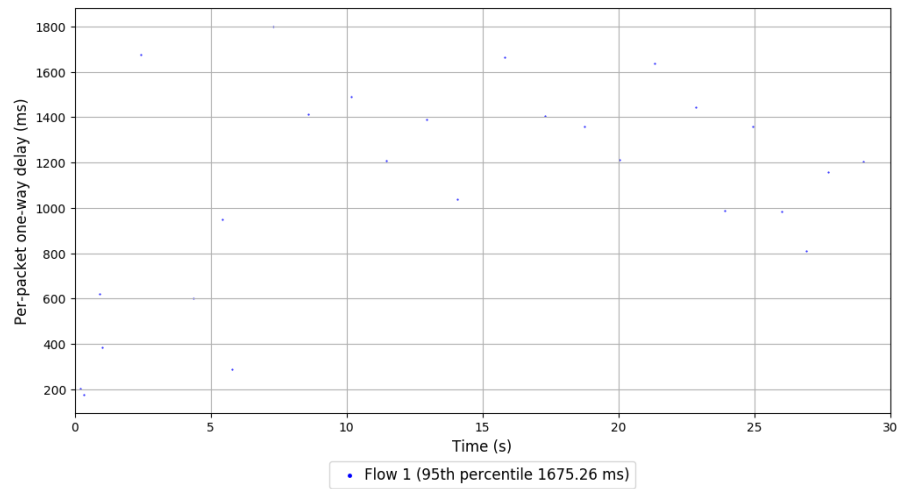
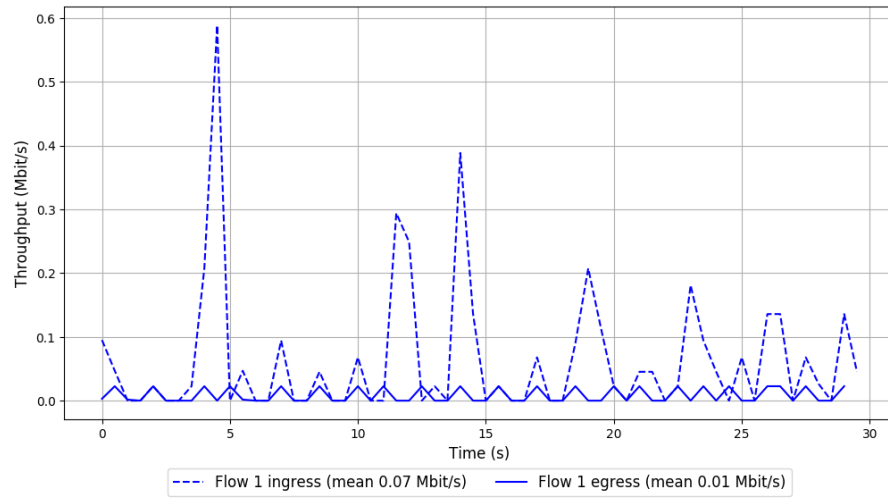
-- Flow 1:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 1675.260 ms

Loss rate: 87.08%

## Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2017-09-22 08:20:36

End at: 2017-09-22 08:21:06

Local clock offset: -1.158 ms

Remote clock offset: 0.299 ms

# Below is generated by plot.py at 2017-09-22 09:31:52

# Datalink statistics

-- Total of 1 flow:

Average throughput: 0.20 Mbit/s

95th percentile per-packet one-way delay: 479.717 ms

Loss rate: 32.29%

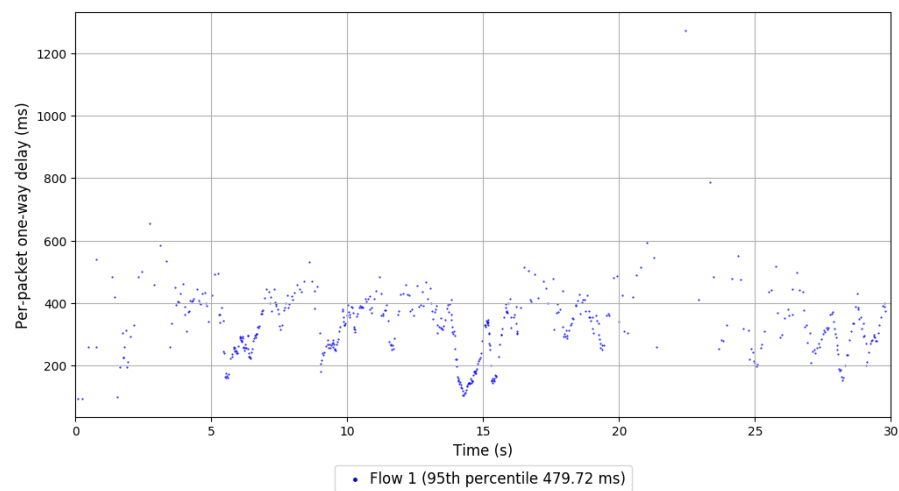
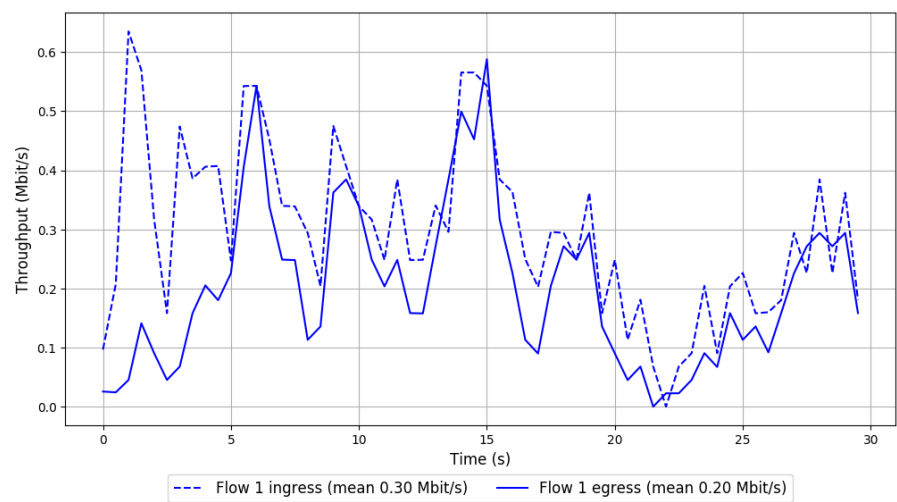
-- Flow 1:

Average throughput: 0.20 Mbit/s

95th percentile per-packet one-way delay: 479.717 ms

Loss rate: 32.29%

Run 2: Report of QUIC Cubic — Data Link



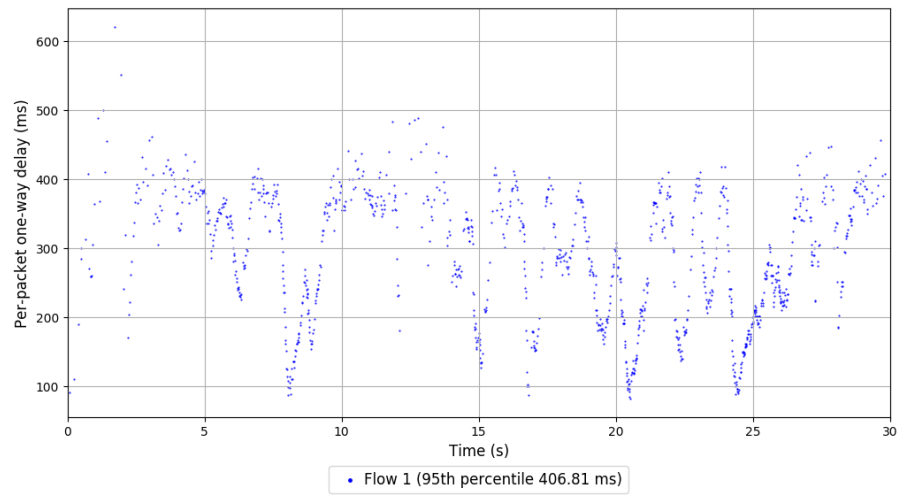
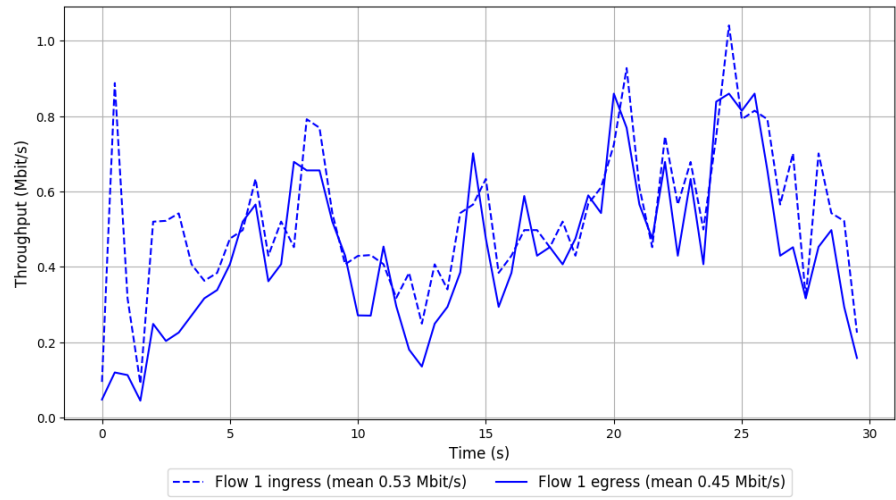
Run 3: Statistics of QUIC Cubic

Start at: 2017-09-22 08:36:00  
End at: 2017-09-22 08:36:30  
Local clock offset: -2.597 ms  
Remote clock offset: -0.019 ms

# Below is generated by plot.py at 2017-09-22 09:31:52  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 0.45 Mbit/s  
95th percentile per-packet one-way delay: 406.815 ms  
Loss rate: 16.56%  
-- Flow 1:  
Average throughput: 0.45 Mbit/s  
95th percentile per-packet one-way delay: 406.815 ms  
Loss rate: 16.56%



