

Pantheon Report

Generated at 2018-11-15 03:47:00 (UTC).

Data path: AWS Brazil 1 on `ens5` (*local*) → Brazil on `p4p1` (*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 `gps.ntp.br` and have been applied to correct the timestamps in logs.

System info:

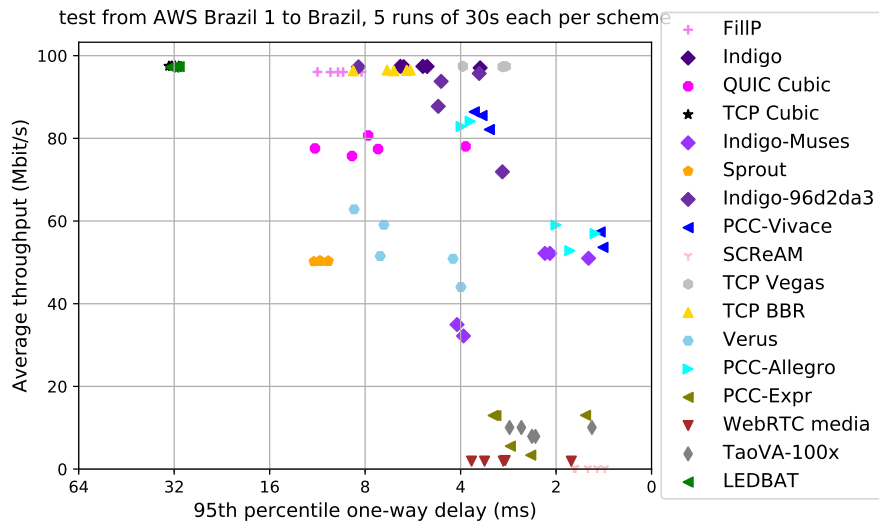
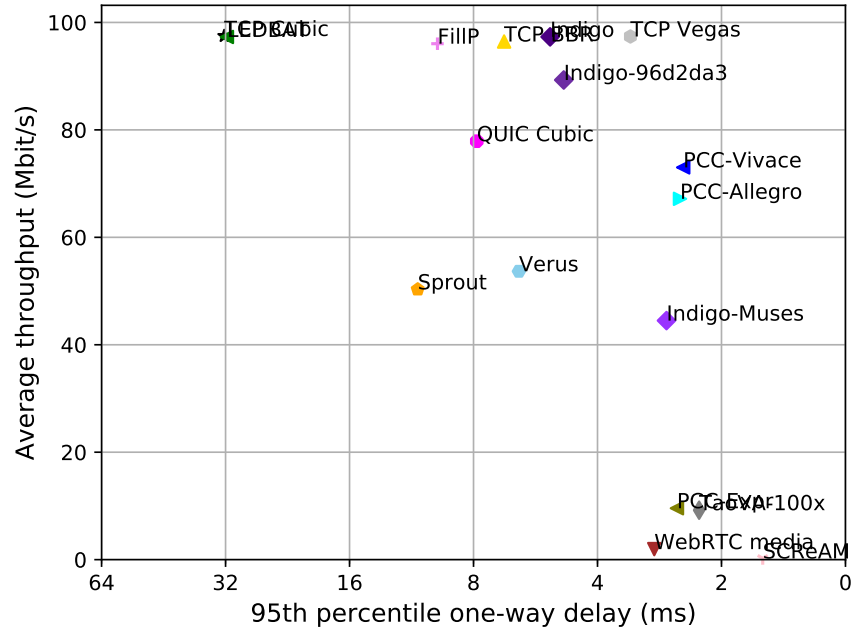
```
Linux 4.15.0-1023-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

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-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
```

third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851

test from AWS Brazil 1 to Brazil, 5 runs of 30s each per scheme
(mean of all runs by 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	96.45	6.74	0.00
Copa	0	N/A	N/A	N/A
TCP Cubic	5	97.48	32.24	0.01
FillP	5	96.04	9.79	0.27
Indigo	5	97.32	5.21	0.00
Indigo-96d2da3	5	89.29	4.83	0.00
LEDBAT	5	97.30	31.77	0.02
Indigo-Muses	5	44.50	2.72	0.00
PCC-Allegro	5	67.17	2.52	0.00
PCC-Expr	5	9.57	2.57	16.58
QUIC Cubic	5	77.89	7.86	0.27
SCReAM	5	0.22	1.33	0.00
Sprout	5	50.31	10.93	0.00
TaoVA-100x	5	9.21	2.27	77.85
TCP Vegas	5	97.39	3.33	0.00
Verus	5	53.67	6.21	1.25
PCC-Vivace	5	73.01	2.48	0.00
WebRTC media	5	1.96	2.91	0.00

Run 1: Statistics of TCP BBR

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

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

Local clock offset: -7.218 ms

Remote clock offset: 0.204 ms

Below is generated by plot.py at 2018-11-15 03:39:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.36 Mbit/s

95th percentile per-packet one-way delay: 8.716 ms

Loss rate: 0.00%

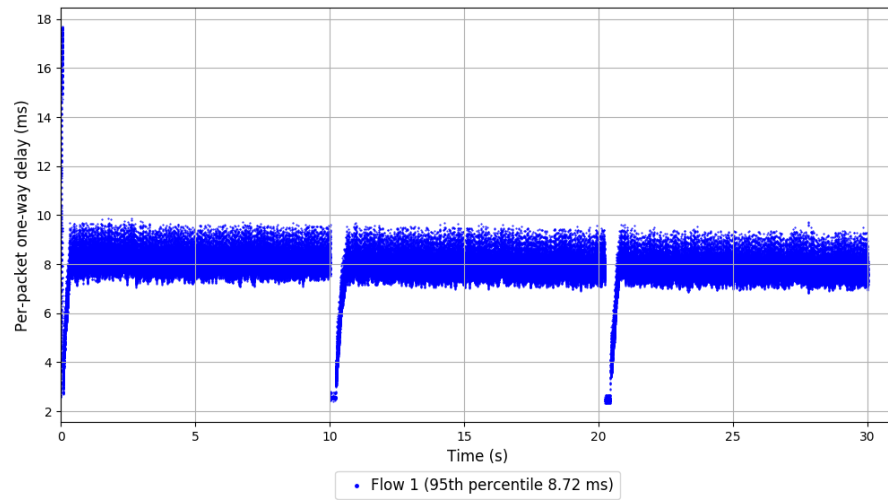
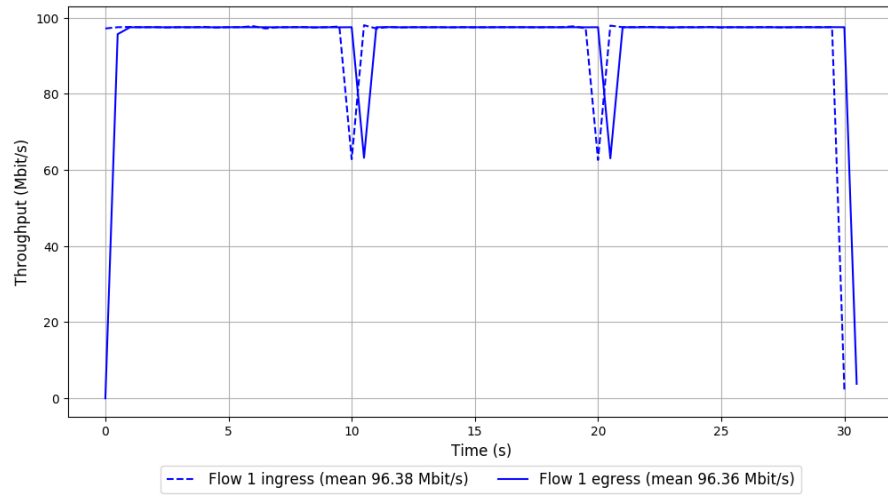
-- Flow 1:

Average throughput: 96.36 Mbit/s

95th percentile per-packet one-way delay: 8.716 ms

Loss rate: 0.00%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-11-15 02:22:04

End at: 2018-11-15 02:22:34

Local clock offset: -7.478 ms

Remote clock offset: 0.37 ms

Below is generated by plot.py at 2018-11-15 03:39:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.47 Mbit/s

95th percentile per-packet one-way delay: 5.915 ms

Loss rate: 0.01%

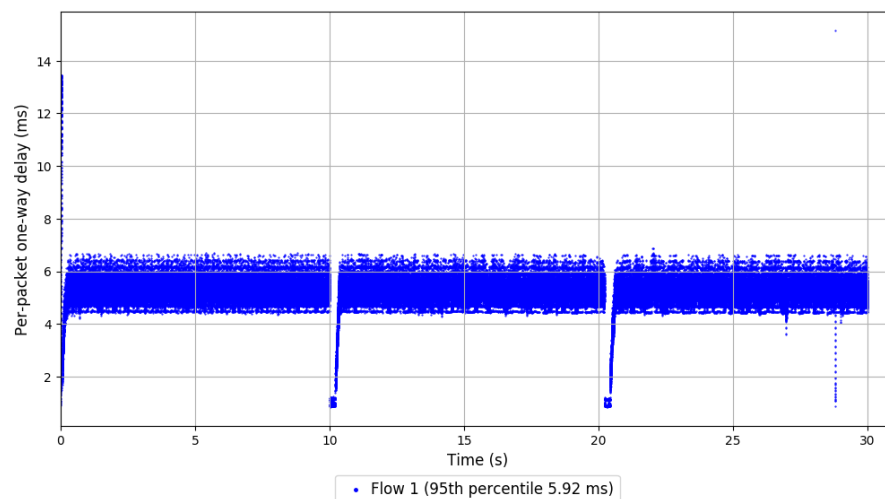
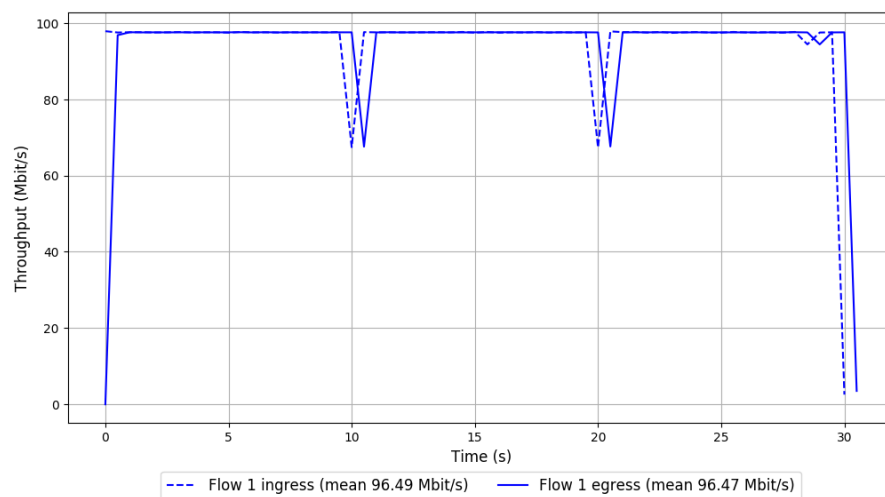
-- Flow 1:

Average throughput: 96.47 Mbit/s

95th percentile per-packet one-way delay: 5.915 ms

Loss rate: 0.01%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-11-15 02:42:07

End at: 2018-11-15 02:42:37

Local clock offset: -5.152 ms

Remote clock offset: 0.404 ms

Below is generated by plot.py at 2018-11-15 03:39:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.52 Mbit/s

95th percentile per-packet one-way delay: 6.817 ms

Loss rate: 0.00%

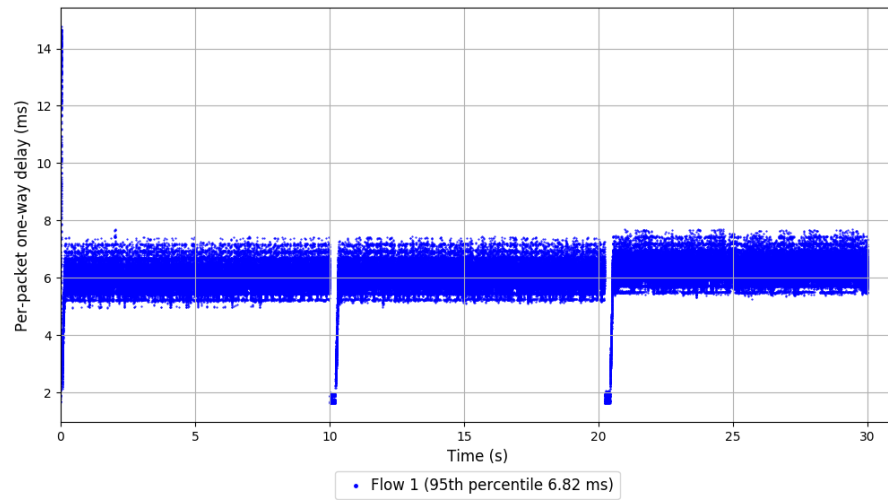
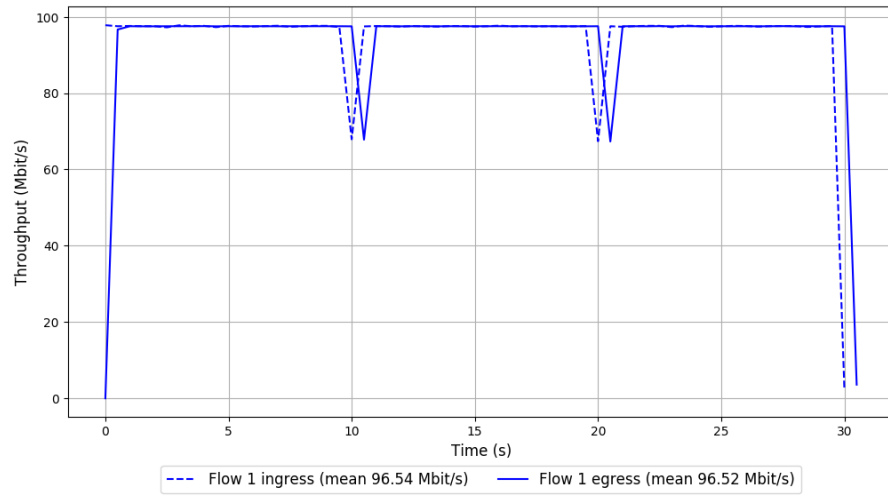
-- Flow 1:

Average throughput: 96.52 Mbit/s

95th percentile per-packet one-way delay: 6.817 ms

Loss rate: 0.00%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-11-15 03:02:05

End at: 2018-11-15 03:02:35

Local clock offset: -5.5 ms

Remote clock offset: 0.416 ms

Below is generated by plot.py at 2018-11-15 03:39:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.53 Mbit/s

95th percentile per-packet one-way delay: 5.769 ms

Loss rate: 0.00%

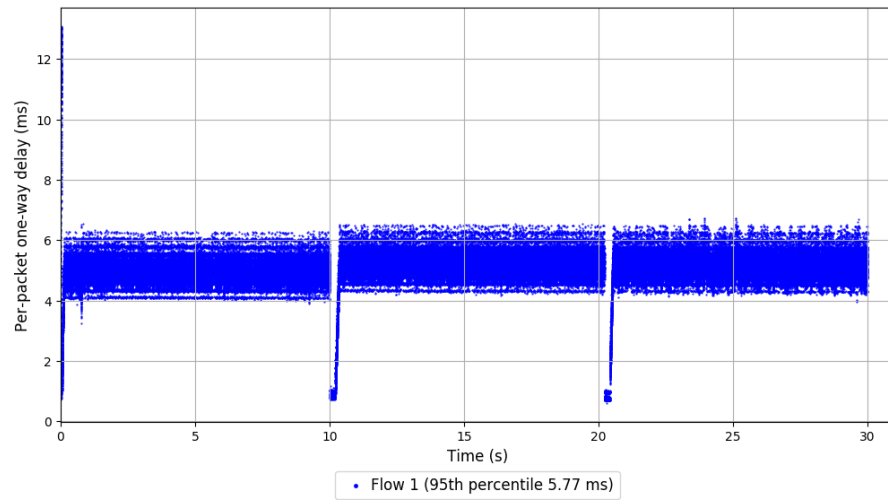
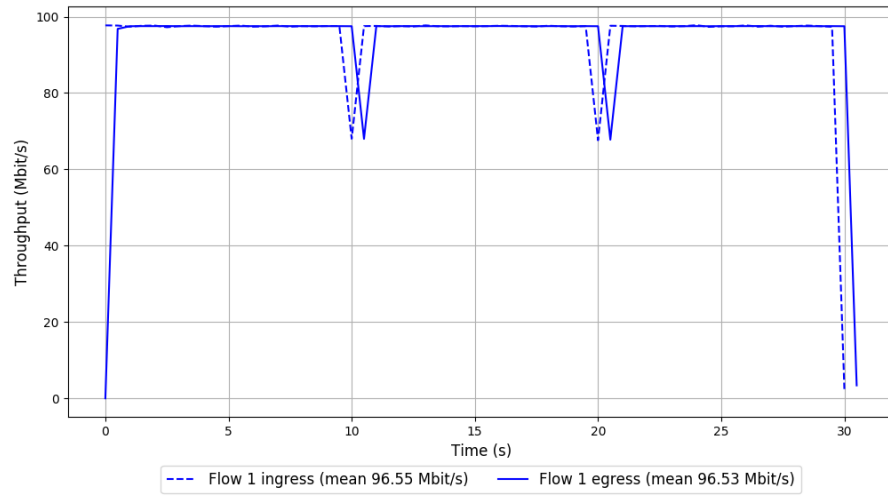
-- Flow 1:

Average throughput: 96.53 Mbit/s

95th percentile per-packet one-way delay: 5.769 ms

Loss rate: 0.00%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-11-15 03:22:07

End at: 2018-11-15 03:22:37

Local clock offset: -8.444 ms

Remote clock offset: 0.36 ms

Below is generated by plot.py at 2018-11-15 03:39:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.35 Mbit/s

95th percentile per-packet one-way delay: 6.496 ms

Loss rate: 0.00%

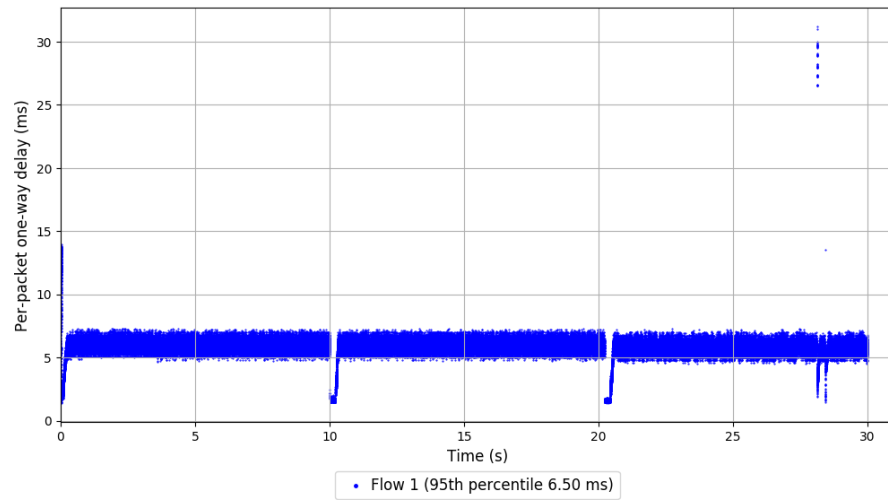
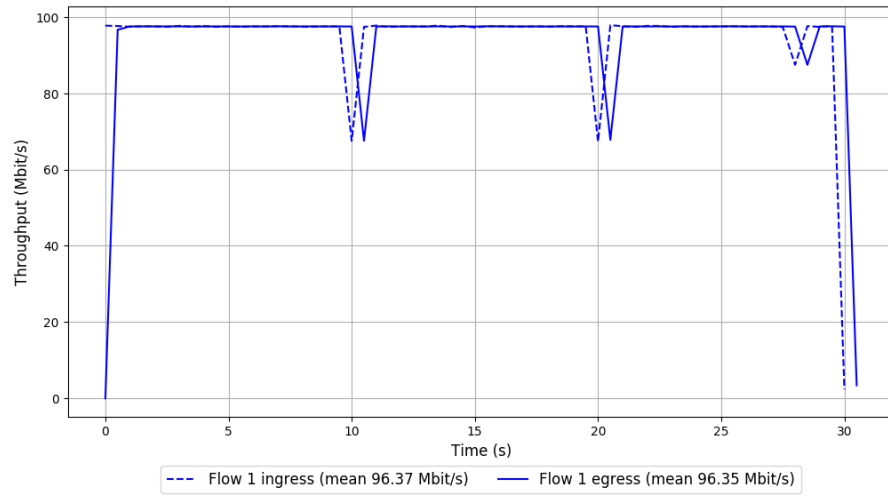
-- Flow 1:

Average throughput: 96.35 Mbit/s

95th percentile per-packet one-way delay: 6.496 ms

Loss rate: 0.00%

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

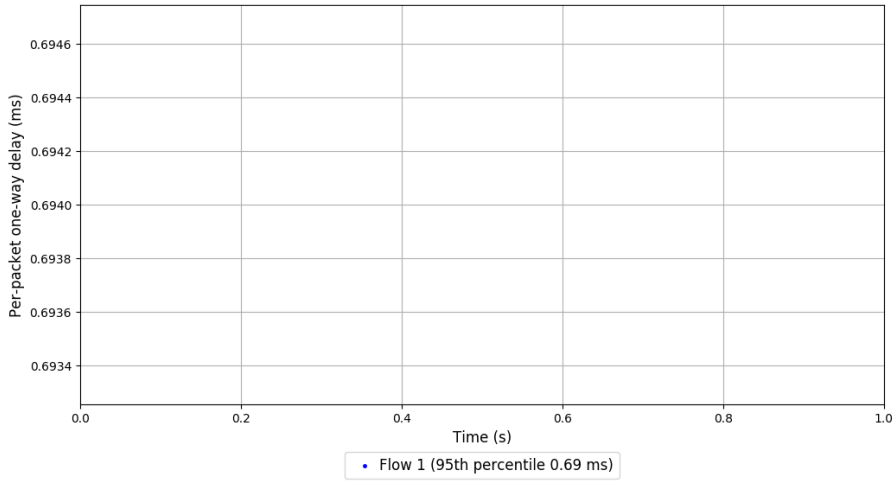
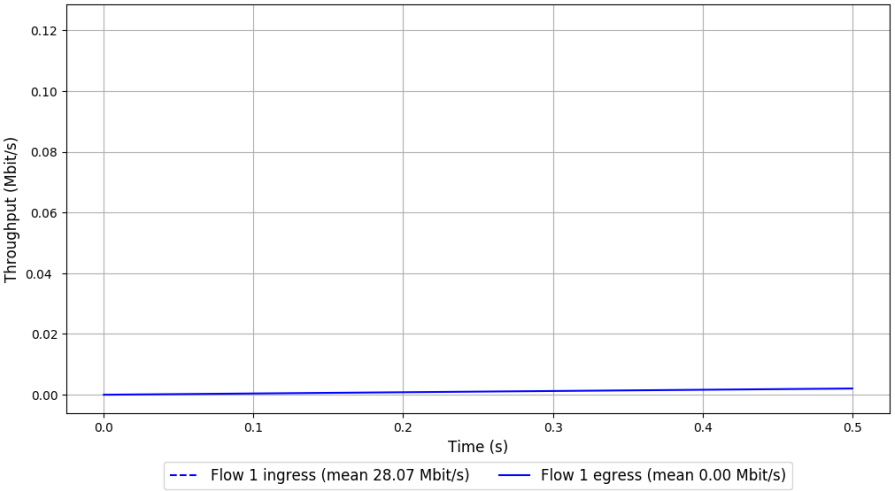
Start at: 2018-11-15 02:08:45

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

Local clock offset: -7.356 ms

Remote clock offset: 0.187 ms

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

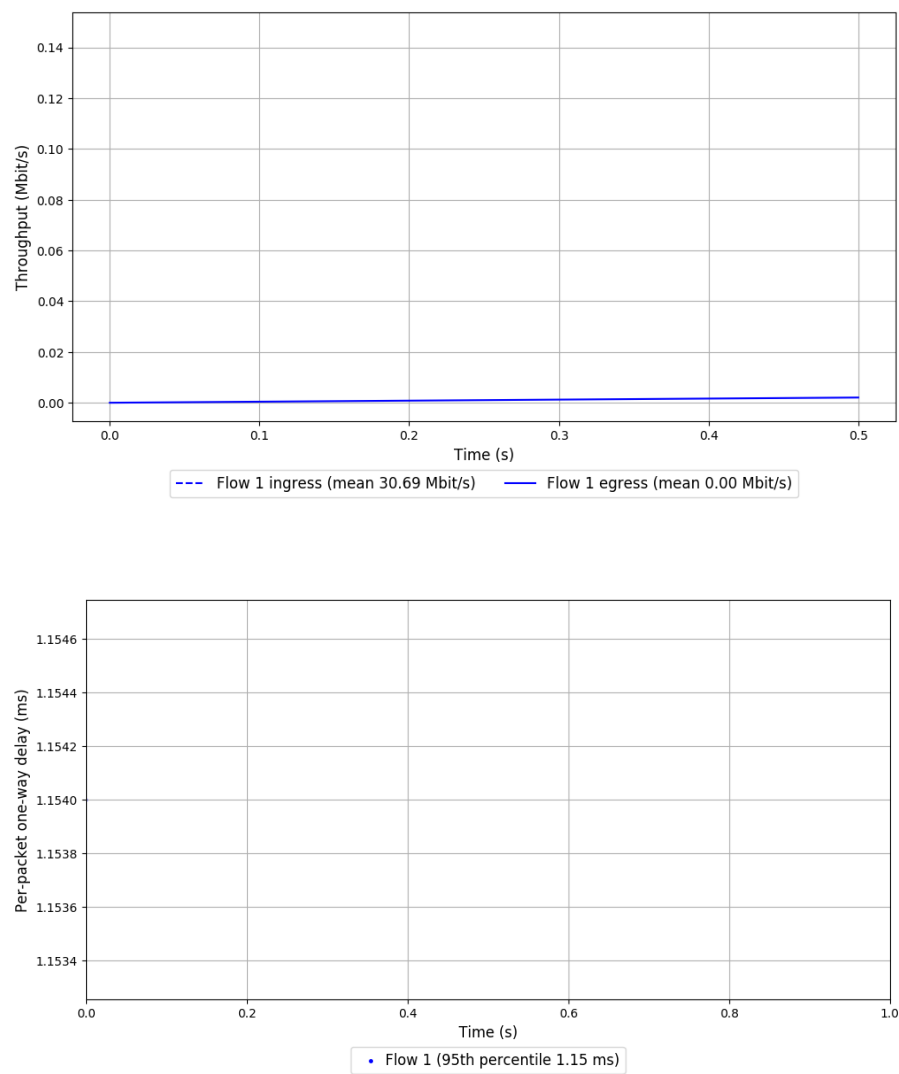
Start at: 2018-11-15 02:28:49

End at: 2018-11-15 02:29:19

Local clock offset: -6.925 ms

Remote clock offset: 0.325 ms

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

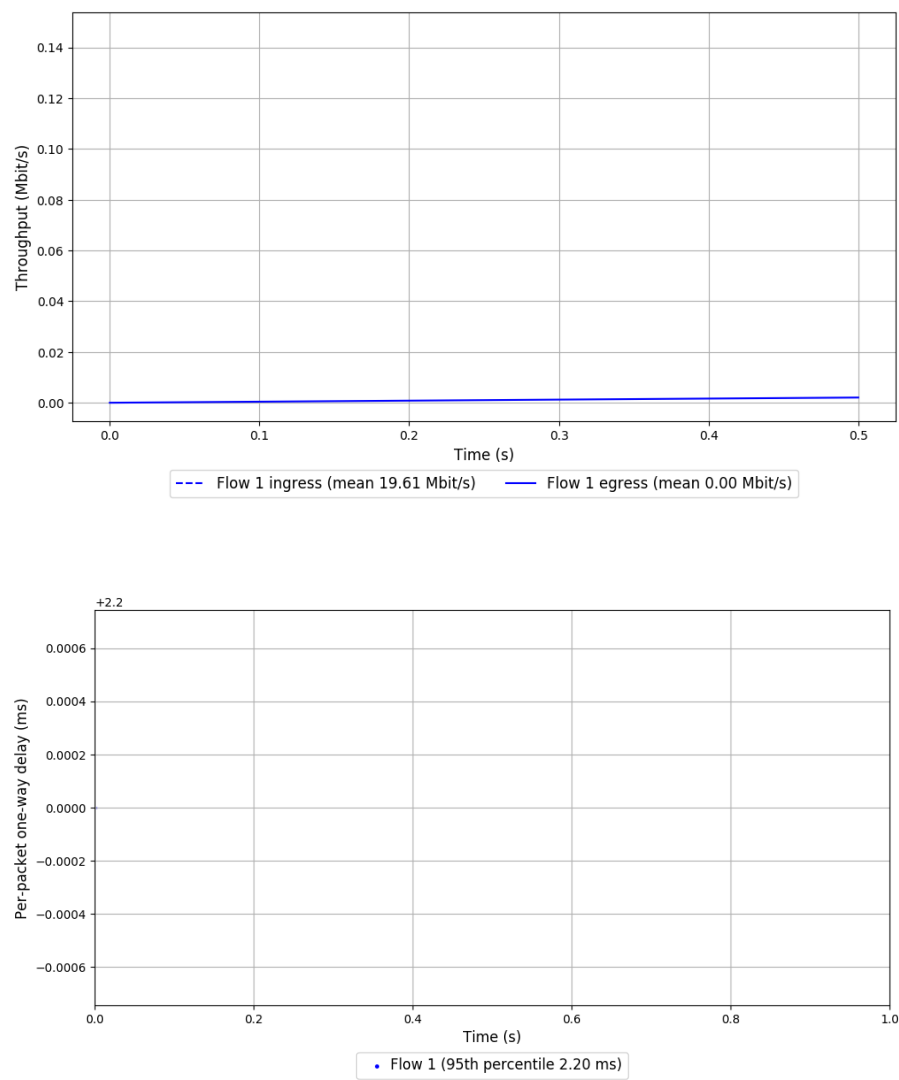
Start at: 2018-11-15 02:48:50

End at: 2018-11-15 02:49:20

Local clock offset: -4.306 ms

Remote clock offset: 0.363 ms

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

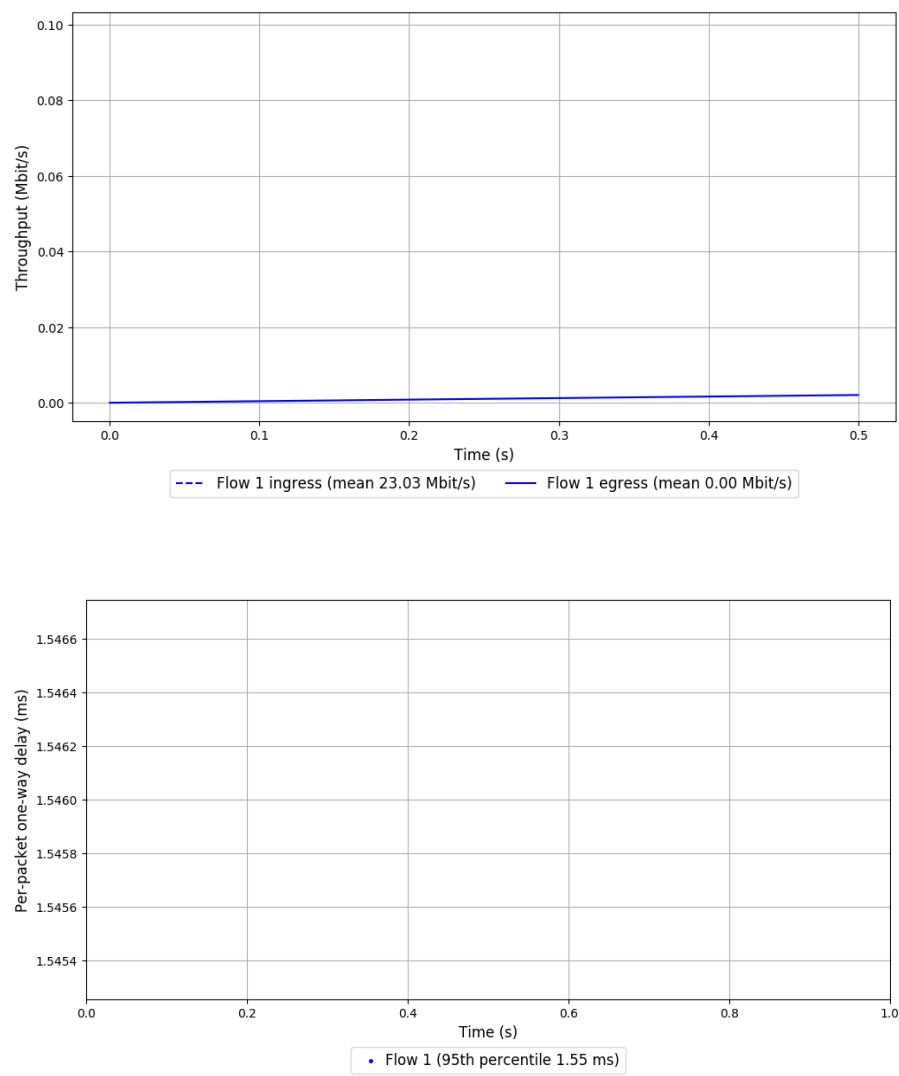
Start at: 2018-11-15 03:08:50

End at: 2018-11-15 03:09:20

Local clock offset: -7.178 ms

Remote clock offset: 0.487 ms

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

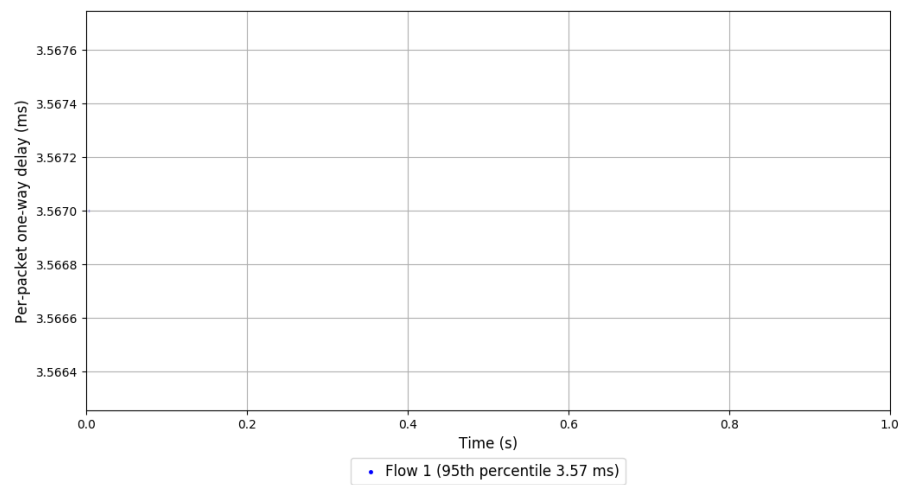
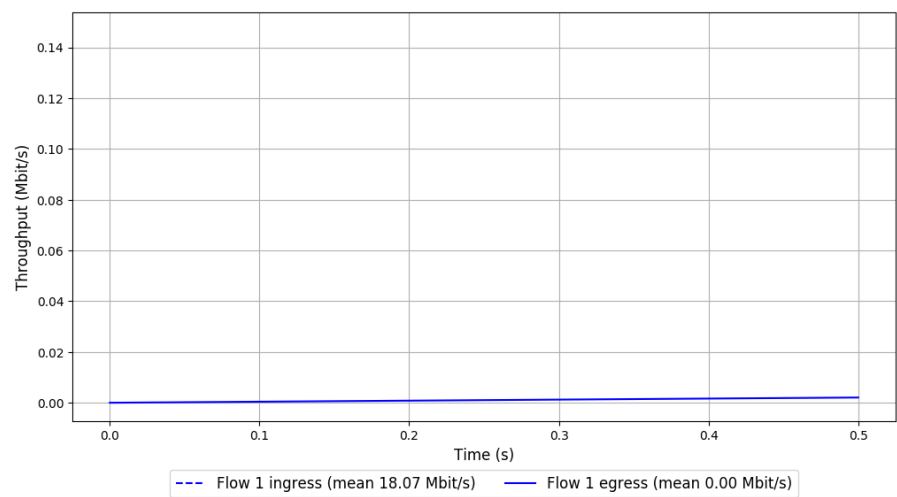
Start at: 2018-11-15 03:28:51

End at: 2018-11-15 03:29:21

Local clock offset: -7.599 ms

Remote clock offset: 0.409 ms

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-11-15 02:00:52

End at: 2018-11-15 02:01:22

Local clock offset: -4.171 ms

Remote clock offset: 0.244 ms

Below is generated by plot.py at 2018-11-15 03:39:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.48 Mbit/s

