

Pantheon Report

Generated at 2018-09-25 08:11:00 (UTC).

Data path: AWS Brazil 2 on **ens5** (*local*) → Colombia on **p4p1** (*remote*).

Repeated the test of 19 congestion control schemes 5 times.

Each test lasted for 30 seconds running 1 flow.

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

System info:

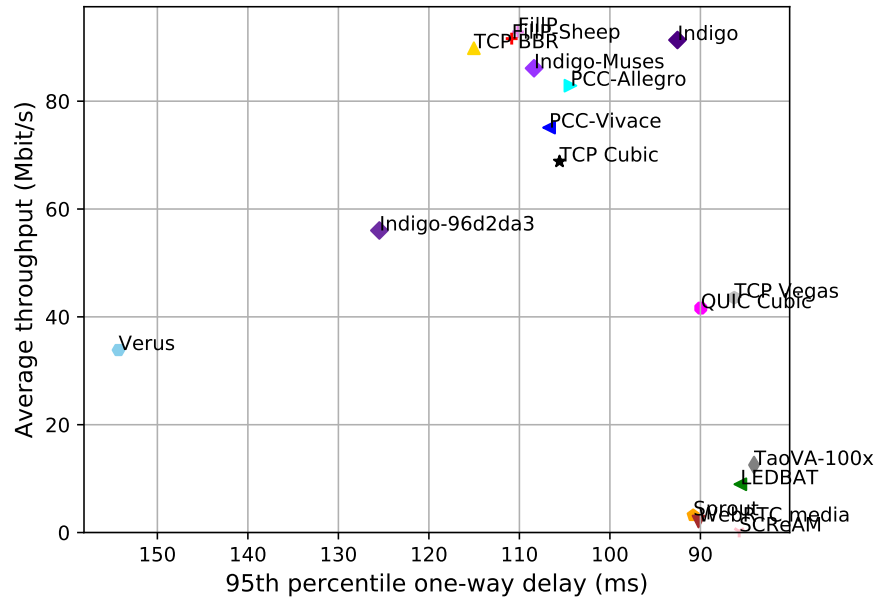
```
Linux 4.15.0-1021-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
net.ipv4.tcp_mem = 184101 245469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

Git summary:

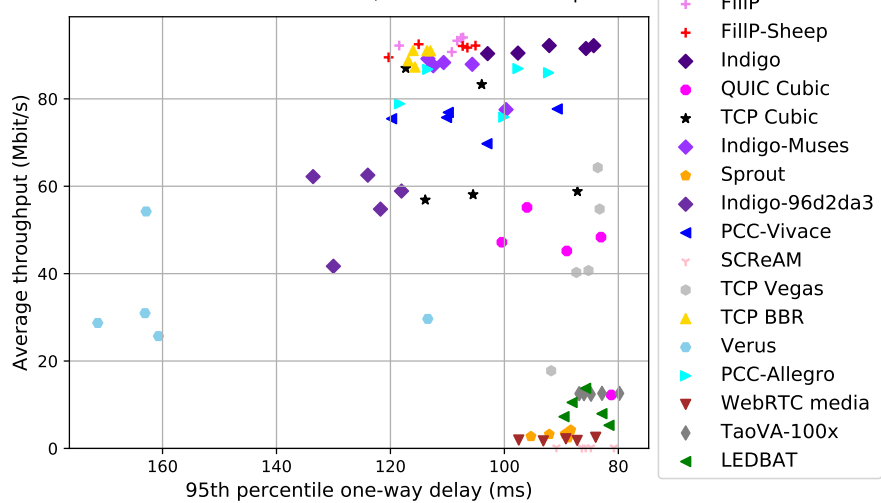
```
branch: muses @ 90192f6b64ce1a1191dcca0e9ff9ee24950674d7
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf5e58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
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 AWS Brazil 2 to Colombia, 5 runs of 30s each per scheme
(mean of all runs by scheme)



test from AWS Brazil 2 to Colombia, 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	89.82	115.03	3.05
Copa	0	N/A	N/A	N/A
TCP Cubic	5	68.81	105.57	1.05
FillP	5	92.84	110.16	8.11
FillP-Sheep	5	91.60	110.85	3.35
Indigo	5	91.34	92.54	1.34
Indigo-96d2da3	5	56.02	125.47	52.01
LEDBAT	5	8.95	85.59	0.23
Indigo-Muses	5	86.11	108.38	2.58
PCC-Allegro	5	82.87	104.36	1.75
PCC-Expr	0	N/A	N/A	N/A
QUIC Cubic	5	41.63	89.96	0.48
SCReAM	5	0.21	85.72	0.03
Sprout	5	3.20	90.80	0.48
TaoVA-100x	5	12.53	84.07	22.16
TCP Vegas	5	43.56	86.26	1.56
Verus	5	33.85	154.30	60.00
PCC-Vivace	5	75.10	106.72	0.37
WebRTC media	5	2.04	90.21	0.43

Run 1: Statistics of TCP BBR

Start at: 2018-09-25 05:18:19

End at: 2018-09-25 05:18:49

Local clock offset: 0.8 ms

Remote clock offset: -1.893 ms

Below is generated by plot.py at 2018-09-25 08:04:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.00 Mbit/s

95th percentile per-packet one-way delay: 112.982 ms

Loss rate: 2.88%

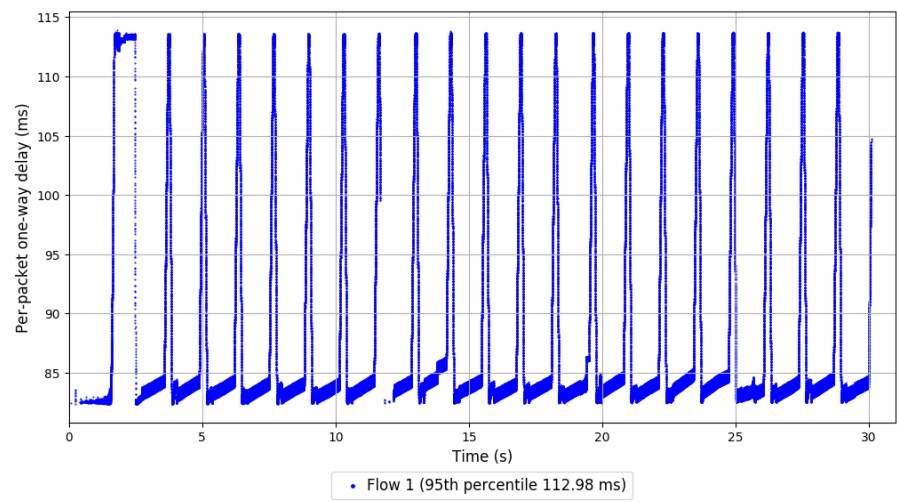
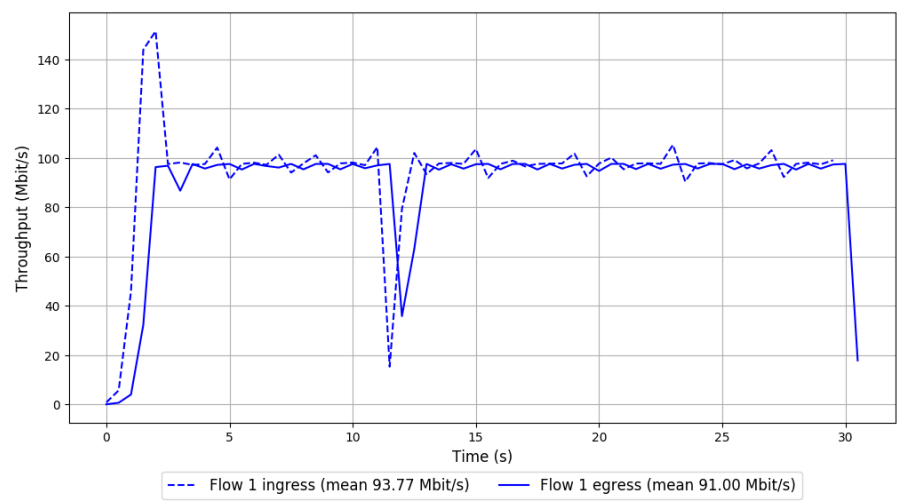
-- Flow 1:

Average throughput: 91.00 Mbit/s

95th percentile per-packet one-way delay: 112.982 ms

Loss rate: 2.88%

Run 1: Report of TCP BBR — Data Link

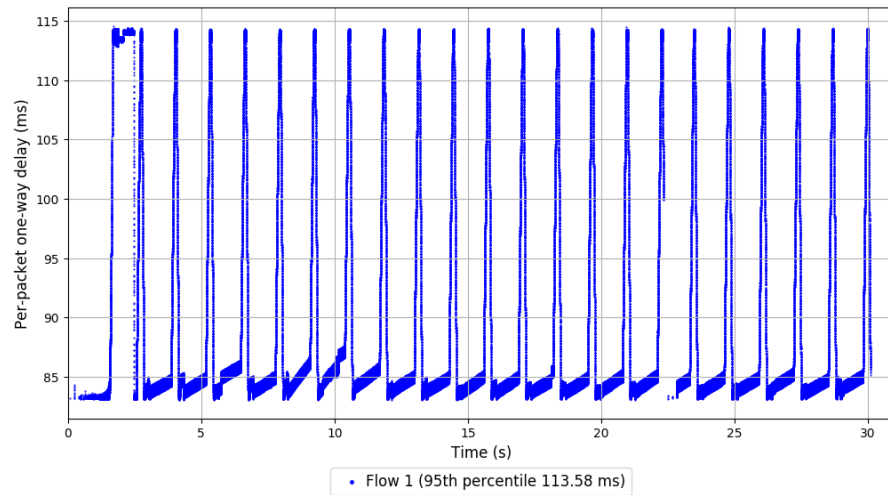
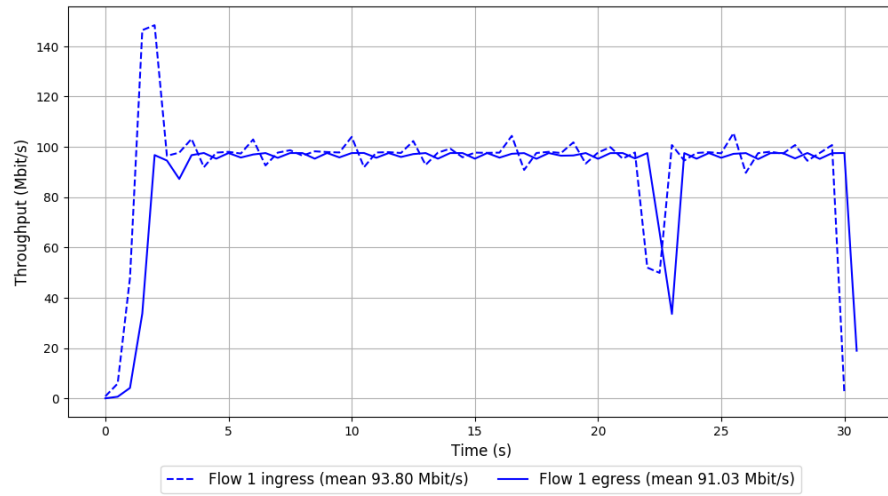


Run 2: Statistics of TCP BBR

Start at: 2018-09-25 05:59:31
End at: 2018-09-25 06:00:01
Local clock offset: 2.776 ms
Remote clock offset: -1.827 ms

Below is generated by plot.py at 2018-09-25 08:04:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 91.03 Mbit/s
95th percentile per-packet one-way delay: 113.575 ms
Loss rate: 2.95%
-- Flow 1:
Average throughput: 91.03 Mbit/s
95th percentile per-packet one-way delay: 113.575 ms
Loss rate: 2.95%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-09-25 06:38:39

End at: 2018-09-25 06:39:09

Local clock offset: -4.63 ms

Remote clock offset: 2.292 ms

Below is generated by plot.py at 2018-09-25 08:04:22

Datalink statistics

-- Total of 1 flow:

Average throughput: 88.73 Mbit/s

95th percentile per-packet one-way delay: 116.865 ms

Loss rate: 2.91%

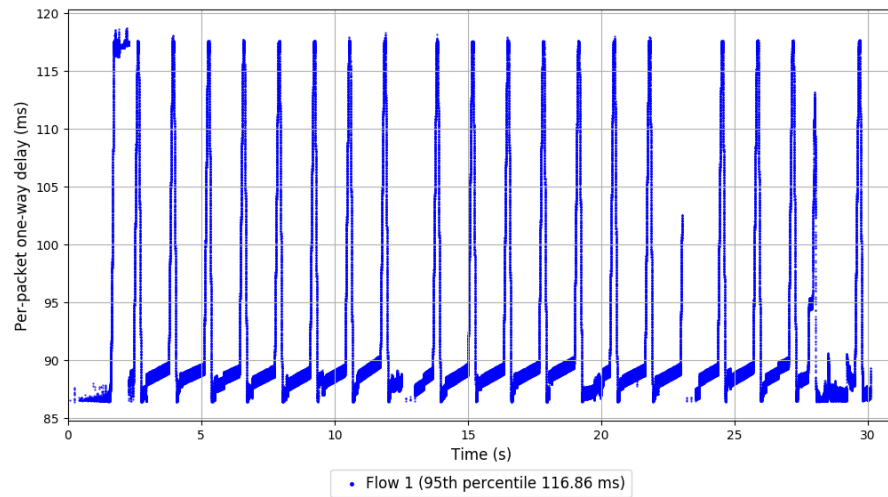
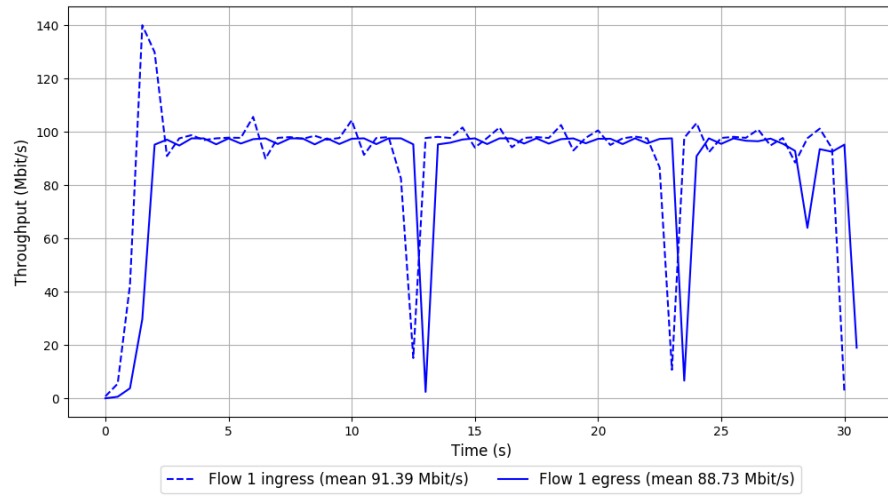
-- Flow 1:

Average throughput: 88.73 Mbit/s

95th percentile per-packet one-way delay: 116.865 ms

Loss rate: 2.91%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-09-25 07:17:46

End at: 2018-09-25 07:18:16

Local clock offset: -1.107 ms

Remote clock offset: 2.233 ms

Below is generated by plot.py at 2018-09-25 08:04:22

Datalink statistics

-- Total of 1 flow:

Average throughput: 87.28 Mbit/s

95th percentile per-packet one-way delay: 115.700 ms

Loss rate: 4.17%

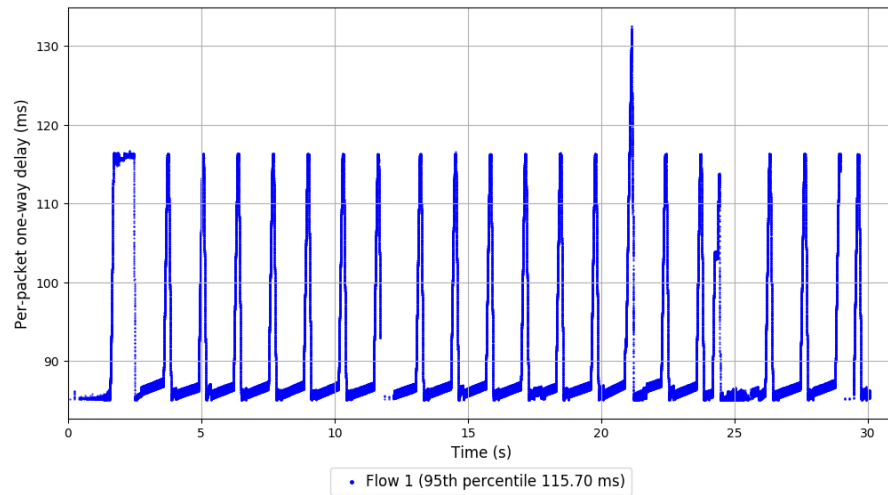
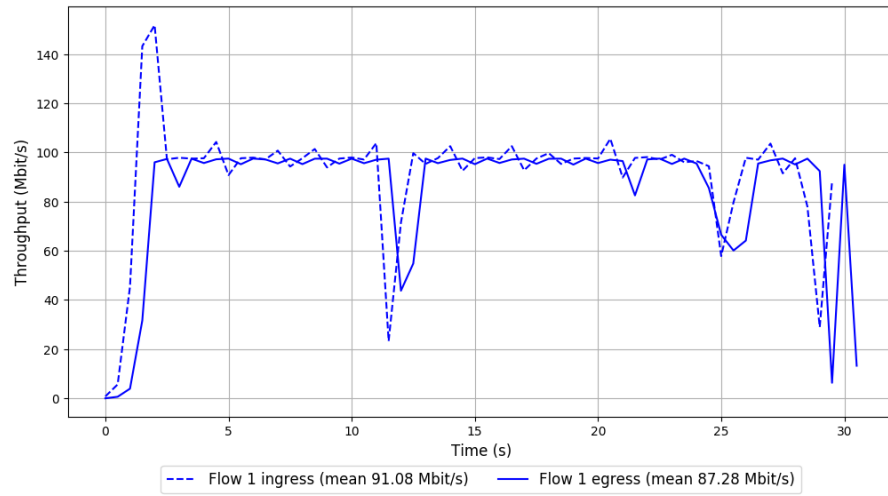
-- Flow 1:

Average throughput: 87.28 Mbit/s

95th percentile per-packet one-way delay: 115.700 ms

Loss rate: 4.17%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-09-25 07:59:34

End at: 2018-09-25 08:00:04

Local clock offset: -1.68 ms

Remote clock offset: 0.961 ms

Below is generated by plot.py at 2018-09-25 08:04:22

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.07 Mbit/s

95th percentile per-packet one-way delay: 116.021 ms

Loss rate: 2.32%

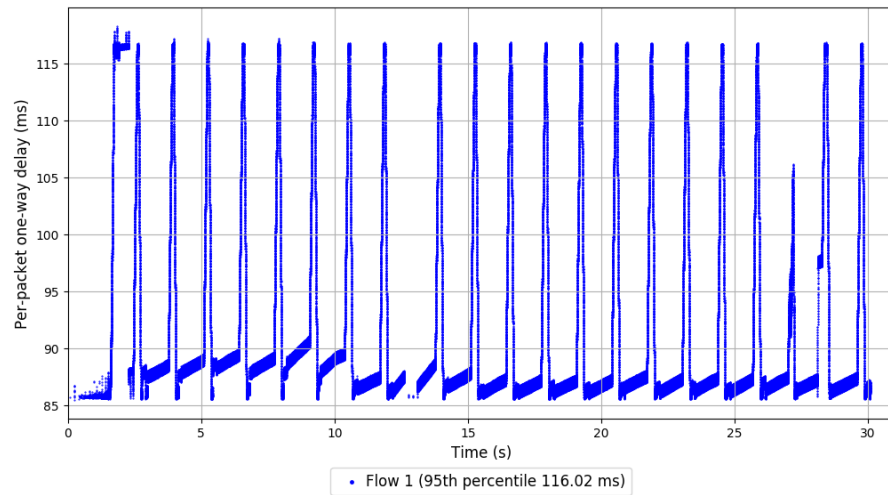
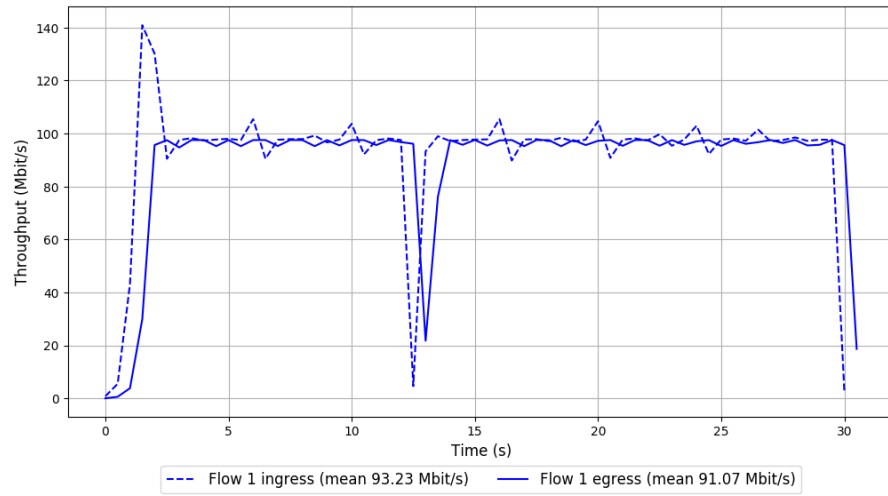
-- Flow 1:

Average throughput: 91.07 Mbit/s

95th percentile per-packet one-way delay: 116.021 ms

Loss rate: 2.32%

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

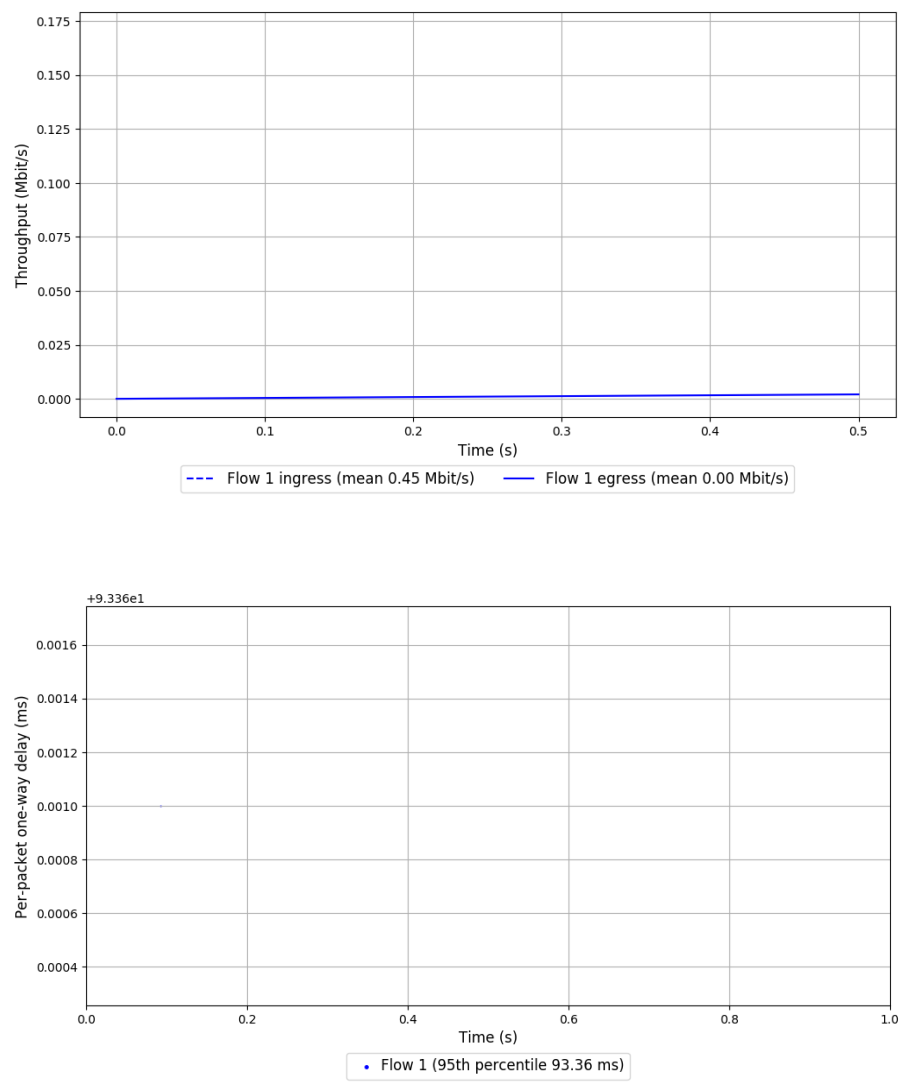
Start at: 2018-09-25 05:17:12

End at: 2018-09-25 05:17:42

Local clock offset: 1.214 ms

Remote clock offset: 3.172 ms

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

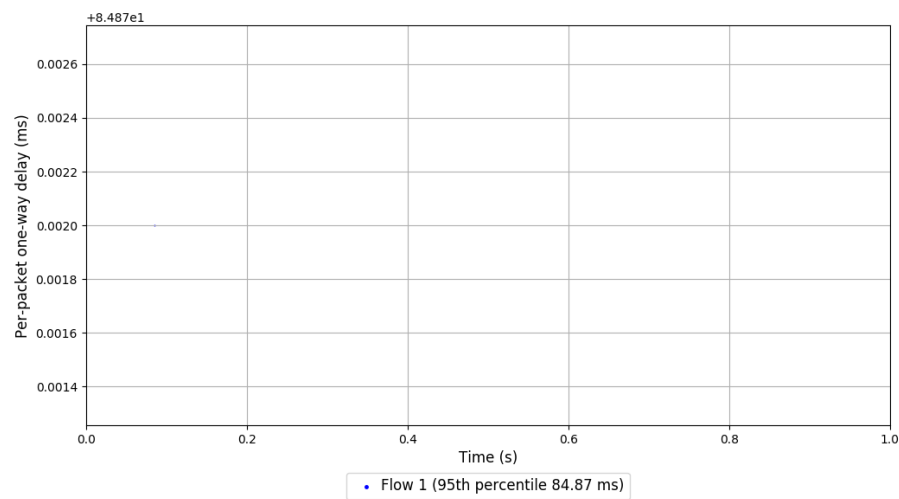
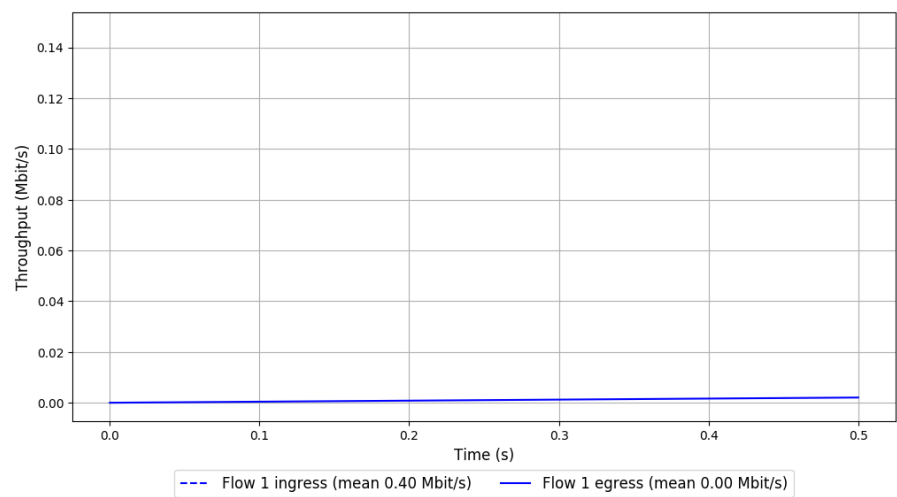
Start at: 2018-09-25 05:58:24

End at: 2018-09-25 05:58:54

Local clock offset: 3.446 ms

Remote clock offset: 2.183 ms

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

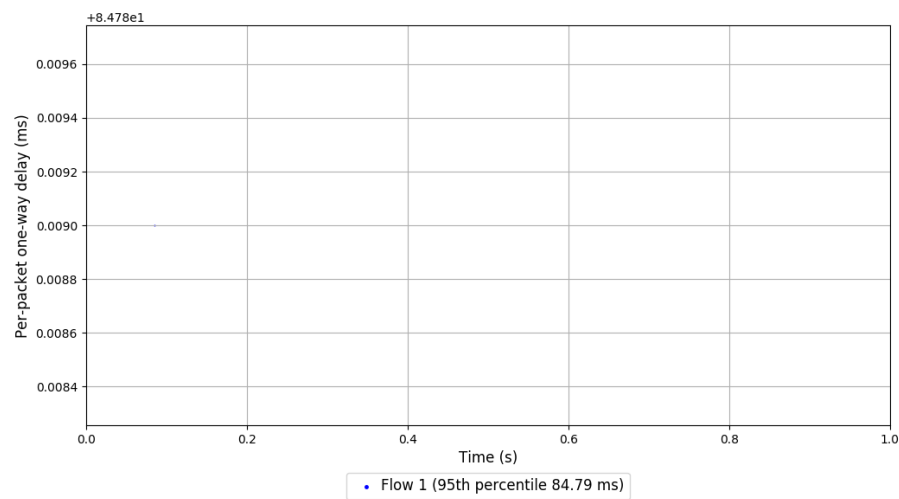
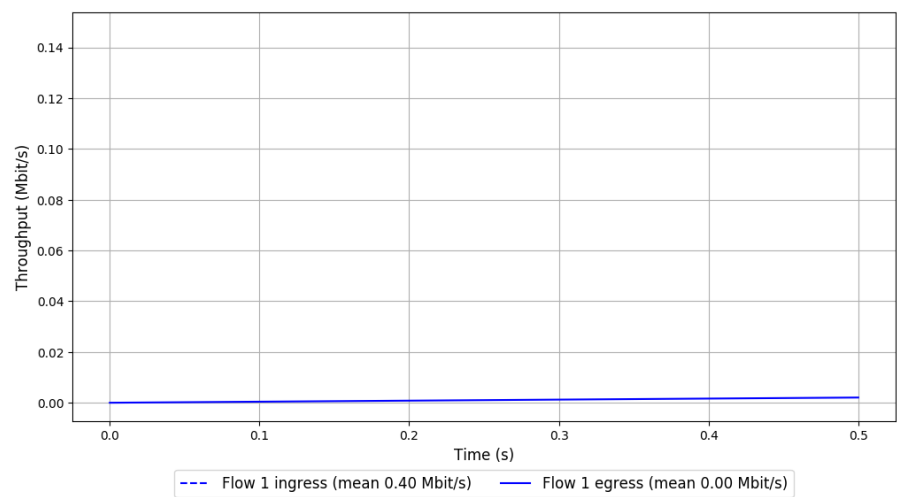
Start at: 2018-09-25 06:37:32

End at: 2018-09-25 06:38:02

Local clock offset: -4.634 ms

Remote clock offset: 2.23 ms

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

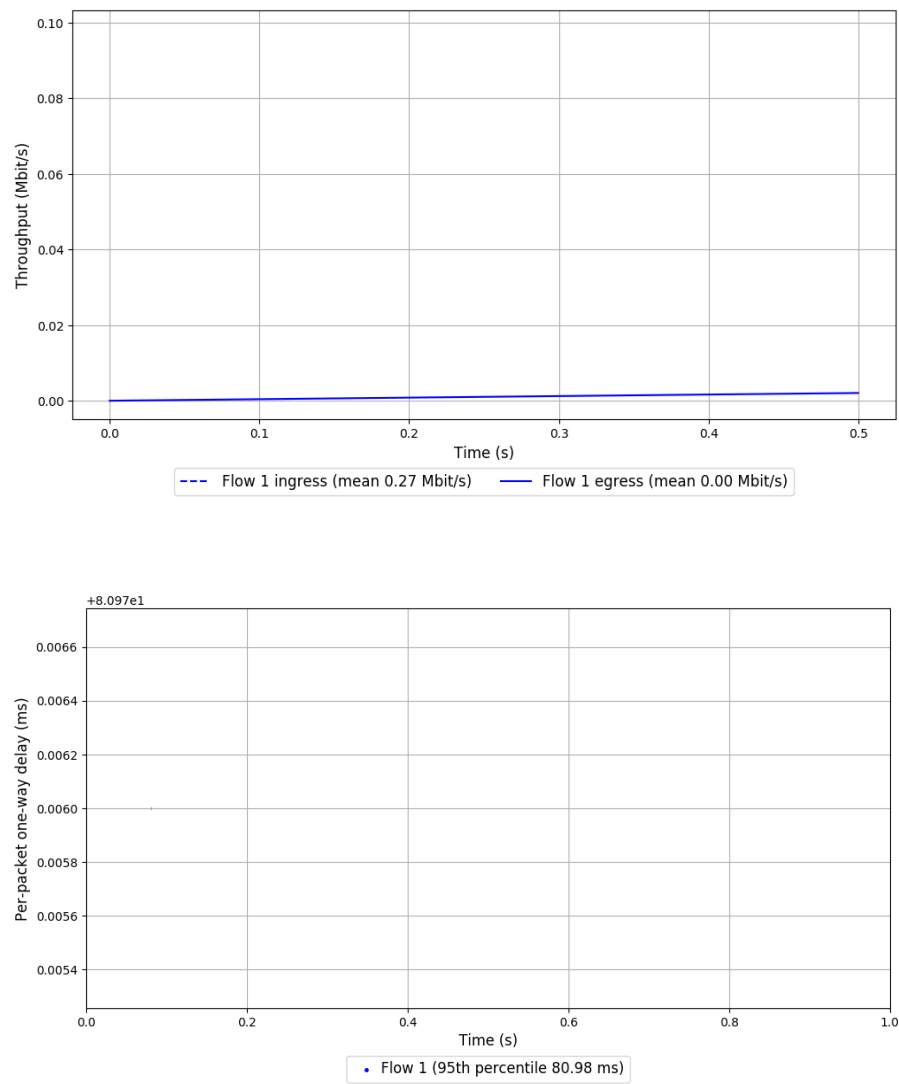
Start at: 2018-09-25 07:16:39

End at: 2018-09-25 07:17:09

Local clock offset: -1.063 ms

Remote clock offset: -1.915 ms

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

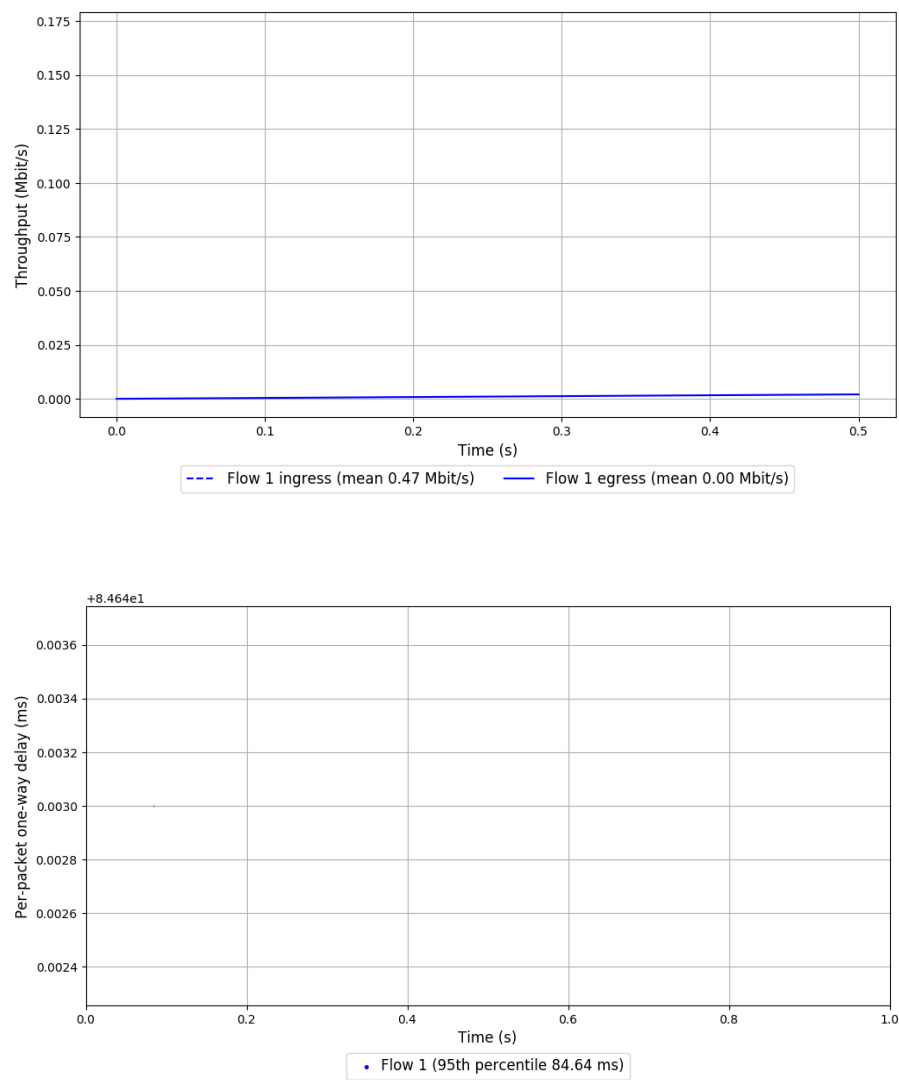
Start at: 2018-09-25 07:58:27

End at: 2018-09-25 07:58:57

Local clock offset: -2.513 ms

Remote clock offset: 1.041 ms

Run 5: Report of Copa — Data Link

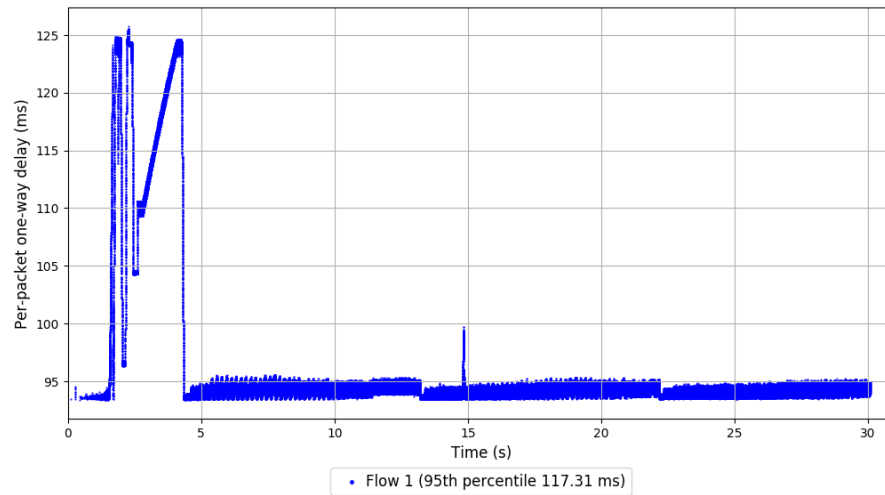
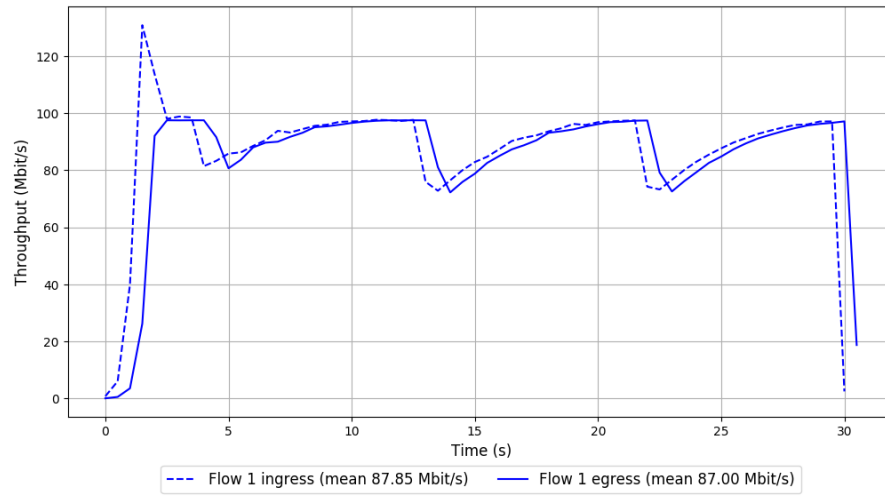


