

Pantheon Report

Generated at 2018-09-07 11:48:11 (UTC).

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

Repeated the test of 18 congestion control schemes 5 times.

Each test lasted for 30 seconds running 1 flow.

NTP offsets were measured against `gps.ntp.br` and have been applied to correct the timestamps in logs.

System info:

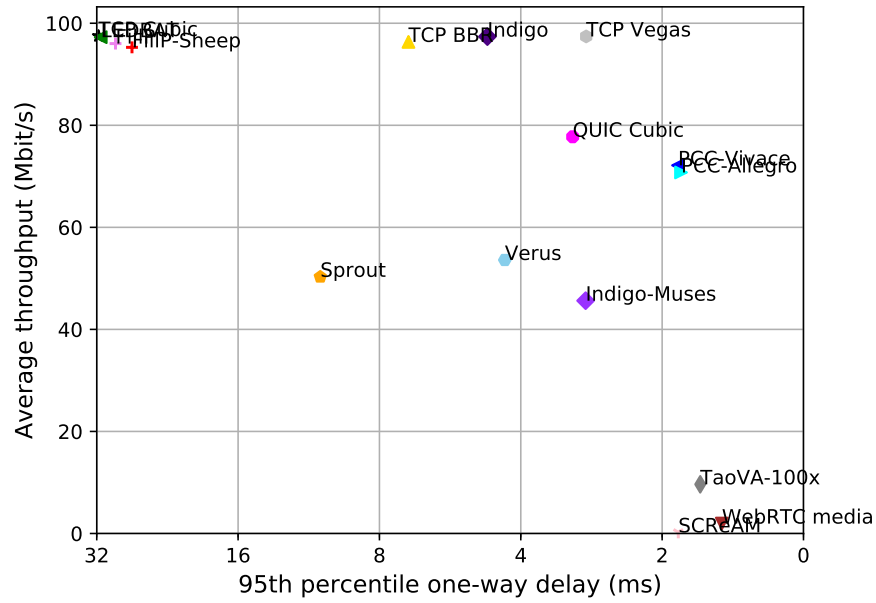
```
Linux 4.15.0-1020-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
net.ipv4.tcp_mem = 536870912 536870912 536870912
```

Git summary:

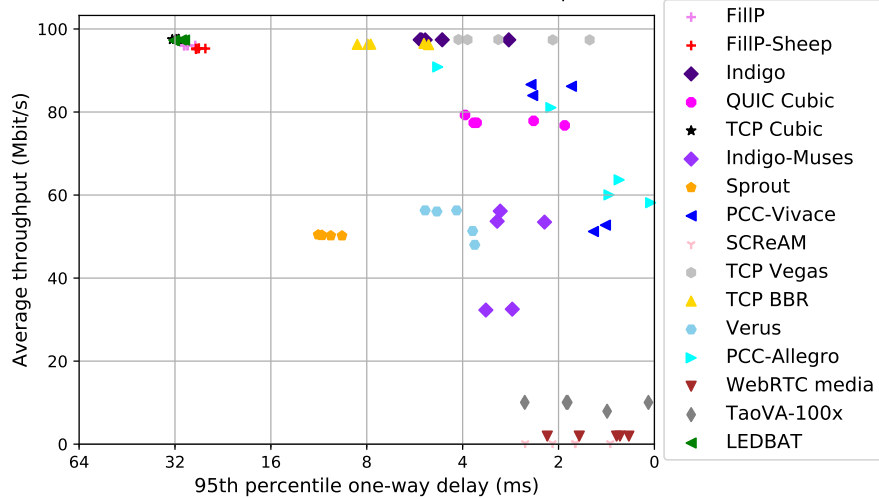
```
branch: muses @ e0a9b05ad97d268013b7cc9a9c95637b593a1b4c
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf5e58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 7631aea3923a3598767c87765ae5103aca0678d3
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)



test from AWS Brazil 1 to Brazil, 5 runs of 30s each per scheme



scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	96.35	6.94	0.00
Copa	0	N/A	N/A	N/A
TCP Cubic	5	97.49	31.73	0.01
FillP	5	96.01	29.19	4.03
FillP-Sheep	5	95.28	26.92	1.27
Indigo	5	97.38	4.71	0.00
LEDBAT	5	97.27	31.39	0.01
Indigo-Muses	5	45.63	2.91	0.00
PCC-Allegro	5	70.76	1.73	0.00
PCC-Expr	0	N/A	N/A	N/A
QUIC Cubic	5	77.75	3.10	0.32
SCReAM	5	0.22	1.77	0.00
Sprout	5	50.30	10.69	0.00
TaoVA-100x	5	9.64	1.46	79.49
TCP Vegas	5	97.41	2.90	0.00
Verus	5	53.60	4.33	1.22
PCC-Vivace	5	72.15	1.78	0.00
WebRTC media	5	1.94	1.16	0.00

Run 1: Statistics of TCP BBR

Start at: 2018-09-07 10:09:54

End at: 2018-09-07 10:10:24

Local clock offset: -7.633 ms

Remote clock offset: 0.352 ms

Below is generated by plot.py at 2018-09-07 11:40:38

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.36 Mbit/s

95th percentile per-packet one-way delay: 7.776 ms

Loss rate: 0.00%

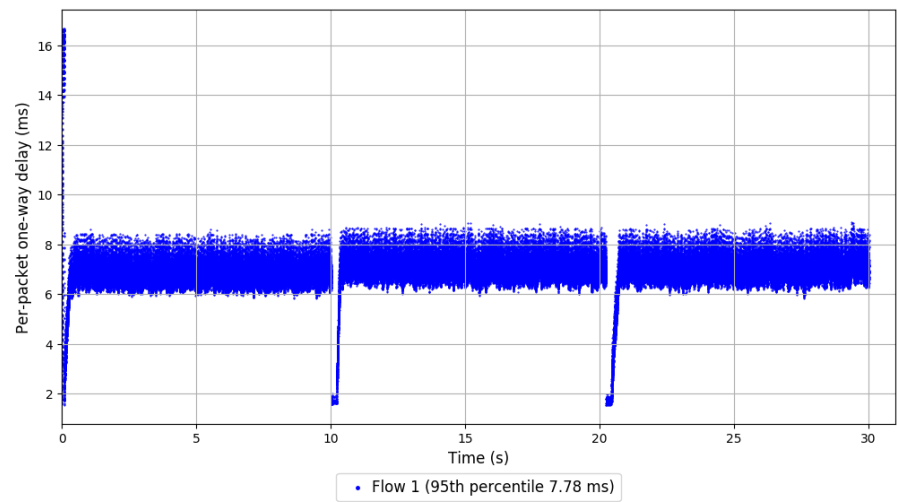
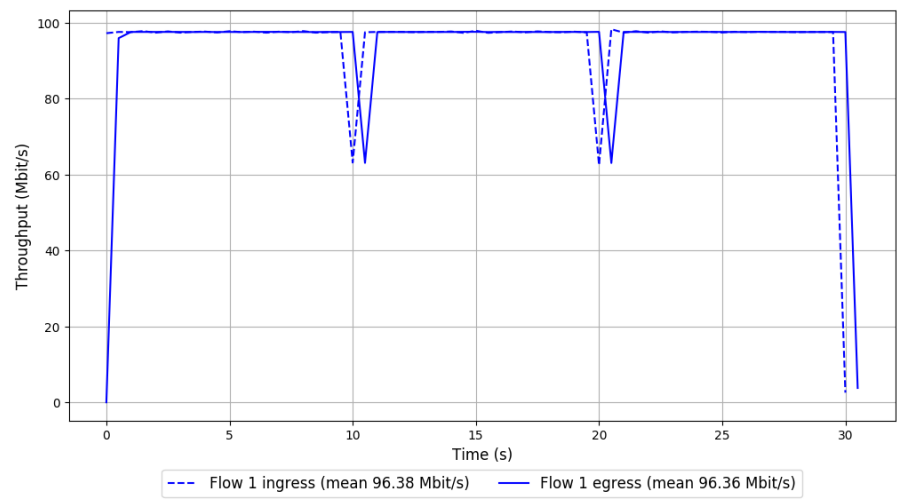
-- Flow 1:

Average throughput: 96.36 Mbit/s

95th percentile per-packet one-way delay: 7.776 ms

Loss rate: 0.00%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-09-07 10:29:55

End at: 2018-09-07 10:30:25

Local clock offset: -9.406 ms

Remote clock offset: 0.451 ms

Below is generated by plot.py at 2018-09-07 11:40:38

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.30 Mbit/s

95th percentile per-packet one-way delay: 8.567 ms

Loss rate: 0.00%

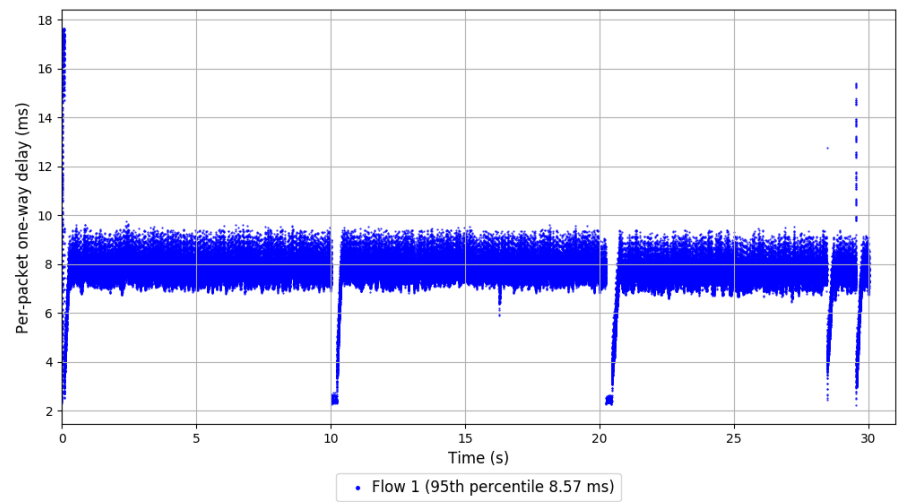
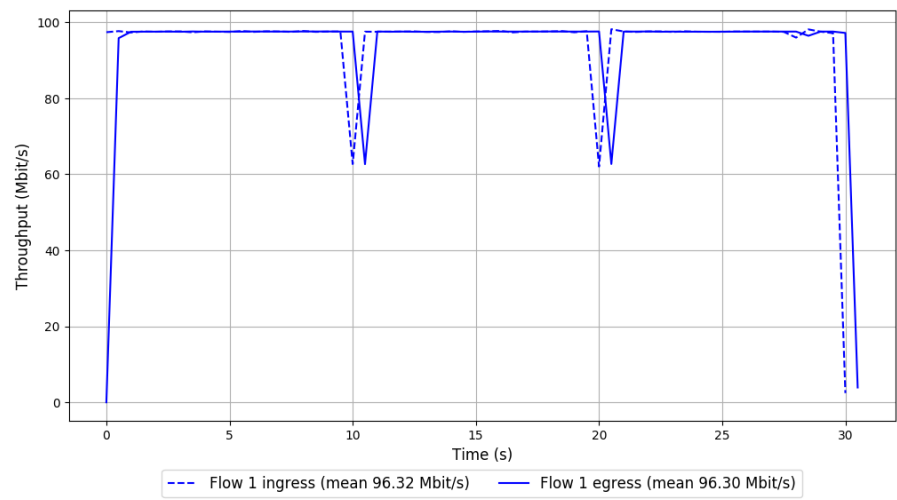
-- Flow 1:

Average throughput: 96.30 Mbit/s

95th percentile per-packet one-way delay: 8.567 ms

Loss rate: 0.00%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-09-07 10:49:55

End at: 2018-09-07 10:50:25

Local clock offset: -6.415 ms

Remote clock offset: 0.498 ms

Below is generated by plot.py at 2018-09-07 11:40:40

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.52 Mbit/s

95th percentile per-packet one-way delay: 5.291 ms

Loss rate: 0.00%

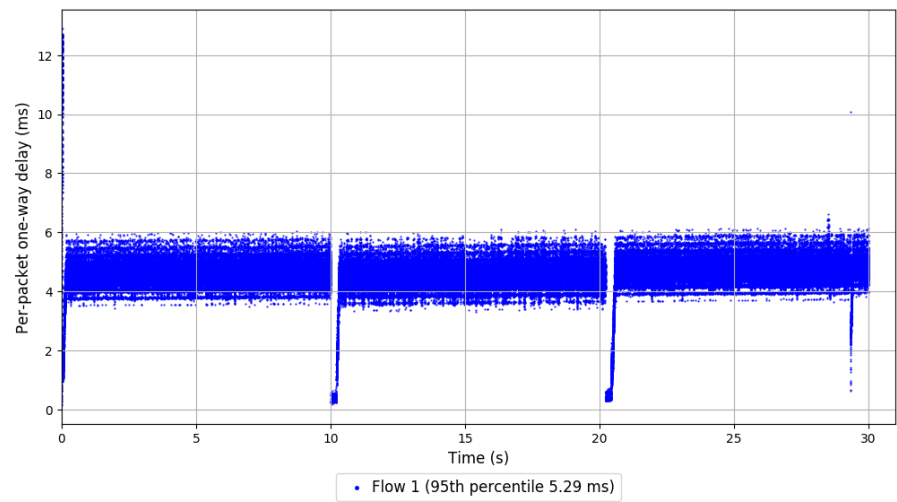
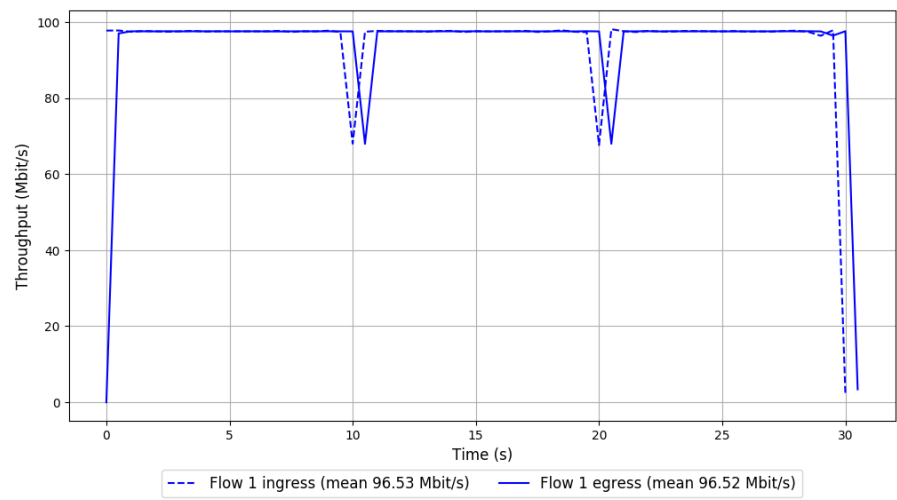
-- Flow 1:

Average throughput: 96.52 Mbit/s

95th percentile per-packet one-way delay: 5.291 ms

Loss rate: 0.00%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-09-07 11:09:55

End at: 2018-09-07 11:10:25

Local clock offset: -2.084 ms

Remote clock offset: 0.647 ms

Below is generated by plot.py at 2018-09-07 11:40:40

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.32 Mbit/s

95th percentile per-packet one-way delay: 7.939 ms

Loss rate: 0.00%

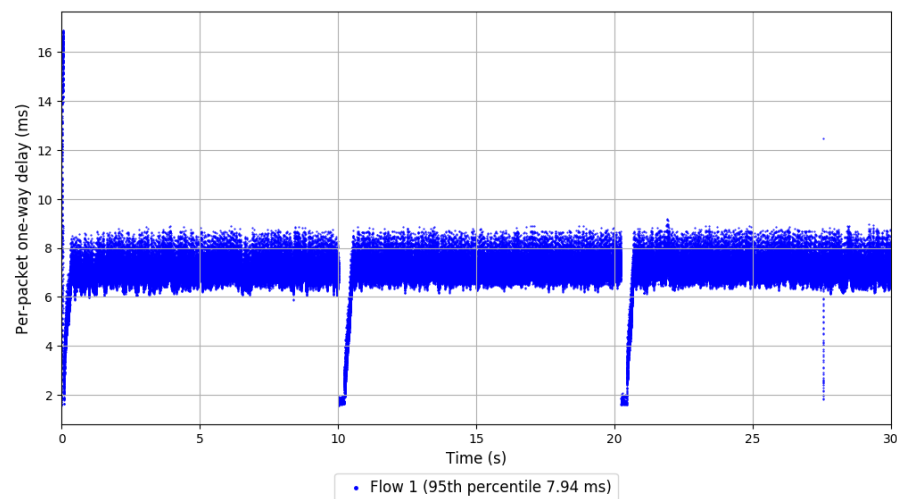
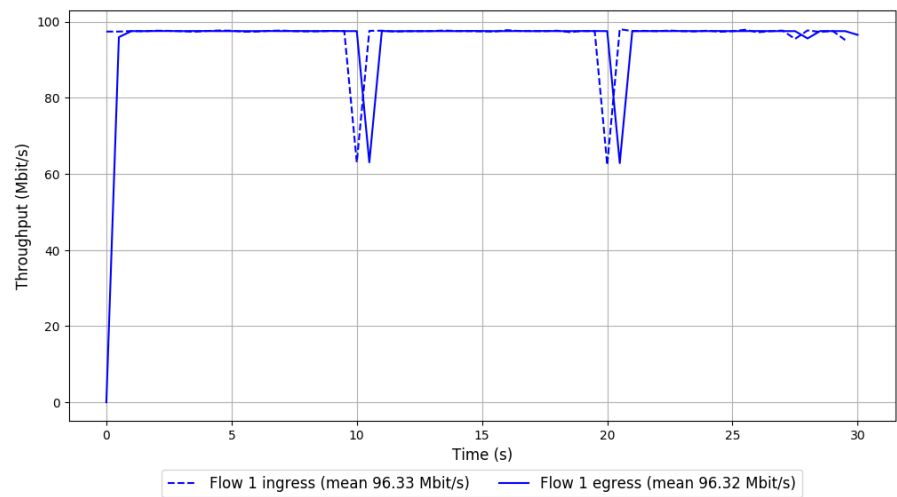
-- Flow 1:

Average throughput: 96.32 Mbit/s

95th percentile per-packet one-way delay: 7.939 ms

Loss rate: 0.00%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-09-07 11:29:57

End at: 2018-09-07 11:30:27

Local clock offset: -2.595 ms

Remote clock offset: 0.709 ms

Below is generated by plot.py at 2018-09-07 11:40:40

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.23 Mbit/s

95th percentile per-packet one-way delay: 5.118 ms

Loss rate: 0.00%

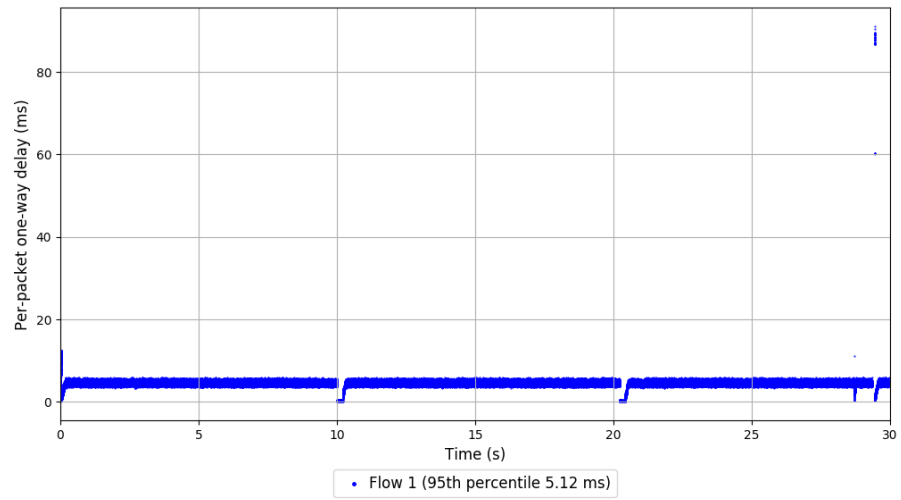
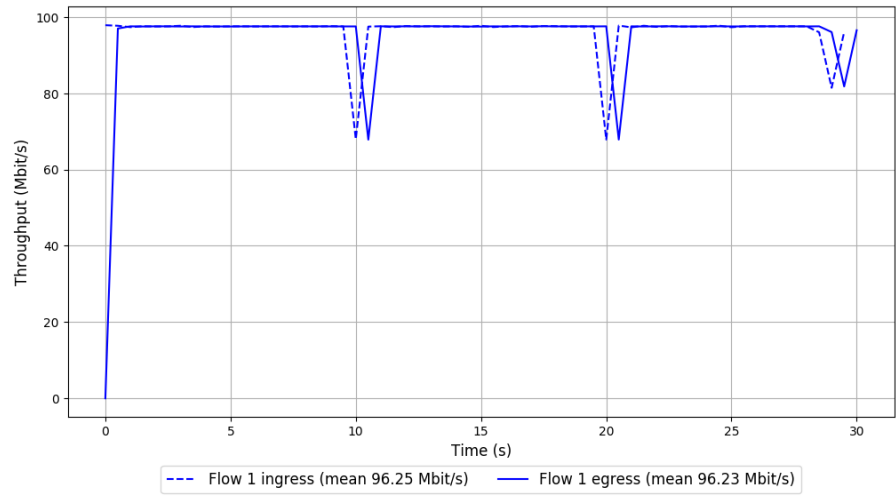
-- Flow 1:

Average throughput: 96.23 Mbit/s

95th percentile per-packet one-way delay: 5.118 ms

Loss rate: 0.00%

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

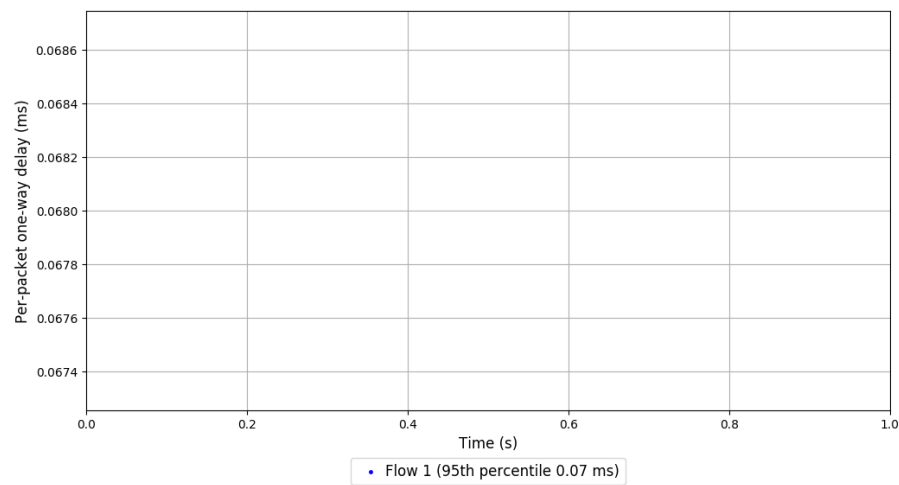
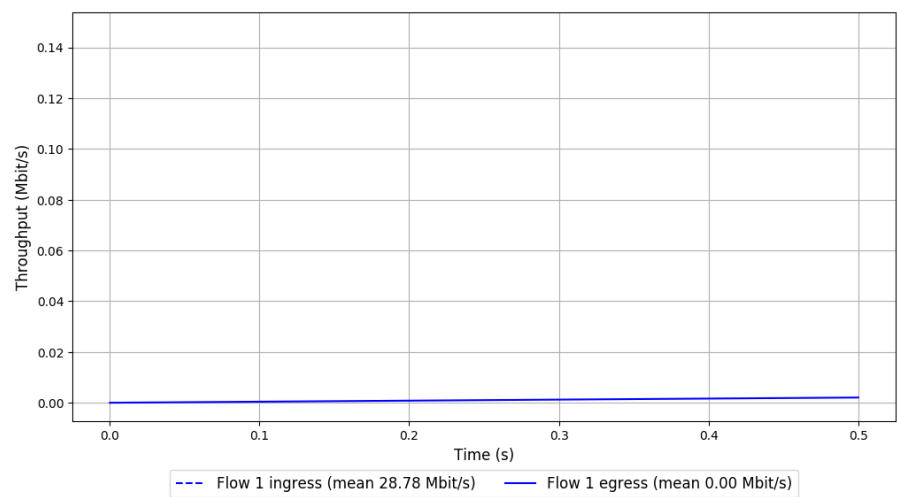
Start at: 2018-09-07 10:05:31

End at: 2018-09-07 10:06:01

Local clock offset: -7.412 ms

Remote clock offset: 0.268 ms

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

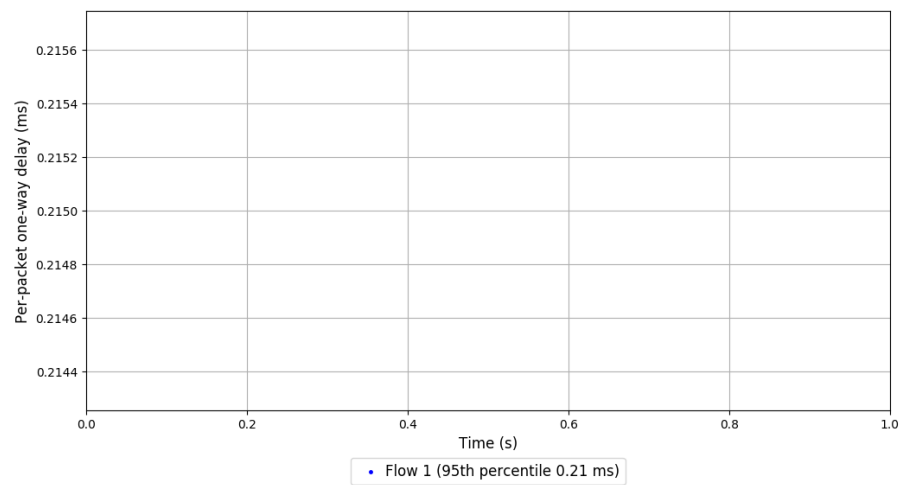
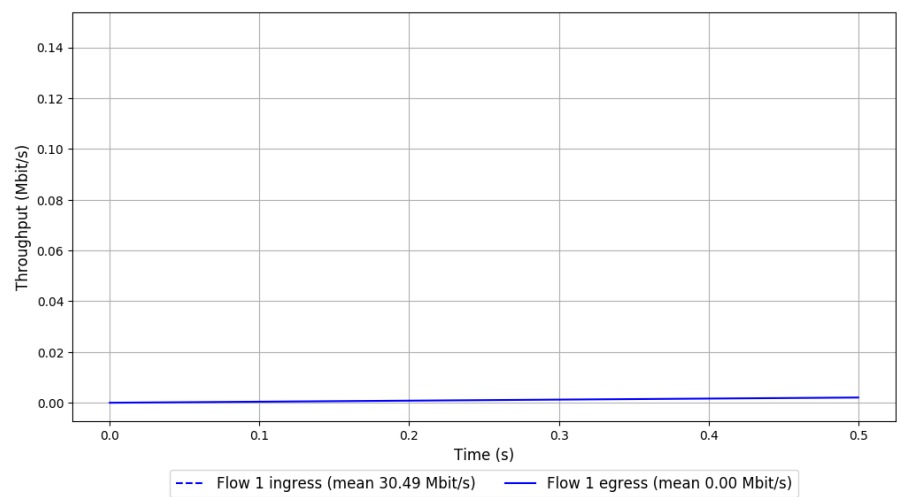
Start at: 2018-09-07 10:25:33

End at: 2018-09-07 10:26:03

Local clock offset: -8.426 ms

Remote clock offset: 0.395 ms

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

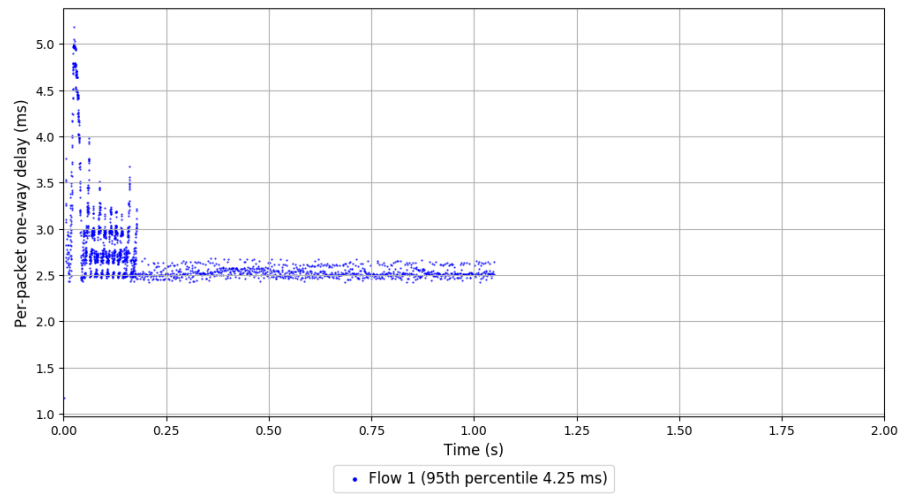
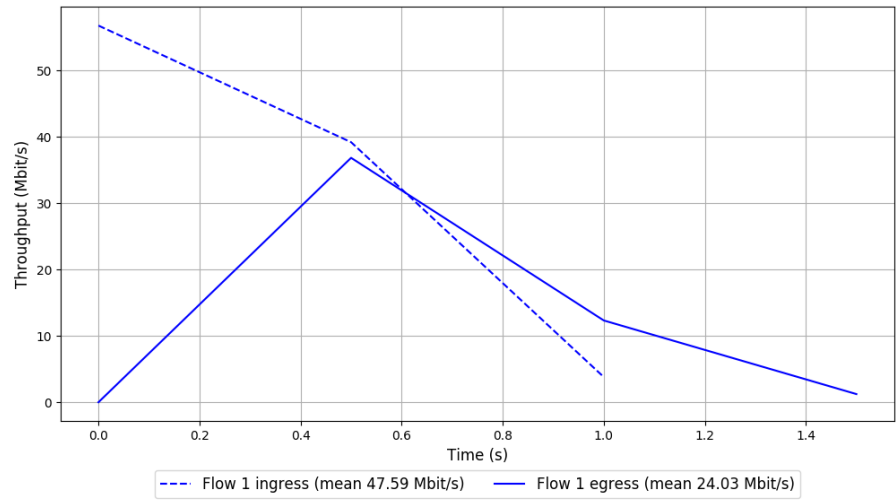
Start at: 2018-09-07 10:45:32

End at: 2018-09-07 10:46:02

Local clock offset: -9.739 ms

Remote clock offset: 0.417 ms

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

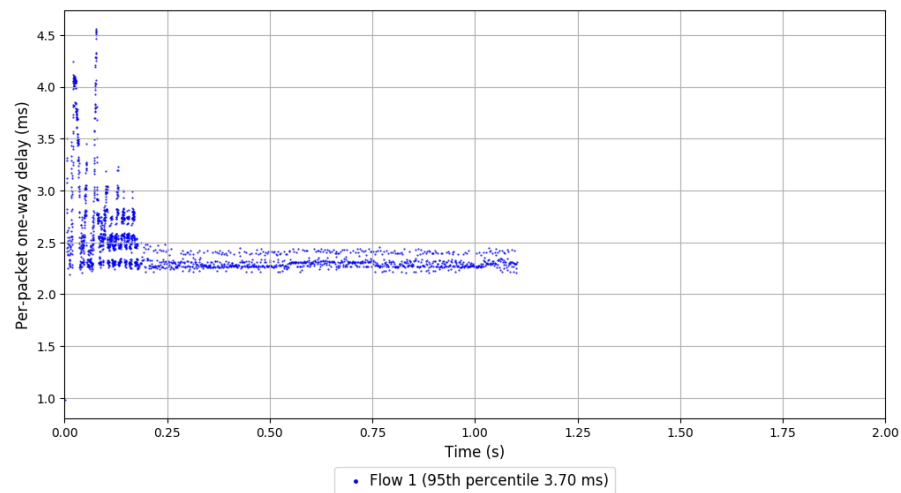
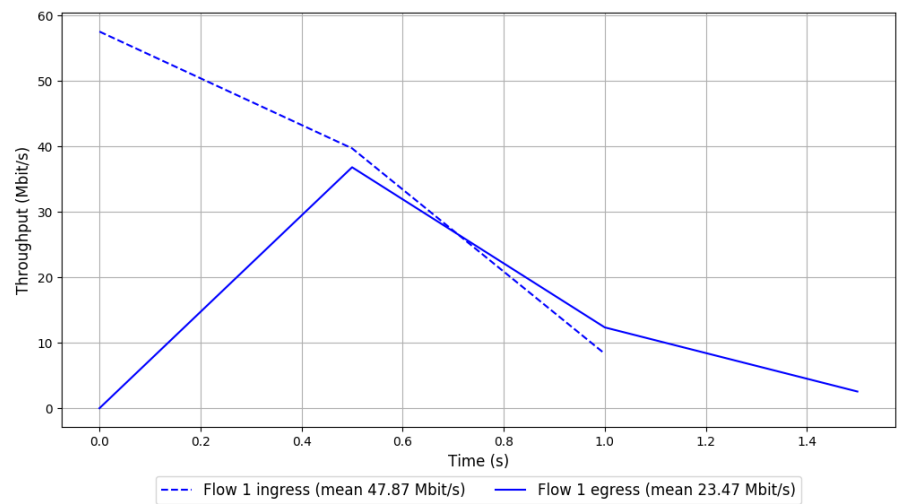
Start at: 2018-09-07 11:05:31

End at: 2018-09-07 11:06:02

Local clock offset: -3.385 ms

Remote clock offset: 0.515 ms

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

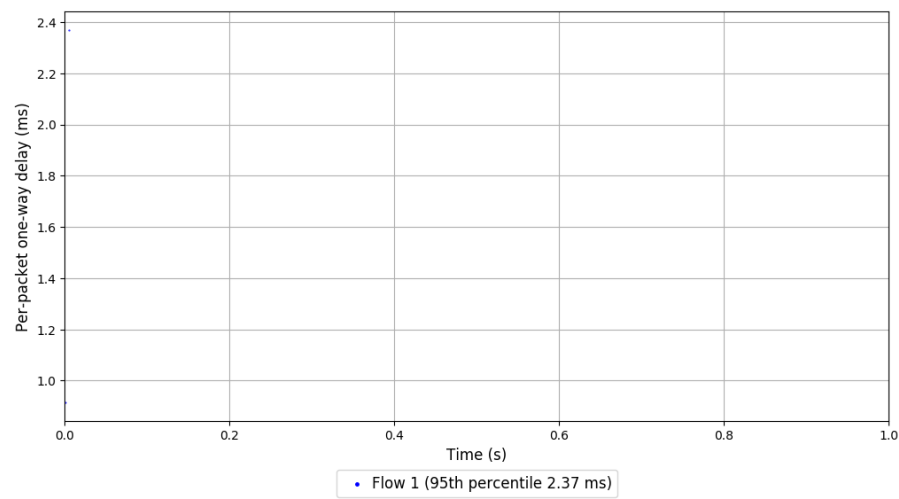
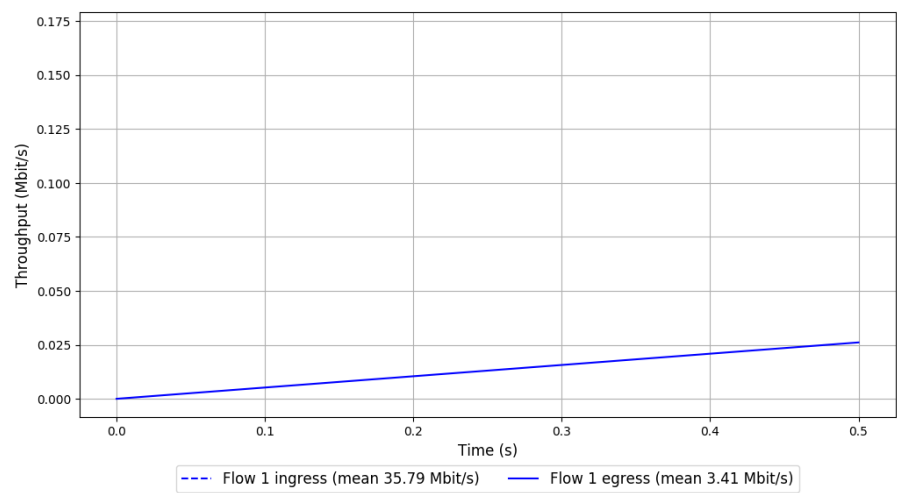
Start at: 2018-09-07 11:25:34

End at: 2018-09-07 11:26:04

Local clock offset: -3.296 ms

Remote clock offset: 0.628 ms

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-09-07 10:01:00

End at: 2018-09-07 10:01:30

Local clock offset: -7.045 ms

Remote clock offset: 0.204 ms

Below is generated by plot.py at 2018-09-07 11:40:42

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.47 Mbit/s

95th percentile per-packet one-way delay: 31.830 ms

Loss rate: 0.01%

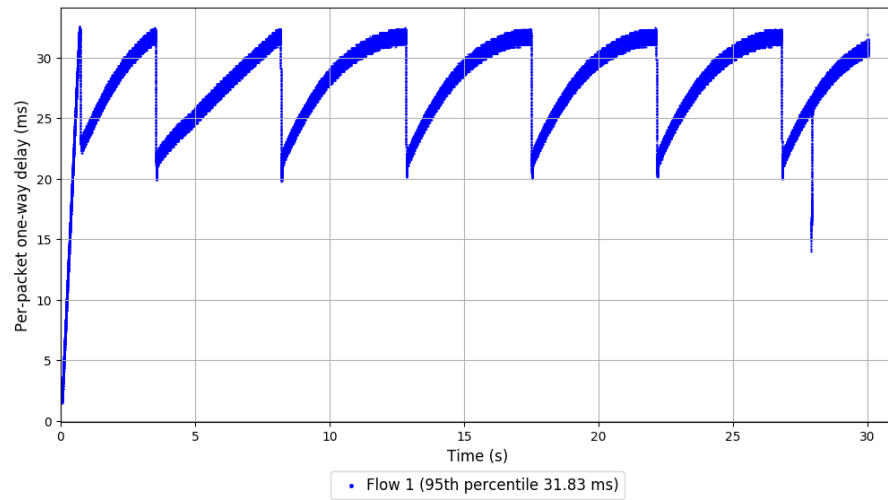
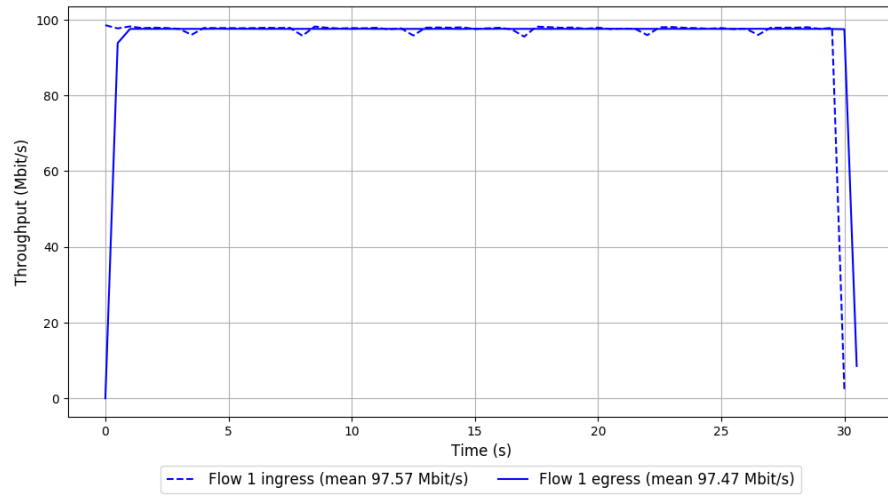
-- Flow 1:

Average throughput: 97.47 Mbit/s

95th percentile per-packet one-way delay: 31.830 ms

Loss rate: 0.01%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-09-07 10:21:01

End at: 2018-09-07 10:21:31

Local clock offset: -8.976 ms

Remote clock offset: 0.415 ms

Below is generated by plot.py at 2018-09-07 11:40:42

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.51 Mbit/s

95th percentile per-packet one-way delay: 31.141 ms

Loss rate: 0.01%

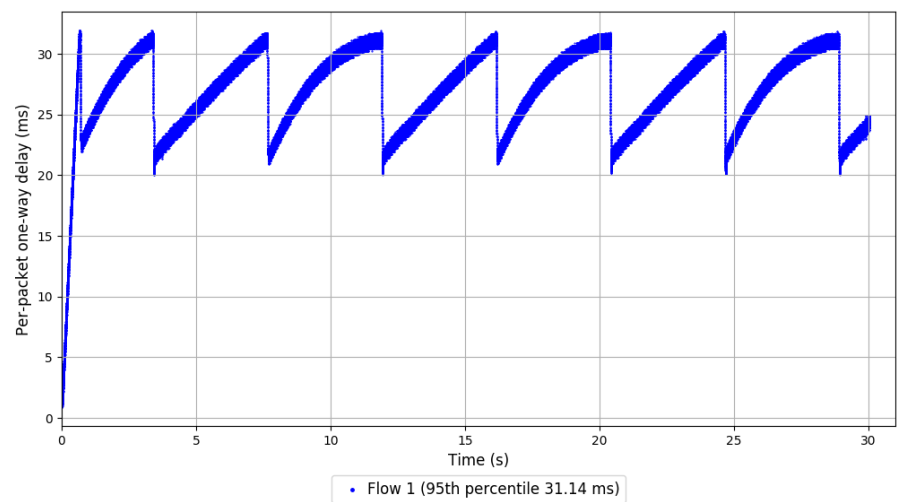
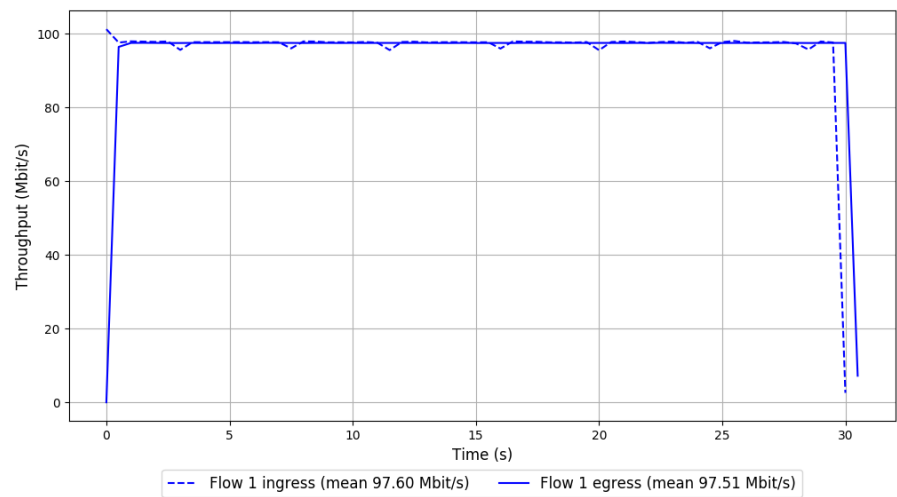
-- Flow 1:

Average throughput: 97.51 Mbit/s

95th percentile per-packet one-way delay: 31.141 ms

Loss rate: 0.01%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-09-07 10:41:00

End at: 2018-09-07 10:41:30

Local clock offset: -9.125 ms

Remote clock offset: 0.473 ms

Below is generated by plot.py at 2018-09-07 11:40:43

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.51 Mbit/s

95th percentile per-packet one-way delay: 31.820 ms

Loss rate: 0.01%

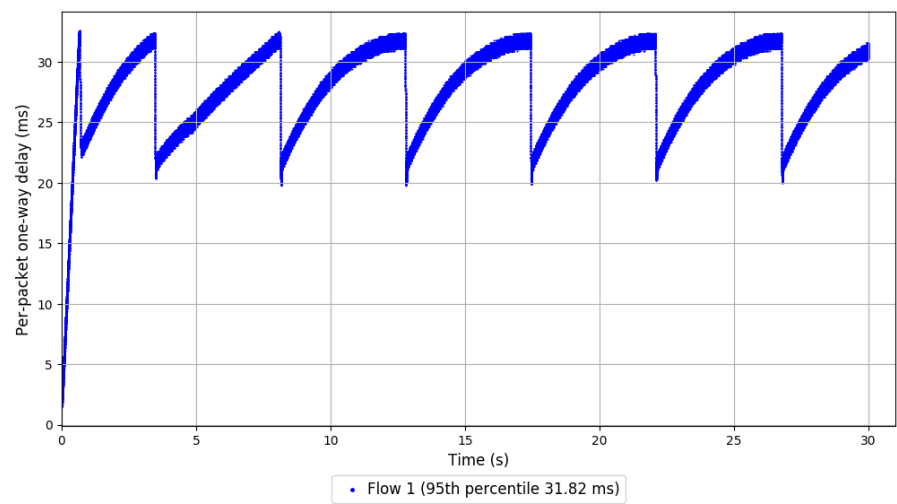
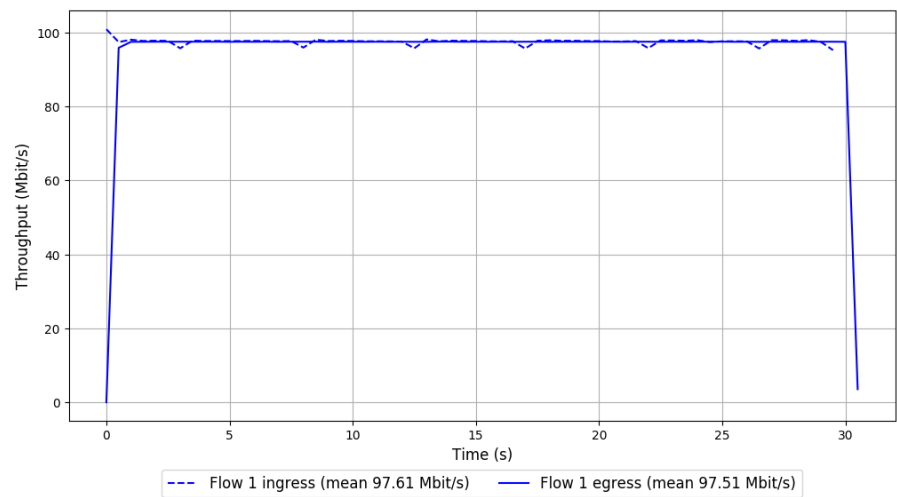
-- Flow 1:

Average throughput: 97.51 Mbit/s

95th percentile per-packet one-way delay: 31.820 ms

Loss rate: 0.01%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-09-07 11:01:00

End at: 2018-09-07 11:01:30

Local clock offset: -4.062 ms

