

Pantheon Report

Generated at 2018-11-29 22:04:57 (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.

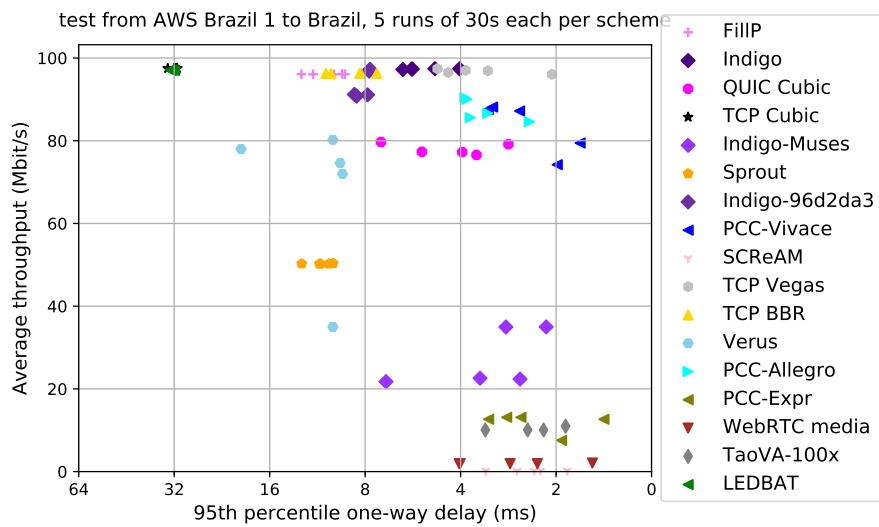
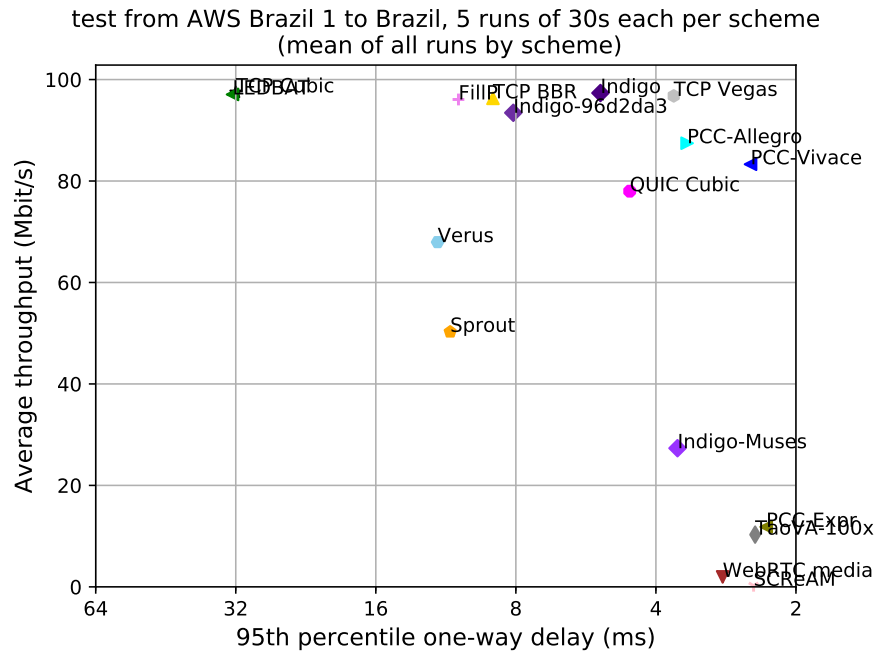
System info:

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

Git summary:

```
branch: muses @ 794ca3866981572cb73700a276691acf79c60f2b
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 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



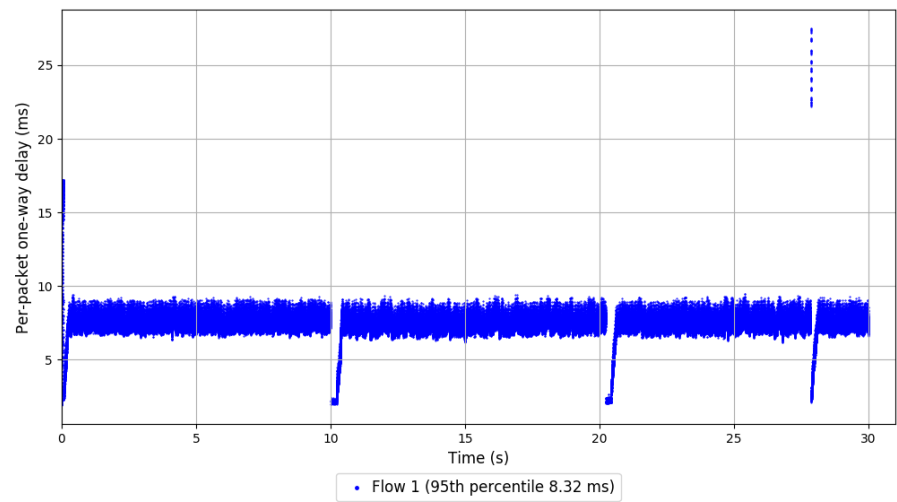
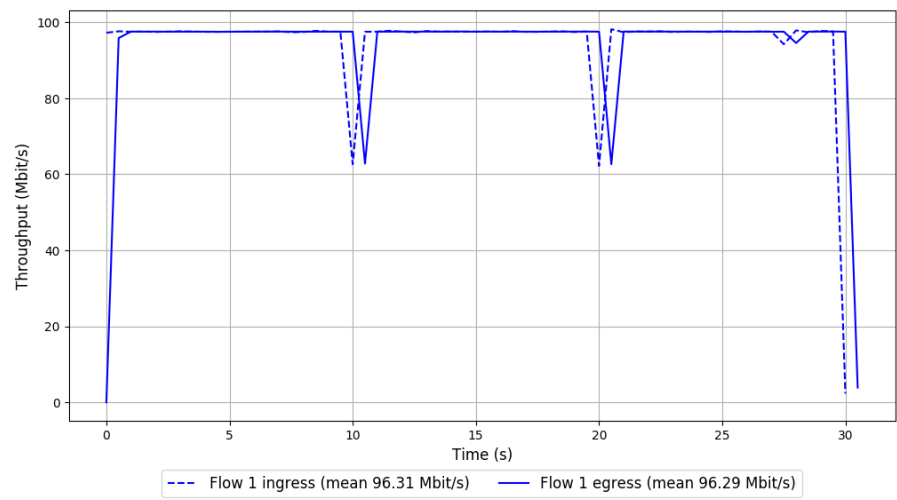
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	96.30	8.96	0.00
Copa	0	N/A	N/A	N/A
TCP Cubic	5	97.47	31.98	0.01
FillP	5	96.07	10.63	0.28
Indigo	5	97.35	5.26	0.00
Indigo-96d2da3	5	93.45	8.10	0.00
LEDBAT	5	97.07	32.52	0.01
Indigo-Muses	5	27.33	3.59	0.00
PCC-Allegro	5	87.45	3.43	0.00
PCC-Expr	5	11.82	2.32	20.79
QUIC Cubic	5	77.99	4.55	0.25
SCReAM	5	0.22	2.47	0.00
Sprout	5	50.27	11.07	0.00
TaoVA-100x	4	10.30	2.45	81.20
TCP Vegas	5	96.78	3.66	0.00
Verus	5	67.96	11.78	1.08
PCC-Vivace	5	83.30	2.50	0.01
WebRTC media	5	1.96	2.88	0.01

Run 1: Statistics of TCP BBR

Start at: 2018-11-29 20:21:28
End at: 2018-11-29 20:21:58
Local clock offset: -1.774 ms
Remote clock offset: -0.142 ms

Below is generated by plot.py at 2018-11-29 21:57:05
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.29 Mbit/s
95th percentile per-packet one-way delay: 8.319 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 96.29 Mbit/s
95th percentile per-packet one-way delay: 8.319 ms
Loss rate: 0.00%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-11-29 20:41:33

End at: 2018-11-29 20:42:03

Local clock offset: 0.718 ms

Remote clock offset: 0.142 ms

Below is generated by plot.py at 2018-11-29 21:57:05

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.26 Mbit/s

95th percentile per-packet one-way delay: 10.240 ms

Loss rate: 0.00%

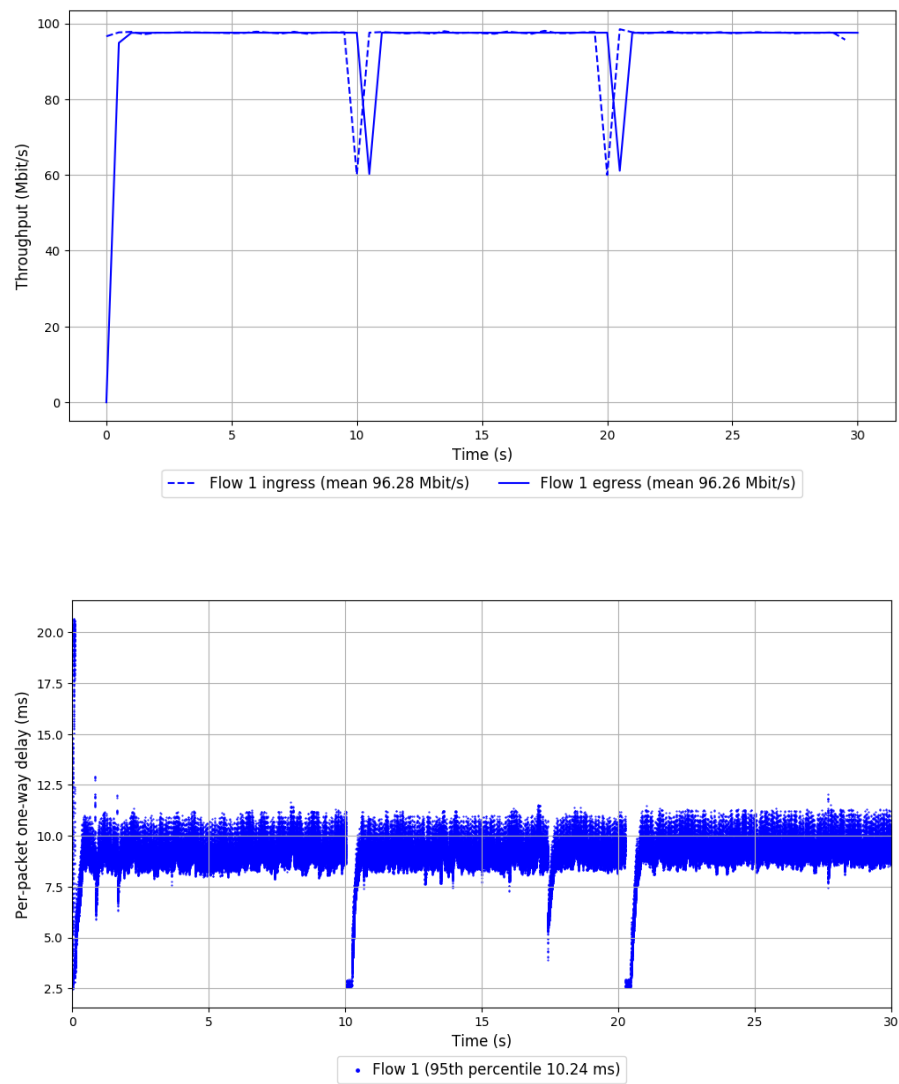
-- Flow 1:

Average throughput: 96.26 Mbit/s

95th percentile per-packet one-way delay: 10.240 ms

Loss rate: 0.00%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-11-29 21:01:38

End at: 2018-11-29 21:02:08

Local clock offset: 2.512 ms

Remote clock offset: 0.31 ms

Below is generated by plot.py at 2018-11-29 21:57:05

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.32 Mbit/s

95th percentile per-packet one-way delay: 7.352 ms

Loss rate: 0.00%

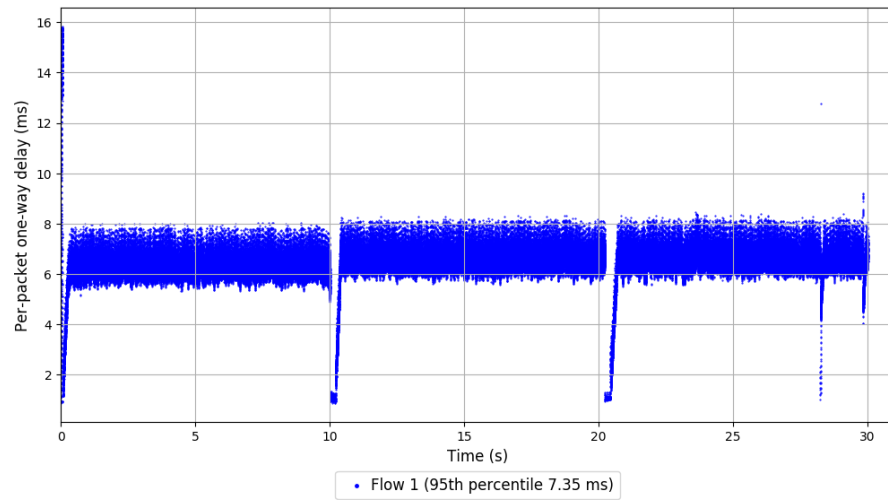
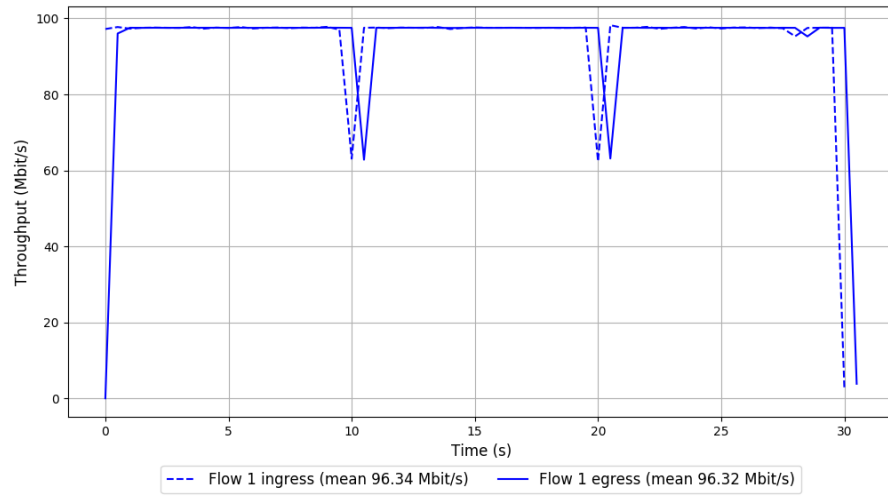
-- Flow 1:

Average throughput: 96.32 Mbit/s

95th percentile per-packet one-way delay: 7.352 ms

Loss rate: 0.00%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-11-29 21:21:41

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

Local clock offset: 0.509 ms

Remote clock offset: 0.415 ms

Below is generated by plot.py at 2018-11-29 21:57:05

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.28 Mbit/s

95th percentile per-packet one-way delay: 10.631 ms

Loss rate: 0.00%

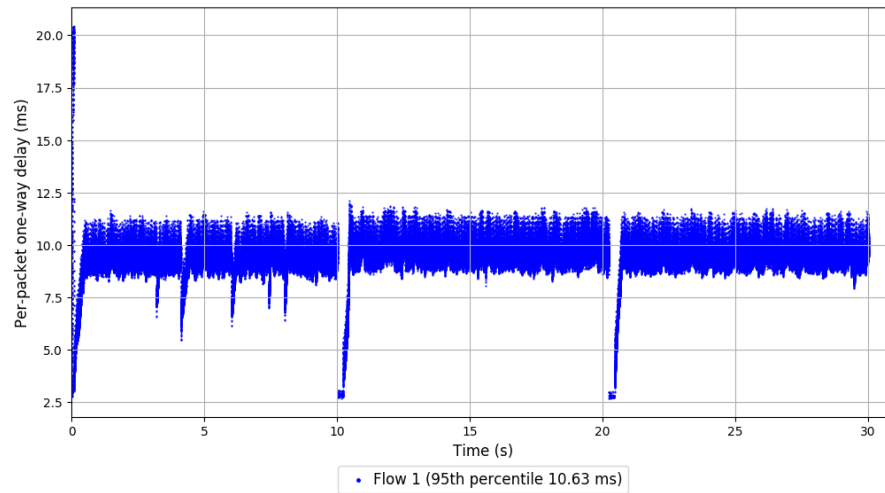
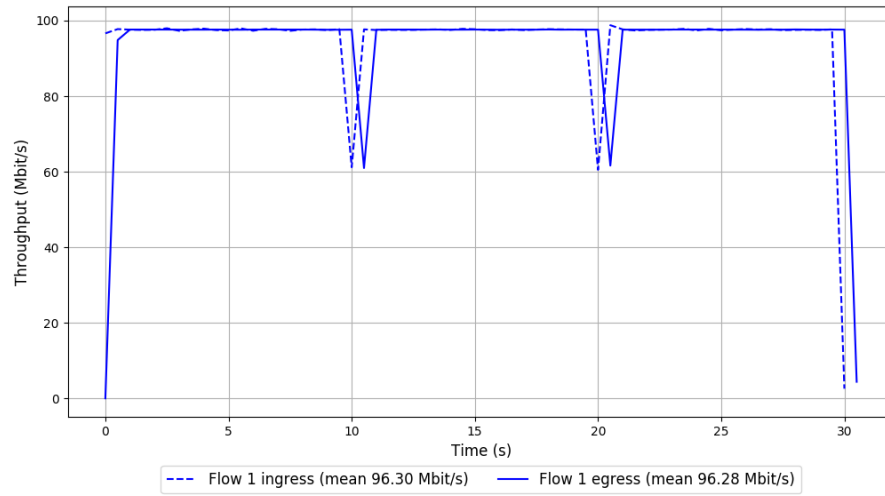
-- Flow 1:

Average throughput: 96.28 Mbit/s

95th percentile per-packet one-way delay: 10.631 ms

Loss rate: 0.00%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-11-29 21:41:47

End at: 2018-11-29 21:42:17

Local clock offset: -0.912 ms

Remote clock offset: 0.543 ms

Below is generated by plot.py at 2018-11-29 21:57:05

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.35 Mbit/s

95th percentile per-packet one-way delay: 8.262 ms

Loss rate: 0.00%

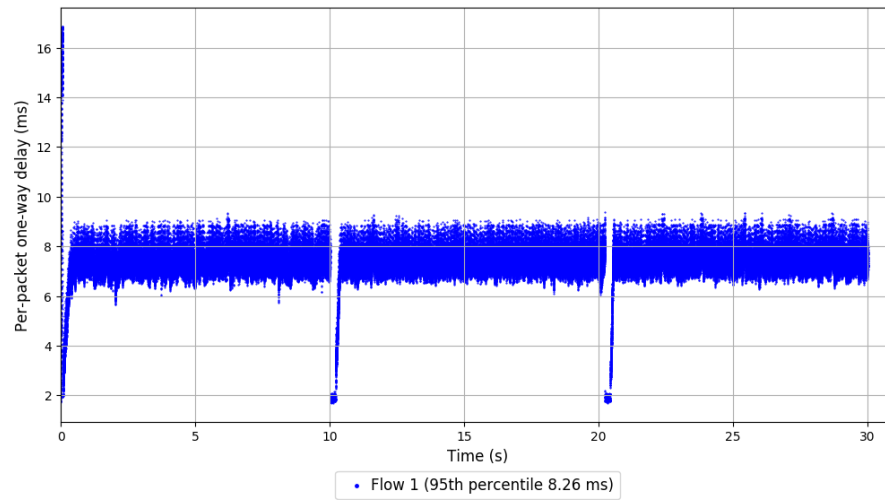
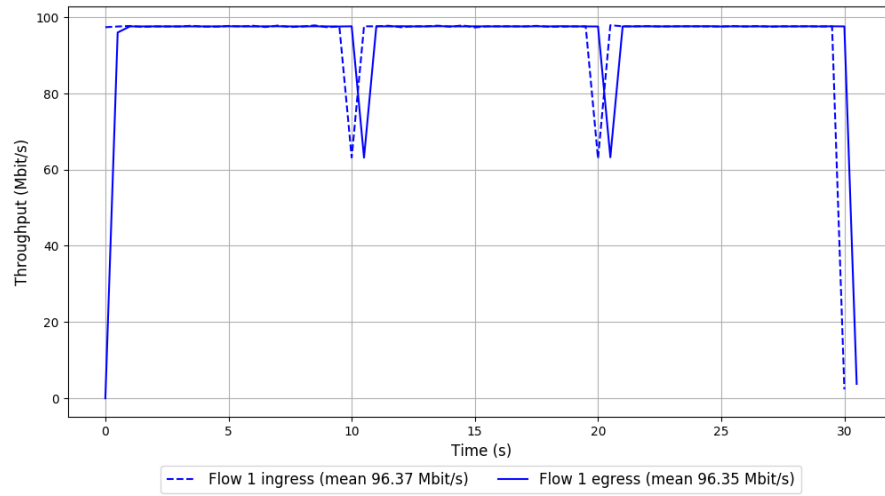
-- Flow 1:

Average throughput: 96.35 Mbit/s

95th percentile per-packet one-way delay: 8.262 ms

Loss rate: 0.00%

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

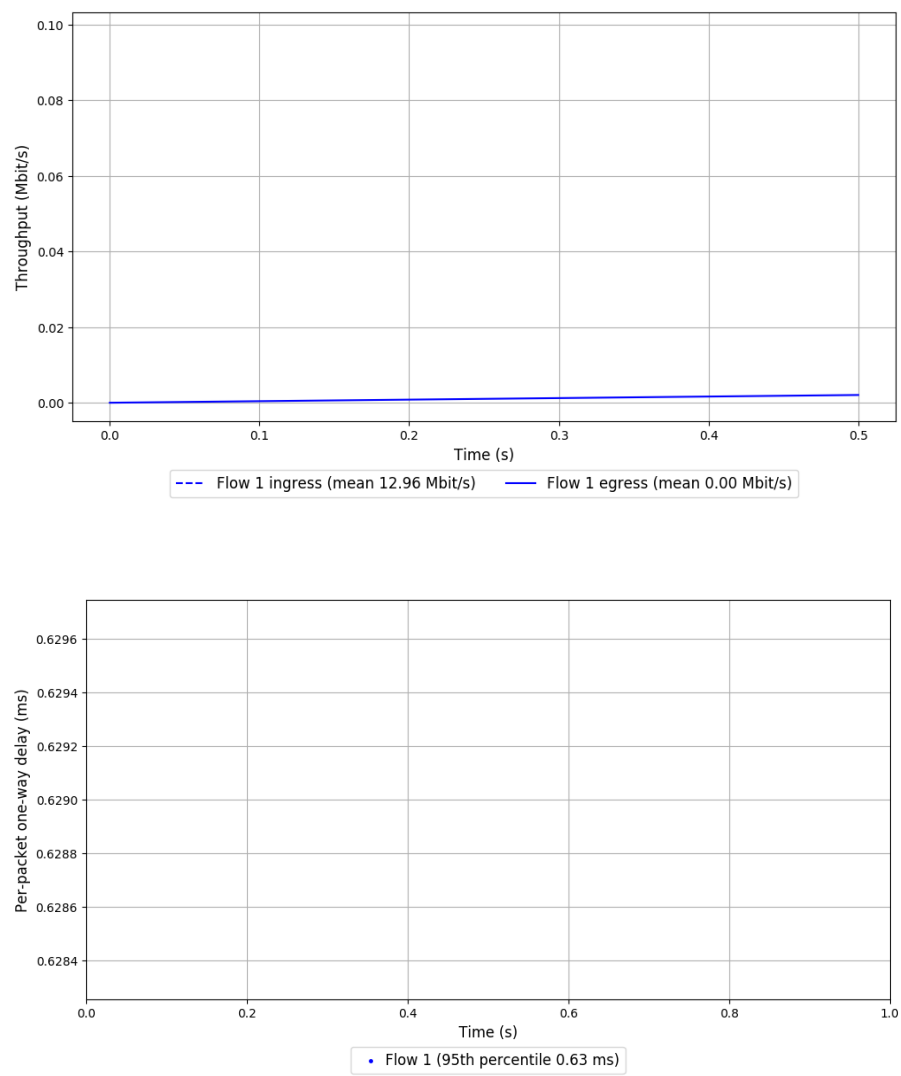
Start at: 2018-11-29 20:31:33

End at: 2018-11-29 20:32:03

Local clock offset: 0.627 ms

Remote clock offset: -0.023 ms

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

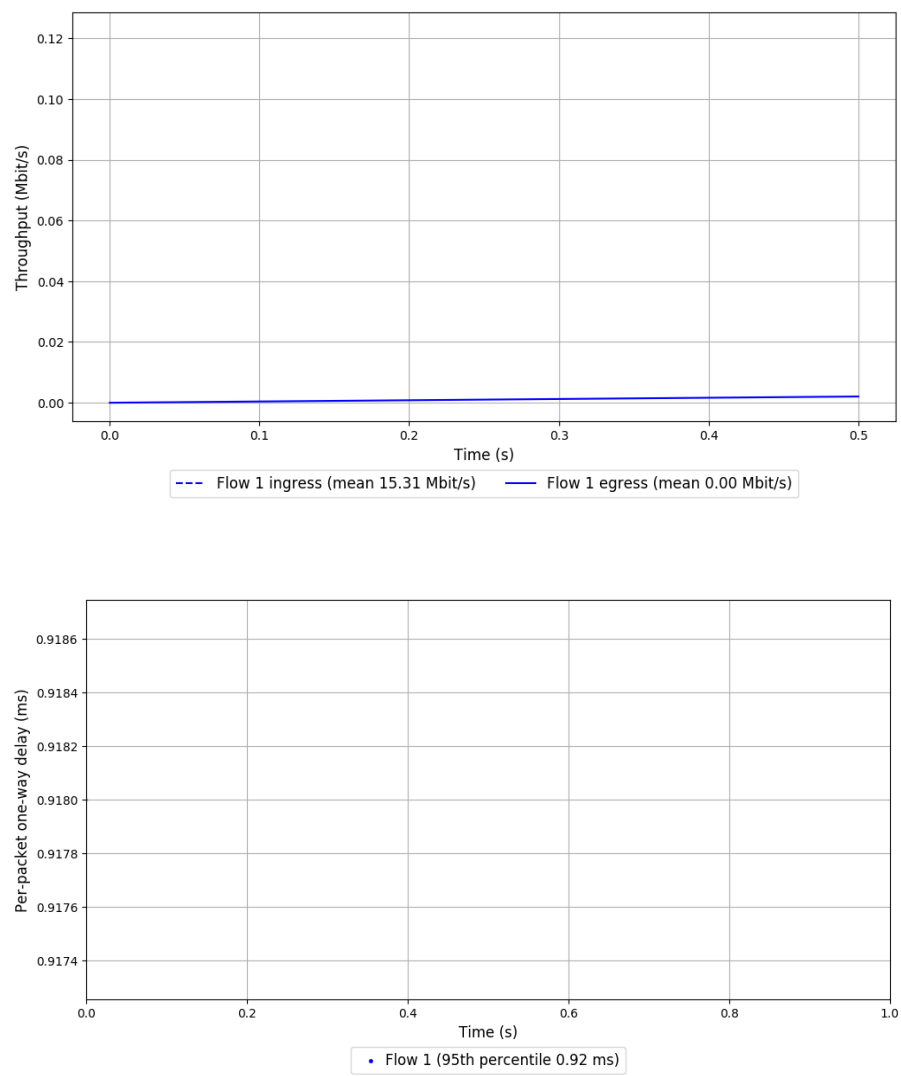
Start at: 2018-11-29 20:51:38

End at: 2018-11-29 20:52:08

Local clock offset: 1.083 ms

Remote clock offset: 0.122 ms

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

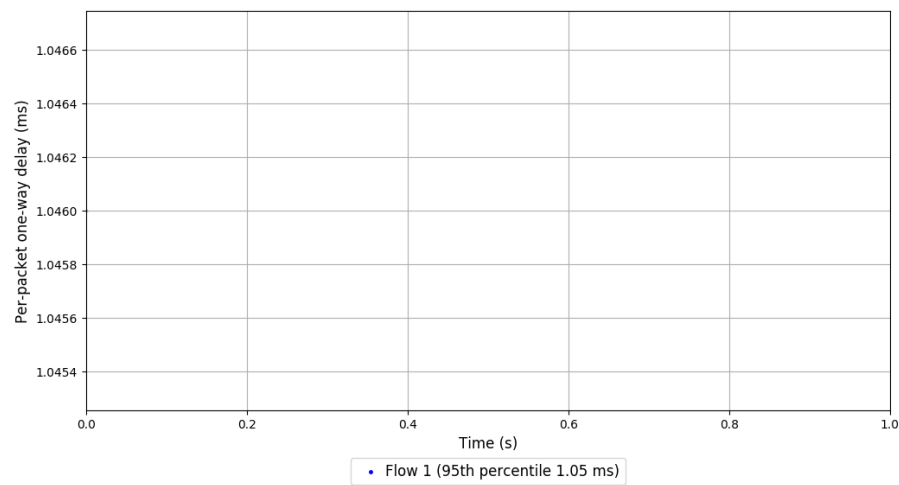
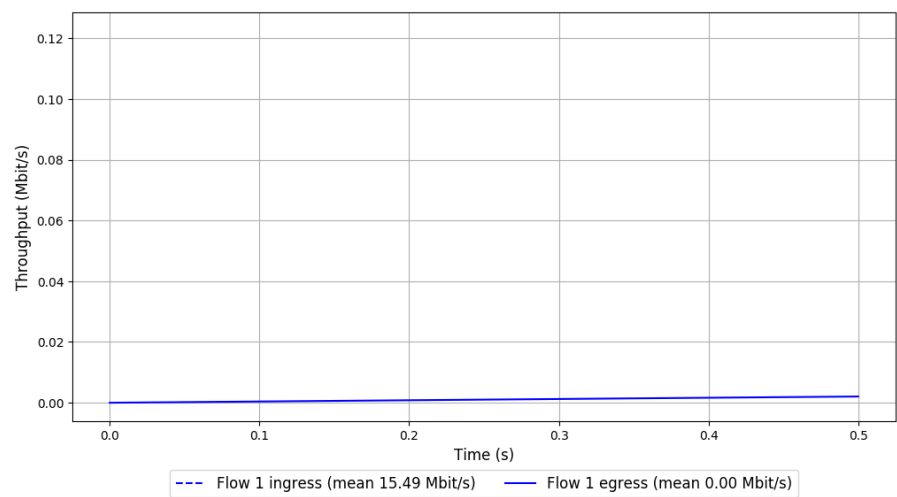
Start at: 2018-11-29 21:11:40

End at: 2018-11-29 21:12:10

Local clock offset: 5.169 ms

Remote clock offset: 0.405 ms

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

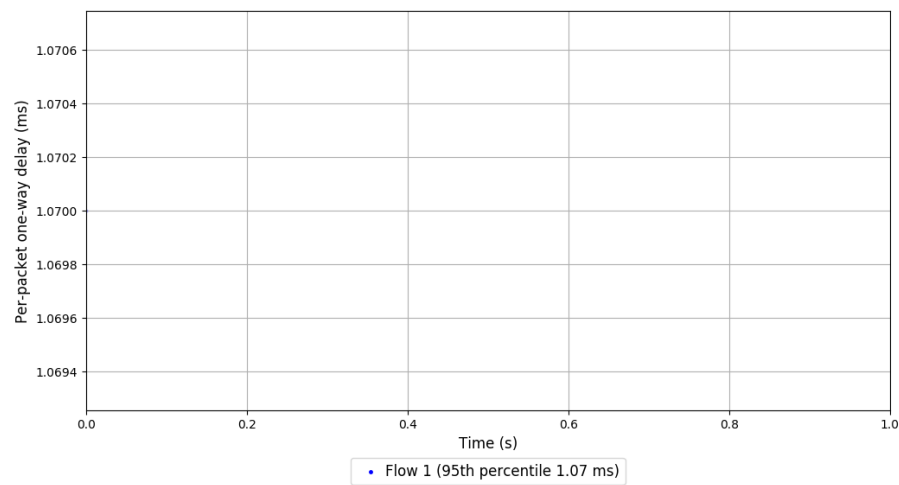
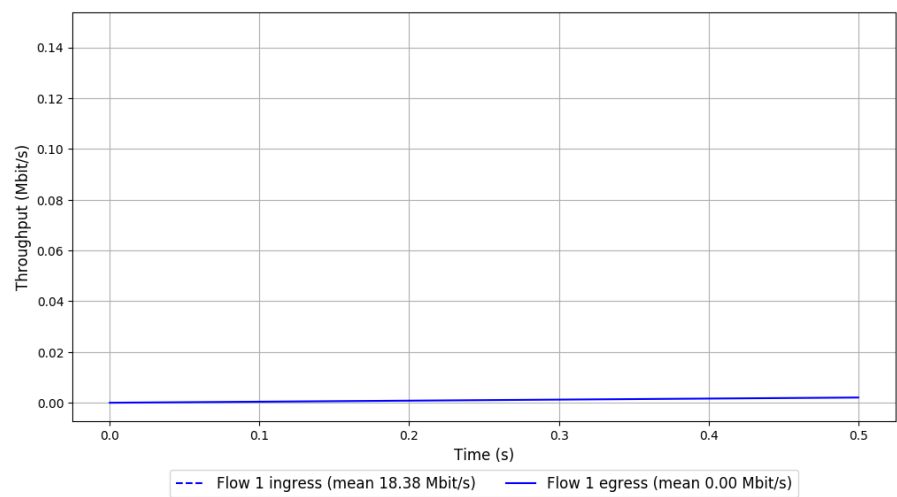
Start at: 2018-11-29 21:31:46

End at: 2018-11-29 21:32:16

Local clock offset: -0.64 ms

Remote clock offset: 0.51 ms

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

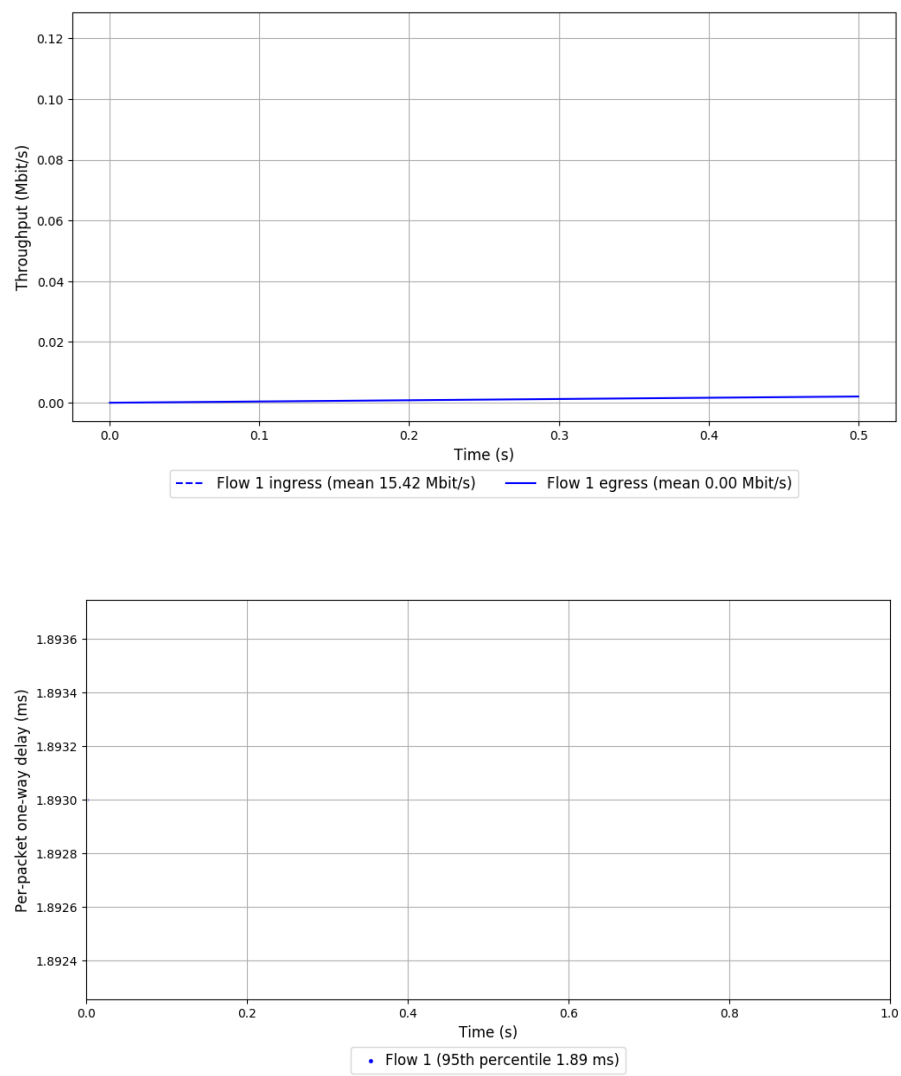
Start at: 2018-11-29 21:51:51

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

Local clock offset: 0.081 ms

Remote clock offset: 0.583 ms

Run 5: Report of Copa — Data Link

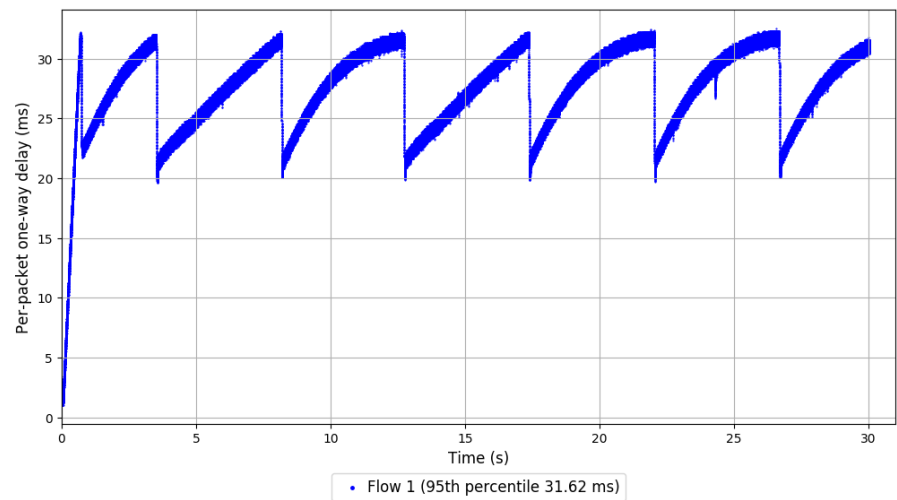
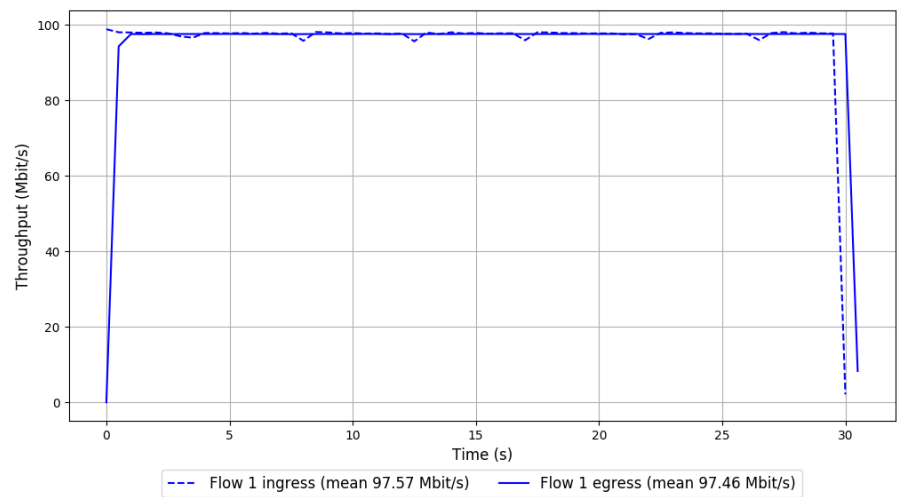


Run 1: Statistics of TCP Cubic

Start at: 2018-11-29 20:16:58
End at: 2018-11-29 20:17:28
Local clock offset: -2.258 ms
Remote clock offset: -0.121 ms

Below is generated by plot.py at 2018-11-29 21:57:06
Datalink statistics
-- Total of 1 flow:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 31.619 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 31.619 ms
Loss rate: 0.01%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-11-29 20:37:03

End at: 2018-11-29 20:37:33

Local clock offset: -0.971 ms

Remote clock offset: 0.044 ms

Below is generated by plot.py at 2018-11-29 21:57:07

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.47 Mbit/s

95th percentile per-packet one-way delay: 32.052 ms

Loss rate: 0.01%

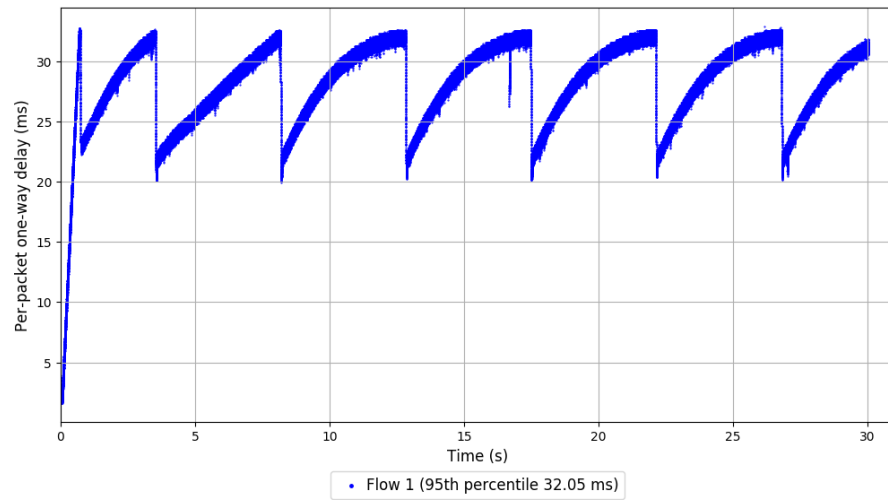
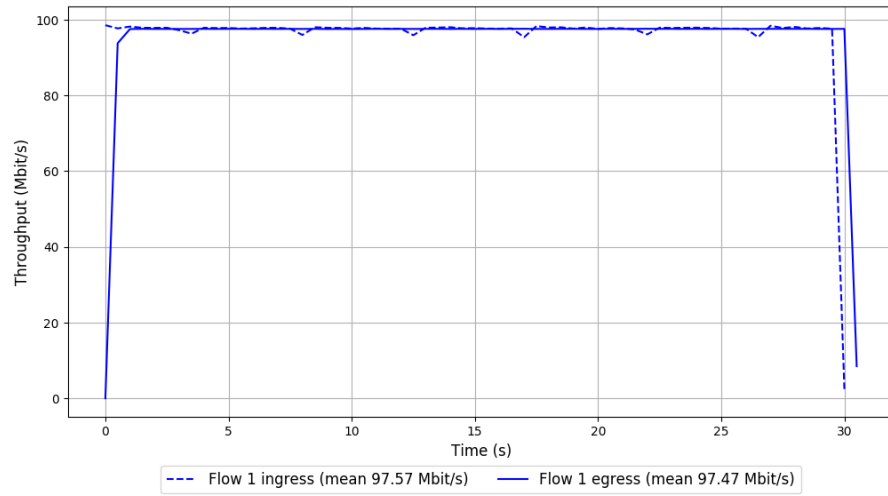
-- Flow 1:

Average throughput: 97.47 Mbit/s

95th percentile per-packet one-way delay: 32.052 ms

Loss rate: 0.01%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-11-29 20:57:07

End at: 2018-11-29 20:57:37

Local clock offset: 0.9 ms

Remote clock offset: 0.269 ms

Below is generated by plot.py at 2018-11-29 21:57:07

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.48 Mbit/s

95th percentile per-packet one-way delay: 33.530 ms

Loss rate: 0.01%

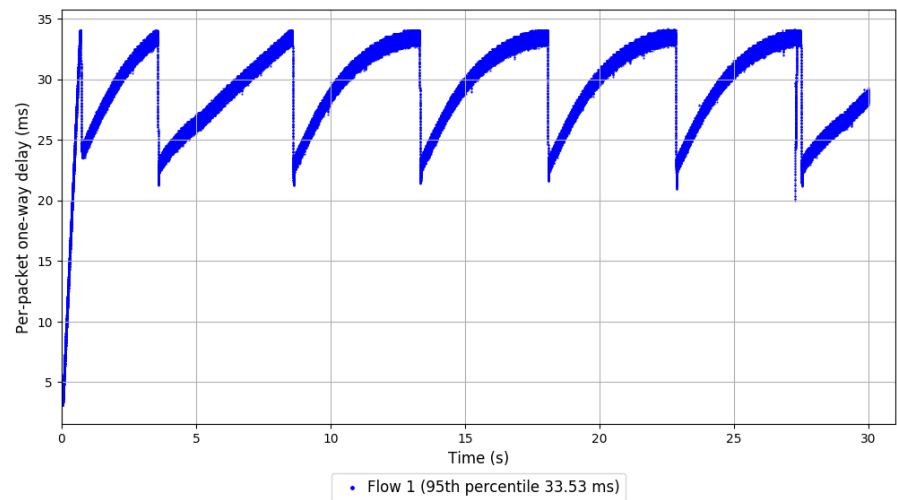
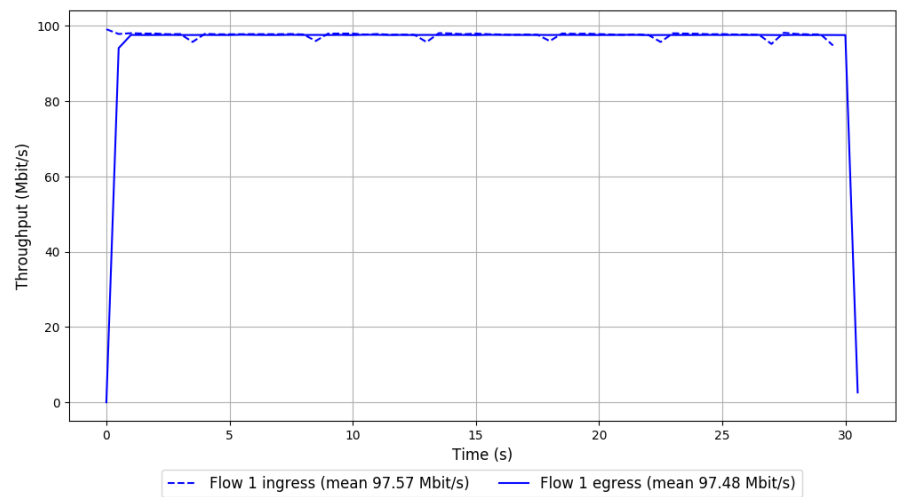
-- Flow 1:

Average throughput: 97.48 Mbit/s

95th percentile per-packet one-way delay: 33.530 ms

Loss rate: 0.01%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-11-29 21:17:10

End at: 2018-11-29 21:17:40

Local clock offset: 3.071 ms

Remote clock offset: 0.365 ms

Below is generated by plot.py at 2018-11-29 21:58:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.47 Mbit/s

95th percentile per-packet one-way delay: 31.416 ms

Loss rate: 0.01%

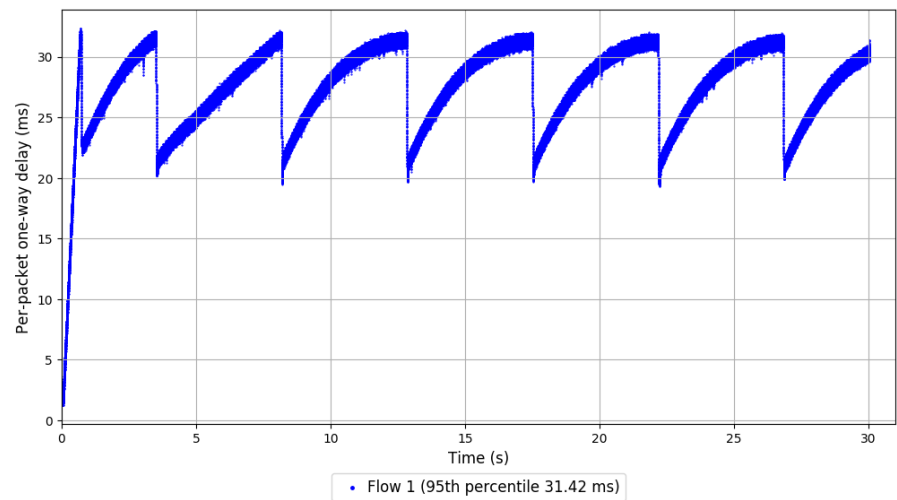
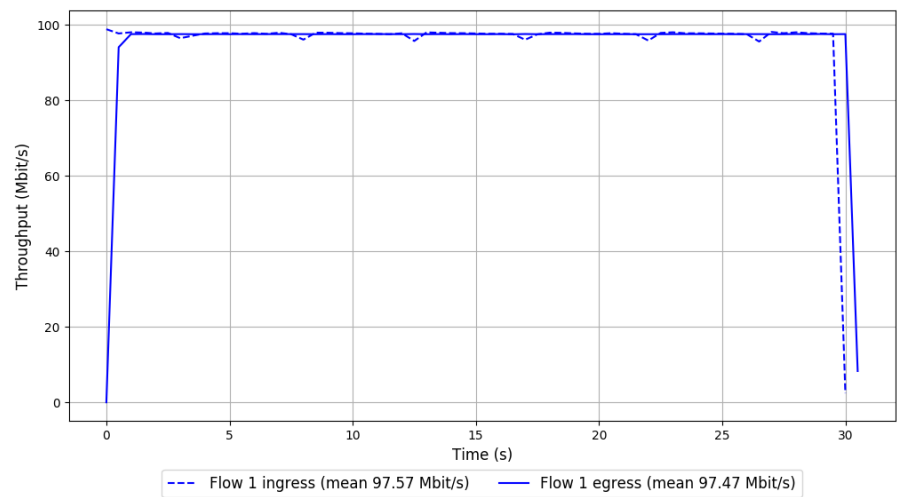
-- Flow 1:

Average throughput: 97.47 Mbit/s

95th percentile per-packet one-way delay: 31.416 ms

Loss rate: 0.01%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-11-29 21:37:16

End at: 2018-11-29 21:37:46

Local clock offset: -0.513 ms

Remote clock offset: 0.527 ms

Below is generated by plot.py at 2018-11-29 21:58:18

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.47 Mbit/s

95th percentile per-packet one-way delay: 31.298 ms

Loss rate: 0.01%

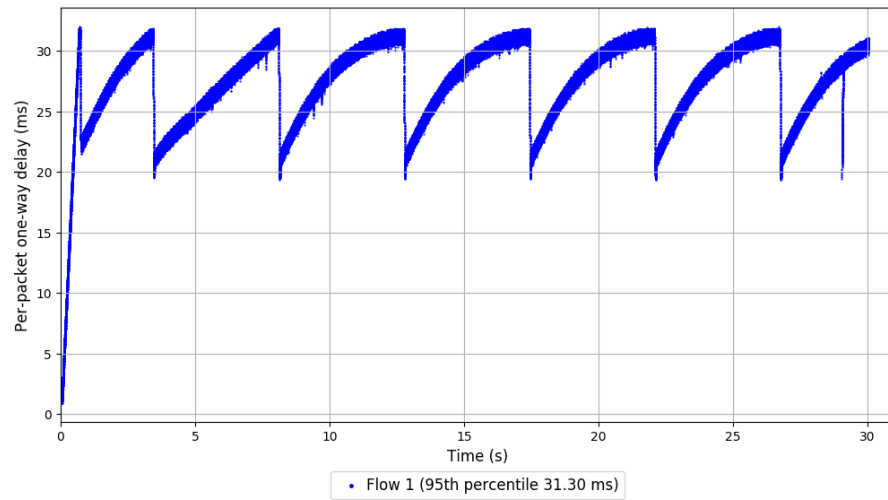
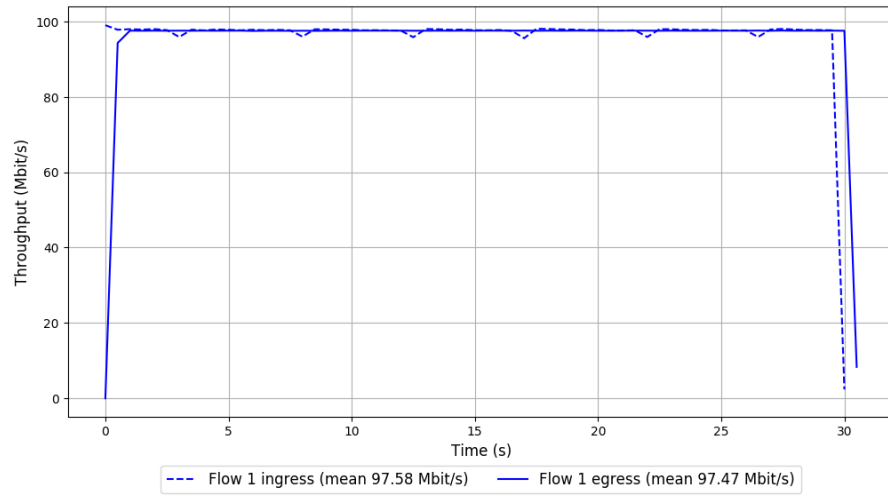
-- Flow 1:

Average throughput: 97.47 Mbit/s

95th percentile per-packet one-way delay: 31.298 ms

Loss rate: 0.01%

Run 5: Report of TCP Cubic — Data Link

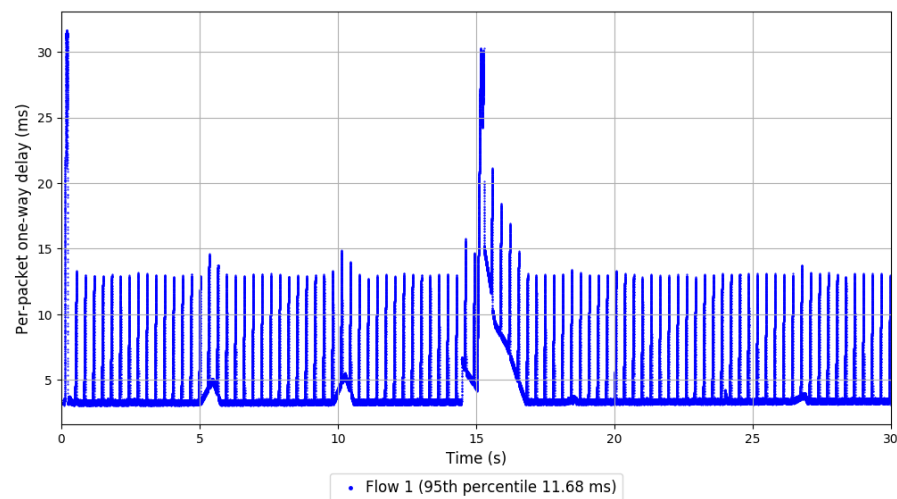
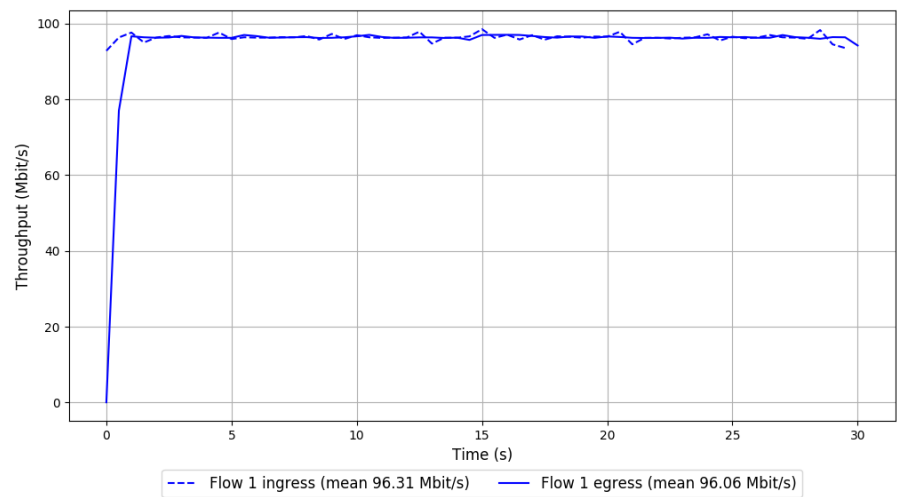


Run 1: Statistics of FillP

Start at: 2018-11-29 20:25:52
End at: 2018-11-29 20:26:22
Local clock offset: -1.935 ms
Remote clock offset: -0.057 ms

Below is generated by plot.py at 2018-11-29 21:58:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.06 Mbit/s
95th percentile per-packet one-way delay: 11.675 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 96.06 Mbit/s
95th percentile per-packet one-way delay: 11.675 ms
Loss rate: 0.26%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-11-29 20:45:57

End at: 2018-11-29 20:46:27

