

Pantheon Report

Generated at 2018-11-15 09:55:36 (UTC).

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

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.

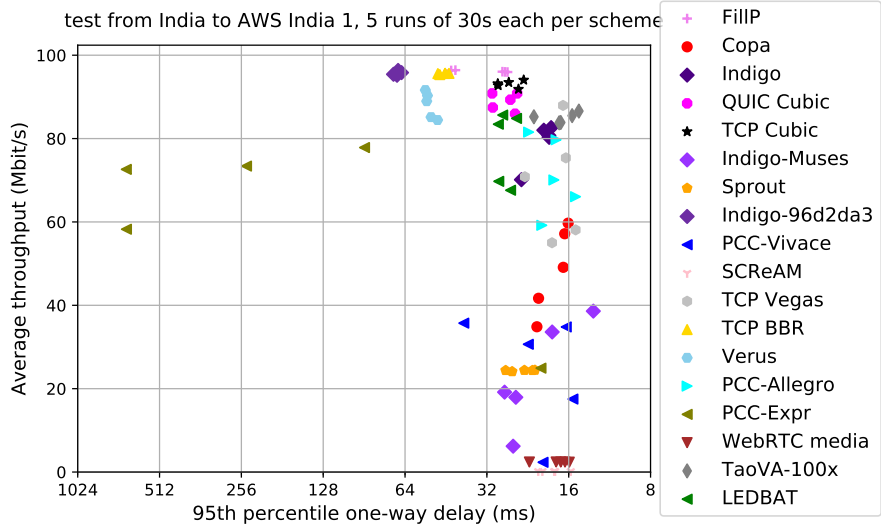
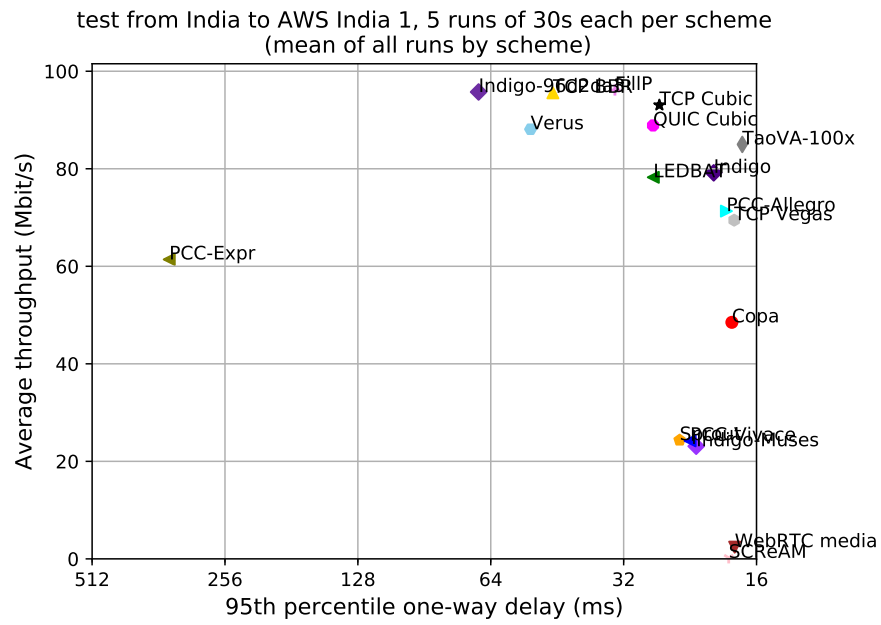
System info:

```
Linux 4.15.0-1023-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 @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
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-quic @ 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



scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	95.57	46.29	3.77
Copa	5	48.51	18.20	0.10
TCP Cubic	5	93.06	26.56	0.10
FillP	5	96.15	33.49	0.31
Indigo	5	79.16	20.01	0.08
Indigo-96d2da3	5	95.75	68.20	1.75
LEDBAT	5	78.25	27.42	0.10
Indigo-Muses	5	23.10	21.92	0.04
PCC-Allegro	5	71.32	18.72	0.09
PCC-Expr	5	61.41	342.44	1.95
QUIC Cubic	5	88.88	27.45	0.11
SCReAM	5	0.21	18.50	0.10
Sprout	5	24.35	23.90	0.11
TaoVA-100x	5	84.99	17.24	0.08
TCP Vegas	5	69.45	17.98	0.09
Verus	5	88.10	52.01	0.29
PCC-Vivace	5	24.21	22.63	0.16
WebRTC media	5	2.40	17.93	0.08

Run 1: Statistics of TCP BBR

Start at: 2018-11-15 08:14:12

End at: 2018-11-15 08:14:42

Local clock offset: 2.635 ms

Remote clock offset: -1.337 ms

Below is generated by plot.py at 2018-11-15 09:46:43

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.64 Mbit/s

95th percentile per-packet one-way delay: 44.112 ms

Loss rate: 3.77%

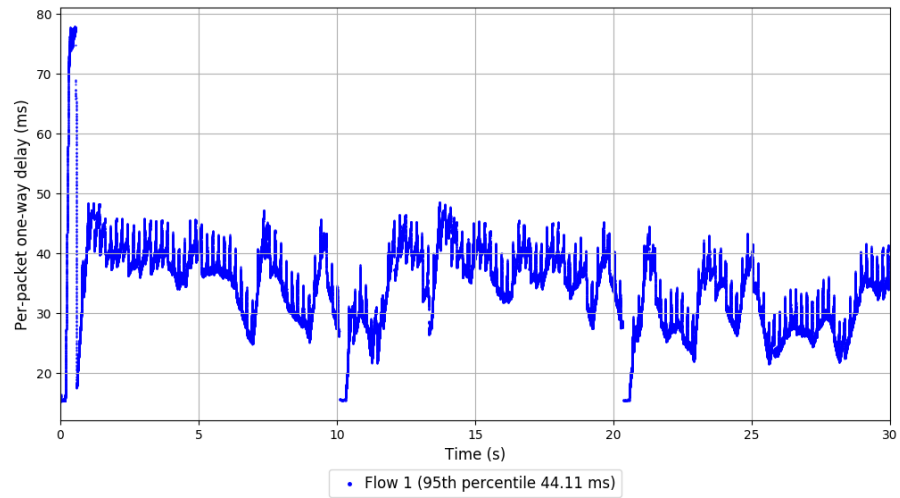
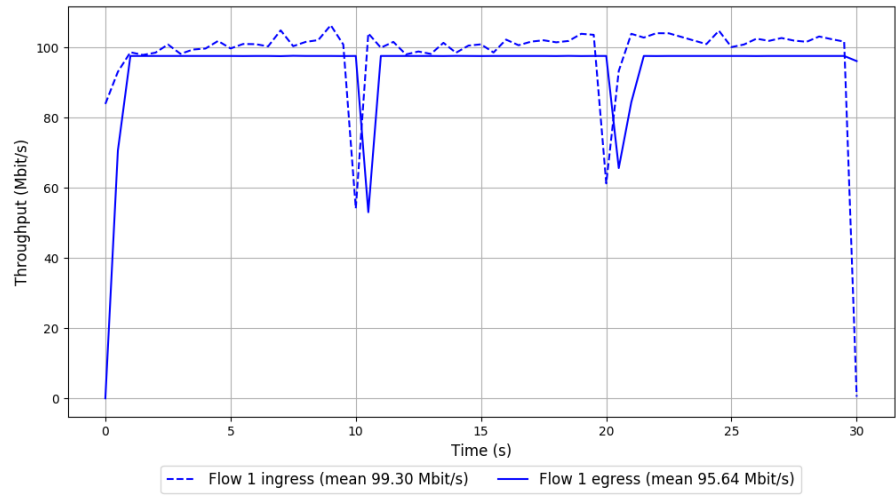
-- Flow 1:

Average throughput: 95.64 Mbit/s

95th percentile per-packet one-way delay: 44.112 ms

Loss rate: 3.77%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-11-15 08:36:14

End at: 2018-11-15 08:36:44

Local clock offset: 2.098 ms

Remote clock offset: -3.171 ms

Below is generated by plot.py at 2018-11-15 09:46:43

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.61 Mbit/s

95th percentile per-packet one-way delay: 45.557 ms

Loss rate: 3.29%

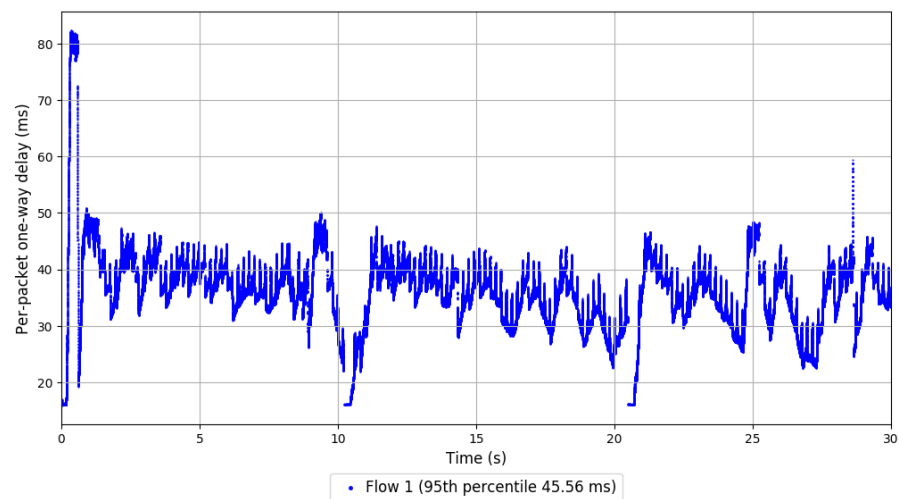
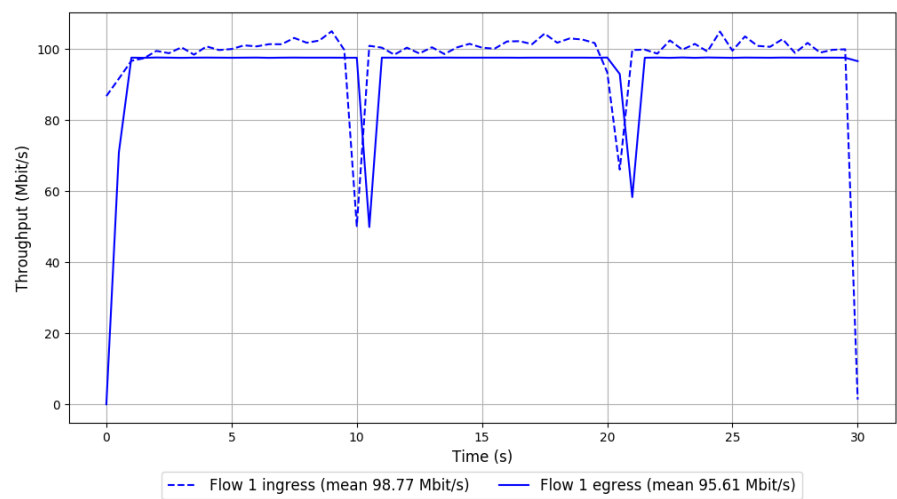
-- Flow 1:

Average throughput: 95.61 Mbit/s

95th percentile per-packet one-way delay: 45.557 ms

Loss rate: 3.29%

Run 2: Report of TCP BBR — Data Link

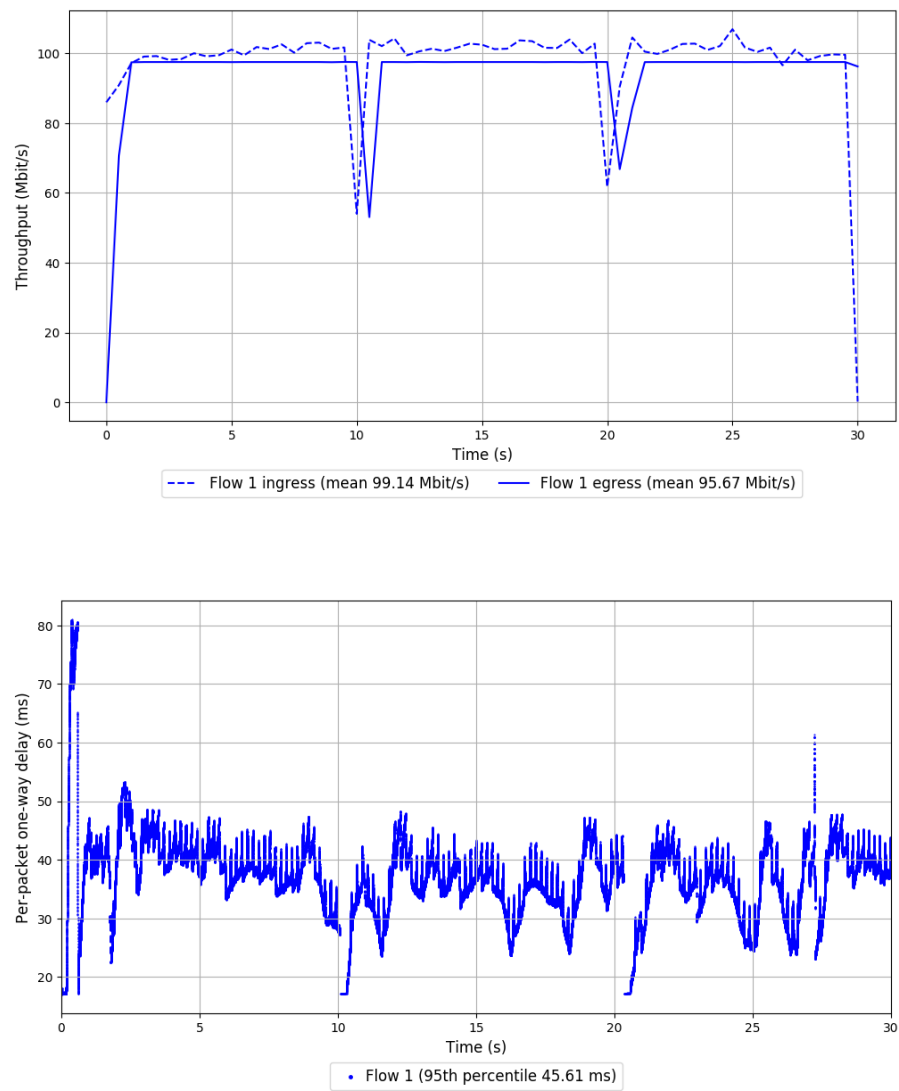


Run 3: Statistics of TCP BBR

Start at: 2018-11-15 08:57:51
End at: 2018-11-15 08:58:21
Local clock offset: 1.908 ms
Remote clock offset: -5.146 ms

Below is generated by plot.py at 2018-11-15 09:46:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.67 Mbit/s
95th percentile per-packet one-way delay: 45.609 ms
Loss rate: 3.58%
-- Flow 1:
Average throughput: 95.67 Mbit/s
95th percentile per-packet one-way delay: 45.609 ms
Loss rate: 3.58%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-11-15 09:19:58

End at: 2018-11-15 09:20:28

Local clock offset: 2.421 ms

Remote clock offset: -7.789 ms

Below is generated by plot.py at 2018-11-15 09:46:43

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.59 Mbit/s

95th percentile per-packet one-way delay: 48.457 ms

Loss rate: 4.46%

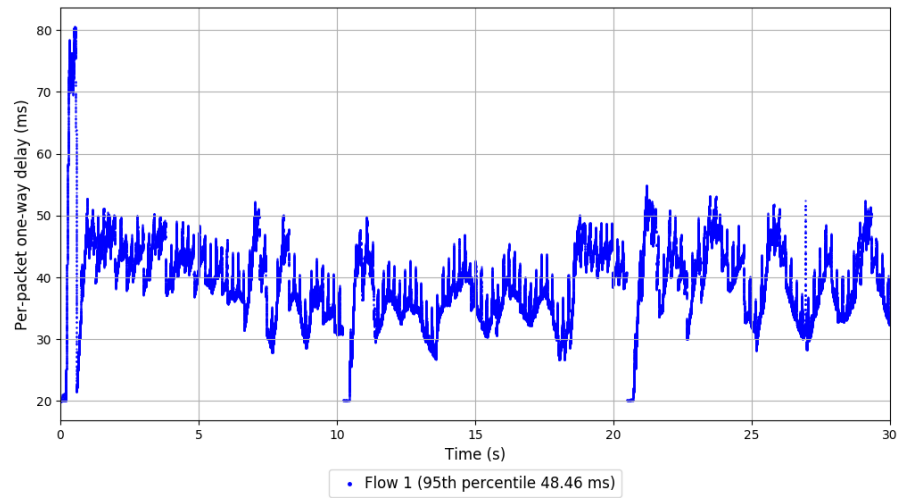
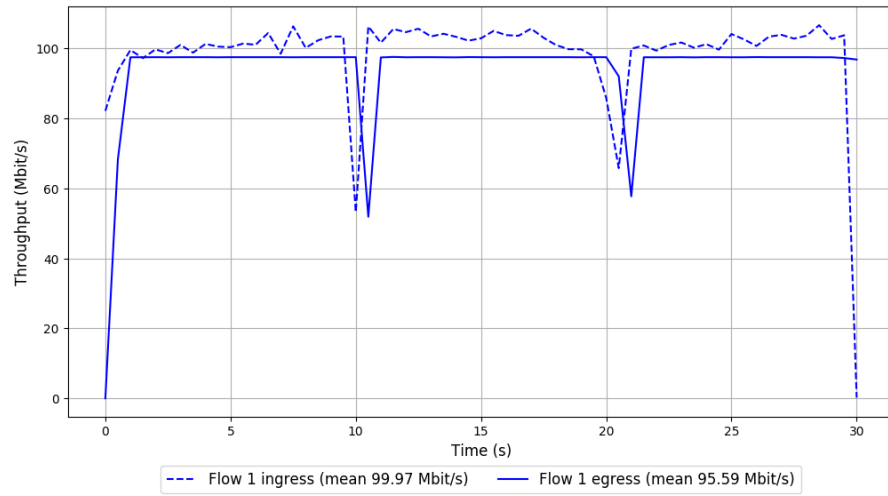
-- Flow 1:

Average throughput: 95.59 Mbit/s

95th percentile per-packet one-way delay: 48.457 ms

Loss rate: 4.46%

Run 4: Report of TCP BBR — Data Link

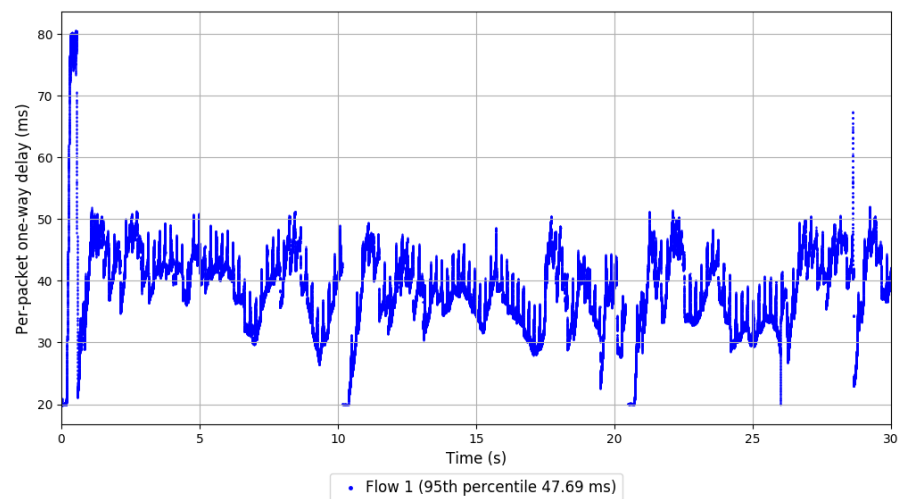
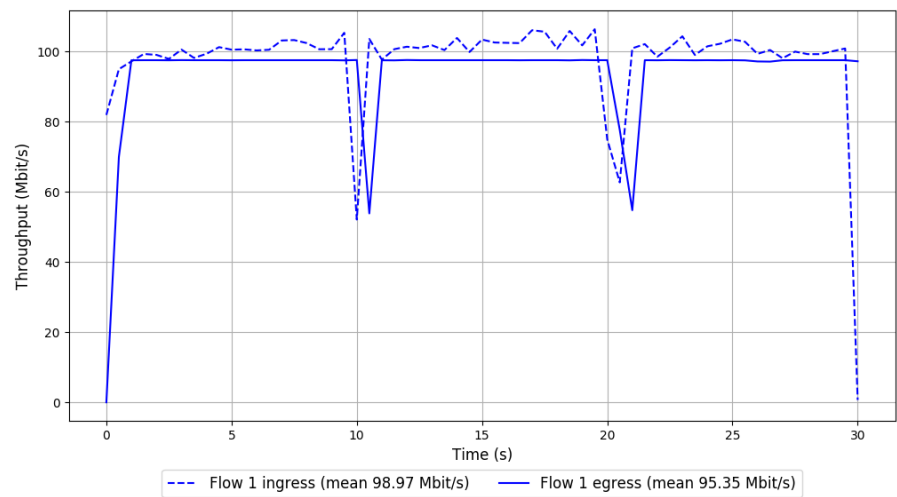


Run 5: Statistics of TCP BBR

Start at: 2018-11-15 09:43:19
End at: 2018-11-15 09:43:49
Local clock offset: 3.328 ms
Remote clock offset: -6.312 ms

Below is generated by plot.py at 2018-11-15 09:46:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.35 Mbit/s
95th percentile per-packet one-way delay: 47.694 ms
Loss rate: 3.73%
-- Flow 1:
Average throughput: 95.35 Mbit/s
95th percentile per-packet one-way delay: 47.694 ms
Loss rate: 3.73%

Run 5: Report of TCP BBR — Data Link

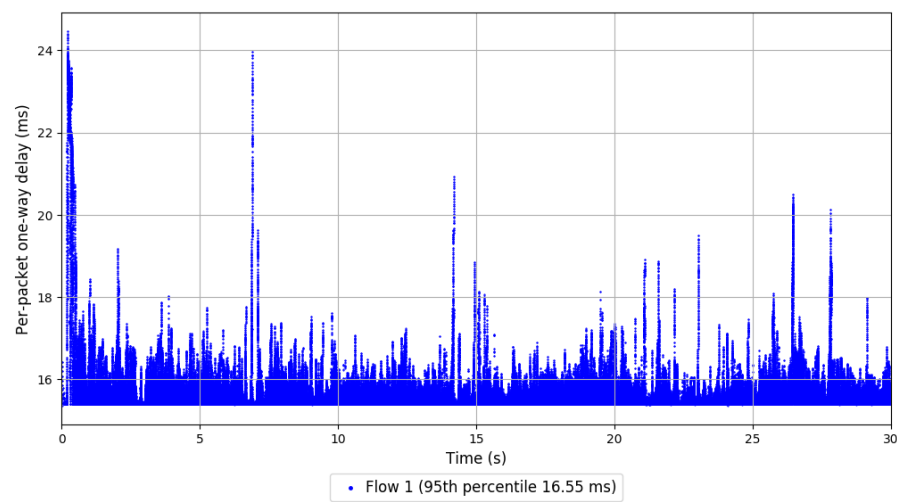
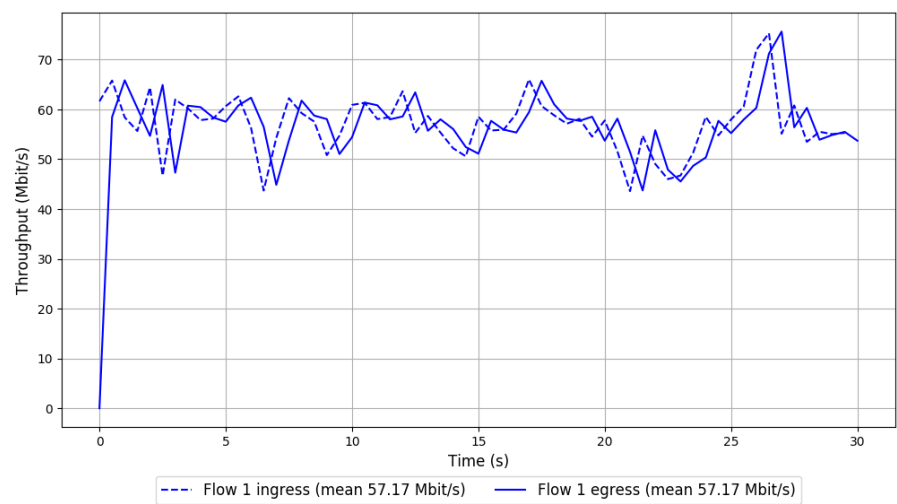


Run 1: Statistics of Copa

Start at: 2018-11-15 08:02:25
End at: 2018-11-15 08:02:55
Local clock offset: 2.248 ms
Remote clock offset: -1.444 ms

Below is generated by plot.py at 2018-11-15 09:46:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 57.17 Mbit/s
95th percentile per-packet one-way delay: 16.554 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 57.17 Mbit/s
95th percentile per-packet one-way delay: 16.554 ms
Loss rate: 0.09%

Run 1: Report of Copa — Data Link

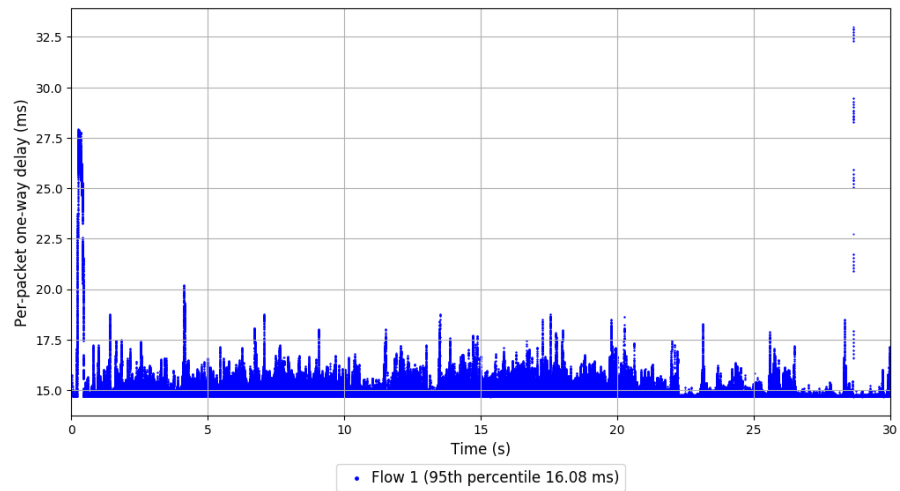
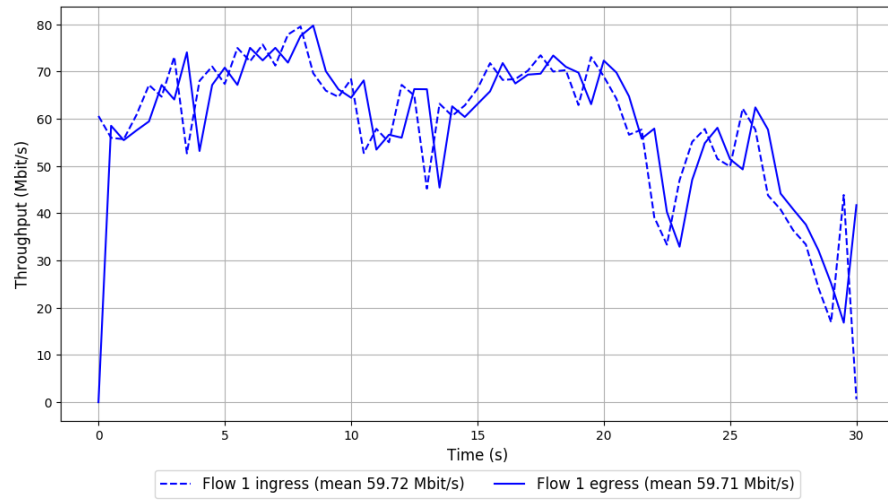


Run 2: Statistics of Copa

Start at: 2018-11-15 08:23:58
End at: 2018-11-15 08:24:28
Local clock offset: 1.883 ms
Remote clock offset: -1.659 ms

Below is generated by plot.py at 2018-11-15 09:46:53
Datalink statistics
-- Total of 1 flow:
Average throughput: 59.71 Mbit/s
95th percentile per-packet one-way delay: 16.077 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 59.71 Mbit/s
95th percentile per-packet one-way delay: 16.077 ms
Loss rate: 0.09%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-11-15 08:45:57

End at: 2018-11-15 08:46:27

Local clock offset: 1.808 ms

Remote clock offset: -3.7 ms

Below is generated by plot.py at 2018-11-15 09:46:53

Datalink statistics

-- Total of 1 flow:

Average throughput: 49.11 Mbit/s

95th percentile per-packet one-way delay: 16.752 ms

Loss rate: 0.10%

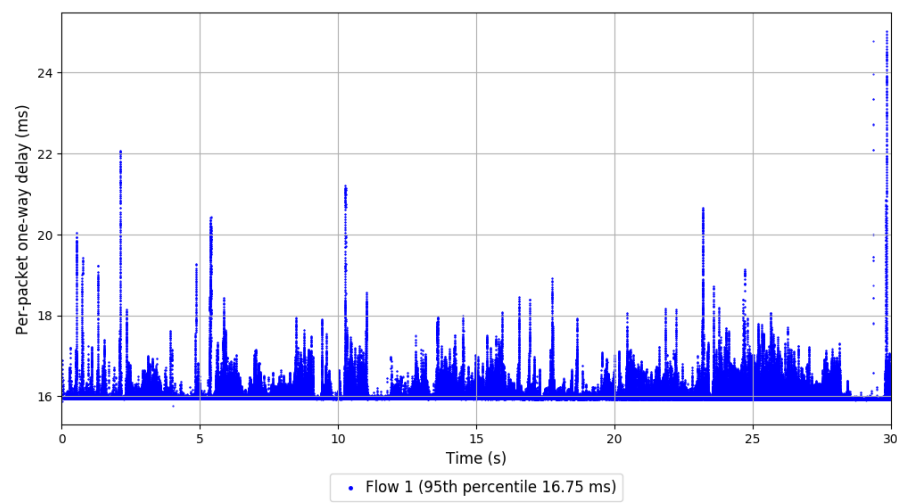
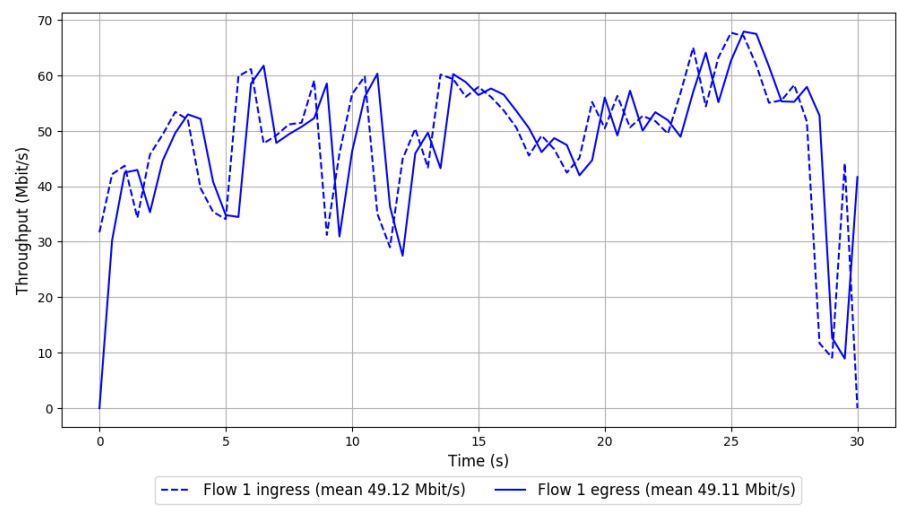
-- Flow 1:

Average throughput: 49.11 Mbit/s

95th percentile per-packet one-way delay: 16.752 ms

Loss rate: 0.10%

Run 3: Report of Copa — Data Link

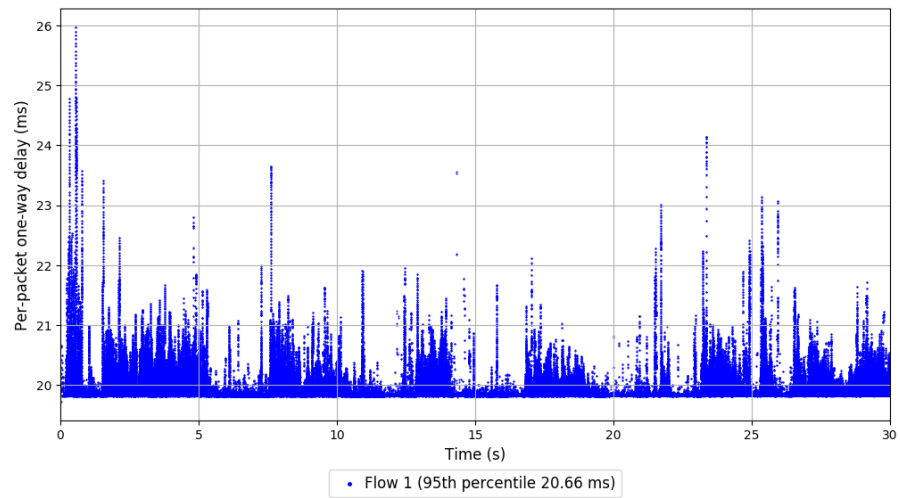
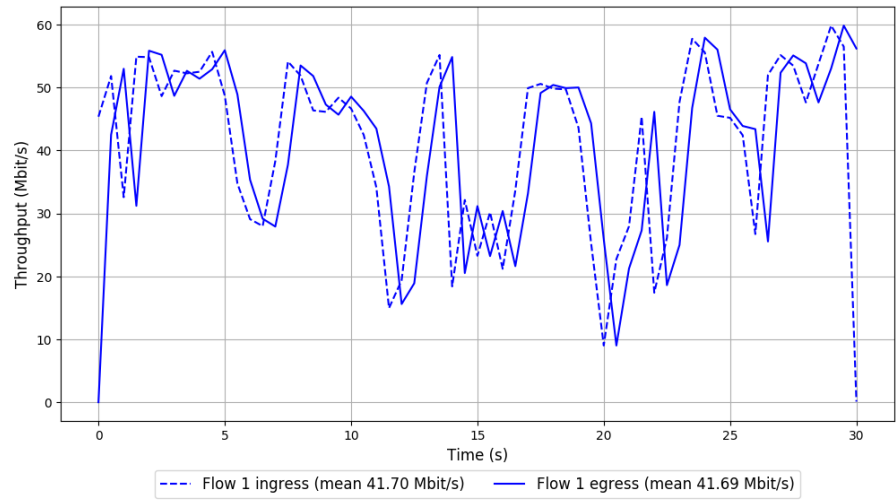


Run 4: Statistics of Copa

Start at: 2018-11-15 09:07:56
End at: 2018-11-15 09:08:26
Local clock offset: 2.011 ms
Remote clock offset: -8.256 ms

Below is generated by plot.py at 2018-11-15 09:47:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 41.69 Mbit/s
95th percentile per-packet one-way delay: 20.656 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 41.69 Mbit/s
95th percentile per-packet one-way delay: 20.656 ms
Loss rate: 0.12%

Run 4: Report of Copa — Data Link

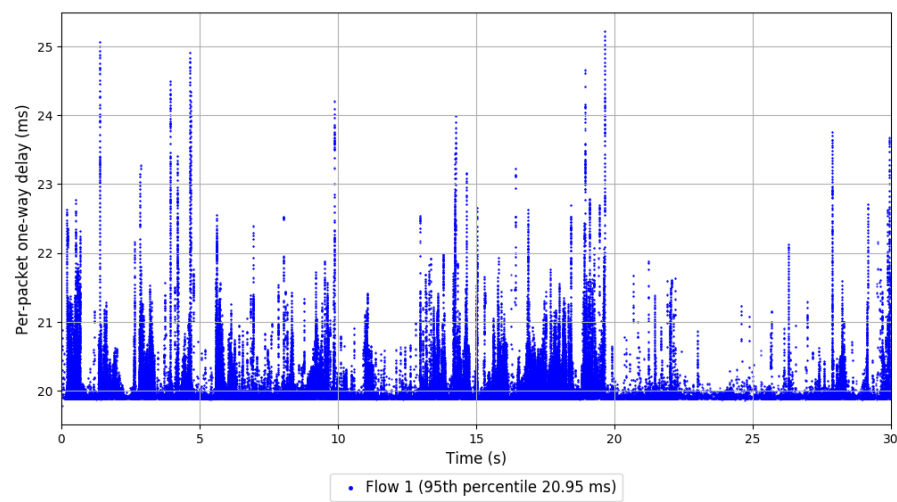
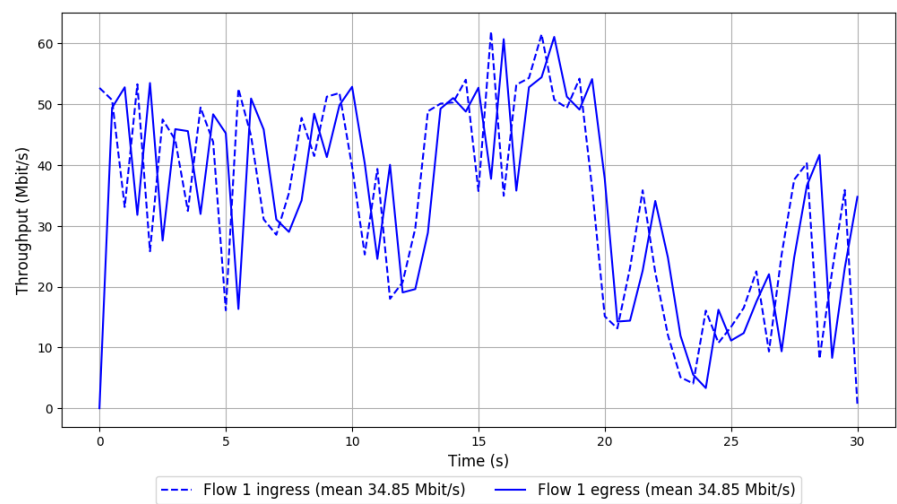


Run 5: Statistics of Copa

Start at: 2018-11-15 09:30:23
End at: 2018-11-15 09:30:53
Local clock offset: 2.875 ms
Remote clock offset: -6.834 ms

Below is generated by plot.py at 2018-11-15 09:47:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 34.85 Mbit/s