### Run 3: Report of QUIC Cubic — Data Link

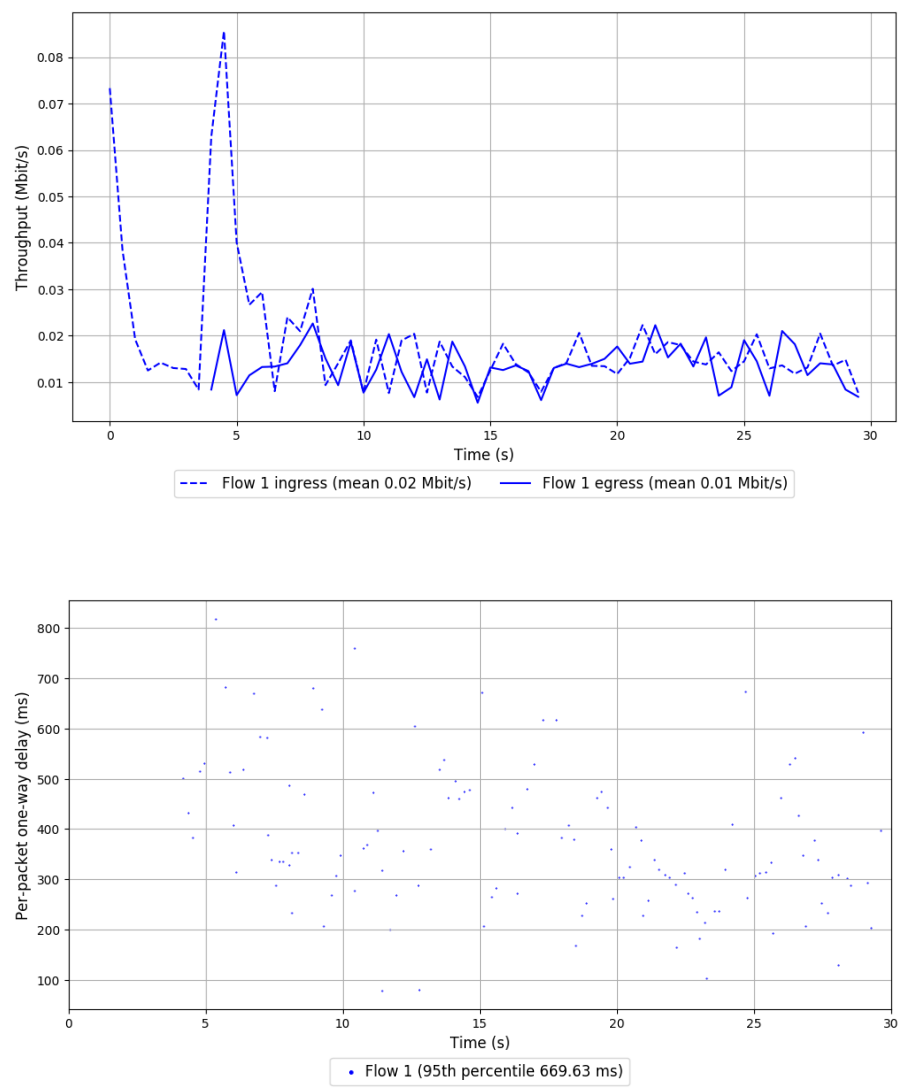


```
Run 1: Statistics of SCReAM

Start at: 2017-09-22 08:09:29
End at: 2017-09-22 08:09:59
Local clock offset: -1.424 ms
Remote clock offset: 0.17 ms

# Below is generated by plot.py at 2017-09-22 09:31:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 669.627 ms
Loss rate: 38.02%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 669.627 ms
Loss rate: 38.02%
```

Run 1: Report of SReAM — Data Link

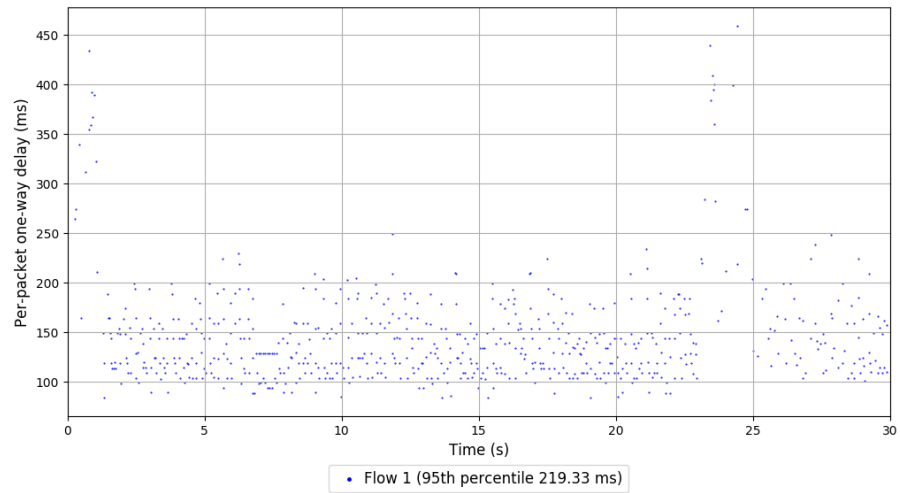
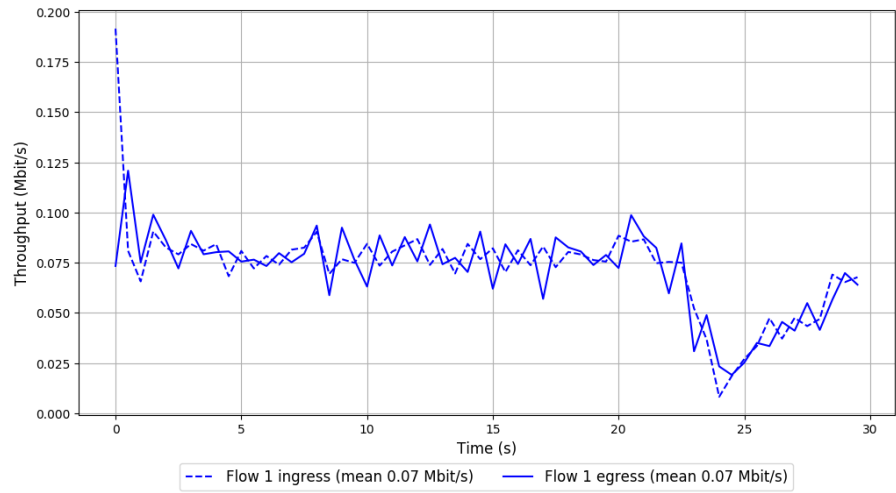


Run 2: Statistics of SCReAM

Start at: 2017-09-22 08:26:21  
End at: 2017-09-22 08:26:51  
Local clock offset: -2.522 ms  
Remote clock offset: -0.325 ms

# Below is generated by plot.py at 2017-09-22 09:31:52  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 0.07 Mbit/s  
95th percentile per-packet one-way delay: 219.331 ms  
Loss rate: 1.57%  
-- Flow 1:  
Average throughput: 0.07 Mbit/s  
95th percentile per-packet one-way delay: 219.331 ms  
Loss rate: 1.57%

## Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2017-09-22 08:41:46

End at: 2017-09-22 08:42:16

Local clock offset: -2.555 ms

Remote clock offset: 0.028 ms

# Below is generated by plot.py at 2017-09-22 09:31:52

# Datalink statistics

-- Total of 1 flow:

Average throughput: 0.07 Mbit/s

95th percentile per-packet one-way delay: 232.498 ms

Loss rate: 6.00%

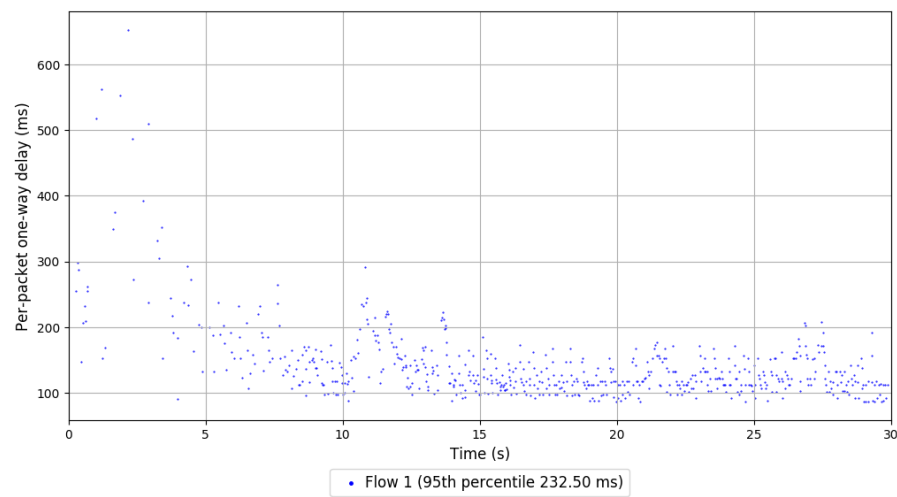
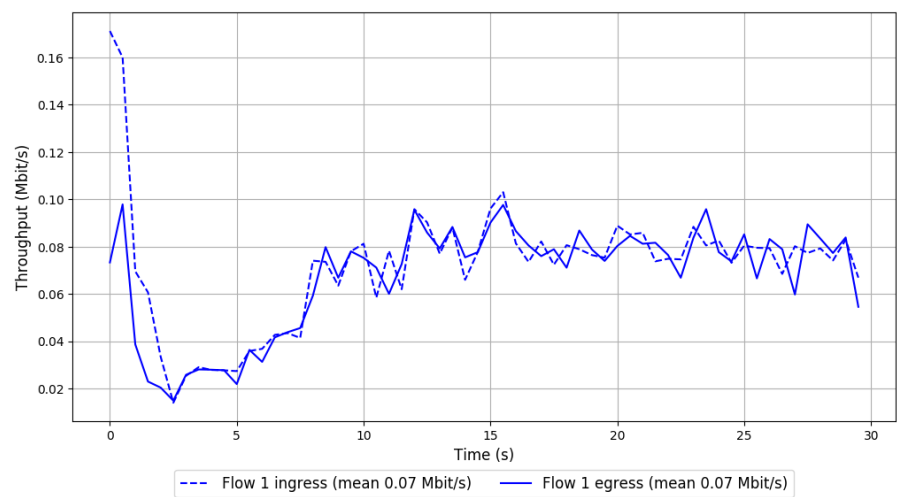
-- Flow 1:

Average throughput: 0.07 Mbit/s

95th percentile per-packet one-way delay: 232.498 ms

Loss rate: 6.00%

Run 3: Report of SReAM — Data Link



Run 1: Statistics of WebRTC media

Start at: 2017-09-22 08:07:10

End at: 2017-09-22 08:07:40

Local clock offset: -1.368 ms

Remote clock offset: 0.276 ms

# Below is generated by plot.py at 2017-09-22 09:31:52

# Datalink statistics

-- Total of 1 flow:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 1804.308 ms

Loss rate: 70.16%

-- Flow 1:

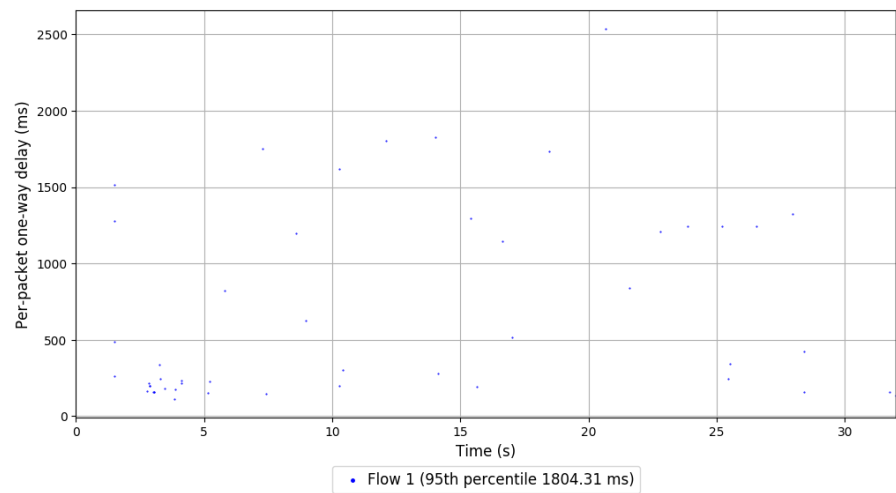
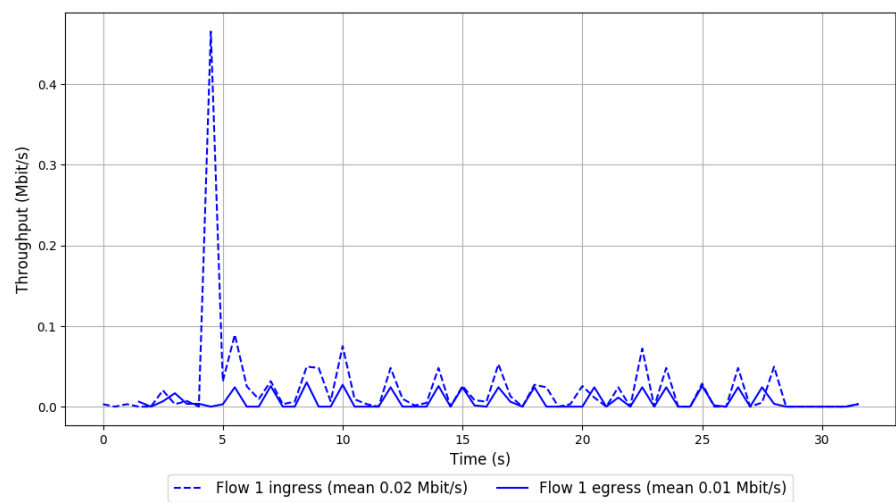
Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 1804.308 ms