Local clock offset: 0.796 ms

Remote clock offset: 0.119 ms

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

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.13 Mbit/s

95th percentile per-packet one-way delay: 9.457 ms

Loss rate: 0.32%

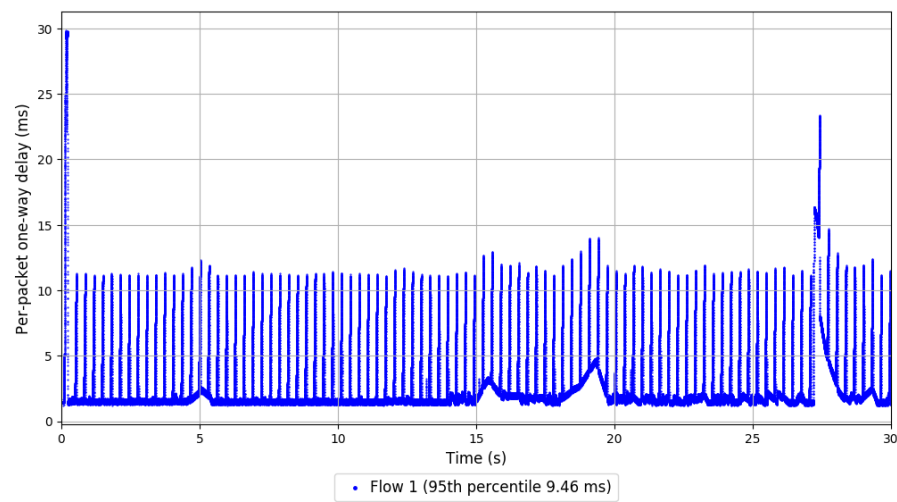
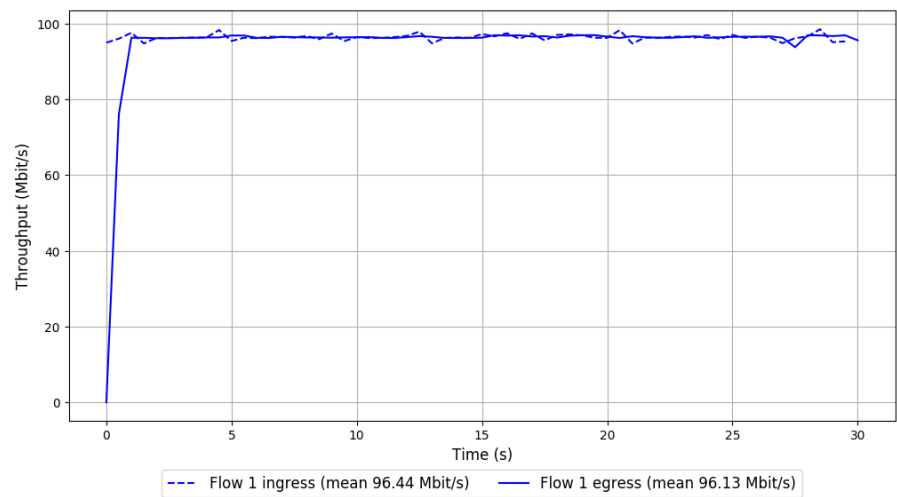
-- Flow 1:

Average throughput: 96.13 Mbit/s

95th percentile per-packet one-way delay: 9.457 ms

Loss rate: 0.32%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-11-29 21:06:02

End at: 2018-11-29 21:06:32

Local clock offset: 3.562 ms

Remote clock offset: 0.388 ms

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

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.07 Mbit/s

95th percentile per-packet one-way delay: 9.276 ms

Loss rate: 0.33%

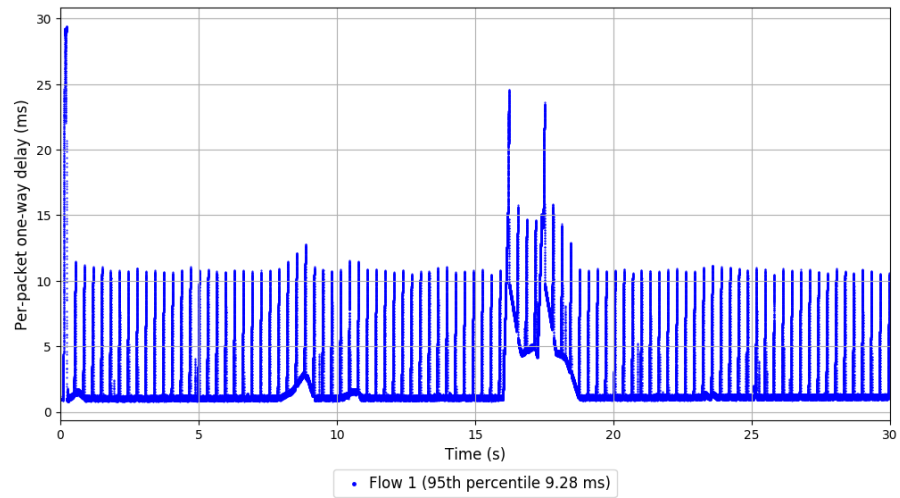
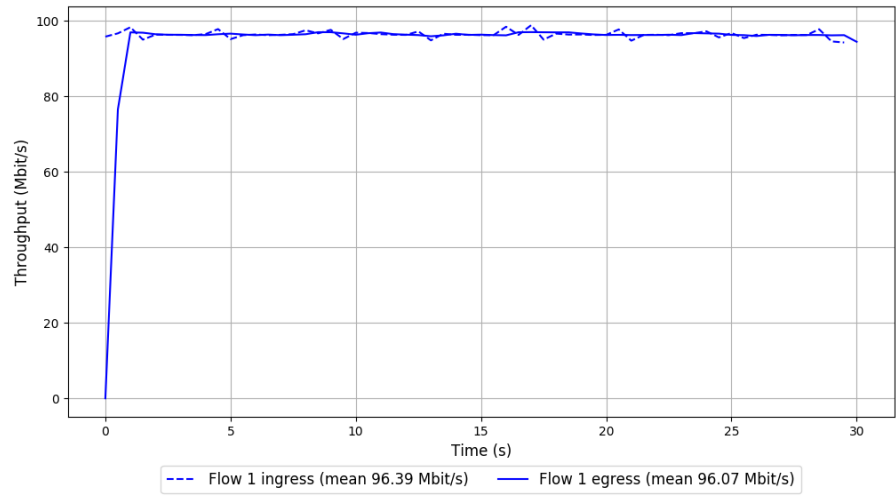
-- Flow 1:

Average throughput: 96.07 Mbit/s

95th percentile per-packet one-way delay: 9.276 ms

Loss rate: 0.33%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-11-29 21:26:05

End at: 2018-11-29 21:26:35

Local clock offset: -0.037 ms

Remote clock offset: 0.387 ms

Below is generated by plot.py at 2018-11-29 21:58:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.02 Mbit/s

95th percentile per-packet one-way delay: 10.024 ms

Loss rate: 0.25%

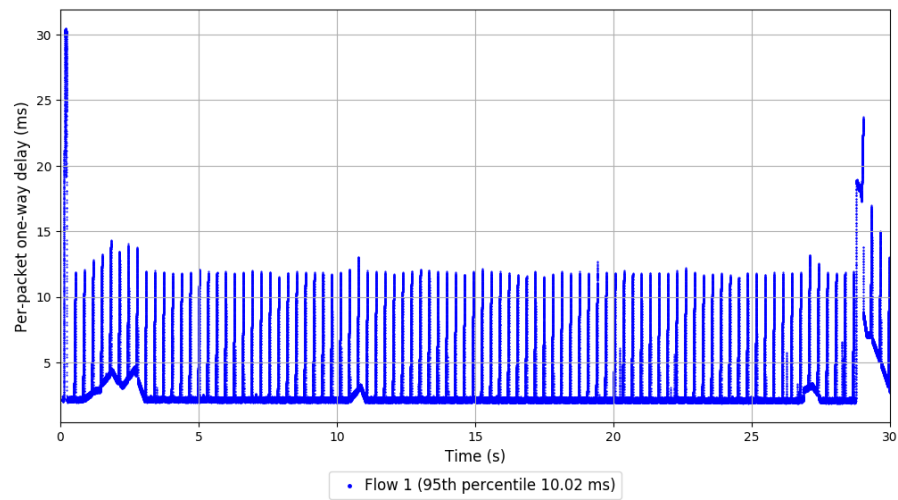
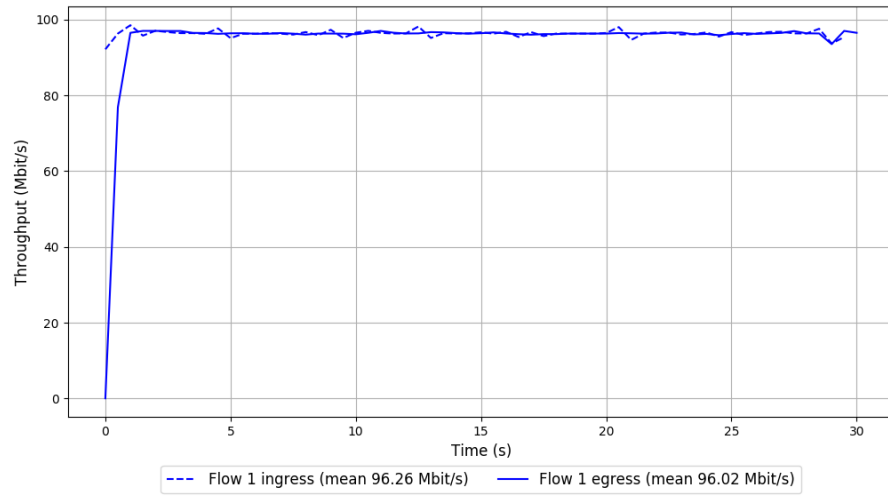
-- Flow 1:

Average throughput: 96.02 Mbit/s

95th percentile per-packet one-way delay: 10.024 ms

Loss rate: 0.25%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-11-29 21:46:10

End at: 2018-11-29 21:46:40

Local clock offset: -0.43 ms

Remote clock offset: 0.45 ms

Below is generated by plot.py at 2018-11-29 21:58:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.08 Mbit/s

95th percentile per-packet one-way delay: 12.710 ms

Loss rate: 0.25%

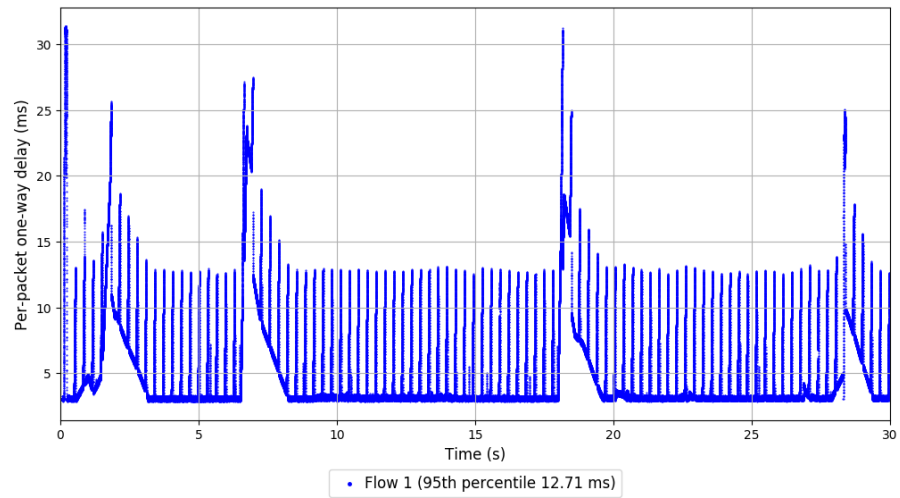
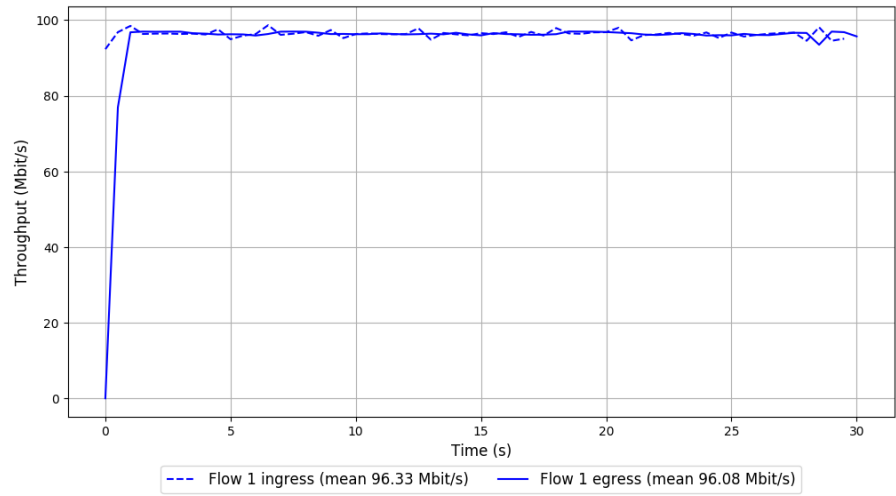
-- Flow 1:

Average throughput: 96.08 Mbit/s

95th percentile per-packet one-way delay: 12.710 ms

Loss rate: 0.25%

Run 5: Report of FillP — Data Link



Run 1: Statistics of Indigo

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

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

Local clock offset: -1.67 ms

Remote clock offset: -0.064 ms

Below is generated by plot.py at 2018-11-29 21:58:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.35 Mbit/s

95th percentile per-packet one-way delay: 5.701 ms

Loss rate: 0.00%

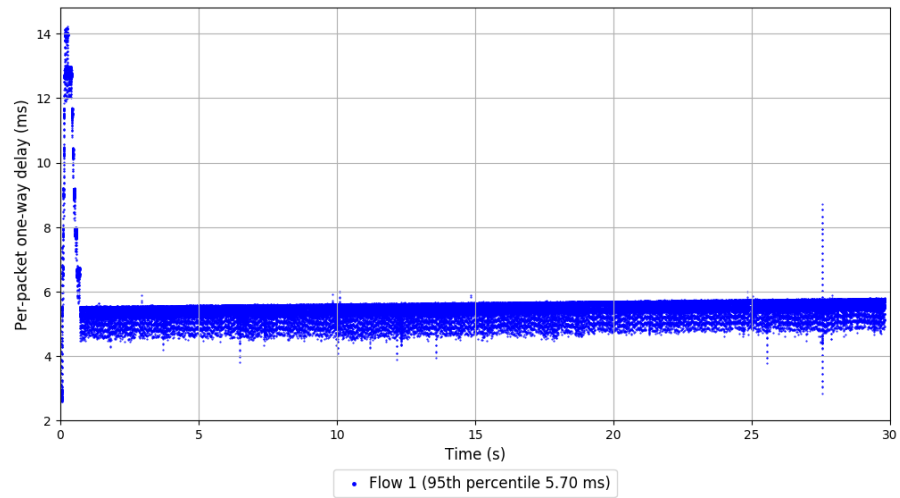
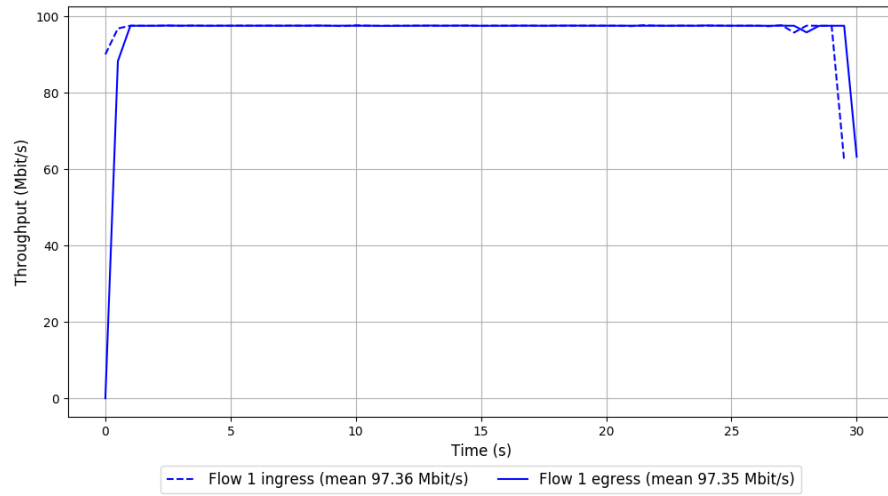
-- Flow 1:

Average throughput: 97.35 Mbit/s

95th percentile per-packet one-way delay: 5.701 ms

Loss rate: 0.00%

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2018-11-29 20:40:24

End at: 2018-11-29 20:40:54

Local clock offset: -0.294 ms

Remote clock offset: 0.067 ms

Below is generated by plot.py at 2018-11-29 21:59:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.41 Mbit/s

95th percentile per-packet one-way delay: 4.821 ms

Loss rate: 0.00%

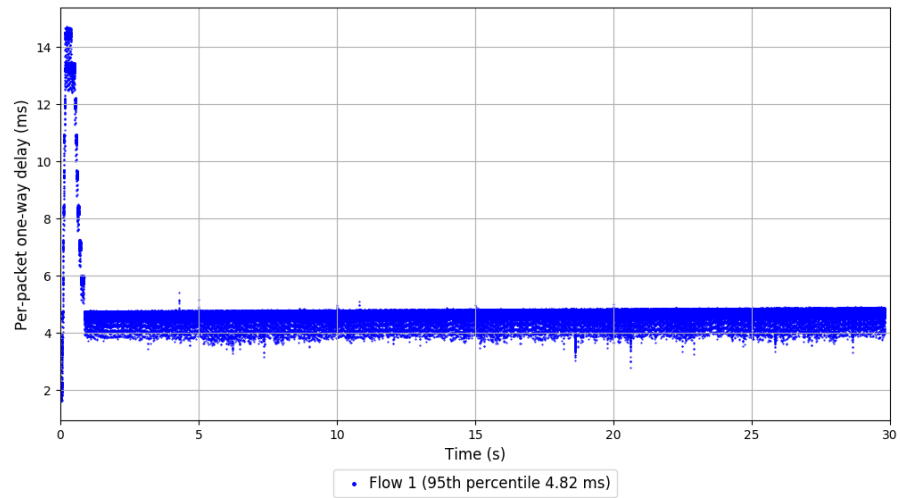
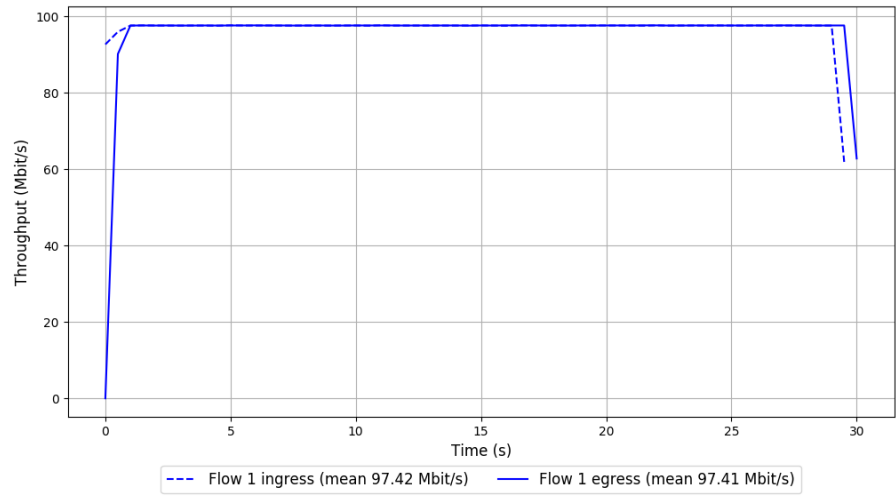
-- Flow 1:

Average throughput: 97.41 Mbit/s

95th percentile per-packet one-way delay: 4.821 ms

Loss rate: 0.00%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2018-11-29 21:00:29

End at: 2018-11-29 21:00:59

Local clock offset: 2.268 ms

Remote clock offset: 0.278 ms

Below is generated by plot.py at 2018-11-29 21:59:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.40 Mbit/s

95th percentile per-packet one-way delay: 4.031 ms

Loss rate: 0.00%

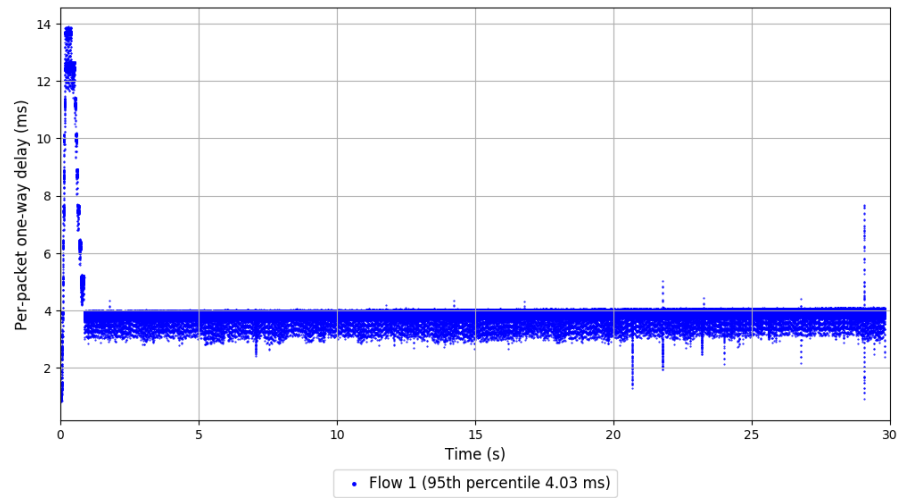
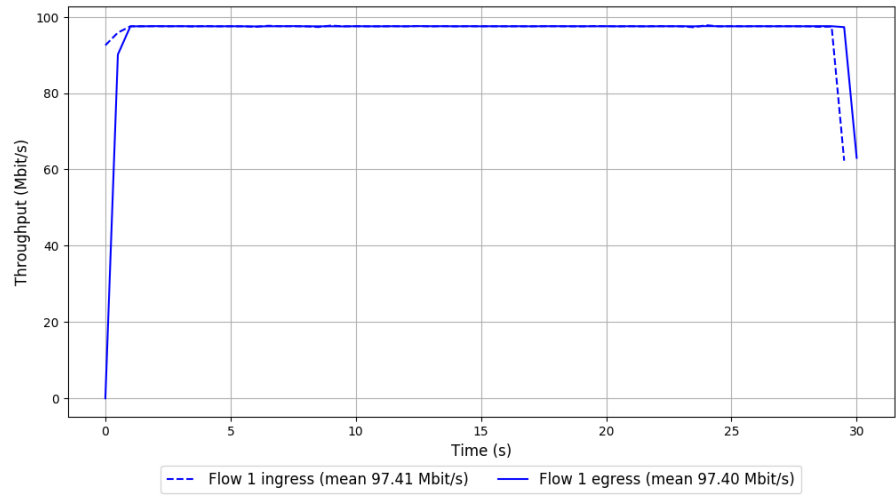
-- Flow 1:

Average throughput: 97.40 Mbit/s

95th percentile per-packet one-way delay: 4.031 ms

Loss rate: 0.00%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2018-11-29 21:20:31

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

Local clock offset: 1.005 ms

Remote clock offset: 0.528 ms

Below is generated by plot.py at 2018-11-29 21:59:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.34 Mbit/s

95th percentile per-packet one-way delay: 5.683 ms

Loss rate: 0.00%

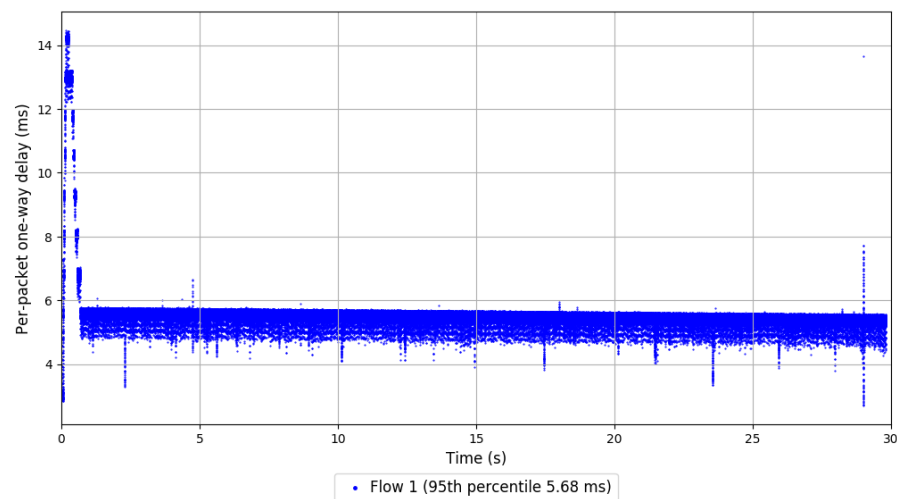
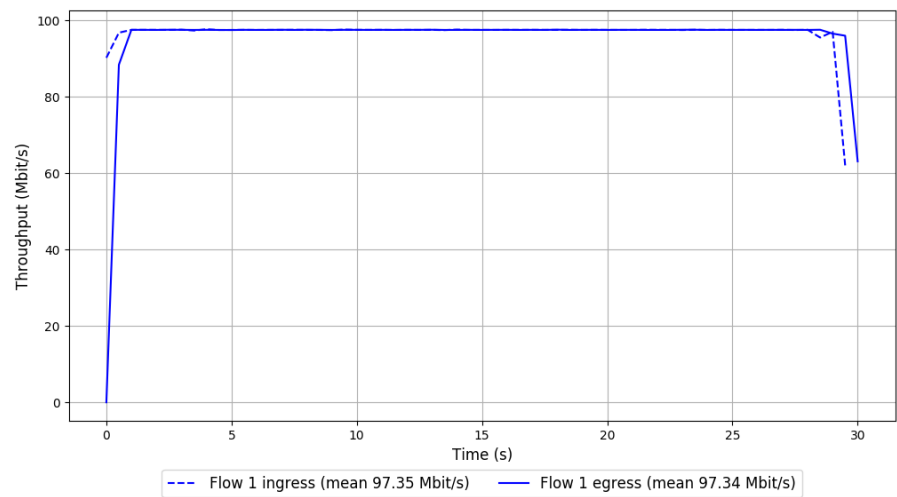
-- Flow 1:

Average throughput: 97.34 Mbit/s

95th percentile per-packet one-way delay: 5.683 ms

Loss rate: 0.00%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2018-11-29 21:40:37

End at: 2018-11-29 21:41:07

Local clock offset: -1.011 ms

Remote clock offset: 0.592 ms

Below is generated by plot.py at 2018-11-29 21:59:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.24 Mbit/s

95th percentile per-packet one-way delay: 6.083 ms

Loss rate: 0.00%

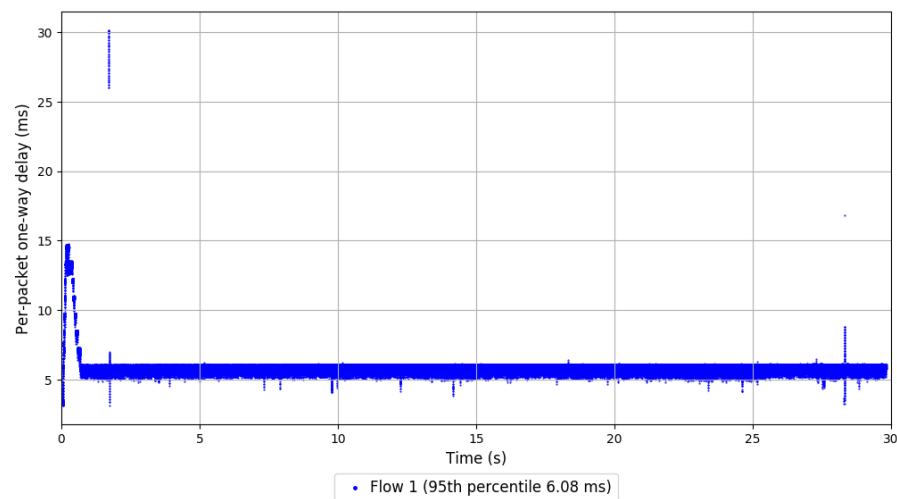
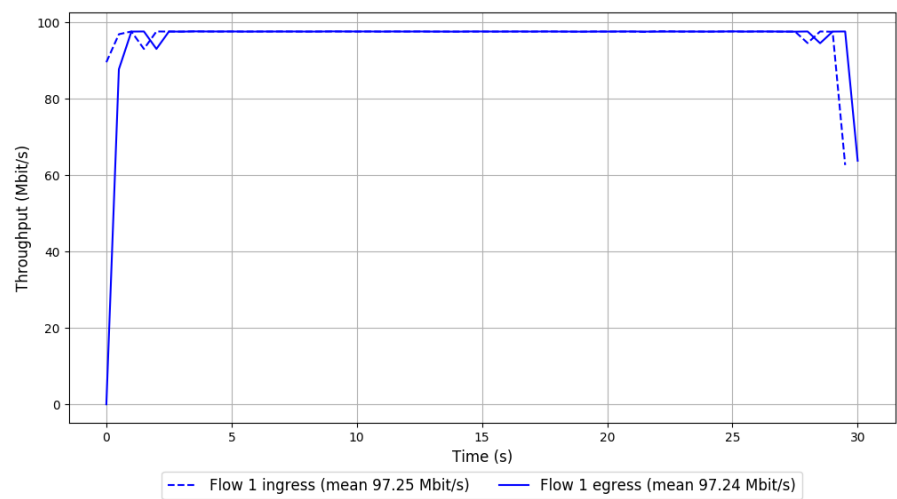
-- Flow 1:

Average throughput: 97.24 Mbit/s

95th percentile per-packet one-way delay: 6.083 ms

Loss rate: 0.00%

Run 5: Report of Indigo — Data Link

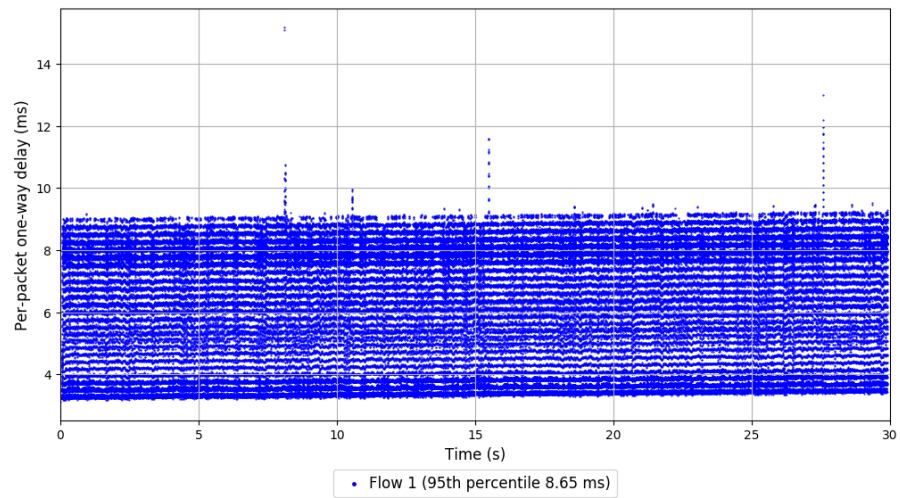
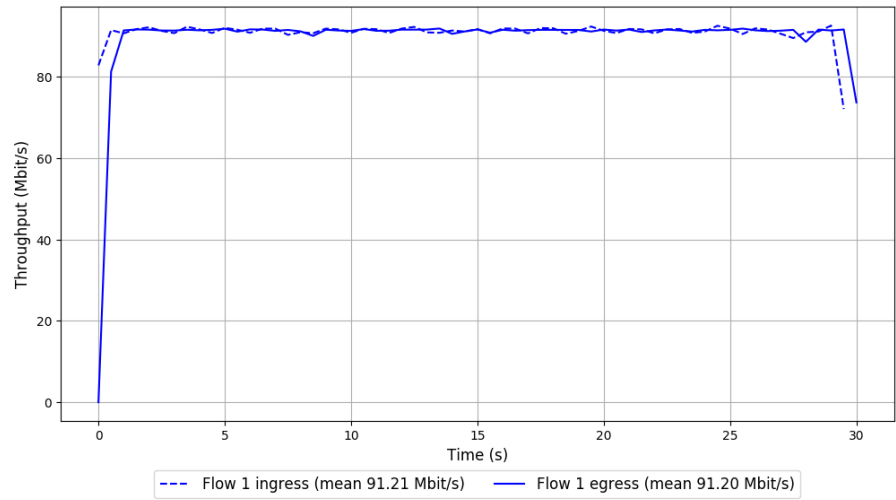


Run 1: Statistics of Indigo-96d2da3

Start at: 2018-11-29 20:28:09
End at: 2018-11-29 20:28:39
Local clock offset: -1.198 ms
Remote clock offset: -0.058 ms

Below is generated by plot.py at 2018-11-29 21:59:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 91.20 Mbit/s
95th percentile per-packet one-way delay: 8.649 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 91.20 Mbit/s
95th percentile per-packet one-way delay: 8.649 ms
Loss rate: 0.00%

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



Run 2: Statistics of Indigo-96d2da3

Start at: 2018-11-29 20:48:14

End at: 2018-11-29 20:48:44

Local clock offset: 0.417 ms

Remote clock offset: 0.135 ms

Below is generated by plot.py at 2018-11-29 21:59:43

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.85 Mbit/s

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

Loss rate: 0.00%

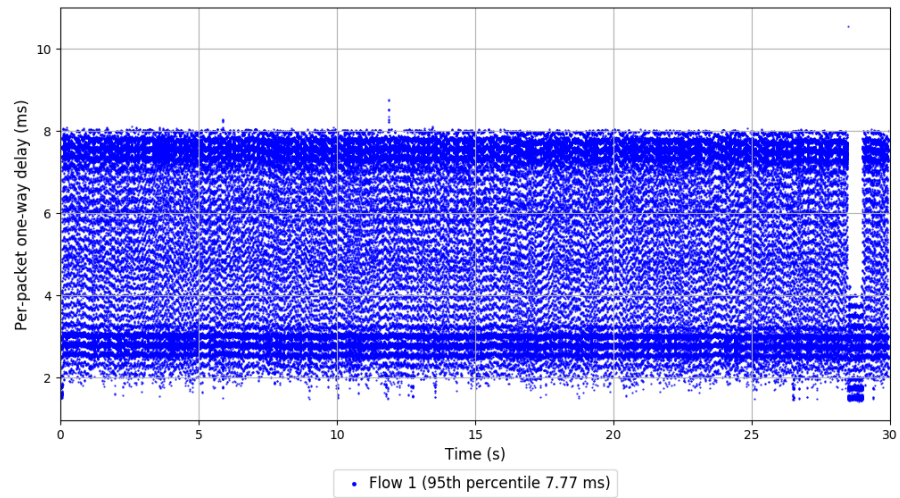
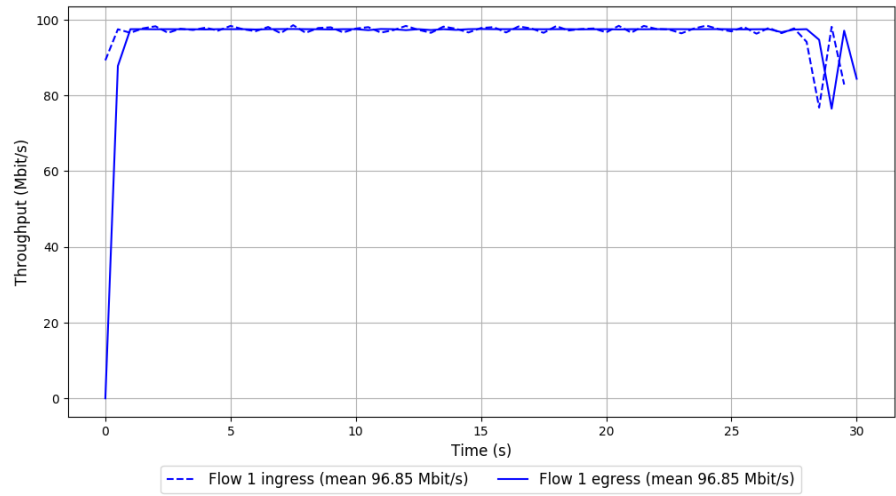
-- Flow 1:

Average throughput: 96.85 Mbit/s

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

Loss rate: 0.00%

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



Run 3: Statistics of Indigo-96d2da3

Start at: 2018-11-29 21:08:19

End at: 2018-11-29 21:08:49

Local clock offset: 4.117 ms

Remote clock offset: 0.409 ms

Below is generated by plot.py at 2018-11-29 21:59:43

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.12 Mbit/s

95th percentile per-packet one-way delay: 7.859 ms

Loss rate: 0.00%

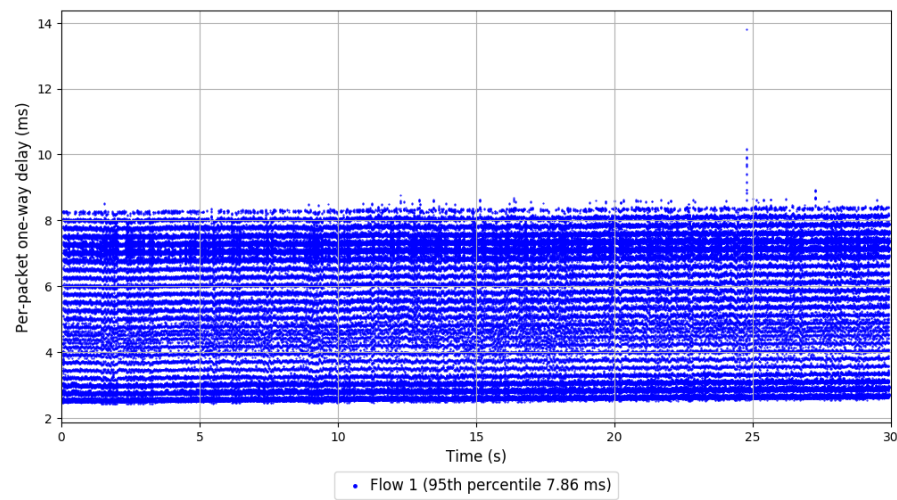
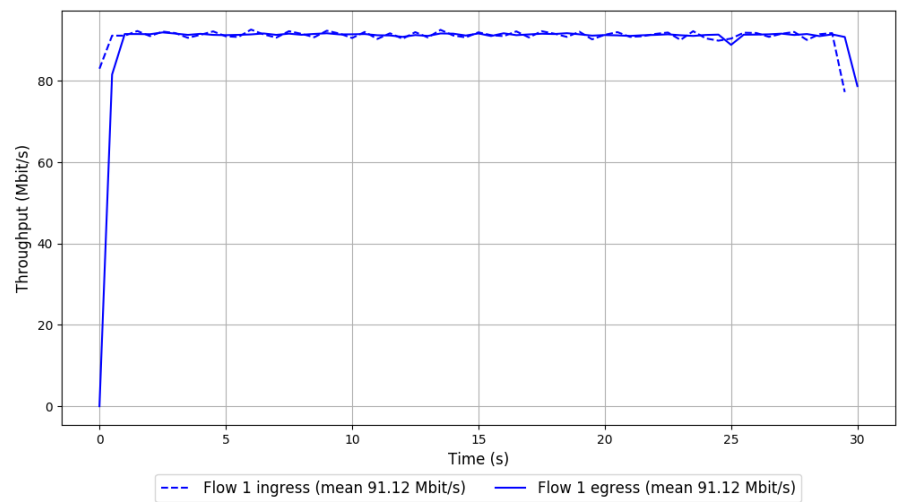
-- Flow 1:

Average throughput: 91.12 Mbit/s

95th percentile per-packet one-way delay: 7.859 ms

Loss rate: 0.00%

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



Run 4: Statistics of Indigo-96d2da3

Start at: 2018-11-29 21:28:22

End at: 2018-11-29 21:28:52

Local clock offset: -1.123 ms

Remote clock offset: 0.401 ms

Below is generated by plot.py at 2018-11-29 21:59:45

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.28 Mbit/s

95th percentile per-packet one-way delay: 7.724 ms

Loss rate: 0.00%

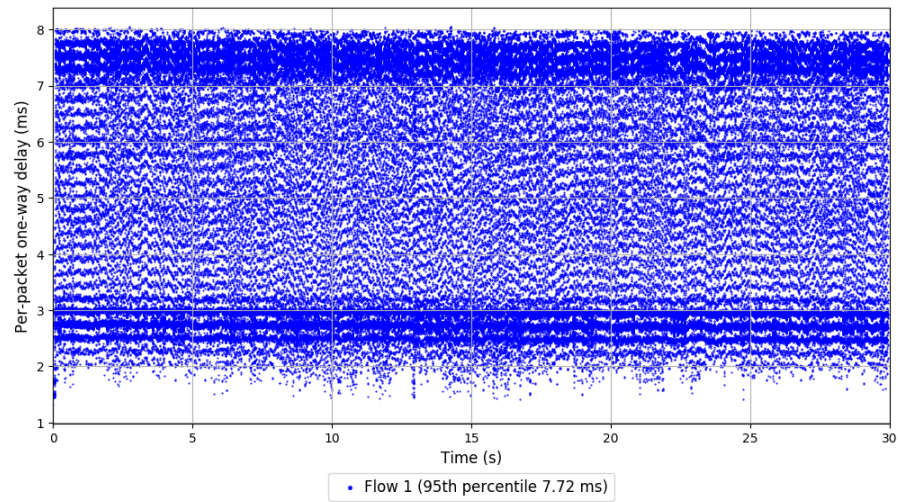
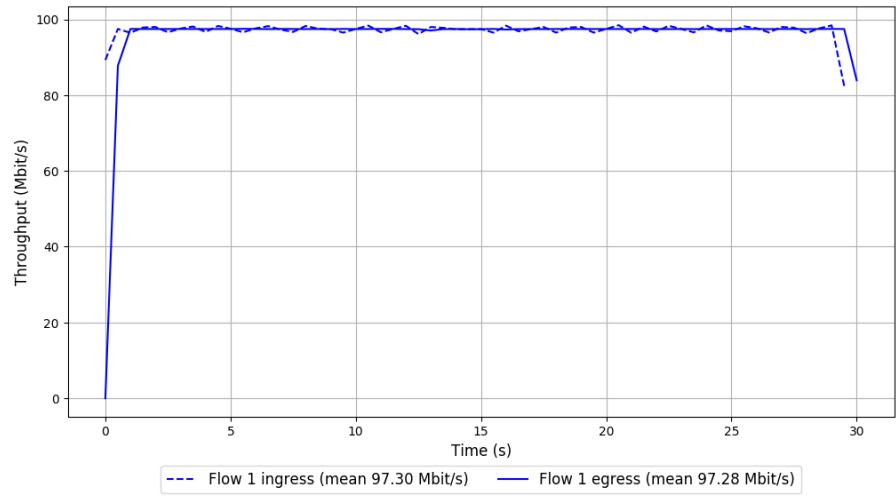
-- Flow 1:

Average throughput: 97.28 Mbit/s

95th percentile per-packet one-way delay: 7.724 ms

Loss rate: 0.00%

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



Run 5: Statistics of Indigo-96d2da3

Start at: 2018-11-29 21:48:27

End at: 2018-11-29 21:48:57

Local clock offset: -0.304 ms

Remote clock offset: 0.522 ms

Below is generated by plot.py at 2018-11-29 22:00:40

Datalink statistics

-- Total of 1 flow:

Average throughput: 90.80 Mbit/s

95th percentile per-packet one-way delay: 8.509 ms

Loss rate: 0.00%

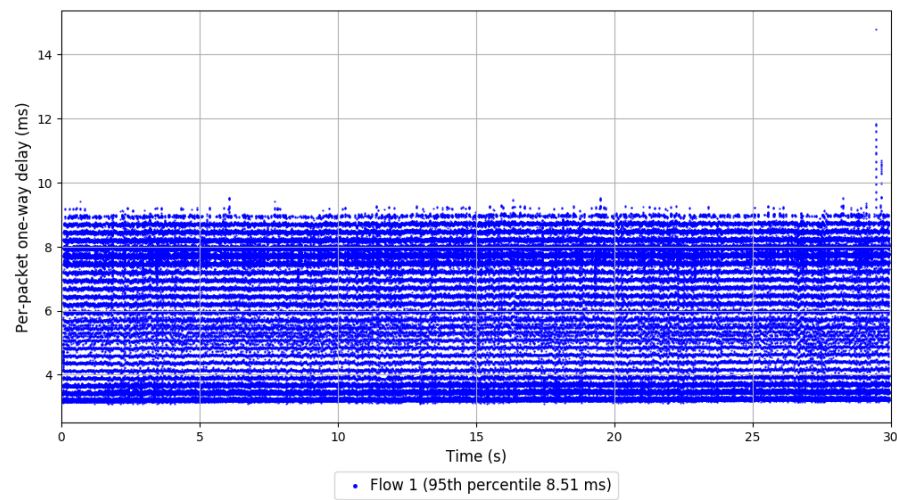
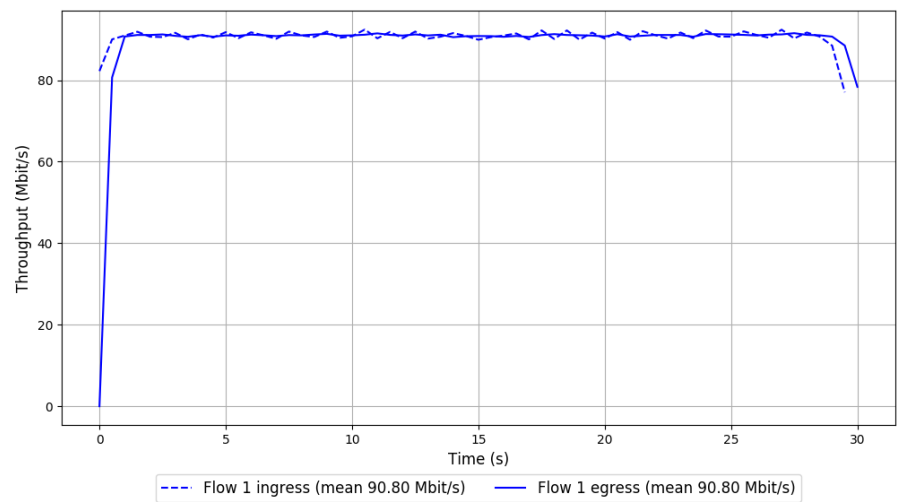
-- Flow 1:

Average throughput: 90.80 Mbit/s

95th percentile per-packet one-way delay: 8.509 ms

Loss rate: 0.00%

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

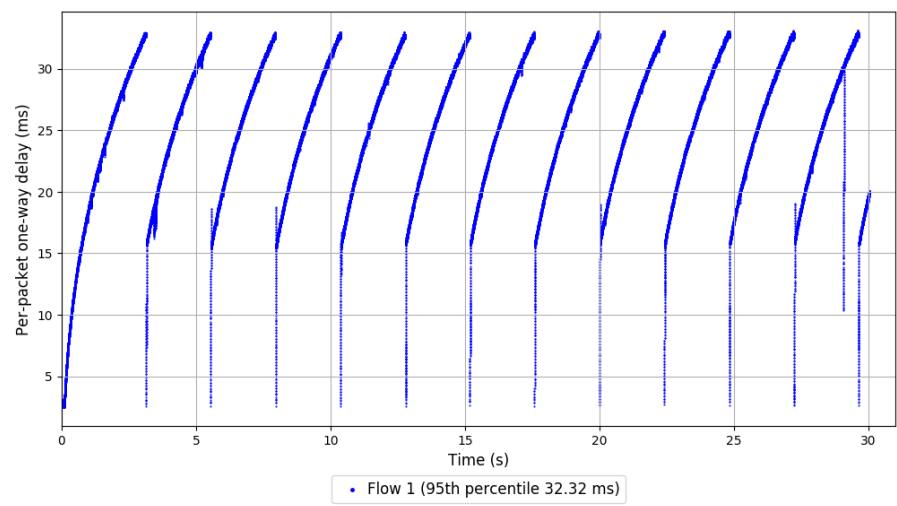
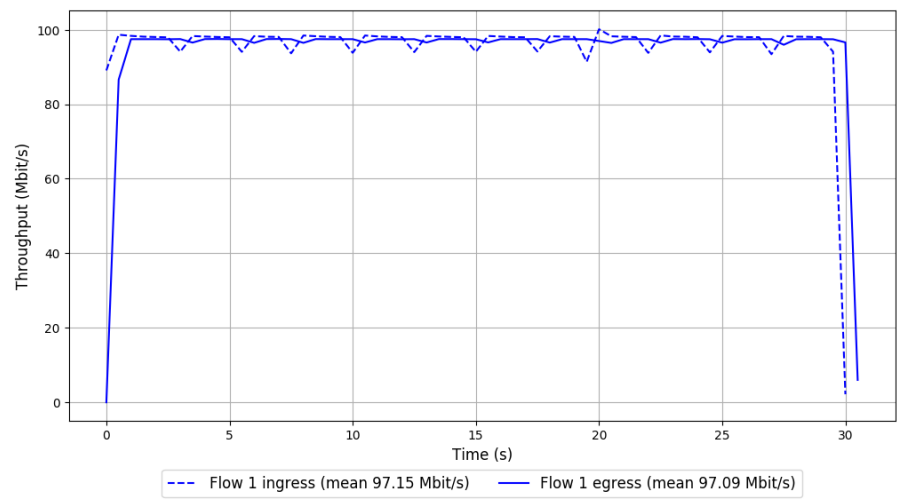