95th percentile per-packet one-way delay: 30.969 ms

Loss rate: 0.01%

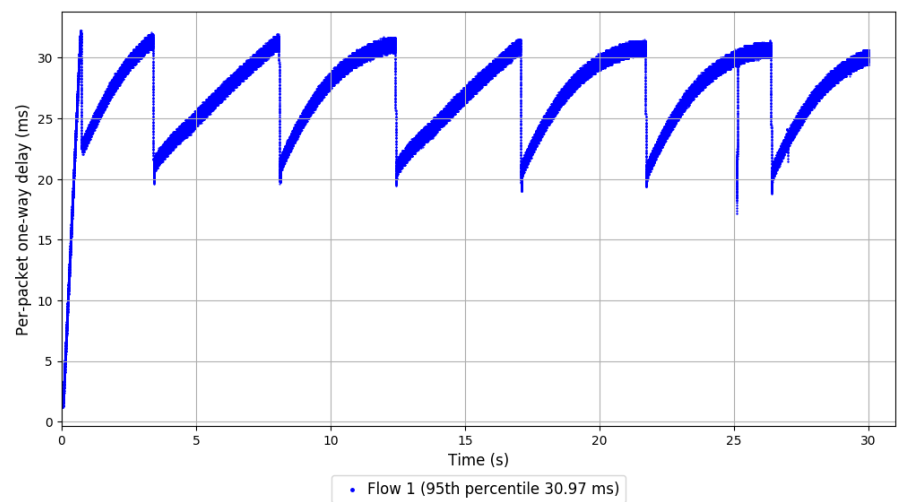
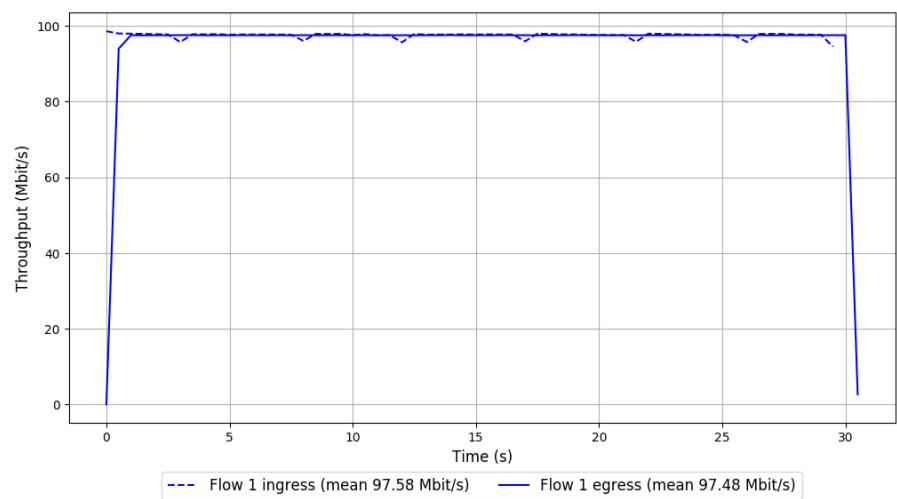
-- Flow 1:

Average throughput: 97.48 Mbit/s

95th percentile per-packet one-way delay: 30.969 ms

Loss rate: 0.01%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-11-15 02:20:56

End at: 2018-11-15 02:21:26

Local clock offset: -8.121 ms

Remote clock offset: 0.277 ms

Below is generated by plot.py at 2018-11-15 03:39:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.48 Mbit/s

95th percentile per-packet one-way delay: 33.271 ms

Loss rate: 0.01%

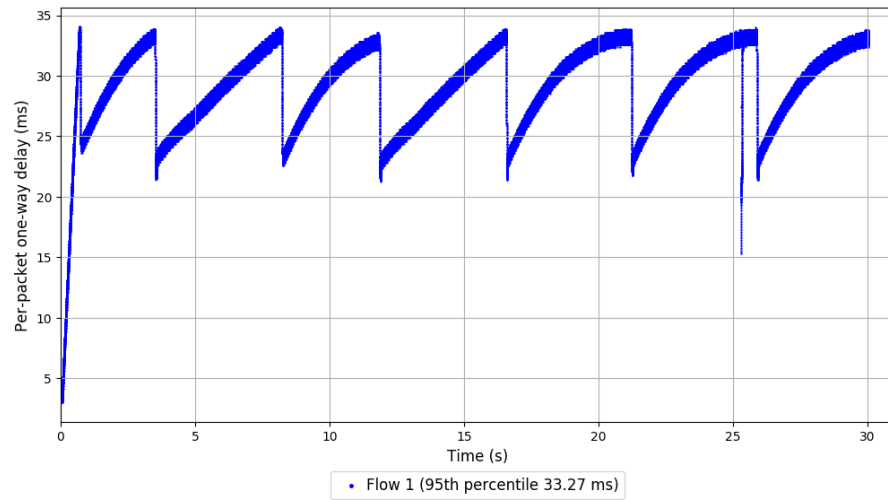
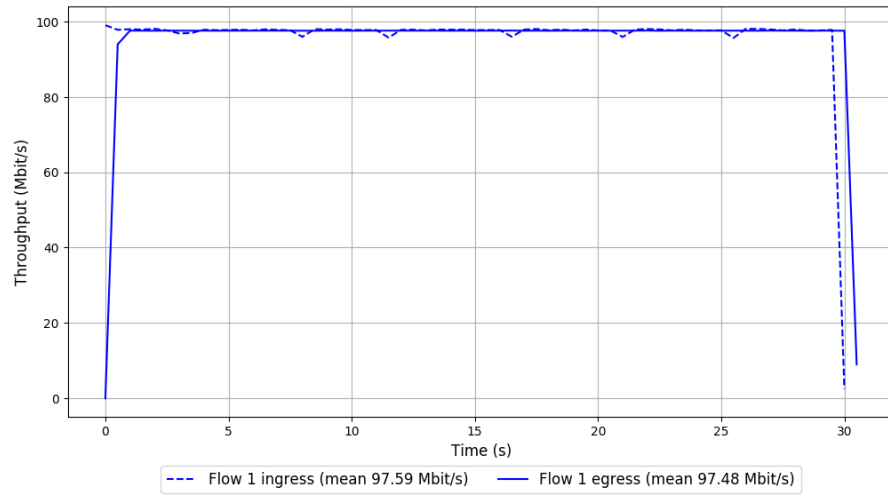
-- Flow 1:

Average throughput: 97.48 Mbit/s

95th percentile per-packet one-way delay: 33.271 ms

Loss rate: 0.01%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-11-15 02:40:59

End at: 2018-11-15 02:41:29

Local clock offset: -4.436 ms

Remote clock offset: 0.358 ms

Below is generated by plot.py at 2018-11-15 03:39:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.47 Mbit/s

95th percentile per-packet one-way delay: 32.639 ms

Loss rate: 0.01%

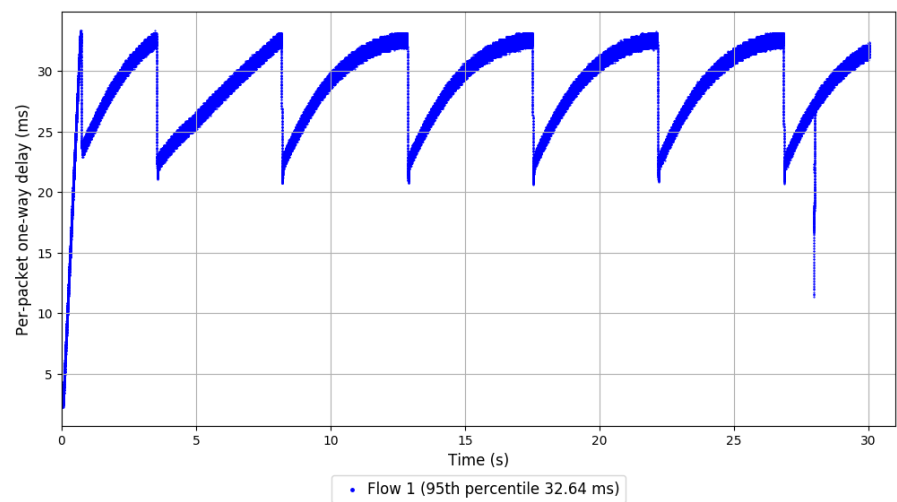
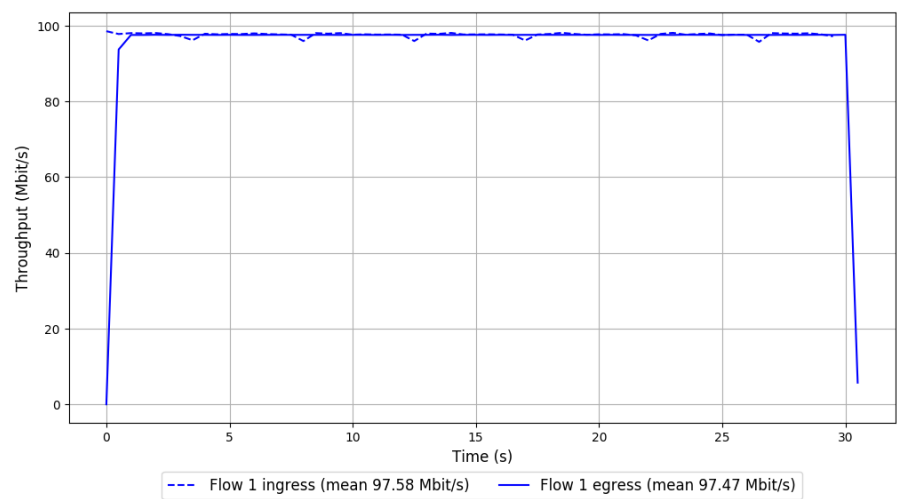
-- Flow 1:

Average throughput: 97.47 Mbit/s

95th percentile per-packet one-way delay: 32.639 ms

Loss rate: 0.01%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-11-15 03:00:57

End at: 2018-11-15 03:01:27

Local clock offset: -5.363 ms

Remote clock offset: 0.421 ms

Below is generated by plot.py at 2018-11-15 03:40:42

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.47 Mbit/s

95th percentile per-packet one-way delay: 32.553 ms

Loss rate: 0.01%

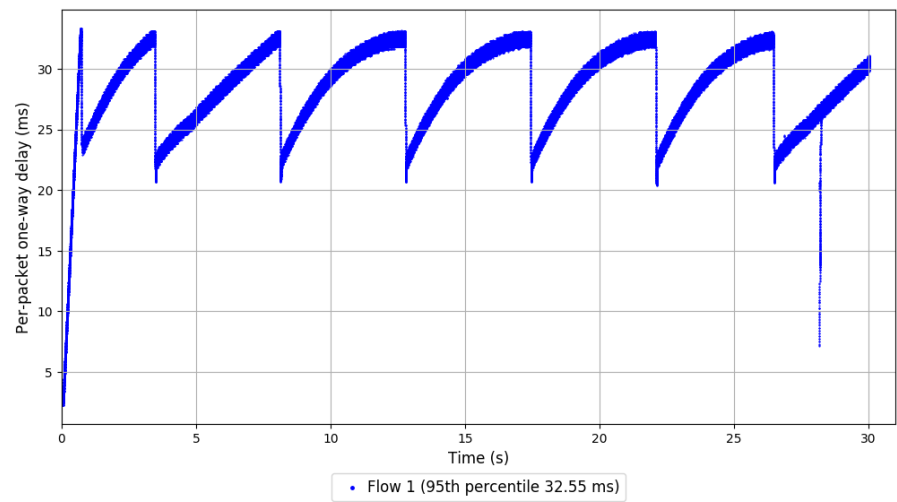
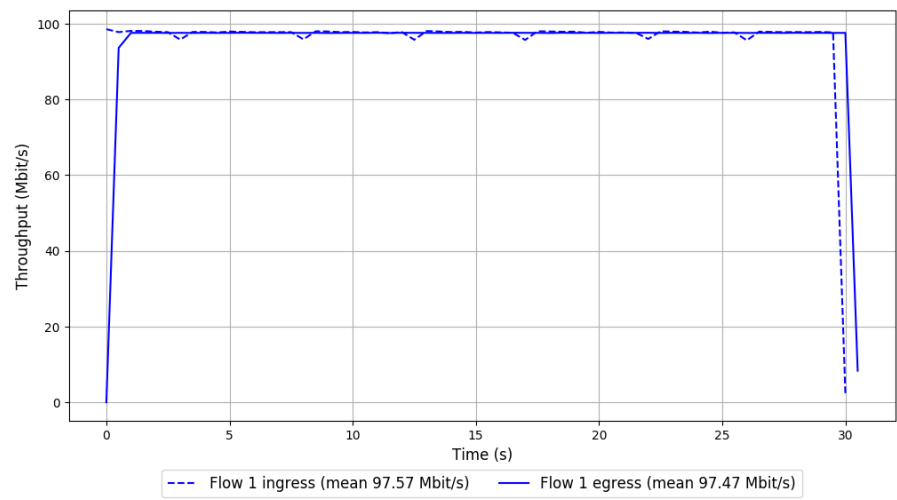
-- Flow 1:

Average throughput: 97.47 Mbit/s

95th percentile per-packet one-way delay: 32.553 ms

Loss rate: 0.01%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-11-15 03:20:59

End at: 2018-11-15 03:21:29

Local clock offset: -8.322 ms

Remote clock offset: 0.411 ms

Below is generated by plot.py at 2018-11-15 03:40:42

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.51 Mbit/s

95th percentile per-packet one-way delay: 31.777 ms

Loss rate: 0.01%

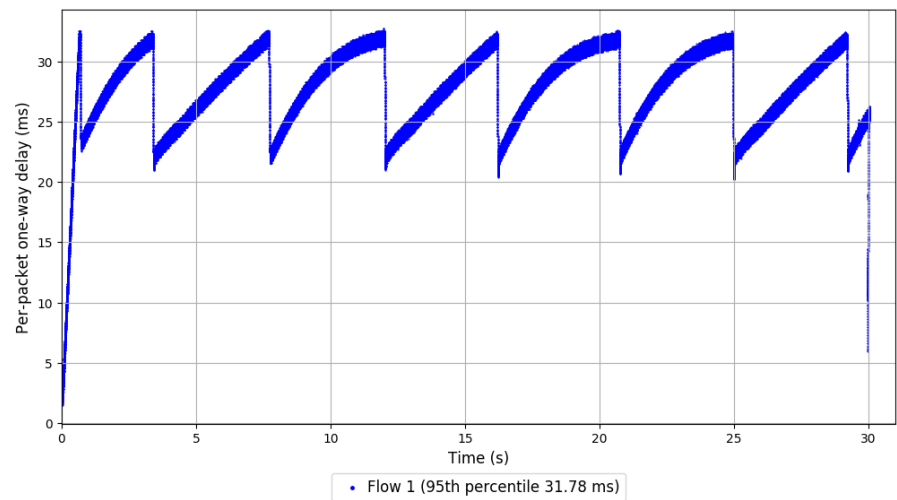
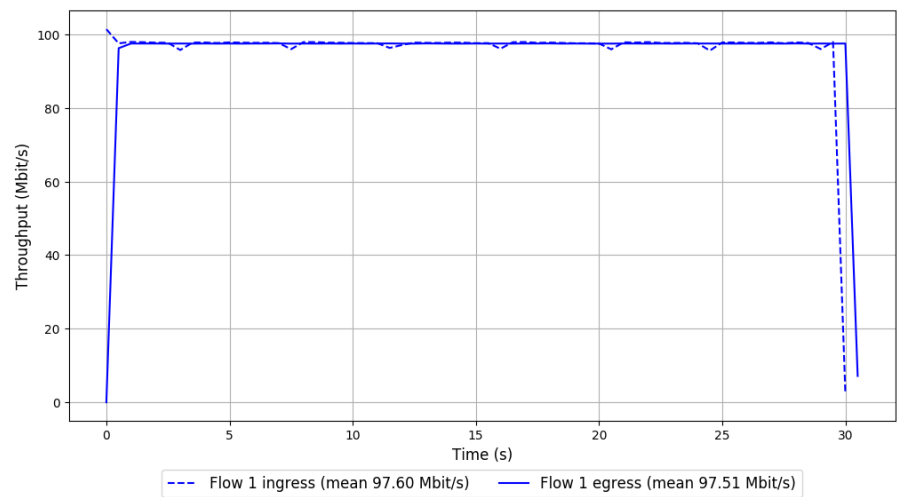
-- Flow 1:

Average throughput: 97.51 Mbit/s

95th percentile per-packet one-way delay: 31.777 ms

Loss rate: 0.01%

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

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

End at: 2018-11-15 02:15:47

Local clock offset: -7.485 ms

Remote clock offset: 0.248 ms

Below is generated by plot.py at 2018-11-15 03:40:51

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.02 Mbit/s

95th percentile per-packet one-way delay: 9.742 ms

Loss rate: 0.31%

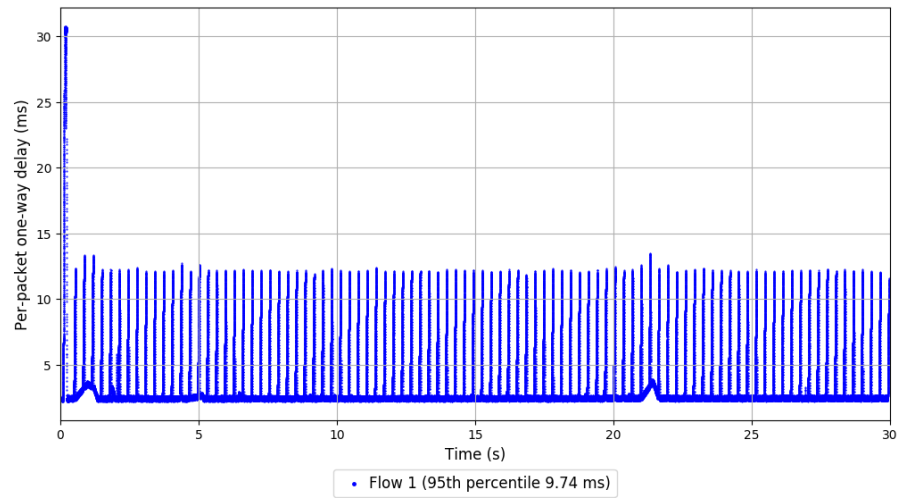
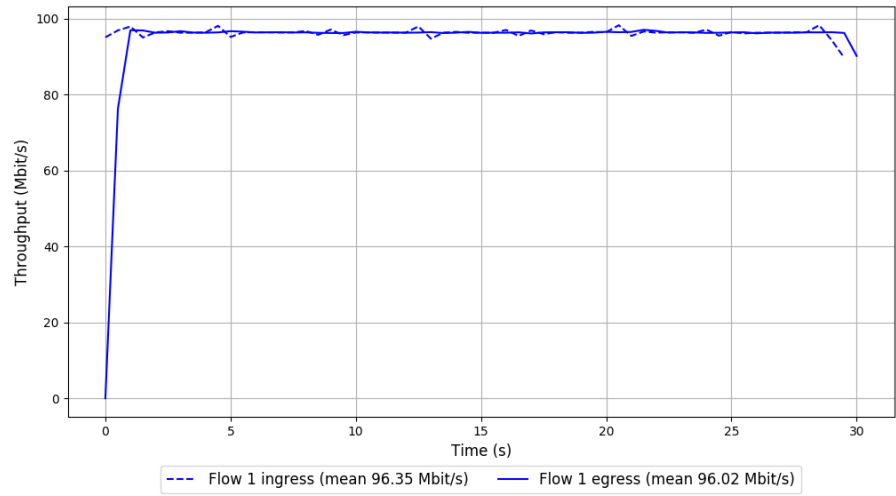
-- Flow 1:

Average throughput: 96.02 Mbit/s

95th percentile per-packet one-way delay: 9.742 ms

Loss rate: 0.31%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-11-15 02:35:21

End at: 2018-11-15 02:35:51

Local clock offset: -5.12 ms

Remote clock offset: 0.427 ms

Below is generated by plot.py at 2018-11-15 03:40:53

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.01 Mbit/s

95th percentile per-packet one-way delay: 10.292 ms

Loss rate: 0.32%

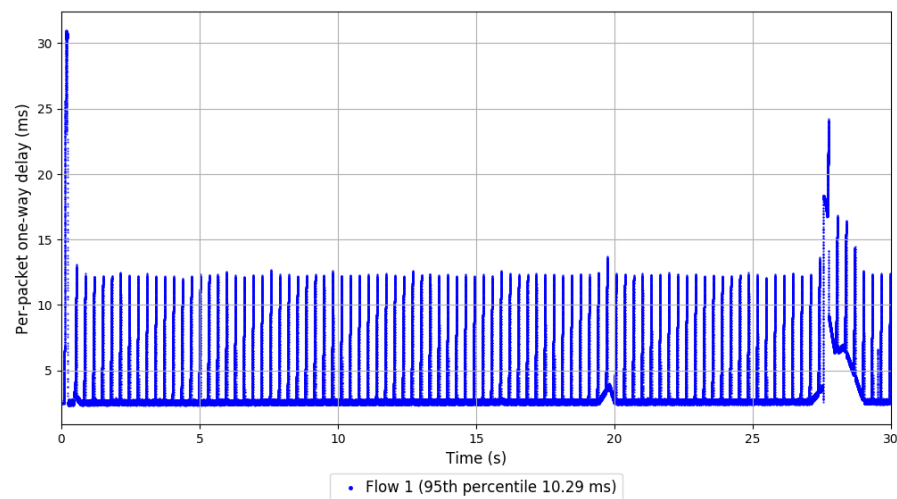
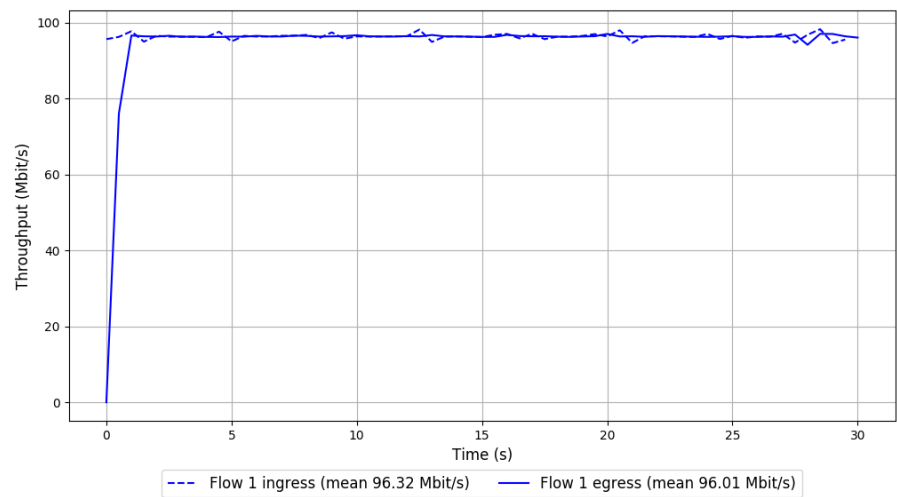
-- Flow 1:

Average throughput: 96.01 Mbit/s

95th percentile per-packet one-way delay: 10.292 ms

Loss rate: 0.32%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-11-15 02:55:22

End at: 2018-11-15 02:55:52

Local clock offset: -4.459 ms

Remote clock offset: 0.446 ms

Below is generated by plot.py at 2018-11-15 03:40:53

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.06 Mbit/s

95th percentile per-packet one-way delay: 8.211 ms

Loss rate: 0.21%

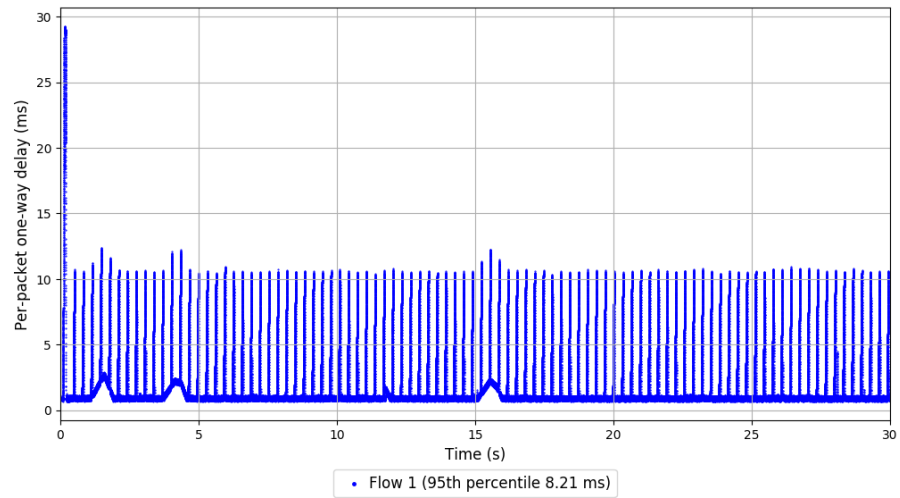
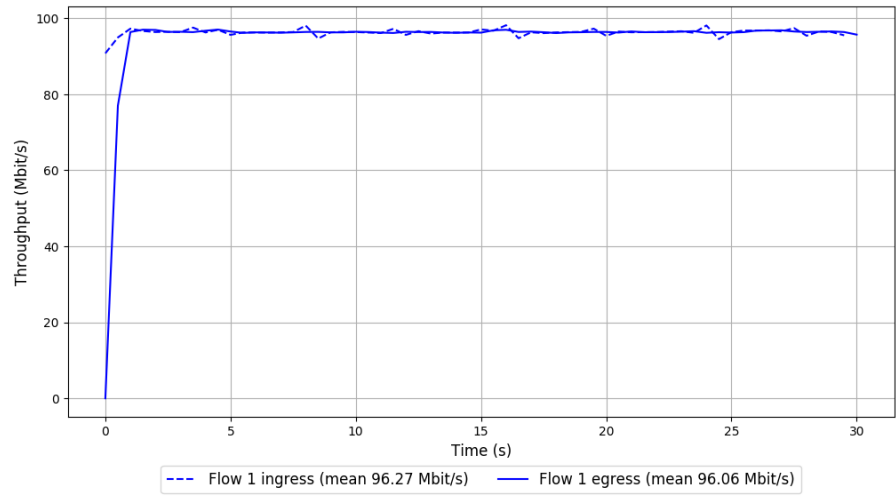
-- Flow 1:

Average throughput: 96.06 Mbit/s

95th percentile per-packet one-way delay: 8.211 ms

Loss rate: 0.21%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

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

End at: 2018-11-15 03:15:52

Local clock offset: -7.848 ms

Remote clock offset: 0.438 ms

Below is generated by plot.py at 2018-11-15 03:40:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.04 Mbit/s

95th percentile per-packet one-way delay: 9.383 ms

Loss rate: 0.21%

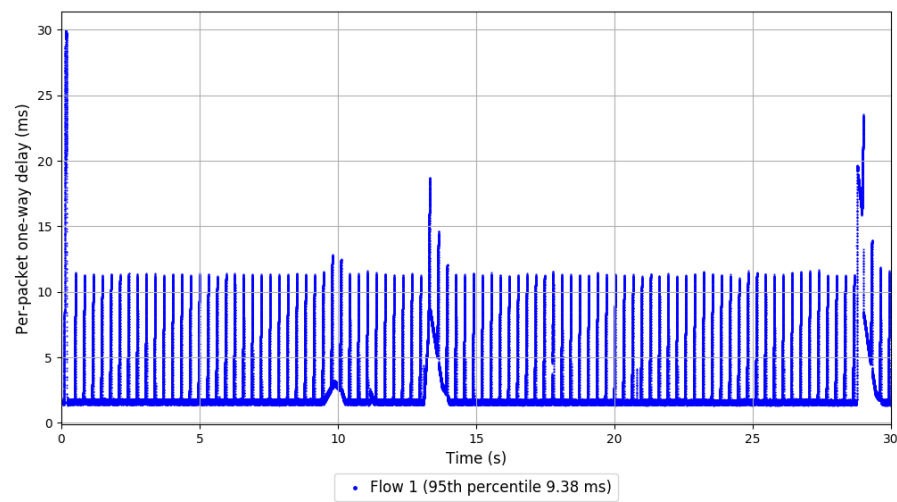
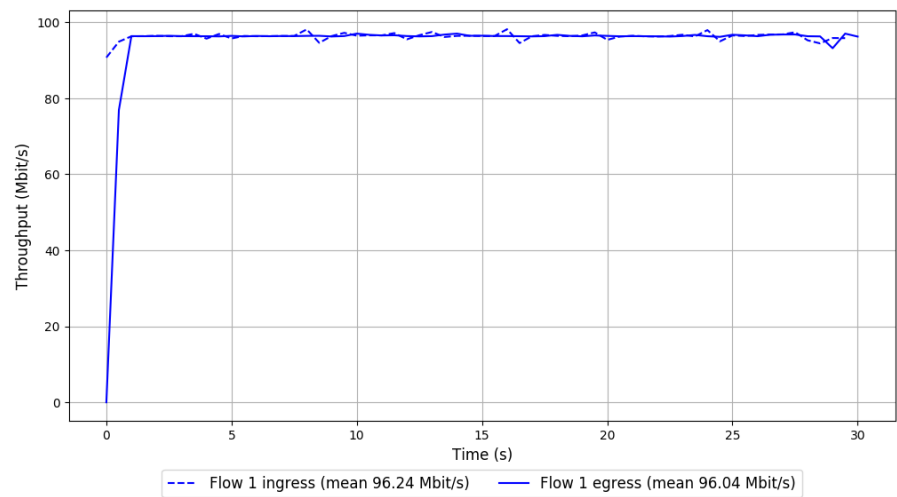
-- Flow 1:

Average throughput: 96.04 Mbit/s

95th percentile per-packet one-way delay: 9.383 ms

Loss rate: 0.21%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-11-15 03:35:23

End at: 2018-11-15 03:35:53

Local clock offset: -4.824 ms

Remote clock offset: 0.479 ms

Below is generated by plot.py at 2018-11-15 03:40:55

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.07 Mbit/s

95th percentile per-packet one-way delay: 11.305 ms

Loss rate: 0.32%

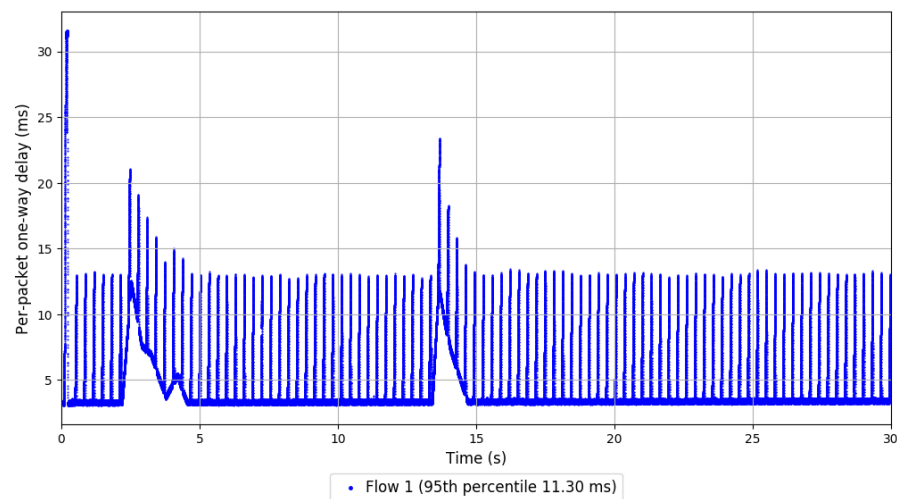
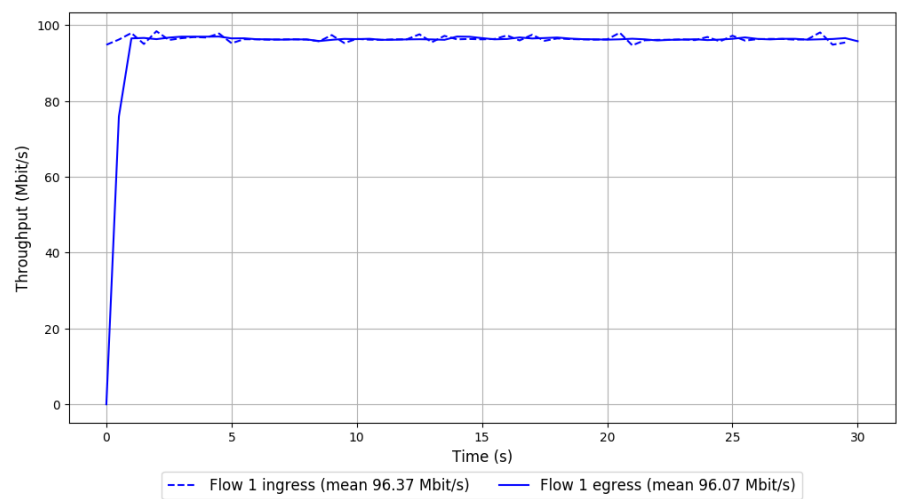
-- Flow 1:

Average throughput: 96.07 Mbit/s

95th percentile per-packet one-way delay: 11.305 ms

Loss rate: 0.32%

Run 5: Report of FillP — Data Link

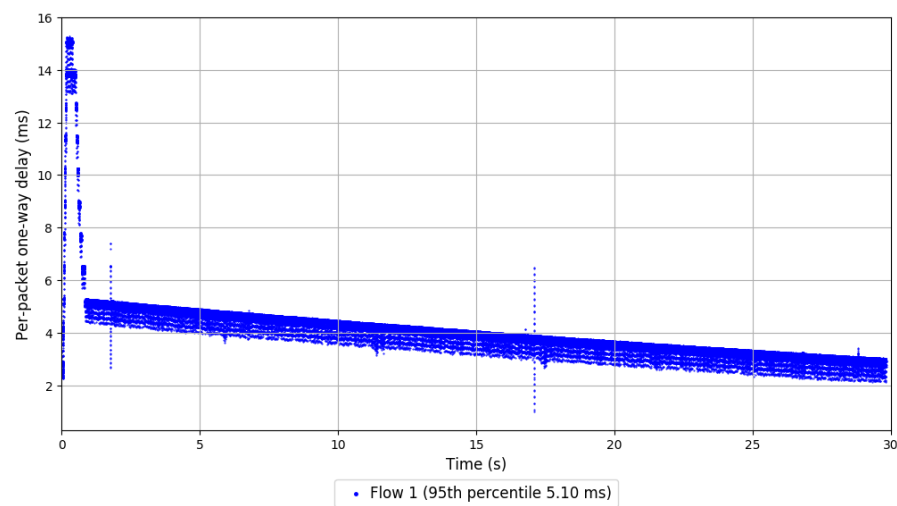
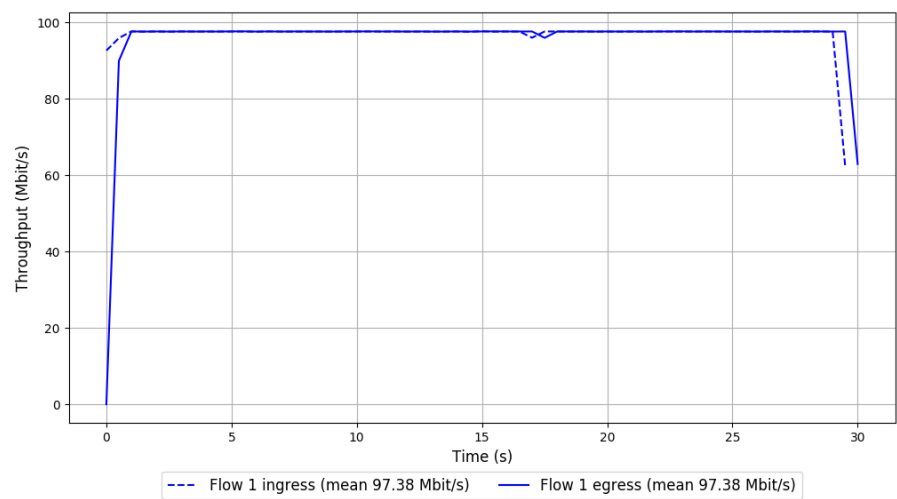


```
Run 1: Statistics of Indigo

Start at: 2018-11-15 01:59:43
End at: 2018-11-15 02:00:13
Local clock offset: -1.192 ms
Remote clock offset: 0.106 ms

# Below is generated by plot.py at 2018-11-15 03:40:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.38 Mbit/s
95th percentile per-packet one-way delay: 5.101 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 97.38 Mbit/s
95th percentile per-packet one-way delay: 5.101 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2018-11-15 02:19:46

End at: 2018-11-15 02:20:17

Local clock offset: -8.085 ms

Remote clock offset: 0.267 ms

Below is generated by plot.py at 2018-11-15 03:41:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.33 Mbit/s

95th percentile per-packet one-way delay: 6.045 ms

Loss rate: 0.00%

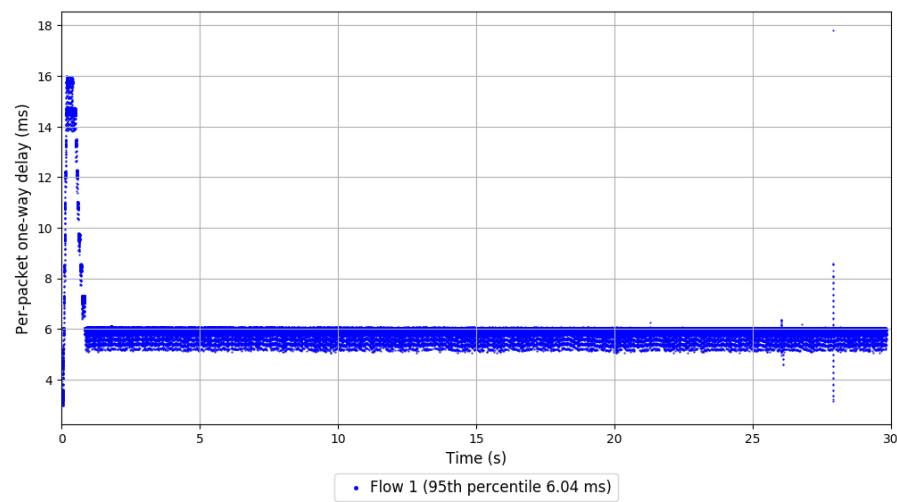
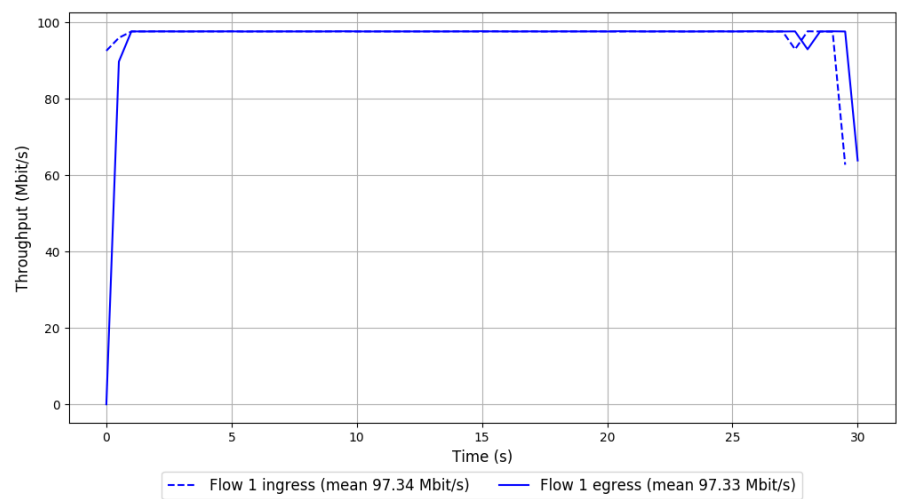
-- Flow 1:

Average throughput: 97.33 Mbit/s

95th percentile per-packet one-way delay: 6.045 ms

Loss rate: 0.00%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2018-11-15 02:39:50

End at: 2018-11-15 02:40:20

Local clock offset: -5.289 ms

Remote clock offset: 0.432 ms

Below is generated by plot.py at 2018-11-15 03:41:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.41 Mbit/s

95th percentile per-packet one-way delay: 6.192 ms

Loss rate: 0.00%

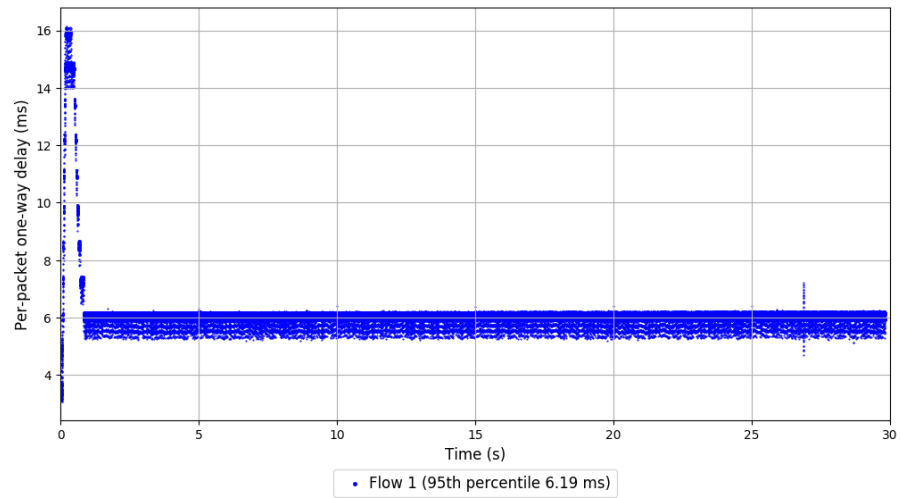
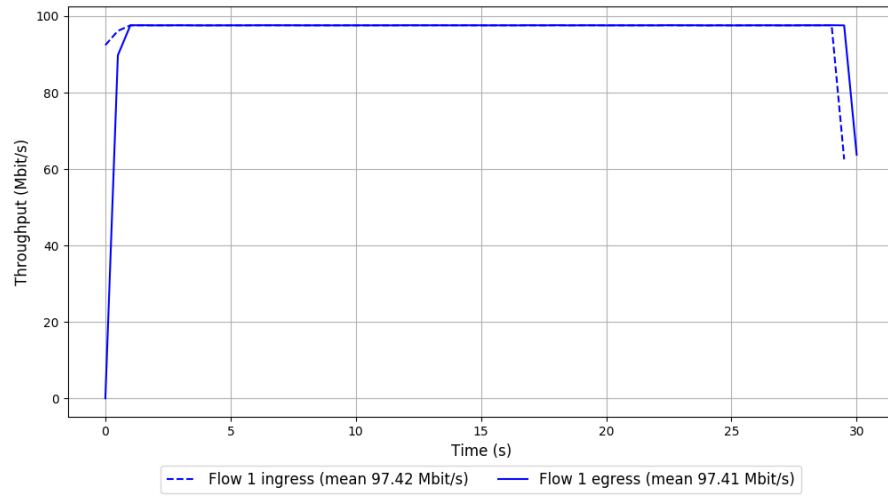
-- Flow 1:

Average throughput: 97.41 Mbit/s

95th percentile per-packet one-way delay: 6.192 ms

Loss rate: 0.00%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2018-11-15 02:59:48

End at: 2018-11-15 03:00:18

Local clock offset: -5.868 ms

Remote clock offset: 0.407 ms

Below is generated by plot.py at 2018-11-15 03:41:55

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.06 Mbit/s

95th percentile per-packet one-way delay: 3.471 ms

Loss rate: 0.00%

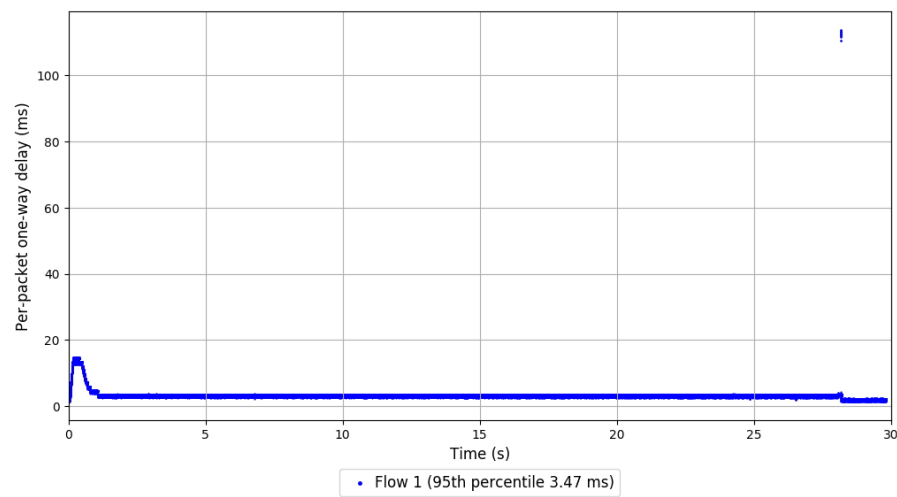
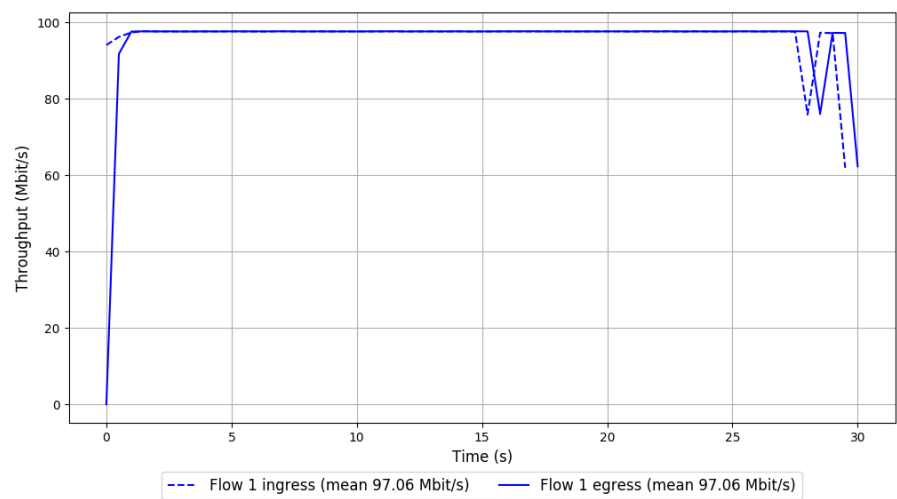
-- Flow 1:

Average throughput: 97.06 Mbit/s

95th percentile per-packet one-way delay: 3.471 ms

Loss rate: 0.00%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2018-11-15 03:19:49

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

Local clock offset: -7.497 ms

Remote clock offset: 0.43 ms

Below is generated by plot.py at 2018-11-15 03:42:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.40 Mbit/s

95th percentile per-packet one-way delay: 5.260 ms

Loss rate: 0.00%

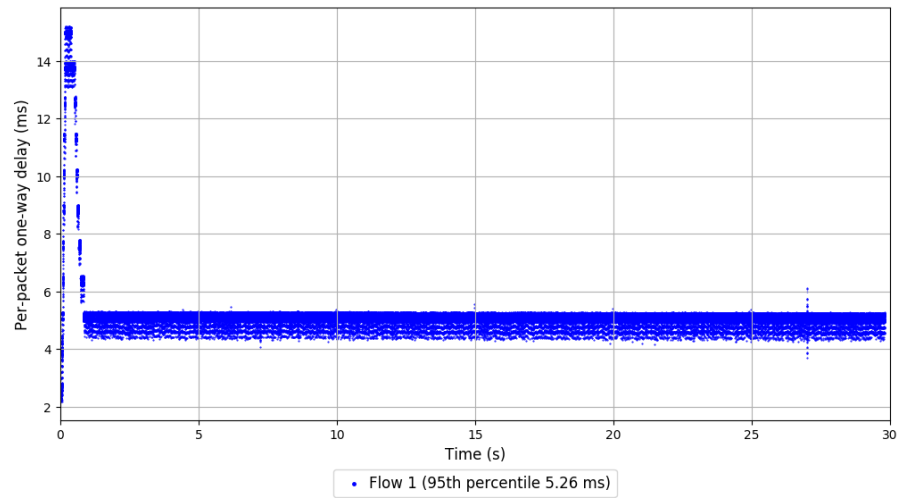
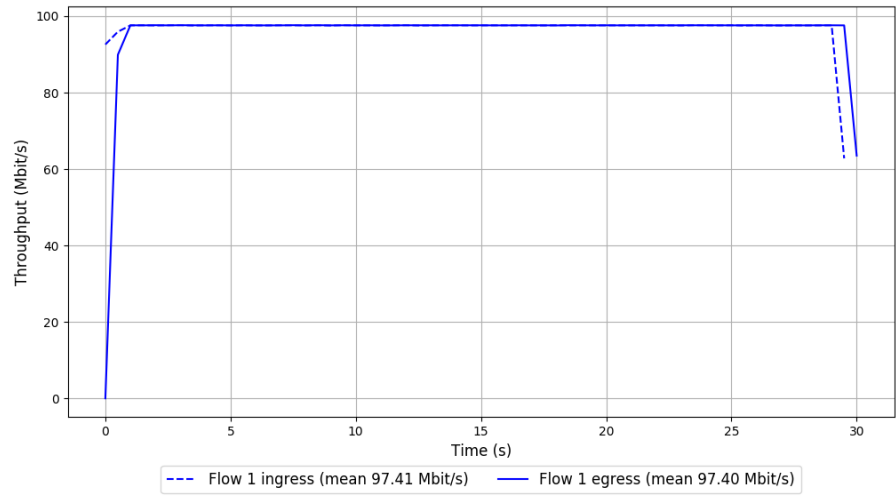
-- Flow 1:

Average throughput: 97.40 Mbit/s

95th percentile per-packet one-way delay: 5.260 ms

Loss rate: 0.00%

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-96d2da3

Start at: 2018-11-15 02:03:09

End at: 2018-11-15 02:03:39

Local clock offset: -7.462 ms

Remote clock offset: 0.168 ms

Below is generated by plot.py at 2018-11-15 03:42:05

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.70 Mbit/s

95th percentile per-packet one-way delay: 3.495 ms

Loss rate: 0.00%

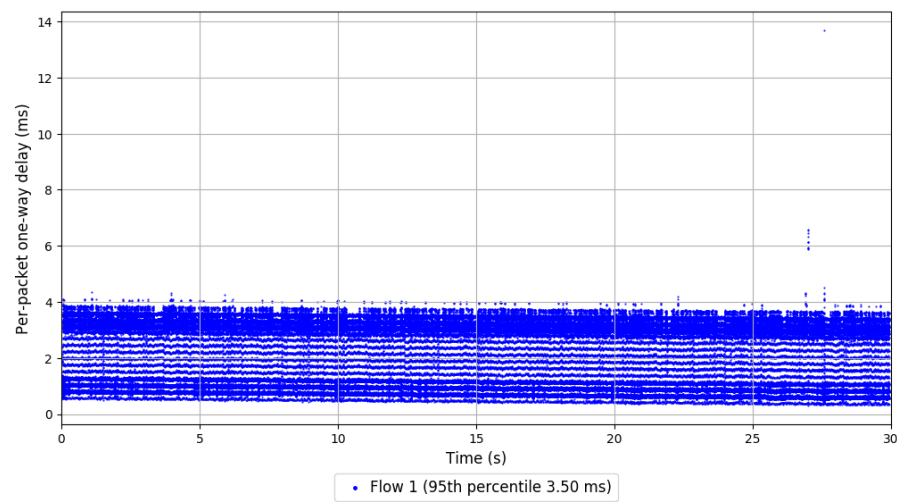
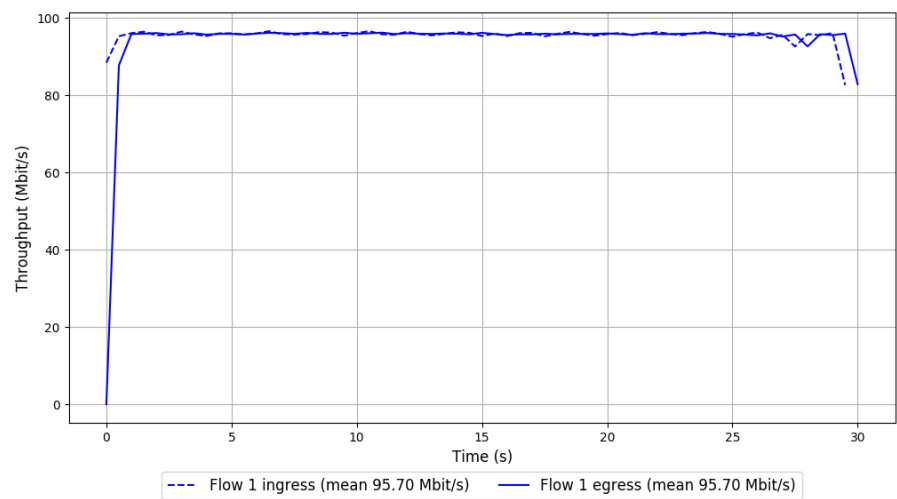
-- Flow 1:

Average throughput: 95.70 Mbit/s

95th percentile per-packet one-way delay: 3.495 ms

Loss rate: 0.00%

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



Run 2: Statistics of Indigo-96d2da3

Start at: 2018-11-15 02:23:12

End at: 2018-11-15 02:23:42

Local clock offset: -8.33 ms

Remote clock offset: 0.332 ms

Below is generated by plot.py at 2018-11-15 03:42:05

Datalink statistics

-- Total of 1 flow:

Average throughput: 93.78 Mbit/s

95th percentile per-packet one-way delay: 4.607 ms

Loss rate: 0.00%

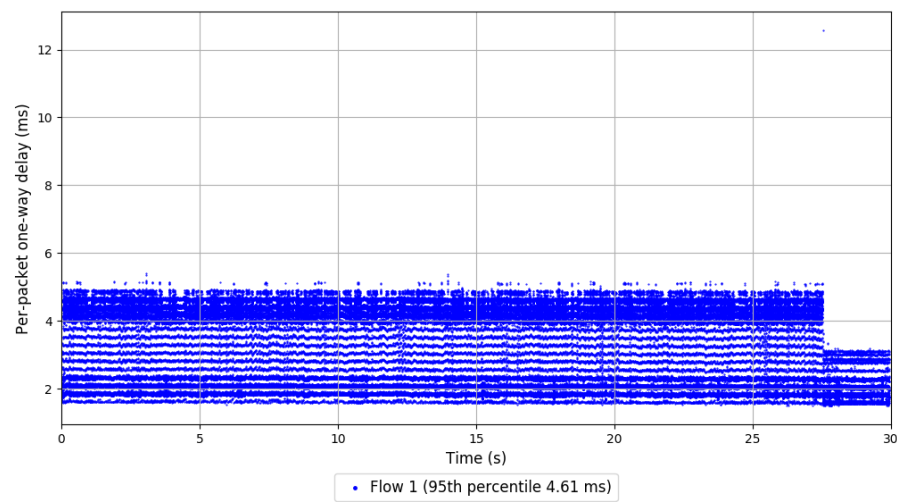
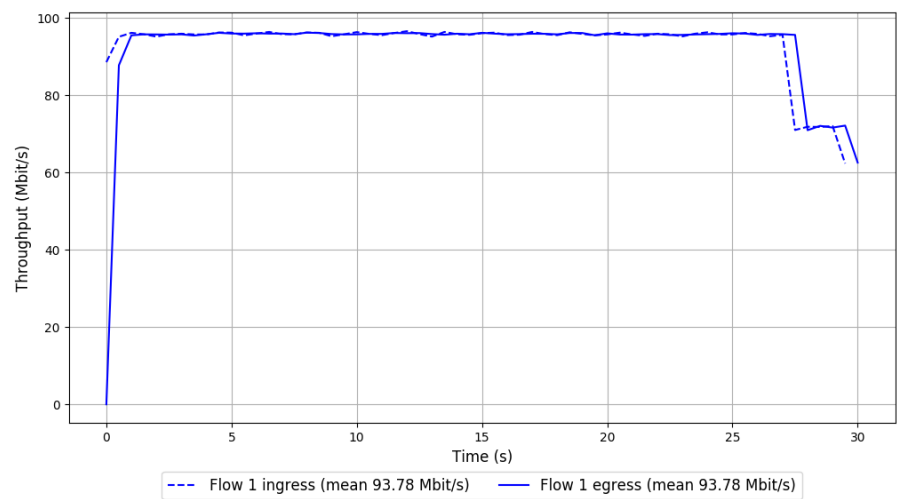
-- Flow 1:

Average throughput: 93.78 Mbit/s

95th percentile per-packet one-way delay: 4.607 ms

Loss rate: 0.00%

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



Run 3: Statistics of Indigo-96d2da3

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

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

Local clock offset: -5.117 ms

Remote clock offset: 0.452 ms

Below is generated by plot.py at 2018-11-15 03:42:05

Datalink statistics

-- Total of 1 flow:

Average throughput: 71.91 Mbit/s

95th percentile per-packet one-way delay: 2.953 ms

Loss rate: 0.00%

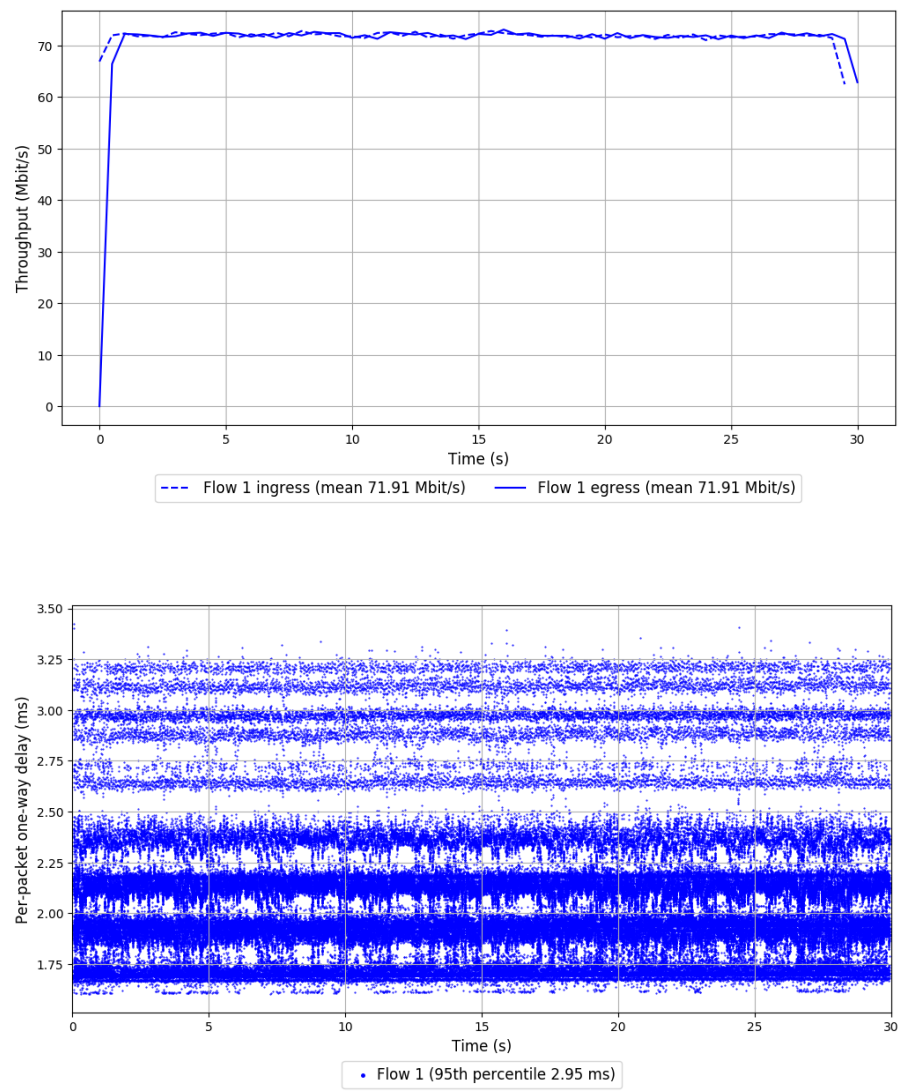
-- Flow 1:

Average throughput: 71.91 Mbit/s

95th percentile per-packet one-way delay: 2.953 ms

Loss rate: 0.00%

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



Run 4: Statistics of Indigo-96d2da3

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

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

Local clock offset: -5.686 ms

Remote clock offset: 0.429 ms

Below is generated by plot.py at 2018-11-15 03:42:07

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.30 Mbit/s

95th percentile per-packet one-way delay: 8.395 ms

Loss rate: 0.00%

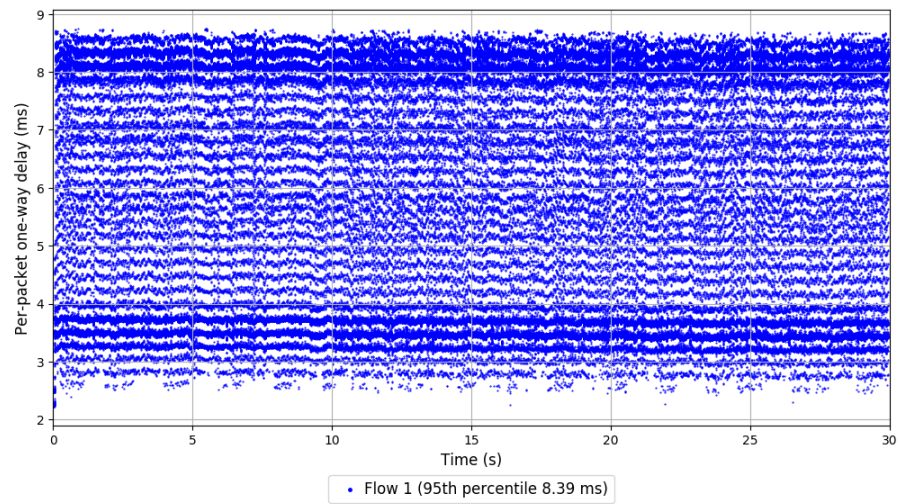
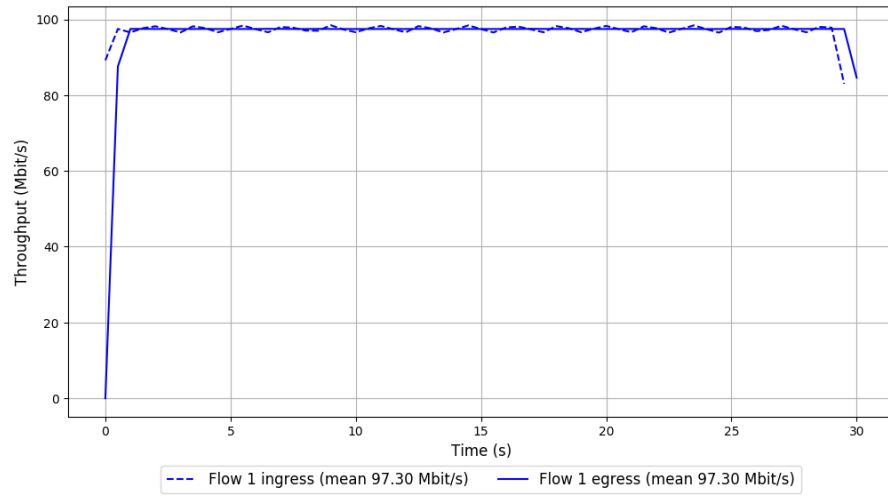
-- Flow 1:

Average throughput: 97.30 Mbit/s

95th percentile per-packet one-way delay: 8.395 ms

Loss rate: 0.00%

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



Run 5: Statistics of Indigo-96d2da3

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

End at: 2018-11-15 03:23:45

Local clock offset: -8.594 ms

Remote clock offset: 0.45 ms

Below is generated by plot.py at 2018-11-15 03:42:52

Datalink statistics

-- Total of 1 flow:

Average throughput: 87.74 Mbit/s

95th percentile per-packet one-way delay: 4.705 ms

Loss rate: 0.00%

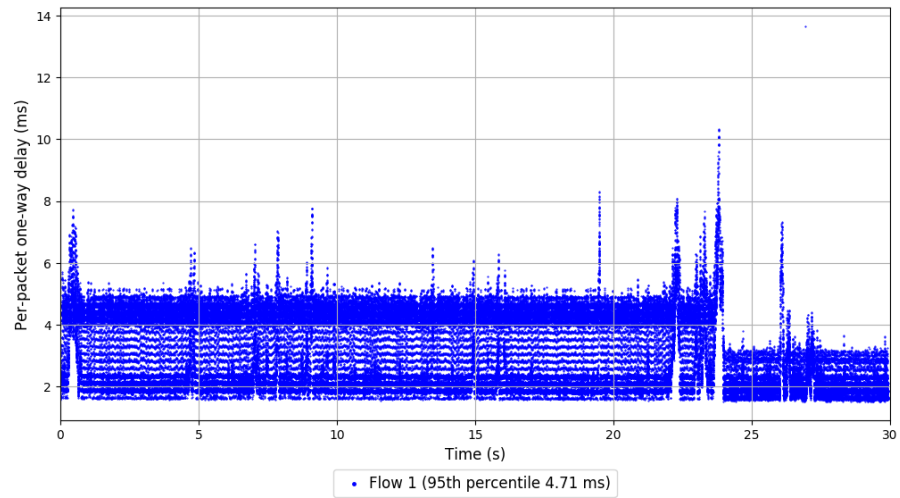
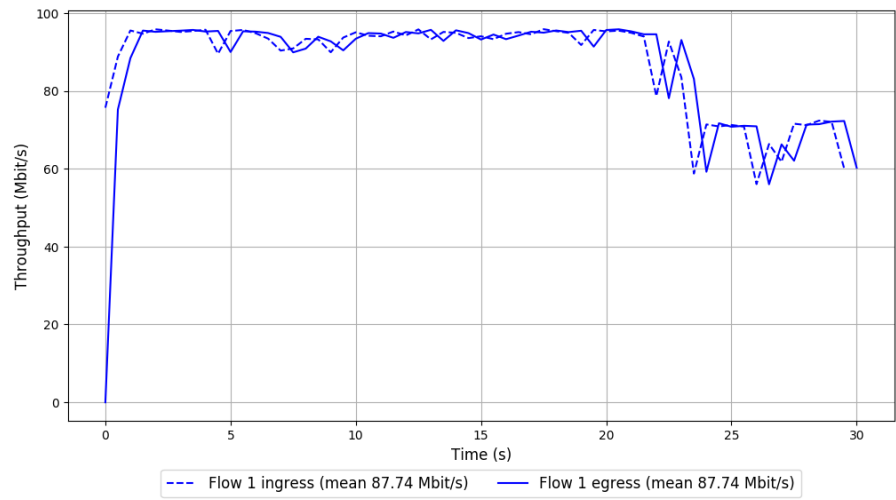
-- Flow 1:

Average throughput: 87.74 Mbit/s

95th percentile per-packet one-way delay: 4.705 ms

Loss rate: 0.00%

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

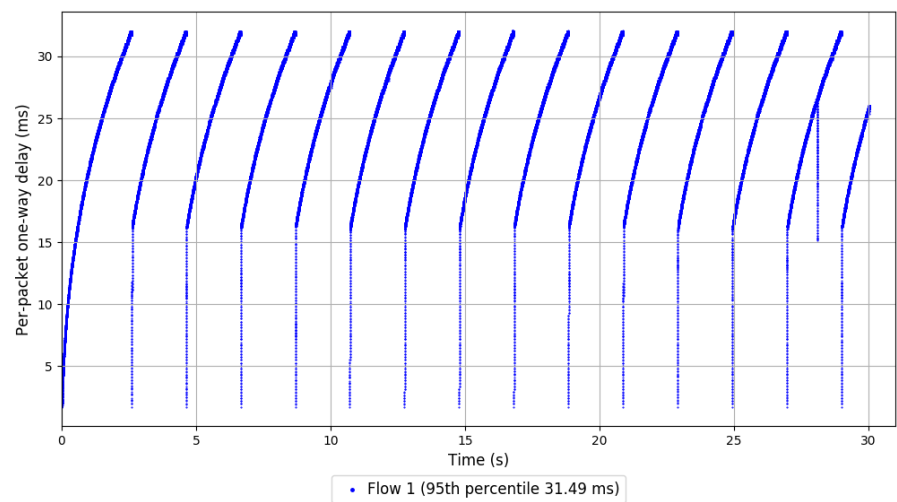
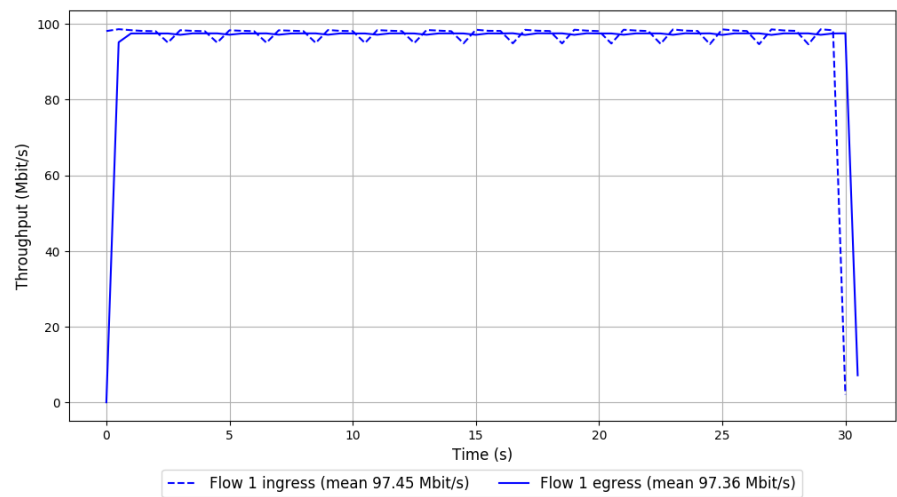


```
Run 1: Statistics of LEDBAT

Start at: 2018-11-15 02:06:28
End at: 2018-11-15 02:06:58
Local clock offset: -8.157 ms
Remote clock offset: 0.254 ms

