

Pantheon Report

Generated at 2019-01-17 06:22:03 (UTC).

Data path: AWS India 1 on `ens5` (*local*) → India cellular on `ppp0` (*remote*).

Repeated the test of 21 congestion control schemes 3 times.

Each test lasted for 30 seconds running 1 flow.

NTP offsets were measured against `nets.org.sg` and have been applied to correct the timestamps in logs.

System info:

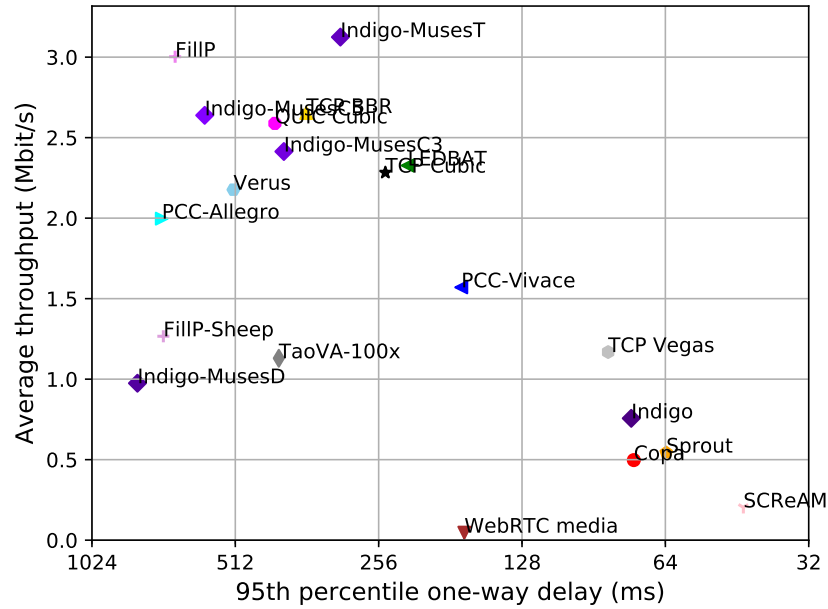
```
Linux 4.15.0-1031-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

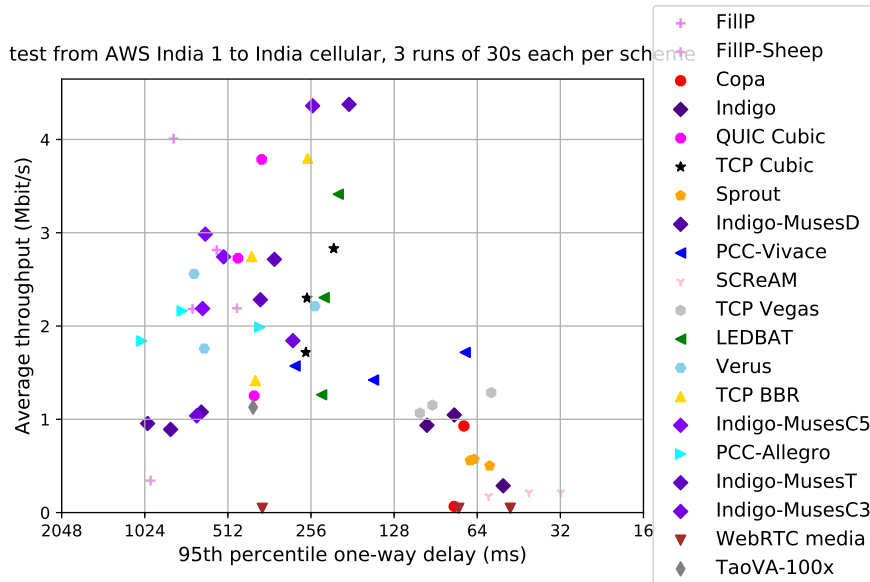
```
branch: muses @ c80a283586bf7b0cc1fe08c69c8f60d56498f81c
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ c3eee875824760ec5b2fd207fefe166e1afe2170
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
  M src/ScreamClient
  M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
  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 @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
```

third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851

test from AWS India 1 to India cellular, 3 runs of 30s each per scheme
(mean of all runs by scheme)



test from AWS India 1 to India cellular, 3 runs of 30s each per scheme



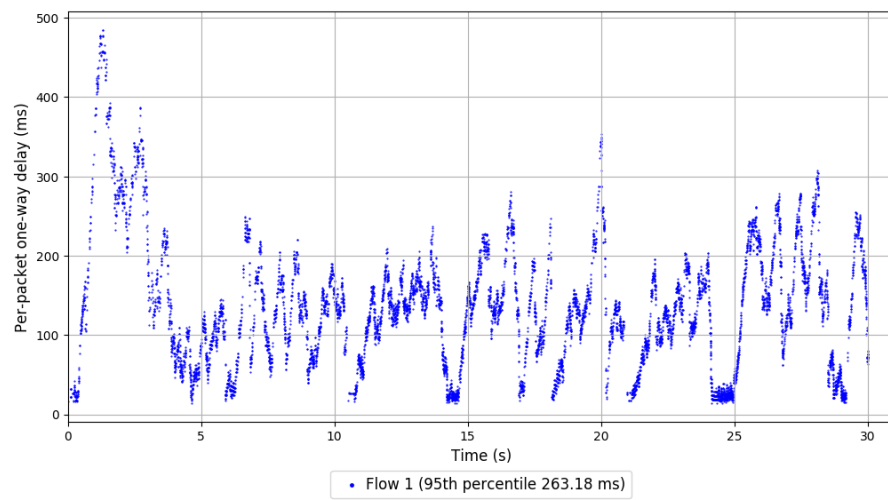
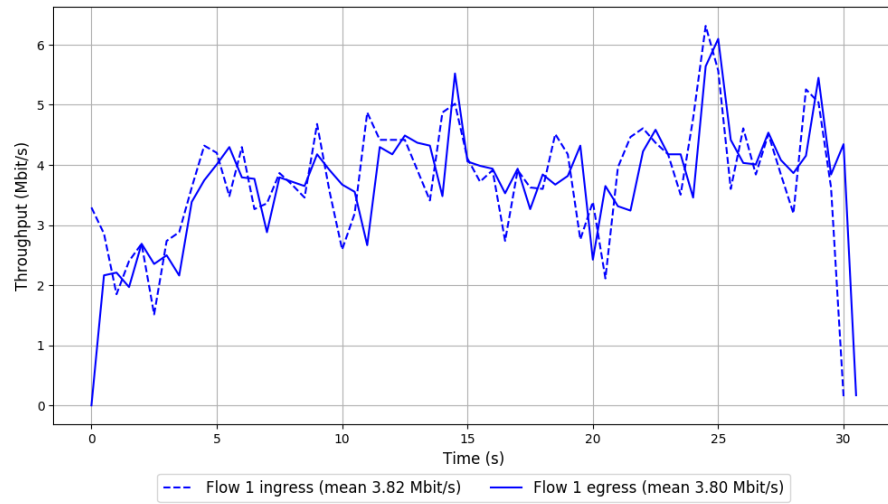
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	3	2.66	363.34	1.25
Copa	2	0.50	74.55	44.27
TCP Cubic	3	2.28	247.83	0.51
FillP	3	3.00	684.86	2.57
FillP-Sheep	2	1.26	725.01	8.70
Indigo	3	0.76	75.48	0.05
Indigo-MusesC3	3	2.41	404.85	1.17
Indigo-MusesC5	3	2.64	593.72	1.45
Indigo-MusesD	3	0.97	821.84	7.95
Indigo-MusesT	3	3.12	308.04	2.76
LEDBAT	3	2.32	222.56	0.52
PCC-Allegro	3	2.00	730.43	7.16
PCC-Expr	0	N/A	N/A	N/A
QUIC Cubic	3	2.59	422.81	1.21
SCReAM	3	0.21	43.89	0.07
Sprout	3	0.54	63.73	0.10
TaoVA-100x	1	1.13	414.86	17.45
TCP Vegas	3	1.17	84.40	0.12
Verus	3	2.18	516.72	1.82
PCC-Vivace	3	1.57	171.71	0.23
WebRTC media	3	0.05	169.18	0.53

Run 1: Statistics of TCP BBR

Start at: 2019-01-17 05:11:13
End at: 2019-01-17 05:11:43
Local clock offset: -0.698 ms
Remote clock offset: -7.812 ms

Below is generated by plot.py at 2019-01-17 06:21:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.80 Mbit/s
95th percentile per-packet one-way delay: 263.181 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 3.80 Mbit/s
95th percentile per-packet one-way delay: 263.181 ms
Loss rate: 0.49%

Run 1: Report of TCP BBR — Data Link

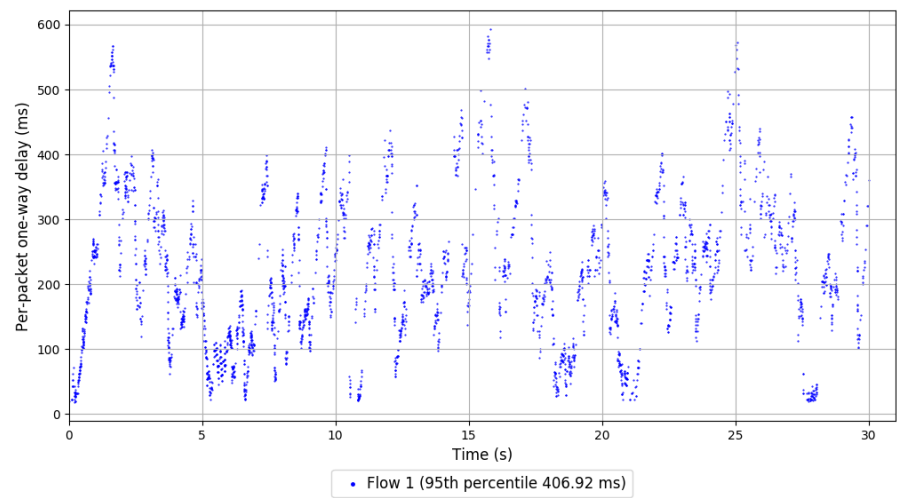
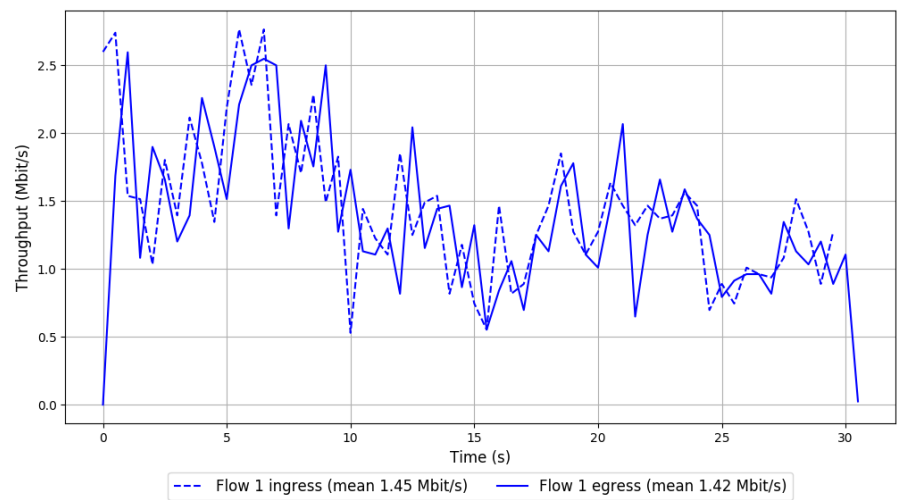


Run 2: Statistics of TCP BBR

Start at: 2019-01-17 05:34:47
End at: 2019-01-17 05:35:17
Local clock offset: -1.498 ms
Remote clock offset: -4.974 ms

Below is generated by plot.py at 2019-01-17 06:21:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.42 Mbit/s
95th percentile per-packet one-way delay: 406.918 ms
Loss rate: 2.02%
-- Flow 1:
Average throughput: 1.42 Mbit/s
95th percentile per-packet one-way delay: 406.918 ms
Loss rate: 2.02%

Run 2: Report of TCP BBR — Data Link

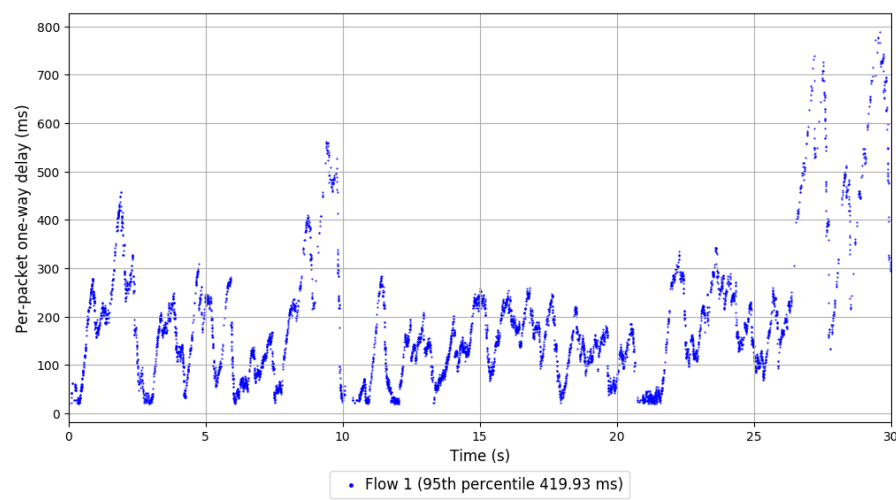
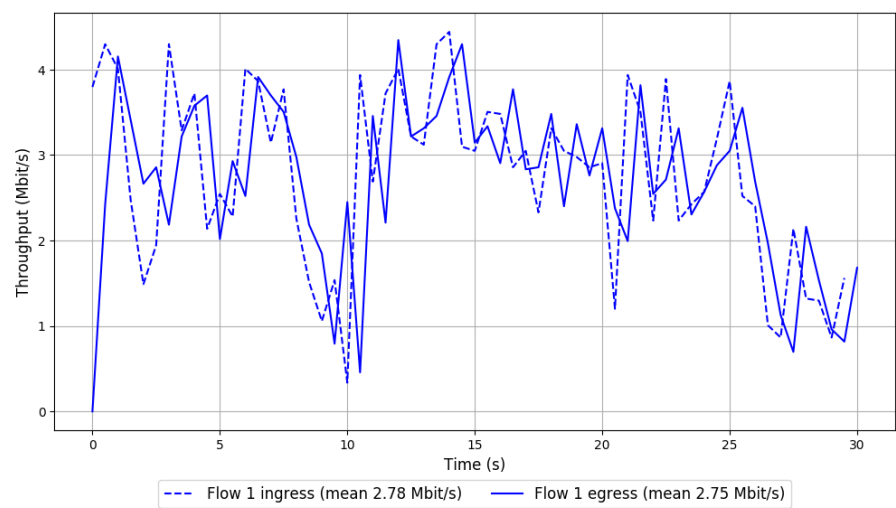


Run 3: Statistics of TCP BBR

Start at: 2019-01-17 05:58:01
End at: 2019-01-17 05:58:31
Local clock offset: -2.795 ms
Remote clock offset: -4.205 ms

Below is generated by plot.py at 2019-01-17 06:21:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.75 Mbit/s
95th percentile per-packet one-way delay: 419.933 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 2.75 Mbit/s
95th percentile per-packet one-way delay: 419.933 ms
Loss rate: 1.25%

Run 3: Report of TCP BBR — Data Link

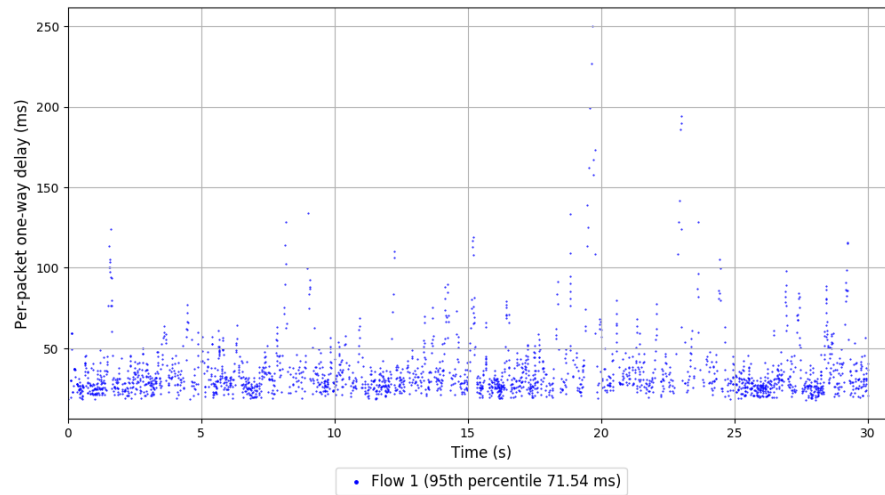
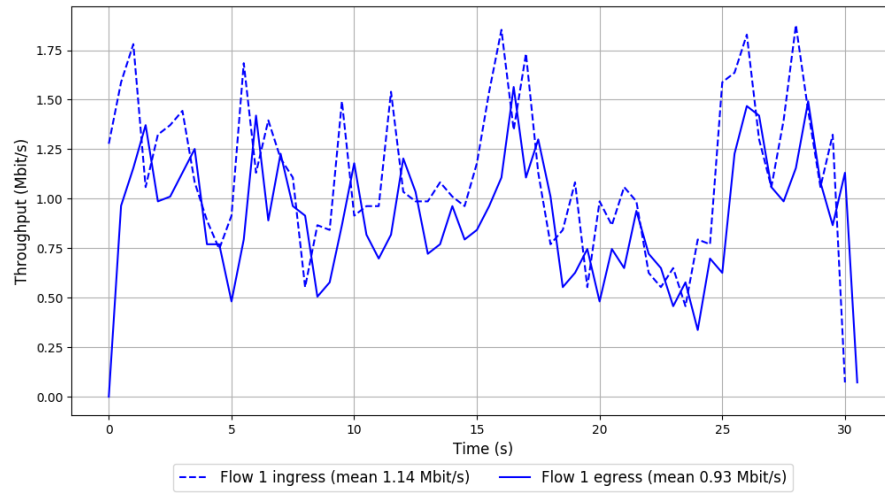


Run 1: Statistics of Copa

Start at: 2019-01-17 05:29:14
End at: 2019-01-17 05:29:44
Local clock offset: -2.568 ms
Remote clock offset: -4.848 ms

Below is generated by plot.py at 2019-01-17 06:21:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.93 Mbit/s
95th percentile per-packet one-way delay: 71.541 ms
Loss rate: 18.74%
-- Flow 1:
Average throughput: 0.93 Mbit/s
95th percentile per-packet one-way delay: 71.541 ms
Loss rate: 18.74%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

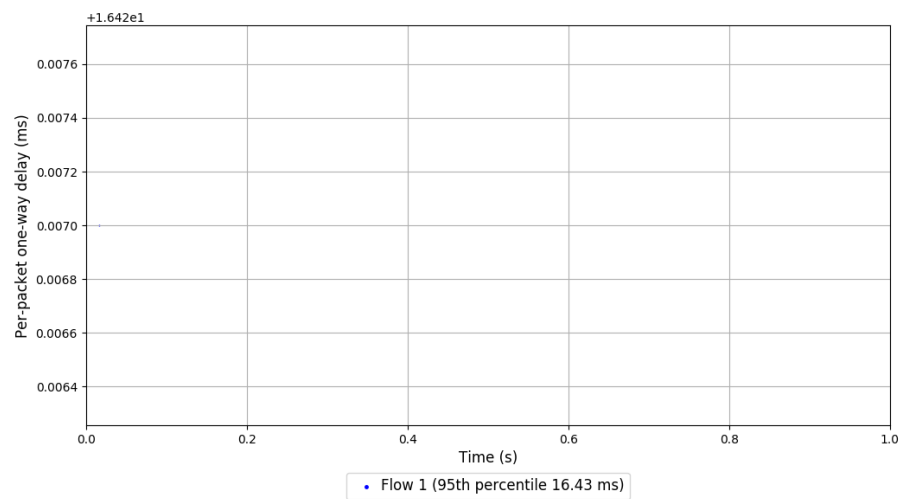
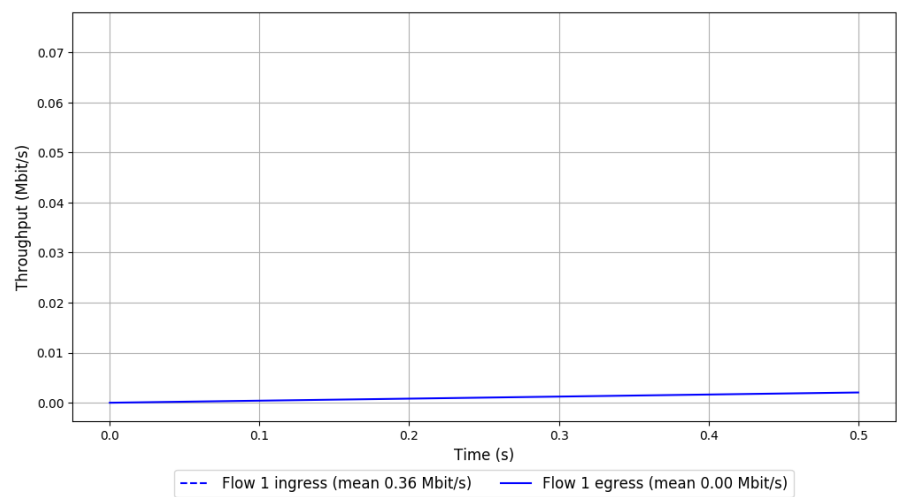
Start at: 2019-01-17 05:52:29

End at: 2019-01-17 05:52:59

Local clock offset: -1.344 ms