```
Run 1: Statistics of LEDBAT

Start at: 2018-11-29 20:26:59
End at: 2018-11-29 20:27:29
Local clock offset: -0.881 ms
Remote clock offset: -0.019 ms

# Below is generated by plot.py at 2018-11-29 22:00:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.09 Mbit/s
95th percentile per-packet one-way delay: 32.321 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.09 Mbit/s
95th percentile per-packet one-way delay: 32.321 ms
Loss rate: 0.01%
```

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2018-11-29 20:47:04

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

Local clock offset: 0.574 ms

Remote clock offset: 0.123 ms

Below is generated by plot.py at 2018-11-29 22:00:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.09 Mbit/s

95th percentile per-packet one-way delay: 32.584 ms

Loss rate: 0.01%

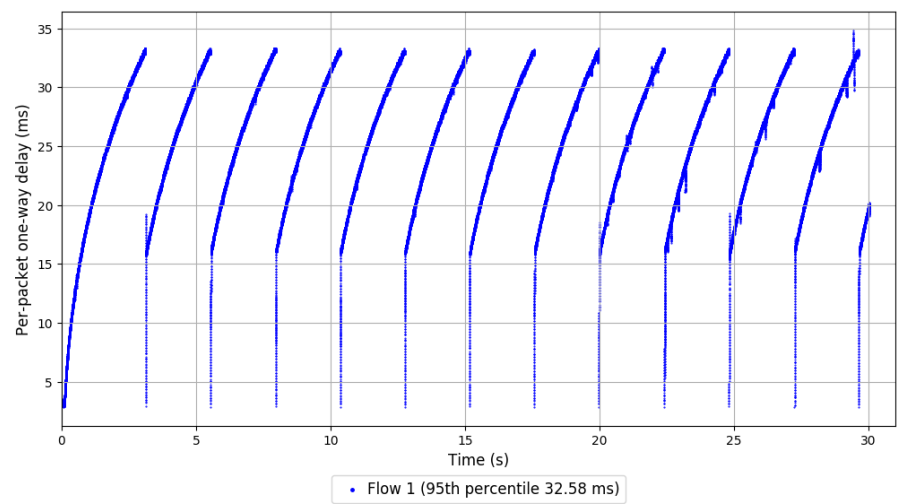
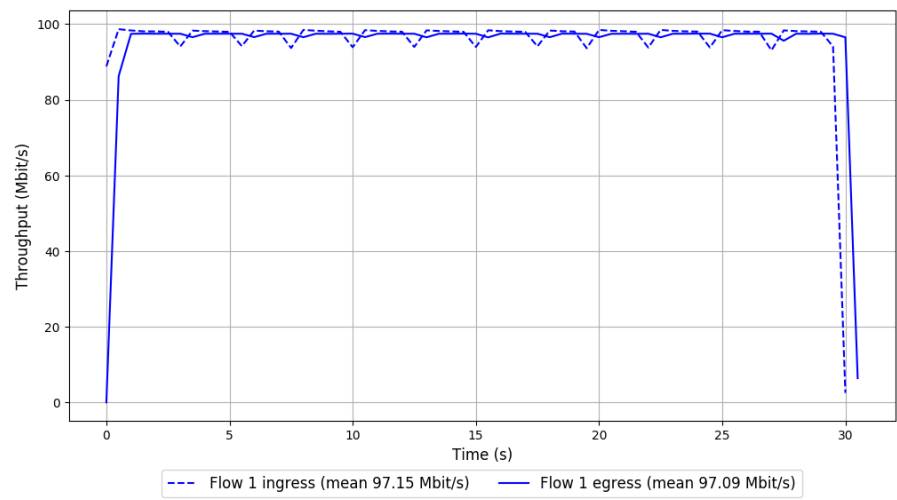
-- Flow 1:

Average throughput: 97.09 Mbit/s

95th percentile per-packet one-way delay: 32.584 ms

Loss rate: 0.01%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-11-29 21:07:09

End at: 2018-11-29 21:07:39

Local clock offset: 3.109 ms

Remote clock offset: 0.393 ms

Below is generated by plot.py at 2018-11-29 22:00:53

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.09 Mbit/s

95th percentile per-packet one-way delay: 32.936 ms

Loss rate: 0.01%

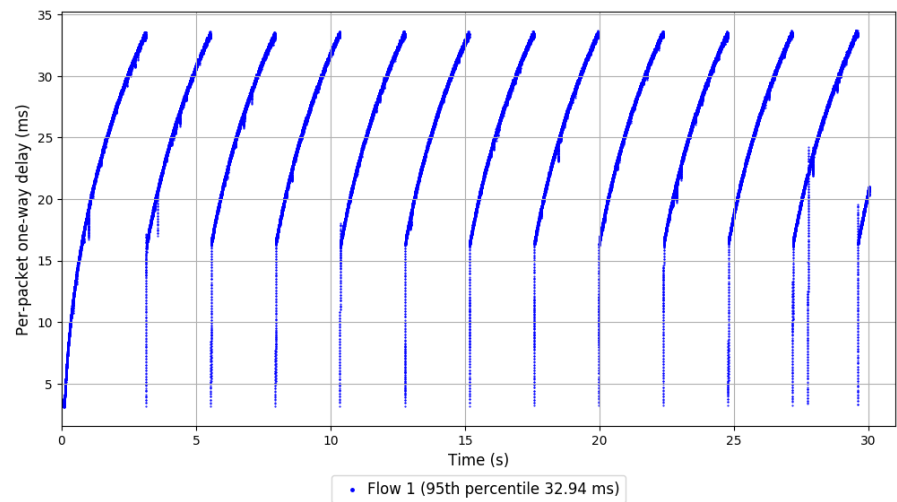
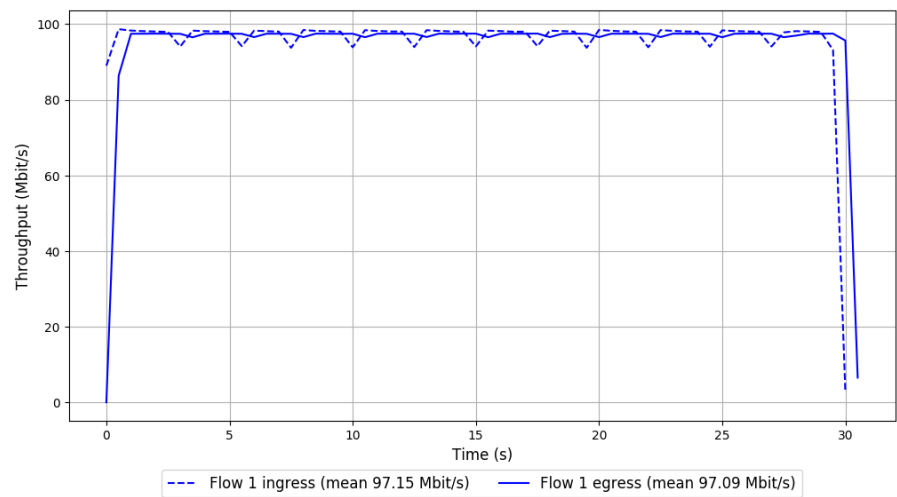
-- Flow 1:

Average throughput: 97.09 Mbit/s

95th percentile per-packet one-way delay: 32.936 ms

Loss rate: 0.01%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-11-29 21:27:12

End at: 2018-11-29 21:27:42

Local clock offset: -0.302 ms

Remote clock offset: 0.434 ms

Below is generated by plot.py at 2018-11-29 22:00:55

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.02 Mbit/s

95th percentile per-packet one-way delay: 31.914 ms

Loss rate: 0.01%

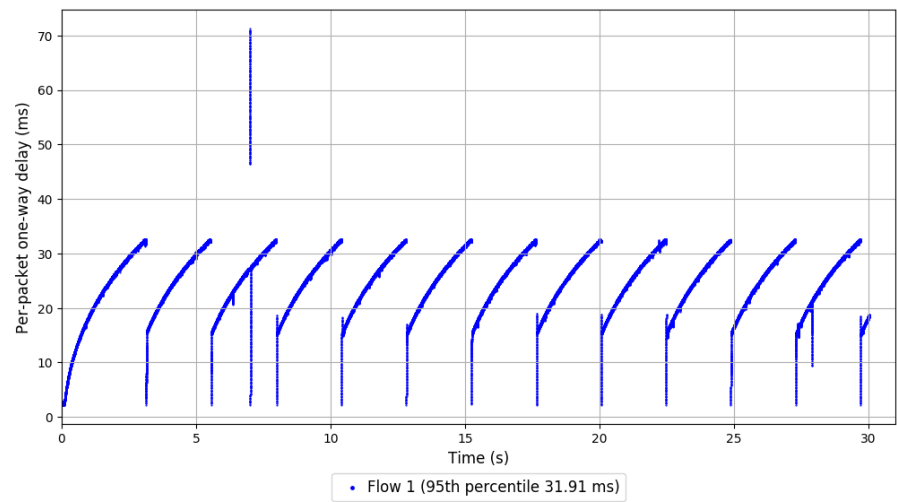
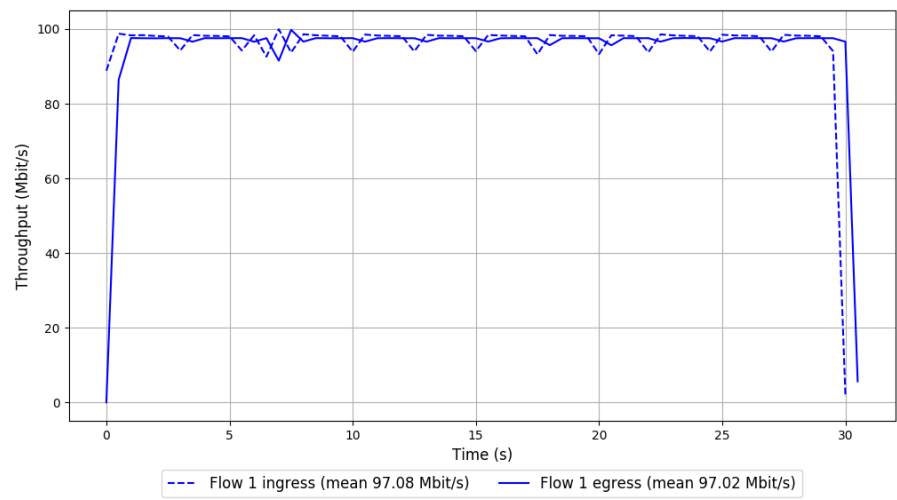
-- Flow 1:

Average throughput: 97.02 Mbit/s

95th percentile per-packet one-way delay: 31.914 ms

Loss rate: 0.01%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-11-29 21:47:18

End at: 2018-11-29 21:47:48

Local clock offset: -0.37 ms

Remote clock offset: 0.528 ms

Below is generated by plot.py at 2018-11-29 22:00:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.04 Mbit/s

95th percentile per-packet one-way delay: 32.833 ms

Loss rate: 0.01%

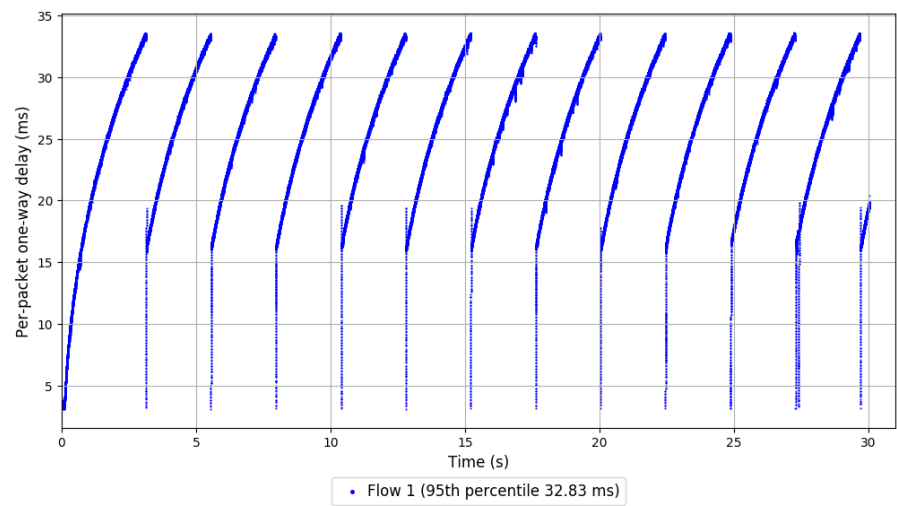
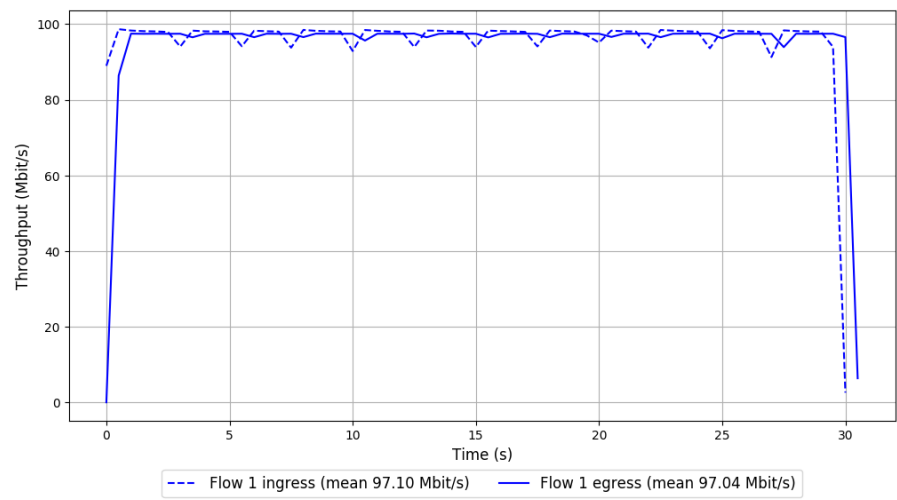
-- Flow 1:

Average throughput: 97.04 Mbit/s

95th percentile per-packet one-way delay: 32.833 ms

Loss rate: 0.01%

Run 5: Report of LEDBAT — Data Link

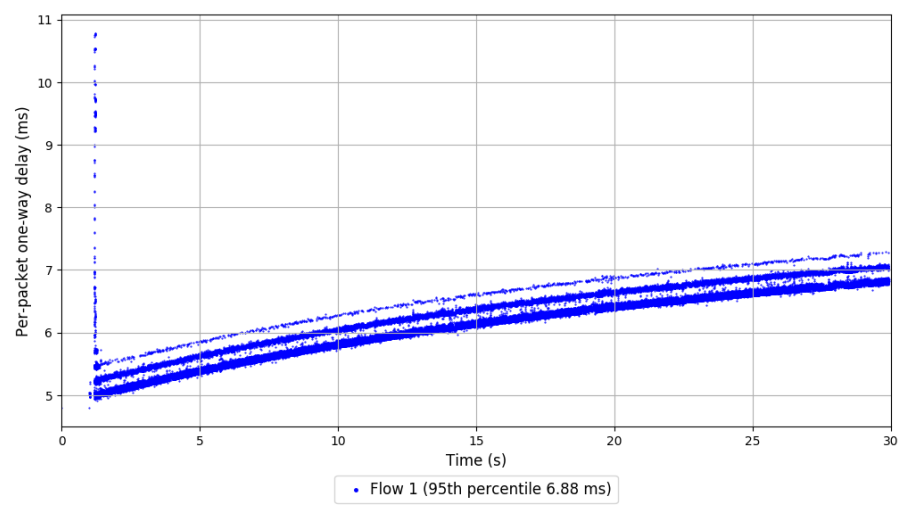
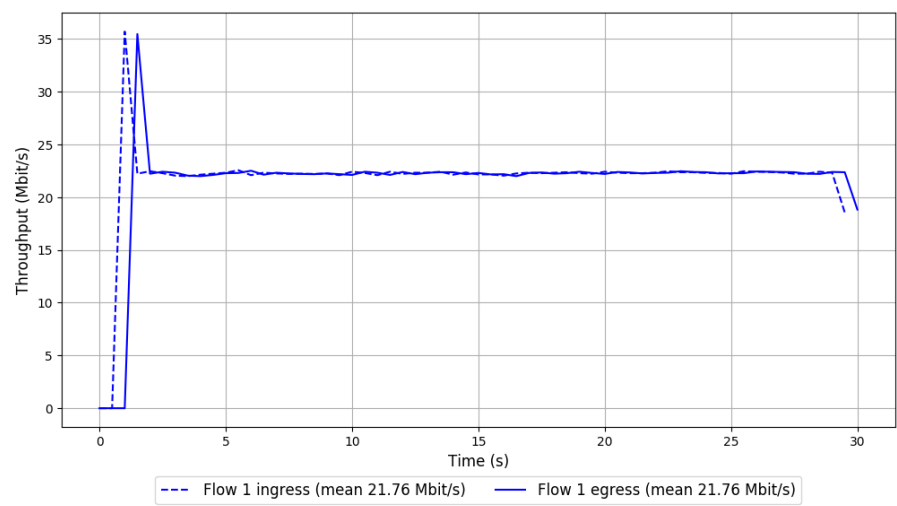


```
Run 1: Statistics of Indigo-Muses

Start at: 2018-11-29 20:14:48
End at: 2018-11-29 20:15:18
Local clock offset: -7.137 ms
Remote clock offset: -0.07 ms

# Below is generated by plot.py at 2018-11-29 22:00:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 21.76 Mbit/s
95th percentile per-packet one-way delay: 6.875 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 21.76 Mbit/s
95th percentile per-packet one-way delay: 6.875 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo-Muses — Data Link



Run 2: Statistics of Indigo-Muses

Start at: 2018-11-29 20:34:52

End at: 2018-11-29 20:35:22

Local clock offset: -0.305 ms

Remote clock offset: 0.028 ms

Below is generated by plot.py at 2018-11-29 22:00:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 22.38 Mbit/s

95th percentile per-packet one-way delay: 2.598 ms

Loss rate: 0.00%

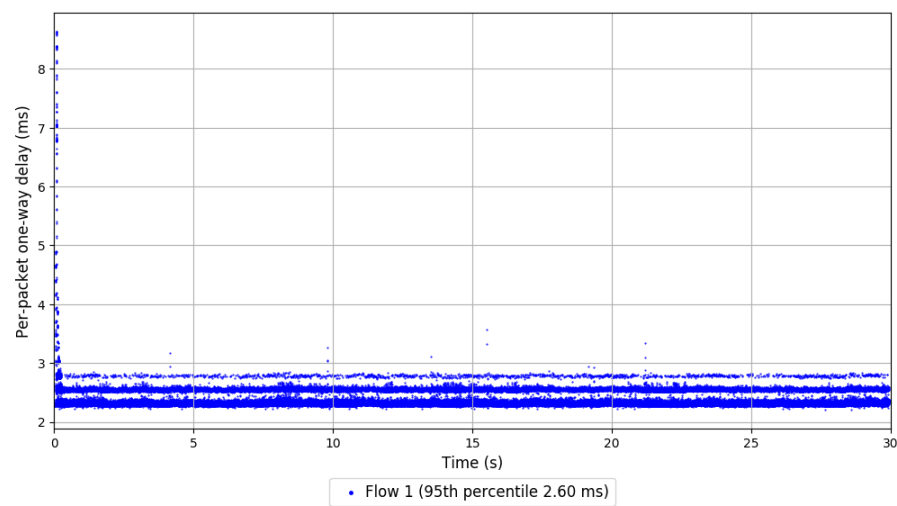
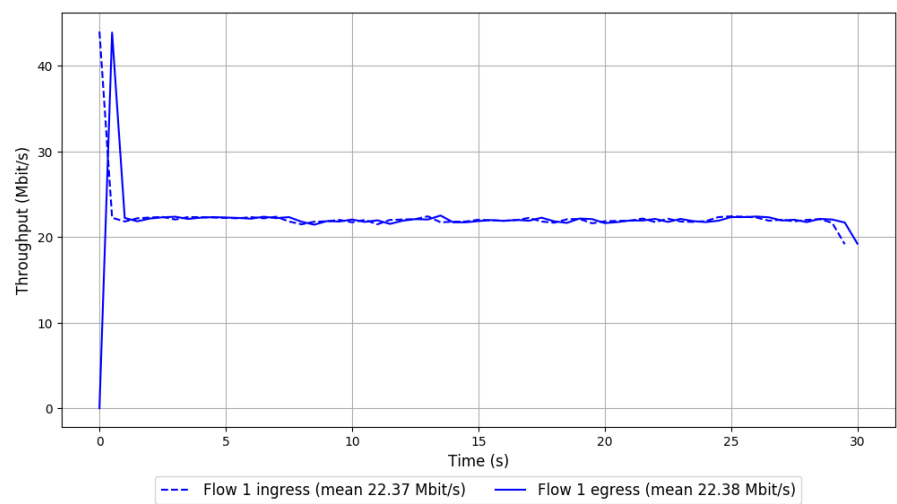
-- Flow 1:

Average throughput: 22.38 Mbit/s

95th percentile per-packet one-way delay: 2.598 ms

Loss rate: 0.00%

Run 2: Report of Indigo-Muses — Data Link



Run 3: Statistics of Indigo-Muses

Start at: 2018-11-29 20:54:57

End at: 2018-11-29 20:55:27

Local clock offset: 0.574 ms

Remote clock offset: 0.286 ms

Below is generated by plot.py at 2018-11-29 22:00:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 22.57 Mbit/s

95th percentile per-packet one-way delay: 3.473 ms

Loss rate: 0.00%

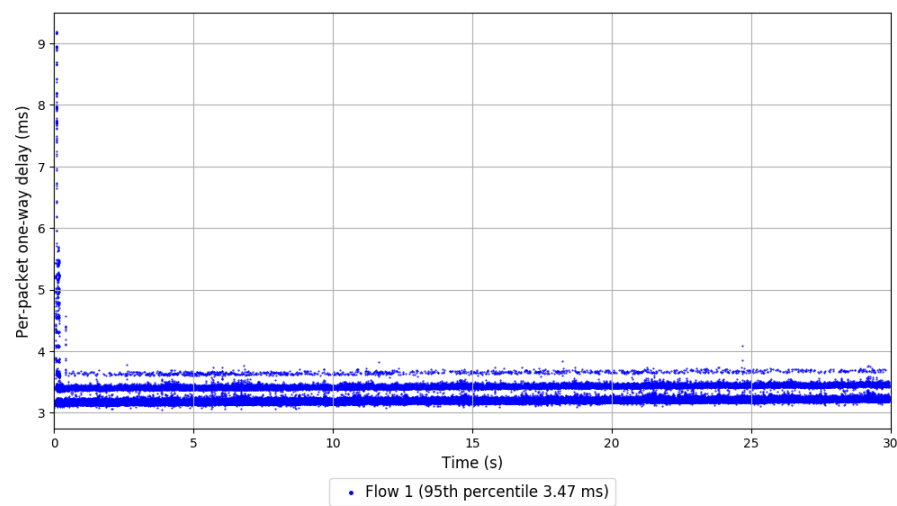
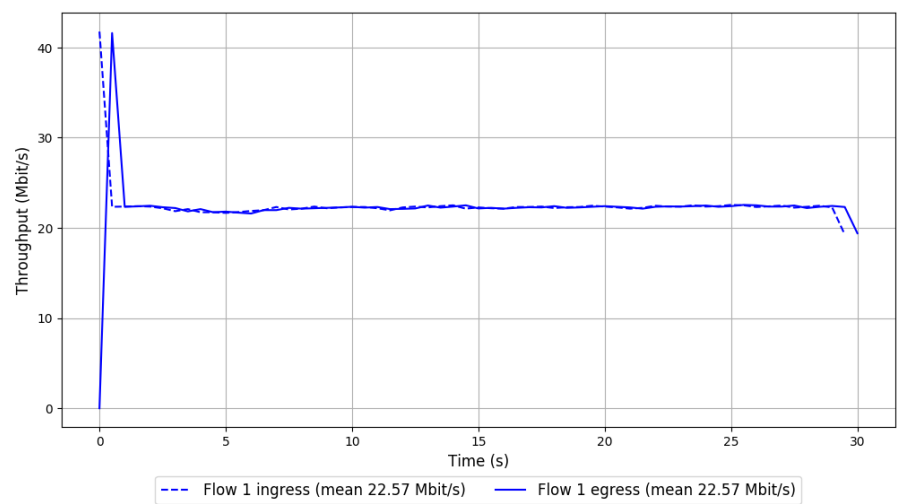
-- Flow 1:

Average throughput: 22.57 Mbit/s

95th percentile per-packet one-way delay: 3.473 ms

Loss rate: 0.00%

Run 3: Report of Indigo-Muses — Data Link



Run 4: Statistics of Indigo-Muses

Start at: 2018-11-29 21:14:59

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

Local clock offset: 5.227 ms

Remote clock offset: 0.419 ms

Below is generated by plot.py at 2018-11-29 22:00:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 34.99 Mbit/s

95th percentile per-packet one-way delay: 2.149 ms

Loss rate: 0.00%

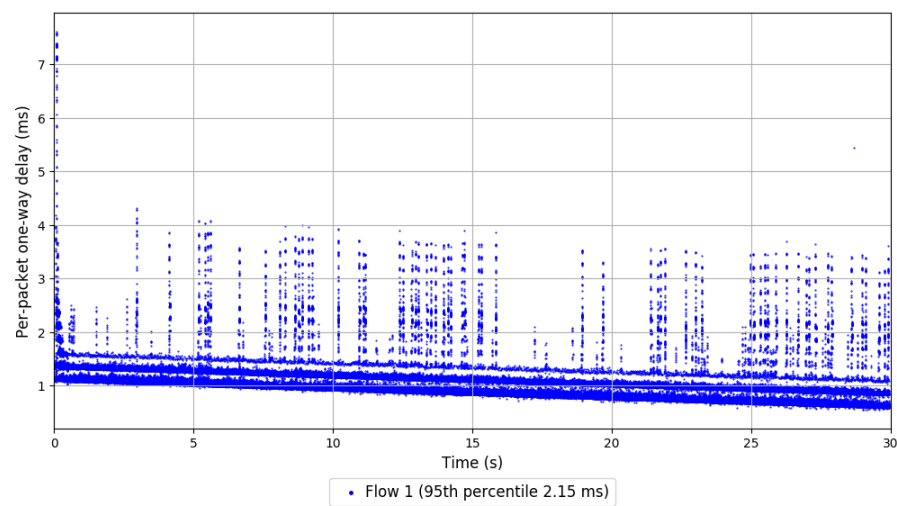
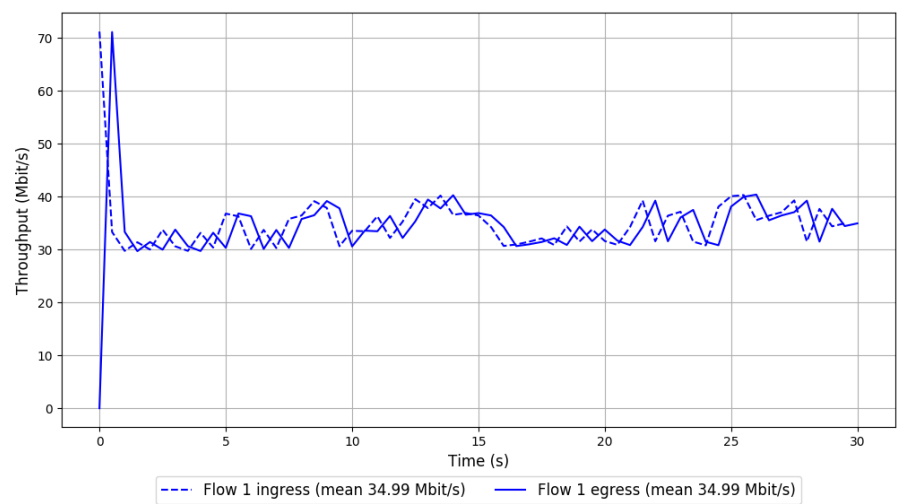
-- Flow 1:

Average throughput: 34.99 Mbit/s

95th percentile per-packet one-way delay: 2.149 ms

Loss rate: 0.00%

Run 4: Report of Indigo-Muses — Data Link



Run 5: Statistics of Indigo-Muses

Start at: 2018-11-29 21:35:05

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

Local clock offset: -1.301 ms

Remote clock offset: 0.517 ms

Below is generated by plot.py at 2018-11-29 22:00:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 34.97 Mbit/s

95th percentile per-packet one-way delay: 2.879 ms

Loss rate: 0.00%

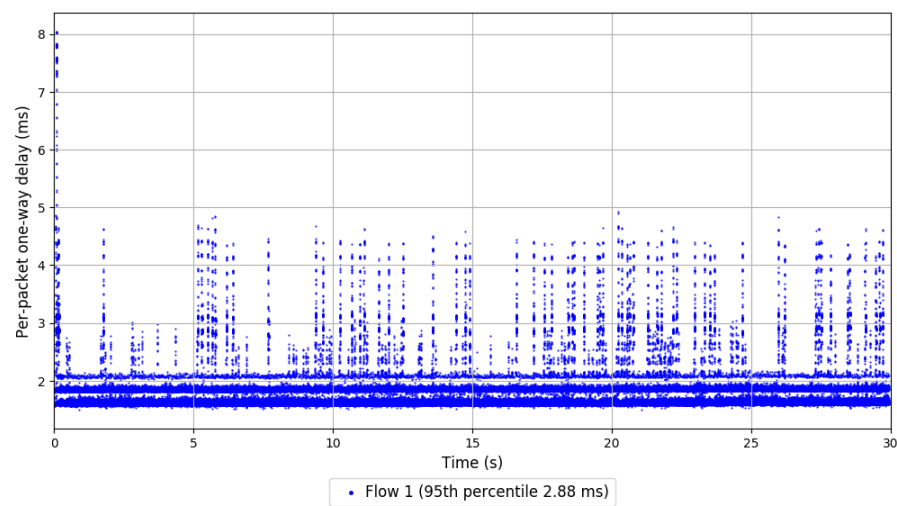
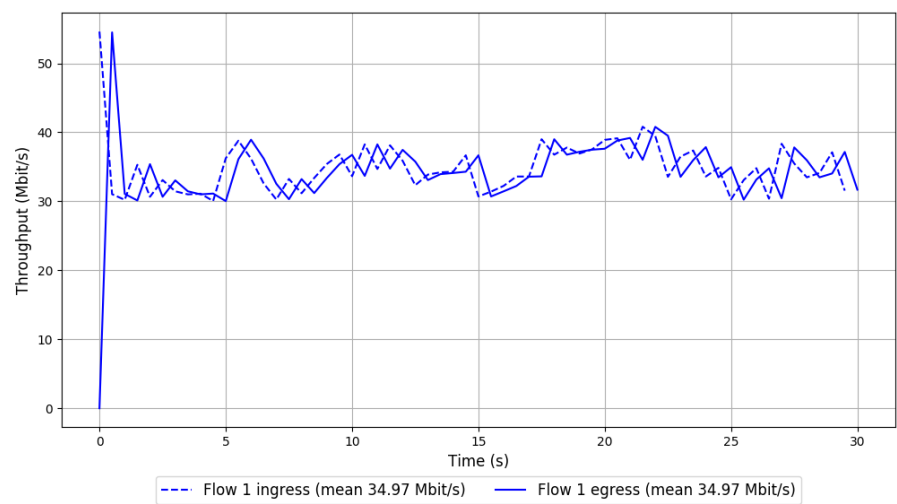
-- Flow 1:

Average throughput: 34.97 Mbit/s

95th percentile per-packet one-way delay: 2.879 ms

Loss rate: 0.00%

Run 5: Report of Indigo-Muses — Data Link

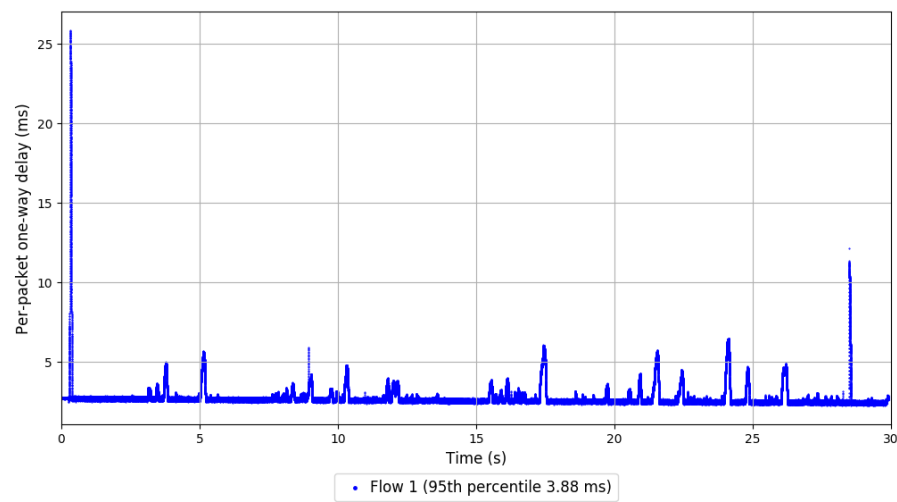
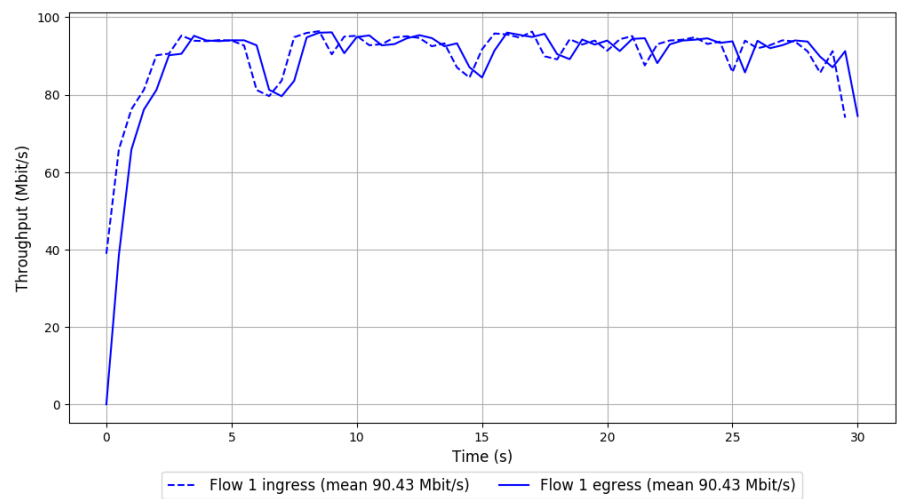


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-11-29 20:22:36
End at: 2018-11-29 20:23:06
Local clock offset: -1.052 ms
Remote clock offset: -0.129 ms

# Below is generated by plot.py at 2018-11-29 22:01:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.43 Mbit/s
95th percentile per-packet one-way delay: 3.876 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 90.43 Mbit/s
95th percentile per-packet one-way delay: 3.876 ms
Loss rate: 0.00%
```

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-11-29 20:42:41

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

Local clock offset: 0.347 ms

Remote clock offset: 0.1 ms

Below is generated by plot.py at 2018-11-29 22:01:44

Datalink statistics

-- Total of 1 flow:

Average throughput: 84.58 Mbit/s

95th percentile per-packet one-way delay: 2.427 ms

Loss rate: 0.02%

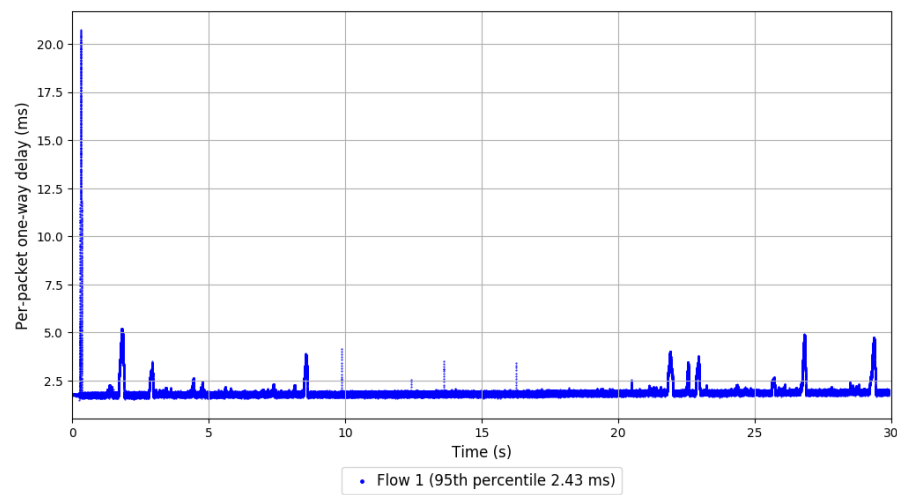
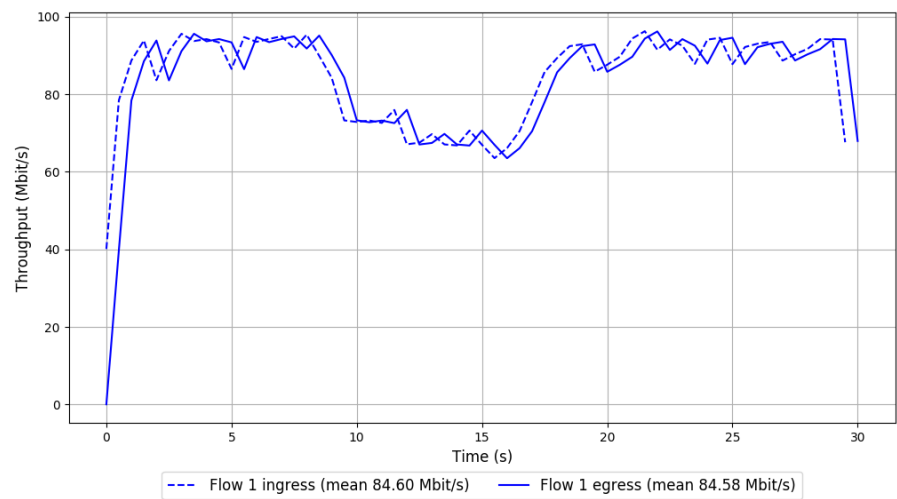
-- Flow 1:

Average throughput: 84.58 Mbit/s

95th percentile per-packet one-way delay: 2.427 ms

Loss rate: 0.02%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-11-29 21:02:46

End at: 2018-11-29 21:03:16

Local clock offset: 2.82 ms

Remote clock offset: 0.354 ms

Below is generated by plot.py at 2018-11-29 22:01:48

Datalink statistics

-- Total of 1 flow:

Average throughput: 86.64 Mbit/s

95th percentile per-packet one-way delay: 3.285 ms

Loss rate: 0.00%

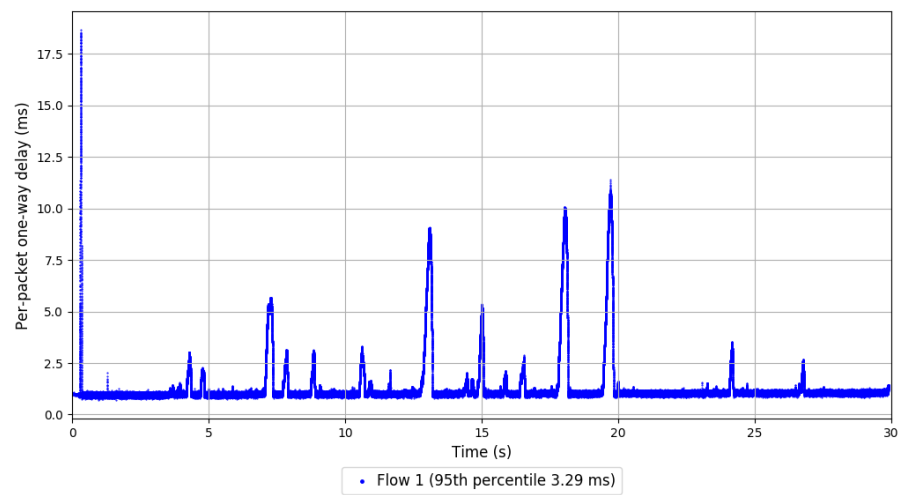
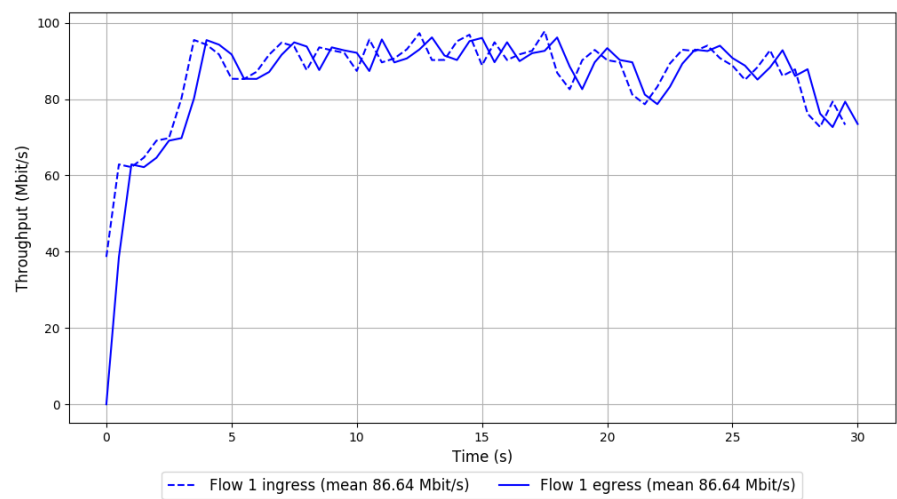
-- Flow 1:

Average throughput: 86.64 Mbit/s

95th percentile per-packet one-way delay: 3.285 ms

Loss rate: 0.00%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-11-29 21:22:49

End at: 2018-11-29 21:23:19

Local clock offset: 0.779 ms

Remote clock offset: 0.516 ms

Below is generated by plot.py at 2018-11-29 22:01:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 90.03 Mbit/s

95th percentile per-packet one-way delay: 3.822 ms

Loss rate: 0.00%

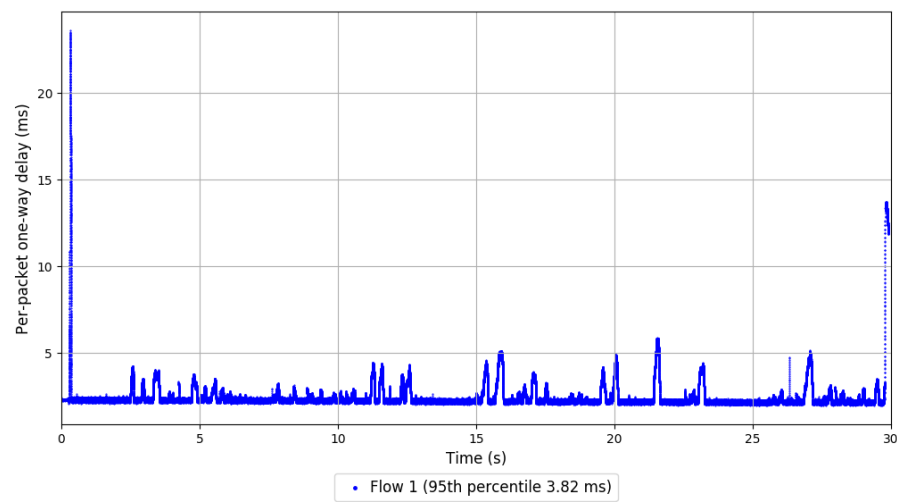
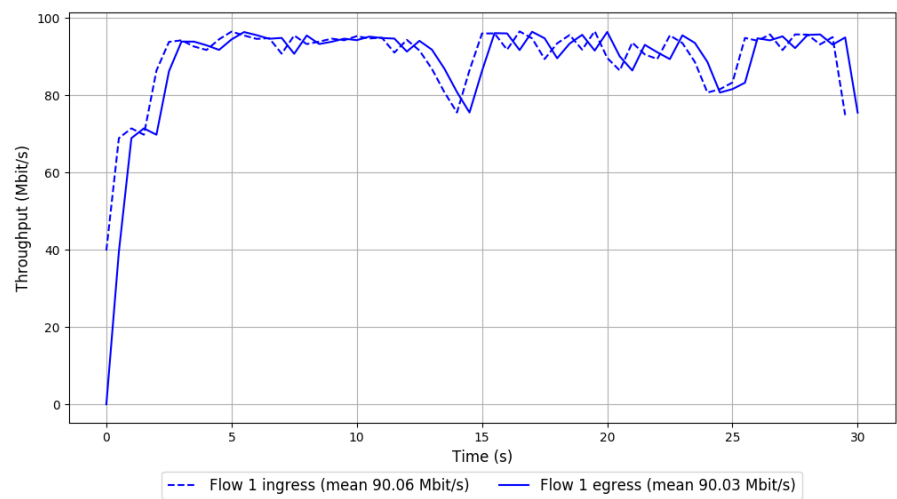
-- Flow 1:

Average throughput: 90.03 Mbit/s

95th percentile per-packet one-way delay: 3.822 ms

Loss rate: 0.00%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-11-29 21:42:55

End at: 2018-11-29 21:43:25

Local clock offset: -0.811 ms

Remote clock offset: 0.529 ms

Below is generated by plot.py at 2018-11-29 22:01:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 85.58 Mbit/s

95th percentile per-packet one-way delay: 3.727 ms

Loss rate: 0.00%

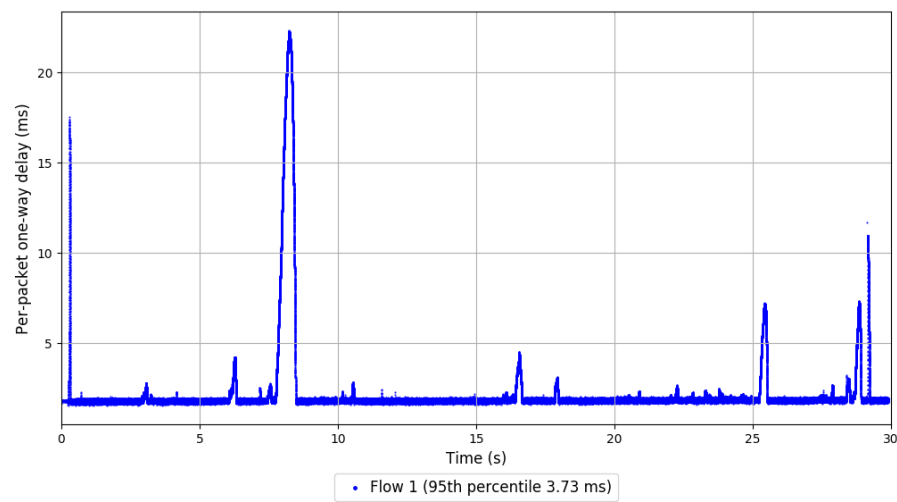
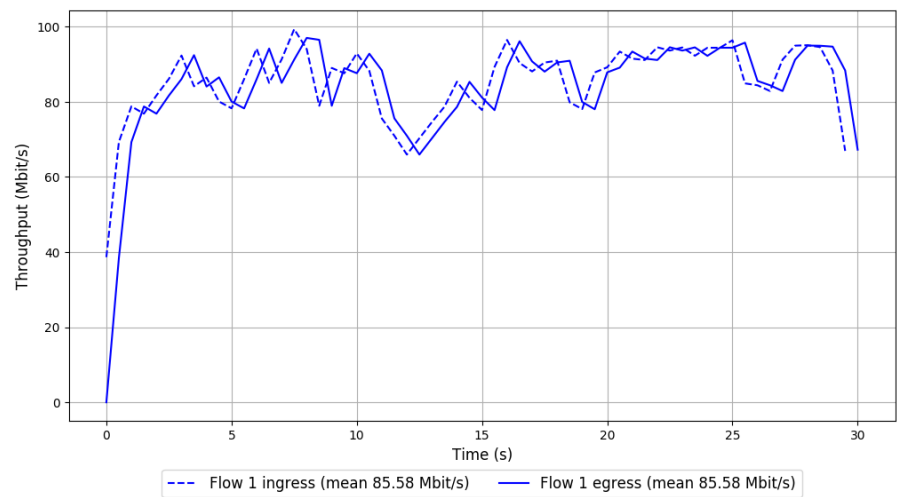
-- Flow 1:

Average throughput: 85.58 Mbit/s

95th percentile per-packet one-way delay: 3.727 ms

Loss rate: 0.00%

Run 5: Report of PCC-Allegro — Data Link

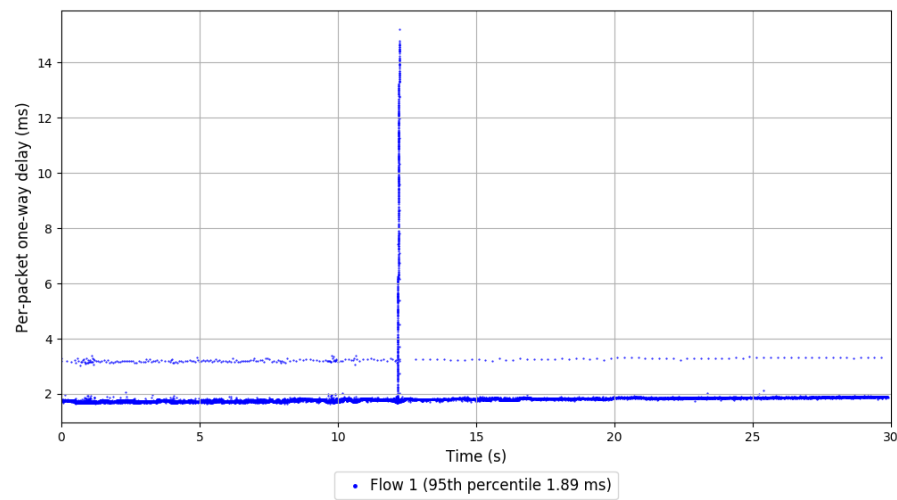
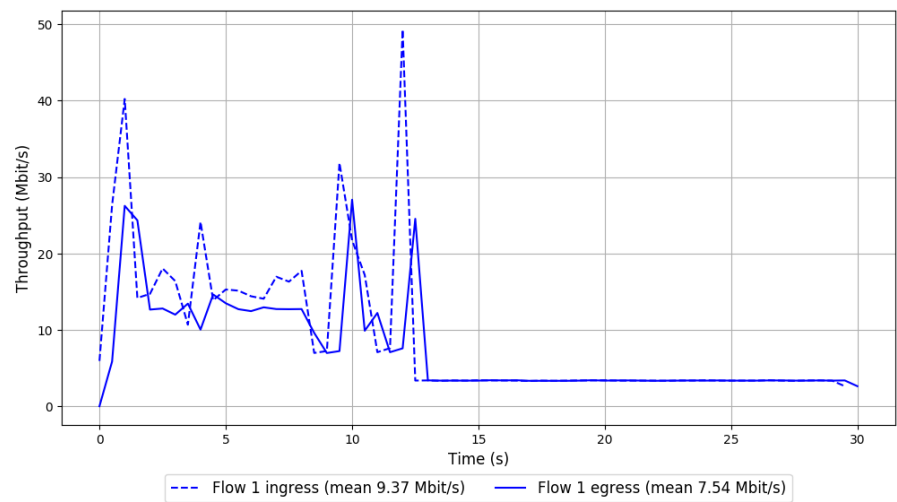


