

Pantheon Report

Generated at 2019-01-02 21:19:34 (UTC).

Data path: AWS Brazil 1 on `ens5` (*local*) → Brazil on `p4p1` (*remote*).

Repeated the test of 19 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:

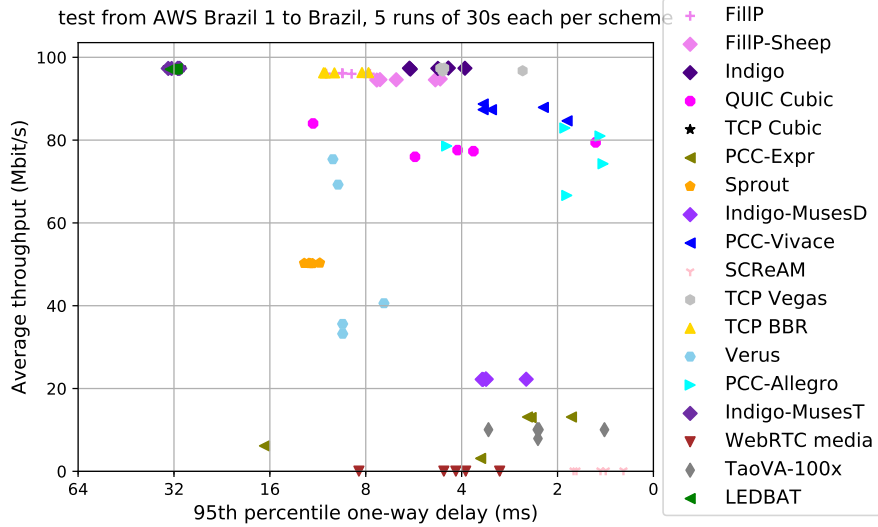
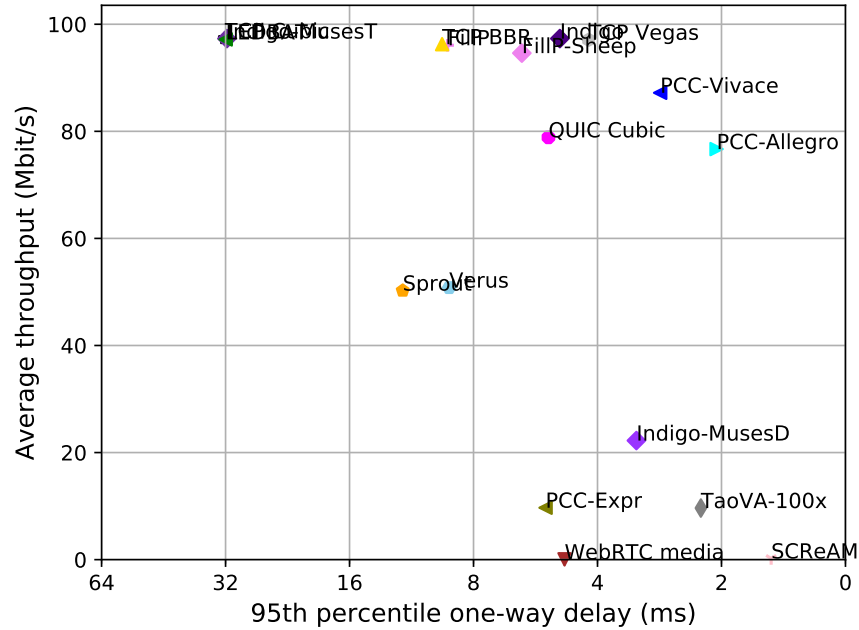
```
Linux 4.15.0-1029-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

```
branch: muses @ c654af0b7d59d4ef4b914cfac404e1fc2e96dc68
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfc58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a
third_party/muses-refactored @ 31f8f0ba8ef8b1da76c2bc0cd0a7850c33ff64fb
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	96.28	9.54	0.00
Copa	0	N/A	N/A	N/A
TCP Cubic	5	97.39	32.14	0.01
FillP	5	96.08	9.24	0.31
FillP-Sheep	5	94.61	6.11	0.08
Indigo	5	97.32	4.94	0.00
Indigo-MusesD	5	22.24	3.22	0.00
Indigo-MusesT	5	97.32	31.76	45.75
LEDBAT	5	97.16	31.99	0.01
PCC-Allegro	5	76.68	2.06	0.00
PCC-Expr	5	9.70	5.35	22.02
QUIC Cubic	5	78.87	5.26	0.26
SCReAM	5	0.22	1.20	0.00
Sprout	5	50.25	11.88	0.00
TaoVA-100x	5	9.63	2.24	79.50
TCP Vegas	5	97.10	4.20	0.00
Verus	5	50.81	9.17	1.47
PCC-Vivace	5	87.20	2.82	0.05
WebRTC media	5	0.05	4.81	0.00

Run 1: Statistics of TCP BBR

Start at: 2019-01-02 19:35:42

End at: 2019-01-02 19:36:12

Local clock offset: -5.248 ms

Remote clock offset: 0.571 ms

Below is generated by plot.py at 2019-01-02 21:11:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.24 Mbit/s

95th percentile per-packet one-way delay: 10.733 ms

Loss rate: 0.00%

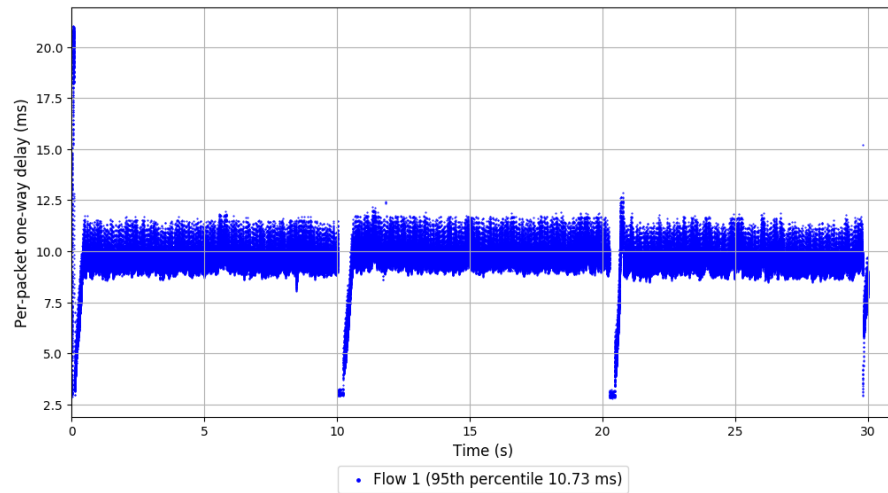
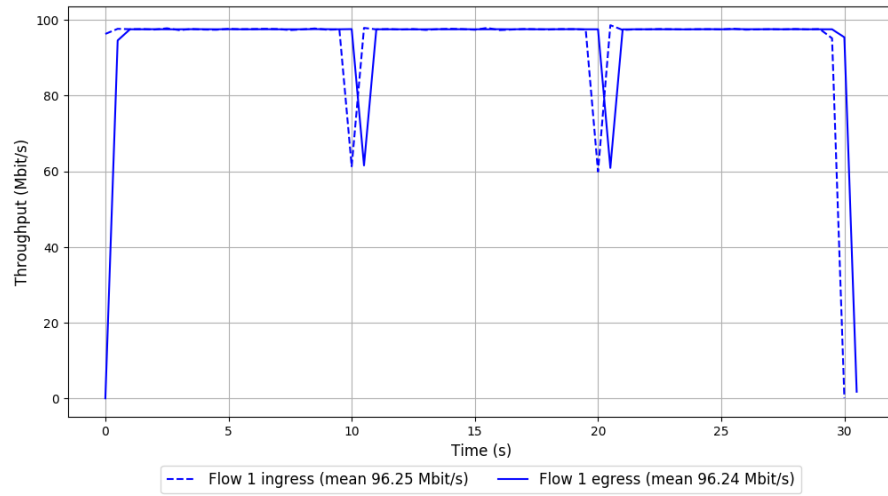
-- Flow 1:

Average throughput: 96.24 Mbit/s

95th percentile per-packet one-way delay: 10.733 ms

Loss rate: 0.00%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2019-01-02 19:56:53

End at: 2019-01-02 19:57:23

Local clock offset: -9.019 ms

Remote clock offset: 0.641 ms

Below is generated by plot.py at 2019-01-02 21:11:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.32 Mbit/s

95th percentile per-packet one-way delay: 8.221 ms

Loss rate: 0.00%

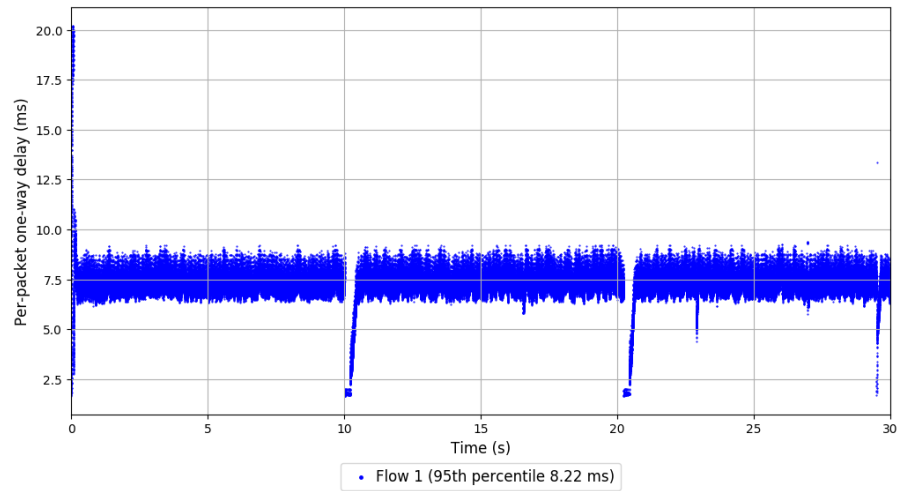
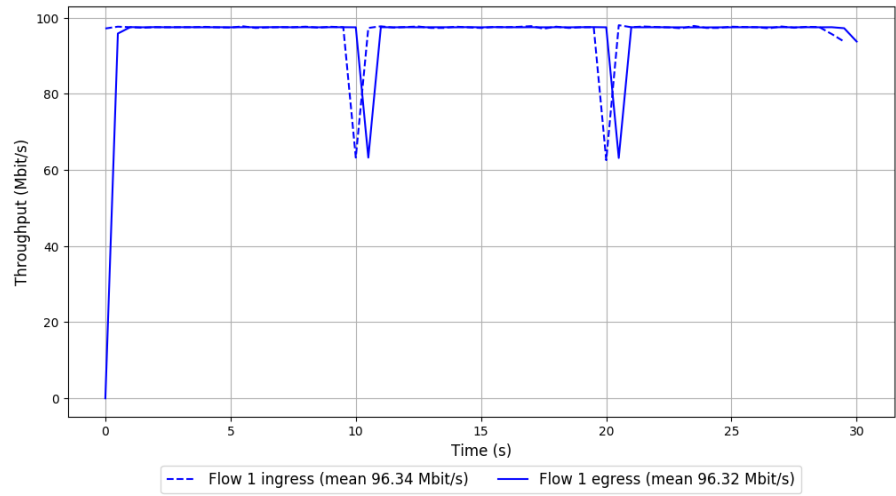
-- Flow 1:

Average throughput: 96.32 Mbit/s

95th percentile per-packet one-way delay: 8.221 ms

Loss rate: 0.00%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2019-01-02 20:18:06

End at: 2019-01-02 20:18:36

Local clock offset: -9.401 ms

Remote clock offset: 0.717 ms

Below is generated by plot.py at 2019-01-02 21:11:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.27 Mbit/s

95th percentile per-packet one-way delay: 10.850 ms

Loss rate: 0.00%

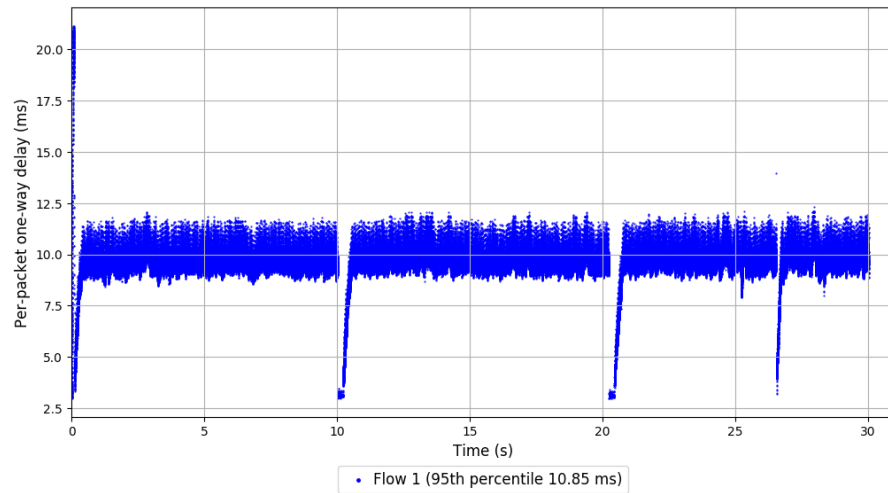
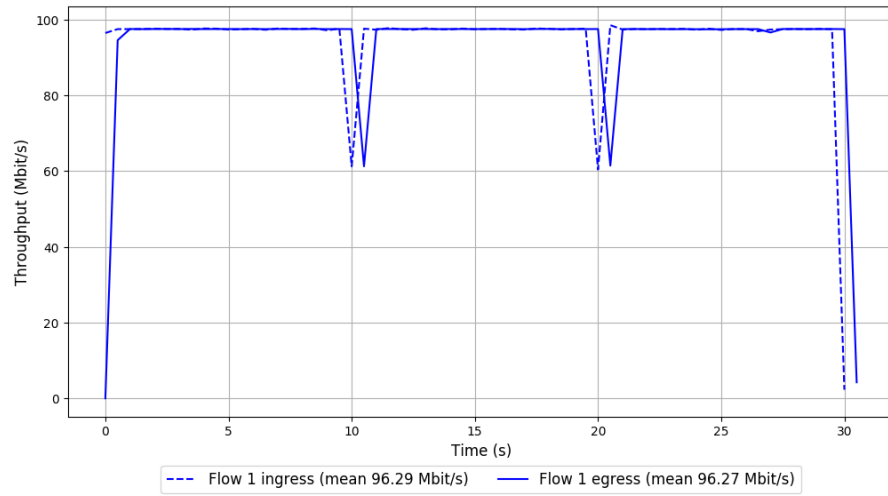
-- Flow 1:

Average throughput: 96.27 Mbit/s

95th percentile per-packet one-way delay: 10.850 ms

Loss rate: 0.00%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2019-01-02 20:39:17

End at: 2019-01-02 20:39:47

Local clock offset: -6.599 ms

Remote clock offset: 0.462 ms

Below is generated by plot.py at 2019-01-02 21:11:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.25 Mbit/s

95th percentile per-packet one-way delay: 10.031 ms

Loss rate: 0.00%

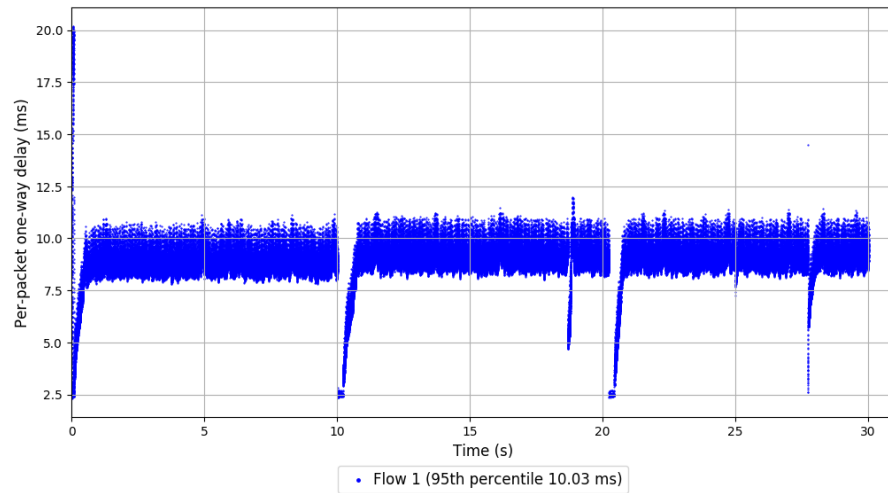
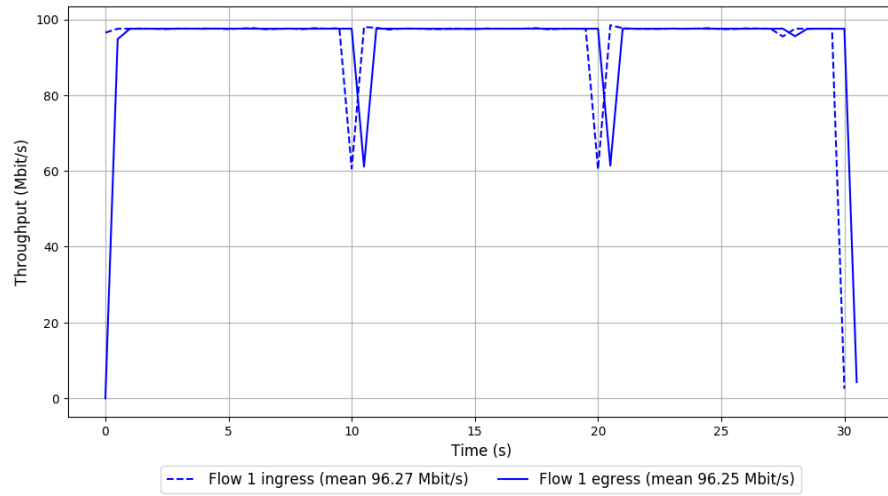
-- Flow 1:

Average throughput: 96.25 Mbit/s

95th percentile per-packet one-way delay: 10.031 ms

Loss rate: 0.00%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2019-01-02 21:00:32

End at: 2019-01-02 21:01:02

Local clock offset: -7.209 ms

Remote clock offset: 0.512 ms

Below is generated by plot.py at 2019-01-02 21:11:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.31 Mbit/s

95th percentile per-packet one-way delay: 7.843 ms

Loss rate: 0.00%

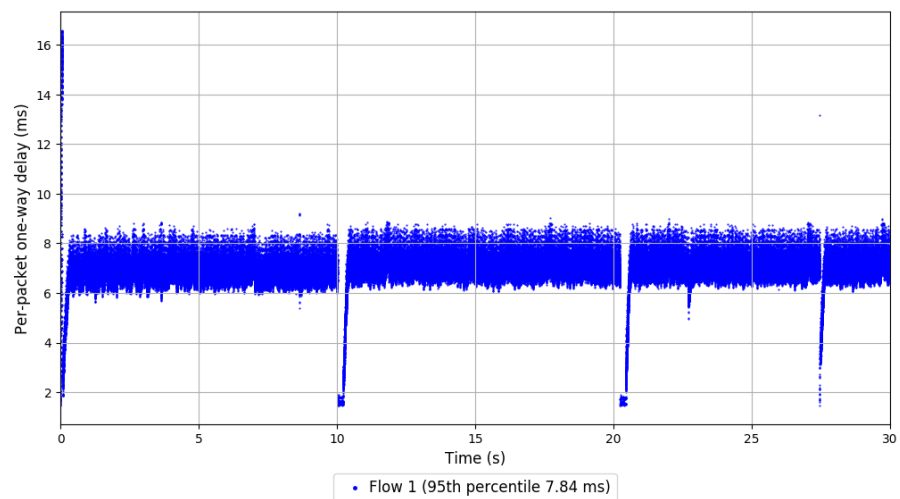
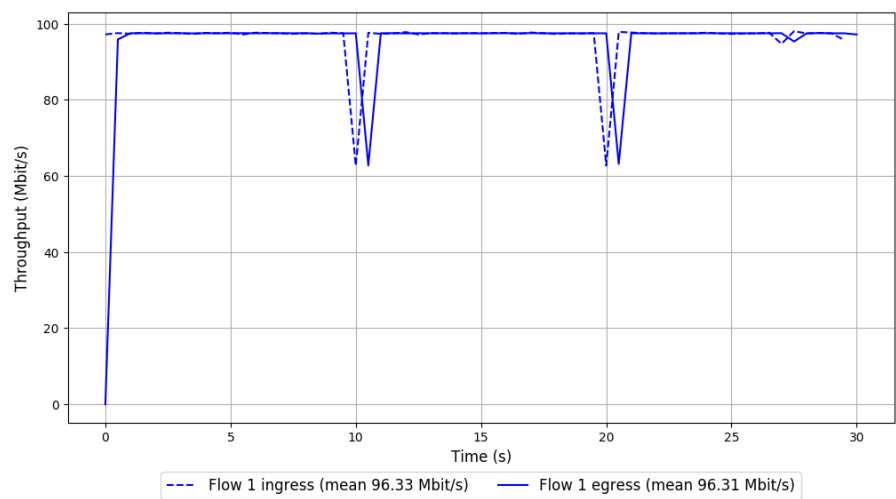
-- Flow 1:

Average throughput: 96.31 Mbit/s

95th percentile per-packet one-way delay: 7.843 ms

Loss rate: 0.00%

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

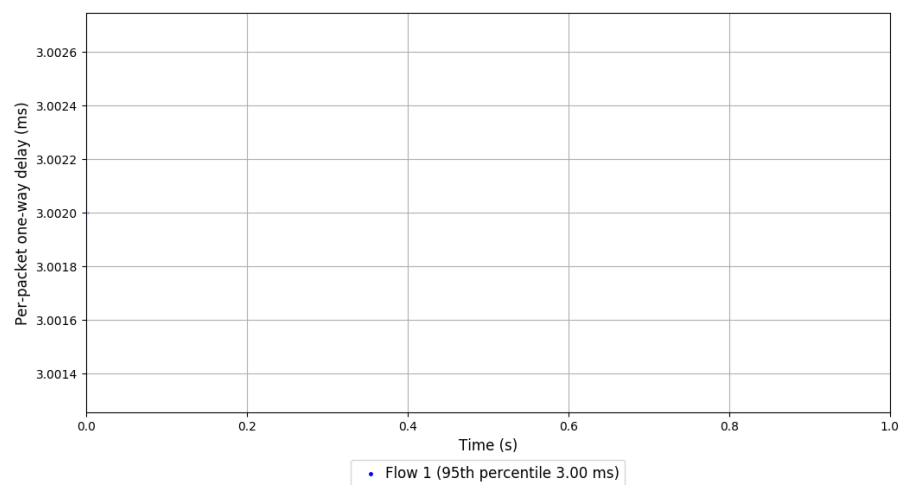
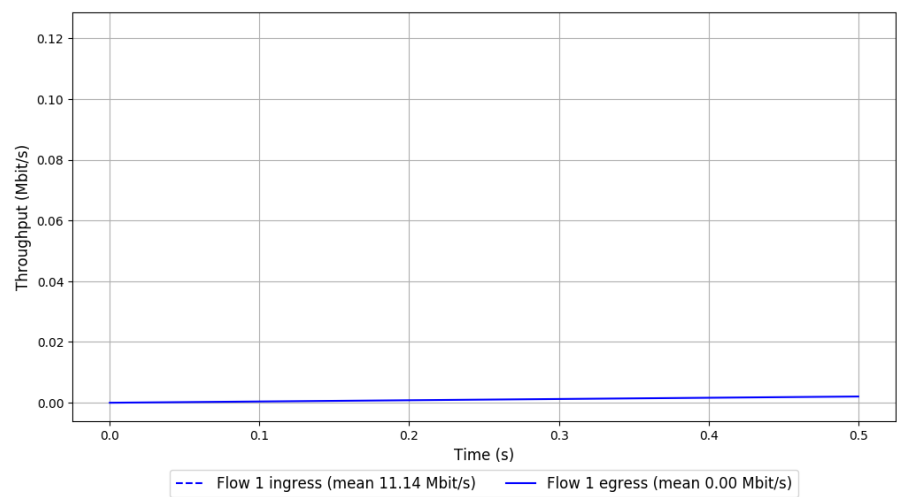
Start at: 2019-01-02 19:33:29

End at: 2019-01-02 19:33:59

Local clock offset: -4.355 ms

Remote clock offset: 0.493 ms

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

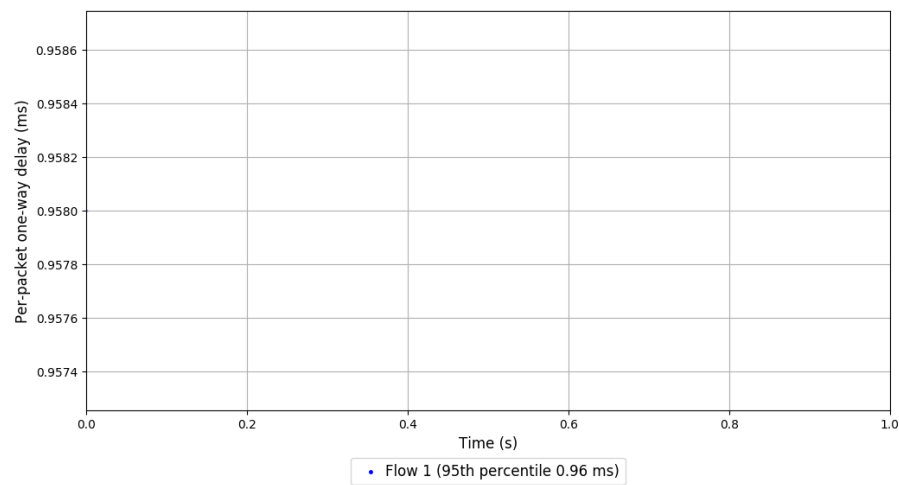
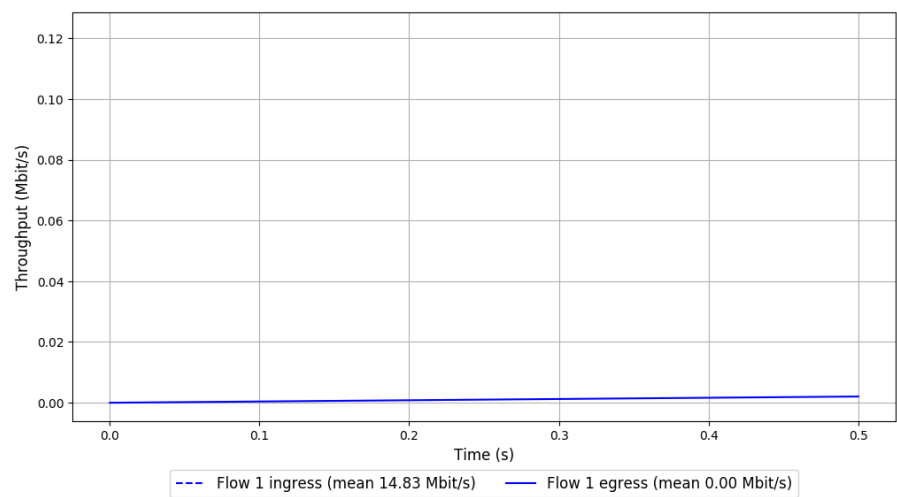
Start at: 2019-01-02 19:54:40

End at: 2019-01-02 19:55:10

Local clock offset: -8.36 ms

Remote clock offset: 0.624 ms

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

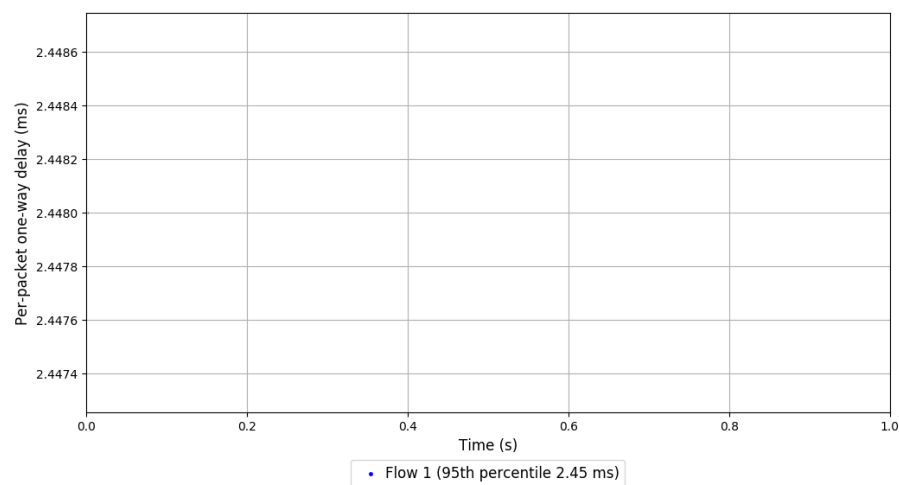
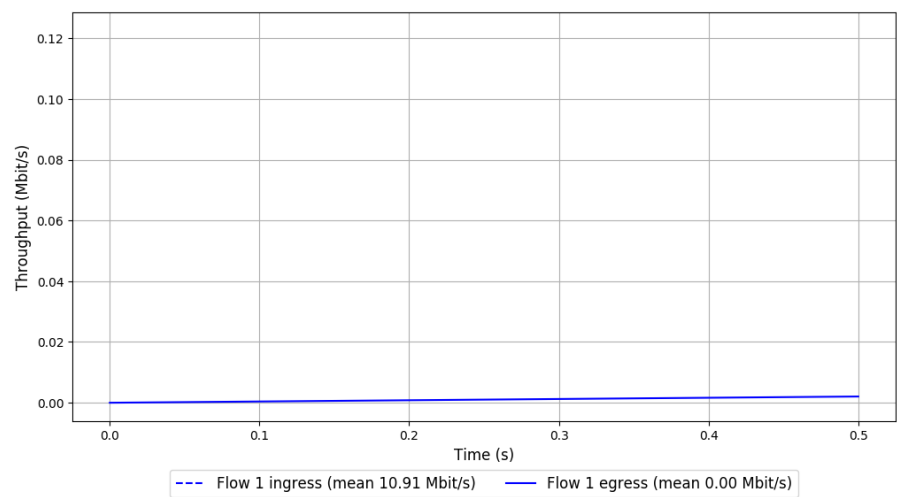
Start at: 2019-01-02 20:15:52

End at: 2019-01-02 20:16:22

Local clock offset: -8.511 ms

Remote clock offset: 0.793 ms

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

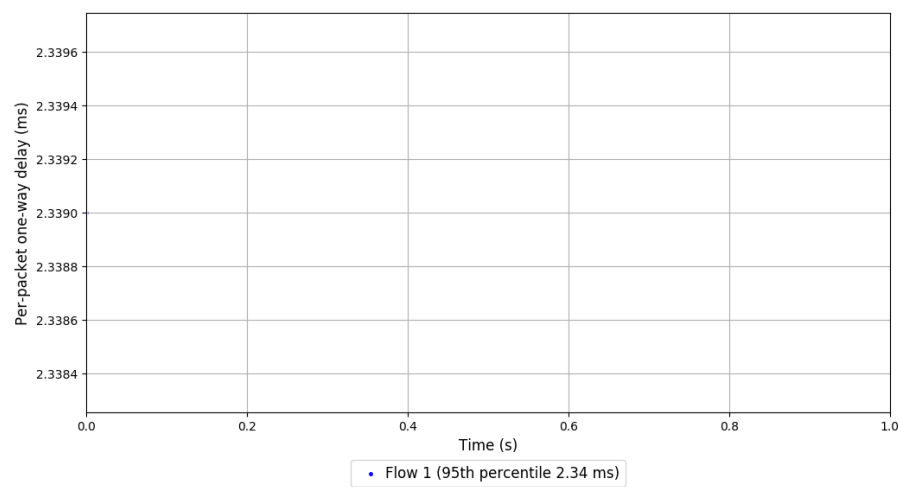
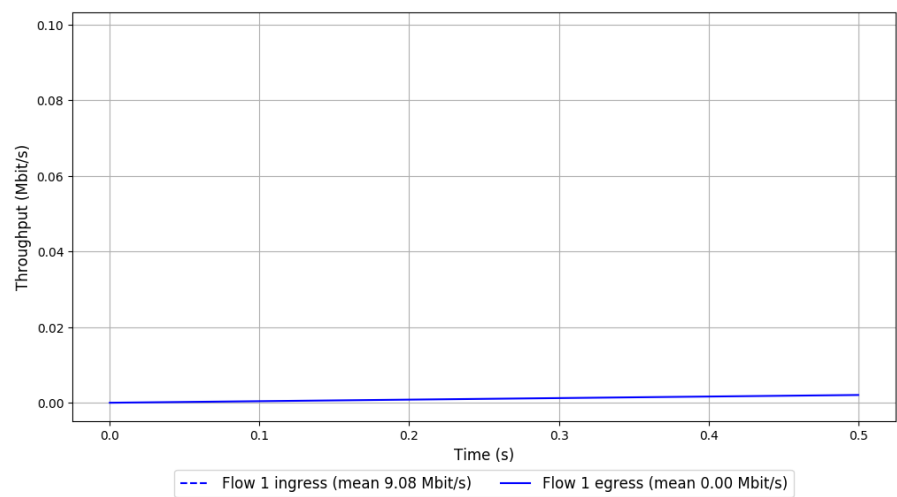
Start at: 2019-01-02 20:37:03

End at: 2019-01-02 20:37:33

Local clock offset: -6.735 ms

Remote clock offset: 0.498 ms

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

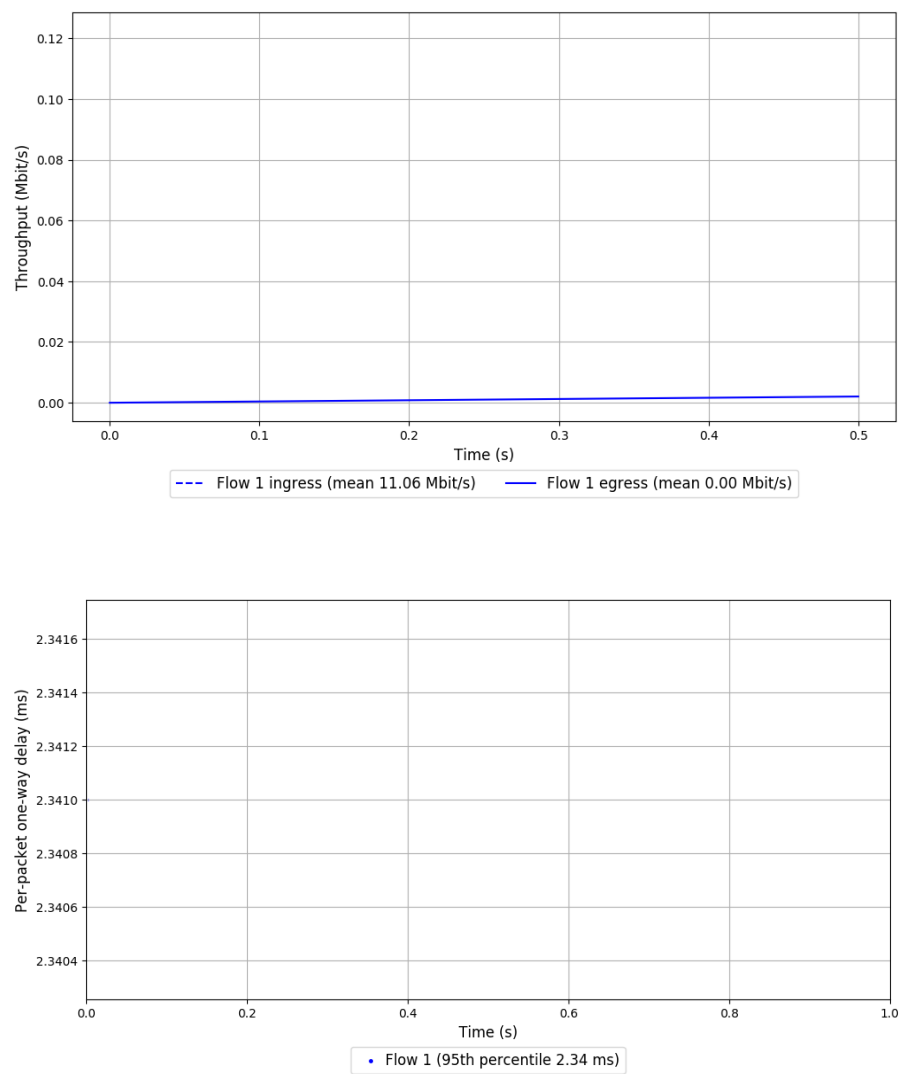
Start at: 2019-01-02 20:58:19

End at: 2019-01-02 20:58:49

Local clock offset: -6.44 ms

Remote clock offset: 0.52 ms

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2019-01-02 19:23:23

End at: 2019-01-02 19:23:53

Local clock offset: 3.126 ms

Remote clock offset: 0.421 ms

Below is generated by plot.py at 2019-01-02 21:11:23

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.47 Mbit/s

95th percentile per-packet one-way delay: 31.168 ms

Loss rate: 0.01%

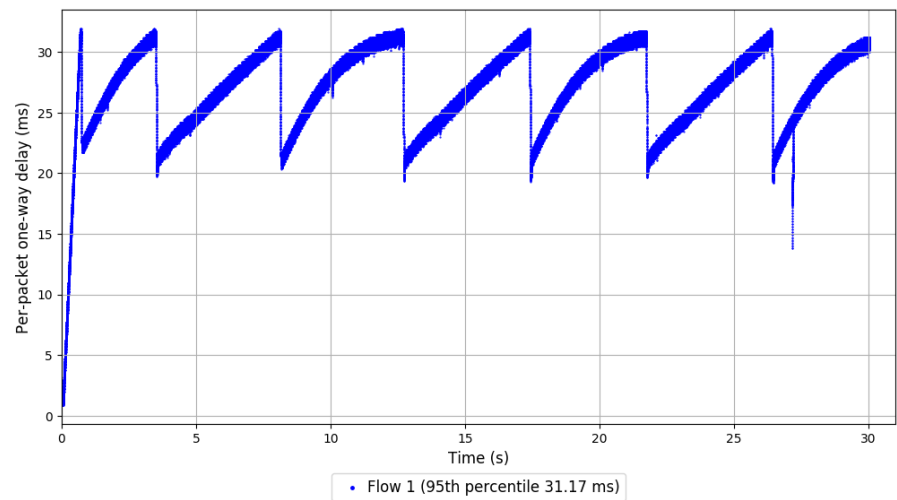
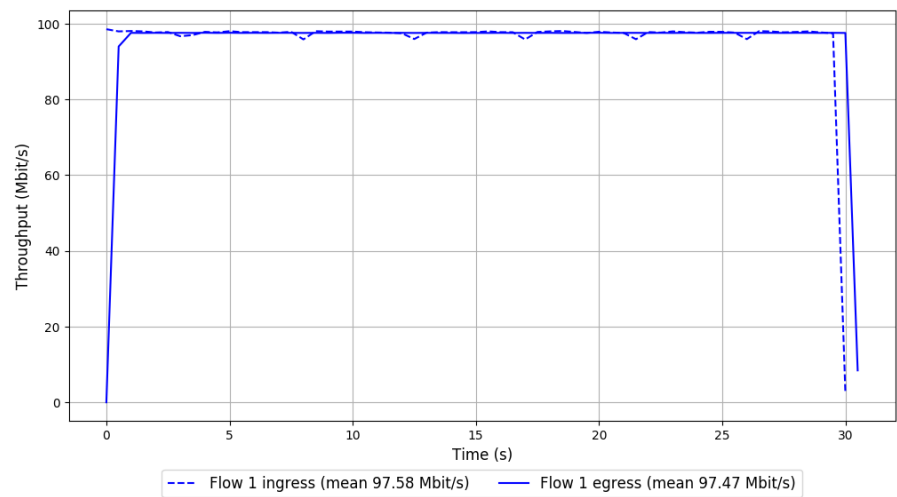
-- Flow 1:

Average throughput: 97.47 Mbit/s

95th percentile per-packet one-way delay: 31.168 ms

Loss rate: 0.01%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2019-01-02 19:44:34

End at: 2019-01-02 19:45:04

Local clock offset: -6.935 ms

Remote clock offset: 0.651 ms

Below is generated by plot.py at 2019-01-02 21:11:24

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.47 Mbit/s

95th percentile per-packet one-way delay: 30.428 ms

Loss rate: 0.01%

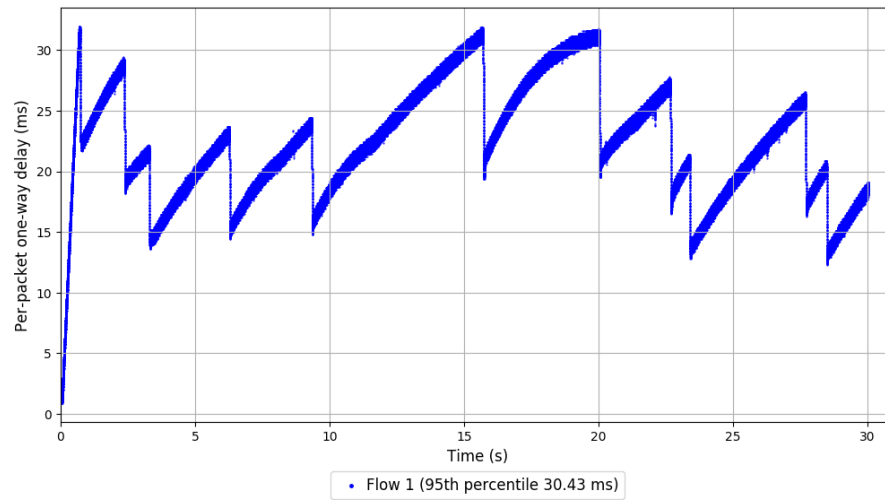
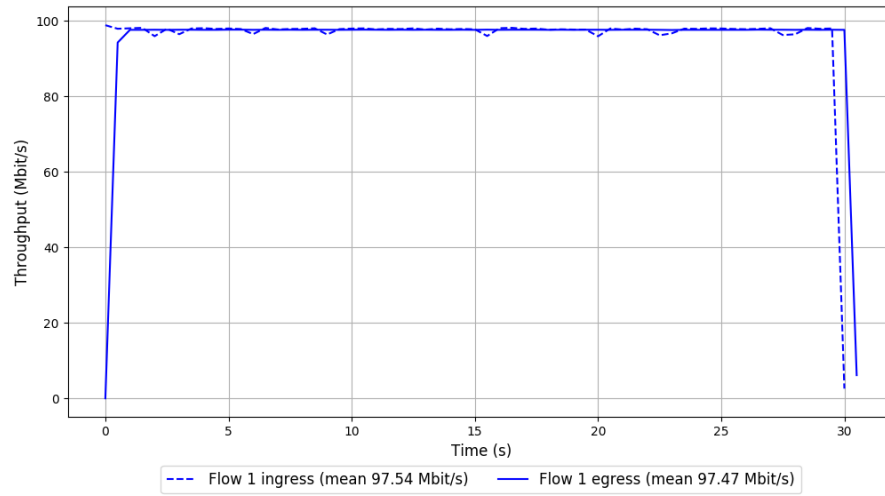
-- Flow 1:

Average throughput: 97.47 Mbit/s

95th percentile per-packet one-way delay: 30.428 ms

Loss rate: 0.01%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2019-01-02 20:05:47

End at: 2019-01-02 20:06:17

Local clock offset: -8.871 ms

Remote clock offset: 0.707 ms

Below is generated by plot.py at 2019-01-02 21:11:24

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.48 Mbit/s

95th percentile per-packet one-way delay: 33.402 ms

Loss rate: 0.01%

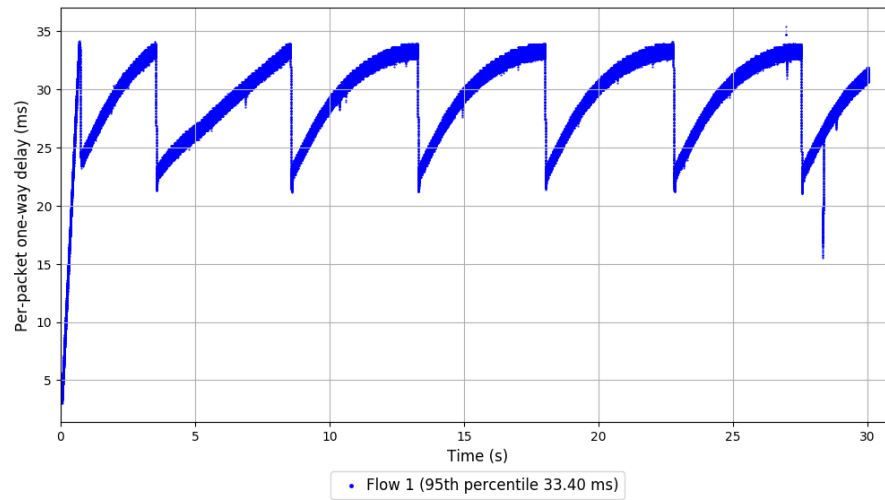
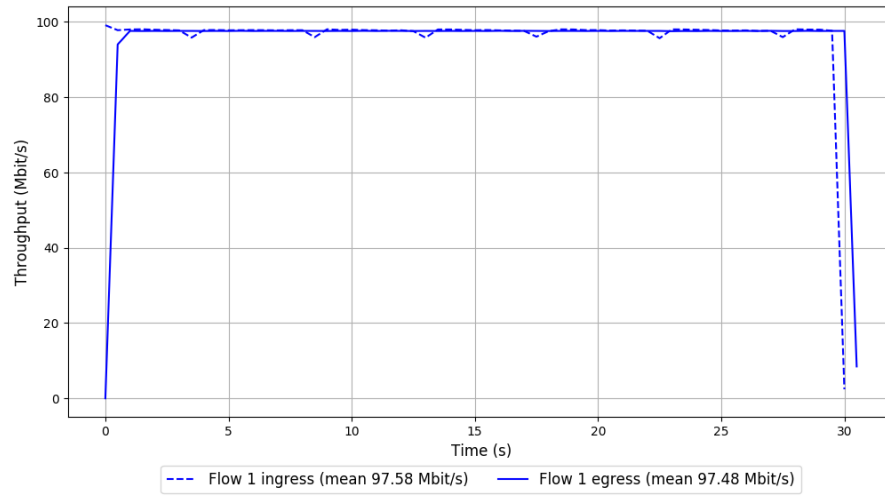
-- Flow 1:

Average throughput: 97.48 Mbit/s

95th percentile per-packet one-way delay: 33.402 ms

Loss rate: 0.01%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2019-01-02 20:26:57

End at: 2019-01-02 20:27:27

Local clock offset: -9.085 ms

Remote clock offset: 0.657 ms

Below is generated by plot.py at 2019-01-02 21:12:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.08 Mbit/s

95th percentile per-packet one-way delay: 32.253 ms

Loss rate: 0.01%

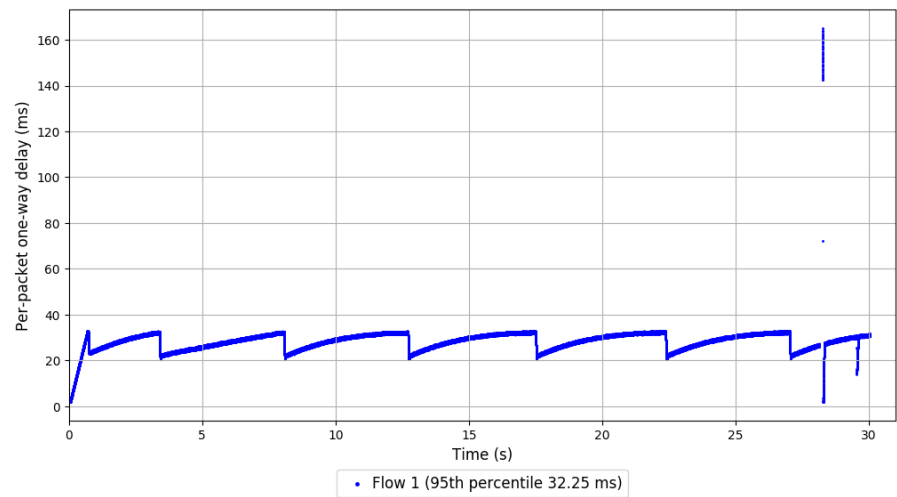
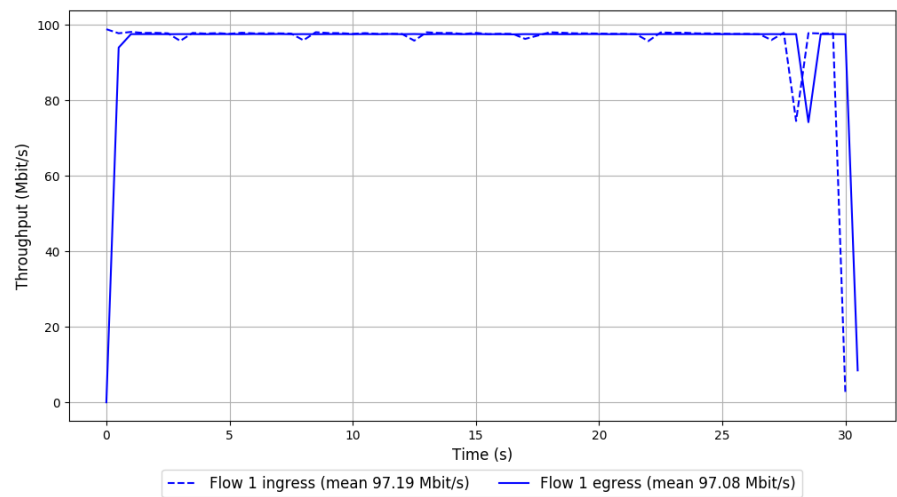
-- Flow 1:

Average throughput: 97.08 Mbit/s

95th percentile per-packet one-way delay: 32.253 ms

Loss rate: 0.01%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2019-01-02 20:48:08

End at: 2019-01-02 20:48:38

Local clock offset: -7.157 ms

Remote clock offset: 0.413 ms

Below is generated by plot.py at 2019-01-02 21:12:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.46 Mbit/s

95th percentile per-packet one-way delay: 33.425 ms

Loss rate: 0.01%

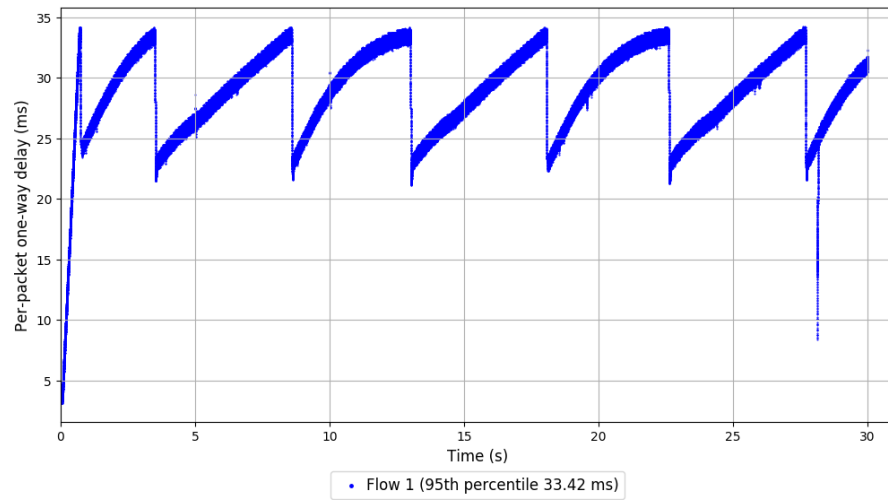
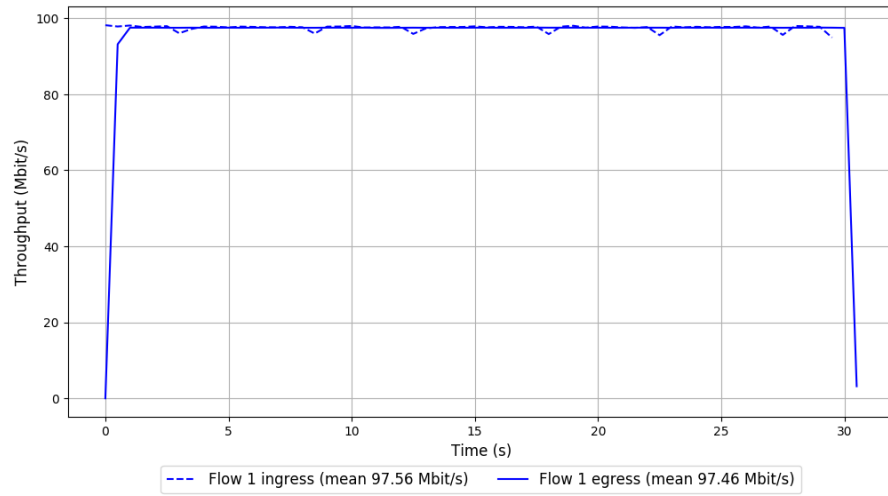
-- Flow 1:

Average throughput: 97.46 Mbit/s

95th percentile per-packet one-way delay: 33.425 ms

Loss rate: 0.01%

Run 5: Report of TCP Cubic — Data Link

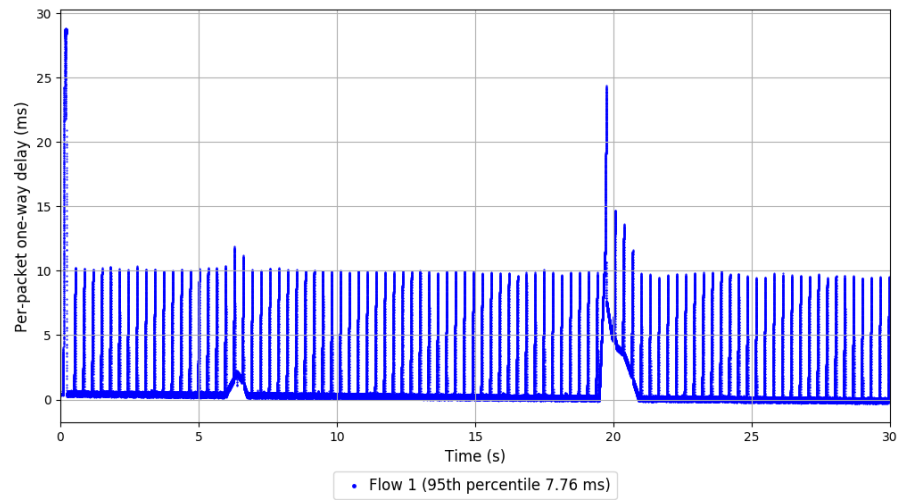
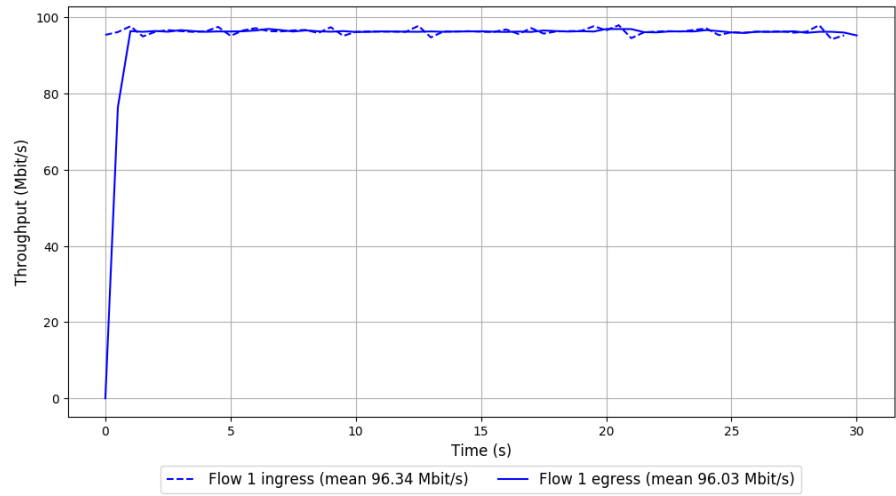


```
Run 1: Statistics of FillP

Start at: 2019-01-02 19:24:31
End at: 2019-01-02 19:25:01
Local clock offset: 3.209 ms
Remote clock offset: 0.417 ms

# Below is generated by plot.py at 2019-01-02 21:12:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.03 Mbit/s
95th percentile per-packet one-way delay: 7.763 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 96.03 Mbit/s
95th percentile per-packet one-way delay: 7.763 ms
Loss rate: 0.33%
```

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2019-01-02 19:45:42

End at: 2019-01-02 19:46:12

Local clock offset: -7.852 ms

Remote clock offset: 0.663 ms

Below is generated by plot.py at 2019-01-02 21:12:40

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.05 Mbit/s

95th percentile per-packet one-way delay: 10.657 ms

Loss rate: 0.24%

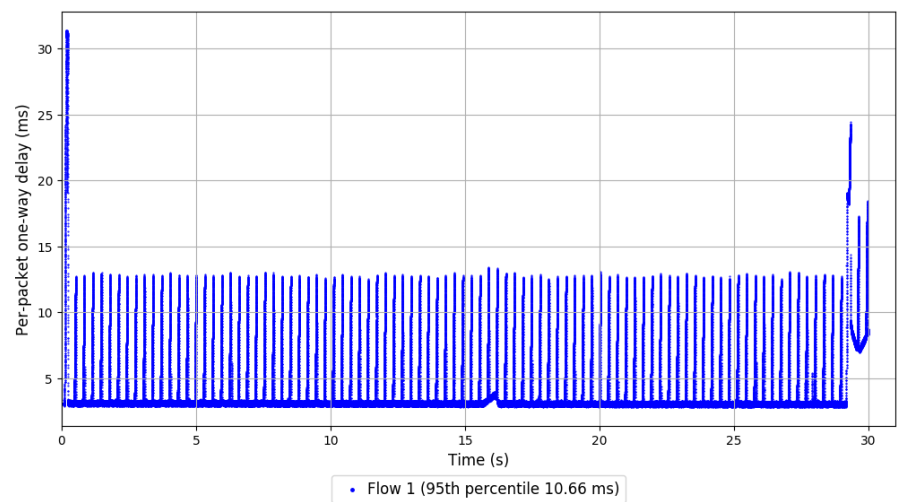
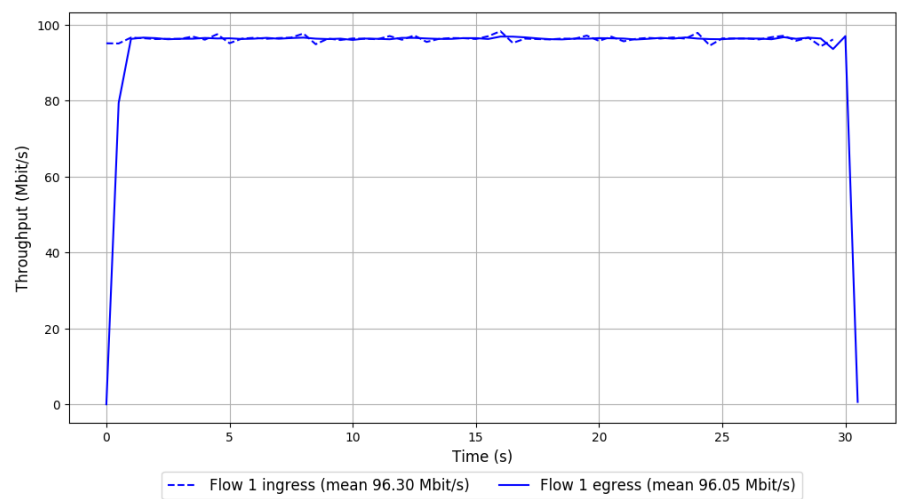
-- Flow 1:

Average throughput: 96.05 Mbit/s

95th percentile per-packet one-way delay: 10.657 ms

Loss rate: 0.24%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2019-01-02 20:06:55

End at: 2019-01-02 20:07:25

Local clock offset: -8.204 ms

Remote clock offset: 0.733 ms

Below is generated by plot.py at 2019-01-02 21:12:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.19 Mbit/s

95th percentile per-packet one-way delay: 9.486 ms

Loss rate: 0.31%

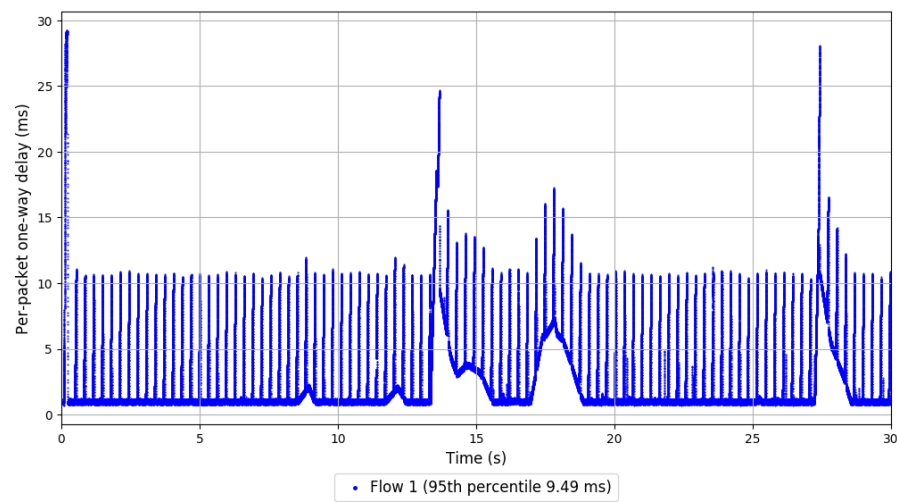
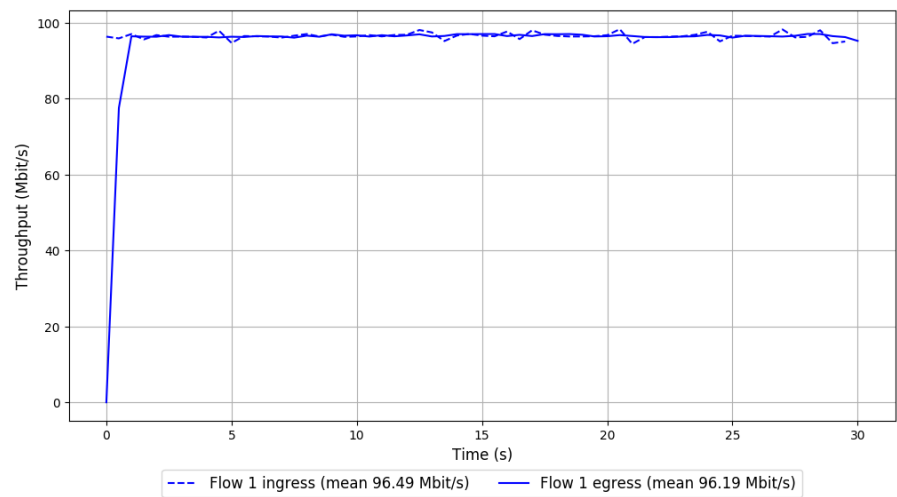
-- Flow 1:

Average throughput: 96.19 Mbit/s

95th percentile per-packet one-way delay: 9.486 ms

Loss rate: 0.31%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2019-01-02 20:28:06

End at: 2019-01-02 20:28:36

Local clock offset: -7.963 ms

Remote clock offset: 0.638 ms

Below is generated by plot.py at 2019-01-02 21:12:44

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.01 Mbit/s

95th percentile per-packet one-way delay: 8.860 ms

Loss rate: 0.35%

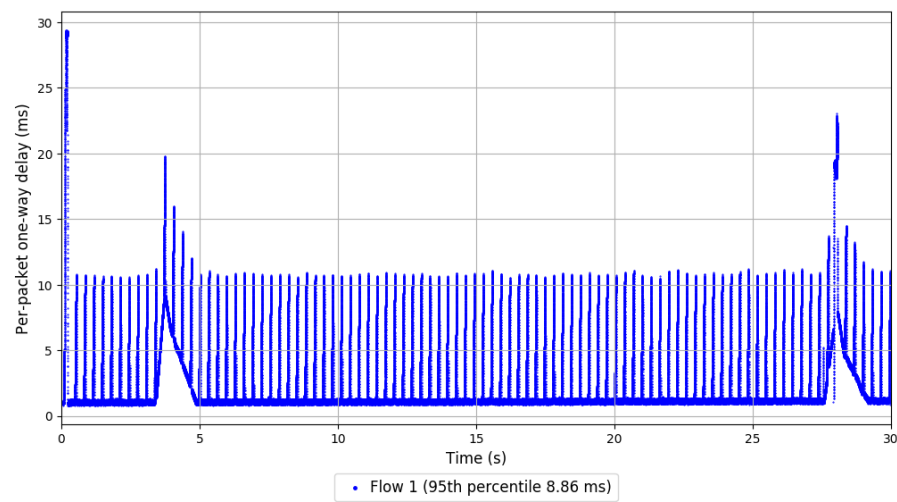
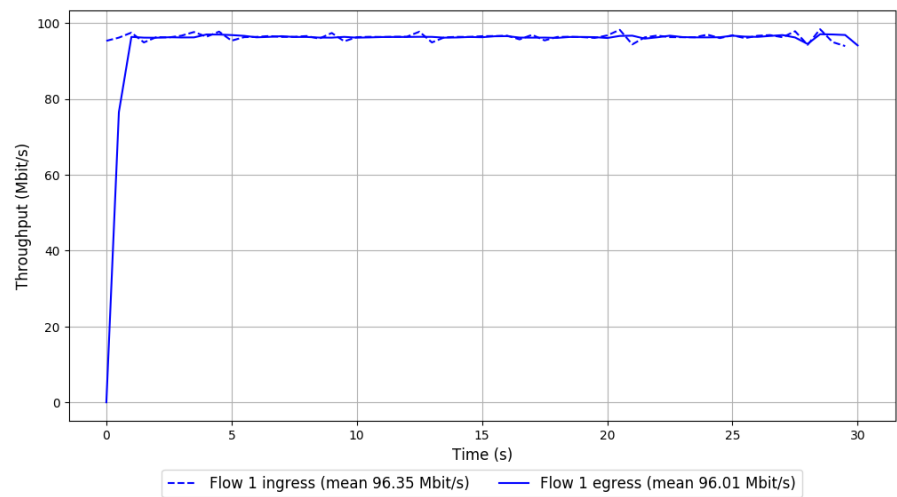
-- Flow 1:

Average throughput: 96.01 Mbit/s

95th percentile per-packet one-way delay: 8.860 ms

Loss rate: 0.35%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2019-01-02 20:49:16

End at: 2019-01-02 20:49:46

Local clock offset: -6.393 ms

Remote clock offset: 0.38 ms

Below is generated by plot.py at 2019-01-02 21:12:45

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.11 Mbit/s

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

Loss rate: 0.32%

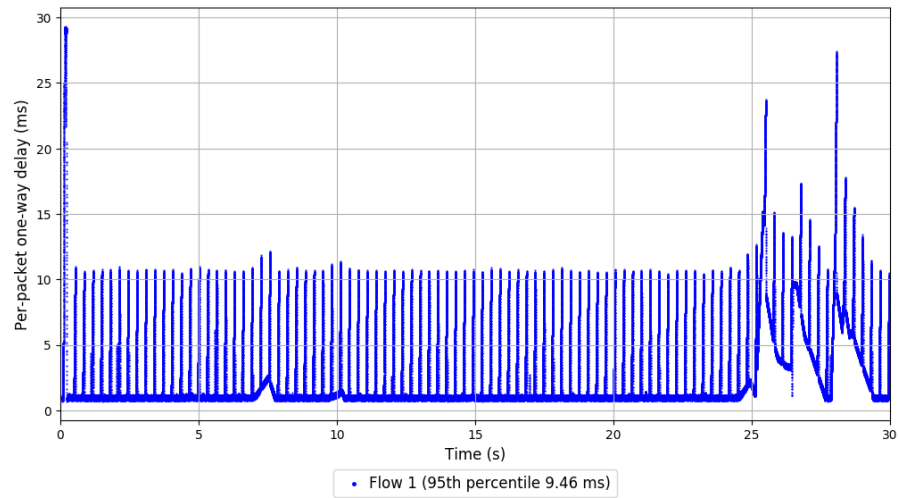
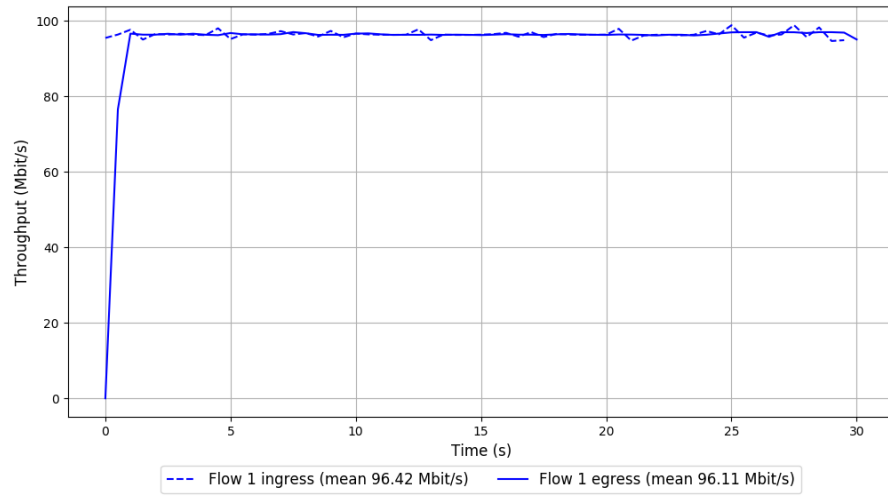
-- Flow 1:

Average throughput: 96.11 Mbit/s

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

Loss rate: 0.32%

Run 5: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2019-01-02 19:25:38

End at: 2019-01-02 19:26:08

Local clock offset: 1.083 ms

Remote clock offset: 0.402 ms

Below is generated by plot.py at 2019-01-02 21:12:45

Datalink statistics

-- Total of 1 flow:

Average throughput: 94.59 Mbit/s

95th percentile per-packet one-way delay: 6.418 ms

Loss rate: 0.09%

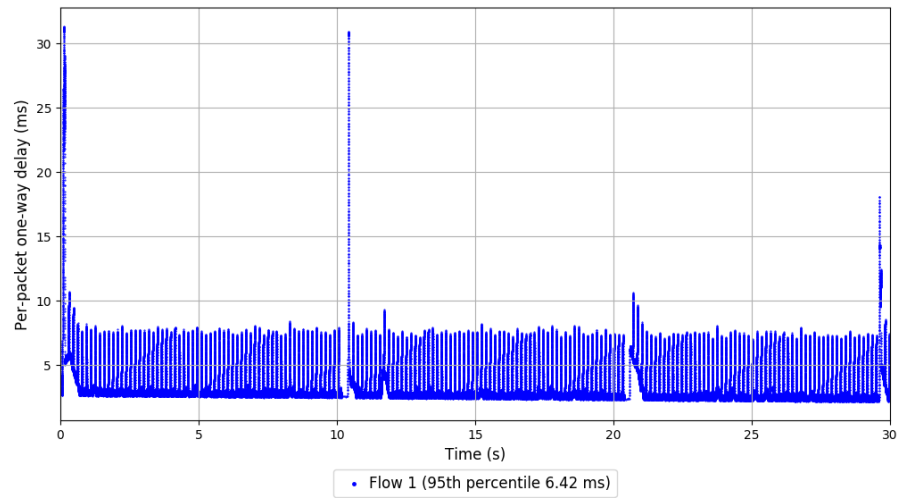
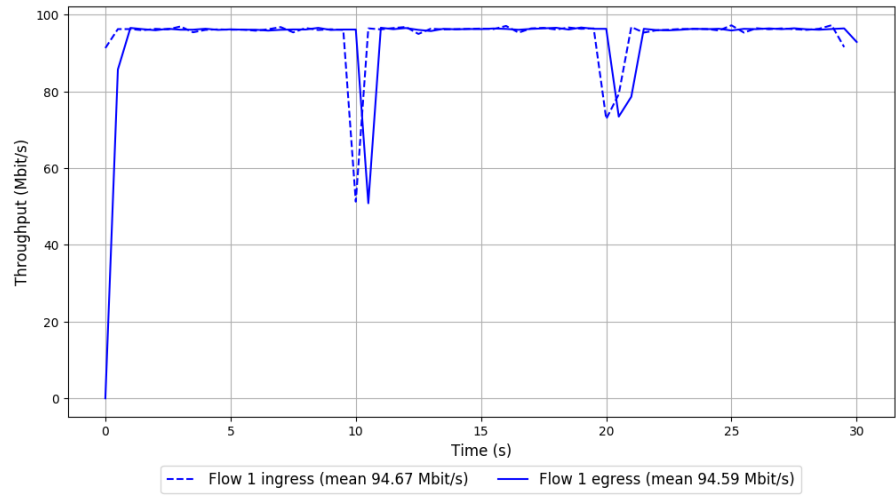
-- Flow 1:

Average throughput: 94.59 Mbit/s

95th percentile per-packet one-way delay: 6.418 ms

Loss rate: 0.09%

Run 1: Report of FillP-Sheep — Data Link

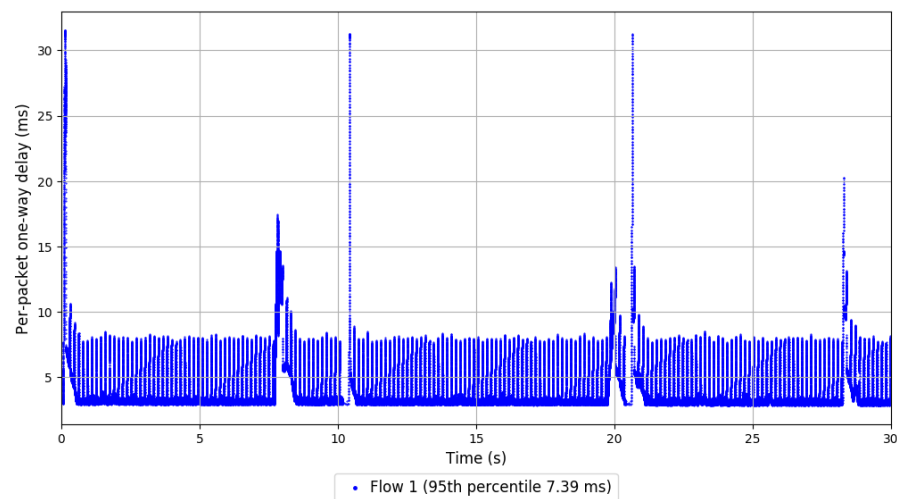
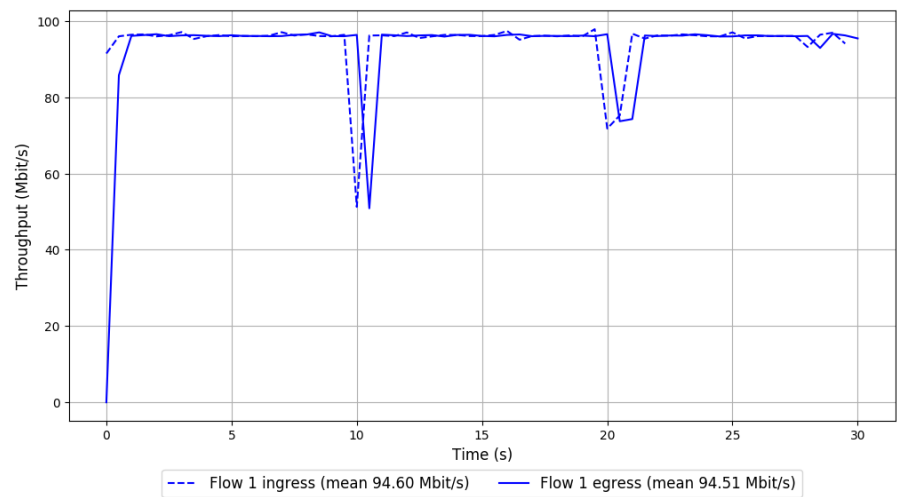


Run 2: Statistics of FillP-Sheep

Start at: 2019-01-02 19:46:50
End at: 2019-01-02 19:47:20
Local clock offset: -8.117 ms
Remote clock offset: 0.613 ms

Below is generated by plot.py at 2019-01-02 21:13:48
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.51 Mbit/s
95th percentile per-packet one-way delay: 7.387 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 94.51 Mbit/s
95th percentile per-packet one-way delay: 7.387 ms
Loss rate: 0.09%

Run 2: Report of FillP-Sheep — Data Link

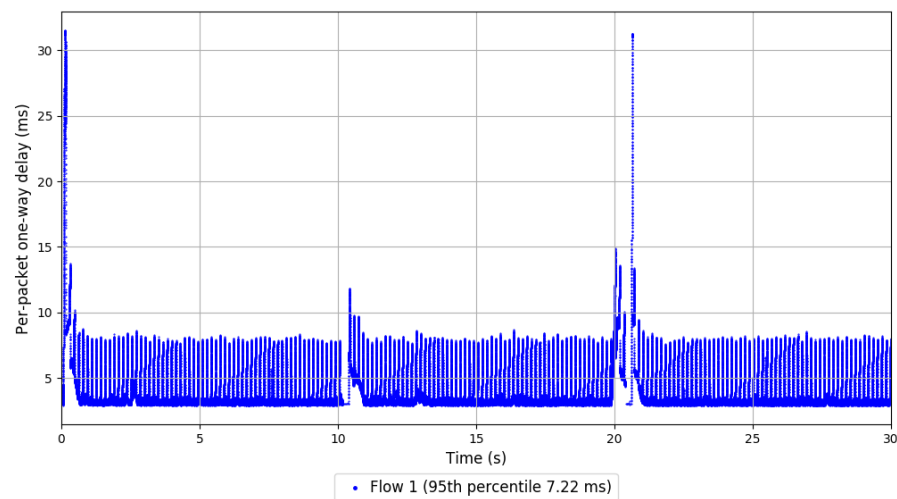
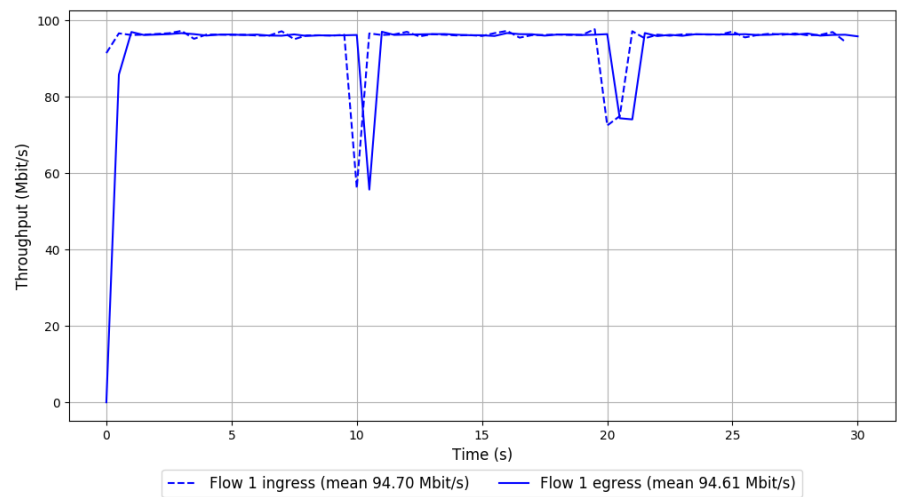