# Below is generated by plot.py at 2018-11-15 03:43:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.36 Mbit/s
95th percentile per-packet one-way delay: 31.490 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.36 Mbit/s
95th percentile per-packet one-way delay: 31.490 ms
Loss rate: 0.01%
```

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2018-11-15 02:26:32

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

Local clock offset: -8.632 ms

Remote clock offset: 0.351 ms

Below is generated by plot.py at 2018-11-15 03:43:06

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.35 Mbit/s

95th percentile per-packet one-way delay: 31.503 ms

Loss rate: 0.01%

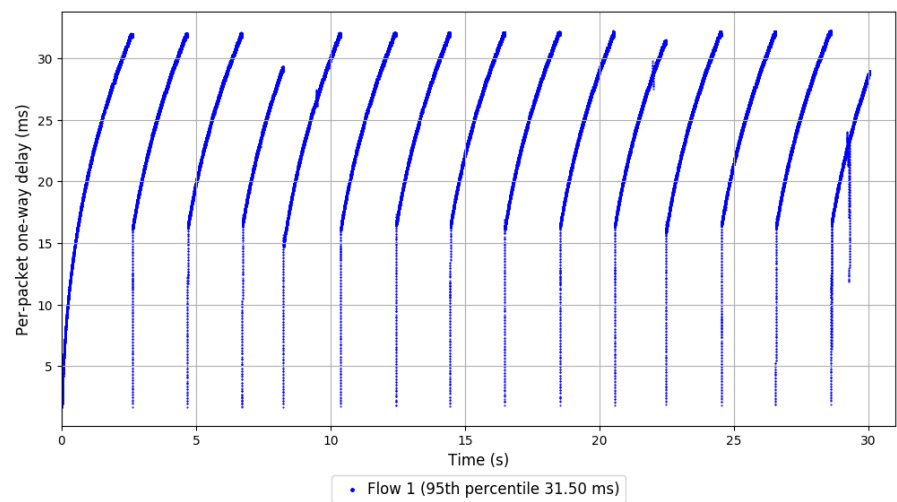
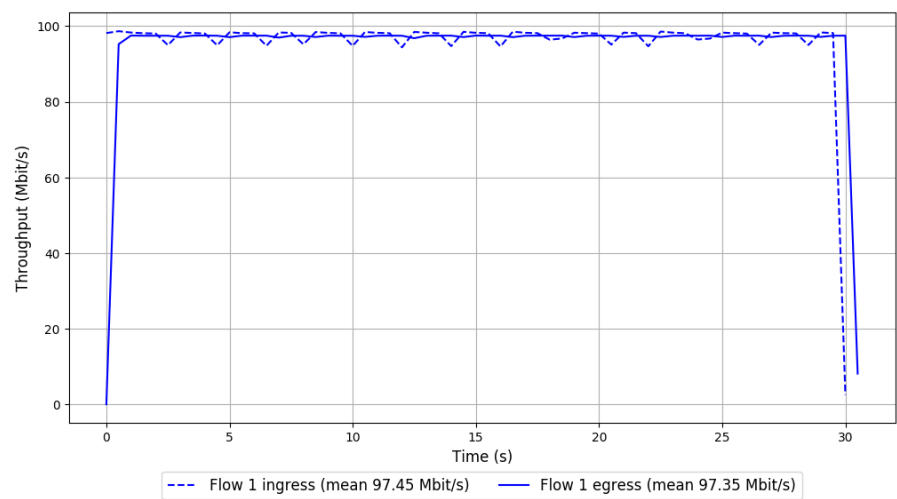
-- Flow 1:

Average throughput: 97.35 Mbit/s

95th percentile per-packet one-way delay: 31.503 ms

Loss rate: 0.01%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-11-15 02:46:33

End at: 2018-11-15 02:47:03

Local clock offset: -5.048 ms

Remote clock offset: 0.422 ms

Below is generated by plot.py at 2018-11-15 03:43:07

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.24 Mbit/s

95th percentile per-packet one-way delay: 32.883 ms

Loss rate: 0.08%

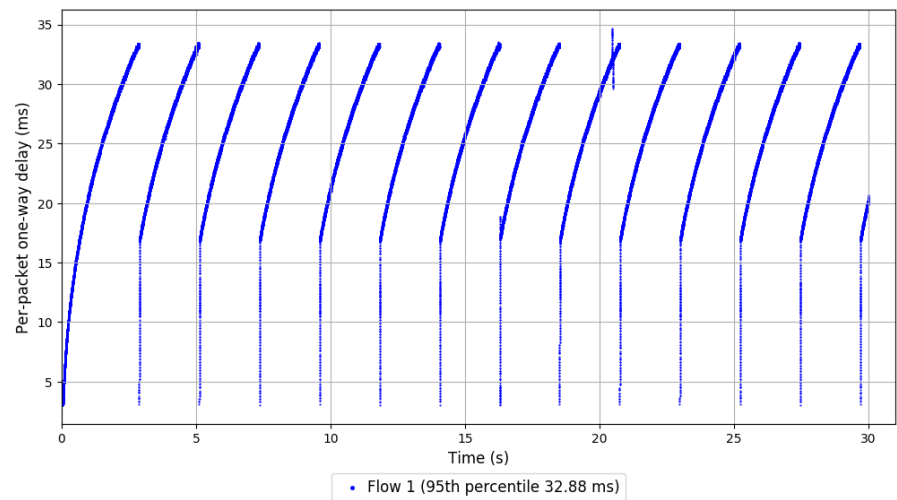
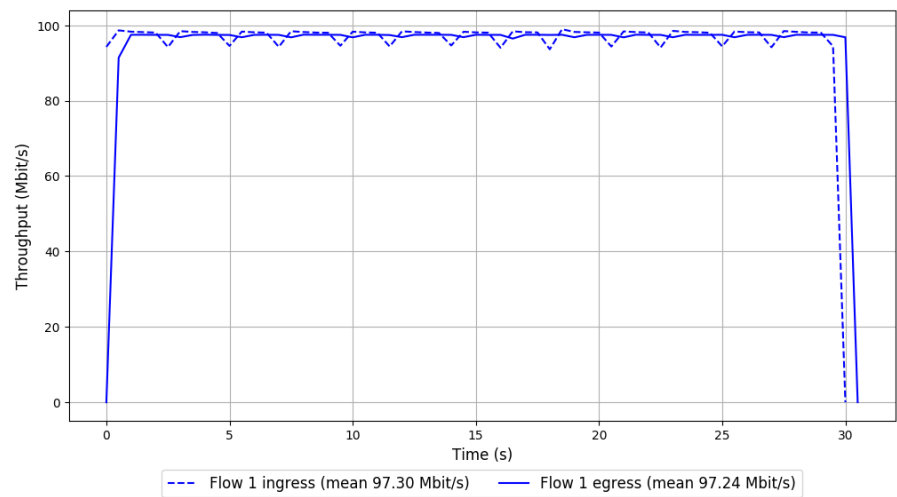
-- Flow 1:

Average throughput: 97.24 Mbit/s

95th percentile per-packet one-way delay: 32.883 ms

Loss rate: 0.08%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-11-15 03:06:33

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

Local clock offset: -6.246 ms

Remote clock offset: 0.39 ms

Below is generated by plot.py at 2018-11-15 03:43:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.21 Mbit/s

95th percentile per-packet one-way delay: 32.086 ms

Loss rate: 0.01%

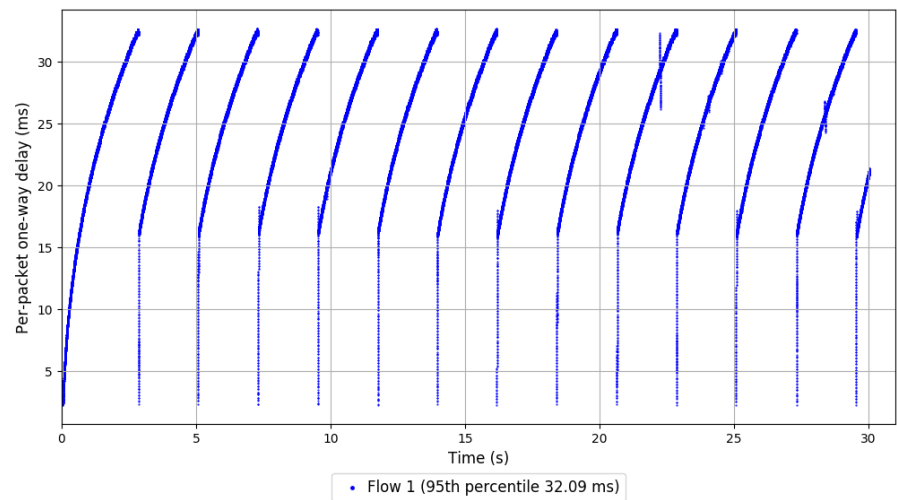
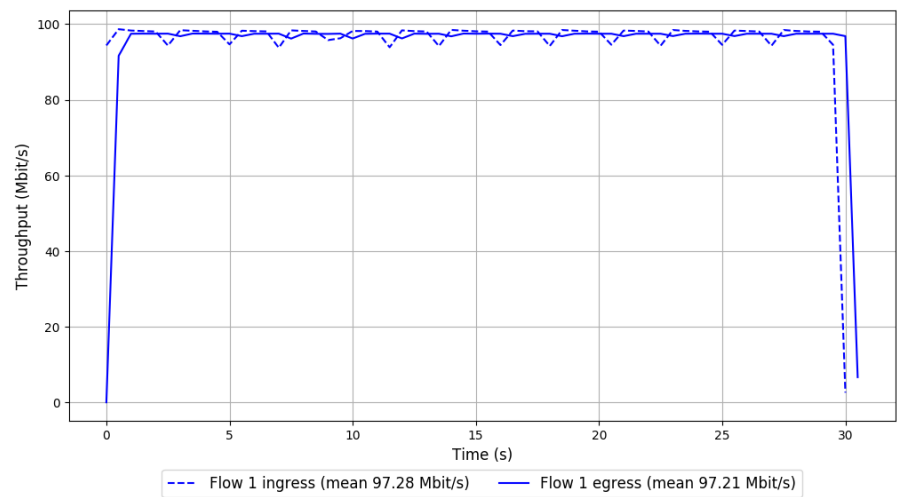
-- Flow 1:

Average throughput: 97.21 Mbit/s

95th percentile per-packet one-way delay: 32.086 ms

Loss rate: 0.01%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-11-15 03:26:34

End at: 2018-11-15 03:27:04

Local clock offset: -8.029 ms

Remote clock offset: 0.446 ms

Below is generated by plot.py at 2018-11-15 03:43:18

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.34 Mbit/s

95th percentile per-packet one-way delay: 30.866 ms

Loss rate: 0.01%

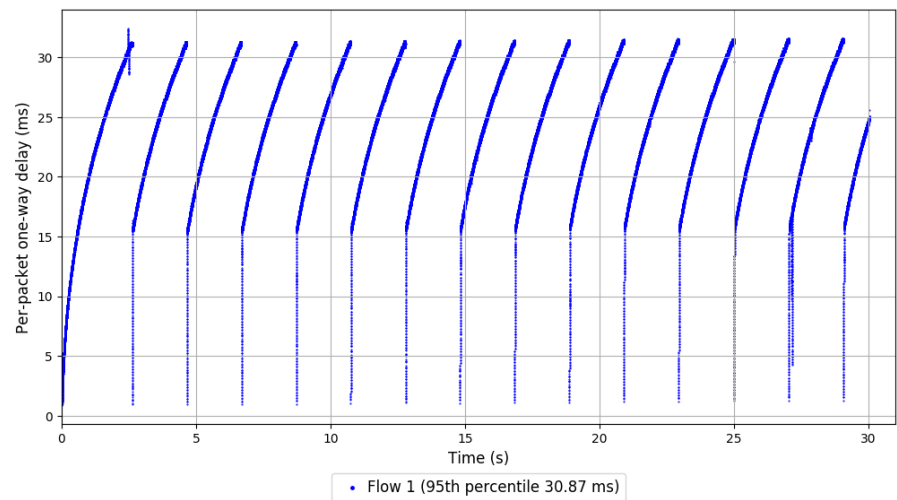
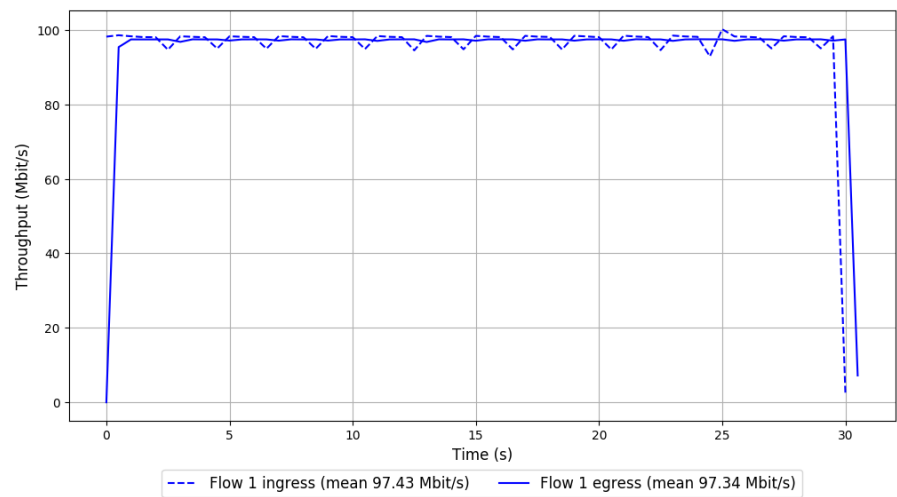
-- Flow 1:

Average throughput: 97.34 Mbit/s

95th percentile per-packet one-way delay: 30.866 ms

Loss rate: 0.01%

Run 5: Report of LEDBAT — Data Link

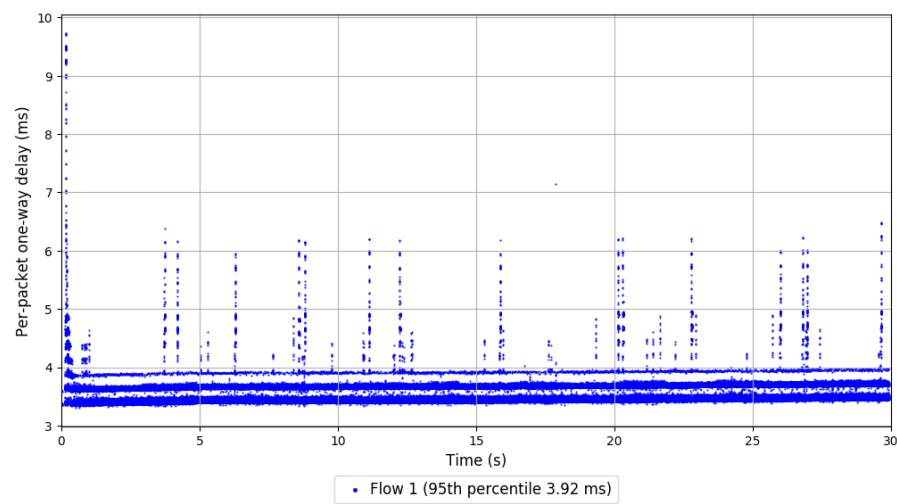
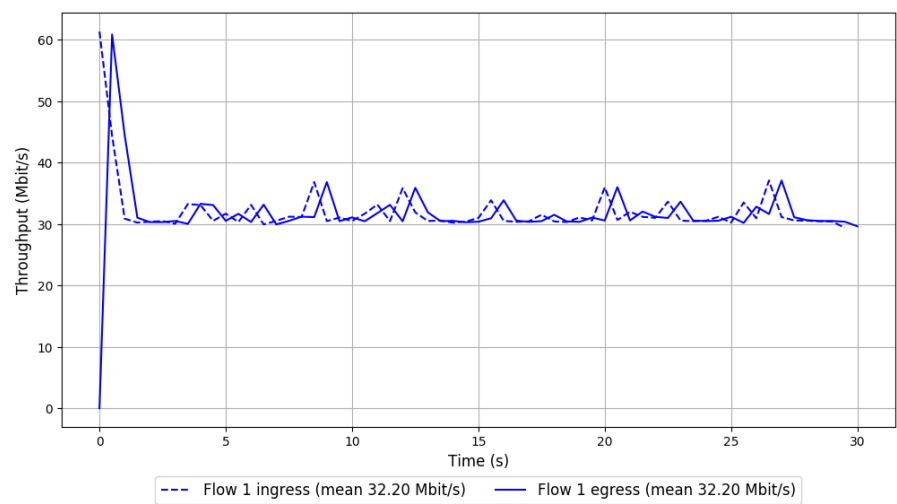


```
Run 1: Statistics of Indigo-Muses

Start at: 2018-11-15 01:57:28
End at: 2018-11-15 01:57:58
Local clock offset: -2.858 ms
Remote clock offset: 0.173 ms

# Below is generated by plot.py at 2018-11-15 03:43:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 32.20 Mbit/s
95th percentile per-packet one-way delay: 3.916 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 32.20 Mbit/s
95th percentile per-packet one-way delay: 3.916 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo-Muses — Data Link



Run 2: Statistics of Indigo-Muses

Start at: 2018-11-15 02:17:31

End at: 2018-11-15 02:18:01

Local clock offset: -8.064 ms

Remote clock offset: 0.25 ms

Below is generated by plot.py at 2018-11-15 03:43:18

Datalink statistics

-- Total of 1 flow:

Average throughput: 52.17 Mbit/s

95th percentile per-packet one-way delay: 2.091 ms

Loss rate: 0.00%

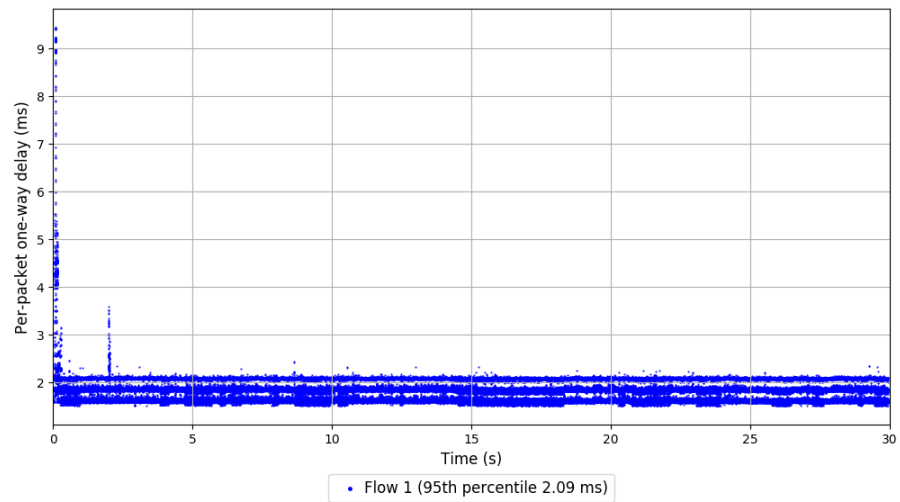
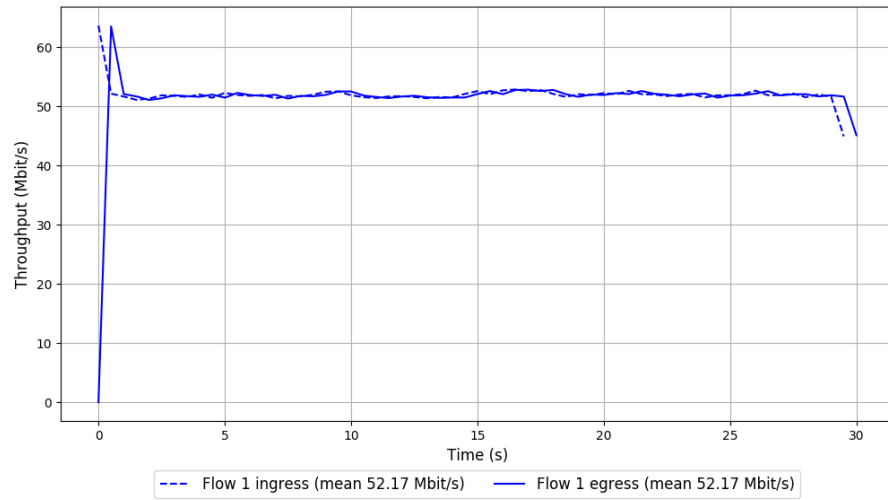
-- Flow 1:

Average throughput: 52.17 Mbit/s

95th percentile per-packet one-way delay: 2.091 ms

Loss rate: 0.00%

Run 2: Report of Indigo-Muses — Data Link



Run 3: Statistics of Indigo-Muses

Start at: 2018-11-15 02:37:35

End at: 2018-11-15 02:38:05

Local clock offset: -5.517 ms

Remote clock offset: 0.352 ms

Below is generated by plot.py at 2018-11-15 03:43:18

Datalink statistics

-- Total of 1 flow:

Average throughput: 52.18 Mbit/s

95th percentile per-packet one-way delay: 2.168 ms

Loss rate: 0.00%

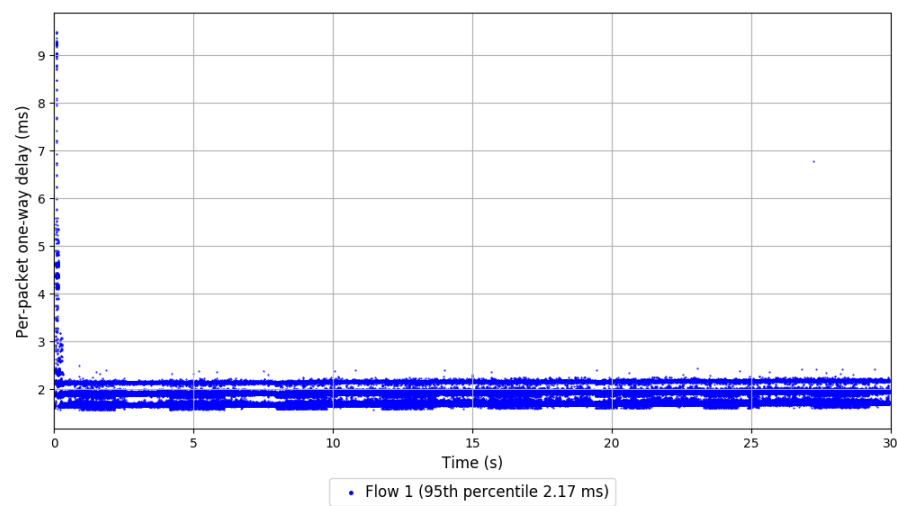
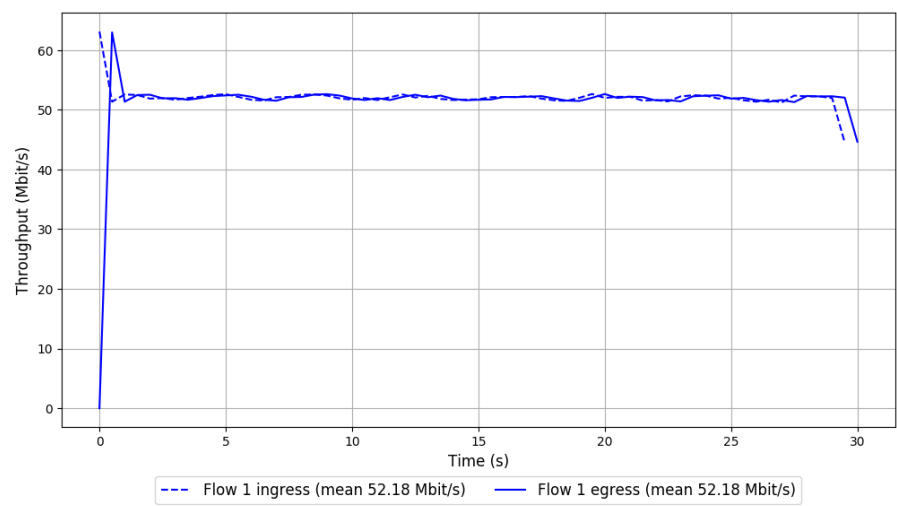
-- Flow 1:

Average throughput: 52.18 Mbit/s

95th percentile per-packet one-way delay: 2.168 ms

Loss rate: 0.00%

Run 3: Report of Indigo-Muses — Data Link



Run 4: Statistics of Indigo-Muses

Start at: 2018-11-15 02:57:35

End at: 2018-11-15 02:58:05

Local clock offset: -5.525 ms

Remote clock offset: 0.47 ms

Below is generated by plot.py at 2018-11-15 03:43:18

Datalink statistics

-- Total of 1 flow:

Average throughput: 34.96 Mbit/s

95th percentile per-packet one-way delay: 4.105 ms

Loss rate: 0.00%

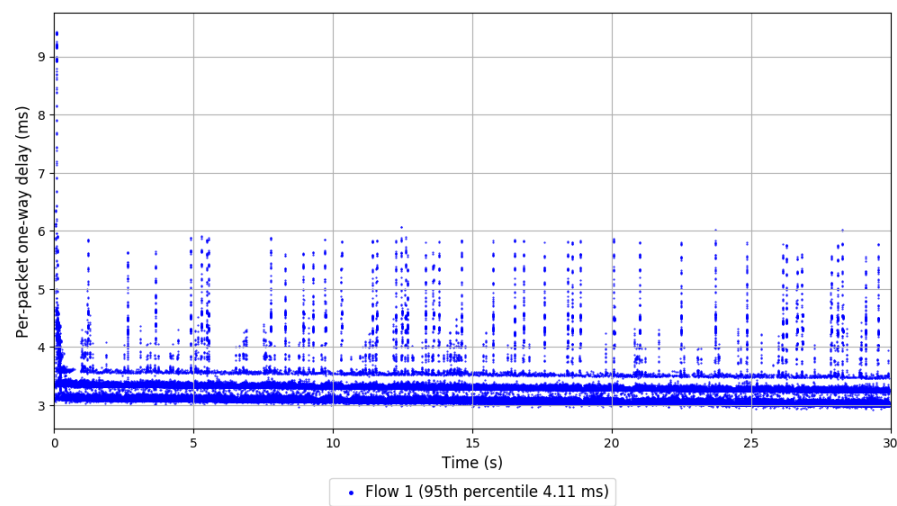
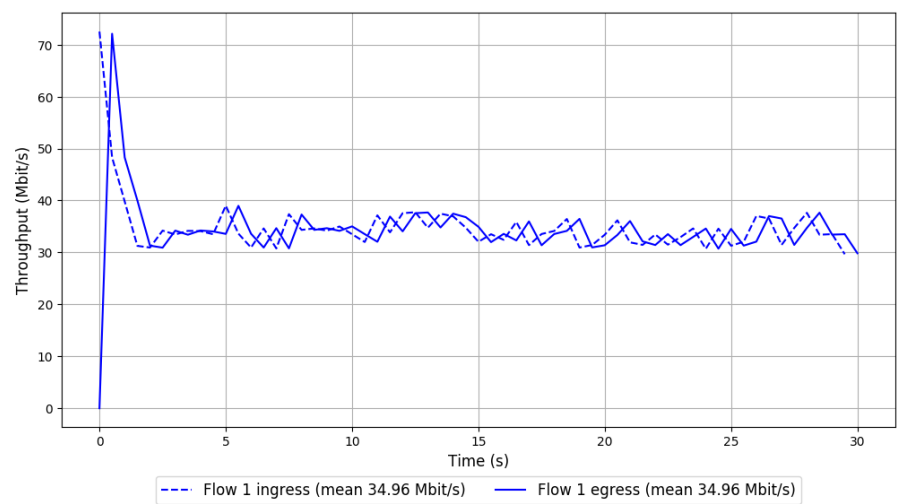
-- Flow 1:

Average throughput: 34.96 Mbit/s

95th percentile per-packet one-way delay: 4.105 ms

Loss rate: 0.00%

Run 4: Report of Indigo-Muses — Data Link



Run 5: Statistics of Indigo-Muses

Start at: 2018-11-15 03:17:36

End at: 2018-11-15 03:18:06

Local clock offset: -7.271 ms

Remote clock offset: 0.504 ms

Below is generated by plot.py at 2018-11-15 03:43:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 50.99 Mbit/s

95th percentile per-packet one-way delay: 1.320 ms

Loss rate: 0.00%

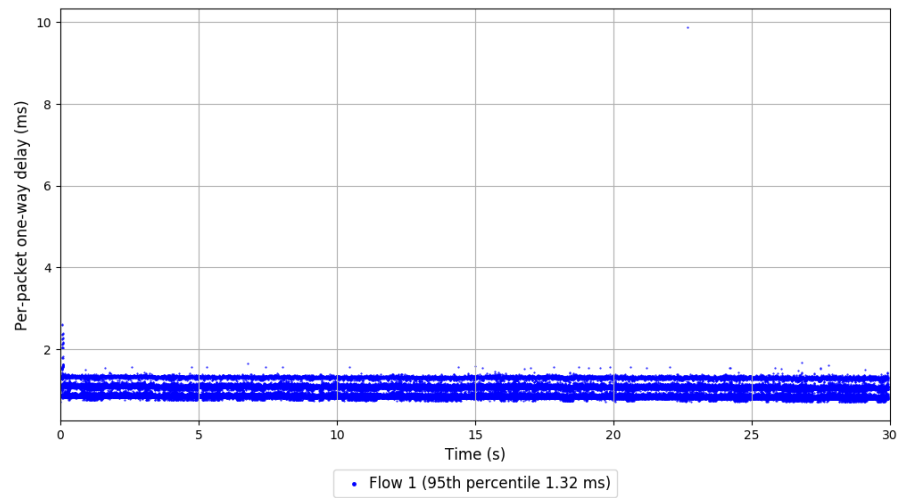
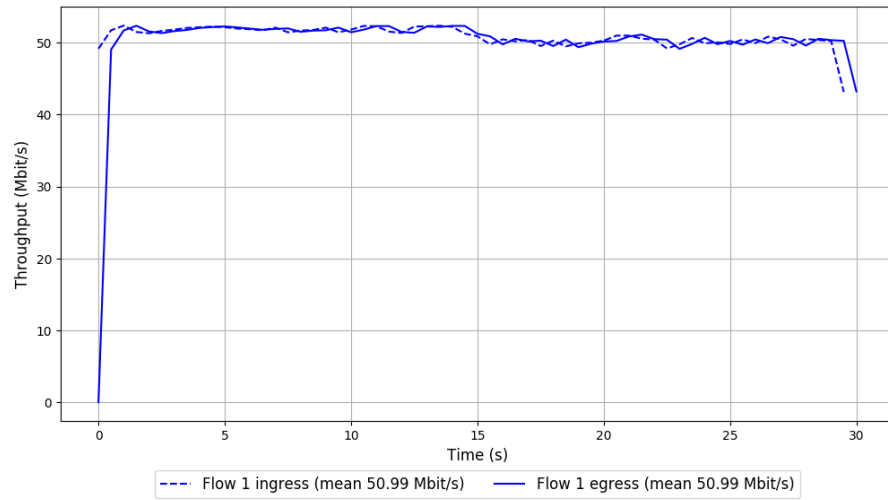
-- Flow 1:

Average throughput: 50.99 Mbit/s

95th percentile per-packet one-way delay: 1.320 ms

Loss rate: 0.00%

Run 5: Report of Indigo-Muses — Data Link

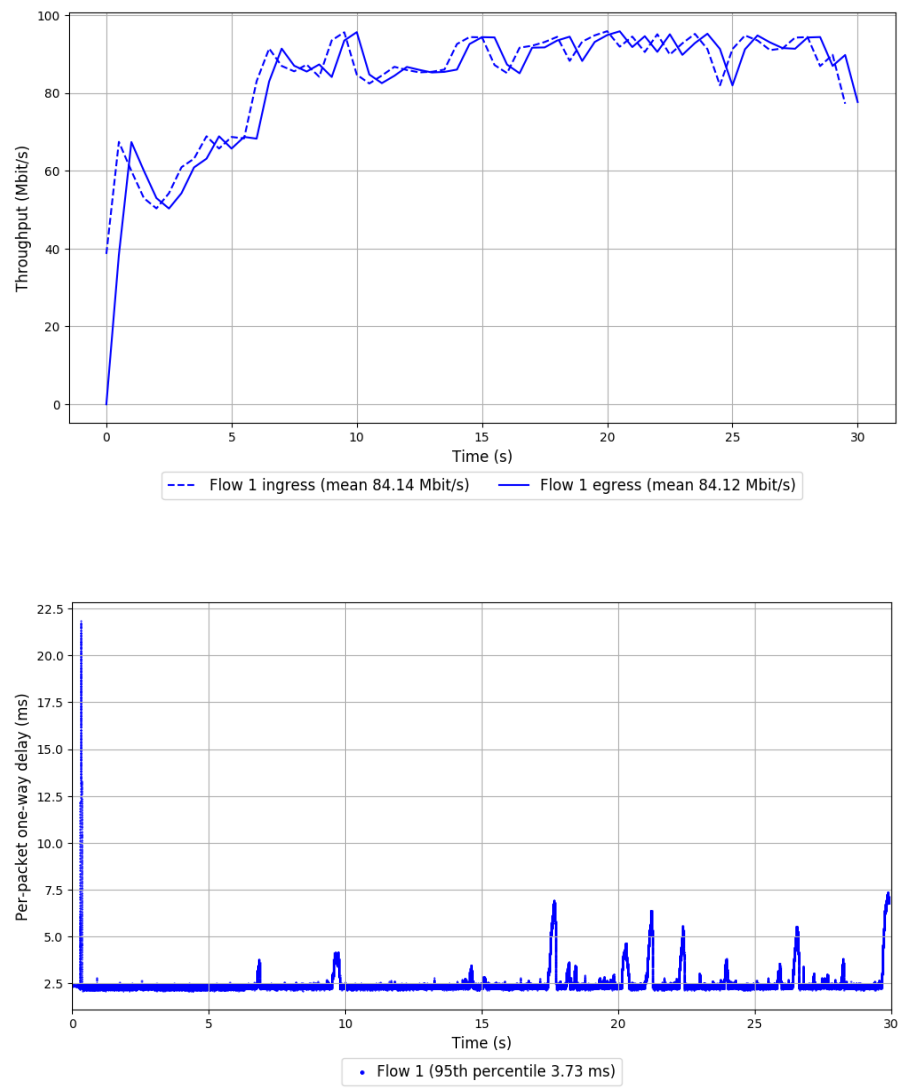


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-11-15 02:16:25
End at: 2018-11-15 02:16:55
Local clock offset: -7.336 ms
Remote clock offset: 0.227 ms

# Below is generated by plot.py at 2018-11-15 03:44:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 84.12 Mbit/s
95th percentile per-packet one-way delay: 3.731 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 84.12 Mbit/s
95th percentile per-packet one-way delay: 3.731 ms
Loss rate: 0.00%
```

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-11-15 02:36:29

End at: 2018-11-15 02:36:59

Local clock offset: -4.899 ms

Remote clock offset: 0.433 ms

Below is generated by plot.py at 2018-11-15 03:44:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 56.96 Mbit/s

95th percentile per-packet one-way delay: 1.182 ms

Loss rate: 0.00%

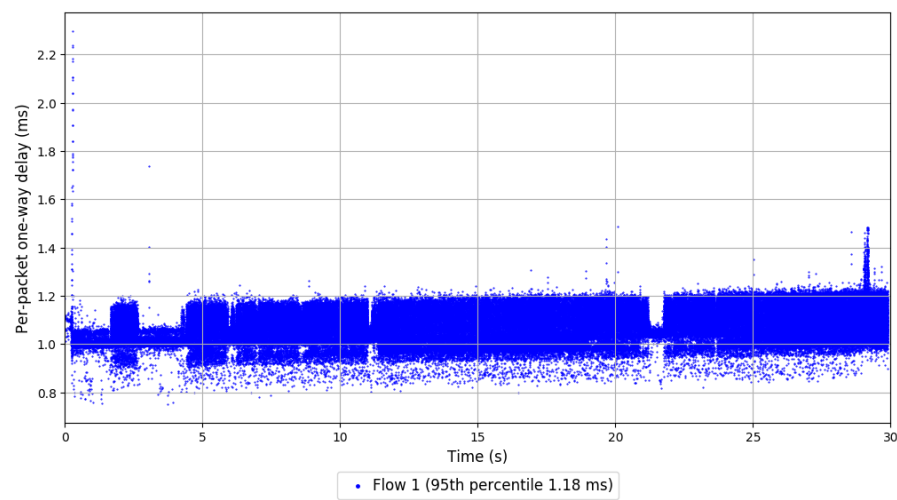
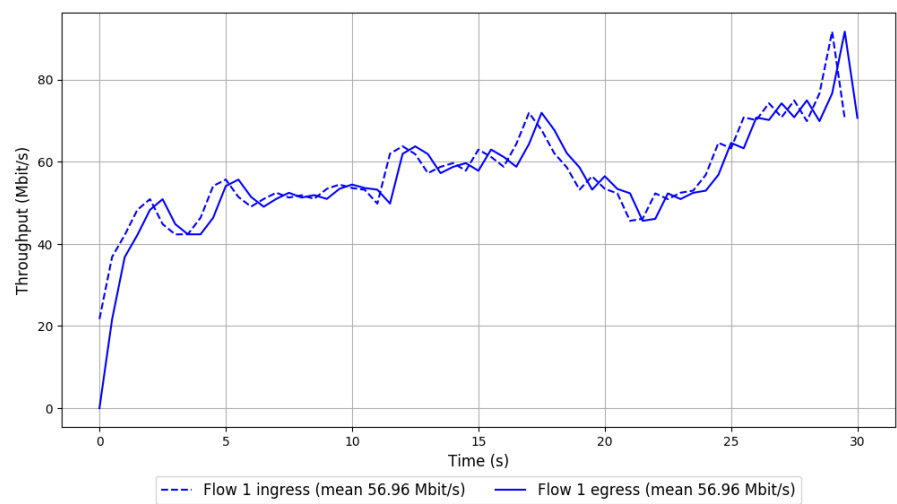
-- Flow 1:

Average throughput: 56.96 Mbit/s

95th percentile per-packet one-way delay: 1.182 ms

Loss rate: 0.00%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-11-15 02:56:29

End at: 2018-11-15 02:56:59

Local clock offset: -5.275 ms

Remote clock offset: 0.437 ms

Below is generated by plot.py at 2018-11-15 03:44:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 52.83 Mbit/s

95th percentile per-packet one-way delay: 1.712 ms

Loss rate: 0.00%

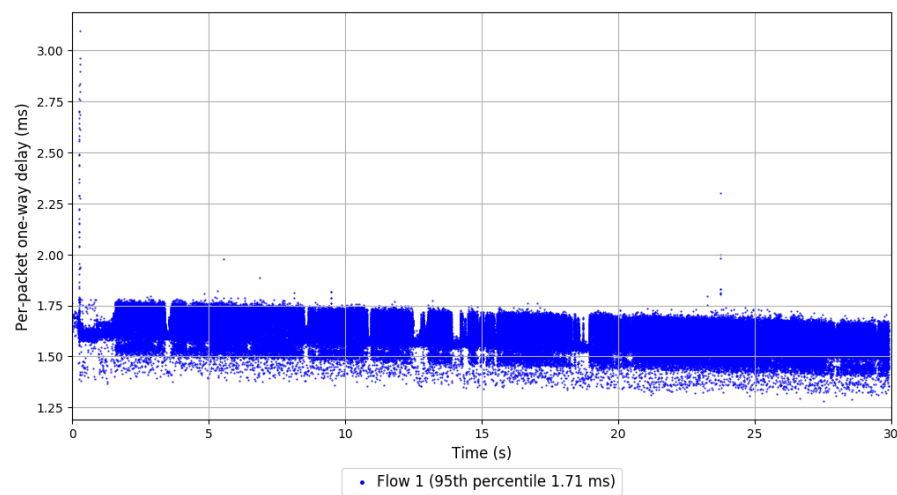
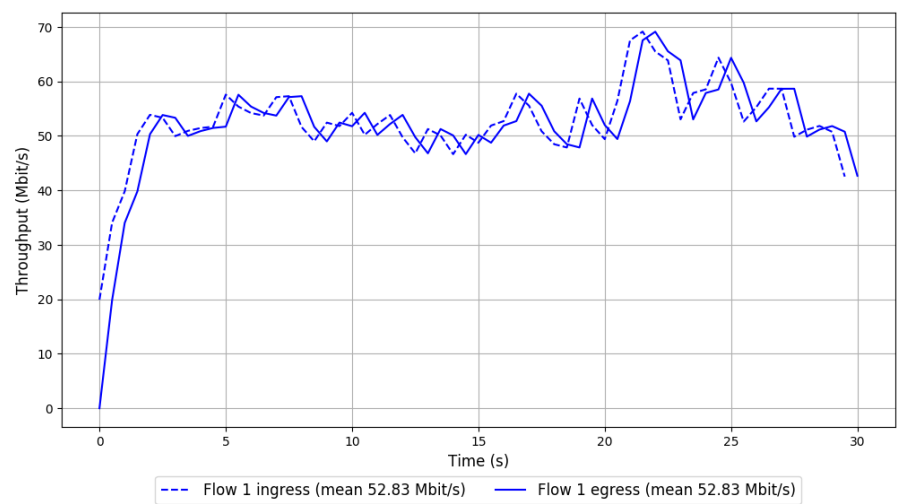
-- Flow 1:

Average throughput: 52.83 Mbit/s

95th percentile per-packet one-way delay: 1.712 ms

Loss rate: 0.00%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-11-15 03:16:29

End at: 2018-11-15 03:16:59

Local clock offset: -7.239 ms

Remote clock offset: 0.462 ms

Below is generated by plot.py at 2018-11-15 03:44:13

Datalink statistics

-- Total of 1 flow:

Average throughput: 82.88 Mbit/s

95th percentile per-packet one-way delay: 3.984 ms

Loss rate: 0.00%

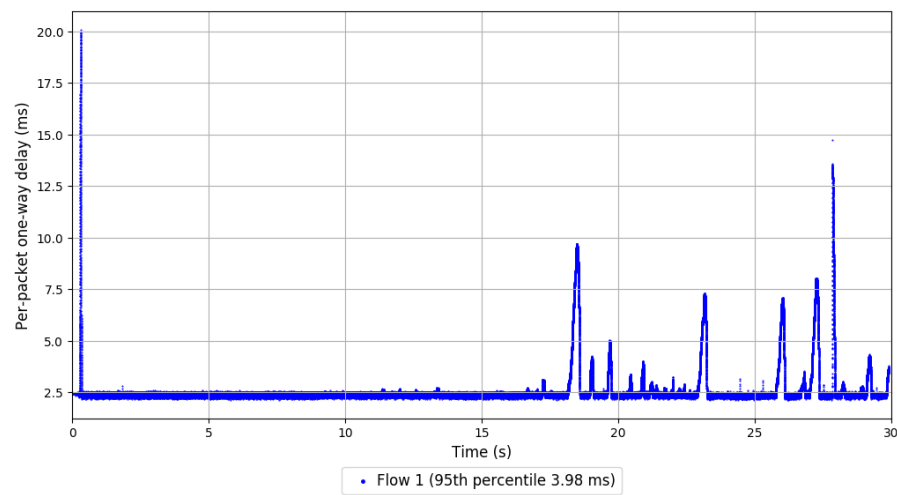
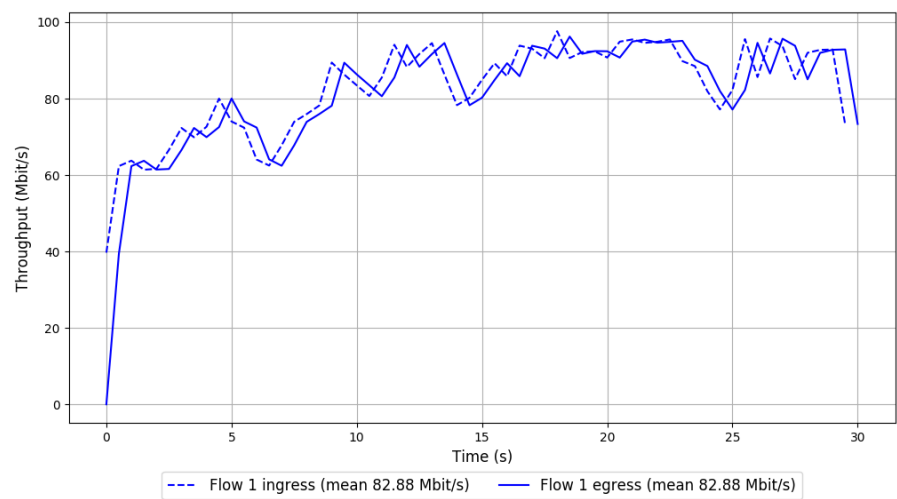
-- Flow 1:

Average throughput: 82.88 Mbit/s

95th percentile per-packet one-way delay: 3.984 ms

Loss rate: 0.00%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-11-15 03:36:31

End at: 2018-11-15 03:37:01

Local clock offset: -4.579 ms

Remote clock offset: 0.389 ms

Below is generated by plot.py at 2018-11-15 03:44:13

Datalink statistics

-- Total of 1 flow:

Average throughput: 59.04 Mbit/s

95th percentile per-packet one-way delay: 2.001 ms

Loss rate: 0.00%

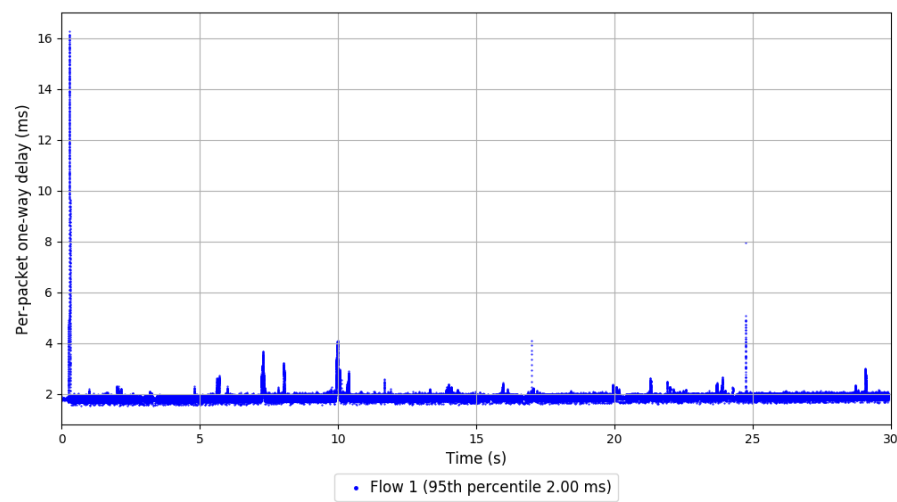
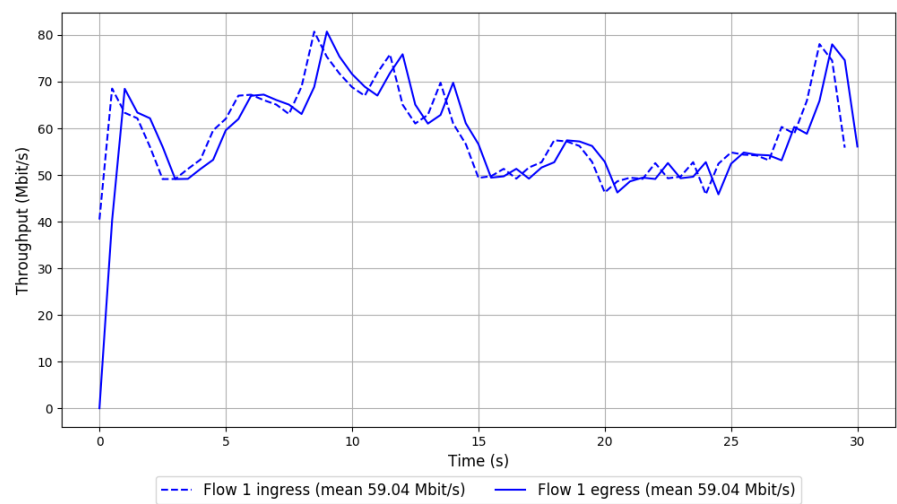
-- Flow 1:

Average throughput: 59.04 Mbit/s

95th percentile per-packet one-way delay: 2.001 ms

Loss rate: 0.00%

Run 5: Report of PCC-Allegro — Data Link

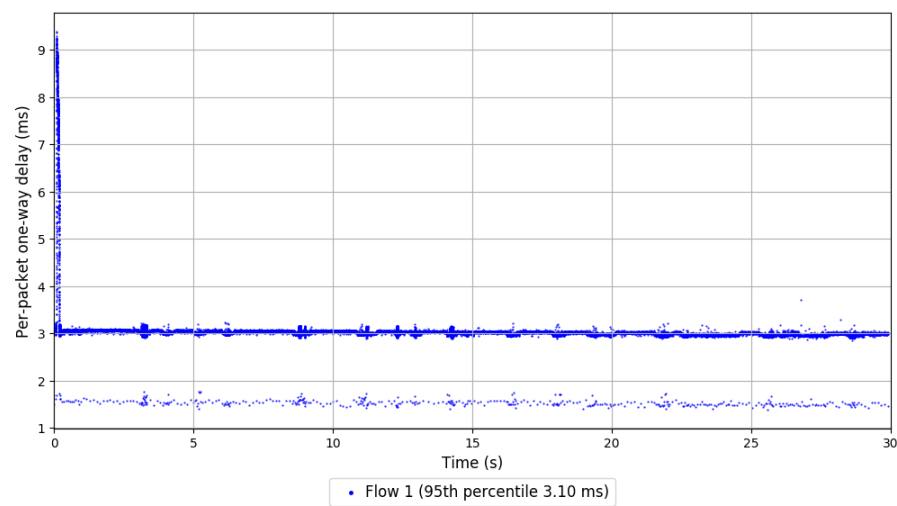
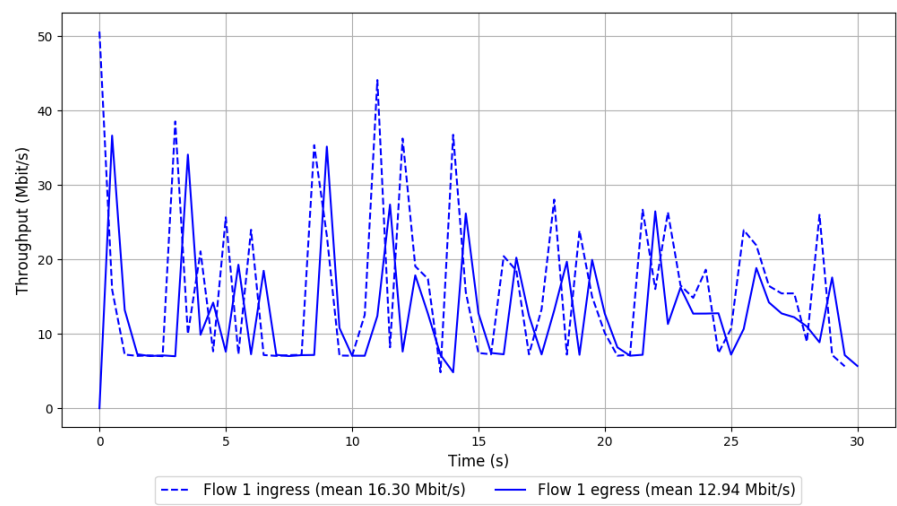


