

Pantheon Report

Generated at 2018-09-25 14:27:39 (UTC).

Data path: India on `em1` (*remote*) → AWS India 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 `nets.org.sg` 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
```


scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	94.74	41.61	1.88
Copa	5	82.72	21.29	0.08
TCP Cubic	4	95.10	24.30	0.10
FillP	5	94.93	786.58	4.44
FillP-Sheep	5	95.06	43.96	1.56
Indigo	5	92.76	19.03	0.08
Indigo-96d2da3	5	96.86	66.92	6.04
LEDBAT	5	78.67	24.84	0.11
Indigo-Muses	5	82.66	18.32	0.08
PCC-Allegro	5	73.58	18.92	0.09
PCC-Expr	5	79.80	169.23	0.26
QUIC Cubic	5	90.44	26.82	0.11
SCReAM	5	0.21	17.39	0.05
Sprout	5	24.51	24.25	0.14
TaoVA-100x	5	90.57	18.87	0.08
TCP Vegas	5	95.46	20.26	0.08
Verus	5	80.22	45.35	0.25
PCC-Vivace	5	71.21	17.13	0.05
WebRTC media	5	2.40	17.69	0.08

Run 1: Statistics of TCP BBR

Start at: 2018-09-25 12:36:12

End at: 2018-09-25 12:36:42

Local clock offset: 1.229 ms

Remote clock offset: -0.099 ms

Below is generated by plot.py at 2018-09-25 14:16:05

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.66 Mbit/s

95th percentile per-packet one-way delay: 41.281 ms

Loss rate: 2.11%

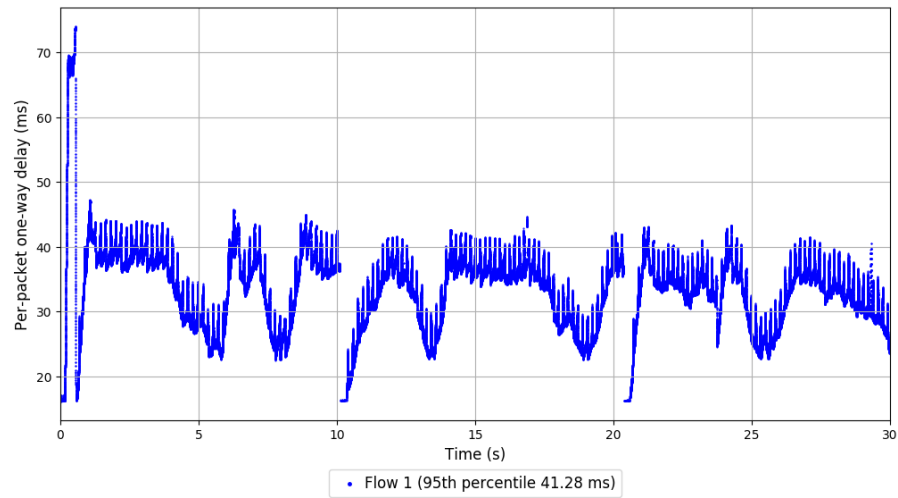
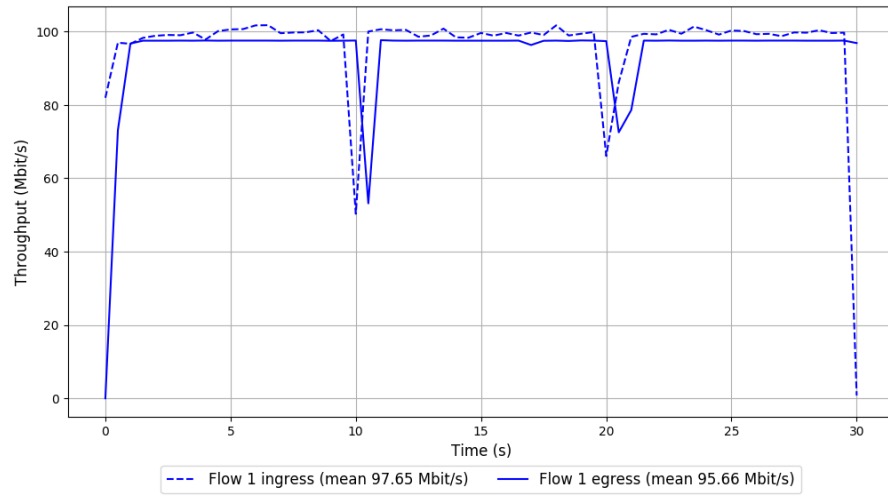
-- Flow 1:

Average throughput: 95.66 Mbit/s

95th percentile per-packet one-way delay: 41.281 ms

Loss rate: 2.11%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-09-25 12:59:53

End at: 2018-09-25 13:00:23

Local clock offset: 1.022 ms

Remote clock offset: 0.652 ms

Below is generated by plot.py at 2018-09-25 14:16:06

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.66 Mbit/s

95th percentile per-packet one-way delay: 40.494 ms

Loss rate: 1.75%

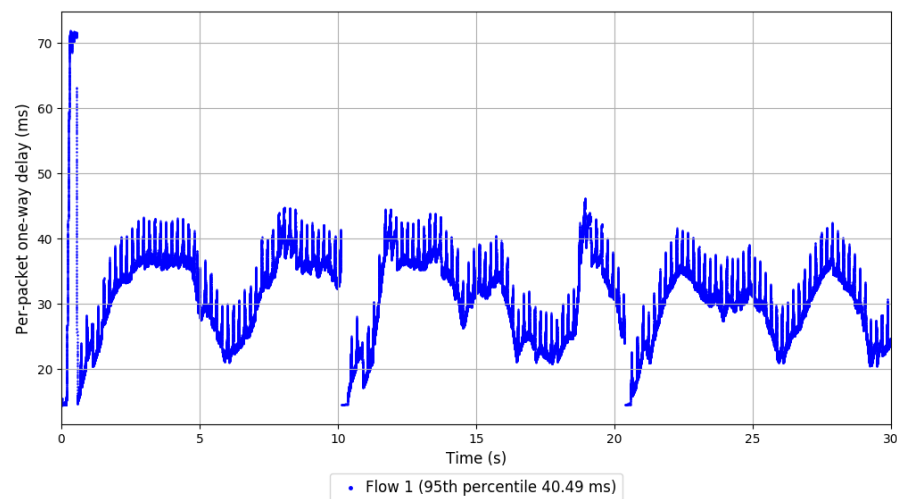
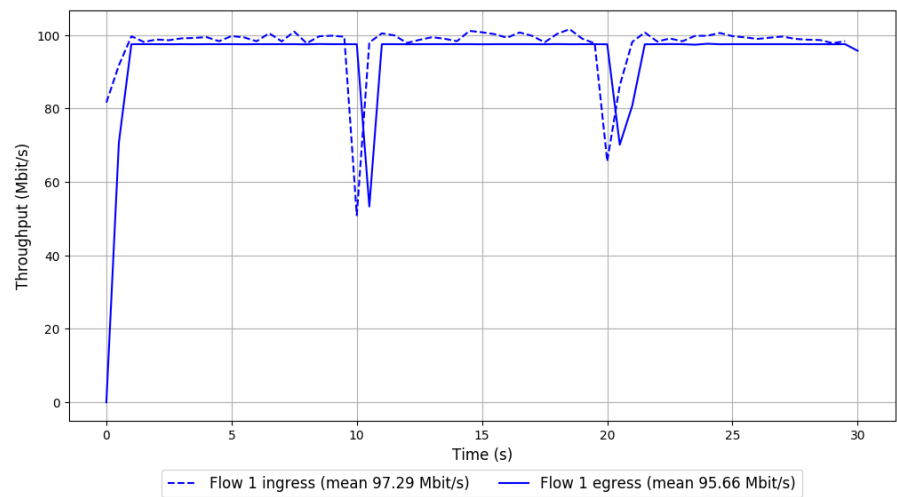
-- Flow 1:

Average throughput: 95.66 Mbit/s

95th percentile per-packet one-way delay: 40.494 ms

Loss rate: 1.75%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-09-25 13:23:32

End at: 2018-09-25 13:24:02

Local clock offset: 0.722 ms

Remote clock offset: 0.157 ms

Below is generated by plot.py at 2018-09-25 14:16:06

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.44 Mbit/s

95th percentile per-packet one-way delay: 40.838 ms

Loss rate: 2.01%

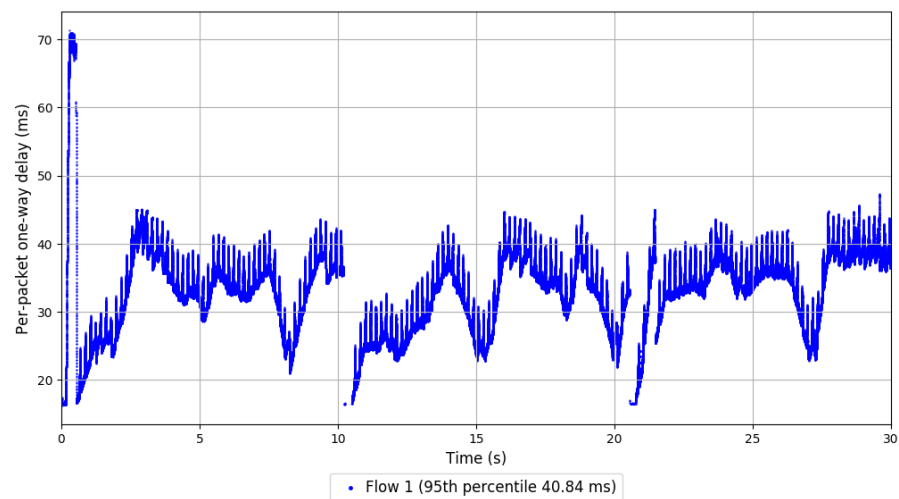
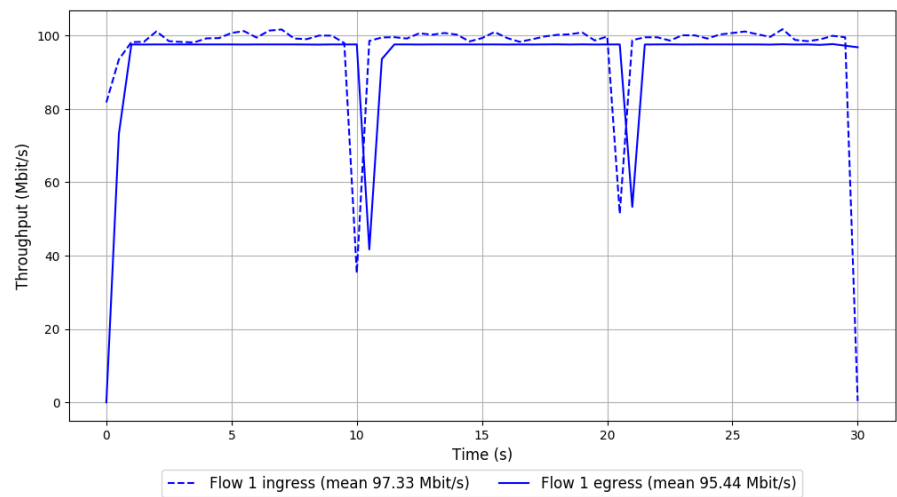
-- Flow 1:

Average throughput: 95.44 Mbit/s

95th percentile per-packet one-way delay: 40.838 ms

Loss rate: 2.01%

Run 3: Report of TCP BBR — Data Link

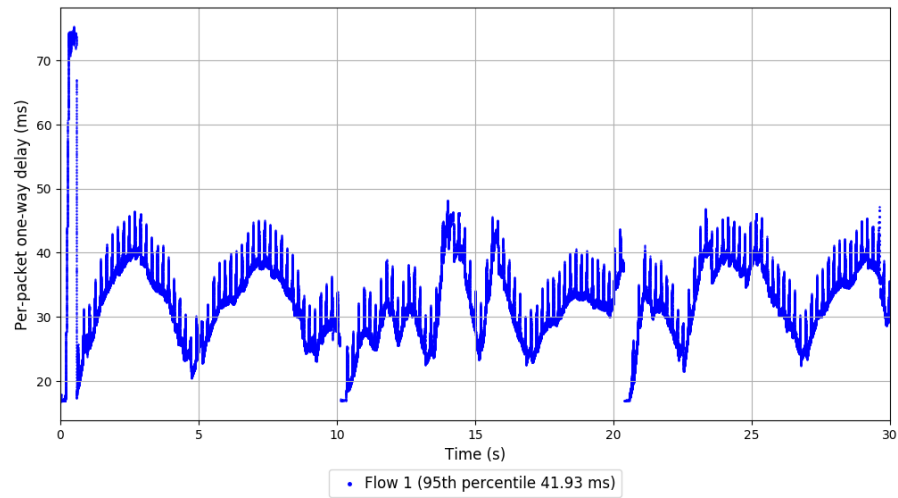
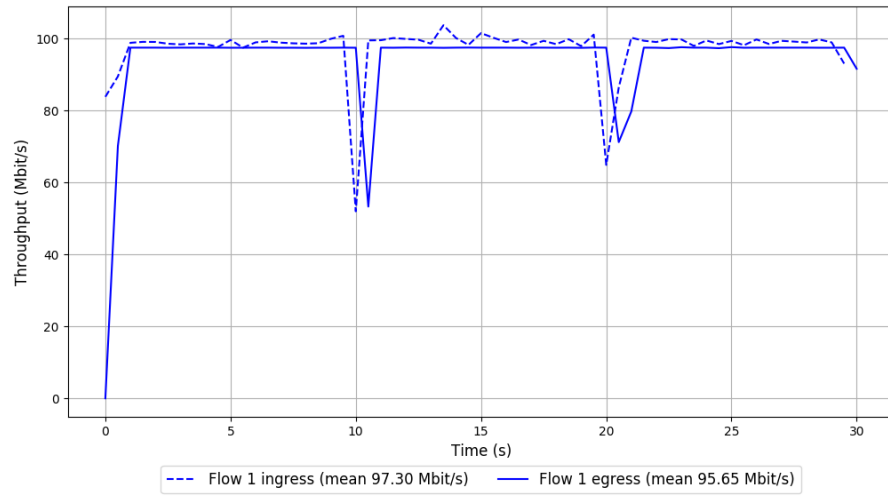


Run 4: Statistics of TCP BBR

Start at: 2018-09-25 13:47:15
End at: 2018-09-25 13:47:45
Local clock offset: -1.675 ms
Remote clock offset: -2.166 ms

Below is generated by plot.py at 2018-09-25 14:16:06
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.65 Mbit/s
95th percentile per-packet one-way delay: 41.929 ms
Loss rate: 1.77%
-- Flow 1:
Average throughput: 95.65 Mbit/s
95th percentile per-packet one-way delay: 41.929 ms
Loss rate: 1.77%

Run 4: Report of TCP BBR — Data Link

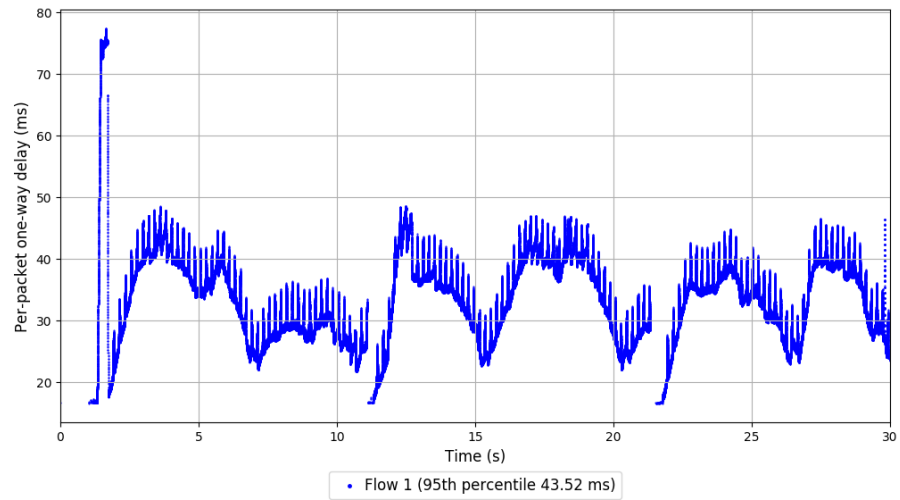
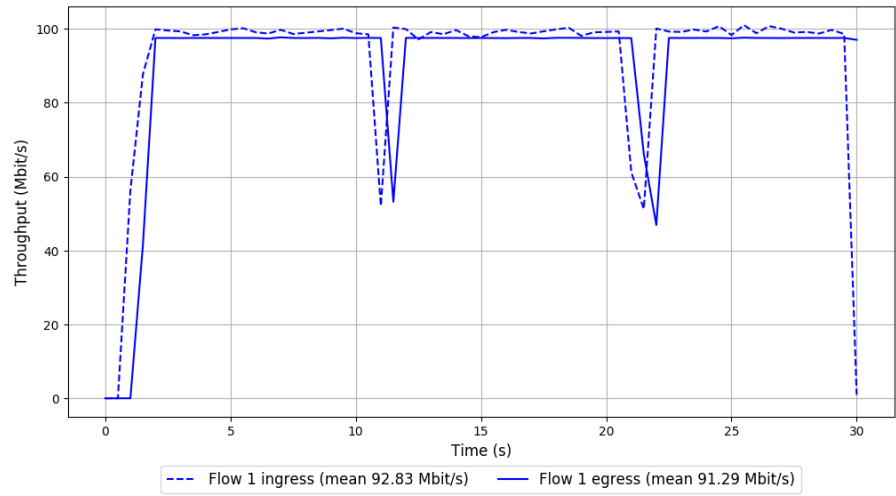


Run 5: Statistics of TCP BBR

Start at: 2018-09-25 14:10:08
End at: 2018-09-25 14:10:38
Local clock offset: -2.584 ms
Remote clock offset: -2.888 ms

Below is generated by plot.py at 2018-09-25 14:16:06
Datalink statistics
-- Total of 1 flow:
Average throughput: 91.29 Mbit/s
95th percentile per-packet one-way delay: 43.517 ms
Loss rate: 1.74%
-- Flow 1:
Average throughput: 91.29 Mbit/s
95th percentile per-packet one-way delay: 43.517 ms
Loss rate: 1.74%

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2018-09-25 12:23:30