95th percentile per-packet one-way delay: 20.949 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 34.85 Mbit/s
95th percentile per-packet one-way delay: 20.949 ms
Loss rate: 0.09%

Run 5: Report of Copa — Data Link

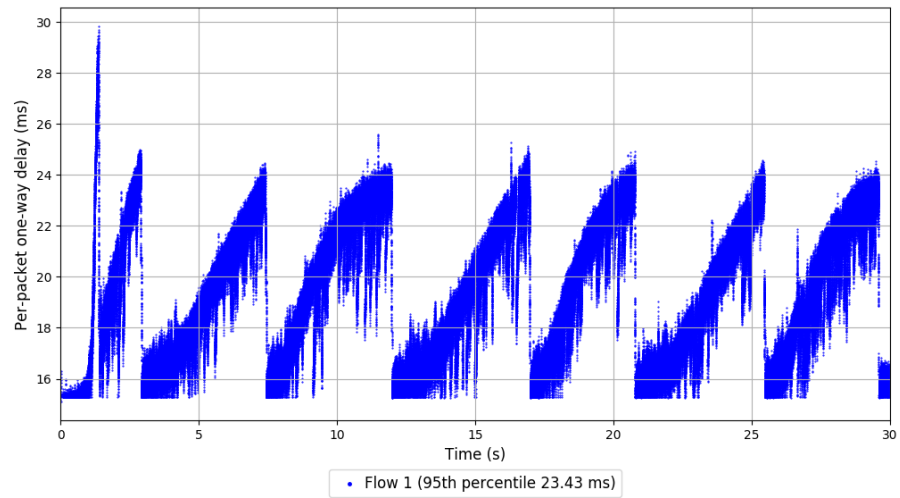
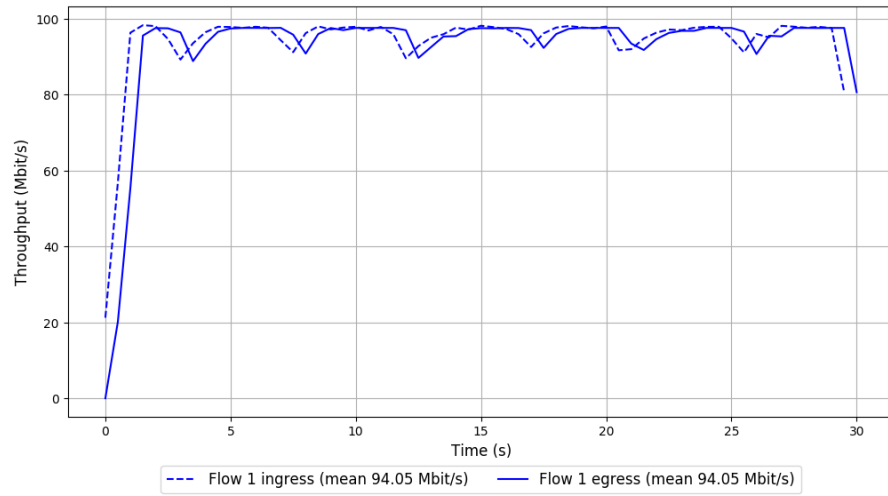


Run 1: Statistics of TCP Cubic

Start at: 2018-11-15 08:08:19
End at: 2018-11-15 08:08:49
Local clock offset: 2.15 ms
Remote clock offset: -1.431 ms

Below is generated by plot.py at 2018-11-15 09:47:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.05 Mbit/s
95th percentile per-packet one-way delay: 23.434 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 94.05 Mbit/s
95th percentile per-packet one-way delay: 23.434 ms
Loss rate: 0.08%

Run 1: Report of TCP Cubic — Data Link

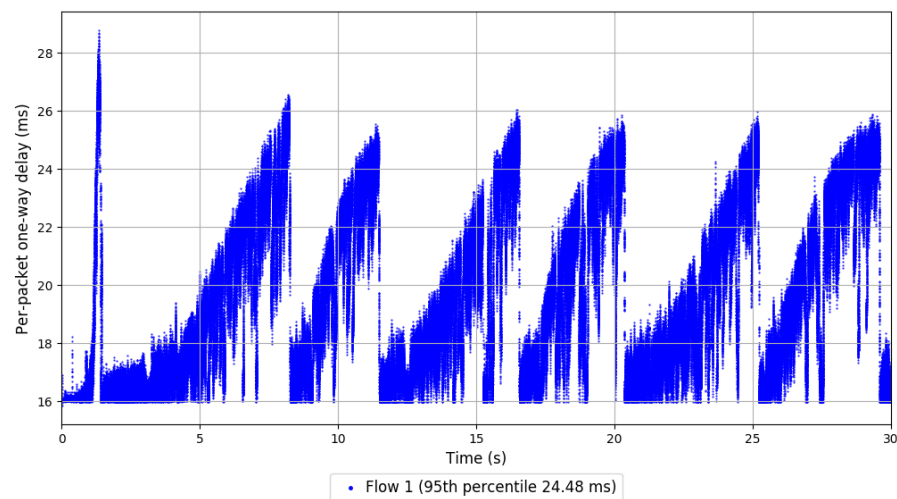
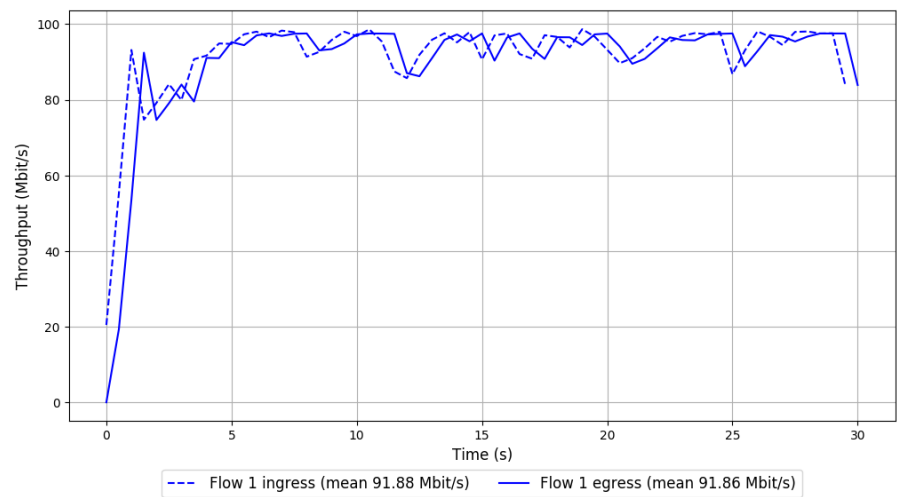


Run 2: Statistics of TCP Cubic

Start at: 2018-11-15 08:30:19
End at: 2018-11-15 08:30:49
Local clock offset: 2.188 ms
Remote clock offset: -2.848 ms

Below is generated by plot.py at 2018-11-15 09:47:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 91.86 Mbit/s
95th percentile per-packet one-way delay: 24.485 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 91.86 Mbit/s
95th percentile per-packet one-way delay: 24.485 ms
Loss rate: 0.11%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-11-15 08:52:01

End at: 2018-11-15 08:52:31

Local clock offset: 3.043 ms

Remote clock offset: -4.79 ms

Below is generated by plot.py at 2018-11-15 09:47:44

Datalink statistics

-- Total of 1 flow:

Average throughput: 93.49 Mbit/s

95th percentile per-packet one-way delay: 26.593 ms

Loss rate: 0.11%

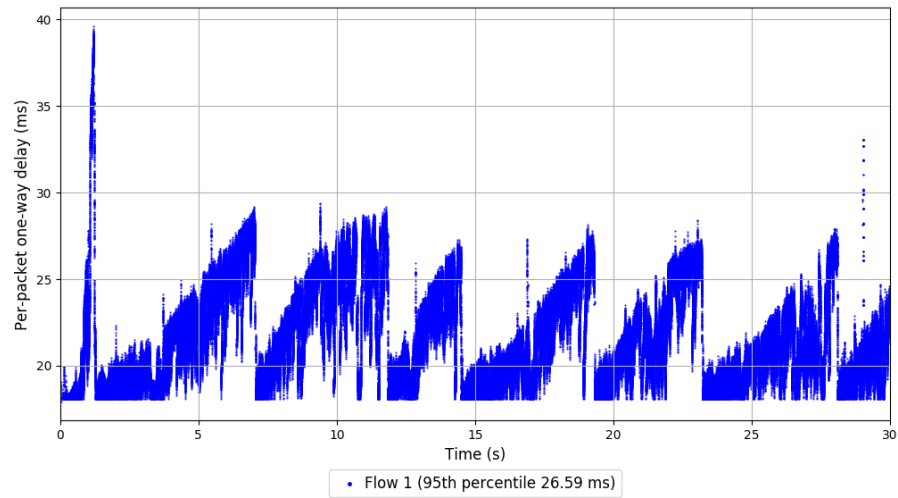
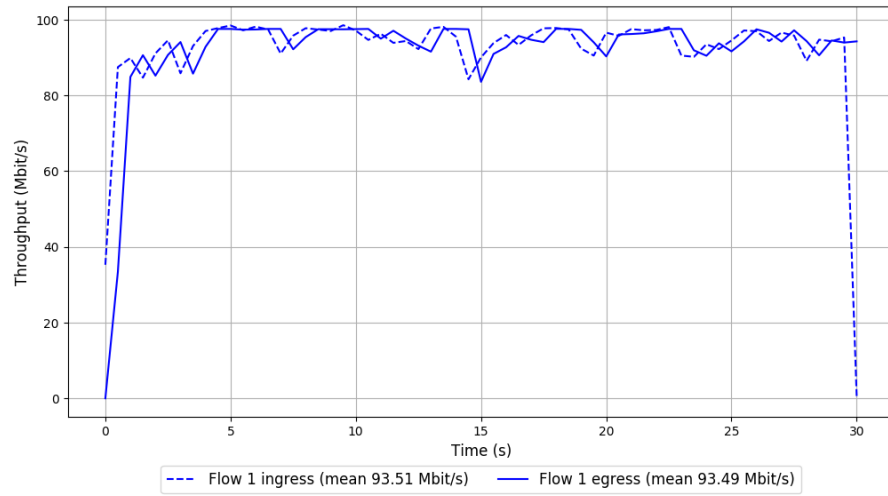
-- Flow 1:

Average throughput: 93.49 Mbit/s

95th percentile per-packet one-way delay: 26.593 ms

Loss rate: 0.11%

Run 3: Report of TCP Cubic — Data Link

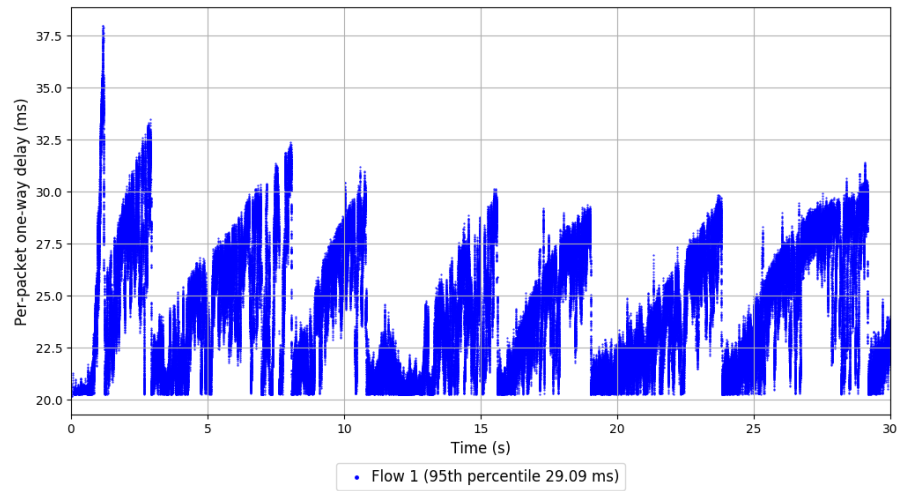
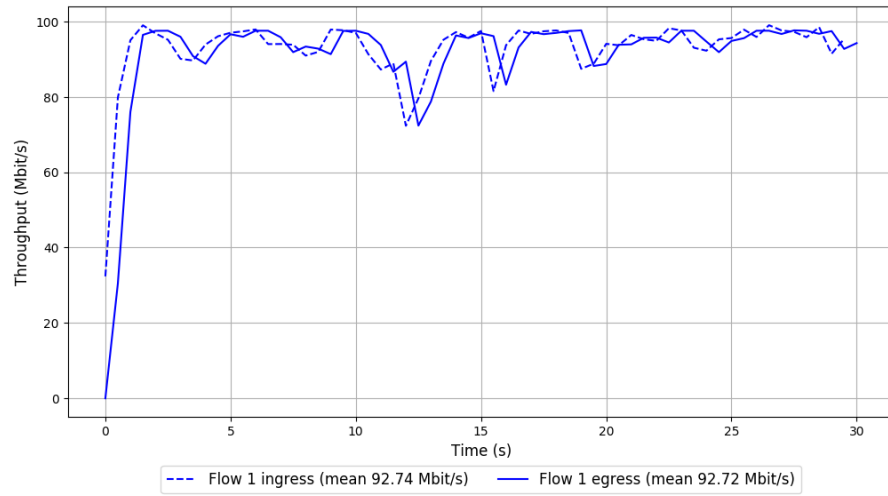


Run 4: Statistics of TCP Cubic

Start at: 2018-11-15 09:14:00
End at: 2018-11-15 09:14:30
Local clock offset: 2.43 ms
Remote clock offset: -8.278 ms

Below is generated by plot.py at 2018-11-15 09:47:44
Datalink statistics
-- Total of 1 flow:
Average throughput: 92.72 Mbit/s
95th percentile per-packet one-way delay: 29.091 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 92.72 Mbit/s
95th percentile per-packet one-way delay: 29.091 ms
Loss rate: 0.10%

Run 4: Report of TCP Cubic — Data Link

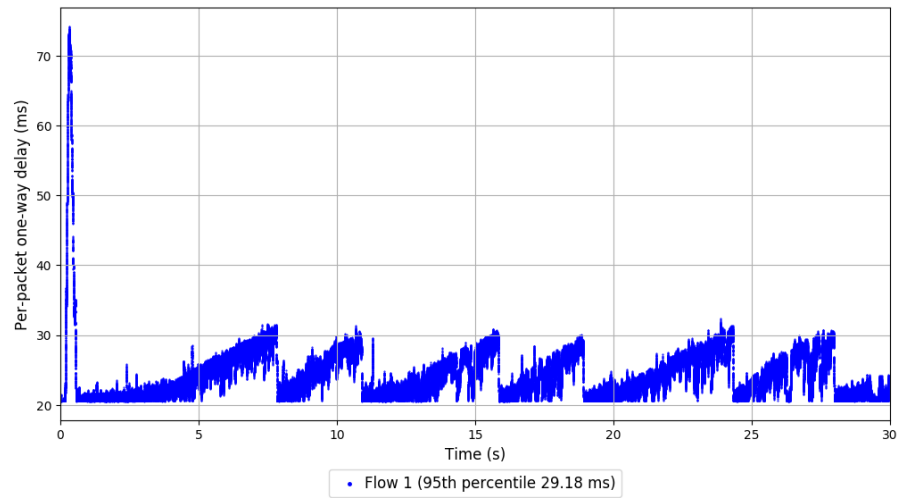
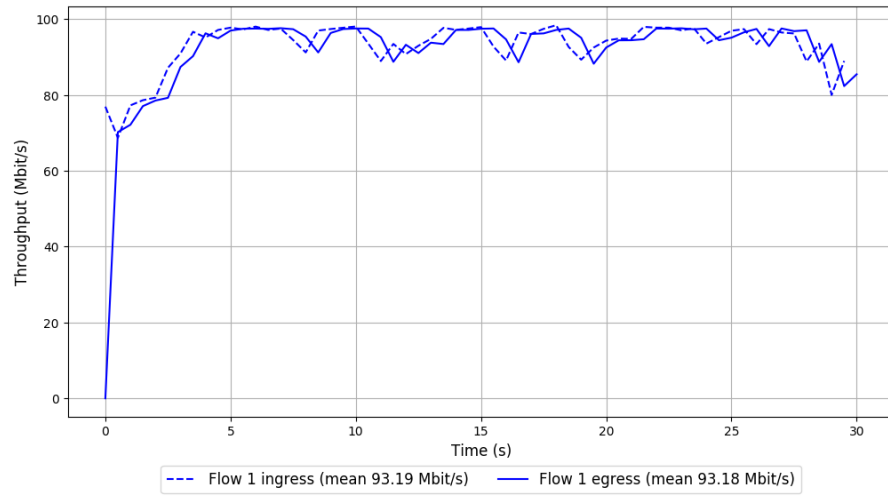


Run 5: Statistics of TCP Cubic

Start at: 2018-11-15 09:36:48
End at: 2018-11-15 09:37:18
Local clock offset: 2.989 ms
Remote clock offset: -7.331 ms

Below is generated by plot.py at 2018-11-15 09:47:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 93.18 Mbit/s
95th percentile per-packet one-way delay: 29.184 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 93.18 Mbit/s
95th percentile per-packet one-way delay: 29.184 ms
Loss rate: 0.10%

Run 5: Report of TCP Cubic — Data Link

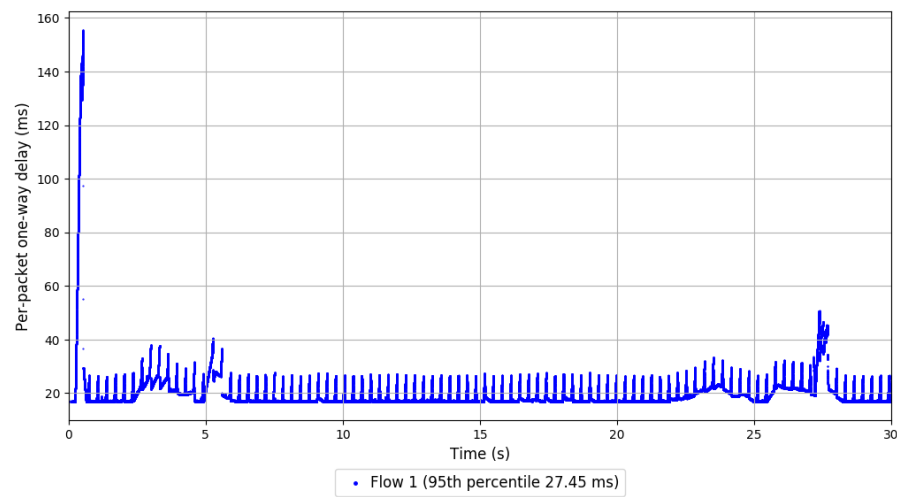
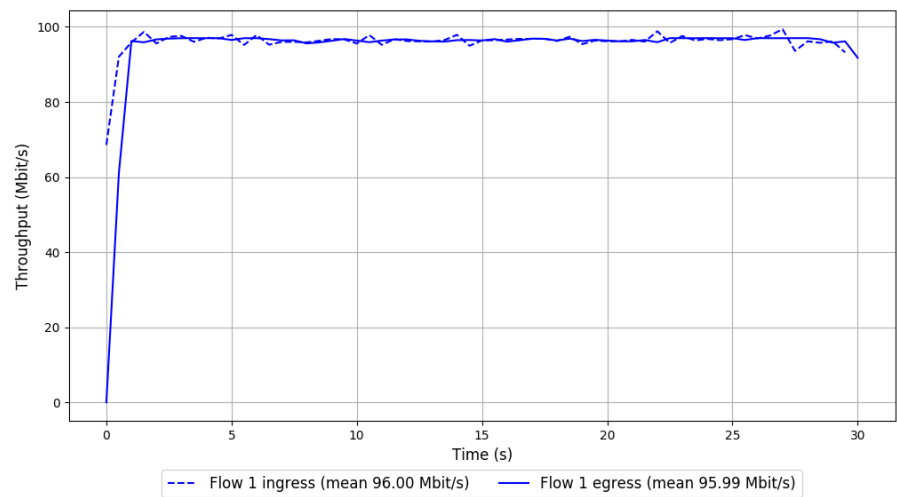


Run 1: Statistics of FillP

Start at: 2018-11-15 07:57:43
End at: 2018-11-15 07:58:13
Local clock offset: 2.704 ms
Remote clock offset: -2.435 ms

Below is generated by plot.py at 2018-11-15 09:48:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.99 Mbit/s
95th percentile per-packet one-way delay: 27.445 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 95.99 Mbit/s
95th percentile per-packet one-way delay: 27.445 ms
Loss rate: 0.09%

Run 1: Report of FillP — Data Link

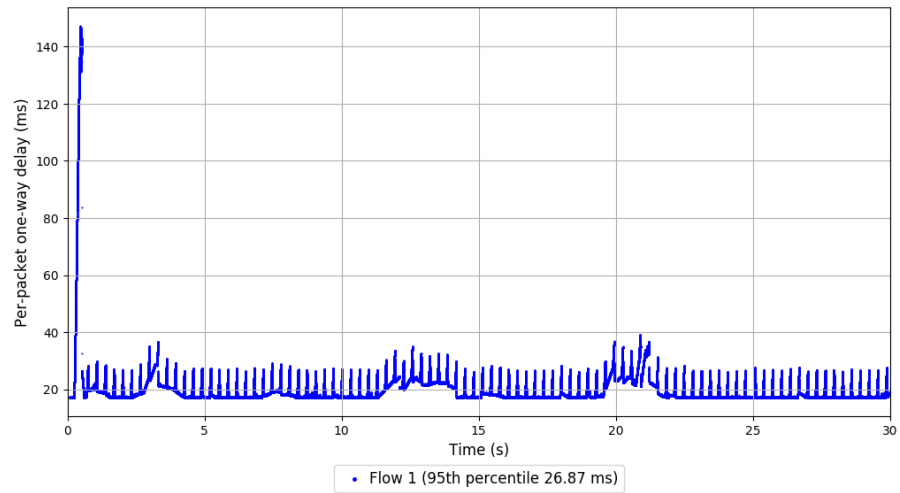
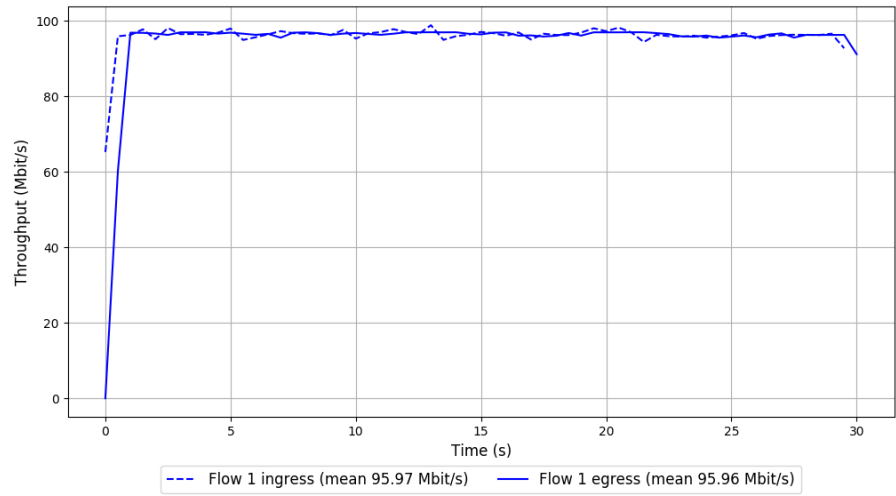


Run 2: Statistics of FillP

Start at: 2018-11-15 08:19:10
End at: 2018-11-15 08:19:40
Local clock offset: 4.078 ms
Remote clock offset: -1.832 ms

Below is generated by plot.py at 2018-11-15 09:48:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.96 Mbit/s
95th percentile per-packet one-way delay: 26.869 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 95.96 Mbit/s
95th percentile per-packet one-way delay: 26.869 ms
Loss rate: 0.09%

Run 2: Report of FillP — Data Link

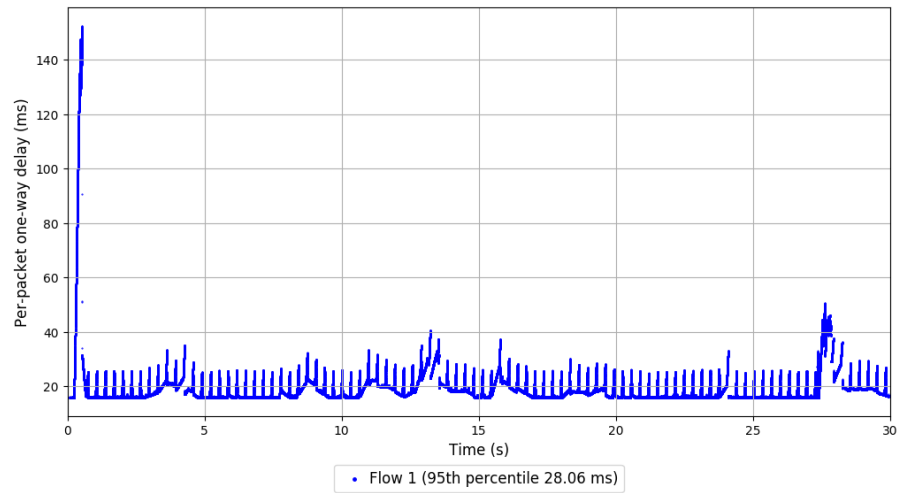
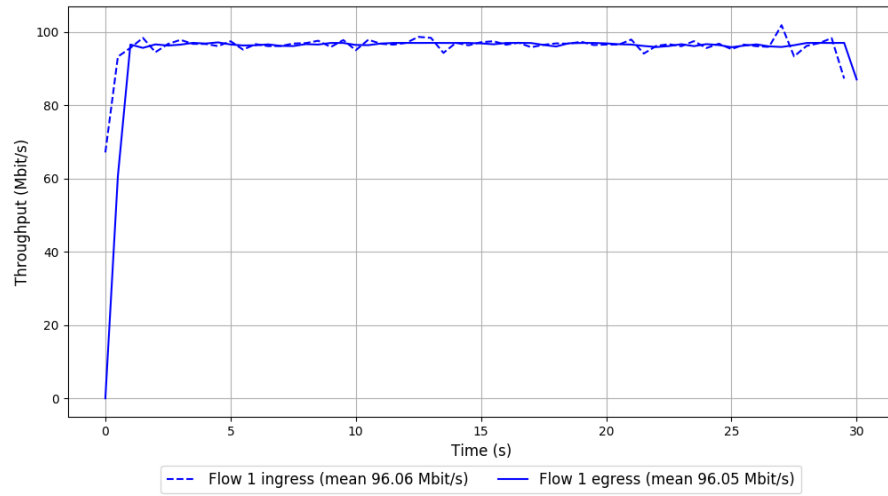


Run 3: Statistics of FillP

Start at: 2018-11-15 08:41:07
End at: 2018-11-15 08:41:37
Local clock offset: 2.332 ms
Remote clock offset: -3.083 ms

Below is generated by plot.py at 2018-11-15 09:48:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.05 Mbit/s
95th percentile per-packet one-way delay: 28.058 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 96.05 Mbit/s
95th percentile per-packet one-way delay: 28.058 ms
Loss rate: 0.10%

Run 3: Report of FillP — Data Link

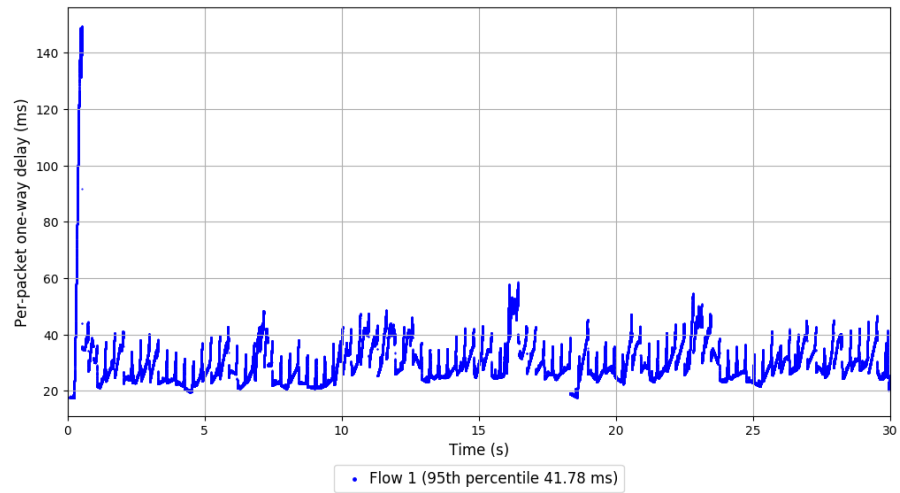
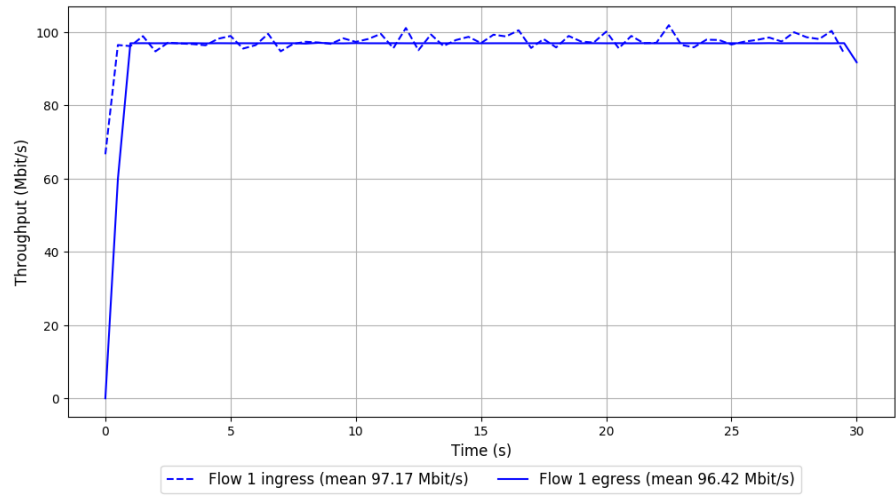


Run 4: Statistics of FillP

Start at: 2018-11-15 09:03:01
End at: 2018-11-15 09:03:31
Local clock offset: 4.257 ms
Remote clock offset: -3.744 ms

Below is generated by plot.py at 2018-11-15 09:49:05
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.42 Mbit/s
95th percentile per-packet one-way delay: 41.780 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 96.42 Mbit/s
95th percentile per-packet one-way delay: 41.780 ms
Loss rate: 0.86%

Run 4: Report of FillP — Data Link

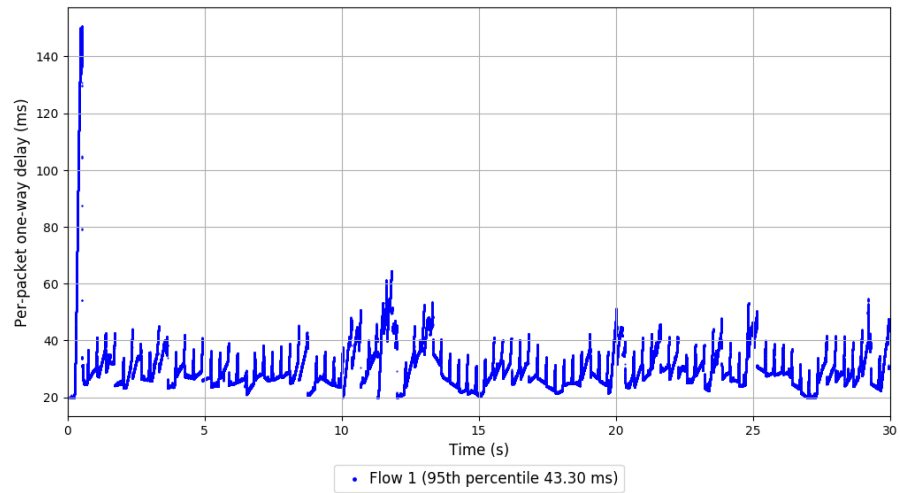
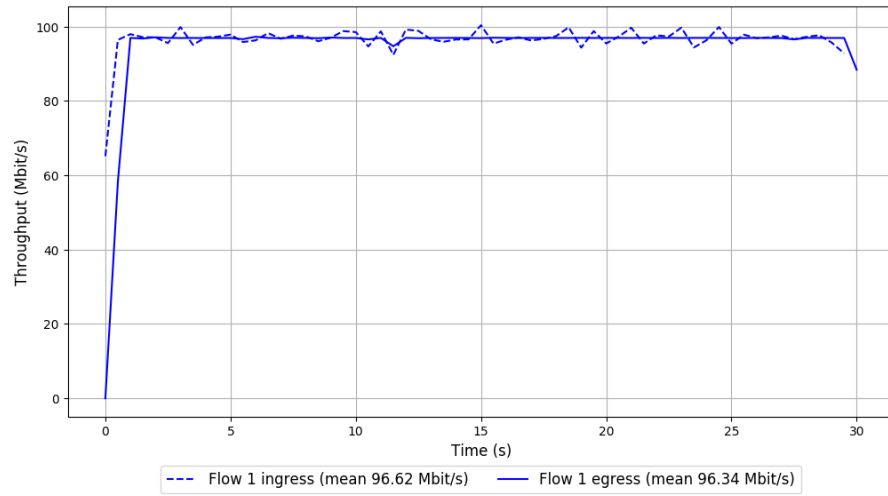


Run 5: Statistics of FillP

Start at: 2018-11-15 09:25:28
End at: 2018-11-15 09:25:58
Local clock offset: 2.441 ms
Remote clock offset: -7.471 ms

Below is generated by plot.py at 2018-11-15 09:49:06
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.34 Mbit/s
95th percentile per-packet one-way delay: 43.299 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 96.34 Mbit/s
95th percentile per-packet one-way delay: 43.299 ms
Loss rate: 0.39%

Run 5: Report of FillP — Data Link

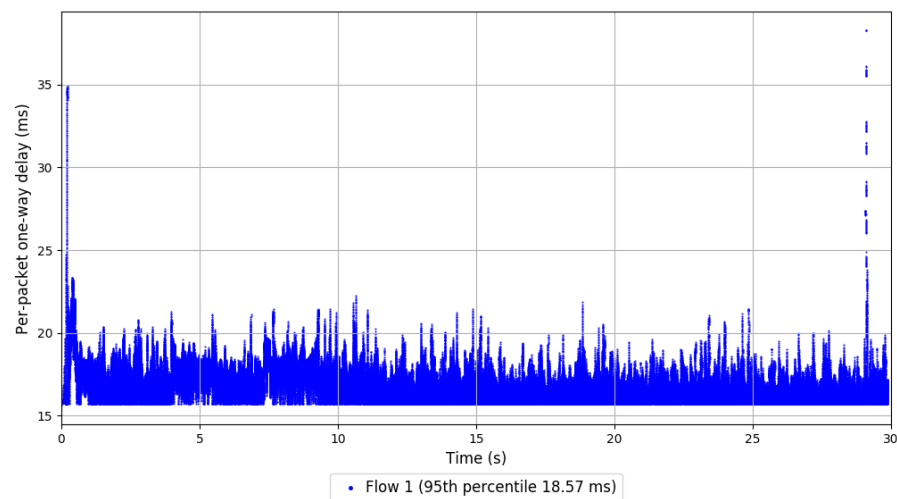
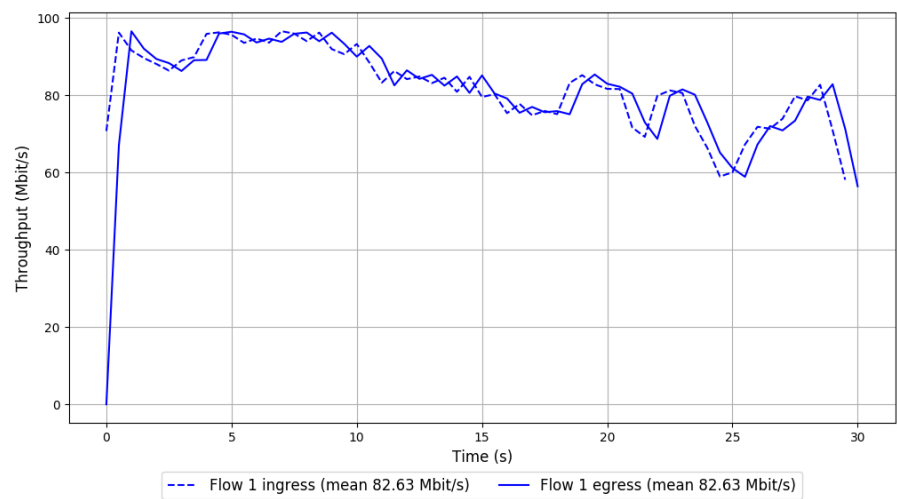


```
Run 1: Statistics of Indigo

Start at: 2018-11-15 07:58:52
End at: 2018-11-15 07:59:22
Local clock offset: 2.159 ms
Remote clock offset: -1.797 ms

# Below is generated by plot.py at 2018-11-15 09:49:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 82.63 Mbit/s
95th percentile per-packet one-way delay: 18.570 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 82.63 Mbit/s
95th percentile per-packet one-way delay: 18.570 ms