```
Run 1: Statistics of PCC-Expr

Start at: 2018-11-15 02:10:53
End at: 2018-11-15 02:11:23
Local clock offset: -8.35 ms
Remote clock offset: 0.22 ms

# Below is generated by plot.py at 2018-11-15 03:44:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.94 Mbit/s
95th percentile per-packet one-way delay: 3.097 ms
Loss rate: 20.62%
-- Flow 1:
Average throughput: 12.94 Mbit/s
95th percentile per-packet one-way delay: 3.097 ms
Loss rate: 20.62%
```

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2018-11-15 02:30:57

End at: 2018-11-15 02:31:27

Local clock offset: -6.216 ms

Remote clock offset: 0.408 ms

Below is generated by plot.py at 2018-11-15 03:44:13

Datalink statistics

-- Total of 1 flow:

Average throughput: 13.02 Mbit/s

95th percentile per-packet one-way delay: 1.383 ms

Loss rate: 9.18%

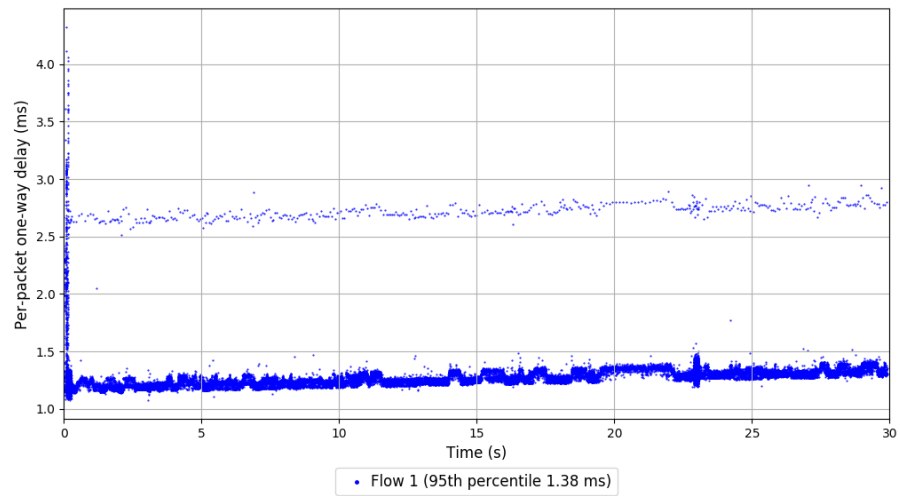
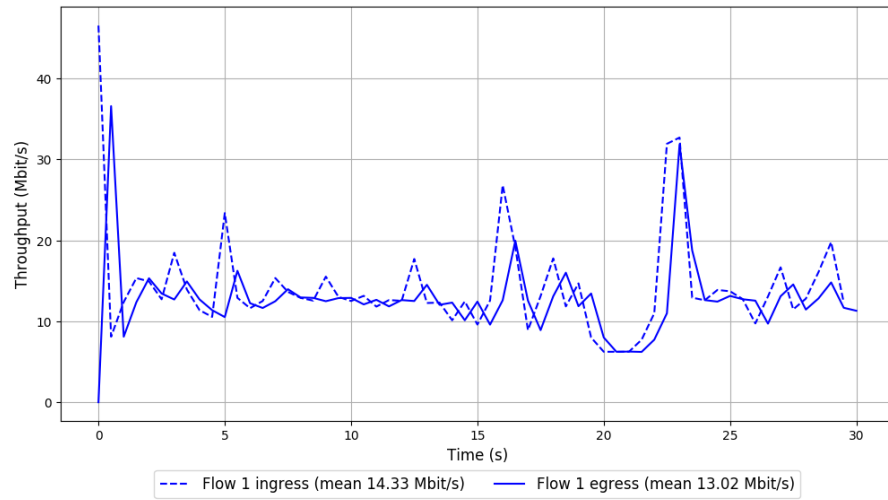
-- Flow 1:

Average throughput: 13.02 Mbit/s

95th percentile per-packet one-way delay: 1.383 ms

Loss rate: 9.18%

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2018-11-15 02:50:59

End at: 2018-11-15 02:51:29

Local clock offset: -4.331 ms

Remote clock offset: 0.397 ms

Below is generated by plot.py at 2018-11-15 03:44:13

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.37 Mbit/s

95th percentile per-packet one-way delay: 2.404 ms

Loss rate: 14.59%

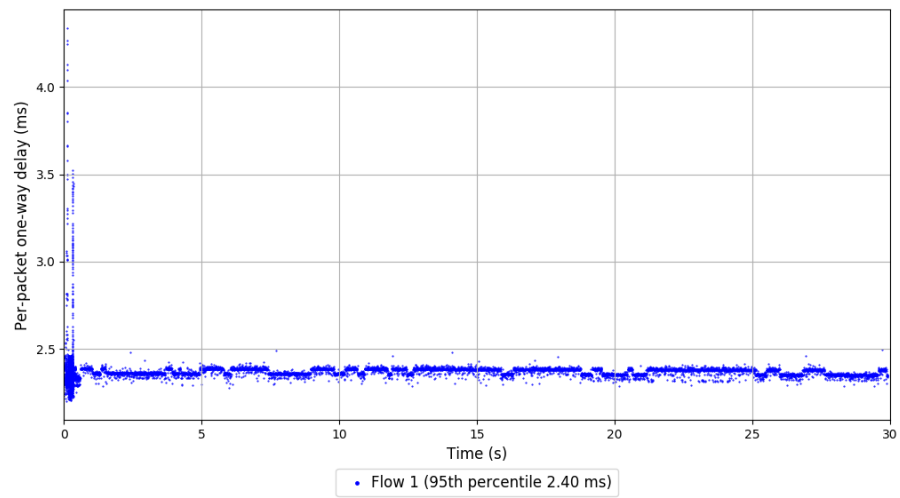
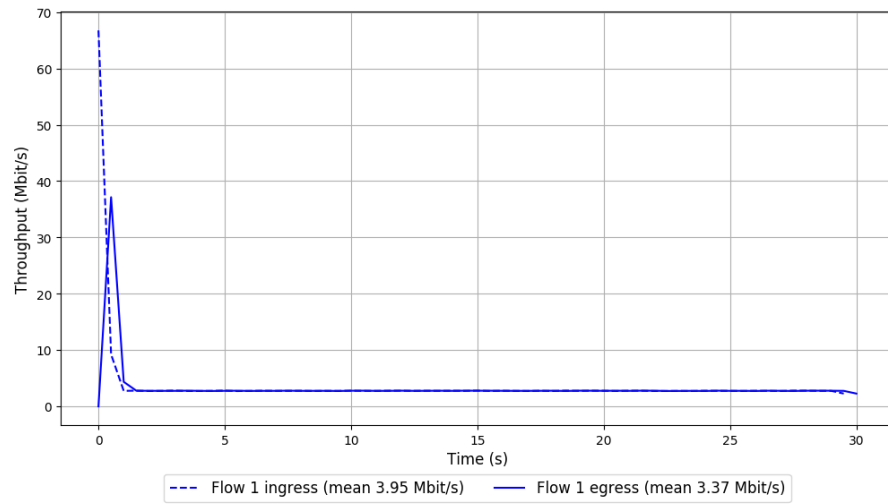
-- Flow 1:

Average throughput: 3.37 Mbit/s

95th percentile per-packet one-way delay: 2.404 ms

Loss rate: 14.59%

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

Start at: 2018-11-15 03:10:58

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

Local clock offset: -7.411 ms

Remote clock offset: 0.478 ms

Below is generated by plot.py at 2018-11-15 03:44:13

Datalink statistics

-- Total of 1 flow:

Average throughput: 12.97 Mbit/s

95th percentile per-packet one-way delay: 3.158 ms

Loss rate: 22.33%

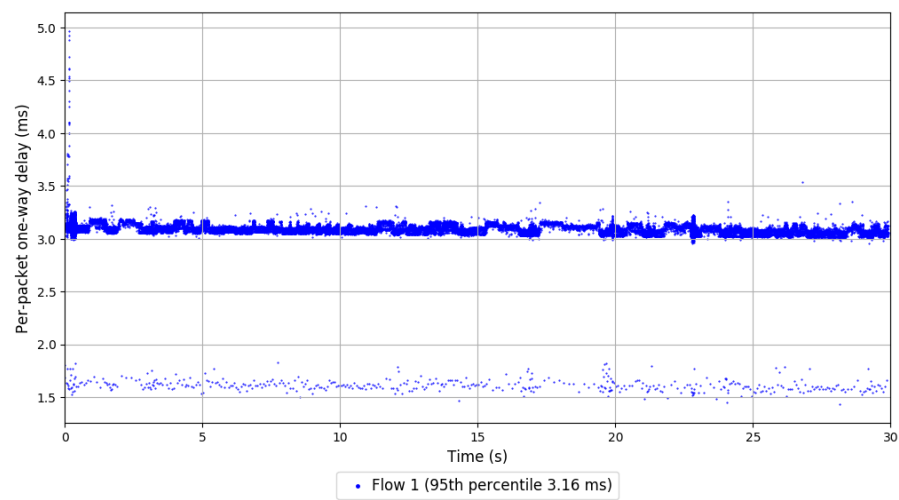
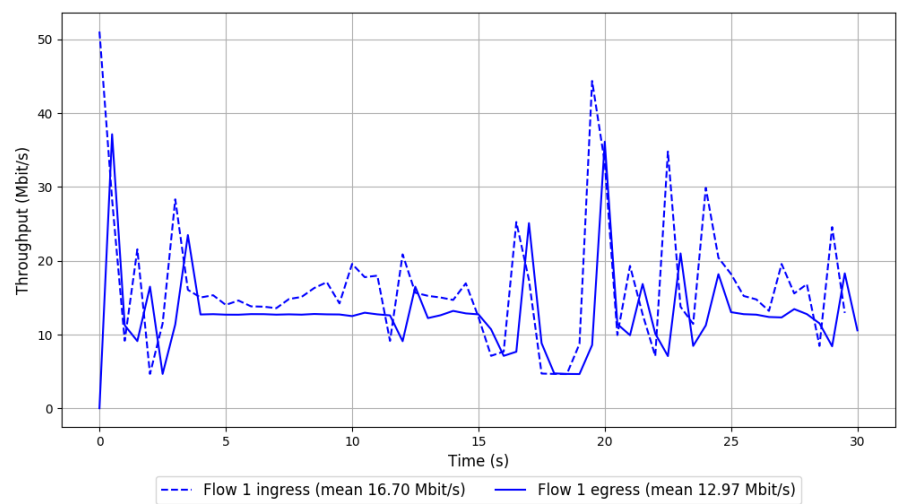
-- Flow 1:

Average throughput: 12.97 Mbit/s

95th percentile per-packet one-way delay: 3.158 ms

Loss rate: 22.33%

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

Start at: 2018-11-15 03:31:00

End at: 2018-11-15 03:31:30

Local clock offset: -5.651 ms

Remote clock offset: 0.423 ms

Below is generated by plot.py at 2018-11-15 03:44:13

Datalink statistics

-- Total of 1 flow:

Average throughput: 5.55 Mbit/s

95th percentile per-packet one-way delay: 2.788 ms

Loss rate: 16.18%

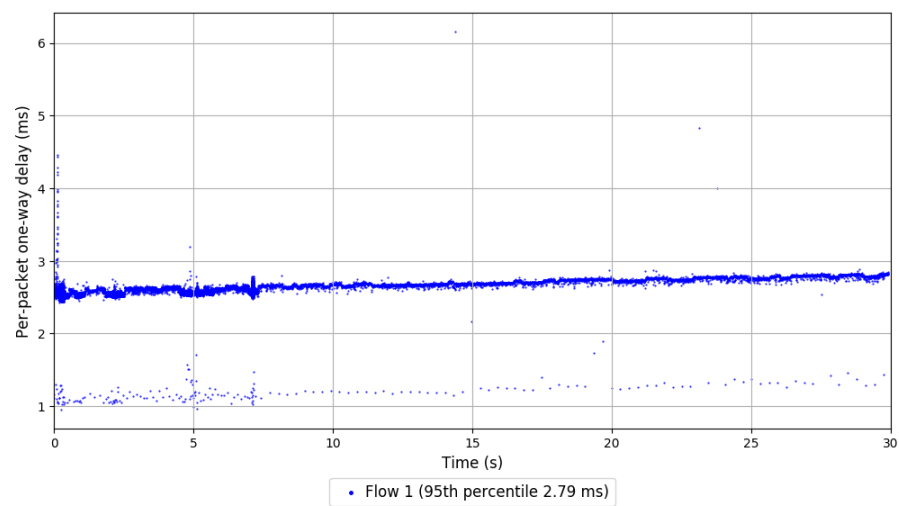
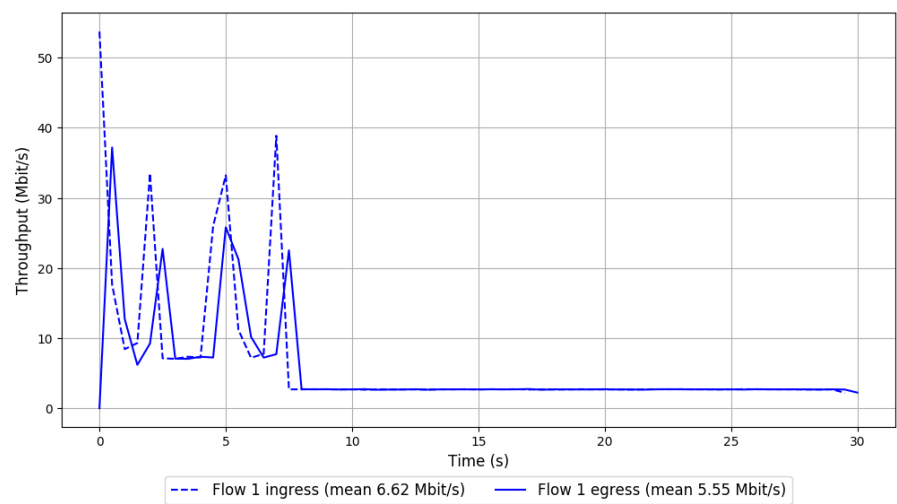
-- Flow 1:

Average throughput: 5.55 Mbit/s

95th percentile per-packet one-way delay: 2.788 ms

Loss rate: 16.18%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2018-11-15 02:07:37

End at: 2018-11-15 02:08:07

Local clock offset: -7.334 ms

Remote clock offset: 0.185 ms

Below is generated by plot.py at 2018-11-15 03:44:39

Datalink statistics

-- Total of 1 flow:

Average throughput: 75.73 Mbit/s

95th percentile per-packet one-way delay: 8.800 ms

Loss rate: 0.26%

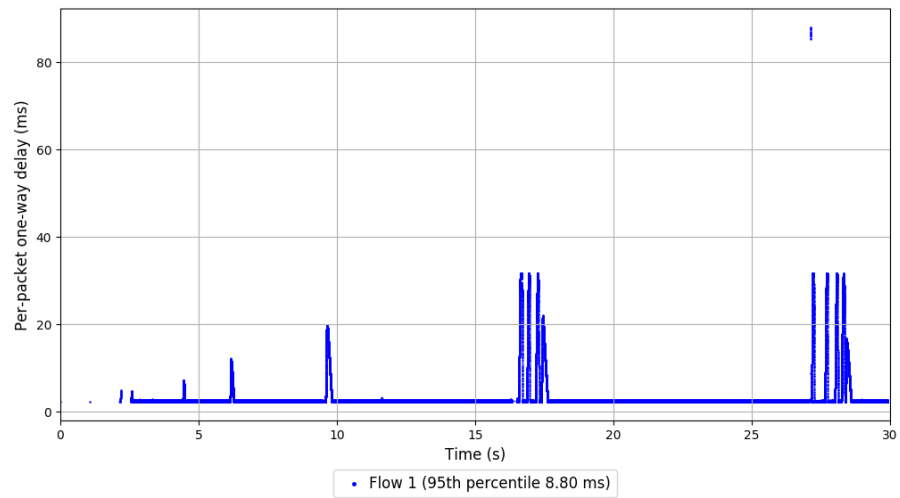
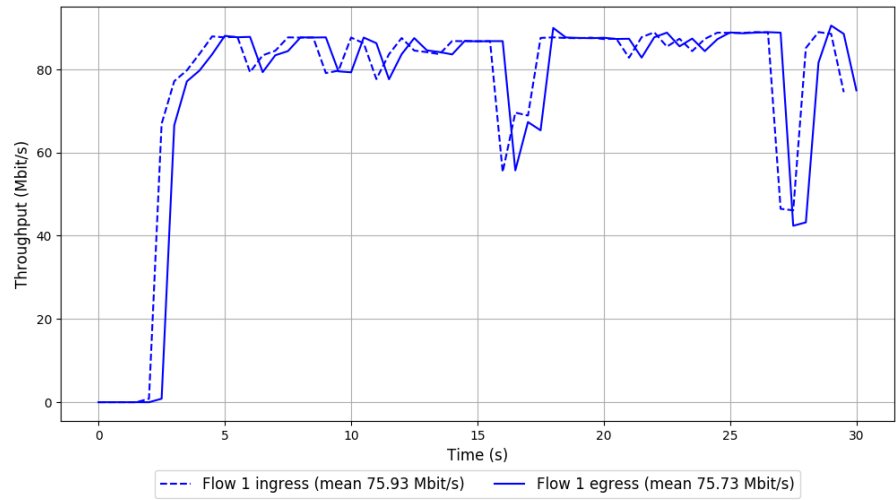
-- Flow 1:

Average throughput: 75.73 Mbit/s

95th percentile per-packet one-way delay: 8.800 ms

Loss rate: 0.26%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

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

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

Local clock offset: -8.188 ms

Remote clock offset: 0.302 ms

Below is generated by plot.py at 2018-11-15 03:44:44

Datalink statistics

-- Total of 1 flow:

Average throughput: 80.69 Mbit/s

95th percentile per-packet one-way delay: 7.825 ms

Loss rate: 0.15%

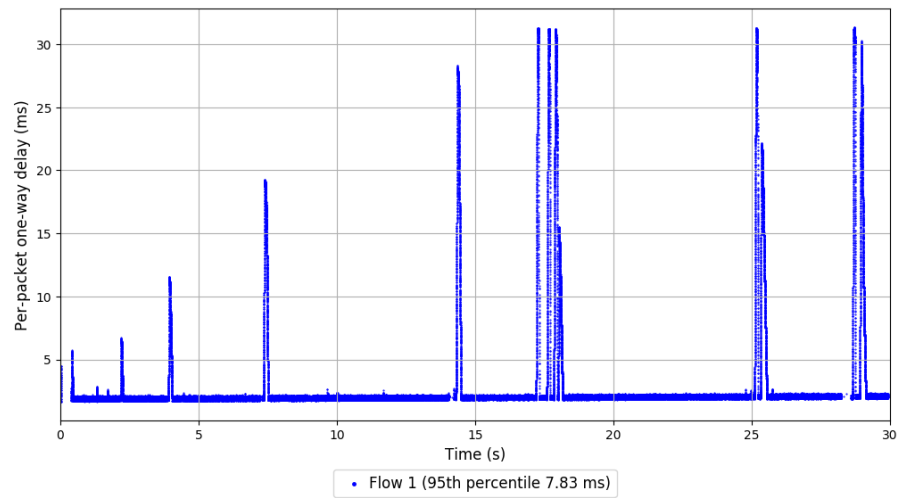
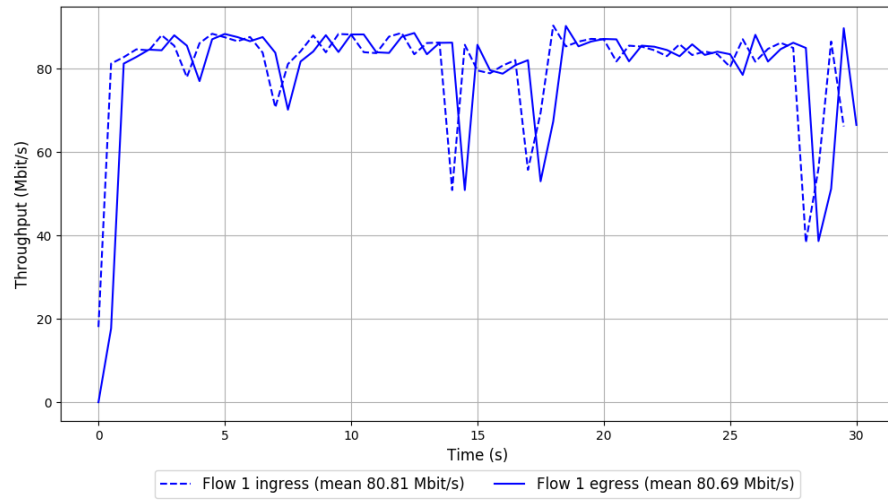
-- Flow 1:

Average throughput: 80.69 Mbit/s

95th percentile per-packet one-way delay: 7.825 ms

Loss rate: 0.15%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-11-15 02:47:43

End at: 2018-11-15 02:48:13

Local clock offset: -5.069 ms

Remote clock offset: 0.425 ms

Below is generated by plot.py at 2018-11-15 03:44:48

Datalink statistics

-- Total of 1 flow:

Average throughput: 77.42 Mbit/s

95th percentile per-packet one-way delay: 7.283 ms

Loss rate: 0.39%

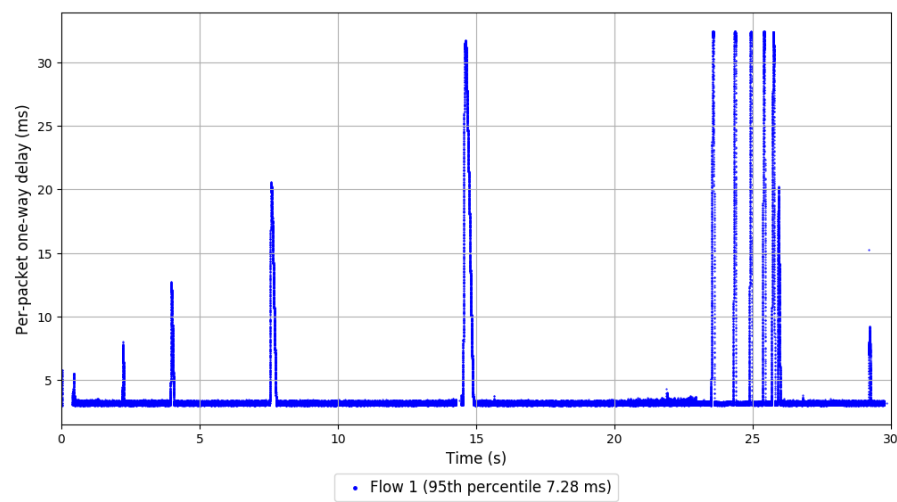
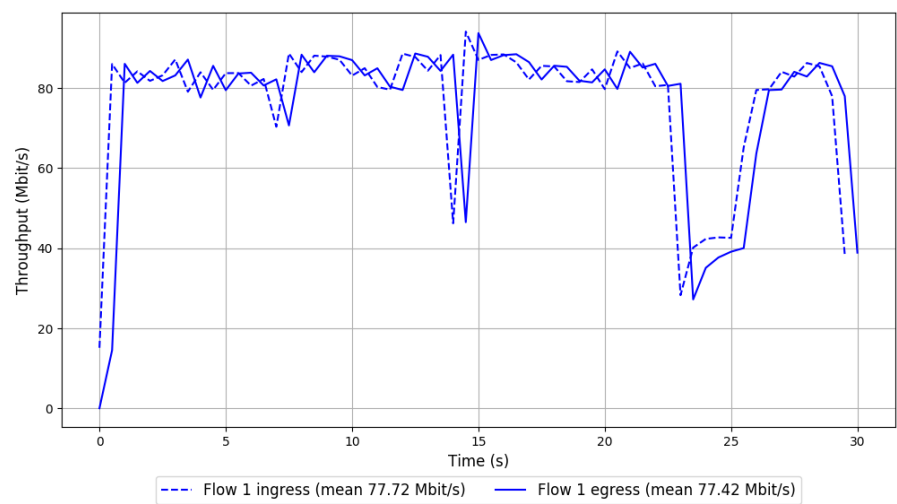
-- Flow 1:

Average throughput: 77.42 Mbit/s

95th percentile per-packet one-way delay: 7.283 ms

Loss rate: 0.39%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-11-15 03:07:42

End at: 2018-11-15 03:08:12

Local clock offset: -7.109 ms

Remote clock offset: 0.44 ms

Below is generated by plot.py at 2018-11-15 03:44:53

Datalink statistics

-- Total of 1 flow:

Average throughput: 77.56 Mbit/s

95th percentile per-packet one-way delay: 11.513 ms

Loss rate: 0.40%

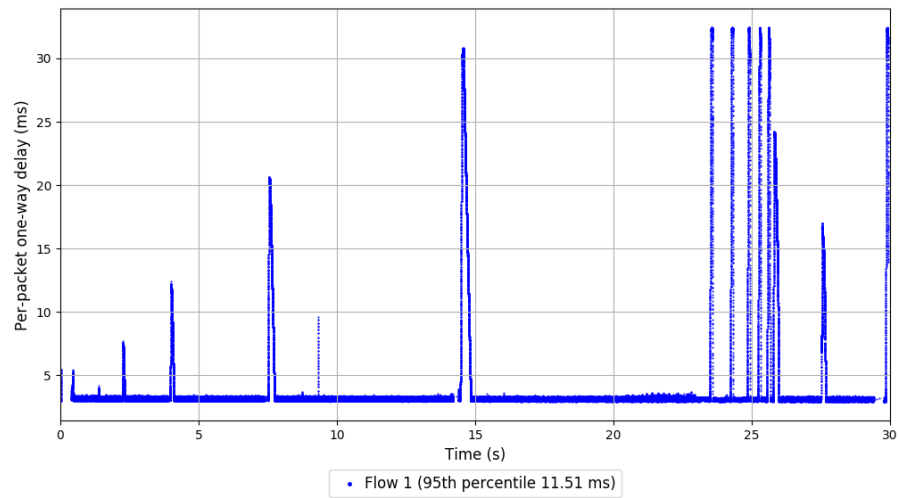
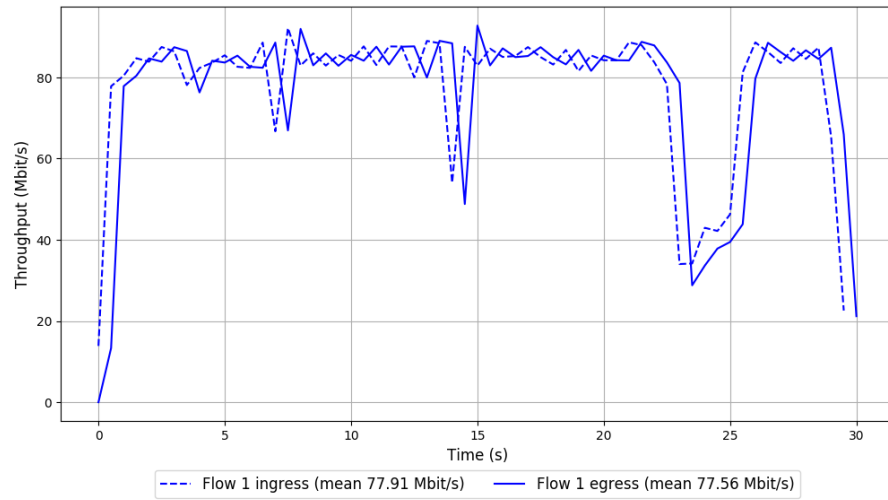
-- Flow 1:

Average throughput: 77.56 Mbit/s

95th percentile per-packet one-way delay: 11.513 ms

Loss rate: 0.40%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-11-15 03:27:44

End at: 2018-11-15 03:28:14

Local clock offset: -8.282 ms

Remote clock offset: 0.357 ms

Below is generated by plot.py at 2018-11-15 03:44:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 78.05 Mbit/s

95th percentile per-packet one-way delay: 3.858 ms

Loss rate: 0.13%

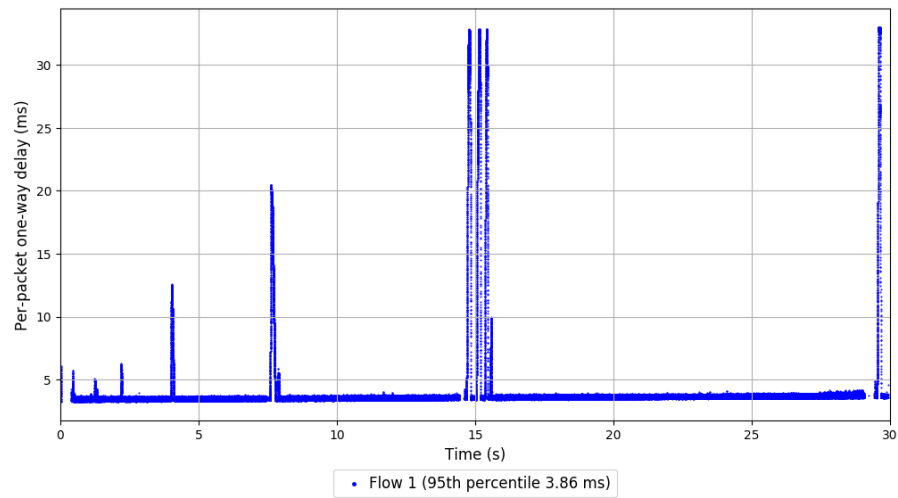
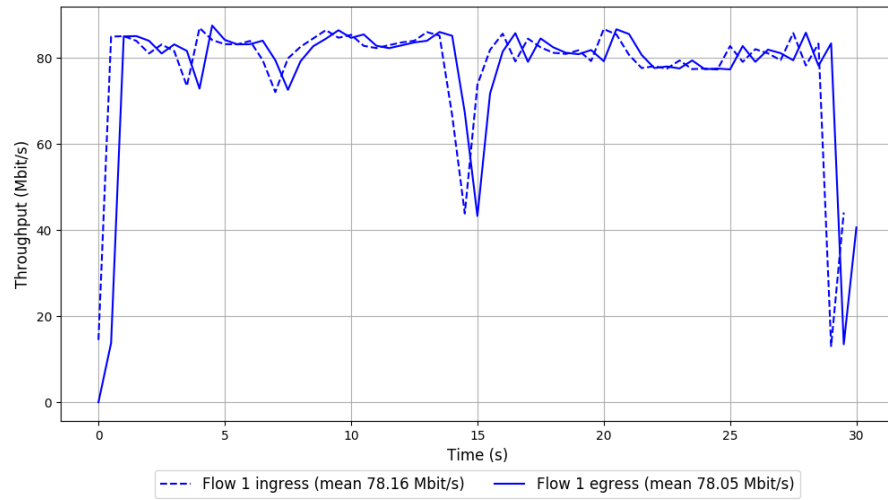
-- Flow 1:

Average throughput: 78.05 Mbit/s

95th percentile per-packet one-way delay: 3.858 ms

Loss rate: 0.13%

Run 5: Report of QUIC Cubic — Data Link

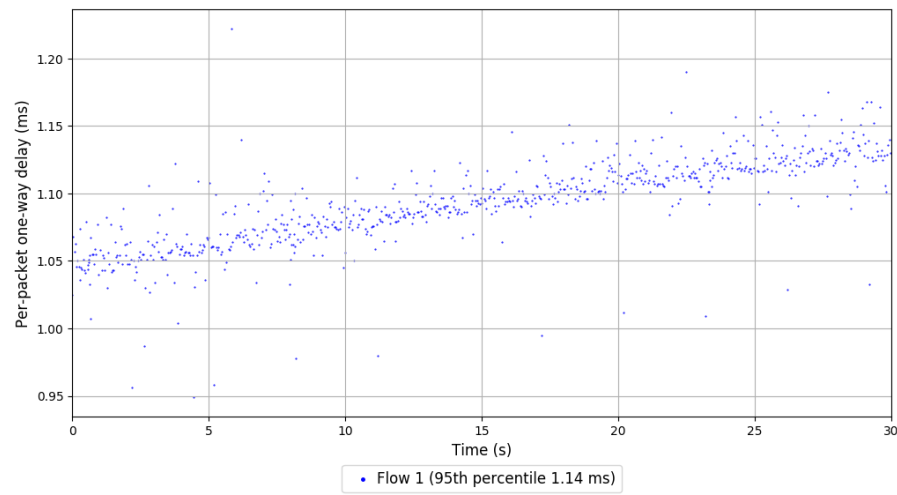
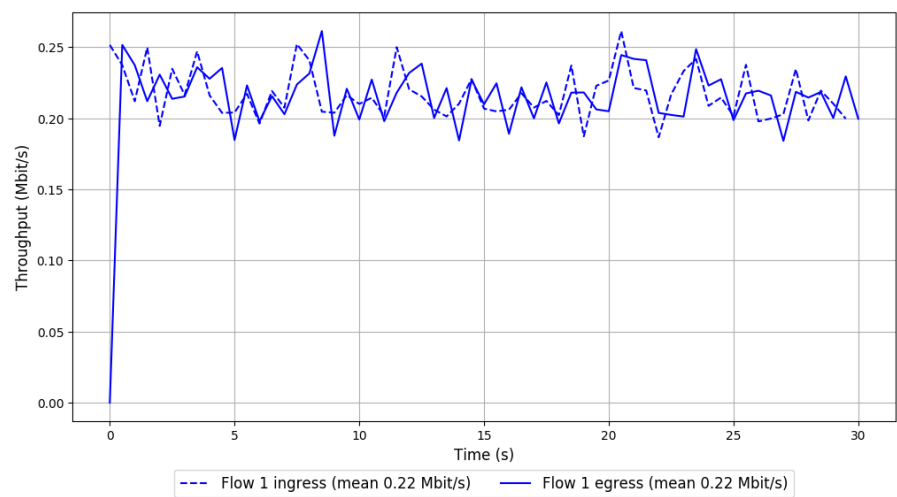