Run 1: Statistics of TCP Cubic

Start at: 2018-09-25 05:13:12
End at: 2018-09-25 05:13:42
Local clock offset: -0.68 ms
Remote clock offset: -2.014 ms

Below is generated by plot.py at 2018-09-25 08:04:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 87.00 Mbit/s
95th percentile per-packet one-way delay: 117.309 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 87.00 Mbit/s
95th percentile per-packet one-way delay: 117.309 ms
Loss rate: 0.99%

Run 1: Report of TCP Cubic — Data Link

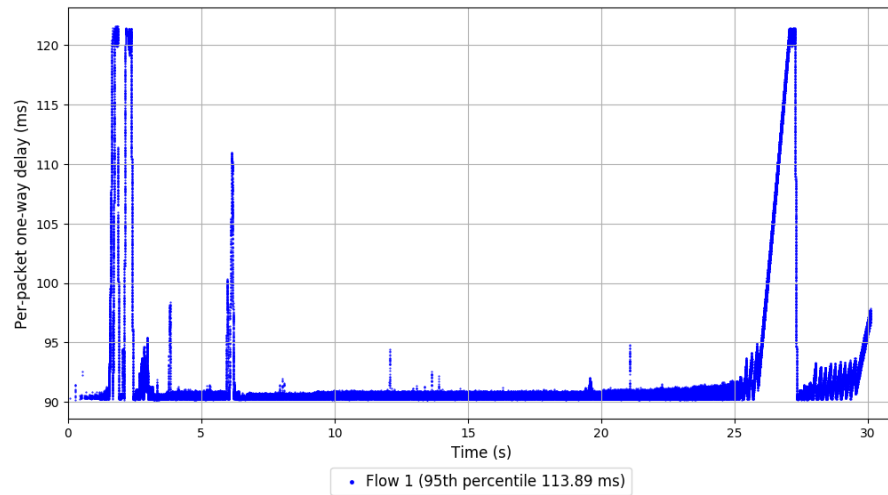
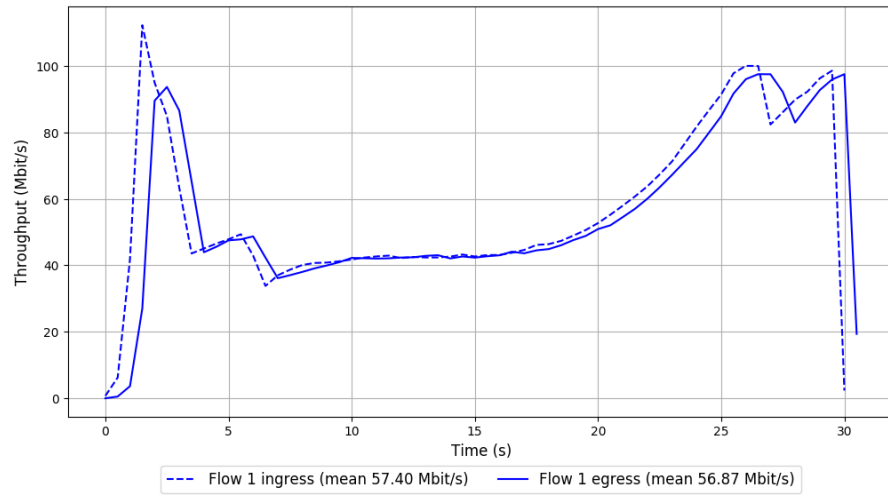


Run 2: Statistics of TCP Cubic

Start at: 2018-09-25 05:55:04
End at: 2018-09-25 05:55:34
Local clock offset: 3.205 ms
Remote clock offset: -2.957 ms

Below is generated by plot.py at 2018-09-25 08:04:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 56.87 Mbit/s
95th percentile per-packet one-way delay: 113.886 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 56.87 Mbit/s
95th percentile per-packet one-way delay: 113.886 ms
Loss rate: 0.93%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-09-25 06:33:47

End at: 2018-09-25 06:34:17

Local clock offset: -4.606 ms

Remote clock offset: 3.268 ms

Below is generated by plot.py at 2018-09-25 08:04:22

Datalink statistics

-- Total of 1 flow:

Average throughput: 58.81 Mbit/s

95th percentile per-packet one-way delay: 87.174 ms

Loss rate: 1.32%

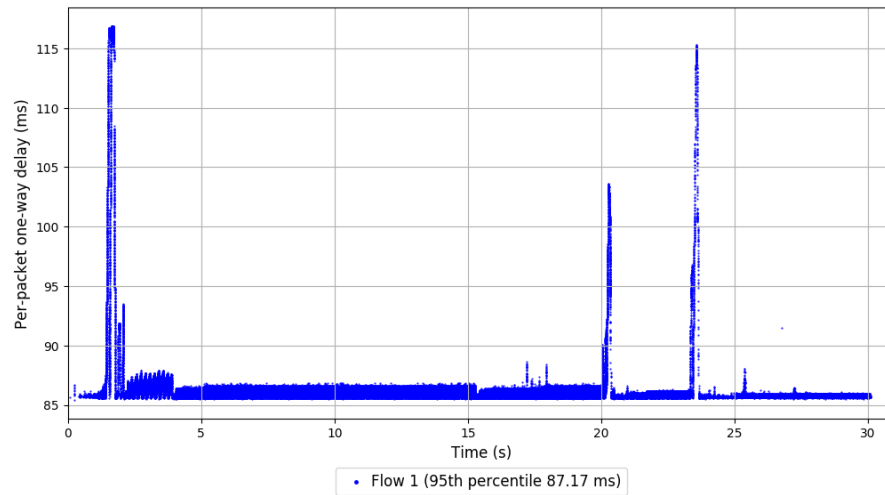
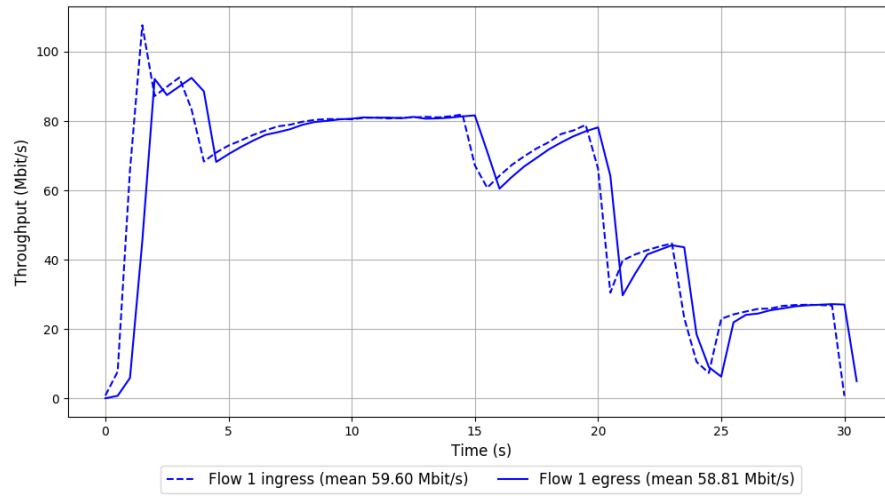
-- Flow 1:

Average throughput: 58.81 Mbit/s

95th percentile per-packet one-way delay: 87.174 ms

Loss rate: 1.32%

Run 3: Report of TCP Cubic — Data Link

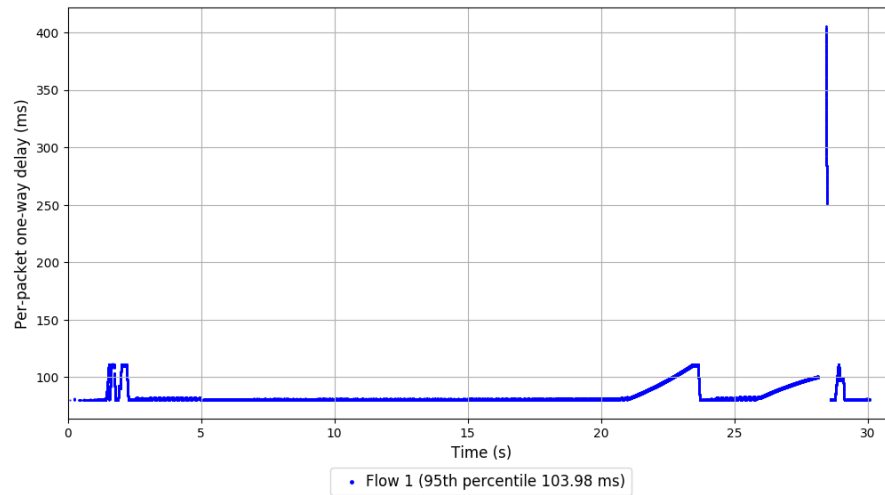
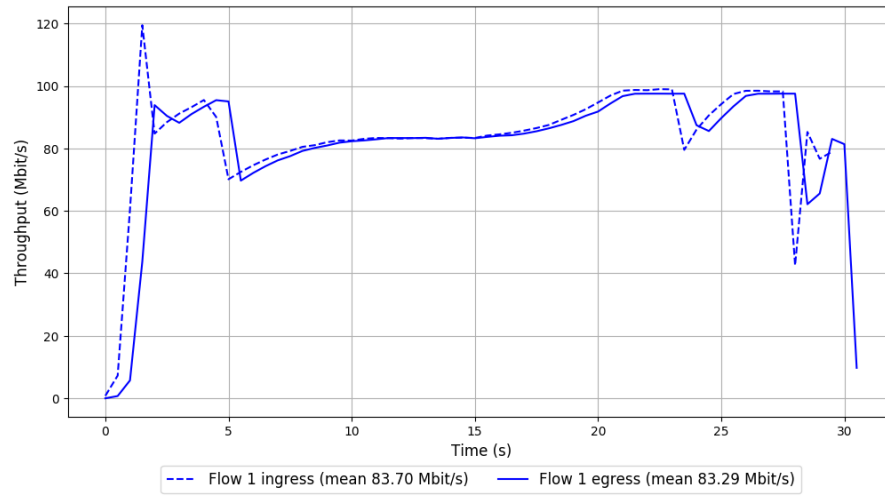


Run 4: Statistics of TCP Cubic

Start at: 2018-09-25 07:12:34
End at: 2018-09-25 07:13:04
Local clock offset: -1.512 ms
Remote clock offset: -3.108 ms

Below is generated by plot.py at 2018-09-25 08:04:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 83.29 Mbit/s
95th percentile per-packet one-way delay: 103.977 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 83.29 Mbit/s
95th percentile per-packet one-way delay: 103.977 ms
Loss rate: 0.49%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-09-25 07:54:54

End at: 2018-09-25 07:55:25

Local clock offset: -1.687 ms

Remote clock offset: 2.19 ms

Below is generated by plot.py at 2018-09-25 08:04:52

Datalink statistics

-- Total of 1 flow:

Average throughput: 58.09 Mbit/s

95th percentile per-packet one-way delay: 105.492 ms

Loss rate: 1.54%

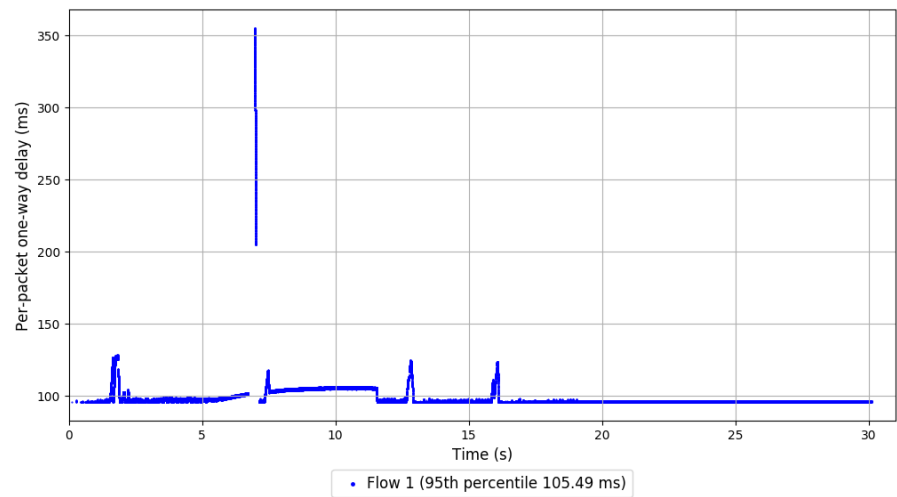
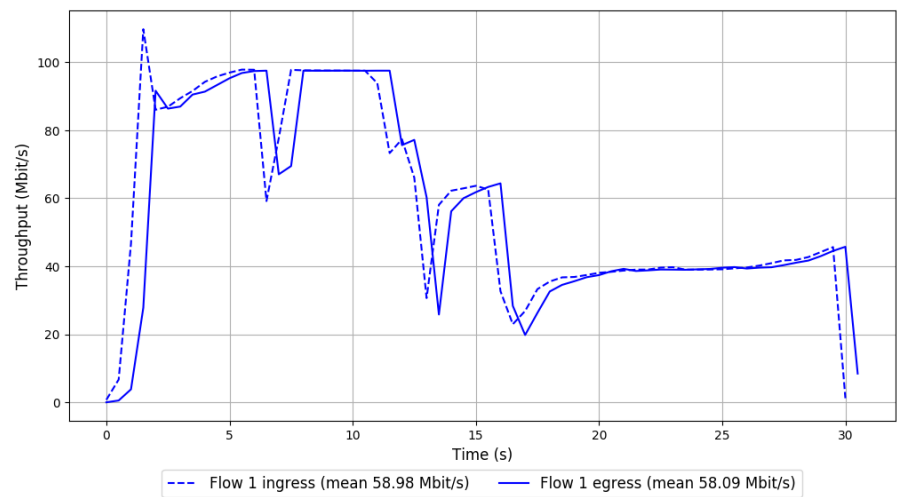
-- Flow 1:

Average throughput: 58.09 Mbit/s

95th percentile per-packet one-way delay: 105.492 ms

Loss rate: 1.54%

Run 5: Report of TCP Cubic — Data Link

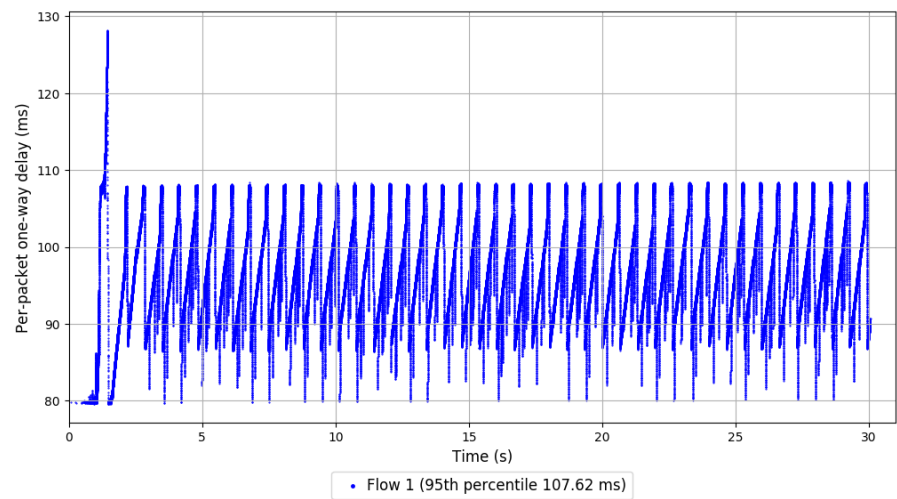
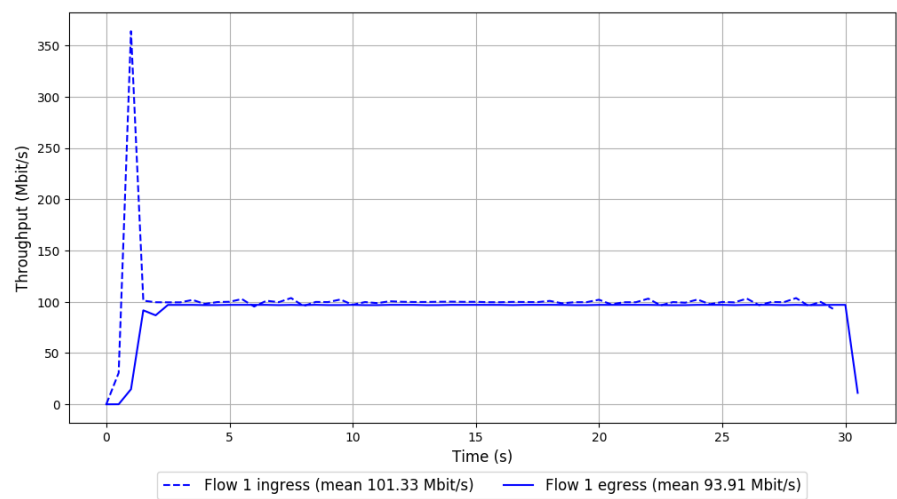


Run 1: Statistics of FillP

Start at: 2018-09-25 04:49:31
End at: 2018-09-25 04:50:01
Local clock offset: -2.155 ms
Remote clock offset: -3.467 ms

Below is generated by plot.py at 2018-09-25 08:05:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 93.91 Mbit/s
95th percentile per-packet one-way delay: 107.620 ms
Loss rate: 7.30%
-- Flow 1:
Average throughput: 93.91 Mbit/s
95th percentile per-packet one-way delay: 107.620 ms
Loss rate: 7.30%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-09-25 05:30:03

End at: 2018-09-25 05:30:33

Local clock offset: 5.776 ms

Remote clock offset: 1.971 ms

Below is generated by plot.py at 2018-09-25 08:05:43

Datalink statistics

-- Total of 1 flow:

Average throughput: 92.20 Mbit/s

95th percentile per-packet one-way delay: 118.461 ms

Loss rate: 9.08%

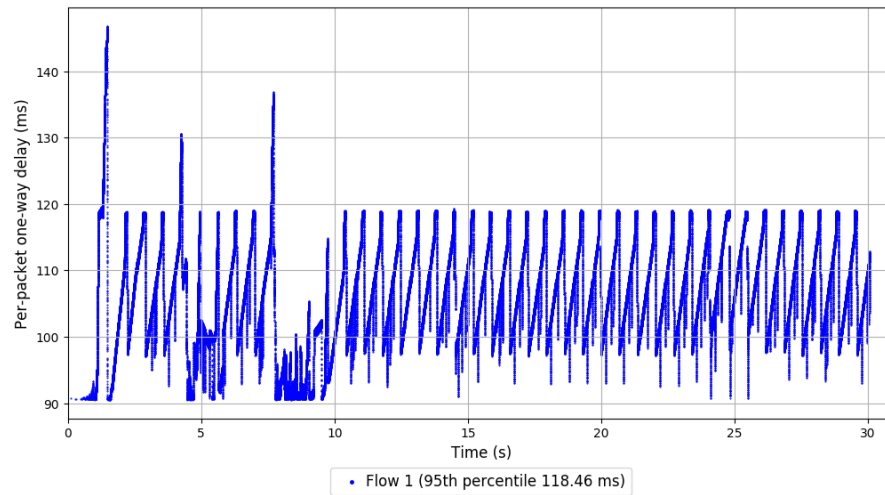
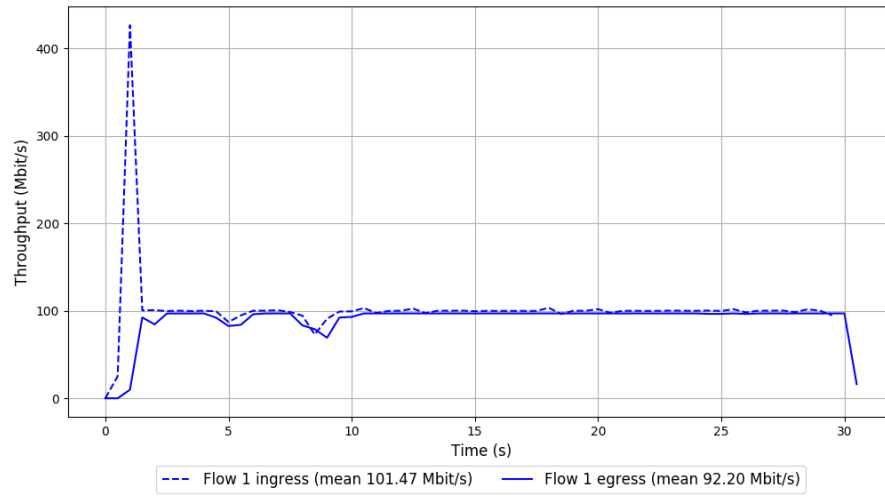
-- Flow 1:

Average throughput: 92.20 Mbit/s

95th percentile per-packet one-way delay: 118.461 ms

Loss rate: 9.08%

Run 2: Report of FillP — Data Link

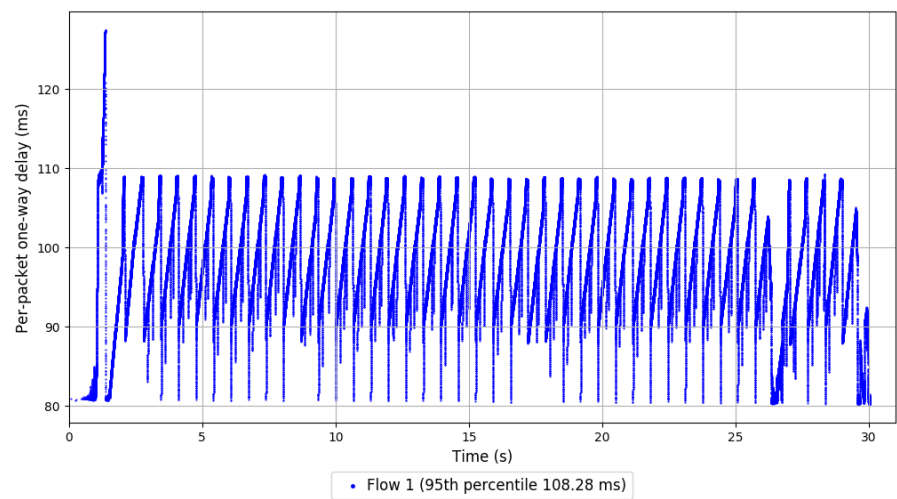
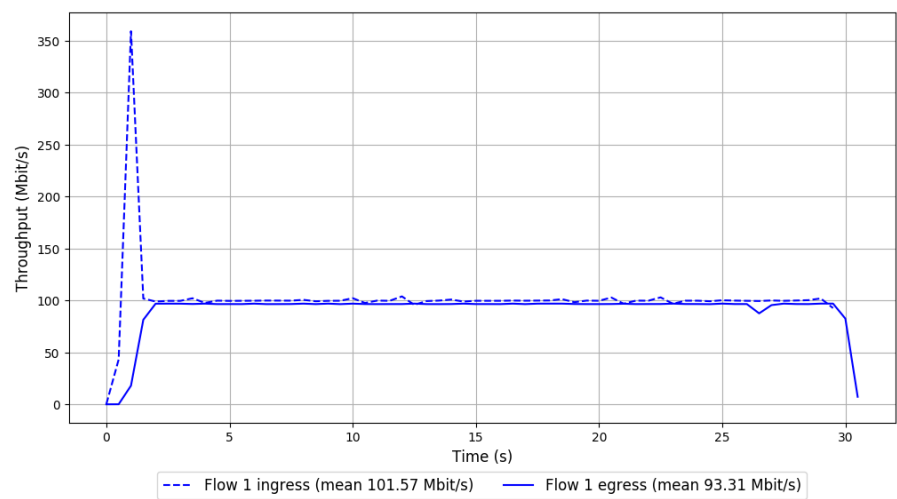


Run 3: Statistics of FillP

Start at: 2018-09-25 06:10:41
End at: 2018-09-25 06:11:11
Local clock offset: 3.658 ms
Remote clock offset: -1.709 ms

Below is generated by plot.py at 2018-09-25 08:05:44
Datalink statistics
-- Total of 1 flow:
Average throughput: 93.31 Mbit/s
95th percentile per-packet one-way delay: 108.275 ms
Loss rate: 8.13%
-- Flow 1:
Average throughput: 93.31 Mbit/s
95th percentile per-packet one-way delay: 108.275 ms
Loss rate: 8.13%

Run 3: Report of FillP — Data Link

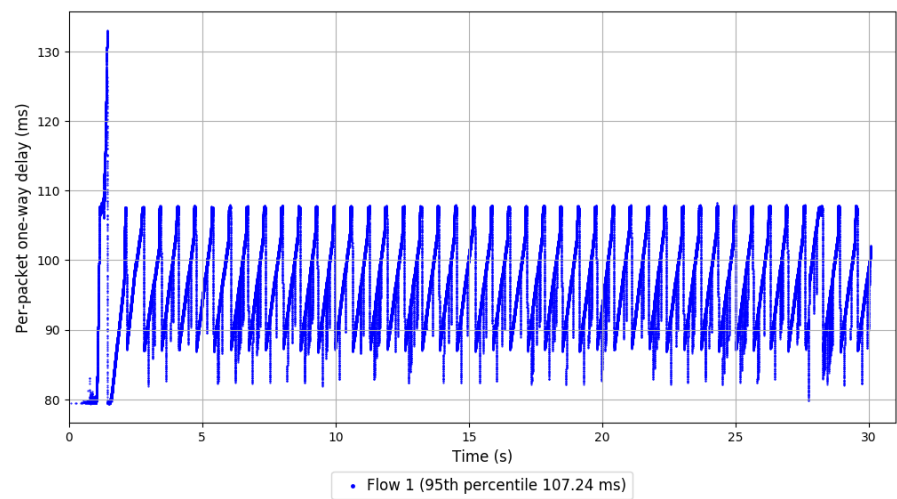
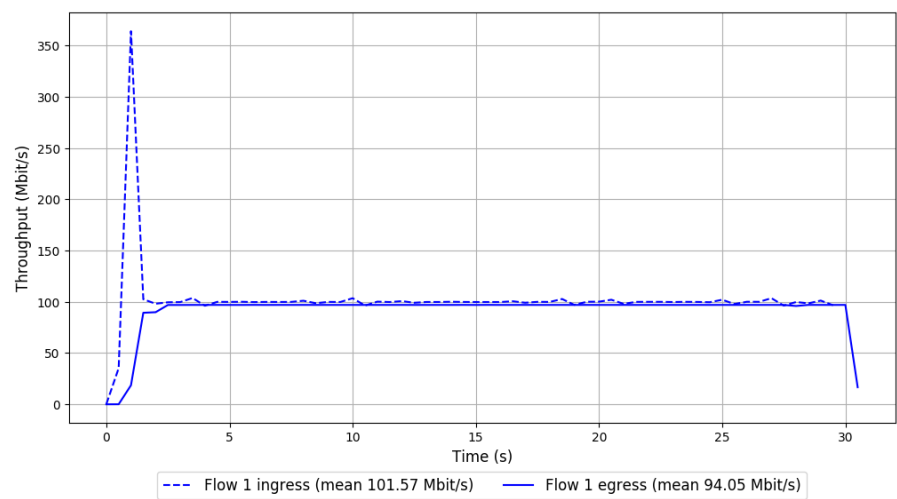


Run 4: Statistics of FillP

Start at: 2018-09-25 06:50:33
End at: 2018-09-25 06:51:03
Local clock offset: -2.323 ms
Remote clock offset: -3.155 ms

Below is generated by plot.py at 2018-09-25 08:05:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.05 Mbit/s
95th percentile per-packet one-way delay: 107.241 ms
Loss rate: 7.34%
-- Flow 1:
Average throughput: 94.05 Mbit/s
95th percentile per-packet one-way delay: 107.241 ms
Loss rate: 7.34%

Run 4: Report of FillP — Data Link

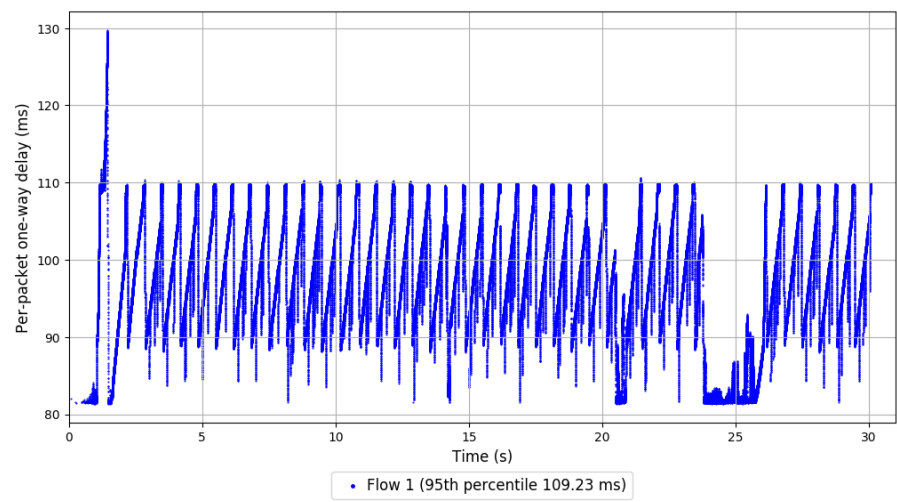
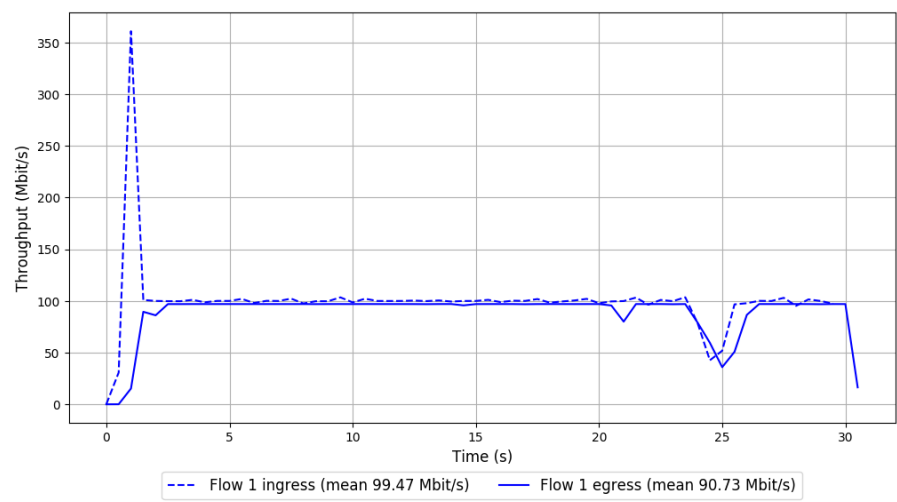


Run 5: Statistics of FillP

Start at: 2018-09-25 07:29:47
End at: 2018-09-25 07:30:17
Local clock offset: -1.018 ms
Remote clock offset: -2.804 ms

Below is generated by plot.py at 2018-09-25 08:05:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 90.73 Mbit/s
95th percentile per-packet one-way delay: 109.228 ms
Loss rate: 8.70%
-- Flow 1:
Average throughput: 90.73 Mbit/s
95th percentile per-packet one-way delay: 109.228 ms
Loss rate: 8.70%

Run 5: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2018-09-25 04:57:47

End at: 2018-09-25 04:58:17

Local clock offset: 1.323 ms

Remote clock offset: -3.32 ms

Below is generated by plot.py at 2018-09-25 08:05:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 92.09 Mbit/s

95th percentile per-packet one-way delay: 107.320 ms

Loss rate: 2.23%

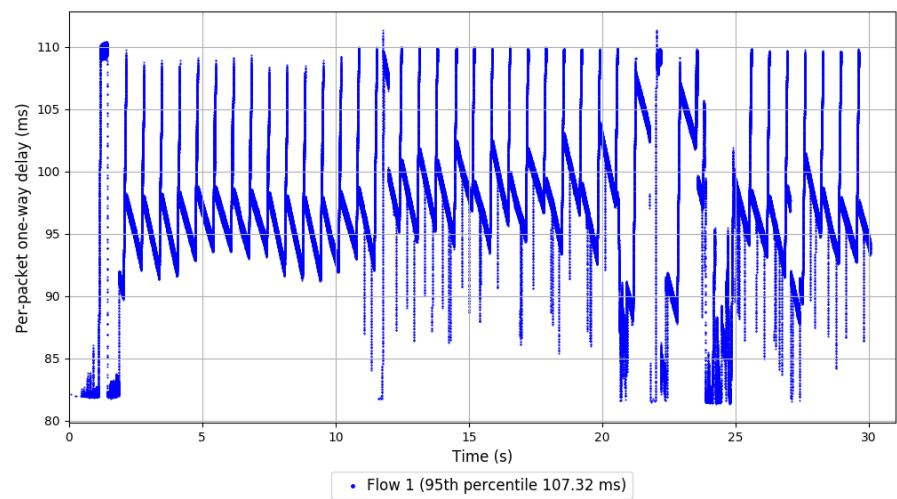
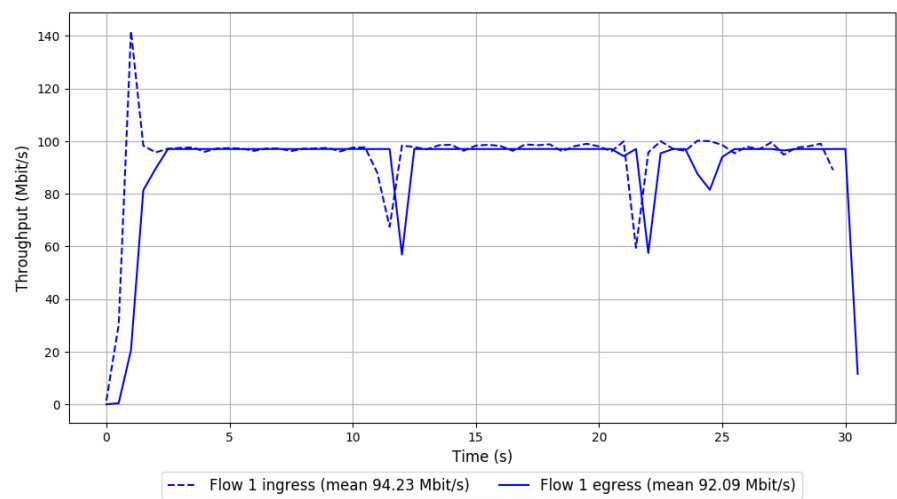
-- Flow 1:

Average throughput: 92.09 Mbit/s

95th percentile per-packet one-way delay: 107.320 ms

Loss rate: 2.23%

Run 1: Report of FillP-Sheep — Data Link

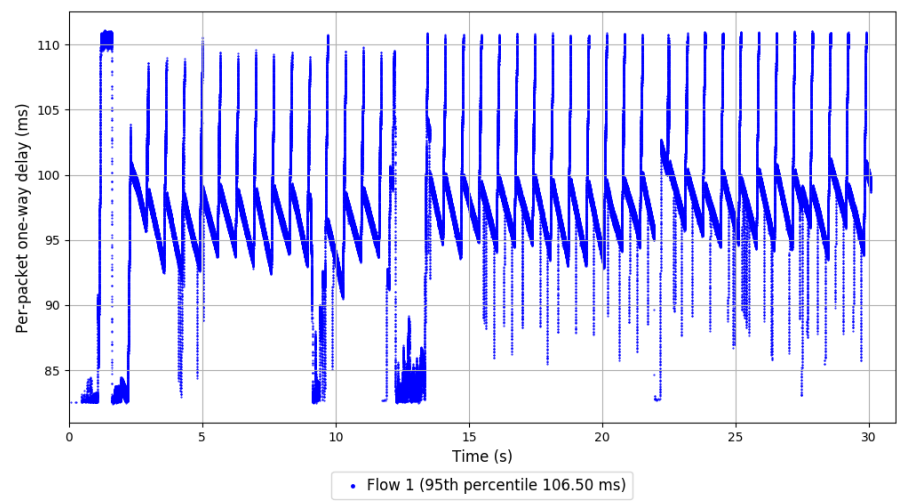
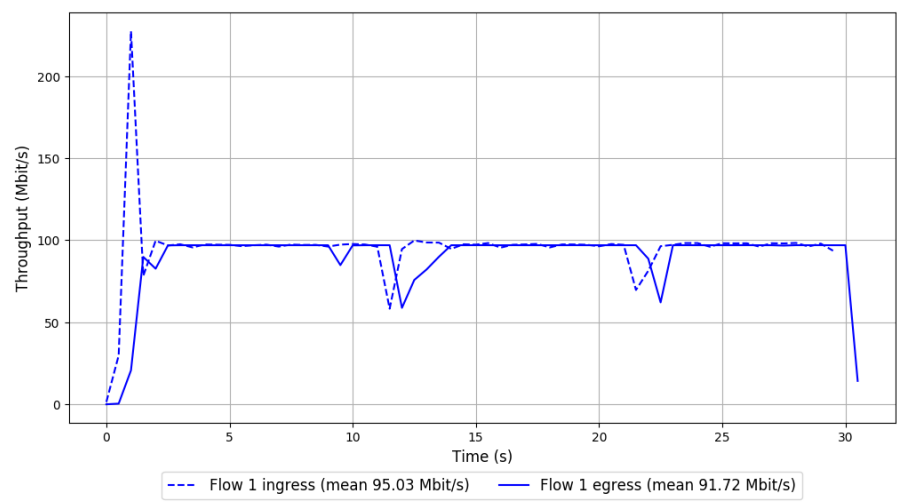


Run 2: Statistics of FillP-Sheep

Start at: 2018-09-25 05:37:58
End at: 2018-09-25 05:38:28
Local clock offset: 8.056 ms
Remote clock offset: -3.051 ms

Below is generated by plot.py at 2018-09-25 08:06:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 91.72 Mbit/s
95th percentile per-packet one-way delay: 106.495 ms
Loss rate: 3.43%
-- Flow 1:
Average throughput: 91.72 Mbit/s
95th percentile per-packet one-way delay: 106.495 ms
Loss rate: 3.43%

Run 2: Report of FillP-Sheep — Data Link

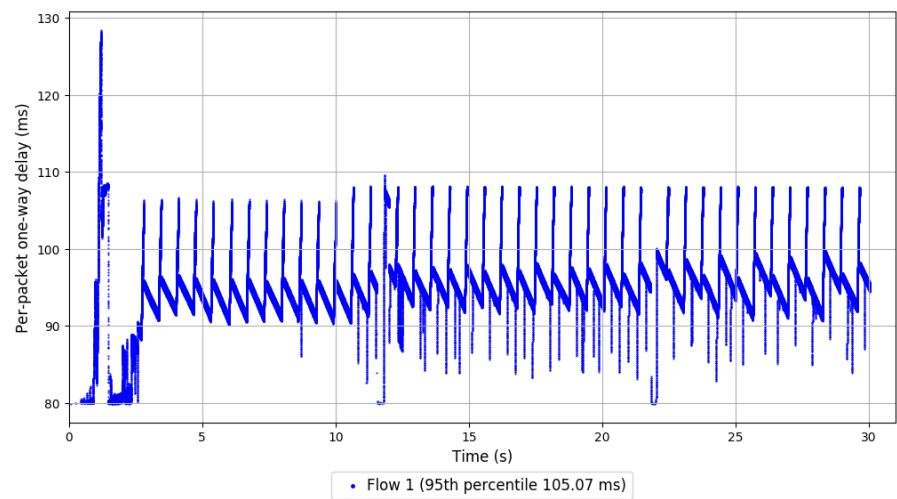
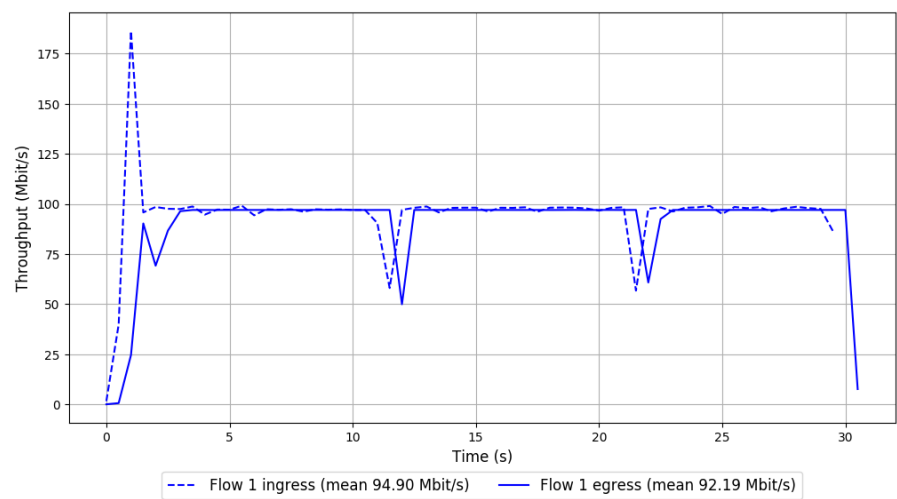


