

Pantheon Report

Generated at 2018-09-25 15:49:31 (UTC).

Data path: Stanford on **eno1** (*remote*) → AWS California 1 on **ens5** (*local*).

Repeated the test of 19 congestion control schemes 5 times.

Each test lasted for 30 seconds running 1 flow.

NTP offsets were measured against **time.stanford.edu** and have been applied to correct the timestamps in logs.

System info:

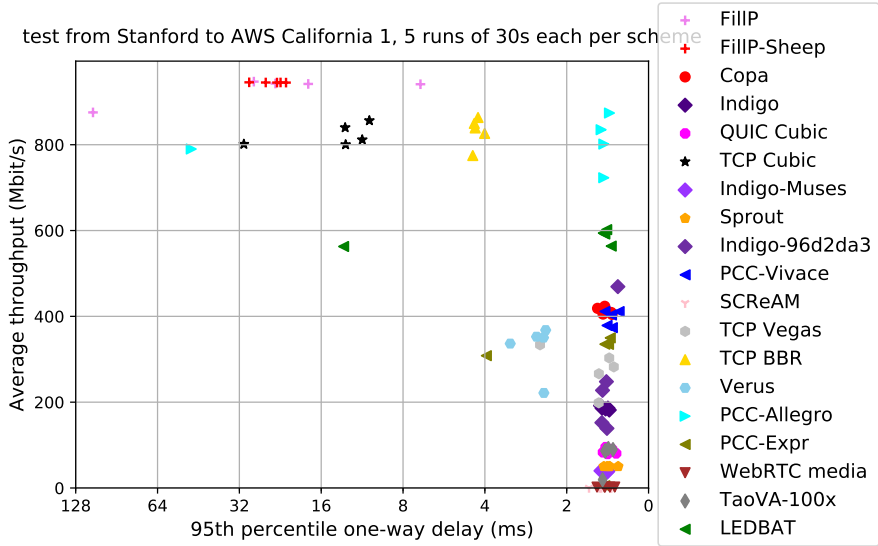
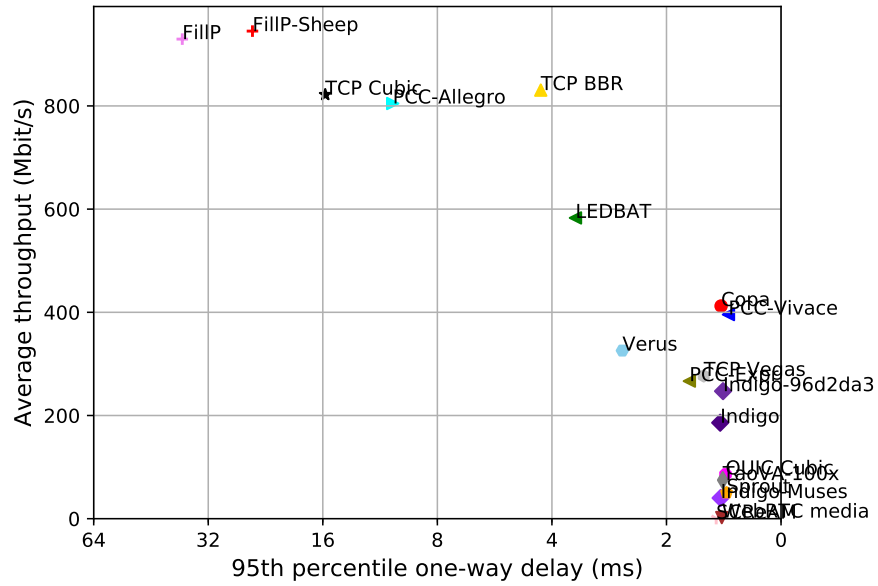
```
Linux 4.15.0-1021-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
net.ipv4.tcp_mem = 184101 245469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

Git summary:

```
branch: muses @ 90192f6b64ce1a1191dcca0e9ff9ee24950674d7
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf5e58e562f4
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 Stanford to AWS California 1, 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	830.68	4.28	0.02
Copa	5	412.21	1.05	0.01
TCP Cubic	5	821.83	15.77	0.03
FillP	5	929.51	37.44	1.35
FillP-Sheep	5	945.02	24.49	0.56
Indigo	5	185.98	1.06	0.01
Indigo-96d2da3	5	247.17	1.01	0.00
LEDBAT	5	582.93	3.47	0.01
Indigo-Muses	5	40.13	1.06	0.01
PCC-Allegro	5	804.68	10.48	0.01
PCC-Expr	5	266.65	1.60	0.00
QUIC Cubic	5	85.80	0.97	0.01
SCReAM	5	0.22	1.13	0.03
Sprout	5	50.26	0.95	0.01
TaoVA-100x	5	74.81	1.02	0.01
TCP Vegas	5	276.73	1.35	0.01
Verus	5	325.82	2.61	0.01
PCC-Vivace	5	395.64	0.92	0.01
WebRTC media	5	2.11	1.03	0.02

Run 1: Statistics of TCP BBR

Start at: 2018-09-25 12:23:56

End at: 2018-09-25 12:24:26

Local clock offset: -2.597 ms

Remote clock offset: 3.474 ms

Below is generated by plot.py at 2018-09-25 14:57:14

Datalink statistics

-- Total of 1 flow:

Average throughput: 839.13 Mbit/s

95th percentile per-packet one-way delay: 4.343 ms

Loss rate: 0.02%

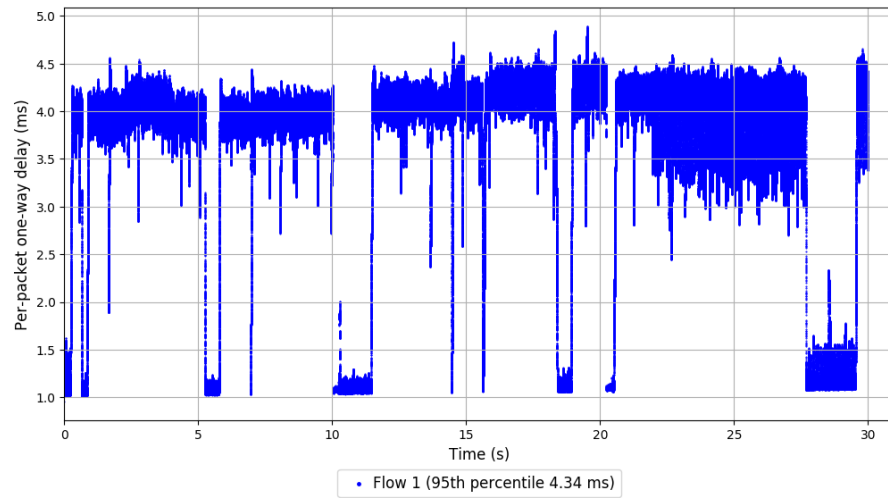
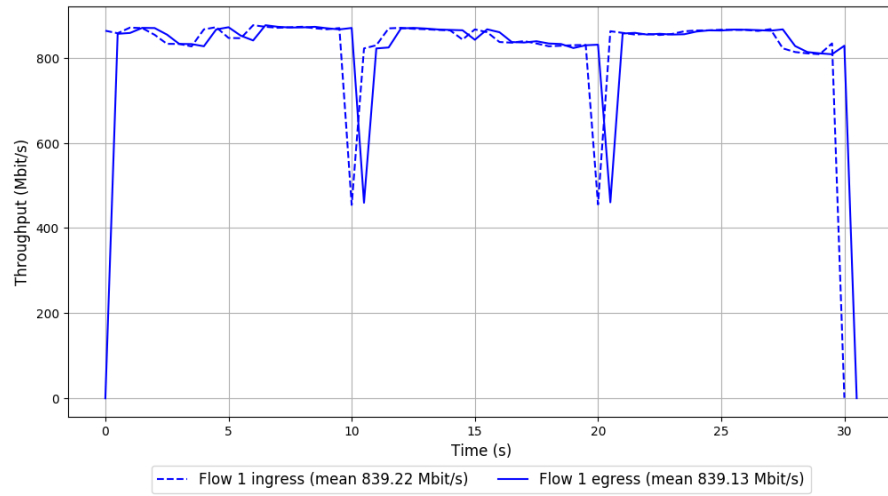
-- Flow 1:

Average throughput: 839.13 Mbit/s

95th percentile per-packet one-way delay: 4.343 ms

Loss rate: 0.02%

Run 1: Report of TCP BBR — Data Link

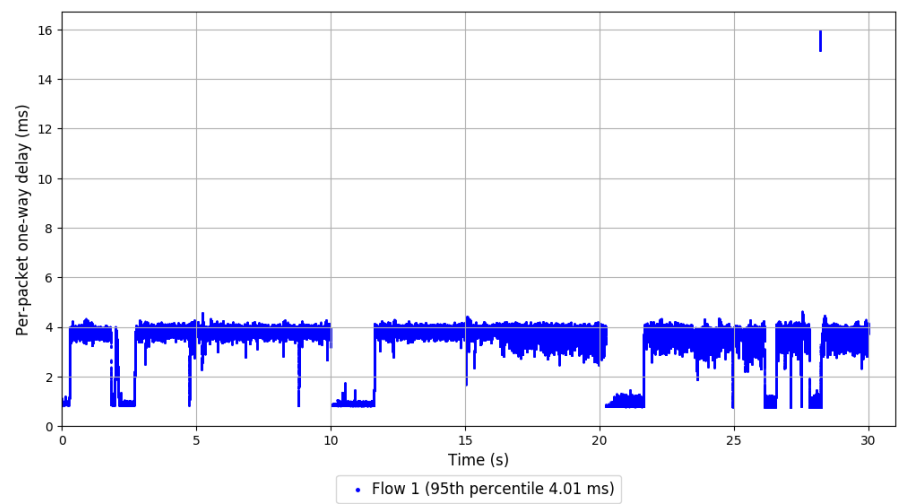
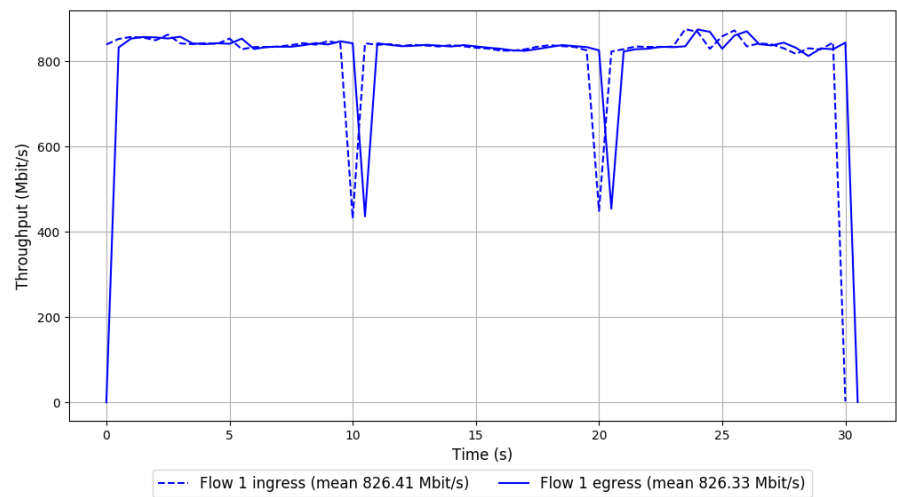


Run 2: Statistics of TCP BBR

Start at: 2018-09-25 12:53:02
End at: 2018-09-25 12:53:32
Local clock offset: -0.274 ms
Remote clock offset: -4.157 ms

Below is generated by plot.py at 2018-09-25 14:57:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 826.33 Mbit/s
95th percentile per-packet one-way delay: 4.009 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 826.33 Mbit/s
95th percentile per-packet one-way delay: 4.009 ms
Loss rate: 0.02%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-09-25 13:22:00

End at: 2018-09-25 13:22:30

Local clock offset: 0.599 ms

Remote clock offset: 0.417 ms

Below is generated by plot.py at 2018-09-25 14:57:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 863.46 Mbit/s

95th percentile per-packet one-way delay: 4.239 ms

Loss rate: 0.02%

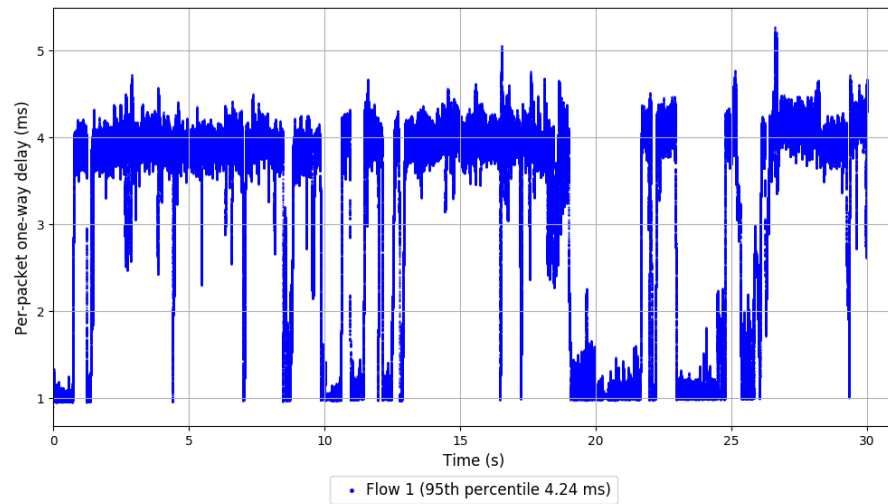
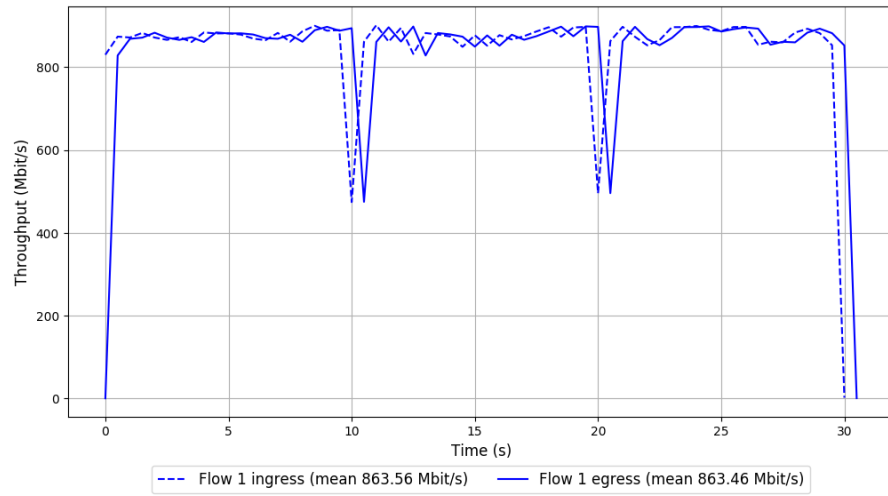
-- Flow 1:

Average throughput: 863.46 Mbit/s

95th percentile per-packet one-way delay: 4.239 ms

Loss rate: 0.02%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-09-25 13:50:36

End at: 2018-09-25 13:51:06

Local clock offset: 0.623 ms

Remote clock offset: 3.838 ms

Below is generated by plot.py at 2018-09-25 14:57:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 774.81 Mbit/s

95th percentile per-packet one-way delay: 4.432 ms

Loss rate: 0.02%

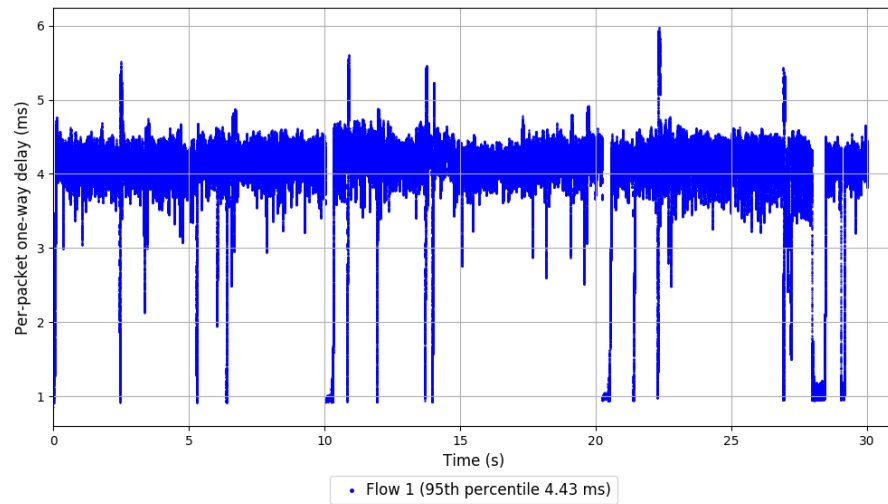
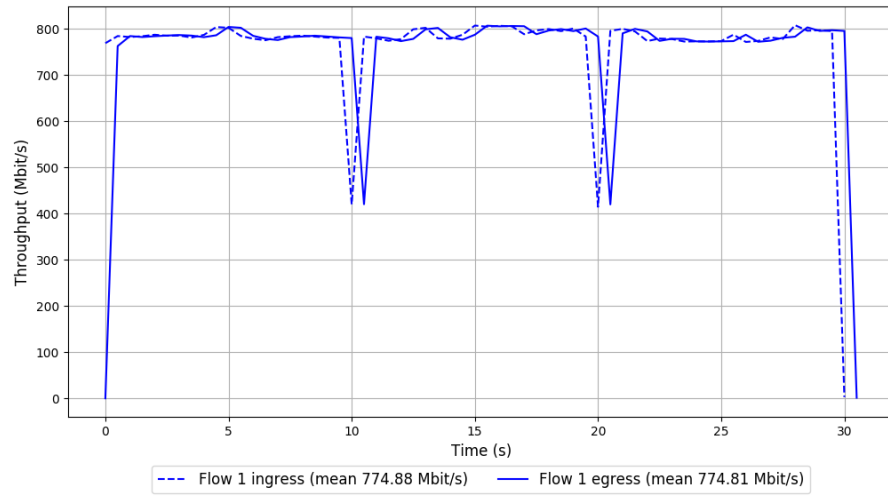
-- Flow 1:

Average throughput: 774.81 Mbit/s

95th percentile per-packet one-way delay: 4.432 ms

Loss rate: 0.02%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-09-25 14:19:31

End at: 2018-09-25 14:20:01

Local clock offset: 0.502 ms

Remote clock offset: 0.976 ms

Below is generated by plot.py at 2018-09-25 14:57:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 849.65 Mbit/s

95th percentile per-packet one-way delay: 4.375 ms

Loss rate: 0.02%

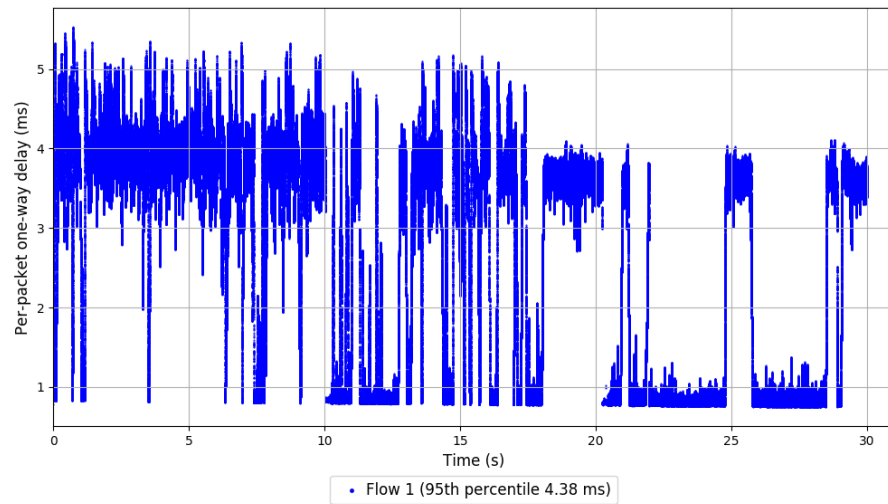
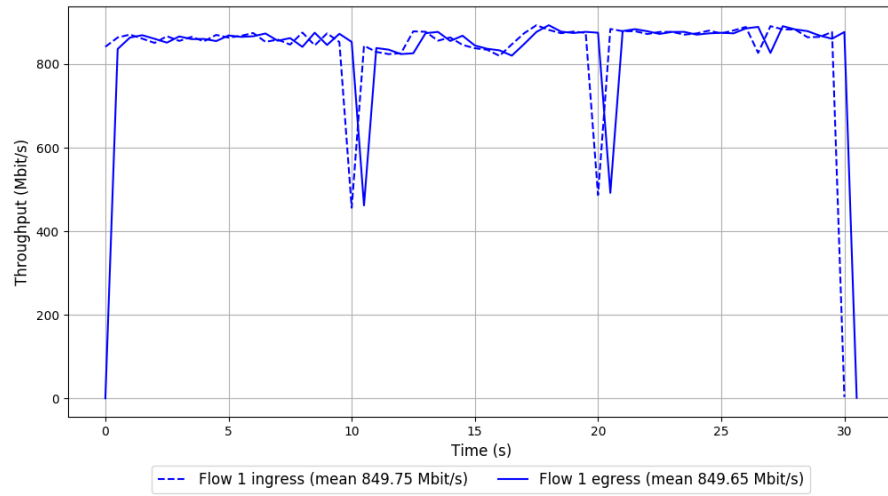
-- Flow 1:

Average throughput: 849.65 Mbit/s

95th percentile per-packet one-way delay: 4.375 ms

Loss rate: 0.02%

Run 5: Report of TCP BBR — Data Link

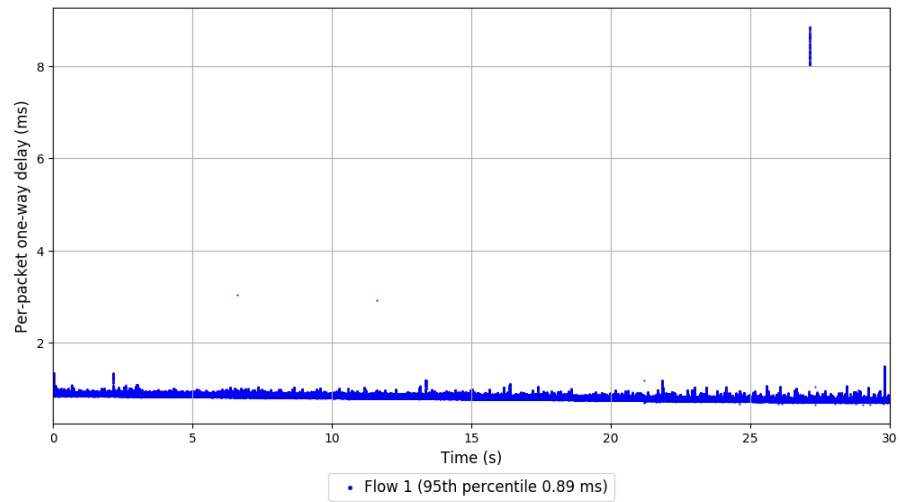
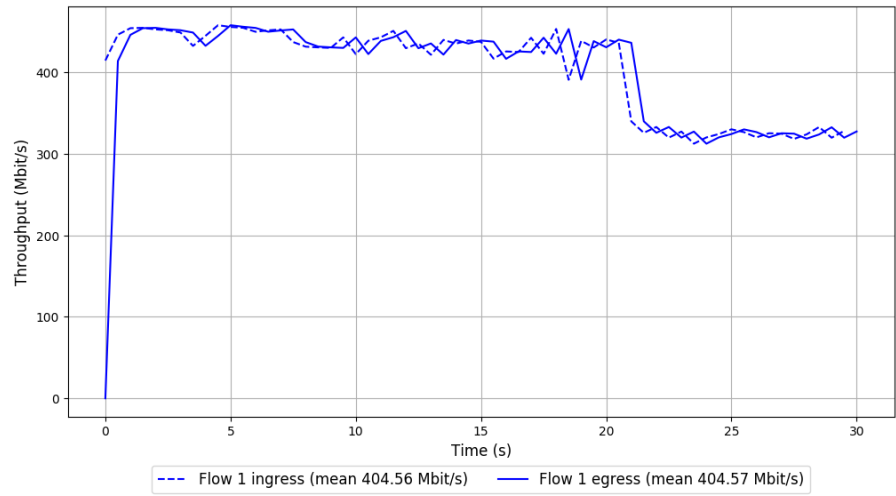


Run 1: Statistics of Copa

Start at: 2018-09-25 12:33:32
End at: 2018-09-25 12:34:02
Local clock offset: -3.337 ms
Remote clock offset: -0.775 ms

Below is generated by plot.py at 2018-09-25 14:57:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 404.57 Mbit/s
95th percentile per-packet one-way delay: 0.892 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 404.57 Mbit/s
95th percentile per-packet one-way delay: 0.892 ms
Loss rate: 0.01%

Run 1: Report of Copa — Data Link

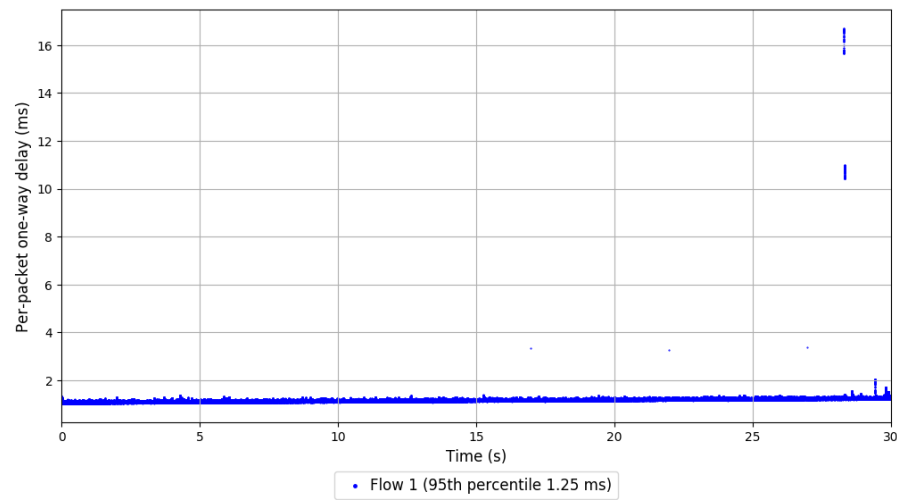
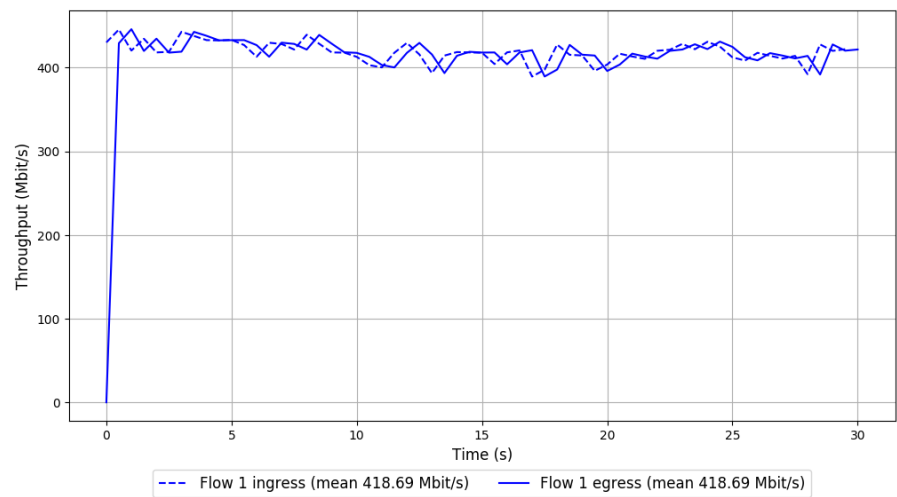


Run 2: Statistics of Copa

Start at: 2018-09-25 13:02:37
End at: 2018-09-25 13:03:07
Local clock offset: 0.465 ms
Remote clock offset: -3.274 ms

Below is generated by plot.py at 2018-09-25 14:57:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 418.69 Mbit/s
95th percentile per-packet one-way delay: 1.246 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 418.69 Mbit/s
95th percentile per-packet one-way delay: 1.246 ms
Loss rate: 0.01%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-09-25 13:31:14

End at: 2018-09-25 13:31:44

Local clock offset: 0.683 ms

Remote clock offset: 1.087 ms

Below is generated by plot.py at 2018-09-25 14:57:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 423.45 Mbit/s

95th percentile per-packet one-way delay: 1.071 ms

Loss rate: 0.01%

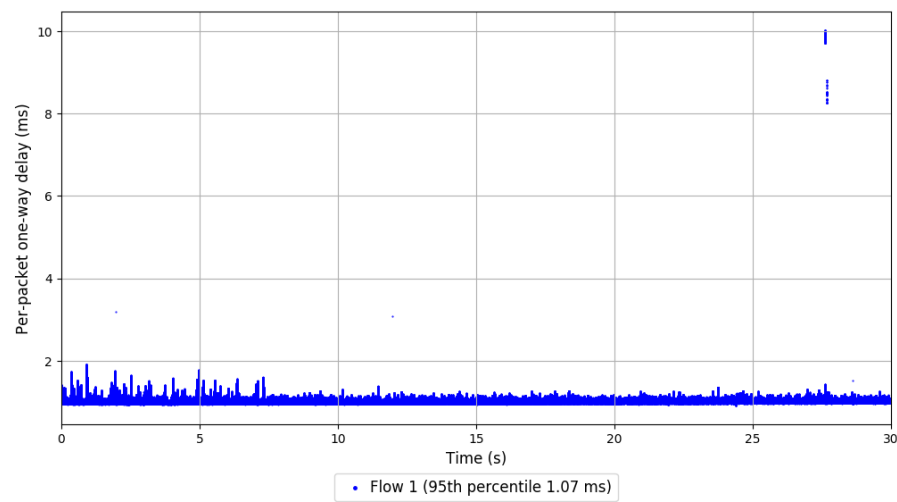
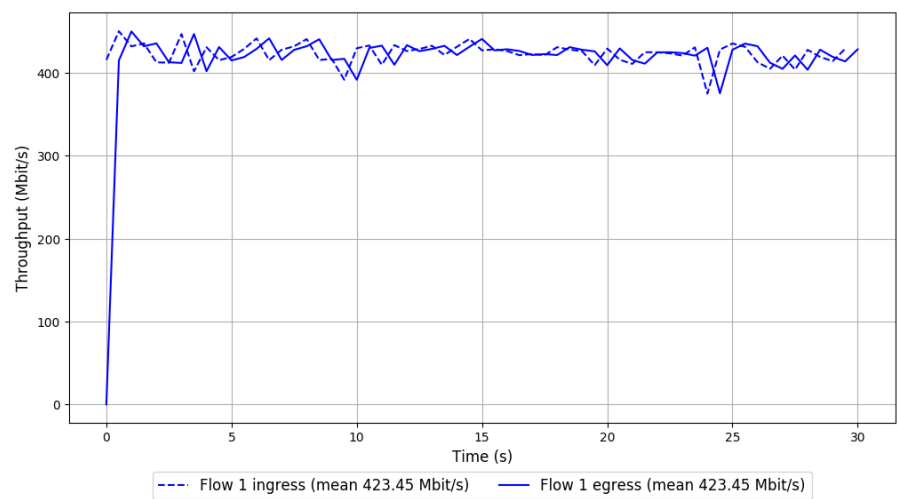
-- Flow 1:

Average throughput: 423.45 Mbit/s

95th percentile per-packet one-way delay: 1.071 ms

Loss rate: 0.01%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2018-09-25 14:00:10

End at: 2018-09-25 14:00:40

Local clock offset: 0.678 ms

Remote clock offset: 4.548 ms

Below is generated by plot.py at 2018-09-25 15:05:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 405.32 Mbit/s

95th percentile per-packet one-way delay: 1.113 ms

Loss rate: 0.00%

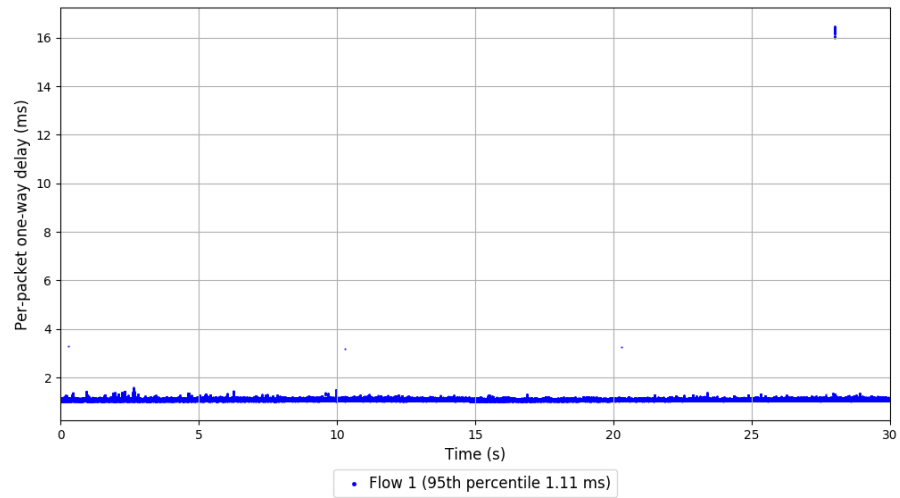
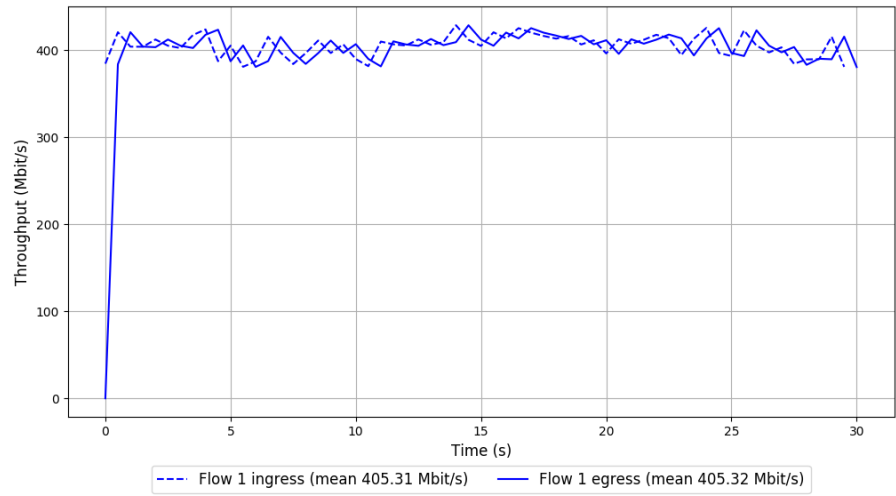
-- Flow 1:

Average throughput: 405.32 Mbit/s

95th percentile per-packet one-way delay: 1.113 ms

Loss rate: 0.00%

Run 4: Report of Copa — Data Link

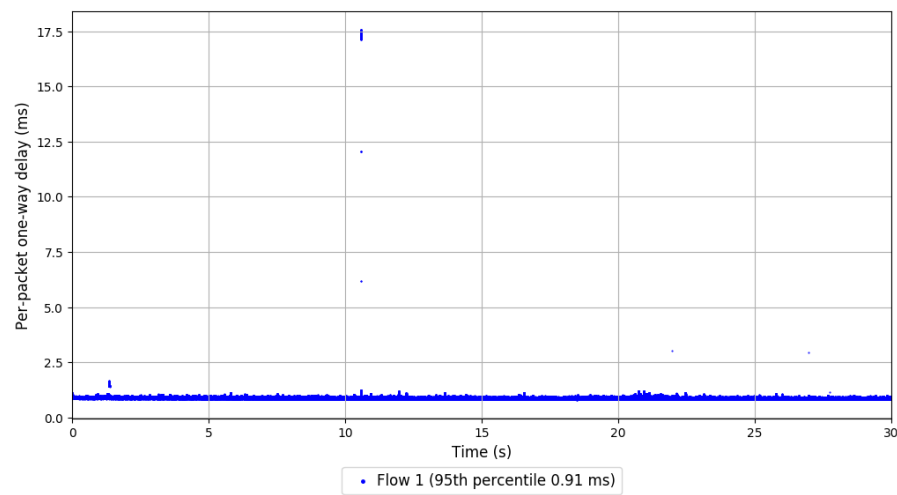
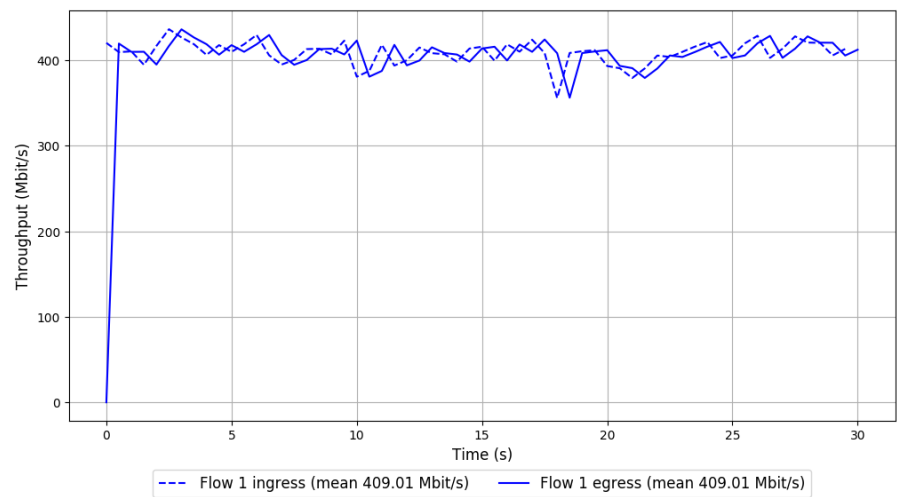


Run 5: Statistics of Copa

Start at: 2018-09-25 14:29:05
End at: 2018-09-25 14:29:35
Local clock offset: 0.476 ms
Remote clock offset: -0.107 ms

Below is generated by plot.py at 2018-09-25 15:05:39
Datalink statistics
-- Total of 1 flow:
Average throughput: 409.01 Mbit/s
95th percentile per-packet one-way delay: 0.912 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 409.01 Mbit/s
95th percentile per-packet one-way delay: 0.912 ms
Loss rate: 0.01%

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-09-25 12:22:11

End at: 2018-09-25 12:22:42

Local clock offset: -2.38 ms

Remote clock offset: 3.422 ms

Below is generated by plot.py at 2018-09-25 15:06:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 856.24 Mbit/s

95th percentile per-packet one-way delay: 10.641 ms

Loss rate: 0.03%

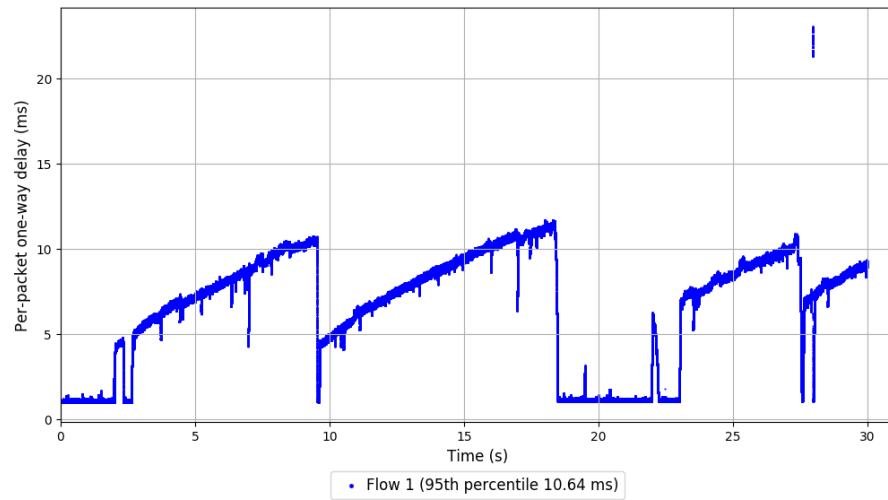
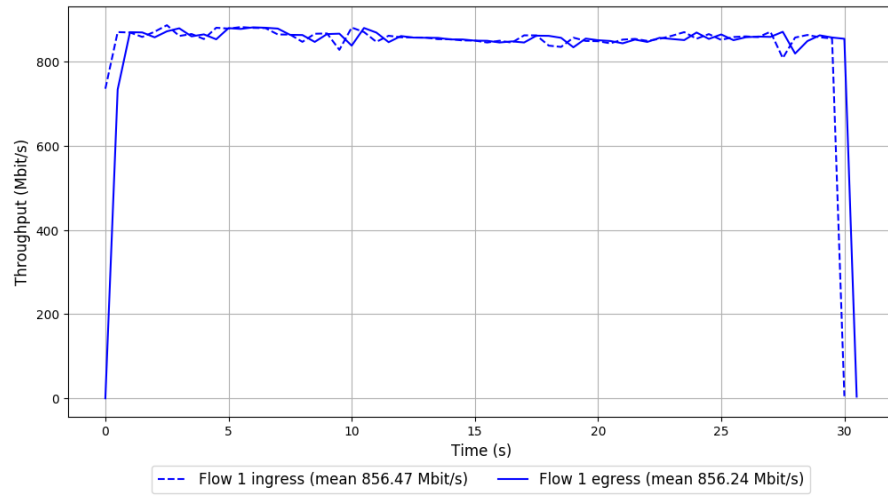
-- Flow 1:

Average throughput: 856.24 Mbit/s

95th percentile per-packet one-way delay: 10.641 ms

Loss rate: 0.03%

Run 1: Report of TCP Cubic — Data Link

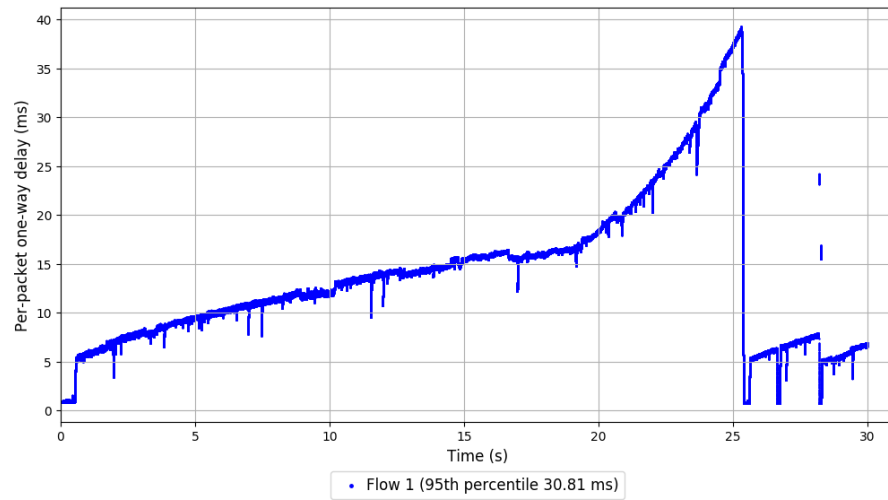
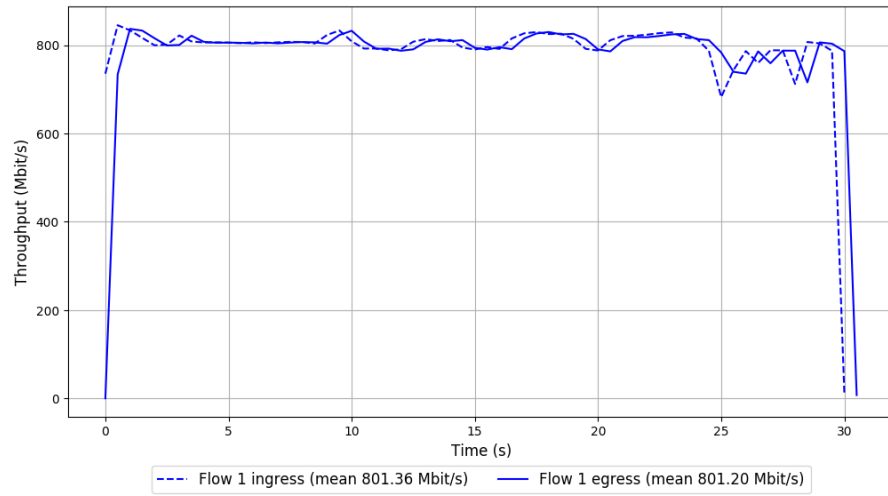


Run 2: Statistics of TCP Cubic

Start at: 2018-09-25 12:51:18
End at: 2018-09-25 12:51:48
Local clock offset: -0.479 ms
Remote clock offset: -4.009 ms

Below is generated by plot.py at 2018-09-25 15:06:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 801.20 Mbit/s
95th percentile per-packet one-way delay: 30.814 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 801.20 Mbit/s
95th percentile per-packet one-way delay: 30.814 ms
Loss rate: 0.03%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-09-25 13:20:16

End at: 2018-09-25 13:20:46

Local clock offset: 0.609 ms

Remote clock offset: 0.308 ms

Below is generated by plot.py at 2018-09-25 15:06:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 839.90 Mbit/s

95th percentile per-packet one-way delay: 13.063 ms

Loss rate: 0.03%

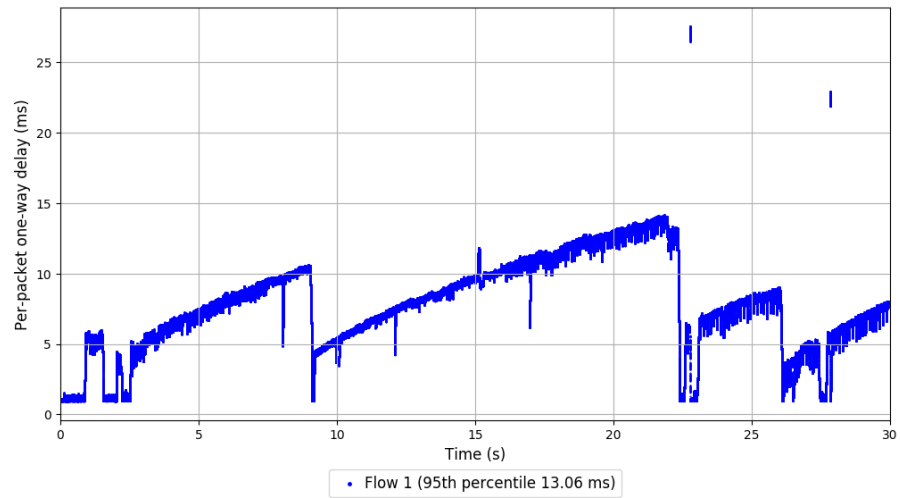
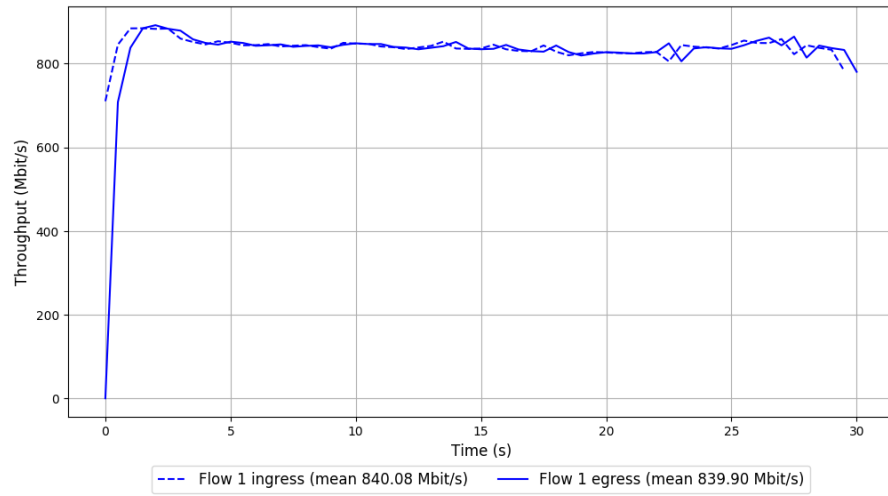
-- Flow 1:

Average throughput: 839.90 Mbit/s

95th percentile per-packet one-way delay: 13.063 ms

Loss rate: 0.03%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-09-25 13:48:52

End at: 2018-09-25 13:49:22

Local clock offset: 0.611 ms

Remote clock offset: 3.601 ms

Below is generated by plot.py at 2018-09-25 15:06:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 811.58 Mbit/s

95th percentile per-packet one-way delay: 11.303 ms

Loss rate: 0.01%

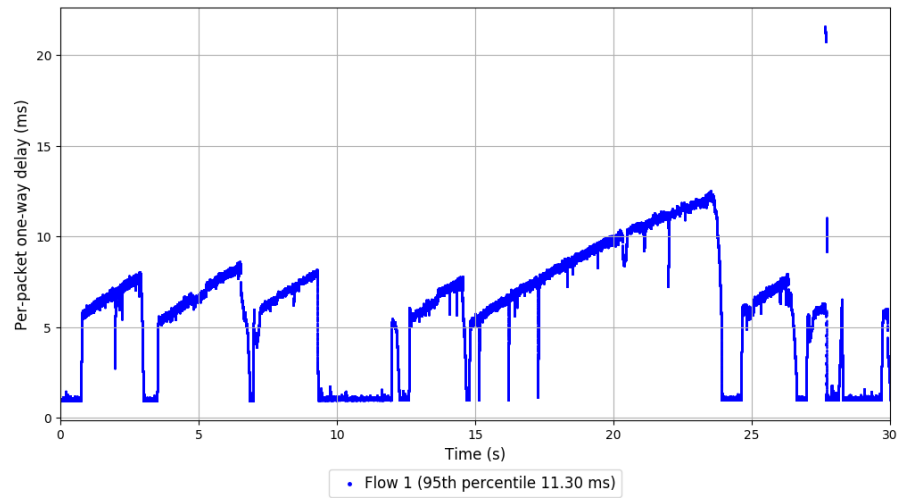
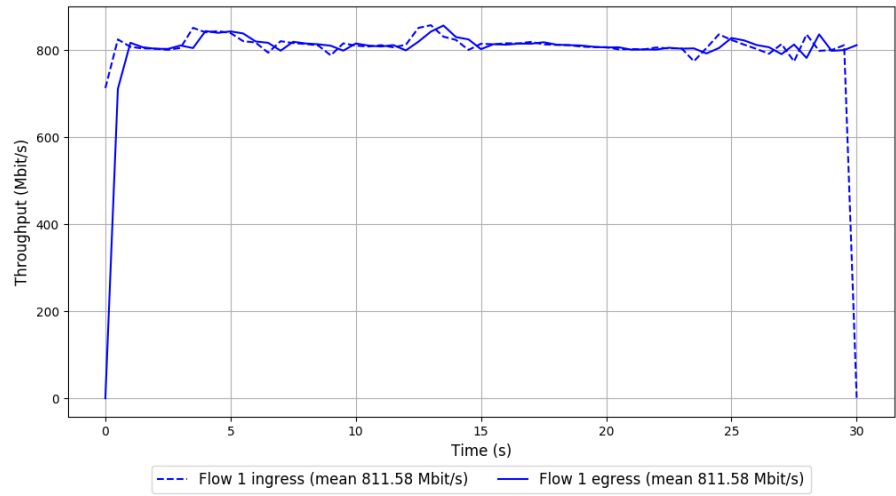
-- Flow 1:

Average throughput: 811.58 Mbit/s

95th percentile per-packet one-way delay: 11.303 ms

Loss rate: 0.01%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-09-25 14:17:48

End at: 2018-09-25 14:18:18

Local clock offset: 0.534 ms

Remote clock offset: 1.182 ms

Below is generated by plot.py at 2018-09-25 15:06:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 800.24 Mbit/s

95th percentile per-packet one-way delay: 13.012 ms

Loss rate: 0.05%

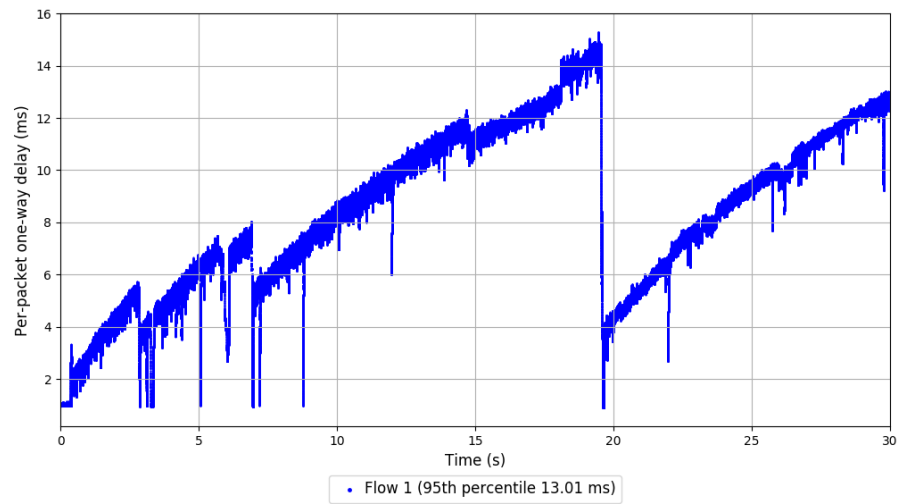
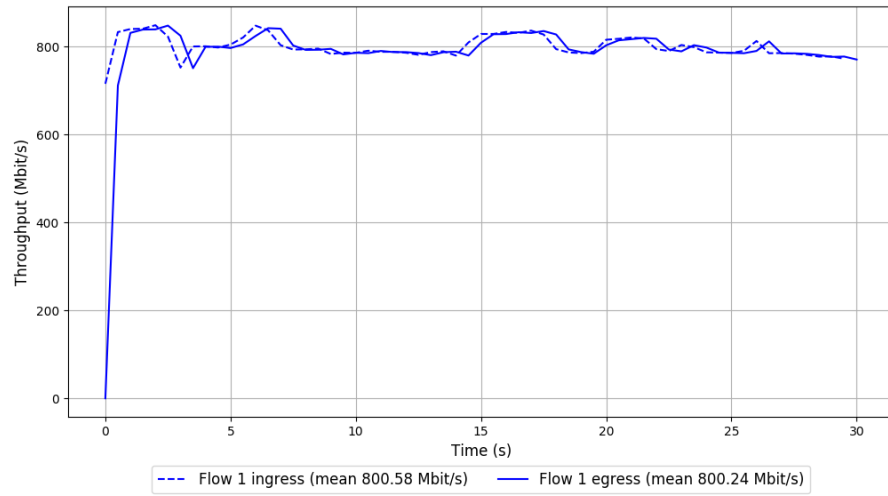
-- Flow 1:

Average throughput: 800.24 Mbit/s

95th percentile per-packet one-way delay: 13.012 ms

Loss rate: 0.05%

Run 5: Report of TCP Cubic — Data Link

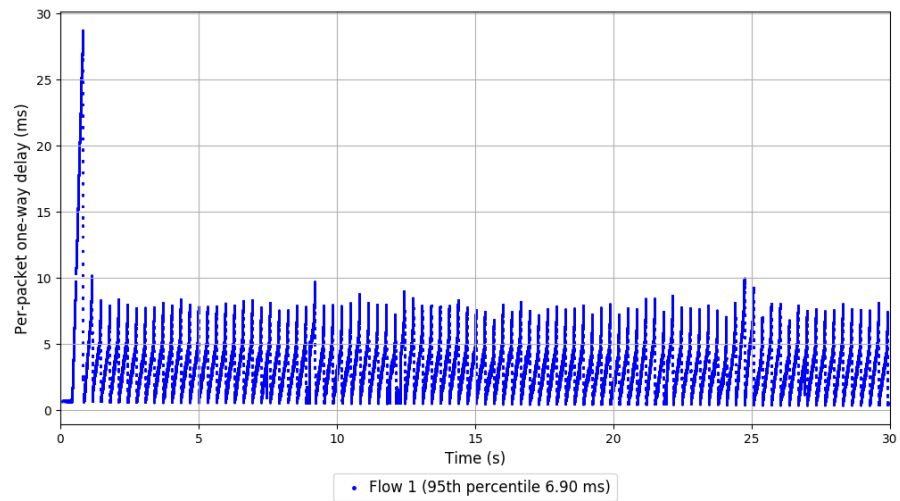
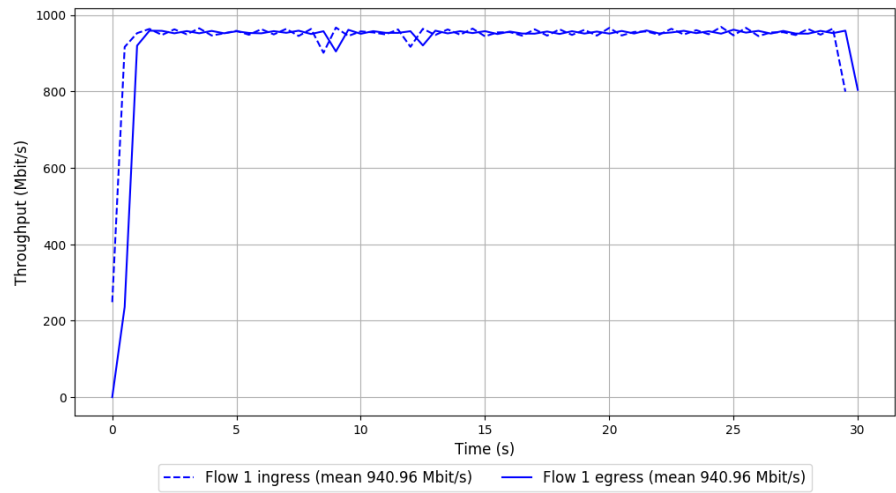


Run 1: Statistics of FillP

Start at: 2018-09-25 12:41:06
End at: 2018-09-25 12:41:36
Local clock offset: -3.029 ms
Remote clock offset: -2.736 ms

Below is generated by plot.py at 2018-09-25 15:10:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 940.96 Mbit/s
95th percentile per-packet one-way delay: 6.903 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 940.96 Mbit/s
95th percentile per-packet one-way delay: 6.903 ms
Loss rate: 0.01%

Run 1: Report of FillP — Data Link

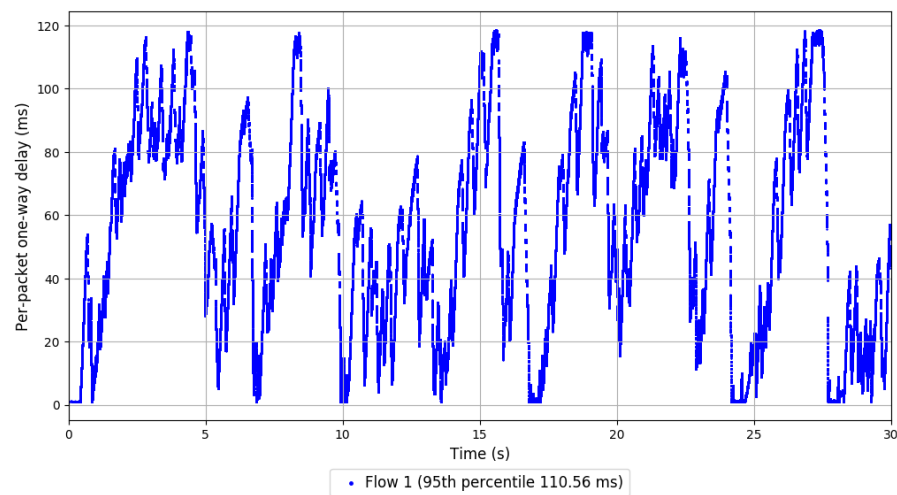
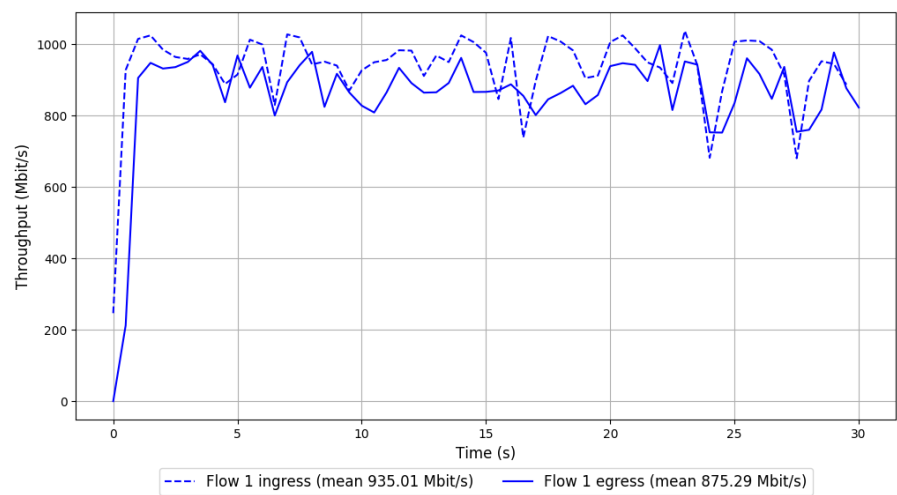


Run 2: Statistics of FillP

Start at: 2018-09-25 13:10:06
End at: 2018-09-25 13:10:36
Local clock offset: 0.694 ms
Remote clock offset: -1.064 ms

Below is generated by plot.py at 2018-09-25 15:18:21
Datalink statistics
-- Total of 1 flow:
Average throughput: 875.29 Mbit/s
95th percentile per-packet one-way delay: 110.564 ms
Loss rate: 6.39%
-- Flow 1:
Average throughput: 875.29 Mbit/s
95th percentile per-packet one-way delay: 110.564 ms
Loss rate: 6.39%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-09-25 13:38:39

End at: 2018-09-25 13:39:09

Local clock offset: 0.781 ms

Remote clock offset: 2.243 ms

Below is generated by plot.py at 2018-09-25 15:18:52

Datalink statistics

-- Total of 1 flow:

Average throughput: 942.63 Mbit/s

95th percentile per-packet one-way delay: 23.585 ms

Loss rate: 0.05%

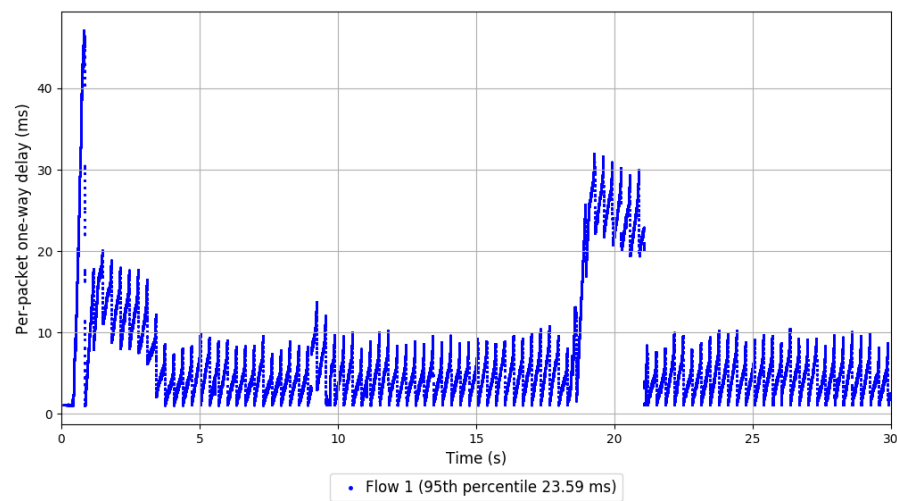
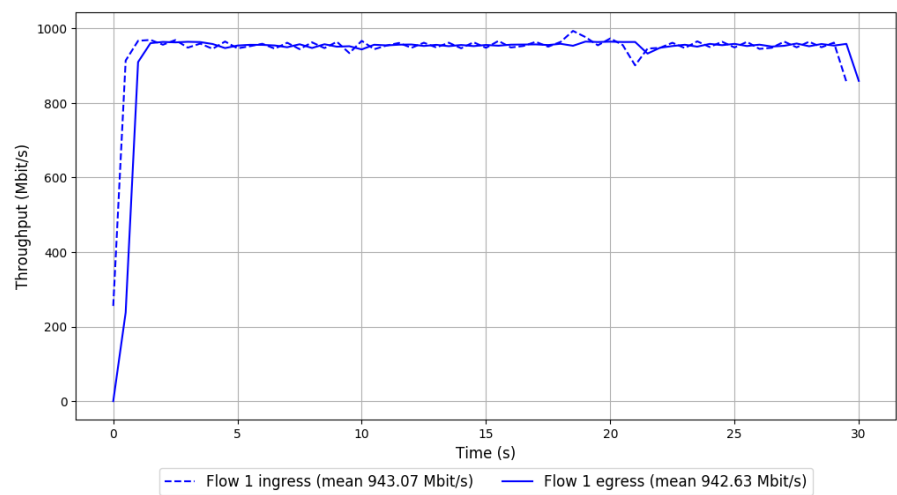
-- Flow 1:

Average throughput: 942.63 Mbit/s

95th percentile per-packet one-way delay: 23.585 ms

Loss rate: 0.05%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-09-25 14:07:35

End at: 2018-09-25 14:08:05

Local clock offset: 0.73 ms

Remote clock offset: 5.175 ms

Below is generated by plot.py at 2018-09-25 15:19:18

Datalink statistics

-- Total of 1 flow:

Average throughput: 947.05 Mbit/s

95th percentile per-packet one-way delay: 28.308 ms

Loss rate: 0.21%

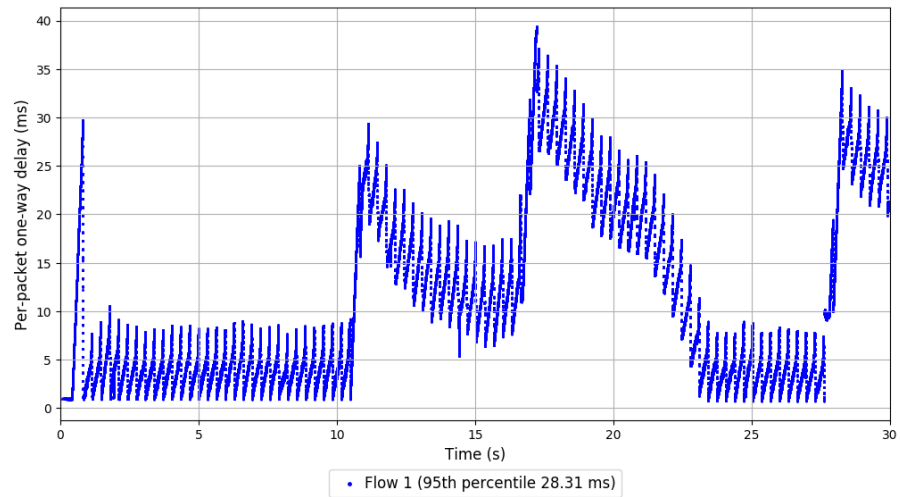
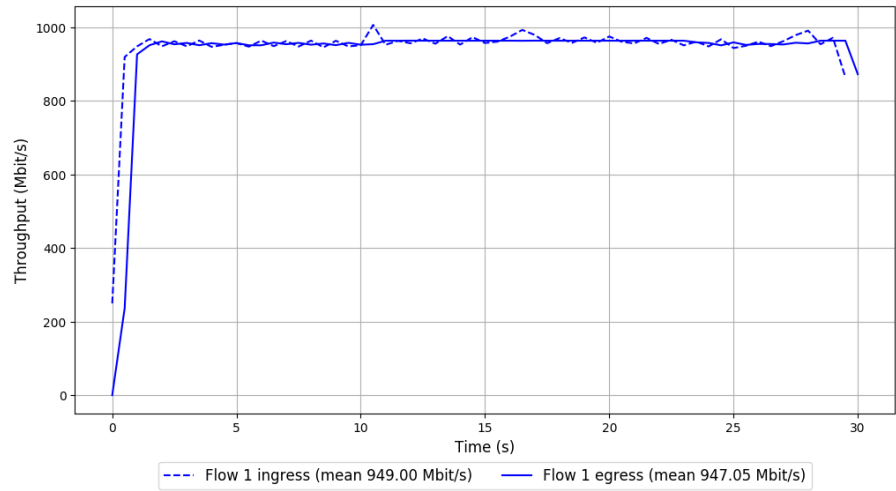
-- Flow 1:

Average throughput: 947.05 Mbit/s

95th percentile per-packet one-way delay: 28.308 ms

Loss rate: 0.21%

Run 4: Report of FillP — Data Link

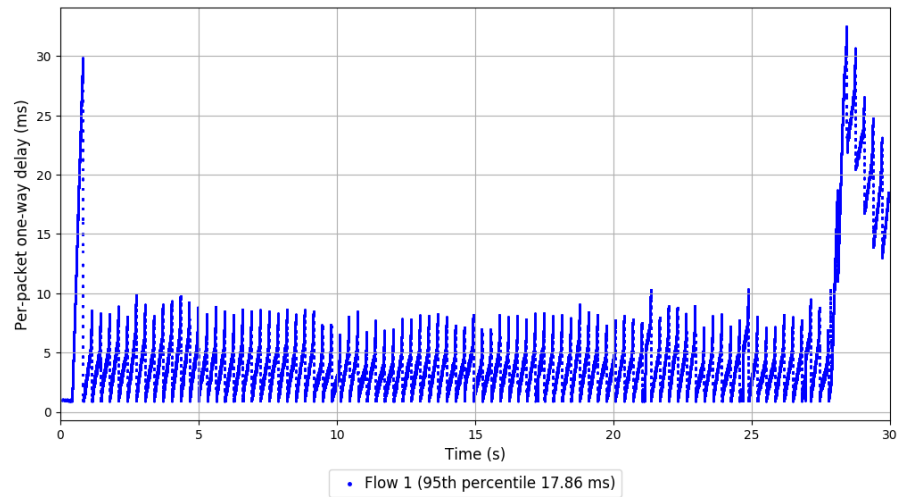
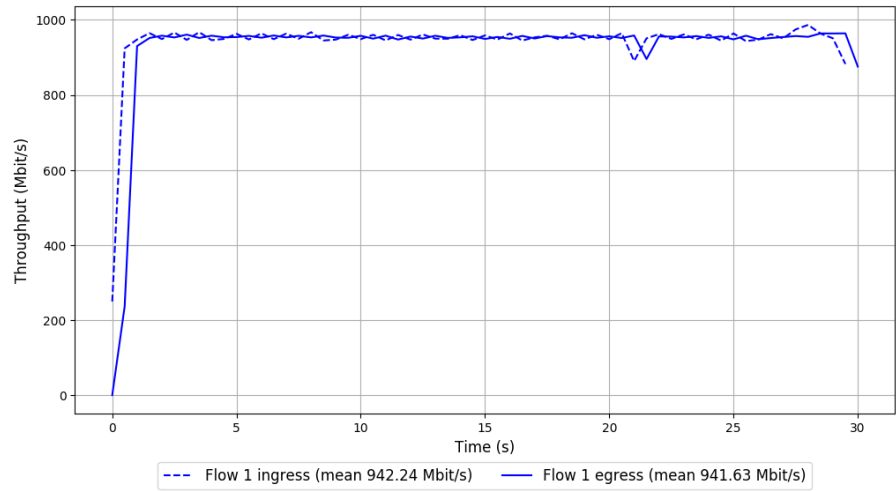


Run 5: Statistics of FillP

Start at: 2018-09-25 14:36:23
End at: 2018-09-25 14:36:54
Local clock offset: 0.459 ms
Remote clock offset: -0.528 ms

Below is generated by plot.py at 2018-09-25 15:19:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 941.63 Mbit/s
95th percentile per-packet one-way delay: 17.858 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 941.63 Mbit/s
95th percentile per-packet one-way delay: 17.858 ms
Loss rate: 0.07%

Run 5: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2018-09-25 12:20:28

End at: 2018-09-25 12:20:58

Local clock offset: -2.169 ms

Remote clock offset: 3.306 ms

Below is generated by plot.py at 2018-09-25 15:19:33

Datalink statistics

-- Total of 1 flow:

Average throughput: 945.09 Mbit/s

95th percentile per-packet one-way delay: 22.581 ms

Loss rate: 0.48%

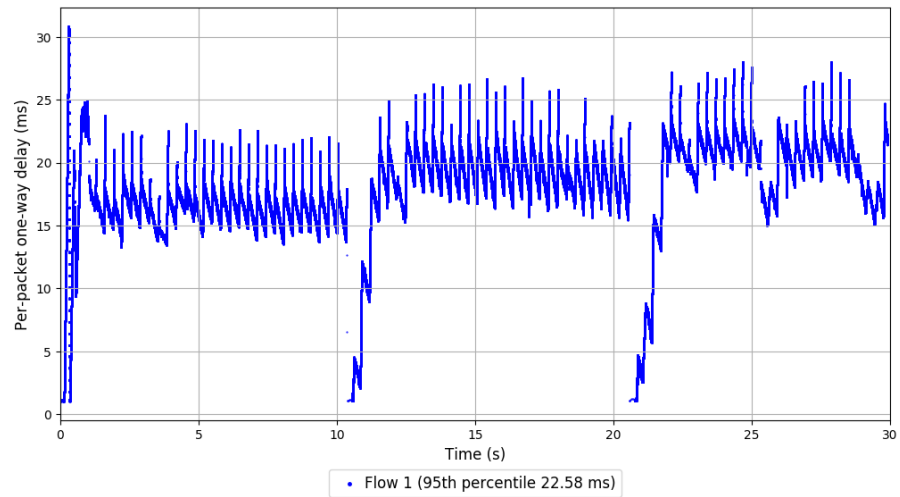
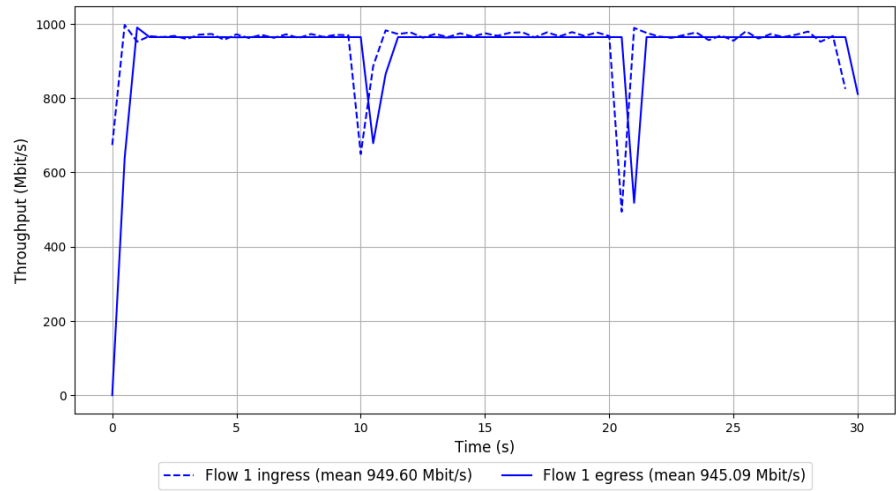
-- Flow 1:

Average throughput: 945.09 Mbit/s

95th percentile per-packet one-way delay: 22.581 ms

Loss rate: 0.48%

Run 1: Report of FillP-Sheep — Data Link

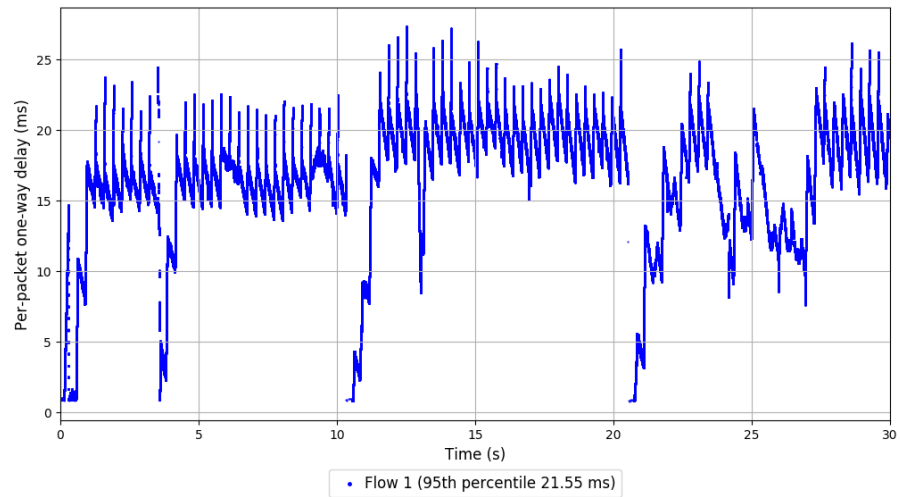
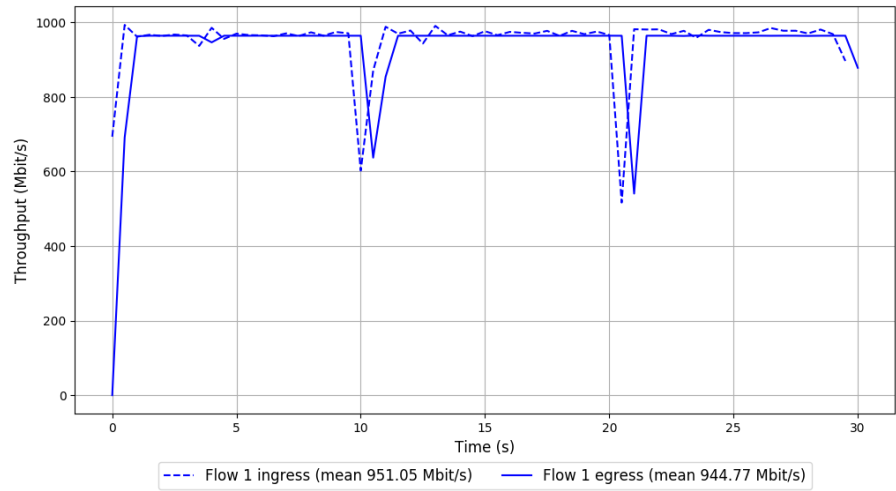


Run 2: Statistics of FillP-Sheep

Start at: 2018-09-25 12:49:35
End at: 2018-09-25 12:50:05
Local clock offset: -0.726 ms
Remote clock offset: -3.874 ms

Below is generated by plot.py at 2018-09-25 15:19:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 944.77 Mbit/s
95th percentile per-packet one-way delay: 21.555 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 944.77 Mbit/s
95th percentile per-packet one-way delay: 21.555 ms
Loss rate: 0.67%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2018-09-25 13:18:32

End at: 2018-09-25 13:19:02

Local clock offset: 0.594 ms

Remote clock offset: 0.19 ms

Below is generated by plot.py at 2018-09-25 15:19:51

Datalink statistics

-- Total of 1 flow:

Average throughput: 944.85 Mbit/s

95th percentile per-packet one-way delay: 23.268 ms

Loss rate: 0.30%

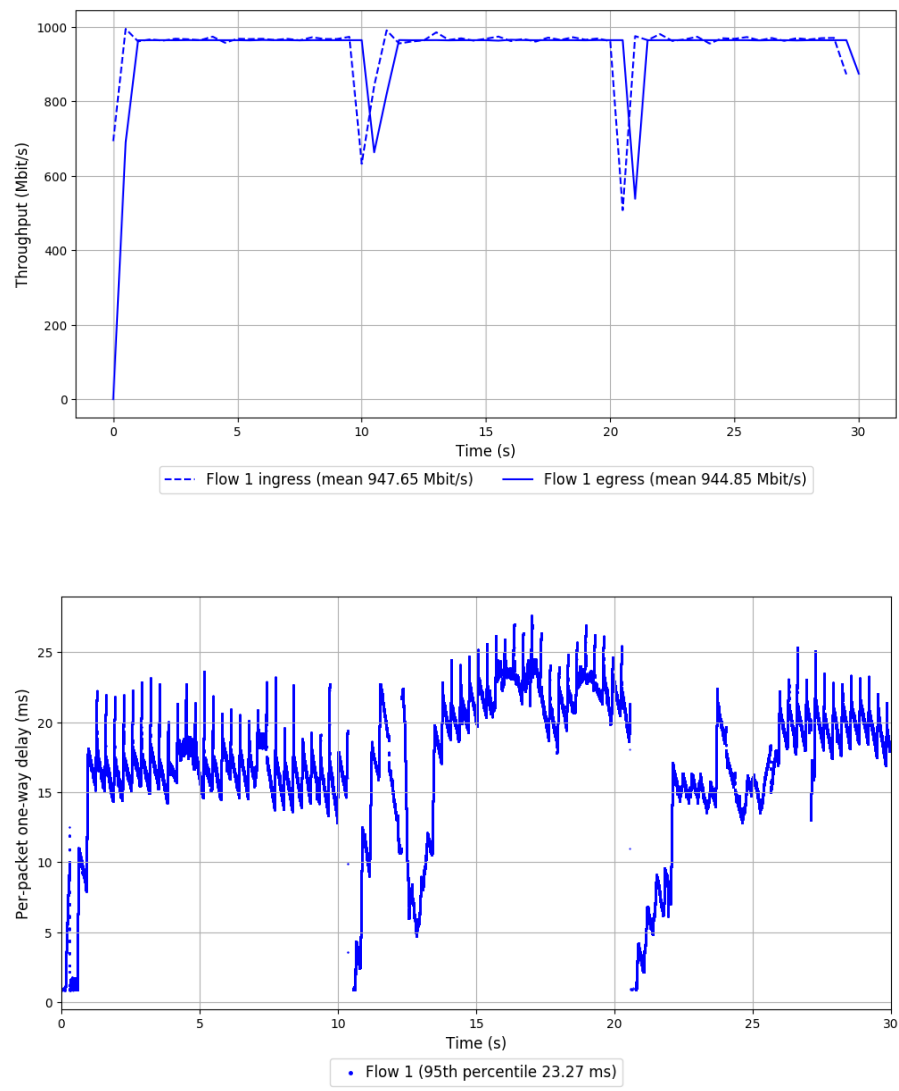
-- Flow 1:

Average throughput: 944.85 Mbit/s

95th percentile per-packet one-way delay: 23.268 ms

Loss rate: 0.30%

Run 3: Report of FillP-Sheep — Data Link



Run 4: Statistics of FillP-Sheep

Start at: 2018-09-25 13:47:08

End at: 2018-09-25 13:47:38

Local clock offset: 0.643 ms

Remote clock offset: 3.413 ms

Below is generated by plot.py at 2018-09-25 15:25:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 945.02 Mbit/s

95th percentile per-packet one-way delay: 25.595 ms

Loss rate: 0.61%

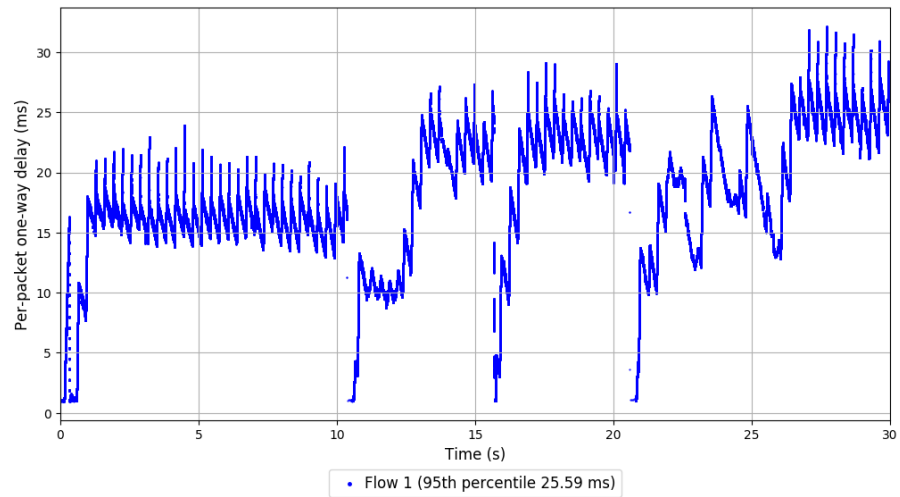
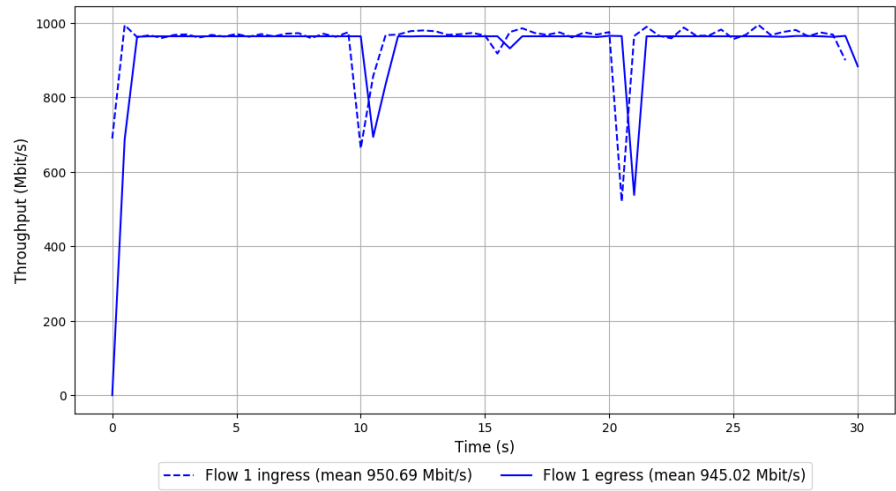
-- Flow 1:

Average throughput: 945.02 Mbit/s

95th percentile per-packet one-way delay: 25.595 ms

Loss rate: 0.61%

Run 4: Report of FillP-Sheep — Data Link



Run 5: Statistics of FillP-Sheep

Start at: 2018-09-25 14:16:05

End at: 2018-09-25 14:16:35

Local clock offset: 0.556 ms

Remote clock offset: 1.633 ms

Below is generated by plot.py at 2018-09-25 15:31:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 945.39 Mbit/s

95th percentile per-packet one-way delay: 29.446 ms

Loss rate: 0.76%

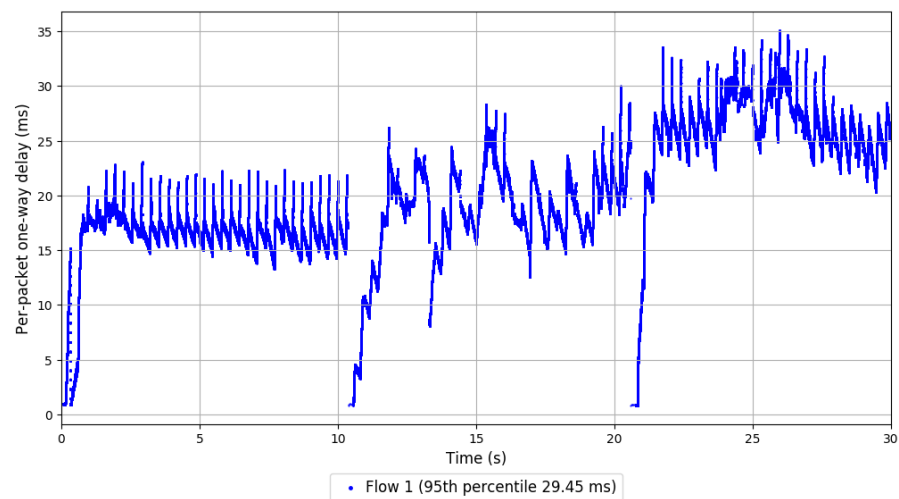
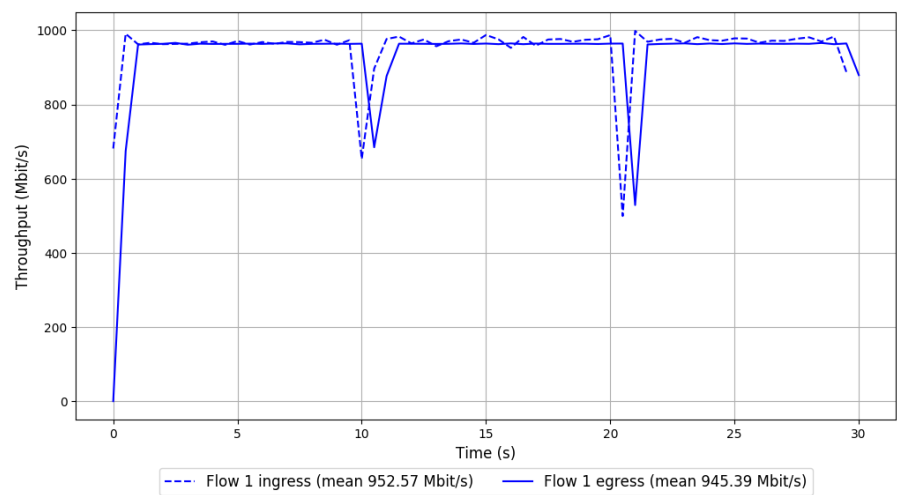
-- Flow 1:

Average throughput: 945.39 Mbit/s

95th percentile per-packet one-way delay: 29.446 ms

Loss rate: 0.76%

Run 5: Report of FillP-Sheep — Data Link

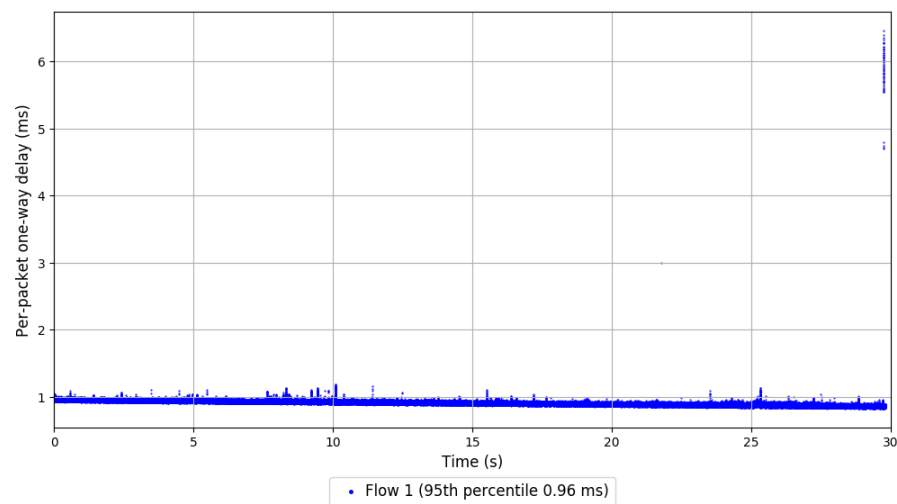
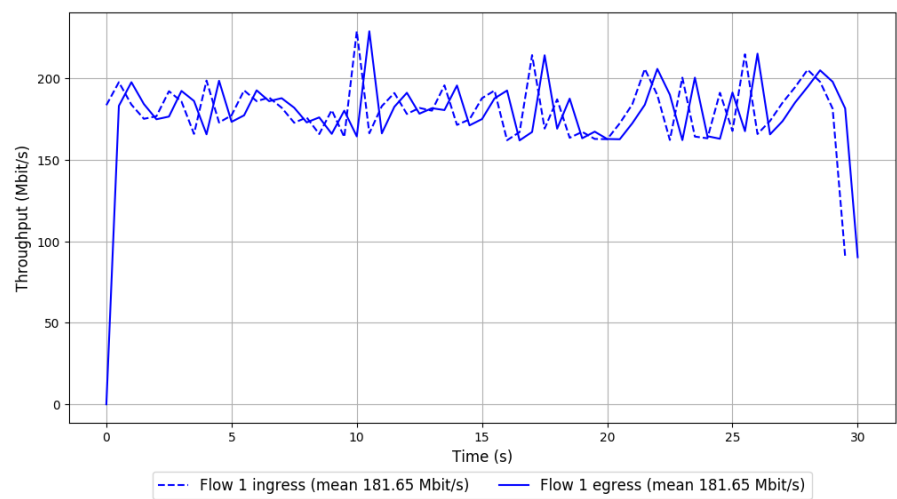


Run 1: Statistics of Indigo

Start at: 2018-09-25 12:36:35
End at: 2018-09-25 12:37:05
Local clock offset: -3.518 ms
Remote clock offset: -1.775 ms

Below is generated by plot.py at 2018-09-25 15:31:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 181.65 Mbit/s
95th percentile per-packet one-way delay: 0.960 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 181.65 Mbit/s
95th percentile per-packet one-way delay: 0.960 ms
Loss rate: 0.01%

Run 1: Report of Indigo — Data Link

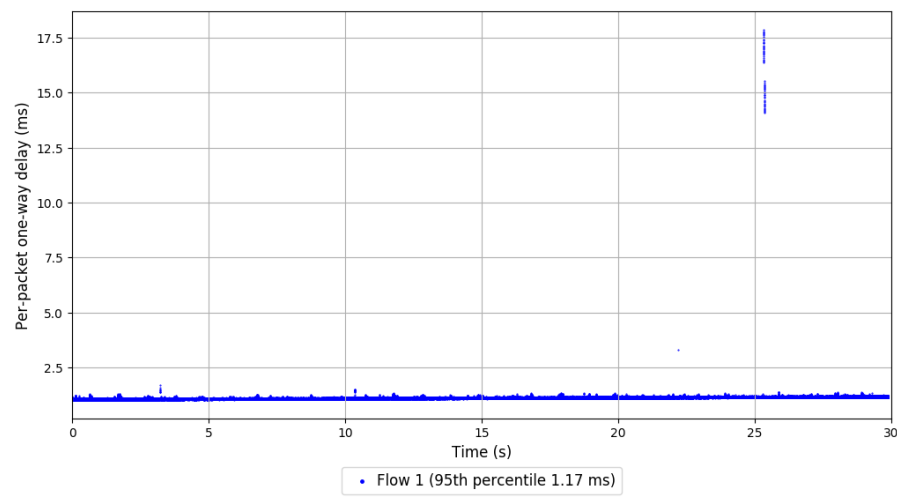
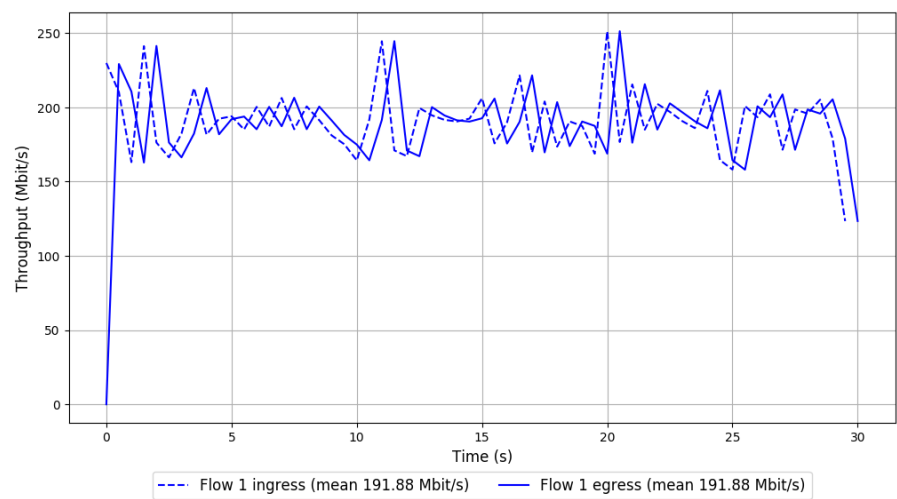


Run 2: Statistics of Indigo

Start at: 2018-09-25 13:05:41
End at: 2018-09-25 13:06:11
Local clock offset: 0.572 ms
Remote clock offset: -2.188 ms

Below is generated by plot.py at 2018-09-25 15:31:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 191.88 Mbit/s
95th percentile per-packet one-way delay: 1.173 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 191.88 Mbit/s
95th percentile per-packet one-way delay: 1.173 ms
Loss rate: 0.00%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2018-09-25 13:34:18

End at: 2018-09-25 13:34:48

Local clock offset: 0.714 ms

Remote clock offset: 1.337 ms

Below is generated by plot.py at 2018-09-25 15:31:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 185.97 Mbit/s

95th percentile per-packet one-way delay: 1.135 ms

Loss rate: 0.01%

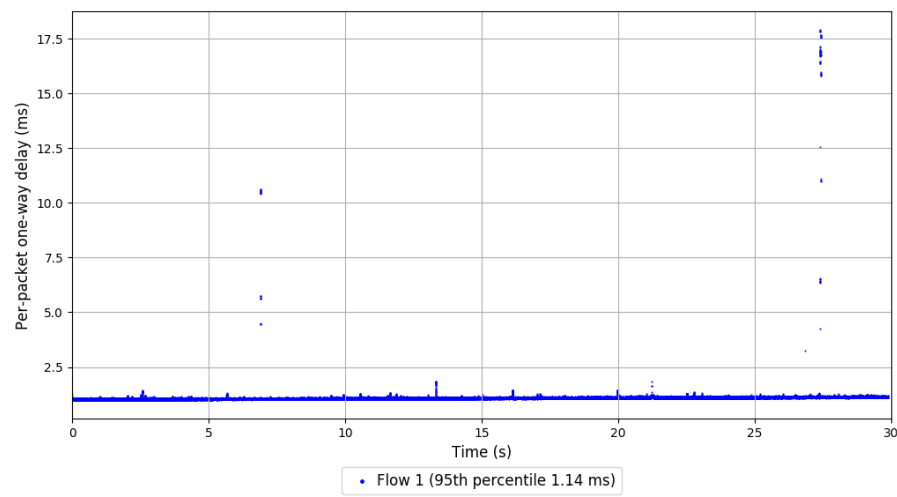
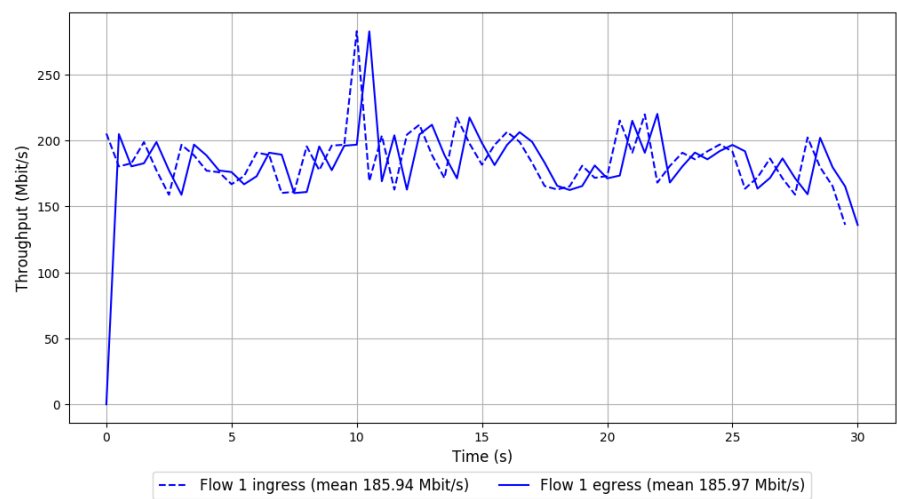
-- Flow 1:

Average throughput: 185.97 Mbit/s

95th percentile per-packet one-way delay: 1.135 ms

Loss rate: 0.01%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2018-09-25 14:03:12

End at: 2018-09-25 14:03:42

Local clock offset: 0.687 ms

Remote clock offset: 4.779 ms

Below is generated by plot.py at 2018-09-25 15:31:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 184.18 Mbit/s

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

Loss rate: 0.00%

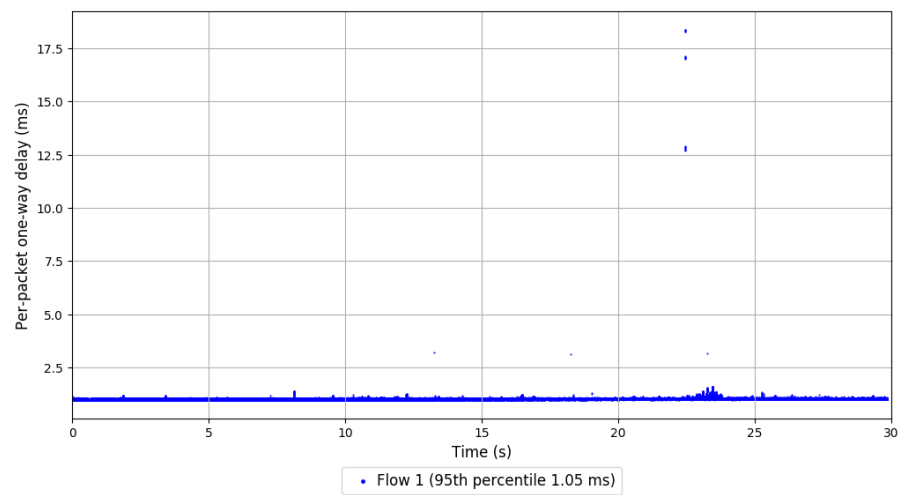
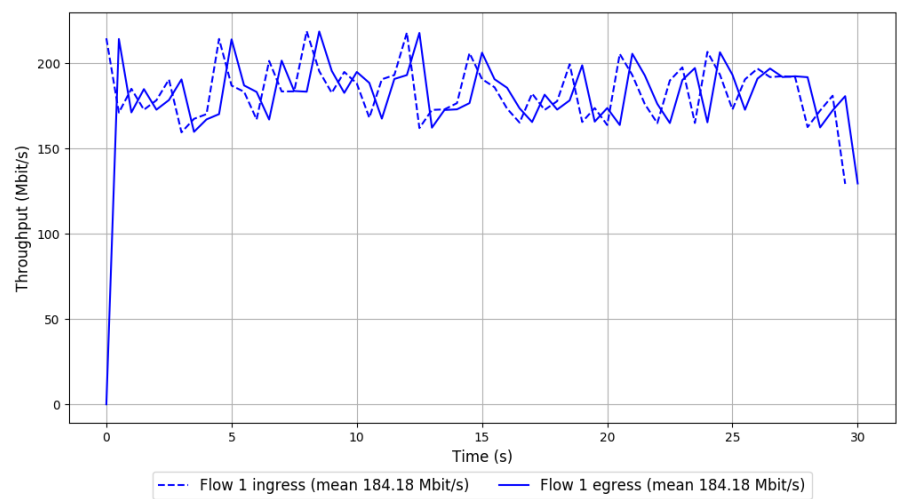
-- Flow 1:

Average throughput: 184.18 Mbit/s

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

Loss rate: 0.00%

Run 4: Report of Indigo — Data Link

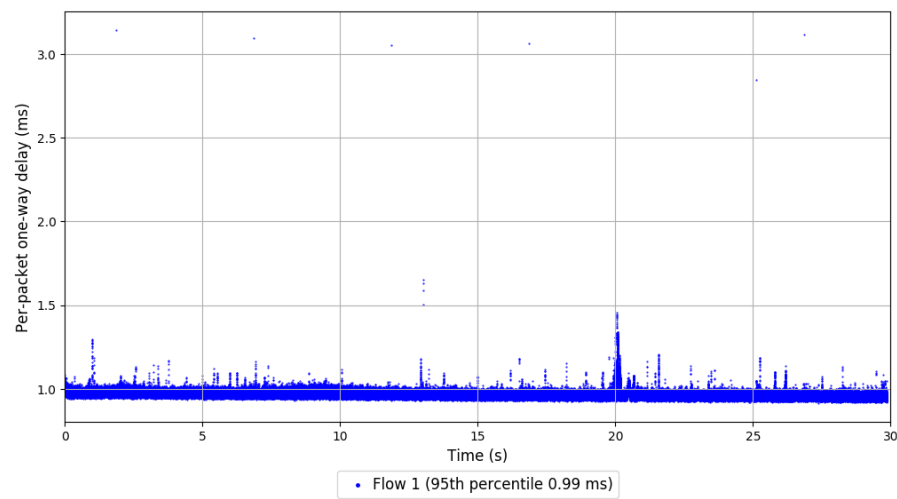
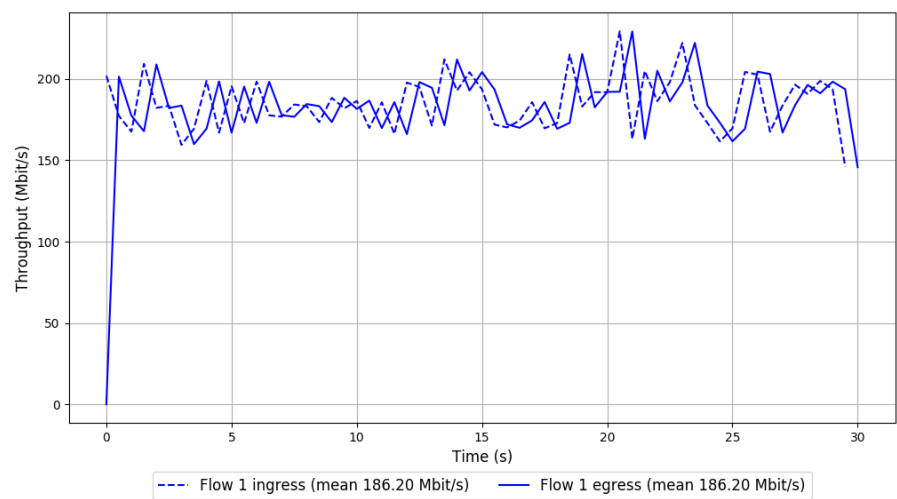


Run 5: Statistics of Indigo

Start at: 2018-09-25 14:32:08
End at: 2018-09-25 14:32:38
Local clock offset: 0.468 ms
Remote clock offset: -0.353 ms

Below is generated by plot.py at 2018-09-25 15:31:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 186.20 Mbit/s
95th percentile per-packet one-way delay: 0.993 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 186.20 Mbit/s
95th percentile per-packet one-way delay: 0.993 ms
Loss rate: 0.01%

Run 5: Report of Indigo — Data Link

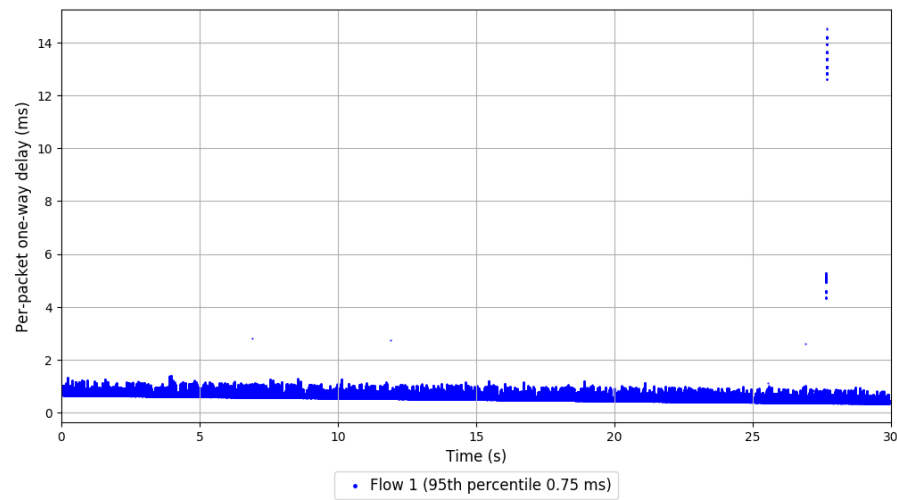
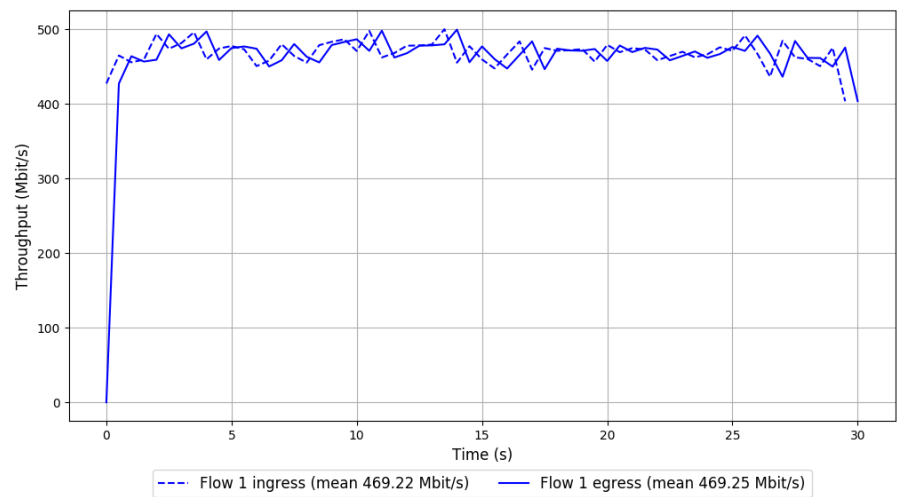


Run 1: Statistics of Indigo-96d2da3

Start at: 2018-09-25 12:39:33
End at: 2018-09-25 12:40:03
Local clock offset: -3.665 ms
Remote clock offset: -2.475 ms

Below is generated by plot.py at 2018-09-25 15:31:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 469.25 Mbit/s
95th percentile per-packet one-way delay: 0.750 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 469.25 Mbit/s
95th percentile per-packet one-way delay: 0.750 ms
Loss rate: 0.00%

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

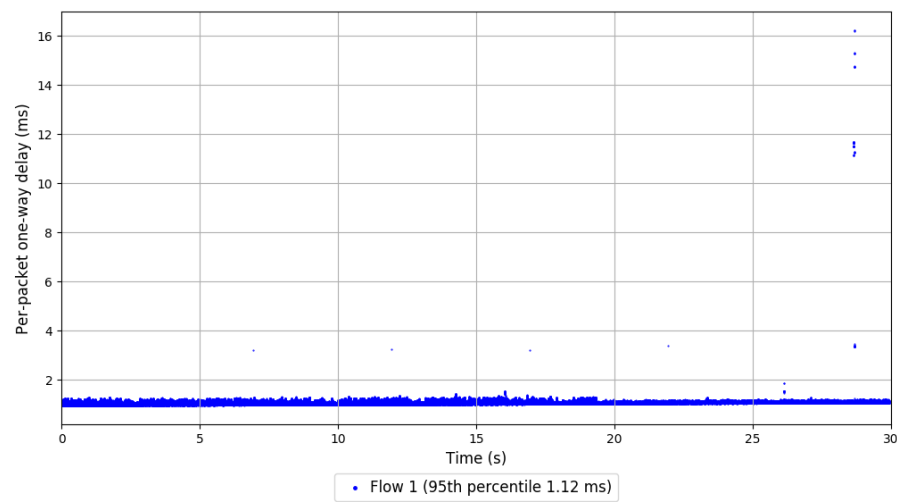
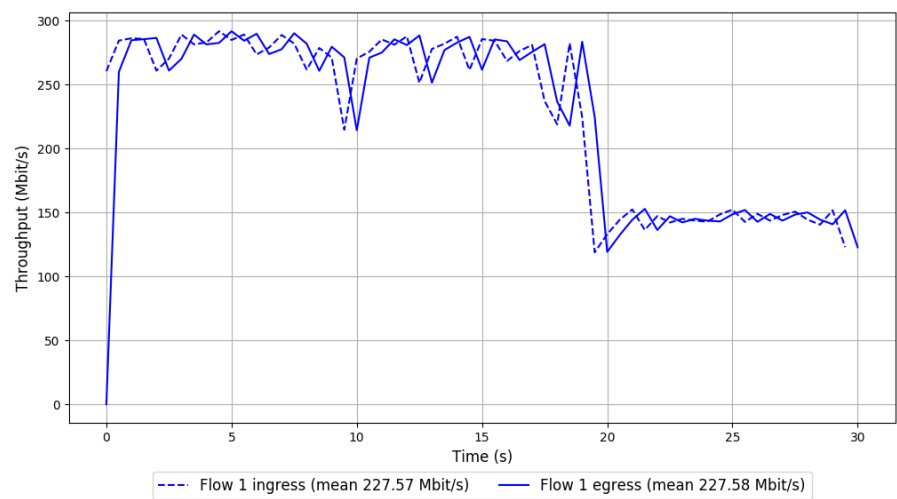


Run 2: Statistics of Indigo-96d2da3

Start at: 2018-09-25 13:08:40
End at: 2018-09-25 13:09:10
Local clock offset: 0.676 ms
Remote clock offset: -1.344 ms

Below is generated by plot.py at 2018-09-25 15:31:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 227.58 Mbit/s
95th percentile per-packet one-way delay: 1.125 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 227.58 Mbit/s
95th percentile per-packet one-way delay: 1.125 ms
Loss rate: 0.00%

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



Run 3: Statistics of Indigo-96d2da3

Start at: 2018-09-25 13:37:16

End at: 2018-09-25 13:37:46

Local clock offset: 0.752 ms

Remote clock offset: 1.989 ms

Below is generated by plot.py at 2018-09-25 15:31:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 152.29 Mbit/s

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

Loss rate: 0.01%

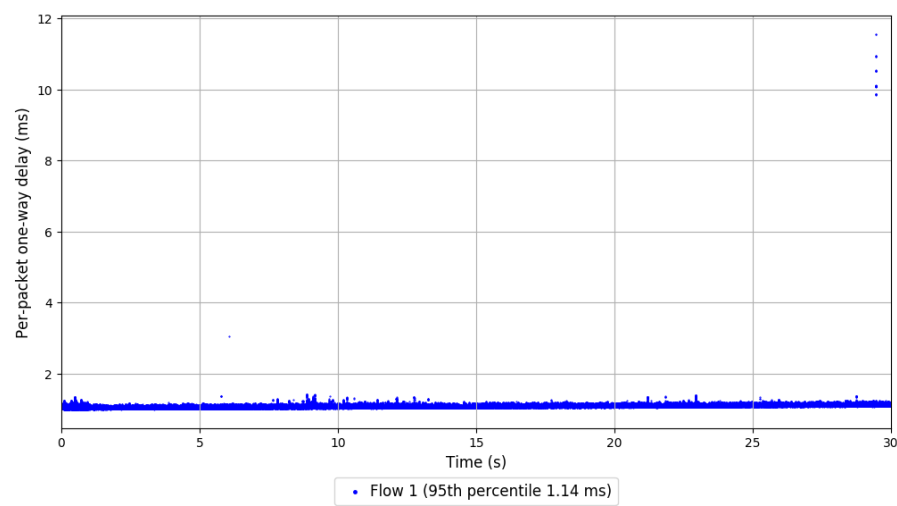
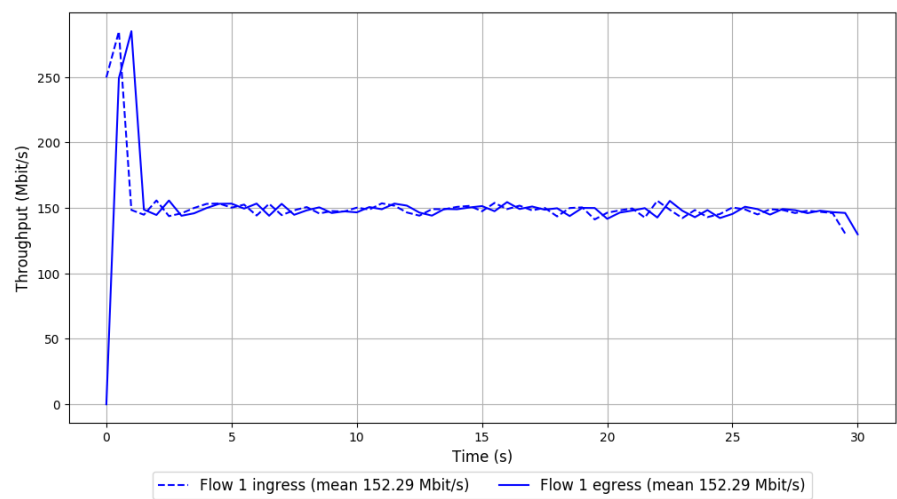
-- Flow 1:

Average throughput: 152.29 Mbit/s

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

Loss rate: 0.01%

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



Run 4: Statistics of Indigo-96d2da3

Start at: 2018-09-25 14:06:10

End at: 2018-09-25 14:06:40

Local clock offset: 0.693 ms

Remote clock offset: 5.066 ms

Below is generated by plot.py at 2018-09-25 15:31:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 247.83 Mbit/s

95th percentile per-packet one-way delay: 1.030 ms

Loss rate: 0.00%

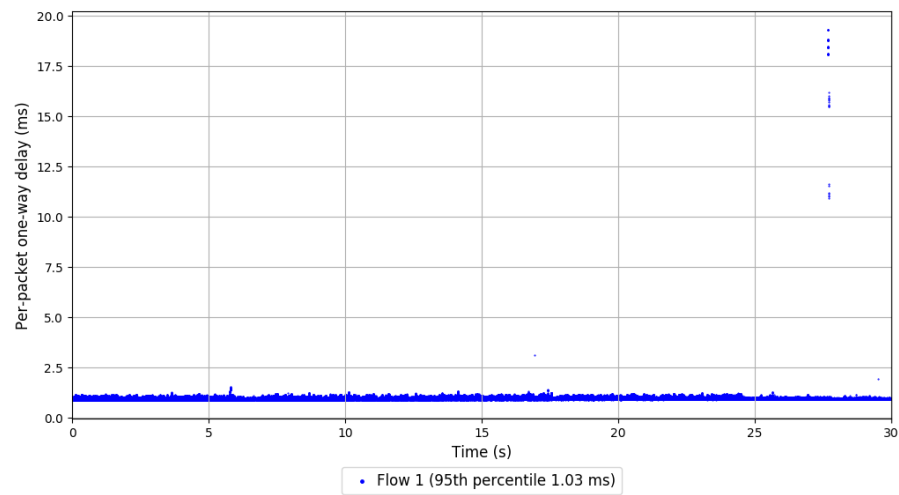
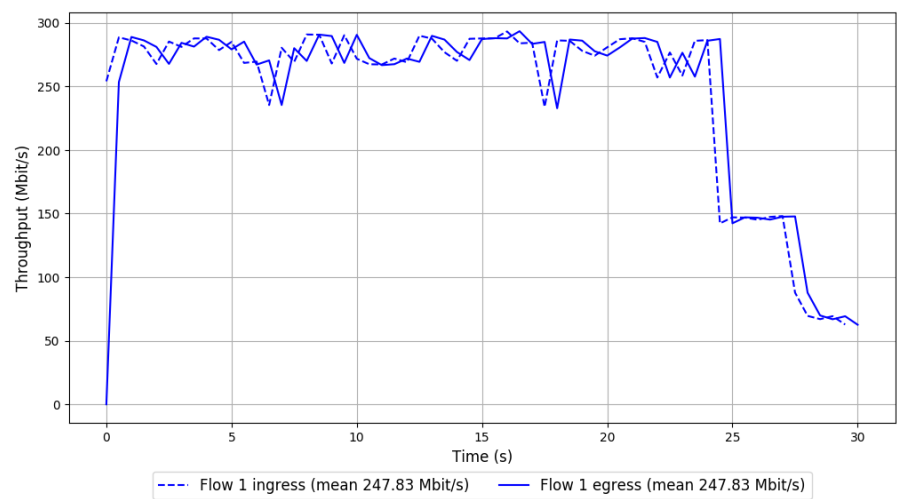
-- Flow 1:

Average throughput: 247.83 Mbit/s

95th percentile per-packet one-way delay: 1.030 ms

Loss rate: 0.00%

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

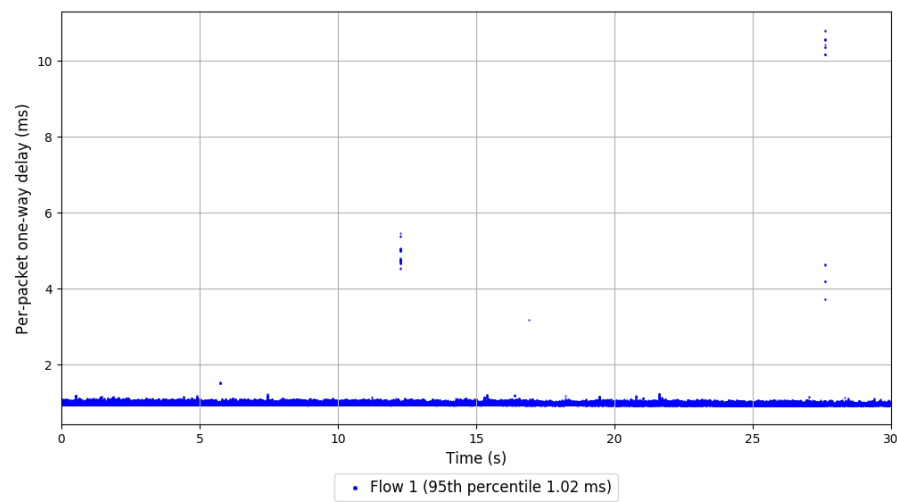
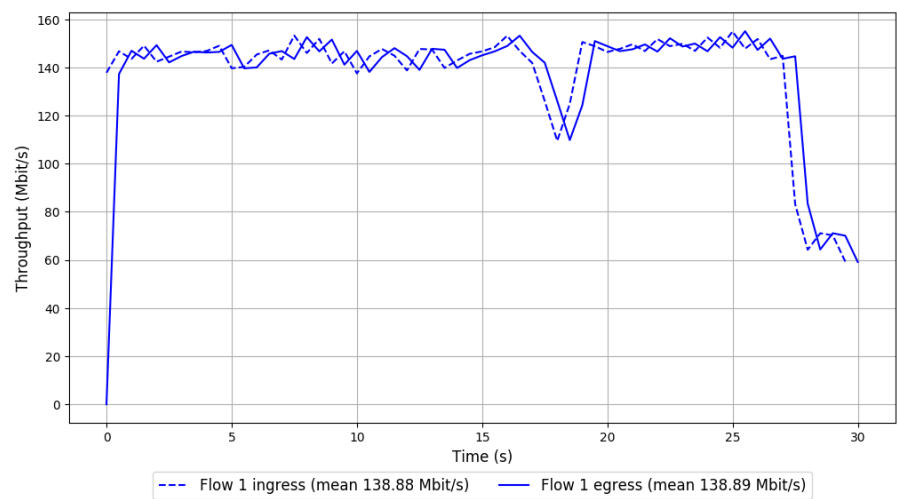


Run 5: Statistics of Indigo-96d2da3

Start at: 2018-09-25 14:35:01
End at: 2018-09-25 14:35:31
Local clock offset: 0.465 ms
Remote clock offset: -0.487 ms

Below is generated by plot.py at 2018-09-25 15:31:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 138.89 Mbit/s
95th percentile per-packet one-way delay: 1.017 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 138.89 Mbit/s
95th percentile per-packet one-way delay: 1.017 ms
Loss rate: 0.00%

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

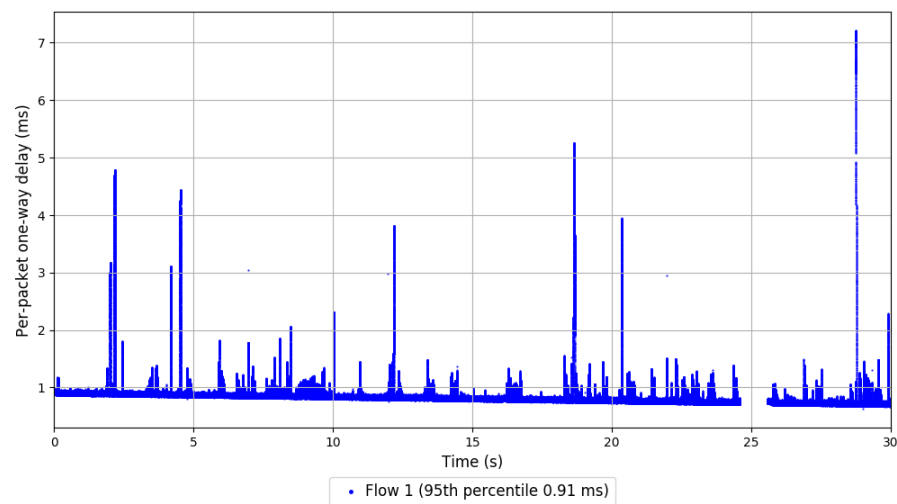
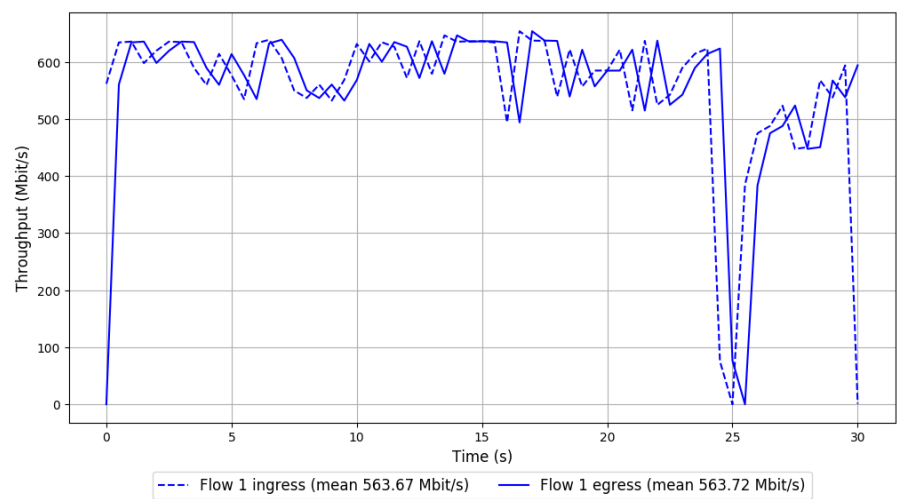


```
Run 1: Statistics of LEDBAT

Start at: 2018-09-25 12:30:15
End at: 2018-09-25 12:30:45
Local clock offset: -3.125 ms
Remote clock offset: 0.538 ms

# Below is generated by plot.py at 2018-09-25 15:31:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 563.72 Mbit/s
95th percentile per-packet one-way delay: 0.913 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 563.72 Mbit/s
95th percentile per-packet one-way delay: 0.913 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link

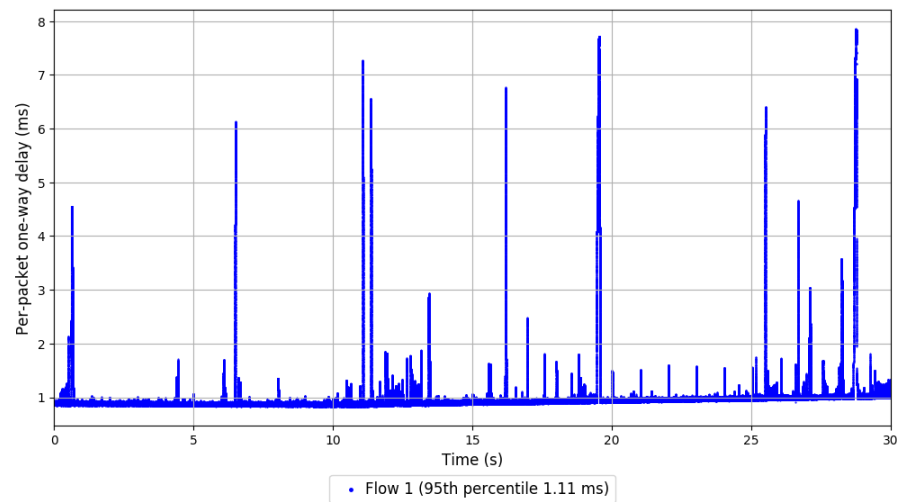
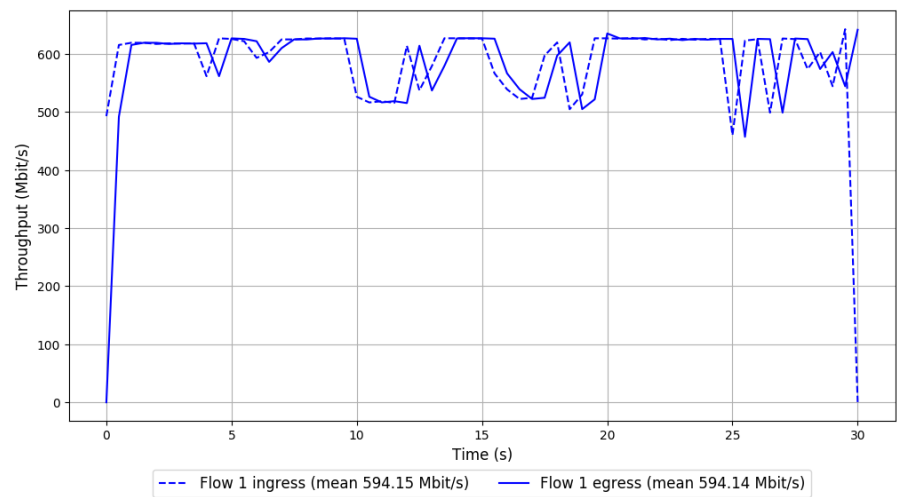


Run 2: Statistics of LEDBAT

Start at: 2018-09-25 12:59:18
End at: 2018-09-25 12:59:48
Local clock offset: 0.271 ms
Remote clock offset: -4.603 ms

Below is generated by plot.py at 2018-09-25 15:31:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 594.14 Mbit/s
95th percentile per-packet one-way delay: 1.106 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 594.14 Mbit/s
95th percentile per-packet one-way delay: 1.106 ms
Loss rate: 0.01%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-09-25 13:28:15

End at: 2018-09-25 13:28:45

Local clock offset: 0.653 ms

Remote clock offset: 0.887 ms

Below is generated by plot.py at 2018-09-25 15:31:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 591.87 Mbit/s

95th percentile per-packet one-way delay: 1.069 ms

Loss rate: 0.01%

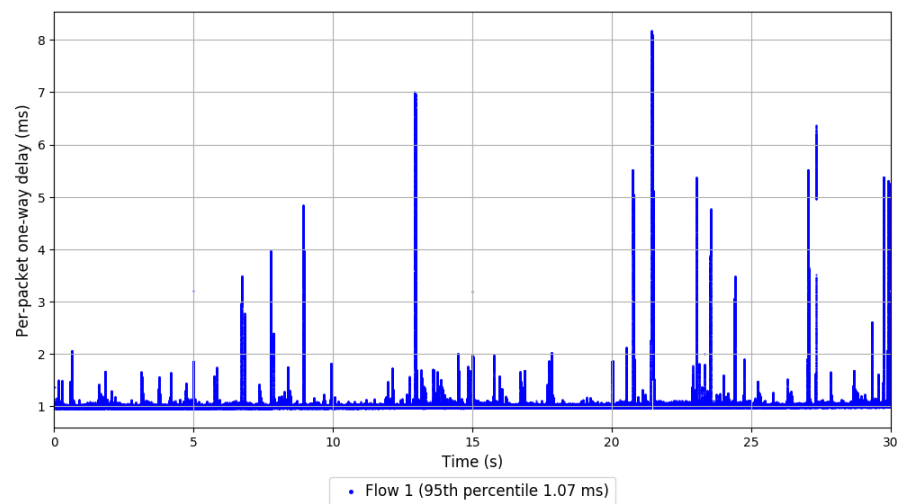
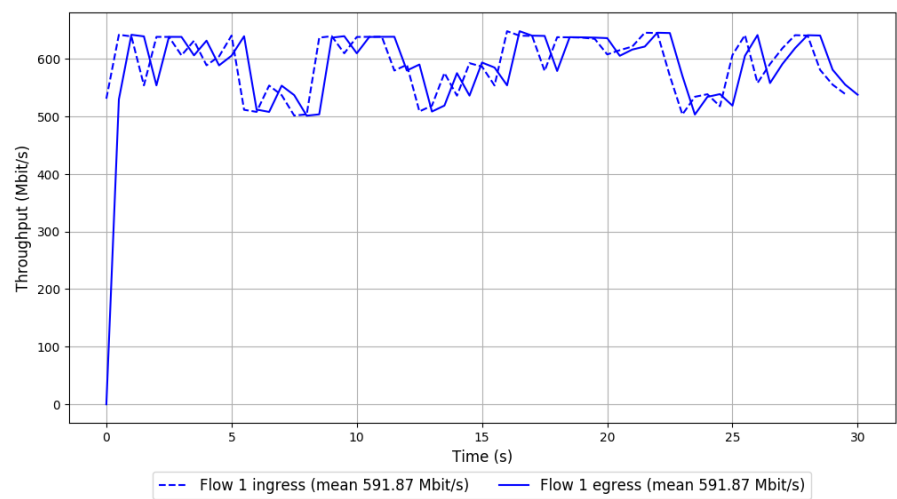
-- Flow 1:

Average throughput: 591.87 Mbit/s

95th percentile per-packet one-way delay: 1.069 ms

Loss rate: 0.01%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-09-25 13:56:51

End at: 2018-09-25 13:57:21

Local clock offset: 0.647 ms

Remote clock offset: 4.337 ms

Below is generated by plot.py at 2018-09-25 15:31:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 602.13 Mbit/s

95th percentile per-packet one-way delay: 1.023 ms

Loss rate: 0.01%

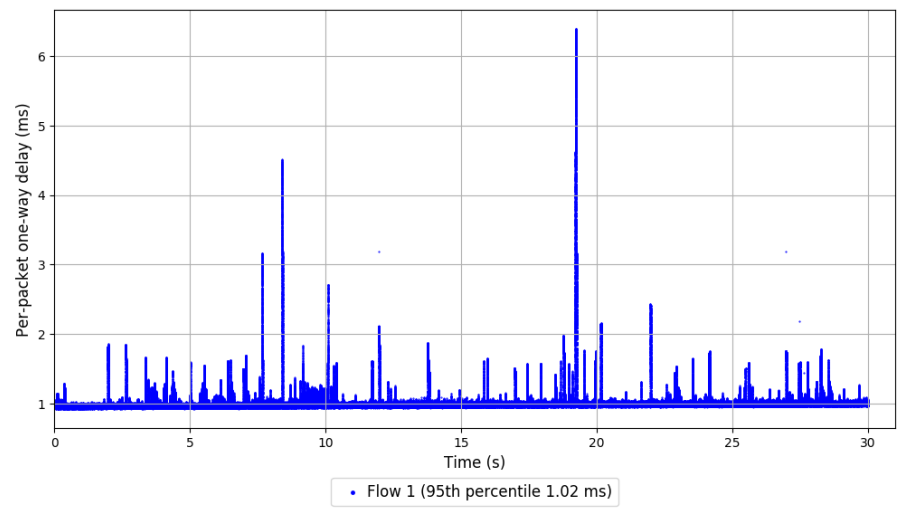
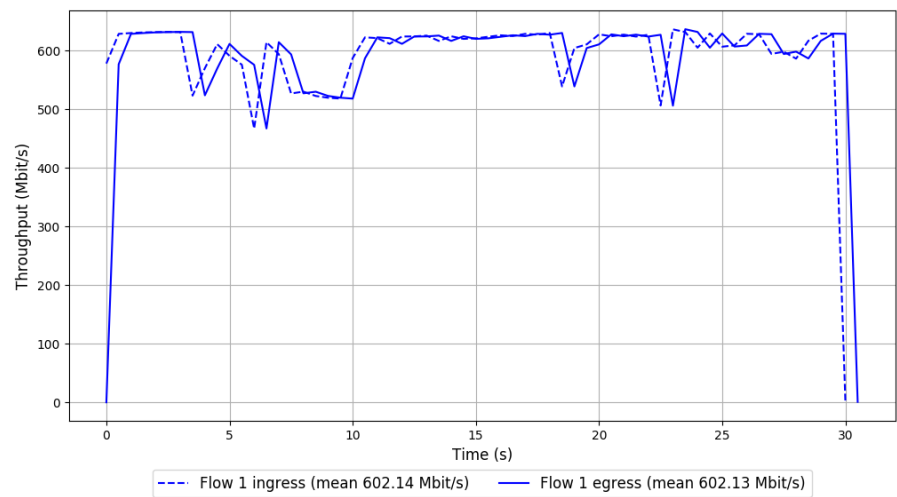
-- Flow 1:

Average throughput: 602.13 Mbit/s

95th percentile per-packet one-way delay: 1.023 ms

Loss rate: 0.01%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-09-25 14:25:45

End at: 2018-09-25 14:26:15

Local clock offset: 0.482 ms

Remote clock offset: 0.029 ms

Below is generated by plot.py at 2018-09-25 15:31:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 562.80 Mbit/s

95th percentile per-packet one-way delay: 13.236 ms

Loss rate: 0.00%

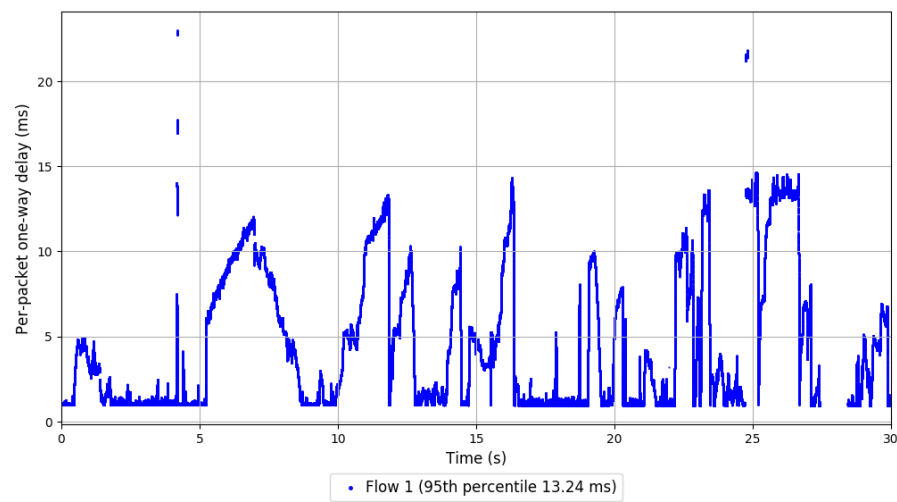
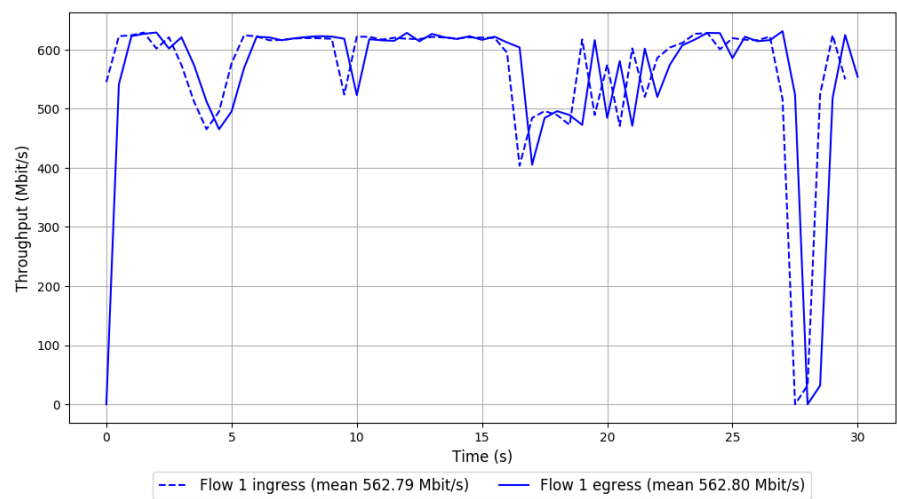
-- Flow 1:

Average throughput: 562.80 Mbit/s

95th percentile per-packet one-way delay: 13.236 ms

Loss rate: 0.00%

Run 5: Report of LEDBAT — Data Link

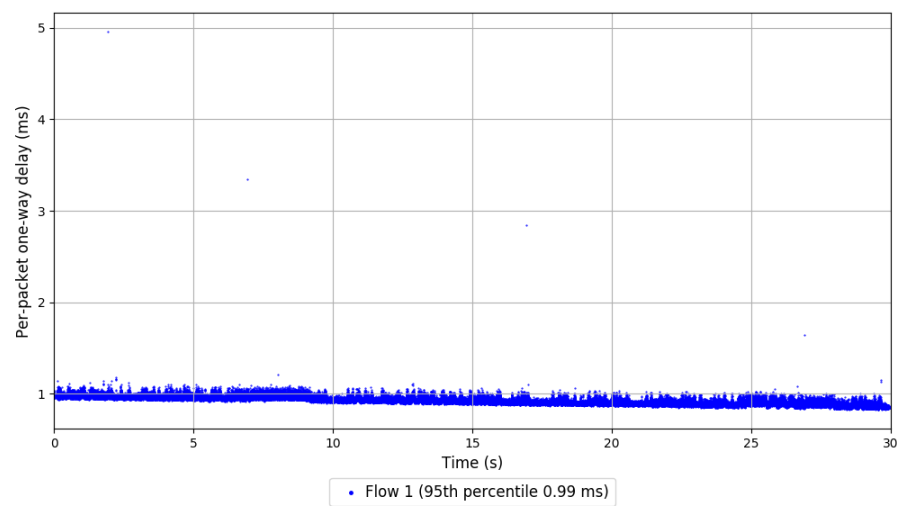
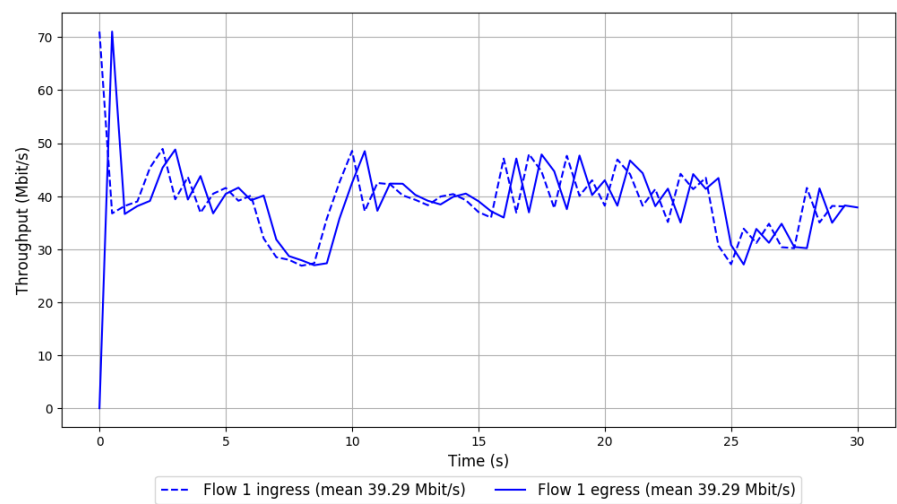


```
Run 1: Statistics of Indigo-Muses

Start at: 2018-09-25 12:35:15
End at: 2018-09-25 12:35:45
Local clock offset: -3.464 ms
Remote clock offset: -1.426 ms

# Below is generated by plot.py at 2018-09-25 15:31:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 39.29 Mbit/s
95th percentile per-packet one-way delay: 0.995 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 39.29 Mbit/s
95th percentile per-packet one-way delay: 0.995 ms
Loss rate: 0.01%
```

Run 1: Report of Indigo-Muses — Data Link

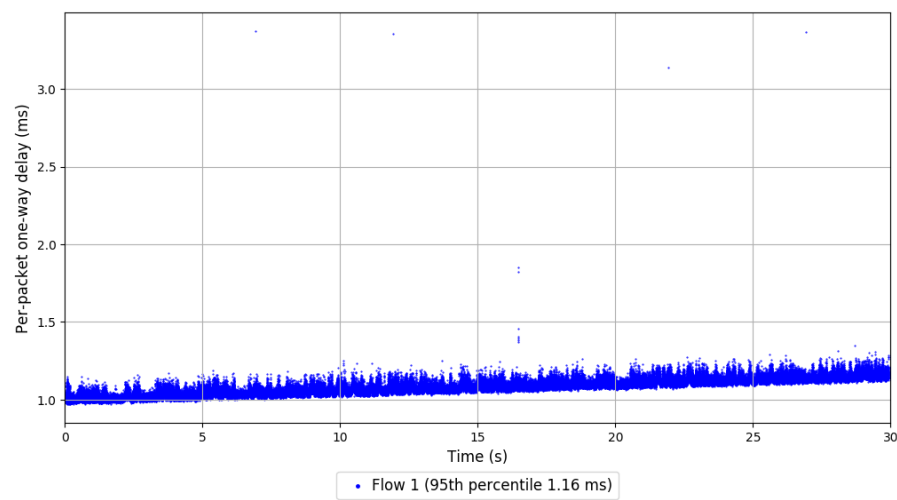
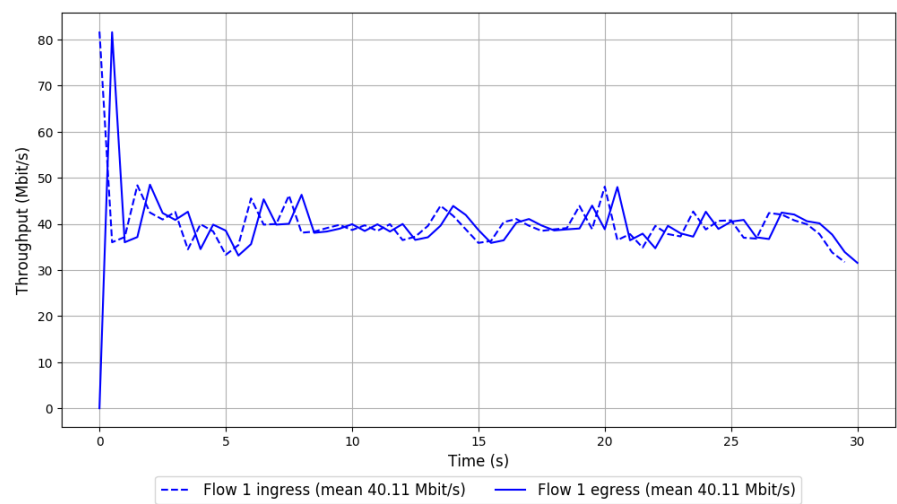


Run 2: Statistics of Indigo-Muses

Start at: 2018-09-25 13:04:21
End at: 2018-09-25 13:04:51
Local clock offset: 0.543 ms
Remote clock offset: -2.552 ms

Below is generated by plot.py at 2018-09-25 15:31:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 40.11 Mbit/s
95th percentile per-packet one-way delay: 1.163 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 40.11 Mbit/s
95th percentile per-packet one-way delay: 1.163 ms
Loss rate: 0.01%

Run 2: Report of Indigo-Muses — Data Link



Run 3: Statistics of Indigo-Muses

Start at: 2018-09-25 13:32:58

End at: 2018-09-25 13:33:28

Local clock offset: 0.706 ms

Remote clock offset: 1.208 ms

Below is generated by plot.py at 2018-09-25 15:31:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 42.39 Mbit/s

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

Loss rate: 0.01%

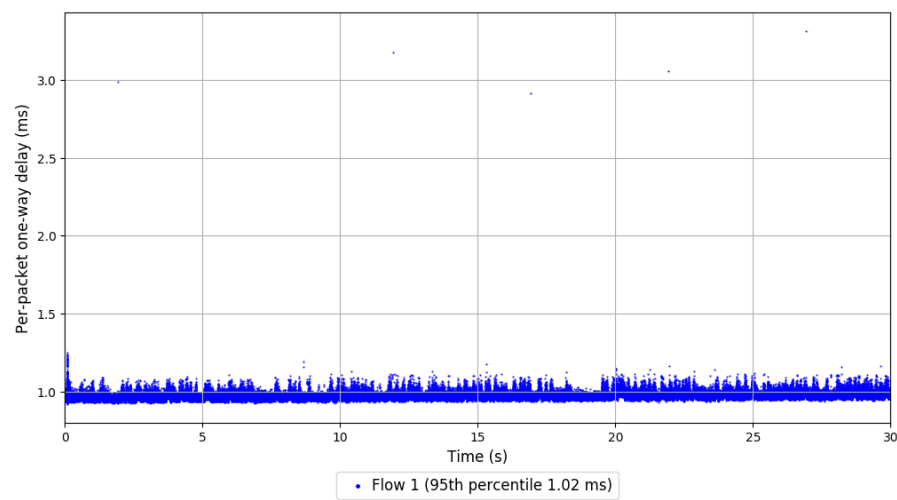
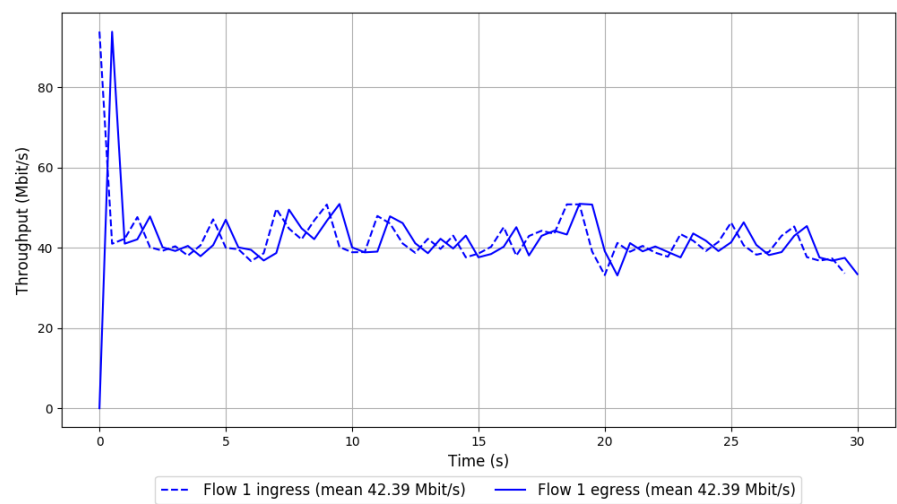
-- Flow 1:

Average throughput: 42.39 Mbit/s

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

Loss rate: 0.01%

Run 3: Report of Indigo-Muses — Data Link



Run 4: Statistics of Indigo-Muses

Start at: 2018-09-25 14:01:53

End at: 2018-09-25 14:02:23

Local clock offset: 0.675 ms

Remote clock offset: 4.682 ms

Below is generated by plot.py at 2018-09-25 15:31:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 41.63 Mbit/s

95th percentile per-packet one-way delay: 1.084 ms

Loss rate: 0.00%

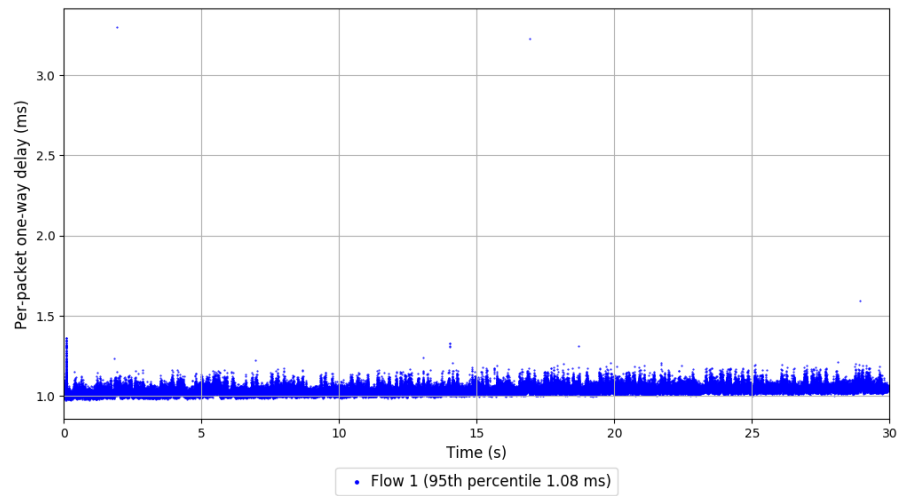
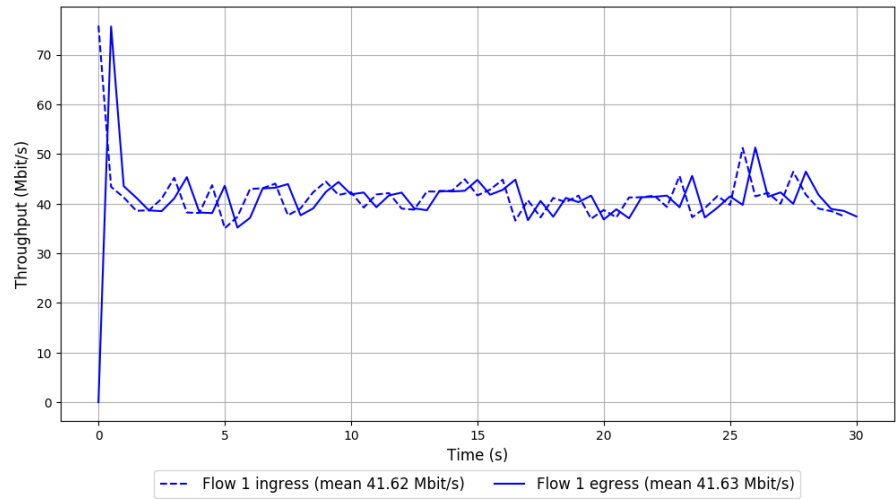
-- Flow 1:

Average throughput: 41.63 Mbit/s

95th percentile per-packet one-way delay: 1.084 ms

Loss rate: 0.00%

Run 4: Report of Indigo-Muses — Data Link

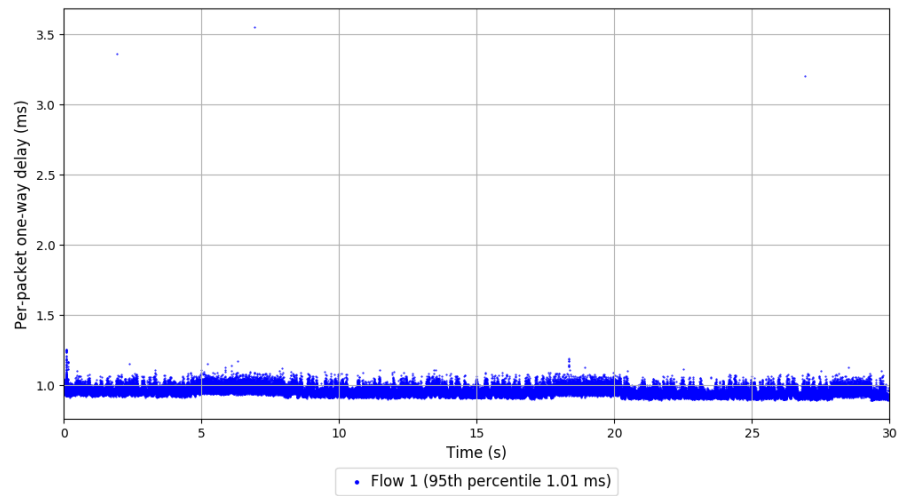
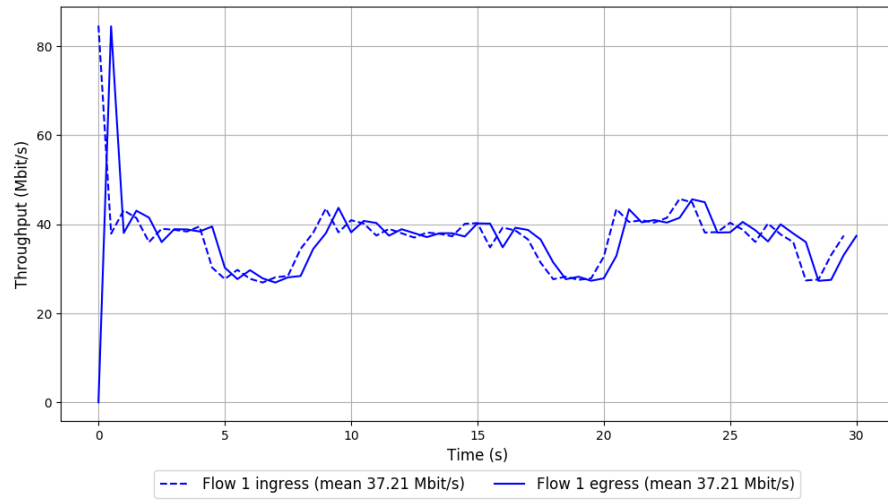


Run 5: Statistics of Indigo-Muses

Start at: 2018-09-25 14:30:48
End at: 2018-09-25 14:31:18
Local clock offset: 0.467 ms
Remote clock offset: -0.268 ms

Below is generated by plot.py at 2018-09-25 15:31:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 37.21 Mbit/s
95th percentile per-packet one-way delay: 1.013 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 37.21 Mbit/s
95th percentile per-packet one-way delay: 1.013 ms
Loss rate: 0.01%

Run 5: Report of Indigo-Muses — Data Link

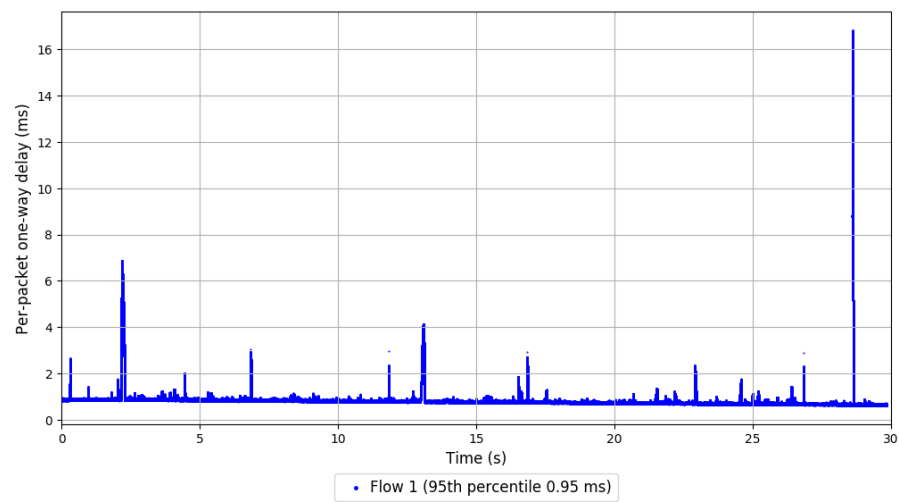
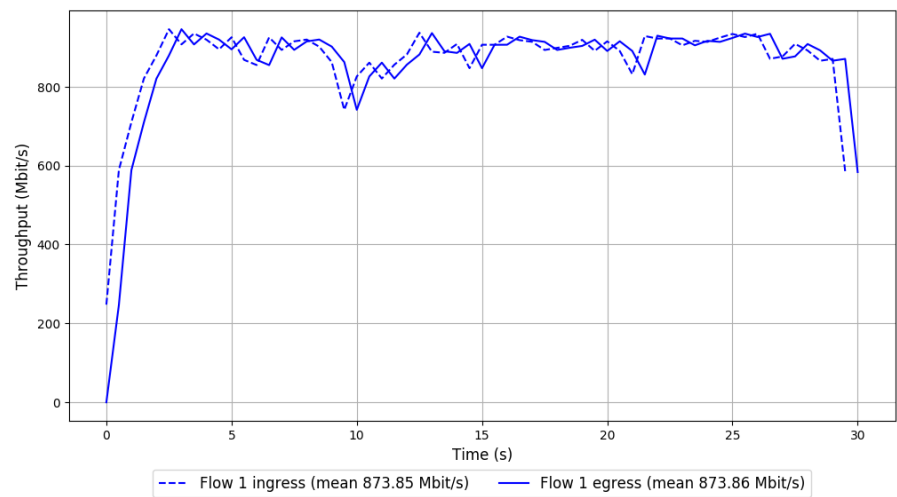


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-09-25 12:28:36
End at: 2018-09-25 12:29:06
Local clock offset: -3.018 ms
Remote clock offset: 1.422 ms

# Below is generated by plot.py at 2018-09-25 15:37:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 873.86 Mbit/s
95th percentile per-packet one-way delay: 0.955 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 873.86 Mbit/s
95th percentile per-packet one-way delay: 0.955 ms
Loss rate: 0.01%
```