Remote clock offset: -4.909 ms

Run 2: Report of Copa — Data Link

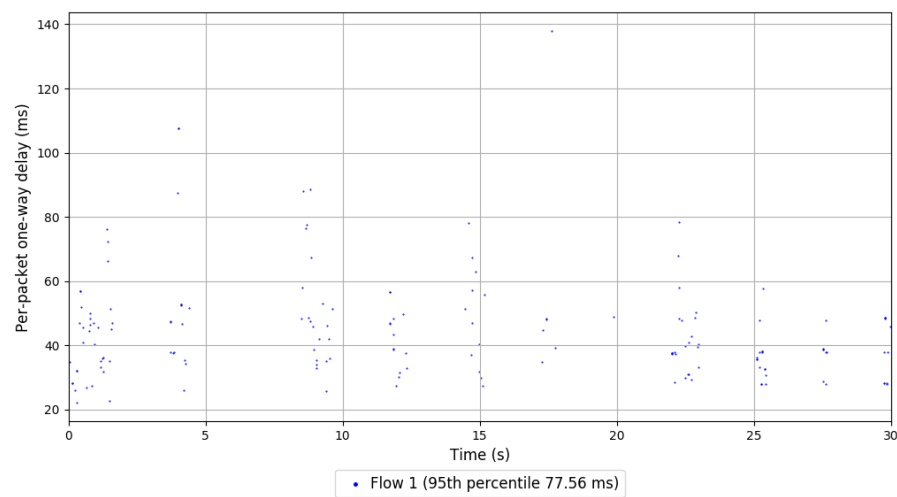
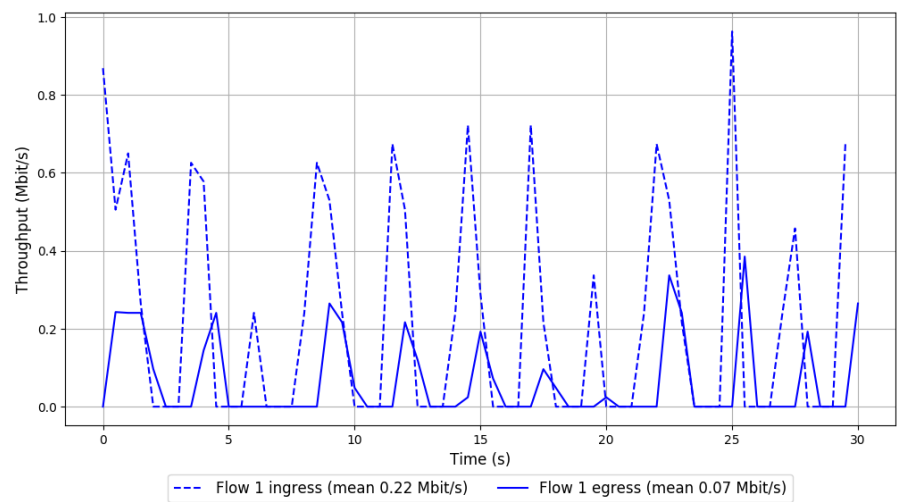


Run 3: Statistics of Copa

Start at: 2019-01-17 06:15:52
End at: 2019-01-17 06:16:22
Local clock offset: -3.874 ms
Remote clock offset: -9.057 ms

Below is generated by plot.py at 2019-01-17 06:21:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 77.558 ms
Loss rate: 69.79%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 77.558 ms
Loss rate: 69.79%

Run 3: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2019-01-17 05:30:20

End at: 2019-01-17 05:30:50

Local clock offset: -2.419 ms

Remote clock offset: -5.0 ms

Below is generated by plot.py at 2019-01-17 06:21:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.30 Mbit/s

95th percentile per-packet one-way delay: 264.585 ms

Loss rate: 0.73%

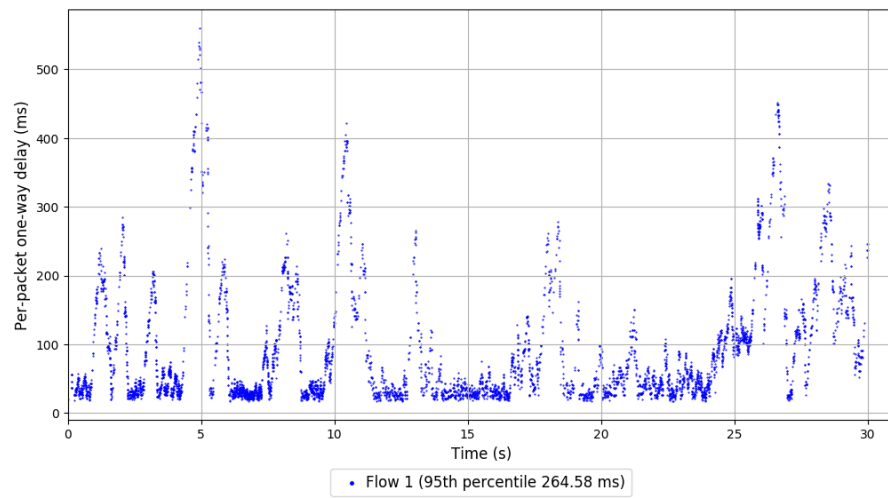
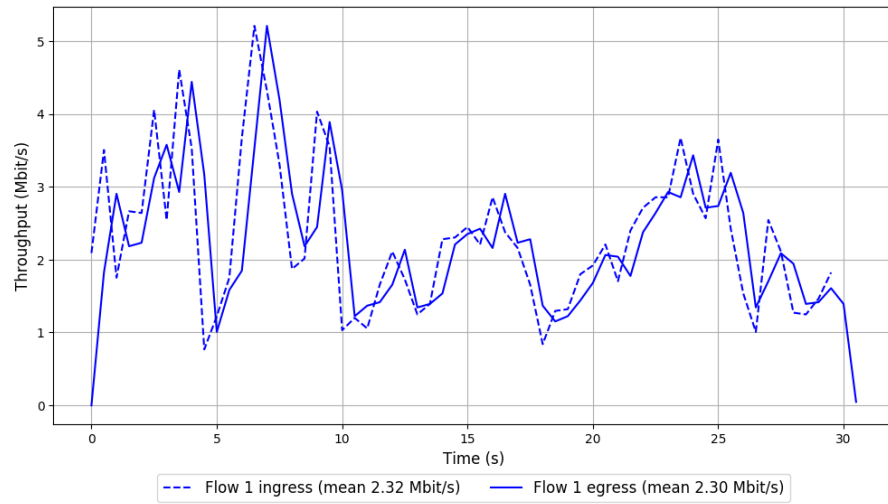
-- Flow 1:

Average throughput: 2.30 Mbit/s

95th percentile per-packet one-way delay: 264.585 ms

Loss rate: 0.73%

Run 1: Report of TCP Cubic — Data Link

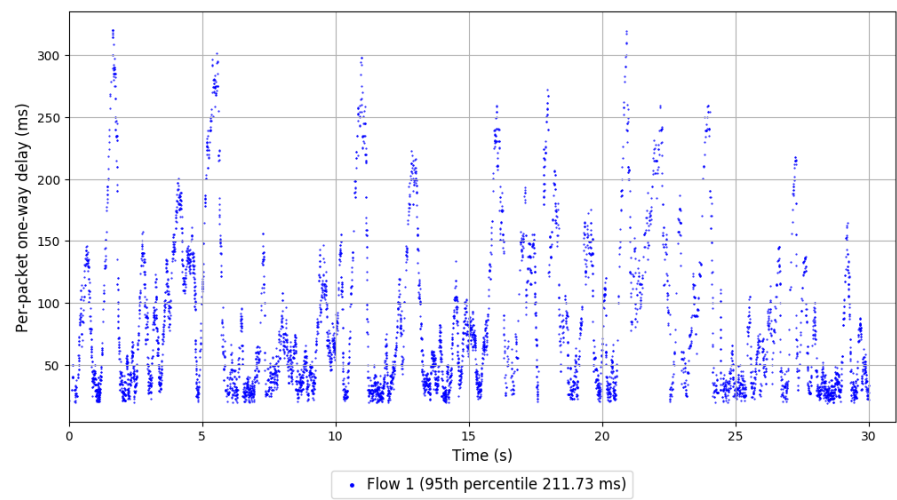
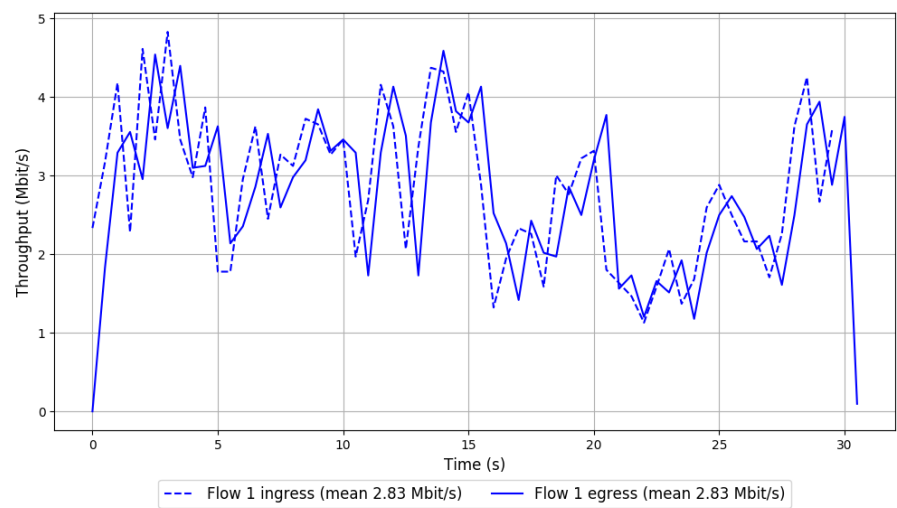


Run 2: Statistics of TCP Cubic

Start at: 2019-01-17 05:53:35
End at: 2019-01-17 05:54:05
Local clock offset: -3.378 ms
Remote clock offset: -4.486 ms

Below is generated by plot.py at 2019-01-17 06:21:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.83 Mbit/s
95th percentile per-packet one-way delay: 211.732 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 2.83 Mbit/s
95th percentile per-packet one-way delay: 211.732 ms
Loss rate: 0.17%

Run 2: Report of TCP Cubic — Data Link

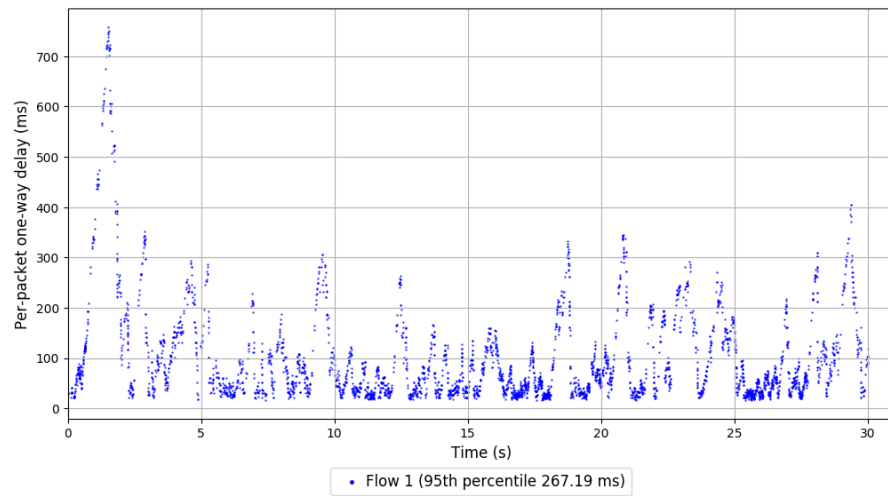
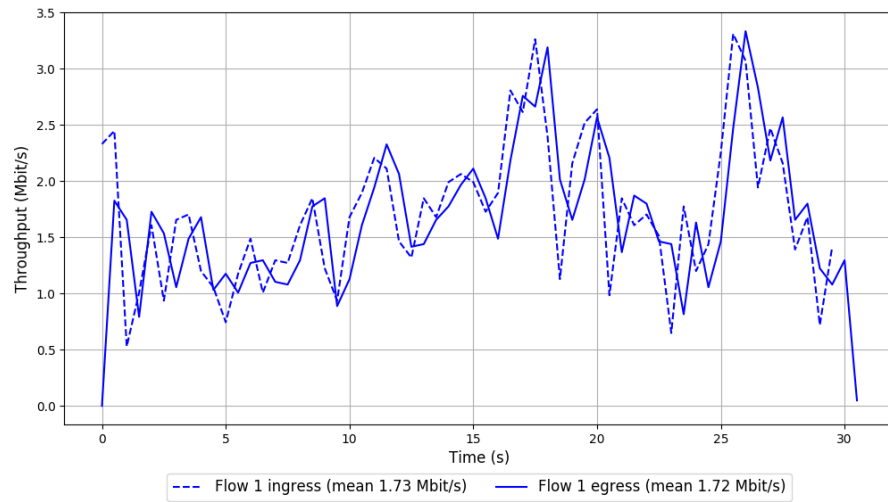


Run 3: Statistics of TCP Cubic

Start at: 2019-01-17 06:16:58
End at: 2019-01-17 06:17:28
Local clock offset: -1.603 ms
Remote clock offset: -4.187 ms

Below is generated by plot.py at 2019-01-17 06:21:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.72 Mbit/s
95th percentile per-packet one-way delay: 267.185 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 1.72 Mbit/s
95th percentile per-packet one-way delay: 267.185 ms
Loss rate: 0.63%

Run 3: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2019-01-17 05:20:22

End at: 2019-01-17 05:20:52

Local clock offset: -4.254 ms

Remote clock offset: -4.62 ms

Below is generated by plot.py at 2019-01-17 06:21:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 4.01 Mbit/s

95th percentile per-packet one-way delay: 804.737 ms

Loss rate: 2.53%

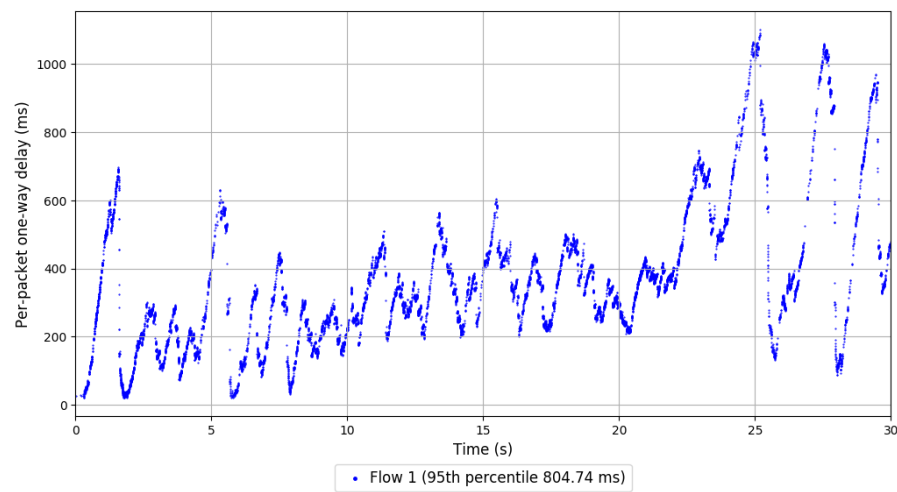
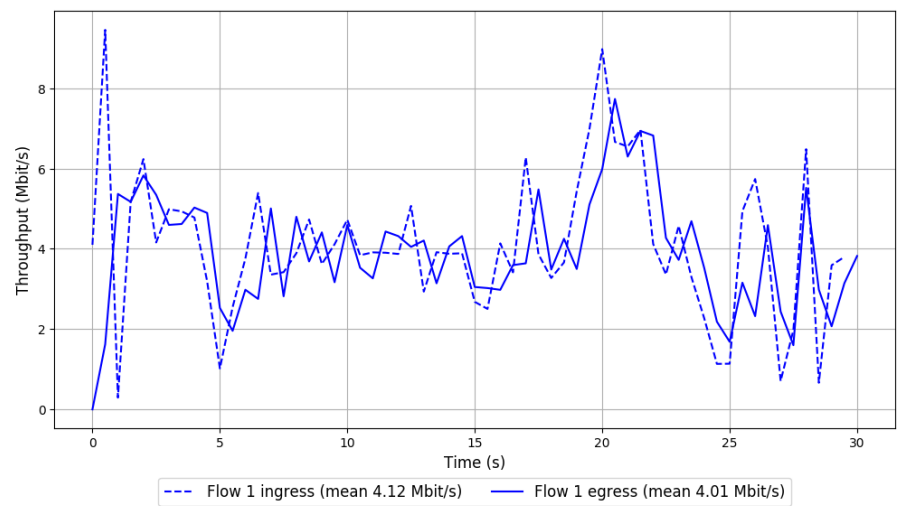
-- Flow 1:

Average throughput: 4.01 Mbit/s

95th percentile per-packet one-way delay: 804.737 ms

Loss rate: 2.53%

Run 1: Report of FillP — Data Link

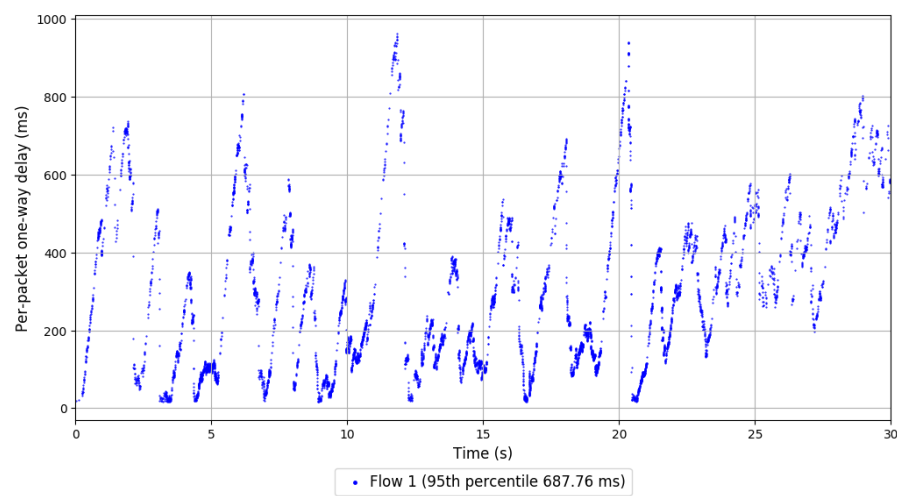
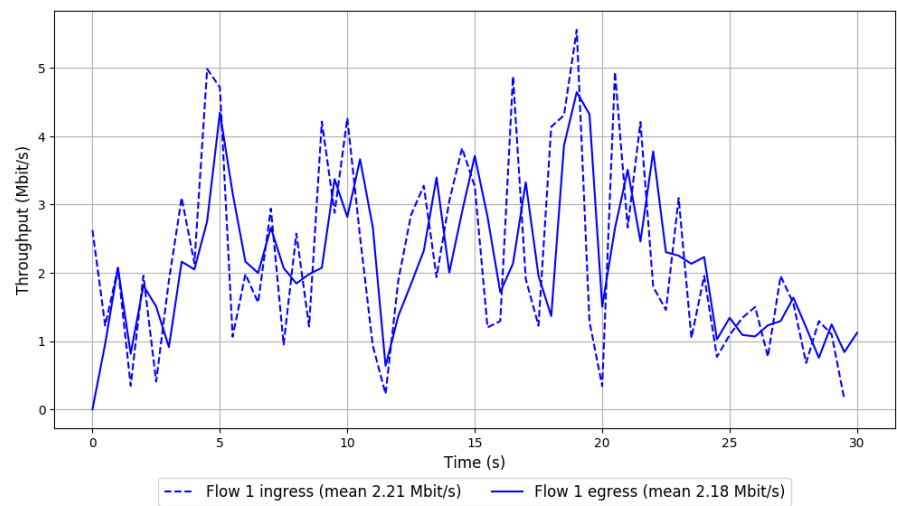


Run 2: Statistics of FillP

Start at: 2019-01-17 05:43:39
End at: 2019-01-17 05:44:09
Local clock offset: -0.943 ms
Remote clock offset: -4.232 ms

Below is generated by plot.py at 2019-01-17 06:21:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.18 Mbit/s
95th percentile per-packet one-way delay: 687.758 ms
Loss rate: 1.15%
-- Flow 1:
Average throughput: 2.18 Mbit/s
95th percentile per-packet one-way delay: 687.758 ms
Loss rate: 1.15%

Run 2: Report of FillP — Data Link

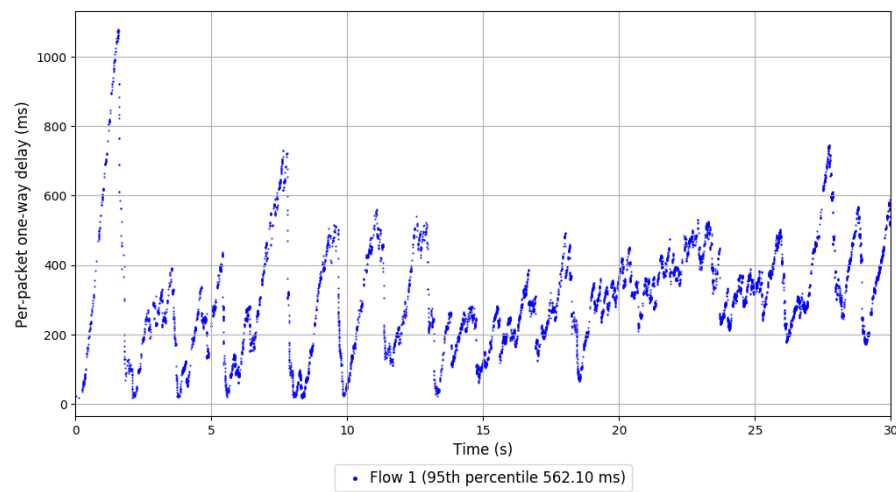
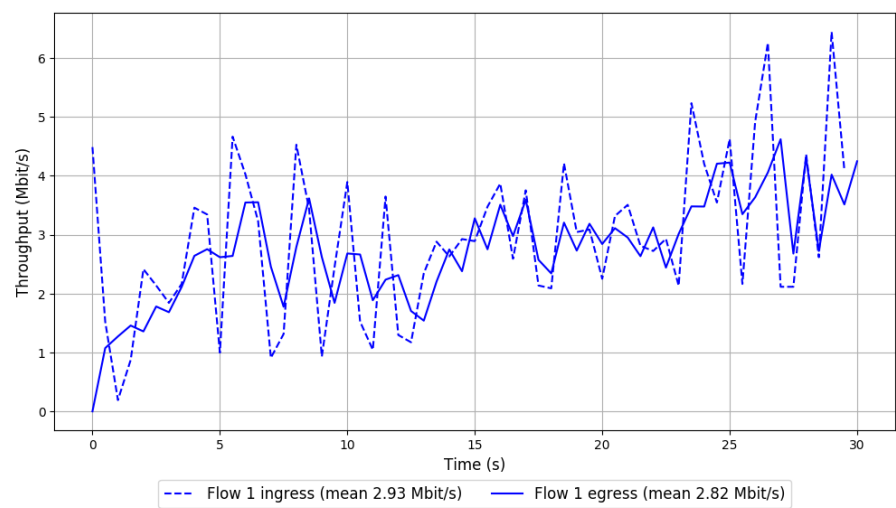


Run 3: Statistics of FillP

Start at: 2019-01-17 06:06:55
End at: 2019-01-17 06:07:25
Local clock offset: -0.814 ms
Remote clock offset: -3.507 ms

Below is generated by plot.py at 2019-01-17 06:21:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.82 Mbit/s
95th percentile per-packet one-way delay: 562.100 ms
Loss rate: 4.02%
-- Flow 1:
Average throughput: 2.82 Mbit/s
95th percentile per-packet one-way delay: 562.100 ms
Loss rate: 4.02%

Run 3: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2019-01-17 05:32:34

End at: 2019-01-17 05:33:04

Local clock offset: -3.205 ms

Remote clock offset: -4.577 ms

Below is generated by plot.py at 2019-01-17 06:21:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.19 Mbit/s

95th percentile per-packet one-way delay: 474.966 ms

Loss rate: 0.70%