```
Run 1: Statistics of SCReAM

Start at: 2018-11-15 02:05:24
End at: 2018-11-15 02:05:54
Local clock offset: -7.639 ms
Remote clock offset: 0.201 ms

# Below is generated by plot.py at 2018-11-15 03:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.139 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.139 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link



Run 2: Statistics of SReAM

Start at: 2018-11-15 02:25:27

End at: 2018-11-15 02:25:57

Local clock offset: -8.491 ms

Remote clock offset: 0.316 ms

Below is generated by plot.py at 2018-11-15 03:44:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.623 ms

Loss rate: 0.00%

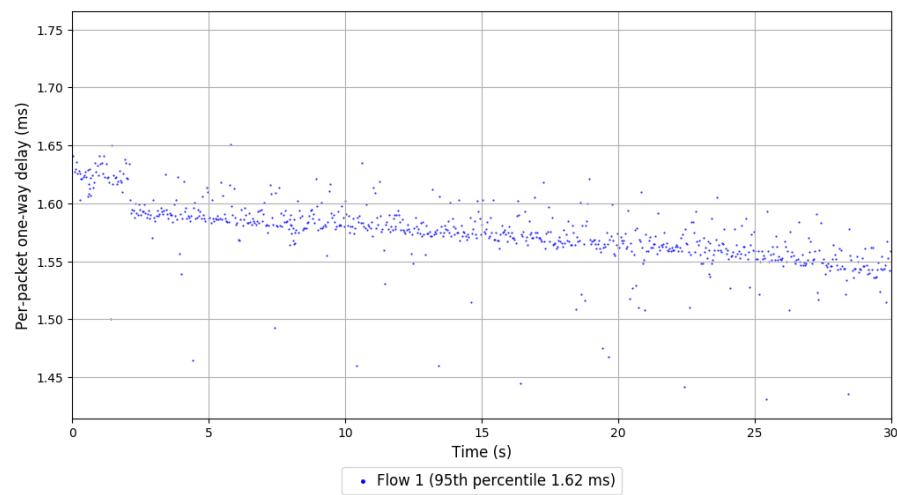
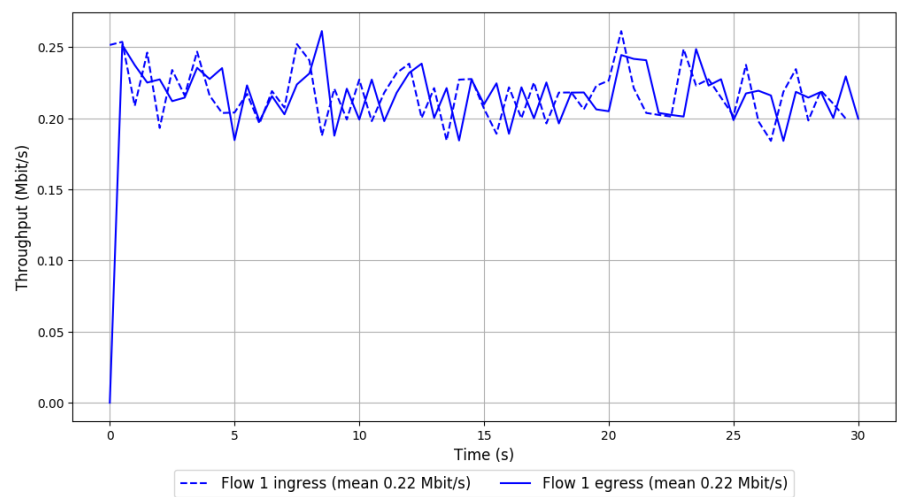
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.623 ms

Loss rate: 0.00%

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2018-11-15 02:45:29

End at: 2018-11-15 02:45:59

Local clock offset: -4.298 ms

Remote clock offset: 0.446 ms

Below is generated by plot.py at 2018-11-15 03:44:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 0.981 ms

Loss rate: 0.00%

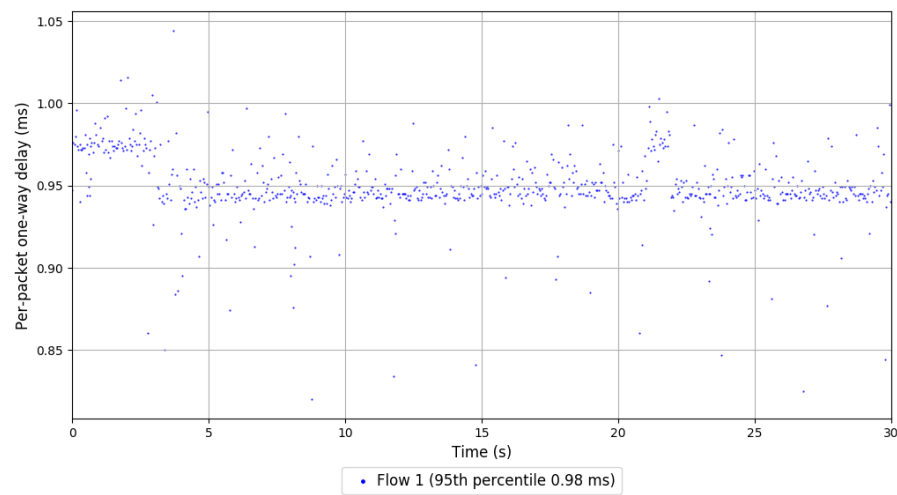
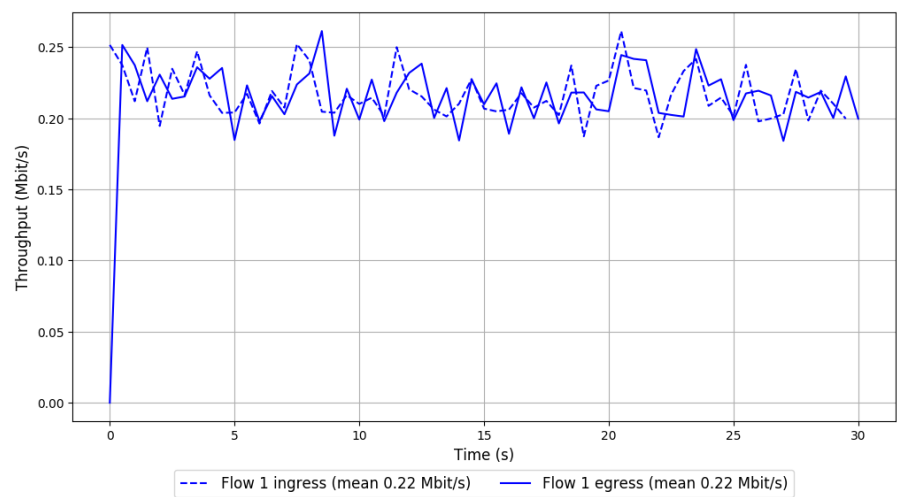
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 0.981 ms

Loss rate: 0.00%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2018-11-15 03:05:29

End at: 2018-11-15 03:05:59

Local clock offset: -6.816 ms

Remote clock offset: 0.356 ms

Below is generated by plot.py at 2018-11-15 03:44:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.595 ms

Loss rate: 0.00%

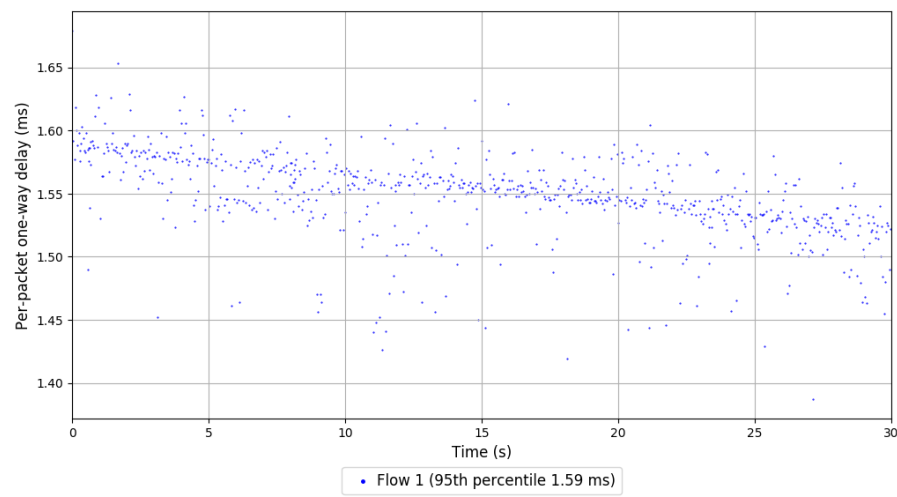
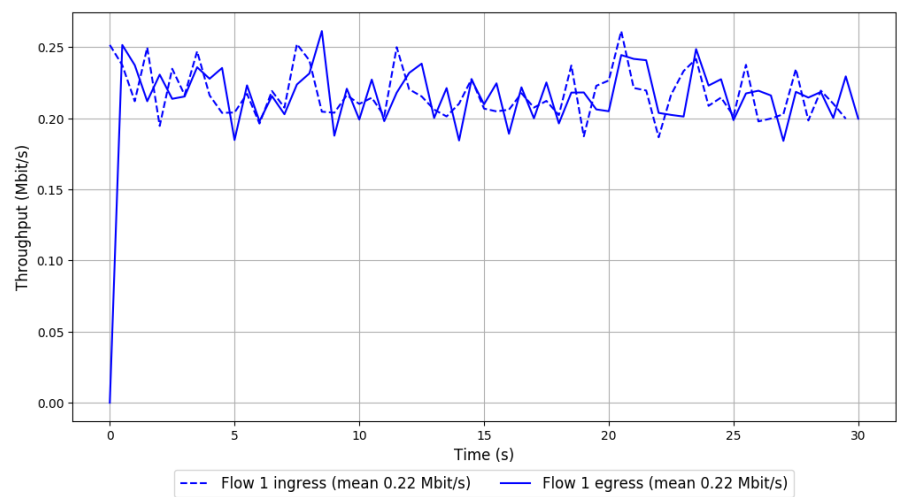
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.595 ms

Loss rate: 0.00%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2018-11-15 03:25:30

End at: 2018-11-15 03:26:00

Local clock offset: -7.955 ms

Remote clock offset: 0.417 ms

Below is generated by plot.py at 2018-11-15 03:44:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.336 ms

Loss rate: 0.00%

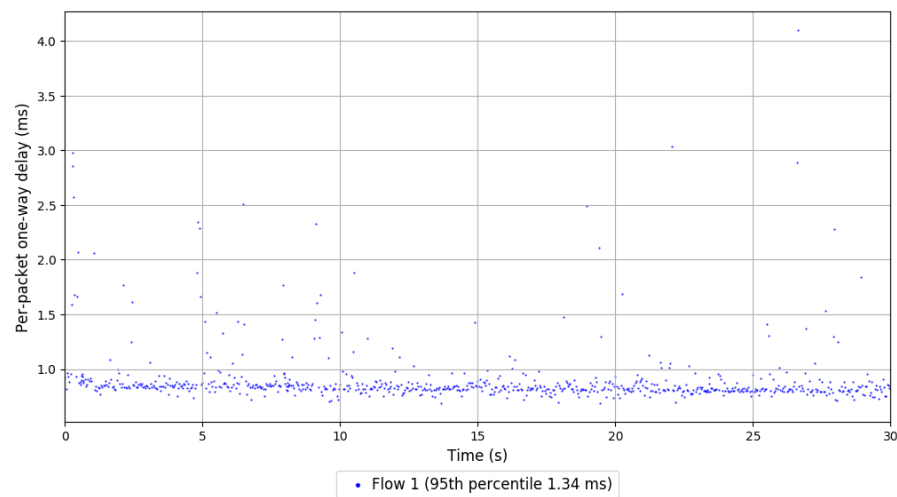
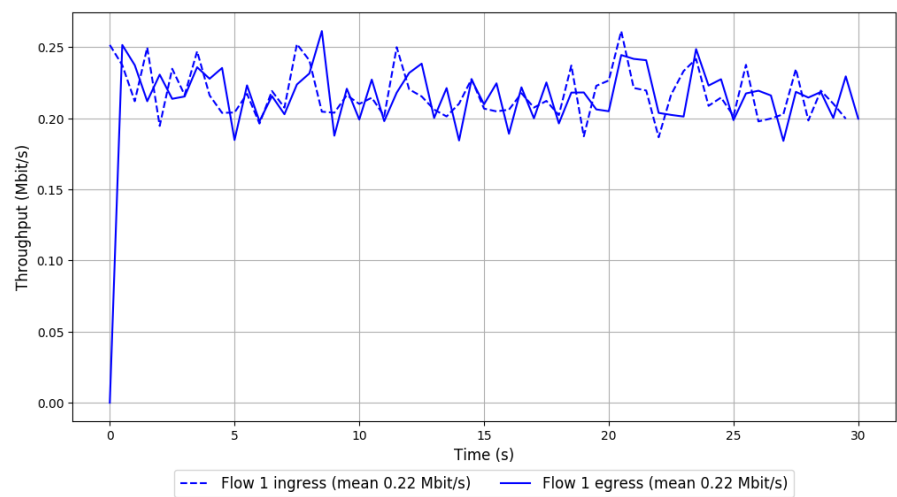
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.336 ms

Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 1: Statistics of Sprout

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

End at: 2018-11-15 02:12:28

Local clock offset: -8.523 ms

Remote clock offset: 0.303 ms

Below is generated by plot.py at 2018-11-15 03:44:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 50.44 Mbit/s

95th percentile per-packet one-way delay: 11.111 ms

Loss rate: 0.00%

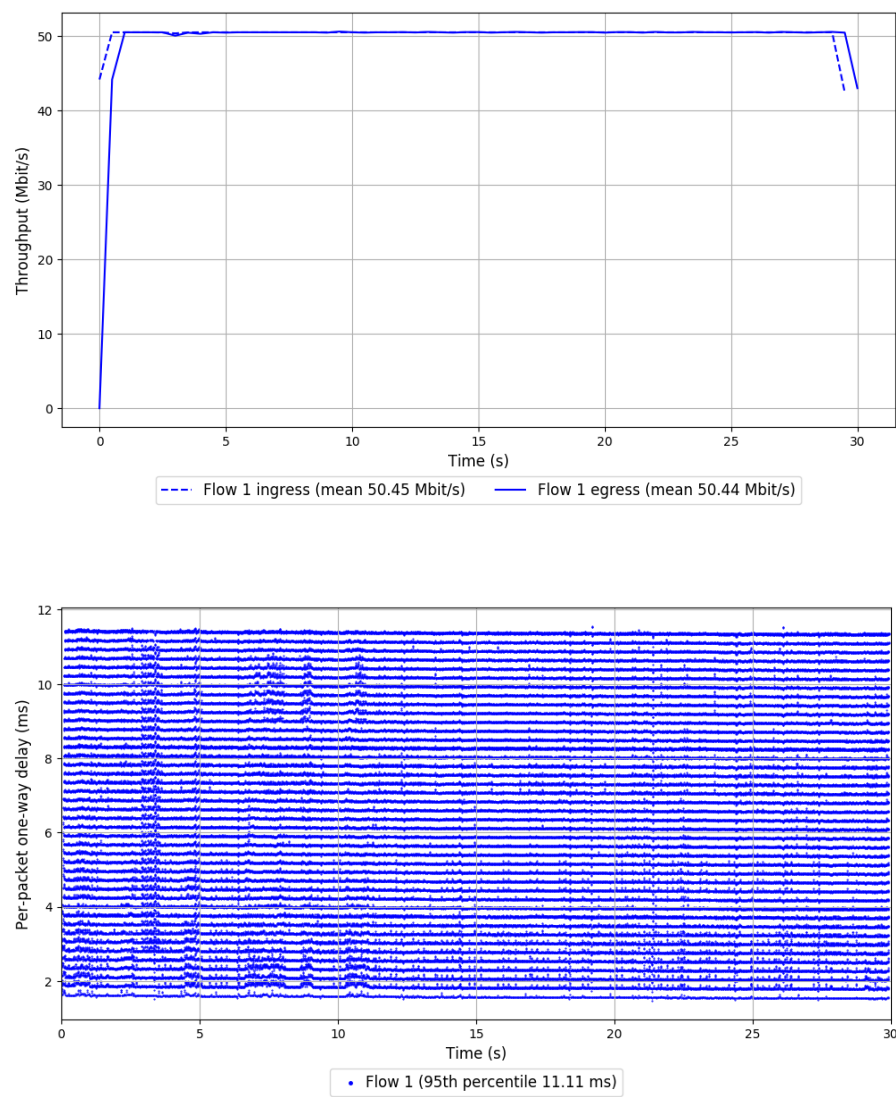
-- Flow 1:

Average throughput: 50.44 Mbit/s

95th percentile per-packet one-way delay: 11.111 ms

Loss rate: 0.00%

Run 1: Report of Sprout — Data Link

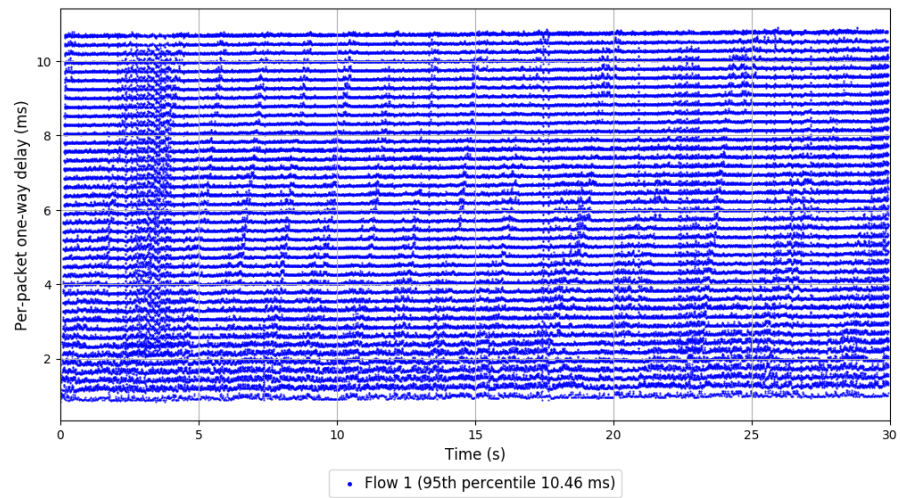
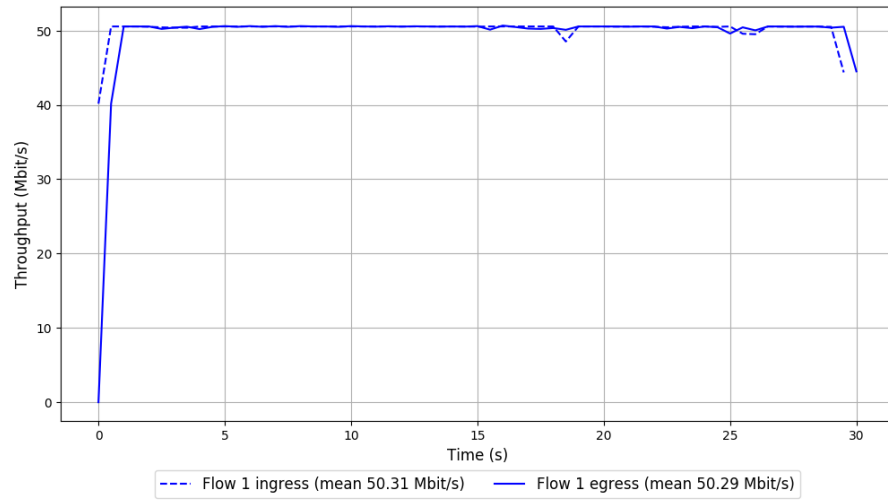


Run 2: Statistics of Sprout

Start at: 2018-11-15 02:32:02
End at: 2018-11-15 02:32:32
Local clock offset: -5.805 ms
Remote clock offset: 0.249 ms

Below is generated by plot.py at 2018-11-15 03:44:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 50.29 Mbit/s
95th percentile per-packet one-way delay: 10.459 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.29 Mbit/s
95th percentile per-packet one-way delay: 10.459 ms
Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

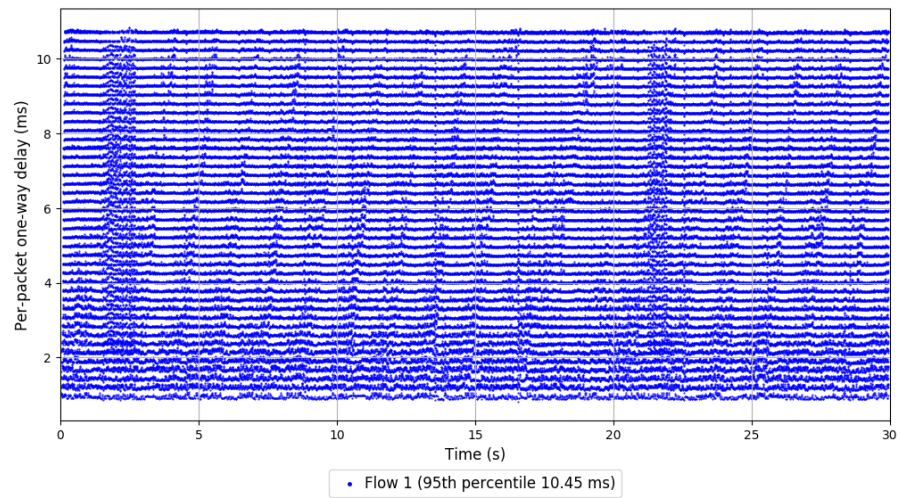
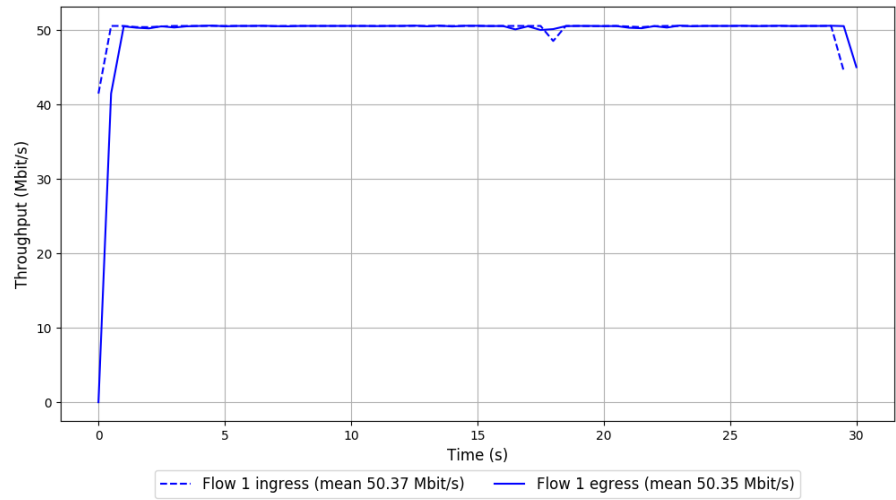


Run 3: Statistics of Sprout

Start at: 2018-11-15 02:52:03
End at: 2018-11-15 02:52:33
Local clock offset: -4.377 ms
Remote clock offset: 0.473 ms

Below is generated by plot.py at 2018-11-15 03:44:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 50.35 Mbit/s
95th percentile per-packet one-way delay: 10.454 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.35 Mbit/s
95th percentile per-packet one-way delay: 10.454 ms
Loss rate: 0.00%

Run 3: Report of Sprout — Data Link

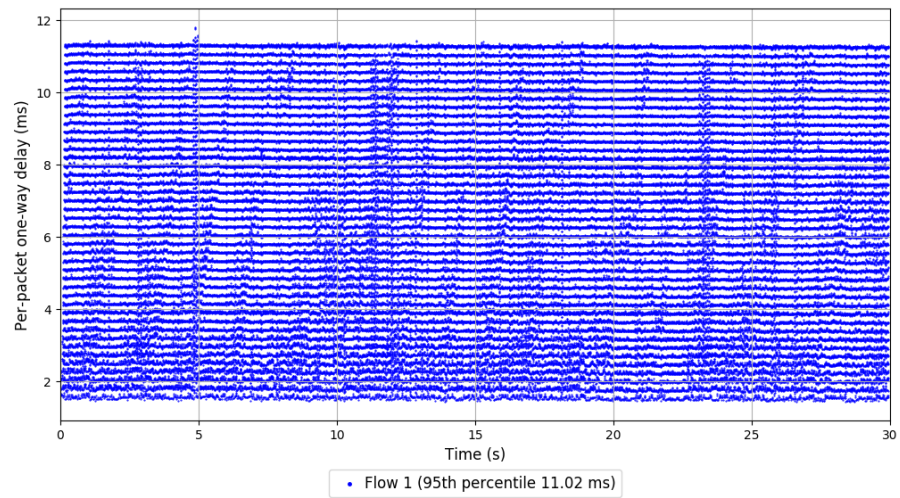
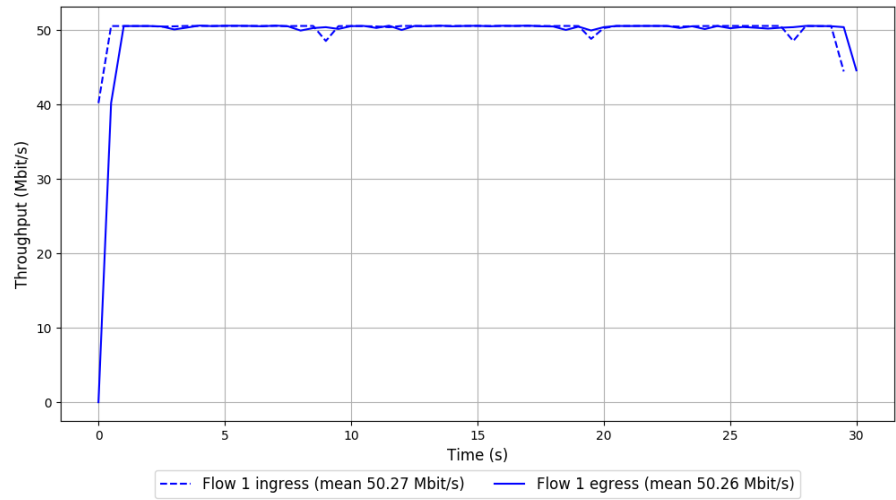


Run 4: Statistics of Sprout

Start at: 2018-11-15 03:12:03
End at: 2018-11-15 03:12:33
Local clock offset: -7.539 ms
Remote clock offset: 0.367 ms

Below is generated by plot.py at 2018-11-15 03:45:16
Datalink statistics
-- Total of 1 flow:
Average throughput: 50.26 Mbit/s
95th percentile per-packet one-way delay: 11.015 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.26 Mbit/s
95th percentile per-packet one-way delay: 11.015 ms
Loss rate: 0.00%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-11-15 03:32:04

End at: 2018-11-15 03:32:34

Local clock offset: -6.019 ms

Remote clock offset: 0.473 ms

Below is generated by plot.py at 2018-11-15 03:45:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 50.22 Mbit/s

95th percentile per-packet one-way delay: 11.607 ms

Loss rate: 0.00%

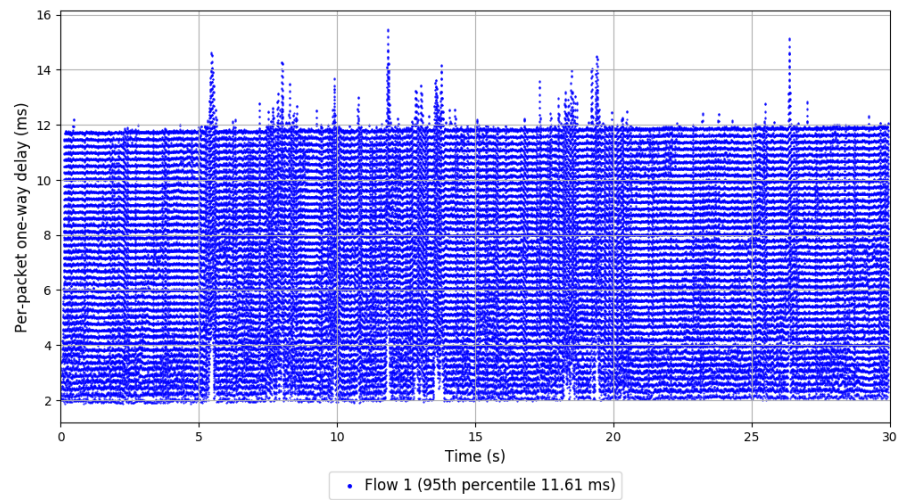
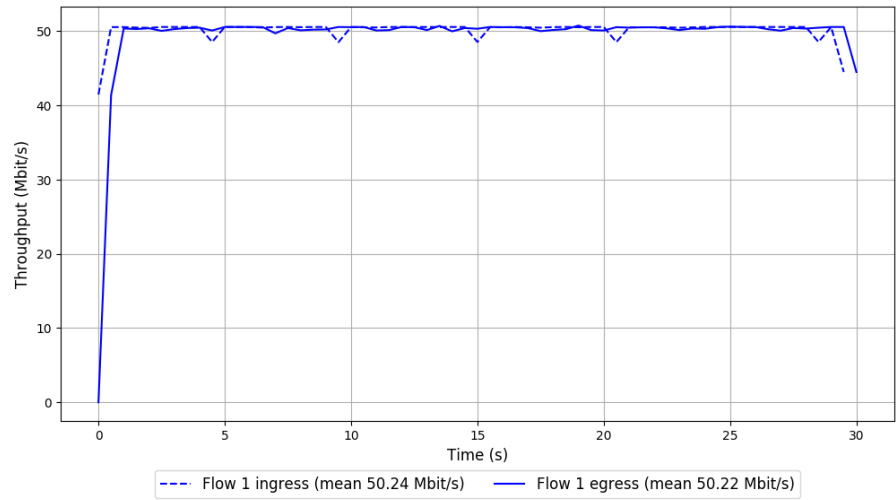
-- Flow 1:

Average throughput: 50.22 Mbit/s

95th percentile per-packet one-way delay: 11.607 ms

Loss rate: 0.00%

Run 5: Report of Sprout — Data Link

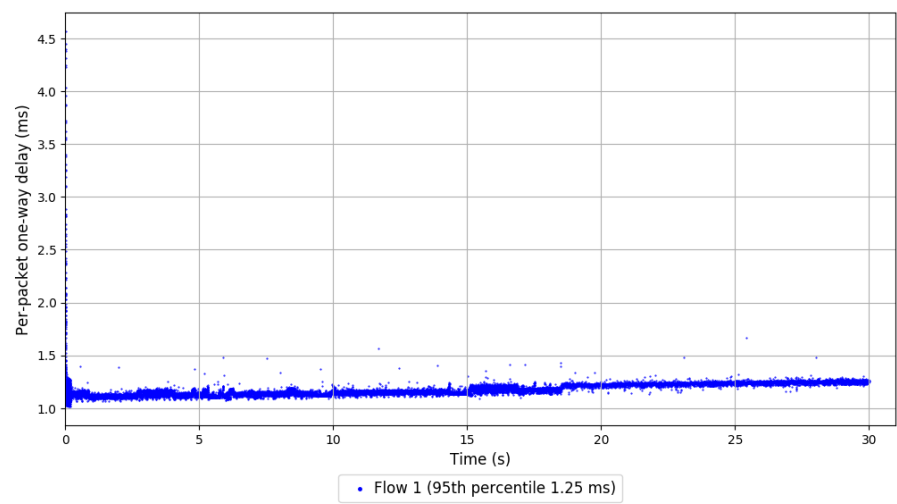
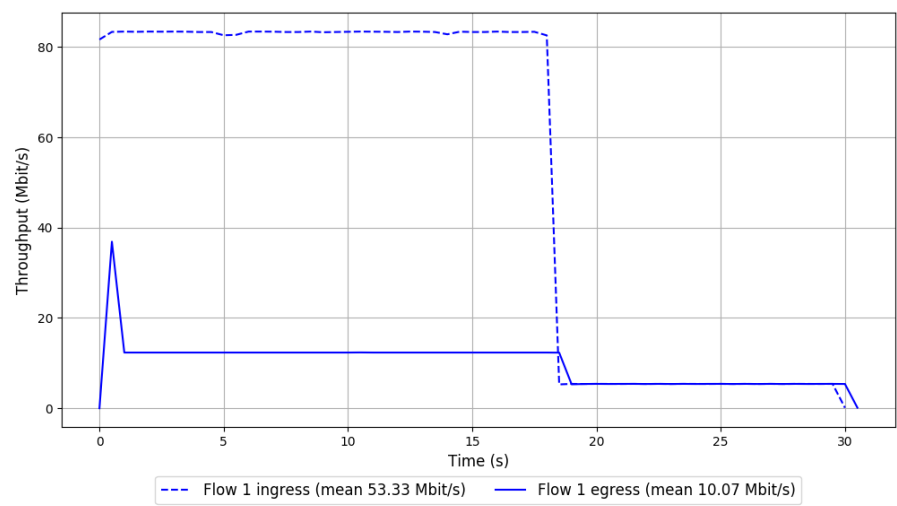


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-11-15 02:13:04
End at: 2018-11-15 02:13:34
Local clock offset: -7.908 ms
Remote clock offset: 0.313 ms