End at: 2018-09-25 12:24:00

Local clock offset: 1.447 ms

Remote clock offset: 0.984 ms

Below is generated by plot.py at 2018-09-25 14:16:52

Datalink statistics

-- Total of 1 flow:

Average throughput: 84.80 Mbit/s

95th percentile per-packet one-way delay: 19.520 ms

Loss rate: 0.09%

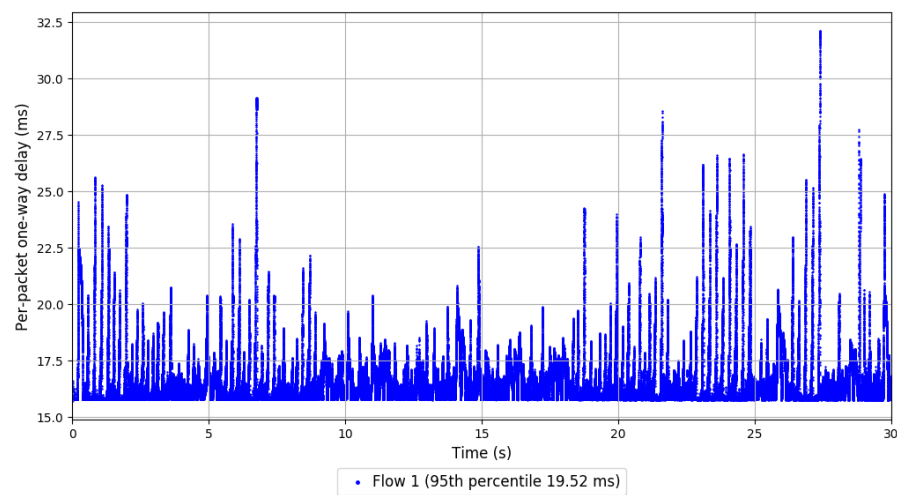
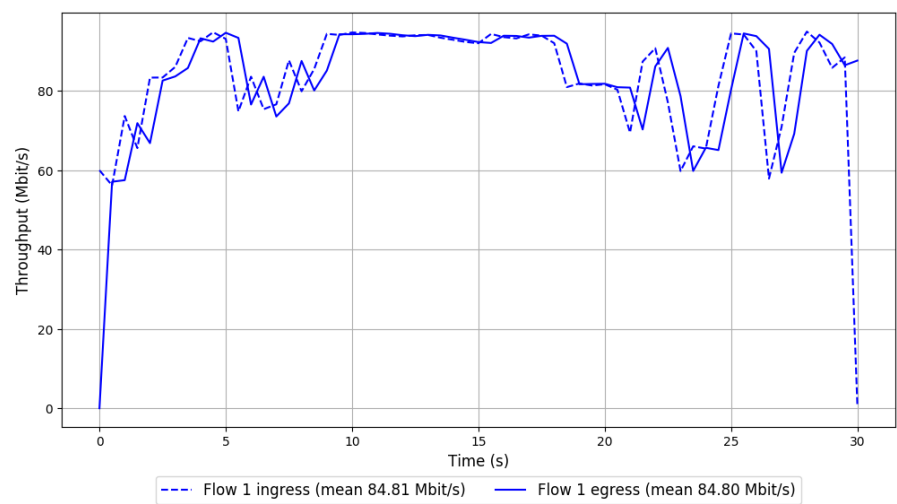
-- Flow 1:

Average throughput: 84.80 Mbit/s

95th percentile per-packet one-way delay: 19.520 ms

Loss rate: 0.09%

Run 1: Report of Copa — Data Link

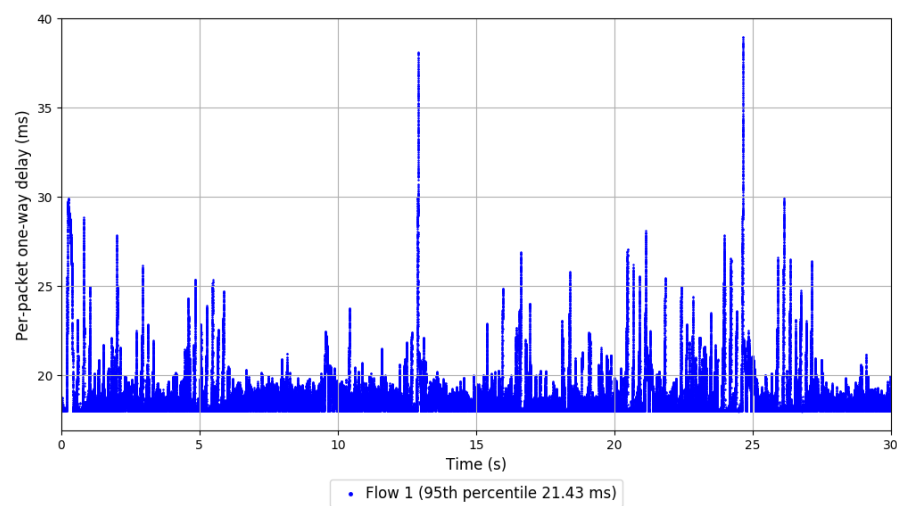
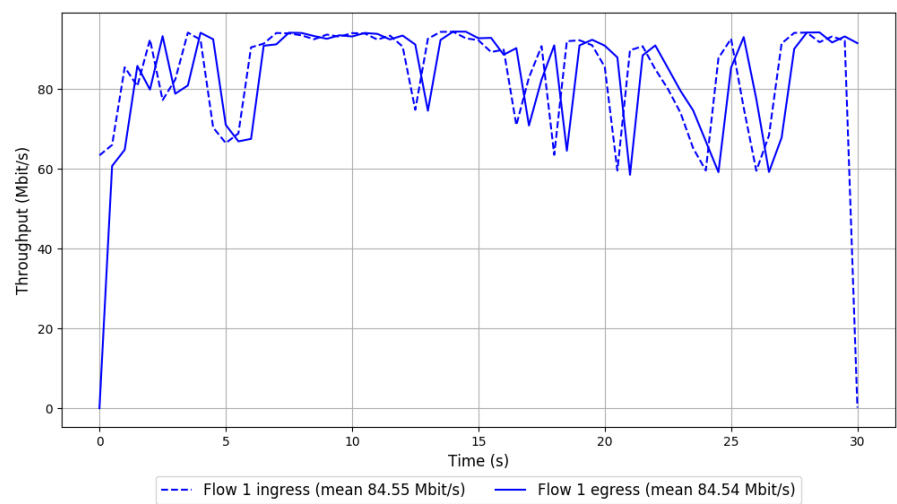


Run 2: Statistics of Copa

Start at: 2018-09-25 12:47:13
End at: 2018-09-25 12:47:44
Local clock offset: 2.919 ms
Remote clock offset: -0.609 ms

Below is generated by plot.py at 2018-09-25 14:16:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 84.54 Mbit/s
95th percentile per-packet one-way delay: 21.435 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 84.54 Mbit/s
95th percentile per-packet one-way delay: 21.435 ms
Loss rate: 0.08%

Run 2: Report of Copa — Data Link

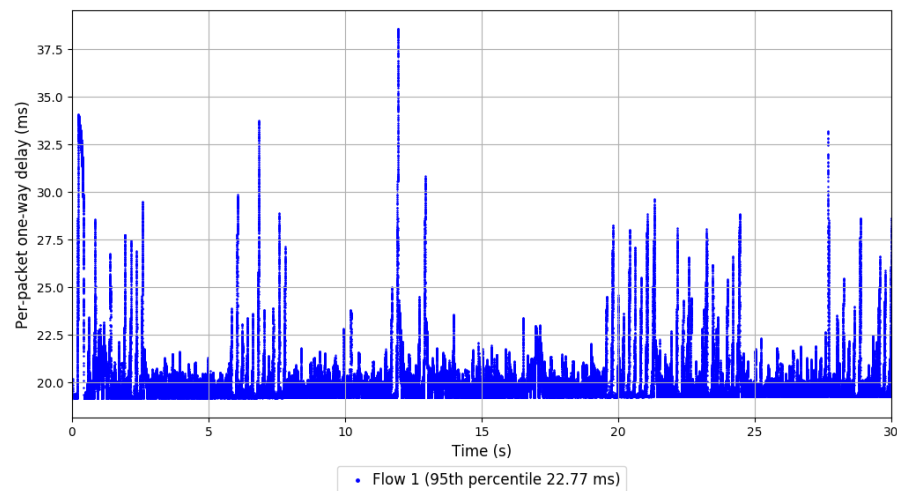
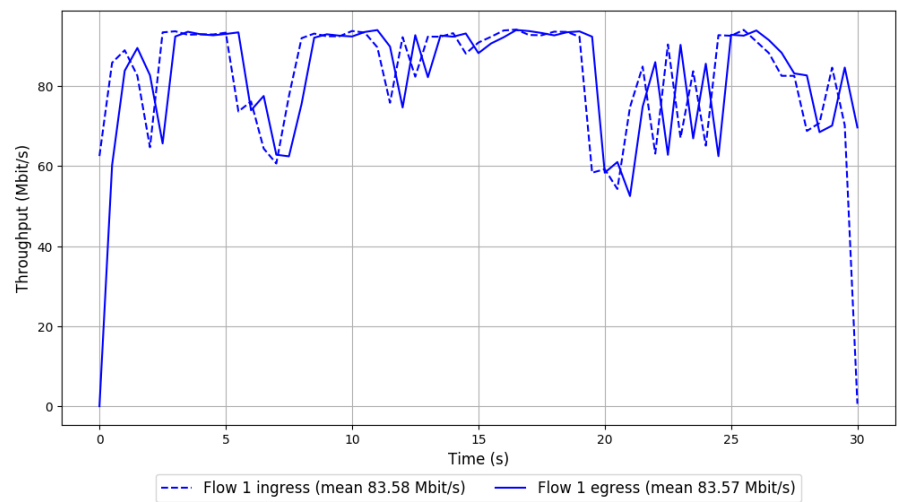


Run 3: Statistics of Copa

Start at: 2018-09-25 13:11:03
End at: 2018-09-25 13:11:33
Local clock offset: 3.333 ms
Remote clock offset: -1.476 ms

Below is generated by plot.py at 2018-09-25 14:16:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 83.57 Mbit/s
95th percentile per-packet one-way delay: 22.773 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 83.57 Mbit/s
95th percentile per-packet one-way delay: 22.773 ms
Loss rate: 0.09%

Run 3: Report of Copa — Data Link

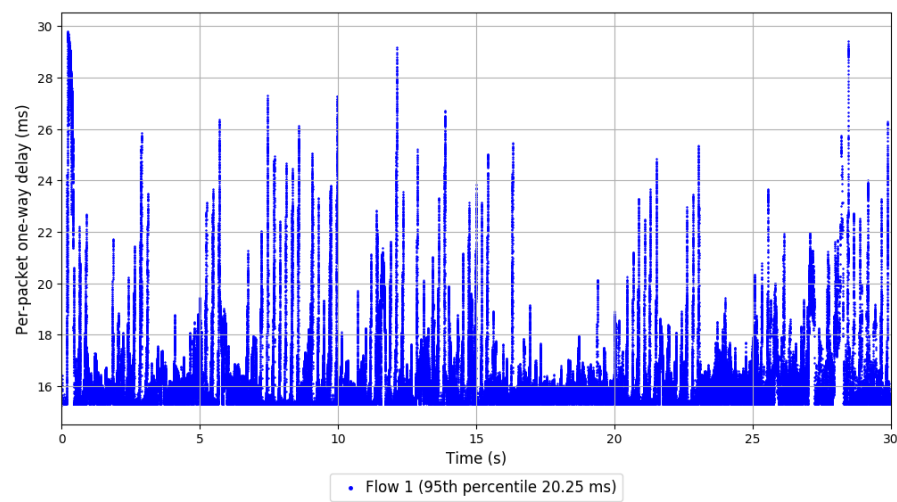
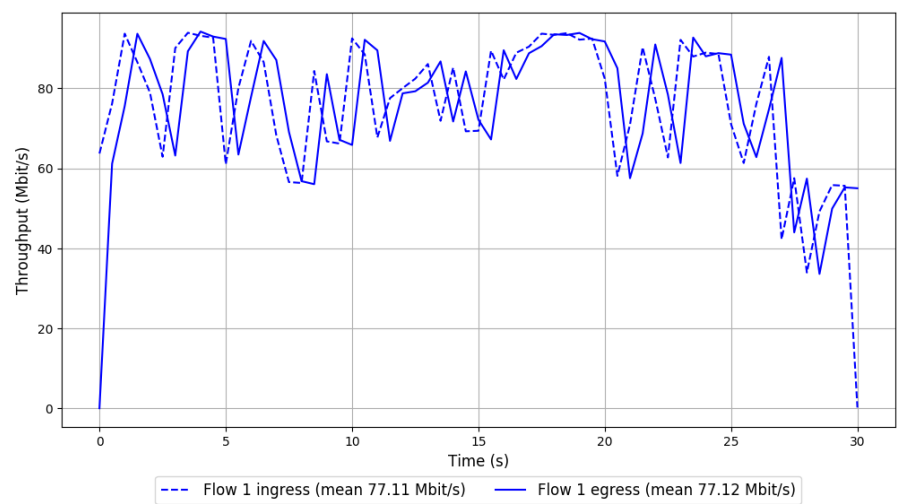


Run 4: Statistics of Copa

Start at: 2018-09-25 13:34:49
End at: 2018-09-25 13:35:19
Local clock offset: -1.957 ms
Remote clock offset: -1.085 ms

Below is generated by plot.py at 2018-09-25 14:17:47
Datalink statistics
-- Total of 1 flow:
Average throughput: 77.12 Mbit/s
95th percentile per-packet one-way delay: 20.246 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 77.12 Mbit/s
95th percentile per-packet one-way delay: 20.246 ms
Loss rate: 0.06%

Run 4: Report of Copa — Data Link

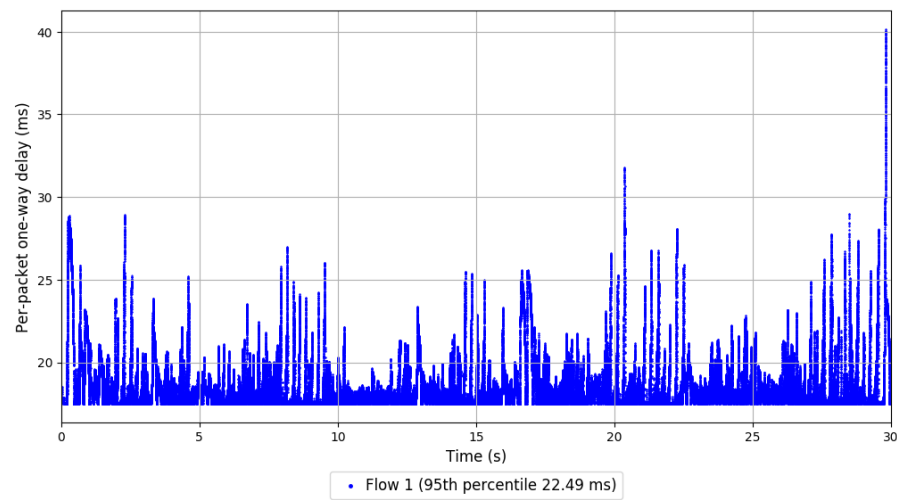
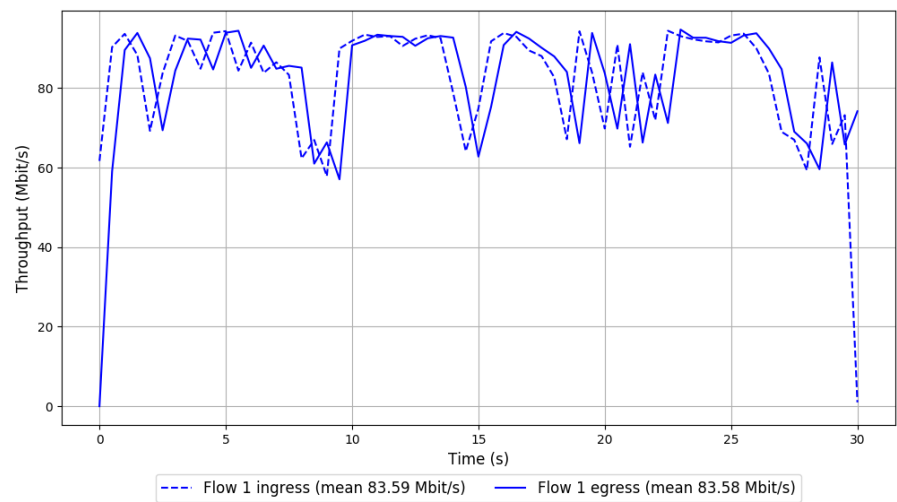


Run 5: Statistics of Copa

Start at: 2018-09-25 13:58:02
End at: 2018-09-25 13:58:32
Local clock offset: -0.364 ms
Remote clock offset: -1.214 ms

Below is generated by plot.py at 2018-09-25 14:18:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 83.58 Mbit/s
95th percentile per-packet one-way delay: 22.493 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 83.58 Mbit/s
95th percentile per-packet one-way delay: 22.493 ms
Loss rate: 0.09%

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

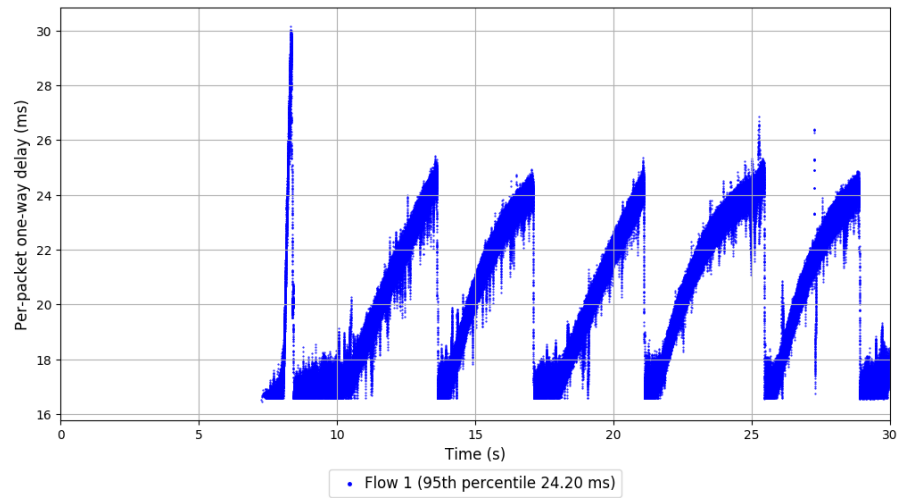
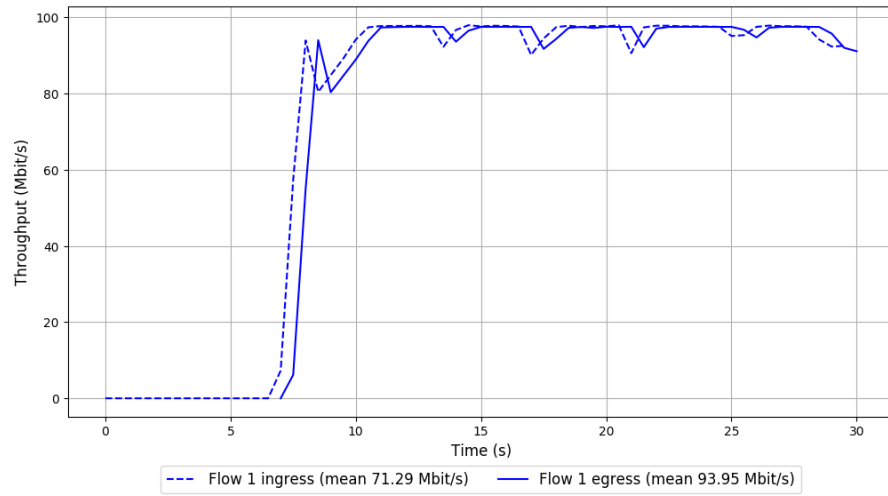
Start at: 2018-09-25 12:21:13

End at: 2018-09-25 12:21:43

Local clock offset: 2.079 ms

Remote clock offset: 0.882 ms

Run 1: Report of TCP Cubic — Data Link

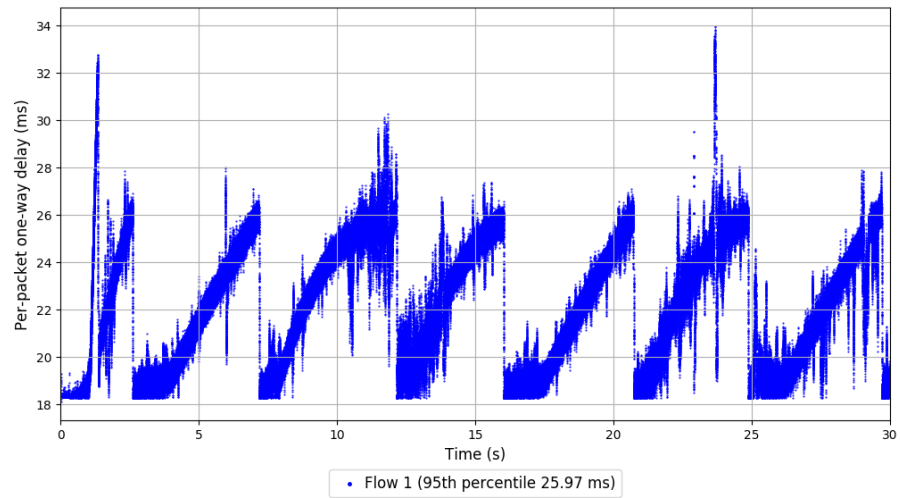
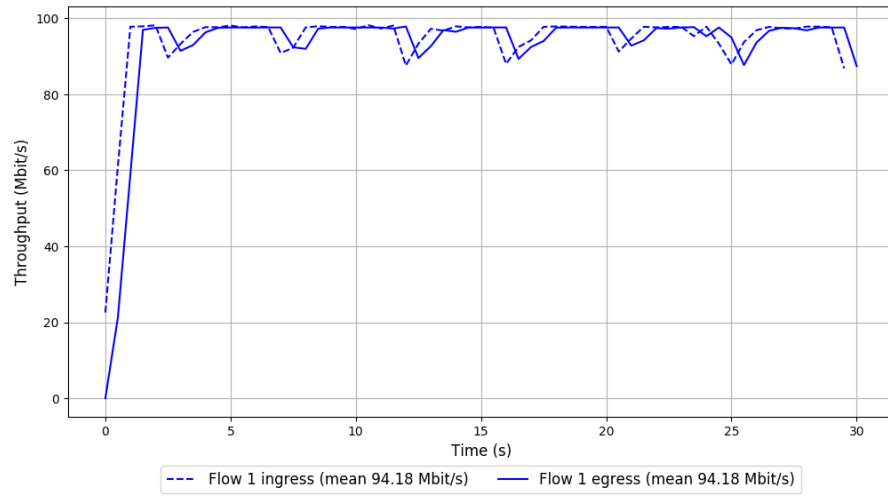


Run 2: Statistics of TCP Cubic

Start at: 2018-09-25 12:44:50
End at: 2018-09-25 12:45:20
Local clock offset: 3.714 ms
Remote clock offset: -0.042 ms

Below is generated by plot.py at 2018-09-25 14:18:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.18 Mbit/s
95th percentile per-packet one-way delay: 25.972 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 94.18 Mbit/s
95th percentile per-packet one-way delay: 25.972 ms
Loss rate: 0.08%

Run 2: Report of TCP Cubic — Data Link

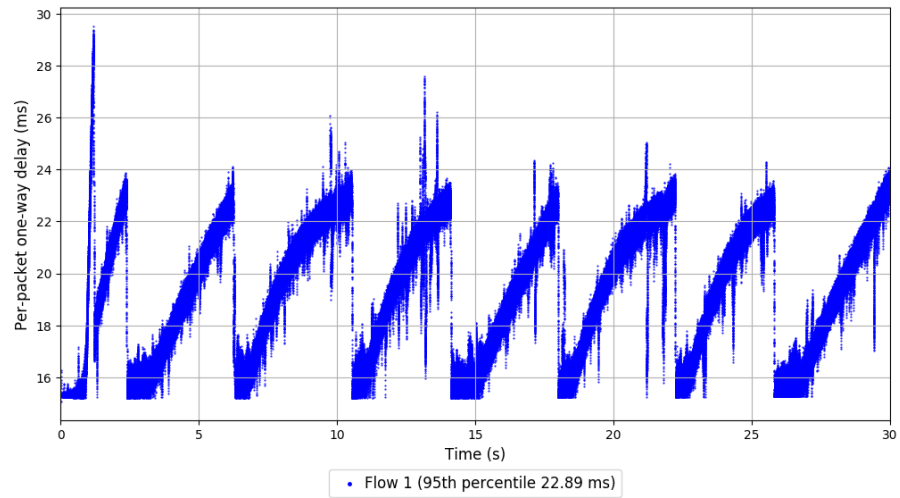
