

Pantheon Report

Generated at 2018-11-29 22:02:36 (UTC).

Data path: AWS India 1 on `ens5` (*local*) → India on `em1` (*remote*).

Repeated the test of 18 congestion control schemes 5 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:

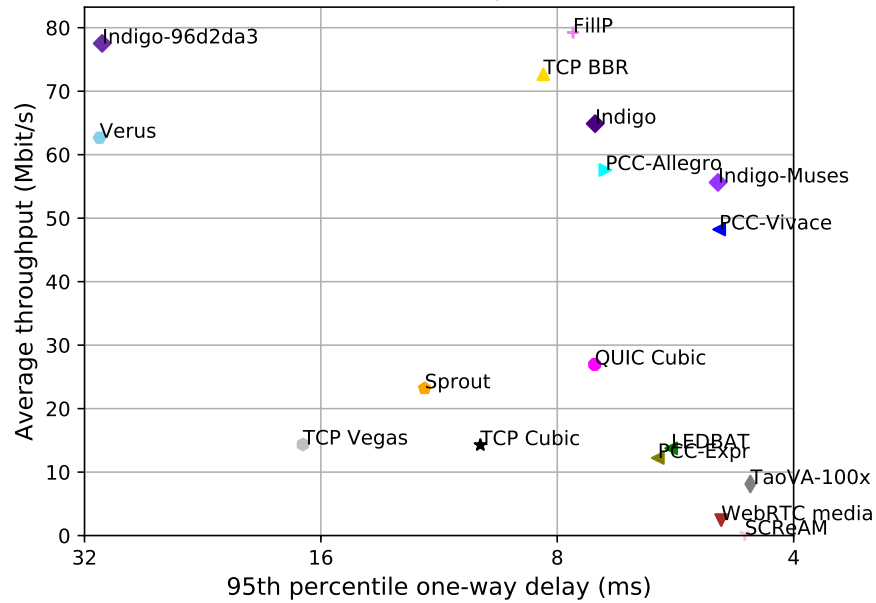
```
Linux 4.15.0-1027-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

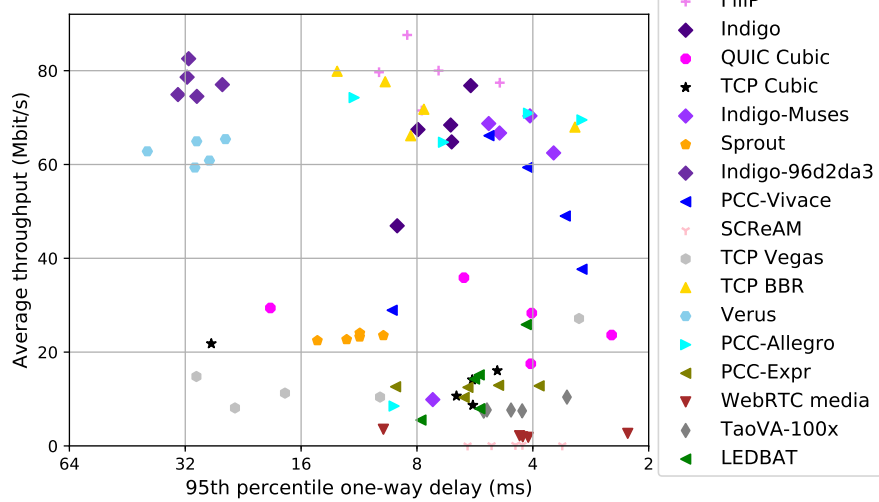
```
branch: muses @ 794ca3866981572cb73700a276691acf79c60f2b
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a
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, 5 runs of 30s each per scheme
(mean of all runs by scheme)



test from AWS India 1 to India, 5 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	5	72.69	8.33	11.60
Copa	0	N/A	N/A	N/A
TCP Cubic	5	14.26	10.02	0.57
FillP	5	79.25	7.64	13.21
Indigo	5	64.89	7.16	12.77
Indigo-96d2da3	5	77.53	30.38	36.22
LEDBAT	5	13.74	5.73	1.45
Indigo-Muses	5	55.63	4.99	7.96
PCC-Allegro	5	57.59	6.95	7.81
PCC-Expr	5	12.23	5.96	34.80
QUIC Cubic	5	26.95	7.17	1.49
SCReAM	5	0.14	4.62	1.66
Sprout	5	23.20	11.80	3.04
TaoVA-100x	5	8.12	4.54	72.59
TCP Vegas	5	14.34	16.87	3.01
Verus	5	62.67	30.62	13.21
PCC-Vivace	5	48.23	4.98	6.82
WebRTC media	5	2.43	4.95	1.72

Run 1: Statistics of TCP BBR

Start at: 2018-11-29 20:32:41

End at: 2018-11-29 20:33:11

Local clock offset: -3.891 ms

Remote clock offset: 2.244 ms

Below is generated by plot.py at 2018-11-29 21:57:42

Datalink statistics

-- Total of 1 flow:

Average throughput: 66.14 Mbit/s

95th percentile per-packet one-way delay: 8.306 ms

Loss rate: 16.04%

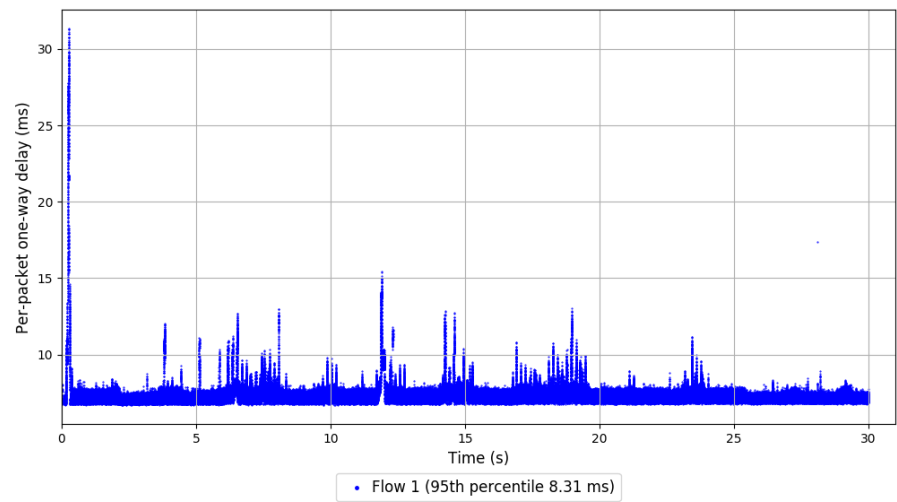
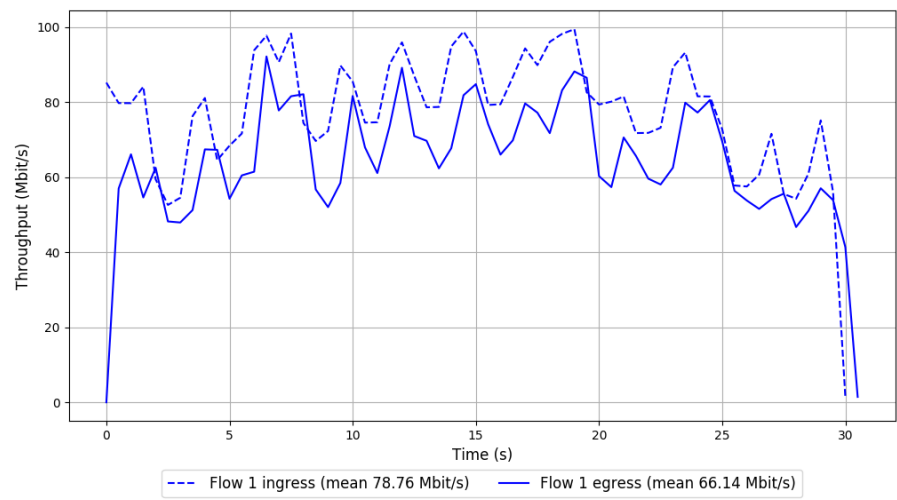
-- Flow 1:

Average throughput: 66.14 Mbit/s

95th percentile per-packet one-way delay: 8.306 ms

Loss rate: 16.04%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-11-29 20:53:12

End at: 2018-11-29 20:53:42

Local clock offset: -4.009 ms

Remote clock offset: 1.696 ms

Below is generated by plot.py at 2018-11-29 21:57:45

Datalink statistics

-- Total of 1 flow:

Average throughput: 71.78 Mbit/s

95th percentile per-packet one-way delay: 7.677 ms

Loss rate: 9.39%

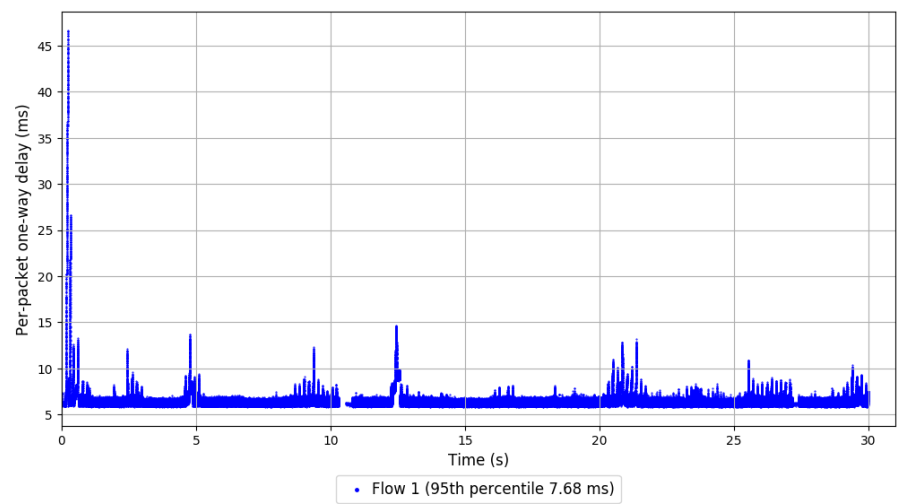
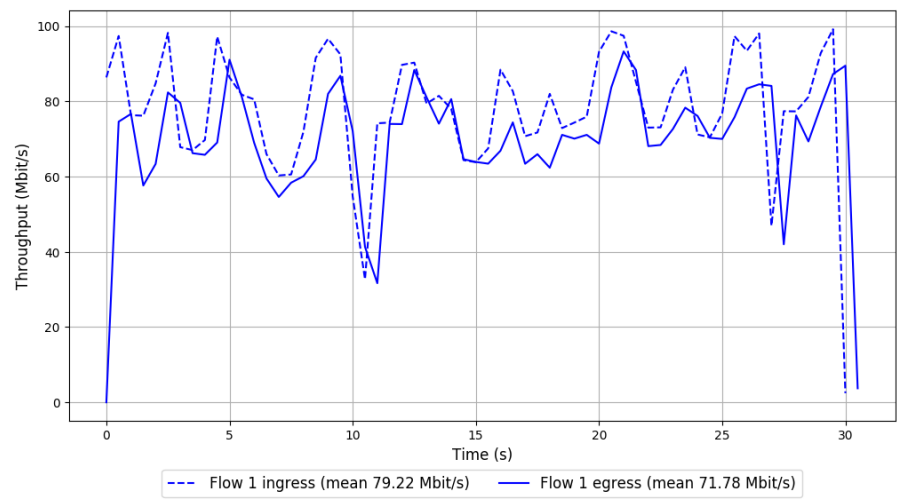
-- Flow 1:

Average throughput: 71.78 Mbit/s

95th percentile per-packet one-way delay: 7.677 ms

Loss rate: 9.39%

Run 2: Report of TCP BBR — Data Link

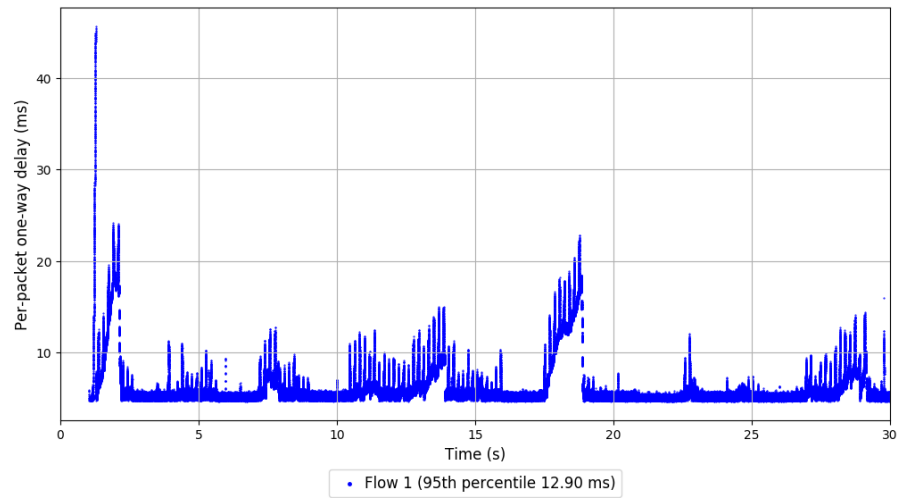
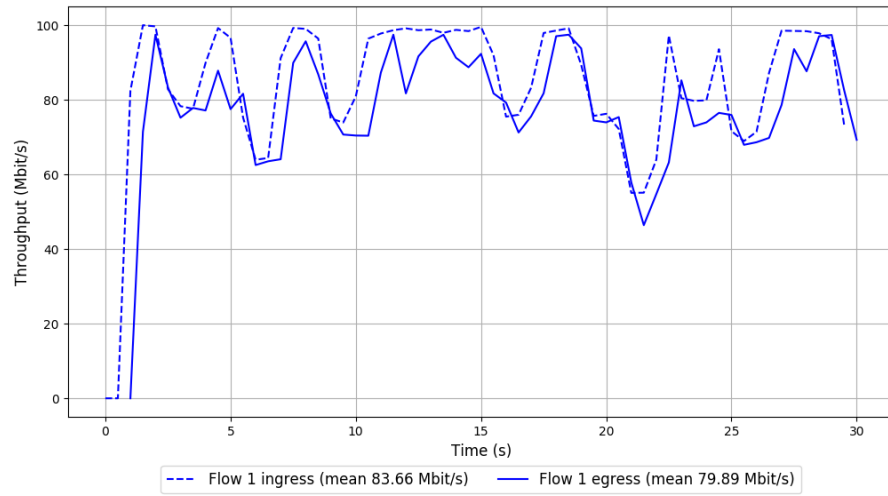


Run 3: Statistics of TCP BBR

Start at: 2018-11-29 21:13:28
End at: 2018-11-29 21:13:58
Local clock offset: -7.031 ms
Remote clock offset: -0.293 ms

Below is generated by plot.py at 2018-11-29 21:57:48
Datalink statistics
-- Total of 1 flow:
Average throughput: 79.89 Mbit/s
95th percentile per-packet one-way delay: 12.896 ms
Loss rate: 7.75%
-- Flow 1:
Average throughput: 79.89 Mbit/s
95th percentile per-packet one-way delay: 12.896 ms
Loss rate: 7.75%

Run 3: Report of TCP BBR — Data Link

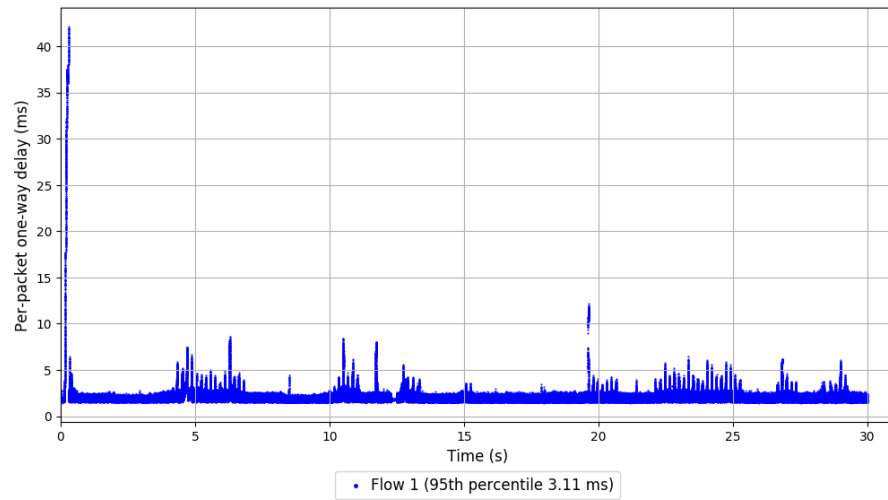
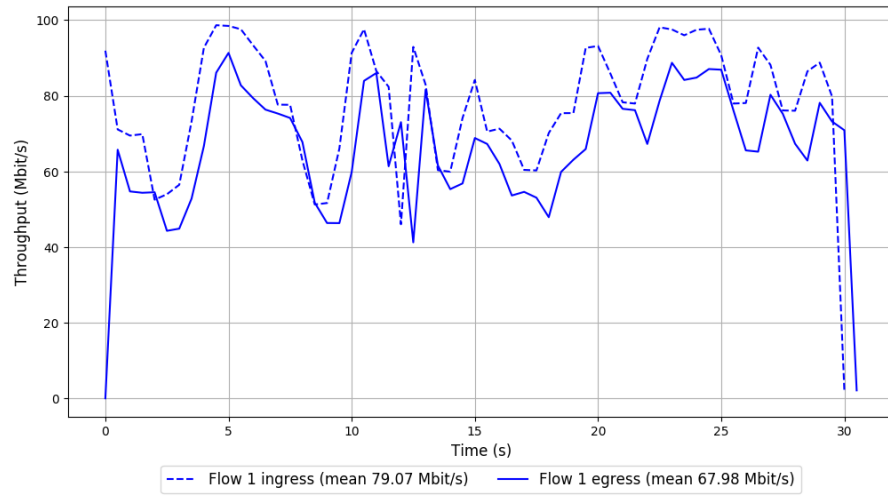


Run 4: Statistics of TCP BBR

Start at: 2018-11-29 21:33:45
End at: 2018-11-29 21:34:15
Local clock offset: -6.793 ms
Remote clock offset: -1.106 ms

Below is generated by plot.py at 2018-11-29 21:57:48
Datalink statistics
-- Total of 1 flow:
Average throughput: 67.98 Mbit/s
95th percentile per-packet one-way delay: 3.109 ms
Loss rate: 14.03%
-- Flow 1:
Average throughput: 67.98 Mbit/s
95th percentile per-packet one-way delay: 3.109 ms
Loss rate: 14.03%

Run 4: Report of TCP BBR — Data Link

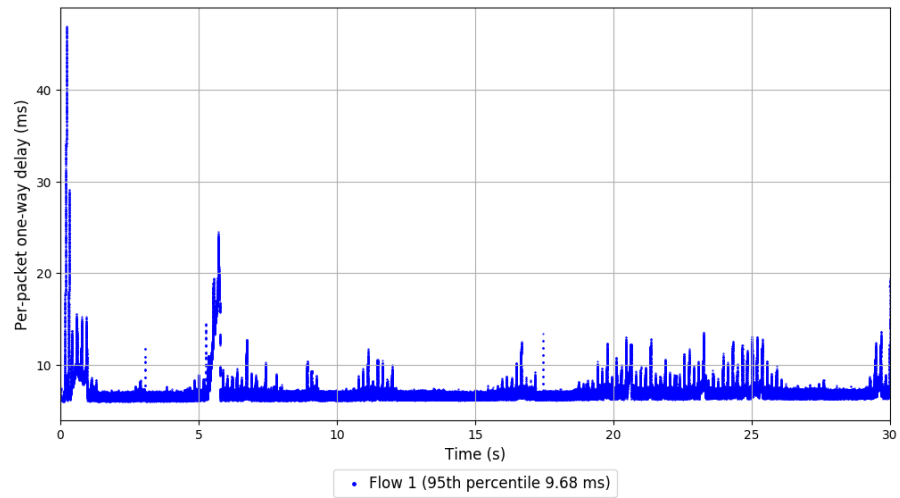
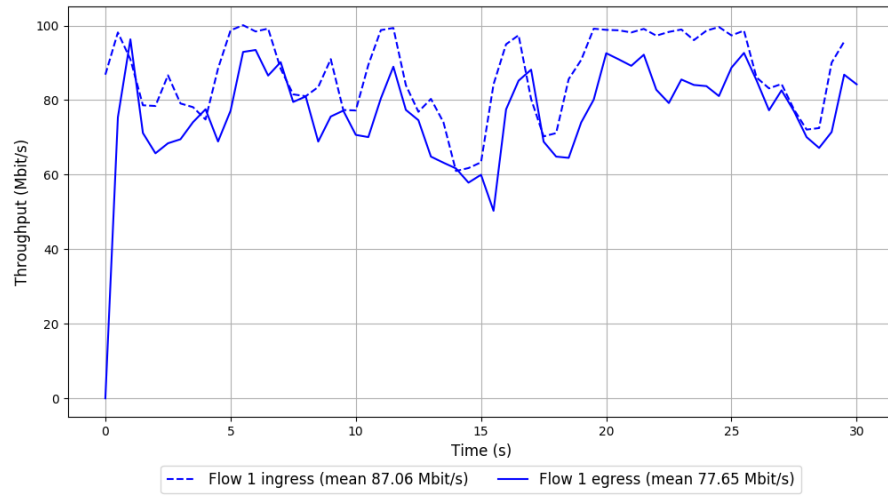


Run 5: Statistics of TCP BBR

Start at: 2018-11-29 21:54:18
End at: 2018-11-29 21:54:48
Local clock offset: -3.718 ms
Remote clock offset: -2.052 ms

Below is generated by plot.py at 2018-11-29 21:57:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 77.65 Mbit/s
95th percentile per-packet one-way delay: 9.675 ms
Loss rate: 10.79%
-- Flow 1:
Average throughput: 77.65 Mbit/s
95th percentile per-packet one-way delay: 9.675 ms
Loss rate: 10.79%

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

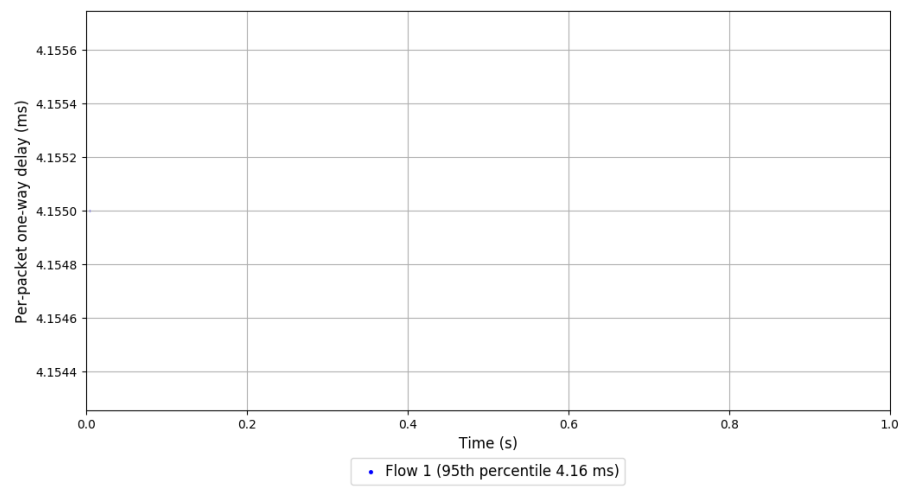
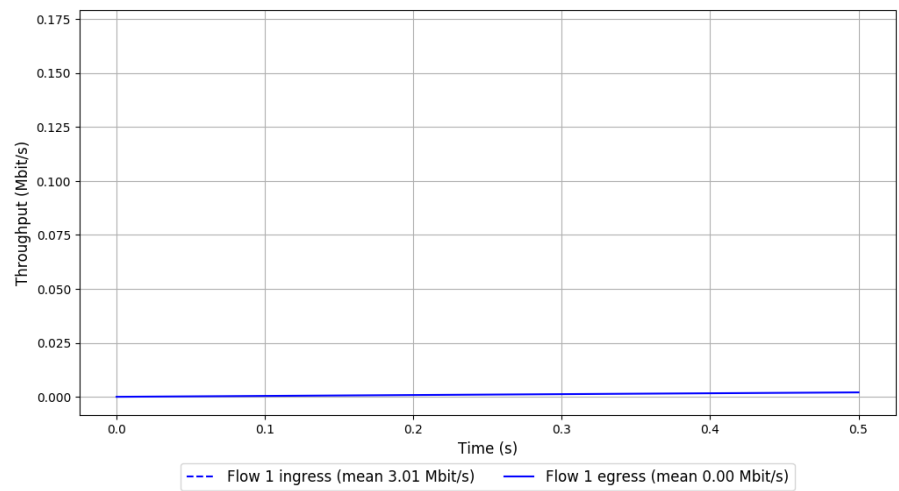
Start at: 2018-11-29 20:25:59

End at: 2018-11-29 20:26:30

Local clock offset: 0.377 ms

Remote clock offset: 0.667 ms

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

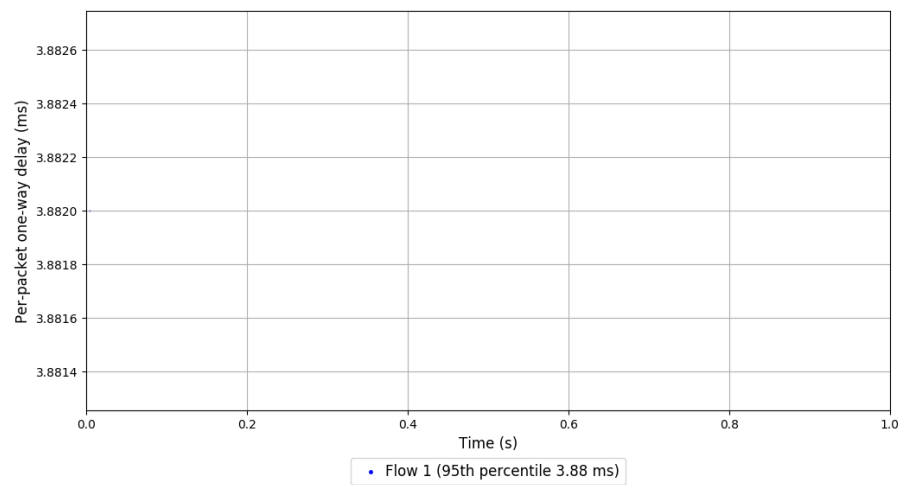
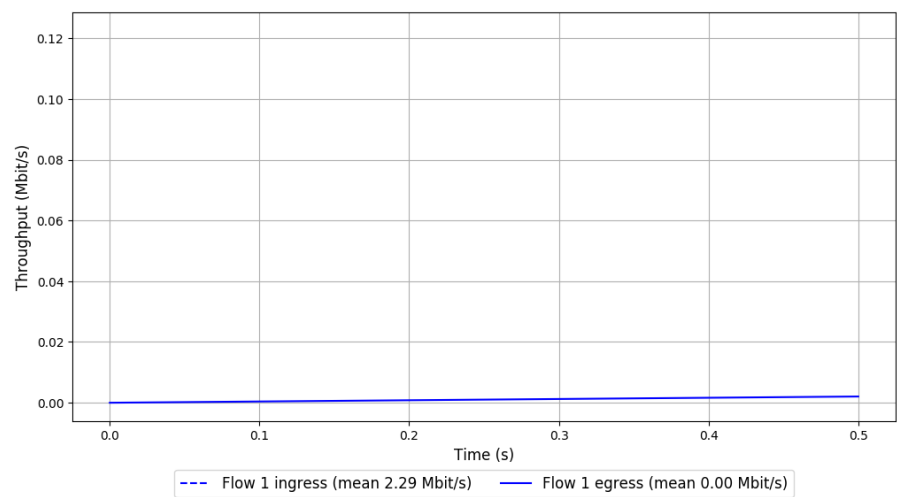
Start at: 2018-11-29 20:46:24

End at: 2018-11-29 20:46:54

Local clock offset: -2.715 ms

Remote clock offset: 0.517 ms

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

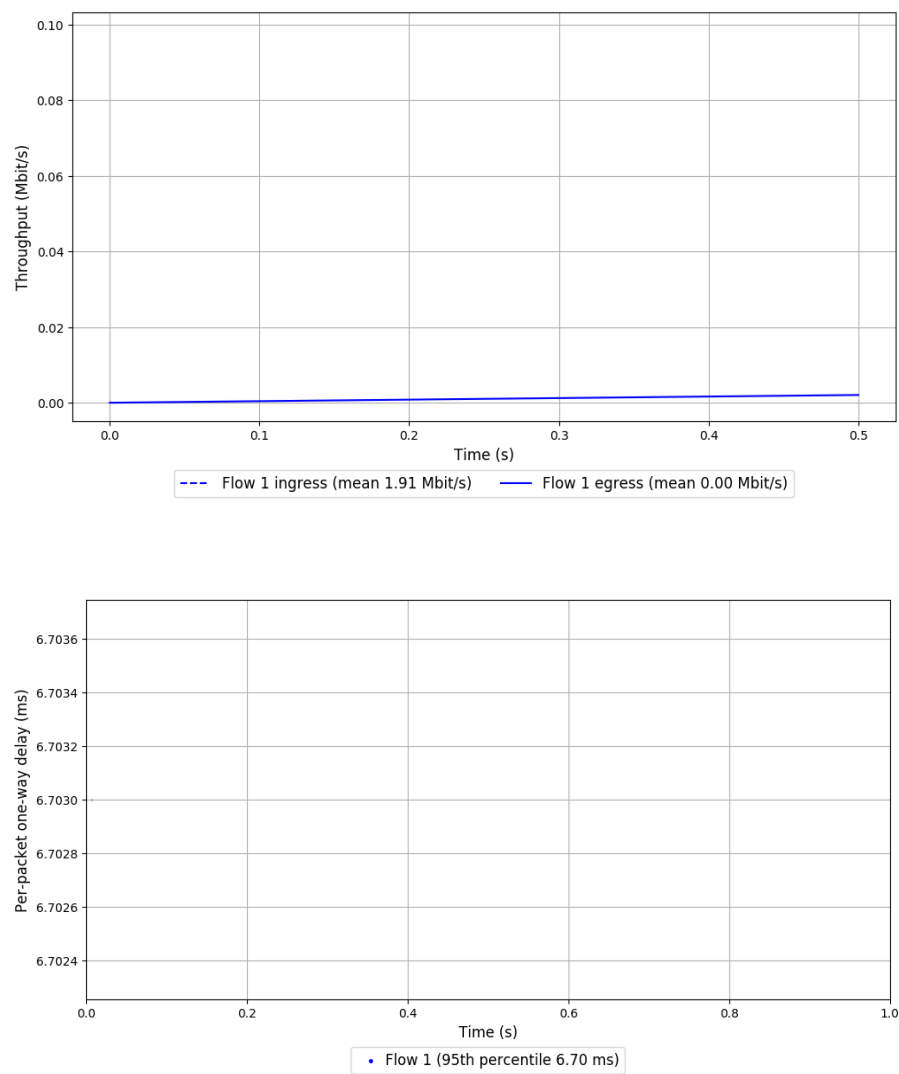
Start at: 2018-11-29 21:06:52

End at: 2018-11-29 21:07:22

Local clock offset: -5.969 ms

Remote clock offset: 1.448 ms

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

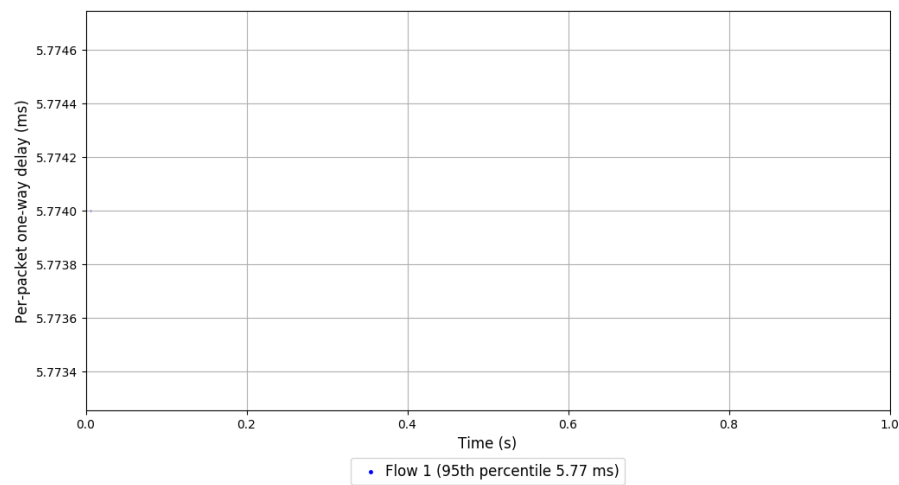
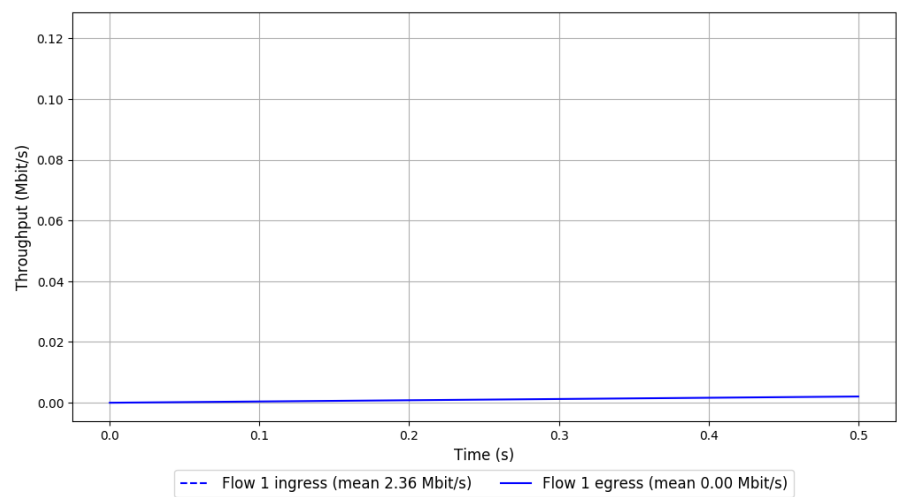
Start at: 2018-11-29 21:27:10

End at: 2018-11-29 21:27:40

Local clock offset: -9.175 ms

Remote clock offset: -0.298 ms

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

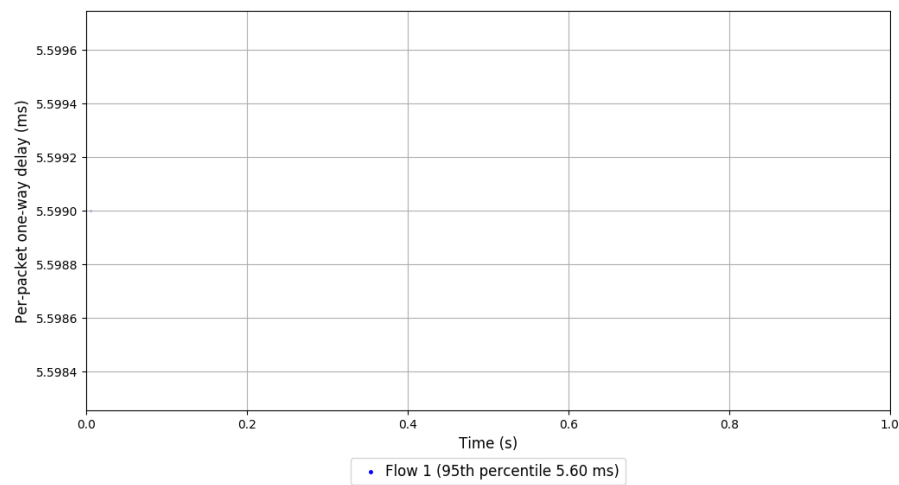
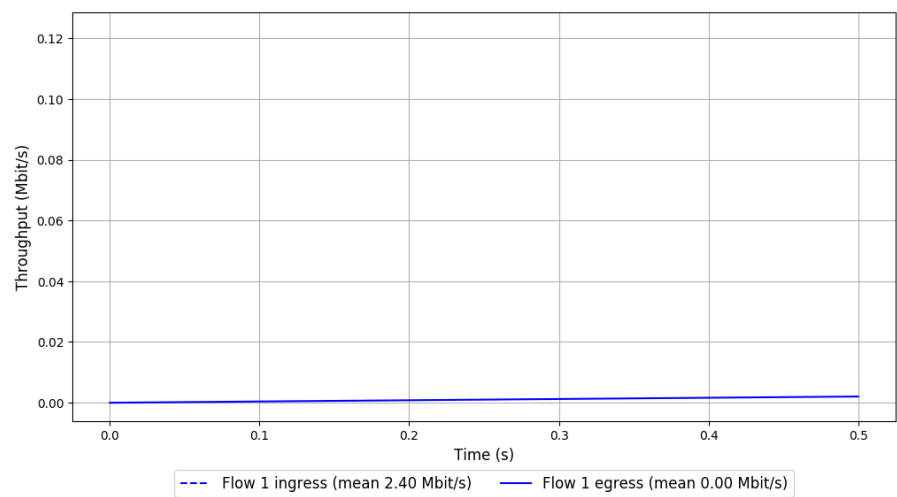
Start at: 2018-11-29 21:47:37

End at: 2018-11-29 21:48:07

Local clock offset: -8.247 ms

Remote clock offset: -1.142 ms

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-11-29 20:27:04

End at: 2018-11-29 20:27:34

Local clock offset: -1.637 ms

Remote clock offset: 2.289 ms

Below is generated by plot.py at 2018-11-29 21:57:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 21.81 Mbit/s

