

Pantheon Report

Generated at 2018-09-25 06:37:22 (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:

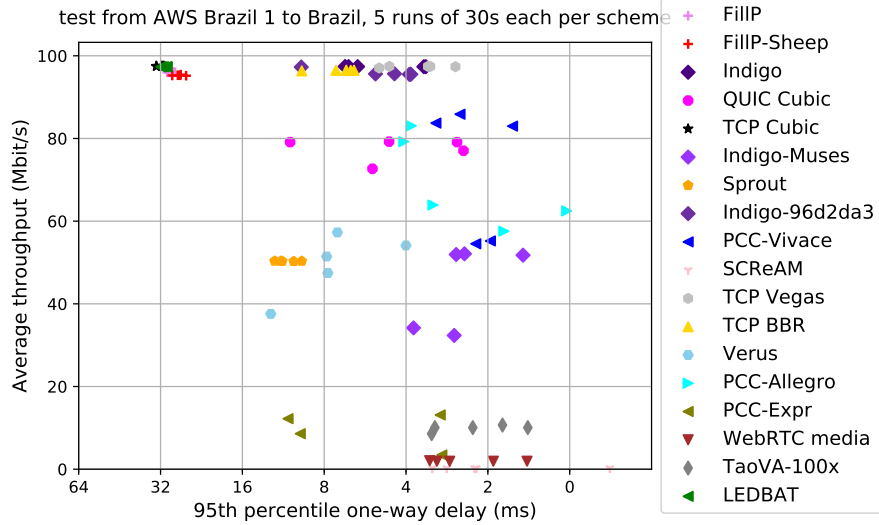
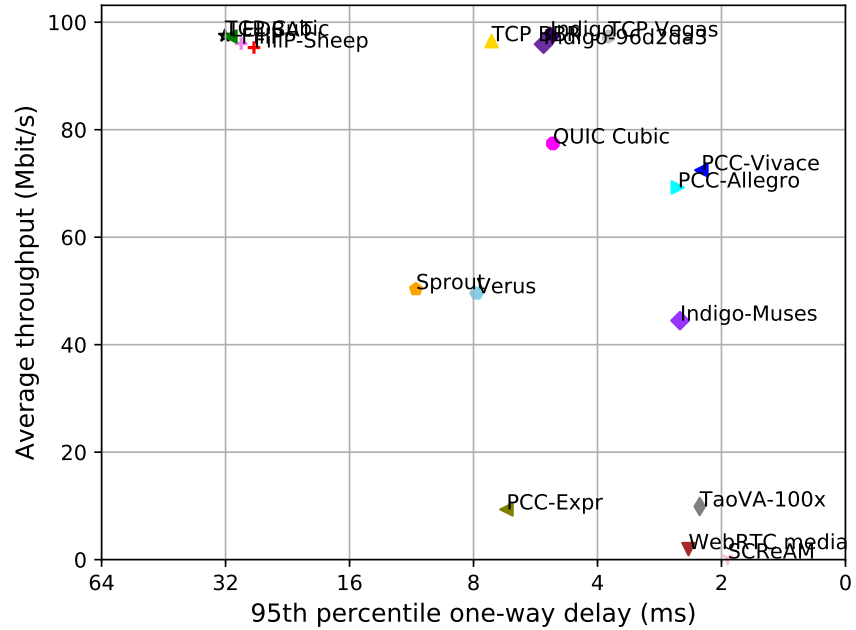
```
Linux 4.15.0-1021-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
net.ipv4.tcp_mem = 184101 245469 368202
```