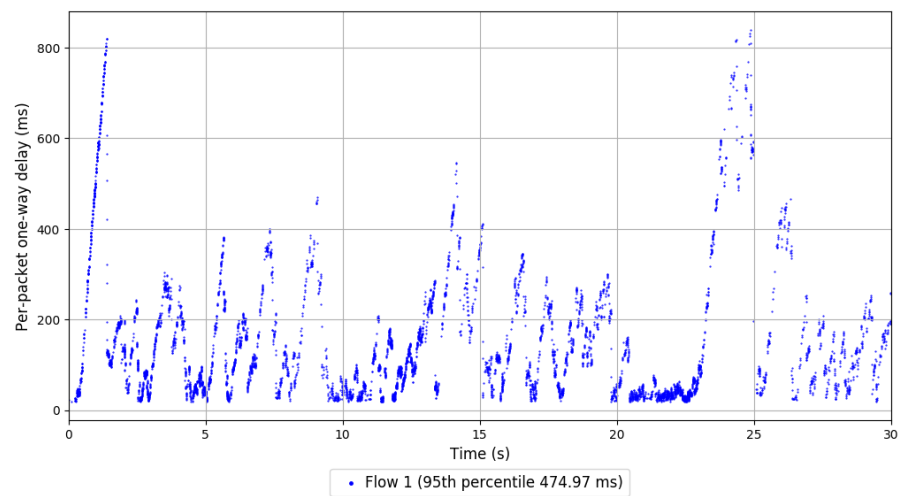
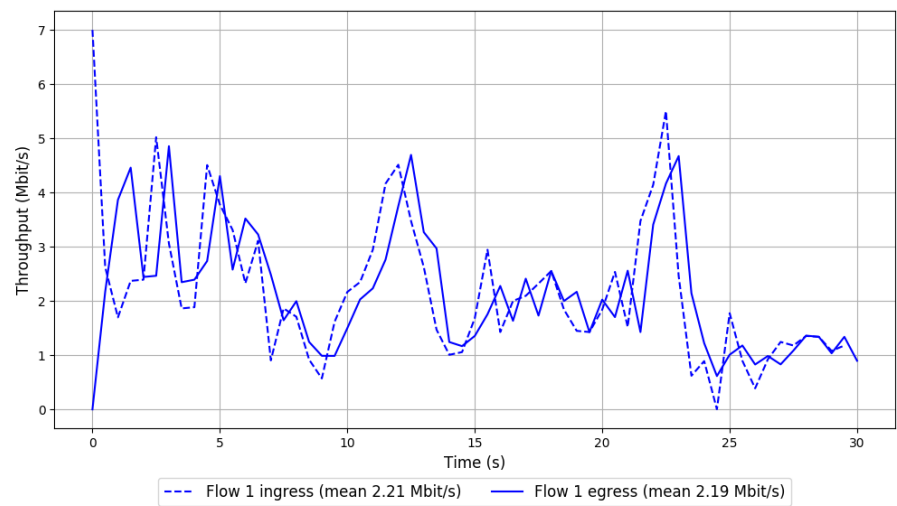
-- Flow 1:

Average throughput: 2.19 Mbit/s

95th percentile per-packet one-way delay: 474.966 ms

Loss rate: 0.70%

Run 1: Report of FillP-Sheep — Data Link

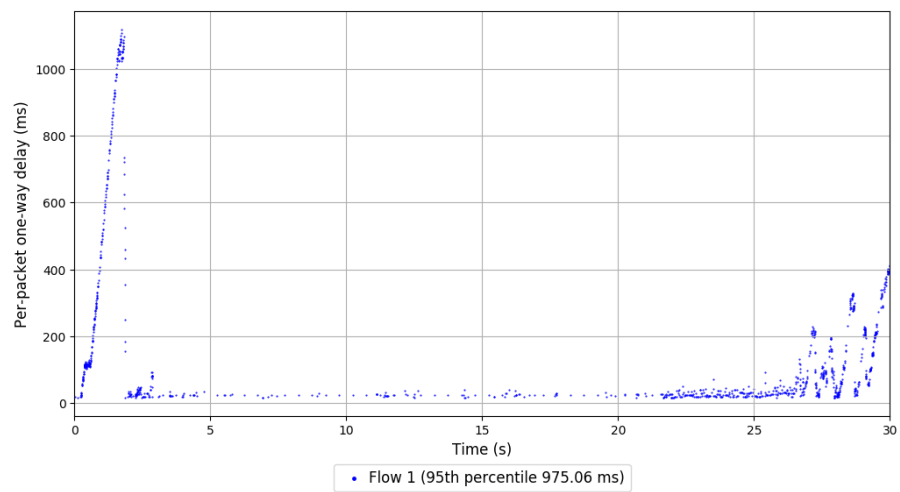
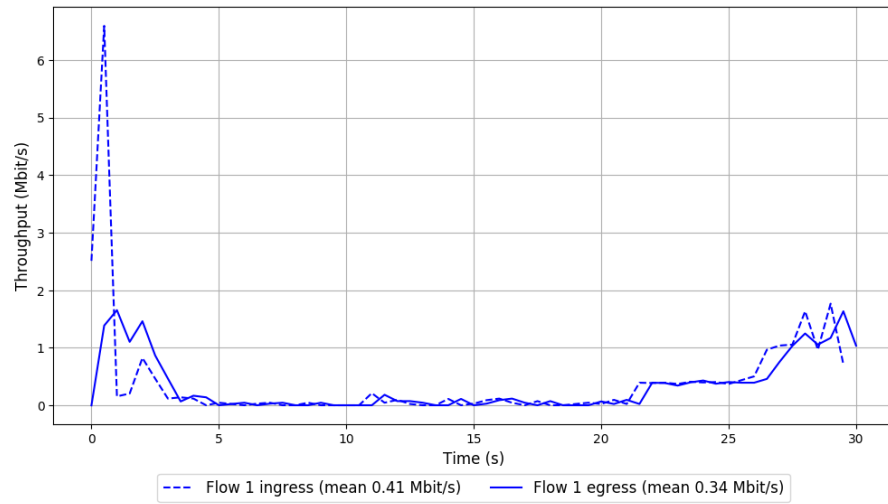


Run 2: Statistics of FillP-Sheep

Start at: 2019-01-17 05:55:48
End at: 2019-01-17 05:56:18
Local clock offset: -0.133 ms
Remote clock offset: -4.604 ms

Below is generated by plot.py at 2019-01-17 06:21:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 975.063 ms
Loss rate: 16.69%
-- Flow 1:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 975.063 ms
Loss rate: 16.69%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

/home/ubuntu/pantheon/data/2019-01-17T05-10-AWS-India-1-to-India-cellular-3-runs/fillp_sheep

Run 3: Report of FillP-Sheep — Data Link

Figure is missing

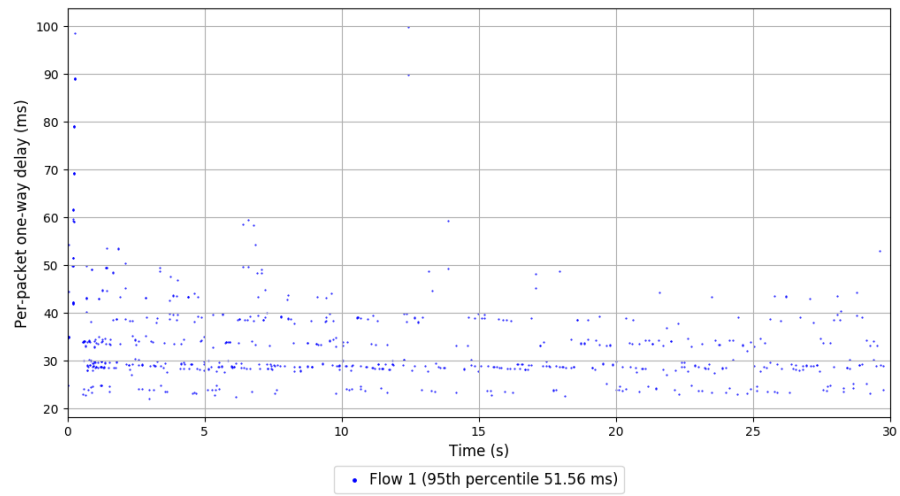
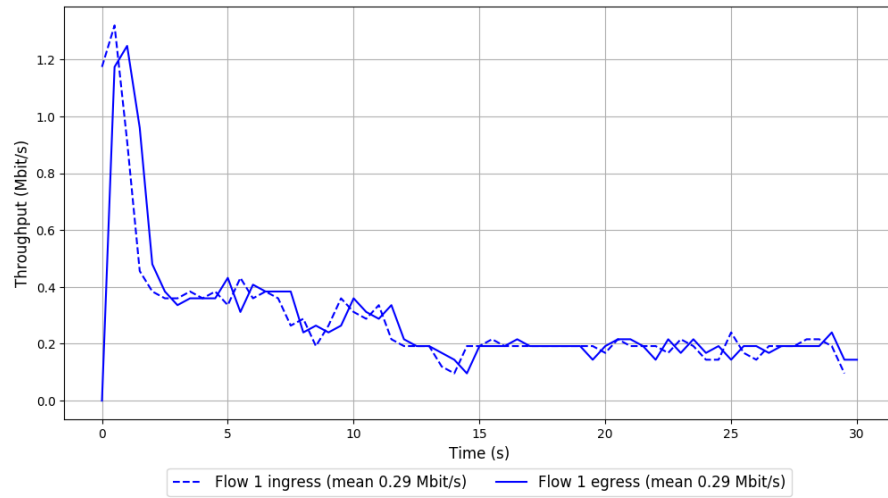
Figure is missing

Run 1: Statistics of Indigo

Start at: 2019-01-17 05:13:43
End at: 2019-01-17 05:14:13
Local clock offset: 0.22 ms
Remote clock offset: -5.257 ms

Below is generated by plot.py at 2019-01-17 06:21:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 51.556 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 51.556 ms
Loss rate: 0.00%

Run 1: Report of Indigo — Data Link

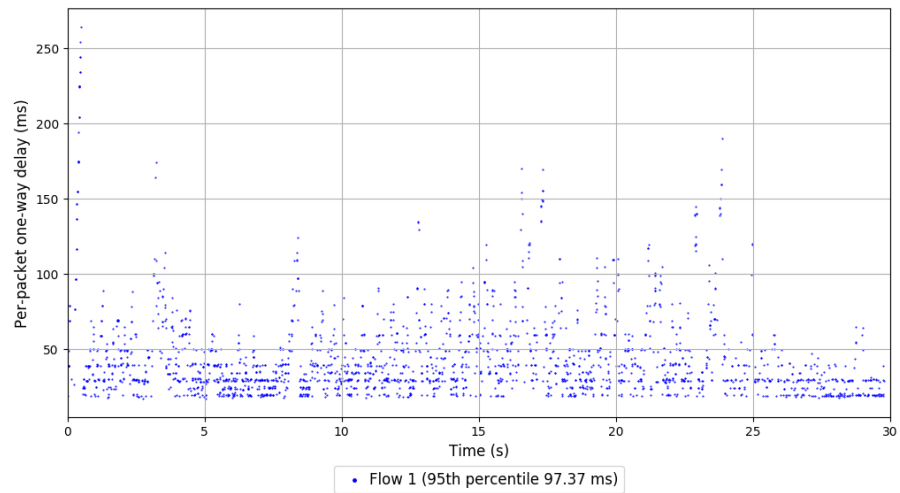
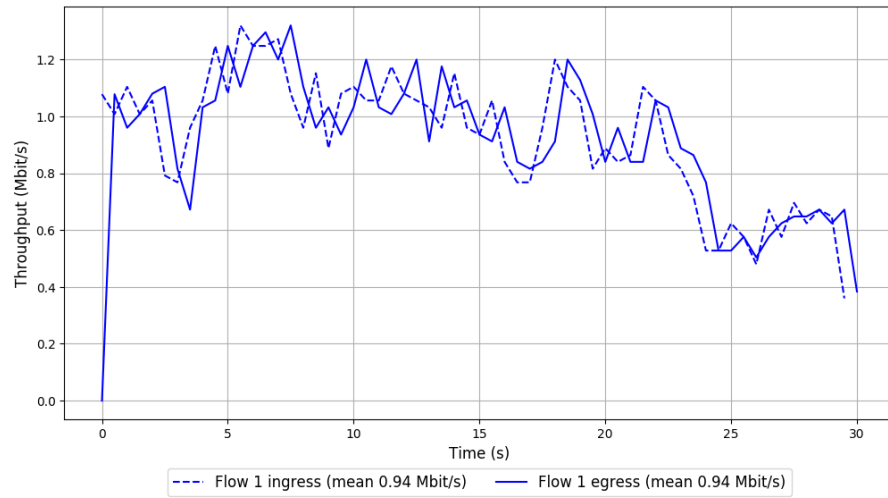


Run 2: Statistics of Indigo

Start at: 2019-01-17 05:36:59
End at: 2019-01-17 05:37:29
Local clock offset: -1.604 ms
Remote clock offset: -5.026 ms

Below is generated by plot.py at 2019-01-17 06:21:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.94 Mbit/s
95th percentile per-packet one-way delay: 97.367 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.94 Mbit/s
95th percentile per-packet one-way delay: 97.367 ms
Loss rate: 0.00%

Run 2: Report of Indigo — Data Link

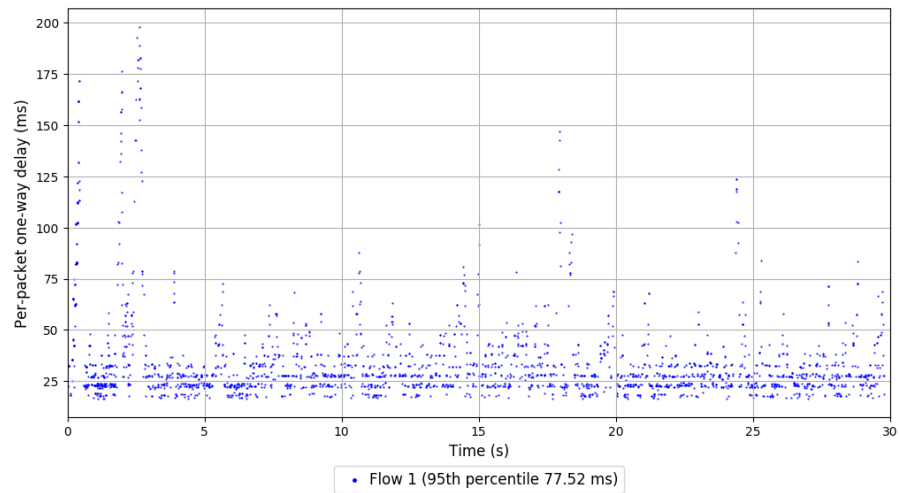
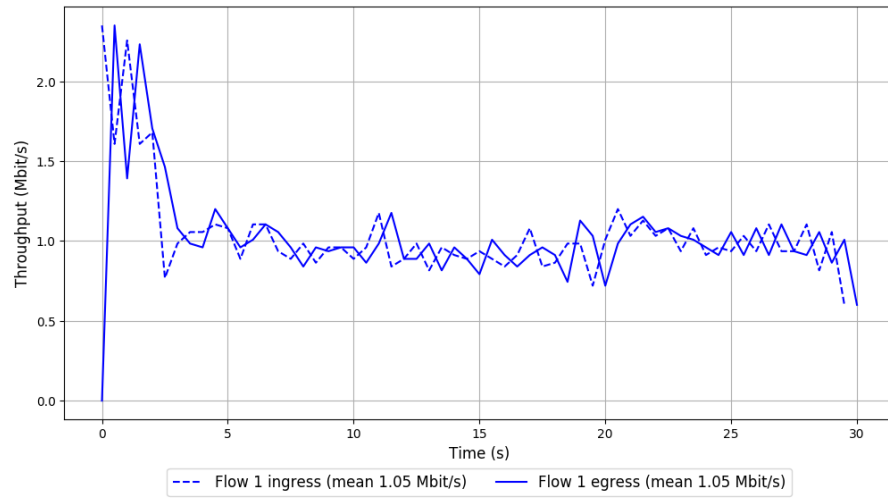


Run 3: Statistics of Indigo

Start at: 2019-01-17 06:00:14
End at: 2019-01-17 06:00:44
Local clock offset: -0.308 ms
Remote clock offset: -5.067 ms

Below is generated by plot.py at 2019-01-17 06:21:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.05 Mbit/s
95th percentile per-packet one-way delay: 77.517 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 1.05 Mbit/s
95th percentile per-packet one-way delay: 77.517 ms
Loss rate: 0.15%

Run 3: Report of Indigo — Data Link

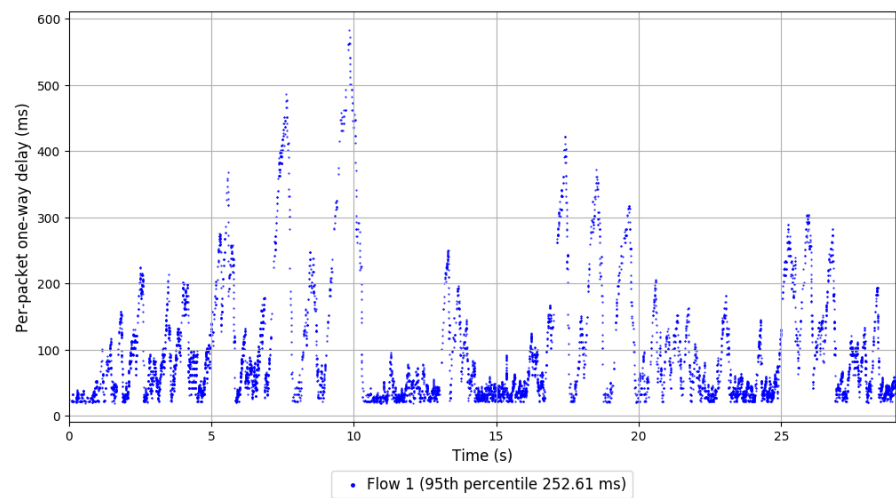
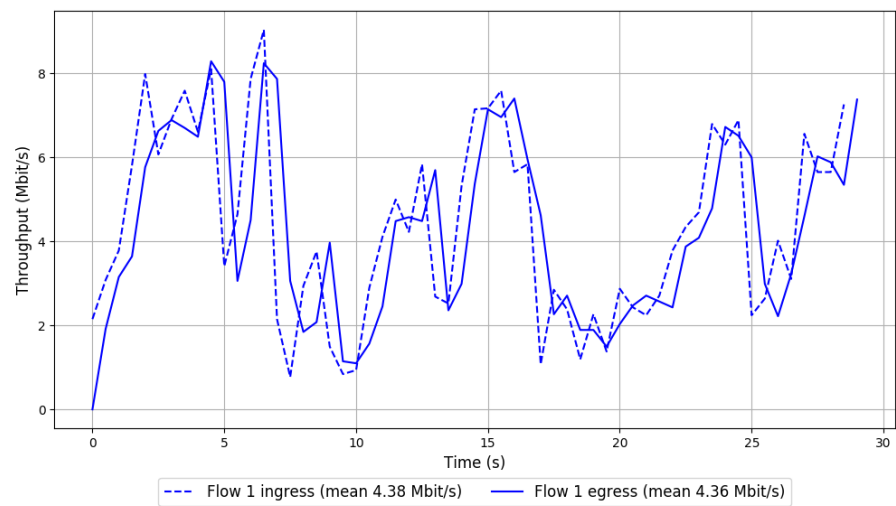



```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-01-17 05:21:28
End at: 2019-01-17 05:21:58
Local clock offset: -3.281 ms
Remote clock offset: -4.793 ms

# Below is generated by plot.py at 2019-01-17 06:21:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.36 Mbit/s
95th percentile per-packet one-way delay: 252.614 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 4.36 Mbit/s
95th percentile per-packet one-way delay: 252.614 ms
Loss rate: 0.37%
```

Run 1: Report of Indigo-MusesC3 — Data Link



Run 2: Statistics of Indigo-MusesC3

Start at: 2019-01-17 05:44:46

End at: 2019-01-17 05:45:16

Local clock offset: -1.536 ms

Remote clock offset: -4.62 ms

Below is generated by plot.py at 2019-01-17 06:21:38

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.04 Mbit/s

95th percentile per-packet one-way delay: 664.137 ms

Loss rate: 2.21%

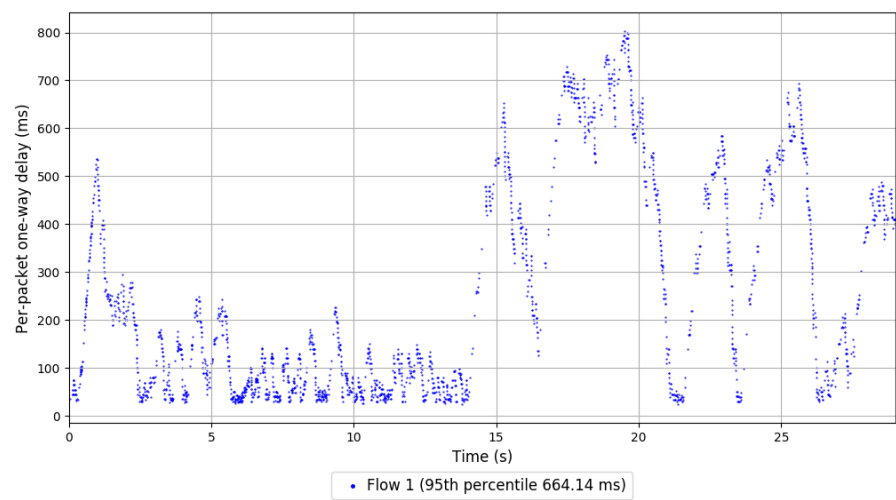
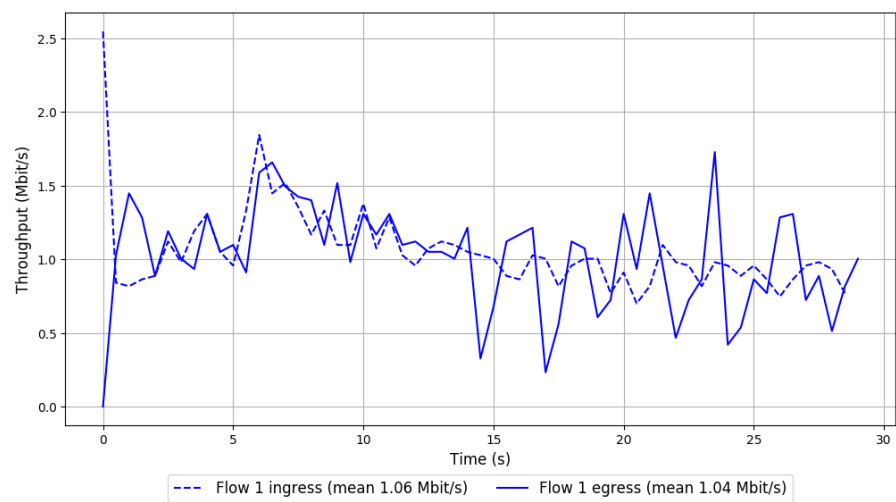
-- Flow 1:

Average throughput: 1.04 Mbit/s

95th percentile per-packet one-way delay: 664.137 ms

Loss rate: 2.21%

Run 2: Report of Indigo-MusesC3 — Data Link

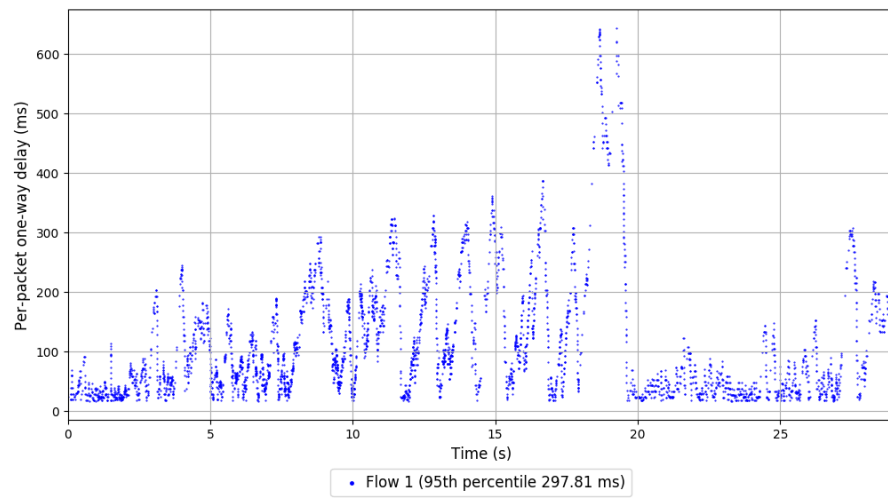
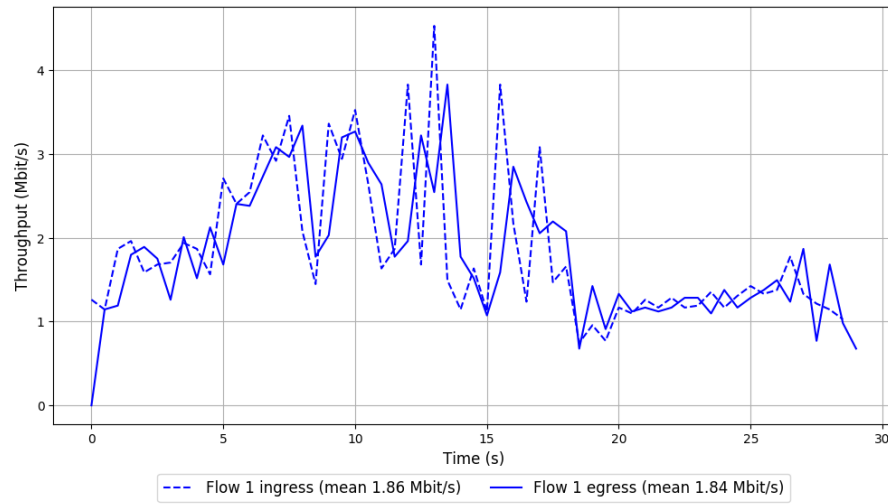


Run 3: Statistics of Indigo-MusesC3

Start at: 2019-01-17 06:08:02
End at: 2019-01-17 06:08:32
Local clock offset: -0.185 ms
Remote clock offset: -4.013 ms

Below is generated by plot.py at 2019-01-17 06:21:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.84 Mbit/s
95th percentile per-packet one-way delay: 297.808 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 1.84 Mbit/s
95th percentile per-packet one-way delay: 297.808 ms
Loss rate: 0.93%

Run 3: Report of Indigo-MusesC3 — Data Link