Loss rate: 0.08%
```

Run 1: Report of Indigo — Data Link

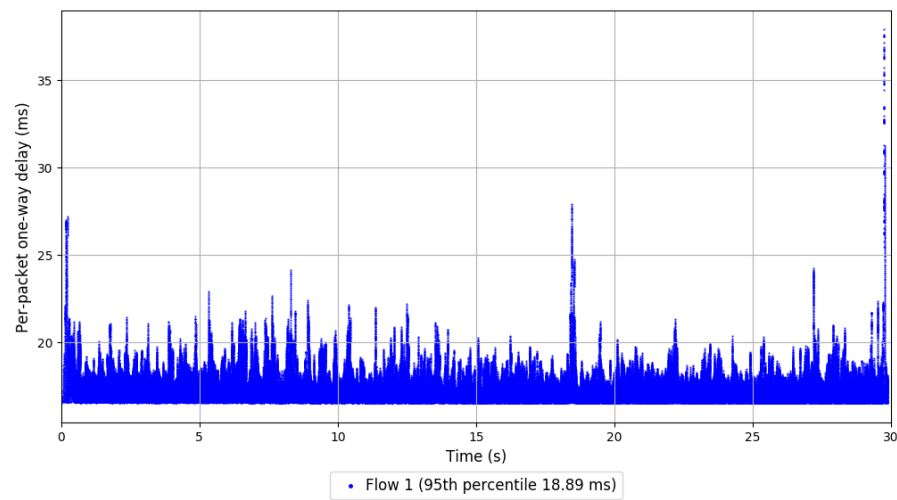
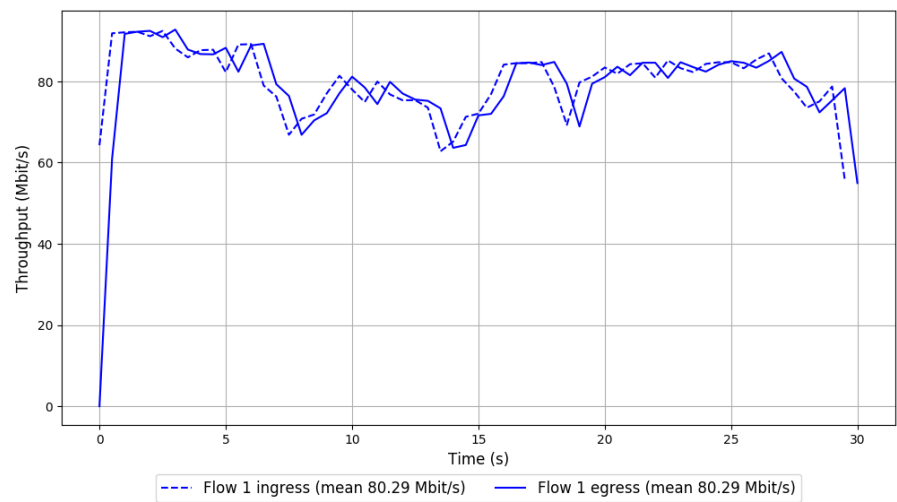


Run 2: Statistics of Indigo

Start at: 2018-11-15 08:20:22
End at: 2018-11-15 08:20:52
Local clock offset: 3.238 ms
Remote clock offset: -2.027 ms

Below is generated by plot.py at 2018-11-15 09:49:06
Datalink statistics
-- Total of 1 flow:
Average throughput: 80.29 Mbit/s
95th percentile per-packet one-way delay: 18.890 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 80.29 Mbit/s
95th percentile per-packet one-way delay: 18.890 ms
Loss rate: 0.08%

Run 2: Report of Indigo — Data Link

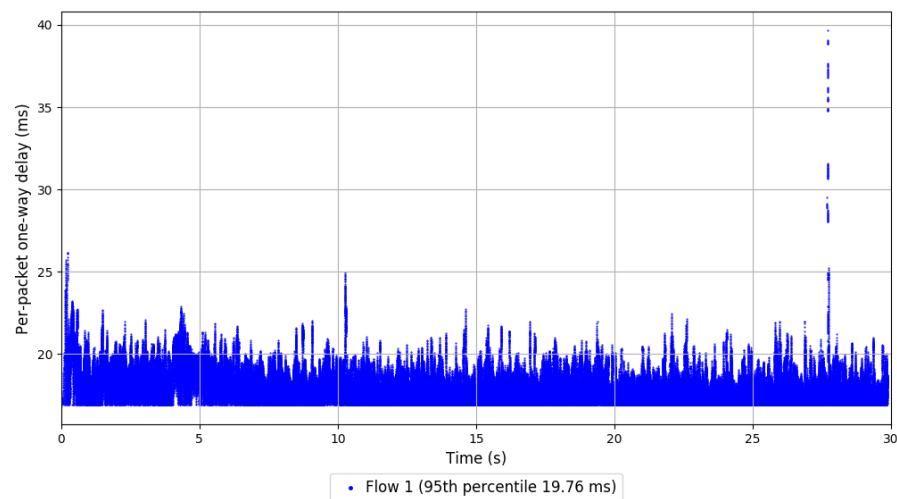
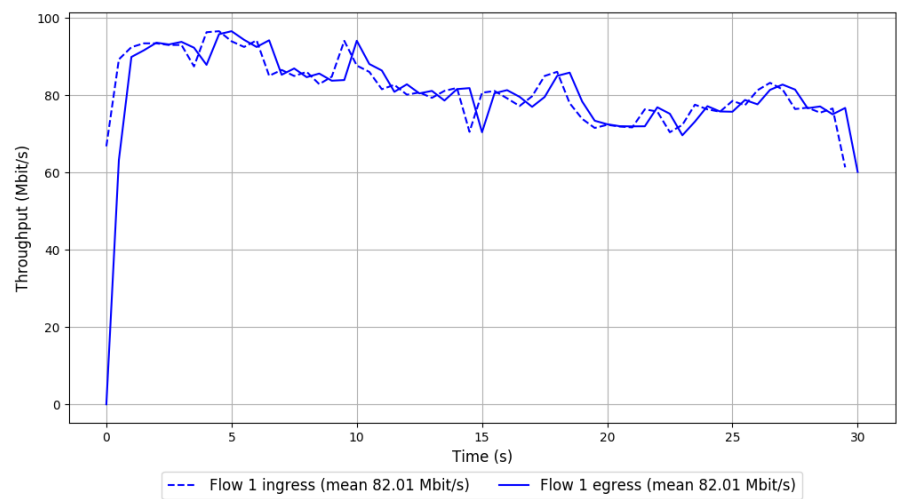


Run 3: Statistics of Indigo

Start at: 2018-11-15 08:42:18
End at: 2018-11-15 08:42:49
Local clock offset: 1.409 ms
Remote clock offset: -4.956 ms

Below is generated by plot.py at 2018-11-15 09:49:06
Datalink statistics
-- Total of 1 flow:
Average throughput: 82.01 Mbit/s
95th percentile per-packet one-way delay: 19.758 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 82.01 Mbit/s
95th percentile per-packet one-way delay: 19.758 ms
Loss rate: 0.08%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2018-11-15 09:04:20

End at: 2018-11-15 09:04:50

Local clock offset: 1.952 ms

Remote clock offset: -4.866 ms

Below is generated by plot.py at 2018-11-15 09:49:14

Datalink statistics

-- Total of 1 flow:

Average throughput: 80.74 Mbit/s

95th percentile per-packet one-way delay: 18.929 ms

Loss rate: 0.08%

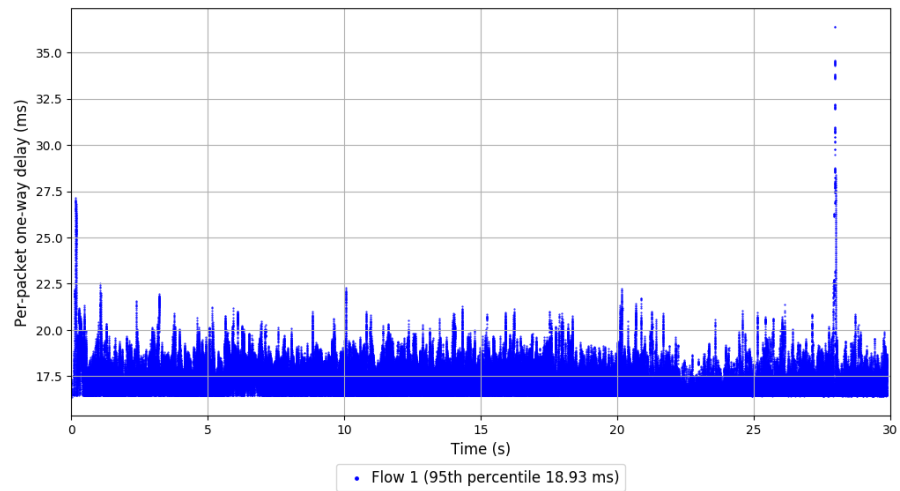
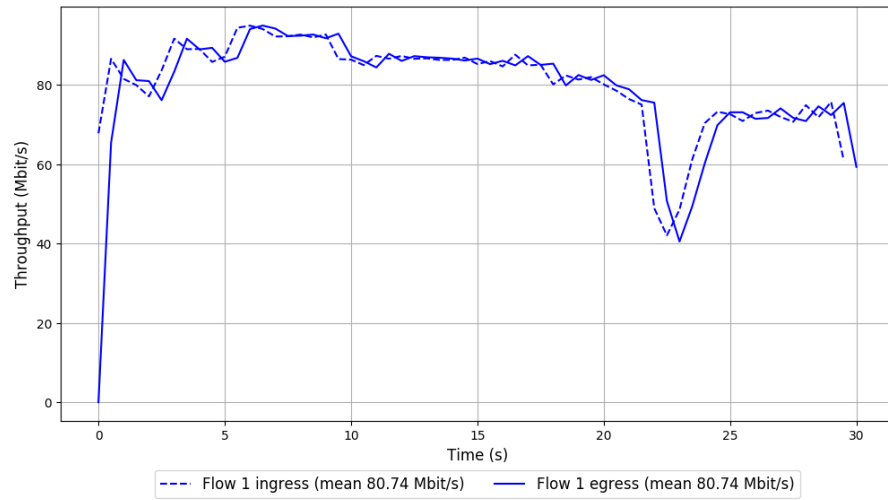
-- Flow 1:

Average throughput: 80.74 Mbit/s

95th percentile per-packet one-way delay: 18.929 ms

Loss rate: 0.08%

Run 4: Report of Indigo — Data Link

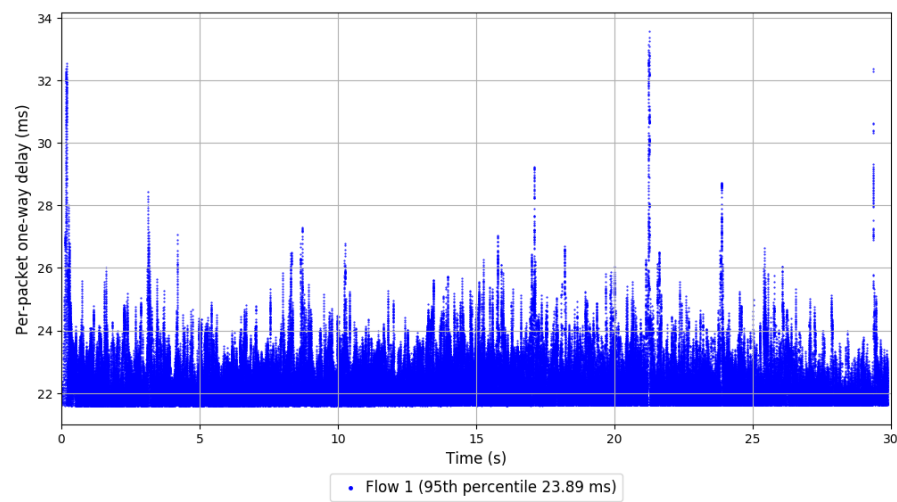
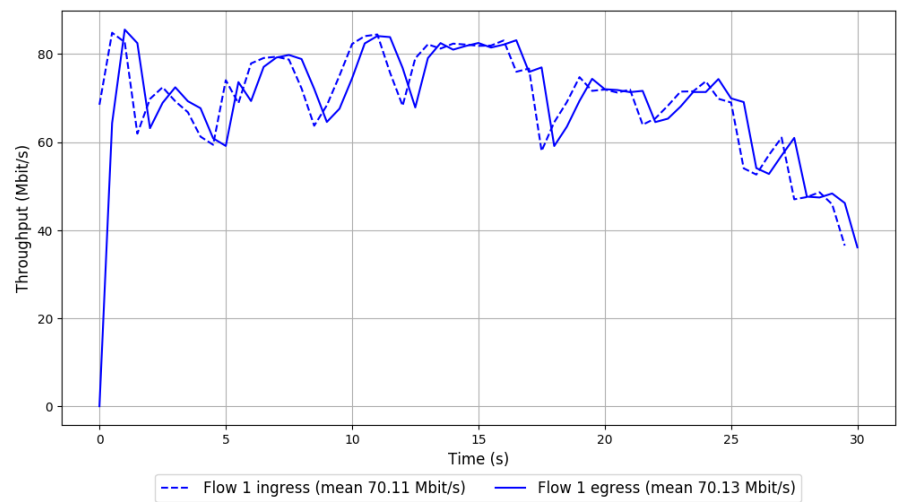


Run 5: Statistics of Indigo

Start at: 2018-11-15 09:26:45
End at: 2018-11-15 09:27:15
Local clock offset: 4.476 ms
Remote clock offset: -6.958 ms

Below is generated by plot.py at 2018-11-15 09:49:23
Datalink statistics
-- Total of 1 flow:
Average throughput: 70.13 Mbit/s
95th percentile per-packet one-way delay: 23.886 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 70.13 Mbit/s
95th percentile per-packet one-way delay: 23.886 ms
Loss rate: 0.06%

Run 5: Report of Indigo — Data Link

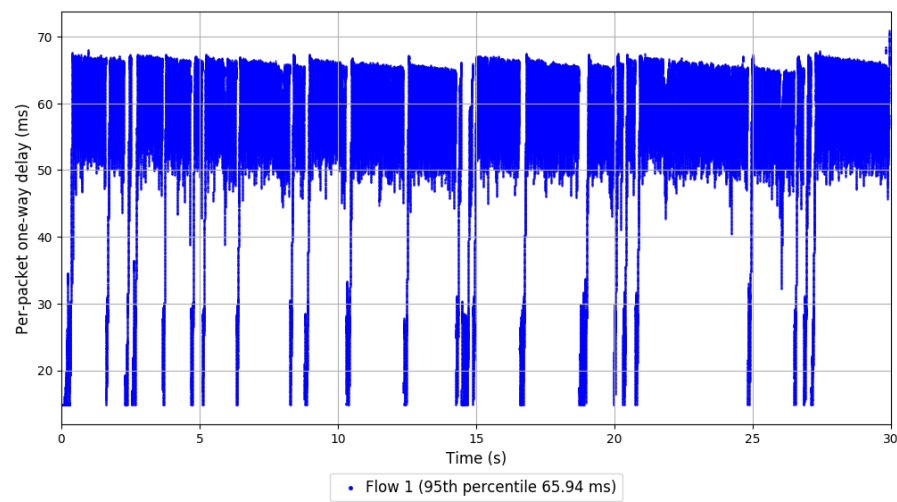
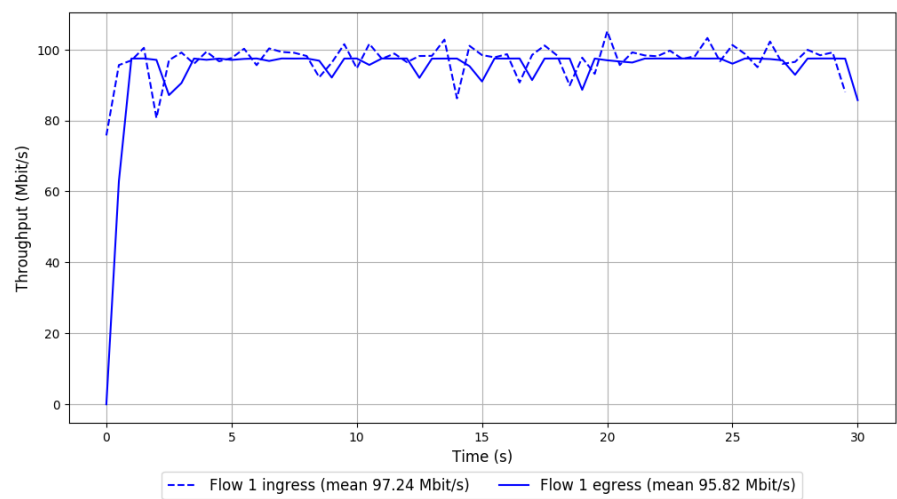


Run 1: Statistics of Indigo-96d2da3

Start at: 2018-11-15 07:56:28
End at: 2018-11-15 07:56:58
Local clock offset: 2.301 ms
Remote clock offset: -0.764 ms

Below is generated by plot.py at 2018-11-15 09:49:47
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.82 Mbit/s
95th percentile per-packet one-way delay: 65.944 ms
Loss rate: 1.51%
-- Flow 1:
Average throughput: 95.82 Mbit/s
95th percentile per-packet one-way delay: 65.944 ms
Loss rate: 1.51%

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

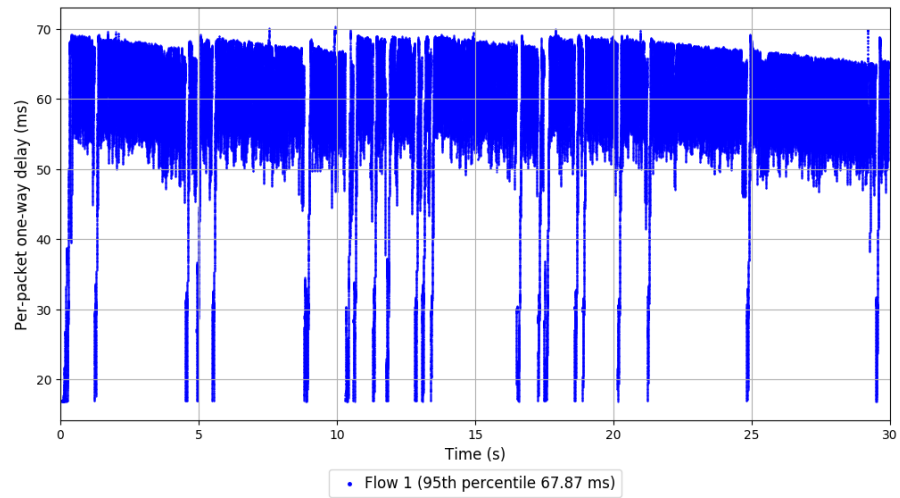
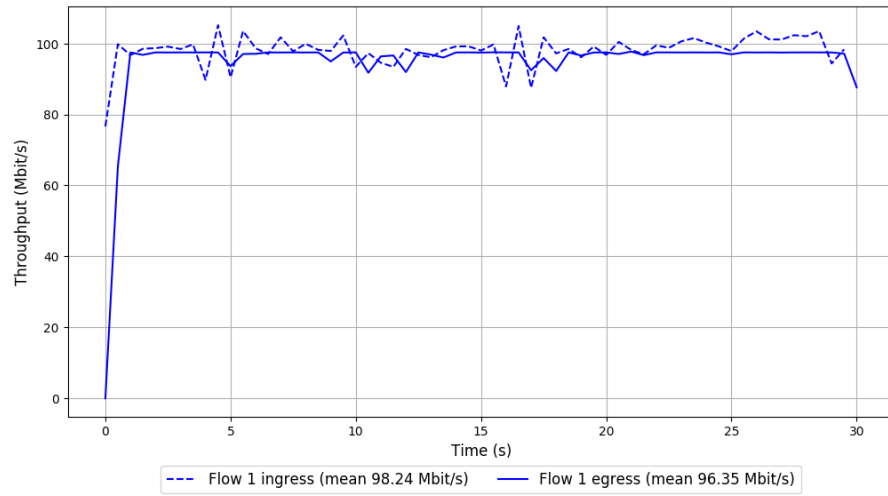


Run 2: Statistics of Indigo-96d2da3

Start at: 2018-11-15 08:17:59
End at: 2018-11-15 08:18:29
Local clock offset: 2.482 ms
Remote clock offset: -3.108 ms

Below is generated by plot.py at 2018-11-15 09:49:57
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.35 Mbit/s
95th percentile per-packet one-way delay: 67.873 ms
Loss rate: 1.97%
-- Flow 1:
Average throughput: 96.35 Mbit/s
95th percentile per-packet one-way delay: 67.873 ms
Loss rate: 1.97%

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

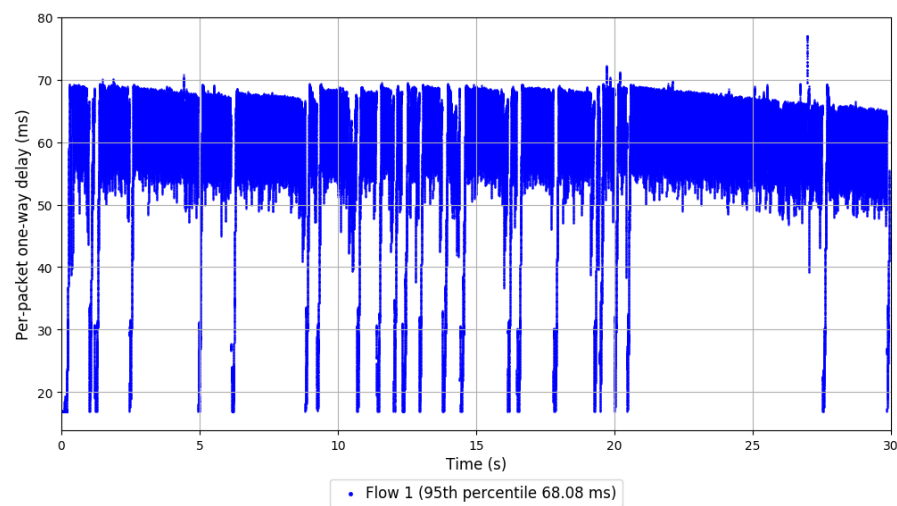
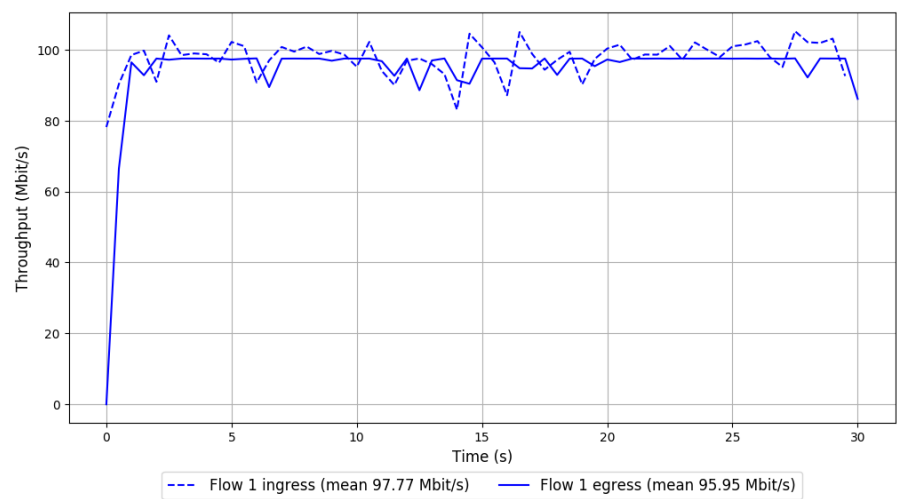


Run 3: Statistics of Indigo-96d2da3

Start at: 2018-11-15 08:39:56
End at: 2018-11-15 08:40:26
Local clock offset: 3.266 ms
Remote clock offset: -3.035 ms

Below is generated by plot.py at 2018-11-15 09:50:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.95 Mbit/s
95th percentile per-packet one-way delay: 68.078 ms
Loss rate: 1.95%
-- Flow 1:
Average throughput: 95.95 Mbit/s
95th percentile per-packet one-way delay: 68.078 ms
Loss rate: 1.95%

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



Run 4: Statistics of Indigo-96d2da3

Start at: 2018-11-15 09:01:42

End at: 2018-11-15 09:02:12

Local clock offset: 4.209 ms

Remote clock offset: -4.17 ms

Below is generated by plot.py at 2018-11-15 09:50:05

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.19 Mbit/s

95th percentile per-packet one-way delay: 68.498 ms

Loss rate: 1.76%

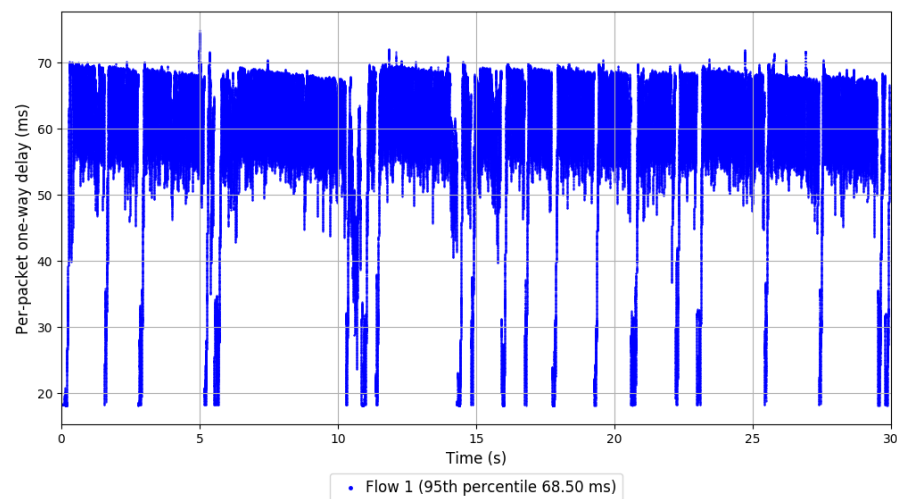
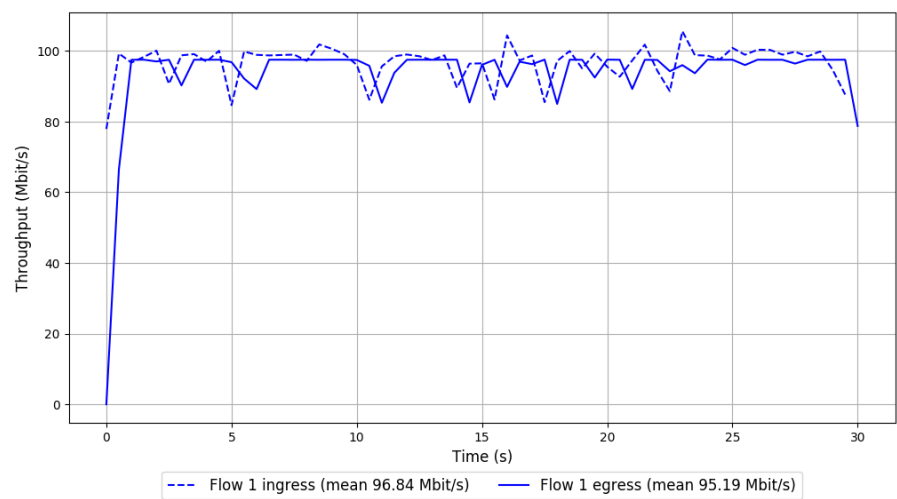
-- Flow 1:

Average throughput: 95.19 Mbit/s

95th percentile per-packet one-way delay: 68.498 ms

Loss rate: 1.76%

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

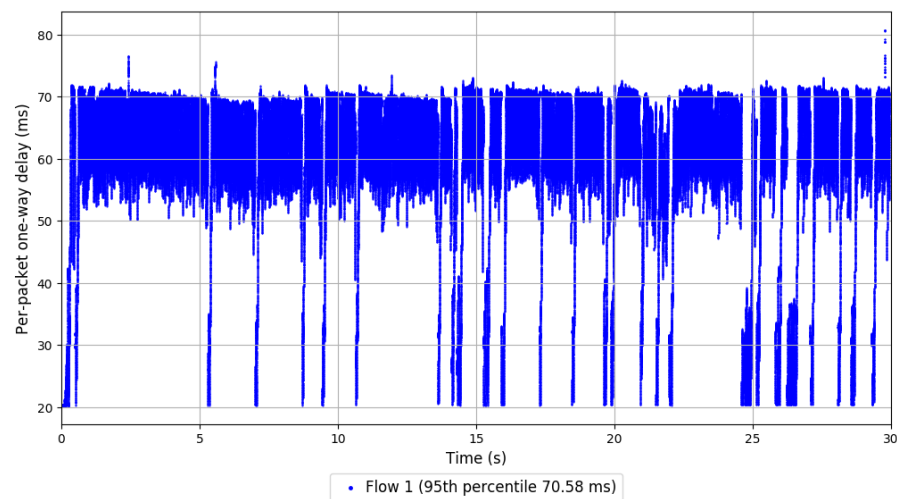
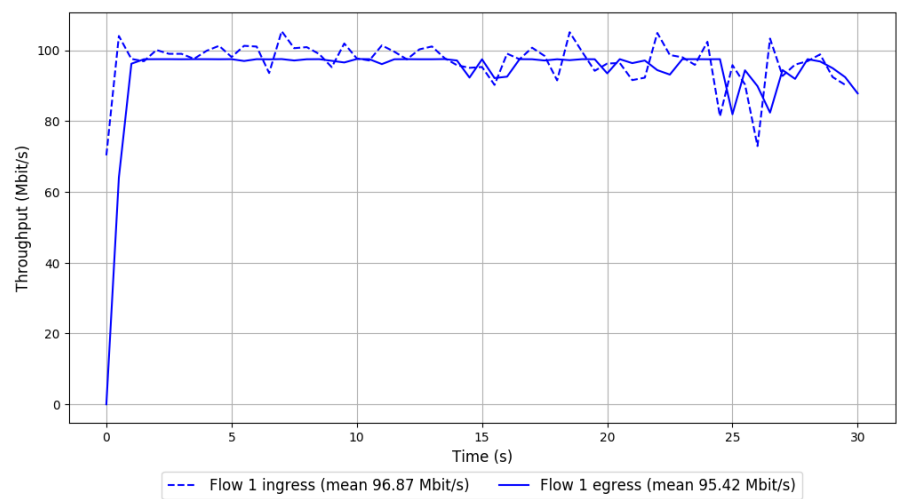


Run 5: Statistics of Indigo-96d2da3

Start at: 2018-11-15 09:24:11
End at: 2018-11-15 09:24:41
Local clock offset: 2.156 ms
Remote clock offset: -8.145 ms

Below is generated by plot.py at 2018-11-15 09:50:16
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.42 Mbit/s
95th percentile per-packet one-way delay: 70.583 ms
Loss rate: 1.57%
-- Flow 1:
Average throughput: 95.42 Mbit/s
95th percentile per-packet one-way delay: 70.583 ms
Loss rate: 1.57%

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

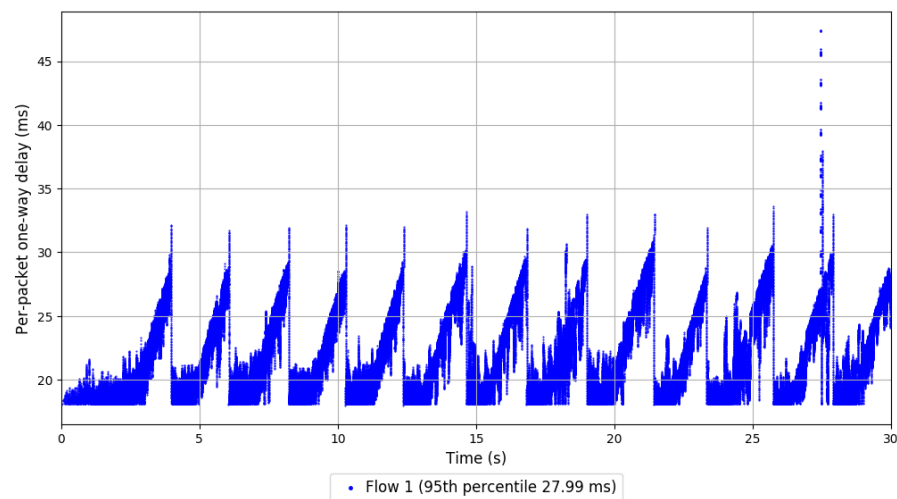
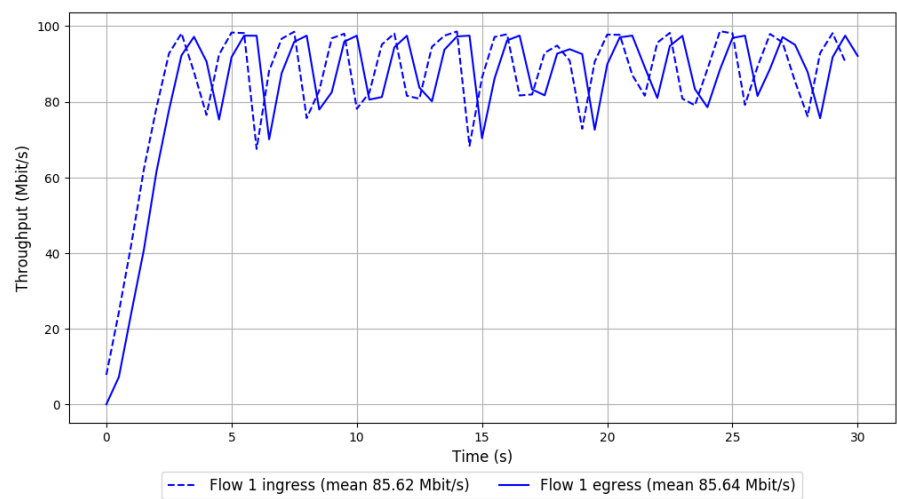


Run 1: Statistics of LEDBAT

Start at: 2018-11-15 08:11:47
End at: 2018-11-15 08:12:17
Local clock offset: 3.738 ms
Remote clock offset: -2.809 ms

Below is generated by plot.py at 2018-11-15 09:50:16
Datalink statistics
-- Total of 1 flow:
Average throughput: 85.64 Mbit/s
95th percentile per-packet one-way delay: 27.994 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 85.64 Mbit/s
95th percentile per-packet one-way delay: 27.994 ms
Loss rate: 0.07%

Run 1: Report of LEDBAT — Data Link

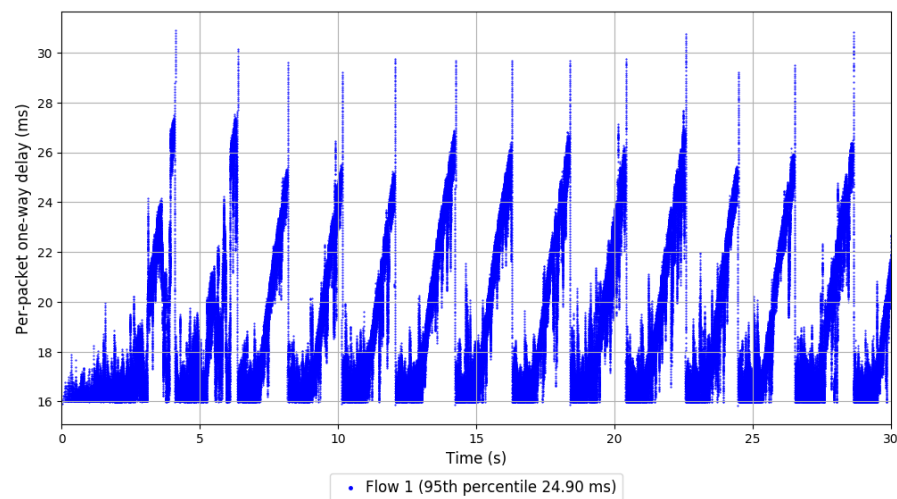
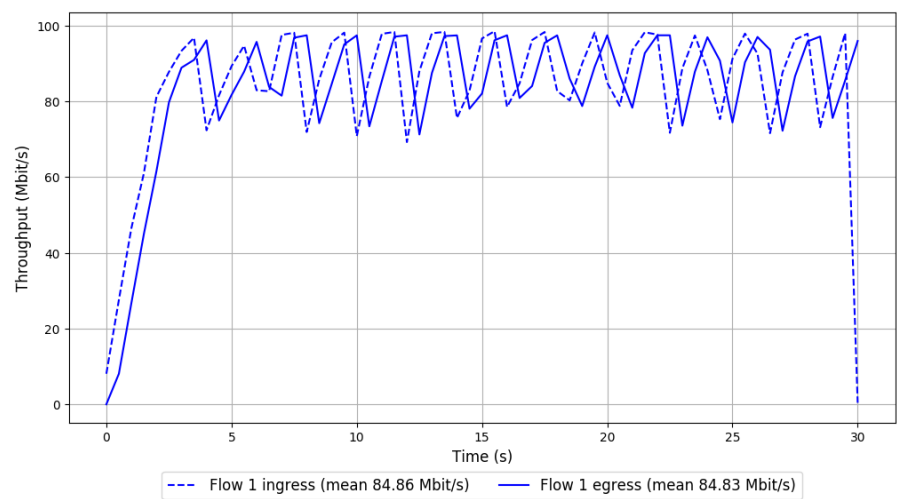


Run 2: Statistics of LEDBAT

Start at: 2018-11-15 08:33:48
End at: 2018-11-15 08:34:18
Local clock offset: 2.173 ms
Remote clock offset: -2.985 ms

Below is generated by plot.py at 2018-11-15 09:50:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 84.83 Mbit/s
95th percentile per-packet one-way delay: 24.897 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 84.83 Mbit/s
95th percentile per-packet one-way delay: 24.897 ms
Loss rate: 0.12%