Run 3: Statistics of FillP-Sheep

Start at: 2018-09-25 06:18:09
End at: 2018-09-25 06:18:39
Local clock offset: -2.712 ms
Remote clock offset: -2.717 ms

Below is generated by plot.py at 2018-09-25 08:06:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 92.19 Mbit/s
95th percentile per-packet one-way delay: 105.072 ms
Loss rate: 2.80%
-- Flow 1:
Average throughput: 92.19 Mbit/s
95th percentile per-packet one-way delay: 105.072 ms
Loss rate: 2.80%

Run 3: Report of FillP-Sheep — Data Link

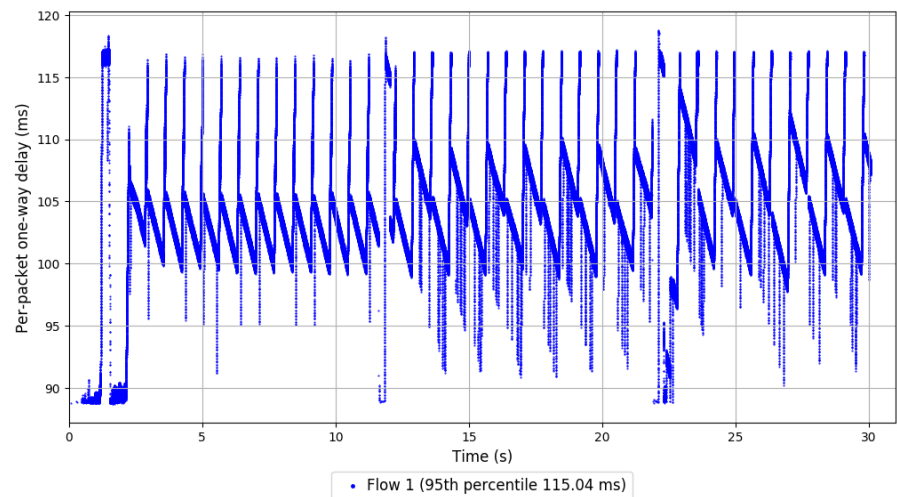
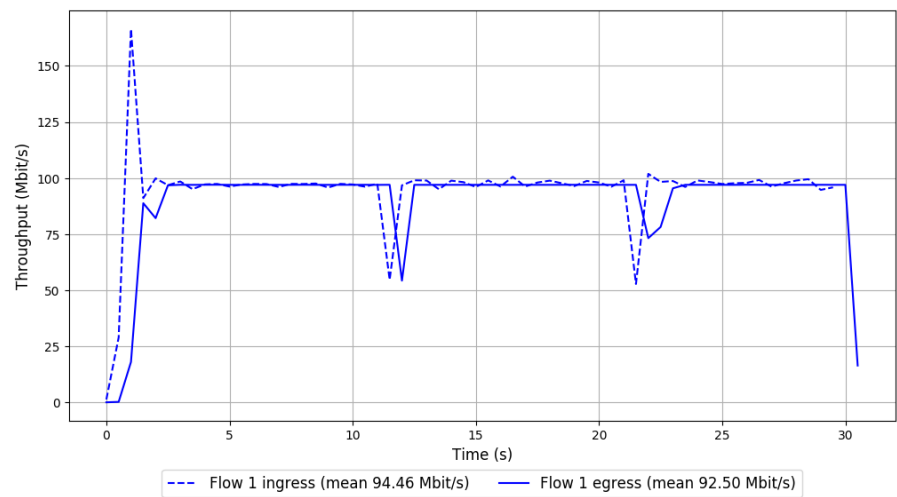


Run 4: Statistics of FillP-Sheep

Start at: 2018-09-25 06:57:29
End at: 2018-09-25 06:58:00
Local clock offset: -2.245 ms
Remote clock offset: -2.035 ms

Below is generated by plot.py at 2018-09-25 08:07:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 92.50 Mbit/s
95th percentile per-packet one-way delay: 115.043 ms
Loss rate: 2.03%
-- Flow 1:
Average throughput: 92.50 Mbit/s
95th percentile per-packet one-way delay: 115.043 ms
Loss rate: 2.03%

Run 4: Report of FillP-Sheep — Data Link



Run 5: Statistics of FillP-Sheep

Start at: 2018-09-25 07:38:07

End at: 2018-09-25 07:38:37

Local clock offset: -1.507 ms

Remote clock offset: 2.228 ms

Below is generated by plot.py at 2018-09-25 08:07:01

Datalink statistics

-- Total of 1 flow:

Average throughput: 89.50 Mbit/s

95th percentile per-packet one-way delay: 120.322 ms

Loss rate: 6.24%

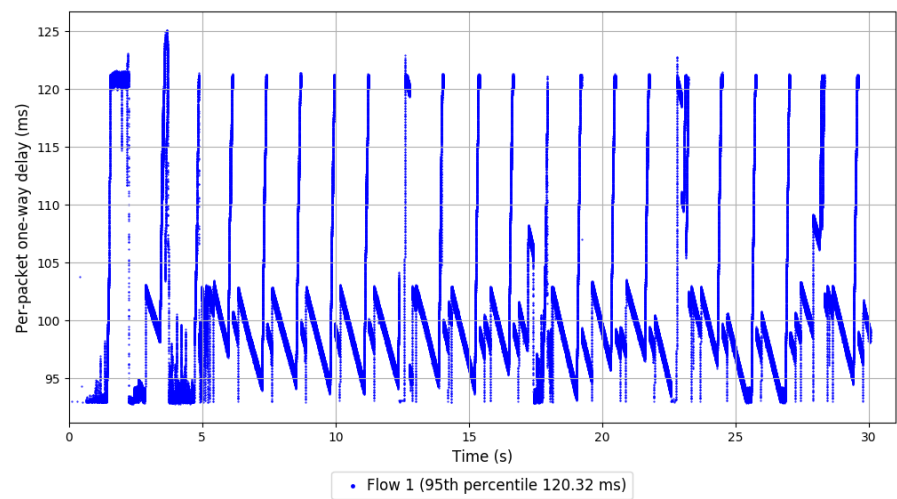
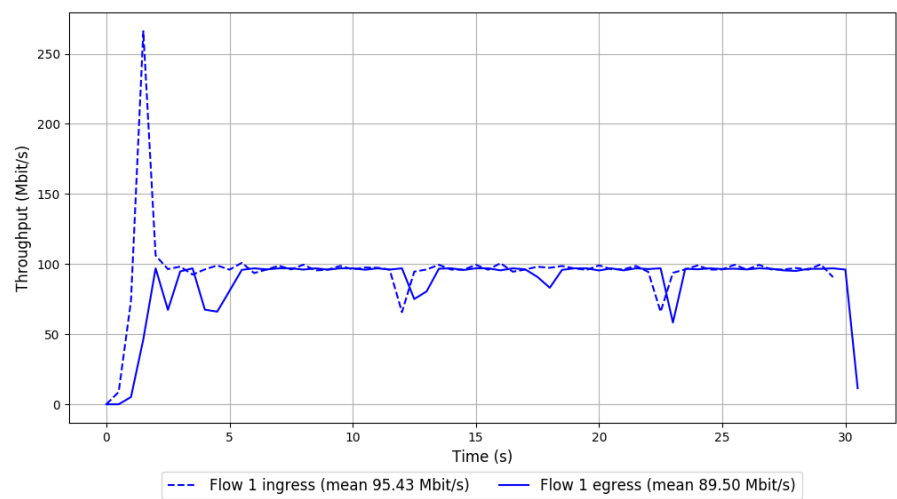
-- Flow 1:

Average throughput: 89.50 Mbit/s

95th percentile per-packet one-way delay: 120.322 ms

Loss rate: 6.24%

Run 5: Report of FillP-Sheep — Data Link



Run 1: Statistics of Indigo

Start at: 2018-09-25 04:43:45

End at: 2018-09-25 04:44:15

Local clock offset: 0.49 ms

Remote clock offset: -2.417 ms

Below is generated by plot.py at 2018-09-25 08:07:01

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.52 Mbit/s

95th percentile per-packet one-way delay: 85.679 ms

Loss rate: 1.46%

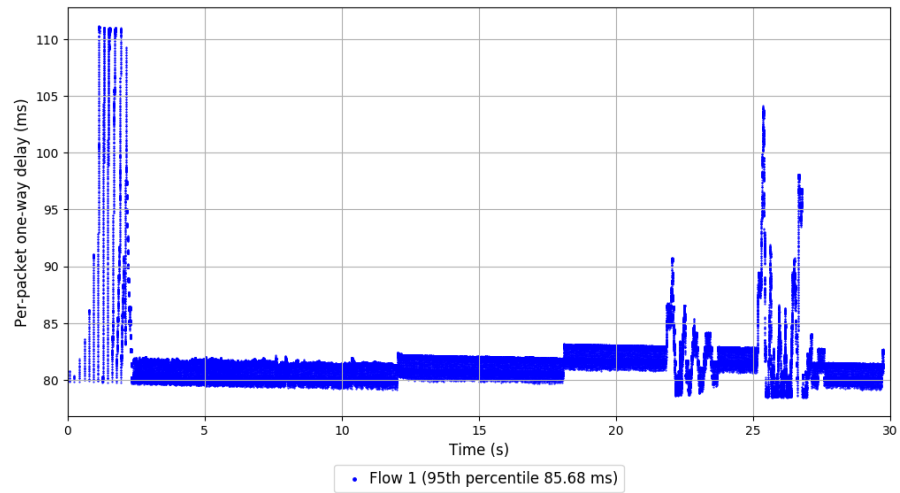
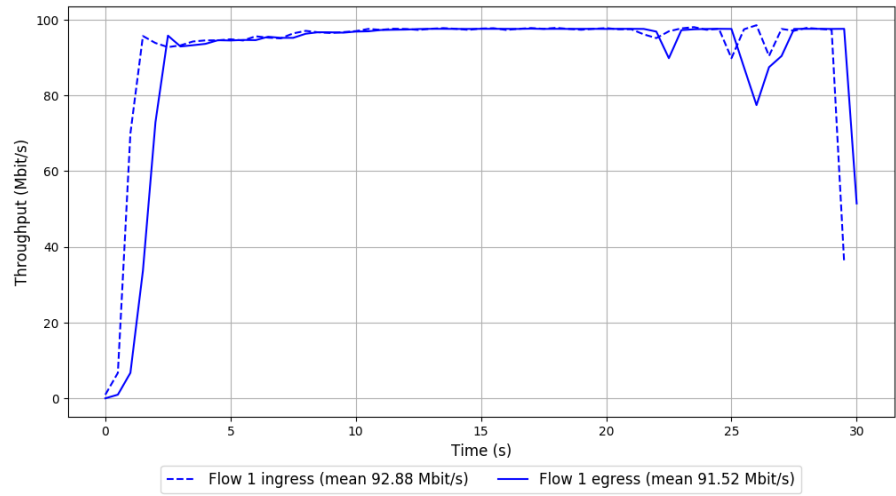
-- Flow 1:

Average throughput: 91.52 Mbit/s

95th percentile per-packet one-way delay: 85.679 ms

Loss rate: 1.46%

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2018-09-25 05:23:34

End at: 2018-09-25 05:24:04

Local clock offset: 2.556 ms

Remote clock offset: 1.901 ms

Below is generated by plot.py at 2018-09-25 08:07:01

Datalink statistics

-- Total of 1 flow:

Average throughput: 92.20 Mbit/s

95th percentile per-packet one-way delay: 92.127 ms

Loss rate: 1.15%

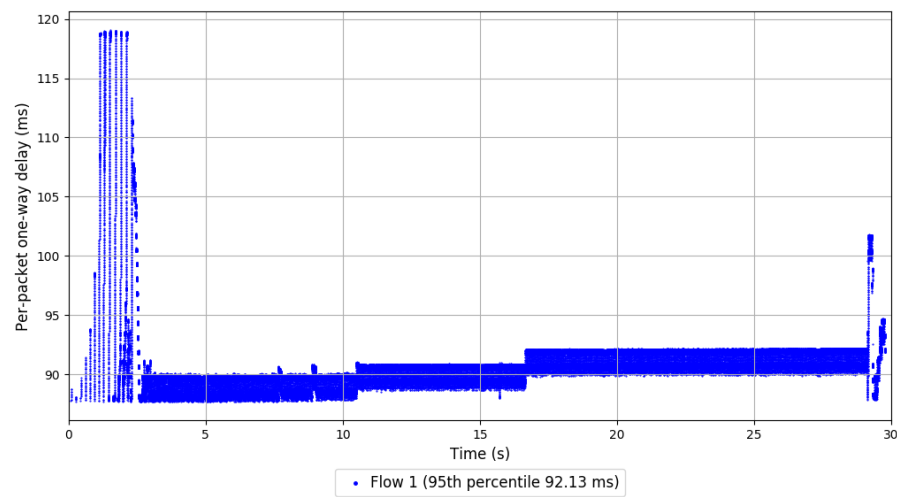
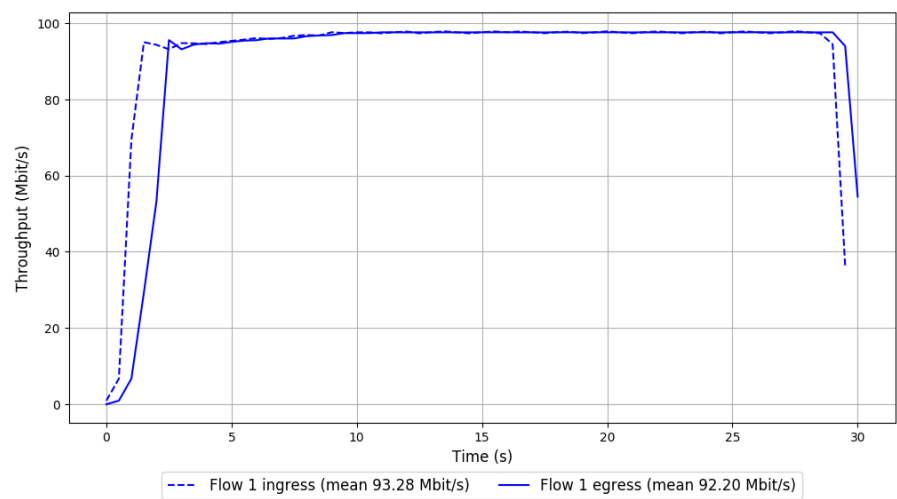
-- Flow 1:

Average throughput: 92.20 Mbit/s

95th percentile per-packet one-way delay: 92.127 ms

Loss rate: 1.15%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2018-09-25 06:04:52

End at: 2018-09-25 06:05:22

Local clock offset: 3.436 ms

Remote clock offset: 2.315 ms

Below is generated by plot.py at 2018-09-25 08:07:01

Datalink statistics

-- Total of 1 flow:

Average throughput: 90.47 Mbit/s

95th percentile per-packet one-way delay: 97.620 ms

Loss rate: 2.01%

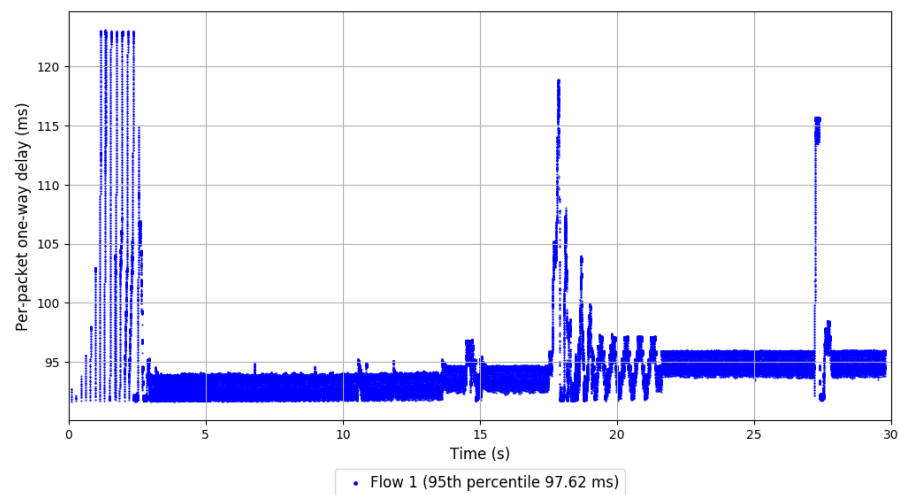
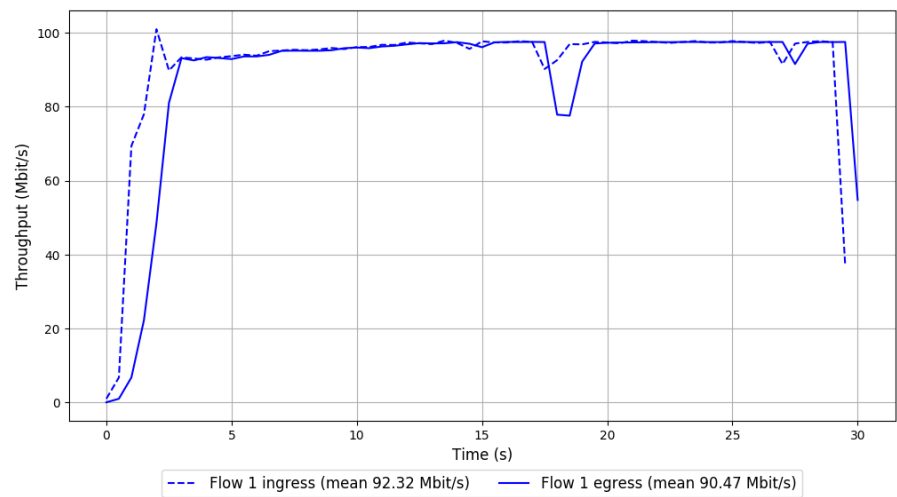
-- Flow 1:

Average throughput: 90.47 Mbit/s

95th percentile per-packet one-way delay: 97.620 ms

Loss rate: 2.01%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2018-09-25 06:44:19

End at: 2018-09-25 06:44:49

Local clock offset: -3.495 ms

Remote clock offset: 3.386 ms

Below is generated by plot.py at 2018-09-25 08:07:01

Datalink statistics

-- Total of 1 flow:

Average throughput: 90.35 Mbit/s

95th percentile per-packet one-way delay: 102.941 ms

Loss rate: 1.30%

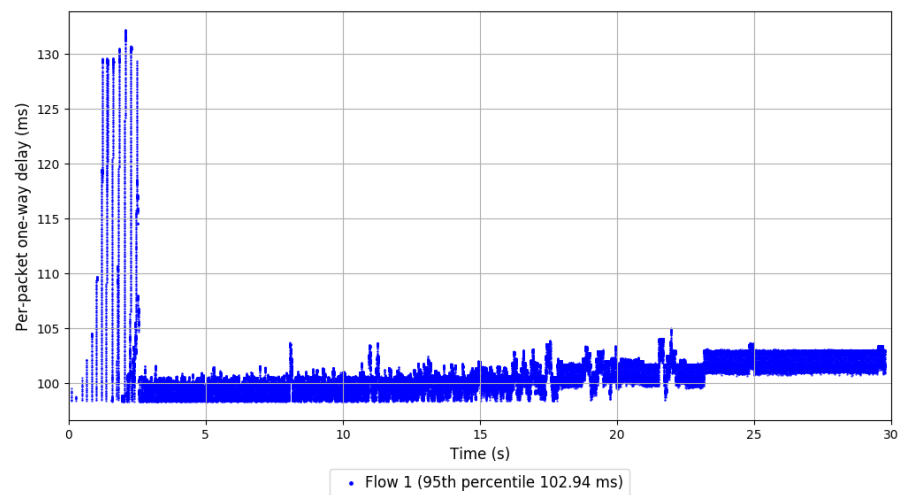
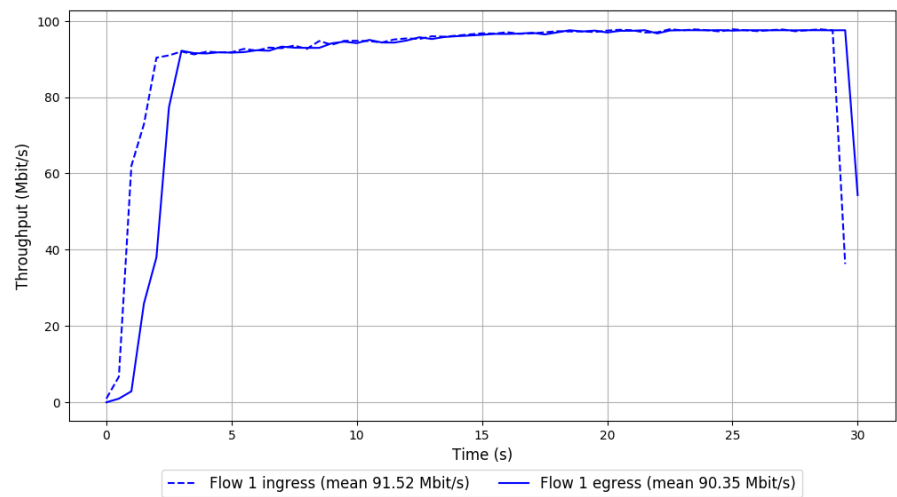
-- Flow 1:

Average throughput: 90.35 Mbit/s

95th percentile per-packet one-way delay: 102.941 ms

Loss rate: 1.30%

Run 4: Report of Indigo — Data Link

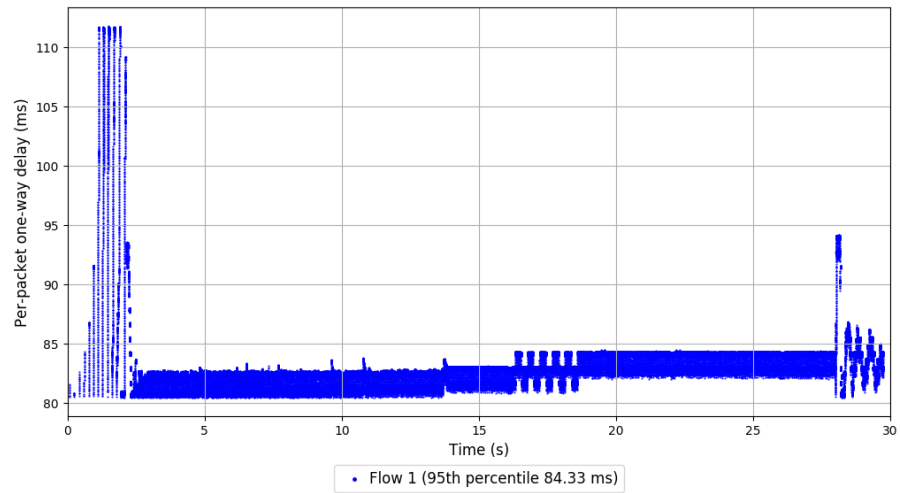
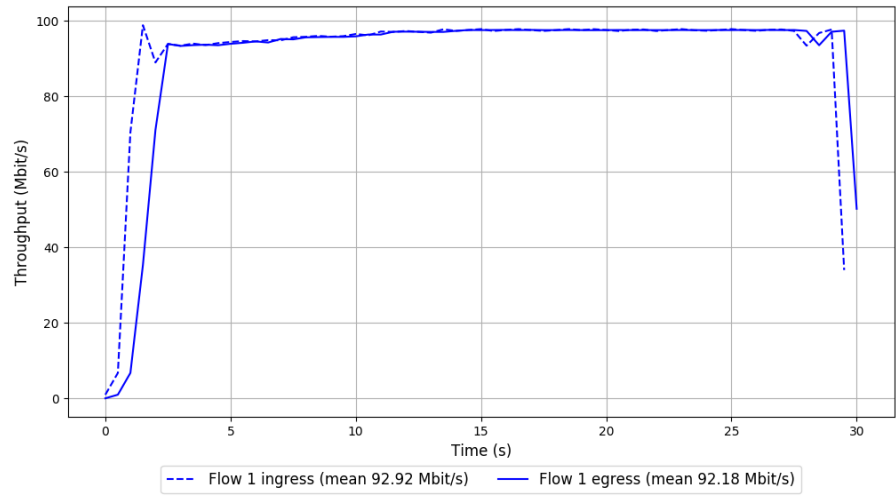


Run 5: Statistics of Indigo

Start at: 2018-09-25 07:23:18
End at: 2018-09-25 07:23:48
Local clock offset: -1.974 ms
Remote clock offset: -3.002 ms

Below is generated by plot.py at 2018-09-25 08:07:10
Datalink statistics
-- Total of 1 flow:
Average throughput: 92.18 Mbit/s
95th percentile per-packet one-way delay: 84.325 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 92.18 Mbit/s
95th percentile per-packet one-way delay: 84.325 ms
Loss rate: 0.79%

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-96d2da3

Start at: 2018-09-25 04:41:26

End at: 2018-09-25 04:41:57

Local clock offset: -5.708 ms

Remote clock offset: 1.571 ms

Below is generated by plot.py at 2018-09-25 08:07:26

Datalink statistics

-- Total of 1 flow:

Average throughput: 62.21 Mbit/s

95th percentile per-packet one-way delay: 133.577 ms

Loss rate: 56.47%

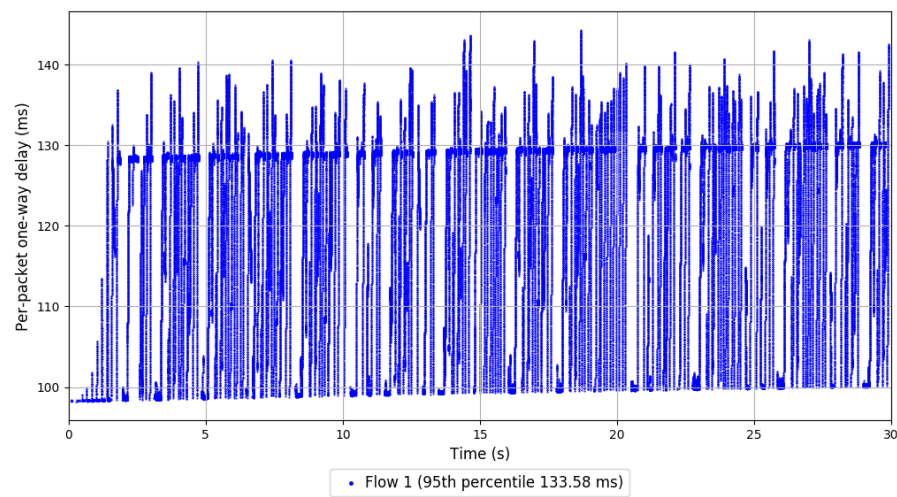
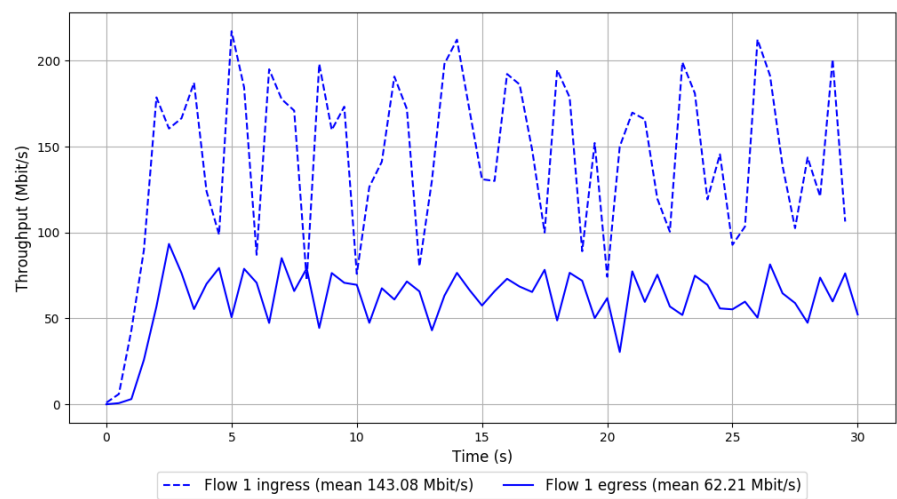
-- Flow 1:

Average throughput: 62.21 Mbit/s

95th percentile per-packet one-way delay: 133.577 ms

Loss rate: 56.47%

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

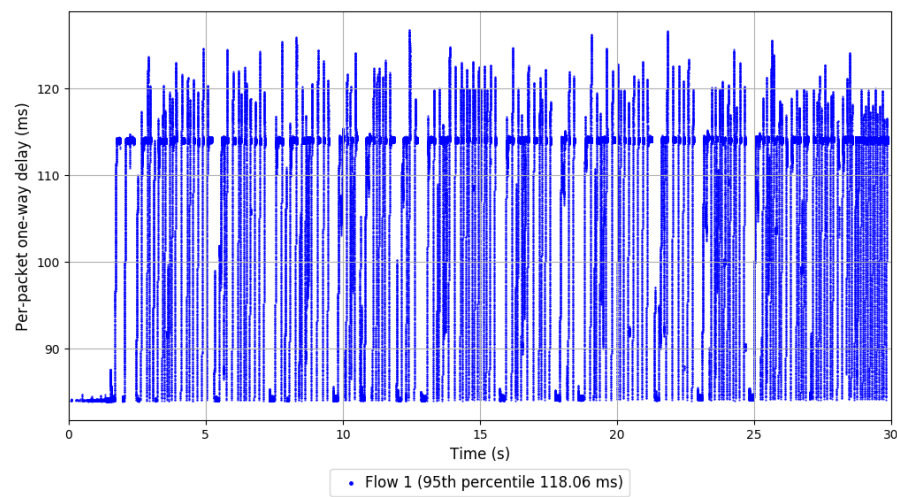
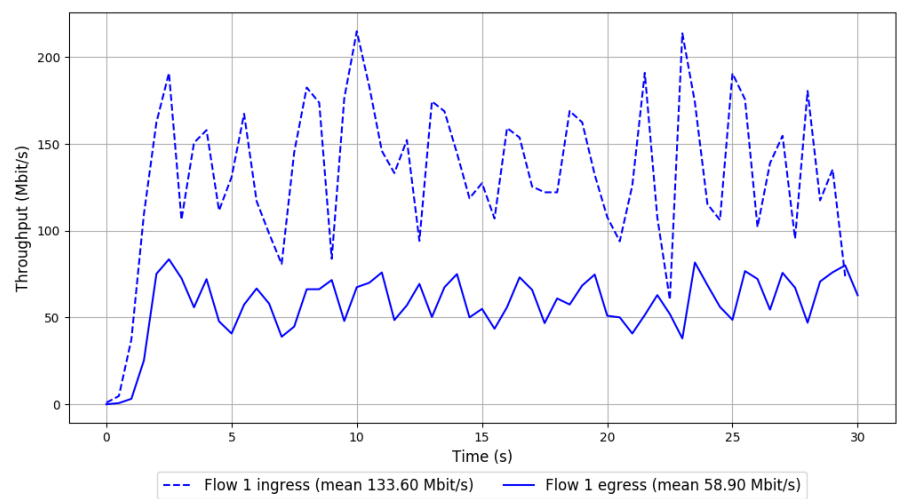


Run 2: Statistics of Indigo-96d2da3

Start at: 2018-09-25 05:21:21
End at: 2018-09-25 05:21:51
Local clock offset: 1.8 ms
Remote clock offset: -3.182 ms

Below is generated by plot.py at 2018-09-25 08:07:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 58.90 Mbit/s
95th percentile per-packet one-way delay: 118.058 ms
Loss rate: 55.87%
-- Flow 1:
Average throughput: 58.90 Mbit/s
95th percentile per-packet one-way delay: 118.058 ms
Loss rate: 55.87%

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



Run 3: Statistics of Indigo-96d2da3

Start at: 2018-09-25 06:02:47

End at: 2018-09-25 06:03:17

Local clock offset: 3.236 ms

Remote clock offset: 3.378 ms

Below is generated by plot.py at 2018-09-25 08:07:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 54.77 Mbit/s

95th percentile per-packet one-way delay: 121.747 ms

Loss rate: 54.68%

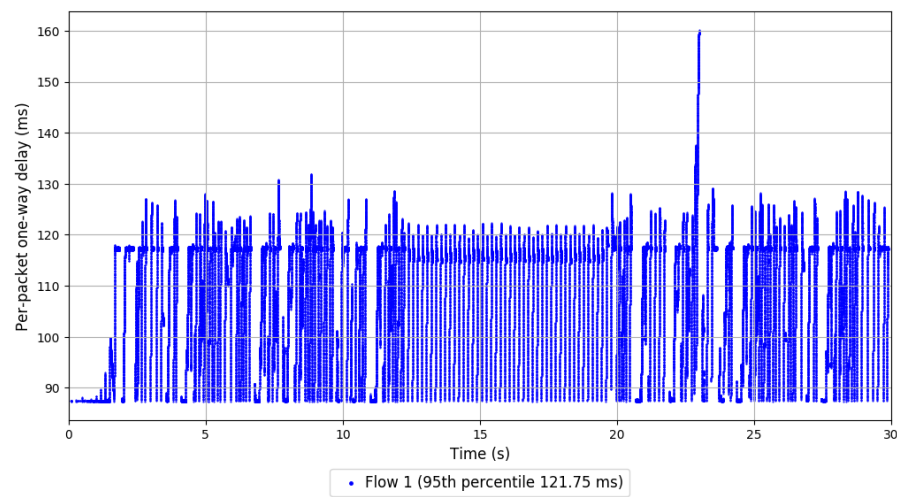
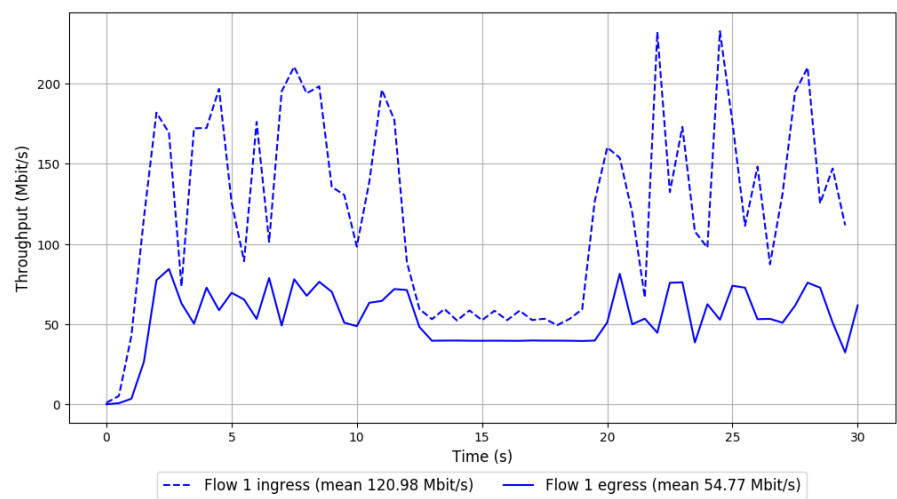
-- Flow 1:

Average throughput: 54.77 Mbit/s

95th percentile per-packet one-way delay: 121.747 ms

Loss rate: 54.68%

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



Run 4: Statistics of Indigo-96d2da3

Start at: 2018-09-25 06:41:59

End at: 2018-09-25 06:42:29

Local clock offset: -3.938 ms

Remote clock offset: 3.312 ms

Below is generated by plot.py at 2018-09-25 08:07:48

Datalink statistics

-- Total of 1 flow:

Average throughput: 62.54 Mbit/s

95th percentile per-packet one-way delay: 123.973 ms

Loss rate: 53.22%

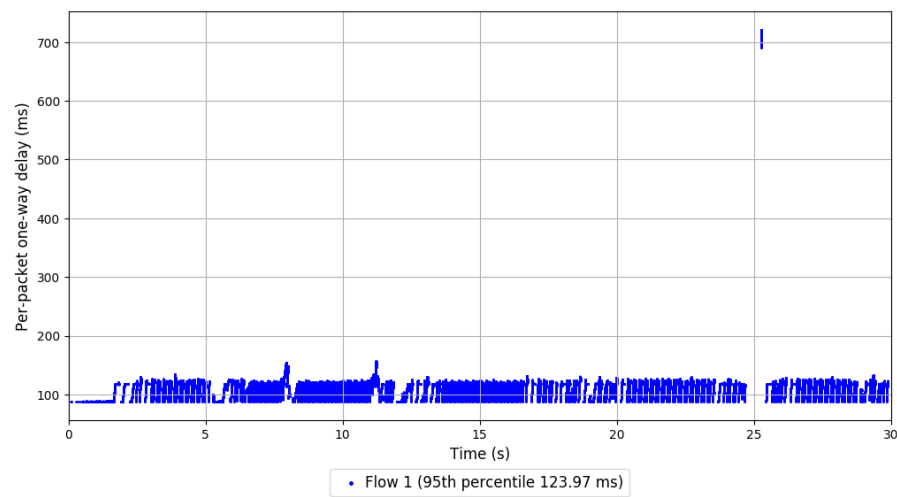
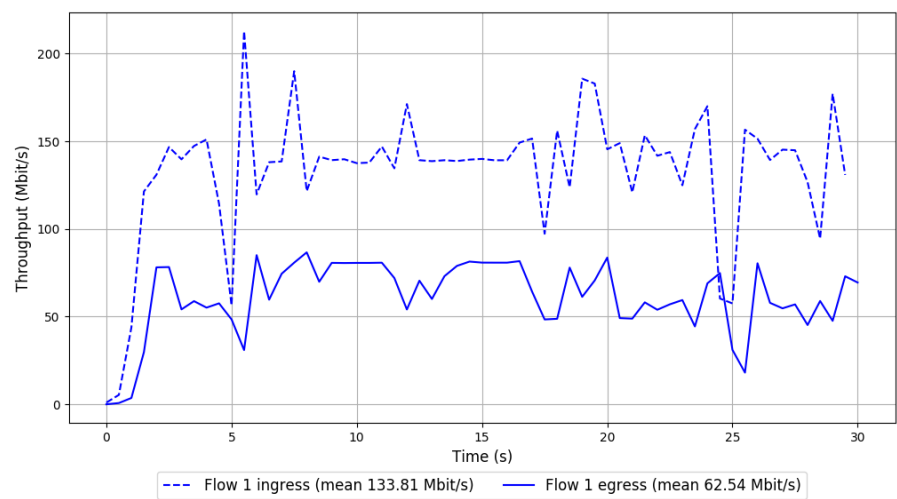
-- Flow 1:

Average throughput: 62.54 Mbit/s

95th percentile per-packet one-way delay: 123.973 ms

Loss rate: 53.22%

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



Run 5: Statistics of Indigo-96d2da3

Start at: 2018-09-25 07:21:06

End at: 2018-09-25 07:21:36

Local clock offset: -1.178 ms

Remote clock offset: 2.222 ms

Below is generated by plot.py at 2018-09-25 08:07:48

Datalink statistics

-- Total of 1 flow:

Average throughput: 41.69 Mbit/s

95th percentile per-packet one-way delay: 130.011 ms

Loss rate: 39.82%

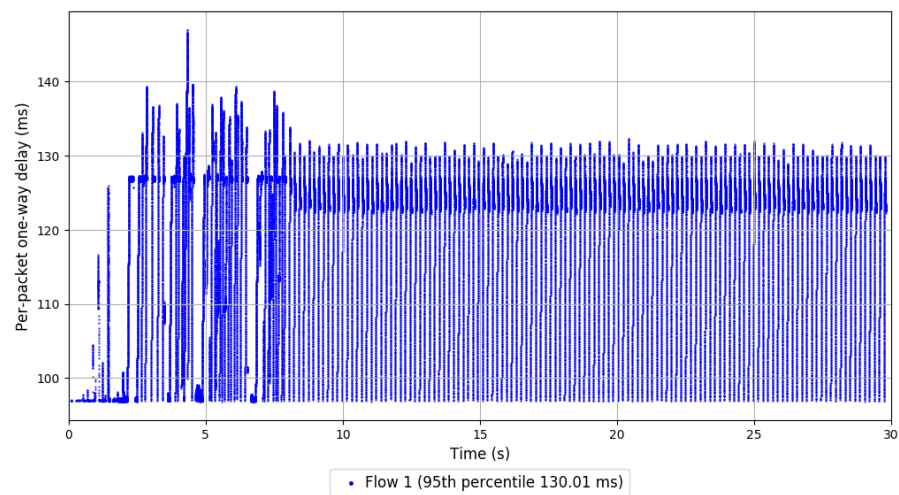
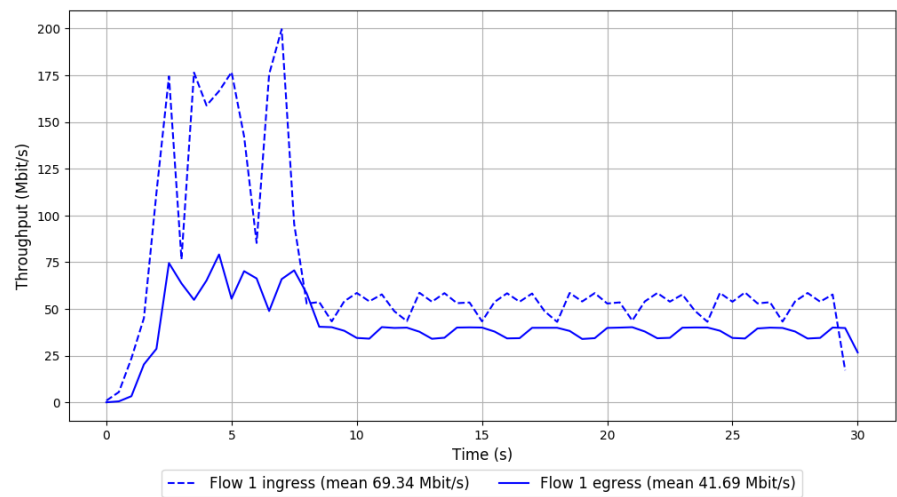
-- Flow 1:

Average throughput: 41.69 Mbit/s

95th percentile per-packet one-way delay: 130.011 ms

Loss rate: 39.82%

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

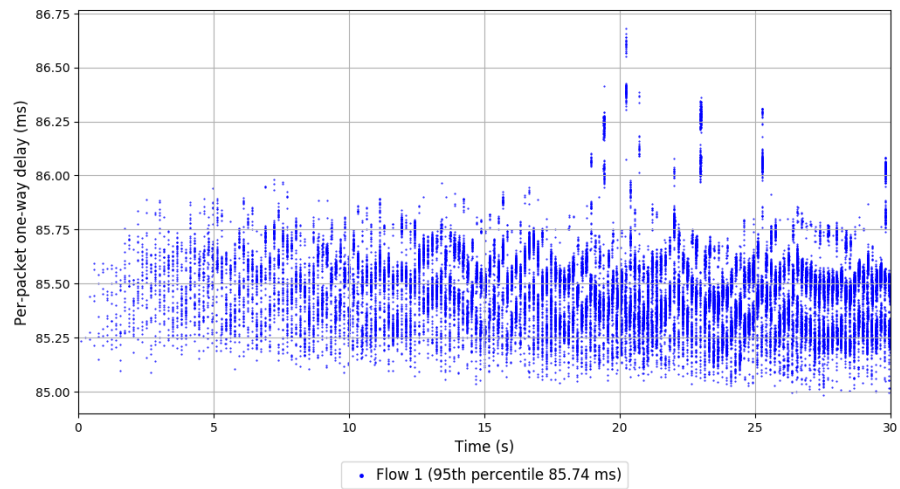
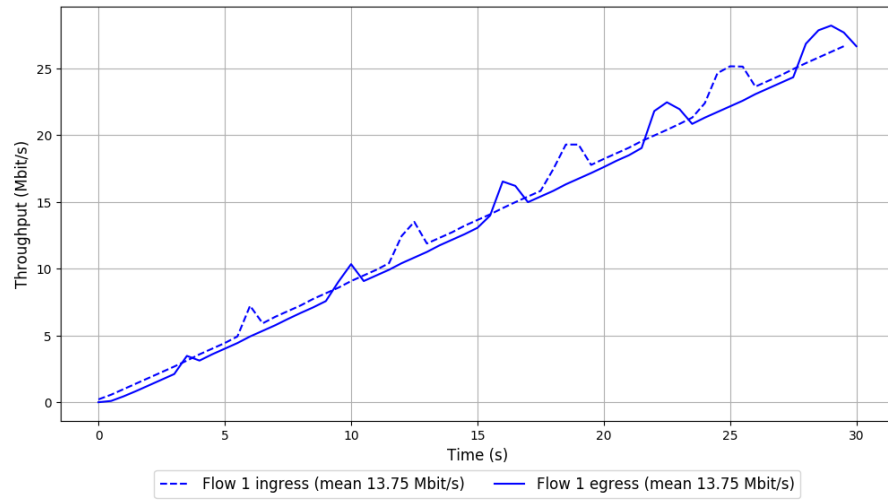


```
Run 1: Statistics of LEDBAT

Start at: 2018-09-25 05:01:28
End at: 2018-09-25 05:01:58
Local clock offset: -2.14 ms
Remote clock offset: 1.798 ms

# Below is generated by plot.py at 2018-09-25 08:07:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 13.75 Mbit/s
95th percentile per-packet one-way delay: 85.741 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 13.75 Mbit/s
95th percentile per-packet one-way delay: 85.741 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link

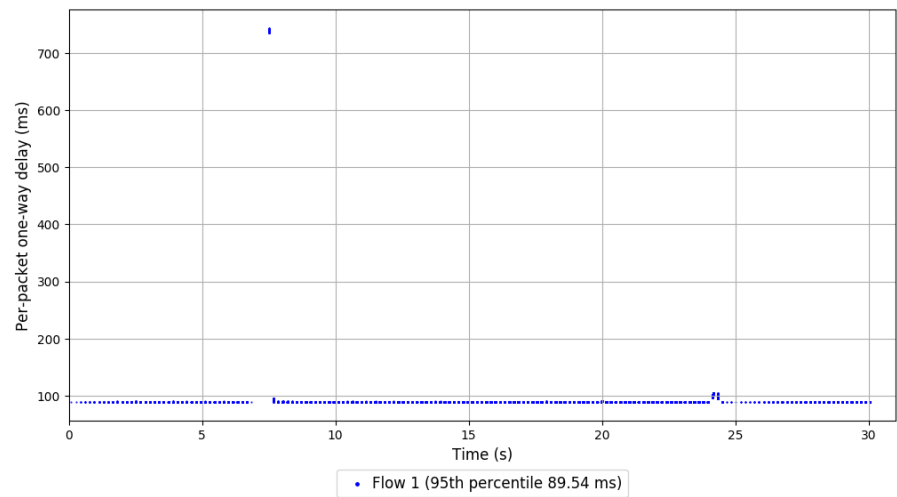
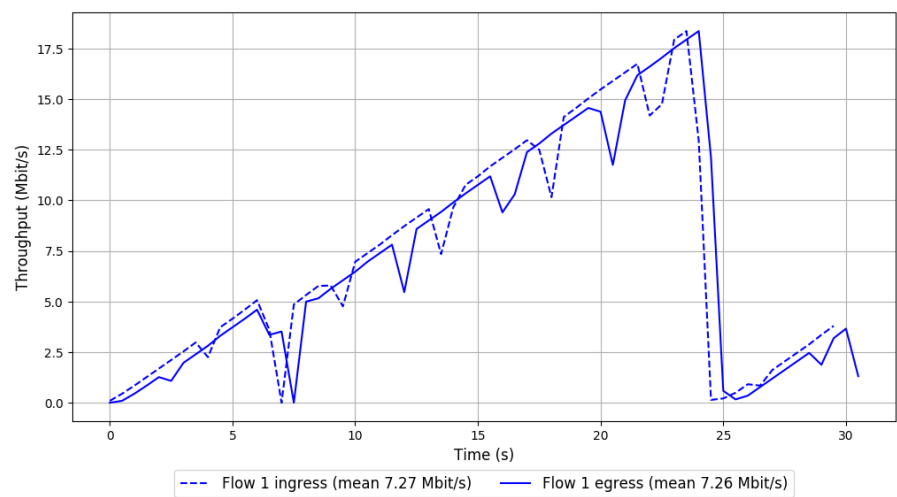


Run 2: Statistics of LEDBAT

Start at: 2018-09-25 05:41:46
End at: 2018-09-25 05:42:16
Local clock offset: 7.252 ms
Remote clock offset: -2.001 ms

Below is generated by plot.py at 2018-09-25 08:07:48
Datalink statistics
-- Total of 1 flow:
Average throughput: 7.26 Mbit/s
95th percentile per-packet one-way delay: 89.541 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 7.26 Mbit/s
95th percentile per-packet one-way delay: 89.541 ms
Loss rate: 0.09%

Run 2: Report of LEDBAT — Data Link

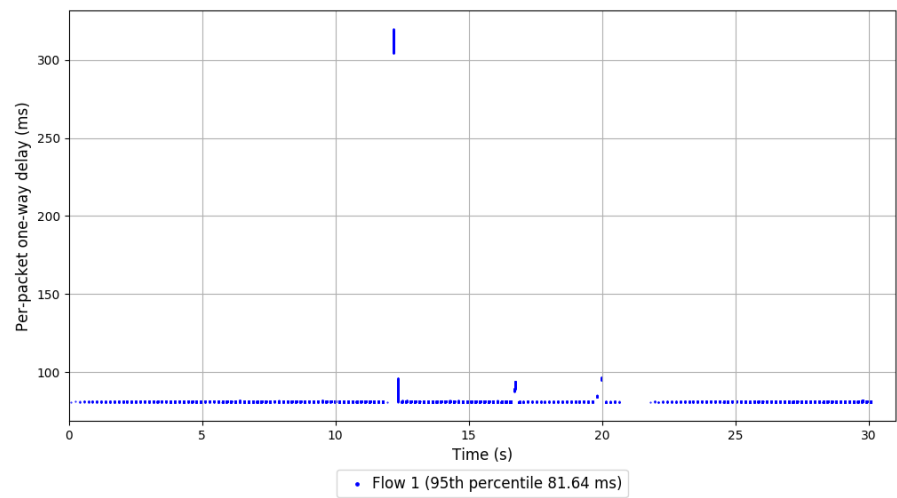
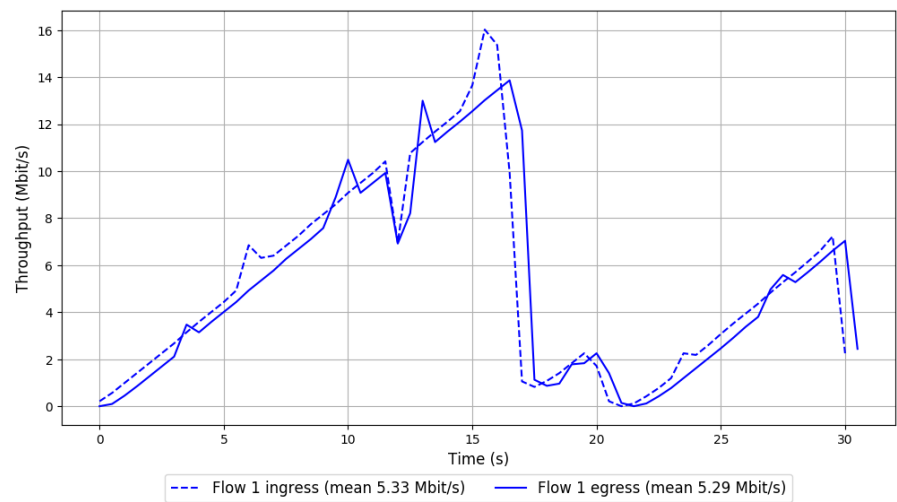


Run 3: Statistics of LEDBAT

Start at: 2018-09-25 06:21:51
End at: 2018-09-25 06:22:21
Local clock offset: -3.279 ms
Remote clock offset: -1.719 ms

Below is generated by plot.py at 2018-09-25 08:07:48
Datalink statistics
-- Total of 1 flow:
Average throughput: 5.29 Mbit/s
95th percentile per-packet one-way delay: 81.643 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 5.29 Mbit/s
95th percentile per-packet one-way delay: 81.643 ms
Loss rate: 0.92%

Run 3: Report of LEDBAT — Data Link

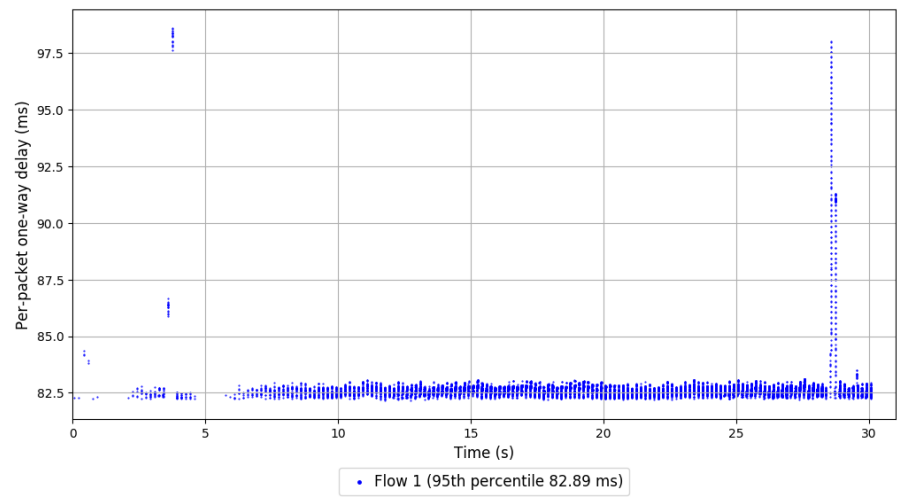
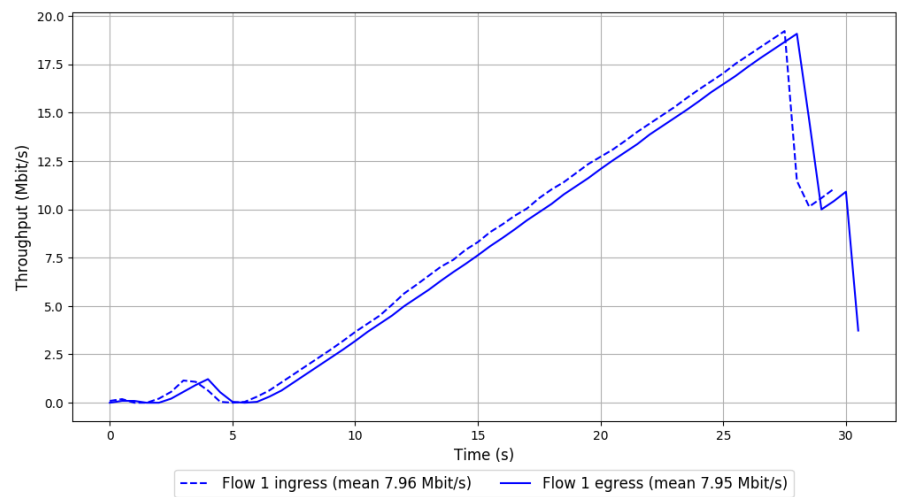


Run 4: Statistics of LEDBAT

Start at: 2018-09-25 07:01:07
End at: 2018-09-25 07:01:37
Local clock offset: -1.174 ms
Remote clock offset: -2.102 ms

Below is generated by plot.py at 2018-09-25 08:07:48
Datalink statistics
-- Total of 1 flow:
Average throughput: 7.95 Mbit/s
95th percentile per-packet one-way delay: 82.887 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 7.95 Mbit/s
95th percentile per-packet one-way delay: 82.887 ms
Loss rate: 0.06%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-09-25 07:42:07

End at: 2018-09-25 07:42:37

Local clock offset: -1.087 ms

Remote clock offset: 2.475 ms

Below is generated by plot.py at 2018-09-25 08:07:48

Datalink statistics

-- Total of 1 flow:

Average throughput: 10.52 Mbit/s

95th percentile per-packet one-way delay: 88.125 ms

Loss rate: 0.06%

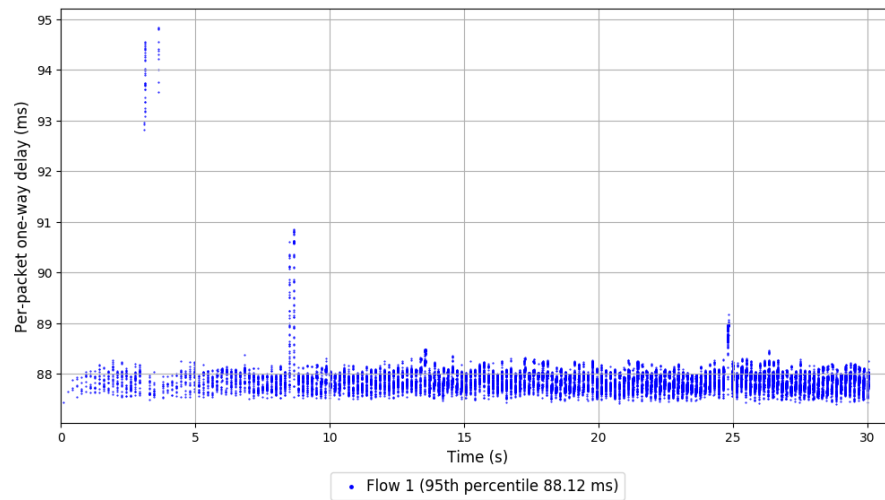
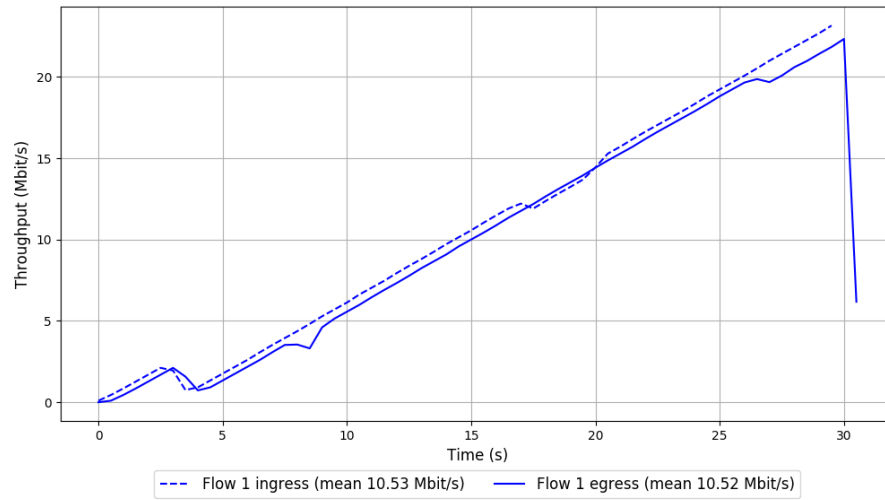
-- Flow 1:

Average throughput: 10.52 Mbit/s

95th percentile per-packet one-way delay: 88.125 ms

Loss rate: 0.06%

Run 5: Report of LEDBAT — Data Link

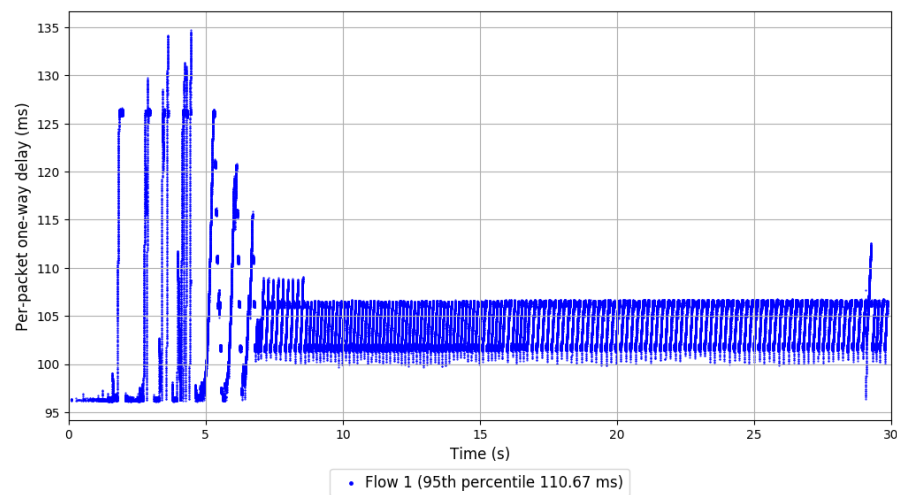
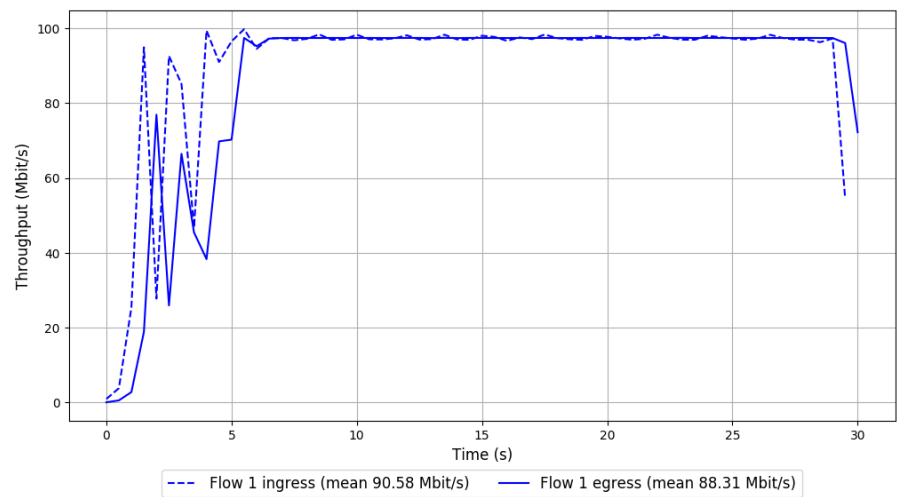



```
Run 1: Statistics of Indigo-Muses

Start at: 2018-09-25 05:08:30
End at: 2018-09-25 05:09:00
Local clock offset: -1.771 ms
Remote clock offset: 0.766 ms

# Below is generated by plot.py at 2018-09-25 08:08:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.31 Mbit/s
95th percentile per-packet one-way delay: 110.667 ms
Loss rate: 2.50%
-- Flow 1:
Average throughput: 88.31 Mbit/s
95th percentile per-packet one-way delay: 110.667 ms
Loss rate: 2.50%
```

Run 1: Report of Indigo-Muses — Data Link

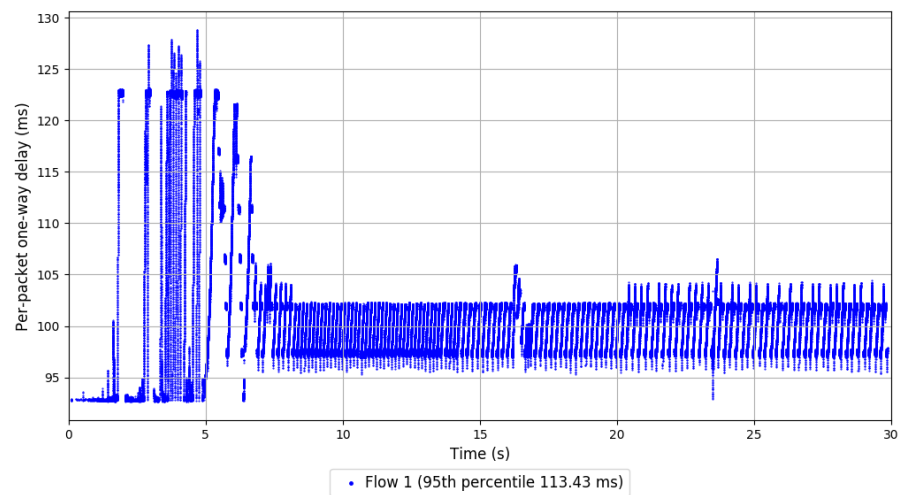
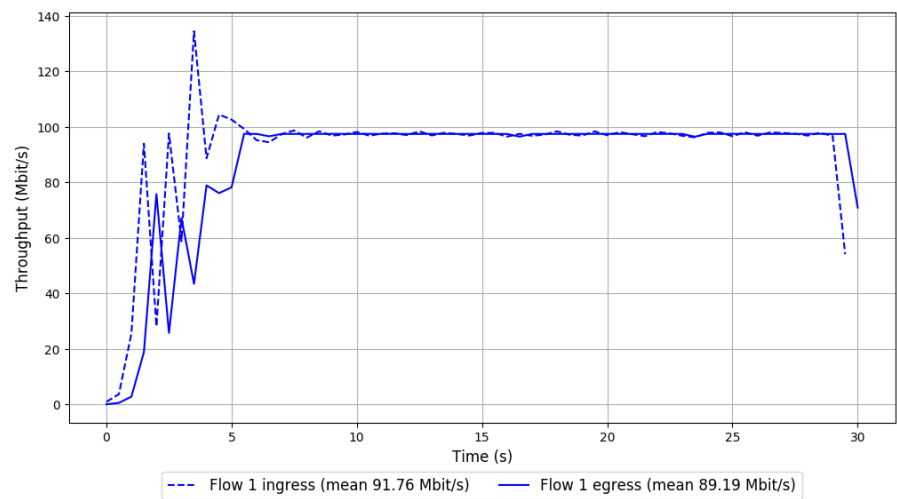


Run 2: Statistics of Indigo-Muses

Start at: 2018-09-25 05:48:54
End at: 2018-09-25 05:49:24
Local clock offset: 3.841 ms
Remote clock offset: -1.802 ms

Below is generated by plot.py at 2018-09-25 08:08:23
Datalink statistics
-- Total of 1 flow:
Average throughput: 89.19 Mbit/s
95th percentile per-packet one-way delay: 113.426 ms
Loss rate: 2.82%
-- Flow 1:
Average throughput: 89.19 Mbit/s
95th percentile per-packet one-way delay: 113.426 ms
Loss rate: 2.82%

Run 2: Report of Indigo-Muses — Data Link



Run 3: Statistics of Indigo-Muses

Start at: 2018-09-25 06:28:44

End at: 2018-09-25 06:29:14

Local clock offset: -5.114 ms

Remote clock offset: 3.377 ms

Below is generated by plot.py at 2018-09-25 08:08:27

Datalink statistics

-- Total of 1 flow:

Average throughput: 87.57 Mbit/s

95th percentile per-packet one-way delay: 112.483 ms

Loss rate: 4.15%

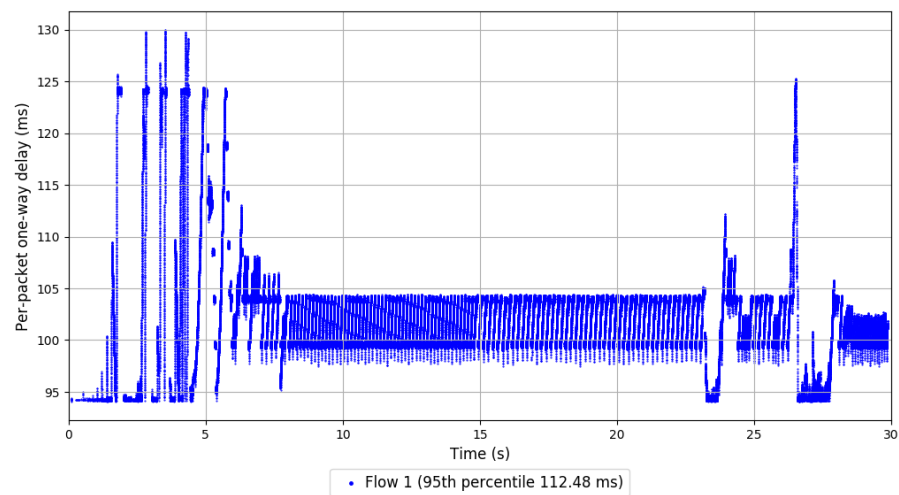
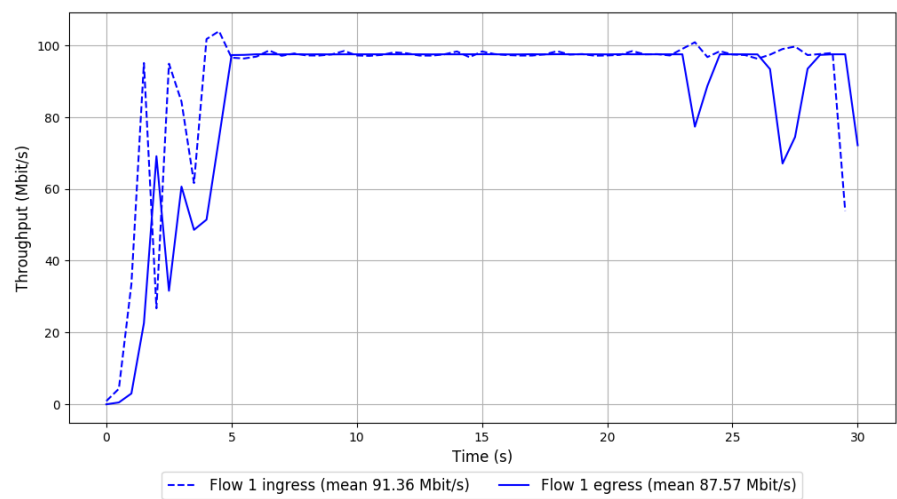
-- Flow 1:

Average throughput: 87.57 Mbit/s

95th percentile per-packet one-way delay: 112.483 ms

Loss rate: 4.15%

Run 3: Report of Indigo-Muses — Data Link



Run 4: Statistics of Indigo-Muses

Start at: 2018-09-25 07:08:17

End at: 2018-09-25 07:08:47

Local clock offset: -1.182 ms

Remote clock offset: 2.197 ms

Below is generated by plot.py at 2018-09-25 08:08:27

Datalink statistics

-- Total of 1 flow:

Average throughput: 77.55 Mbit/s

95th percentile per-packet one-way delay: 99.703 ms

Loss rate: 0.26%

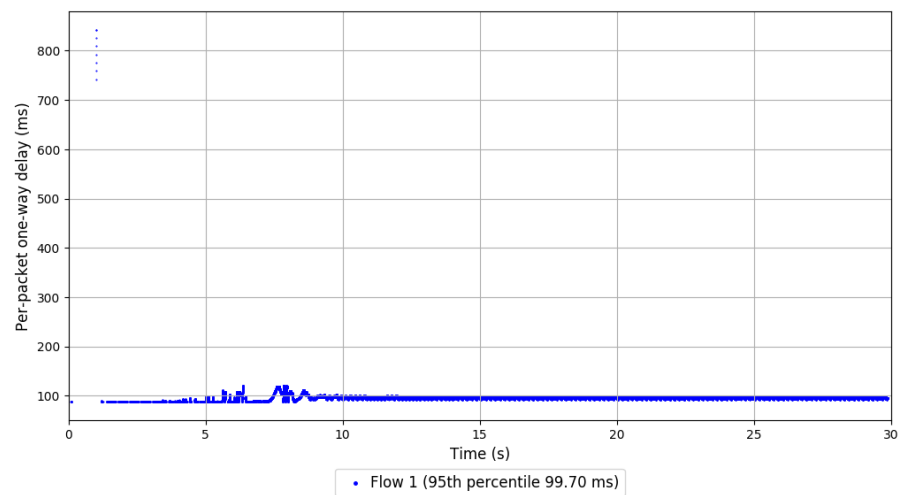
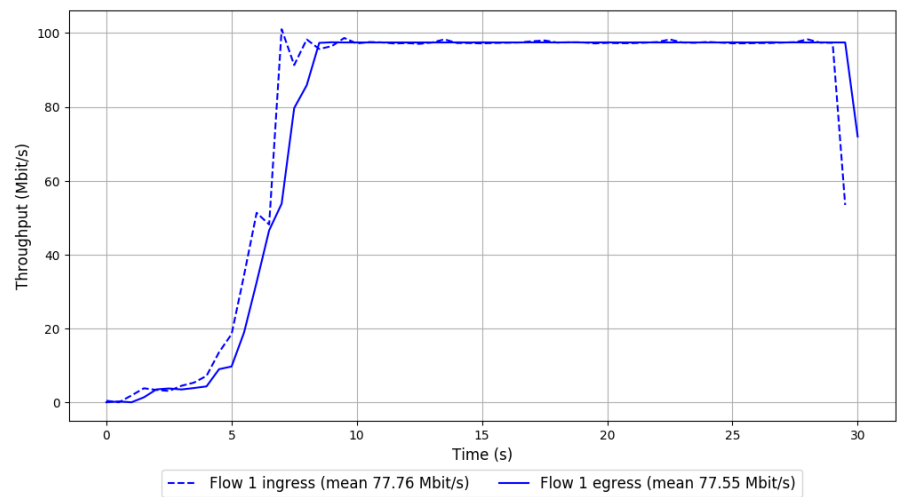
-- Flow 1:

Average throughput: 77.55 Mbit/s

95th percentile per-packet one-way delay: 99.703 ms

Loss rate: 0.26%

Run 4: Report of Indigo-Muses — Data Link



Run 5: Statistics of Indigo-Muses

Start at: 2018-09-25 07:50:02

End at: 2018-09-25 07:50:32

Local clock offset: -1.586 ms

Remote clock offset: 2.318 ms

Below is generated by plot.py at 2018-09-25 08:08:34

Datalink statistics

-- Total of 1 flow:

Average throughput: 87.91 Mbit/s

95th percentile per-packet one-way delay: 105.644 ms

Loss rate: 3.19%

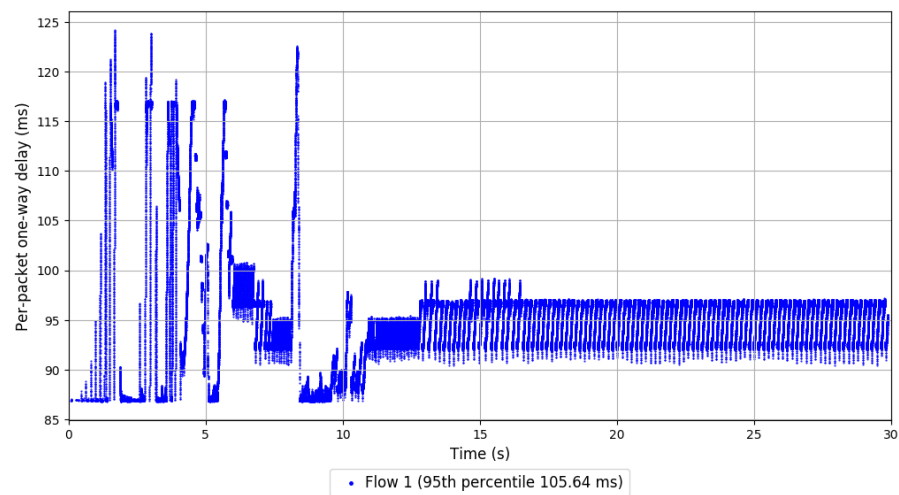
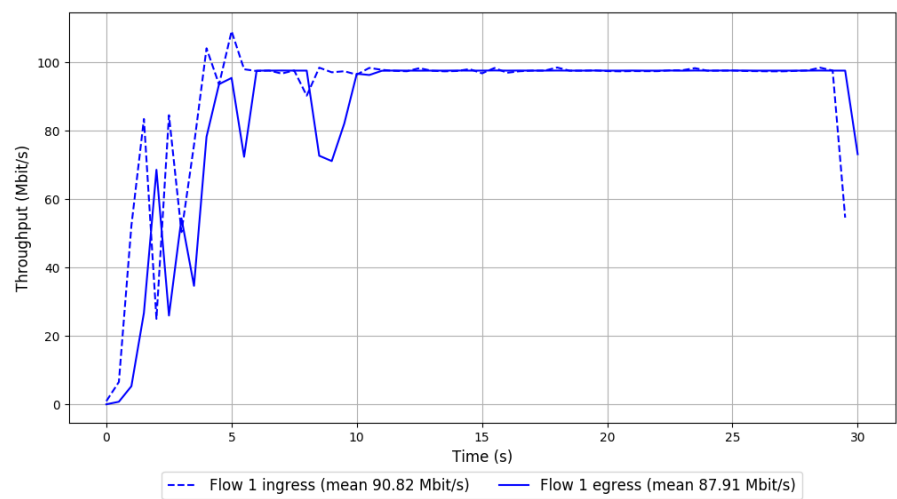
-- Flow 1:

Average throughput: 87.91 Mbit/s

95th percentile per-packet one-way delay: 105.644 ms

Loss rate: 3.19%

Run 5: Report of Indigo-Muses — Data Link

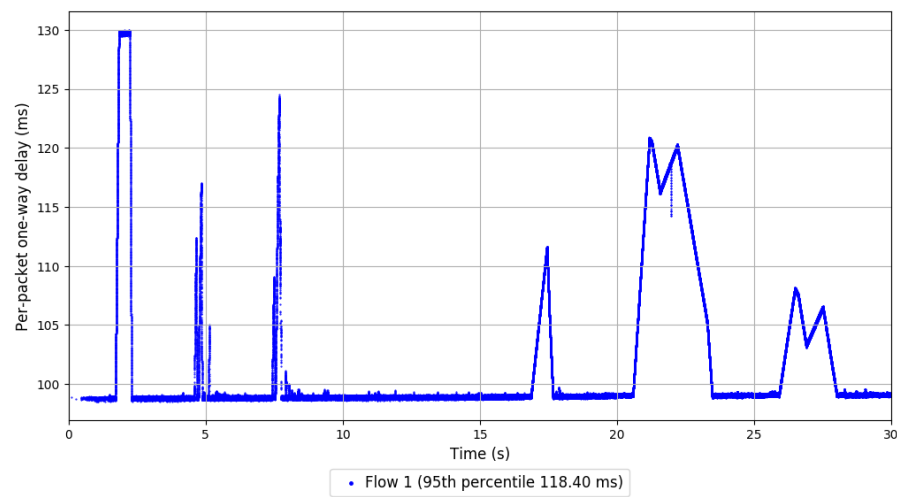
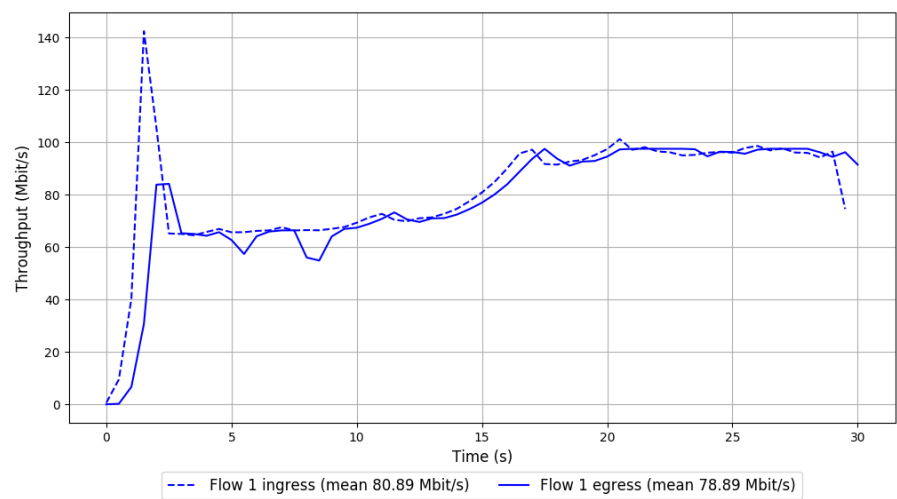


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-09-25 04:47:03
End at: 2018-09-25 04:47:33
Local clock offset: -4.886 ms
Remote clock offset: 2.734 ms

# Below is generated by plot.py at 2018-09-25 08:08:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.89 Mbit/s
95th percentile per-packet one-way delay: 118.396 ms
Loss rate: 2.51%
-- Flow 1:
Average throughput: 78.89 Mbit/s
95th percentile per-packet one-way delay: 118.396 ms
Loss rate: 2.51%
```