Run 3: Statistics of FillP-Sheep

Start at: 2019-01-02 20:08:02
End at: 2019-01-02 20:08:32
Local clock offset: -8.938 ms
Remote clock offset: 0.736 ms

Below is generated by plot.py at 2019-01-02 21:13:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.61 Mbit/s
95th percentile per-packet one-way delay: 7.219 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 94.61 Mbit/s
95th percentile per-packet one-way delay: 7.219 ms
Loss rate: 0.09%

Run 3: Report of FillP-Sheep — Data Link

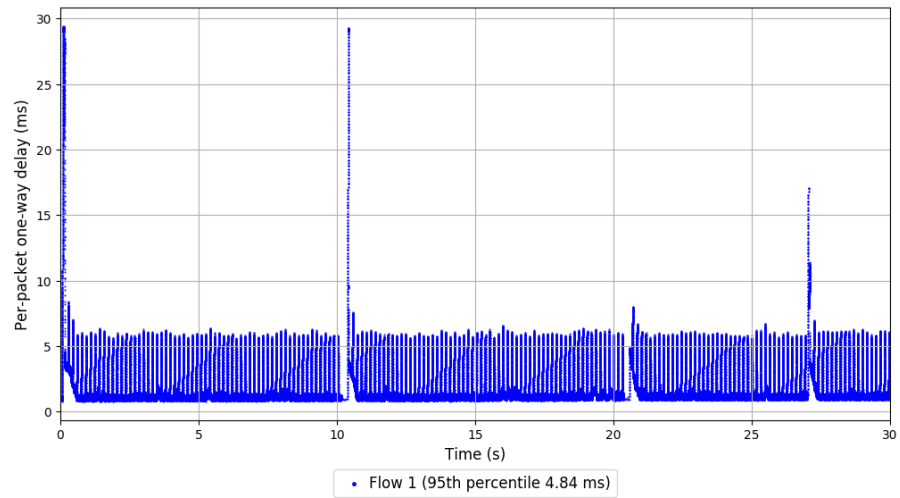
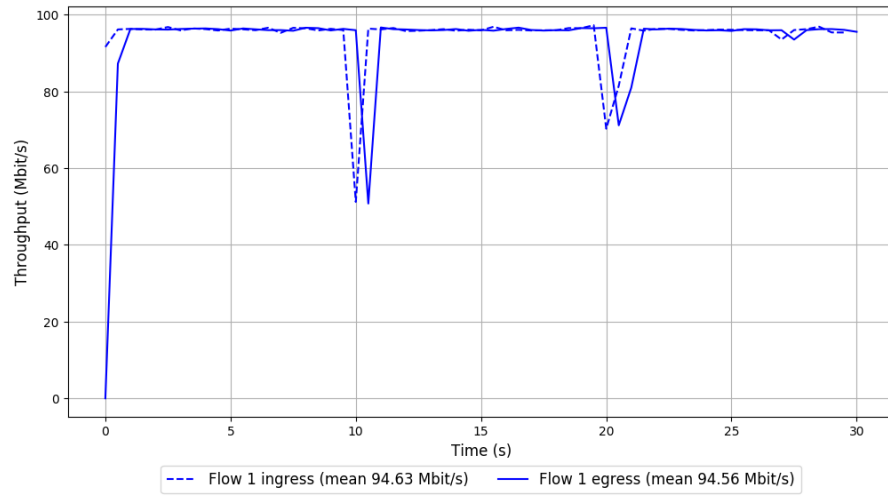


Run 4: Statistics of FillP-Sheep

Start at: 2019-01-02 20:29:13
End at: 2019-01-02 20:29:43
Local clock offset: -7.783 ms
Remote clock offset: 0.564 ms

Below is generated by plot.py at 2019-01-02 21:14:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.56 Mbit/s
95th percentile per-packet one-way delay: 4.837 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 94.56 Mbit/s
95th percentile per-packet one-way delay: 4.837 ms
Loss rate: 0.07%

Run 4: Report of FillP-Sheep — Data Link



Run 5: Statistics of FillP-Sheep

Start at: 2019-01-02 20:50:24

End at: 2019-01-02 20:50:54

Local clock offset: -6.396 ms

Remote clock offset: 0.274 ms

Below is generated by plot.py at 2019-01-02 21:14:03

Datalink statistics

-- Total of 1 flow:

Average throughput: 94.76 Mbit/s

95th percentile per-packet one-way delay: 4.670 ms

Loss rate: 0.07%

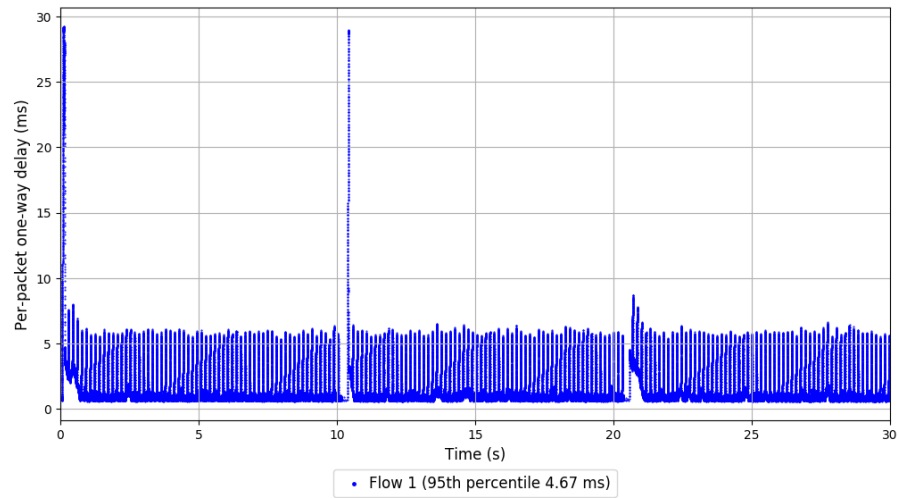
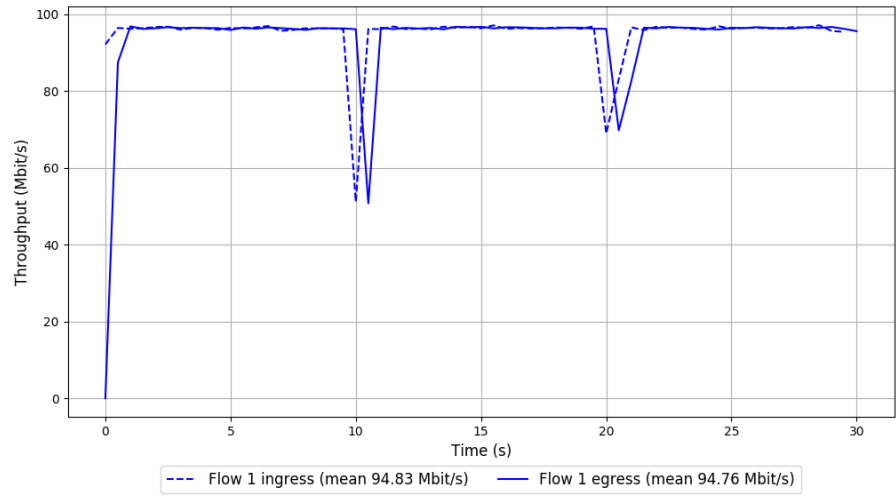
-- Flow 1:

Average throughput: 94.76 Mbit/s

95th percentile per-packet one-way delay: 4.670 ms

Loss rate: 0.07%

Run 5: Report of FillP-Sheep — Data Link



Run 1: Statistics of Indigo

Start at: 2019-01-02 19:30:07

End at: 2019-01-02 19:30:37

Local clock offset: -2.52 ms

Remote clock offset: 0.531 ms

Below is generated by plot.py at 2019-01-02 21:14:03

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.41 Mbit/s

95th percentile per-packet one-way delay: 4.404 ms

Loss rate: 0.00%

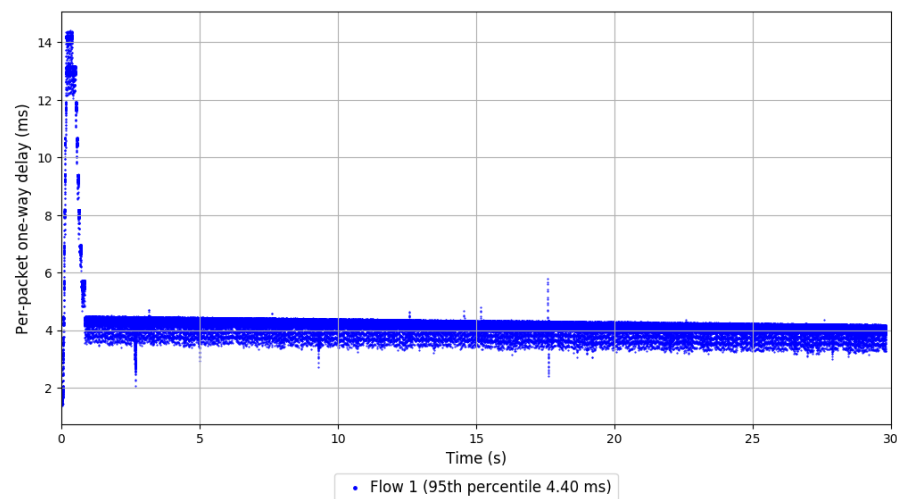
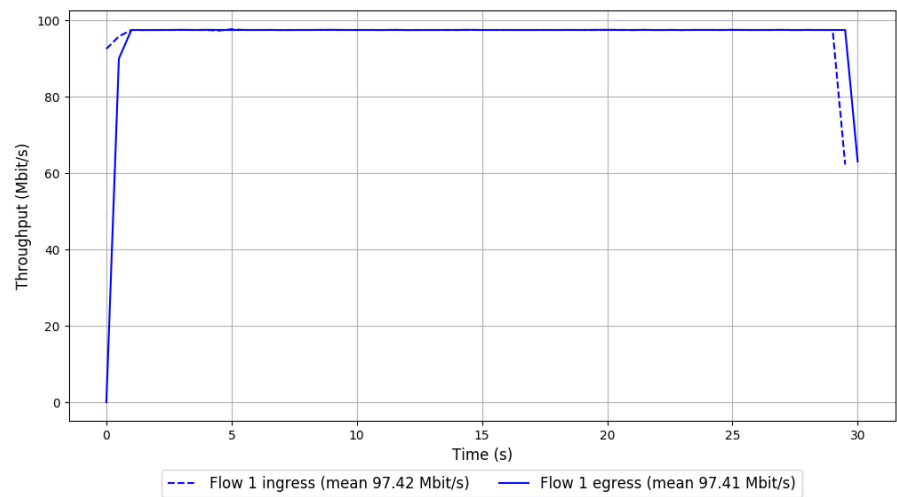
-- Flow 1:

Average throughput: 97.41 Mbit/s

95th percentile per-packet one-way delay: 4.404 ms

Loss rate: 0.00%

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2019-01-02 19:51:18

End at: 2019-01-02 19:51:48

Local clock offset: -8.724 ms

Remote clock offset: 0.686 ms

Below is generated by plot.py at 2019-01-02 21:14:03

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.38 Mbit/s

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

Loss rate: 0.00%

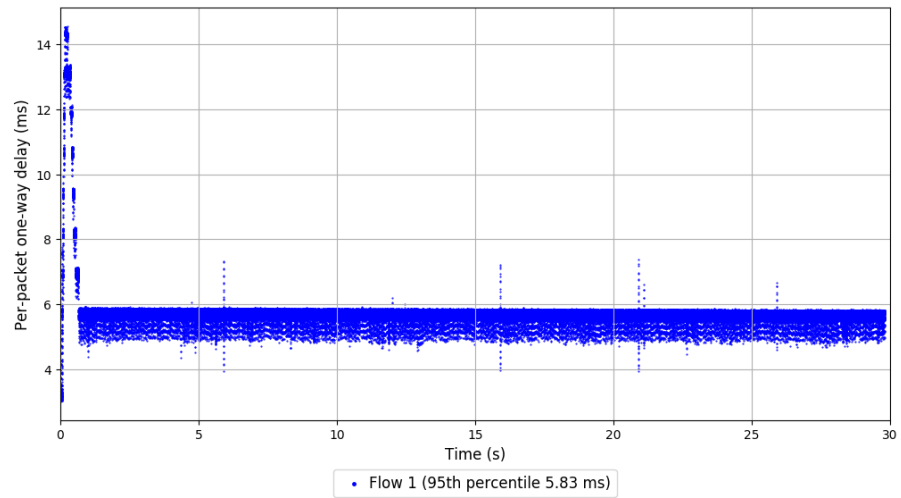
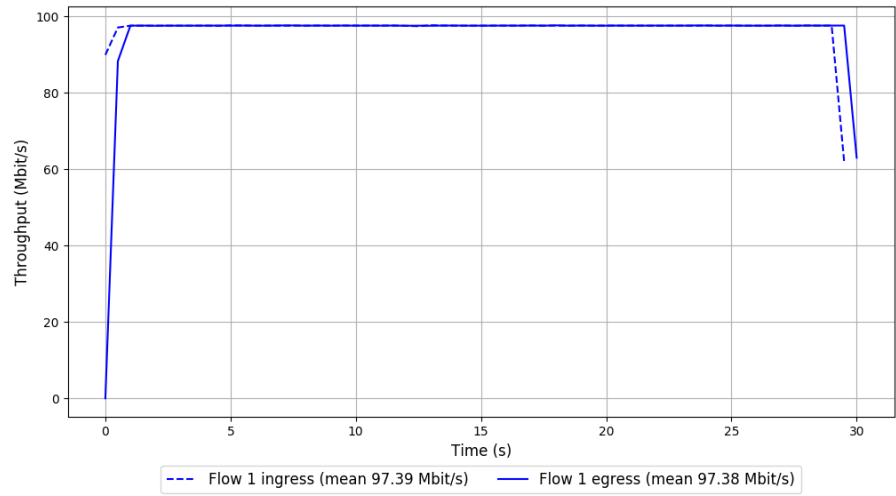
-- Flow 1:

Average throughput: 97.38 Mbit/s

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

Loss rate: 0.00%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2019-01-02 20:12:31

End at: 2019-01-02 20:13:01

Local clock offset: -8.355 ms

Remote clock offset: 0.819 ms

Below is generated by plot.py at 2019-01-02 21:14:03

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.36 Mbit/s

95th percentile per-packet one-way delay: 3.906 ms

Loss rate: 0.00%

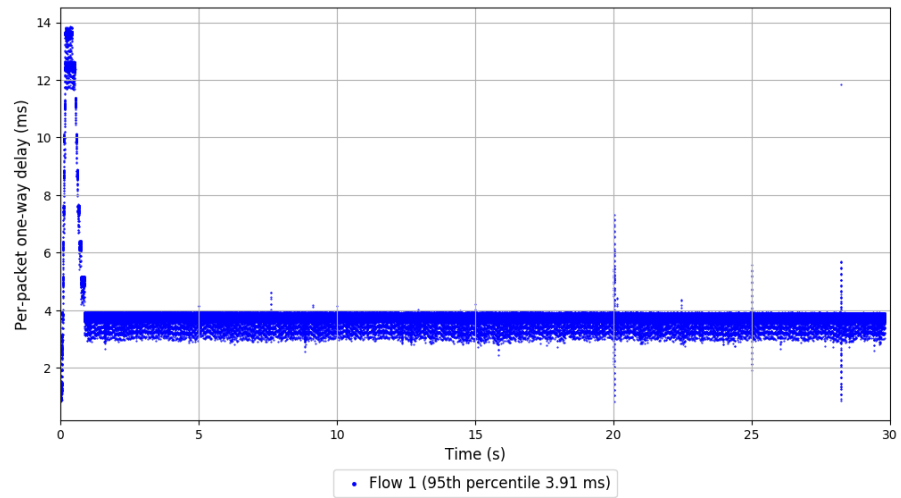
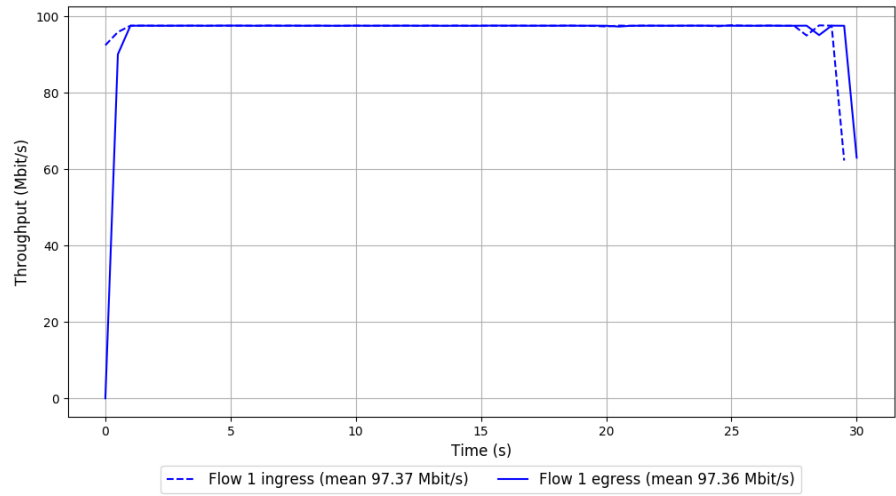
-- Flow 1:

Average throughput: 97.36 Mbit/s

95th percentile per-packet one-way delay: 3.906 ms

Loss rate: 0.00%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2019-01-02 20:33:42

End at: 2019-01-02 20:34:12

Local clock offset: -7.766 ms

Remote clock offset: 0.571 ms

Below is generated by plot.py at 2019-01-02 21:14:03

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.32 Mbit/s

95th percentile per-packet one-way delay: 4.751 ms

Loss rate: 0.00%

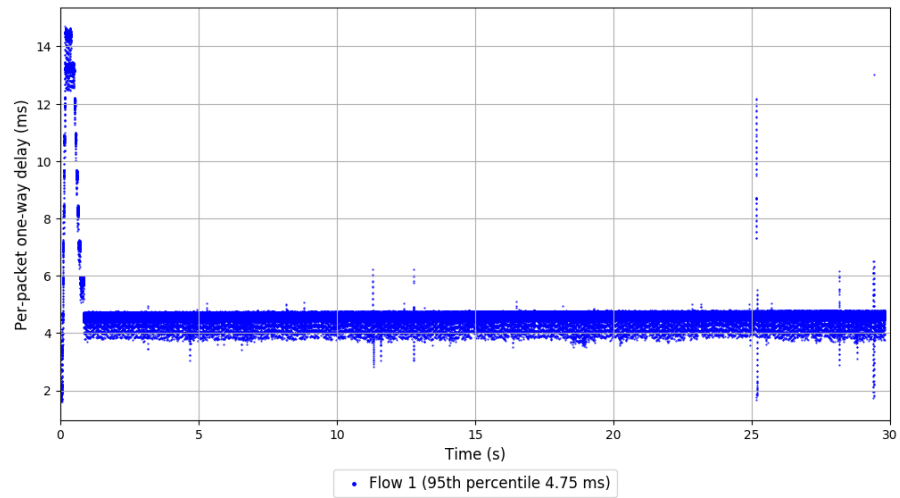
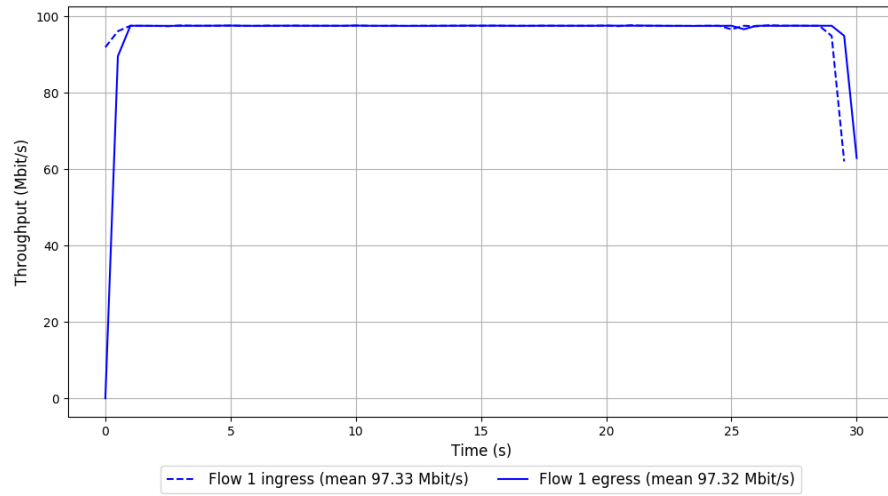
-- Flow 1:

Average throughput: 97.32 Mbit/s

95th percentile per-packet one-way delay: 4.751 ms

Loss rate: 0.00%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2019-01-02 20:54:58

End at: 2019-01-02 20:55:28

Local clock offset: -7.197 ms

Remote clock offset: 0.41 ms

Below is generated by plot.py at 2019-01-02 21:14:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.15 Mbit/s

95th percentile per-packet one-way delay: 5.795 ms

Loss rate: 0.00%

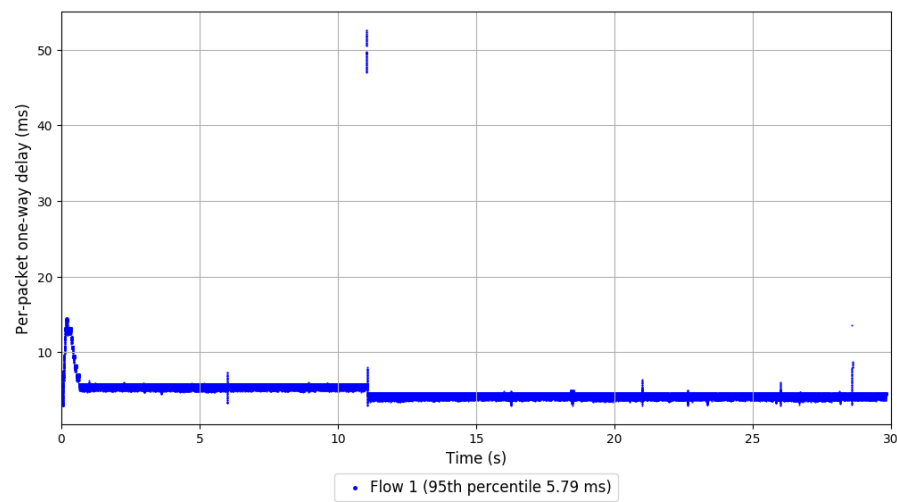
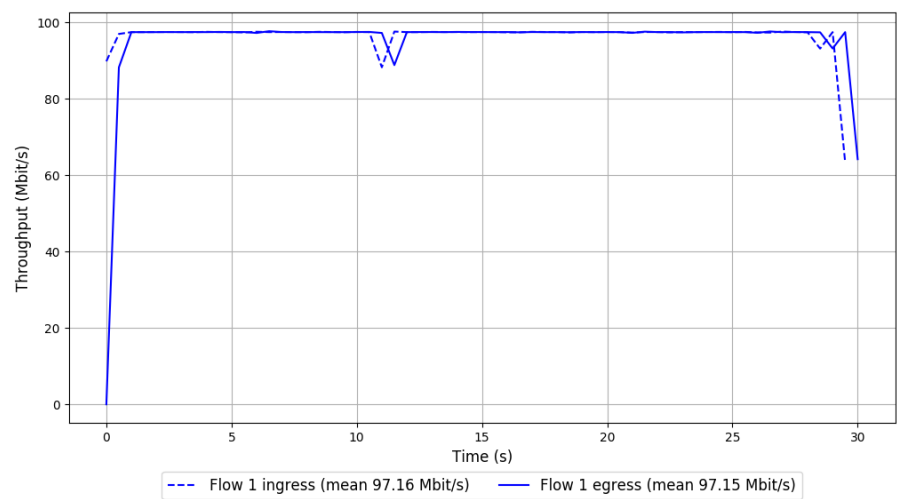
-- Flow 1:

Average throughput: 97.15 Mbit/s

95th percentile per-packet one-way delay: 5.795 ms

Loss rate: 0.00%

Run 5: Report of Indigo — Data Link

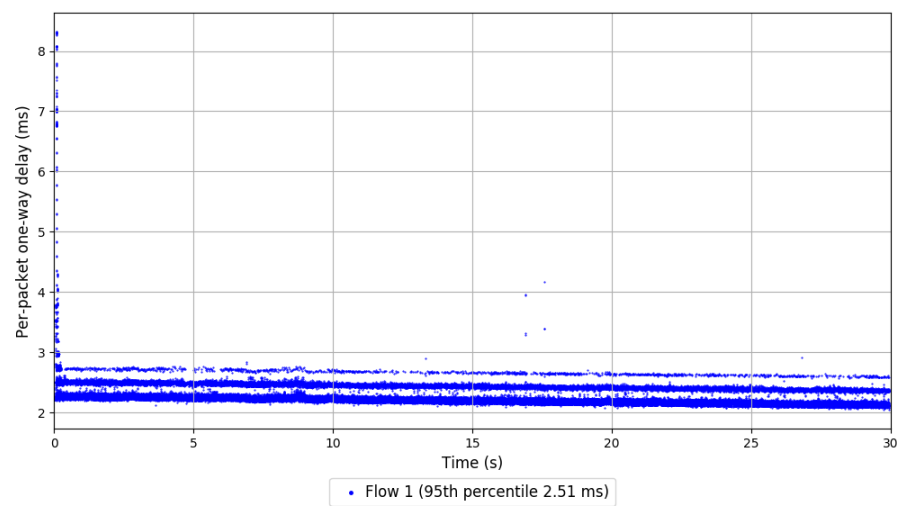
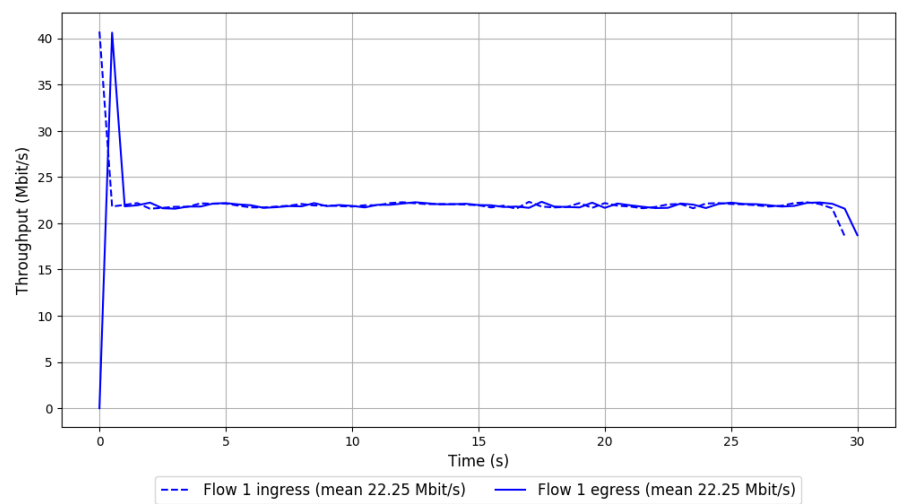


```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-01-02 19:39:01
End at: 2019-01-02 19:39:31
Local clock offset: -5.619 ms
Remote clock offset: 0.564 ms

# Below is generated by plot.py at 2019-01-02 21:14:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 22.25 Mbit/s
95th percentile per-packet one-way delay: 2.508 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 22.25 Mbit/s
95th percentile per-packet one-way delay: 2.508 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo-MusesD — Data Link



Run 2: Statistics of Indigo-MusesD

Start at: 2019-01-02 20:00:13

End at: 2019-01-02 20:00:43

Local clock offset: -8.823 ms

Remote clock offset: 0.657 ms

Below is generated by plot.py at 2019-01-02 21:14:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 22.23 Mbit/s

95th percentile per-packet one-way delay: 3.350 ms

Loss rate: 0.00%

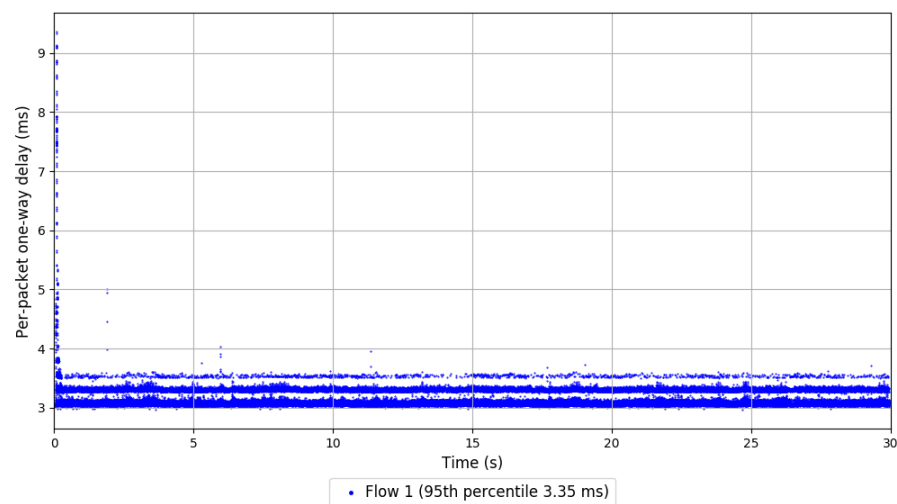
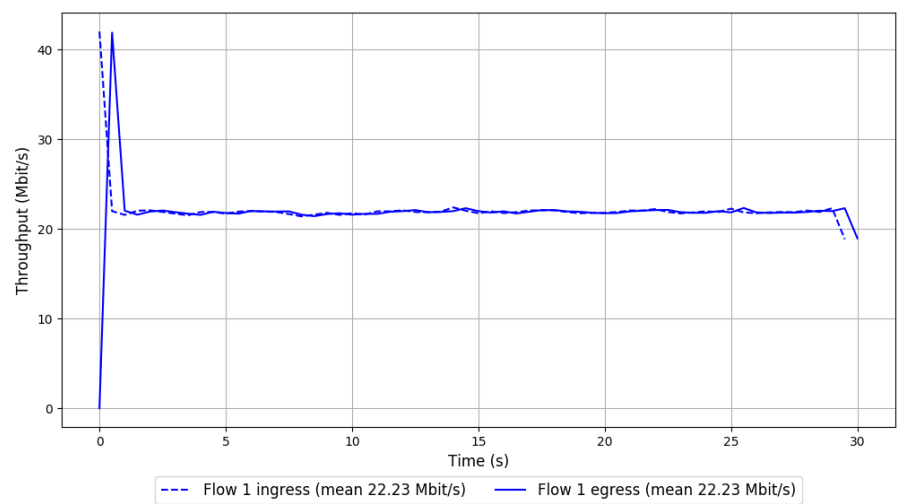
-- Flow 1:

Average throughput: 22.23 Mbit/s

95th percentile per-packet one-way delay: 3.350 ms

Loss rate: 0.00%

Run 2: Report of Indigo-MusesD — Data Link



Run 3: Statistics of Indigo-MusesD

Start at: 2019-01-02 20:21:24

End at: 2019-01-02 20:21:54

Local clock offset: -9.624 ms

Remote clock offset: 0.688 ms

Below is generated by plot.py at 2019-01-02 21:14:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 22.32 Mbit/s

95th percentile per-packet one-way delay: 3.359 ms

Loss rate: 0.00%

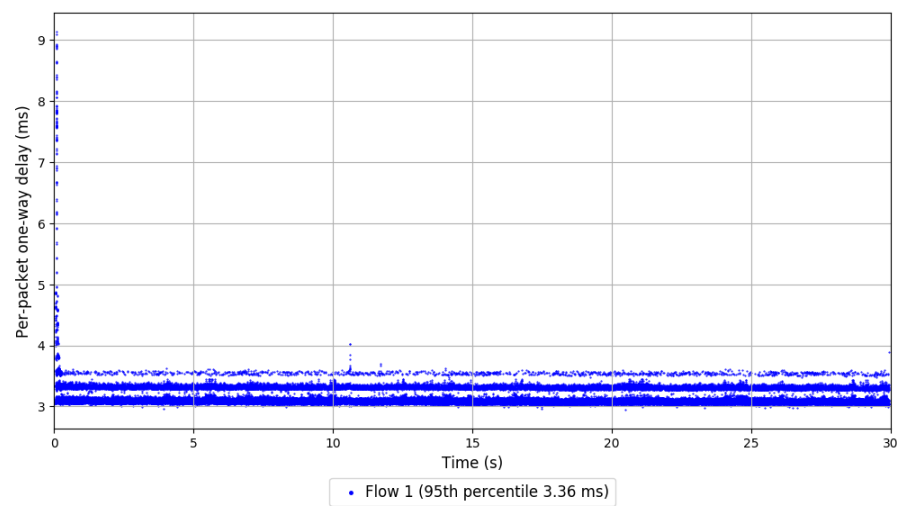
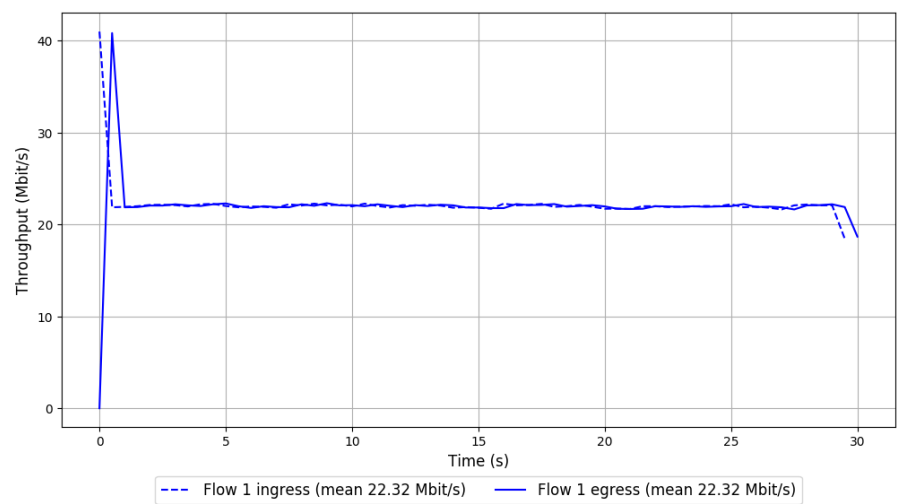
-- Flow 1:

Average throughput: 22.32 Mbit/s

95th percentile per-packet one-way delay: 3.359 ms

Loss rate: 0.00%

Run 3: Report of Indigo-MusesD — Data Link



Run 4: Statistics of Indigo-MusesD

Start at: 2019-01-02 20:42:35

End at: 2019-01-02 20:43:05

Local clock offset: -7.238 ms

Remote clock offset: 0.457 ms

Below is generated by plot.py at 2019-01-02 21:14:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 22.21 Mbit/s

95th percentile per-packet one-way delay: 3.448 ms

Loss rate: 0.00%

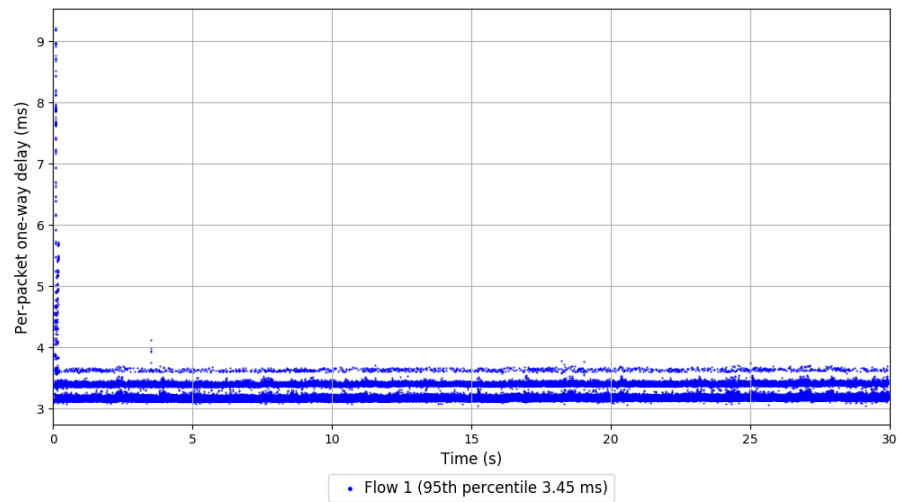
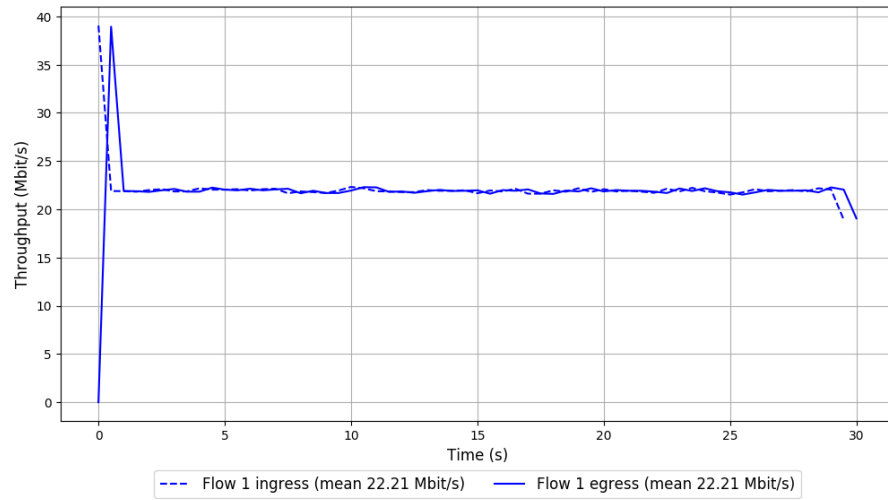
-- Flow 1:

Average throughput: 22.21 Mbit/s

95th percentile per-packet one-way delay: 3.448 ms

Loss rate: 0.00%

Run 4: Report of Indigo-MusesD — Data Link



Run 5: Statistics of Indigo-MusesD

Start at: 2019-01-02 21:03:53

End at: 2019-01-02 21:04:23

Local clock offset: -7.247 ms

Remote clock offset: 0.749 ms

Below is generated by plot.py at 2019-01-02 21:14:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 22.20 Mbit/s

95th percentile per-packet one-way delay: 3.427 ms

Loss rate: 0.00%

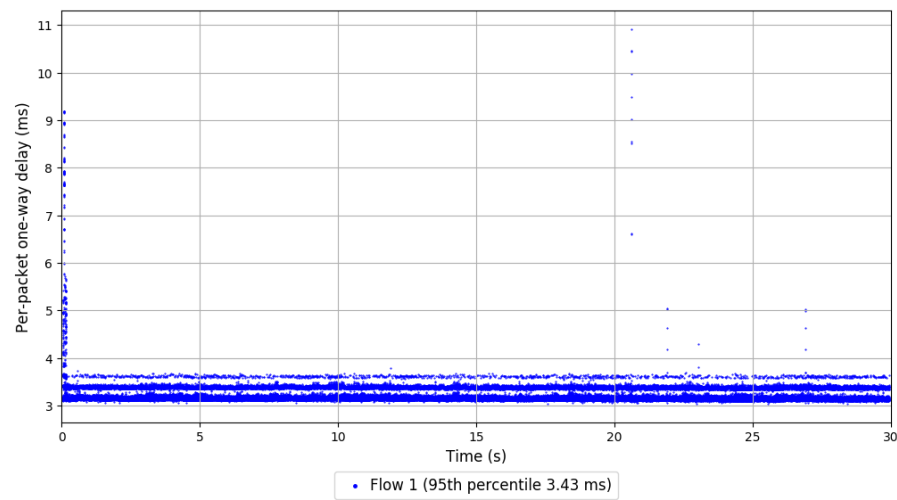
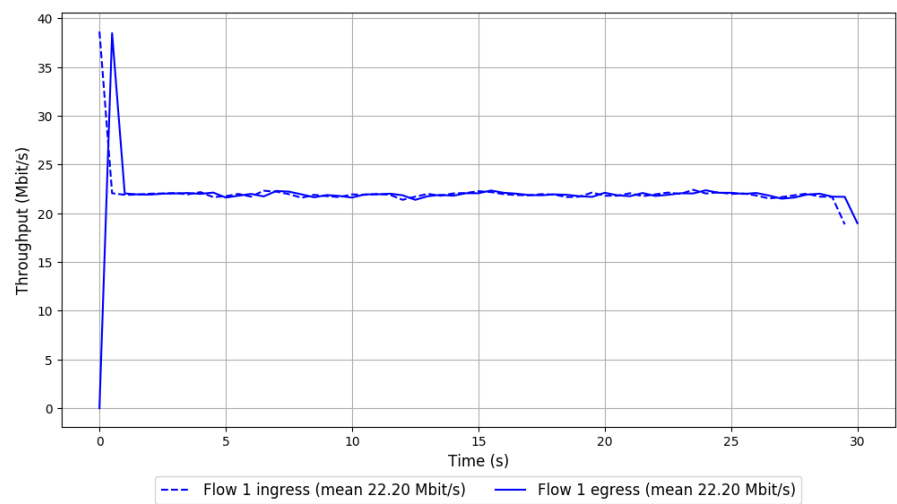
-- Flow 1:

Average throughput: 22.20 Mbit/s

95th percentile per-packet one-way delay: 3.427 ms

Loss rate: 0.00%

Run 5: Report of Indigo-MusesD — Data Link



Run 1: Statistics of Indigo-MusesT

Start at: 2019-01-02 19:34:33

End at: 2019-01-02 19:35:03

Local clock offset: -4.04 ms

Remote clock offset: 0.455 ms

Below is generated by plot.py at 2019-01-02 21:15:23

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.33 Mbit/s

95th percentile per-packet one-way delay: 30.705 ms

Loss rate: 46.03%

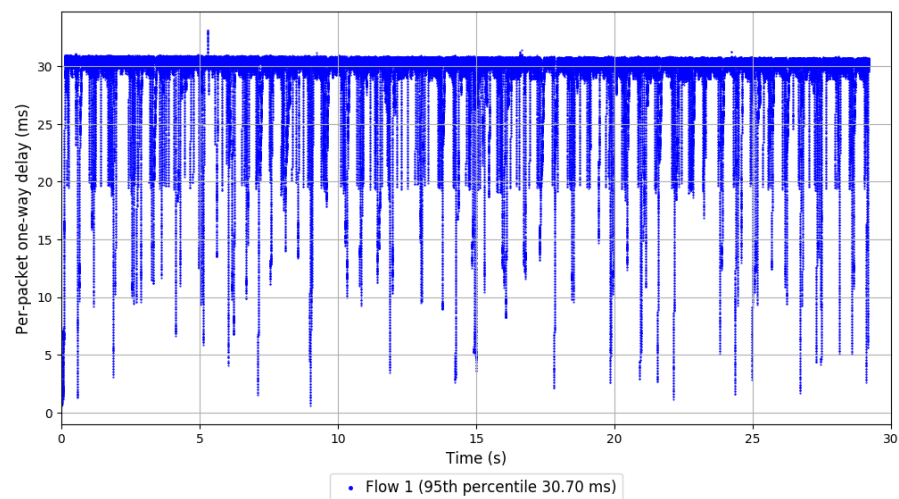
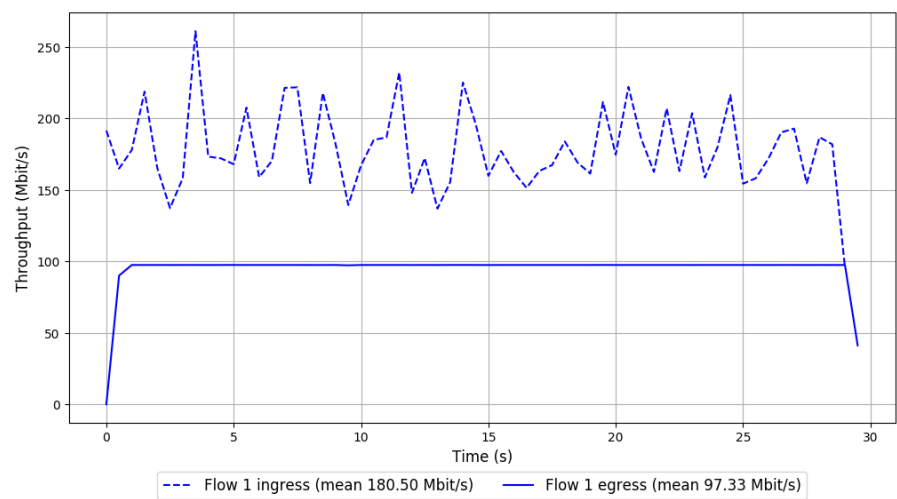
-- Flow 1:

Average throughput: 97.33 Mbit/s

95th percentile per-packet one-way delay: 30.705 ms

Loss rate: 46.03%

Run 1: Report of Indigo-MusesT — Data Link



Run 2: Statistics of Indigo-MusesT

Start at: 2019-01-02 19:55:44

End at: 2019-01-02 19:56:14

Local clock offset: -8.347 ms

Remote clock offset: 0.669 ms

Below is generated by plot.py at 2019-01-02 21:15:23

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.32 Mbit/s

95th percentile per-packet one-way delay: 31.156 ms

Loss rate: 45.24%

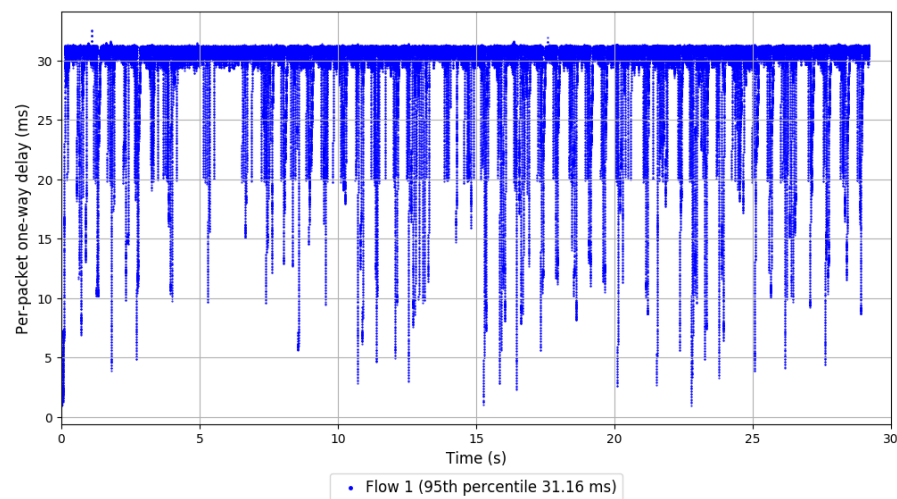
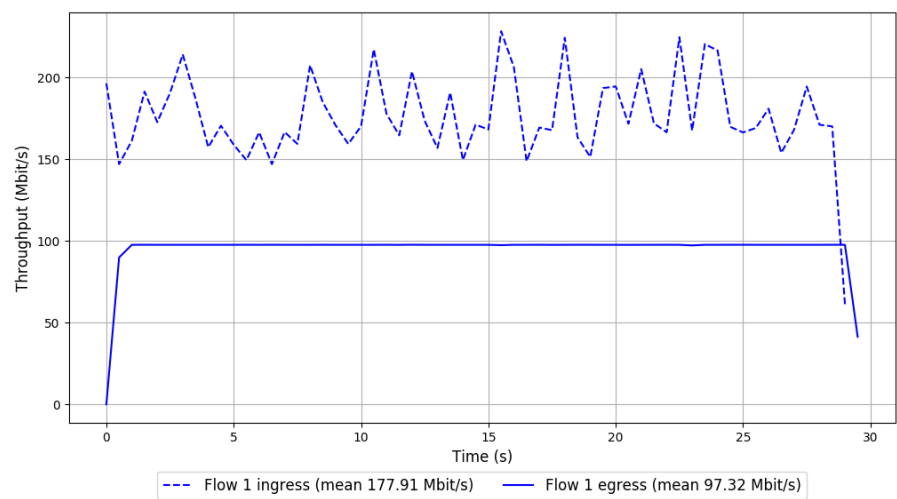
-- Flow 1:

Average throughput: 97.32 Mbit/s

95th percentile per-packet one-way delay: 31.156 ms

Loss rate: 45.24%

Run 2: Report of Indigo-MusesT — Data Link



Run 3: Statistics of Indigo-MusesT

Start at: 2019-01-02 20:16:56

End at: 2019-01-02 20:17:27

Local clock offset: -8.61 ms

Remote clock offset: 0.815 ms

Below is generated by plot.py at 2019-01-02 21:15:25

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.31 Mbit/s

95th percentile per-packet one-way delay: 32.551 ms

Loss rate: 45.58%

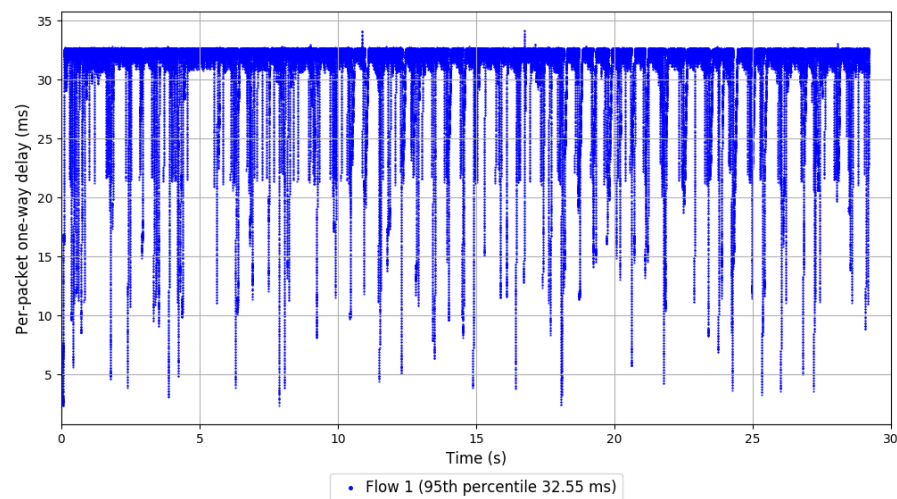
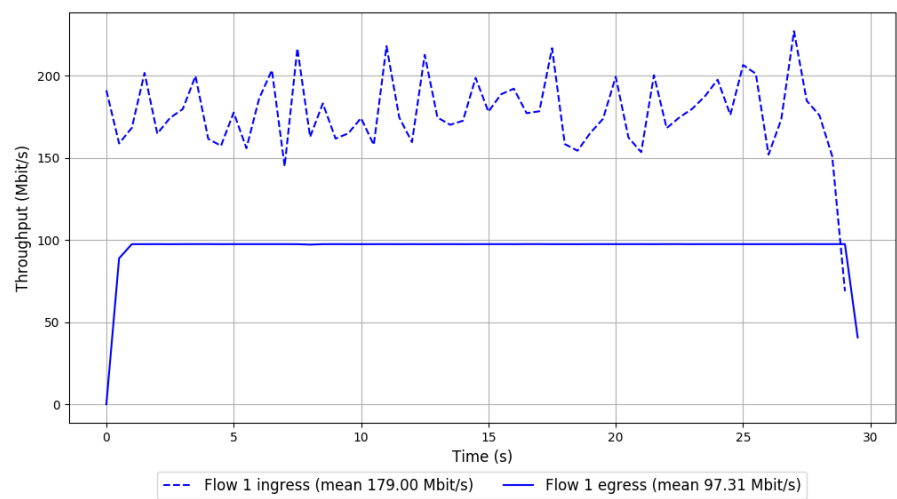
-- Flow 1:

Average throughput: 97.31 Mbit/s

95th percentile per-packet one-way delay: 32.551 ms

Loss rate: 45.58%

Run 3: Report of Indigo-MusesT — Data Link



Run 4: Statistics of Indigo-MusesT

Start at: 2019-01-02 20:38:07

End at: 2019-01-02 20:38:38

Local clock offset: -7.411 ms

Remote clock offset: 0.535 ms

Below is generated by plot.py at 2019-01-02 21:15:27

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.31 Mbit/s

95th percentile per-packet one-way delay: 33.357 ms

Loss rate: 45.64%

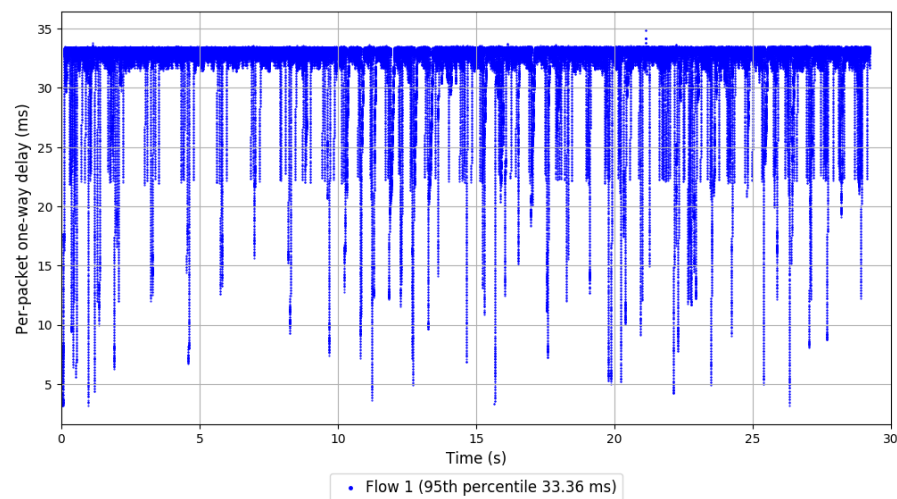
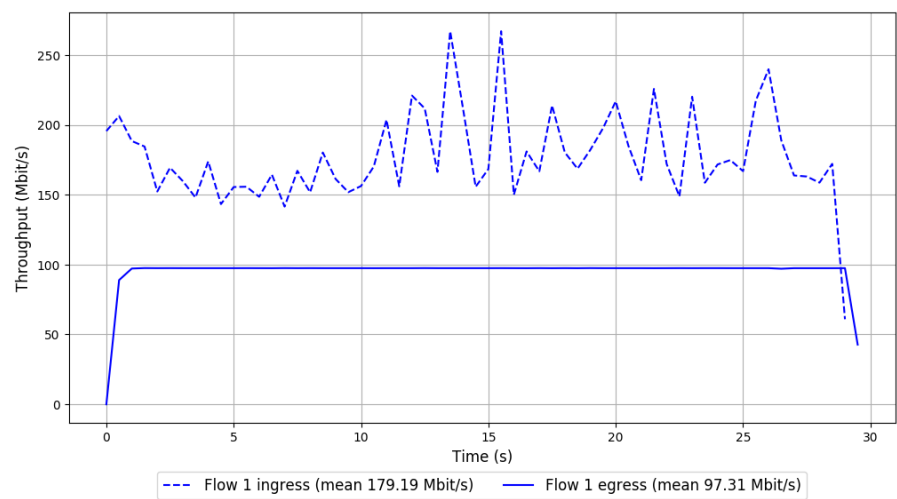
-- Flow 1:

Average throughput: 97.31 Mbit/s

95th percentile per-packet one-way delay: 33.357 ms

Loss rate: 45.64%

Run 4: Report of Indigo-MusesT — Data Link



Run 5: Statistics of Indigo-MusesT

Start at: 2019-01-02 20:59:23

End at: 2019-01-02 20:59:53

Local clock offset: -6.436 ms

Remote clock offset: 0.608 ms

Below is generated by plot.py at 2019-01-02 21:15:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.33 Mbit/s

95th percentile per-packet one-way delay: 31.049 ms

Loss rate: 46.25%

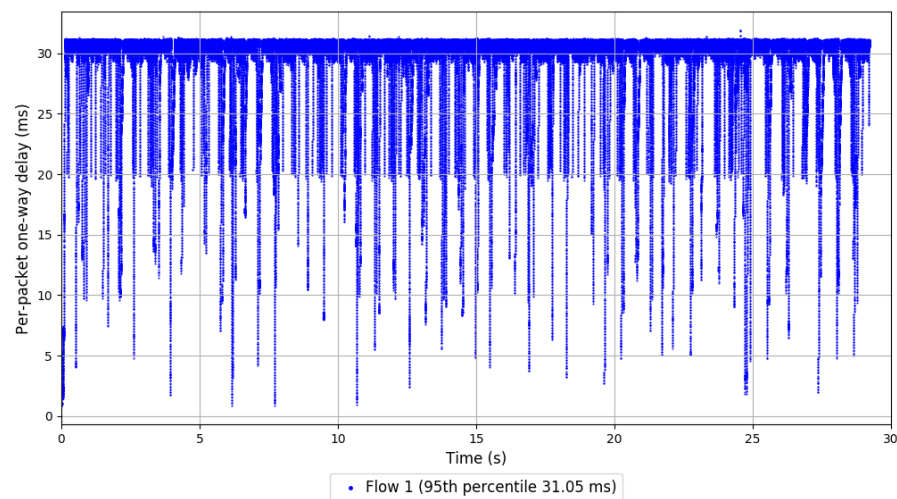
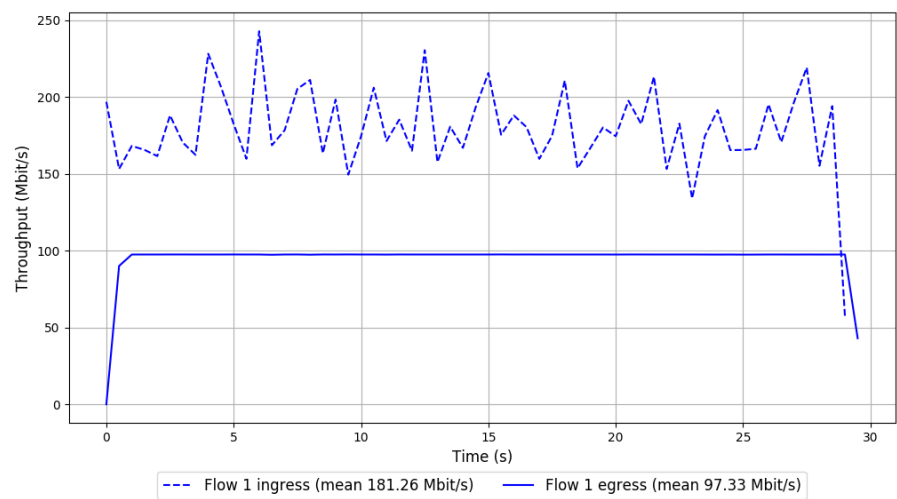
-- Flow 1:

Average throughput: 97.33 Mbit/s

95th percentile per-packet one-way delay: 31.049 ms

Loss rate: 46.25%

Run 5: Report of Indigo-MusesT — Data Link

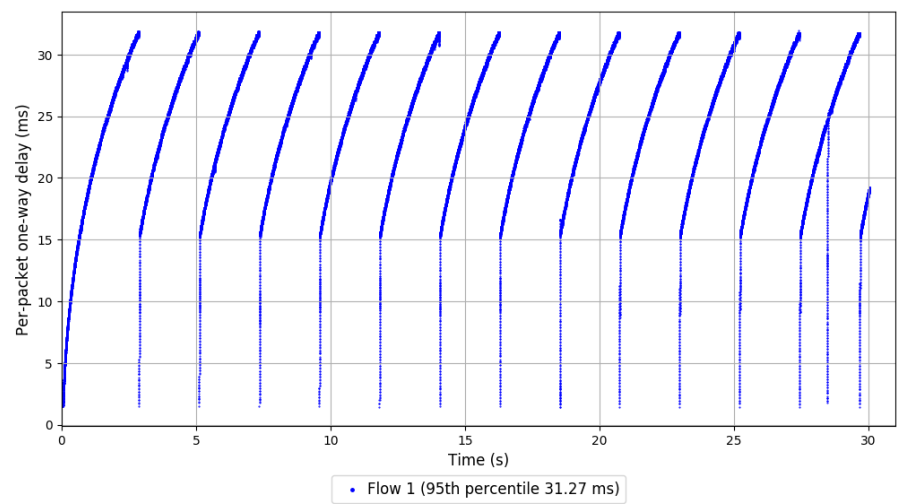
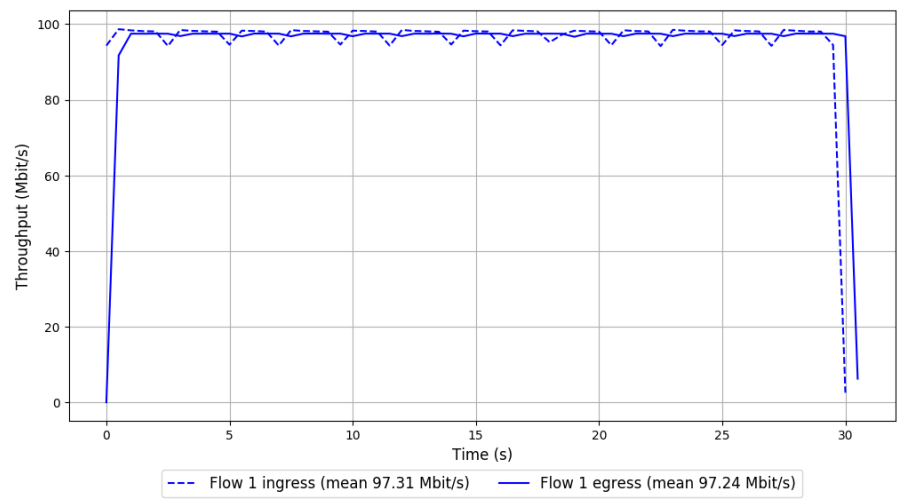



```
Run 1: Statistics of LEDBAT

Start at: 2019-01-02 19:43:25
End at: 2019-01-02 19:43:55
Local clock offset: -7.465 ms
Remote clock offset: 0.533 ms

# Below is generated by plot.py at 2019-01-02 21:15:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.24 Mbit/s
95th percentile per-packet one-way delay: 31.274 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.24 Mbit/s
95th percentile per-packet one-way delay: 31.274 ms
Loss rate: 0.01%
```

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2019-01-02 20:04:37

End at: 2019-01-02 20:05:07

Local clock offset: -8.105 ms

Remote clock offset: 0.709 ms

Below is generated by plot.py at 2019-01-02 21:15:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.11 Mbit/s

95th percentile per-packet one-way delay: 31.927 ms

Loss rate: 0.01%

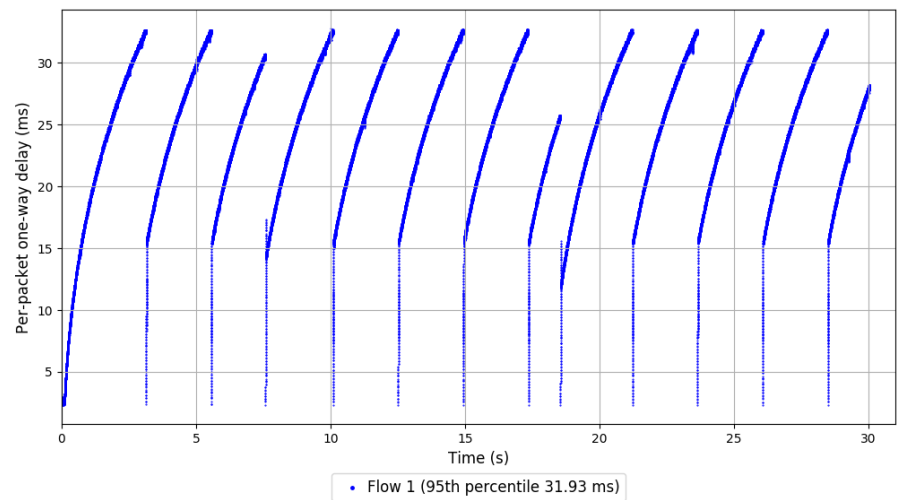
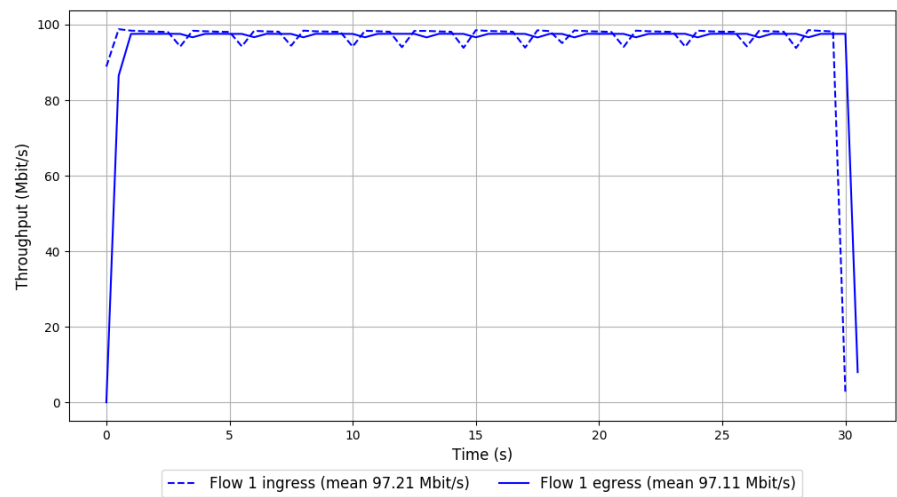
-- Flow 1:

Average throughput: 97.11 Mbit/s

95th percentile per-packet one-way delay: 31.927 ms

Loss rate: 0.01%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2019-01-02 20:25:48

End at: 2019-01-02 20:26:18

Local clock offset: -8.659 ms

Remote clock offset: 0.677 ms

Below is generated by plot.py at 2019-01-02 21:16:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.11 Mbit/s

95th percentile per-packet one-way delay: 32.380 ms

Loss rate: 0.01%

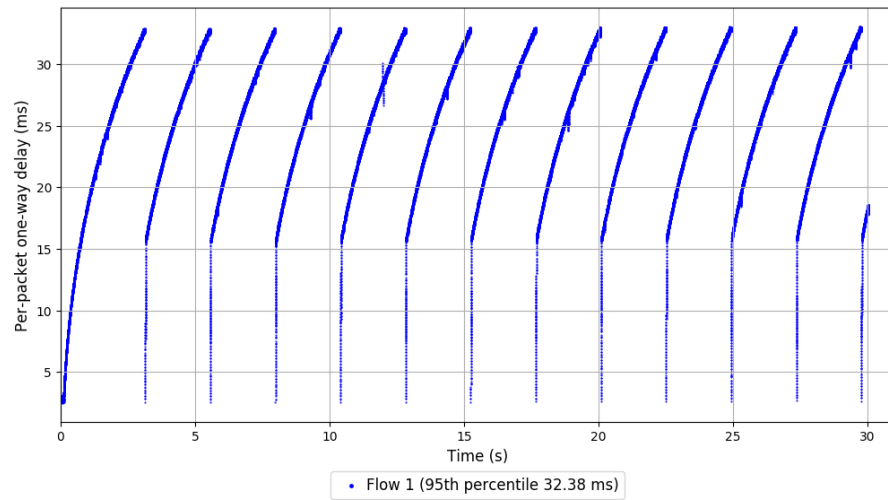
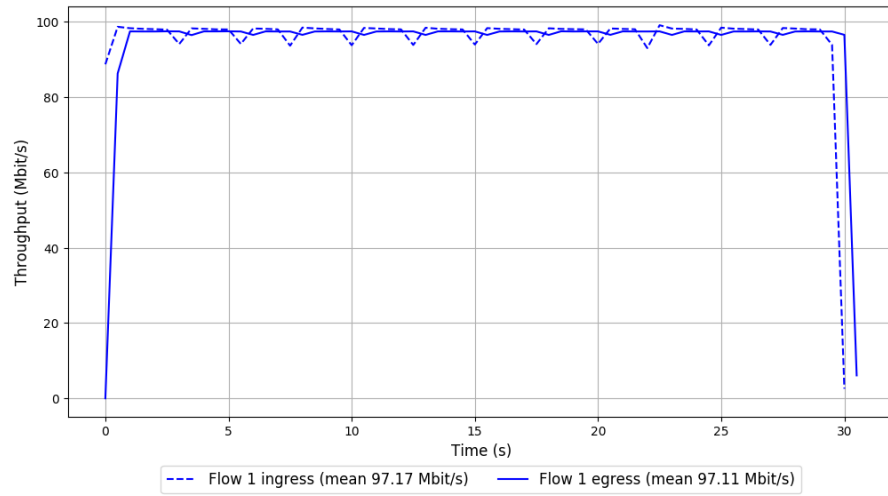
-- Flow 1:

Average throughput: 97.11 Mbit/s

95th percentile per-packet one-way delay: 32.380 ms

Loss rate: 0.01%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2019-01-02 20:46:59

End at: 2019-01-02 20:47:29

Local clock offset: -7.143 ms

Remote clock offset: 0.424 ms

Below is generated by plot.py at 2019-01-02 21:16:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.23 Mbit/s

95th percentile per-packet one-way delay: 31.471 ms

Loss rate: 0.01%

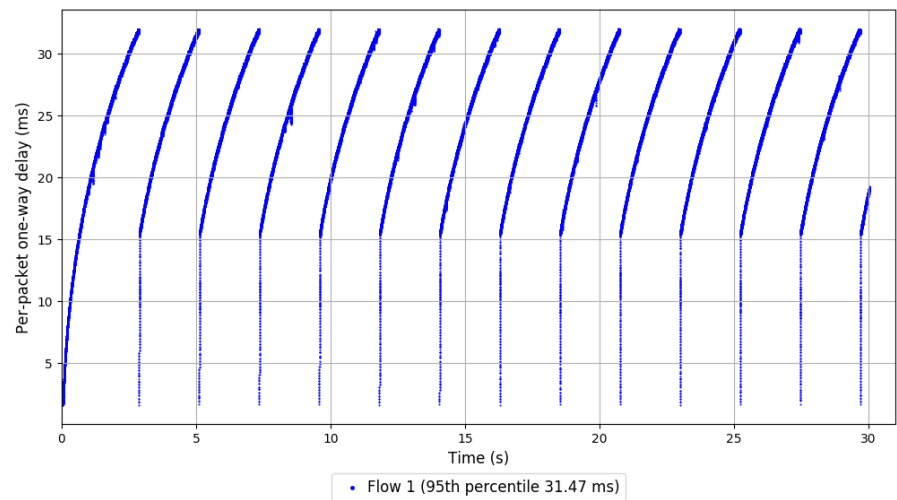
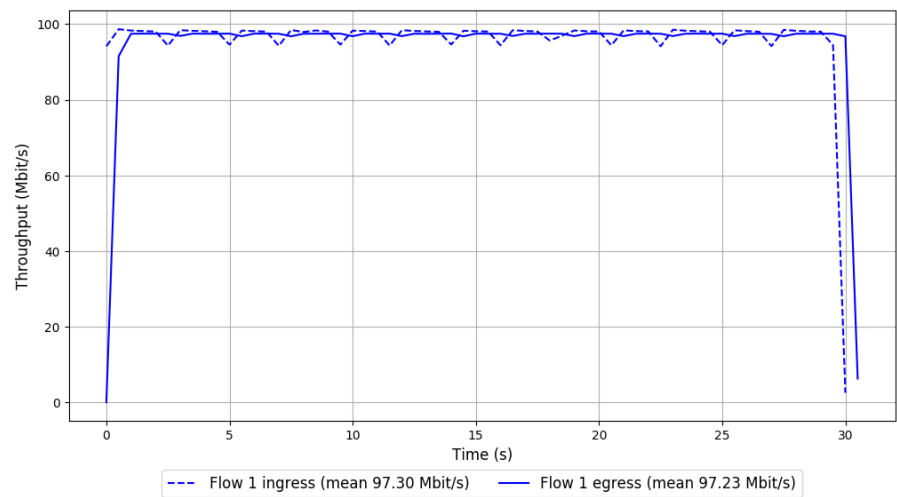
-- Flow 1:

Average throughput: 97.23 Mbit/s

95th percentile per-packet one-way delay: 31.471 ms

Loss rate: 0.01%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2019-01-02 21:08:17

End at: 2019-01-02 21:08:47

Local clock offset: -7.374 ms

Remote clock offset: 0.715 ms

Below is generated by plot.py at 2019-01-02 21:16:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.11 Mbit/s

95th percentile per-packet one-way delay: 32.877 ms

Loss rate: 0.01%

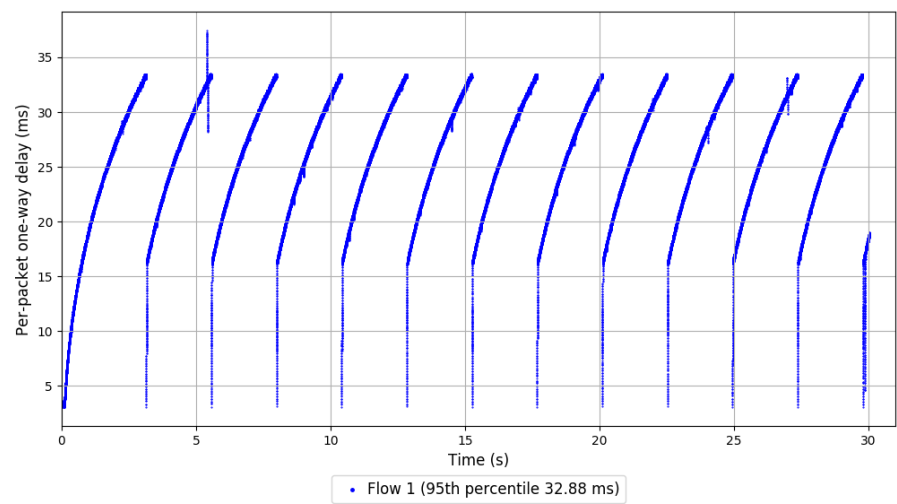
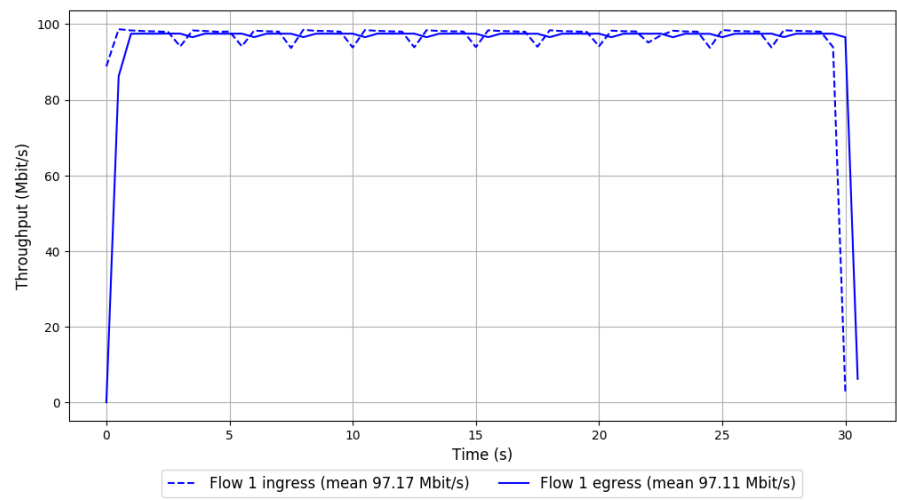
-- Flow 1:

Average throughput: 97.11 Mbit/s

95th percentile per-packet one-way delay: 32.877 ms

Loss rate: 0.01%

Run 5: Report of LEDBAT — Data Link

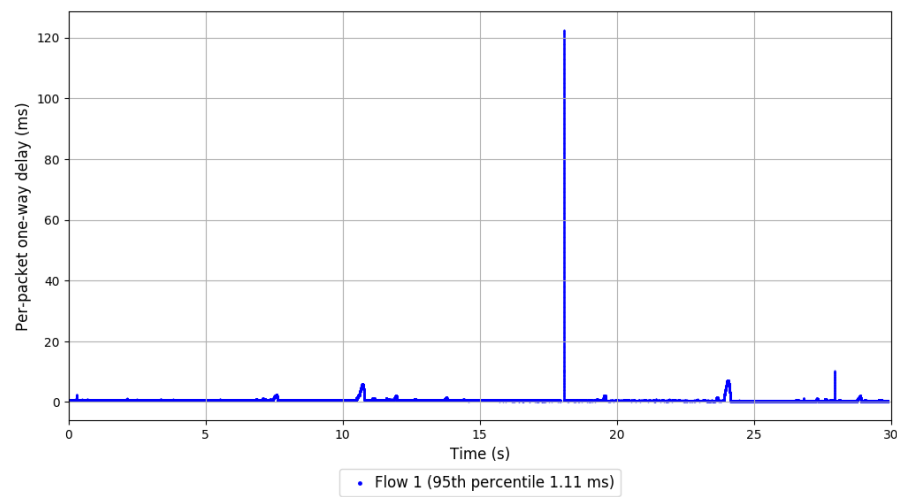
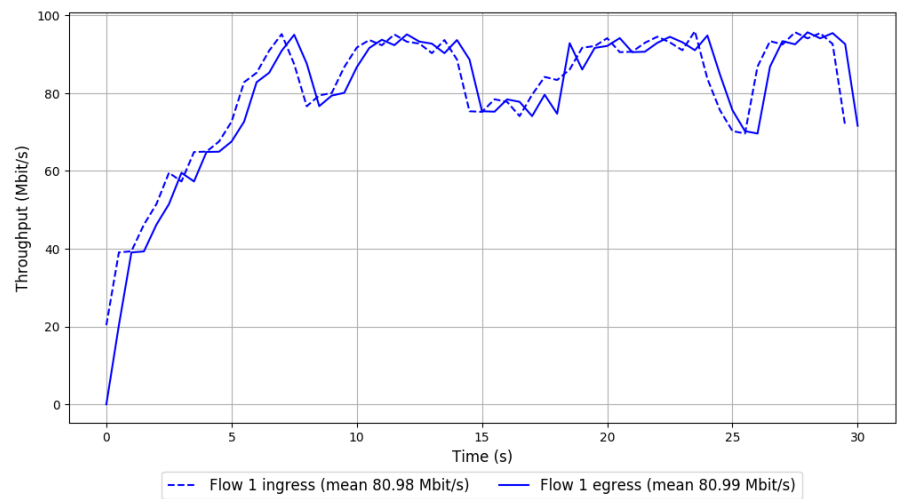


```
Run 1: Statistics of PCC-Allegro

Start at: 2019-01-02 19:27:55
End at: 2019-01-02 19:28:25
Local clock offset: -0.224 ms
Remote clock offset: 0.452 ms