Run 1: Report of PCC-Allegro — Data Link

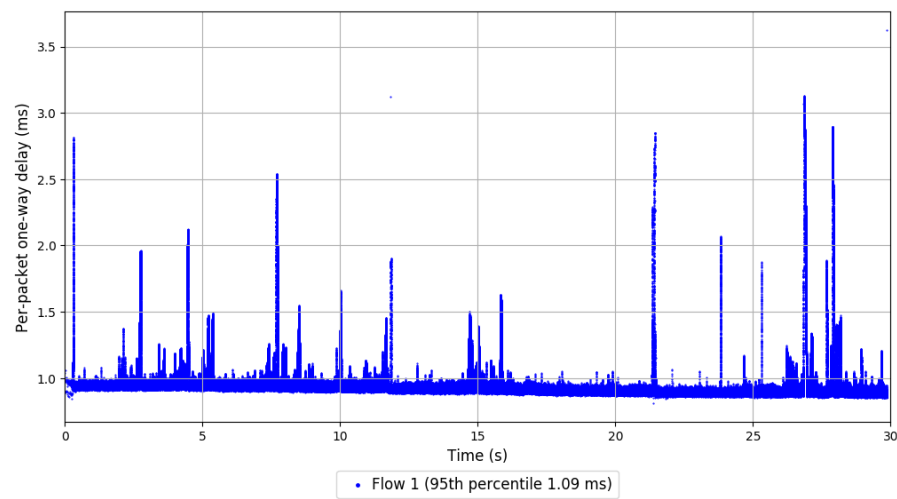
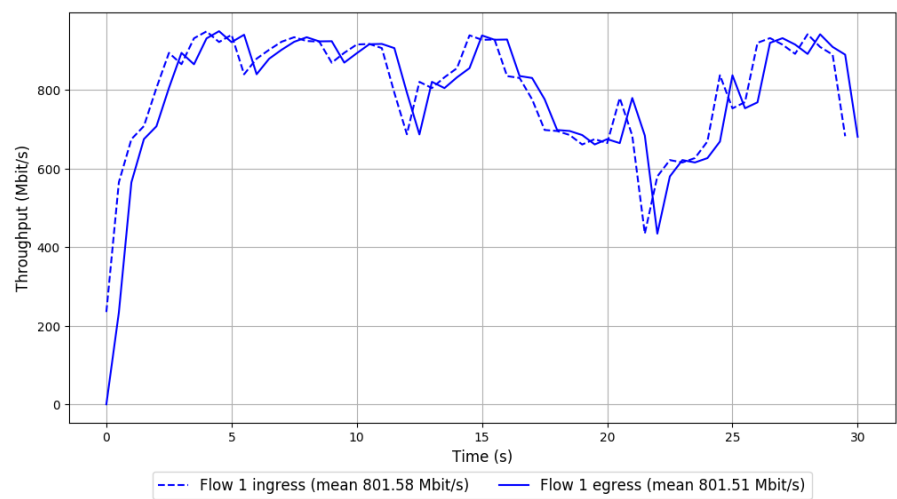


Run 2: Statistics of PCC-Allegro

Start at: 2018-09-25 12:57:41
End at: 2018-09-25 12:58:11
Local clock offset: 0.179 ms
Remote clock offset: -4.555 ms

Below is generated by plot.py at 2018-09-25 15:37:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 801.51 Mbit/s
95th percentile per-packet one-way delay: 1.092 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 801.51 Mbit/s
95th percentile per-packet one-way delay: 1.092 ms
Loss rate: 0.01%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-09-25 13:26:39

End at: 2018-09-25 13:27:09

Local clock offset: 0.62 ms

Remote clock offset: 0.834 ms

Below is generated by plot.py at 2018-09-25 15:38:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 789.99 Mbit/s

95th percentile per-packet one-way delay: 48.101 ms

Loss rate: 0.01%

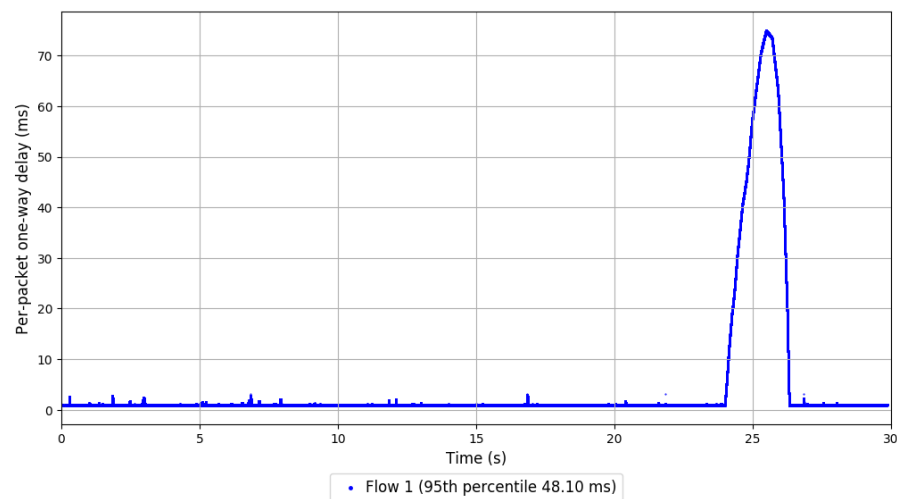
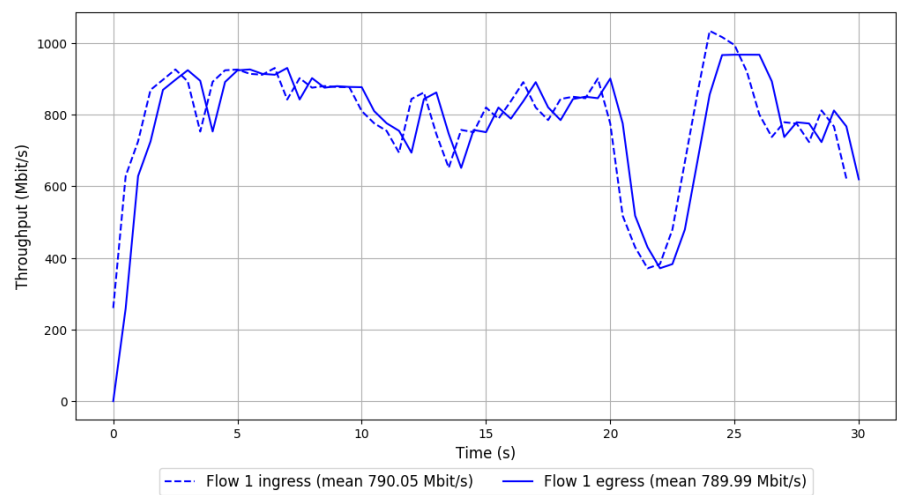
-- Flow 1:

Average throughput: 789.99 Mbit/s

95th percentile per-packet one-way delay: 48.101 ms

Loss rate: 0.01%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-09-25 13:55:14

End at: 2018-09-25 13:55:44

Local clock offset: 0.64 ms

Remote clock offset: 4.151 ms

Below is generated by plot.py at 2018-09-25 15:40:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 834.99 Mbit/s

95th percentile per-packet one-way delay: 1.159 ms

Loss rate: 0.01%

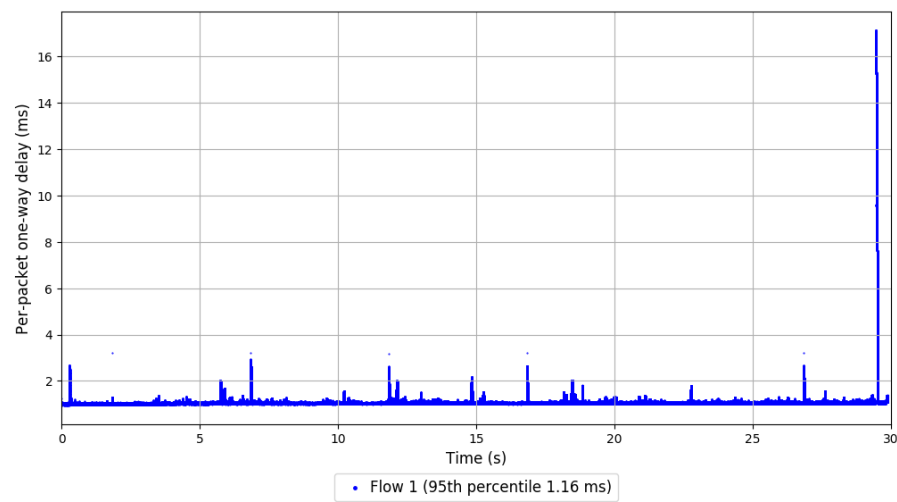
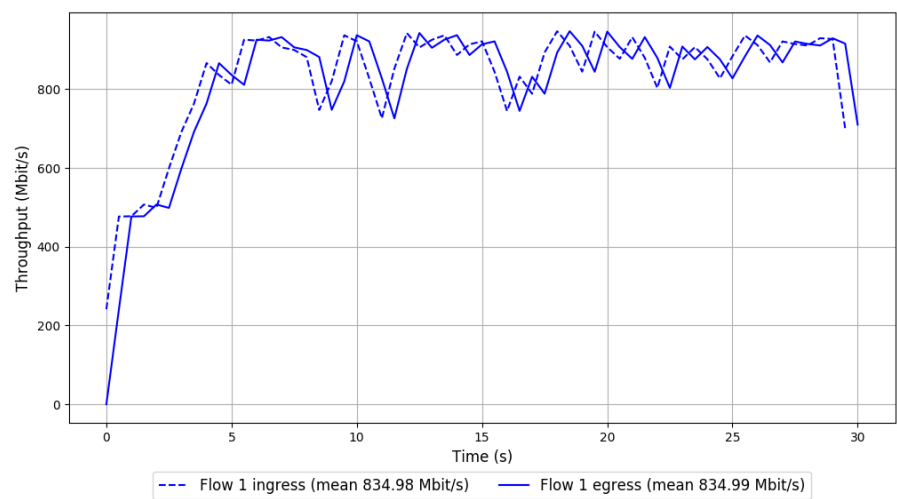
-- Flow 1:

Average throughput: 834.99 Mbit/s

95th percentile per-packet one-way delay: 1.159 ms

Loss rate: 0.01%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-09-25 14:24:10

End at: 2018-09-25 14:24:40

Local clock offset: 0.486 ms

Remote clock offset: 0.222 ms

Below is generated by plot.py at 2018-09-25 15:40:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 723.03 Mbit/s

95th percentile per-packet one-way delay: 1.094 ms

Loss rate: 0.01%

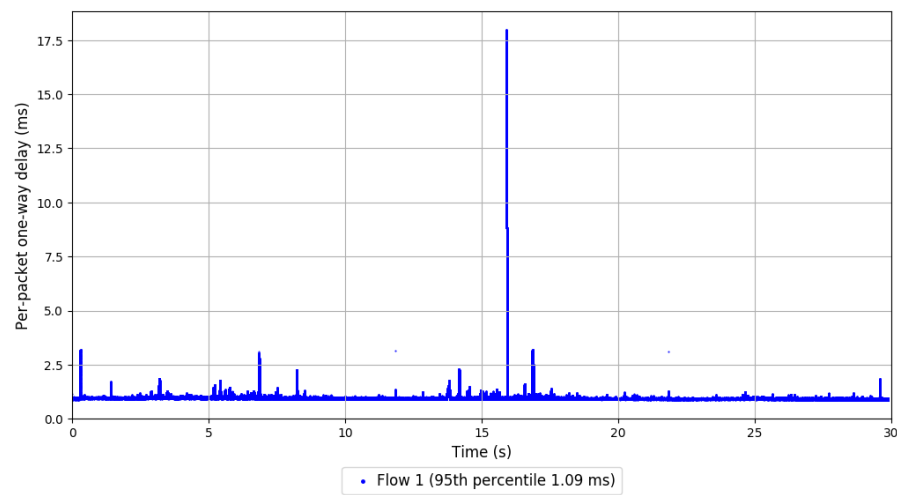
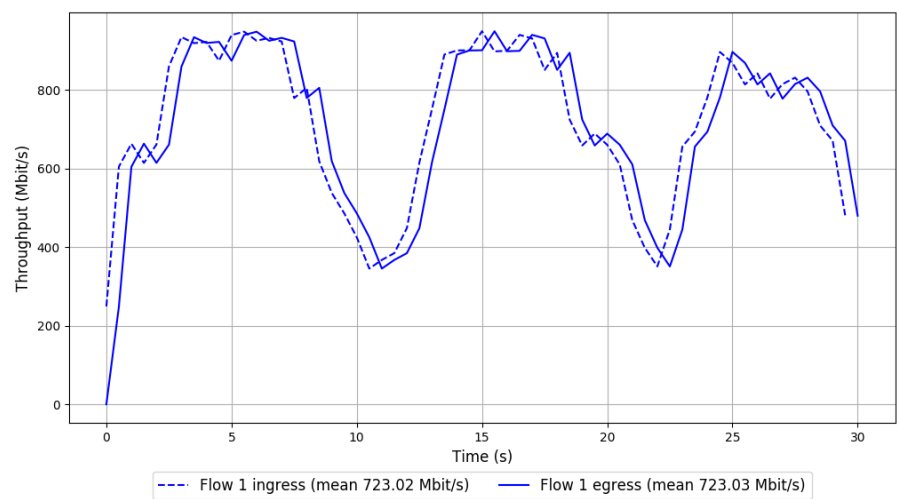
-- Flow 1:

Average throughput: 723.03 Mbit/s

95th percentile per-packet one-way delay: 1.094 ms

Loss rate: 0.01%

Run 5: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

Start at: 2018-09-25 12:31:54

End at: 2018-09-25 12:32:24

Local clock offset: -3.236 ms

Remote clock offset: -0.277 ms

Below is generated by plot.py at 2018-09-25 15:40:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 334.72 Mbit/s

95th percentile per-packet one-way delay: 0.979 ms

Loss rate: 0.00%

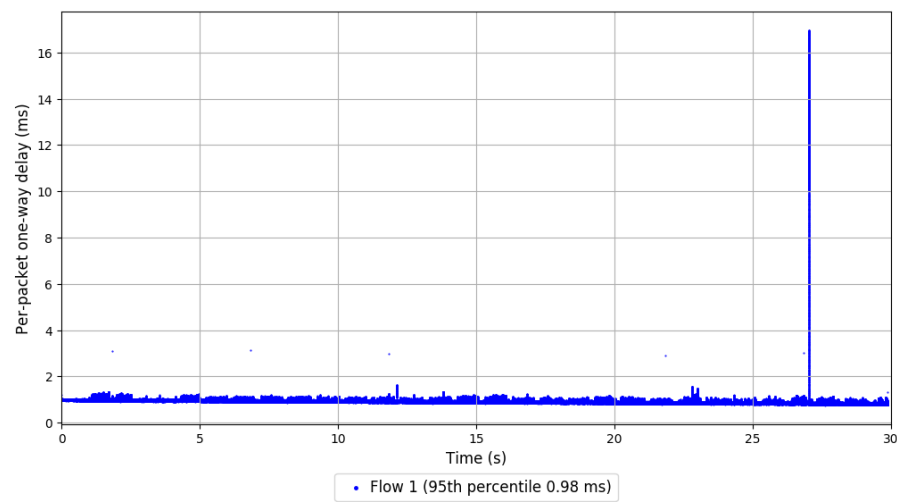
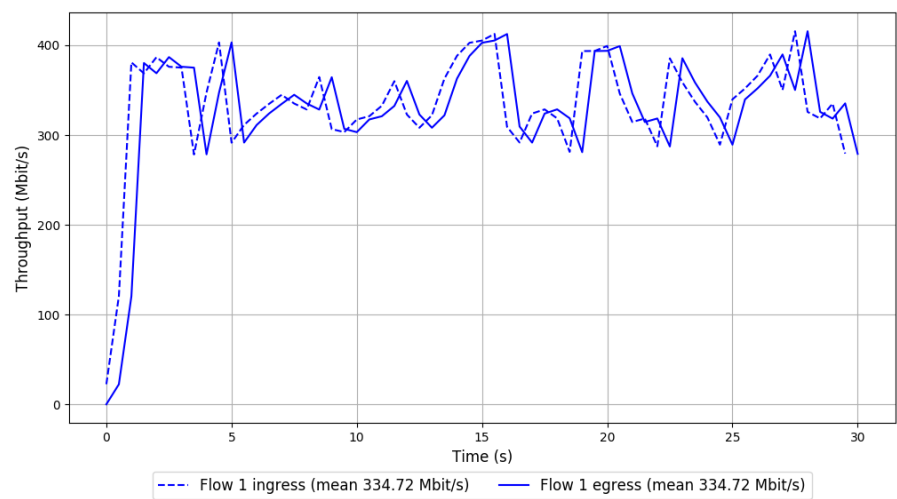
-- Flow 1:

Average throughput: 334.72 Mbit/s

95th percentile per-packet one-way delay: 0.979 ms

Loss rate: 0.00%

Run 1: Report of PCC-Expr — Data Link

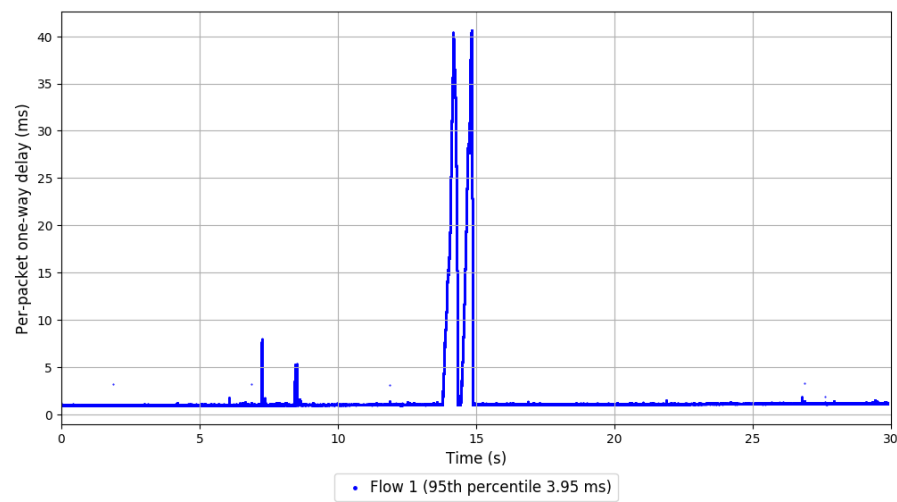
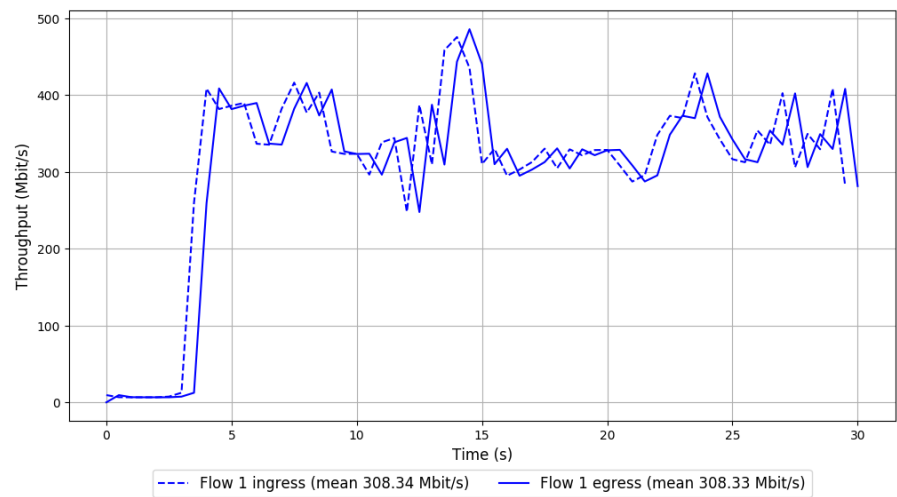


Run 2: Statistics of PCC-Expr

Start at: 2018-09-25 13:01:00
End at: 2018-09-25 13:01:30
Local clock offset: 0.372 ms
Remote clock offset: -3.883 ms

Below is generated by plot.py at 2018-09-25 15:40:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 308.33 Mbit/s
95th percentile per-packet one-way delay: 3.951 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 308.33 Mbit/s
95th percentile per-packet one-way delay: 3.951 ms
Loss rate: 0.01%

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2018-09-25 13:29:56

End at: 2018-09-25 13:30:26

Local clock offset: 0.666 ms

Remote clock offset: 0.948 ms

Below is generated by plot.py at 2018-09-25 15:40:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 5.27 Mbit/s

95th percentile per-packet one-way delay: 1.069 ms

Loss rate: 0.01%

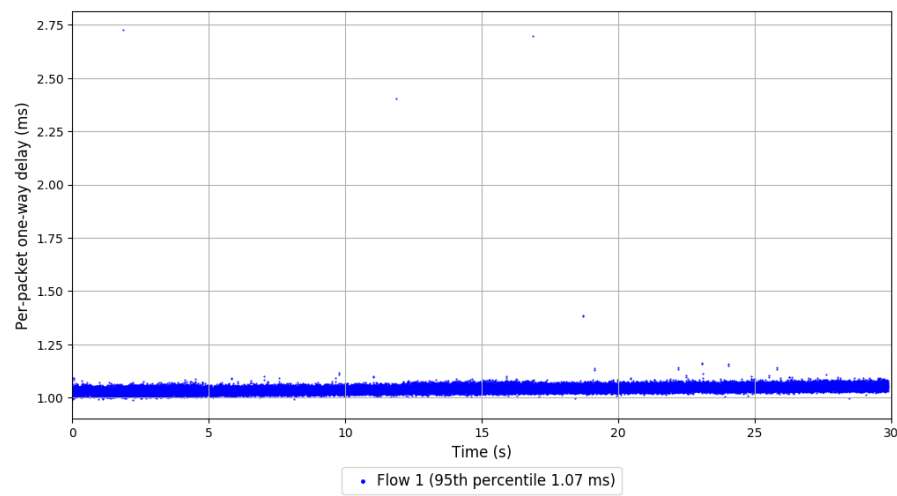
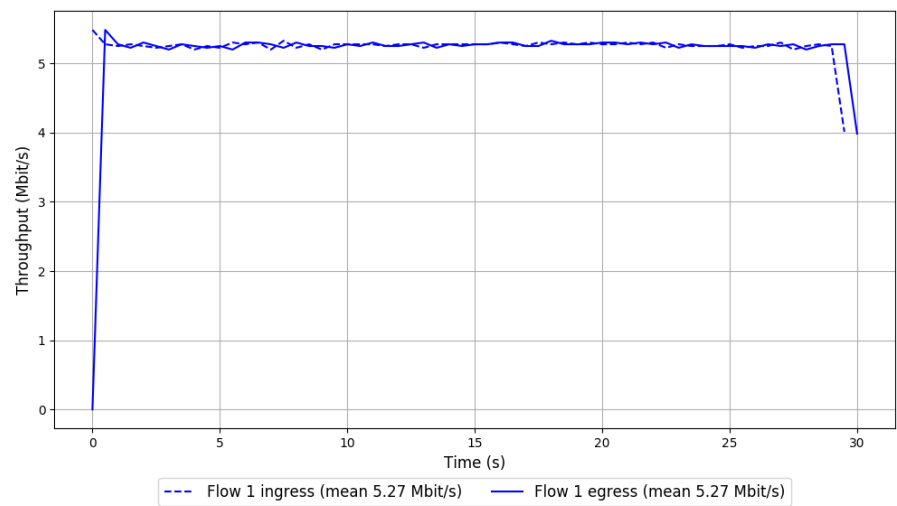
-- Flow 1:

Average throughput: 5.27 Mbit/s

95th percentile per-packet one-way delay: 1.069 ms

Loss rate: 0.01%

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

Start at: 2018-09-25 13:58:33

End at: 2018-09-25 13:59:03

Local clock offset: 0.645 ms

Remote clock offset: 4.41 ms

Below is generated by plot.py at 2018-09-25 15:40:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 335.07 Mbit/s

95th percentile per-packet one-way delay: 1.068 ms

Loss rate: 0.00%

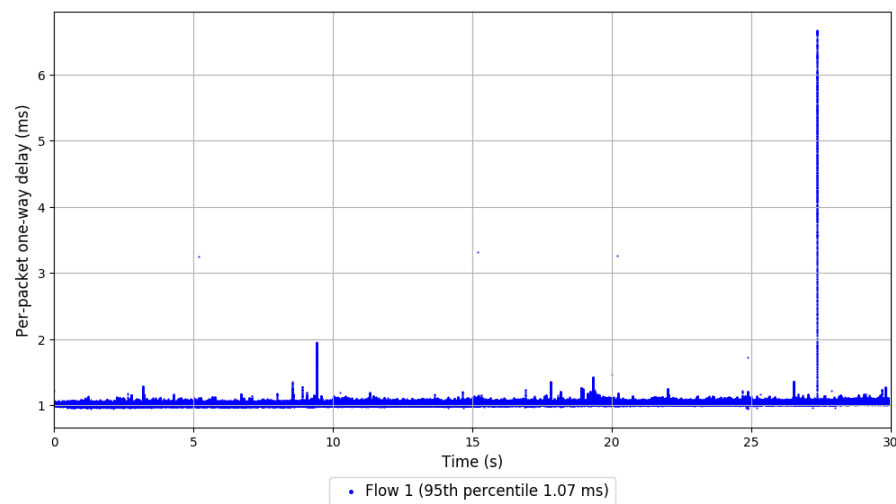
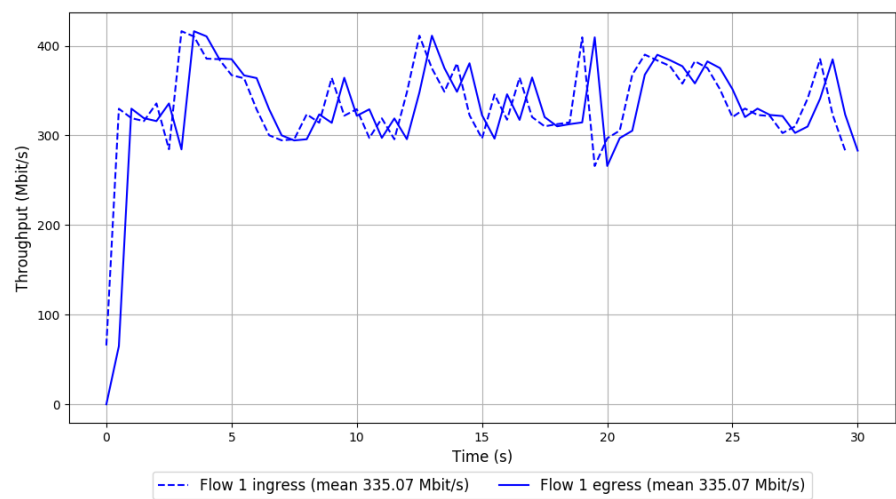
-- Flow 1:

Average throughput: 335.07 Mbit/s

95th percentile per-packet one-way delay: 1.068 ms

Loss rate: 0.00%

Run 4: Report of PCC-Expr — Data Link

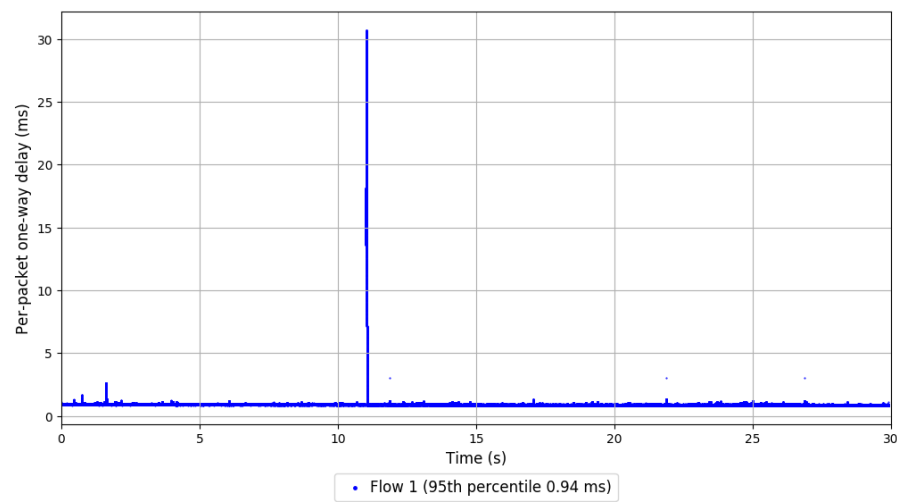
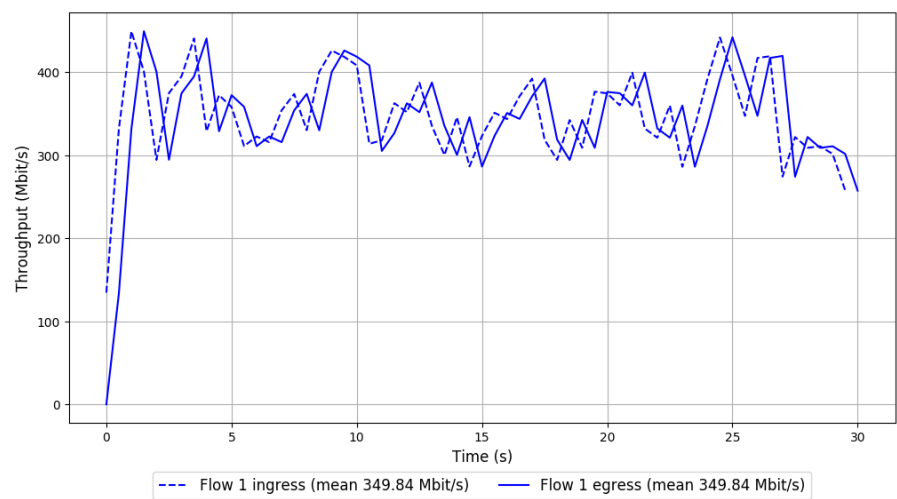


Run 5: Statistics of PCC-Expr

Start at: 2018-09-25 14:27:27
End at: 2018-09-25 14:27:57
Local clock offset: 0.467 ms
Remote clock offset: -0.018 ms

Below is generated by plot.py at 2018-09-25 15:44:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 349.84 Mbit/s
95th percentile per-packet one-way delay: 0.937 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 349.84 Mbit/s
95th percentile per-packet one-way delay: 0.937 ms
Loss rate: 0.00%

Run 5: Report of PCC-Expr — Data Link

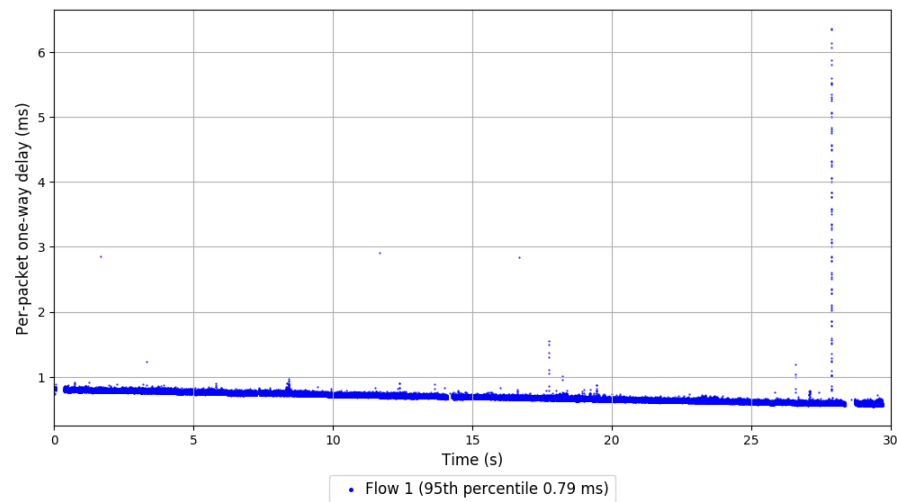
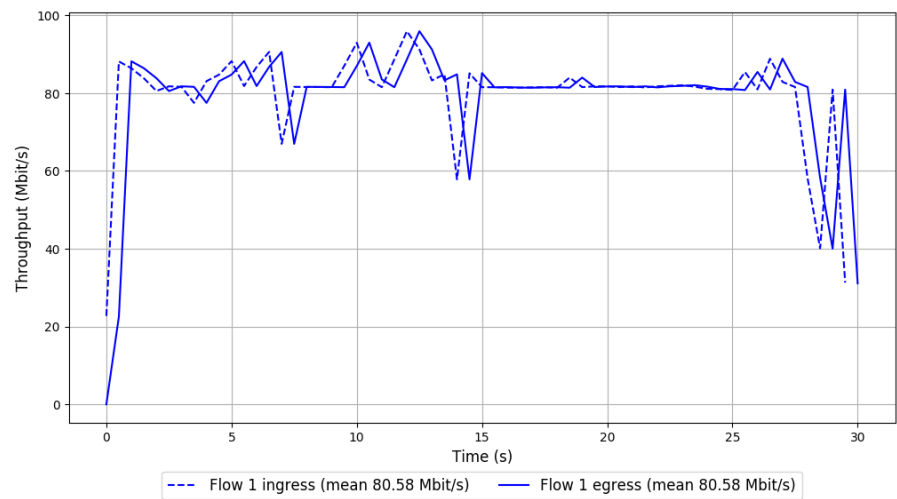


Run 1: Statistics of QUIC Cubic

Start at: 2018-09-25 12:42:49
End at: 2018-09-25 12:43:19
Local clock offset: -2.351 ms
Remote clock offset: -3.055 ms

Below is generated by plot.py at 2018-09-25 15:44:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 80.58 Mbit/s
95th percentile per-packet one-way delay: 0.792 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 80.58 Mbit/s
95th percentile per-packet one-way delay: 0.792 ms
Loss rate: 0.01%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-09-25 13:11:48

End at: 2018-09-25 13:12:18

Local clock offset: 0.65 ms

Remote clock offset: -0.753 ms

Below is generated by plot.py at 2018-09-25 15:44:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 83.18 Mbit/s

95th percentile per-packet one-way delay: 1.114 ms

Loss rate: 0.01%

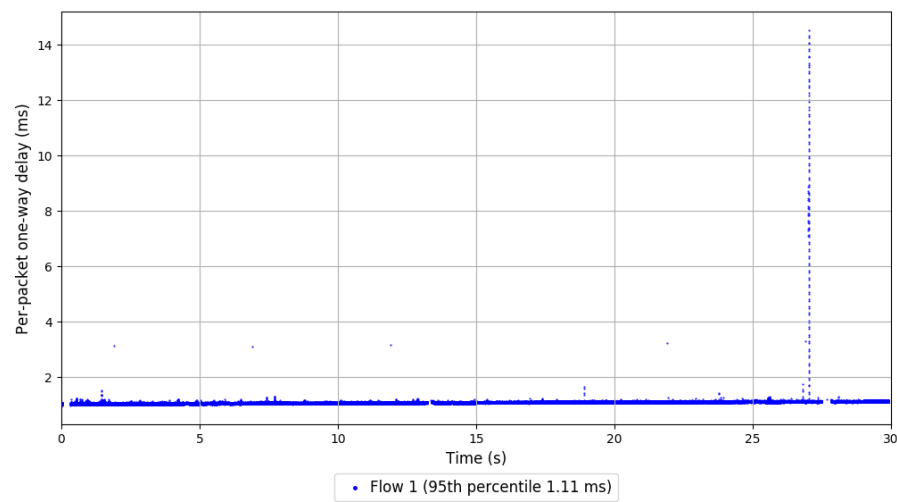
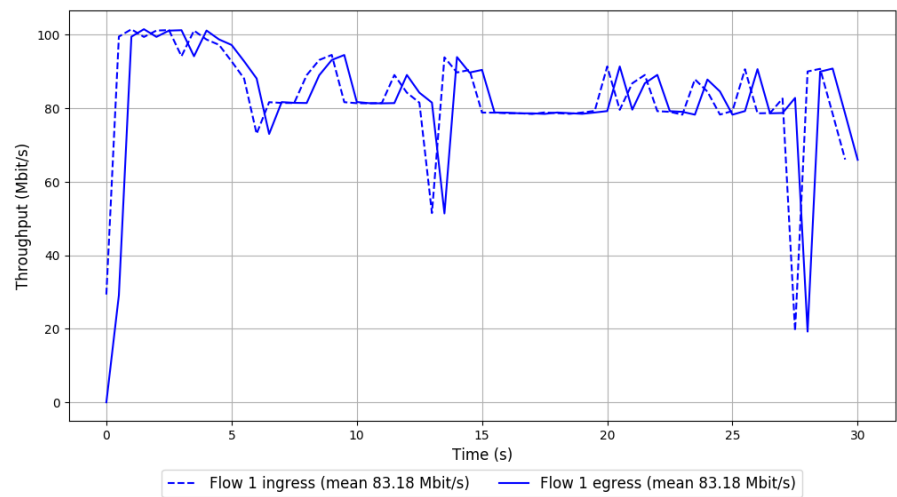
-- Flow 1:

Average throughput: 83.18 Mbit/s

95th percentile per-packet one-way delay: 1.114 ms

Loss rate: 0.01%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-09-25 13:40:22

End at: 2018-09-25 13:40:52

Local clock offset: 0.765 ms

Remote clock offset: 2.626 ms

Below is generated by plot.py at 2018-09-25 15:44:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.18 Mbit/s

95th percentile per-packet one-way delay: 1.049 ms

Loss rate: 0.01%

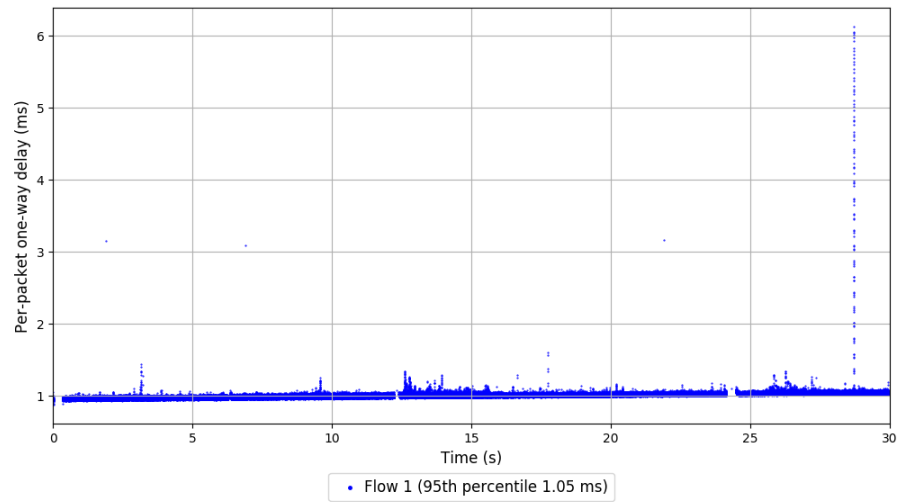
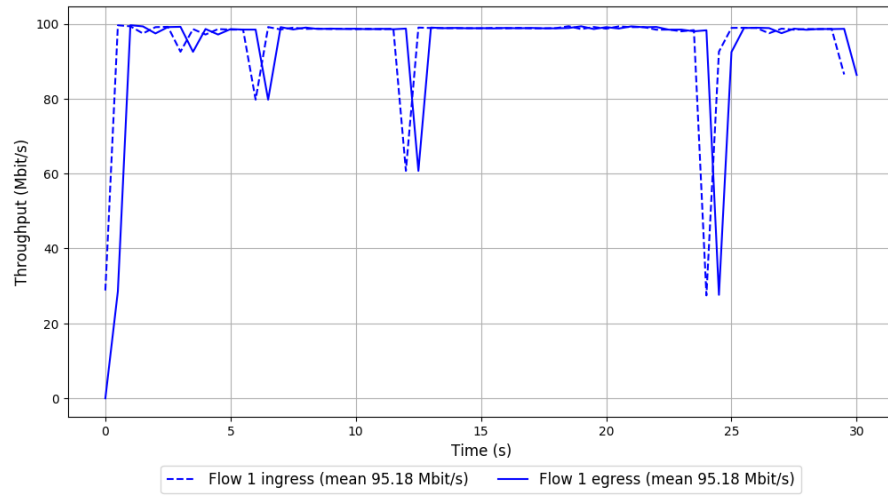
-- Flow 1:

Average throughput: 95.18 Mbit/s

95th percentile per-packet one-way delay: 1.049 ms

Loss rate: 0.01%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-09-25 14:09:18