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-09-25 05:27:38

End at: 2018-09-25 05:28:08

Local clock offset: 4.093 ms

Remote clock offset: -3.23 ms

Below is generated by plot.py at 2018-09-25 08:08:57

Datalink statistics

-- Total of 1 flow:

Average throughput: 86.76 Mbit/s

95th percentile per-packet one-way delay: 113.445 ms

Loss rate: 1.55%

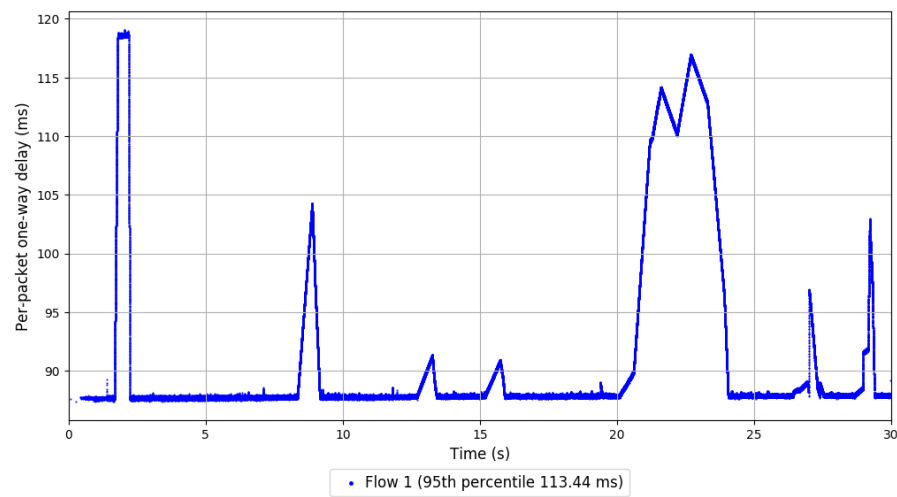
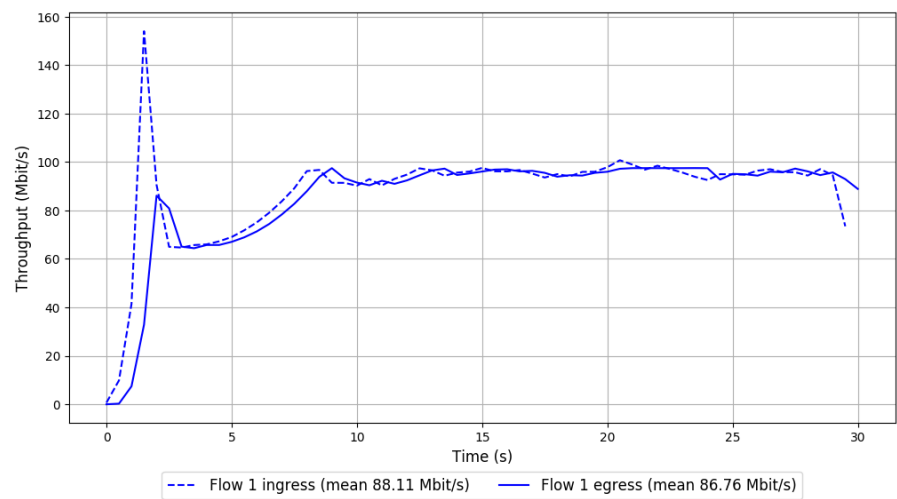
-- Flow 1:

Average throughput: 86.76 Mbit/s

95th percentile per-packet one-way delay: 113.445 ms

Loss rate: 1.55%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-09-25 06:08:04

End at: 2018-09-25 06:08:35

Local clock offset: 4.833 ms

Remote clock offset: -2.905 ms

Below is generated by plot.py at 2018-09-25 08:09:01

Datalink statistics

-- Total of 1 flow:

Average throughput: 85.97 Mbit/s

95th percentile per-packet one-way delay: 92.242 ms

Loss rate: 1.60%

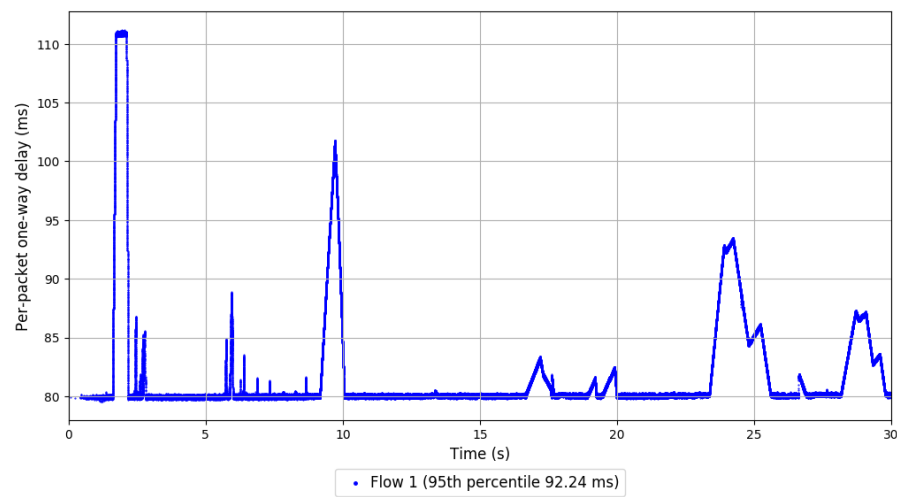
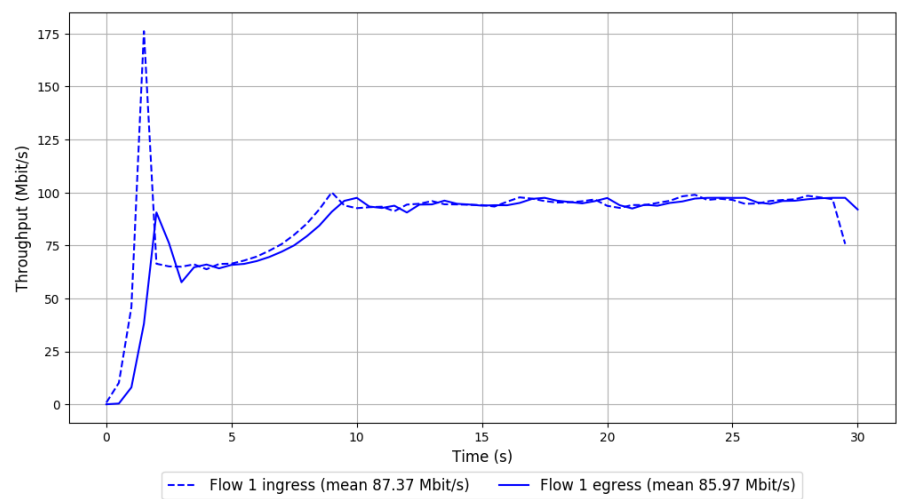
-- Flow 1:

Average throughput: 85.97 Mbit/s

95th percentile per-packet one-way delay: 92.242 ms

Loss rate: 1.60%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-09-25 06:48:17

End at: 2018-09-25 06:48:47

Local clock offset: -3.466 ms

Remote clock offset: 0.924 ms

Below is generated by plot.py at 2018-09-25 08:09:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 75.81 Mbit/s

95th percentile per-packet one-way delay: 100.102 ms

Loss rate: 1.63%

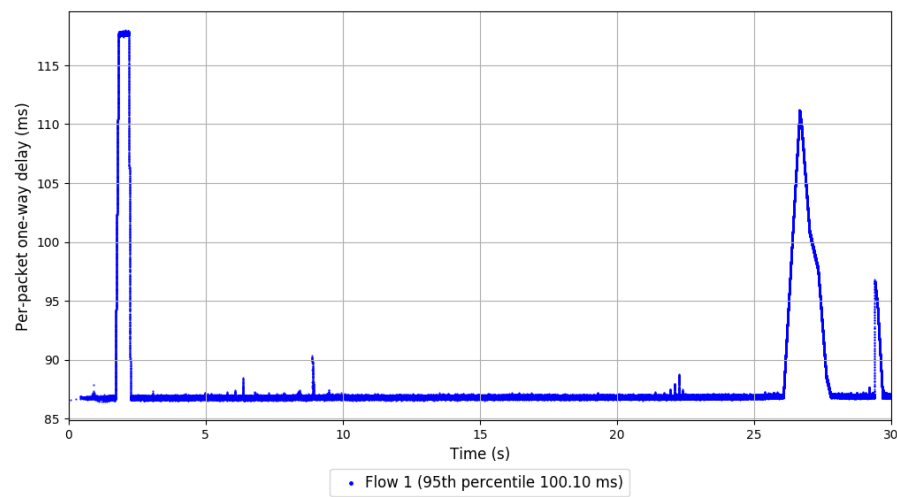
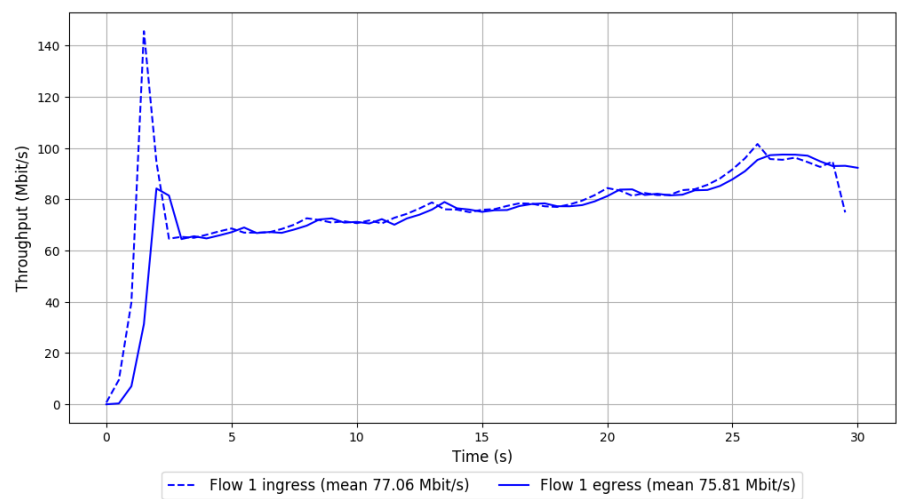
-- Flow 1:

Average throughput: 75.81 Mbit/s

95th percentile per-packet one-way delay: 100.102 ms

Loss rate: 1.63%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-09-25 07:27:14

End at: 2018-09-25 07:27:44

Local clock offset: -1.104 ms

Remote clock offset: -1.82 ms

Below is generated by plot.py at 2018-09-25 08:09:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 86.93 Mbit/s

95th percentile per-packet one-way delay: 97.615 ms

Loss rate: 1.48%

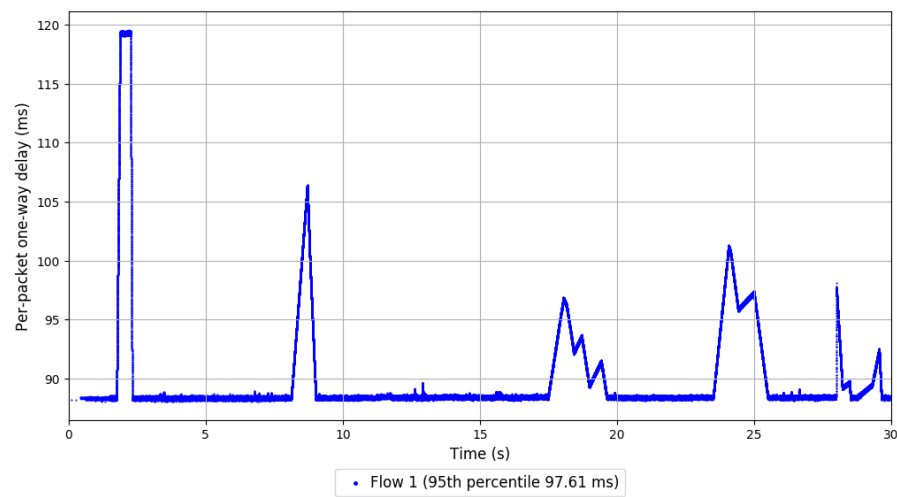
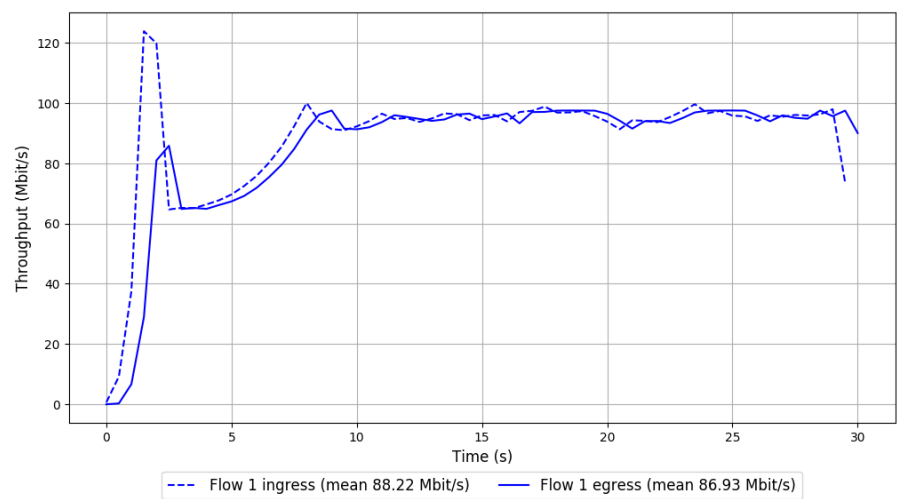
-- Flow 1:

Average throughput: 86.93 Mbit/s

95th percentile per-packet one-way delay: 97.615 ms

Loss rate: 1.48%

Run 5: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

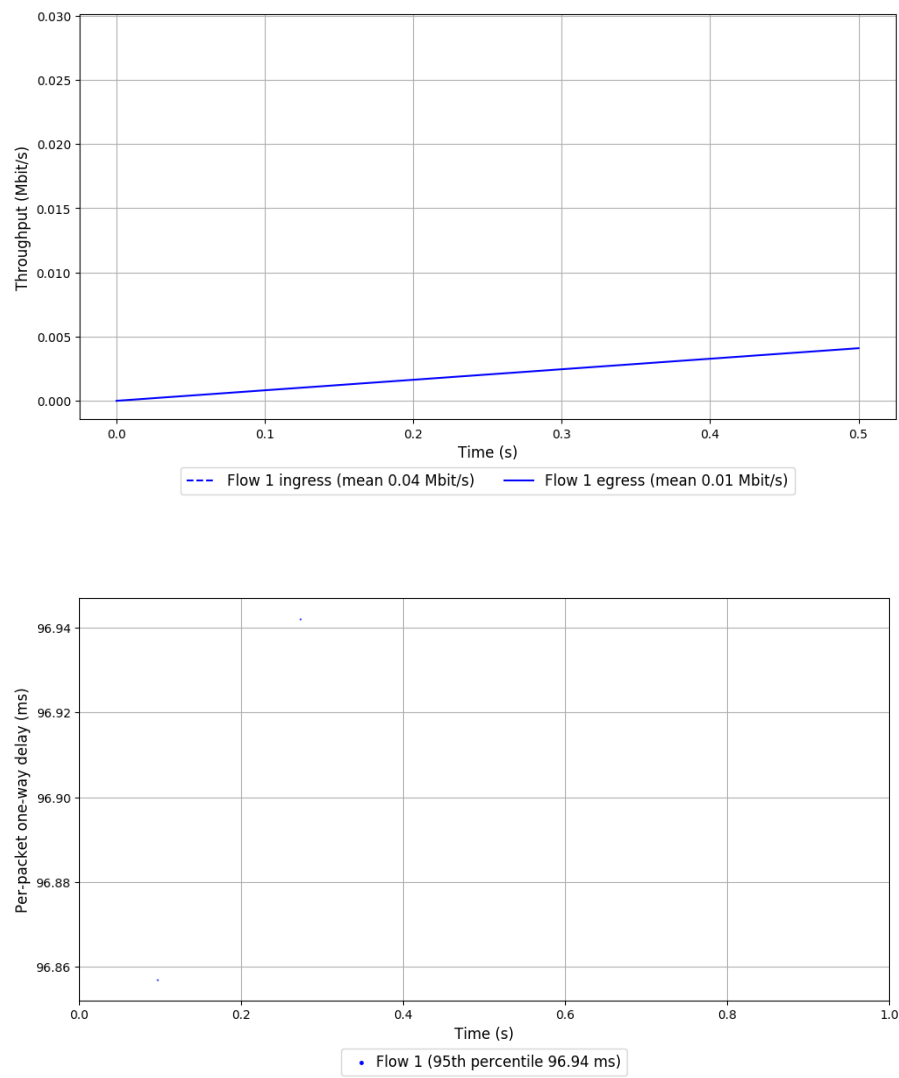
Start at: 2018-09-25 05:00:21

End at: 2018-09-25 05:00:51

Local clock offset: -0.93 ms

Remote clock offset: 2.895 ms

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

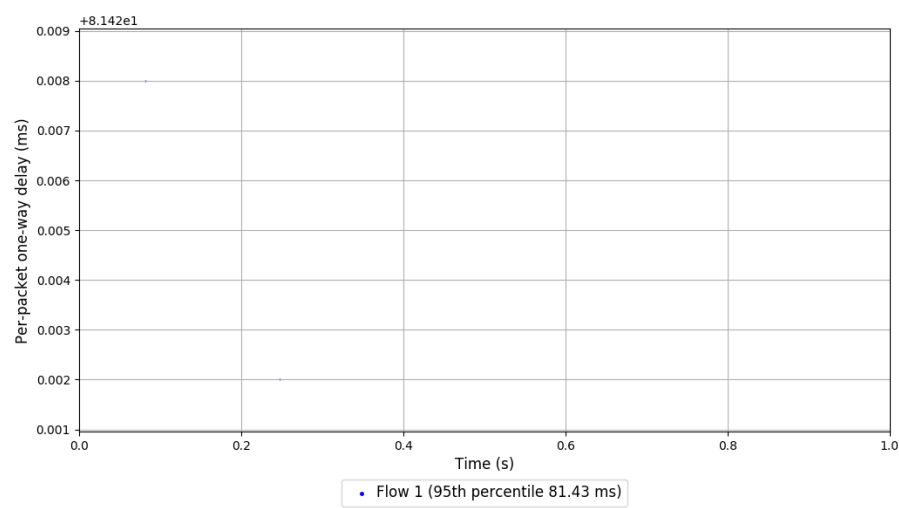
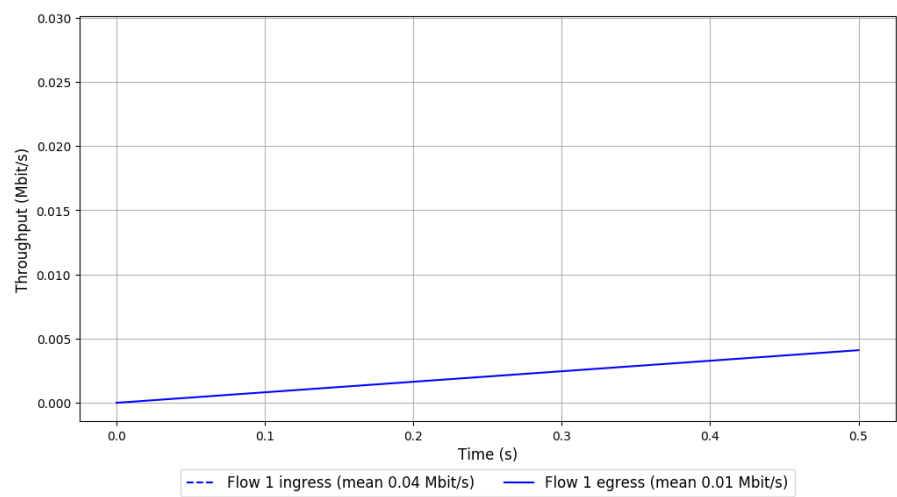
Start at: 2018-09-25 05:40:39

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

Local clock offset: 7.412 ms

Remote clock offset: -3.023 ms

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

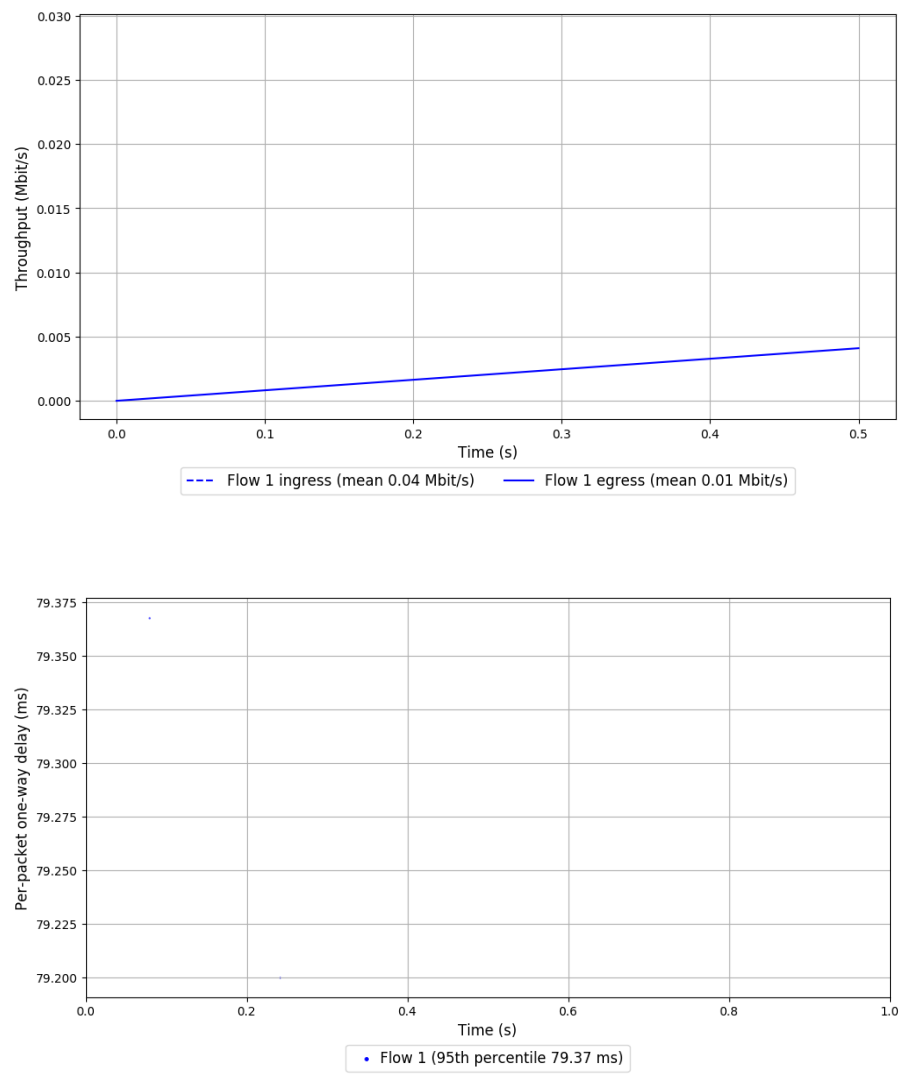
Start at: 2018-09-25 06:20:44

End at: 2018-09-25 06:21:14

Local clock offset: -2.895 ms

Remote clock offset: -2.854 ms

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

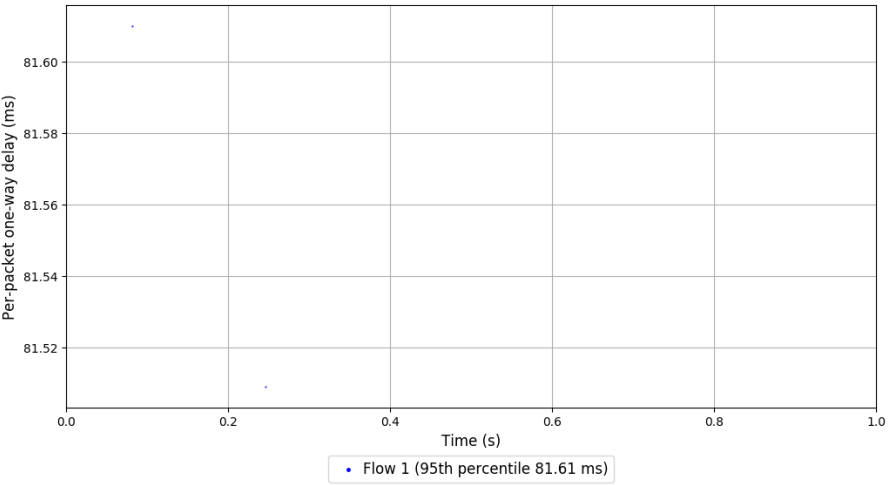
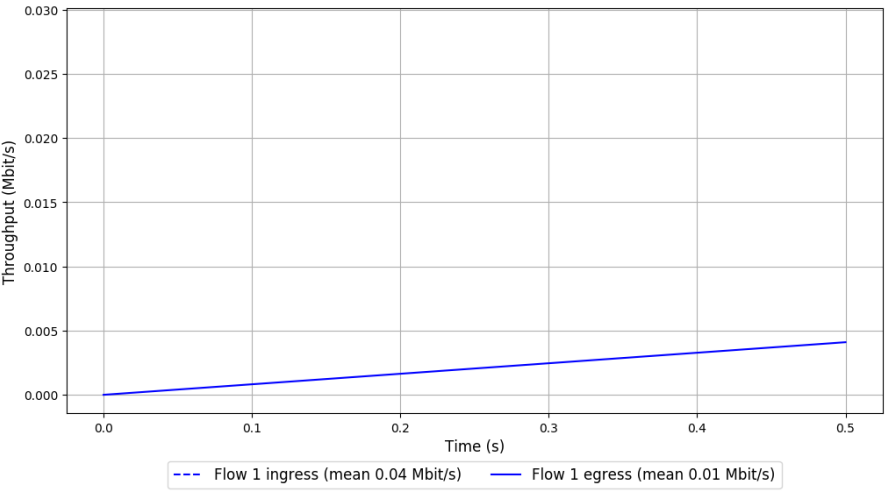
Start at: 2018-09-25 07:00:00

End at: 2018-09-25 07:00:30

Local clock offset: -2.033 ms

Remote clock offset: -2.02 ms

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

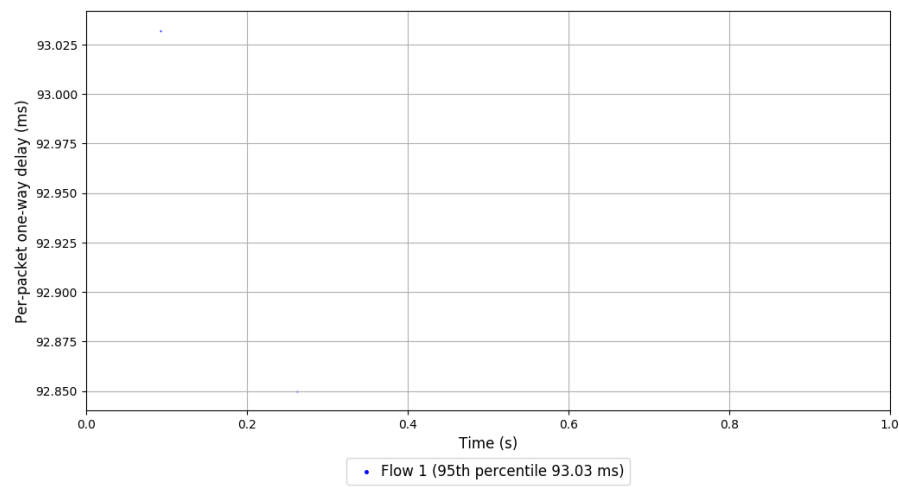
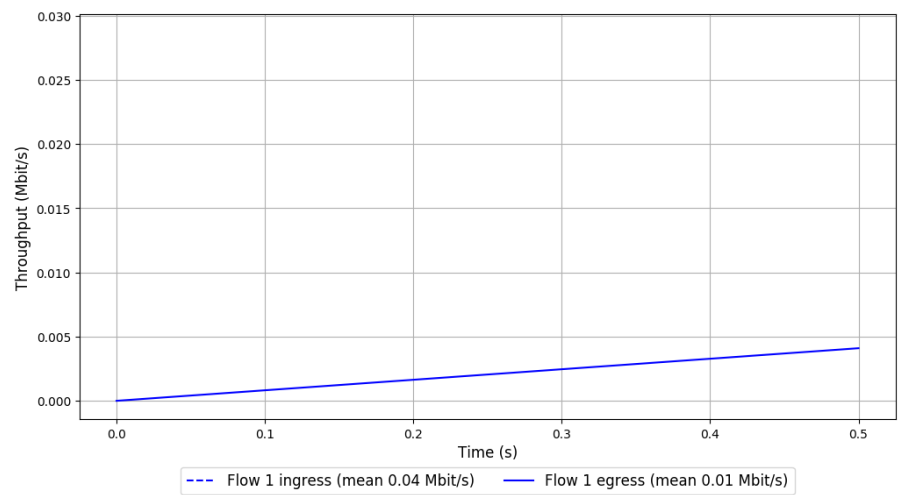
Start at: 2018-09-25 07:41:00

End at: 2018-09-25 07:41:30

Local clock offset: -1.627 ms

Remote clock offset: 2.18 ms

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2018-09-25 04:53:27

End at: 2018-09-25 04:53:57

Local clock offset: 1.062 ms

Remote clock offset: 1.71 ms

Below is generated by plot.py at 2018-09-25 08:09:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 47.19 Mbit/s

95th percentile per-packet one-way delay: 100.445 ms

Loss rate: 0.58%

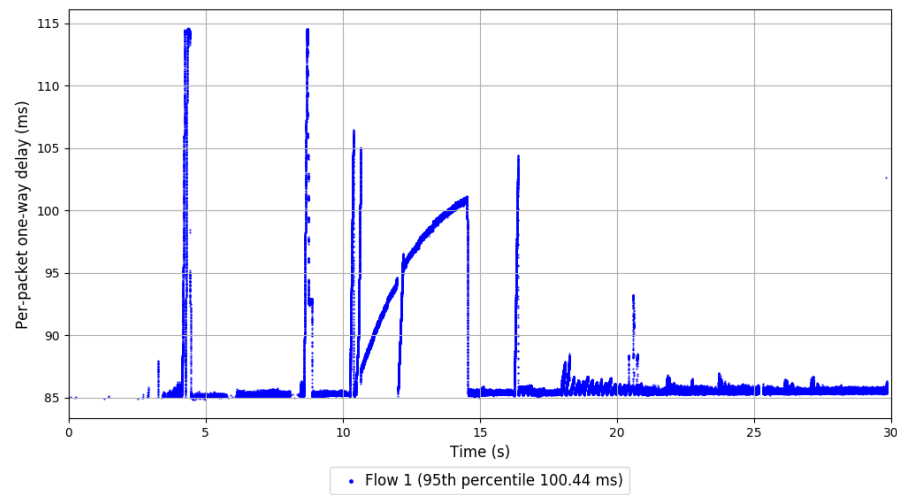
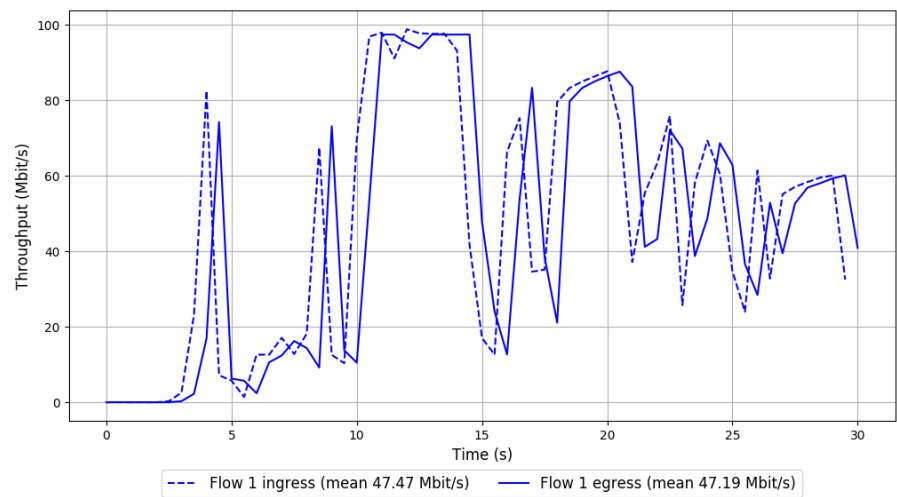
-- Flow 1:

Average throughput: 47.19 Mbit/s

95th percentile per-packet one-way delay: 100.445 ms

Loss rate: 0.58%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

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

End at: 2018-09-25 05:34:35

Local clock offset: 6.588 ms

Remote clock offset: -3.147 ms

Below is generated by plot.py at 2018-09-25 08:09:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 48.36 Mbit/s

95th percentile per-packet one-way delay: 83.043 ms

Loss rate: 0.28%

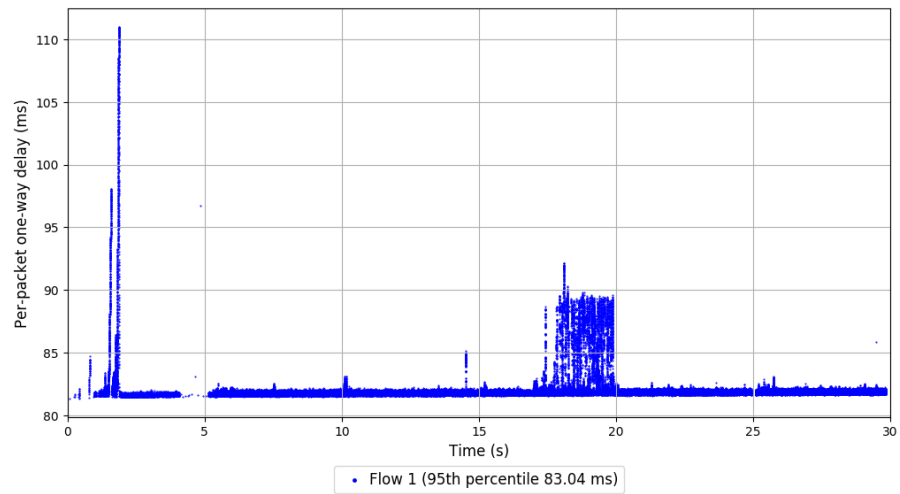
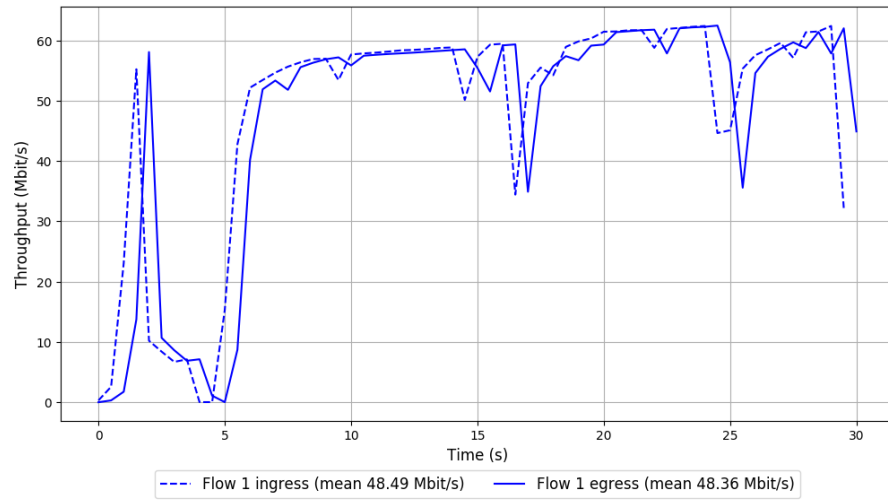
-- Flow 1:

Average throughput: 48.36 Mbit/s

95th percentile per-packet one-way delay: 83.043 ms

Loss rate: 0.28%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-09-25 06:14:15

End at: 2018-09-25 06:14:45

Local clock offset: 0.343 ms

Remote clock offset: -2.889 ms

Below is generated by plot.py at 2018-09-25 08:09:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 55.15 Mbit/s

95th percentile per-packet one-way delay: 96.032 ms

Loss rate: 0.43%

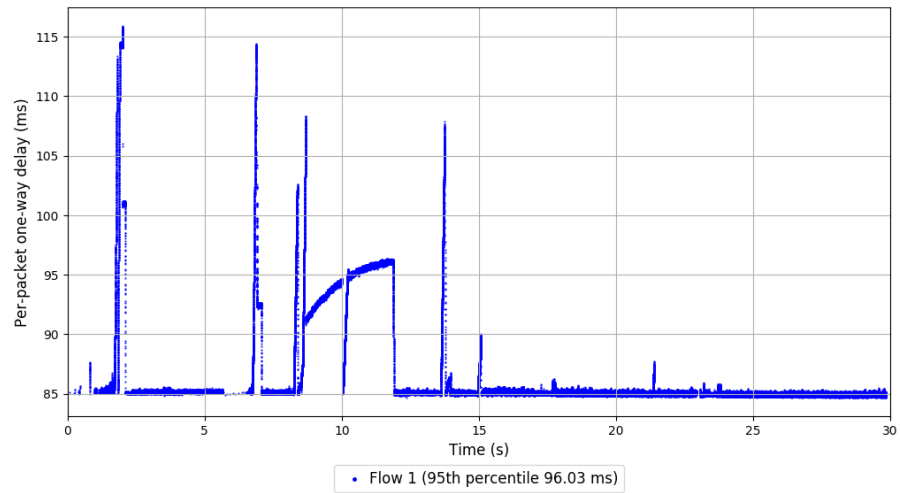
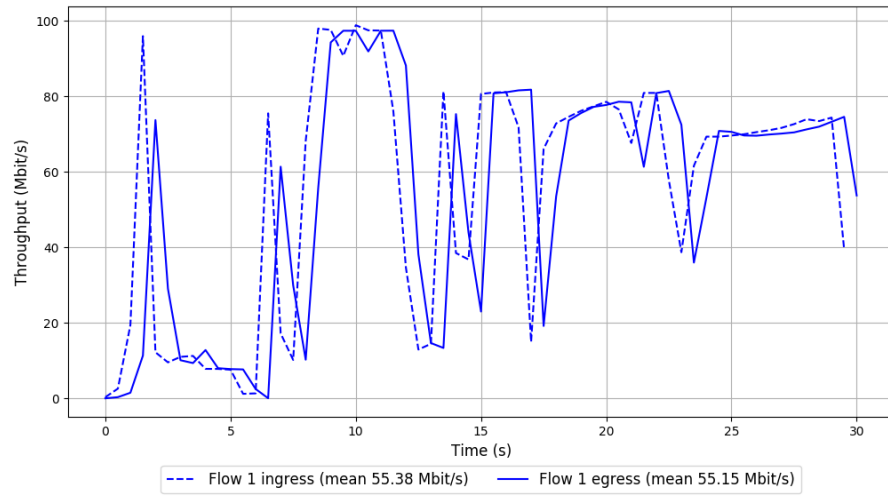
-- Flow 1:

Average throughput: 55.15 Mbit/s

95th percentile per-packet one-way delay: 96.032 ms

Loss rate: 0.43%

Run 3: Report of QUIC Cubic — Data Link

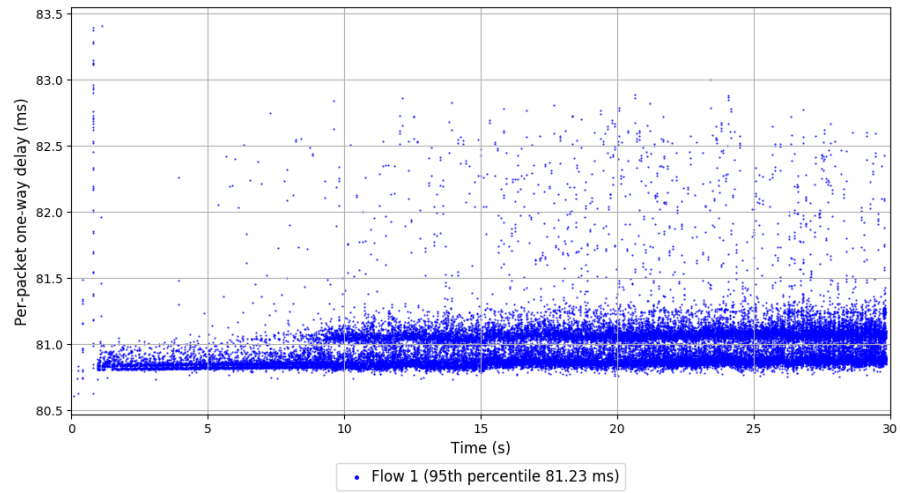
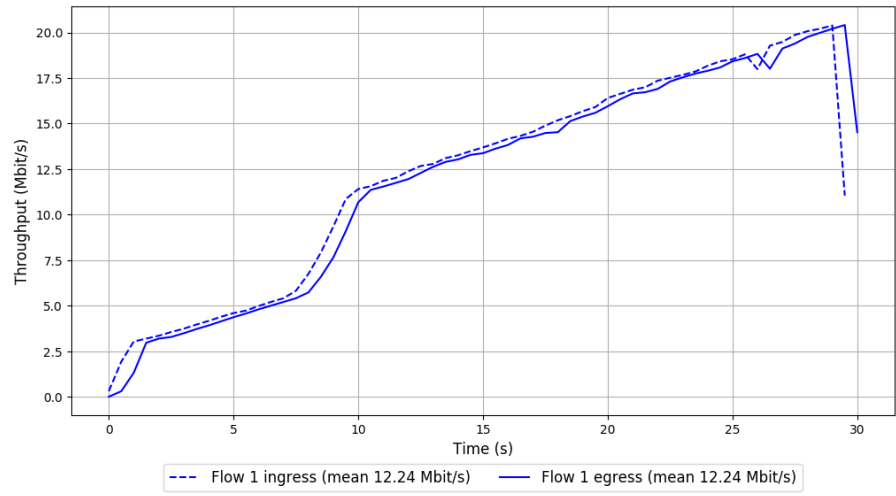


Run 4: Statistics of QUIC Cubic

Start at: 2018-09-25 06:54:10
End at: 2018-09-25 06:54:40
Local clock offset: -2.632 ms
Remote clock offset: -3.242 ms

Below is generated by plot.py at 2018-09-25 08:09:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.24 Mbit/s
95th percentile per-packet one-way delay: 81.230 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 12.24 Mbit/s
95th percentile per-packet one-way delay: 81.230 ms
Loss rate: 0.01%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-09-25 07:34:01

End at: 2018-09-25 07:34:31

Local clock offset: -0.851 ms

Remote clock offset: 1.05 ms

Below is generated by plot.py at 2018-09-25 08:09:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 45.19 Mbit/s

95th percentile per-packet one-way delay: 89.048 ms

Loss rate: 1.10%

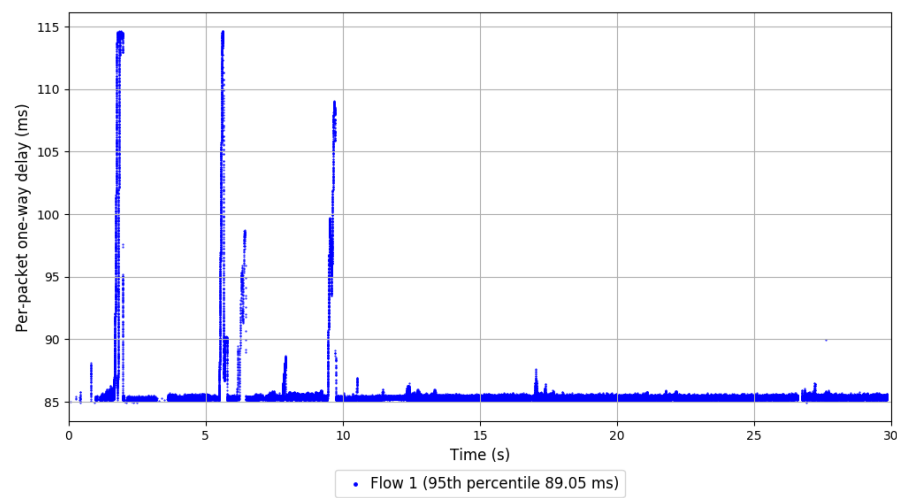
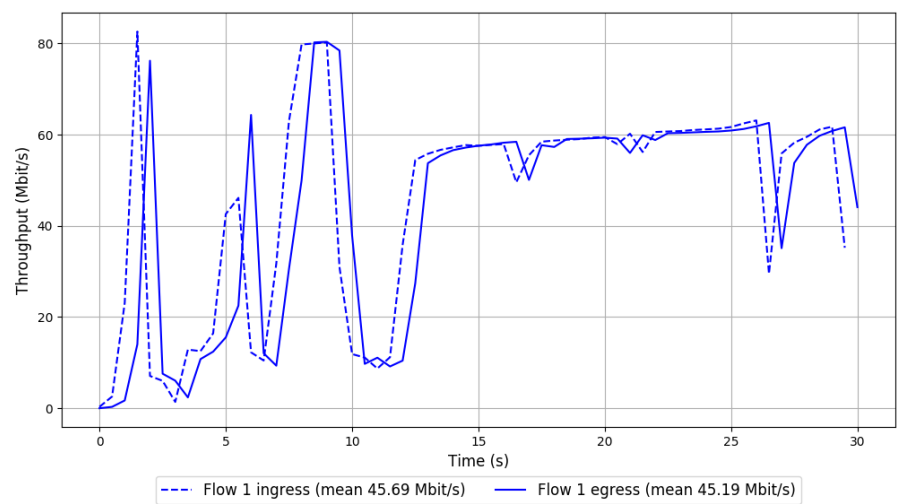
-- Flow 1:

Average throughput: 45.19 Mbit/s

95th percentile per-packet one-way delay: 89.048 ms

Loss rate: 1.10%

Run 5: Report of QUIC Cubic — Data Link

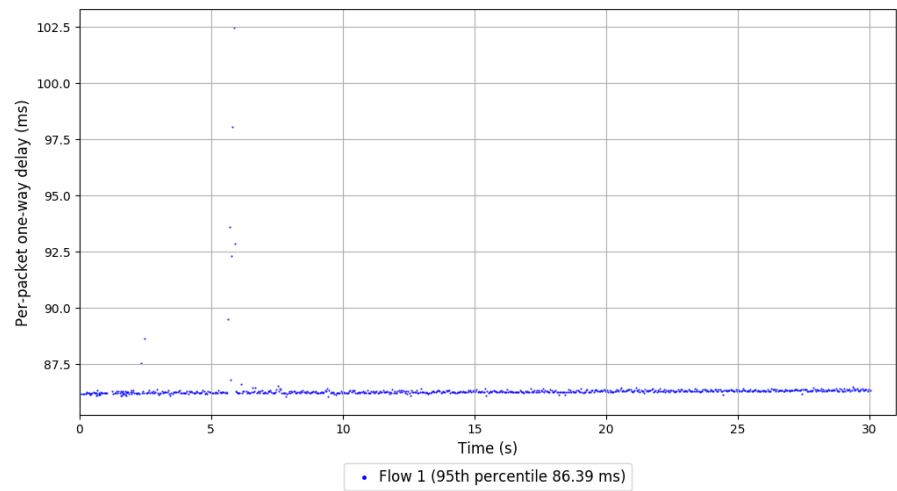
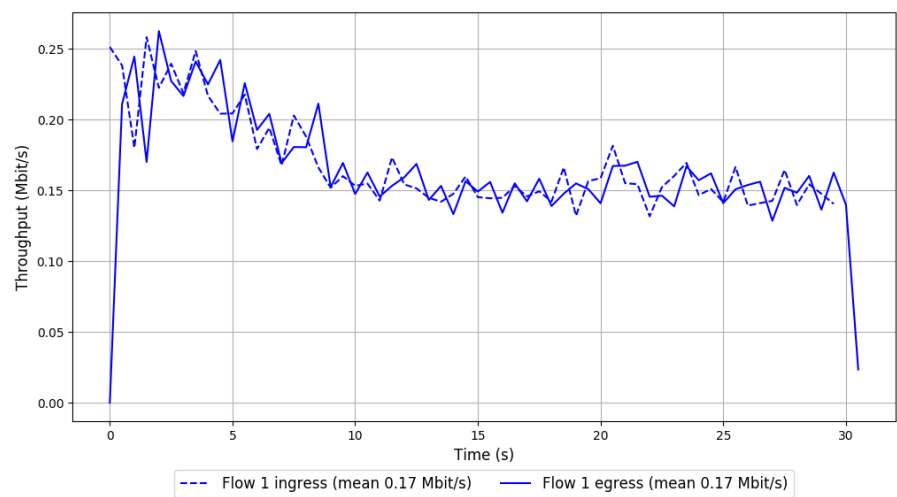



```
Run 1: Statistics of SCReAM

Start at: 2018-09-25 05:16:05
End at: 2018-09-25 05:16:35
Local clock offset: 0.852 ms
Remote clock offset: 1.97 ms

# Below is generated by plot.py at 2018-09-25 08:09:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 86.394 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 86.394 ms
Loss rate: 0.15%
```

Run 1: Report of SReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2018-09-25 05:57:16

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

Local clock offset: 3.379 ms

Remote clock offset: 2.256 ms

Below is generated by plot.py at 2018-09-25 08:09:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 84.821 ms

Loss rate: 0.00%

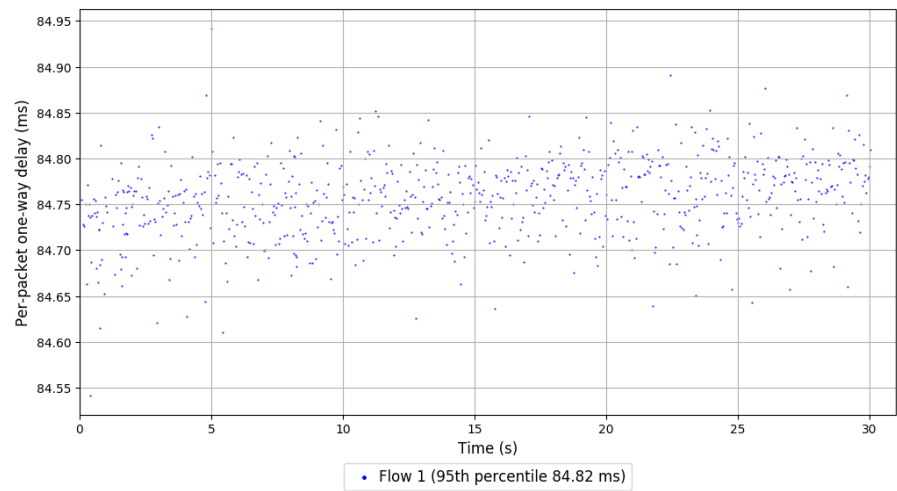
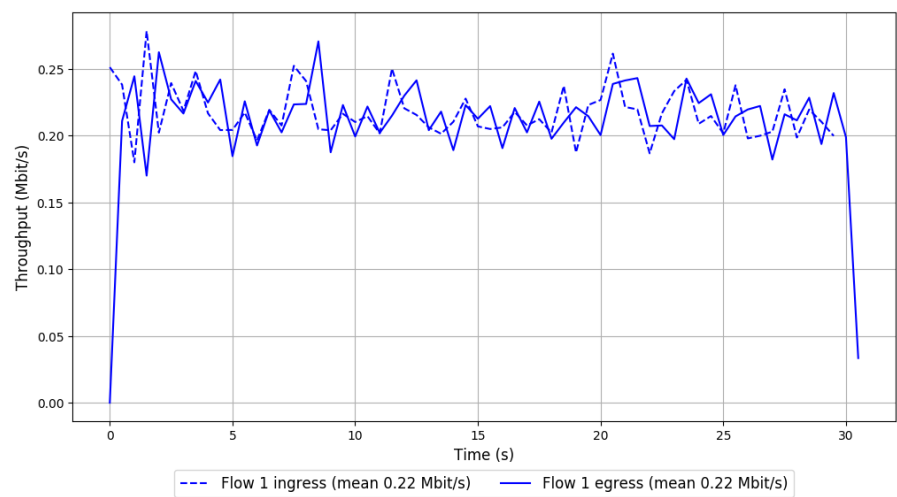
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 84.821 ms

Loss rate: 0.00%

Run 2: Report of SReAM — Data Link

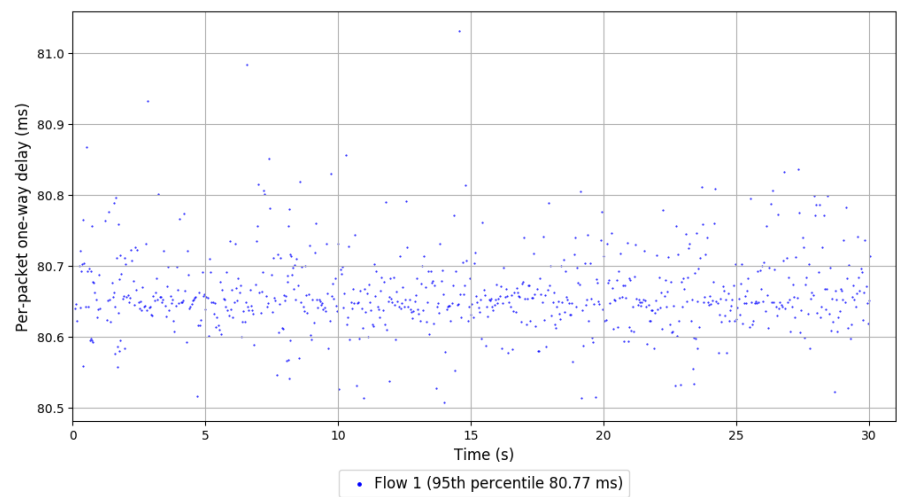
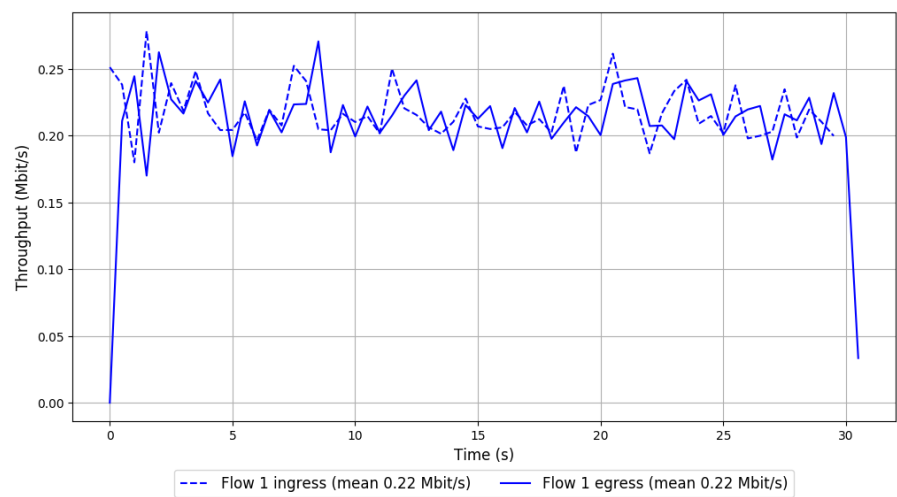


Run 3: Statistics of SCReAM

Start at: 2018-09-25 06:36:24
End at: 2018-09-25 06:36:54
Local clock offset: -4.645 ms
Remote clock offset: -1.889 ms

Below is generated by plot.py at 2018-09-25 08:09:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 80.773 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 80.773 ms
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2018-09-25 07:15:32

End at: 2018-09-25 07:16:02

Local clock offset: -1.007 ms

Remote clock offset: 2.166 ms

Below is generated by plot.py at 2018-09-25 08:09:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 90.870 ms

Loss rate: 0.00%

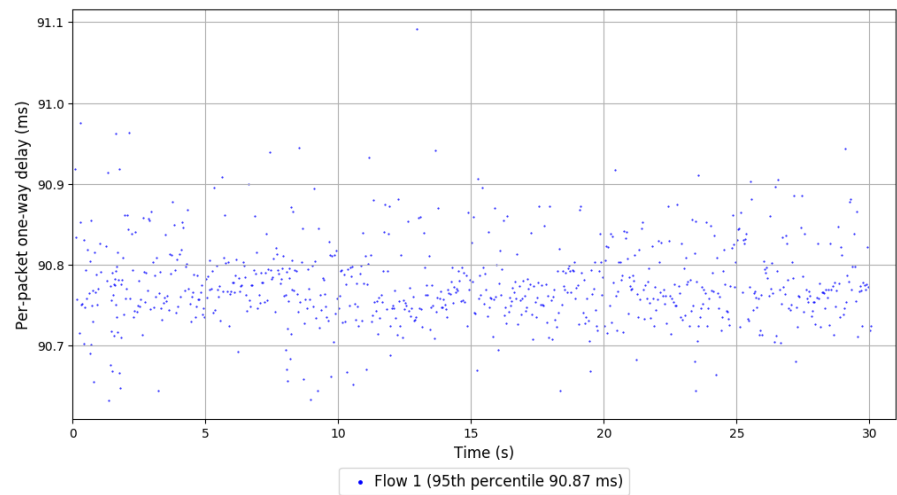
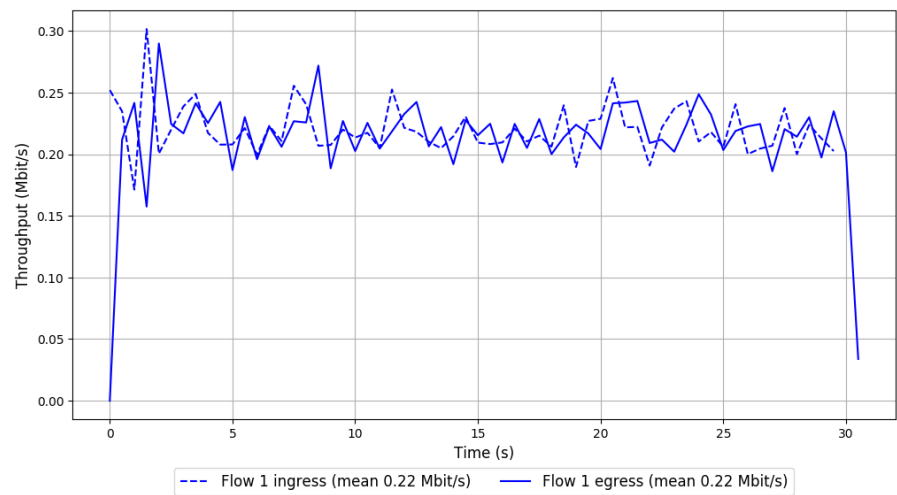
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 90.870 ms

Loss rate: 0.00%

Run 4: Report of SReAM — Data Link

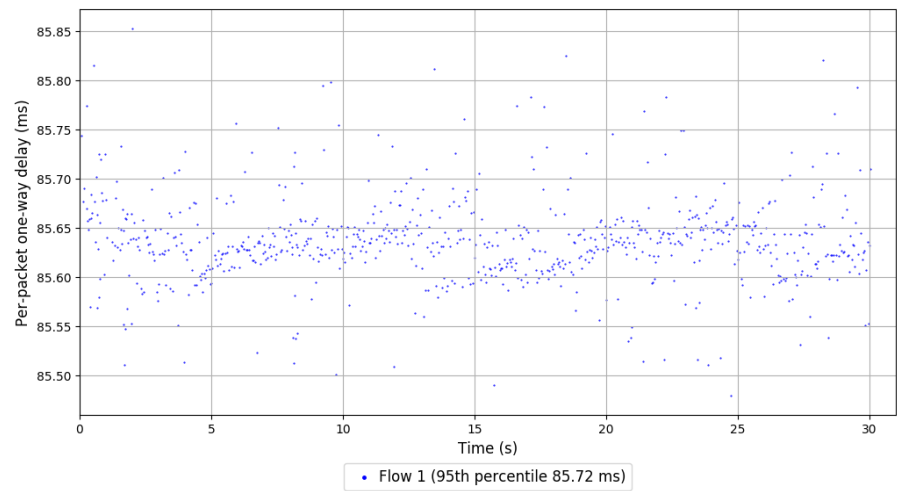
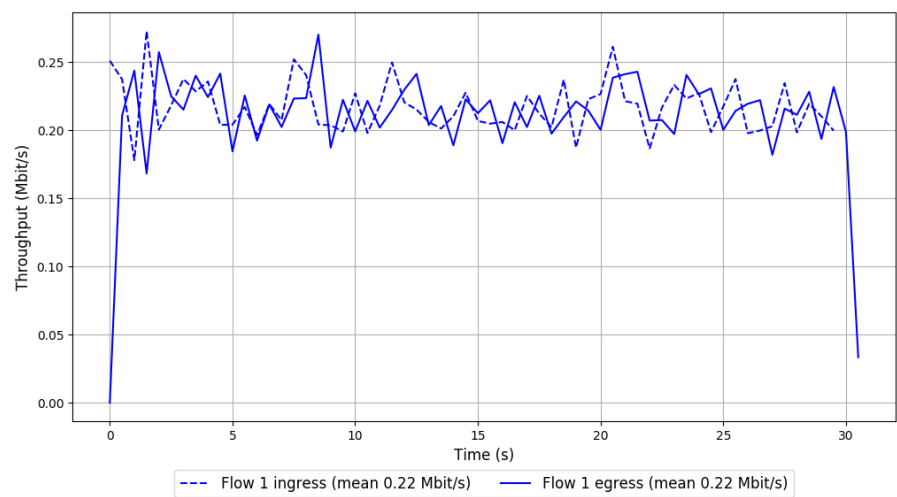


Run 5: Statistics of SCReAM

Start at: 2018-09-25 07:57:19
End at: 2018-09-25 07:57:49
Local clock offset: -1.675 ms
Remote clock offset: -3.011 ms

Below is generated by plot.py at 2018-09-25 08:09:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 85.725 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 85.725 ms
Loss rate: 0.00%

Run 5: Report of SReAM — Data Link

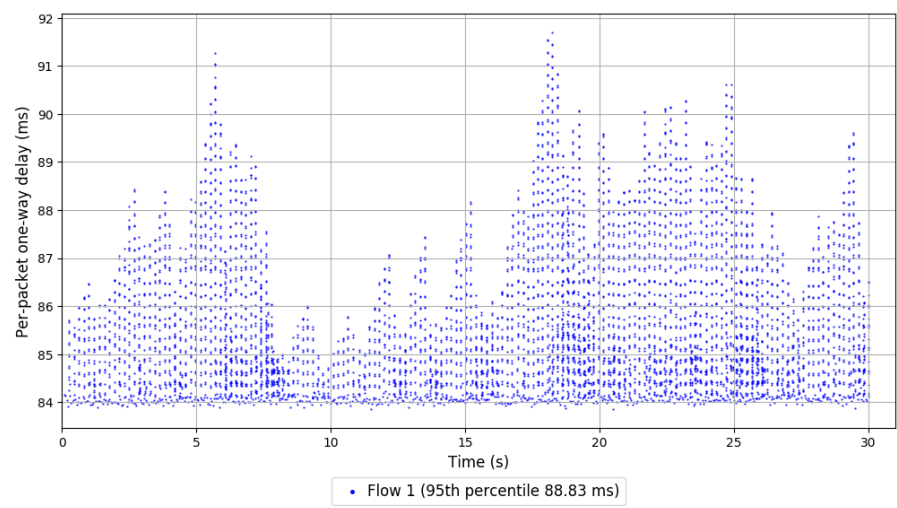
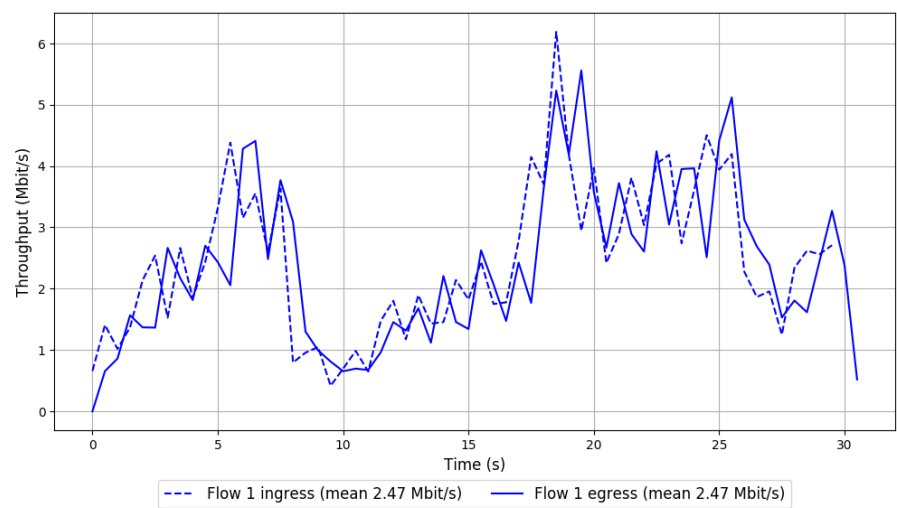


Run 1: Statistics of Sprout

Start at: 2018-09-25 05:04:18
End at: 2018-09-25 05:04:48
Local clock offset: -1.752 ms
Remote clock offset: -1.927 ms

Below is generated by plot.py at 2018-09-25 08:09:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.47 Mbit/s
95th percentile per-packet one-way delay: 88.832 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.47 Mbit/s
95th percentile per-packet one-way delay: 88.832 ms
Loss rate: 0.00%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-09-25 05:44:28

End at: 2018-09-25 05:44:58

Local clock offset: 4.664 ms

Remote clock offset: 1.0 ms

Below is generated by plot.py at 2018-09-25 08:09:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.75 Mbit/s

95th percentile per-packet one-way delay: 95.337 ms

Loss rate: 1.65%

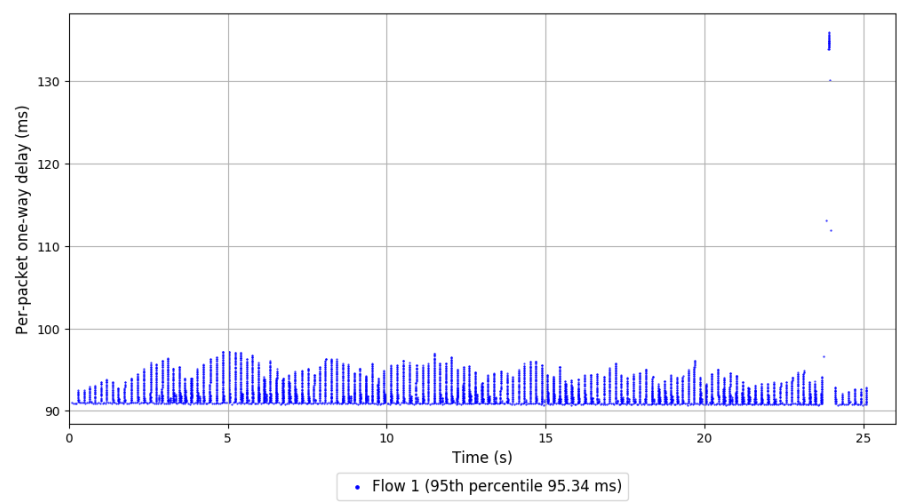
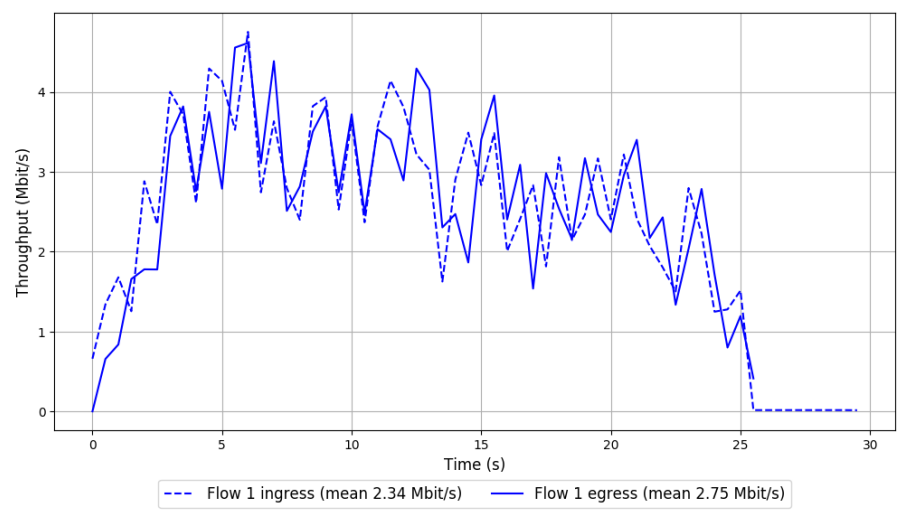
-- Flow 1:

Average throughput: 2.75 Mbit/s

95th percentile per-packet one-way delay: 95.337 ms

Loss rate: 1.65%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-09-25 06:24:29

End at: 2018-09-25 06:24:59

Local clock offset: -3.788 ms

Remote clock offset: 2.332 ms

Below is generated by plot.py at 2018-09-25 08:09:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.24 Mbit/s

95th percentile per-packet one-way delay: 92.122 ms

Loss rate: 0.00%

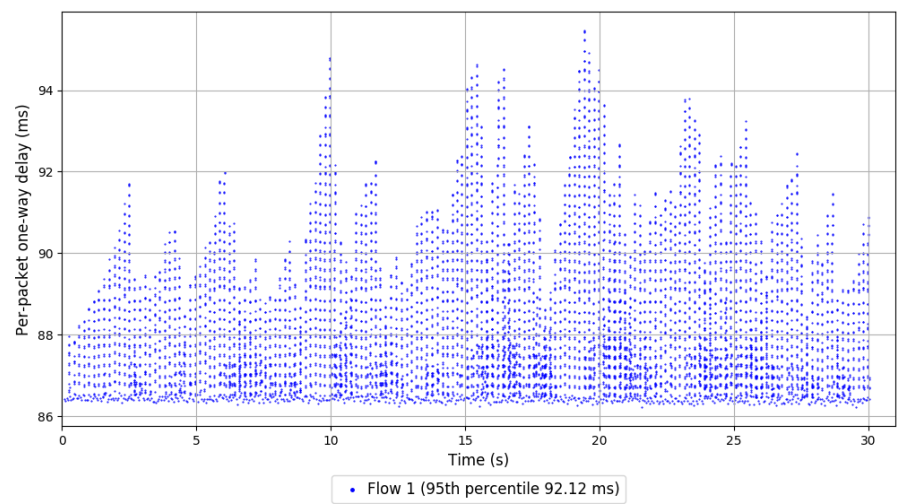
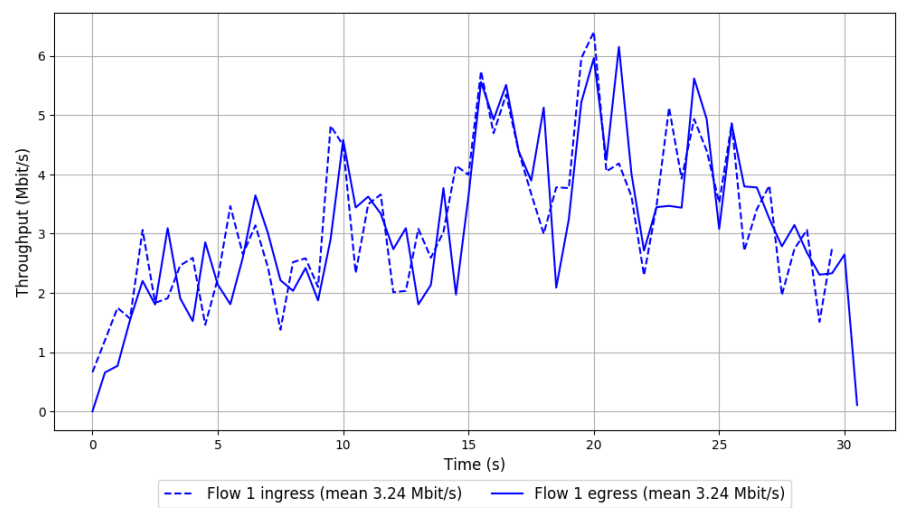
-- Flow 1:

Average throughput: 3.24 Mbit/s

95th percentile per-packet one-way delay: 92.122 ms

Loss rate: 0.00%

Run 3: Report of Sprout — Data Link

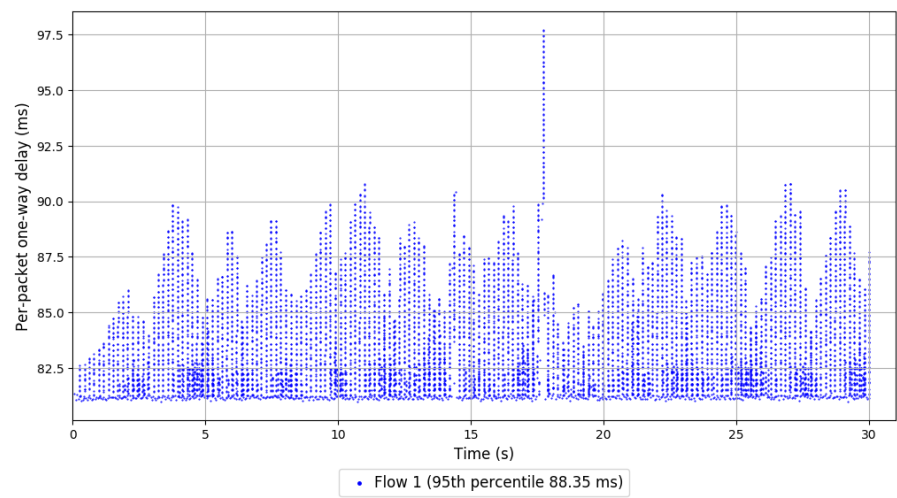
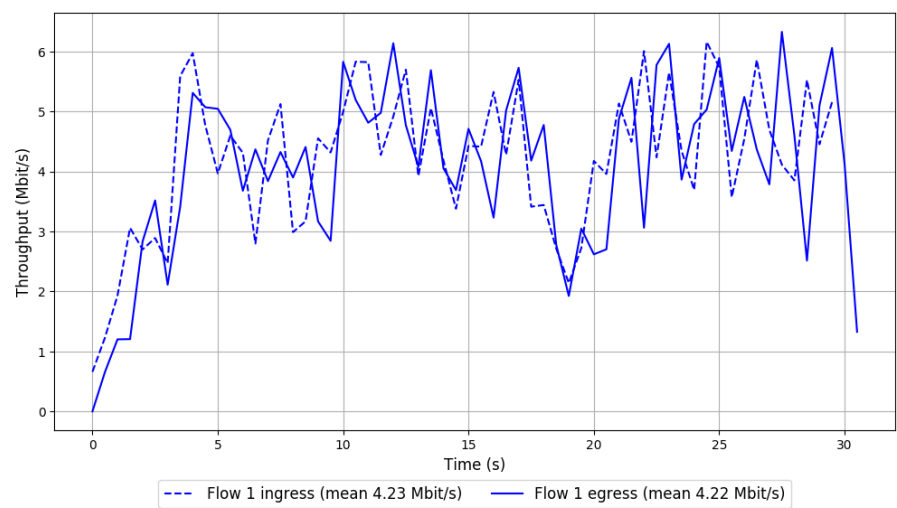


Run 4: Statistics of Sprout

Start at: 2018-09-25 07:03:53
End at: 2018-09-25 07:04:23
Local clock offset: -0.82 ms
Remote clock offset: -3.047 ms

Below is generated by plot.py at 2018-09-25 08:09:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 4.22 Mbit/s
95th percentile per-packet one-way delay: 88.354 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 4.22 Mbit/s
95th percentile per-packet one-way delay: 88.354 ms
Loss rate: 0.39%

Run 4: Report of Sprout — Data Link

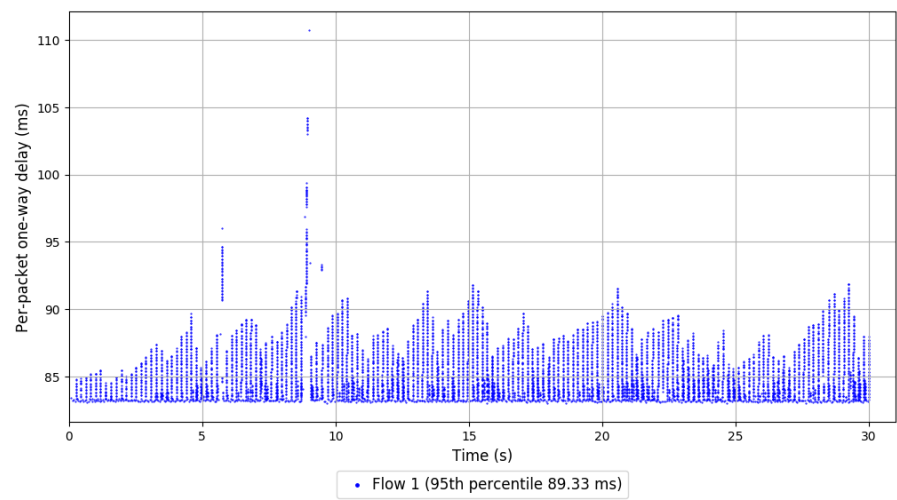
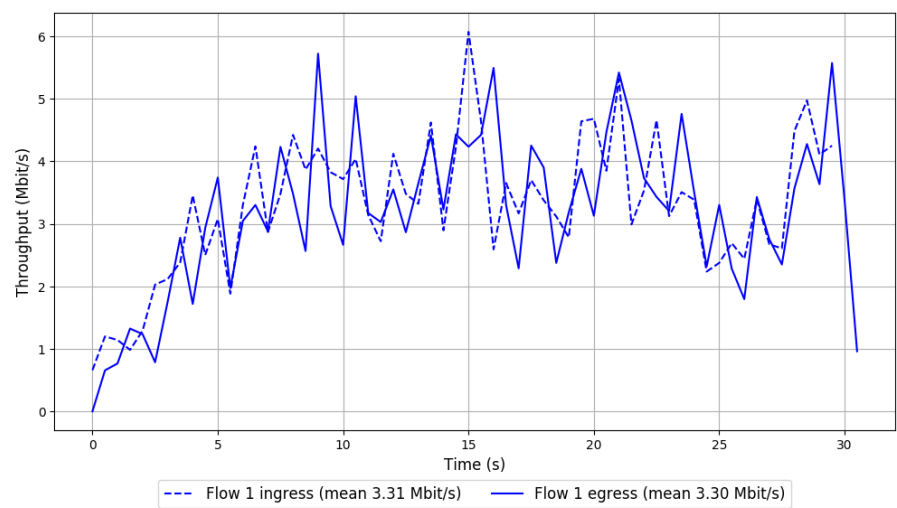


Run 5: Statistics of Sprout

Start at: 2018-09-25 07:45:01
End at: 2018-09-25 07:45:32
Local clock offset: -2.064 ms
Remote clock offset: -1.627 ms

Below is generated by plot.py at 2018-09-25 08:09:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.30 Mbit/s
95th percentile per-packet one-way delay: 89.332 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 3.30 Mbit/s
95th percentile per-packet one-way delay: 89.332 ms
Loss rate: 0.38%