Git summary:

```
branch: muses @ 90192f6b64ce1a1191dcca0e9ff9ee24950674d7
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
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 @ cbfce6db5ff5740dafa1771f813cd646339e1952
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	96.47	7.23	0.00
Copa	0	N/A	N/A	N/A
TCP Cubic	5	97.49	32.12	0.01
FillP	5	96.03	29.33	3.97
FillP-Sheep	5	95.29	27.30	1.28
Indigo	5	97.38	5.21	0.00
Indigo-96d2da3	5	95.91	5.41	0.00
LEDBAT	5	97.34	31.14	0.01
Indigo-Muses	5	44.47	2.52	0.00
PCC-Allegro	5	69.25	2.55	0.00
PCC-Expr	4	9.34	6.65	23.56
QUIC Cubic	5	77.44	5.13	0.34
SCReAM	5	0.22	1.90	0.03
Sprout	5	50.33	11.04	0.00
TaoVA-100x	5	9.89	2.26	64.02
TCP Vegas	5	97.34	3.77	0.00
Verus	5	49.57	7.87	1.37
PCC-Vivace	5	72.46	2.24	0.00
WebRTC media	5	1.95	2.41	0.00

Run 1: Statistics of TCP BBR

Start at: 2018-09-25 04:52:30

End at: 2018-09-25 04:53:01

Local clock offset: 1.07 ms

Remote clock offset: 0.069 ms

Below is generated by plot.py at 2018-09-25 06:28:58

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.36 Mbit/s

95th percentile per-packet one-way delay: 9.674 ms

Loss rate: 0.01%

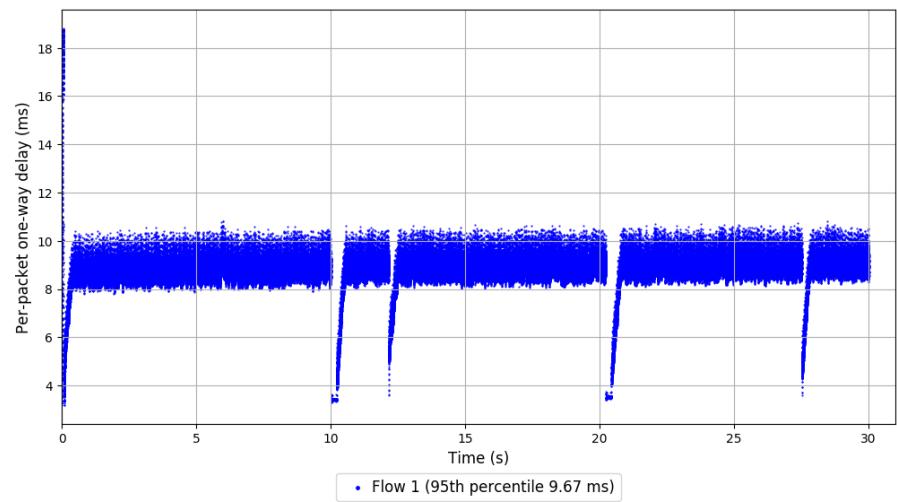
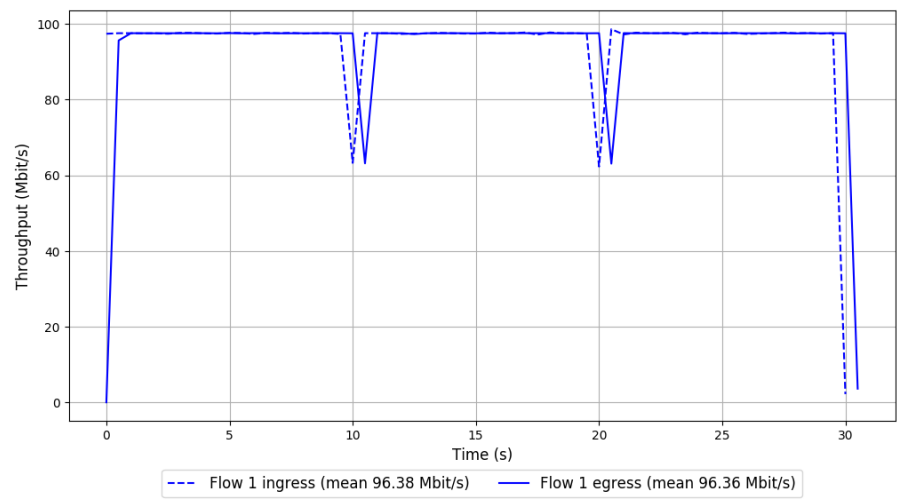
-- Flow 1:

Average throughput: 96.36 Mbit/s

95th percentile per-packet one-way delay: 9.674 ms

Loss rate: 0.01%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-09-25 05:13:39

End at: 2018-09-25 05:14:09

Local clock offset: 14.321 ms

Remote clock offset: 0.237 ms

Below is generated by plot.py at 2018-09-25 06:29:00

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.50 Mbit/s

95th percentile per-packet one-way delay: 7.241 ms

Loss rate: 0.00%

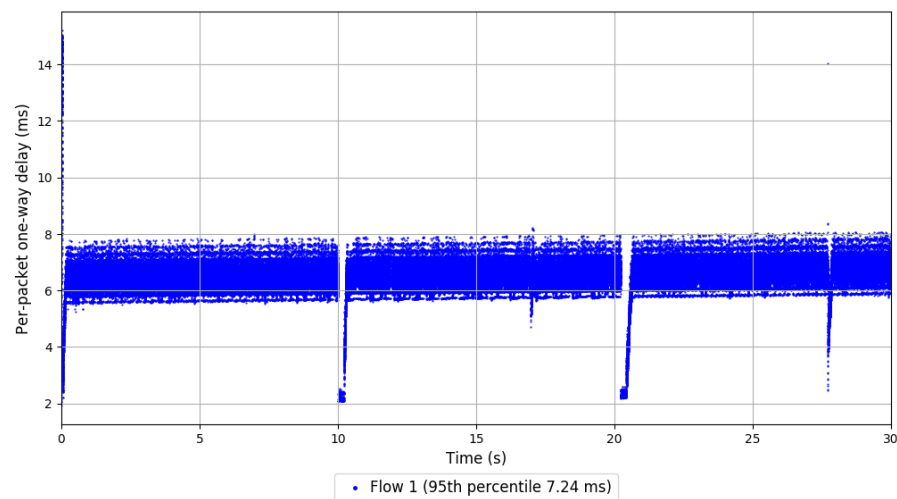
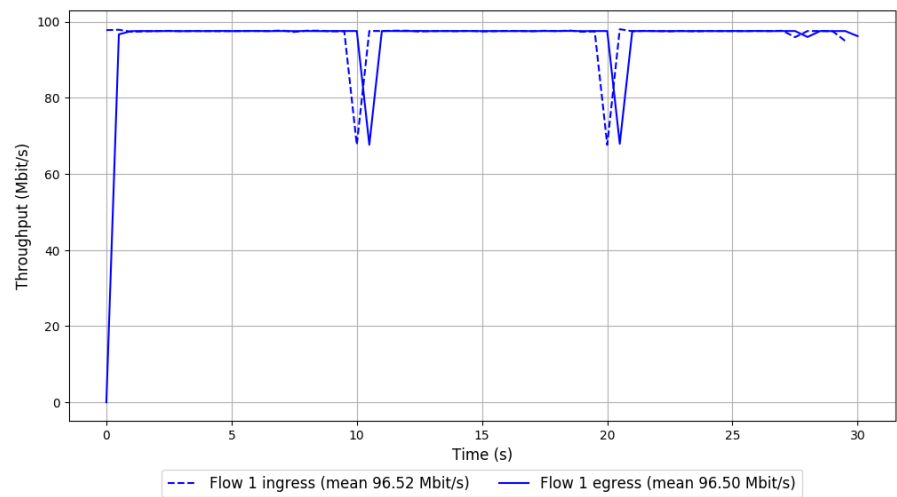
-- Flow 1:

Average throughput: 96.50 Mbit/s

95th percentile per-packet one-way delay: 7.241 ms

Loss rate: 0.00%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-09-25 05:34:47

End at: 2018-09-25 05:35:17

Local clock offset: 28.699 ms

Remote clock offset: 0.411 ms

Below is generated by plot.py at 2018-09-25 06:29:00

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.47 Mbit/s

95th percentile per-packet one-way delay: 6.390 ms

Loss rate: 0.00%

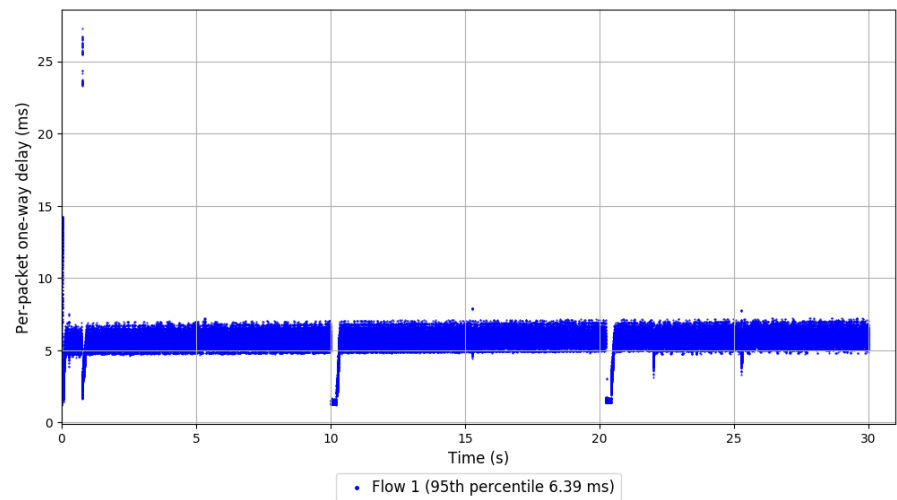
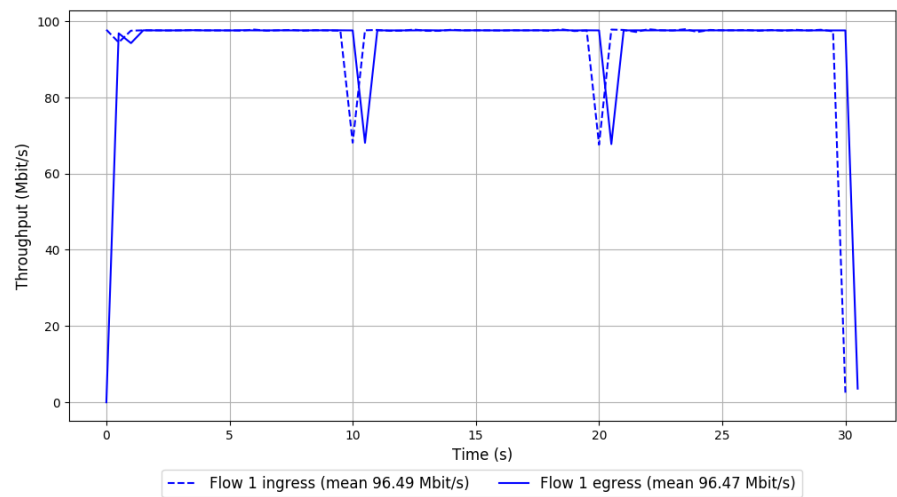
-- Flow 1:

Average throughput: 96.47 Mbit/s

95th percentile per-packet one-way delay: 6.390 ms

Loss rate: 0.00%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-09-25 05:55:56

End at: 2018-09-25 05:56:26

Local clock offset: -0.866 ms

Remote clock offset: 0.382 ms

Below is generated by plot.py at 2018-09-25 06:29:00

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.51 Mbit/s

95th percentile per-packet one-way delay: 6.215 ms

Loss rate: 0.00%

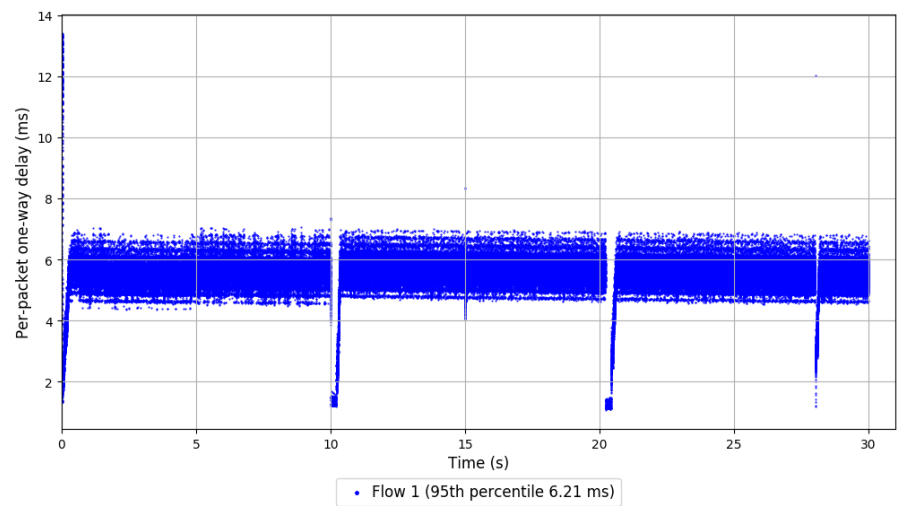
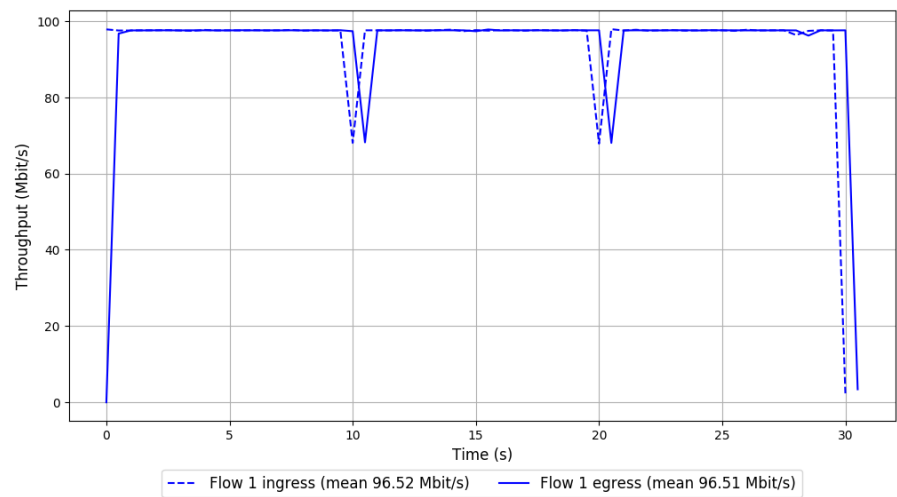
-- Flow 1:

Average throughput: 96.51 Mbit/s

95th percentile per-packet one-way delay: 6.215 ms

Loss rate: 0.00%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-09-25 06:17:05

End at: 2018-09-25 06:17:35

Local clock offset: -6.405 ms

Remote clock offset: 0.489 ms

Below is generated by plot.py at 2018-09-25 06:29:00

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.53 Mbit/s

95th percentile per-packet one-way delay: 6.638 ms

Loss rate: 0.00%

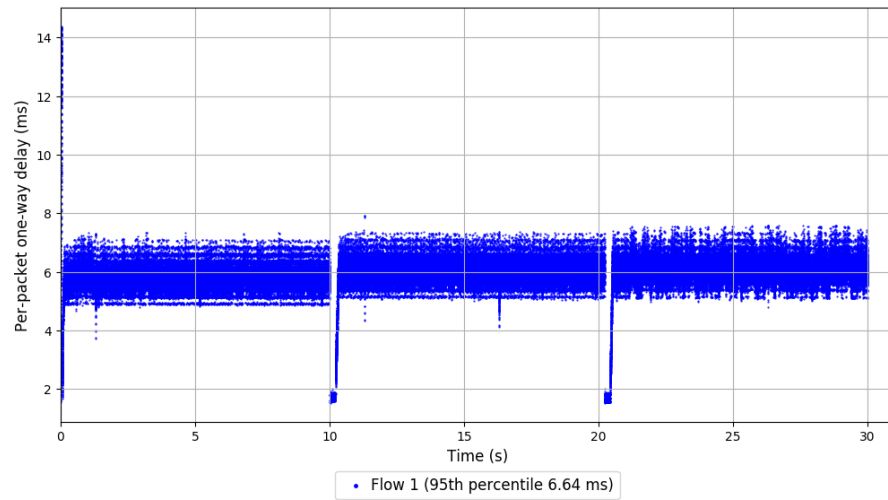
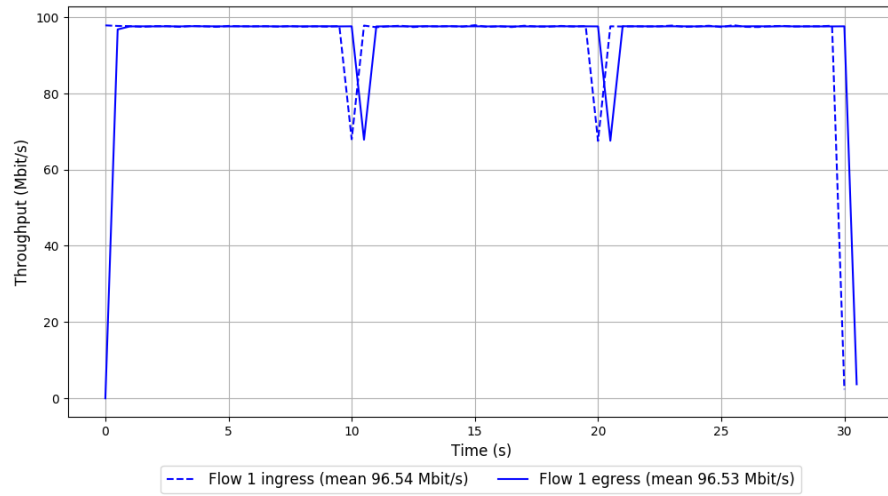
-- Flow 1:

Average throughput: 96.53 Mbit/s

95th percentile per-packet one-way delay: 6.638 ms

Loss rate: 0.00%

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

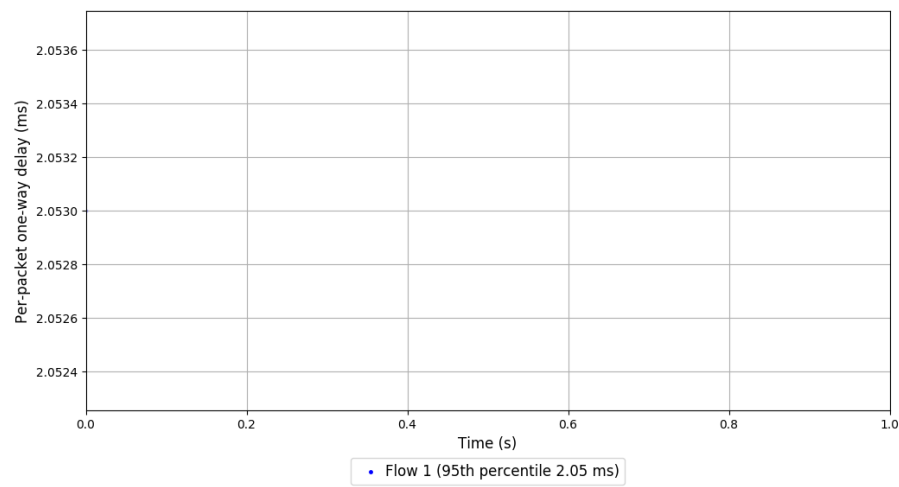
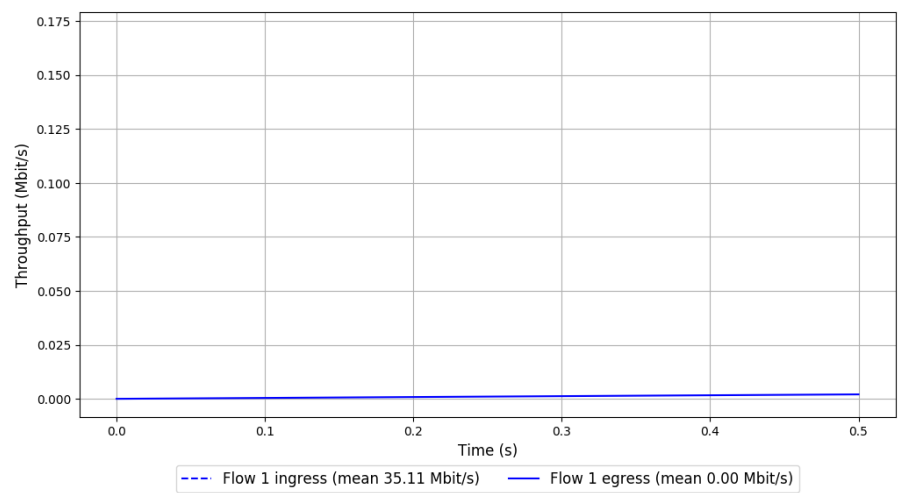
Start at: 2018-09-25 04:55:52

End at: 2018-09-25 04:56:22

Local clock offset: 3.137 ms

Remote clock offset: 0.148 ms

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

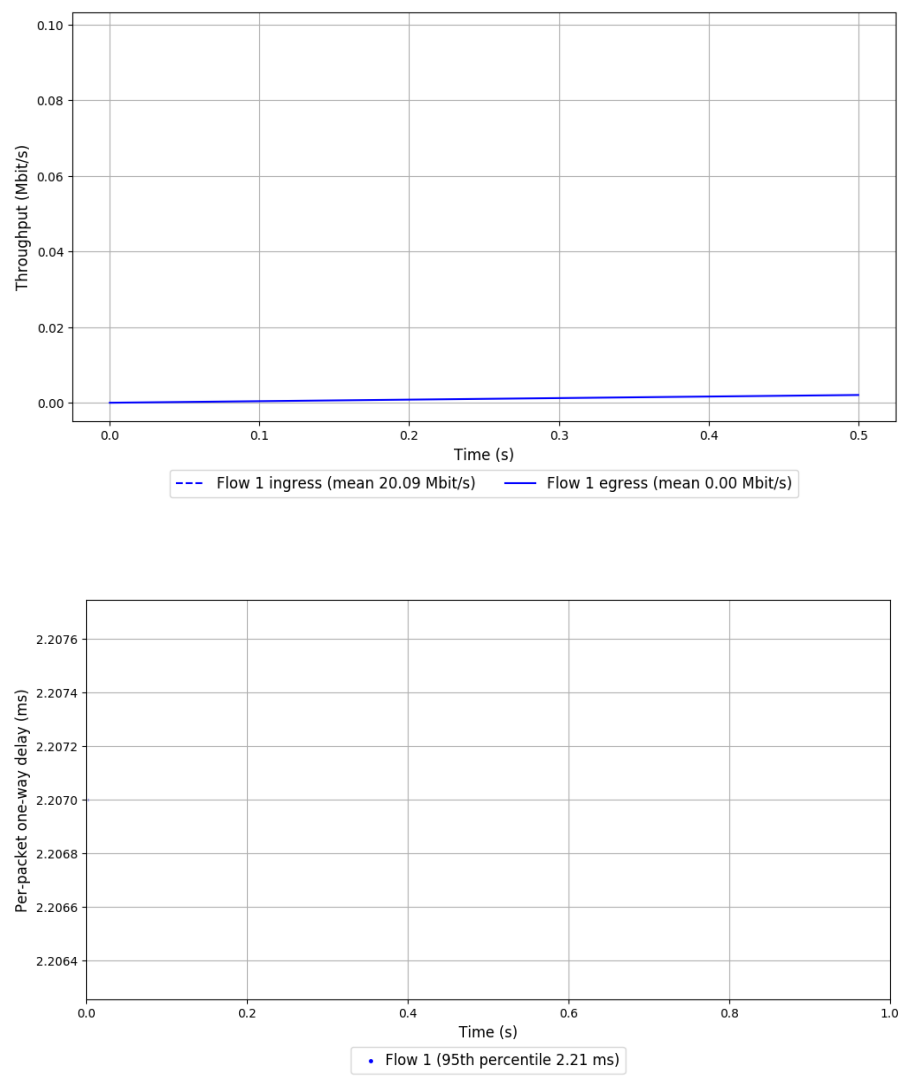
Start at: 2018-09-25 05:17:00

End at: 2018-09-25 05:17:30

Local clock offset: 16.521 ms

Remote clock offset: 0.356 ms

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

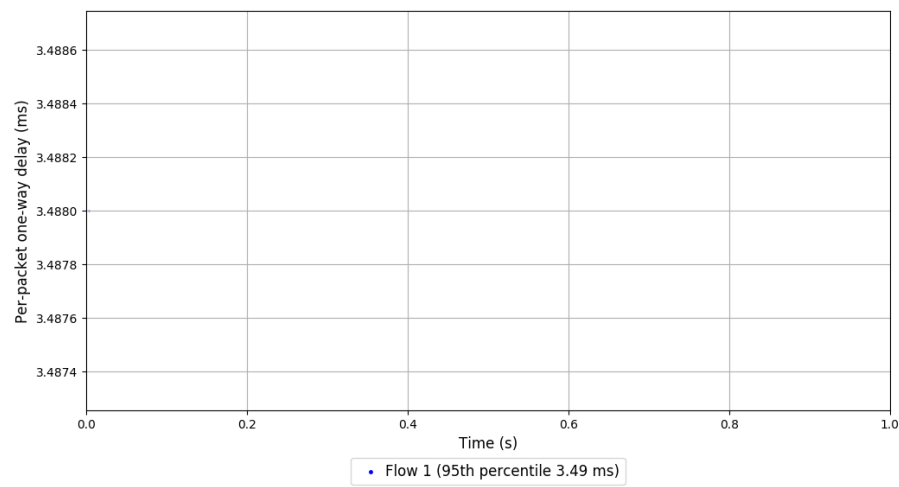
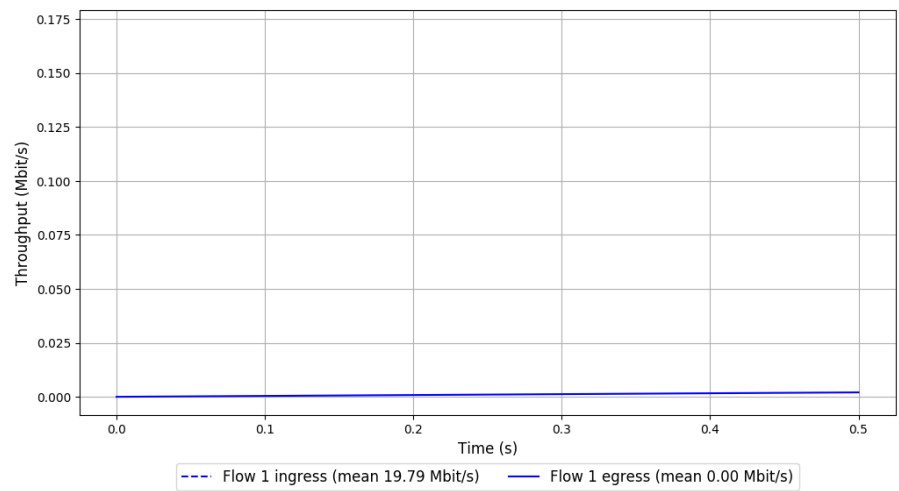
Start at: 2018-09-25 05:38:09

End at: 2018-09-25 05:38:39

Local clock offset: 30.076 ms

Remote clock offset: 0.391 ms

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

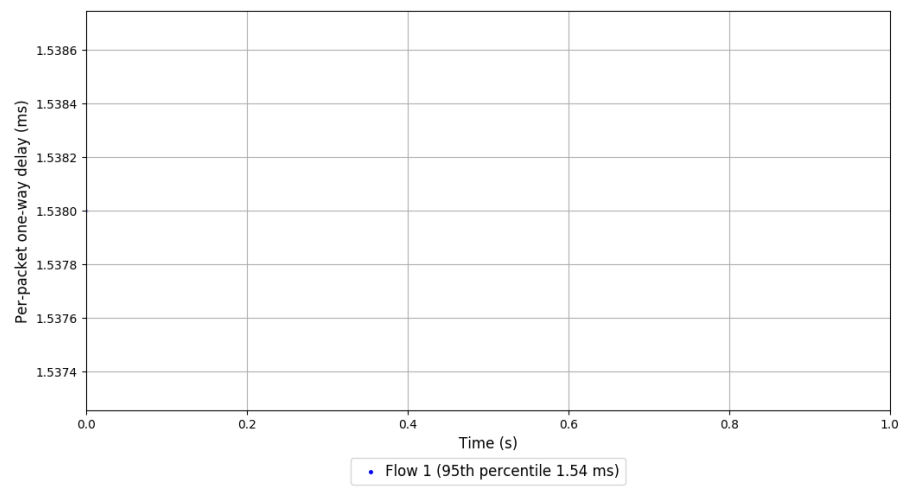
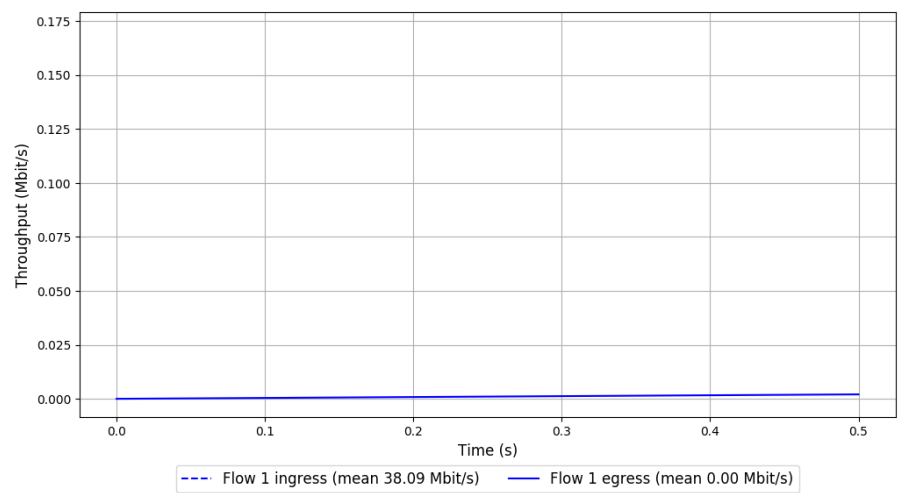
Start at: 2018-09-25 05:59:17

End at: 2018-09-25 05:59:47

Local clock offset: -2.69 ms

Remote clock offset: 0.482 ms

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

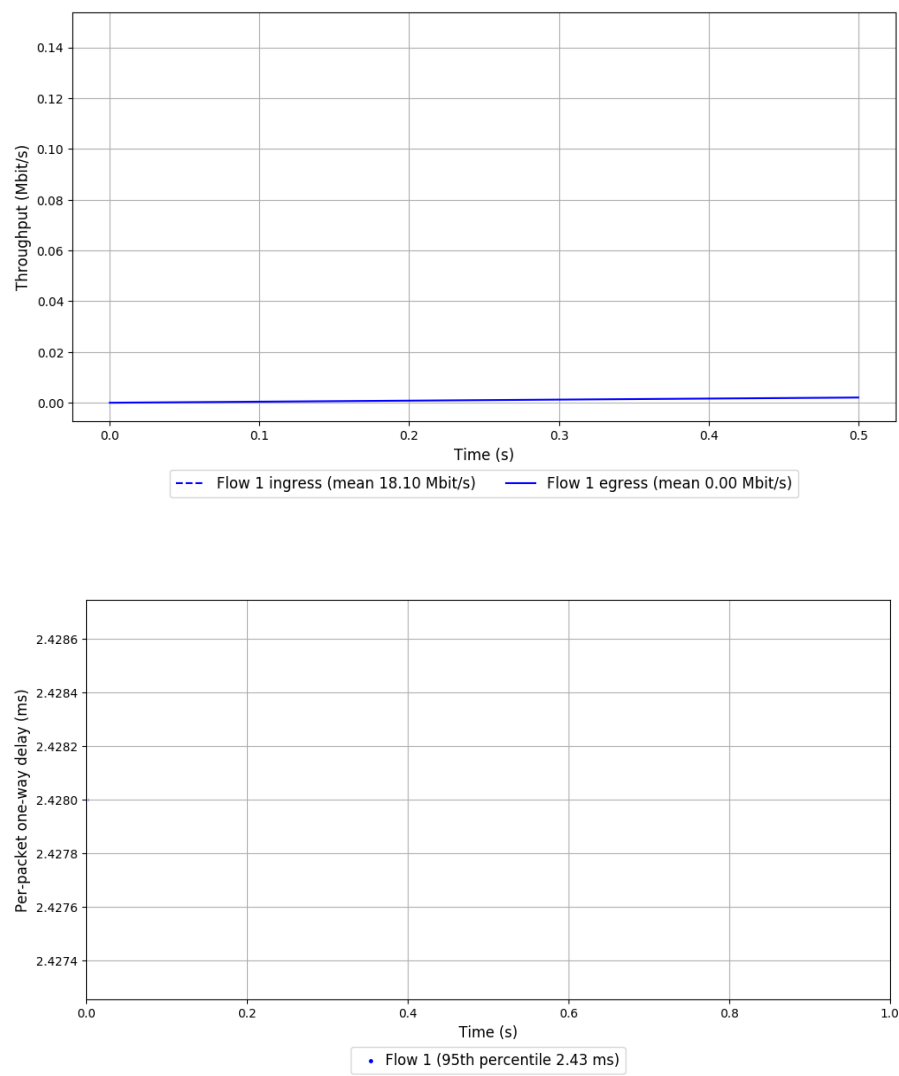
Start at: 2018-09-25 06:20:27

End at: 2018-09-25 06:20:57

Local clock offset: -5.878 ms

Remote clock offset: 0.447 ms

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-09-25 04:56:56

End at: 2018-09-25 04:57:26

Local clock offset: 4.48 ms

Remote clock offset: 0.134 ms

Below is generated by plot.py at 2018-09-25 06:29:02

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.48 Mbit/s

95th percentile per-packet one-way delay: 33.186 ms

Loss rate: 0.01%

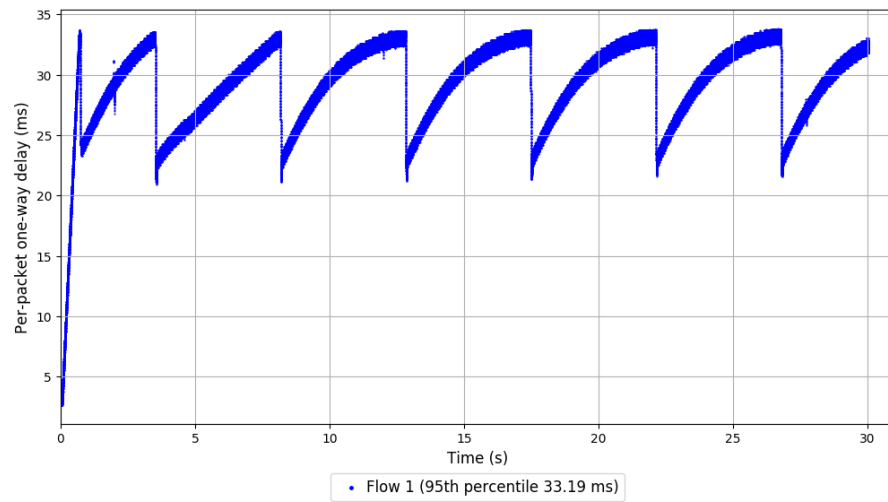
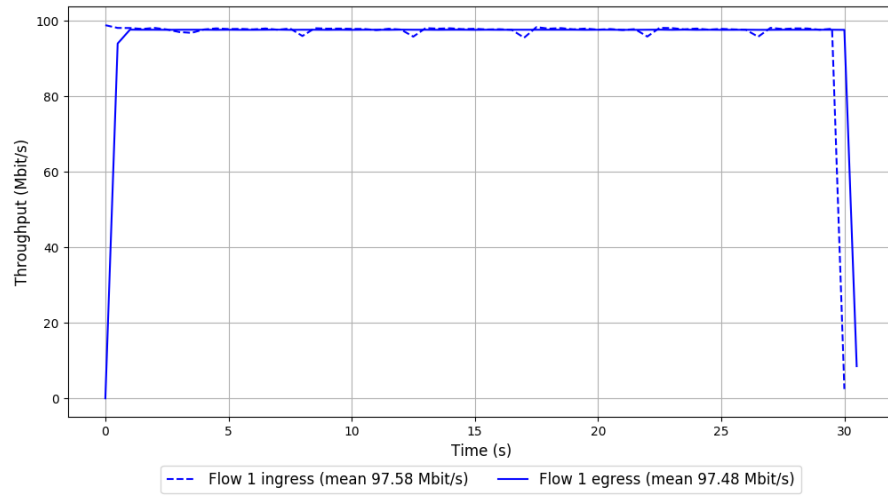
-- Flow 1:

Average throughput: 97.48 Mbit/s

95th percentile per-packet one-way delay: 33.186 ms

Loss rate: 0.01%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-09-25 05:18:04

End at: 2018-09-25 05:18:34

Local clock offset: 18.087 ms

Remote clock offset: 0.347 ms

Below is generated by plot.py at 2018-09-25 06:29:02

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.48 Mbit/s

95th percentile per-packet one-way delay: 33.135 ms

Loss rate: 0.01%

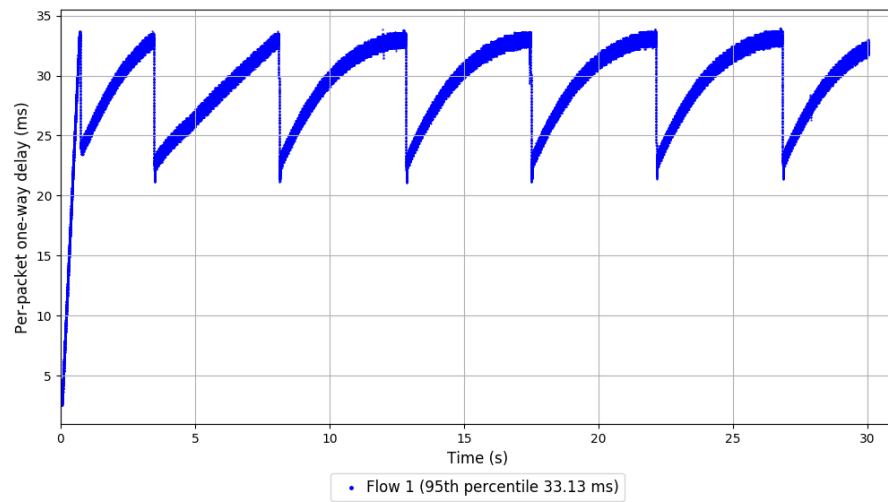
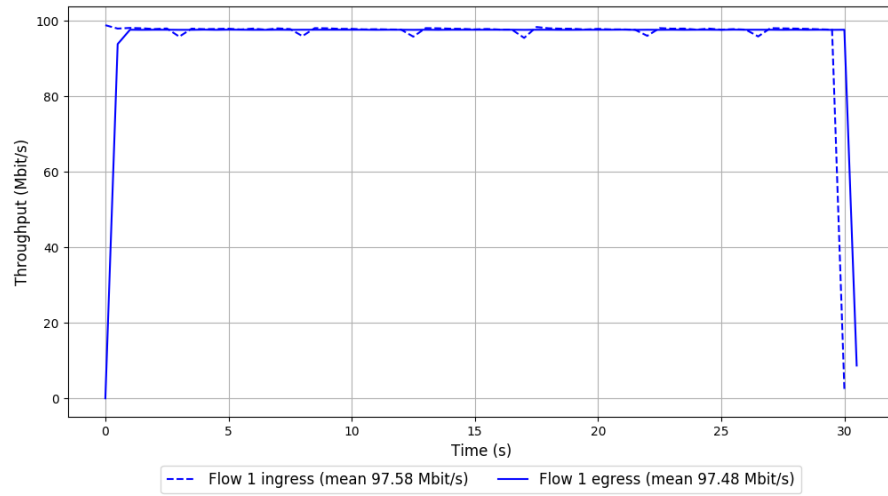
-- Flow 1:

Average throughput: 97.48 Mbit/s

95th percentile per-packet one-way delay: 33.135 ms

Loss rate: 0.01%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-09-25 05:39:13

End at: 2018-09-25 05:39:43

Local clock offset: 30.825 ms

Remote clock offset: 0.381 ms

Below is generated by plot.py at 2018-09-25 06:29:02

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.47 Mbit/s

95th percentile per-packet one-way delay: 31.487 ms

Loss rate: 0.01%

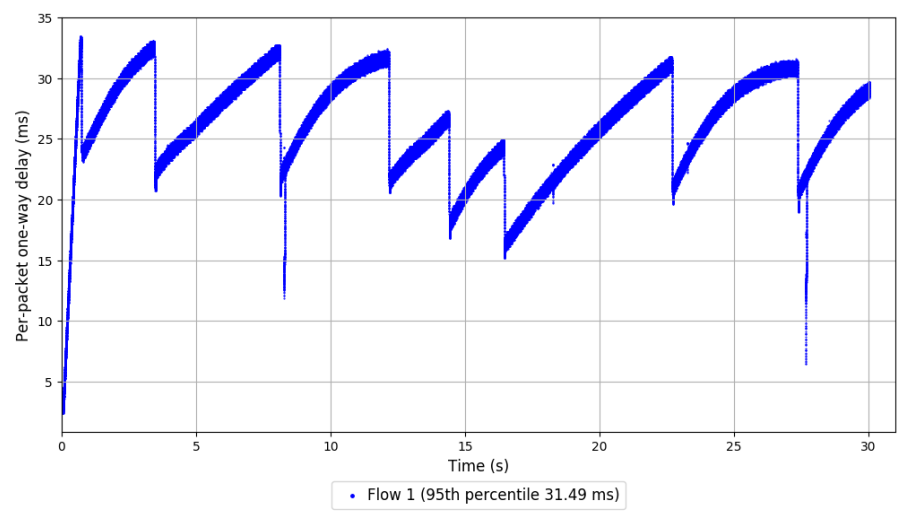
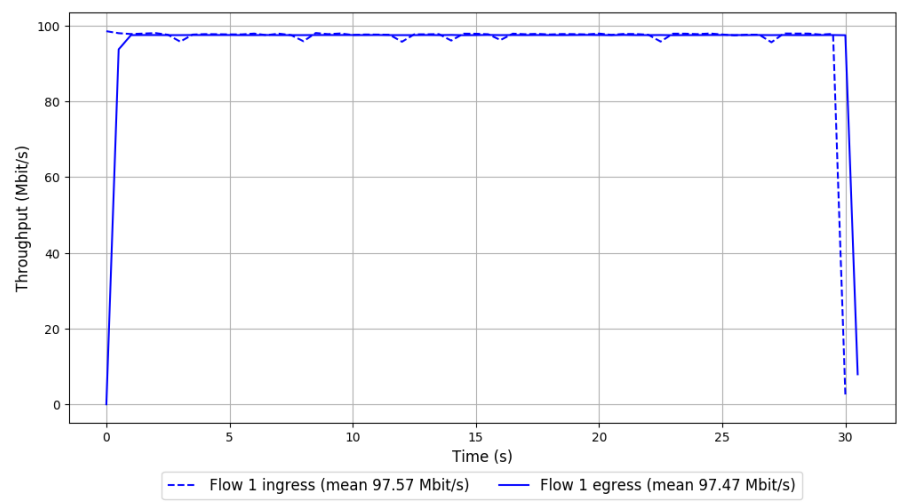
-- Flow 1:

Average throughput: 97.47 Mbit/s

95th percentile per-packet one-way delay: 31.487 ms

Loss rate: 0.01%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-09-25 06:00:21

End at: 2018-09-25 06:00:51

Local clock offset: -3.16 ms

Remote clock offset: 0.482 ms

Below is generated by plot.py at 2018-09-25 06:30:13

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.51 Mbit/s

95th percentile per-packet one-way delay: 31.661 ms

Loss rate: 0.01%

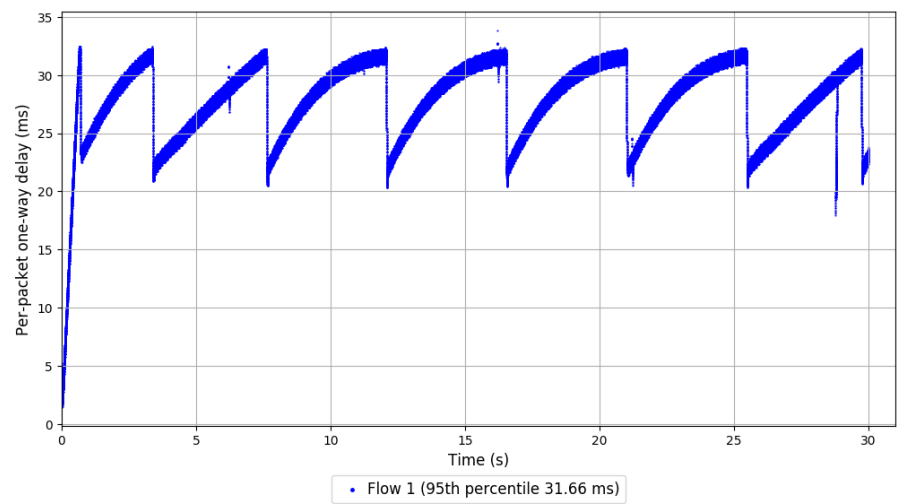
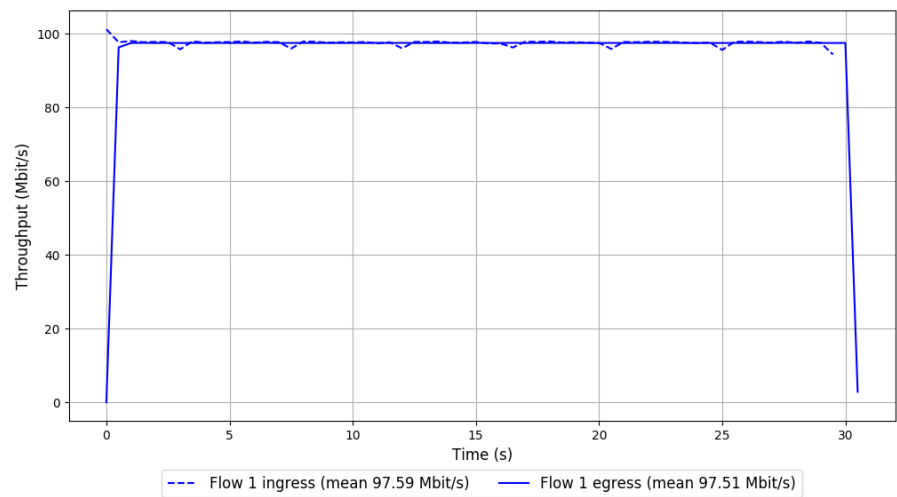
-- Flow 1:

Average throughput: 97.51 Mbit/s

95th percentile per-packet one-way delay: 31.661 ms

Loss rate: 0.01%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-09-25 06:21:31

End at: 2018-09-25 06:22:01

Local clock offset: -5.963 ms

Remote clock offset: 0.543 ms

Below is generated by plot.py at 2018-09-25 06:30:13

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.52 Mbit/s

95th percentile per-packet one-way delay: 31.137 ms

Loss rate: 0.01%

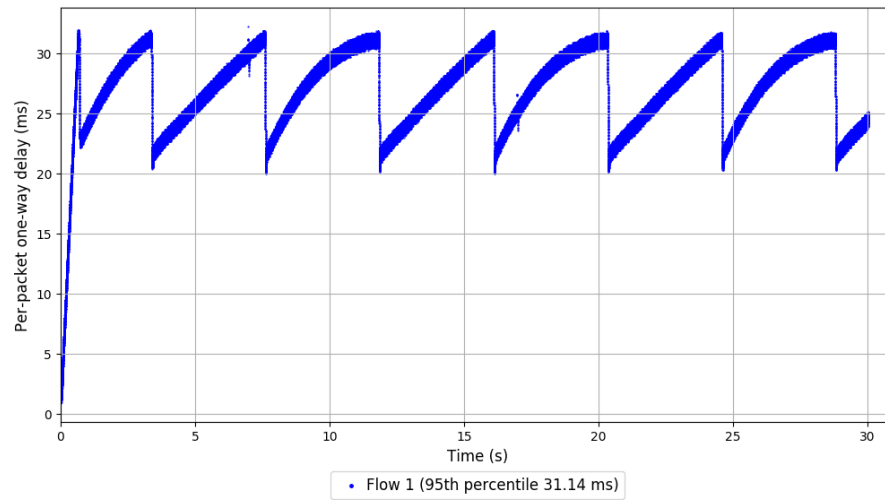
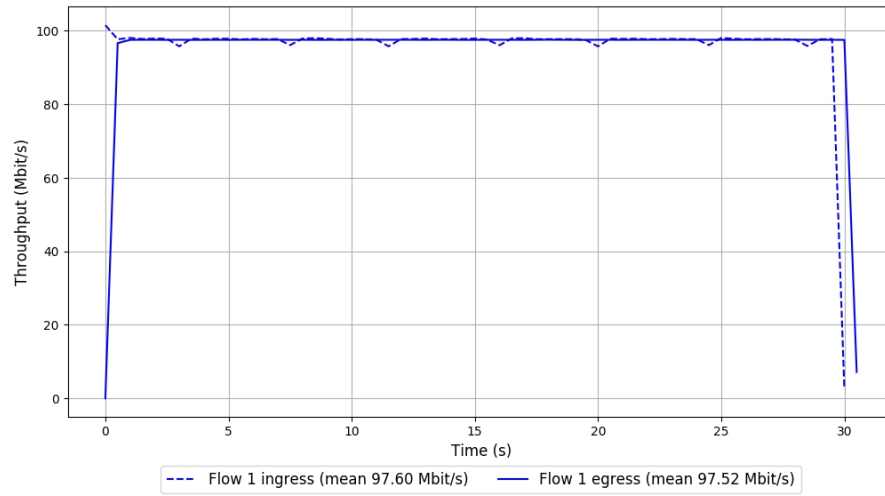
-- Flow 1:

Average throughput: 97.52 Mbit/s

95th percentile per-packet one-way delay: 31.137 ms

Loss rate: 0.01%

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2018-09-25 04:49:10

End at: 2018-09-25 04:49:40

Local clock offset: -1.154 ms

Remote clock offset: 0.167 ms

Below is generated by plot.py at 2018-09-25 06:30:23

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.03 Mbit/s

95th percentile per-packet one-way delay: 29.749 ms

Loss rate: 3.96%

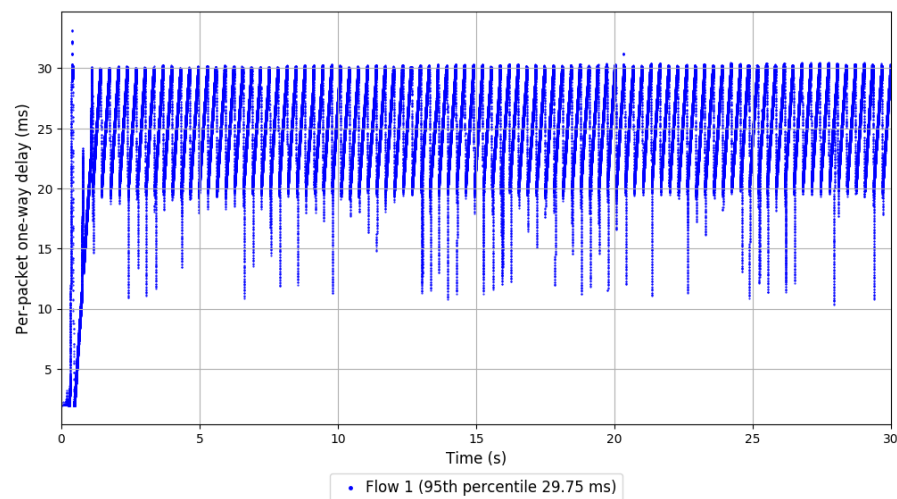
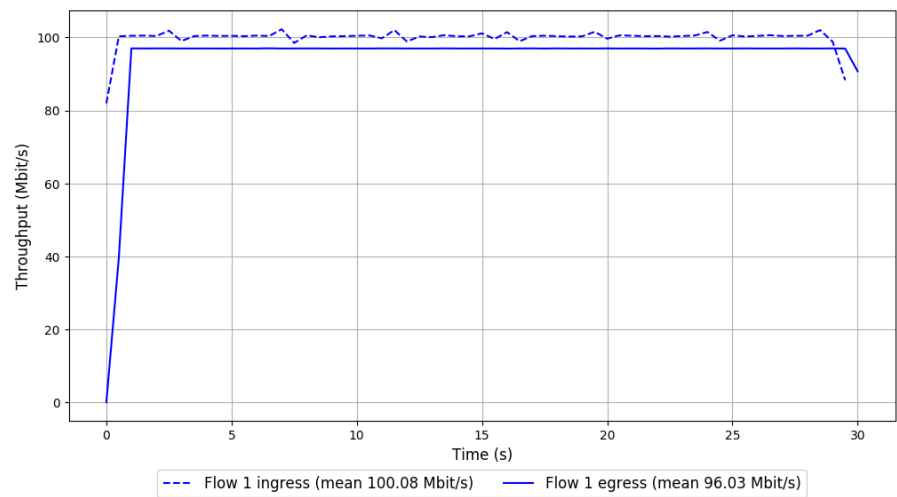
-- Flow 1:

Average throughput: 96.03 Mbit/s

95th percentile per-packet one-way delay: 29.749 ms

Loss rate: 3.96%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-09-25 05:10:18

End at: 2018-09-25 05:10:48

Local clock offset: 13.126 ms

Remote clock offset: 0.22 ms

Below is generated by plot.py at 2018-09-25 06:30:25

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.03 Mbit/s

95th percentile per-packet one-way delay: 30.268 ms

Loss rate: 4.01%

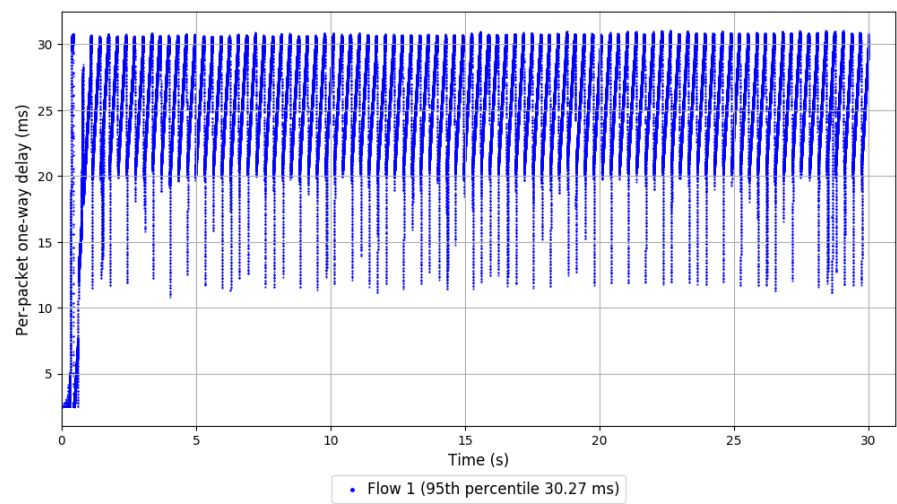
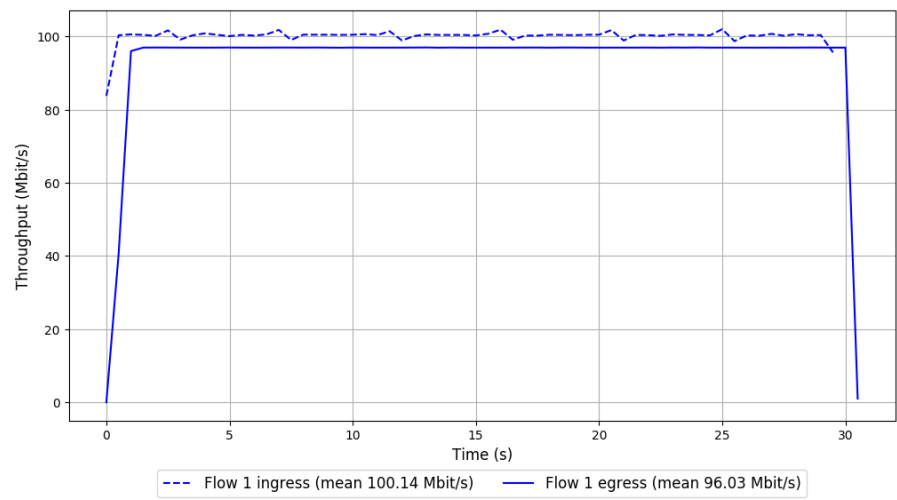
-- Flow 1:

Average throughput: 96.03 Mbit/s

95th percentile per-packet one-way delay: 30.268 ms

Loss rate: 4.01%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-09-25 05:31:26

End at: 2018-09-25 05:31:57

Local clock offset: 25.833 ms

Remote clock offset: 0.412 ms

Below is generated by plot.py at 2018-09-25 06:30:25

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.02 Mbit/s

95th percentile per-packet one-way delay: 29.668 ms

Loss rate: 3.95%

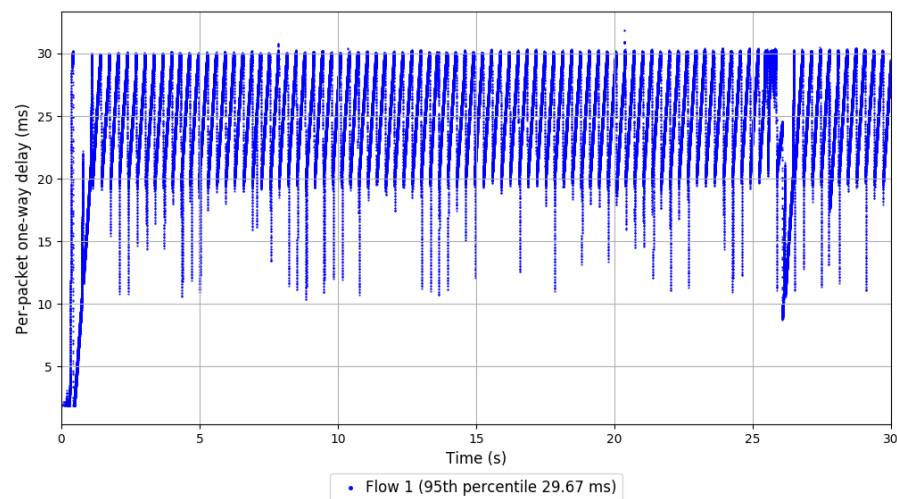
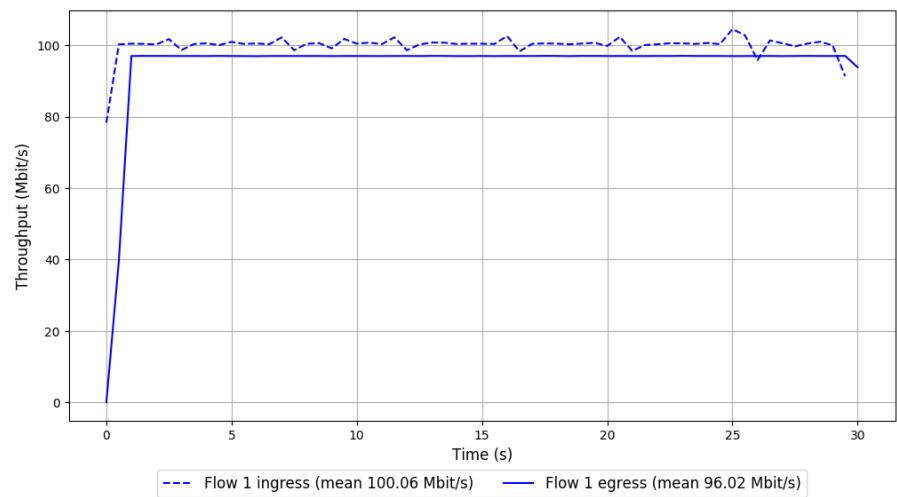
-- Flow 1:

Average throughput: 96.02 Mbit/s

95th percentile per-packet one-way delay: 29.668 ms

Loss rate: 3.95%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-09-25 05:52:35

End at: 2018-09-25 05:53:05

Local clock offset: 1.88 ms

Remote clock offset: 0.495 ms

Below is generated by plot.py at 2018-09-25 06:30:27

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.06 Mbit/s

95th percentile per-packet one-way delay: 28.671 ms

Loss rate: 3.99%

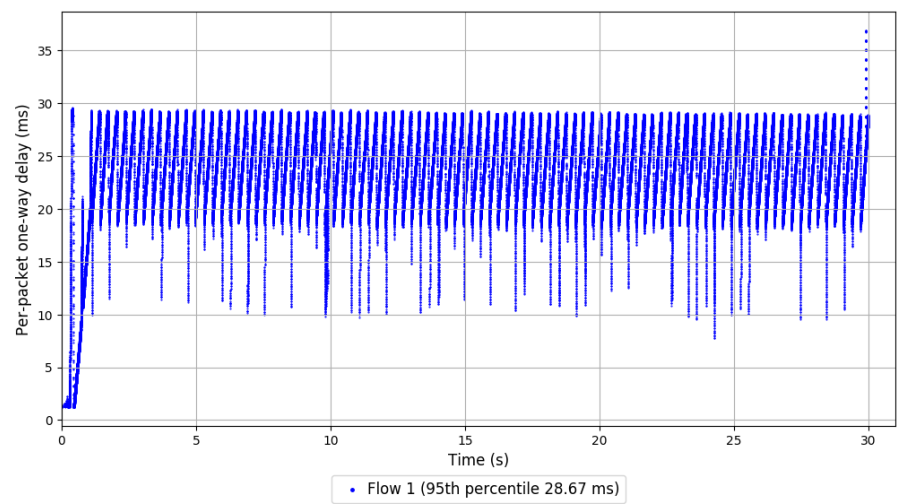
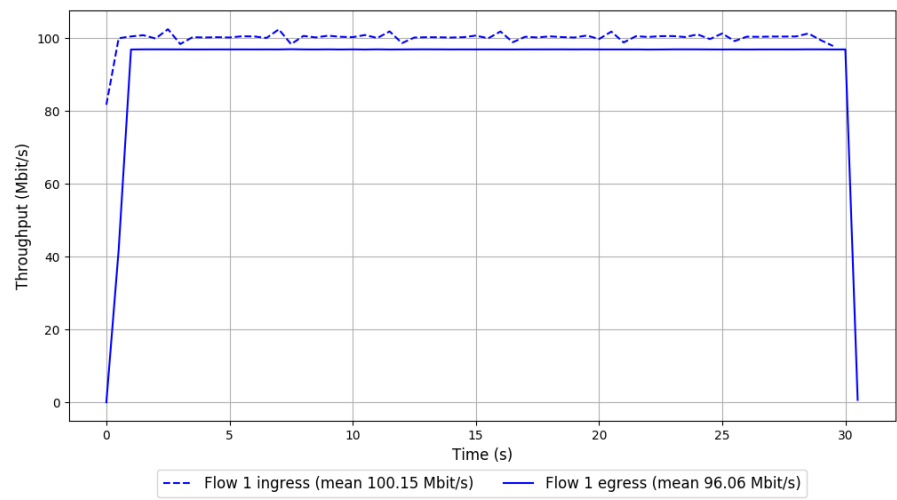
-- Flow 1:

Average throughput: 96.06 Mbit/s

95th percentile per-packet one-way delay: 28.671 ms

Loss rate: 3.99%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-09-25 06:13:44

End at: 2018-09-25 06:14:14

Local clock offset: -5.336 ms

Remote clock offset: 0.421 ms

Below is generated by plot.py at 2018-09-25 06:30:27

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.00 Mbit/s

95th percentile per-packet one-way delay: 28.301 ms

Loss rate: 3.95%

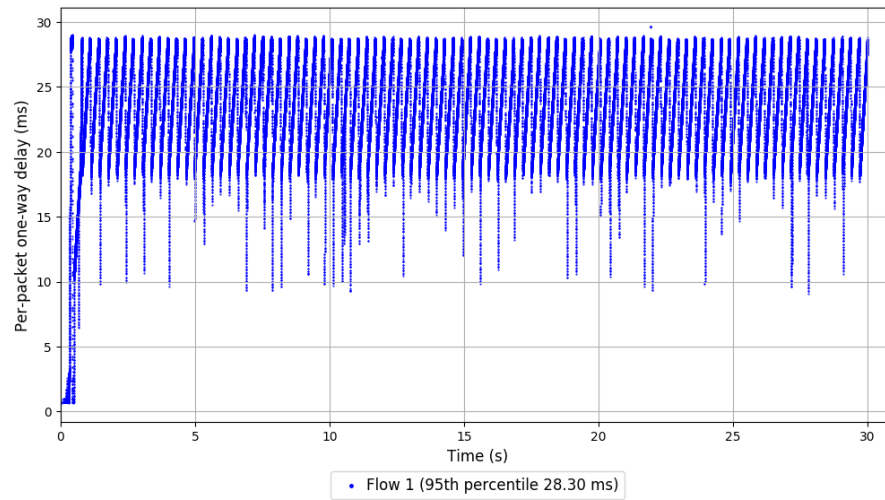
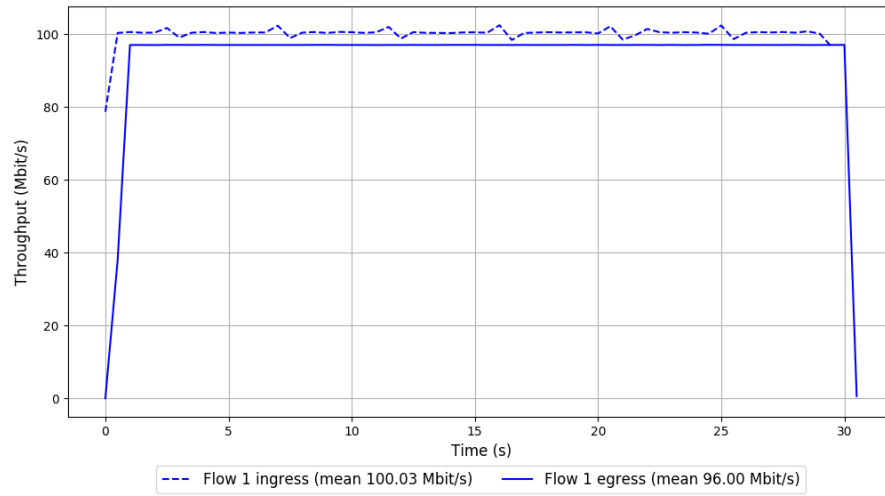
-- Flow 1:

Average throughput: 96.00 Mbit/s

95th percentile per-packet one-way delay: 28.301 ms

Loss rate: 3.95%

Run 5: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2018-09-25 04:41:20

End at: 2018-09-25 04:41:50

Local clock offset: -4.628 ms

Remote clock offset: 0.128 ms

Below is generated by plot.py at 2018-09-25 06:30:27

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.29 Mbit/s

95th percentile per-packet one-way delay: 27.164 ms

Loss rate: 1.23%

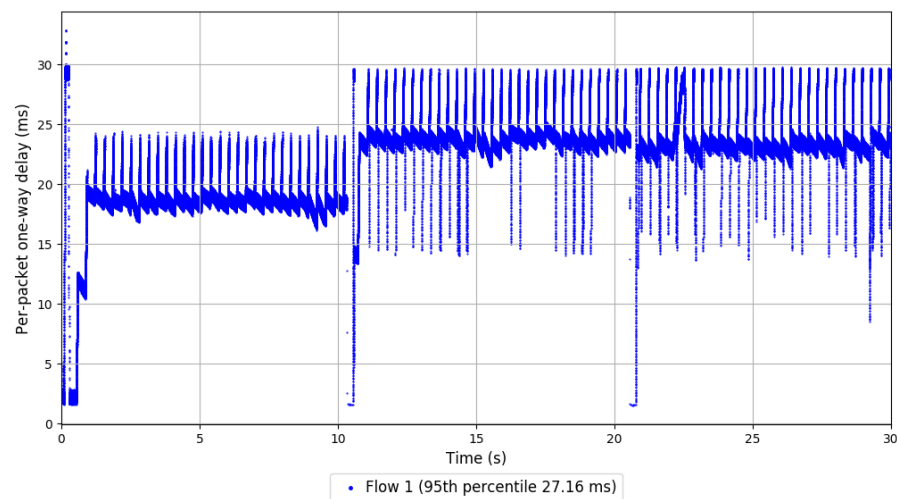
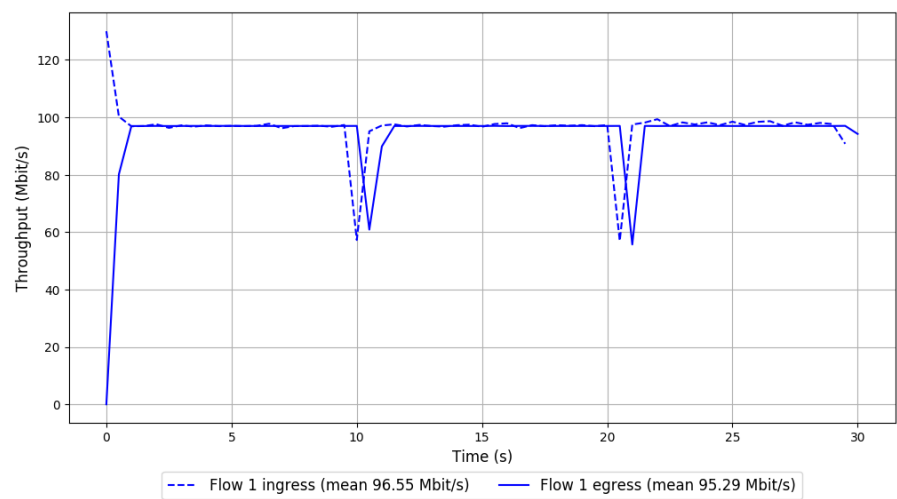
-- Flow 1:

Average throughput: 95.29 Mbit/s

95th percentile per-packet one-way delay: 27.164 ms

Loss rate: 1.23%

Run 1: Report of FillP-Sheep — Data Link



Run 2: Statistics of FillP-Sheep

Start at: 2018-09-25 05:02:27

End at: 2018-09-25 05:02:57

Local clock offset: 7.356 ms

Remote clock offset: 0.265 ms

Below is generated by plot.py at 2018-09-25 06:31:34

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.24 Mbit/s

95th percentile per-packet one-way delay: 28.976 ms

Loss rate: 1.23%

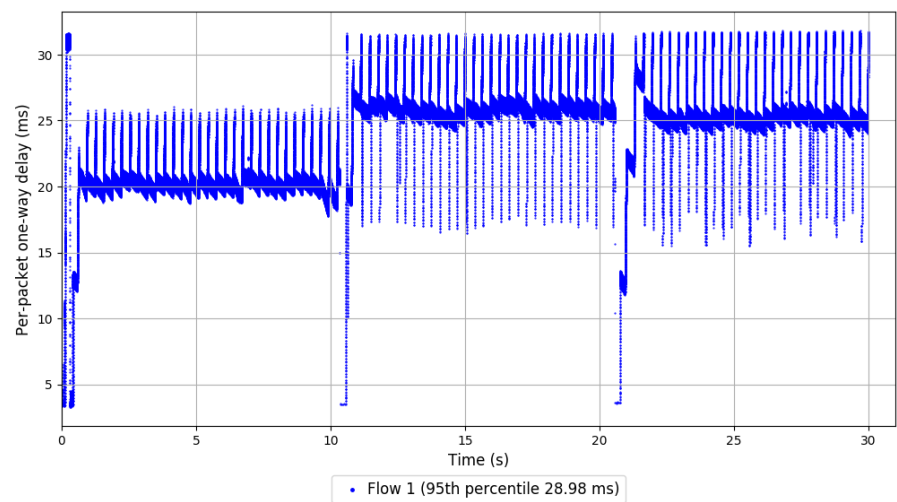
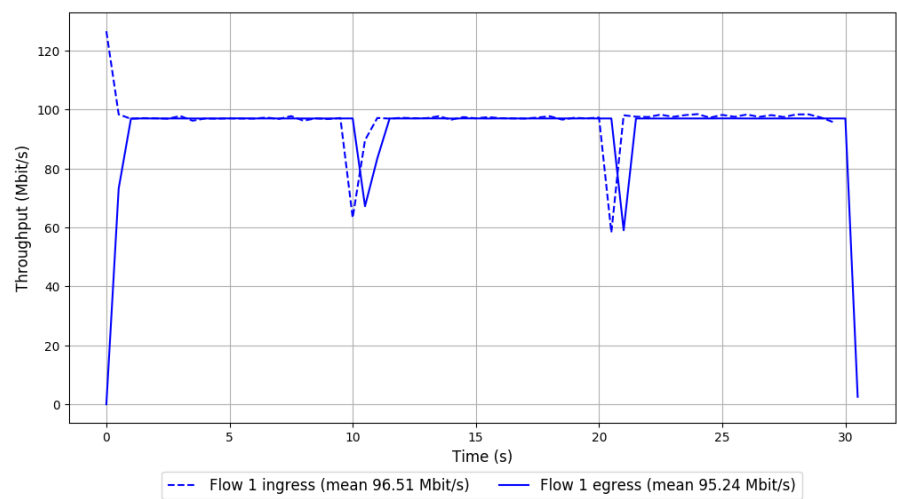
-- Flow 1:

Average throughput: 95.24 Mbit/s

95th percentile per-packet one-way delay: 28.976 ms

Loss rate: 1.23%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2018-09-25 05:23:36

End at: 2018-09-25 05:24:06

Local clock offset: 21.559 ms

Remote clock offset: 0.415 ms

Below is generated by plot.py at 2018-09-25 06:31:36

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.43 Mbit/s

95th percentile per-packet one-way delay: 26.957 ms

Loss rate: 1.39%

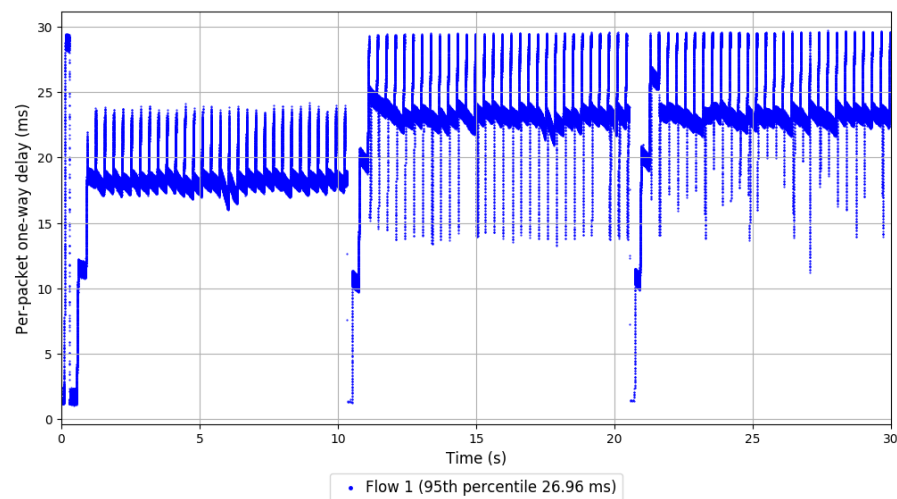
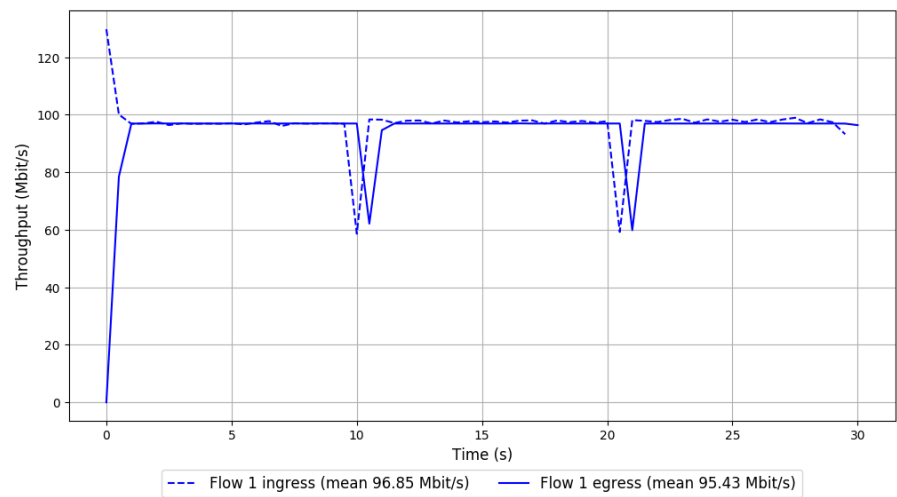
-- Flow 1:

Average throughput: 95.43 Mbit/s

95th percentile per-packet one-way delay: 26.957 ms

Loss rate: 1.39%

Run 3: Report of FillP-Sheep — Data Link



Run 4: Statistics of FillP-Sheep

Start at: 2018-09-25 05:44:45

End at: 2018-09-25 05:45:15

Local clock offset: 15.073 ms

Remote clock offset: 0.488 ms

Below is generated by plot.py at 2018-09-25 06:31:47

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.19 Mbit/s

95th percentile per-packet one-way delay: 25.768 ms

Loss rate: 1.24%

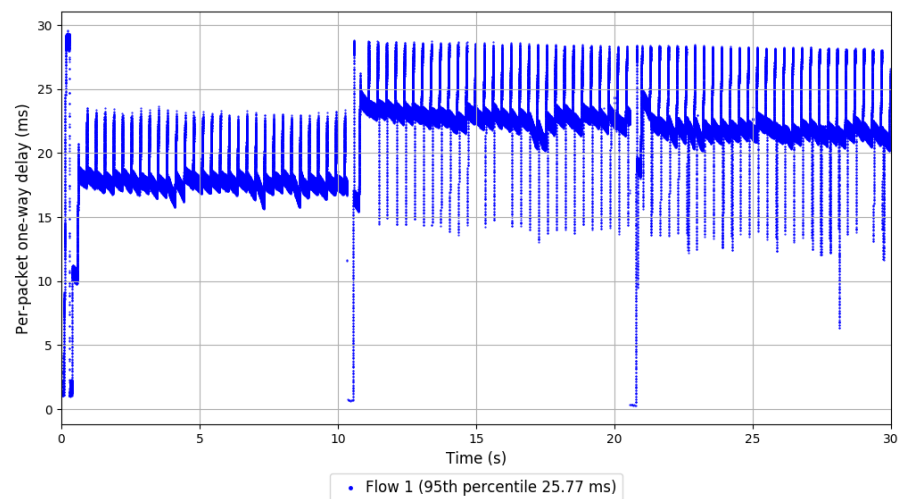
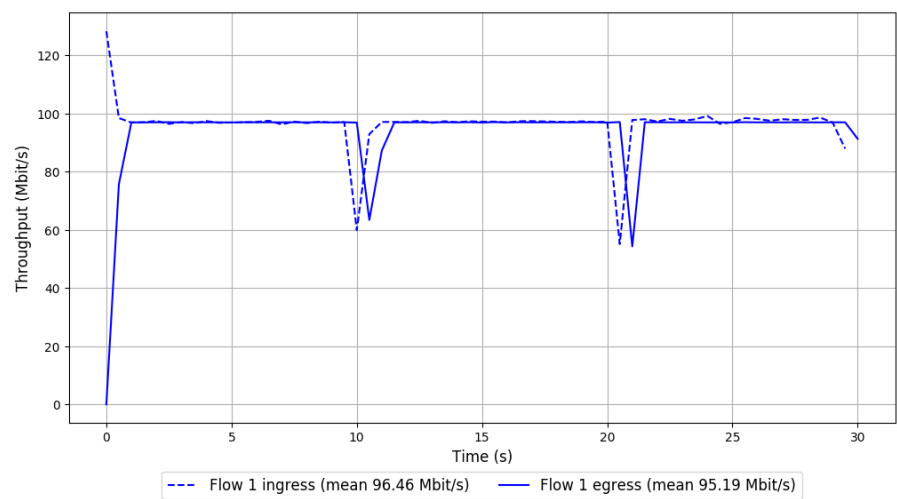
-- Flow 1:

Average throughput: 95.19 Mbit/s

95th percentile per-packet one-way delay: 25.768 ms

Loss rate: 1.24%

Run 4: Report of FillP-Sheep — Data Link



Run 5: Statistics of FillP-Sheep

Start at: 2018-09-25 06:05:54

End at: 2018-09-25 06:06:24

Local clock offset: -4.199 ms

Remote clock offset: 0.554 ms

Below is generated by plot.py at 2018-09-25 06:31:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.30 Mbit/s

95th percentile per-packet one-way delay: 27.649 ms

Loss rate: 1.30%

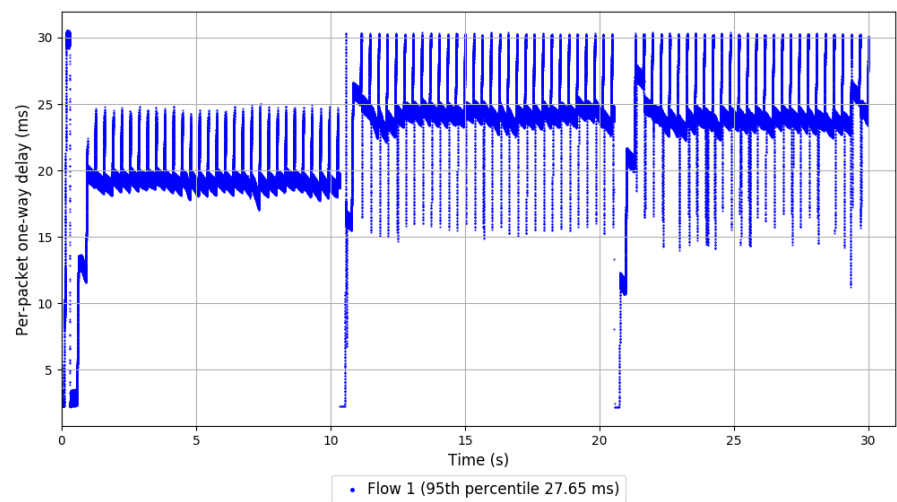
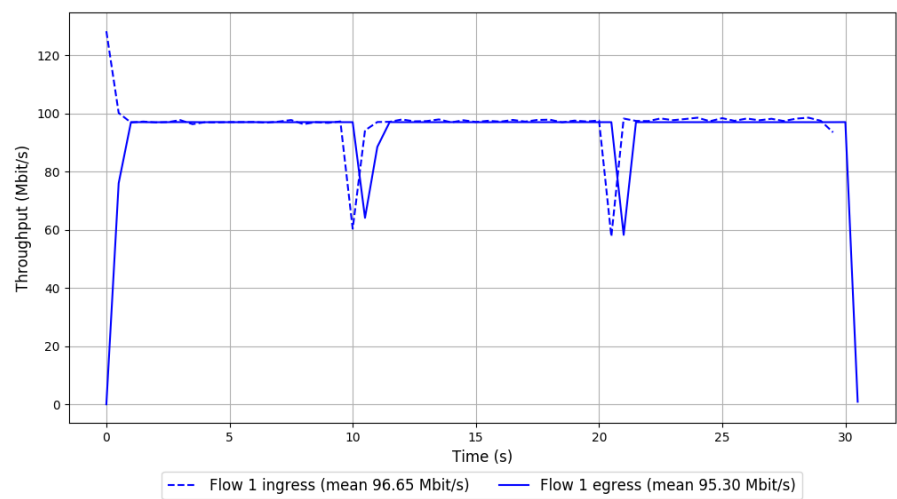
-- Flow 1:

Average throughput: 95.30 Mbit/s

95th percentile per-packet one-way delay: 27.649 ms

Loss rate: 1.30%

Run 5: Report of FillP-Sheep — Data Link

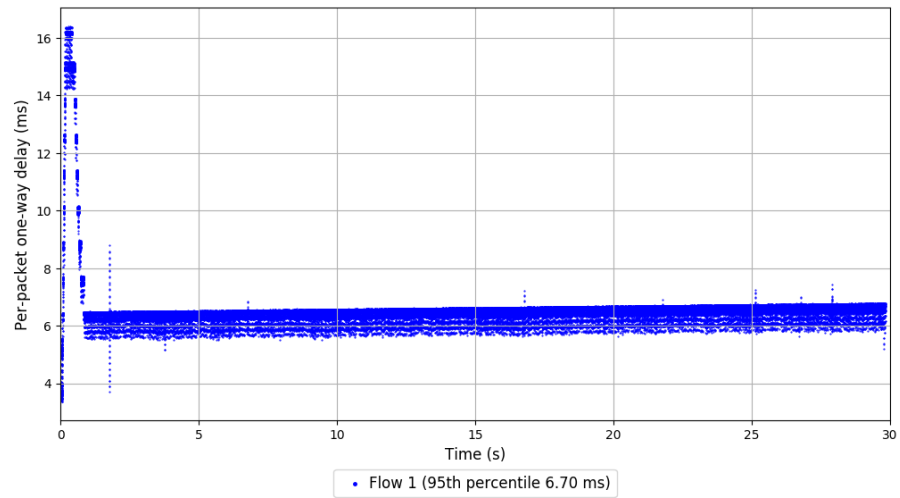
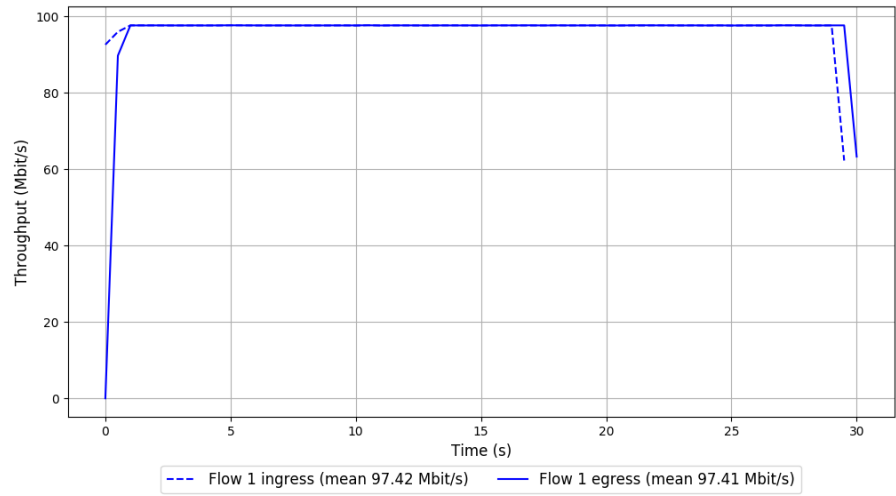