95th percentile per-packet one-way delay: 27.383 ms

Loss rate: 0.39%

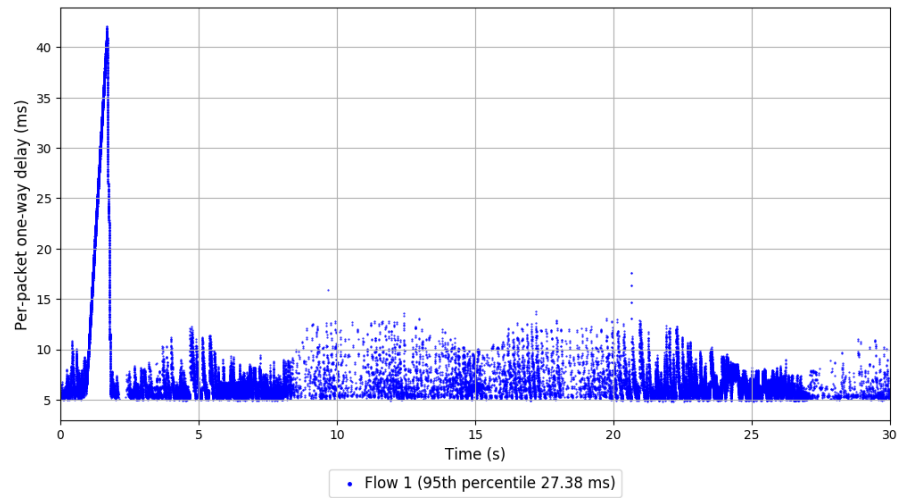
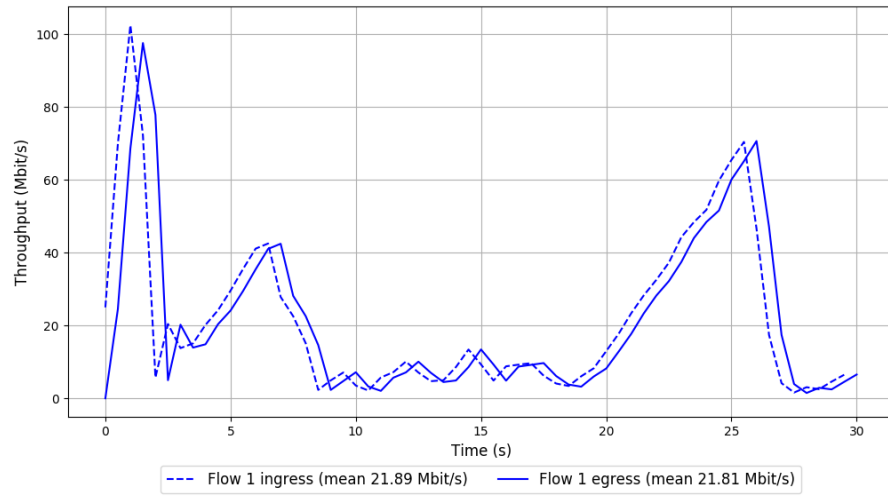
-- Flow 1:

Average throughput: 21.81 Mbit/s

95th percentile per-packet one-way delay: 27.383 ms

Loss rate: 0.39%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-11-29 20:47:34

End at: 2018-11-29 20:48:04

Local clock offset: -4.596 ms

Remote clock offset: 0.58 ms

Below is generated by plot.py at 2018-11-29 21:57:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 8.68 Mbit/s

95th percentile per-packet one-way delay: 5.727 ms

Loss rate: 1.05%

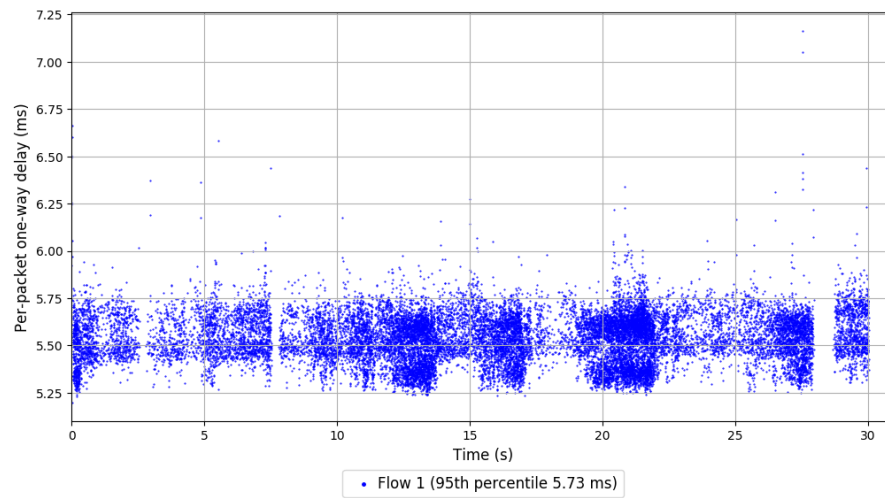
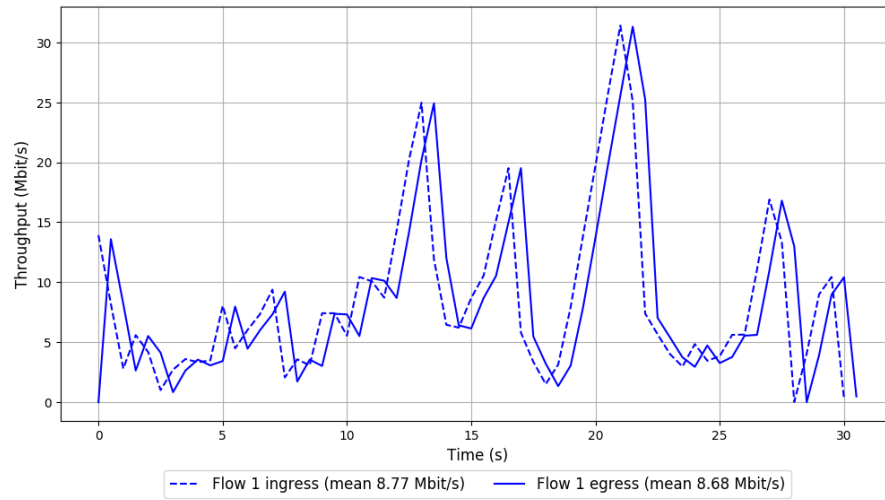
-- Flow 1:

Average throughput: 8.68 Mbit/s

95th percentile per-packet one-way delay: 5.727 ms

Loss rate: 1.05%

Run 2: Report of TCP Cubic — Data Link

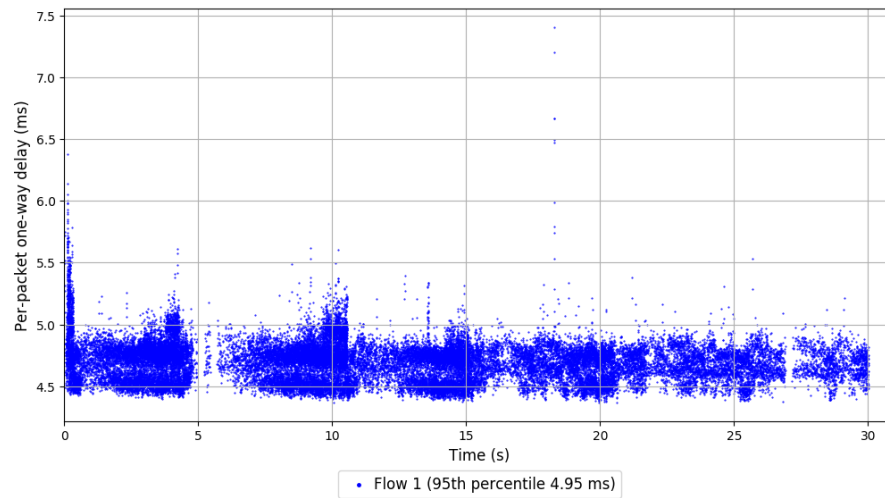
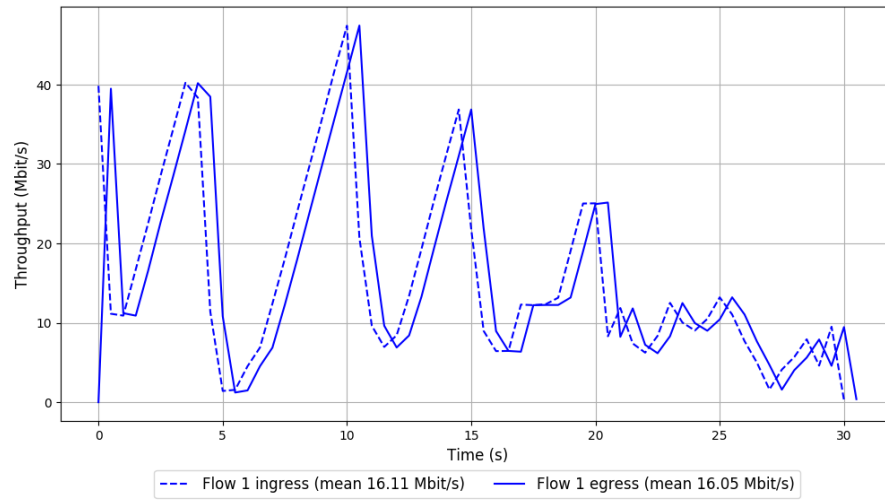


Run 3: Statistics of TCP Cubic

Start at: 2018-11-29 21:07:56
End at: 2018-11-29 21:08:26
Local clock offset: -6.19 ms
Remote clock offset: -0.432 ms

Below is generated by plot.py at 2018-11-29 21:57:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 16.05 Mbit/s
95th percentile per-packet one-way delay: 4.947 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 16.05 Mbit/s
95th percentile per-packet one-way delay: 4.947 ms
Loss rate: 0.33%

Run 3: Report of TCP Cubic — Data Link

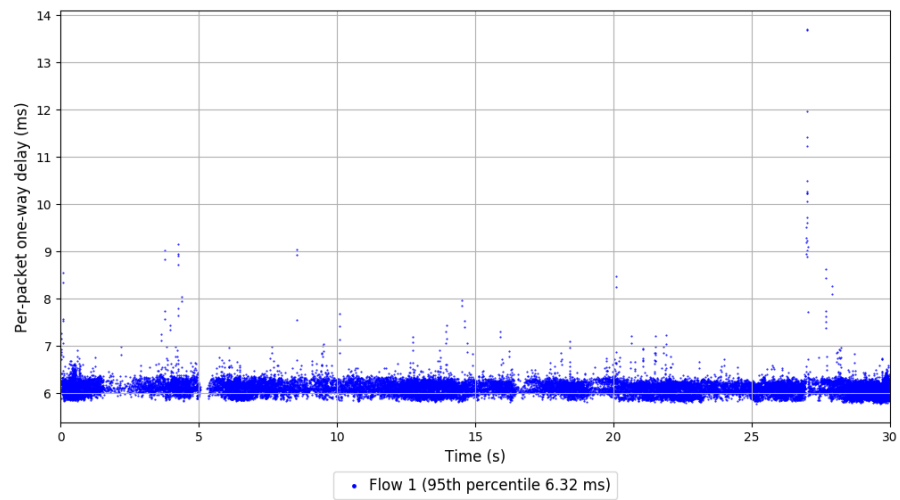
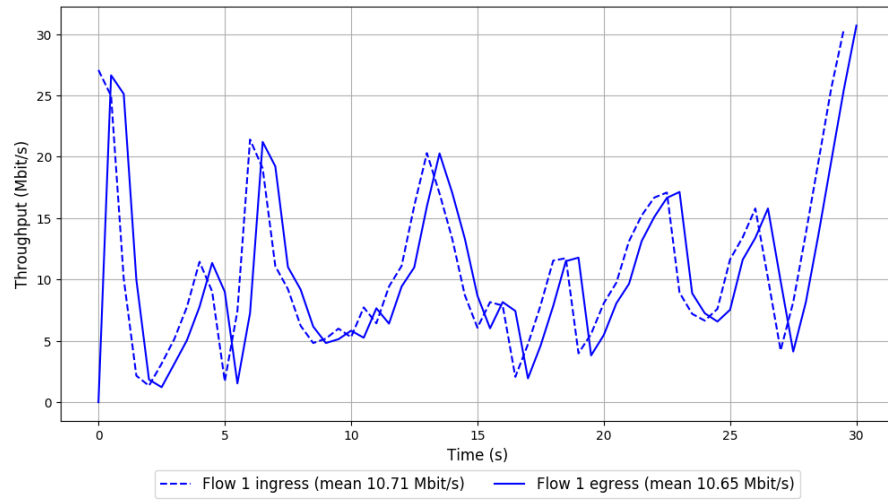


Run 4: Statistics of TCP Cubic

Start at: 2018-11-29 21:28:15
End at: 2018-11-29 21:28:45
Local clock offset: -9.586 ms
Remote clock offset: -0.053 ms

Below is generated by plot.py at 2018-11-29 21:57:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 10.65 Mbit/s
95th percentile per-packet one-way delay: 6.316 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 10.65 Mbit/s
95th percentile per-packet one-way delay: 6.316 ms
Loss rate: 0.58%

Run 4: Report of TCP Cubic — Data Link

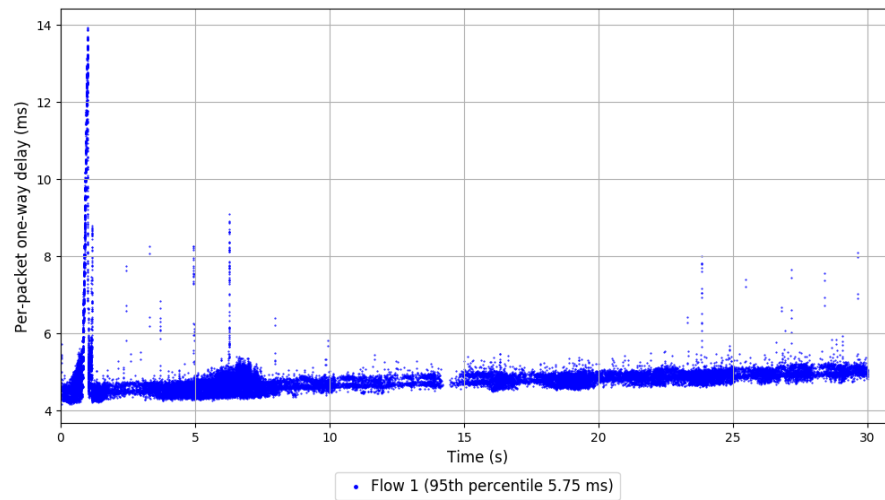
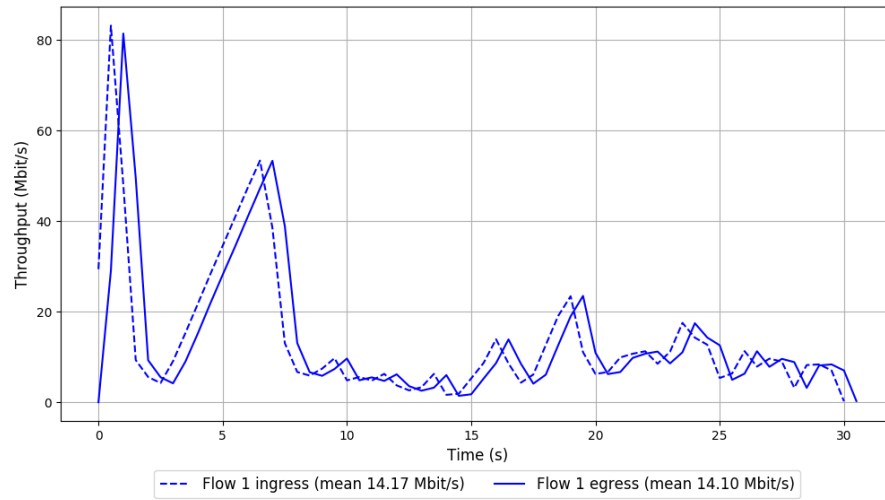


Run 5: Statistics of TCP Cubic

Start at: 2018-11-29 21:48:42
End at: 2018-11-29 21:49:12
Local clock offset: -6.087 ms
Remote clock offset: -0.464 ms

Below is generated by plot.py at 2018-11-29 21:57:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 14.10 Mbit/s
95th percentile per-packet one-way delay: 5.745 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 14.10 Mbit/s
95th percentile per-packet one-way delay: 5.745 ms
Loss rate: 0.48%

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2018-11-29 20:28:10

End at: 2018-11-29 20:28:40

Local clock offset: -2.469 ms

Remote clock offset: 2.053 ms

Below is generated by plot.py at 2018-11-29 21:58:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 79.67 Mbit/s

95th percentile per-packet one-way delay: 10.038 ms

Loss rate: 14.37%

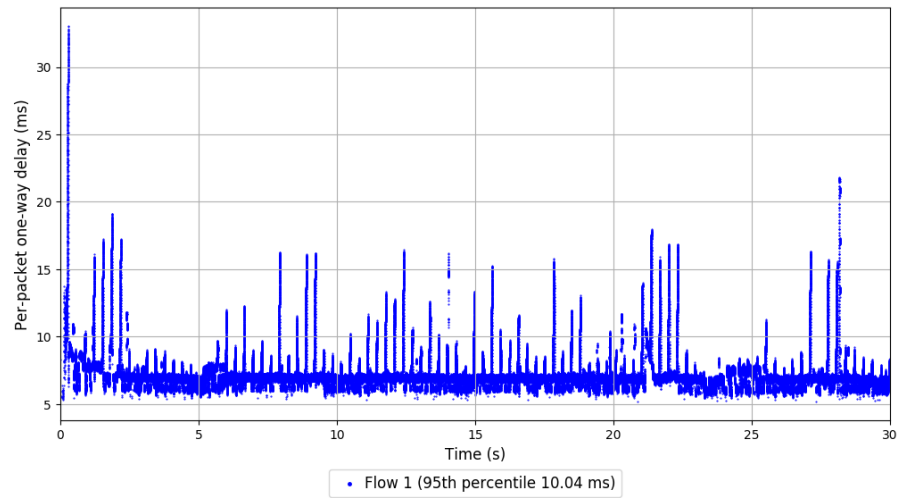
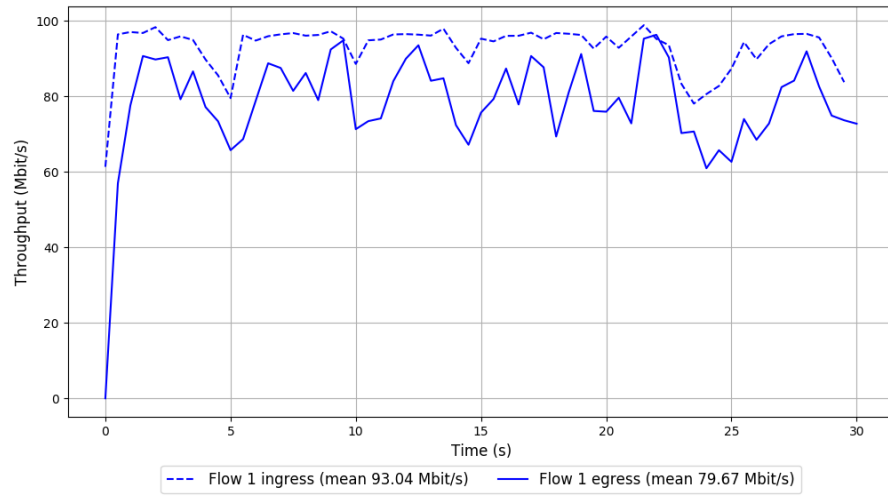
-- Flow 1:

Average throughput: 79.67 Mbit/s

95th percentile per-packet one-way delay: 10.038 ms

Loss rate: 14.37%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-11-29 20:48:39

End at: 2018-11-29 20:49:09

Local clock offset: -5.339 ms

Remote clock offset: 0.141 ms

Below is generated by plot.py at 2018-11-29 21:58:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 71.51 Mbit/s

95th percentile per-packet one-way delay: 7.772 ms

Loss rate: 15.82%

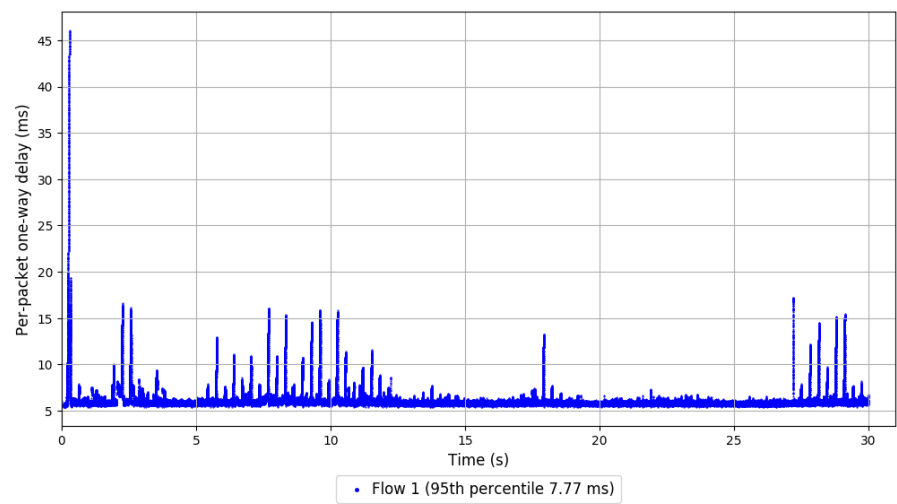
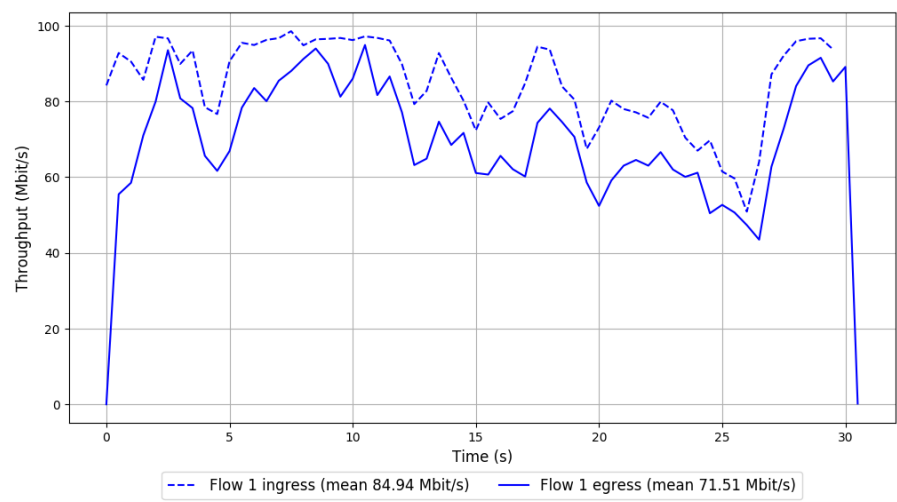
-- Flow 1:

Average throughput: 71.51 Mbit/s

95th percentile per-packet one-way delay: 7.772 ms

Loss rate: 15.82%

Run 2: Report of FillP — Data Link

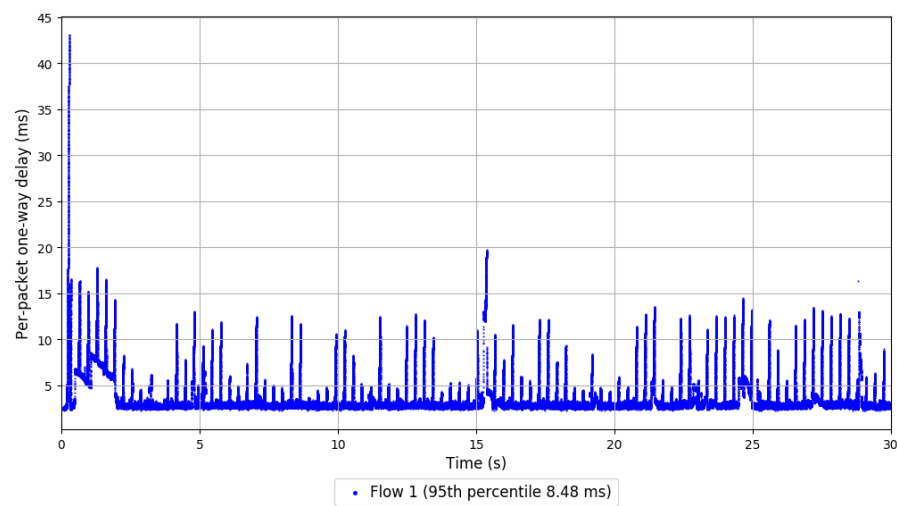
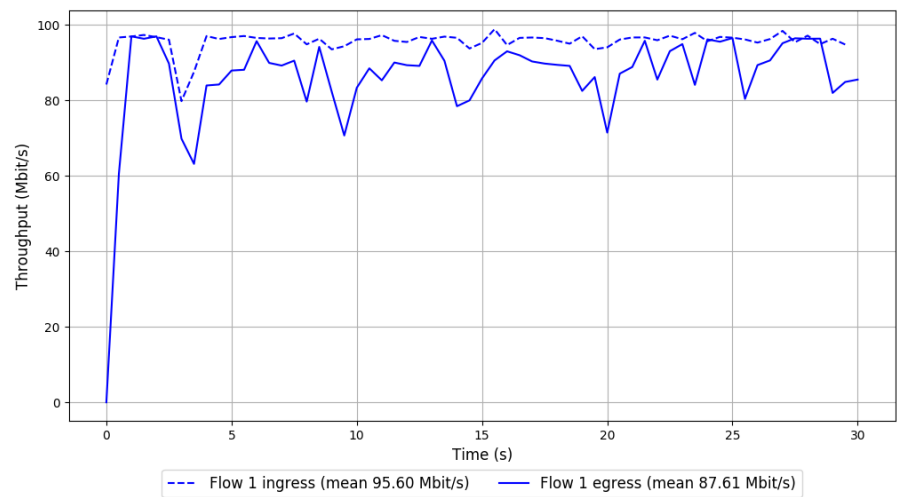


Run 3: Statistics of FillP

Start at: 2018-11-29 21:09:02
End at: 2018-11-29 21:09:32
Local clock offset: -4.027 ms
Remote clock offset: -0.062 ms

Below is generated by plot.py at 2018-11-29 21:58:40
Datalink statistics
-- Total of 1 flow:
Average throughput: 87.61 Mbit/s
95th percentile per-packet one-way delay: 8.481 ms
Loss rate: 8.36%
-- Flow 1:
Average throughput: 87.61 Mbit/s
95th percentile per-packet one-way delay: 8.481 ms
Loss rate: 8.36%

Run 3: Report of FillP — Data Link

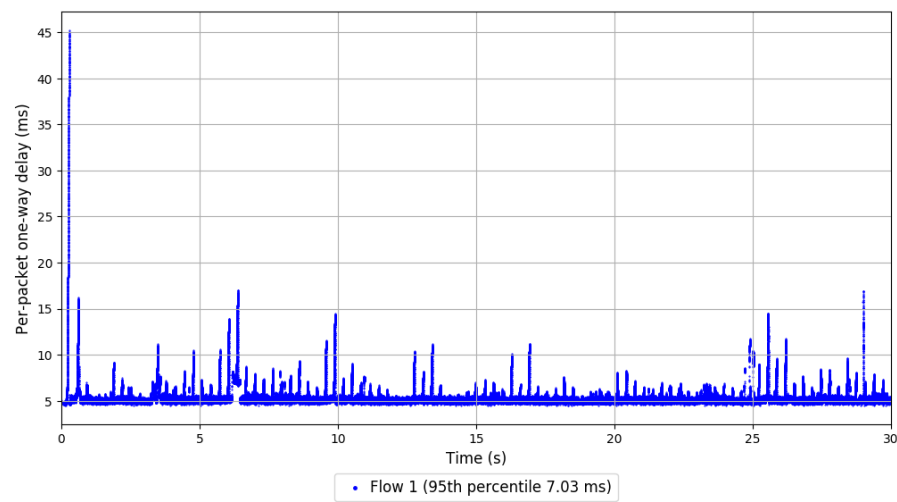
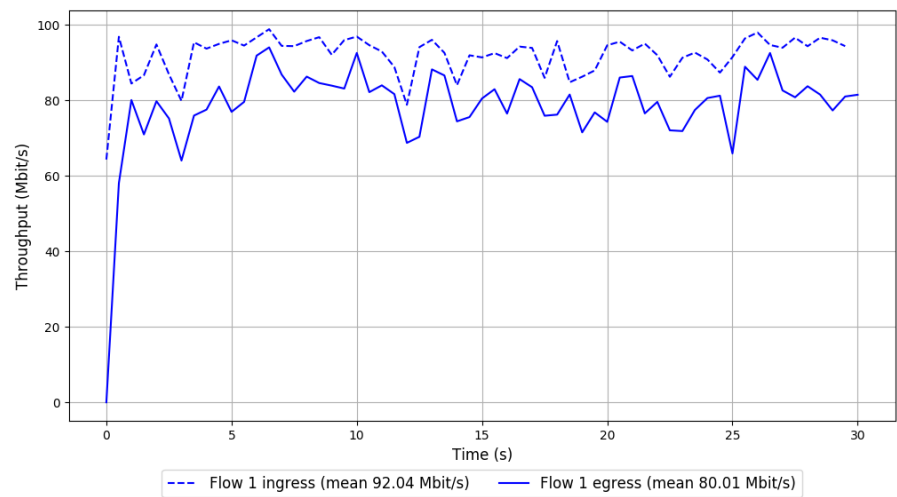


Run 4: Statistics of FillP

Start at: 2018-11-29 21:29:21
End at: 2018-11-29 21:29:51
Local clock offset: -9.047 ms
Remote clock offset: -0.456 ms

Below is generated by plot.py at 2018-11-29 21:58:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 80.01 Mbit/s
95th percentile per-packet one-way delay: 7.030 ms
Loss rate: 13.07%
-- Flow 1:
Average throughput: 80.01 Mbit/s
95th percentile per-packet one-way delay: 7.030 ms
Loss rate: 13.07%

Run 4: Report of FillP — Data Link

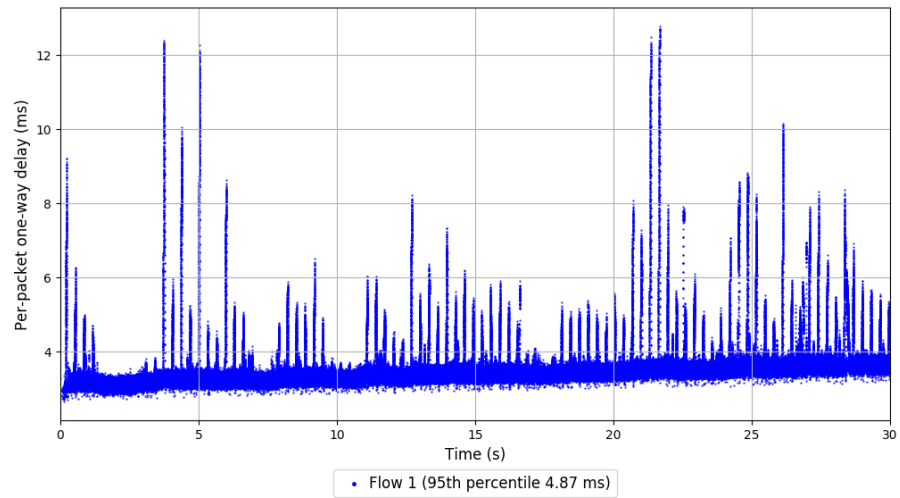
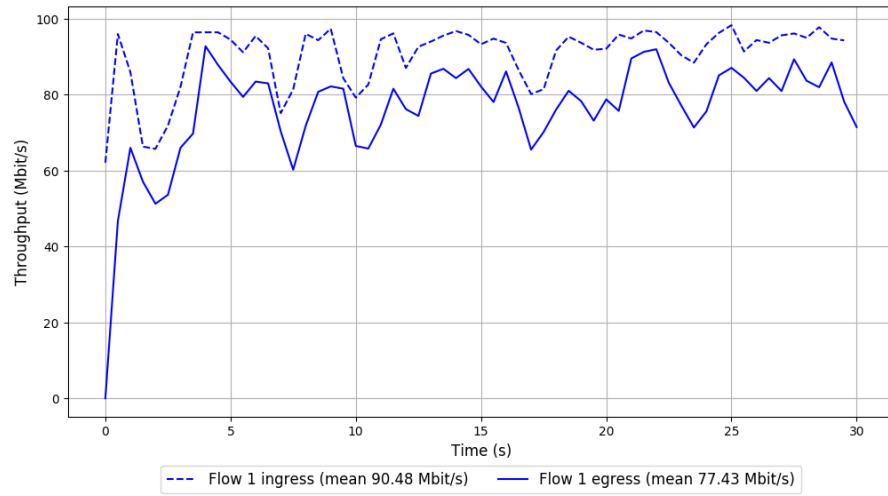


Run 5: Statistics of FillP

Start at: 2018-11-29 21:49:53
End at: 2018-11-29 21:50:23
Local clock offset: -3.909 ms
Remote clock offset: -1.935 ms

Below is generated by plot.py at 2018-11-29 21:58:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 77.43 Mbit/s
95th percentile per-packet one-way delay: 4.874 ms
Loss rate: 14.42%
-- Flow 1:
Average throughput: 77.43 Mbit/s
95th percentile per-packet one-way delay: 4.874 ms
Loss rate: 14.42%

Run 5: Report of FillP — Data Link

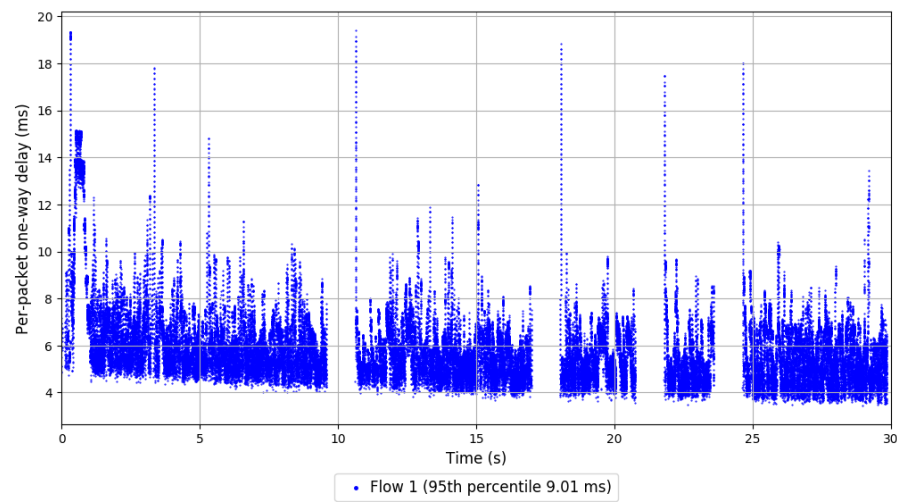
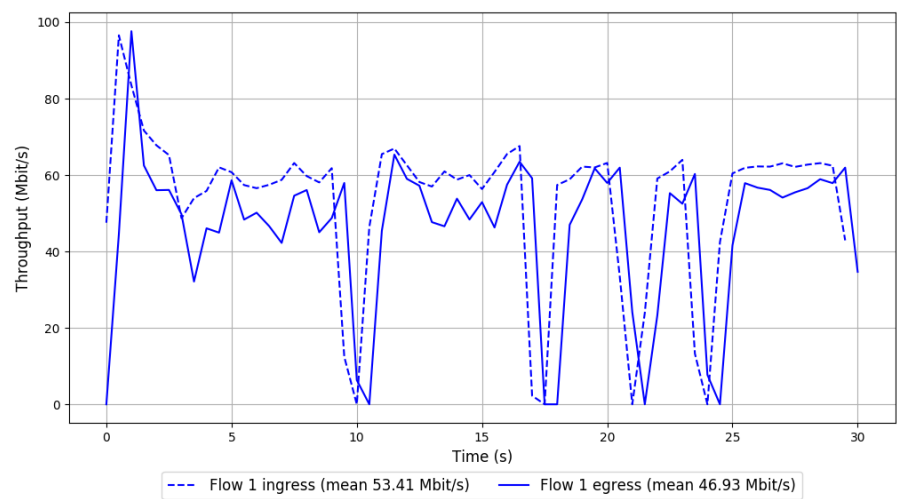


```
Run 1: Statistics of Indigo

Start at: 2018-11-29 20:14:49
End at: 2018-11-29 20:15:19
Local clock offset: 1.264 ms
Remote clock offset: 1.267 ms

# Below is generated by plot.py at 2018-11-29 21:58:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 46.93 Mbit/s
95th percentile per-packet one-way delay: 9.005 ms
Loss rate: 12.13%
-- Flow 1:
Average throughput: 46.93 Mbit/s
95th percentile per-packet one-way delay: 9.005 ms
Loss rate: 12.13%
```

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2018-11-29 20:34:57

End at: 2018-11-29 20:35:27

Local clock offset: -2.778 ms

Remote clock offset: 1.35 ms

Below is generated by plot.py at 2018-11-29 21:58:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 67.46 Mbit/s

95th percentile per-packet one-way delay: 7.952 ms

Loss rate: 12.04%

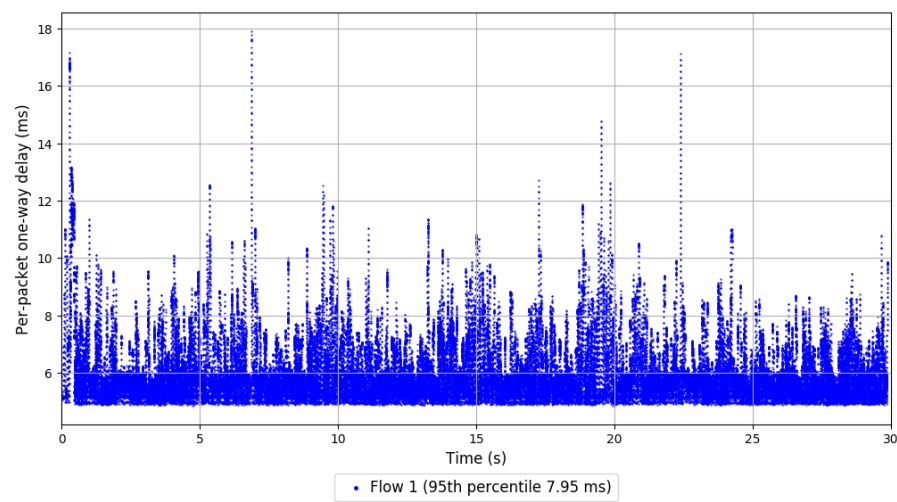
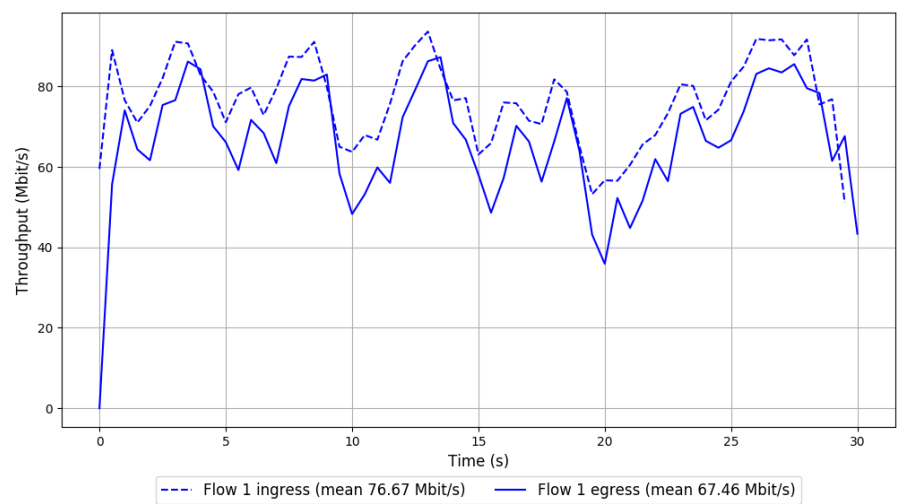
-- Flow 1:

Average throughput: 67.46 Mbit/s

95th percentile per-packet one-way delay: 7.952 ms

Loss rate: 12.04%

Run 2: Report of Indigo — Data Link

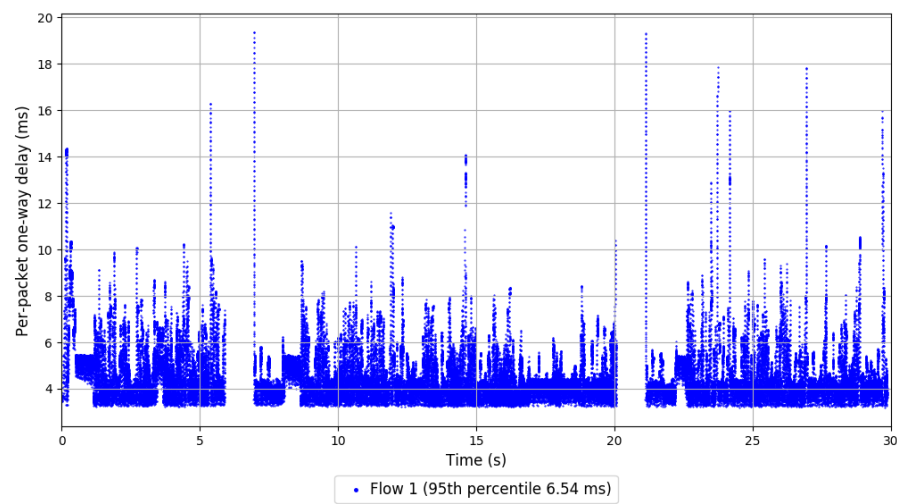
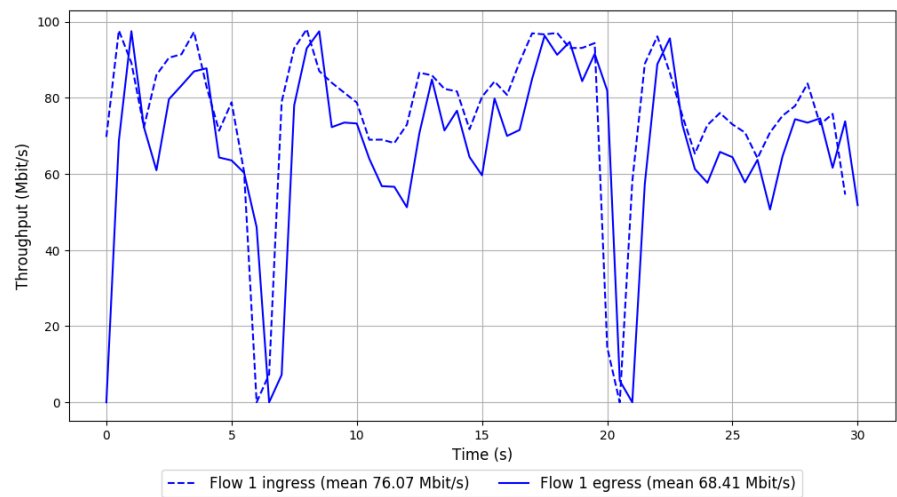


Run 3: Statistics of Indigo

Start at: 2018-11-29 20:55:29
End at: 2018-11-29 20:55:59
Local clock offset: -3.365 ms
Remote clock offset: -0.078 ms

Below is generated by plot.py at 2018-11-29 21:58:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 68.41 Mbit/s
95th percentile per-packet one-way delay: 6.539 ms
Loss rate: 10.07%
-- Flow 1:
Average throughput: 68.41 Mbit/s
95th percentile per-packet one-way delay: 6.539 ms
Loss rate: 10.07%

Run 3: Report of Indigo — Data Link

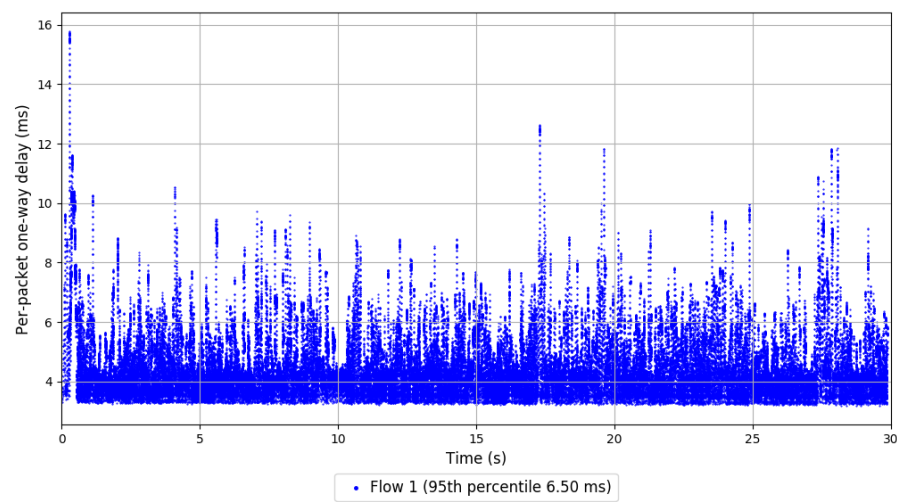
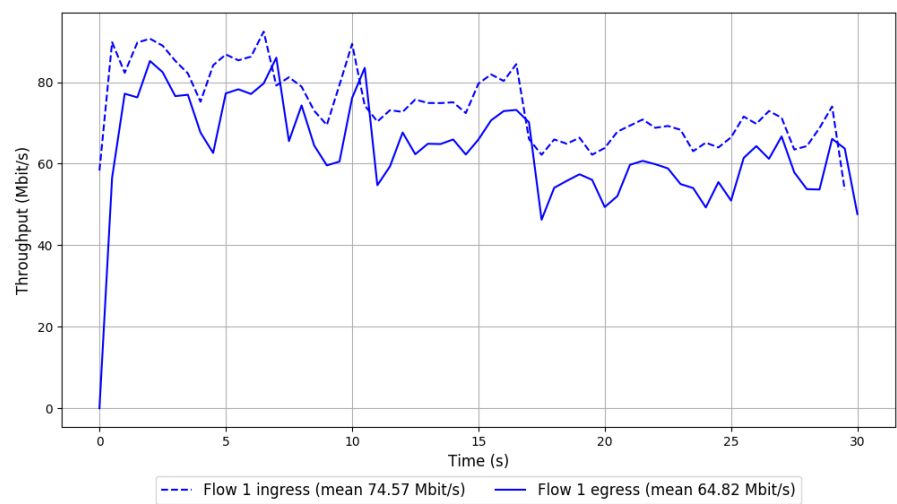


Run 4: Statistics of Indigo

Start at: 2018-11-29 21:15:47
End at: 2018-11-29 21:16:17
Local clock offset: -5.654 ms
Remote clock offset: -0.129 ms

Below is generated by plot.py at 2018-11-29 21:59:05
Datalink statistics
-- Total of 1 flow:
Average throughput: 64.82 Mbit/s
95th percentile per-packet one-way delay: 6.502 ms
Loss rate: 13.08%
-- Flow 1:
Average throughput: 64.82 Mbit/s
95th percentile per-packet one-way delay: 6.502 ms
Loss rate: 13.08%

Run 4: Report of Indigo — Data Link

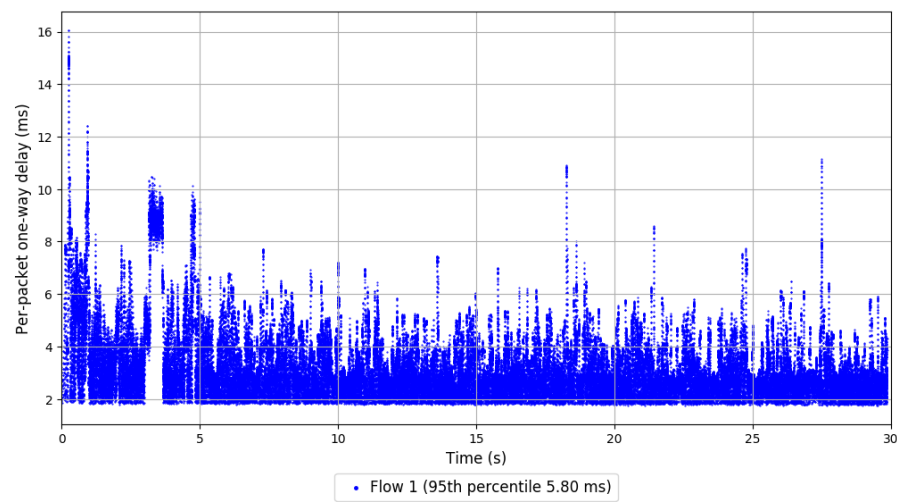
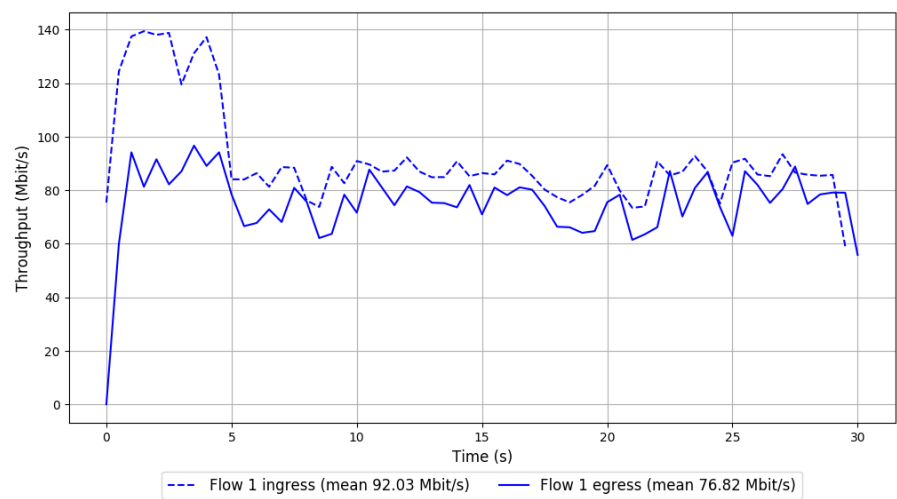


Run 5: Statistics of Indigo

Start at: 2018-11-29 21:36:03
End at: 2018-11-29 21:36:33
Local clock offset: -8.532 ms
Remote clock offset: -1.139 ms

Below is generated by plot.py at 2018-11-29 21:59:20
Datalink statistics
-- Total of 1 flow:
Average throughput: 76.82 Mbit/s
95th percentile per-packet one-way delay: 5.800 ms
Loss rate: 16.52%
-- Flow 1:
Average throughput: 76.82 Mbit/s
95th percentile per-packet one-way delay: 5.800 ms
Loss rate: 16.52%

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-96d2da3

Start at: 2018-11-29 20:22:39

End at: 2018-11-29 20:23:09

Local clock offset: -3.579 ms

Remote clock offset: 0.831 ms

Below is generated by plot.py at 2018-11-29 21:59:36

Datalink statistics

-- Total of 1 flow:

Average throughput: 78.62 Mbit/s

95th percentile per-packet one-way delay: 31.645 ms

Loss rate: 35.47%

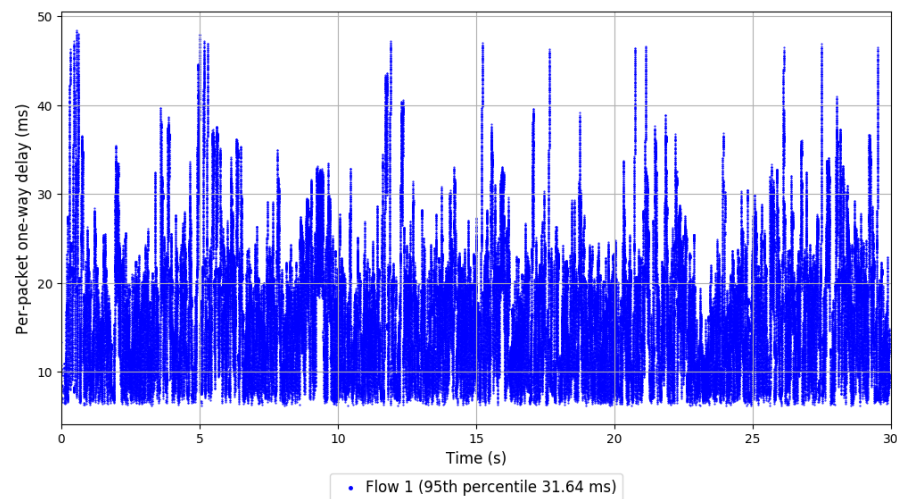
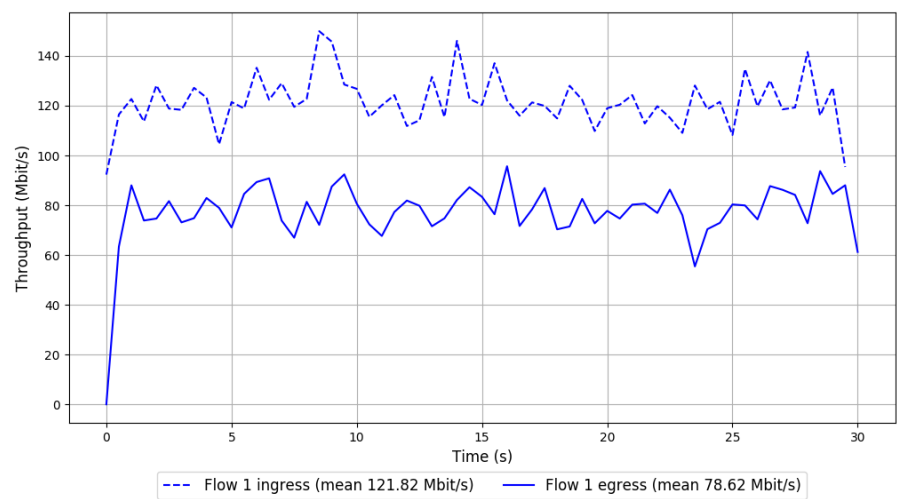
-- Flow 1:

Average throughput: 78.62 Mbit/s

95th percentile per-packet one-way delay: 31.645 ms

Loss rate: 35.47%

Run 1: Report of Indigo-96d2da3 — Data Link



Run 2: Statistics of Indigo-96d2da3

Start at: 2018-11-29 20:43:02

End at: 2018-11-29 20:43:32

Local clock offset: -3.665 ms

Remote clock offset: 0.929 ms

Below is generated by plot.py at 2018-11-29 21:59:44

Datalink statistics

-- Total of 1 flow:

Average throughput: 77.03 Mbit/s

95th percentile per-packet one-way delay: 25.631 ms

Loss rate: 37.78%

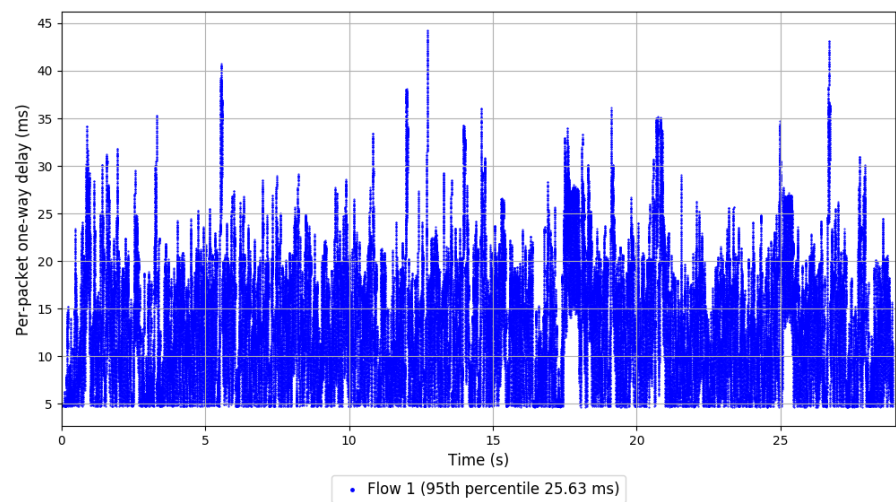
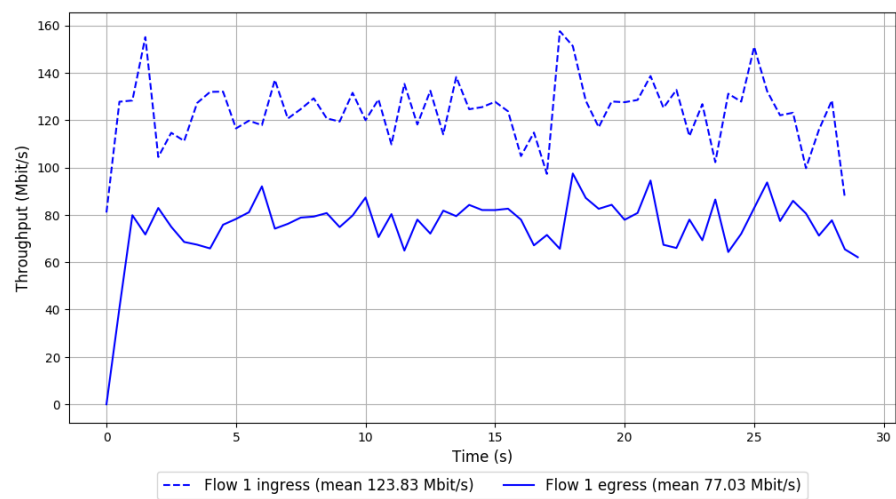
-- Flow 1:

Average throughput: 77.03 Mbit/s

95th percentile per-packet one-way delay: 25.631 ms

Loss rate: 37.78%

Run 2: Report of Indigo-96d2da3 — Data Link



Run 3: Statistics of Indigo-96d2da3

Start at: 2018-11-29 21:03:28

End at: 2018-11-29 21:03:58

Local clock offset: -6.202 ms

Remote clock offset: 1.293 ms

Below is generated by plot.py at 2018-11-29 21:59:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 74.91 Mbit/s

95th percentile per-packet one-way delay: 33.429 ms

Loss rate: 36.27%

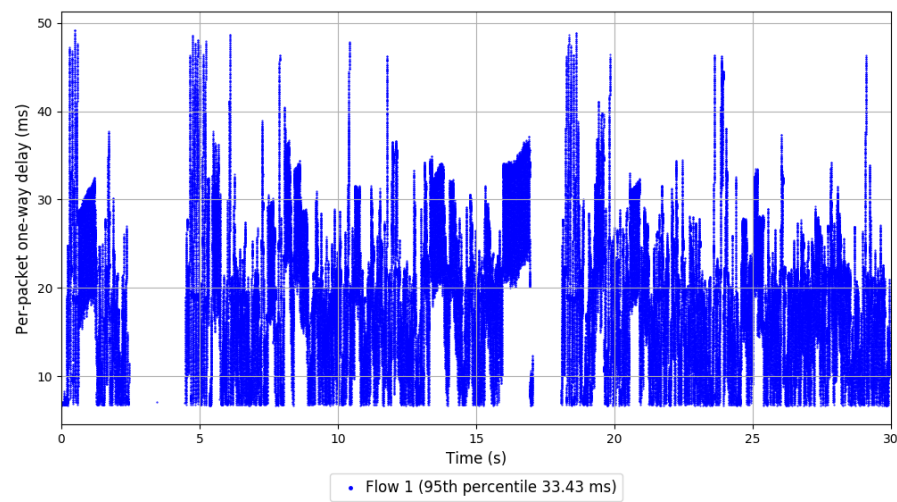
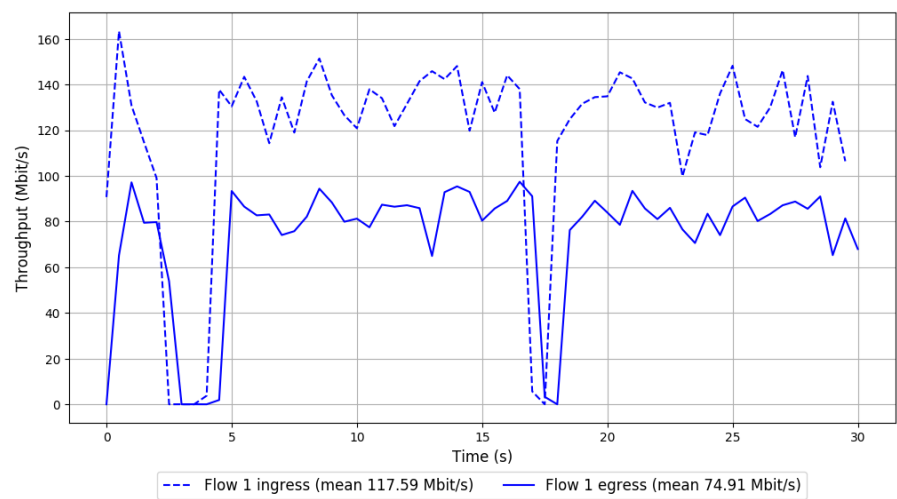
-- Flow 1:

Average throughput: 74.91 Mbit/s

95th percentile per-packet one-way delay: 33.429 ms

Loss rate: 36.27%

Run 3: Report of Indigo-96d2da3 — Data Link



Run 4: Statistics of Indigo-96d2da3

Start at: 2018-11-29 21:23:51

End at: 2018-11-29 21:24:21

Local clock offset: -6.689 ms

Remote clock offset: 0.039 ms

Below is generated by plot.py at 2018-11-29 21:59:47

Datalink statistics

-- Total of 1 flow:

Average throughput: 74.52 Mbit/s

95th percentile per-packet one-way delay: 29.856 ms

Loss rate: 35.40%

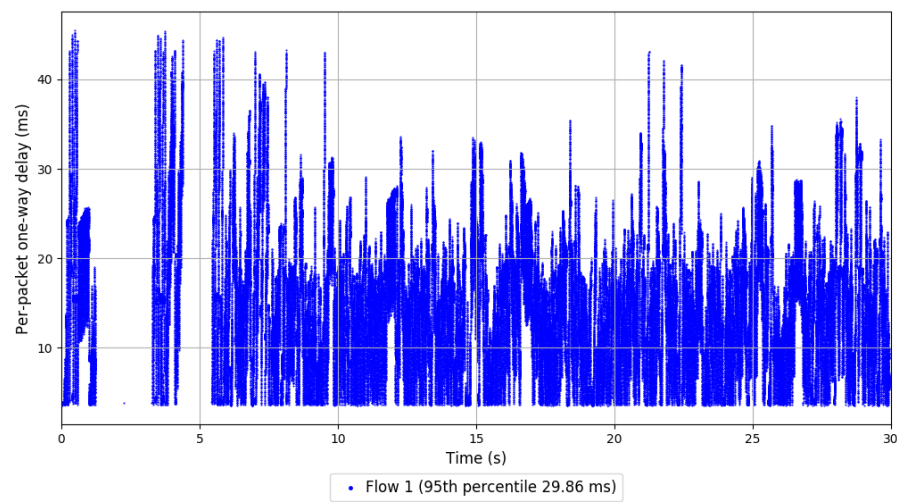
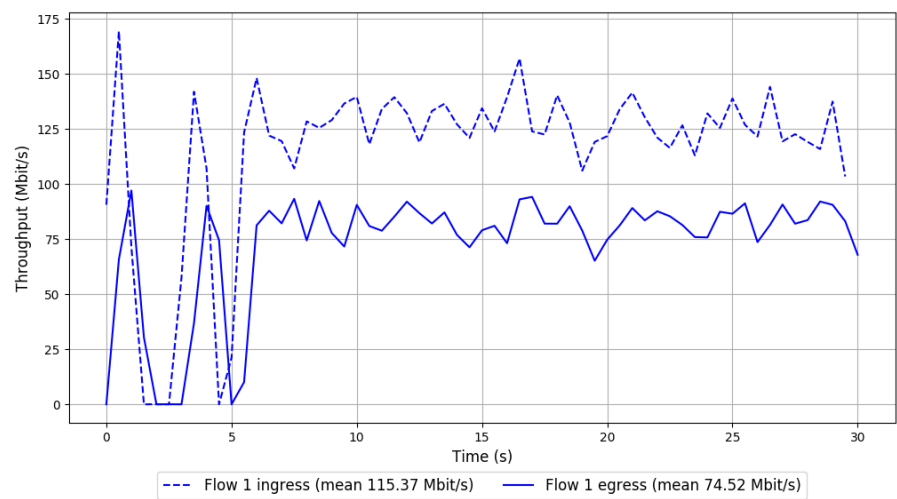
-- Flow 1:

Average throughput: 74.52 Mbit/s

95th percentile per-packet one-way delay: 29.856 ms

Loss rate: 35.40%

Run 4: Report of Indigo-96d2da3 — Data Link

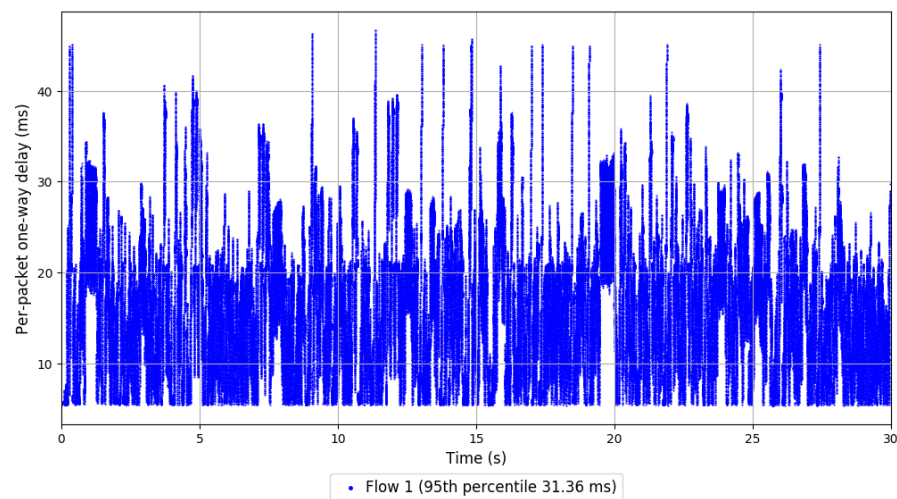
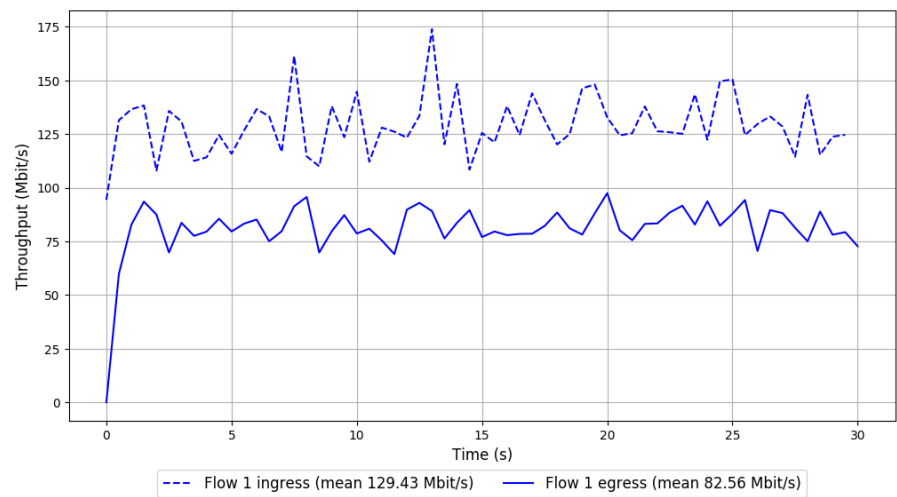


Run 5: Statistics of Indigo-96d2da3

Start at: 2018-11-29 21:44:15
End at: 2018-11-29 21:44:45
Local clock offset: -11.421 ms
Remote clock offset: -0.483 ms

Below is generated by plot.py at 2018-11-29 22:00:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 82.56 Mbit/s
95th percentile per-packet one-way delay: 31.360 ms
Loss rate: 36.17%
-- Flow 1:
Average throughput: 82.56 Mbit/s
95th percentile per-packet one-way delay: 31.360 ms
Loss rate: 36.17%

Run 5: Report of Indigo-96d2da3 — Data Link

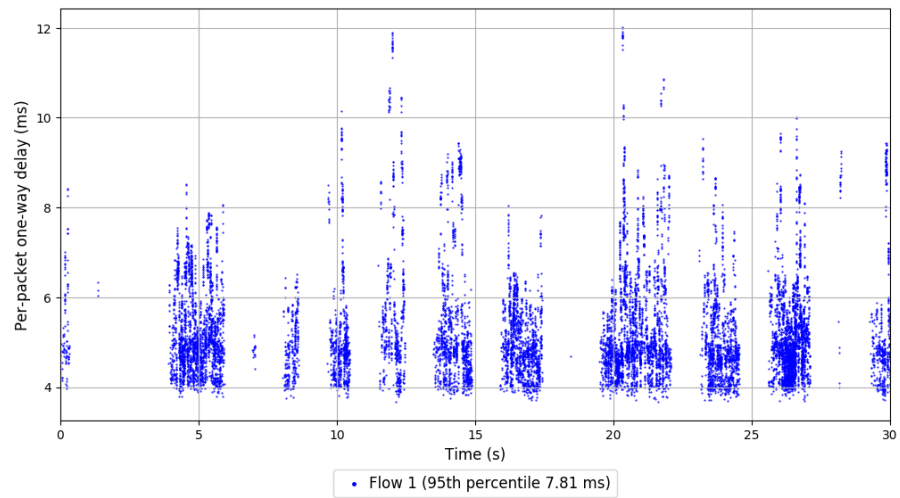
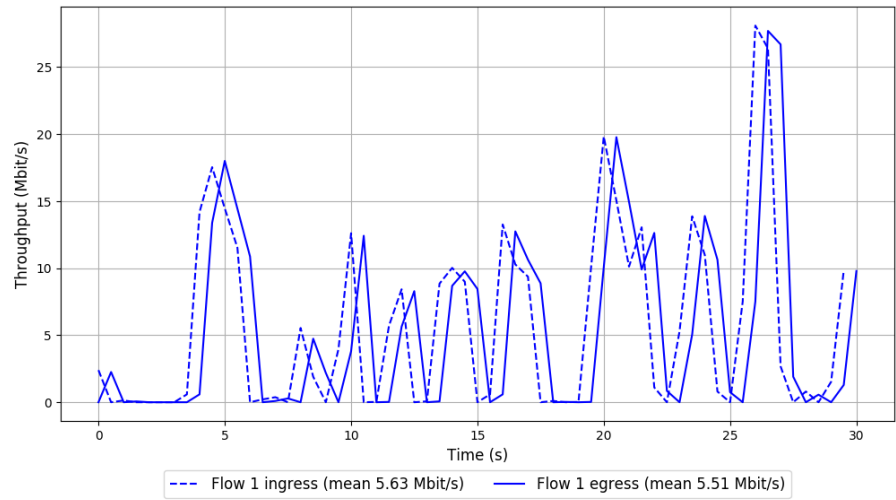


```
Run 1: Statistics of LEDBAT

Start at: 2018-11-29 20:24:54
End at: 2018-11-29 20:25:24
Local clock offset: -2.146 ms
Remote clock offset: 0.043 ms

# Below is generated by plot.py at 2018-11-29 22:00:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.51 Mbit/s
95th percentile per-packet one-way delay: 7.812 ms
Loss rate: 2.15%
-- Flow 1:
Average throughput: 5.51 Mbit/s
95th percentile per-packet one-way delay: 7.812 ms
Loss rate: 2.15%
```

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2018-11-29 20:45:18

End at: 2018-11-29 20:45:48

Local clock offset: -4.186 ms

Remote clock offset: 0.443 ms

Below is generated by plot.py at 2018-11-29 22:00:11

Datalink statistics

-- Total of 1 flow:

Average throughput: 7.93 Mbit/s

95th percentile per-packet one-way delay: 5.491 ms

Loss rate: 2.69%

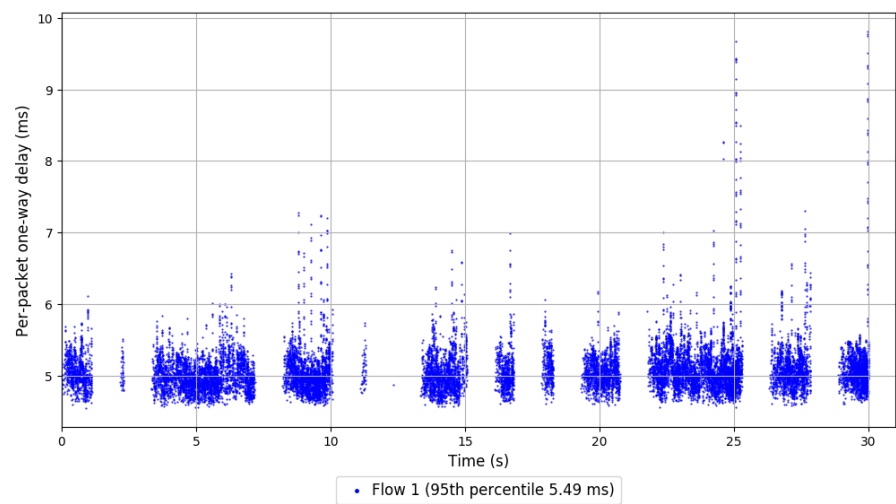
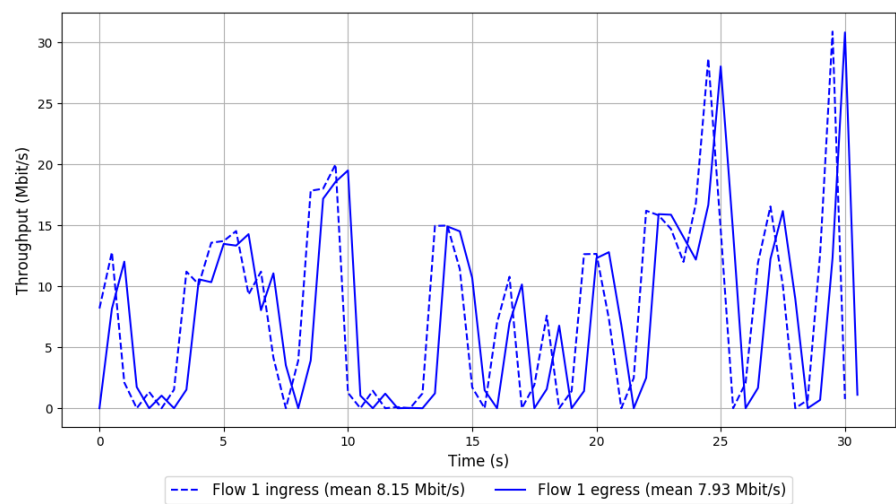
-- Flow 1:

Average throughput: 7.93 Mbit/s

95th percentile per-packet one-way delay: 5.491 ms

Loss rate: 2.69%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-11-29 21:05:45

End at: 2018-11-29 21:06:15

Local clock offset: -3.696 ms

Remote clock offset: 0.585 ms

Below is generated by plot.py at 2018-11-29 22:00:11

Datalink statistics

-- Total of 1 flow:

Average throughput: 25.87 Mbit/s

95th percentile per-packet one-way delay: 4.161 ms

Loss rate: 0.28%

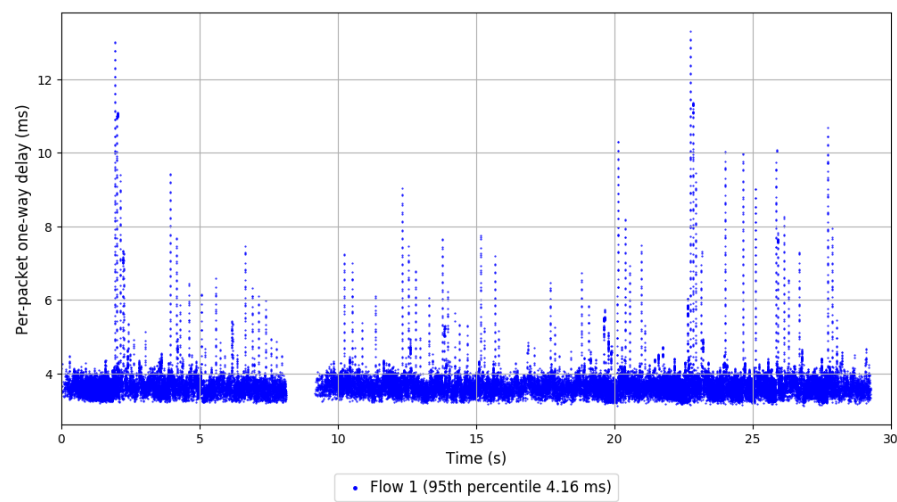
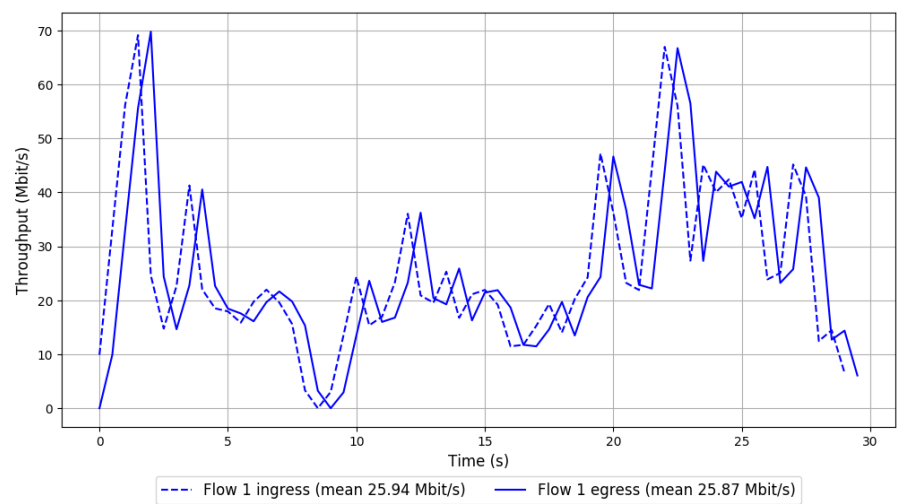
-- Flow 1:

Average throughput: 25.87 Mbit/s

95th percentile per-packet one-way delay: 4.161 ms

Loss rate: 0.28%

Run 3: Report of LEDBAT — Data Link

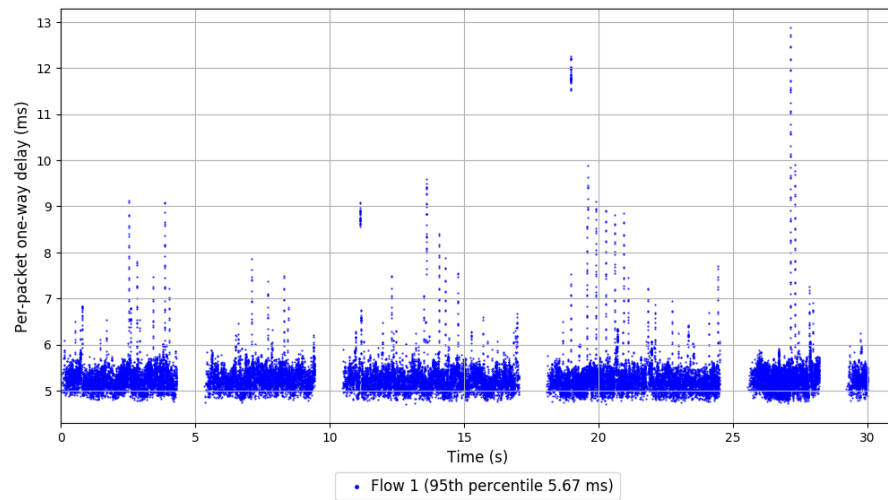
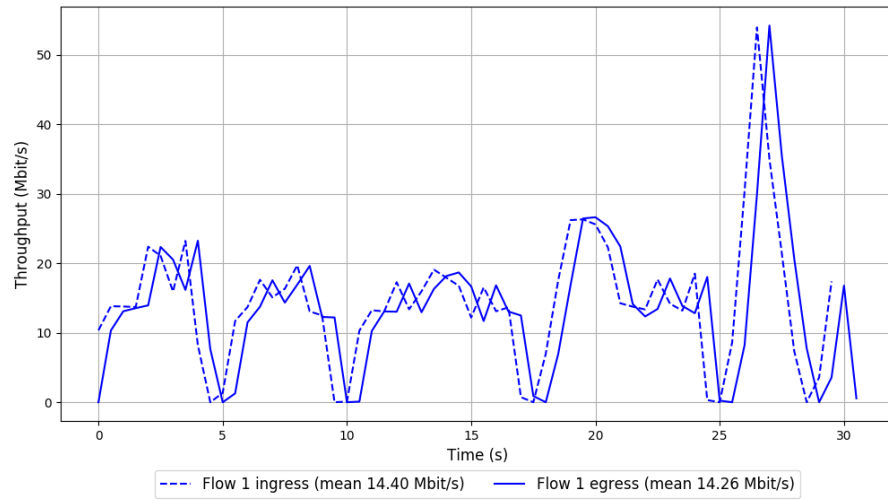


Run 4: Statistics of LEDBAT

Start at: 2018-11-29 21:26:05
End at: 2018-11-29 21:26:35
Local clock offset: -8.768 ms
Remote clock offset: -0.456 ms

Below is generated by plot.py at 2018-11-29 22:00:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 14.26 Mbit/s
95th percentile per-packet one-way delay: 5.669 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 14.26 Mbit/s
95th percentile per-packet one-way delay: 5.669 ms
Loss rate: 1.00%

Run 4: Report of LEDBAT — Data Link

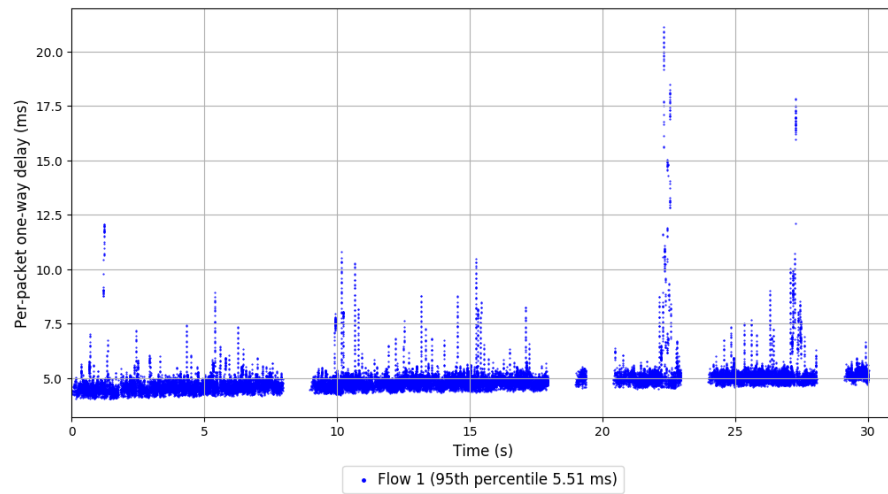
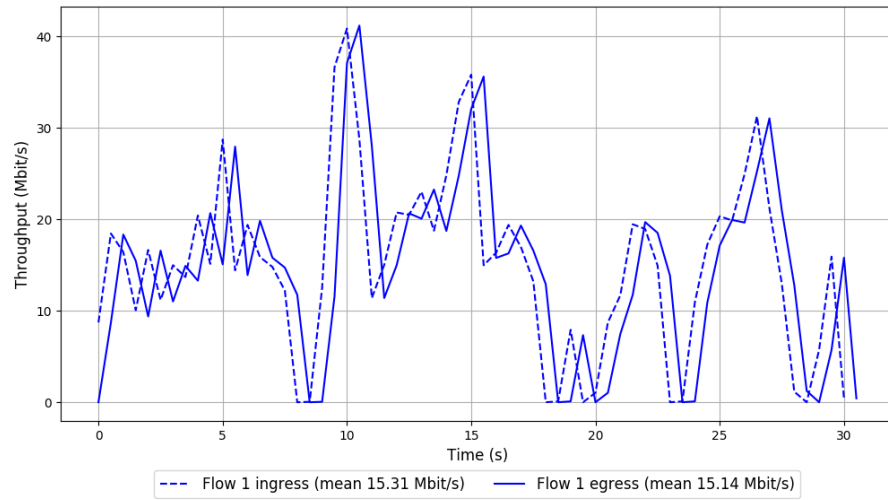


Run 5: Statistics of LEDBAT

Start at: 2018-11-29 21:46:31
End at: 2018-11-29 21:47:01
Local clock offset: -8.911 ms
Remote clock offset: -0.704 ms

Below is generated by plot.py at 2018-11-29 22:00:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 15.14 Mbit/s
95th percentile per-packet one-way delay: 5.514 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 15.14 Mbit/s
95th percentile per-packet one-way delay: 5.514 ms
Loss rate: 1.11%

Run 5: Report of LEDBAT — Data Link

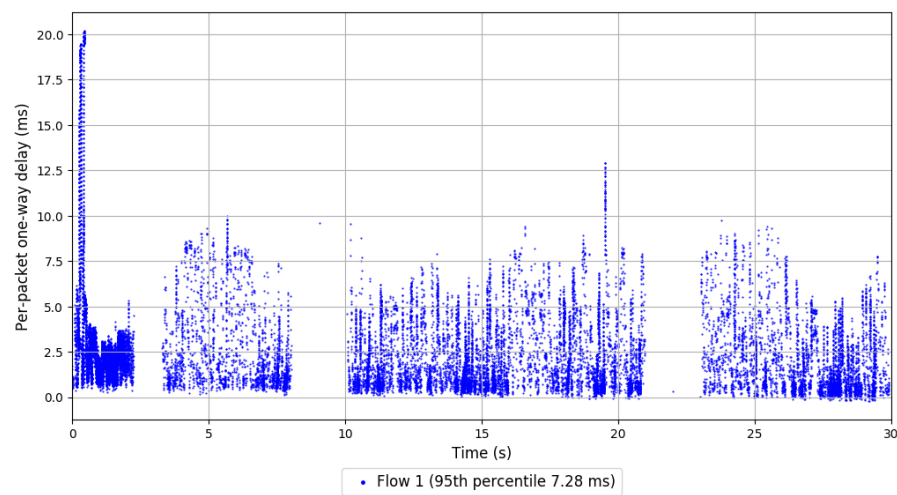
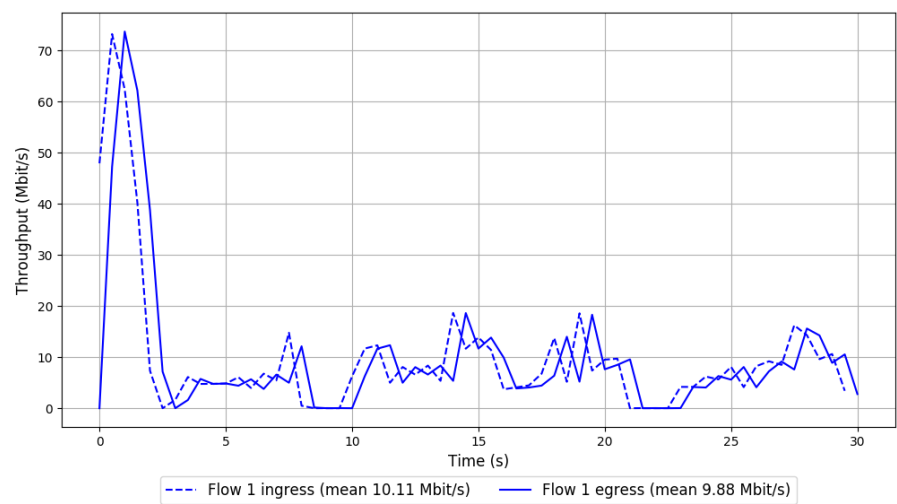


Run 1: Statistics of Indigo-Muses

Start at: 2018-11-29 20:17:02
End at: 2018-11-29 20:17:32
Local clock offset: -5.546 ms
Remote clock offset: -5.521 ms

Below is generated by plot.py at 2018-11-29 22:00:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 9.88 Mbit/s
95th percentile per-packet one-way delay: 7.278 ms
Loss rate: 2.30%
-- Flow 1:
Average throughput: 9.88 Mbit/s
95th percentile per-packet one-way delay: 7.278 ms
Loss rate: 2.30%

Run 1: Report of Indigo-Muses — Data Link



Run 2: Statistics of Indigo-Muses

Start at: 2018-11-29 20:37:14

End at: 2018-11-29 20:37:44

Local clock offset: -1.588 ms

Remote clock offset: 1.293 ms

Below is generated by plot.py at 2018-11-29 22:00:18

Datalink statistics

-- Total of 1 flow:

Average throughput: 66.72 Mbit/s

95th percentile per-packet one-way delay: 4.881 ms

Loss rate: 9.41%

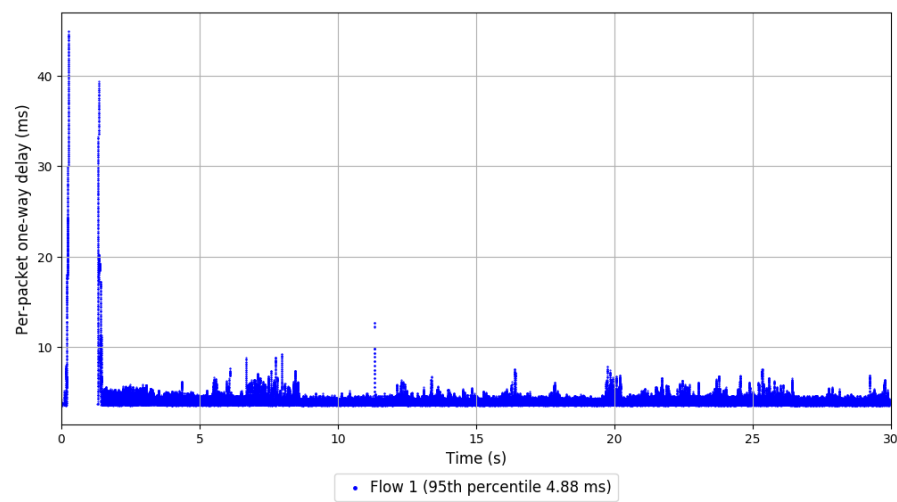
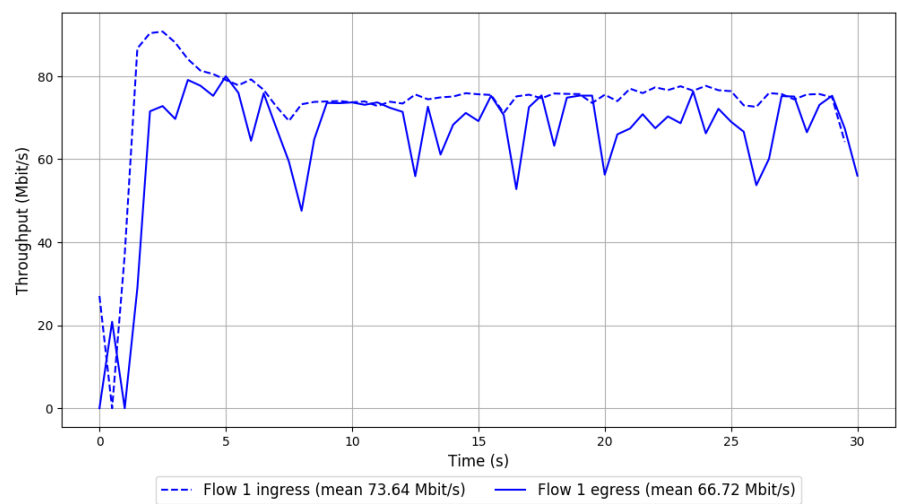
-- Flow 1:

Average throughput: 66.72 Mbit/s

95th percentile per-packet one-way delay: 4.881 ms

Loss rate: 9.41%

Run 2: Report of Indigo-Muses — Data Link



Run 3: Statistics of Indigo-Muses

Start at: 2018-11-29 20:57:44

End at: 2018-11-29 20:58:14

Local clock offset: -2.976 ms

Remote clock offset: 1.103 ms

Below is generated by plot.py at 2018-11-29 22:00:23

Datalink statistics

-- Total of 1 flow:

Average throughput: 68.73 Mbit/s

95th percentile per-packet one-way delay: 5.208 ms

Loss rate: 9.05%

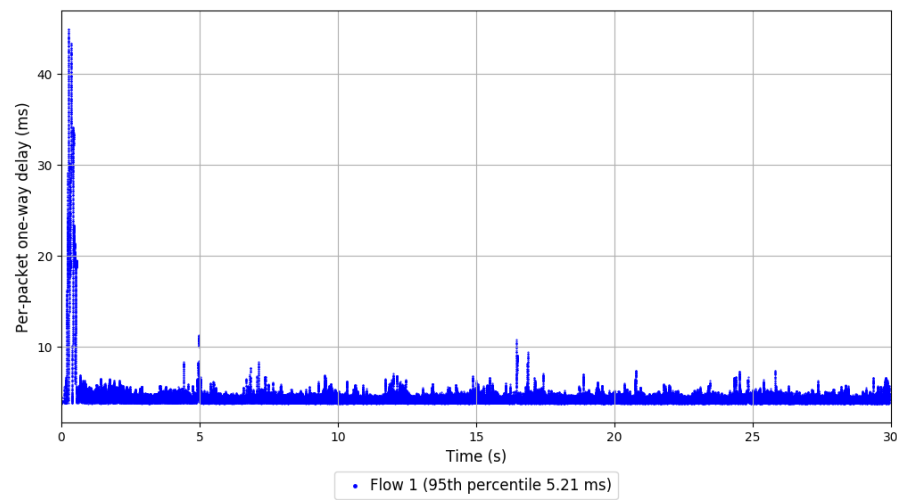
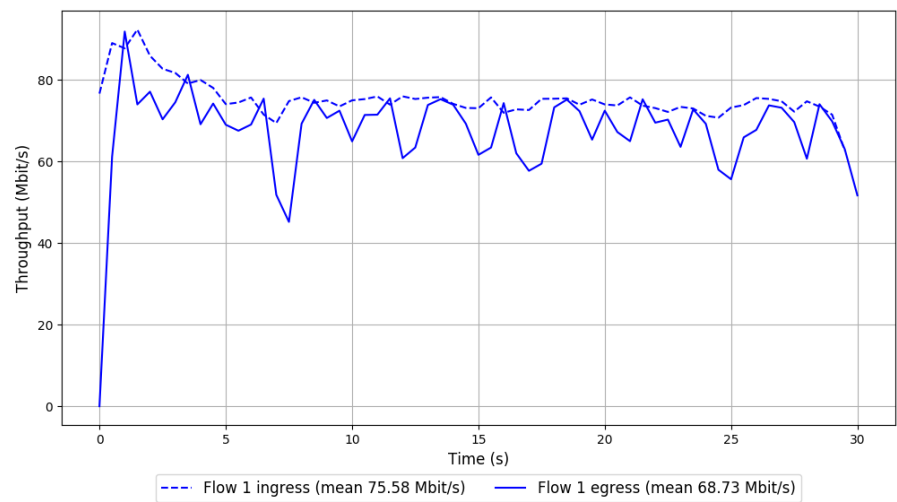
-- Flow 1:

Average throughput: 68.73 Mbit/s

95th percentile per-packet one-way delay: 5.208 ms

Loss rate: 9.05%

Run 3: Report of Indigo-Muses — Data Link



Run 4: Statistics of Indigo-Muses

Start at: 2018-11-29 21:18:04

End at: 2018-11-29 21:18:34

Local clock offset: -5.655 ms

Remote clock offset: -0.13 ms

Below is generated by plot.py at 2018-11-29 22:00:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 70.36 Mbit/s

95th percentile per-packet one-way delay: 4.069 ms

Loss rate: 9.03%

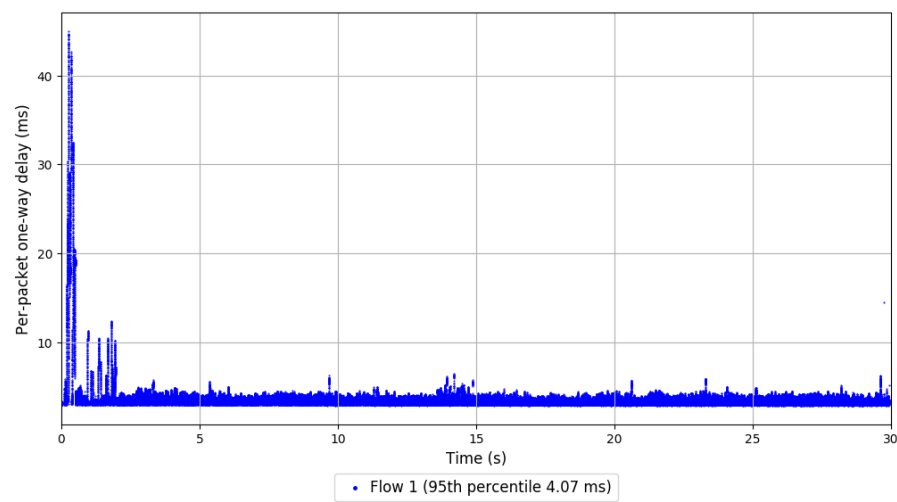
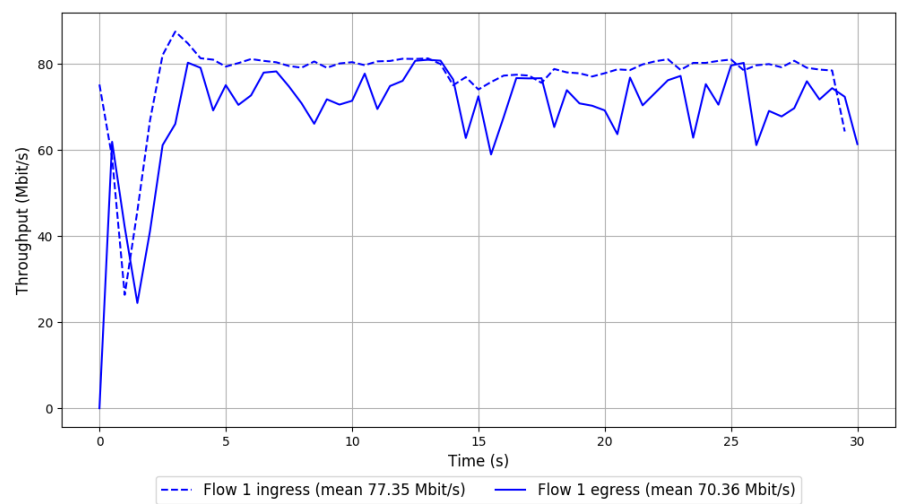
-- Flow 1:

Average throughput: 70.36 Mbit/s

95th percentile per-packet one-way delay: 4.069 ms

Loss rate: 9.03%

Run 4: Report of Indigo-Muses — Data Link

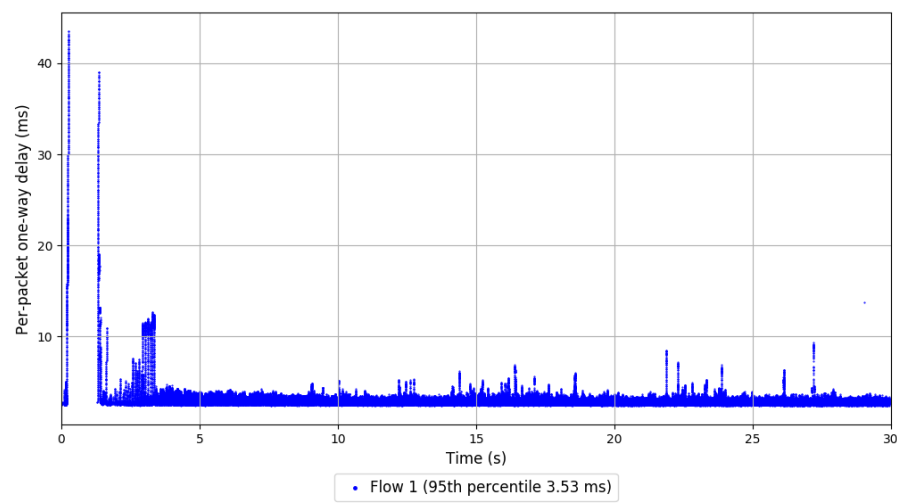
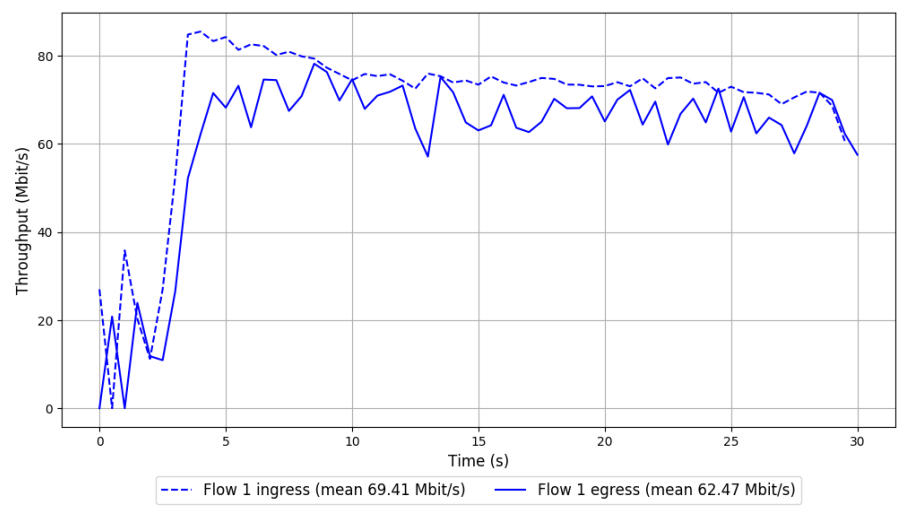


Run 5: Statistics of Indigo-Muses

Start at: 2018-11-29 21:38:19
End at: 2018-11-29 21:38:49
Local clock offset: -8.125 ms
Remote clock offset: -1.026 ms

Below is generated by plot.py at 2018-11-29 22:00:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 62.47 Mbit/s
95th percentile per-packet one-way delay: 3.532 ms
Loss rate: 10.01%
-- Flow 1:
Average throughput: 62.47 Mbit/s
95th percentile per-packet one-way delay: 3.532 ms
Loss rate: 10.01%

Run 5: Report of Indigo-Muses — Data Link

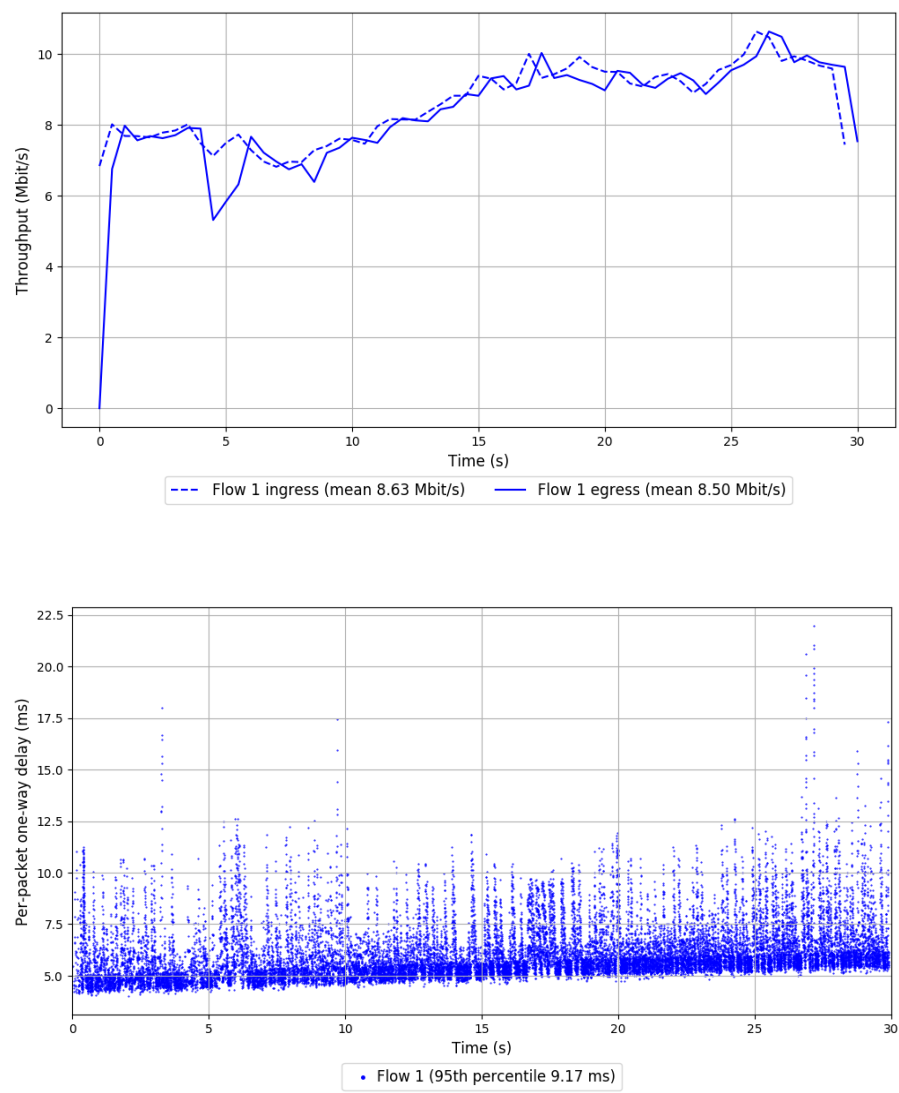


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-11-29 20:18:07
End at: 2018-11-29 20:18:37
Local clock offset: -2.997 ms
Remote clock offset: 1.319 ms

# Below is generated by plot.py at 2018-11-29 22:00:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.50 Mbit/s
95th percentile per-packet one-way delay: 9.173 ms
Loss rate: 1.51%
-- Flow 1:
Average throughput: 8.50 Mbit/s
95th percentile per-packet one-way delay: 9.173 ms
Loss rate: 1.51%
```

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-11-29 20:38:24

End at: 2018-11-29 20:38:54

Local clock offset: -4.914 ms

Remote clock offset: 0.875 ms

Below is generated by plot.py at 2018-11-29 22:00:48

Datalink statistics

-- Total of 1 flow:

Average throughput: 74.26 Mbit/s

95th percentile per-packet one-way delay: 11.650 ms

Loss rate: 11.61%

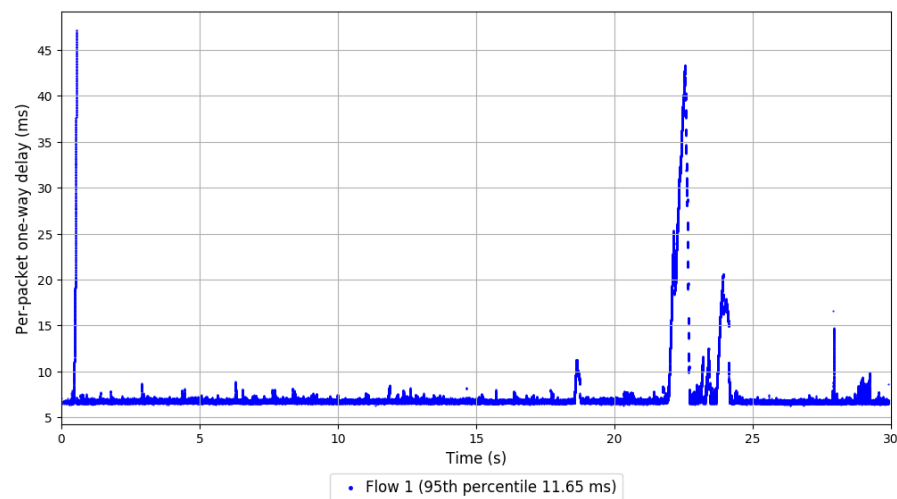
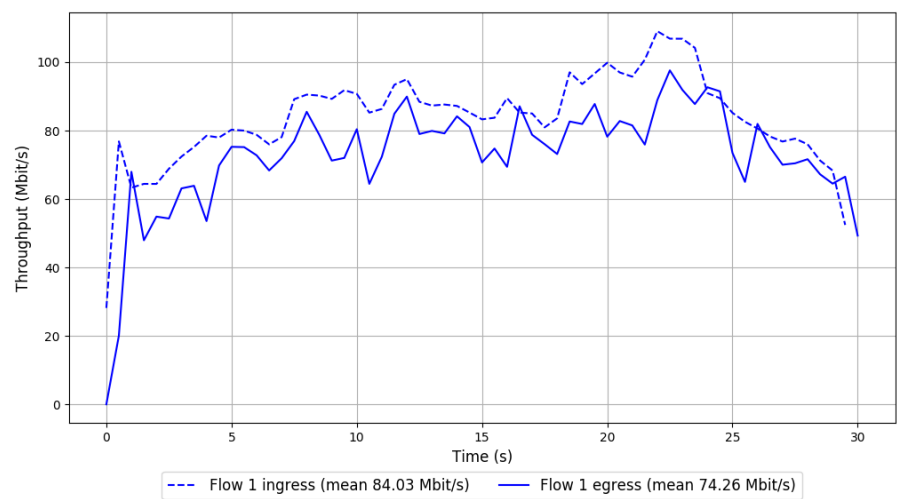
-- Flow 1:

Average throughput: 74.26 Mbit/s

95th percentile per-packet one-way delay: 11.650 ms

Loss rate: 11.61%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-11-29 20:58:53

End at: 2018-11-29 20:59:23

Local clock offset: -5.263 ms

Remote clock offset: 0.581 ms

Below is generated by plot.py at 2018-11-29 22:00:48

Datalink statistics

-- Total of 1 flow:

Average throughput: 64.74 Mbit/s

95th percentile per-packet one-way delay: 6.827 ms

Loss rate: 7.99%

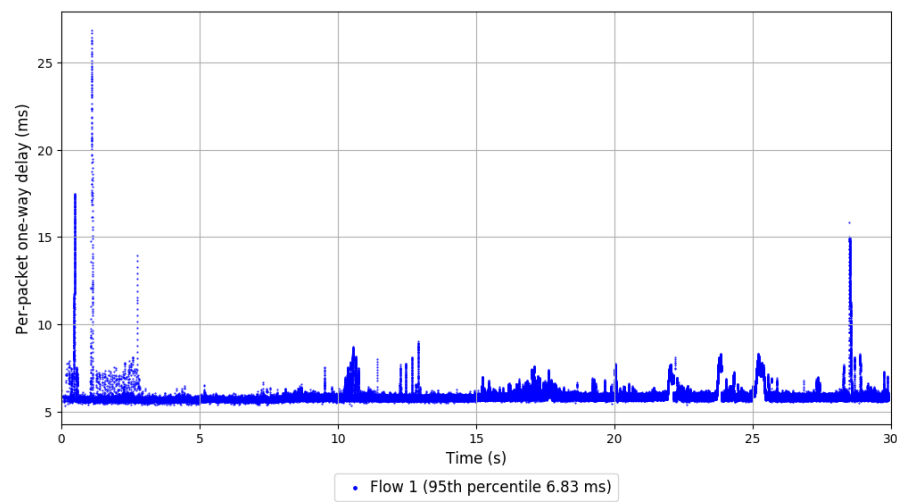
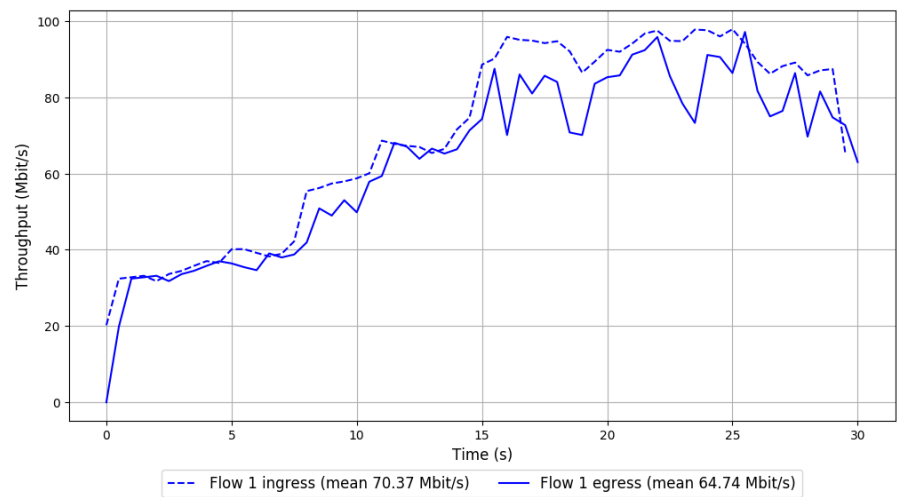
-- Flow 1:

Average throughput: 64.74 Mbit/s

95th percentile per-packet one-way delay: 6.827 ms

Loss rate: 7.99%

Run 3: Report of PCC-Allegro — Data Link

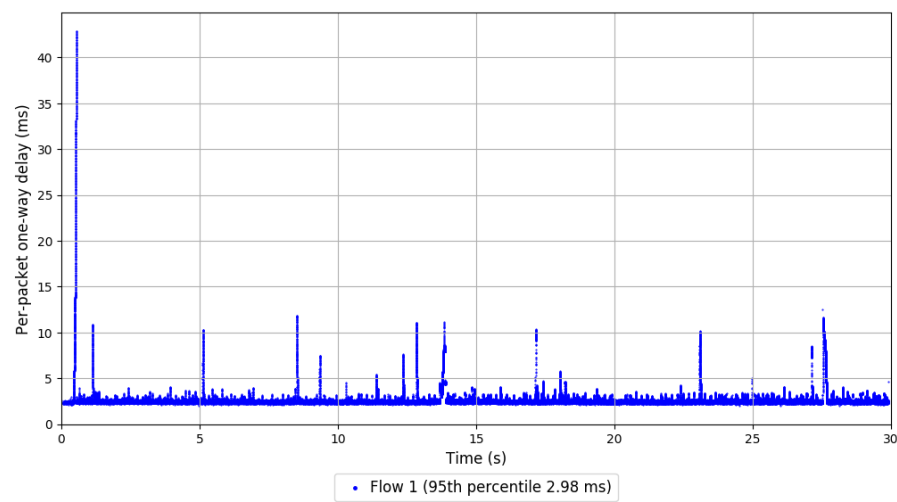
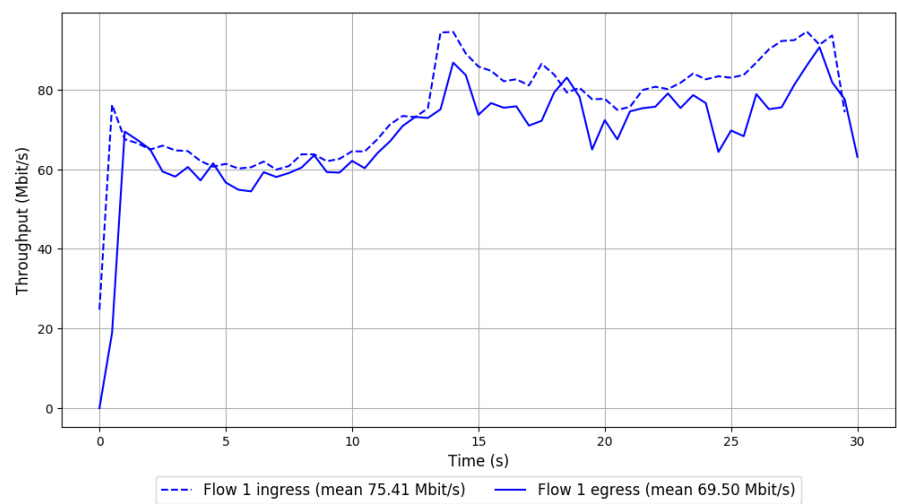


Run 4: Statistics of PCC-Allegro

Start at: 2018-11-29 21:19:13
End at: 2018-11-29 21:19:43
Local clock offset: -5.227 ms
Remote clock offset: -0.319 ms

Below is generated by plot.py at 2018-11-29 22:00:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 69.50 Mbit/s
95th percentile per-packet one-way delay: 2.981 ms
Loss rate: 7.83%
-- Flow 1:
Average throughput: 69.50 Mbit/s
95th percentile per-packet one-way delay: 2.981 ms
Loss rate: 7.83%

Run 4: Report of PCC-Allegro — Data Link

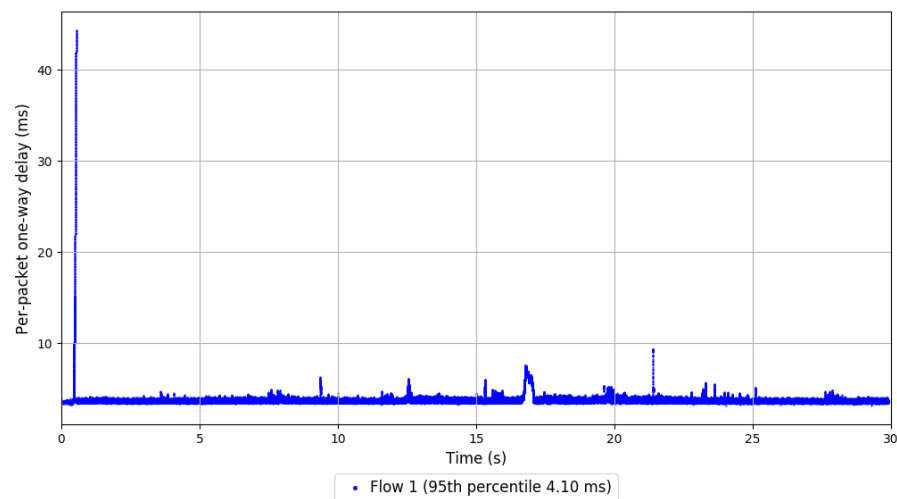
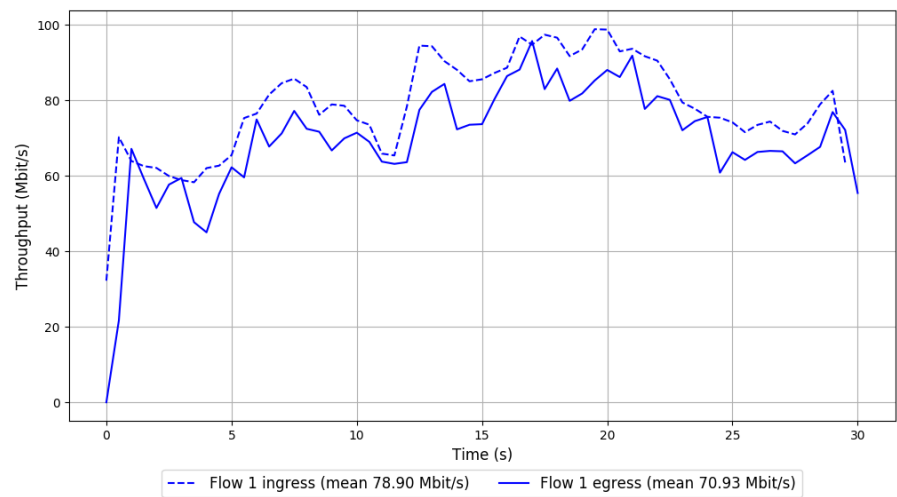


Run 5: Statistics of PCC-Allegro

Start at: 2018-11-29 21:39:28
End at: 2018-11-29 21:39:58
Local clock offset: -10.225 ms
Remote clock offset: -0.848 ms

Below is generated by plot.py at 2018-11-29 22:01:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 70.93 Mbit/s
95th percentile per-packet one-way delay: 4.104 ms
Loss rate: 10.10%
-- Flow 1:
Average throughput: 70.93 Mbit/s
95th percentile per-packet one-way delay: 4.104 ms
Loss rate: 10.10%

Run 5: Report of PCC-Allegro — Data Link

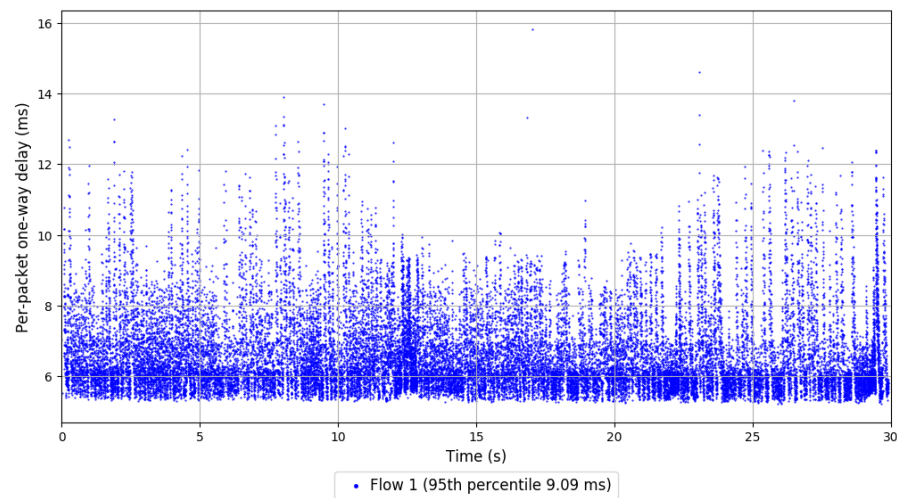
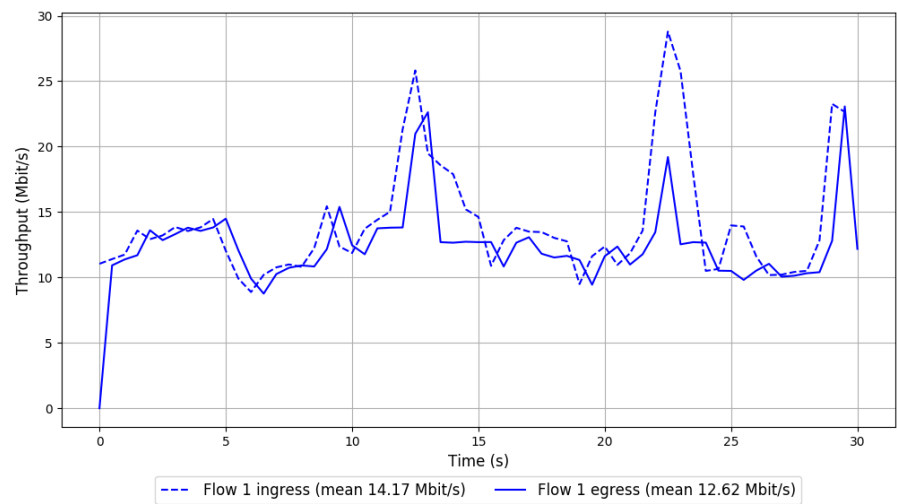