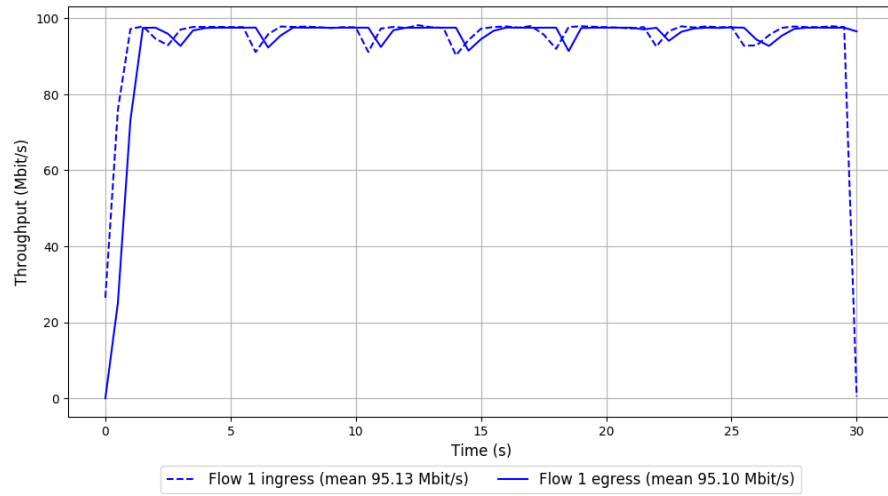


Run 3: Statistics of TCP Cubic

Start at: 2018-09-25 13:08:42
End at: 2018-09-25 13:09:12
Local clock offset: 0.79 ms
Remote clock offset: -0.542 ms

Below is generated by plot.py at 2018-09-25 14:18:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.10 Mbit/s
95th percentile per-packet one-way delay: 22.886 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 95.10 Mbit/s
95th percentile per-packet one-way delay: 22.886 ms
Loss rate: 0.11%

Run 3: Report of TCP Cubic — Data Link

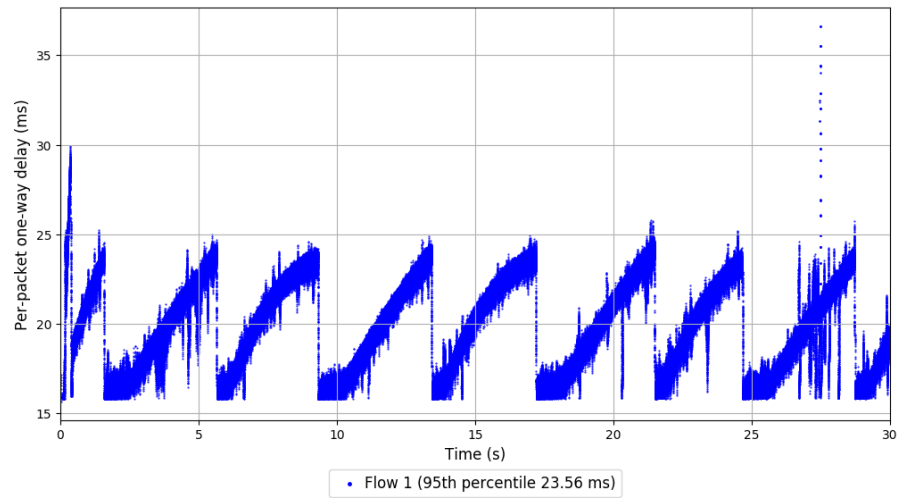
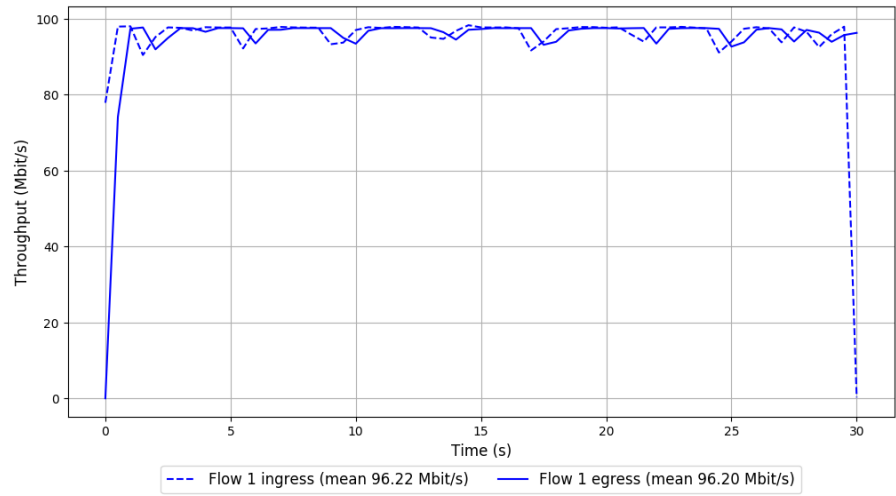


Run 4: Statistics of TCP Cubic

Start at: 2018-09-25 13:32:26
End at: 2018-09-25 13:32:56
Local clock offset: -2.087 ms
Remote clock offset: -1.773 ms

Below is generated by plot.py at 2018-09-25 14:18:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.20 Mbit/s
95th percentile per-packet one-way delay: 23.564 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 96.20 Mbit/s
95th percentile per-packet one-way delay: 23.564 ms
Loss rate: 0.09%

Run 4: Report of TCP Cubic — Data Link

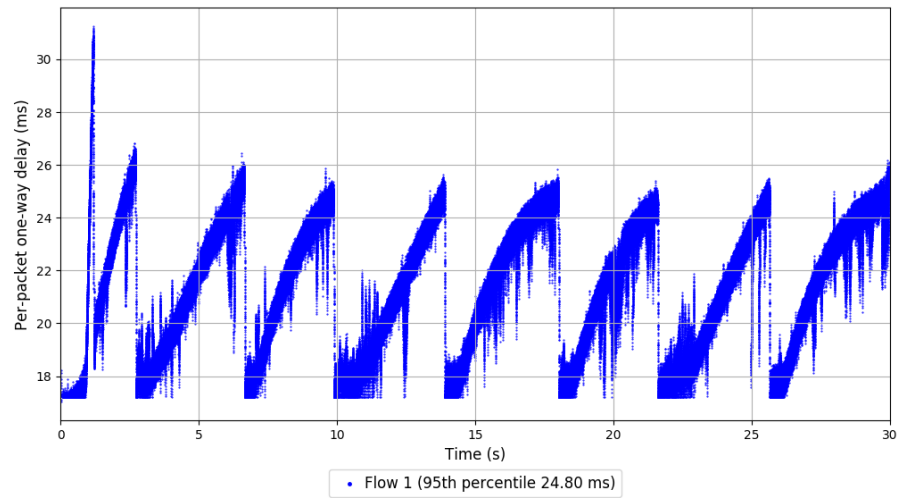
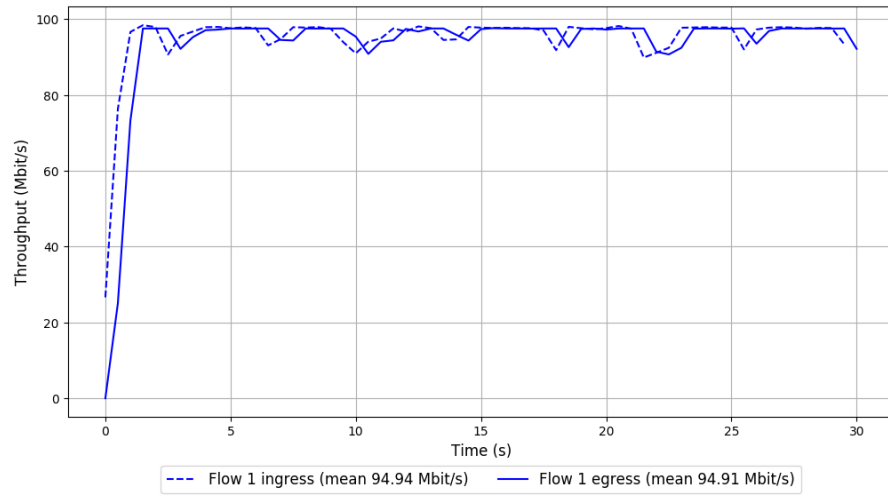


Run 5: Statistics of TCP Cubic

Start at: 2018-09-25 13:55:46
End at: 2018-09-25 13:56:16
Local clock offset: -1.477 ms
Remote clock offset: -2.059 ms

Below is generated by plot.py at 2018-09-25 14:18:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.91 Mbit/s
95th percentile per-packet one-way delay: 24.798 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 94.91 Mbit/s
95th percentile per-packet one-way delay: 24.798 ms
Loss rate: 0.11%

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2018-09-25 12:19:56

End at: 2018-09-25 12:20:26

Local clock offset: 2.639 ms

Remote clock offset: 0.397 ms

Below is generated by plot.py at 2018-09-25 14:18:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.00 Mbit/s

95th percentile per-packet one-way delay: 786.263 ms

Loss rate: 5.14%

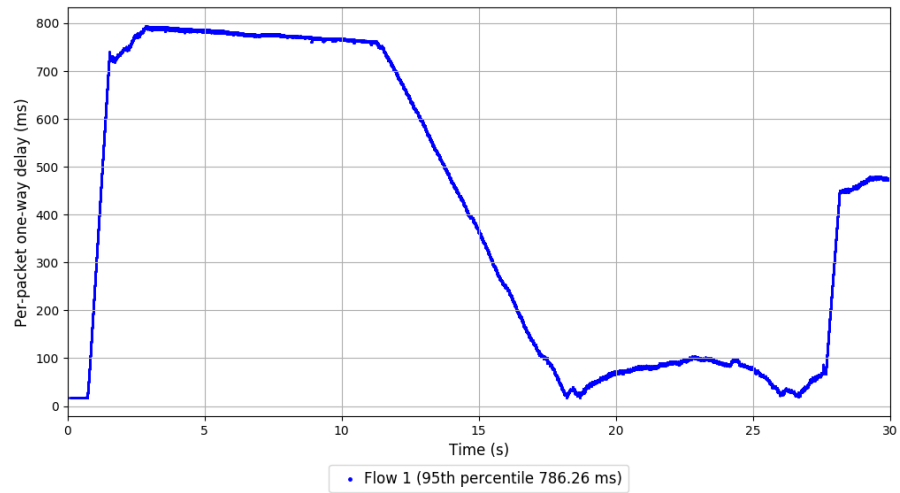
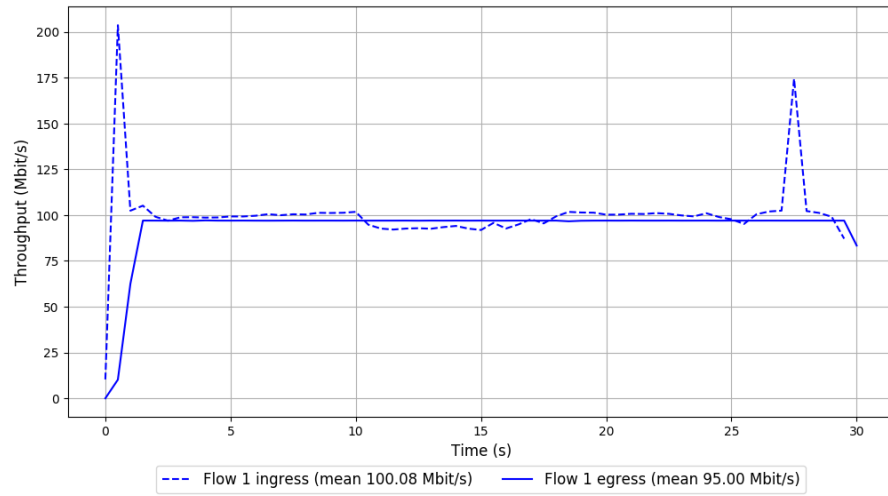
-- Flow 1:

Average throughput: 95.00 Mbit/s

95th percentile per-packet one-way delay: 786.263 ms

Loss rate: 5.14%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-09-25 12:43:32

End at: 2018-09-25 12:44:03

Local clock offset: 0.484 ms

Remote clock offset: 0.588 ms

Below is generated by plot.py at 2018-09-25 14:18:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 94.81 Mbit/s

95th percentile per-packet one-way delay: 787.165 ms

Loss rate: 4.01%

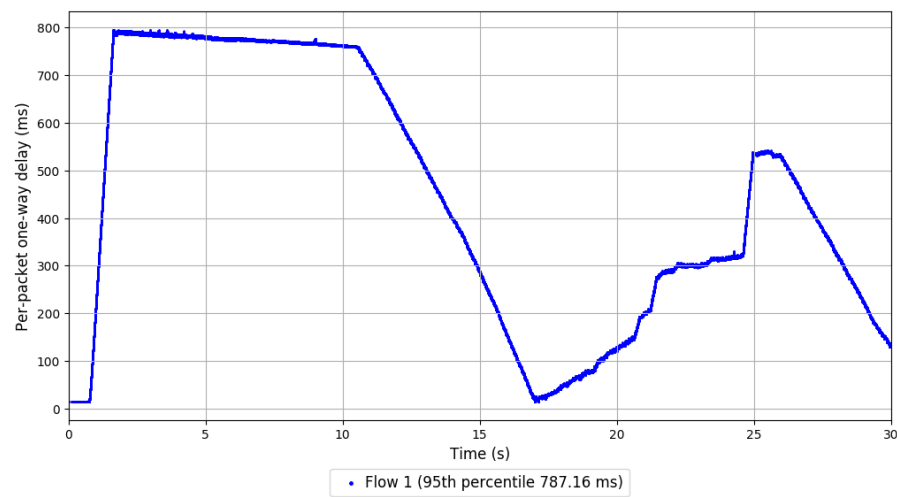
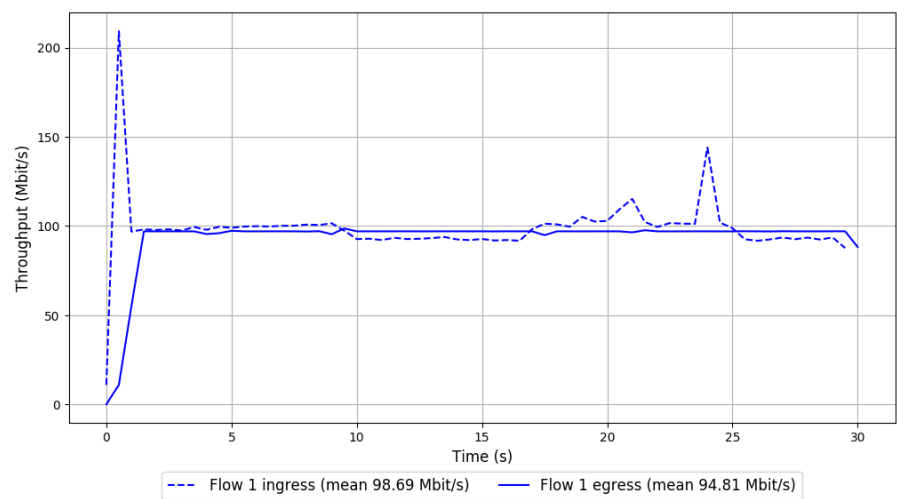
-- Flow 1:

Average throughput: 94.81 Mbit/s

95th percentile per-packet one-way delay: 787.165 ms

Loss rate: 4.01%

Run 2: Report of FillP — Data Link

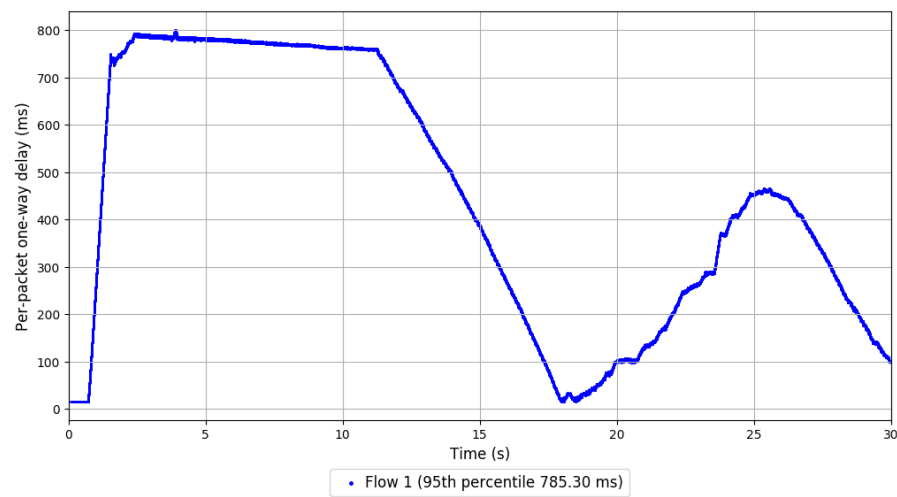
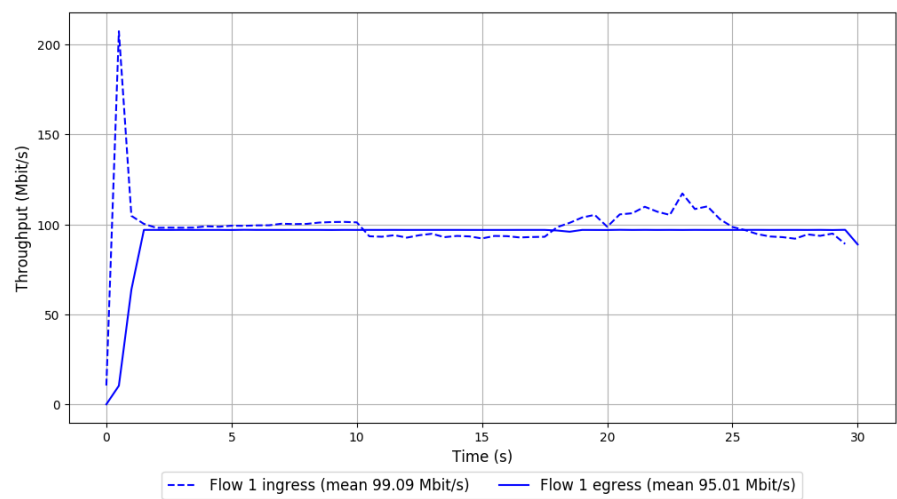


Run 3: Statistics of FillP

Start at: 2018-09-25 13:07:24
End at: 2018-09-25 13:07:54
Local clock offset: 0.942 ms
Remote clock offset: -0.522 ms

Below is generated by plot.py at 2018-09-25 14:18:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.01 Mbit/s
95th percentile per-packet one-way delay: 785.300 ms
Loss rate: 4.20%
-- Flow 1:
Average throughput: 95.01 Mbit/s
95th percentile per-packet one-way delay: 785.300 ms
Loss rate: 4.20%

Run 3: Report of FillP — Data Link

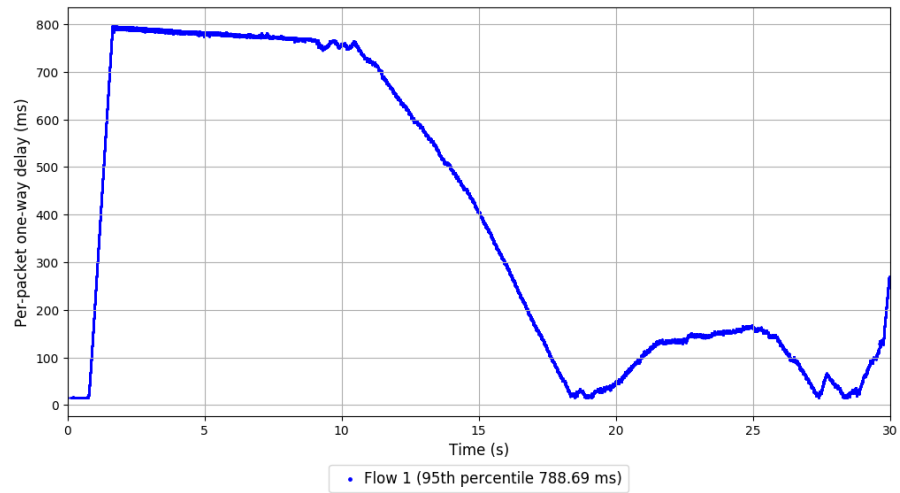
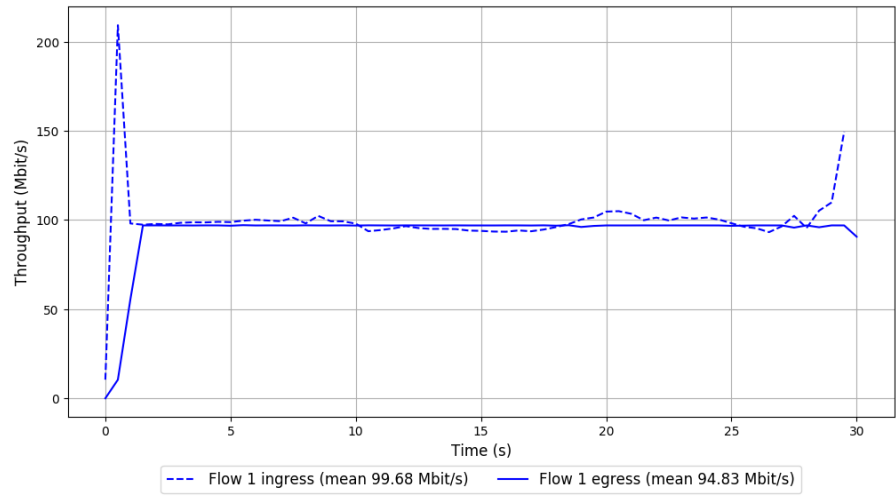


Run 4: Statistics of FillP

Start at: 2018-09-25 13:31:12
End at: 2018-09-25 13:31:42
Local clock offset: -1.696 ms
Remote clock offset: -1.302 ms

Below is generated by plot.py at 2018-09-25 14:18:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.83 Mbit/s