Loss rate: 70.16%



Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

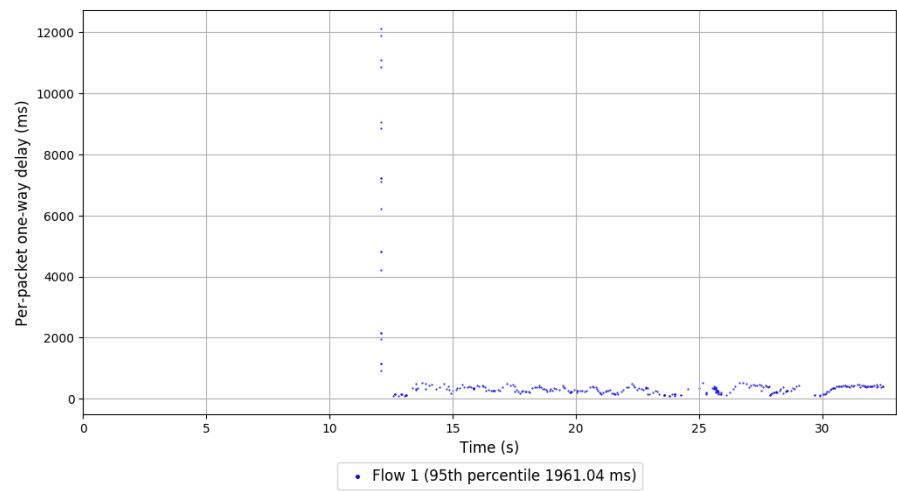
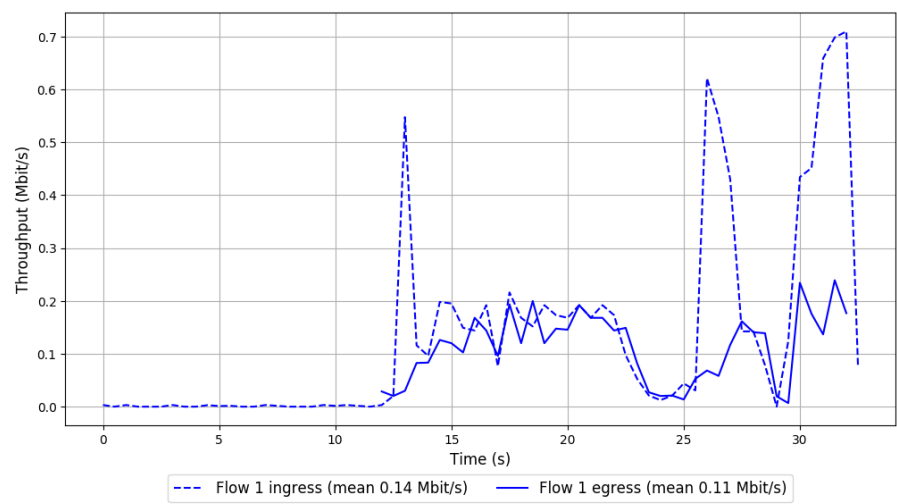
Start at: 2017-09-22 08:24:03

End at: 2017-09-22 08:24:33

Local clock offset: -2.646 ms

Remote clock offset: 0.128 ms

Run 2: Report of WebRTC media — Data Link

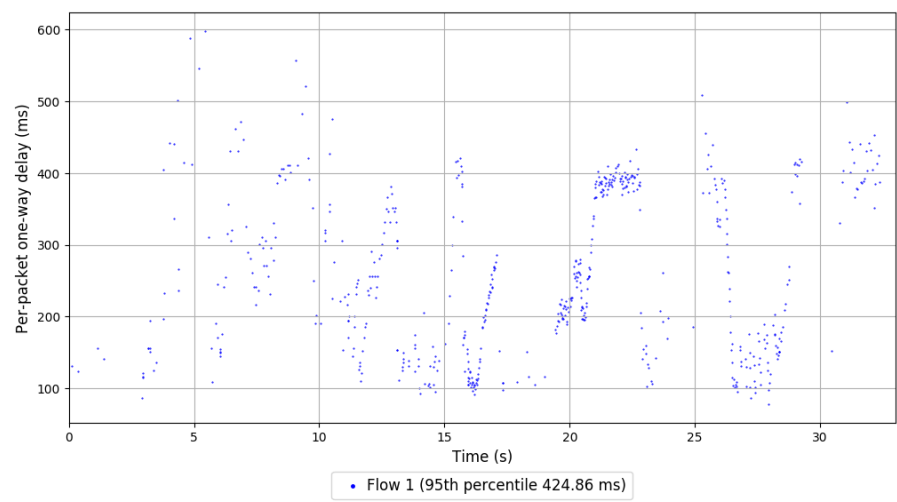
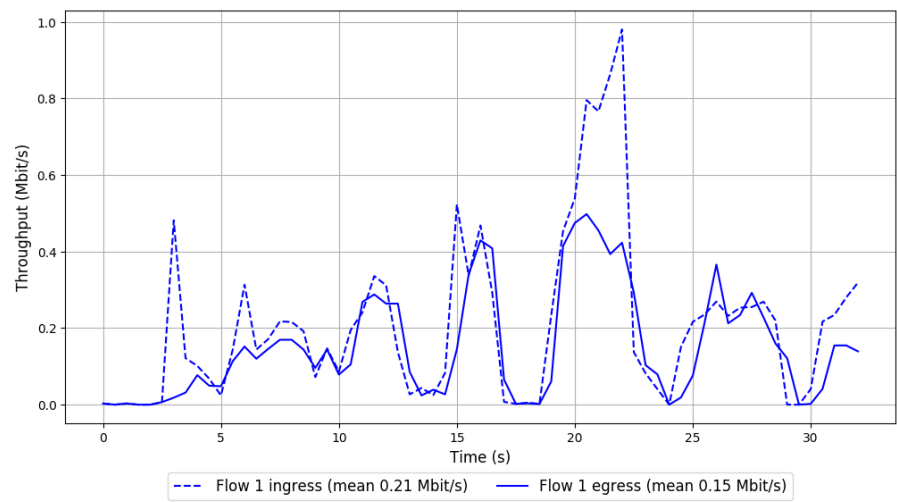


Run 3: Statistics of WebRTC media

Start at: 2017-09-22 08:39:27  
End at: 2017-09-22 08:39:57  
Local clock offset: -1.436 ms  
Remote clock offset: -0.314 ms

# Below is generated by plot.py at 2017-09-22 09:31:52  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 0.15 Mbit/s  
95th percentile per-packet one-way delay: 424.861 ms  
Loss rate: 27.10%  
-- Flow 1:  
Average throughput: 0.15 Mbit/s  
95th percentile per-packet one-way delay: 424.861 ms  
Loss rate: 27.10%

Run 3: Report of WebRTC media — Data Link



Run 1: Statistics of Sprout

Start at: 2017-09-22 08:11:47

End at: 2017-09-22 08:12:17

Local clock offset: -1.326 ms

Remote clock offset: 0.062 ms

# Below is generated by plot.py at 2017-09-22 09:31:52

# Datalink statistics

-- Total of 1 flow:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 420.037 ms

Loss rate: 13.87%

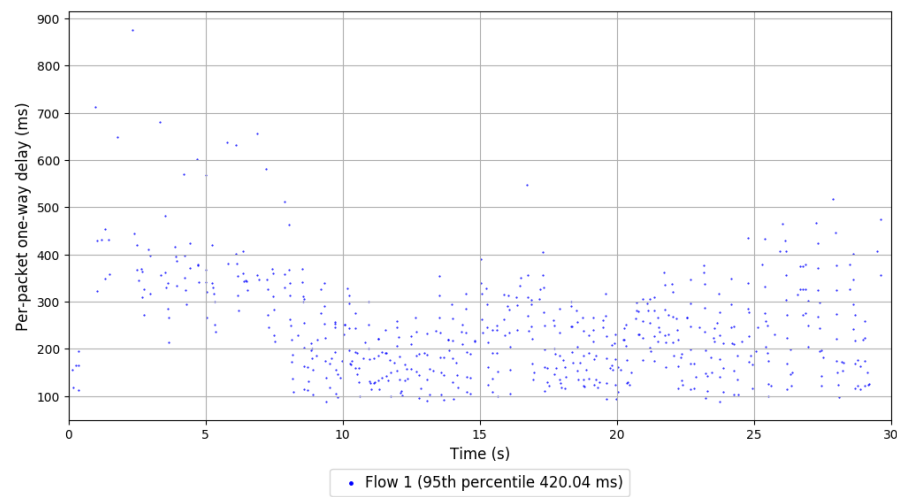
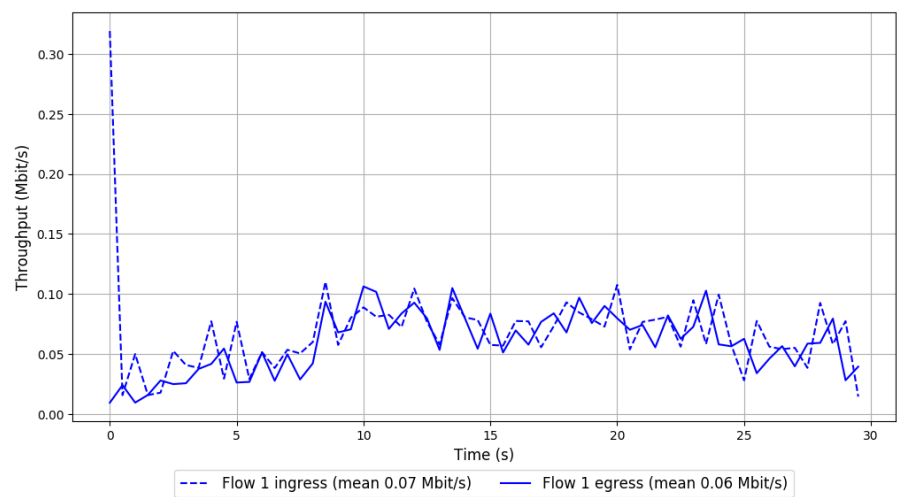
-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 420.037 ms