Remote clock offset: 0.555 ms

Below is generated by plot.py at 2018-09-07 11:41:52

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.51 Mbit/s

95th percentile per-packet one-way delay: 31.227 ms

Loss rate: 0.01%

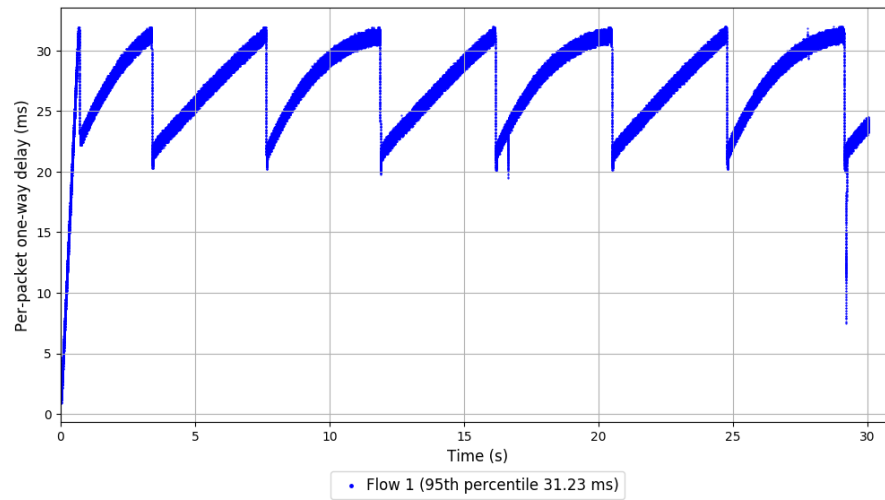
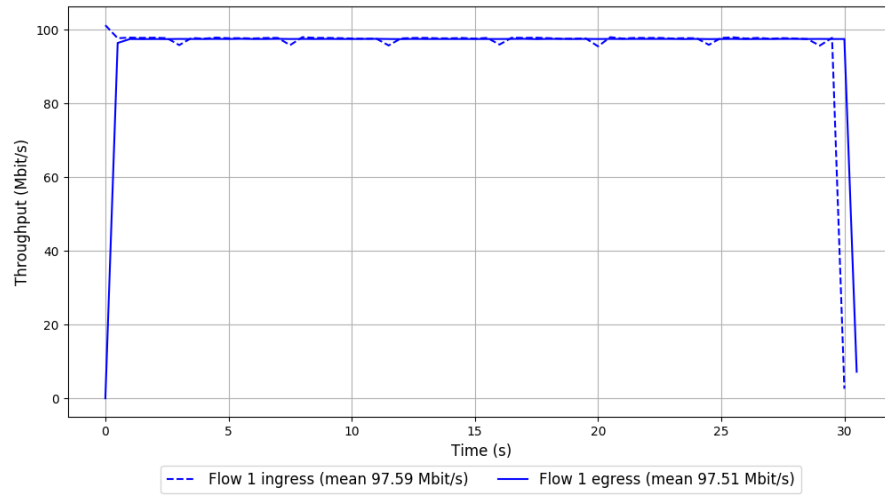
-- Flow 1:

Average throughput: 97.51 Mbit/s

95th percentile per-packet one-way delay: 31.227 ms

Loss rate: 0.01%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-09-07 11:21:02

End at: 2018-09-07 11:21:32

Local clock offset: -3.076 ms

Remote clock offset: 0.716 ms

Below is generated by plot.py at 2018-09-07 11:41:52

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.47 Mbit/s

95th percentile per-packet one-way delay: 32.625 ms

Loss rate: 0.01%

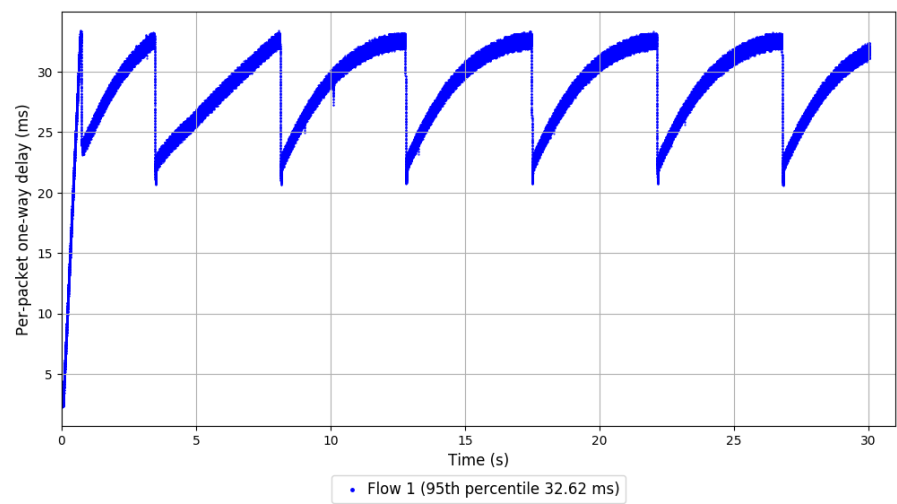
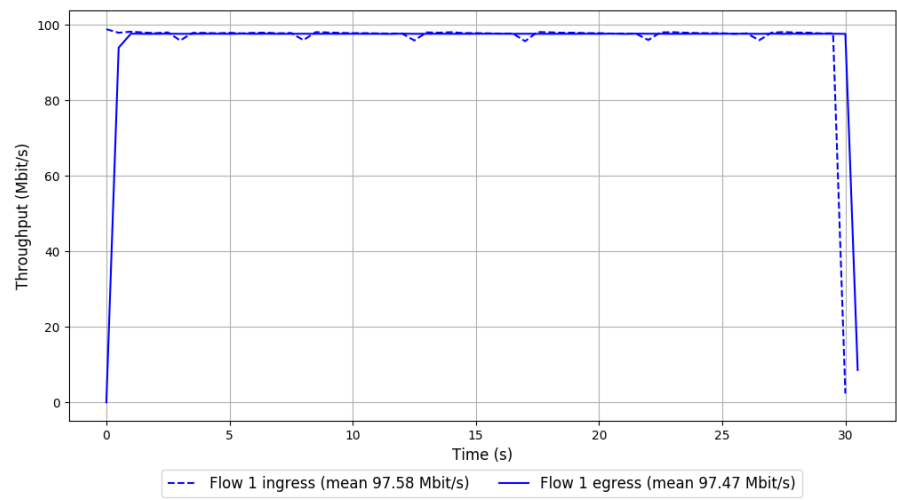
-- Flow 1:

Average throughput: 97.47 Mbit/s

95th percentile per-packet one-way delay: 32.625 ms

Loss rate: 0.01%

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2018-09-07 10:03:14

End at: 2018-09-07 10:03:44

Local clock offset: -7.163 ms

Remote clock offset: 0.227 ms

Below is generated by plot.py at 2018-09-07 11:42:02

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.03 Mbit/s

95th percentile per-packet one-way delay: 27.629 ms

Loss rate: 3.97%

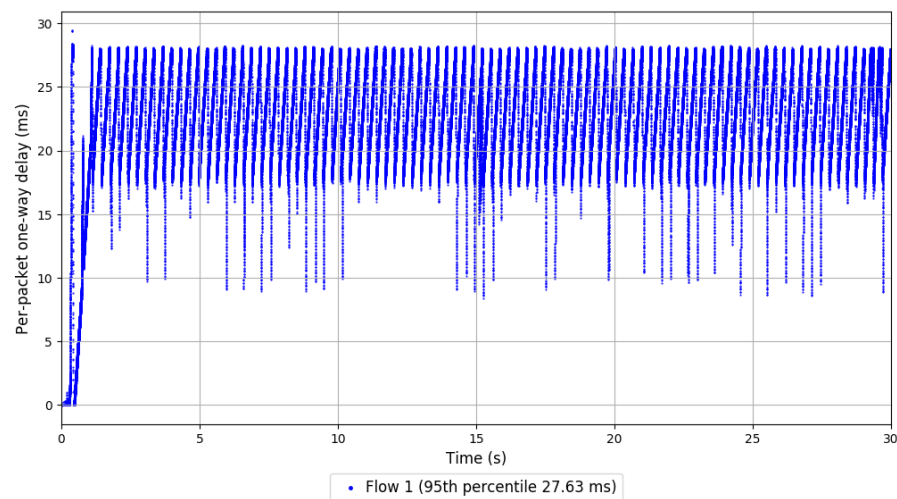
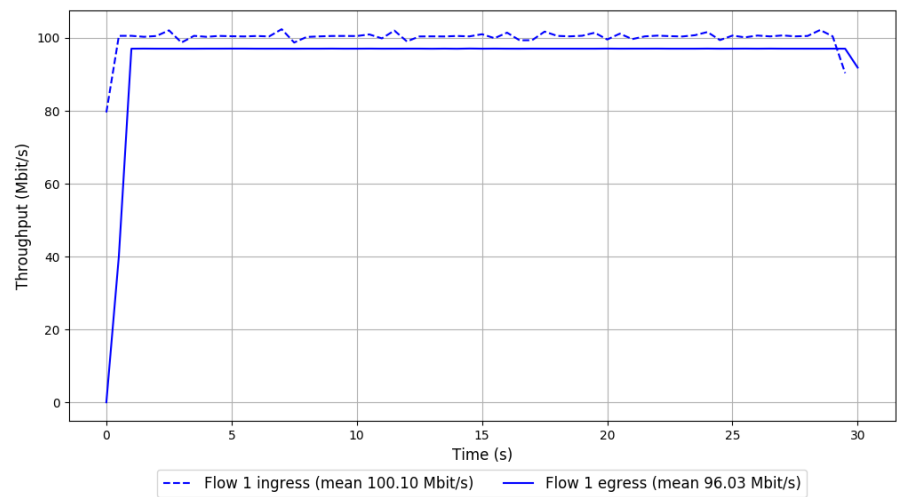
-- Flow 1:

Average throughput: 96.03 Mbit/s

95th percentile per-packet one-way delay: 27.629 ms

Loss rate: 3.97%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-09-07 10:23:16

End at: 2018-09-07 10:23:46

Local clock offset: -9.143 ms

Remote clock offset: 0.378 ms

Below is generated by plot.py at 2018-09-07 11:42:02

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.01 Mbit/s

95th percentile per-packet one-way delay: 29.985 ms

Loss rate: 4.11%

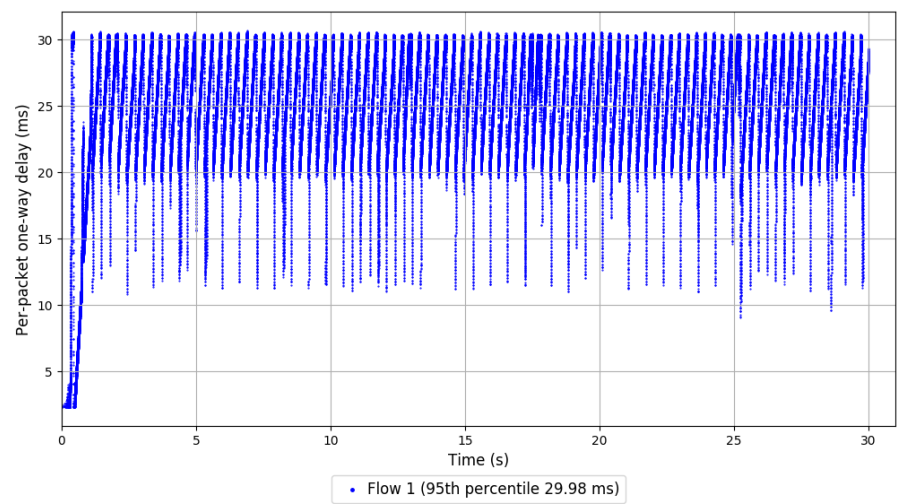
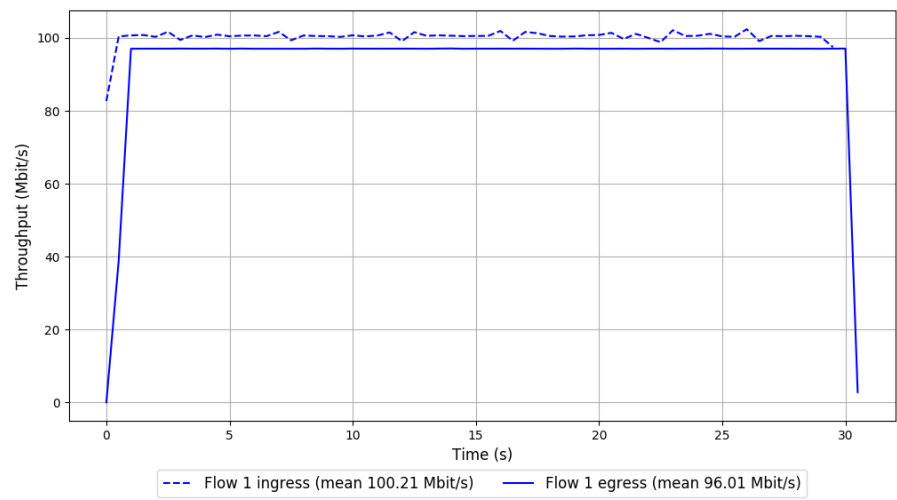
-- Flow 1:

Average throughput: 96.01 Mbit/s

95th percentile per-packet one-way delay: 29.985 ms

Loss rate: 4.11%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-09-07 10:43:15

End at: 2018-09-07 10:43:45

Local clock offset: -9.219 ms

Remote clock offset: 0.569 ms

Below is generated by plot.py at 2018-09-07 11:42:03

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.01 Mbit/s

95th percentile per-packet one-way delay: 29.193 ms

Loss rate: 4.02%

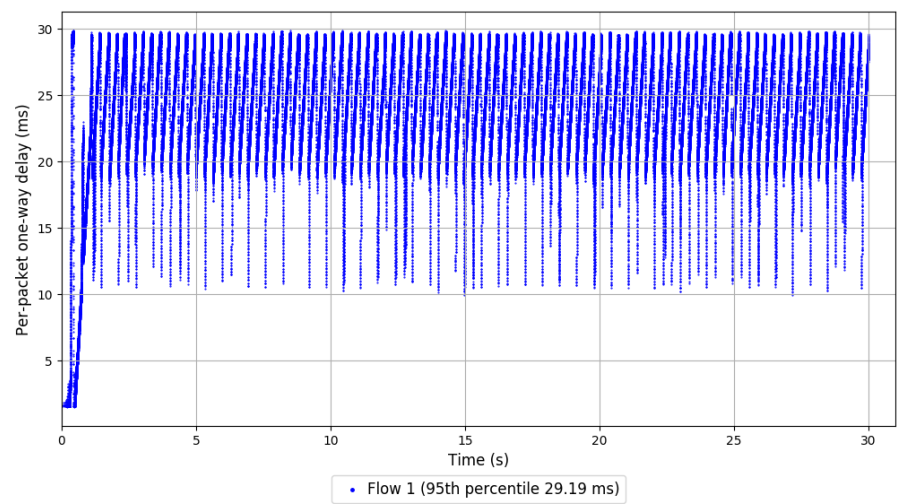
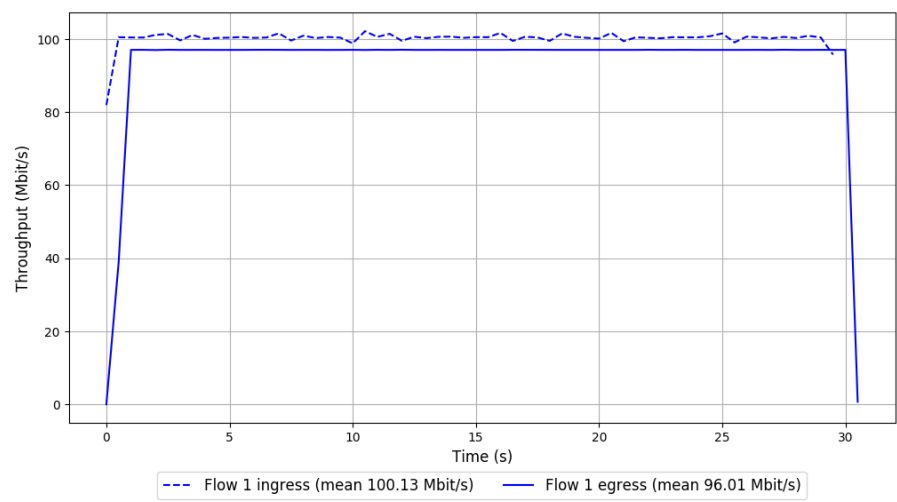
-- Flow 1:

Average throughput: 96.01 Mbit/s

95th percentile per-packet one-way delay: 29.193 ms

Loss rate: 4.02%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-09-07 11:03:15

End at: 2018-09-07 11:03:45

Local clock offset: -2.922 ms

Remote clock offset: 0.605 ms

Below is generated by plot.py at 2018-09-07 11:42:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.01 Mbit/s

95th percentile per-packet one-way delay: 29.239 ms

Loss rate: 4.06%

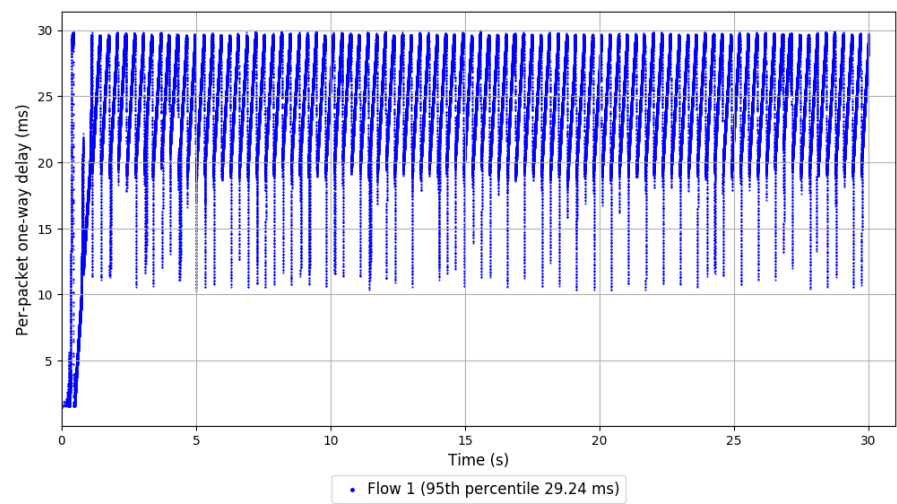
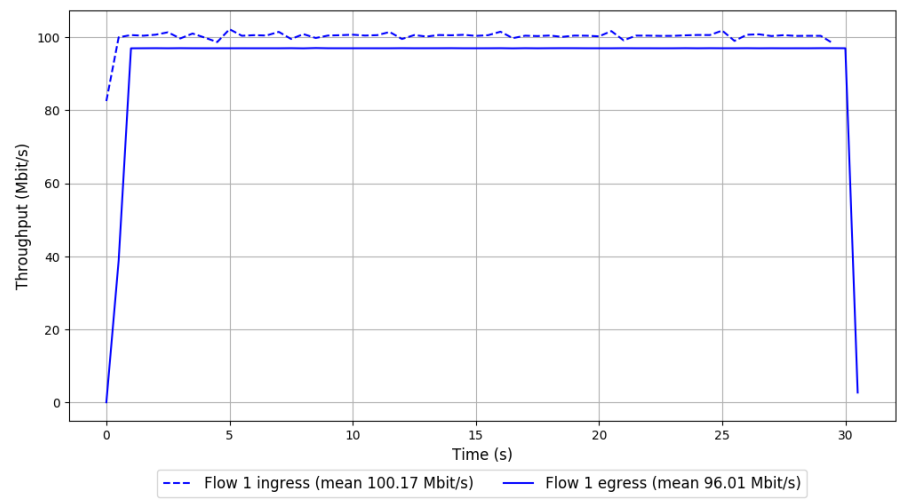
-- Flow 1:

Average throughput: 96.01 Mbit/s

95th percentile per-packet one-way delay: 29.239 ms

Loss rate: 4.06%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-09-07 11:23:17

End at: 2018-09-07 11:23:47

Local clock offset: -3.216 ms

Remote clock offset: 0.658 ms

Below is generated by plot.py at 2018-09-07 11:42:05

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.00 Mbit/s

95th percentile per-packet one-way delay: 29.884 ms

Loss rate: 4.01%

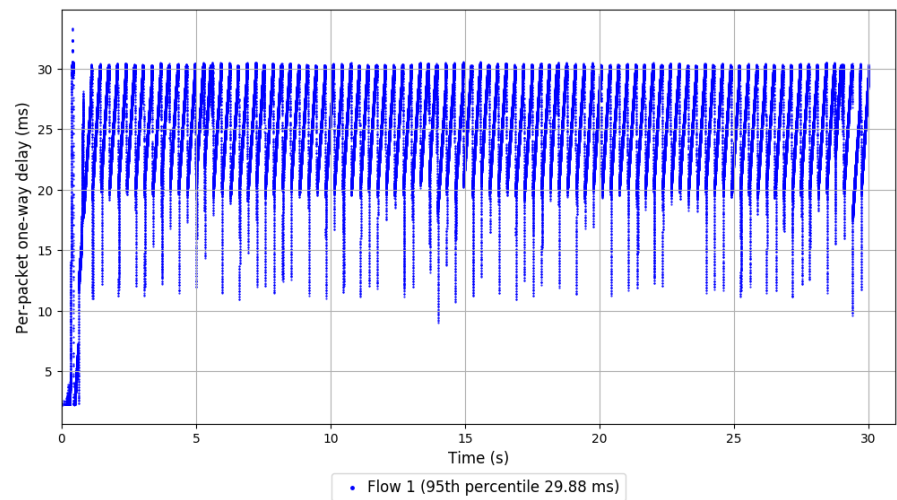
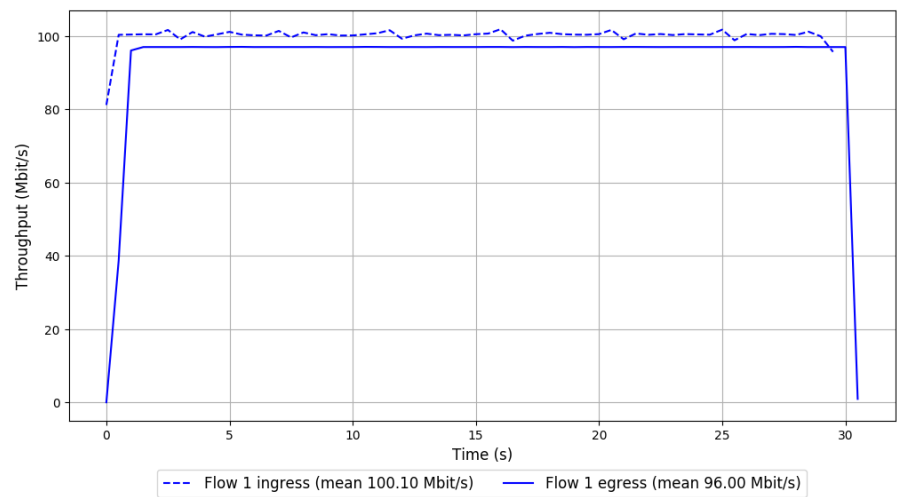
-- Flow 1:

Average throughput: 96.00 Mbit/s

95th percentile per-packet one-way delay: 29.884 ms

Loss rate: 4.01%

Run 5: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2018-09-07 10:06:35

End at: 2018-09-07 10:07:05

Local clock offset: -7.405 ms

Remote clock offset: 0.335 ms

Below is generated by plot.py at 2018-09-07 11:42:05

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.37 Mbit/s

95th percentile per-packet one-way delay: 26.927 ms

Loss rate: 1.32%

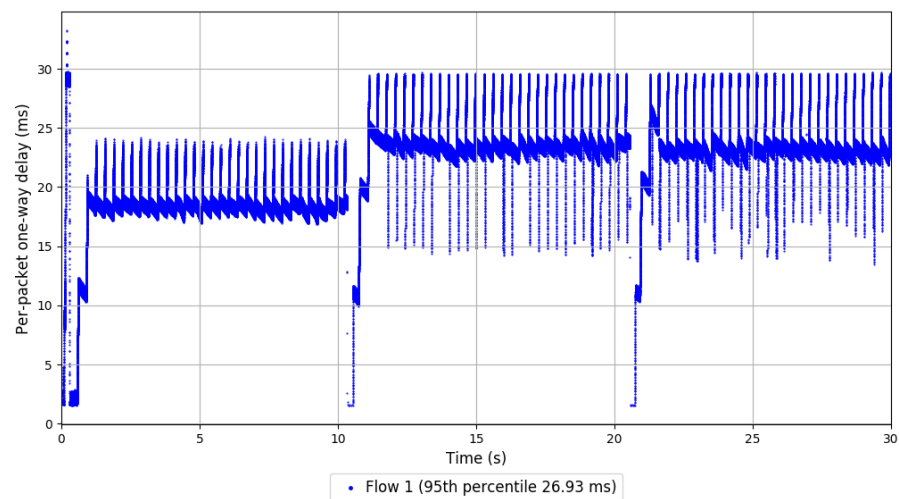
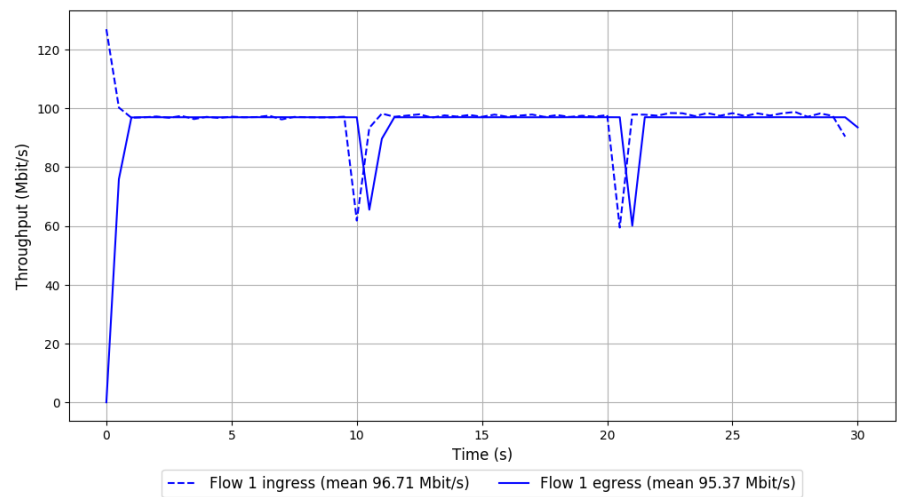
-- Flow 1:

Average throughput: 95.37 Mbit/s

95th percentile per-packet one-way delay: 26.927 ms

Loss rate: 1.32%

Run 1: Report of FillP-Sheep — Data Link



Run 2: Statistics of FillP-Sheep

Start at: 2018-09-07 10:26:37

End at: 2018-09-07 10:27:07

Local clock offset: -8.479 ms

Remote clock offset: 0.404 ms

Below is generated by plot.py at 2018-09-07 11:43:13

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.30 Mbit/s

95th percentile per-packet one-way delay: 27.012 ms

Loss rate: 1.27%

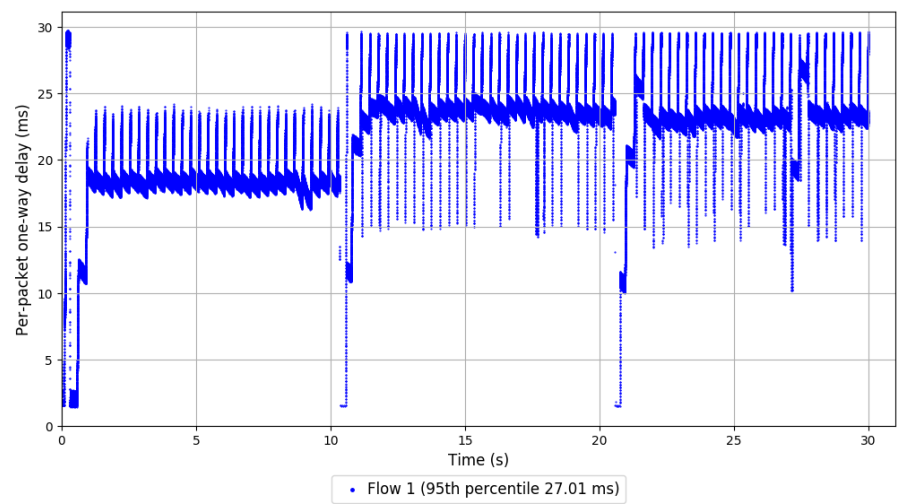
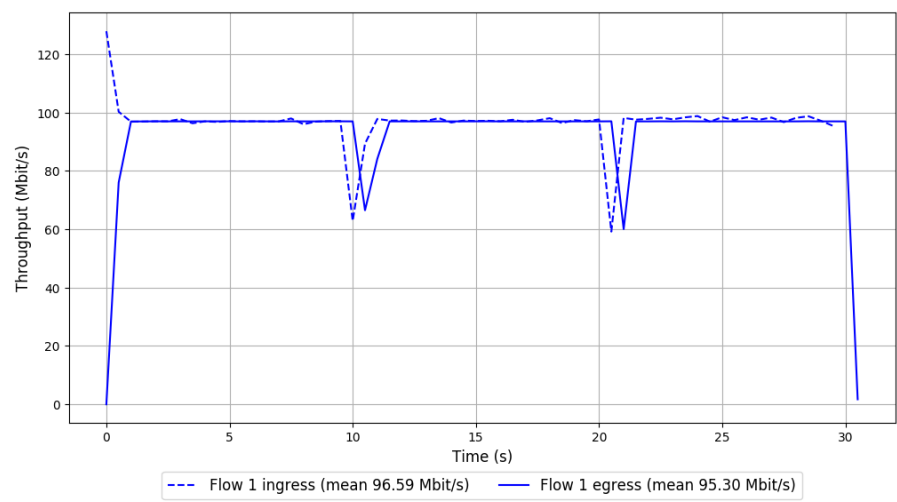
-- Flow 1:

Average throughput: 95.30 Mbit/s

95th percentile per-packet one-way delay: 27.012 ms

Loss rate: 1.27%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2018-09-07 10:46:36

End at: 2018-09-07 10:47:06

Local clock offset: -8.261 ms

Remote clock offset: 0.568 ms

Below is generated by plot.py at 2018-09-07 11:43:13

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.13 Mbit/s

95th percentile per-packet one-way delay: 27.462 ms

Loss rate: 1.18%

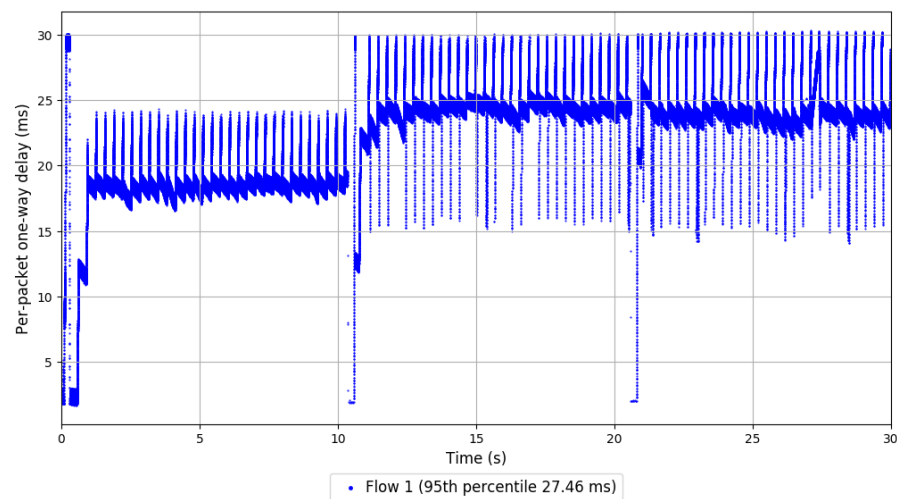
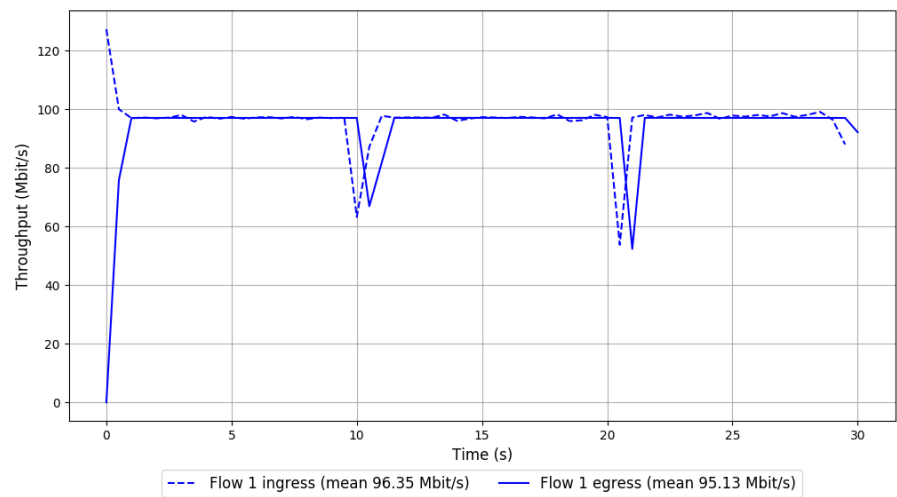
-- Flow 1:

Average throughput: 95.13 Mbit/s

95th percentile per-packet one-way delay: 27.462 ms

Loss rate: 1.18%

Run 3: Report of FillP-Sheep — Data Link



Run 4: Statistics of FillP-Sheep

Start at: 2018-09-07 11:06:36

End at: 2018-09-07 11:07:06

Local clock offset: -2.465 ms

Remote clock offset: 0.619 ms

Below is generated by plot.py at 2018-09-07 11:43:24

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.29 Mbit/s

95th percentile per-packet one-way delay: 25.690 ms

Loss rate: 1.37%

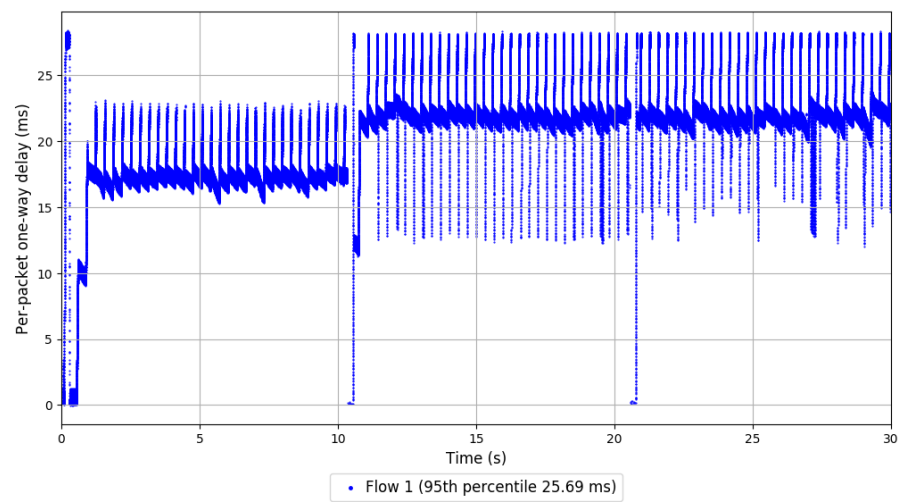
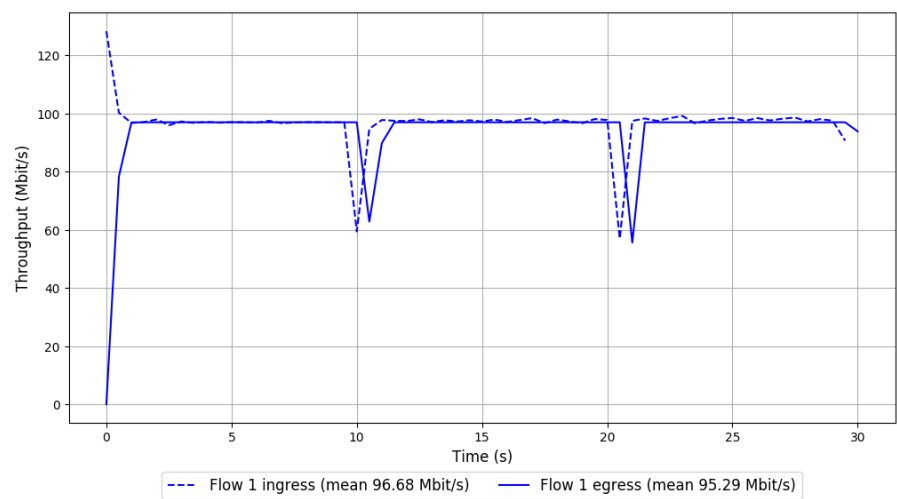
-- Flow 1:

Average throughput: 95.29 Mbit/s

95th percentile per-packet one-way delay: 25.690 ms

Loss rate: 1.37%

Run 4: Report of FillP-Sheep — Data Link



Run 5: Statistics of FillP-Sheep

Start at: 2018-09-07 11:26:38

End at: 2018-09-07 11:27:08

Local clock offset: -3.319 ms

Remote clock offset: 0.733 ms

Below is generated by plot.py at 2018-09-07 11:43:25

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.30 Mbit/s

95th percentile per-packet one-way delay: 27.512 ms

Loss rate: 1.22%

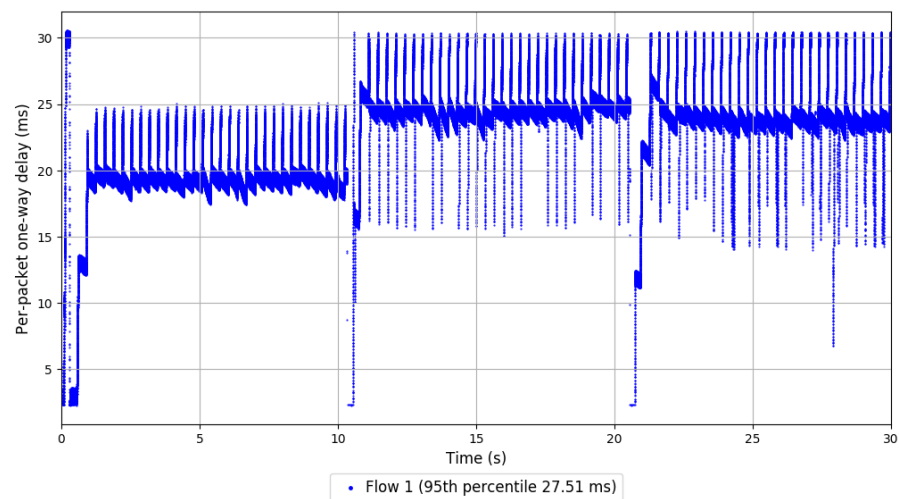
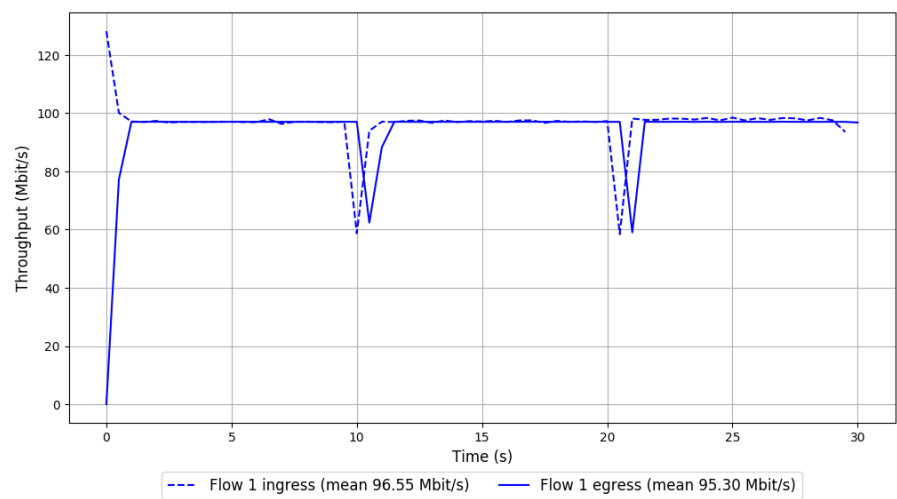
-- Flow 1:

Average throughput: 95.30 Mbit/s

95th percentile per-packet one-way delay: 27.512 ms

Loss rate: 1.22%

Run 5: Report of FillP-Sheep — Data Link

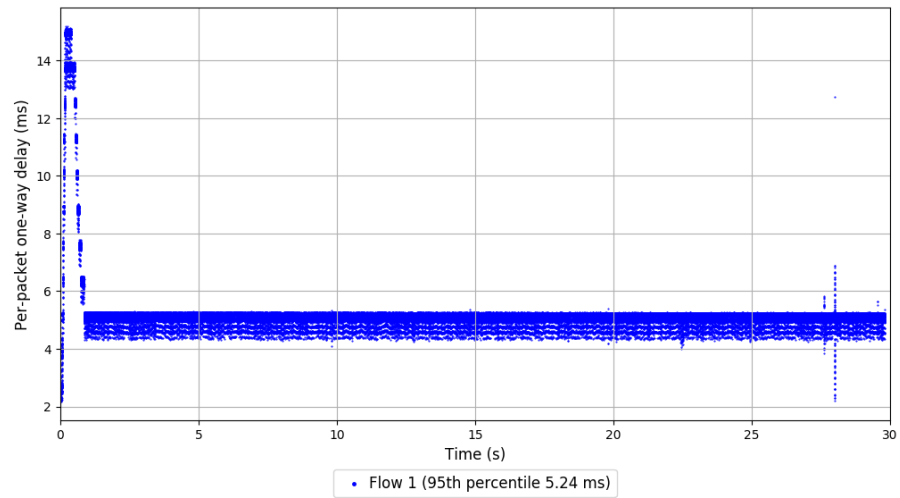
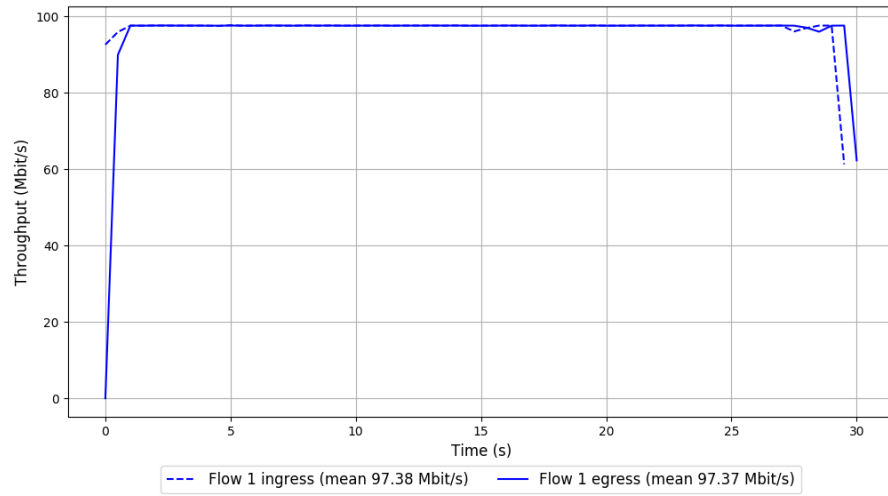