Run 2: Report of LEDBAT — Data Link

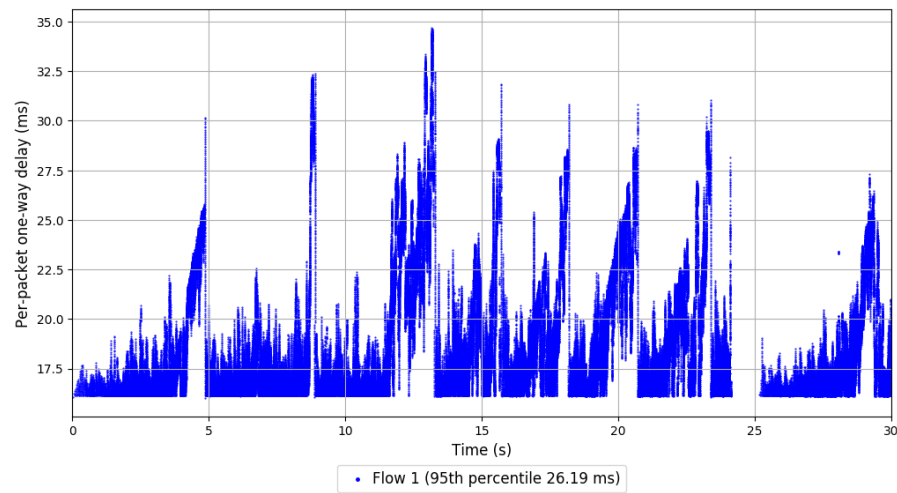
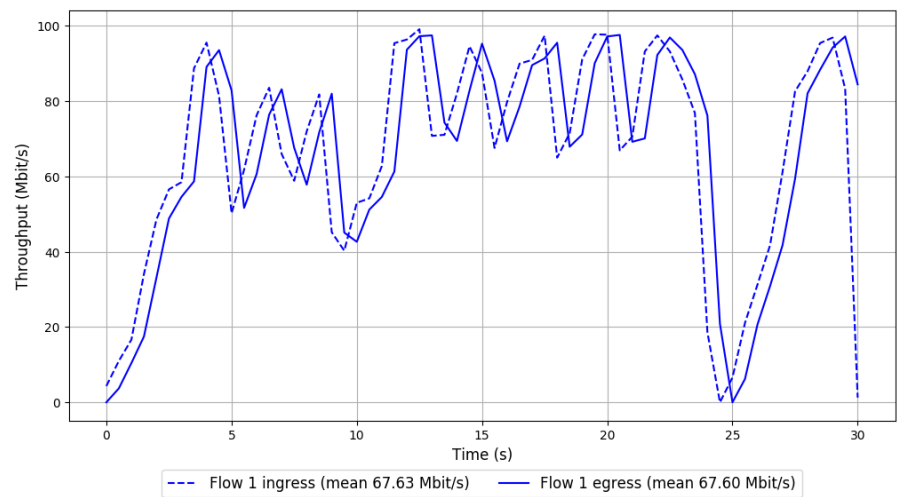


Run 3: Statistics of LEDBAT

Start at: 2018-11-15 08:55:32
End at: 2018-11-15 08:56:02
Local clock offset: 1.656 ms
Remote clock offset: -4.329 ms

Below is generated by plot.py at 2018-11-15 09:50:19
Datalink statistics
-- Total of 1 flow:
Average throughput: 67.60 Mbit/s
95th percentile per-packet one-way delay: 26.190 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 67.60 Mbit/s
95th percentile per-packet one-way delay: 26.190 ms
Loss rate: 0.12%

Run 3: Report of LEDBAT — Data Link

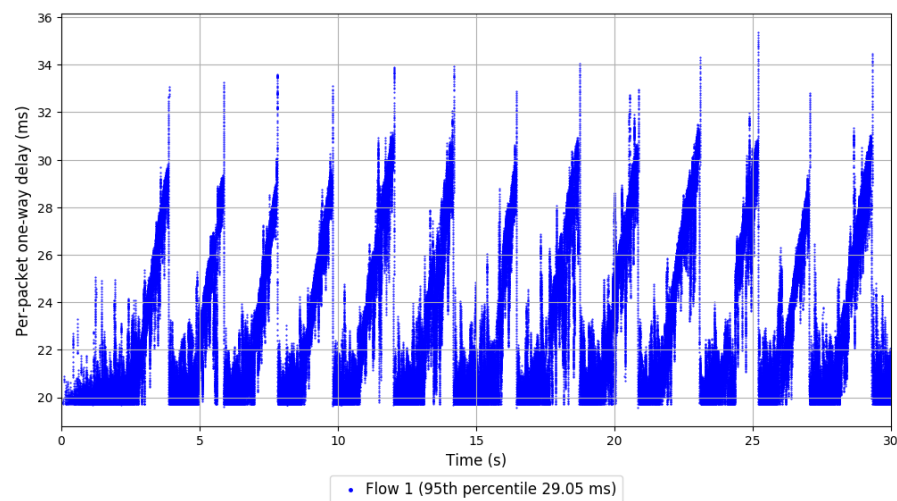
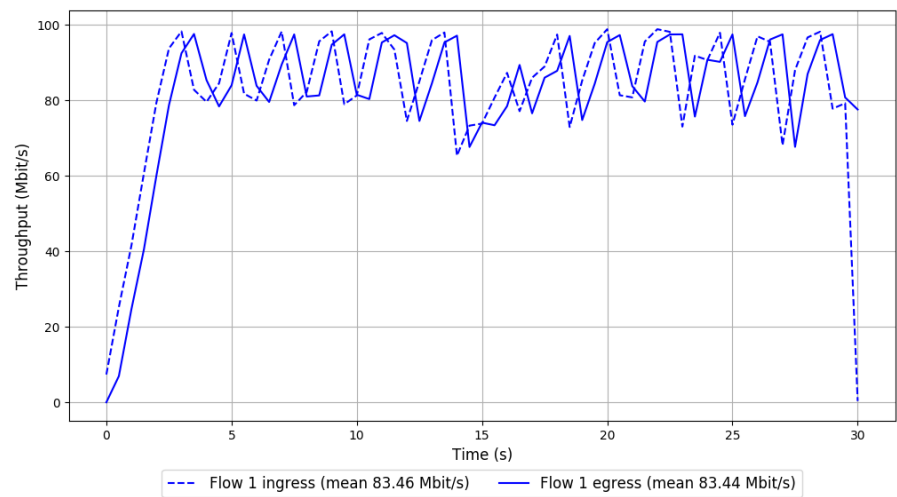


Run 4: Statistics of LEDBAT

Start at: 2018-11-15 09:17:30
End at: 2018-11-15 09:18:00
Local clock offset: 1.967 ms
Remote clock offset: -8.142 ms

Below is generated by plot.py at 2018-11-15 09:50:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 83.44 Mbit/s
95th percentile per-packet one-way delay: 29.052 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 83.44 Mbit/s
95th percentile per-packet one-way delay: 29.052 ms
Loss rate: 0.10%

Run 4: Report of LEDBAT — Data Link

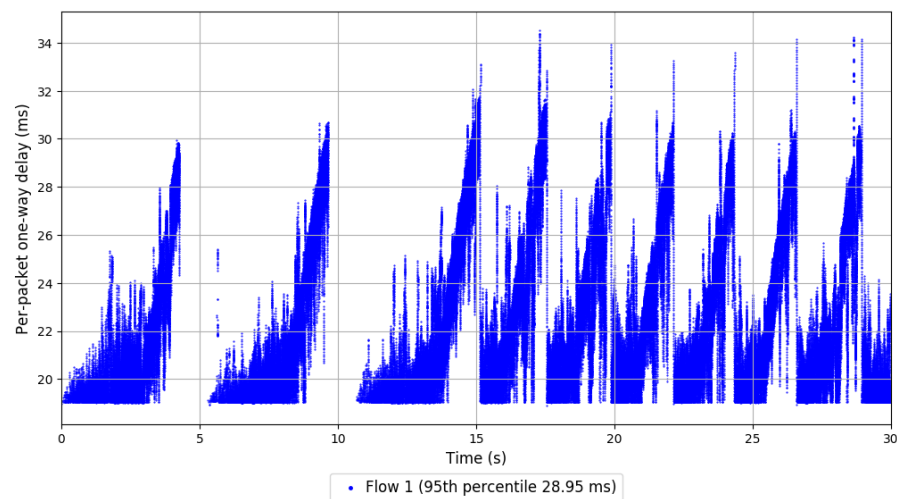
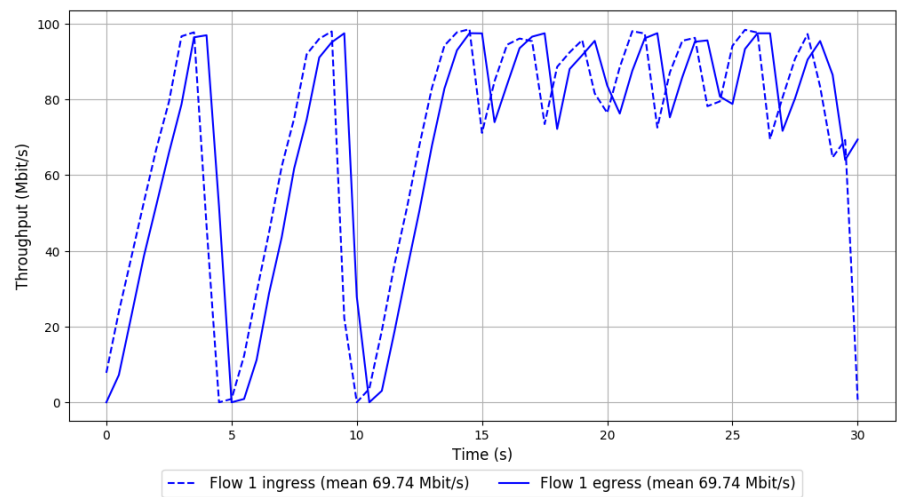


Run 5: Statistics of LEDBAT

Start at: 2018-11-15 09:40:51
End at: 2018-11-15 09:41:21
Local clock offset: 2.337 ms
Remote clock offset: -6.447 ms

Below is generated by plot.py at 2018-11-15 09:50:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 69.74 Mbit/s
95th percentile per-packet one-way delay: 28.946 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 69.74 Mbit/s
95th percentile per-packet one-way delay: 28.946 ms
Loss rate: 0.09%

Run 5: Report of LEDBAT — Data Link

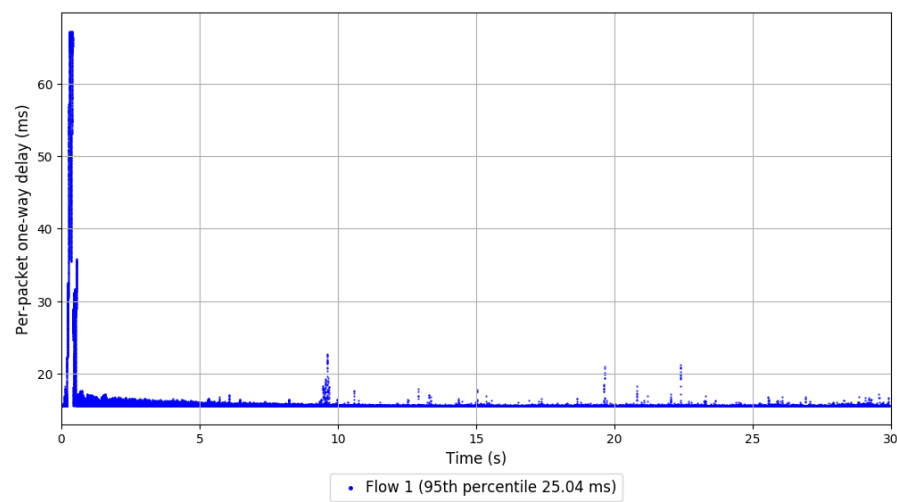
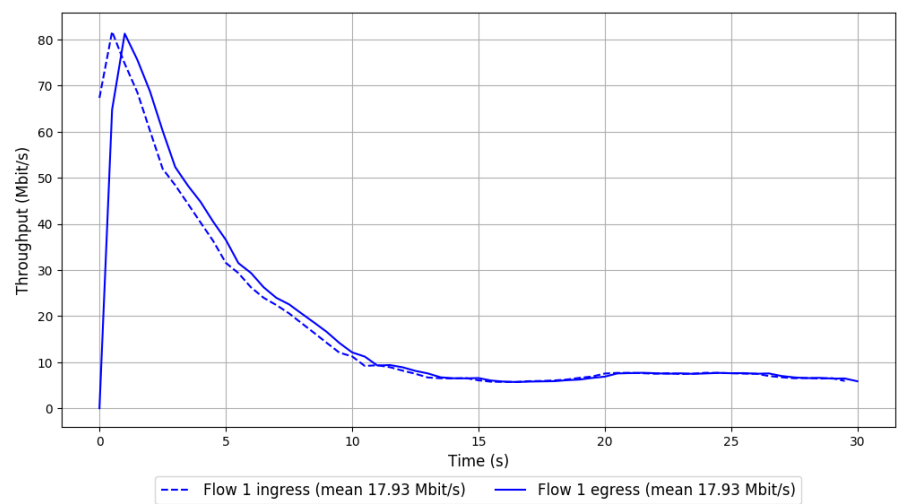


Run 1: Statistics of Indigo-Muses

Start at: 2018-11-15 08:10:40
End at: 2018-11-15 08:11:10
Local clock offset: 2.175 ms
Remote clock offset: -1.805 ms

Below is generated by plot.py at 2018-11-15 09:50:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 17.93 Mbit/s
95th percentile per-packet one-way delay: 25.044 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 17.93 Mbit/s
95th percentile per-packet one-way delay: 25.044 ms
Loss rate: 0.03%

Run 1: Report of Indigo-Muses — Data Link

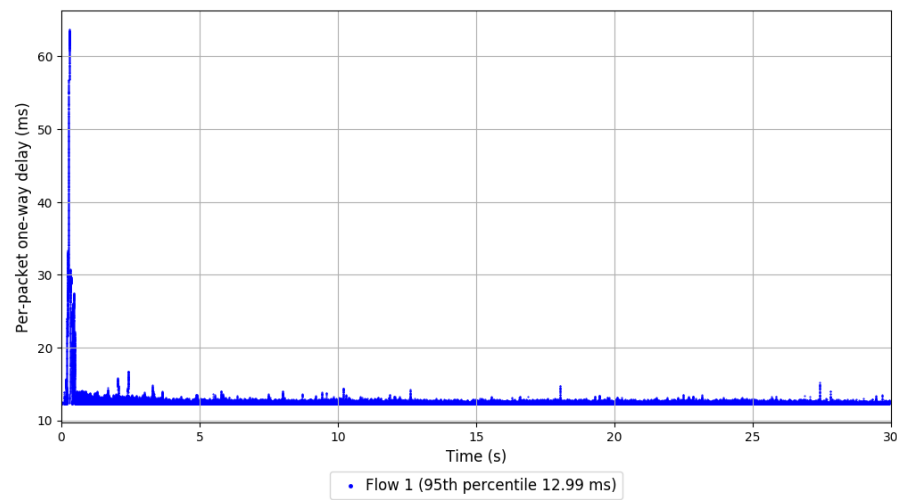
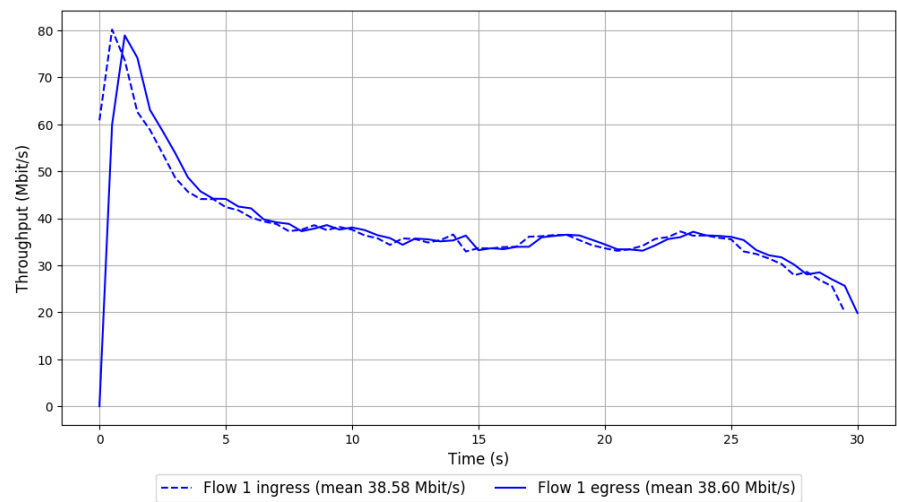


Run 2: Statistics of Indigo-Muses

Start at: 2018-11-15 08:32:39
End at: 2018-11-15 08:33:09
Local clock offset: -5.304 ms
Remote clock offset: -6.753 ms

Below is generated by plot.py at 2018-11-15 09:50:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 38.60 Mbit/s
95th percentile per-packet one-way delay: 12.990 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 38.60 Mbit/s
95th percentile per-packet one-way delay: 12.990 ms
Loss rate: 0.03%

Run 2: Report of Indigo-Muses — Data Link



Run 3: Statistics of Indigo-Muses

Start at: 2018-11-15 08:54:25

End at: 2018-11-15 08:54:55

Local clock offset: 2.504 ms

Remote clock offset: -4.83 ms

Below is generated by plot.py at 2018-11-15 09:50:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 33.60 Mbit/s

95th percentile per-packet one-way delay: 18.404 ms

Loss rate: 0.05%

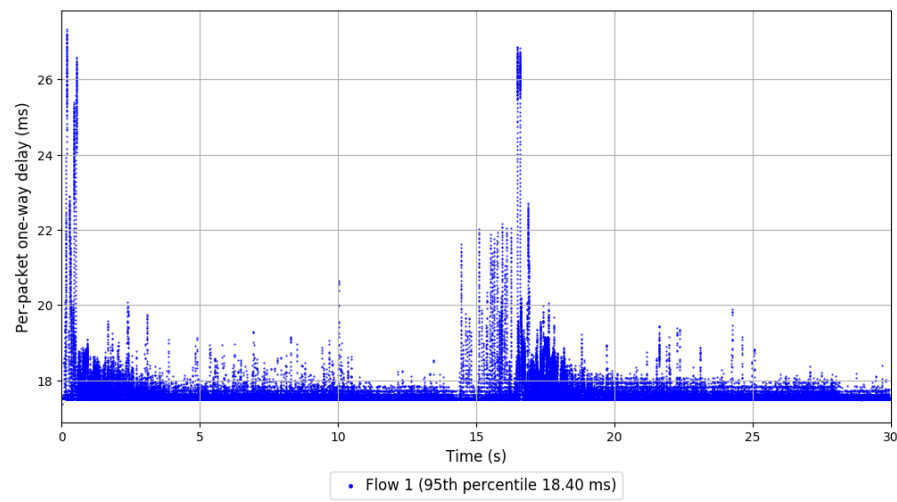
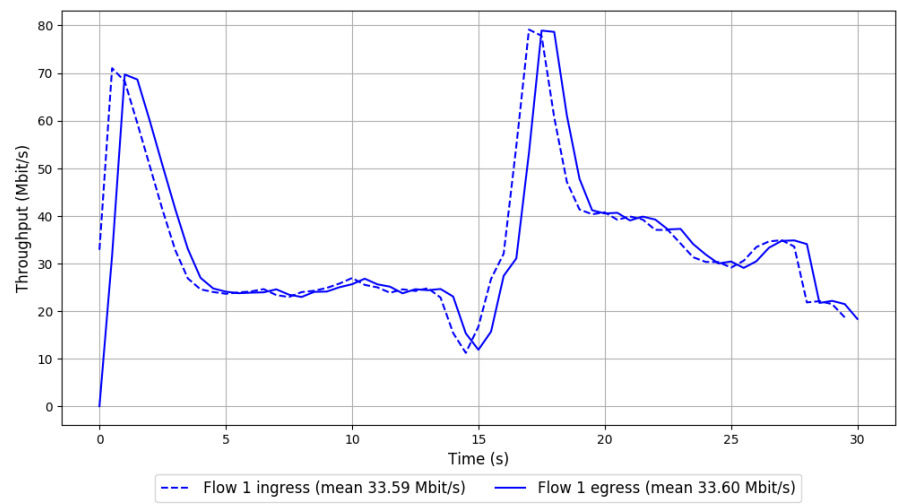
-- Flow 1:

Average throughput: 33.60 Mbit/s

95th percentile per-packet one-way delay: 18.404 ms

Loss rate: 0.05%

Run 3: Report of Indigo-Muses — Data Link

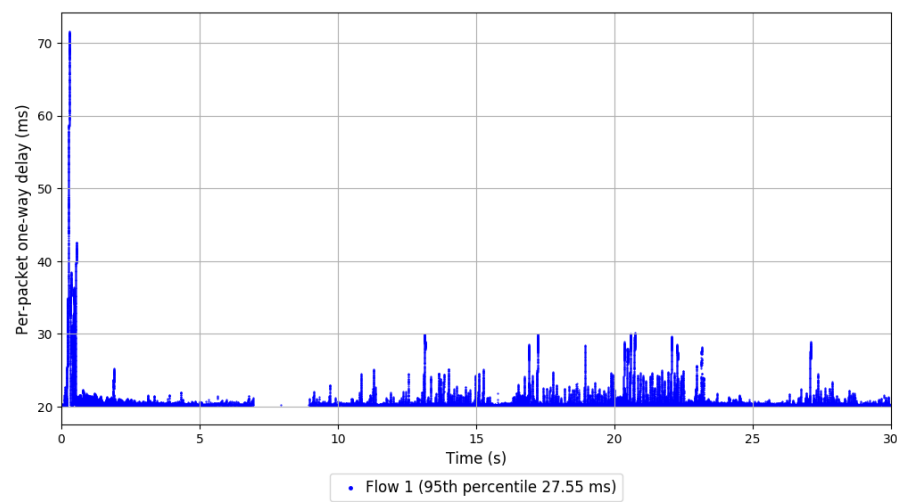
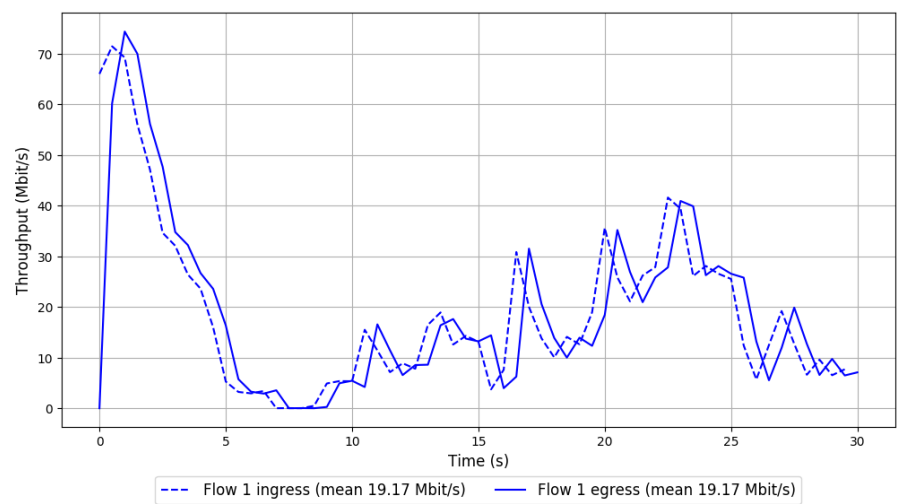


Run 4: Statistics of Indigo-Muses

Start at: 2018-11-15 09:16:22
End at: 2018-11-15 09:16:52
Local clock offset: 2.13 ms
Remote clock offset: -8.448 ms

Below is generated by plot.py at 2018-11-15 09:50:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 19.17 Mbit/s
95th percentile per-packet one-way delay: 27.549 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 19.17 Mbit/s
95th percentile per-packet one-way delay: 27.549 ms
Loss rate: 0.07%

Run 4: Report of Indigo-Muses — Data Link

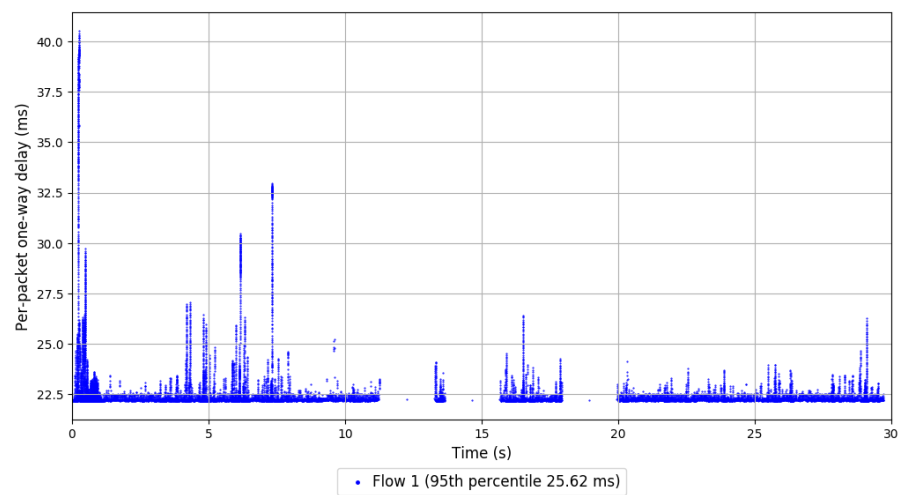
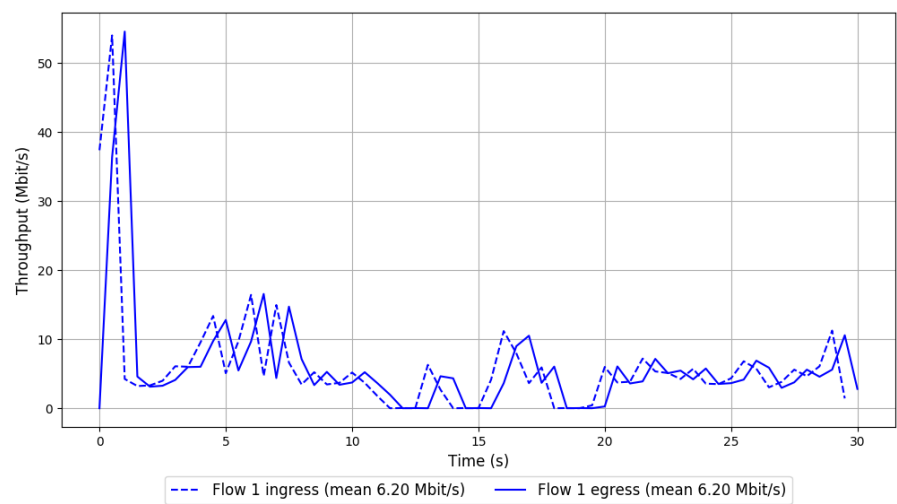


Run 5: Statistics of Indigo-Muses

Start at: 2018-11-15 09:39:12
End at: 2018-11-15 09:39:42
Local clock offset: 4.947 ms
Remote clock offset: -6.996 ms

Below is generated by plot.py at 2018-11-15 09:50:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 6.20 Mbit/s
95th percentile per-packet one-way delay: 25.618 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.20 Mbit/s
95th percentile per-packet one-way delay: 25.618 ms
Loss rate: 0.00%

Run 5: Report of Indigo-Muses — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2018-11-15 08:07:09

End at: 2018-11-15 08:07:39

Local clock offset: 3.57 ms

Remote clock offset: -2.2 ms

Below is generated by plot.py at 2018-11-15 09:51:14

Datalink statistics

-- Total of 1 flow:

Average throughput: 79.72 Mbit/s

95th percentile per-packet one-way delay: 17.808 ms

Loss rate: 0.10%

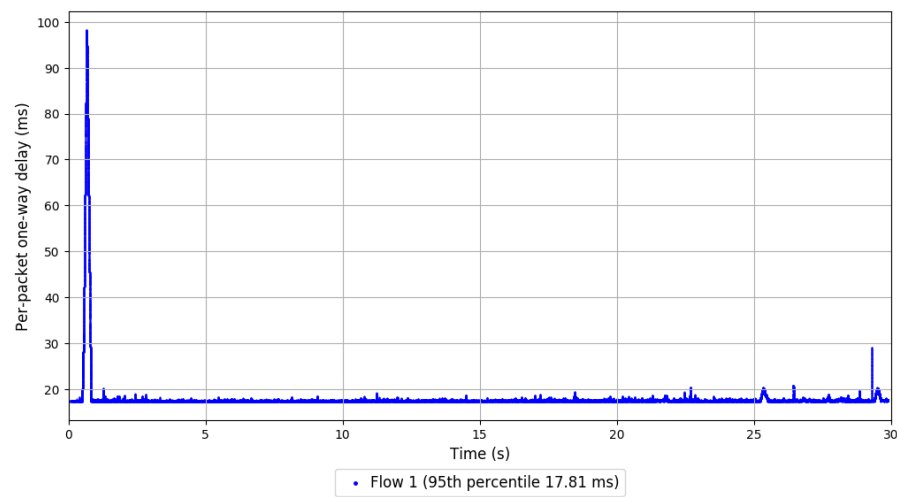
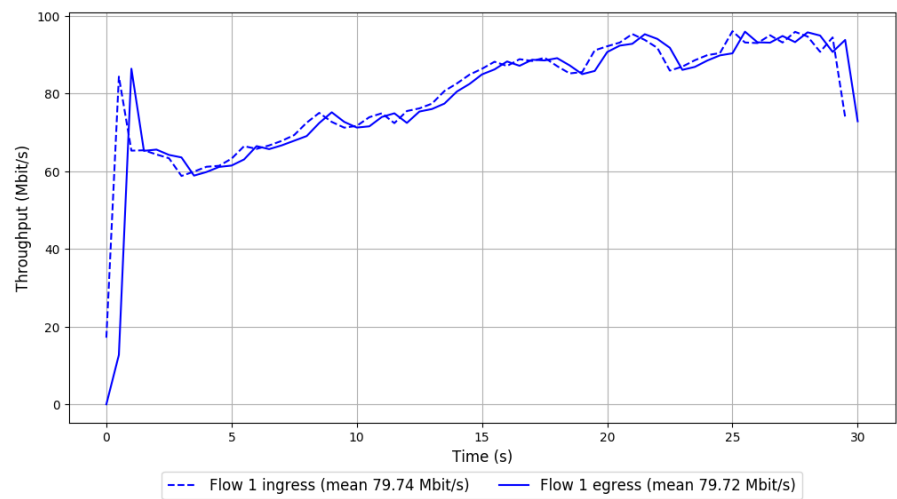
-- Flow 1:

Average throughput: 79.72 Mbit/s

95th percentile per-packet one-way delay: 17.808 ms

Loss rate: 0.10%

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-11-15 08:29:10

End at: 2018-11-15 08:29:40

Local clock offset: 2.31 ms

Remote clock offset: -1.541 ms

Below is generated by plot.py at 2018-11-15 09:51:14

Datalink statistics

-- Total of 1 flow:

Average throughput: 66.06 Mbit/s

95th percentile per-packet one-way delay: 15.101 ms

Loss rate: 0.09%

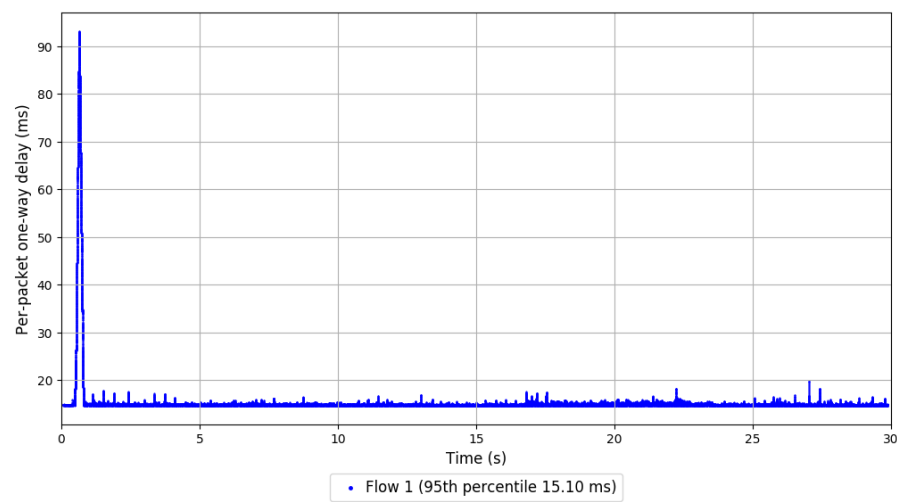
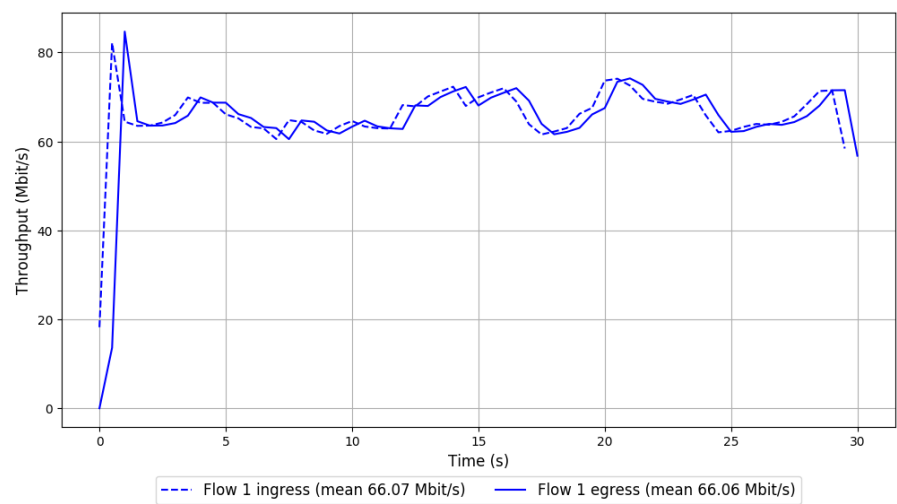
-- Flow 1:

Average throughput: 66.06 Mbit/s

95th percentile per-packet one-way delay: 15.101 ms

Loss rate: 0.09%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-11-15 08:50:51

End at: 2018-11-15 08:51:21

Local clock offset: 4.215 ms

Remote clock offset: -3.4 ms

Below is generated by plot.py at 2018-11-15 09:51:14

Datalink statistics

-- Total of 1 flow:

Average throughput: 70.07 Mbit/s

95th percentile per-packet one-way delay: 18.139 ms

Loss rate: 0.10%

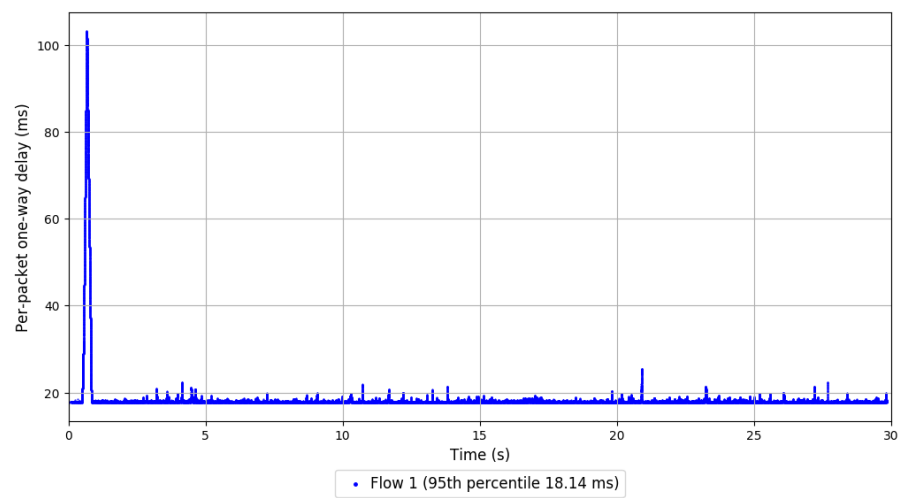
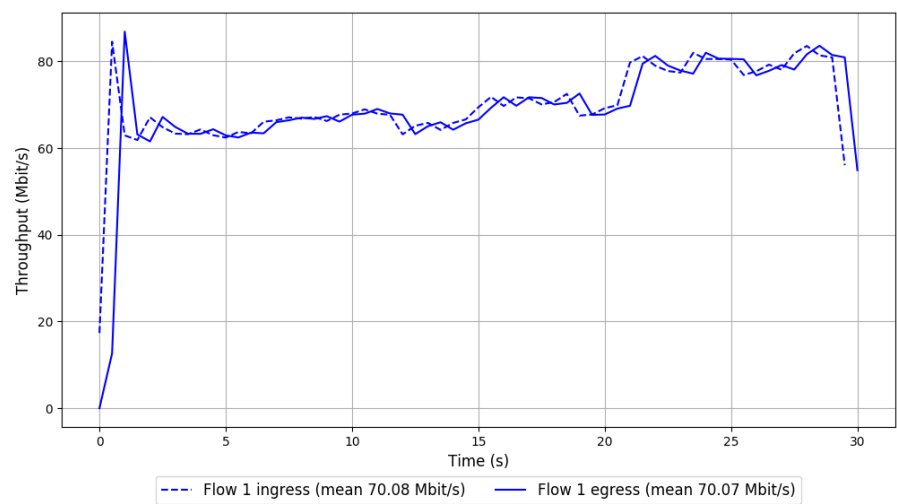
-- Flow 1:

Average throughput: 70.07 Mbit/s

95th percentile per-packet one-way delay: 18.139 ms

Loss rate: 0.10%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-11-15 09:12:50

End at: 2018-11-15 09:13:20

Local clock offset: 2.522 ms