Loss rate: 13.87%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2017-09-22 08:28:38

End at: 2017-09-22 08:29:08

Local clock offset: -2.513 ms

Remote clock offset: 0.079 ms

# Below is generated by plot.py at 2017-09-22 09:31:52

# Datalink statistics

-- Total of 1 flow:

Average throughput: 0.08 Mbit/s

95th percentile per-packet one-way delay: 312.211 ms

Loss rate: 6.29%

-- Flow 1:

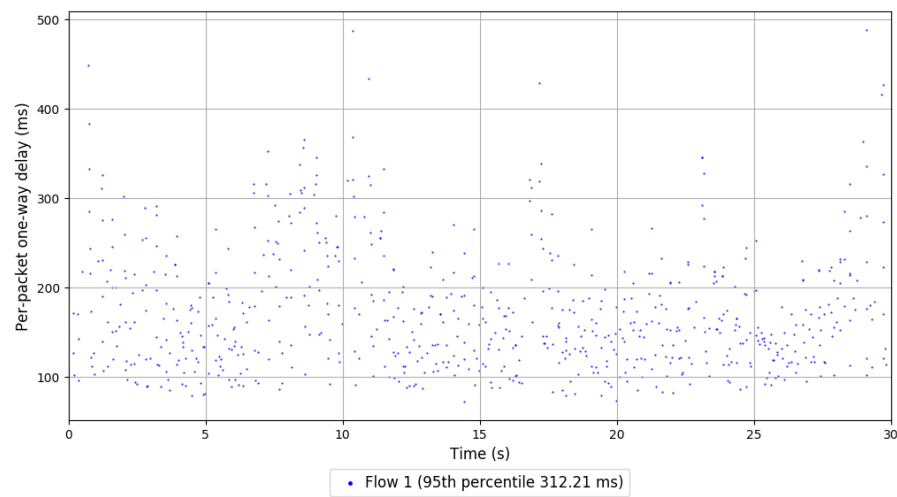
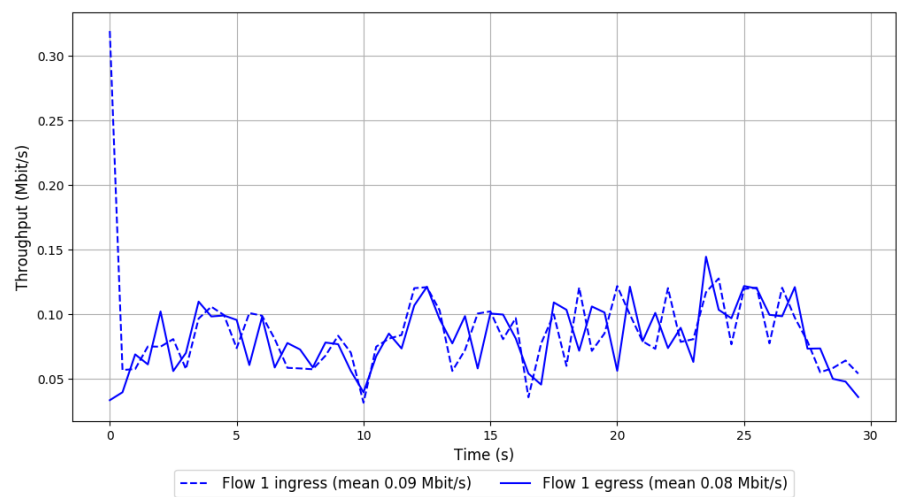
Average throughput: 0.08 Mbit/s

95th percentile per-packet one-way delay: 312.211 ms

Loss rate: 6.29%



Run 2: Report of Sprout — Data Link

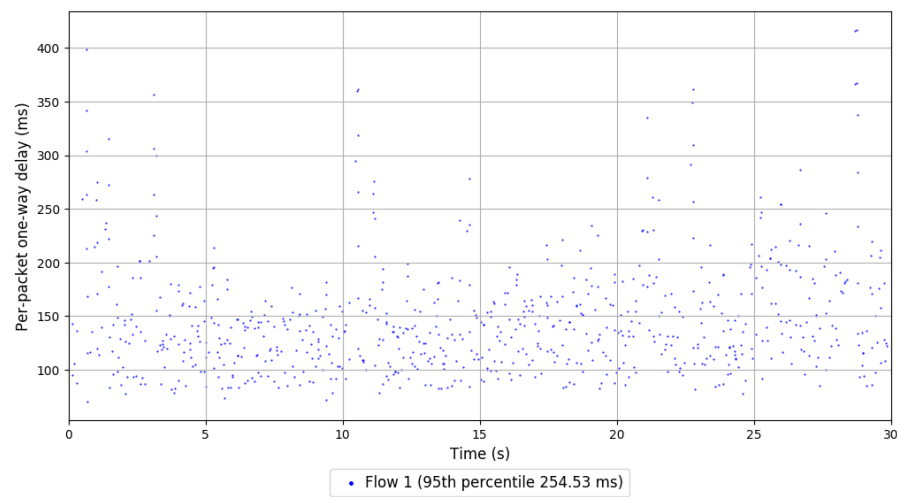
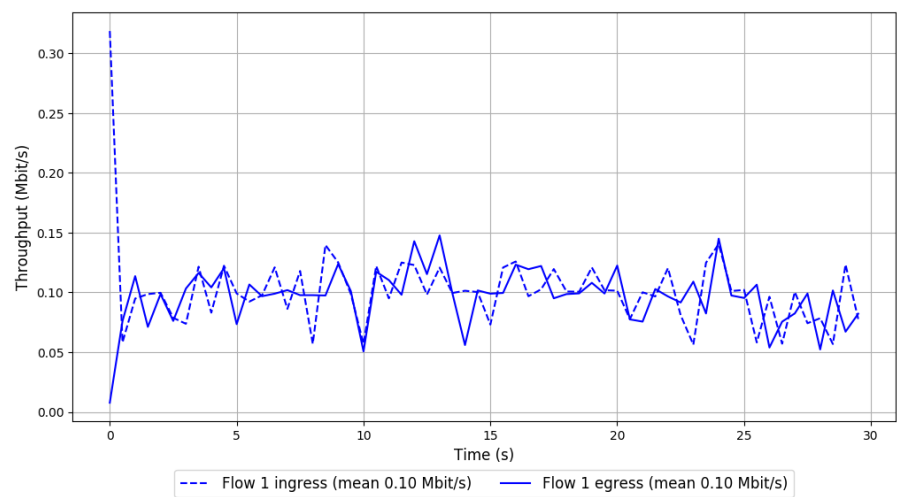


Run 3: Statistics of Sprout

Start at: 2017-09-22 08:44:05  
End at: 2017-09-22 08:44:35  
Local clock offset: -1.403 ms  
Remote clock offset: -0.341 ms

# Below is generated by plot.py at 2017-09-22 09:31:52  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 0.10 Mbit/s  
95th percentile per-packet one-way delay: 254.528 ms  
Loss rate: 5.10%  
-- Flow 1:  
Average throughput: 0.10 Mbit/s  
95th percentile per-packet one-way delay: 254.528 ms  
Loss rate: 5.10%

Run 3: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2017-09-22 08:08:19

End at: 2017-09-22 08:08:49

Local clock offset: -2.412 ms

Remote clock offset: 0.211 ms

# Below is generated by plot.py at 2017-09-22 09:31:52

# Datalink statistics

-- Total of 1 flow:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 1157.665 ms

Loss rate: 41.26%

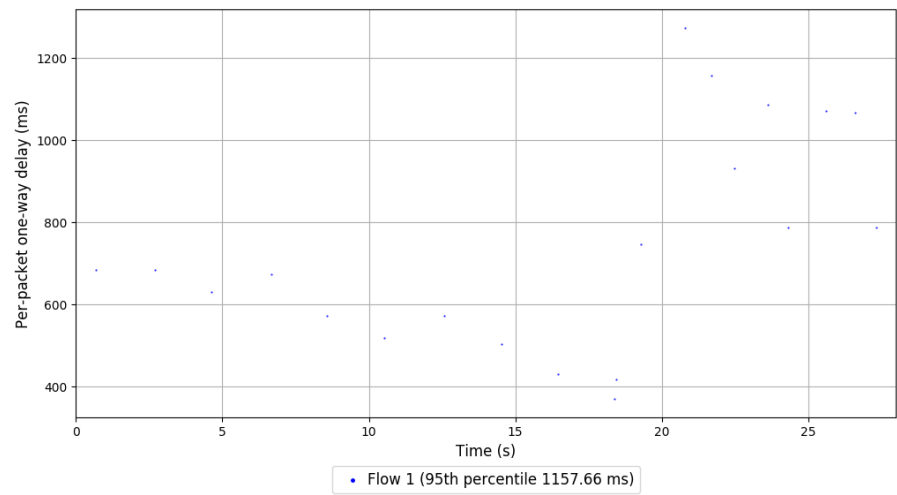
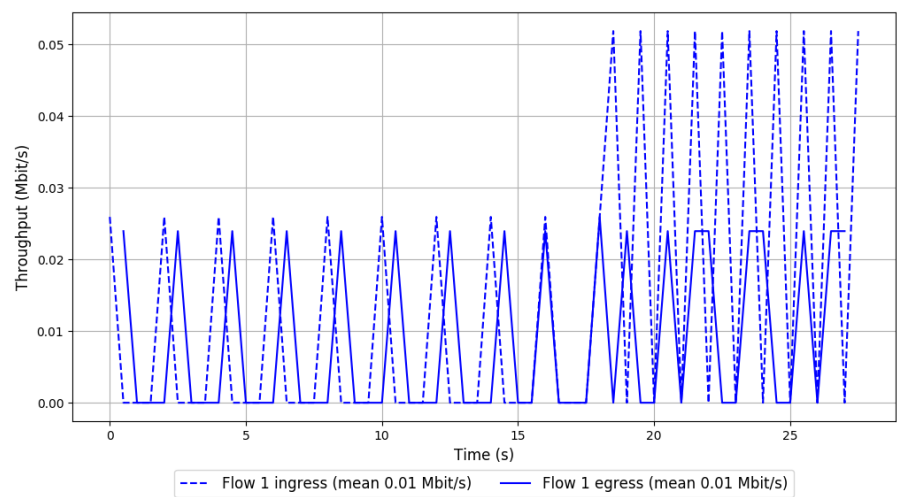
-- Flow 1:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 1157.665 ms