```
Run 1: Statistics of Indigo

Start at: 2018-09-07 10:17:38
End at: 2018-09-07 10:18:08
Local clock offset: -8.802 ms
Remote clock offset: 0.289 ms

# Below is generated by plot.py at 2018-09-07 11:43:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.37 Mbit/s
95th percentile per-packet one-way delay: 5.244 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 97.37 Mbit/s
95th percentile per-packet one-way delay: 5.244 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2018-09-07 10:37:40

End at: 2018-09-07 10:38:10

Local clock offset: -9.751 ms

Remote clock offset: 0.541 ms

Below is generated by plot.py at 2018-09-07 11:43:25

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.35 Mbit/s

95th percentile per-packet one-way delay: 5.378 ms

Loss rate: 0.00%

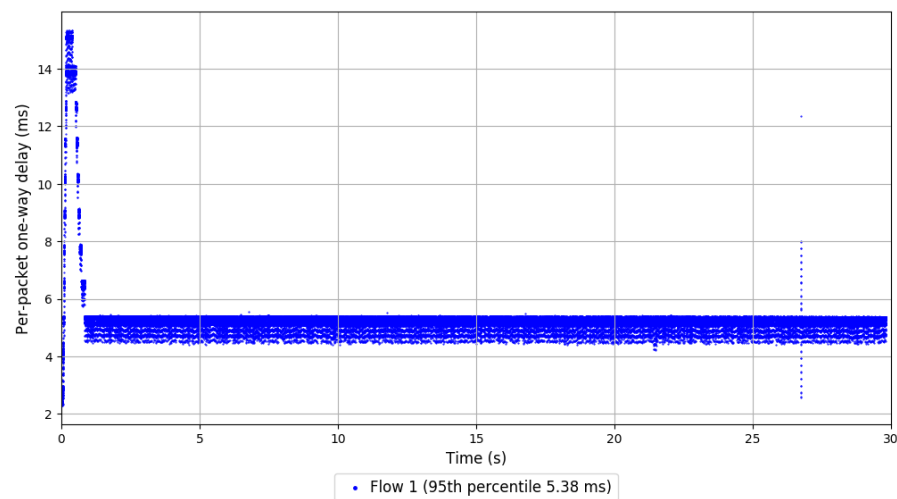
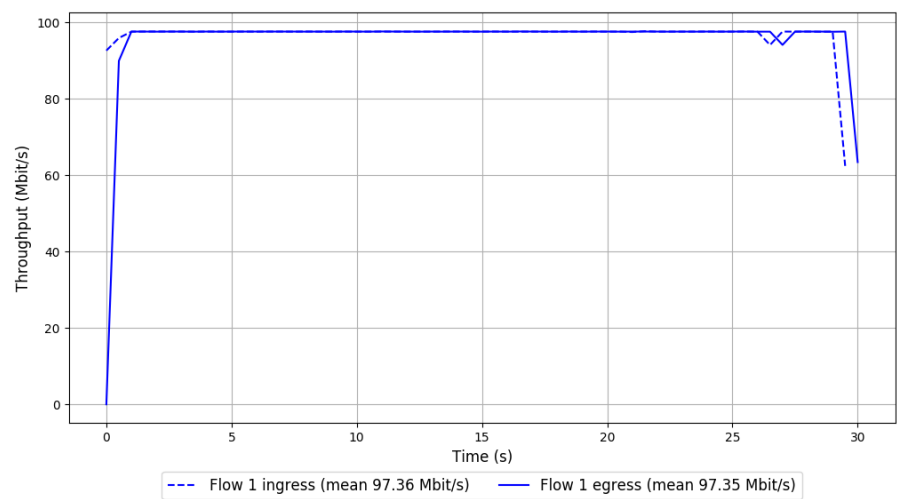
-- Flow 1:

Average throughput: 97.35 Mbit/s

95th percentile per-packet one-way delay: 5.378 ms

Loss rate: 0.00%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2018-09-07 10:57:40

End at: 2018-09-07 10:58:10

Local clock offset: -4.743 ms

Remote clock offset: 0.474 ms

Below is generated by plot.py at 2018-09-07 11:43:25

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.40 Mbit/s

95th percentile per-packet one-way delay: 5.437 ms

Loss rate: 0.00%

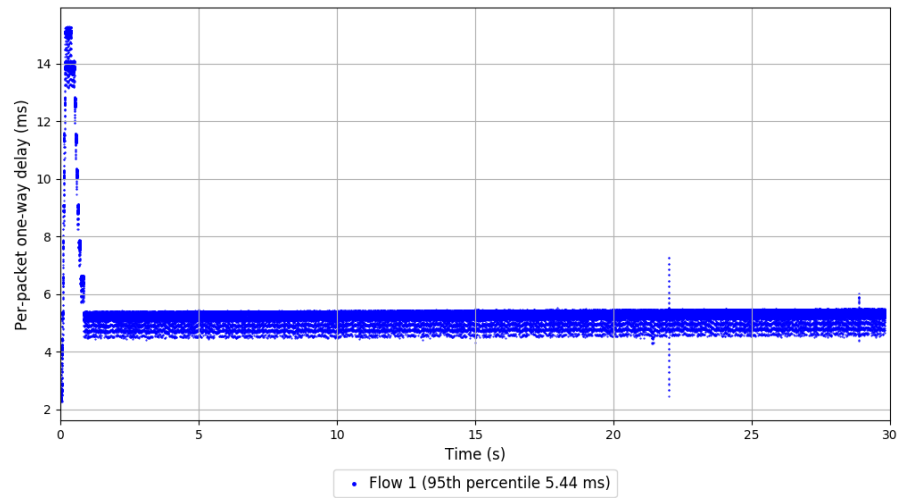
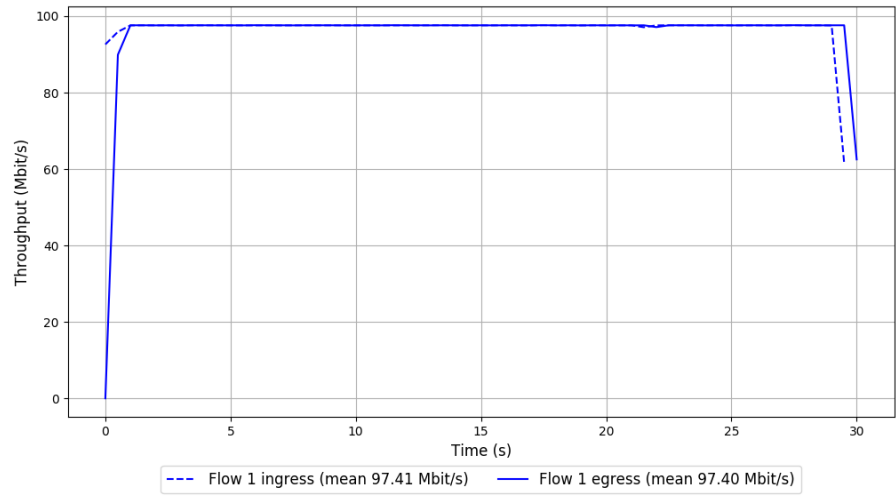
-- Flow 1:

Average throughput: 97.40 Mbit/s

95th percentile per-packet one-way delay: 5.437 ms

Loss rate: 0.00%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2018-09-07 11:17:40

End at: 2018-09-07 11:18:10

Local clock offset: -2.813 ms

Remote clock offset: 0.678 ms

Below is generated by plot.py at 2018-09-07 11:43:25

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.38 Mbit/s

95th percentile per-packet one-way delay: 2.866 ms

Loss rate: 0.00%

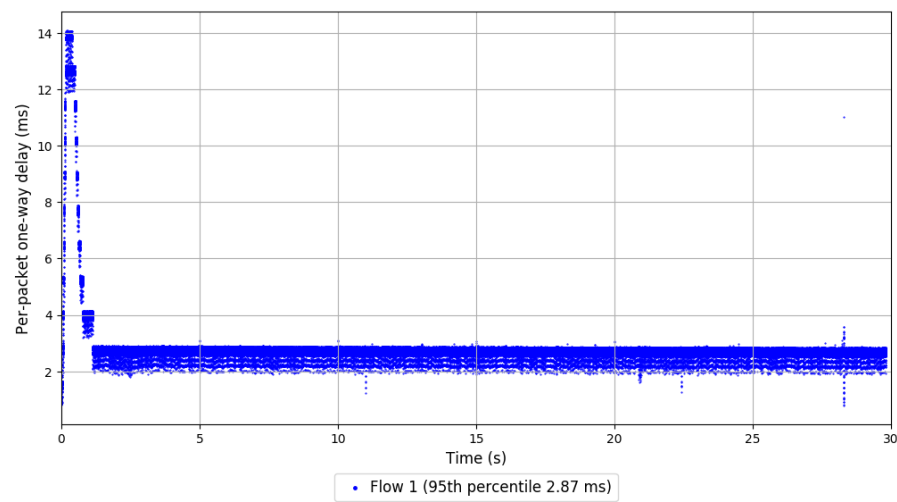
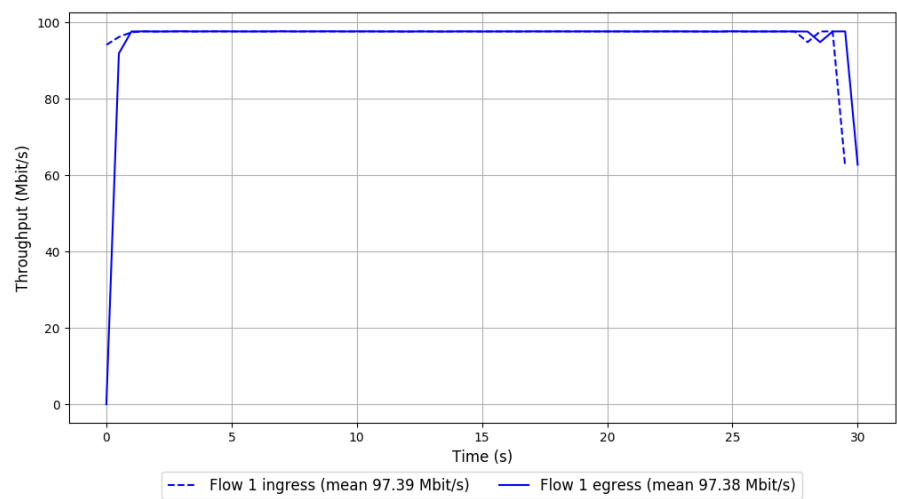
-- Flow 1:

Average throughput: 97.38 Mbit/s

95th percentile per-packet one-way delay: 2.866 ms

Loss rate: 0.00%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2018-09-07 11:37:41

End at: 2018-09-07 11:38:11

Local clock offset: -2.49 ms

Remote clock offset: 0.787 ms

Below is generated by plot.py at 2018-09-07 11:44:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.40 Mbit/s

95th percentile per-packet one-way delay: 4.636 ms

Loss rate: 0.00%

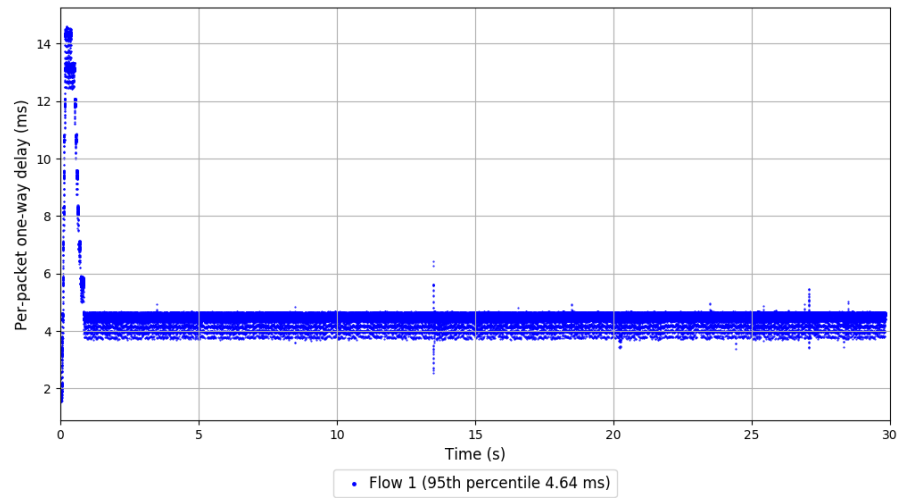
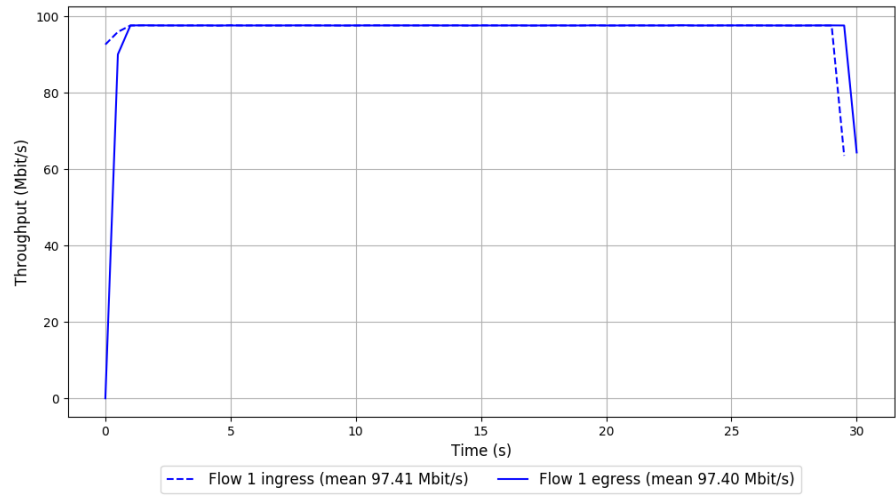
-- Flow 1:

Average throughput: 97.40 Mbit/s

95th percentile per-packet one-way delay: 4.636 ms

Loss rate: 0.00%

Run 5: Report of Indigo — Data Link

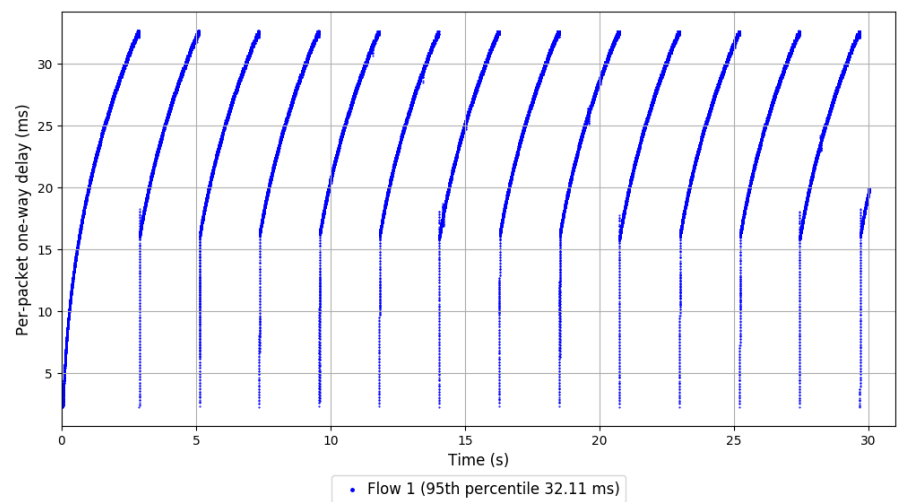
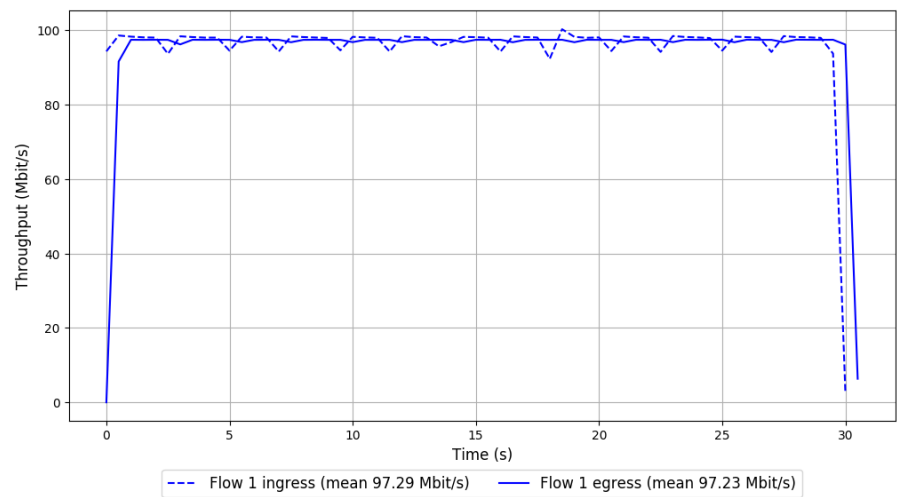



```
Run 1: Statistics of LEDBAT

Start at: 2018-09-07 10:04:21
End at: 2018-09-07 10:04:51
Local clock offset: -8.064 ms
Remote clock offset: 0.257 ms

# Below is generated by plot.py at 2018-09-07 11:44:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.23 Mbit/s
95th percentile per-packet one-way delay: 32.107 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.23 Mbit/s
95th percentile per-packet one-way delay: 32.107 ms
Loss rate: 0.01%
```

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2018-09-07 10:24:23

End at: 2018-09-07 10:24:53

Local clock offset: -8.377 ms

Remote clock offset: 0.422 ms

Below is generated by plot.py at 2018-09-07 11:44:24

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.33 Mbit/s

95th percentile per-packet one-way delay: 29.867 ms

Loss rate: 0.01%

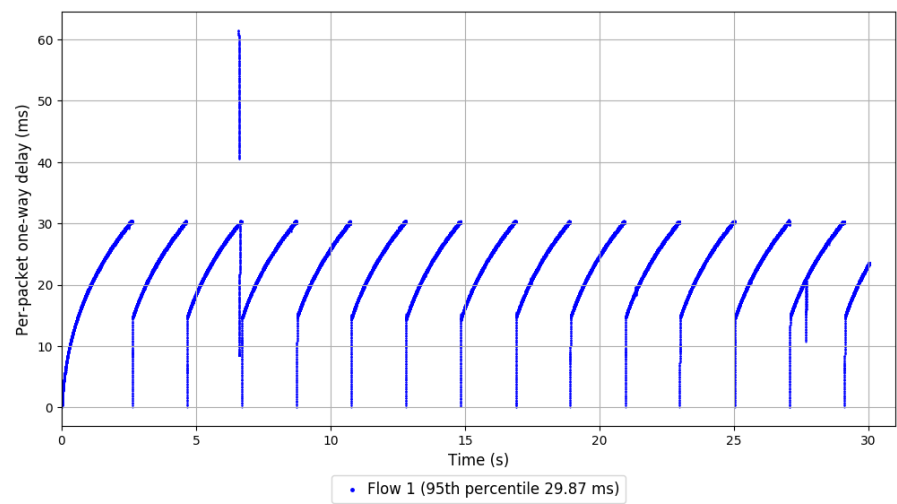
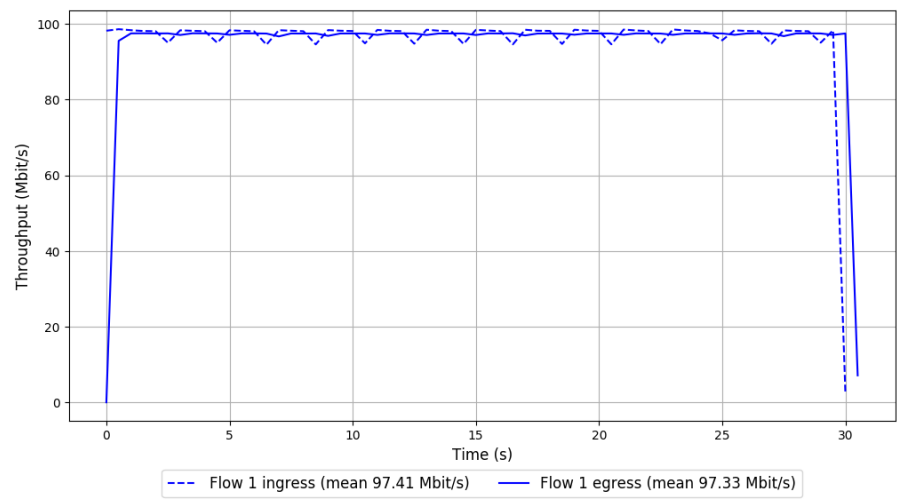
-- Flow 1:

Average throughput: 97.33 Mbit/s

95th percentile per-packet one-way delay: 29.867 ms

Loss rate: 0.01%

Run 2: Report of LEDBAT — Data Link

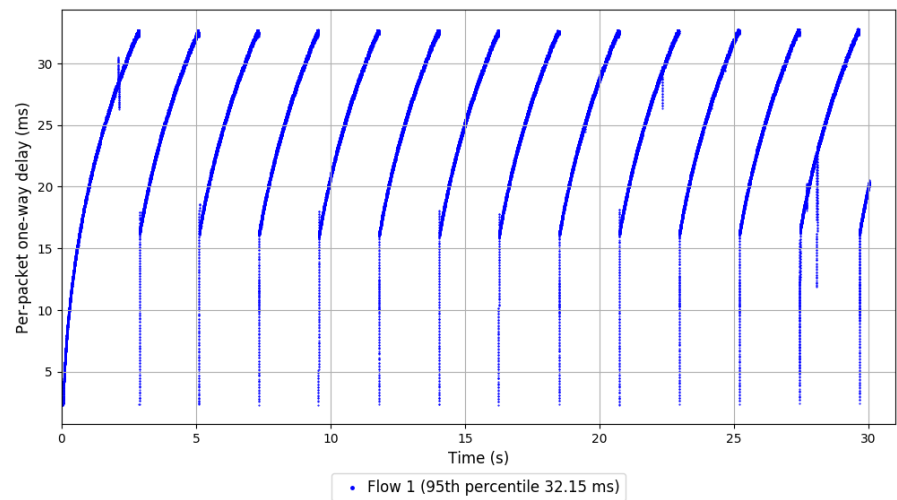
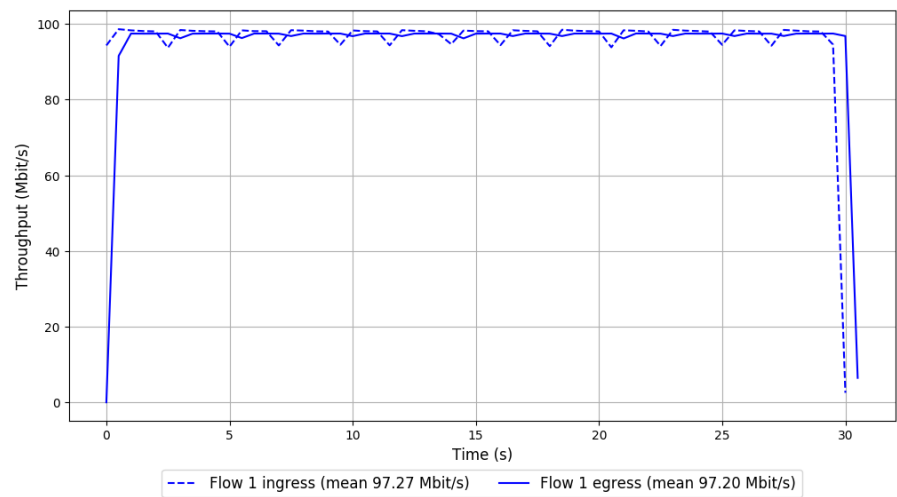