```
Run 1: Statistics of PCC-Expr

Start at: 2018-11-29 20:19:14
End at: 2018-11-29 20:19:44
Local clock offset: -2.541 ms
Remote clock offset: -0.066 ms

# Below is generated by plot.py at 2018-11-29 22:01:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.54 Mbit/s
95th percentile per-packet one-way delay: 1.885 ms
Loss rate: 19.55%
-- Flow 1:
Average throughput: 7.54 Mbit/s
95th percentile per-packet one-way delay: 1.885 ms
Loss rate: 19.55%
```

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2018-11-29 20:39:19

End at: 2018-11-29 20:39:49

Local clock offset: 0.128 ms

Remote clock offset: 0.044 ms

Below is generated by plot.py at 2018-11-29 22:01:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 13.12 Mbit/s

95th percentile per-packet one-way delay: 2.582 ms

Loss rate: 17.89%

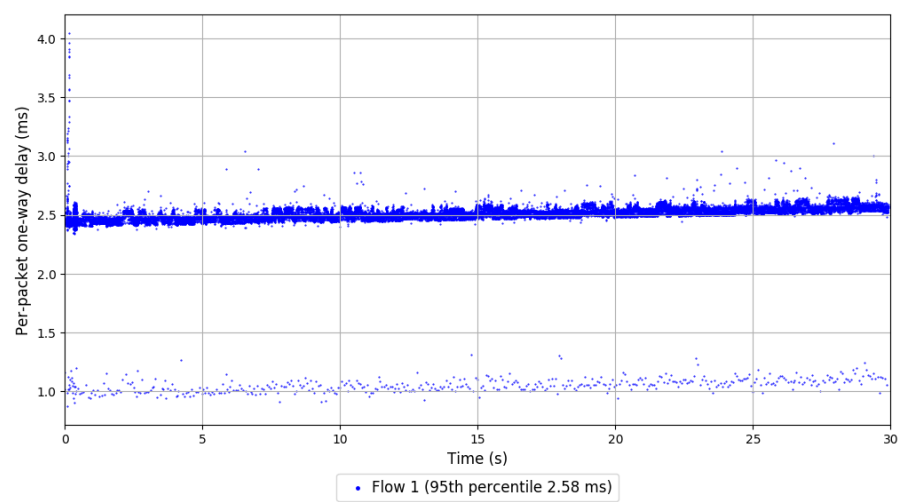
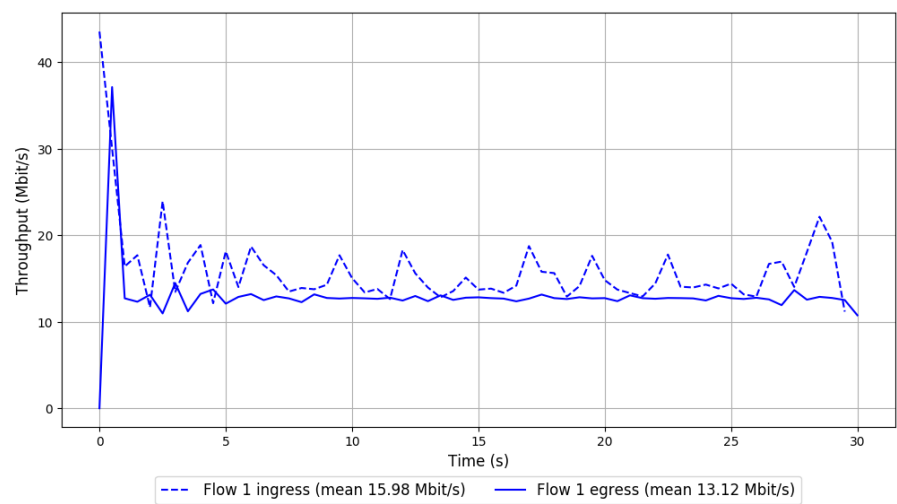
-- Flow 1:

Average throughput: 13.12 Mbit/s

95th percentile per-packet one-way delay: 2.582 ms

Loss rate: 17.89%

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2018-11-29 20:59:24

End at: 2018-11-29 20:59:54

Local clock offset: 1.314 ms

Remote clock offset: 0.295 ms

Below is generated by plot.py at 2018-11-29 22:01:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 12.67 Mbit/s

95th percentile per-packet one-way delay: 3.264 ms

Loss rate: 16.98%

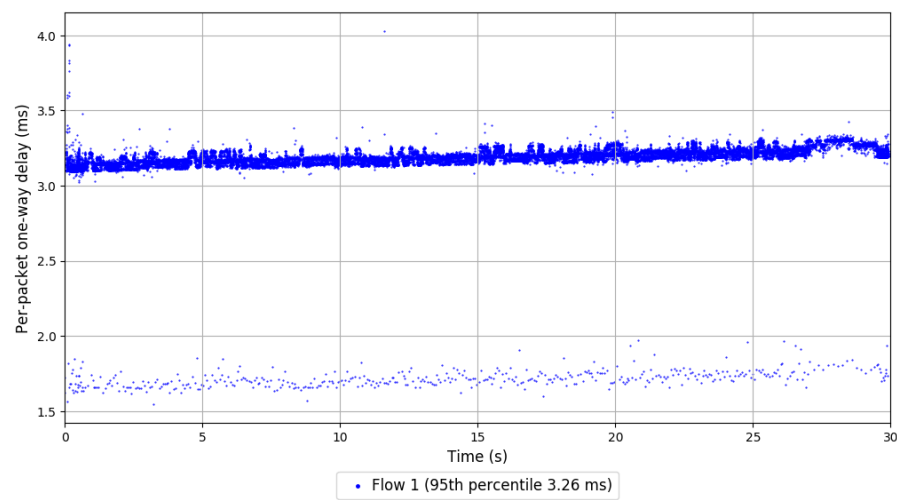
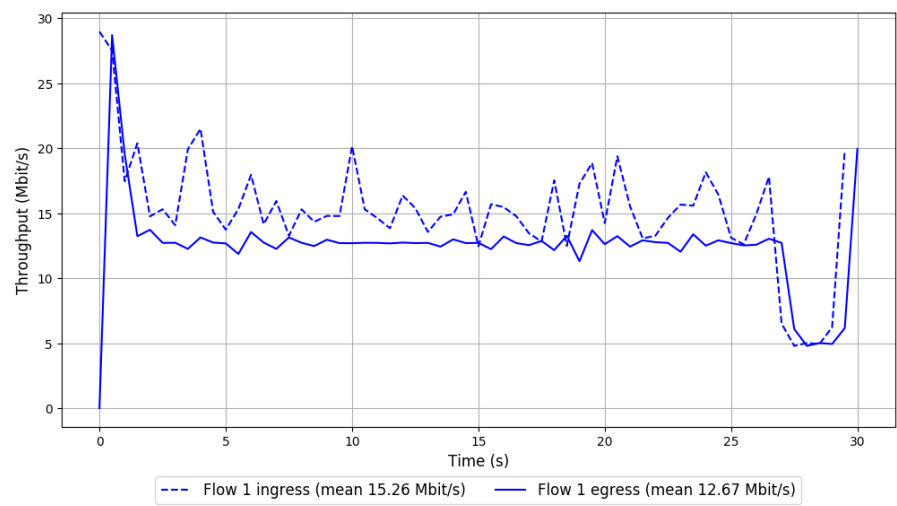
-- Flow 1:

Average throughput: 12.67 Mbit/s

95th percentile per-packet one-way delay: 3.264 ms

Loss rate: 16.98%

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

Start at: 2018-11-29 21:19:26

End at: 2018-11-29 21:19:57

Local clock offset: 1.658 ms

Remote clock offset: 0.537 ms

Below is generated by plot.py at 2018-11-29 22:01:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 13.12 Mbit/s

95th percentile per-packet one-way delay: 2.863 ms

Loss rate: 32.22%

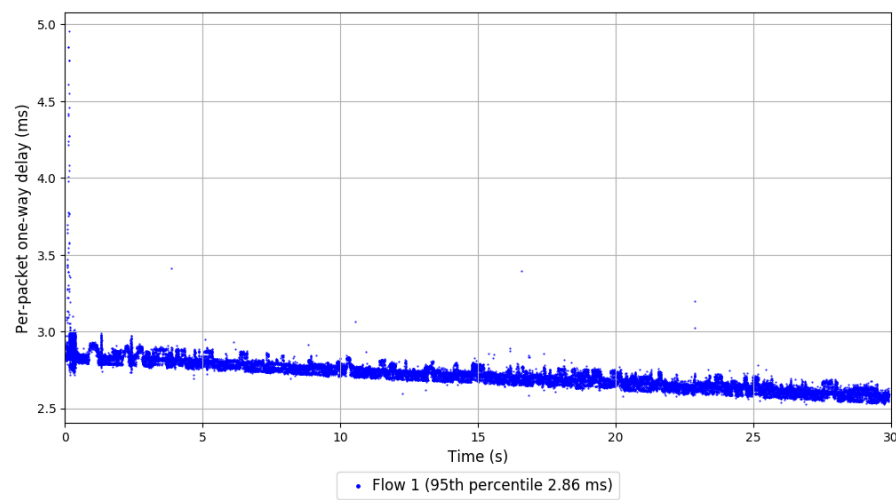
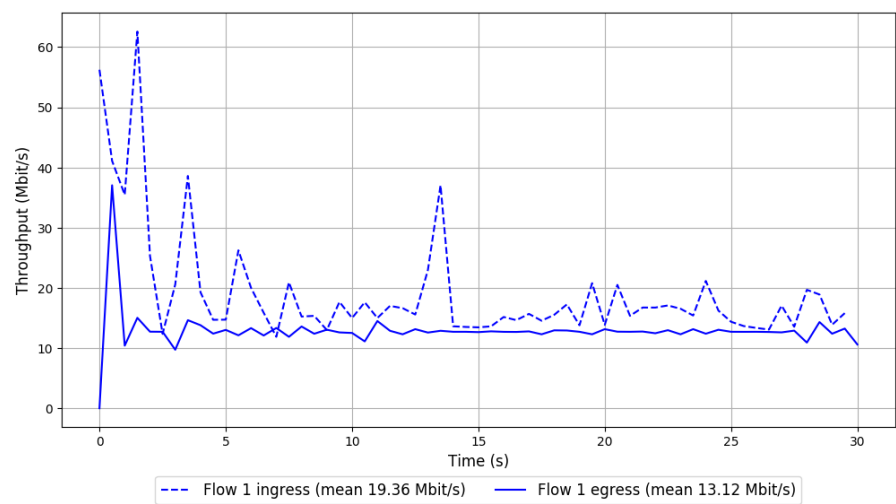
-- Flow 1:

Average throughput: 13.12 Mbit/s

95th percentile per-packet one-way delay: 2.863 ms

Loss rate: 32.22%

Run 4: Report of PCC-Expr — Data Link

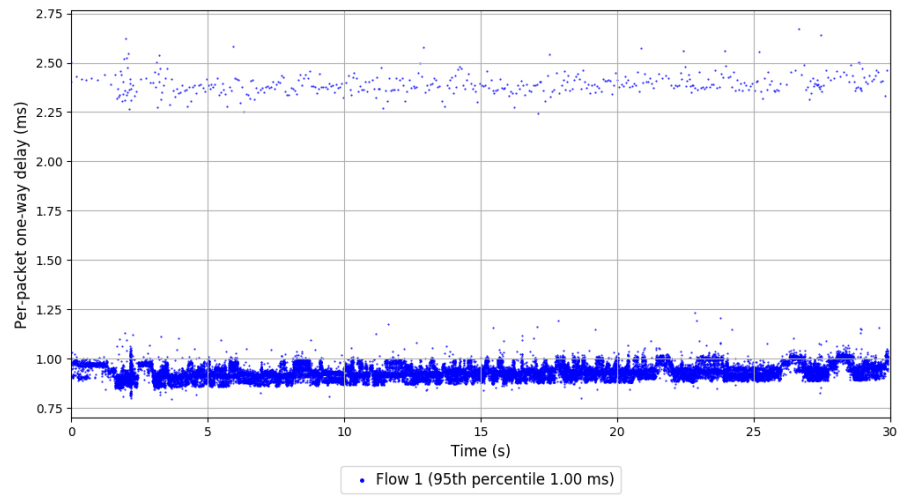
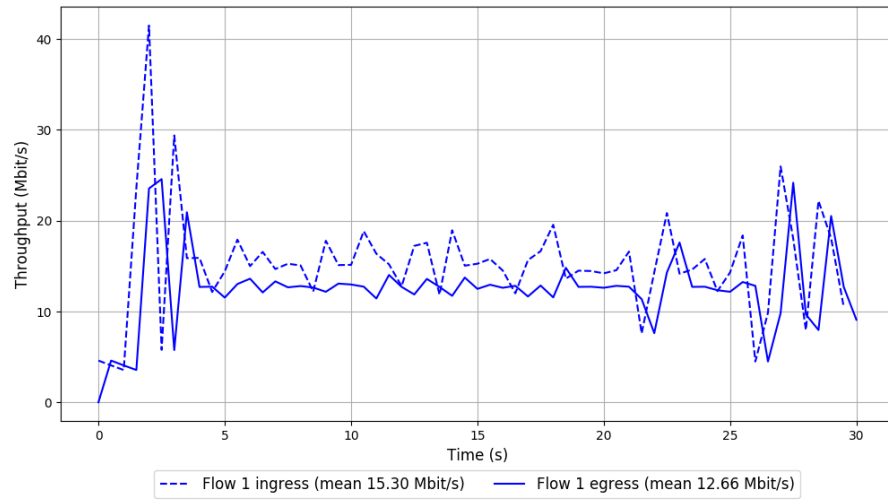


```
Run 5: Statistics of PCC-Expr

Start at: 2018-11-29 21:39:32
End at: 2018-11-29 21:40:02
Local clock offset: -0.283 ms
Remote clock offset: 0.534 ms

# Below is generated by plot.py at 2018-11-29 22:01:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.66 Mbit/s
95th percentile per-packet one-way delay: 0.998 ms
Loss rate: 17.30%
-- Flow 1:
Average throughput: 12.66 Mbit/s
95th percentile per-packet one-way delay: 0.998 ms
Loss rate: 17.30%
```

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

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

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

Local clock offset: 0.527 ms

Remote clock offset: -0.024 ms

Below is generated by plot.py at 2018-11-29 22:02:10

Datalink statistics

-- Total of 1 flow:

Average throughput: 76.57 Mbit/s

95th percentile per-packet one-way delay: 3.564 ms

Loss rate: 0.01%

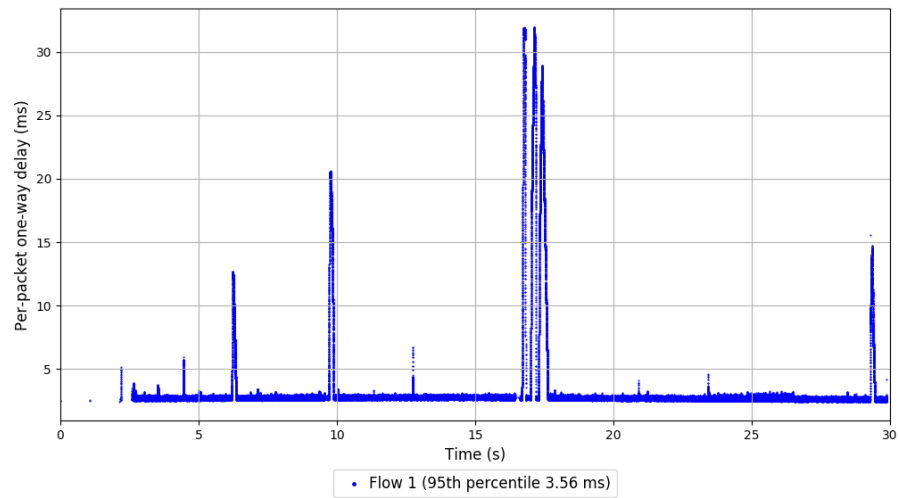
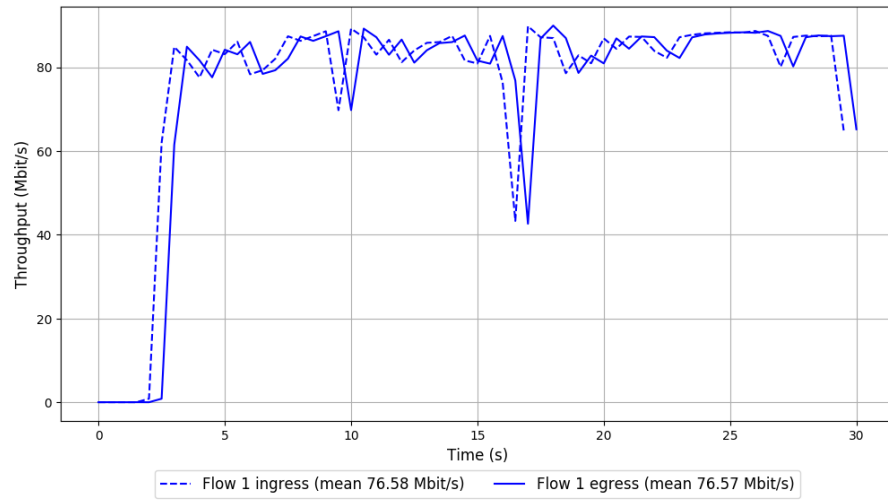
-- Flow 1:

Average throughput: 76.57 Mbit/s

95th percentile per-packet one-way delay: 3.564 ms

Loss rate: 0.01%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-11-29 20:50:30

End at: 2018-11-29 20:51:00

Local clock offset: 0.279 ms

Remote clock offset: 0.167 ms

Below is generated by plot.py at 2018-11-29 22:02:16

Datalink statistics

-- Total of 1 flow:

Average throughput: 79.68 Mbit/s

95th percentile per-packet one-way delay: 7.129 ms

Loss rate: 0.31%

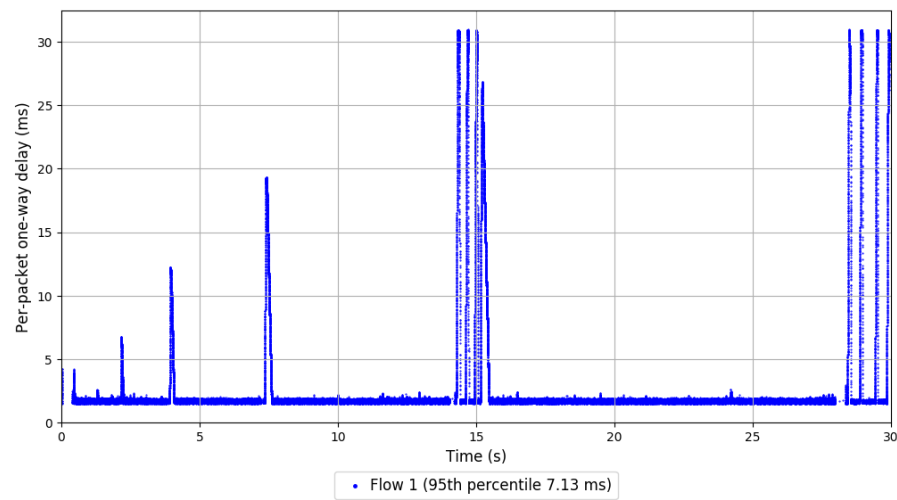
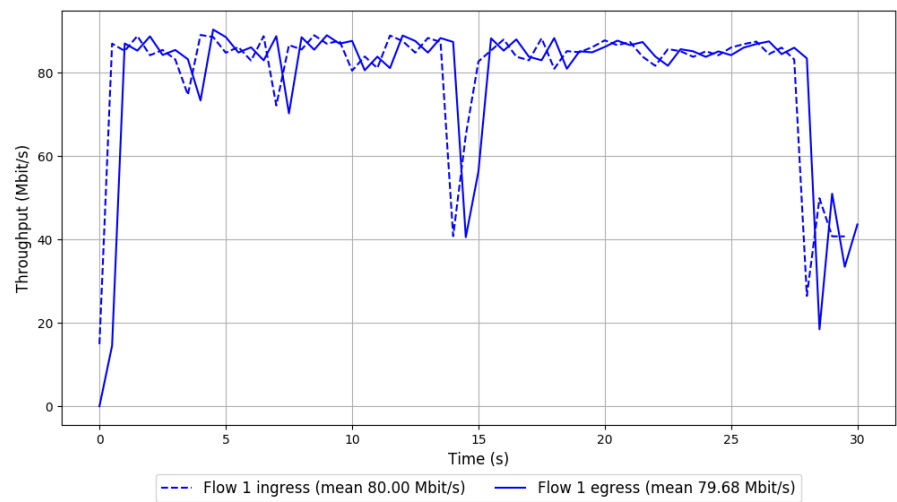
-- Flow 1:

Average throughput: 79.68 Mbit/s

95th percentile per-packet one-way delay: 7.129 ms

Loss rate: 0.31%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-11-29 21:10:33

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

Local clock offset: 4.8 ms

Remote clock offset: 0.44 ms

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

Datalink statistics

-- Total of 1 flow:

Average throughput: 79.15 Mbit/s

95th percentile per-packet one-way delay: 2.827 ms

Loss rate: 0.20%

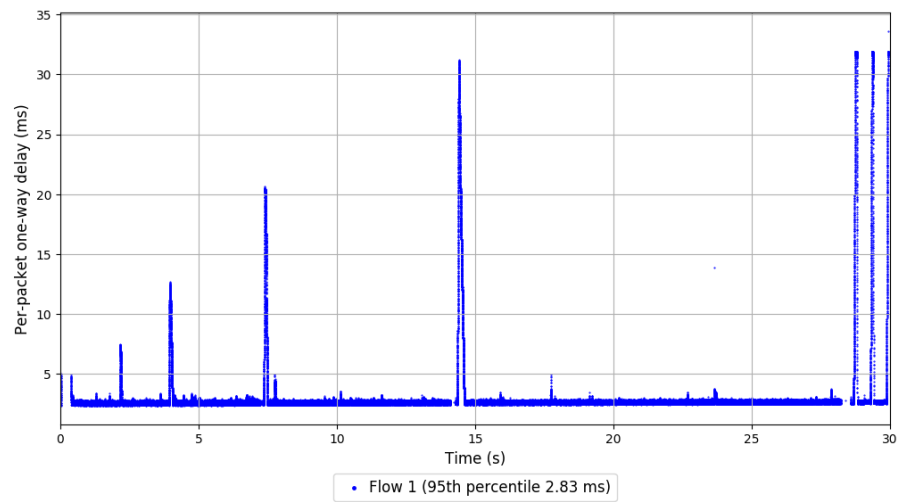
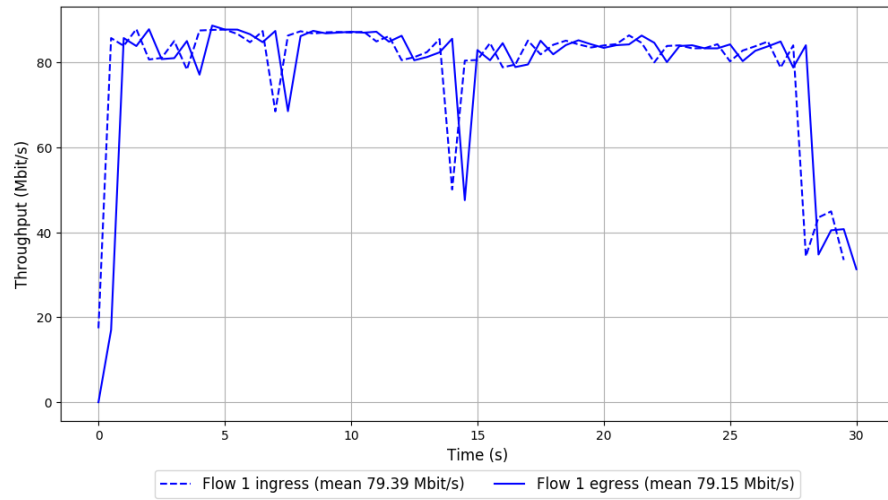
-- Flow 1:

Average throughput: 79.15 Mbit/s

95th percentile per-packet one-way delay: 2.827 ms

Loss rate: 0.20%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-11-29 21:30:38

End at: 2018-11-29 21:31:08

Local clock offset: -1.364 ms

Remote clock offset: 0.55 ms

Below is generated by plot.py at 2018-11-29 22:02:47

Datalink statistics

-- Total of 1 flow:

Average throughput: 77.33 Mbit/s

95th percentile per-packet one-way delay: 5.297 ms

Loss rate: 0.35%

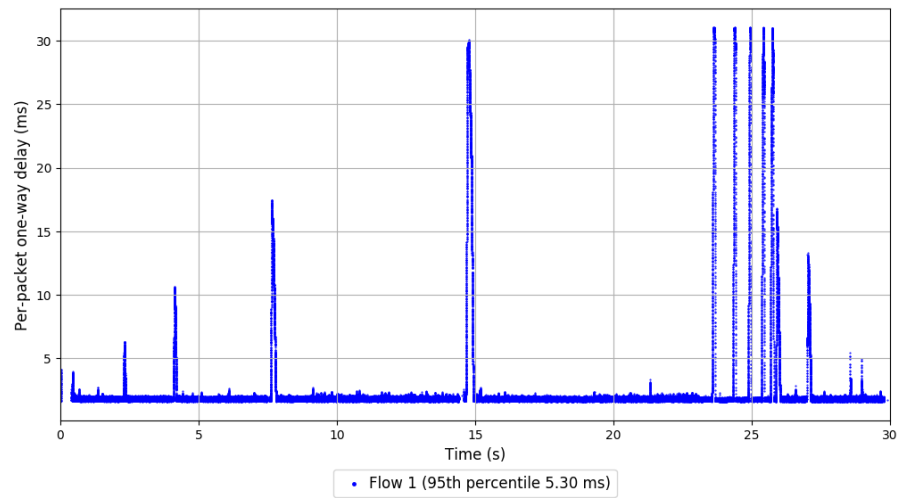
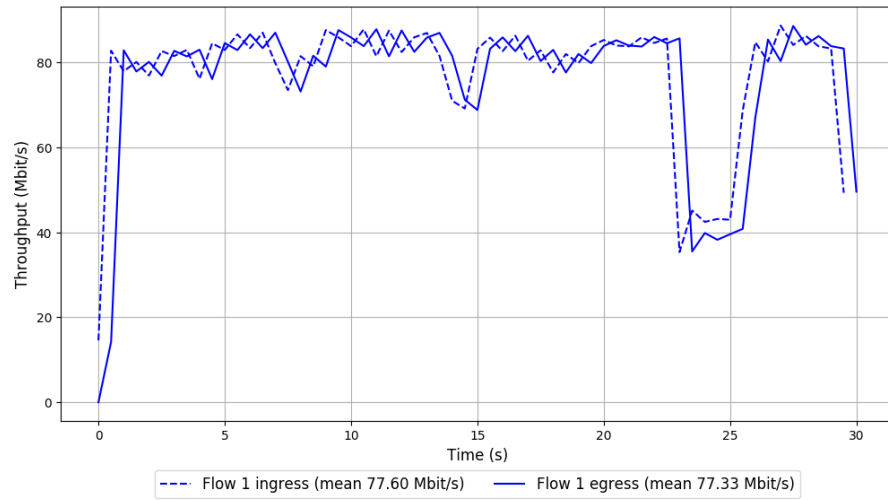
-- Flow 1:

Average throughput: 77.33 Mbit/s

95th percentile per-packet one-way delay: 5.297 ms

Loss rate: 0.35%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-11-29 21:50:44

End at: 2018-11-29 21:51:14

Local clock offset: -0.028 ms

Remote clock offset: 0.535 ms

Below is generated by plot.py at 2018-11-29 22:02:51

Datalink statistics

-- Total of 1 flow:

Average throughput: 77.24 Mbit/s

95th percentile per-packet one-way delay: 3.953 ms

Loss rate: 0.36%

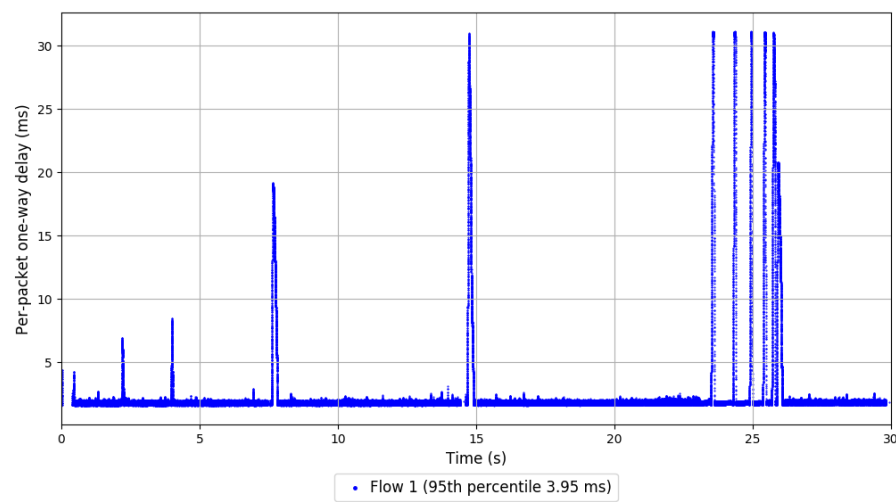
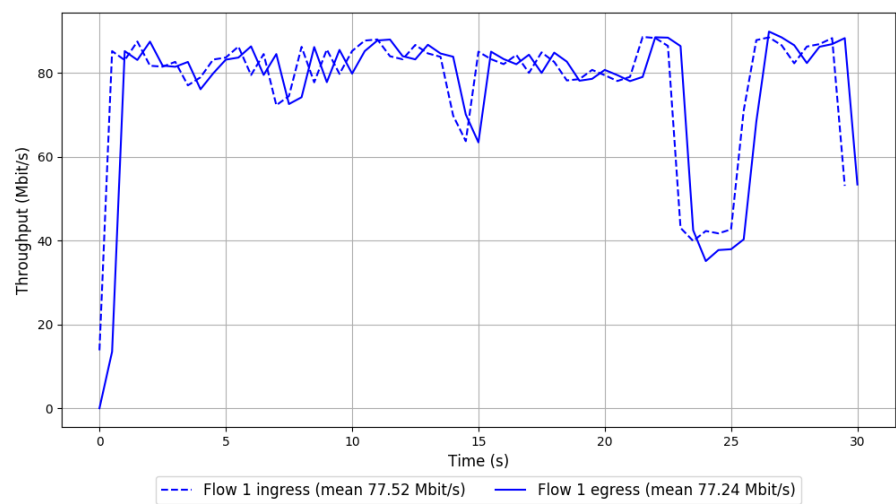
-- Flow 1:

Average throughput: 77.24 Mbit/s

95th percentile per-packet one-way delay: 3.953 ms

Loss rate: 0.36%

Run 5: Report of QUIC Cubic — Data Link

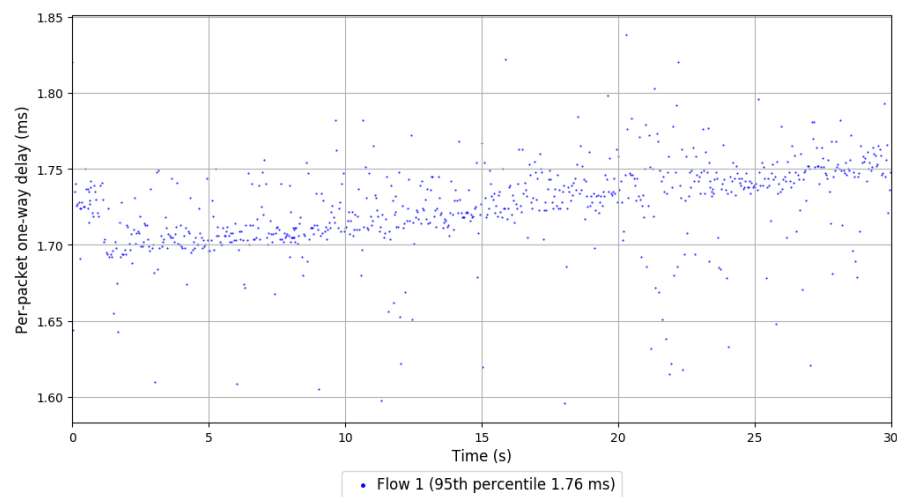
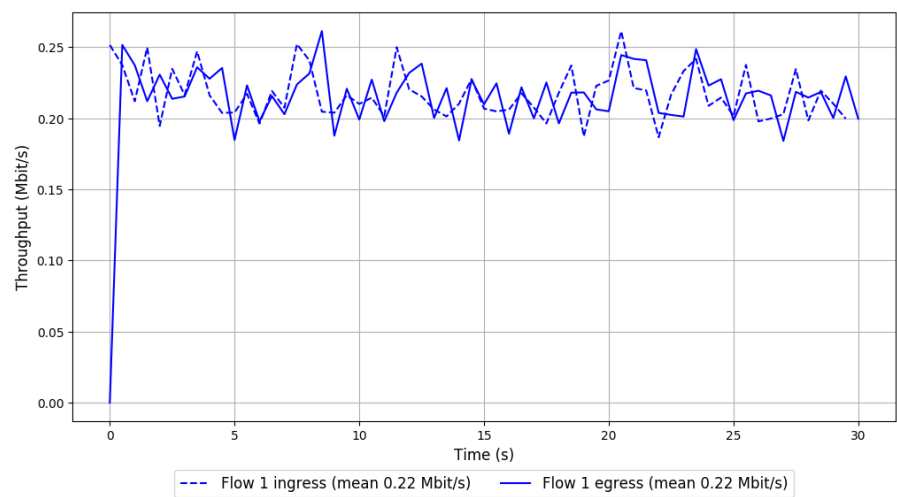