Loss rate: 41.26%

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



Run 2: Statistics of TaoVA-100x

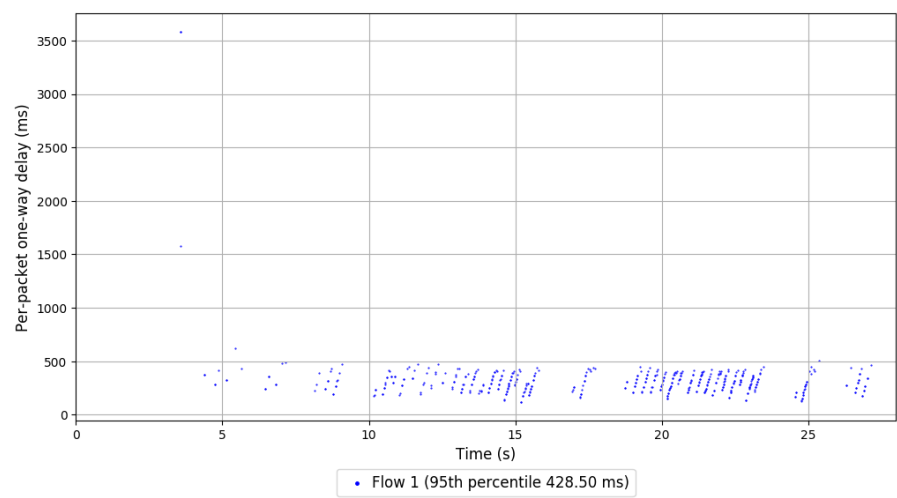
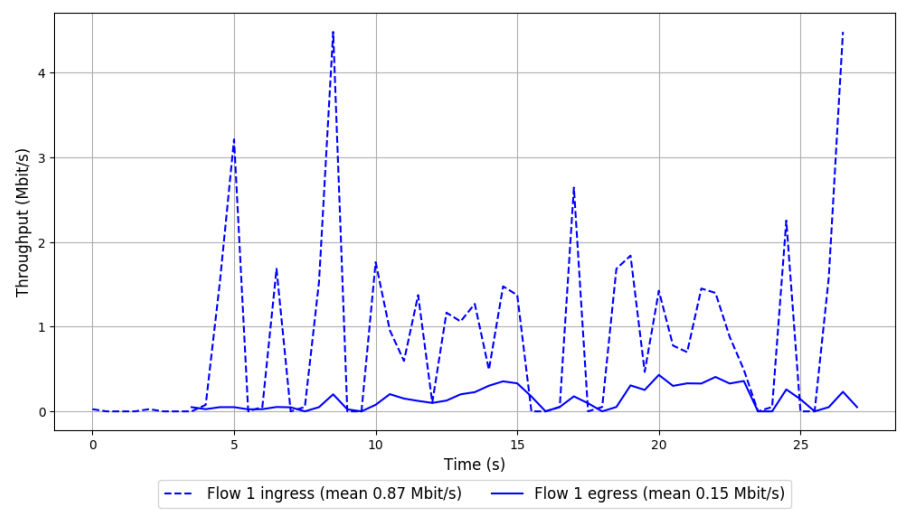
Start at: 2017-09-22 08:25:12

End at: 2017-09-22 08:25:42

Local clock offset: -2.514 ms

Remote clock offset: 0.117 ms

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



Run 3: Statistics of TaoVA-100x

Start at: 2017-09-22 08:40:36

End at: 2017-09-22 08:41:06

Local clock offset: -1.293 ms

Remote clock offset: -0.225 ms

# Below is generated by plot.py at 2017-09-22 09:31:52

# Datalink statistics

-- Total of 1 flow:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 423.156 ms

Loss rate: 82.77%

-- Flow 1:

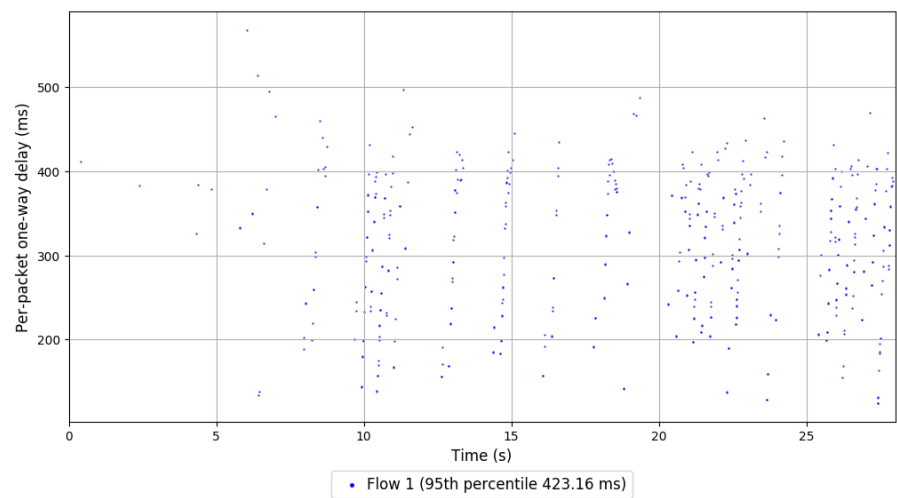
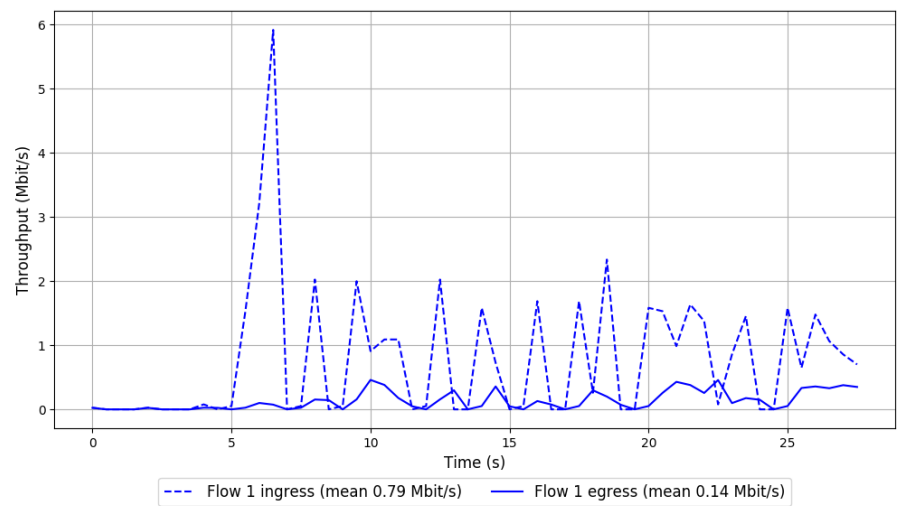
Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 423.156 ms

Loss rate: 82.77%



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



Run 1: Statistics of TCP Vegas

Start at: 2017-09-22 08:04:49

End at: 2017-09-22 08:05:19

Local clock offset: -2.418 ms

Remote clock offset: 0.269 ms

# Below is generated by plot.py at 2017-09-22 09:31:52

# Datalink statistics

-- Total of 1 flow:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 1833.747 ms

Loss rate: 56.01%

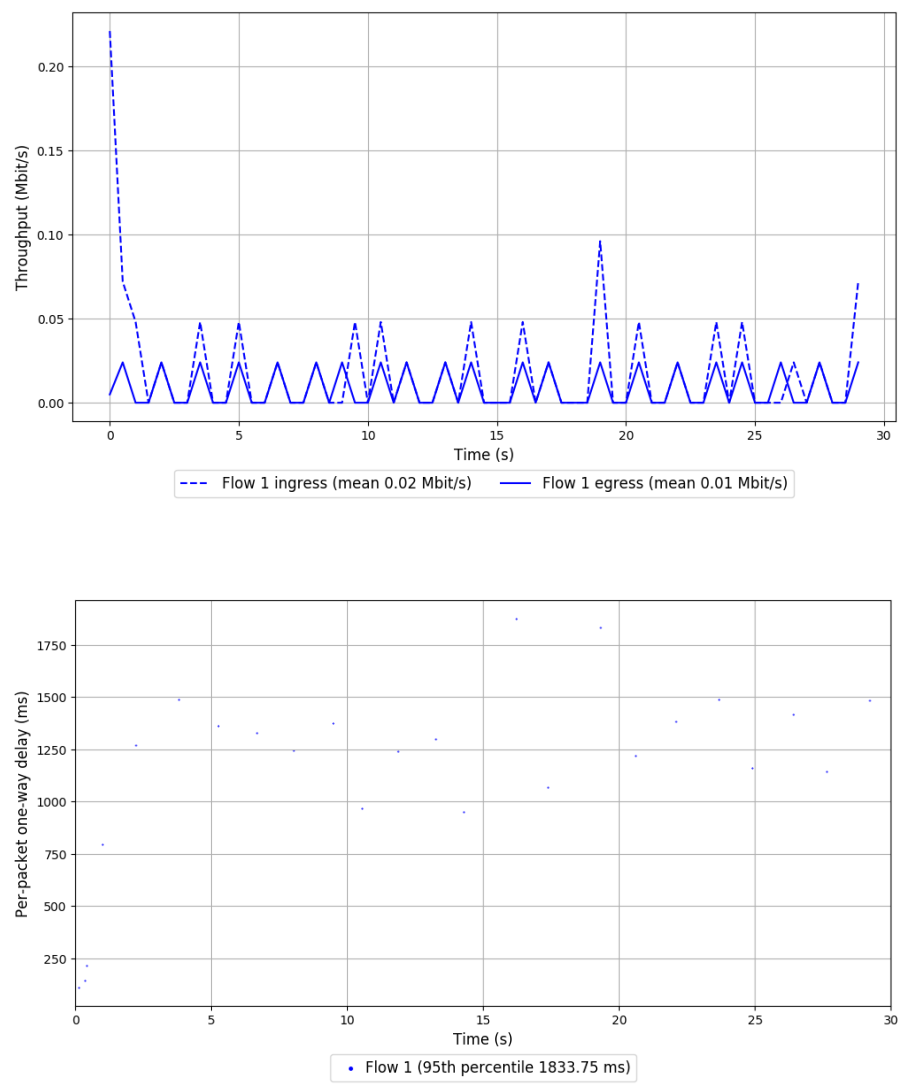
-- Flow 1:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 1833.747 ms

Loss rate: 56.01%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2017-09-22 08:21:45