Run 3: Statistics of LEDBAT

Start at: 2018-09-07 10:44:22
End at: 2018-09-07 10:44:52
Local clock offset: -10.096 ms
Remote clock offset: 0.507 ms

Below is generated by plot.py at 2018-09-07 11:44:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 97.20 Mbit/s
95th percentile per-packet one-way delay: 32.153 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.20 Mbit/s
95th percentile per-packet one-way delay: 32.153 ms
Loss rate: 0.01%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-09-07 11:04:22

End at: 2018-09-07 11:04:52

Local clock offset: -3.525 ms

Remote clock offset: 0.663 ms

Below is generated by plot.py at 2018-09-07 11:44:25

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.23 Mbit/s

95th percentile per-packet one-way delay: 32.252 ms

Loss rate: 0.01%

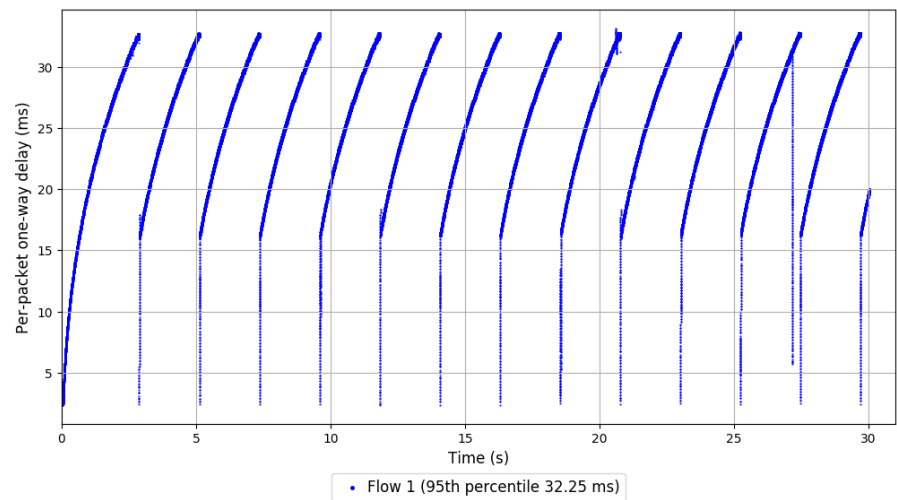
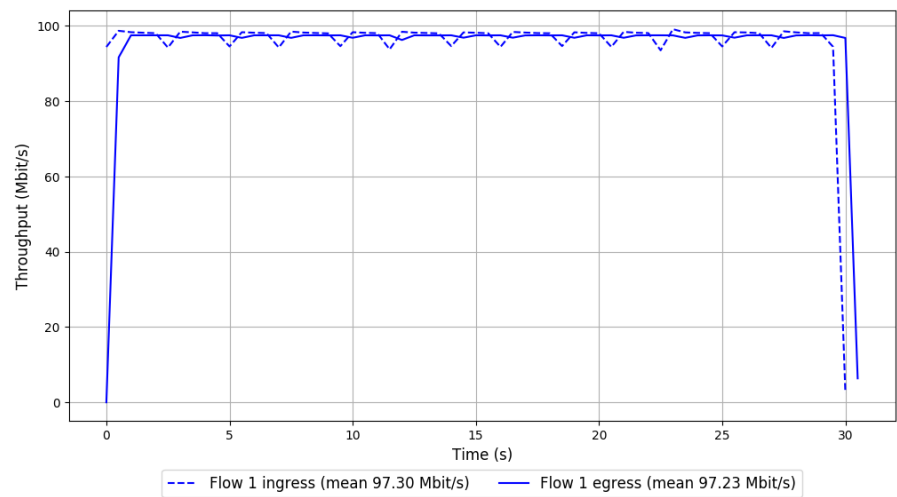
-- Flow 1:

Average throughput: 97.23 Mbit/s

95th percentile per-packet one-way delay: 32.252 ms

Loss rate: 0.01%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-09-07 11:24:24

End at: 2018-09-07 11:24:54

Local clock offset: -3.25 ms

Remote clock offset: 0.646 ms

Below is generated by plot.py at 2018-09-07 11:44:26

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.35 Mbit/s

95th percentile per-packet one-way delay: 30.553 ms

Loss rate: 0.01%

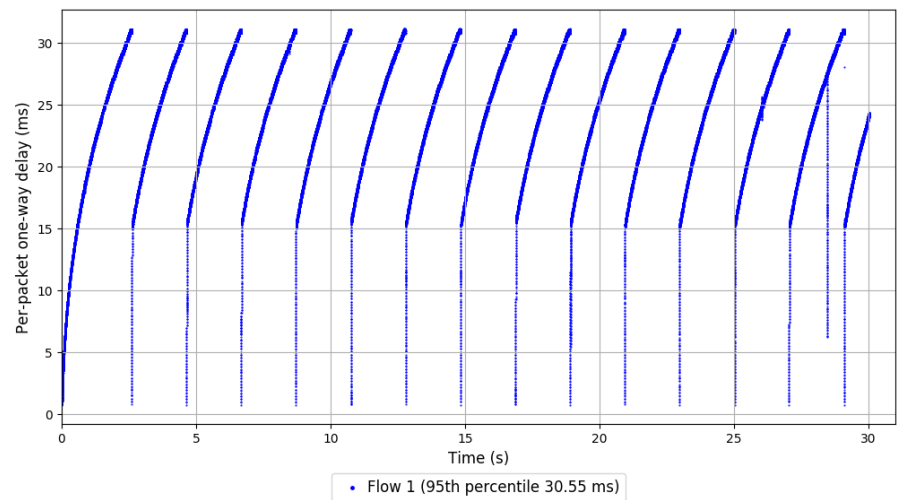
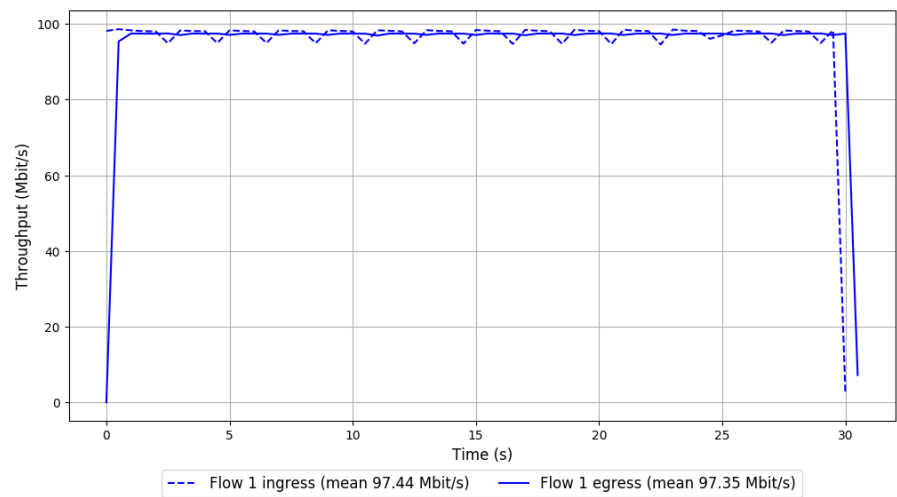
-- Flow 1:

Average throughput: 97.35 Mbit/s

95th percentile per-packet one-way delay: 30.553 ms

Loss rate: 0.01%

Run 5: Report of LEDBAT — Data Link

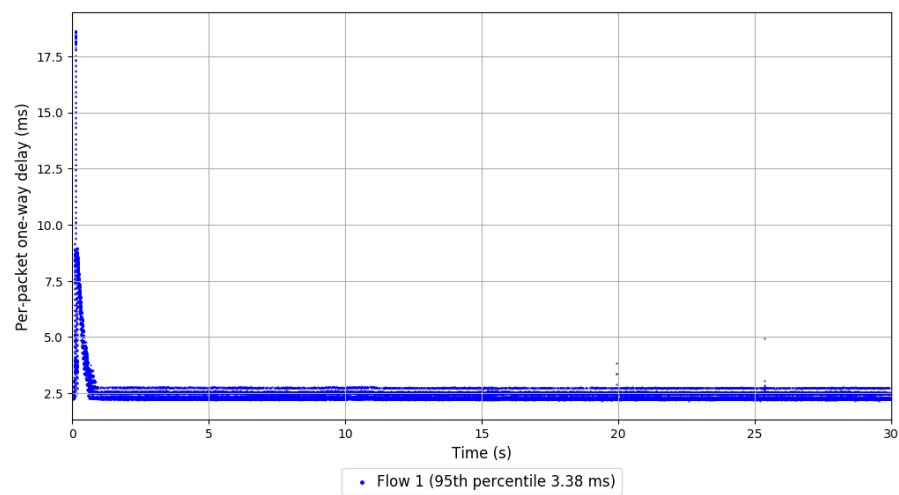
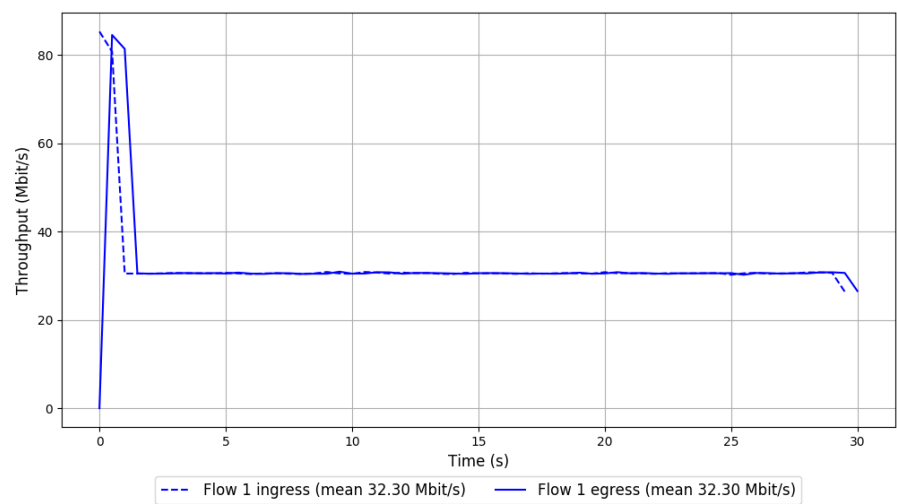


```
Run 1: Statistics of Indigo-Muses

Start at: 2018-09-07 10:12:07
End at: 2018-09-07 10:12:37
Local clock offset: -8.515 ms
Remote clock offset: 0.293 ms

# Below is generated by plot.py at 2018-09-07 11:44:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 32.30 Mbit/s
95th percentile per-packet one-way delay: 3.382 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 32.30 Mbit/s
95th percentile per-packet one-way delay: 3.382 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo-Muses — Data Link



Run 2: Statistics of Indigo-Muses

Start at: 2018-09-07 10:32:09

End at: 2018-09-07 10:32:39

Local clock offset: -8.735 ms

Remote clock offset: 0.396 ms

Below is generated by plot.py at 2018-09-07 11:44:26

Datalink statistics

-- Total of 1 flow:

Average throughput: 53.49 Mbit/s

95th percentile per-packet one-way delay: 2.213 ms

Loss rate: 0.00%

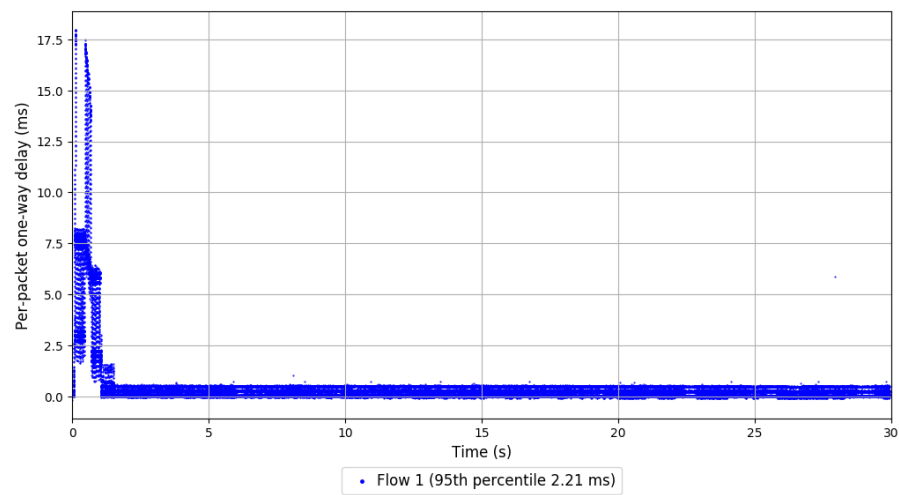
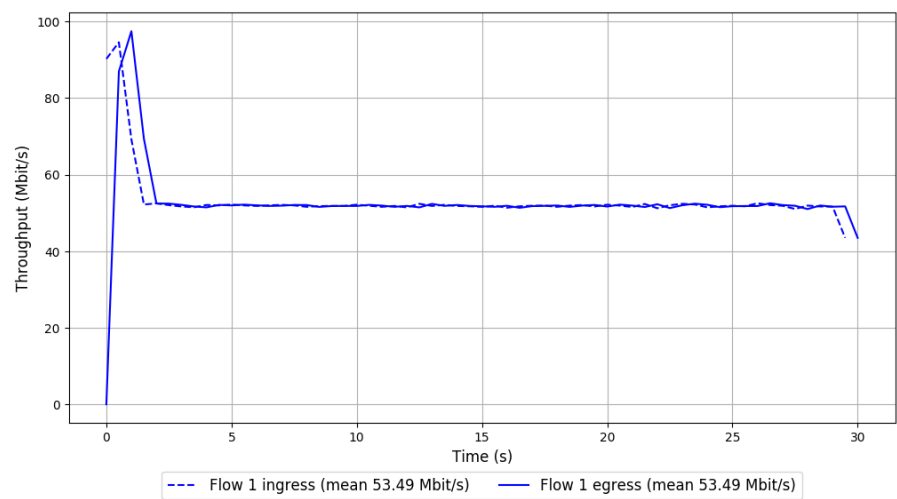
-- Flow 1:

Average throughput: 53.49 Mbit/s

95th percentile per-packet one-way delay: 2.213 ms

Loss rate: 0.00%

Run 2: Report of Indigo-Muses — Data Link



Run 3: Statistics of Indigo-Muses

Start at: 2018-09-07 10:52:08

End at: 2018-09-07 10:52:38

Local clock offset: -5.625 ms

Remote clock offset: 0.507 ms

Below is generated by plot.py at 2018-09-07 11:44:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 56.14 Mbit/s

95th percentile per-packet one-way delay: 3.048 ms

Loss rate: 0.00%

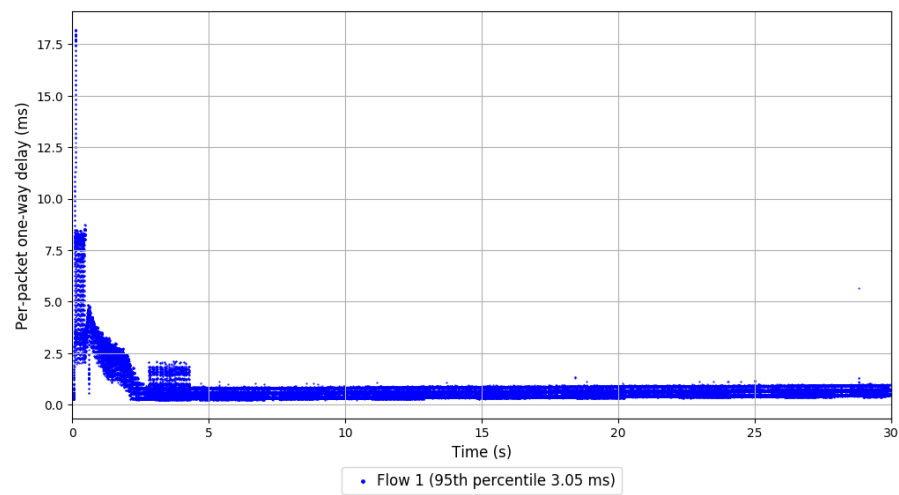
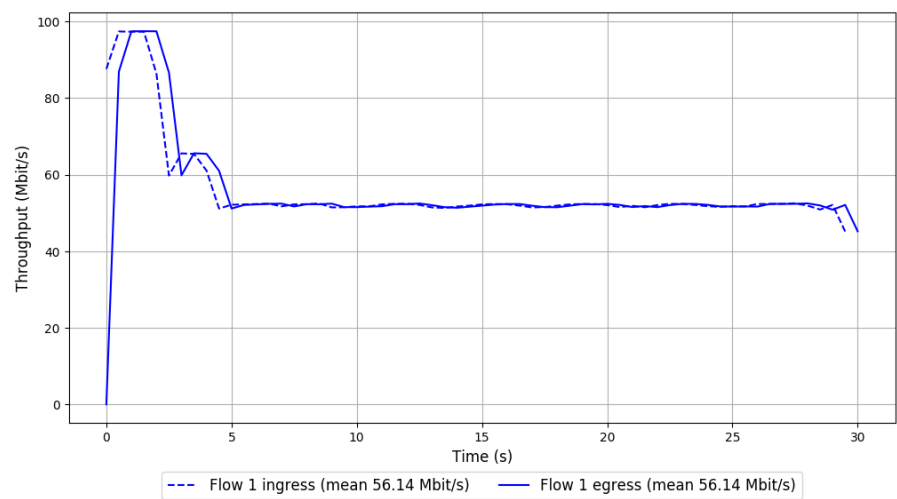
-- Flow 1:

Average throughput: 56.14 Mbit/s

95th percentile per-packet one-way delay: 3.048 ms

Loss rate: 0.00%

Run 3: Report of Indigo-Muses — Data Link



Run 4: Statistics of Indigo-Muses

Start at: 2018-09-07 11:12:08

End at: 2018-09-07 11:12:38

Local clock offset: -1.932 ms

Remote clock offset: 0.678 ms

Below is generated by plot.py at 2018-09-07 11:44:47

Datalink statistics

-- Total of 1 flow:

Average throughput: 53.68 Mbit/s

95th percentile per-packet one-way delay: 3.117 ms

Loss rate: 0.00%

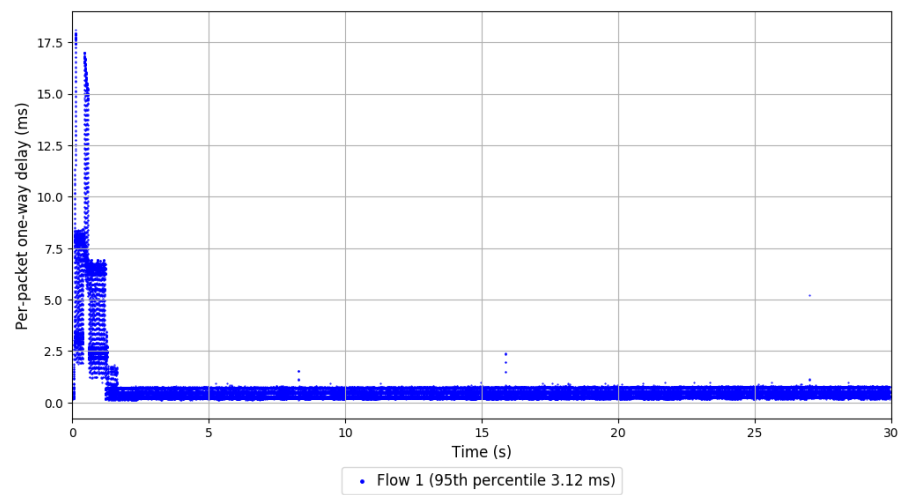
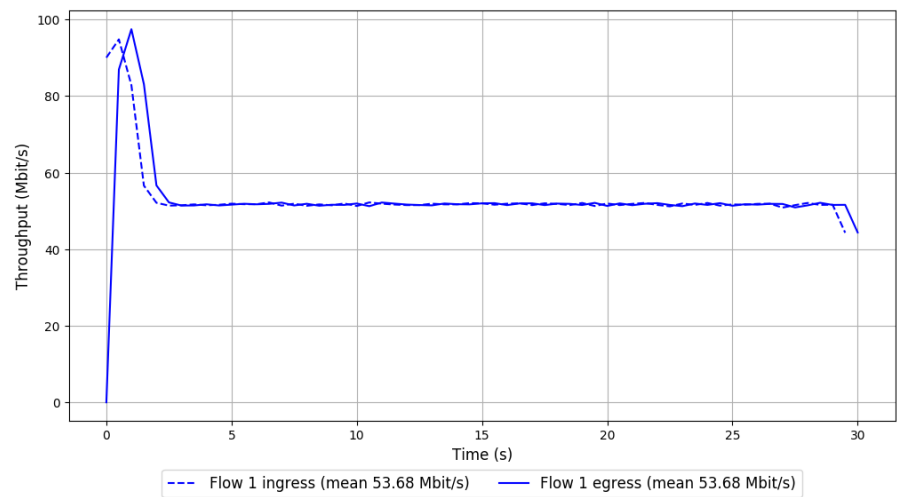
-- Flow 1:

Average throughput: 53.68 Mbit/s

95th percentile per-packet one-way delay: 3.117 ms

Loss rate: 0.00%

Run 4: Report of Indigo-Muses — Data Link



Run 5: Statistics of Indigo-Muses

Start at: 2018-09-07 11:32:10

End at: 2018-09-07 11:32:40

Local clock offset: -3.408 ms

Remote clock offset: 0.657 ms

Below is generated by plot.py at 2018-09-07 11:44:47

Datalink statistics

-- Total of 1 flow:

Average throughput: 32.52 Mbit/s

95th percentile per-packet one-way delay: 2.794 ms

Loss rate: 0.00%

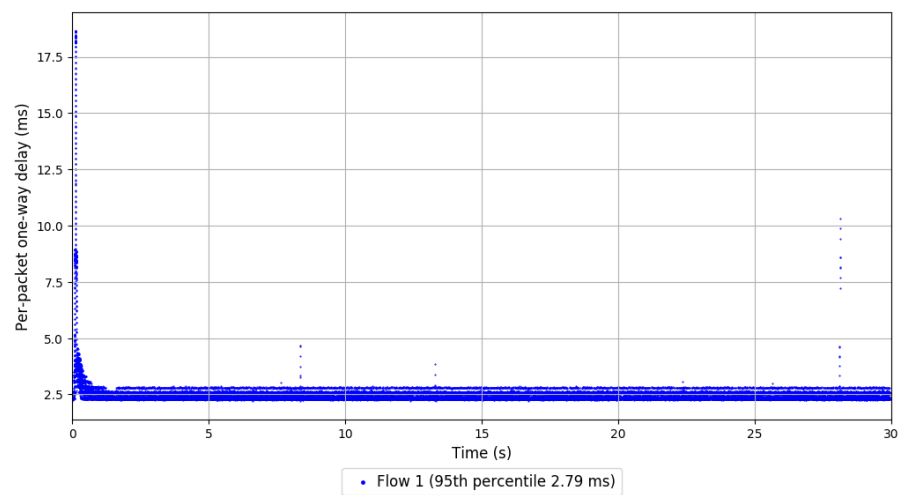
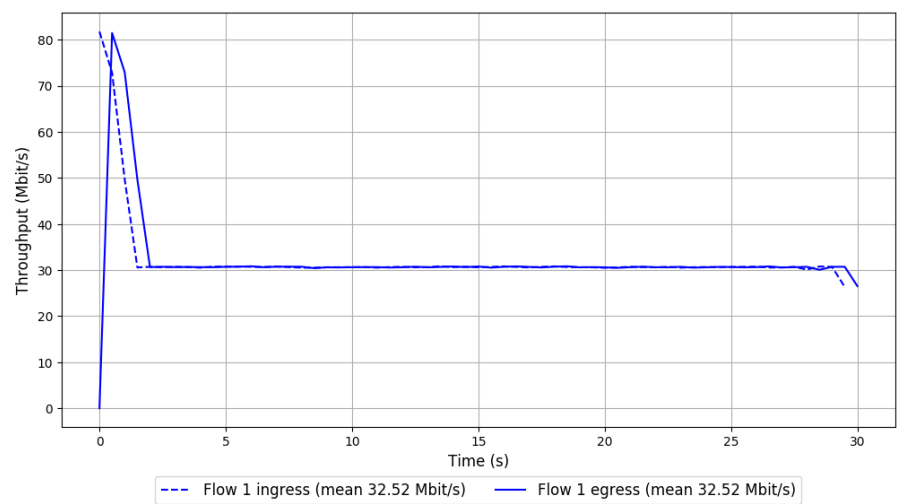
-- Flow 1:

Average throughput: 32.52 Mbit/s

95th percentile per-packet one-way delay: 2.794 ms

Loss rate: 0.00%

Run 5: Report of Indigo-Muses — Data Link

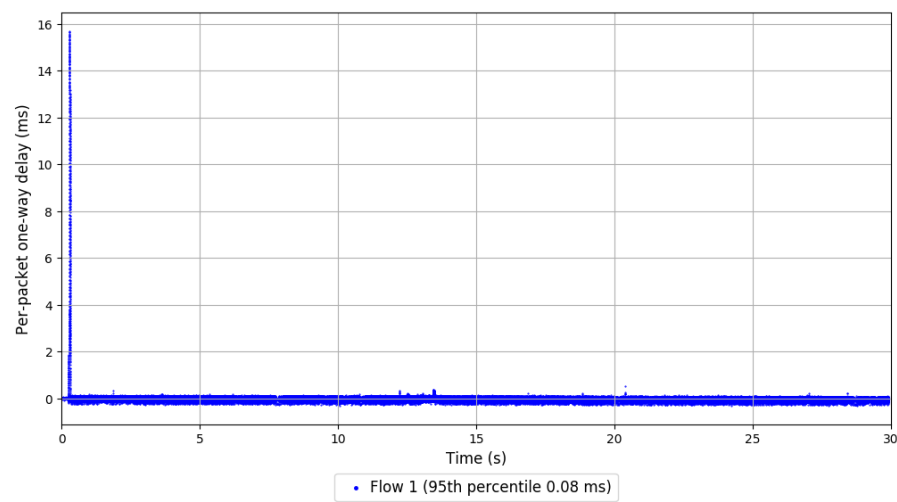
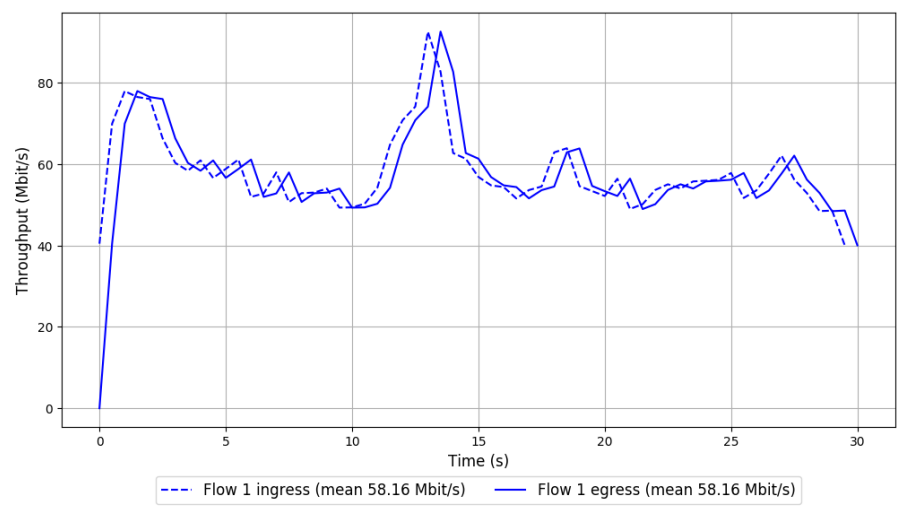


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-09-07 10:02:08
End at: 2018-09-07 10:02:38
Local clock offset: -7.075 ms
Remote clock offset: 0.147 ms

# Below is generated by plot.py at 2018-09-07 11:45:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 58.16 Mbit/s
95th percentile per-packet one-way delay: 0.078 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 58.16 Mbit/s
95th percentile per-packet one-way delay: 0.078 ms
Loss rate: 0.00%
```

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-09-07 10:22:09

End at: 2018-09-07 10:22:39

Local clock offset: -8.273 ms

Remote clock offset: 0.349 ms

Below is generated by plot.py at 2018-09-07 11:45:37

Datalink statistics

-- Total of 1 flow:

Average throughput: 90.85 Mbit/s

95th percentile per-packet one-way delay: 4.788 ms

Loss rate: 0.00%

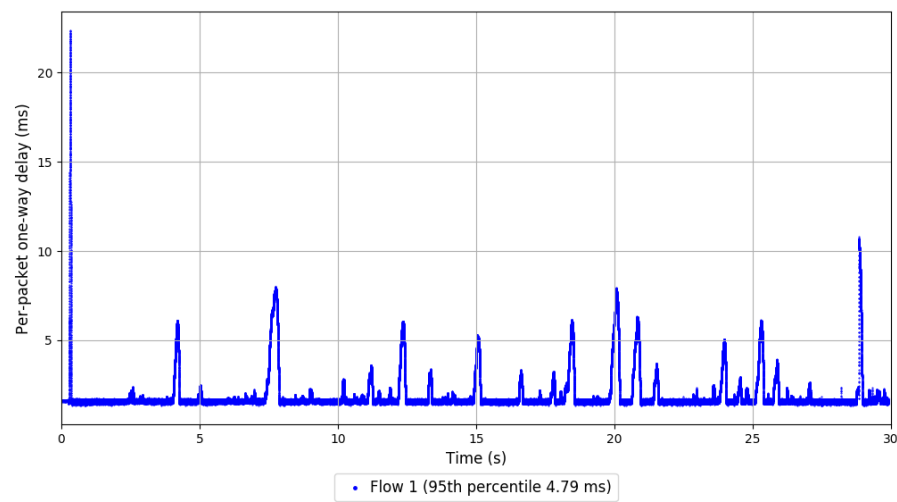
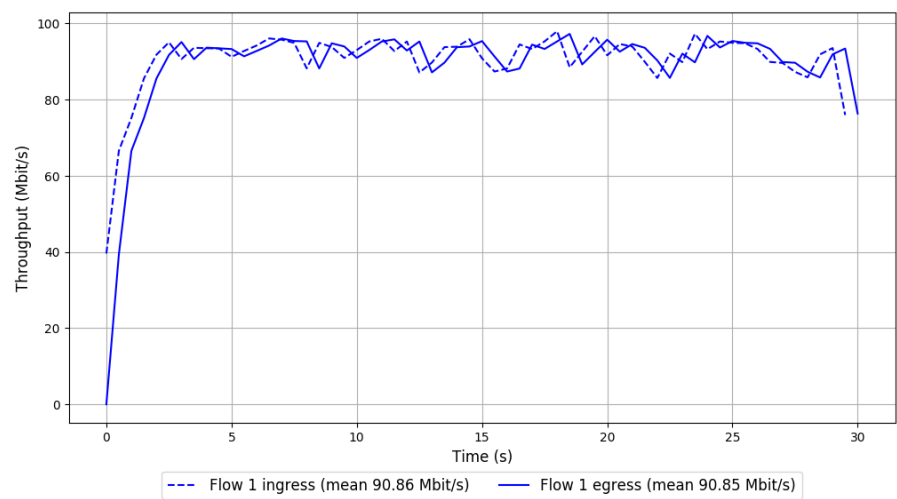
-- Flow 1:

Average throughput: 90.85 Mbit/s

95th percentile per-packet one-way delay: 4.788 ms

Loss rate: 0.00%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-09-07 10:42:09

End at: 2018-09-07 10:42:39

Local clock offset: -9.936 ms

Remote clock offset: 0.478 ms

Below is generated by plot.py at 2018-09-07 11:45:37

Datalink statistics

-- Total of 1 flow:

Average throughput: 60.04 Mbit/s

95th percentile per-packet one-way delay: 0.947 ms

Loss rate: 0.00%

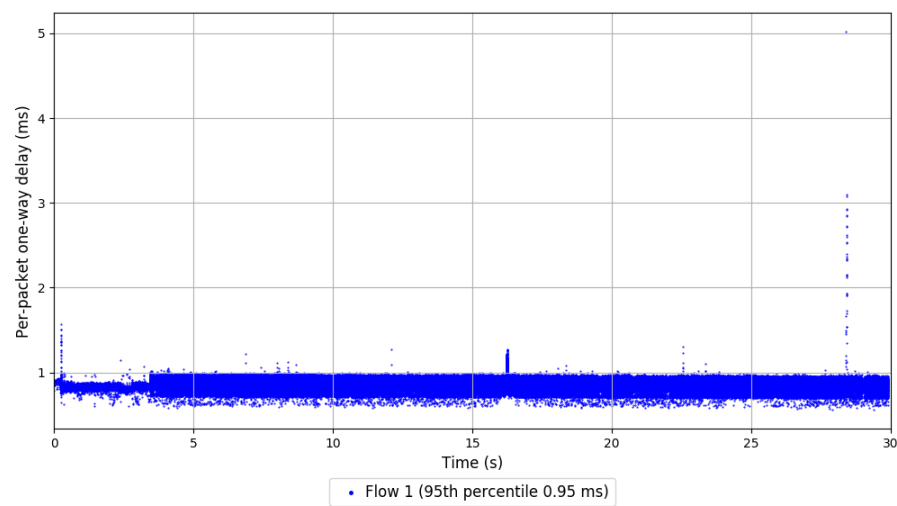
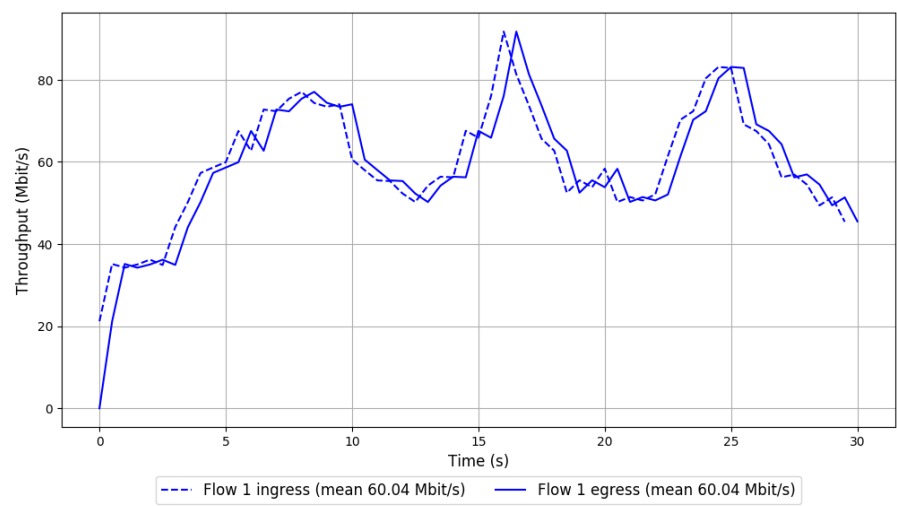
-- Flow 1:

Average throughput: 60.04 Mbit/s

95th percentile per-packet one-way delay: 0.947 ms

Loss rate: 0.00%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-09-07 11:02:09

End at: 2018-09-07 11:02:39

Local clock offset: -3.077 ms

Remote clock offset: 0.603 ms

Below is generated by plot.py at 2018-09-07 11:45:37

Datalink statistics

-- Total of 1 flow:

Average throughput: 63.67 Mbit/s

95th percentile per-packet one-way delay: 0.736 ms

Loss rate: 0.00%

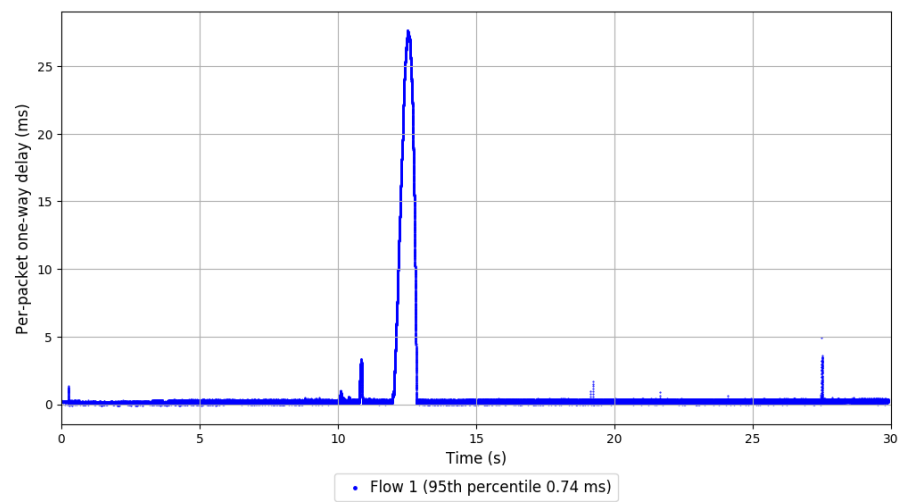
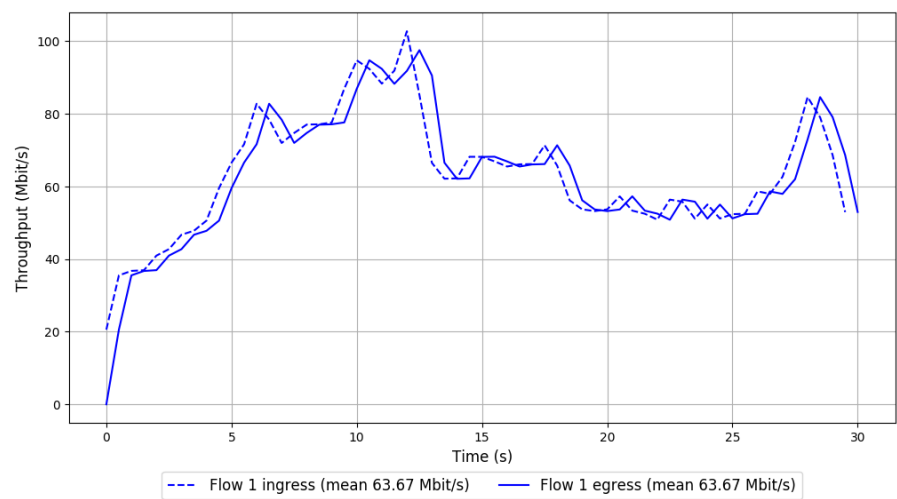
-- Flow 1:

Average throughput: 63.67 Mbit/s

95th percentile per-packet one-way delay: 0.736 ms

Loss rate: 0.00%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-09-07 11:22:10

End at: 2018-09-07 11:22:40

Local clock offset: -2.442 ms

Remote clock offset: 0.723 ms

Below is generated by plot.py at 2018-09-07 11:45:37

Datalink statistics

-- Total of 1 flow:

Average throughput: 81.06 Mbit/s

95th percentile per-packet one-way delay: 2.113 ms

Loss rate: 0.00%

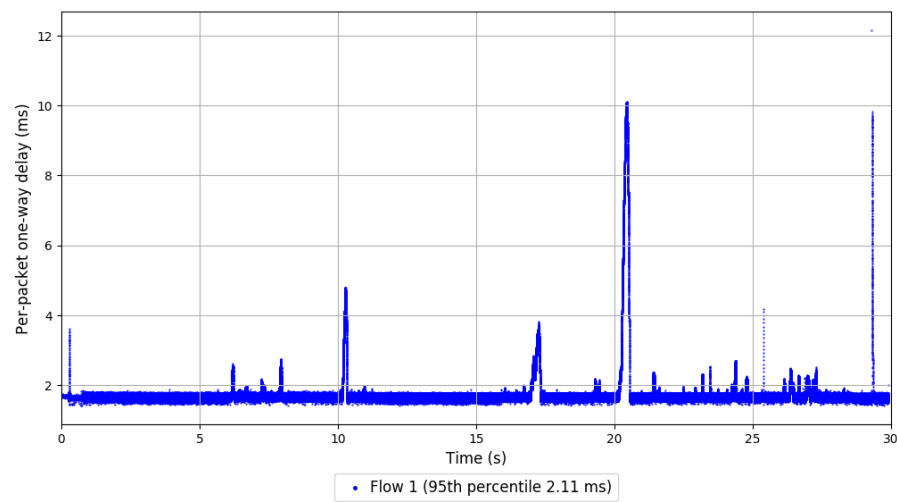
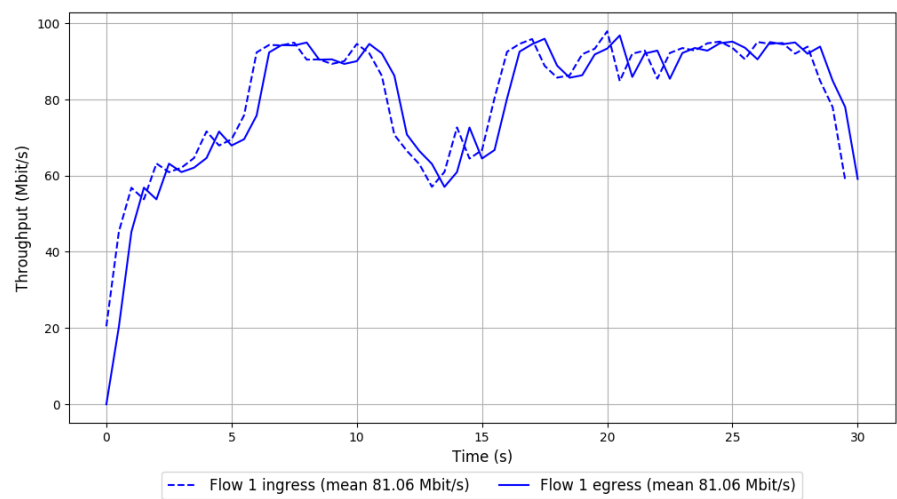
-- Flow 1:

Average throughput: 81.06 Mbit/s

95th percentile per-packet one-way delay: 2.113 ms

Loss rate: 0.00%

Run 5: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

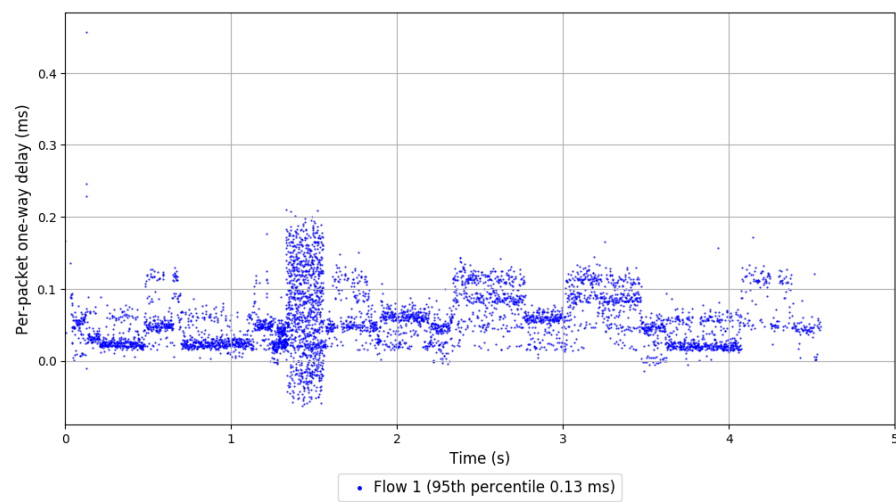
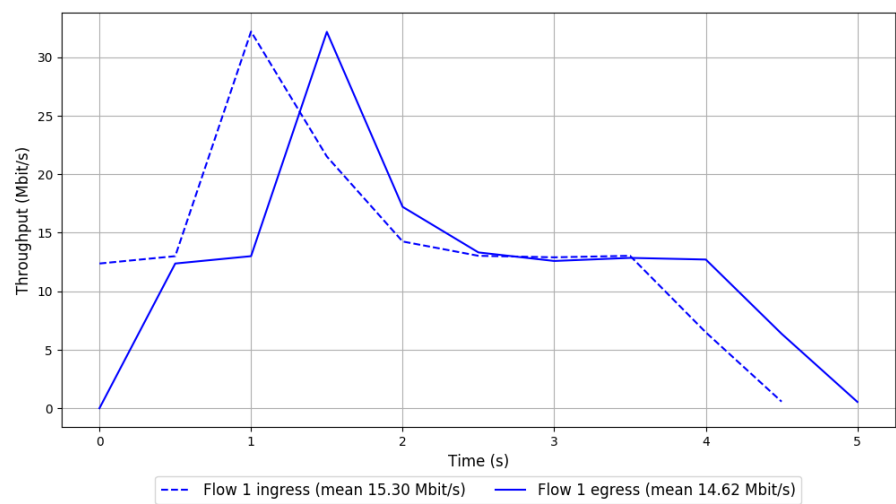
Start at: 2018-09-07 10:15:26

End at: 2018-09-07 10:15:56

Local clock offset: -7.947 ms

Remote clock offset: 0.261 ms

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

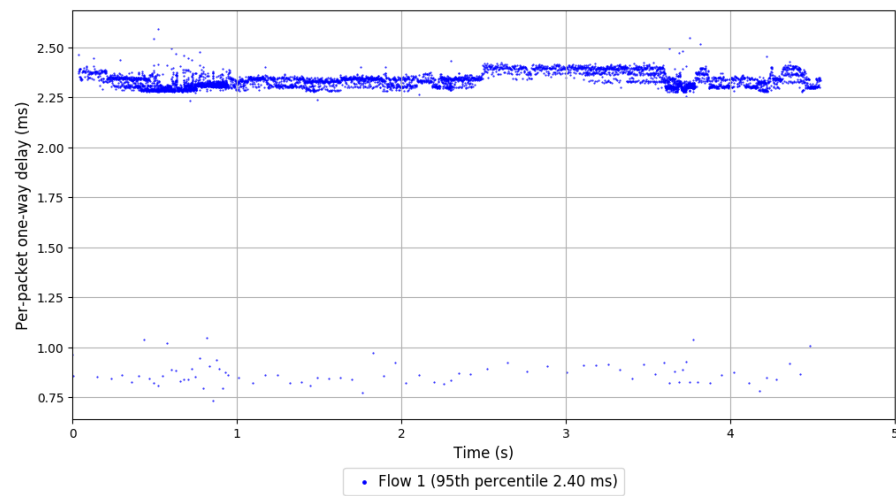
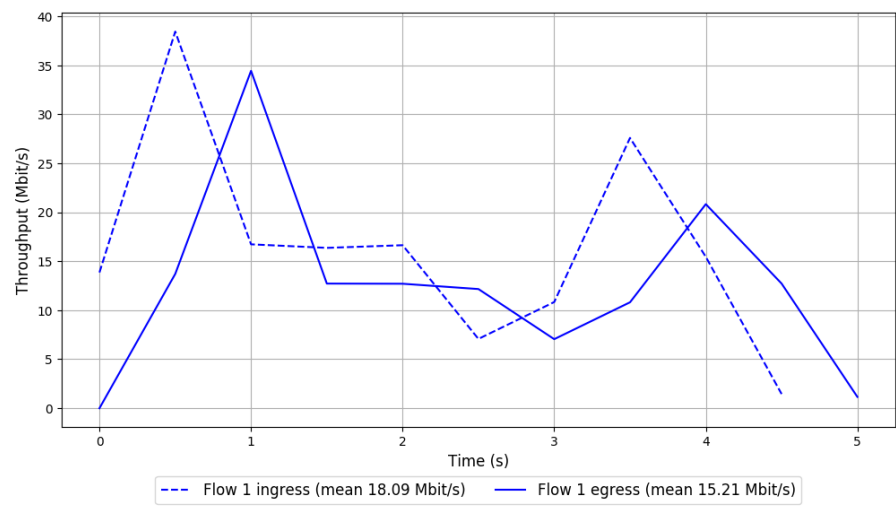
Start at: 2018-09-07 10:35:28

End at: 2018-09-07 10:35:58

Local clock offset: -9.651 ms

Remote clock offset: 0.471 ms

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

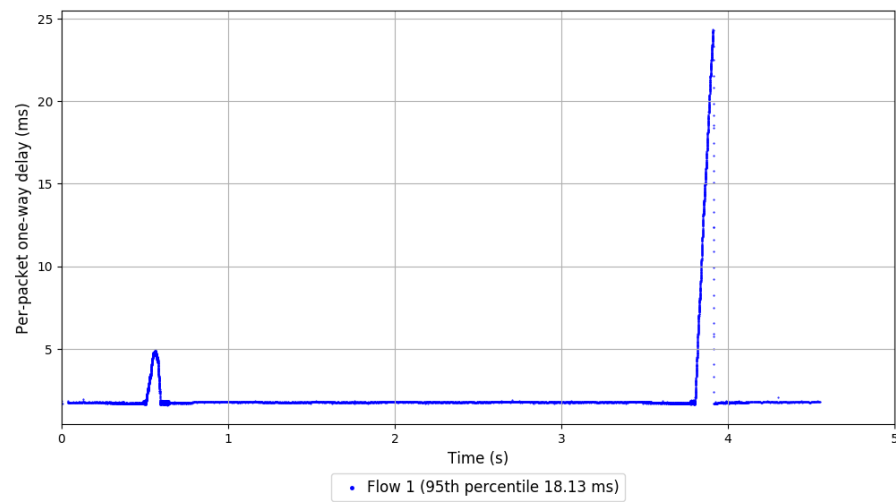
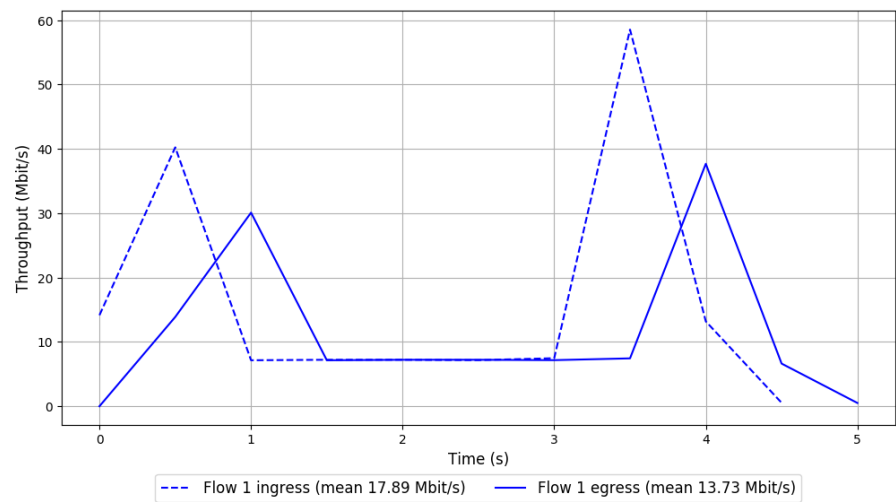
Start at: 2018-09-07 10:55:28

End at: 2018-09-07 10:55:58

Local clock offset: -4.464 ms

Remote clock offset: 0.616 ms

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

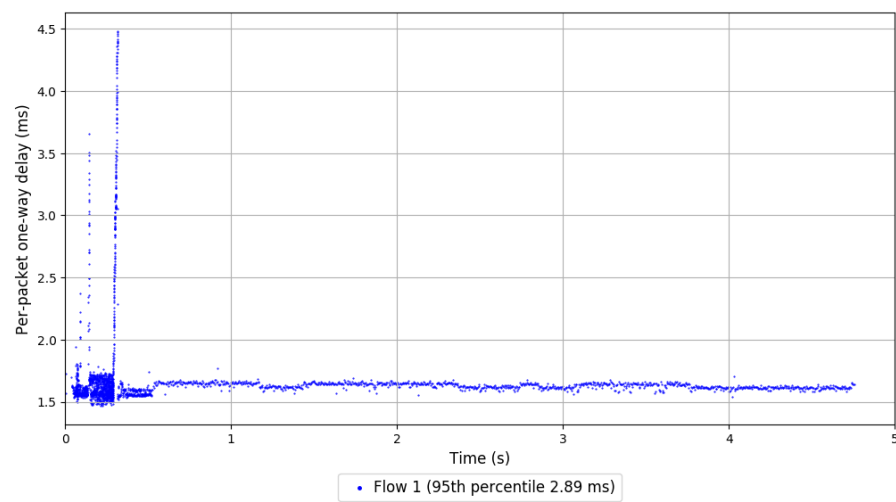
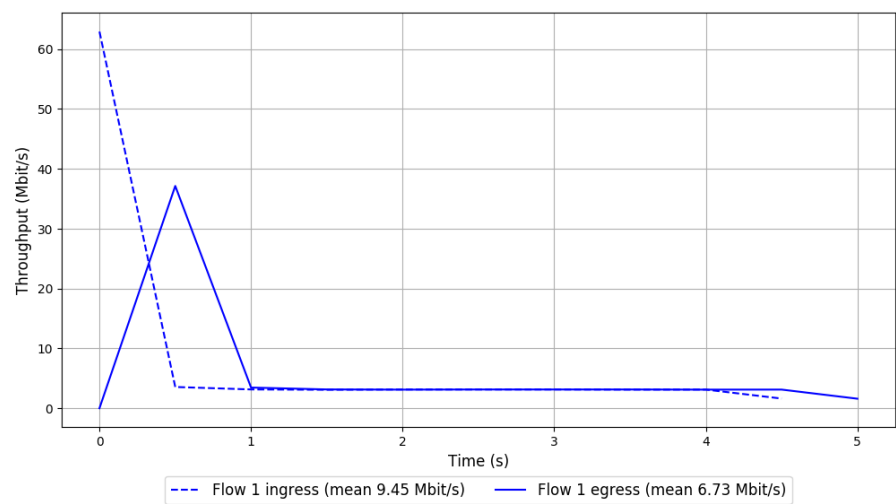
Start at: 2018-09-07 11:15:28

End at: 2018-09-07 11:15:58

Local clock offset: -1.727 ms

Remote clock offset: 0.655 ms

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

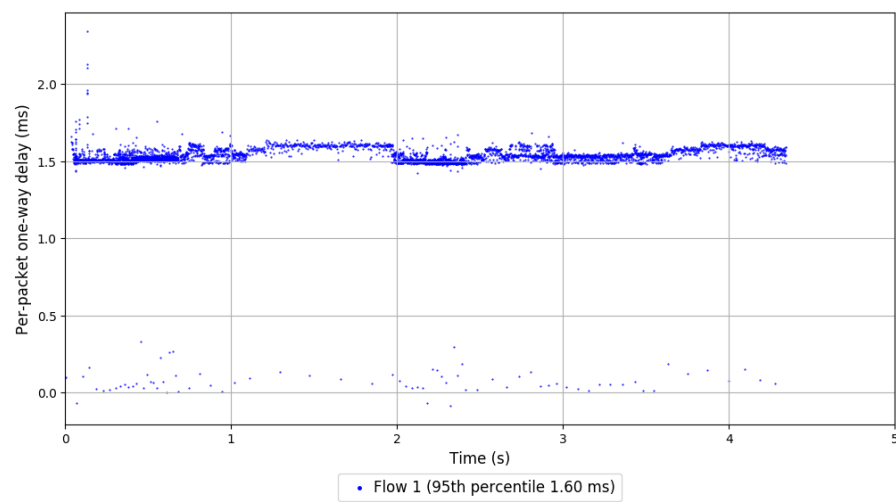
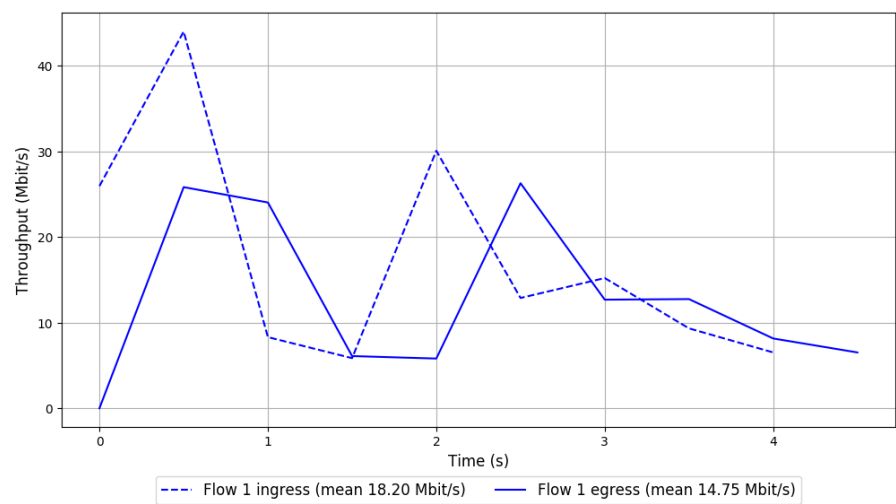
Start at: 2018-09-07 11:35:29

End at: 2018-09-07 11:35:59

Local clock offset: -2.539 ms

Remote clock offset: 0.67 ms

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2018-09-07 10:16:30

End at: 2018-09-07 10:17:00

Local clock offset: -8.839 ms

Remote clock offset: 0.27 ms

Below is generated by plot.py at 2018-09-07 11:45:44

Datalink statistics

-- Total of 1 flow:

Average throughput: 77.87 Mbit/s

95th percentile per-packet one-way delay: 2.395 ms

Loss rate: 0.34%

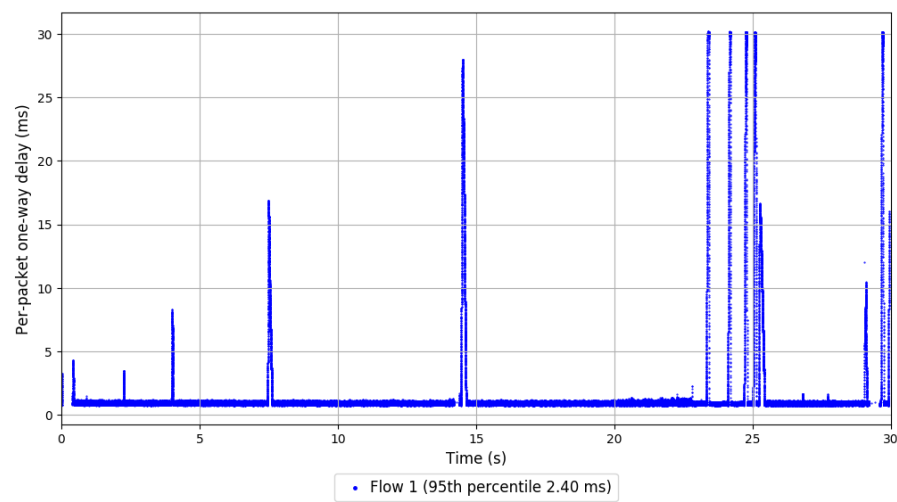
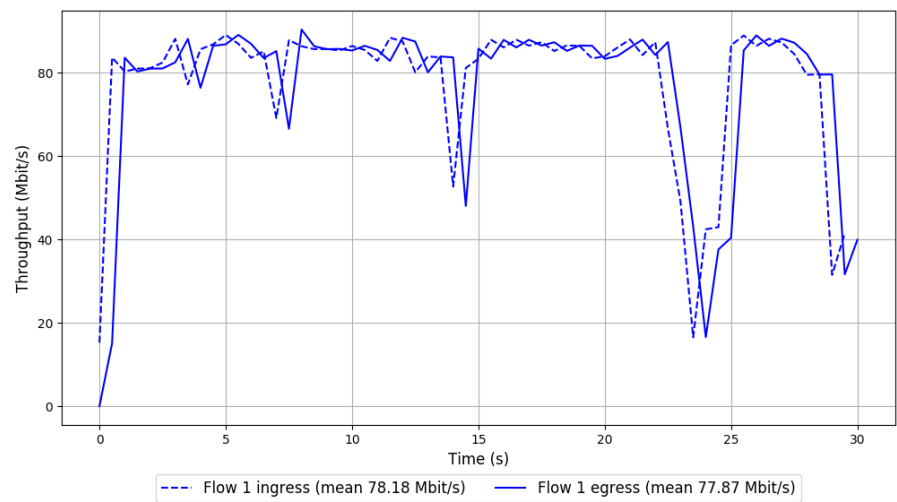
-- Flow 1:

Average throughput: 77.87 Mbit/s

95th percentile per-packet one-way delay: 2.395 ms

Loss rate: 0.34%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-09-07 10:36:32

End at: 2018-09-07 10:37:02

Local clock offset: -9.688 ms

Remote clock offset: 0.409 ms

Below is generated by plot.py at 2018-09-07 11:45:48

Datalink statistics

-- Total of 1 flow:

Average throughput: 79.29 Mbit/s

95th percentile per-packet one-way delay: 3.932 ms

Loss rate: 0.23%

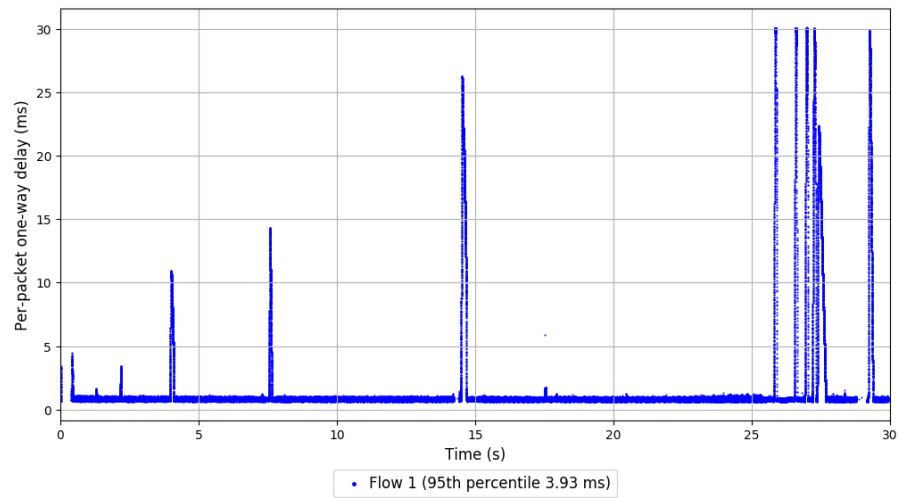
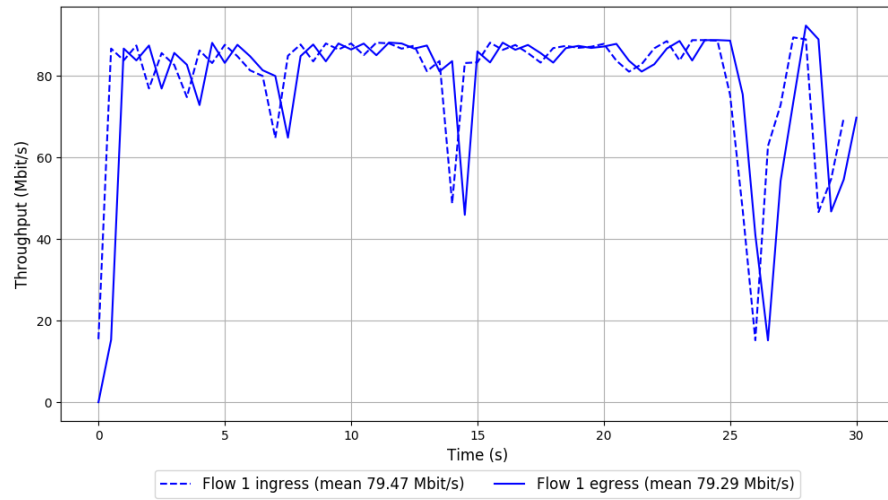
-- Flow 1:

Average throughput: 79.29 Mbit/s

95th percentile per-packet one-way delay: 3.932 ms

Loss rate: 0.23%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-09-07 10:56:32

End at: 2018-09-07 10:57:02

Local clock offset: -5.014 ms

Remote clock offset: 0.628 ms

Below is generated by plot.py at 2018-09-07 11:45:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 77.41 Mbit/s

95th percentile per-packet one-way delay: 3.616 ms

Loss rate: 0.32%

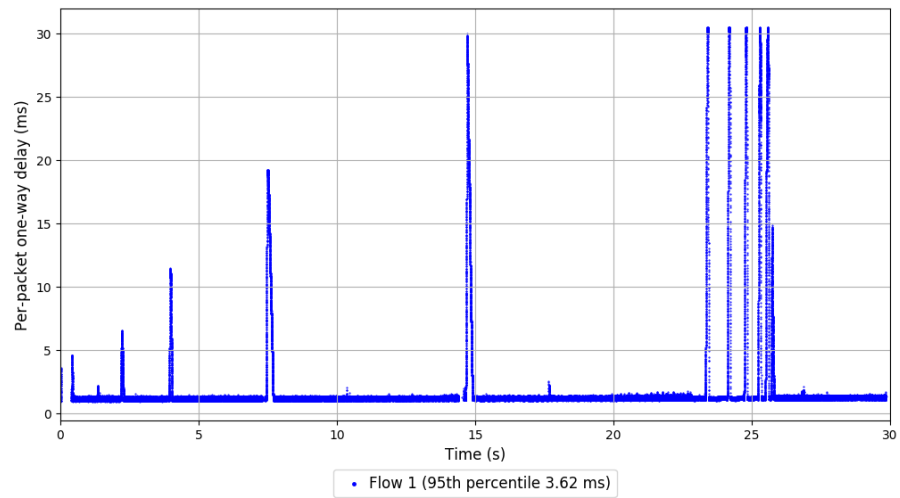
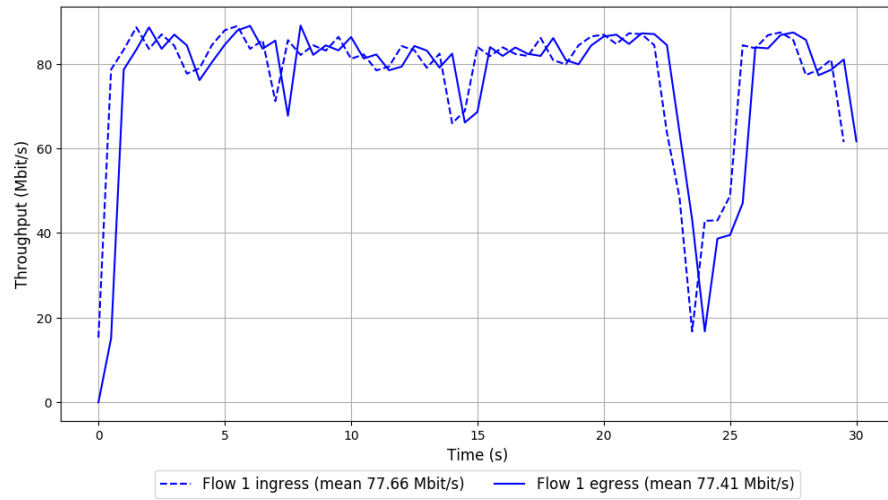
-- Flow 1:

Average throughput: 77.41 Mbit/s

95th percentile per-packet one-way delay: 3.616 ms

Loss rate: 0.32%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-09-07 11:16:32

End at: 2018-09-07 11:17:02

Local clock offset: -2.579 ms

Remote clock offset: 0.732 ms

Below is generated by plot.py at 2018-09-07 11:46:11

Datalink statistics

-- Total of 1 flow:

Average throughput: 77.40 Mbit/s

95th percentile per-packet one-way delay: 3.692 ms

Loss rate: 0.35%

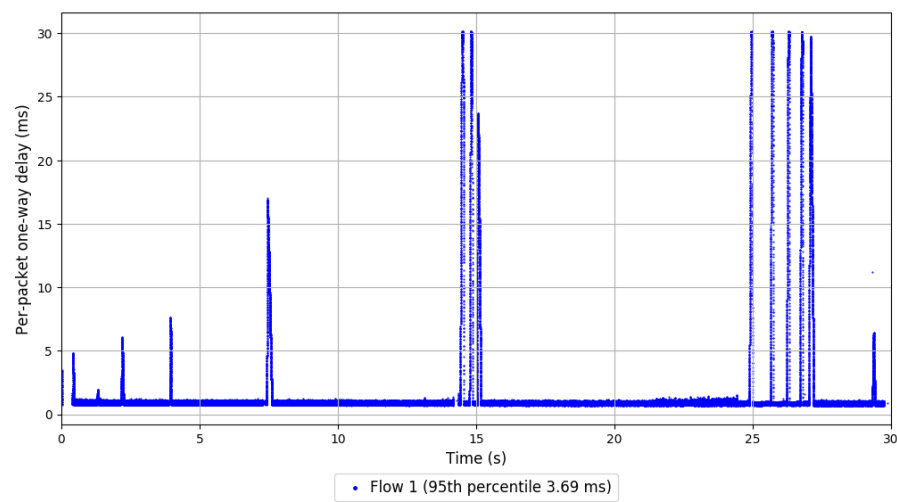
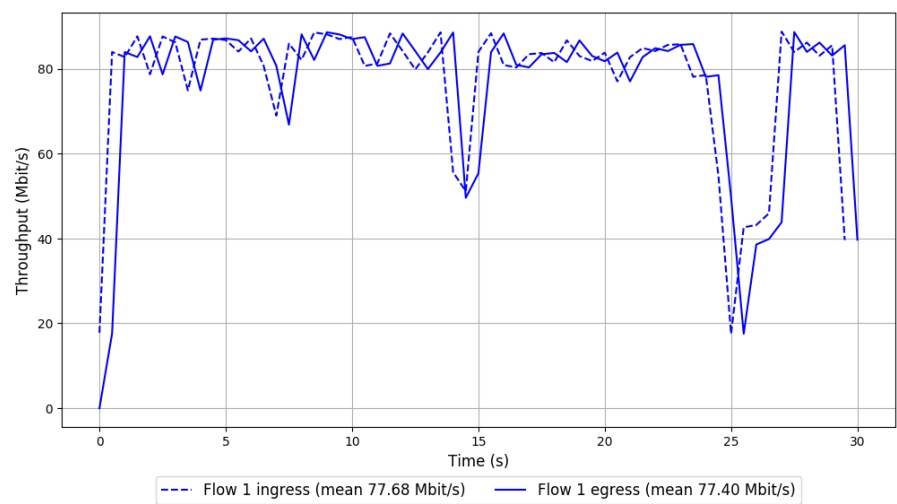
-- Flow 1:

Average throughput: 77.40 Mbit/s

95th percentile per-packet one-way delay: 3.692 ms

Loss rate: 0.35%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-09-07 11:36:34

End at: 2018-09-07 11:37:04

Local clock offset: -3.284 ms

Remote clock offset: 0.784 ms

Below is generated by plot.py at 2018-09-07 11:46:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 76.77 Mbit/s

95th percentile per-packet one-way delay: 1.872 ms

Loss rate: 0.37%

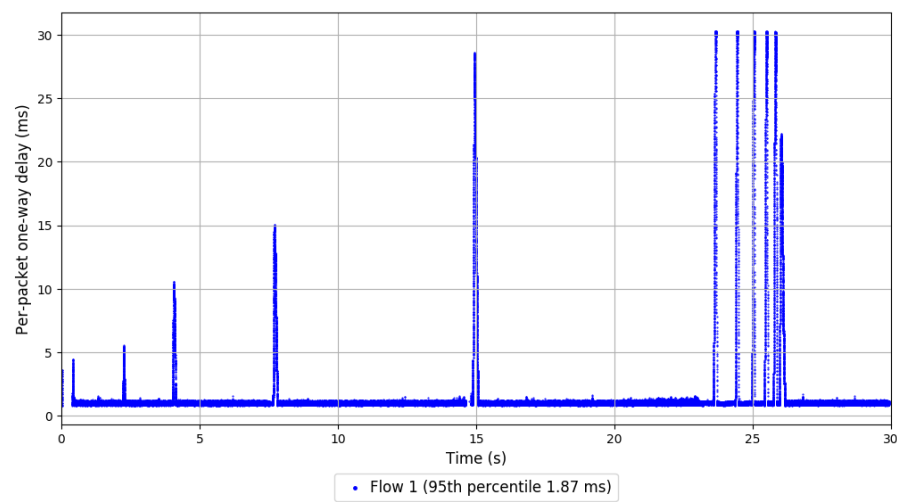
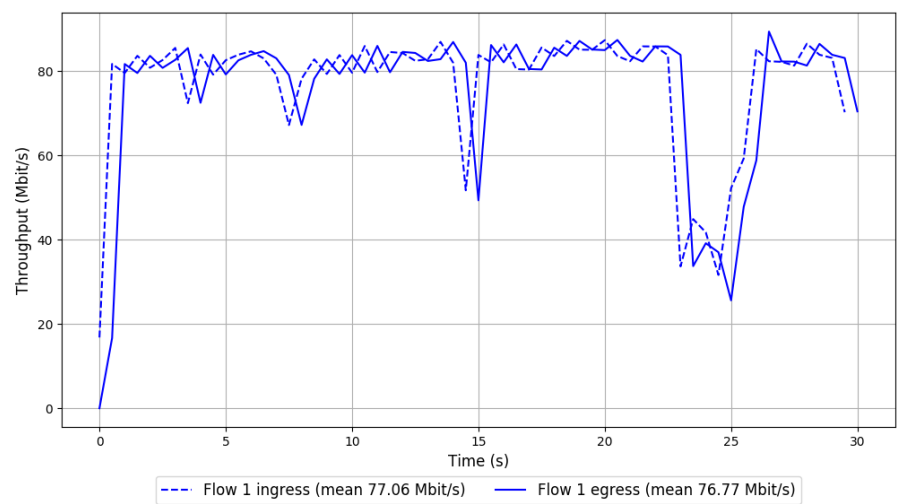
-- Flow 1:

Average throughput: 76.77 Mbit/s

95th percentile per-packet one-way delay: 1.872 ms

Loss rate: 0.37%

Run 5: Report of QUIC Cubic — Data Link

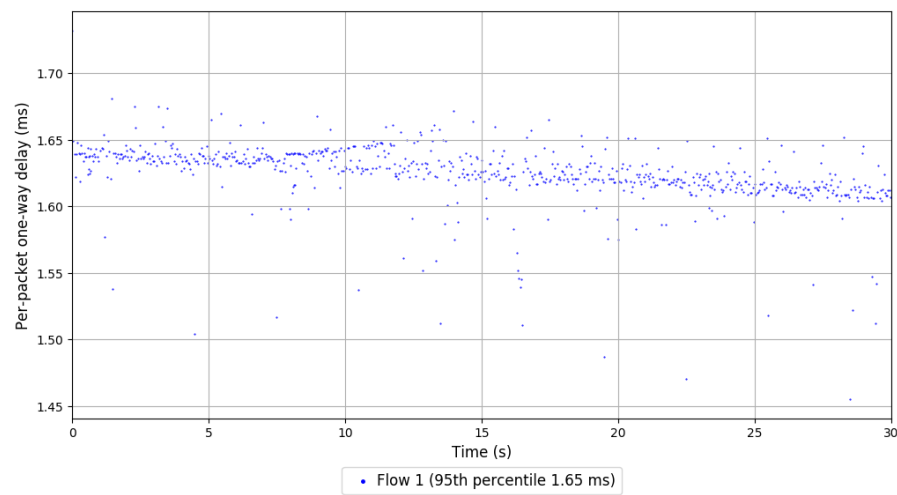
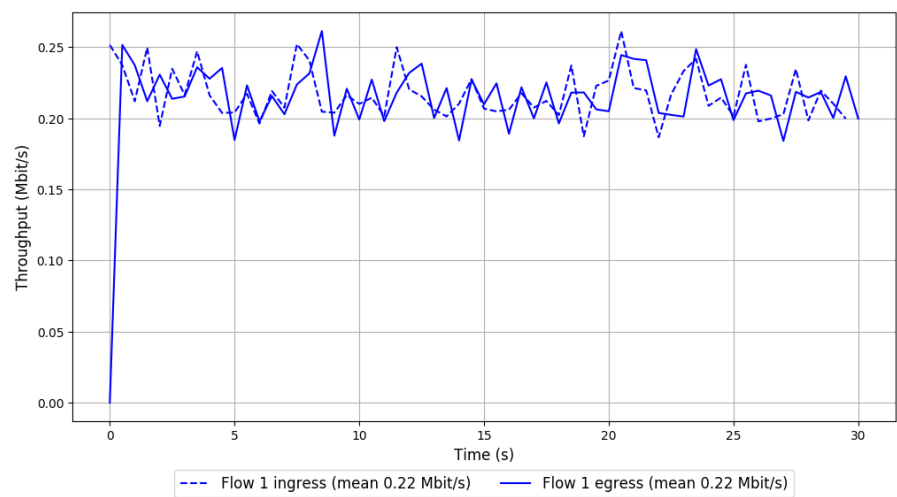


```
Run 1: Statistics of SCReAM

Start at: 2018-09-07 10:08:49
End at: 2018-09-07 10:09:19
Local clock offset: -7.57 ms
Remote clock offset: 0.335 ms

# Below is generated by plot.py at 2018-09-07 11:46:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.649 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.649 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2018-09-07 10:28:51

End at: 2018-09-07 10:29:21

Local clock offset: -8.59 ms

Remote clock offset: 0.456 ms

Below is generated by plot.py at 2018-09-07 11:46:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.653 ms

Loss rate: 0.00%

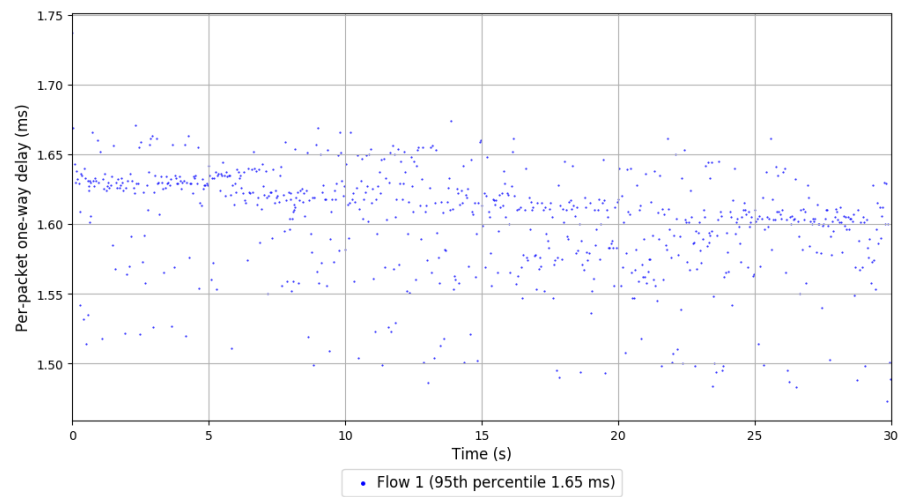
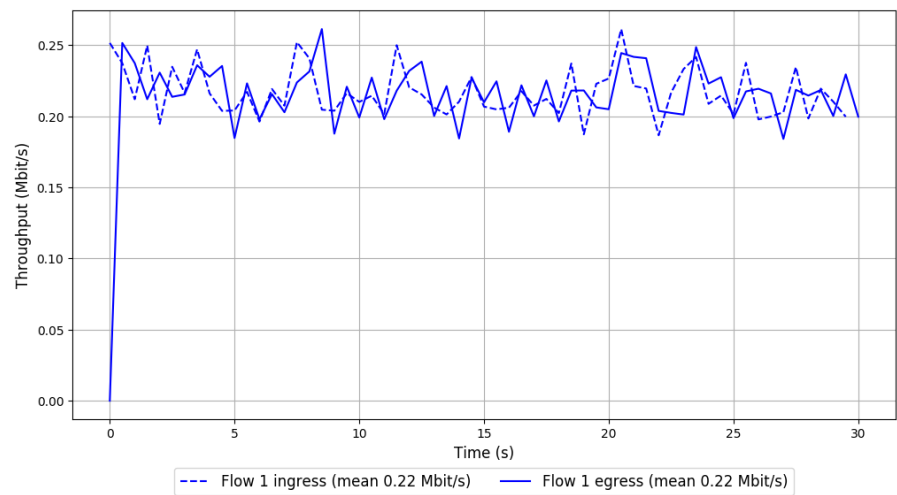
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.653 ms

Loss rate: 0.00%

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2018-09-07 10:48:50

End at: 2018-09-07 10:49:20

Local clock offset: -7.004 ms

Remote clock offset: 0.554 ms

Below is generated by plot.py at 2018-09-07 11:46:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 2.088 ms

Loss rate: 0.00%

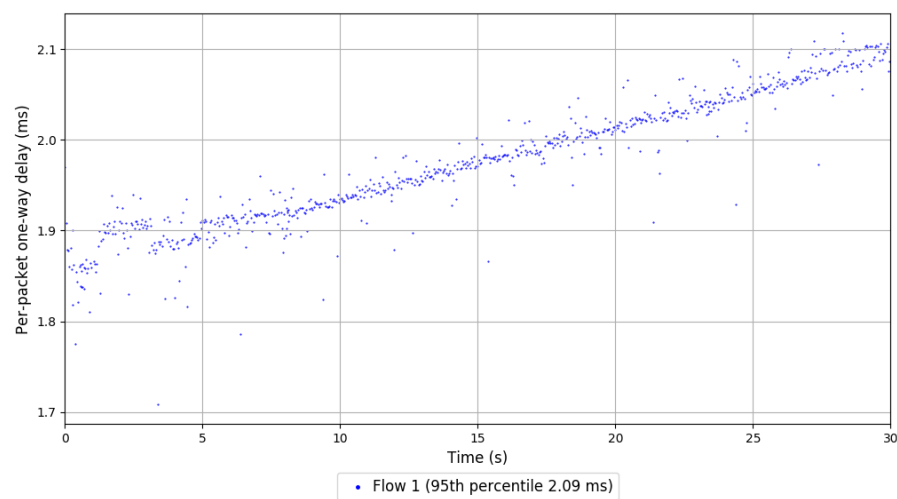
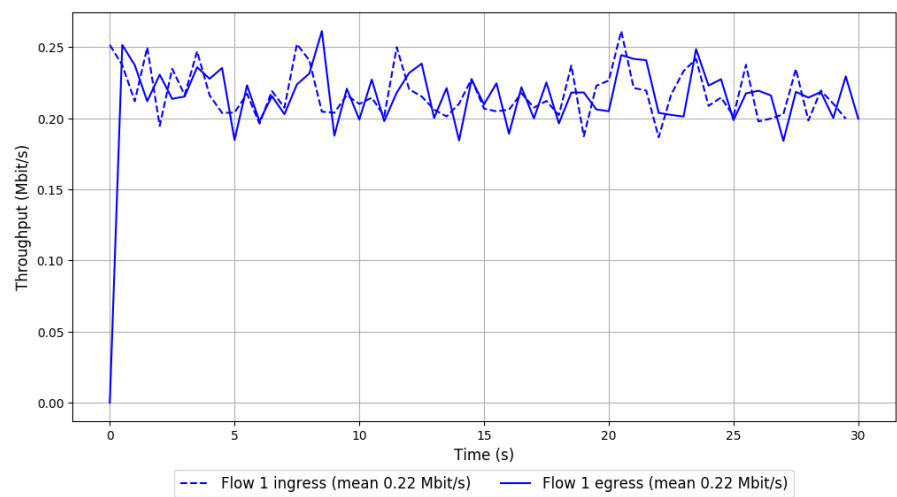
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 2.088 ms

Loss rate: 0.00%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2018-09-07 11:08:50

End at: 2018-09-07 11:09:20

Local clock offset: -3.048 ms

Remote clock offset: 0.657 ms

Below is generated by plot.py at 2018-09-07 11:46:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 2.546 ms

Loss rate: 0.00%

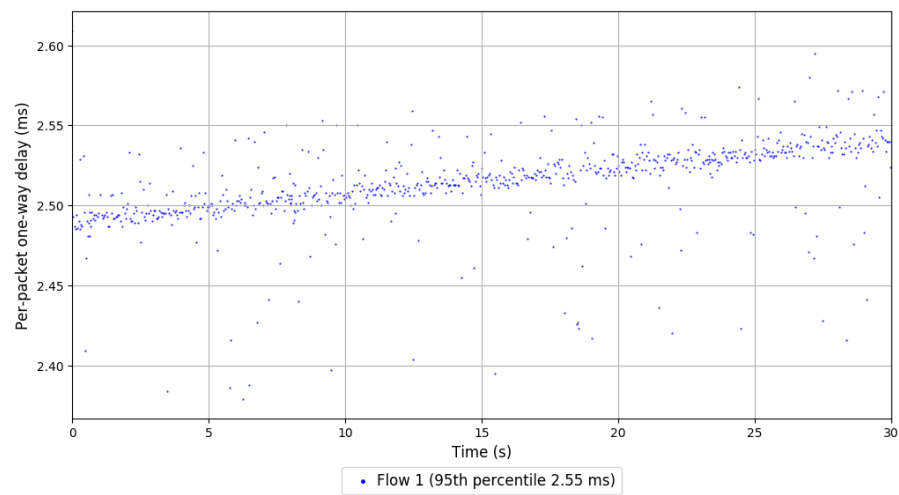
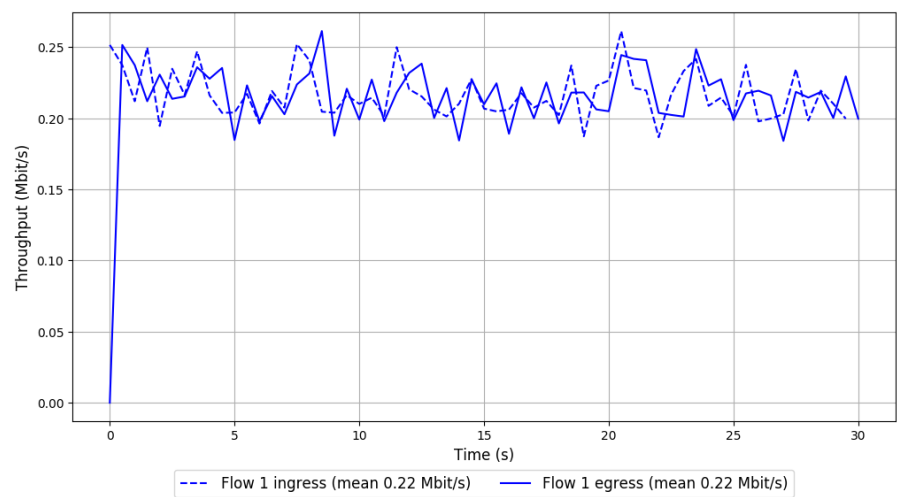
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 2.546 ms

Loss rate: 0.00%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2018-09-07 11:28:53

End at: 2018-09-07 11:29:23

Local clock offset: -3.365 ms

Remote clock offset: 0.683 ms

Below is generated by plot.py at 2018-09-07 11:46:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 0.921 ms

Loss rate: 0.00%

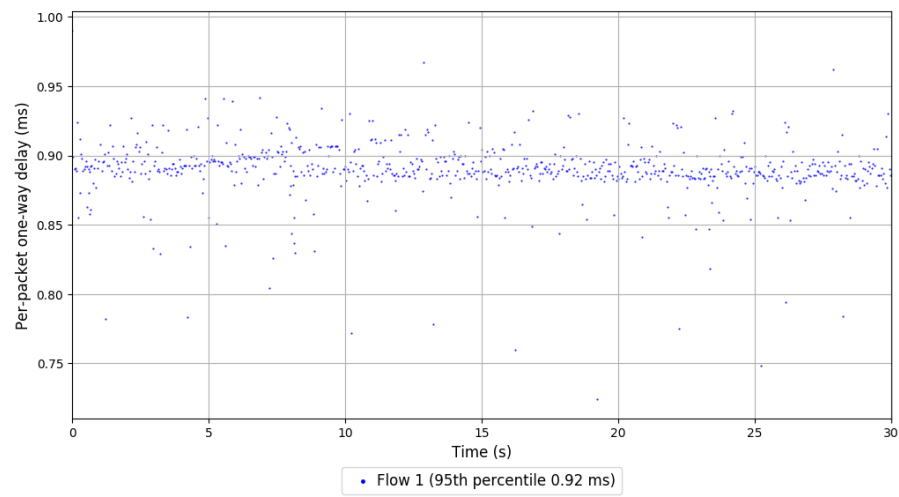
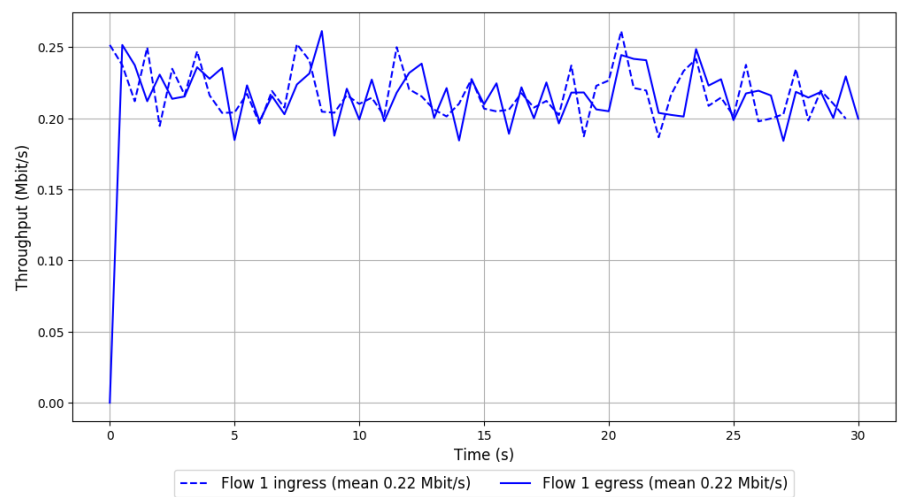
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 0.921 ms

Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2018-09-07 10:11:02

End at: 2018-09-07 10:11:32

Local clock offset: -7.688 ms

Remote clock offset: 0.346 ms

Below is generated by plot.py at 2018-09-07 11:46:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 50.35 Mbit/s

95th percentile per-packet one-way delay: 11.064 ms

Loss rate: 0.00%

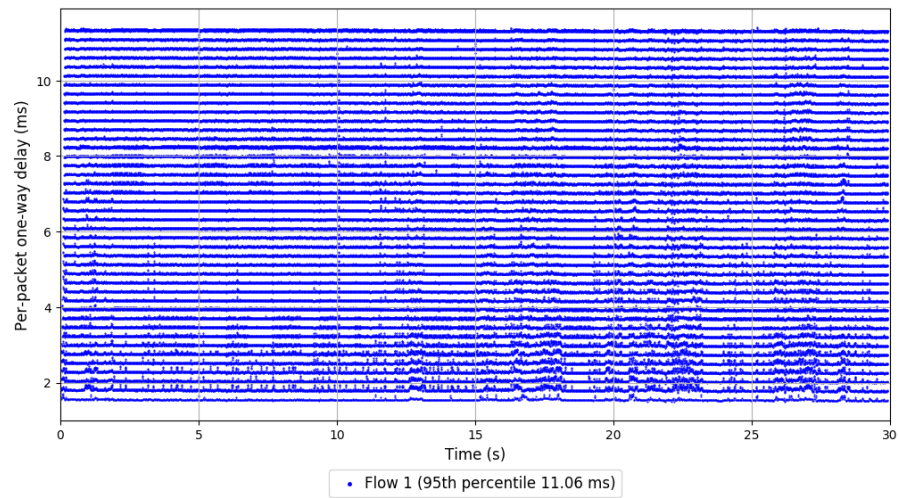
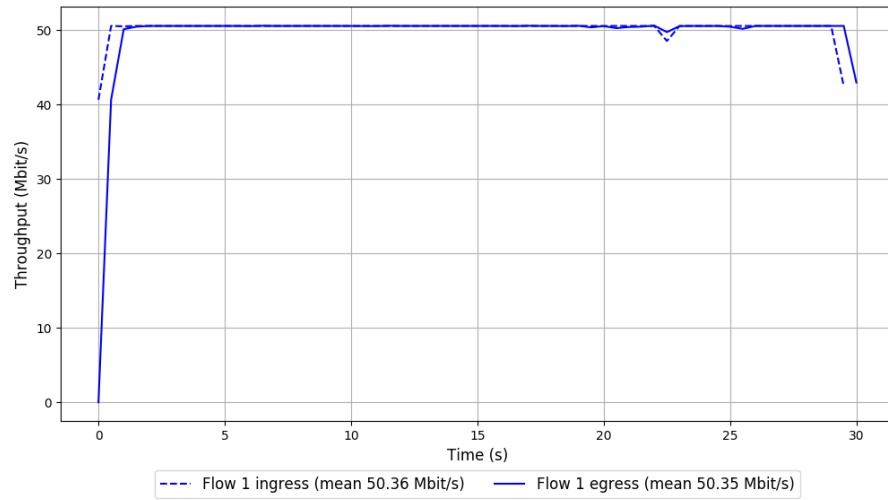
-- Flow 1:

Average throughput: 50.35 Mbit/s

95th percentile per-packet one-way delay: 11.064 ms

Loss rate: 0.00%

Run 1: Report of Sprout — Data Link

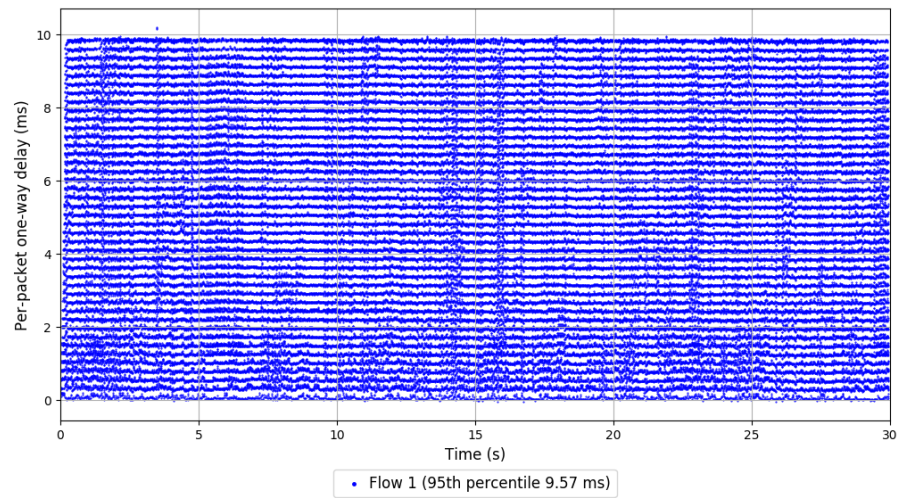
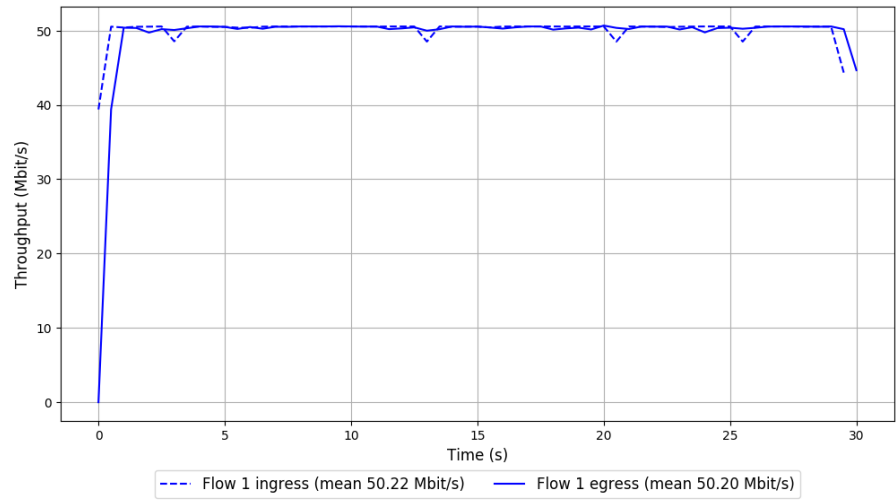


Run 2: Statistics of Sprout

Start at: 2018-09-07 10:31:03
End at: 2018-09-07 10:31:33
Local clock offset: -8.692 ms
Remote clock offset: 0.428 ms

Below is generated by plot.py at 2018-09-07 11:46:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 50.20 Mbit/s
95th percentile per-packet one-way delay: 9.567 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.20 Mbit/s
95th percentile per-packet one-way delay: 9.567 ms
Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

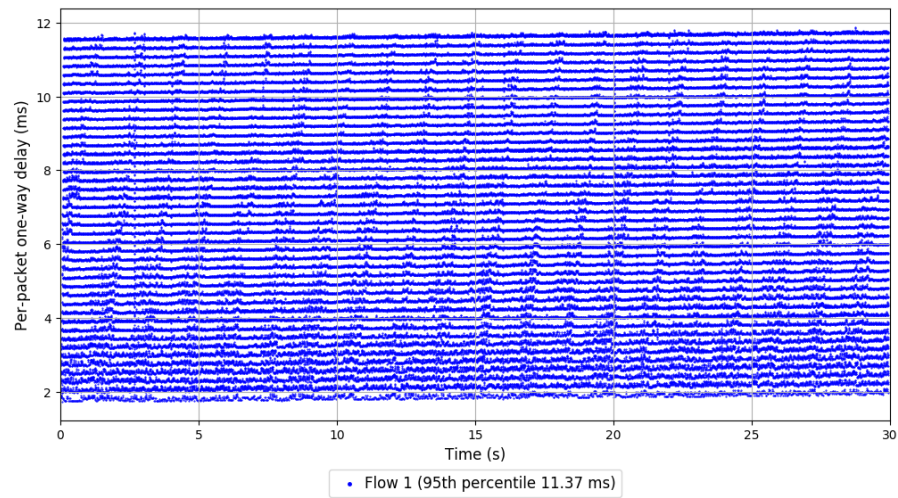
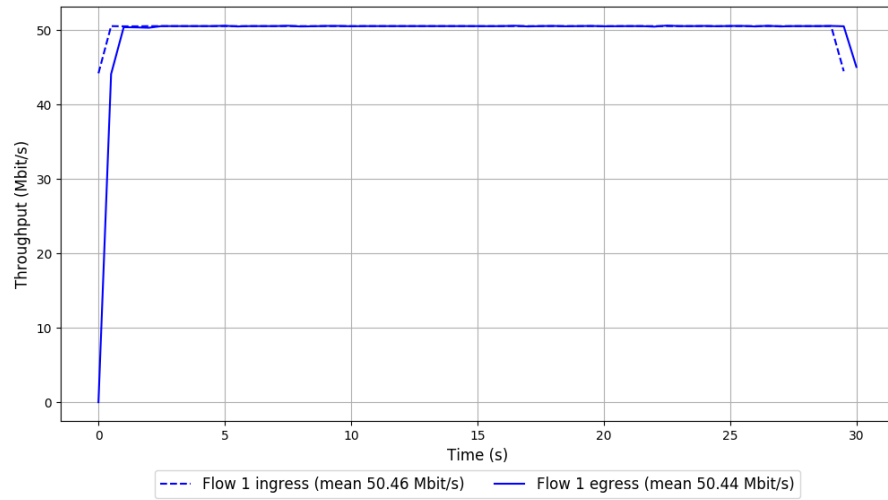


Run 3: Statistics of Sprout

Start at: 2018-09-07 10:51:03
End at: 2018-09-07 10:51:33
Local clock offset: -5.954 ms
Remote clock offset: 0.59 ms

Below is generated by plot.py at 2018-09-07 11:46:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 50.44 Mbit/s
95th percentile per-packet one-way delay: 11.365 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.44 Mbit/s
95th percentile per-packet one-way delay: 11.365 ms
Loss rate: 0.00%

Run 3: Report of Sprout — Data Link

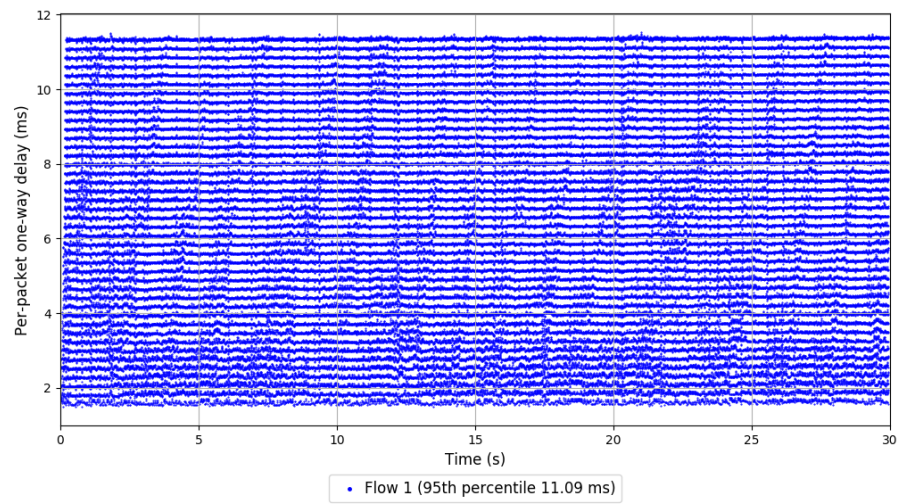
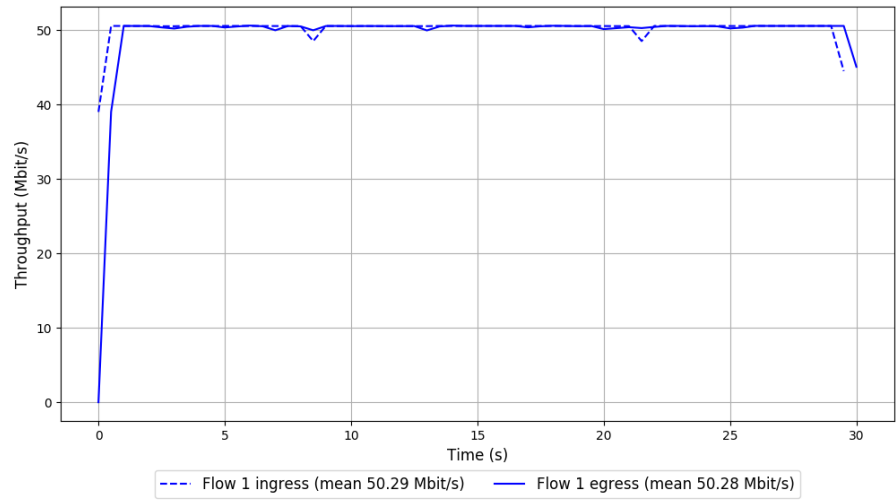


Run 4: Statistics of Sprout

Start at: 2018-09-07 11:11:03
End at: 2018-09-07 11:11:33
Local clock offset: -2.021 ms
Remote clock offset: 0.565 ms

Below is generated by plot.py at 2018-09-07 11:46:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 50.28 Mbit/s
95th percentile per-packet one-way delay: 11.089 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.28 Mbit/s
95th percentile per-packet one-way delay: 11.089 ms
Loss rate: 0.00%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-09-07 11:31:05

End at: 2018-09-07 11:31:35

Local clock offset: -3.347 ms

Remote clock offset: 0.715 ms

Below is generated by plot.py at 2018-09-07 11:46:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 50.22 Mbit/s

95th percentile per-packet one-way delay: 10.378 ms

Loss rate: 0.00%

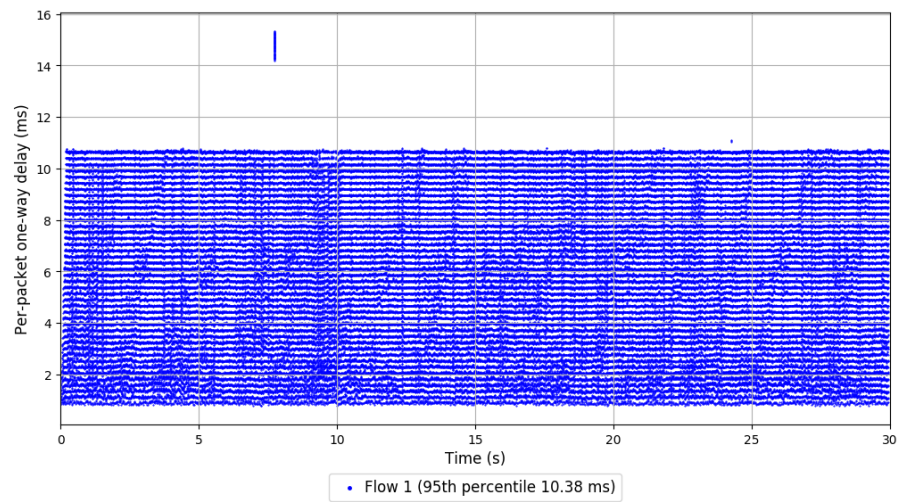
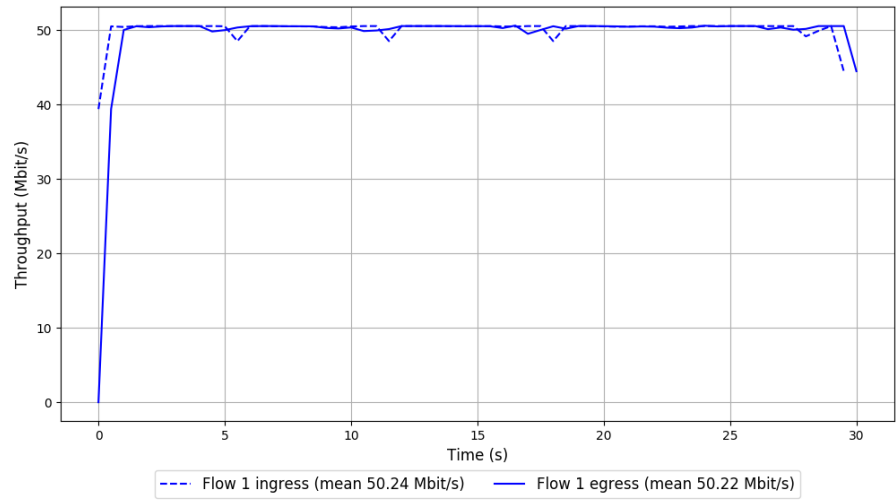
-- Flow 1:

Average throughput: 50.22 Mbit/s

95th percentile per-packet one-way delay: 10.378 ms

Loss rate: 0.00%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2018-09-07 10:14:21

End at: 2018-09-07 10:14:51

Local clock offset: -7.879 ms

Remote clock offset: 0.287 ms

Below is generated by plot.py at 2018-09-07 11:46:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 10.05 Mbit/s

95th percentile per-packet one-way delay: 0.125 ms

Loss rate: 81.15%

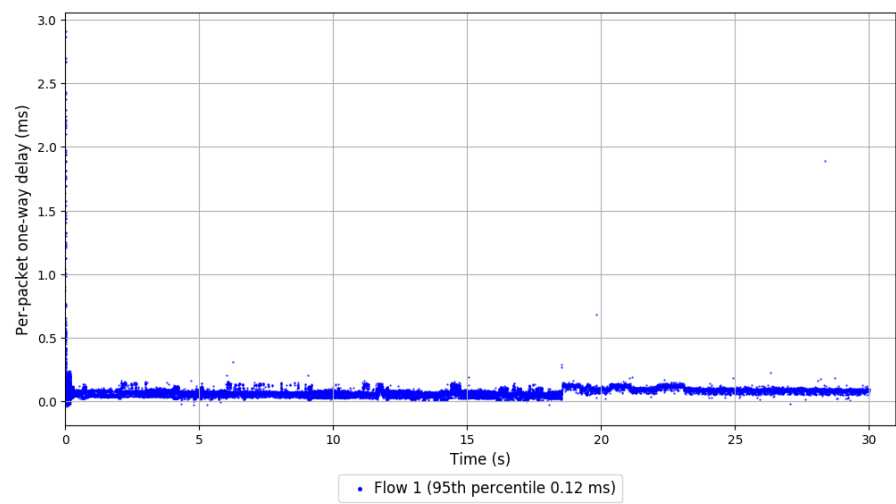
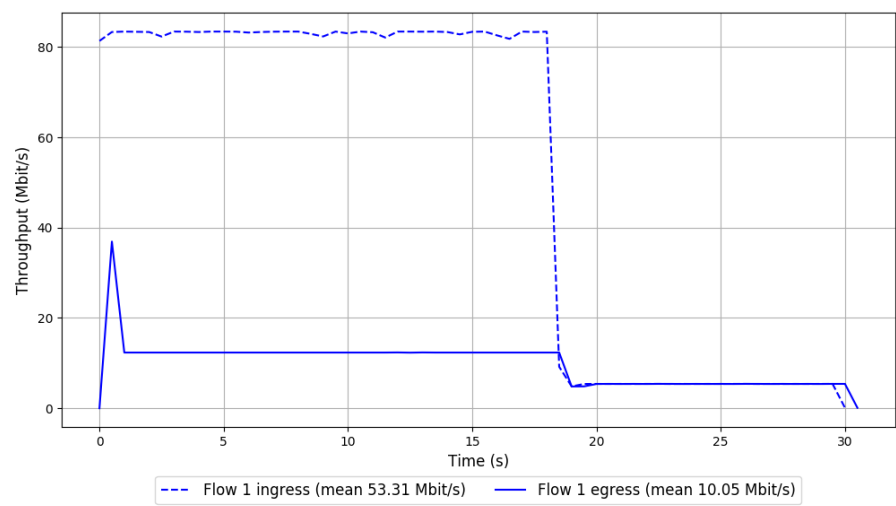
-- Flow 1:

Average throughput: 10.05 Mbit/s

95th percentile per-packet one-way delay: 0.125 ms

Loss rate: 81.15%

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



Run 2: Statistics of TaoVA-100x

Start at: 2018-09-07 10:34:23

End at: 2018-09-07 10:34:53

Local clock offset: -9.599 ms

Remote clock offset: 0.518 ms

Below is generated by plot.py at 2018-09-07 11:46:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 7.93 Mbit/s

95th percentile per-packet one-way delay: 0.986 ms

Loss rate: 72.90%

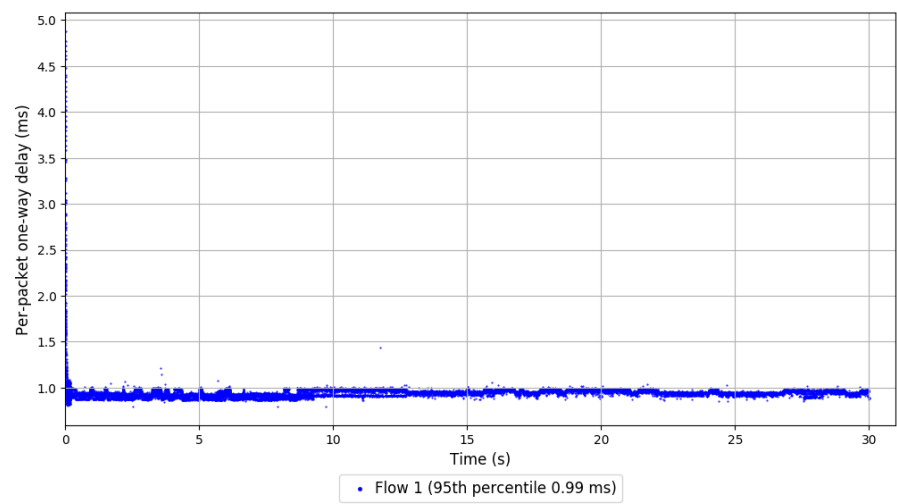
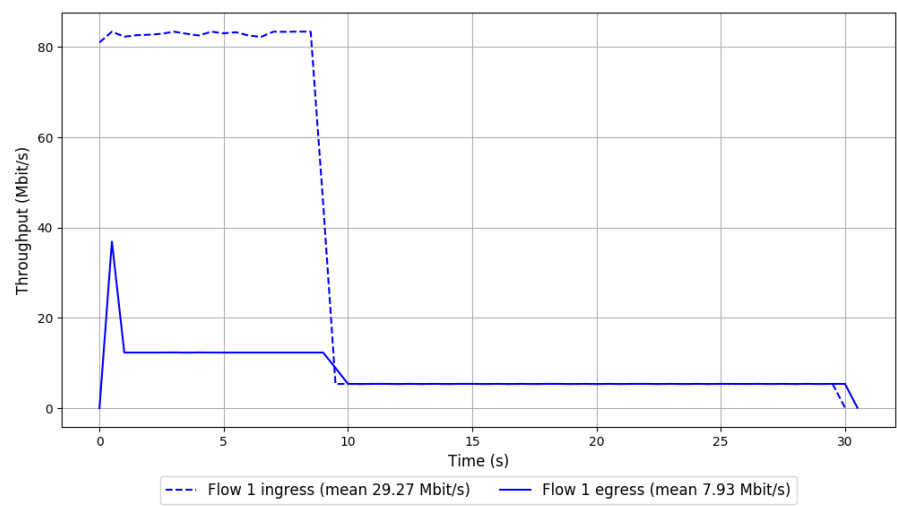
-- Flow 1:

Average throughput: 7.93 Mbit/s

95th percentile per-packet one-way delay: 0.986 ms

Loss rate: 72.90%

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-09-07 10:54:23

End at: 2018-09-07 10:54:53

Local clock offset: -4.848 ms

Remote clock offset: 0.453 ms

Below is generated by plot.py at 2018-09-07 11:46:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 10.07 Mbit/s

95th percentile per-packet one-way delay: 1.834 ms

Loss rate: 81.14%

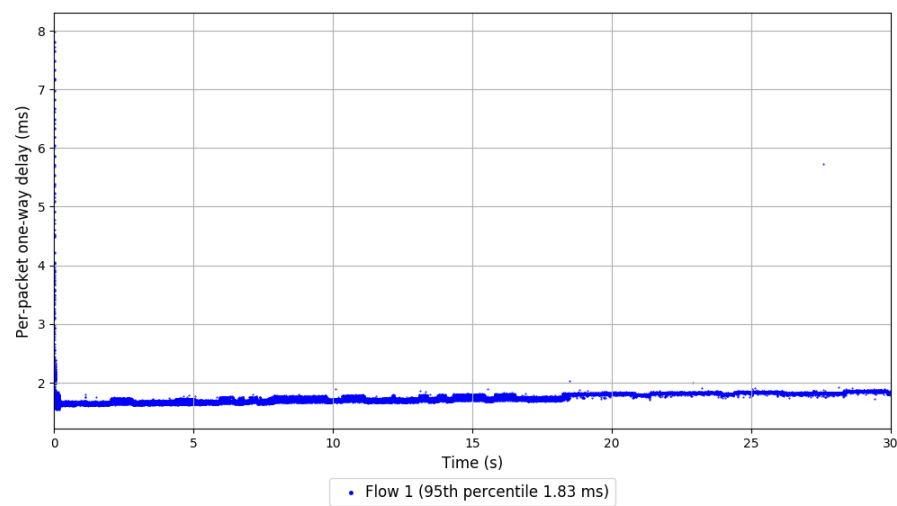
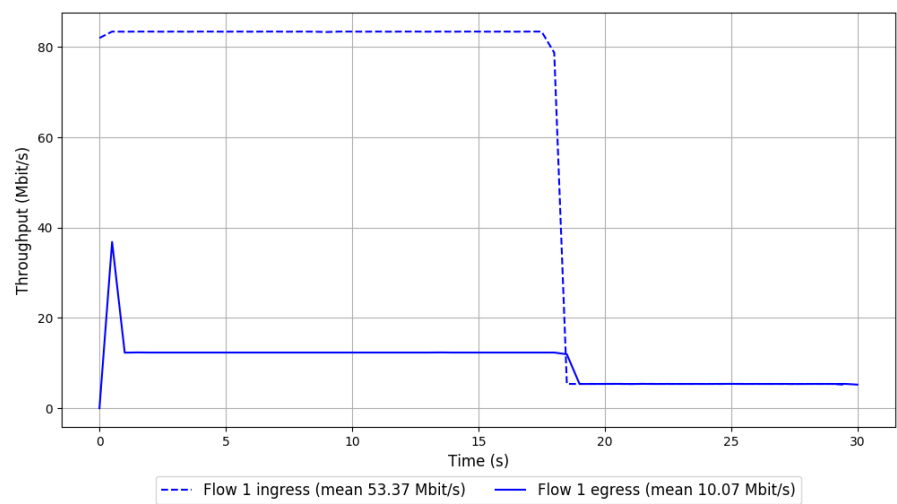
-- Flow 1:

Average throughput: 10.07 Mbit/s

95th percentile per-packet one-way delay: 1.834 ms

Loss rate: 81.14%

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-09-07 11:14:22

End at: 2018-09-07 11:14:52

Local clock offset: -1.64 ms

Remote clock offset: 0.779 ms

Below is generated by plot.py at 2018-09-07 11:46:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 10.07 Mbit/s

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

Loss rate: 81.14%

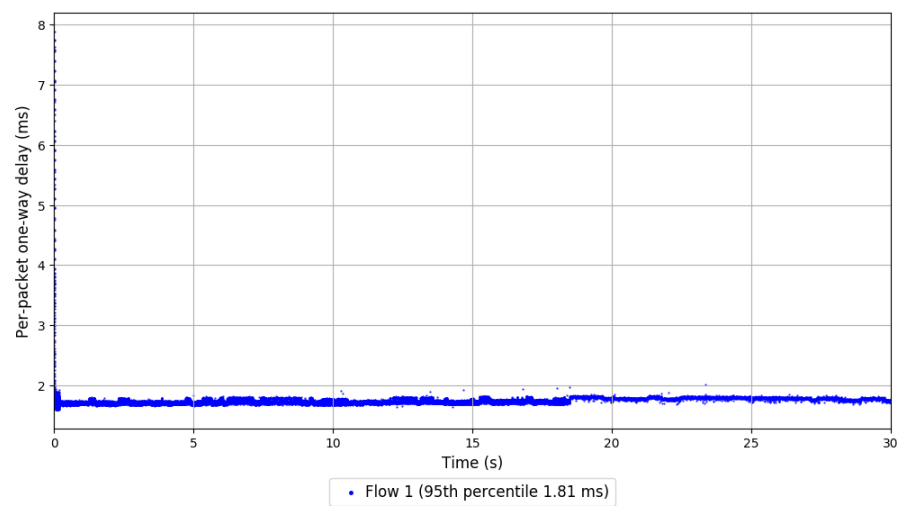
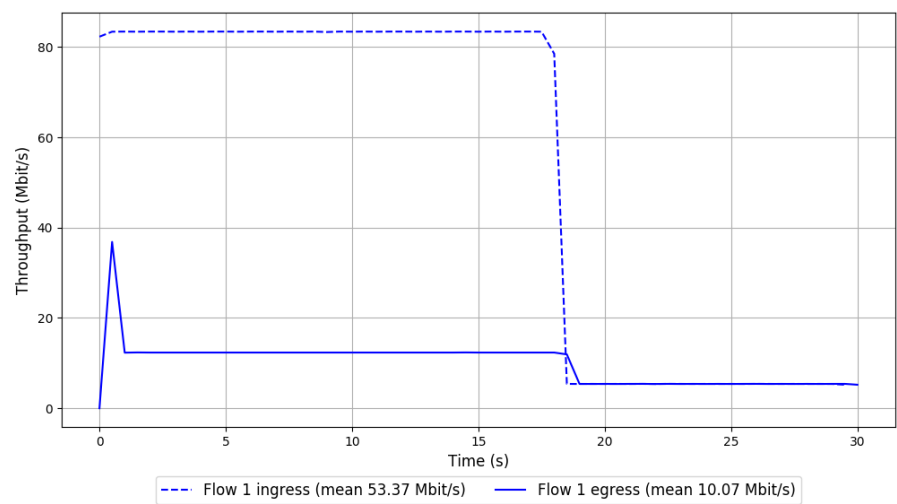
-- Flow 1:

Average throughput: 10.07 Mbit/s

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

Loss rate: 81.14%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-09-07 11:34:24

End at: 2018-09-07 11:34:54

Local clock offset: -3.387 ms

Remote clock offset: 0.779 ms

Below is generated by plot.py at 2018-09-07 11:46:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 10.06 Mbit/s

95th percentile per-packet one-way delay: 2.553 ms

Loss rate: 81.13%

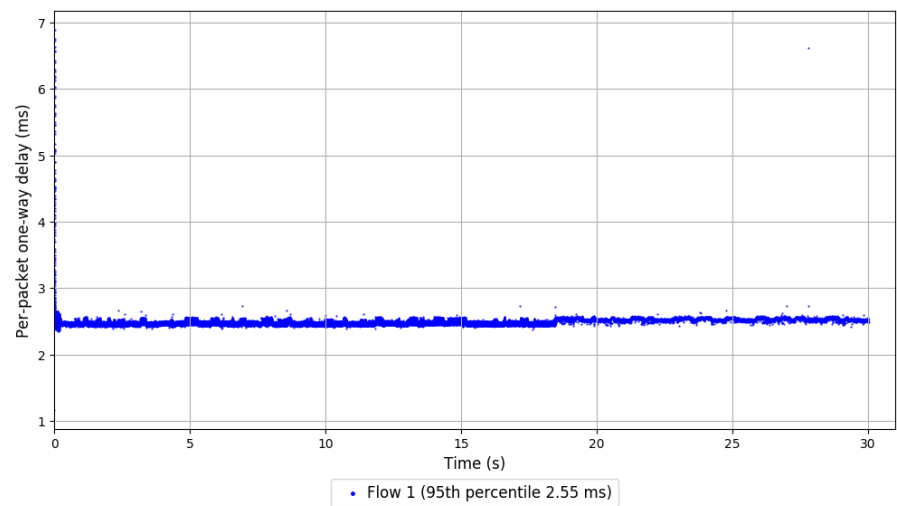
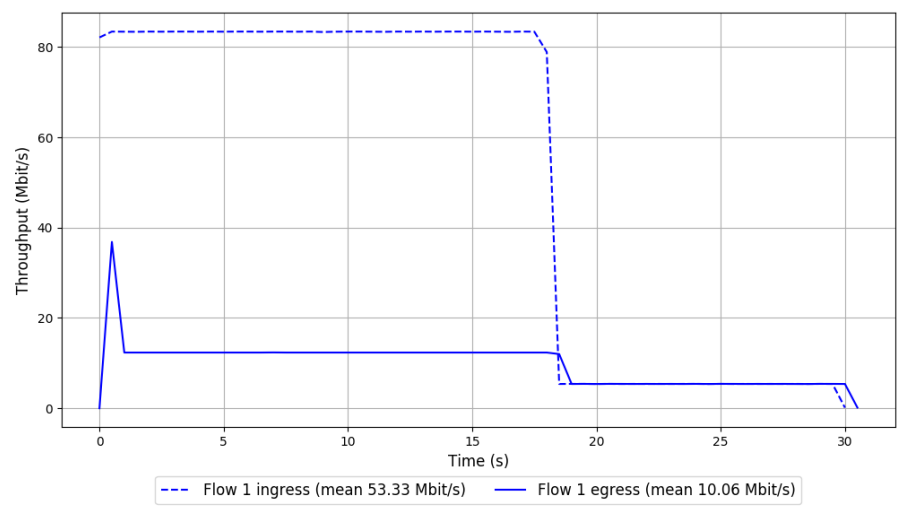
-- Flow 1:

Average throughput: 10.06 Mbit/s

95th percentile per-packet one-way delay: 2.553 ms

Loss rate: 81.13%

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



Run 1: Statistics of TCP Vegas

Start at: 2018-09-07 10:13:13

End at: 2018-09-07 10:13:43

Local clock offset: -8.59 ms

Remote clock offset: 0.295 ms

Below is generated by plot.py at 2018-09-07 11:47:22

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.38 Mbit/s

95th percentile per-packet one-way delay: 2.086 ms

Loss rate: 0.00%

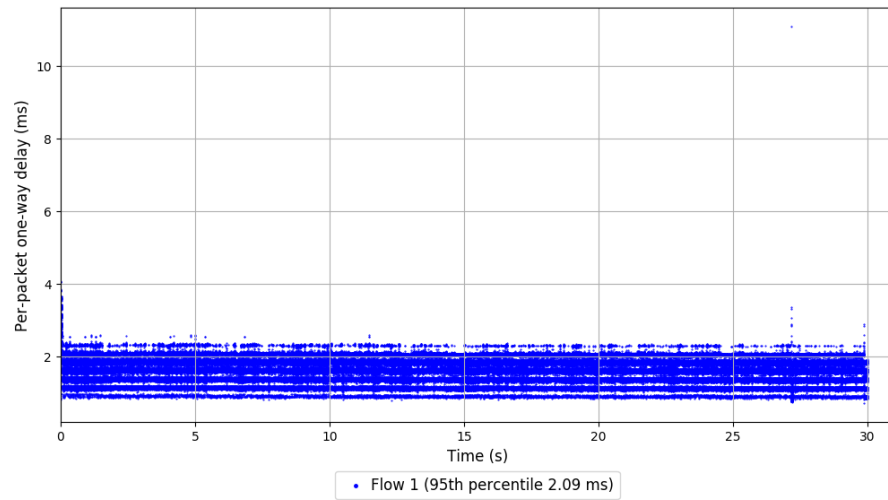
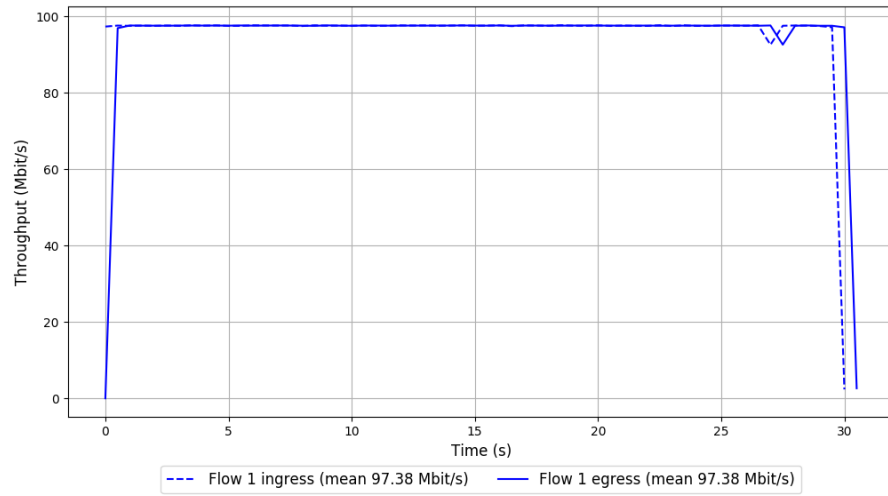
-- Flow 1:

Average throughput: 97.38 Mbit/s

95th percentile per-packet one-way delay: 2.086 ms

Loss rate: 0.00%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-09-07 10:33:15

End at: 2018-09-07 10:33:45

Local clock offset: -8.85 ms

Remote clock offset: 0.424 ms

Below is generated by plot.py at 2018-09-07 11:47:24

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.44 Mbit/s

95th percentile per-packet one-way delay: 3.091 ms

Loss rate: 0.00%

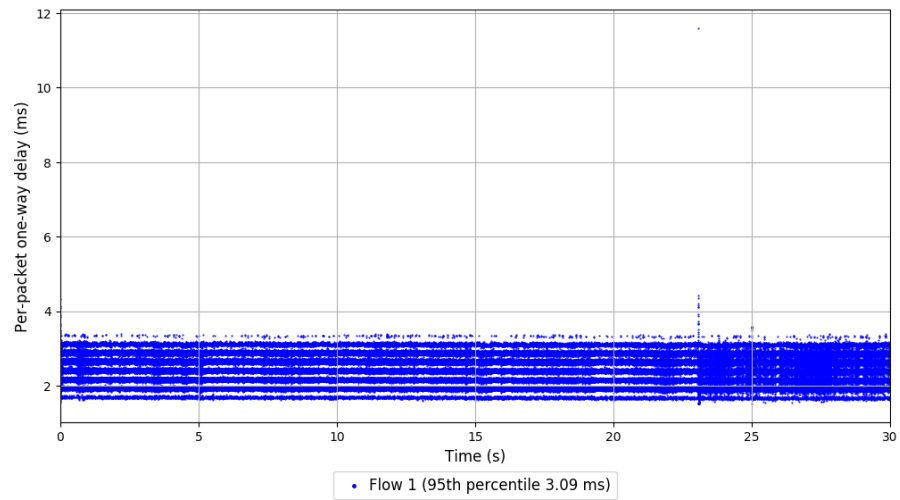
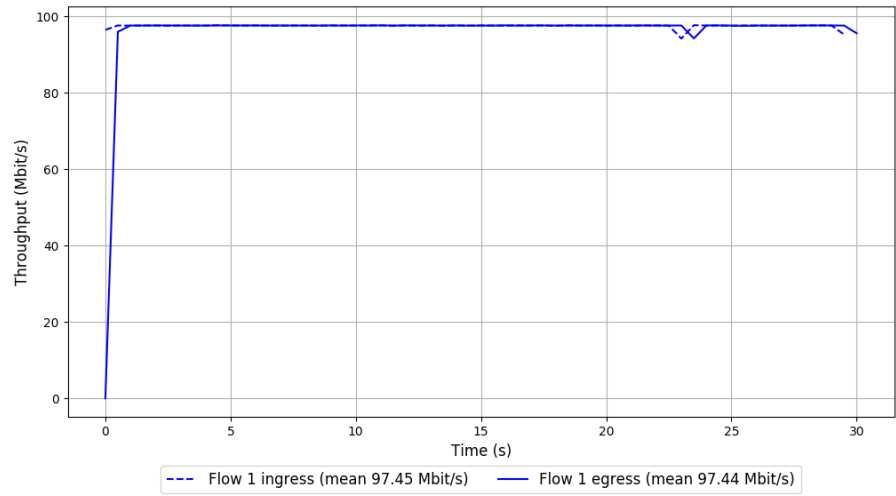
-- Flow 1:

Average throughput: 97.44 Mbit/s

95th percentile per-packet one-way delay: 3.091 ms

Loss rate: 0.00%

Run 2: Report of TCP Vegas — Data Link

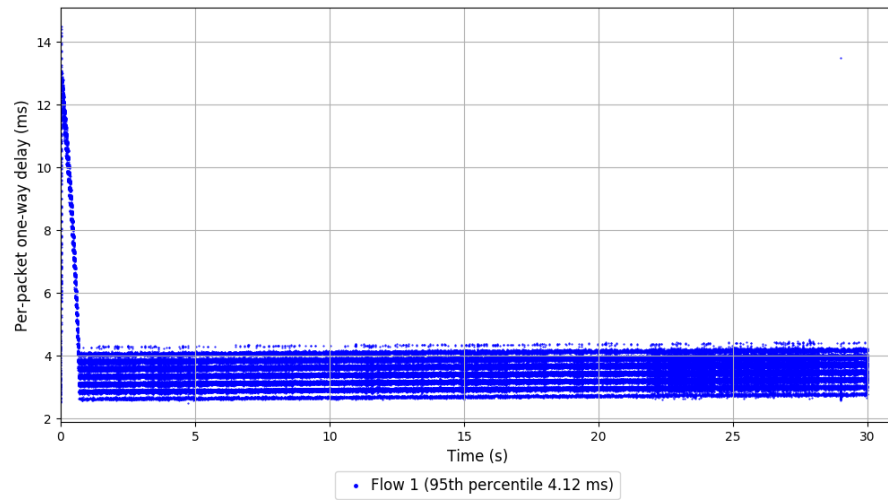
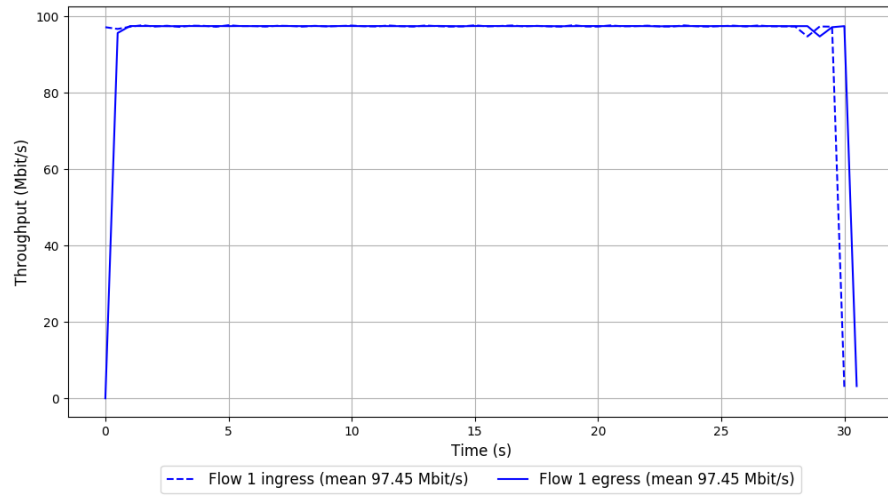


Run 3: Statistics of TCP Vegas

Start at: 2018-09-07 10:53:15
End at: 2018-09-07 10:53:45
Local clock offset: -5.932 ms
Remote clock offset: 0.568 ms

Below is generated by plot.py at 2018-09-07 11:47:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 97.45 Mbit/s