# Below is generated by plot.py at 2019-01-02 21:16:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 80.99 Mbit/s
95th percentile per-packet one-way delay: 1.114 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 80.99 Mbit/s
95th percentile per-packet one-way delay: 1.114 ms
Loss rate: 0.00%
```

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2019-01-02 19:49:06

End at: 2019-01-02 19:49:36

Local clock offset: -8.488 ms

Remote clock offset: 0.64 ms

Below is generated by plot.py at 2019-01-02 21:16:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 66.64 Mbit/s

95th percentile per-packet one-way delay: 1.807 ms

Loss rate: 0.00%

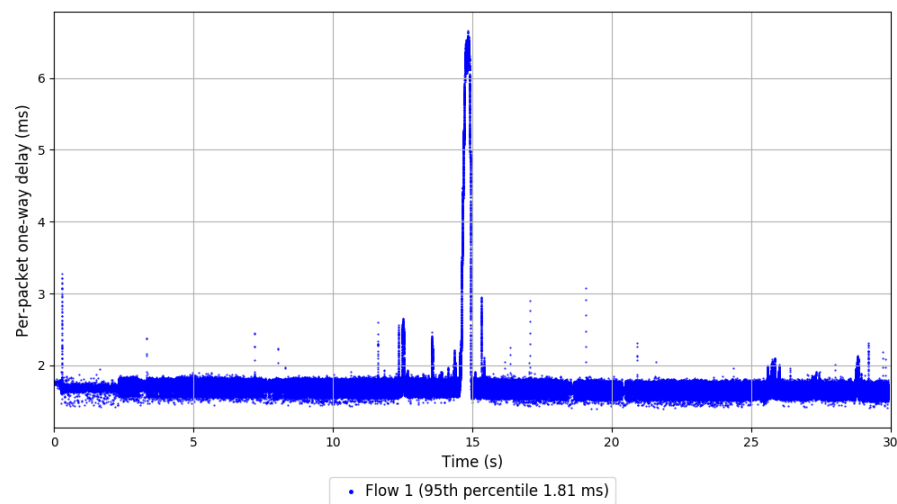
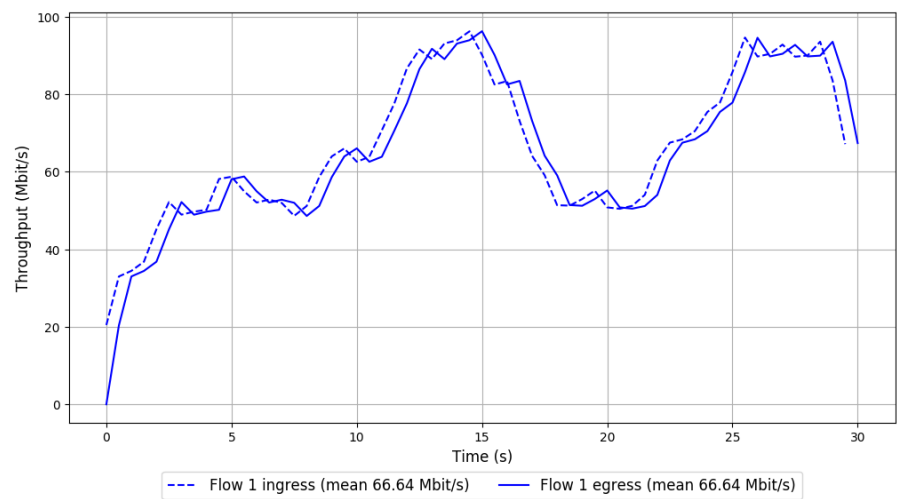
-- Flow 1:

Average throughput: 66.64 Mbit/s

95th percentile per-packet one-way delay: 1.807 ms

Loss rate: 0.00%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2019-01-02 20:10:19

End at: 2019-01-02 20:10:49

Local clock offset: -8.259 ms

Remote clock offset: 0.773 ms

Below is generated by plot.py at 2019-01-02 21:16:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 74.29 Mbit/s

95th percentile per-packet one-way delay: 1.051 ms

Loss rate: 0.00%

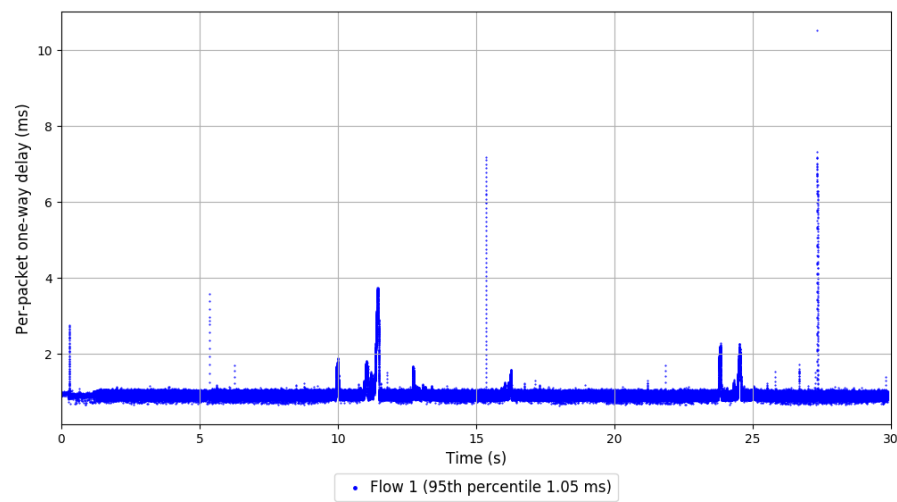
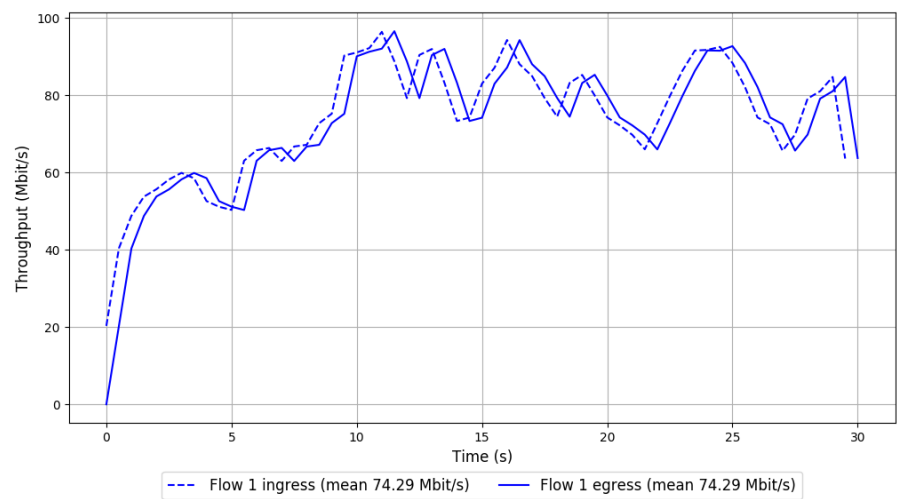
-- Flow 1:

Average throughput: 74.29 Mbit/s

95th percentile per-packet one-way delay: 1.051 ms

Loss rate: 0.00%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2019-01-02 20:31:30

End at: 2019-01-02 20:32:00

Local clock offset: -7.324 ms

Remote clock offset: 0.541 ms

Below is generated by plot.py at 2019-01-02 21:16:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 78.58 Mbit/s

95th percentile per-packet one-way delay: 4.458 ms

Loss rate: 0.00%

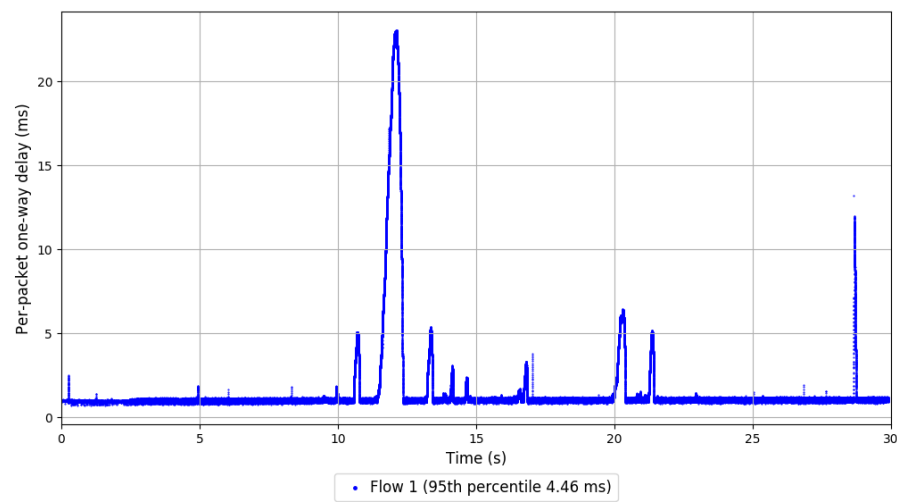
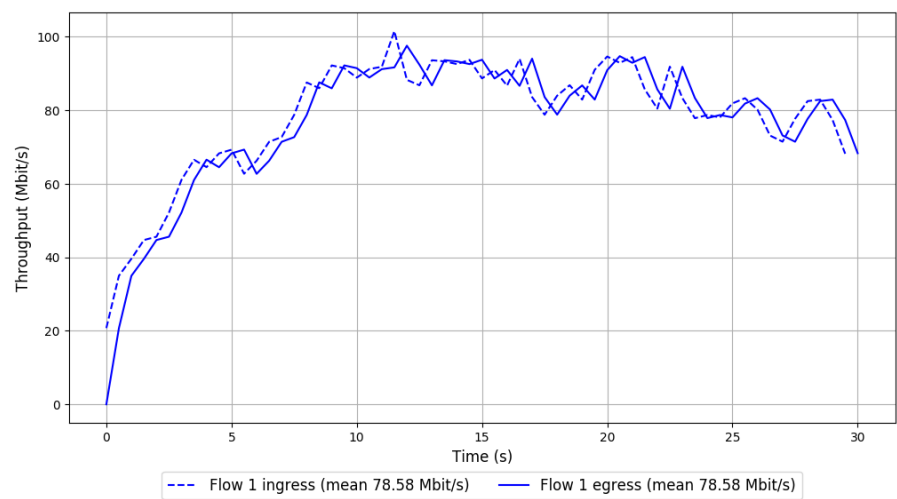
-- Flow 1:

Average throughput: 78.58 Mbit/s

95th percentile per-packet one-way delay: 4.458 ms

Loss rate: 0.00%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2019-01-02 20:52:45

End at: 2019-01-02 20:53:15

Local clock offset: -6.426 ms

Remote clock offset: 0.365 ms

Below is generated by plot.py at 2019-01-02 21:16:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 82.92 Mbit/s

95th percentile per-packet one-way delay: 1.847 ms

Loss rate: 0.00%

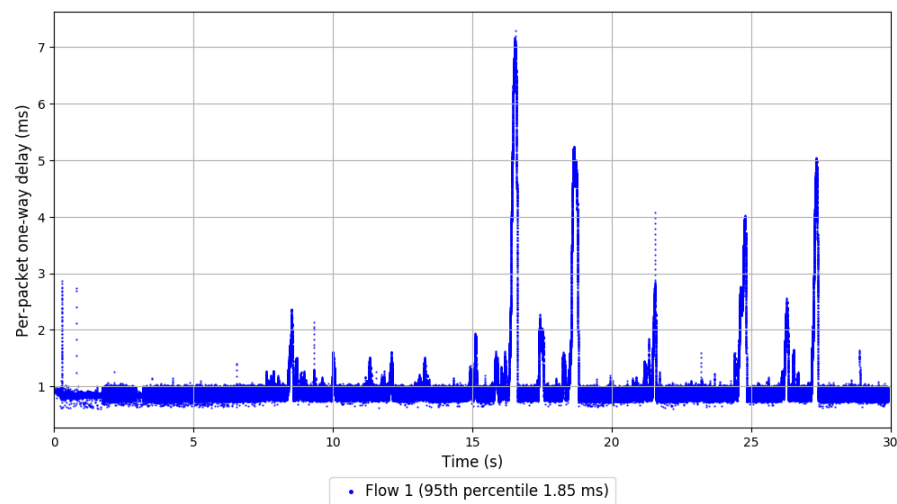
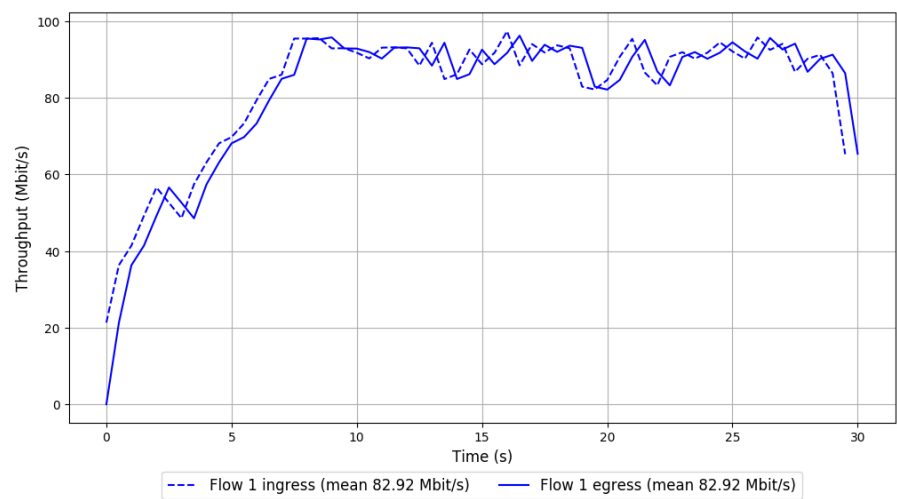
-- Flow 1:

Average throughput: 82.92 Mbit/s

95th percentile per-packet one-way delay: 1.847 ms

Loss rate: 0.00%

Run 5: Report of PCC-Allegro — Data Link

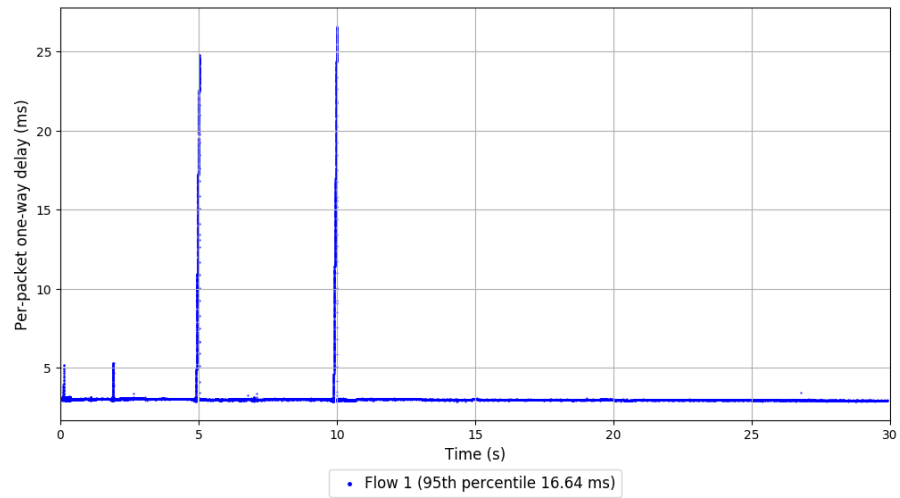
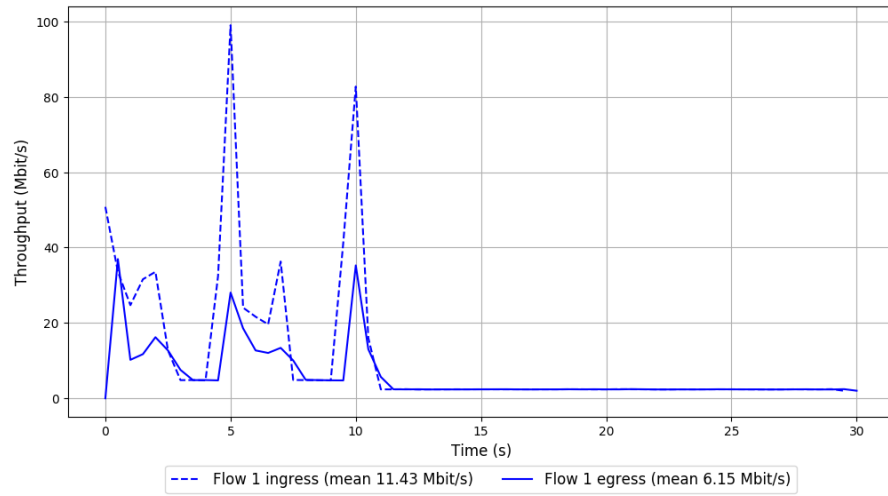


```
Run 1: Statistics of PCC-Expr

Start at: 2019-01-02 19:41:12
End at: 2019-01-02 19:41:42
Local clock offset: -6.994 ms
Remote clock offset: 0.497 ms

# Below is generated by plot.py at 2019-01-02 21:16:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.15 Mbit/s
95th percentile per-packet one-way delay: 16.639 ms
Loss rate: 46.22%
-- Flow 1:
Average throughput: 6.15 Mbit/s
95th percentile per-packet one-way delay: 16.639 ms
Loss rate: 46.22%
```

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2019-01-02 20:02:24

End at: 2019-01-02 20:02:54

Local clock offset: -8.059 ms

Remote clock offset: 0.762 ms

Below is generated by plot.py at 2019-01-02 21:16:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 13.12 Mbit/s

95th percentile per-packet one-way delay: 2.485 ms

Loss rate: 15.09%

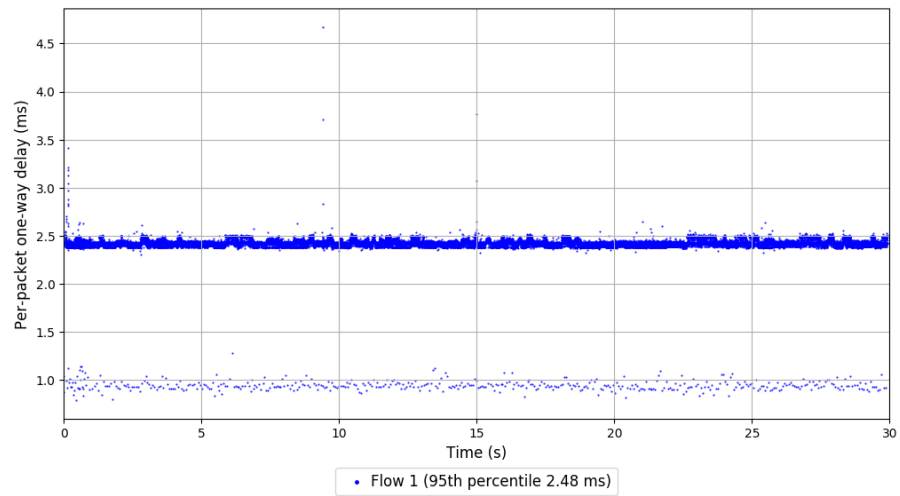
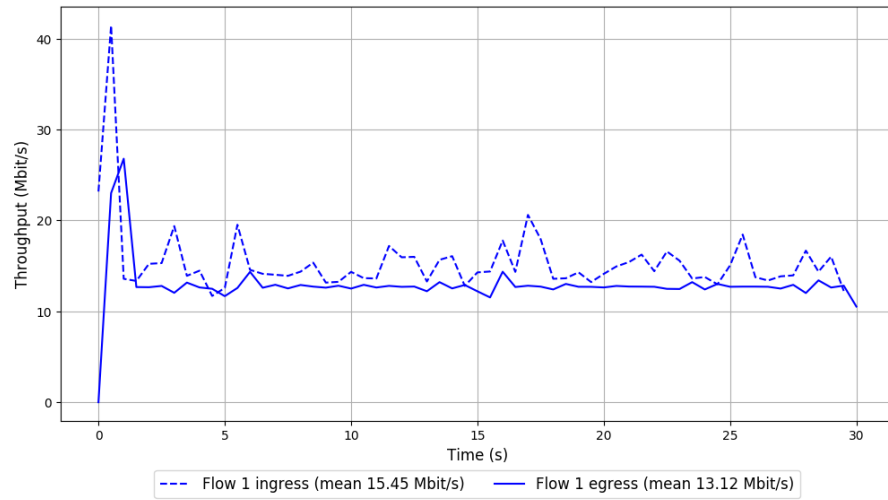
-- Flow 1:

Average throughput: 13.12 Mbit/s

95th percentile per-packet one-way delay: 2.485 ms

Loss rate: 15.09%

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2019-01-02 20:23:35

End at: 2019-01-02 20:24:05

Local clock offset: -8.994 ms

Remote clock offset: 0.692 ms

Below is generated by plot.py at 2019-01-02 21:16:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 12.98 Mbit/s

95th percentile per-packet one-way delay: 2.421 ms

Loss rate: 17.69%

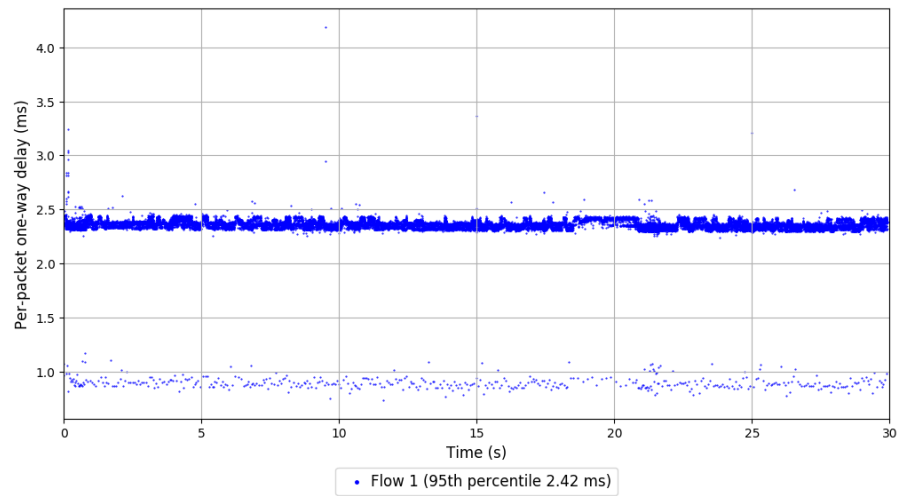
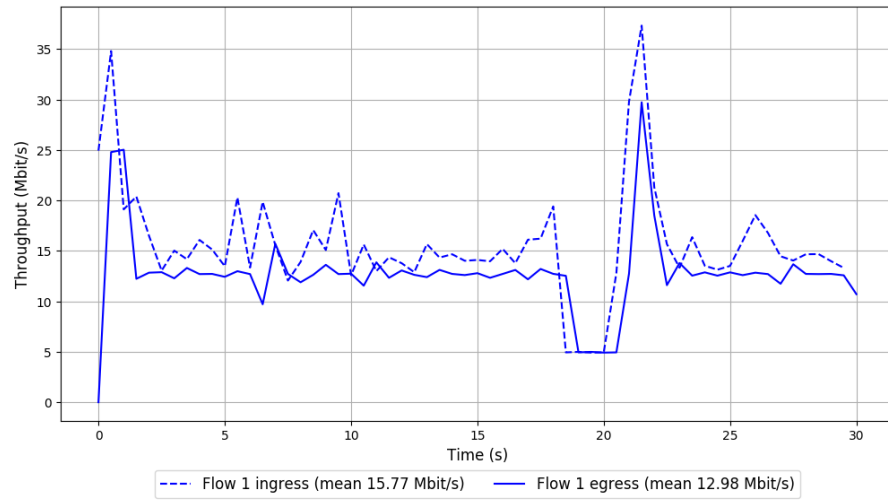
-- Flow 1:

Average throughput: 12.98 Mbit/s

95th percentile per-packet one-way delay: 2.421 ms

Loss rate: 17.69%

Run 3: Report of PCC-Expr — Data Link

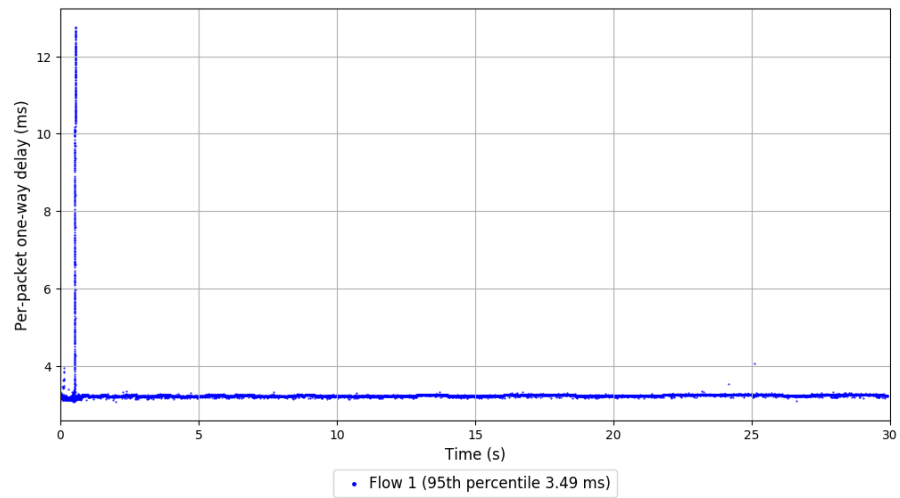
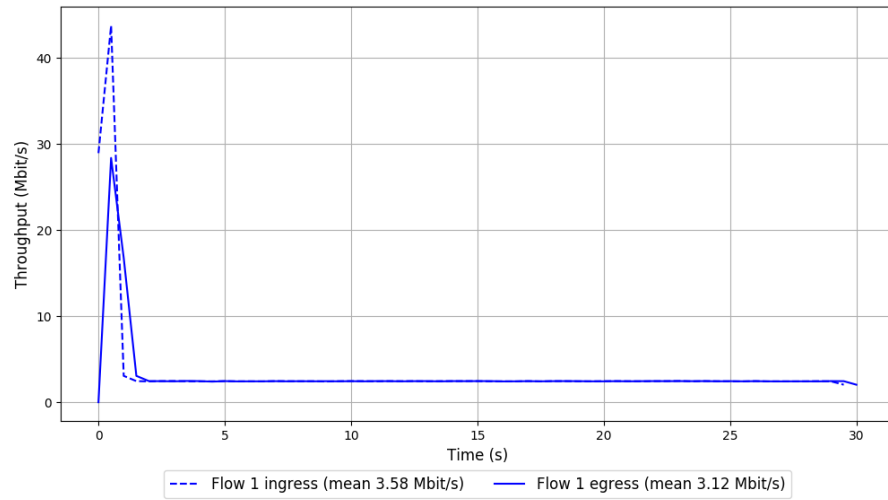


```
Run 4: Statistics of PCC-Expr

Start at: 2019-01-02 20:44:46
End at: 2019-01-02 20:45:16
Local clock offset: -7.181 ms
Remote clock offset: 0.44 ms