End at: 2017-09-22 08:22:15

Local clock offset: -1.194 ms

Remote clock offset: 0.203 ms

# Below is generated by plot.py at 2017-09-22 09:31:52

# Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 398.297 ms

Loss rate: 5.19%

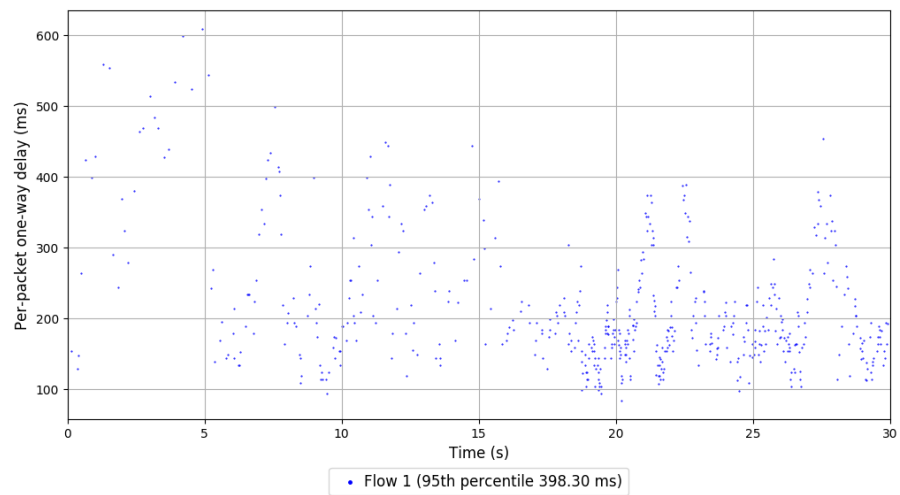
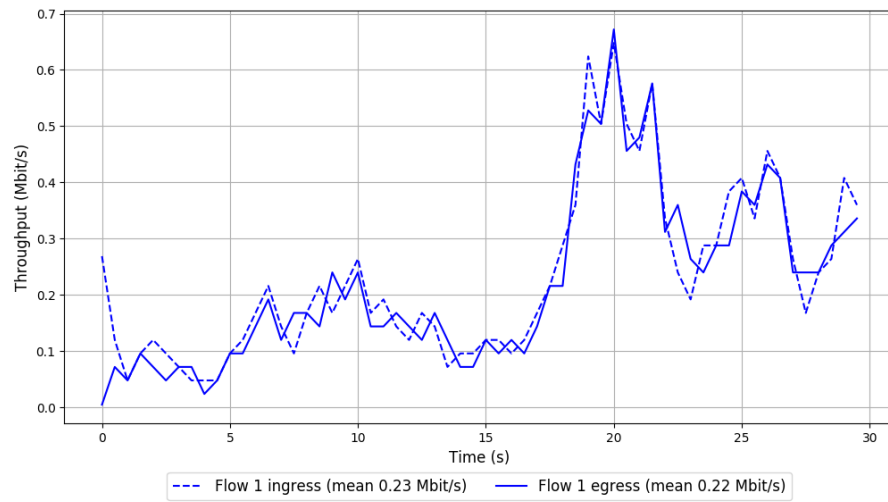
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 398.297 ms

Loss rate: 5.19%

## Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2017-09-22 08:37:09

End at: 2017-09-22 08:37:39

Local clock offset: -1.253 ms

Remote clock offset: 0.021 ms

# Below is generated by plot.py at 2017-09-22 09:31:52

# Datalink statistics

-- Total of 1 flow:

Average throughput: 0.36 Mbit/s

95th percentile per-packet one-way delay: 356.774 ms

Loss rate: 2.63%

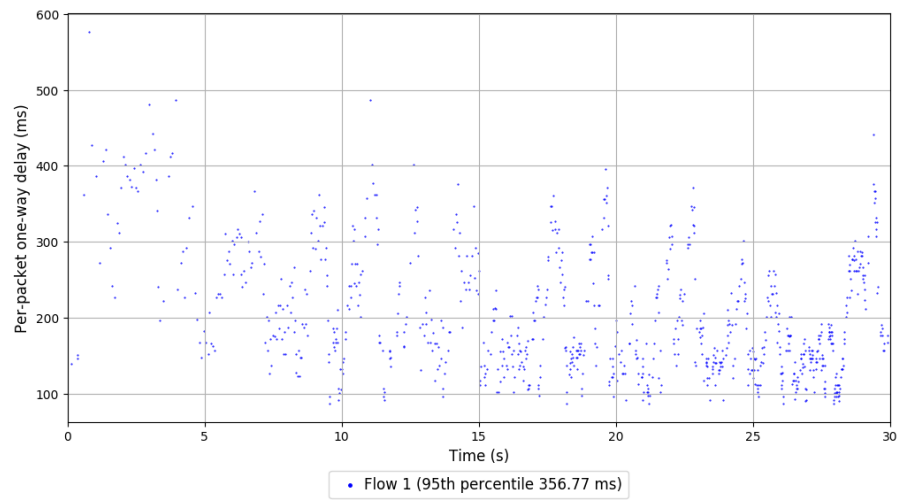
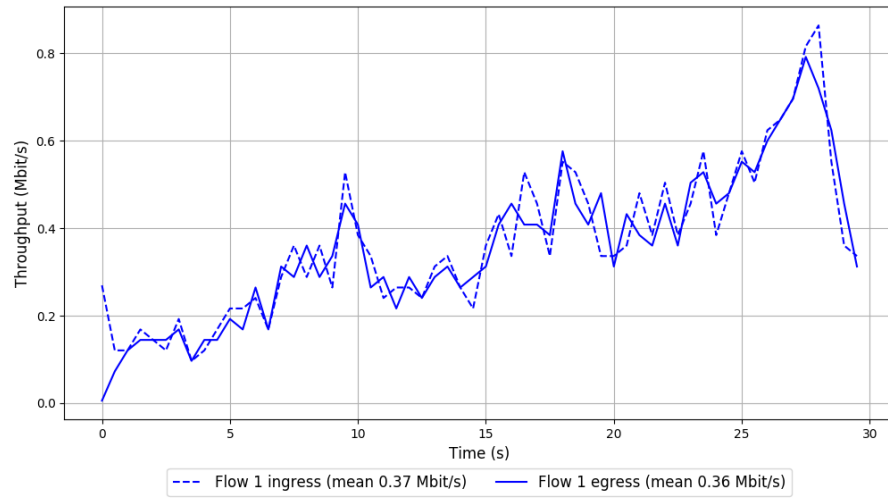
-- Flow 1:

Average throughput: 0.36 Mbit/s

95th percentile per-packet one-way delay: 356.774 ms

Loss rate: 2.63%

### Run 3: Report of TCP Vegas — Data Link



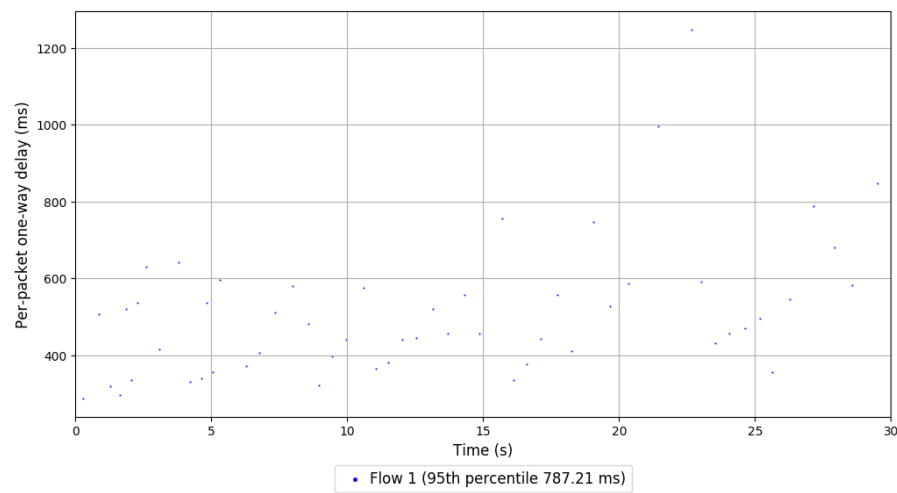
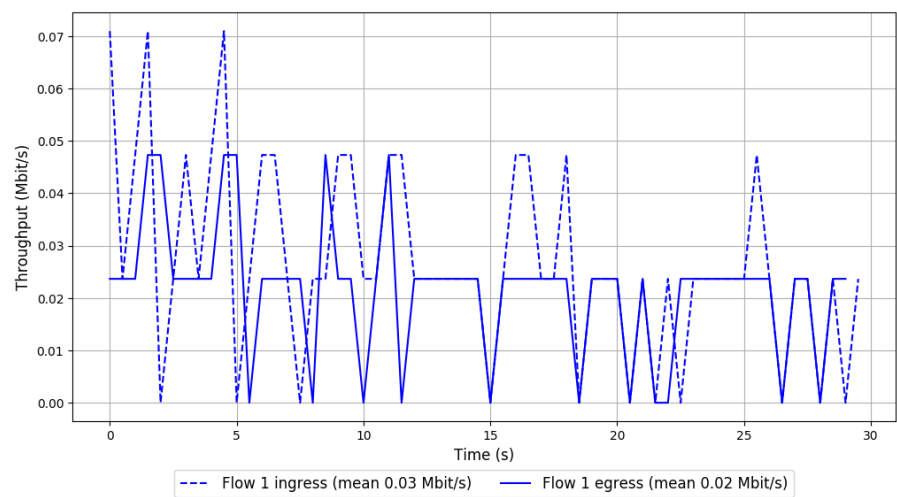
Run 1: Statistics of Verus

Start at: 2017-09-22 07:53:47  
End at: 2017-09-22 07:54:17  
Local clock offset: -1.338 ms  
Remote clock offset: -2.715 ms

# Below is generated by plot.py at 2017-09-22 09:31:52  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 0.02 Mbit/s  
95th percentile per-packet one-way delay: 787.210 ms  
Loss rate: 20.59%  
-- Flow 1:  
Average throughput: 0.02 Mbit/s  
95th percentile per-packet one-way delay: 787.210 ms  
Loss rate: 20.59%



Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2017-09-22 08:15:05

End at: 2017-09-22 08:15:35

Local clock offset: -2.517 ms

Remote clock offset: 0.188 ms

# Below is generated by plot.py at 2017-09-22 09:31:52

# Datalink statistics

-- Total of 1 flow:

Average throughput: 0.10 Mbit/s

95th percentile per-packet one-way delay: 589.041 ms

Loss rate: 58.74%

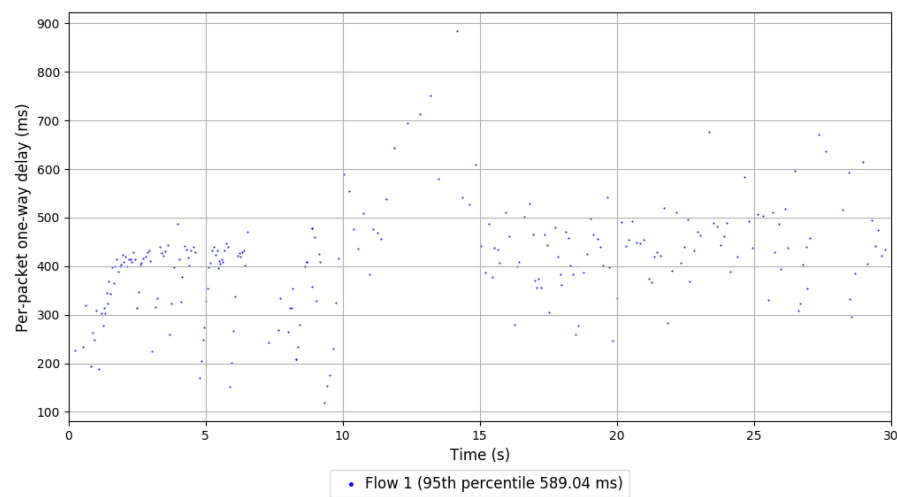
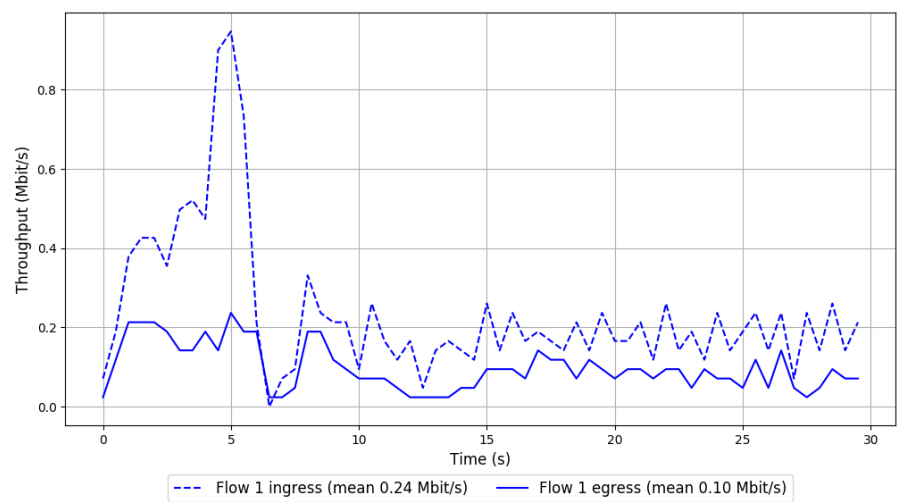
-- Flow 1:

Average throughput: 0.10 Mbit/s

95th percentile per-packet one-way delay: 589.041 ms

Loss rate: 58.74%

Run 2: Report of Verus — Data Link

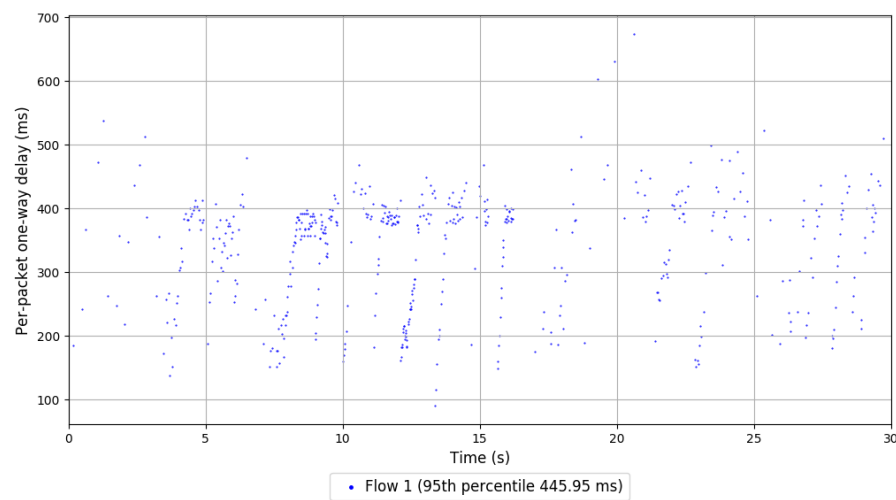
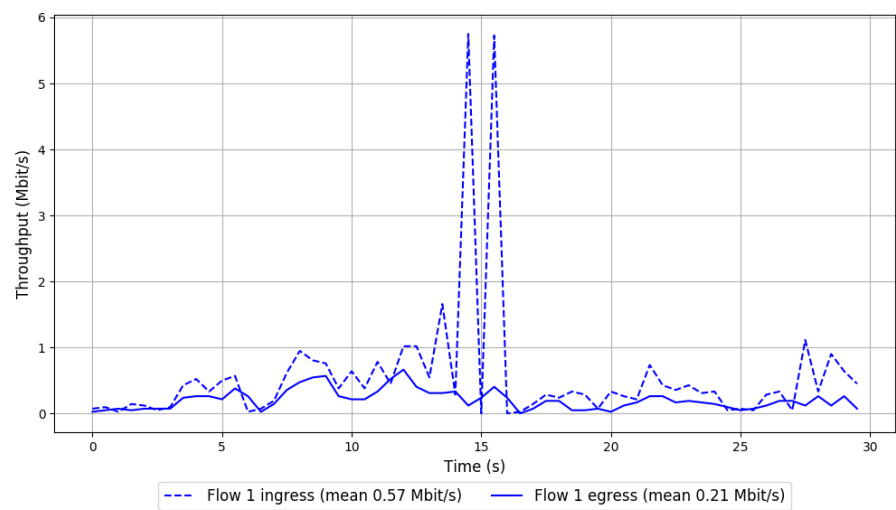


Run 3: Statistics of Verus

Start at: 2017-09-22 08:31:00  
End at: 2017-09-22 08:31:30  
Local clock offset: -2.499 ms  
Remote clock offset: -0.012 ms

# Below is generated by plot.py at 2017-09-22 09:31:52  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 445.946 ms  
Loss rate: 63.79%  
-- Flow 1:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 445.946 ms  
Loss rate: 63.79%

Run 3: Report of Verus — Data Link

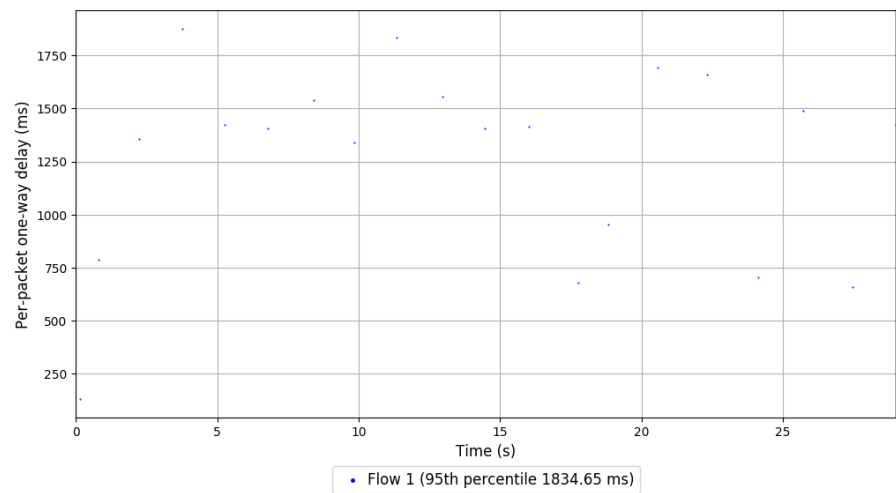
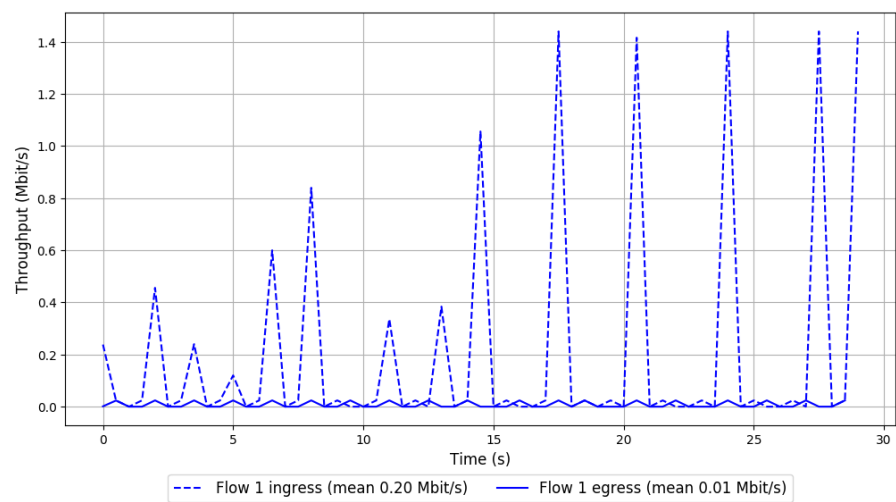


```
Run 1: Statistics of Indigo

Start at: 2017-09-22 08:06:01
End at: 2017-09-22 08:06:31
Local clock offset: -2.349 ms
Remote clock offset: 0.29 ms

# Below is generated by plot.py at 2017-09-22 09:31:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1834.653 ms
Loss rate: 96.16%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1834.653 ms
Loss rate: 96.16%
```

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2017-09-22 08:22:54

End at: 2017-09-22 08:23:24

Local clock offset: -2.386 ms

Remote clock offset: 0.108 ms

# Below is generated by plot.py at 2017-09-22 09:31:52

# Datalink statistics

-- Total of 1 flow:

Average throughput: 0.18 Mbit/s

95th percentile per-packet one-way delay: 423.479 ms

Loss rate: 24.87%

-- Flow 1:

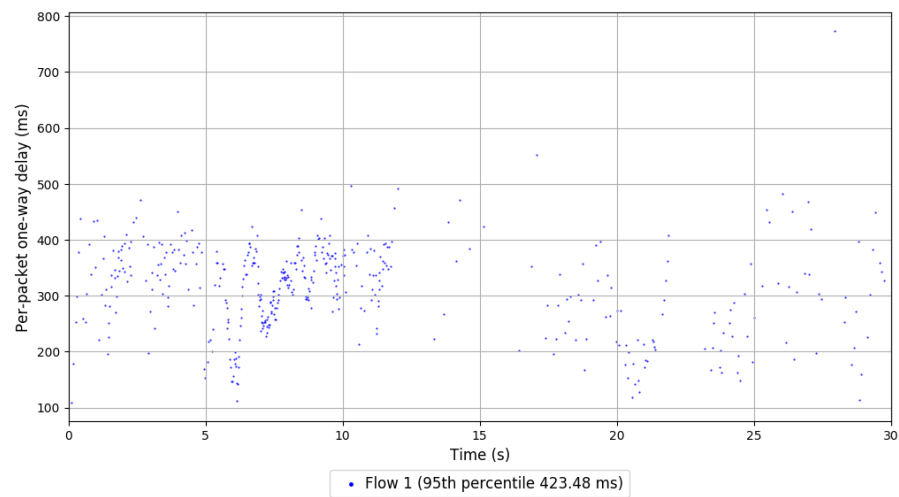
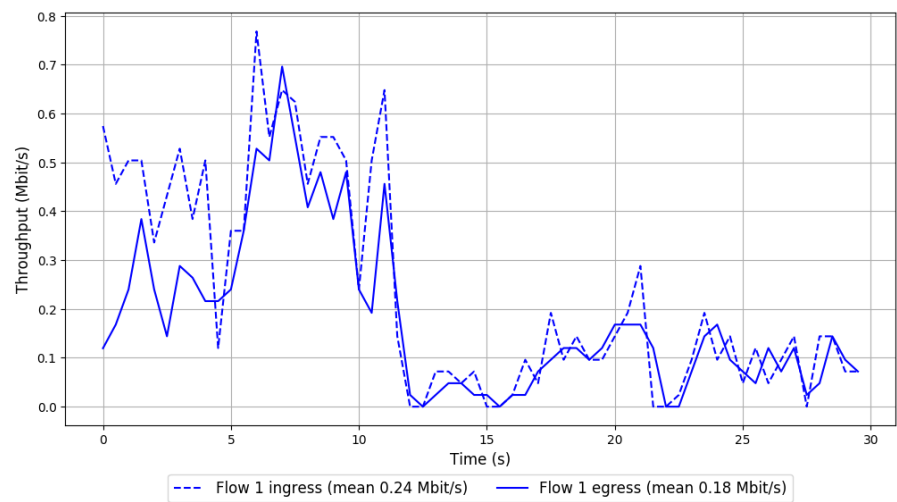
Average throughput: 0.18 Mbit/s

