

Pantheon Report

Generated at 2018-11-15 04:46:31 (UTC).

Data path: AWS California 1 on `ens5` (*local*) → Stanford on `eno1` (*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 `time.stanford.edu` and have been applied to correct the timestamps in logs.

System info:

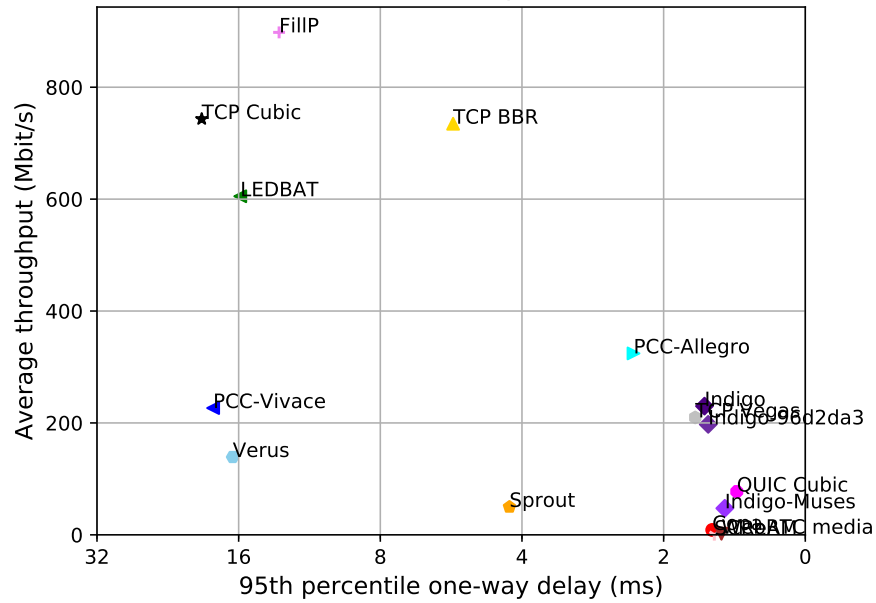
```
Linux 4.15.0-1023-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

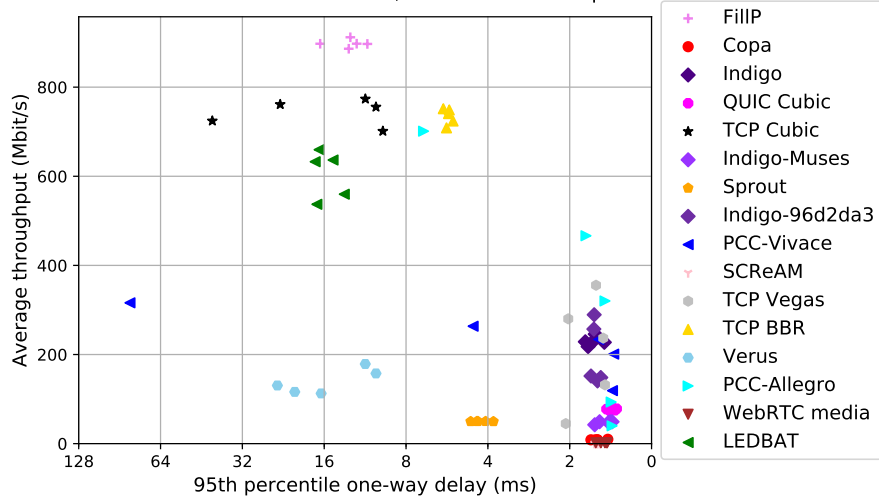
```
branch: muses @ 794ca3866981572cb73700a276691acf79c60f2b
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95
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

test from AWS California 1 to Stanford, 5 runs of 30s each per scheme
(mean of all runs by scheme)



test from AWS California 1 to Stanford, 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	734.77	5.60	0.02
Copa	5	8.74	1.31	42.81
TCP Cubic	5	743.17	19.17	0.08
FillP	5	898.00	13.13	3.39
Indigo	5	230.07	1.42	0.00
Indigo-96d2da3	5	197.46	1.37	0.00
LEDBAT	5	605.12	15.88	0.04
Indigo-Muses	5	47.46	1.14	0.01
PCC-Allegro	5	324.24	2.32	0.35
PCC-Expr	0	N/A	N/A	N/A
QUIC Cubic	5	77.36	0.97	0.00
SCReAM	5	0.22	1.28	0.00
Sprout	5	49.93	4.25	0.16
TaoVA-100x	0	N/A	N/A	N/A
TCP Vegas	5	209.84	1.55	0.03
Verus	5	139.13	16.47	2.44
PCC-Vivace	5	226.63	18.13	0.02
WebRTC media	5	1.97	1.18	0.00

Run 1: Statistics of TCP BBR

Start at: 2018-11-15 02:20:21

End at: 2018-11-15 02:20:51

Local clock offset: 3.868 ms

Remote clock offset: 4.388 ms

Below is generated by plot.py at 2018-11-15 04:19:48

Datalink statistics

-- Total of 1 flow:

Average throughput: 724.06 Mbit/s

95th percentile per-packet one-way delay: 5.372 ms

Loss rate: 0.04%

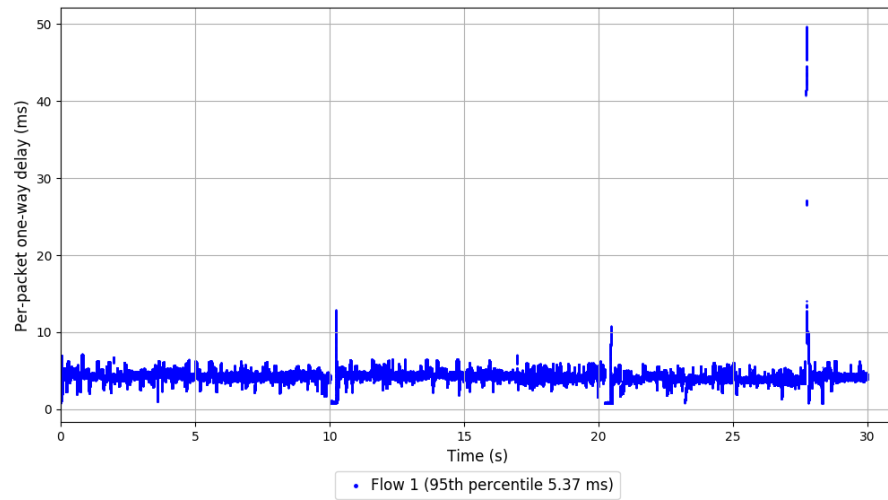
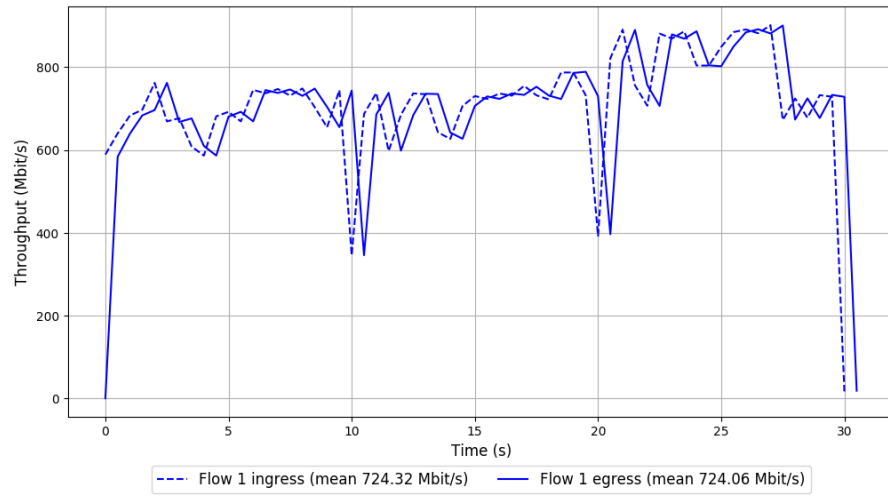
-- Flow 1:

Average throughput: 724.06 Mbit/s

95th percentile per-packet one-way delay: 5.372 ms

Loss rate: 0.04%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-11-15 02:46:27

End at: 2018-11-15 02:46:57

Local clock offset: 3.527 ms

Remote clock offset: 0.135 ms

Below is generated by plot.py at 2018-11-15 04:20:05

Datalink statistics

-- Total of 1 flow:

Average throughput: 748.90 Mbit/s

95th percentile per-packet one-way delay: 5.547 ms

Loss rate: 0.03%

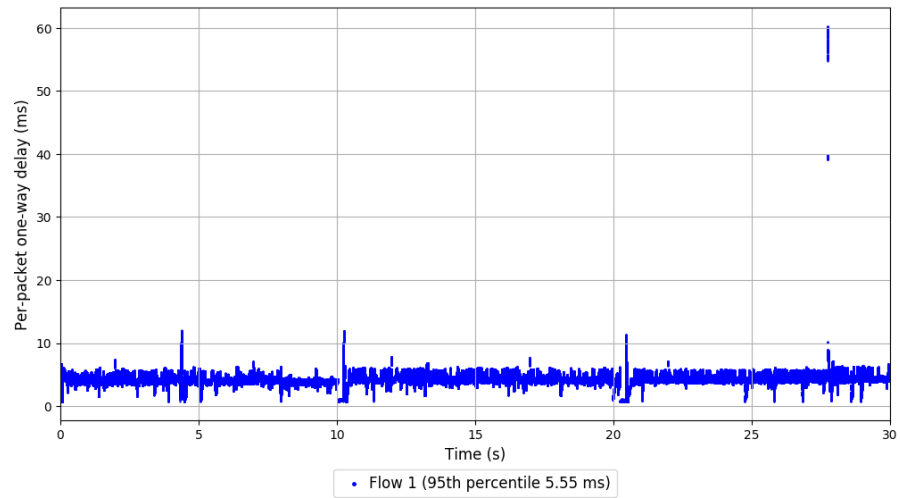
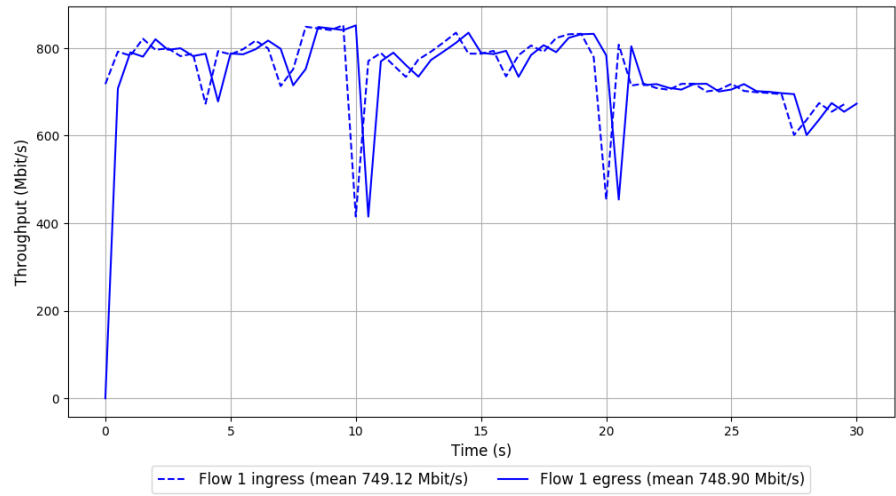
-- Flow 1:

Average throughput: 748.90 Mbit/s

95th percentile per-packet one-way delay: 5.547 ms

Loss rate: 0.03%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-11-15 03:12:23

End at: 2018-11-15 03:12:53

Local clock offset: 3.476 ms

Remote clock offset: 2.782 ms

Below is generated by plot.py at 2018-11-15 04:20:05

Datalink statistics

-- Total of 1 flow:

Average throughput: 708.64 Mbit/s

95th percentile per-packet one-way delay: 5.679 ms

Loss rate: 0.02%

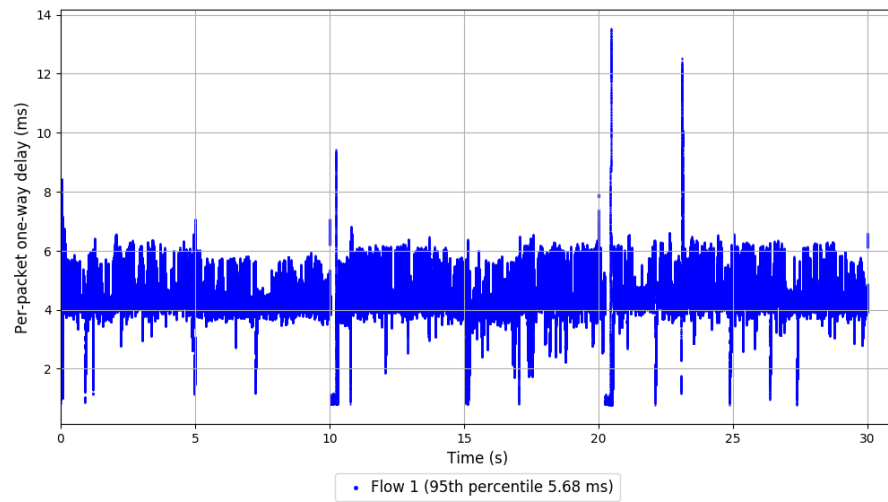
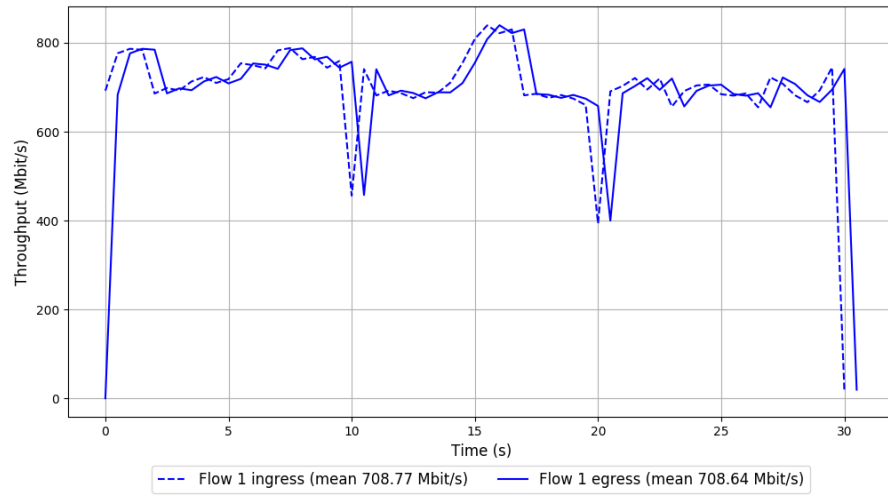
-- Flow 1:

Average throughput: 708.64 Mbit/s

95th percentile per-packet one-way delay: 5.679 ms

Loss rate: 0.02%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-11-15 03:38:28

End at: 2018-11-15 03:38:58

Local clock offset: 4.05 ms

Remote clock offset: 2.134 ms

Below is generated by plot.py at 2018-11-15 04:20:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 751.59 Mbit/s

95th percentile per-packet one-way delay: 5.834 ms

Loss rate: 0.01%

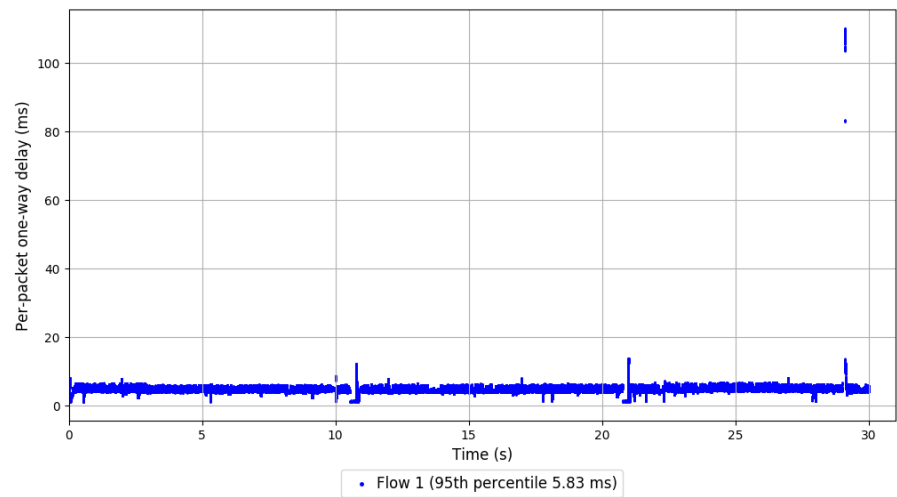
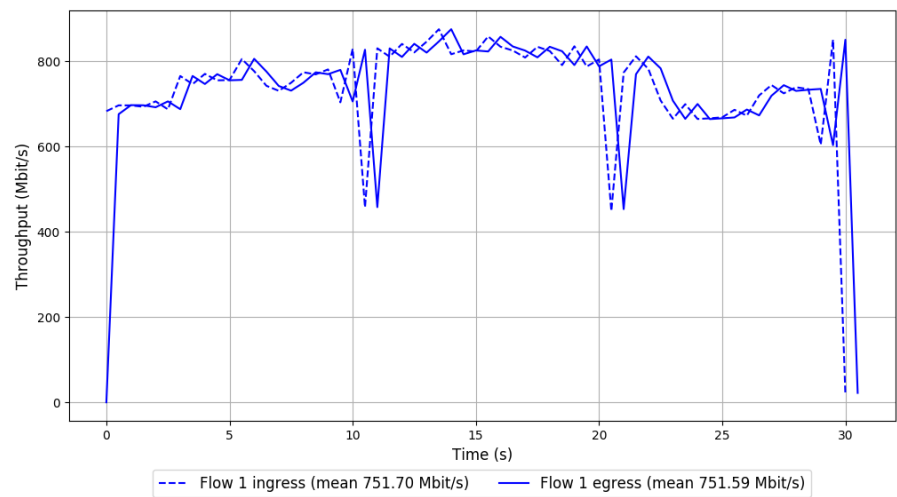
-- Flow 1:

Average throughput: 751.59 Mbit/s

95th percentile per-packet one-way delay: 5.834 ms

Loss rate: 0.01%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-11-15 04:04:28

End at: 2018-11-15 04:04:58

Local clock offset: 4.291 ms

Remote clock offset: -1.794 ms

Below is generated by plot.py at 2018-11-15 04:20:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 740.66 Mbit/s

95th percentile per-packet one-way delay: 5.581 ms

Loss rate: 0.02%

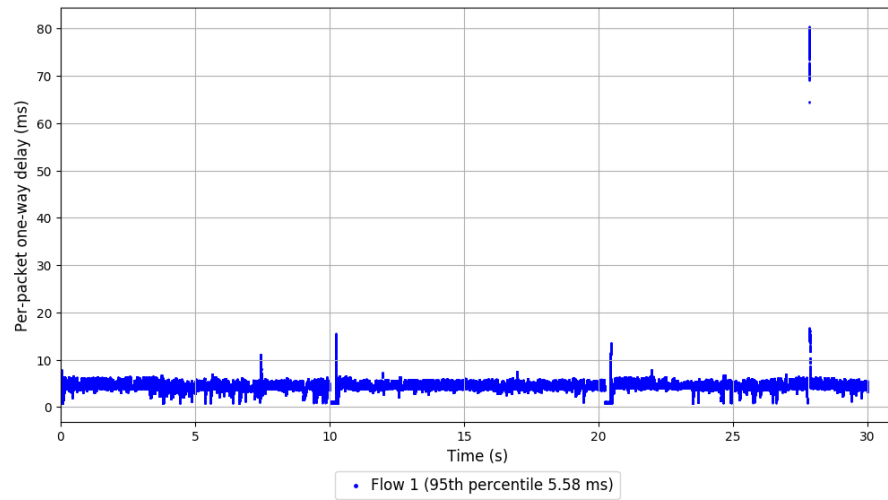
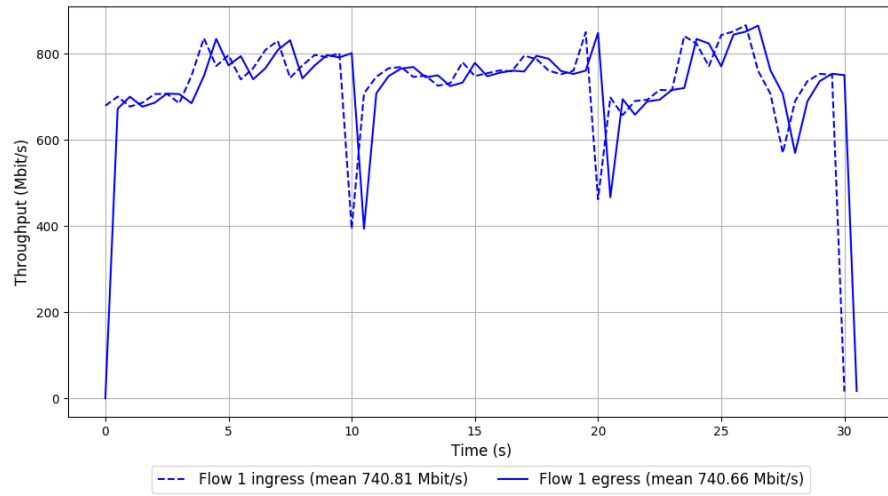
-- Flow 1:

Average throughput: 740.66 Mbit/s

95th percentile per-packet one-way delay: 5.581 ms

Loss rate: 0.02%

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2018-11-15 02:08:58

End at: 2018-11-15 02:09:28

Local clock offset: 4.171 ms

Remote clock offset: 3.443 ms

Below is generated by plot.py at 2018-11-15 04:20:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 8.60 Mbit/s

95th percentile per-packet one-way delay: 1.323 ms

Loss rate: 38.23%

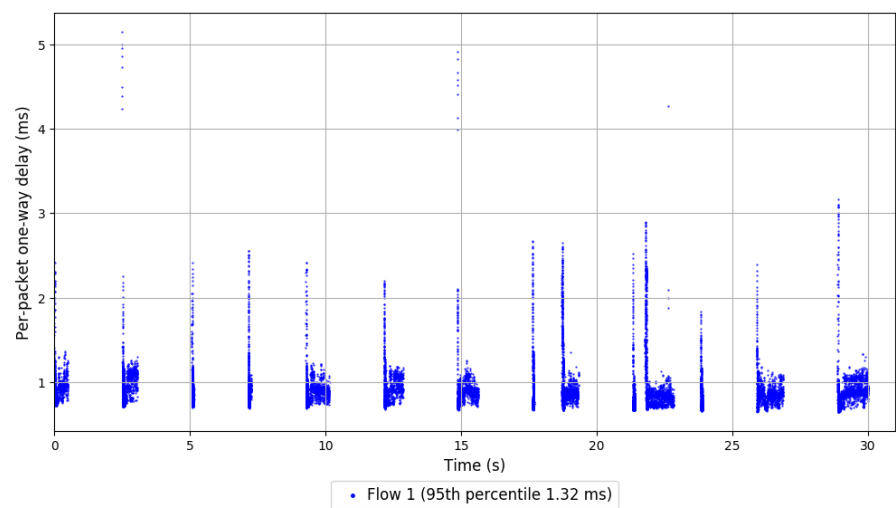
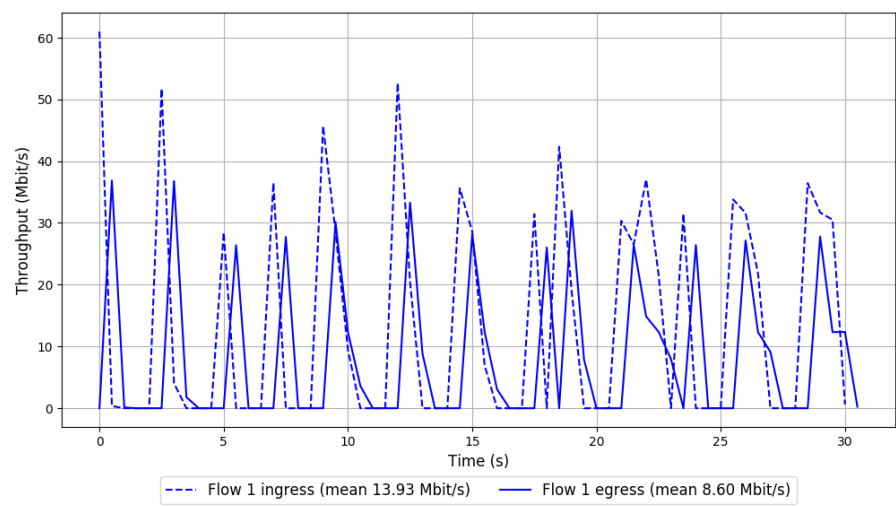
-- Flow 1:

Average throughput: 8.60 Mbit/s

95th percentile per-packet one-way delay: 1.323 ms

Loss rate: 38.23%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-11-15 02:34:37

End at: 2018-11-15 02:35:07

Local clock offset: 3.781 ms

Remote clock offset: 1.499 ms

Below is generated by plot.py at 2018-11-15 04:20:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 8.61 Mbit/s

95th percentile per-packet one-way delay: 1.482 ms

Loss rate: 42.38%

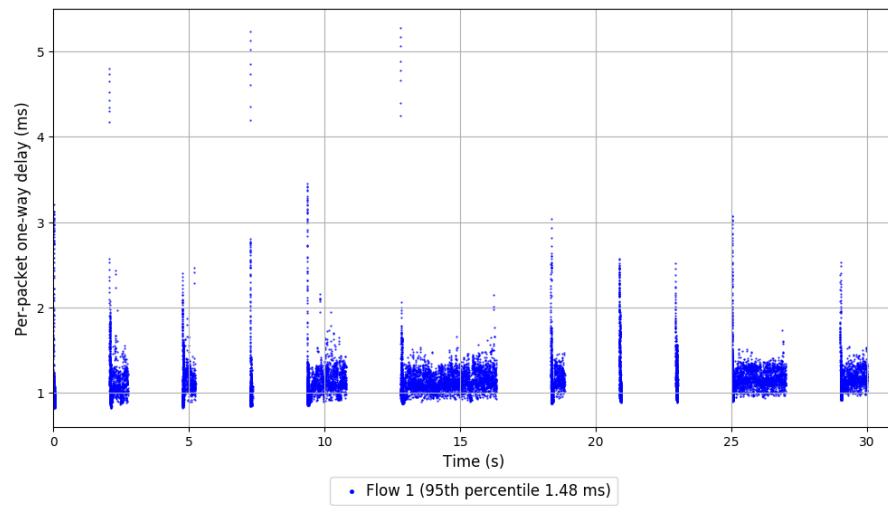
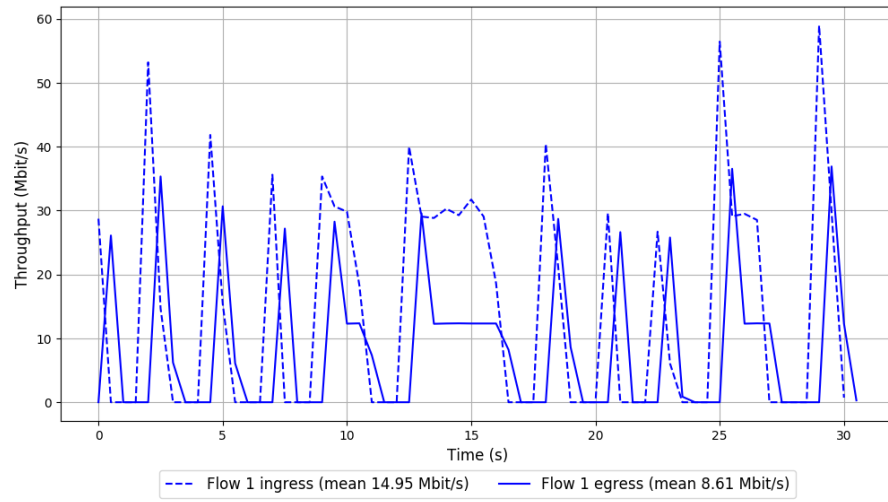
-- Flow 1:

Average throughput: 8.61 Mbit/s

95th percentile per-packet one-way delay: 1.482 ms

Loss rate: 42.38%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-11-15 03:00:52

End at: 2018-11-15 03:01:22

Local clock offset: 3.388 ms

Remote clock offset: 0.178 ms

Below is generated by plot.py at 2018-11-15 04:20:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 9.78 Mbit/s

95th percentile per-packet one-way delay: 1.069 ms

Loss rate: 49.49%

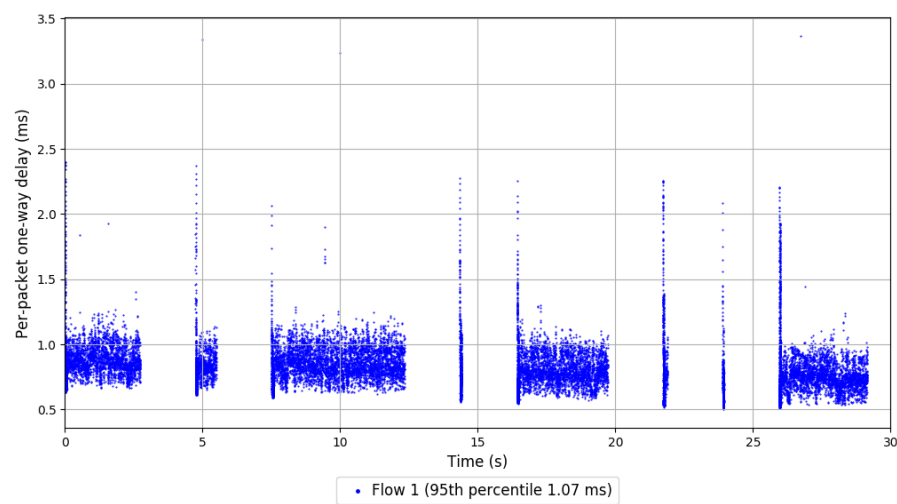
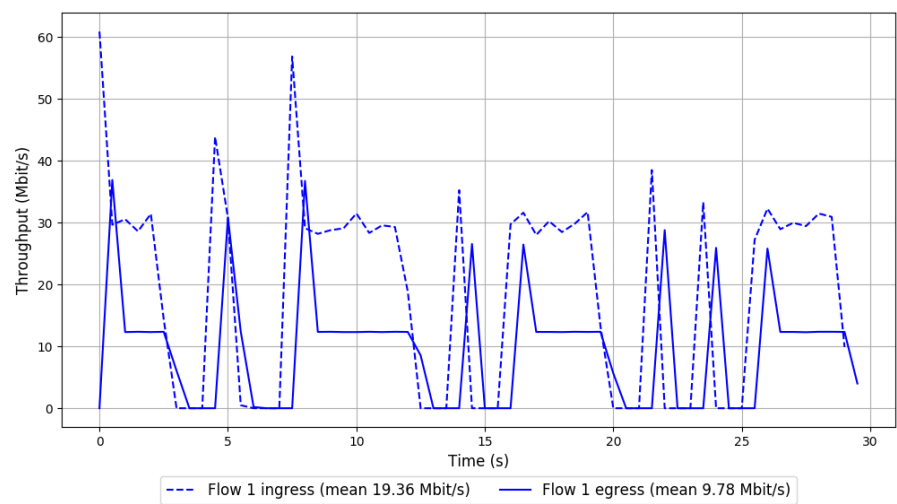
-- Flow 1:

Average throughput: 9.78 Mbit/s

95th percentile per-packet one-way delay: 1.069 ms

Loss rate: 49.49%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2018-11-15 03:26:49

End at: 2018-11-15 03:27:19

Local clock offset: 3.198 ms

Remote clock offset: 3.808 ms

Below is generated by plot.py at 2018-11-15 04:20:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 8.20 Mbit/s

95th percentile per-packet one-way delay: 1.319 ms

Loss rate: 40.05%

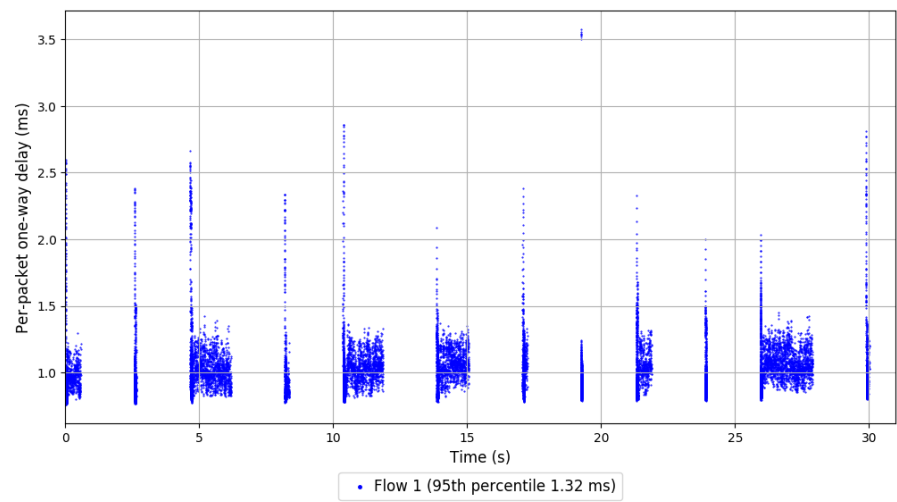
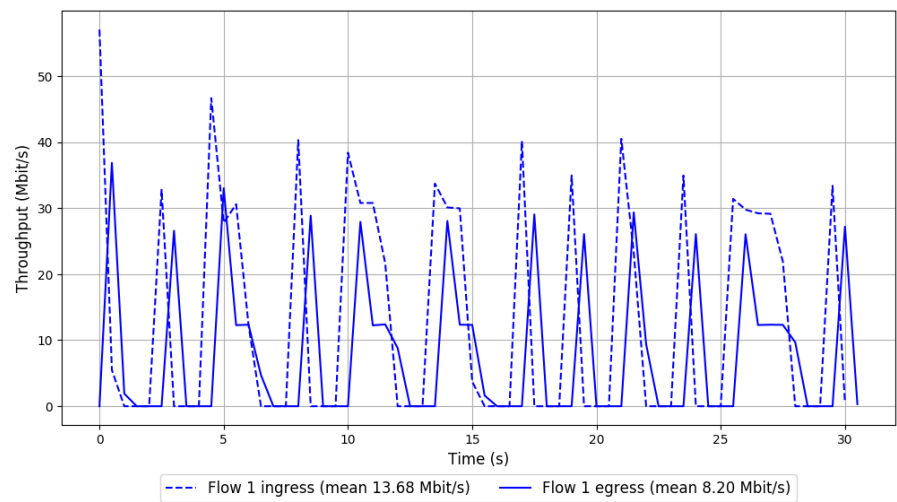
-- Flow 1:

Average throughput: 8.20 Mbit/s

95th percentile per-packet one-way delay: 1.319 ms

Loss rate: 40.05%

Run 4: Report of Copa — Data Link

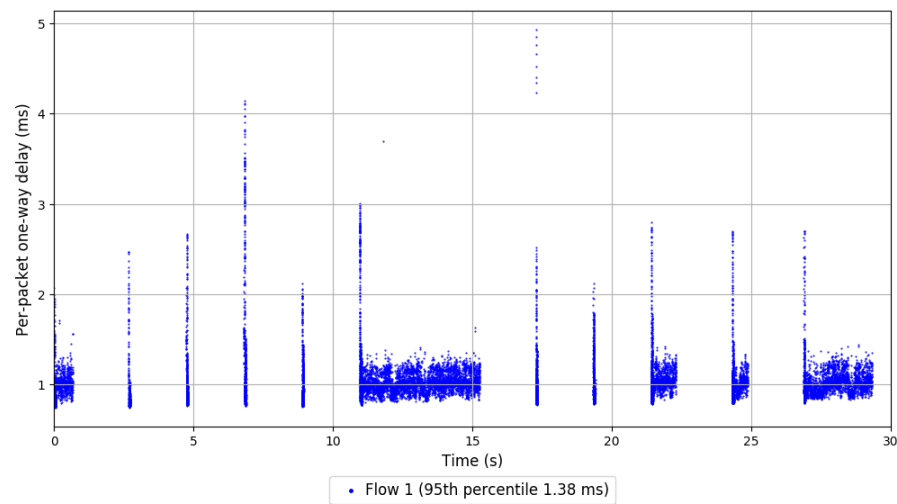
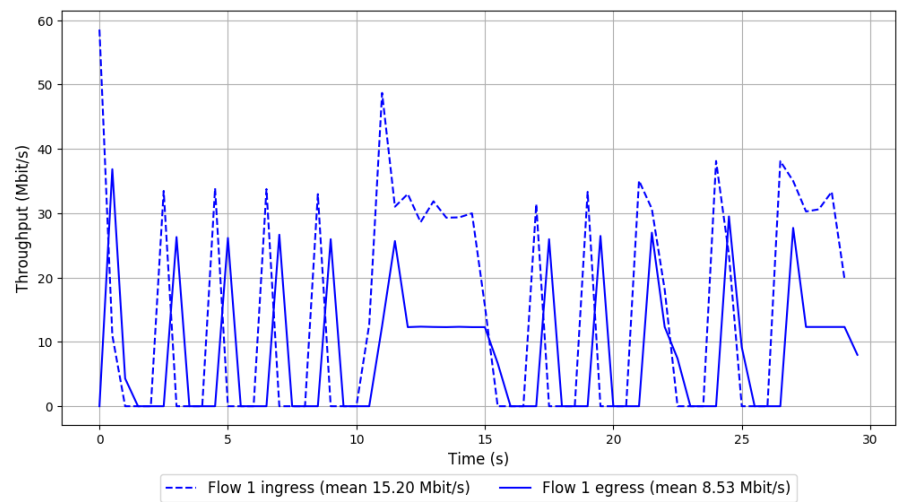


Run 5: Statistics of Copa

Start at: 2018-11-15 03:52:53
End at: 2018-11-15 03:53:23
Local clock offset: 4.212 ms
Remote clock offset: -0.884 ms