# Below is generated by plot.py at 2019-01-02 21:16:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 3.12 Mbit/s
95th percentile per-packet one-way delay: 3.487 ms
Loss rate: 12.84%
-- Flow 1:
Average throughput: 3.12 Mbit/s
95th percentile per-packet one-way delay: 3.487 ms
Loss rate: 12.84%
```

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

Start at: 2019-01-02 21:06:03

End at: 2019-01-02 21:06:33

Local clock offset: -7.341 ms

Remote clock offset: 0.672 ms

Below is generated by plot.py at 2019-01-02 21:16:36

Datalink statistics

-- Total of 1 flow:

Average throughput: 13.12 Mbit/s

95th percentile per-packet one-way delay: 1.710 ms

Loss rate: 18.25%

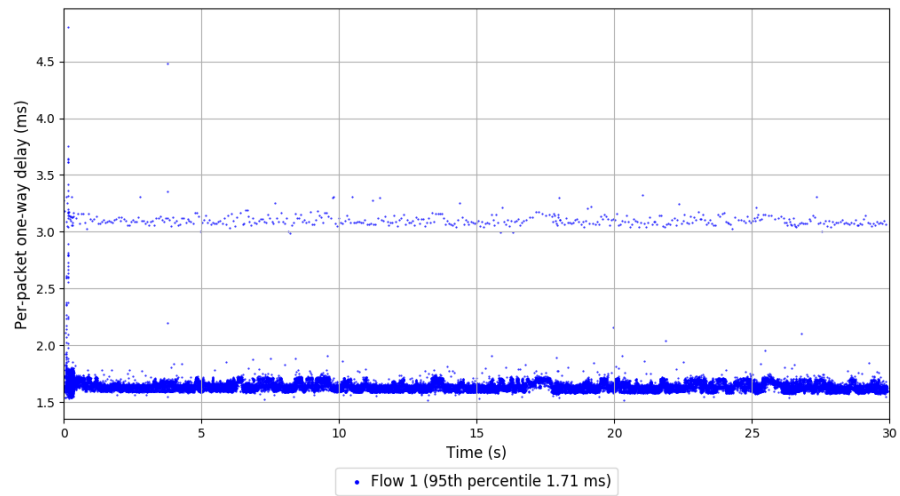
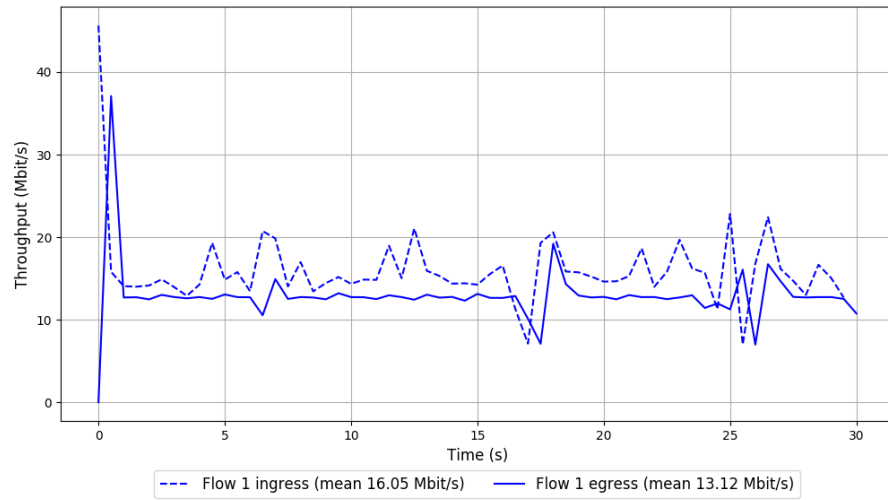
-- Flow 1:

Average throughput: 13.12 Mbit/s

95th percentile per-packet one-way delay: 1.710 ms

Loss rate: 18.25%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2019-01-02 19:32:21

End at: 2019-01-02 19:32:51

Local clock offset: -3.003 ms

Remote clock offset: 0.512 ms

Below is generated by plot.py at 2019-01-02 21:17:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 84.02 Mbit/s

95th percentile per-packet one-way delay: 11.708 ms

Loss rate: 0.12%

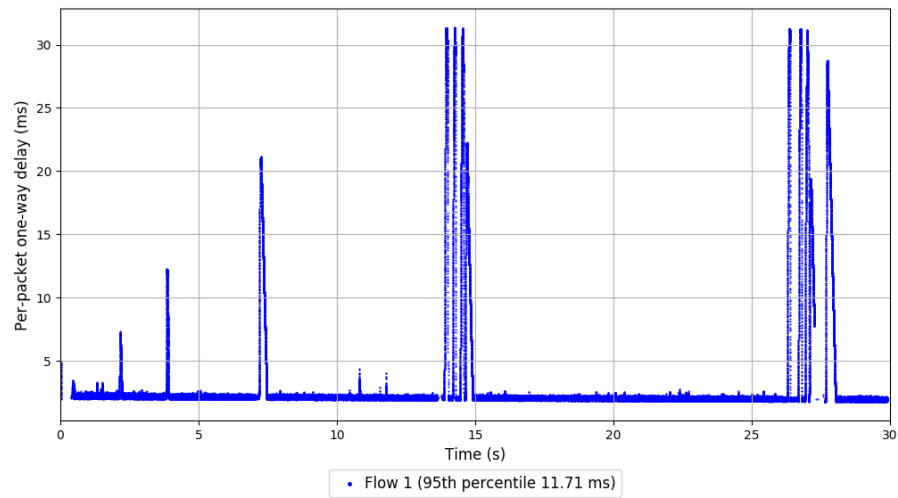
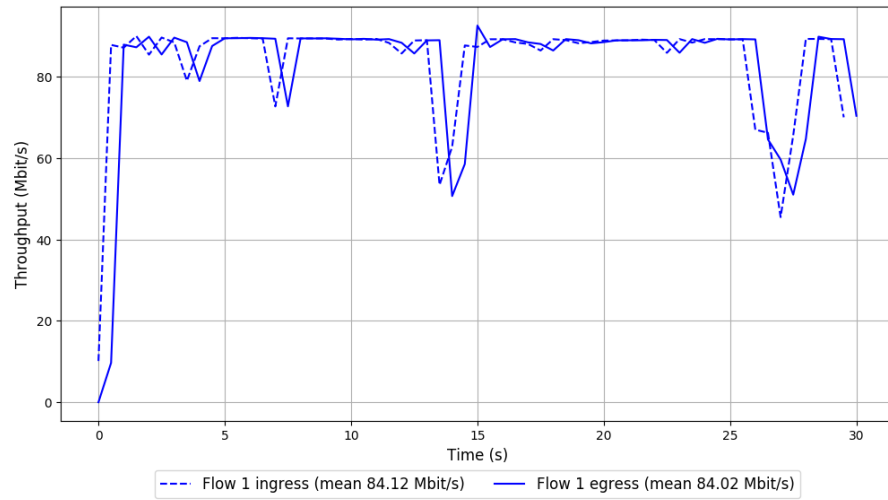
-- Flow 1:

Average throughput: 84.02 Mbit/s

95th percentile per-packet one-way delay: 11.708 ms

Loss rate: 0.12%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2019-01-02 19:53:32

End at: 2019-01-02 19:54:02

Local clock offset: -8.272 ms

Remote clock offset: 0.67 ms

Below is generated by plot.py at 2019-01-02 21:17:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 79.44 Mbit/s

95th percentile per-packet one-way delay: 1.206 ms

Loss rate: 0.33%

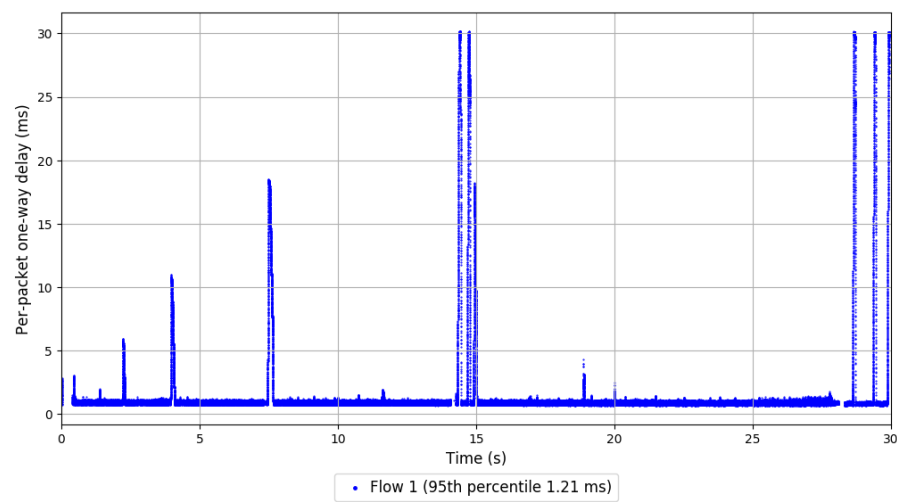
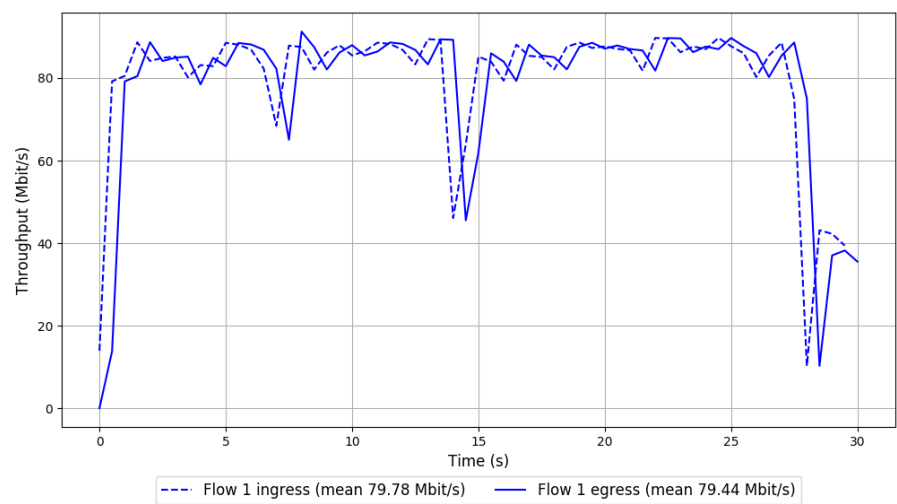
-- Flow 1:

Average throughput: 79.44 Mbit/s

95th percentile per-packet one-way delay: 1.206 ms

Loss rate: 0.33%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2019-01-02 20:14:45

End at: 2019-01-02 20:15:15

Local clock offset: -8.529 ms

Remote clock offset: 0.726 ms

Below is generated by plot.py at 2019-01-02 21:17:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 77.33 Mbit/s

95th percentile per-packet one-way delay: 3.674 ms

Loss rate: 0.24%

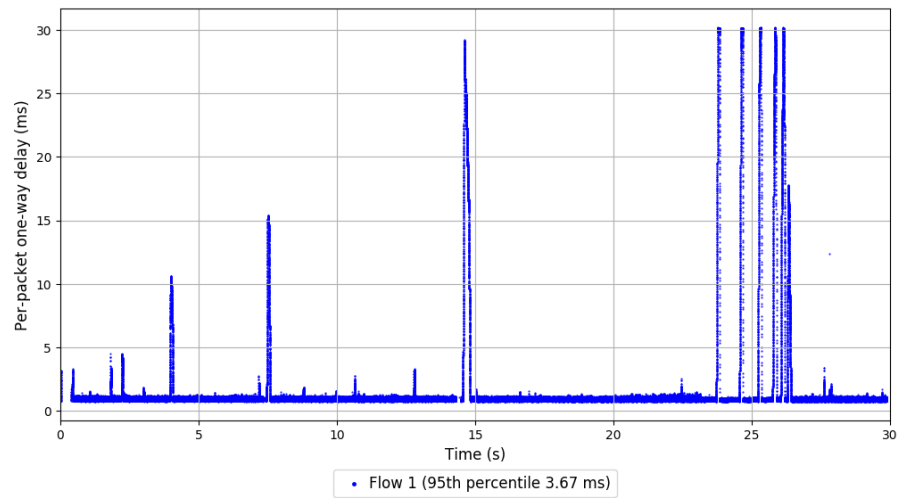
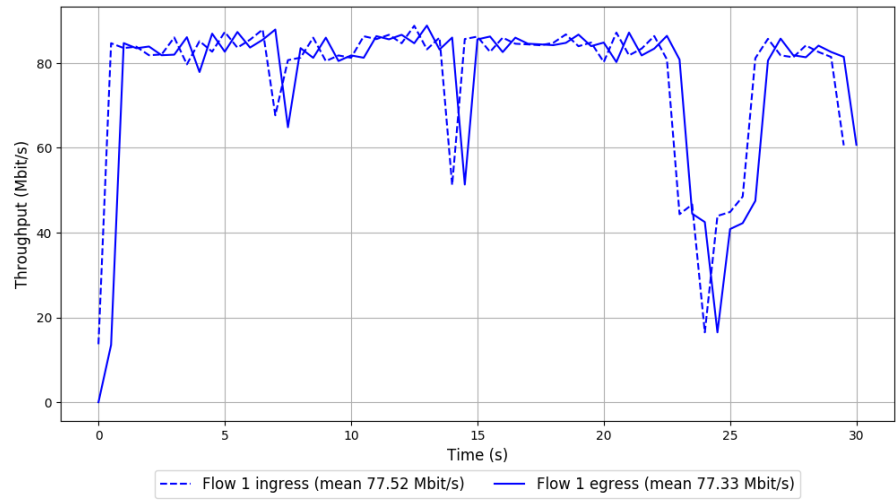
-- Flow 1:

Average throughput: 77.33 Mbit/s

95th percentile per-packet one-way delay: 3.674 ms

Loss rate: 0.24%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2019-01-02 20:35:56

End at: 2019-01-02 20:36:26

Local clock offset: -6.814 ms

Remote clock offset: 0.489 ms

Below is generated by plot.py at 2019-01-02 21:17:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 77.59 Mbit/s

95th percentile per-packet one-way delay: 4.119 ms

Loss rate: 0.30%

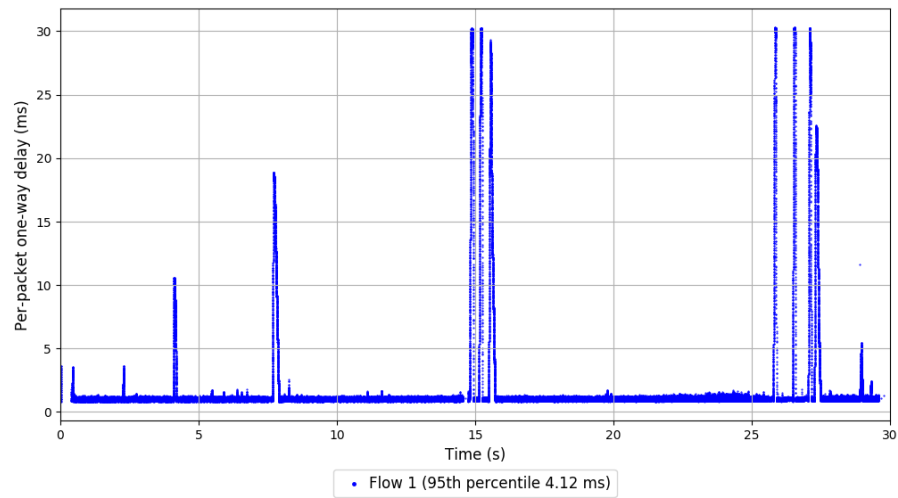
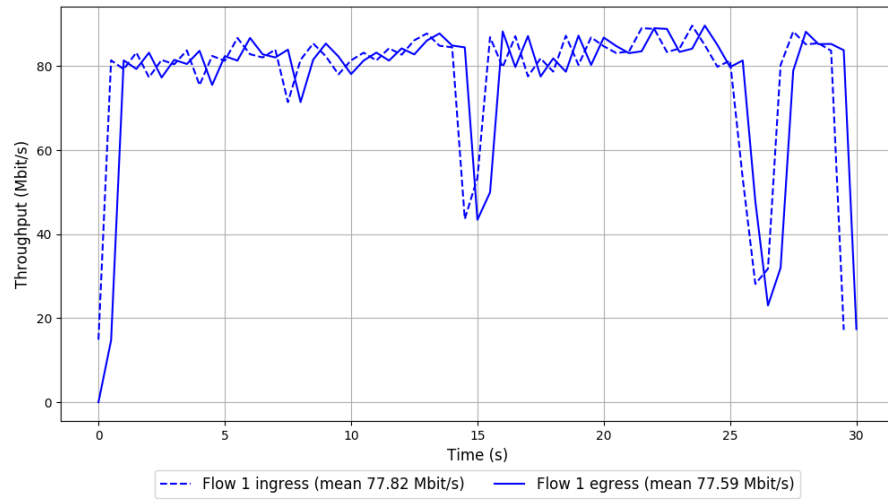
-- Flow 1:

Average throughput: 77.59 Mbit/s

95th percentile per-packet one-way delay: 4.119 ms

Loss rate: 0.30%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2019-01-02 20:57:12

End at: 2019-01-02 20:57:42

Local clock offset: -6.424 ms

Remote clock offset: 0.525 ms

Below is generated by plot.py at 2019-01-02 21:17:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 75.97 Mbit/s

95th percentile per-packet one-way delay: 5.604 ms

Loss rate: 0.30%

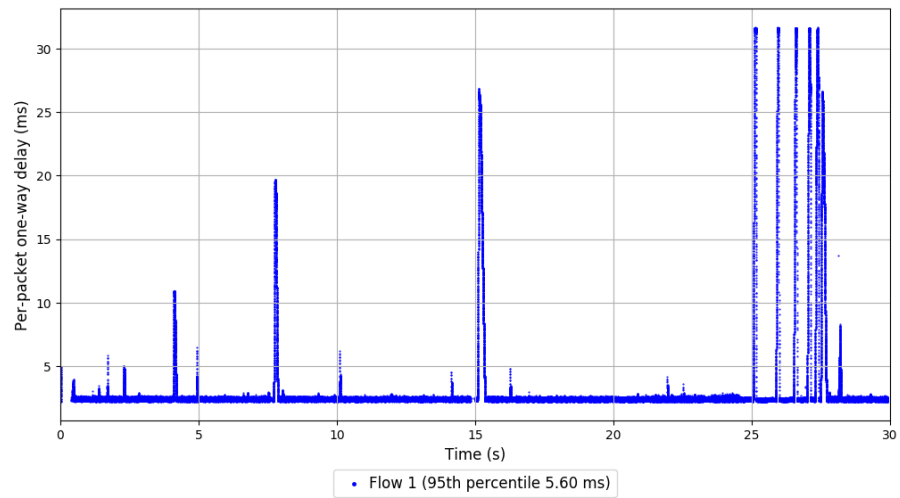
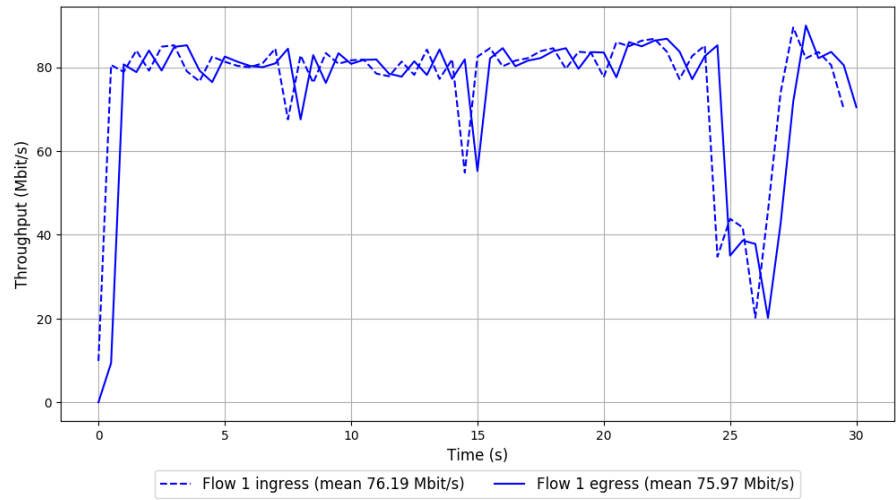
-- Flow 1:

Average throughput: 75.97 Mbit/s

95th percentile per-packet one-way delay: 5.604 ms

Loss rate: 0.30%

Run 5: Report of QUIC Cubic — Data Link



Run 1: Statistics of SCReAM

Start at: 2019-01-02 19:31:17

End at: 2019-01-02 19:31:47

Local clock offset: -2.371 ms

Remote clock offset: 0.486 ms

Below is generated by plot.py at 2019-01-02 21:17:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 0.625 ms

Loss rate: 0.00%

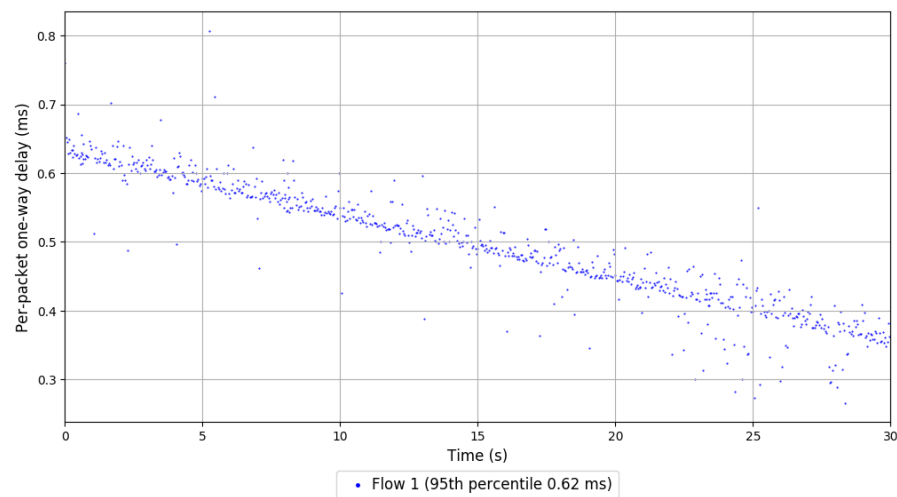
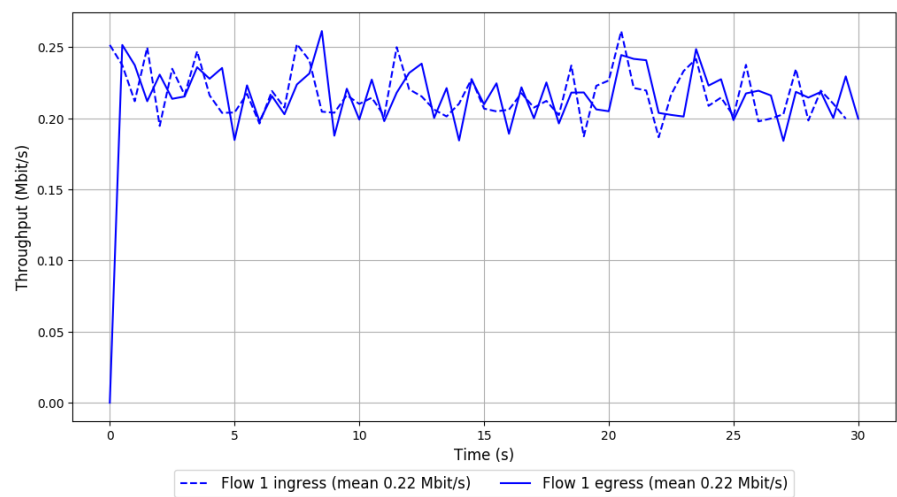
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 0.625 ms

Loss rate: 0.00%

Run 1: Report of SReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2019-01-02 19:52:28

End at: 2019-01-02 19:52:58

Local clock offset: -8.869 ms

Remote clock offset: 0.703 ms

Below is generated by plot.py at 2019-01-02 21:17:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.666 ms

Loss rate: 0.00%

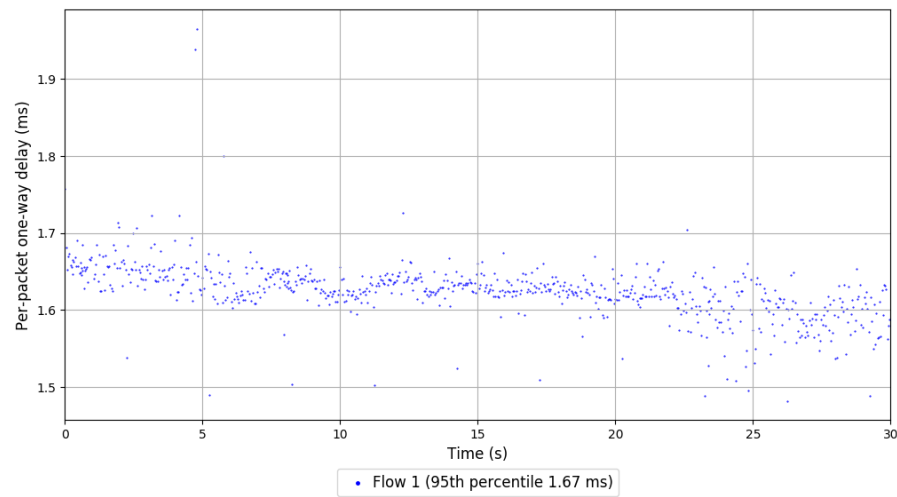
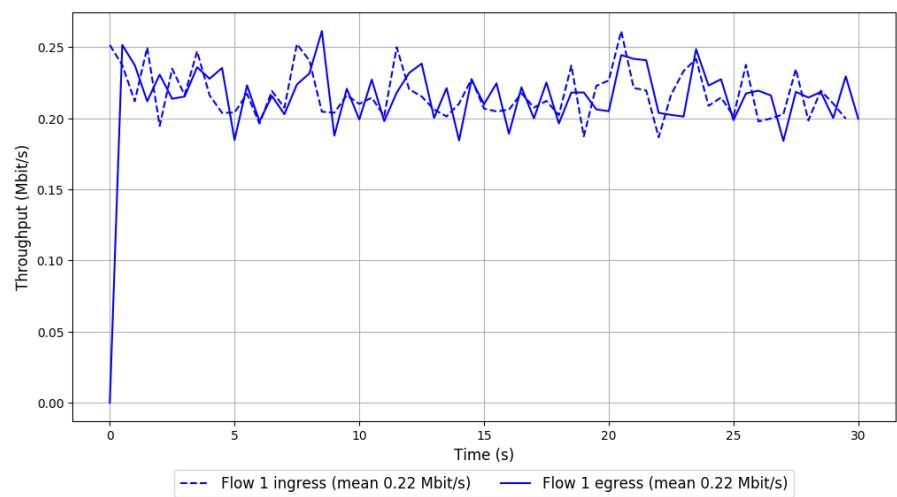
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.666 ms

Loss rate: 0.00%

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2019-01-02 20:13:40

End at: 2019-01-02 20:14:10

Local clock offset: -8.496 ms

Remote clock offset: 0.755 ms

Below is generated by plot.py at 2019-01-02 21:17:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 0.994 ms

Loss rate: 0.00%

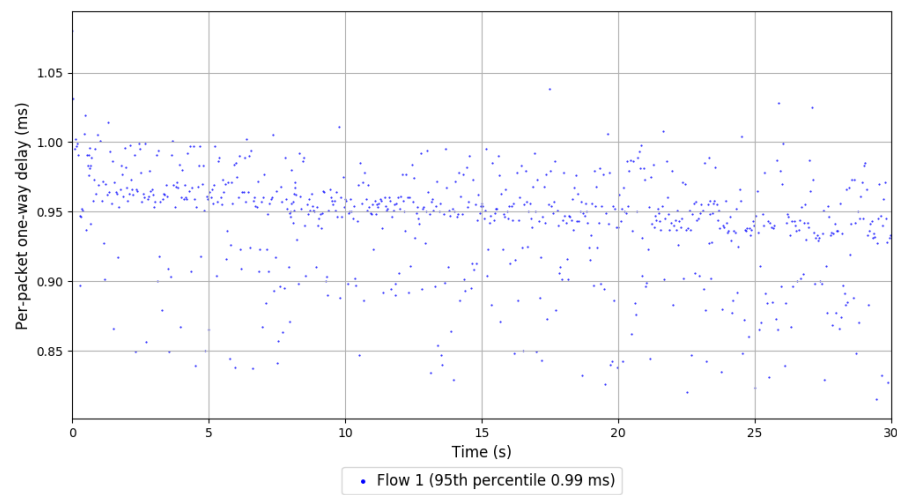
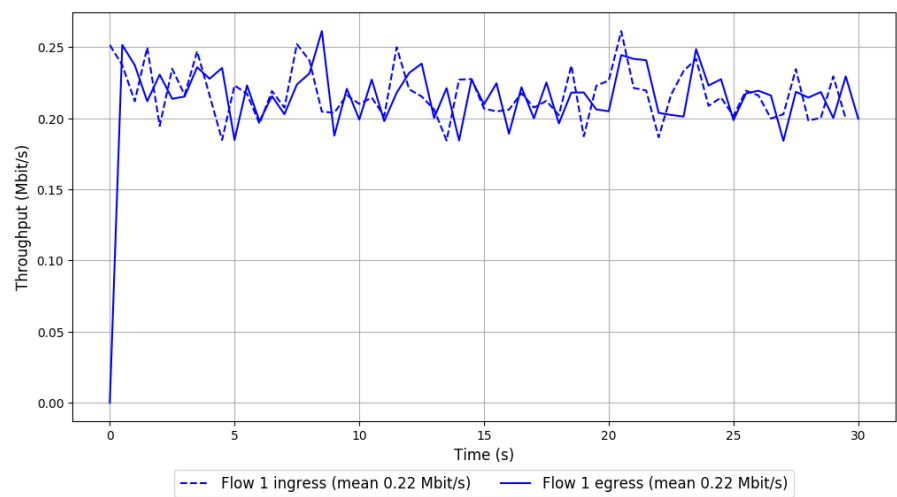
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 0.994 ms

Loss rate: 0.00%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2019-01-02 20:34:51

End at: 2019-01-02 20:35:21

Local clock offset: -6.983 ms

Remote clock offset: 0.499 ms

Below is generated by plot.py at 2019-01-02 21:17:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.104 ms

Loss rate: 0.00%

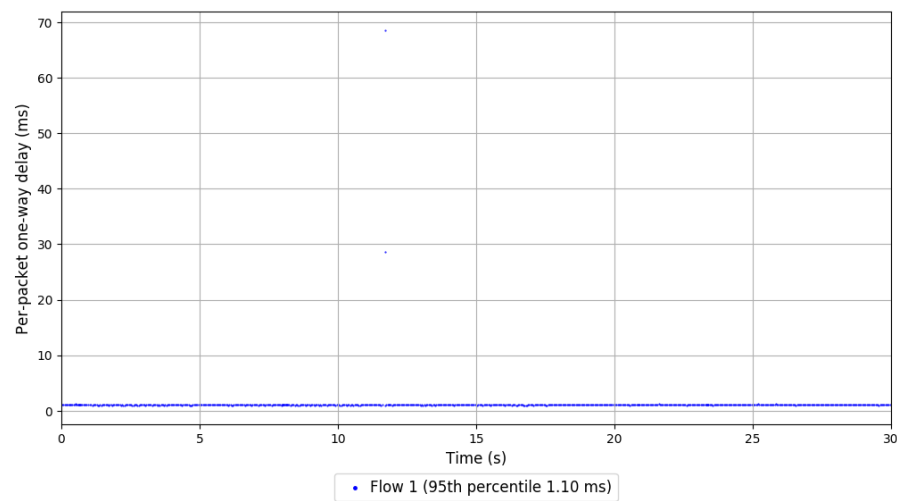
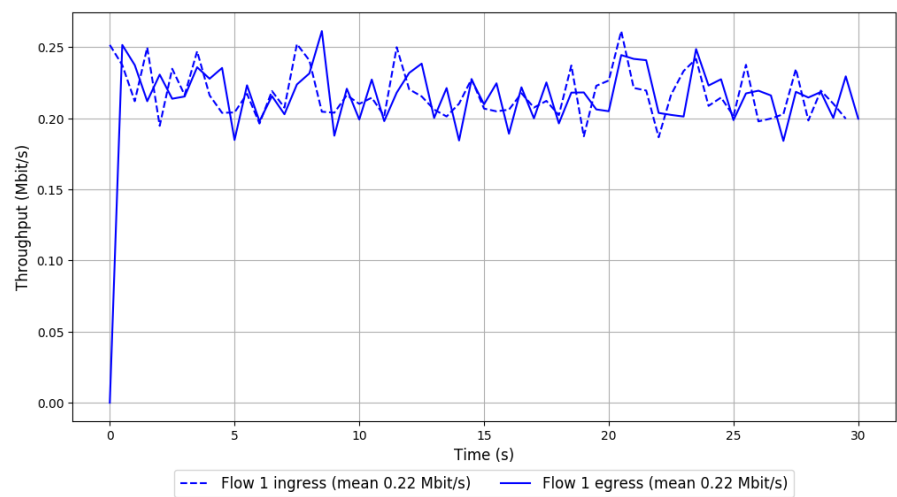
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.104 ms

Loss rate: 0.00%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2019-01-02 20:56:07

End at: 2019-01-02 20:56:37

Local clock offset: -7.186 ms

Remote clock offset: 0.392 ms

Below is generated by plot.py at 2019-01-02 21:17:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.605 ms

Loss rate: 0.00%

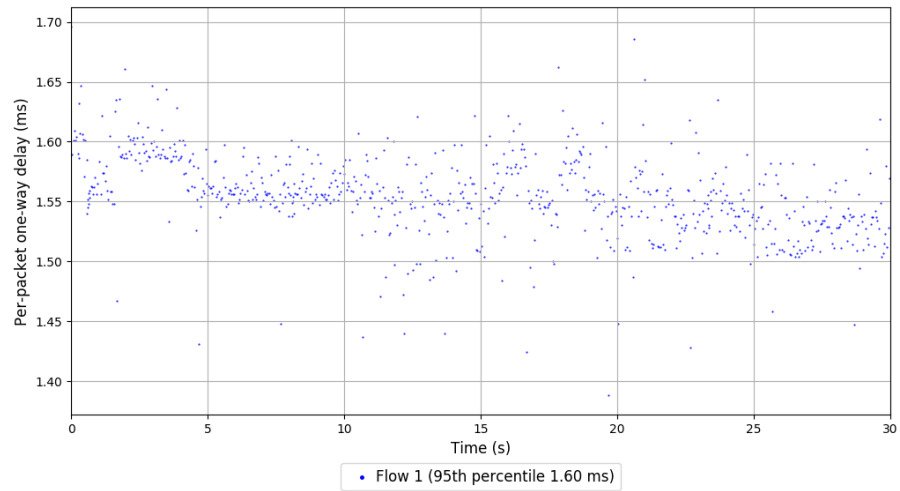
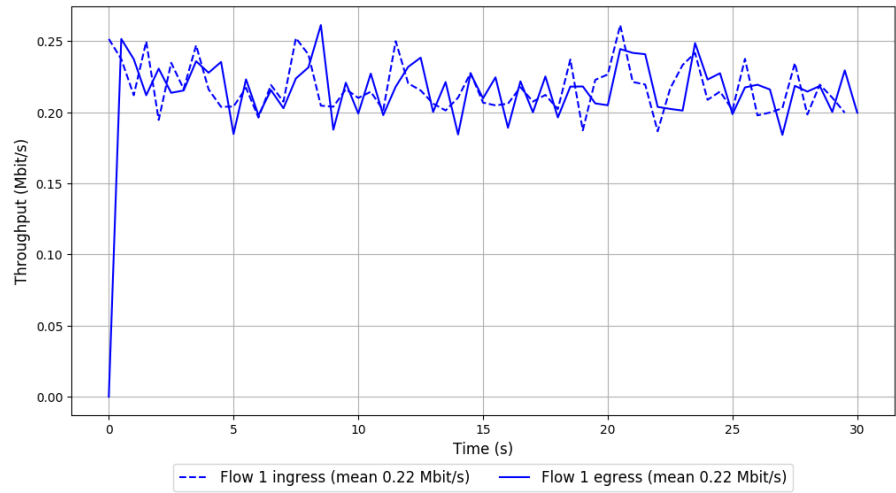
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.605 ms

Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2019-01-02 19:29:02

End at: 2019-01-02 19:29:32

Local clock offset: -1.72 ms

Remote clock offset: 0.537 ms

Below is generated by plot.py at 2019-01-02 21:17:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 50.26 Mbit/s

95th percentile per-packet one-way delay: 12.068 ms

Loss rate: 0.00%

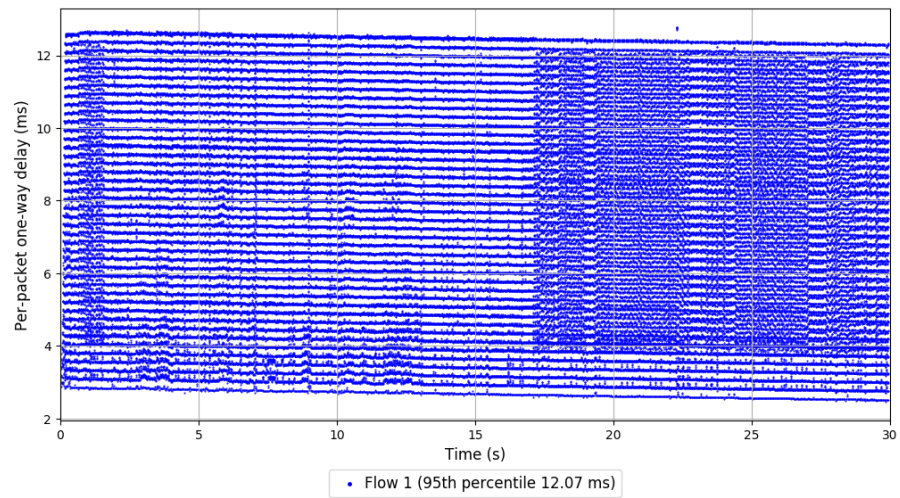
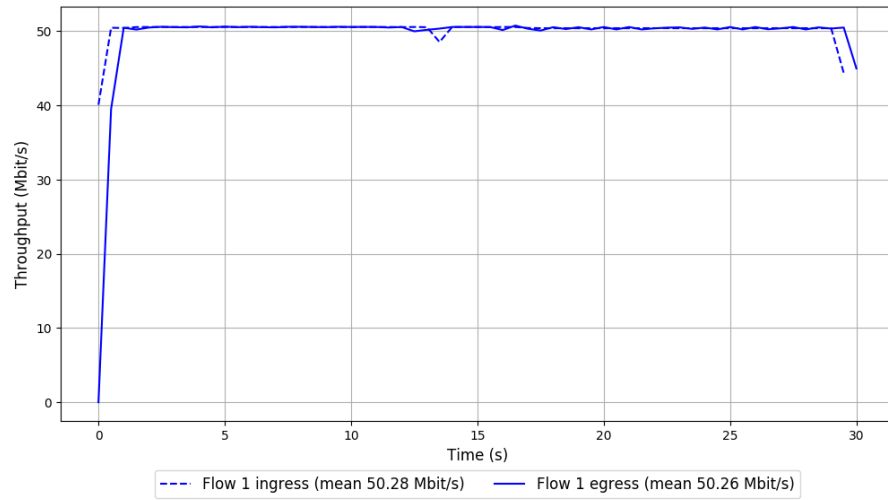
-- Flow 1:

Average throughput: 50.26 Mbit/s

95th percentile per-packet one-way delay: 12.068 ms

Loss rate: 0.00%

Run 1: Report of Sprout — Data Link

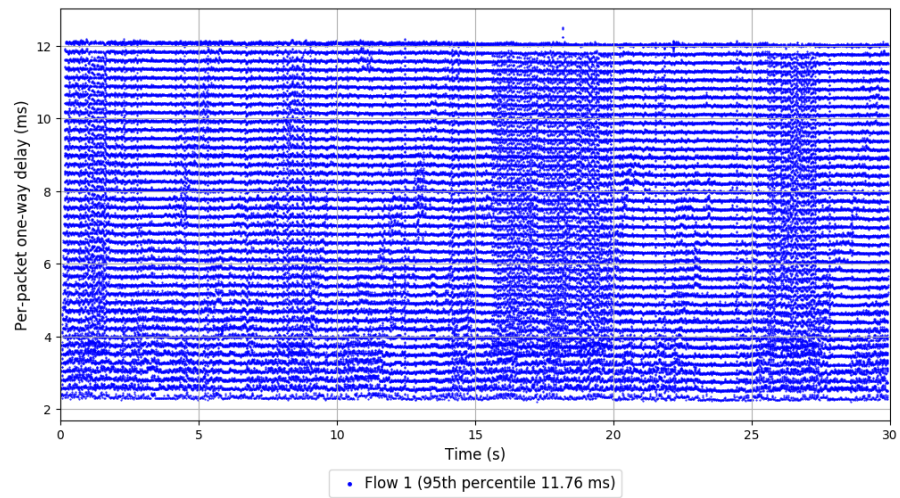
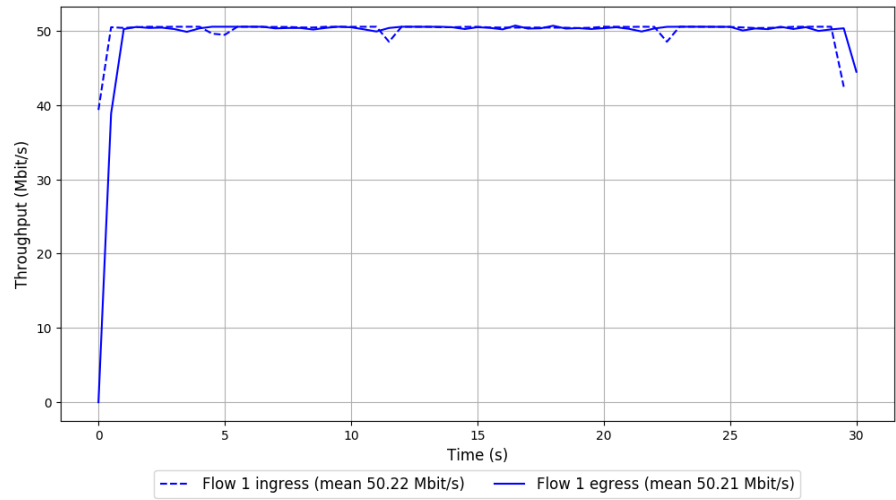


Run 2: Statistics of Sprout

Start at: 2019-01-02 19:50:13
End at: 2019-01-02 19:50:43
Local clock offset: -7.89 ms
Remote clock offset: 0.609 ms

Below is generated by plot.py at 2019-01-02 21:17:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 50.21 Mbit/s
95th percentile per-packet one-way delay: 11.760 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.21 Mbit/s
95th percentile per-packet one-way delay: 11.760 ms
Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

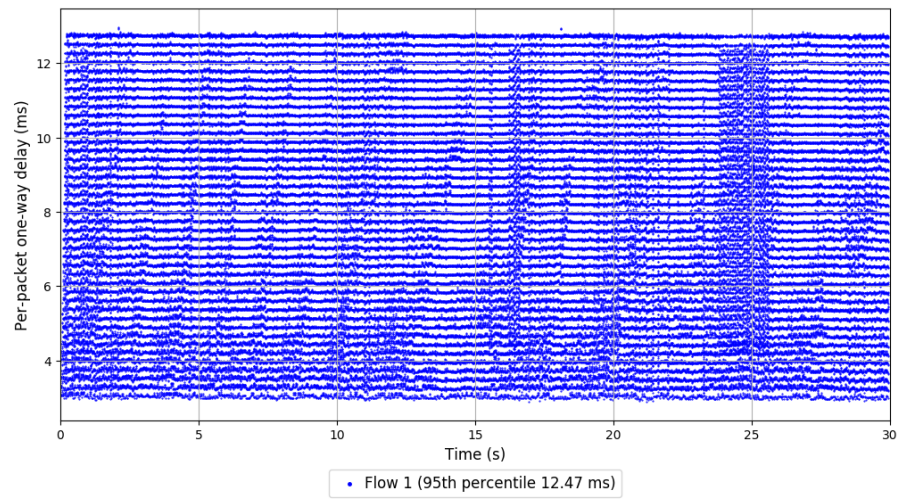
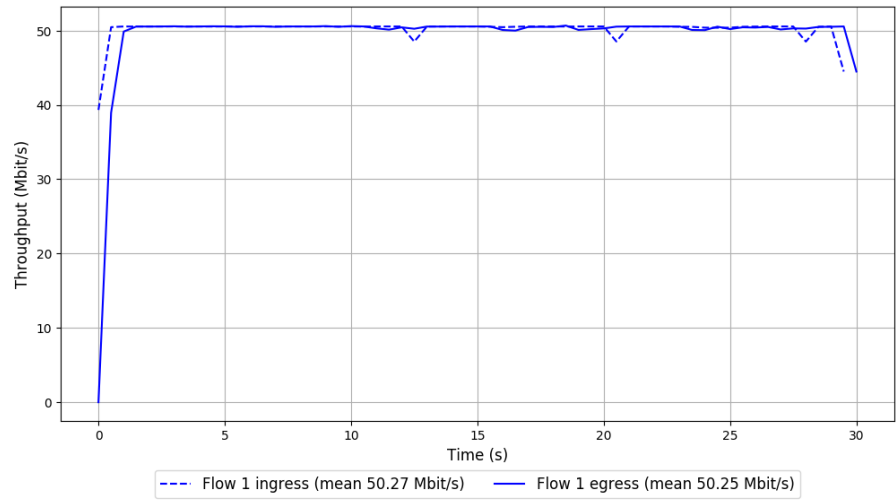


Run 3: Statistics of Sprout

Start at: 2019-01-02 20:11:25
End at: 2019-01-02 20:11:55
Local clock offset: -9.056 ms
Remote clock offset: 0.696 ms

Below is generated by plot.py at 2019-01-02 21:17:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 50.25 Mbit/s
95th percentile per-packet one-way delay: 12.475 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.25 Mbit/s
95th percentile per-packet one-way delay: 12.475 ms
Loss rate: 0.00%

Run 3: Report of Sprout — Data Link

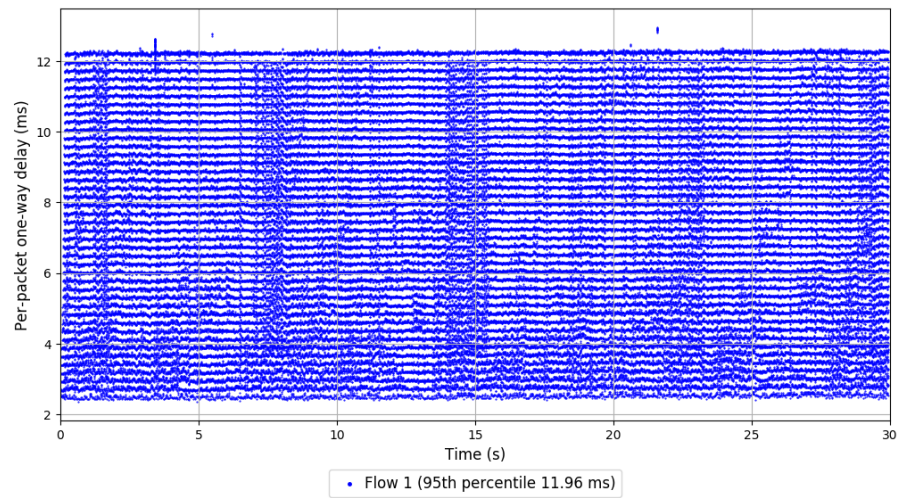
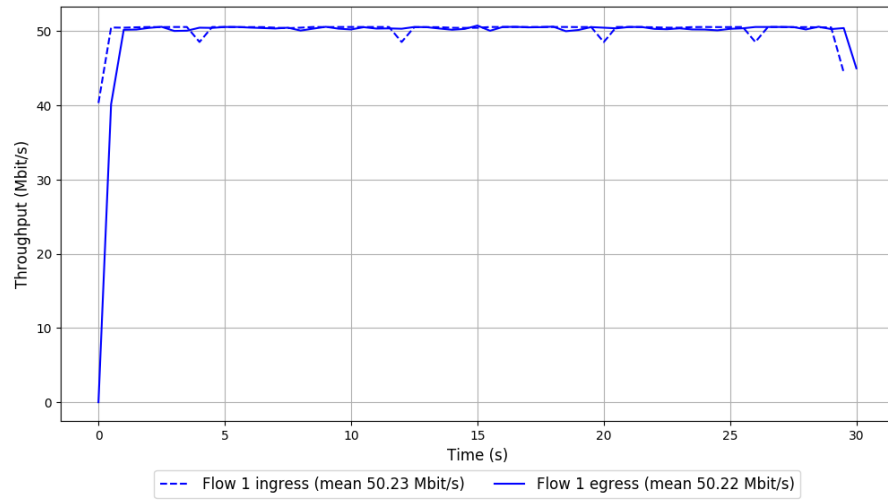


Run 4: Statistics of Sprout

Start at: 2019-01-02 20:32:36
End at: 2019-01-02 20:33:06
Local clock offset: -7.184 ms
Remote clock offset: 0.568 ms

Below is generated by plot.py at 2019-01-02 21:17:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 50.22 Mbit/s
95th percentile per-packet one-way delay: 11.965 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.22 Mbit/s
95th percentile per-packet one-way delay: 11.965 ms
Loss rate: 0.00%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2019-01-02 20:53:52

End at: 2019-01-02 20:54:22

Local clock offset: -7.172 ms

Remote clock offset: 0.494 ms

Below is generated by plot.py at 2019-01-02 21:17:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 50.33 Mbit/s

95th percentile per-packet one-way delay: 11.156 ms

Loss rate: 0.00%

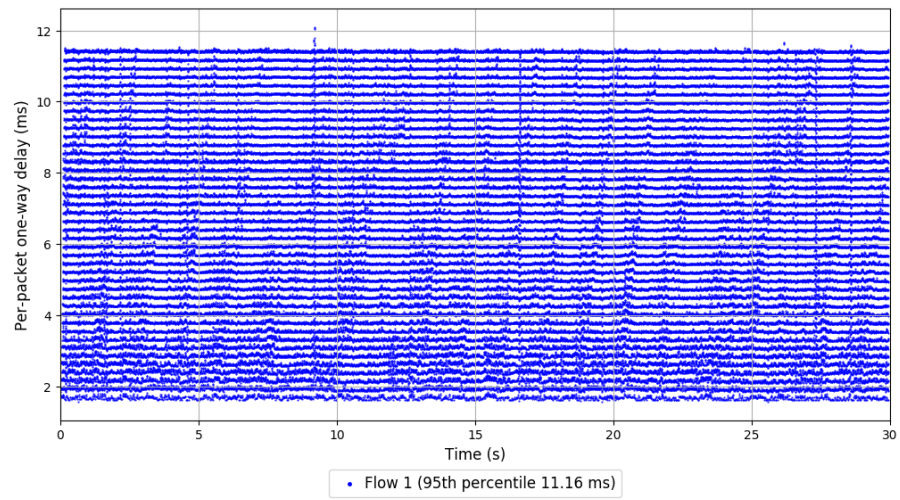
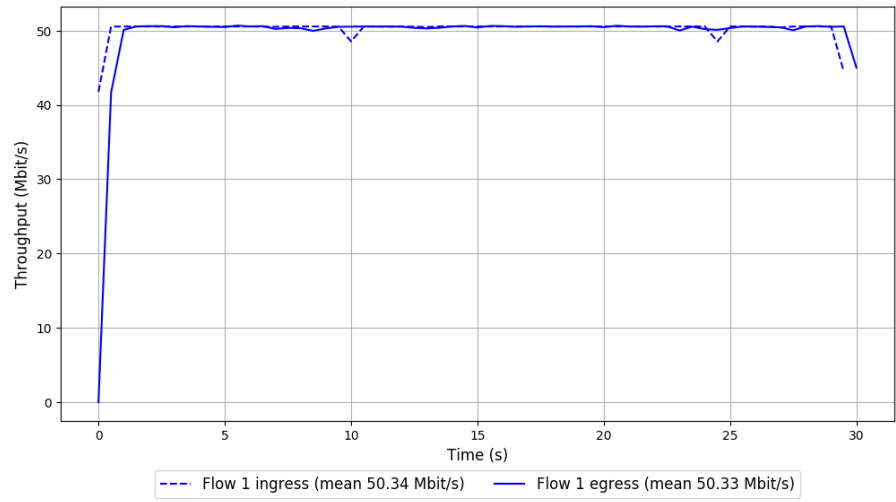
-- Flow 1:

Average throughput: 50.33 Mbit/s

95th percentile per-packet one-way delay: 11.156 ms

Loss rate: 0.00%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2019-01-02 19:40:06

End at: 2019-01-02 19:40:36

Local clock offset: -5.856 ms

Remote clock offset: 0.639 ms

Below is generated by plot.py at 2019-01-02 21:17:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 10.06 Mbit/s

95th percentile per-packet one-way delay: 2.315 ms

Loss rate: 81.13%

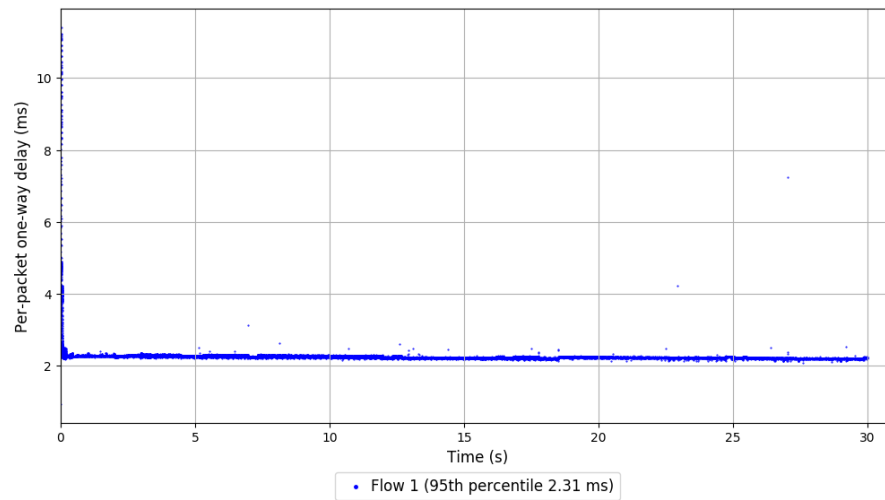
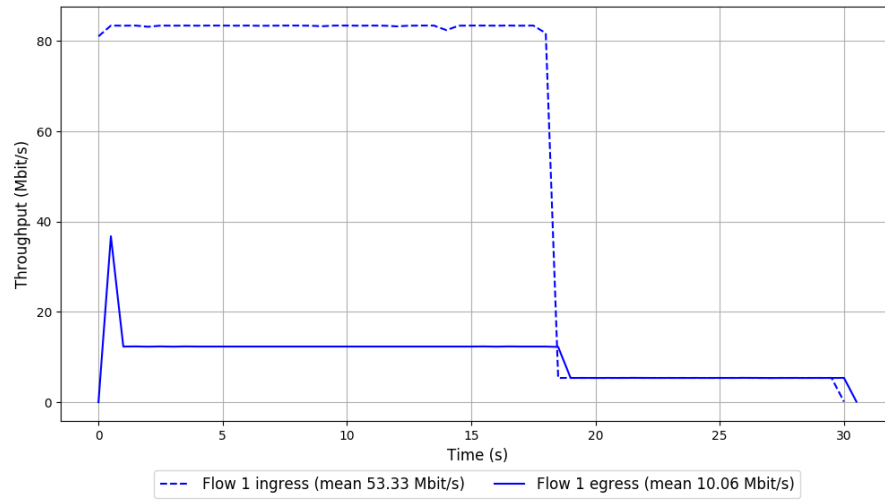
-- Flow 1:

Average throughput: 10.06 Mbit/s

95th percentile per-packet one-way delay: 2.315 ms

Loss rate: 81.13%

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



Run 2: Statistics of TaoVA-100x

Start at: 2019-01-02 20:01:19

End at: 2019-01-02 20:01:49

Local clock offset: -8.866 ms

Remote clock offset: 0.747 ms

Below is generated by plot.py at 2019-01-02 21:17:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 10.06 Mbit/s

95th percentile per-packet one-way delay: 3.295 ms

Loss rate: 81.13%

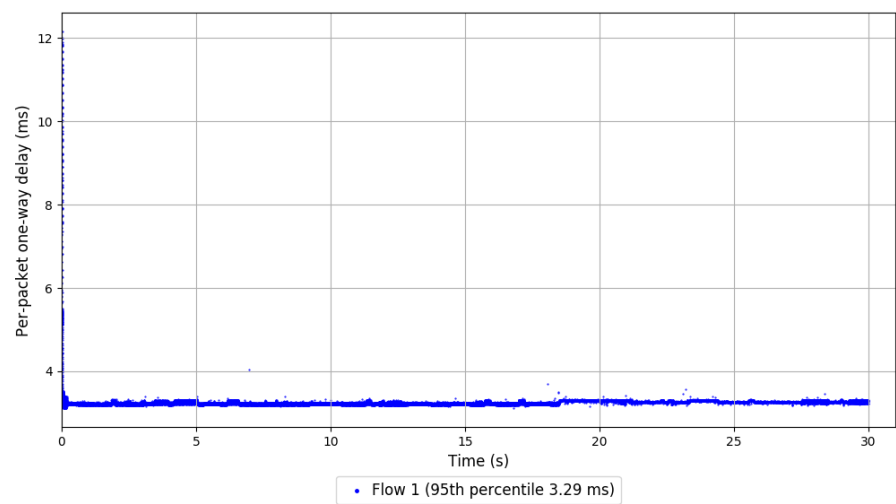
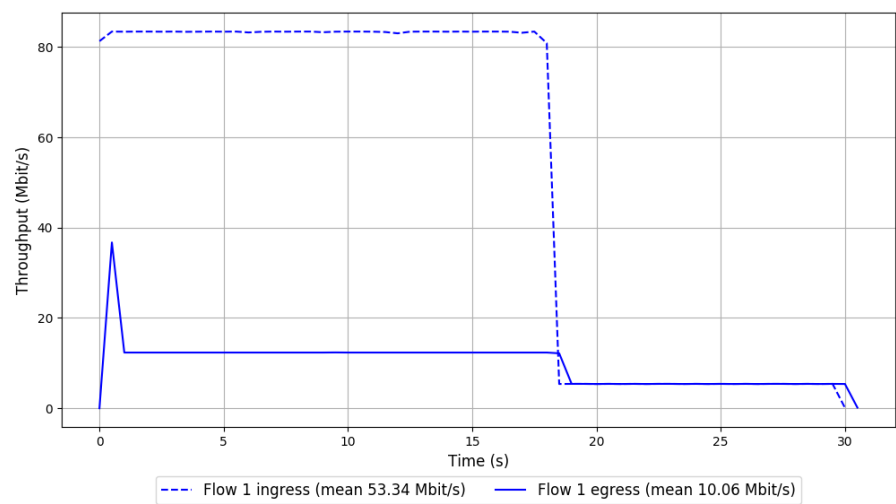
-- Flow 1:

Average throughput: 10.06 Mbit/s

95th percentile per-packet one-way delay: 3.295 ms

Loss rate: 81.13%

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



Run 3: Statistics of TaoVA-100x

Start at: 2019-01-02 20:22:29

End at: 2019-01-02 20:22:59

Local clock offset: -8.911 ms