```
Run 1: Statistics of Indigo

Start at: 2018-09-25 04:54:43
End at: 2018-09-25 04:55:13
Local clock offset: 2.316 ms
Remote clock offset: 0.135 ms

# Below is generated by plot.py at 2018-09-25 06:31:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.41 Mbit/s
95th percentile per-packet one-way delay: 6.702 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 97.41 Mbit/s
95th percentile per-packet one-way delay: 6.702 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2018-09-25 05:15:51

End at: 2018-09-25 05:16:21

Local clock offset: 15.883 ms

Remote clock offset: 0.179 ms

Below is generated by plot.py at 2018-09-25 06:31:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.39 Mbit/s

95th percentile per-packet one-way delay: 6.507 ms

Loss rate: 0.00%

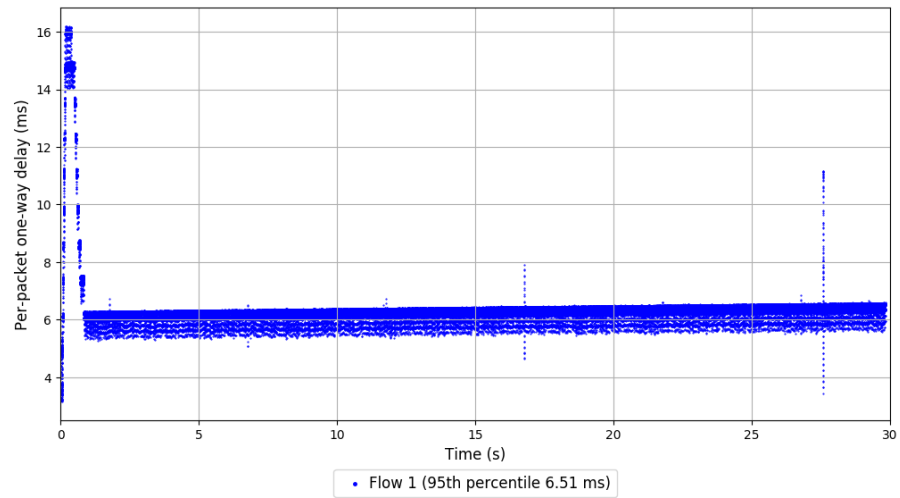
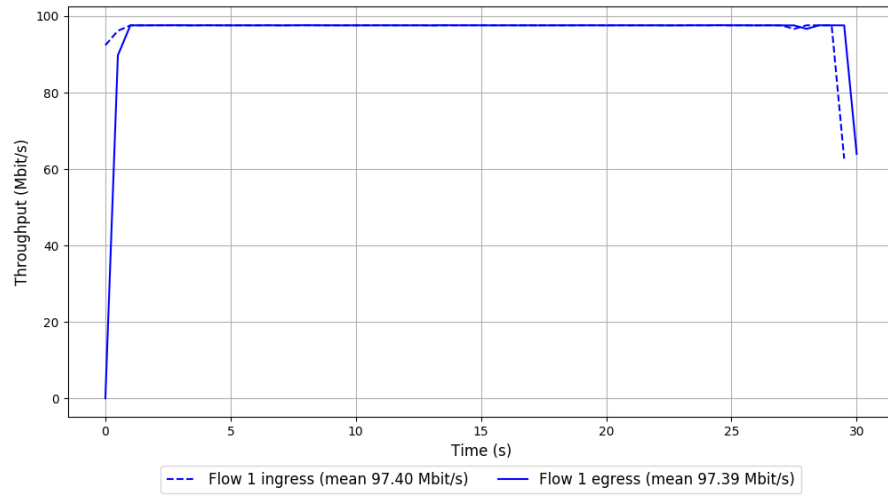
-- Flow 1:

Average throughput: 97.39 Mbit/s

95th percentile per-packet one-way delay: 6.507 ms

Loss rate: 0.00%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2018-09-25 05:36:59

End at: 2018-09-25 05:37:29

Local clock offset: 30.066 ms

Remote clock offset: 0.378 ms

Below is generated by plot.py at 2018-09-25 06:31:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.37 Mbit/s

95th percentile per-packet one-way delay: 3.441 ms

Loss rate: 0.00%

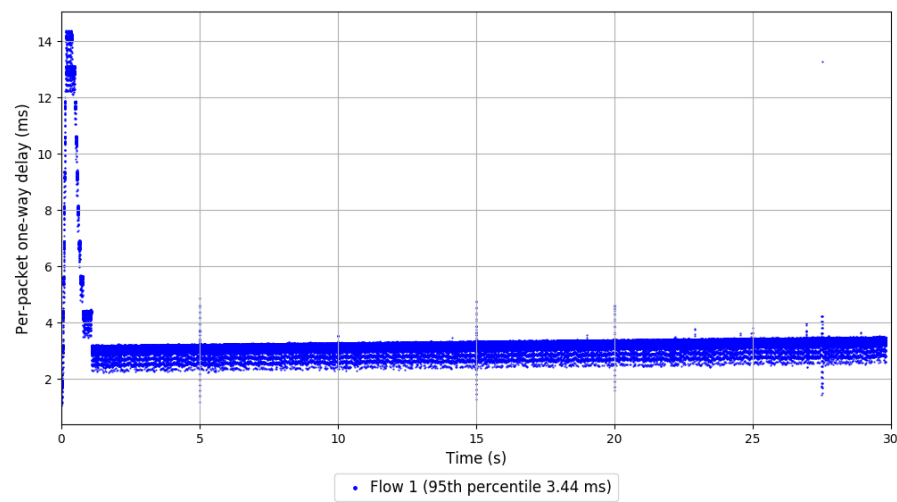
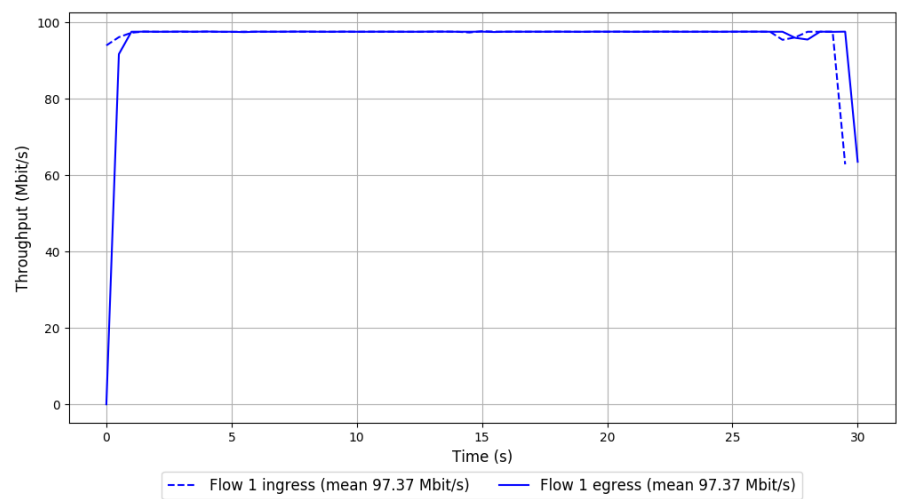
-- Flow 1:

Average throughput: 97.37 Mbit/s

95th percentile per-packet one-way delay: 3.441 ms

Loss rate: 0.00%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2018-09-25 05:58:08

End at: 2018-09-25 05:58:38

Local clock offset: -2.078 ms

Remote clock offset: 0.522 ms

Below is generated by plot.py at 2018-09-25 06:31:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.37 Mbit/s

95th percentile per-packet one-way delay: 3.383 ms

Loss rate: 0.00%

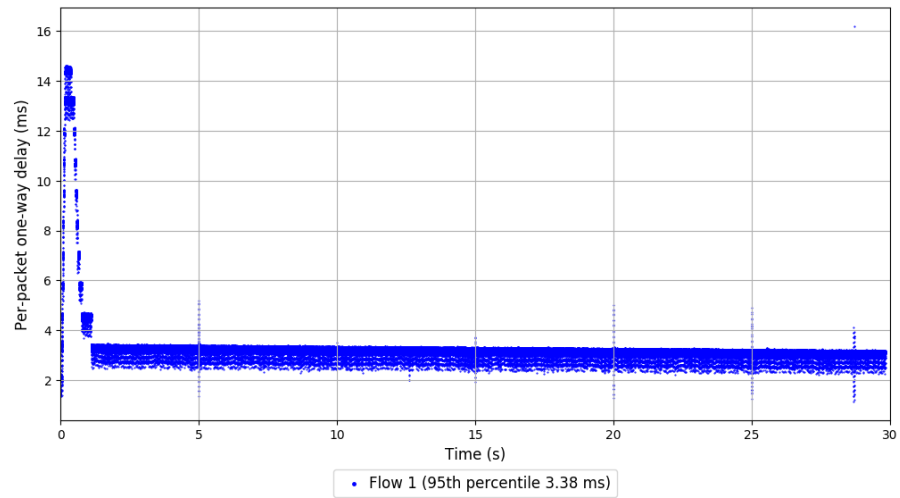
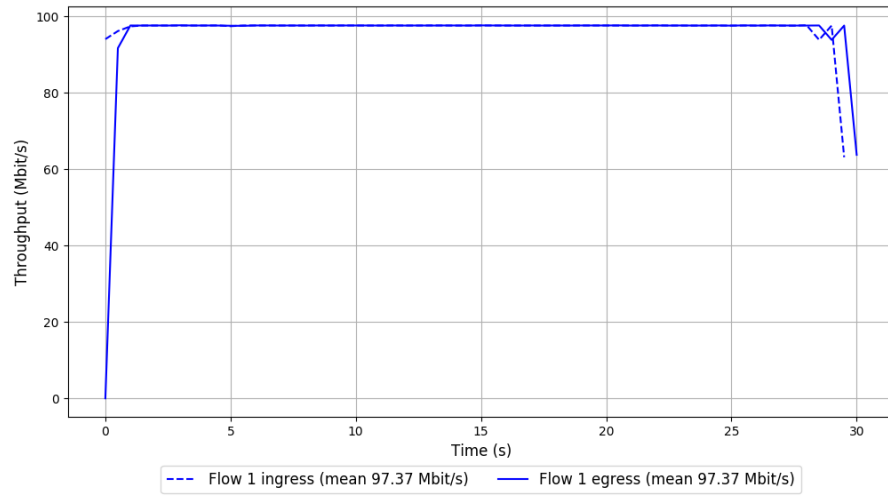
-- Flow 1:

Average throughput: 97.37 Mbit/s

95th percentile per-packet one-way delay: 3.383 ms

Loss rate: 0.00%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2018-09-25 06:19:17

End at: 2018-09-25 06:19:47

Local clock offset: -6.559 ms

Remote clock offset: 0.459 ms

Below is generated by plot.py at 2018-09-25 06:32:43

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.38 Mbit/s

95th percentile per-packet one-way delay: 6.027 ms

Loss rate: 0.00%

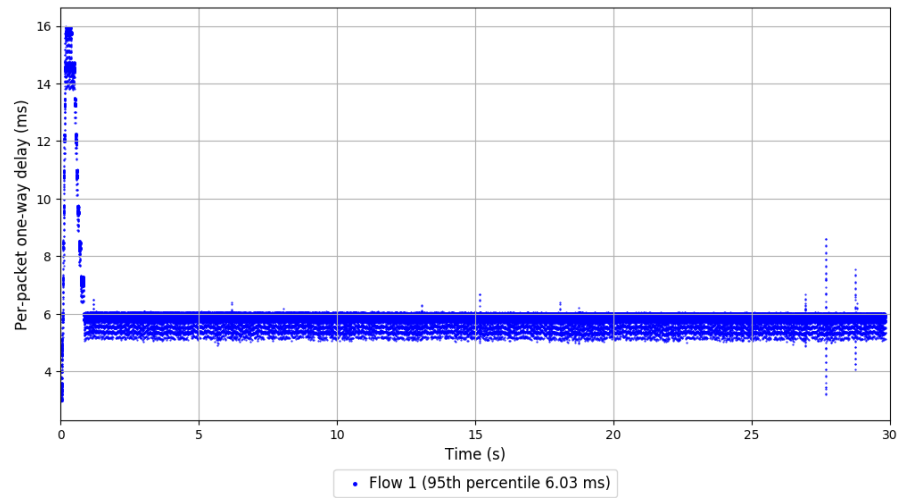
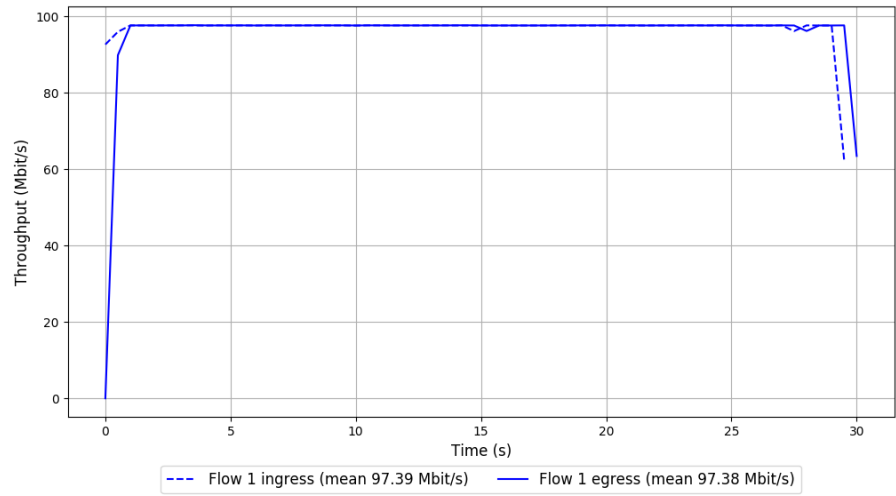
-- Flow 1:

Average throughput: 97.38 Mbit/s

95th percentile per-packet one-way delay: 6.027 ms

Loss rate: 0.00%

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-96d2da3

Start at: 2018-09-25 04:46:55

End at: 2018-09-25 04:47:25

Local clock offset: -1.828 ms

Remote clock offset: 0.102 ms

Below is generated by plot.py at 2018-09-25 06:32:47

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.64 Mbit/s

95th percentile per-packet one-way delay: 4.411 ms

Loss rate: 0.00%

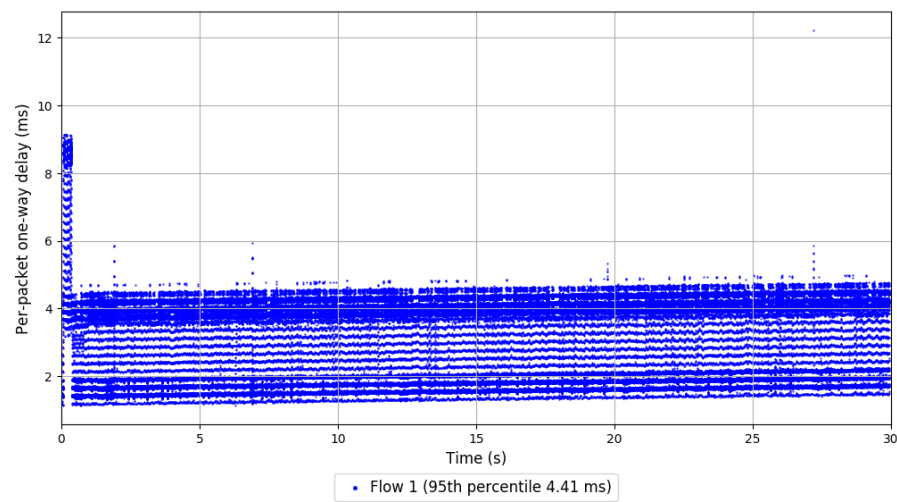
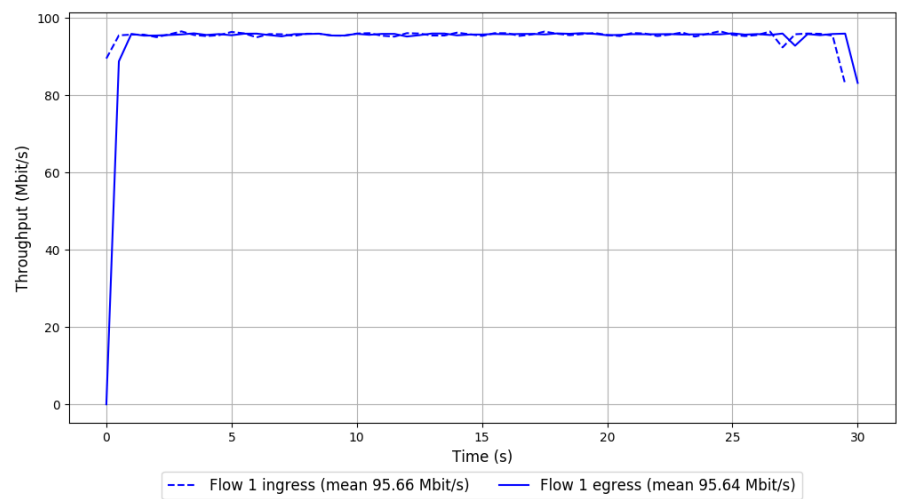
-- Flow 1:

Average throughput: 95.64 Mbit/s

95th percentile per-packet one-way delay: 4.411 ms

Loss rate: 0.00%

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



Run 2: Statistics of Indigo-96d2da3

Start at: 2018-09-25 05:08:03

End at: 2018-09-25 05:08:33

Local clock offset: 10.86 ms

Remote clock offset: 0.302 ms

Below is generated by plot.py at 2018-09-25 06:32:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.62 Mbit/s

95th percentile per-packet one-way delay: 5.183 ms

Loss rate: 0.00%

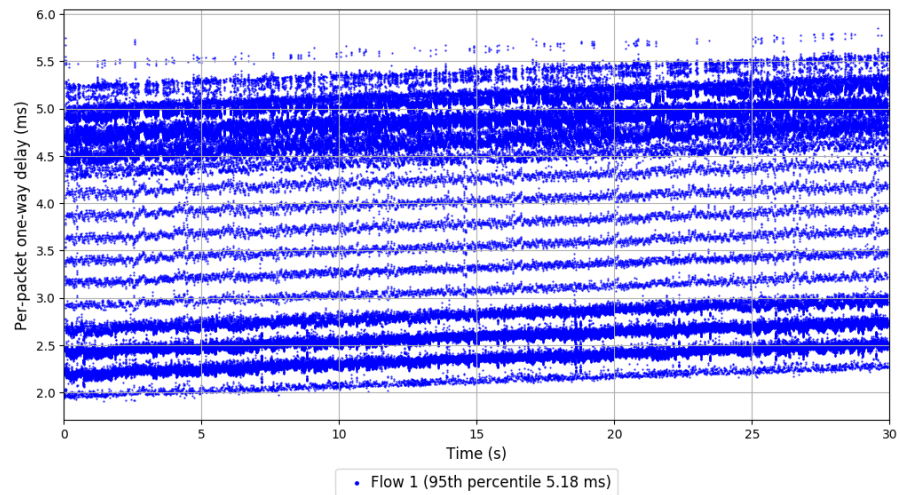
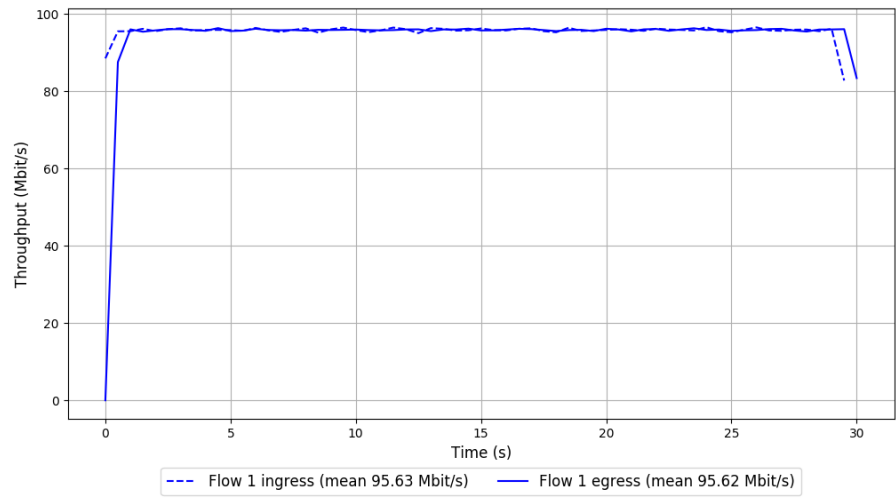
-- Flow 1:

Average throughput: 95.62 Mbit/s

95th percentile per-packet one-way delay: 5.183 ms

Loss rate: 0.00%

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



Run 3: Statistics of Indigo-96d2da3

Start at: 2018-09-25 05:29:11

End at: 2018-09-25 05:29:41

Local clock offset: 24.356 ms

Remote clock offset: 0.308 ms

Below is generated by plot.py at 2018-09-25 06:32:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.27 Mbit/s

95th percentile per-packet one-way delay: 9.717 ms

Loss rate: 0.00%

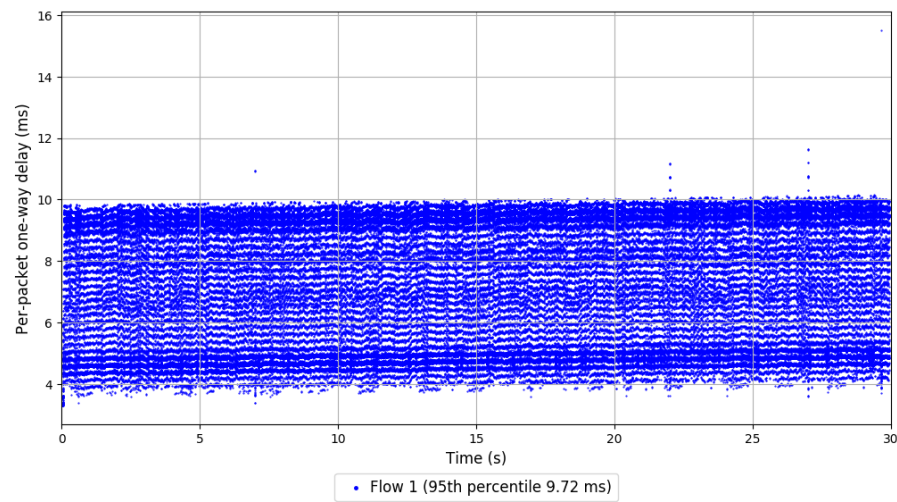
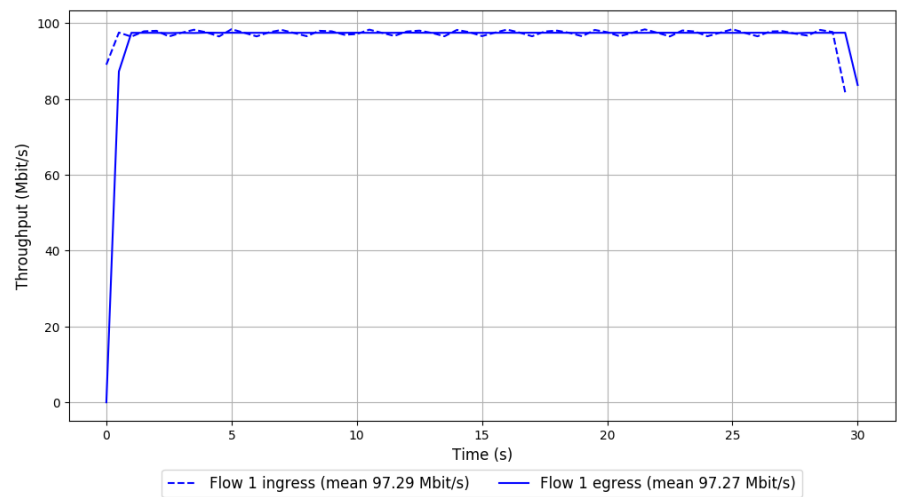
-- Flow 1:

Average throughput: 97.27 Mbit/s

95th percentile per-packet one-way delay: 9.717 ms

Loss rate: 0.00%

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



Run 4: Statistics of Indigo-96d2da3

Start at: 2018-09-25 05:50:20

End at: 2018-09-25 05:50:50

Local clock offset: 4.428 ms

Remote clock offset: 0.428 ms

Below is generated by plot.py at 2018-09-25 06:32:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.52 Mbit/s

95th percentile per-packet one-way delay: 3.841 ms

Loss rate: 0.00%

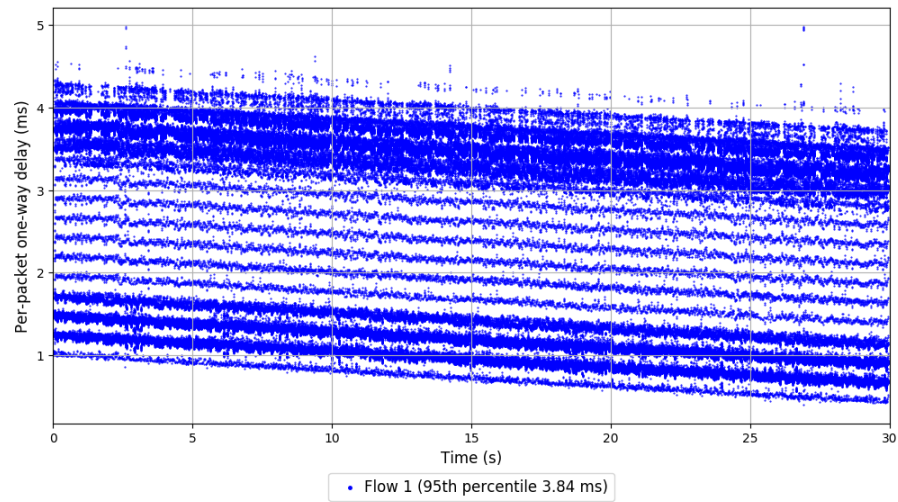
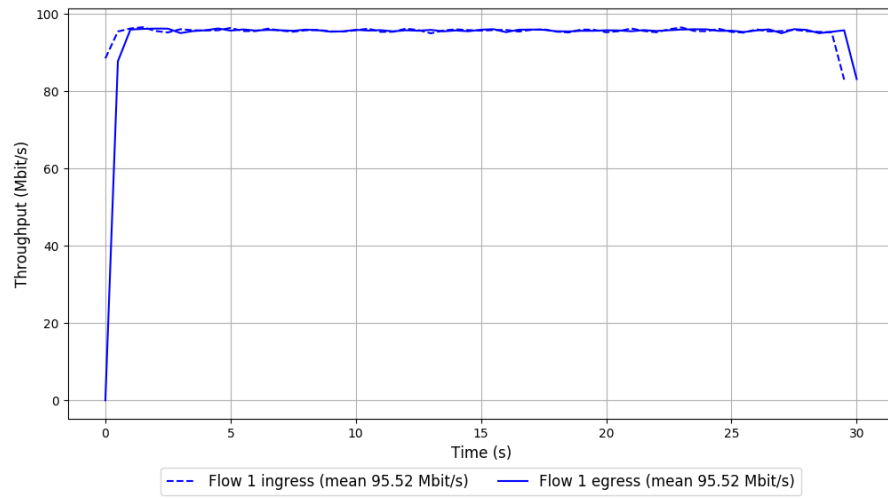
-- Flow 1:

Average throughput: 95.52 Mbit/s

95th percentile per-packet one-way delay: 3.841 ms

Loss rate: 0.00%

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



Run 5: Statistics of Indigo-96d2da3

Start at: 2018-09-25 06:11:30

End at: 2018-09-25 06:12:00

Local clock offset: -5.136 ms

Remote clock offset: 0.596 ms

Below is generated by plot.py at 2018-09-25 06:32:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.51 Mbit/s

95th percentile per-packet one-way delay: 3.890 ms

Loss rate: 0.00%

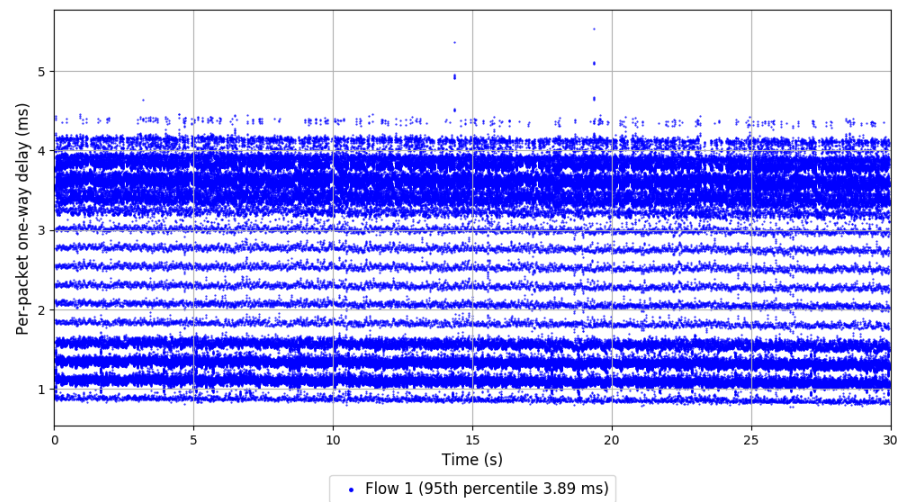
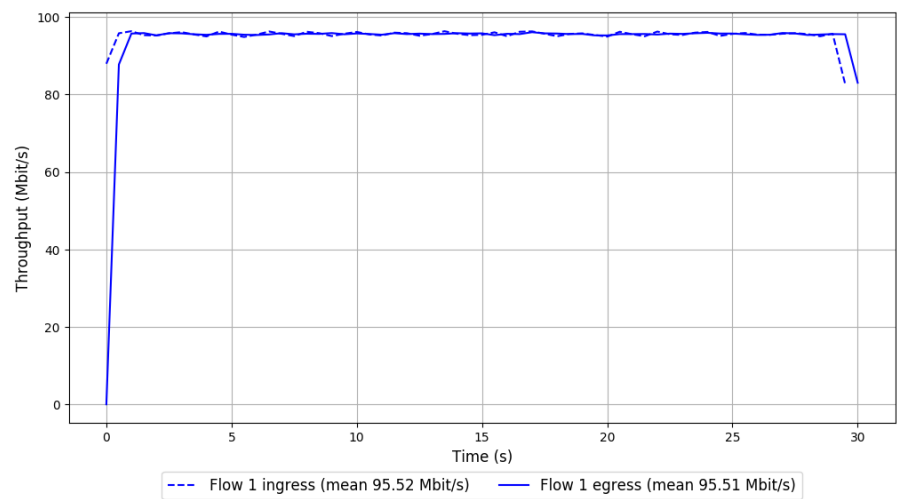
-- Flow 1:

Average throughput: 95.51 Mbit/s

95th percentile per-packet one-way delay: 3.890 ms

Loss rate: 0.00%

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

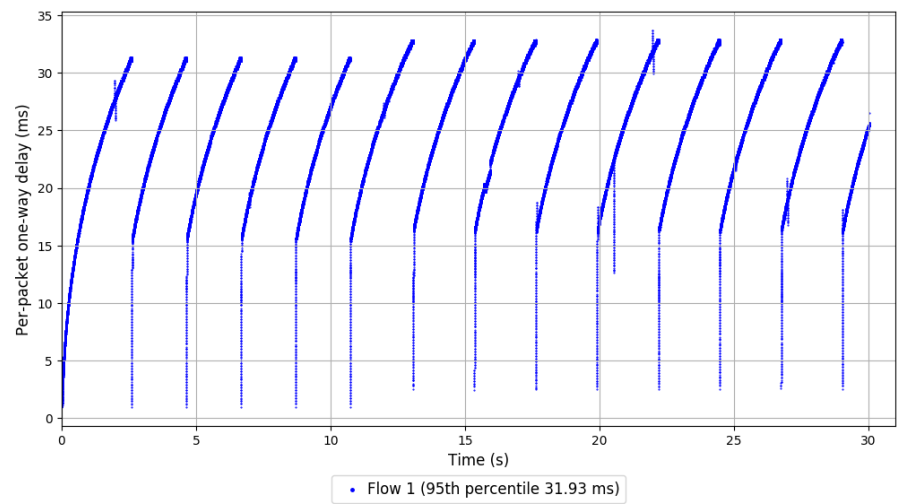
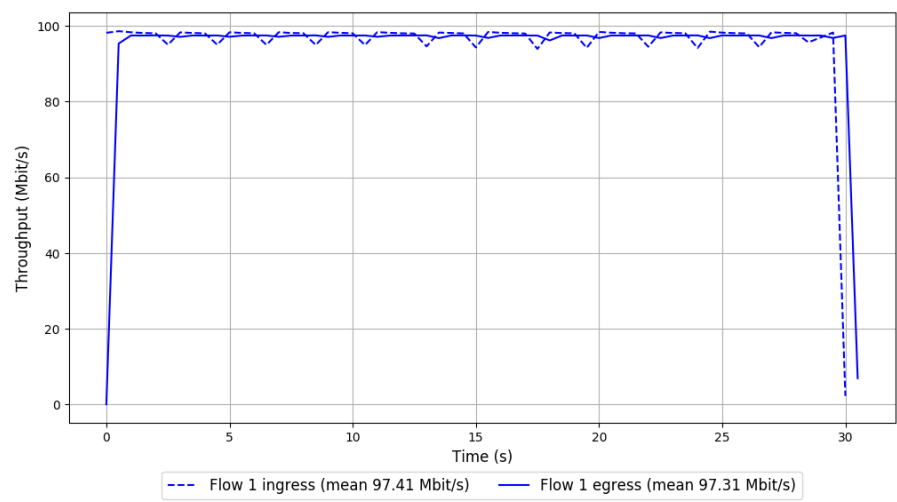


```
Run 1: Statistics of LEDBAT

Start at: 2018-09-25 04:43:32
End at: 2018-09-25 04:44:02
Local clock offset: -3.287 ms
Remote clock offset: 0.078 ms

# Below is generated by plot.py at 2018-09-25 06:33:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.31 Mbit/s
95th percentile per-packet one-way delay: 31.932 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.31 Mbit/s
95th percentile per-packet one-way delay: 31.932 ms
Loss rate: 0.01%
```

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2018-09-25 05:04:40

End at: 2018-09-25 05:05:10

Local clock offset: 9.4 ms

Remote clock offset: 0.278 ms

Below is generated by plot.py at 2018-09-25 06:33:03

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.36 Mbit/s

95th percentile per-packet one-way delay: 31.243 ms

Loss rate: 0.01%

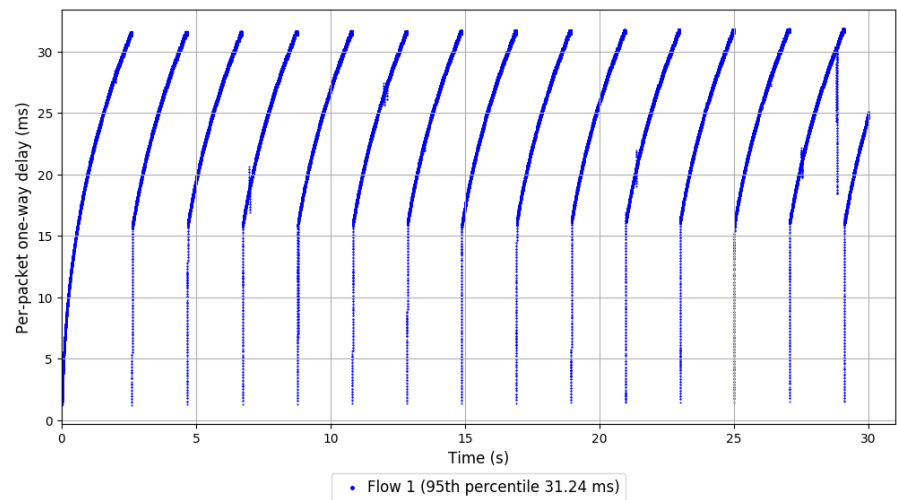
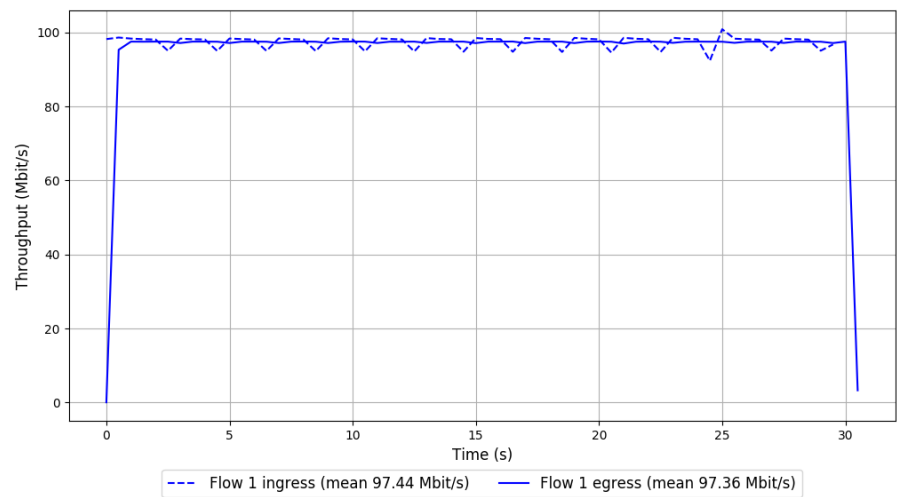
-- Flow 1:

Average throughput: 97.36 Mbit/s

95th percentile per-packet one-way delay: 31.243 ms

Loss rate: 0.01%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-09-25 05:25:48

End at: 2018-09-25 05:26:18

Local clock offset: 22.186 ms

Remote clock offset: 0.32 ms

Below is generated by plot.py at 2018-09-25 06:33:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.35 Mbit/s

95th percentile per-packet one-way delay: 31.803 ms

Loss rate: 0.01%

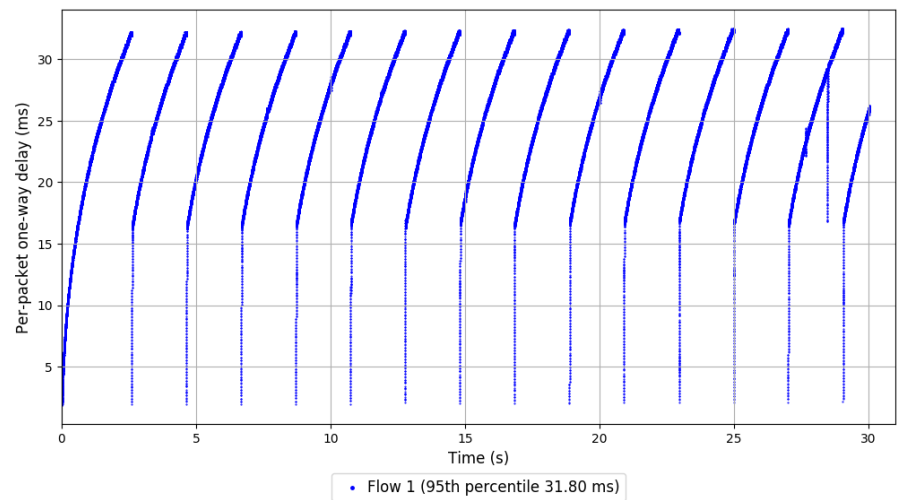
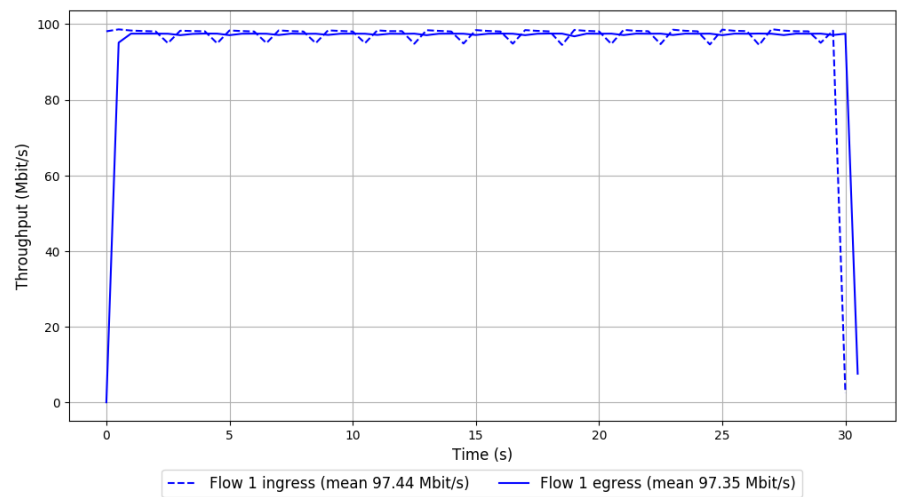
-- Flow 1:

Average throughput: 97.35 Mbit/s

95th percentile per-packet one-way delay: 31.803 ms

Loss rate: 0.01%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-09-25 05:46:57

End at: 2018-09-25 05:47:27

Local clock offset: 9.39 ms

Remote clock offset: 0.463 ms

Below is generated by plot.py at 2018-09-25 06:34:00

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.35 Mbit/s

95th percentile per-packet one-way delay: 30.241 ms

Loss rate: 0.01%

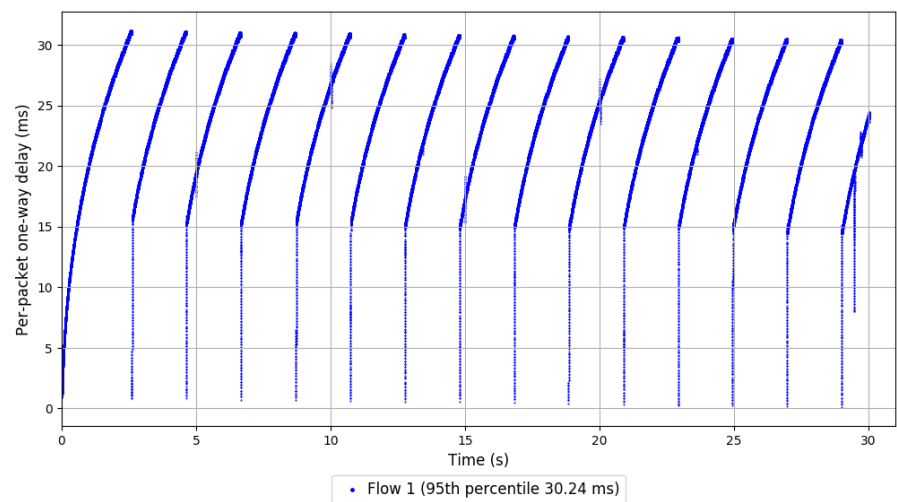
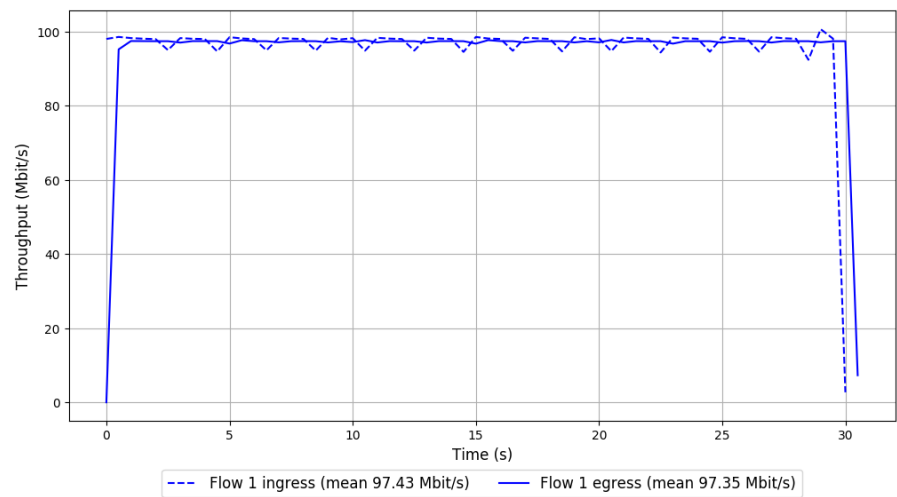
-- Flow 1:

Average throughput: 97.35 Mbit/s

95th percentile per-packet one-way delay: 30.241 ms

Loss rate: 0.01%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-09-25 06:08:06

End at: 2018-09-25 06:08:36

Local clock offset: -4.684 ms

Remote clock offset: 0.496 ms

Below is generated by plot.py at 2018-09-25 06:34:03

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.34 Mbit/s

95th percentile per-packet one-way delay: 30.477 ms

Loss rate: 0.01%

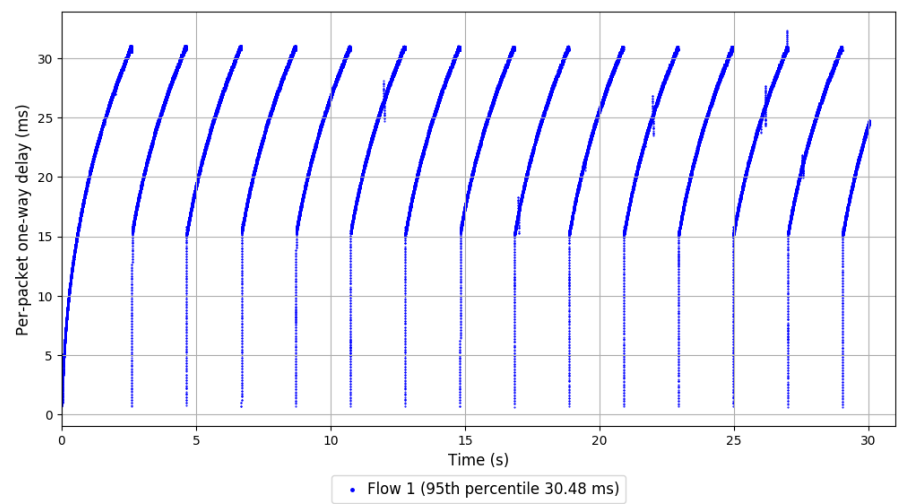
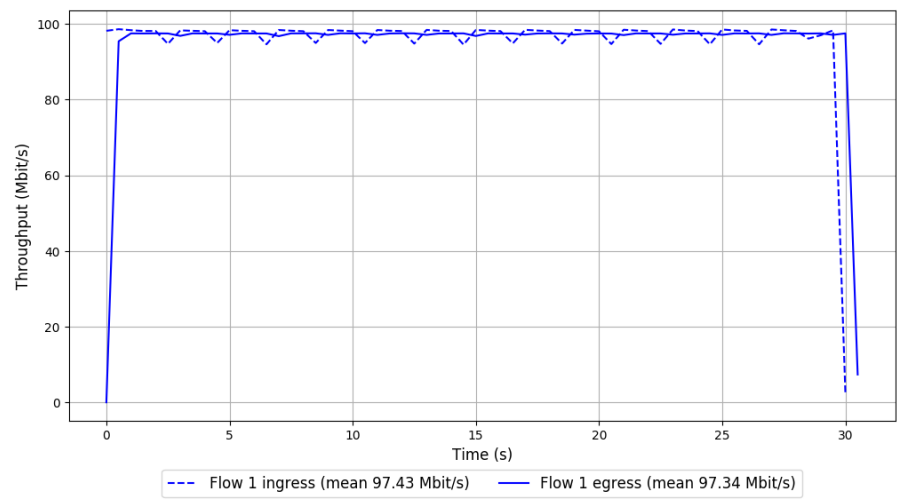
-- Flow 1:

Average throughput: 97.34 Mbit/s

95th percentile per-packet one-way delay: 30.477 ms

Loss rate: 0.01%

Run 5: Report of LEDBAT — Data Link

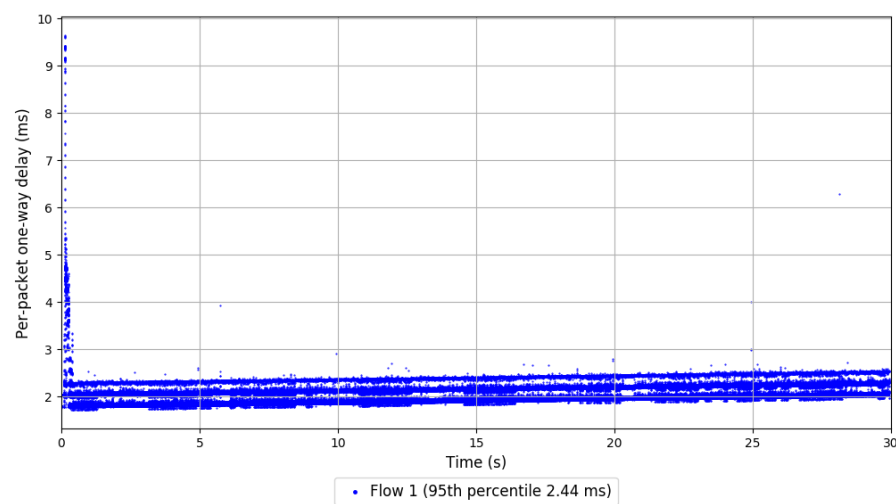
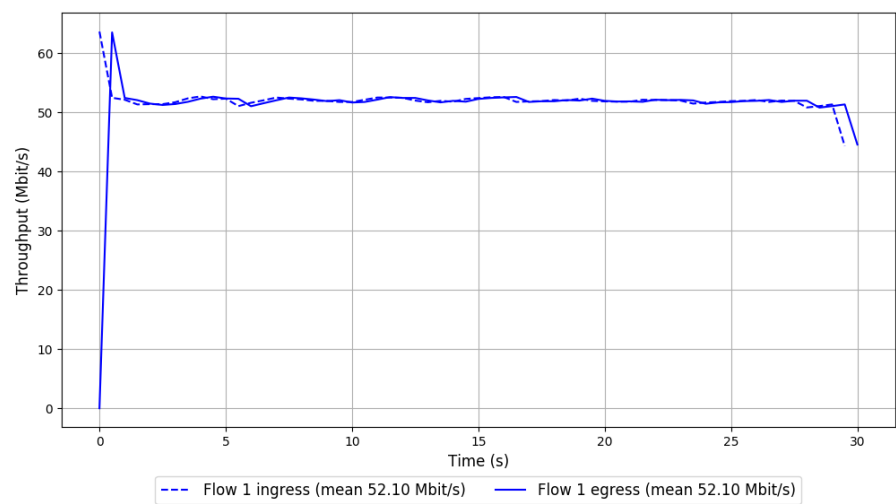



```
Run 1: Statistics of Indigo-Muses

Start at: 2018-09-25 04:44:41
End at: 2018-09-25 04:45:11
Local clock offset: -3.713 ms
Remote clock offset: 0.081 ms

# Below is generated by plot.py at 2018-09-25 06:34:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 52.10 Mbit/s
95th percentile per-packet one-way delay: 2.439 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 52.10 Mbit/s
95th percentile per-packet one-way delay: 2.439 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo-Muses — Data Link



Run 2: Statistics of Indigo-Muses

Start at: 2018-09-25 05:05:49

End at: 2018-09-25 05:06:19

Local clock offset: 10.259 ms

Remote clock offset: 0.283 ms

Below is generated by plot.py at 2018-09-25 06:34:03

Datalink statistics

-- Total of 1 flow:

Average throughput: 34.18 Mbit/s

95th percentile per-packet one-way delay: 3.754 ms

Loss rate: 0.00%

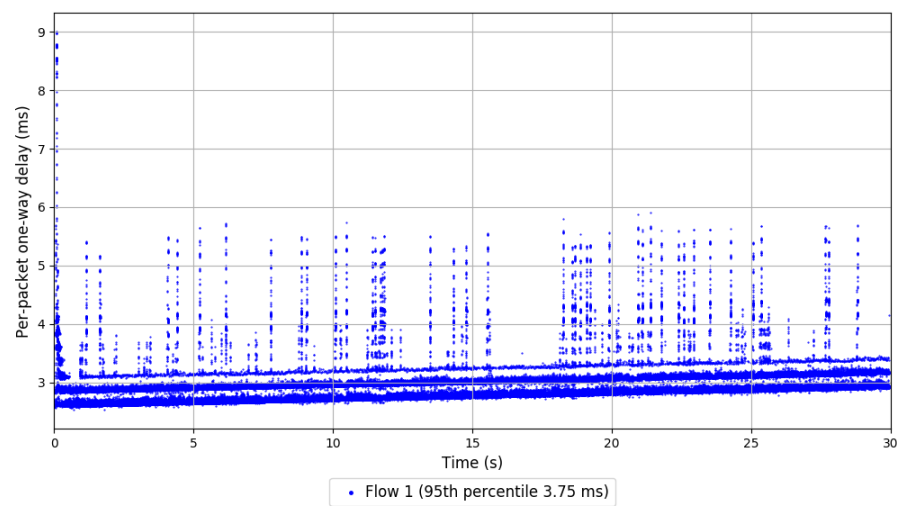
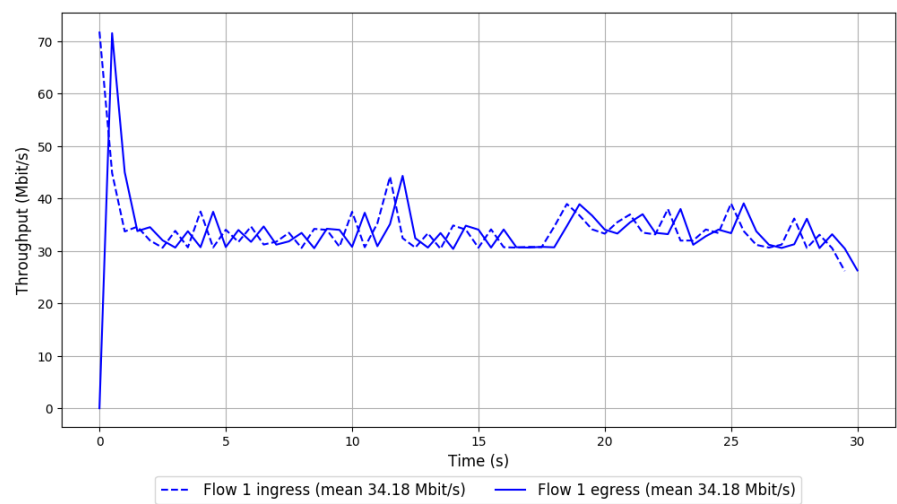
-- Flow 1:

Average throughput: 34.18 Mbit/s

95th percentile per-packet one-way delay: 3.754 ms

Loss rate: 0.00%

Run 2: Report of Indigo-Muses — Data Link



Run 3: Statistics of Indigo-Muses

Start at: 2018-09-25 05:26:57

End at: 2018-09-25 05:27:27

Local clock offset: 22.947 ms

Remote clock offset: 0.412 ms

Below is generated by plot.py at 2018-09-25 06:34:03

Datalink statistics

-- Total of 1 flow:

Average throughput: 51.93 Mbit/s

95th percentile per-packet one-way delay: 2.616 ms

Loss rate: 0.00%

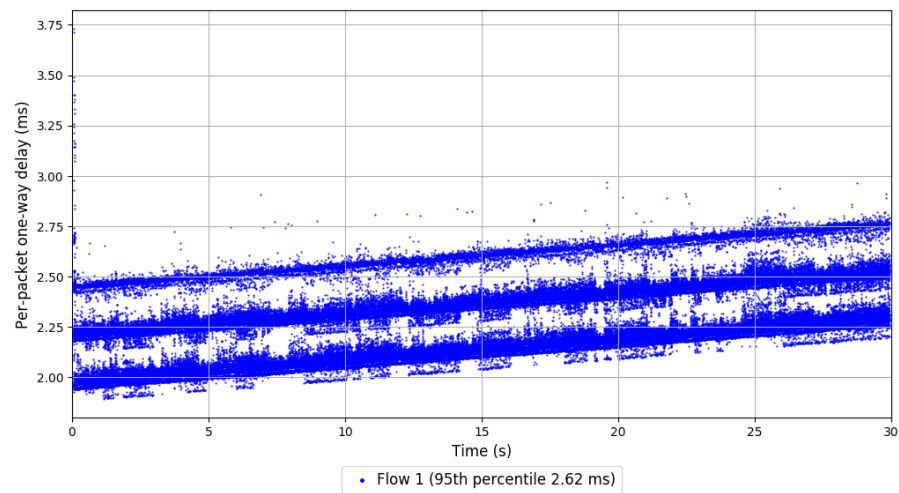
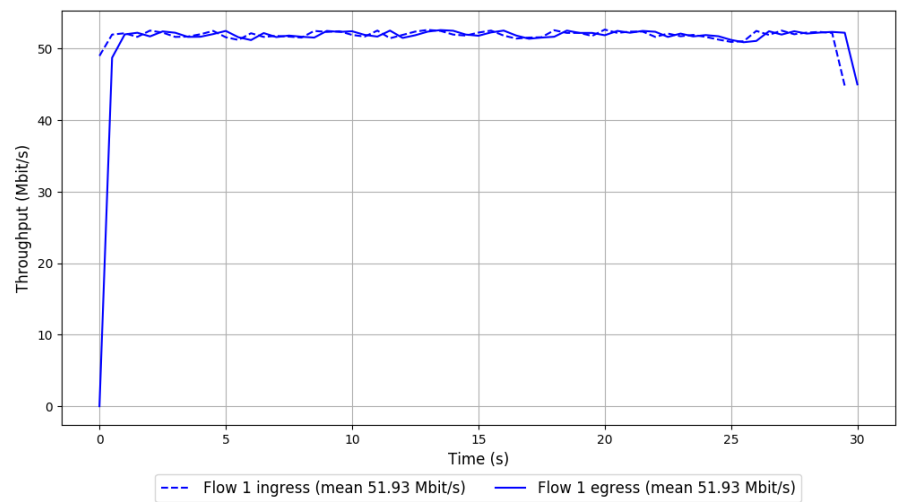
-- Flow 1:

Average throughput: 51.93 Mbit/s

95th percentile per-packet one-way delay: 2.616 ms

Loss rate: 0.00%

Run 3: Report of Indigo-Muses — Data Link



Run 4: Statistics of Indigo-Muses

Start at: 2018-09-25 05:48:07

End at: 2018-09-25 05:48:37

Local clock offset: 7.505 ms

Remote clock offset: 0.438 ms

Below is generated by plot.py at 2018-09-25 06:34:03

Datalink statistics

-- Total of 1 flow:

Average throughput: 32.36 Mbit/s

95th percentile per-packet one-way delay: 2.660 ms

Loss rate: 0.00%

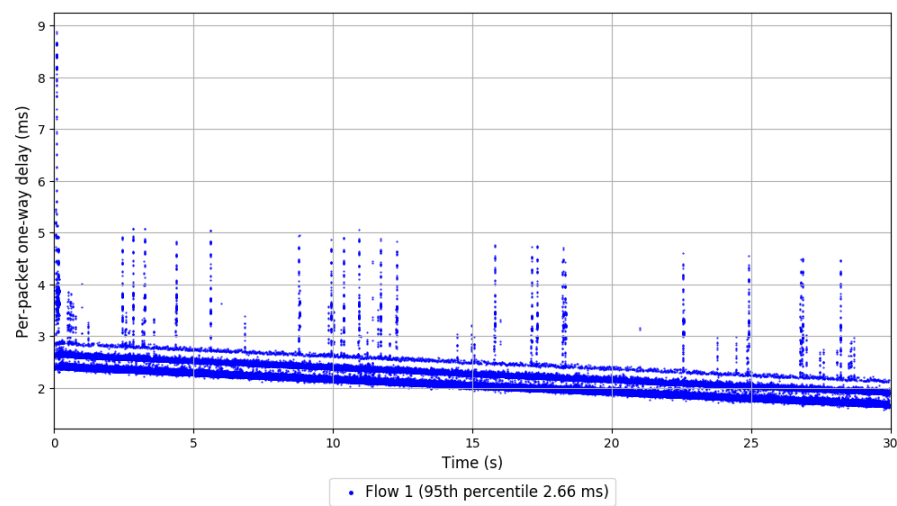
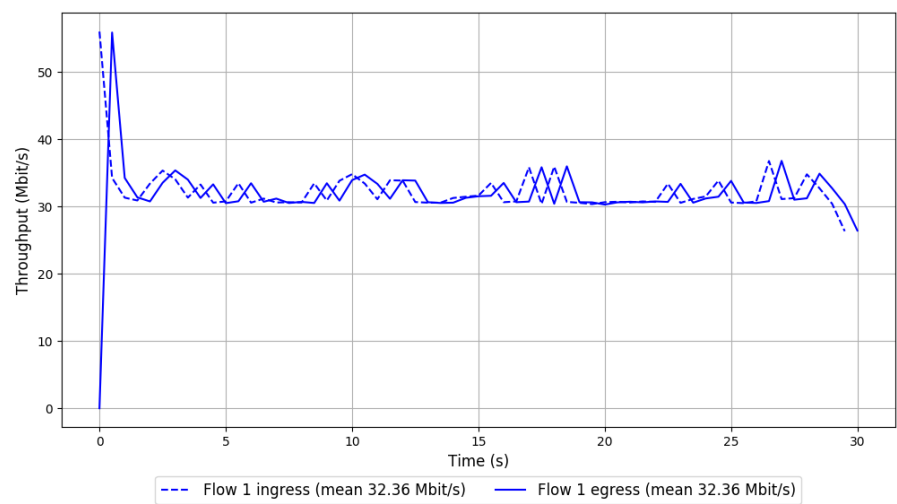
-- Flow 1:

Average throughput: 32.36 Mbit/s

95th percentile per-packet one-way delay: 2.660 ms

Loss rate: 0.00%

Run 4: Report of Indigo-Muses — Data Link



Run 5: Statistics of Indigo-Muses

Start at: 2018-09-25 06:09:16

End at: 2018-09-25 06:09:46

Local clock offset: -4.892 ms

Remote clock offset: 0.404 ms

Below is generated by plot.py at 2018-09-25 06:34:03

Datalink statistics

-- Total of 1 flow:

Average throughput: 51.77 Mbit/s

95th percentile per-packet one-way delay: 1.141 ms

Loss rate: 0.00%

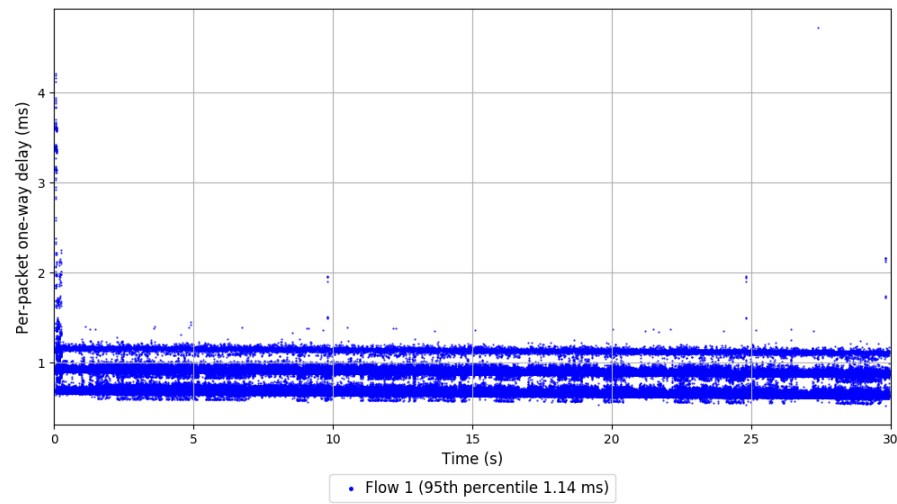
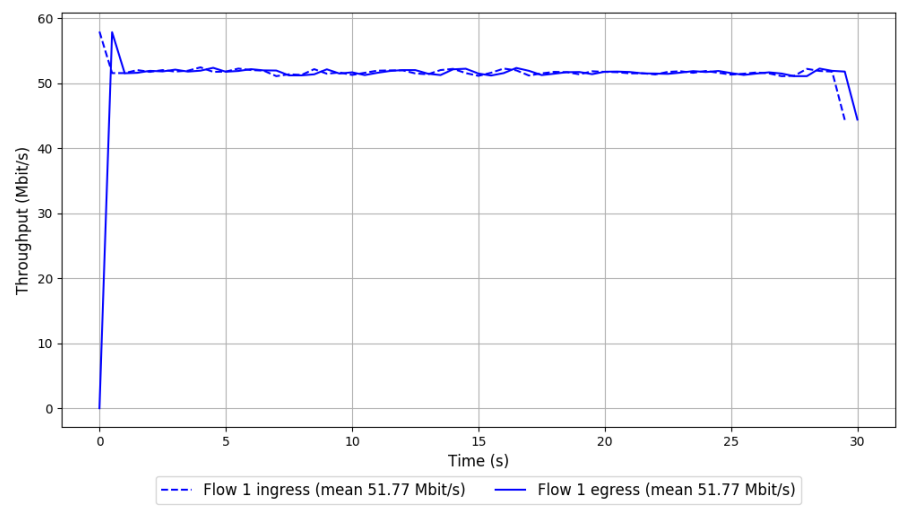
-- Flow 1:

Average throughput: 51.77 Mbit/s

95th percentile per-packet one-way delay: 1.141 ms

Loss rate: 0.00%

Run 5: Report of Indigo-Muses — Data Link

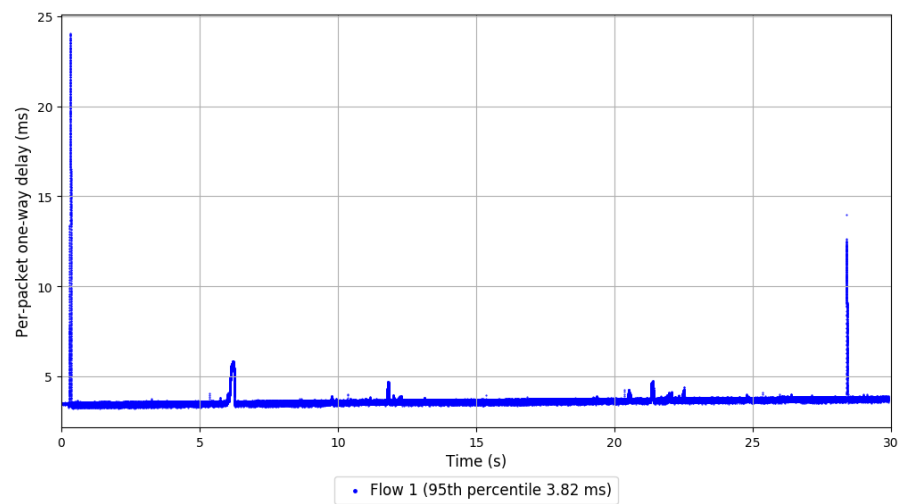
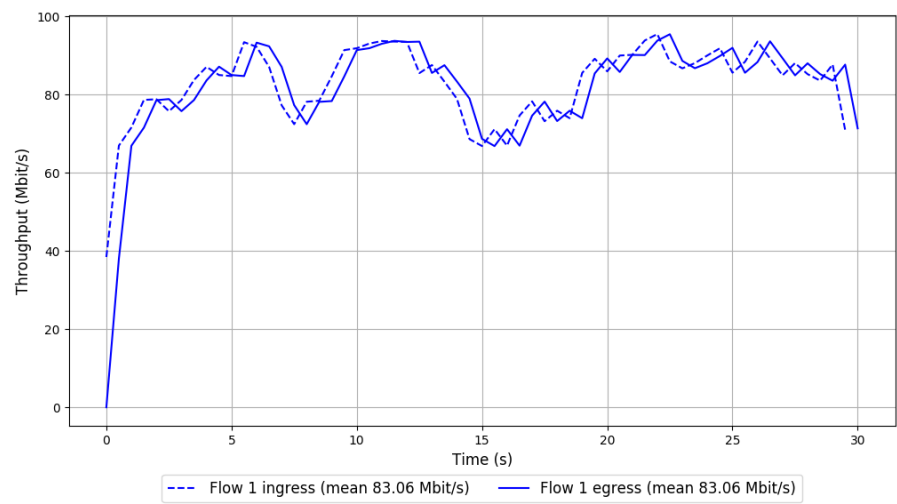


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-09-25 04:58:04
End at: 2018-09-25 04:58:34
Local clock offset: 4.555 ms
Remote clock offset: 0.25 ms

# Below is generated by plot.py at 2018-09-25 06:34:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 83.06 Mbit/s
95th percentile per-packet one-way delay: 3.824 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 83.06 Mbit/s
95th percentile per-packet one-way delay: 3.824 ms
Loss rate: 0.01%
```

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-09-25 05:19:12

End at: 2018-09-25 05:19:42

Local clock offset: 17.873 ms

Remote clock offset: 0.291 ms

Below is generated by plot.py at 2018-09-25 06:34:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 79.23 Mbit/s