```
Run 1: Statistics of SCReAM

Start at: 2018-11-29 20:24:48
End at: 2018-11-29 20:25:18
Local clock offset: -2.044 ms
Remote clock offset: -0.113 ms

# Below is generated by plot.py at 2018-11-29 22:02:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.765 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.765 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2018-11-29 20:44:52

End at: 2018-11-29 20:45:22

Local clock offset: 1.707 ms

Remote clock offset: 0.134 ms

Below is generated by plot.py at 2018-11-29 22:02:51

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 2.346 ms

Loss rate: 0.00%

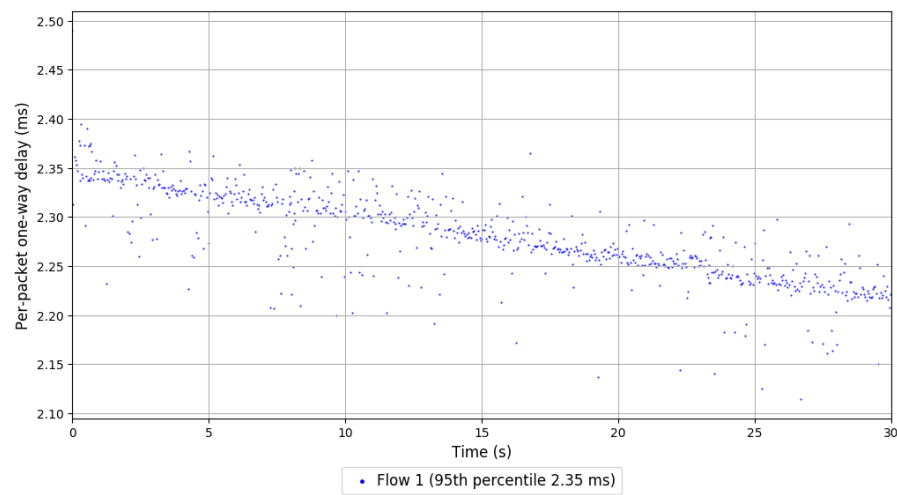
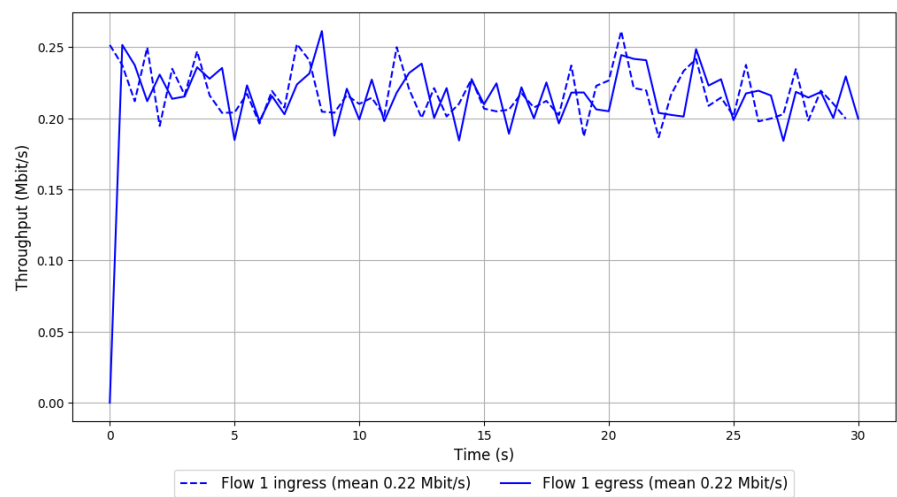
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 2.346 ms

Loss rate: 0.00%

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2018-11-29 21:04:57

End at: 2018-11-29 21:05:27

Local clock offset: 3.243 ms

Remote clock offset: 0.372 ms

Below is generated by plot.py at 2018-11-29 22:02:51

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 2.655 ms

Loss rate: 0.00%

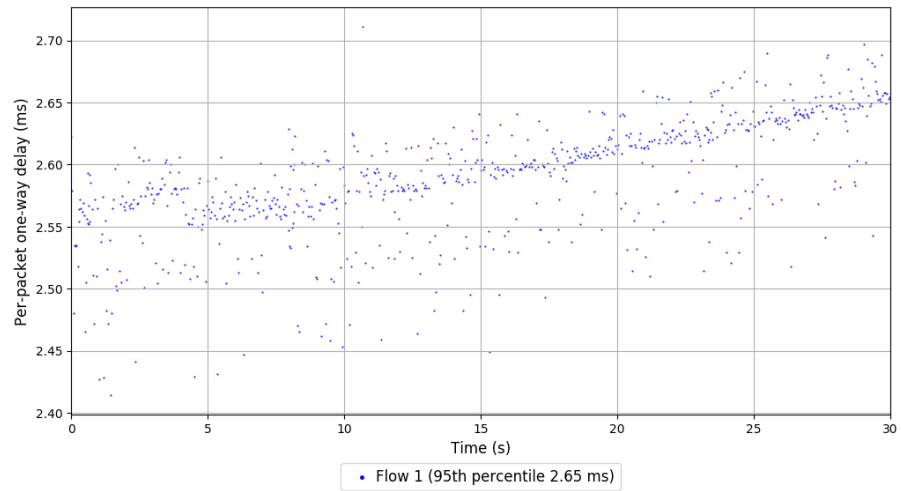
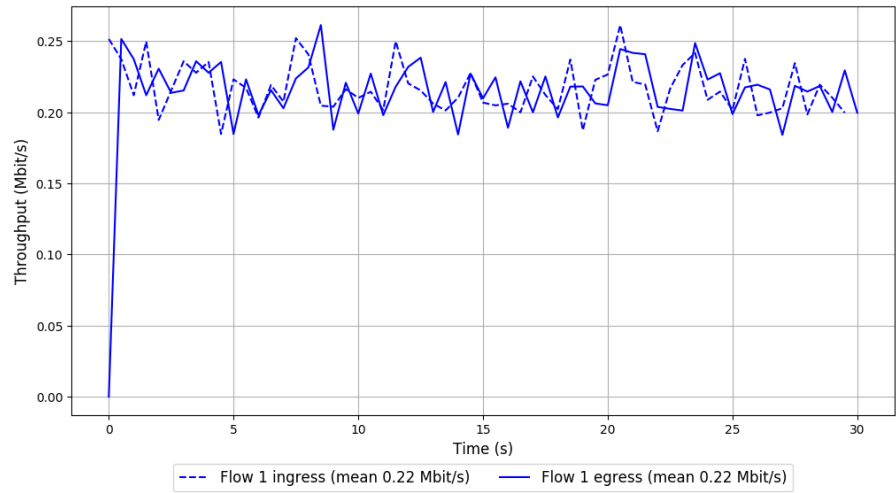
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 2.655 ms

Loss rate: 0.00%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2018-11-29 21:25:00

End at: 2018-11-29 21:25:30

Local clock offset: 0.161 ms

Remote clock offset: 0.399 ms

Below is generated by plot.py at 2018-11-29 22:02:51

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 2.238 ms

Loss rate: 0.00%

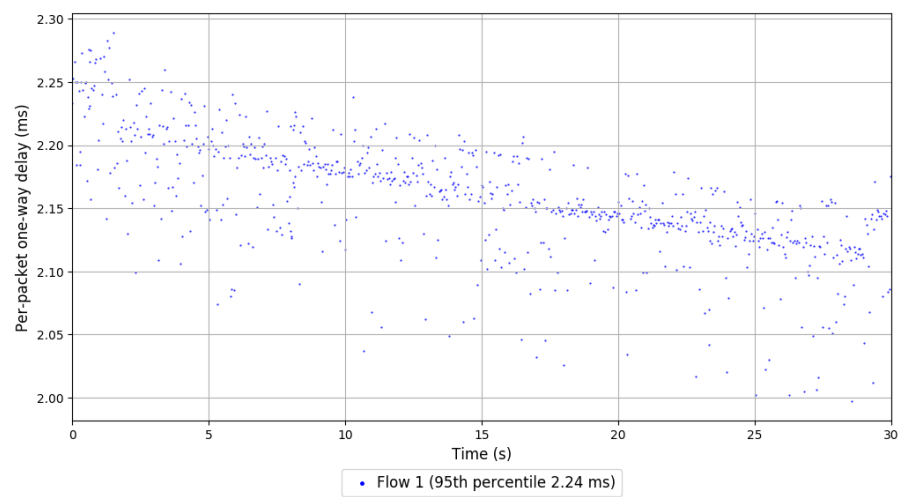
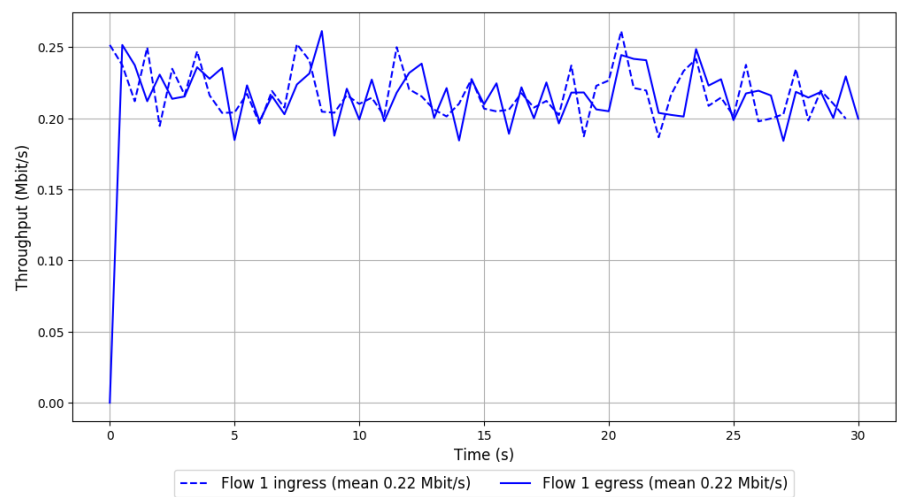
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 2.238 ms

Loss rate: 0.00%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2018-11-29 21:45:06

End at: 2018-11-29 21:45:36

Local clock offset: -0.552 ms

Remote clock offset: 0.583 ms

Below is generated by plot.py at 2018-11-29 22:02:51

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 3.330 ms

Loss rate: 0.00%

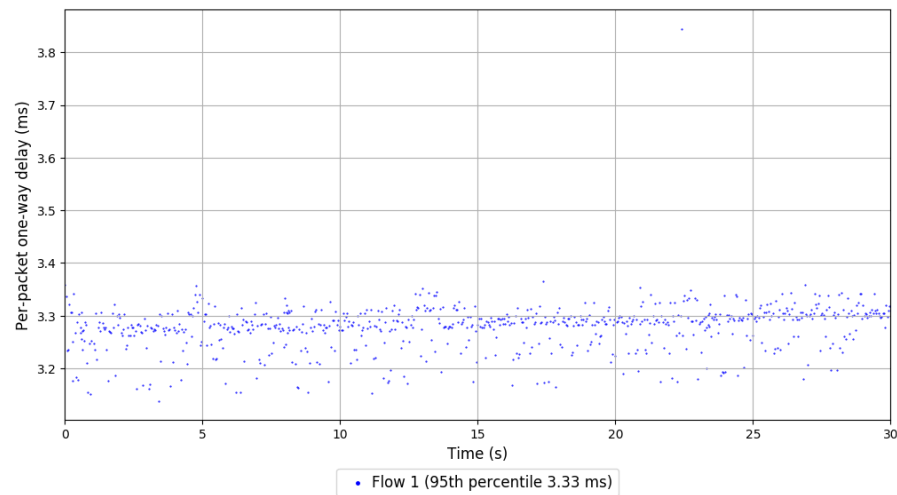
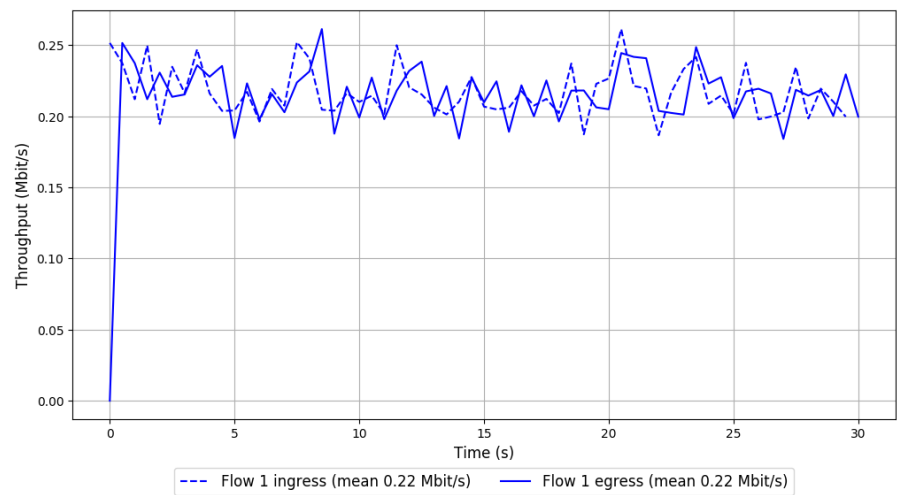
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 3.330 ms

Loss rate: 0.00%

Run 5: Report of SReAM — Data Link

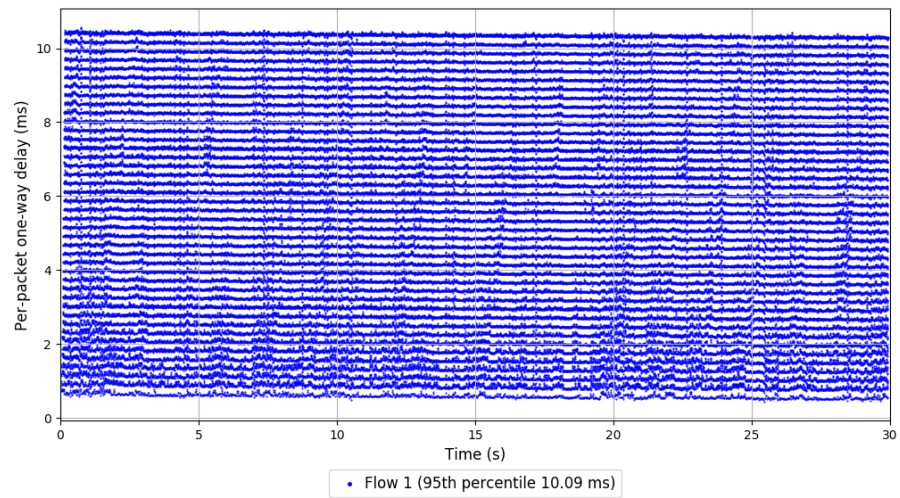
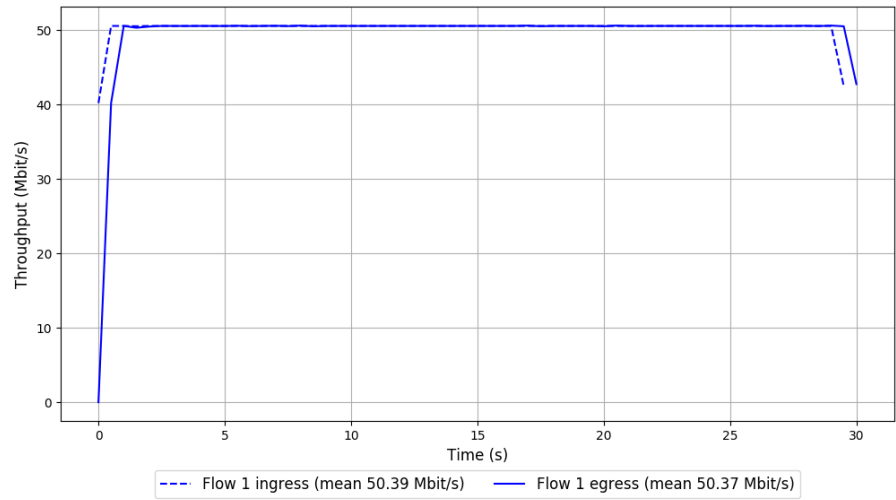


Run 1: Statistics of Sprout

Start at: 2018-11-29 20:32:37
End at: 2018-11-29 20:33:07
Local clock offset: 0.156 ms
Remote clock offset: -0.033 ms

Below is generated by plot.py at 2018-11-29 22:02:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 50.37 Mbit/s
95th percentile per-packet one-way delay: 10.085 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.37 Mbit/s
95th percentile per-packet one-way delay: 10.085 ms
Loss rate: 0.00%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-11-29 20:52:42

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

Local clock offset: 0.373 ms

Remote clock offset: 0.2 ms

Below is generated by plot.py at 2018-11-29 22:02:51

Datalink statistics

-- Total of 1 flow:

Average throughput: 50.22 Mbit/s

95th percentile per-packet one-way delay: 11.046 ms

Loss rate: 0.00%

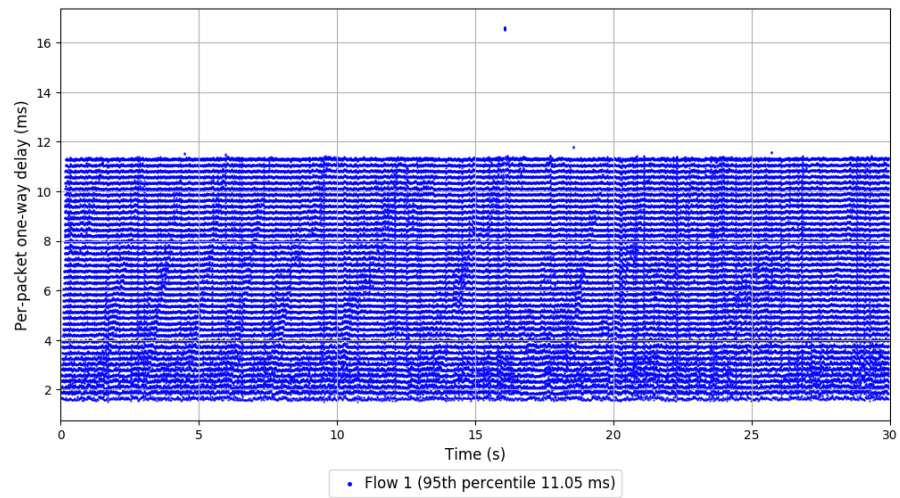
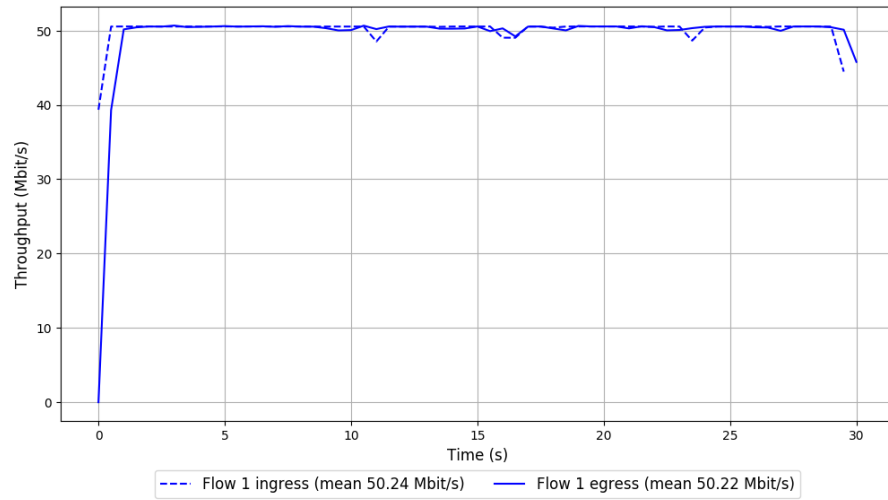
-- Flow 1:

Average throughput: 50.22 Mbit/s

95th percentile per-packet one-way delay: 11.046 ms

Loss rate: 0.00%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-11-29 21:12:45

End at: 2018-11-29 21:13:15

Local clock offset: 4.626 ms

Remote clock offset: 0.427 ms

Below is generated by plot.py at 2018-11-29 22:02:51

Datalink statistics

-- Total of 1 flow:

Average throughput: 50.27 Mbit/s

95th percentile per-packet one-way delay: 12.673 ms

Loss rate: 0.00%

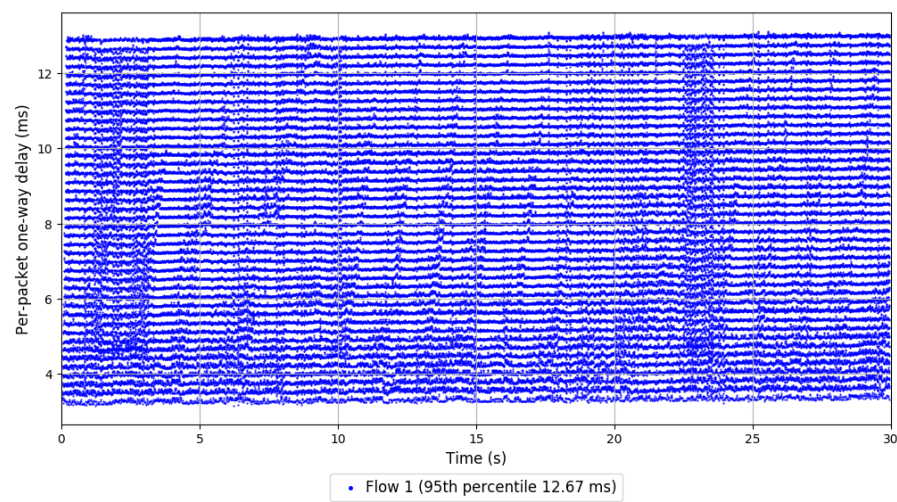
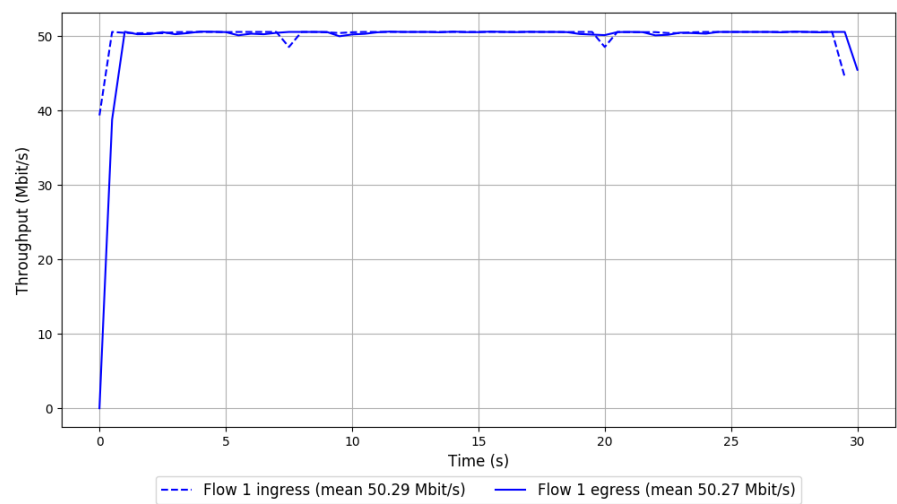
-- Flow 1:

Average throughput: 50.27 Mbit/s

95th percentile per-packet one-way delay: 12.673 ms

Loss rate: 0.00%

Run 3: Report of Sprout — Data Link

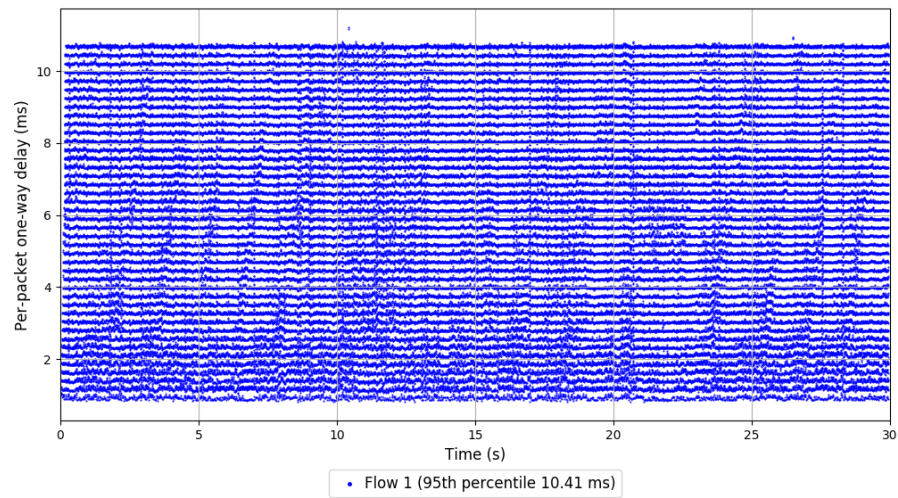
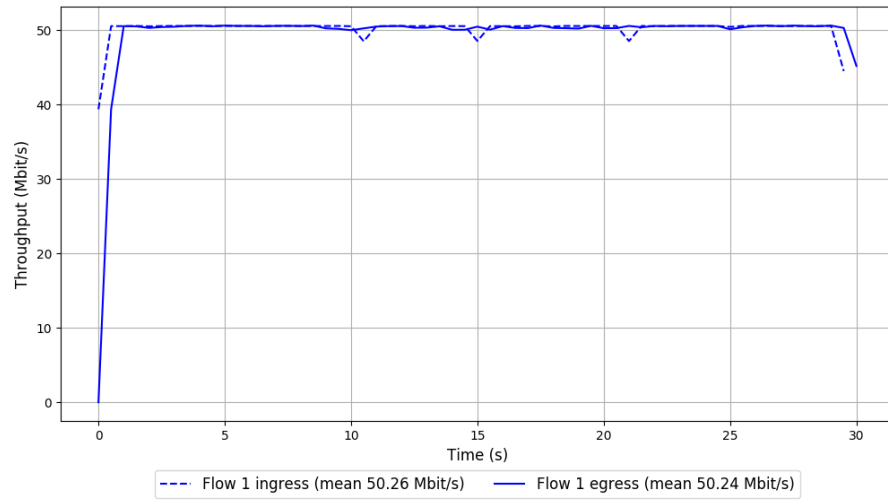


Run 4: Statistics of Sprout

Start at: 2018-11-29 21:32:50
End at: 2018-11-29 21:33:20
Local clock offset: -0.591 ms
Remote clock offset: 0.555 ms

Below is generated by plot.py at 2018-11-29 22:02:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 50.24 Mbit/s
95th percentile per-packet one-way delay: 10.411 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.24 Mbit/s
95th percentile per-packet one-way delay: 10.411 ms
Loss rate: 0.00%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-11-29 21:52:56

End at: 2018-11-29 21:53:26

Local clock offset: 0.217 ms

Remote clock offset: 0.486 ms

Below is generated by plot.py at 2018-11-29 22:03:00

Datalink statistics

-- Total of 1 flow:

Average throughput: 50.23 Mbit/s

95th percentile per-packet one-way delay: 11.151 ms

Loss rate: 0.00%

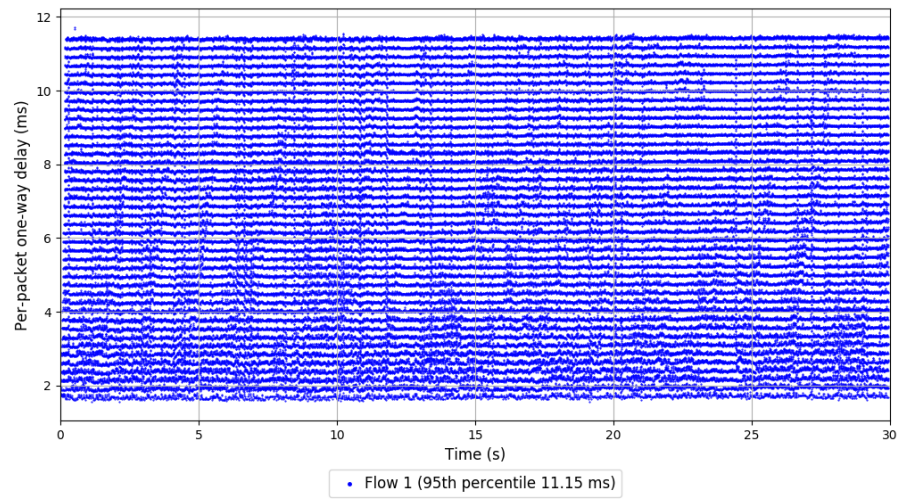
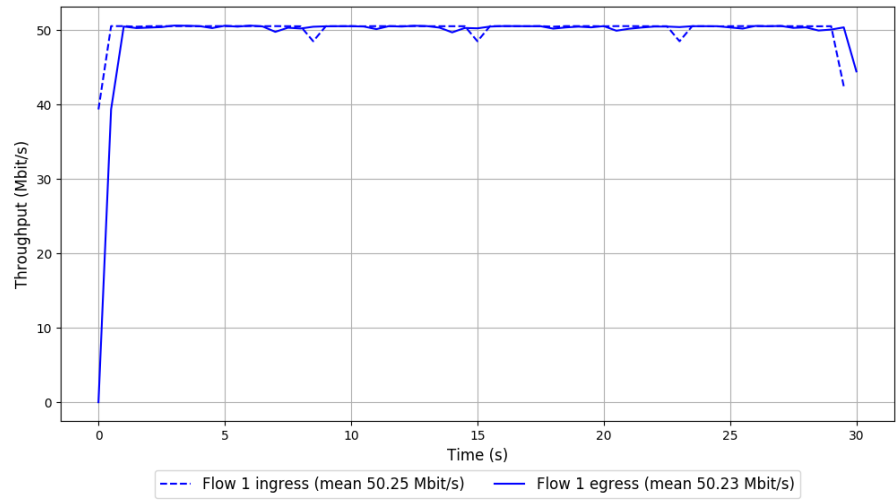
-- Flow 1:

Average throughput: 50.23 Mbit/s

95th percentile per-packet one-way delay: 11.151 ms

Loss rate: 0.00%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

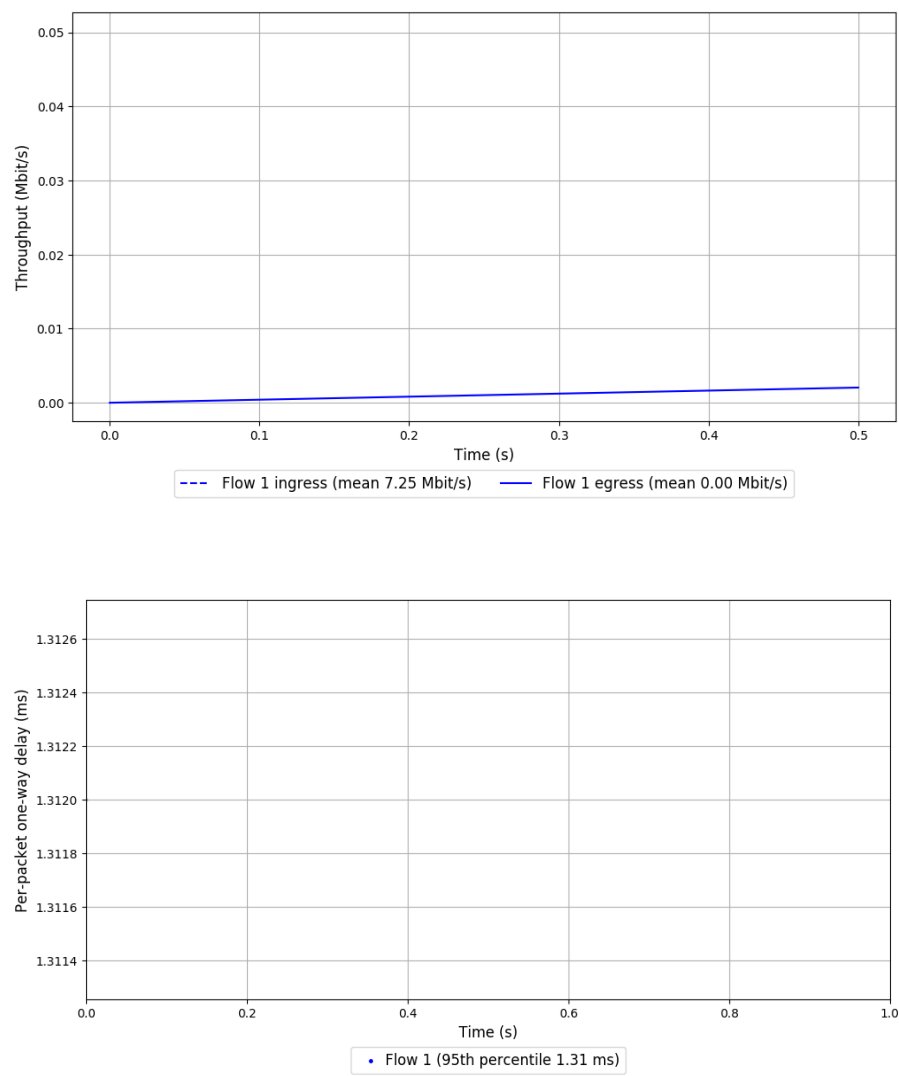
Start at: 2018-11-29 20:15:54

End at: 2018-11-29 20:16:24

Local clock offset: -2.625 ms

Remote clock offset: -0.152 ms

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



Run 2: Statistics of TaoVA-100x

Start at: 2018-11-29 20:35:57

End at: 2018-11-29 20:36:27

Local clock offset: -0.31 ms

Remote clock offset: 0.029 ms

Below is generated by plot.py at 2018-11-29 22:03:00

Datalink statistics

-- Total of 1 flow:

Average throughput: 10.06 Mbit/s

95th percentile per-packet one-way delay: 2.458 ms

Loss rate: 81.13%

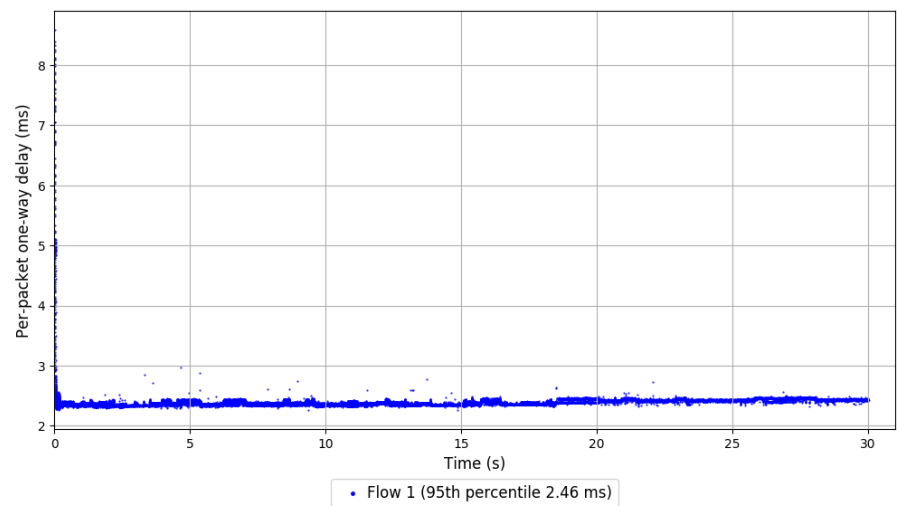
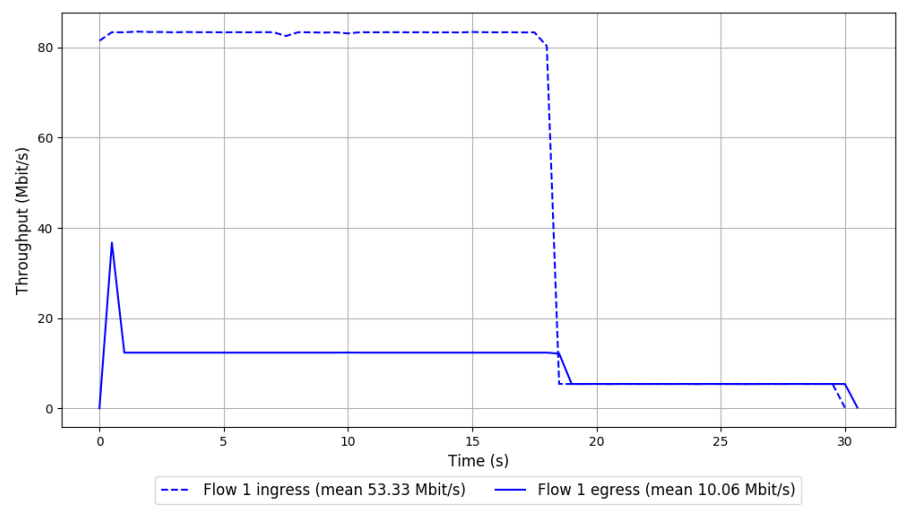
-- Flow 1:

Average throughput: 10.06 Mbit/s

95th percentile per-packet one-way delay: 2.458 ms

Loss rate: 81.13%

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-11-29 20:56:02

End at: 2018-11-29 20:56:32

Local clock offset: 0.637 ms

Remote clock offset: 0.263 ms

Below is generated by plot.py at 2018-11-29 22:03:00

Datalink statistics

-- Total of 1 flow:

Average throughput: 10.07 Mbit/s

95th percentile per-packet one-way delay: 3.343 ms

Loss rate: 81.13%

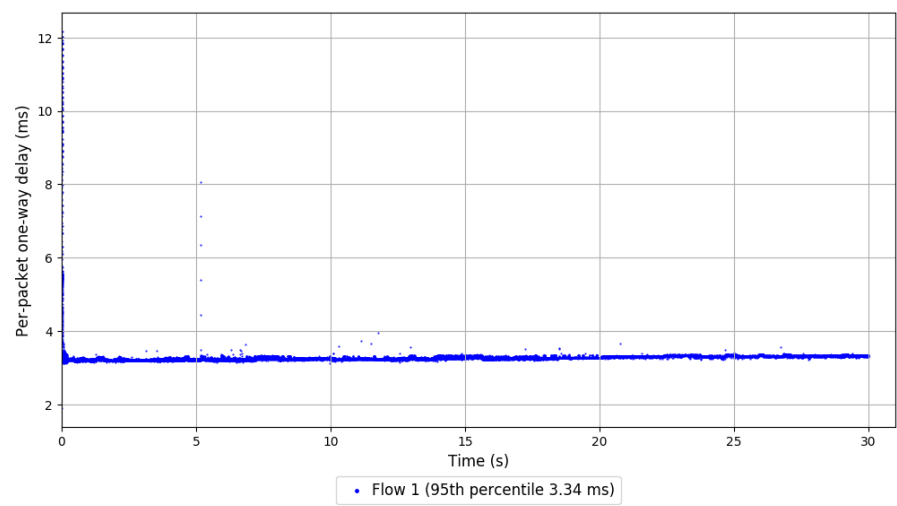
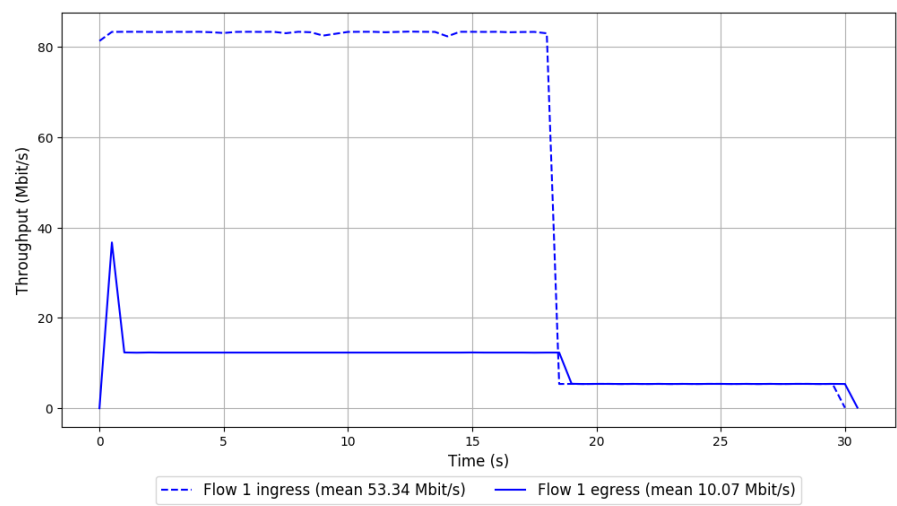
-- Flow 1:

Average throughput: 10.07 Mbit/s

95th percentile per-packet one-way delay: 3.343 ms

Loss rate: 81.13%

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-11-29 21:16:05

End at: 2018-11-29 21:16:35

Local clock offset: 4.701 ms

Remote clock offset: 0.506 ms

Below is generated by plot.py at 2018-11-29 22:03:00

Datalink statistics

-- Total of 1 flow:

Average throughput: 10.06 Mbit/s

95th percentile per-packet one-way delay: 2.190 ms

Loss rate: 81.13%

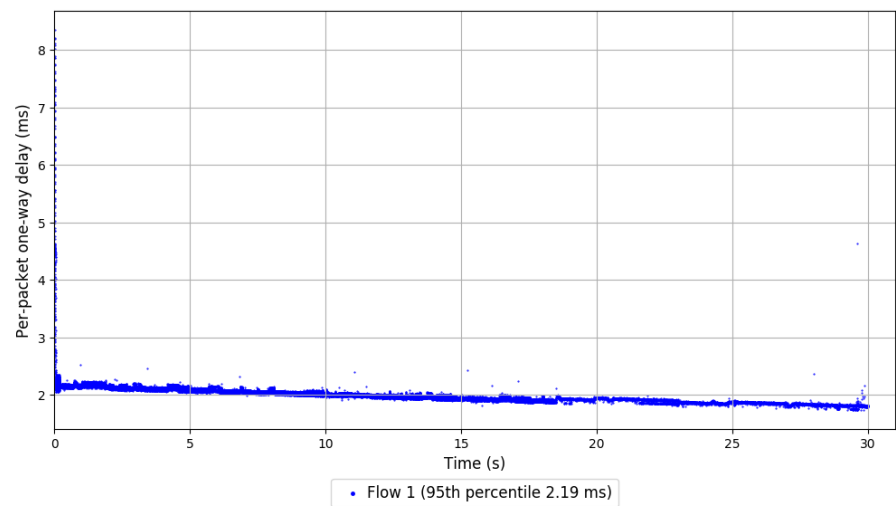
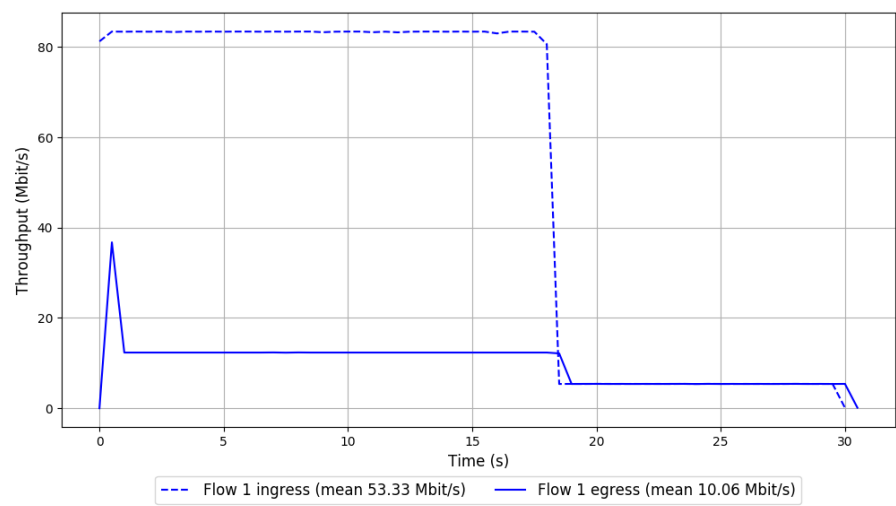
-- Flow 1:

Average throughput: 10.06 Mbit/s

95th percentile per-packet one-way delay: 2.190 ms

Loss rate: 81.13%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-11-29 21:36:10

End at: 2018-11-29 21:36:41

Local clock offset: -1.265 ms

Remote clock offset: 0.589 ms

Below is generated by plot.py at 2018-11-29 22:03:00

Datalink statistics

-- Total of 1 flow:

Average throughput: 10.99 Mbit/s

95th percentile per-packet one-way delay: 1.801 ms

Loss rate: 81.42%

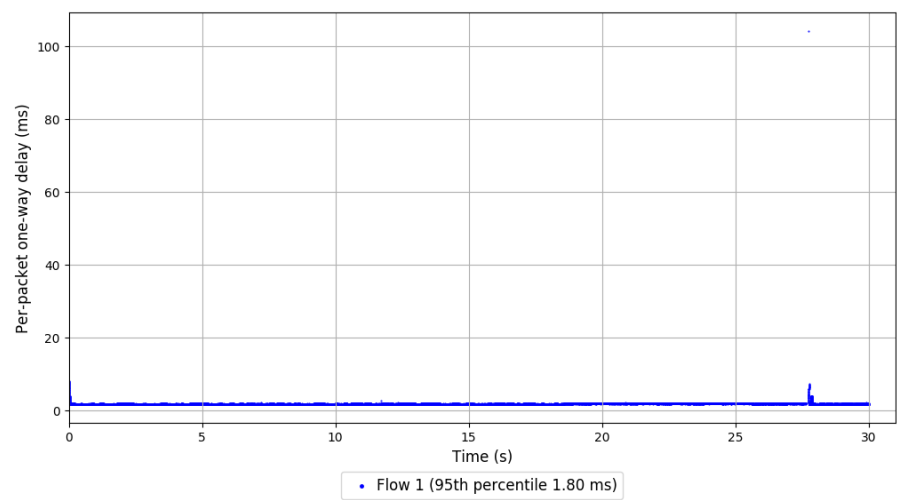
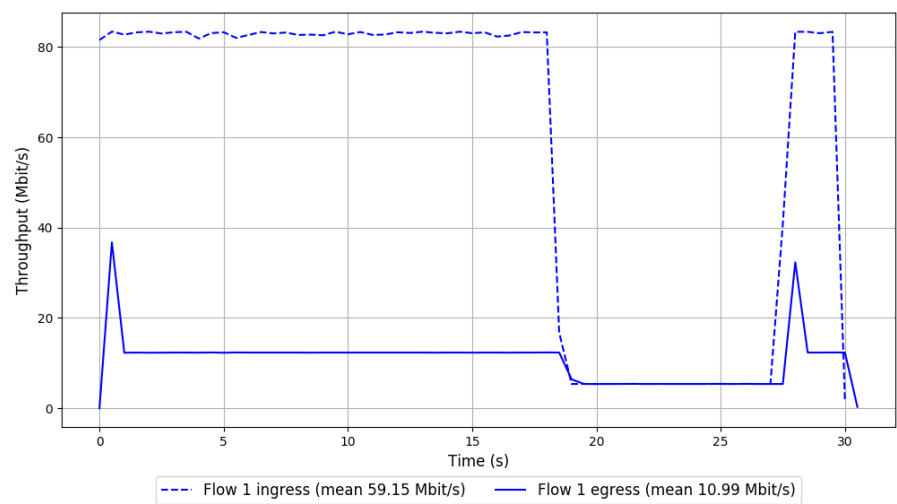
-- Flow 1:

Average throughput: 10.99 Mbit/s

95th percentile per-packet one-way delay: 1.801 ms

Loss rate: 81.42%

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

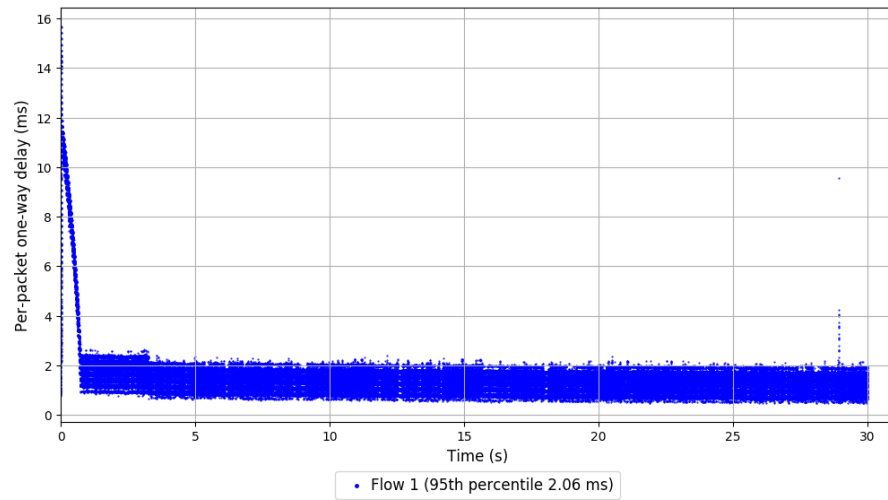
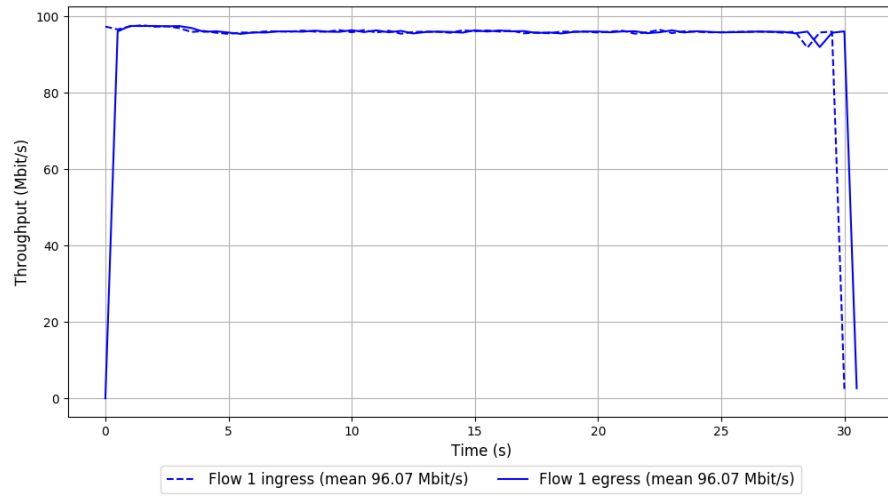


Run 1: Statistics of TCP Vegas

Start at: 2018-11-29 20:18:06
End at: 2018-11-29 20:18:36
Local clock offset: -1.462 ms
Remote clock offset: -0.114 ms

Below is generated by plot.py at 2018-11-29 22:03:57
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.07 Mbit/s
95th percentile per-packet one-way delay: 2.061 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 96.07 Mbit/s
95th percentile per-packet one-way delay: 2.061 ms
Loss rate: 0.00%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

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

End at: 2018-11-29 20:38:41

Local clock offset: -0.06 ms

Remote clock offset: 0.063 ms

Below is generated by plot.py at 2018-11-29 22:04:00

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.02 Mbit/s

95th percentile per-packet one-way delay: 3.856 ms

Loss rate: 0.00%

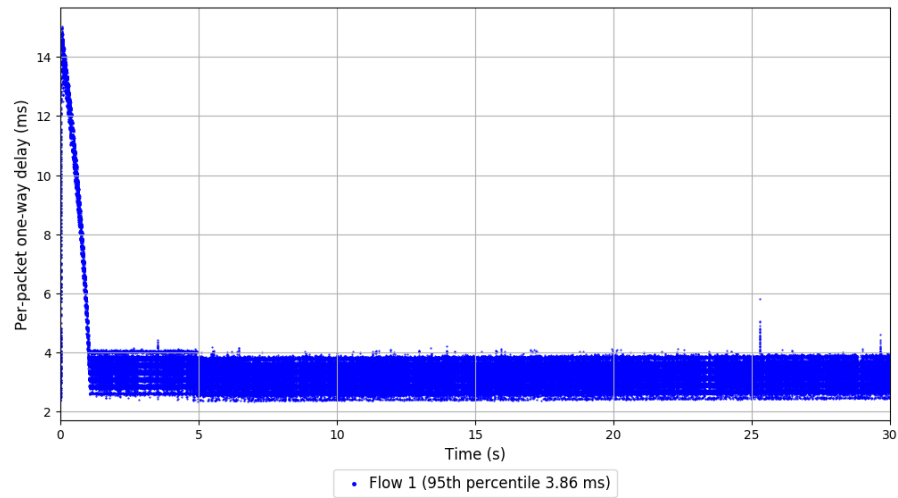
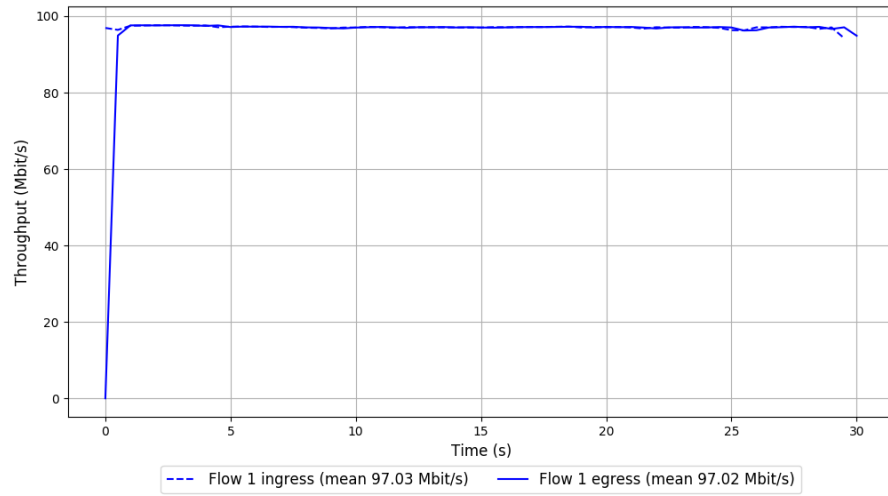
-- Flow 1:

Average throughput: 97.02 Mbit/s

95th percentile per-packet one-way delay: 3.856 ms

Loss rate: 0.00%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-11-29 20:58:16

End at: 2018-11-29 20:58:46

Local clock offset: 0.994 ms

Remote clock offset: 0.352 ms

Below is generated by plot.py at 2018-11-29 22:04:02

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.39 Mbit/s

95th percentile per-packet one-way delay: 4.735 ms

Loss rate: 0.00%

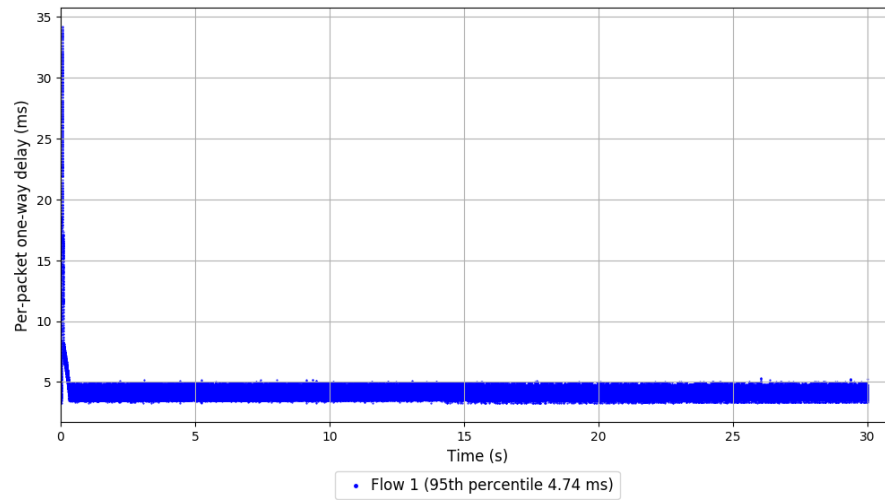
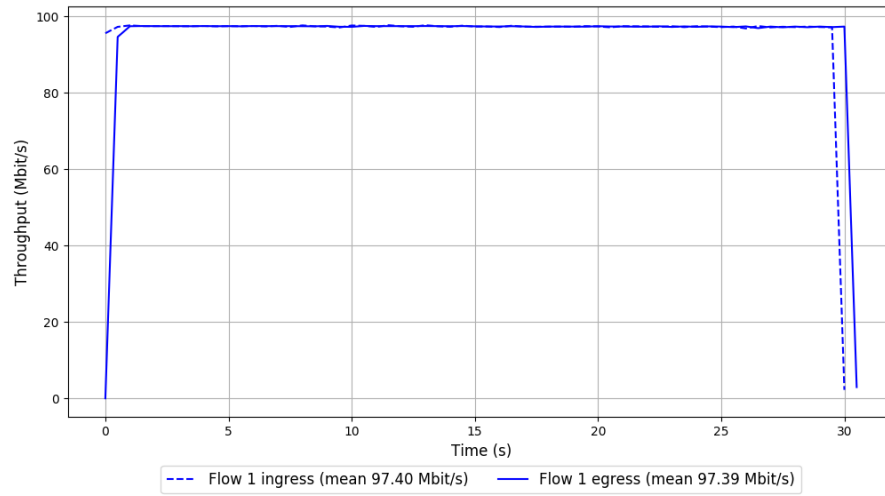
-- Flow 1:

Average throughput: 97.39 Mbit/s

95th percentile per-packet one-way delay: 4.735 ms

Loss rate: 0.00%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

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

End at: 2018-11-29 21:18:48

Local clock offset: 3.012 ms

Remote clock offset: 0.433 ms

Below is generated by plot.py at 2018-11-29 22:04:03

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.90 Mbit/s

95th percentile per-packet one-way delay: 3.281 ms

Loss rate: 0.00%

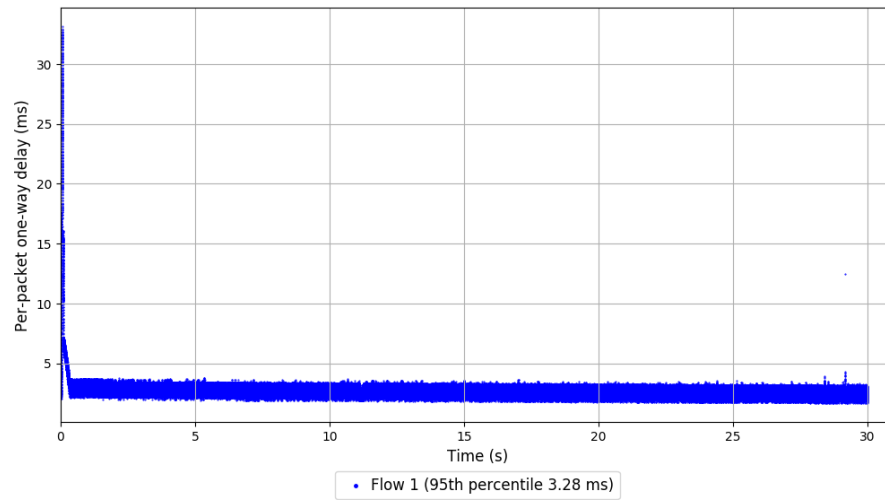
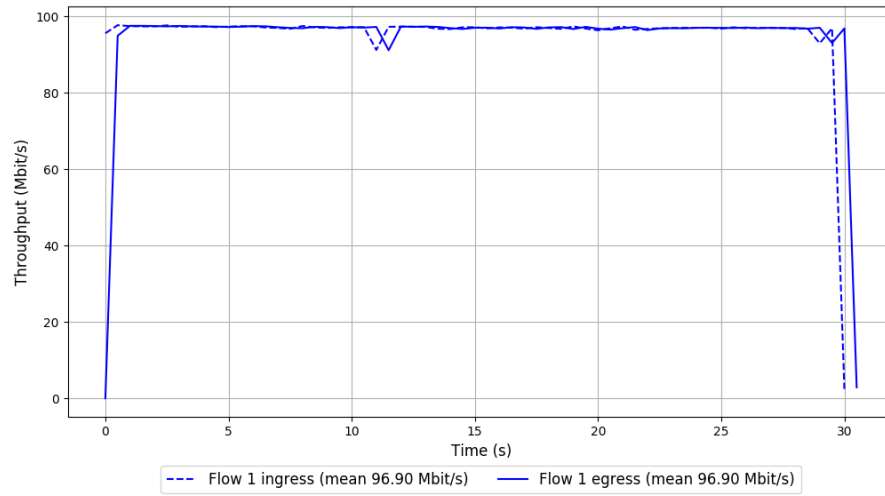
-- Flow 1:

Average throughput: 96.90 Mbit/s

95th percentile per-packet one-way delay: 3.281 ms

Loss rate: 0.00%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-11-29 21:38:24

End at: 2018-11-29 21:38:54

Local clock offset: -1.121 ms

Remote clock offset: 0.455 ms

Below is generated by plot.py at 2018-11-29 22:04:05

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.50 Mbit/s

95th percentile per-packet one-way delay: 4.379 ms

Loss rate: 0.00%

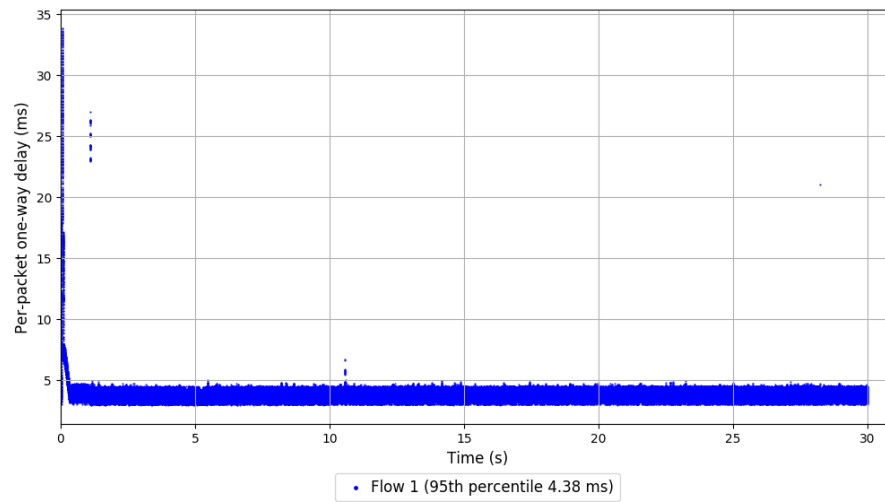
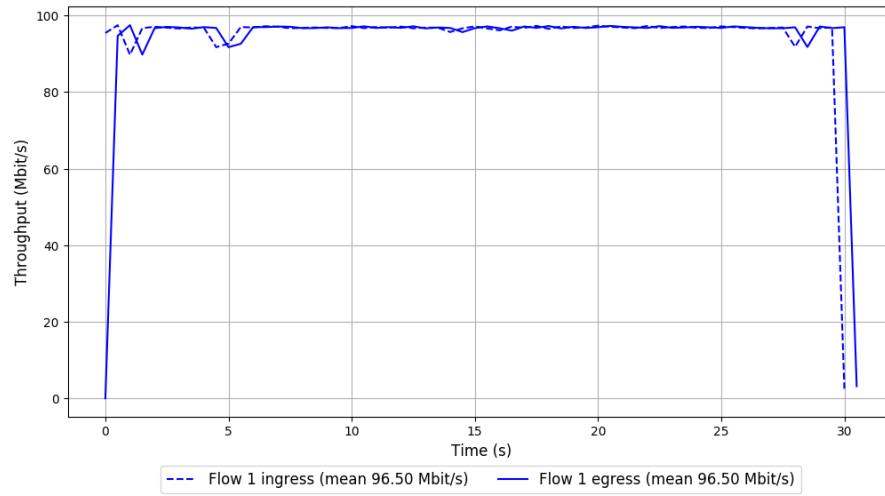
-- Flow 1:

Average throughput: 96.50 Mbit/s

95th percentile per-packet one-way delay: 4.379 ms

Loss rate: 0.00%

Run 5: Report of TCP Vegas — Data Link

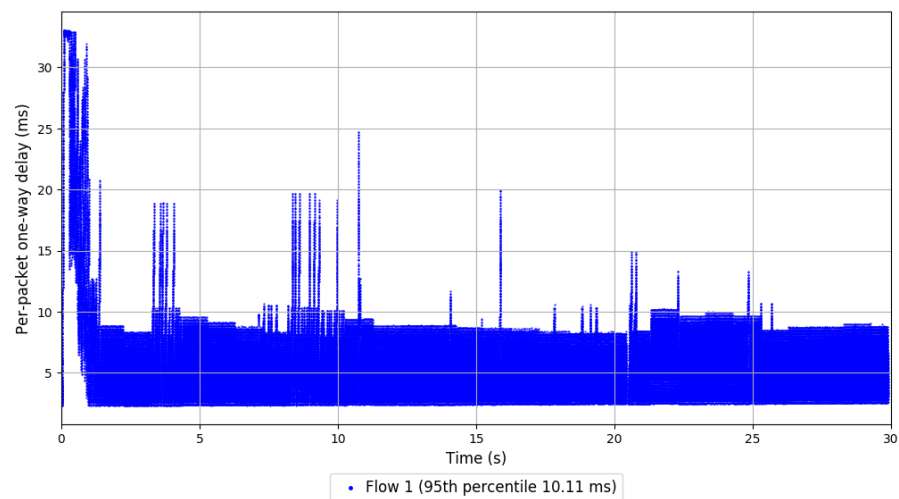
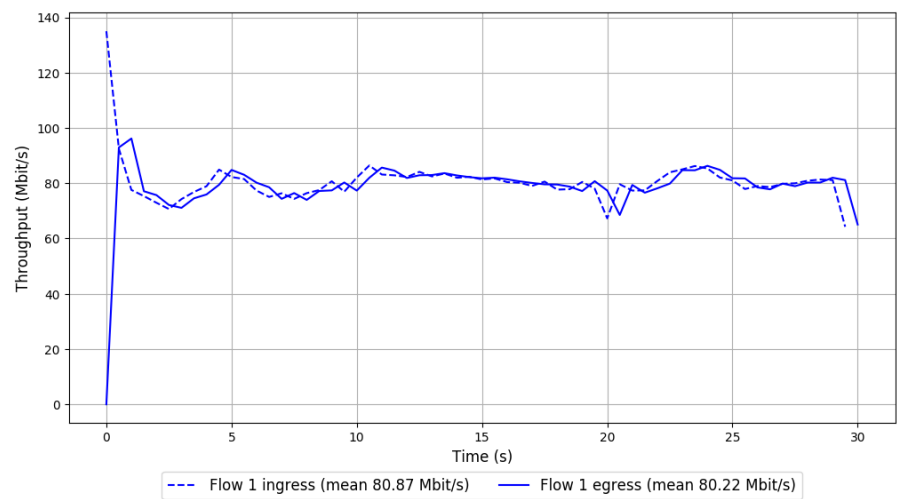


Run 1: Statistics of Verus

Start at: 2018-11-29 20:29:17
End at: 2018-11-29 20:29:47
Local clock offset: 0.064 ms
Remote clock offset: -0.143 ms

Below is generated by plot.py at 2018-11-29 22:04:05
Datalink statistics
-- Total of 1 flow:
Average throughput: 80.22 Mbit/s
95th percentile per-packet one-way delay: 10.112 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 80.22 Mbit/s
95th percentile per-packet one-way delay: 10.112 ms
Loss rate: 0.79%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-11-29 20:49:22

End at: 2018-11-29 20:49:52

Local clock offset: 0.319 ms

Remote clock offset: 0.19 ms

Below is generated by plot.py at 2018-11-29 22:04:05

Datalink statistics

-- Total of 1 flow:

Average throughput: 74.63 Mbit/s

95th percentile per-packet one-way delay: 9.594 ms

Loss rate: 0.90%

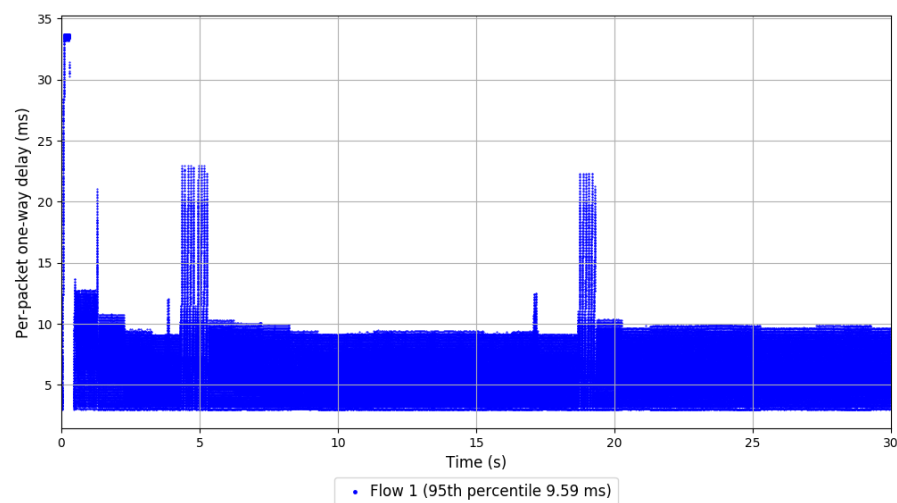
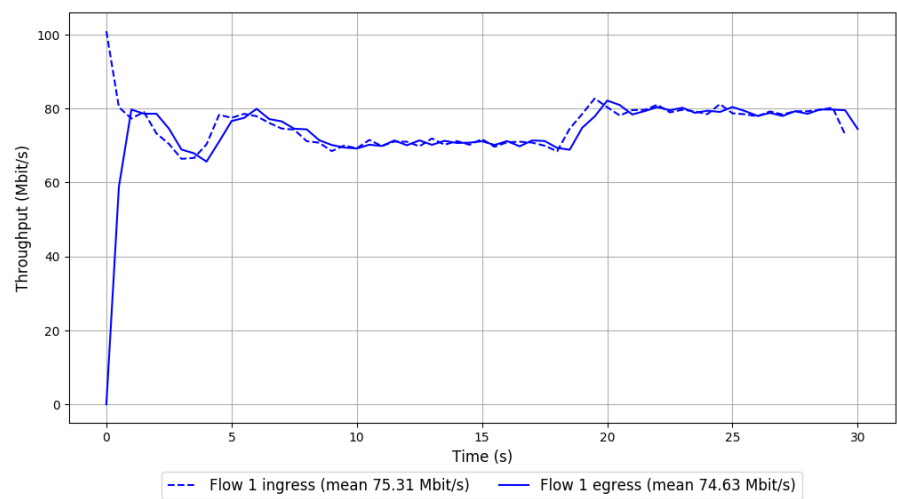
-- Flow 1:

Average throughput: 74.63 Mbit/s

95th percentile per-packet one-way delay: 9.594 ms

Loss rate: 0.90%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-11-29 21:09:27

End at: 2018-11-29 21:09:57

Local clock offset: 3.638 ms

Remote clock offset: 0.356 ms

Below is generated by plot.py at 2018-11-29 22:04:05

Datalink statistics

-- Total of 1 flow:

Average throughput: 34.98 Mbit/s

95th percentile per-packet one-way delay: 10.104 ms

Loss rate: 1.90%

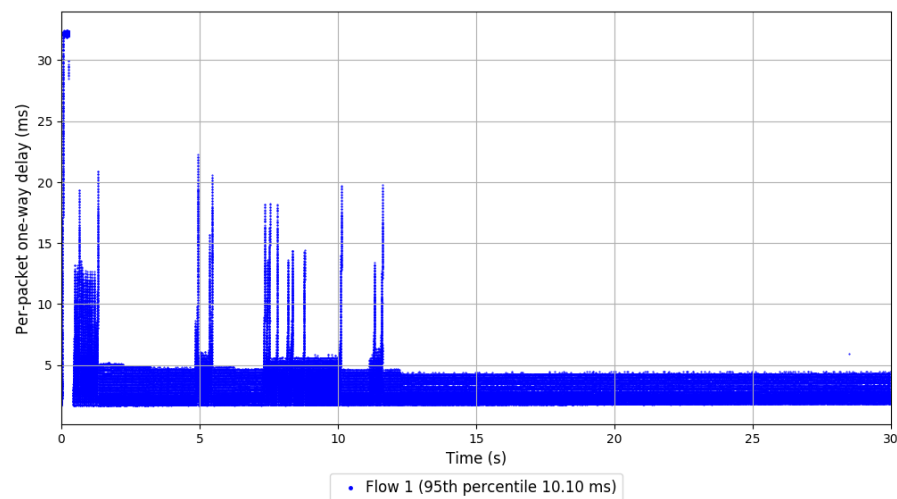
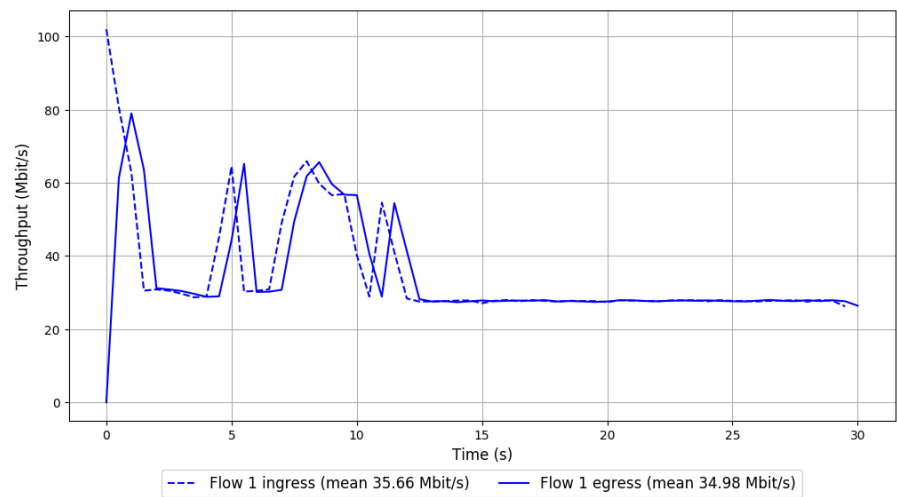
-- Flow 1:

Average throughput: 34.98 Mbit/s

95th percentile per-packet one-way delay: 10.104 ms

Loss rate: 1.90%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

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

End at: 2018-11-29 21:30:00

Local clock offset: -1.215 ms

Remote clock offset: 0.509 ms

Below is generated by plot.py at 2018-11-29 22:04:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 71.96 Mbit/s

95th percentile per-packet one-way delay: 9.425 ms

Loss rate: 0.94%

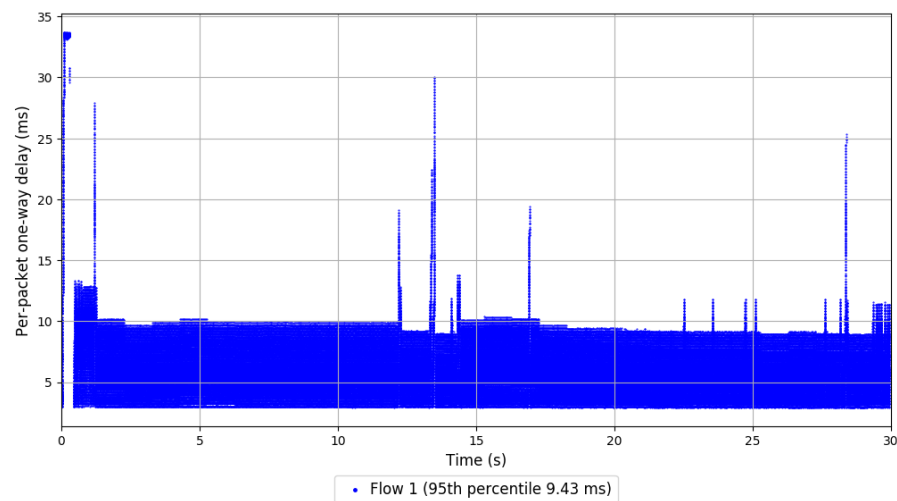
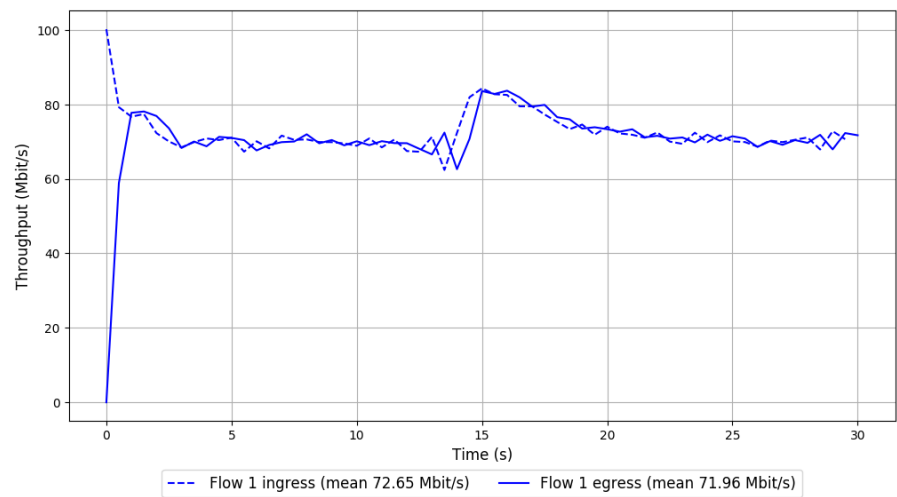
-- Flow 1:

Average throughput: 71.96 Mbit/s

95th percentile per-packet one-way delay: 9.425 ms

Loss rate: 0.94%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-11-29 21:49:35

End at: 2018-11-29 21:50:05

Local clock offset: -0.199 ms

Remote clock offset: 0.557 ms

Below is generated by plot.py at 2018-11-29 22:04:47

Datalink statistics

-- Total of 1 flow:

Average throughput: 78.00 Mbit/s

95th percentile per-packet one-way delay: 19.689 ms

Loss rate: 0.89%

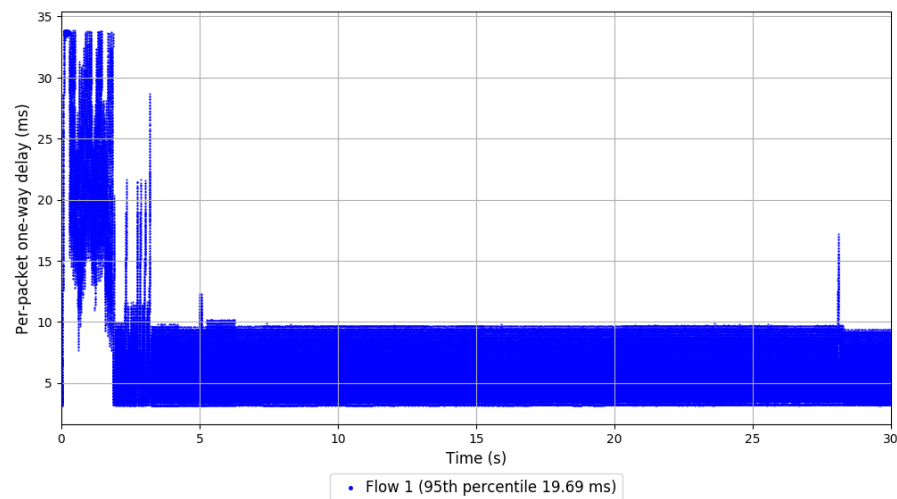
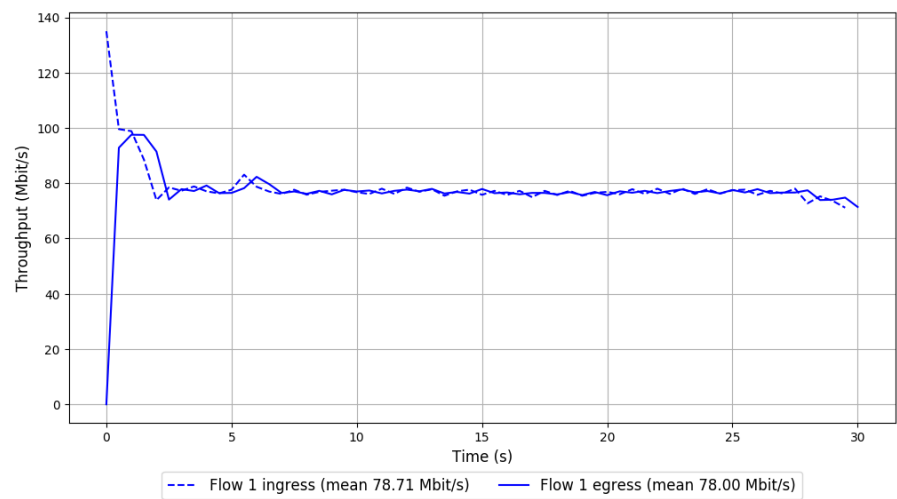
-- Flow 1:

Average throughput: 78.00 Mbit/s

95th percentile per-packet one-way delay: 19.689 ms

Loss rate: 0.89%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2018-11-29 20:33:43

End at: 2018-11-29 20:34:13

Local clock offset: -0.92 ms

Remote clock offset: 0.05 ms

Below is generated by plot.py at 2018-11-29 22:04:55

Datalink statistics

-- Total of 1 flow:

Average throughput: 88.14 Mbit/s

95th percentile per-packet one-way delay: 3.171 ms

Loss rate: 0.00%

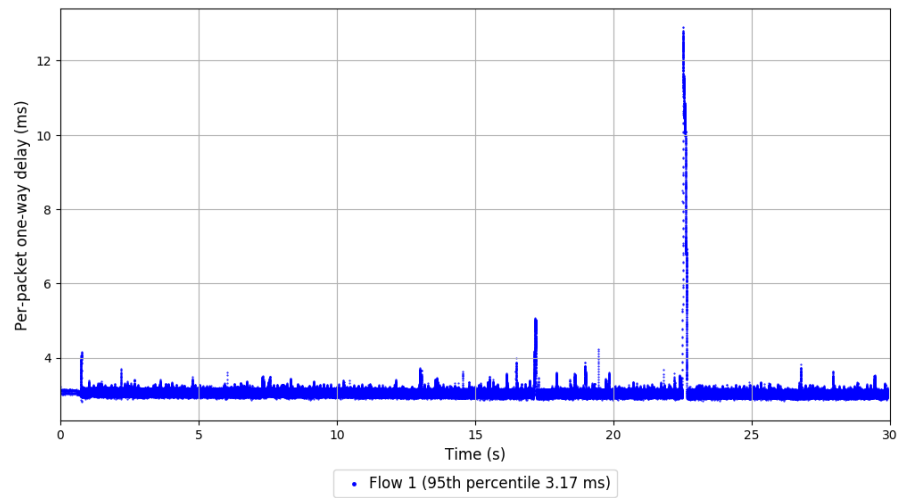
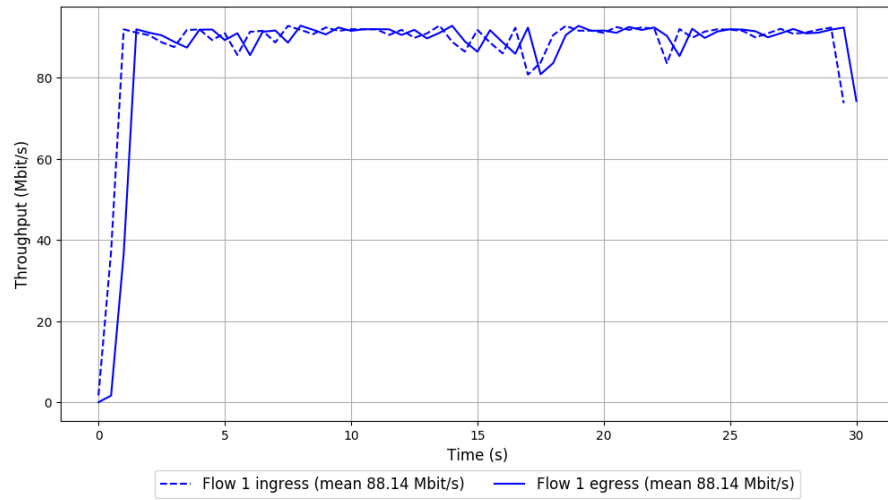
-- Flow 1:

Average throughput: 88.14 Mbit/s

95th percentile per-packet one-way delay: 3.171 ms

Loss rate: 0.00%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2018-11-29 20:53:48

End at: 2018-11-29 20:54:18

Local clock offset: 1.212 ms

Remote clock offset: 0.26 ms

Below is generated by plot.py at 2018-11-29 22:04:55

Datalink statistics

-- Total of 1 flow:

Average throughput: 87.18 Mbit/s

95th percentile per-packet one-way delay: 2.607 ms

Loss rate: 0.00%

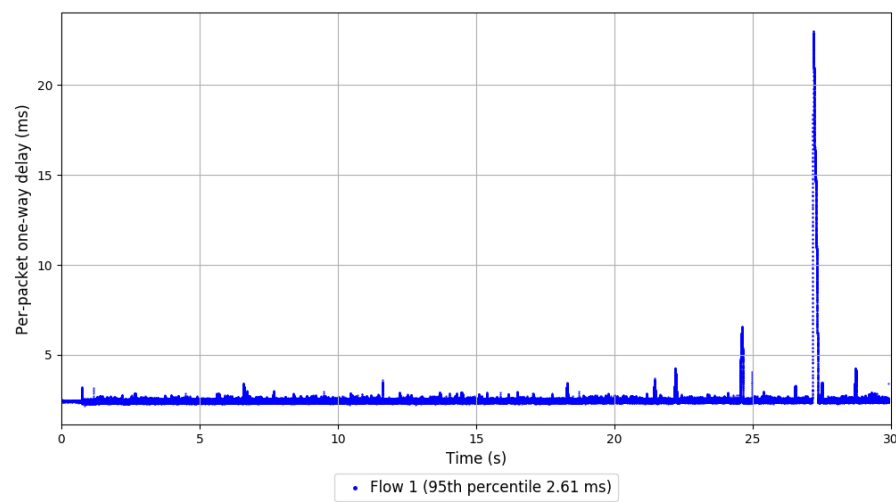
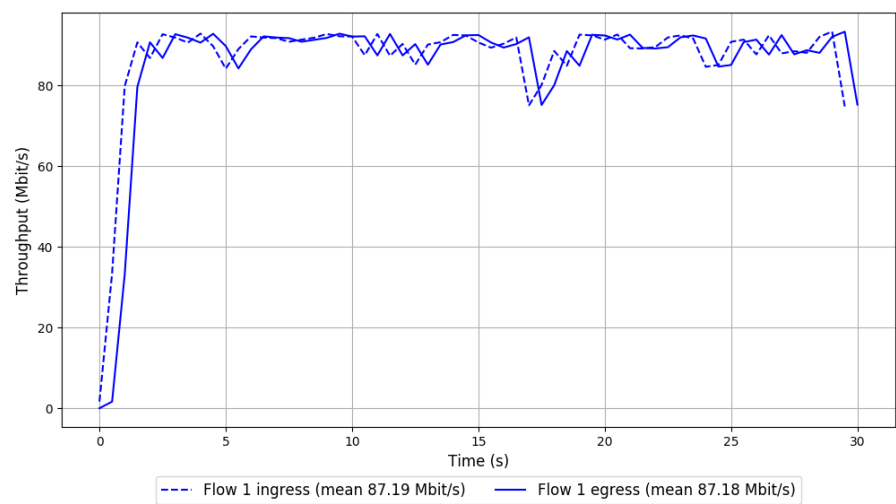
-- Flow 1:

Average throughput: 87.18 Mbit/s

95th percentile per-packet one-way delay: 2.607 ms

Loss rate: 0.00%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2018-11-29 21:13:50

End at: 2018-11-29 21:14:20

Local clock offset: 5.753 ms

Remote clock offset: 0.502 ms

Below is generated by plot.py at 2018-11-29 22:04:55

Datalink statistics

-- Total of 1 flow:

Average throughput: 79.44 Mbit/s

95th percentile per-packet one-way delay: 1.497 ms

Loss rate: 0.04%

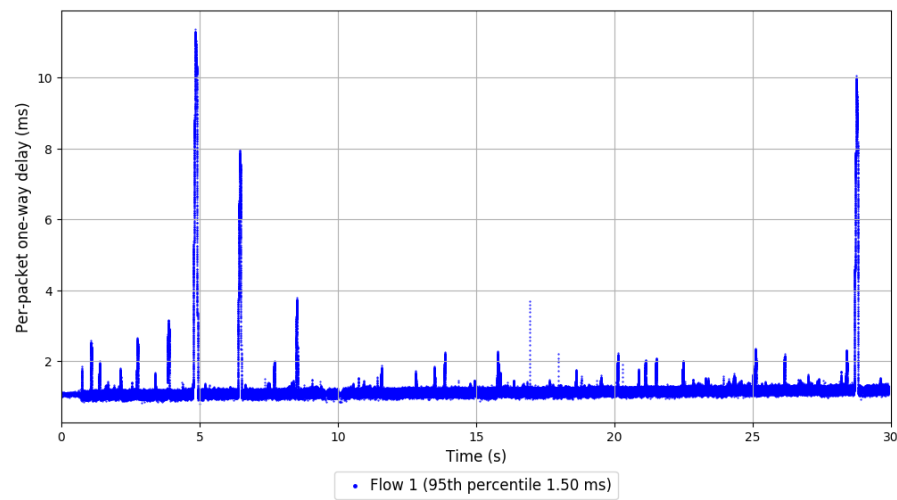
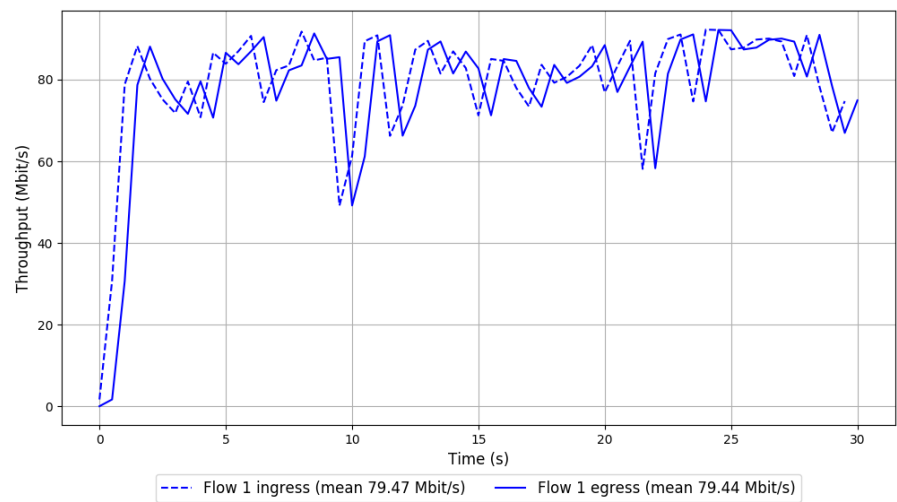
-- Flow 1:

Average throughput: 79.44 Mbit/s

95th percentile per-packet one-way delay: 1.497 ms

Loss rate: 0.04%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2018-11-29 21:33:56

End at: 2018-11-29 21:34:26

Local clock offset: -1.336 ms

Remote clock offset: 0.537 ms

Below is generated by plot.py at 2018-11-29 22:04:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 87.55 Mbit/s

95th percentile per-packet one-way delay: 3.271 ms

Loss rate: 0.00%

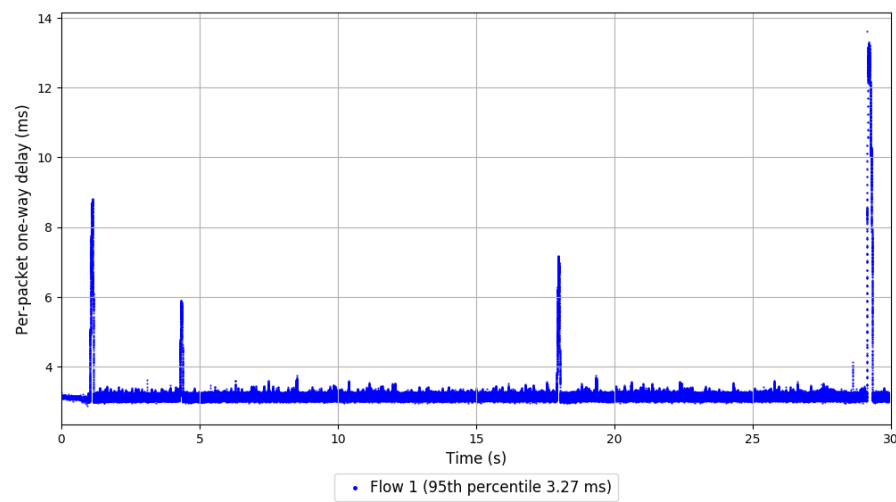
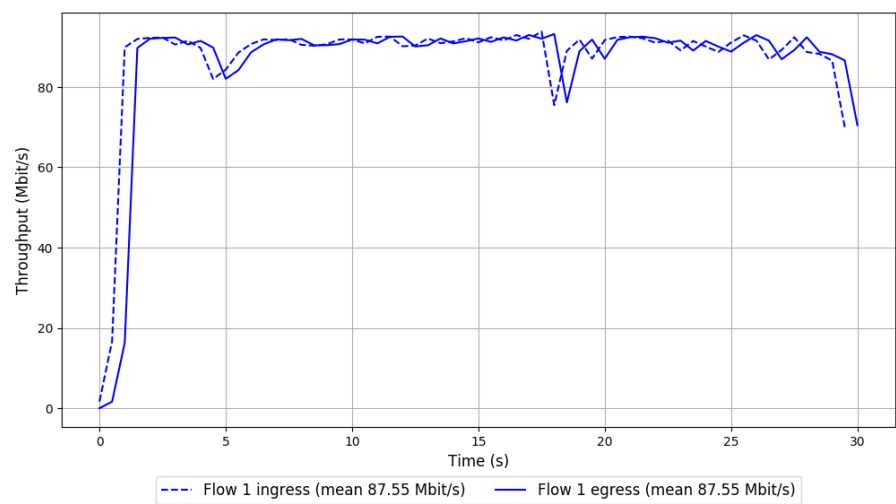
-- Flow 1:

Average throughput: 87.55 Mbit/s

95th percentile per-packet one-way delay: 3.271 ms

Loss rate: 0.00%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2018-11-29 21:54:01

End at: 2018-11-29 21:54:31

Local clock offset: 0.351 ms

Remote clock offset: 0.464 ms

Below is generated by plot.py at 2018-11-29 22:04:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 74.21 Mbit/s

95th percentile per-packet one-way delay: 1.976 ms

Loss rate: 0.00%

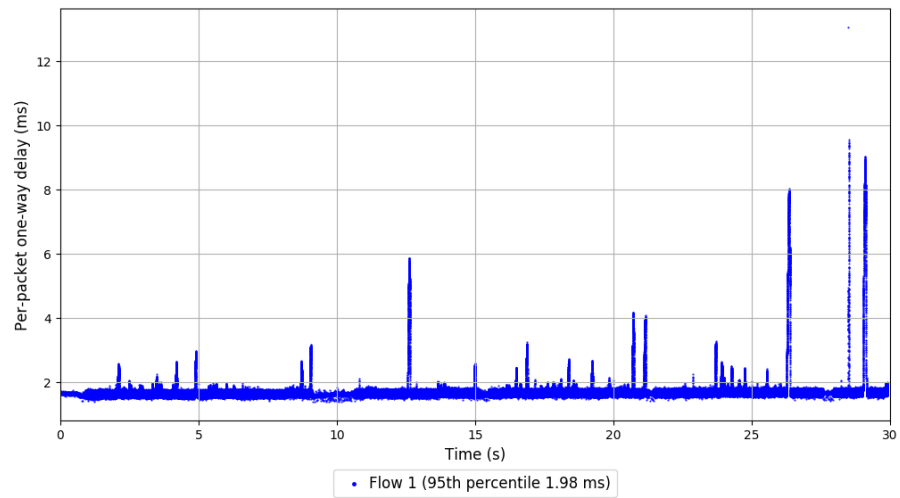
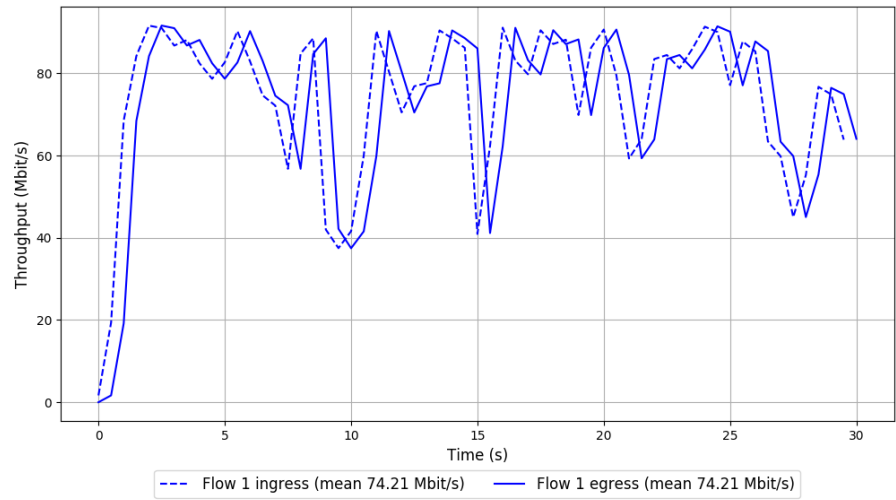
-- Flow 1:

Average throughput: 74.21 Mbit/s

95th percentile per-packet one-way delay: 1.976 ms

Loss rate: 0.00%

Run 5: Report of PCC-Vivace — Data Link

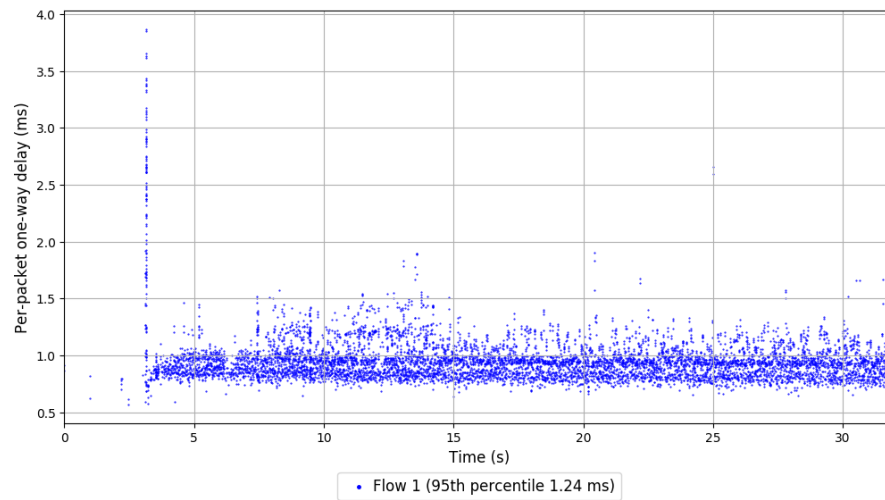
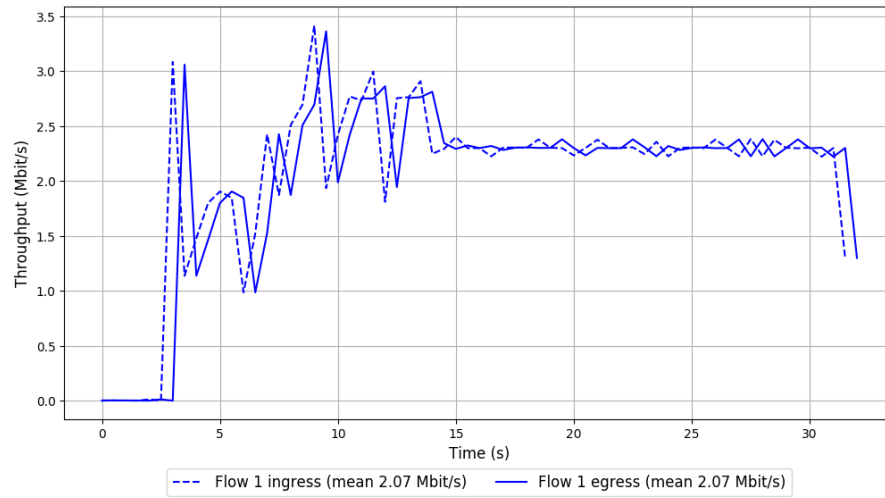


Run 1: Statistics of WebRTC media

Start at: 2018-11-29 20:23:43
End at: 2018-11-29 20:24:13
Local clock offset: -0.997 ms
Remote clock offset: -0.017 ms

Below is generated by plot.py at 2018-11-29 22:04:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.07 Mbit/s
95th percentile per-packet one-way delay: 1.239 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 2.07 Mbit/s
95th percentile per-packet one-way delay: 1.239 ms
Loss rate: 0.03%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-11-29 20:43:48

End at: 2018-11-29 20:44:18

Local clock offset: 0.62 ms

Remote clock offset: 0.061 ms

Below is generated by plot.py at 2018-11-29 22:04:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 4.011 ms

Loss rate: 0.00%

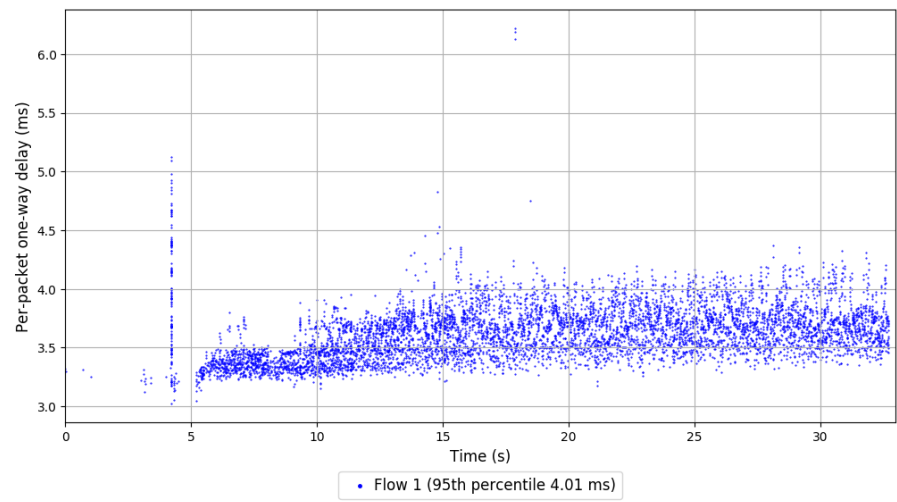
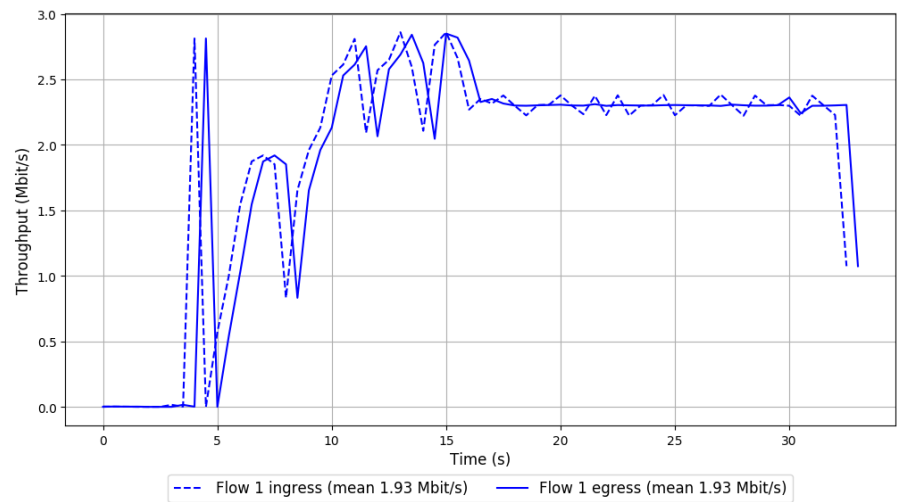
-- Flow 1:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 4.011 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-11-29 21:03:53

End at: 2018-11-29 21:04:23

Local clock offset: 2.224 ms

Remote clock offset: 0.399 ms

Below is generated by plot.py at 2018-11-29 22:04:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 4.042 ms

Loss rate: 0.00%

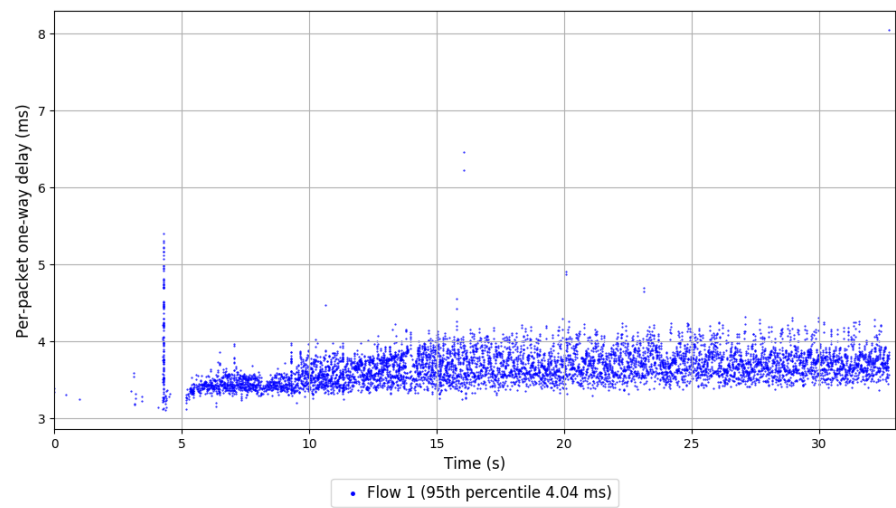
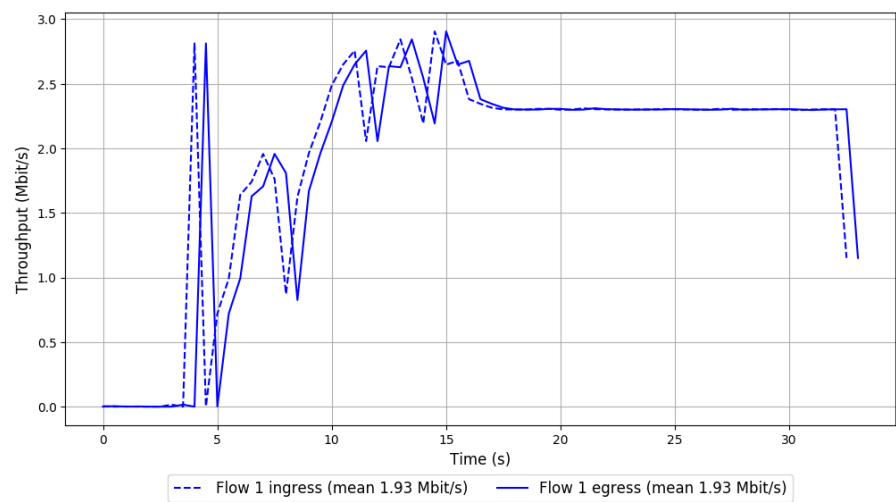
-- Flow 1:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 4.042 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-11-29 21:23:56

End at: 2018-11-29 21:24:26

Local clock offset: 0.458 ms

Remote clock offset: 0.474 ms

Below is generated by plot.py at 2018-11-29 22:04:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 2.792 ms

Loss rate: 0.00%

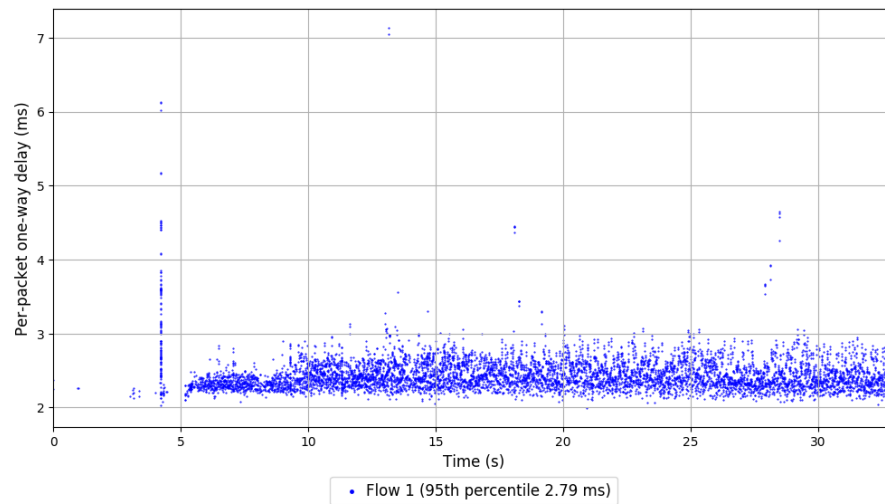
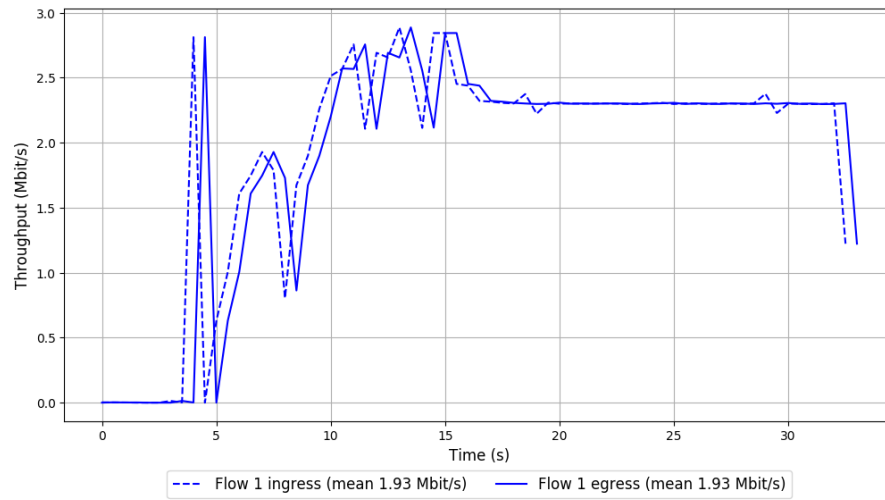
-- Flow 1:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 2.792 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-11-29 21:44:01

End at: 2018-11-29 21:44:32

Local clock offset: -0.686 ms

Remote clock offset: 0.523 ms

Below is generated by plot.py at 2018-11-29 22:04:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 2.291 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 2.291 ms

Loss rate: 0.02%

Run 5: Report of WebRTC media — Data Link