Below is generated by plot.py at 2018-11-15 04:20:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 8.53 Mbit/s
95th percentile per-packet one-way delay: 1.376 ms
Loss rate: 43.89%
-- Flow 1:
Average throughput: 8.53 Mbit/s
95th percentile per-packet one-way delay: 1.376 ms
Loss rate: 43.89%

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-11-15 02:10:16

End at: 2018-11-15 02:10:46

Local clock offset: 4.128 ms

Remote clock offset: 3.551 ms

Below is generated by plot.py at 2018-11-15 04:20:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 701.26 Mbit/s

95th percentile per-packet one-way delay: 9.737 ms

Loss rate: 0.04%

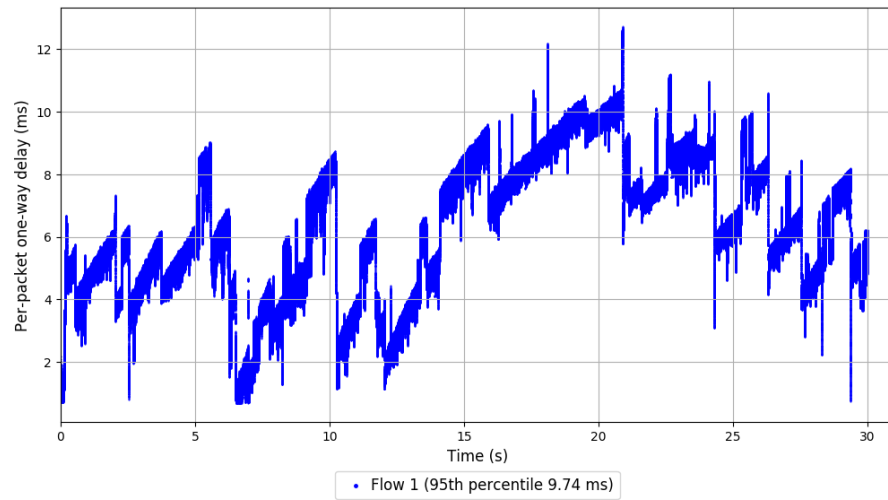
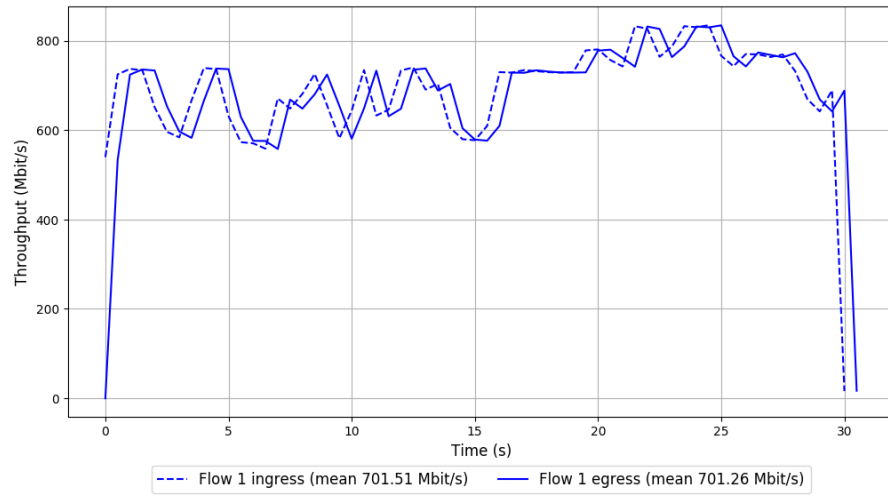
-- Flow 1:

Average throughput: 701.26 Mbit/s

95th percentile per-packet one-way delay: 9.737 ms

Loss rate: 0.04%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-11-15 02:35:55

End at: 2018-11-15 02:36:25

Local clock offset: 3.765 ms

Remote clock offset: 1.25 ms

Below is generated by plot.py at 2018-11-15 04:20:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 724.29 Mbit/s

95th percentile per-packet one-way delay: 41.273 ms

Loss rate: 0.11%

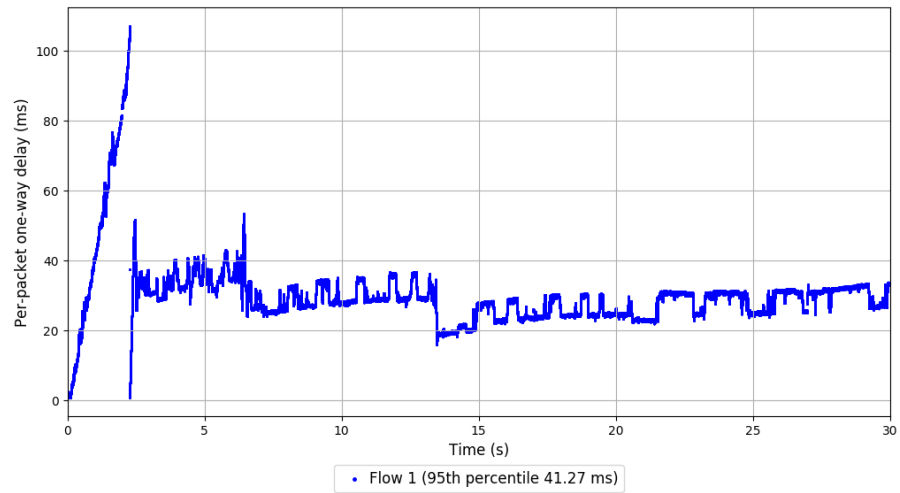
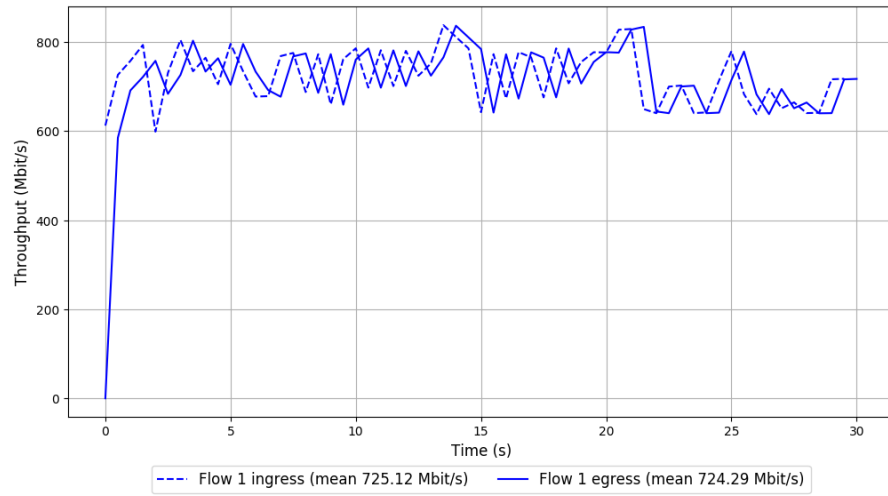
-- Flow 1:

Average throughput: 724.29 Mbit/s

95th percentile per-packet one-way delay: 41.273 ms

Loss rate: 0.11%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-11-15 03:02:11

End at: 2018-11-15 03:02:41

Local clock offset: 3.422 ms

Remote clock offset: 0.728 ms

Below is generated by plot.py at 2018-11-15 04:20:26

Datalink statistics

-- Total of 1 flow:

Average throughput: 761.22 Mbit/s

95th percentile per-packet one-way delay: 23.228 ms

Loss rate: 0.07%

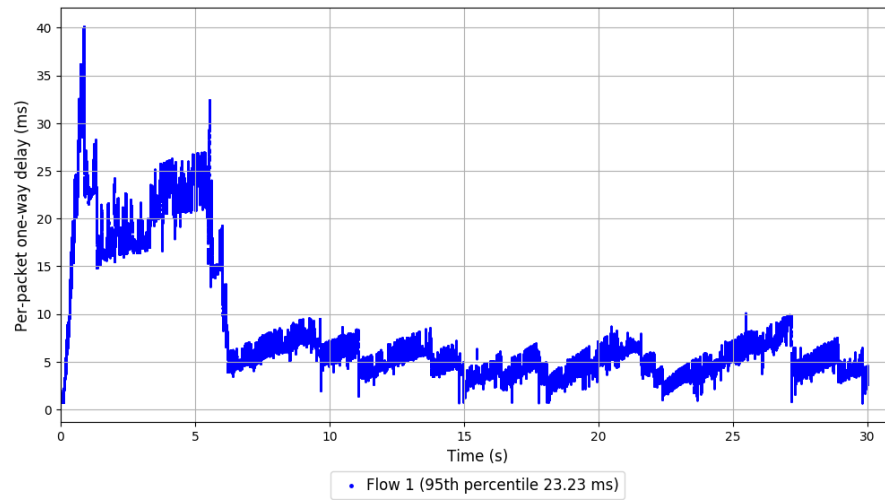
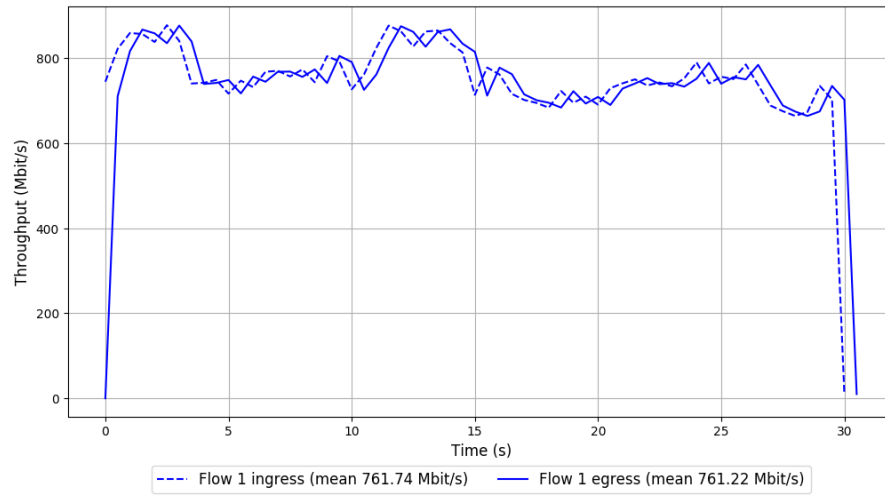
-- Flow 1:

Average throughput: 761.22 Mbit/s

95th percentile per-packet one-way delay: 23.228 ms

Loss rate: 0.07%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-11-15 03:28:08

End at: 2018-11-15 03:28:38

Local clock offset: 3.361 ms

Remote clock offset: 3.975 ms

Below is generated by plot.py at 2018-11-15 04:27:01

Datalink statistics

-- Total of 1 flow:

Average throughput: 755.51 Mbit/s

95th percentile per-packet one-way delay: 10.321 ms

Loss rate: 0.09%

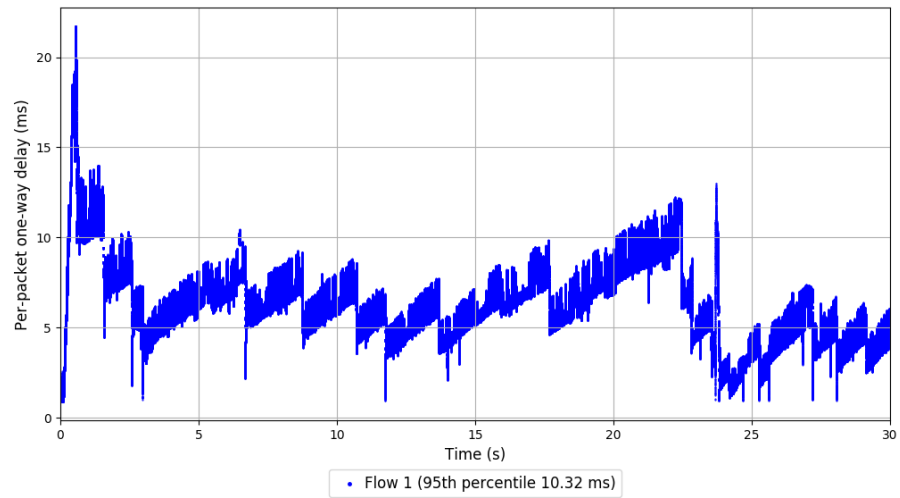
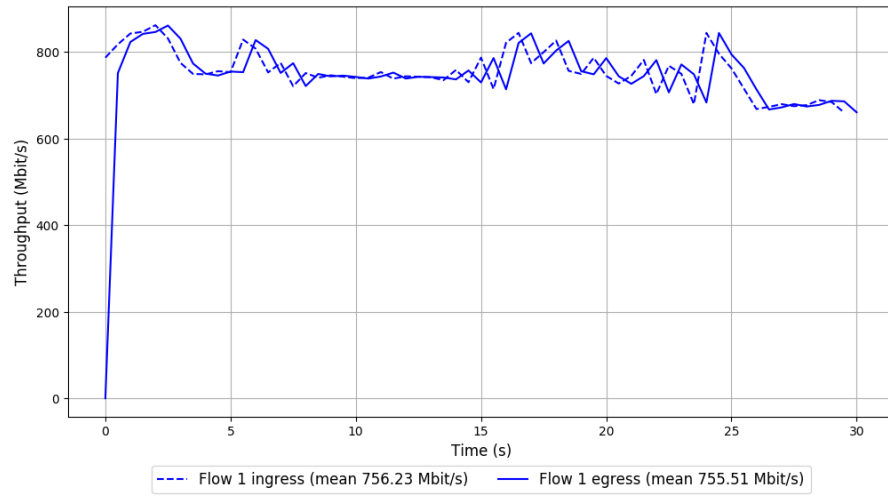
-- Flow 1:

Average throughput: 755.51 Mbit/s

95th percentile per-packet one-way delay: 10.321 ms

Loss rate: 0.09%

Run 4: Report of TCP Cubic — Data Link

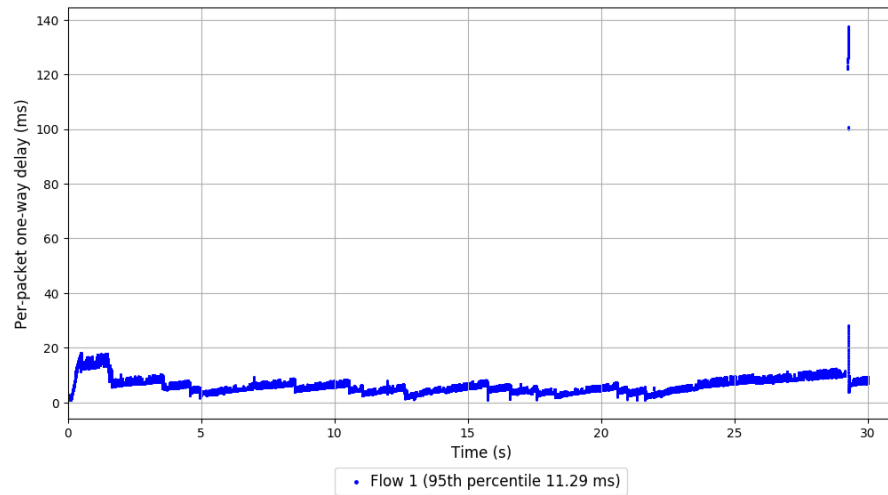
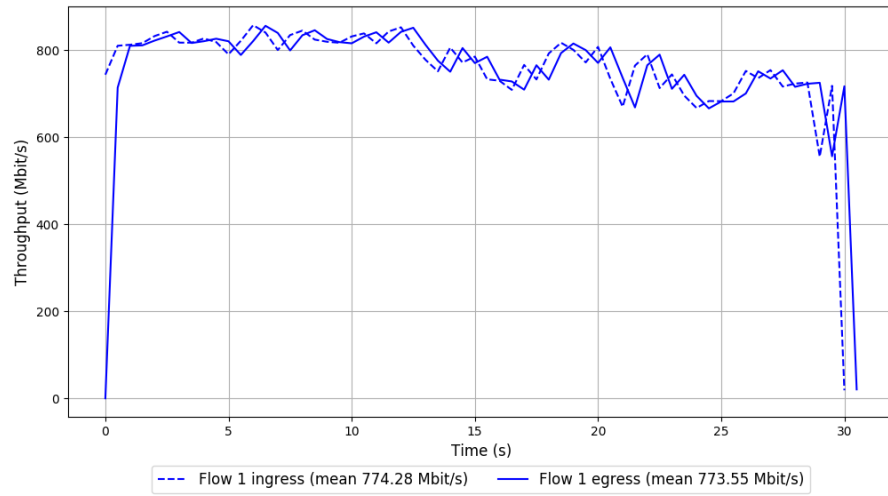


Run 5: Statistics of TCP Cubic

Start at: 2018-11-15 03:54:11
End at: 2018-11-15 03:54:41
Local clock offset: 4.197 ms
Remote clock offset: -0.943 ms

Below is generated by plot.py at 2018-11-15 04:27:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 773.55 Mbit/s
95th percentile per-packet one-way delay: 11.290 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 773.55 Mbit/s
95th percentile per-packet one-way delay: 11.290 ms
Loss rate: 0.09%

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2018-11-15 02:07:15

End at: 2018-11-15 02:07:45

Local clock offset: 4.275 ms

Remote clock offset: 3.301 ms

Below is generated by plot.py at 2018-11-15 04:32:36

Datalink statistics

-- Total of 1 flow:

Average throughput: 897.53 Mbit/s

95th percentile per-packet one-way delay: 12.153 ms

Loss rate: 3.16%

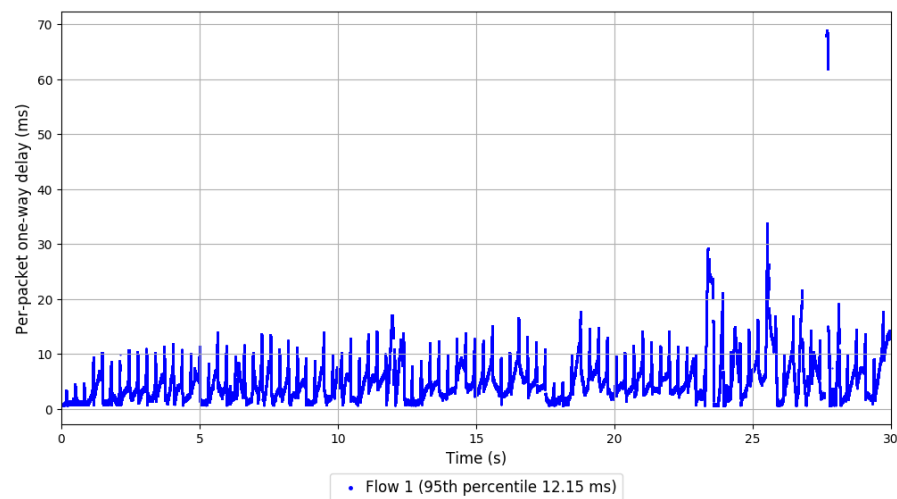
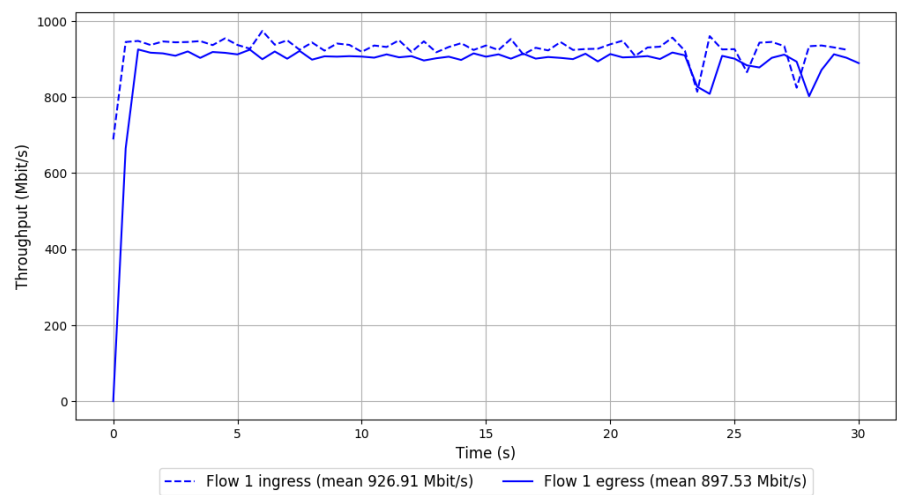
-- Flow 1:

Average throughput: 897.53 Mbit/s

95th percentile per-packet one-way delay: 12.153 ms

Loss rate: 3.16%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-11-15 02:32:54

End at: 2018-11-15 02:33:24

Local clock offset: 3.784 ms

Remote clock offset: 1.829 ms

Below is generated by plot.py at 2018-11-15 04:32:52

Datalink statistics

-- Total of 1 flow:

Average throughput: 896.96 Mbit/s

95th percentile per-packet one-way delay: 11.101 ms

Loss rate: 3.30%

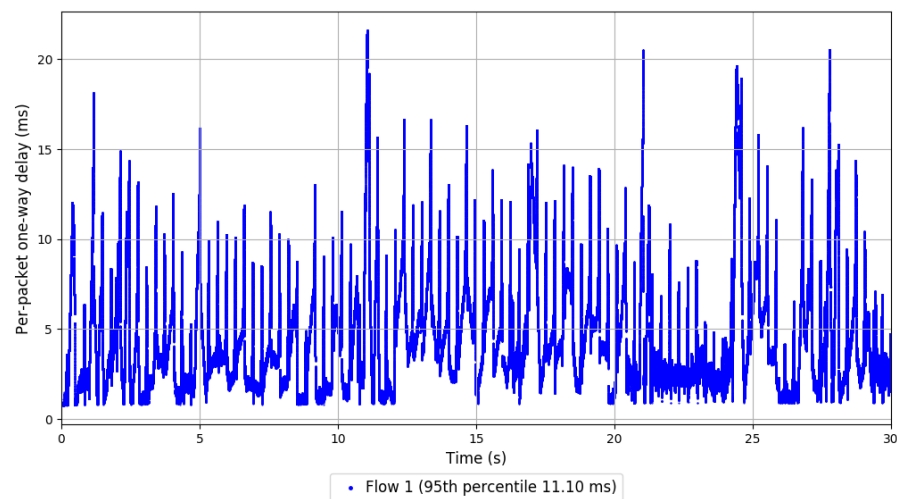
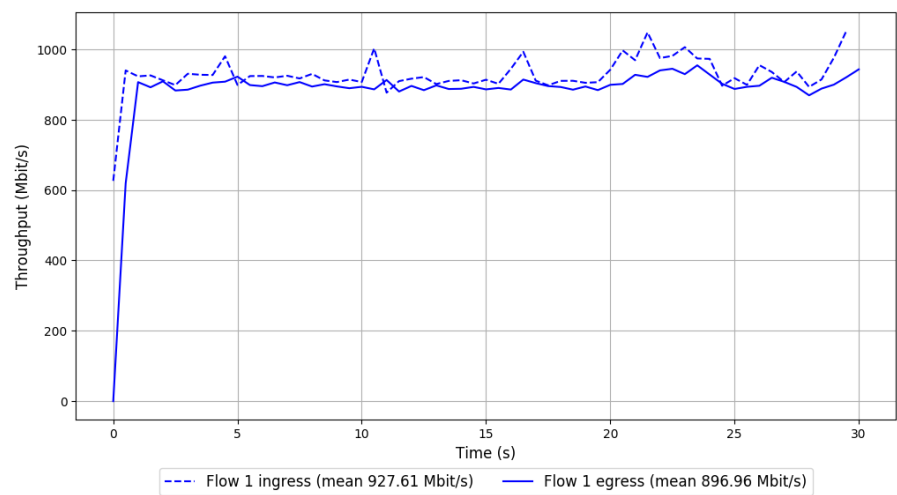
-- Flow 1:

Average throughput: 896.96 Mbit/s

95th percentile per-packet one-way delay: 11.101 ms

Loss rate: 3.30%

Run 2: Report of FillP — Data Link

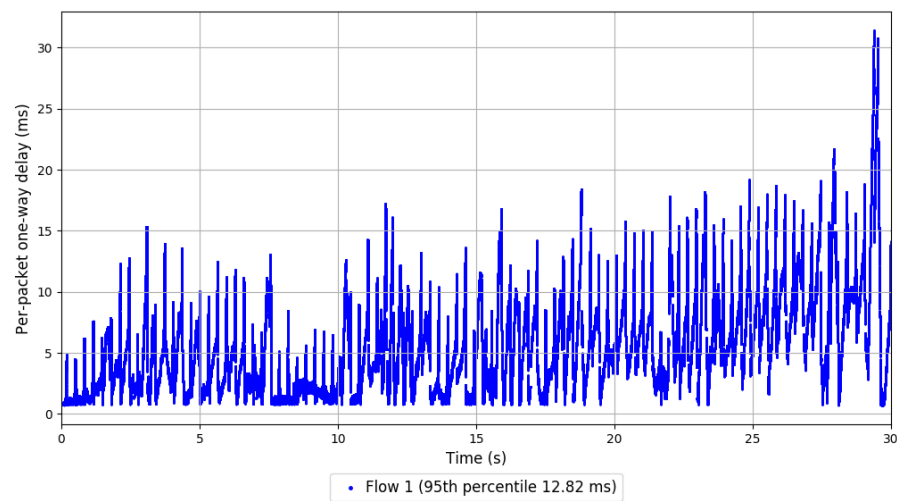
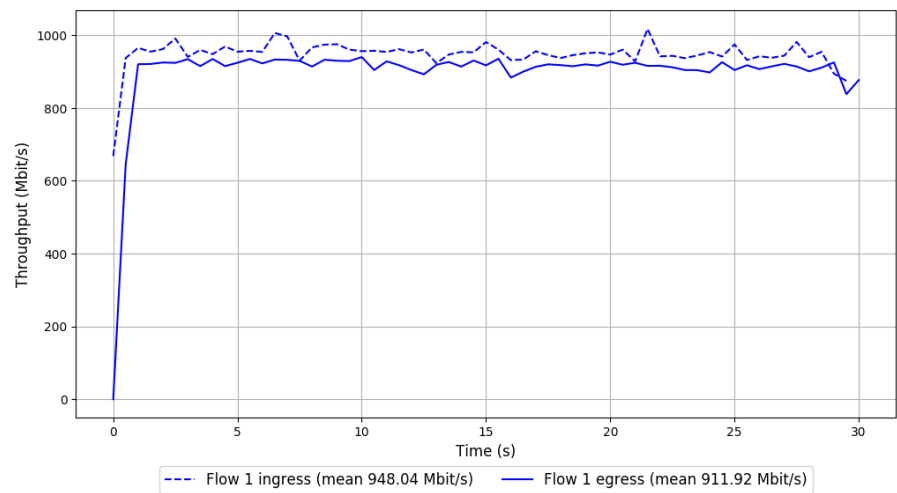


Run 3: Statistics of FillP

Start at: 2018-11-15 02:59:09
End at: 2018-11-15 02:59:39
Local clock offset: 3.291 ms
Remote clock offset: -0.262 ms

Below is generated by plot.py at 2018-11-15 04:33:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 911.92 Mbit/s
95th percentile per-packet one-way delay: 12.824 ms
Loss rate: 3.81%
-- Flow 1:
Average throughput: 911.92 Mbit/s
95th percentile per-packet one-way delay: 12.824 ms
Loss rate: 3.81%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-11-15 03:25:05

End at: 2018-11-15 03:25:35

Local clock offset: 3.242 ms

Remote clock offset: 3.782 ms

Below is generated by plot.py at 2018-11-15 04:33:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 897.41 Mbit/s

95th percentile per-packet one-way delay: 16.558 ms

Loss rate: 3.56%

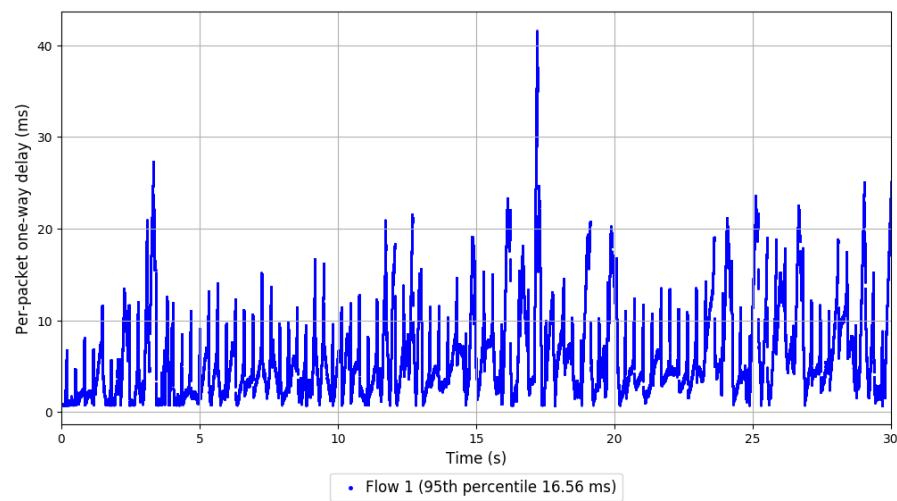
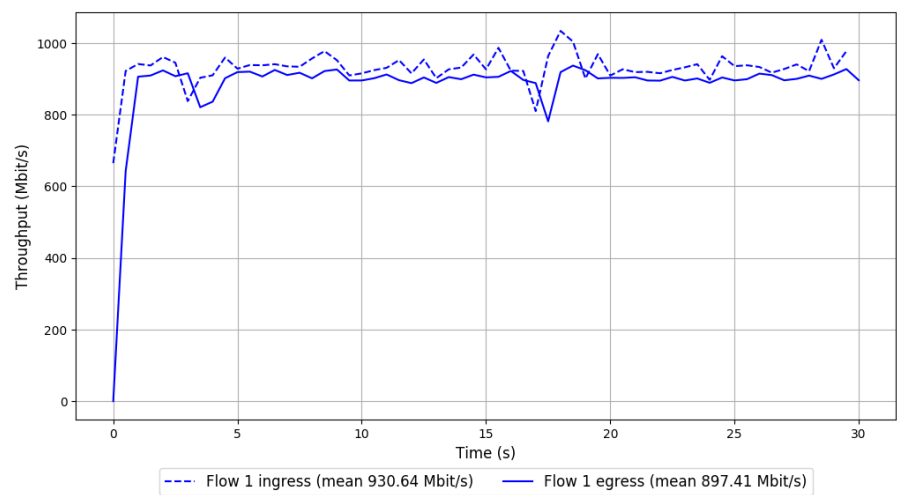
-- Flow 1:

Average throughput: 897.41 Mbit/s

95th percentile per-packet one-way delay: 16.558 ms

Loss rate: 3.56%

Run 4: Report of FillP — Data Link

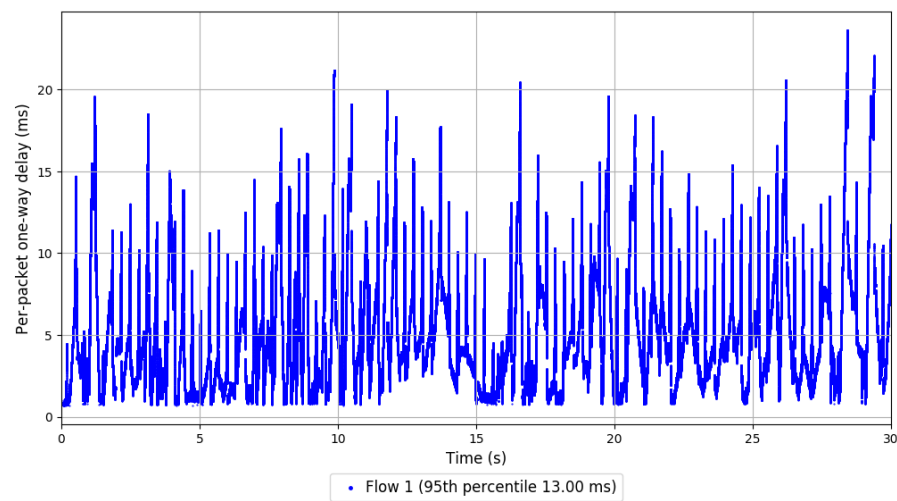
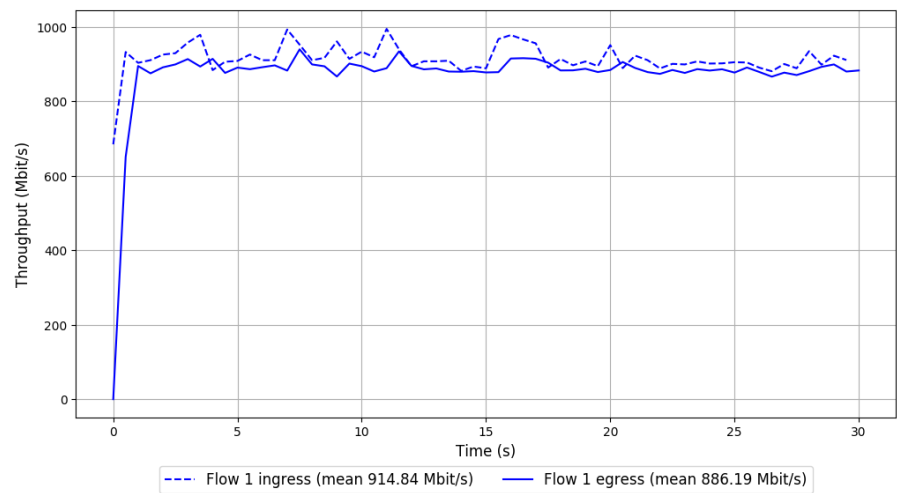


Run 5: Statistics of FillP

Start at: 2018-11-15 03:51:10
End at: 2018-11-15 03:51:40
Local clock offset: 4.211 ms
Remote clock offset: -0.664 ms

Below is generated by plot.py at 2018-11-15 04:33:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 886.19 Mbit/s
95th percentile per-packet one-way delay: 12.998 ms
Loss rate: 3.13%
-- Flow 1:
Average throughput: 886.19 Mbit/s
95th percentile per-packet one-way delay: 12.998 ms
Loss rate: 3.13%