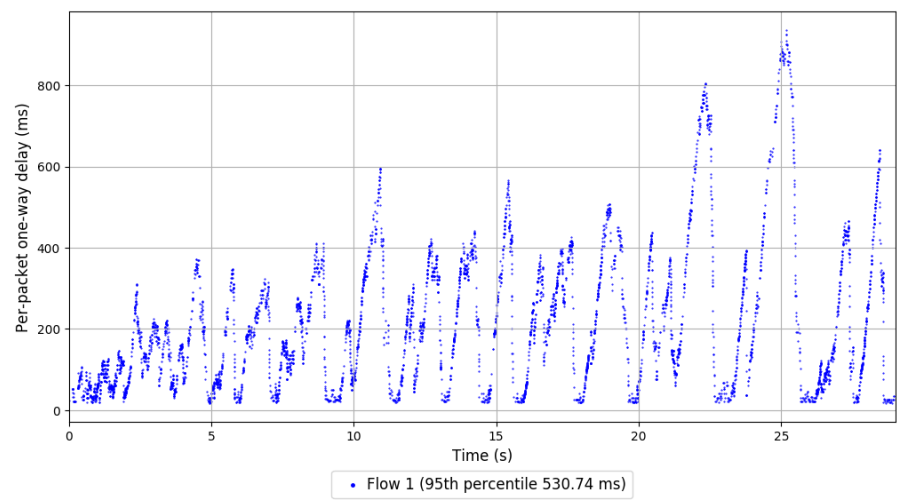
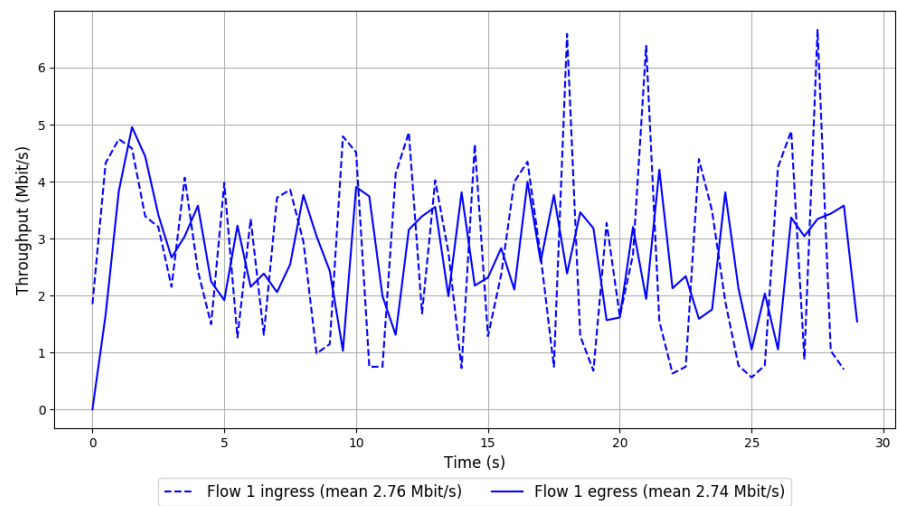


Run 1: Statistics of Indigo-MusesC5

Start at: 2019-01-17 05:17:02
End at: 2019-01-17 05:17:32
Local clock offset: -1.345 ms
Remote clock offset: -5.274 ms

Below is generated by plot.py at 2019-01-17 06:21:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.74 Mbit/s
95th percentile per-packet one-way delay: 530.737 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 2.74 Mbit/s
95th percentile per-packet one-way delay: 530.737 ms
Loss rate: 0.56%

Run 1: Report of Indigo-MusesC5 — Data Link

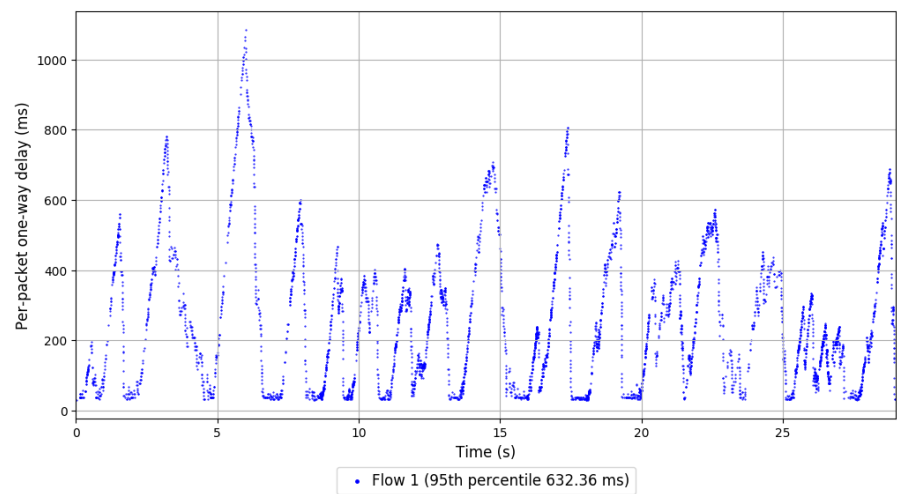
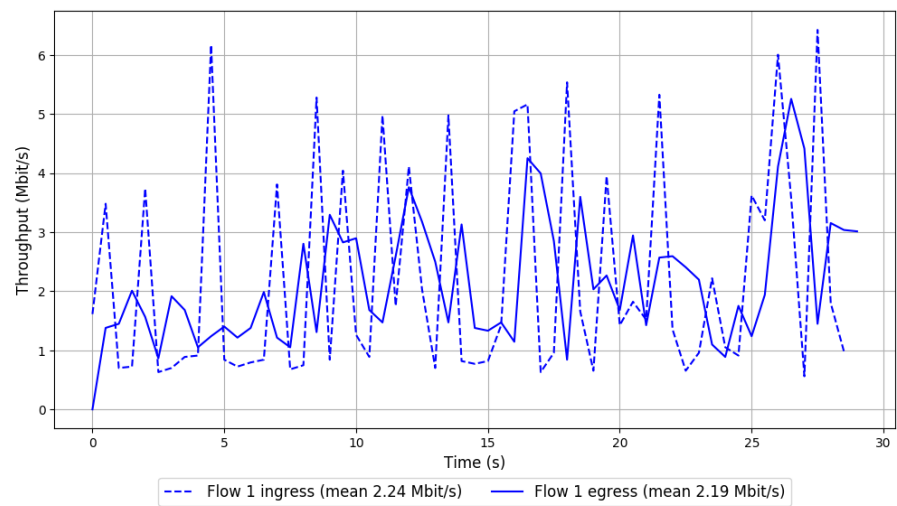


Run 2: Statistics of Indigo-MusesC5

Start at: 2019-01-17 05:40:19
End at: 2019-01-17 05:40:49
Local clock offset: -4.32 ms
Remote clock offset: -4.524 ms

Below is generated by plot.py at 2019-01-17 06:21:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.19 Mbit/s
95th percentile per-packet one-way delay: 632.358 ms
Loss rate: 2.34%
-- Flow 1:
Average throughput: 2.19 Mbit/s
95th percentile per-packet one-way delay: 632.358 ms
Loss rate: 2.34%

Run 2: Report of Indigo-MusesC5 — Data Link

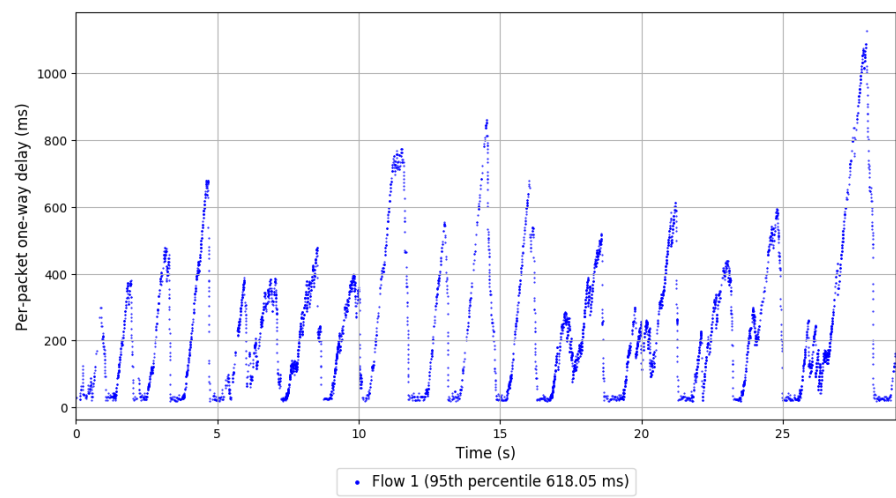
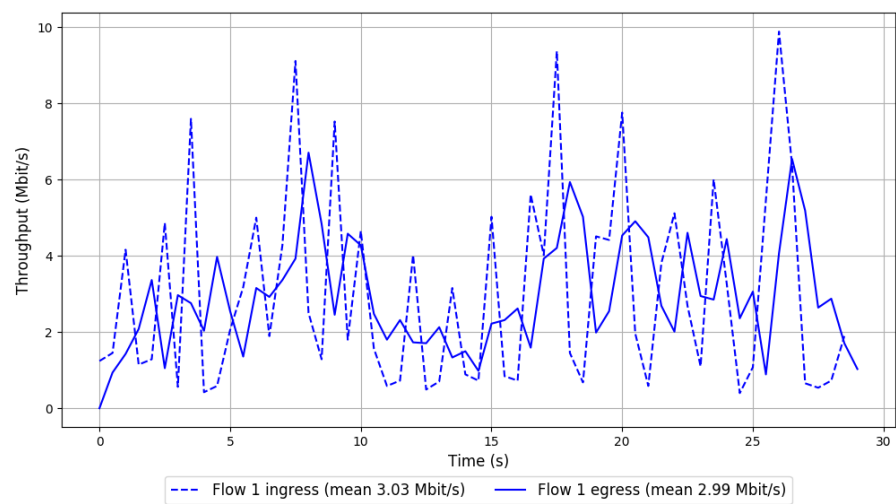


Run 3: Statistics of Indigo-MusesC5

Start at: 2019-01-17 06:03:34
End at: 2019-01-17 06:04:04
Local clock offset: -4.111 ms
Remote clock offset: -4.612 ms

Below is generated by plot.py at 2019-01-17 06:21:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.99 Mbit/s
95th percentile per-packet one-way delay: 618.054 ms
Loss rate: 1.44%
-- Flow 1:
Average throughput: 2.99 Mbit/s
95th percentile per-packet one-way delay: 618.054 ms
Loss rate: 1.44%

Run 3: Report of Indigo-MusesC5 — Data Link

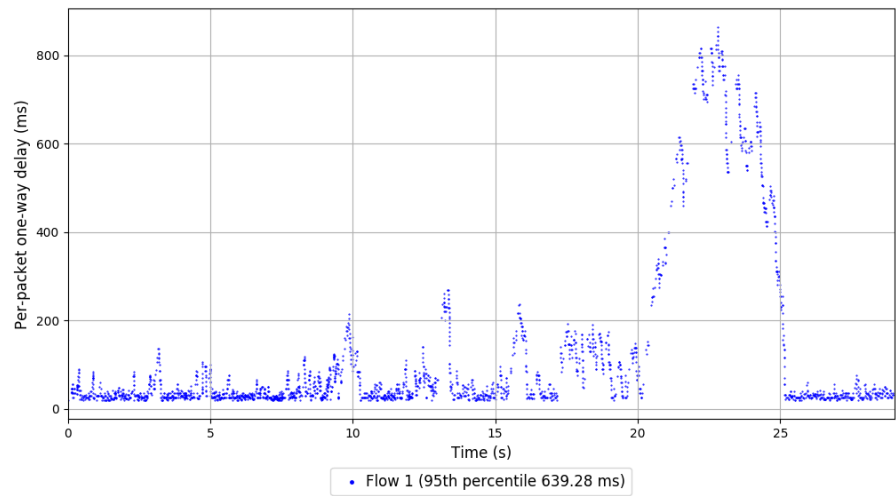
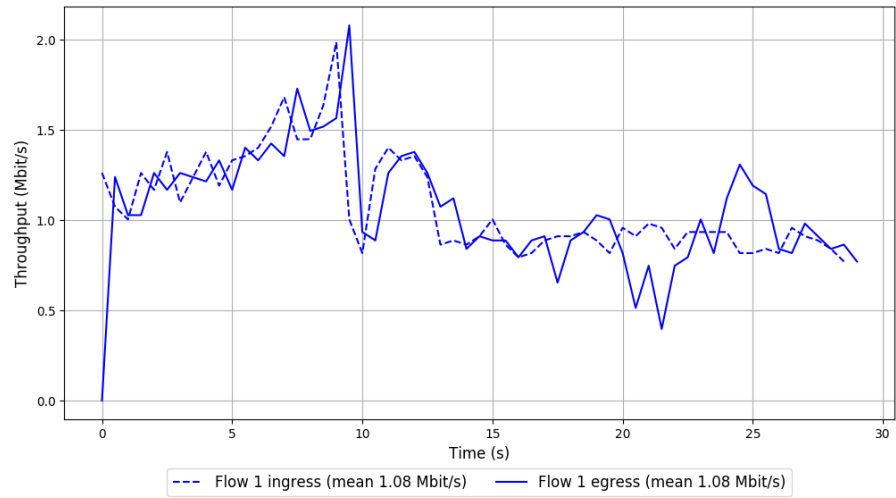


Run 1: Statistics of Indigo-MusesD

Start at: 2019-01-17 05:23:41
End at: 2019-01-17 05:24:11
Local clock offset: -3.241 ms
Remote clock offset: -4.981 ms

Below is generated by plot.py at 2019-01-17 06:21:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.08 Mbit/s
95th percentile per-packet one-way delay: 639.281 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 1.08 Mbit/s
95th percentile per-packet one-way delay: 639.281 ms
Loss rate: 0.52%

Run 1: Report of Indigo-MusesD — Data Link



Run 2: Statistics of Indigo-MusesD

Start at: 2019-01-17 05:46:58

End at: 2019-01-17 05:47:28

Local clock offset: -3.231 ms

Remote clock offset: -4.087 ms

Below is generated by plot.py at 2019-01-17 06:21:38

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.89 Mbit/s

95th percentile per-packet one-way delay: 825.774 ms

Loss rate: 1.03%

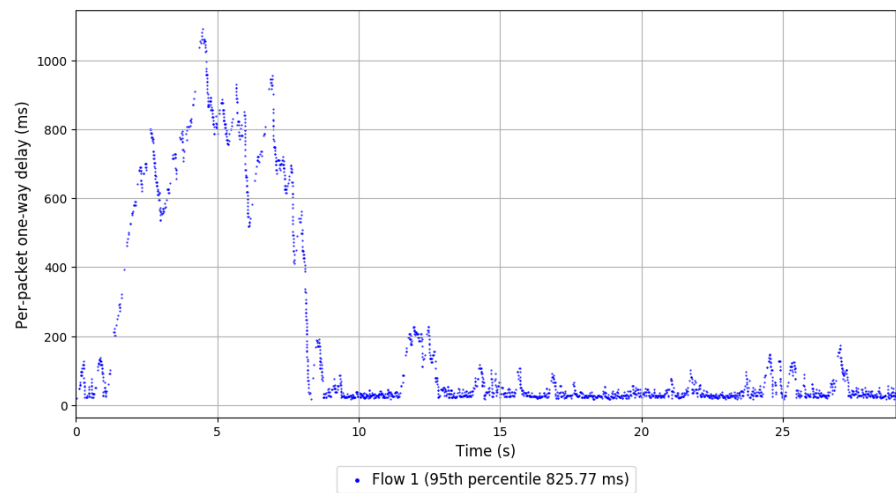
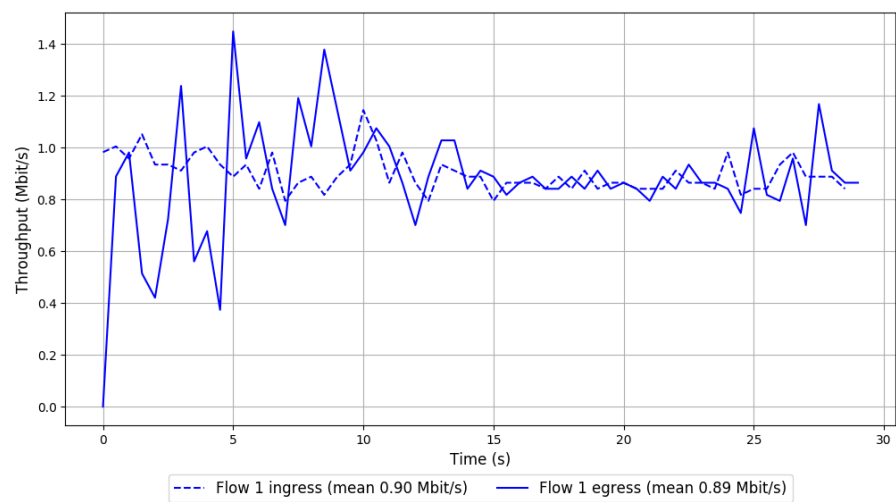
-- Flow 1:

Average throughput: 0.89 Mbit/s

95th percentile per-packet one-way delay: 825.774 ms

Loss rate: 1.03%

Run 2: Report of Indigo-MusesD — Data Link



Run 3: Statistics of Indigo-MusesD

Start at: 2019-01-17 06:10:16

End at: 2019-01-17 06:10:46

Local clock offset: 0.187 ms

Remote clock offset: -4.39 ms

Below is generated by plot.py at 2019-01-17 06:21:38

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.95 Mbit/s

95th percentile per-packet one-way delay: 1000.476 ms

Loss rate: 22.30%

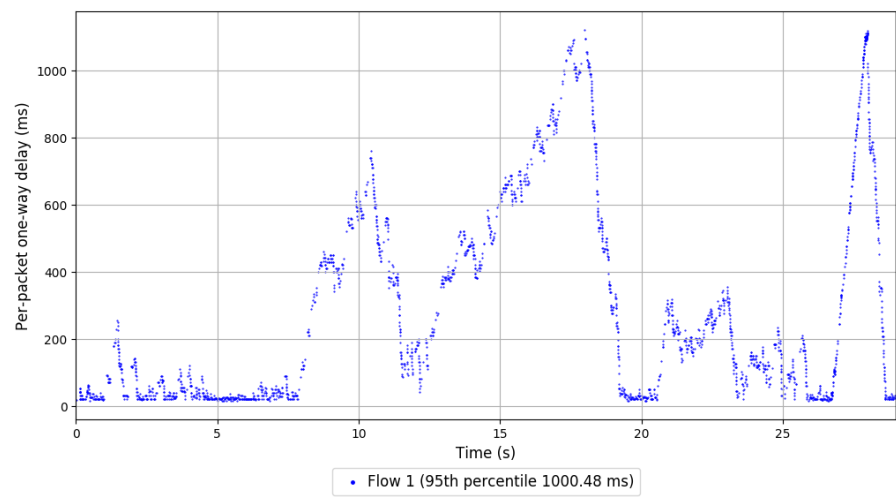
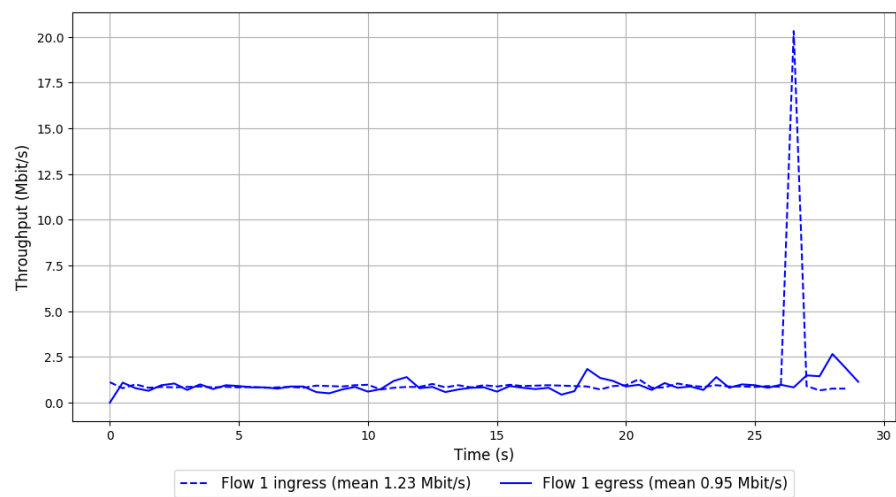
-- Flow 1:

Average throughput: 0.95 Mbit/s

95th percentile per-packet one-way delay: 1000.476 ms

Loss rate: 22.30%

Run 3: Report of Indigo-MusesD — Data Link

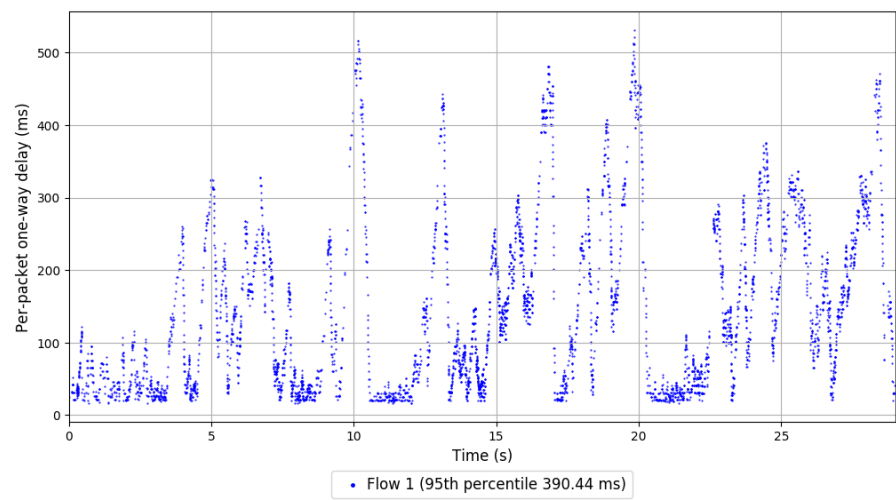
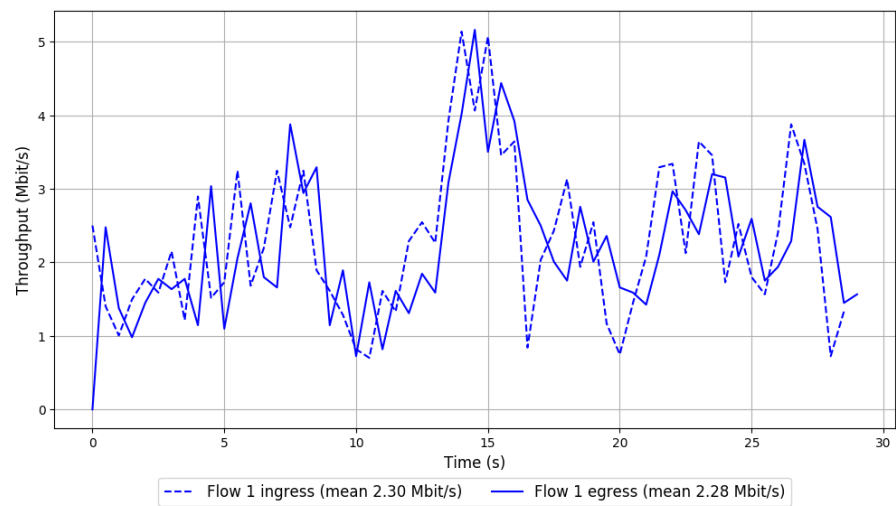


Run 1: Statistics of Indigo-MusesT

Start at: 2019-01-17 05:31:27
End at: 2019-01-17 05:31:57
Local clock offset: -1.581 ms
Remote clock offset: -5.924 ms

Below is generated by plot.py at 2019-01-17 06:21:40
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.28 Mbit/s
95th percentile per-packet one-way delay: 390.443 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 2.28 Mbit/s
95th percentile per-packet one-way delay: 390.443 ms
Loss rate: 0.67%

Run 1: Report of Indigo-MusesT — Data Link

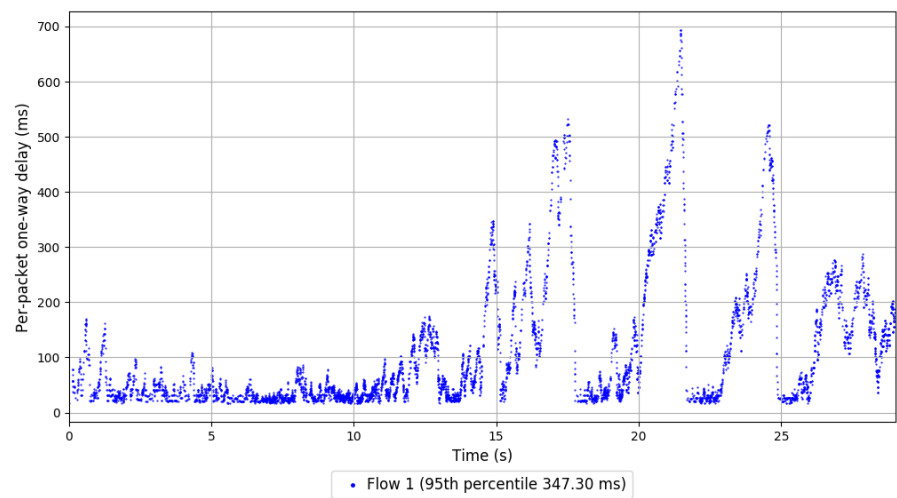
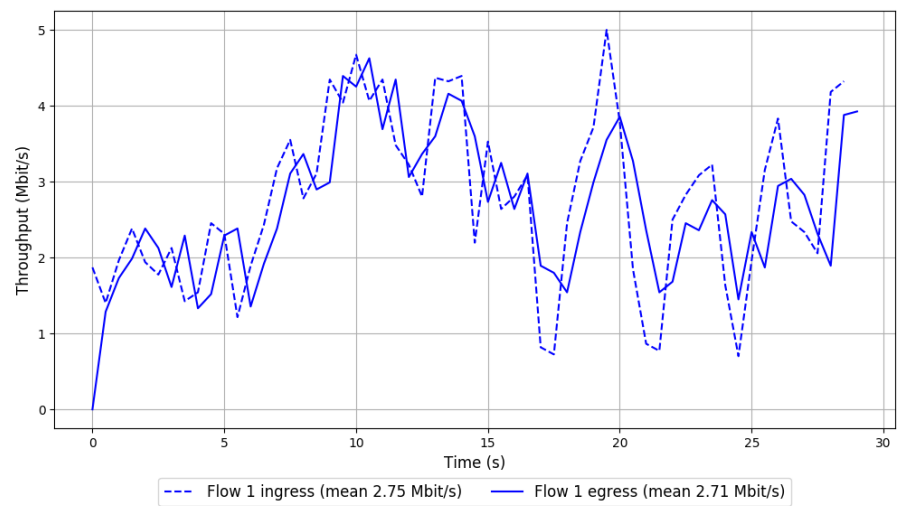


Run 2: Statistics of Indigo-MusesT

Start at: 2019-01-17 05:54:41
End at: 2019-01-17 05:55:12