95th percentile per-packet one-way delay: 788.693 ms
Loss rate: 4.93%
-- Flow 1:
Average throughput: 94.83 Mbit/s
95th percentile per-packet one-way delay: 788.693 ms
Loss rate: 4.93%

Run 4: Report of FillP — Data Link

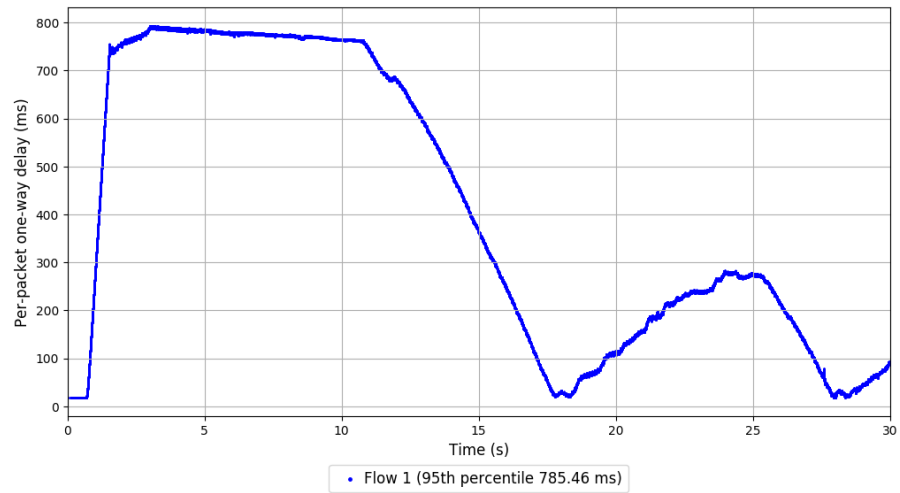
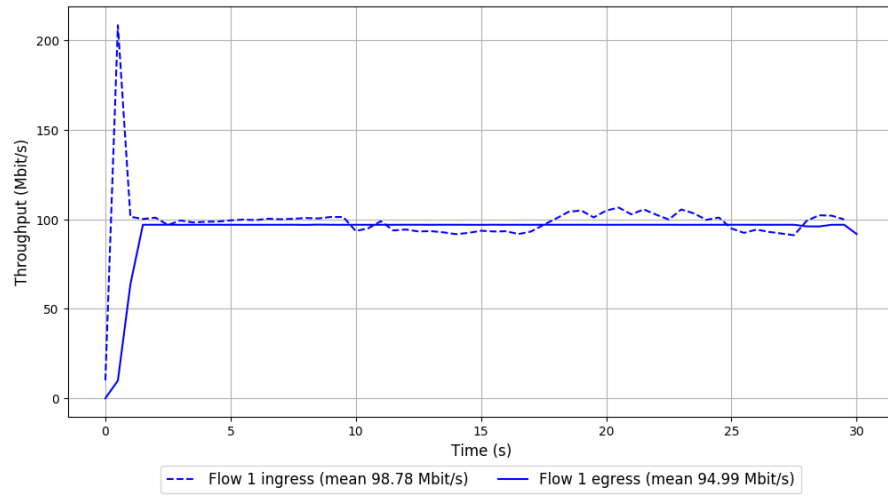


Run 5: Statistics of FillP

Start at: 2018-09-25 13:54:33
End at: 2018-09-25 13:55:03
Local clock offset: -0.451 ms
Remote clock offset: -1.646 ms

Below is generated by plot.py at 2018-09-25 14:19:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.99 Mbit/s
95th percentile per-packet one-way delay: 785.456 ms
Loss rate: 3.90%
-- Flow 1:
Average throughput: 94.99 Mbit/s
95th percentile per-packet one-way delay: 785.456 ms
Loss rate: 3.90%

Run 5: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2018-09-25 12:33:55

End at: 2018-09-25 12:34:25

Local clock offset: 1.854 ms

Remote clock offset: 0.992 ms

Below is generated by plot.py at 2018-09-25 14:19:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.08 Mbit/s

95th percentile per-packet one-way delay: 45.442 ms

Loss rate: 1.89%

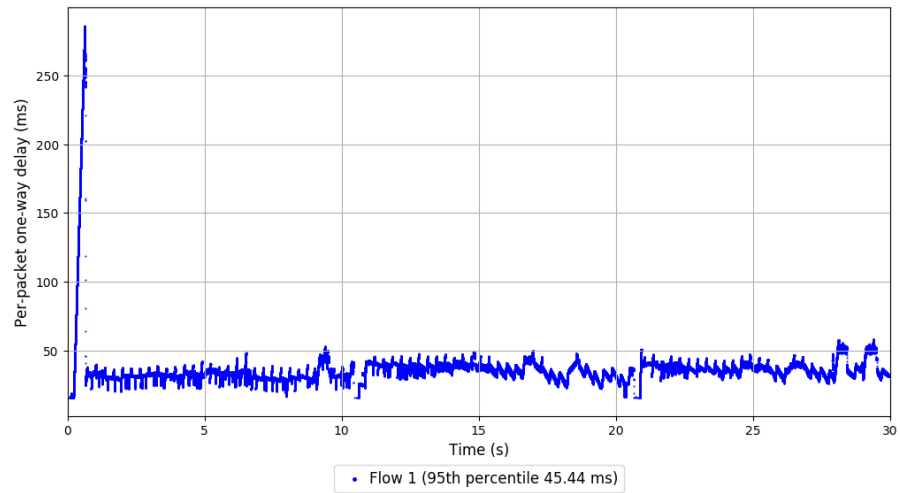
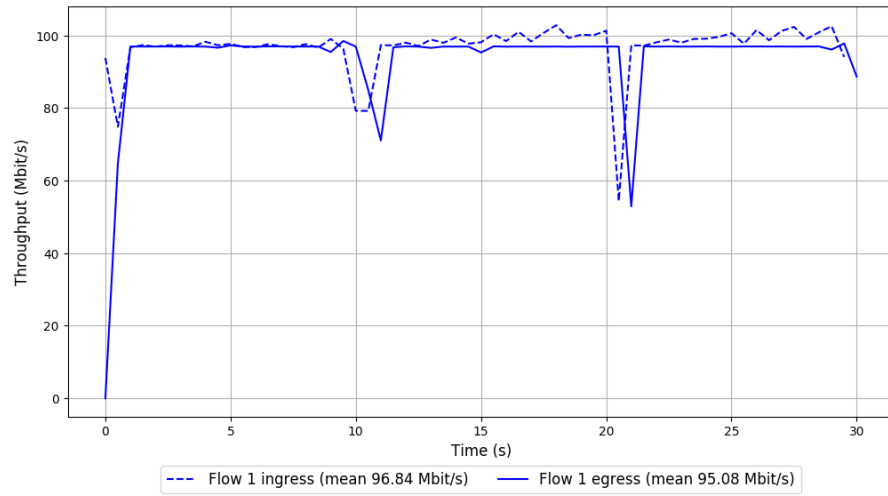
-- Flow 1:

Average throughput: 95.08 Mbit/s

95th percentile per-packet one-way delay: 45.442 ms

Loss rate: 1.89%

Run 1: Report of FillP-Sheep — Data Link



Run 2: Statistics of FillP-Sheep

Start at: 2018-09-25 12:57:33

End at: 2018-09-25 12:58:03

Local clock offset: -0.05 ms

Remote clock offset: 0.108 ms

Below is generated by plot.py at 2018-09-25 14:19:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.19 Mbit/s

95th percentile per-packet one-way delay: 41.646 ms

Loss rate: 1.37%

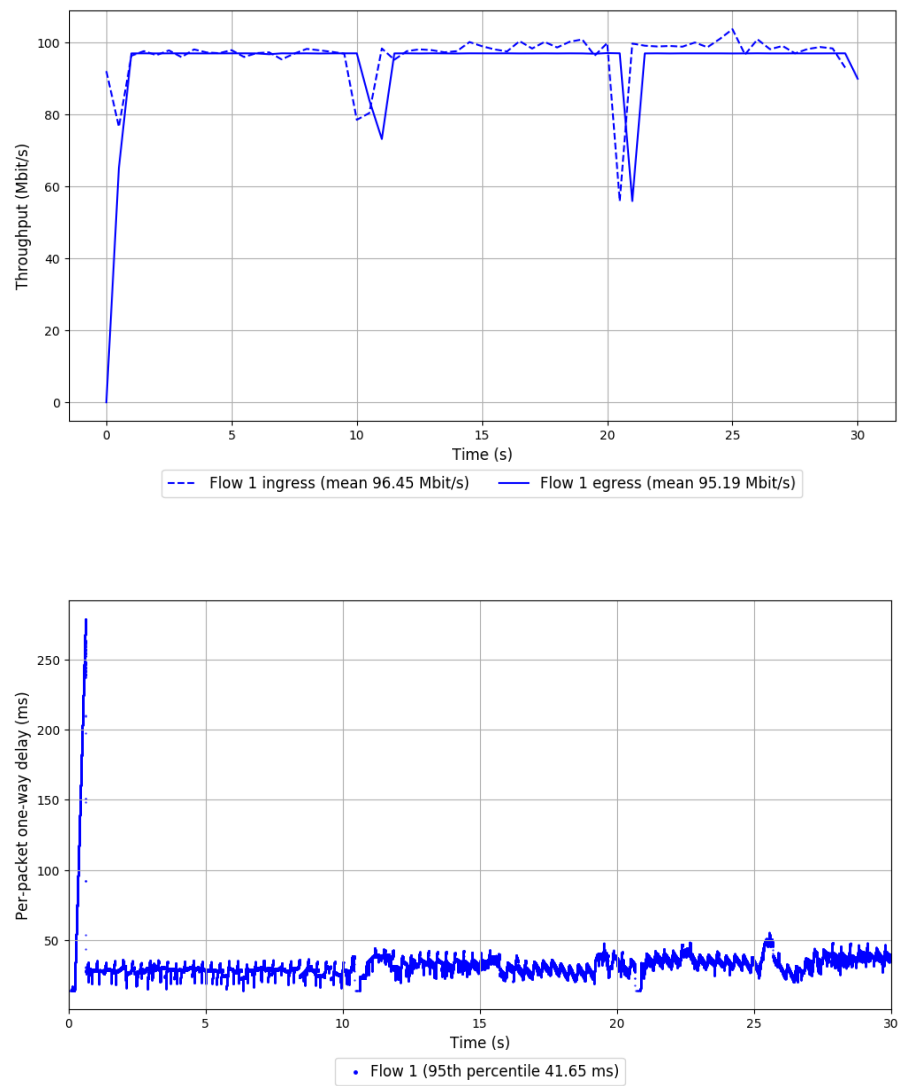
-- Flow 1:

Average throughput: 95.19 Mbit/s

95th percentile per-packet one-way delay: 41.646 ms

Loss rate: 1.37%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2018-09-25 13:21:07

End at: 2018-09-25 13:21:37

Local clock offset: 1.266 ms

Remote clock offset: -0.903 ms

Below is generated by plot.py at 2018-09-25 14:19:22

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.10 Mbit/s

95th percentile per-packet one-way delay: 44.126 ms

Loss rate: 1.53%

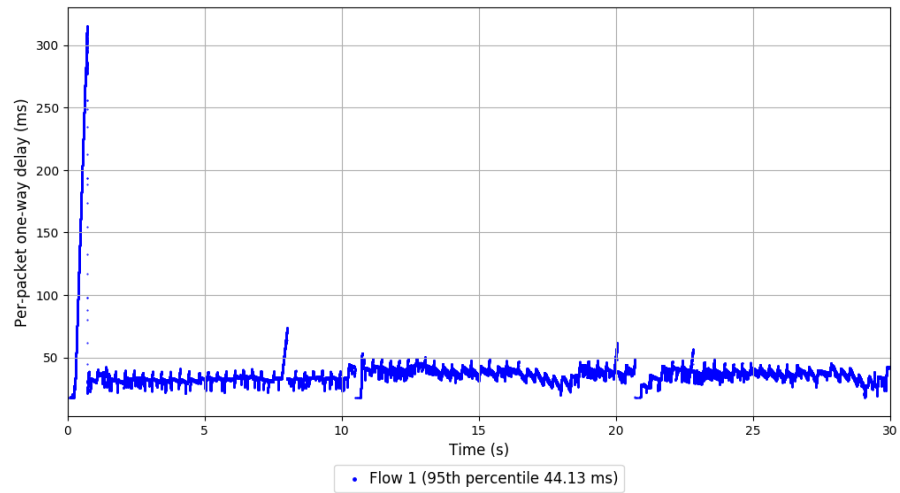
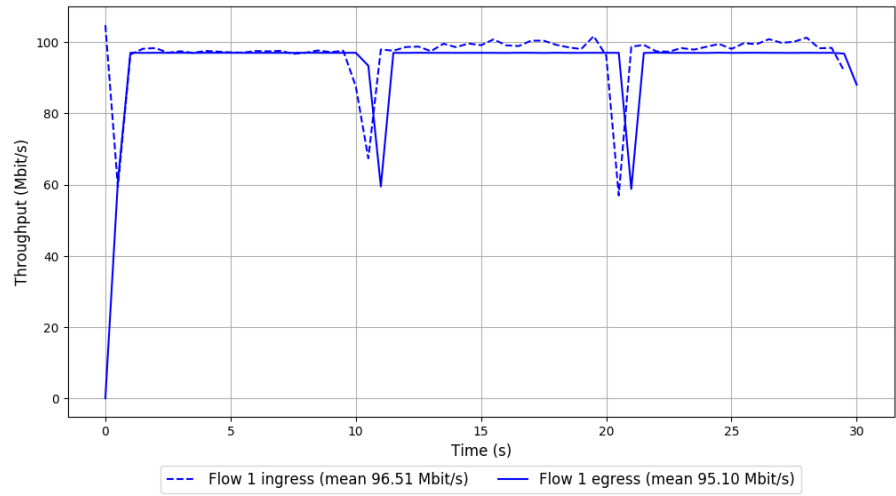
-- Flow 1:

Average throughput: 95.10 Mbit/s

95th percentile per-packet one-way delay: 44.126 ms

Loss rate: 1.53%

Run 3: Report of FillP-Sheep — Data Link

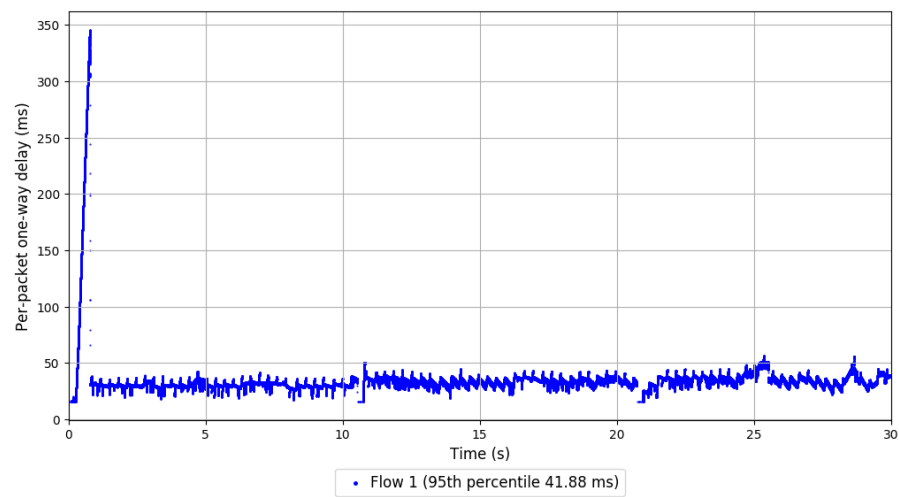
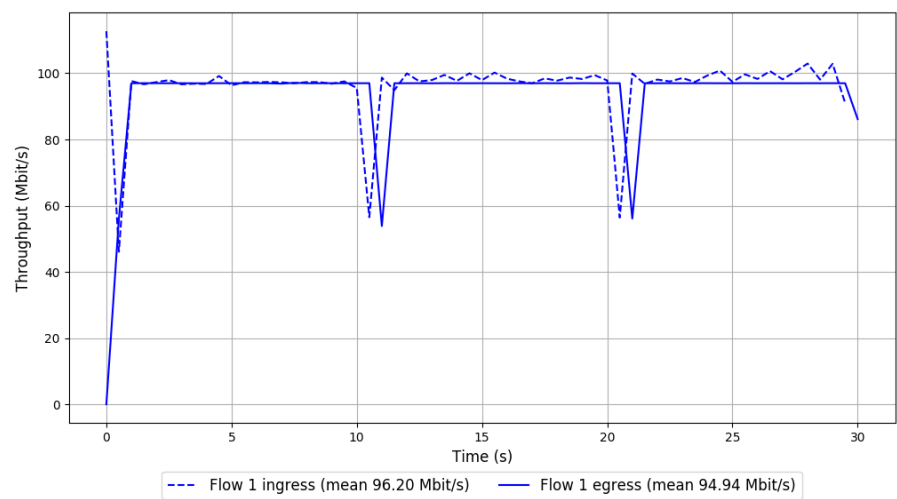


Run 4: Statistics of FillP-Sheep

Start at: 2018-09-25 13:44:58
End at: 2018-09-25 13:45:28
Local clock offset: -1.885 ms
Remote clock offset: -1.162 ms

Below is generated by plot.py at 2018-09-25 14:19:39
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.94 Mbit/s
95th percentile per-packet one-way delay: 41.882 ms
Loss rate: 1.38%
-- Flow 1:
Average throughput: 94.94 Mbit/s
95th percentile per-packet one-way delay: 41.882 ms
Loss rate: 1.38%

Run 4: Report of FillP-Sheep — Data Link



Run 5: Statistics of FillP-Sheep

Start at: 2018-09-25 14:07:52

End at: 2018-09-25 14:08:22

Local clock offset: -0.137 ms

Remote clock offset: -3.214 ms

Below is generated by plot.py at 2018-09-25 14:19:40

Datalink statistics

-- Total of 1 flow:

Average throughput: 94.99 Mbit/s

95th percentile per-packet one-way delay: 46.690 ms

Loss rate: 1.62%

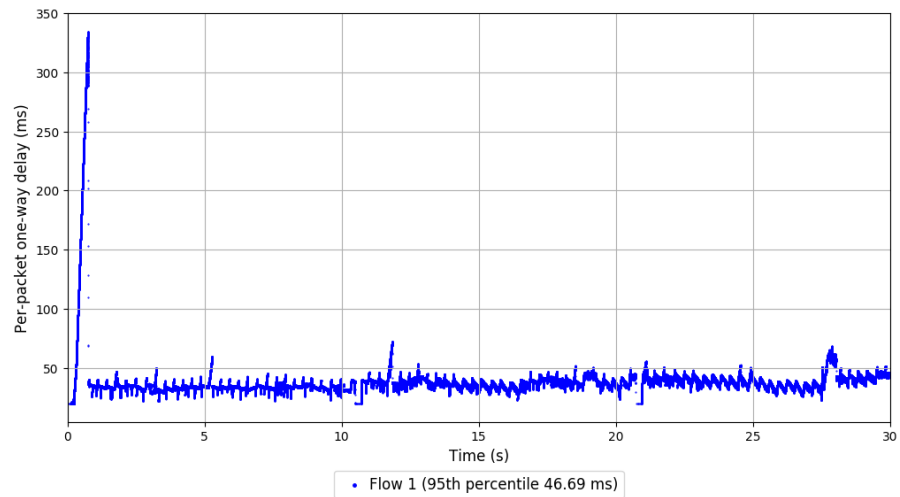
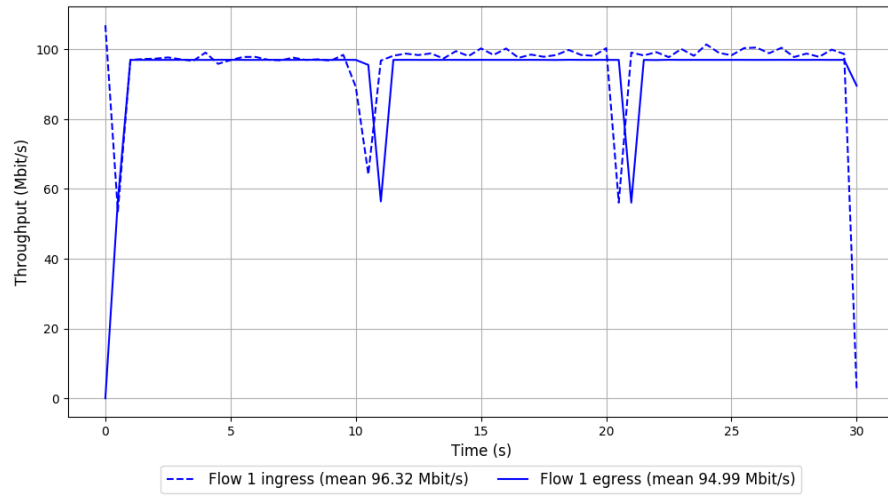
-- Flow 1:

Average throughput: 94.99 Mbit/s

95th percentile per-packet one-way delay: 46.690 ms

Loss rate: 1.62%

Run 5: Report of FillP-Sheep — Data Link

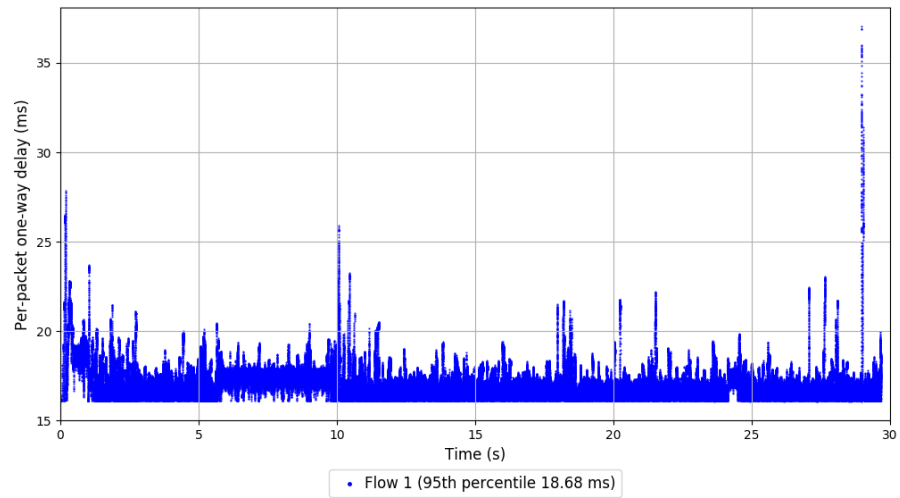
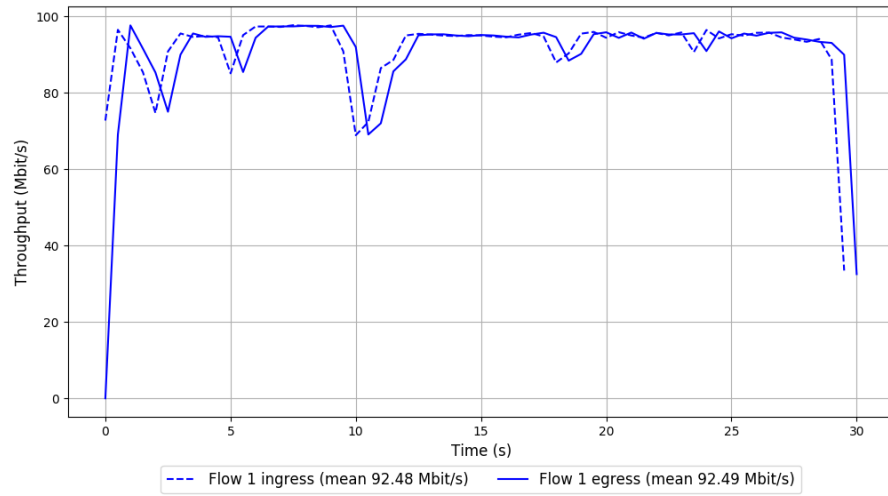