Run 5: Report of FillP — Data Link

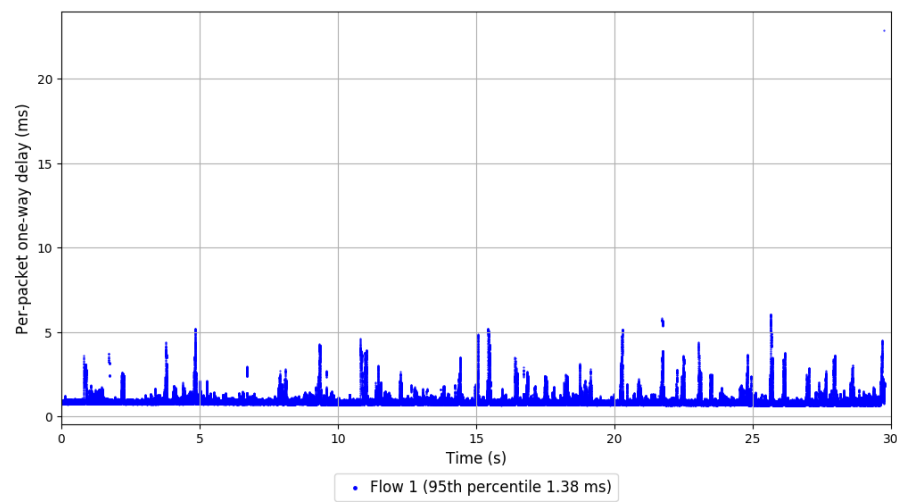
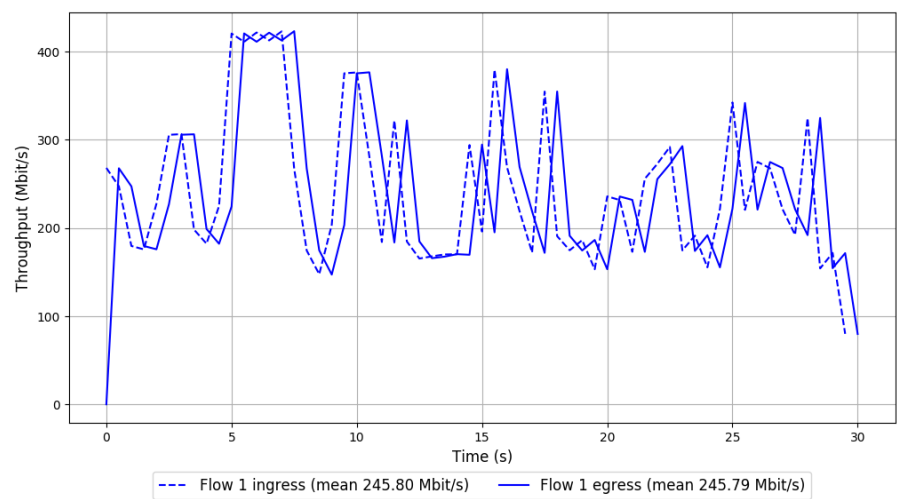


```
Run 1: Statistics of Indigo

Start at: 2018-11-15 02:01:50
End at: 2018-11-15 02:02:21
Local clock offset: 4.495 ms
Remote clock offset: 2.663 ms

# Below is generated by plot.py at 2018-11-15 04:33:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 245.79 Mbit/s
95th percentile per-packet one-way delay: 1.377 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 245.79 Mbit/s
95th percentile per-packet one-way delay: 1.377 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2018-11-15 02:27:30

End at: 2018-11-15 02:28:00

Local clock offset: 3.716 ms

Remote clock offset: 3.75 ms

Below is generated by plot.py at 2018-11-15 04:33:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 228.65 Mbit/s

95th percentile per-packet one-way delay: 1.619 ms

Loss rate: 0.00%

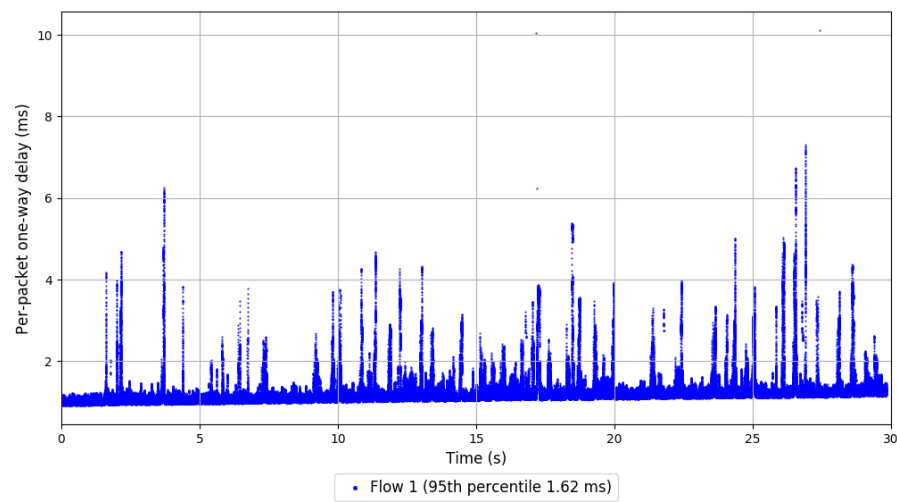
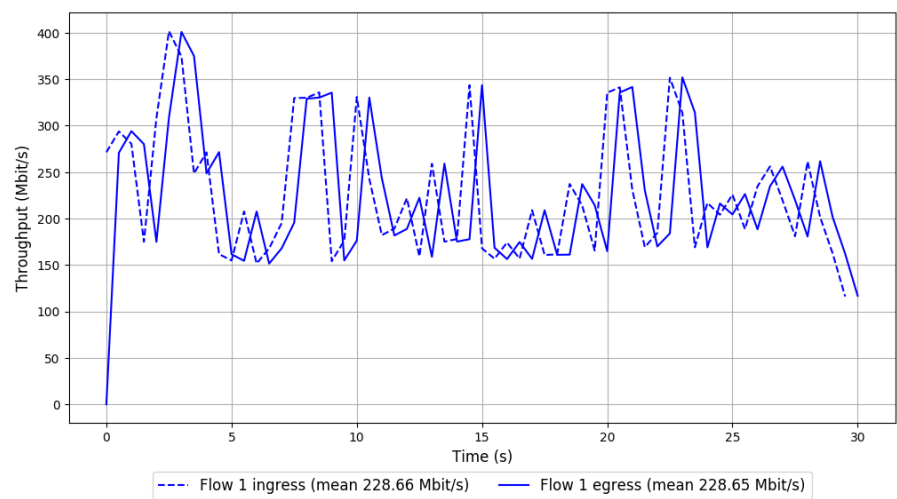
-- Flow 1:

Average throughput: 228.65 Mbit/s

95th percentile per-packet one-way delay: 1.619 ms

Loss rate: 0.00%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2018-11-15 02:53:44

End at: 2018-11-15 02:54:14

Local clock offset: 3.27 ms

Remote clock offset: -0.134 ms

Below is generated by plot.py at 2018-11-15 04:33:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 227.36 Mbit/s

95th percentile per-packet one-way delay: 1.154 ms

Loss rate: 0.00%

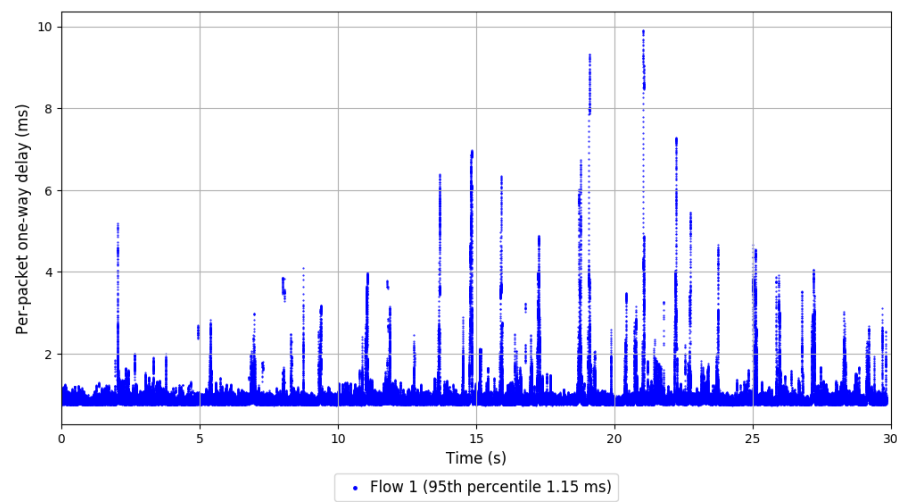
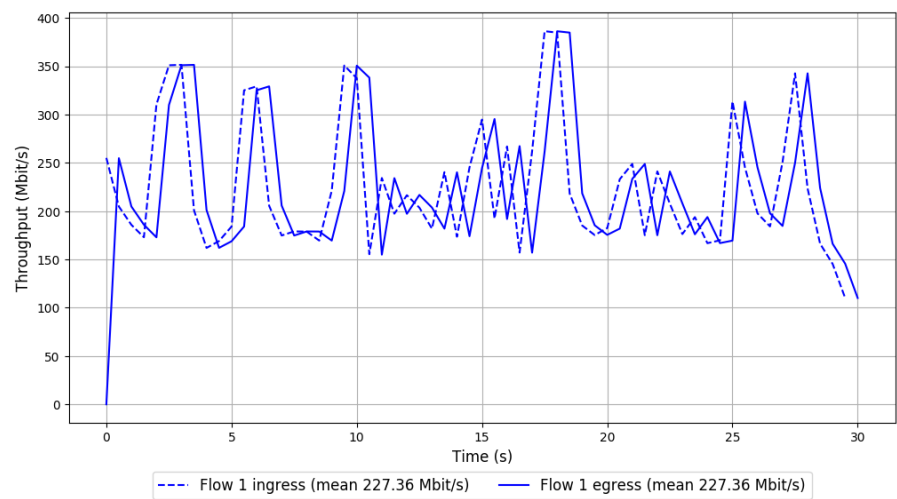
-- Flow 1:

Average throughput: 227.36 Mbit/s

95th percentile per-packet one-way delay: 1.154 ms

Loss rate: 0.00%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2018-11-15 03:19:40

End at: 2018-11-15 03:20:10

Local clock offset: 3.365 ms

Remote clock offset: 3.389 ms

Below is generated by plot.py at 2018-11-15 04:33:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 230.68 Mbit/s

95th percentile per-packet one-way delay: 1.416 ms

Loss rate: 0.00%

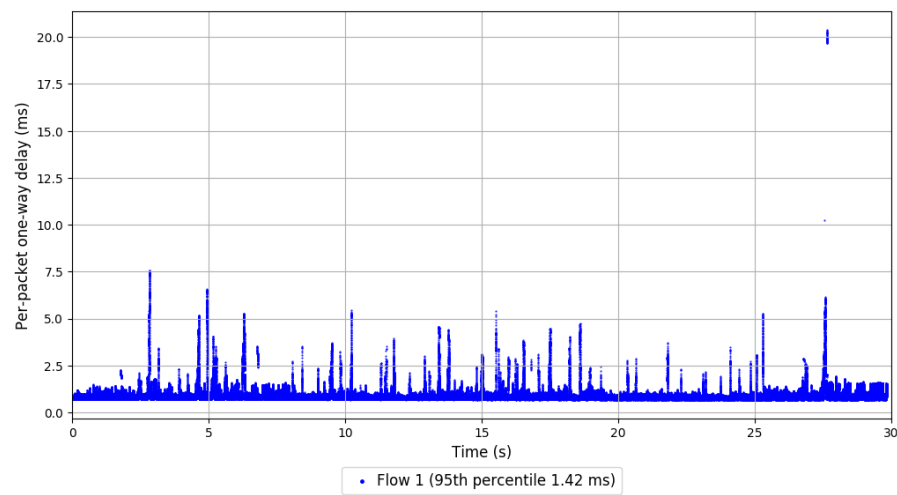
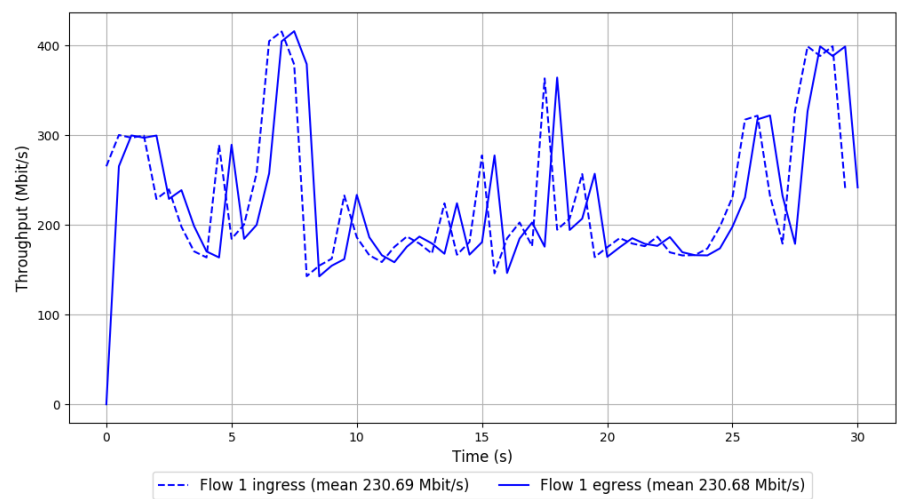
-- Flow 1:

Average throughput: 230.68 Mbit/s

95th percentile per-packet one-way delay: 1.416 ms

Loss rate: 0.00%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2018-11-15 03:45:46

End at: 2018-11-15 03:46:16

Local clock offset: 4.175 ms

Remote clock offset: 0.194 ms

Below is generated by plot.py at 2018-11-15 04:33:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 217.85 Mbit/s

95th percentile per-packet one-way delay: 1.551 ms

Loss rate: 0.00%

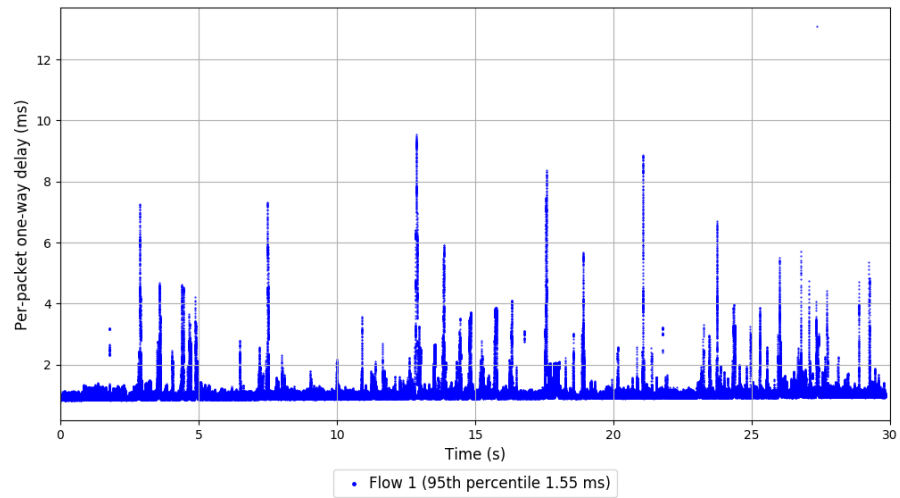
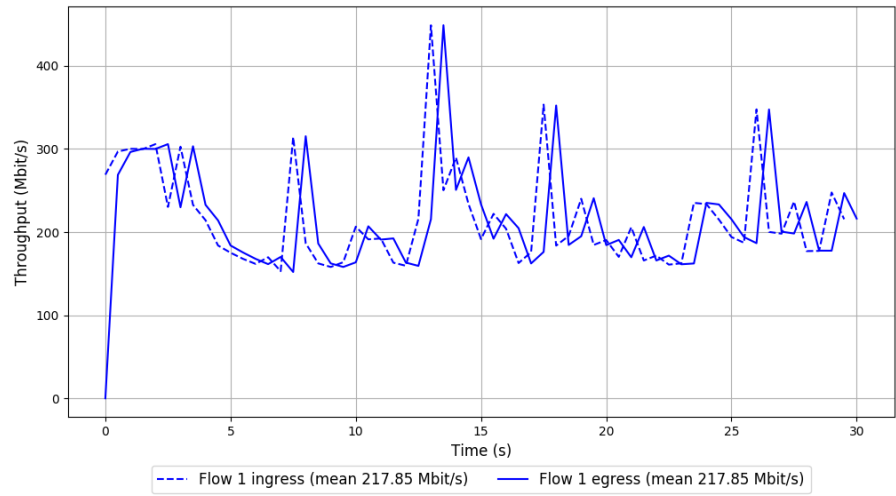
-- Flow 1:

Average throughput: 217.85 Mbit/s

95th percentile per-packet one-way delay: 1.551 ms

Loss rate: 0.00%

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-96d2da3

Start at: 2018-11-15 01:59:08

End at: 2018-11-15 01:59:38

Local clock offset: 4.675 ms

Remote clock offset: 2.157 ms

Below is generated by plot.py at 2018-11-15 04:33:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 140.69 Mbit/s

95th percentile per-packet one-way delay: 1.321 ms

Loss rate: 0.00%

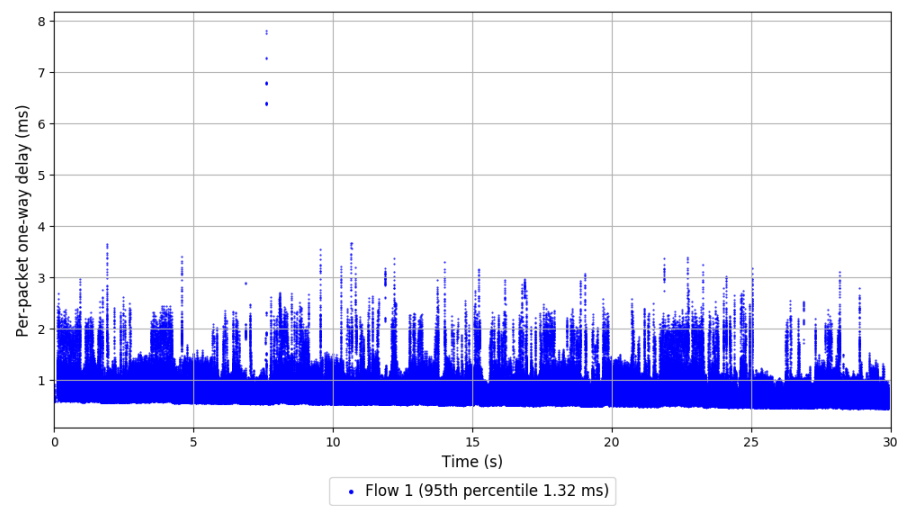
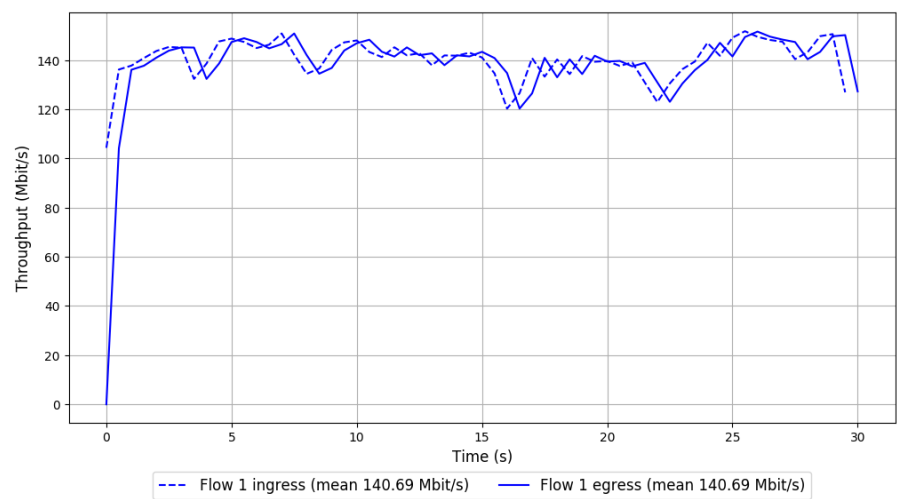
-- Flow 1:

Average throughput: 140.69 Mbit/s

95th percentile per-packet one-way delay: 1.321 ms

Loss rate: 0.00%

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



Run 2: Statistics of Indigo-96d2da3

Start at: 2018-11-15 02:24:48

End at: 2018-11-15 02:25:18

Local clock offset: 3.803 ms

Remote clock offset: 4.695 ms

Below is generated by plot.py at 2018-11-15 04:33:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 148.39 Mbit/s

95th percentile per-packet one-way delay: 1.241 ms

Loss rate: 0.00%

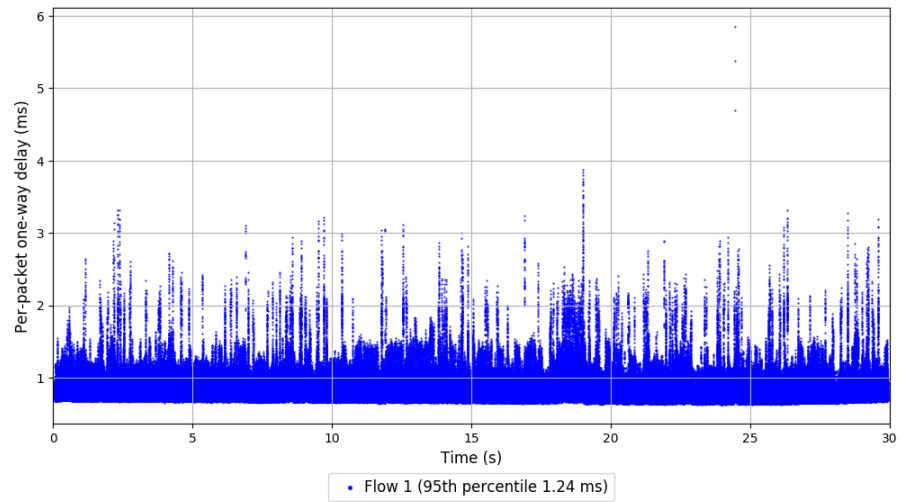
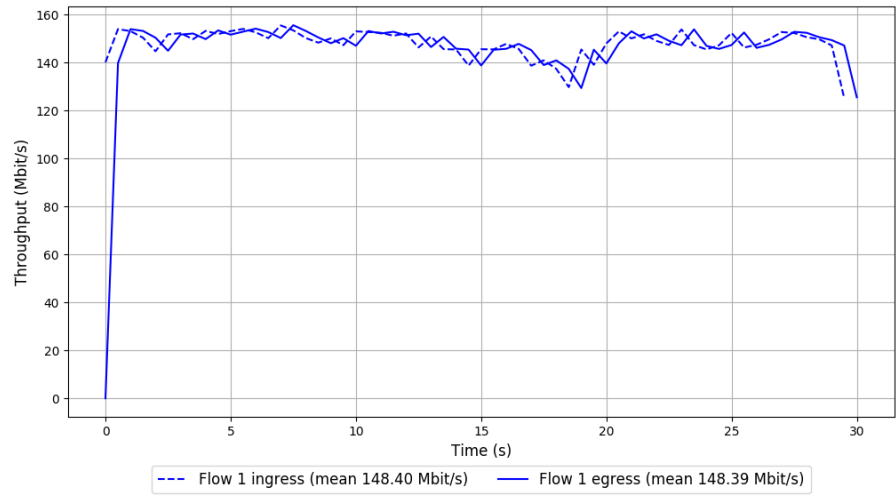
-- Flow 1:

Average throughput: 148.39 Mbit/s

95th percentile per-packet one-way delay: 1.241 ms

Loss rate: 0.00%

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

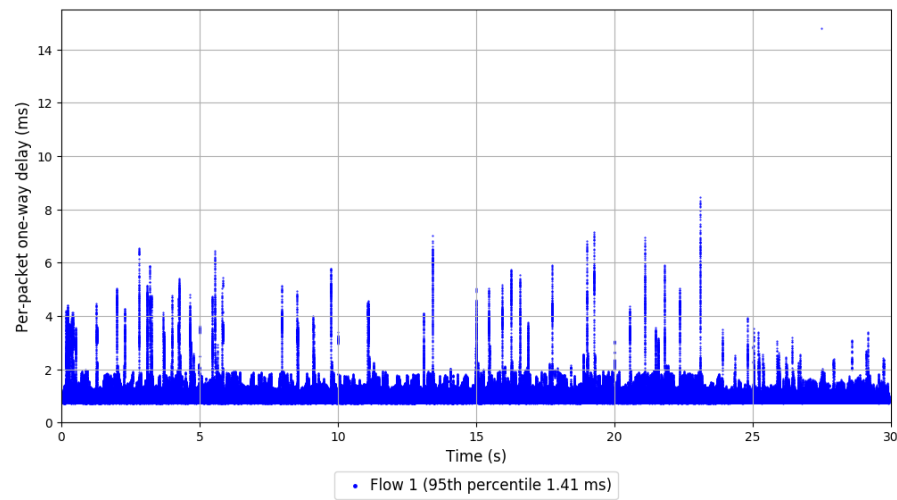
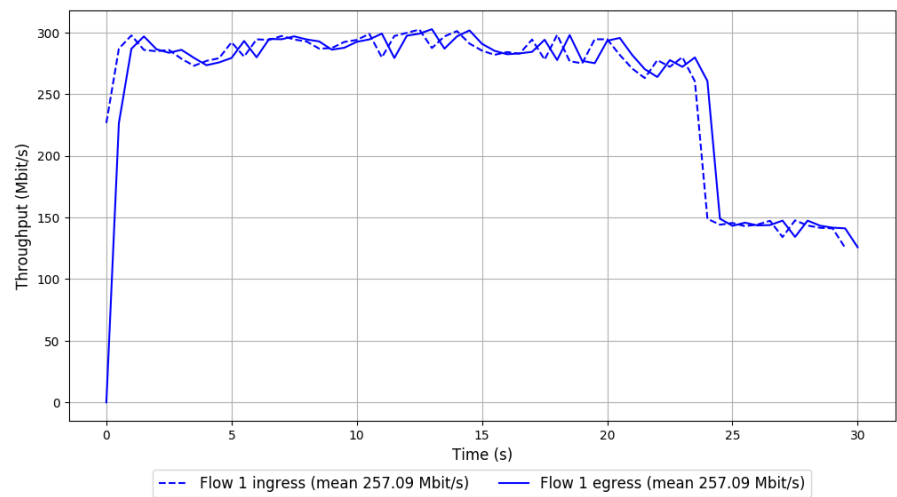


Run 3: Statistics of Indigo-96d2da3

Start at: 2018-11-15 02:50:58
End at: 2018-11-15 02:51:28
Local clock offset: 3.381 ms
Remote clock offset: -0.049 ms

Below is generated by plot.py at 2018-11-15 04:34:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 257.09 Mbit/s
95th percentile per-packet one-way delay: 1.410 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 257.09 Mbit/s
95th percentile per-packet one-way delay: 1.410 ms
Loss rate: 0.00%

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



Run 4: Statistics of Indigo-96d2da3

Start at: 2018-11-15 03:16:53

End at: 2018-11-15 03:17:23

Local clock offset: 3.435 ms

Remote clock offset: 3.241 ms

Below is generated by plot.py at 2018-11-15 04:34:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 289.29 Mbit/s

95th percentile per-packet one-way delay: 1.402 ms

Loss rate: 0.00%

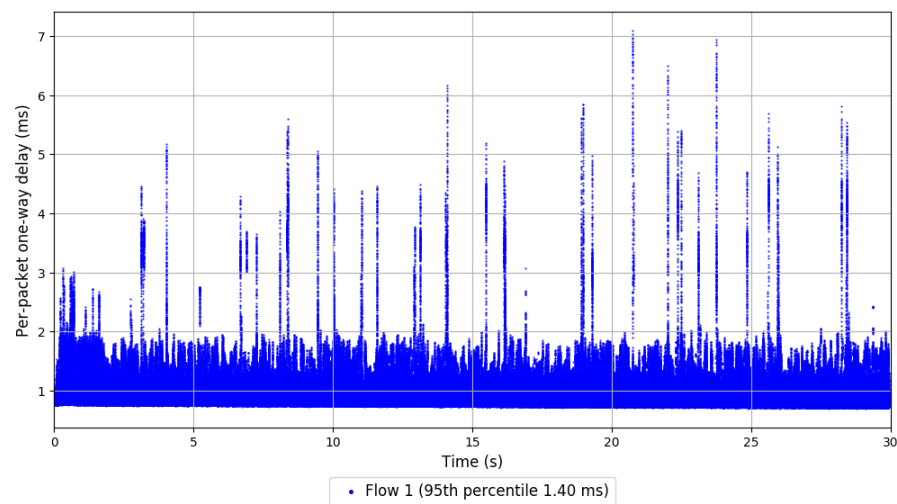
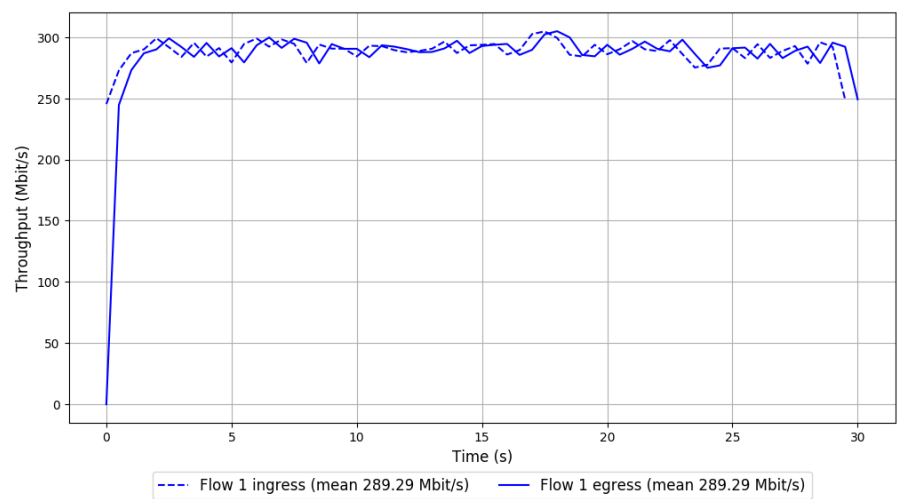
-- Flow 1:

Average throughput: 289.29 Mbit/s

95th percentile per-packet one-way delay: 1.402 ms

Loss rate: 0.00%

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



Run 5: Statistics of Indigo-96d2da3

Start at: 2018-11-15 03:43:03

End at: 2018-11-15 03:43:33

Local clock offset: 4.147 ms

Remote clock offset: 0.81 ms

Below is generated by plot.py at 2018-11-15 04:34:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 151.82 Mbit/s

95th percentile per-packet one-way delay: 1.480 ms

Loss rate: 0.00%

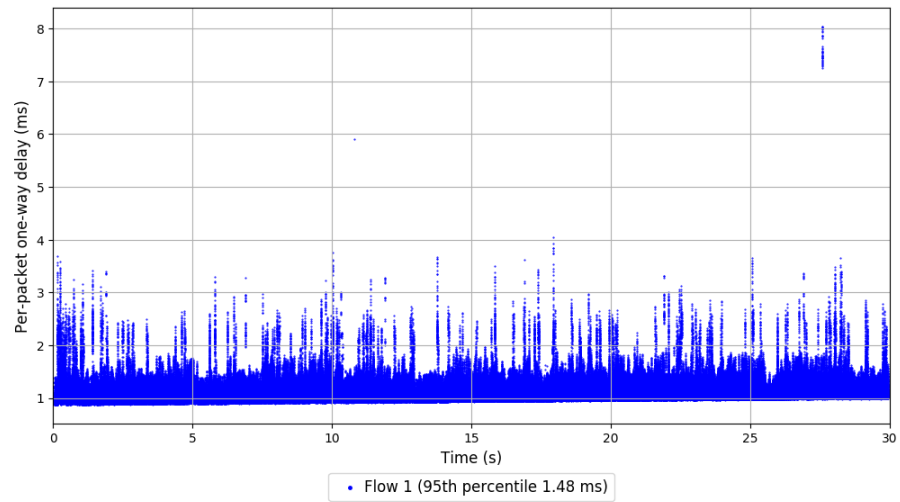
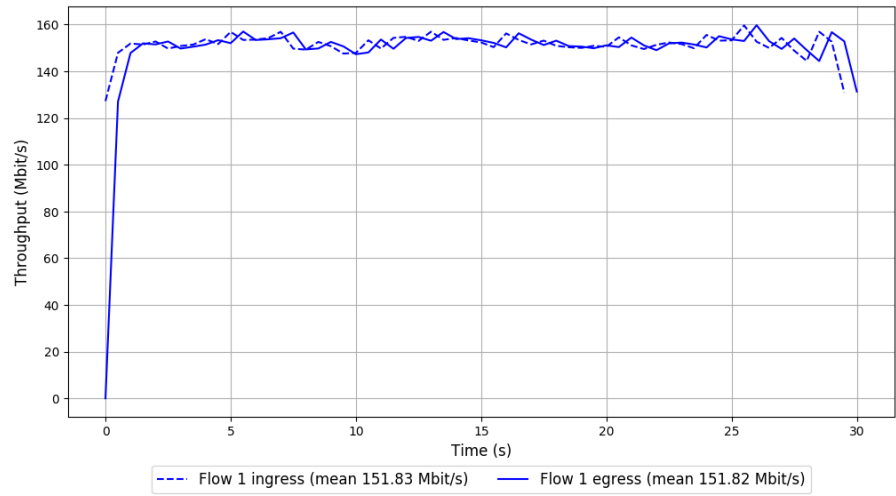
-- Flow 1:

Average throughput: 151.82 Mbit/s

95th percentile per-packet one-way delay: 1.480 ms

Loss rate: 0.00%

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



Run 1: Statistics of LEDBAT

Start at: 2018-11-15 02:13:15

End at: 2018-11-15 02:13:45

Local clock offset: 3.961 ms

Remote clock offset: 3.828 ms

Below is generated by plot.py at 2018-11-15 04:39:24

Datalink statistics

-- Total of 1 flow:

Average throughput: 559.75 Mbit/s

95th percentile per-packet one-way delay: 13.503 ms

Loss rate: 0.04%

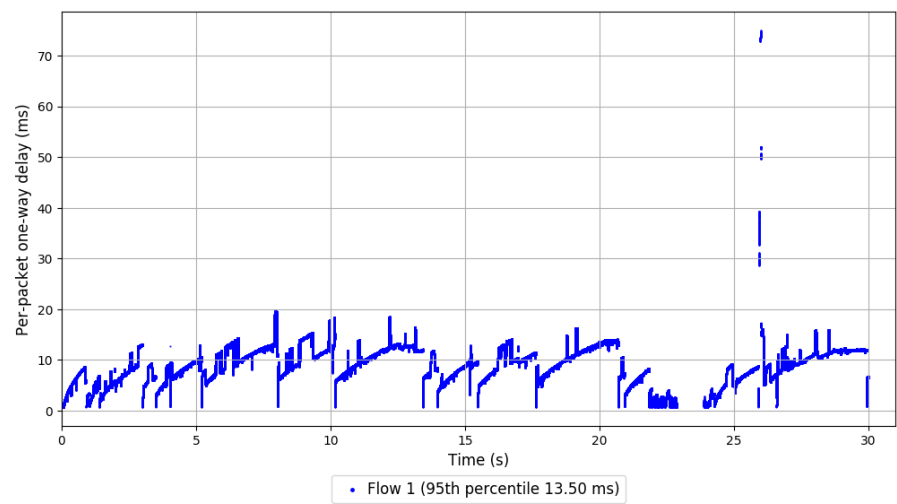
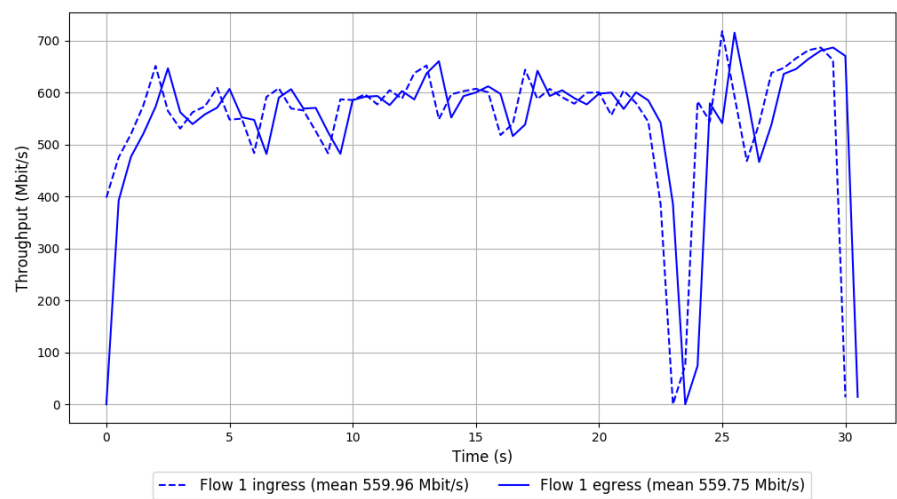
-- Flow 1:

Average throughput: 559.75 Mbit/s

95th percentile per-packet one-way delay: 13.503 ms

Loss rate: 0.04%

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2018-11-15 02:39:11

End at: 2018-11-15 02:39:41

Local clock offset: 3.722 ms

Remote clock offset: 0.75 ms

Below is generated by plot.py at 2018-11-15 04:40:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 659.61 Mbit/s

95th percentile per-packet one-way delay: 16.713 ms

Loss rate: 0.04%

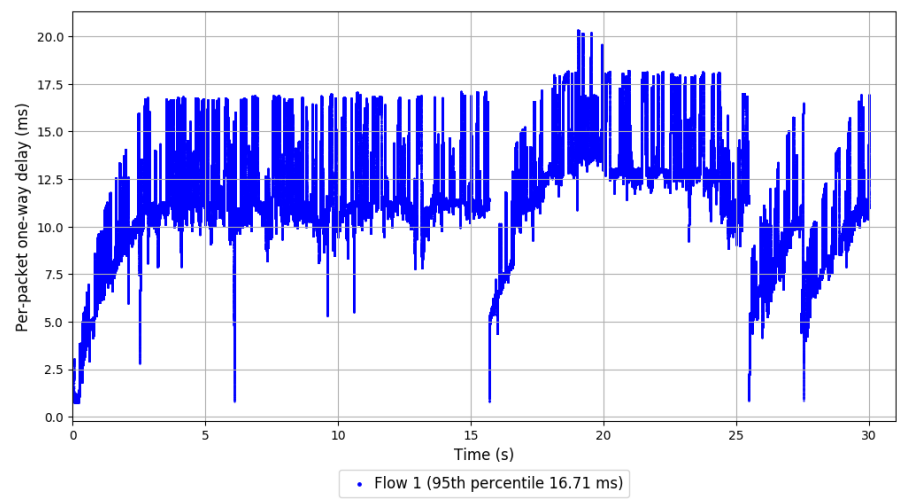
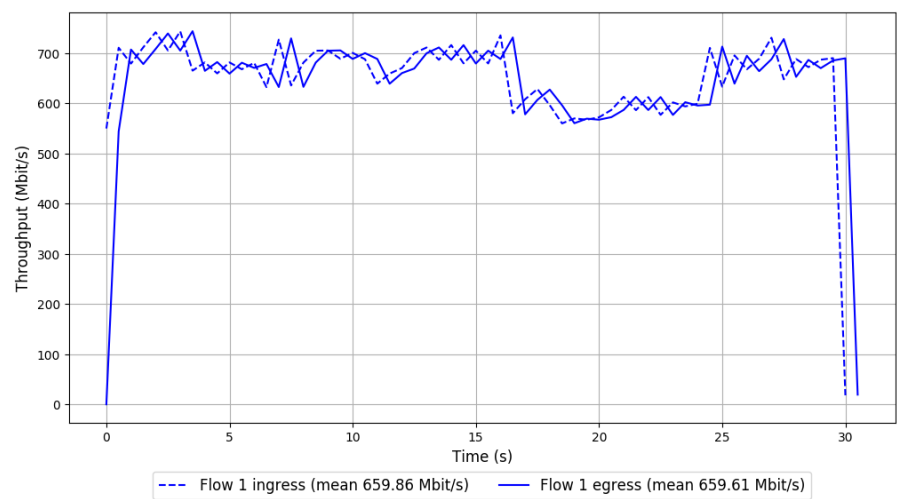
-- Flow 1:

Average throughput: 659.61 Mbit/s

95th percentile per-packet one-way delay: 16.713 ms

Loss rate: 0.04%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-11-15 03:05:19

End at: 2018-11-15 03:05:49

Local clock offset: 3.471 ms

Remote clock offset: 1.522 ms

Below is generated by plot.py at 2018-11-15 04:40:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 537.08 Mbit/s

95th percentile per-packet one-way delay: 17.029 ms

Loss rate: 0.04%

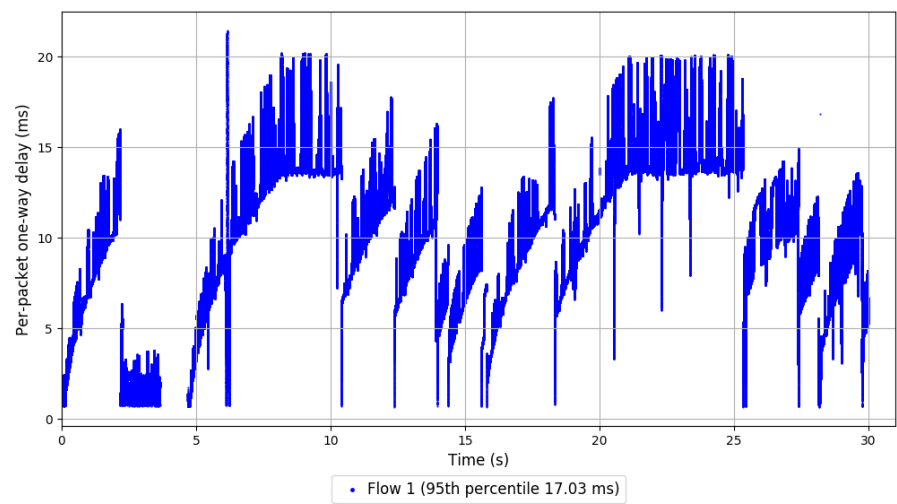
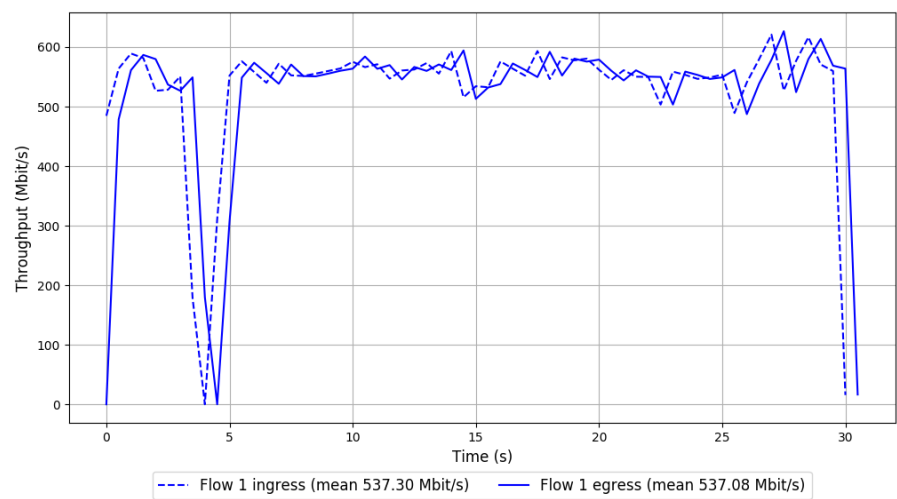
-- Flow 1:

Average throughput: 537.08 Mbit/s

95th percentile per-packet one-way delay: 17.029 ms

Loss rate: 0.04%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-11-15 03:31:19

End at: 2018-11-15 03:31:49

Local clock offset: 3.678 ms

Remote clock offset: 4.169 ms

Below is generated by plot.py at 2018-11-15 04:40:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 636.48 Mbit/s

95th percentile per-packet one-way delay: 14.850 ms

Loss rate: 0.04%

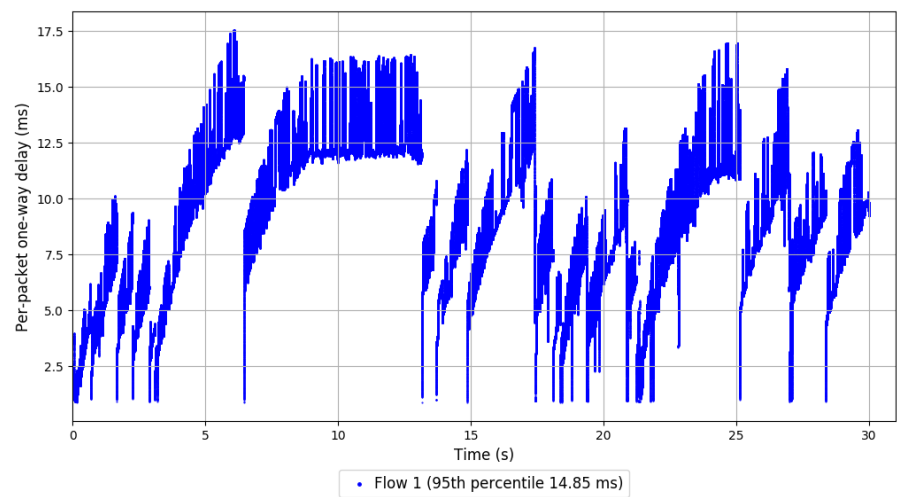
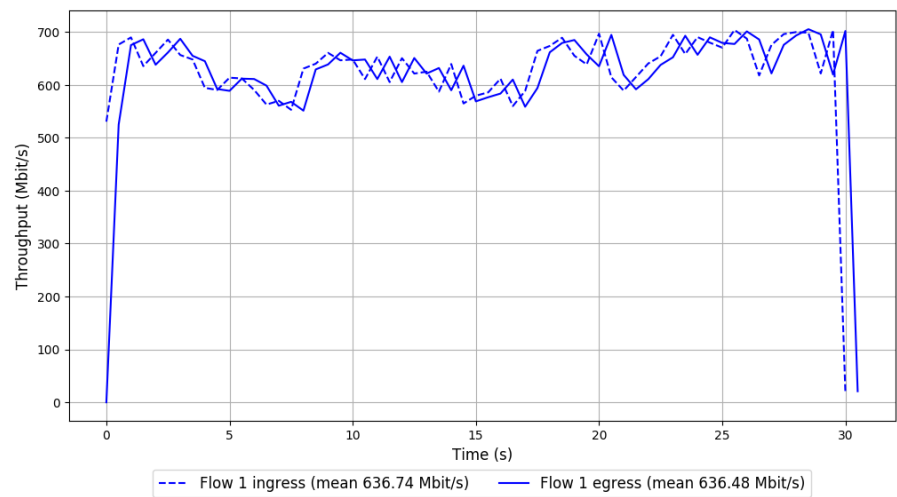
-- Flow 1:

Average throughput: 636.48 Mbit/s

95th percentile per-packet one-way delay: 14.850 ms

Loss rate: 0.04%

Run 4: Report of LEDBAT — Data Link

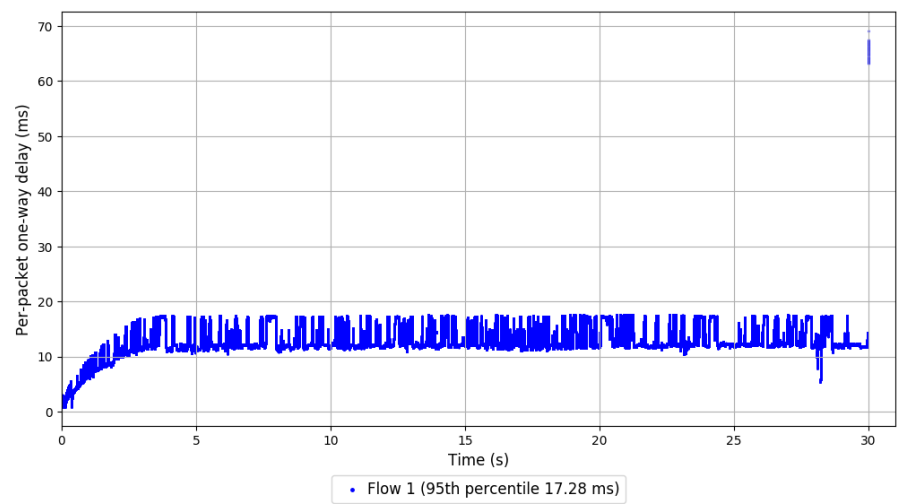
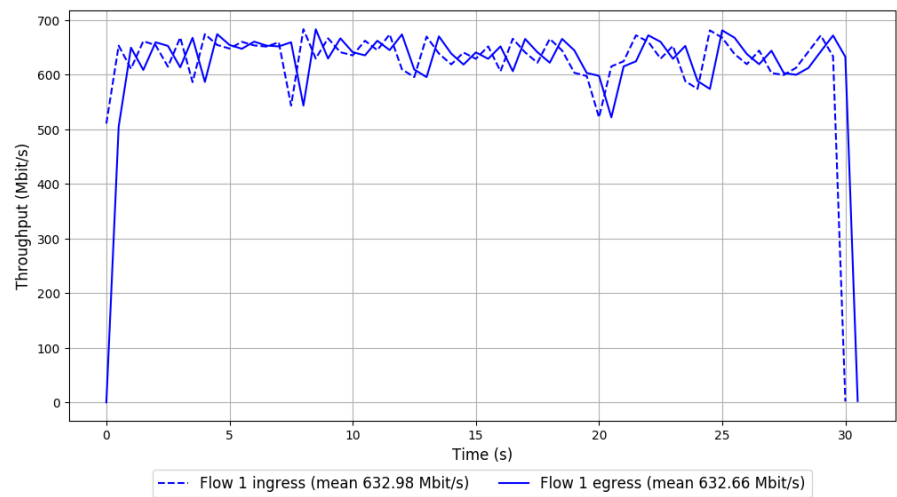


Run 5: Statistics of LEDBAT

Start at: 2018-11-15 03:57:15
End at: 2018-11-15 03:57:45
Local clock offset: 4.196 ms
Remote clock offset: -1.273 ms

Below is generated by plot.py at 2018-11-15 04:40:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 632.66 Mbit/s
95th percentile per-packet one-way delay: 17.280 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 632.66 Mbit/s
95th percentile per-packet one-way delay: 17.280 ms
Loss rate: 0.04%

Run 5: Report of LEDBAT — Data Link



Run 1: Statistics of Indigo-Muses

Start at: 2018-11-15 02:00:31

End at: 2018-11-15 02:01:01

Local clock offset: 4.534 ms

Remote clock offset: 2.385 ms

Below is generated by plot.py at 2018-11-15 04:40:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 49.10 Mbit/s

95th percentile per-packet one-way delay: 0.964 ms

Loss rate: 0.00%

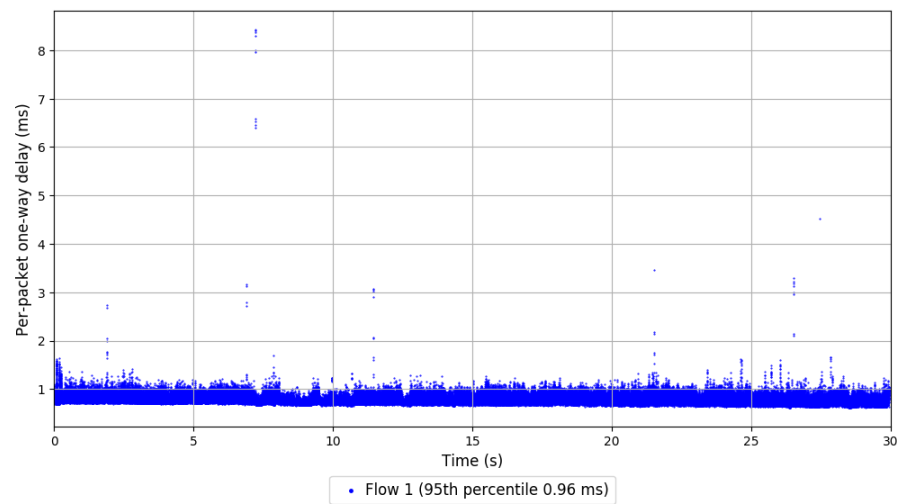
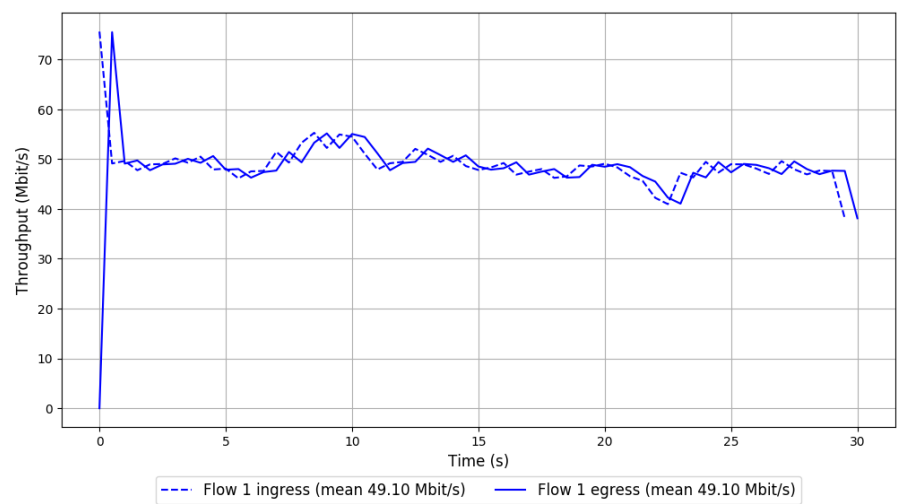
-- Flow 1:

Average throughput: 49.10 Mbit/s

95th percentile per-packet one-way delay: 0.964 ms

Loss rate: 0.00%

Run 1: Report of Indigo-Muses — Data Link



Run 2: Statistics of Indigo-Muses

Start at: 2018-11-15 02:26:11

End at: 2018-11-15 02:26:41

Local clock offset: 3.739 ms

Remote clock offset: 4.379 ms

Below is generated by plot.py at 2018-11-15 04:40:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 42.38 Mbit/s

95th percentile per-packet one-way delay: 1.389 ms

Loss rate: 0.00%

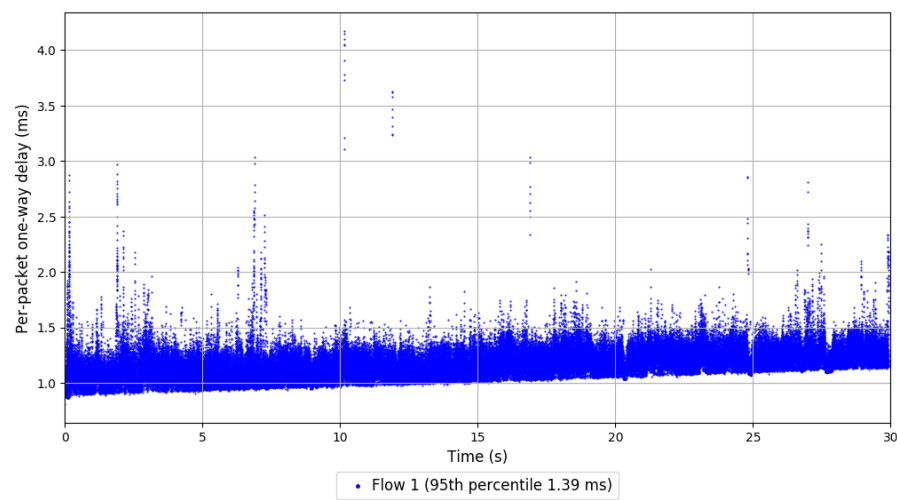
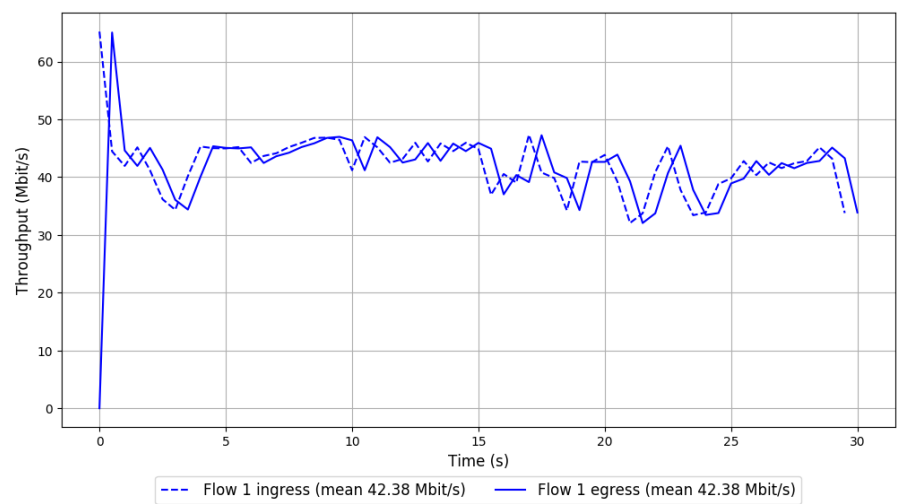
-- Flow 1:

Average throughput: 42.38 Mbit/s

95th percentile per-packet one-way delay: 1.389 ms

Loss rate: 0.00%

Run 2: Report of Indigo-Muses — Data Link

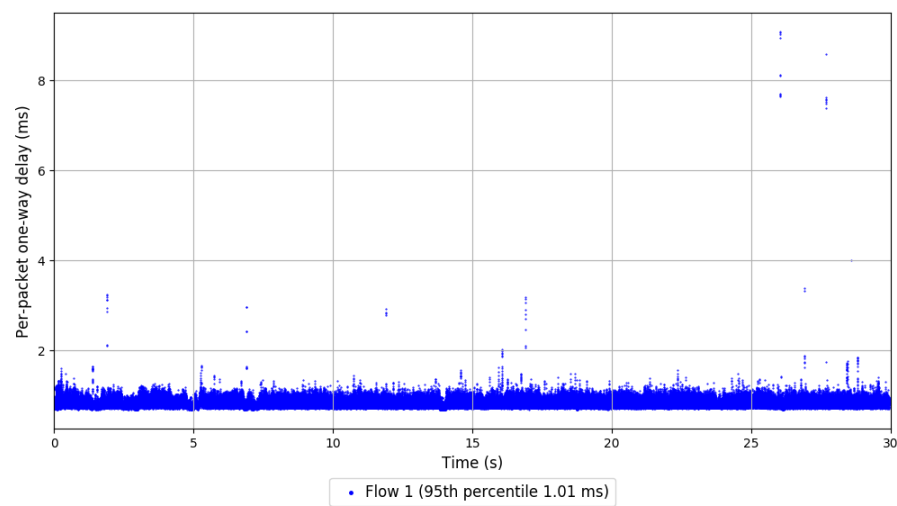
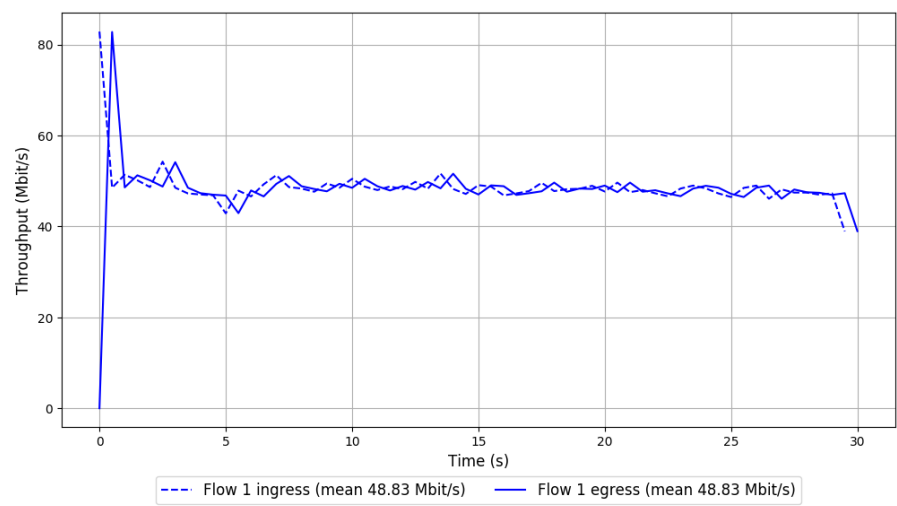


Run 3: Statistics of Indigo-Muses

Start at: 2018-11-15 02:52:24
End at: 2018-11-15 02:52:54
Local clock offset: 3.345 ms
Remote clock offset: -0.136 ms

Below is generated by plot.py at 2018-11-15 04:40:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 48.83 Mbit/s
95th percentile per-packet one-way delay: 1.010 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 48.83 Mbit/s
95th percentile per-packet one-way delay: 1.010 ms
Loss rate: 0.00%

Run 3: Report of Indigo-Muses — Data Link



Run 4: Statistics of Indigo-Muses

Start at: 2018-11-15 03:18:21

End at: 2018-11-15 03:18:51

Local clock offset: 3.387 ms

Remote clock offset: 3.301 ms

Below is generated by plot.py at 2018-11-15 04:40:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 47.77 Mbit/s

95th percentile per-packet one-way delay: 1.050 ms

Loss rate: 0.00%

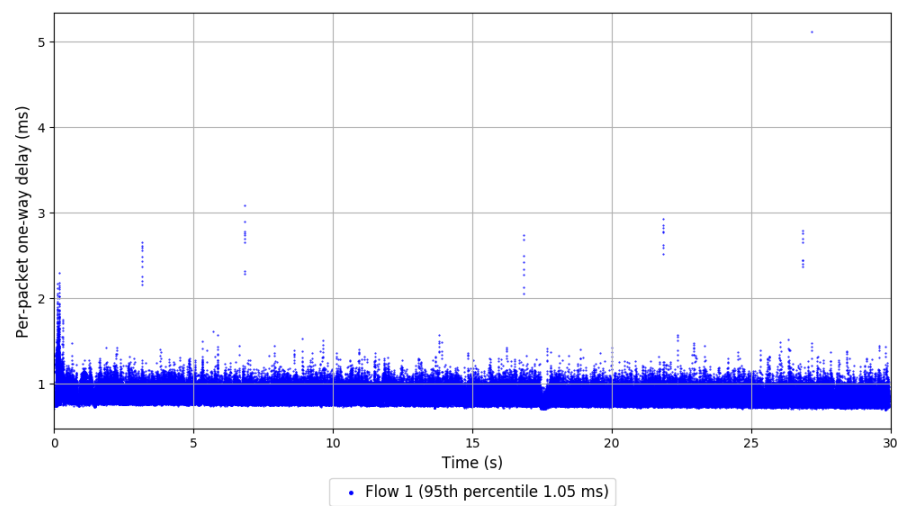
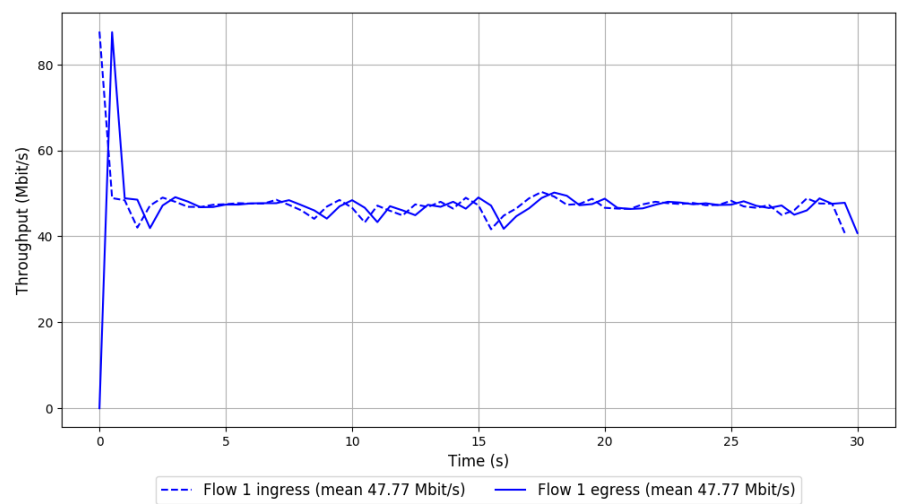
-- Flow 1:

Average throughput: 47.77 Mbit/s

95th percentile per-packet one-way delay: 1.050 ms

Loss rate: 0.00%

Run 4: Report of Indigo-Muses — Data Link



Run 5: Statistics of Indigo-Muses

Start at: 2018-11-15 03:44:26

End at: 2018-11-15 03:44:56

Local clock offset: 4.184 ms

Remote clock offset: 0.514 ms

Below is generated by plot.py at 2018-11-15 04:40:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 49.22 Mbit/s

95th percentile per-packet one-way delay: 1.270 ms

Loss rate: 0.03%

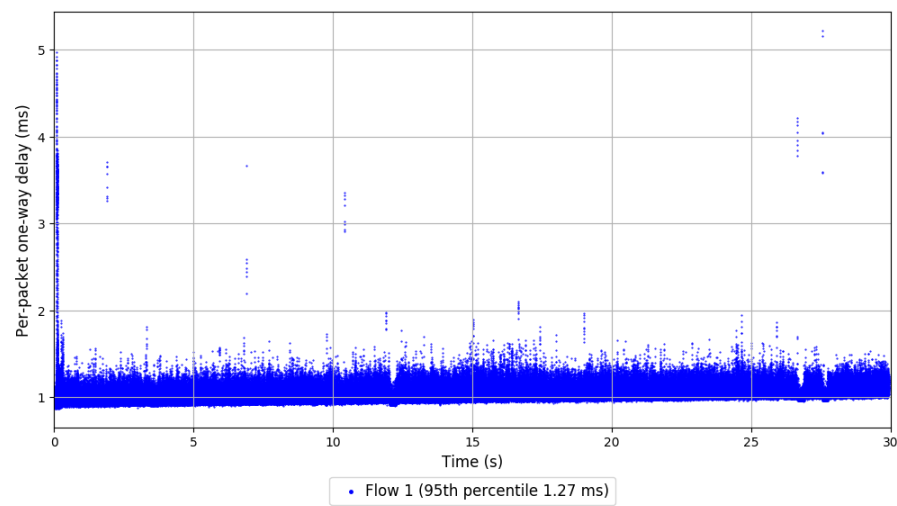
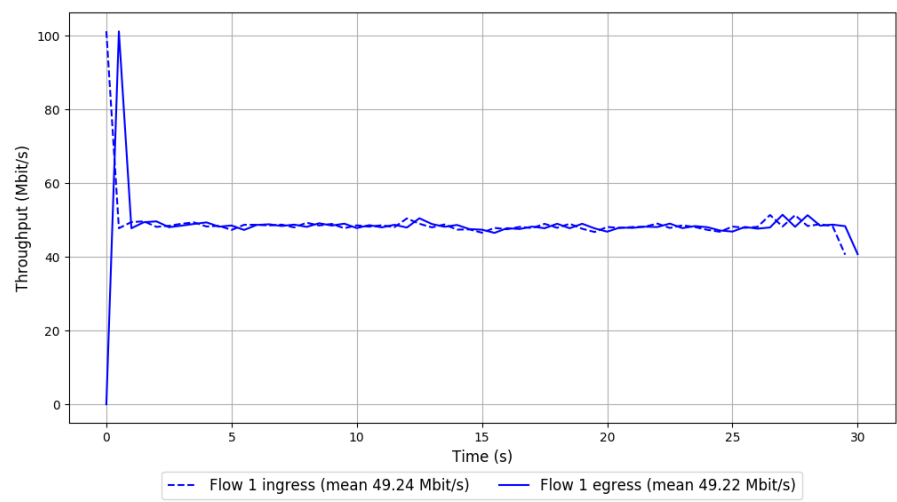
-- Flow 1:

Average throughput: 49.22 Mbit/s

95th percentile per-packet one-way delay: 1.270 ms

Loss rate: 0.03%

Run 5: Report of Indigo-Muses — Data Link

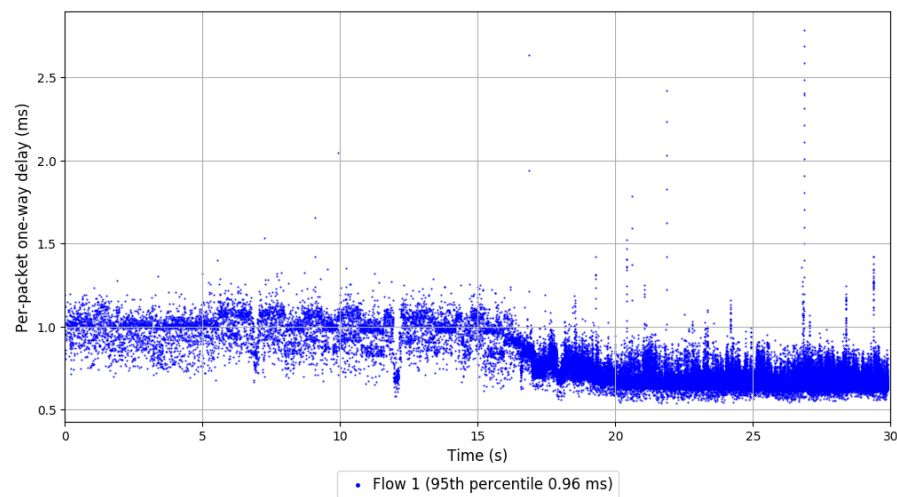
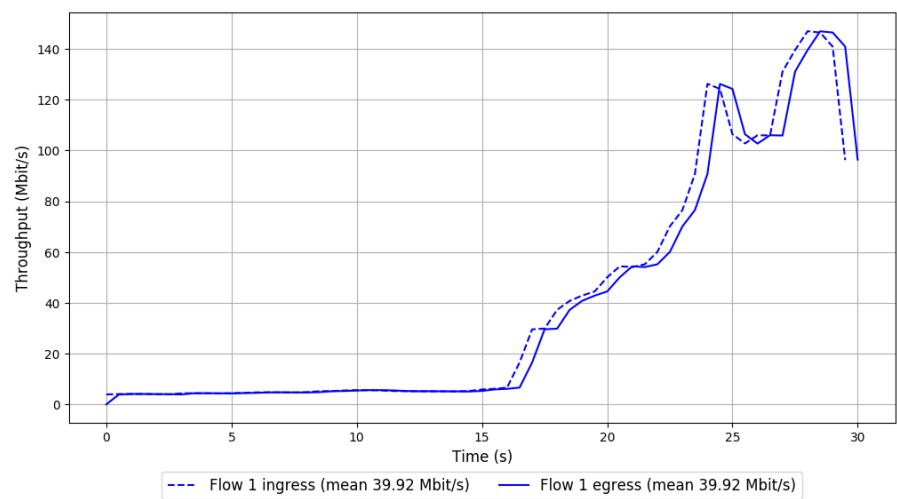


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-11-15 02:11:56
End at: 2018-11-15 02:12:26
Local clock offset: 4.042 ms
Remote clock offset: 3.705 ms

# Below is generated by plot.py at 2018-11-15 04:40:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 39.92 Mbit/s
95th percentile per-packet one-way delay: 0.964 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 39.92 Mbit/s
95th percentile per-packet one-way delay: 0.964 ms
Loss rate: 0.00%
```