Remote clock offset: -7.931 ms

Below is generated by plot.py at 2018-11-15 09:51:14

Datalink statistics

-- Total of 1 flow:

Average throughput: 59.19 Mbit/s

95th percentile per-packet one-way delay: 20.094 ms

Loss rate: 0.07%

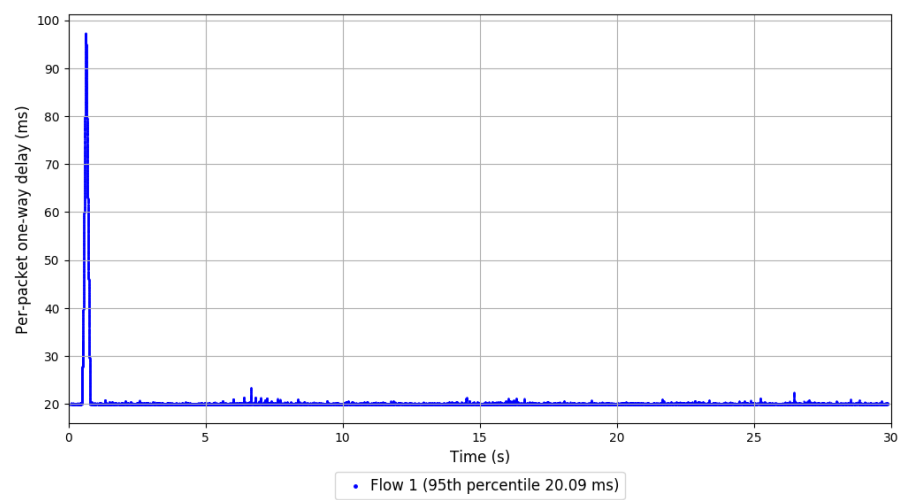
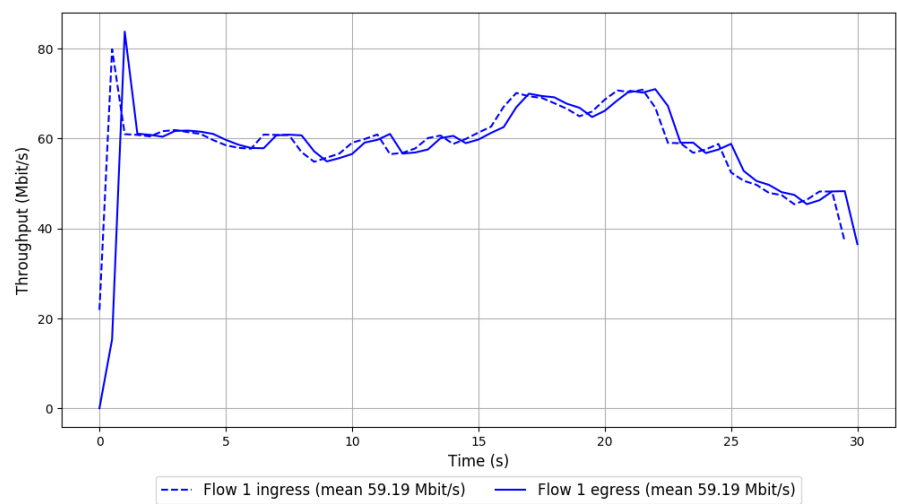
-- Flow 1:

Average throughput: 59.19 Mbit/s

95th percentile per-packet one-way delay: 20.094 ms

Loss rate: 0.07%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-11-15 09:35:35

End at: 2018-11-15 09:36:05

Local clock offset: 4.631 ms

Remote clock offset: -7.054 ms

Below is generated by plot.py at 2018-11-15 09:51:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 81.55 Mbit/s

95th percentile per-packet one-way delay: 22.474 ms

Loss rate: 0.09%

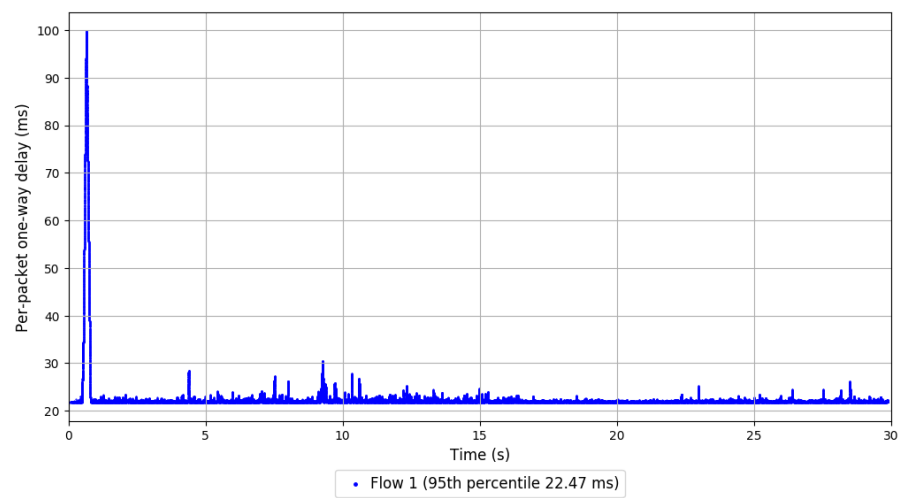
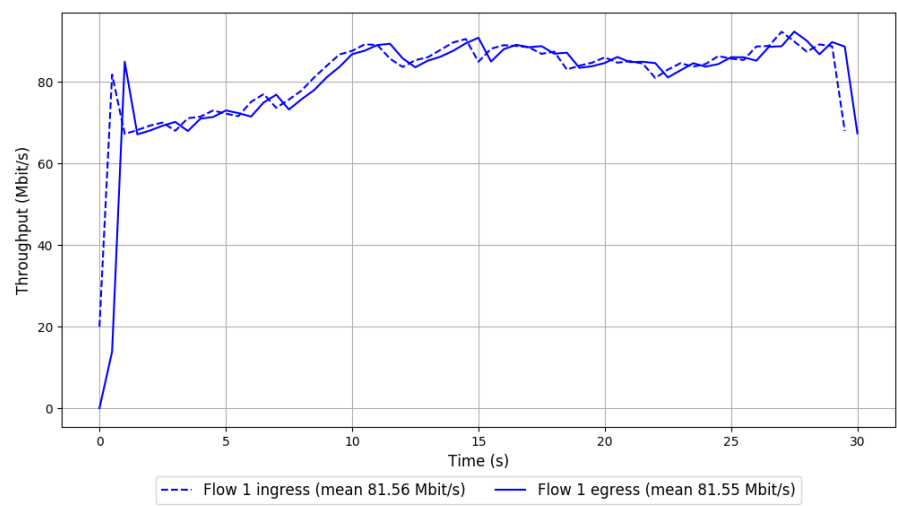
-- Flow 1:

Average throughput: 81.55 Mbit/s

95th percentile per-packet one-way delay: 22.474 ms

Loss rate: 0.09%

Run 5: Report of PCC-Allegro — Data Link

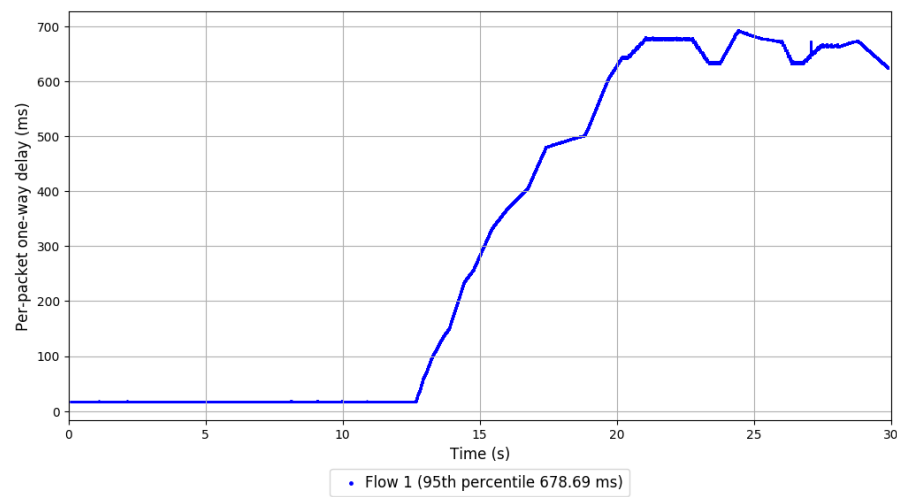
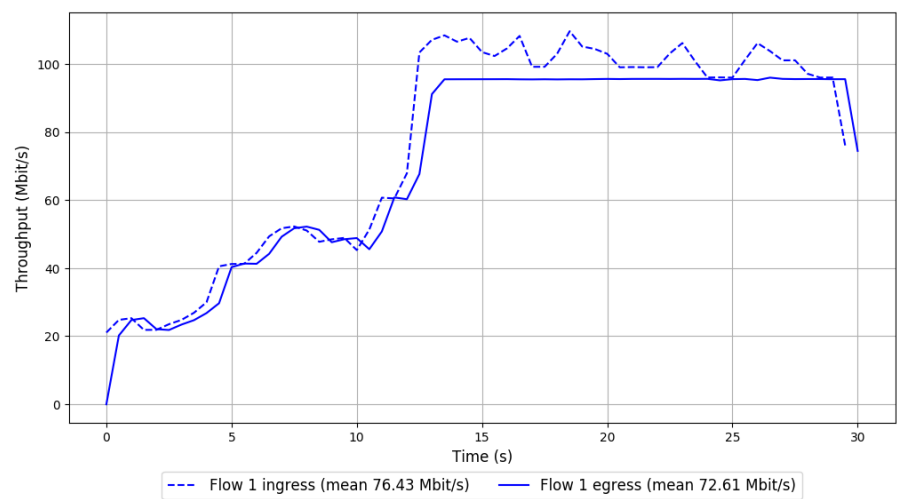


Run 1: Statistics of PCC-Expr

Start at: 2018-11-15 08:01:07
End at: 2018-11-15 08:01:37
Local clock offset: 3.308 ms
Remote clock offset: -2.249 ms

Below is generated by plot.py at 2018-11-15 09:52:10
Datalink statistics
-- Total of 1 flow:
Average throughput: 72.61 Mbit/s
95th percentile per-packet one-way delay: 678.687 ms
Loss rate: 5.07%
-- Flow 1:
Average throughput: 72.61 Mbit/s
95th percentile per-packet one-way delay: 678.687 ms
Loss rate: 5.07%

Run 1: Report of PCC-Expr — Data Link

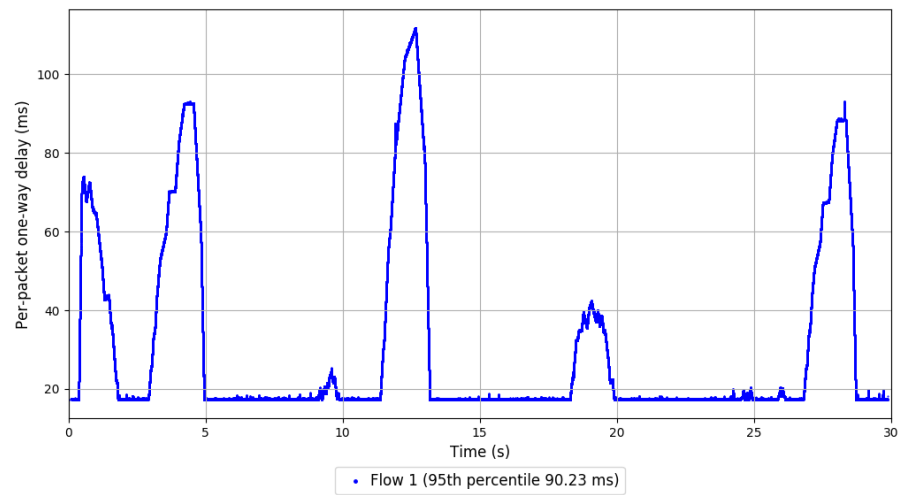
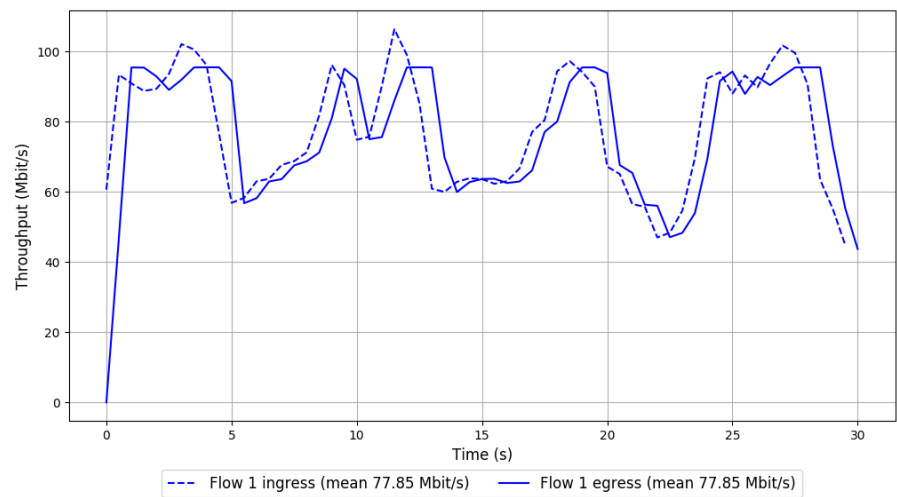


Run 2: Statistics of PCC-Expr

Start at: 2018-11-15 08:22:42
End at: 2018-11-15 08:23:12
Local clock offset: 3.893 ms
Remote clock offset: -2.205 ms

Below is generated by plot.py at 2018-11-15 09:52:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 77.85 Mbit/s
95th percentile per-packet one-way delay: 90.228 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 77.85 Mbit/s
95th percentile per-packet one-way delay: 90.228 ms
Loss rate: 0.09%

Run 2: Report of PCC-Expr — Data Link

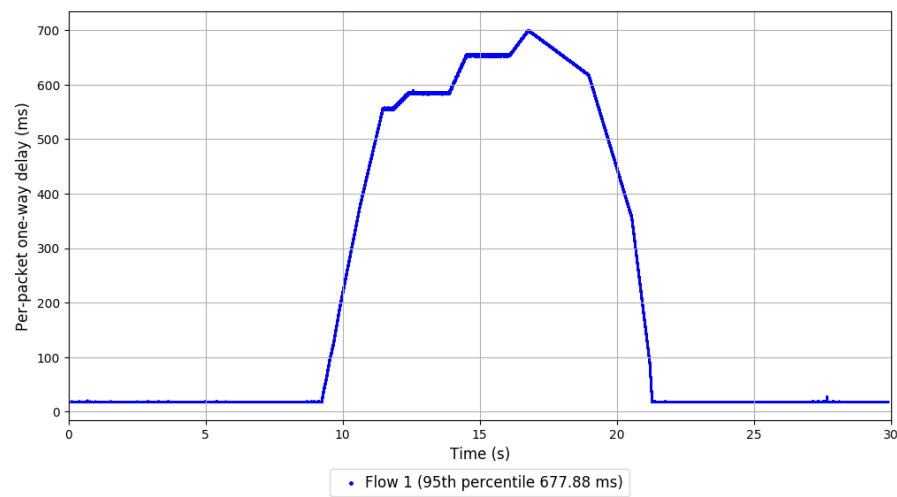
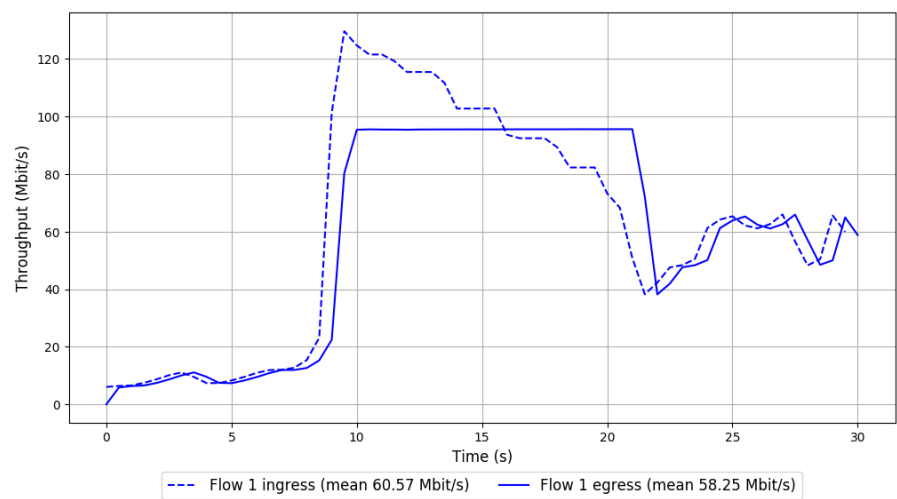


Run 3: Statistics of PCC-Expr

Start at: 2018-11-15 08:44:42
End at: 2018-11-15 08:45:12
Local clock offset: 4.159 ms
Remote clock offset: -3.803 ms

Below is generated by plot.py at 2018-11-15 09:52:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 58.25 Mbit/s
95th percentile per-packet one-way delay: 677.877 ms
Loss rate: 3.90%
-- Flow 1:
Average throughput: 58.25 Mbit/s
95th percentile per-packet one-way delay: 677.877 ms
Loss rate: 3.90%

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

Start at: 2018-11-15 09:06:46

End at: 2018-11-15 09:07:16

Local clock offset: 2.85 ms

Remote clock offset: -7.732 ms

Below is generated by plot.py at 2018-11-15 09:52:33

Datalink statistics

-- Total of 1 flow:

Average throughput: 24.92 Mbit/s

95th percentile per-packet one-way delay: 20.247 ms

Loss rate: 0.25%

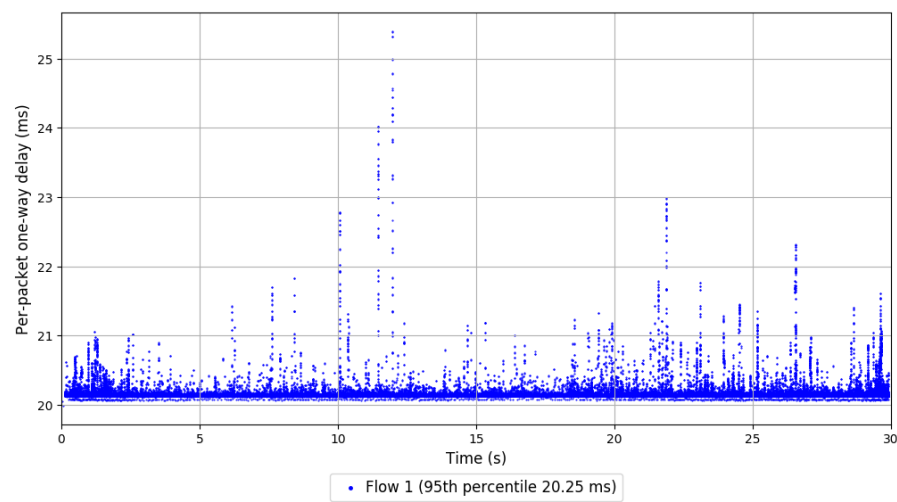
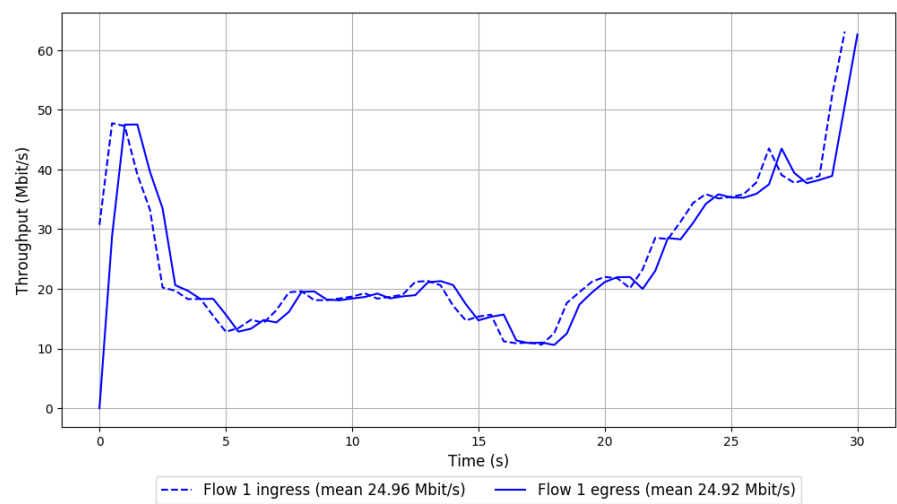
-- Flow 1:

Average throughput: 24.92 Mbit/s

95th percentile per-packet one-way delay: 20.247 ms

Loss rate: 0.25%

Run 4: Report of PCC-Expr — Data Link

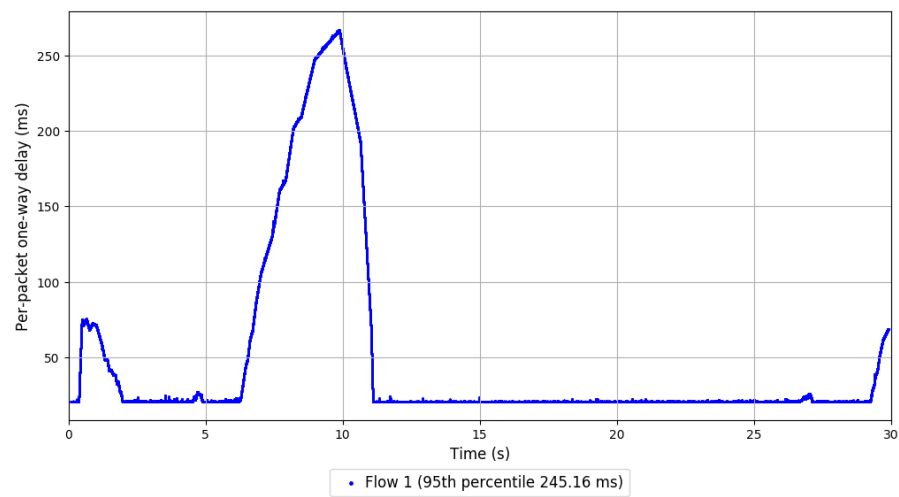
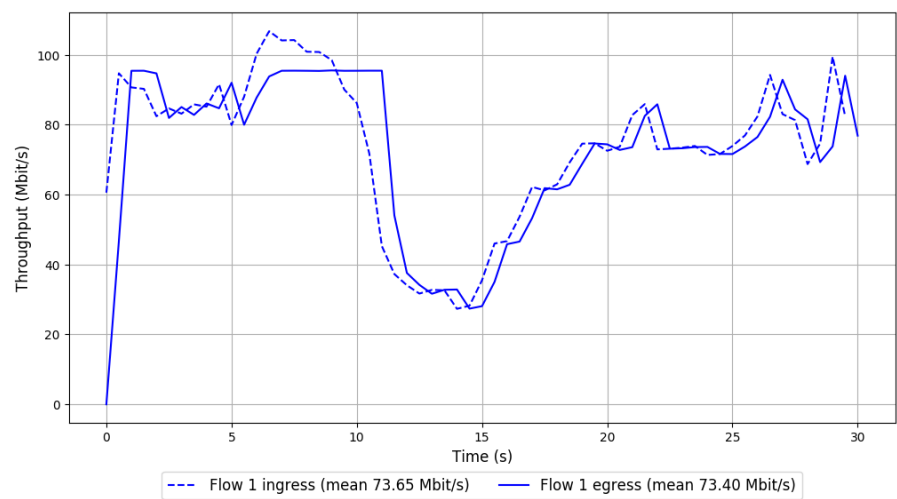


Run 5: Statistics of PCC-Expr

Start at: 2018-11-15 09:29:02
End at: 2018-11-15 09:29:32
Local clock offset: 2.533 ms
Remote clock offset: -8.016 ms

Below is generated by plot.py at 2018-11-15 09:52:55
Datalink statistics
-- Total of 1 flow:
Average throughput: 73.40 Mbit/s
95th percentile per-packet one-way delay: 245.164 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 73.40 Mbit/s
95th percentile per-packet one-way delay: 245.164 ms
Loss rate: 0.43%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2018-11-15 08:05:57

End at: 2018-11-15 08:06:27

Local clock offset: 2.344 ms

Remote clock offset: -2.514 ms

Below is generated by plot.py at 2018-11-15 09:52:55

Datalink statistics

-- Total of 1 flow:

Average throughput: 85.96 Mbit/s

95th percentile per-packet one-way delay: 25.209 ms

Loss rate: 0.05%

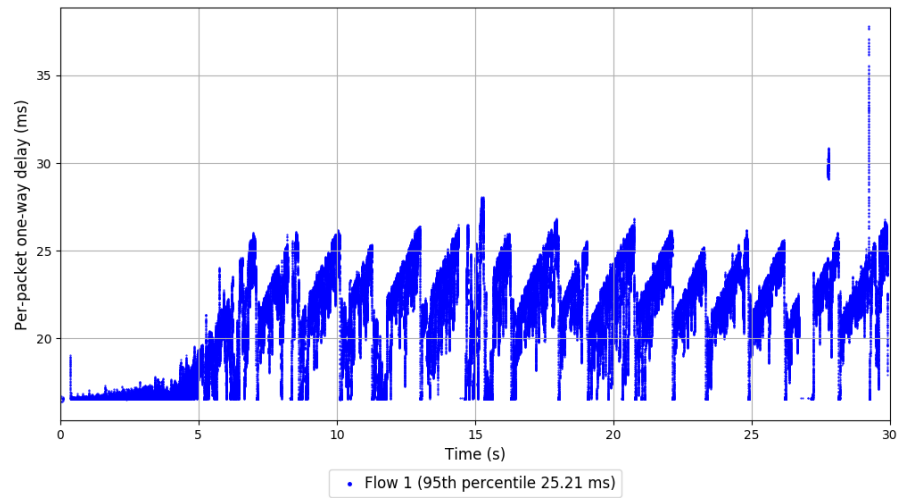
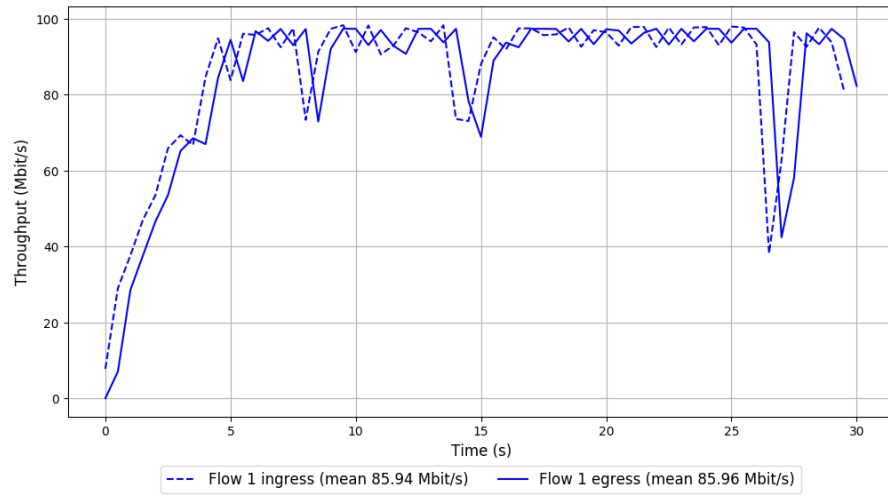
-- Flow 1:

Average throughput: 85.96 Mbit/s

95th percentile per-packet one-way delay: 25.209 ms

Loss rate: 0.05%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-11-15 08:27:56

End at: 2018-11-15 08:28:26

Local clock offset: 1.94 ms

Remote clock offset: -2.936 ms

Below is generated by plot.py at 2018-11-15 09:52:55

Datalink statistics

-- Total of 1 flow:

Average throughput: 90.84 Mbit/s

95th percentile per-packet one-way delay: 24.761 ms

Loss rate: 0.11%

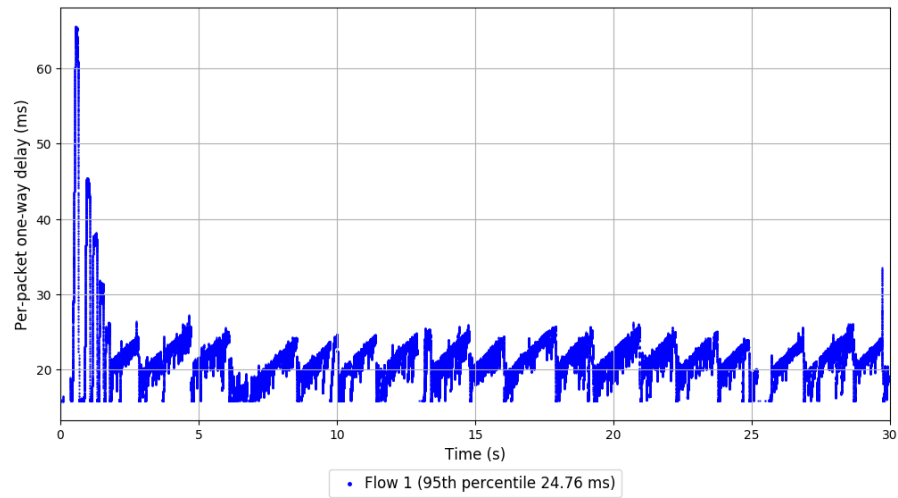
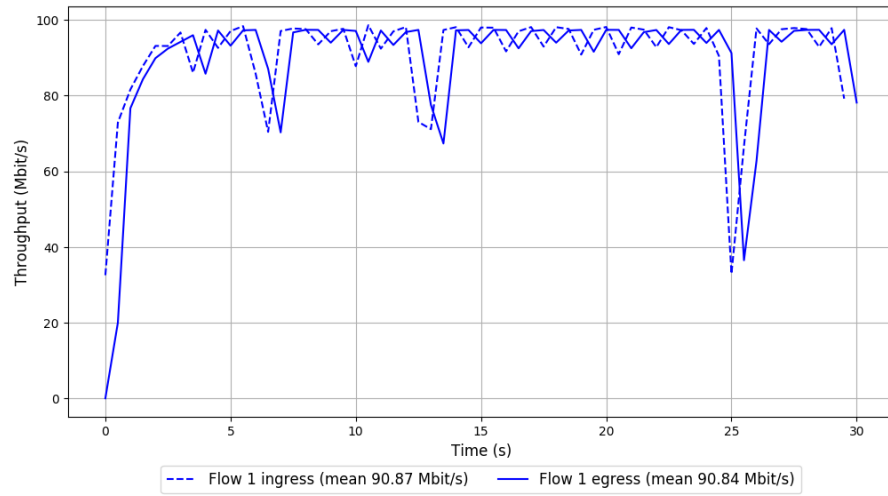
-- Flow 1:

Average throughput: 90.84 Mbit/s

95th percentile per-packet one-way delay: 24.761 ms

Loss rate: 0.11%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-11-15 08:49:33

End at: 2018-11-15 08:50:03

Local clock offset: 1.684 ms

Remote clock offset: -4.106 ms

Below is generated by plot.py at 2018-11-15 09:52:55

Datalink statistics

-- Total of 1 flow:

Average throughput: 89.33 Mbit/s

95th percentile per-packet one-way delay: 26.233 ms

Loss rate: 0.14%

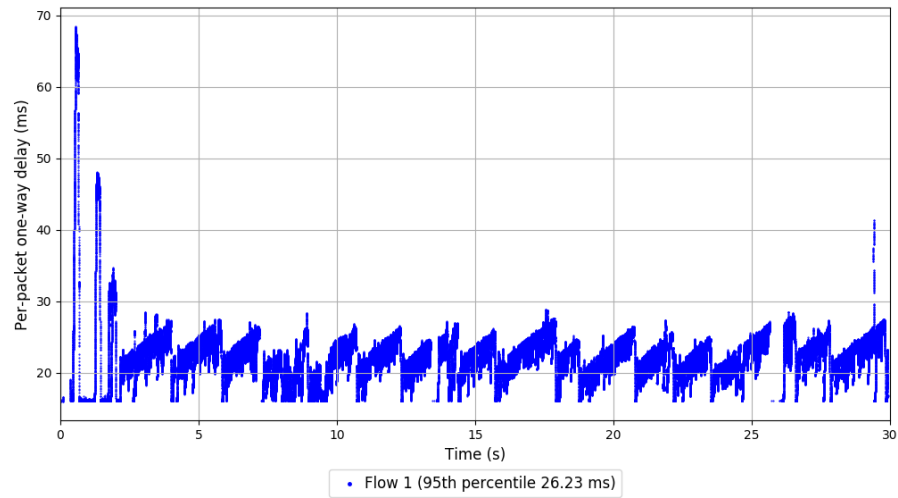
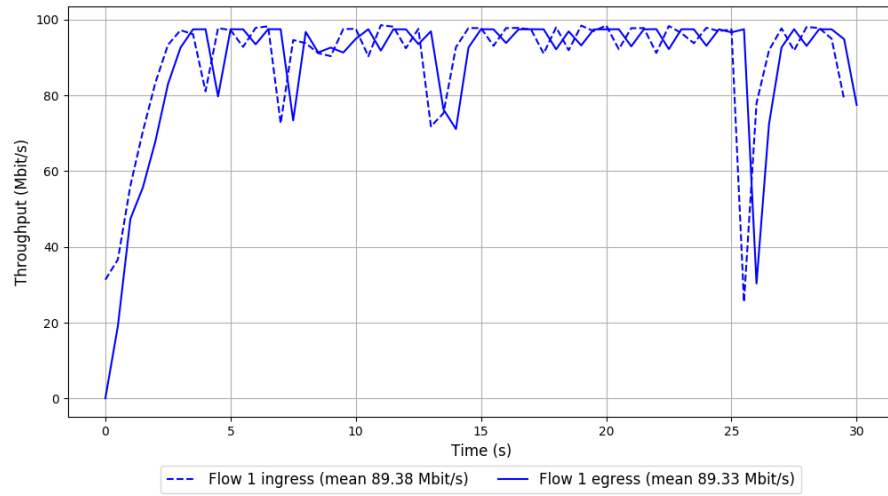
-- Flow 1:

Average throughput: 89.33 Mbit/s

95th percentile per-packet one-way delay: 26.233 ms

Loss rate: 0.14%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-11-15 09:11:28

End at: 2018-11-15 09:11:58

Local clock offset: 3.104 ms

Remote clock offset: -7.821 ms

Below is generated by plot.py at 2018-11-15 09:52:55

Datalink statistics

-- Total of 1 flow:

Average throughput: 87.45 Mbit/s

95th percentile per-packet one-way delay: 30.442 ms

Loss rate: 0.13%

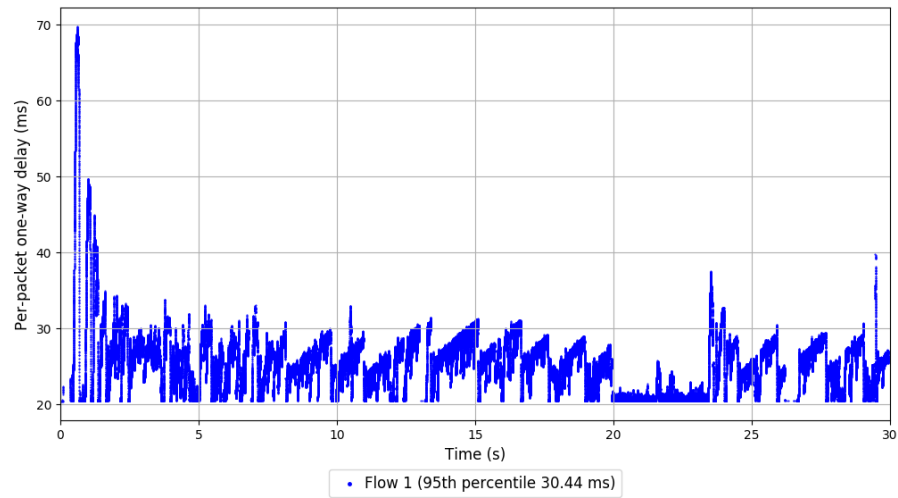
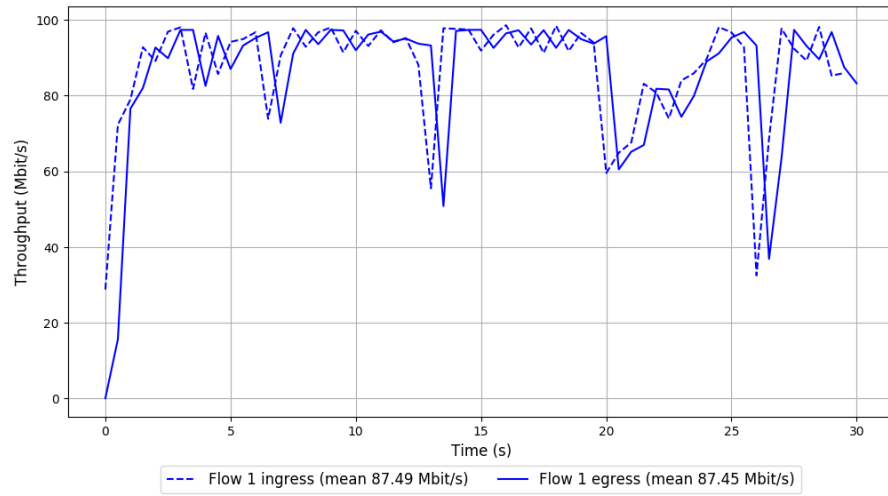
-- Flow 1:

Average throughput: 87.45 Mbit/s

95th percentile per-packet one-way delay: 30.442 ms

Loss rate: 0.13%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-11-15 09:34:14

End at: 2018-11-15 09:34:44

Local clock offset: 4.748 ms

Remote clock offset: -5.743 ms

Below is generated by plot.py at 2018-11-15 09:53:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 90.84 Mbit/s

95th percentile per-packet one-way delay: 30.610 ms