```
Run 1: Statistics of Indigo

Start at: 2018-09-25 12:16:19
End at: 2018-09-25 12:16:49
Local clock offset: 1.488 ms
Remote clock offset: 0.947 ms

# Below is generated by plot.py at 2018-09-25 14:19:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.49 Mbit/s
95th percentile per-packet one-way delay: 18.684 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 92.49 Mbit/s
95th percentile per-packet one-way delay: 18.684 ms
Loss rate: 0.07%
```

Run 1: Report of Indigo — Data Link

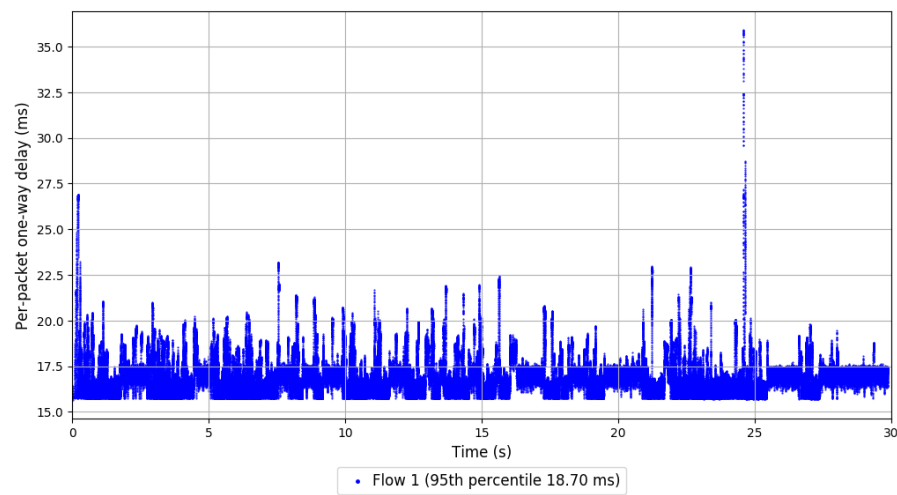
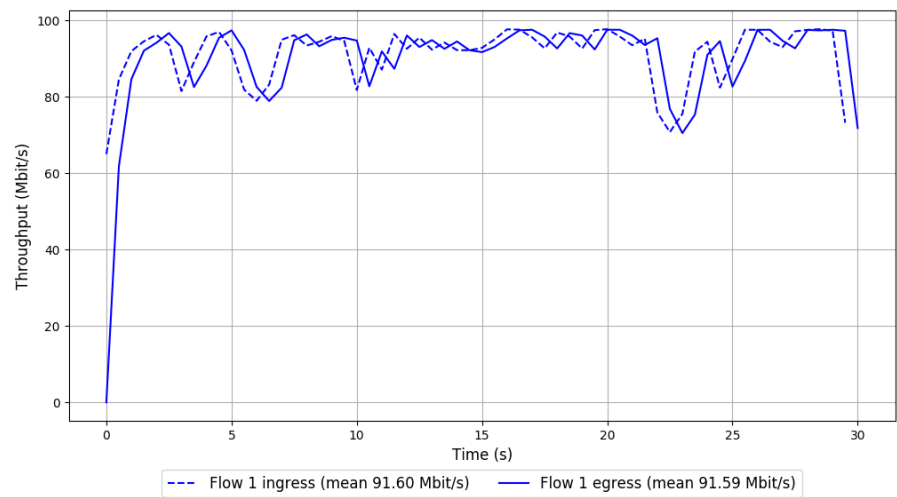


Run 2: Statistics of Indigo

Start at: 2018-09-25 12:39:57
End at: 2018-09-25 12:40:27
Local clock offset: 0.428 ms
Remote clock offset: -0.596 ms

Below is generated by plot.py at 2018-09-25 14:19:42
Datalink statistics
-- Total of 1 flow:
Average throughput: 91.59 Mbit/s
95th percentile per-packet one-way delay: 18.695 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 91.59 Mbit/s
95th percentile per-packet one-way delay: 18.695 ms
Loss rate: 0.09%

Run 2: Report of Indigo — Data Link

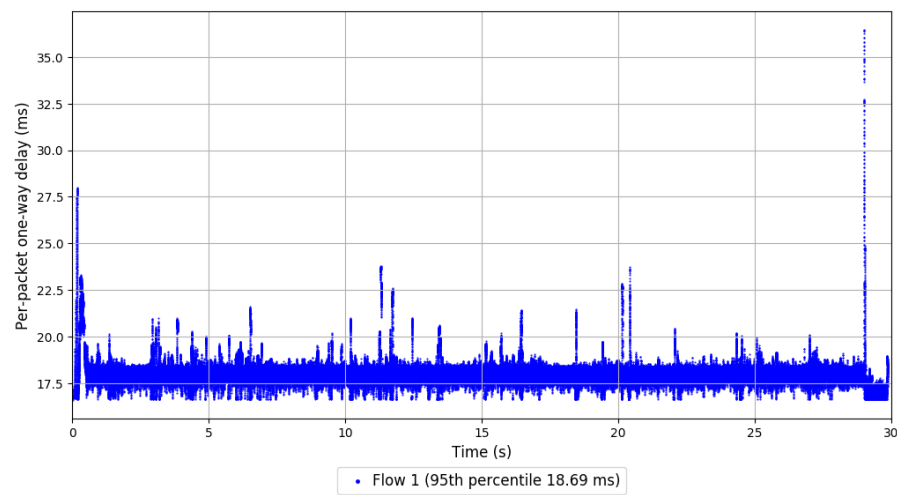
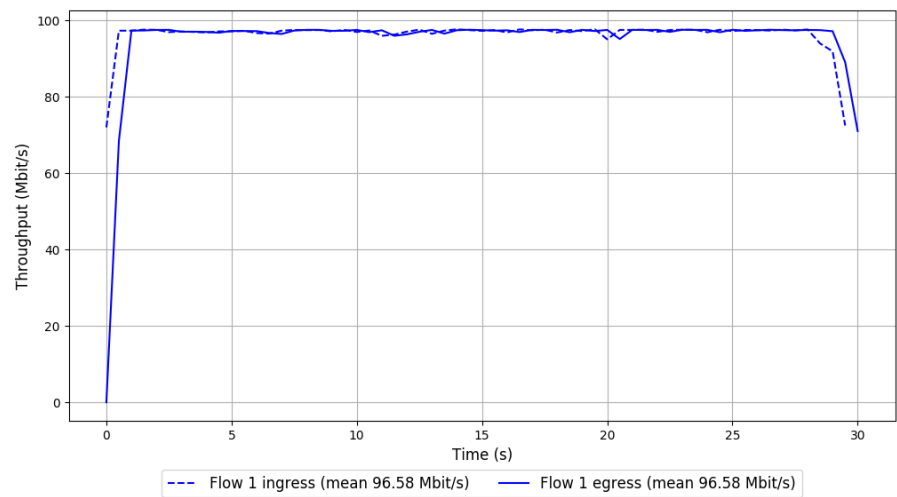


Run 3: Statistics of Indigo

Start at: 2018-09-25 13:03:41
End at: 2018-09-25 13:04:11
Local clock offset: 2.098 ms
Remote clock offset: -0.518 ms

Below is generated by plot.py at 2018-09-25 14:20:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.58 Mbit/s
95th percentile per-packet one-way delay: 18.689 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 96.58 Mbit/s
95th percentile per-packet one-way delay: 18.689 ms
Loss rate: 0.08%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

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

End at: 2018-09-25 13:27:55

Local clock offset: 0.938 ms

Remote clock offset: -0.848 ms

Below is generated by plot.py at 2018-09-25 14:20:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.36 Mbit/s

95th percentile per-packet one-way delay: 20.174 ms

Loss rate: 0.08%

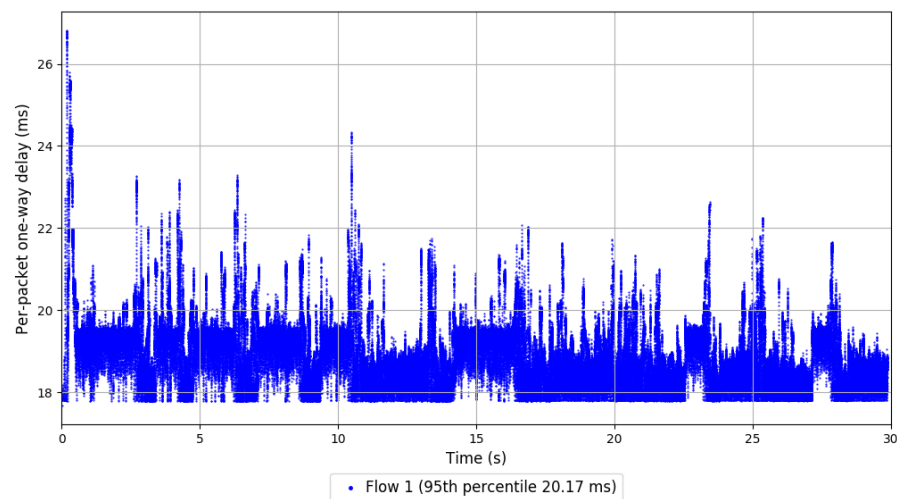
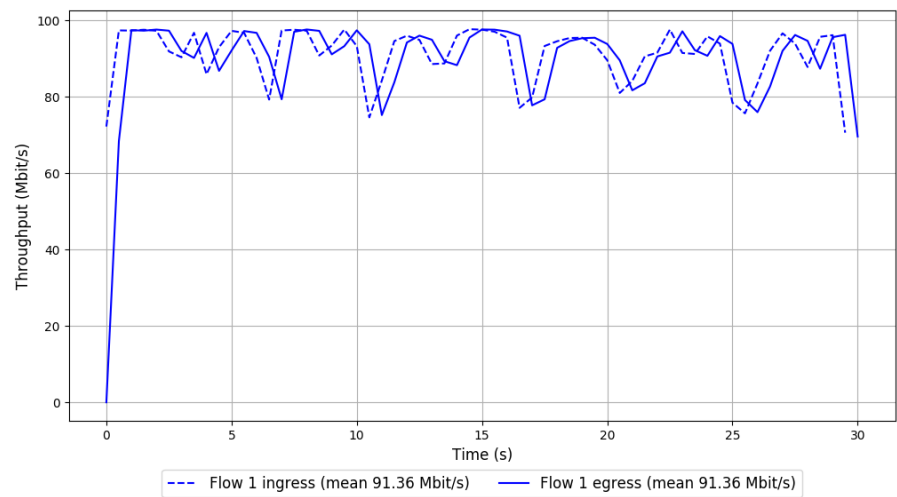
-- Flow 1:

Average throughput: 91.36 Mbit/s

95th percentile per-packet one-way delay: 20.174 ms

Loss rate: 0.08%

Run 4: Report of Indigo — Data Link

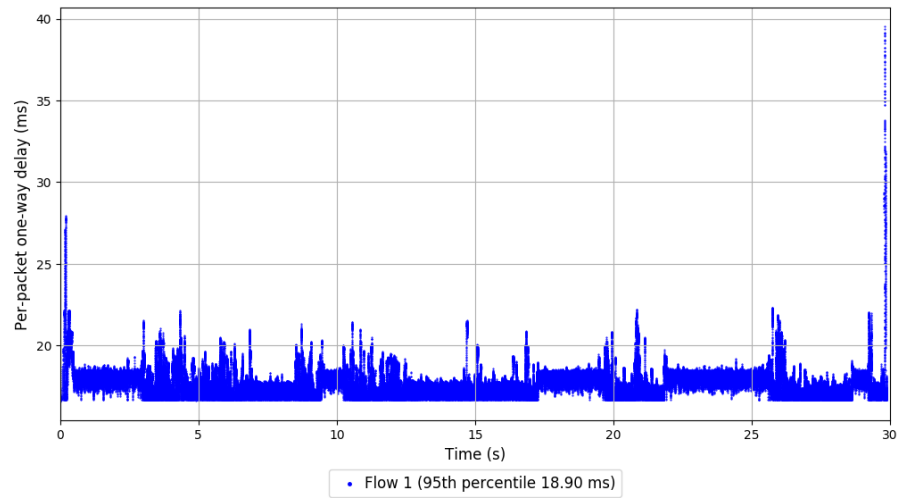
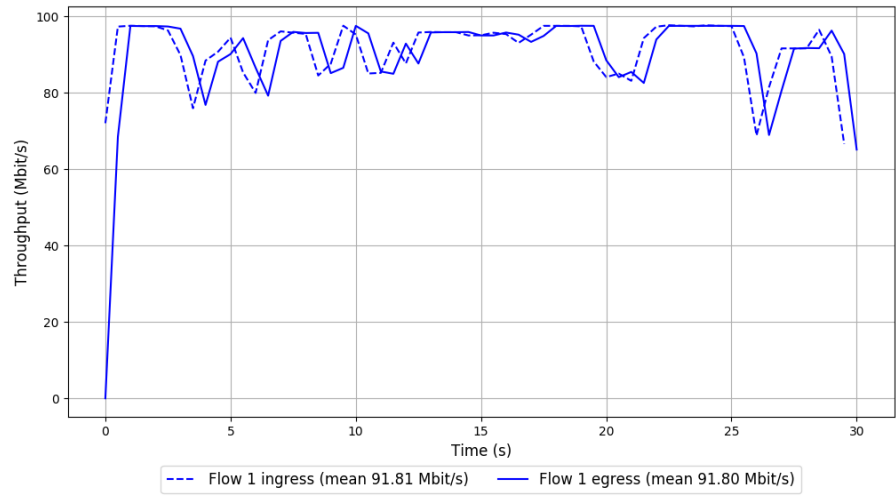


Run 5: Statistics of Indigo

Start at: 2018-09-25 13:50:55
End at: 2018-09-25 13:51:25
Local clock offset: -1.236 ms
Remote clock offset: -1.345 ms

Below is generated by plot.py at 2018-09-25 14:20:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 91.80 Mbit/s
95th percentile per-packet one-way delay: 18.901 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 91.80 Mbit/s
95th percentile per-packet one-way delay: 18.901 ms
Loss rate: 0.08%

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-96d2da3

Start at: 2018-09-25 12:18:42

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

Local clock offset: 1.967 ms

Remote clock offset: 0.522 ms

Below is generated by plot.py at 2018-09-25 14:20:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.88 Mbit/s

95th percentile per-packet one-way delay: 68.984 ms

Loss rate: 5.49%

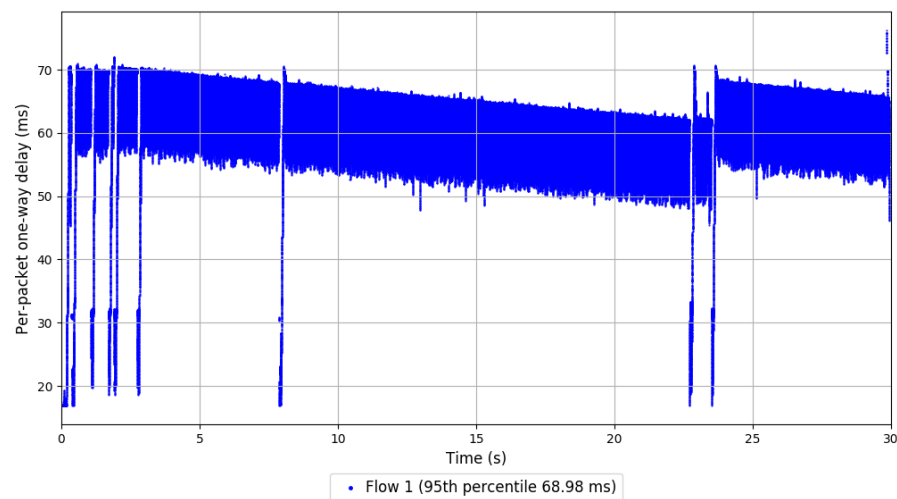
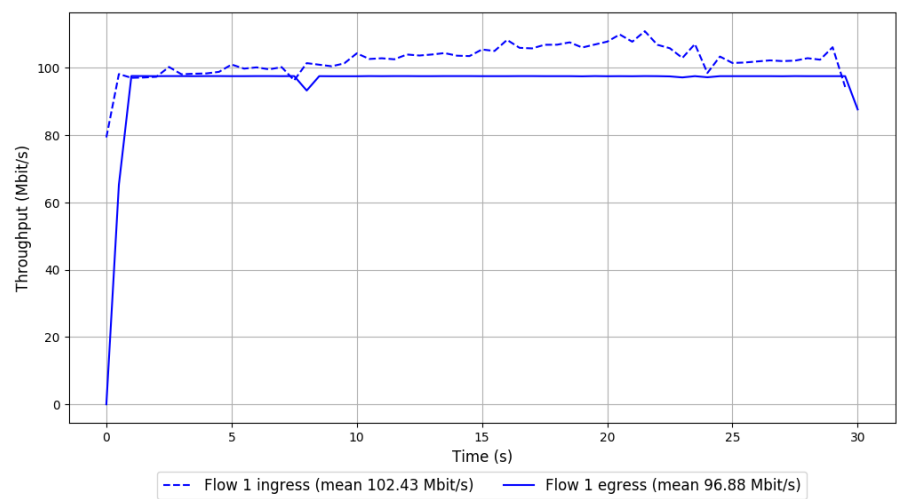
-- Flow 1:

Average throughput: 96.88 Mbit/s

95th percentile per-packet one-way delay: 68.984 ms

Loss rate: 5.49%

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



Run 2: Statistics of Indigo-96d2da3

Start at: 2018-09-25 12:42:21

End at: 2018-09-25 12:42:51

Local clock offset: 0.866 ms

Remote clock offset: 0.031 ms

Below is generated by plot.py at 2018-09-25 14:20:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.03 Mbit/s

95th percentile per-packet one-way delay: 67.145 ms

Loss rate: 6.15%

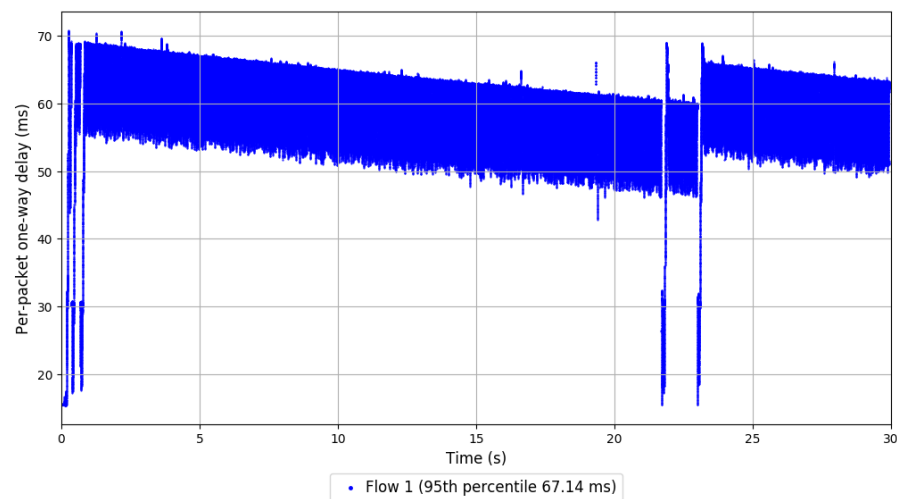
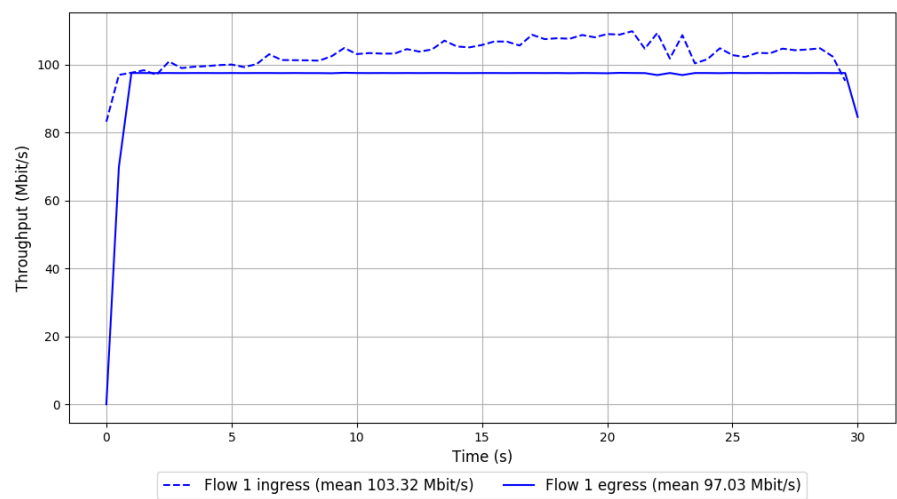
-- Flow 1:

Average throughput: 97.03 Mbit/s

95th percentile per-packet one-way delay: 67.145 ms

Loss rate: 6.15%

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



Run 3: Statistics of Indigo-96d2da3

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

End at: 2018-09-25 13:06:39

Local clock offset: 3.556 ms

Remote clock offset: -0.542 ms

Below is generated by plot.py at 2018-09-25 14:20:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.93 Mbit/s

95th percentile per-packet one-way delay: 67.530 ms

Loss rate: 7.09%

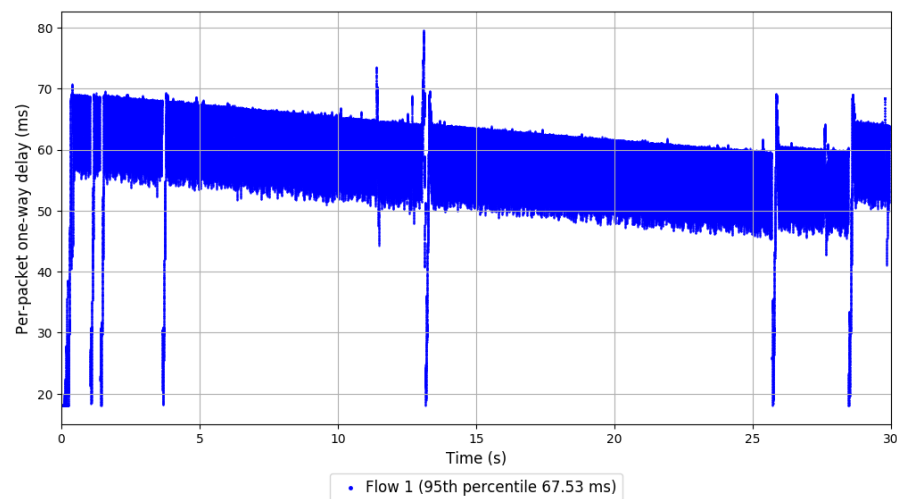
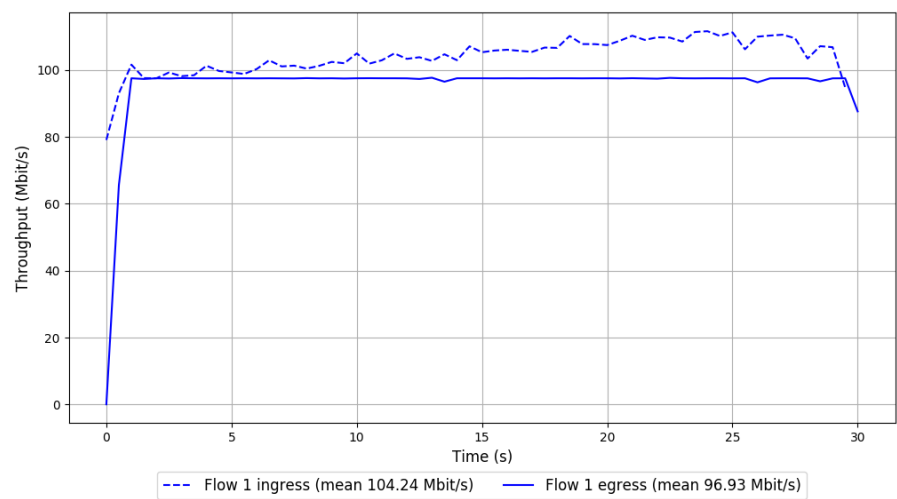
-- Flow 1:

Average throughput: 96.93 Mbit/s

95th percentile per-packet one-way delay: 67.530 ms

Loss rate: 7.09%

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

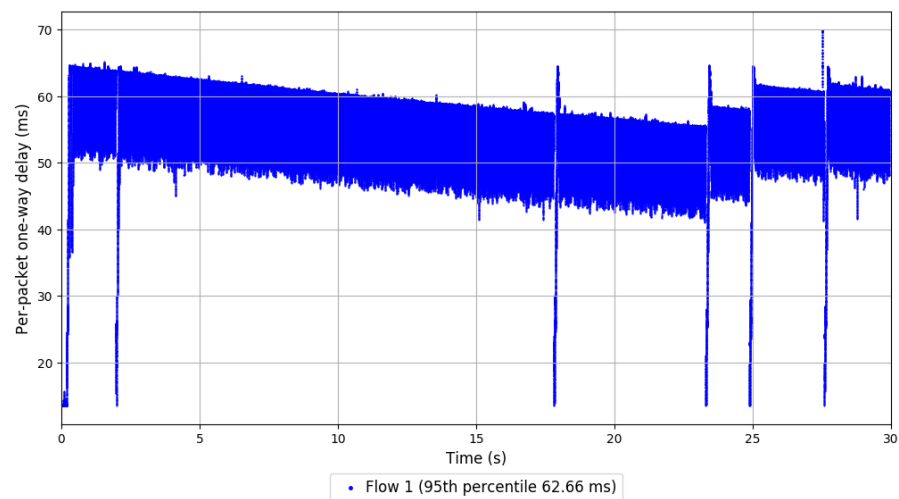
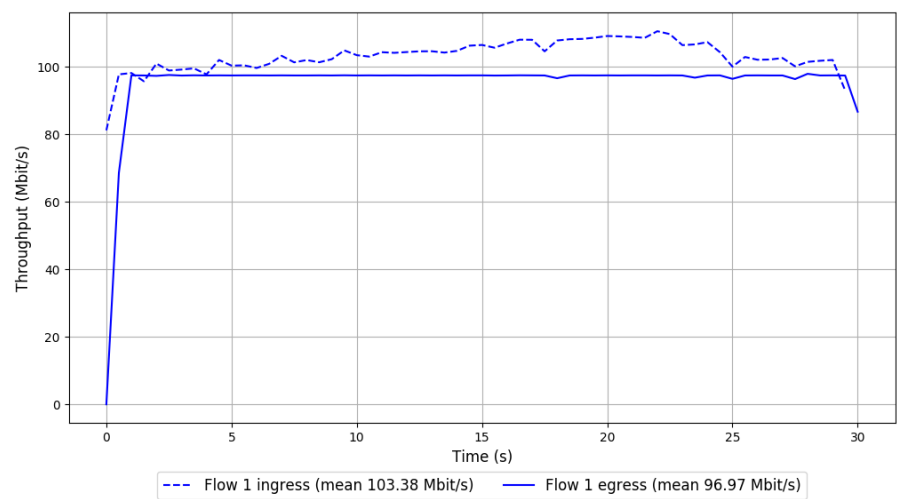


Run 4: Statistics of Indigo-96d2da3

Start at: 2018-09-25 13:29:57
End at: 2018-09-25 13:30:27
Local clock offset: -2.874 ms
Remote clock offset: -0.322 ms

Below is generated by plot.py at 2018-09-25 14:20:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.97 Mbit/s
95th percentile per-packet one-way delay: 62.656 ms
Loss rate: 6.27%
-- Flow 1:
Average throughput: 96.97 Mbit/s
95th percentile per-packet one-way delay: 62.656 ms
Loss rate: 6.27%

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

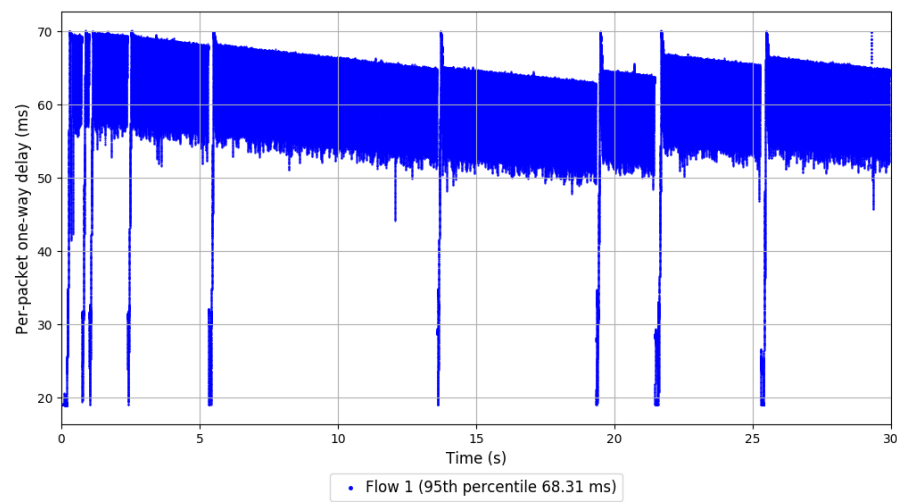
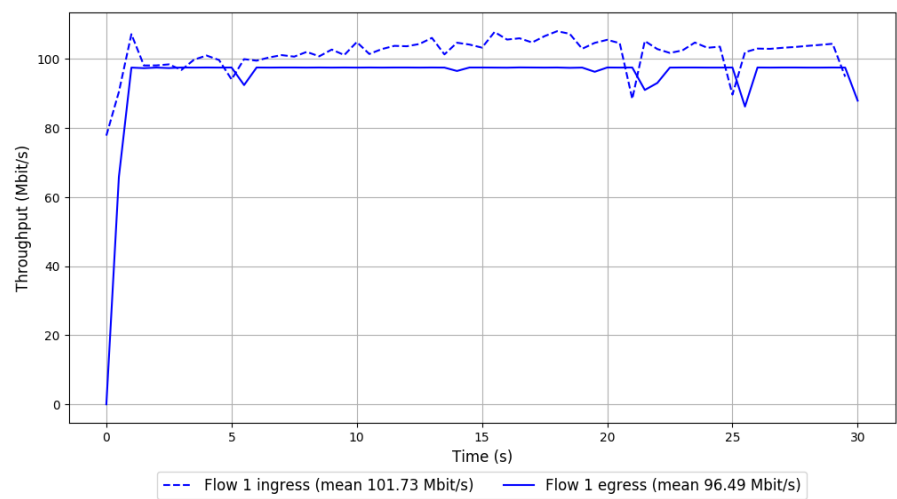


Run 5: Statistics of Indigo-96d2da3

Start at: 2018-09-25 13:53:19
End at: 2018-09-25 13:53:49
Local clock offset: 0.93 ms
Remote clock offset: -1.437 ms

Below is generated by plot.py at 2018-09-25 14:20:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.49 Mbit/s
95th percentile per-packet one-way delay: 68.306 ms
Loss rate: 5.22%
-- Flow 1:
Average throughput: 96.49 Mbit/s
95th percentile per-packet one-way delay: 68.306 ms
Loss rate: 5.22%

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

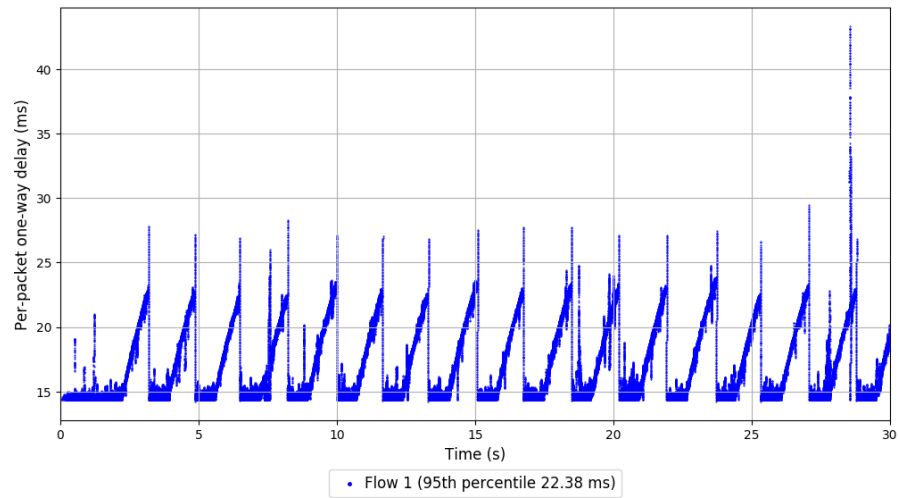
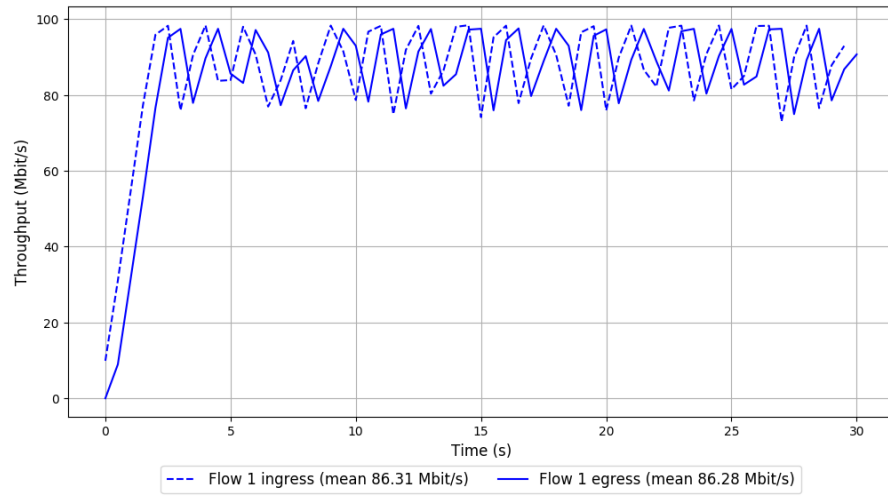