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-11-15 02:37:36

End at: 2018-11-15 02:38:06

Local clock offset: 3.754 ms

Remote clock offset: 1.021 ms

Below is generated by plot.py at 2018-11-15 04:43:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 701.20 Mbit/s

95th percentile per-packet one-way delay: 6.897 ms

Loss rate: 0.02%

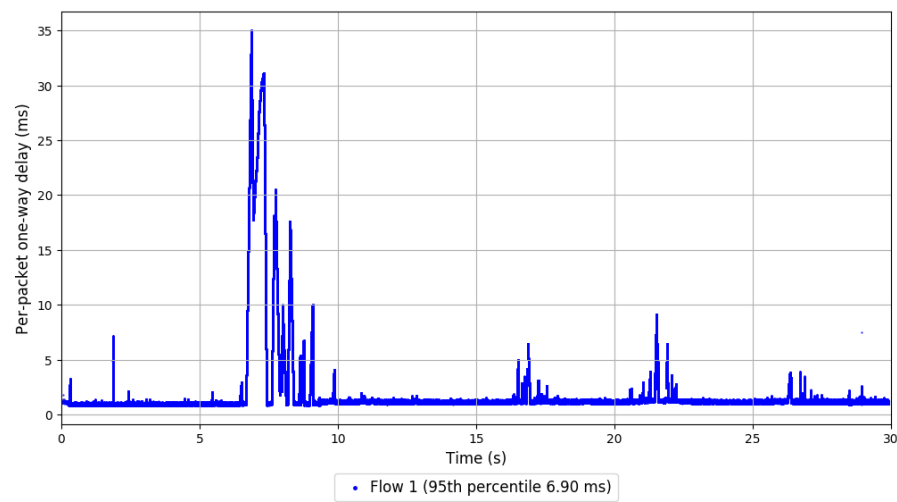
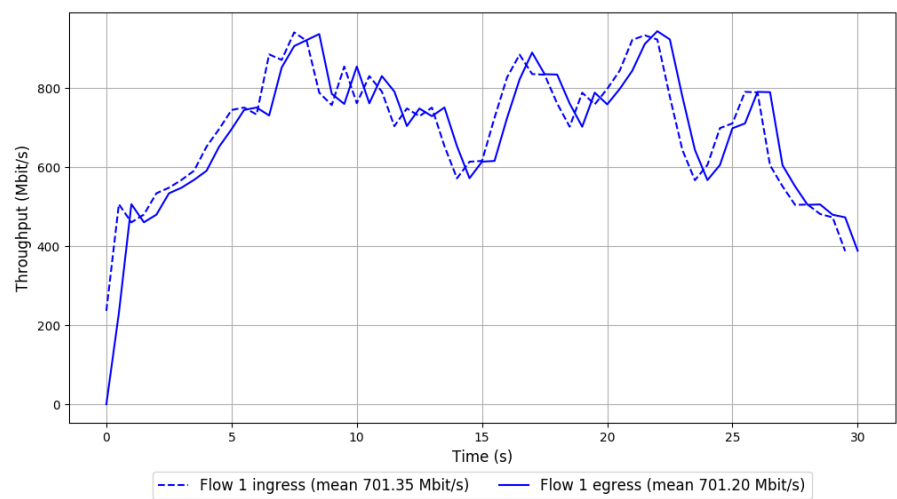
-- Flow 1:

Average throughput: 701.20 Mbit/s

95th percentile per-packet one-way delay: 6.897 ms

Loss rate: 0.02%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-11-15 03:03:54

End at: 2018-11-15 03:04:24

Local clock offset: 3.461 ms

Remote clock offset: 1.276 ms

Below is generated by plot.py at 2018-11-15 04:43:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 320.21 Mbit/s

95th percentile per-packet one-way delay: 1.137 ms

Loss rate: 0.01%

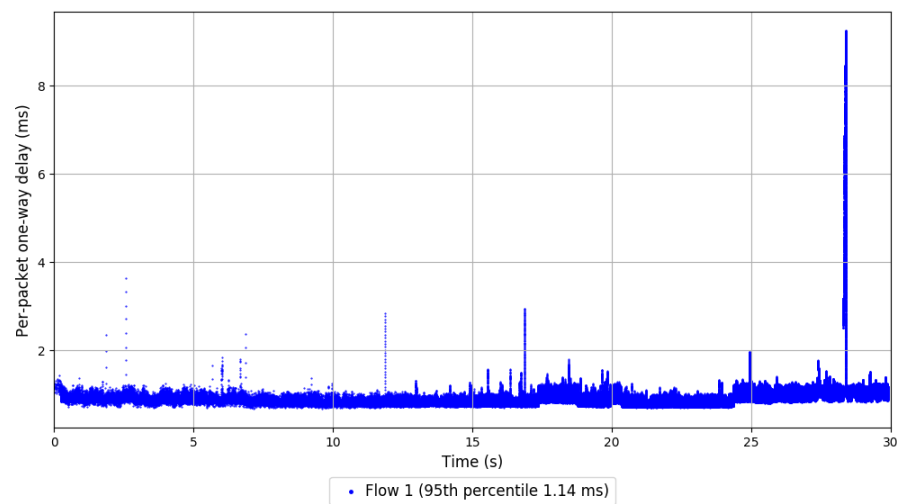
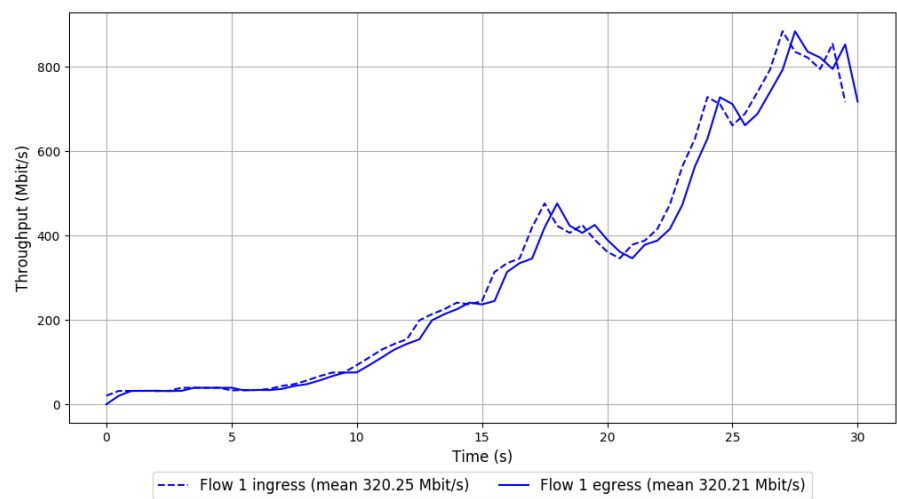
-- Flow 1:

Average throughput: 320.21 Mbit/s

95th percentile per-packet one-way delay: 1.137 ms

Loss rate: 0.01%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-11-15 03:29:50

End at: 2018-11-15 03:30:20

Local clock offset: 3.533 ms

Remote clock offset: 3.984 ms

Below is generated by plot.py at 2018-11-15 04:43:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 466.53 Mbit/s