Local clock offset: -0.608 ms
Remote clock offset: -4.657 ms

Below is generated by plot.py at 2019-01-17 06:21:42
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.71 Mbit/s
95th percentile per-packet one-way delay: 347.295 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 2.71 Mbit/s
95th percentile per-packet one-way delay: 347.295 ms
Loss rate: 1.22%

Run 2: Report of Indigo-MusesT — Data Link

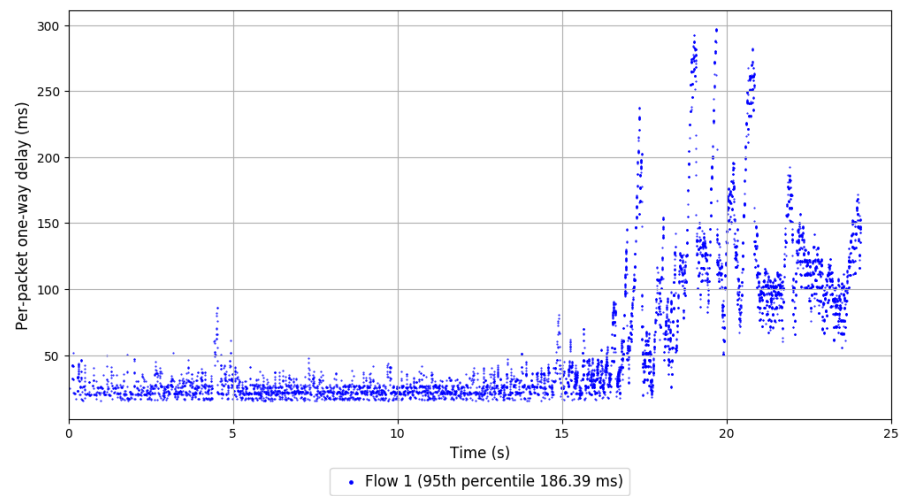
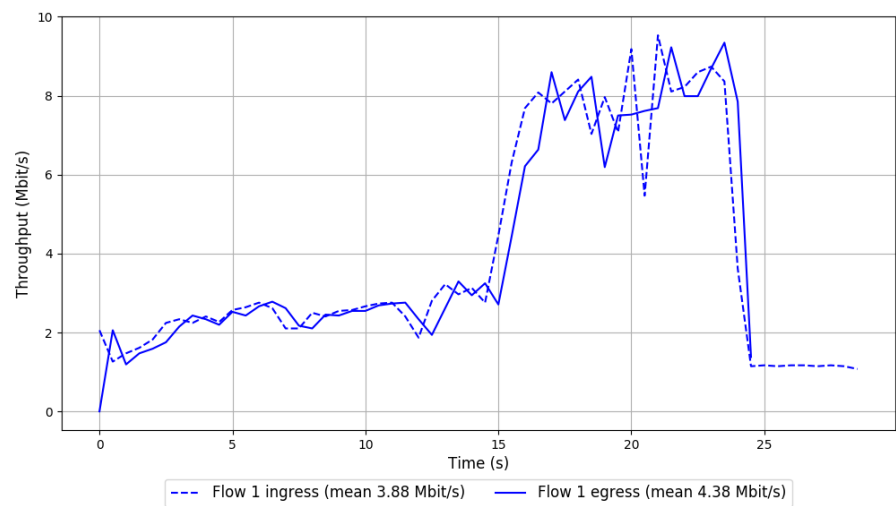


Run 3: Statistics of Indigo-MusesT

Start at: 2019-01-17 06:18:05
End at: 2019-01-17 06:18:35
Local clock offset: -1.011 ms
Remote clock offset: -4.052 ms

Below is generated by plot.py at 2019-01-17 06:21:44
Datalink statistics
-- Total of 1 flow:
Average throughput: 4.38 Mbit/s
95th percentile per-packet one-way delay: 186.388 ms
Loss rate: 6.40%
-- Flow 1:
Average throughput: 4.38 Mbit/s
95th percentile per-packet one-way delay: 186.388 ms
Loss rate: 6.40%

Run 3: Report of Indigo-MusesT — Data Link



Run 1: Statistics of LEDBAT

Start at: 2019-01-17 05:24:47

End at: 2019-01-17 05:25:17

Local clock offset: -0.897 ms

Remote clock offset: -4.92 ms

Below is generated by plot.py at 2019-01-17 06:21:44

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.30 Mbit/s

95th percentile per-packet one-way delay: 229.435 ms

Loss rate: 0.30%

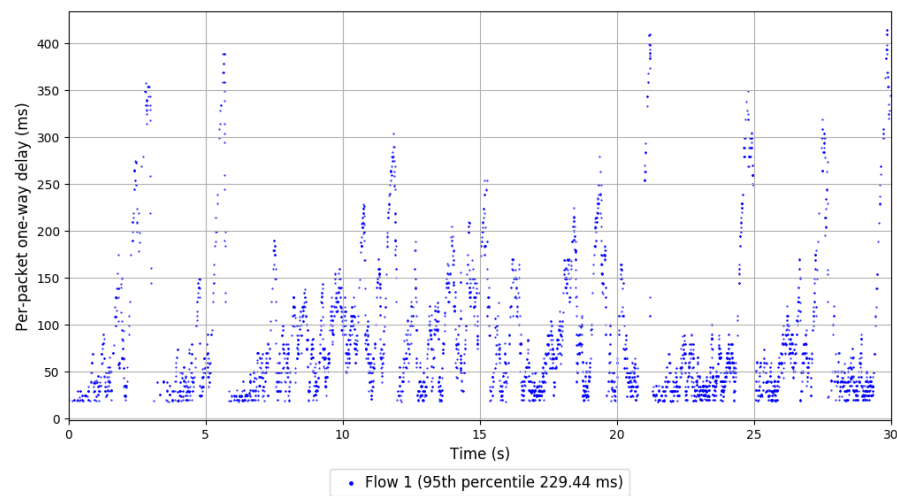
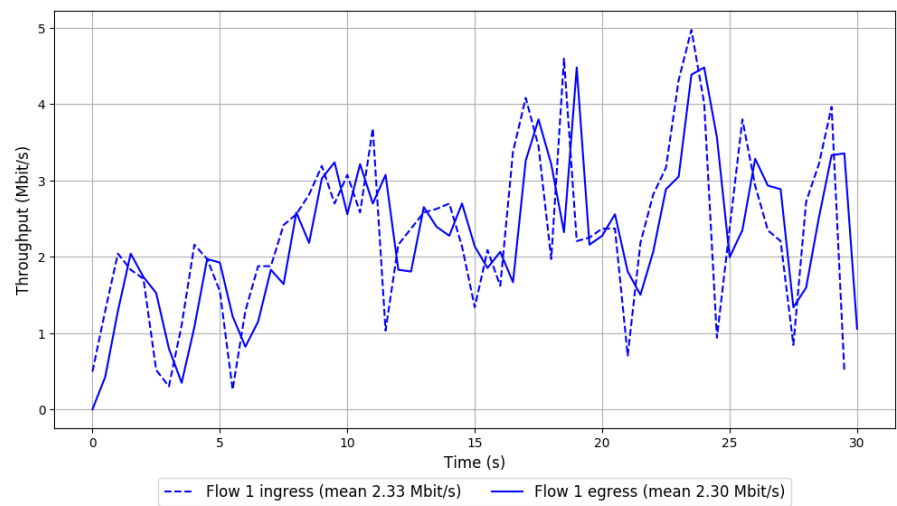
-- Flow 1:

Average throughput: 2.30 Mbit/s

95th percentile per-packet one-way delay: 229.435 ms

Loss rate: 0.30%

Run 1: Report of LEDBAT — Data Link

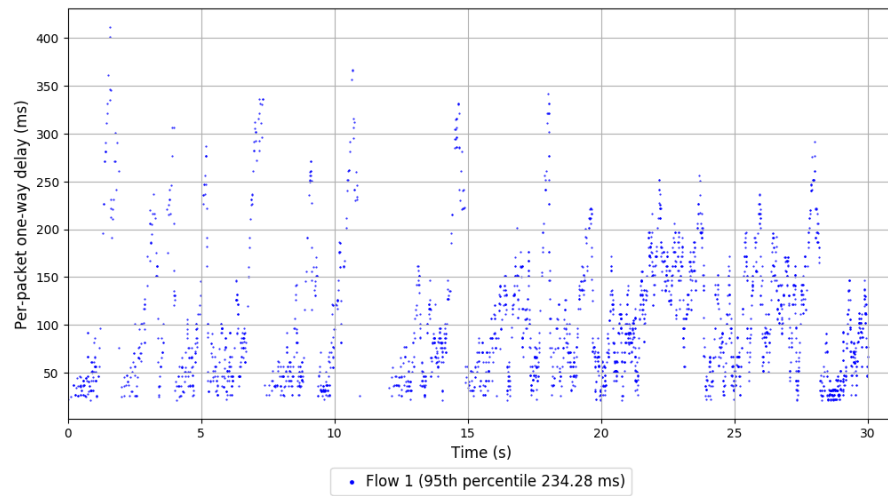
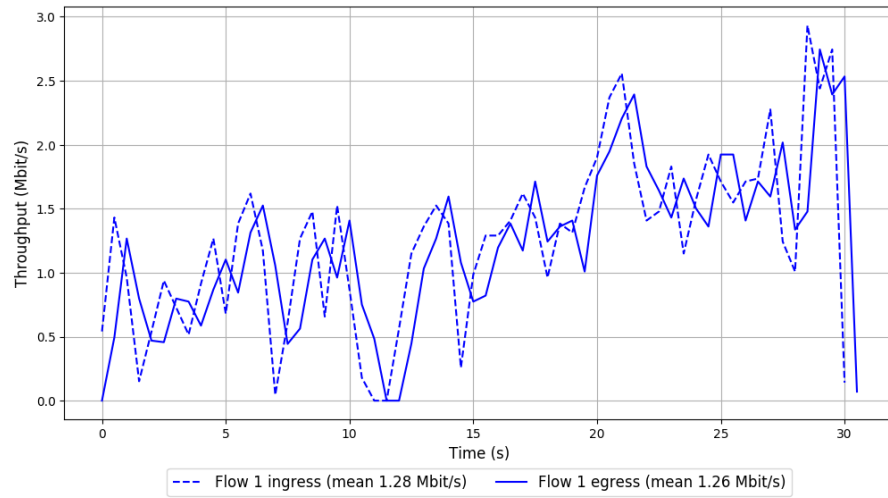


Run 2: Statistics of LEDBAT

Start at: 2019-01-17 05:48:04
End at: 2019-01-17 05:48:34
Local clock offset: -5.125 ms
Remote clock offset: -4.731 ms

Below is generated by plot.py at 2019-01-17 06:21:44
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.26 Mbit/s
95th percentile per-packet one-way delay: 234.284 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 1.26 Mbit/s
95th percentile per-packet one-way delay: 234.284 ms
Loss rate: 1.07%

Run 2: Report of LEDBAT — Data Link

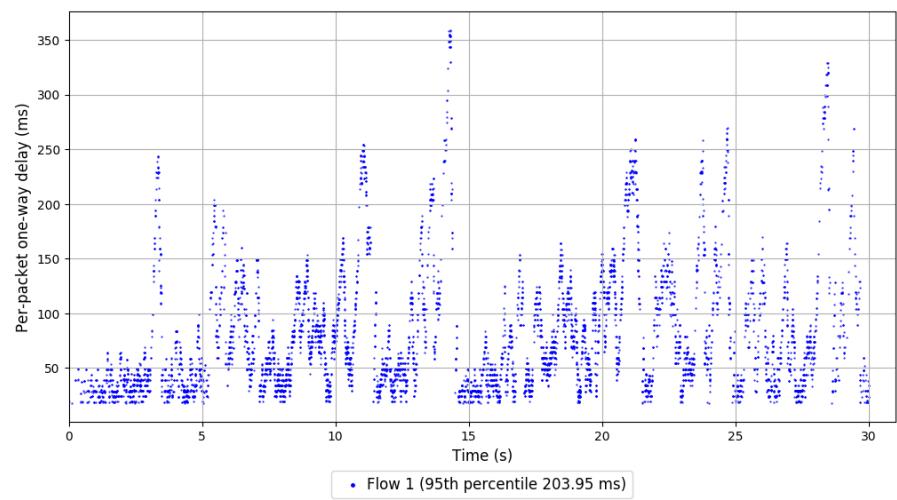
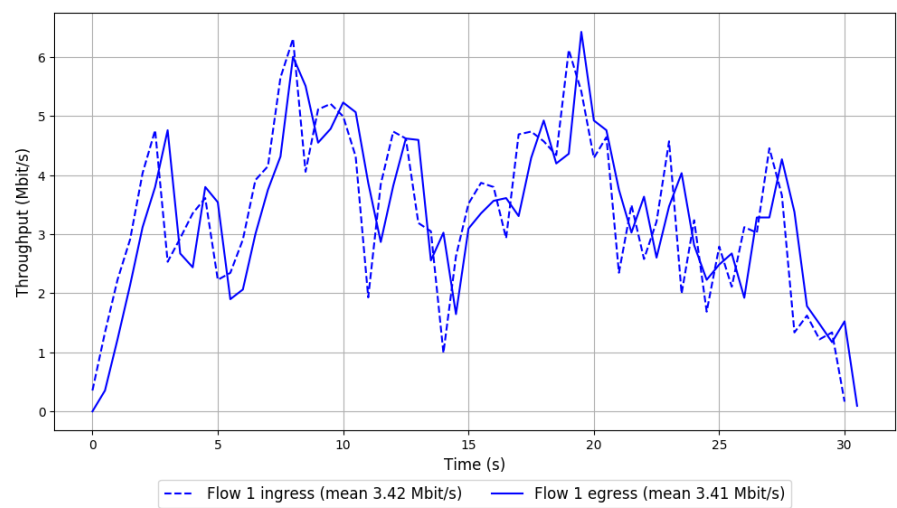


Run 3: Statistics of LEDBAT

Start at: 2019-01-17 06:11:23
End at: 2019-01-17 06:11:53
Local clock offset: -0.774 ms
Remote clock offset: -3.941 ms

Below is generated by plot.py at 2019-01-17 06:21:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.41 Mbit/s
95th percentile per-packet one-way delay: 203.954 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 3.41 Mbit/s
95th percentile per-packet one-way delay: 203.954 ms
Loss rate: 0.18%

Run 3: Report of LEDBAT — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2019-01-17 05:19:15

End at: 2019-01-17 05:19:45

Local clock offset: -2.55 ms

Remote clock offset: -5.905 ms

Below is generated by plot.py at 2019-01-17 06:21:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.16 Mbit/s

95th percentile per-packet one-way delay: 749.497 ms

Loss rate: 0.71%

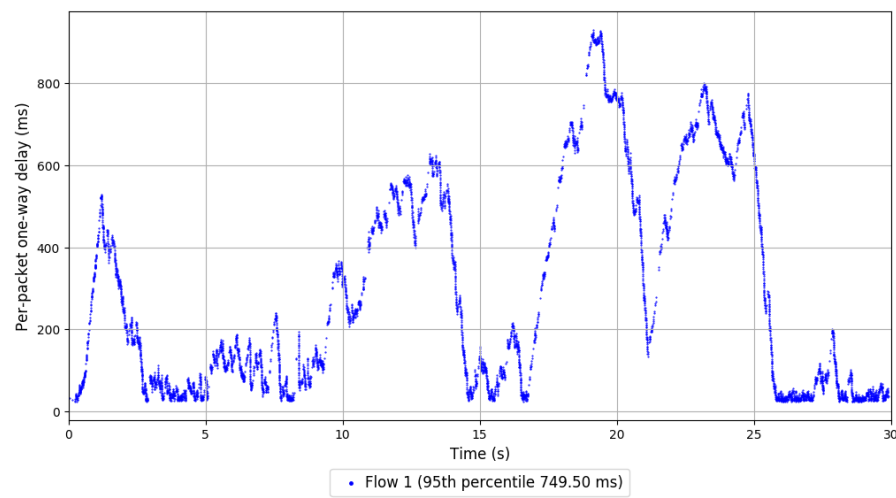
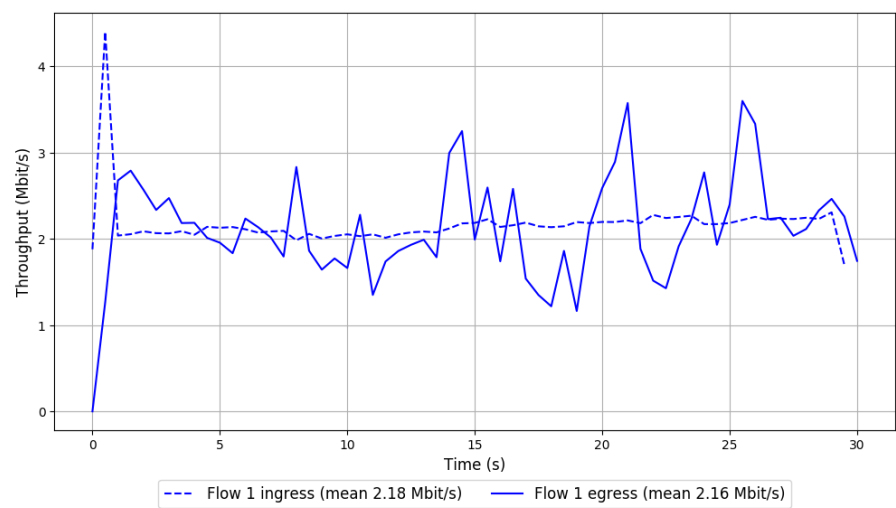
-- Flow 1:

Average throughput: 2.16 Mbit/s

95th percentile per-packet one-way delay: 749.497 ms

Loss rate: 0.71%

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2019-01-17 05:42:32

End at: 2019-01-17 05:43:02

Local clock offset: -3.506 ms

Remote clock offset: -4.227 ms

Below is generated by plot.py at 2019-01-17 06:21:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.84 Mbit/s

95th percentile per-packet one-way delay: 1049.231 ms

Loss rate: 20.45%

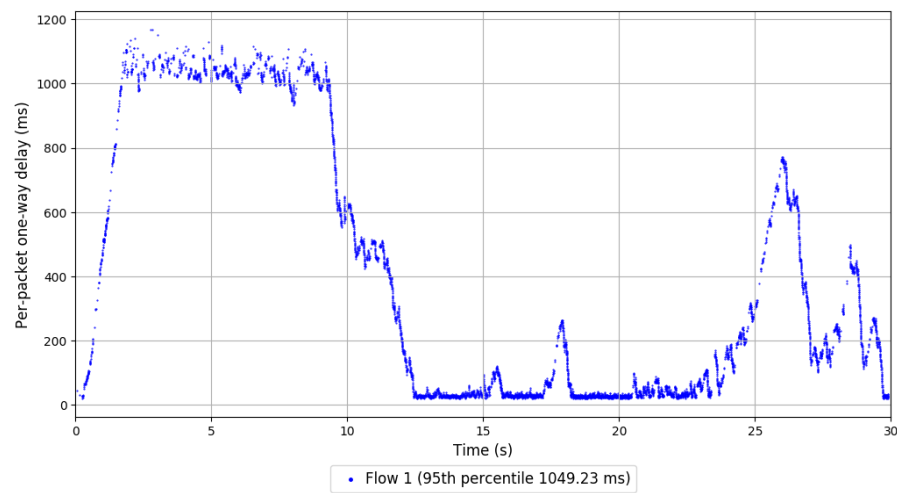
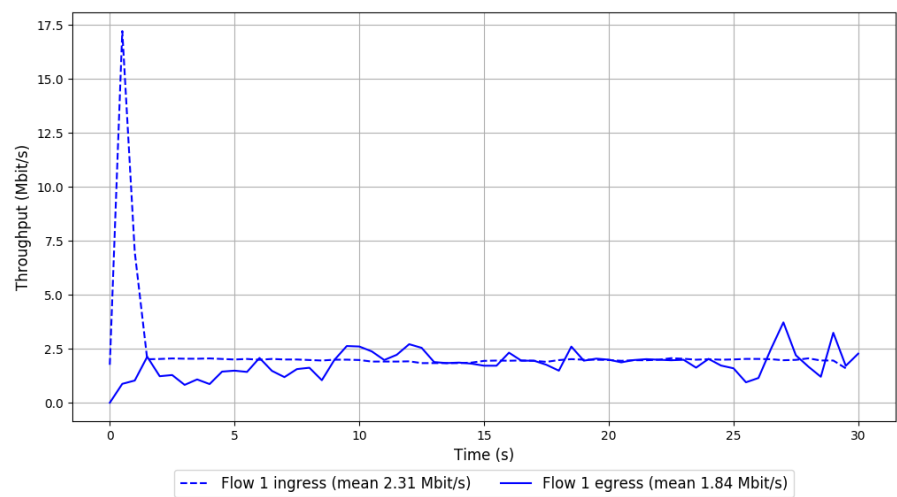
-- Flow 1:

Average throughput: 1.84 Mbit/s

95th percentile per-packet one-way delay: 1049.231 ms

Loss rate: 20.45%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2019-01-17 06:05:48

End at: 2019-01-17 06:06:18

Local clock offset: -2.904 ms

Remote clock offset: -4.043 ms

Below is generated by plot.py at 2019-01-17 06:21:48

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.99 Mbit/s

95th percentile per-packet one-way delay: 392.553 ms

Loss rate: 0.33%

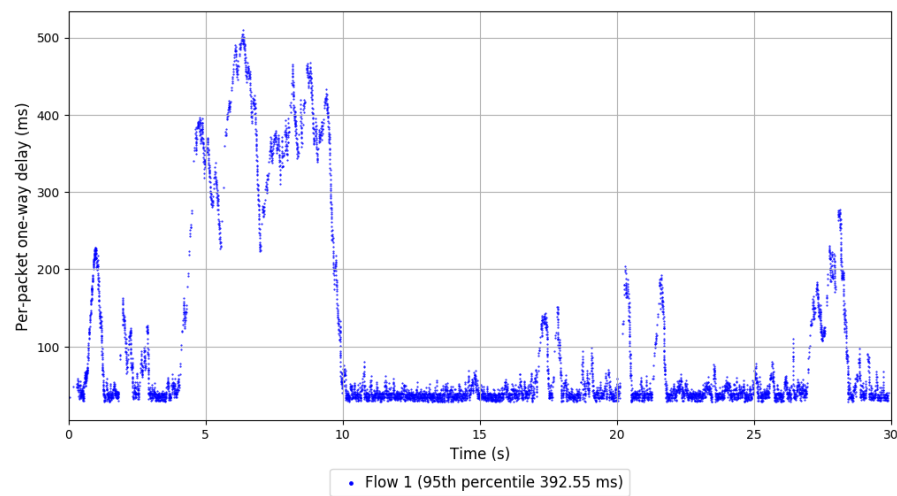
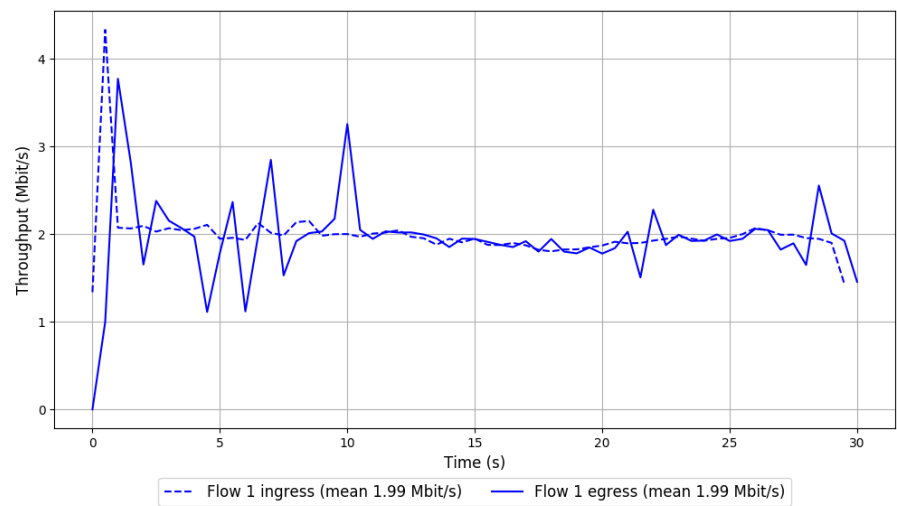
-- Flow 1:

Average throughput: 1.99 Mbit/s

95th percentile per-packet one-way delay: 392.553 ms

Loss rate: 0.33%

Run 3: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

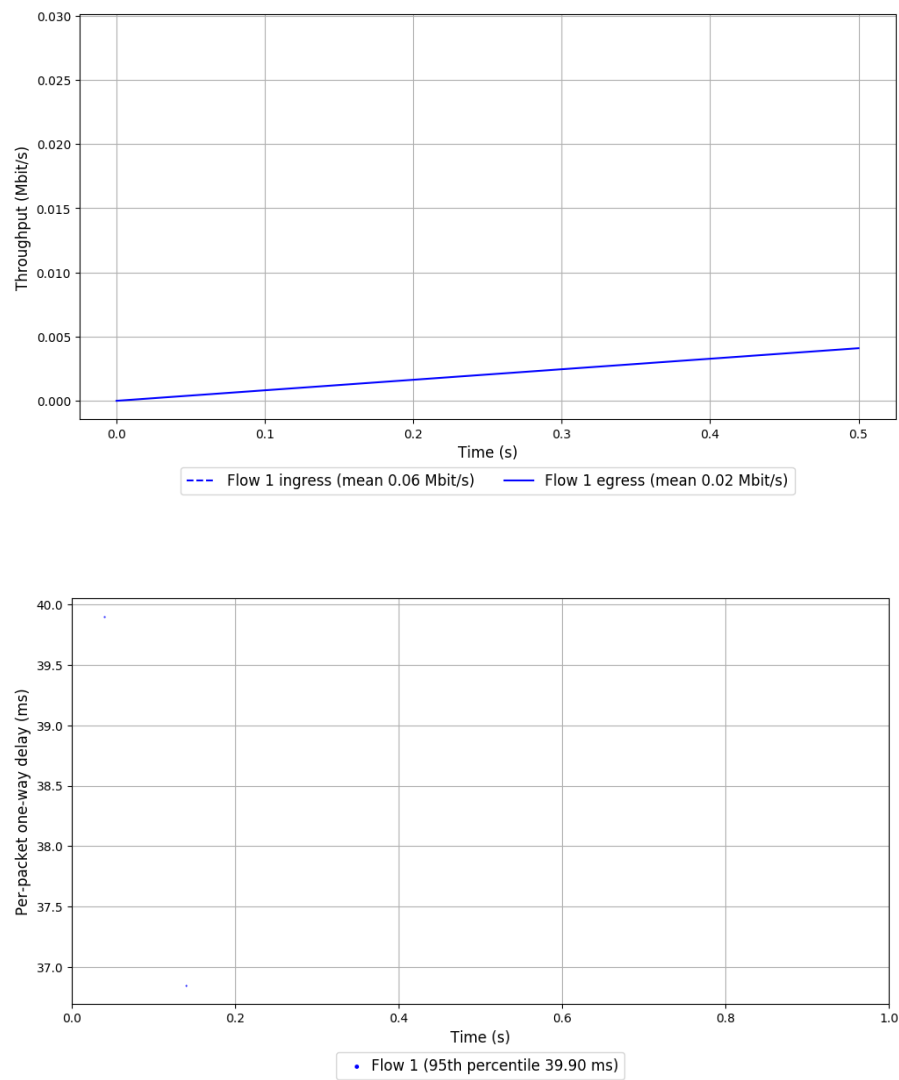
Start at: 2019-01-17 05:28:07

End at: 2019-01-17 05:28:37

Local clock offset: -1.657 ms

Remote clock offset: -5.317 ms

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

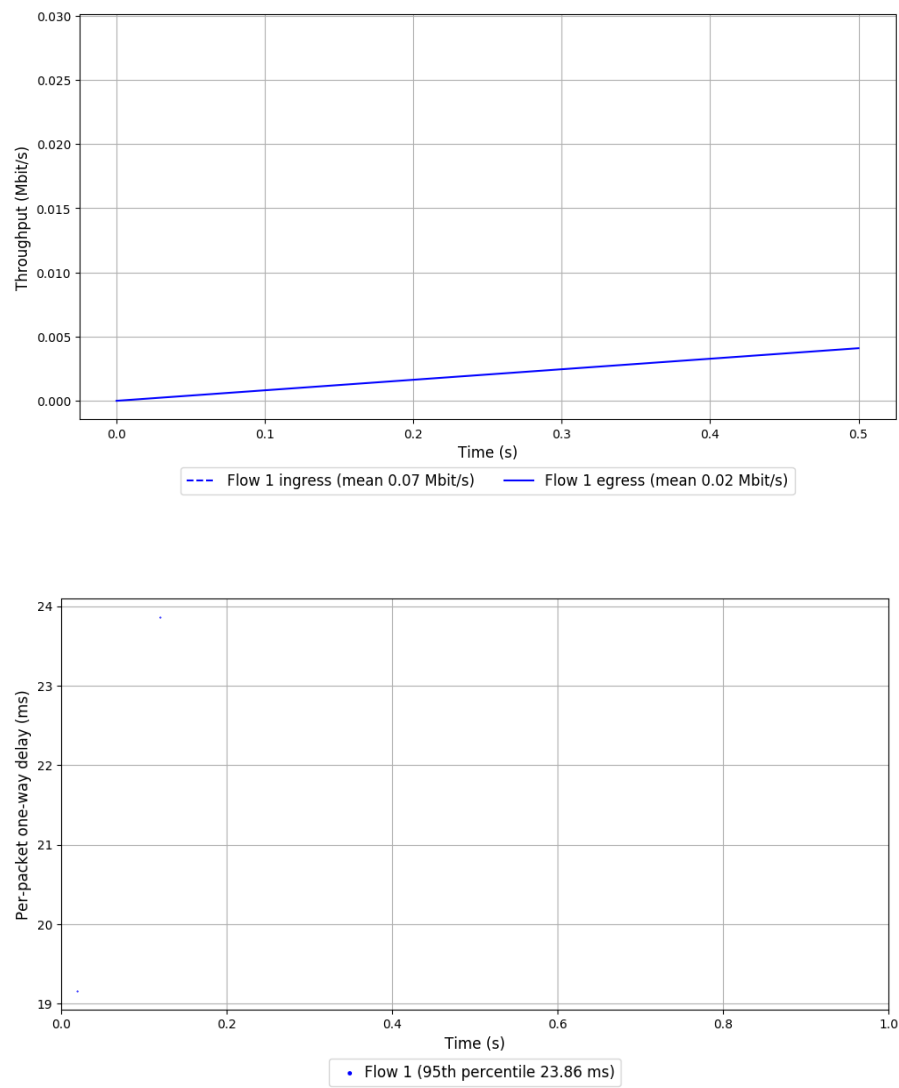
Start at: 2019-01-17 05:51:23

End at: 2019-01-17 05:51:53

Local clock offset: -1.416 ms

Remote clock offset: -5.077 ms

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

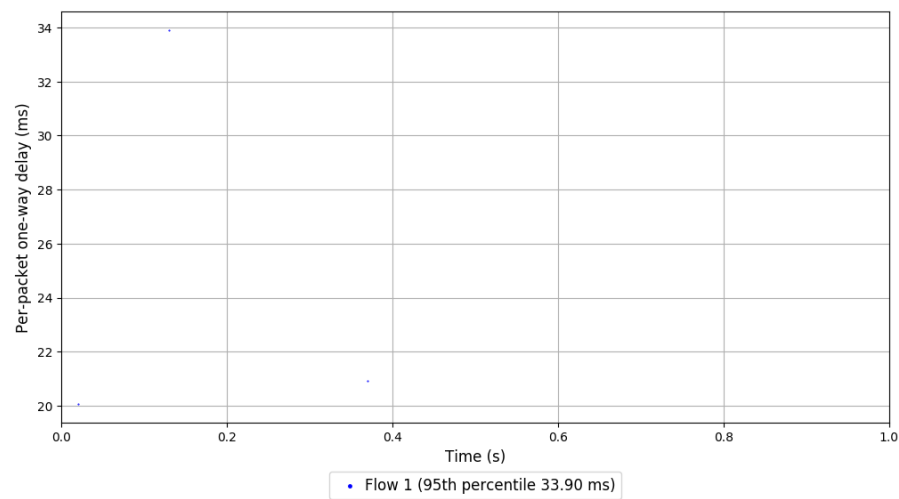
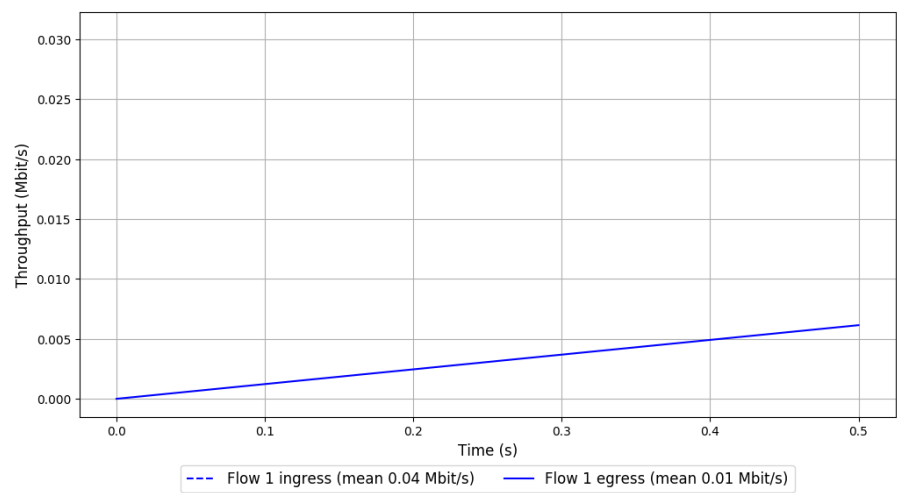
Start at: 2019-01-17 06:14:46

End at: 2019-01-17 06:15:16

Local clock offset: -2.017 ms

Remote clock offset: -5.101 ms

Run 3: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2019-01-17 05:25:54

End at: 2019-01-17 05:26:24

Local clock offset: -3.23 ms

Remote clock offset: -4.671 ms

Below is generated by plot.py at 2019-01-17 06:21:52

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.73 Mbit/s

95th percentile per-packet one-way delay: 470.803 ms

Loss rate: 1.03%

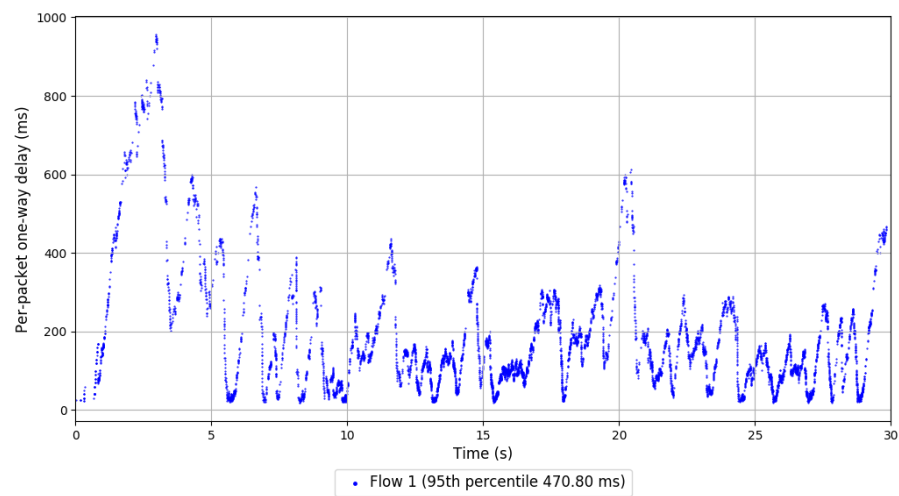
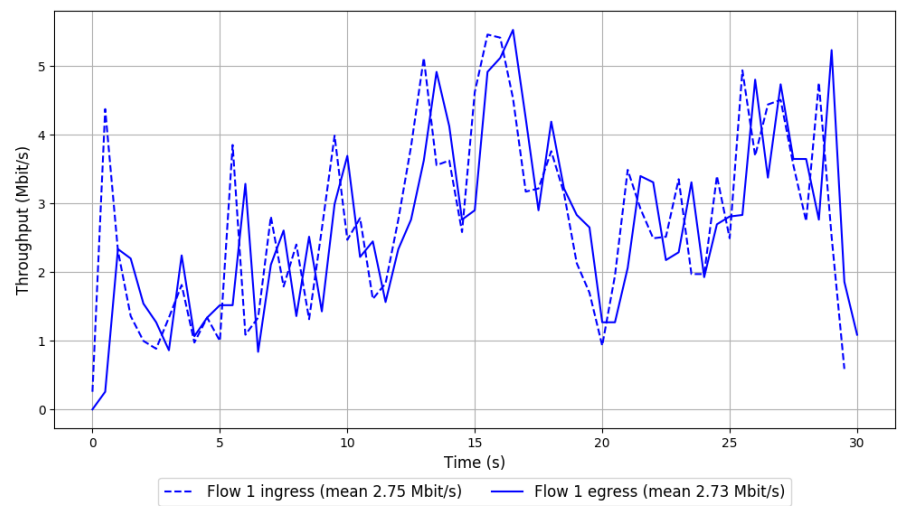
-- Flow 1:

Average throughput: 2.73 Mbit/s

95th percentile per-packet one-way delay: 470.803 ms

Loss rate: 1.03%

Run 1: Report of QUIC Cubic — Data Link

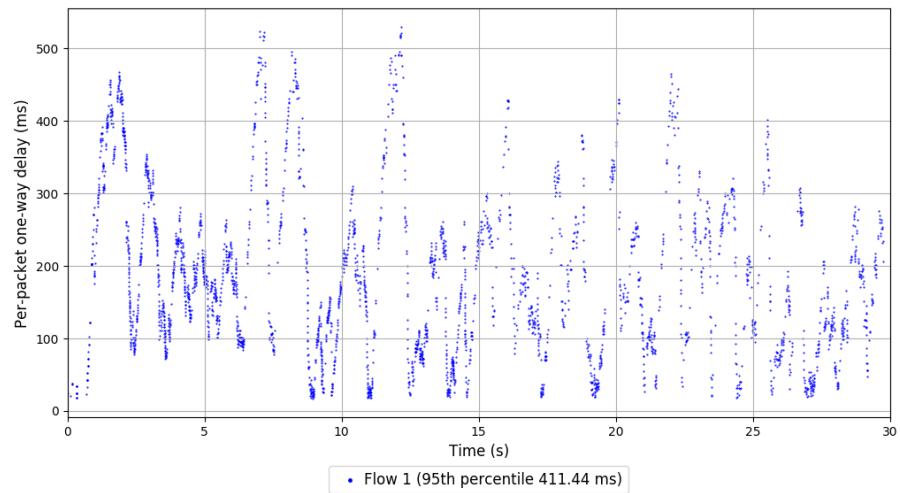
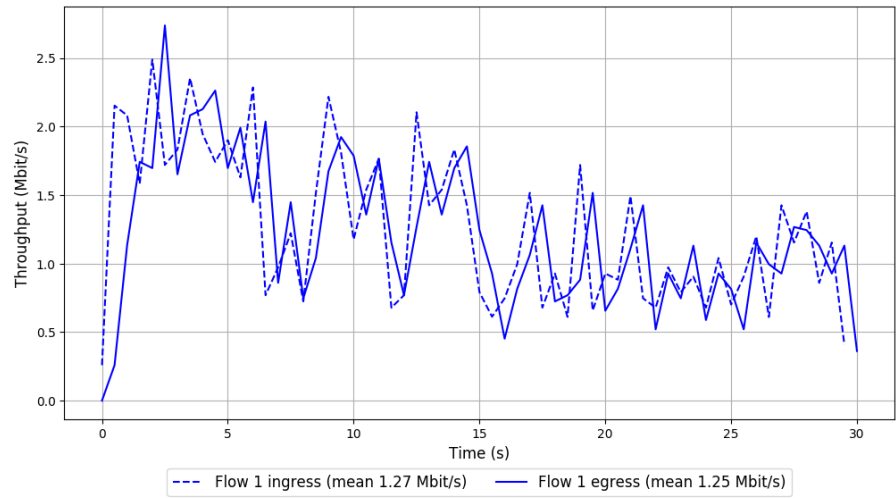


Run 2: Statistics of QUIC Cubic

Start at: 2019-01-17 05:49:11
End at: 2019-01-17 05:49:41
Local clock offset: -1.097 ms
Remote clock offset: -4.284 ms

Below is generated by plot.py at 2019-01-17 06:21:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.25 Mbit/s
95th percentile per-packet one-way delay: 411.441 ms
Loss rate: 1.56%
-- Flow 1:
Average throughput: 1.25 Mbit/s
95th percentile per-packet one-way delay: 411.441 ms
Loss rate: 1.56%

Run 2: Report of QUIC Cubic — Data Link

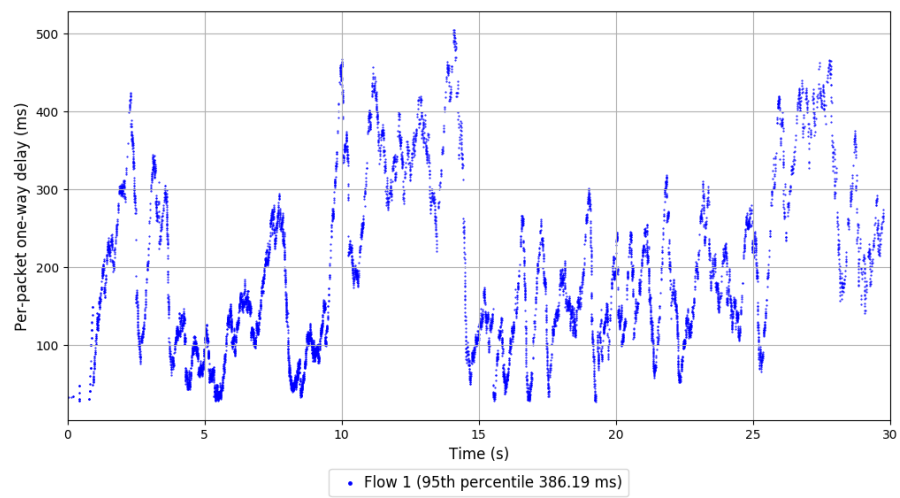
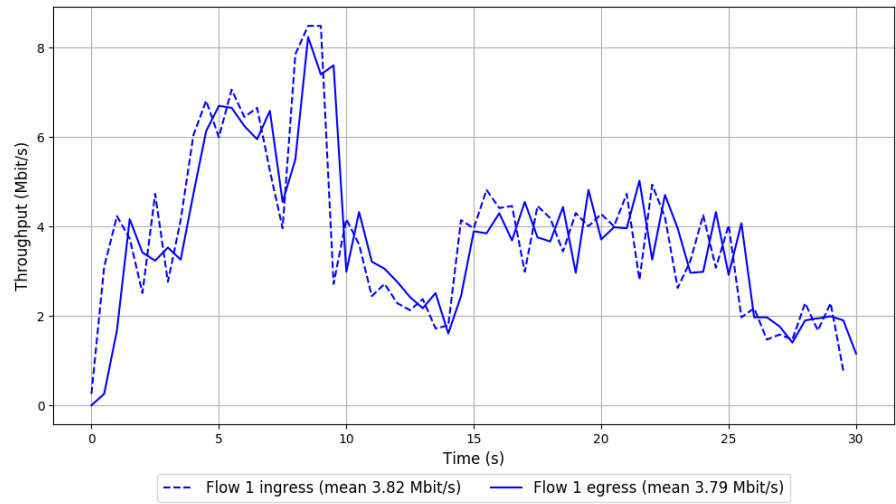


Run 3: Statistics of QUIC Cubic

Start at: 2019-01-17 06:12:32
End at: 2019-01-17 06:13:02
Local clock offset: -0.554 ms
Remote clock offset: -4.454 ms

Below is generated by plot.py at 2019-01-17 06:21:55
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.79 Mbit/s
95th percentile per-packet one-way delay: 386.189 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 3.79 Mbit/s
95th percentile per-packet one-way delay: 386.189 ms
Loss rate: 1.04%

Run 3: Report of QUIC Cubic — Data Link

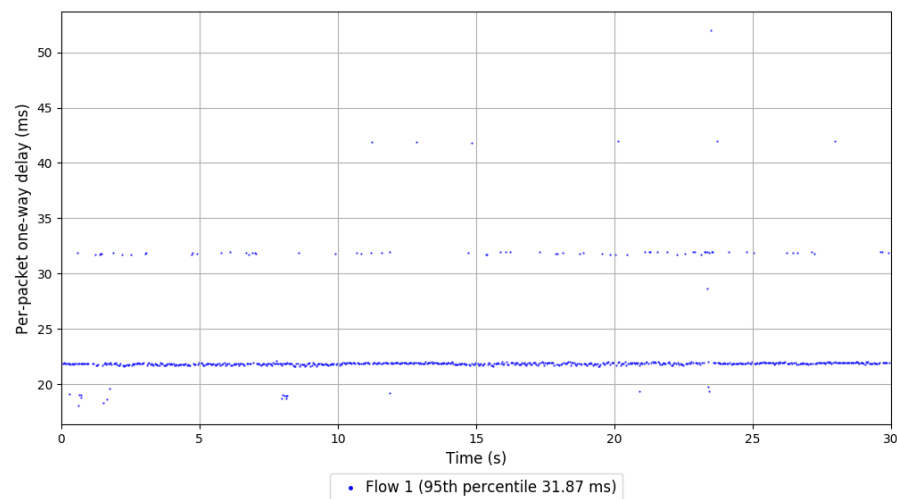
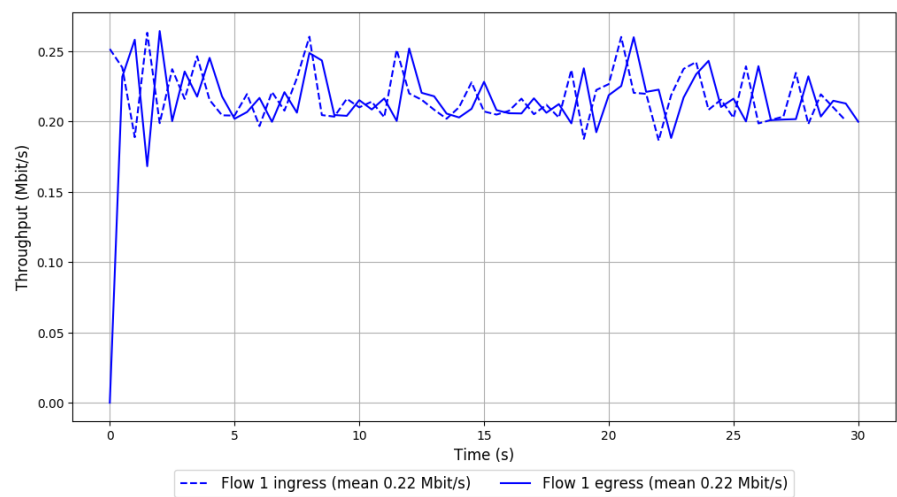


Run 1: Statistics of SCReAM

Start at: 2019-01-17 05:22:35
End at: 2019-01-17 05:23:05
Local clock offset: -1.981 ms
Remote clock offset: -6.683 ms

Below is generated by plot.py at 2019-01-17 06:21:55
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 31.873 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 31.873 ms
Loss rate: 0.13%

Run 1: Report of SReAM — Data Link

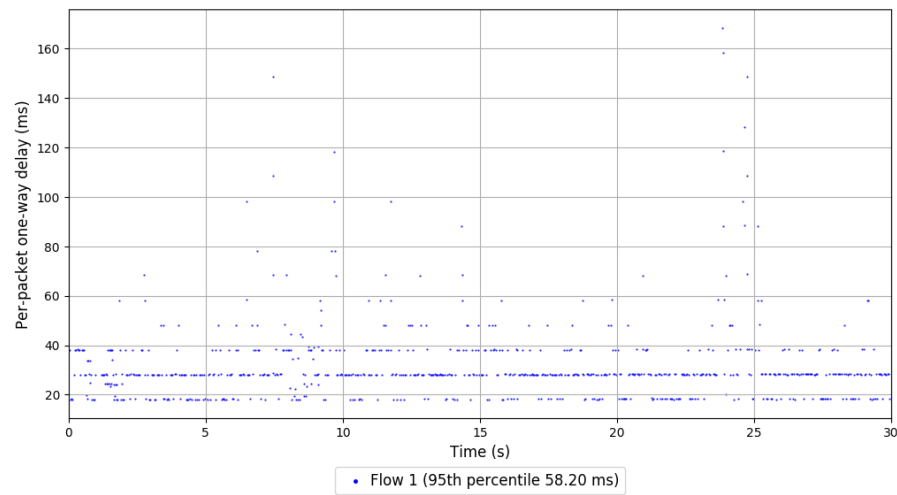
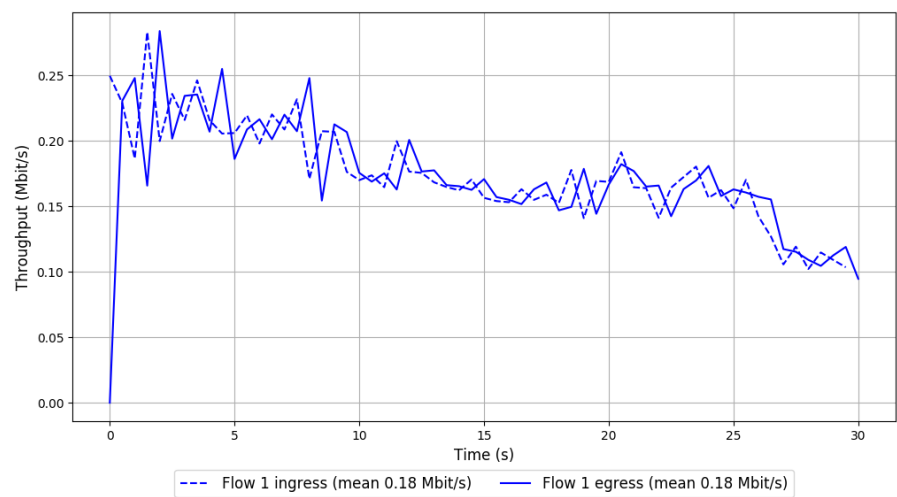


Run 2: Statistics of SCReAM

Start at: 2019-01-17 05:45:52
End at: 2019-01-17 05:46:22
Local clock offset: -1.664 ms
Remote clock offset: -5.012 ms

Below is generated by plot.py at 2019-01-17 06:21:55
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 58.201 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 58.201 ms
Loss rate: 0.08%

Run 2: Report of SReAM — Data Link

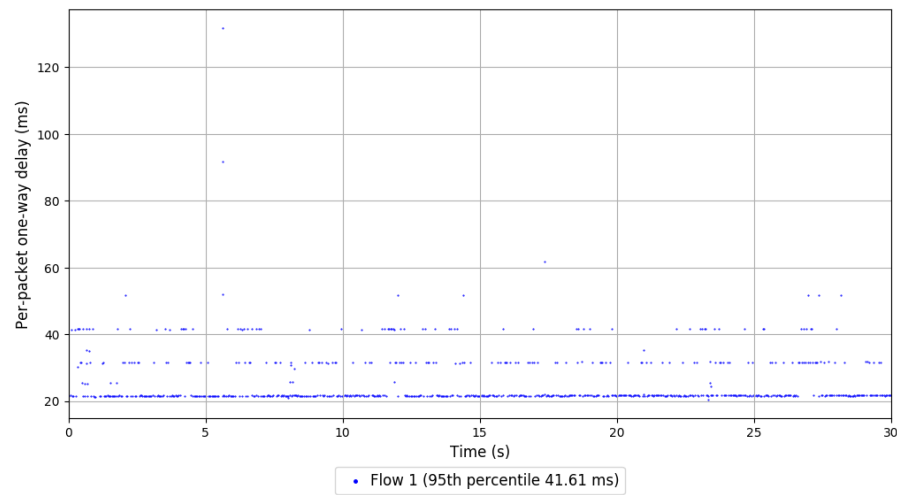
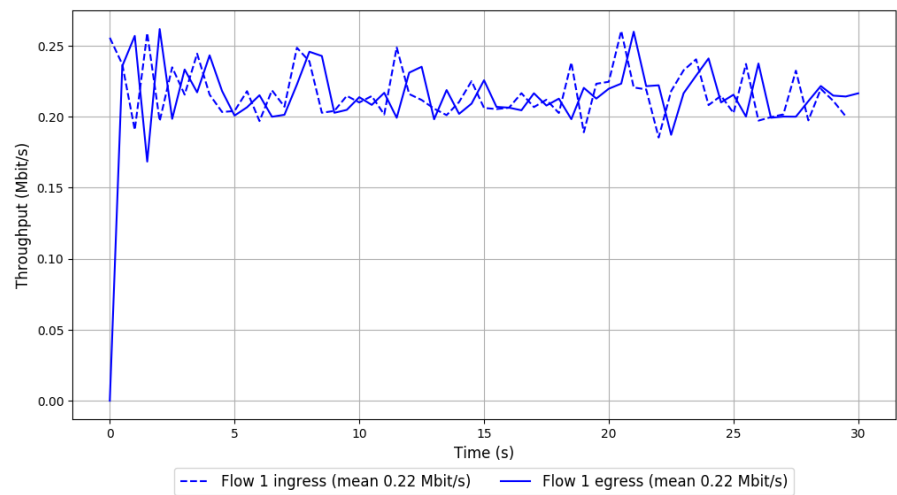


Run 3: Statistics of SCReAM

Start at: 2019-01-17 06:09:10
End at: 2019-01-17 06:09:40
Local clock offset: -3.539 ms
Remote clock offset: -4.282 ms

Below is generated by plot.py at 2019-01-17 06:21:55
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 41.606 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 41.606 ms
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link

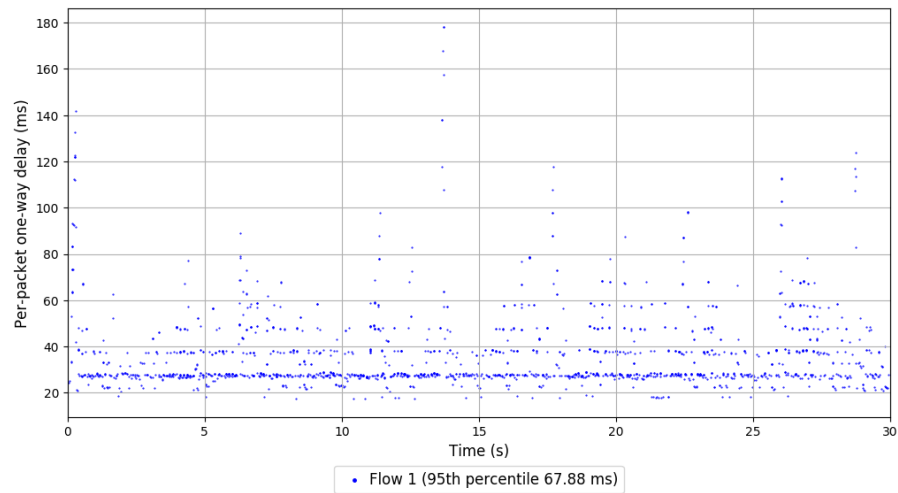
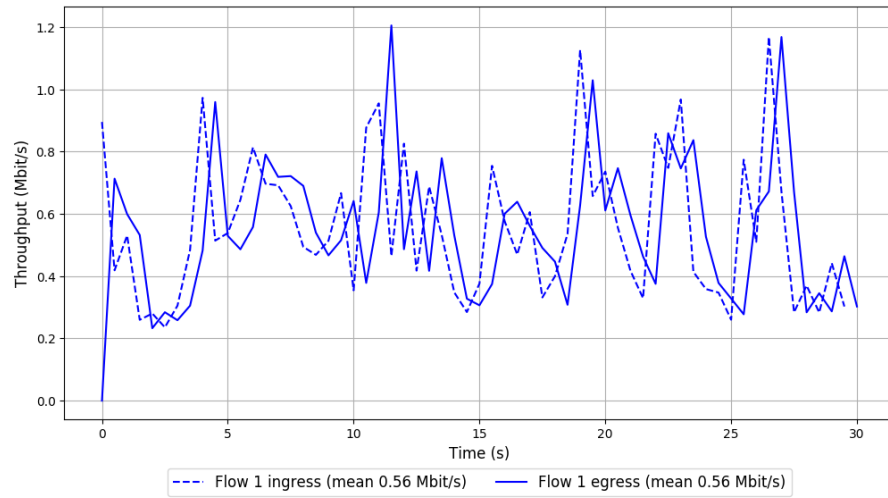


Run 1: Statistics of Sprout

Start at: 2019-01-17 05:27:01
End at: 2019-01-17 05:27:31
Local clock offset: -2.84 ms
Remote clock offset: -4.943 ms

Below is generated by plot.py at 2019-01-17 06:21:55