```
Run 1: Statistics of PCC-Expr

Start at: 2018-11-29 20:29:19
End at: 2018-11-29 20:29:49
Local clock offset: -3.192 ms
Remote clock offset: 1.602 ms

# Below is generated by plot.py at 2018-11-29 22:01:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.62 Mbit/s
95th percentile per-packet one-way delay: 9.093 ms
Loss rate: 10.98%
-- Flow 1:
Average throughput: 12.62 Mbit/s
95th percentile per-packet one-way delay: 9.093 ms
Loss rate: 10.98%
```

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2018-11-29 20:49:54

End at: 2018-11-29 20:50:24

Local clock offset: -4.189 ms

Remote clock offset: 0.983 ms

Below is generated by plot.py at 2018-11-29 22:01:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 12.48 Mbit/s

95th percentile per-packet one-way delay: 5.899 ms

Loss rate: 55.99%

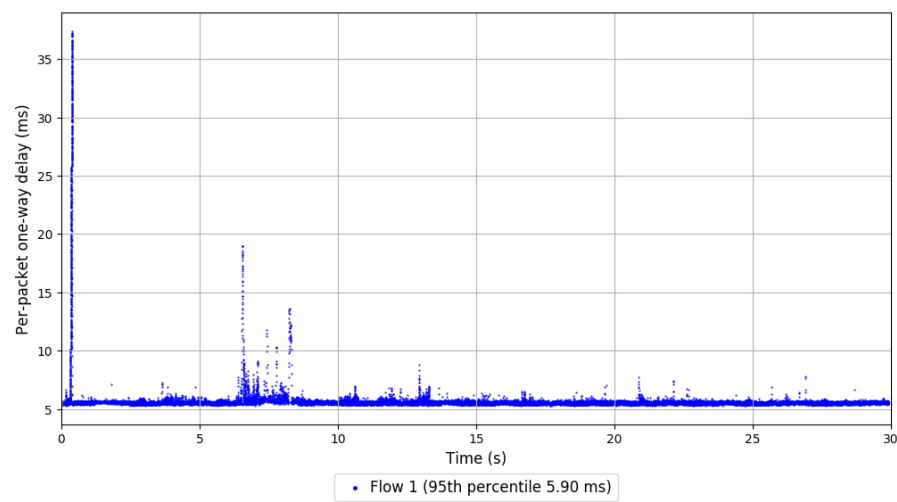
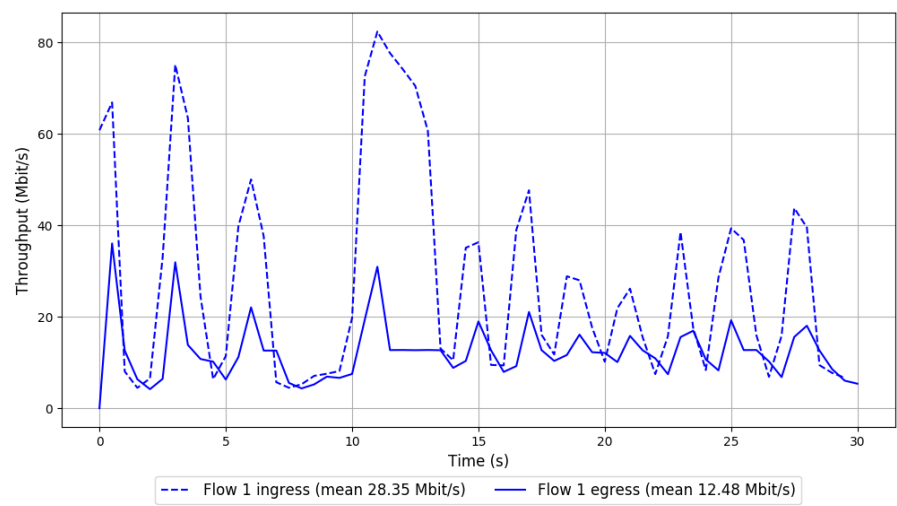
-- Flow 1:

Average throughput: 12.48 Mbit/s

95th percentile per-packet one-way delay: 5.899 ms

Loss rate: 55.99%

Run 2: Report of PCC-Expr — Data Link

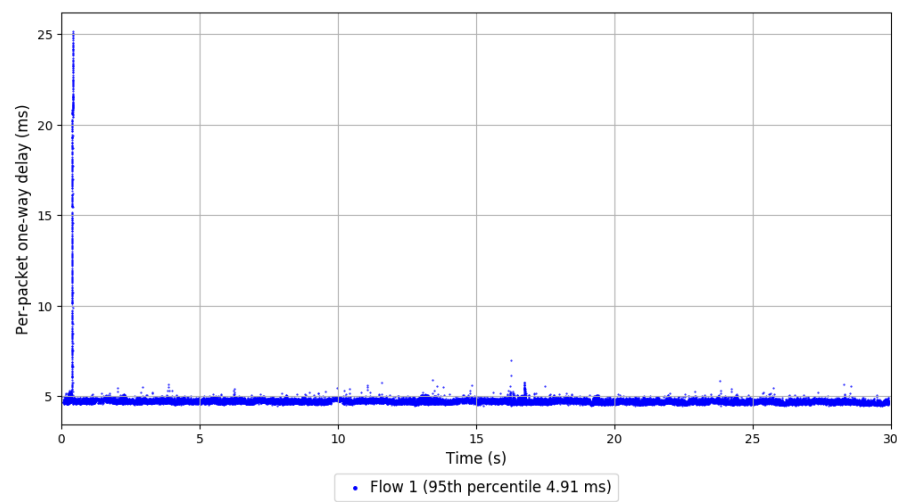
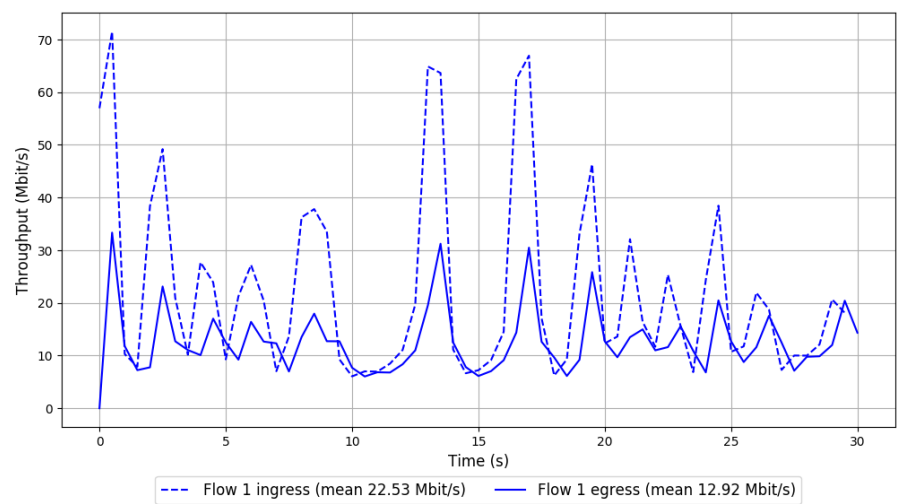


Run 3: Statistics of PCC-Expr

Start at: 2018-11-29 21:10:11
End at: 2018-11-29 21:10:41
Local clock offset: -6.488 ms
Remote clock offset: -0.411 ms

Below is generated by plot.py at 2018-11-29 22:01:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.92 Mbit/s
95th percentile per-packet one-way delay: 4.910 ms
Loss rate: 42.67%
-- Flow 1:
Average throughput: 12.92 Mbit/s
95th percentile per-packet one-way delay: 4.910 ms
Loss rate: 42.67%

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

Start at: 2018-11-29 21:30:29

End at: 2018-11-29 21:30:59

Local clock offset: -9.399 ms

Remote clock offset: 0.167 ms

Below is generated by plot.py at 2018-11-29 22:01:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 10.33 Mbit/s

95th percentile per-packet one-way delay: 6.034 ms

Loss rate: 18.25%

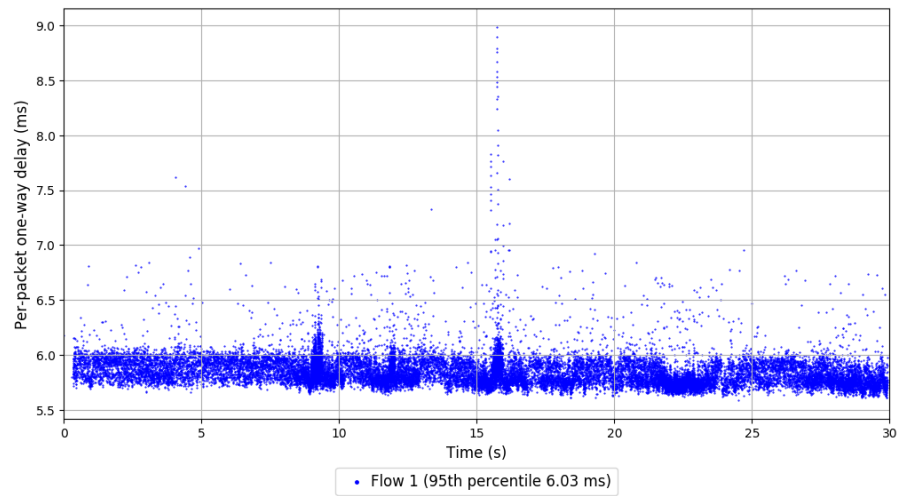
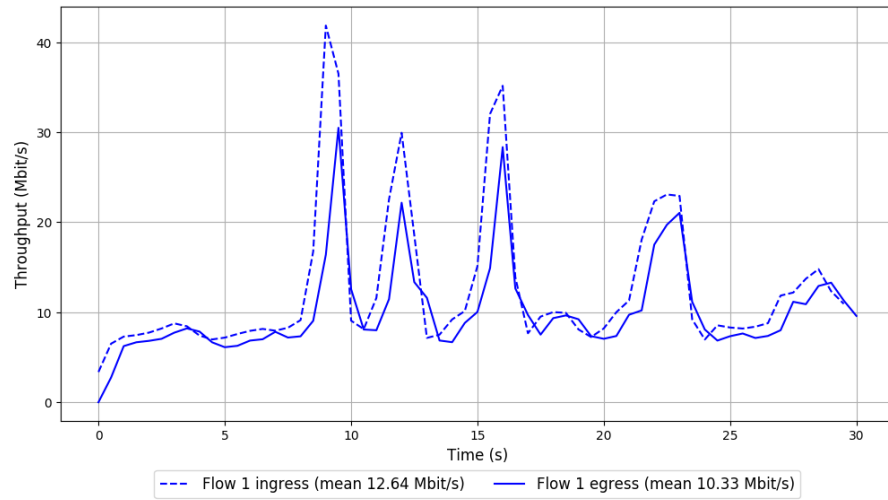
-- Flow 1:

Average throughput: 10.33 Mbit/s

95th percentile per-packet one-way delay: 6.034 ms

Loss rate: 18.25%

Run 4: Report of PCC-Expr — Data Link

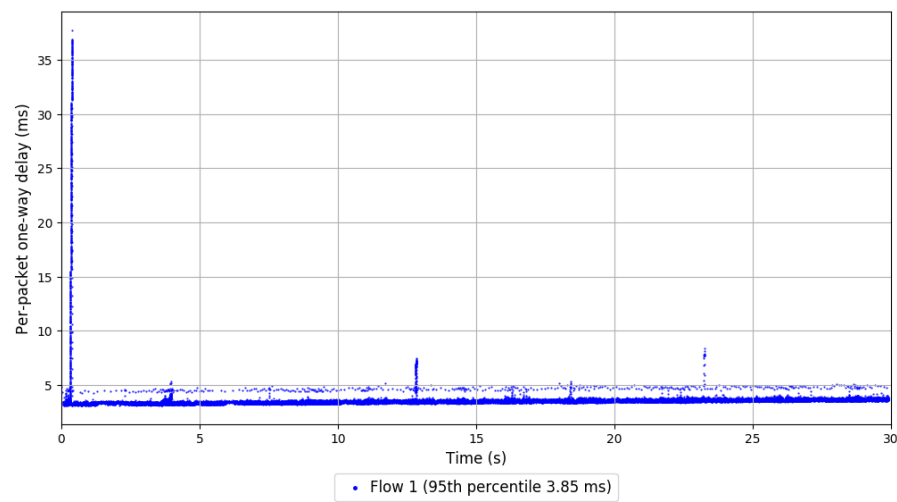
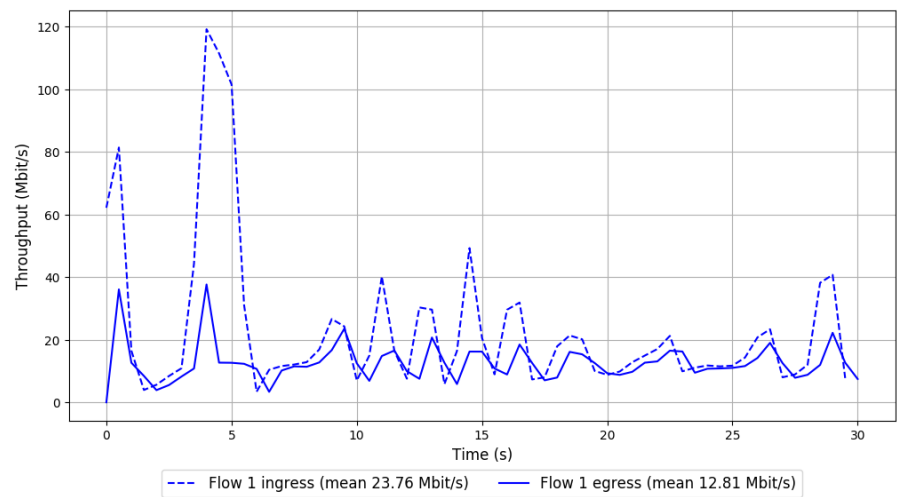


Run 5: Statistics of PCC-Expr

Start at: 2018-11-29 21:51:02
End at: 2018-11-29 21:51:32
Local clock offset: -3.642 ms
Remote clock offset: -1.368 ms

Below is generated by plot.py at 2018-11-29 22:01:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.81 Mbit/s
95th percentile per-packet one-way delay: 3.853 ms
Loss rate: 46.10%
-- Flow 1:
Average throughput: 12.81 Mbit/s
95th percentile per-packet one-way delay: 3.853 ms
Loss rate: 46.10%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2018-11-29 20:33:51

End at: 2018-11-29 20:34:21

Local clock offset: -1.945 ms

Remote clock offset: 0.867 ms

Below is generated by plot.py at 2018-11-29 22:01:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 28.32 Mbit/s

95th percentile per-packet one-way delay: 4.025 ms

Loss rate: 0.44%

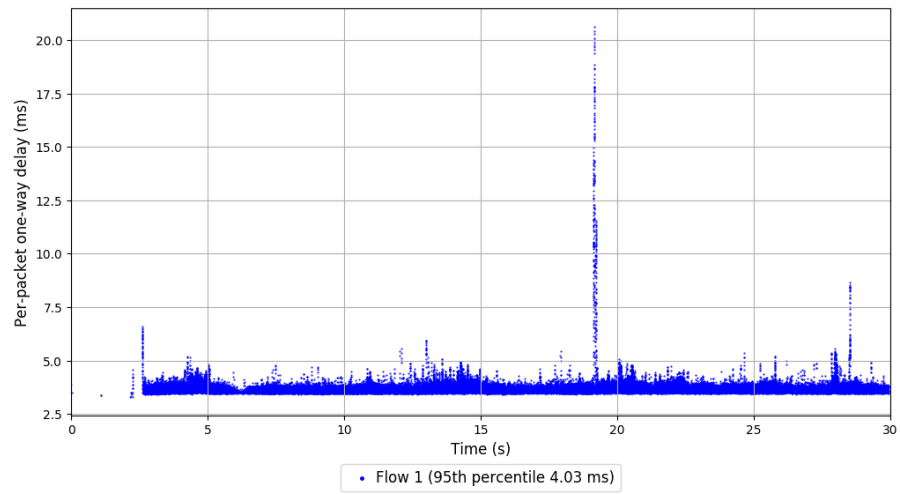
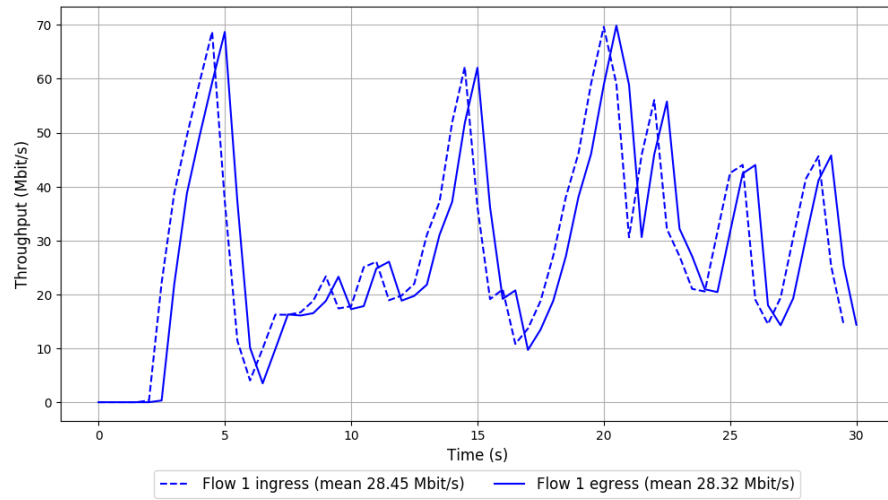
-- Flow 1:

Average throughput: 28.32 Mbit/s

95th percentile per-packet one-way delay: 4.025 ms

Loss rate: 0.44%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-11-29 20:54:22

End at: 2018-11-29 20:54:52

Local clock offset: -4.302 ms

Remote clock offset: 0.718 ms

Below is generated by plot.py at 2018-11-29 22:01:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 35.87 Mbit/s

95th percentile per-packet one-way delay: 6.041 ms

Loss rate: 1.37%

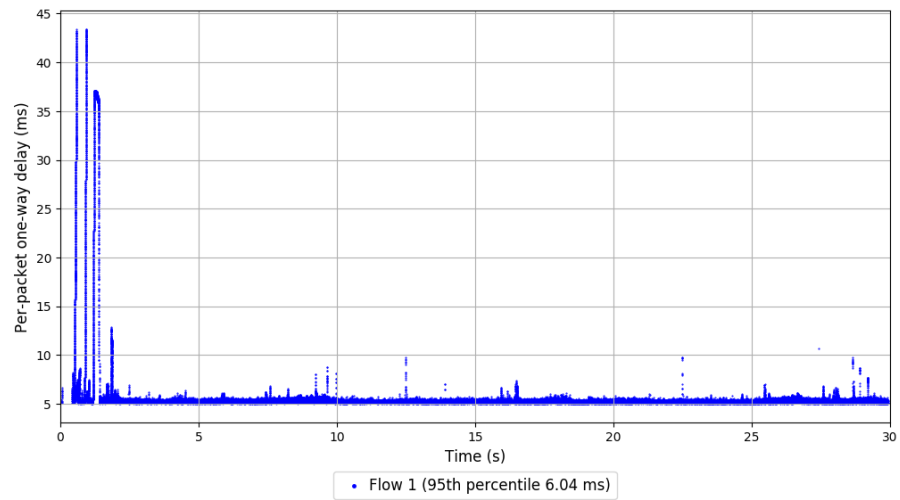
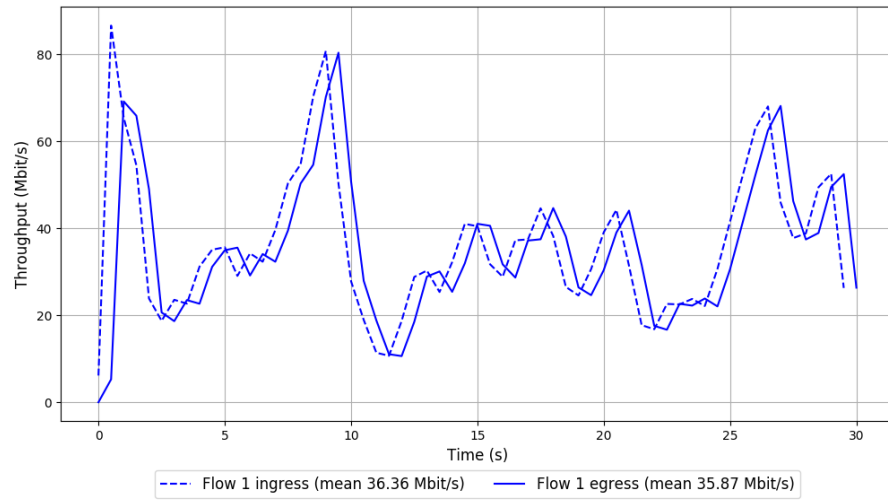
-- Flow 1:

Average throughput: 35.87 Mbit/s

95th percentile per-packet one-way delay: 6.041 ms

Loss rate: 1.37%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-11-29 21:14:40

End at: 2018-11-29 21:15:10

Local clock offset: -5.587 ms

Remote clock offset: 0.414 ms

Below is generated by plot.py at 2018-11-29 22:01:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 29.41 Mbit/s

95th percentile per-packet one-way delay: 19.232 ms

Loss rate: 1.49%

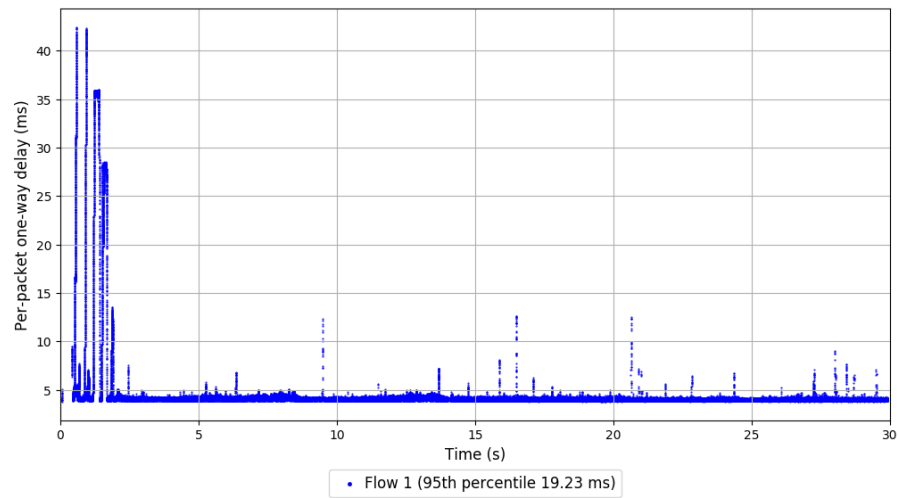
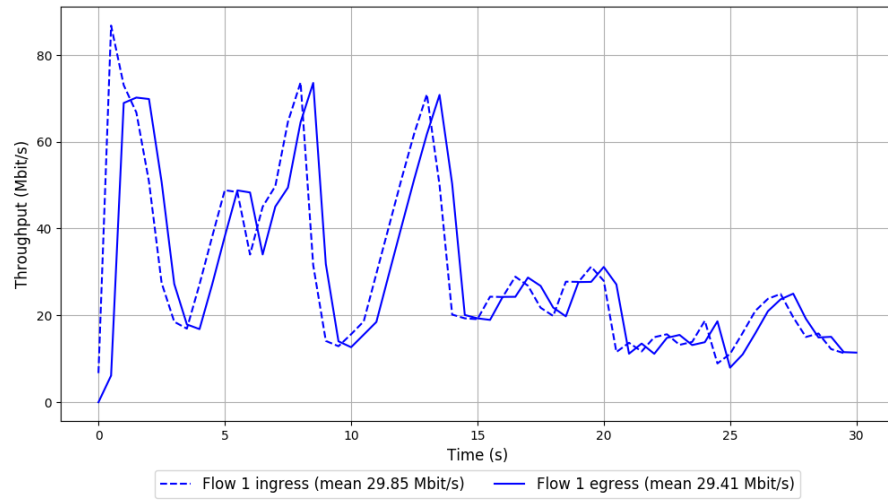
-- Flow 1:

Average throughput: 29.41 Mbit/s

95th percentile per-packet one-way delay: 19.232 ms

Loss rate: 1.49%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-11-29 21:34:57

End at: 2018-11-29 21:35:27

Local clock offset: -7.849 ms

Remote clock offset: 0.098 ms

Below is generated by plot.py at 2018-11-29 22:01:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 17.52 Mbit/s

95th percentile per-packet one-way delay: 4.049 ms

Loss rate: 3.41%

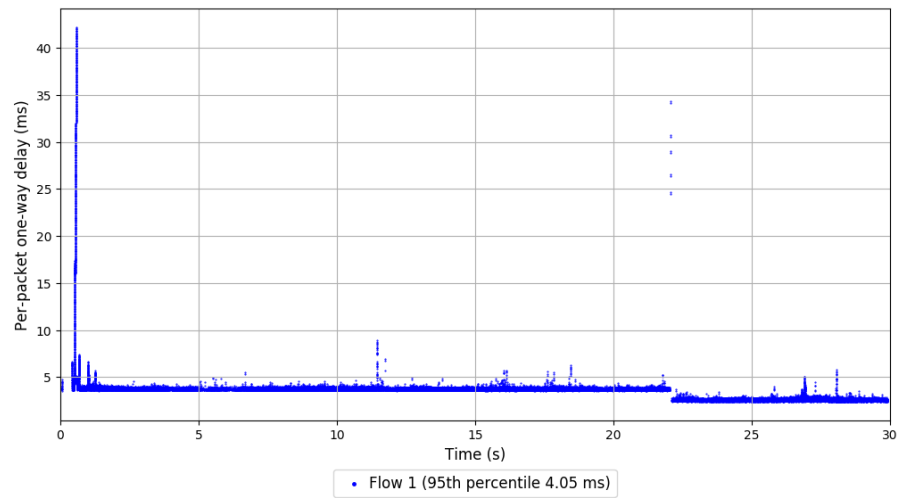
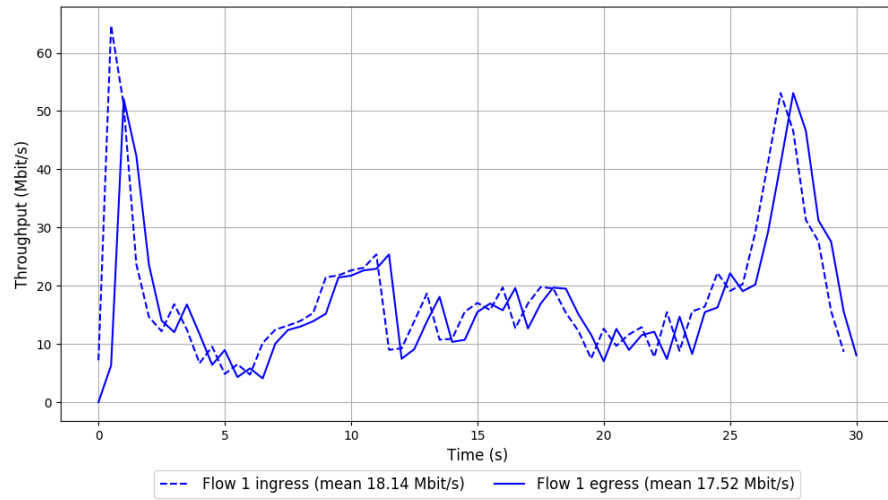
-- Flow 1:

Average throughput: 17.52 Mbit/s

95th percentile per-packet one-way delay: 4.049 ms

Loss rate: 3.41%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-11-29 21:55:28

End at: 2018-11-29 21:55:58

Local clock offset: 1.734 ms

Remote clock offset: -1.411 ms

Below is generated by plot.py at 2018-11-29 22:01:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 23.64 Mbit/s

95th percentile per-packet one-way delay: 2.496 ms

Loss rate: 0.73%

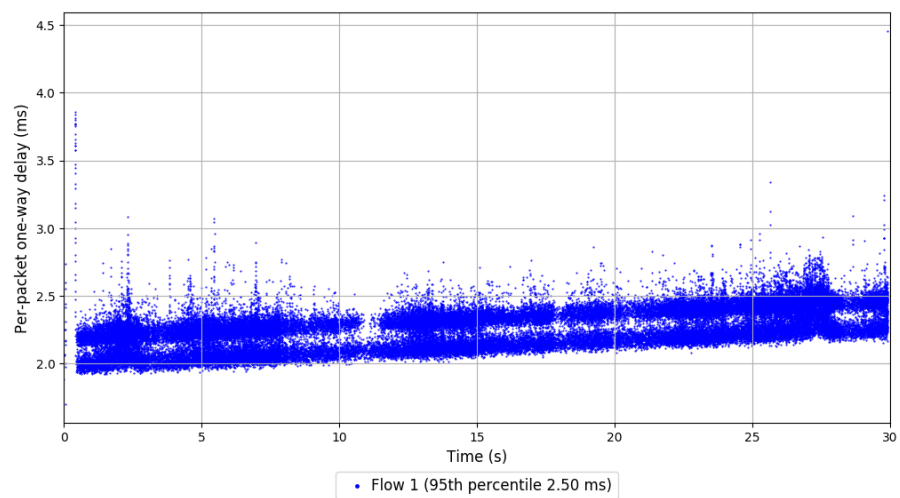
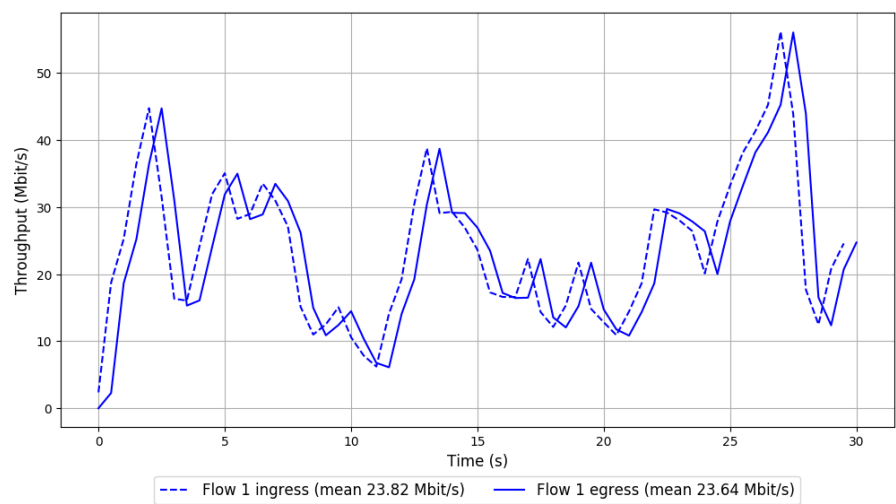
-- Flow 1:

Average throughput: 23.64 Mbit/s

95th percentile per-packet one-way delay: 2.496 ms

Loss rate: 0.73%

Run 5: Report of QUIC Cubic — Data Link

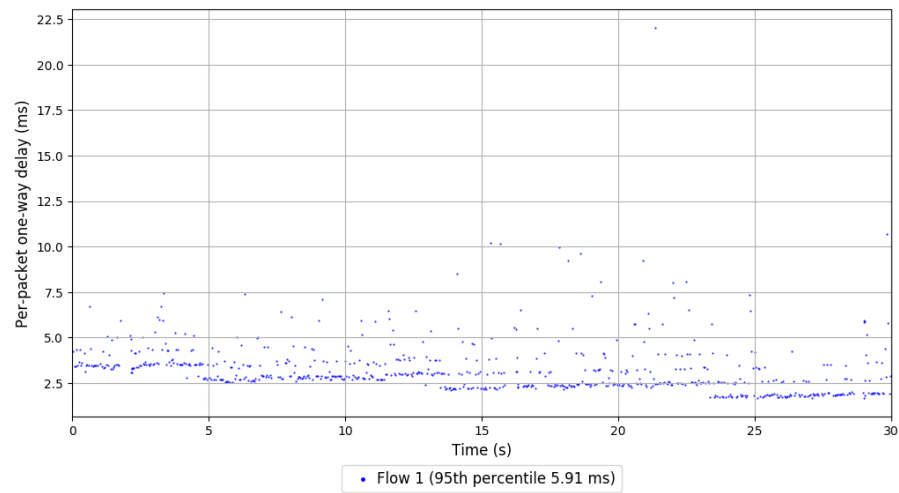
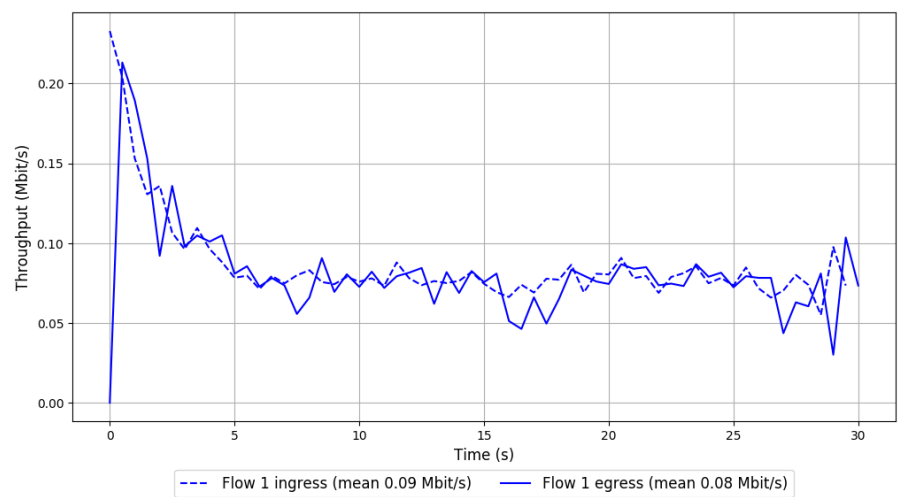