95th percentile per-packet one-way delay: 1.602 ms

Loss rate: 0.04%

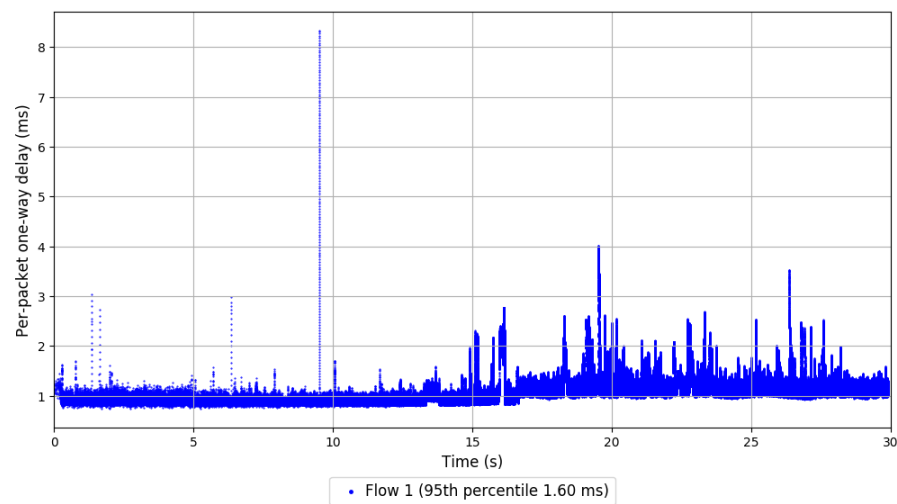
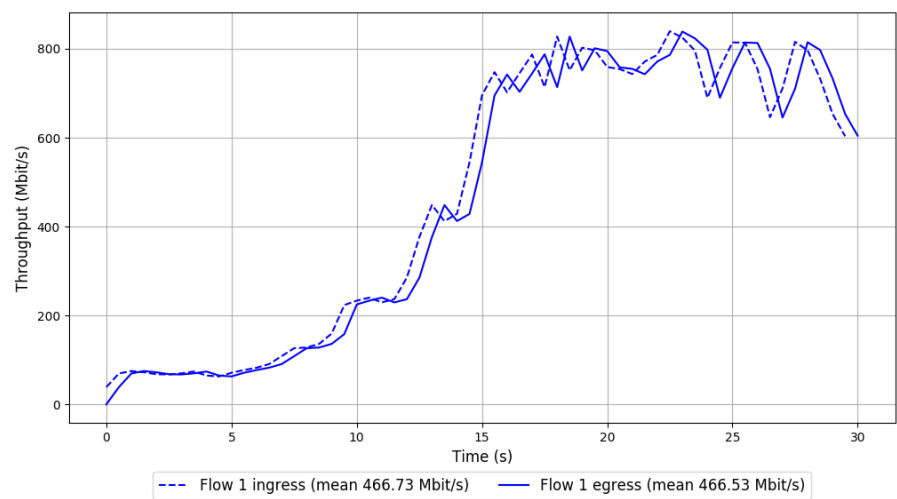
-- Flow 1:

Average throughput: 466.53 Mbit/s

95th percentile per-packet one-way delay: 1.602 ms

Loss rate: 0.04%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-11-15 03:55:55

End at: 2018-11-15 03:56:25

Local clock offset: 4.208 ms

Remote clock offset: -1.174 ms

Below is generated by plot.py at 2018-11-15 04:43:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 93.36 Mbit/s

95th percentile per-packet one-way delay: 0.987 ms

Loss rate: 1.67%

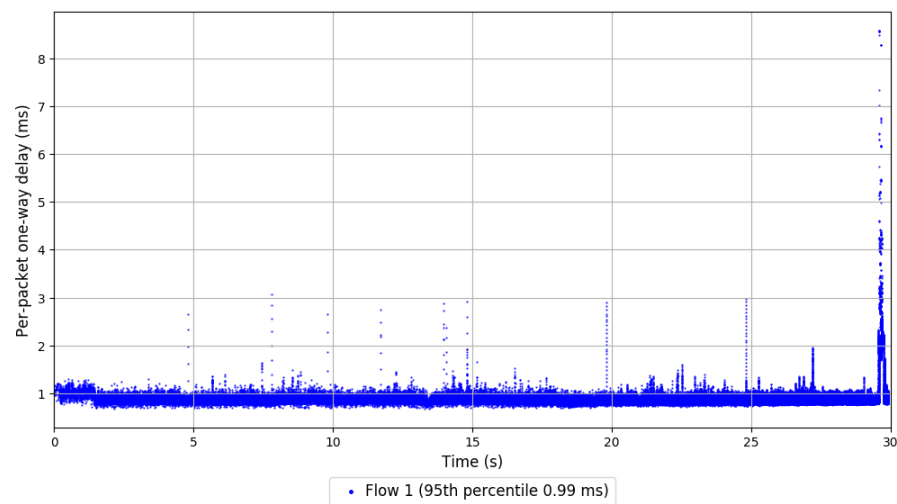
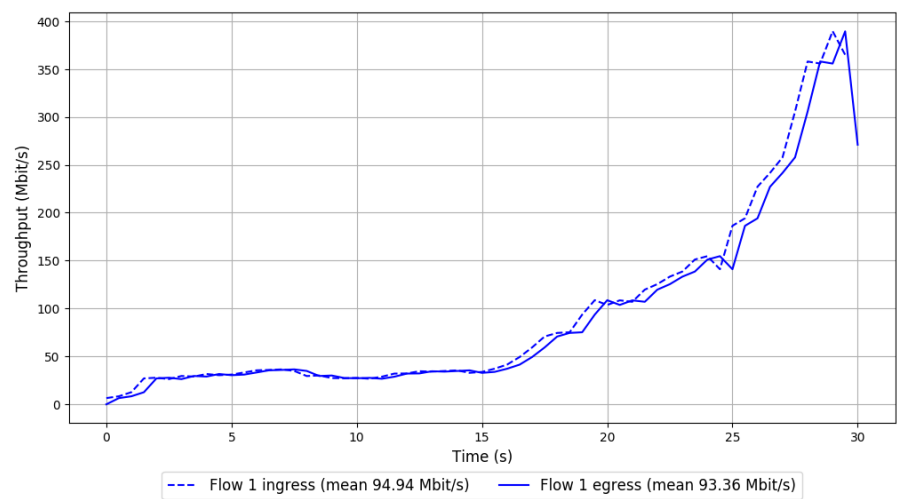
-- Flow 1:

Average throughput: 93.36 Mbit/s

95th percentile per-packet one-way delay: 0.987 ms

Loss rate: 1.67%

Run 5: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

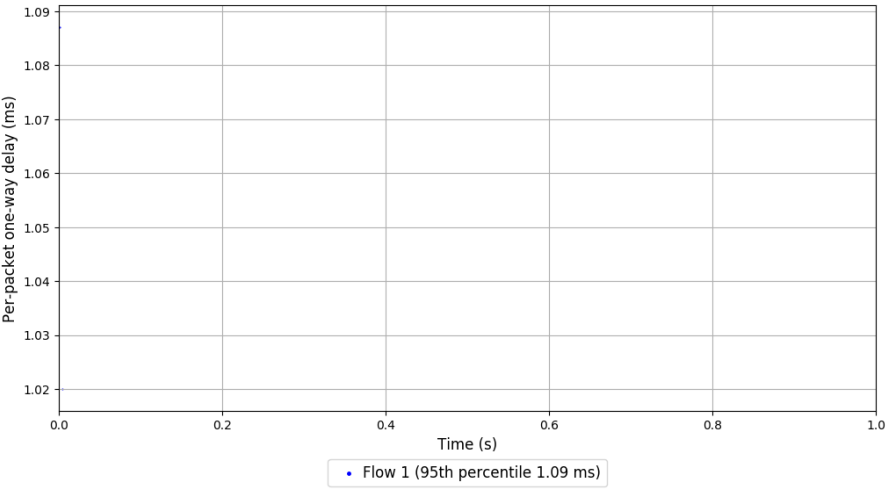
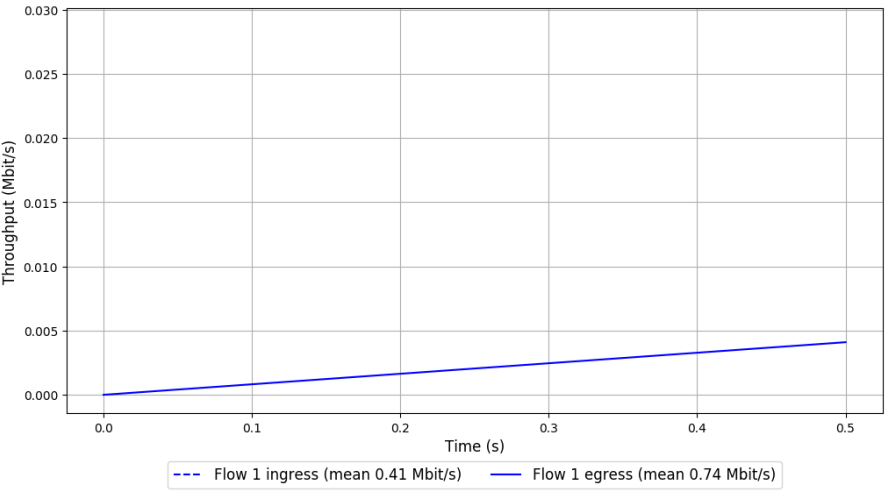
Start at: 2018-11-15 02:16:26

End at: 2018-11-15 02:16:56

Local clock offset: 4.013 ms

Remote clock offset: 4.087 ms

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

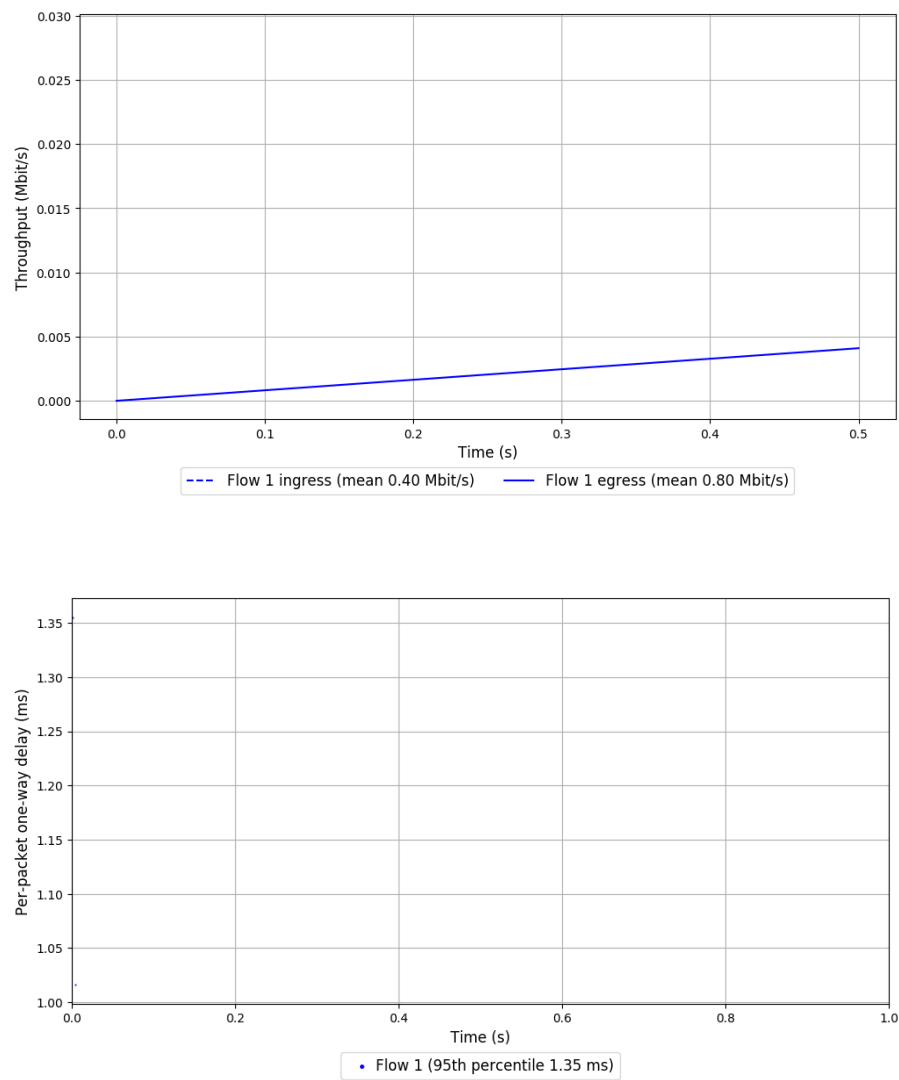
Start at: 2018-11-15 02:42:27

End at: 2018-11-15 02:42:57

Local clock offset: 3.627 ms

Remote clock offset: 0.433 ms

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

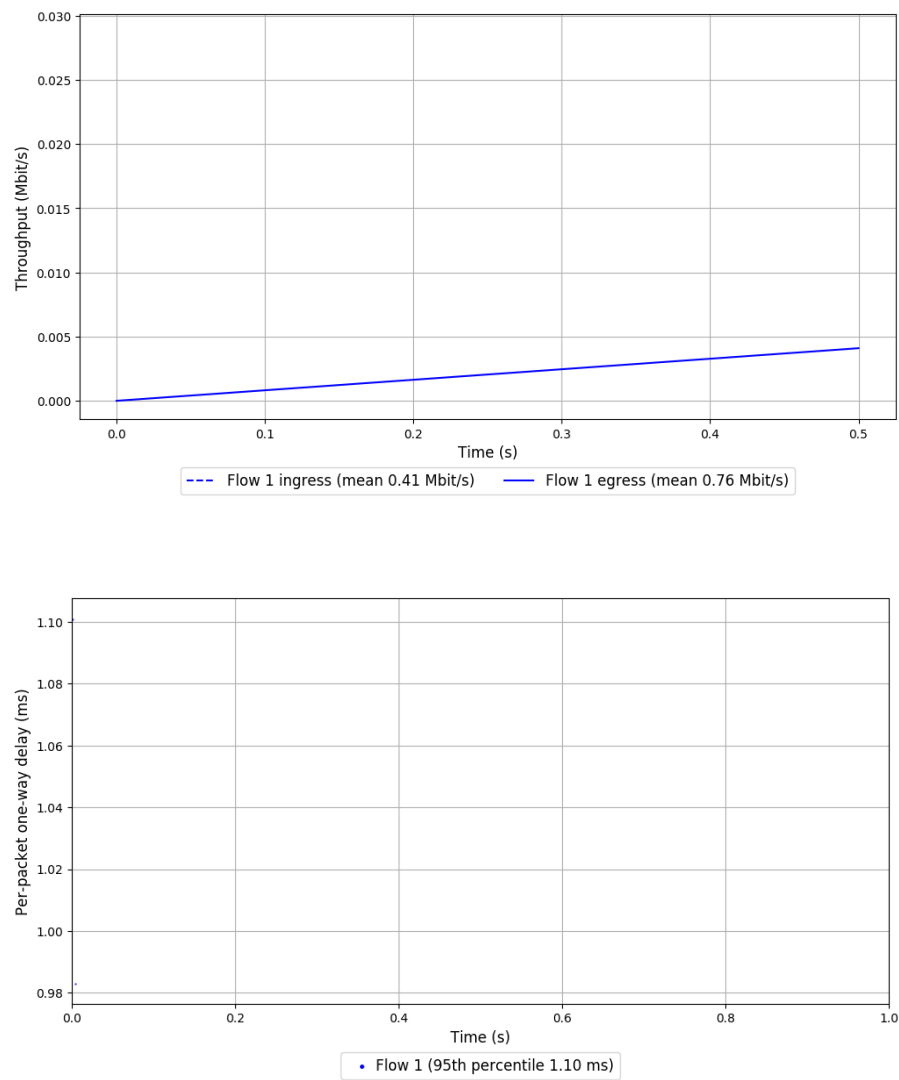
Start at: 2018-11-15 03:08:28

End at: 2018-11-15 03:08:58

Local clock offset: 3.473 ms

Remote clock offset: 2.135 ms

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

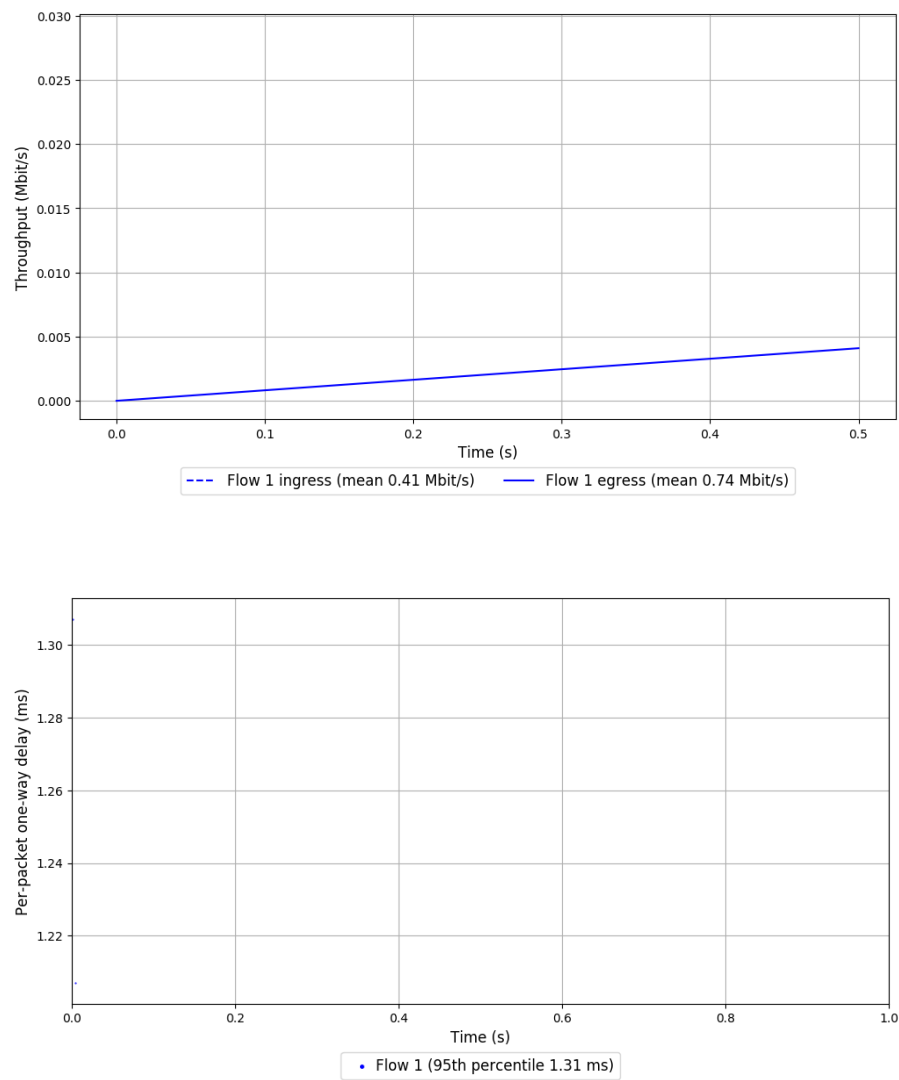
Start at: 2018-11-15 03:34:33

End at: 2018-11-15 03:35:03

Local clock offset: 3.897 ms

Remote clock offset: 3.759 ms

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

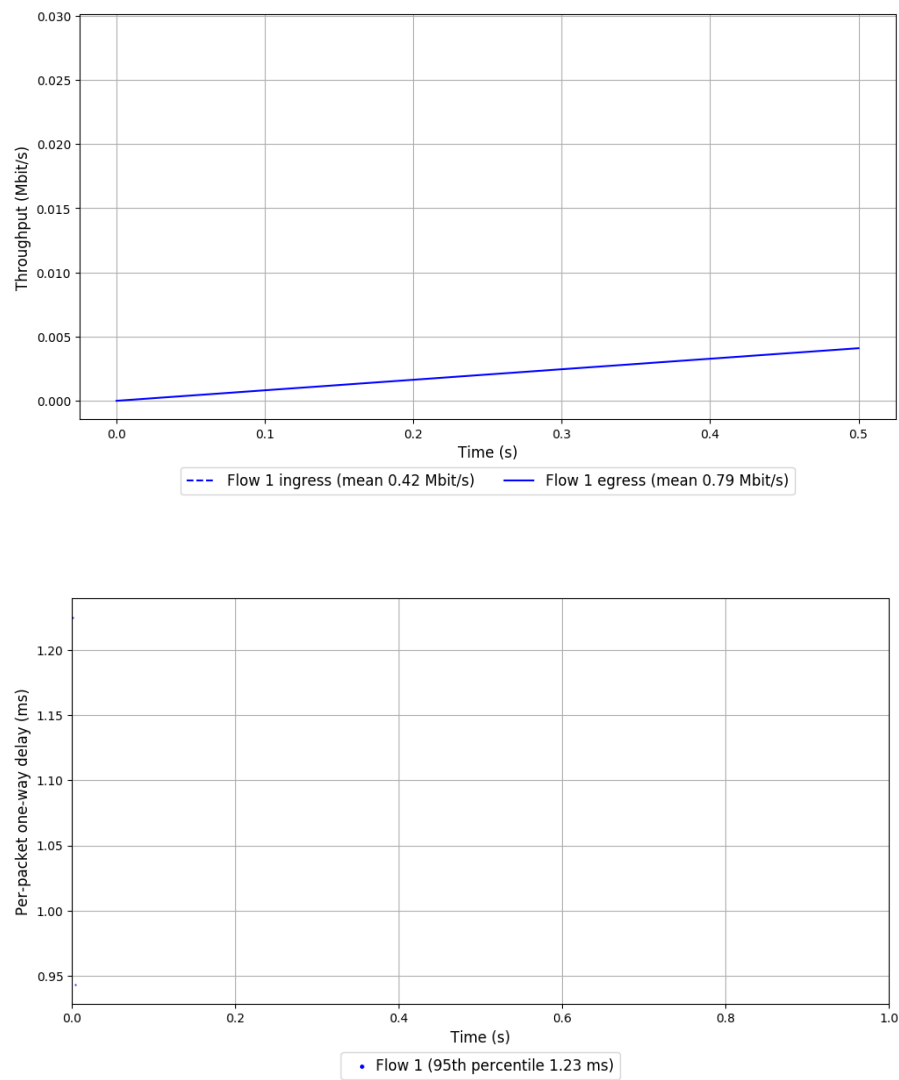
Start at: 2018-11-15 04:00:33

End at: 2018-11-15 04:01:03

Local clock offset: 4.249 ms

Remote clock offset: -1.557 ms

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2018-11-15 02:03:19

End at: 2018-11-15 02:03:49

Local clock offset: 4.442 ms

Remote clock offset: 2.867 ms

Below is generated by plot.py at 2018-11-15 04:43:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 78.33 Mbit/s

95th percentile per-packet one-way delay: 0.852 ms

Loss rate: 0.00%

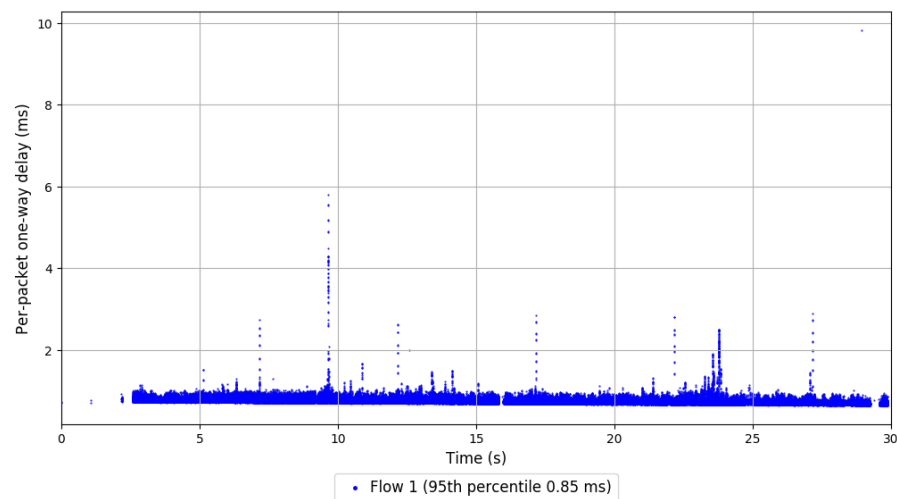
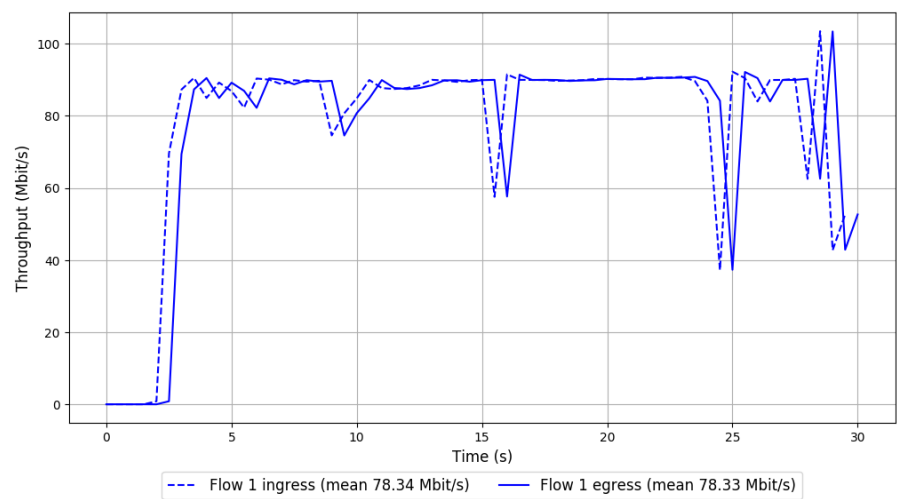
-- Flow 1:

Average throughput: 78.33 Mbit/s

95th percentile per-packet one-way delay: 0.852 ms

Loss rate: 0.00%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-11-15 02:28:57

End at: 2018-11-15 02:29:28

Local clock offset: 3.74 ms

Remote clock offset: 3.036 ms

Below is generated by plot.py at 2018-11-15 04:43:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 77.48 Mbit/s

95th percentile per-packet one-way delay: 1.102 ms

Loss rate: 0.00%

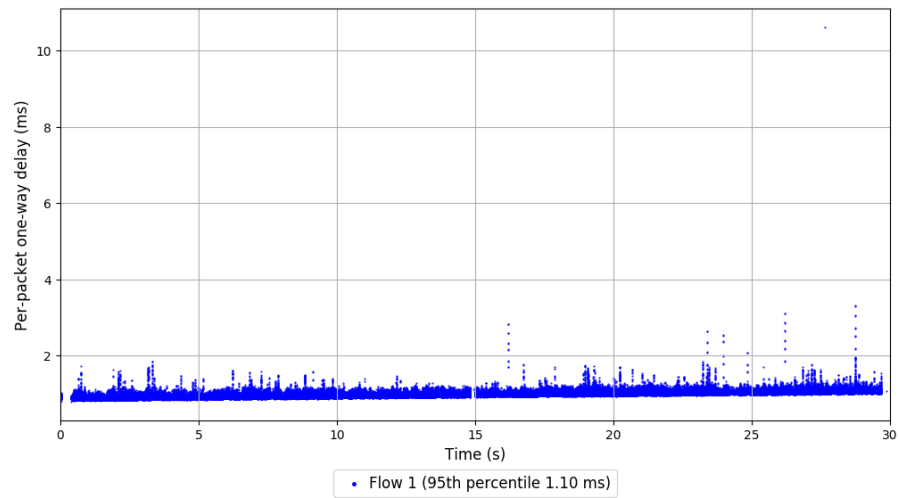
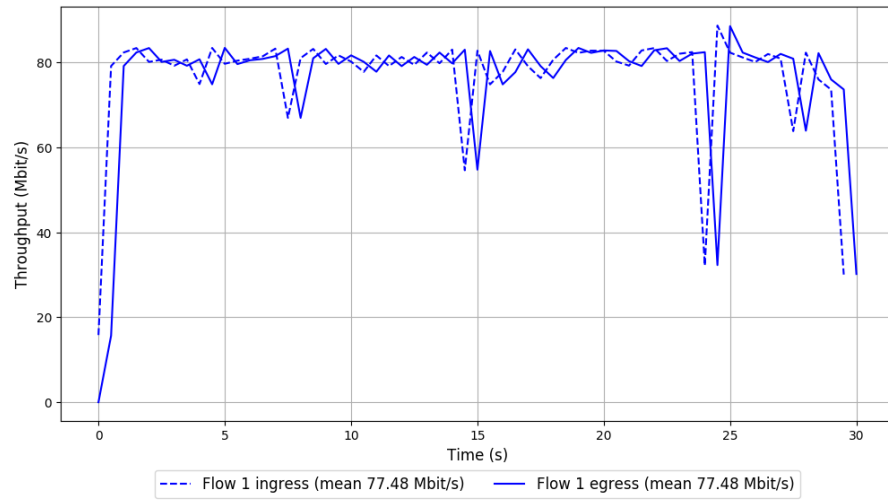
-- Flow 1:

Average throughput: 77.48 Mbit/s

95th percentile per-packet one-way delay: 1.102 ms

Loss rate: 0.00%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-11-15 02:55:12

End at: 2018-11-15 02:55:42

Local clock offset: 3.236 ms

Remote clock offset: -0.124 ms

Below is generated by plot.py at 2018-11-15 04:43:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 82.50 Mbit/s

95th percentile per-packet one-way delay: 0.967 ms

Loss rate: 0.01%

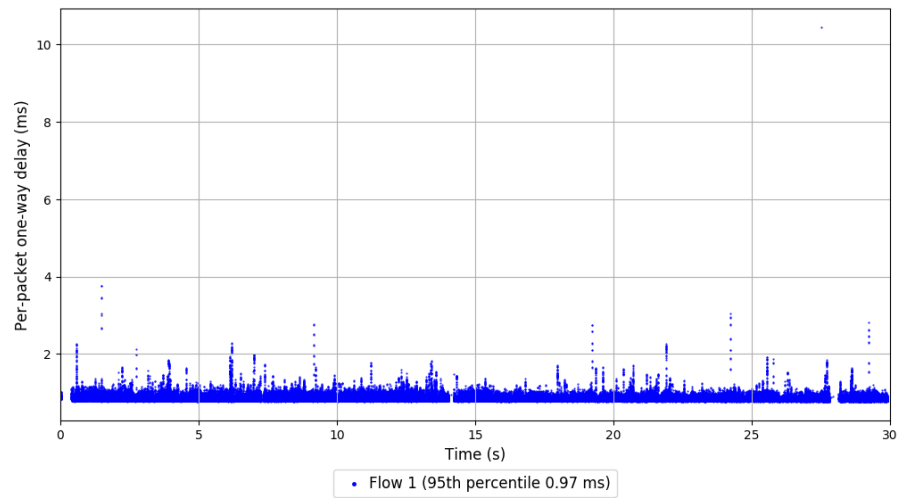
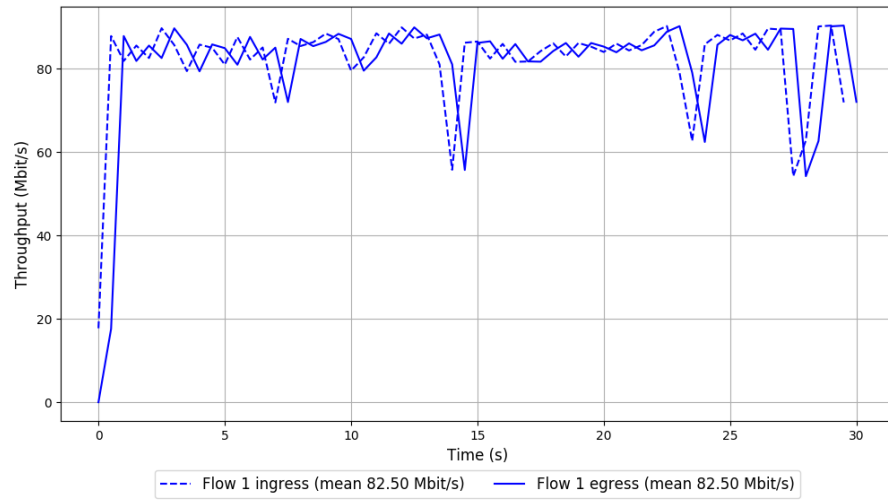
-- Flow 1:

Average throughput: 82.50 Mbit/s

95th percentile per-packet one-way delay: 0.967 ms

Loss rate: 0.01%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-11-15 03:21:08

End at: 2018-11-15 03:21:38

Local clock offset: 3.316 ms

Remote clock offset: 3.49 ms

Below is generated by plot.py at 2018-11-15 04:43:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 74.91 Mbit/s

95th percentile per-packet one-way delay: 0.892 ms

Loss rate: 0.00%

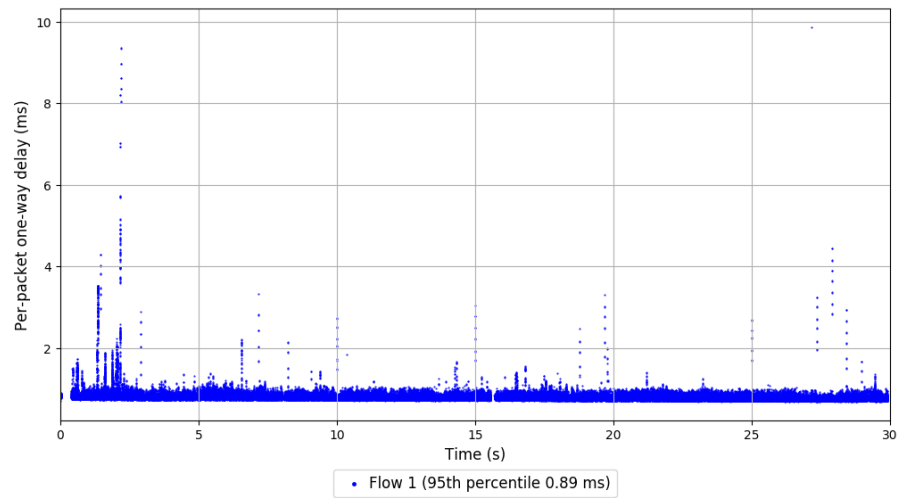
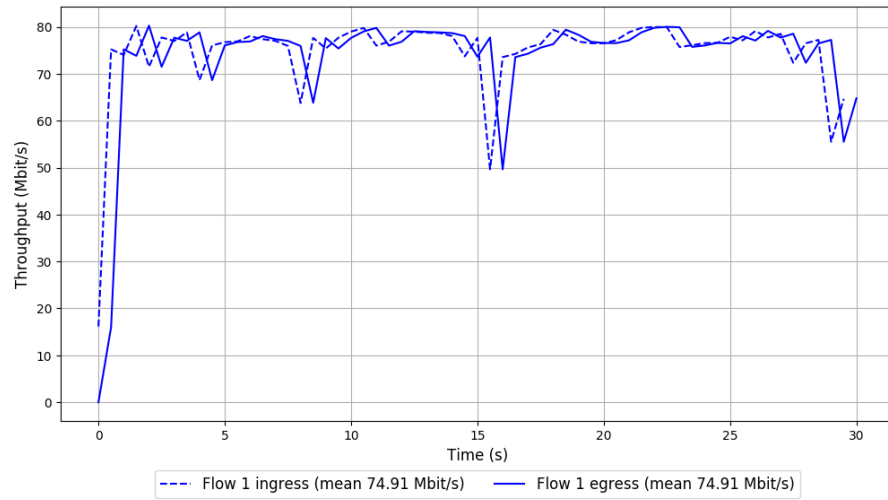
-- Flow 1:

Average throughput: 74.91 Mbit/s

95th percentile per-packet one-way delay: 0.892 ms

Loss rate: 0.00%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-11-15 03:47:13

End at: 2018-11-15 03:47:43

Local clock offset: 4.191 ms

Remote clock offset: -0.009 ms

Below is generated by plot.py at 2018-11-15 04:43:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 73.60 Mbit/s

95th percentile per-packet one-way delay: 1.023 ms

Loss rate: 0.00%

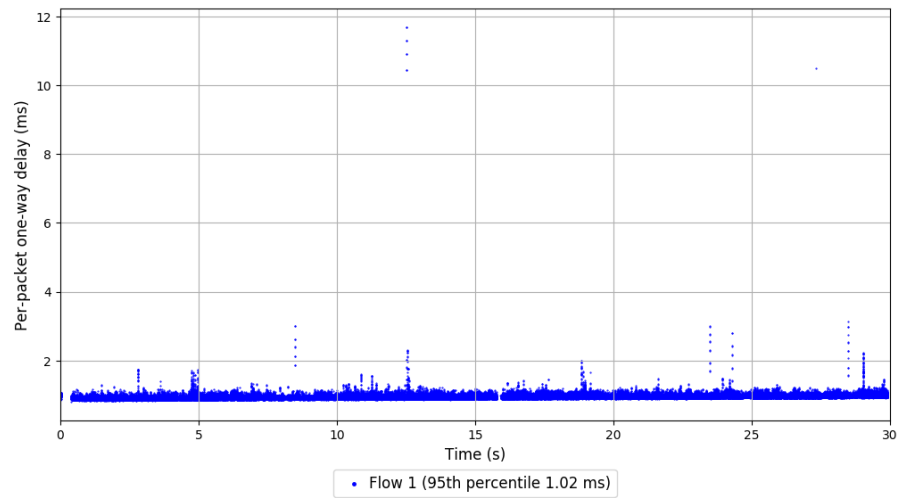
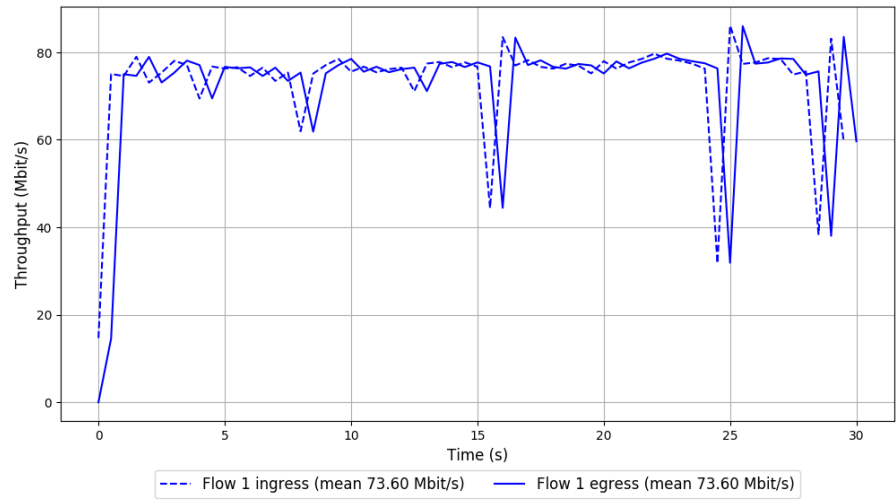
-- Flow 1:

Average throughput: 73.60 Mbit/s

95th percentile per-packet one-way delay: 1.023 ms

Loss rate: 0.00%

Run 5: Report of QUIC Cubic — Data Link



Run 1: Statistics of SCReAM

Start at: 2018-11-15 02:05:57

End at: 2018-11-15 02:06:27

Local clock offset: 4.323 ms

Remote clock offset: 3.113 ms

Below is generated by plot.py at 2018-11-15 04:43:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.102 ms

Loss rate: 0.00%

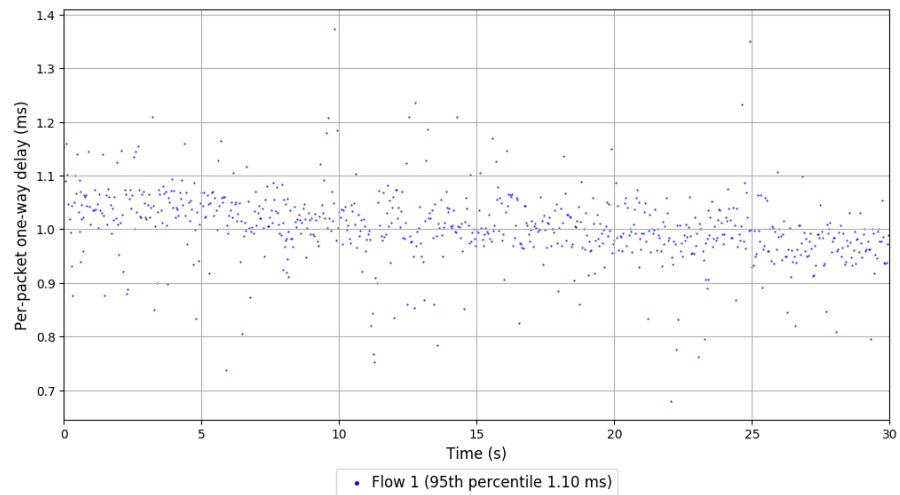
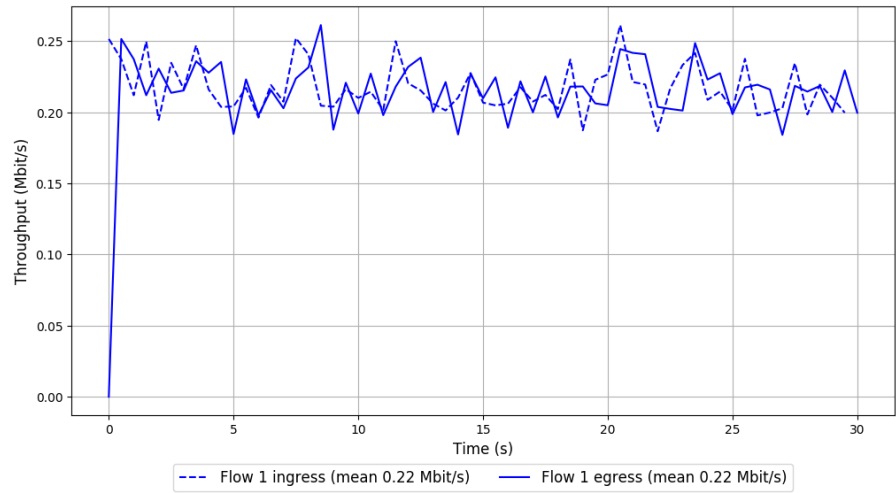
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.102 ms

Loss rate: 0.00%

Run 1: Report of SReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2018-11-15 02:31:36

End at: 2018-11-15 02:32:06

Local clock offset: 3.772 ms

Remote clock offset: 2.209 ms

Below is generated by plot.py at 2018-11-15 04:43:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.397 ms

Loss rate: 0.00%

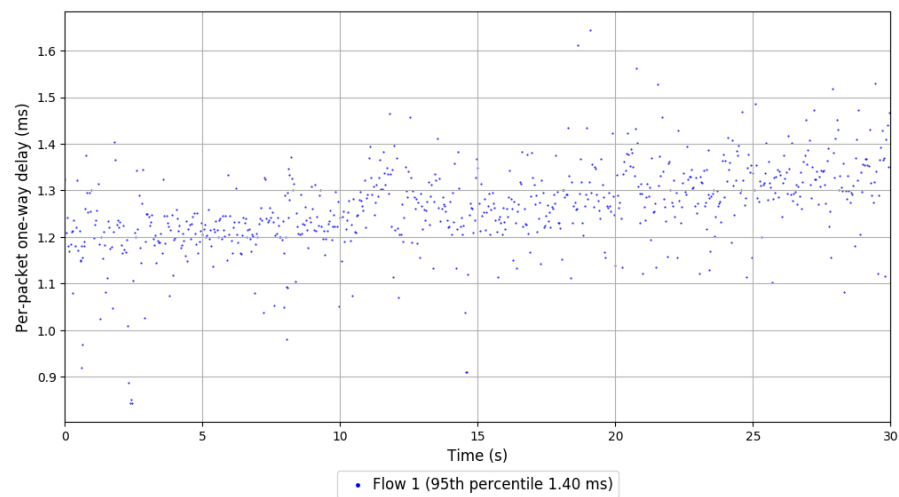
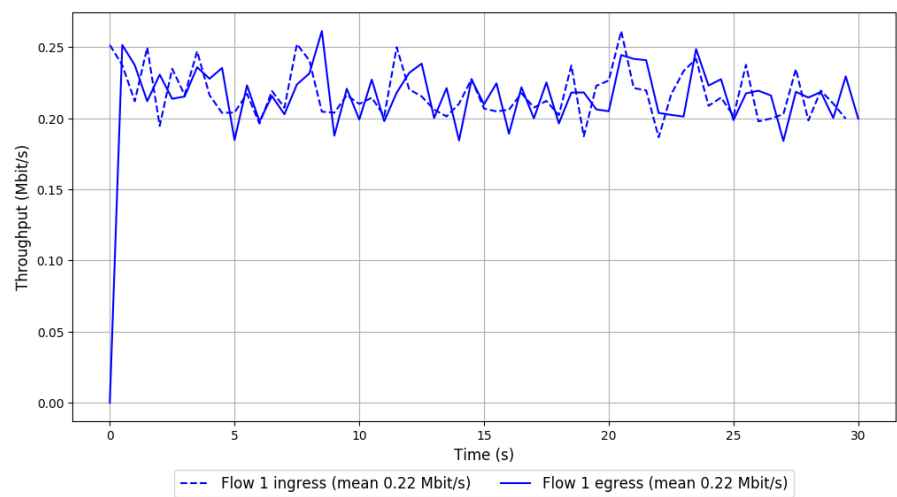
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.397 ms

Loss rate: 0.00%

Run 2: Report of SReAM — Data Link

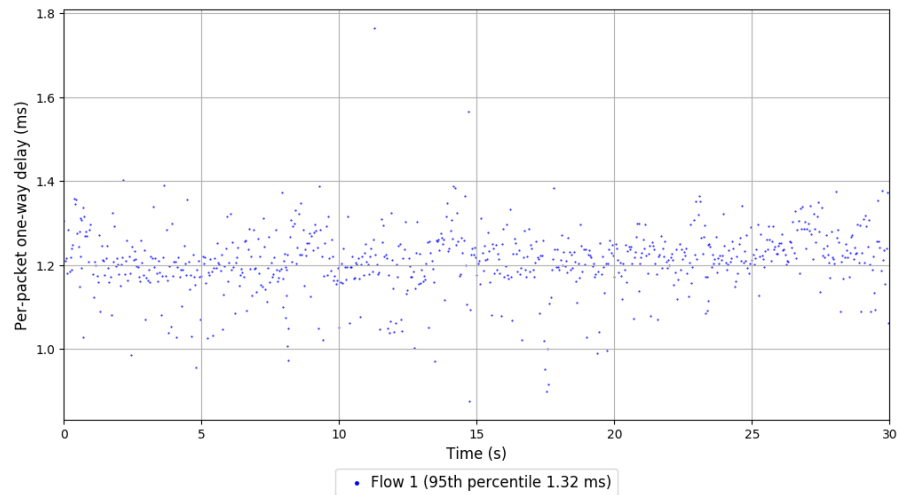
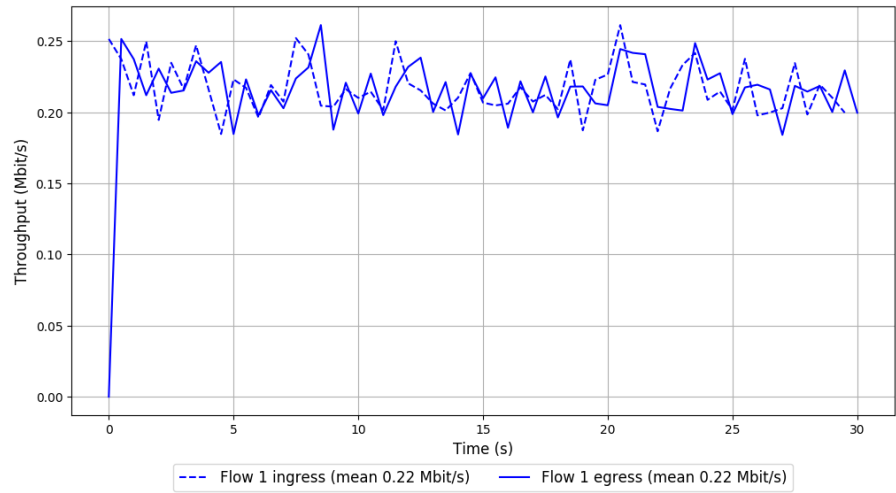


Run 3: Statistics of SCReAM

Start at: 2018-11-15 02:57:51
End at: 2018-11-15 02:58:21
Local clock offset: 3.238 ms
Remote clock offset: -0.201 ms

Below is generated by plot.py at 2018-11-15 04:43:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.322 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.322 ms
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2018-11-15 03:23:47

End at: 2018-11-15 03:24:17

Local clock offset: 3.285 ms

Remote clock offset: 3.721 ms

Below is generated by plot.py at 2018-11-15 04:43:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.253 ms

Loss rate: 0.00%

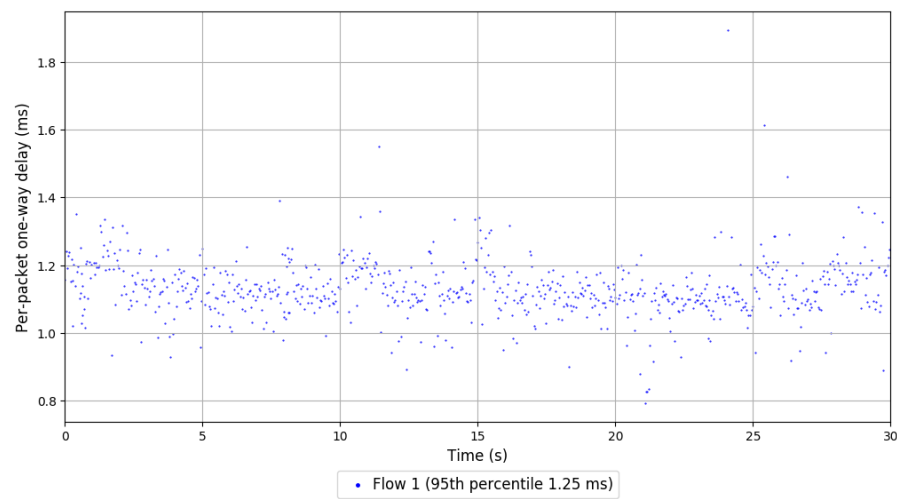
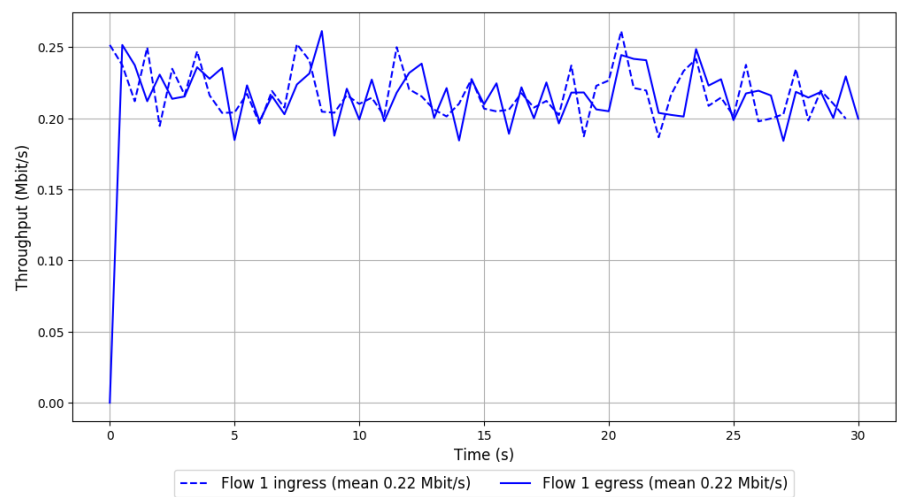
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.253 ms

Loss rate: 0.00%

Run 4: Report of SReAM — Data Link

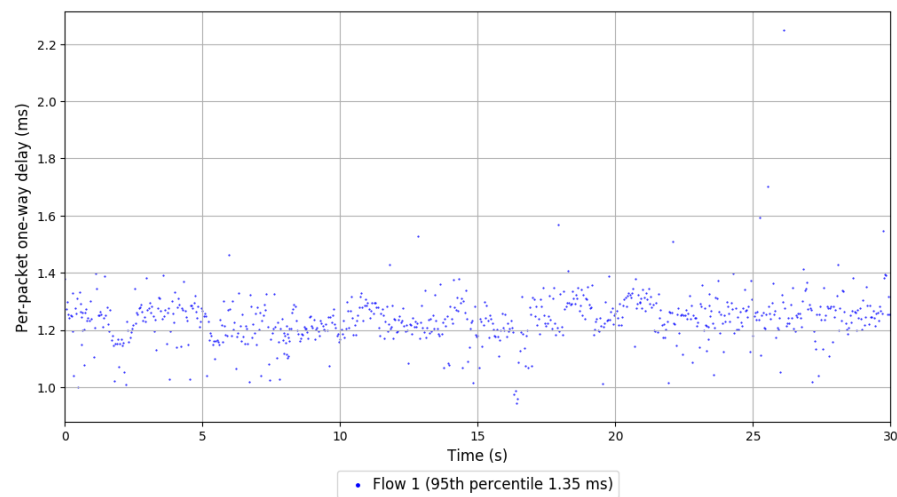
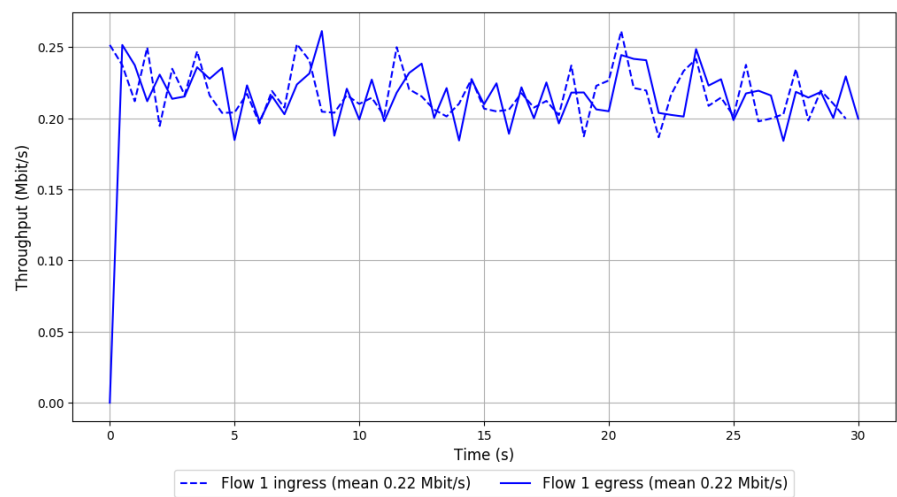


Run 5: Statistics of SCReAM

Start at: 2018-11-15 03:49:52
End at: 2018-11-15 03:50:22
Local clock offset: 4.219 ms
Remote clock offset: -0.405 ms

Below is generated by plot.py at 2018-11-15 04:43:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.348 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.348 ms
Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2018-11-15 02:17:44

End at: 2018-11-15 02:18:14

Local clock offset: 4.002 ms

Remote clock offset: 4.206 ms

Below is generated by plot.py at 2018-11-15 04:43:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 49.74 Mbit/s

95th percentile per-packet one-way delay: 3.817 ms

Loss rate: 0.53%

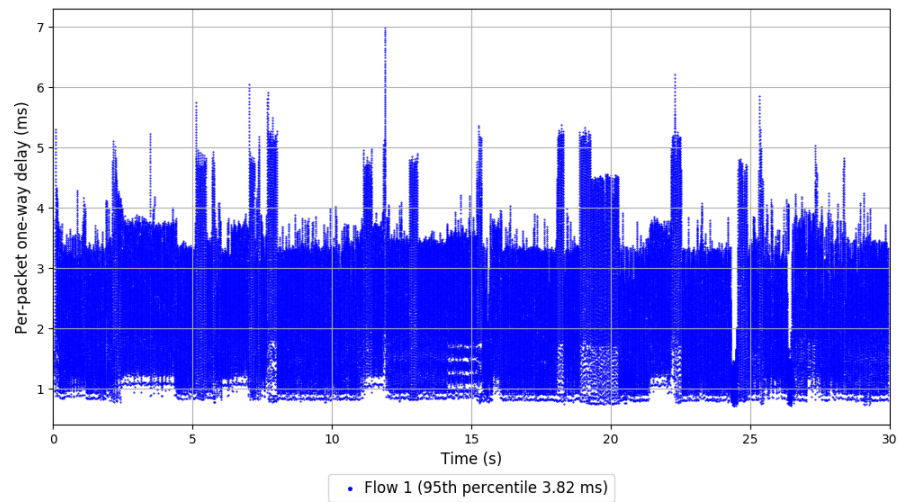
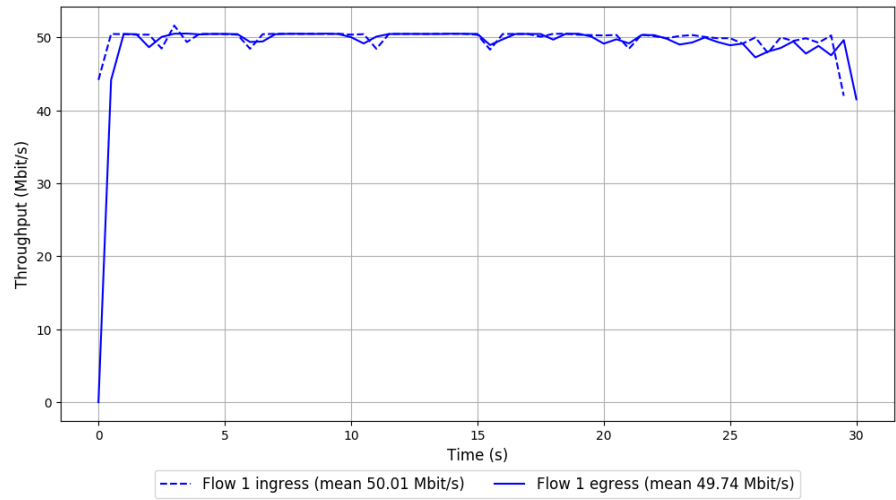
-- Flow 1:

Average throughput: 49.74 Mbit/s

95th percentile per-packet one-way delay: 3.817 ms

Loss rate: 0.53%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-11-15 02:43:45

End at: 2018-11-15 02:44:15

Local clock offset: 3.599 ms

Remote clock offset: 0.377 ms

Below is generated by plot.py at 2018-11-15 04:43:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 50.04 Mbit/s

95th percentile per-packet one-way delay: 4.079 ms

Loss rate: 0.05%

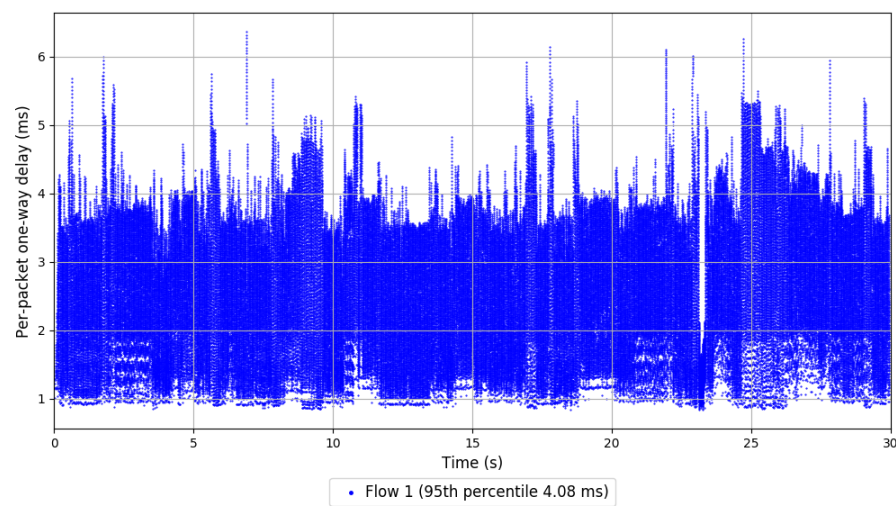
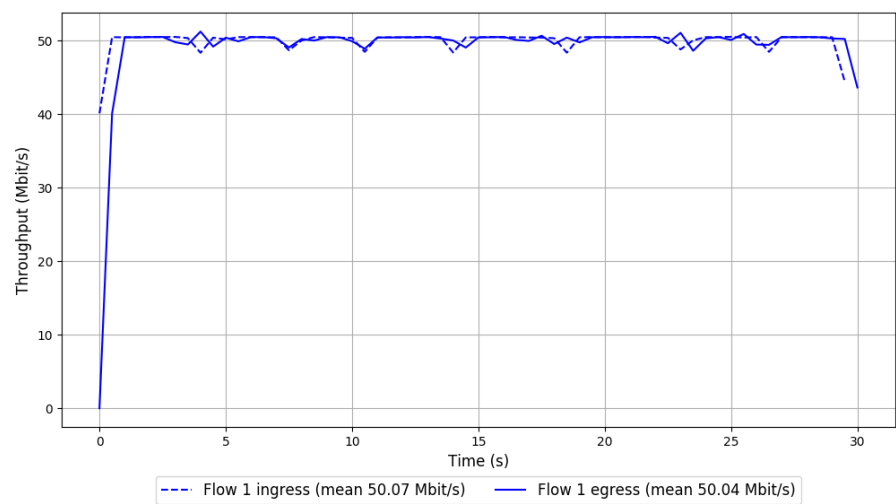
-- Flow 1:

Average throughput: 50.04 Mbit/s

95th percentile per-packet one-way delay: 4.079 ms

Loss rate: 0.05%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-11-15 03:09:46

End at: 2018-11-15 03:10:16

Local clock offset: 3.473 ms

Remote clock offset: 2.459 ms

Below is generated by plot.py at 2018-11-15 04:43:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 50.01 Mbit/s

95th percentile per-packet one-way delay: 4.392 ms

Loss rate: 0.07%

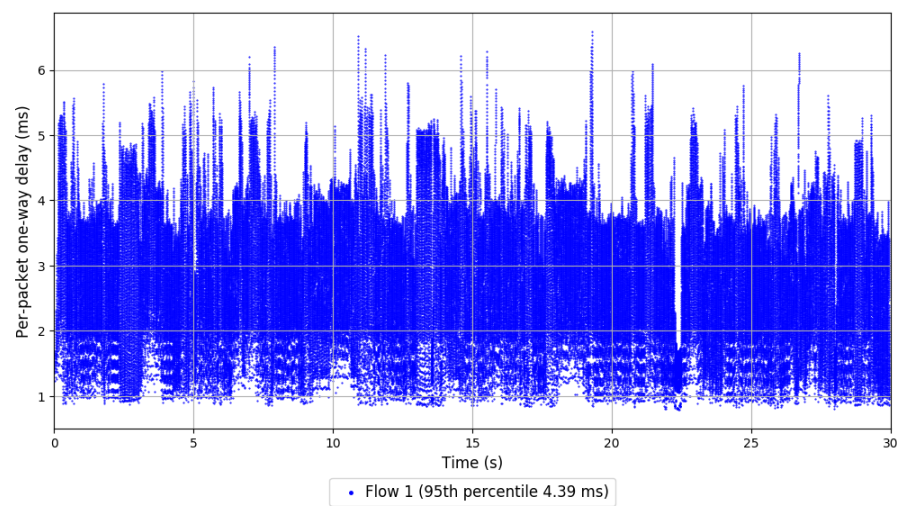
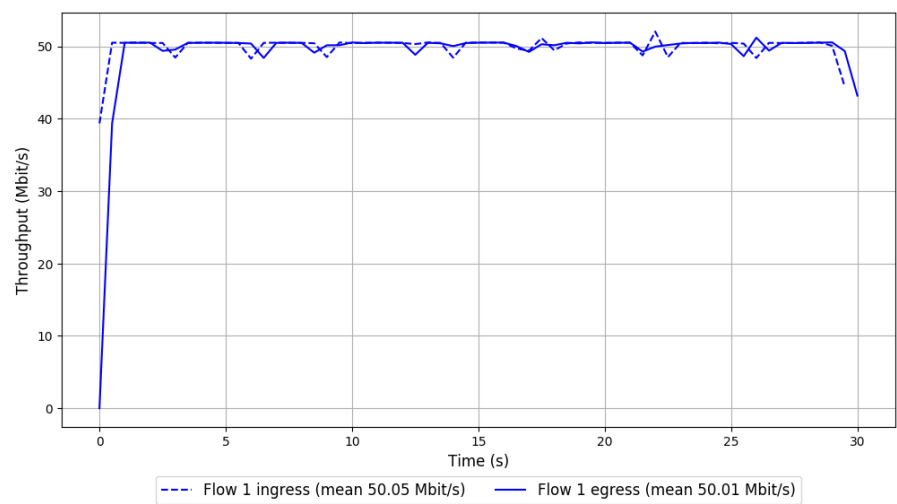
-- Flow 1:

Average throughput: 50.01 Mbit/s

95th percentile per-packet one-way delay: 4.392 ms

Loss rate: 0.07%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2018-11-15 03:35:51

End at: 2018-11-15 03:36:21

Local clock offset: 3.932 ms

Remote clock offset: 3.141 ms

Below is generated by plot.py at 2018-11-15 04:43:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 50.02 Mbit/s

95th percentile per-packet one-way delay: 4.353 ms

Loss rate: 0.02%

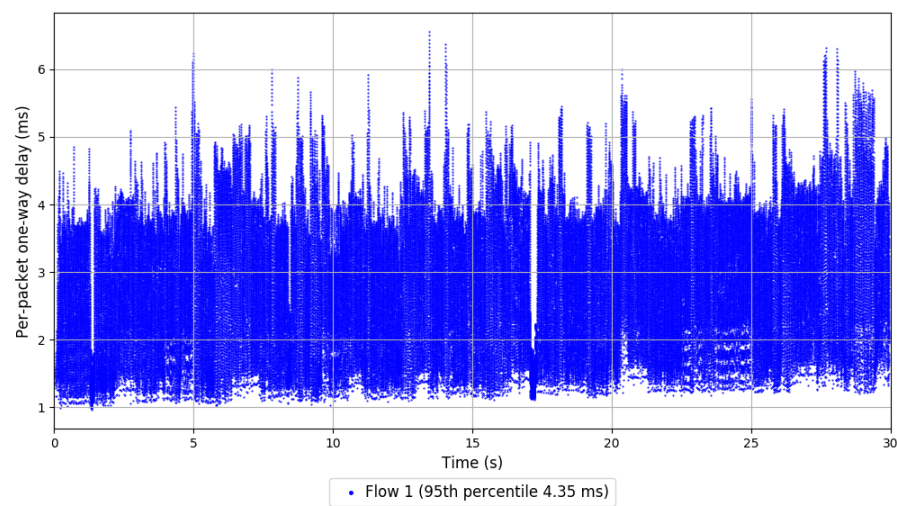
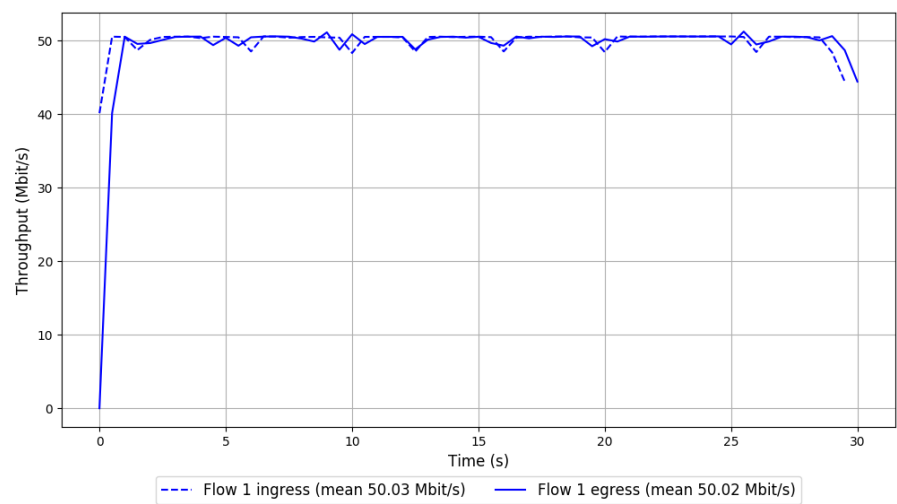
-- Flow 1:

Average throughput: 50.02 Mbit/s

95th percentile per-packet one-way delay: 4.353 ms

Loss rate: 0.02%

Run 4: Report of Sprout — Data Link

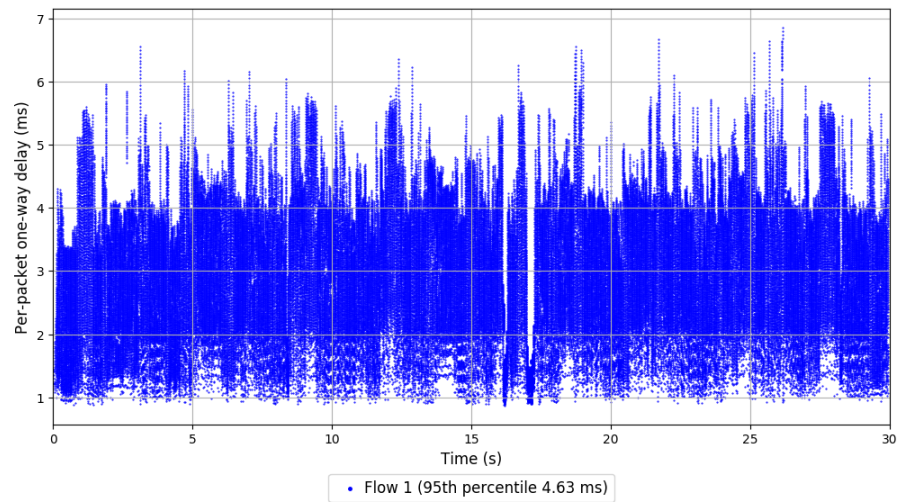
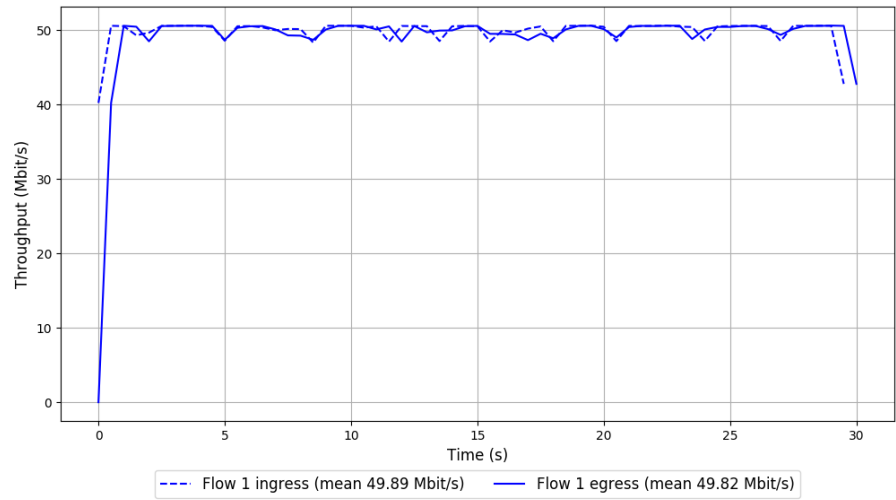


Run 5: Statistics of Sprout

Start at: 2018-11-15 04:01:51
End at: 2018-11-15 04:02:21
Local clock offset: 4.26 ms
Remote clock offset: -1.597 ms

Below is generated by plot.py at 2018-11-15 04:43:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 49.82 Mbit/s
95th percentile per-packet one-way delay: 4.627 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 49.82 Mbit/s
95th percentile per-packet one-way delay: 4.627 ms
Loss rate: 0.14%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

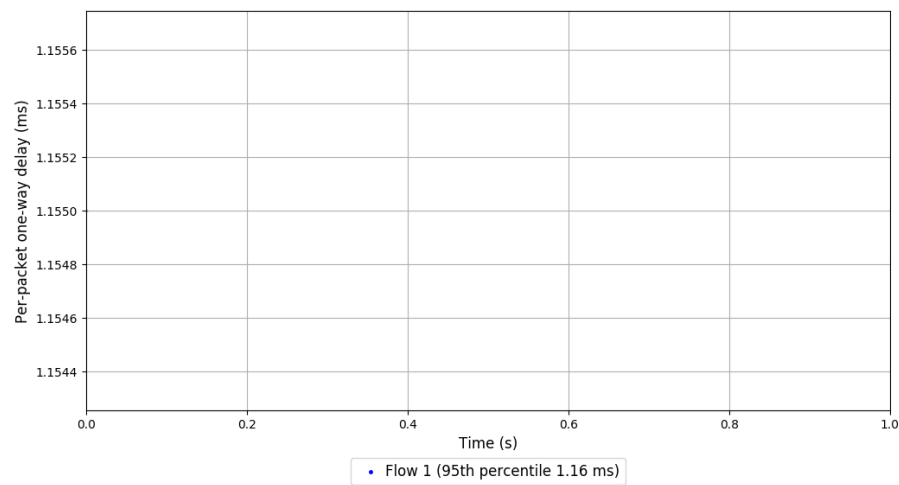
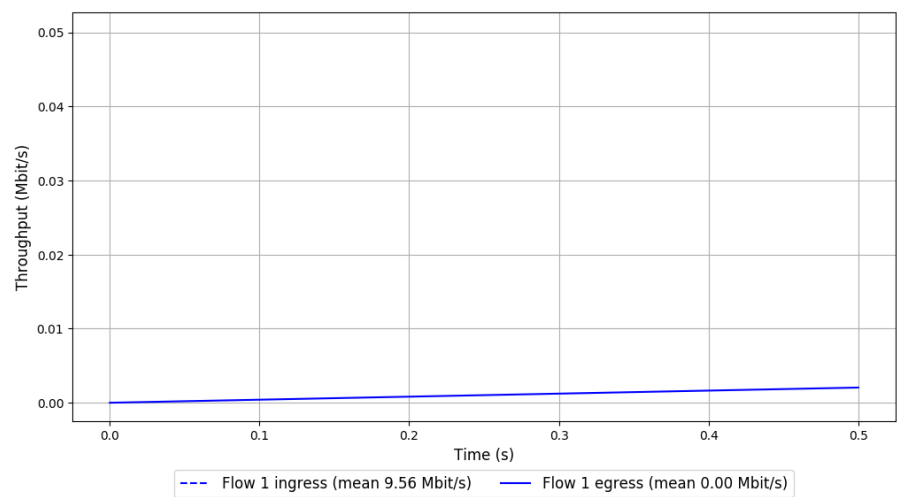
Start at: 2018-11-15 02:04:39