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 67.884 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 67.884 ms
Loss rate: 0.00%

Run 1: Report of Sprout — Data Link

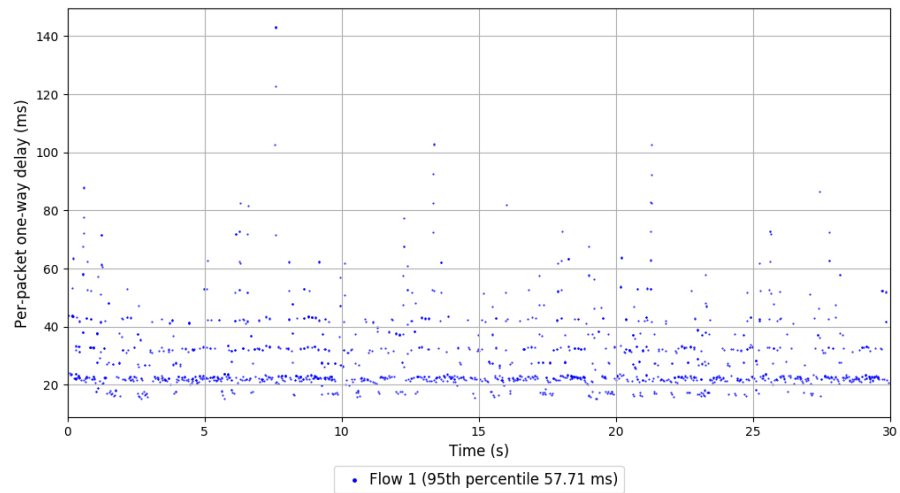
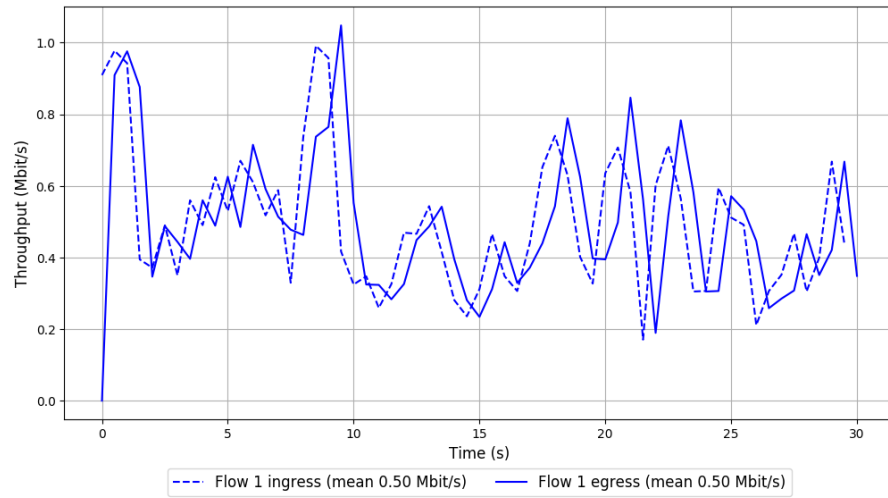


Run 2: Statistics of Sprout

Start at: 2019-01-17 05:50:17
End at: 2019-01-17 05:50:47
Local clock offset: -0.928 ms
Remote clock offset: -4.943 ms

Below is generated by plot.py at 2019-01-17 06:21:55
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 57.712 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 57.712 ms
Loss rate: 0.30%

Run 2: Report of Sprout — Data Link

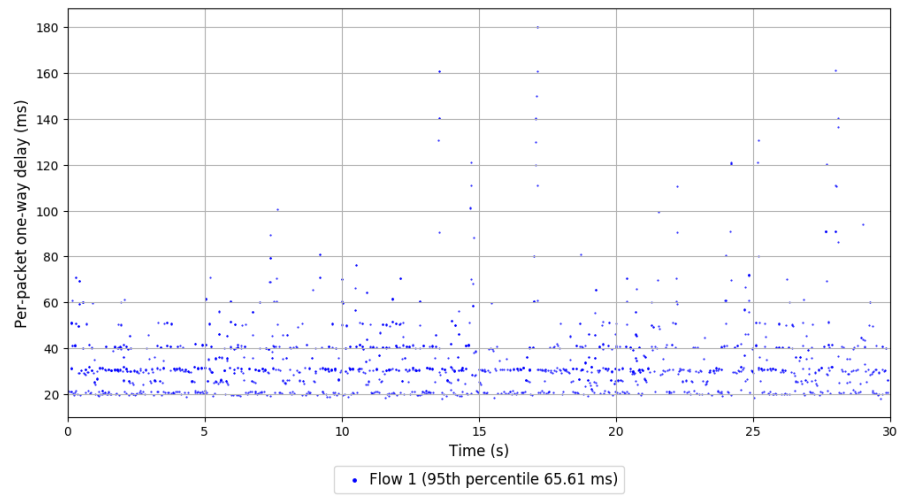
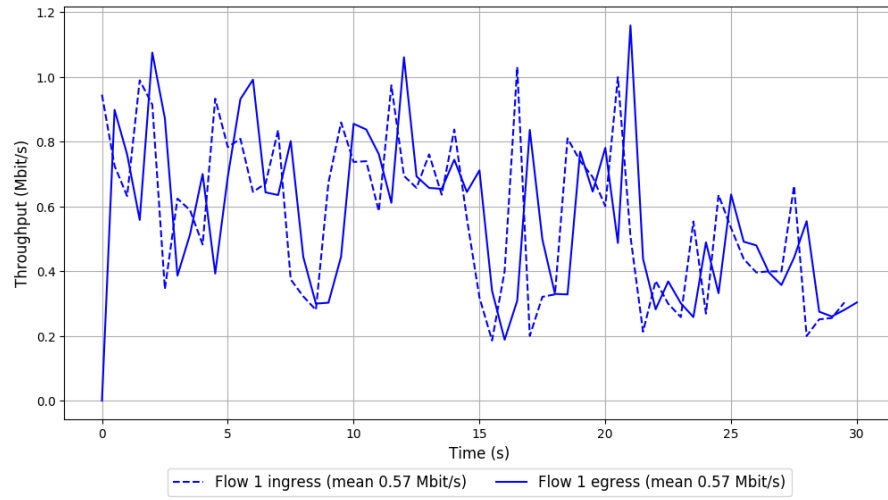


Run 3: Statistics of Sprout

Start at: 2019-01-17 06:13:40
End at: 2019-01-17 06:14:10
Local clock offset: -3.041 ms
Remote clock offset: -4.209 ms

Below is generated by plot.py at 2019-01-17 06:21:55
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 65.606 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 65.606 ms
Loss rate: 0.00%

Run 3: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

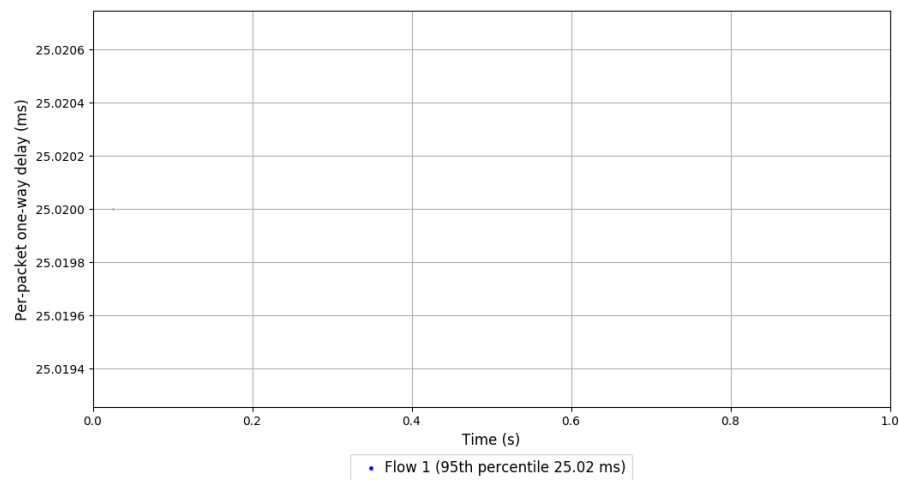
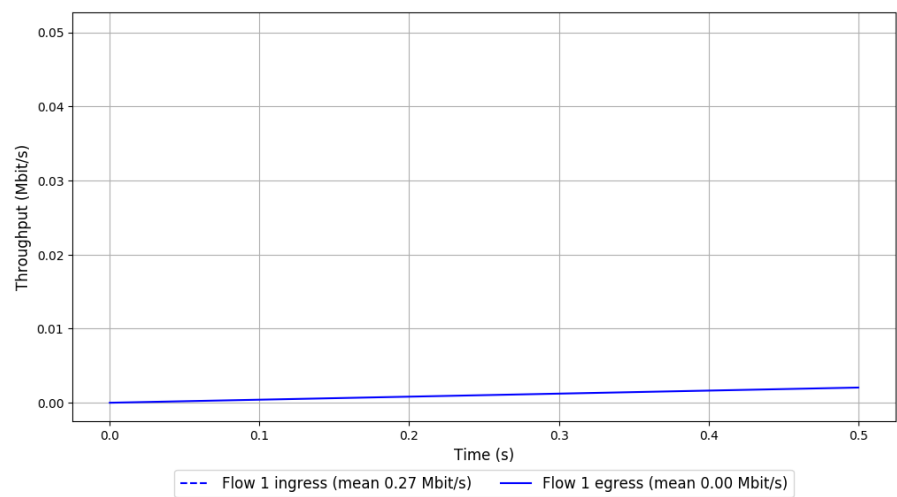
Start at: 2019-01-17 05:12:37

End at: 2019-01-17 05:13:07

Local clock offset: 0.179 ms

Remote clock offset: -6.13 ms

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



Run 2: Statistics of TaoVA-100x

Start at: 2019-01-17 05:35:53

End at: 2019-01-17 05:36:23

Local clock offset: -3.406 ms

Remote clock offset: -5.25 ms

Below is generated by plot.py at 2019-01-17 06:21:55

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.13 Mbit/s

95th percentile per-packet one-way delay: 414.864 ms

Loss rate: 17.45%

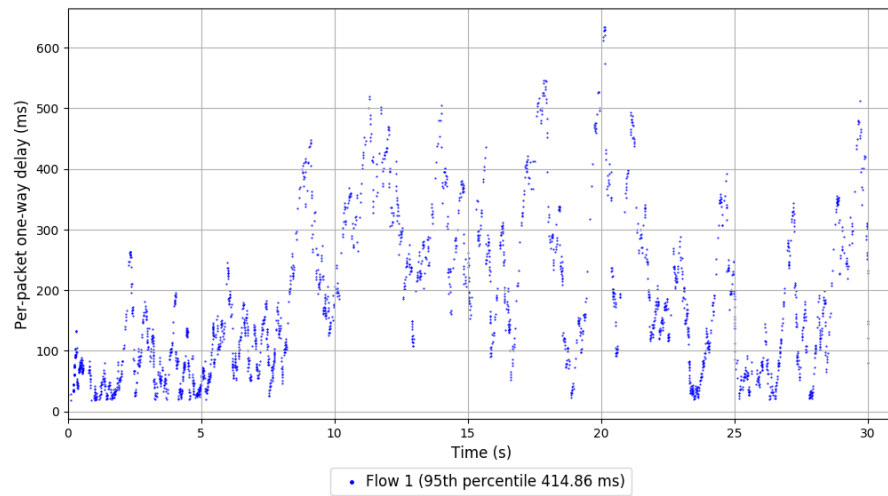
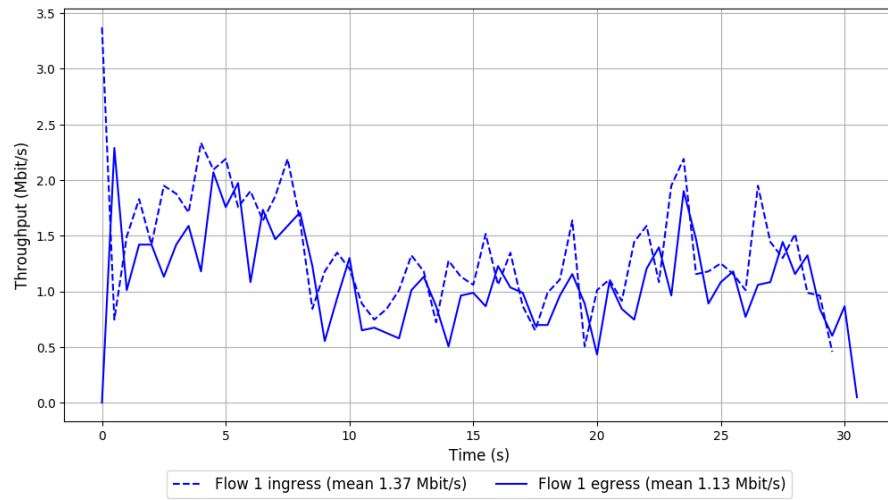
-- Flow 1:

Average throughput: 1.13 Mbit/s

95th percentile per-packet one-way delay: 414.864 ms

Loss rate: 17.45%

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



Run 3: Statistics of TaoVA-100x

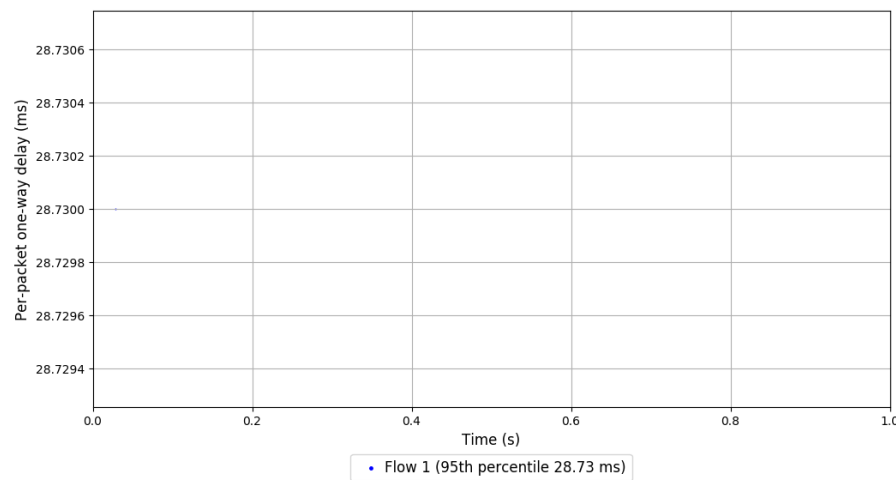
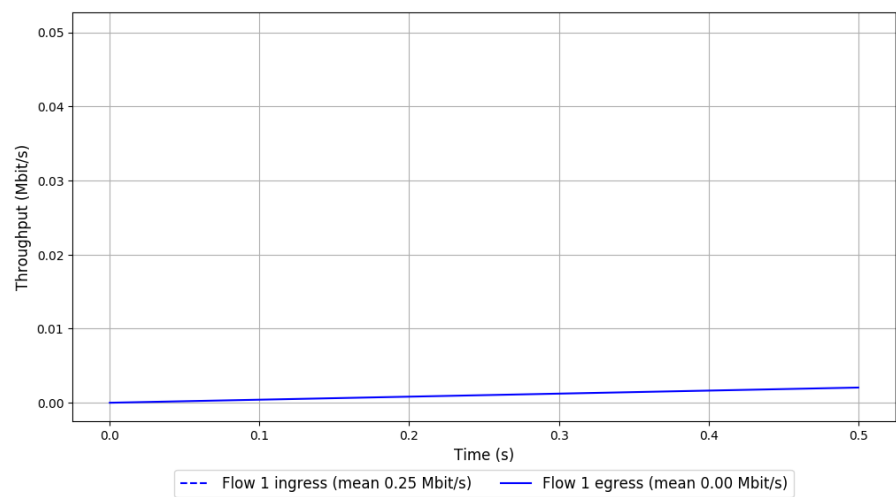
Start at: 2019-01-17 05:59:08

End at: 2019-01-17 05:59:38

Local clock offset: -3.588 ms

Remote clock offset: -4.902 ms

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

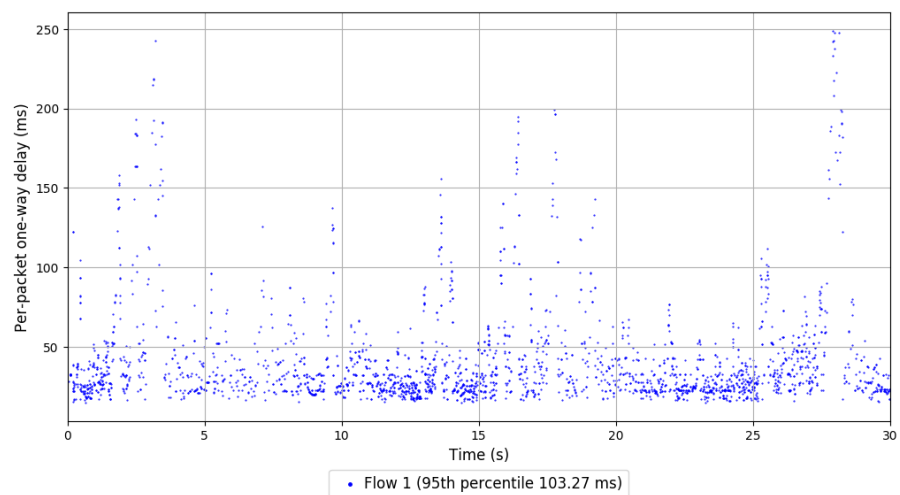
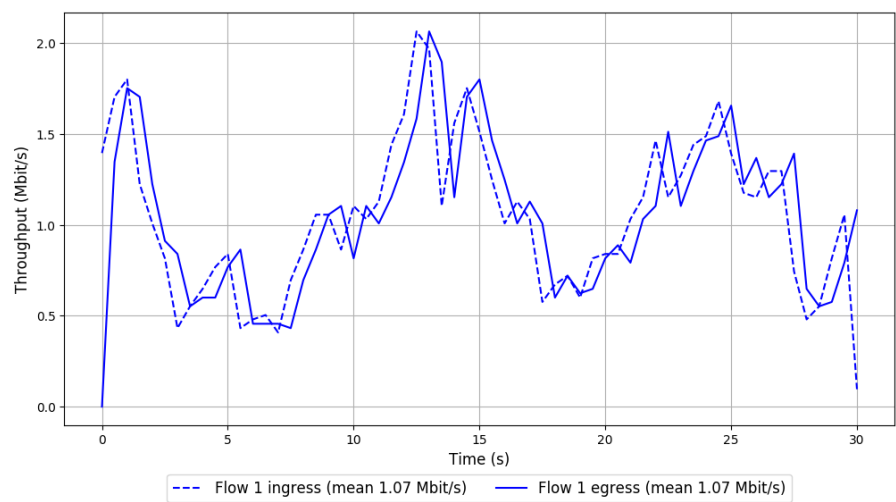


Run 1: Statistics of TCP Vegas

Start at: 2019-01-17 05:33:41
End at: 2019-01-17 05:34:11
Local clock offset: -1.79 ms
Remote clock offset: -5.653 ms

Below is generated by plot.py at 2019-01-17 06:21:55
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.07 Mbit/s
95th percentile per-packet one-way delay: 103.271 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 1.07 Mbit/s
95th percentile per-packet one-way delay: 103.271 ms
Loss rate: 0.19%

Run 1: Report of TCP Vegas — Data Link

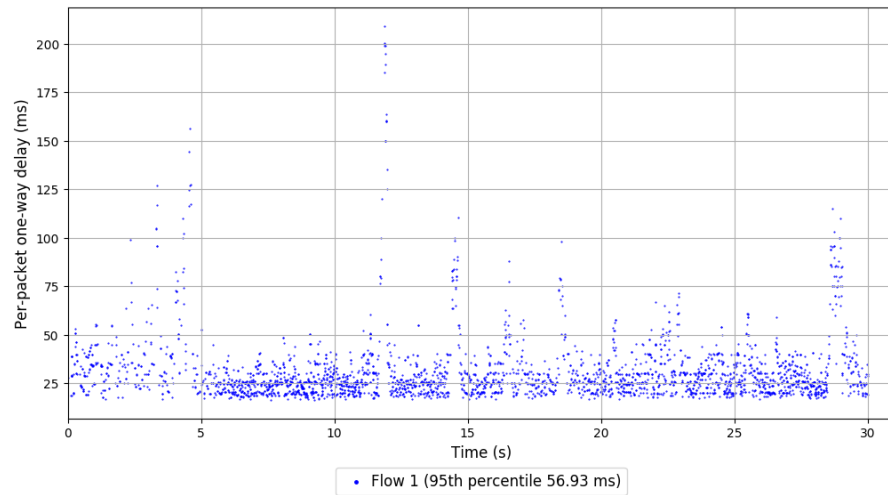
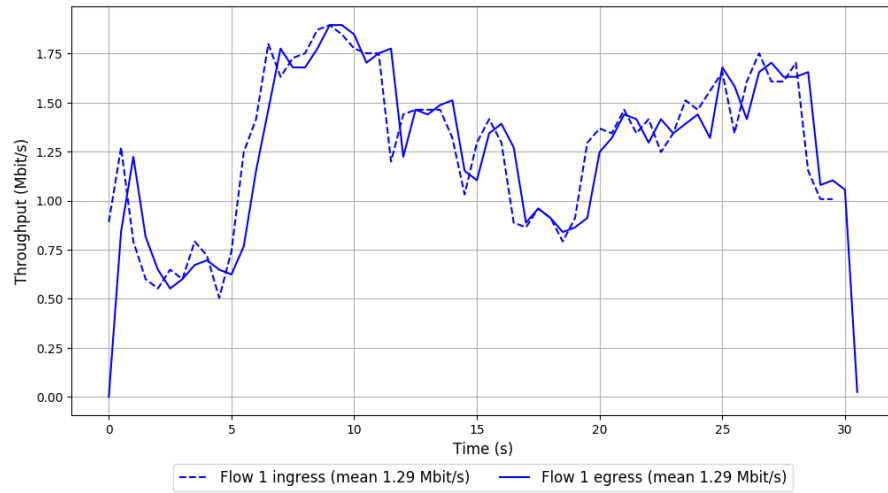


Run 2: Statistics of TCP Vegas

Start at: 2019-01-17 05:56:54
End at: 2019-01-17 05:57:24
Local clock offset: -0.571 ms
Remote clock offset: -4.653 ms

Below is generated by plot.py at 2019-01-17 06:21:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.29 Mbit/s
95th percentile per-packet one-way delay: 56.926 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.29 Mbit/s
95th percentile per-packet one-way delay: 56.926 ms
Loss rate: 0.00%

Run 2: Report of TCP Vegas — Data Link

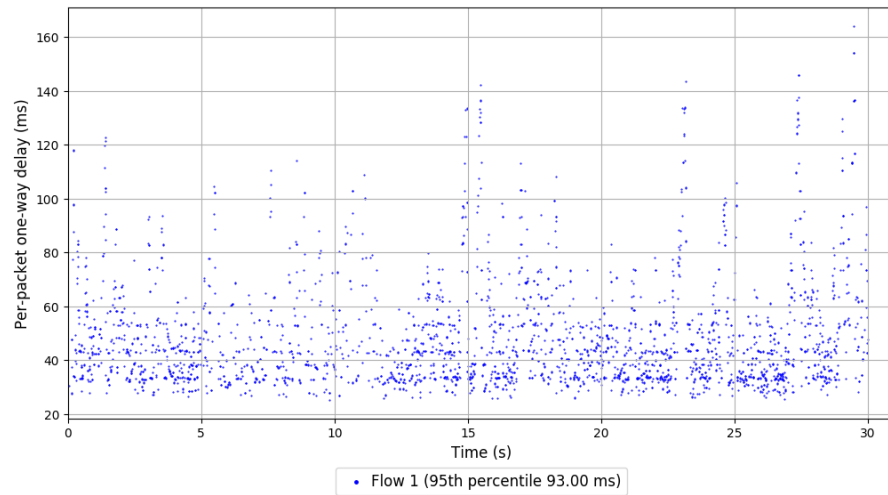
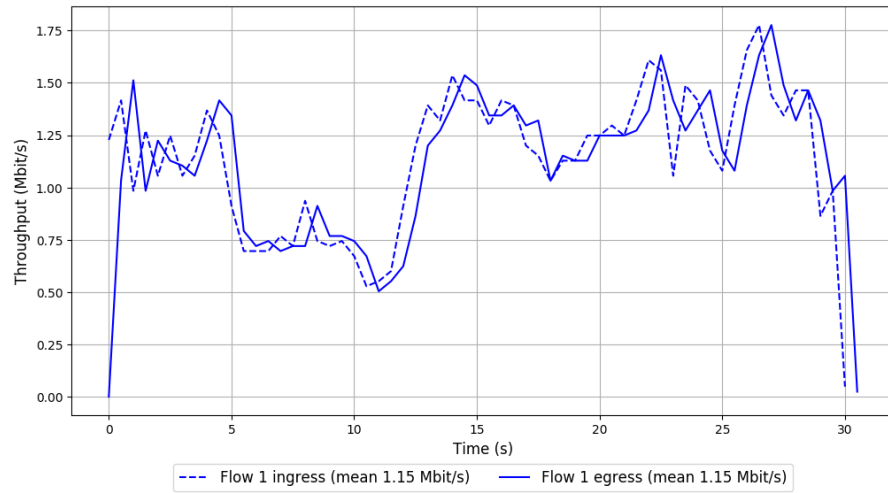


Run 3: Statistics of TCP Vegas

Start at: 2019-01-17 06:20:43
End at: 2019-01-17 06:21:13
Local clock offset: -3.016 ms
Remote clock offset: -4.415 ms

Below is generated by plot.py at 2019-01-17 06:21:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.15 Mbit/s
95th percentile per-packet one-way delay: 93.005 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 1.15 Mbit/s
95th percentile per-packet one-way delay: 93.005 ms
Loss rate: 0.17%

Run 3: Report of TCP Vegas — Data Link

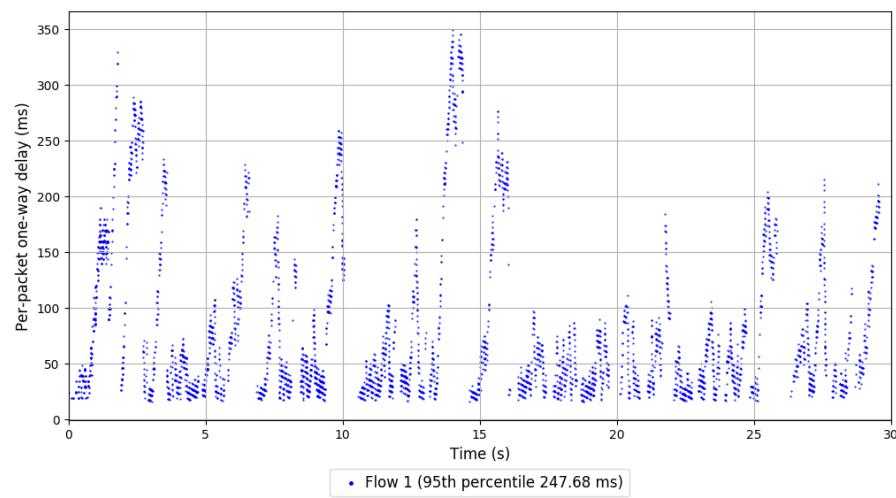
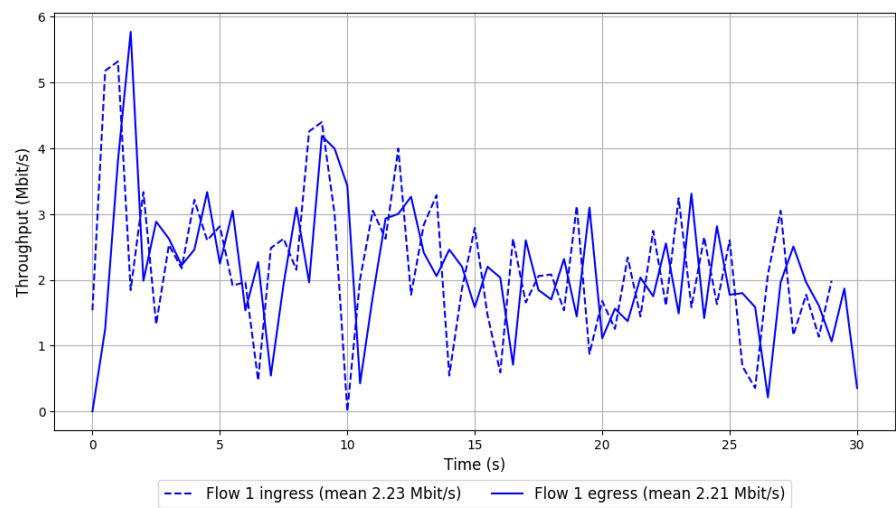


Run 1: Statistics of Verus

Start at: 2019-01-17 05:18:09
End at: 2019-01-17 05:18:39
Local clock offset: -2.33 ms
Remote clock offset: -5.515 ms

Below is generated by plot.py at 2019-01-17 06:21:59