```
Run 1: Statistics of LEDBAT

Start at: 2018-09-25 12:38:42
End at: 2018-09-25 12:39:12
Local clock offset: -0.344 ms
Remote clock offset: 0.064 ms

# Below is generated by plot.py at 2018-09-25 14:21:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.28 Mbit/s
95th percentile per-packet one-way delay: 22.384 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 86.28 Mbit/s
95th percentile per-packet one-way delay: 22.384 ms
Loss rate: 0.11%
```

Run 1: Report of LEDBAT — Data Link

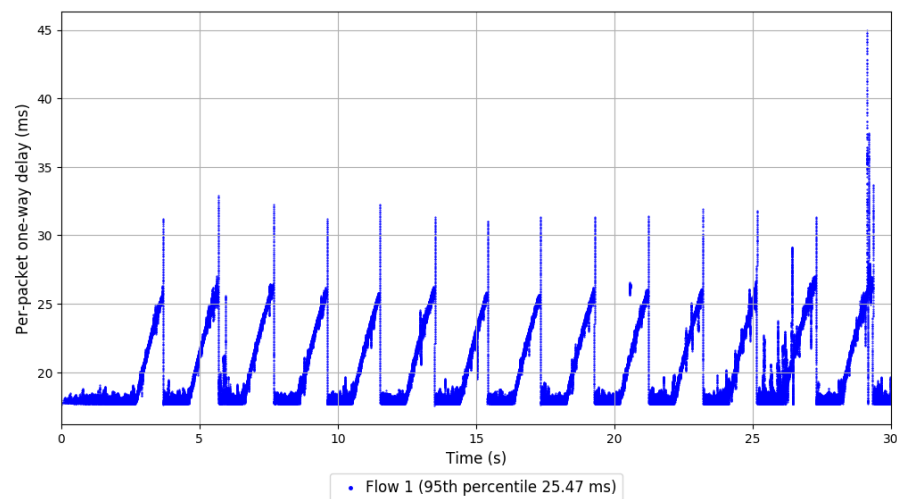
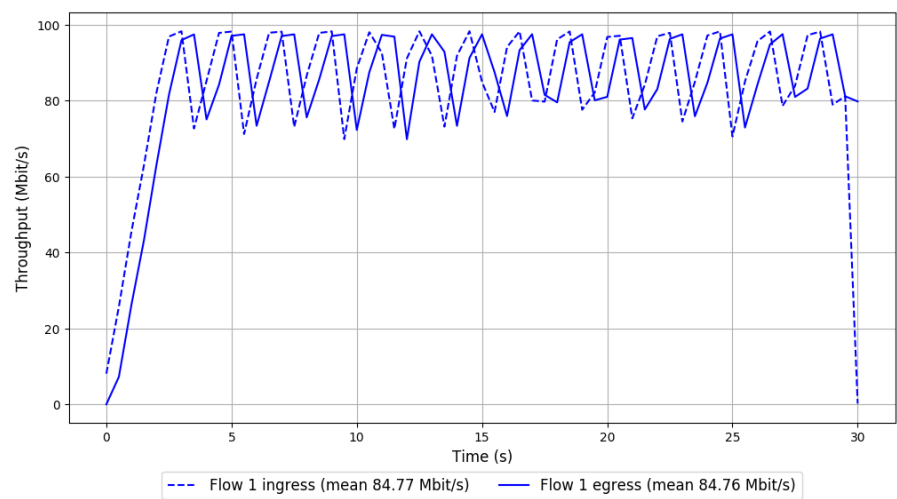


Run 2: Statistics of LEDBAT

Start at: 2018-09-25 13:02:24
End at: 2018-09-25 13:02:54
Local clock offset: 3.492 ms
Remote clock offset: -0.158 ms

Below is generated by plot.py at 2018-09-25 14:21:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 84.76 Mbit/s
95th percentile per-packet one-way delay: 25.469 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 84.76 Mbit/s
95th percentile per-packet one-way delay: 25.469 ms
Loss rate: 0.09%

Run 2: Report of LEDBAT — Data Link

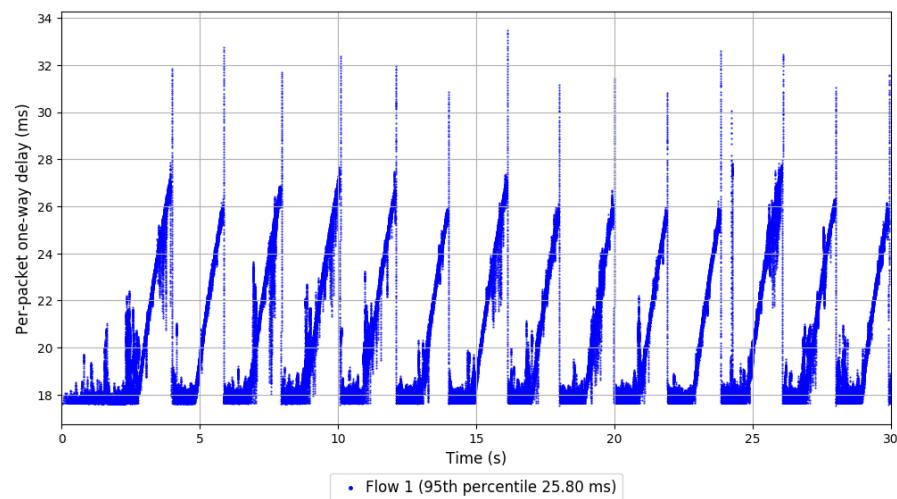
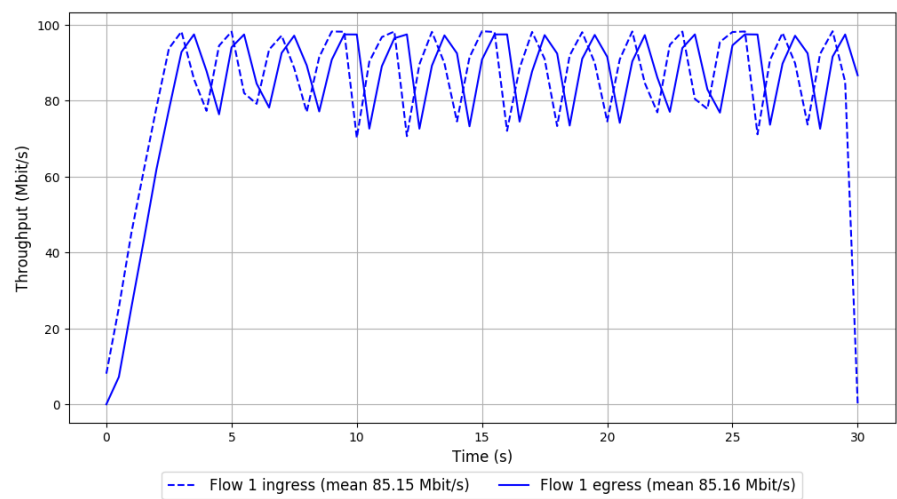


Run 3: Statistics of LEDBAT

Start at: 2018-09-25 13:26:05
End at: 2018-09-25 13:26:35
Local clock offset: 0.065 ms
Remote clock offset: -1.625 ms

Below is generated by plot.py at 2018-09-25 14:21:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 85.16 Mbit/s
95th percentile per-packet one-way delay: 25.804 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 85.16 Mbit/s
95th percentile per-packet one-way delay: 25.804 ms
Loss rate: 0.07%

Run 3: Report of LEDBAT — Data Link

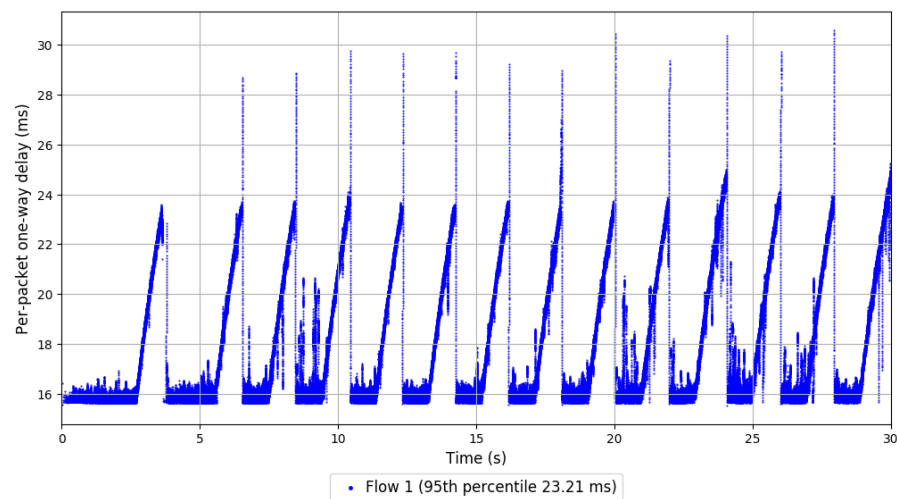
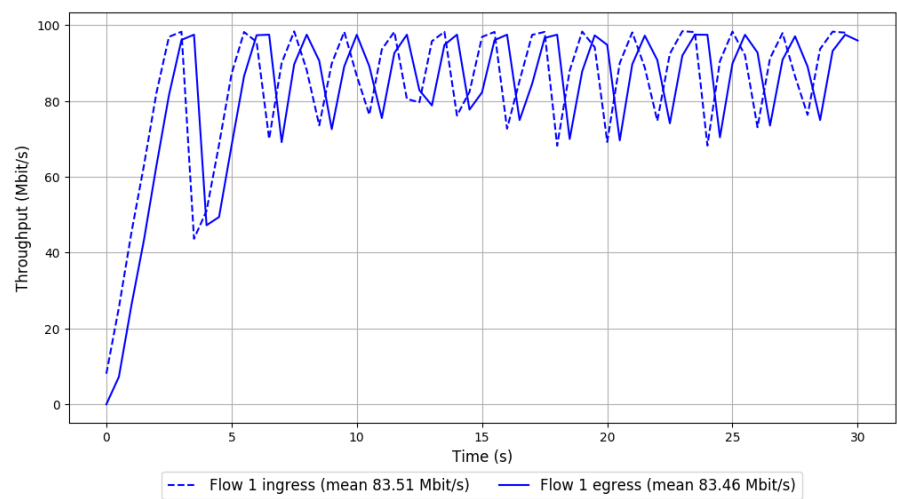


Run 4: Statistics of LEDBAT

Start at: 2018-09-25 13:49:42
End at: 2018-09-25 13:50:12
Local clock offset: -2.427 ms
Remote clock offset: -1.561 ms

Below is generated by plot.py at 2018-09-25 14:21:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 83.46 Mbit/s
95th percentile per-packet one-way delay: 23.210 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 83.46 Mbit/s
95th percentile per-packet one-way delay: 23.210 ms
Loss rate: 0.14%

Run 4: Report of LEDBAT — Data Link

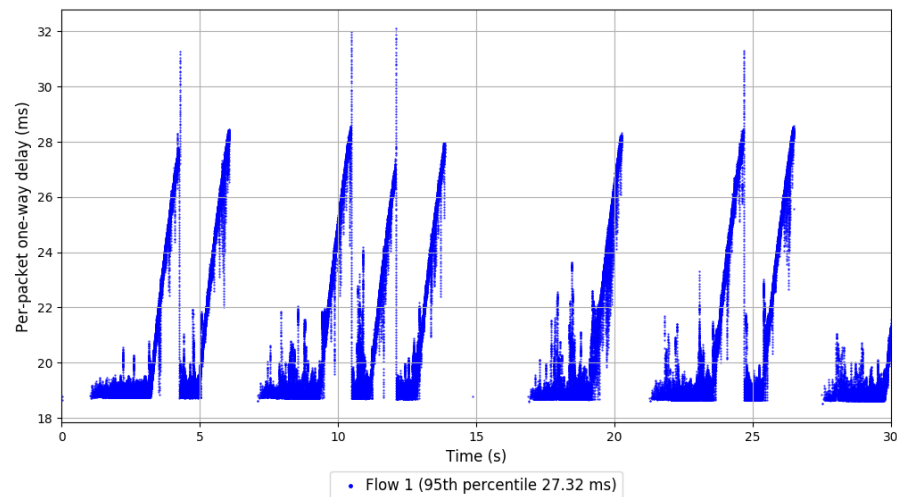
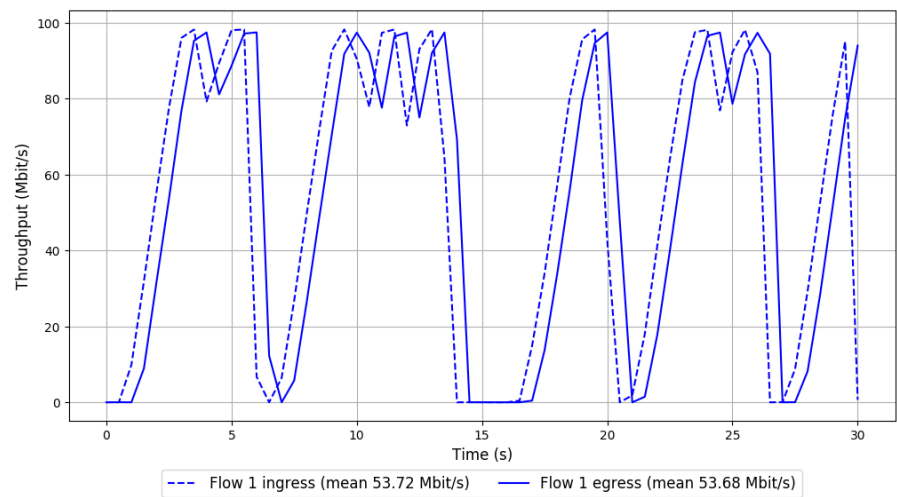


Run 5: Statistics of LEDBAT

Start at: 2018-09-25 14:12:34
End at: 2018-09-25 14:13:04
Local clock offset: -0.207 ms
Remote clock offset: -3.306 ms

Below is generated by plot.py at 2018-09-25 14:21:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 53.68 Mbit/s
95th percentile per-packet one-way delay: 27.320 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 53.68 Mbit/s
95th percentile per-packet one-way delay: 27.320 ms
Loss rate: 0.16%

Run 5: Report of LEDBAT — Data Link

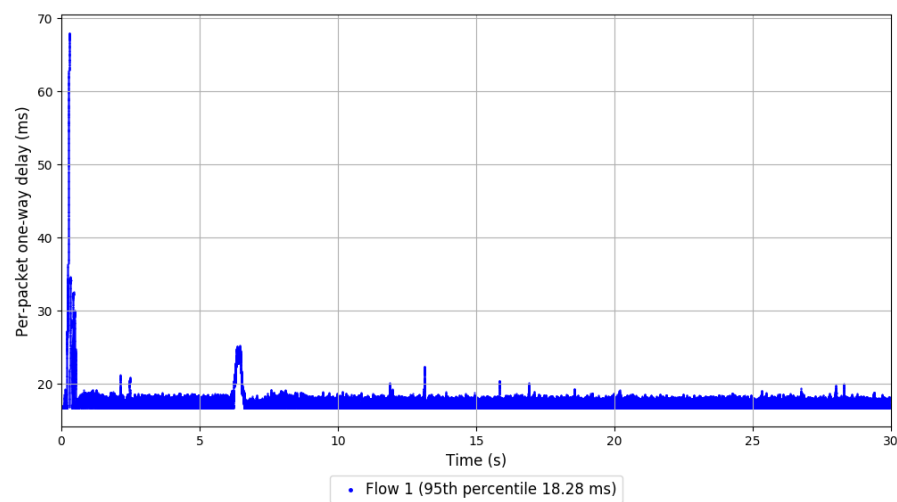
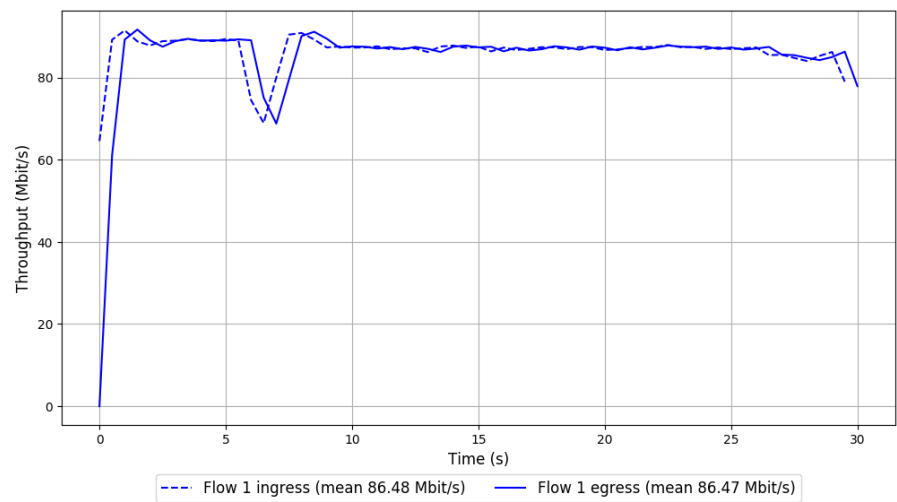



```
Run 1: Statistics of Indigo-Muses

Start at: 2018-09-25 12:17:30
End at: 2018-09-25 12:18:00
Local clock offset: 1.999 ms
Remote clock offset: 0.766 ms