Run 5: Report of Sprout — Data Link

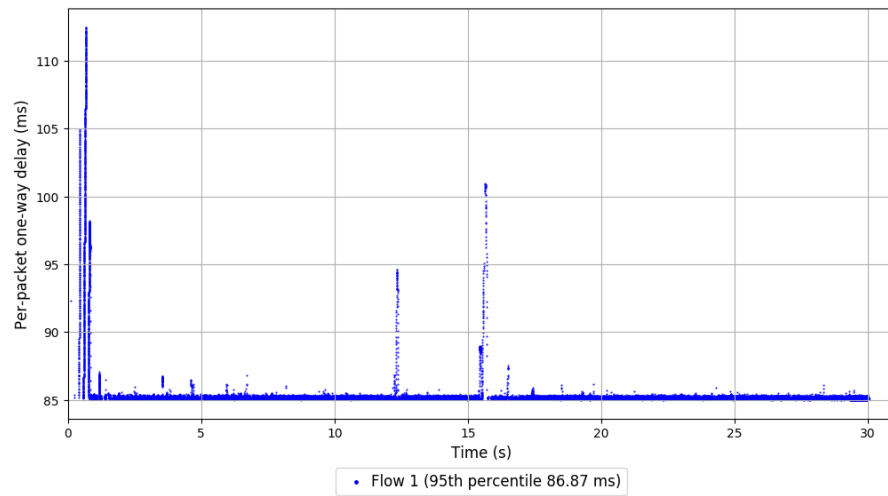
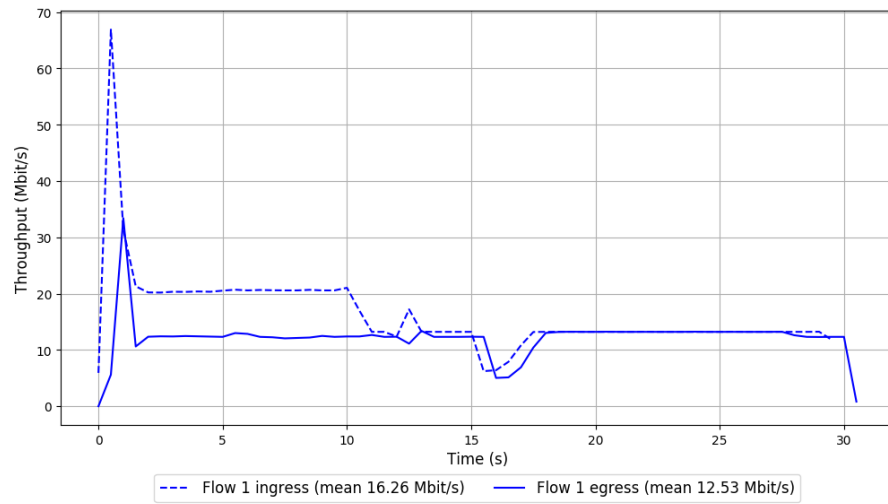


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-09-25 05:02:55
End at: 2018-09-25 05:03:25
Local clock offset: -2.466 ms
Remote clock offset: 1.972 ms