95th percentile per-packet one-way delay: 4.075 ms

Loss rate: 0.00%

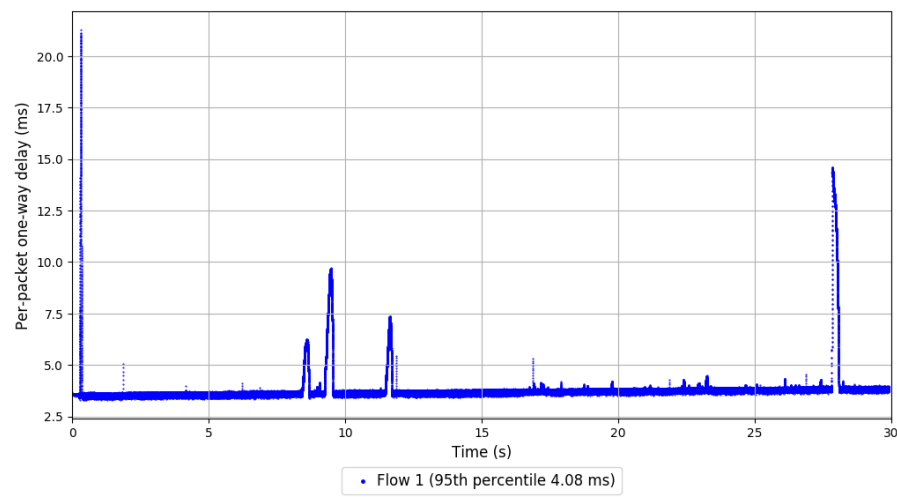
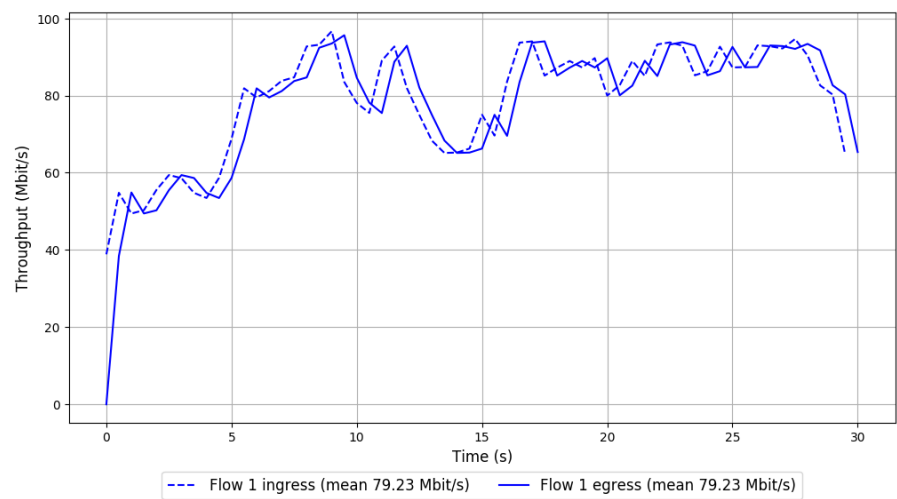
-- Flow 1:

Average throughput: 79.23 Mbit/s

95th percentile per-packet one-way delay: 4.075 ms

Loss rate: 0.00%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-09-25 05:40:21

End at: 2018-09-25 05:40:51

Local clock offset: 27.23 ms

Remote clock offset: 0.42 ms

Below is generated by plot.py at 2018-09-25 06:34:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 62.48 Mbit/s

95th percentile per-packet one-way delay: 0.073 ms

Loss rate: 0.00%

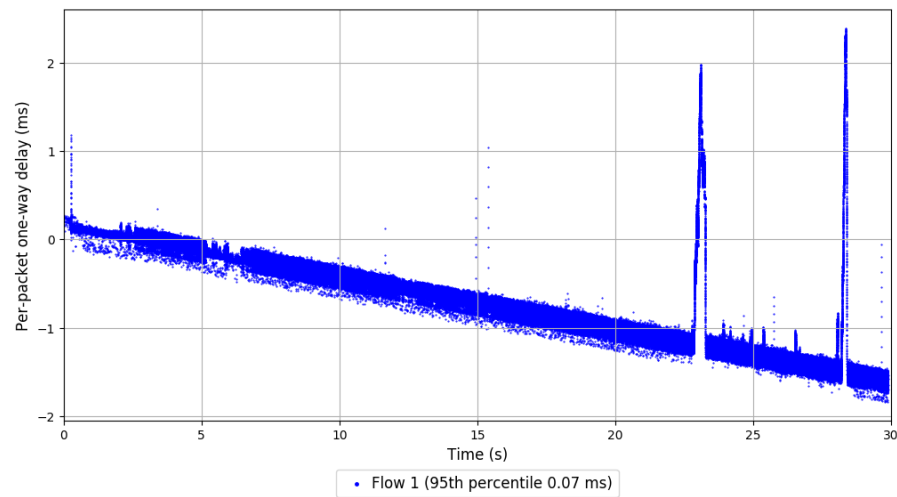
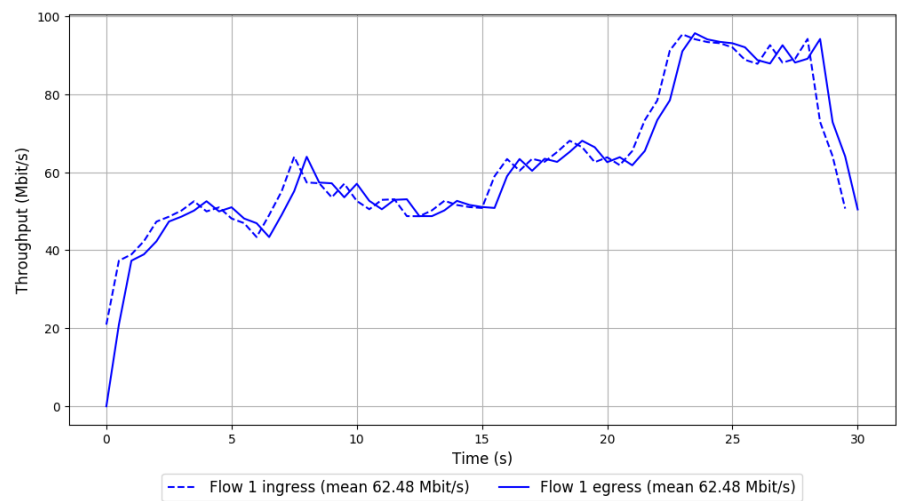
-- Flow 1:

Average throughput: 62.48 Mbit/s

95th percentile per-packet one-way delay: 0.073 ms

Loss rate: 0.00%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-09-25 06:01:29

End at: 2018-09-25 06:02:00

Local clock offset: -3.645 ms

Remote clock offset: 0.526 ms

Below is generated by plot.py at 2018-09-25 06:34:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 57.57 Mbit/s

95th percentile per-packet one-way delay: 1.610 ms

Loss rate: 0.00%

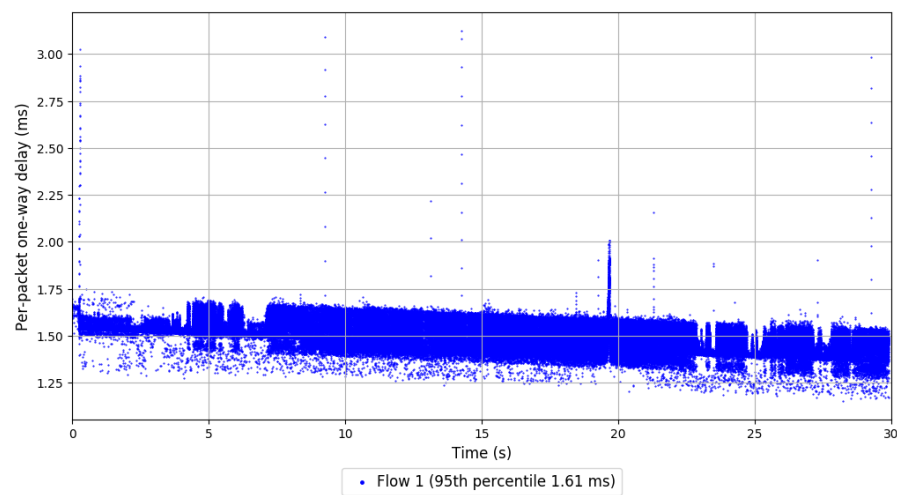
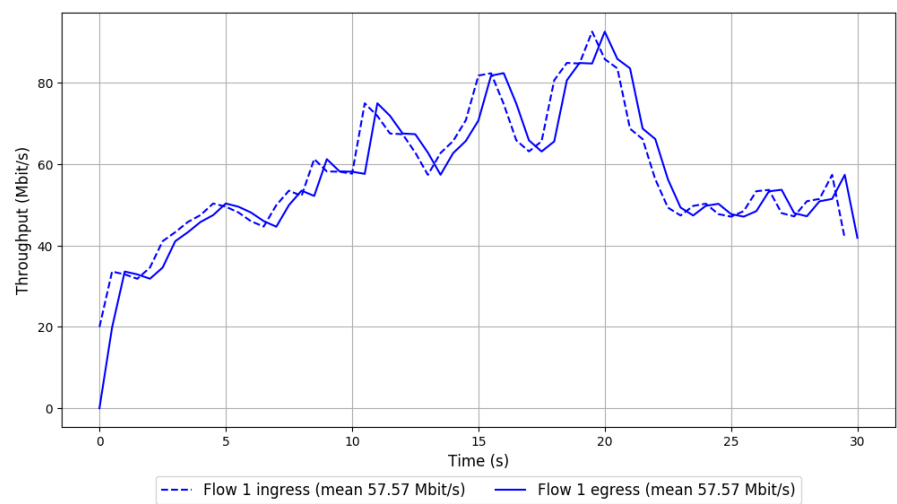
-- Flow 1:

Average throughput: 57.57 Mbit/s

95th percentile per-packet one-way delay: 1.610 ms

Loss rate: 0.00%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-09-25 06:22:39

End at: 2018-09-25 06:23:09

Local clock offset: -6.805 ms

Remote clock offset: 0.464 ms

Below is generated by plot.py at 2018-09-25 06:34:36

Datalink statistics

-- Total of 1 flow:

Average throughput: 63.90 Mbit/s

95th percentile per-packet one-way delay: 3.185 ms

Loss rate: 0.00%

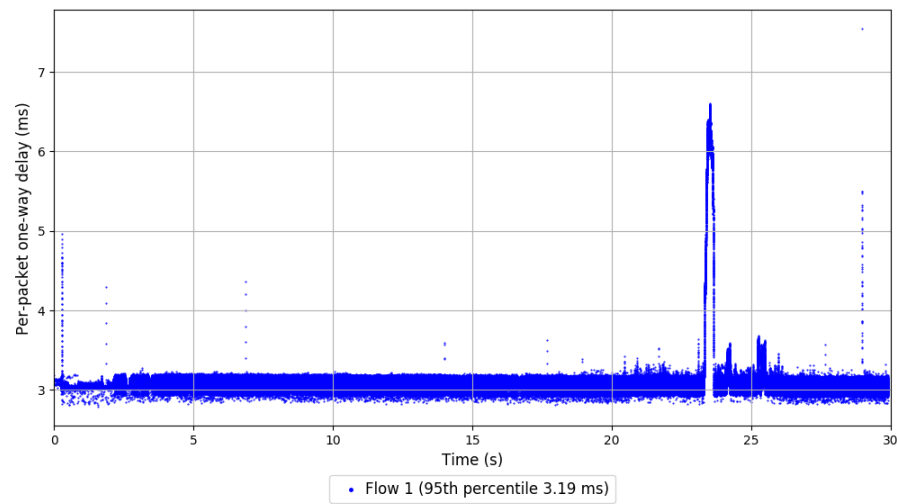
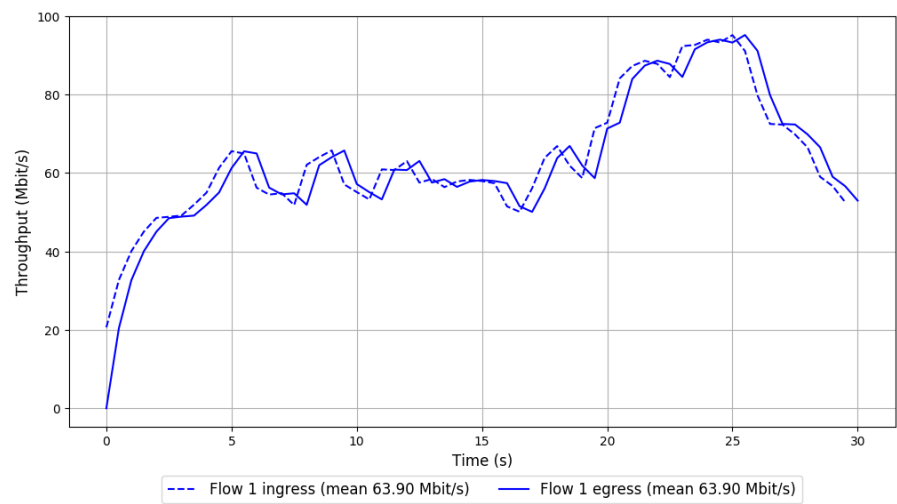
-- Flow 1:

Average throughput: 63.90 Mbit/s

95th percentile per-packet one-way delay: 3.185 ms

Loss rate: 0.00%

Run 5: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

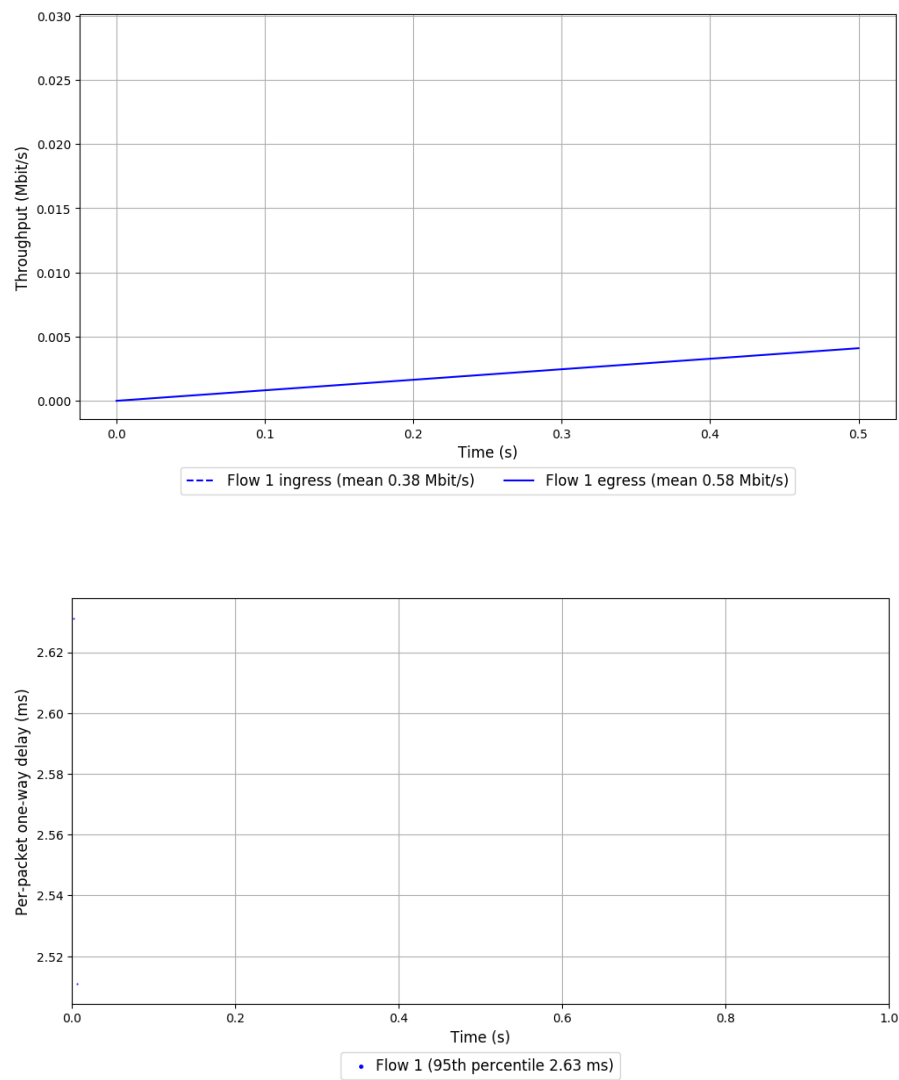
Start at: 2018-09-25 04:42:27

End at: 2018-09-25 04:42:57

Local clock offset: -3.851 ms

Remote clock offset: 0.043 ms

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2018-09-25 05:03:35

End at: 2018-09-25 05:04:05

Local clock offset: 8.82 ms

Remote clock offset: 0.249 ms

Below is generated by plot.py at 2018-09-25 06:34:36

Datalink statistics

-- Total of 1 flow:

Average throughput: 12.22 Mbit/s

95th percentile per-packet one-way delay: 10.869 ms

Loss rate: 32.09%

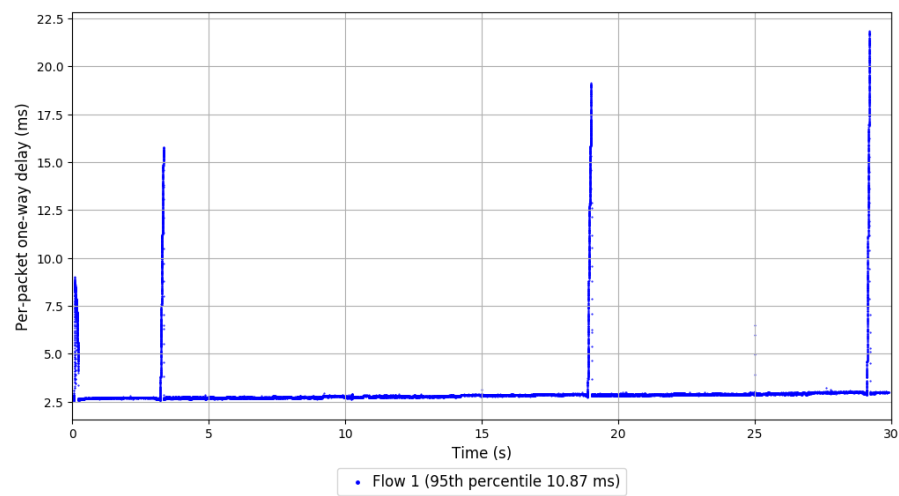
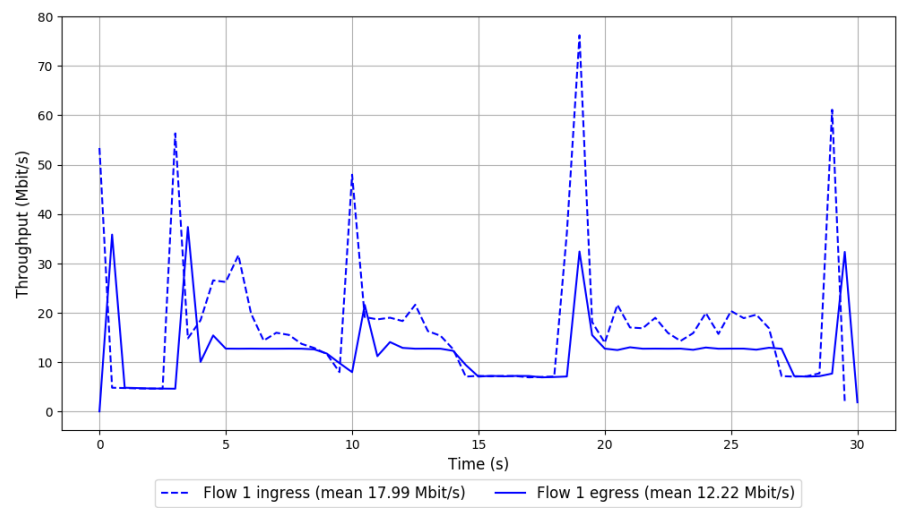
-- Flow 1:

Average throughput: 12.22 Mbit/s

95th percentile per-packet one-way delay: 10.869 ms

Loss rate: 32.09%

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2018-09-25 05:24:43

End at: 2018-09-25 05:25:13

Local clock offset: 22.29 ms

Remote clock offset: 0.318 ms

Below is generated by plot.py at 2018-09-25 06:34:36

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.43 Mbit/s

95th percentile per-packet one-way delay: 2.954 ms

Loss rate: 9.19%

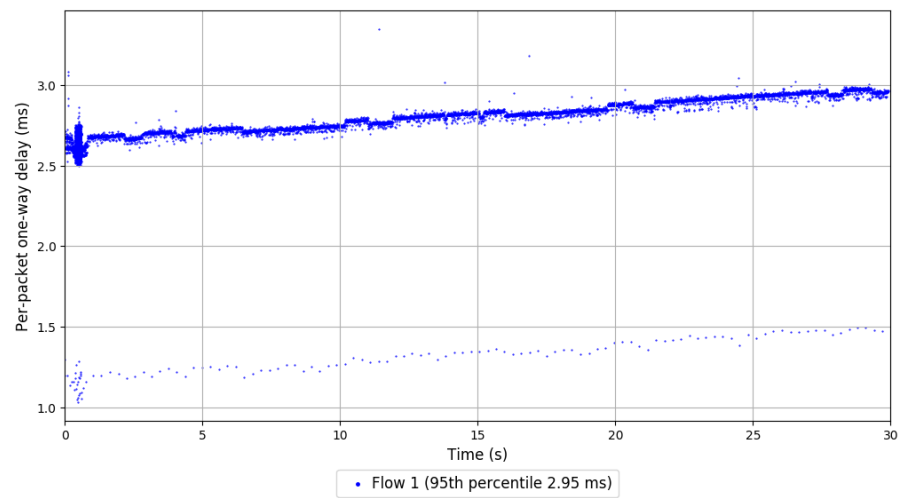
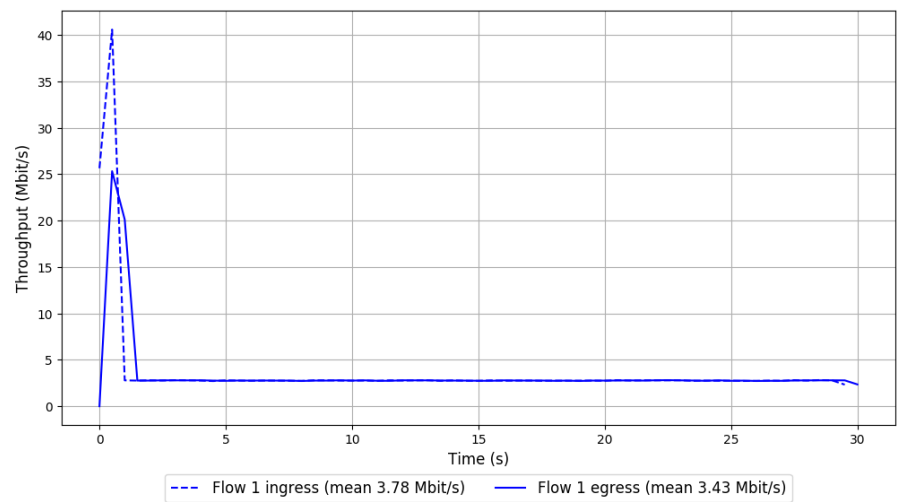
-- Flow 1:

Average throughput: 3.43 Mbit/s

95th percentile per-packet one-way delay: 2.954 ms

Loss rate: 9.19%

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

Start at: 2018-09-25 05:45:52

End at: 2018-09-25 05:46:22

Local clock offset: 11.388 ms

Remote clock offset: 0.448 ms

Below is generated by plot.py at 2018-09-25 06:34:36

Datalink statistics

-- Total of 1 flow:

Average throughput: 8.59 Mbit/s

95th percentile per-packet one-way delay: 9.801 ms

Loss rate: 33.74%

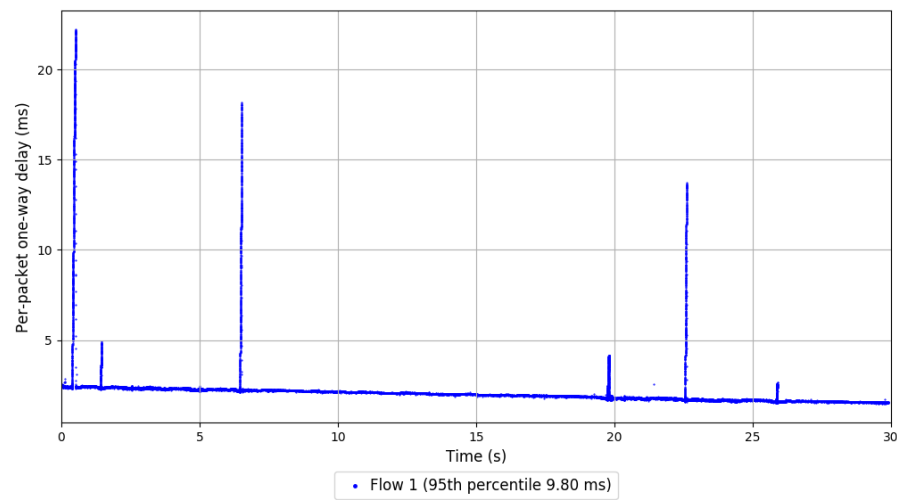
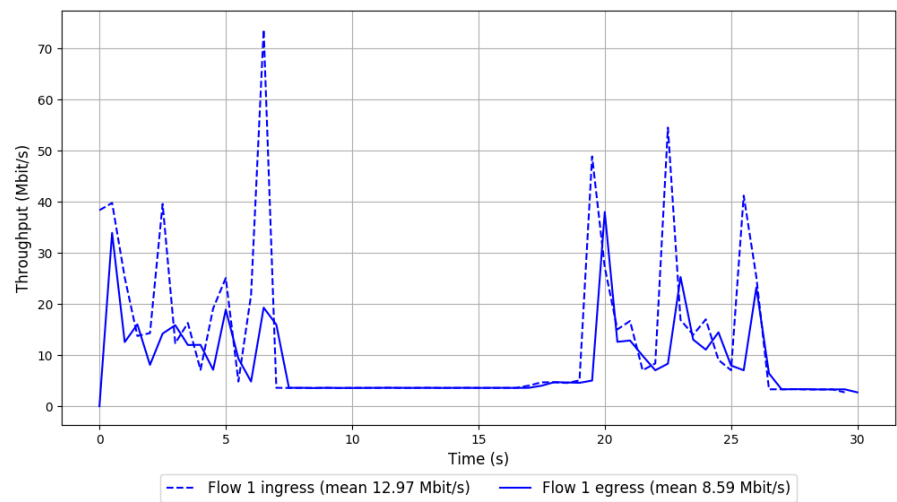
-- Flow 1:

Average throughput: 8.59 Mbit/s

95th percentile per-packet one-way delay: 9.801 ms

Loss rate: 33.74%

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

Start at: 2018-09-25 06:07:01

End at: 2018-09-25 06:07:31

Local clock offset: -5.185 ms

Remote clock offset: 0.486 ms

Below is generated by plot.py at 2018-09-25 06:34:36

Datalink statistics

-- Total of 1 flow:

Average throughput: 13.12 Mbit/s

95th percentile per-packet one-way delay: 2.995 ms

Loss rate: 19.22%

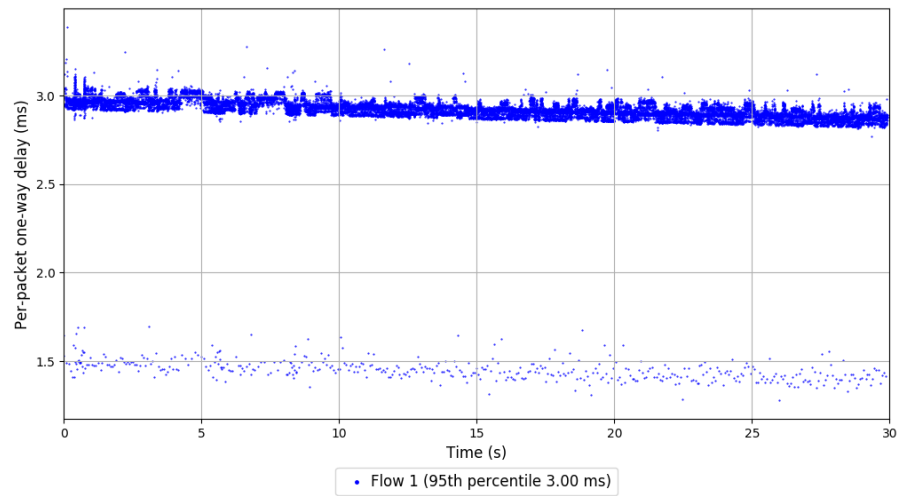
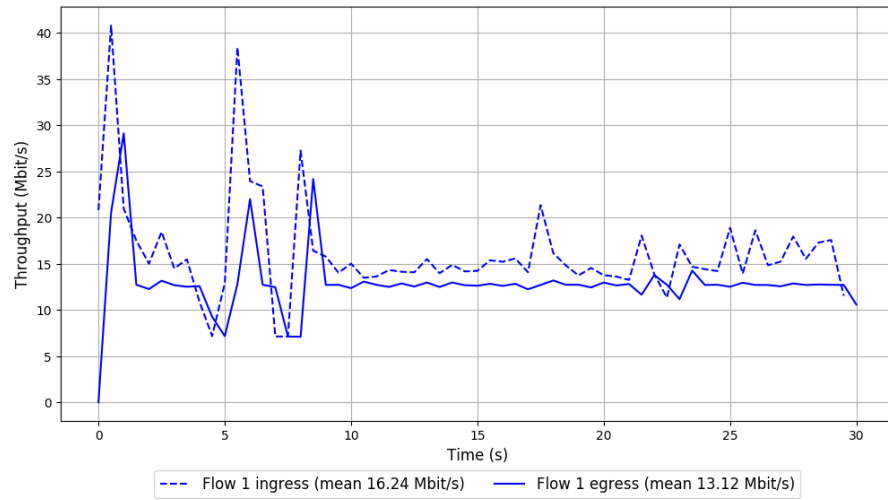
-- Flow 1:

Average throughput: 13.12 Mbit/s

95th percentile per-packet one-way delay: 2.995 ms

Loss rate: 19.22%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2018-09-25 04:51:23

End at: 2018-09-25 04:51:53

Local clock offset: 1.115 ms

Remote clock offset: 0.166 ms

Below is generated by plot.py at 2018-09-25 06:35:13

Datalink statistics

-- Total of 1 flow:

Average throughput: 72.68 Mbit/s

95th percentile per-packet one-way delay: 5.316 ms

Loss rate: 0.43%

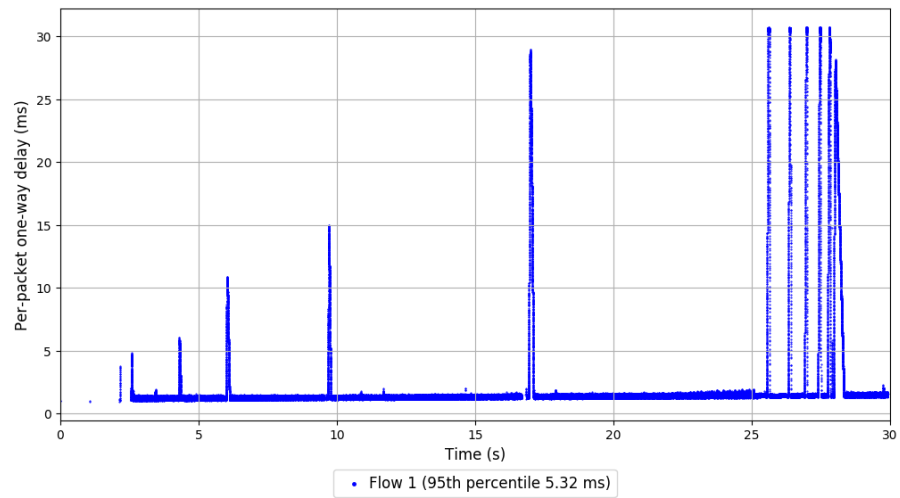
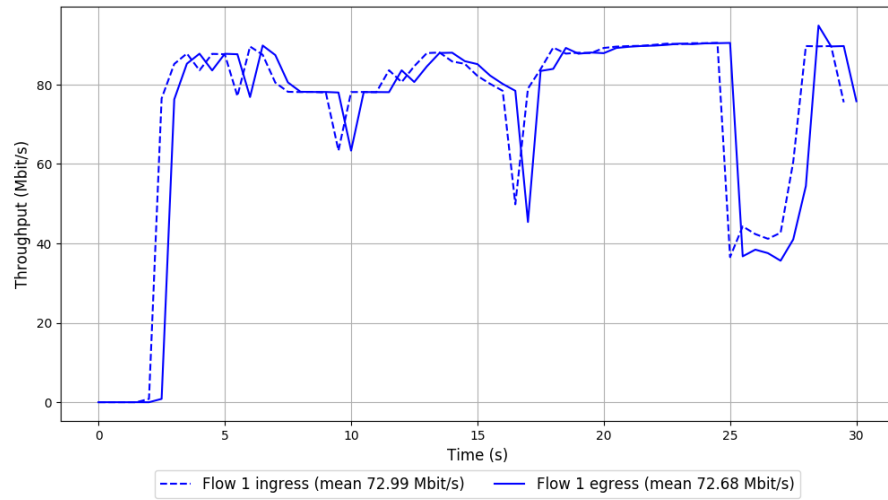
-- Flow 1:

Average throughput: 72.68 Mbit/s

95th percentile per-packet one-way delay: 5.316 ms

Loss rate: 0.43%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-09-25 05:12:31

End at: 2018-09-25 05:13:01

Local clock offset: 14.597 ms

Remote clock offset: 0.32 ms

Below is generated by plot.py at 2018-09-25 06:35:16

Datalink statistics

-- Total of 1 flow:

Average throughput: 79.12 Mbit/s

95th percentile per-packet one-way delay: 10.678 ms

Loss rate: 0.35%

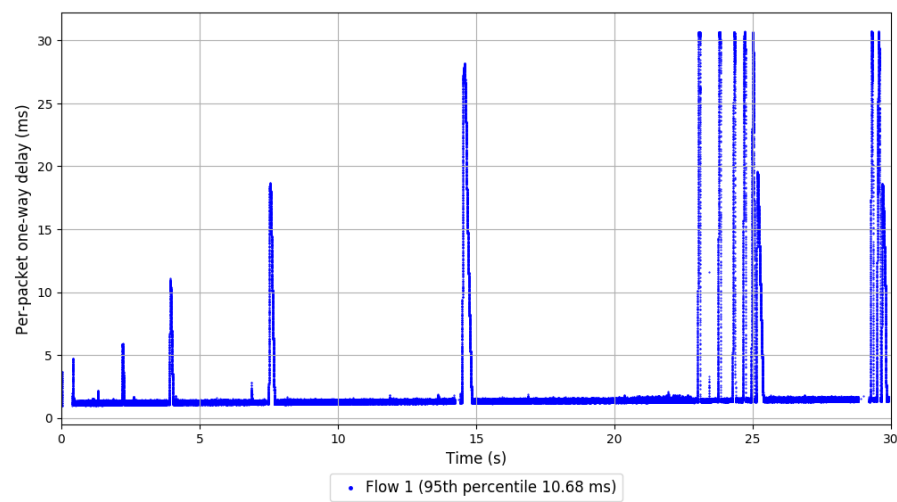
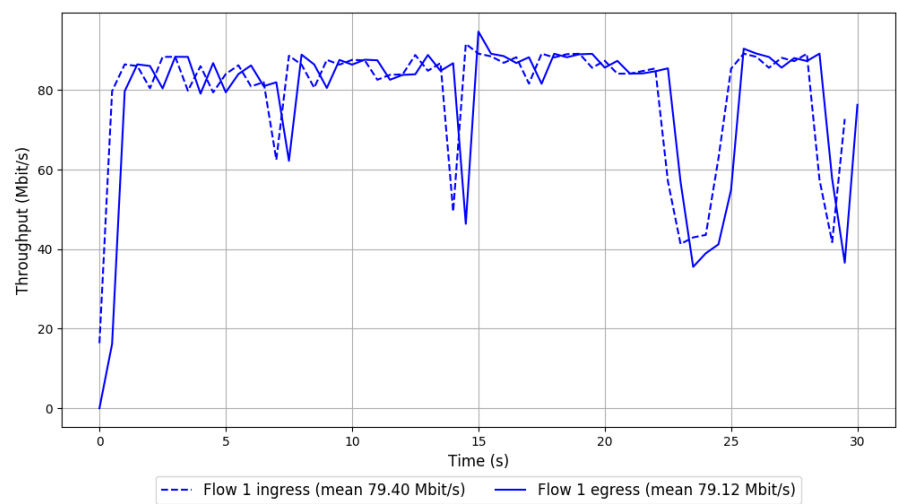
-- Flow 1:

Average throughput: 79.12 Mbit/s

95th percentile per-packet one-way delay: 10.678 ms

Loss rate: 0.35%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-09-25 05:33:40

End at: 2018-09-25 05:34:10

Local clock offset: 27.273 ms

Remote clock offset: 0.391 ms

Below is generated by plot.py at 2018-09-25 06:35:19

Datalink statistics

-- Total of 1 flow:

Average throughput: 79.23 Mbit/s

95th percentile per-packet one-way delay: 4.618 ms

Loss rate: 0.25%

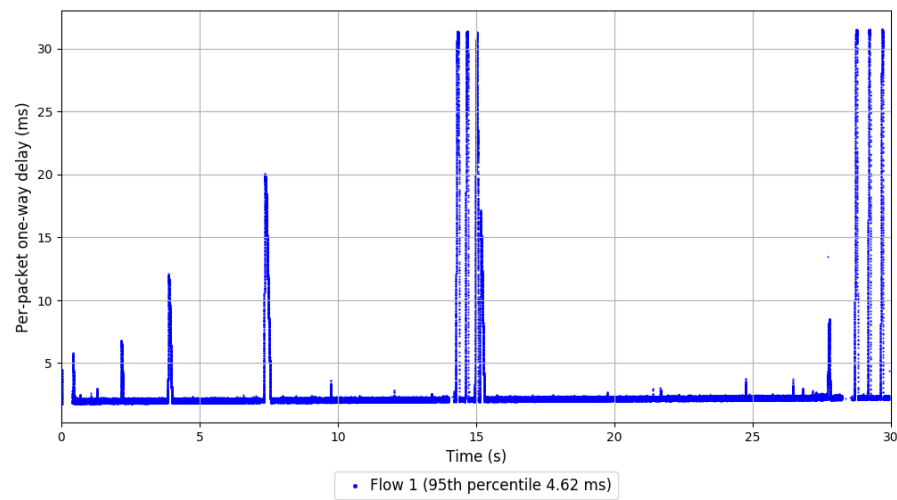
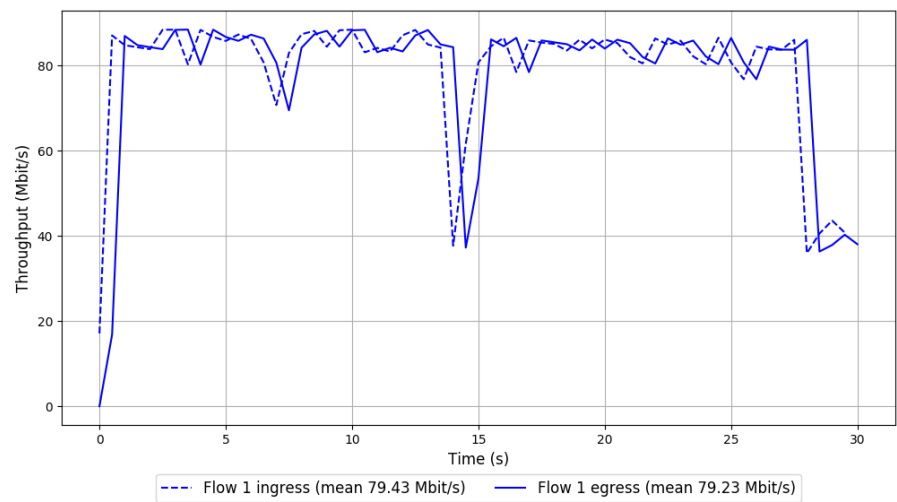
-- Flow 1:

Average throughput: 79.23 Mbit/s

95th percentile per-packet one-way delay: 4.618 ms

Loss rate: 0.25%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-09-25 05:54:48

End at: 2018-09-25 05:55:18

Local clock offset: -0.079 ms

Remote clock offset: 0.53 ms

Below is generated by plot.py at 2018-09-25 06:35:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 77.04 Mbit/s