95th percentile per-packet one-way delay: 423.479 ms

Loss rate: 24.87%



Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2017-09-22 08:38:18

End at: 2017-09-22 08:38:48

Local clock offset: -1.129 ms

Remote clock offset: -0.09 ms

# Below is generated by plot.py at 2017-09-22 09:31:52

# Datalink statistics

-- Total of 1 flow:

Average throughput: 0.30 Mbit/s

95th percentile per-packet one-way delay: 405.830 ms

Loss rate: 76.35%

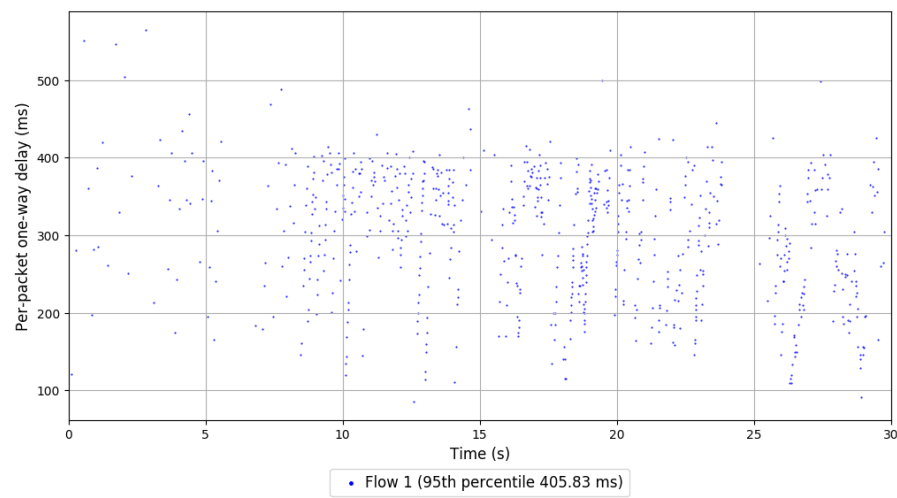
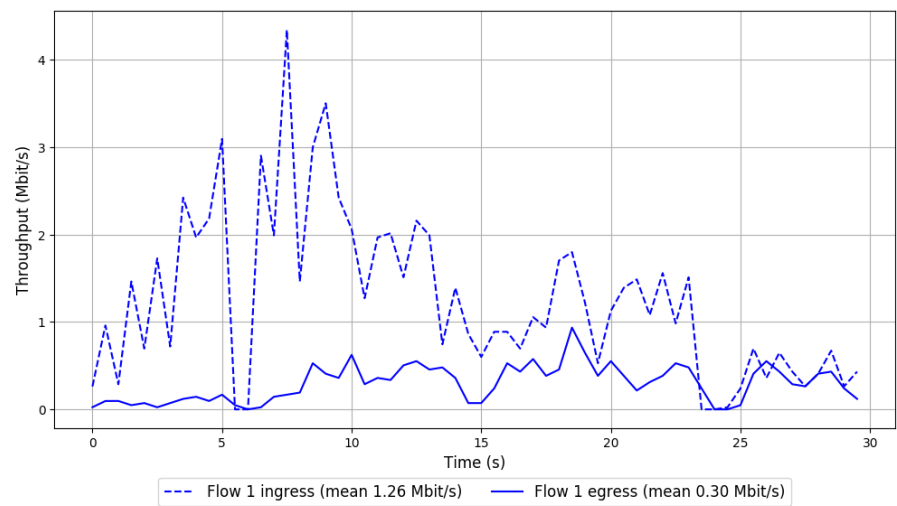
-- Flow 1:

Average throughput: 0.30 Mbit/s

95th percentile per-packet one-way delay: 405.830 ms

Loss rate: 76.35%

Run 3: Report of Indigo — Data Link



Run 1: Statistics of Indigo-cellular

Start at: 2017-09-22 08:10:37

End at: 2017-09-22 08:11:07

Local clock offset: -1.231 ms

Remote clock offset: 0.25 ms

# Below is generated by plot.py at 2017-09-22 09:31:52

# Datalink statistics

-- Total of 1 flow:

Average throughput: 0.02 Mbit/s

95th percentile per-packet one-way delay: 1994.891 ms

Loss rate: 93.89%

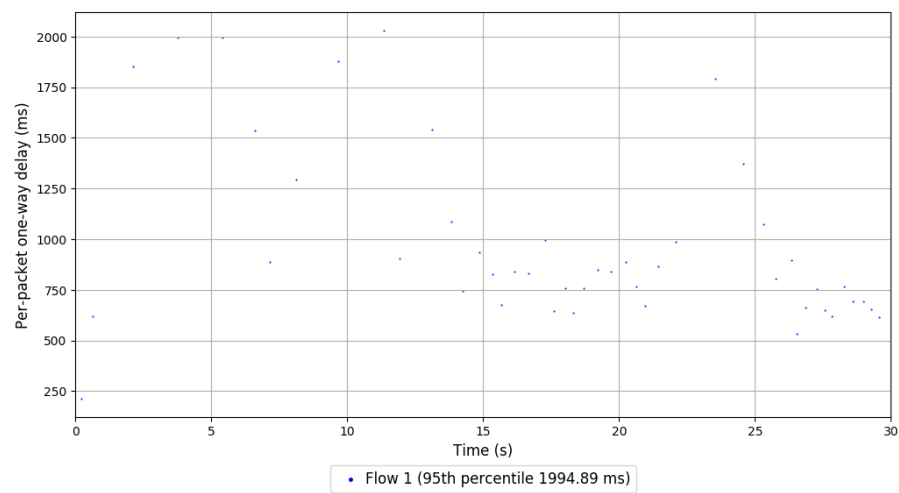
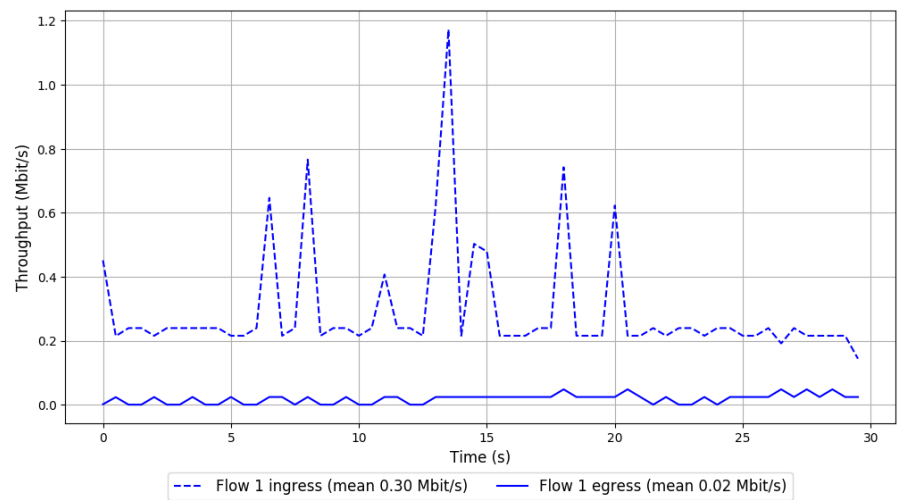
-- Flow 1:

Average throughput: 0.02 Mbit/s

95th percentile per-packet one-way delay: 1994.891 ms

Loss rate: 93.89%

Run 1: Report of Indigo-cellular — Data Link



Run 2: Statistics of Indigo-cellular

Start at: 2017-09-22 08:27:30

End at: 2017-09-22 08:28:00

Local clock offset: -1.31 ms

Remote clock offset: 0.24 ms

# Below is generated by plot.py at 2017-09-22 09:31:52

# Datalink statistics

-- Total of 1 flow:

Average throughput: 0.19 Mbit/s

95th percentile per-packet one-way delay: 483.955 ms

Loss rate: 20.22%

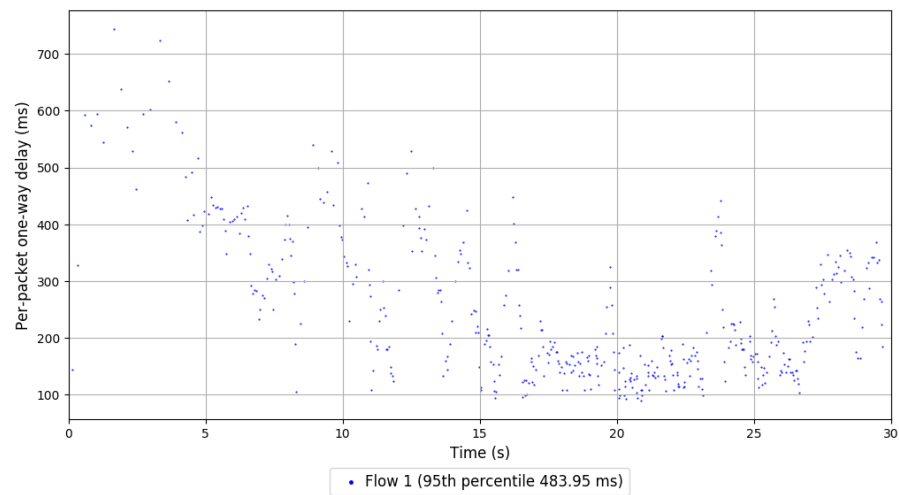
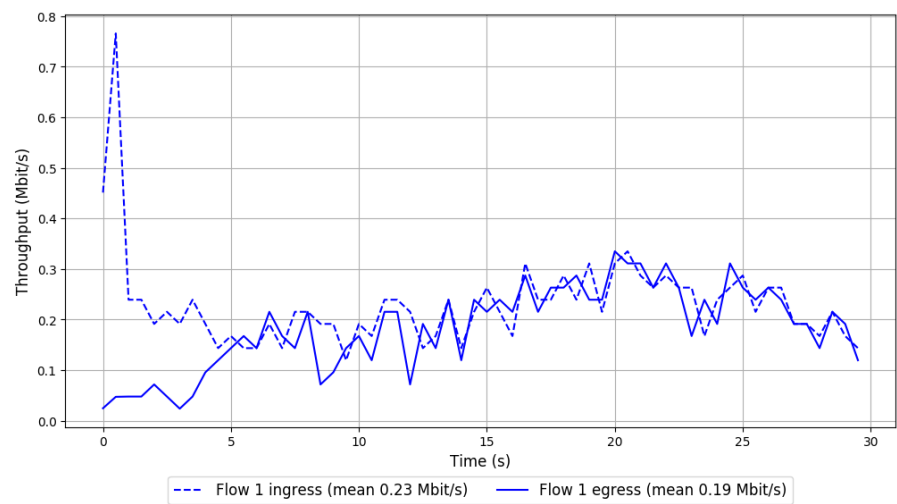
-- Flow 1:

Average throughput: 0.19 Mbit/s

95th percentile per-packet one-way delay: 483.955 ms

Loss rate: 20.22%

Run 2: Report of Indigo-cellular — Data Link



Run 3: Statistics of Indigo-cellular

Start at: 2017-09-22 08:42:56

End at: 2017-09-22 08:43:26

Local clock offset: -2.46 ms

Remote clock offset: -0.102 ms

# Below is generated by plot.py at 2017-09-22 09:31:52

# Datalink statistics

-- Total of 1 flow:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 444.815 ms

Loss rate: 13.24%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 444.815 ms

Loss rate: 13.24%



Run 3: Report of Indigo-cellular — Data Link