Loss rate: 0.14%

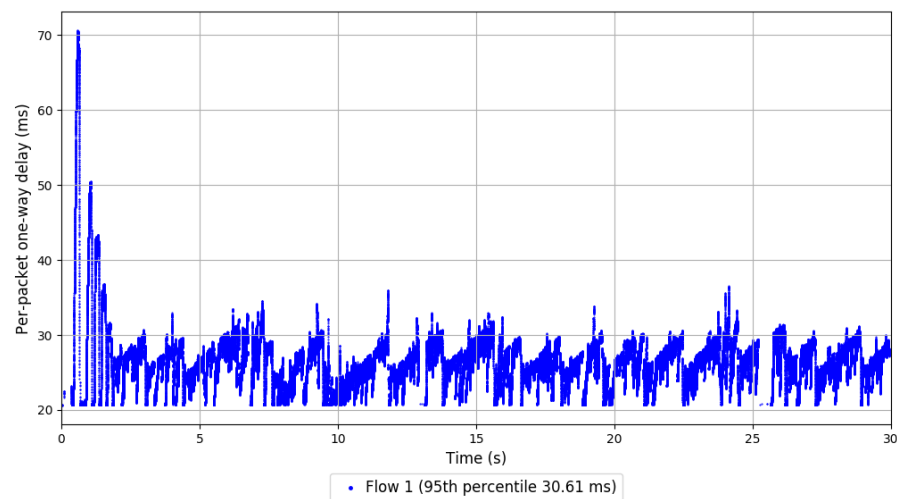
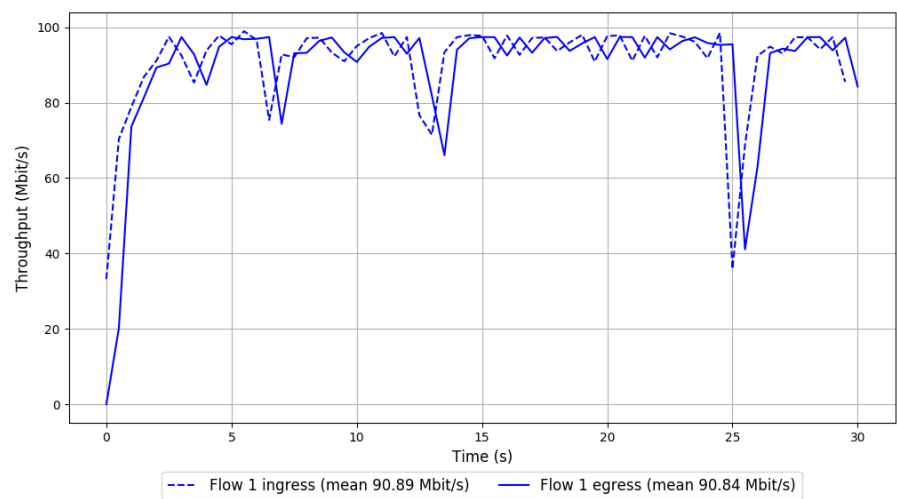
-- Flow 1:

Average throughput: 90.84 Mbit/s

95th percentile per-packet one-way delay: 30.610 ms

Loss rate: 0.14%

Run 5: Report of QUIC Cubic — Data Link

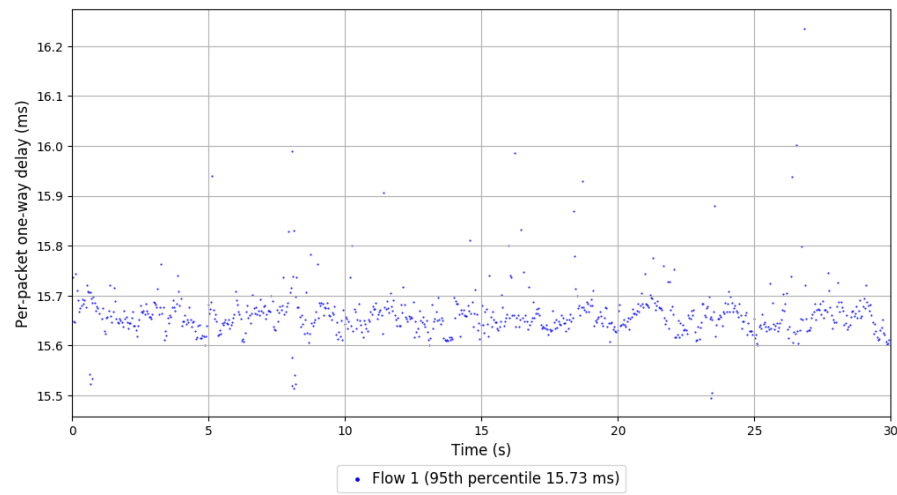
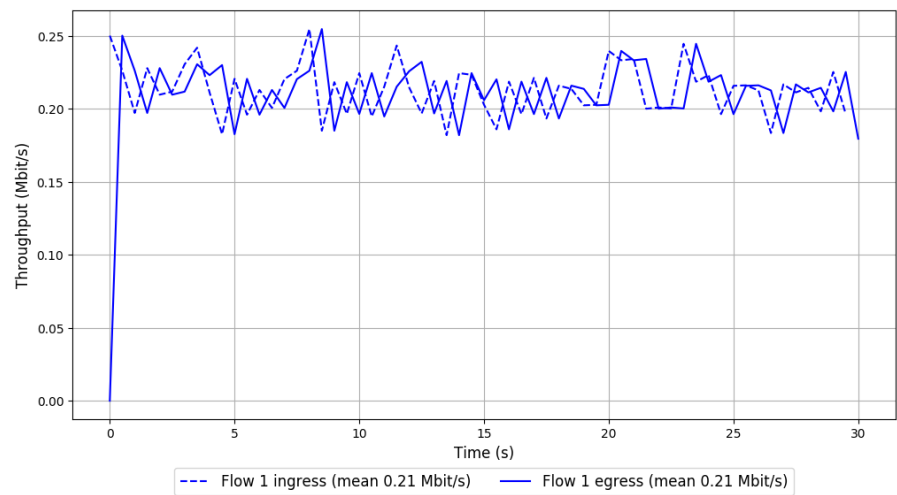


```
Run 1: Statistics of SCReAM

Start at: 2018-11-15 08:03:38
End at: 2018-11-15 08:04:08
Local clock offset: 2.06 ms
Remote clock offset: -1.889 ms

# Below is generated by plot.py at 2018-11-15 09:53:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 15.728 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 15.728 ms
Loss rate: 0.13%
```

Run 1: Report of SReAM — Data Link

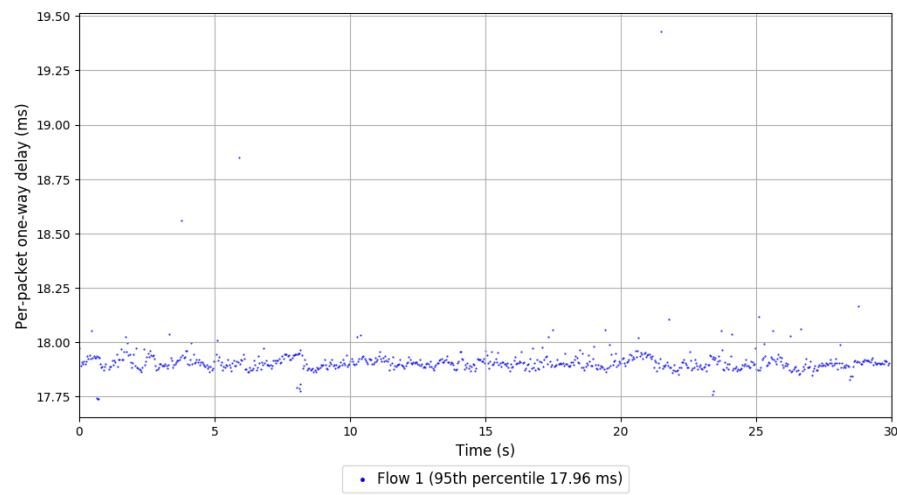
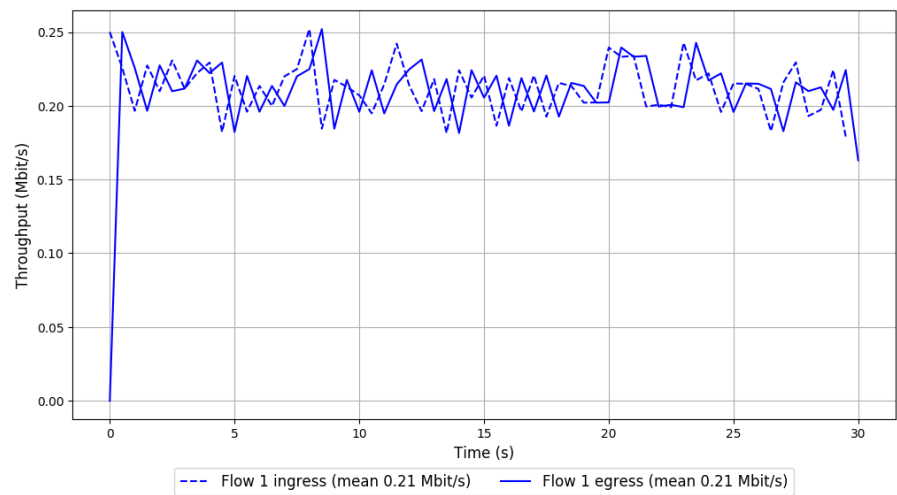


Run 2: Statistics of SCReAM

Start at: 2018-11-15 08:25:35
End at: 2018-11-15 08:26:05
Local clock offset: 3.443 ms
Remote clock offset: -3.356 ms

Below is generated by plot.py at 2018-11-15 09:53:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 17.962 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 17.962 ms
Loss rate: 0.13%

Run 2: Report of SReAM — Data Link

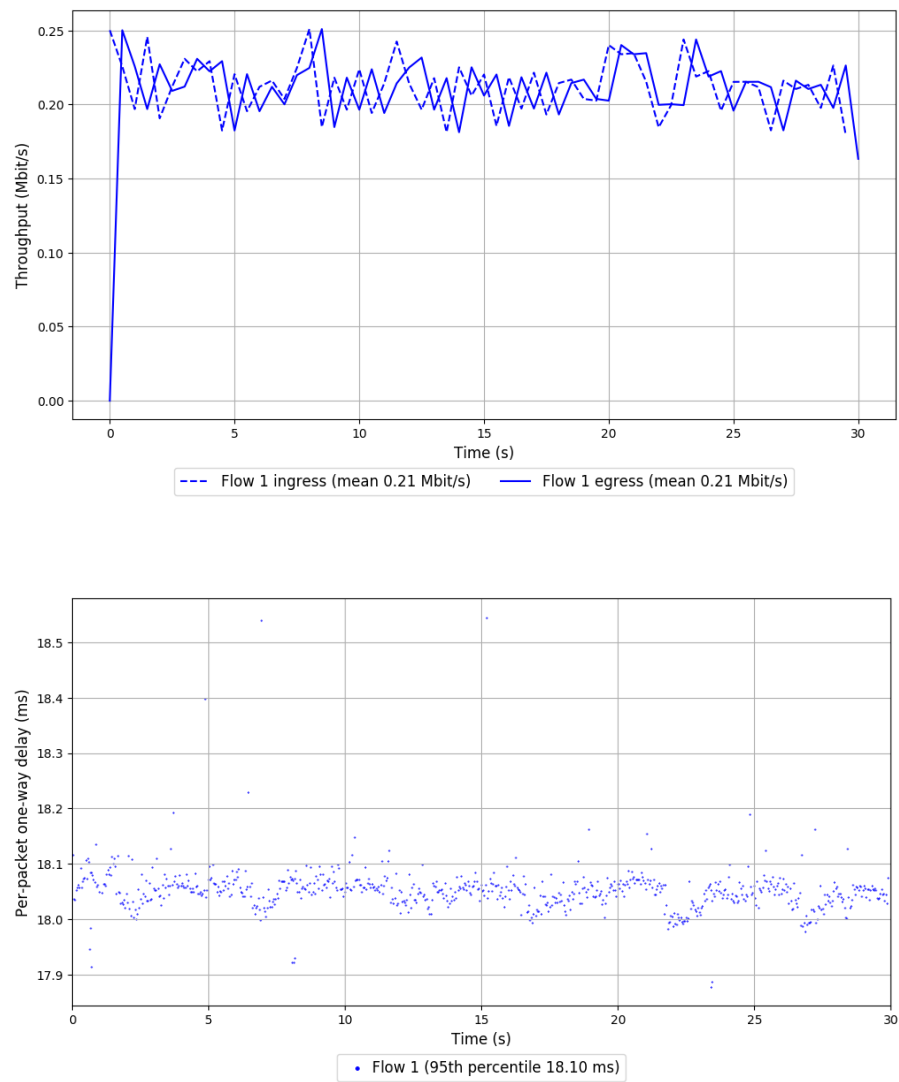


Run 3: Statistics of SCReAM

Start at: 2018-11-15 08:47:13
End at: 2018-11-15 08:47:43
Local clock offset: 4.176 ms
Remote clock offset: -3.479 ms

Below is generated by plot.py at 2018-11-15 09:53:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 18.097 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 18.097 ms
Loss rate: 0.13%

Run 3: Report of SReAM — Data Link

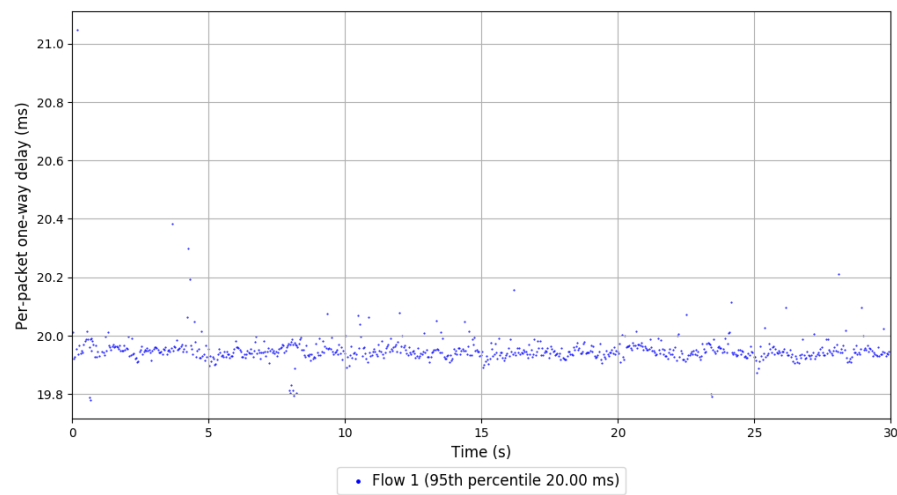
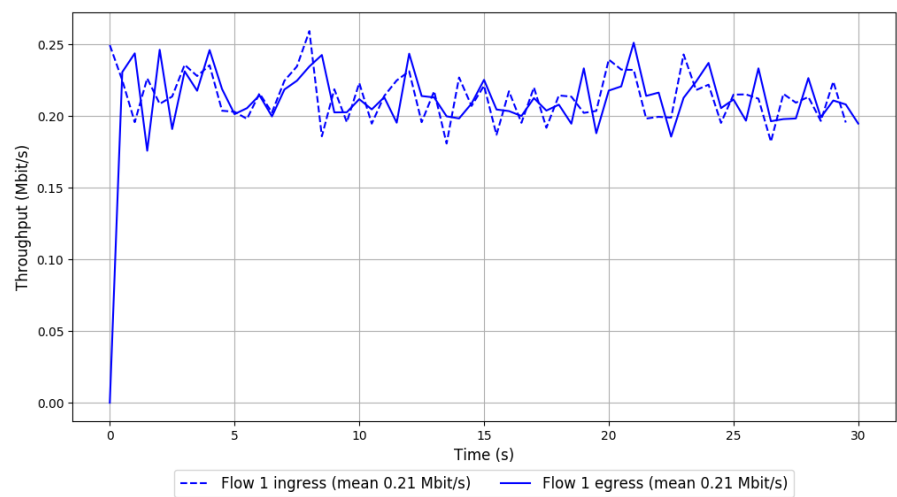


Run 4: Statistics of SCReAM

Start at: 2018-11-15 09:09:08
End at: 2018-11-15 09:09:38
Local clock offset: 2.374 ms
Remote clock offset: -7.985 ms

Below is generated by plot.py at 2018-11-15 09:53:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 19.999 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 19.999 ms
Loss rate: 0.13%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2018-11-15 09:31:50

End at: 2018-11-15 09:32:20

Local clock offset: 3.214 ms

Remote clock offset: -7.2 ms

Below is generated by plot.py at 2018-11-15 09:53:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 20.710 ms

Loss rate: 0.00%

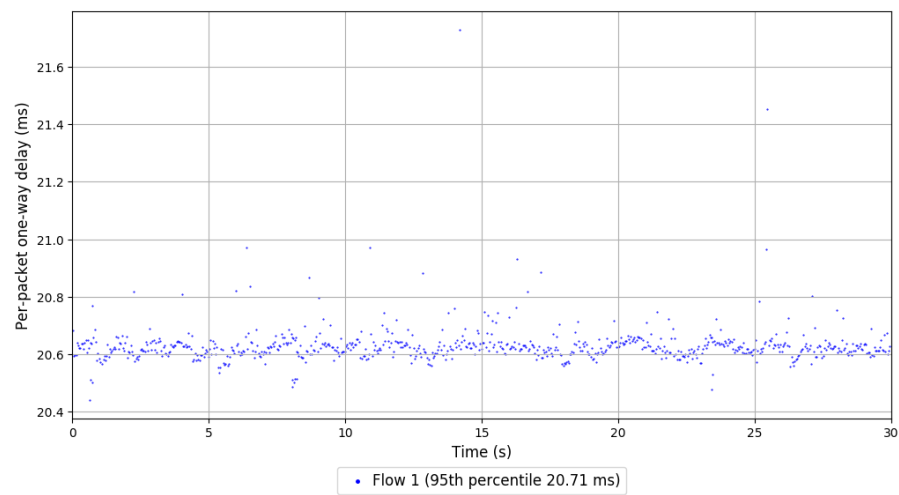
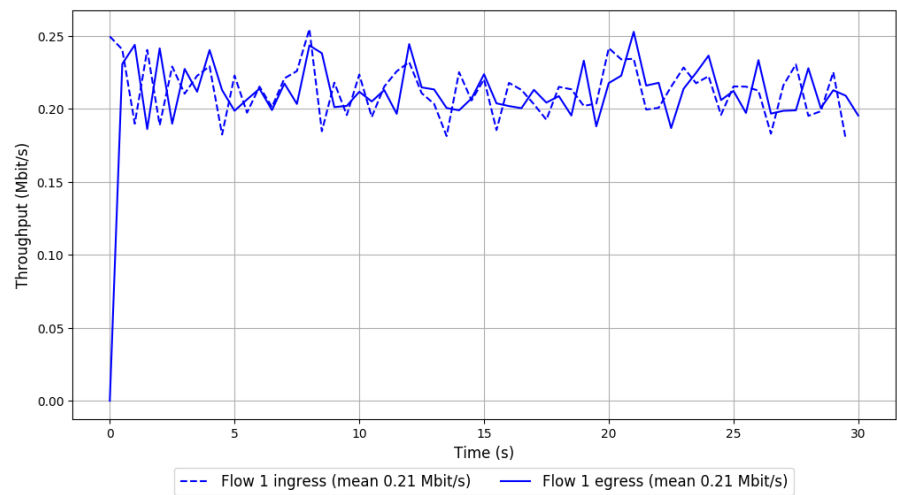
-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 20.710 ms

Loss rate: 0.00%

Run 5: Report of SReAM — Data Link

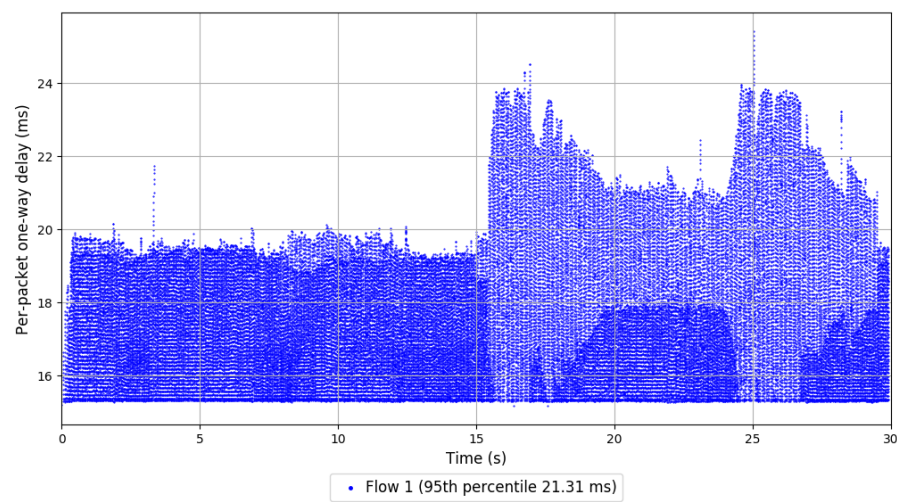
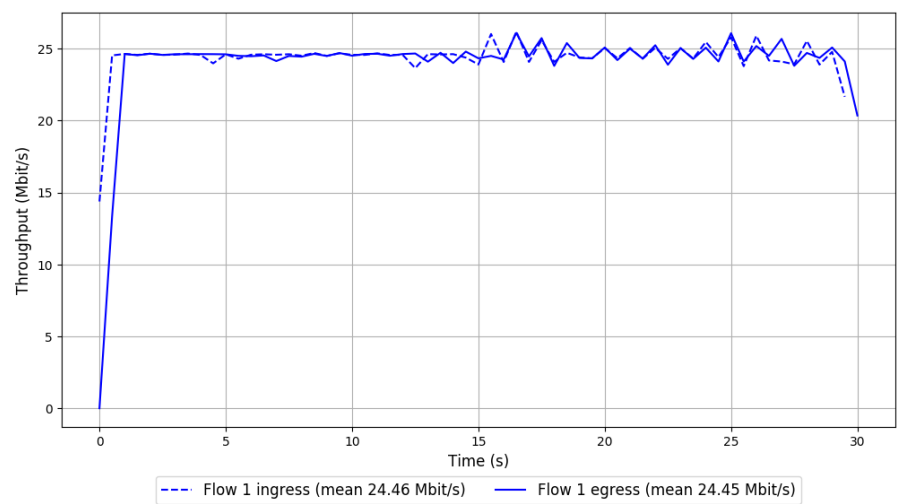


Run 1: Statistics of Sprout

Start at: 2018-11-15 08:09:34
End at: 2018-11-15 08:10:04
Local clock offset: 1.376 ms
Remote clock offset: -2.225 ms

Below is generated by plot.py at 2018-11-15 09:53:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.45 Mbit/s
95th percentile per-packet one-way delay: 21.308 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 24.45 Mbit/s
95th percentile per-packet one-way delay: 21.308 ms
Loss rate: 0.13%

Run 1: Report of Sprout — Data Link

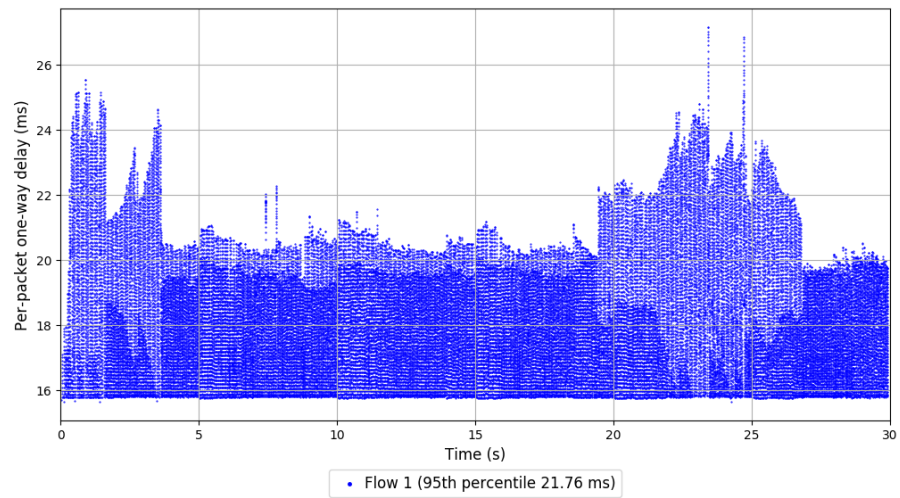
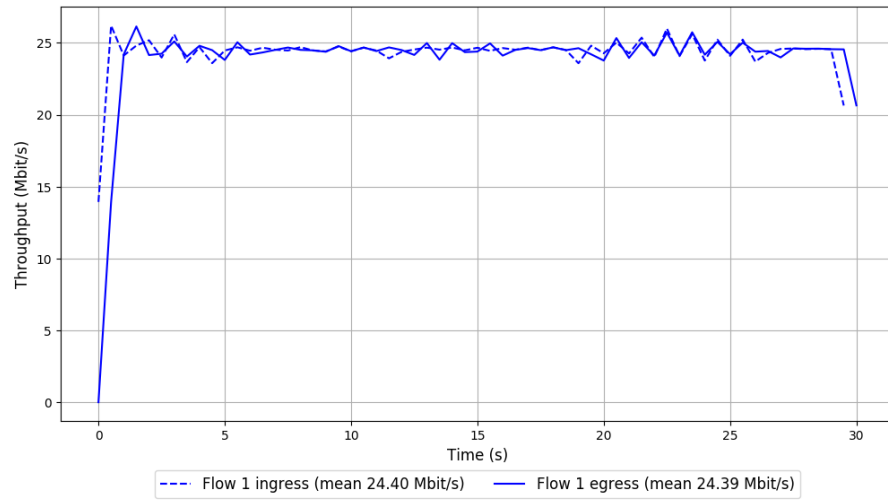


Run 2: Statistics of Sprout

Start at: 2018-11-15 08:31:32
End at: 2018-11-15 08:32:02
Local clock offset: 2.674 ms
Remote clock offset: -2.177 ms

Below is generated by plot.py at 2018-11-15 09:53:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.39 Mbit/s
95th percentile per-packet one-way delay: 21.759 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 24.39 Mbit/s
95th percentile per-packet one-way delay: 21.759 ms
Loss rate: 0.07%

Run 2: Report of Sprout — Data Link

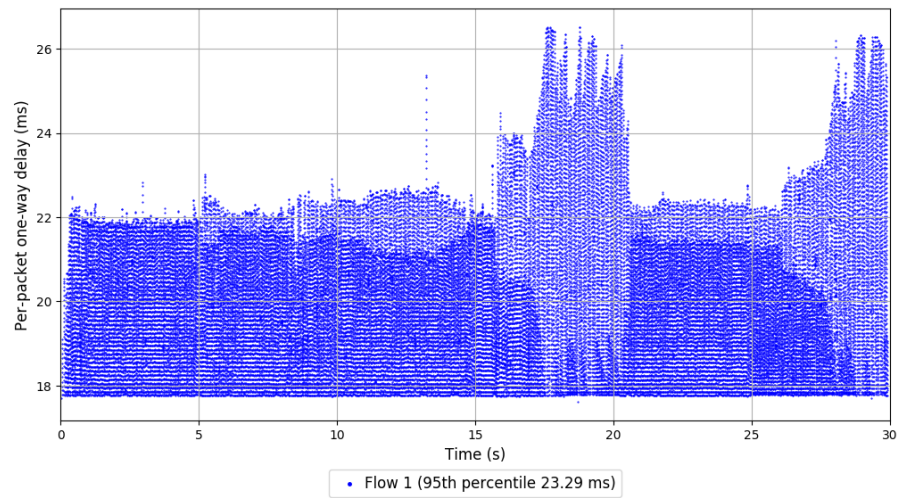
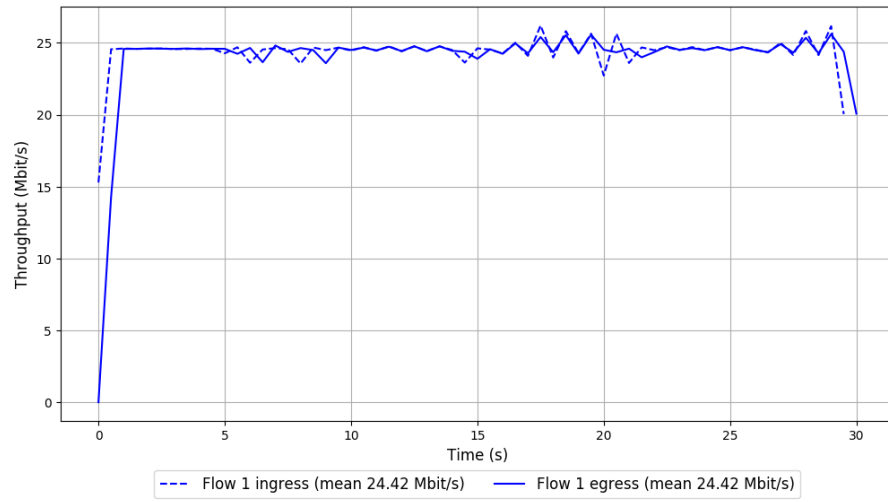


Run 3: Statistics of Sprout

Start at: 2018-11-15 08:53:18
End at: 2018-11-15 08:53:49
Local clock offset: 3.614 ms
Remote clock offset: -3.934 ms

Below is generated by plot.py at 2018-11-15 09:53:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.42 Mbit/s
95th percentile per-packet one-way delay: 23.286 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 24.42 Mbit/s
95th percentile per-packet one-way delay: 23.286 ms
Loss rate: 0.14%

Run 3: Report of Sprout — Data Link

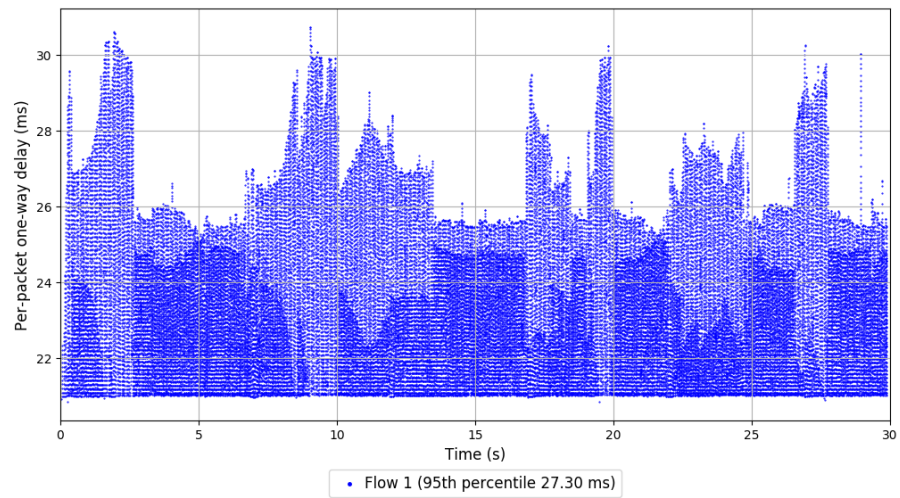
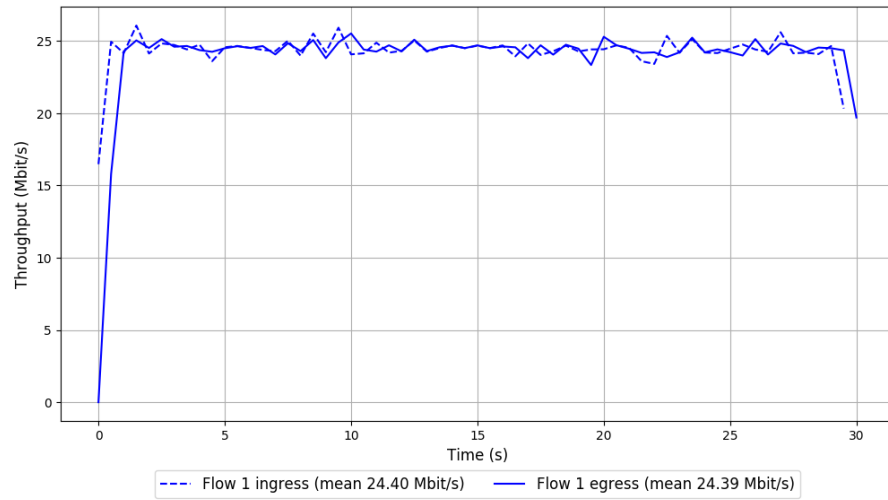


Run 4: Statistics of Sprout

Start at: 2018-11-15 09:15:15
End at: 2018-11-15 09:15:45
Local clock offset: 4.496 ms
Remote clock offset: -6.892 ms

Below is generated by plot.py at 2018-11-15 09:53:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.39 Mbit/s
95th percentile per-packet one-way delay: 27.295 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 24.39 Mbit/s
95th percentile per-packet one-way delay: 27.295 ms
Loss rate: 0.13%

Run 4: Report of Sprout — Data Link

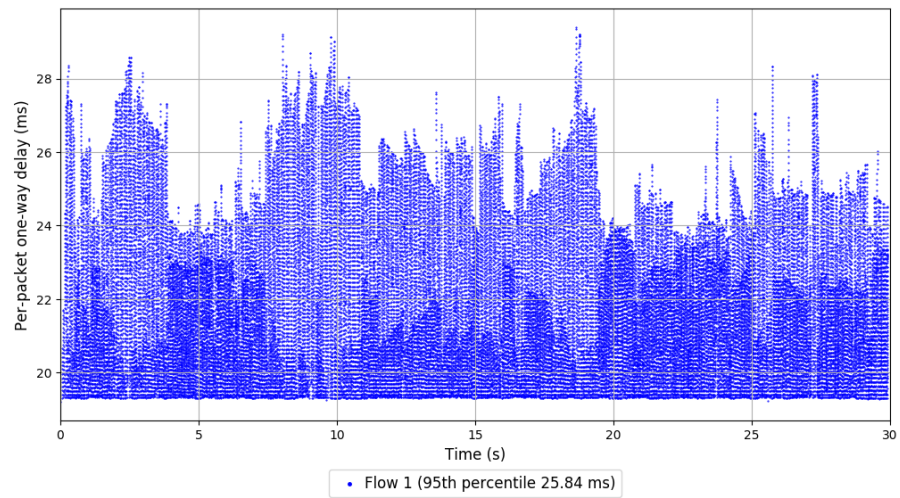
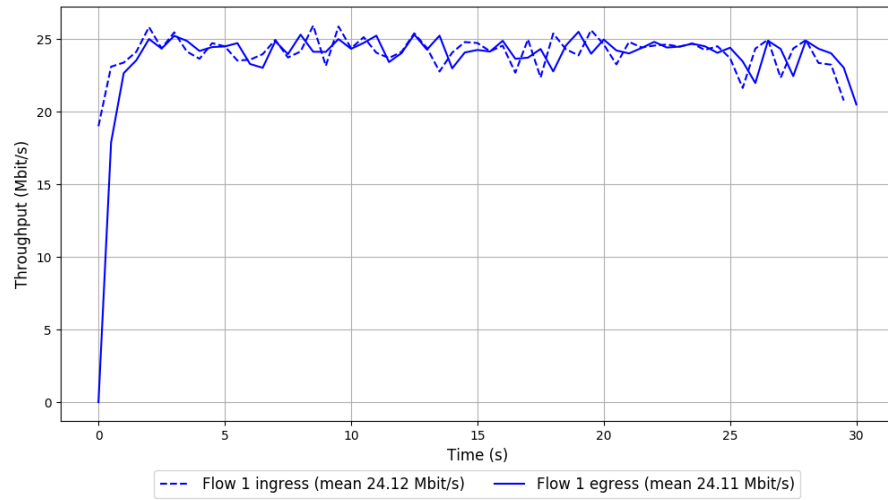


Run 5: Statistics of Sprout

Start at: 2018-11-15 09:38:05
End at: 2018-11-15 09:38:35
Local clock offset: 3.265 ms
Remote clock offset: -5.794 ms

Below is generated by plot.py at 2018-11-15 09:53:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.11 Mbit/s
95th percentile per-packet one-way delay: 25.839 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 24.11 Mbit/s
95th percentile per-packet one-way delay: 25.839 ms
Loss rate: 0.08%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2018-11-15 07:53:58

End at: 2018-11-15 07:54:28

Local clock offset: 2.179 ms

Remote clock offset: -1.425 ms

Below is generated by plot.py at 2018-11-15 09:54:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 85.50 Mbit/s

95th percentile per-packet one-way delay: 15.543 ms

Loss rate: 0.08%

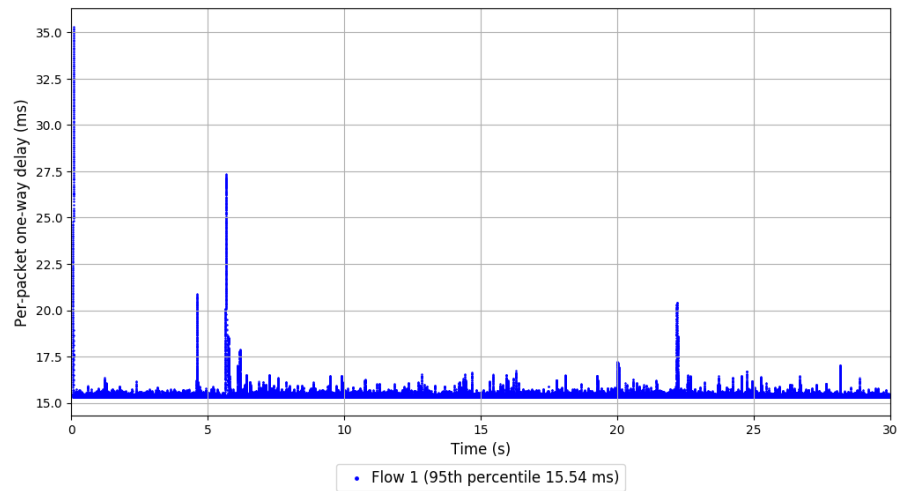
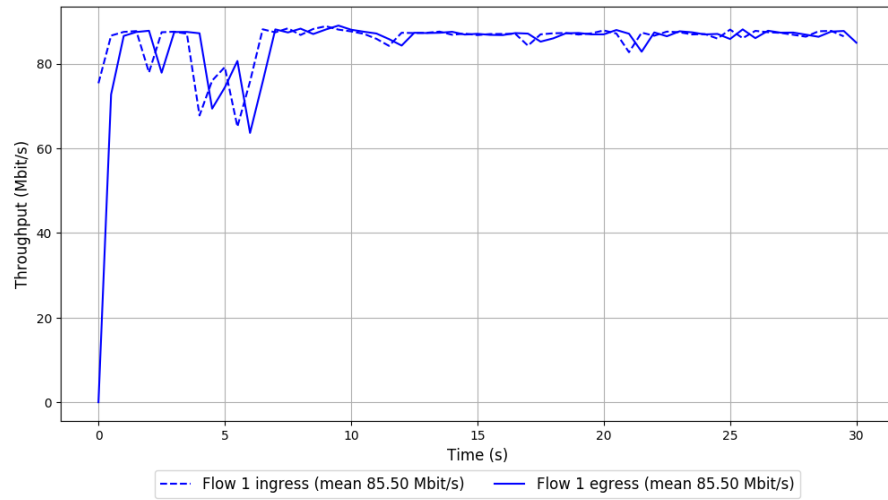
-- Flow 1:

Average throughput: 85.50 Mbit/s

95th percentile per-packet one-way delay: 15.543 ms

Loss rate: 0.08%

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

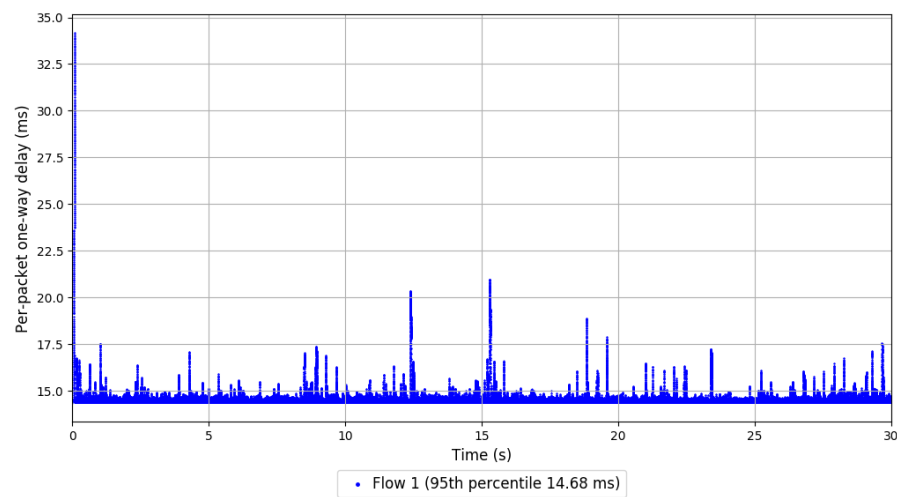
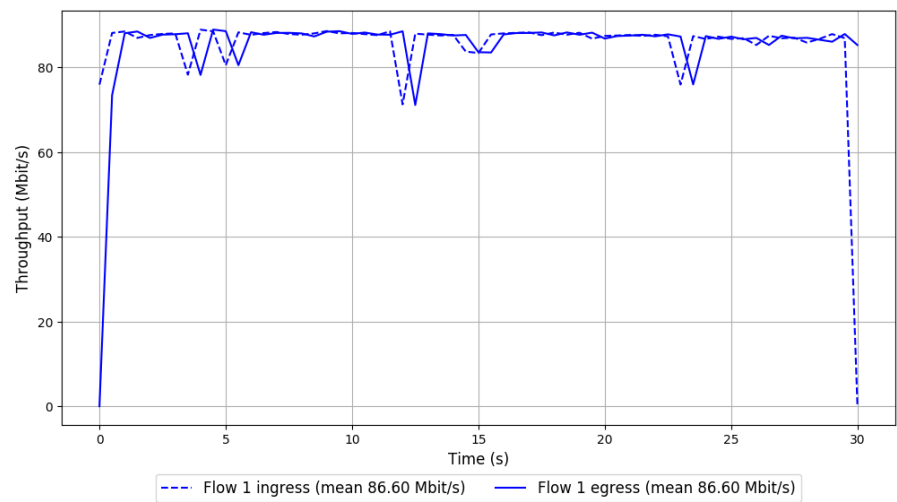


Run 2: Statistics of TaoVA-100x

Start at: 2018-11-15 08:15:29
End at: 2018-11-15 08:15:59
Local clock offset: 1.546 ms
Remote clock offset: -1.439 ms

Below is generated by plot.py at 2018-11-15 09:54:40
Datalink statistics
-- Total of 1 flow:
Average throughput: 86.60 Mbit/s
95th percentile per-packet one-way delay: 14.683 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 86.60 Mbit/s
95th percentile per-packet one-way delay: 14.683 ms