Remote clock offset: 0.572 ms

Below is generated by plot.py at 2019-01-02 21:17:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 10.07 Mbit/s

95th percentile per-packet one-way delay: 2.287 ms

Loss rate: 81.14%

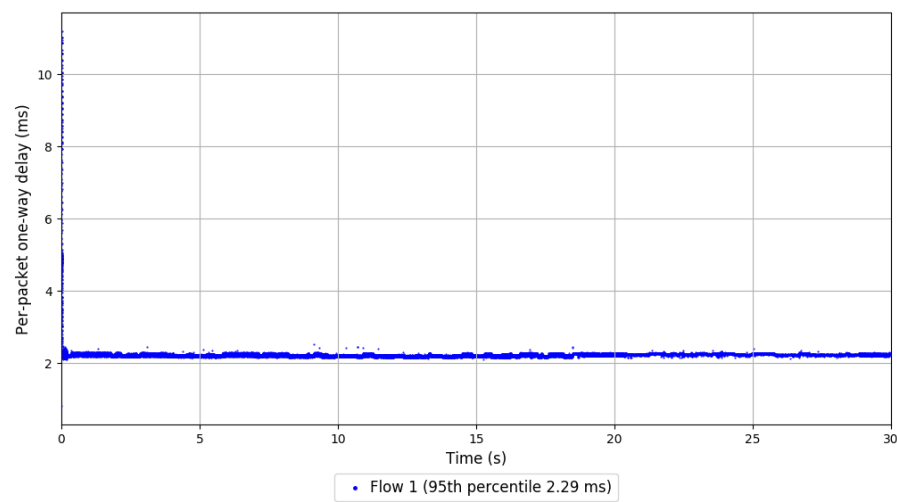
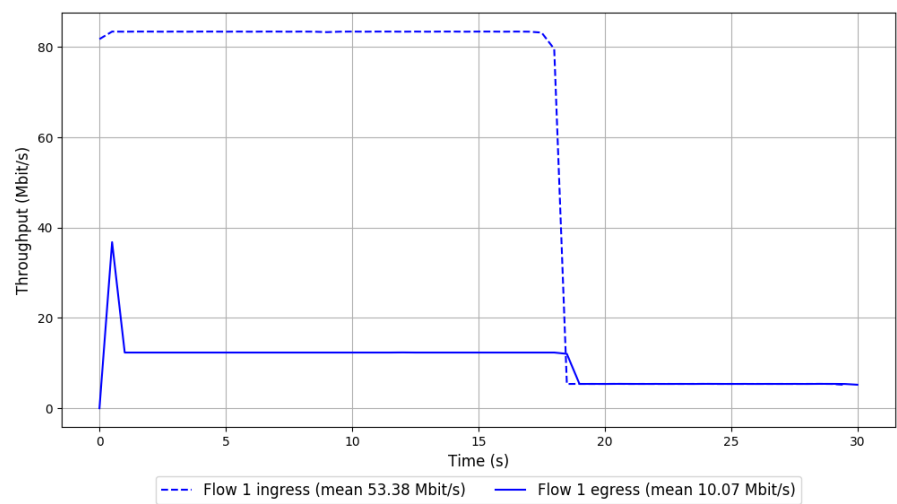
-- Flow 1:

Average throughput: 10.07 Mbit/s

95th percentile per-packet one-way delay: 2.287 ms

Loss rate: 81.14%

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



Run 4: Statistics of TaoVA-100x

Start at: 2019-01-02 20:43:41

End at: 2019-01-02 20:44:11

Local clock offset: -6.451 ms

Remote clock offset: 0.436 ms

Below is generated by plot.py at 2019-01-02 21:17:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 10.06 Mbit/s

95th percentile per-packet one-way delay: 1.021 ms

Loss rate: 81.14%

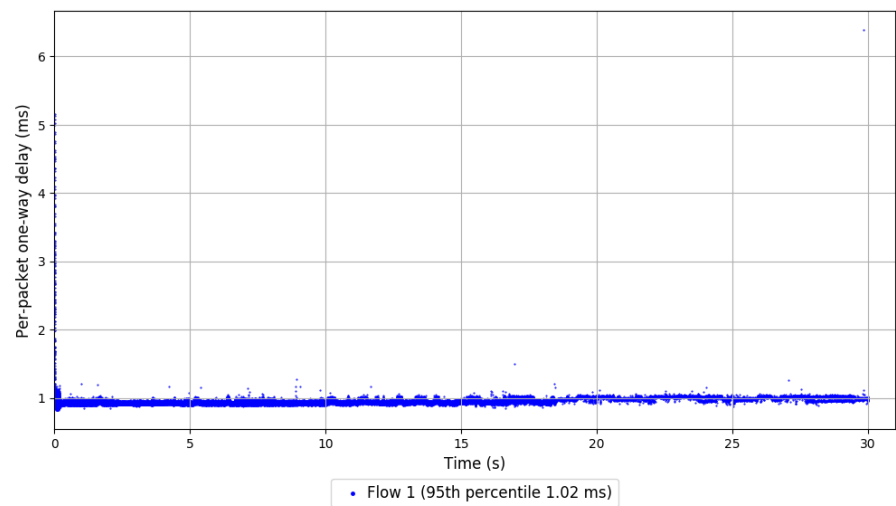
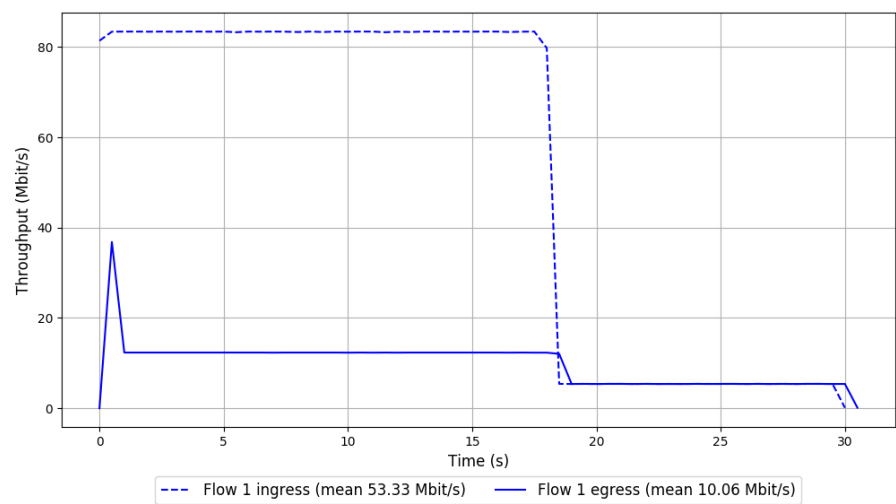
-- Flow 1:

Average throughput: 10.06 Mbit/s

95th percentile per-packet one-way delay: 1.021 ms

Loss rate: 81.14%

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



Run 5: Statistics of TaoVA-100x

Start at: 2019-01-02 21:04:58

End at: 2019-01-02 21:05:28

Local clock offset: -6.509 ms

Remote clock offset: 0.596 ms

Below is generated by plot.py at 2019-01-02 21:17:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 7.92 Mbit/s

95th percentile per-packet one-way delay: 2.304 ms

Loss rate: 72.95%

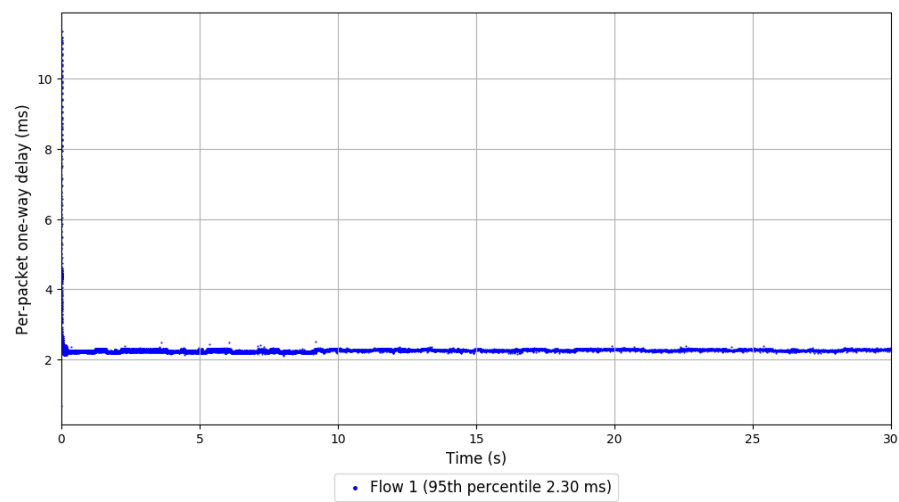
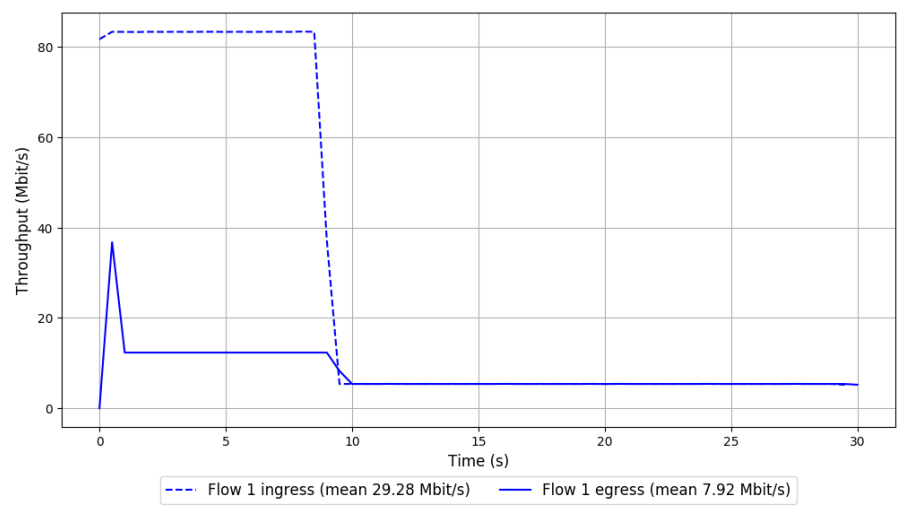
-- Flow 1:

Average throughput: 7.92 Mbit/s

95th percentile per-packet one-way delay: 2.304 ms

Loss rate: 72.95%

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



Run 1: Statistics of TCP Vegas

Start at: 2019-01-02 19:42:16

End at: 2019-01-02 19:42:46

Local clock offset: -7.262 ms

Remote clock offset: 0.578 ms

Below is generated by plot.py at 2019-01-02 21:18:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.65 Mbit/s

95th percentile per-packet one-way delay: 4.588 ms

Loss rate: 0.00%

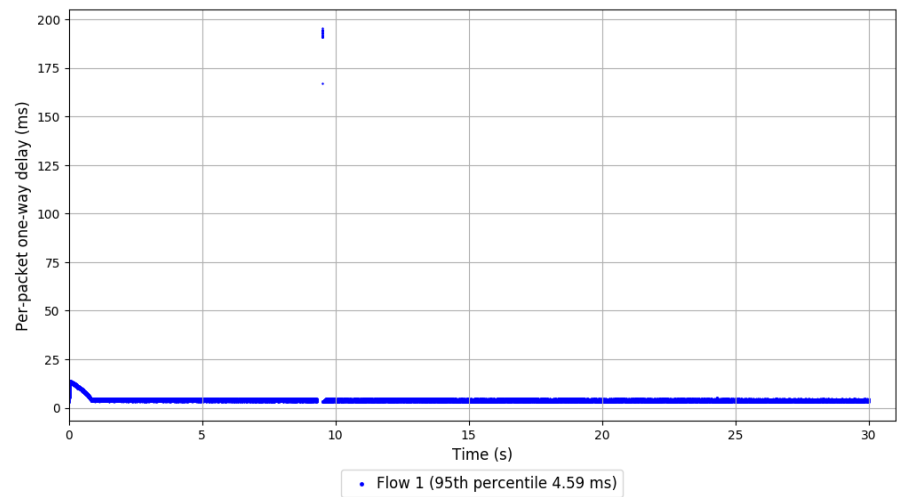
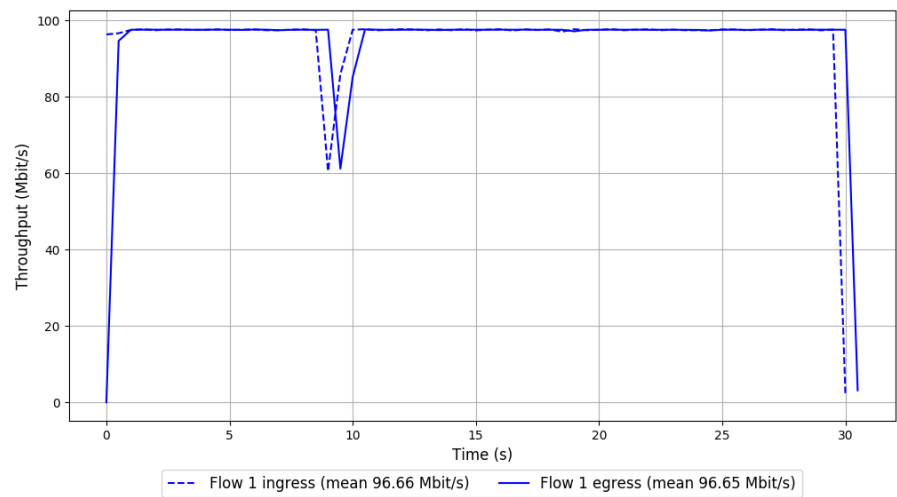
-- Flow 1:

Average throughput: 96.65 Mbit/s

95th percentile per-packet one-way delay: 4.588 ms

Loss rate: 0.00%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2019-01-02 20:03:29

End at: 2019-01-02 20:03:59

Local clock offset: -8.822 ms

Remote clock offset: 0.768 ms

Below is generated by plot.py at 2019-01-02 21:18:42

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.32 Mbit/s

95th percentile per-packet one-way delay: 4.661 ms

Loss rate: 0.00%

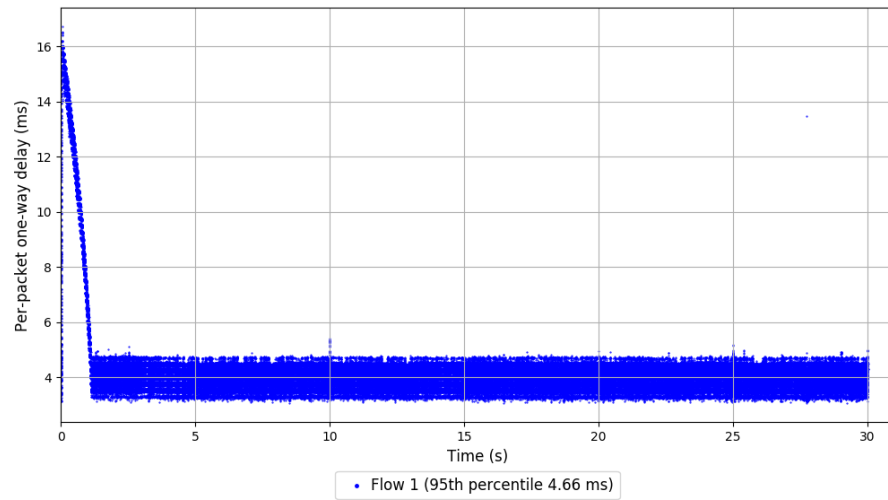
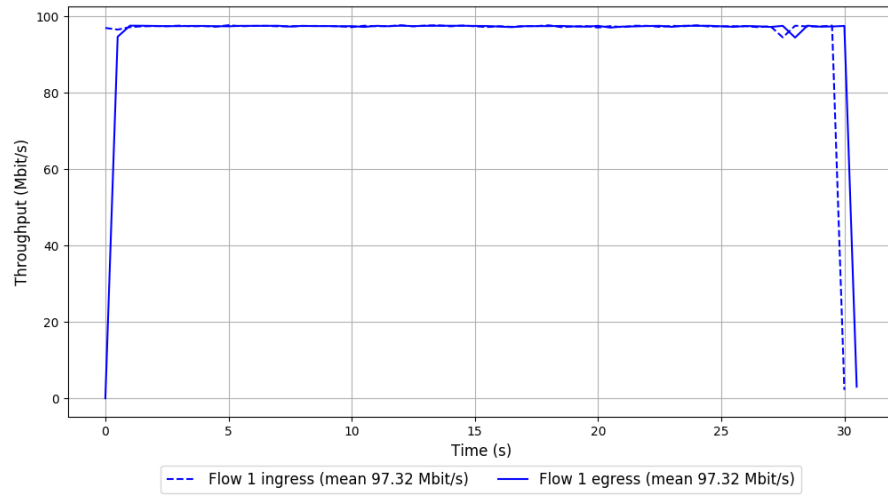
-- Flow 1:

Average throughput: 97.32 Mbit/s

95th percentile per-packet one-way delay: 4.661 ms

Loss rate: 0.00%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2019-01-02 20:24:40

End at: 2019-01-02 20:25:10

Local clock offset: -9.011 ms

Remote clock offset: 0.626 ms

Below is generated by plot.py at 2019-01-02 21:18:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.75 Mbit/s

95th percentile per-packet one-way delay: 2.574 ms

Loss rate: 0.00%

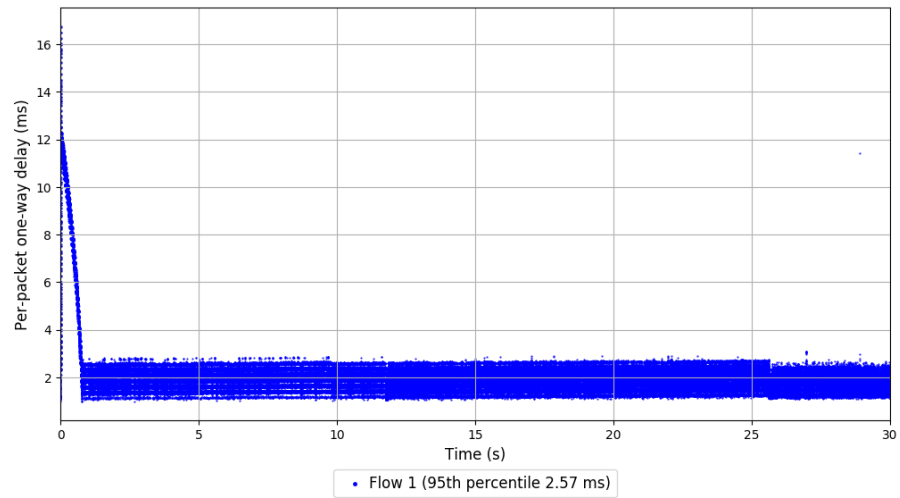
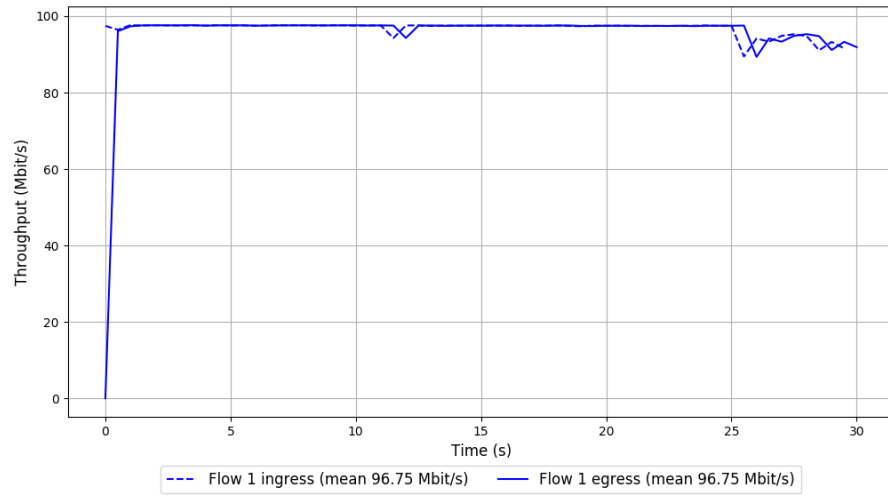
-- Flow 1:

Average throughput: 96.75 Mbit/s

95th percentile per-packet one-way delay: 2.574 ms

Loss rate: 0.00%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2019-01-02 20:45:51

End at: 2019-01-02 20:46:21

Local clock offset: -7.217 ms

Remote clock offset: 0.376 ms

Below is generated by plot.py at 2019-01-02 21:18:51

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.39 Mbit/s

95th percentile per-packet one-way delay: 4.537 ms

Loss rate: 0.00%

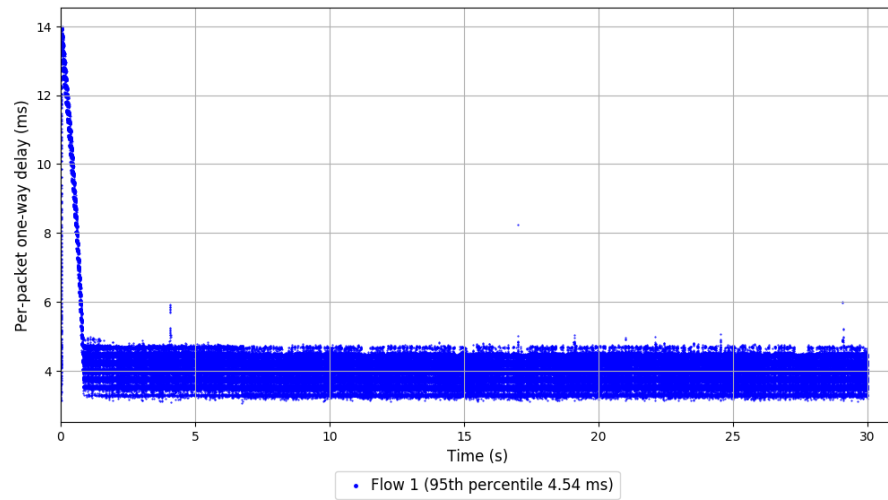
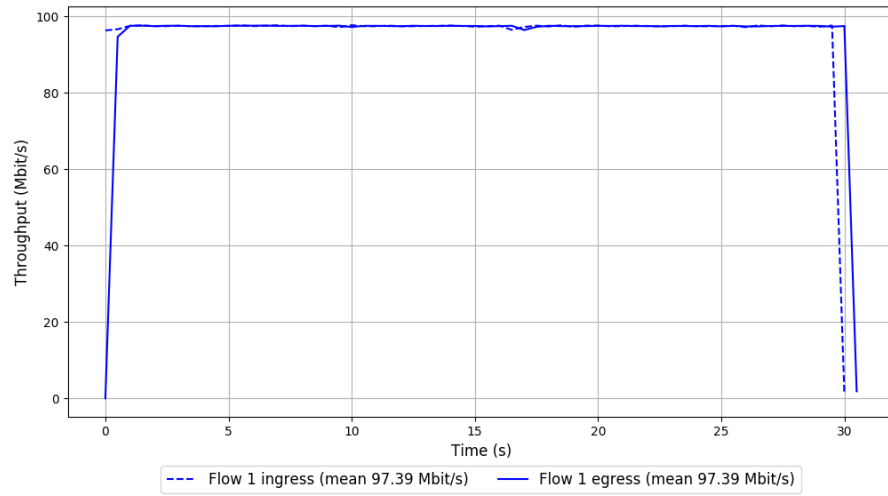
-- Flow 1:

Average throughput: 97.39 Mbit/s

95th percentile per-packet one-way delay: 4.537 ms

Loss rate: 0.00%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2019-01-02 21:07:08

End at: 2019-01-02 21:07:38

Local clock offset: -7.342 ms

Remote clock offset: 0.731 ms

Below is generated by plot.py at 2019-01-02 21:18:55

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.37 Mbit/s

95th percentile per-packet one-way delay: 4.658 ms

Loss rate: 0.00%

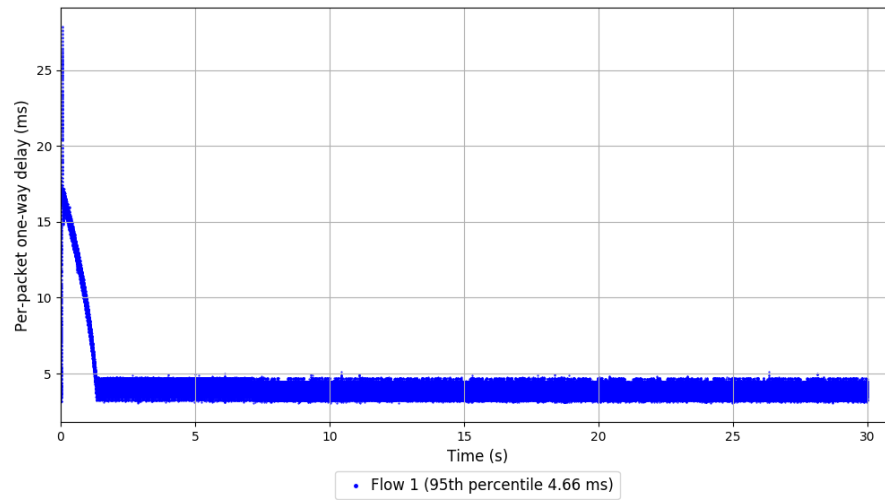
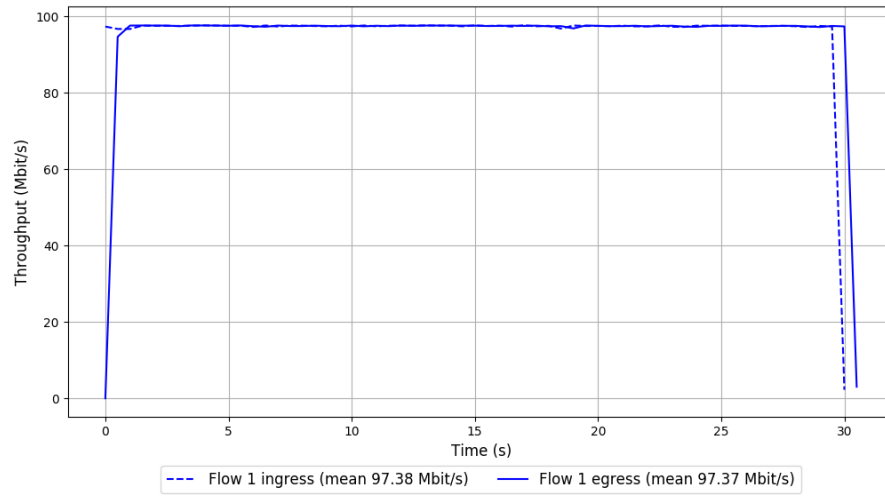
-- Flow 1:

Average throughput: 97.37 Mbit/s

95th percentile per-packet one-way delay: 4.658 ms

Loss rate: 0.00%

Run 5: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2019-01-02 19:36:50

End at: 2019-01-02 19:37:20

Local clock offset: -5.695 ms

Remote clock offset: 0.553 ms

Below is generated by plot.py at 2019-01-02 21:18:55

Datalink statistics

-- Total of 1 flow:

Average throughput: 35.61 Mbit/s

95th percentile per-packet one-way delay: 9.455 ms

Loss rate: 1.86%

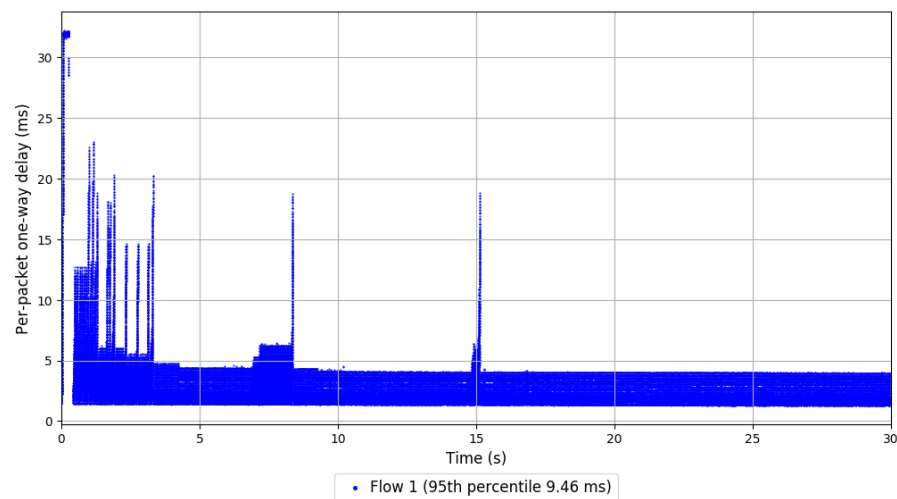
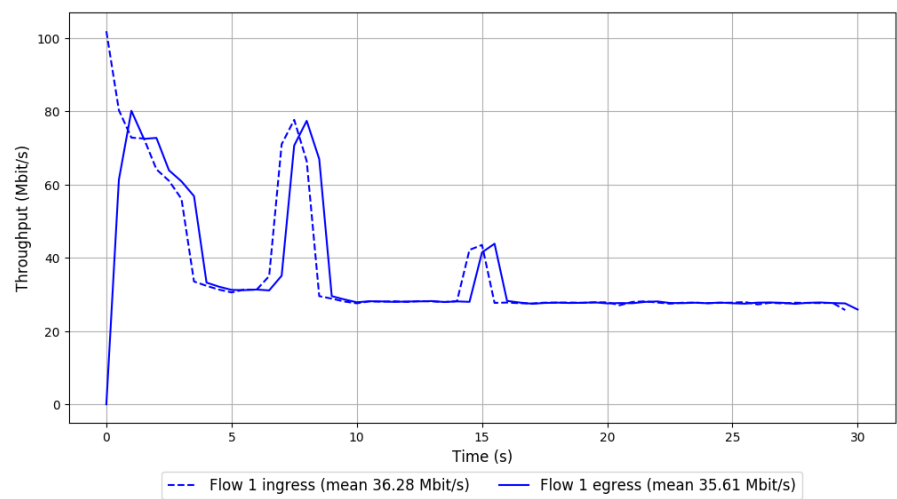
-- Flow 1:

Average throughput: 35.61 Mbit/s

95th percentile per-packet one-way delay: 9.455 ms

Loss rate: 1.86%

Run 1: Report of Verus — Data Link

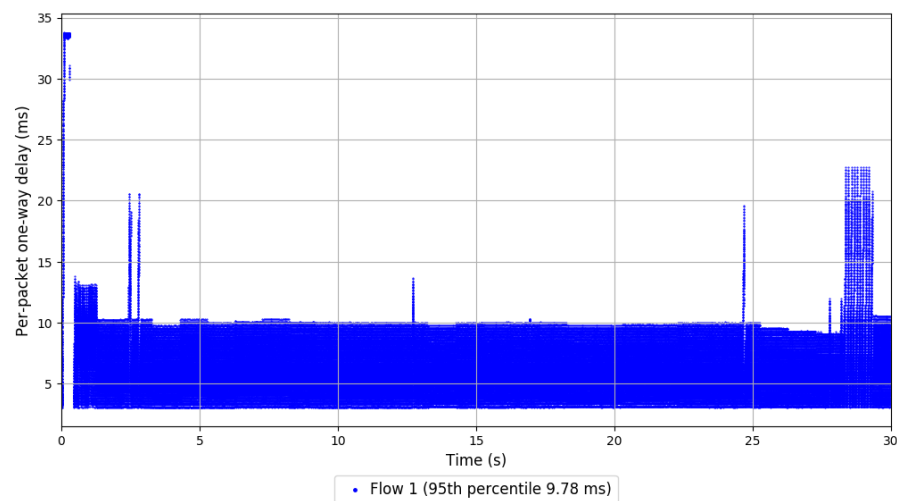
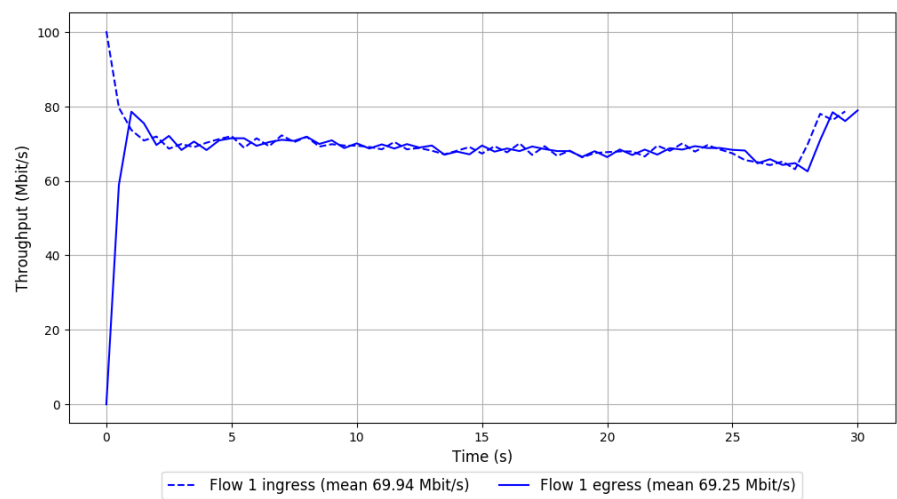


Run 2: Statistics of Verus

Start at: 2019-01-02 19:58:01
End at: 2019-01-02 19:58:31
Local clock offset: -8.884 ms
Remote clock offset: 0.729 ms

Below is generated by plot.py at 2019-01-02 21:18:55
Datalink statistics
-- Total of 1 flow:
Average throughput: 69.25 Mbit/s
95th percentile per-packet one-way delay: 9.775 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 69.25 Mbit/s
95th percentile per-packet one-way delay: 9.775 ms
Loss rate: 0.97%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2019-01-02 20:19:14

End at: 2019-01-02 20:19:44

Local clock offset: -9.483 ms

Remote clock offset: 0.695 ms

Below is generated by plot.py at 2019-01-02 21:18:55

Datalink statistics

-- Total of 1 flow:

Average throughput: 33.23 Mbit/s

95th percentile per-packet one-way delay: 9.451 ms

Loss rate: 2.00%

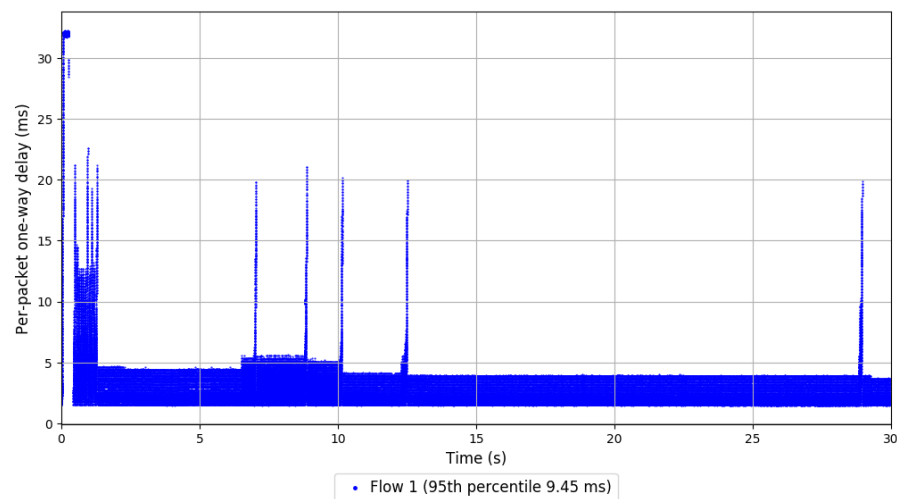
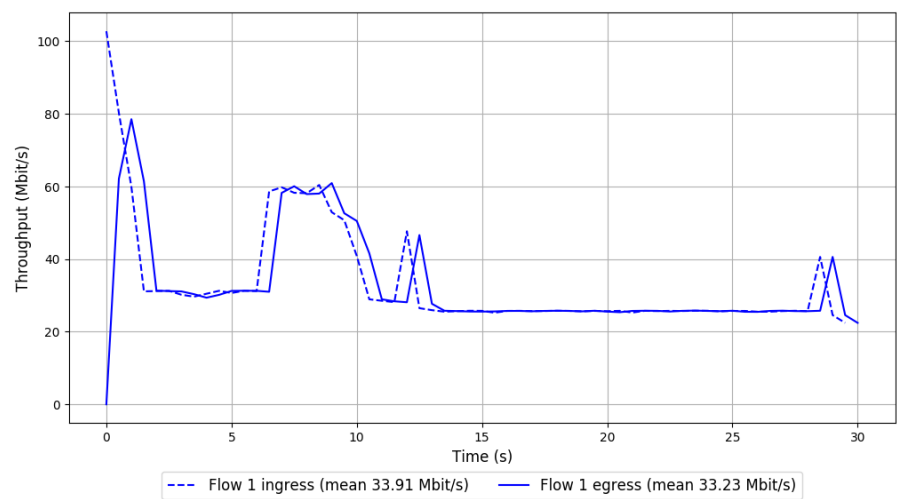
-- Flow 1:

Average throughput: 33.23 Mbit/s

95th percentile per-packet one-way delay: 9.451 ms

Loss rate: 2.00%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2019-01-02 20:40:25

End at: 2019-01-02 20:40:55

Local clock offset: -6.616 ms

Remote clock offset: 0.506 ms

Below is generated by plot.py at 2019-01-02 21:18:55

Datalink statistics

-- Total of 1 flow:

Average throughput: 40.60 Mbit/s

95th percentile per-packet one-way delay: 7.014 ms

Loss rate: 1.65%

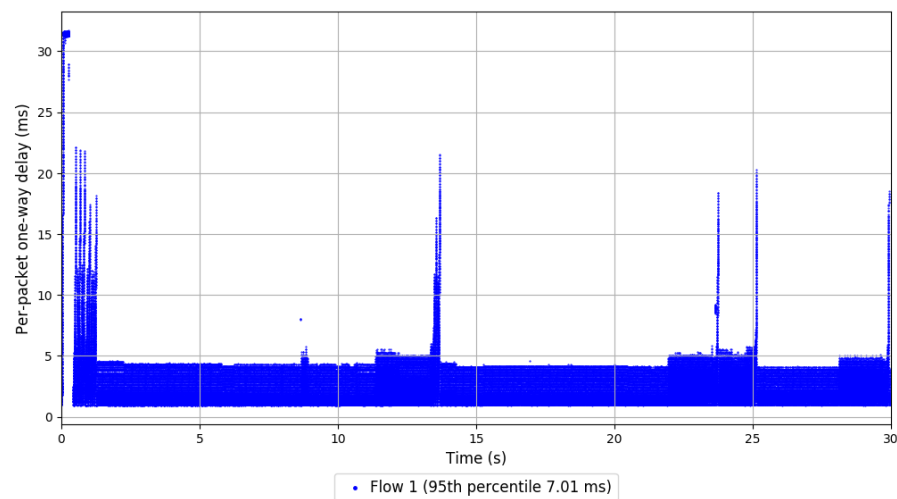
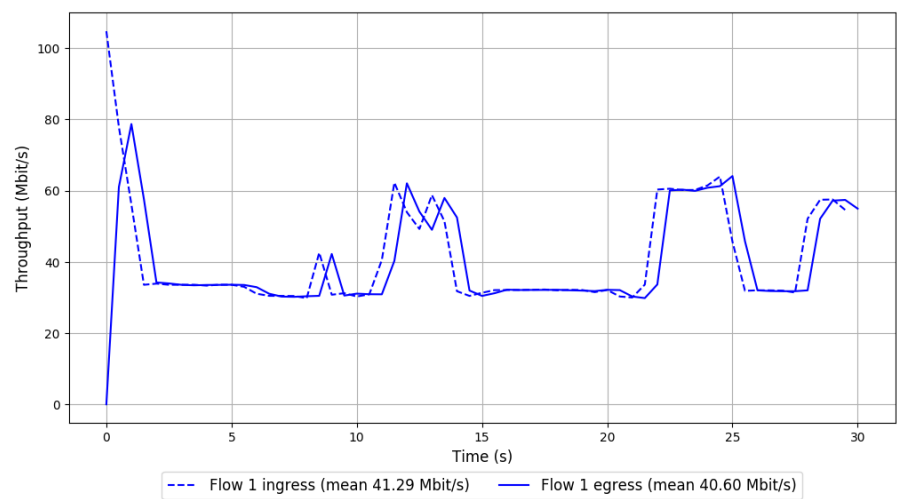
-- Flow 1:

Average throughput: 40.60 Mbit/s

95th percentile per-packet one-way delay: 7.014 ms

Loss rate: 1.65%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2019-01-02 21:01:41

End at: 2019-01-02 21:02:11

Local clock offset: -7.224 ms

Remote clock offset: 0.566 ms

Below is generated by plot.py at 2019-01-02 21:19:05

Datalink statistics

-- Total of 1 flow:

Average throughput: 75.38 Mbit/s

95th percentile per-packet one-way delay: 10.144 ms

Loss rate: 0.89%

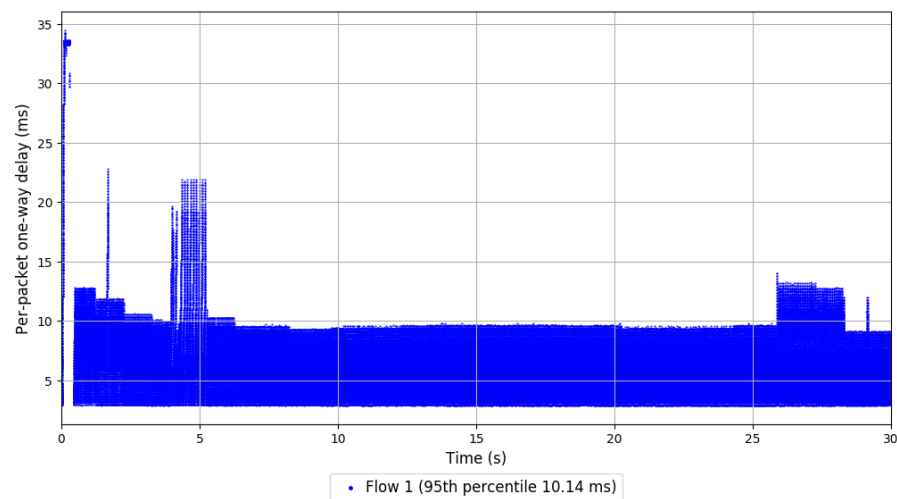
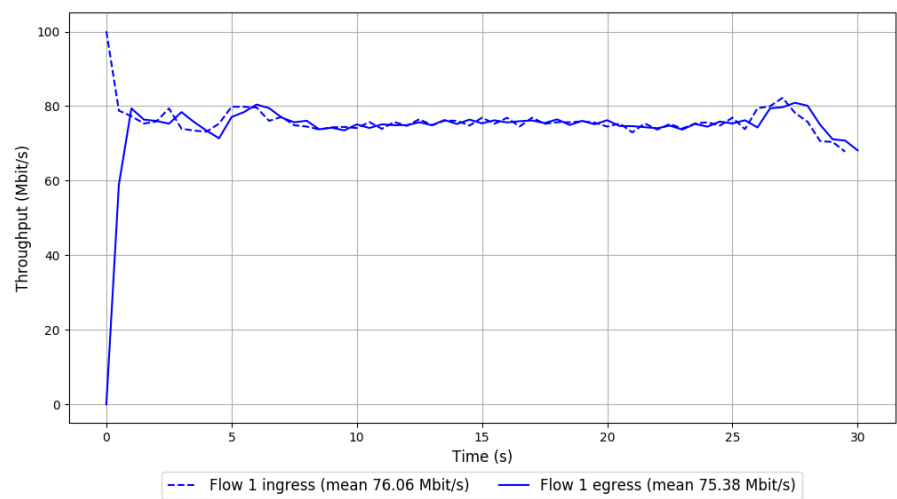
-- Flow 1:

Average throughput: 75.38 Mbit/s

95th percentile per-packet one-way delay: 10.144 ms

Loss rate: 0.89%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2019-01-02 19:26:46

End at: 2019-01-02 19:27:16

Local clock offset: 0.771 ms

Remote clock offset: 0.5 ms

Below is generated by plot.py at 2019-01-02 21:19:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 87.90 Mbit/s

95th percentile per-packet one-way delay: 2.216 ms

Loss rate: 0.00%

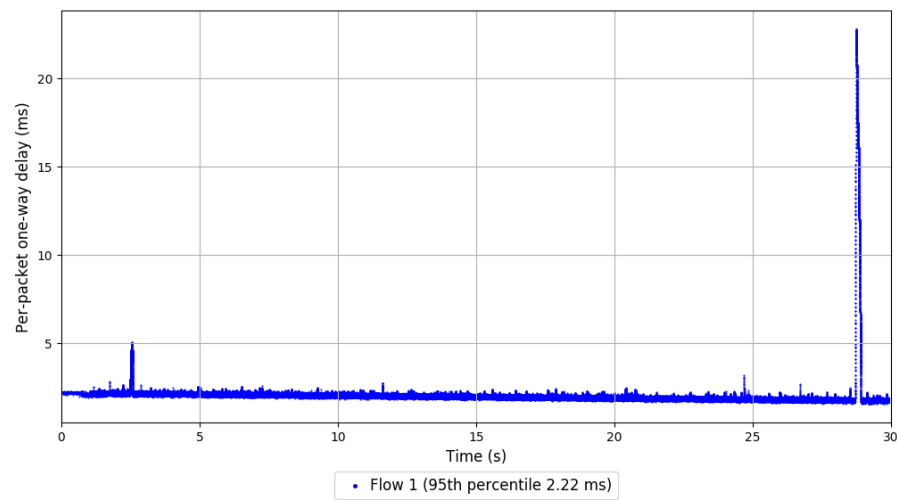
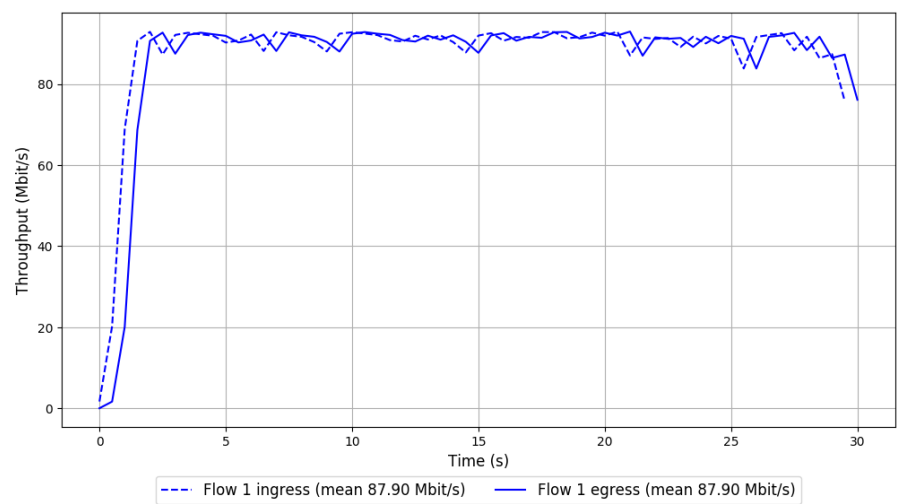
-- Flow 1:

Average throughput: 87.90 Mbit/s

95th percentile per-packet one-way delay: 2.216 ms

Loss rate: 0.00%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2019-01-02 19:47:57

End at: 2019-01-02 19:48:27

Local clock offset: -8.192 ms

Remote clock offset: 0.663 ms

Below is generated by plot.py at 2019-01-02 21:19:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 84.65 Mbit/s

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

Loss rate: 0.00%

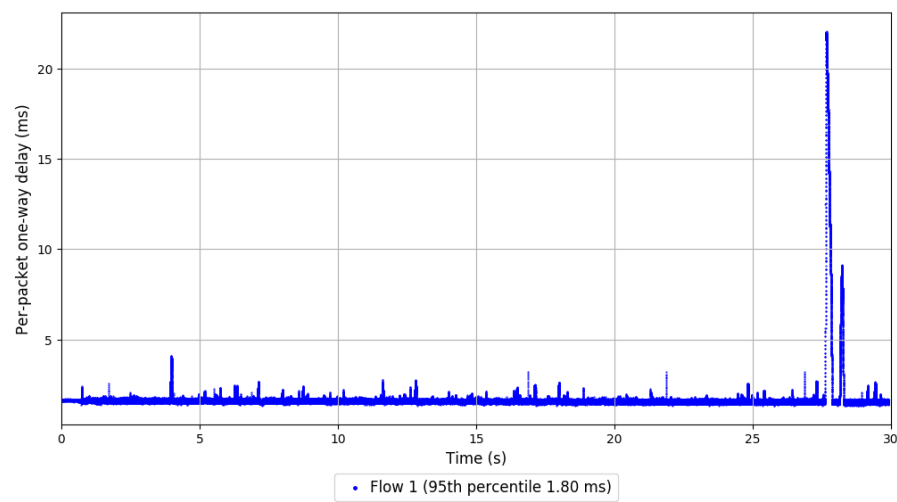
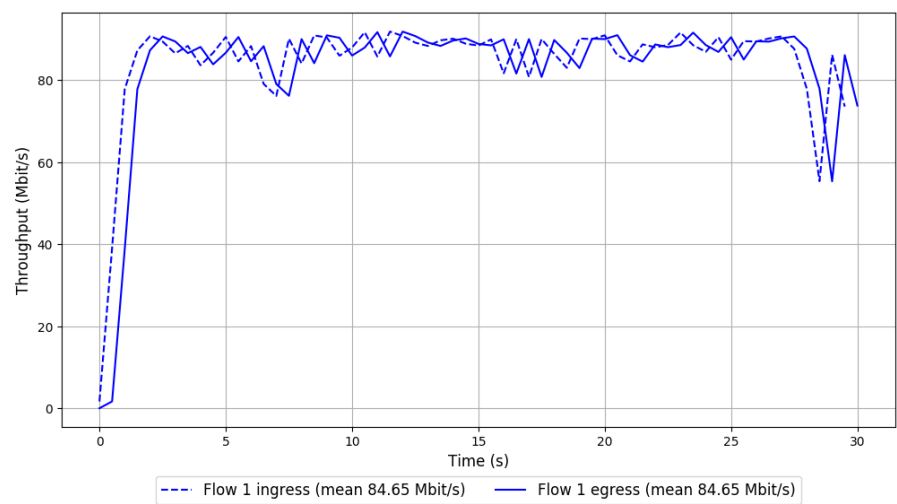
-- Flow 1:

Average throughput: 84.65 Mbit/s

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

Loss rate: 0.00%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2019-01-02 20:09:10

End at: 2019-01-02 20:09:40

Local clock offset: -8.951 ms

Remote clock offset: 0.736 ms

Below is generated by plot.py at 2019-01-02 21:19:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 87.35 Mbit/s

95th percentile per-packet one-way delay: 3.225 ms

Loss rate: 0.00%

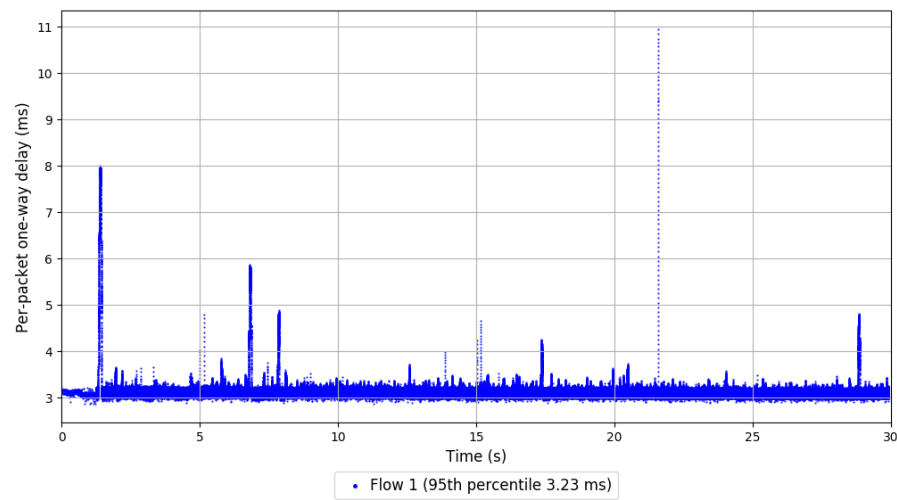
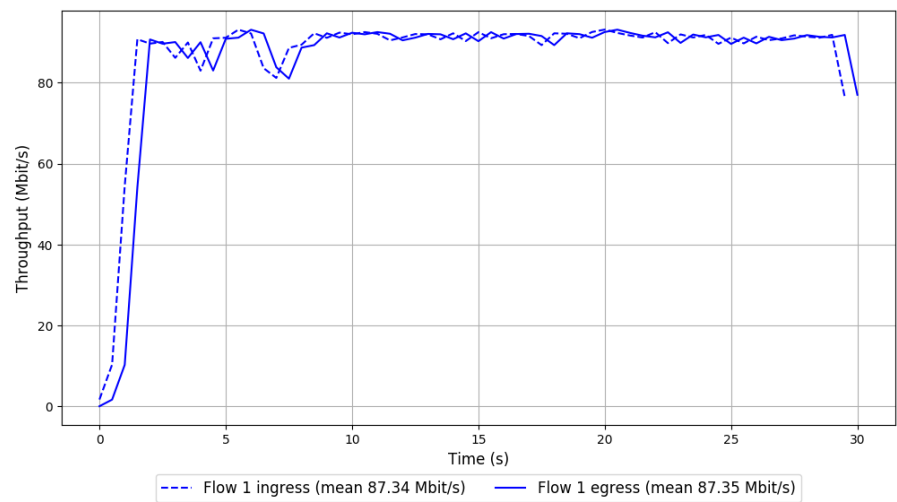
-- Flow 1:

Average throughput: 87.35 Mbit/s

95th percentile per-packet one-way delay: 3.225 ms

Loss rate: 0.00%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2019-01-02 20:30:20

End at: 2019-01-02 20:30:50

Local clock offset: -8.254 ms

Remote clock offset: 0.621 ms

Below is generated by plot.py at 2019-01-02 21:19:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 87.36 Mbit/s

95th percentile per-packet one-way delay: 3.425 ms

Loss rate: 0.00%

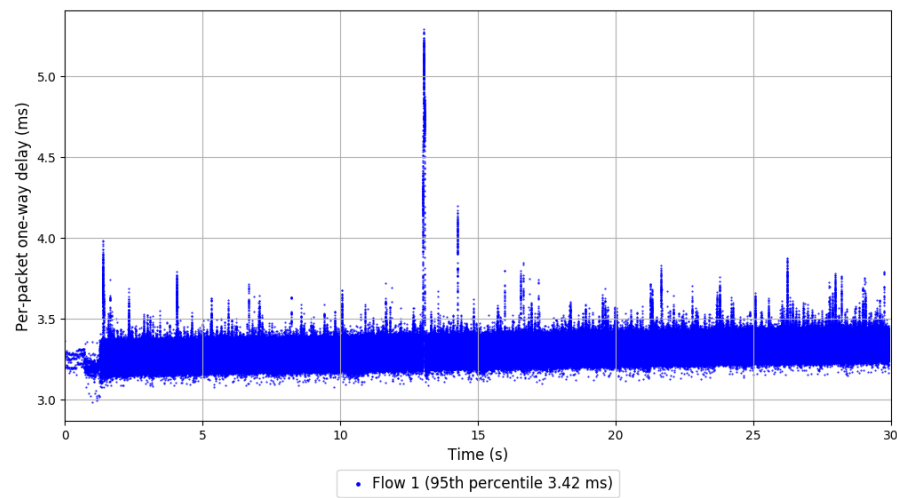
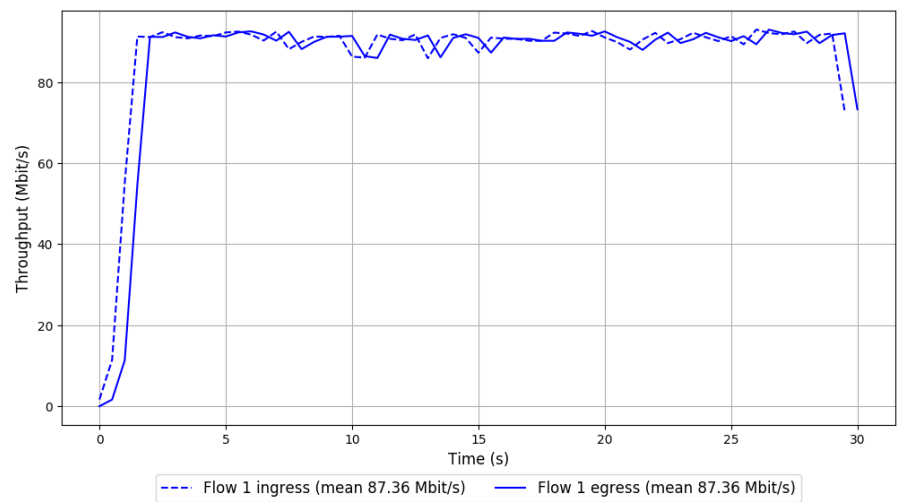
-- Flow 1:

Average throughput: 87.36 Mbit/s

95th percentile per-packet one-way delay: 3.425 ms

Loss rate: 0.00%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2019-01-02 20:51:36

End at: 2019-01-02 20:52:06

Local clock offset: -7.179 ms

Remote clock offset: 0.381 ms

Below is generated by plot.py at 2019-01-02 21:19:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 88.72 Mbit/s

95th percentile per-packet one-way delay: 3.423 ms

Loss rate: 0.24%

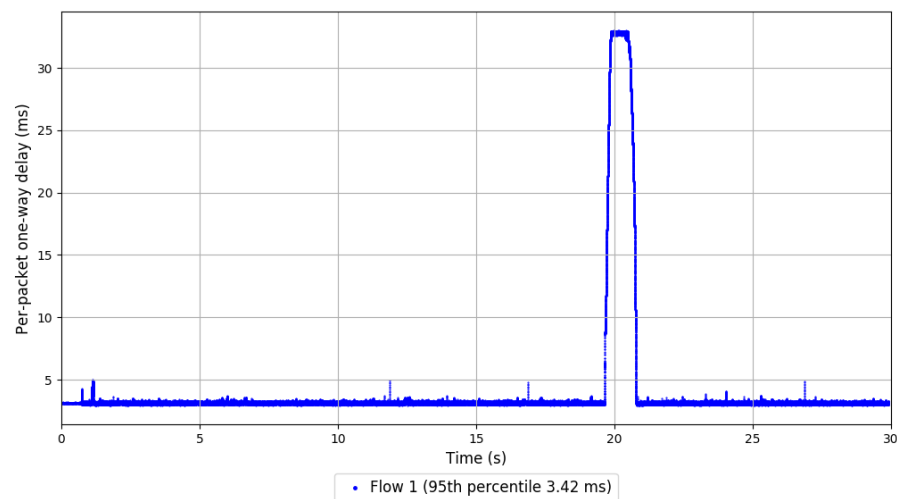
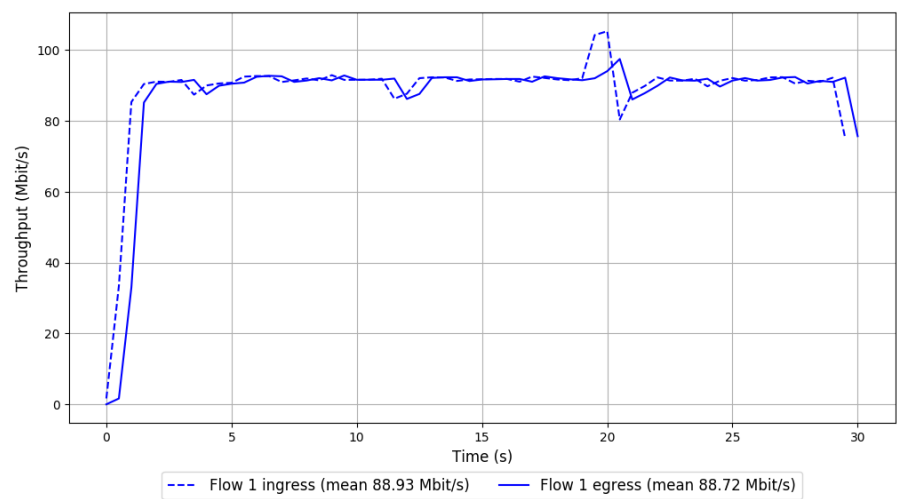
-- Flow 1:

Average throughput: 88.72 Mbit/s

95th percentile per-packet one-way delay: 3.423 ms

Loss rate: 0.24%

Run 5: Report of PCC-Vivace — Data Link

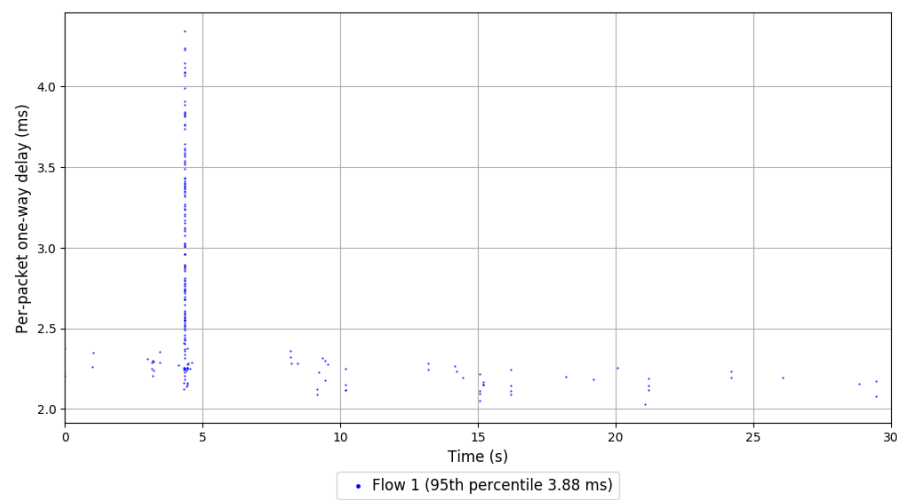
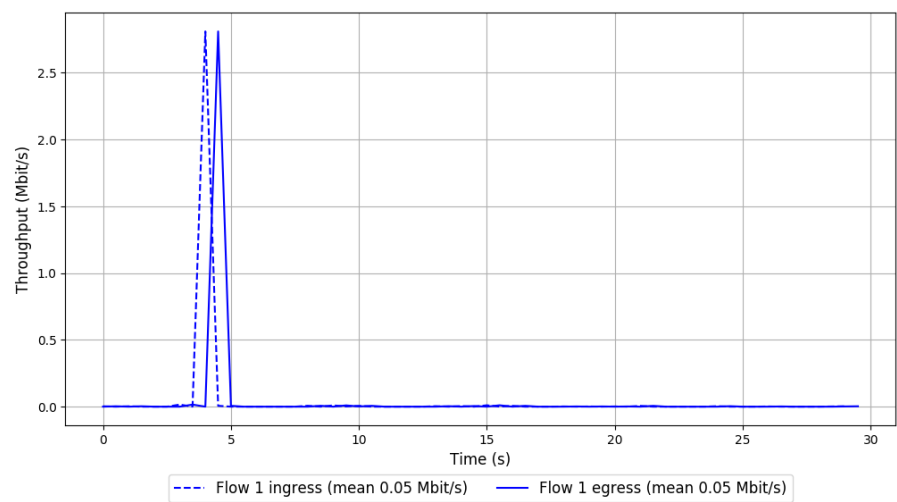