# Below is generated by plot.py at 2018-09-25 14:21:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.47 Mbit/s
95th percentile per-packet one-way delay: 18.276 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 86.47 Mbit/s
95th percentile per-packet one-way delay: 18.276 ms
Loss rate: 0.08%
```

Run 1: Report of Indigo-Muses — Data Link

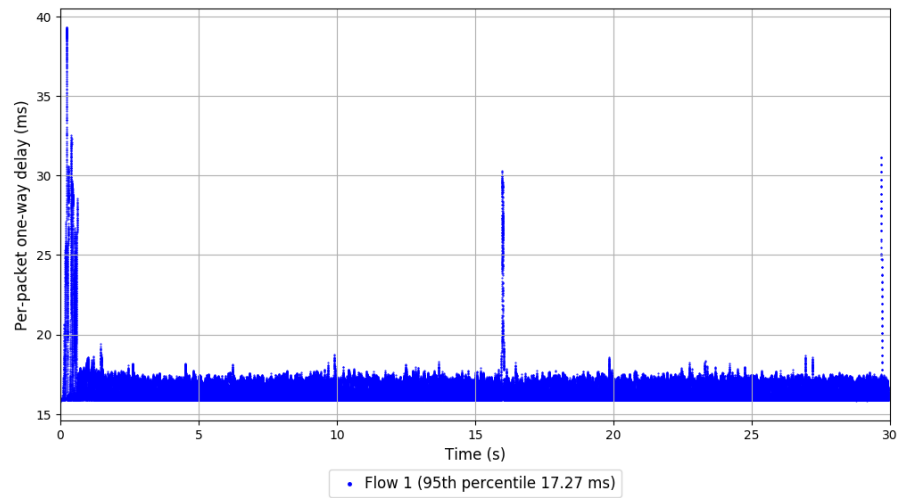
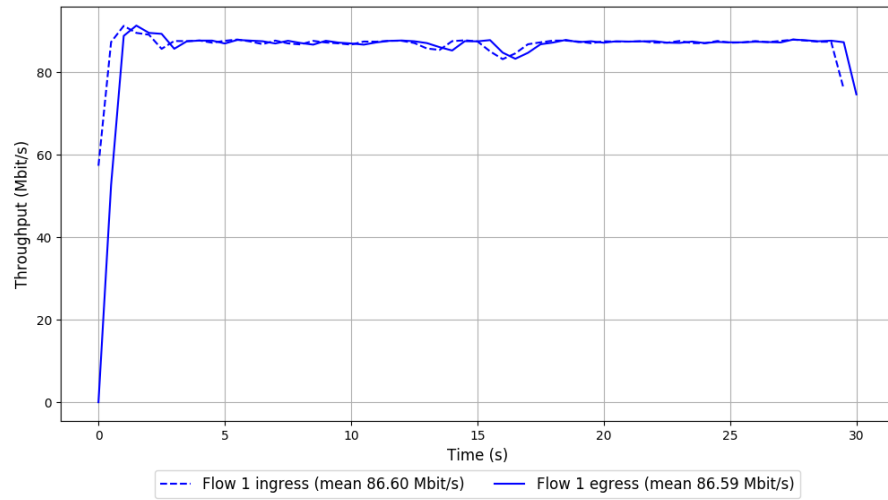


Run 2: Statistics of Indigo-Muses

Start at: 2018-09-25 12:41:09
End at: 2018-09-25 12:41:39
Local clock offset: 0.319 ms
Remote clock offset: -0.906 ms

Below is generated by plot.py at 2018-09-25 14:21:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 86.59 Mbit/s
95th percentile per-packet one-way delay: 17.274 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 86.59 Mbit/s
95th percentile per-packet one-way delay: 17.274 ms
Loss rate: 0.08%

Run 2: Report of Indigo-Muses — Data Link



Run 3: Statistics of Indigo-Muses

Start at: 2018-09-25 13:04:54

End at: 2018-09-25 13:05:24

Local clock offset: 2.681 ms

Remote clock offset: -0.82 ms

Below is generated by plot.py at 2018-09-25 14:21:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 86.44 Mbit/s

95th percentile per-packet one-way delay: 18.907 ms

Loss rate: 0.08%

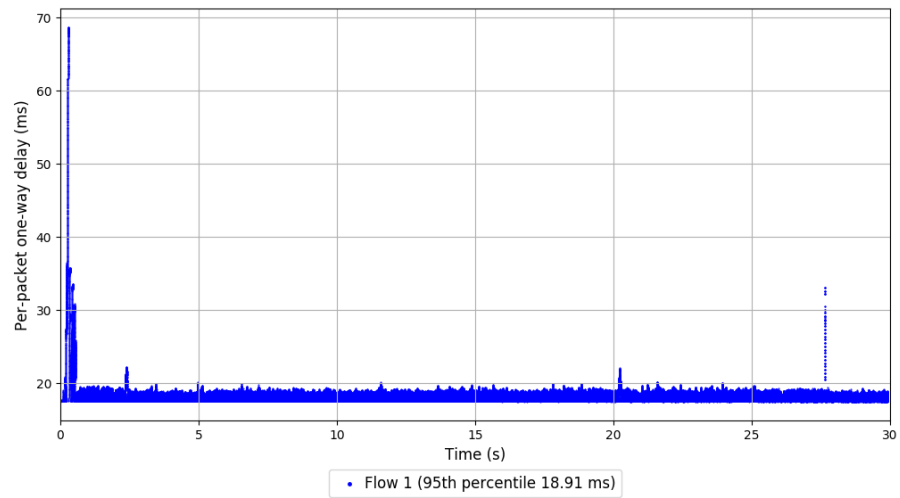
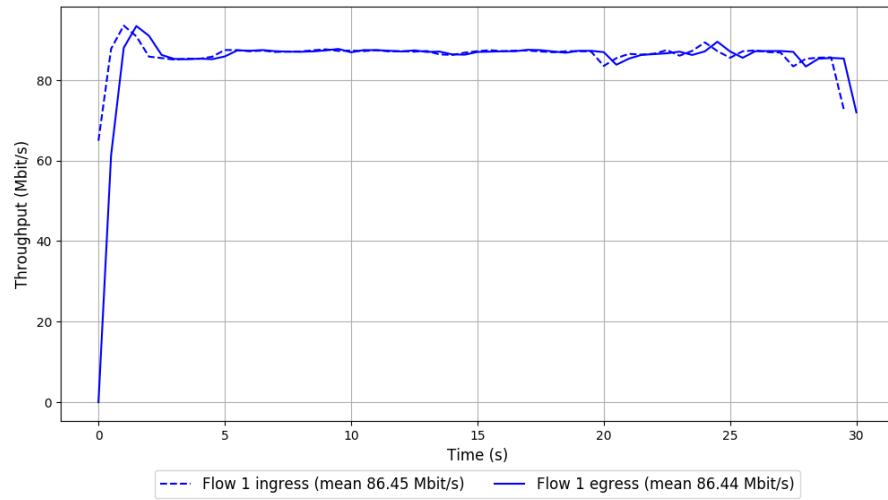
-- Flow 1:

Average throughput: 86.44 Mbit/s

95th percentile per-packet one-way delay: 18.907 ms

Loss rate: 0.08%

Run 3: Report of Indigo-Muses — Data Link

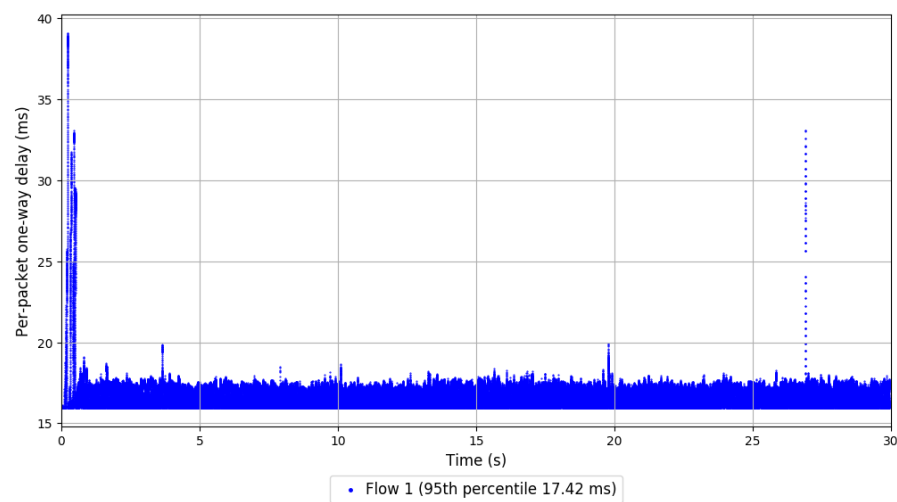
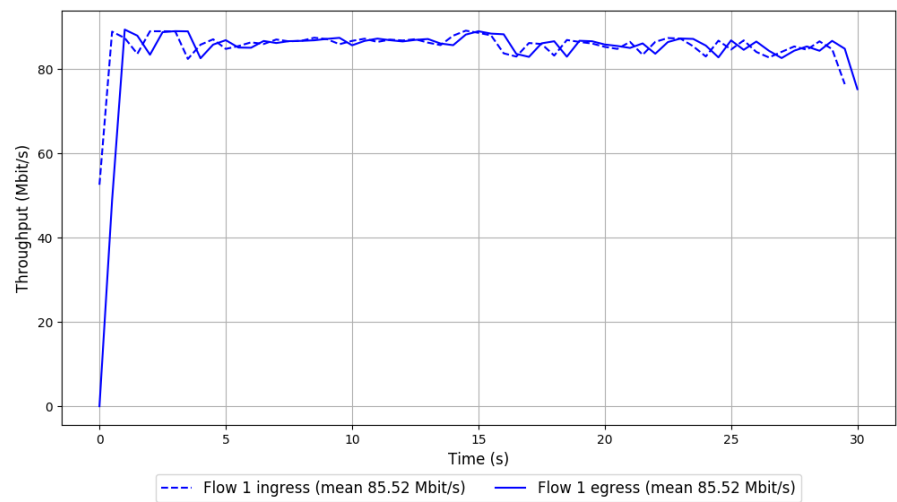


Run 4: Statistics of Indigo-Muses

Start at: 2018-09-25 13:28:41
End at: 2018-09-25 13:29:11
Local clock offset: -0.15 ms
Remote clock offset: -0.086 ms

Below is generated by plot.py at 2018-09-25 14:22:23
Datalink statistics
-- Total of 1 flow:
Average throughput: 85.52 Mbit/s
95th percentile per-packet one-way delay: 17.418 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 85.52 Mbit/s
95th percentile per-packet one-way delay: 17.418 ms
Loss rate: 0.08%

Run 4: Report of Indigo-Muses — Data Link

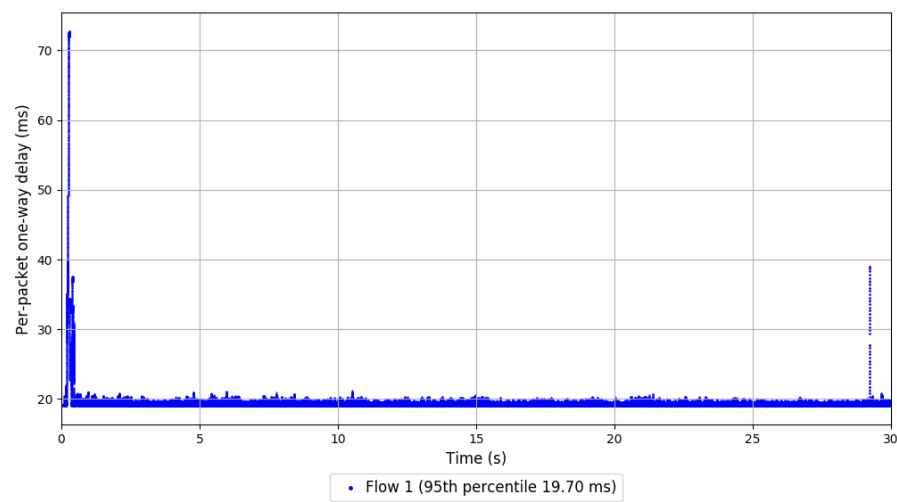
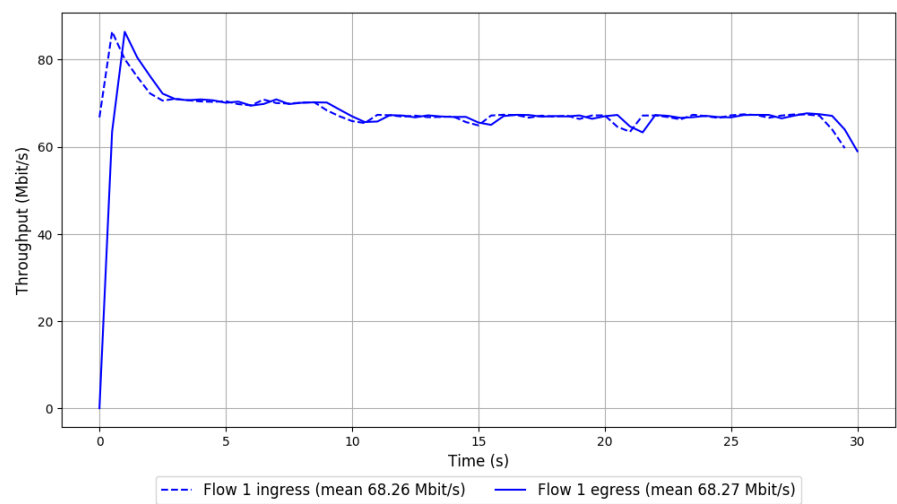


Run 5: Statistics of Indigo-Muses

Start at: 2018-09-25 13:52:08
End at: 2018-09-25 13:52:38
Local clock offset: 0.925 ms
Remote clock offset: -1.545 ms

Below is generated by plot.py at 2018-09-25 14:22:23
Datalink statistics
-- Total of 1 flow:
Average throughput: 68.27 Mbit/s
95th percentile per-packet one-way delay: 19.700 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 68.27 Mbit/s
95th percentile per-packet one-way delay: 19.700 ms
Loss rate: 0.08%

Run 5: Report of Indigo-Muses — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2018-09-25 12:28:58

End at: 2018-09-25 12:29:28

Local clock offset: 2.565 ms

Remote clock offset: 0.781 ms

Below is generated by plot.py at 2018-09-25 14:22:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 86.58 Mbit/s

95th percentile per-packet one-way delay: 18.968 ms

Loss rate: 0.09%

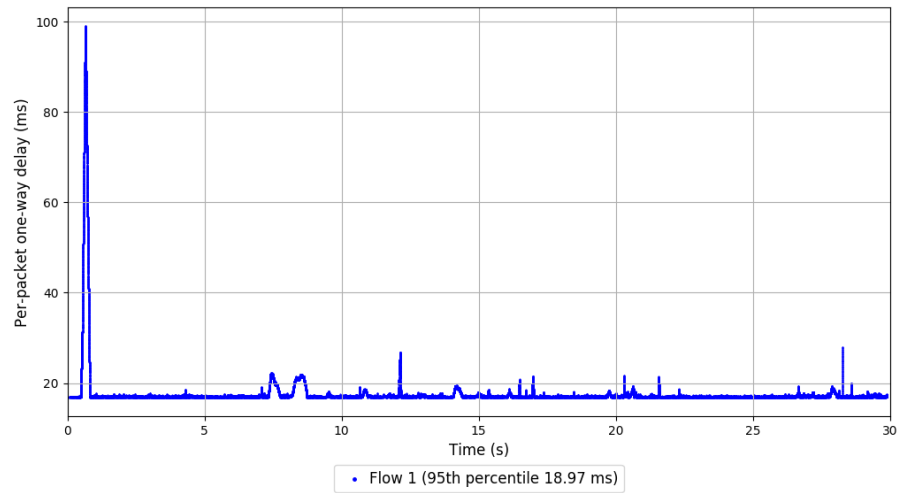
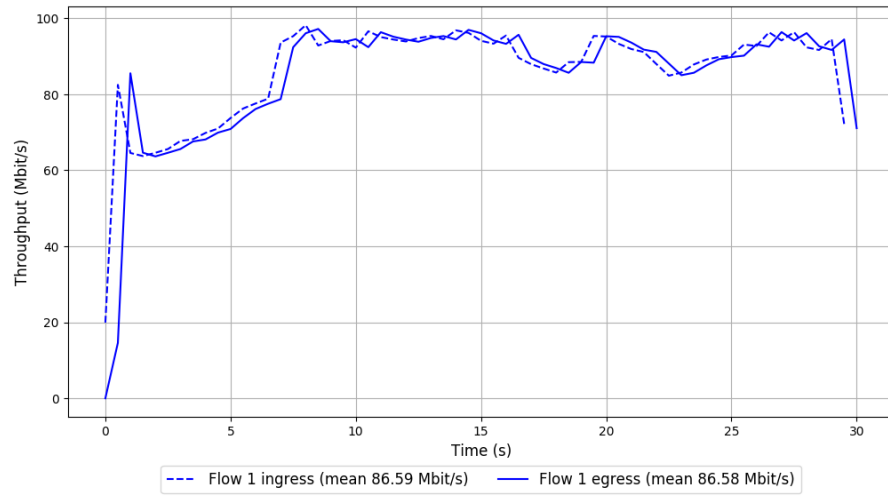
-- Flow 1:

Average throughput: 86.58 Mbit/s

95th percentile per-packet one-way delay: 18.968 ms

Loss rate: 0.09%

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-09-25 12:52:35

End at: 2018-09-25 12:53:05

Local clock offset: 2.809 ms

Remote clock offset: -0.694 ms

Below is generated by plot.py at 2018-09-25 14:22:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 80.25 Mbit/s

95th percentile per-packet one-way delay: 20.714 ms

Loss rate: 0.10%

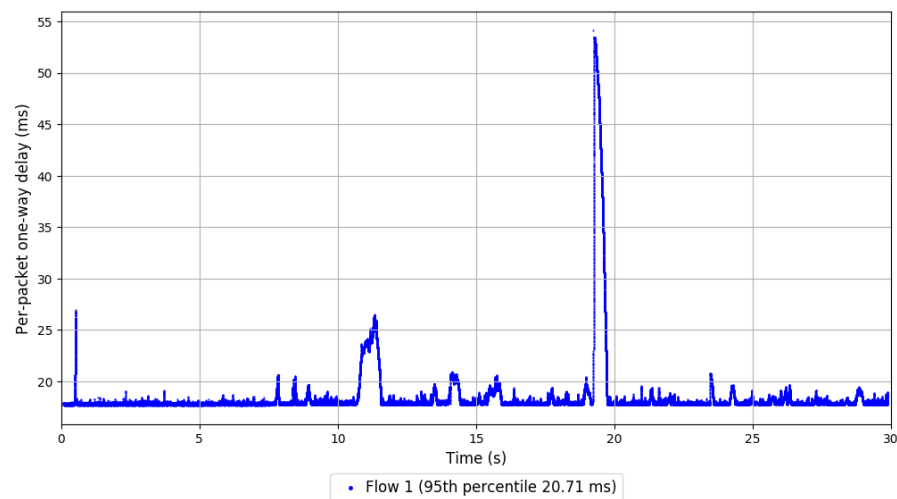
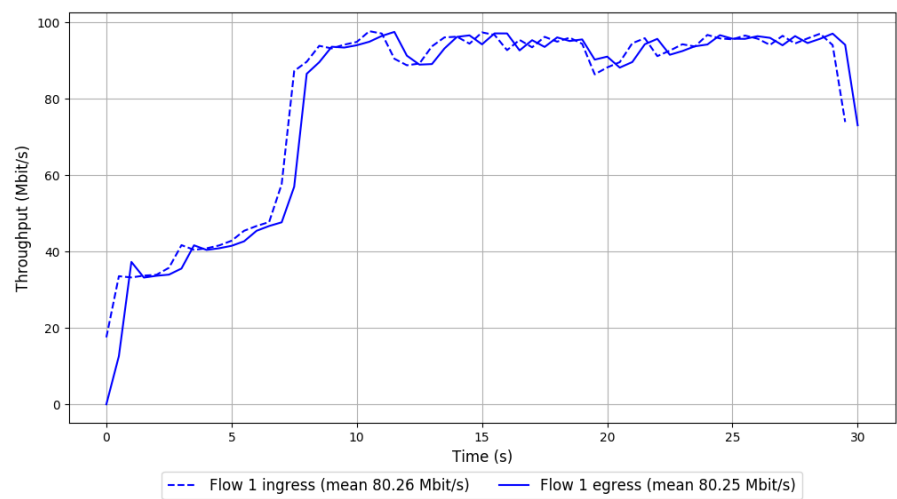
-- Flow 1:

Average throughput: 80.25 Mbit/s

95th percentile per-packet one-way delay: 20.714 ms

Loss rate: 0.10%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

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

End at: 2018-09-25 13:16:43

Local clock offset: 1.1 ms

Remote clock offset: 0.322 ms

Below is generated by plot.py at 2018-09-25 14:22:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 22.64 Mbit/s

95th percentile per-packet one-way delay: 16.130 ms

Loss rate: 0.11%

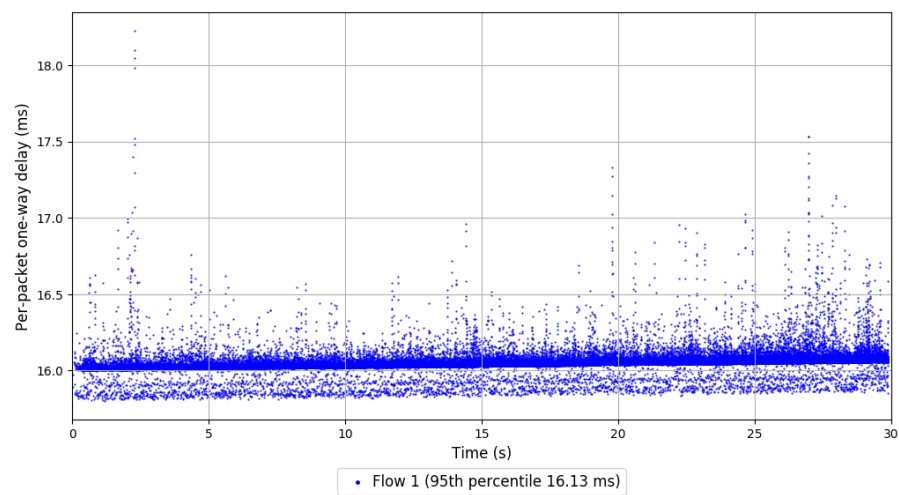
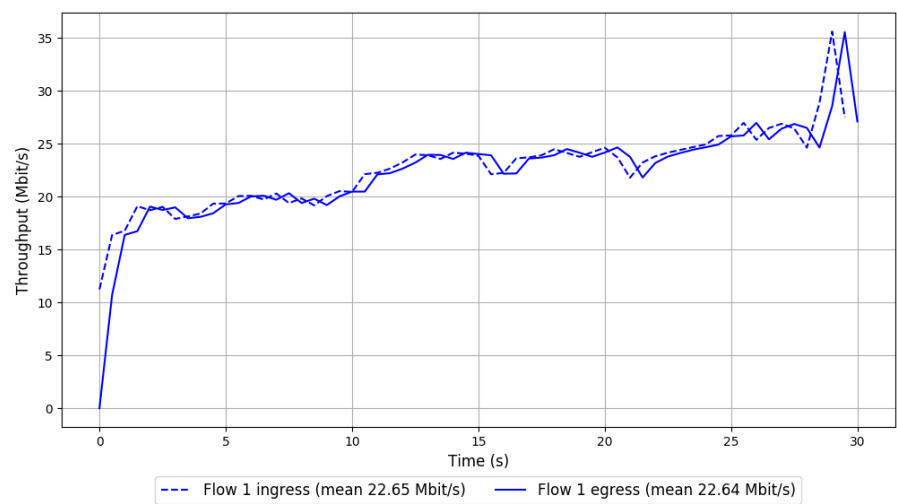
-- Flow 1:

Average throughput: 22.64 Mbit/s

95th percentile per-packet one-way delay: 16.130 ms

Loss rate: 0.11%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

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

End at: 2018-09-25 13:40:39

Local clock offset: -0.981 ms

Remote clock offset: -1.68 ms

Below is generated by plot.py at 2018-09-25 14:22:51

Datalink statistics

-- Total of 1 flow:

Average throughput: 92.03 Mbit/s

95th percentile per-packet one-way delay: 18.684 ms

Loss rate: 0.08%

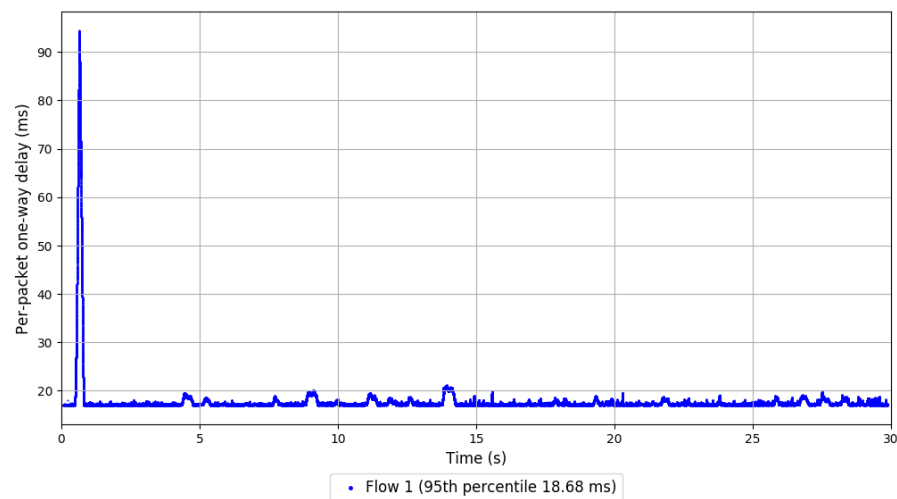
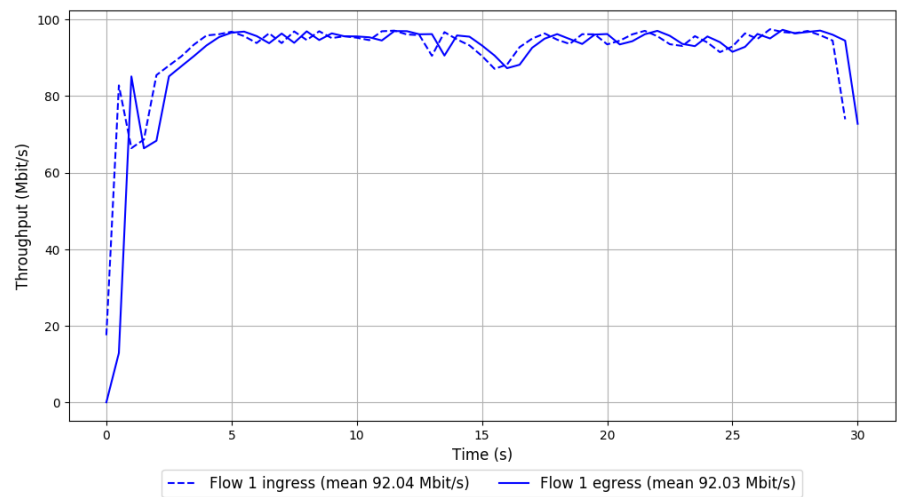
-- Flow 1:

Average throughput: 92.03 Mbit/s

95th percentile per-packet one-way delay: 18.684 ms

Loss rate: 0.08%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-09-25 14:03:01

End at: 2018-09-25 14:03:31

Local clock offset: -1.746 ms

Remote clock offset: -2.122 ms

Below is generated by plot.py at 2018-09-25 14:22:51

Datalink statistics

-- Total of 1 flow:

Average throughput: 86.39 Mbit/s

95th percentile per-packet one-way delay: 20.107 ms

Loss rate: 0.09%

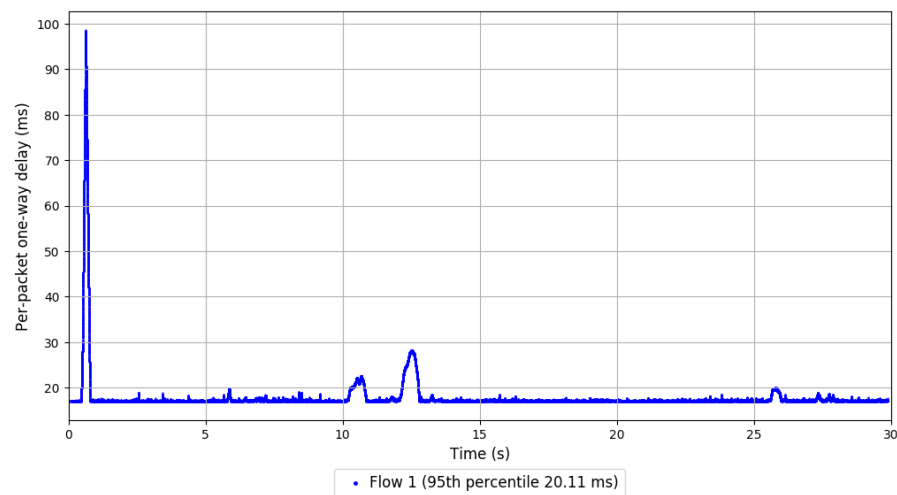
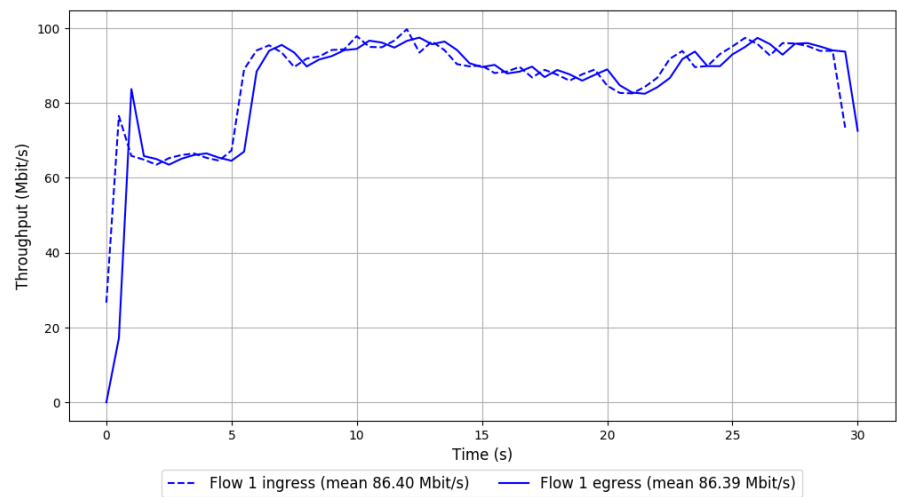
-- Flow 1:

Average throughput: 86.39 Mbit/s

95th percentile per-packet one-way delay: 20.107 ms

Loss rate: 0.09%

Run 5: Report of PCC-Allegro — Data Link

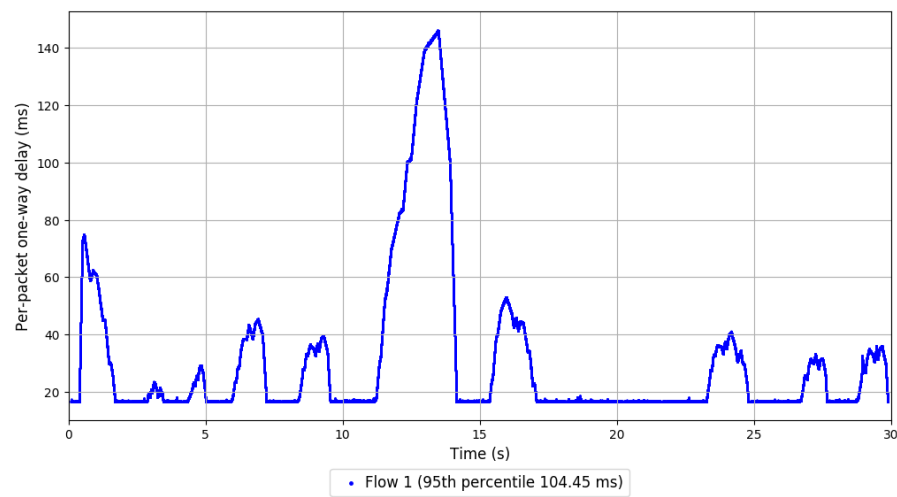
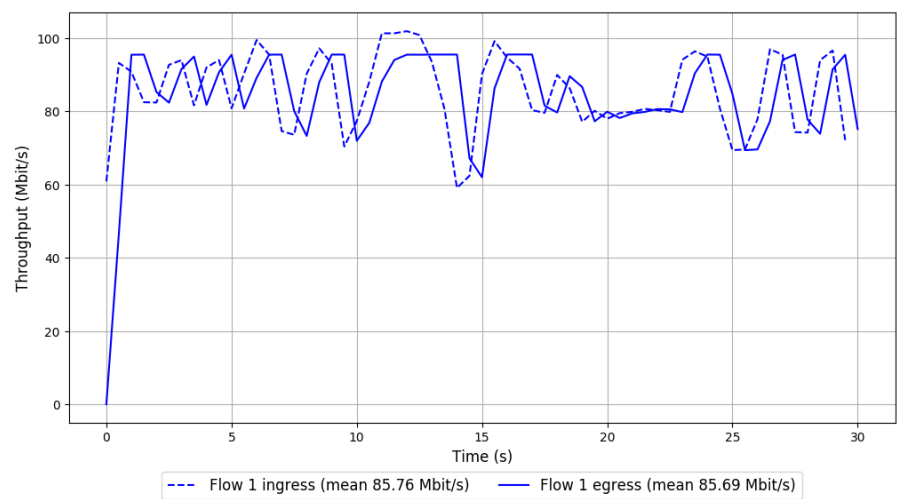