# Below is generated by plot.py at 2018-11-15 03:45:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 10.07 Mbit/s
95th percentile per-packet one-way delay: 1.249 ms
Loss rate: 81.12%
-- Flow 1:
Average throughput: 10.07 Mbit/s
95th percentile per-packet one-way delay: 1.249 ms
Loss rate: 81.12%
```

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



Run 2: Statistics of TaoVA-100x

Start at: 2018-11-15 02:33:08

End at: 2018-11-15 02:33:38

Local clock offset: -5.521 ms

Remote clock offset: 0.314 ms

Below is generated by plot.py at 2018-11-15 03:45:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 10.06 Mbit/s

95th percentile per-packet one-way delay: 2.573 ms

Loss rate: 81.13%

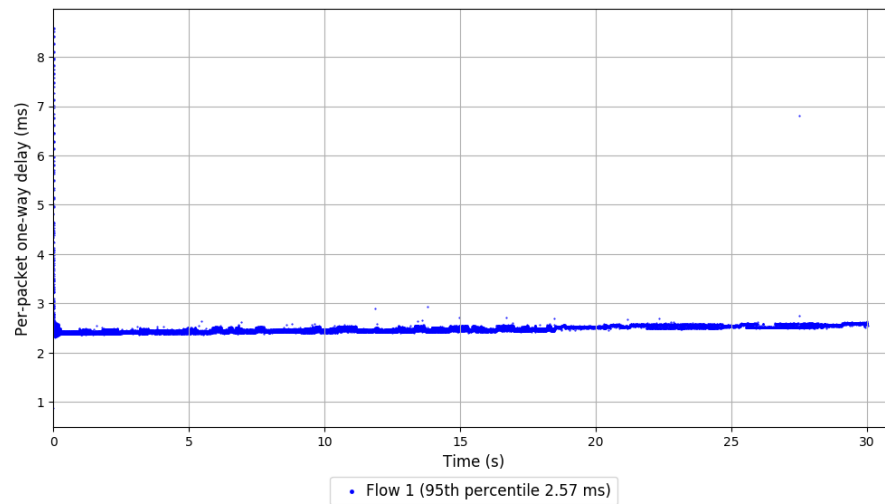
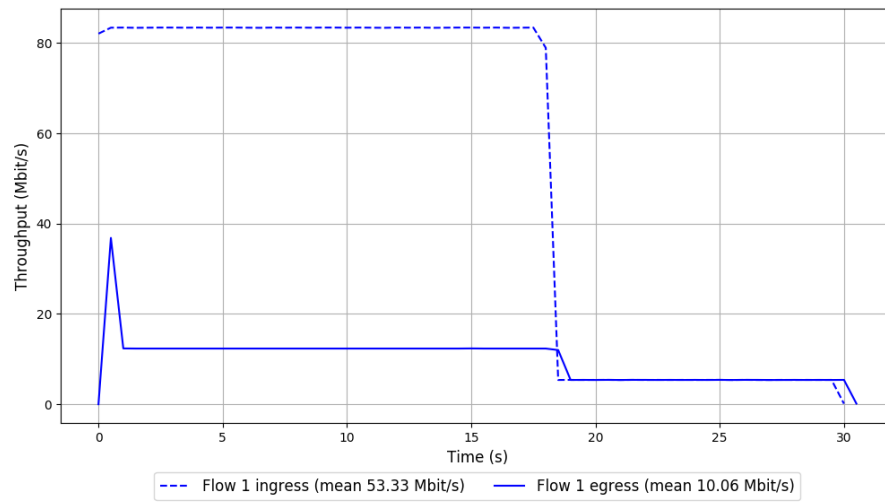
-- Flow 1:

Average throughput: 10.06 Mbit/s

95th percentile per-packet one-way delay: 2.573 ms

Loss rate: 81.13%

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-11-15 02:53:09

End at: 2018-11-15 02:53:39

Local clock offset: -4.416 ms

Remote clock offset: 0.363 ms

Below is generated by plot.py at 2018-11-15 03:45:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 7.92 Mbit/s

95th percentile per-packet one-way delay: 2.383 ms

Loss rate: 72.95%

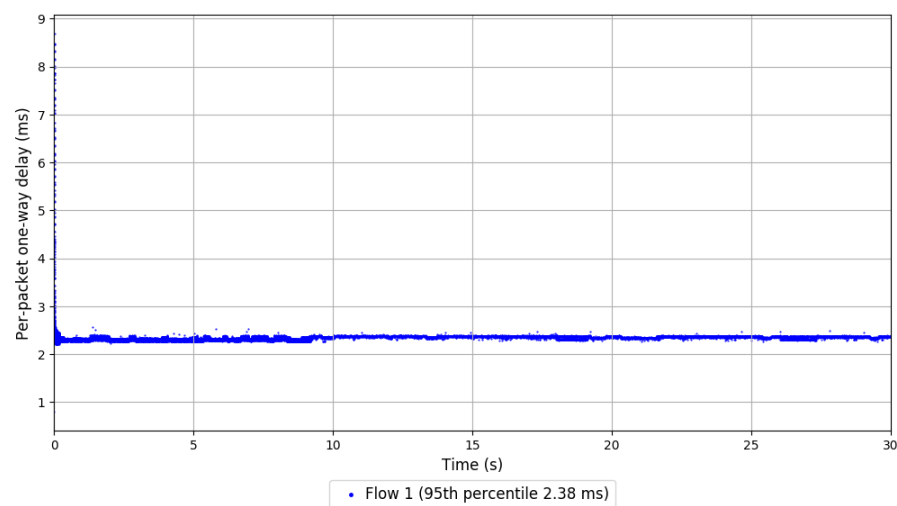
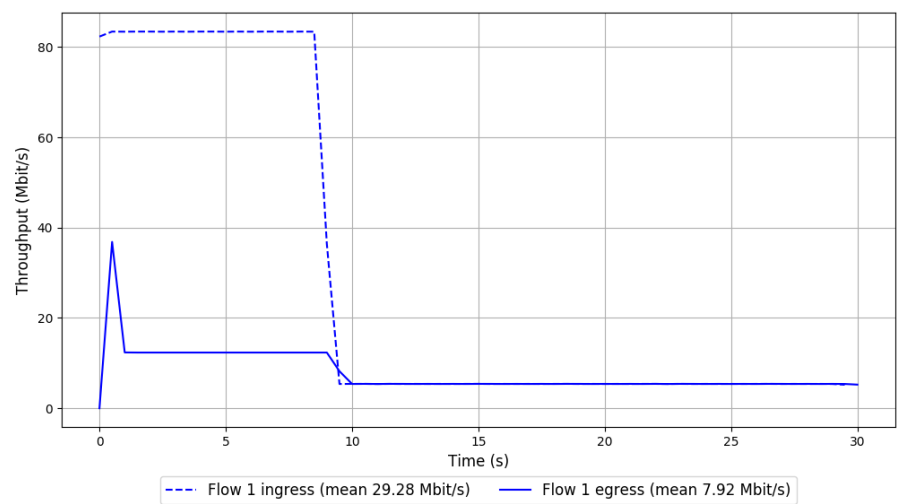
-- Flow 1:

Average throughput: 7.92 Mbit/s

95th percentile per-packet one-way delay: 2.383 ms

Loss rate: 72.95%

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-11-15 03:13:09

End at: 2018-11-15 03:13:39

Local clock offset: -6.845 ms

Remote clock offset: 0.422 ms

Below is generated by plot.py at 2018-11-15 03:45:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 7.92 Mbit/s

95th percentile per-packet one-way delay: 2.323 ms

Loss rate: 72.94%

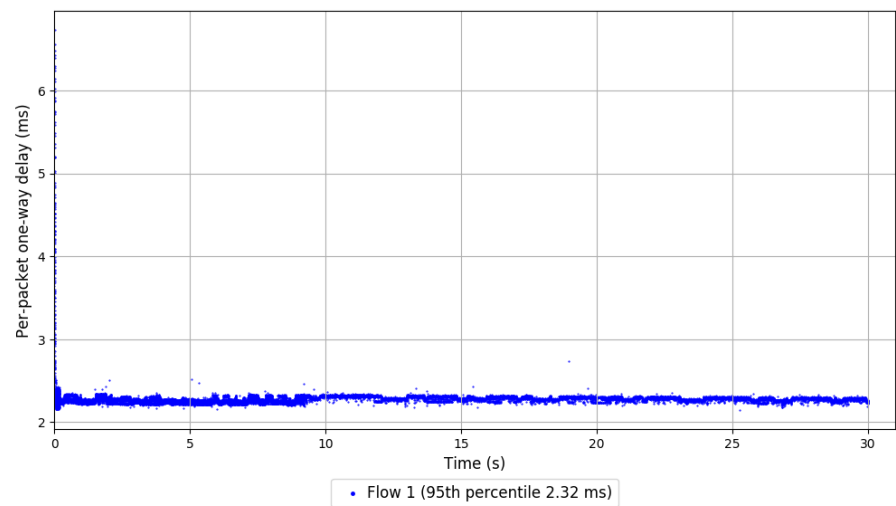
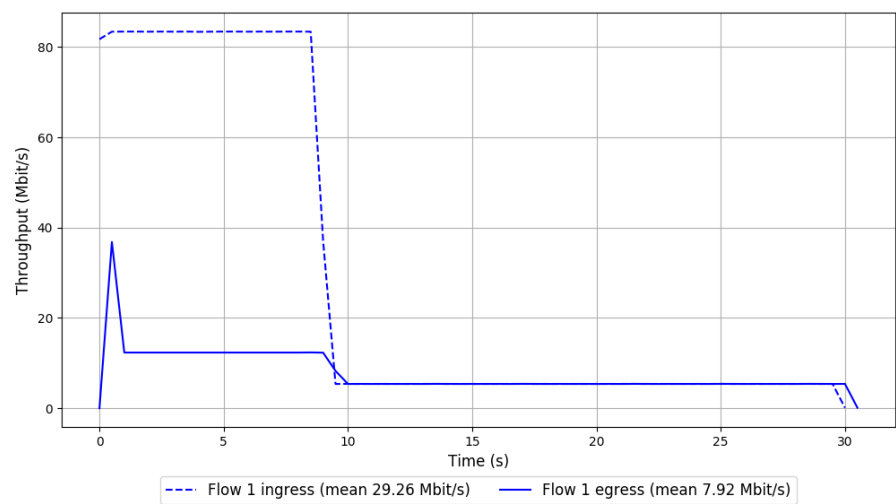
-- Flow 1:

Average throughput: 7.92 Mbit/s

95th percentile per-packet one-way delay: 2.323 ms

Loss rate: 72.94%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-11-15 03:33:10

End at: 2018-11-15 03:33:40

Local clock offset: -4.801 ms

Remote clock offset: 0.483 ms

Below is generated by plot.py at 2018-11-15 03:45:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 10.06 Mbit/s

95th percentile per-packet one-way delay: 2.804 ms

Loss rate: 81.13%

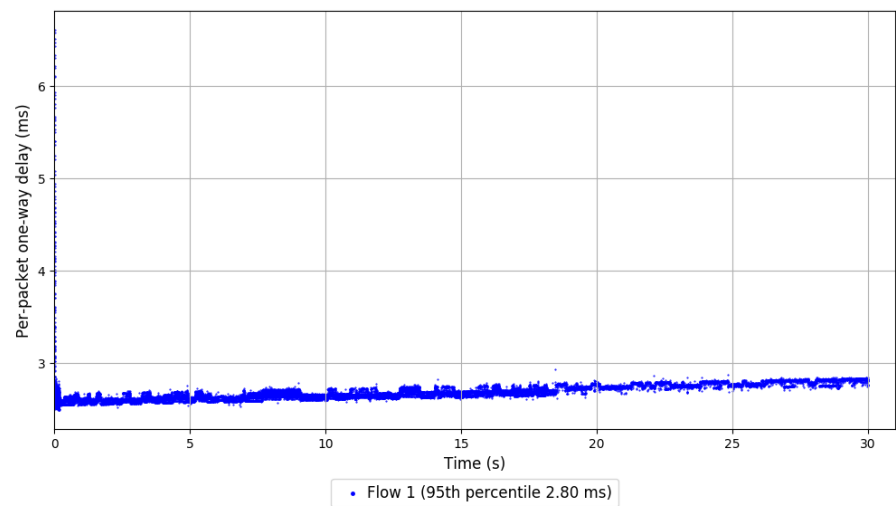
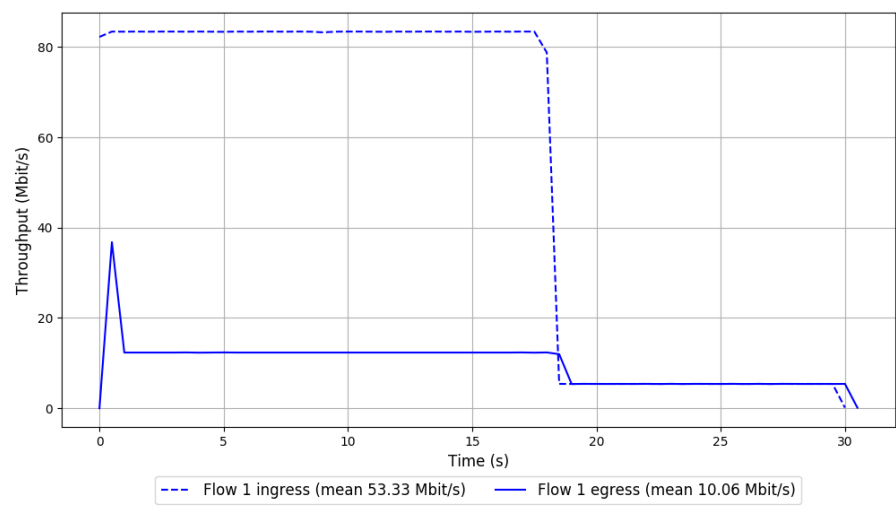
-- Flow 1:

Average throughput: 10.06 Mbit/s

95th percentile per-packet one-way delay: 2.804 ms

Loss rate: 81.13%

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



Run 1: Statistics of TCP Vegas

Start at: 2018-11-15 02:14:09

End at: 2018-11-15 02:14:39

Local clock offset: -8.349 ms

Remote clock offset: 0.245 ms

Below is generated by plot.py at 2018-11-15 03:46:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.31 Mbit/s

95th percentile per-packet one-way delay: 2.953 ms

Loss rate: 0.00%

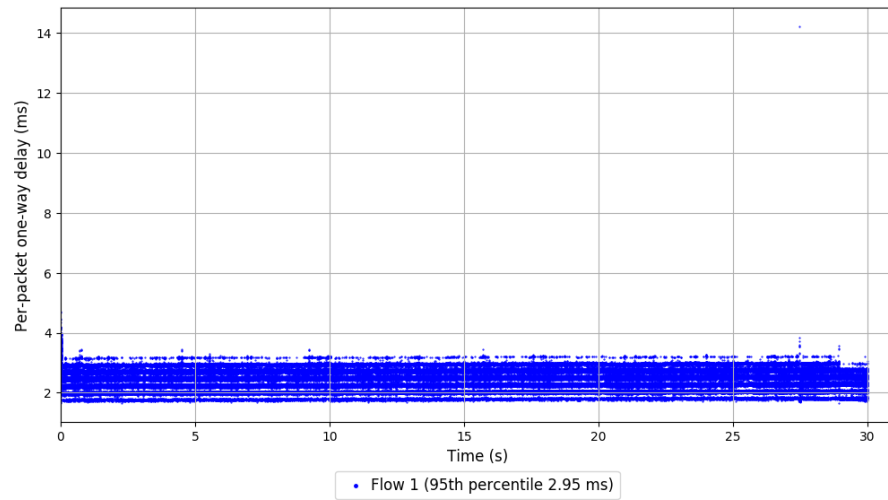
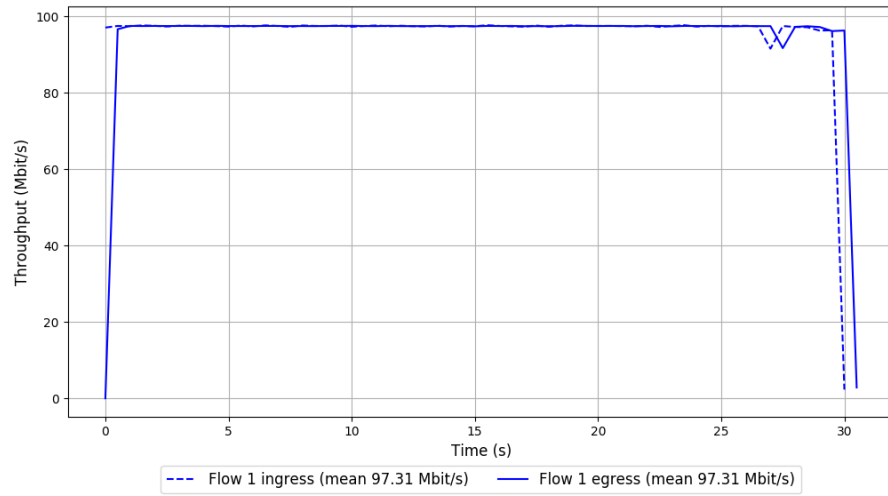
-- Flow 1:

Average throughput: 97.31 Mbit/s

95th percentile per-packet one-way delay: 2.953 ms

Loss rate: 0.00%

Run 1: Report of TCP Vegas — Data Link

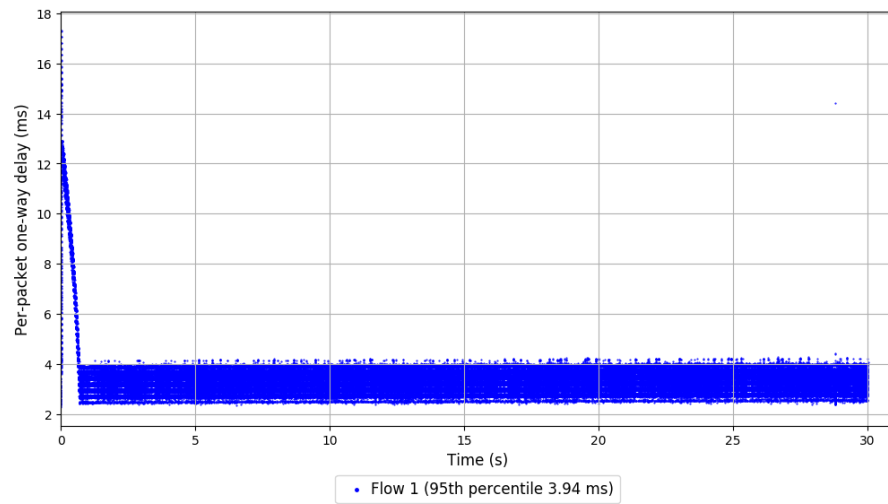
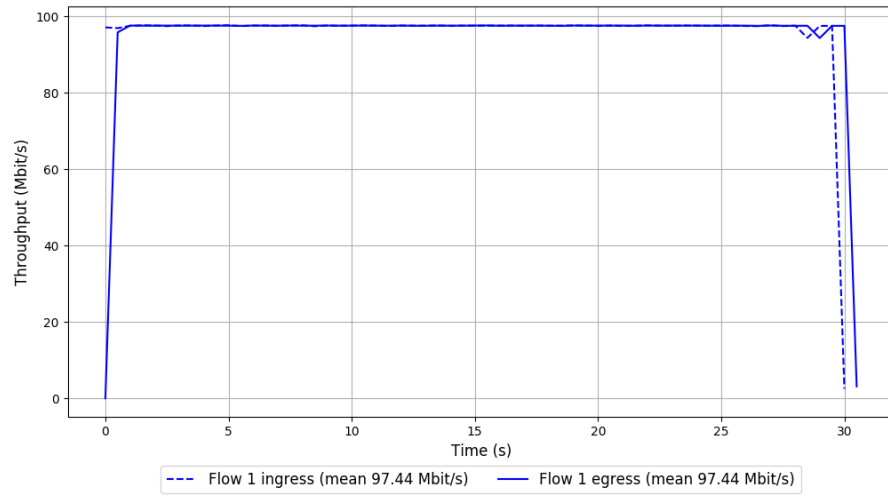


Run 2: Statistics of TCP Vegas

Start at: 2018-11-15 02:34:13
End at: 2018-11-15 02:34:43
Local clock offset: -5.249 ms
Remote clock offset: 0.314 ms

Below is generated by plot.py at 2018-11-15 03:46:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 97.44 Mbit/s
95th percentile per-packet one-way delay: 3.935 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 97.44 Mbit/s
95th percentile per-packet one-way delay: 3.935 ms
Loss rate: 0.00%

Run 2: Report of TCP Vegas — Data Link

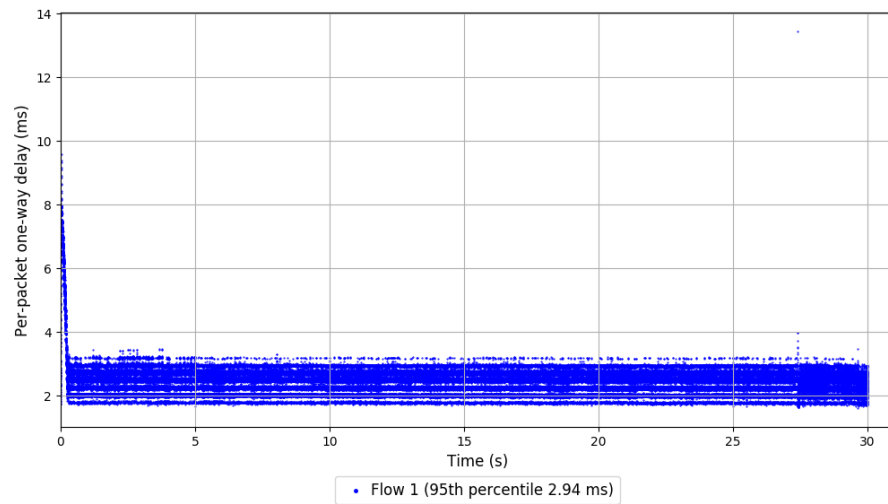
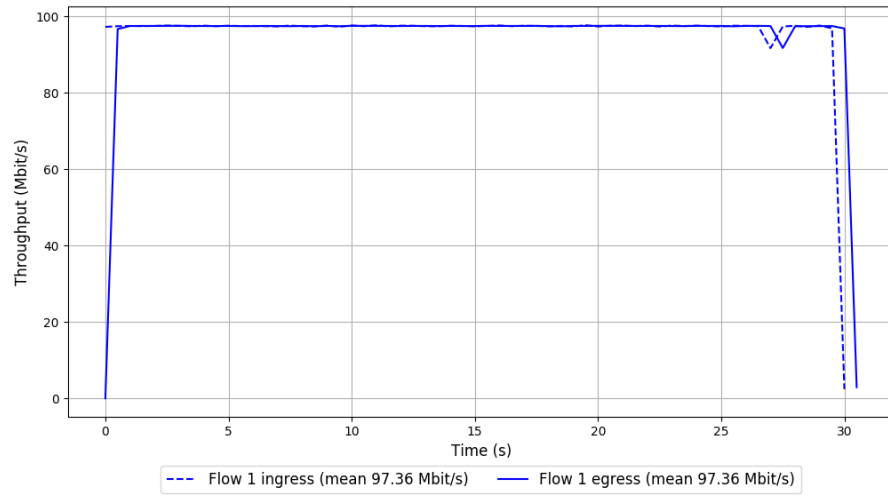


Run 3: Statistics of TCP Vegas

Start at: 2018-11-15 02:54:14
End at: 2018-11-15 02:54:44
Local clock offset: -5.258 ms
Remote clock offset: 0.417 ms

Below is generated by plot.py at 2018-11-15 03:46:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 97.36 Mbit/s
95th percentile per-packet one-way delay: 2.938 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 97.36 Mbit/s
95th percentile per-packet one-way delay: 2.938 ms
Loss rate: 0.00%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

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

End at: 2018-11-15 03:14:44

Local clock offset: -7.742 ms

Remote clock offset: 0.5 ms

Below is generated by plot.py at 2018-11-15 03:46:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.41 Mbit/s

95th percentile per-packet one-way delay: 2.878 ms

Loss rate: 0.00%

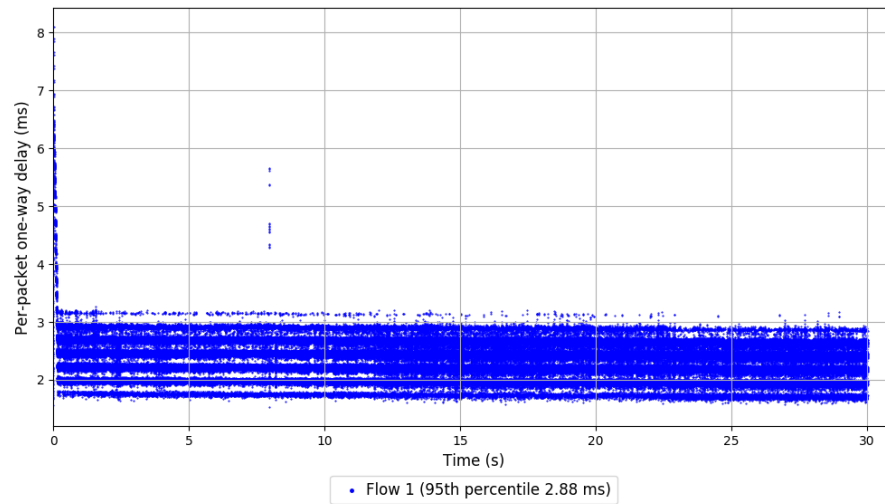
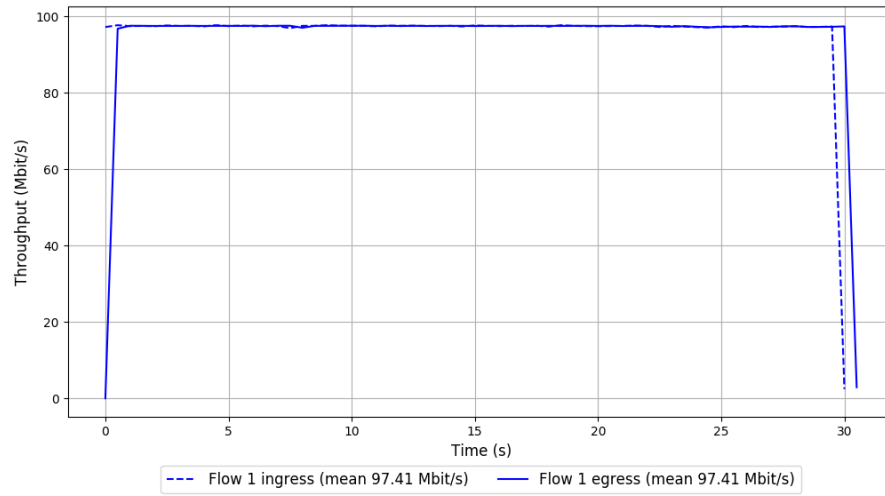
-- Flow 1:

Average throughput: 97.41 Mbit/s

95th percentile per-packet one-way delay: 2.878 ms

Loss rate: 0.00%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

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

End at: 2018-11-15 03:34:45

Local clock offset: -4.365 ms

Remote clock offset: 0.429 ms

Below is generated by plot.py at 2018-11-15 03:46:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.42 Mbit/s

95th percentile per-packet one-way delay: 3.936 ms

Loss rate: 0.00%

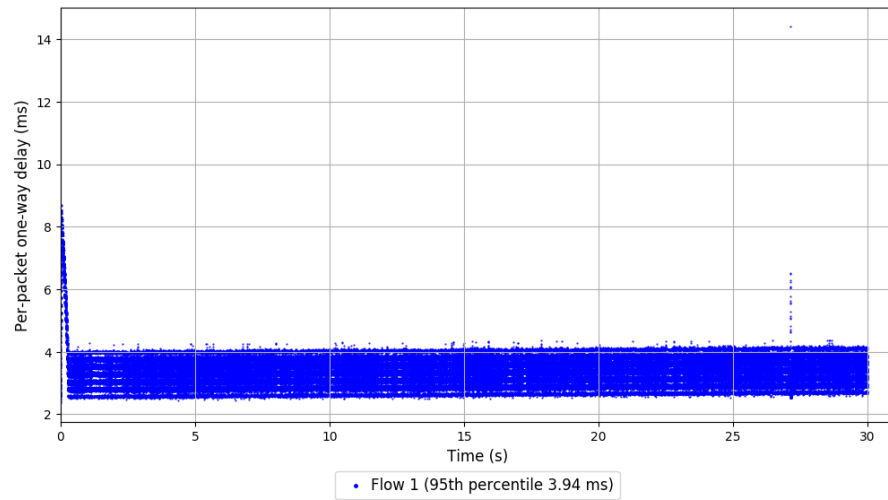
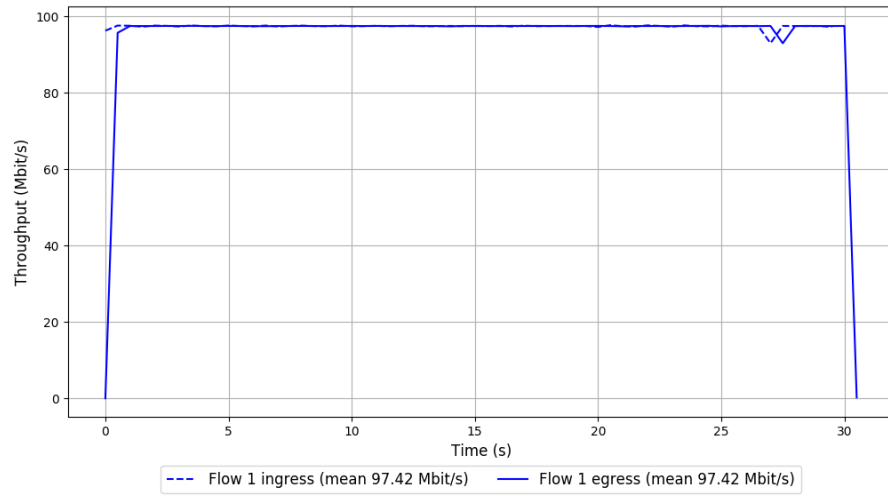
-- Flow 1:

Average throughput: 97.42 Mbit/s

95th percentile per-packet one-way delay: 3.936 ms

Loss rate: 0.00%

Run 5: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2018-11-15 02:04:17

End at: 2018-11-15 02:04:47

Local clock offset: -8.782 ms

Remote clock offset: 0.135 ms

Below is generated by plot.py at 2018-11-15 03:46:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 51.53 Mbit/s

95th percentile per-packet one-way delay: 7.172 ms

Loss rate: 1.30%

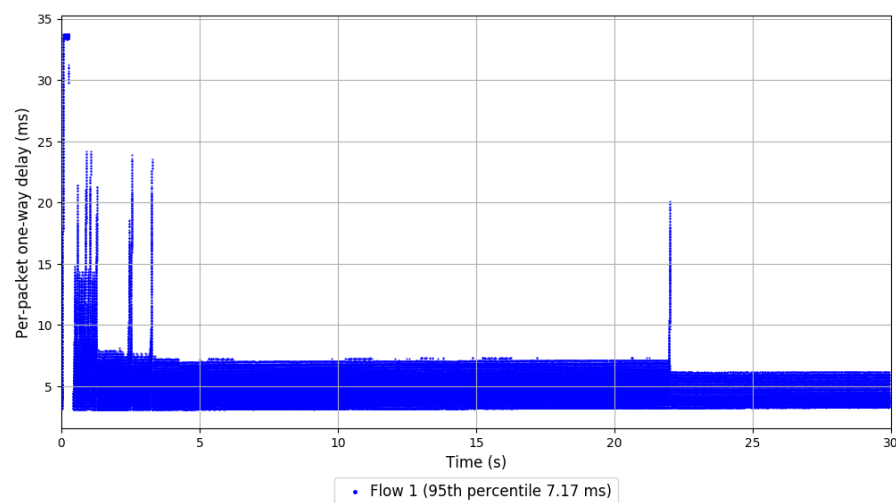
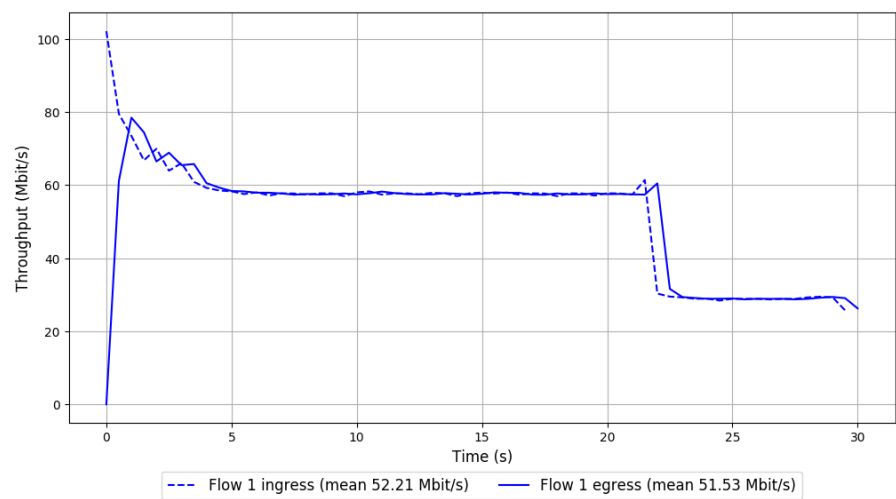
-- Flow 1:

Average throughput: 51.53 Mbit/s

95th percentile per-packet one-way delay: 7.172 ms

Loss rate: 1.30%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-11-15 02:24:20

End at: 2018-11-15 02:24:50

Local clock offset: -8.409 ms

Remote clock offset: 0.274 ms

Below is generated by plot.py at 2018-11-15 03:46:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 59.09 Mbit/s

95th percentile per-packet one-way delay: 6.981 ms

Loss rate: 1.13%

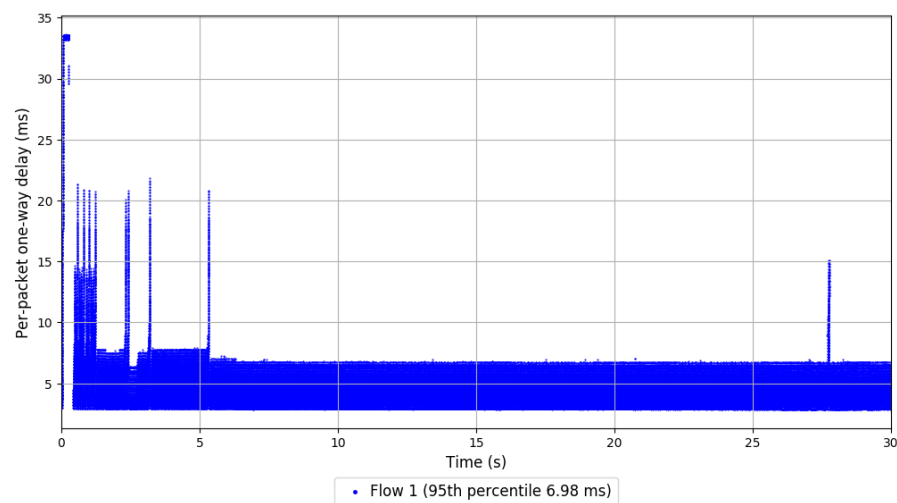
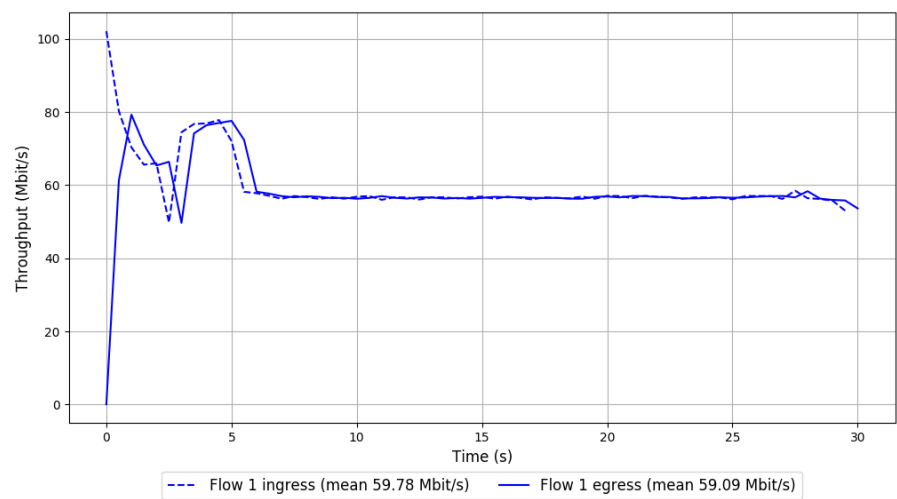
-- Flow 1:

Average throughput: 59.09 Mbit/s

95th percentile per-packet one-way delay: 6.981 ms

Loss rate: 1.13%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-11-15 02:44:22

End at: 2018-11-15 02:44:52