# Below is generated by plot.py at 2018-09-25 08:09:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.53 Mbit/s
95th percentile per-packet one-way delay: 86.869 ms
Loss rate: 22.92%
-- Flow 1:
Average throughput: 12.53 Mbit/s
95th percentile per-packet one-way delay: 86.869 ms
Loss rate: 22.92%
```

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



Run 2: Statistics of TaoVA-100x

Start at: 2018-09-25 05:43:04

End at: 2018-09-25 05:43:34

Local clock offset: 6.245 ms

Remote clock offset: 2.187 ms

Below is generated by plot.py at 2018-09-25 08:09:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 12.54 Mbit/s

95th percentile per-packet one-way delay: 86.026 ms

Loss rate: 17.59%

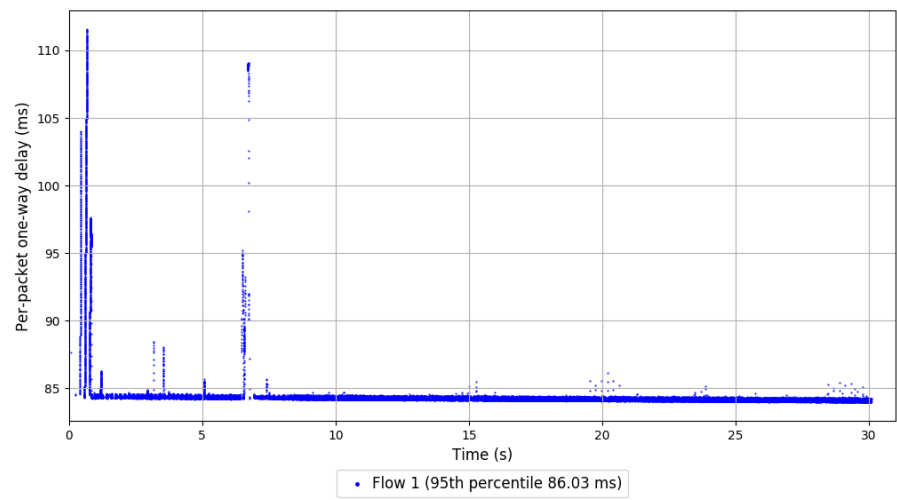
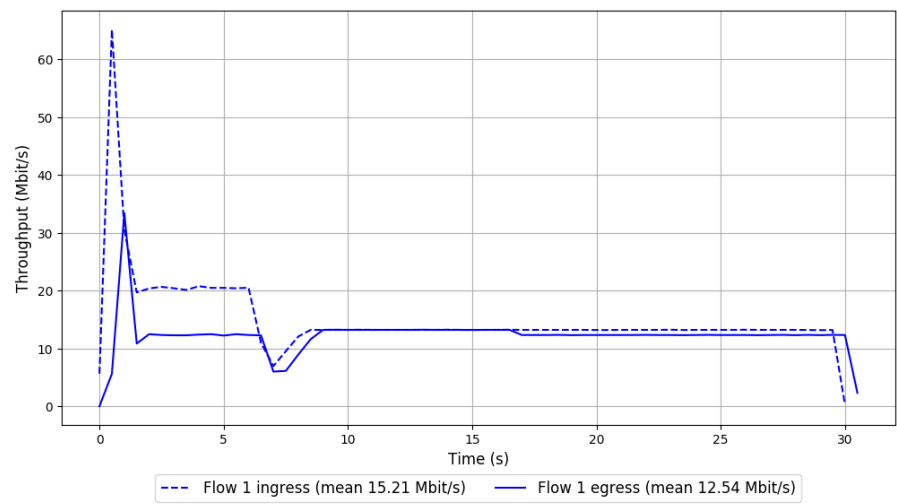
-- Flow 1:

Average throughput: 12.54 Mbit/s

95th percentile per-packet one-way delay: 86.026 ms

Loss rate: 17.59%

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



Run 3: Statistics of TaoVA-100x

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

End at: 2018-09-25 06:23:36

Local clock offset: -4.31 ms

Remote clock offset: -2.794 ms

Below is generated by plot.py at 2018-09-25 08:09:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 12.39 Mbit/s

95th percentile per-packet one-way delay: 84.798 ms

Loss rate: 8.93%

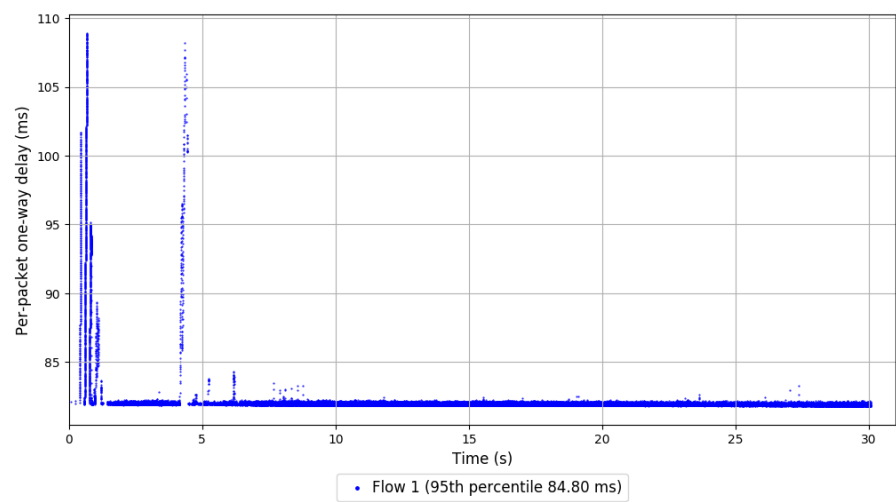
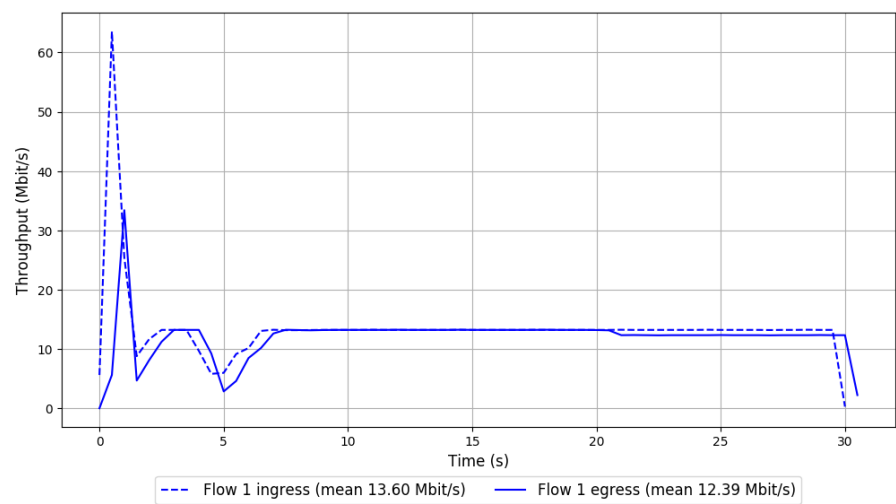
-- Flow 1:

Average throughput: 12.39 Mbit/s

95th percentile per-packet one-way delay: 84.798 ms

Loss rate: 8.93%

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-09-25 07:02:28

End at: 2018-09-25 07:02:58

Local clock offset: -1.725 ms

Remote clock offset: -1.935 ms

Below is generated by plot.py at 2018-09-25 08:09:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 12.60 Mbit/s

95th percentile per-packet one-way delay: 82.870 ms

Loss rate: 31.37%

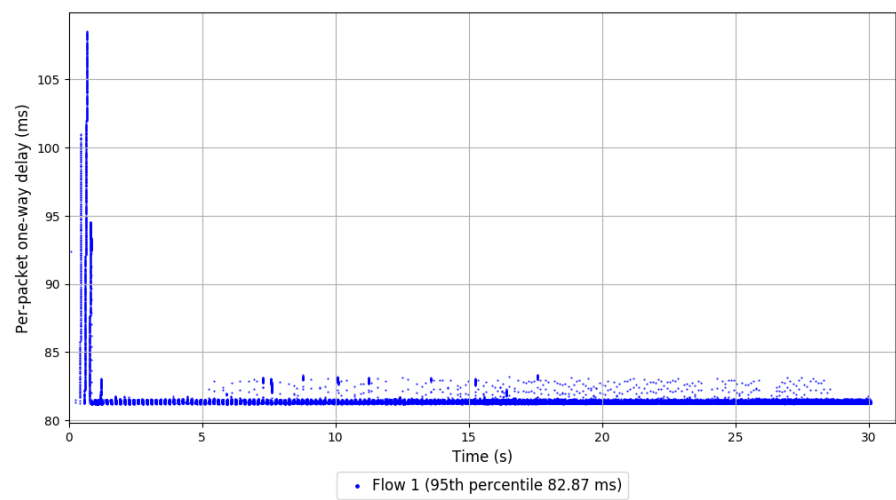
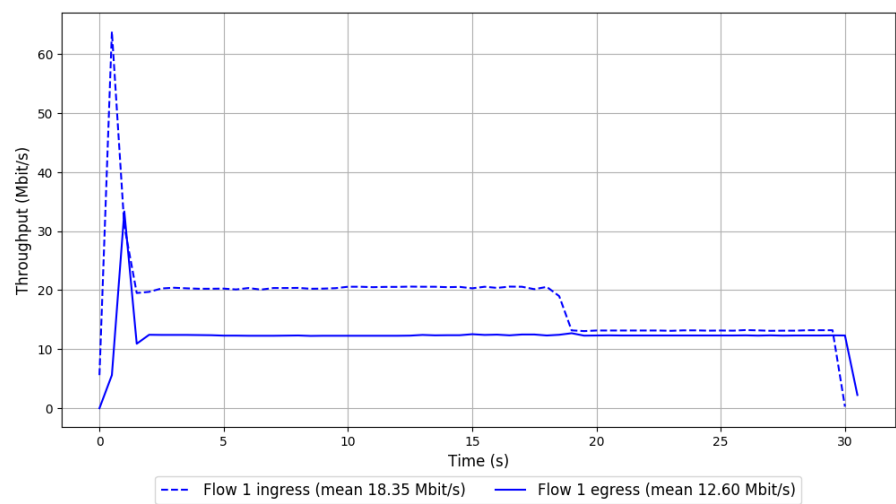
-- Flow 1:

Average throughput: 12.60 Mbit/s

95th percentile per-packet one-way delay: 82.870 ms

Loss rate: 31.37%

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

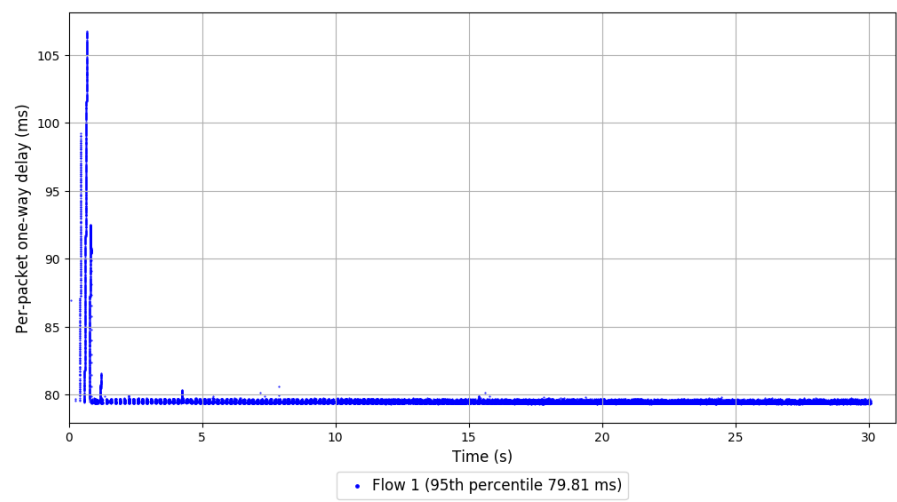
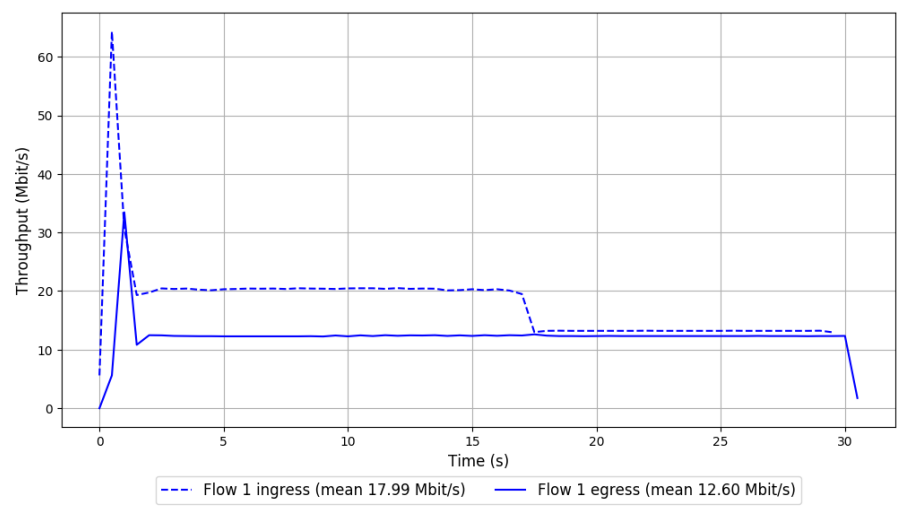


Run 5: Statistics of TaoVA-100x

Start at: 2018-09-25 07:43:32
End at: 2018-09-25 07:44:02
Local clock offset: -1.197 ms
Remote clock offset: -2.694 ms

Below is generated by plot.py at 2018-09-25 08:09:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.60 Mbit/s
95th percentile per-packet one-way delay: 79.810 ms
Loss rate: 30.01%
-- Flow 1:
Average throughput: 12.60 Mbit/s
95th percentile per-packet one-way delay: 79.810 ms
Loss rate: 30.01%

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



Run 1: Statistics of TCP Vegas

Start at: 2018-09-25 05:11:15

End at: 2018-09-25 05:11:45

Local clock offset: -0.333 ms

Remote clock offset: 0.854 ms

Below is generated by plot.py at 2018-09-25 08:09:53

Datalink statistics

-- Total of 1 flow:

Average throughput: 40.27 Mbit/s

95th percentile per-packet one-way delay: 87.374 ms

Loss rate: 0.87%

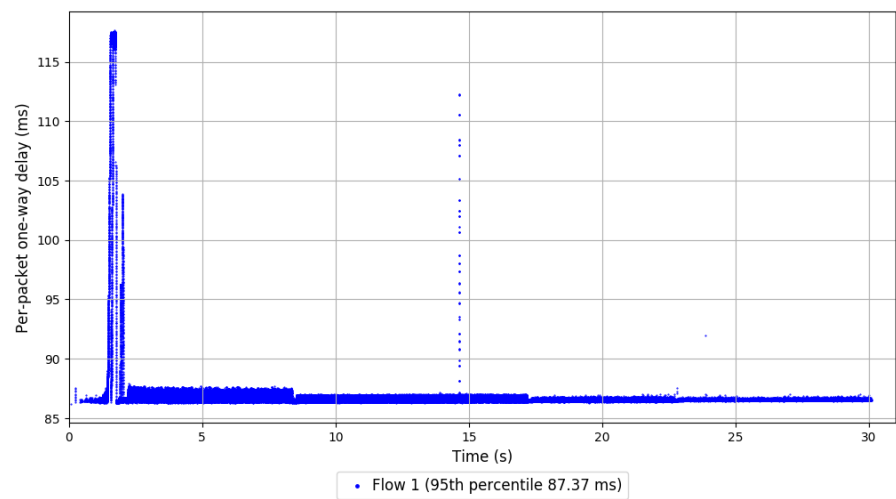
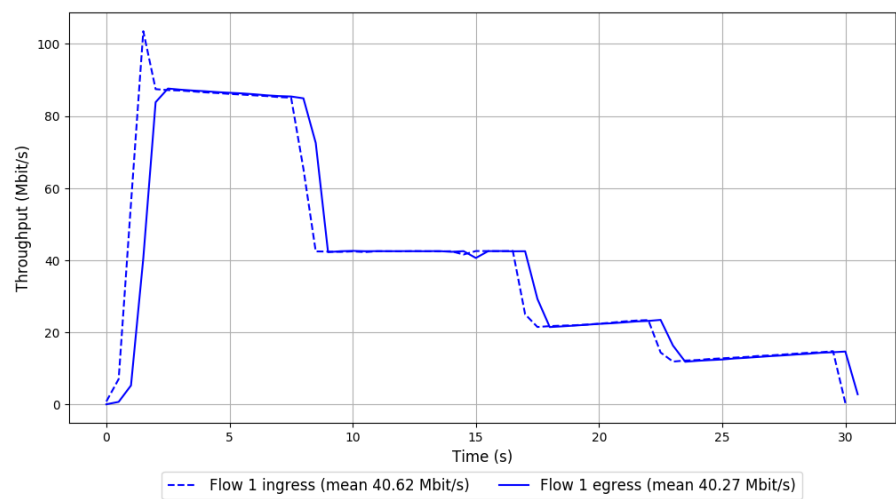
-- Flow 1:

Average throughput: 40.27 Mbit/s

95th percentile per-packet one-way delay: 87.374 ms

Loss rate: 0.87%

Run 1: Report of TCP Vegas — Data Link

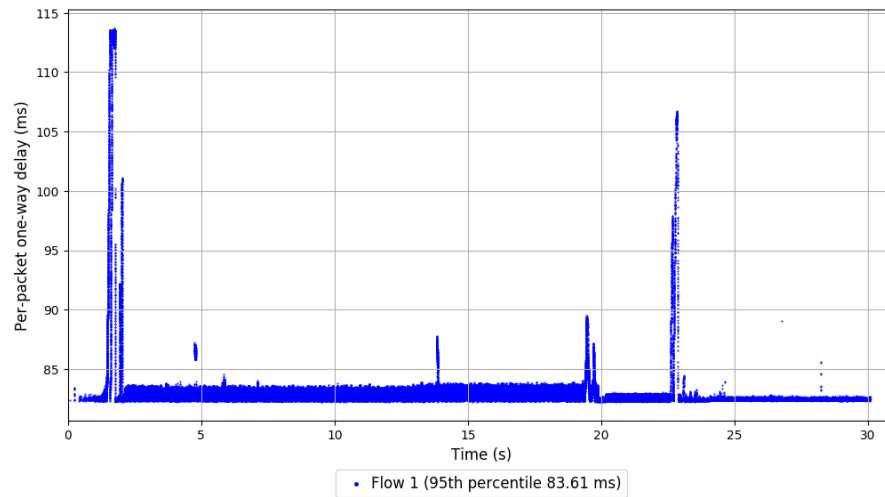
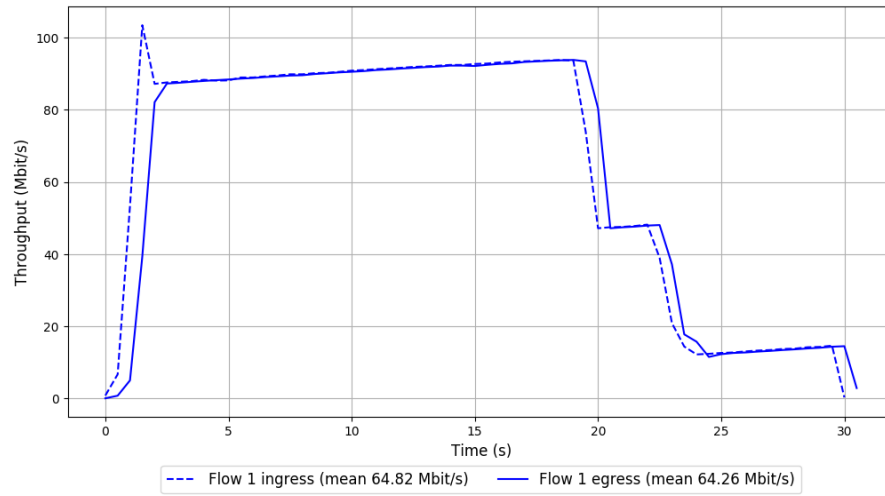


Run 2: Statistics of TCP Vegas

Start at: 2018-09-25 05:51:48
End at: 2018-09-25 05:52:18
Local clock offset: 3.414 ms
Remote clock offset: -2.975 ms

Below is generated by plot.py at 2018-09-25 08:10:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 64.26 Mbit/s
95th percentile per-packet one-way delay: 83.609 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 64.26 Mbit/s
95th percentile per-packet one-way delay: 83.609 ms
Loss rate: 0.87%

Run 2: Report of TCP Vegas — Data Link

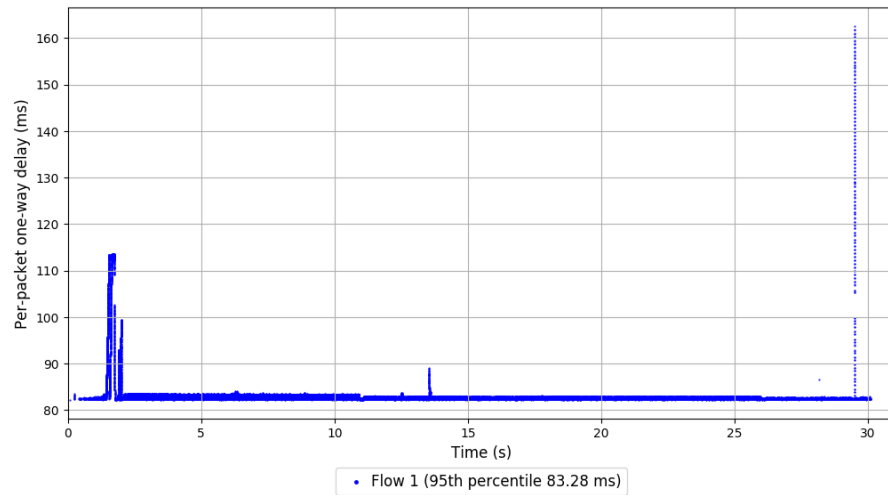
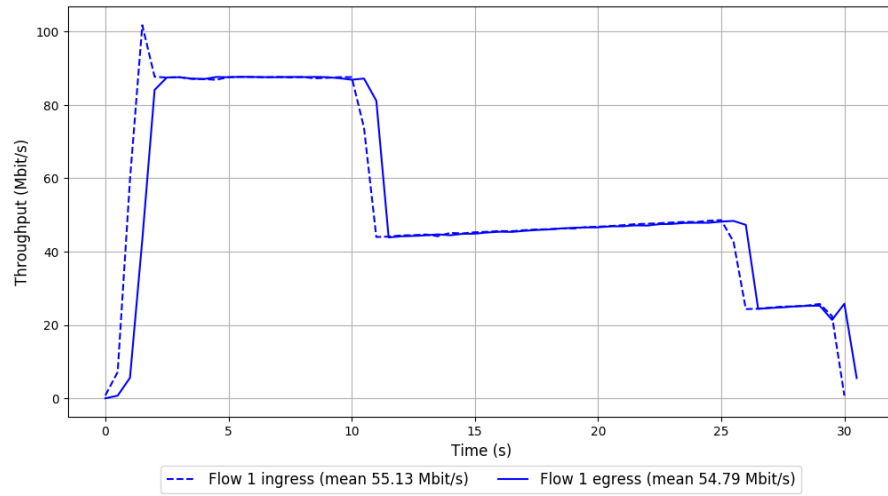


Run 3: Statistics of TCP Vegas

Start at: 2018-09-25 06:31:32
End at: 2018-09-25 06:32:02
Local clock offset: -4.602 ms
Remote clock offset: -1.813 ms

Below is generated by plot.py at 2018-09-25 08:10:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 54.79 Mbit/s
95th percentile per-packet one-way delay: 83.281 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 54.79 Mbit/s
95th percentile per-packet one-way delay: 83.281 ms
Loss rate: 0.63%

Run 3: Report of TCP Vegas — Data Link

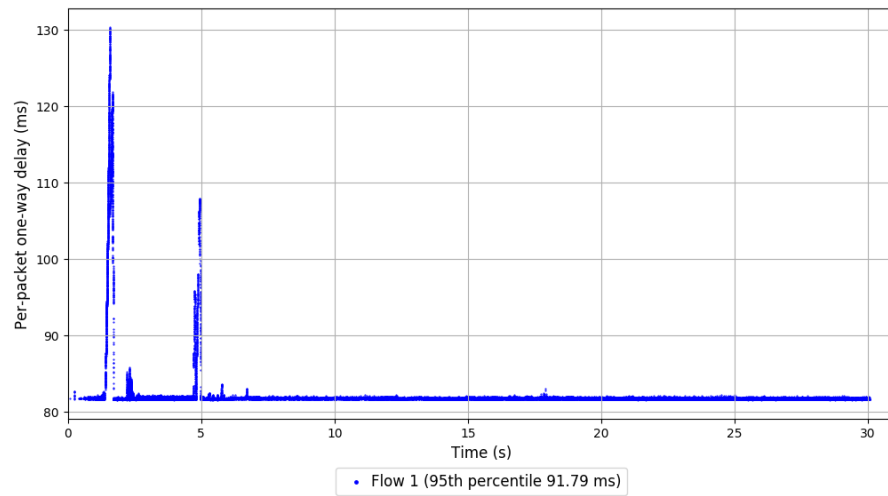
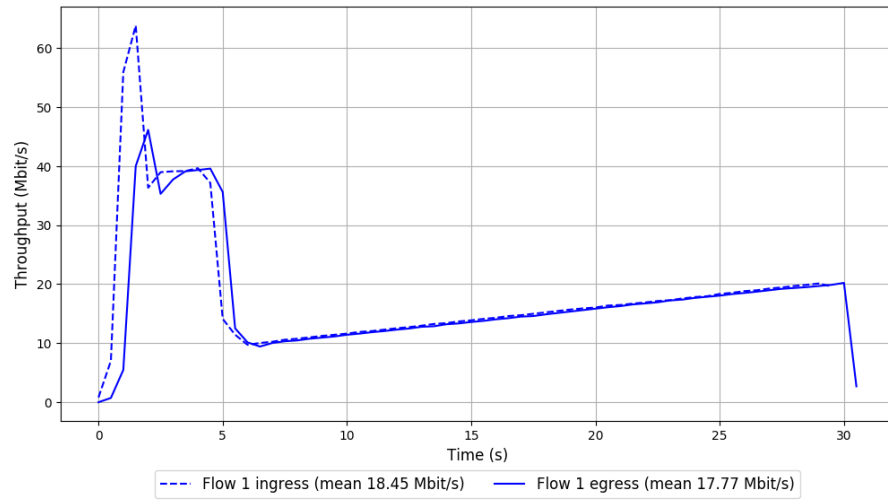


Run 4: Statistics of TCP Vegas

Start at: 2018-09-25 07:11:06
End at: 2018-09-25 07:11:36
Local clock offset: -0.565 ms
Remote clock offset: -2.863 ms

Below is generated by plot.py at 2018-09-25 08:10:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 17.77 Mbit/s
95th percentile per-packet one-way delay: 91.789 ms
Loss rate: 3.67%
-- Flow 1:
Average throughput: 17.77 Mbit/s
95th percentile per-packet one-way delay: 91.789 ms
Loss rate: 3.67%

Run 4: Report of TCP Vegas — Data Link

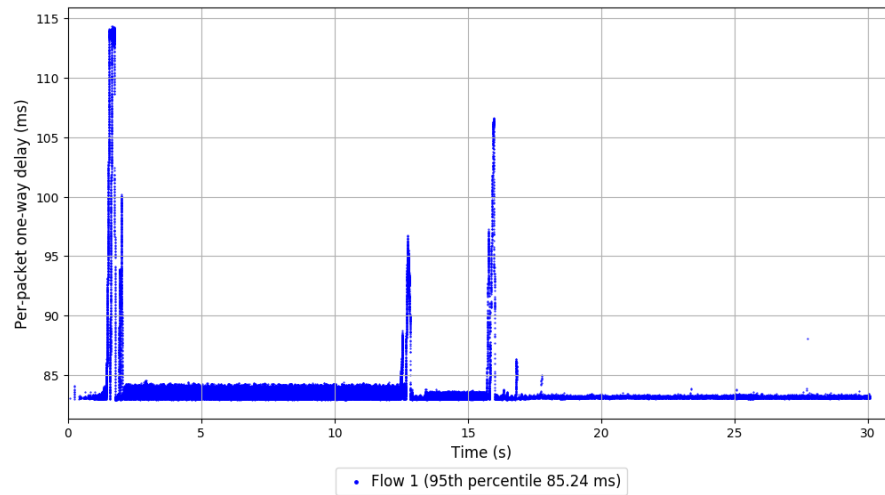
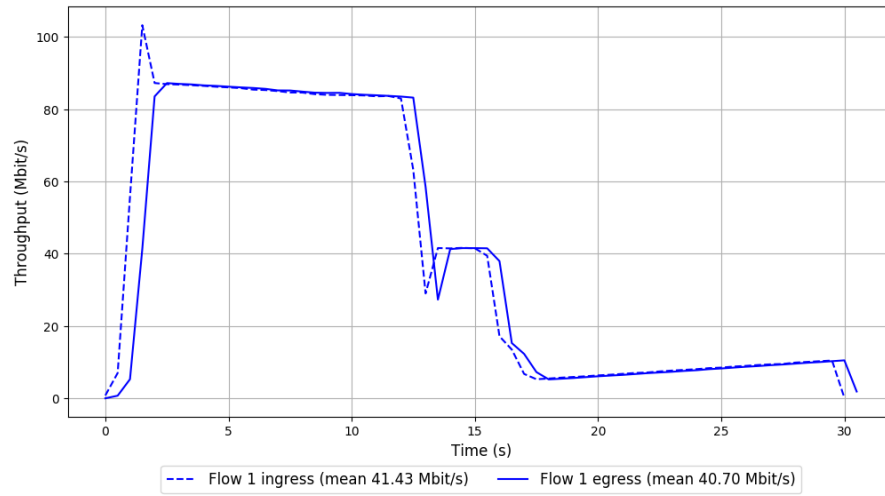


Run 5: Statistics of TCP Vegas

Start at: 2018-09-25 07:52:55
End at: 2018-09-25 07:53:25
Local clock offset: -1.656 ms
Remote clock offset: -1.683 ms

Below is generated by plot.py at 2018-09-25 08:10:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 40.70 Mbit/s
95th percentile per-packet one-way delay: 85.239 ms
Loss rate: 1.76%
-- Flow 1:
Average throughput: 40.70 Mbit/s
95th percentile per-packet one-way delay: 85.239 ms
Loss rate: 1.76%

Run 5: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2018-09-25 04:55:20

End at: 2018-09-25 04:55:50

Local clock offset: 1.781 ms

Remote clock offset: 2.855 ms

Below is generated by plot.py at 2018-09-25 08:10:59

Datalink statistics

-- Total of 1 flow:

Average throughput: 54.23 Mbit/s

95th percentile per-packet one-way delay: 162.878 ms

Loss rate: 81.42%

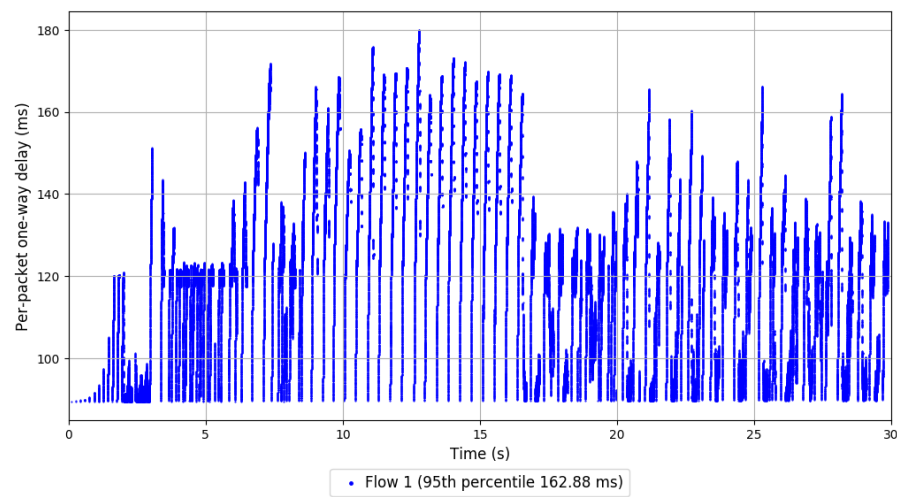
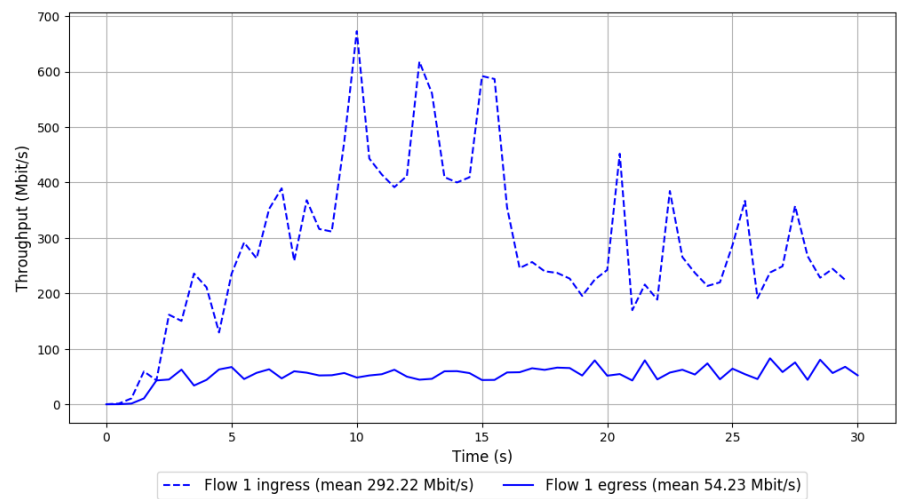
-- Flow 1:

Average throughput: 54.23 Mbit/s

95th percentile per-packet one-way delay: 162.878 ms

Loss rate: 81.42%

Run 1: Report of Verus — Data Link

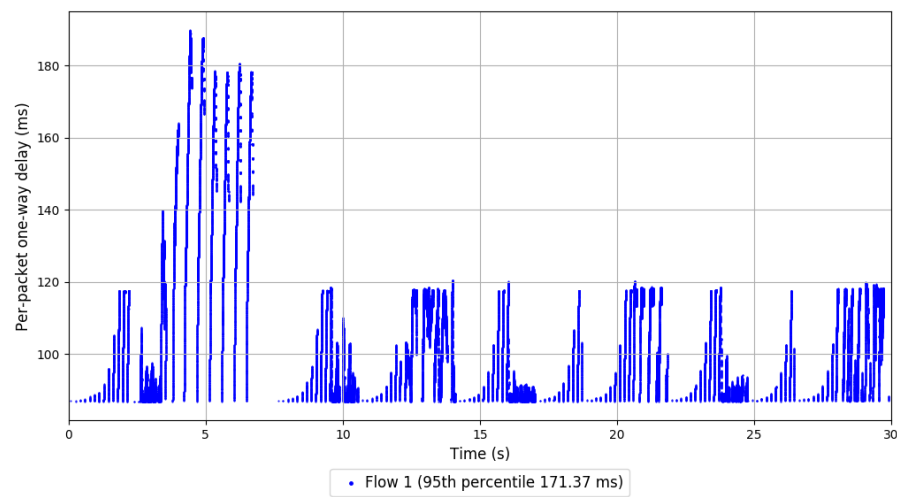
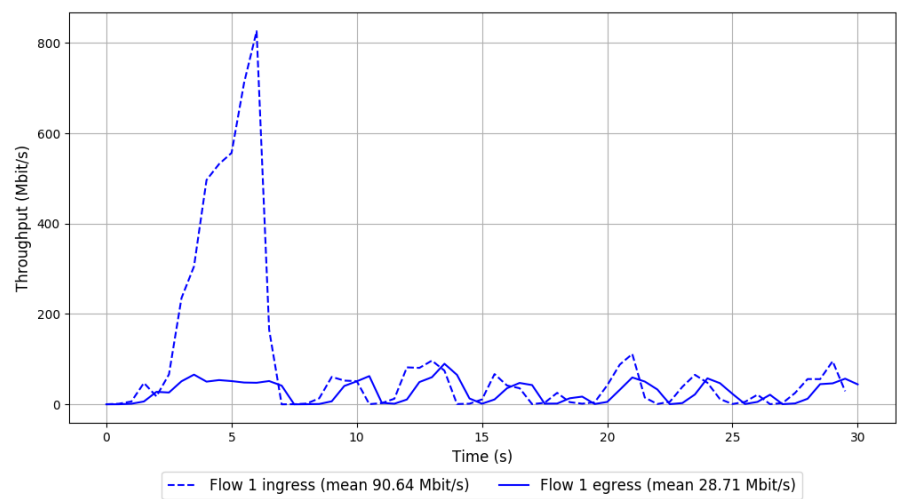


Run 2: Statistics of Verus

Start at: 2018-09-25 05:36:15
End at: 2018-09-25 05:36:45
Local clock offset: 8.132 ms
Remote clock offset: -1.981 ms

Below is generated by plot.py at 2018-09-25 08:10:59
Datalink statistics
-- Total of 1 flow:
Average throughput: 28.71 Mbit/s
95th percentile per-packet one-way delay: 171.370 ms
Loss rate: 68.33%
-- Flow 1:
Average throughput: 28.71 Mbit/s
95th percentile per-packet one-way delay: 171.370 ms
Loss rate: 68.33%

Run 2: Report of Verus — Data Link

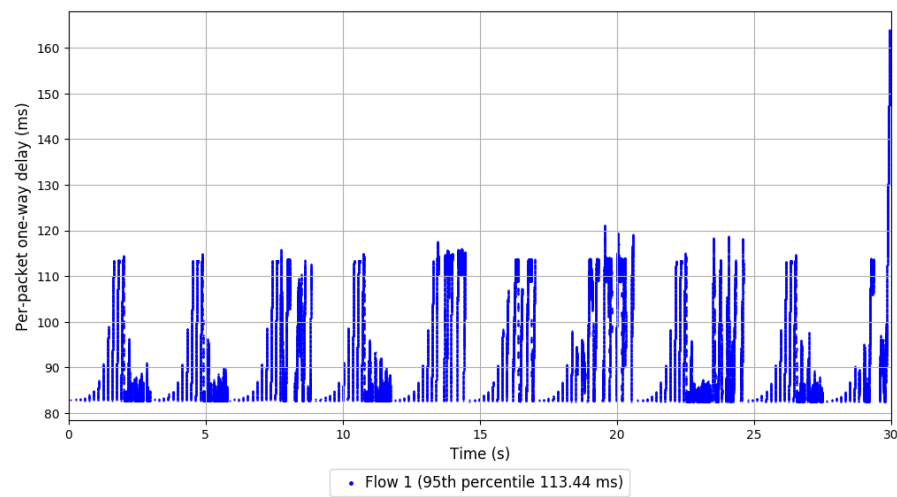
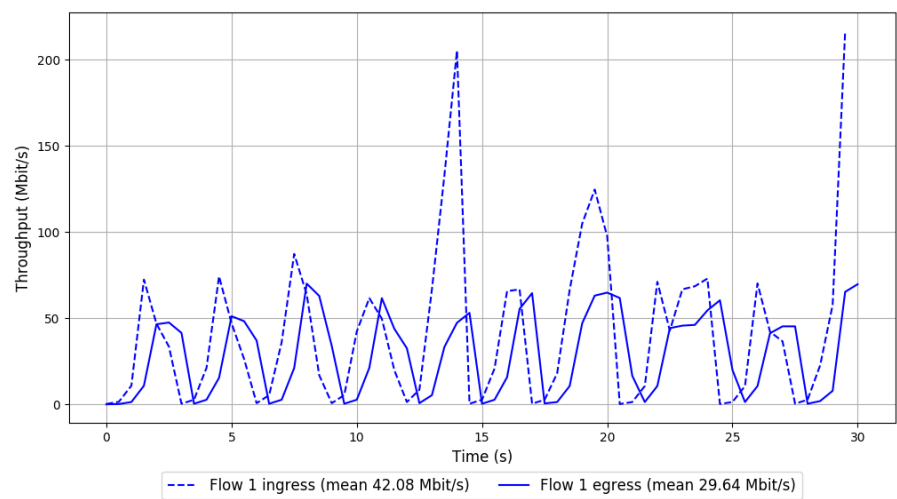


Run 3: Statistics of Verus

Start at: 2018-09-25 06:16:20
End at: 2018-09-25 06:16:50
Local clock offset: -1.767 ms
Remote clock offset: -1.749 ms

Below is generated by plot.py at 2018-09-25 08:10:59
Datalink statistics
-- Total of 1 flow:
Average throughput: 29.64 Mbit/s
95th percentile per-packet one-way delay: 113.441 ms
Loss rate: 29.36%
-- Flow 1:
Average throughput: 29.64 Mbit/s
95th percentile per-packet one-way delay: 113.441 ms
Loss rate: 29.36%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-09-25 06:55:34

End at: 2018-09-25 06:56:04

Local clock offset: -2.451 ms

Remote clock offset: 0.902 ms

Below is generated by plot.py at 2018-09-25 08:10:59

Datalink statistics

-- Total of 1 flow:

Average throughput: 30.95 Mbit/s

95th percentile per-packet one-way delay: 163.071 ms

Loss rate: 55.76%

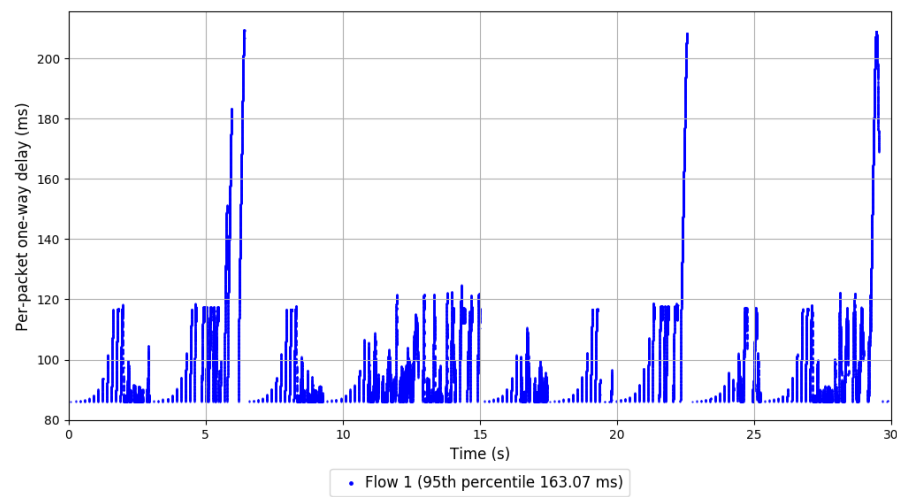
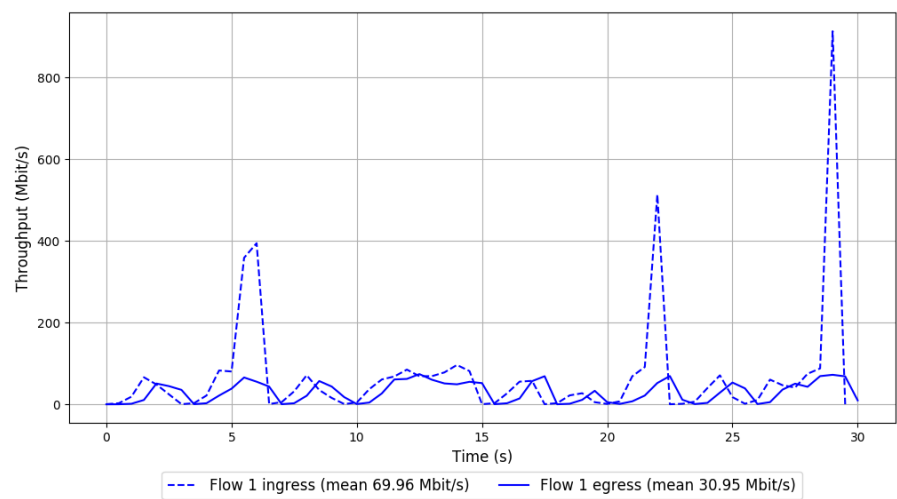
-- Flow 1:

Average throughput: 30.95 Mbit/s

95th percentile per-packet one-way delay: 163.071 ms

Loss rate: 55.76%

Run 4: Report of Verus — Data Link

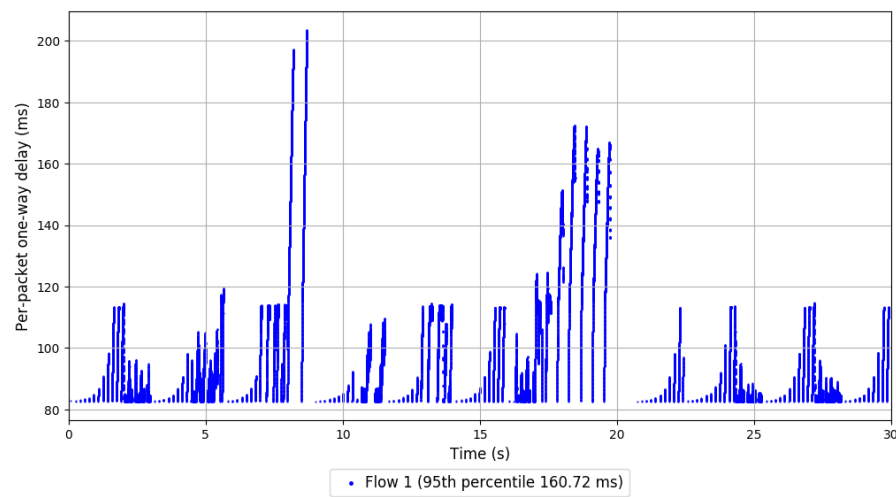
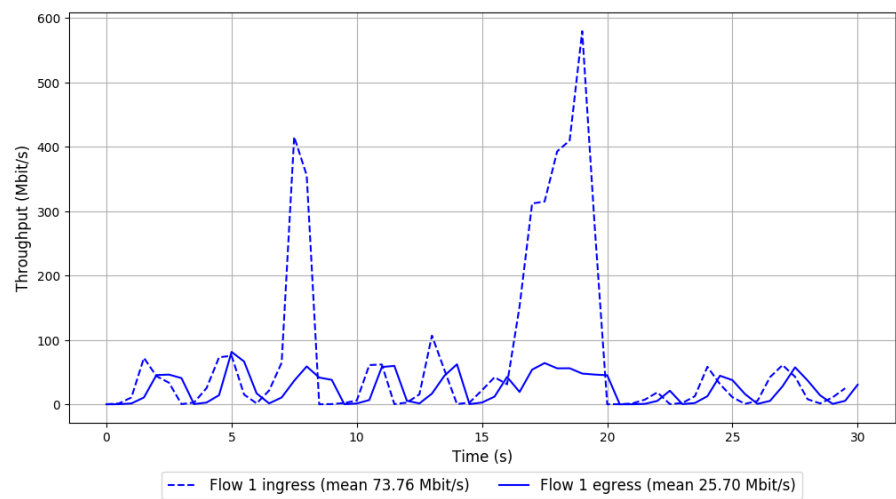


Run 5: Statistics of Verus

Start at: 2018-09-25 07:36:18
End at: 2018-09-25 07:36:48
Local clock offset: -1.52 ms
Remote clock offset: -2.939 ms

Below is generated by plot.py at 2018-09-25 08:10:59
Datalink statistics
-- Total of 1 flow:
Average throughput: 25.70 Mbit/s
95th percentile per-packet one-way delay: 160.717 ms
Loss rate: 65.12%
-- Flow 1:
Average throughput: 25.70 Mbit/s
95th percentile per-packet one-way delay: 160.717 ms
Loss rate: 65.12%

Run 5: Report of Verus — Data Link

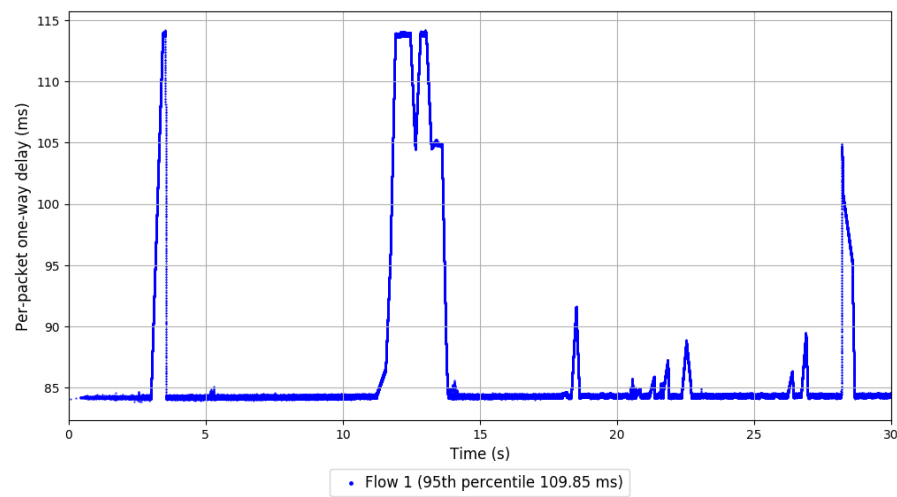
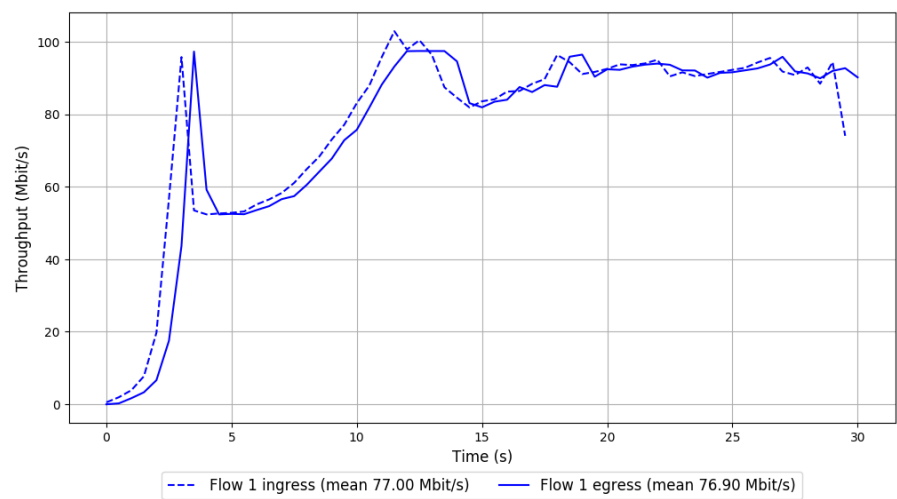


Run 1: Statistics of PCC-Vivace

Start at: 2018-09-25 05:05:27
End at: 2018-09-25 05:05:57
Local clock offset: -2.422 ms
Remote clock offset: -2.141 ms

Below is generated by plot.py at 2018-09-25 08:10:59
Datalink statistics
-- Total of 1 flow:
Average throughput: 76.90 Mbit/s
95th percentile per-packet one-way delay: 109.854 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 76.90 Mbit/s
95th percentile per-packet one-way delay: 109.854 ms
Loss rate: 0.13%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2018-09-25 05:45:39

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

Local clock offset: 4.845 ms

Remote clock offset: 3.191 ms

Below is generated by plot.py at 2018-09-25 08:10:59

Datalink statistics

-- Total of 1 flow:

Average throughput: 77.69 Mbit/s

95th percentile per-packet one-way delay: 90.732 ms

Loss rate: 0.03%

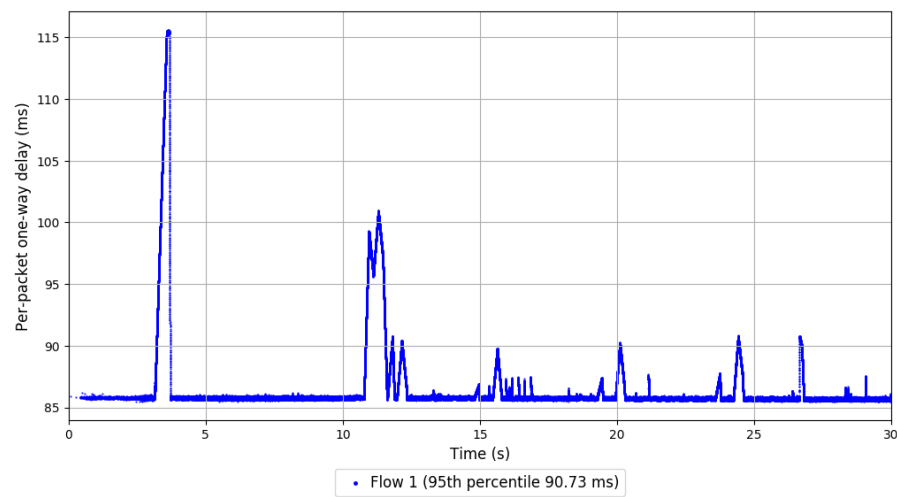
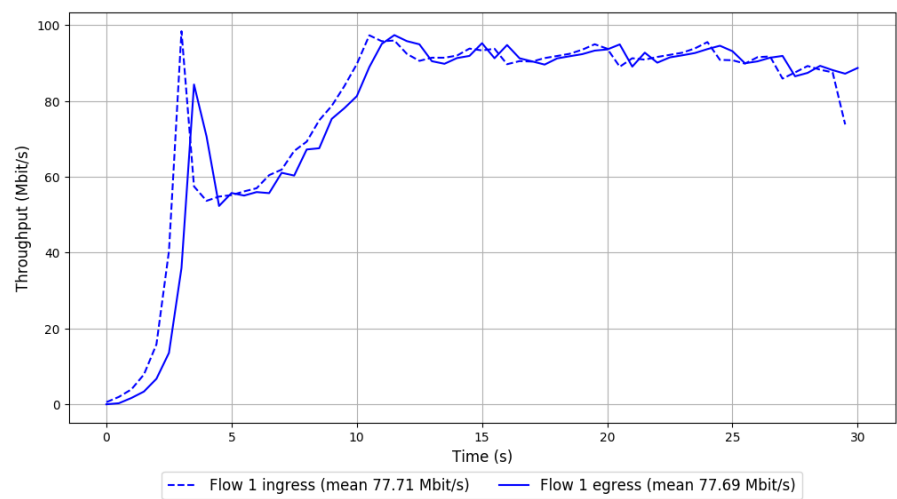
-- Flow 1:

Average throughput: 77.69 Mbit/s

95th percentile per-packet one-way delay: 90.732 ms

Loss rate: 0.03%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

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

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

Local clock offset: -4.067 ms

Remote clock offset: 2.244 ms

Below is generated by plot.py at 2018-09-25 08:10:59

Datalink statistics

-- Total of 1 flow:

Average throughput: 75.73 Mbit/s

95th percentile per-packet one-way delay: 110.159 ms

Loss rate: 0.62%

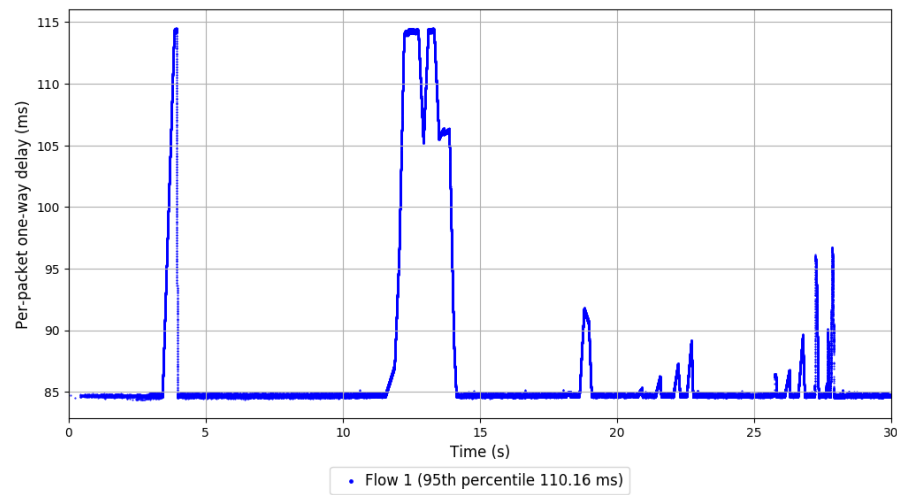
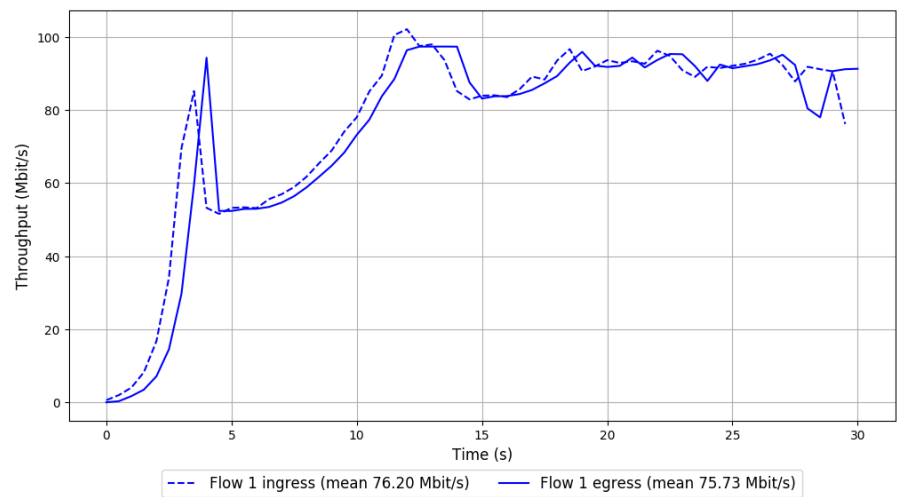
-- Flow 1:

Average throughput: 75.73 Mbit/s

95th percentile per-packet one-way delay: 110.159 ms

Loss rate: 0.62%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2018-09-25 07:05:04

End at: 2018-09-25 07:05:34

Local clock offset: -1.458 ms

Remote clock offset: 3.26 ms

Below is generated by plot.py at 2018-09-25 08:10:59

Datalink statistics

-- Total of 1 flow:

Average throughput: 69.74 Mbit/s

95th percentile per-packet one-way delay: 103.066 ms

Loss rate: 0.87%

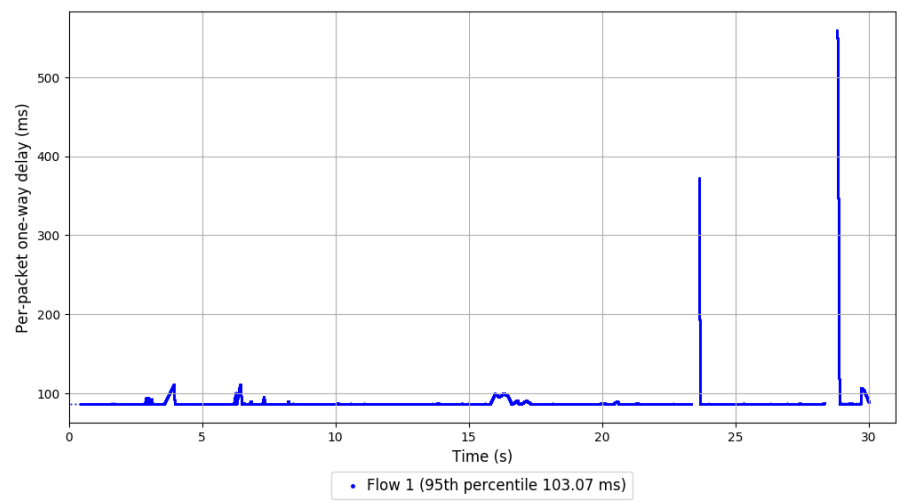
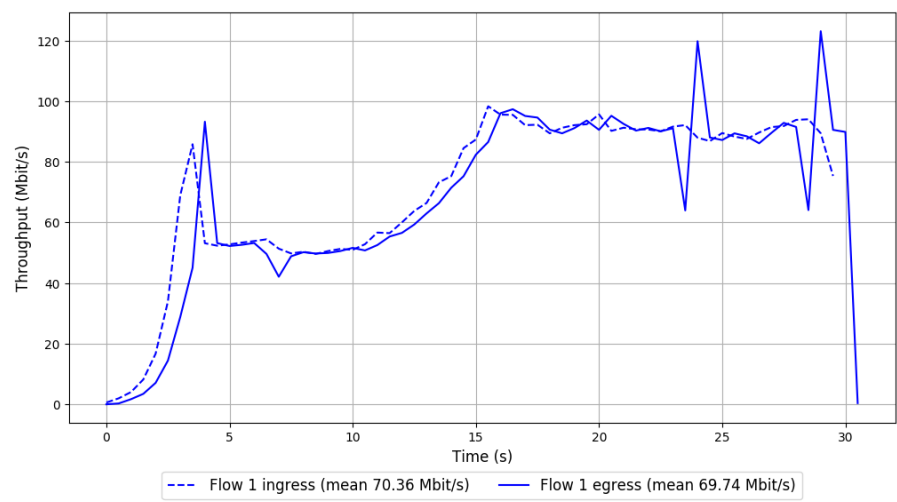
-- Flow 1:

Average throughput: 69.74 Mbit/s

95th percentile per-packet one-way delay: 103.066 ms

Loss rate: 0.87%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2018-09-25 07:46:10

End at: 2018-09-25 07:46:40

Local clock offset: -2.155 ms

Remote clock offset: 2.384 ms

Below is generated by plot.py at 2018-09-25 08:10:59

Datalink statistics

-- Total of 1 flow:

Average throughput: 75.45 Mbit/s

95th percentile per-packet one-way delay: 119.803 ms

Loss rate: 0.19%

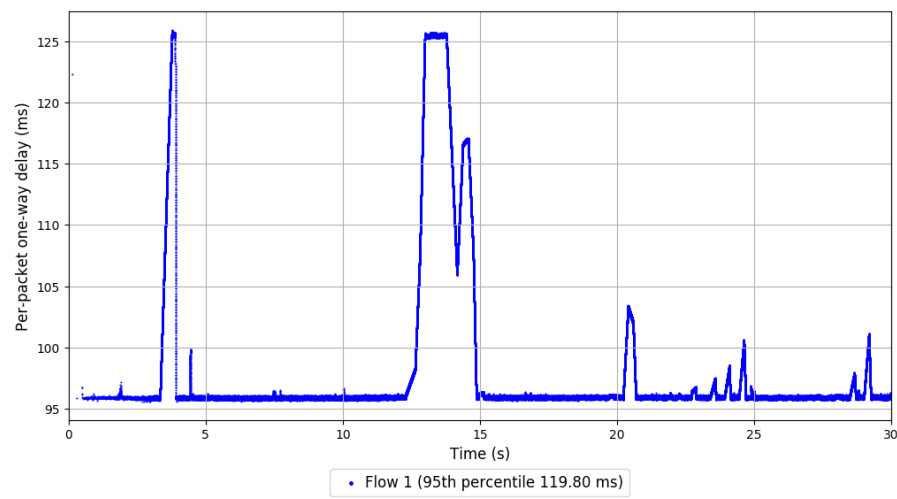
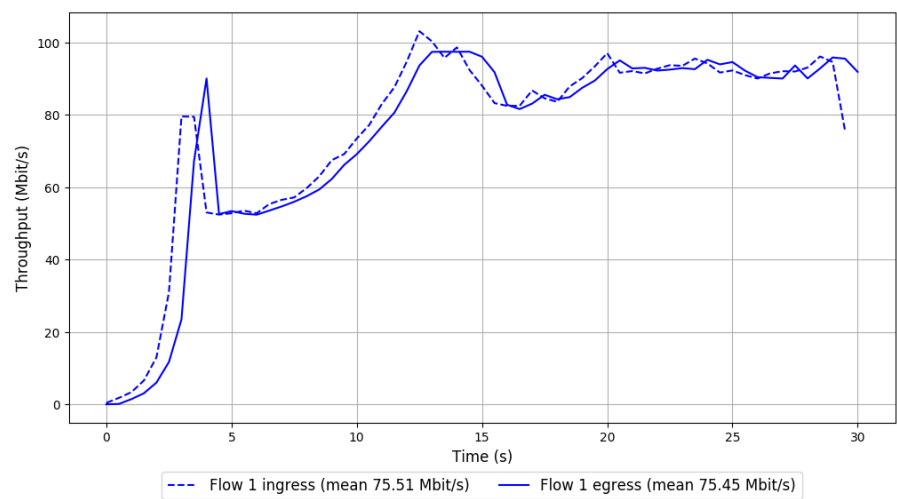
-- Flow 1:

Average throughput: 75.45 Mbit/s

95th percentile per-packet one-way delay: 119.803 ms

Loss rate: 0.19%

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2018-09-25 04:52:19

End at: 2018-09-25 04:52:49

Local clock offset: 0.116 ms

Remote clock offset: 1.63 ms

Below is generated by plot.py at 2018-09-25 08:10:59

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.82 Mbit/s

95th percentile per-packet one-way delay: 87.227 ms

Loss rate: 0.00%

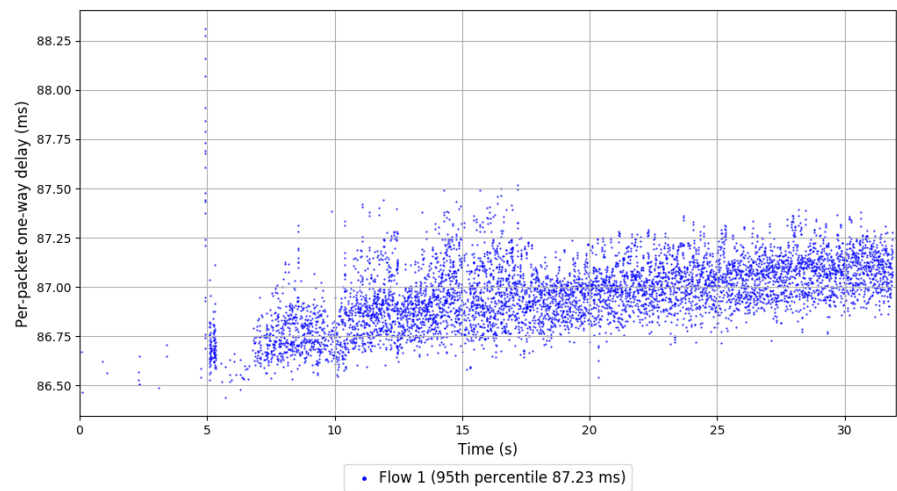
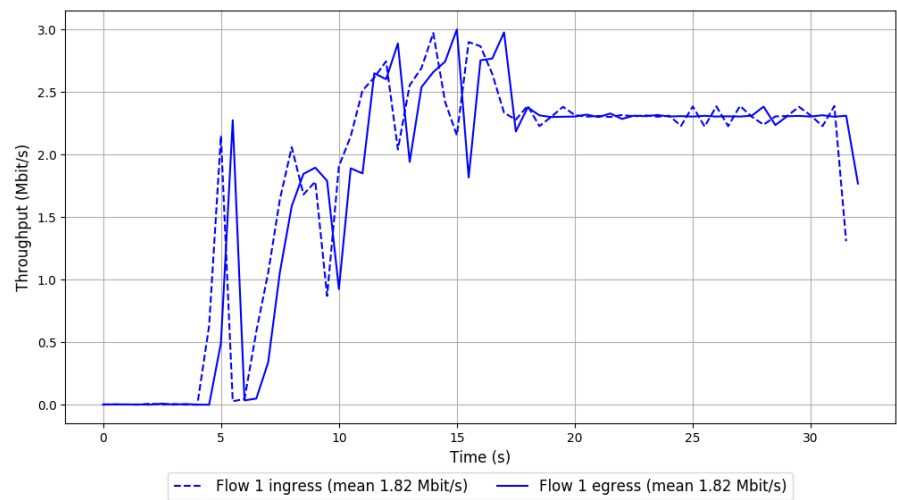
-- Flow 1:

Average throughput: 1.82 Mbit/s

95th percentile per-packet one-way delay: 87.227 ms

Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link

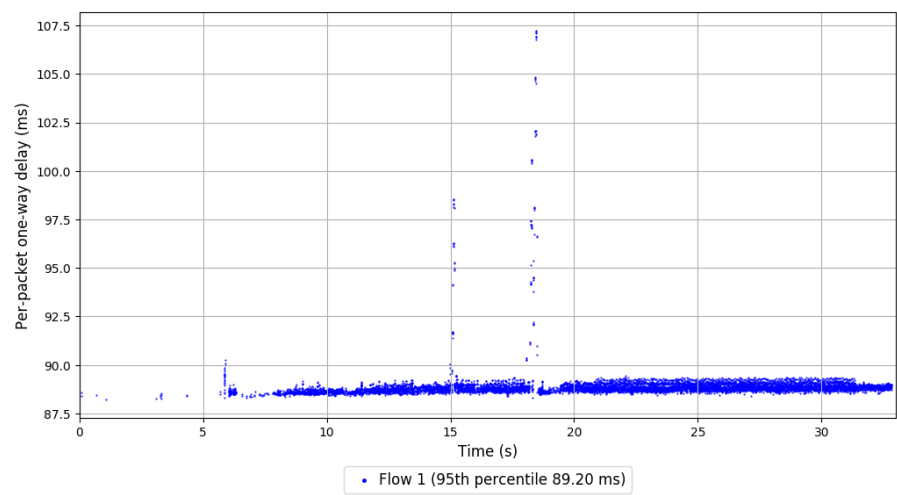
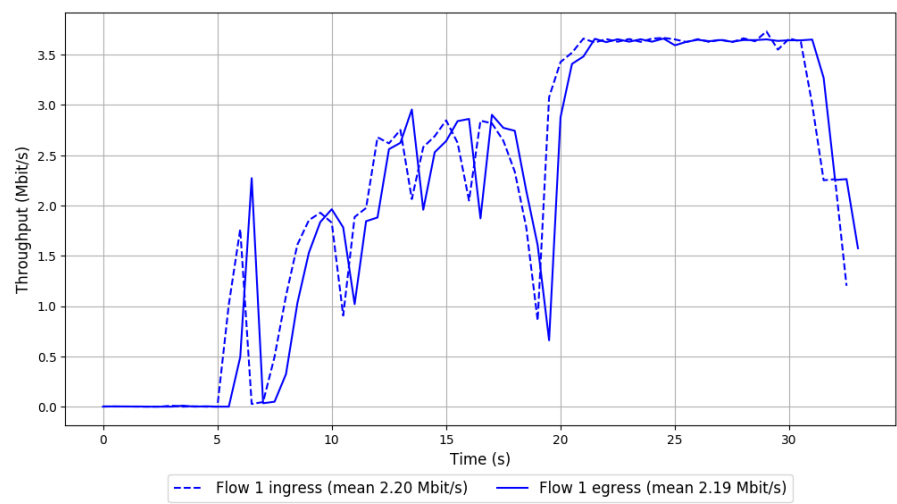


Run 2: Statistics of WebRTC media

Start at: 2018-09-25 05:32:55
End at: 2018-09-25 05:33:25
Local clock offset: 6.838 ms
Remote clock offset: -3.129 ms

Below is generated by plot.py at 2018-09-25 08:10:59
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.19 Mbit/s
95th percentile per-packet one-way delay: 89.205 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 2.19 Mbit/s
95th percentile per-packet one-way delay: 89.205 ms
Loss rate: 0.40%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

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

End at: 2018-09-25 06:13:36

Local clock offset: 1.192 ms

Remote clock offset: 3.33 ms

Below is generated by plot.py at 2018-09-25 08:10:59

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.72 Mbit/s

95th percentile per-packet one-way delay: 93.160 ms

Loss rate: 0.00%

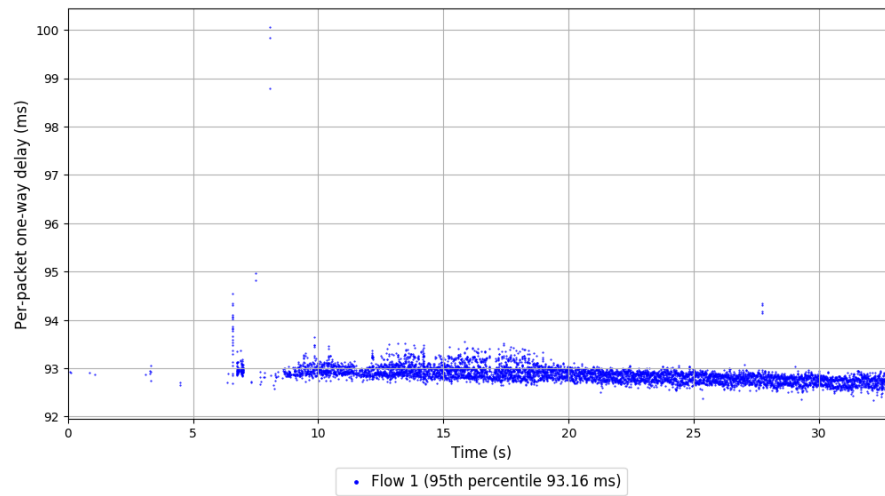
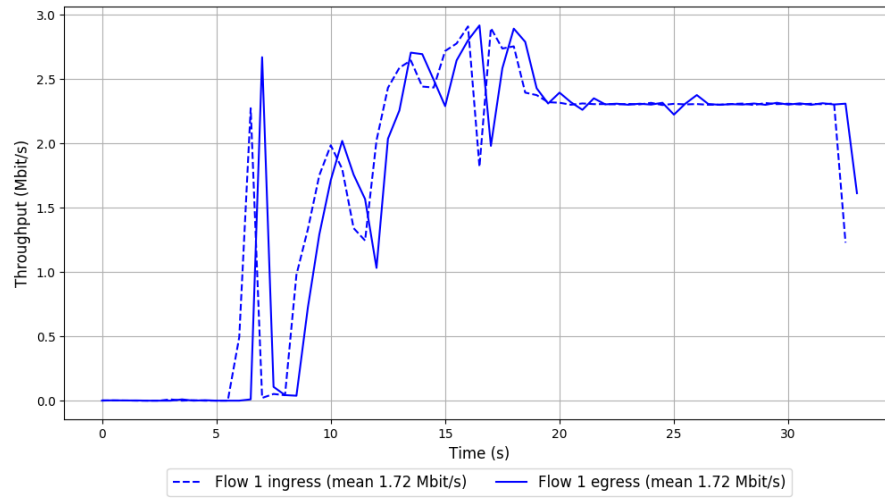
-- Flow 1:

Average throughput: 1.72 Mbit/s

95th percentile per-packet one-way delay: 93.160 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-09-25 06:53:01

End at: 2018-09-25 06:53:31

Local clock offset: -2.075 ms

Remote clock offset: 2.018 ms

Below is generated by plot.py at 2018-09-25 08:10:59

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.92 Mbit/s

95th percentile per-packet one-way delay: 97.481 ms

Loss rate: 0.18%

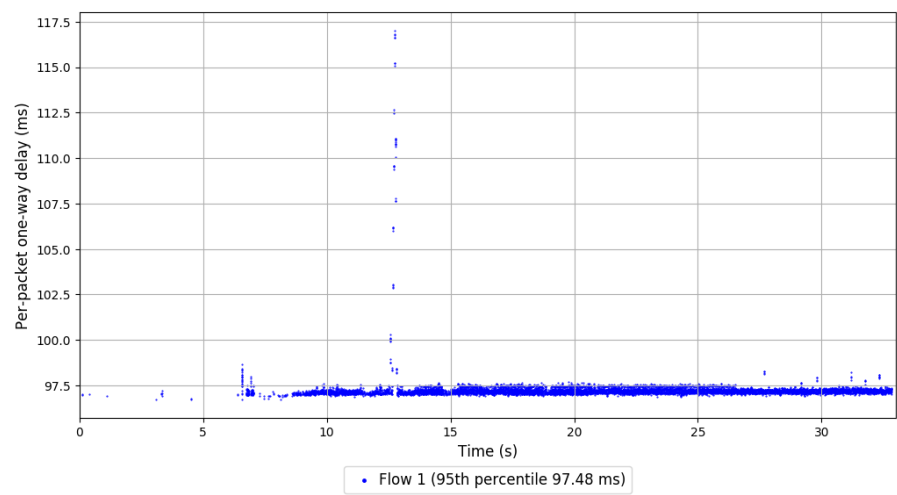
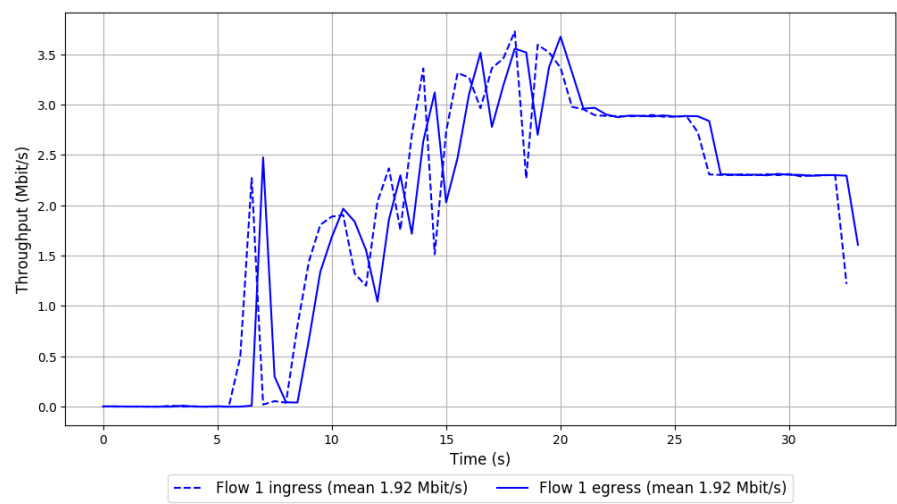
-- Flow 1:

Average throughput: 1.92 Mbit/s

95th percentile per-packet one-way delay: 97.481 ms

Loss rate: 0.18%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-09-25 07:32:50
End at: 2018-09-25 07:33:20
Local clock offset: -1.666 ms
Remote clock offset: -1.797 ms

Below is generated by plot.py at 2018-09-25 08:10:59
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.55 Mbit/s
95th percentile per-packet one-way delay: 83.978 ms
Loss rate: 1.59%
-- Flow 1:
Average throughput: 2.55 Mbit/s
95th percentile per-packet one-way delay: 83.978 ms
Loss rate: 1.59%

Run 5: Report of WebRTC media — Data Link