```
Run 1: Statistics of SCReAM

Start at: 2018-11-29 20:15:57
End at: 2018-11-29 20:16:27
Local clock offset: 0.01 ms
Remote clock offset: 0.409 ms

# Below is generated by plot.py at 2018-11-29 22:01:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 5.910 ms
Loss rate: 4.69%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 5.910 ms
Loss rate: 4.69%
```

Run 1: Report of SReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2018-11-29 20:36:09

End at: 2018-11-29 20:36:39

Local clock offset: -1.947 ms

Remote clock offset: 2.129 ms

Below is generated by plot.py at 2018-11-29 22:01:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 5.120 ms

Loss rate: 0.67%

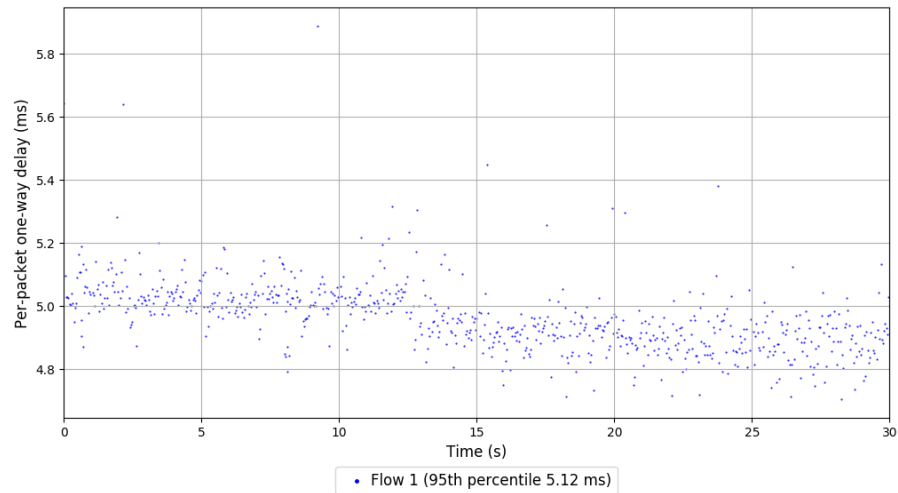
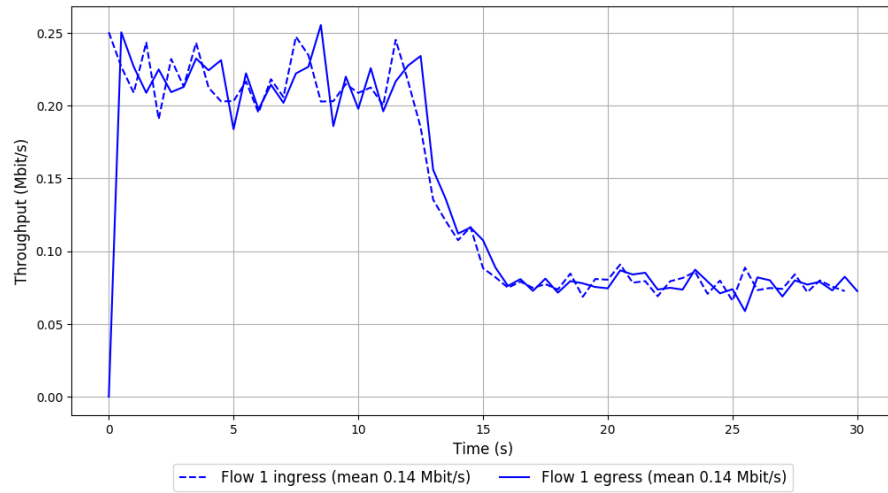
-- Flow 1:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 5.120 ms

Loss rate: 0.67%

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2018-11-29 20:56:39

End at: 2018-11-29 20:57:09

Local clock offset: -3.236 ms

Remote clock offset: 0.766 ms

Below is generated by plot.py at 2018-11-29 22:01:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 4.257 ms

Loss rate: 0.00%

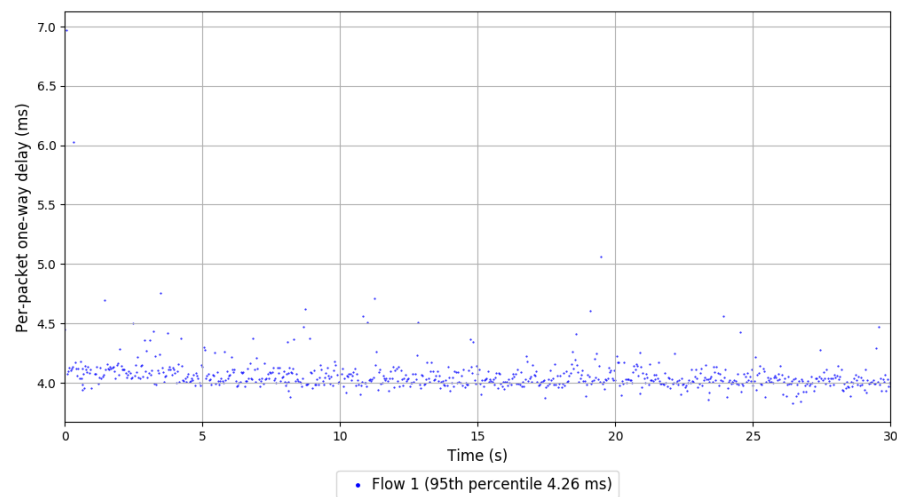
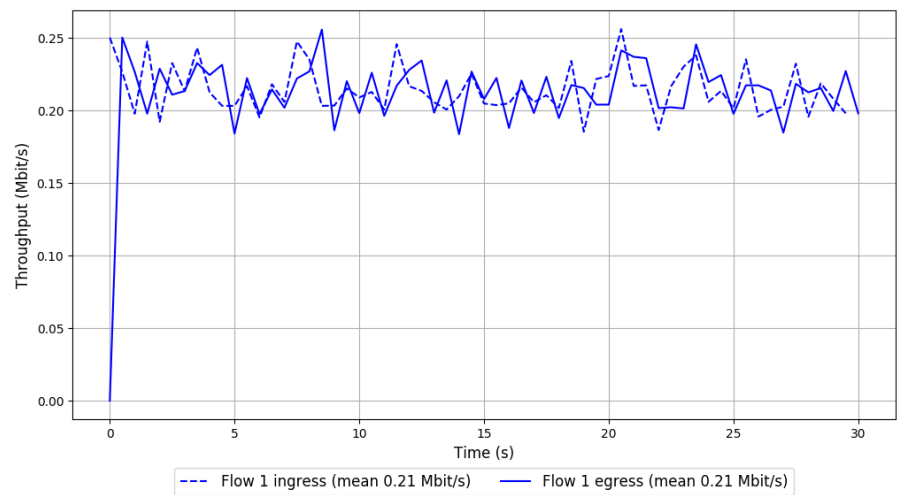
-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 4.257 ms

Loss rate: 0.00%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2018-11-29 21:16:59

End at: 2018-11-29 21:17:29

Local clock offset: -5.843 ms

Remote clock offset: -0.25 ms

Below is generated by plot.py at 2018-11-29 22:01:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.10 Mbit/s

95th percentile per-packet one-way delay: 3.354 ms

Loss rate: 2.80%

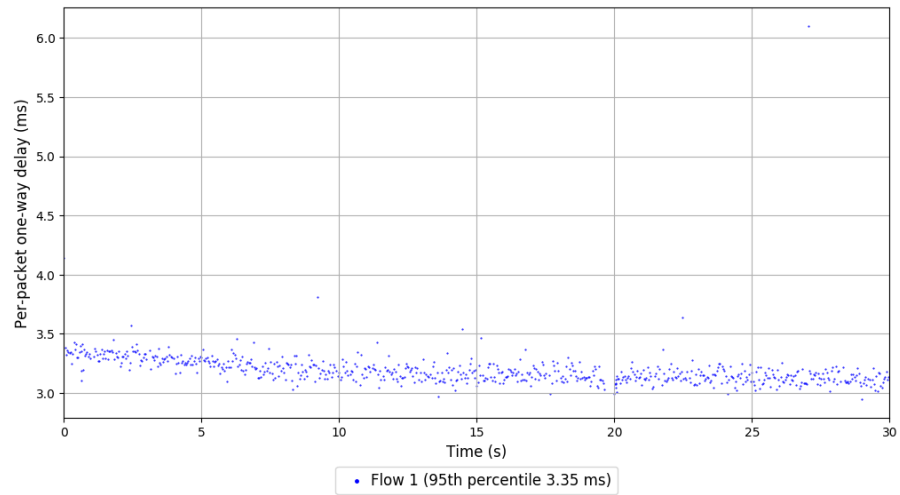
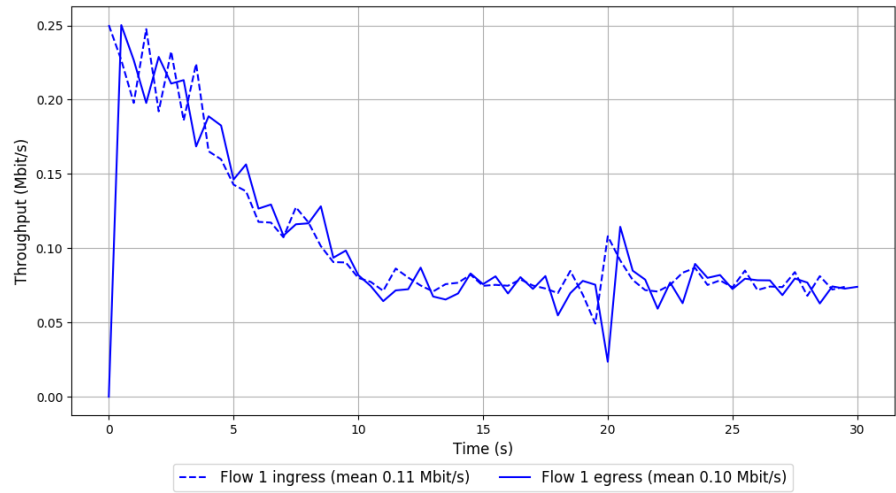
-- Flow 1:

Average throughput: 0.10 Mbit/s

95th percentile per-packet one-way delay: 3.354 ms

Loss rate: 2.80%

Run 4: Report of SReAM — Data Link

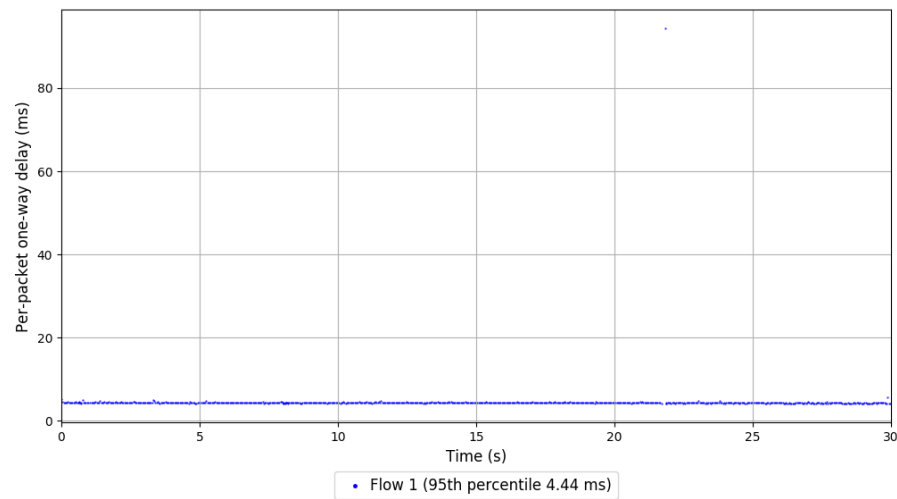
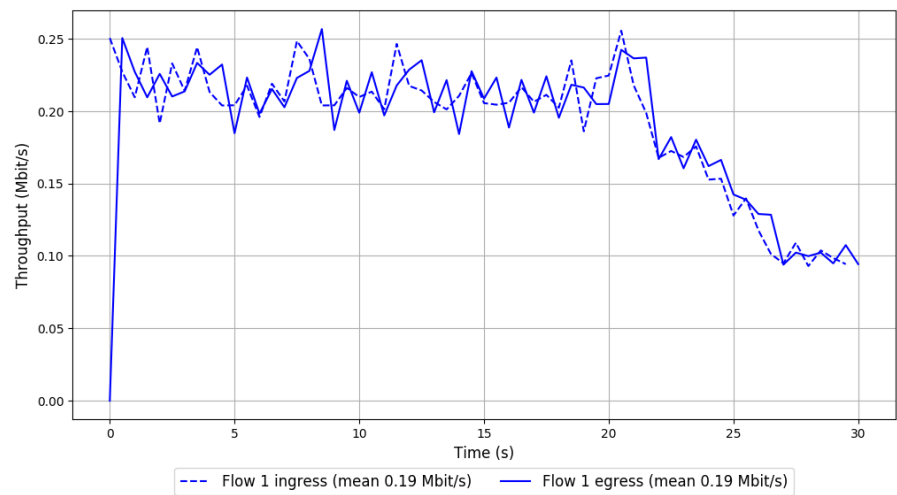


Run 5: Statistics of SCReAM

Start at: 2018-11-29 21:37:13
End at: 2018-11-29 21:37:43
Local clock offset: -11.067 ms
Remote clock offset: -1.092 ms

Below is generated by plot.py at 2018-11-29 22:01:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 4.439 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 4.439 ms
Loss rate: 0.15%

Run 5: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2018-11-29 20:20:22

End at: 2018-11-29 20:20:52

Local clock offset: -0.44 ms

Remote clock offset: 0.725 ms

Below is generated by plot.py at 2018-11-29 22:01:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 22.69 Mbit/s

95th percentile per-packet one-way delay: 12.184 ms

Loss rate: 4.37%

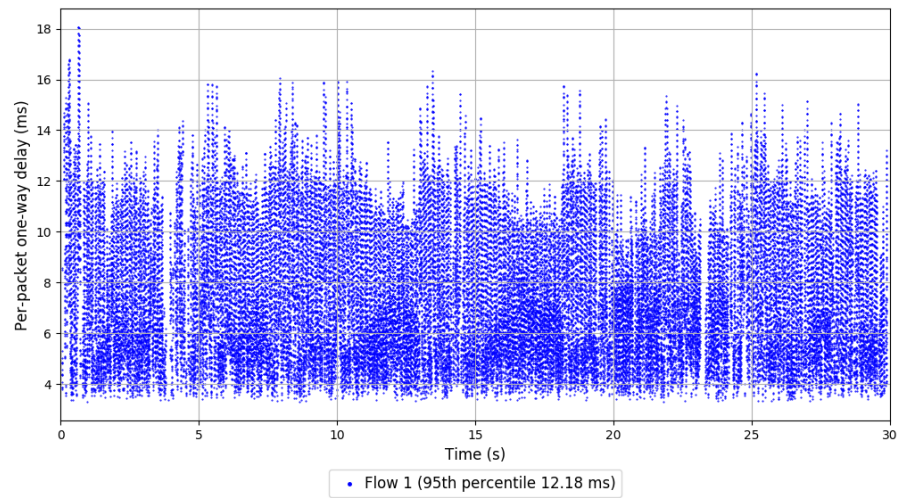
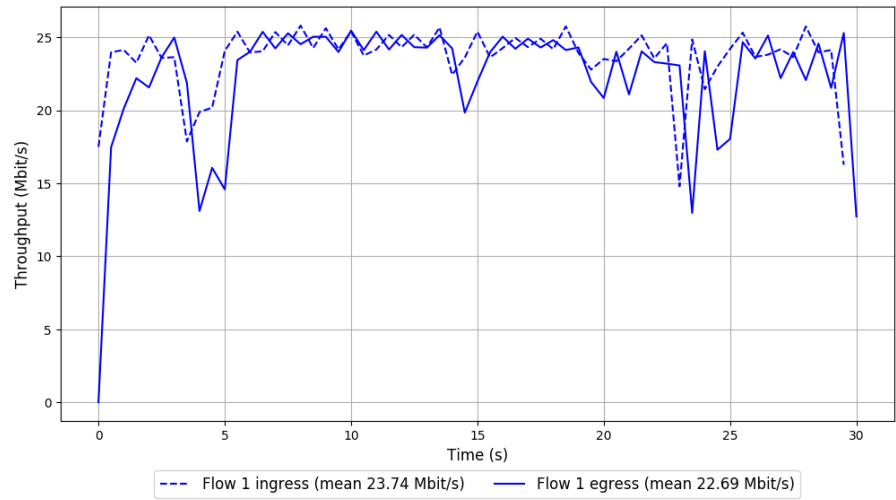
-- Flow 1:

Average throughput: 22.69 Mbit/s

95th percentile per-packet one-way delay: 12.184 ms

Loss rate: 4.37%

Run 1: Report of Sprout — Data Link

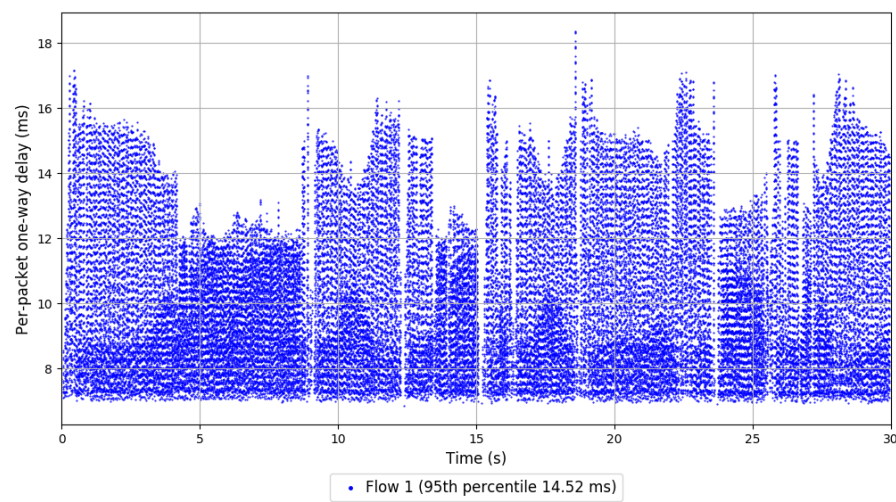
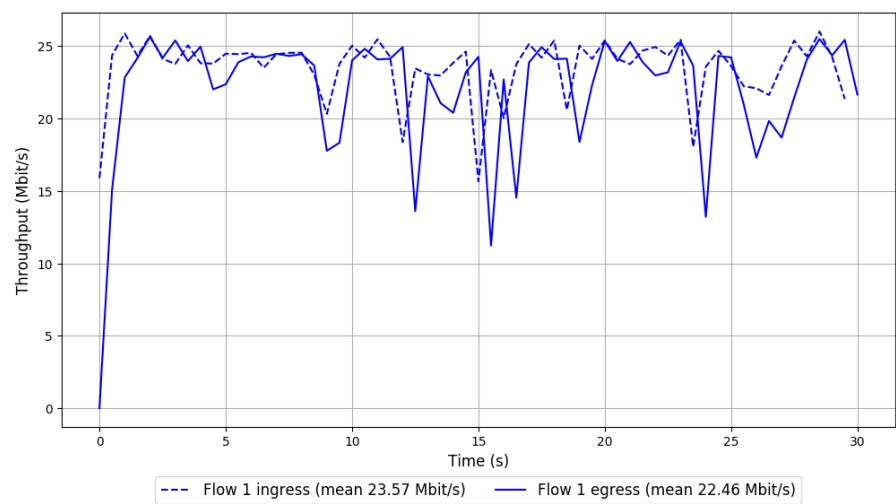


Run 2: Statistics of Sprout

Start at: 2018-11-29 20:40:42
End at: 2018-11-29 20:41:12
Local clock offset: -4.954 ms
Remote clock offset: 1.579 ms

Below is generated by plot.py at 2018-11-29 22:01:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 22.46 Mbit/s
95th percentile per-packet one-way delay: 14.516 ms
Loss rate: 4.68%
-- Flow 1:
Average throughput: 22.46 Mbit/s
95th percentile per-packet one-way delay: 14.516 ms
Loss rate: 4.68%

Run 2: Report of Sprout — Data Link

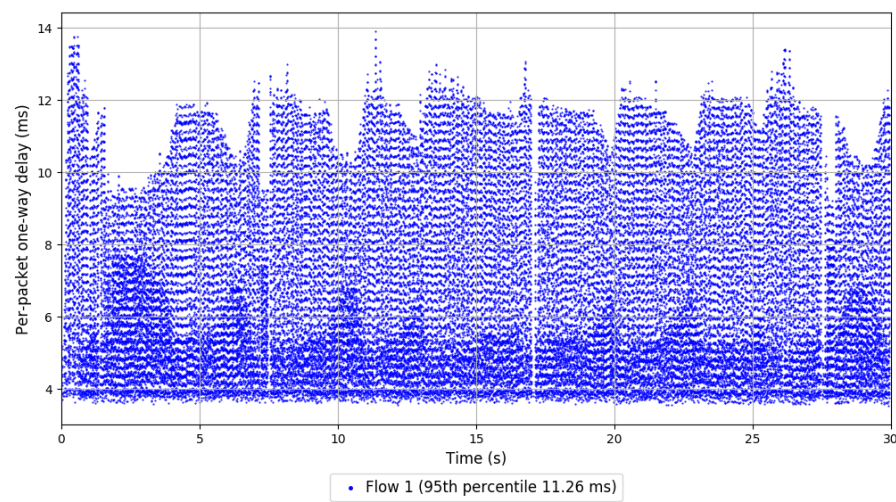
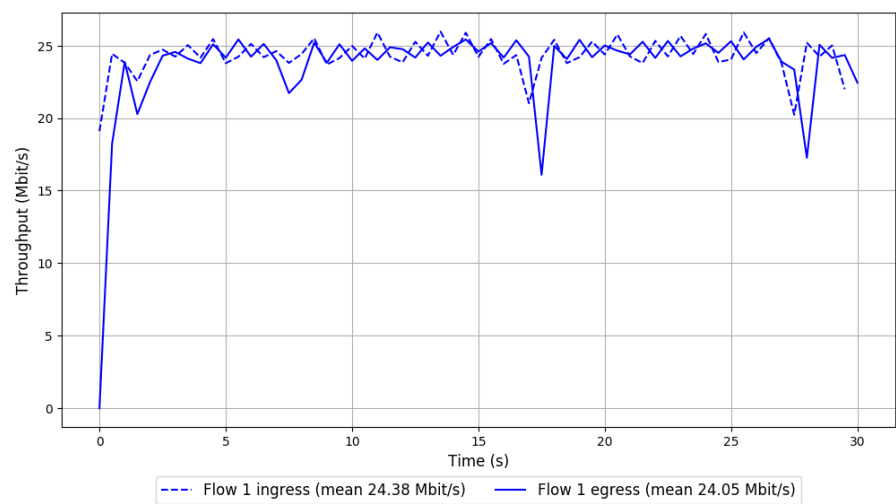


Run 3: Statistics of Sprout

Start at: 2018-11-29 21:01:09
End at: 2018-11-29 21:01:39
Local clock offset: -3.683 ms
Remote clock offset: 0.414 ms

Below is generated by plot.py at 2018-11-29 22:01:21
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.05 Mbit/s
95th percentile per-packet one-way delay: 11.262 ms
Loss rate: 1.31%
-- Flow 1:
Average throughput: 24.05 Mbit/s
95th percentile per-packet one-way delay: 11.262 ms
Loss rate: 1.31%

Run 3: Report of Sprout — Data Link

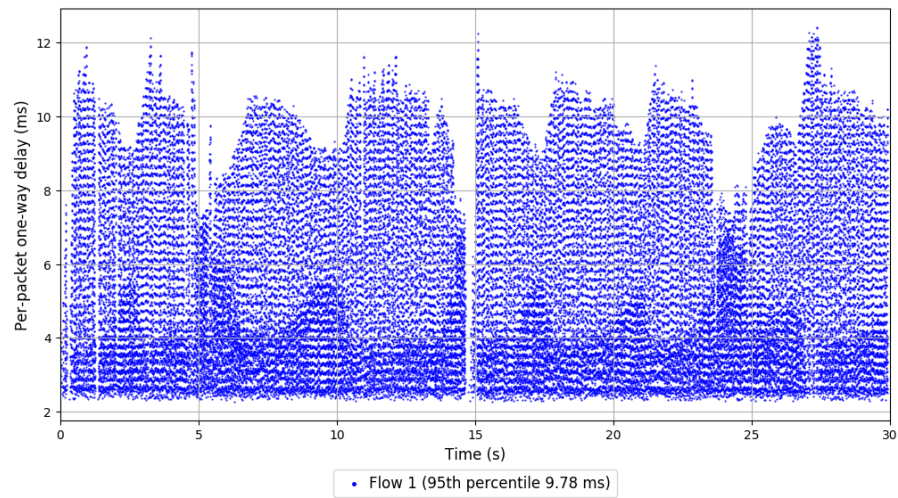
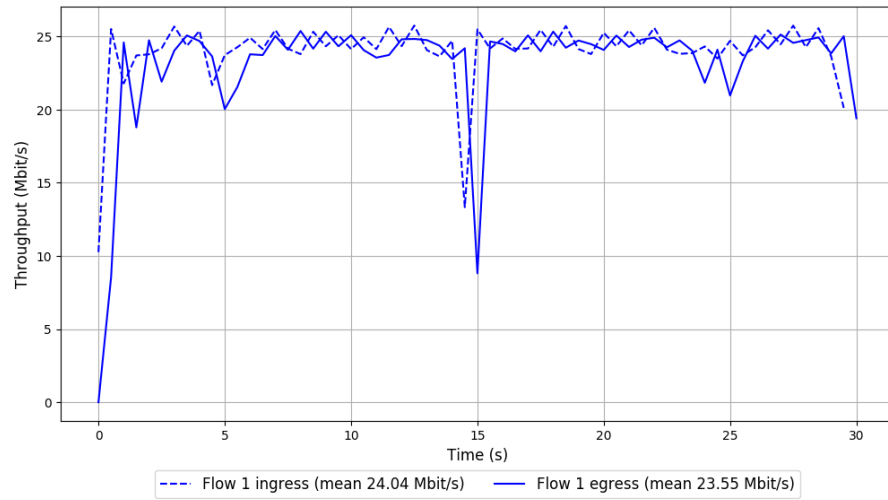


Run 4: Statistics of Sprout

Start at: 2018-11-29 21:21:34
End at: 2018-11-29 21:22:04
Local clock offset: -5.335 ms
Remote clock offset: -0.024 ms

Below is generated by plot.py at 2018-11-29 22:01:27
Datalink statistics
-- Total of 1 flow:
Average throughput: 23.55 Mbit/s
95th percentile per-packet one-way delay: 9.780 ms
Loss rate: 2.07%
-- Flow 1:
Average throughput: 23.55 Mbit/s
95th percentile per-packet one-way delay: 9.780 ms
Loss rate: 2.07%

Run 4: Report of Sprout — Data Link

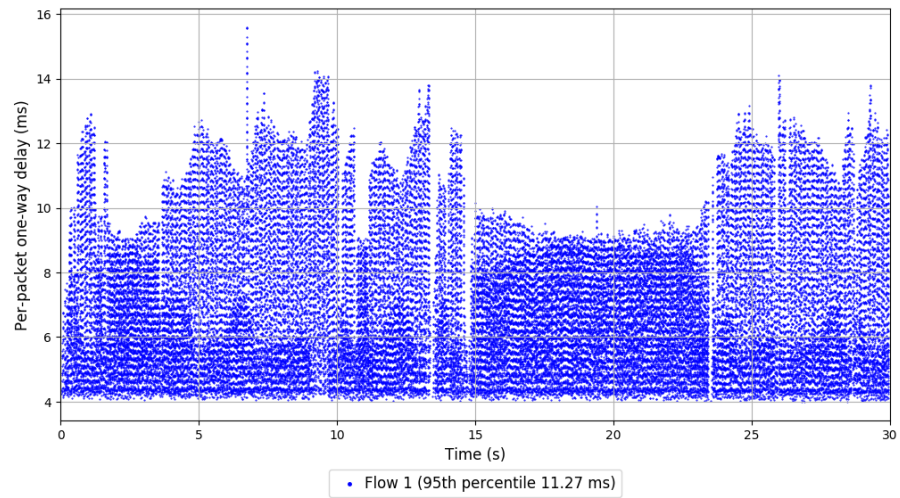
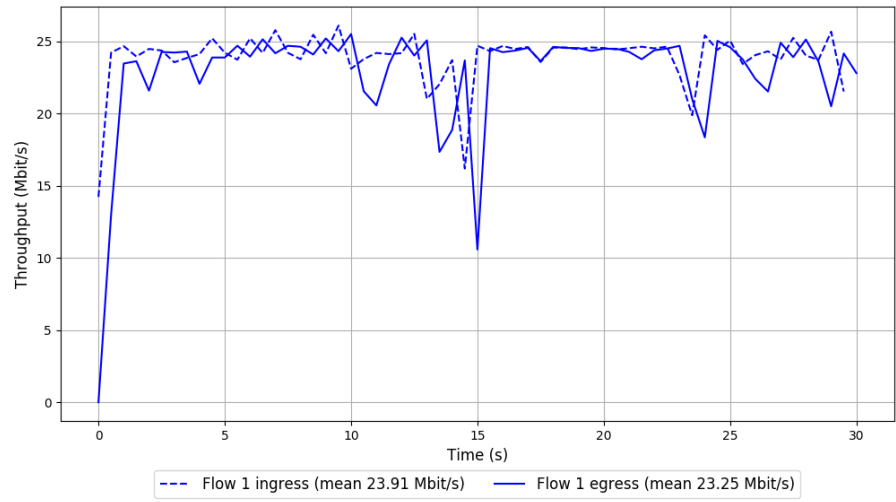


Run 5: Statistics of Sprout

Start at: 2018-11-29 21:41:59
End at: 2018-11-29 21:42:29
Local clock offset: -11.626 ms
Remote clock offset: -1.308 ms

Below is generated by plot.py at 2018-11-29 22:01:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 23.25 Mbit/s
95th percentile per-packet one-way delay: 11.272 ms
Loss rate: 2.77%
-- Flow 1:
Average throughput: 23.25 Mbit/s
95th percentile per-packet one-way delay: 11.272 ms
Loss rate: 2.77%

Run 5: Report of Sprout — Data Link

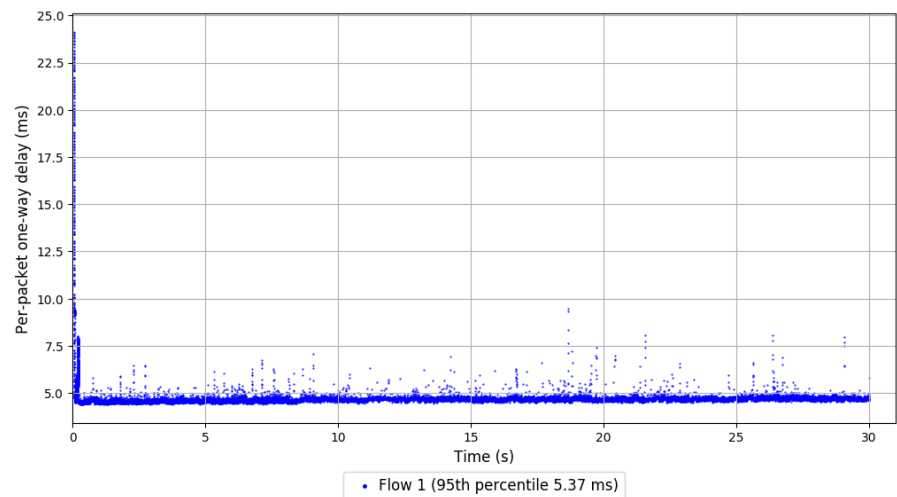
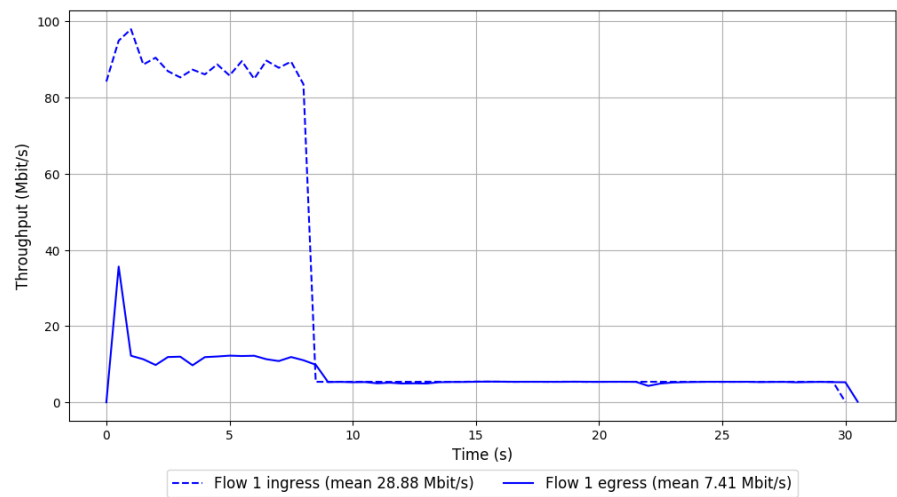


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-11-29 20:31:35
End at: 2018-11-29 20:32:05
Local clock offset: -2.714 ms
Remote clock offset: 1.335 ms

# Below is generated by plot.py at 2018-11-29 22:01:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.41 Mbit/s
95th percentile per-packet one-way delay: 5.366 ms
Loss rate: 74.33%
-- Flow 1:
Average throughput: 7.41 Mbit/s
95th percentile per-packet one-way delay: 5.366 ms
Loss rate: 74.33%
```

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



Run 2: Statistics of TaoVA-100x

Start at: 2018-11-29 20:52:06

End at: 2018-11-29 20:52:36

Local clock offset: -3.074 ms

Remote clock offset: 1.441 ms

Below is generated by plot.py at 2018-11-29 22:01:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 7.67 Mbit/s

95th percentile per-packet one-way delay: 5.263 ms

Loss rate: 73.59%

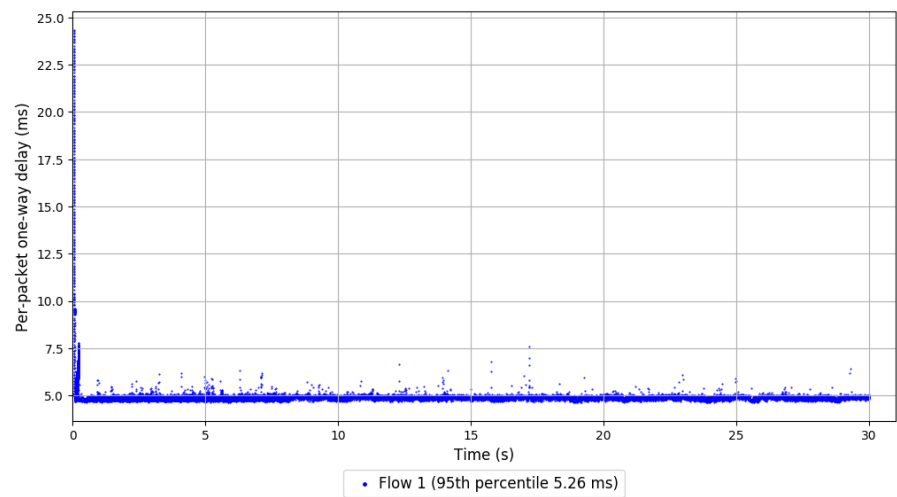
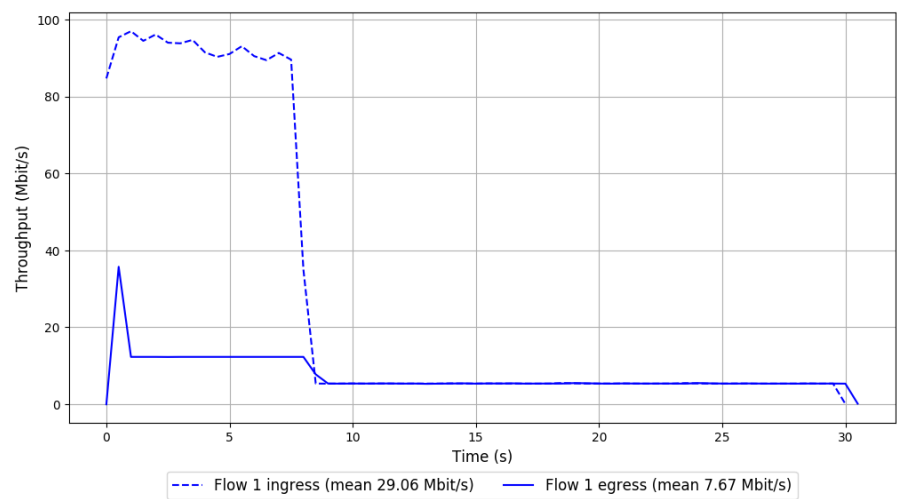
-- Flow 1:

Average throughput: 7.67 Mbit/s

95th percentile per-packet one-way delay: 5.263 ms

Loss rate: 73.59%

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-11-29 21:12:22

End at: 2018-11-29 21:12:52

Local clock offset: -4.858 ms

Remote clock offset: 0.848 ms

Below is generated by plot.py at 2018-11-29 22:01:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 7.65 Mbit/s

95th percentile per-packet one-way delay: 4.557 ms

Loss rate: 73.69%

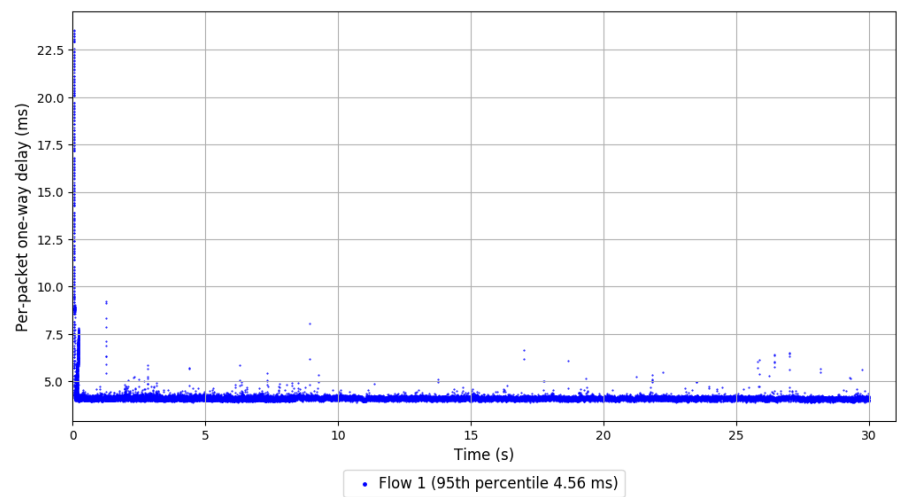
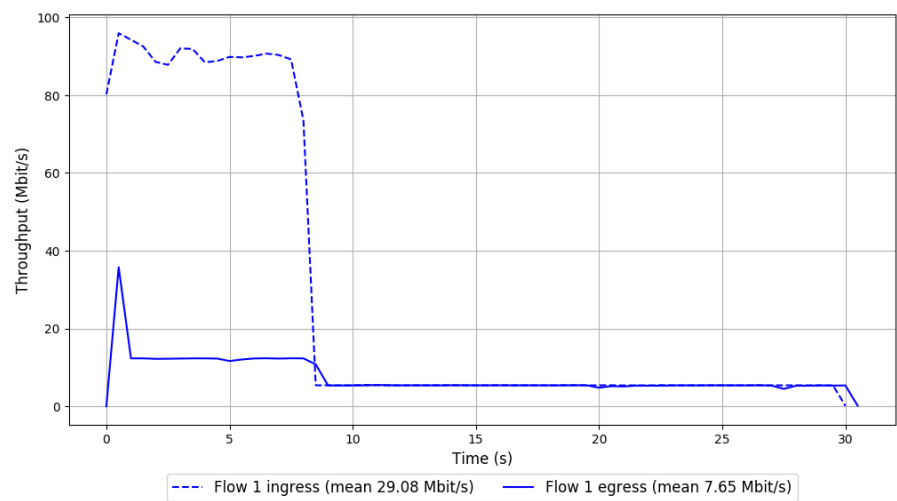
-- Flow 1:

Average throughput: 7.65 Mbit/s

95th percentile per-packet one-way delay: 4.557 ms

Loss rate: 73.69%

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

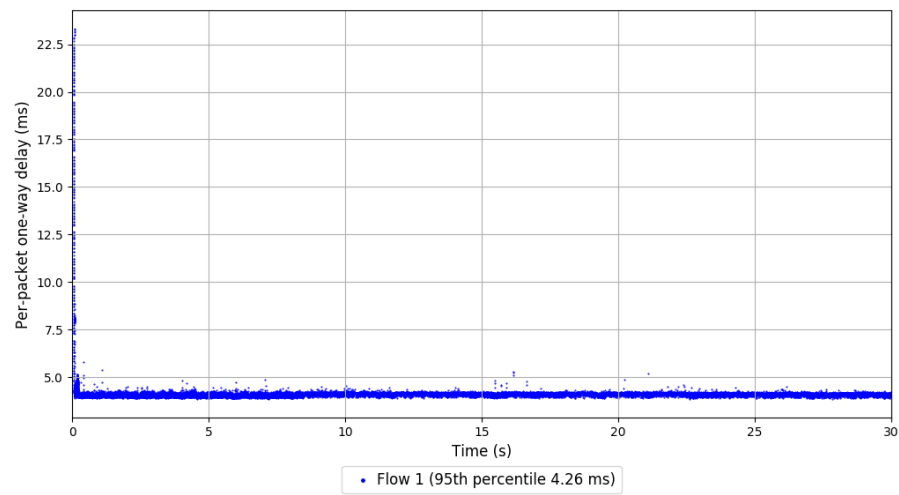
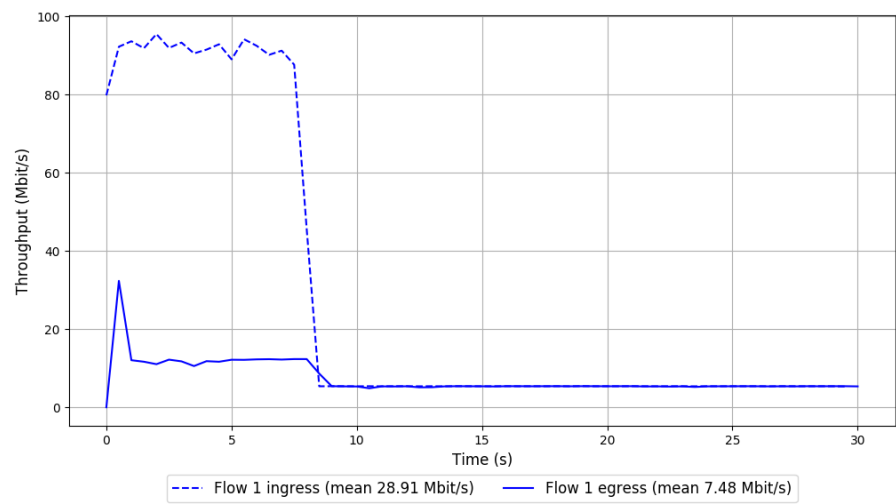


Run 4: Statistics of TaoVA-100x

Start at: 2018-11-29 21:32:39
End at: 2018-11-29 21:33:09
Local clock offset: -9.114 ms
Remote clock offset: -1.103 ms

Below is generated by plot.py at 2018-11-29 22:01:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 7.48 Mbit/s
95th percentile per-packet one-way delay: 4.263 ms
Loss rate: 74.13%
-- Flow 1:
Average throughput: 7.48 Mbit/s
95th percentile per-packet one-way delay: 4.263 ms
Loss rate: 74.13%

Run 4: Report of TaoVA-100x — Data Link

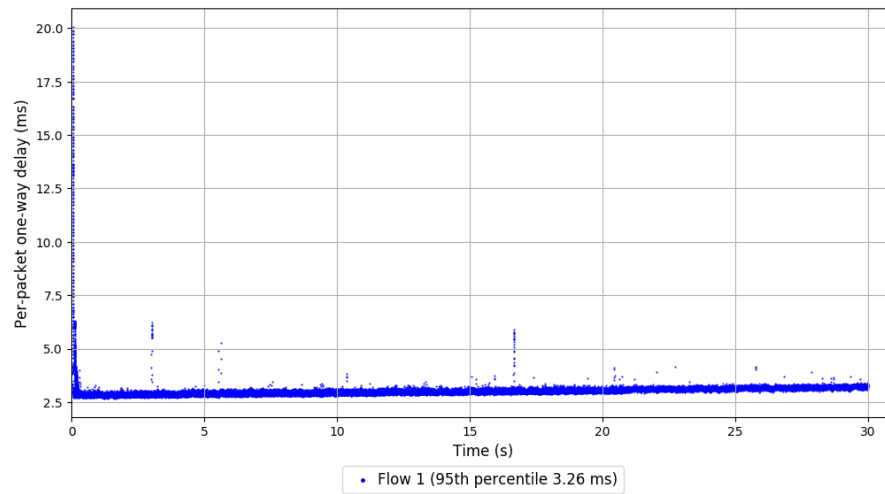
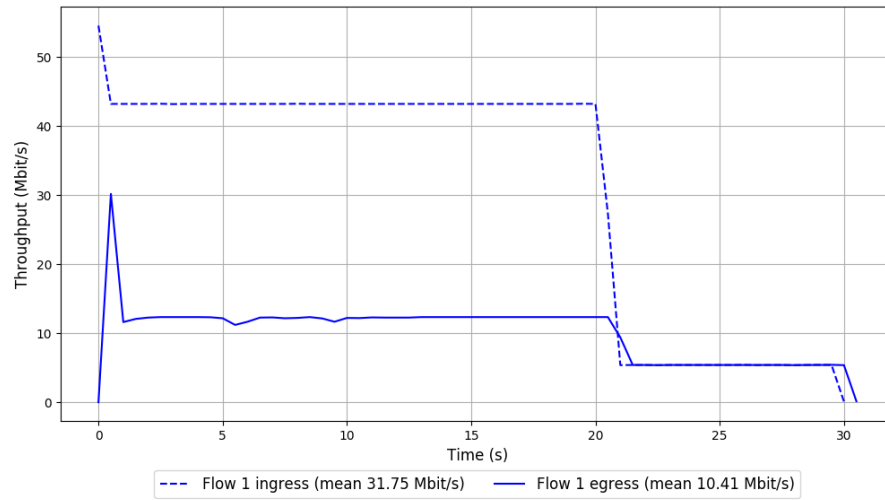


Run 5: Statistics of TaoVA-100x

Start at: 2018-11-29 21:53:12
End at: 2018-11-29 21:53:43
Local clock offset: -1.596 ms
Remote clock offset: -1.422 ms

Below is generated by plot.py at 2018-11-29 22:01:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 10.41 Mbit/s
95th percentile per-packet one-way delay: 3.261 ms
Loss rate: 67.22%
-- Flow 1:
Average throughput: 10.41 Mbit/s
95th percentile per-packet one-way delay: 3.261 ms
Loss rate: 67.22%

Run 5: Report of TaoVA-100x — Data Link



Run 1: Statistics of TCP Vegas

Start at: 2018-11-29 20:23:49

End at: 2018-11-29 20:24:19

Local clock offset: -3.217 ms

Remote clock offset: 0.501 ms

Below is generated by plot.py at 2018-11-29 22:01:34

Datalink statistics

-- Total of 1 flow:

Average throughput: 10.41 Mbit/s

95th percentile per-packet one-way delay: 9.978 ms

Loss rate: 0.86%

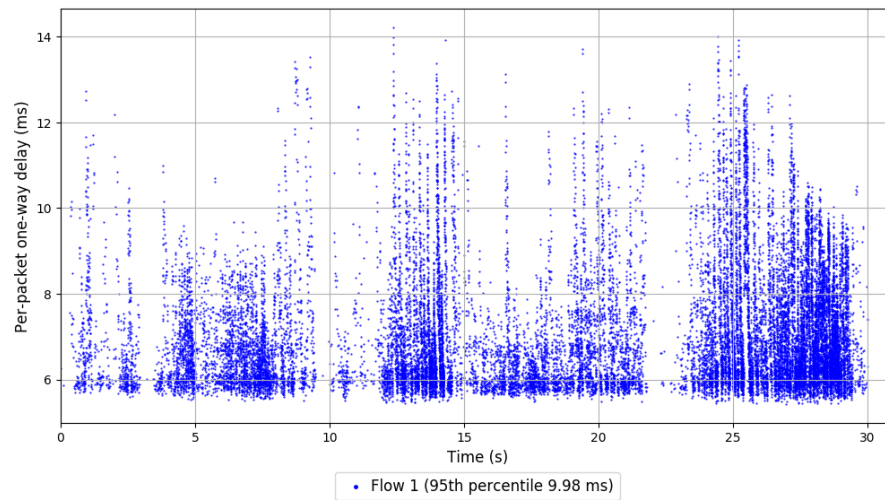
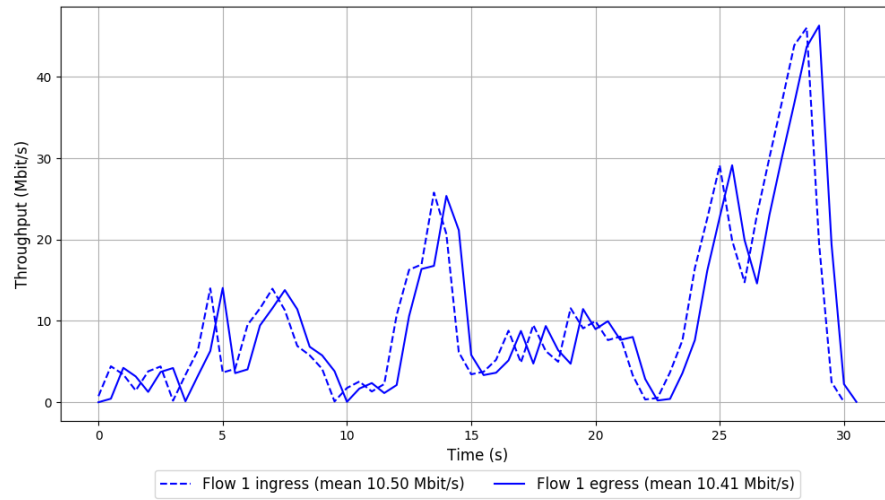
-- Flow 1:

Average throughput: 10.41 Mbit/s

95th percentile per-packet one-way delay: 9.978 ms

Loss rate: 0.86%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-11-29 20:44:12

End at: 2018-11-29 20:44:42

Local clock offset: -5.638 ms

Remote clock offset: 1.078 ms

Below is generated by plot.py at 2018-11-29 22:01:34

Datalink statistics

-- Total of 1 flow:

Average throughput: 11.26 Mbit/s

95th percentile per-packet one-way delay: 17.622 ms

Loss rate: 4.31%

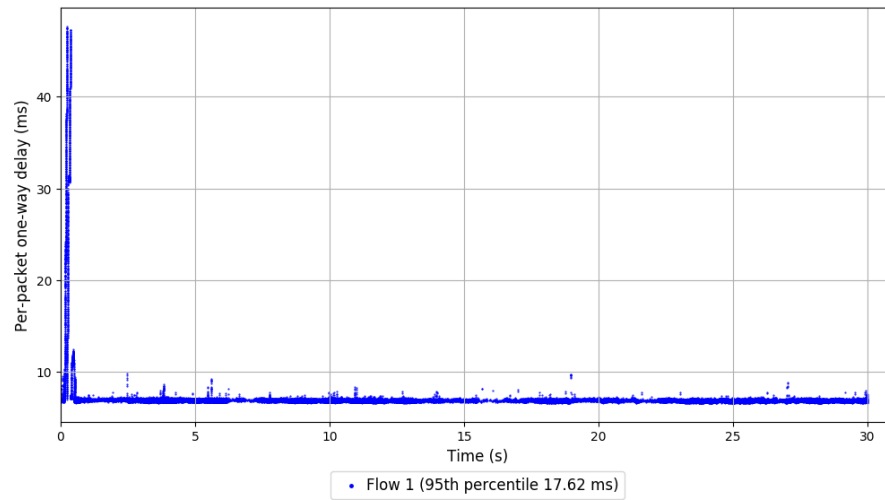
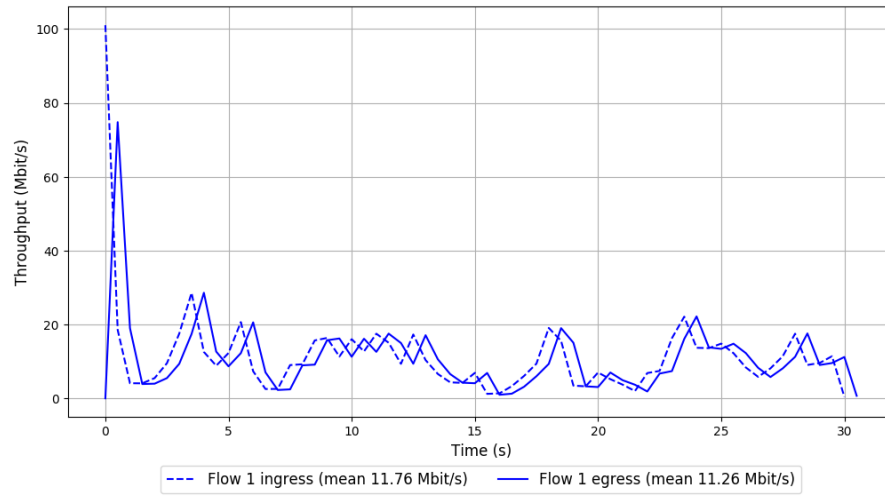
-- Flow 1:

Average throughput: 11.26 Mbit/s

95th percentile per-packet one-way delay: 17.622 ms

Loss rate: 4.31%

Run 2: Report of TCP Vegas — Data Link

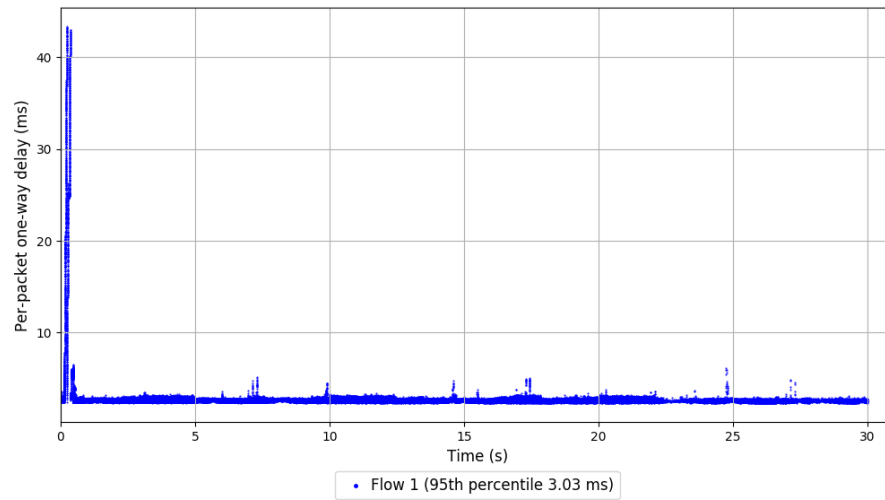
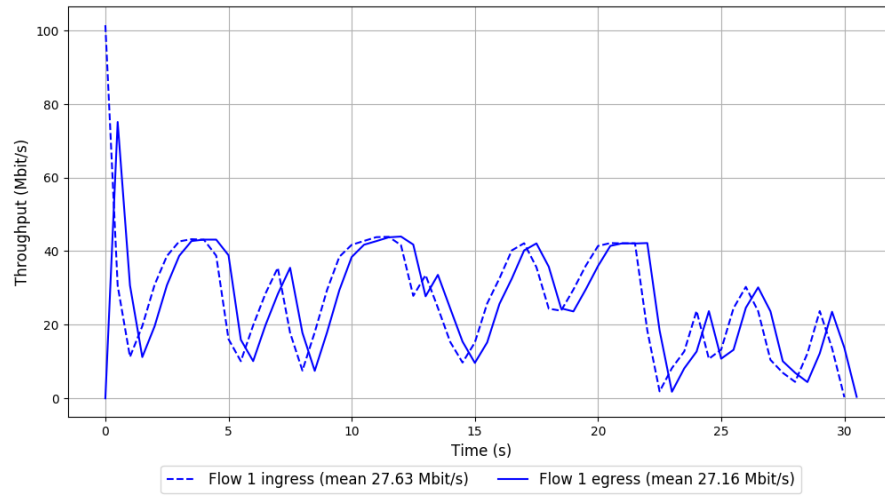


Run 3: Statistics of TCP Vegas

Start at: 2018-11-29 21:04:38
End at: 2018-11-29 21:05:08
Local clock offset: -3.011 ms
Remote clock offset: 0.188 ms

Below is generated by plot.py at 2018-11-29 22:01:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 27.16 Mbit/s
95th percentile per-packet one-way delay: 3.034 ms
Loss rate: 1.68%
-- Flow 1:
Average throughput: 27.16 Mbit/s
95th percentile per-packet one-way delay: 3.034 ms
Loss rate: 1.68%

Run 3: Report of TCP Vegas — Data Link

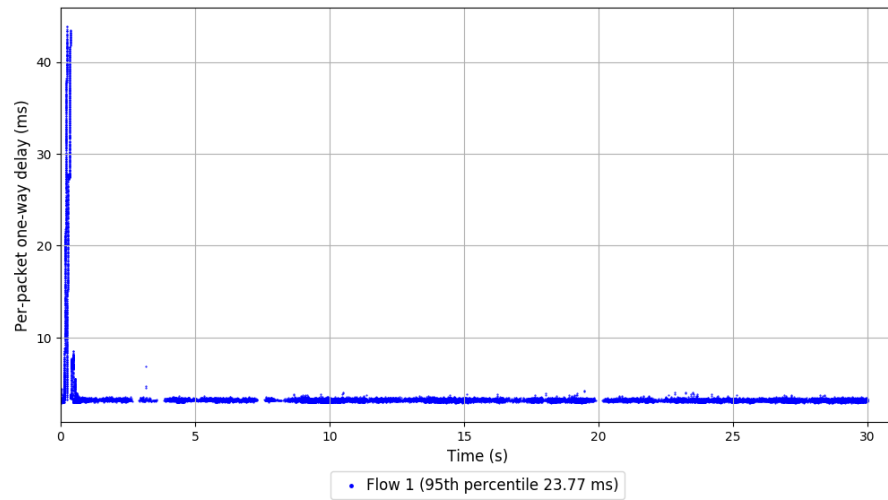
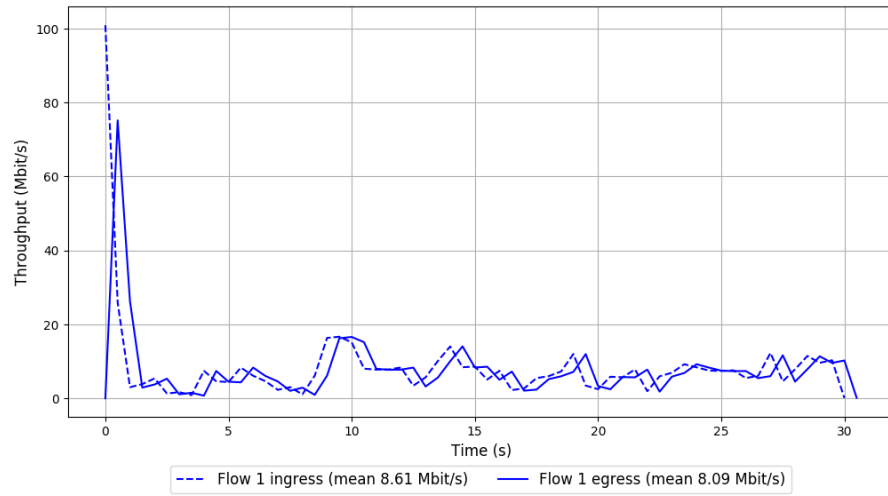


Run 4: Statistics of TCP Vegas

Start at: 2018-11-29 21:24:59
End at: 2018-11-29 21:25:29
Local clock offset: -6.565 ms
Remote clock offset: -0.238 ms

Below is generated by plot.py at 2018-11-29 22:01:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 8.09 Mbit/s
95th percentile per-packet one-way delay: 23.766 ms
Loss rate: 5.96%
-- Flow 1:
Average throughput: 8.09 Mbit/s
95th percentile per-packet one-way delay: 23.766 ms
Loss rate: 5.96%

Run 4: Report of TCP Vegas — Data Link

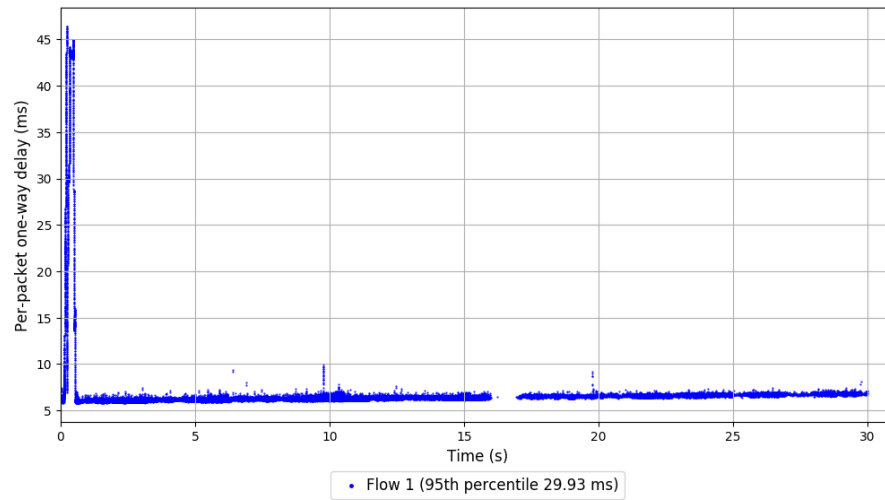
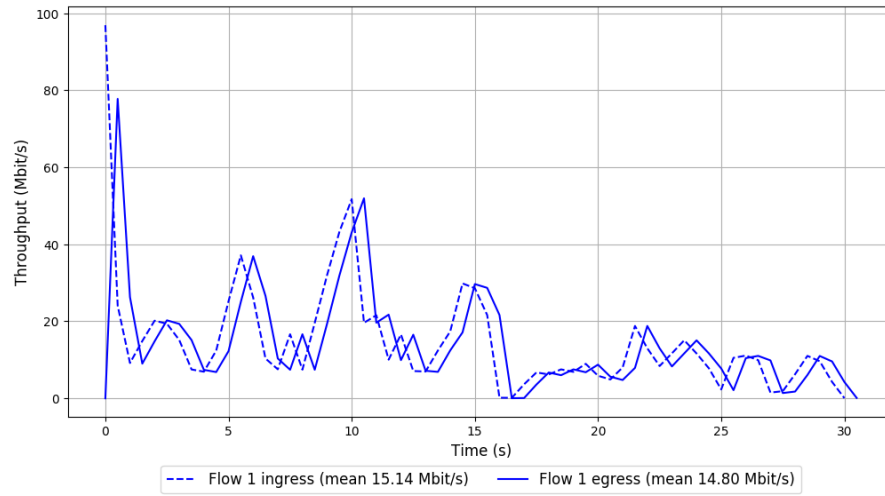


Run 5: Statistics of TCP Vegas

Start at: 2018-11-29 21:45:26
End at: 2018-11-29 21:45:56
Local clock offset: -12.772 ms
Remote clock offset: -1.266 ms

Below is generated by plot.py at 2018-11-29 22:01:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 14.80 Mbit/s
95th percentile per-packet one-way delay: 29.932 ms
Loss rate: 2.26%
-- Flow 1:
Average throughput: 14.80 Mbit/s
95th percentile per-packet one-way delay: 29.932 ms
Loss rate: 2.26%

Run 5: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2018-11-29 20:21:28

End at: 2018-11-29 20:21:58

Local clock offset: -1.315 ms

Remote clock offset: 2.174 ms

Below is generated by plot.py at 2018-11-29 22:02:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 62.81 Mbit/s

95th percentile per-packet one-way delay: 40.144 ms

Loss rate: 19.56%

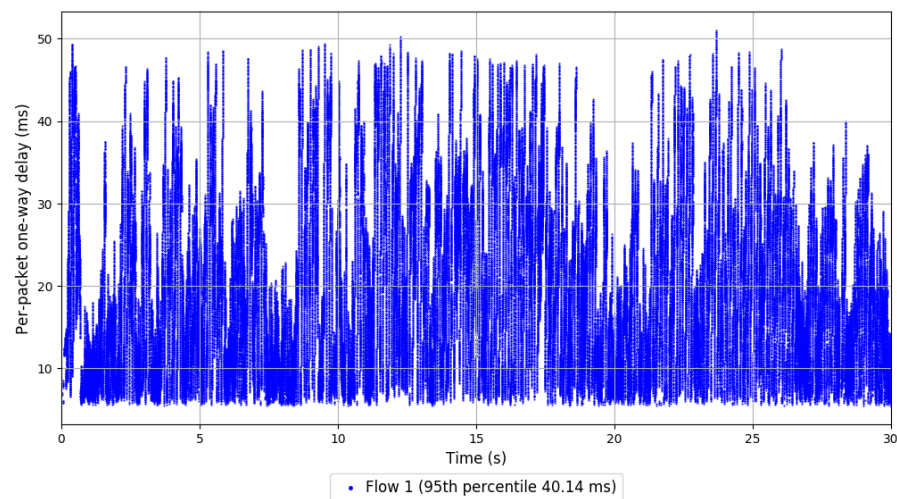
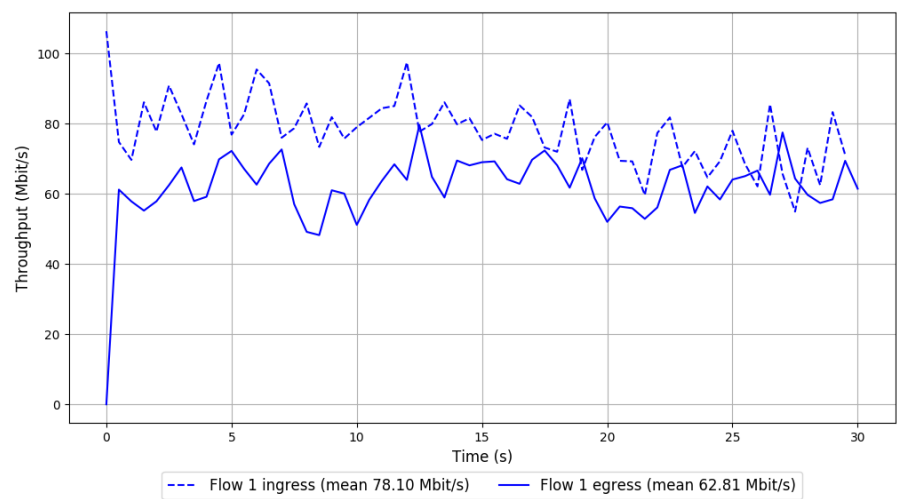
-- Flow 1:

Average throughput: 62.81 Mbit/s

95th percentile per-packet one-way delay: 40.144 ms

Loss rate: 19.56%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-11-29 20:41:53

End at: 2018-11-29 20:42:23

Local clock offset: -3.343 ms

Remote clock offset: 0.802 ms

Below is generated by plot.py at 2018-11-29 22:02:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 59.35 Mbit/s

95th percentile per-packet one-way delay: 30.207 ms

Loss rate: 16.85%

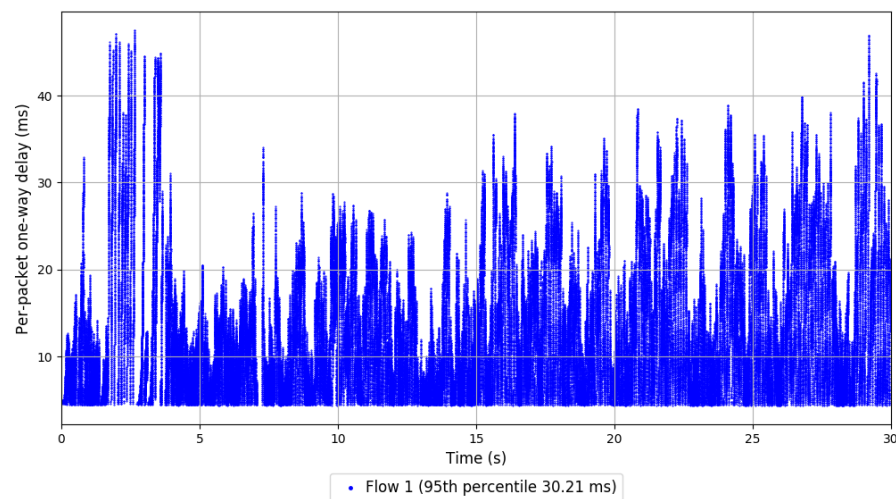
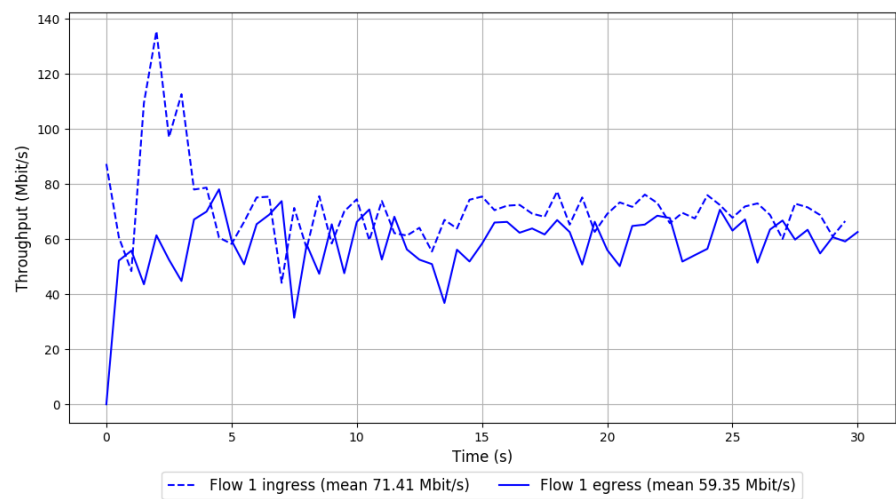
-- Flow 1:

Average throughput: 59.35 Mbit/s

95th percentile per-packet one-way delay: 30.207 ms

Loss rate: 16.85%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-11-29 21:02:18

End at: 2018-11-29 21:02:48

Local clock offset: -4.132 ms

Remote clock offset: 0.667 ms

Below is generated by plot.py at 2018-11-29 22:02:23

Datalink statistics

-- Total of 1 flow:

Average throughput: 65.41 Mbit/s

95th percentile per-packet one-way delay: 25.156 ms

Loss rate: 6.31%

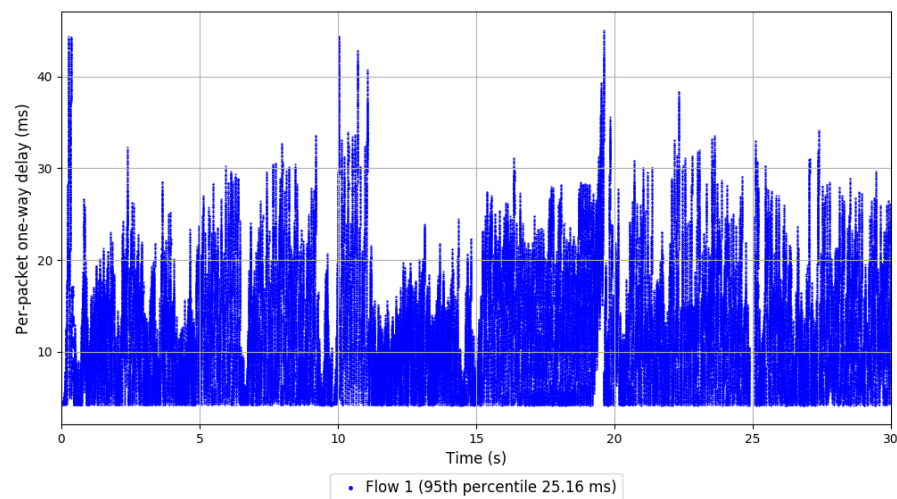
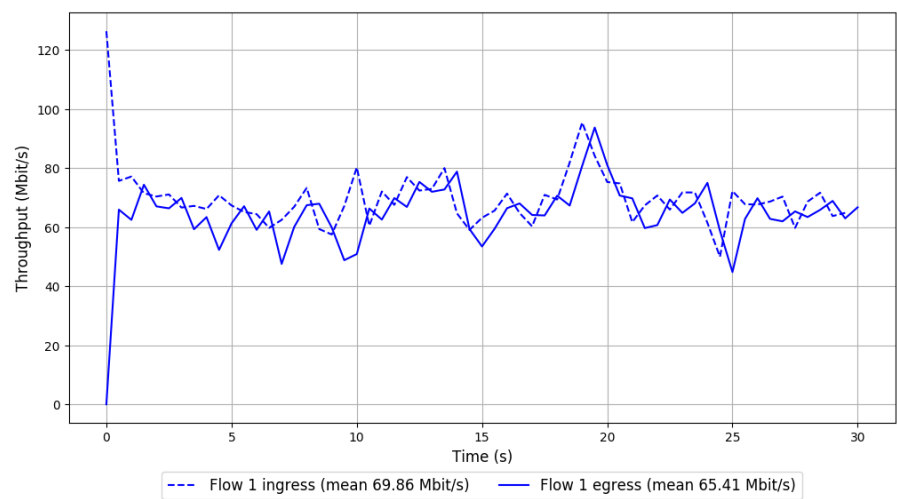
-- Flow 1:

Average throughput: 65.41 Mbit/s

95th percentile per-packet one-way delay: 25.156 ms

Loss rate: 6.31%

Run 3: Report of Verus — Data Link

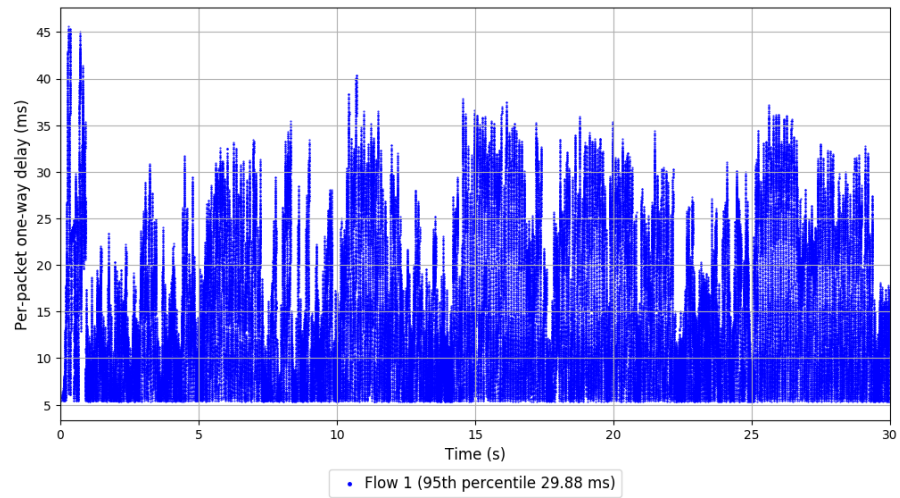
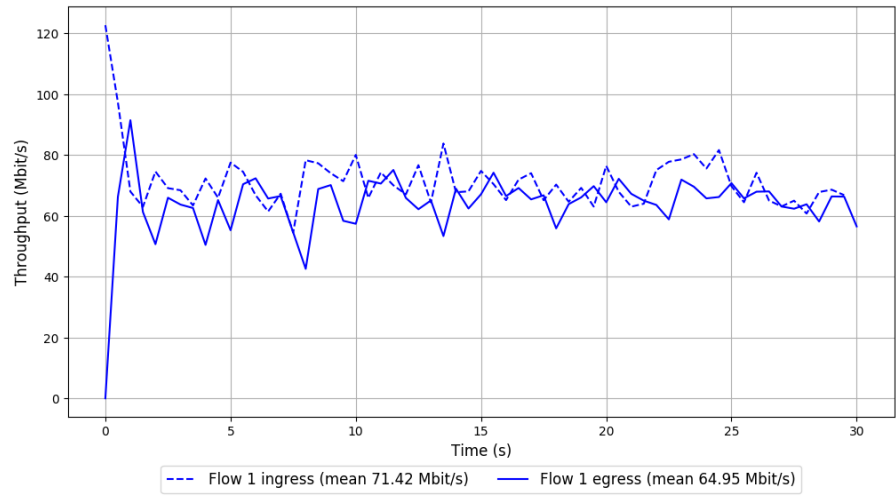


Run 4: Statistics of Verus

Start at: 2018-11-29 21:22:42
End at: 2018-11-29 21:23:12
Local clock offset: -8.623 ms
Remote clock offset: -0.046 ms

Below is generated by plot.py at 2018-11-29 22:02:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 64.95 Mbit/s
95th percentile per-packet one-way delay: 29.882 ms
Loss rate: 9.04%
-- Flow 1:
Average throughput: 64.95 Mbit/s
95th percentile per-packet one-way delay: 29.882 ms
Loss rate: 9.04%

Run 4: Report of Verus — Data Link

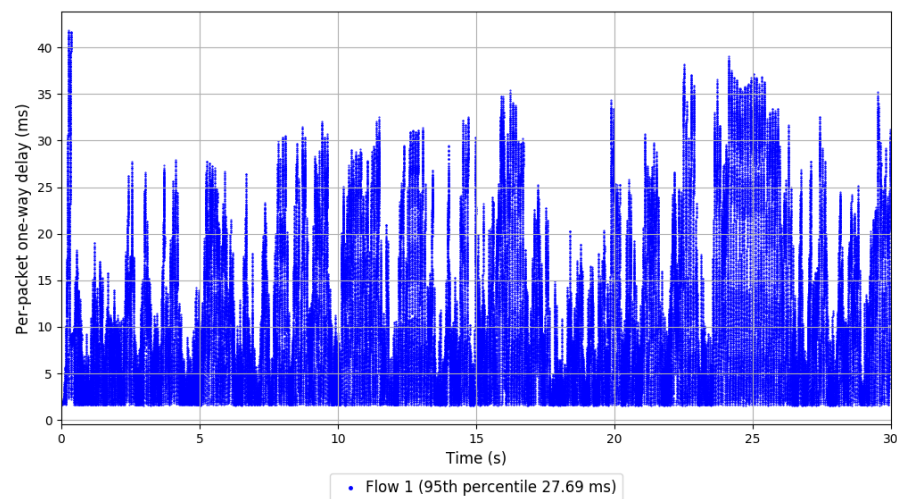
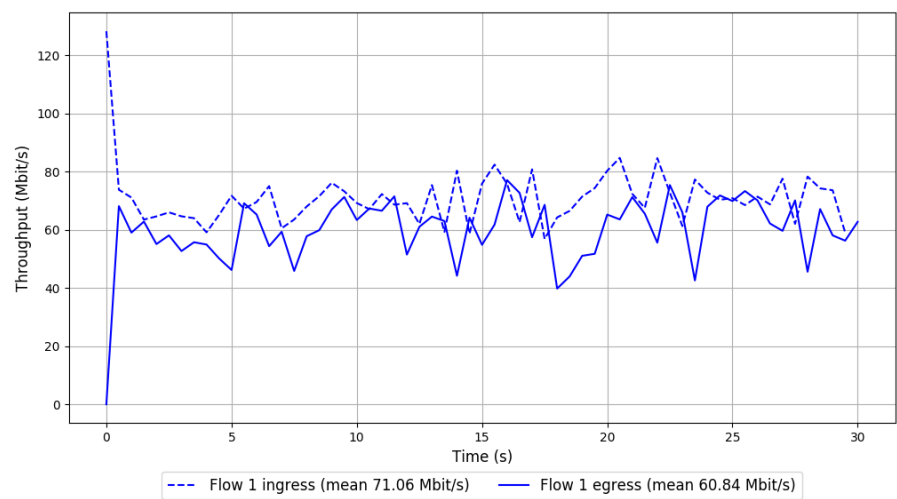


Run 5: Statistics of Verus

Start at: 2018-11-29 21:43:05
End at: 2018-11-29 21:43:35
Local clock offset: -9.543 ms
Remote clock offset: -1.505 ms

Below is generated by plot.py at 2018-11-29 22:02:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 60.84 Mbit/s
95th percentile per-packet one-way delay: 27.692 ms
Loss rate: 14.31%
-- Flow 1:
Average throughput: 60.84 Mbit/s
95th percentile per-packet one-way delay: 27.692 ms
Loss rate: 14.31%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2018-11-29 20:19:13

End at: 2018-11-29 20:19:43

Local clock offset: -3.058 ms

Remote clock offset: 1.295 ms

Below is generated by plot.py at 2018-11-29 22:02:26

Datalink statistics

-- Total of 1 flow:

Average throughput: 28.92 Mbit/s

95th percentile per-packet one-way delay: 9.281 ms

Loss rate: 3.14%

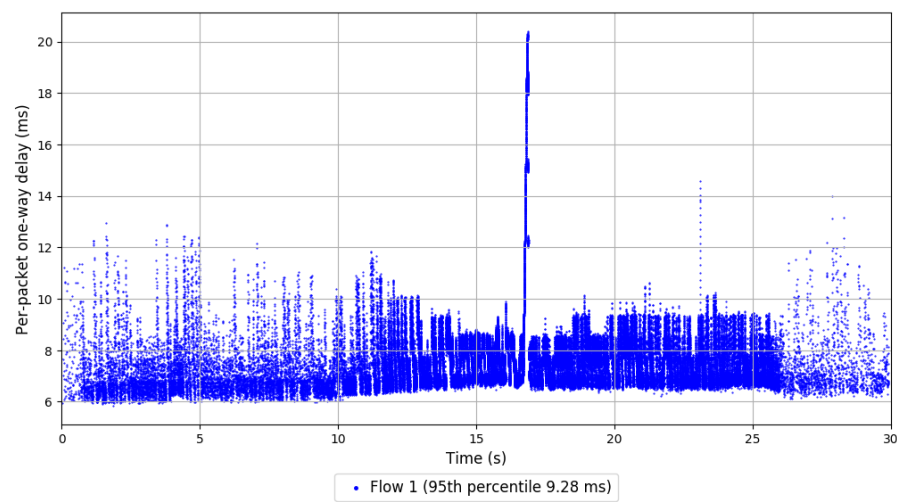
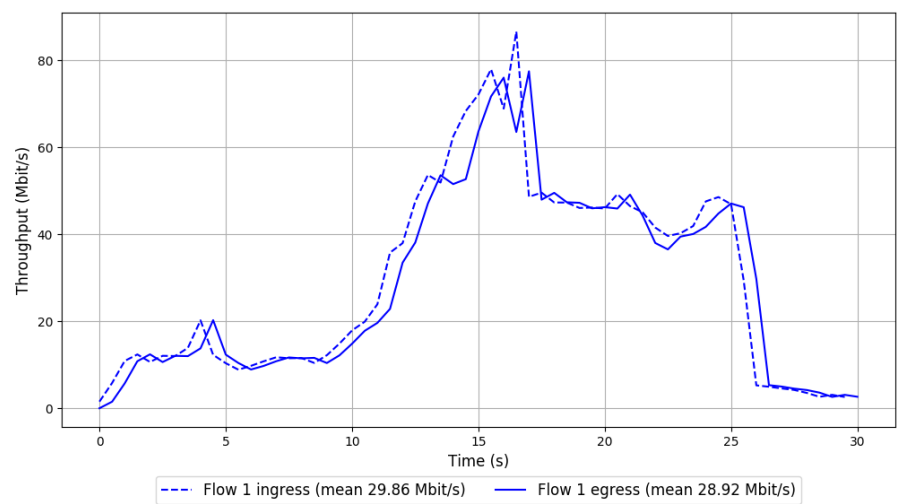
-- Flow 1:

Average throughput: 28.92 Mbit/s

95th percentile per-packet one-way delay: 9.281 ms

Loss rate: 3.14%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2018-11-29 20:39:33

End at: 2018-11-29 20:40:03

Local clock offset: -1.362 ms

Remote clock offset: 1.549 ms

Below is generated by plot.py at 2018-11-29 22:02:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 59.37 Mbit/s

95th percentile per-packet one-way delay: 4.126 ms

Loss rate: 7.69%

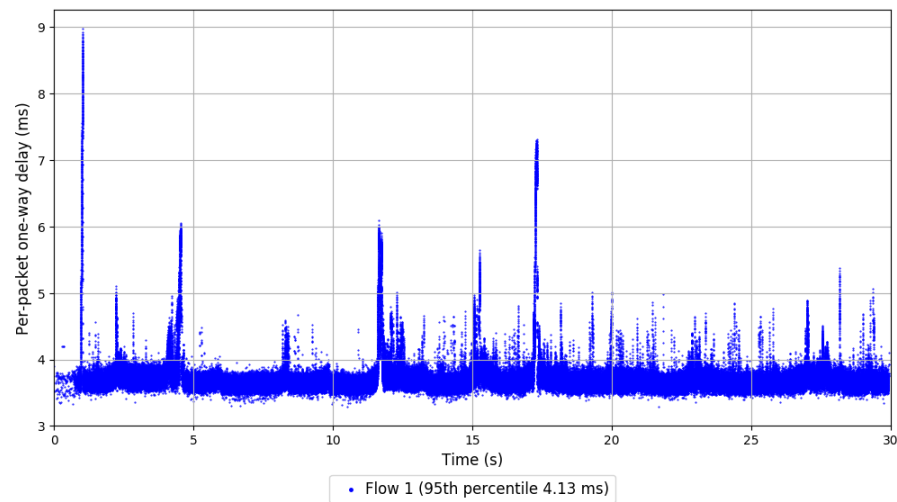
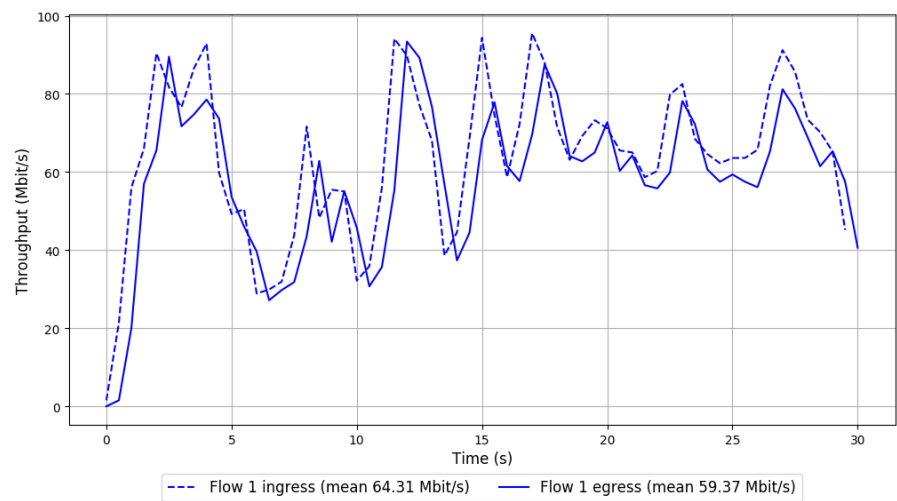
-- Flow 1:

Average throughput: 59.37 Mbit/s

95th percentile per-packet one-way delay: 4.126 ms

Loss rate: 7.69%

Run 2: Report of PCC-Vivace — Data Link

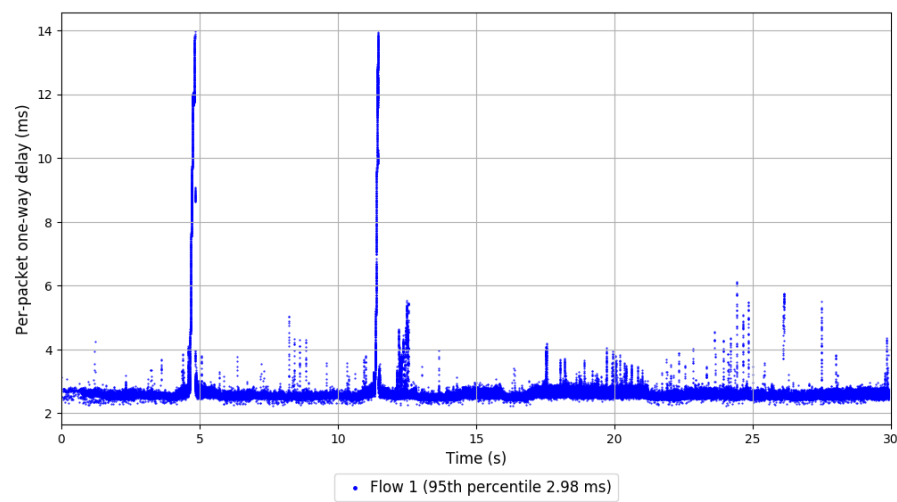
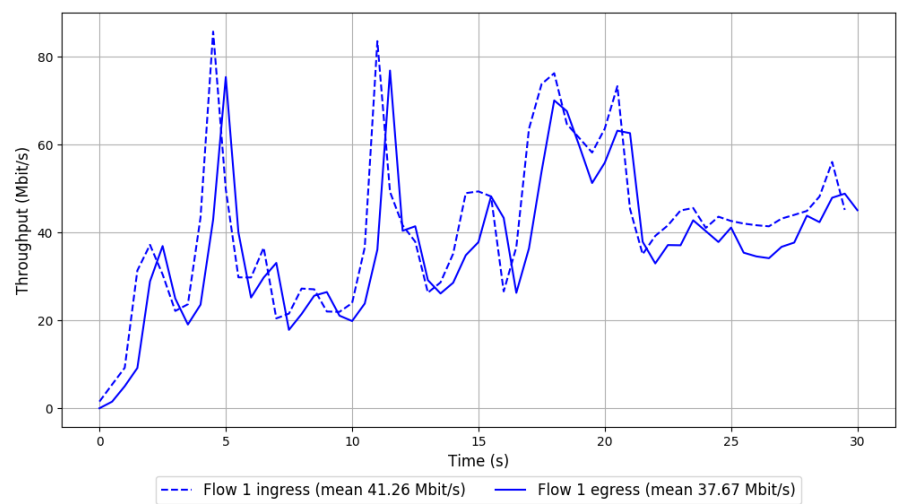


Run 3: Statistics of PCC-Vivace

Start at: 2018-11-29 21:00:01
End at: 2018-11-29 21:00:31
Local clock offset: -2.842 ms
Remote clock offset: -0.013 ms

Below is generated by plot.py at 2018-11-29 22:02:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 37.67 Mbit/s
95th percentile per-packet one-way delay: 2.981 ms
Loss rate: 8.70%
-- Flow 1:
Average throughput: 37.67 Mbit/s
95th percentile per-packet one-way delay: 2.981 ms
Loss rate: 8.70%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2018-11-29 21:20:20

End at: 2018-11-29 21:20:50

Local clock offset: -7.389 ms

Remote clock offset: 0.231 ms

Below is generated by plot.py at 2018-11-29 22:02:34

Datalink statistics

-- Total of 1 flow:

Average throughput: 66.15 Mbit/s

95th percentile per-packet one-way delay: 5.201 ms

Loss rate: 6.39%

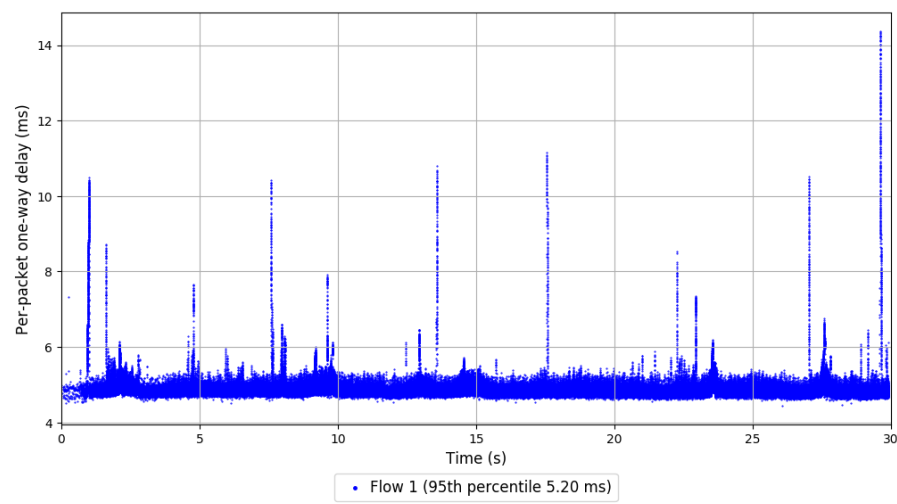
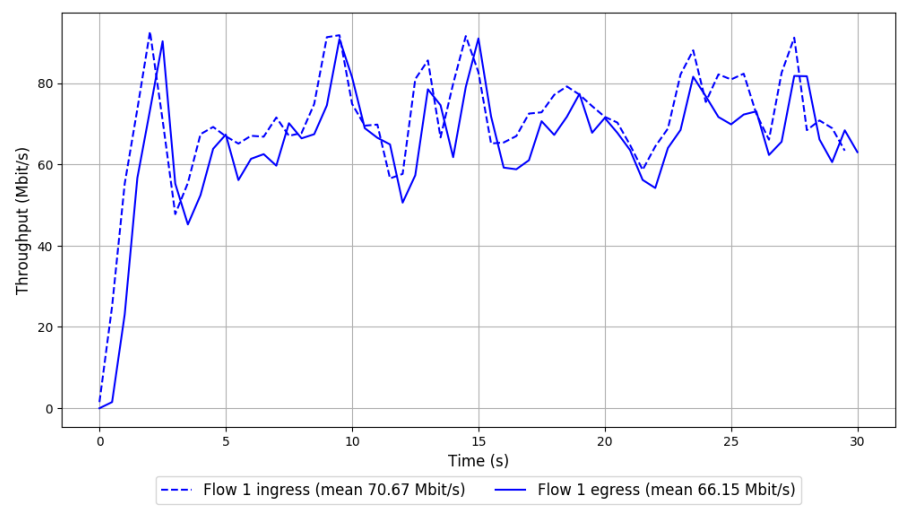
-- Flow 1:

Average throughput: 66.15 Mbit/s

95th percentile per-packet one-way delay: 5.201 ms

Loss rate: 6.39%

Run 4: Report of PCC-Vivace — Data Link

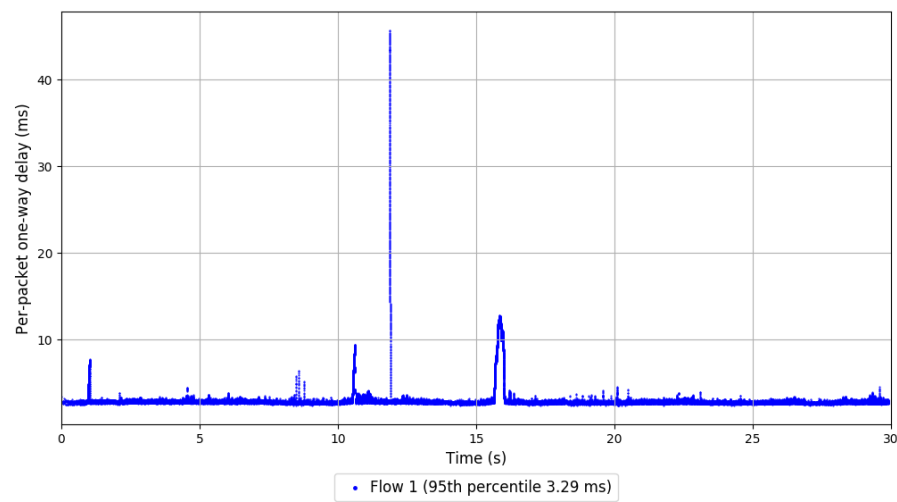
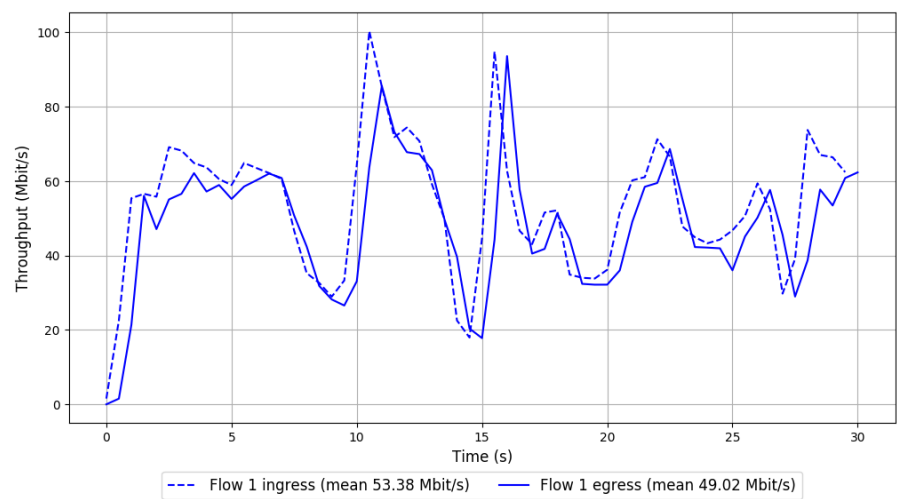


Run 5: Statistics of PCC-Vivace

Start at: 2018-11-29 21:40:36
End at: 2018-11-29 21:41:06
Local clock offset: -9.374 ms
Remote clock offset: -0.516 ms

Below is generated by plot.py at 2018-11-29 22:02:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 49.02 Mbit/s
95th percentile per-packet one-way delay: 3.295 ms
Loss rate: 8.17%
-- Flow 1:
Average throughput: 49.02 Mbit/s
95th percentile per-packet one-way delay: 3.295 ms
Loss rate: 8.17%

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2018-11-29 20:30:25

End at: 2018-11-29 20:30:55

Local clock offset: -4.586 ms

Remote clock offset: 1.295 ms

Below is generated by plot.py at 2018-11-29 22:02:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.55 Mbit/s

95th percentile per-packet one-way delay: 9.779 ms

Loss rate: 3.17%

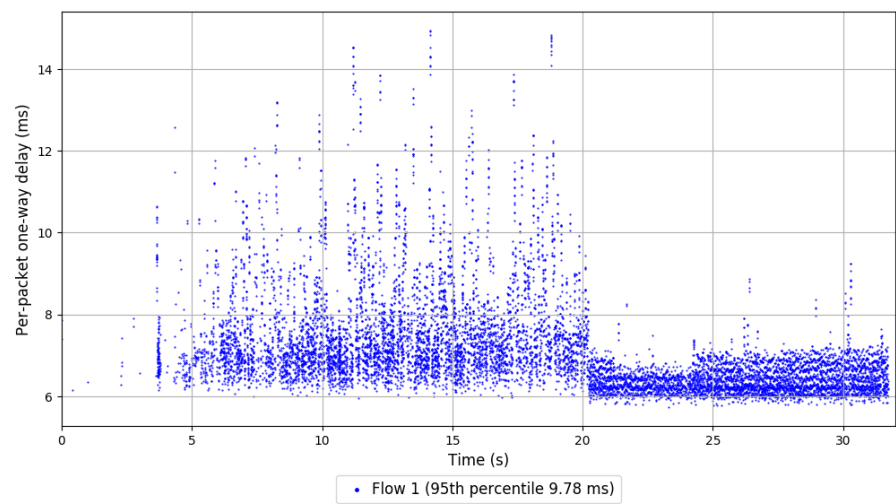
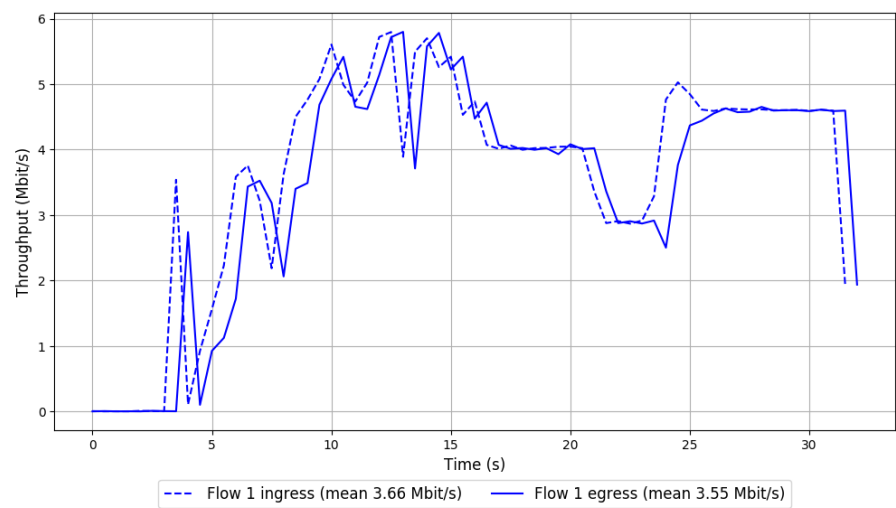
-- Flow 1:

Average throughput: 3.55 Mbit/s

95th percentile per-packet one-way delay: 9.779 ms

Loss rate: 3.17%

Run 1: Report of WebRTC media — Data Link

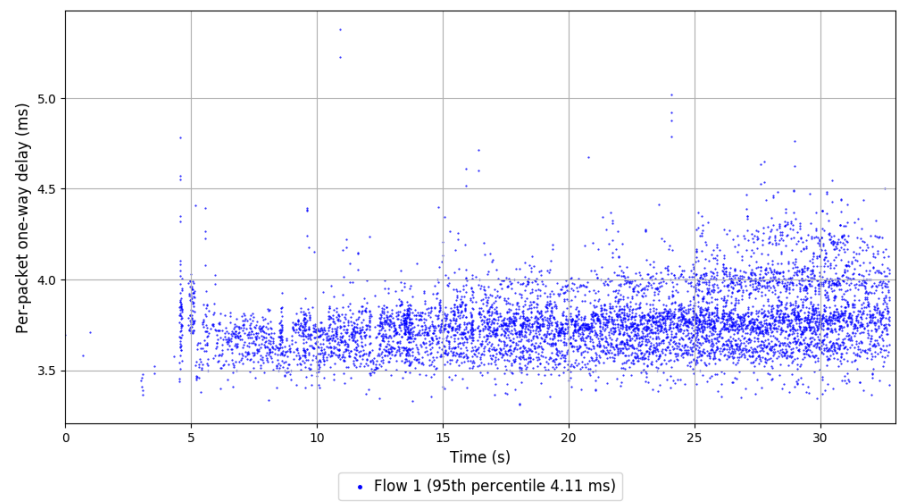
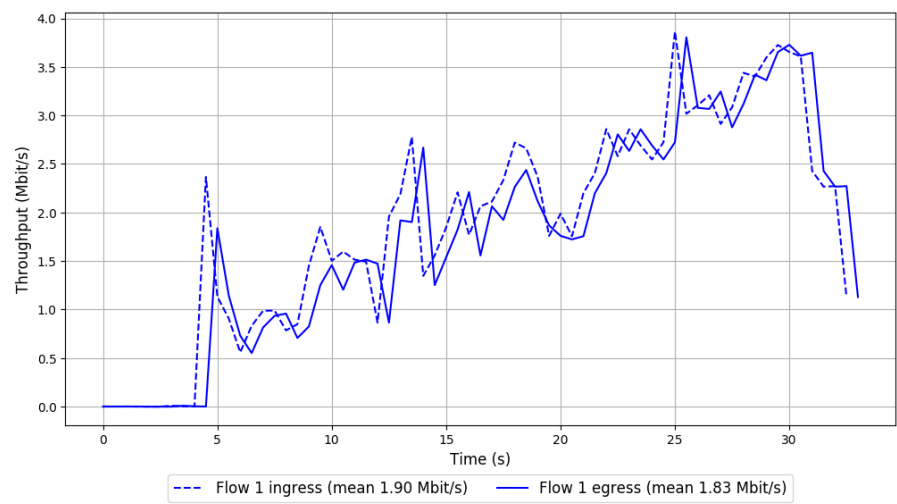


Run 2: Statistics of WebRTC media

Start at: 2018-11-29 20:51:00
End at: 2018-11-29 20:51:30
Local clock offset: -3.463 ms
Remote clock offset: -0.032 ms

Below is generated by plot.py at 2018-11-29 22:02:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.83 Mbit/s
95th percentile per-packet one-way delay: 4.111 ms
Loss rate: 3.66%
-- Flow 1:
Average throughput: 1.83 Mbit/s
95th percentile per-packet one-way delay: 4.111 ms
Loss rate: 3.66%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-11-29 21:11:17

End at: 2018-11-29 21:11:47

Local clock offset: -5.361 ms

Remote clock offset: 0.019 ms

Below is generated by plot.py at 2018-11-29 22:02:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.17 Mbit/s

95th percentile per-packet one-way delay: 4.329 ms

Loss rate: 0.11%

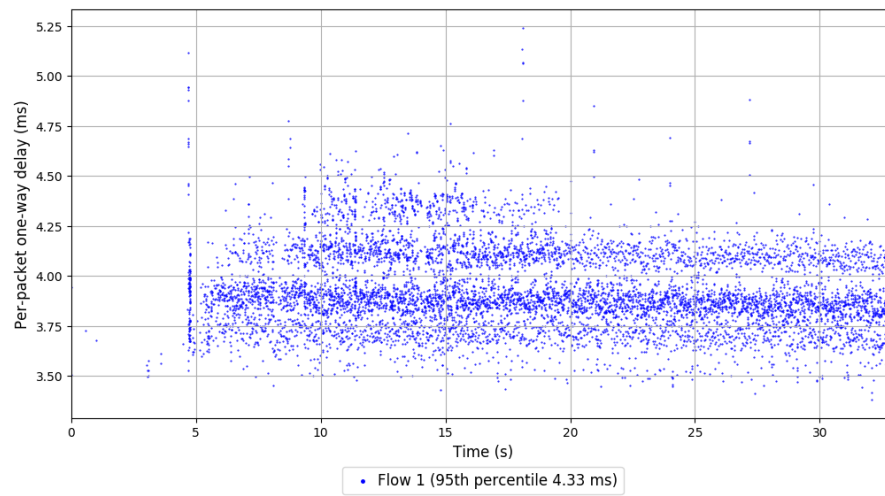
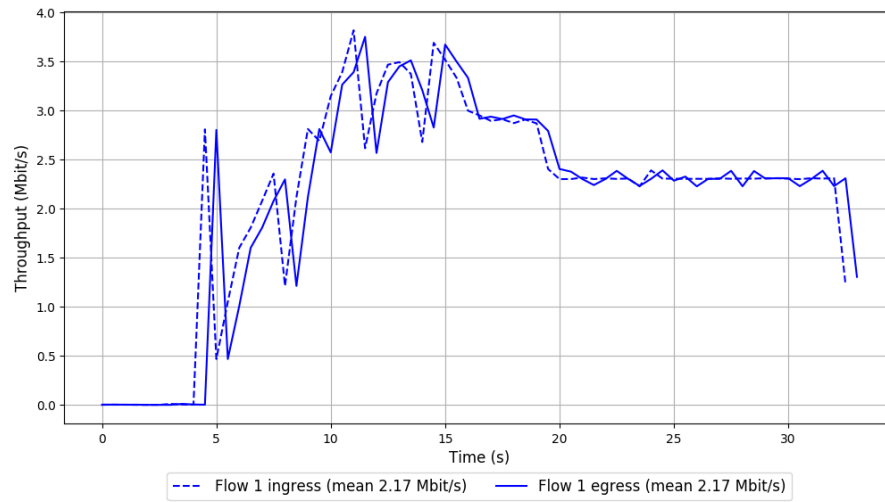
-- Flow 1:

Average throughput: 2.17 Mbit/s

95th percentile per-packet one-way delay: 4.329 ms

Loss rate: 0.11%

Run 3: Report of WebRTC media — Data Link

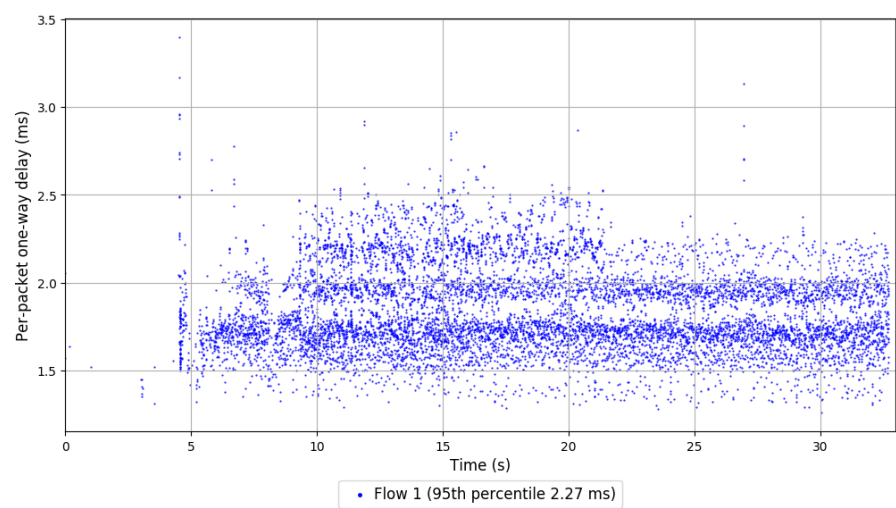
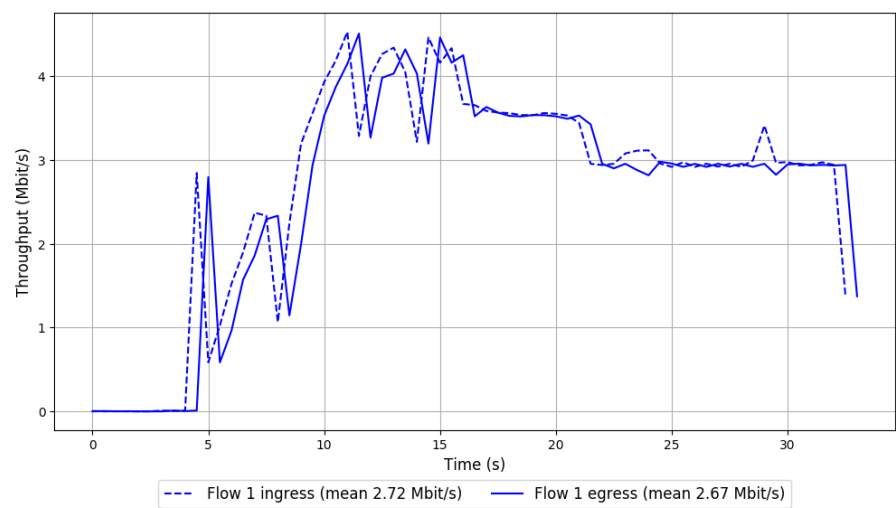


Run 4: Statistics of WebRTC media

Start at: 2018-11-29 21:31:34
End at: 2018-11-29 21:32:04
Local clock offset: -13.824 ms
Remote clock offset: -8.253 ms

Below is generated by plot.py at 2018-11-29 22:02:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.67 Mbit/s
95th percentile per-packet one-way delay: 2.267 ms
Loss rate: 1.65%
-- Flow 1:
Average throughput: 2.67 Mbit/s
95th percentile per-packet one-way delay: 2.267 ms
Loss rate: 1.65%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-11-29 21:52:08
End at: 2018-11-29 21:52:38
Local clock offset: -2.131 ms
Remote clock offset: -1.506 ms

Below is generated by plot.py at 2018-11-29 22:02:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 4.249 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 4.249 ms
Loss rate: 0.02%

Run 5: Report of WebRTC media — Data Link