95th percentile per-packet one-way delay: 4.123 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 97.45 Mbit/s
95th percentile per-packet one-way delay: 4.123 ms
Loss rate: 0.00%

Run 3: Report of TCP Vegas — Data Link

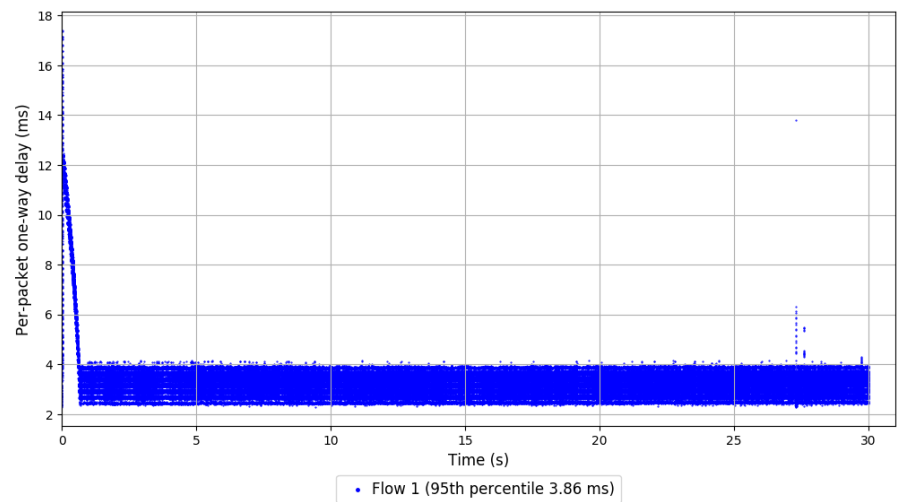
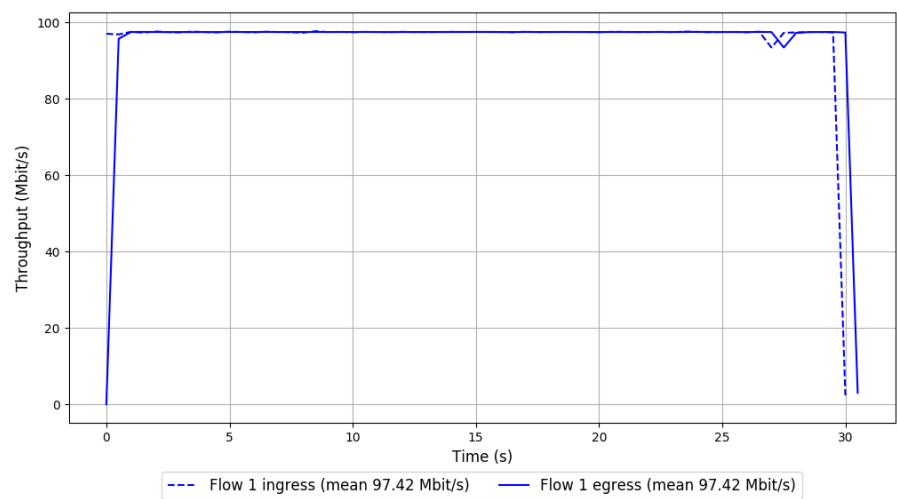


Run 4: Statistics of TCP Vegas

Start at: 2018-09-07 11:13:14
End at: 2018-09-07 11:13:45
Local clock offset: -2.534 ms
Remote clock offset: 0.602 ms

Below is generated by plot.py at 2018-09-07 11:47:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 97.42 Mbit/s
95th percentile per-packet one-way delay: 3.862 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 97.42 Mbit/s
95th percentile per-packet one-way delay: 3.862 ms
Loss rate: 0.00%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-09-07 11:33:16

End at: 2018-09-07 11:33:46

Local clock offset: -2.568 ms

Remote clock offset: 0.714 ms

Below is generated by plot.py at 2018-09-07 11:47:37

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.37 Mbit/s

95th percentile per-packet one-way delay: 1.351 ms

Loss rate: 0.00%

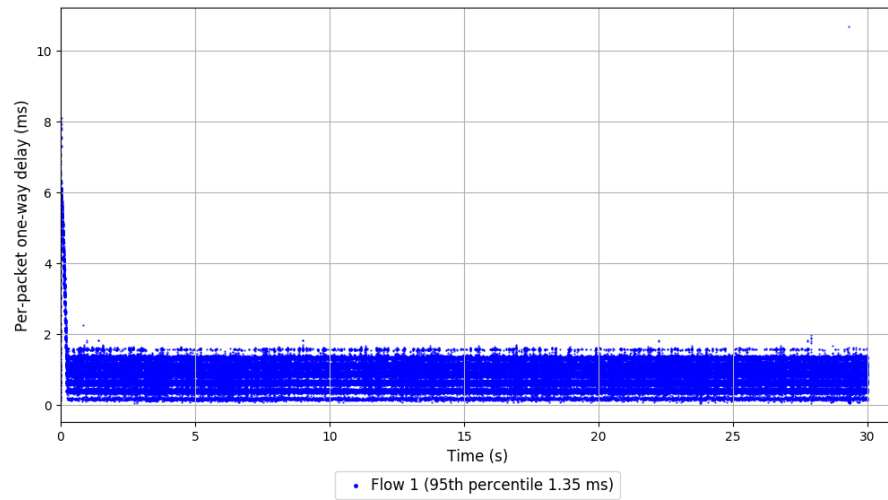
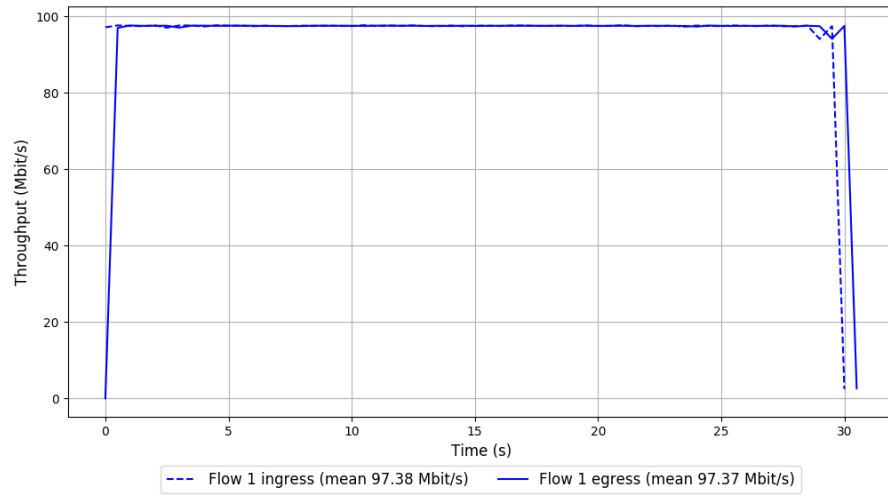
-- Flow 1:

Average throughput: 97.37 Mbit/s

95th percentile per-packet one-way delay: 1.351 ms

Loss rate: 0.00%

Run 5: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2018-09-07 10:07:42

End at: 2018-09-07 10:08:12

Local clock offset: -7.554 ms

Remote clock offset: 0.323 ms

Below is generated by plot.py at 2018-09-07 11:47:37

Datalink statistics

-- Total of 1 flow:

Average throughput: 51.35 Mbit/s

95th percentile per-packet one-way delay: 3.720 ms

Loss rate: 1.27%

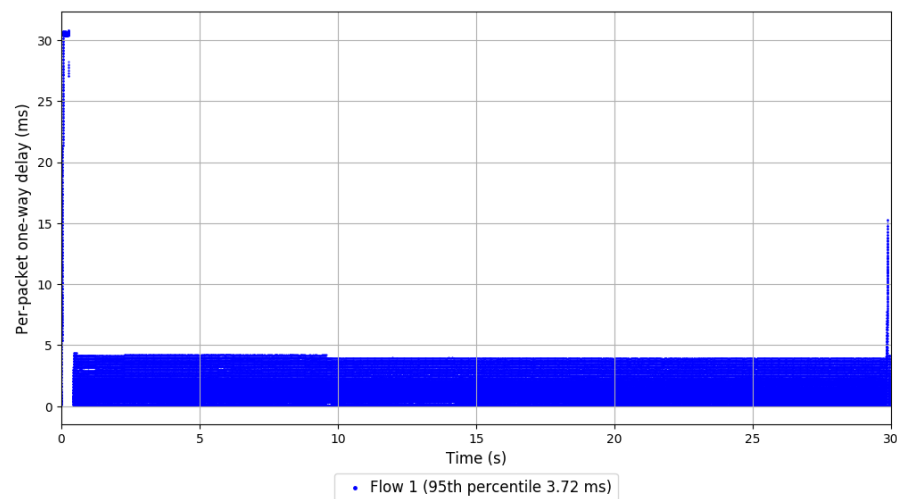
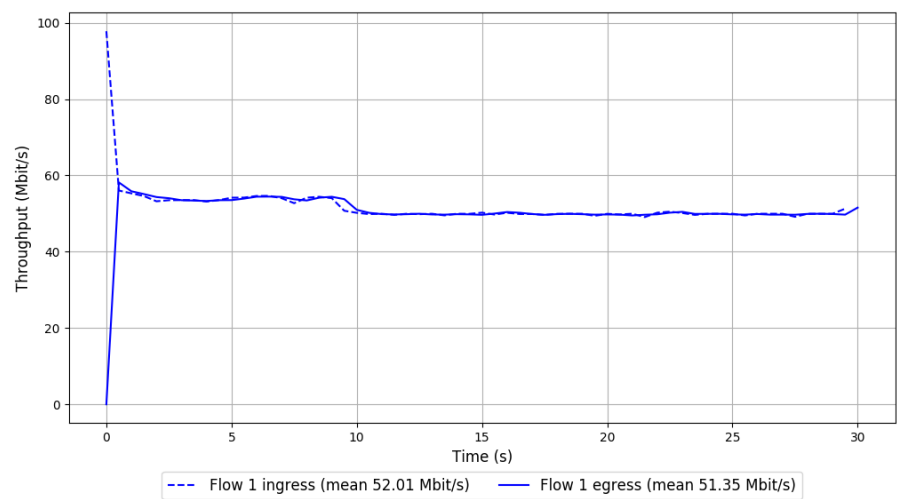
-- Flow 1:

Average throughput: 51.35 Mbit/s

95th percentile per-packet one-way delay: 3.720 ms

Loss rate: 1.27%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-09-07 10:27:44

End at: 2018-09-07 10:28:14

Local clock offset: -8.602 ms

Remote clock offset: 0.433 ms

Below is generated by plot.py at 2018-09-07 11:47:37

Datalink statistics

-- Total of 1 flow:

Average throughput: 48.01 Mbit/s

95th percentile per-packet one-way delay: 3.665 ms

Loss rate: 1.35%

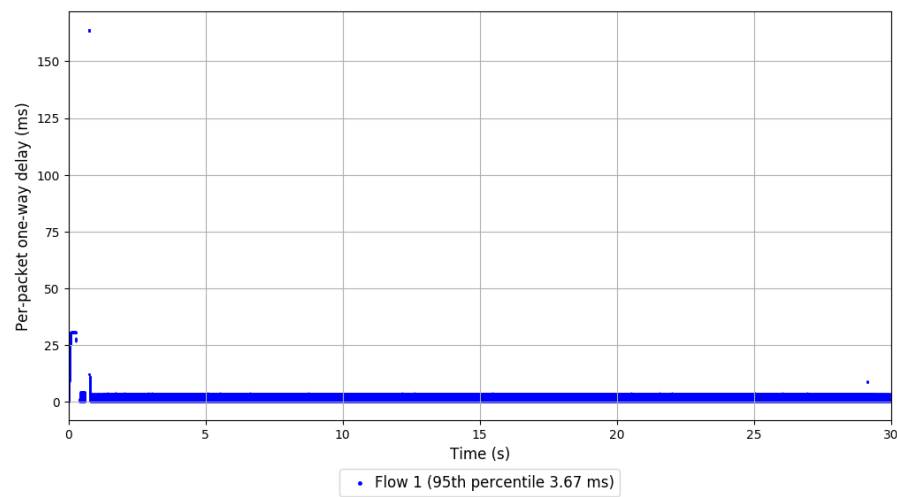
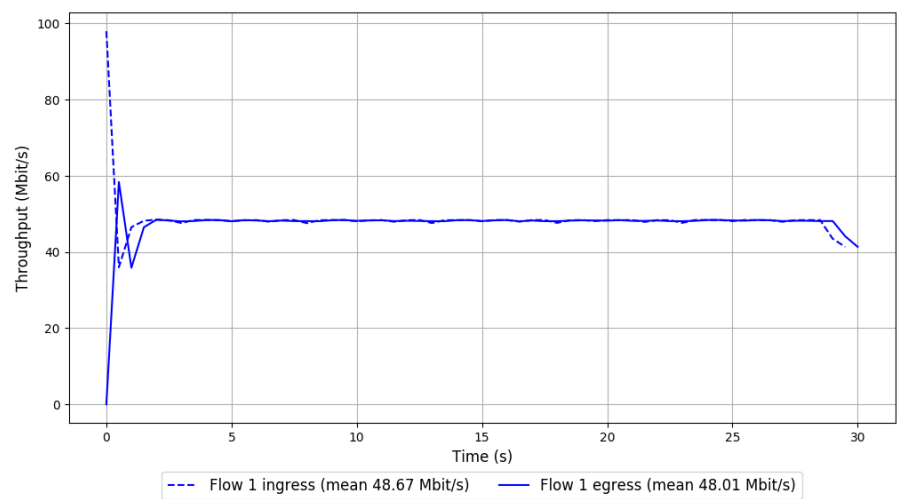
-- Flow 1:

Average throughput: 48.01 Mbit/s

95th percentile per-packet one-way delay: 3.665 ms

Loss rate: 1.35%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-09-07 10:47:43

End at: 2018-09-07 10:48:13

Local clock offset: -8.333 ms

Remote clock offset: 0.582 ms

Below is generated by plot.py at 2018-09-07 11:47:37

Datalink statistics

-- Total of 1 flow:

Average throughput: 56.31 Mbit/s

95th percentile per-packet one-way delay: 5.246 ms

Loss rate: 1.16%

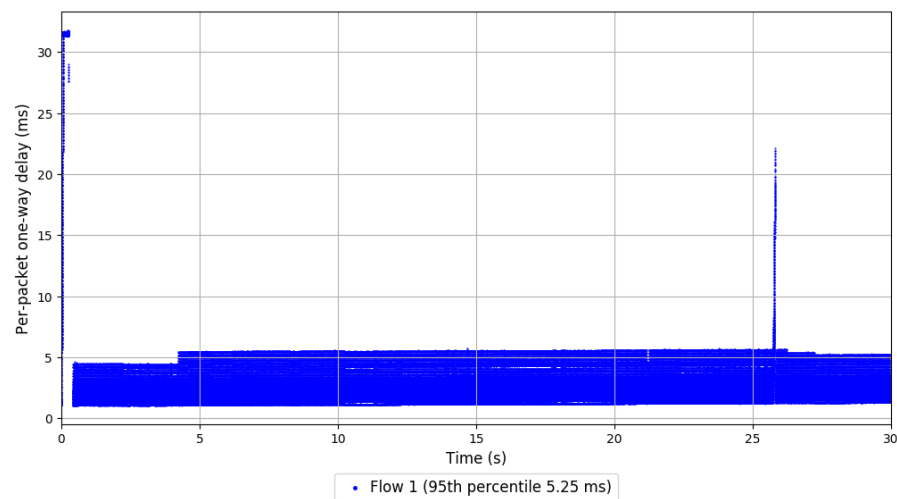
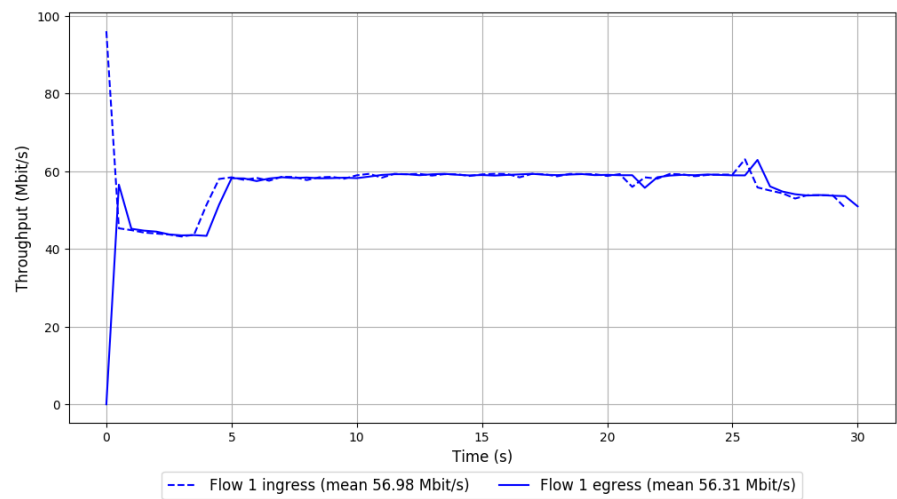
-- Flow 1:

Average throughput: 56.31 Mbit/s

95th percentile per-packet one-way delay: 5.246 ms

Loss rate: 1.16%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-09-07 11:07:43

End at: 2018-09-07 11:08:13

Local clock offset: -3.144 ms

Remote clock offset: 0.716 ms

Below is generated by plot.py at 2018-09-07 11:47:44

Datalink statistics

-- Total of 1 flow:

Average throughput: 56.04 Mbit/s

95th percentile per-packet one-way delay: 4.819 ms

Loss rate: 1.16%

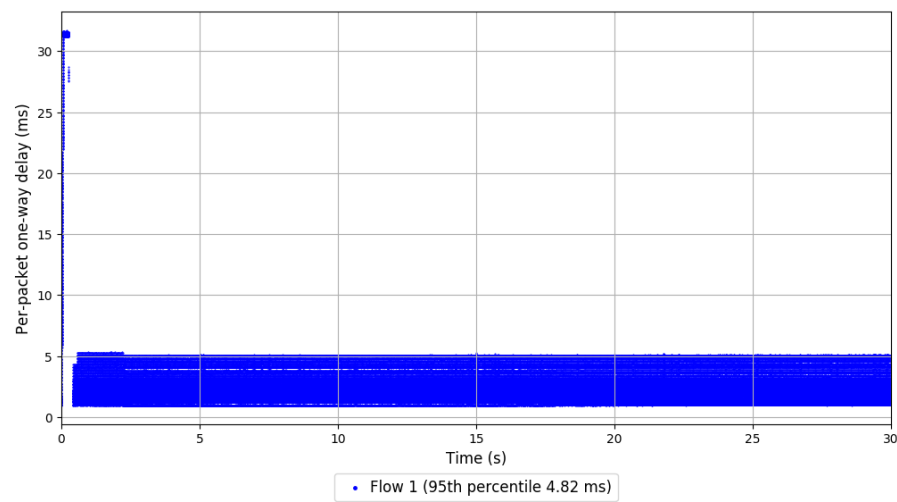
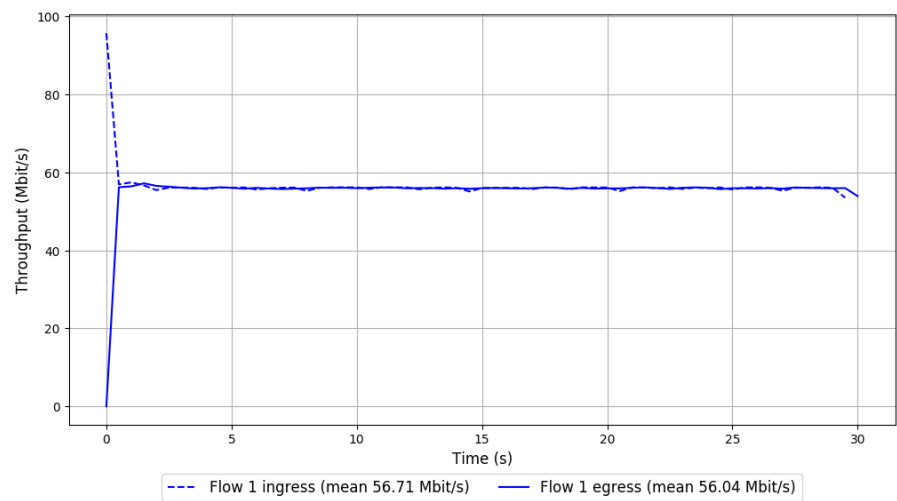
-- Flow 1:

Average throughput: 56.04 Mbit/s

95th percentile per-packet one-way delay: 4.819 ms

Loss rate: 1.16%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-09-07 11:27:45

End at: 2018-09-07 11:28:15

Local clock offset: -2.627 ms

Remote clock offset: 0.75 ms

Below is generated by plot.py at 2018-09-07 11:47:45

Datalink statistics

-- Total of 1 flow:

Average throughput: 56.31 Mbit/s

95th percentile per-packet one-way delay: 4.178 ms

Loss rate: 1.16%

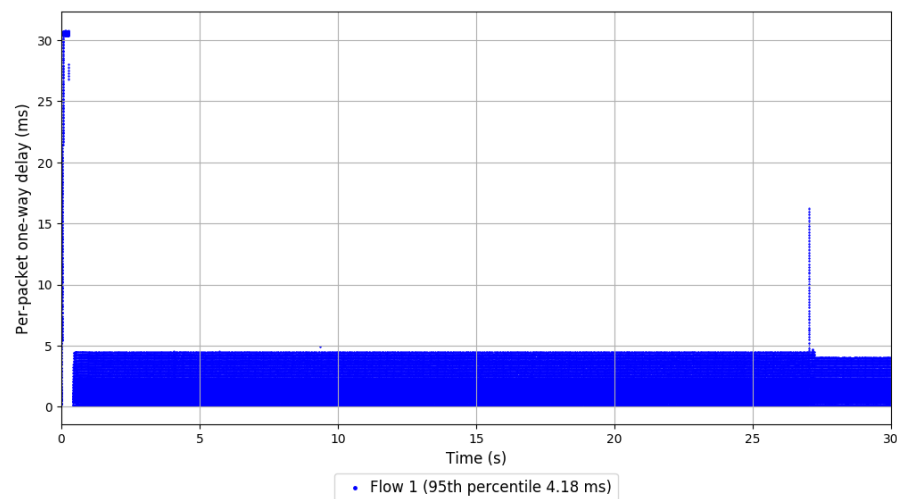
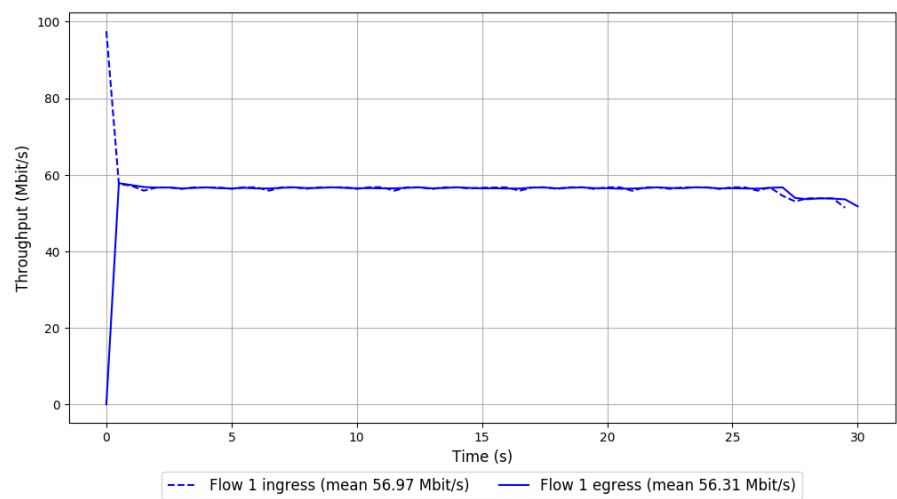
-- Flow 1:

Average throughput: 56.31 Mbit/s

95th percentile per-packet one-way delay: 4.178 ms

Loss rate: 1.16%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2018-09-07 09:58:47

End at: 2018-09-07 09:59:17

Local clock offset: -7.511 ms

Remote clock offset: 0.255 ms

Below is generated by plot.py at 2018-09-07 11:48:05

Datalink statistics

-- Total of 1 flow:

Average throughput: 83.97 Mbit/s

95th percentile per-packet one-way delay: 2.411 ms

Loss rate: 0.00%

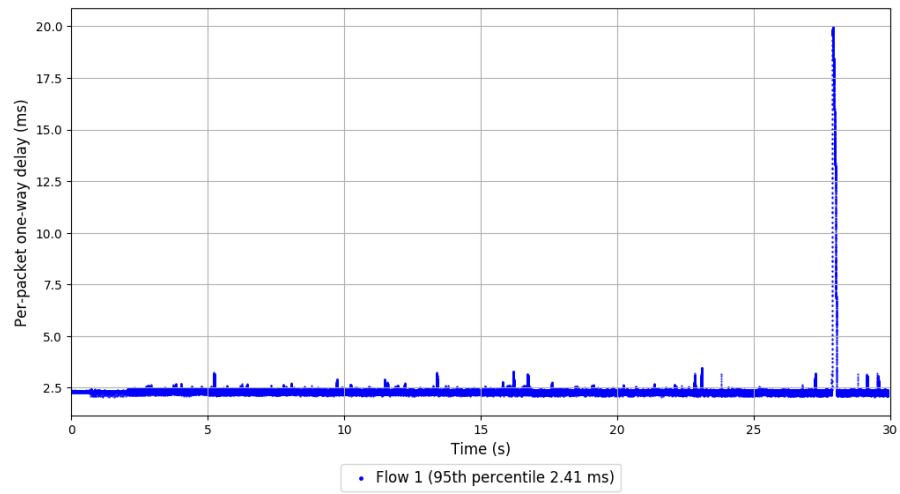
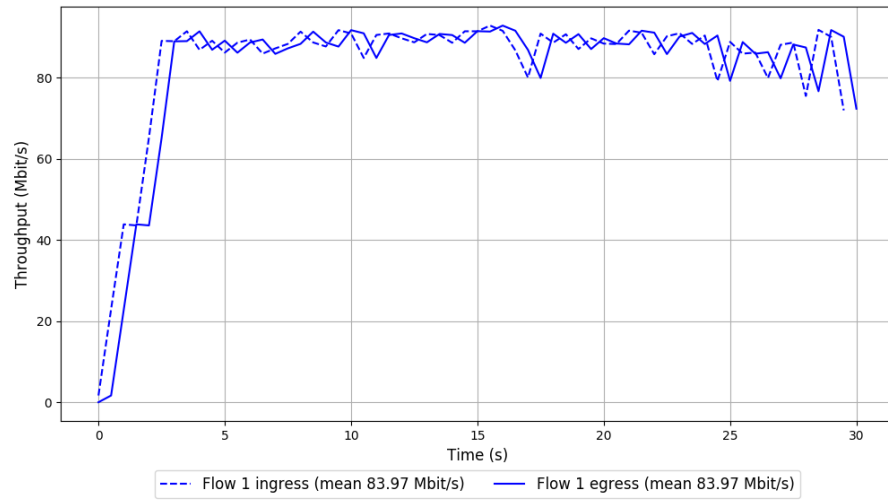
-- Flow 1:

Average throughput: 83.97 Mbit/s

95th percentile per-packet one-way delay: 2.411 ms

Loss rate: 0.00%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2018-09-07 10:18:47

End at: 2018-09-07 10:19:17

Local clock offset: -8.171 ms

Remote clock offset: 0.324 ms

Below is generated by plot.py at 2018-09-07 11:48:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 86.20 Mbit/s

95th percentile per-packet one-way delay: 1.731 ms

Loss rate: 0.00%

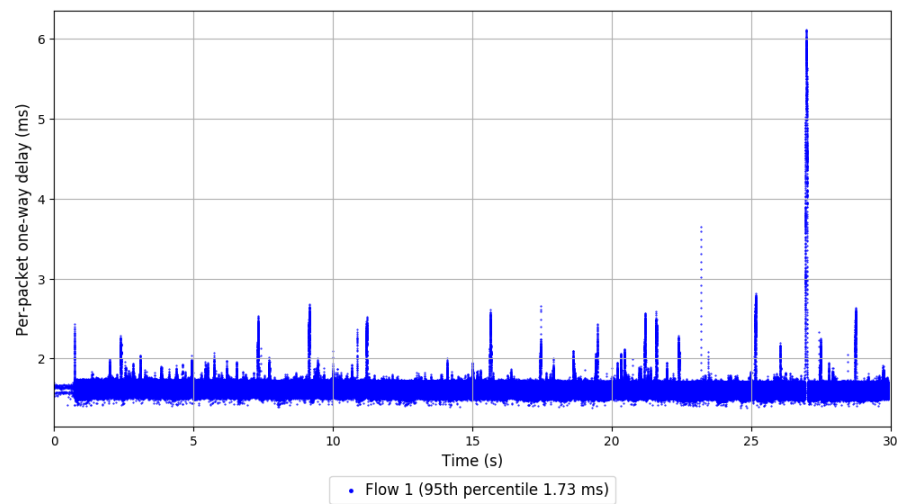
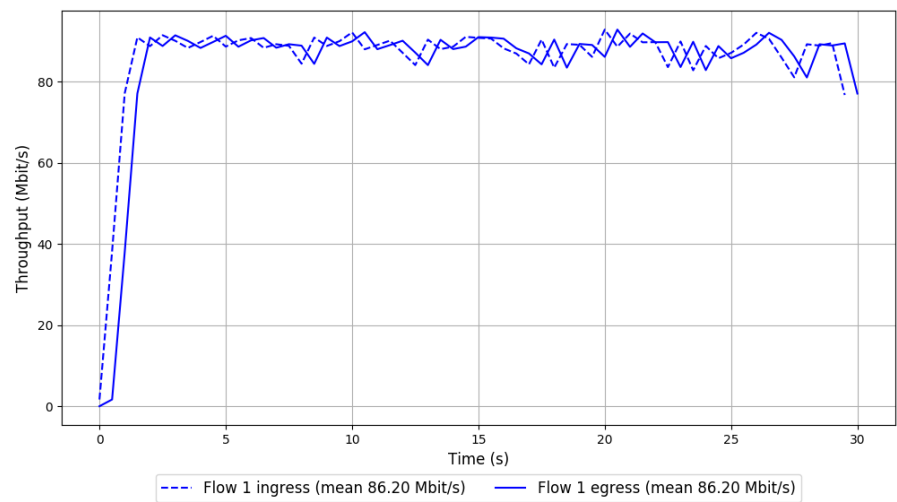
-- Flow 1:

Average throughput: 86.20 Mbit/s

95th percentile per-packet one-way delay: 1.731 ms

Loss rate: 0.00%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2018-09-07 10:38:49

End at: 2018-09-07 10:39:19

Local clock offset: -9.786 ms

Remote clock offset: 0.479 ms

Below is generated by plot.py at 2018-09-07 11:48:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 52.75 Mbit/s

95th percentile per-packet one-way delay: 1.022 ms

Loss rate: 0.00%

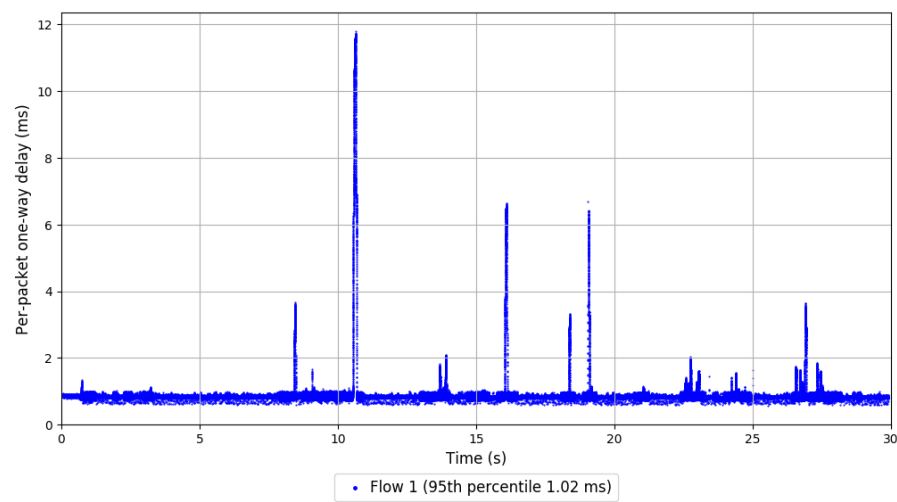
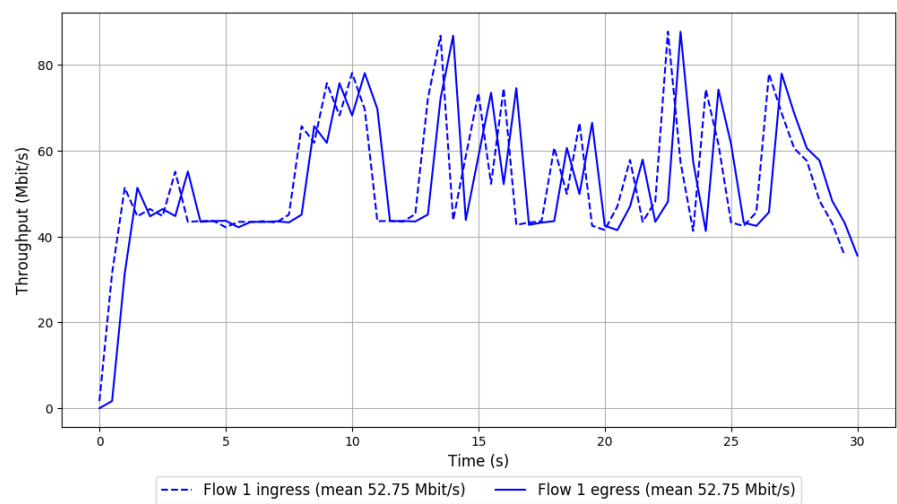
-- Flow 1:

Average throughput: 52.75 Mbit/s

95th percentile per-packet one-way delay: 1.022 ms

Loss rate: 0.00%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2018-09-07 10:58:49

End at: 2018-09-07 10:59:19

Local clock offset: -4.526 ms

Remote clock offset: 0.577 ms

Below is generated by plot.py at 2018-09-07 11:48:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 51.23 Mbit/s

95th percentile per-packet one-way delay: 1.272 ms

Loss rate: 0.02%

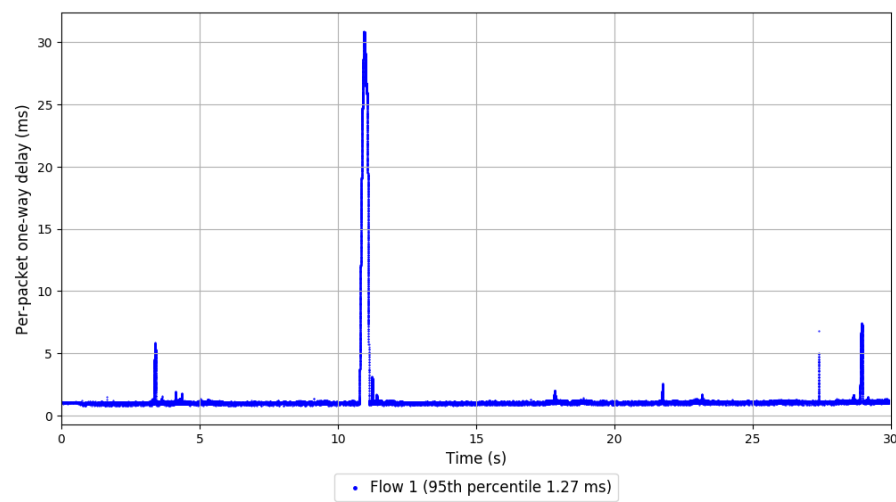
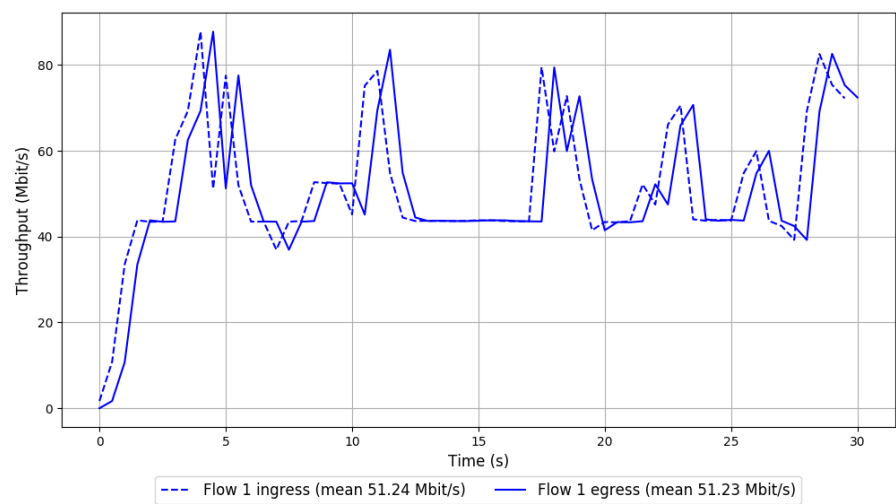
-- Flow 1:

Average throughput: 51.23 Mbit/s

95th percentile per-packet one-way delay: 1.272 ms

Loss rate: 0.02%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2018-09-07 11:18:49

End at: 2018-09-07 11:19:19

Local clock offset: -2.877 ms

Remote clock offset: 0.667 ms

Below is generated by plot.py at 2018-09-07 11:48:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 86.62 Mbit/s

95th percentile per-packet one-way delay: 2.441 ms

Loss rate: 0.00%

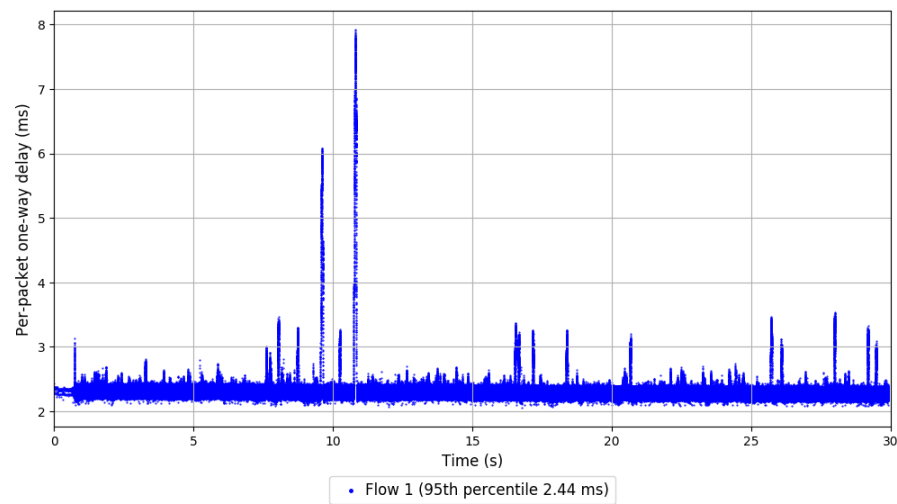
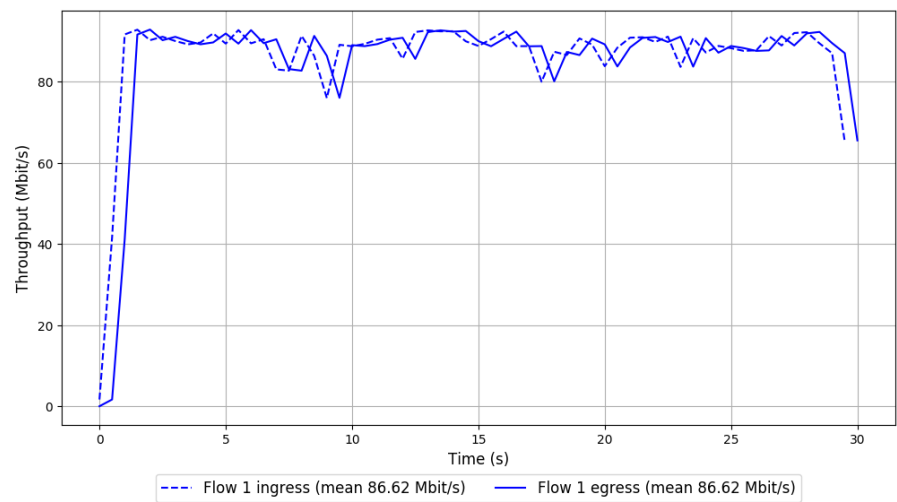
-- Flow 1:

Average throughput: 86.62 Mbit/s

95th percentile per-packet one-way delay: 2.441 ms

Loss rate: 0.00%

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2018-09-07 09:59:56

End at: 2018-09-07 10:00:26

Local clock offset: -6.89 ms

Remote clock offset: 0.246 ms

Below is generated by plot.py at 2018-09-07 11:48:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.94 Mbit/s

95th percentile per-packet one-way delay: 2.169 ms

Loss rate: 0.00%

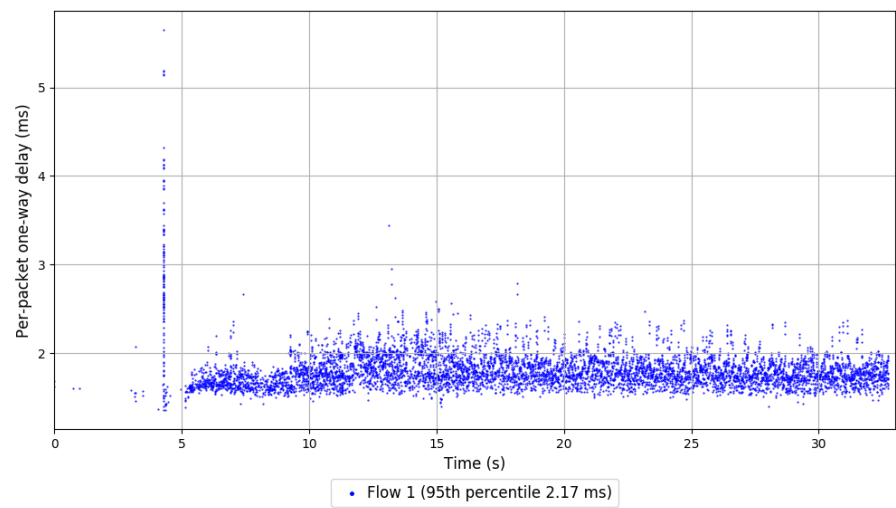
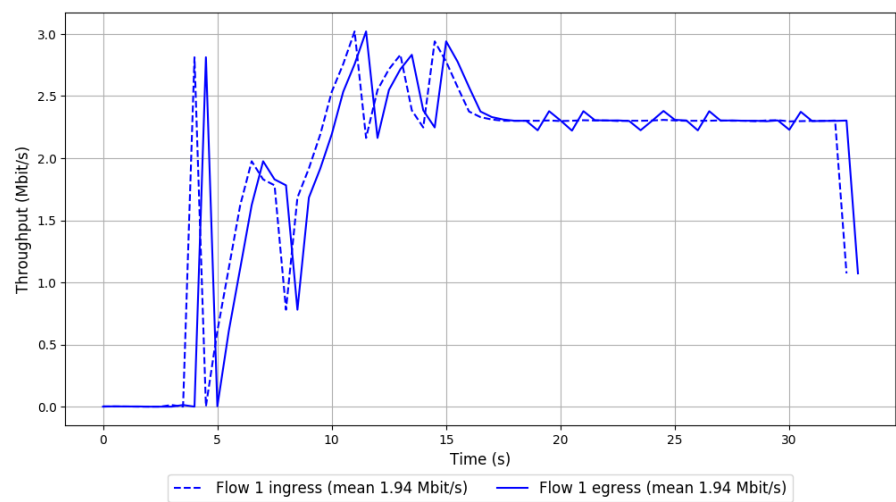
-- Flow 1:

Average throughput: 1.94 Mbit/s

95th percentile per-packet one-way delay: 2.169 ms

Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-09-07 10:19:56

End at: 2018-09-07 10:20:26

Local clock offset: -8.159 ms

Remote clock offset: 0.313 ms

Below is generated by plot.py at 2018-09-07 11:48:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.94 Mbit/s

95th percentile per-packet one-way delay: 0.533 ms

Loss rate: 0.00%

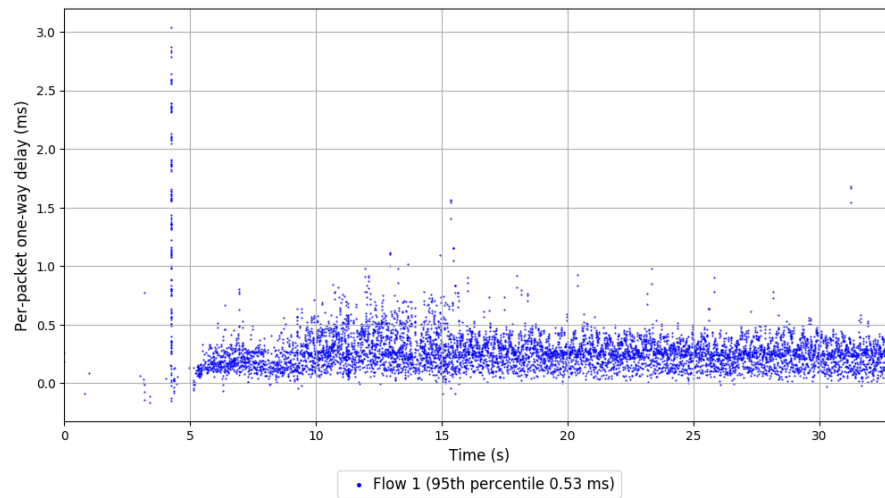
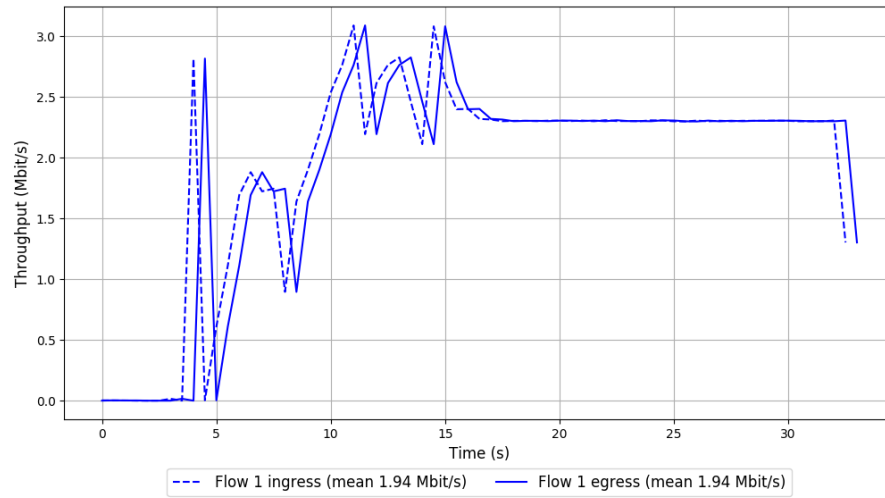
-- Flow 1:

Average throughput: 1.94 Mbit/s

95th percentile per-packet one-way delay: 0.533 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-09-07 10:39:56

End at: 2018-09-07 10:40:26

Local clock offset: -9.069 ms

Remote clock offset: 0.535 ms

Below is generated by plot.py at 2018-09-07 11:48:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.94 Mbit/s

95th percentile per-packet one-way delay: 0.789 ms

Loss rate: 0.00%

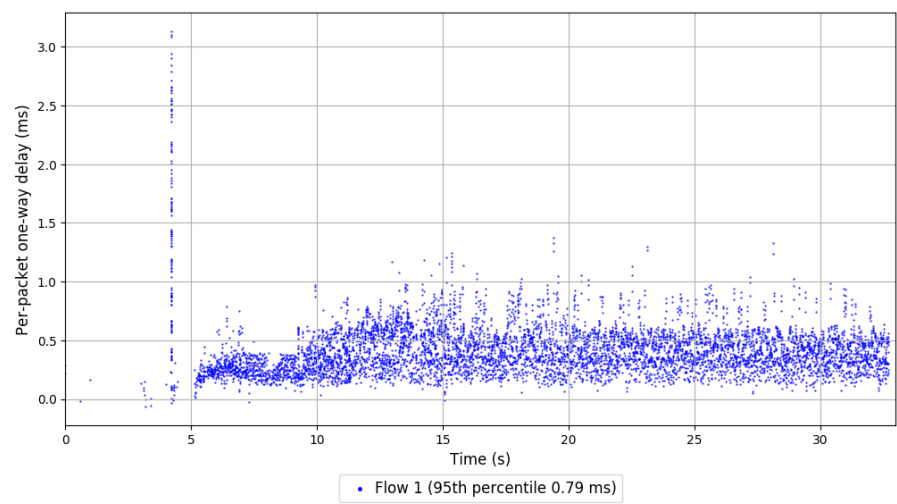
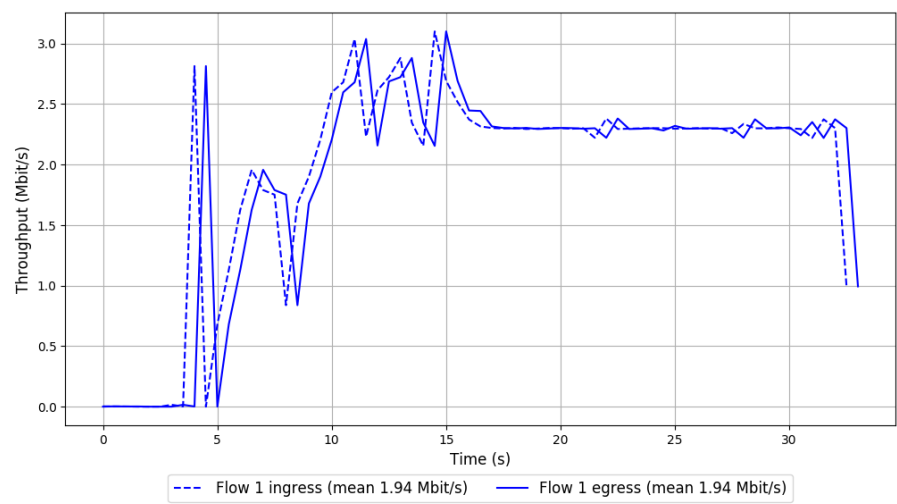
-- Flow 1:

Average throughput: 1.94 Mbit/s

95th percentile per-packet one-way delay: 0.789 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-09-07 10:59:56

End at: 2018-09-07 11:00:26

Local clock offset: -4.264 ms

Remote clock offset: 0.638 ms

Below is generated by plot.py at 2018-09-07 11:48:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.95 Mbit/s

95th percentile per-packet one-way delay: 1.567 ms

Loss rate: 0.00%

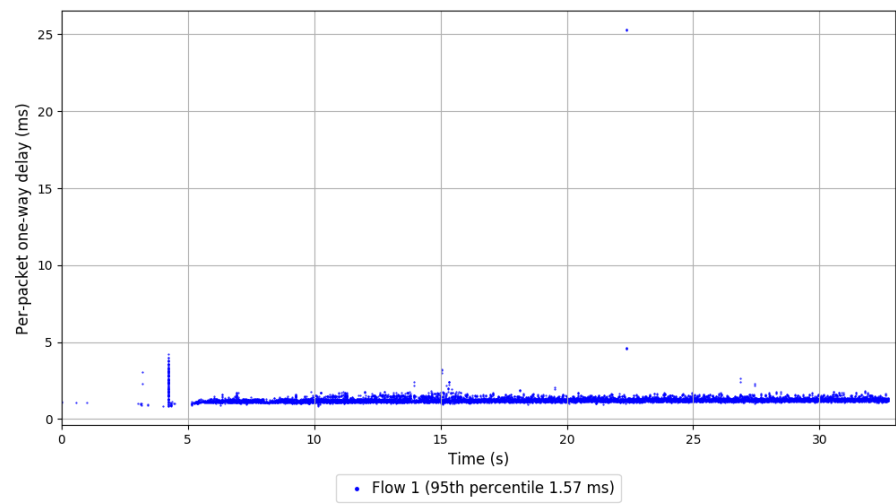
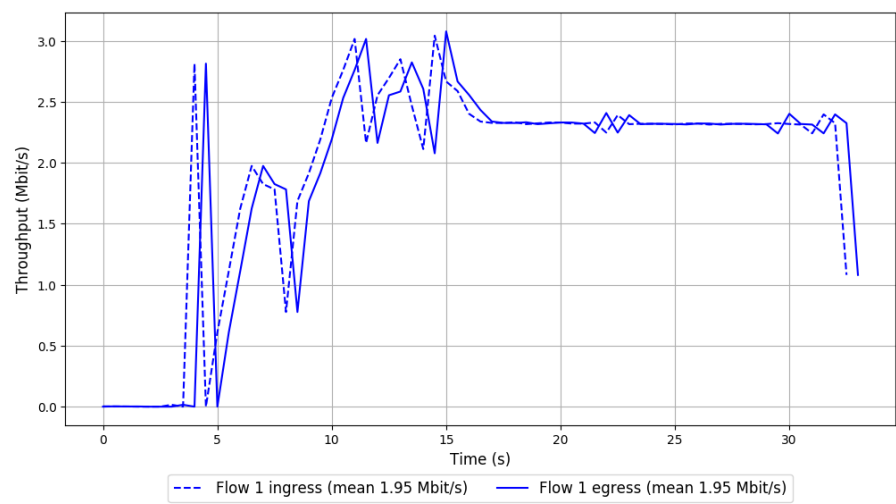
-- Flow 1:

Average throughput: 1.95 Mbit/s

95th percentile per-packet one-way delay: 1.567 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-09-07 11:19:58

End at: 2018-09-07 11:20:28

Local clock offset: -2.293 ms

Remote clock offset: 0.688 ms

Below is generated by plot.py at 2018-09-07 11:48:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.94 Mbit/s

95th percentile per-packet one-way delay: 0.719 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 1.94 Mbit/s

95th percentile per-packet one-way delay: 0.719 ms

Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