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 247.681 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 247.681 ms
Loss rate: 0.14%

Run 1: Report of Verus — Data Link

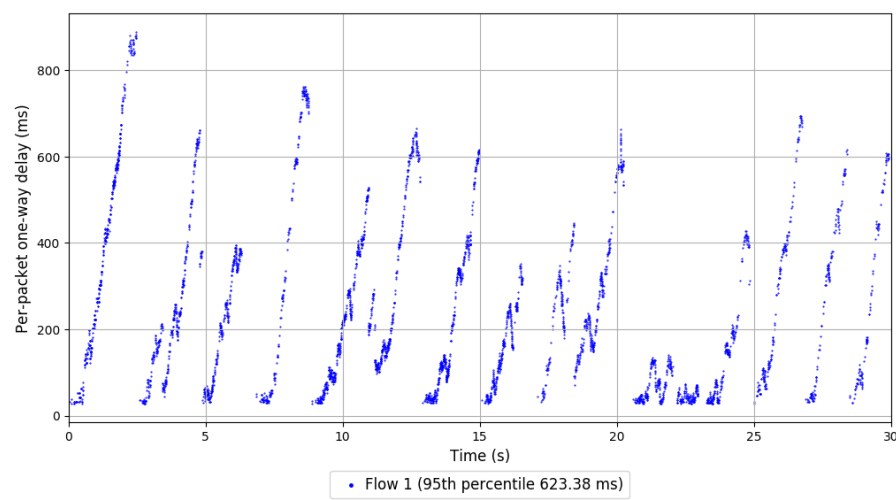
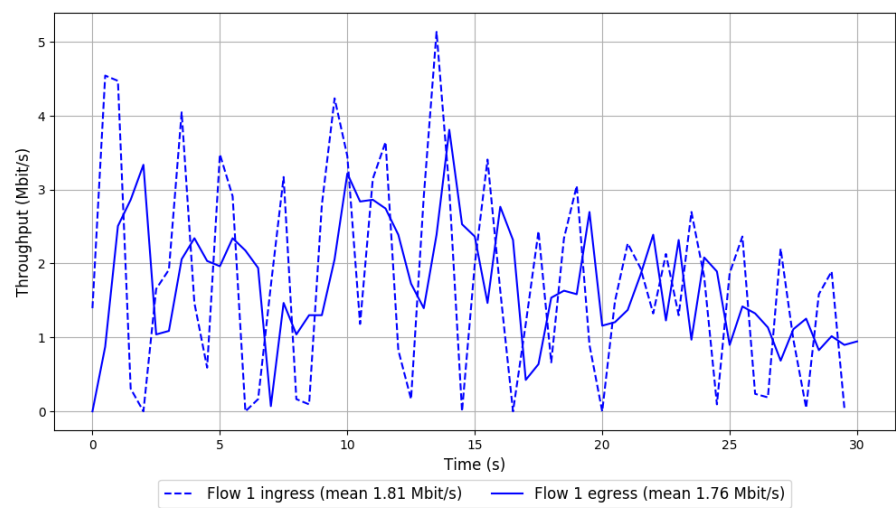


Run 2: Statistics of Verus

Start at: 2019-01-17 05:41:26
End at: 2019-01-17 05:41:56
Local clock offset: -3.183 ms
Remote clock offset: -5.207 ms

Below is generated by plot.py at 2019-01-17 06:21:59
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.76 Mbit/s
95th percentile per-packet one-way delay: 623.379 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 1.76 Mbit/s
95th percentile per-packet one-way delay: 623.379 ms
Loss rate: 1.42%

Run 2: Report of Verus — Data Link

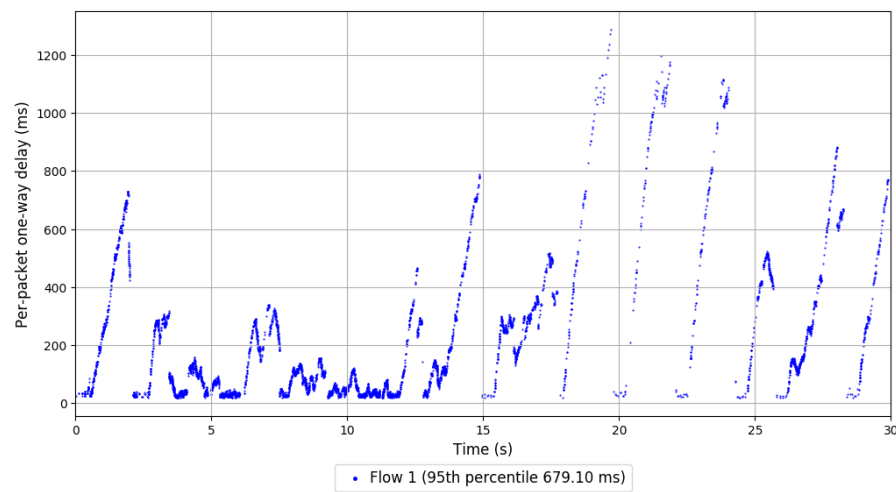
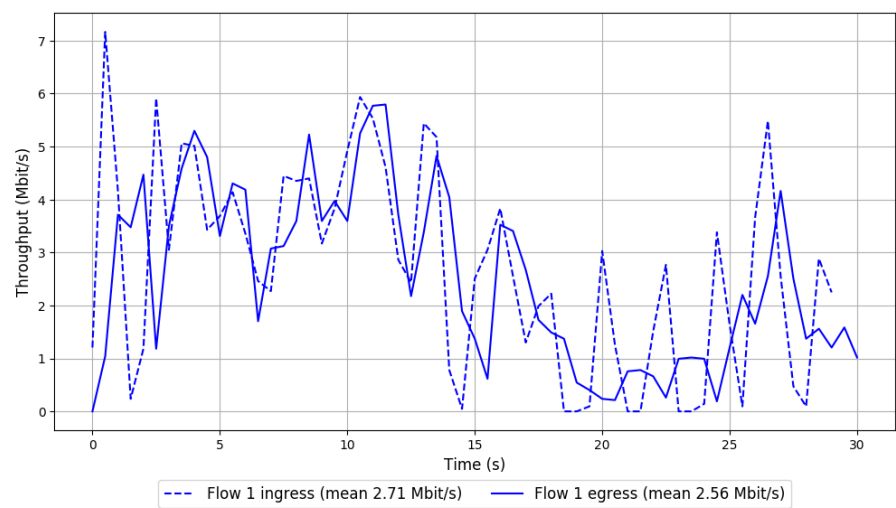


Run 3: Statistics of Verus

Start at: 2019-01-17 06:04:41
End at: 2019-01-17 06:05:11
Local clock offset: -4.197 ms
Remote clock offset: -4.958 ms

Below is generated by plot.py at 2019-01-17 06:22:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.56 Mbit/s
95th percentile per-packet one-way delay: 679.097 ms
Loss rate: 3.90%
-- Flow 1:
Average throughput: 2.56 Mbit/s
95th percentile per-packet one-way delay: 679.097 ms
Loss rate: 3.90%

Run 3: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2019-01-17 05:15:55

End at: 2019-01-17 05:16:25

Local clock offset: -0.37 ms

Remote clock offset: -5.533 ms

Below is generated by plot.py at 2019-01-17 06:22:01

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.72 Mbit/s

95th percentile per-packet one-way delay: 70.768 ms

Loss rate: 0.07%

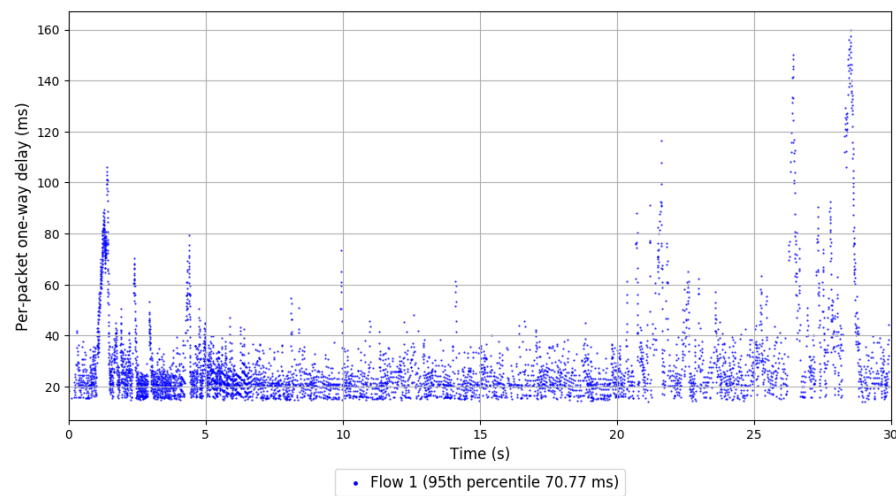
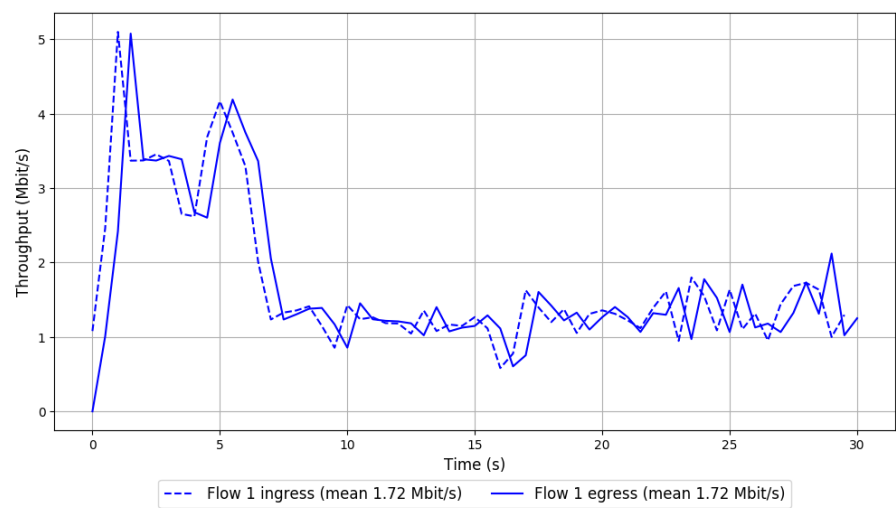
-- Flow 1:

Average throughput: 1.72 Mbit/s

95th percentile per-packet one-way delay: 70.768 ms

Loss rate: 0.07%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2019-01-17 05:39:12

End at: 2019-01-17 05:39:42

Local clock offset: -2.673 ms

Remote clock offset: -4.77 ms

Below is generated by plot.py at 2019-01-17 06:22:01

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.57 Mbit/s

95th percentile per-packet one-way delay: 292.330 ms

Loss rate: 0.30%

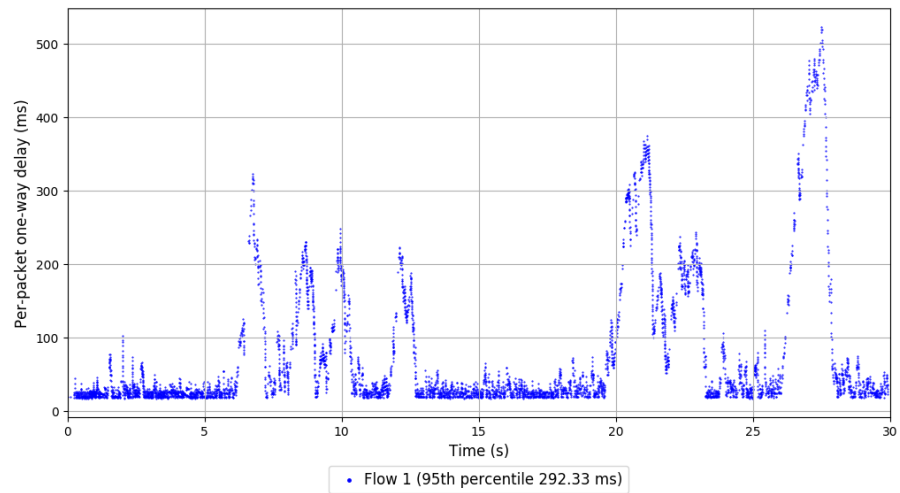
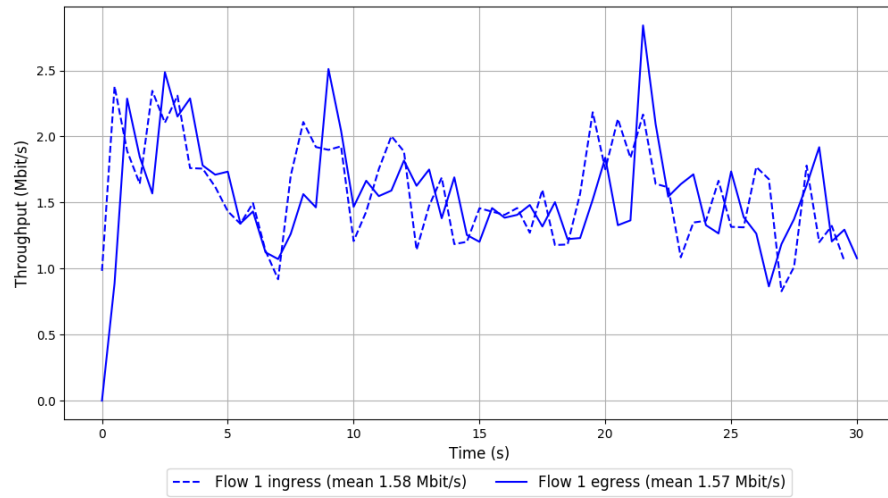
-- Flow 1:

Average throughput: 1.57 Mbit/s

95th percentile per-packet one-way delay: 292.330 ms

Loss rate: 0.30%

Run 2: Report of PCC-Vivace — Data Link

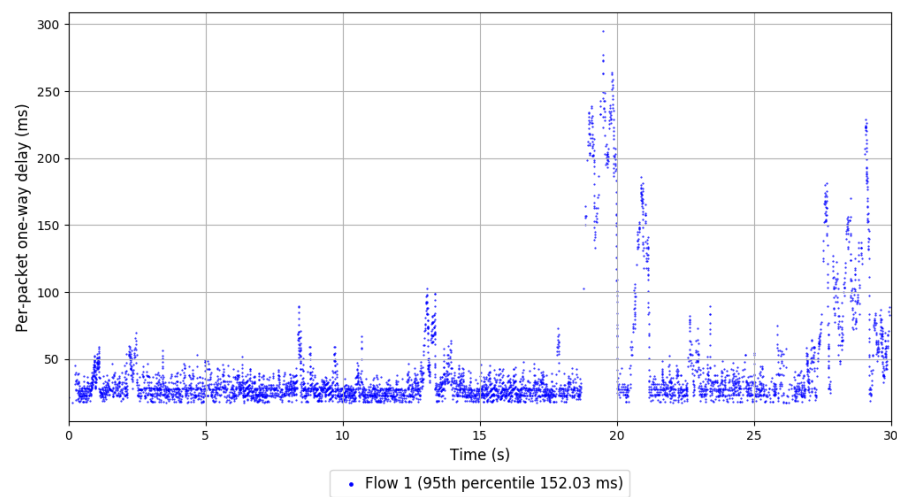
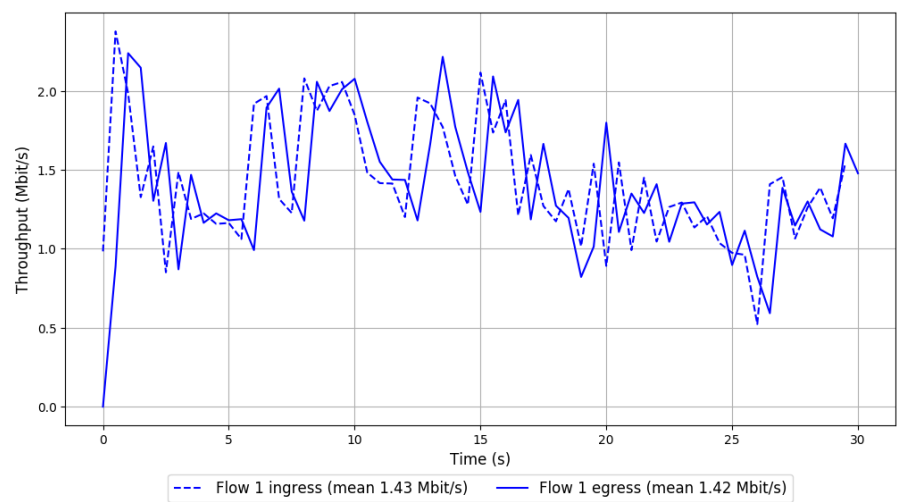


Run 3: Statistics of PCC-Vivace

Start at: 2019-01-17 06:02:27
End at: 2019-01-17 06:02:57
Local clock offset: -3.619 ms
Remote clock offset: -4.764 ms

Below is generated by plot.py at 2019-01-17 06:22:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.42 Mbit/s
95th percentile per-packet one-way delay: 152.029 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 1.42 Mbit/s
95th percentile per-packet one-way delay: 152.029 ms
Loss rate: 0.32%

Run 3: Report of PCC-Vivace — Data Link

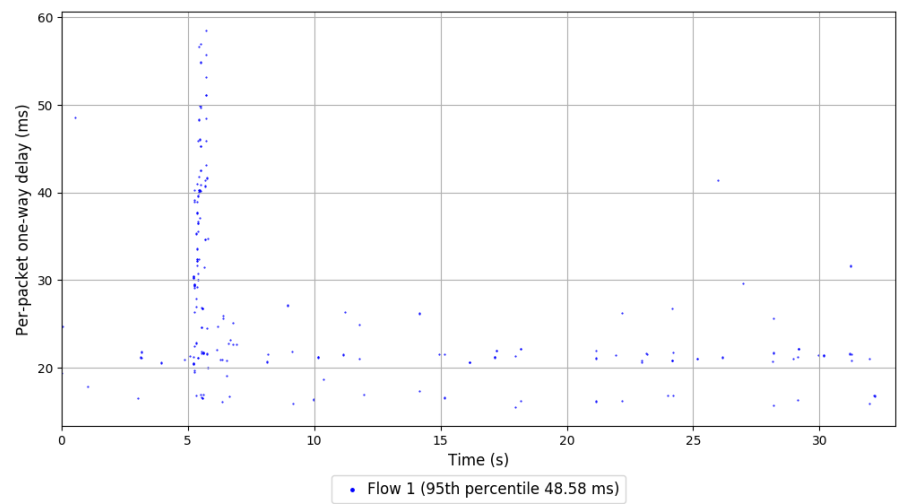
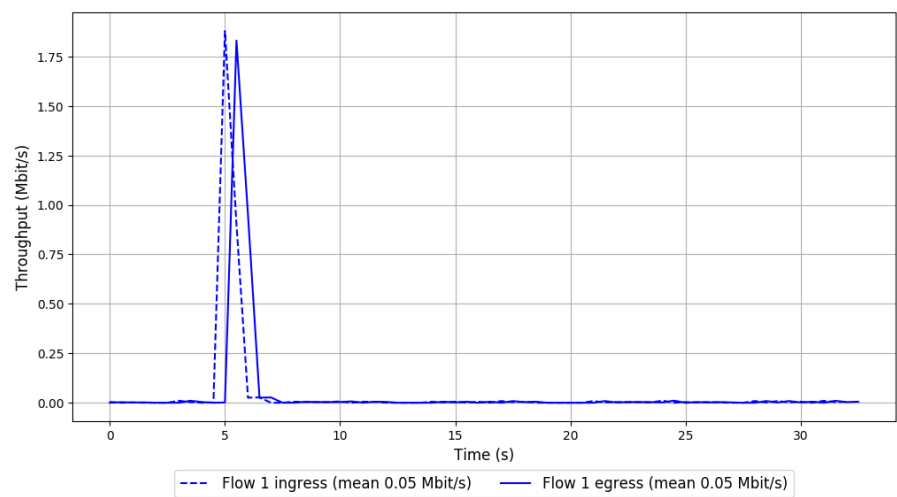


Run 1: Statistics of WebRTC media

Start at: 2019-01-17 05:14:49
End at: 2019-01-17 05:15:19
Local clock offset: -1.105 ms
Remote clock offset: -6.249 ms

Below is generated by plot.py at 2019-01-17 06:22:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 48.579 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 48.579 ms
Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link

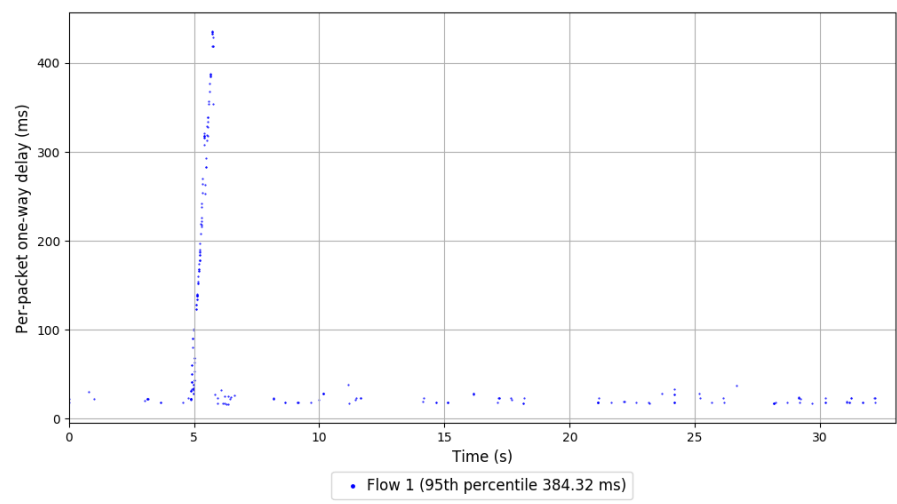
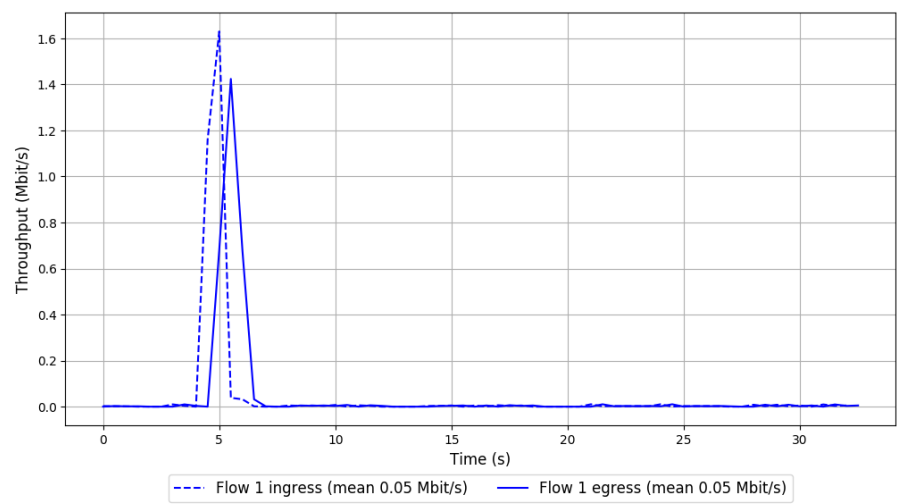


Run 2: Statistics of WebRTC media

Start at: 2019-01-17 05:38:06
End at: 2019-01-17 05:38:36
Local clock offset: -1.955 ms
Remote clock offset: -5.078 ms

Below is generated by plot.py at 2019-01-17 06:22:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 384.325 ms
Loss rate: 1.58%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 384.325 ms
Loss rate: 1.58%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2019-01-17 06:01:21

End at: 2019-01-17 06:01:51

Local clock offset: -3.232 ms

Remote clock offset: -5.1 ms

Below is generated by plot.py at 2019-01-17 06:22:01

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 74.640 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 74.640 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