End at: 2018-09-25 14:09:48

Local clock offset: 0.731 ms

Remote clock offset: 4.297 ms

Below is generated by plot.py at 2018-09-25 15:44:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 90.65 Mbit/s

95th percentile per-packet one-way delay: 0.891 ms

Loss rate: 0.01%

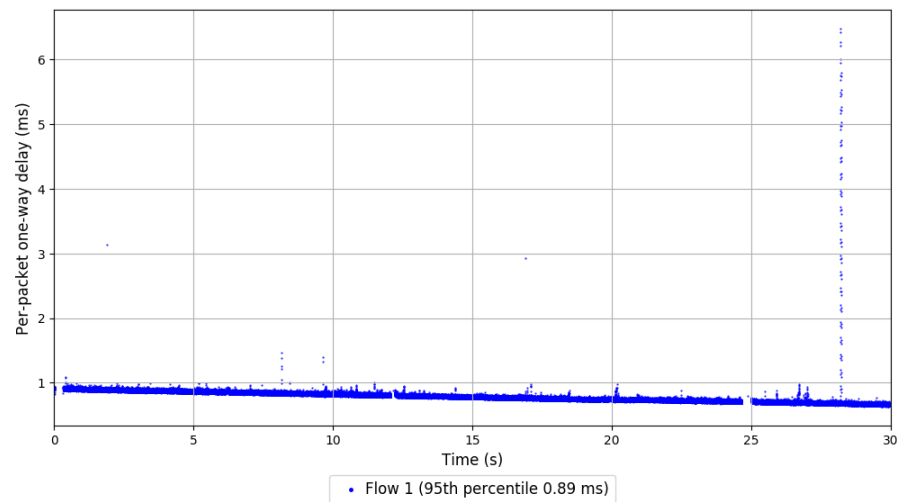
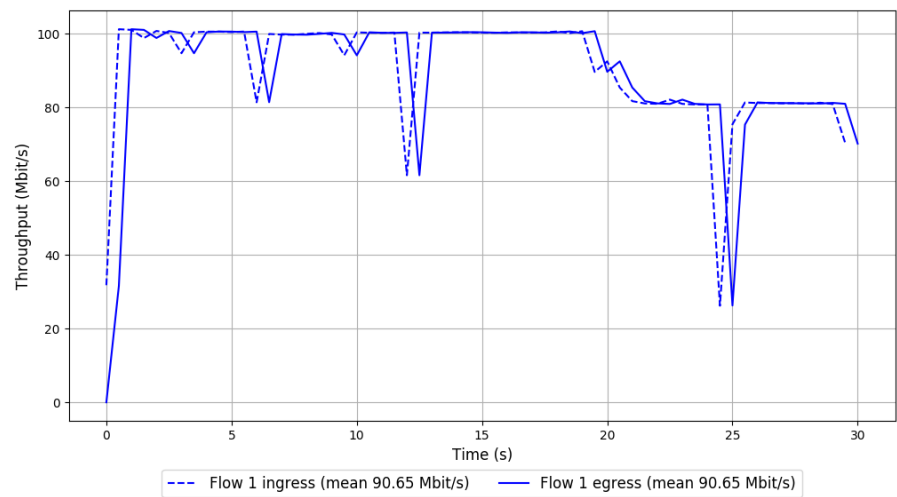
-- Flow 1:

Average throughput: 90.65 Mbit/s

95th percentile per-packet one-way delay: 0.891 ms

Loss rate: 0.01%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-09-25 14:38:06

End at: 2018-09-25 14:38:36

Local clock offset: 0.471 ms

Remote clock offset: -0.578 ms

Below is generated by plot.py at 2018-09-25 15:44:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 79.41 Mbit/s

95th percentile per-packet one-way delay: 1.000 ms

Loss rate: 0.01%

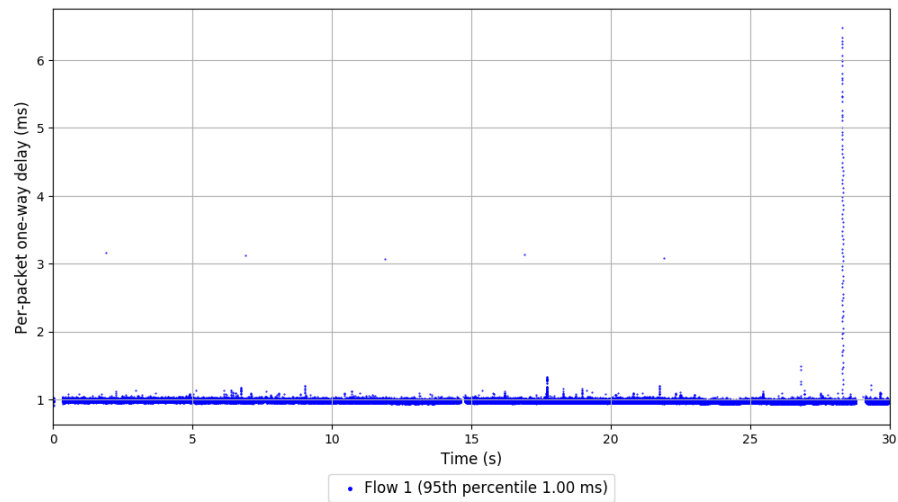
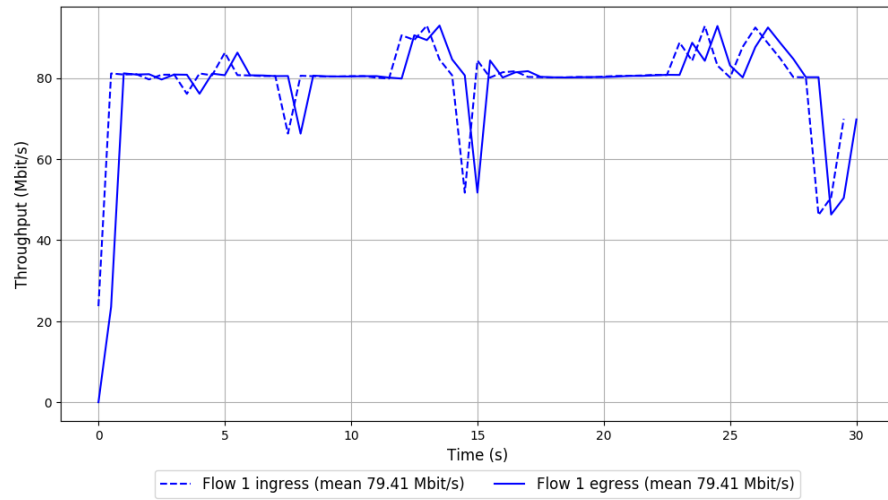
-- Flow 1:

Average throughput: 79.41 Mbit/s

95th percentile per-packet one-way delay: 1.000 ms

Loss rate: 0.01%

Run 5: Report of QUIC Cubic — Data Link

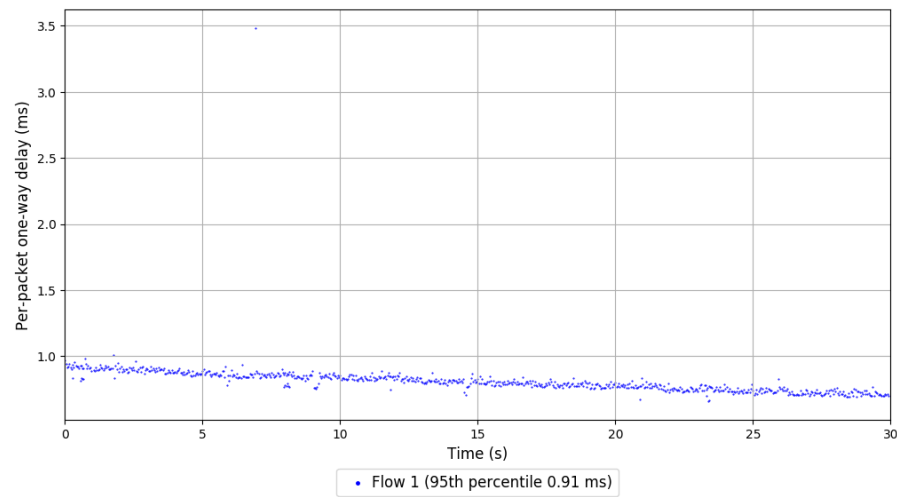
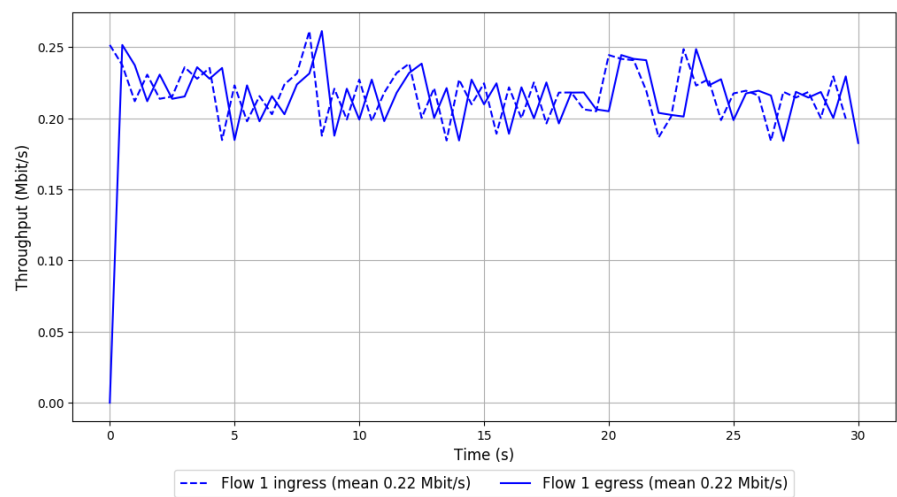


Run 1: Statistics of SCReAM

Start at: 2018-09-25 12:44:09
End at: 2018-09-25 12:44:39
Local clock offset: -1.929 ms
Remote clock offset: -3.229 ms

Below is generated by plot.py at 2018-09-25 15:44:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 0.913 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 0.913 ms
Loss rate: 0.13%

Run 1: Report of SReAM — Data Link



Run 2: Statistics of SReAM

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

End at: 2018-09-25 13:13:39

Local clock offset: 0.628 ms

Remote clock offset: -0.53 ms

Below is generated by plot.py at 2018-09-25 15:44:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.199 ms

Loss rate: 0.00%

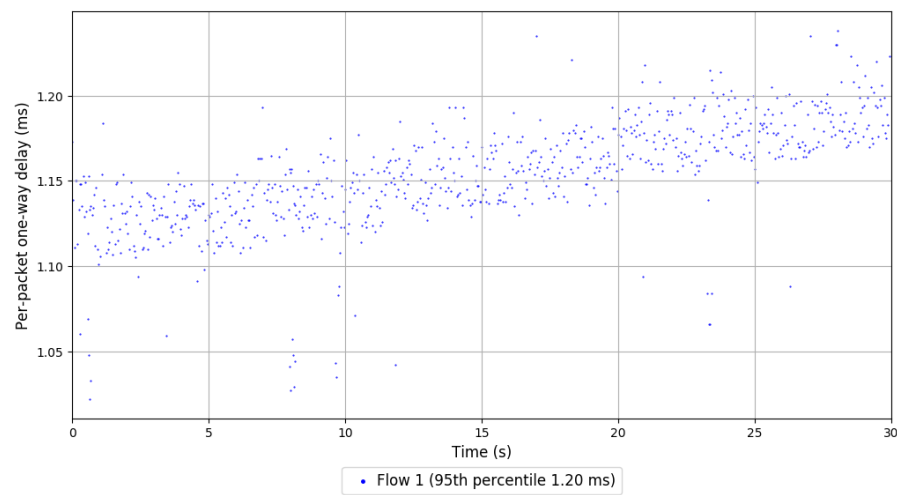
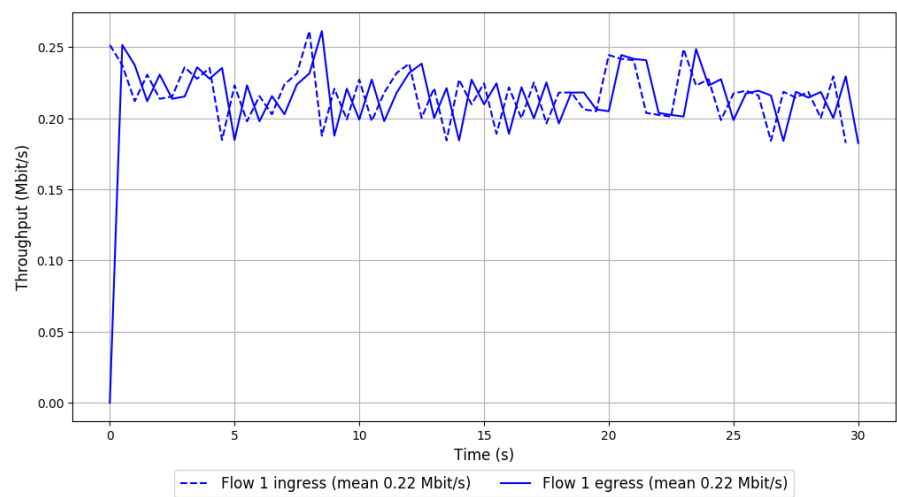
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.199 ms

Loss rate: 0.00%

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2018-09-25 13:41:43

End at: 2018-09-25 13:42:13

Local clock offset: 0.719 ms

Remote clock offset: 2.81 ms

Below is generated by plot.py at 2018-09-25 15:44:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.159 ms

Loss rate: 0.00%

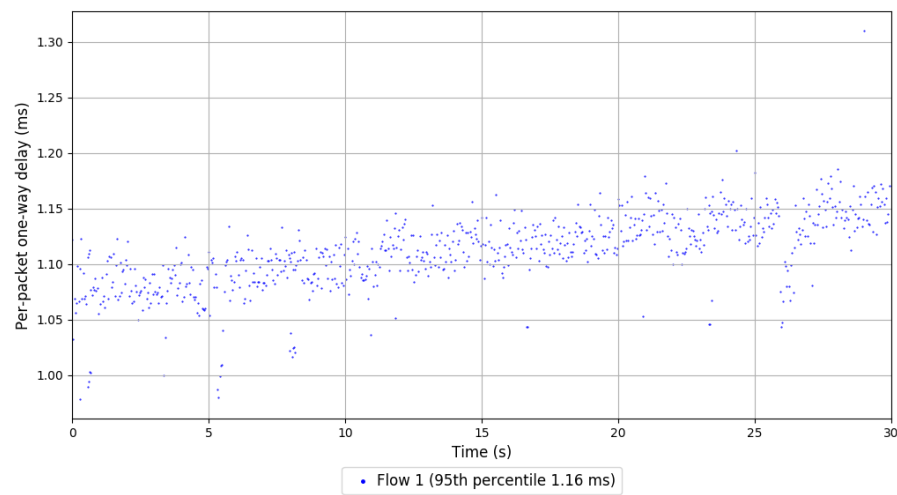
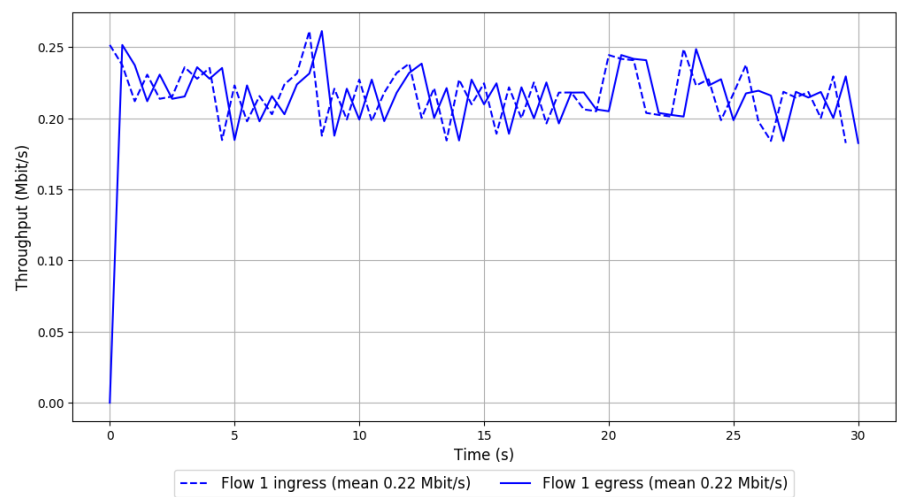
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.159 ms

Loss rate: 0.00%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2018-09-25 14:10:39

End at: 2018-09-25 14:11:09

Local clock offset: 0.7 ms

Remote clock offset: 3.703 ms

Below is generated by plot.py at 2018-09-25 15:44:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 0.935 ms

Loss rate: 0.00%

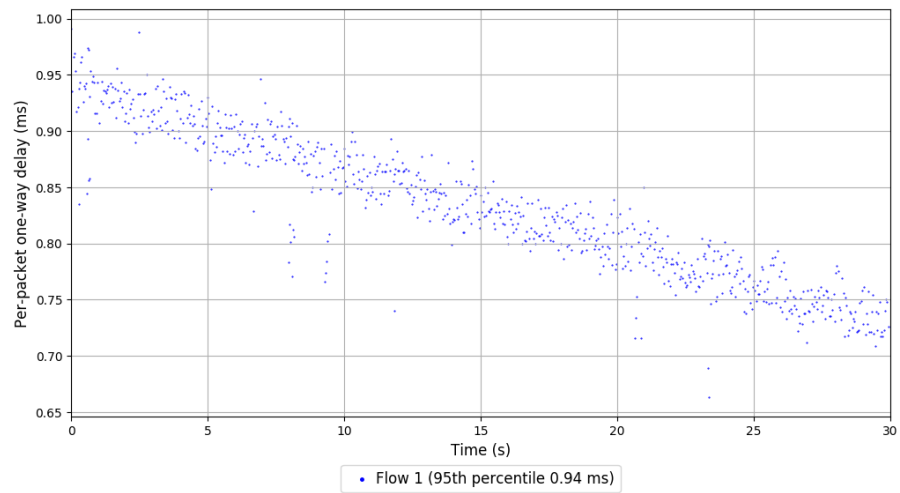
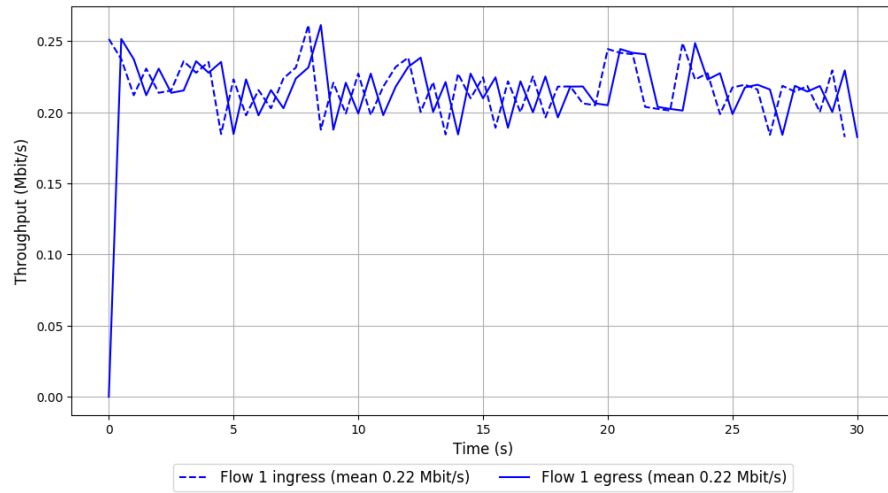
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 0.935 ms

Loss rate: 0.00%

Run 4: Report of SReAM — Data Link

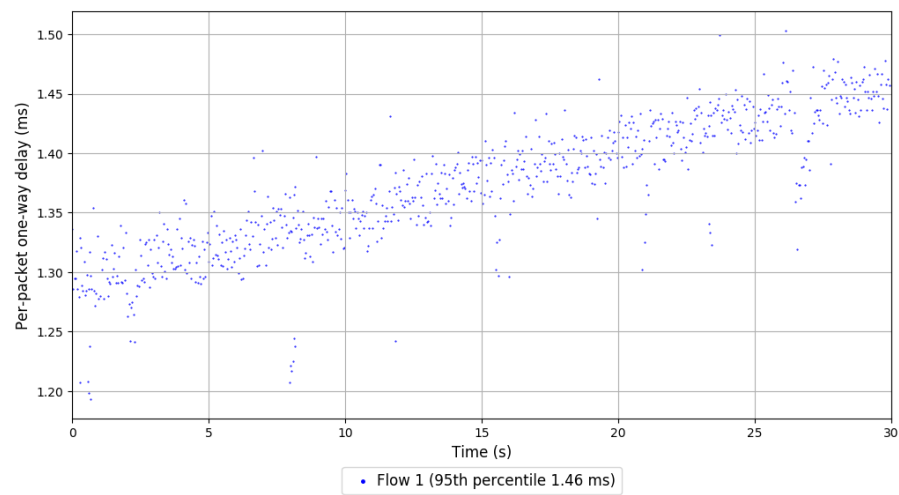
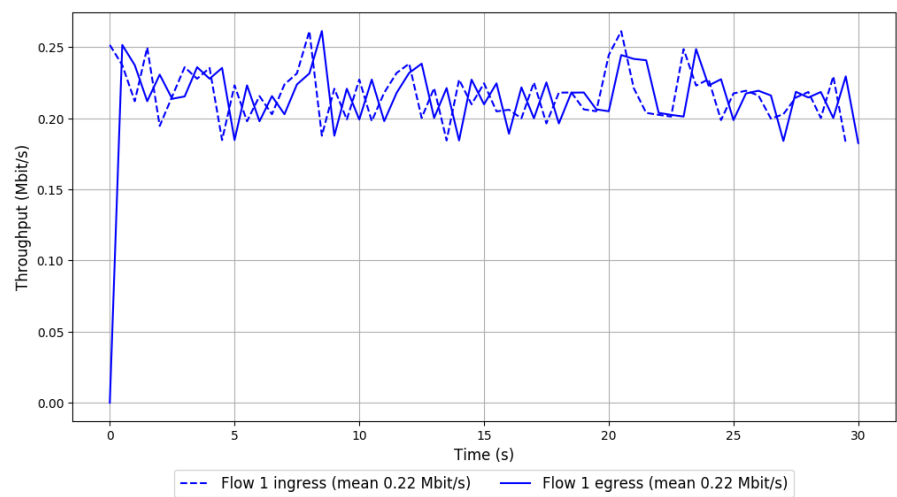


Run 5: Statistics of SCReAM

Start at: 2018-09-25 14:39:27
End at: 2018-09-25 14:39:57
Local clock offset: 0.474 ms
Remote clock offset: -0.631 ms

Below is generated by plot.py at 2018-09-25 15:44:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.455 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.455 ms
Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2018-09-25 12:25:41

End at: 2018-09-25 12:26:11

Local clock offset: -2.753 ms

Remote clock offset: 3.582 ms

Below is generated by plot.py at 2018-09-25 15:44:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 50.26 Mbit/s

95th percentile per-packet one-way delay: 0.743 ms

Loss rate: 0.03%

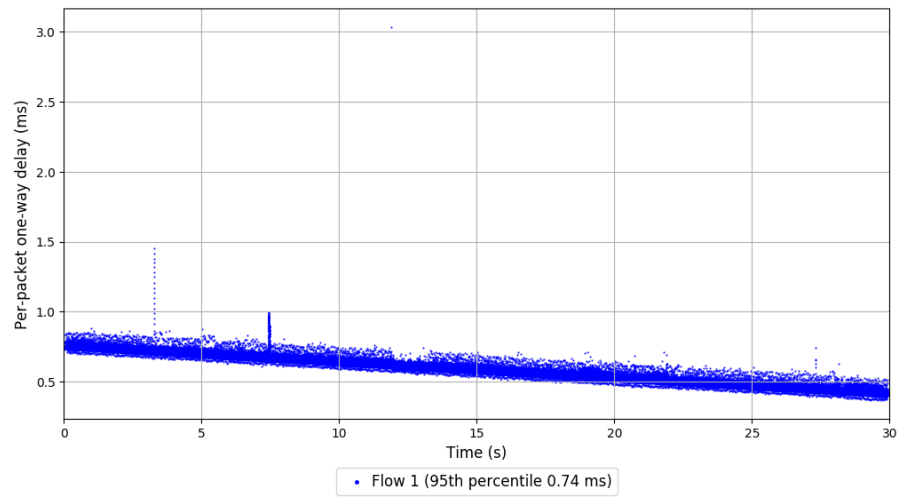
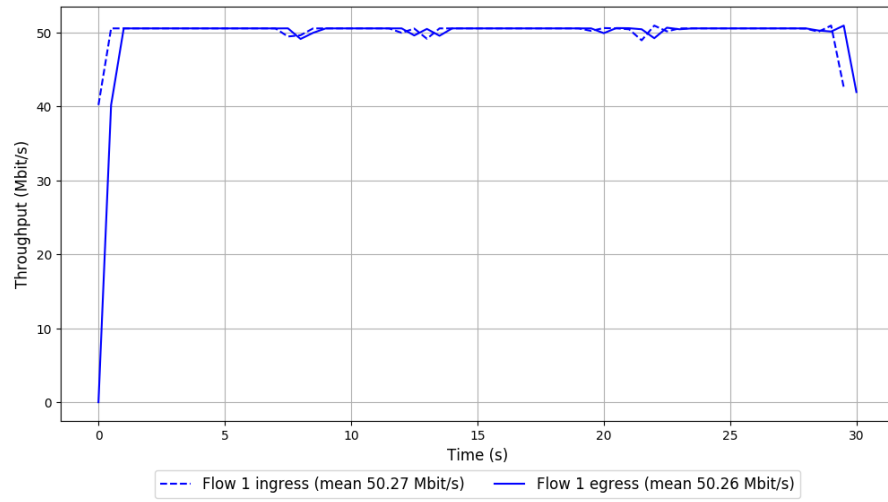
-- Flow 1:

Average throughput: 50.26 Mbit/s

95th percentile per-packet one-way delay: 0.743 ms

Loss rate: 0.03%

Run 1: Report of Sprout — Data Link

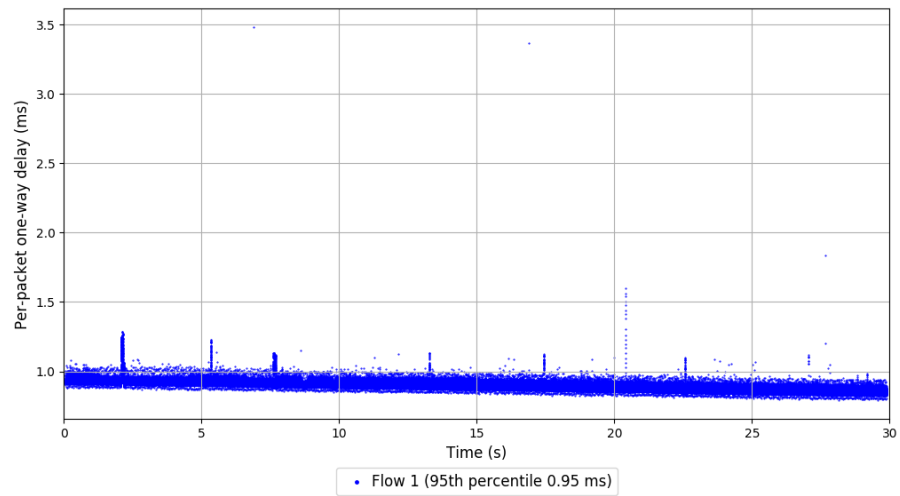
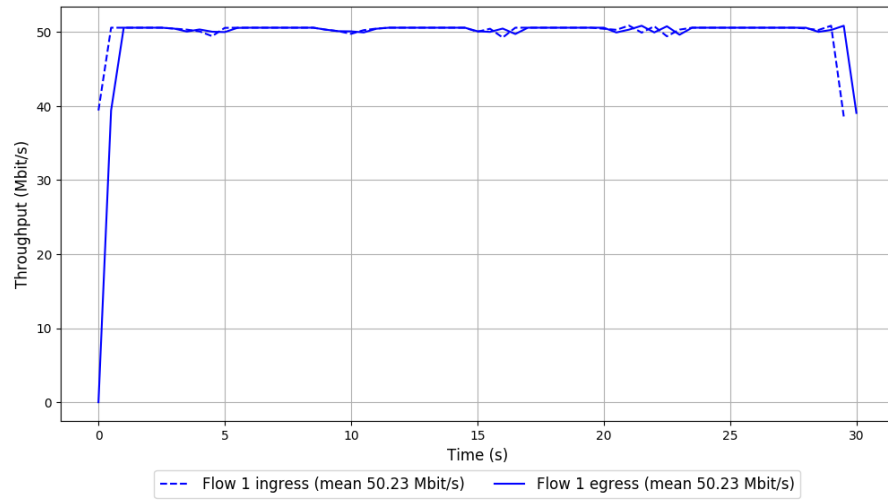


Run 2: Statistics of Sprout

Start at: 2018-09-25 12:54:46
End at: 2018-09-25 12:55:16
Local clock offset: -0.063 ms
Remote clock offset: -4.309 ms

Below is generated by plot.py at 2018-09-25 15:44:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 50.23 Mbit/s
95th percentile per-packet one-way delay: 0.951 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.23 Mbit/s
95th percentile per-packet one-way delay: 0.951 ms
Loss rate: 0.00%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-09-25 13:23:45

End at: 2018-09-25 13:24:15

Local clock offset: 0.597 ms

Remote clock offset: 0.61 ms

Below is generated by plot.py at 2018-09-25 15:44:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 50.27 Mbit/s

95th percentile per-packet one-way delay: 1.014 ms

Loss rate: 0.00%

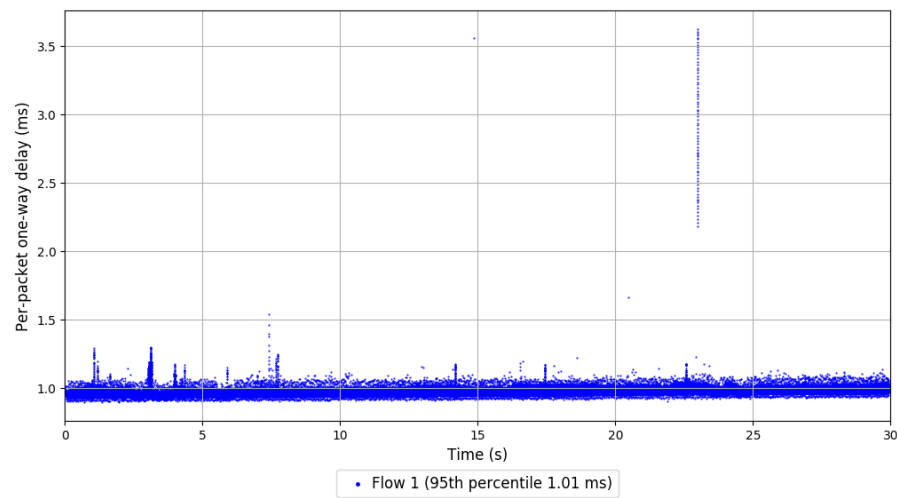
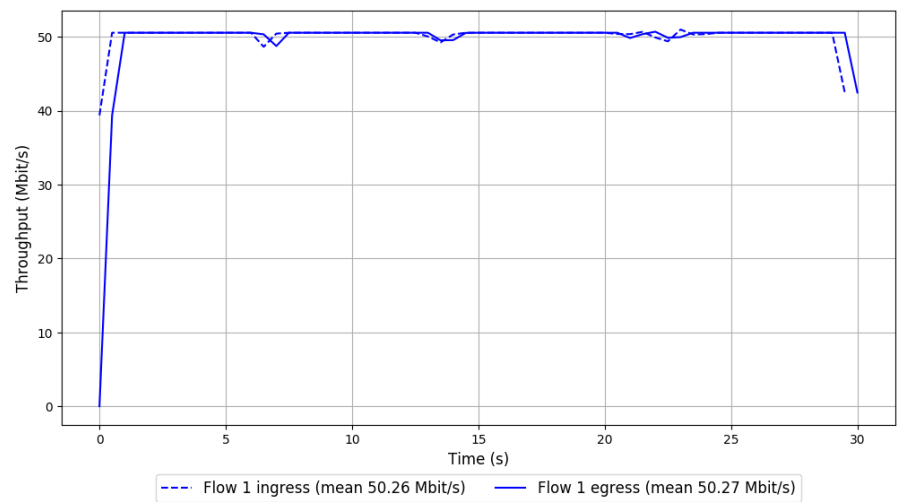
-- Flow 1:

Average throughput: 50.27 Mbit/s

95th percentile per-packet one-way delay: 1.014 ms

Loss rate: 0.00%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2018-09-25 13:52:19

End at: 2018-09-25 13:52:49

Local clock offset: 0.623 ms

Remote clock offset: 3.915 ms

Below is generated by plot.py at 2018-09-25 15:44:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 50.26 Mbit/s

95th percentile per-packet one-way delay: 1.092 ms

Loss rate: 0.00%

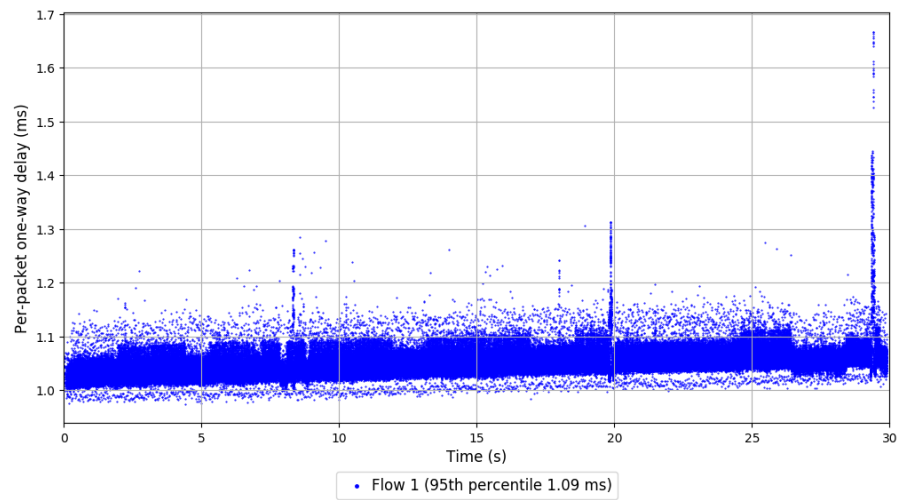
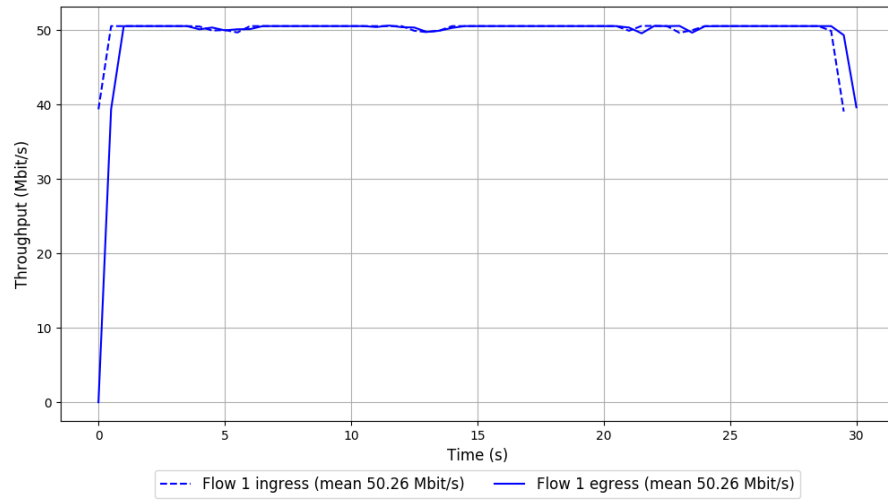
-- Flow 1:

Average throughput: 50.26 Mbit/s

95th percentile per-packet one-way delay: 1.092 ms

Loss rate: 0.00%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-09-25 14:21:16

End at: 2018-09-25 14:21:46

Local clock offset: 0.494 ms

Remote clock offset: 0.643 ms

Below is generated by plot.py at 2018-09-25 15:44:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 50.28 Mbit/s

95th percentile per-packet one-way delay: 0.958 ms

Loss rate: 0.00%

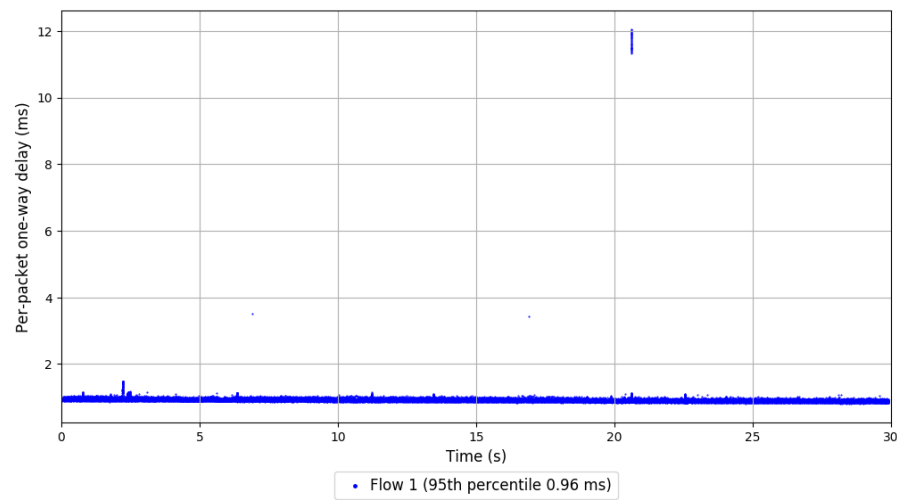
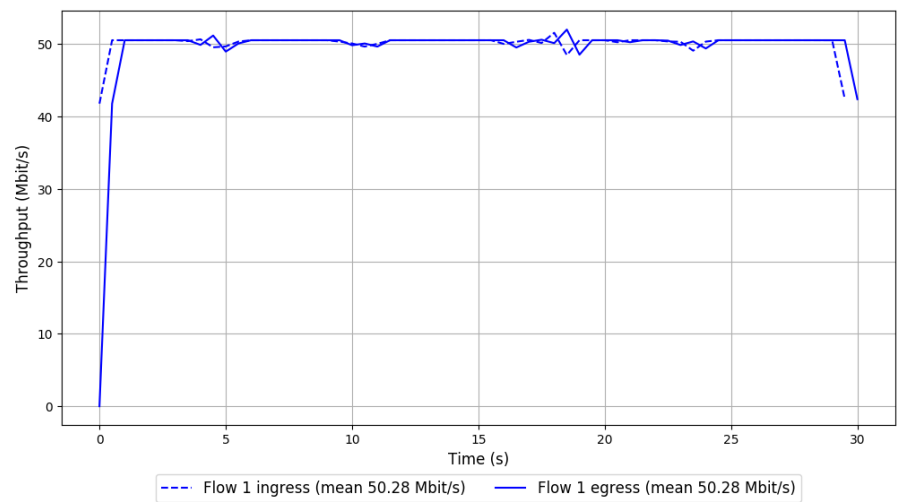
-- Flow 1:

Average throughput: 50.28 Mbit/s

95th percentile per-packet one-way delay: 0.958 ms

Loss rate: 0.00%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

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

End at: 2018-09-25 12:19:35

Local clock offset: -1.957 ms

Remote clock offset: 3.367 ms

Below is generated by plot.py at 2018-09-25 15:44:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 86.47 Mbit/s