Loss rate: 0.08%

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-11-15 08:37:28

End at: 2018-11-15 08:37:58

Local clock offset: 3.48 ms

Remote clock offset: -2.755 ms

Below is generated by plot.py at 2018-11-15 09:54:40

Datalink statistics

-- Total of 1 flow:

Average throughput: 83.86 Mbit/s

95th percentile per-packet one-way delay: 17.119 ms

Loss rate: 0.09%

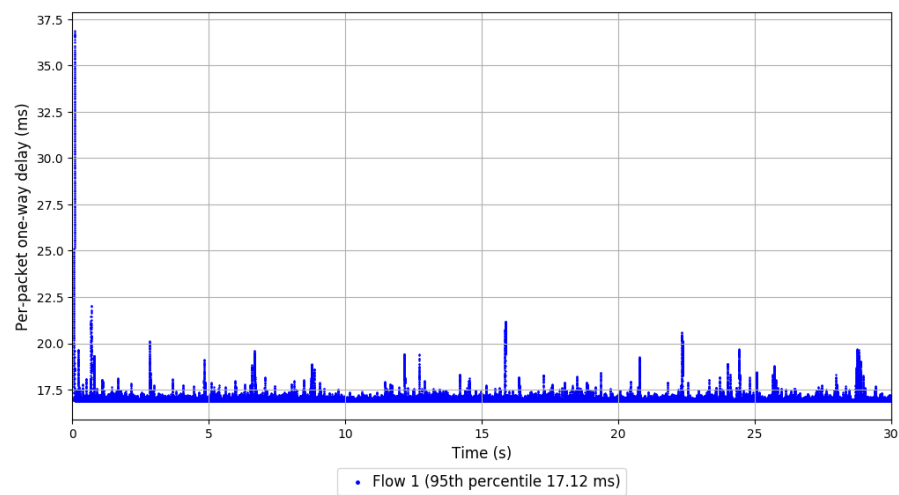
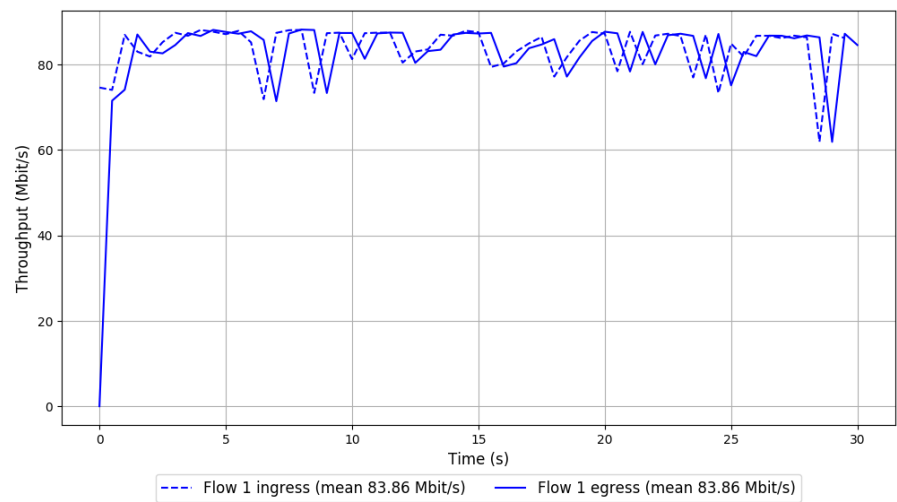
-- Flow 1:

Average throughput: 83.86 Mbit/s

95th percentile per-packet one-way delay: 17.119 ms

Loss rate: 0.09%

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-11-15 08:59:03

End at: 2018-11-15 08:59:33

Local clock offset: 2.131 ms

Remote clock offset: -4.73 ms

Below is generated by plot.py at 2018-11-15 09:54:42

Datalink statistics

-- Total of 1 flow:

Average throughput: 83.78 Mbit/s

95th percentile per-packet one-way delay: 17.343 ms

Loss rate: 0.09%

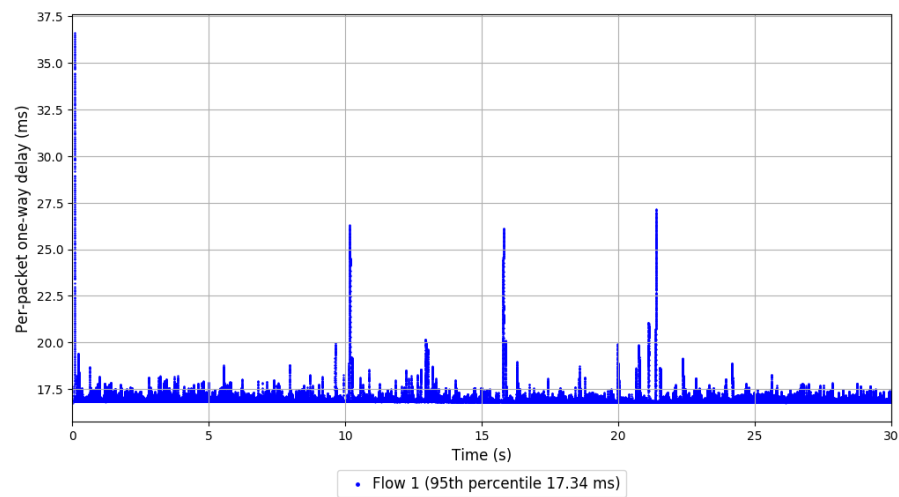
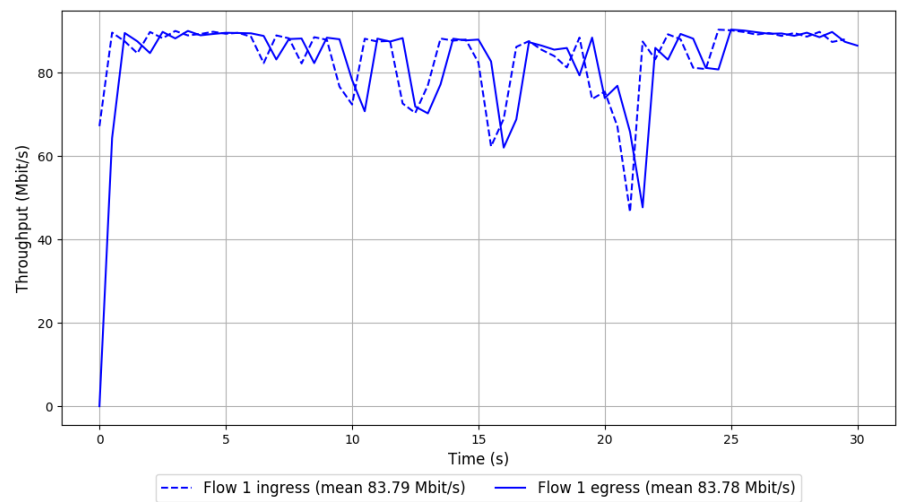
-- Flow 1:

Average throughput: 83.78 Mbit/s

95th percentile per-packet one-way delay: 17.343 ms

Loss rate: 0.09%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-11-15 09:21:28

End at: 2018-11-15 09:21:58

Local clock offset: 2.625 ms

Remote clock offset: -8.193 ms

Below is generated by plot.py at 2018-11-15 09:54:45

Datalink statistics

-- Total of 1 flow:

Average throughput: 85.23 Mbit/s

95th percentile per-packet one-way delay: 21.488 ms

Loss rate: 0.07%

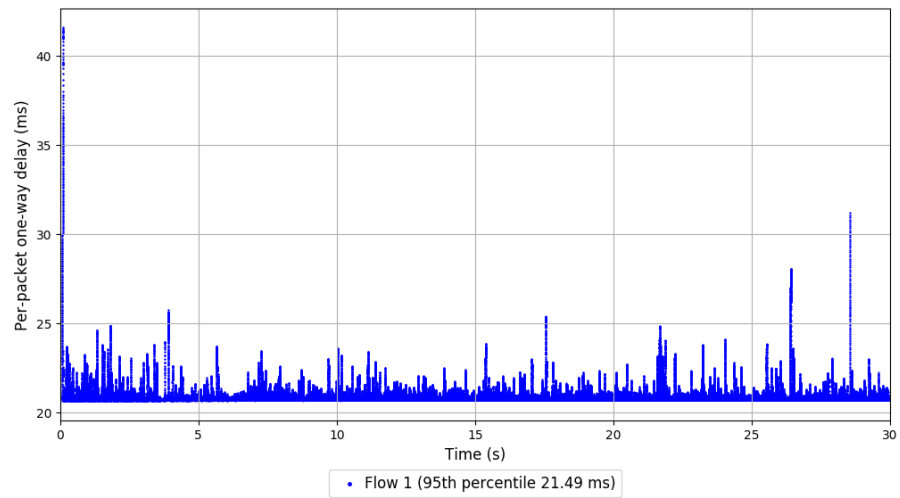
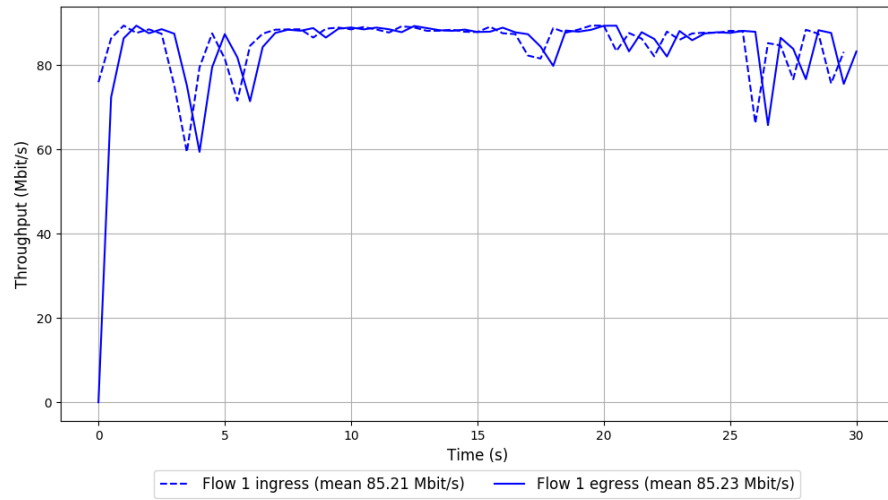
-- Flow 1:

Average throughput: 85.23 Mbit/s

95th percentile per-packet one-way delay: 21.488 ms

Loss rate: 0.07%

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

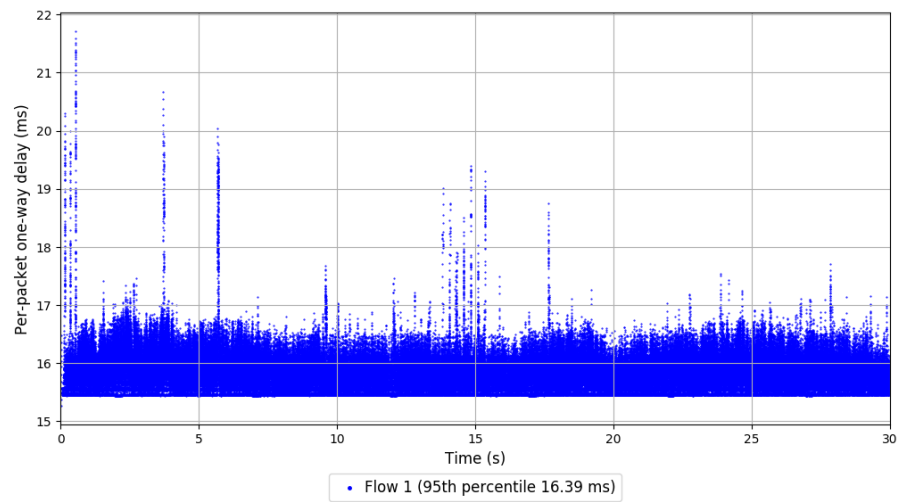
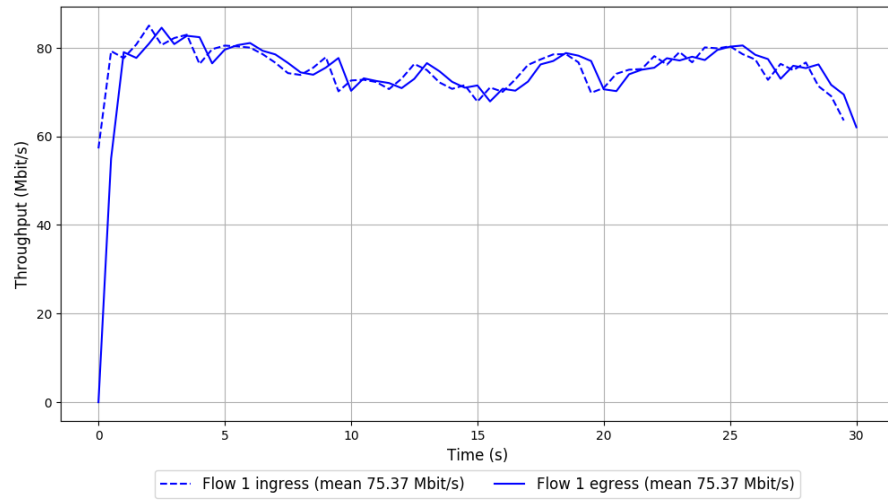


Run 1: Statistics of TCP Vegas

Start at: 2018-11-15 07:55:11
End at: 2018-11-15 07:55:41
Local clock offset: 2.111 ms
Remote clock offset: -1.591 ms

Below is generated by plot.py at 2018-11-15 09:54:45
Datalink statistics
-- Total of 1 flow:
Average throughput: 75.37 Mbit/s
95th percentile per-packet one-way delay: 16.391 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 75.37 Mbit/s
95th percentile per-packet one-way delay: 16.391 ms
Loss rate: 0.07%

Run 1: Report of TCP Vegas — Data Link

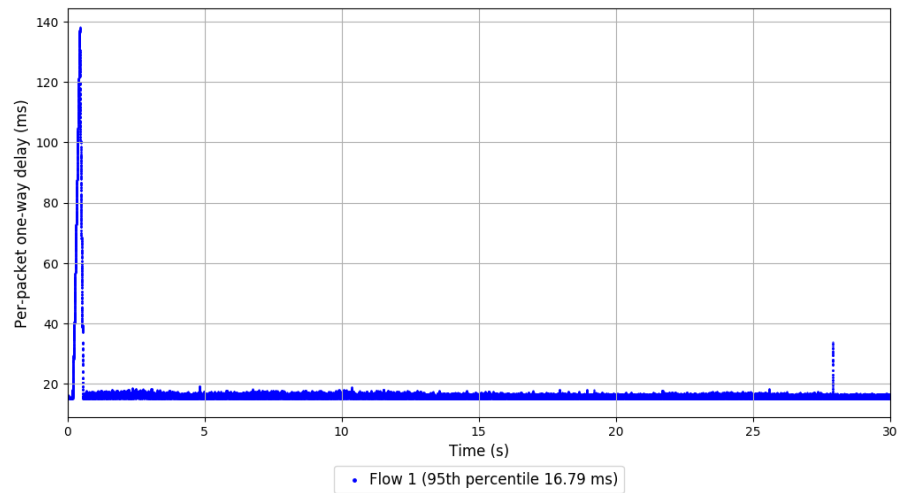
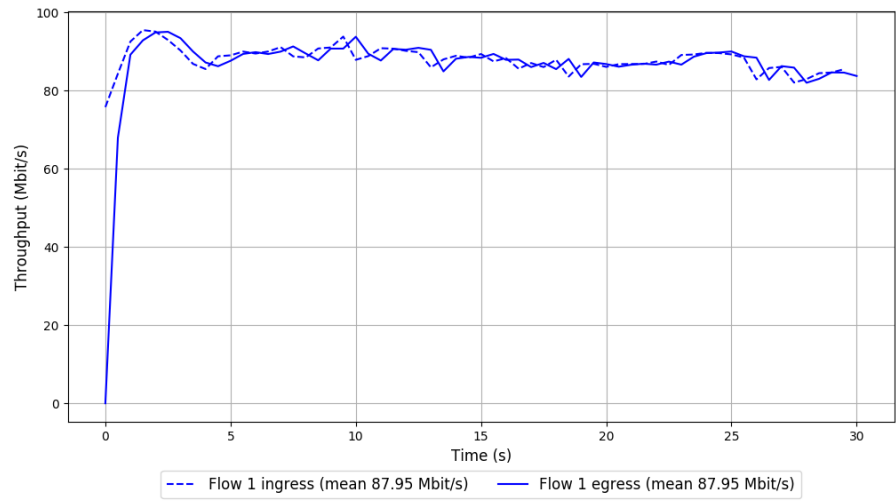


Run 2: Statistics of TCP Vegas

Start at: 2018-11-15 08:16:49
End at: 2018-11-15 08:17:19
Local clock offset: 1.434 ms
Remote clock offset: -2.274 ms

Below is generated by plot.py at 2018-11-15 09:54:45
Datalink statistics
-- Total of 1 flow:
Average throughput: 87.95 Mbit/s
95th percentile per-packet one-way delay: 16.792 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 87.95 Mbit/s
95th percentile per-packet one-way delay: 16.792 ms
Loss rate: 0.08%

Run 2: Report of TCP Vegas — Data Link

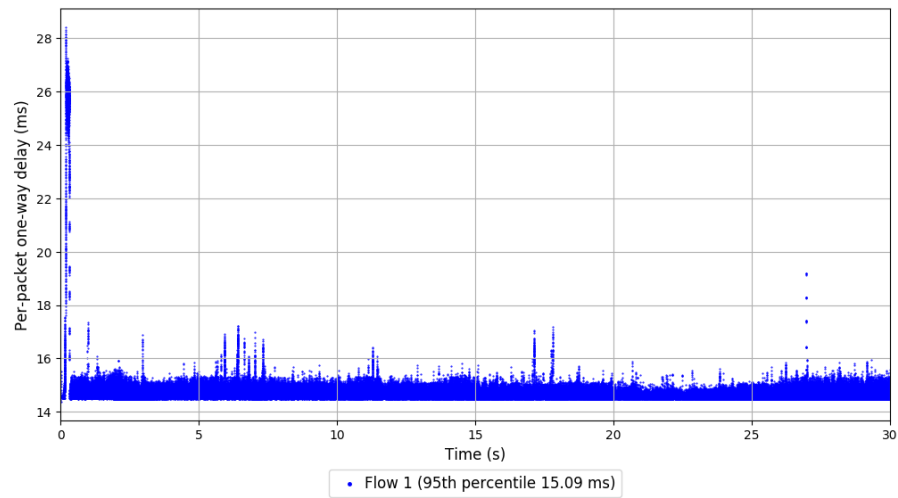
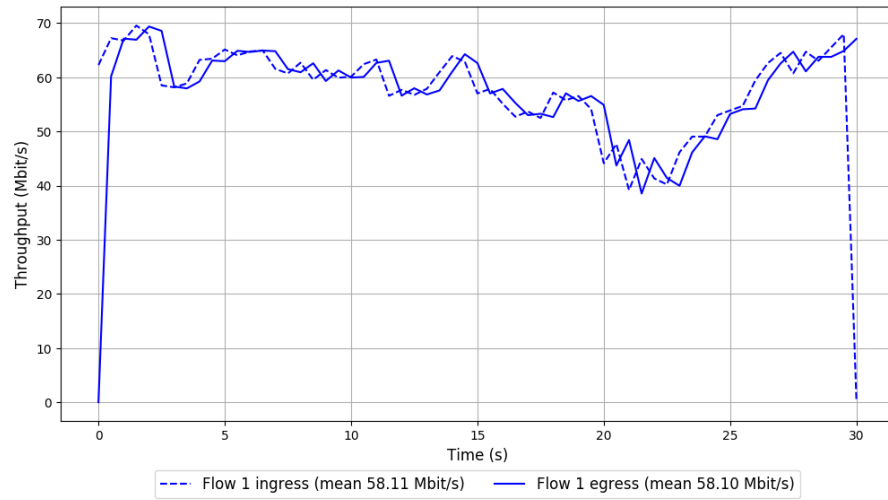


Run 3: Statistics of TCP Vegas

Start at: 2018-11-15 08:38:44
End at: 2018-11-15 08:39:14
Local clock offset: 1.506 ms
Remote clock offset: -2.357 ms

Below is generated by plot.py at 2018-11-15 09:54:45
Datalink statistics
-- Total of 1 flow:
Average throughput: 58.10 Mbit/s
95th percentile per-packet one-way delay: 15.092 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 58.10 Mbit/s
95th percentile per-packet one-way delay: 15.092 ms
Loss rate: 0.10%

Run 3: Report of TCP Vegas — Data Link

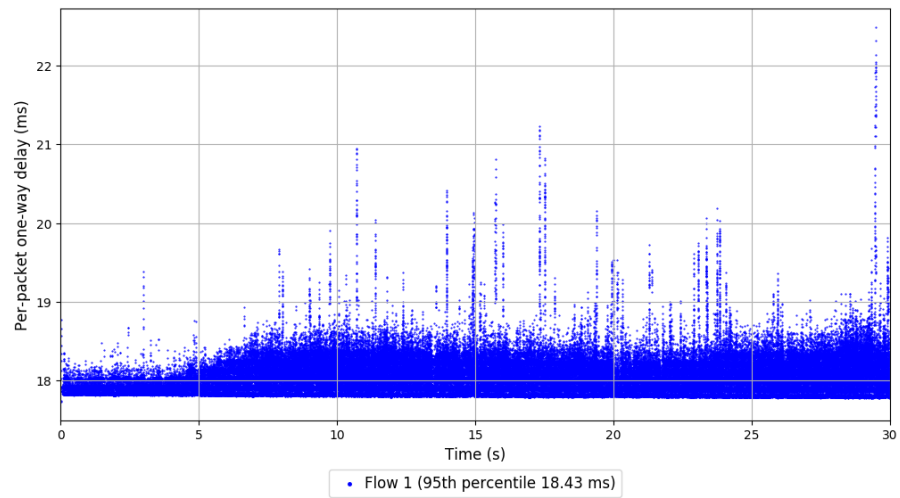
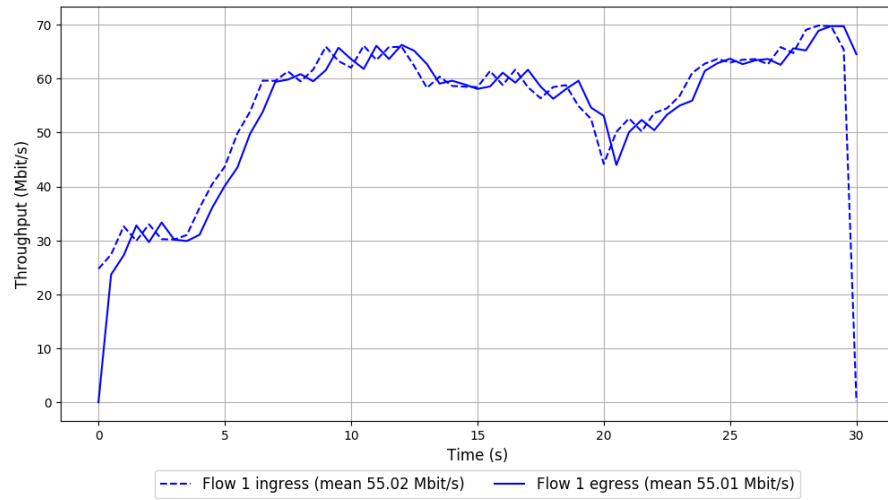


Run 4: Statistics of TCP Vegas

Start at: 2018-11-15 09:00:27
End at: 2018-11-15 09:00:57
Local clock offset: 2.044 ms
Remote clock offset: -5.885 ms

Below is generated by plot.py at 2018-11-15 09:54:45
Datalink statistics
-- Total of 1 flow:
Average throughput: 55.01 Mbit/s
95th percentile per-packet one-way delay: 18.431 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 55.01 Mbit/s
95th percentile per-packet one-way delay: 18.431 ms
Loss rate: 0.11%

Run 4: Report of TCP Vegas — Data Link

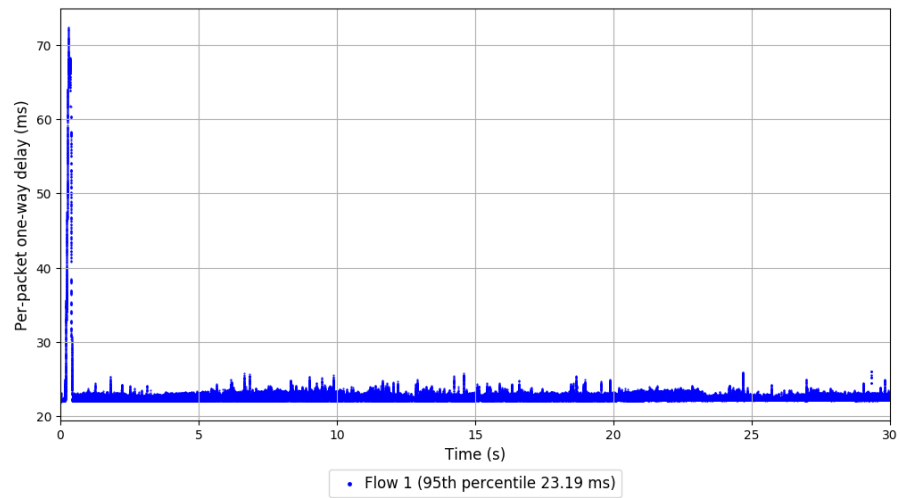
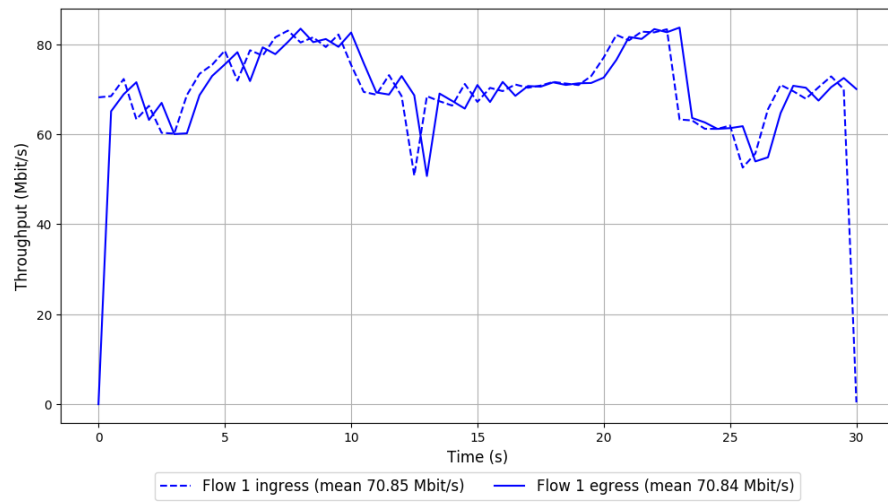


Run 5: Statistics of TCP Vegas

Start at: 2018-11-15 09:22:55
End at: 2018-11-15 09:23:25
Local clock offset: 4.418 ms
Remote clock offset: -7.726 ms

Below is generated by plot.py at 2018-11-15 09:54:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 70.84 Mbit/s
95th percentile per-packet one-way delay: 23.194 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 70.84 Mbit/s
95th percentile per-packet one-way delay: 23.194 ms
Loss rate: 0.09%

Run 5: Report of TCP Vegas — Data Link

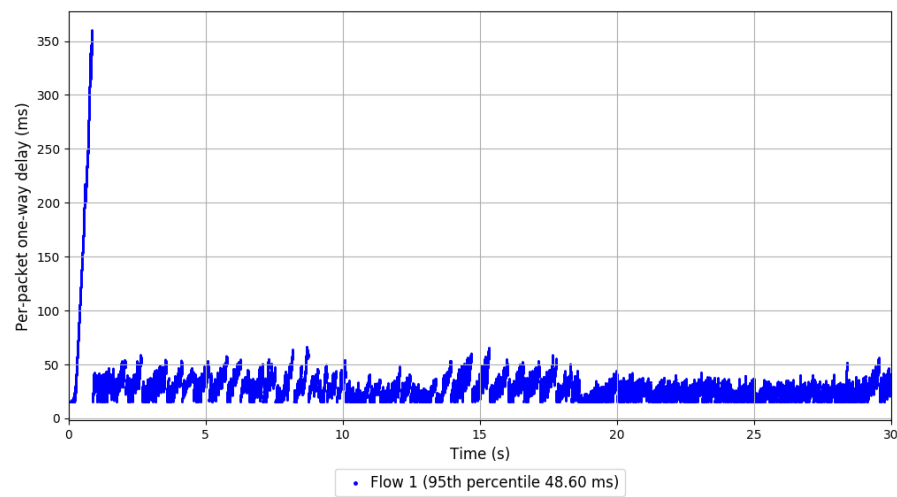
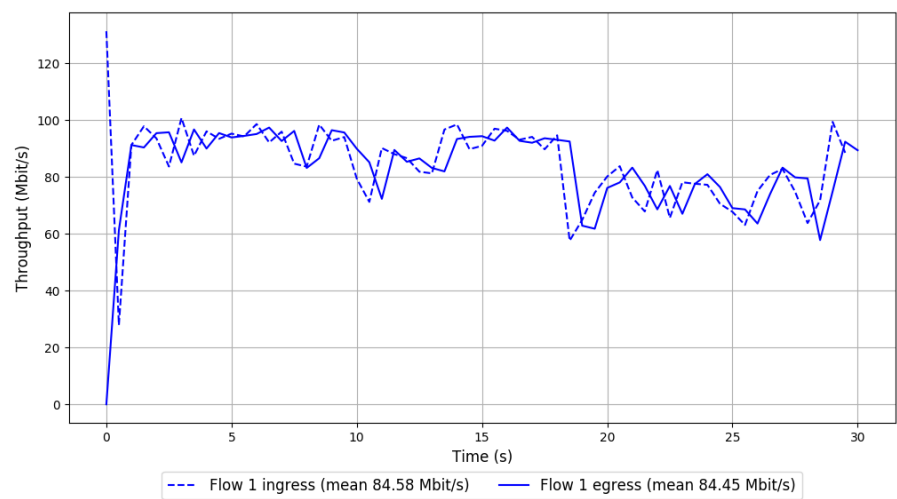


Run 1: Statistics of Verus

Start at: 2018-11-15 08:04:43
End at: 2018-11-15 08:05:13
Local clock offset: 2.045 ms
Remote clock offset: -1.379 ms

Below is generated by plot.py at 2018-11-15 09:55:05
Datalink statistics
-- Total of 1 flow:
Average throughput: 84.45 Mbit/s
95th percentile per-packet one-way delay: 48.596 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 84.45 Mbit/s
95th percentile per-packet one-way delay: 48.596 ms
Loss rate: 0.23%

Run 1: Report of Verus — Data Link

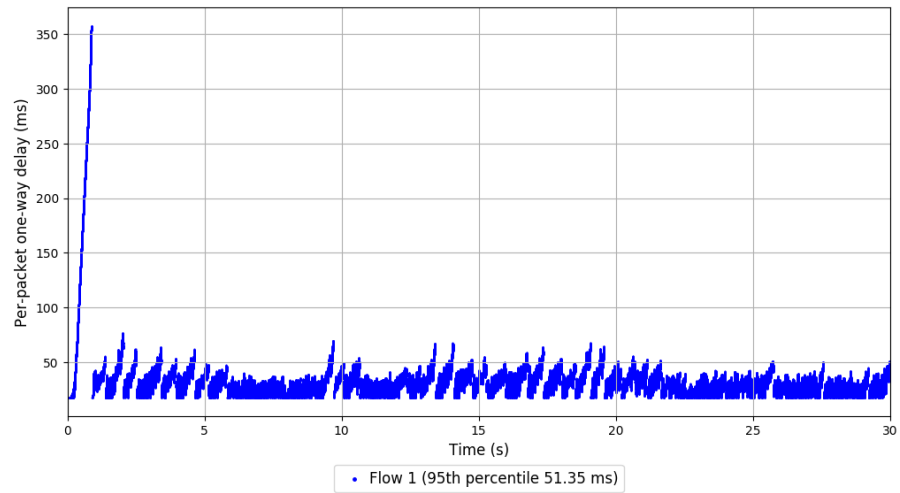
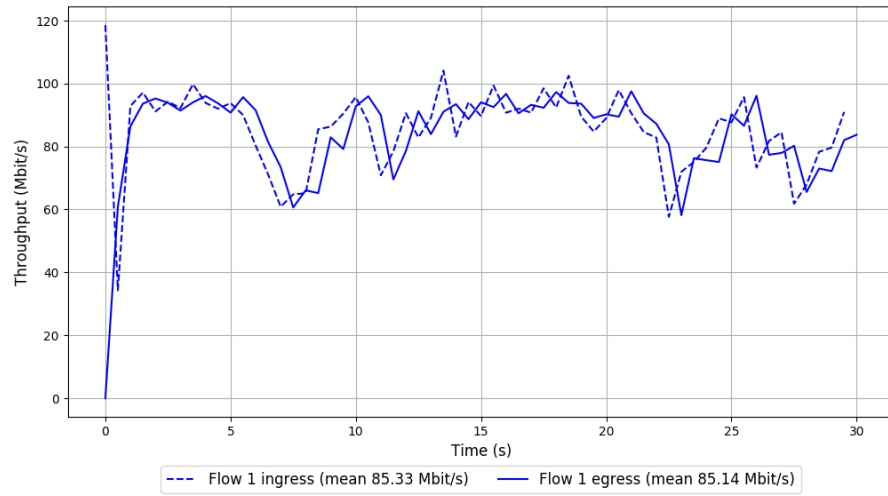


Run 2: Statistics of Verus

Start at: 2018-11-15 08:26:40
End at: 2018-11-15 08:27:10
Local clock offset: 3.742 ms
Remote clock offset: -2.634 ms

Below is generated by plot.py at 2018-11-15 09:55:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 85.14 Mbit/s
95th percentile per-packet one-way delay: 51.350 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 85.14 Mbit/s
95th percentile per-packet one-way delay: 51.350 ms
Loss rate: 0.29%

Run 2: Report of Verus — Data Link

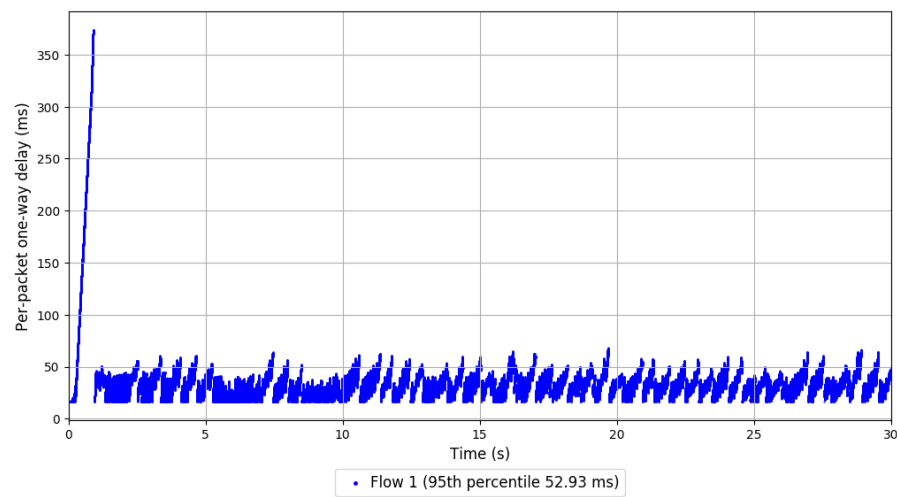
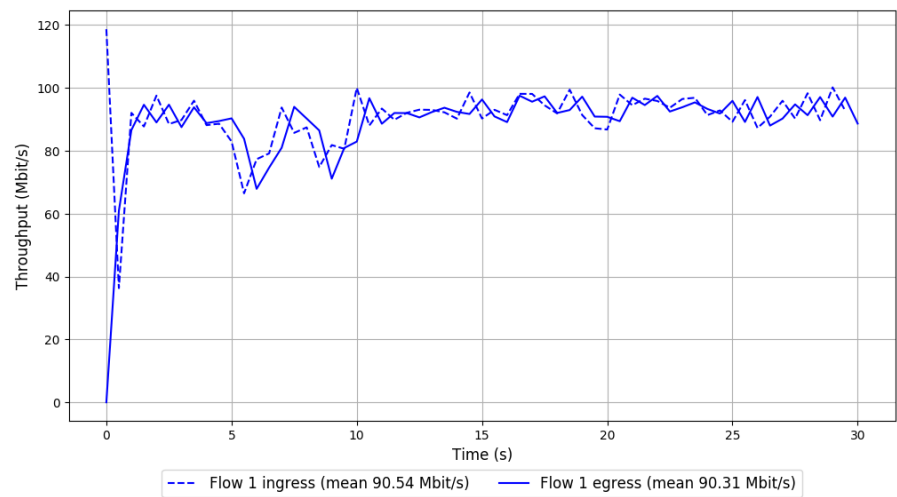


Run 3: Statistics of Verus

Start at: 2018-11-15 08:48:18
End at: 2018-11-15 08:48:48
Local clock offset: 2.55 ms
Remote clock offset: -3.446 ms

Below is generated by plot.py at 2018-11-15 09:55:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 90.31 Mbit/s
95th percentile per-packet one-way delay: 52.928 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 90.31 Mbit/s
95th percentile per-packet one-way delay: 52.928 ms
Loss rate: 0.33%

Run 3: Report of Verus — Data Link

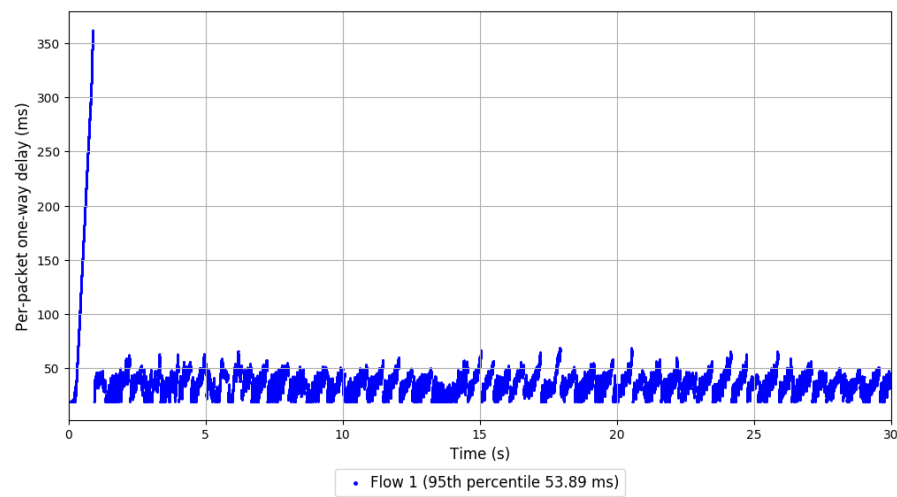