95th percentile per-packet one-way delay: 2.459 ms

Loss rate: 0.37%

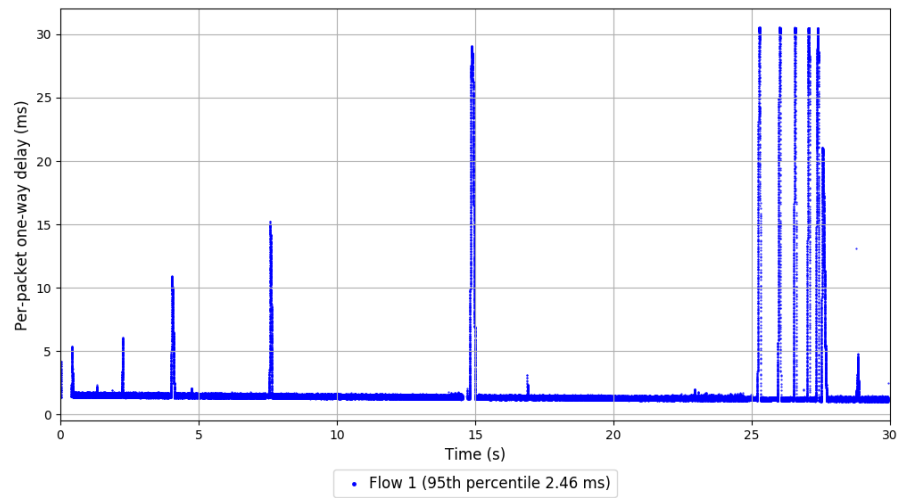
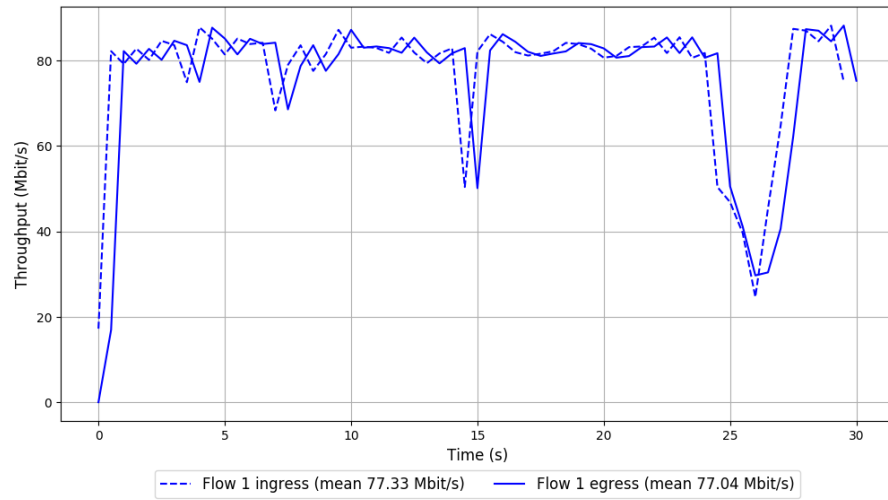
-- Flow 1:

Average throughput: 77.04 Mbit/s

95th percentile per-packet one-way delay: 2.459 ms

Loss rate: 0.37%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-09-25 06:15:58

End at: 2018-09-25 06:16:28

Local clock offset: -5.523 ms

Remote clock offset: 0.425 ms

Below is generated by plot.py at 2018-09-25 06:35:22

Datalink statistics

-- Total of 1 flow:

Average throughput: 79.12 Mbit/s

95th percentile per-packet one-way delay: 2.596 ms

Loss rate: 0.28%

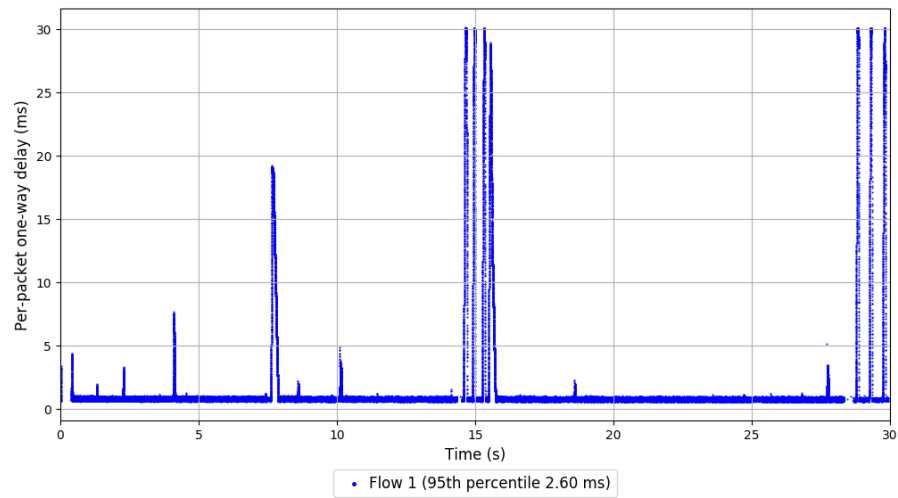
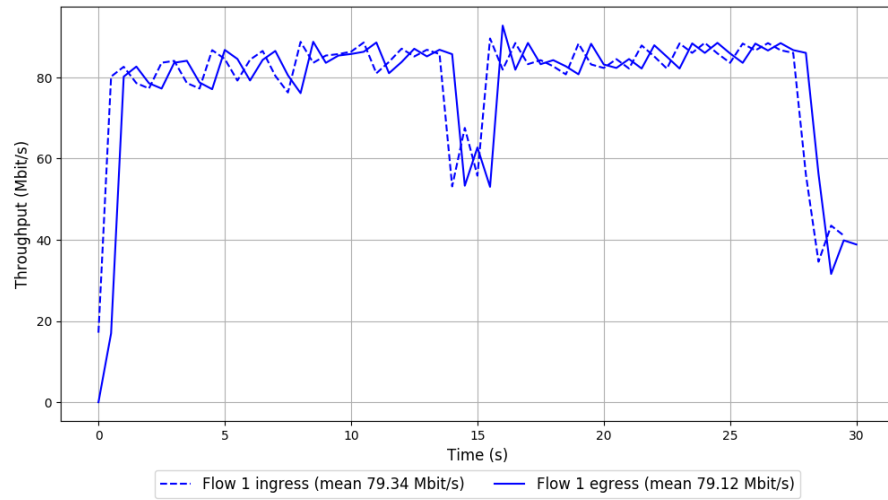
-- Flow 1:

Average throughput: 79.12 Mbit/s

95th percentile per-packet one-way delay: 2.596 ms

Loss rate: 0.28%

Run 5: Report of QUIC Cubic — Data Link

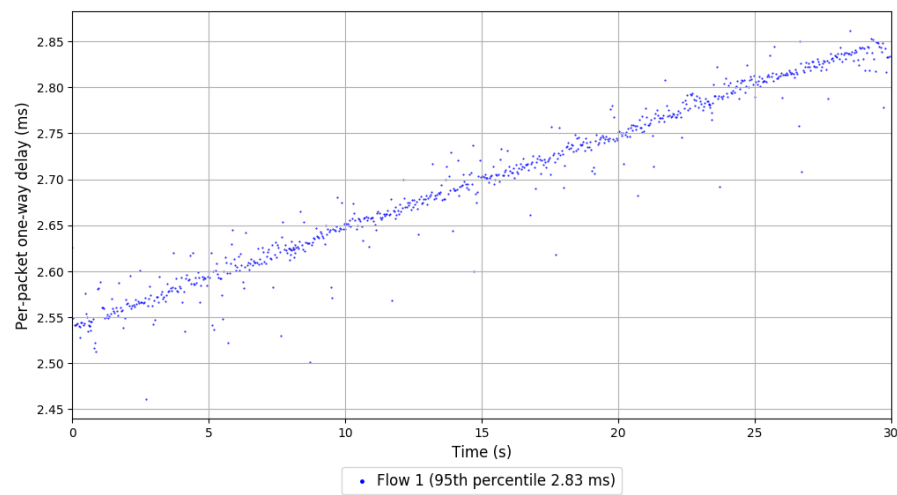
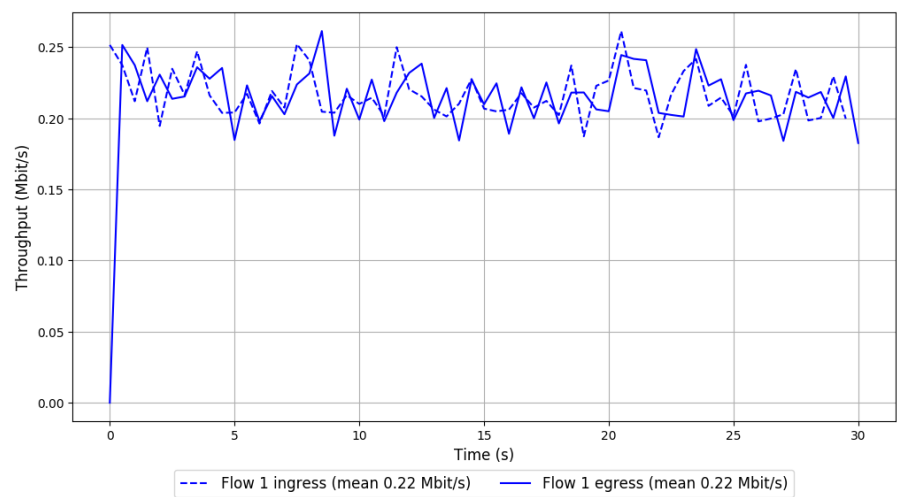



```
Run 1: Statistics of SCReAM

Start at: 2018-09-25 04:59:11
End at: 2018-09-25 04:59:41
Local clock offset: 6.035 ms
Remote clock offset: 0.108 ms

# Below is generated by plot.py at 2018-09-25 06:35:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.834 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.834 ms
Loss rate: 0.13%
```

Run 1: Report of SReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2018-09-25 05:20:19

End at: 2018-09-25 05:20:49

Local clock offset: 18.752 ms

Remote clock offset: 0.358 ms

Below is generated by plot.py at 2018-09-25 06:35:22

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 2.240 ms

Loss rate: 0.00%

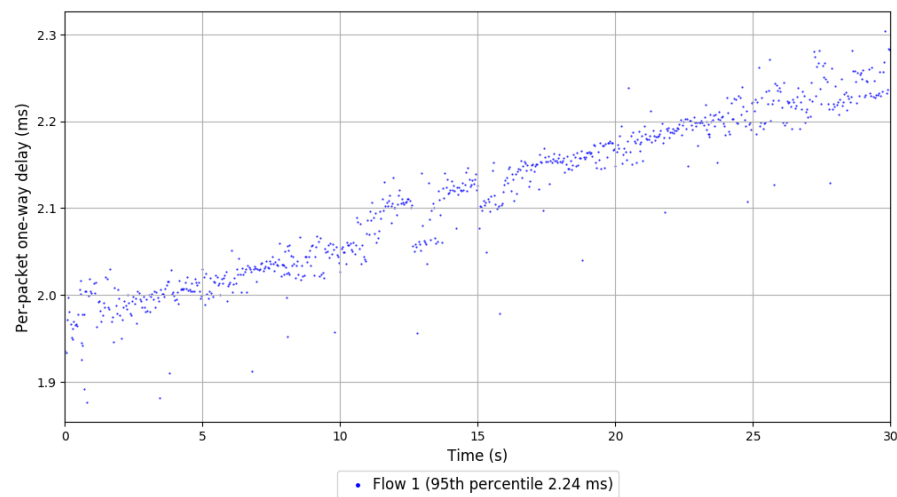
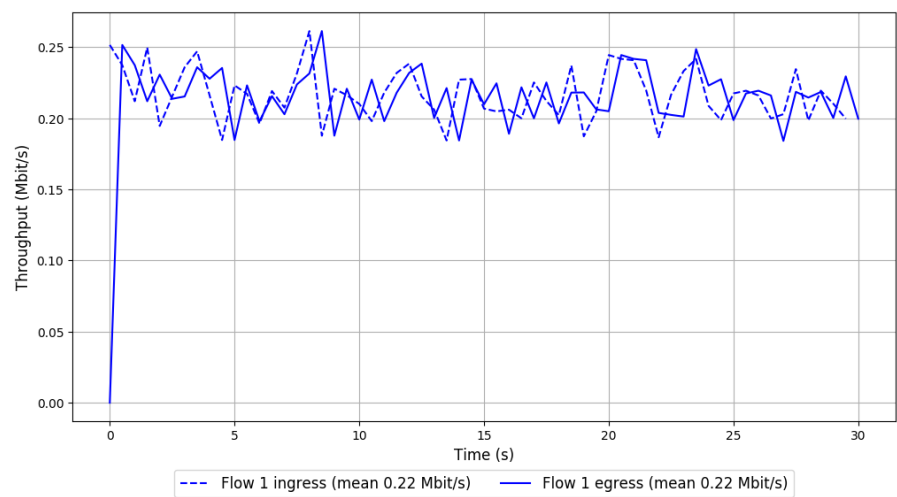
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 2.240 ms

Loss rate: 0.00%

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2018-09-25 05:41:27

End at: 2018-09-25 05:41:57

Local clock offset: 24.577 ms

Remote clock offset: 0.483 ms

Below is generated by plot.py at 2018-09-25 06:35:22

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: -0.980 ms

Loss rate: 0.00%

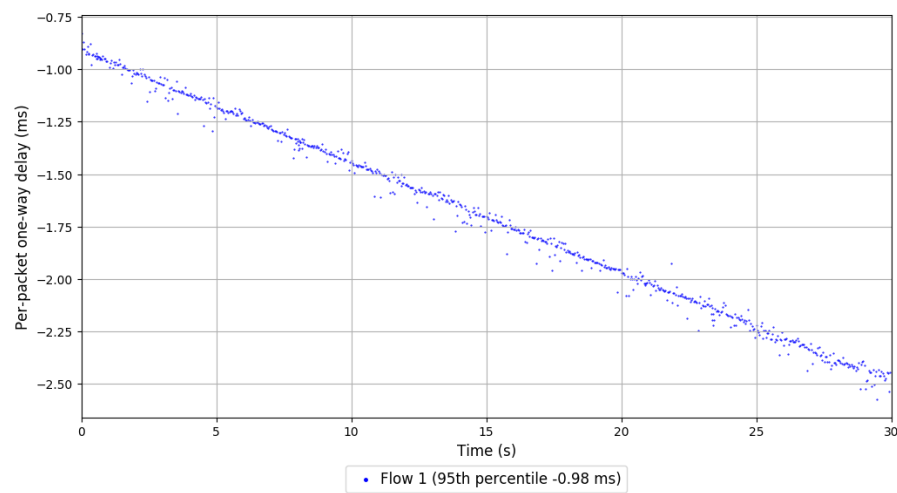
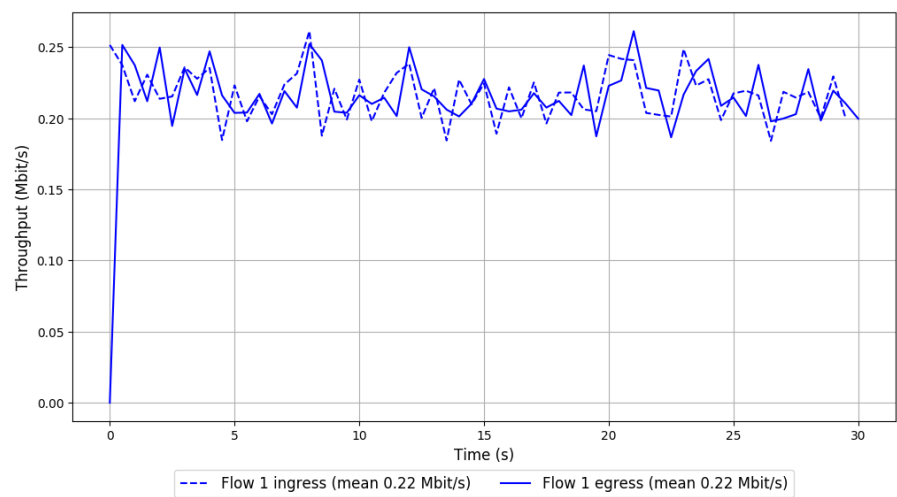
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: -0.980 ms

Loss rate: 0.00%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2018-09-25 06:02:35

End at: 2018-09-25 06:03:05

Local clock offset: -3.181 ms

Remote clock offset: 0.521 ms

Below is generated by plot.py at 2018-09-25 06:35:22

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 2.203 ms

Loss rate: 0.00%

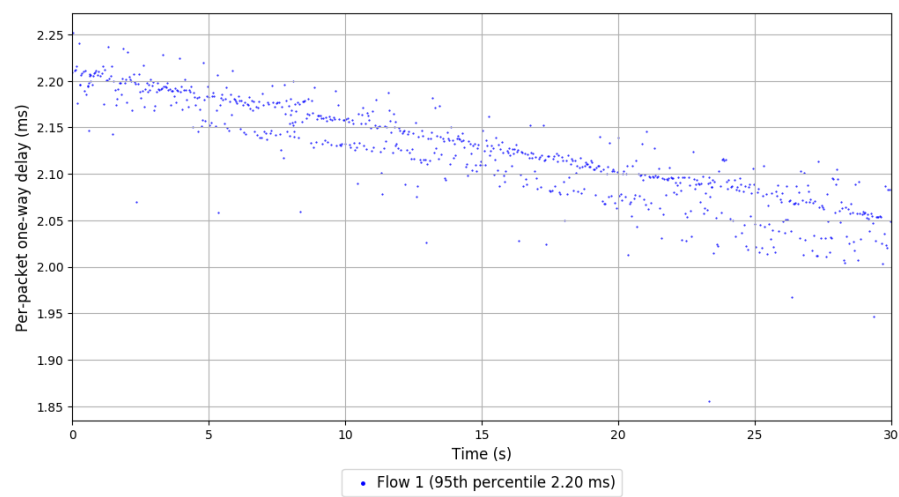
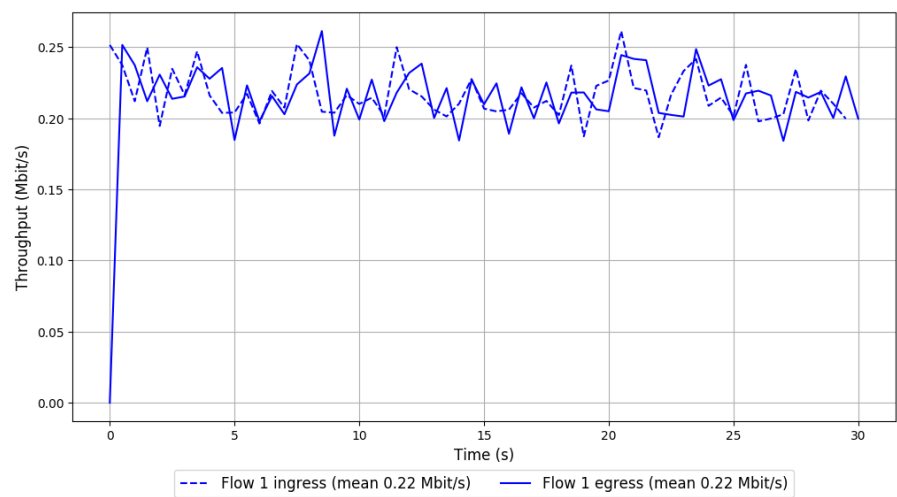
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 2.203 ms

Loss rate: 0.00%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2018-09-25 06:23:45

End at: 2018-09-25 06:24:15

Local clock offset: -6.896 ms

Remote clock offset: 0.555 ms

Below is generated by plot.py at 2018-09-25 06:35:22

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 3.202 ms

Loss rate: 0.00%

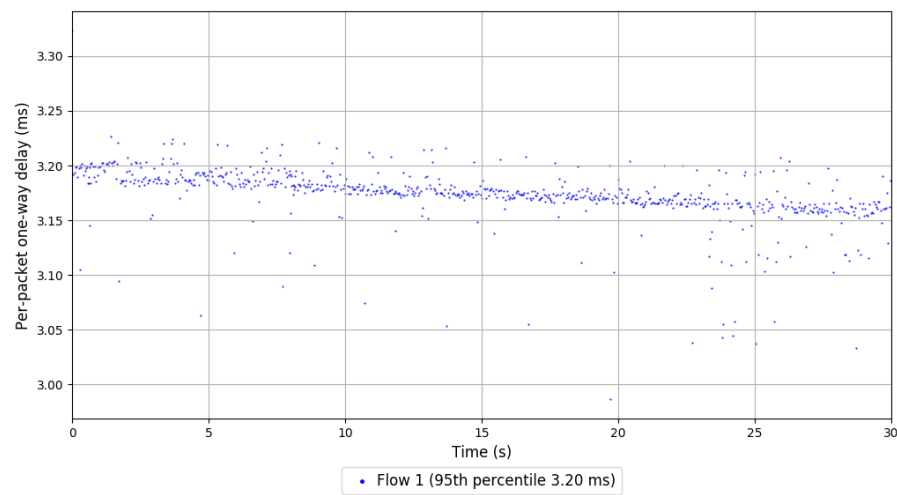
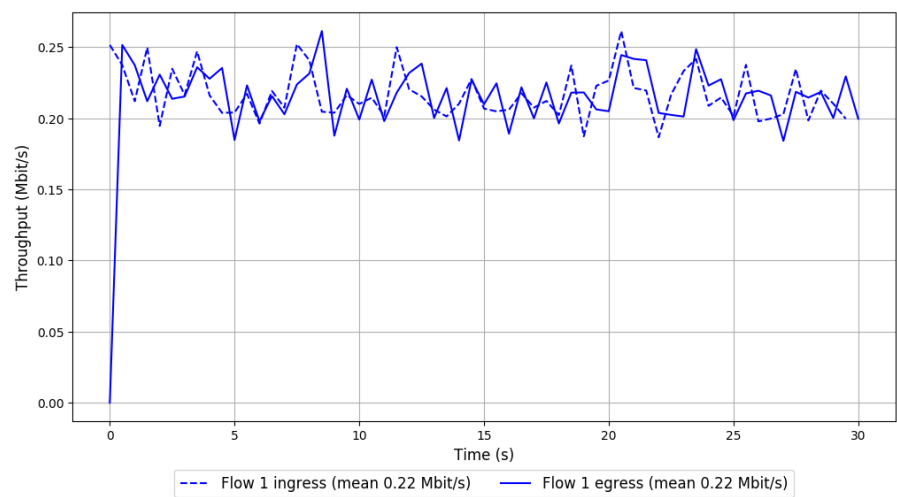
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 3.202 ms

Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2018-09-25 04:50:18

End at: 2018-09-25 04:50:48

Local clock offset: 0.373 ms

Remote clock offset: 0.085 ms

Below is generated by plot.py at 2018-09-25 06:35:22

Datalink statistics

-- Total of 1 flow:

Average throughput: 50.36 Mbit/s

95th percentile per-packet one-way delay: 12.178 ms

Loss rate: 0.00%

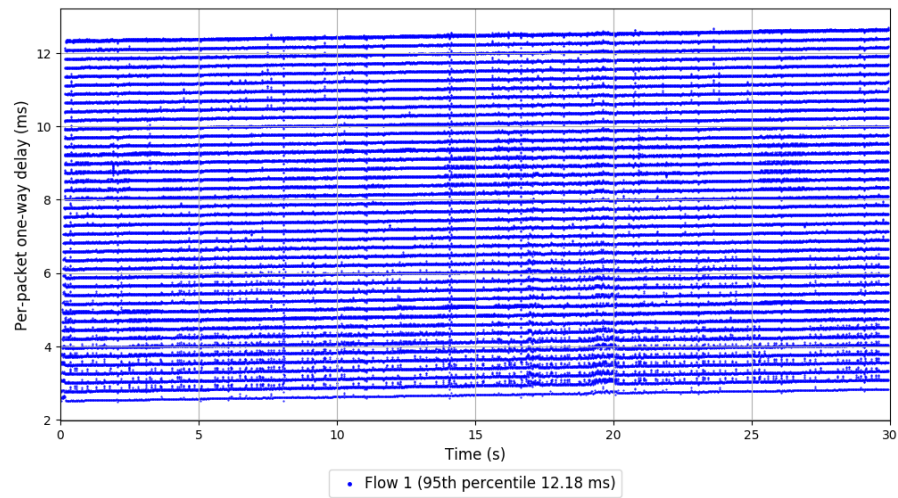
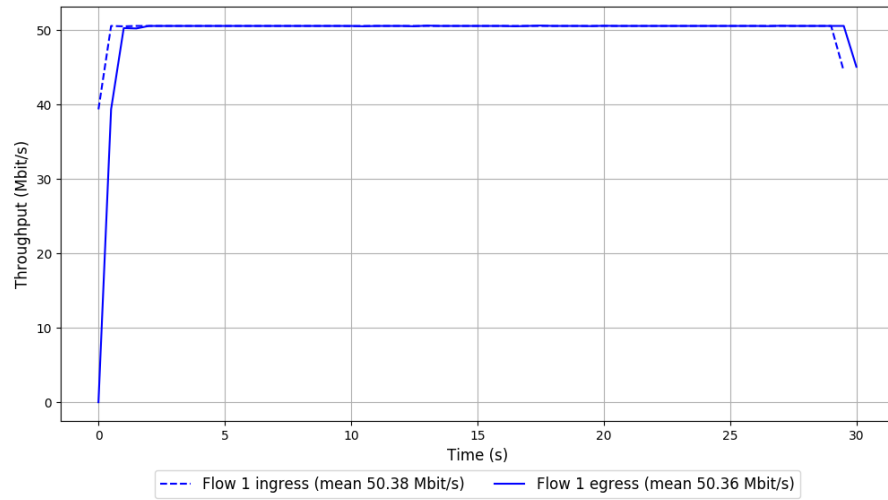
-- Flow 1:

Average throughput: 50.36 Mbit/s

95th percentile per-packet one-way delay: 12.178 ms

Loss rate: 0.00%

Run 1: Report of Sprout — Data Link

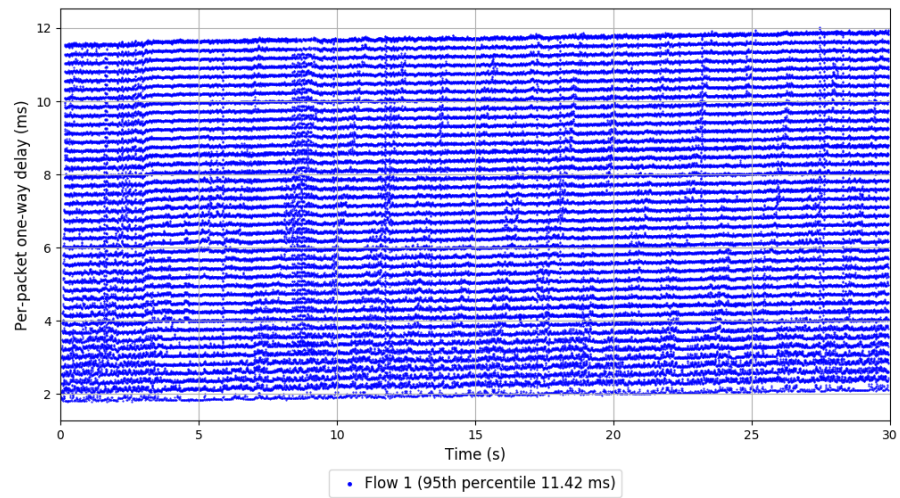
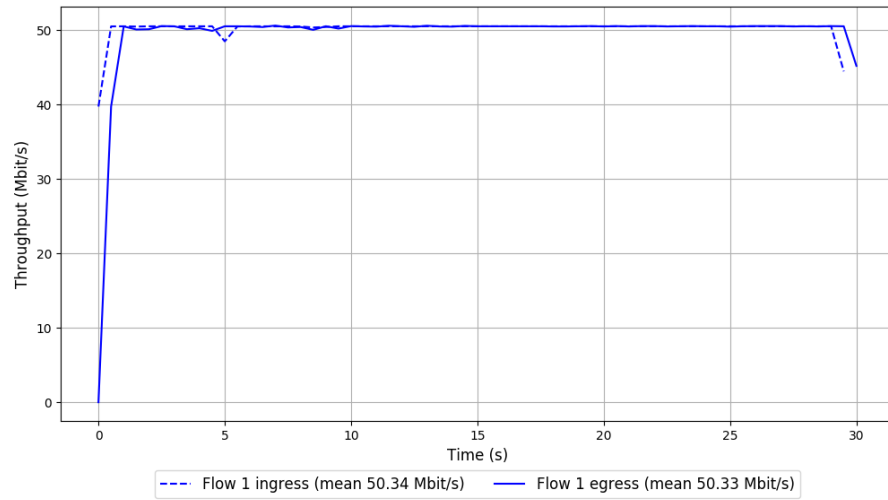


Run 2: Statistics of Sprout

Start at: 2018-09-25 05:11:25
End at: 2018-09-25 05:11:55
Local clock offset: 13.026 ms
Remote clock offset: 0.163 ms

Below is generated by plot.py at 2018-09-25 06:35:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 50.33 Mbit/s
95th percentile per-packet one-way delay: 11.420 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.33 Mbit/s
95th percentile per-packet one-way delay: 11.420 ms
Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

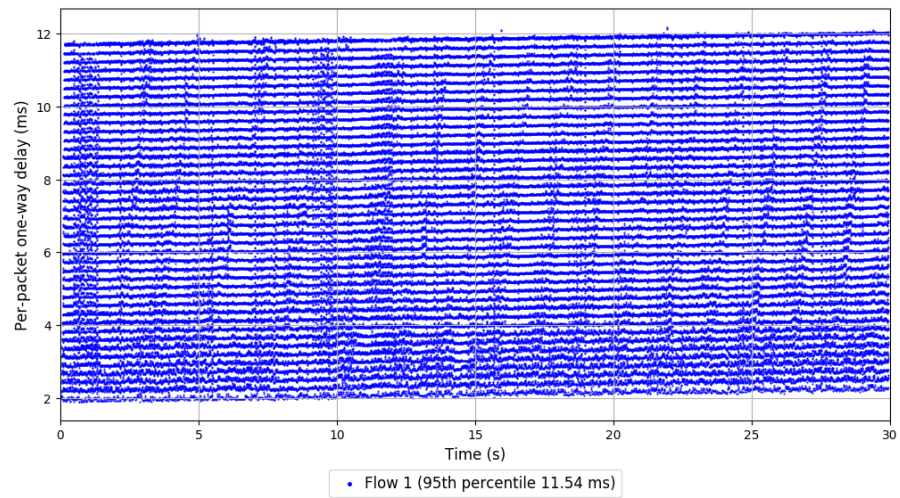
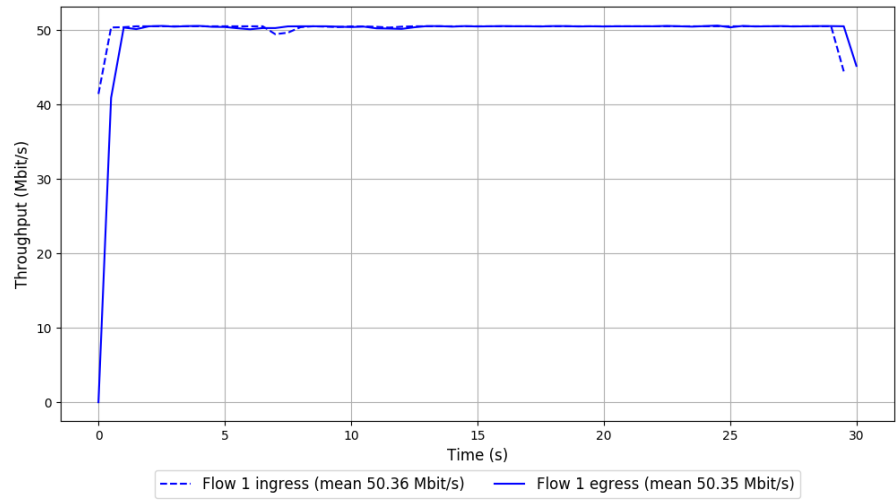


Run 3: Statistics of Sprout

Start at: 2018-09-25 05:32:34
End at: 2018-09-25 05:33:04
Local clock offset: 26.562 ms
Remote clock offset: 0.436 ms

Below is generated by plot.py at 2018-09-25 06:35:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 50.35 Mbit/s
95th percentile per-packet one-way delay: 11.545 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.35 Mbit/s
95th percentile per-packet one-way delay: 11.545 ms
Loss rate: 0.00%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2018-09-25 05:53:43

End at: 2018-09-25 05:54:13

Local clock offset: 1.697 ms

Remote clock offset: 0.426 ms

Below is generated by plot.py at 2018-09-25 06:35:40

Datalink statistics

-- Total of 1 flow:

Average throughput: 50.34 Mbit/s

95th percentile per-packet one-way delay: 9.680 ms

Loss rate: 0.00%

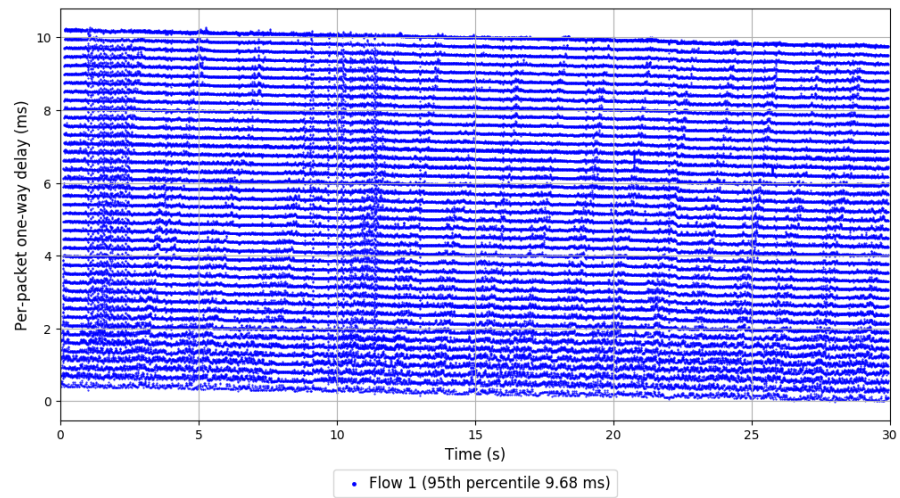
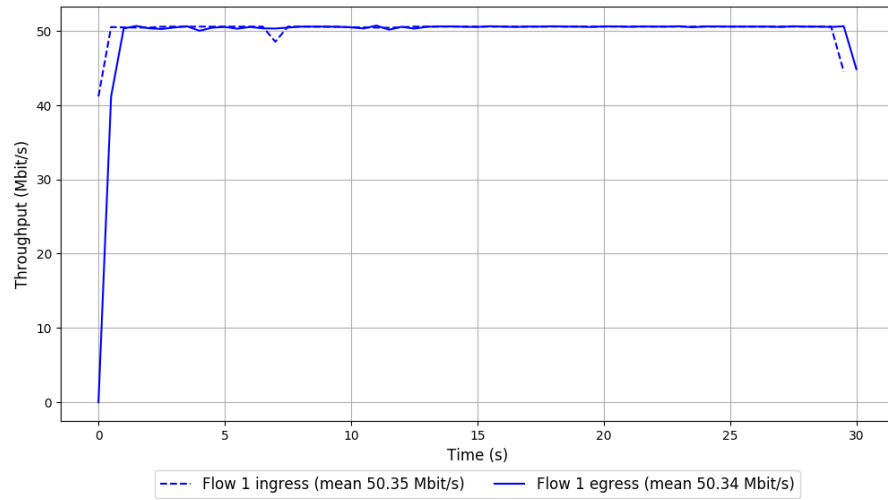
-- Flow 1:

Average throughput: 50.34 Mbit/s

95th percentile per-packet one-way delay: 9.680 ms

Loss rate: 0.00%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-09-25 06:14:52

End at: 2018-09-25 06:15:22

Local clock offset: -5.466 ms

Remote clock offset: 0.54 ms

Below is generated by plot.py at 2018-09-25 06:35:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 50.28 Mbit/s

95th percentile per-packet one-way delay: 10.358 ms

Loss rate: 0.00%

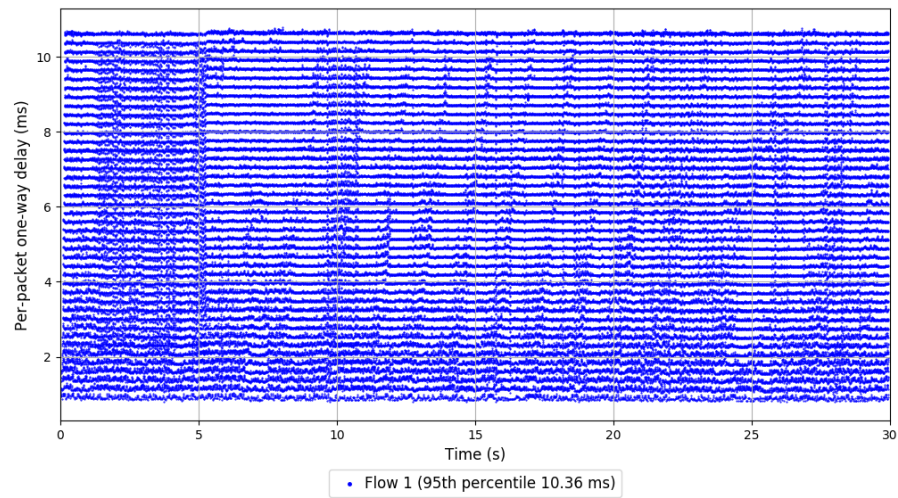
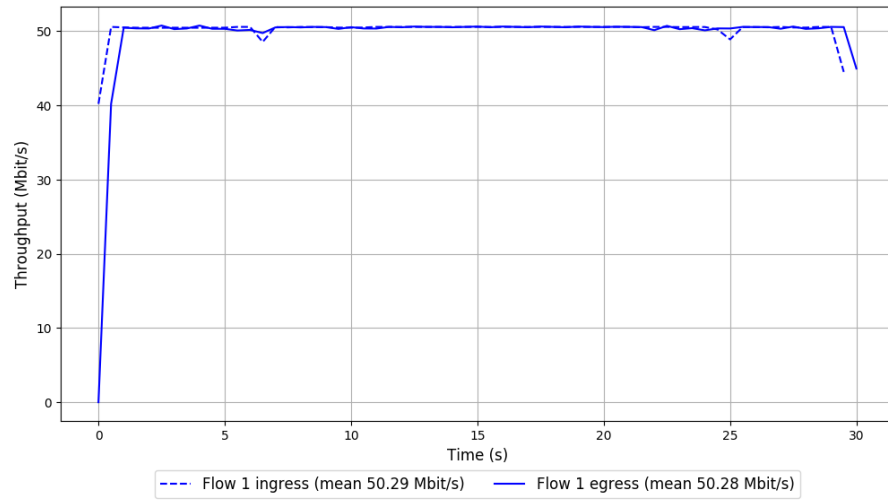
-- Flow 1:

Average throughput: 50.28 Mbit/s

95th percentile per-packet one-way delay: 10.358 ms

Loss rate: 0.00%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2018-09-25 05:00:15

End at: 2018-09-25 05:00:45

Local clock offset: 6.548 ms

Remote clock offset: 0.233 ms

Below is generated by plot.py at 2018-09-25 06:35:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 10.68 Mbit/s