Local clock offset: -4.332 ms

Remote clock offset: 0.435 ms

Below is generated by plot.py at 2018-11-15 03:46:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 44.03 Mbit/s

95th percentile per-packet one-way delay: 3.991 ms

Loss rate: 1.47%

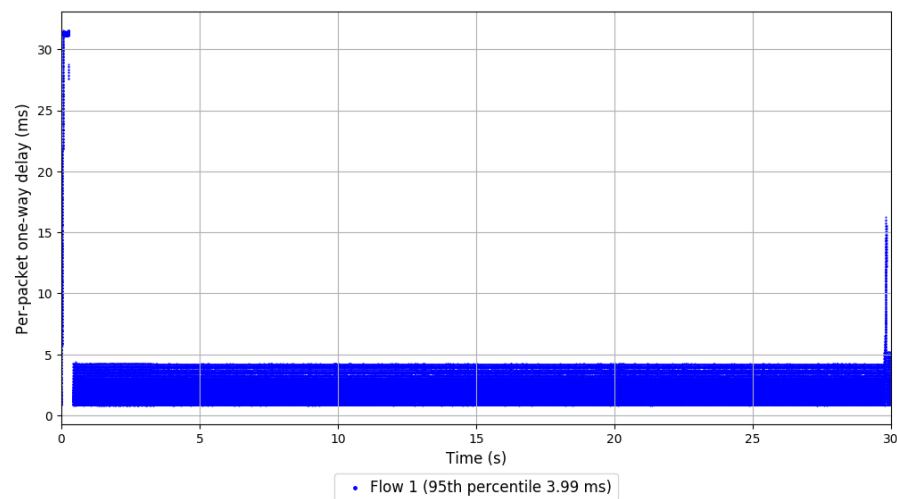
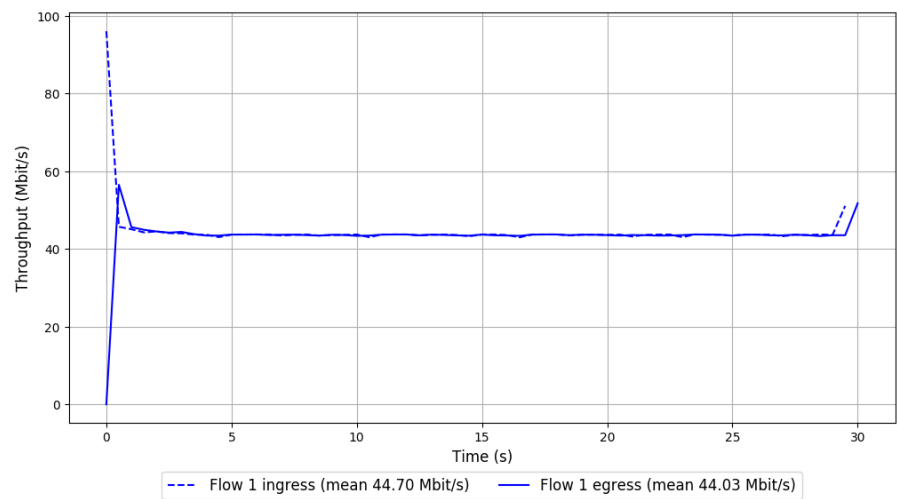
-- Flow 1:

Average throughput: 44.03 Mbit/s

95th percentile per-packet one-way delay: 3.991 ms

Loss rate: 1.47%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-11-15 03:04:22

End at: 2018-11-15 03:04:52

Local clock offset: -5.894 ms

Remote clock offset: 0.327 ms

Below is generated by plot.py at 2018-11-15 03:46:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 50.88 Mbit/s

95th percentile per-packet one-way delay: 4.226 ms

Loss rate: 1.28%

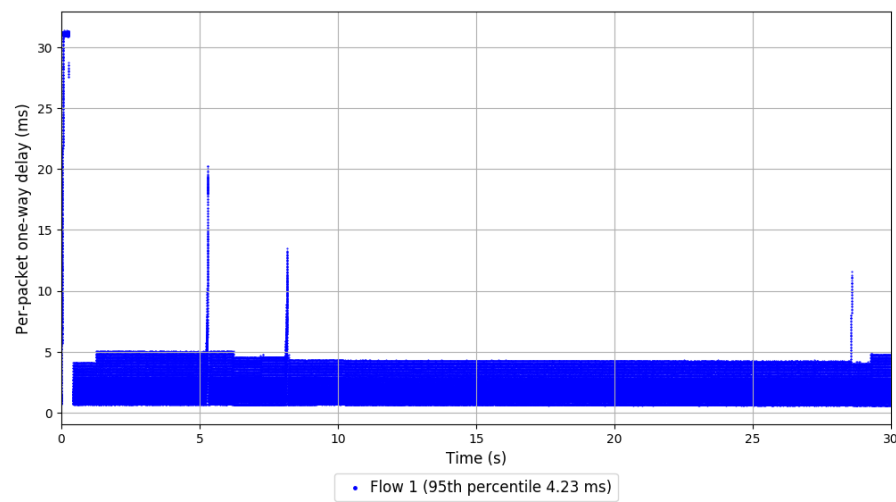
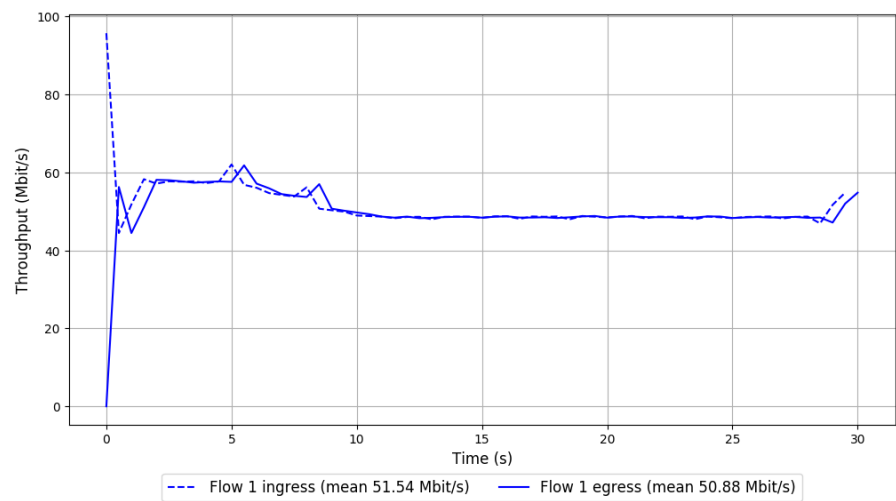
-- Flow 1:

Average throughput: 50.88 Mbit/s

95th percentile per-packet one-way delay: 4.226 ms

Loss rate: 1.28%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-11-15 03:24:23

End at: 2018-11-15 03:24:53

Local clock offset: -8.702 ms

Remote clock offset: 0.452 ms

Below is generated by plot.py at 2018-11-15 03:46:38

Datalink statistics

-- Total of 1 flow:

Average throughput: 62.84 Mbit/s

95th percentile per-packet one-way delay: 8.666 ms

Loss rate: 1.06%

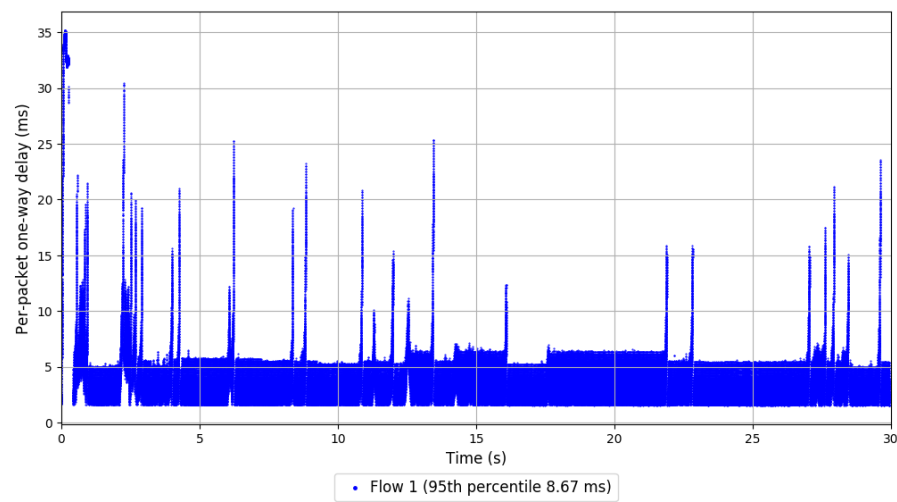
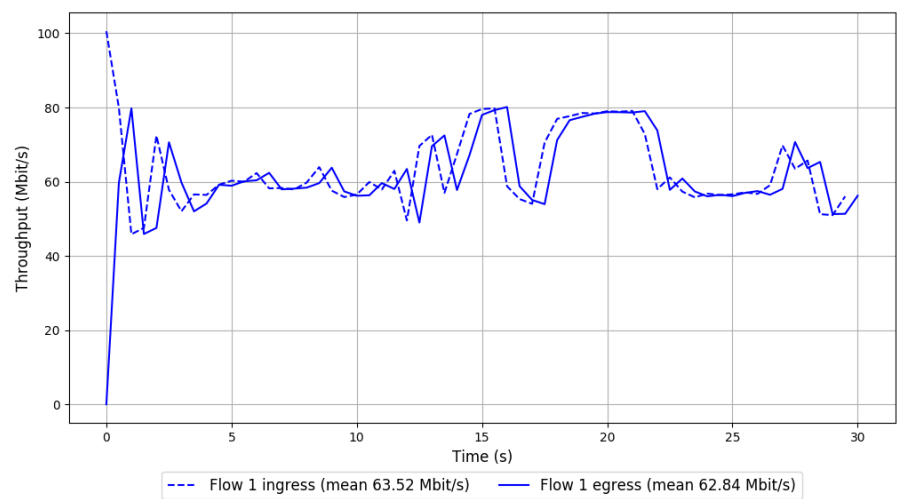
-- Flow 1:

Average throughput: 62.84 Mbit/s

95th percentile per-packet one-way delay: 8.666 ms

Loss rate: 1.06%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2018-11-15 01:58:34

End at: 2018-11-15 01:59:04

Local clock offset: -2.513 ms

Remote clock offset: 0.153 ms

Below is generated by plot.py at 2018-11-15 03:46:57

Datalink statistics

-- Total of 1 flow:

Average throughput: 86.41 Mbit/s

95th percentile per-packet one-way delay: 3.622 ms

Loss rate: 0.00%

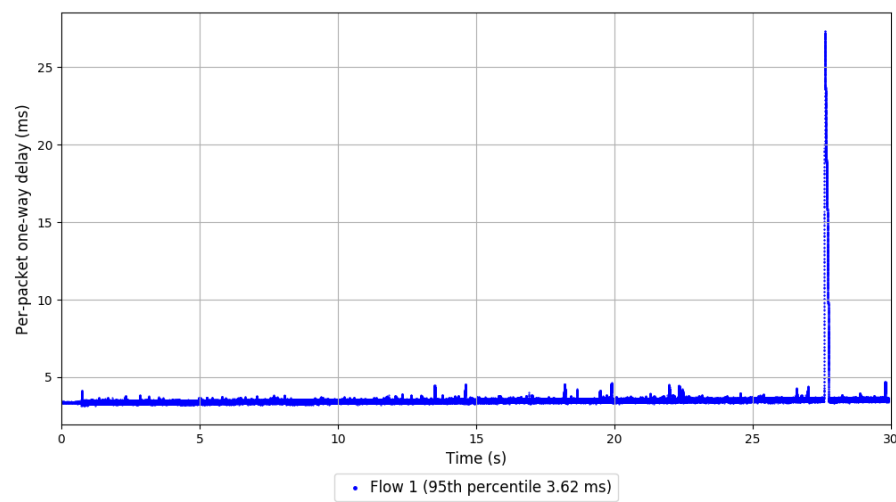
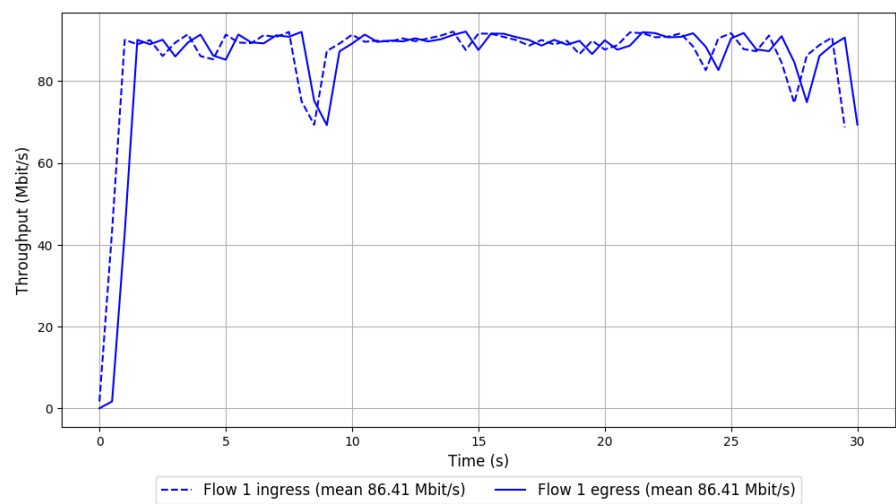
-- Flow 1:

Average throughput: 86.41 Mbit/s

95th percentile per-packet one-way delay: 3.622 ms

Loss rate: 0.00%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2018-11-15 02:18:38

End at: 2018-11-15 02:19:08

Local clock offset: -8.05 ms

Remote clock offset: 0.304 ms

Below is generated by plot.py at 2018-11-15 03:46:58

Datalink statistics

-- Total of 1 flow:

Average throughput: 82.13 Mbit/s

95th percentile per-packet one-way delay: 3.247 ms

Loss rate: 0.00%

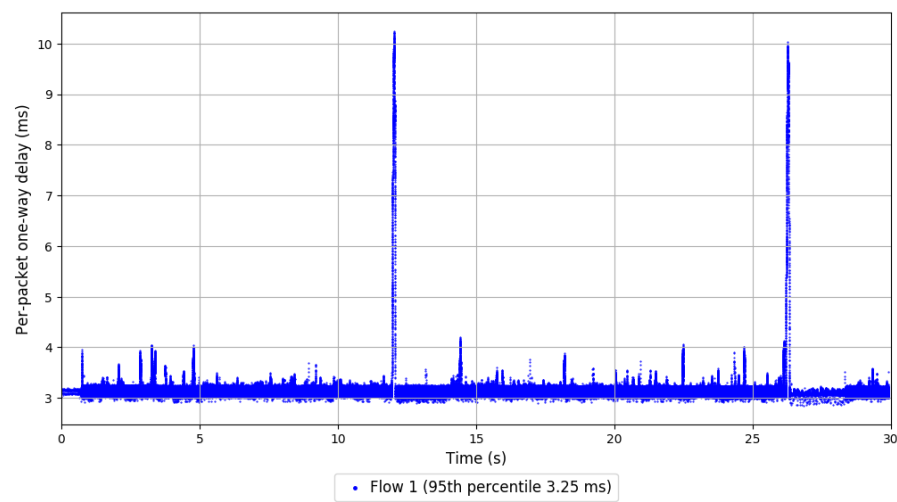
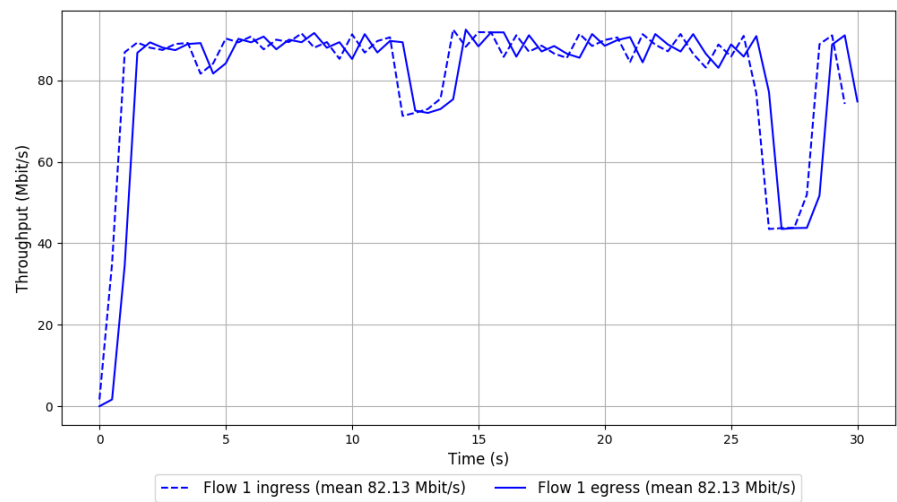
-- Flow 1:

Average throughput: 82.13 Mbit/s

95th percentile per-packet one-way delay: 3.247 ms

Loss rate: 0.00%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2018-11-15 02:38:41

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

Local clock offset: -5.384 ms

Remote clock offset: 0.462 ms

Below is generated by plot.py at 2018-11-15 03:46:59

Datalink statistics

-- Total of 1 flow:

Average throughput: 85.52 Mbit/s

95th percentile per-packet one-way delay: 3.424 ms

Loss rate: 0.00%

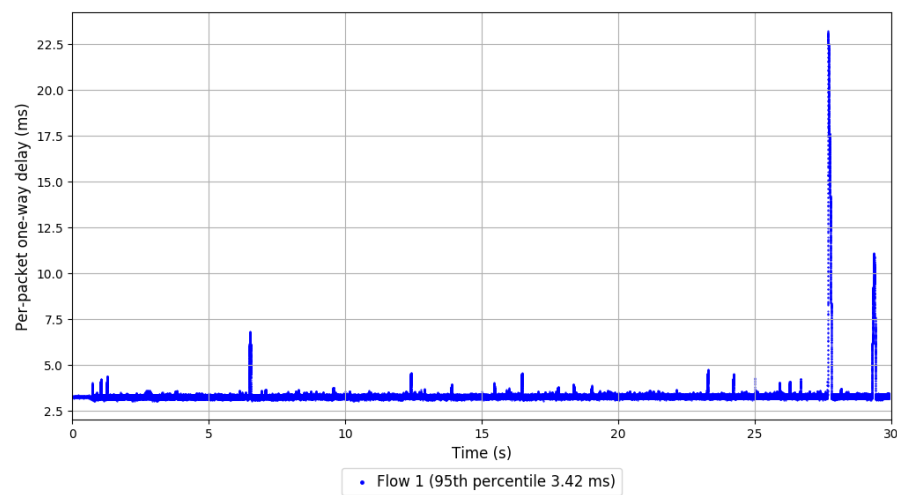
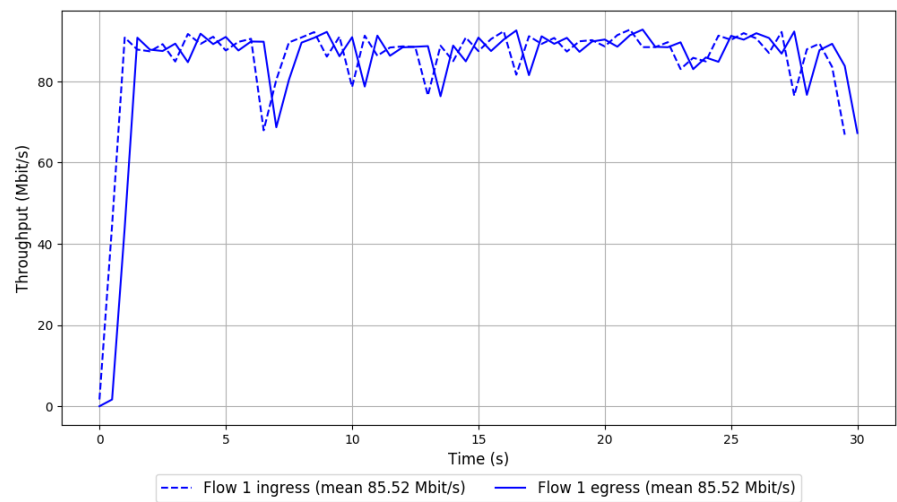
-- Flow 1:

Average throughput: 85.52 Mbit/s

95th percentile per-packet one-way delay: 3.424 ms

Loss rate: 0.00%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2018-11-15 02:58:41

End at: 2018-11-15 02:59:11

Local clock offset: -4.929 ms

Remote clock offset: 0.385 ms

Below is generated by plot.py at 2018-11-15 03:46:59

Datalink statistics

-- Total of 1 flow:

Average throughput: 57.37 Mbit/s

95th percentile per-packet one-way delay: 1.077 ms

Loss rate: 0.00%

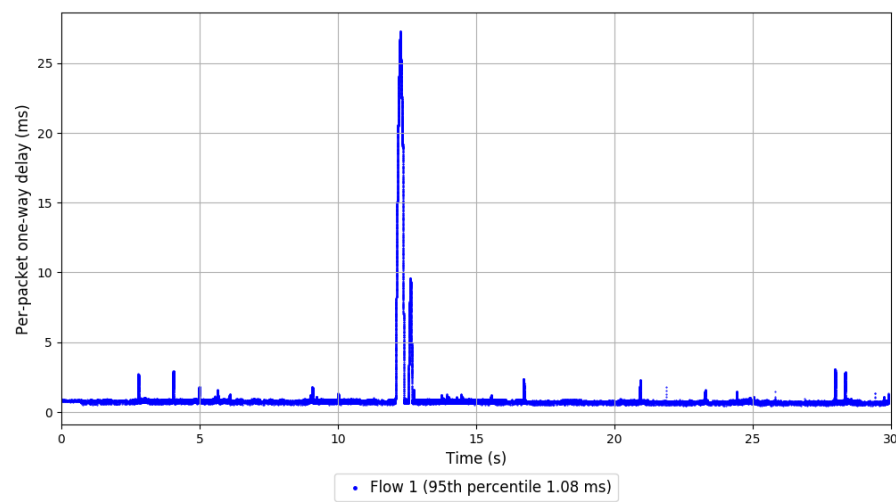
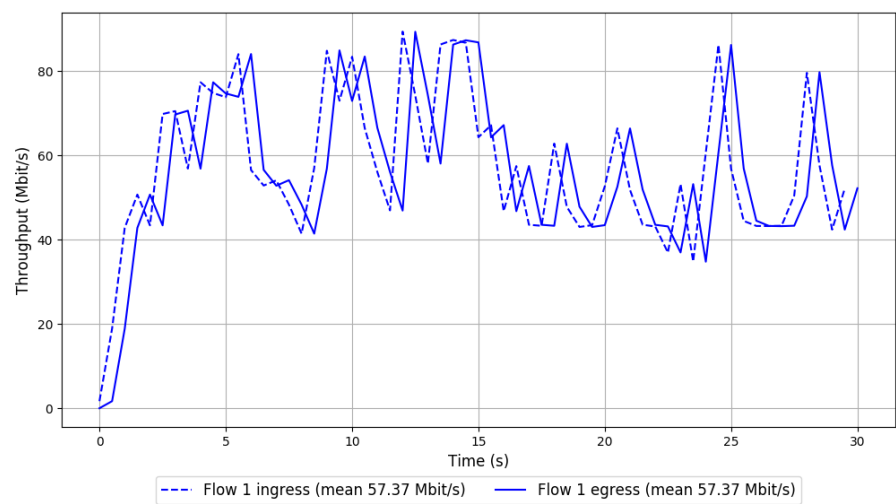
-- Flow 1:

Average throughput: 57.37 Mbit/s

95th percentile per-packet one-way delay: 1.077 ms

Loss rate: 0.00%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2018-11-15 03:18:42

End at: 2018-11-15 03:19:12

Local clock offset: -7.391 ms

Remote clock offset: 0.496 ms

Below is generated by plot.py at 2018-11-15 03:46:59

Datalink statistics

-- Total of 1 flow:

Average throughput: 53.64 Mbit/s

95th percentile per-packet one-way delay: 1.018 ms

Loss rate: 0.00%

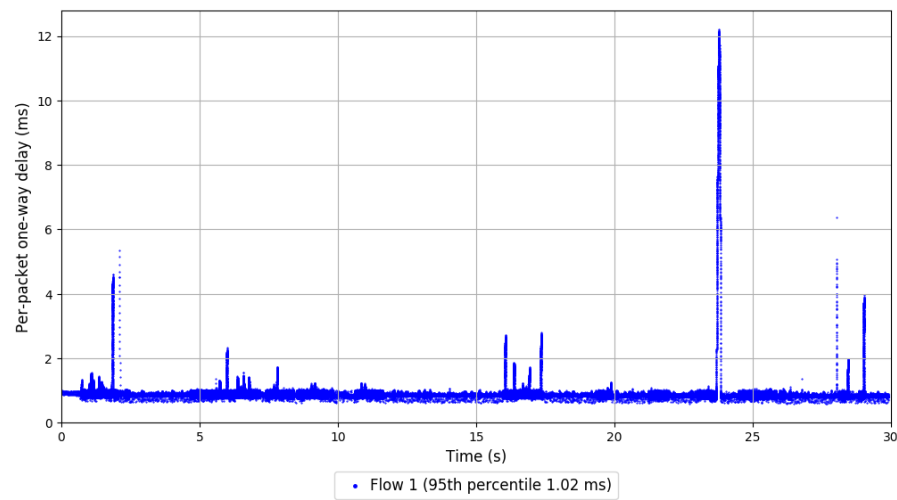
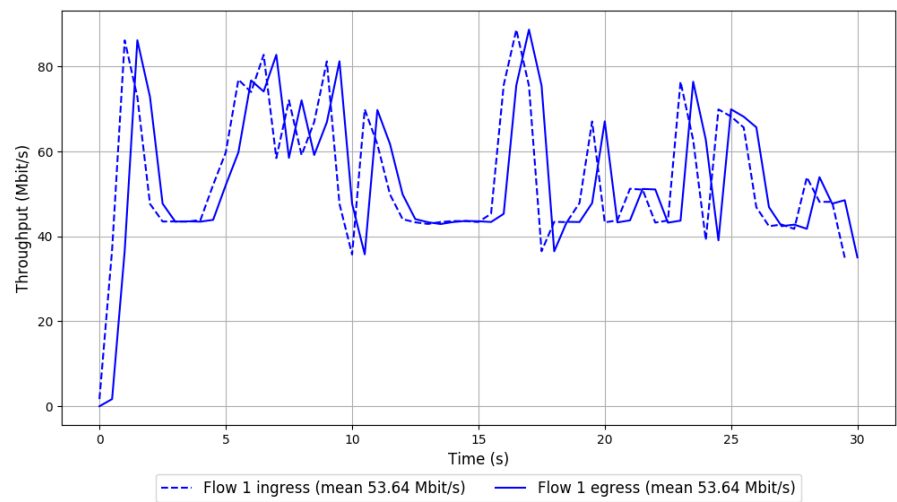
-- Flow 1:

Average throughput: 53.64 Mbit/s

95th percentile per-packet one-way delay: 1.018 ms

Loss rate: 0.00%

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2018-11-15 02:09:49

End at: 2018-11-15 02:10:19

Local clock offset: -7.527 ms

Remote clock offset: 0.237 ms

Below is generated by plot.py at 2018-11-15 03:46:59

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.07 Mbit/s

95th percentile per-packet one-way delay: 2.894 ms

Loss rate: 0.00%

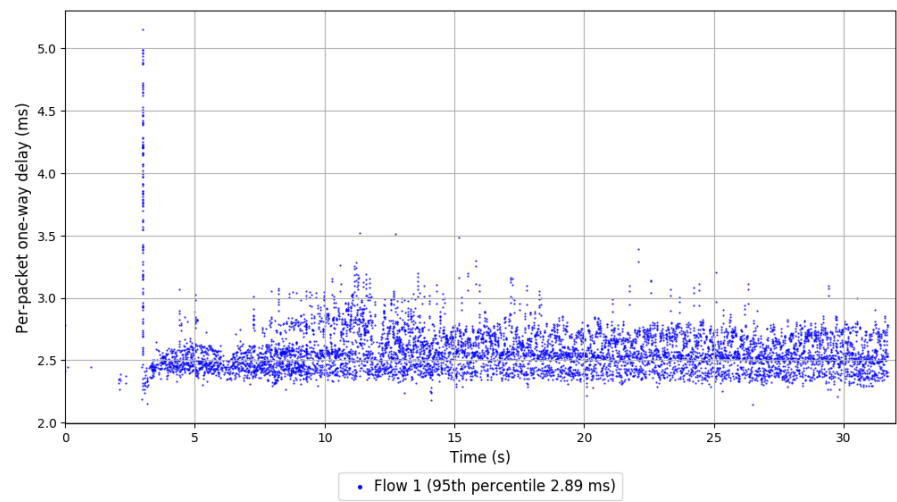
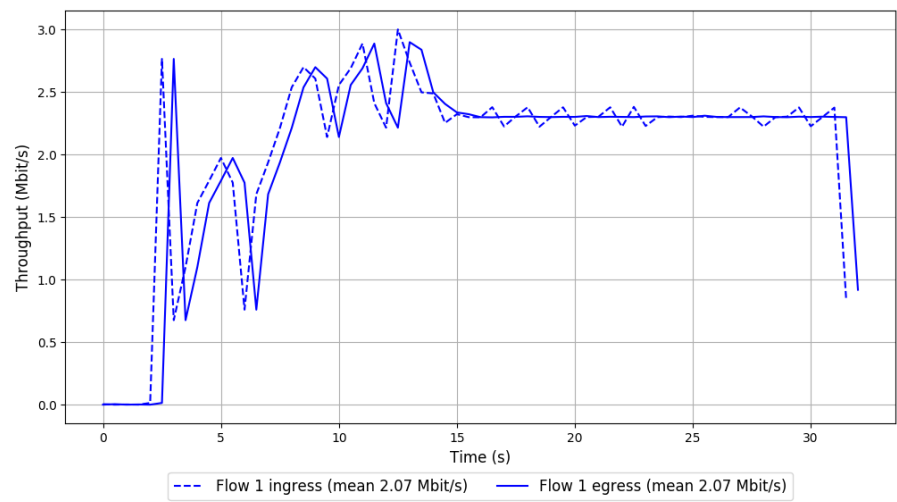
-- Flow 1:

Average throughput: 2.07 Mbit/s

95th percentile per-packet one-way delay: 2.894 ms

Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-11-15 02:29:53

End at: 2018-11-15 02:30:23

Local clock offset: -6.501 ms

Remote clock offset: 0.412 ms

Below is generated by plot.py at 2018-11-15 03:46:59

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 1.681 ms

Loss rate: 0.00%

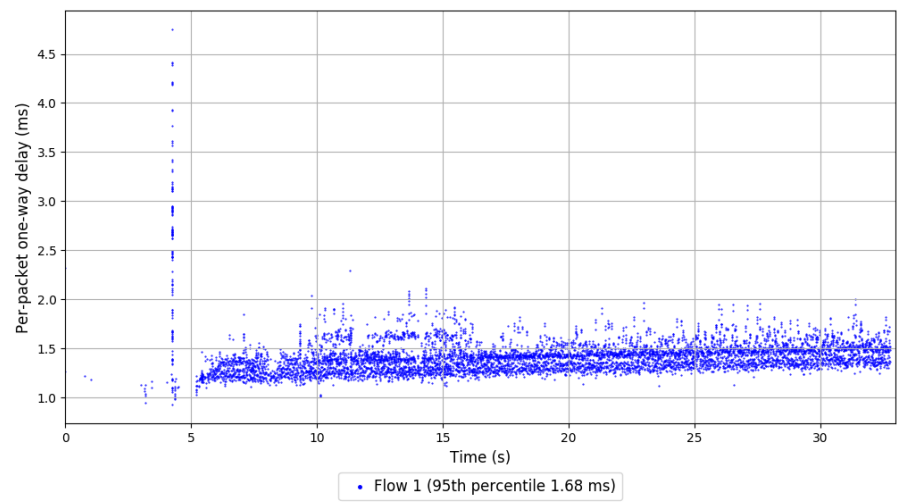
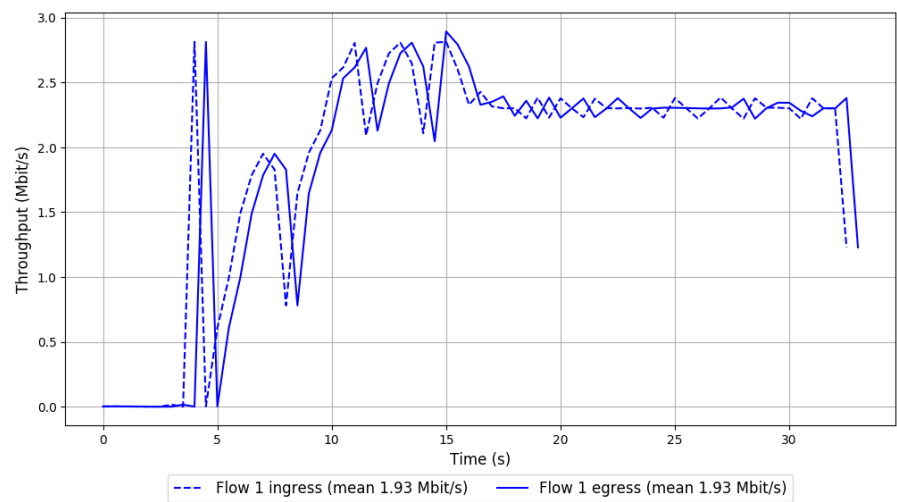
-- Flow 1:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 1.681 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-11-15 02:49:54

End at: 2018-11-15 02:50:24

Local clock offset: -5.09 ms

Remote clock offset: 0.352 ms

Below is generated by plot.py at 2018-11-15 03:46:59

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 3.694 ms

Loss rate: 0.00%

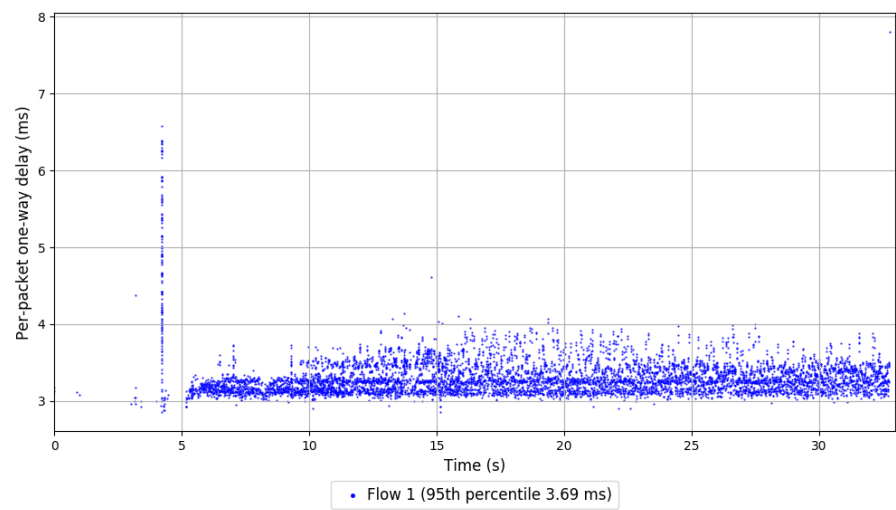
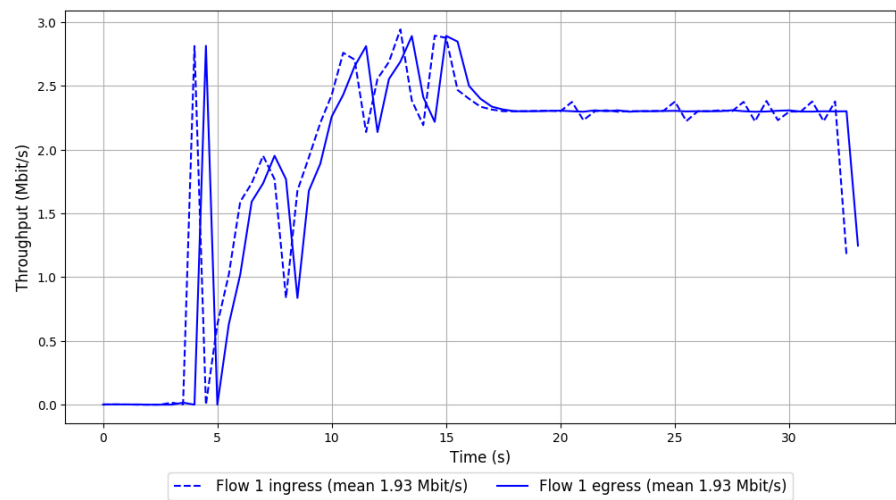
-- Flow 1:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 3.694 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-11-15 03:09:54

End at: 2018-11-15 03:10:24

Local clock offset: -6.51 ms

Remote clock offset: 0.474 ms

Below is generated by plot.py at 2018-11-15 03:46:59

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 2.933 ms

Loss rate: 0.00%

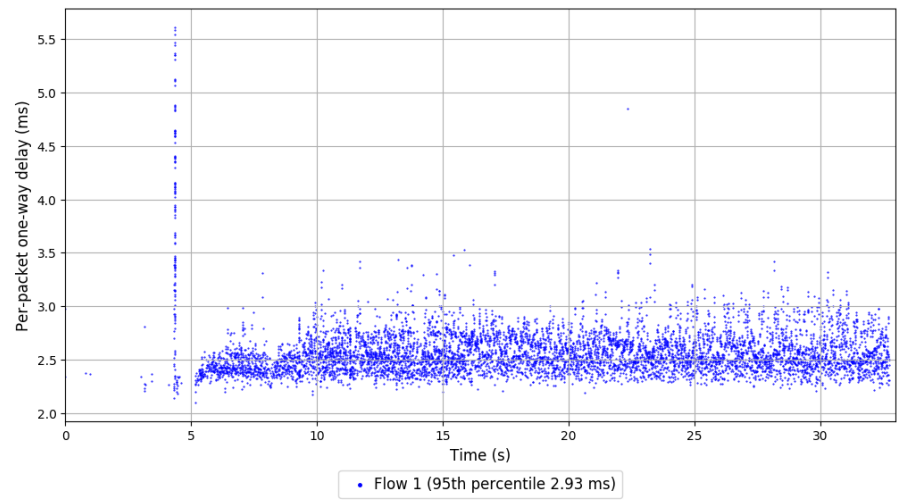
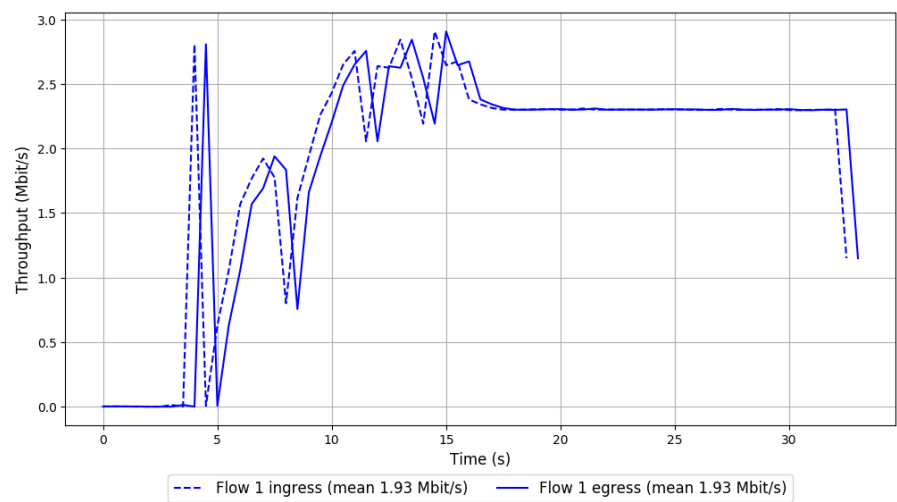
-- Flow 1:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 2.933 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-11-15 03:29:56

End at: 2018-11-15 03:30:26

Local clock offset: -6.237 ms

Remote clock offset: 0.378 ms

Below is generated by plot.py at 2018-11-15 03:46:59

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 3.361 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 3.361 ms

Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