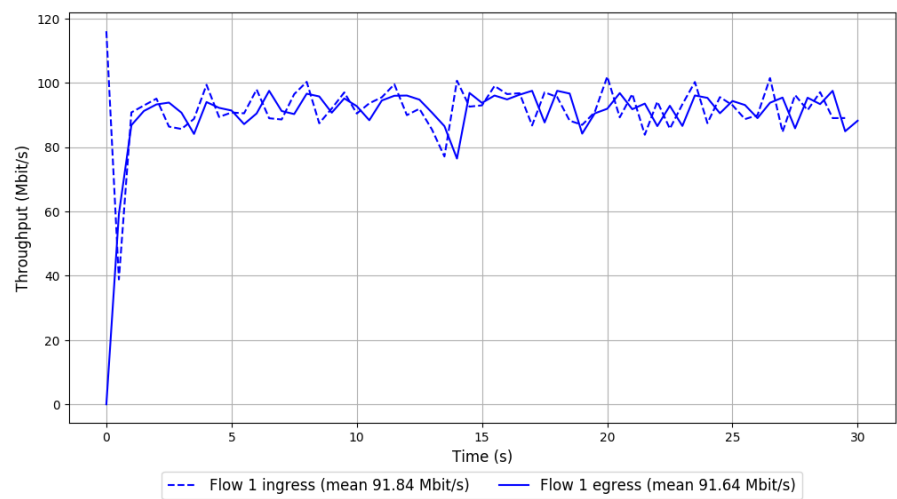


Run 4: Statistics of Verus

Start at: 2018-11-15 09:10:13
End at: 2018-11-15 09:10:43
Local clock offset: 2.141 ms
Remote clock offset: -7.591 ms

Below is generated by plot.py at 2018-11-15 09:55:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 91.64 Mbit/s
95th percentile per-packet one-way delay: 53.894 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 91.64 Mbit/s
95th percentile per-packet one-way delay: 53.894 ms
Loss rate: 0.31%

Run 4: Report of Verus — Data Link

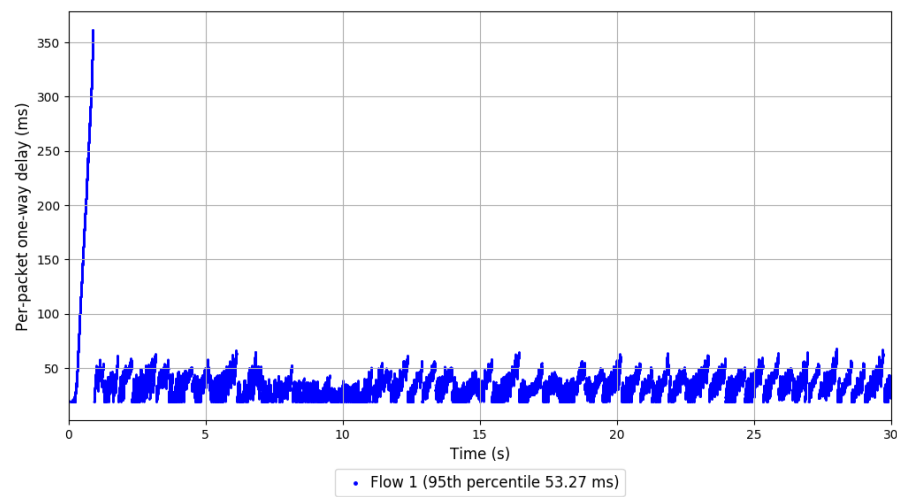
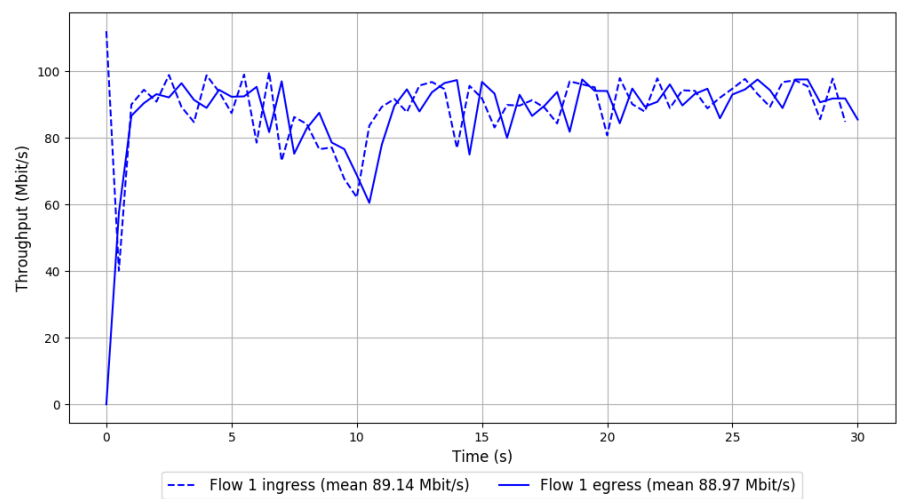


Run 5: Statistics of Verus

Start at: 2018-11-15 09:32:55
End at: 2018-11-15 09:33:25
Local clock offset: 2.195 ms
Remote clock offset: -6.466 ms

Below is generated by plot.py at 2018-11-15 09:55:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 88.97 Mbit/s
95th percentile per-packet one-way delay: 53.272 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 88.97 Mbit/s
95th percentile per-packet one-way delay: 53.272 ms
Loss rate: 0.27%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2018-11-15 08:13:04

End at: 2018-11-15 08:13:34

Local clock offset: 1.849 ms

Remote clock offset: -2.815 ms

Below is generated by plot.py at 2018-11-15 09:55:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 35.72 Mbit/s

95th percentile per-packet one-way delay: 38.920 ms

Loss rate: 0.18%

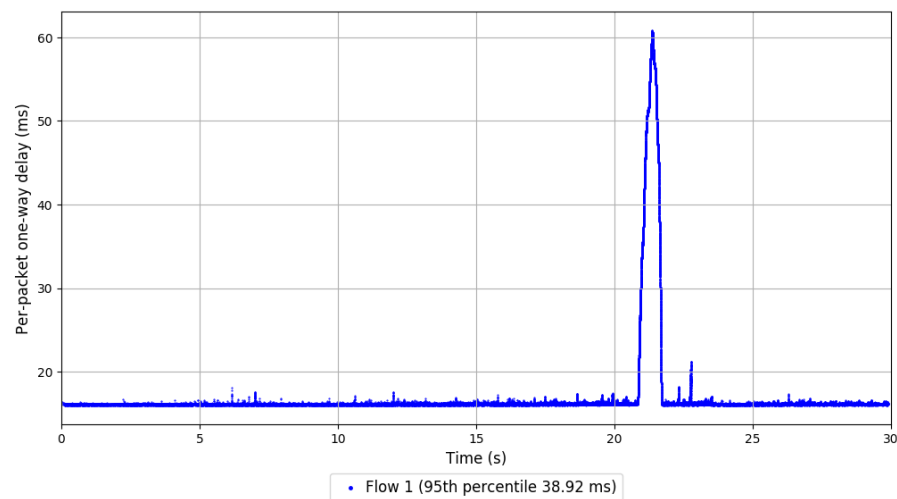
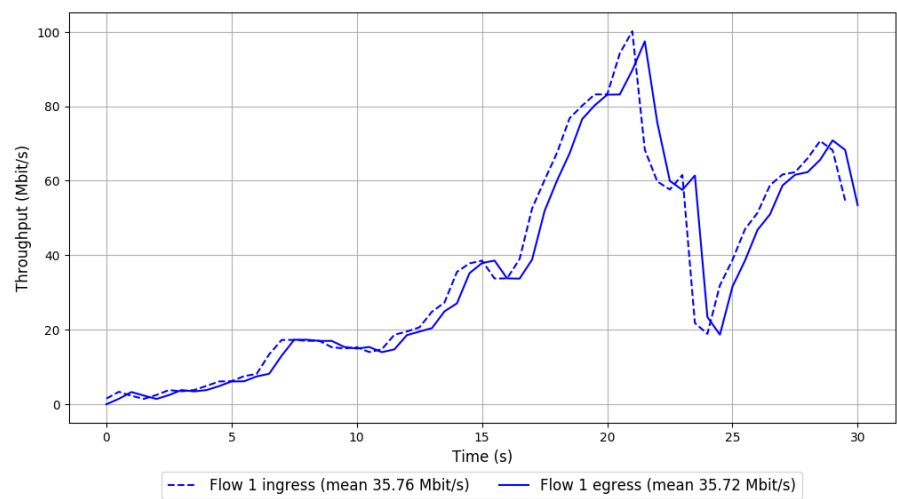
-- Flow 1:

Average throughput: 35.72 Mbit/s

95th percentile per-packet one-way delay: 38.920 ms

Loss rate: 0.18%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2018-11-15 08:35:06

End at: 2018-11-15 08:35:36

Local clock offset: 2.261 ms

Remote clock offset: -1.717 ms

Below is generated by plot.py at 2018-11-15 09:55:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 34.81 Mbit/s

95th percentile per-packet one-way delay: 16.345 ms

Loss rate: 0.19%

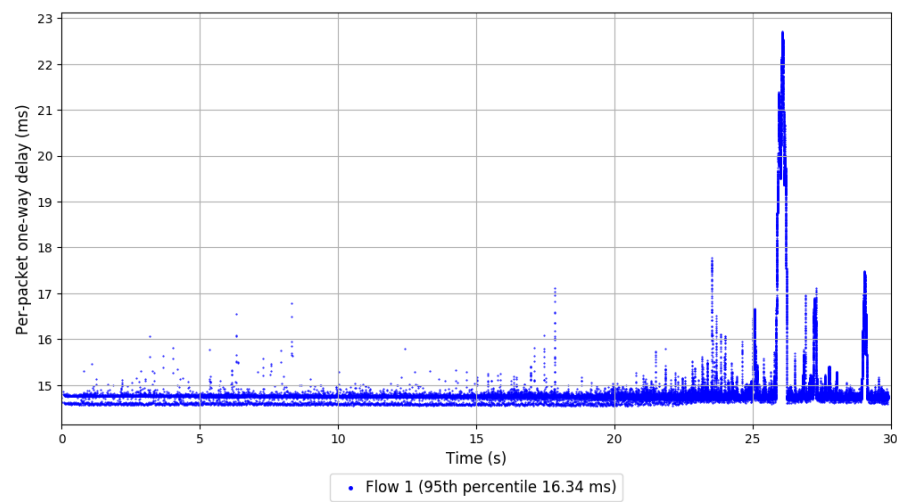
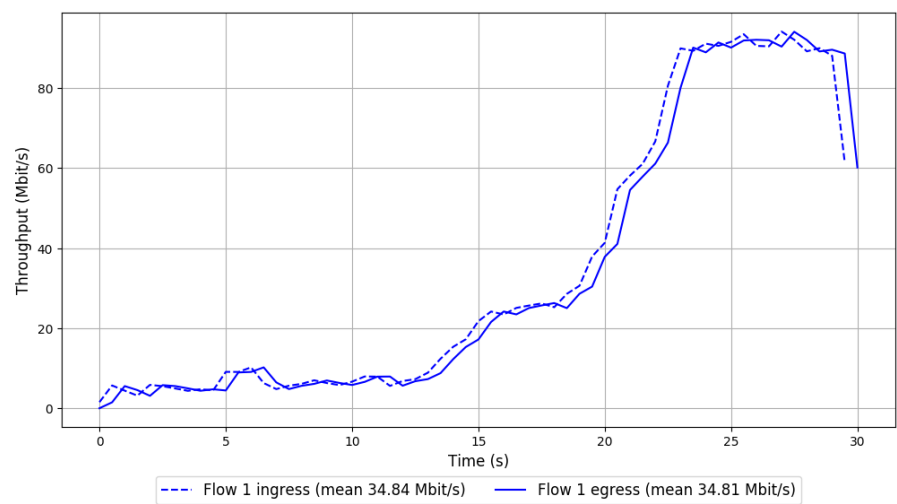
-- Flow 1:

Average throughput: 34.81 Mbit/s

95th percentile per-packet one-way delay: 16.345 ms

Loss rate: 0.19%

Run 2: Report of PCC-Vivace — Data Link

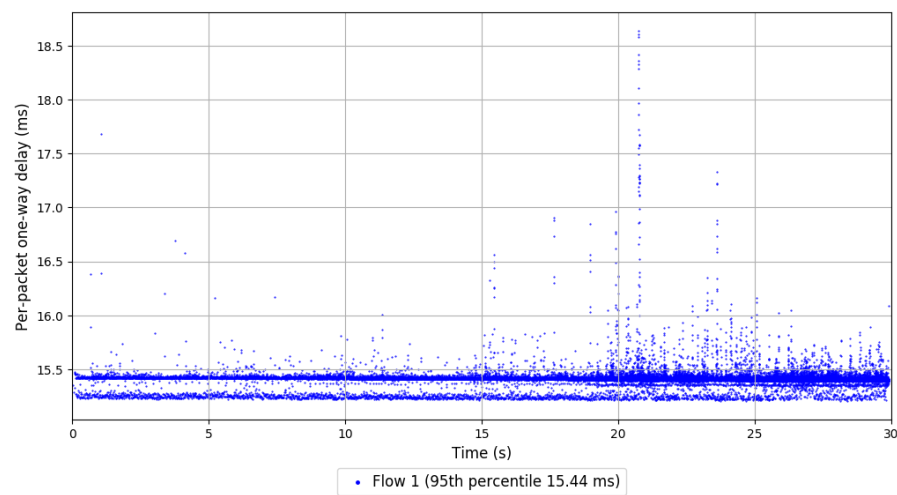
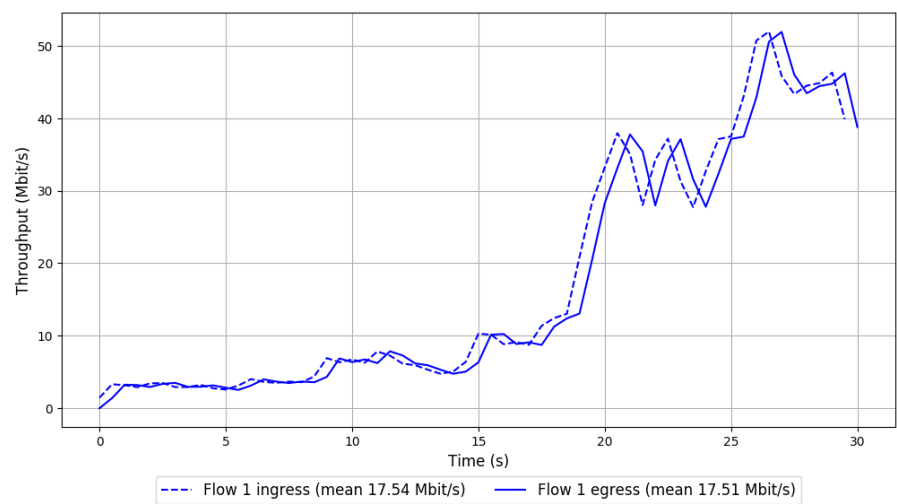


Run 3: Statistics of PCC-Vivace

Start at: 2018-11-15 08:56:45
End at: 2018-11-15 08:57:15
Local clock offset: 1.762 ms
Remote clock offset: -3.541 ms

Below is generated by plot.py at 2018-11-15 09:55:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 17.51 Mbit/s
95th percentile per-packet one-way delay: 15.444 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 17.51 Mbit/s
95th percentile per-packet one-way delay: 15.444 ms
Loss rate: 0.25%

Run 3: Report of PCC-Vivace — Data Link

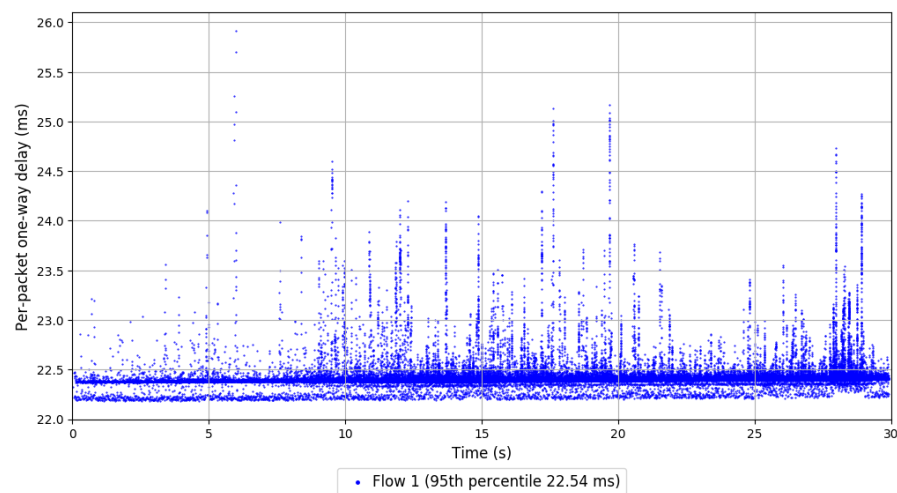
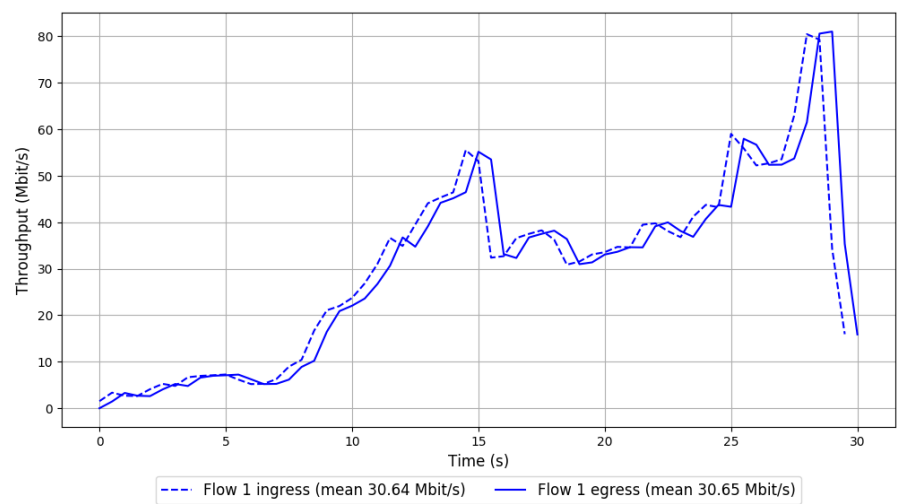


Run 4: Statistics of PCC-Vivace

Start at: 2018-11-15 09:18:50
End at: 2018-11-15 09:19:20
Local clock offset: 4.277 ms
Remote clock offset: -8.435 ms

Below is generated by plot.py at 2018-11-15 09:55:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 30.65 Mbit/s
95th percentile per-packet one-way delay: 22.540 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 30.65 Mbit/s
95th percentile per-packet one-way delay: 22.540 ms
Loss rate: 0.05%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2018-11-15 09:42:08

End at: 2018-11-15 09:42:38

Local clock offset: 2.825 ms

Remote clock offset: -6.65 ms

Below is generated by plot.py at 2018-11-15 09:55:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.34 Mbit/s

95th percentile per-packet one-way delay: 19.894 ms

Loss rate: 0.12%

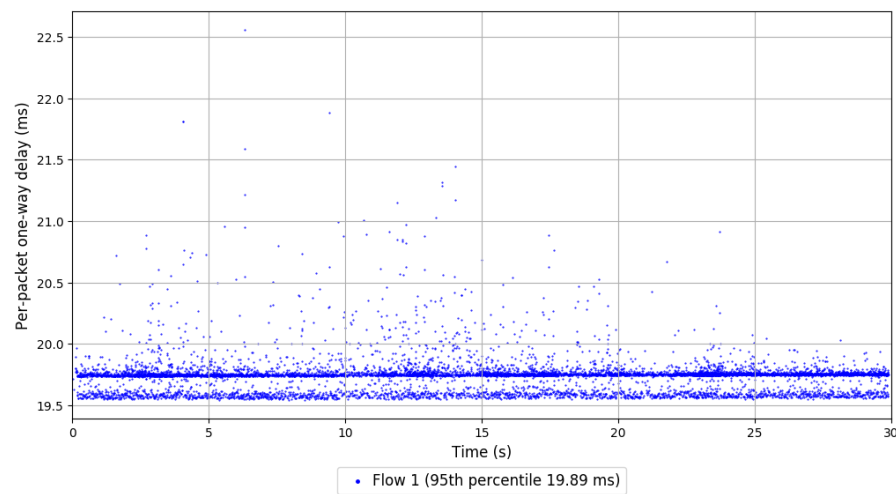
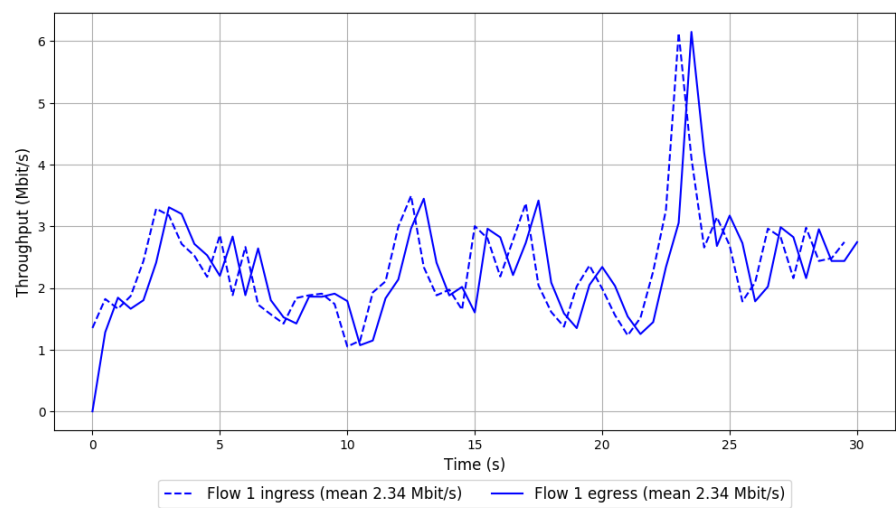
-- Flow 1:

Average throughput: 2.34 Mbit/s

95th percentile per-packet one-way delay: 19.894 ms

Loss rate: 0.12%

Run 5: Report of PCC-Vivace — Data Link

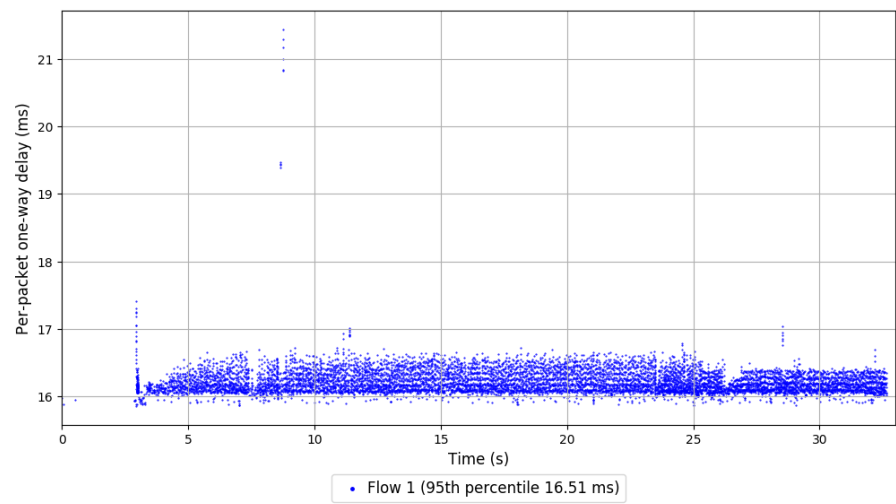
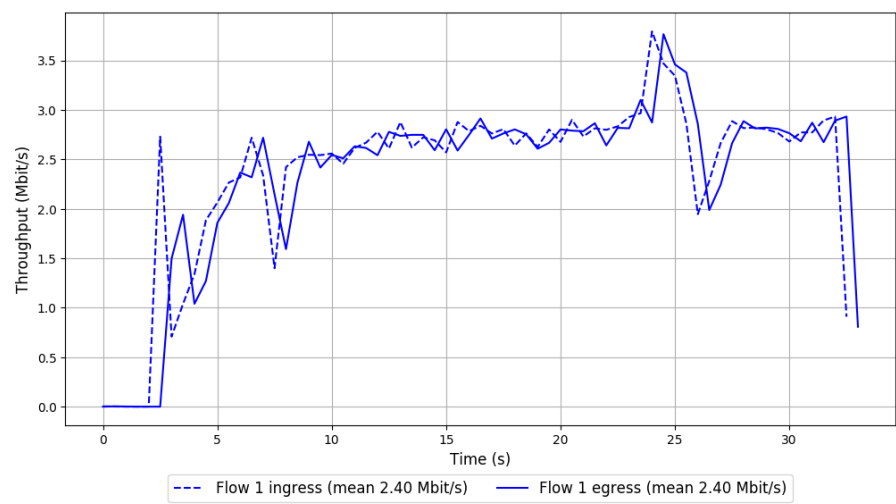


Run 1: Statistics of WebRTC media

Start at: 2018-11-15 08:00:02
End at: 2018-11-15 08:00:32
Local clock offset: 1.413 ms
Remote clock offset: -2.896 ms

Below is generated by plot.py at 2018-11-15 09:55:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.40 Mbit/s
95th percentile per-packet one-way delay: 16.509 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 2.40 Mbit/s
95th percentile per-packet one-way delay: 16.509 ms
Loss rate: 0.13%

Run 1: Report of WebRTC media — Data Link

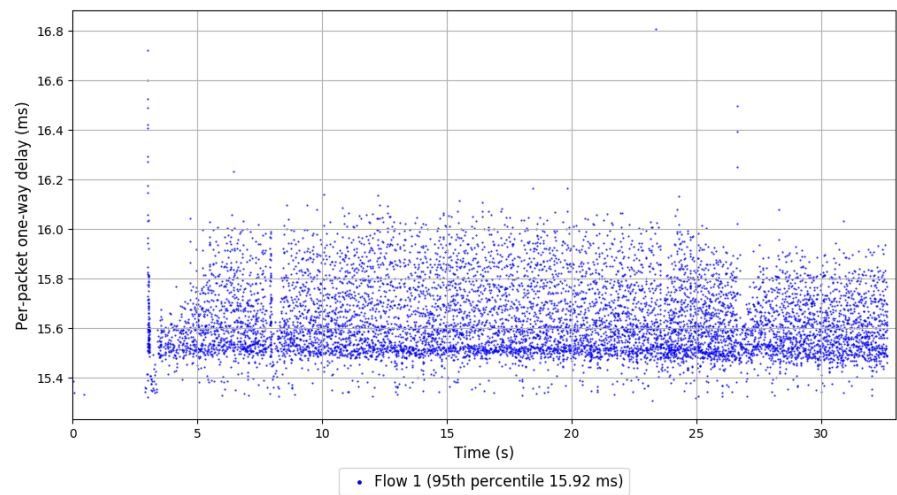
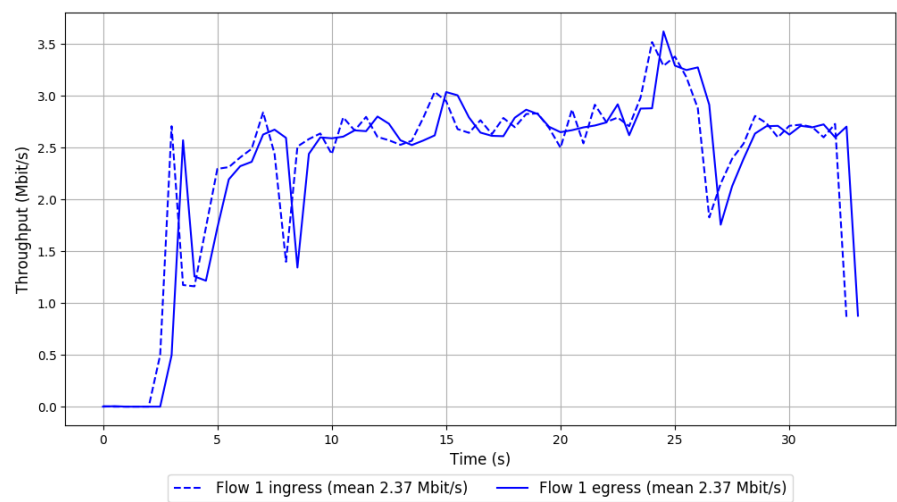


Run 2: Statistics of WebRTC media

Start at: 2018-11-15 08:21:37
End at: 2018-11-15 08:22:07
Local clock offset: 1.938 ms
Remote clock offset: -2.294 ms

Below is generated by plot.py at 2018-11-15 09:55:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.37 Mbit/s
95th percentile per-packet one-way delay: 15.924 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 2.37 Mbit/s
95th percentile per-packet one-way delay: 15.924 ms
Loss rate: 0.07%

Run 2: Report of WebRTC media — Data Link

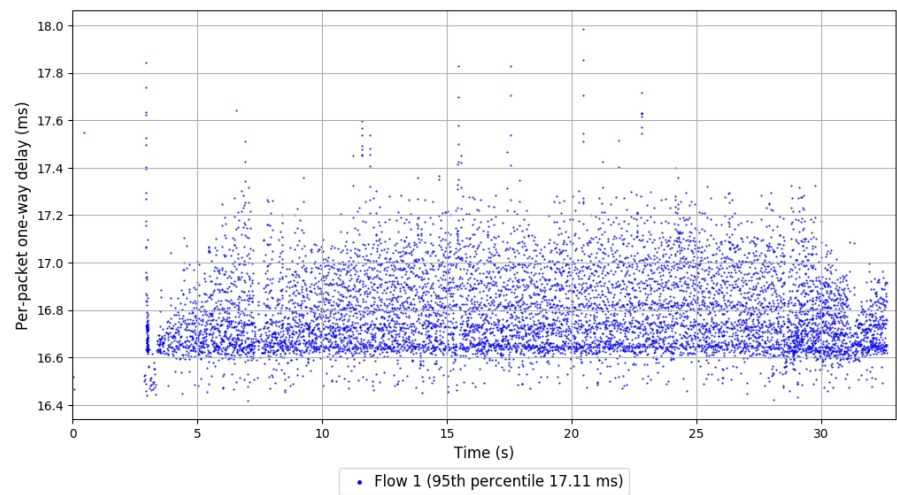
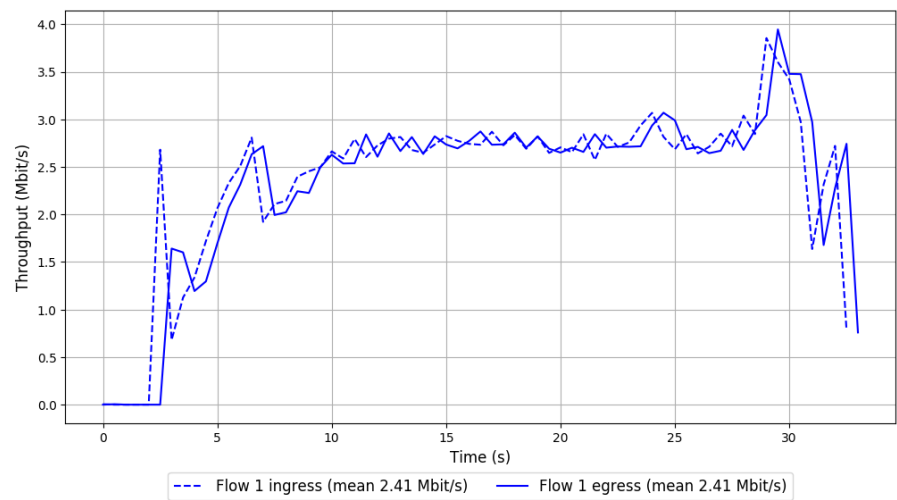


Run 3: Statistics of WebRTC media

Start at: 2018-11-15 08:43:37
End at: 2018-11-15 08:44:07
Local clock offset: 1.678 ms
Remote clock offset: -4.432 ms

Below is generated by plot.py at 2018-11-15 09:55:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 17.114 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 17.114 ms
Loss rate: 0.06%

Run 3: Report of WebRTC media — Data Link

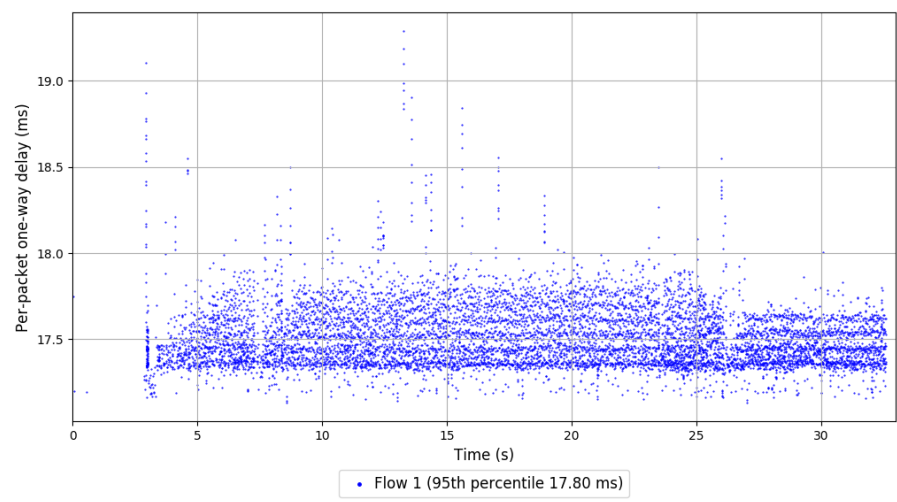
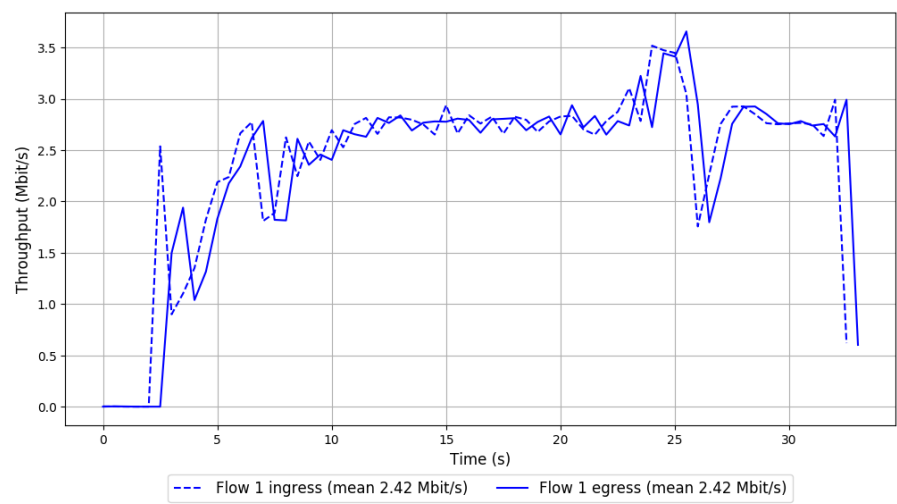


Run 4: Statistics of WebRTC media

Start at: 2018-11-15 09:05:40
End at: 2018-11-15 09:06:10
Local clock offset: 2.543 ms
Remote clock offset: -5.193 ms

Below is generated by plot.py at 2018-11-15 09:55:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.42 Mbit/s
95th percentile per-packet one-way delay: 17.797 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 2.42 Mbit/s
95th percentile per-packet one-way delay: 17.797 ms
Loss rate: 0.07%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-11-15 09:27:57
End at: 2018-11-15 09:28:27
Local clock offset: 4.103 ms
Remote clock offset: -7.457 ms

Below is generated by plot.py at 2018-11-15 09:55:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 22.323 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 22.323 ms
Loss rate: 0.06%

Run 5: Report of WebRTC media — Data Link