95th percentile per-packet one-way delay: 1.053 ms

Loss rate: 0.01%

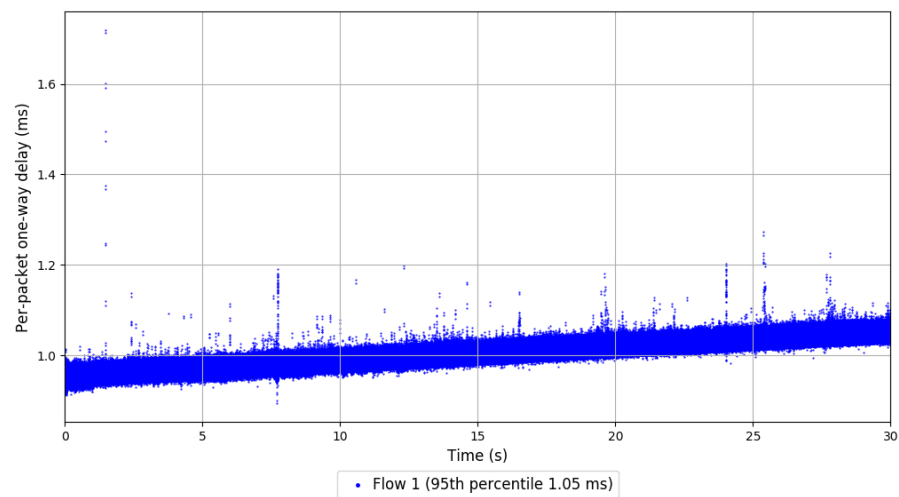
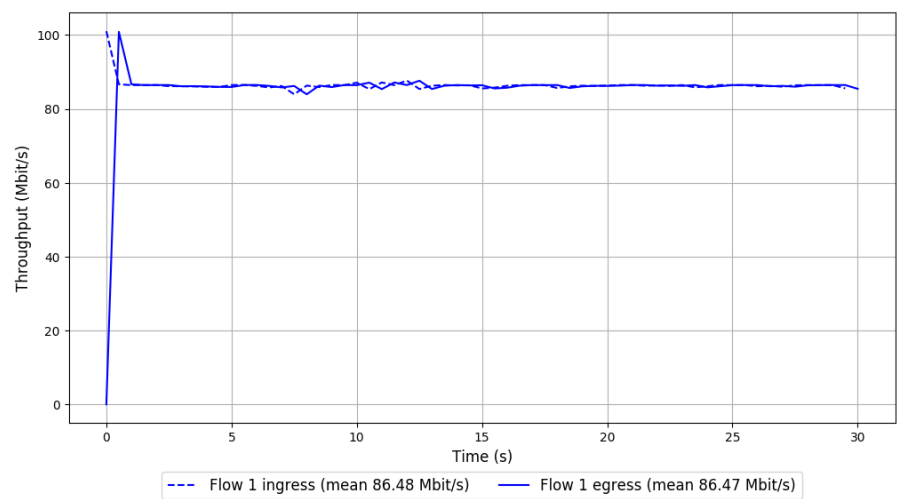
-- Flow 1:

Average throughput: 86.47 Mbit/s

95th percentile per-packet one-way delay: 1.053 ms

Loss rate: 0.01%

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

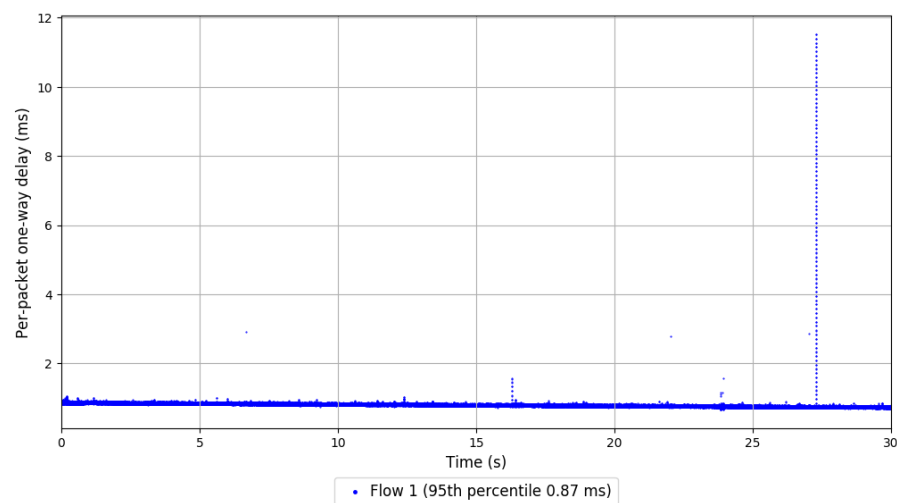
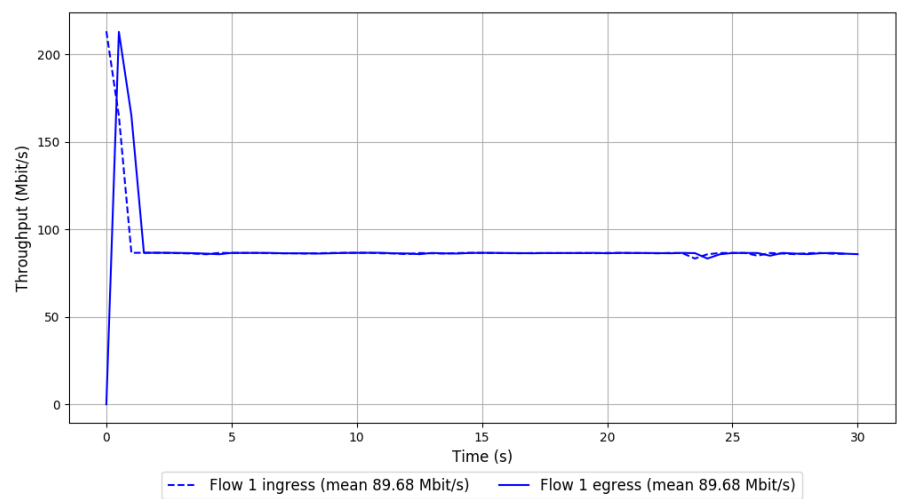


Run 2: Statistics of TaoVA-100x

Start at: 2018-09-25 12:48:12
End at: 2018-09-25 12:48:42
Local clock offset: -0.963 ms
Remote clock offset: -3.728 ms

Below is generated by plot.py at 2018-09-25 15:44:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 89.68 Mbit/s
95th percentile per-packet one-way delay: 0.869 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 89.68 Mbit/s
95th percentile per-packet one-way delay: 0.869 ms
Loss rate: 0.01%

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-09-25 13:17:13

End at: 2018-09-25 13:17:43

Local clock offset: 0.592 ms

Remote clock offset: -0.038 ms

Below is generated by plot.py at 2018-09-25 15:44:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 19.40 Mbit/s

95th percentile per-packet one-way delay: 1.123 ms

Loss rate: 0.00%

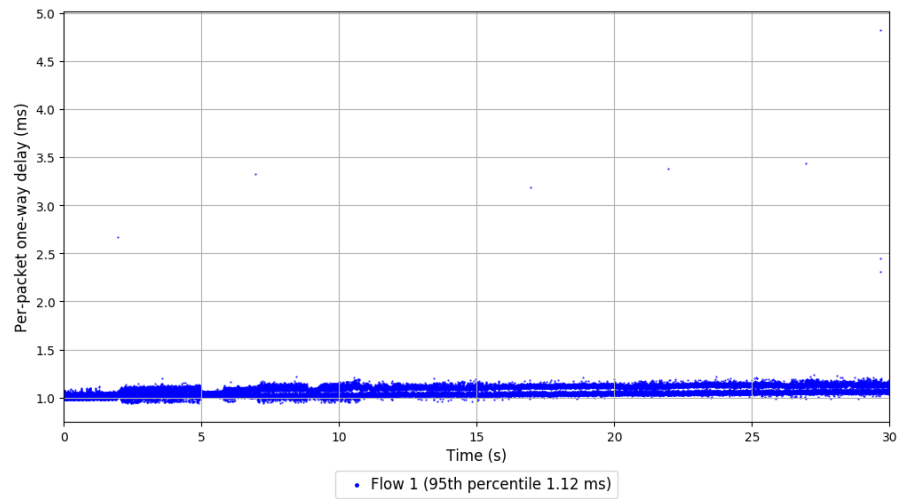
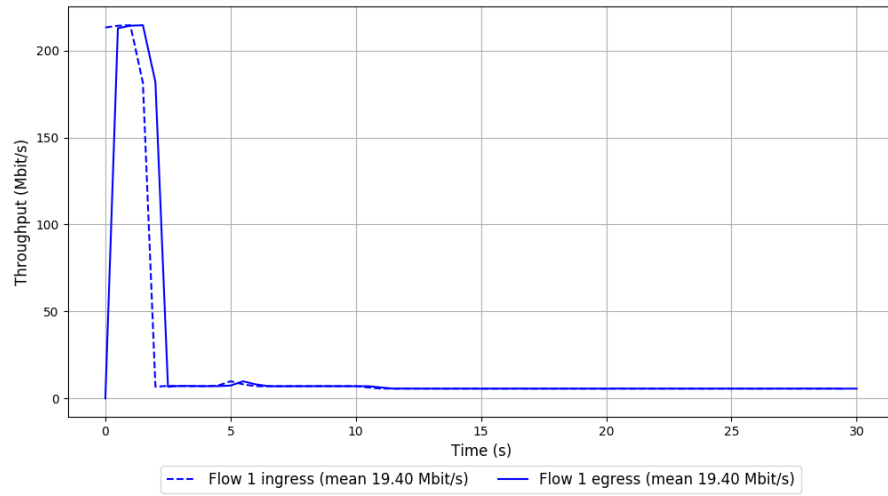
-- Flow 1:

Average throughput: 19.40 Mbit/s

95th percentile per-packet one-way delay: 1.123 ms

Loss rate: 0.00%

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-09-25 13:45:45

End at: 2018-09-25 13:46:15

Local clock offset: 0.66 ms

Remote clock offset: 3.267 ms

Below is generated by plot.py at 2018-09-25 15:44:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 86.35 Mbit/s

95th percentile per-packet one-way delay: 1.065 ms

Loss rate: 0.01%

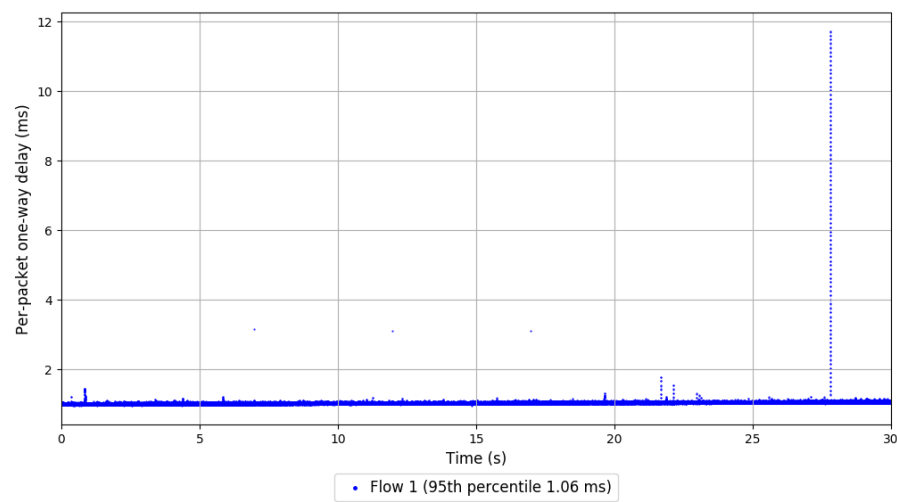
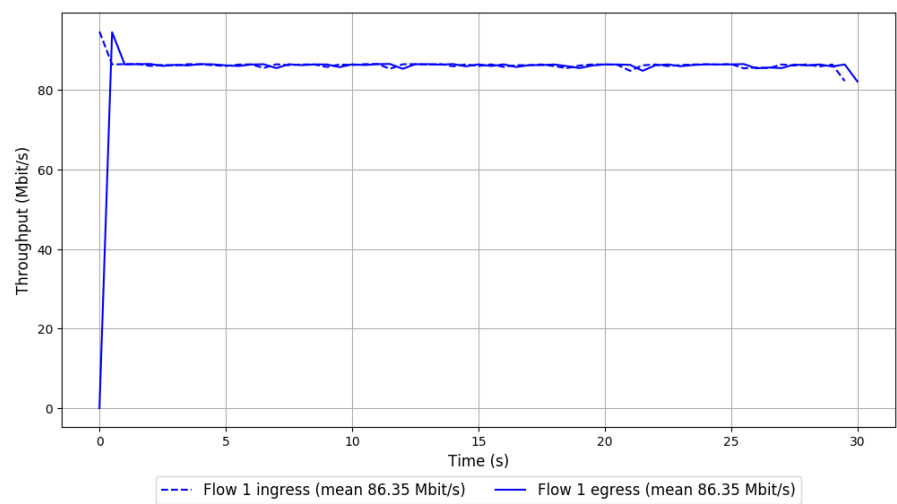
-- Flow 1:

Average throughput: 86.35 Mbit/s

95th percentile per-packet one-way delay: 1.065 ms

Loss rate: 0.01%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-09-25 14:14:41

End at: 2018-09-25 14:15:11

Local clock offset: 0.581 ms

Remote clock offset: 1.967 ms

Below is generated by plot.py at 2018-09-25 15:44:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 92.13 Mbit/s

95th percentile per-packet one-way delay: 0.983 ms

Loss rate: 0.01%

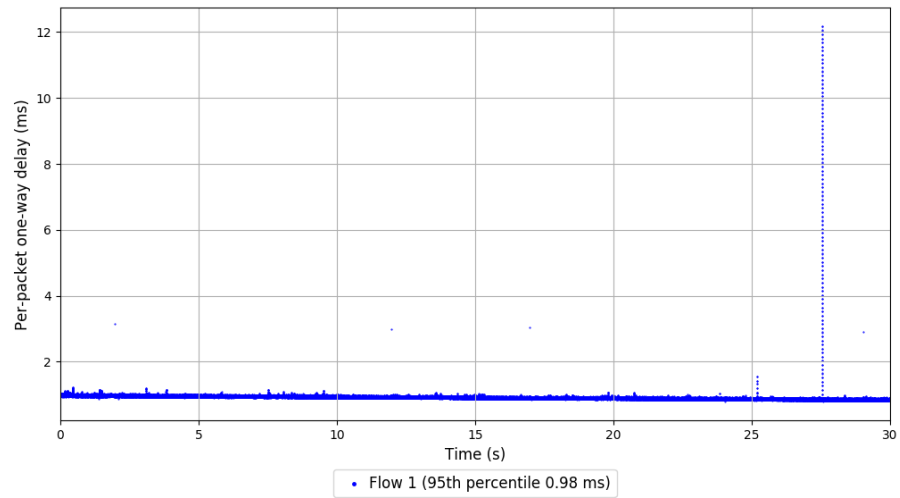
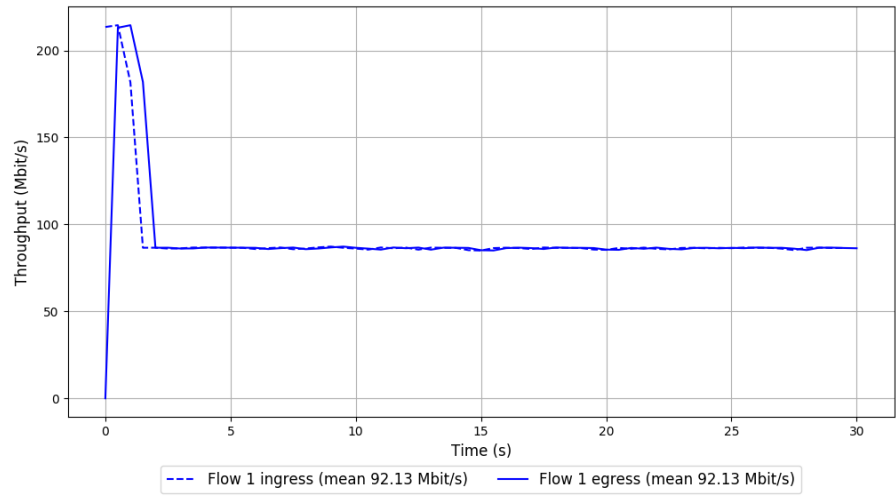
-- Flow 1:

Average throughput: 92.13 Mbit/s

95th percentile per-packet one-way delay: 0.983 ms

Loss rate: 0.01%

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



Run 1: Statistics of TCP Vegas

Start at: 2018-09-25 12:16:23

End at: 2018-09-25 12:16:53

Local clock offset: -1.479 ms

Remote clock offset: 3.131 ms

Below is generated by plot.py at 2018-09-25 15:44:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 198.47 Mbit/s

95th percentile per-packet one-way delay: 1.218 ms

Loss rate: 0.00%

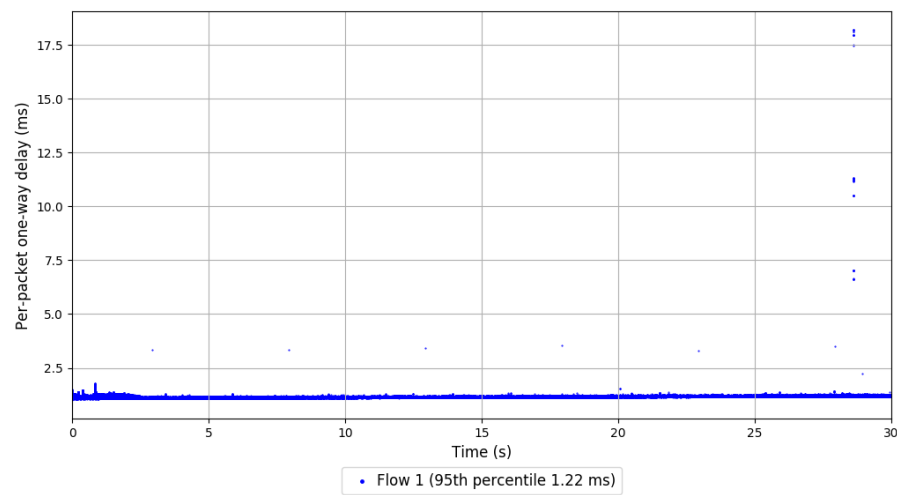
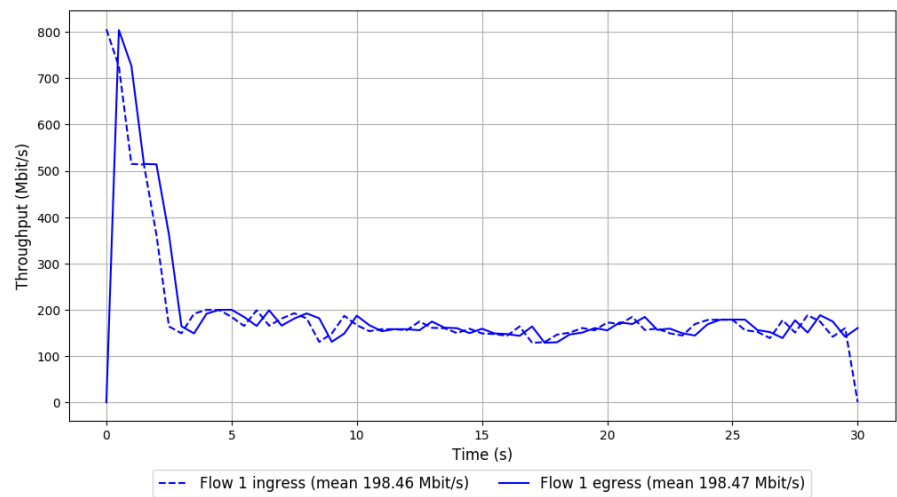
-- Flow 1:

Average throughput: 198.47 Mbit/s

95th percentile per-packet one-way delay: 1.218 ms

Loss rate: 0.00%

Run 1: Report of TCP Vegas — Data Link

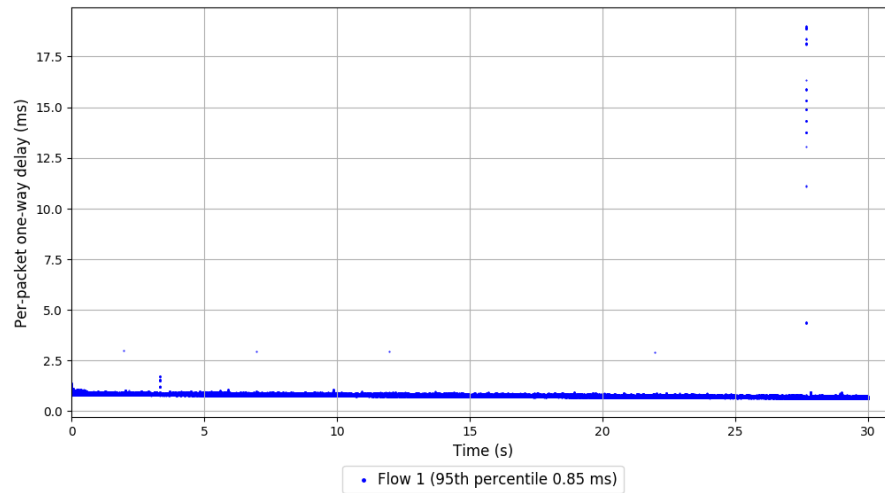
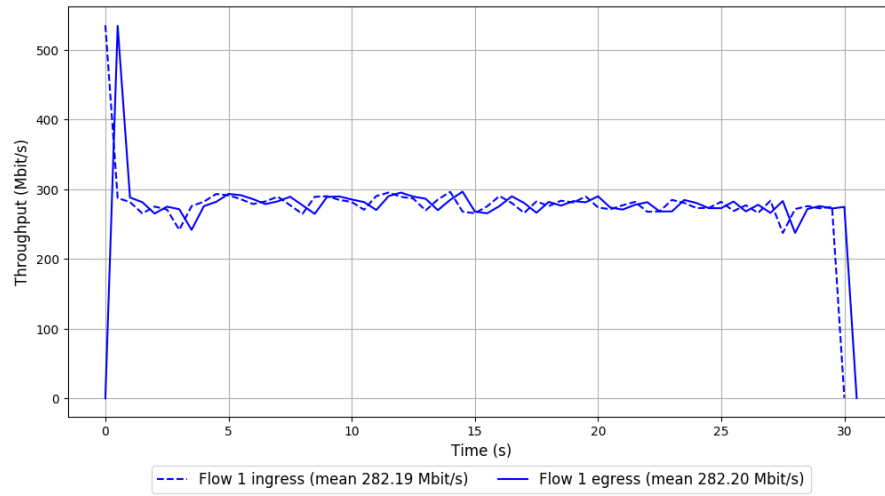


Run 2: Statistics of TCP Vegas

Start at: 2018-09-25 12:45:27
End at: 2018-09-25 12:45:57
Local clock offset: -1.583 ms
Remote clock offset: -3.382 ms

Below is generated by plot.py at 2018-09-25 15:44:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 282.20 Mbit/s
95th percentile per-packet one-way delay: 0.849 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 282.20 Mbit/s
95th percentile per-packet one-way delay: 0.849 ms
Loss rate: 0.01%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-09-25 13:14:27

End at: 2018-09-25 13:14:57

Local clock offset: 0.623 ms

Remote clock offset: -0.38 ms

Below is generated by plot.py at 2018-09-25 15:44:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 333.64 Mbit/s

95th percentile per-packet one-way delay: 2.507 ms

Loss rate: 0.01%

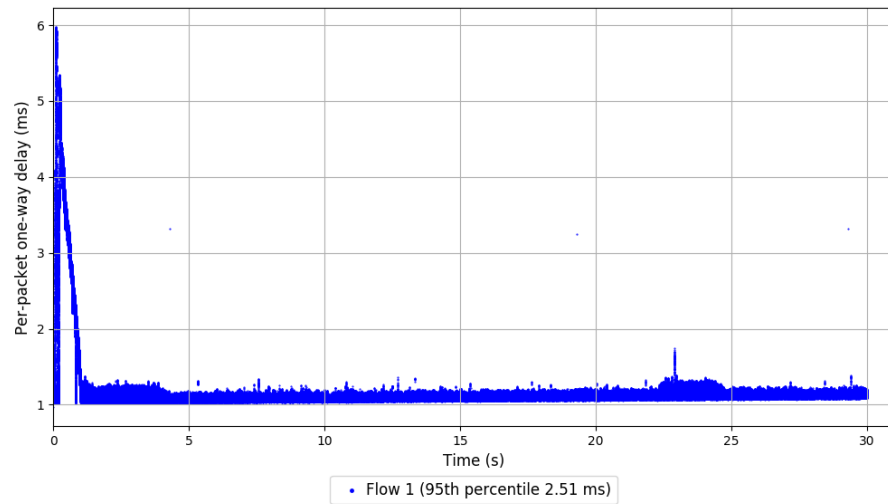
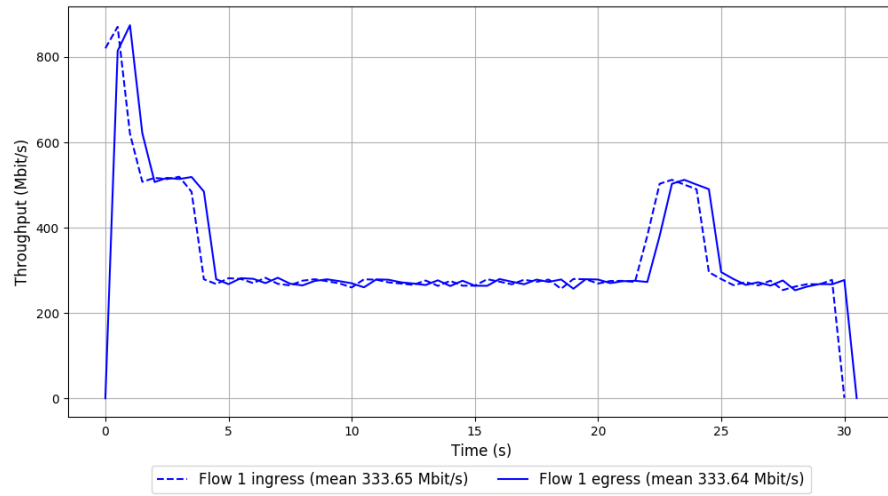
-- Flow 1:

Average throughput: 333.64 Mbit/s

95th percentile per-packet one-way delay: 2.507 ms

Loss rate: 0.01%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2018-09-25 13:43:01

End at: 2018-09-25 13:43:31

Local clock offset: 0.686 ms

Remote clock offset: 2.914 ms

Below is generated by plot.py at 2018-09-25 15:44:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 266.29 Mbit/s

95th percentile per-packet one-way delay: 1.214 ms

Loss rate: 0.00%

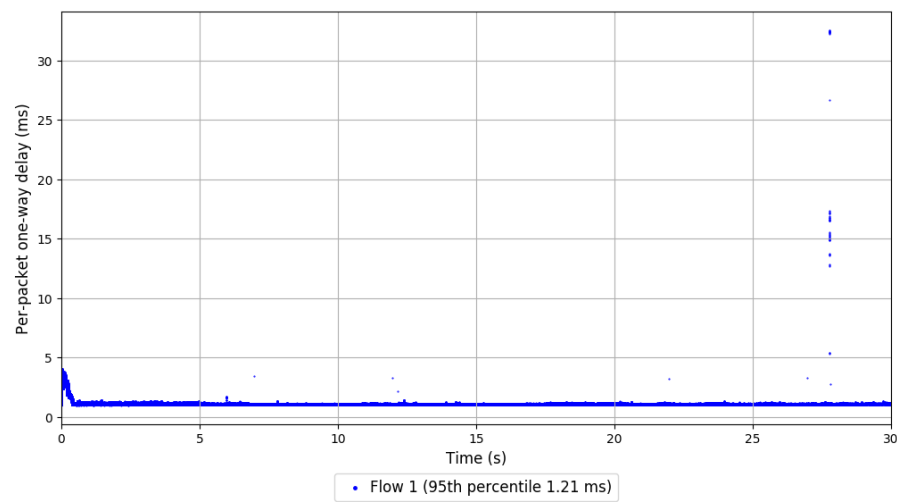
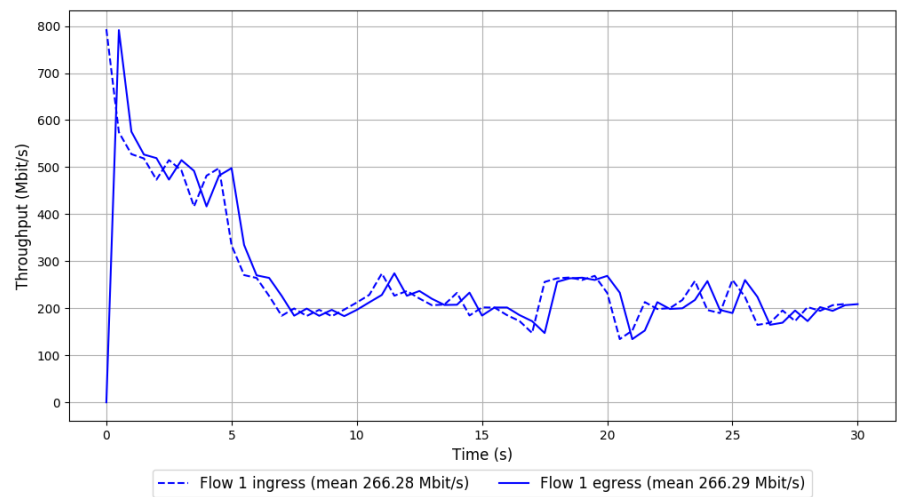
-- Flow 1:

Average throughput: 266.29 Mbit/s

95th percentile per-packet one-way delay: 1.214 ms

Loss rate: 0.00%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-09-25 14:11:56

End at: 2018-09-25 14:12:26

Local clock offset: 0.662 ms

Remote clock offset: 3.099 ms

Below is generated by plot.py at 2018-09-25 15:45:44

Datalink statistics

-- Total of 1 flow:

Average throughput: 303.04 Mbit/s

95th percentile per-packet one-way delay: 0.961 ms

Loss rate: 0.01%

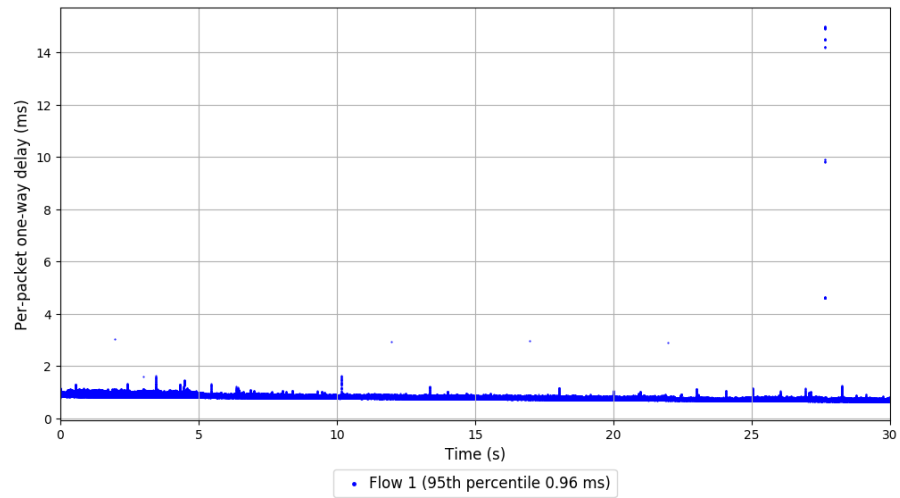
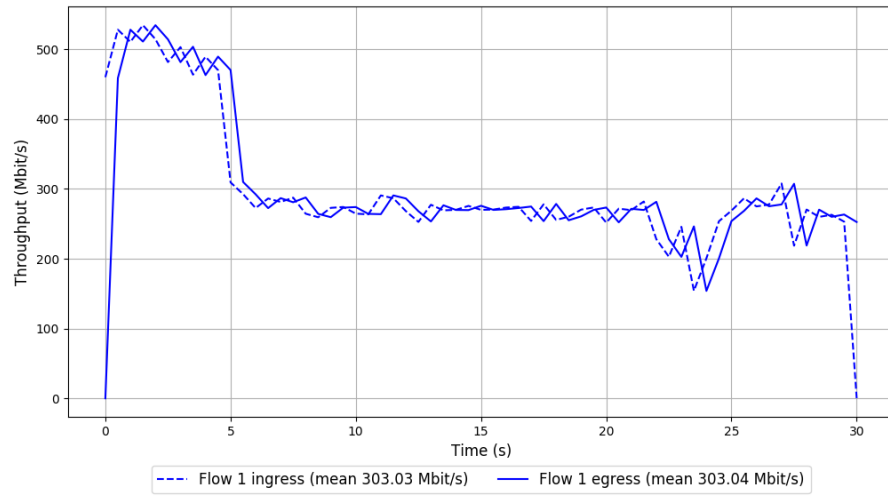
-- Flow 1:

Average throughput: 303.04 Mbit/s

95th percentile per-packet one-way delay: 0.961 ms

Loss rate: 0.01%

Run 5: Report of TCP Vegas — Data Link

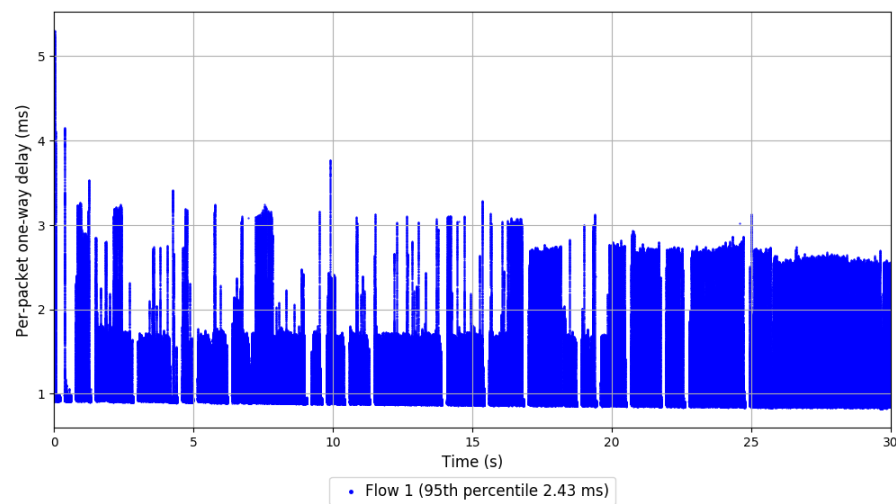
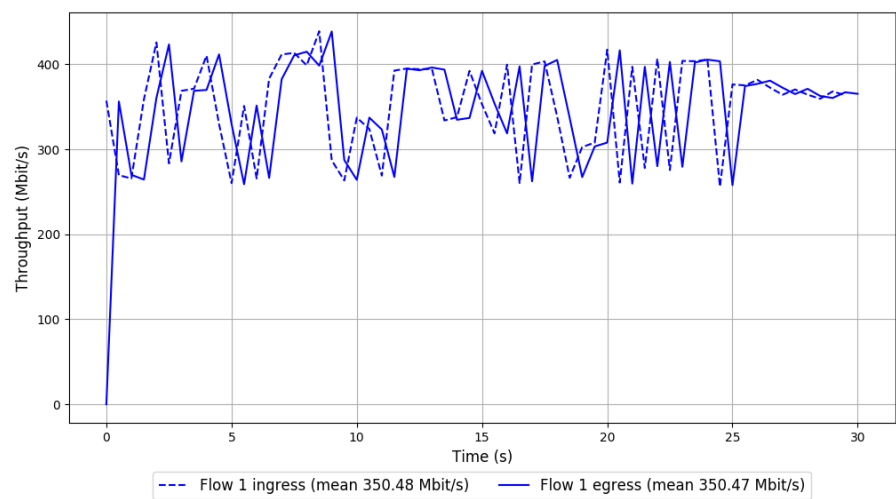


Run 1: Statistics of Verus

Start at: 2018-09-25 12:38:00
End at: 2018-09-25 12:38:30
Local clock offset: -3.591 ms
Remote clock offset: -2.095 ms

Below is generated by plot.py at 2018-09-25 15:46:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 350.47 Mbit/s
95th percentile per-packet one-way delay: 2.434 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 350.47 Mbit/s
95th percentile per-packet one-way delay: 2.434 ms
Loss rate: 0.00%

Run 1: Report of Verus — Data Link

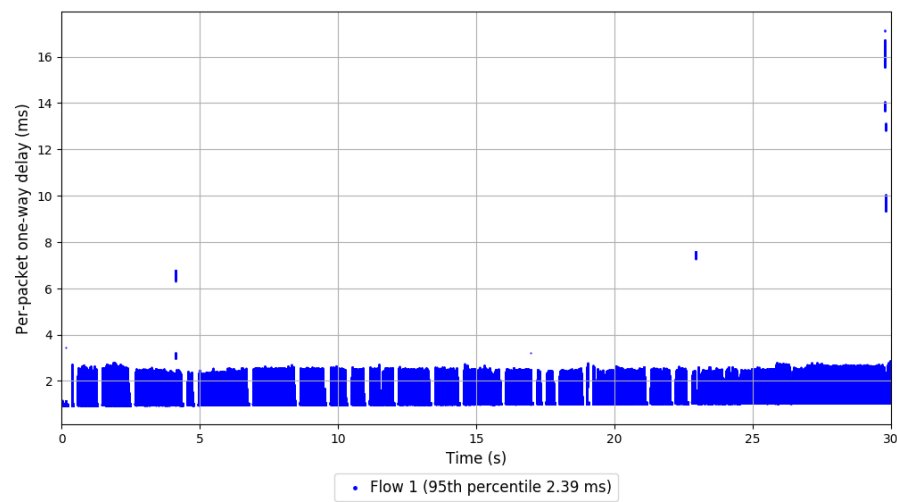
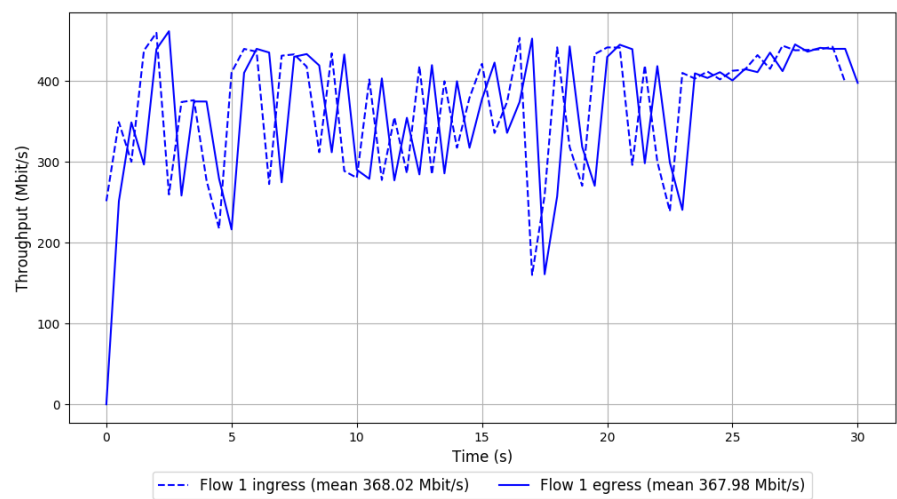


Run 2: Statistics of Verus

Start at: 2018-09-25 13:07:07
End at: 2018-09-25 13:07:37
Local clock offset: 0.638 ms
Remote clock offset: -1.701 ms

Below is generated by plot.py at 2018-09-25 15:46:39
Datalink statistics
-- Total of 1 flow:
Average throughput: 367.98 Mbit/s
95th percentile per-packet one-way delay: 2.390 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 367.98 Mbit/s
95th percentile per-packet one-way delay: 2.390 ms
Loss rate: 0.01%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-09-25 13:35:43

End at: 2018-09-25 13:36:13

Local clock offset: 0.726 ms

Remote clock offset: 1.699 ms

Below is generated by plot.py at 2018-09-25 15:46:39

Datalink statistics

-- Total of 1 flow:

Average throughput: 336.52 Mbit/s

95th percentile per-packet one-way delay: 3.227 ms

Loss rate: 0.02%

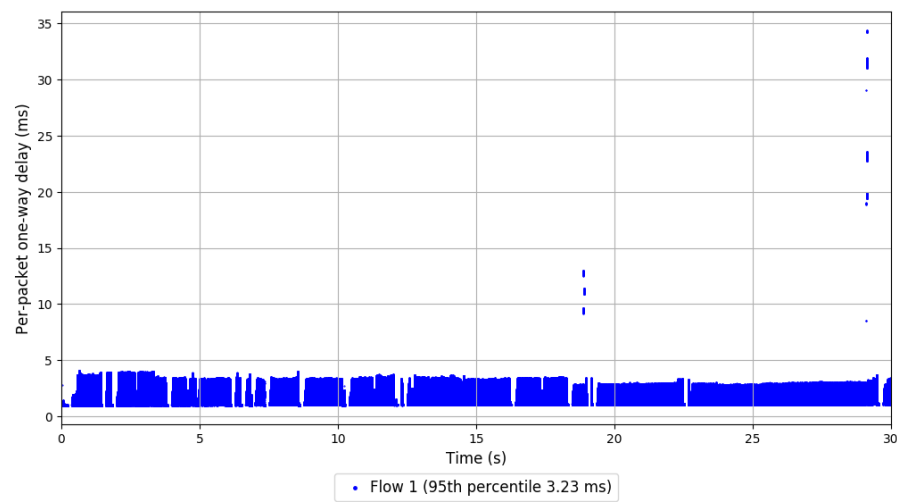
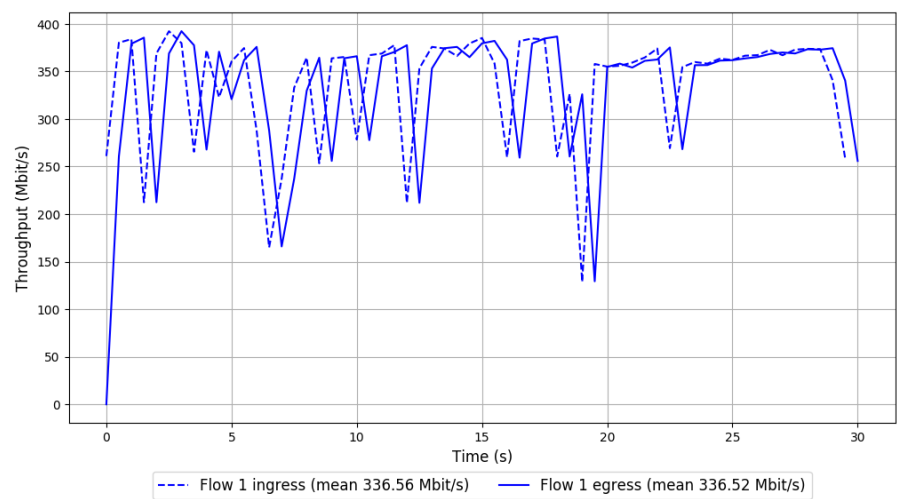
-- Flow 1:

Average throughput: 336.52 Mbit/s

95th percentile per-packet one-way delay: 3.227 ms

Loss rate: 0.02%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-09-25 14:04:37

End at: 2018-09-25 14:05:07

Local clock offset: 0.693 ms

Remote clock offset: 4.913 ms

Below is generated by plot.py at 2018-09-25 15:47:37

Datalink statistics

-- Total of 1 flow:

Average throughput: 352.58 Mbit/s

95th percentile per-packet one-way delay: 2.583 ms

Loss rate: 0.01%

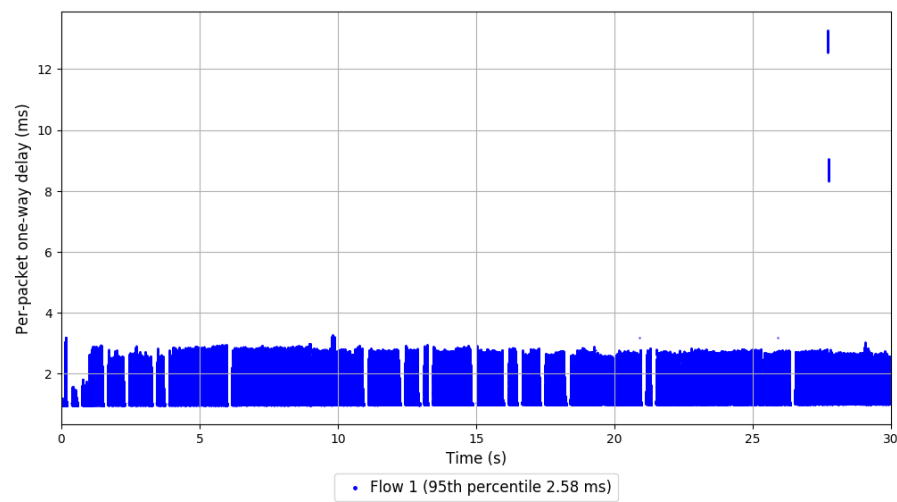
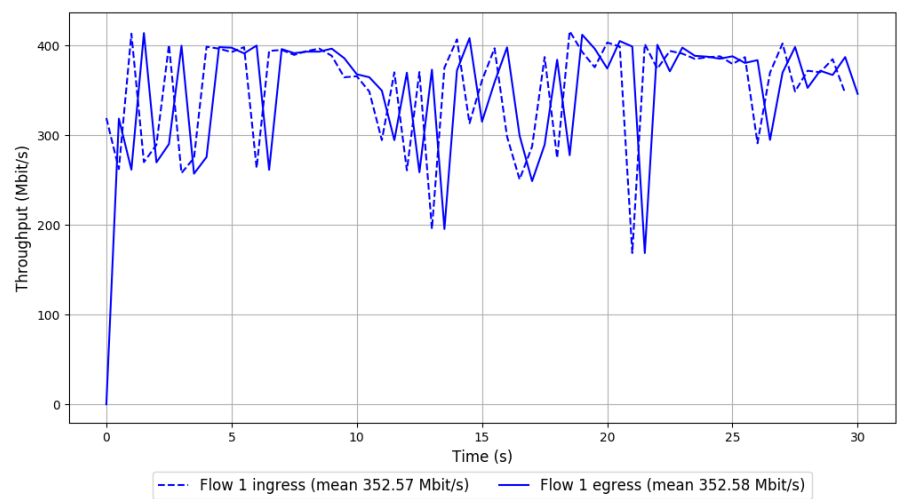
-- Flow 1:

Average throughput: 352.58 Mbit/s

95th percentile per-packet one-way delay: 2.583 ms

Loss rate: 0.01%

Run 4: Report of Verus — Data Link

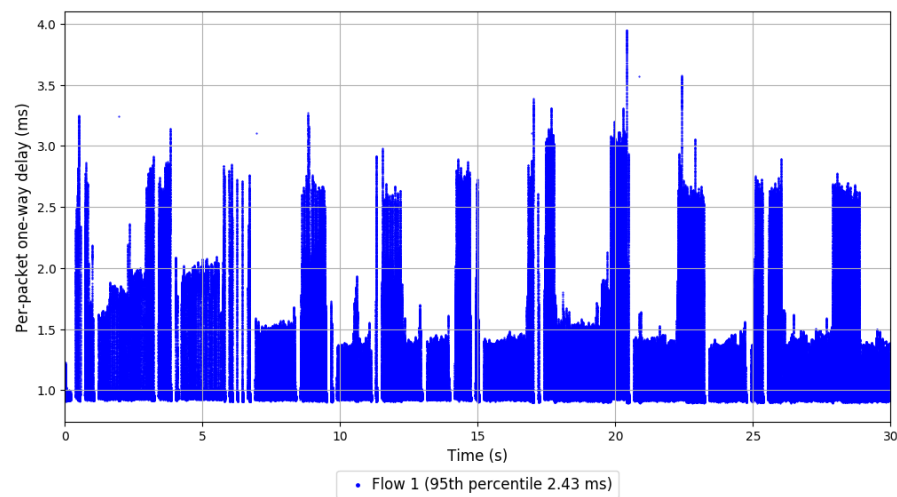
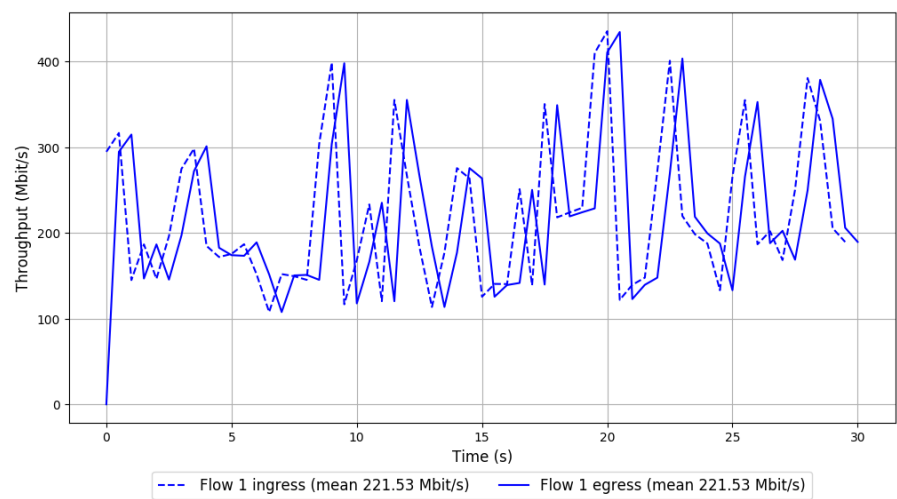


Run 5: Statistics of Verus

Start at: 2018-09-25 14:33:33
End at: 2018-09-25 14:34:03
Local clock offset: 0.44 ms
Remote clock offset: -0.419 ms

Below is generated by plot.py at 2018-09-25 15:47:37
Datalink statistics
-- Total of 1 flow:
Average throughput: 221.53 Mbit/s
95th percentile per-packet one-way delay: 2.427 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 221.53 Mbit/s
95th percentile per-packet one-way delay: 2.427 ms
Loss rate: 0.00%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2018-09-25 12:27:00

End at: 2018-09-25 12:27:30

Local clock offset: -2.877 ms

Remote clock offset: 2.578 ms

Below is generated by plot.py at 2018-09-25 15:48:55

Datalink statistics

-- Total of 1 flow:

Average throughput: 411.13 Mbit/s

95th percentile per-packet one-way delay: 0.720 ms

Loss rate: 0.00%

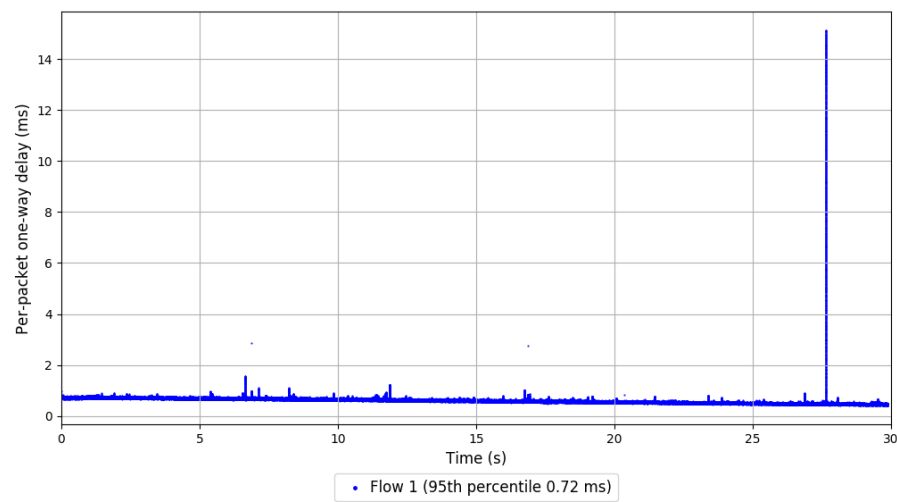
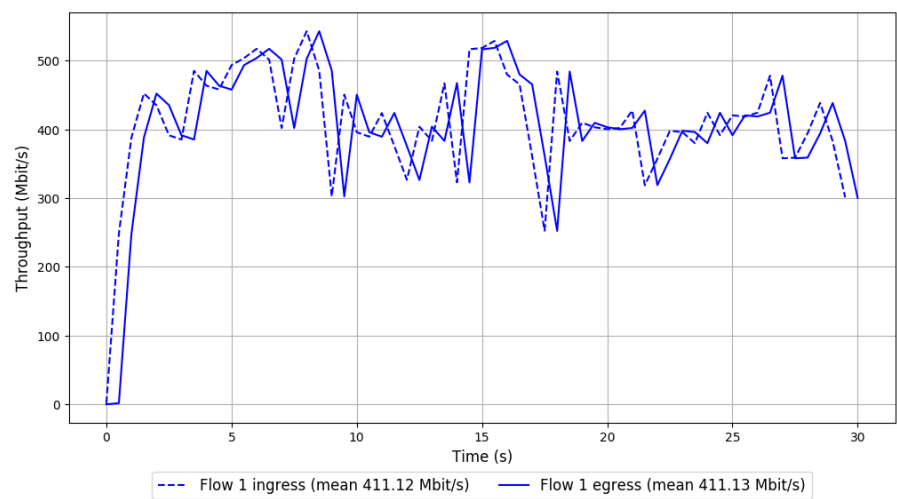
-- Flow 1:

Average throughput: 411.13 Mbit/s

95th percentile per-packet one-way delay: 0.720 ms

Loss rate: 0.00%

Run 1: Report of PCC-Vivace — Data Link

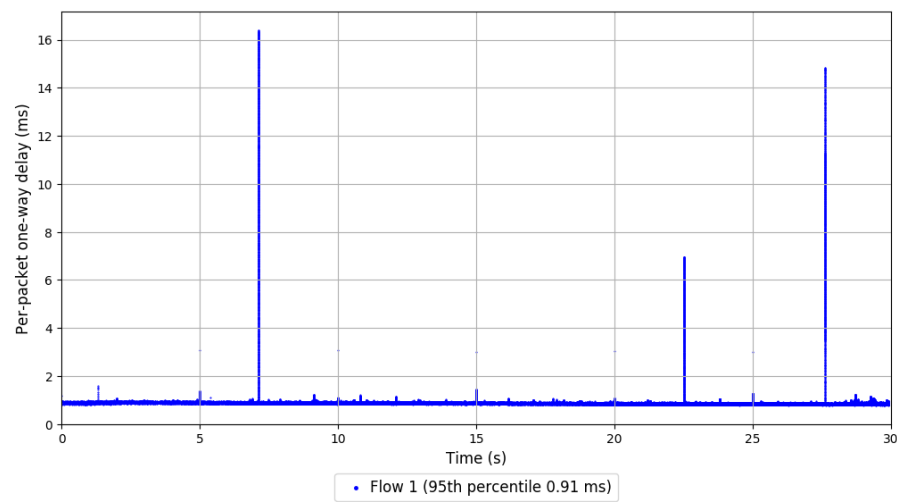
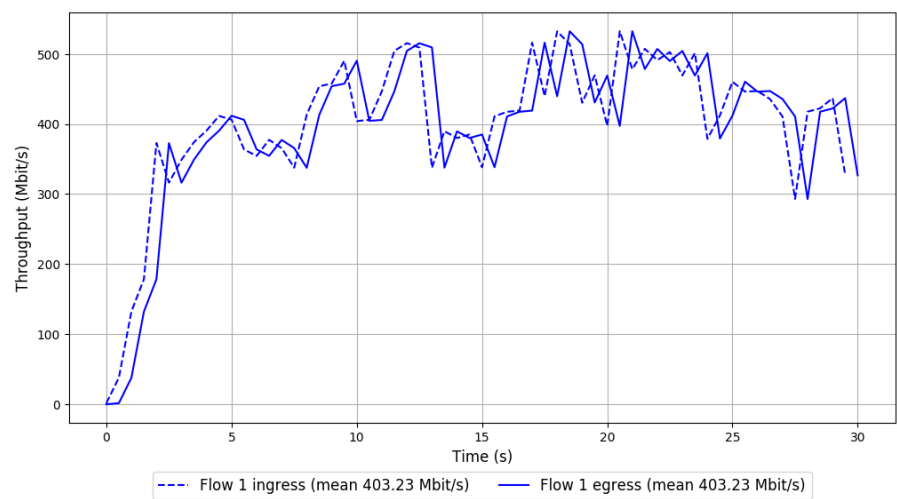


Run 2: Statistics of PCC-Vivace

Start at: 2018-09-25 12:56:05
End at: 2018-09-25 12:56:35
Local clock offset: 0.043 ms
Remote clock offset: -4.411 ms

Below is generated by plot.py at 2018-09-25 15:48:58
Datalink statistics
-- Total of 1 flow:
Average throughput: 403.23 Mbit/s
95th percentile per-packet one-way delay: 0.906 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 403.23 Mbit/s
95th percentile per-packet one-way delay: 0.906 ms
Loss rate: 0.01%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2018-09-25 13:25:04

End at: 2018-09-25 13:25:34

Local clock offset: 0.605 ms

Remote clock offset: 0.644 ms

Below is generated by plot.py at 2018-09-25 15:49:23

Datalink statistics

-- Total of 1 flow:

Average throughput: 378.76 Mbit/s

95th percentile per-packet one-way delay: 1.015 ms

Loss rate: 0.01%

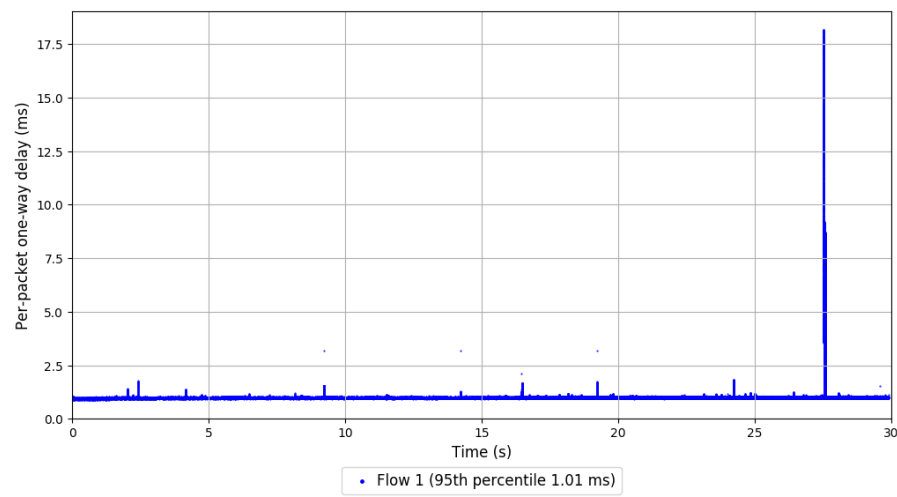
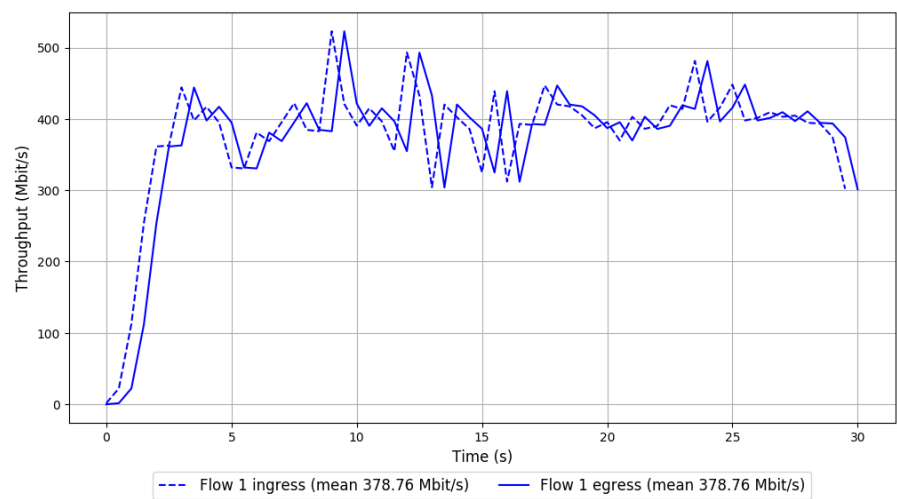
-- Flow 1:

Average throughput: 378.76 Mbit/s

95th percentile per-packet one-way delay: 1.015 ms

Loss rate: 0.01%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2018-09-25 13:53:38

End at: 2018-09-25 13:54:08

Local clock offset: 0.634 ms

Remote clock offset: 4.002 ms

Below is generated by plot.py at 2018-09-25 15:49:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 411.43 Mbit/s

95th percentile per-packet one-way delay: 1.066 ms

Loss rate: 0.00%

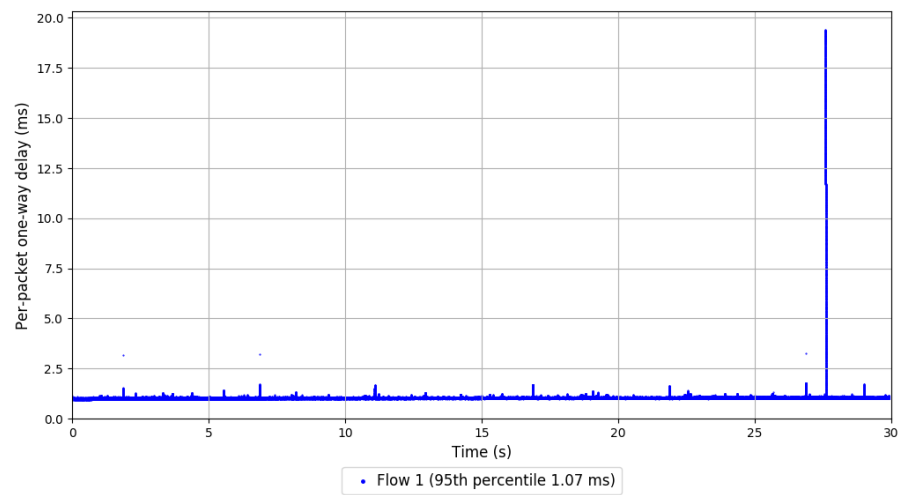
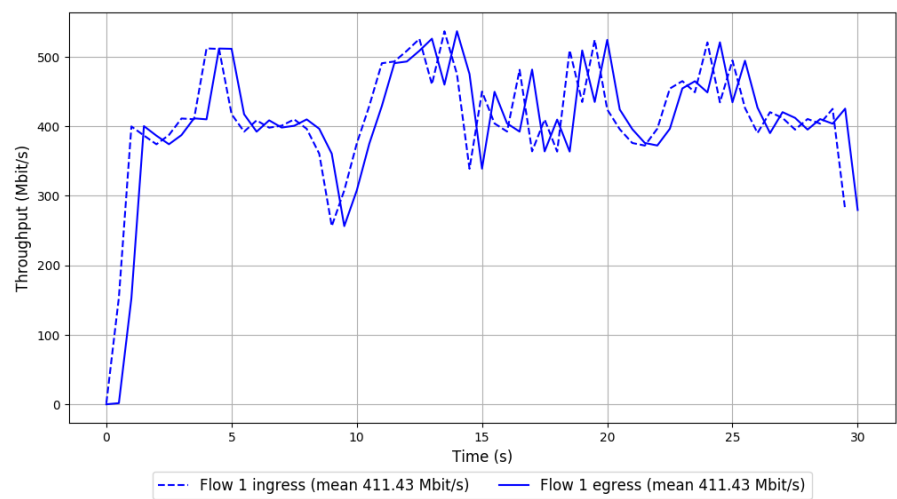
-- Flow 1:

Average throughput: 411.43 Mbit/s

95th percentile per-packet one-way delay: 1.066 ms

Loss rate: 0.00%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2018-09-25 14:22:35

End at: 2018-09-25 14:23:05

Local clock offset: 0.497 ms

Remote clock offset: 0.502 ms

Below is generated by plot.py at 2018-09-25 15:49:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 373.63 Mbit/s

95th percentile per-packet one-way delay: 0.886 ms

Loss rate: 0.01%

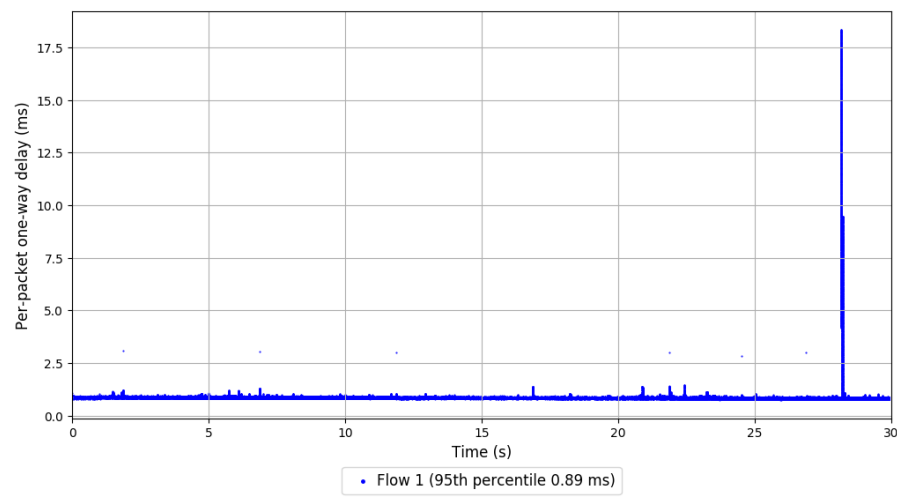
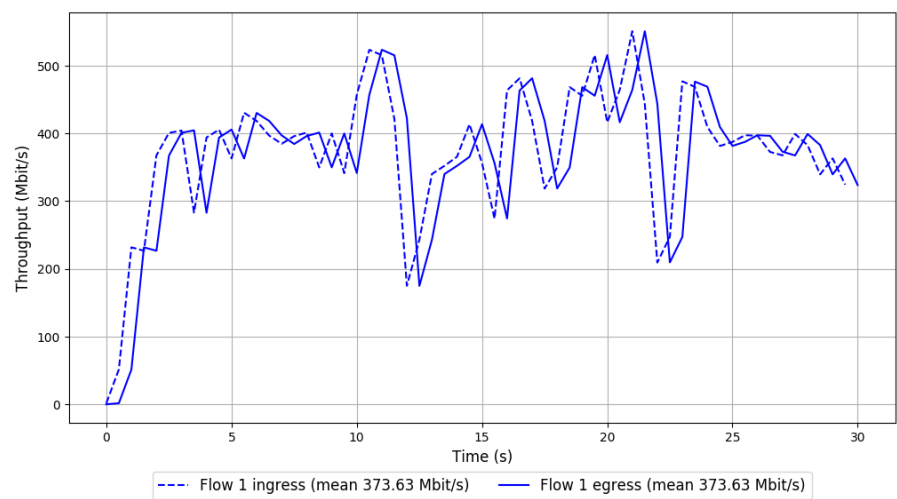
-- Flow 1:

Average throughput: 373.63 Mbit/s

95th percentile per-packet one-way delay: 0.886 ms

Loss rate: 0.01%

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2018-09-25 12:17:47

End at: 2018-09-25 12:18:17

Local clock offset: -1.735 ms

Remote clock offset: 3.166 ms

Below is generated by plot.py at 2018-09-25 15:49:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 1.259 ms

Loss rate: 0.07%

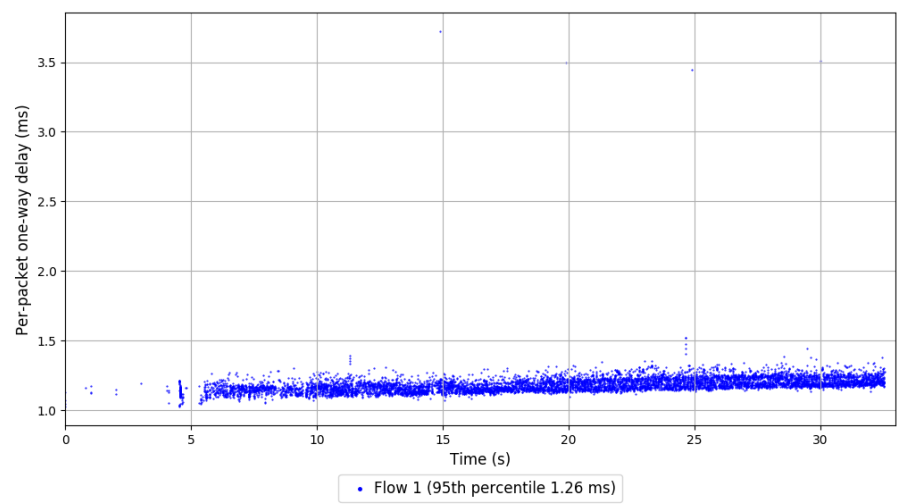
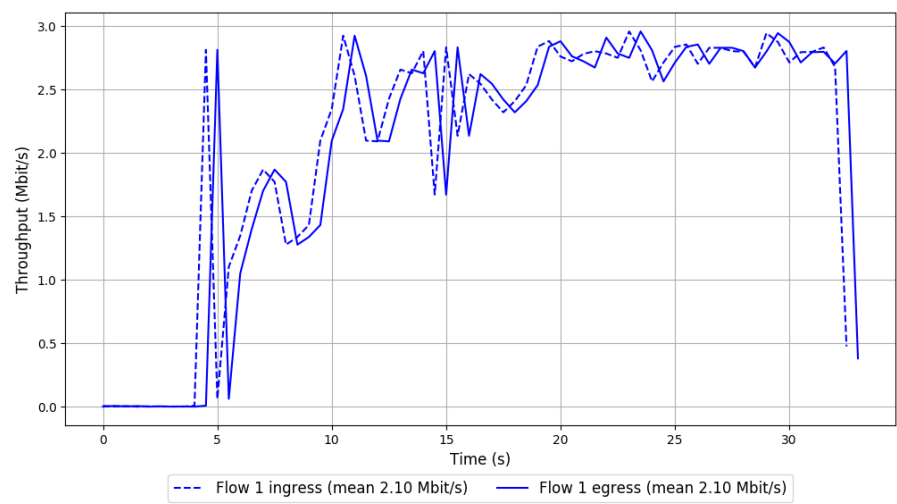
-- Flow 1:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 1.259 ms

Loss rate: 0.07%

Run 1: Report of WebRTC media — Data Link

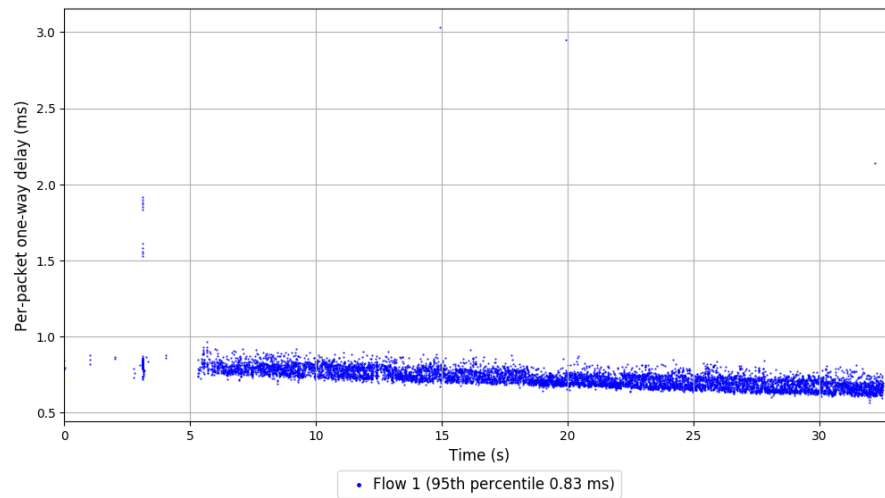
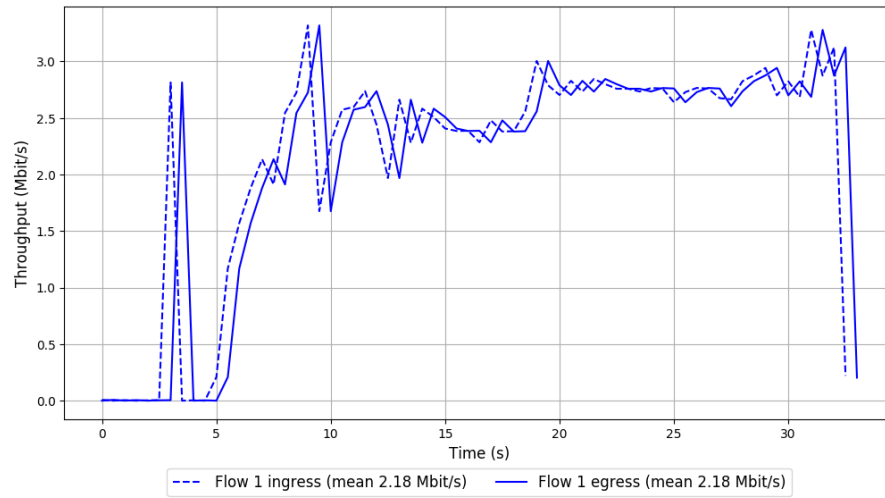


Run 2: Statistics of WebRTC media

Start at: 2018-09-25 12:46:54
End at: 2018-09-25 12:47:24
Local clock offset: -1.254 ms
Remote clock offset: -3.561 ms

Below is generated by plot.py at 2018-09-25 15:49:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.18 Mbit/s
95th percentile per-packet one-way delay: 0.827 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 2.18 Mbit/s
95th percentile per-packet one-way delay: 0.827 ms
Loss rate: 0.01%

Run 2: Report of WebRTC media — Data Link

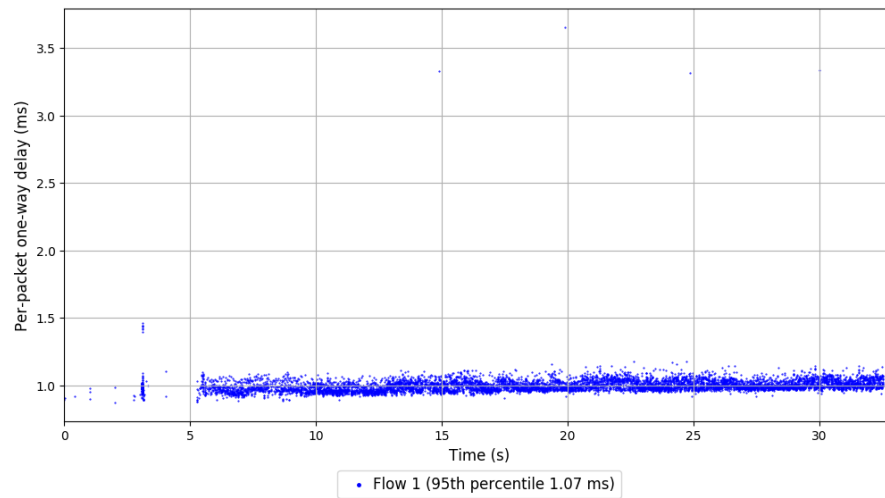
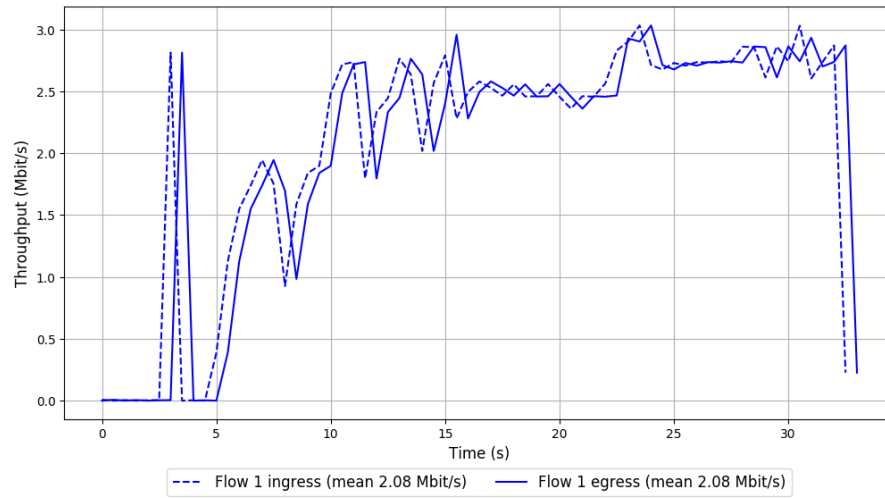


Run 3: Statistics of WebRTC media

Start at: 2018-09-25 13:15:55
End at: 2018-09-25 13:16:25
Local clock offset: 0.603 ms
Remote clock offset: -0.114 ms

Below is generated by plot.py at 2018-09-25 15:49:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 1.066 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 1.066 ms
Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-09-25 13:44:27

End at: 2018-09-25 13:44:57

Local clock offset: 0.67 ms

Remote clock offset: 3.148 ms

Below is generated by plot.py at 2018-09-25 15:49:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.08 Mbit/s

95th percentile per-packet one-way delay: 1.076 ms

Loss rate: 0.00%

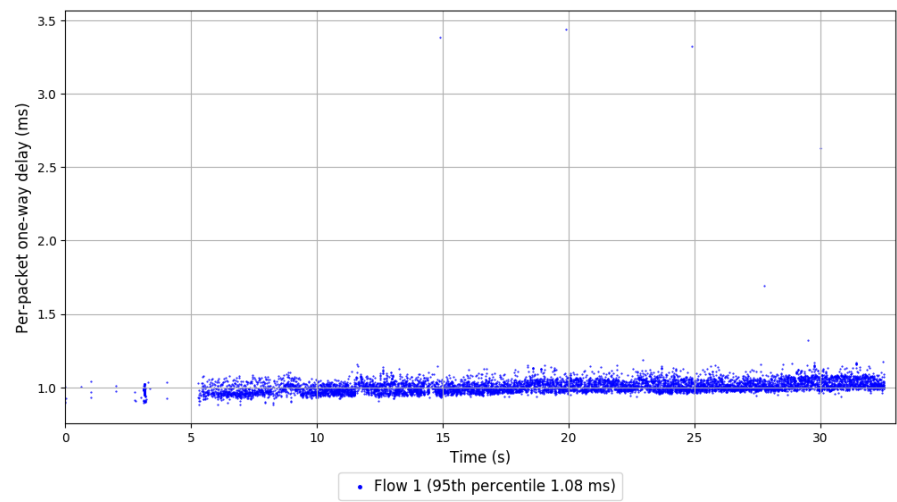
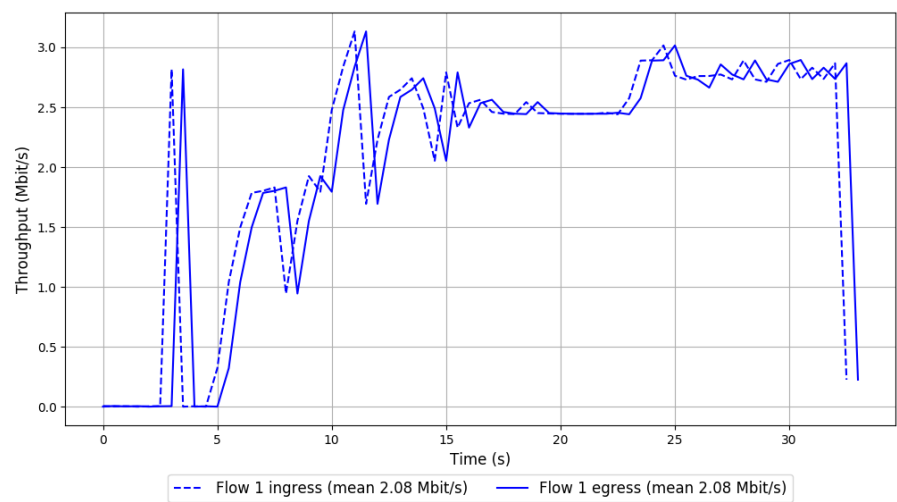
-- Flow 1:

Average throughput: 2.08 Mbit/s

95th percentile per-packet one-way delay: 1.076 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-09-25 14:13:24

End at: 2018-09-25 14:13:54

Local clock offset: 0.617 ms

Remote clock offset: 2.449 ms

Below is generated by plot.py at 2018-09-25 15:49:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.11 Mbit/s

95th percentile per-packet one-way delay: 0.946 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.11 Mbit/s

95th percentile per-packet one-way delay: 0.946 ms

Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