End at: 2018-11-15 02:05:09

Local clock offset: 4.354 ms

Remote clock offset: 3.006 ms

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



Run 2: Statistics of TaoVA-100x

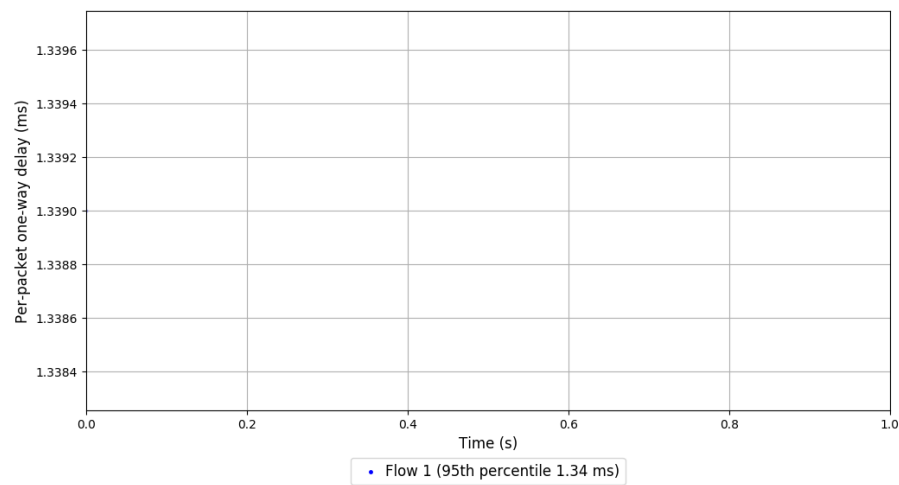
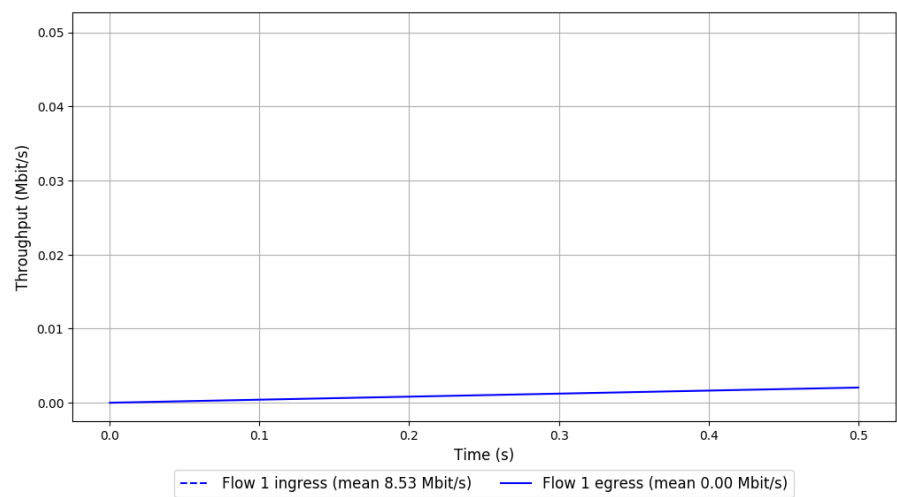
Start at: 2018-11-15 02:30:18

End at: 2018-11-15 02:30:48

Local clock offset: 3.773 ms

Remote clock offset: 2.664 ms

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



Run 3: Statistics of TaoVA-100x

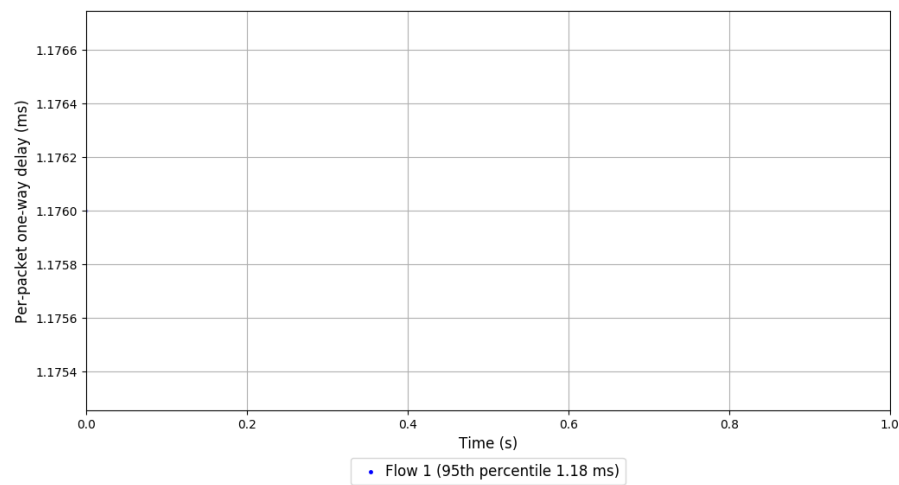
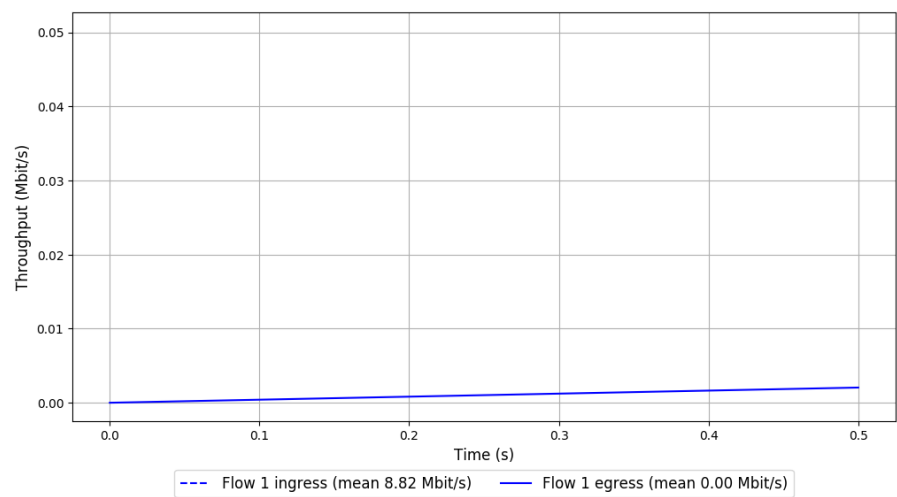
Start at: 2018-11-15 02:56:33

End at: 2018-11-15 02:57:03

Local clock offset: 3.207 ms

Remote clock offset: -0.159 ms

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



Run 4: Statistics of TaoVA-100x

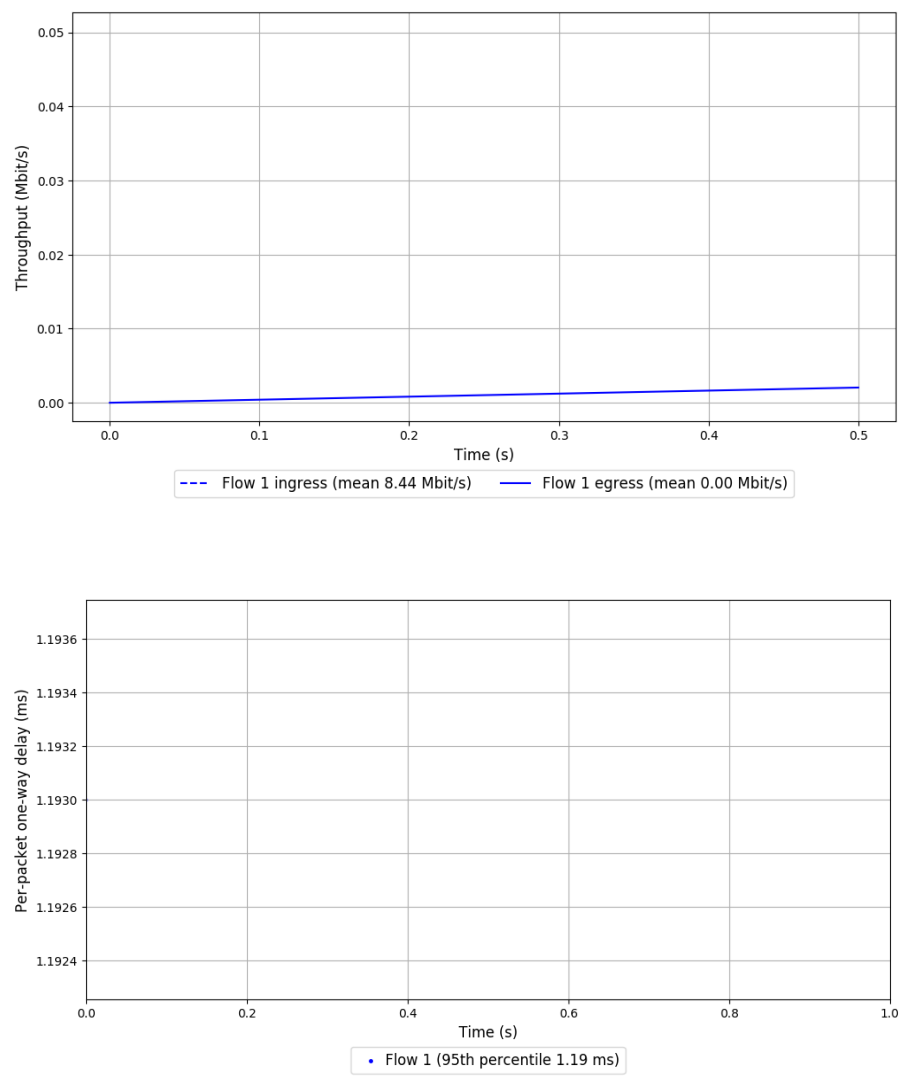
Start at: 2018-11-15 03:22:29

End at: 2018-11-15 03:22:59

Local clock offset: 3.326 ms

Remote clock offset: 3.682 ms

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



Run 5: Statistics of TaoVA-100x

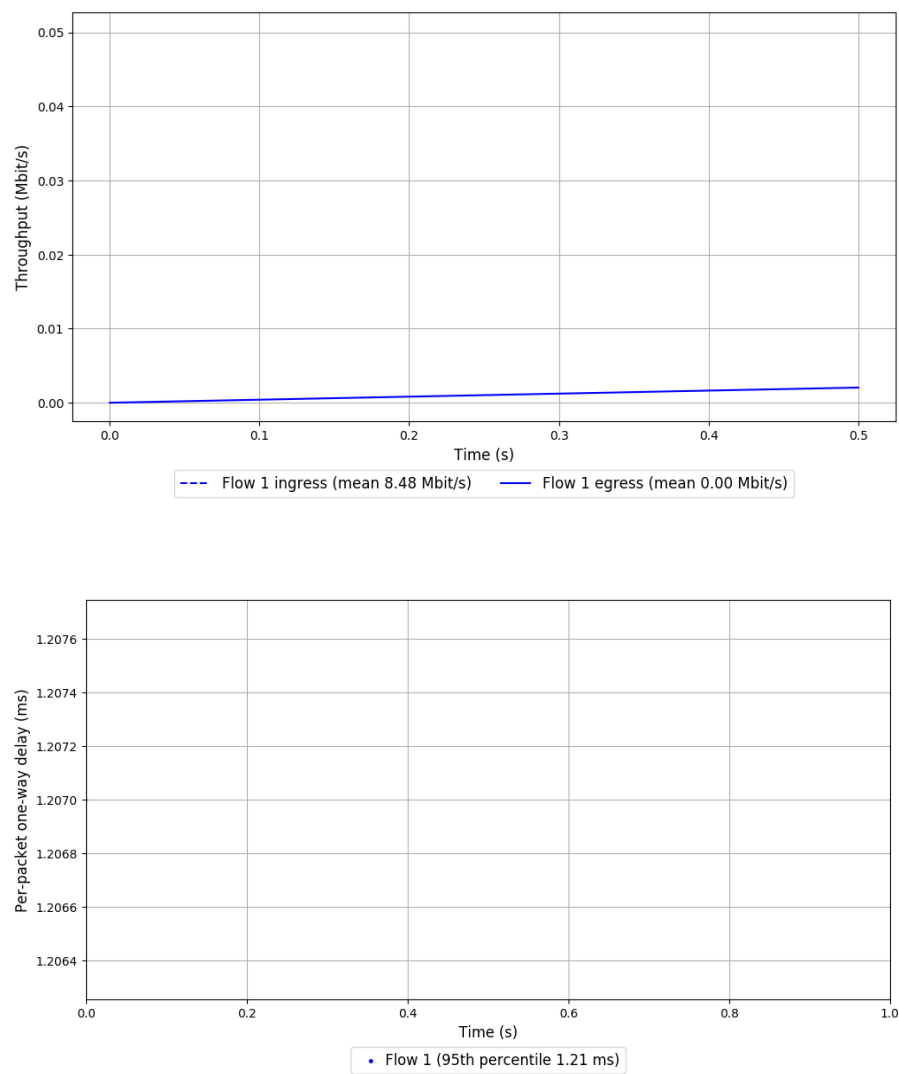
Start at: 2018-11-15 03:48:34

End at: 2018-11-15 03:49:04

Local clock offset: 4.189 ms

Remote clock offset: -0.241 ms

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



Run 1: Statistics of TCP Vegas

Start at: 2018-11-15 01:57:41

End at: 2018-11-15 01:58:11

Local clock offset: 3.999 ms

Remote clock offset: 1.946 ms

Below is generated by plot.py at 2018-11-15 04:44:59

Datalink statistics

-- Total of 1 flow:

Average throughput: 280.09 Mbit/s

95th percentile per-packet one-way delay: 2.025 ms

Loss rate: 0.00%

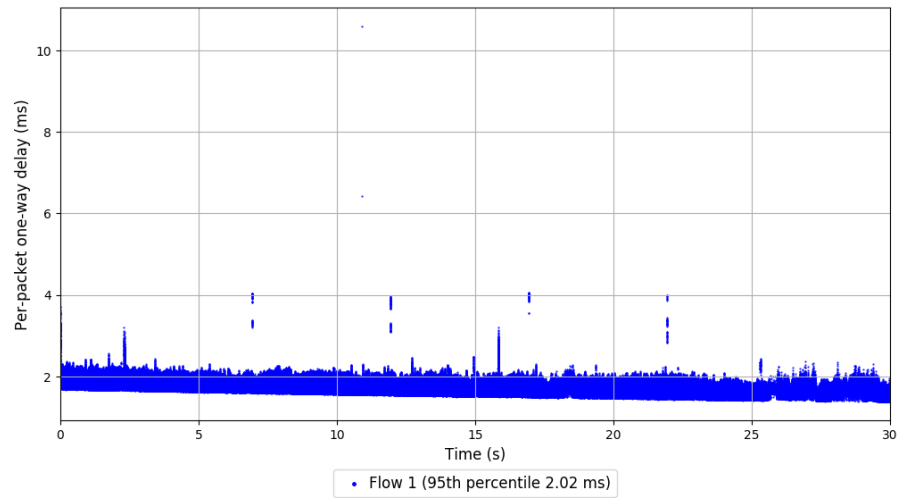
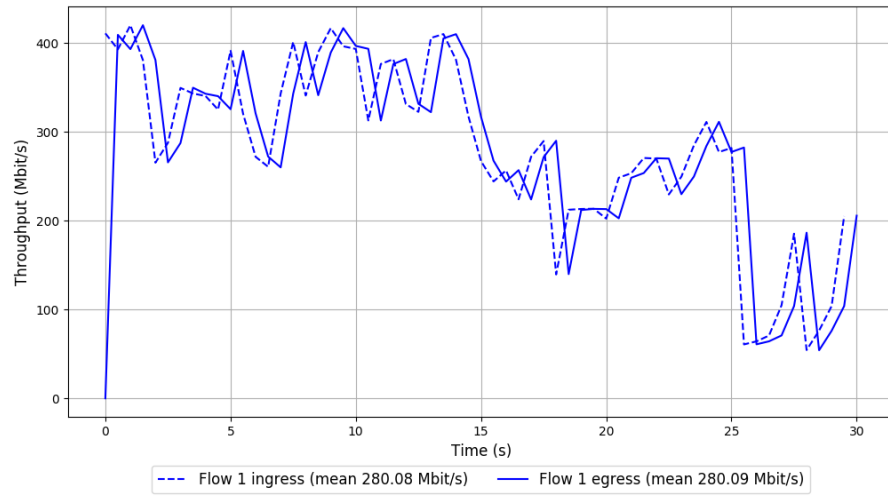
-- Flow 1:

Average throughput: 280.09 Mbit/s

95th percentile per-packet one-way delay: 2.025 ms

Loss rate: 0.00%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-11-15 02:23:26

End at: 2018-11-15 02:23:56

Local clock offset: 3.864 ms

Remote clock offset: 4.614 ms

Below is generated by plot.py at 2018-11-15 04:44:59

Datalink statistics

-- Total of 1 flow:

Average throughput: 131.89 Mbit/s

95th percentile per-packet one-way delay: 1.139 ms

Loss rate: 0.01%

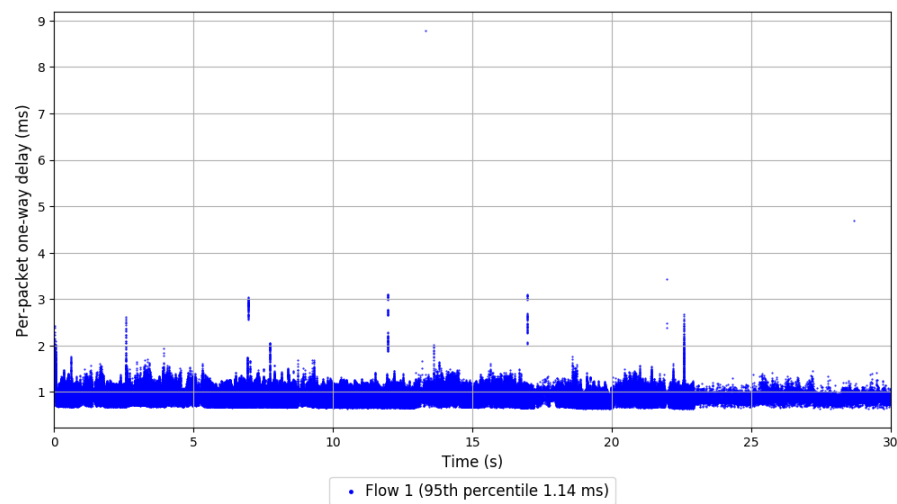
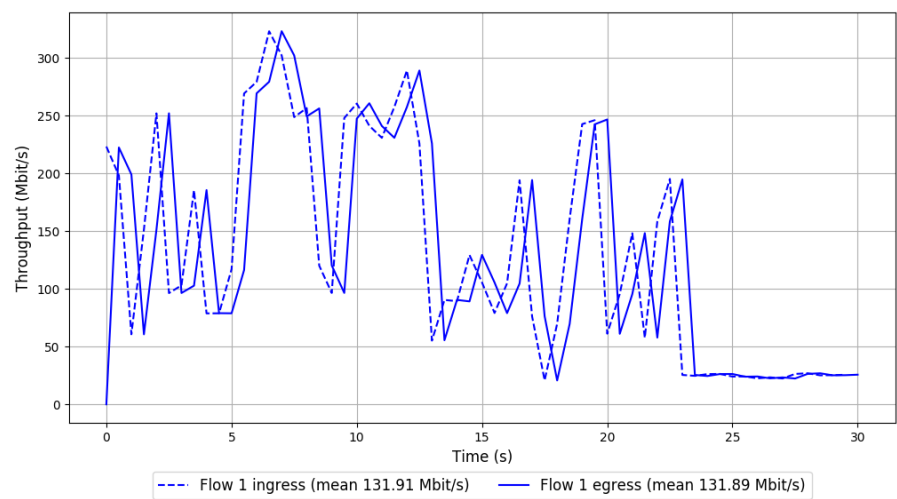
-- Flow 1:

Average throughput: 131.89 Mbit/s

95th percentile per-packet one-way delay: 1.139 ms

Loss rate: 0.01%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-11-15 02:49:32

End at: 2018-11-15 02:50:02

Local clock offset: 3.433 ms

Remote clock offset: 0.011 ms

Below is generated by plot.py at 2018-11-15 04:44:59

Datalink statistics

-- Total of 1 flow:

Average throughput: 236.78 Mbit/s

95th percentile per-packet one-way delay: 1.181 ms

Loss rate: 0.01%

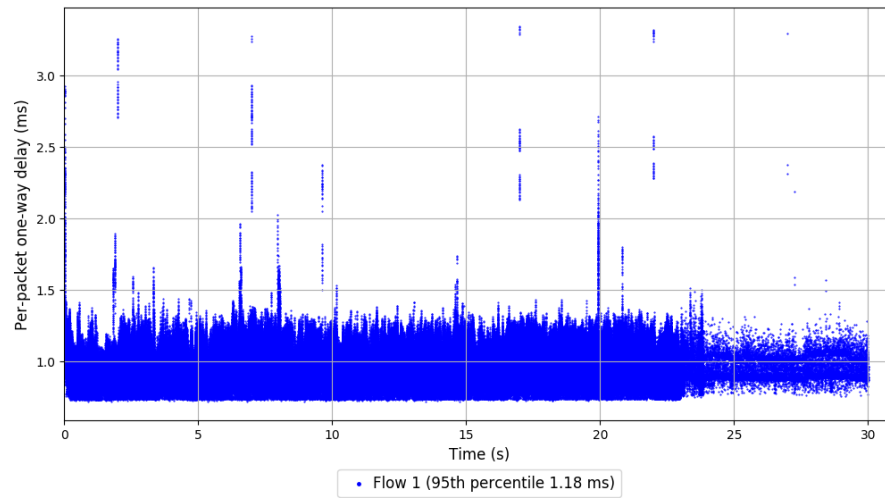
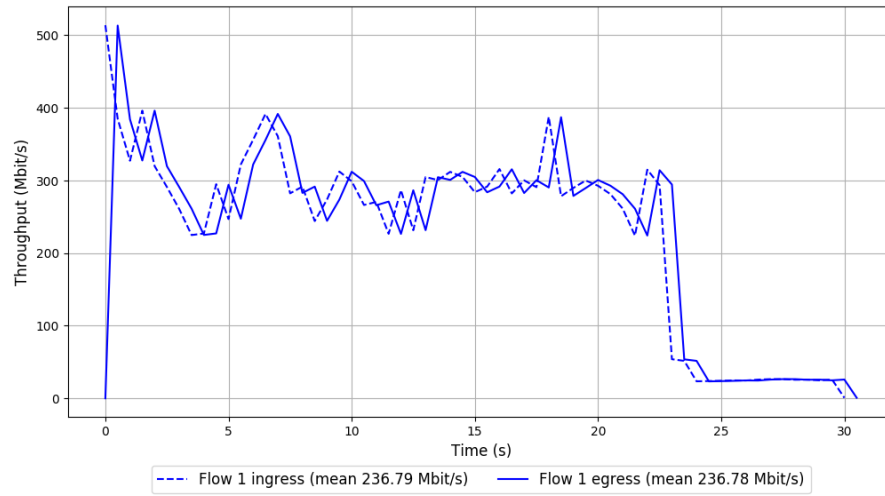
-- Flow 1:

Average throughput: 236.78 Mbit/s

95th percentile per-packet one-way delay: 1.181 ms

Loss rate: 0.01%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2018-11-15 03:15:34

End at: 2018-11-15 03:16:04

Local clock offset: 3.437 ms

Remote clock offset: 3.103 ms

Below is generated by plot.py at 2018-11-15 04:44:59

Datalink statistics

-- Total of 1 flow:

Average throughput: 45.01 Mbit/s

95th percentile per-packet one-way delay: 2.068 ms

Loss rate: 0.11%

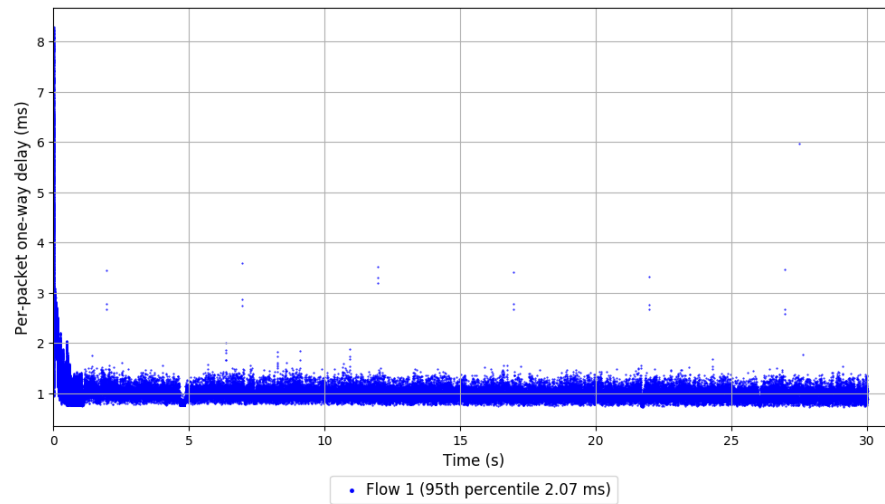
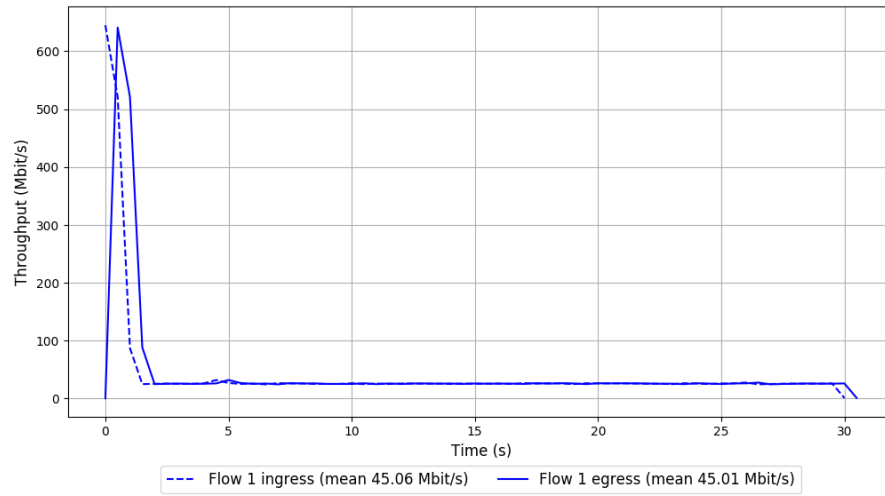
-- Flow 1:

Average throughput: 45.01 Mbit/s

95th percentile per-packet one-way delay: 2.068 ms

Loss rate: 0.11%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-11-15 03:41:33

End at: 2018-11-15 03:42:03

Local clock offset: 4.123 ms

Remote clock offset: 1.065 ms

Below is generated by plot.py at 2018-11-15 04:45:40

Datalink statistics

-- Total of 1 flow:

Average throughput: 355.44 Mbit/s

95th percentile per-packet one-way delay: 1.357 ms

Loss rate: 0.00%

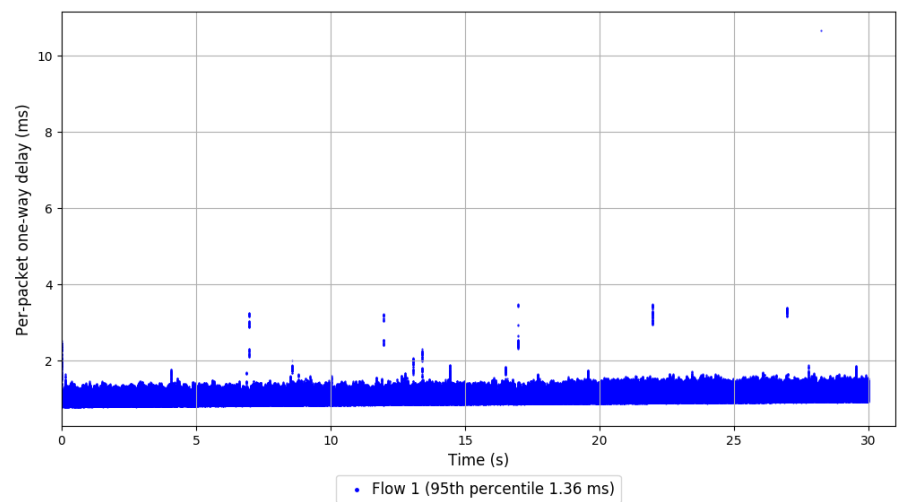
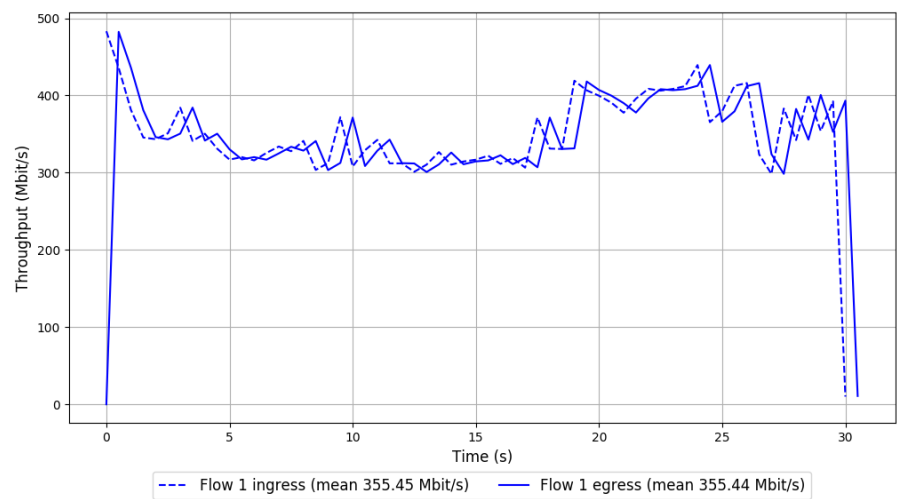
-- Flow 1:

Average throughput: 355.44 Mbit/s

95th percentile per-packet one-way delay: 1.357 ms

Loss rate: 0.00%

Run 5: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2018-11-15 02:22:02

End at: 2018-11-15 02:22:32

Local clock offset: 3.891 ms

Remote clock offset: 4.54 ms

Below is generated by plot.py at 2018-11-15 04:45:40

Datalink statistics

-- Total of 1 flow:

Average throughput: 130.52 Mbit/s

95th percentile per-packet one-way delay: 23.788 ms

Loss rate: 3.06%

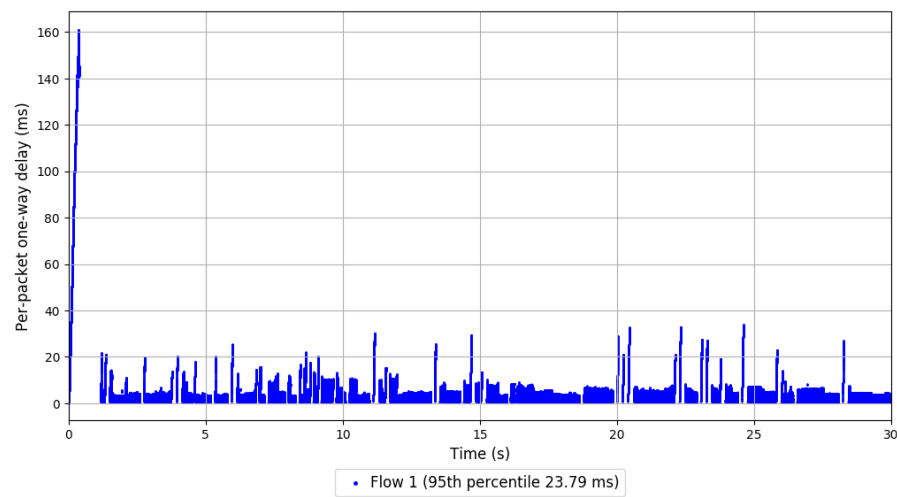
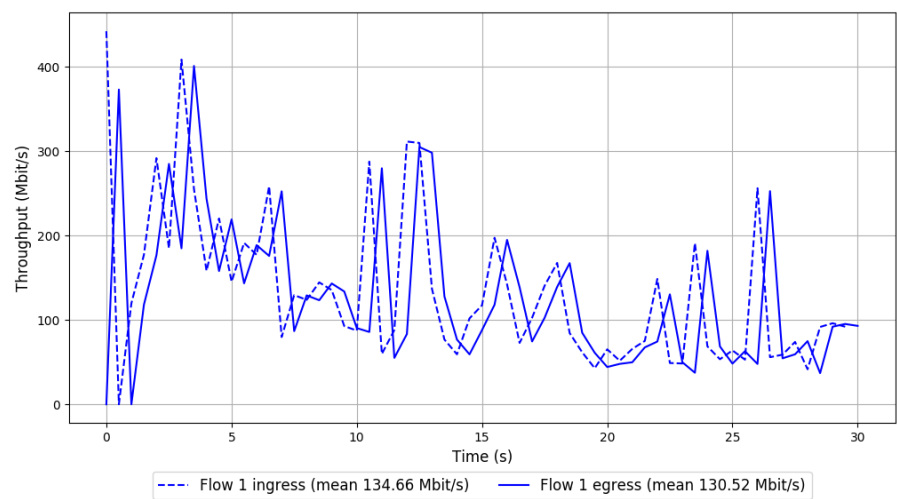
-- Flow 1:

Average throughput: 130.52 Mbit/s

95th percentile per-packet one-way delay: 23.788 ms

Loss rate: 3.06%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-11-15 02:48:09

End at: 2018-11-15 02:48:39

Local clock offset: 3.473 ms

Remote clock offset: 0.098 ms

Below is generated by plot.py at 2018-11-15 04:45:40

Datalink statistics

-- Total of 1 flow:

Average throughput: 116.14 Mbit/s

95th percentile per-packet one-way delay: 20.534 ms

Loss rate: 2.95%

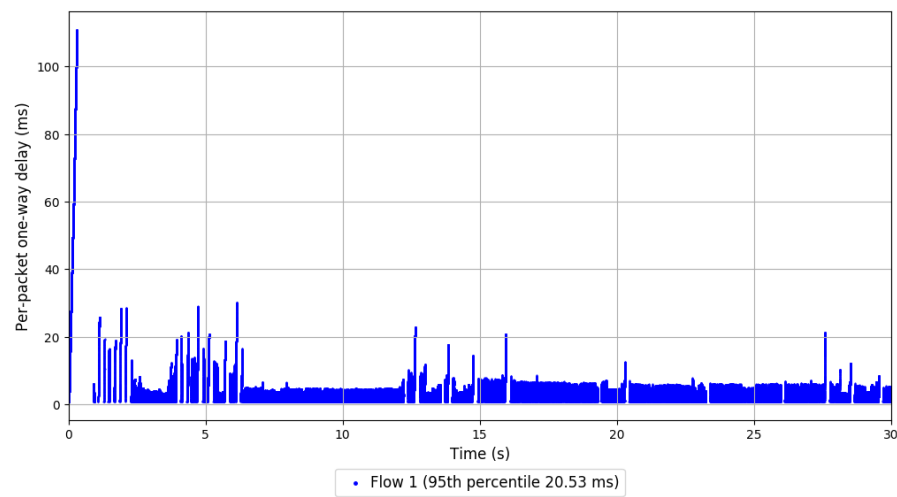
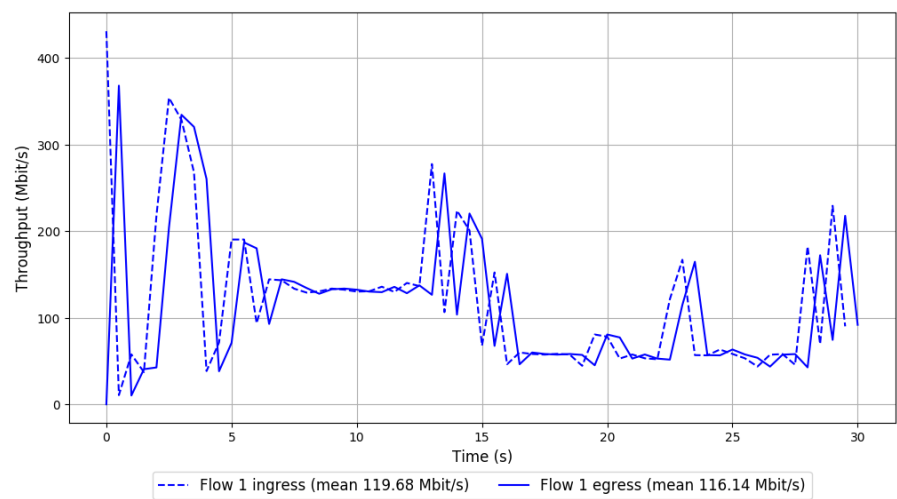
-- Flow 1:

Average throughput: 116.14 Mbit/s

95th percentile per-packet one-way delay: 20.534 ms

Loss rate: 2.95%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-11-15 03:14:04

End at: 2018-11-15 03:14:34

Local clock offset: 3.453 ms

Remote clock offset: 2.938 ms

Below is generated by plot.py at 2018-11-15 04:45:40

Datalink statistics

-- Total of 1 flow:

Average throughput: 157.55 Mbit/s

95th percentile per-packet one-way delay: 10.319 ms

Loss rate: 2.93%

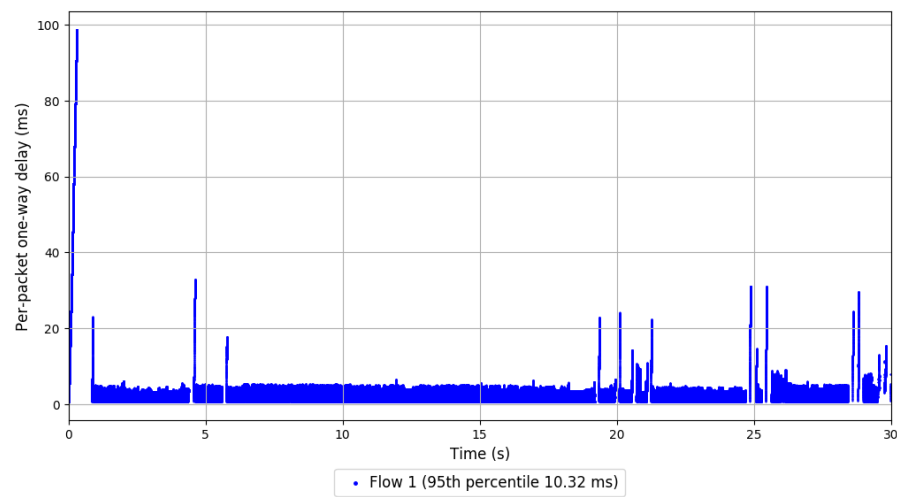
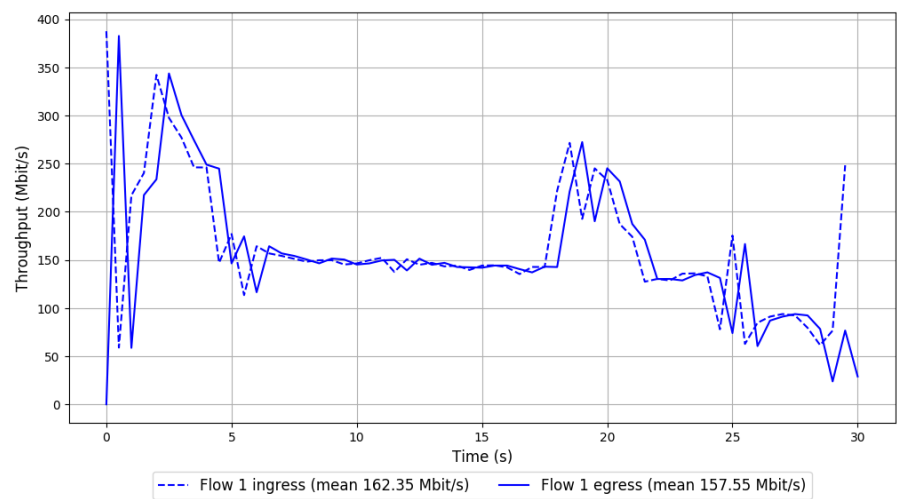
-- Flow 1:

Average throughput: 157.55 Mbit/s

95th percentile per-packet one-way delay: 10.319 ms

Loss rate: 2.93%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-11-15 03:40:10

End at: 2018-11-15 03:40:40

Local clock offset: 4.091 ms

Remote clock offset: 1.566 ms

Below is generated by plot.py at 2018-11-15 04:45:40

Datalink statistics

-- Total of 1 flow:

Average throughput: 112.69 Mbit/s

95th percentile per-packet one-way delay: 16.420 ms

Loss rate: 1.05%

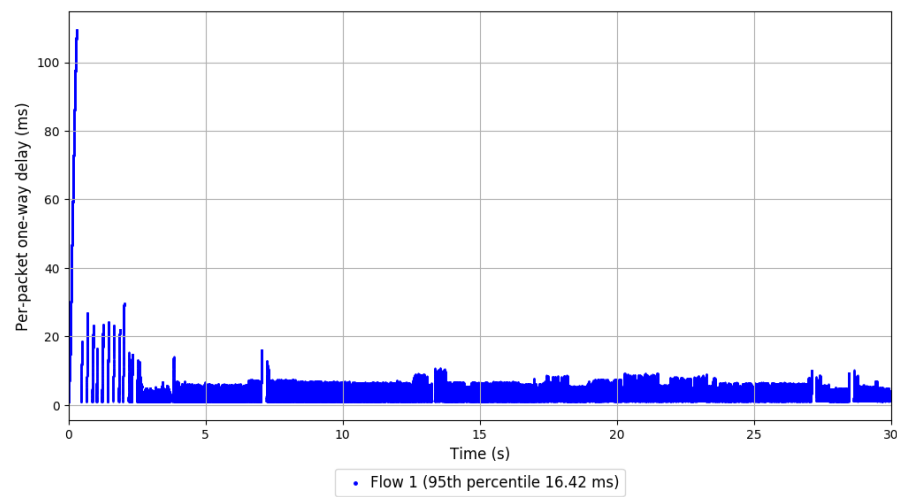
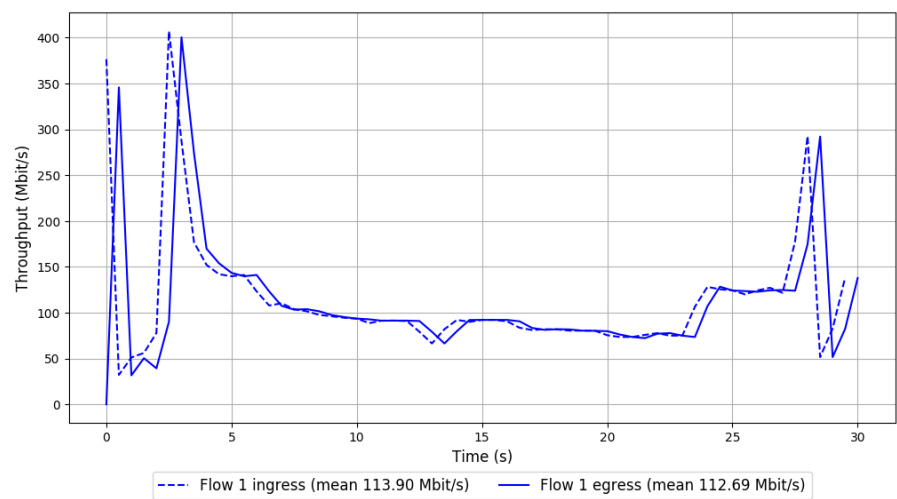
-- Flow 1:

Average throughput: 112.69 Mbit/s

95th percentile per-packet one-way delay: 16.420 ms

Loss rate: 1.05%

Run 4: Report of Verus — Data Link

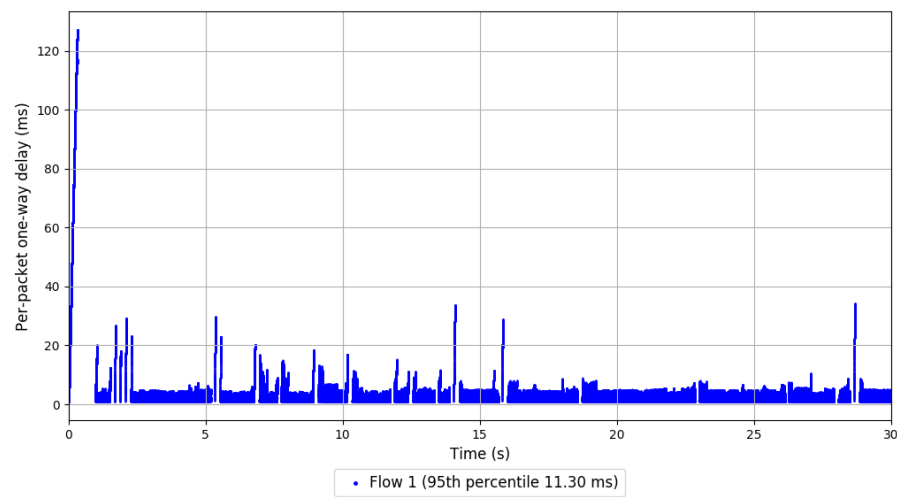
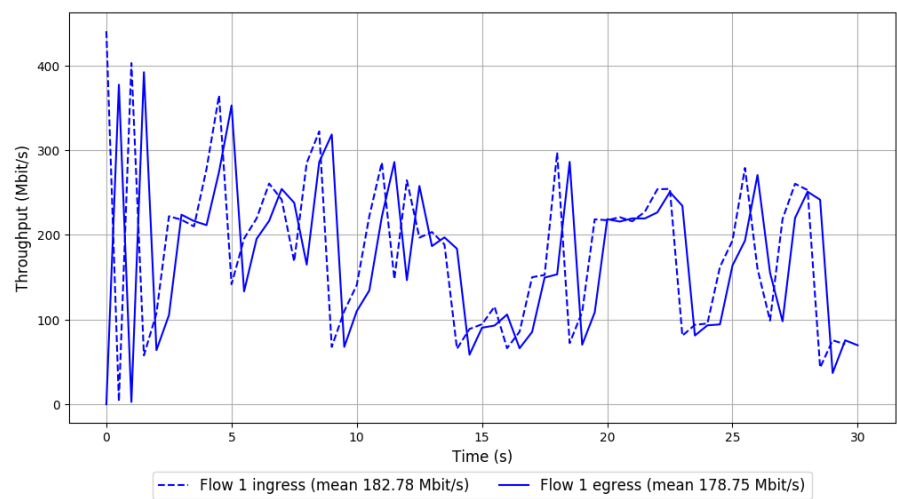


Run 5: Statistics of Verus

Start at: 2018-11-15 04:06:10
End at: 2018-11-15 04:06:40
Local clock offset: 4.297 ms
Remote clock offset: -1.953 ms

Below is generated by plot.py at 2018-11-15 04:45:40
Datalink statistics
-- Total of 1 flow:
Average throughput: 178.75 Mbit/s
95th percentile per-packet one-way delay: 11.300 ms
Loss rate: 2.21%
-- Flow 1:
Average throughput: 178.75 Mbit/s
95th percentile per-packet one-way delay: 11.300 ms
Loss rate: 2.21%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2018-11-15 02:15:03

End at: 2018-11-15 02:15:33

Local clock offset: 4.024 ms

Remote clock offset: 4.003 ms

Below is generated by plot.py at 2018-11-15 04:45:40

Datalink statistics

-- Total of 1 flow:

Average throughput: 118.96 Mbit/s

95th percentile per-packet one-way delay: 0.956 ms

Loss rate: 0.00%

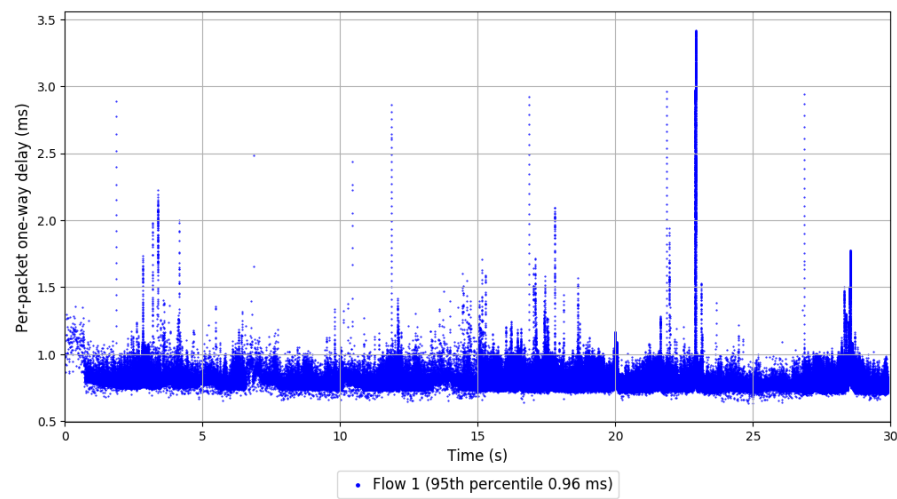
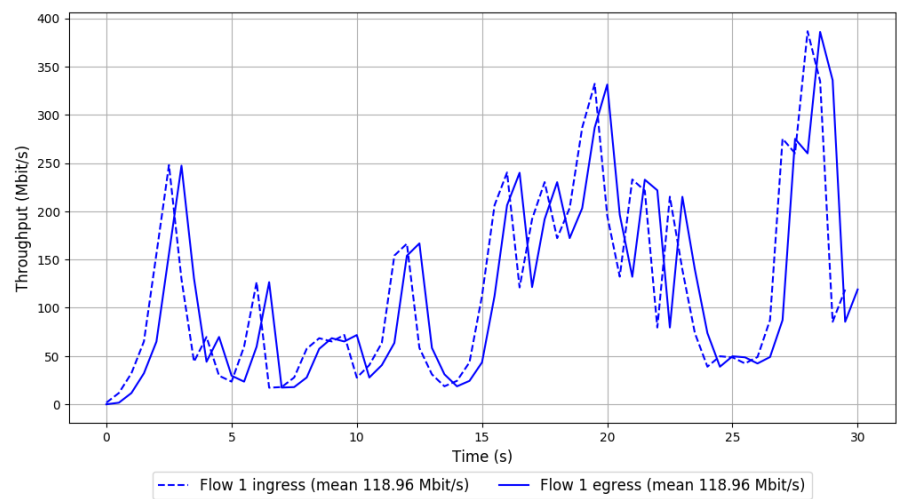
-- Flow 1:

Average throughput: 118.96 Mbit/s

95th percentile per-packet one-way delay: 0.956 ms

Loss rate: 0.00%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2018-11-15 02:40:57

End at: 2018-11-15 02:41:27

Local clock offset: 3.691 ms

Remote clock offset: 0.533 ms

Below is generated by plot.py at 2018-11-15 04:46:19

Datalink statistics

-- Total of 1 flow:

Average throughput: 263.49 Mbit/s

95th percentile per-packet one-way delay: 4.534 ms

Loss rate: 0.00%

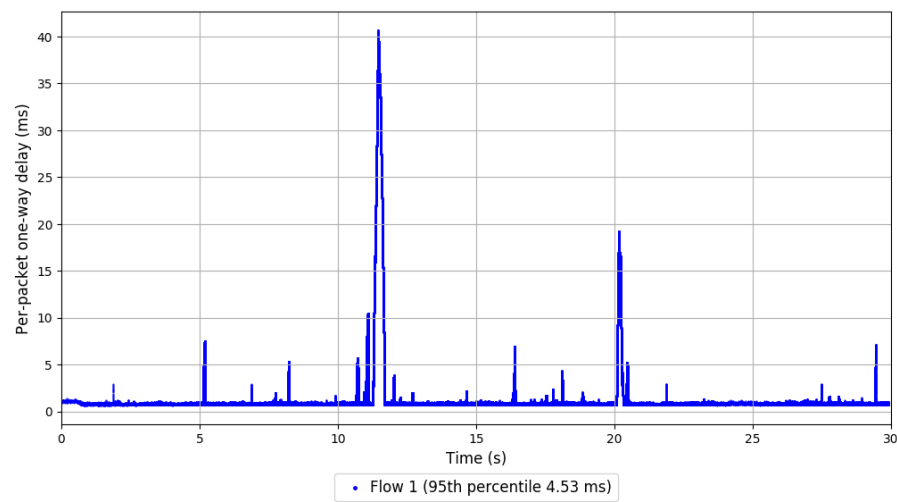
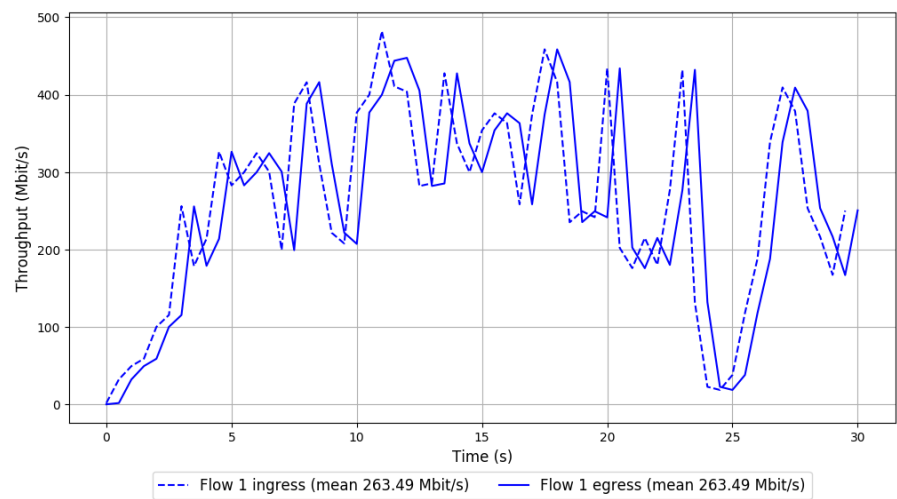
-- Flow 1:

Average throughput: 263.49 Mbit/s

95th percentile per-packet one-way delay: 4.534 ms

Loss rate: 0.00%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2018-11-15 03:07:01

End at: 2018-11-15 03:07:31

Local clock offset: 3.486 ms

Remote clock offset: 1.881 ms

Below is generated by plot.py at 2018-11-15 04:46:19

Datalink statistics

-- Total of 1 flow:

Average throughput: 200.89 Mbit/s

95th percentile per-packet one-way delay: 0.925 ms

Loss rate: 0.06%

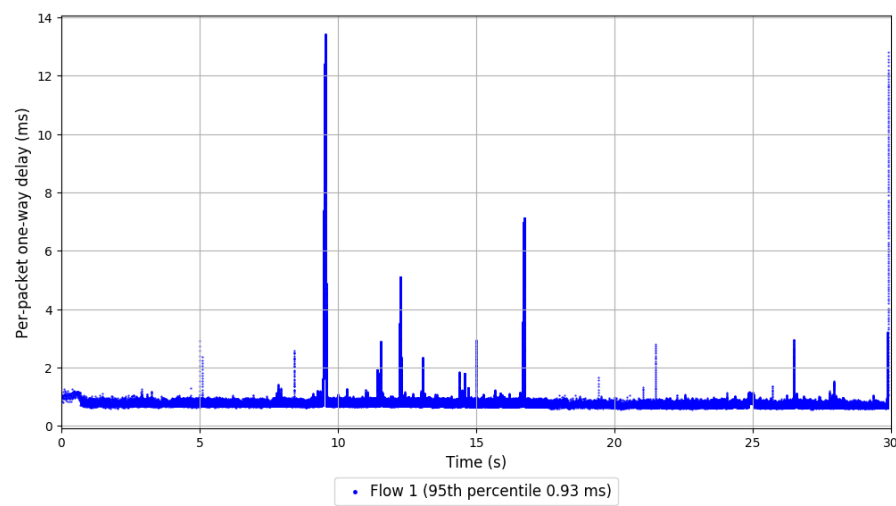
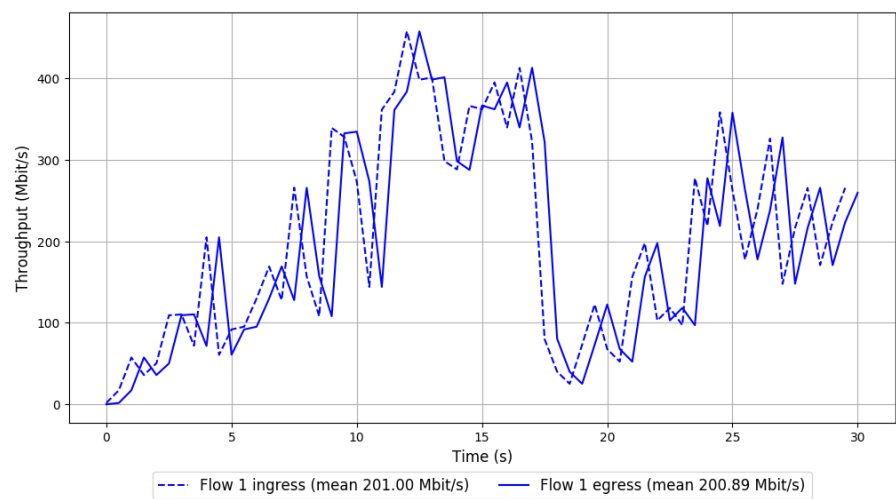
-- Flow 1:

Average throughput: 200.89 Mbit/s

95th percentile per-packet one-way delay: 0.925 ms

Loss rate: 0.06%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2018-11-15 03:33:04

End at: 2018-11-15 03:33:34

Local clock offset: 3.795 ms

Remote clock offset: 4.248 ms

Below is generated by plot.py at 2018-11-15 04:46:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 233.79 Mbit/s

95th percentile per-packet one-way delay: 1.290 ms

Loss rate: 0.02%

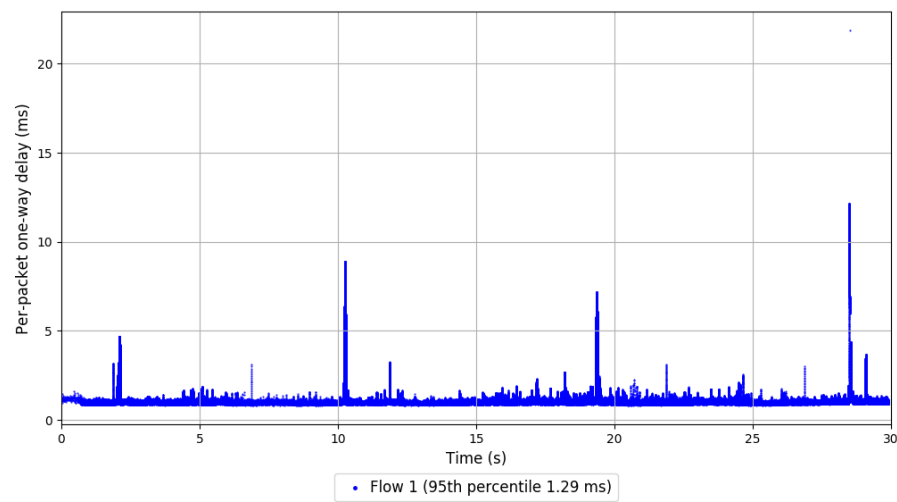
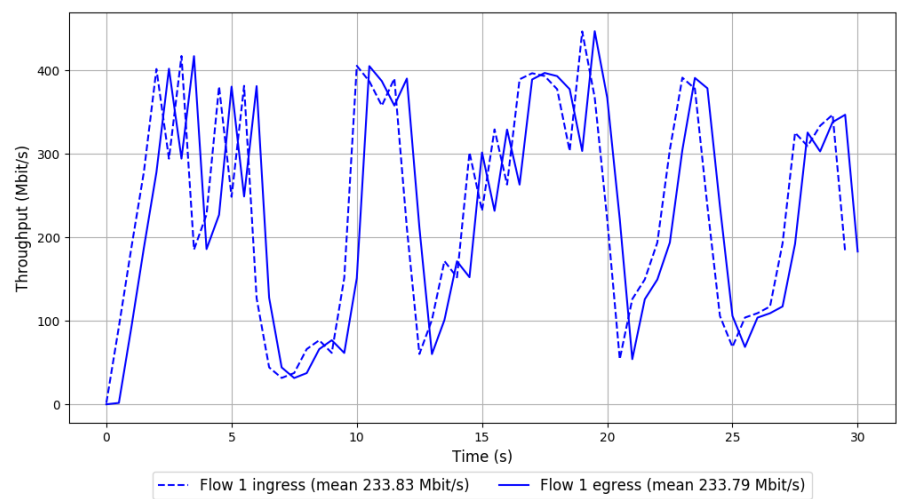
-- Flow 1:

Average throughput: 233.79 Mbit/s

95th percentile per-packet one-way delay: 1.290 ms

Loss rate: 0.02%

Run 4: Report of PCC-Vivace — Data Link

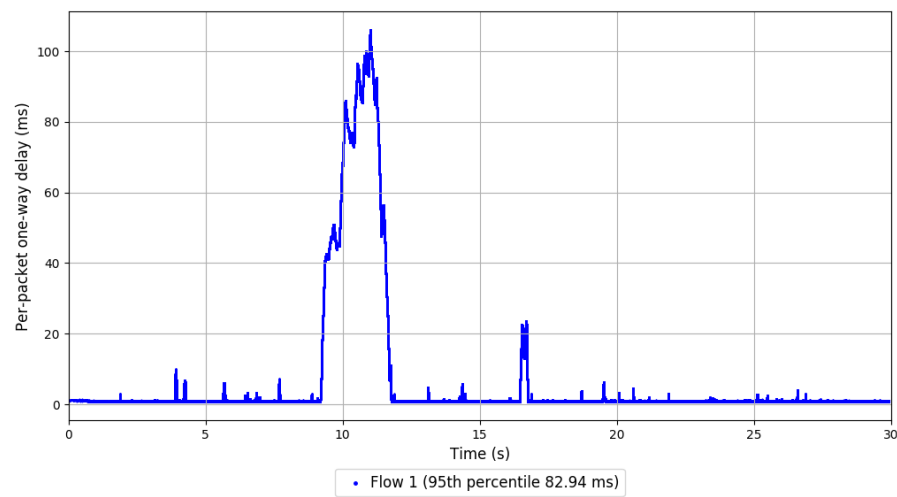
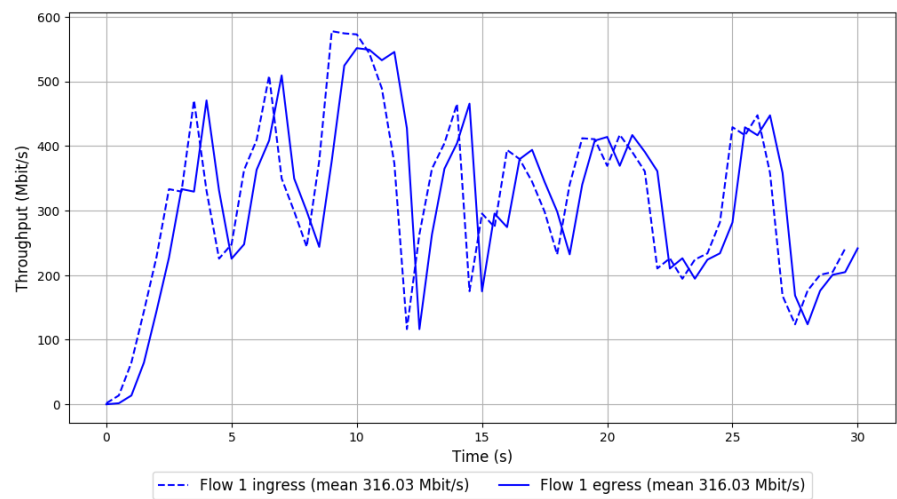


Run 5: Statistics of PCC-Vivace

Start at: 2018-11-15 03:59:01
End at: 2018-11-15 03:59:31
Local clock offset: 4.232 ms
Remote clock offset: -1.359 ms

Below is generated by plot.py at 2018-11-15 04:46:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 316.03 Mbit/s
95th percentile per-packet one-way delay: 82.937 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 316.03 Mbit/s
95th percentile per-packet one-way delay: 82.937 ms
Loss rate: 0.00%

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2018-11-15 02:19:03

End at: 2018-11-15 02:19:33

Local clock offset: 3.969 ms

Remote clock offset: 4.287 ms

Below is generated by plot.py at 2018-11-15 04:46:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.12 Mbit/s

95th percentile per-packet one-way delay: 1.085 ms

Loss rate: 0.00%

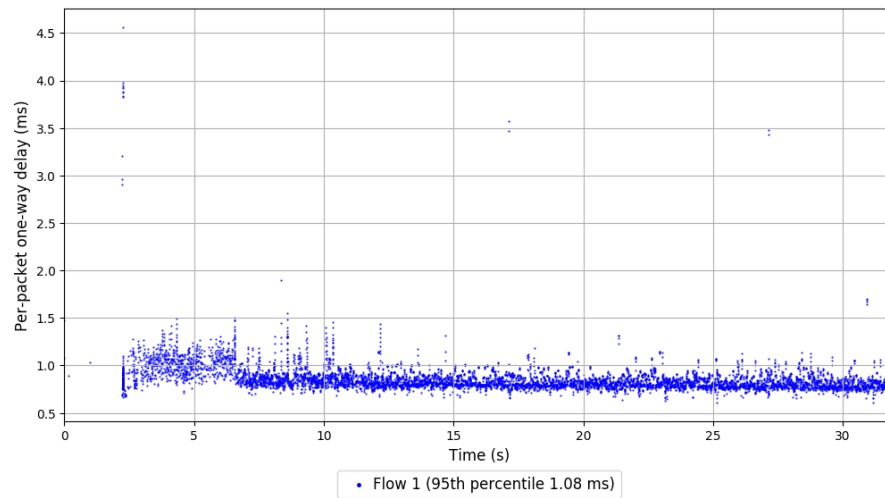
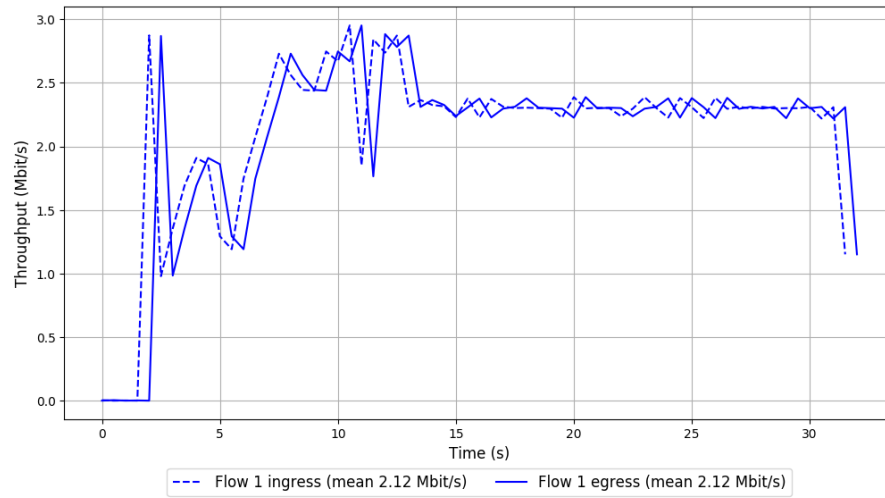
-- Flow 1:

Average throughput: 2.12 Mbit/s

95th percentile per-packet one-way delay: 1.085 ms

Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-11-15 02:45:09

End at: 2018-11-15 02:45:39

Local clock offset: 3.552 ms

Remote clock offset: 0.242 ms

Below is generated by plot.py at 2018-11-15 04:46:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 1.140 ms

Loss rate: 0.00%

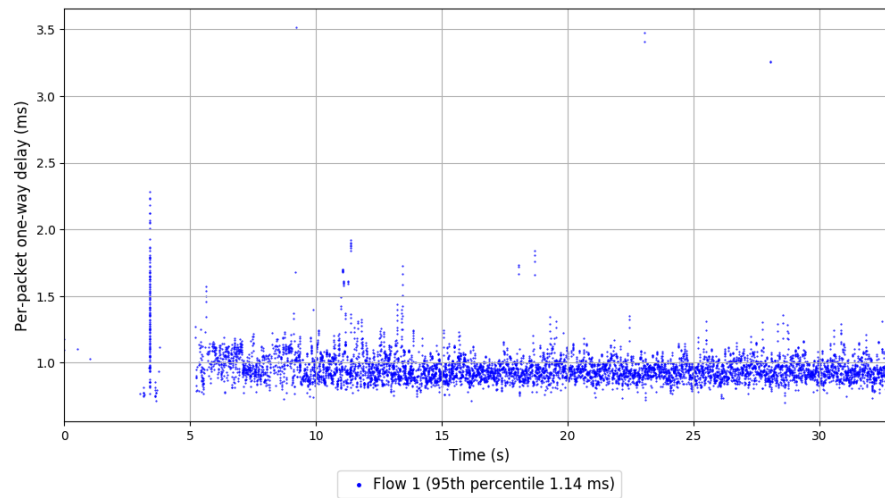
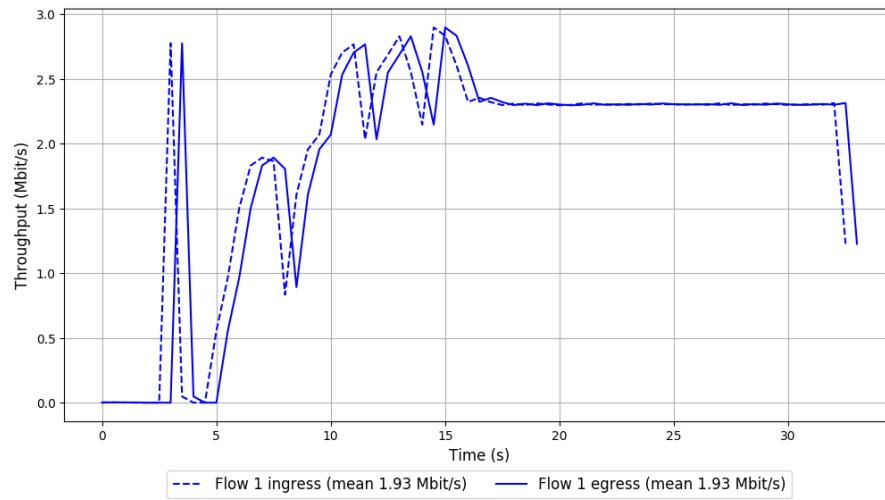
-- Flow 1:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 1.140 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-11-15 03:11:05

End at: 2018-11-15 03:11:35

Local clock offset: 3.463 ms

Remote clock offset: 2.534 ms

Below is generated by plot.py at 2018-11-15 04:46:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.94 Mbit/s

95th percentile per-packet one-way delay: 1.091 ms

Loss rate: 0.00%

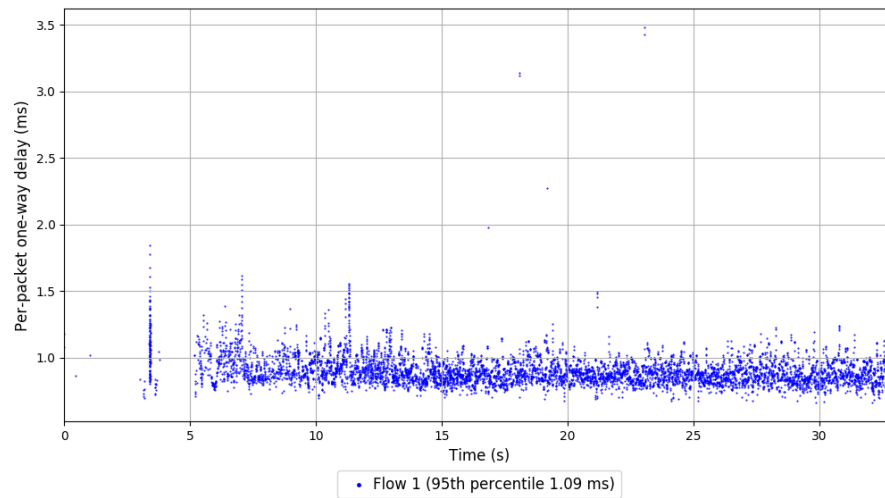
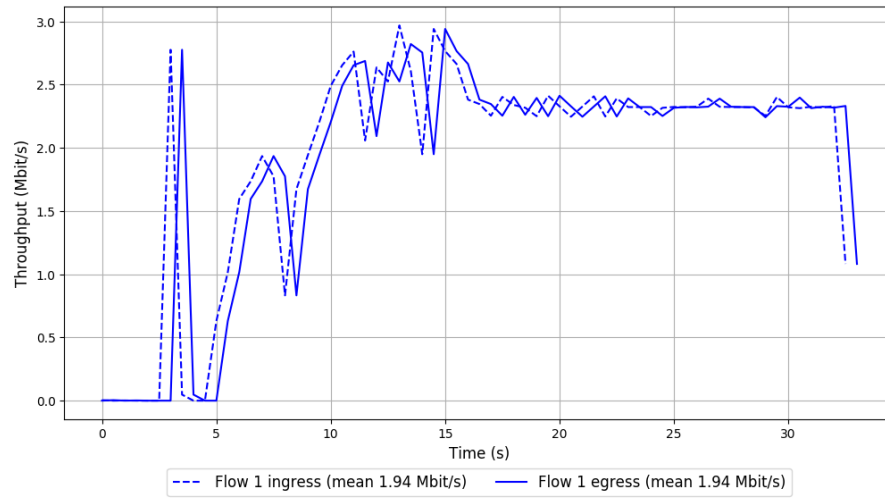
-- Flow 1:

Average throughput: 1.94 Mbit/s

95th percentile per-packet one-way delay: 1.091 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-11-15 03:37:10

End at: 2018-11-15 03:37:40

Local clock offset: 3.999 ms

Remote clock offset: 2.489 ms

Below is generated by plot.py at 2018-11-15 04:46:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 1.364 ms

Loss rate: 0.00%

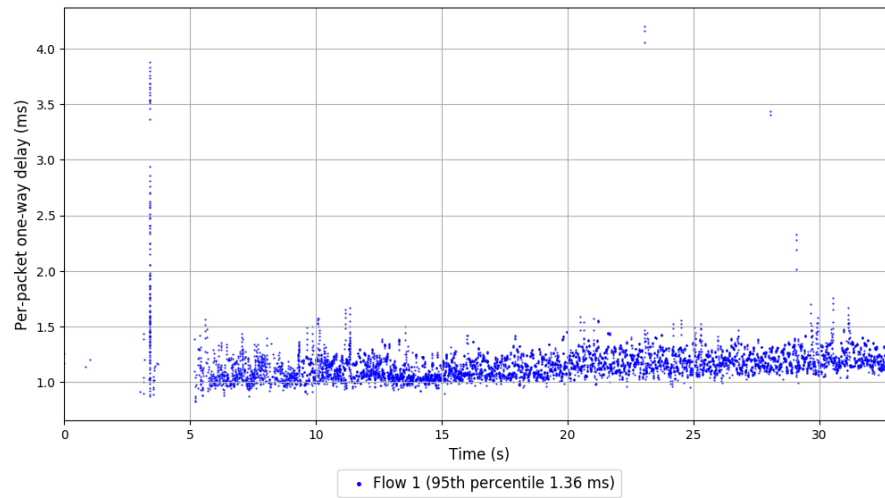
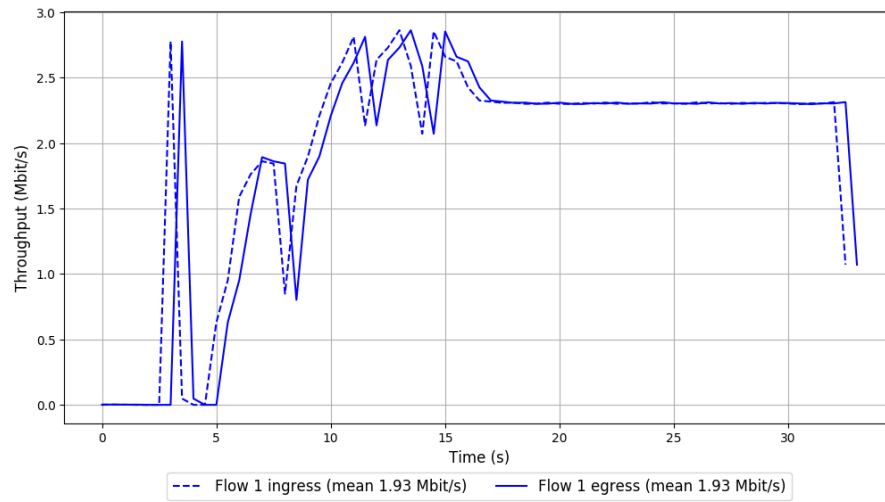
-- Flow 1:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 1.364 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-11-15 04:03:10
End at: 2018-11-15 04:03:40
Local clock offset: 4.275 ms
Remote clock offset: -1.755 ms

Below is generated by plot.py at 2018-11-15 04:46:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 1.239 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 1.239 ms
Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