```
Run 1: Statistics of WebRTC media

Start at: 2019-01-02 19:37:57
End at: 2019-01-02 19:38:27
Local clock offset: -5.263 ms
Remote clock offset: 0.62 ms

# Below is generated by plot.py at 2019-01-02 21:19:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 3.885 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 3.885 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2019-01-02 19:59:09

End at: 2019-01-02 19:59:39

Local clock offset: -8.1 ms

Remote clock offset: 0.733 ms

Below is generated by plot.py at 2019-01-02 21:19:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 4.171 ms

Loss rate: 0.00%

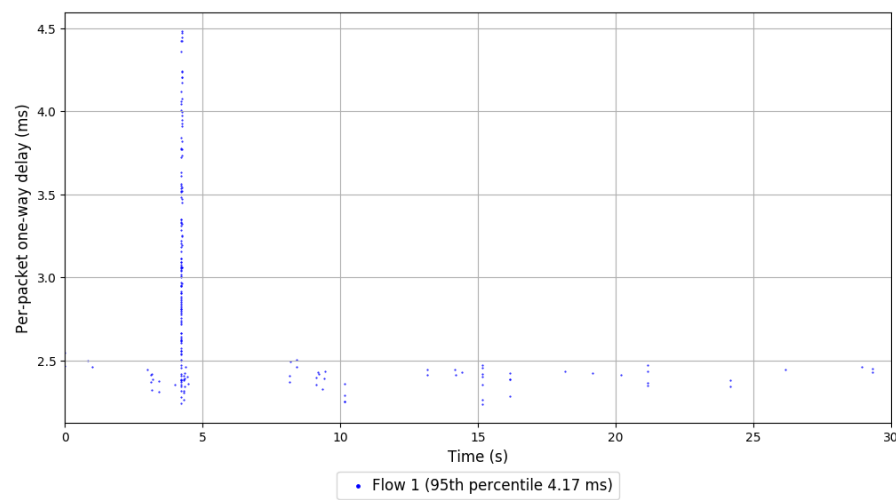
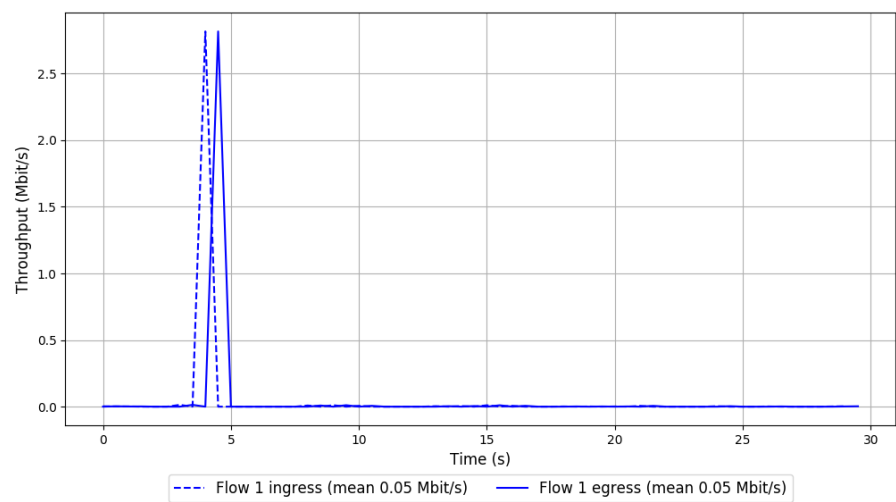
-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 4.171 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2019-01-02 20:20:20

End at: 2019-01-02 20:20:50

Local clock offset: -8.8 ms

Remote clock offset: 0.765 ms

Below is generated by plot.py at 2019-01-02 21:19:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 3.039 ms

Loss rate: 0.00%

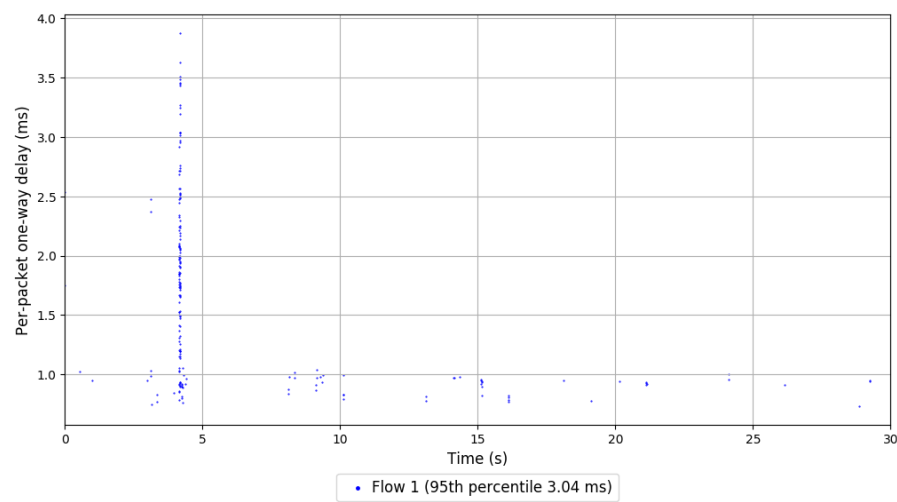
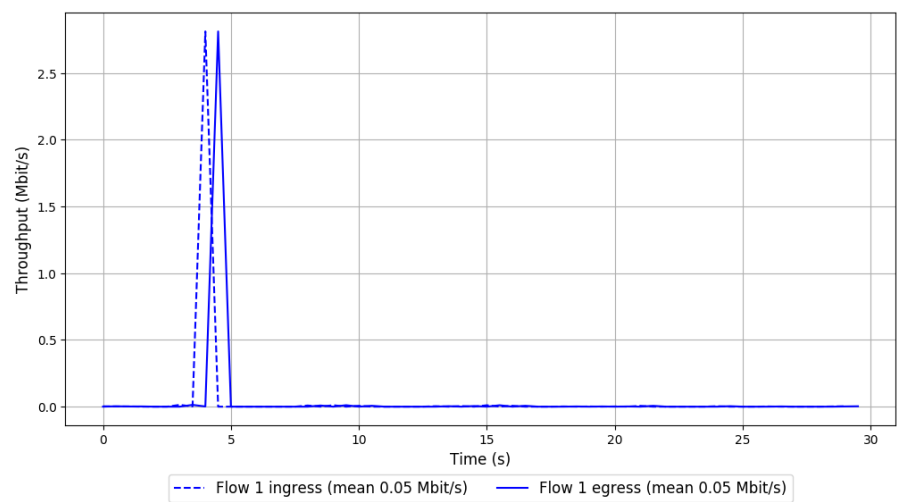
-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 3.039 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2019-01-02 20:41:31

End at: 2019-01-02 20:42:01

Local clock offset: -6.503 ms

Remote clock offset: 0.482 ms

Below is generated by plot.py at 2019-01-02 21:19:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 8.406 ms

Loss rate: 0.00%

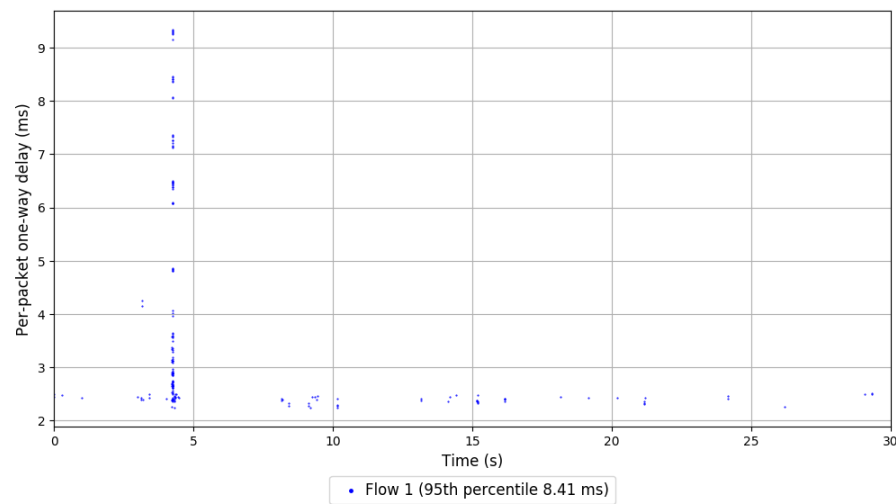
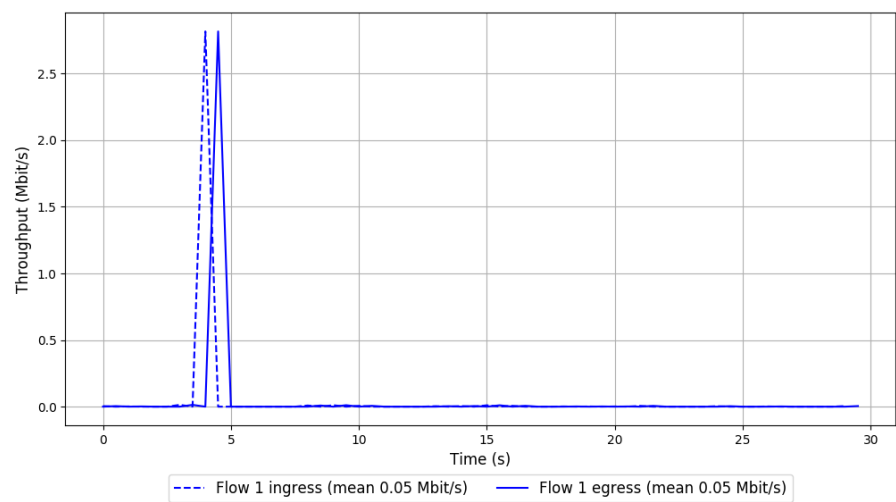
-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 8.406 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2019-01-02 21:02:49

End at: 2019-01-02 21:03:19

Local clock offset: -7.239 ms

Remote clock offset: 0.726 ms

Below is generated by plot.py at 2019-01-02 21:19:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 4.549 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 4.549 ms

Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