95th percentile per-packet one-way delay: 1.643 ms

Loss rate: 0.00%

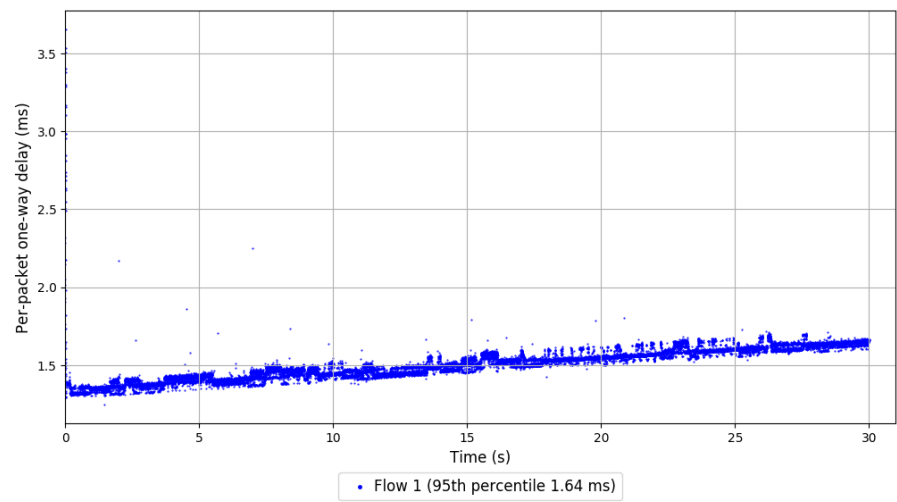
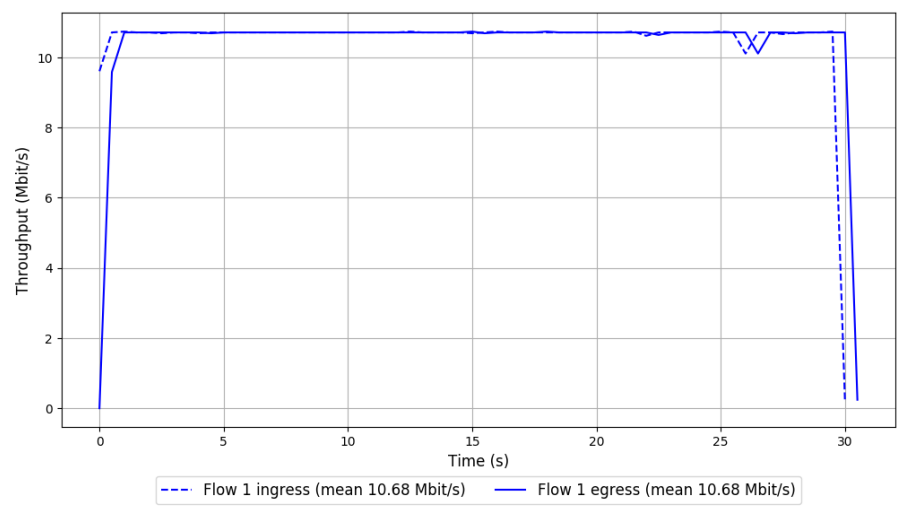
-- Flow 1:

Average throughput: 10.68 Mbit/s

95th percentile per-packet one-way delay: 1.643 ms

Loss rate: 0.00%

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



Run 2: Statistics of TaoVA-100x

Start at: 2018-09-25 05:21:23

End at: 2018-09-25 05:21:53

Local clock offset: 20.069 ms

Remote clock offset: 0.396 ms

Below is generated by plot.py at 2018-09-25 06:35:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 10.06 Mbit/s

95th percentile per-packet one-way delay: 3.134 ms

Loss rate: 81.13%

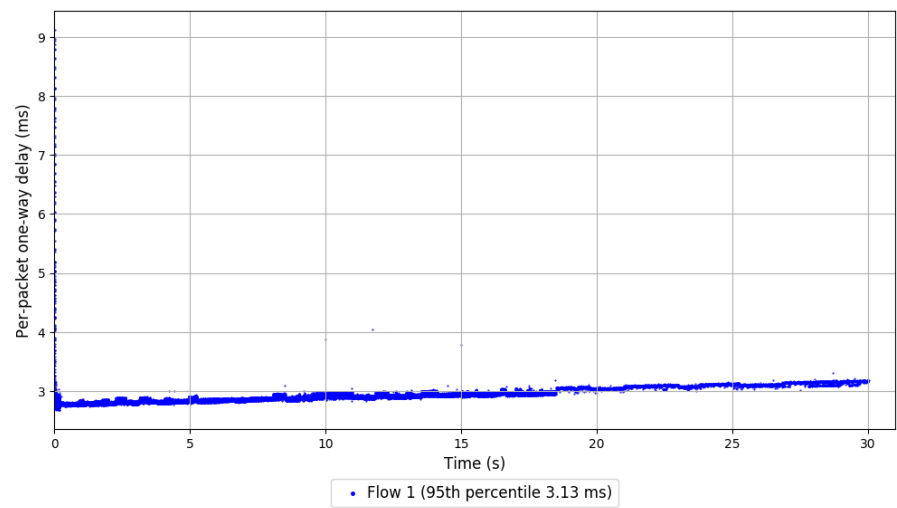
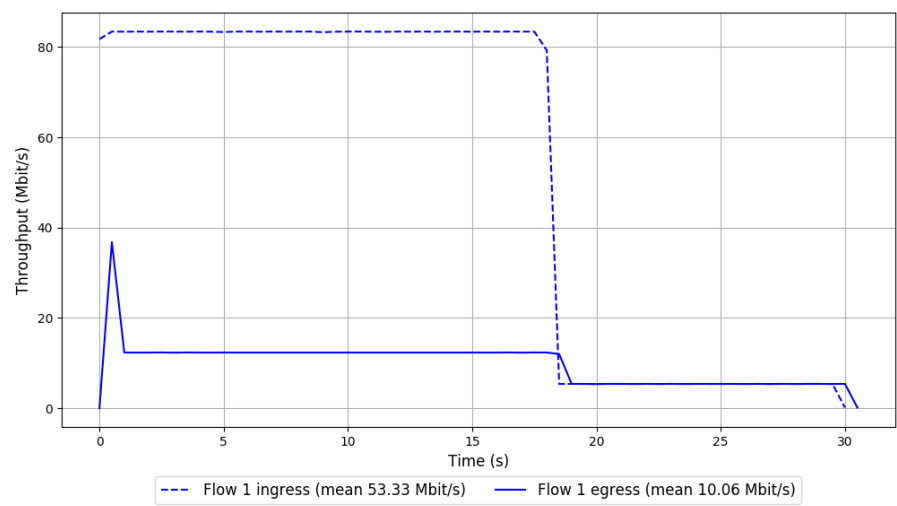
-- Flow 1:

Average throughput: 10.06 Mbit/s

95th percentile per-packet one-way delay: 3.134 ms

Loss rate: 81.13%

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-09-25 05:42:31

End at: 2018-09-25 05:43:01

Local clock offset: 20.764 ms

Remote clock offset: 0.45 ms

Below is generated by plot.py at 2018-09-25 06:35:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 10.06 Mbit/s

95th percentile per-packet one-way delay: 1.024 ms

Loss rate: 81.14%

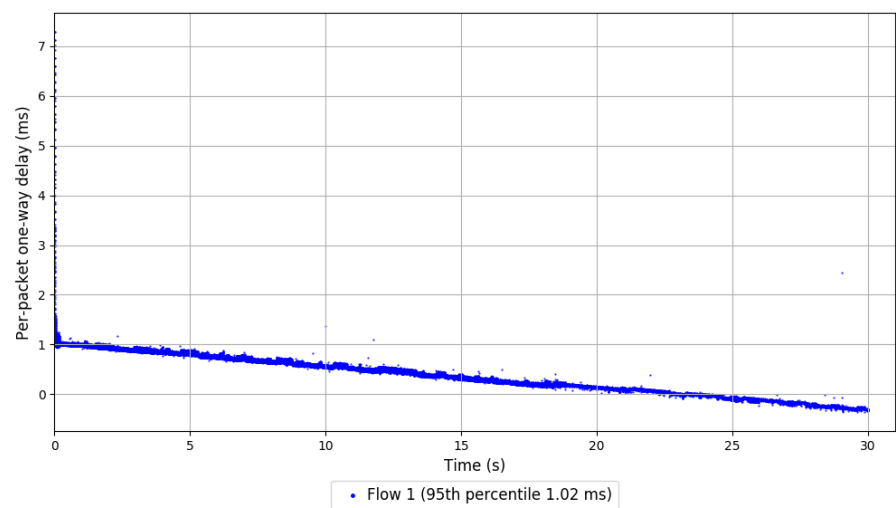
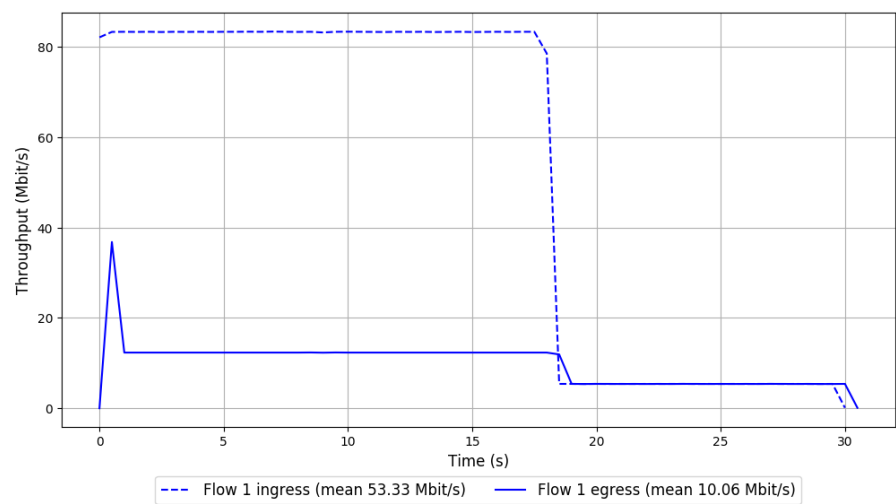
-- Flow 1:

Average throughput: 10.06 Mbit/s

95th percentile per-packet one-way delay: 1.024 ms

Loss rate: 81.14%

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-09-25 06:03:40

End at: 2018-09-25 06:04:10

Local clock offset: -3.586 ms

Remote clock offset: 0.505 ms

Below is generated by plot.py at 2018-09-25 06:35:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 10.06 Mbit/s

95th percentile per-packet one-way delay: 2.273 ms

Loss rate: 81.13%

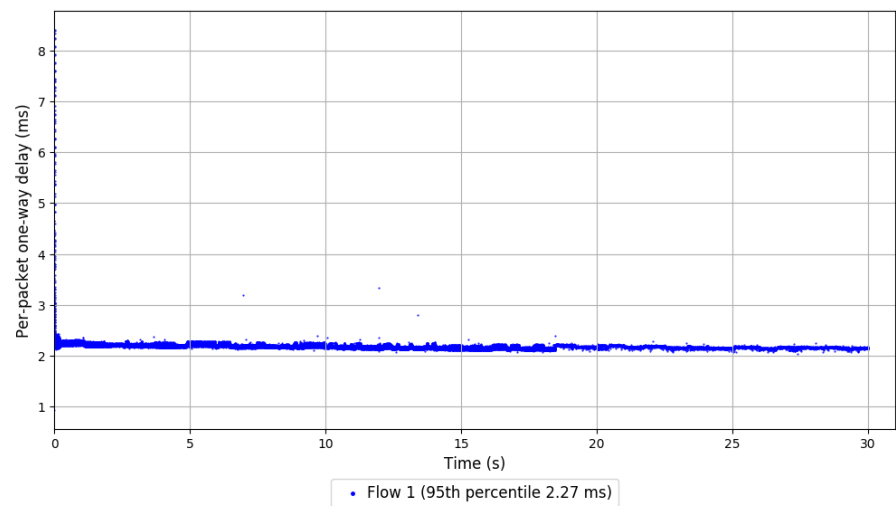
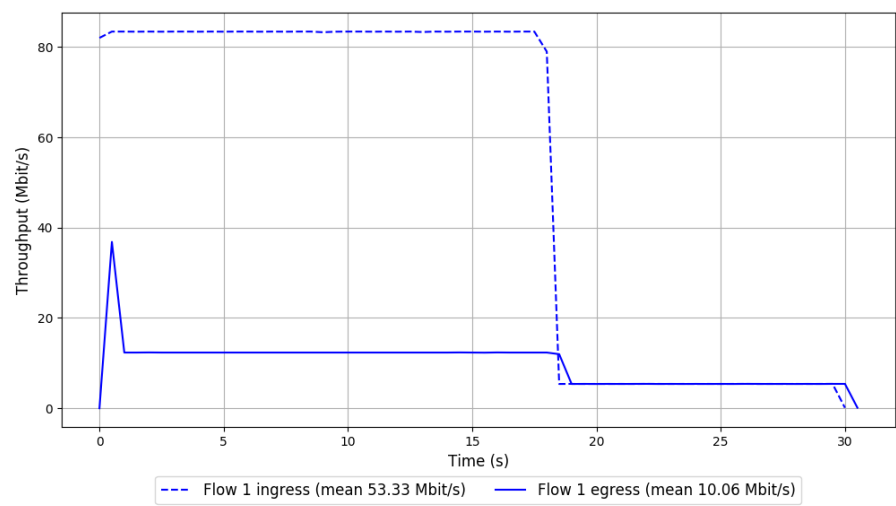
-- Flow 1:

Average throughput: 10.06 Mbit/s

95th percentile per-packet one-way delay: 2.273 ms

Loss rate: 81.13%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-09-25 06:24:49

End at: 2018-09-25 06:25:19

Local clock offset: -6.964 ms

Remote clock offset: 0.556 ms

Below is generated by plot.py at 2018-09-25 06:35:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 8.60 Mbit/s

95th percentile per-packet one-way delay: 3.221 ms

Loss rate: 76.71%

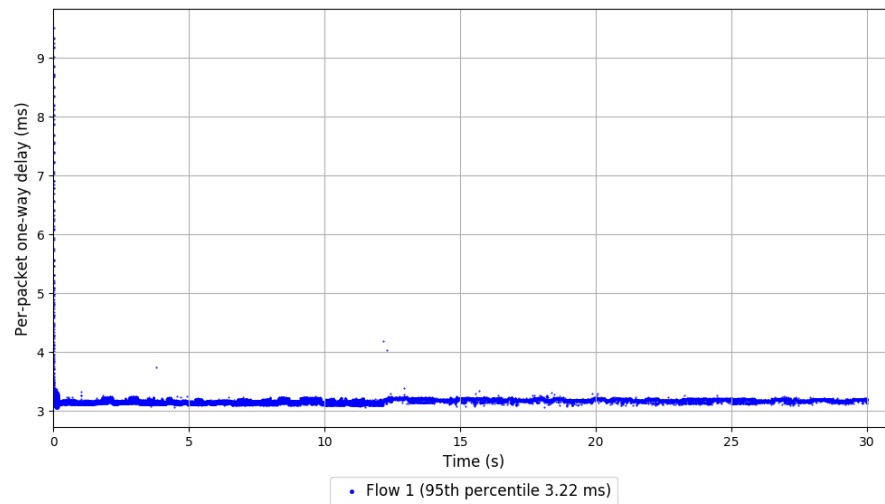
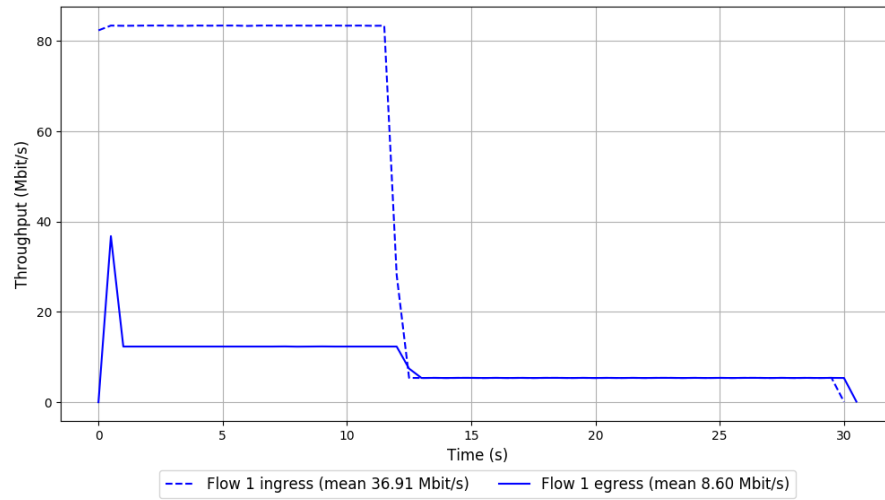
-- Flow 1:

Average throughput: 8.60 Mbit/s

95th percentile per-packet one-way delay: 3.221 ms

Loss rate: 76.71%

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



Run 1: Statistics of TCP Vegas

Start at: 2018-09-25 04:45:47

End at: 2018-09-25 04:46:17

Local clock offset: -3.232 ms

Remote clock offset: 0.154 ms

Below is generated by plot.py at 2018-09-25 06:36:33

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.06 Mbit/s

95th percentile per-packet one-way delay: 5.022 ms

Loss rate: 0.01%

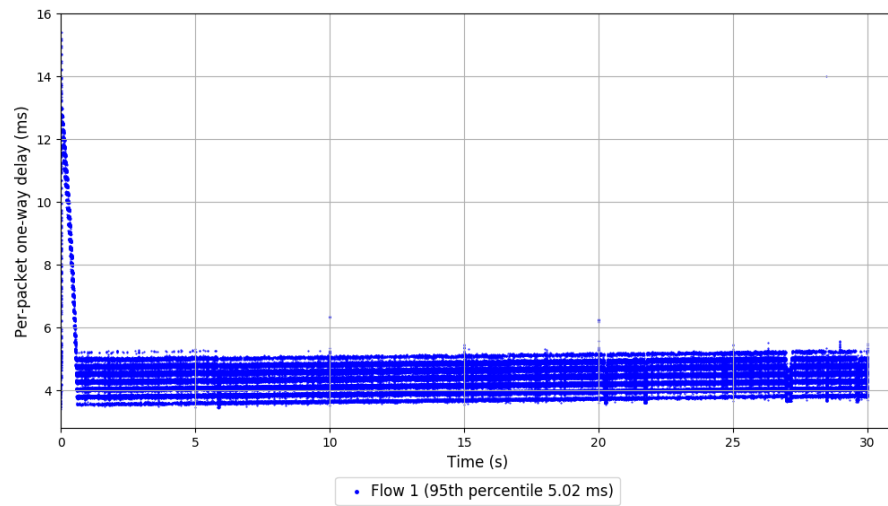
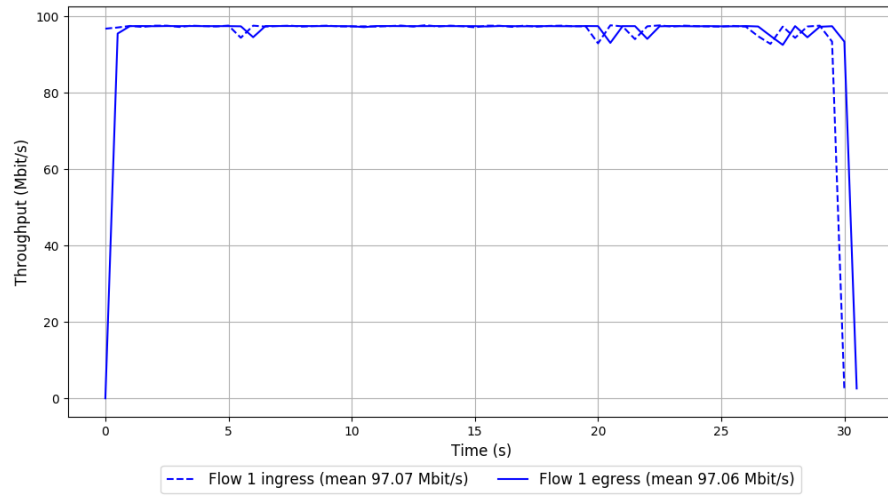
-- Flow 1:

Average throughput: 97.06 Mbit/s

95th percentile per-packet one-way delay: 5.022 ms

Loss rate: 0.01%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-09-25 05:06:55

End at: 2018-09-25 05:07:25

Local clock offset: 10.85 ms

Remote clock offset: 0.244 ms

Below is generated by plot.py at 2018-09-25 06:36:34

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.36 Mbit/s

95th percentile per-packet one-way delay: 2.633 ms

Loss rate: 0.00%

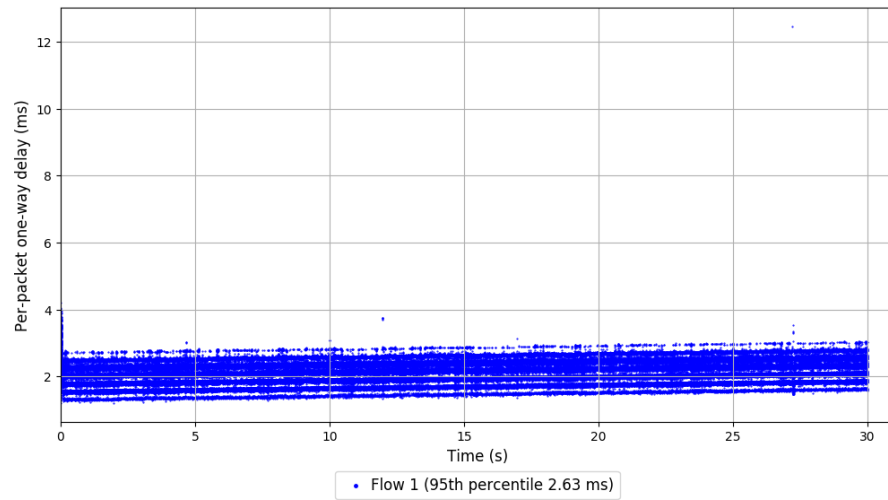
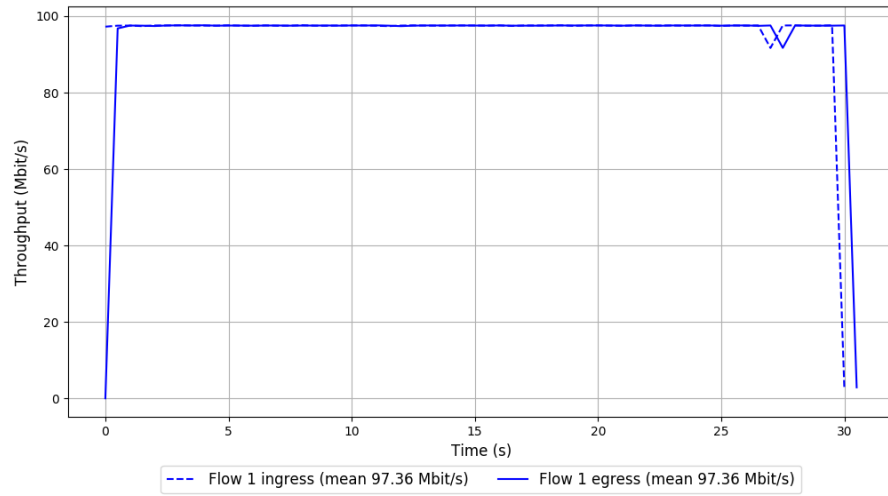
-- Flow 1:

Average throughput: 97.36 Mbit/s

95th percentile per-packet one-way delay: 2.633 ms

Loss rate: 0.00%

Run 2: Report of TCP Vegas — Data Link

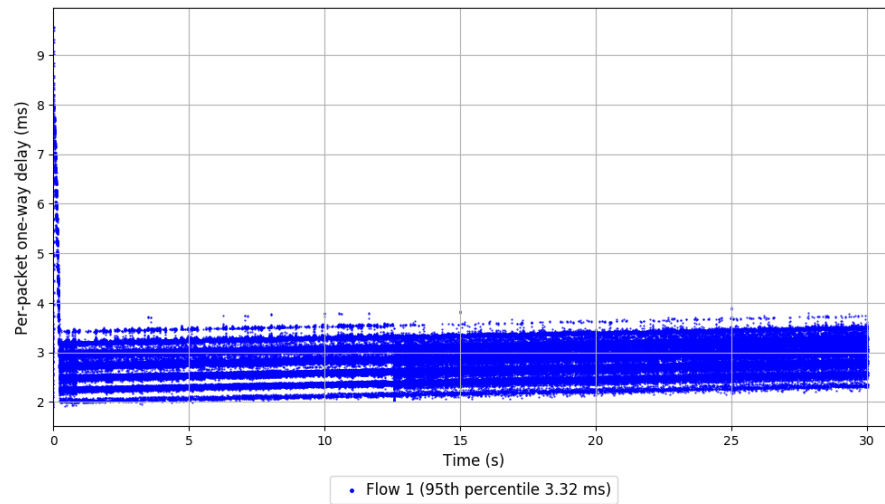
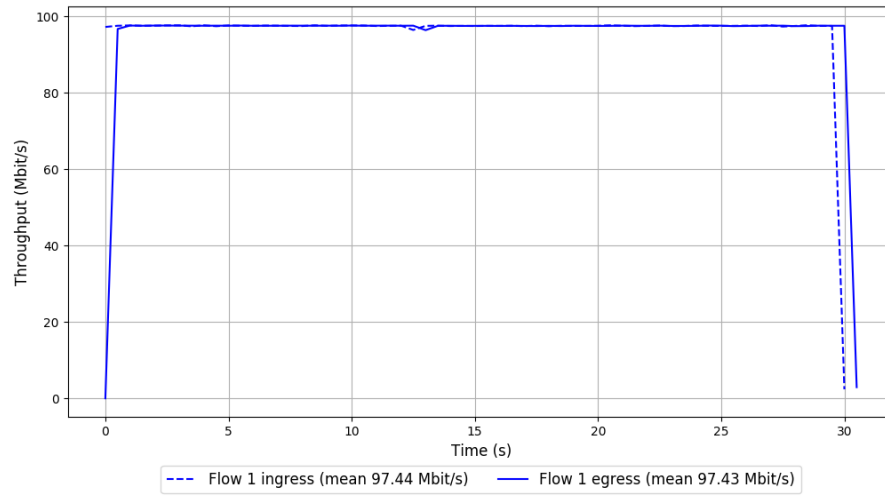


Run 3: Statistics of TCP Vegas

Start at: 2018-09-25 05:28:03
End at: 2018-09-25 05:28:33
Local clock offset: 23.699 ms
Remote clock offset: 0.413 ms

Below is generated by plot.py at 2018-09-25 06:36:42
Datalink statistics
-- Total of 1 flow:
Average throughput: 97.43 Mbit/s
95th percentile per-packet one-way delay: 3.322 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 97.43 Mbit/s
95th percentile per-packet one-way delay: 3.322 ms
Loss rate: 0.00%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2018-09-25 05:49:12

End at: 2018-09-25 05:49:42

Local clock offset: 6.388 ms

Remote clock offset: 0.45 ms

Below is generated by plot.py at 2018-09-25 06:36:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.43 Mbit/s

95th percentile per-packet one-way delay: 3.258 ms

Loss rate: 0.00%

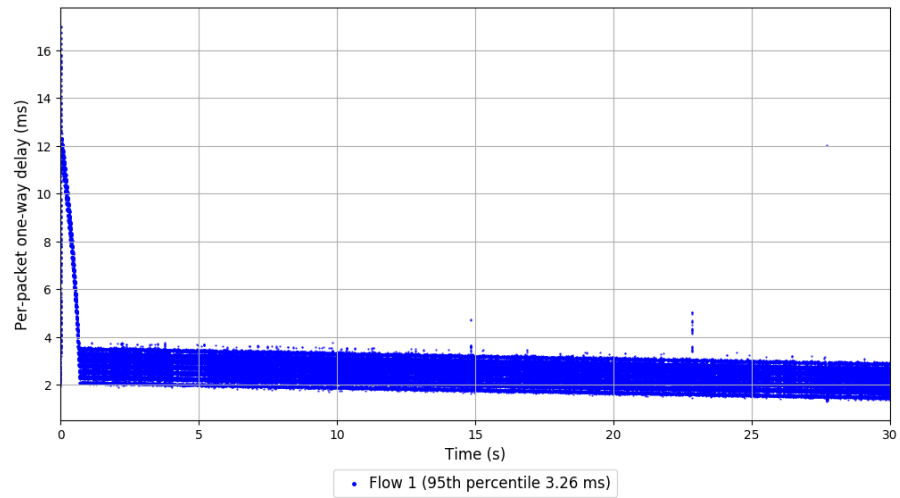
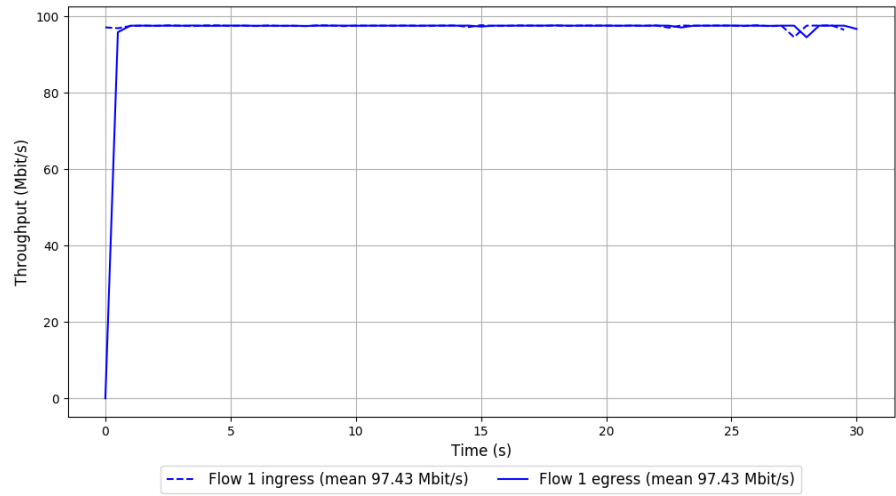
-- Flow 1:

Average throughput: 97.43 Mbit/s

95th percentile per-packet one-way delay: 3.258 ms

Loss rate: 0.00%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-09-25 06:10:22

End at: 2018-09-25 06:10:52

Local clock offset: -5.776 ms

Remote clock offset: 0.562 ms

Below is generated by plot.py at 2018-09-25 06:36:47

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.44 Mbit/s

95th percentile per-packet one-way delay: 4.609 ms

Loss rate: 0.00%

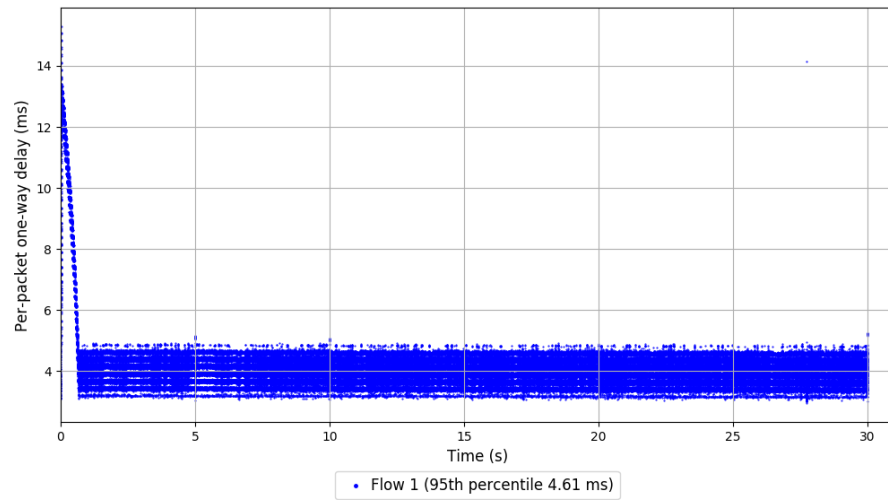
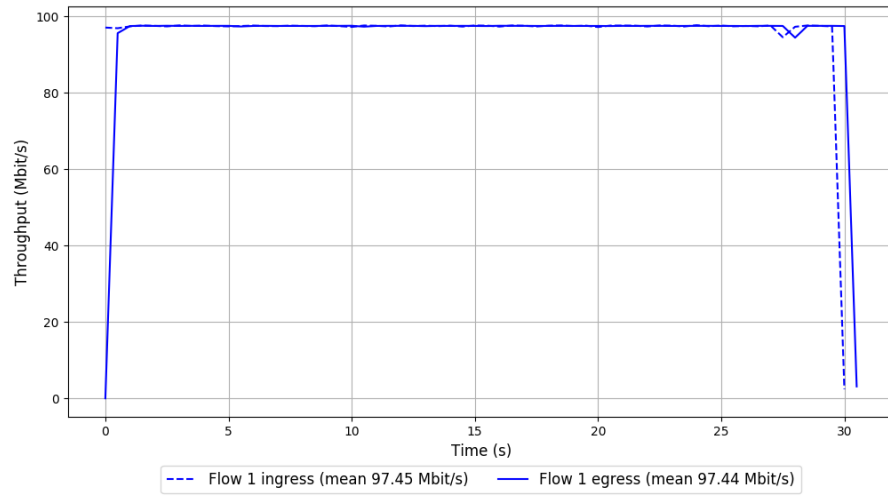
-- Flow 1:

Average throughput: 97.44 Mbit/s

95th percentile per-packet one-way delay: 4.609 ms

Loss rate: 0.00%

Run 5: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2018-09-25 04:48:03

End at: 2018-09-25 04:48:33

Local clock offset: -1.856 ms

Remote clock offset: 0.01 ms

Below is generated by plot.py at 2018-09-25 06:36:47

Datalink statistics

-- Total of 1 flow:

Average throughput: 47.46 Mbit/s

95th percentile per-packet one-way delay: 7.758 ms

Loss rate: 1.41%

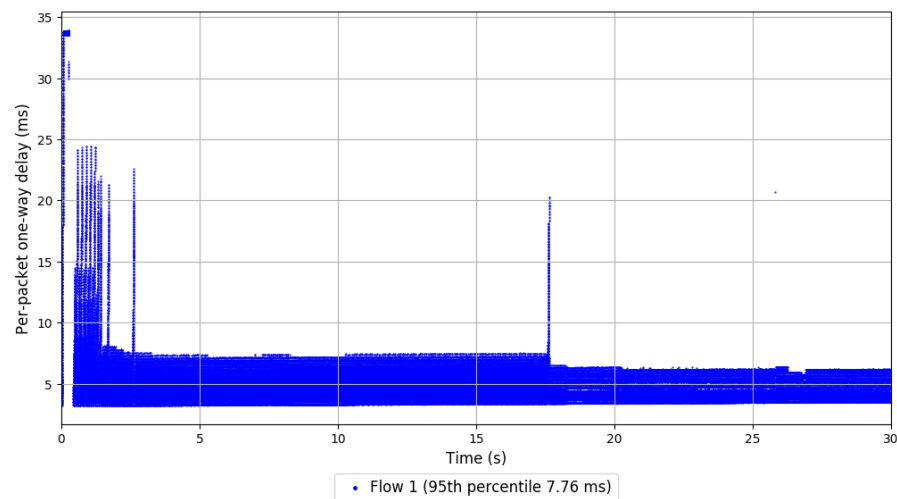
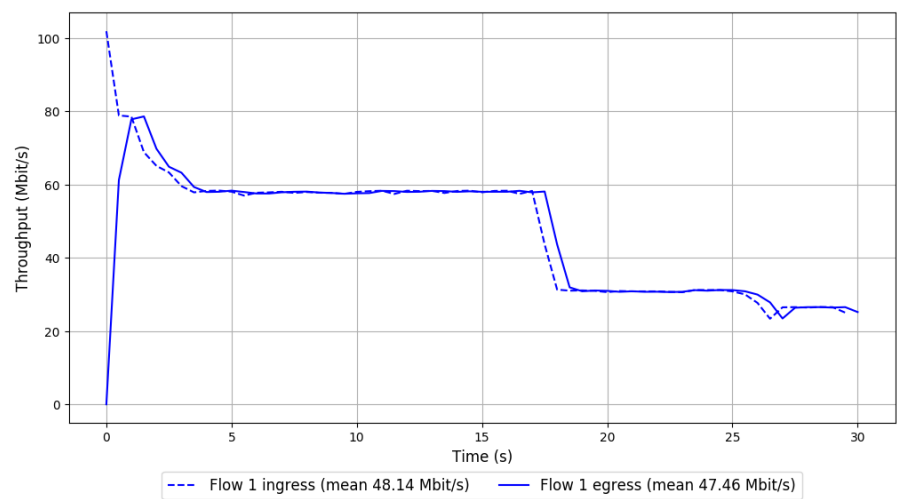
-- Flow 1:

Average throughput: 47.46 Mbit/s

95th percentile per-packet one-way delay: 7.758 ms

Loss rate: 1.41%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-09-25 05:09:11

End at: 2018-09-25 05:09:41

Local clock offset: 11.642 ms

Remote clock offset: 0.311 ms

Below is generated by plot.py at 2018-09-25 06:36:47

Datalink statistics

-- Total of 1 flow:

Average throughput: 57.28 Mbit/s

95th percentile per-packet one-way delay: 7.154 ms

Loss rate: 1.14%

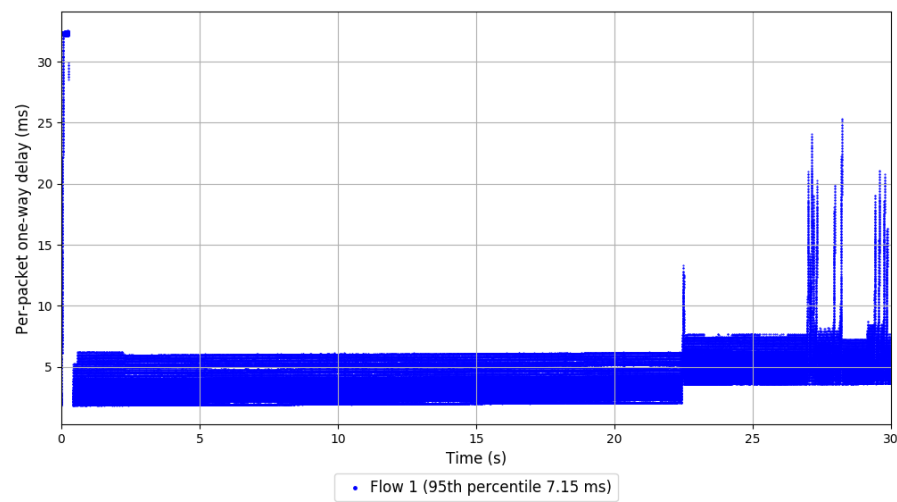
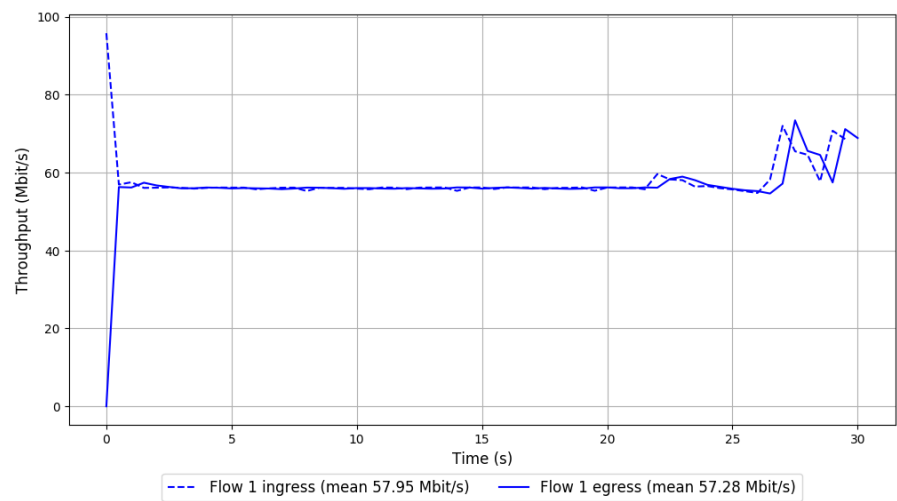
-- Flow 1:

Average throughput: 57.28 Mbit/s

95th percentile per-packet one-way delay: 7.154 ms

Loss rate: 1.14%

Run 2: Report of Verus — Data Link

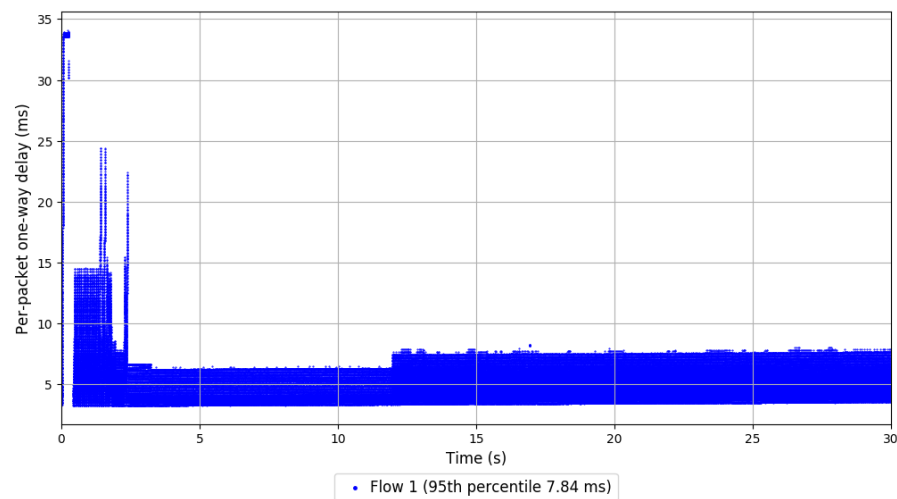
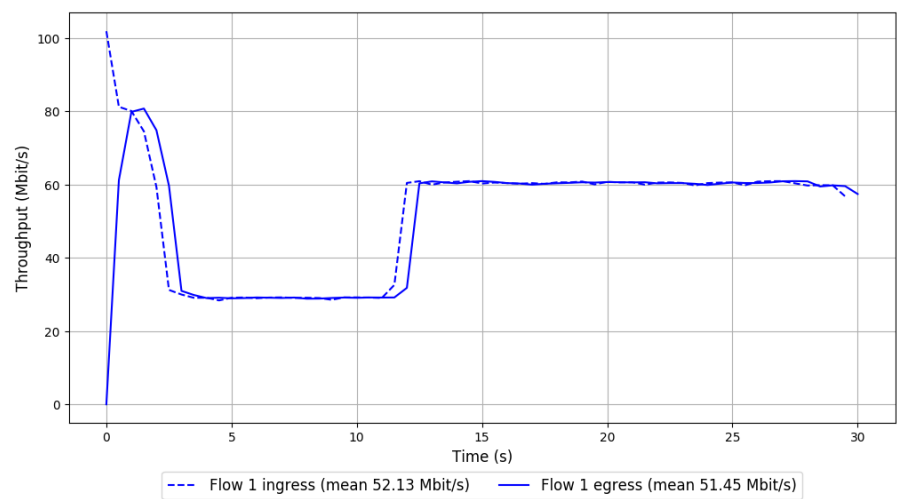


Run 3: Statistics of Verus

Start at: 2018-09-25 05:30:20
End at: 2018-09-25 05:30:50
Local clock offset: 25.038 ms
Remote clock offset: 0.274 ms

Below is generated by plot.py at 2018-09-25 06:36:47
Datalink statistics
-- Total of 1 flow:
Average throughput: 51.45 Mbit/s
95th percentile per-packet one-way delay: 7.838 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 51.45 Mbit/s
95th percentile per-packet one-way delay: 7.838 ms
Loss rate: 1.30%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-09-25 05:51:28

End at: 2018-09-25 05:51:58

Local clock offset: 3.779 ms

Remote clock offset: 0.434 ms

Below is generated by plot.py at 2018-09-25 06:36:53

Datalink statistics

-- Total of 1 flow:

Average throughput: 54.11 Mbit/s

95th percentile per-packet one-way delay: 4.002 ms

Loss rate: 1.23%

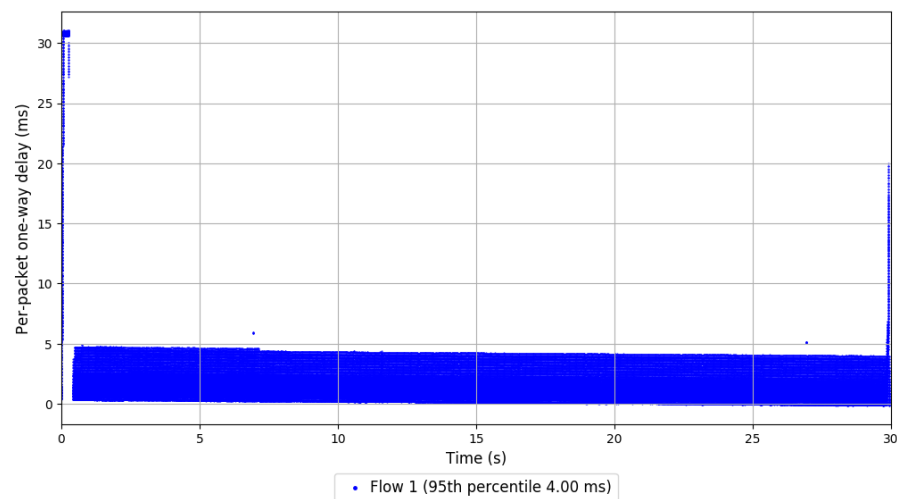
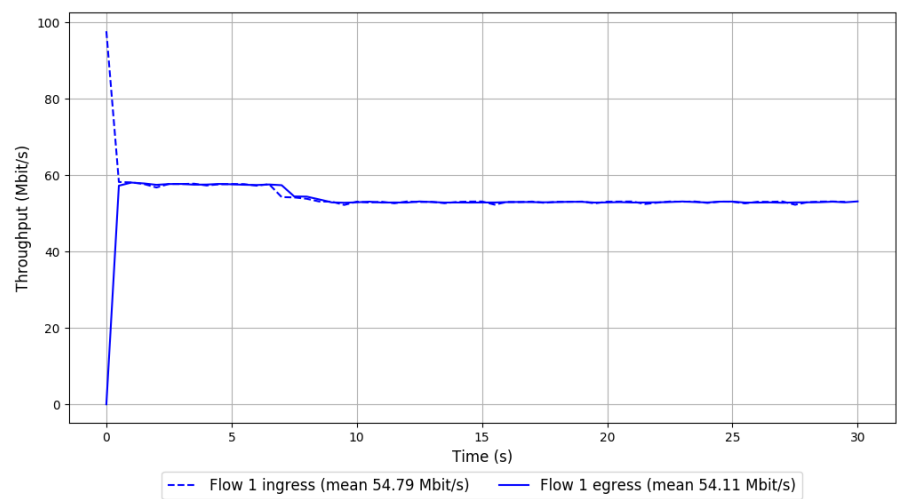
-- Flow 1:

Average throughput: 54.11 Mbit/s

95th percentile per-packet one-way delay: 4.002 ms

Loss rate: 1.23%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-09-25 06:12:38

End at: 2018-09-25 06:13:08

Local clock offset: -6.076 ms

Remote clock offset: 0.55 ms

Below is generated by plot.py at 2018-09-25 06:36:53

Datalink statistics

-- Total of 1 flow:

Average throughput: 37.56 Mbit/s

95th percentile per-packet one-way delay: 12.579 ms

Loss rate: 1.78%

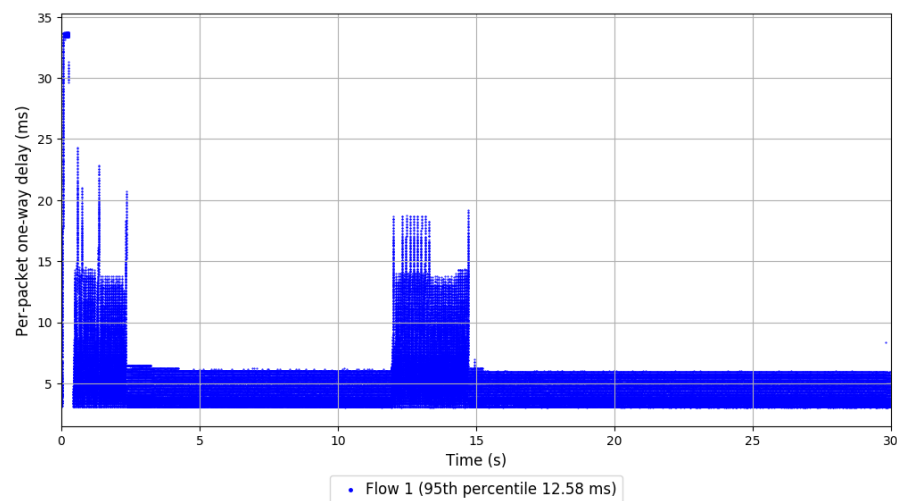
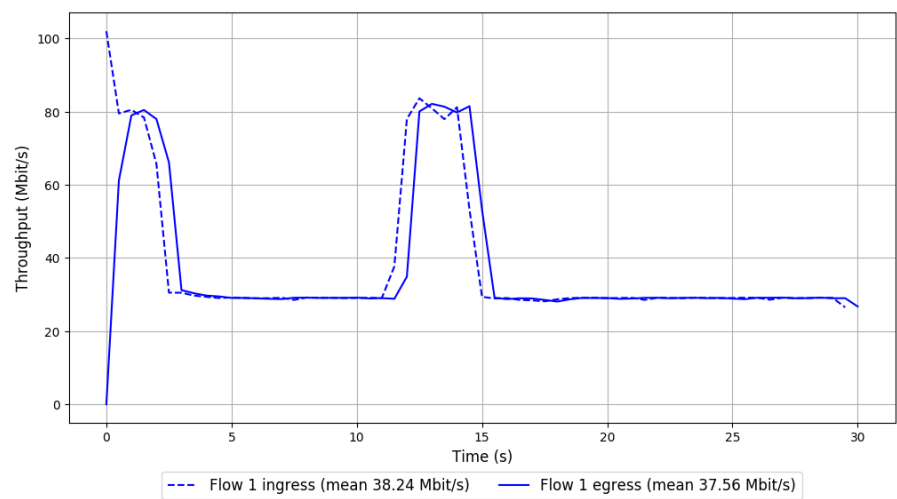
-- Flow 1:

Average throughput: 37.56 Mbit/s

95th percentile per-packet one-way delay: 12.579 ms

Loss rate: 1.78%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2018-09-25 05:01:20

End at: 2018-09-25 05:01:50

Local clock offset: 6.638 ms

Remote clock offset: 0.14 ms

Below is generated by plot.py at 2018-09-25 06:37:05

Datalink statistics

-- Total of 1 flow:

Average throughput: 54.53 Mbit/s

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

Loss rate: 0.00%

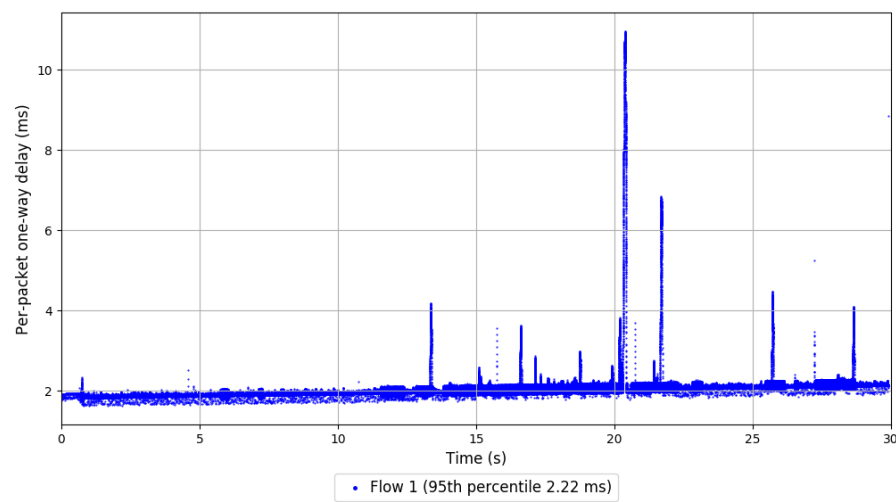
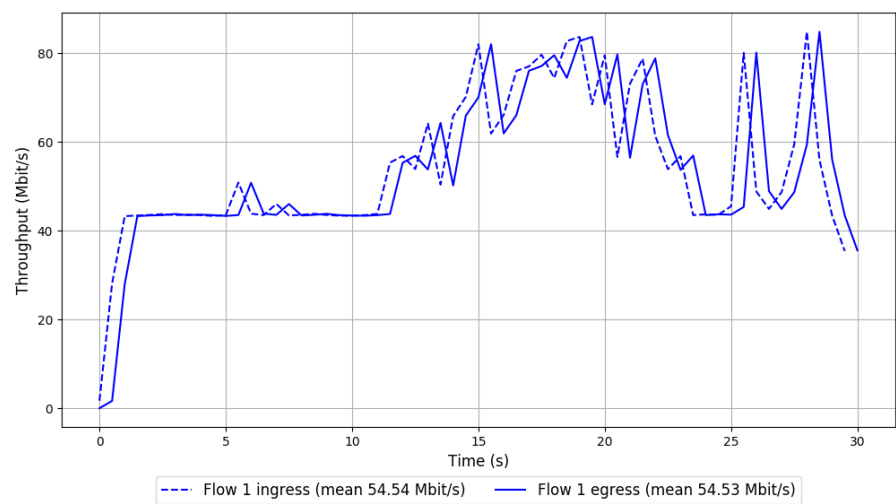
-- Flow 1:

Average throughput: 54.53 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: 2018-09-25 05:22:29

End at: 2018-09-25 05:22:59

Local clock offset: 20.835 ms

Remote clock offset: 0.297 ms

Below is generated by plot.py at 2018-09-25 06:37:07

Datalink statistics

-- Total of 1 flow:

Average throughput: 55.21 Mbit/s

95th percentile per-packet one-way delay: 1.939 ms

Loss rate: 0.00%

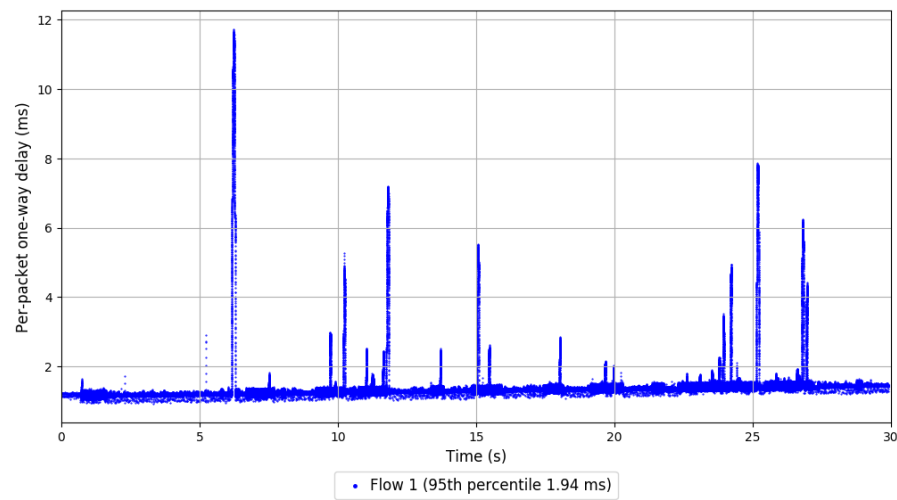
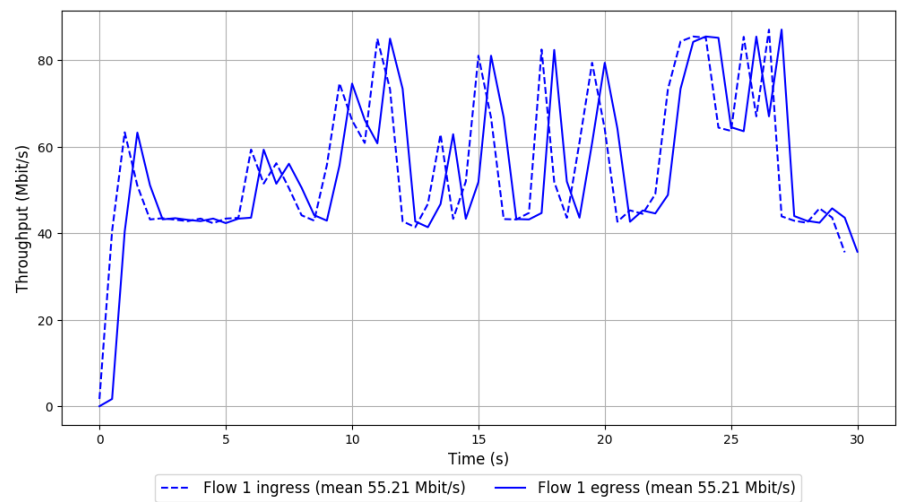
-- Flow 1:

Average throughput: 55.21 Mbit/s

95th percentile per-packet one-way delay: 1.939 ms

Loss rate: 0.00%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2018-09-25 05:43:36

End at: 2018-09-25 05:44:06

Local clock offset: 17.436 ms

Remote clock offset: 0.47 ms

Below is generated by plot.py at 2018-09-25 06:37:18

Datalink statistics

-- Total of 1 flow:

Average throughput: 82.99 Mbit/s

95th percentile per-packet one-way delay: 1.398 ms

Loss rate: 0.01%

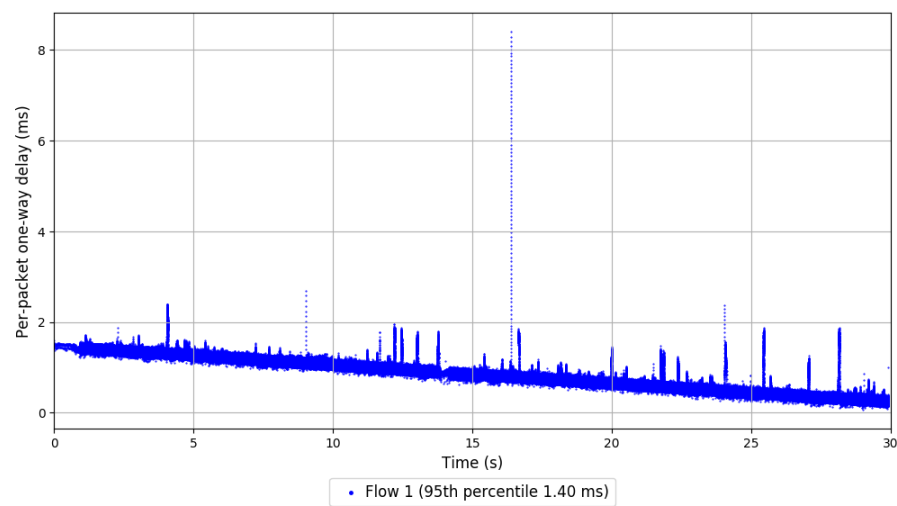
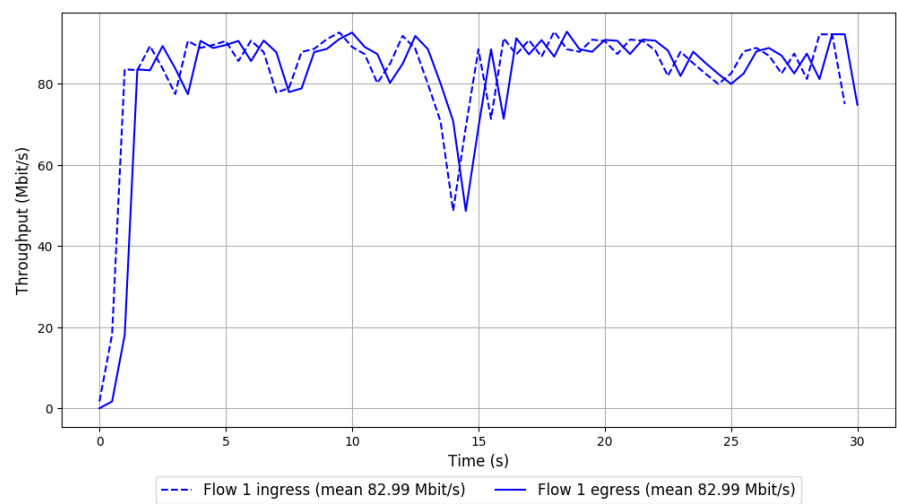
-- Flow 1:

Average throughput: 82.99 Mbit/s

95th percentile per-packet one-way delay: 1.398 ms

Loss rate: 0.01%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2018-09-25 06:04:45

End at: 2018-09-25 06:05:15

Local clock offset: -4.685 ms

Remote clock offset: 0.484 ms

Below is generated by plot.py at 2018-09-25 06:37:19

Datalink statistics

-- Total of 1 flow:

Average throughput: 83.72 Mbit/s

95th percentile per-packet one-way delay: 3.107 ms

Loss rate: 0.00%

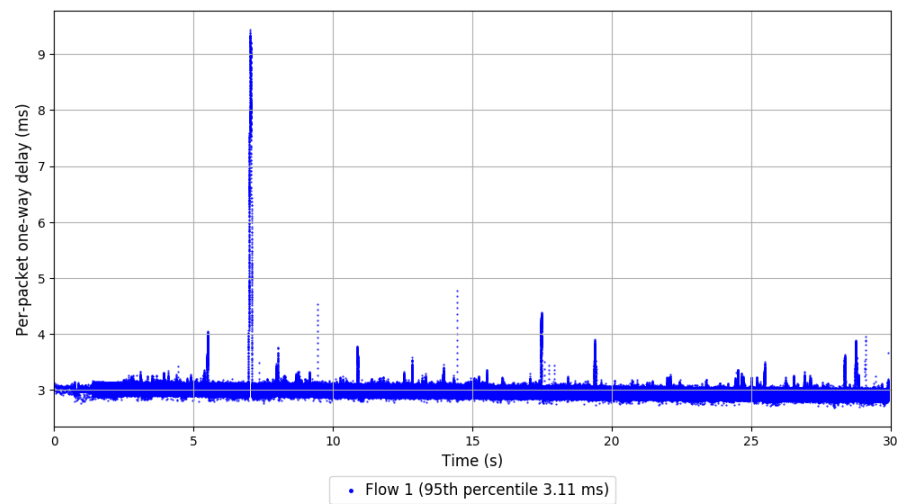
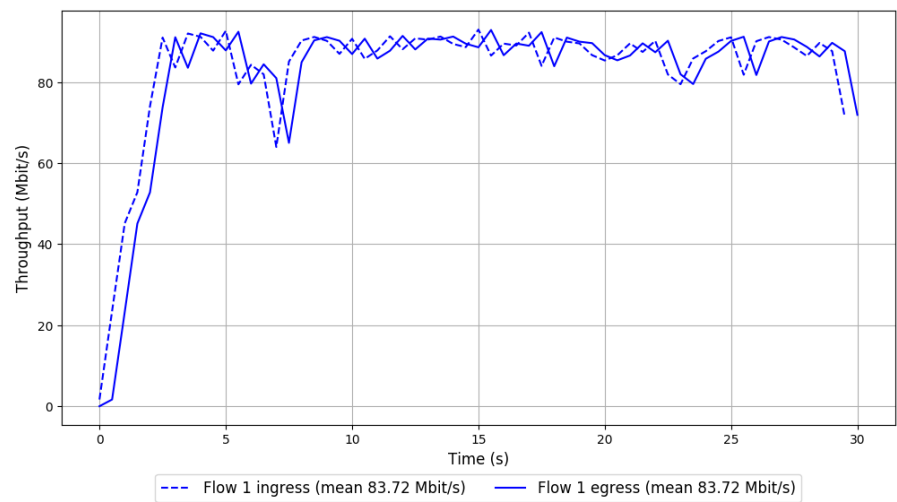
-- Flow 1:

Average throughput: 83.72 Mbit/s

95th percentile per-packet one-way delay: 3.107 ms

Loss rate: 0.00%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2018-09-25 06:25:54

End at: 2018-09-25 06:26:24

Local clock offset: -6.325 ms

Remote clock offset: 0.45 ms

Below is generated by plot.py at 2018-09-25 06:37:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 85.86 Mbit/s

95th percentile per-packet one-way delay: 2.533 ms

Loss rate: 0.00%

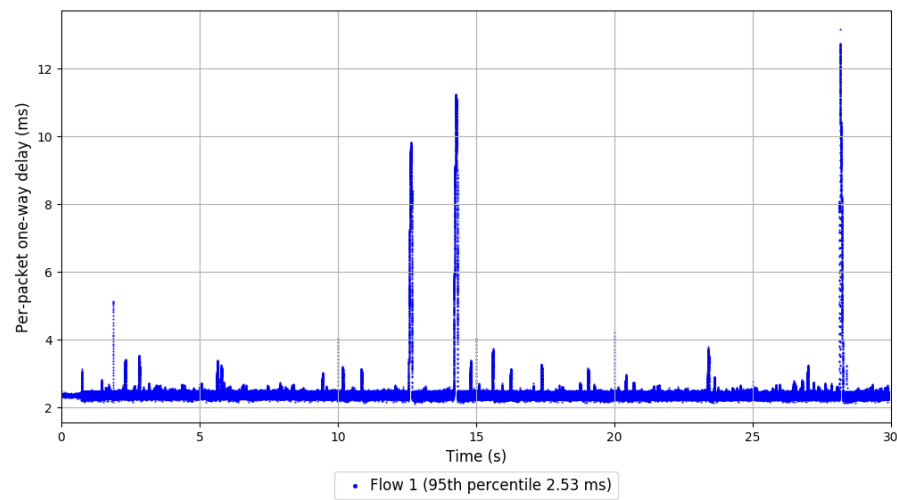
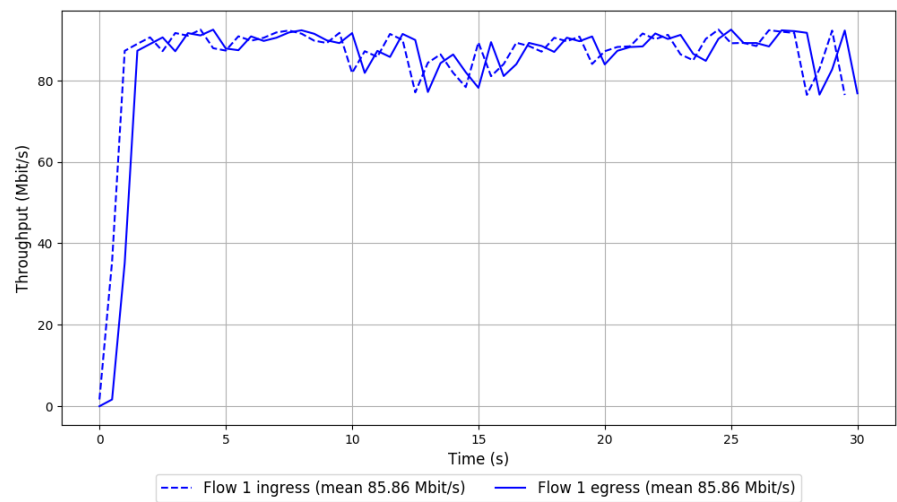
-- Flow 1:

Average throughput: 85.86 Mbit/s

95th percentile per-packet one-way delay: 2.533 ms

Loss rate: 0.00%

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2018-09-25 04:53:38

End at: 2018-09-25 04:54:09

Local clock offset: 2.545 ms

Remote clock offset: 0.145 ms

Below is generated by plot.py at 2018-09-25 06:37:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.05 Mbit/s

95th percentile per-packet one-way delay: 3.274 ms

Loss rate: 0.00%

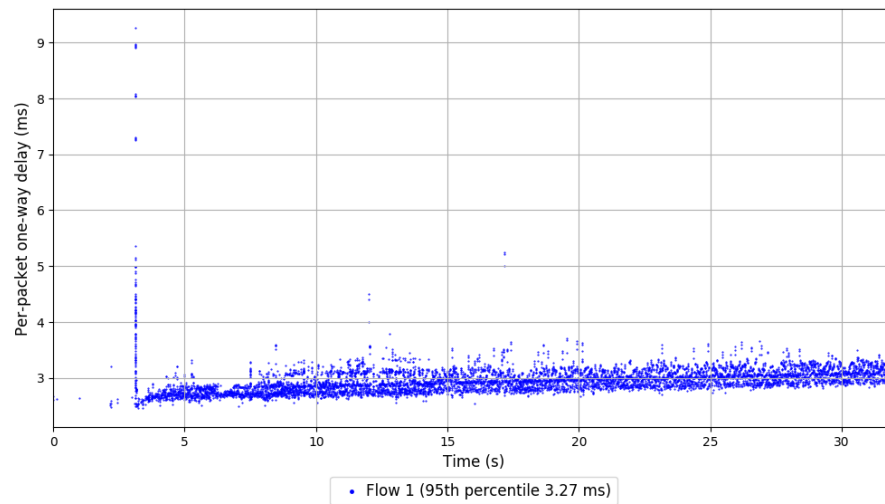
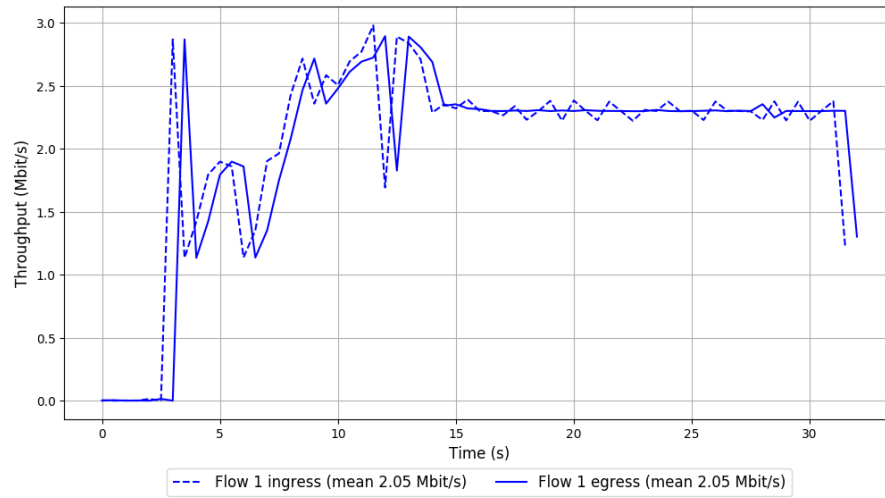
-- Flow 1:

Average throughput: 2.05 Mbit/s

95th percentile per-packet one-way delay: 3.274 ms

Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-09-25 05:14:46

End at: 2018-09-25 05:15:17

Local clock offset: 15.976 ms

Remote clock offset: 0.263 ms

Below is generated by plot.py at 2018-09-25 06:37:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 1.866 ms

Loss rate: 0.00%

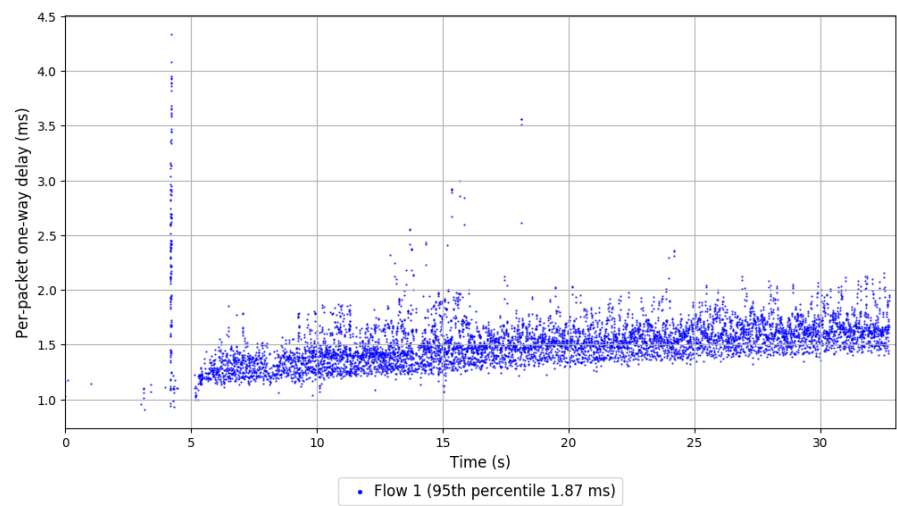
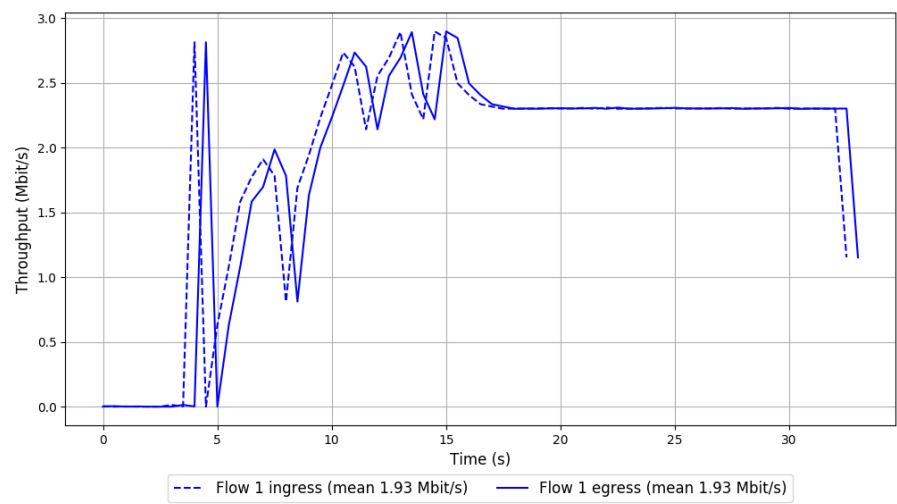
-- Flow 1:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 1.866 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-09-25 05:35:55

End at: 2018-09-25 05:36:25

Local clock offset: 28.747 ms

Remote clock offset: 0.444 ms

Below is generated by plot.py at 2018-09-25 06:37:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 2.764 ms

Loss rate: 0.00%

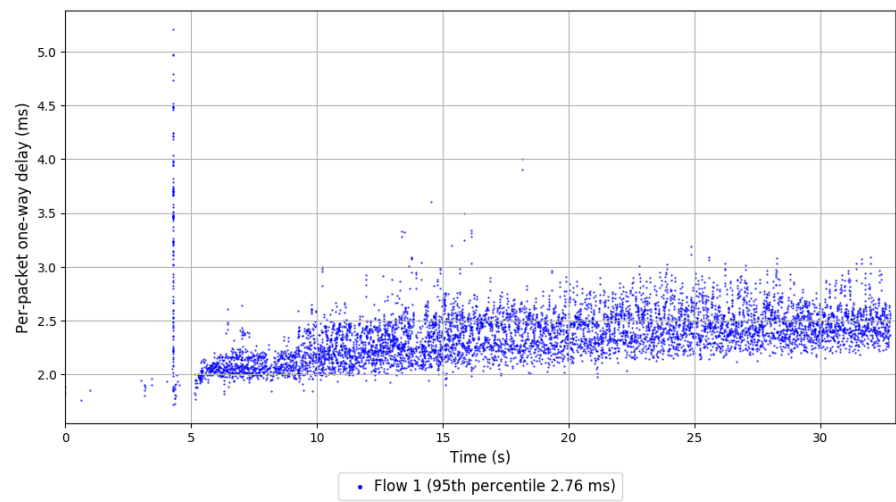
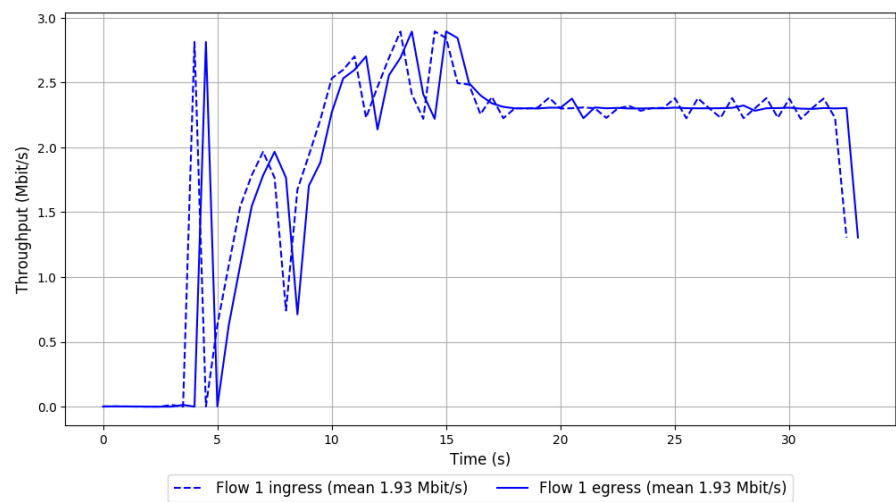
-- Flow 1:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 2.764 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-09-25 05:57:04

End at: 2018-09-25 05:57:34

Local clock offset: -0.698 ms

Remote clock offset: 0.392 ms

Below is generated by plot.py at 2018-09-25 06:37:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 1.043 ms

Loss rate: 0.00%

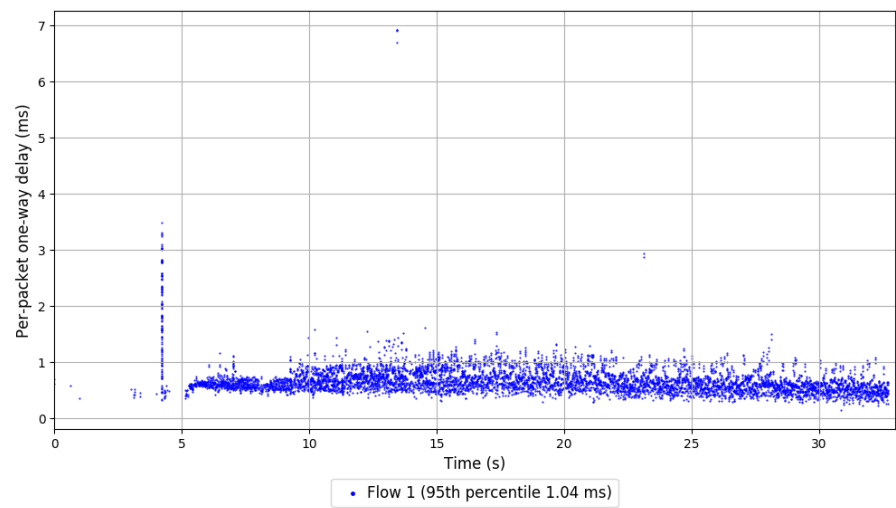
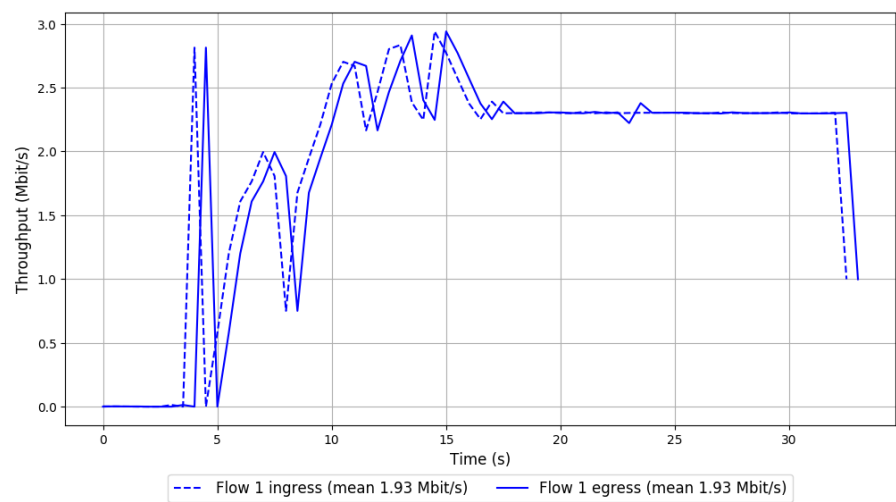
-- Flow 1:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 1.043 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-09-25 06:18:13

End at: 2018-09-25 06:18:43

Local clock offset: -5.796 ms

Remote clock offset: 0.54 ms

Below is generated by plot.py at 2018-09-25 06:37:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 3.080 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 3.080 ms

Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