```
Run 1: Statistics of PCC-Expr

Start at: 2018-09-25 12:32:35
End at: 2018-09-25 12:33:05
Local clock offset: 1.543 ms
Remote clock offset: -0.019 ms

# Below is generated by plot.py at 2018-09-25 14:23:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 85.69 Mbit/s
95th percentile per-packet one-way delay: 104.452 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 85.69 Mbit/s
95th percentile per-packet one-way delay: 104.452 ms
Loss rate: 0.15%
```

Run 1: Report of PCC-Expr — Data Link

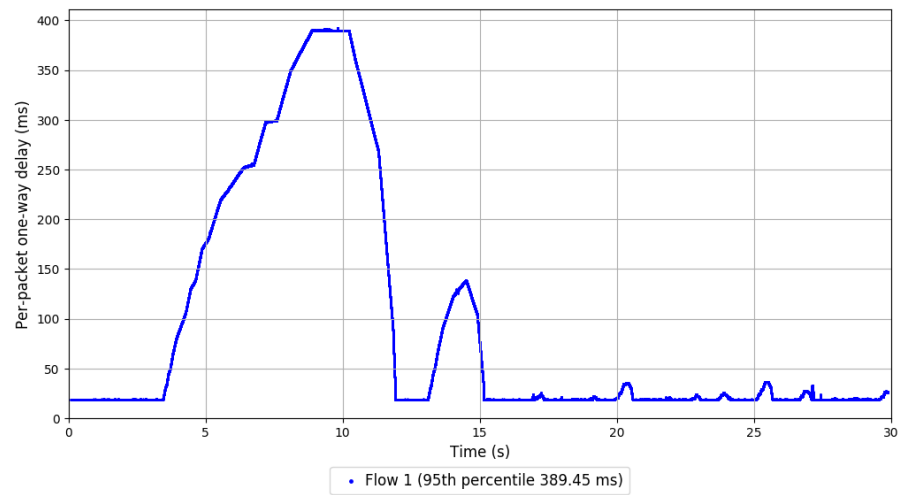
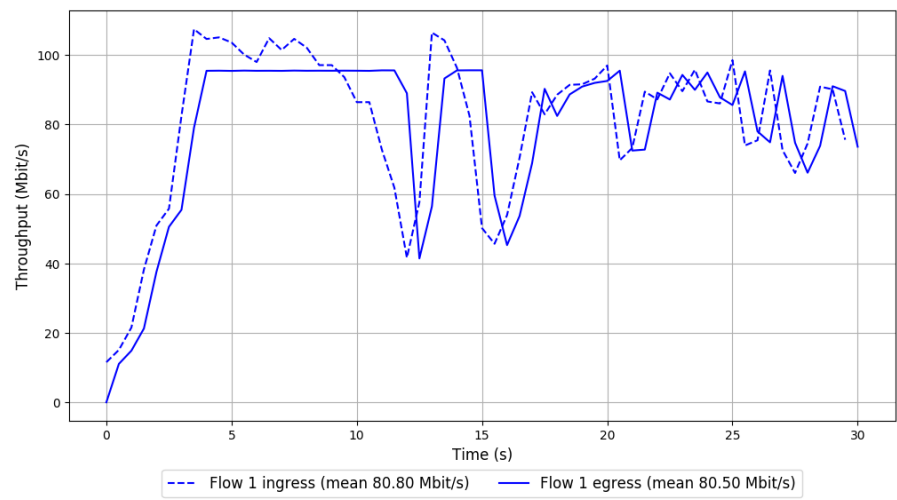


Run 2: Statistics of PCC-Expr

Start at: 2018-09-25 12:56:07
End at: 2018-09-25 12:56:37
Local clock offset: 3.561 ms
Remote clock offset: -0.783 ms

Below is generated by plot.py at 2018-09-25 14:23:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 80.50 Mbit/s
95th percentile per-packet one-way delay: 389.455 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 80.50 Mbit/s
95th percentile per-packet one-way delay: 389.455 ms
Loss rate: 0.45%

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2018-09-25 13:19:42

End at: 2018-09-25 13:20:12

Local clock offset: 1.82 ms

Remote clock offset: -1.143 ms

Below is generated by plot.py at 2018-09-25 14:24:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 82.38 Mbit/s

95th percentile per-packet one-way delay: 184.932 ms

Loss rate: 0.46%

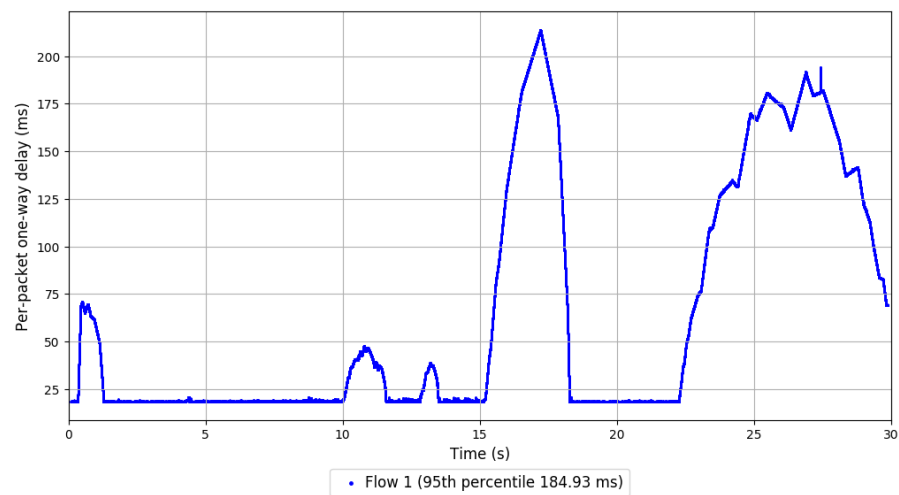
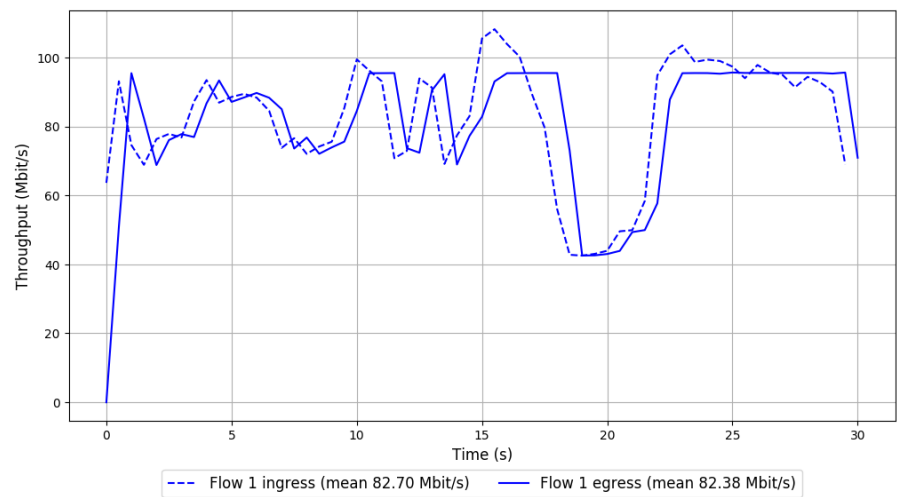
-- Flow 1:

Average throughput: 82.38 Mbit/s

95th percentile per-packet one-way delay: 184.932 ms

Loss rate: 0.46%

Run 3: Report of PCC-Expr — Data Link

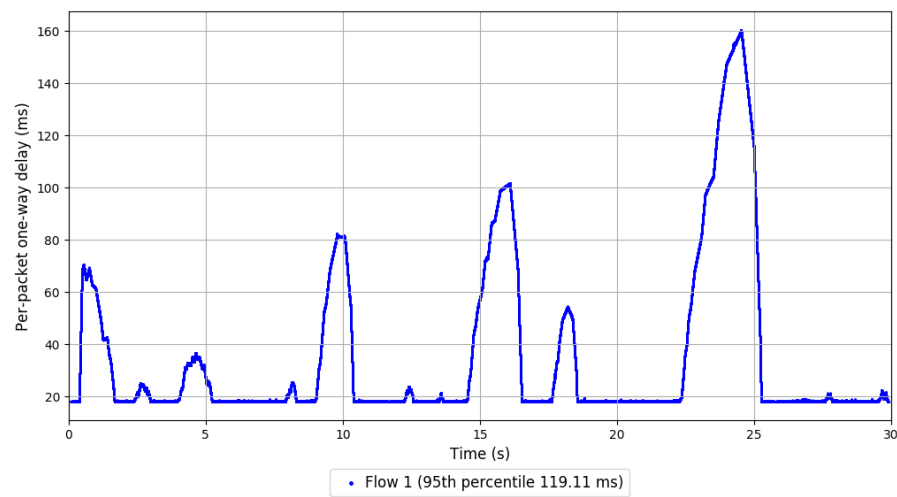
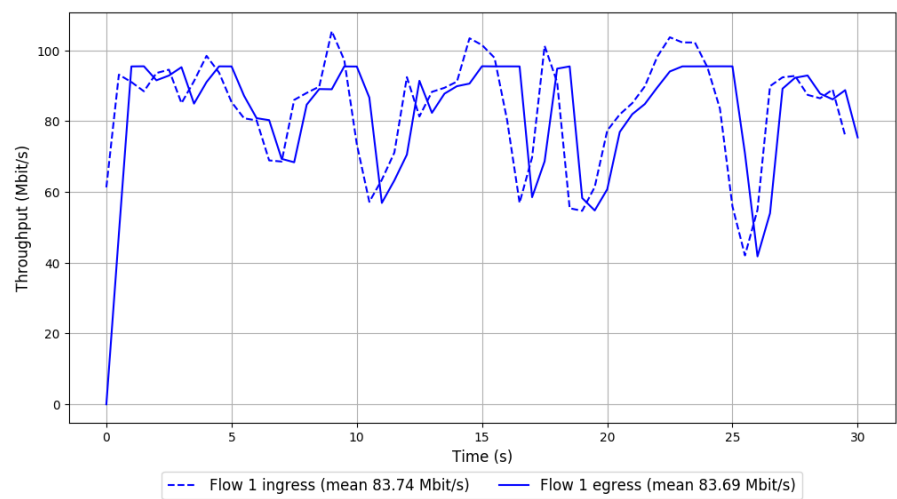


Run 4: Statistics of PCC-Expr

Start at: 2018-09-25 13:43:39
End at: 2018-09-25 13:44:09
Local clock offset: -0.269 ms
Remote clock offset: -2.058 ms

Below is generated by plot.py at 2018-09-25 14:24:16
Datalink statistics
-- Total of 1 flow:
Average throughput: 83.69 Mbit/s
95th percentile per-packet one-way delay: 119.114 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 83.69 Mbit/s
95th percentile per-packet one-way delay: 119.114 ms
Loss rate: 0.13%

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

Start at: 2018-09-25 14:06:33

End at: 2018-09-25 14:07:03

Local clock offset: -1.58 ms

Remote clock offset: -4.03 ms

Below is generated by plot.py at 2018-09-25 14:24:16

Datalink statistics

-- Total of 1 flow:

Average throughput: 66.74 Mbit/s

95th percentile per-packet one-way delay: 48.179 ms

Loss rate: 0.10%

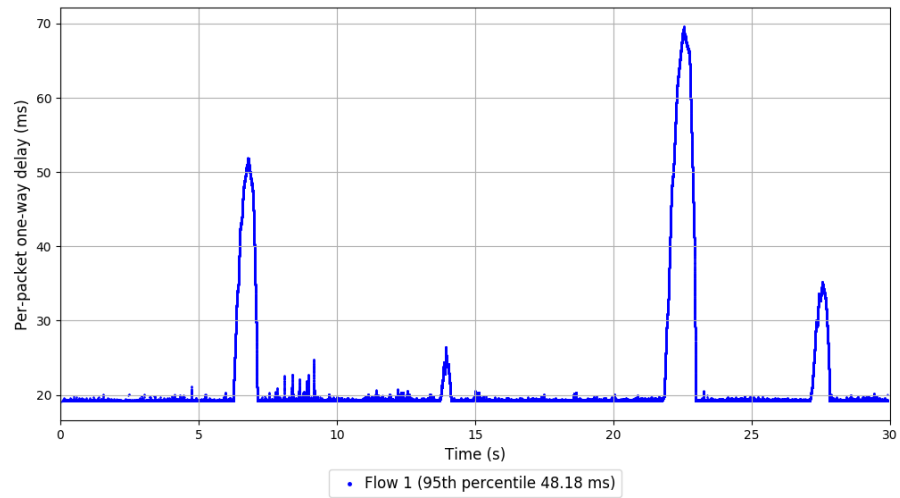
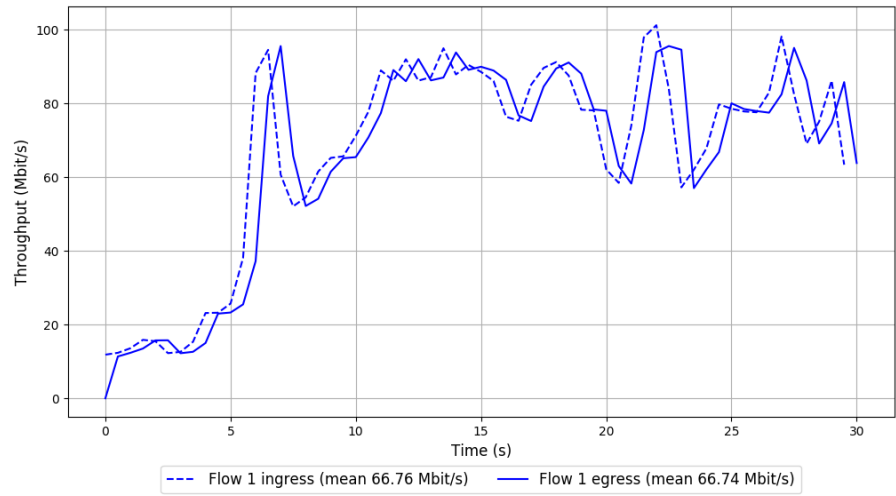
-- Flow 1:

Average throughput: 66.74 Mbit/s

95th percentile per-packet one-way delay: 48.179 ms

Loss rate: 0.10%

Run 5: Report of PCC-Expr — Data Link

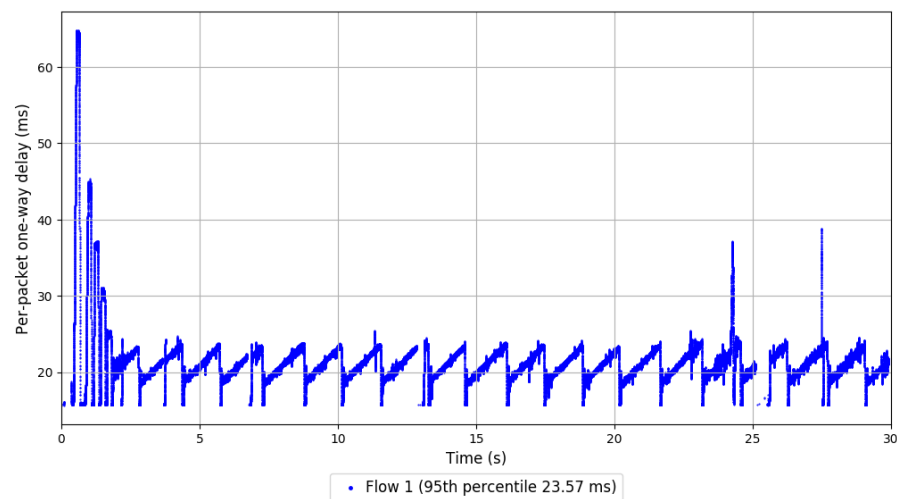
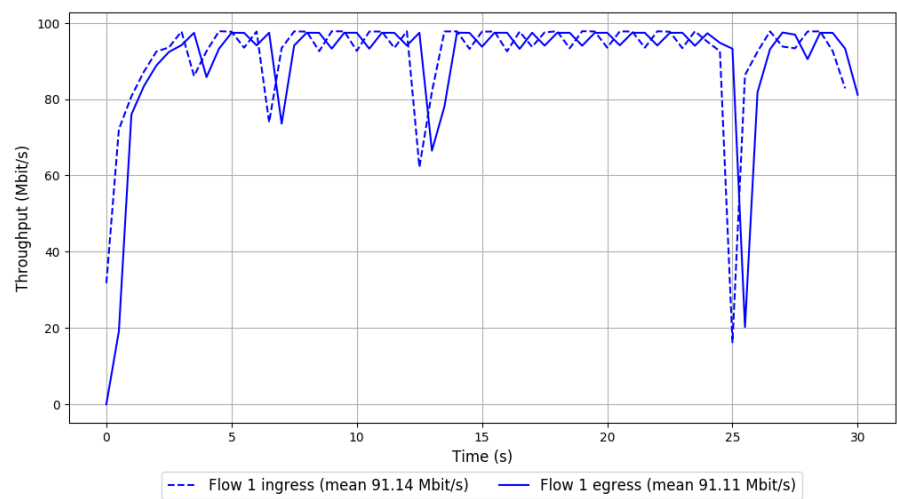


Run 1: Statistics of QUIC Cubic

Start at: 2018-09-25 12:30:11
End at: 2018-09-25 12:30:41
Local clock offset: 0.502 ms
Remote clock offset: -0.136 ms

Below is generated by plot.py at 2018-09-25 14:24:16
Datalink statistics
-- Total of 1 flow:
Average throughput: 91.11 Mbit/s
95th percentile per-packet one-way delay: 23.568 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 91.11 Mbit/s
95th percentile per-packet one-way delay: 23.568 ms
Loss rate: 0.11%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-09-25 12:53:47

End at: 2018-09-25 12:54:17

Local clock offset: 3.355 ms

Remote clock offset: -0.225 ms

Below is generated by plot.py at 2018-09-25 14:24:16

Datalink statistics

-- Total of 1 flow:

Average throughput: 89.40 Mbit/s

95th percentile per-packet one-way delay: 29.164 ms

Loss rate: 0.13%

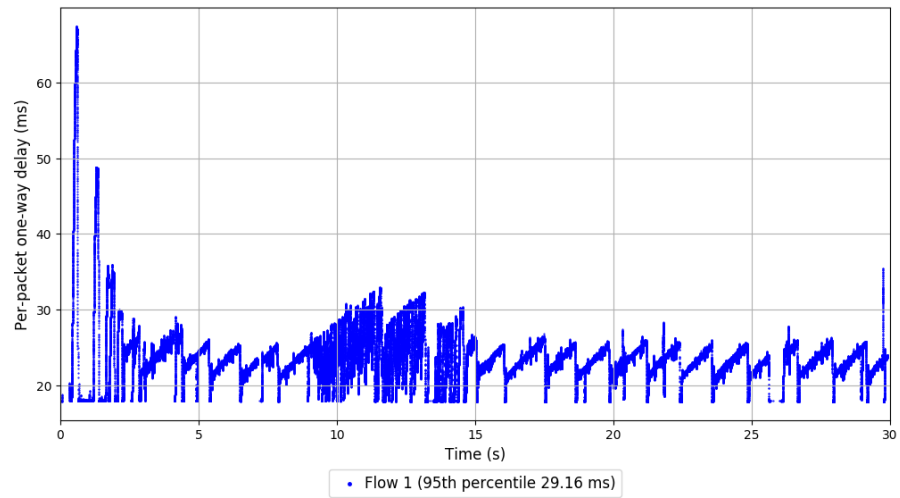
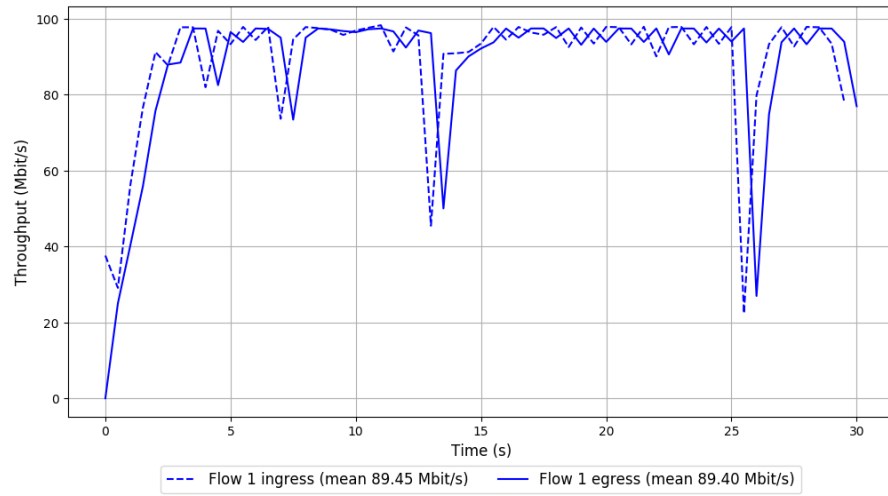
-- Flow 1:

Average throughput: 89.40 Mbit/s

95th percentile per-packet one-way delay: 29.164 ms

Loss rate: 0.13%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-09-25 13:17:21

End at: 2018-09-25 13:17:51

Local clock offset: 1.563 ms

Remote clock offset: -1.606 ms

Below is generated by plot.py at 2018-09-25 14:24:16

Datalink statistics

-- Total of 1 flow:

Average throughput: 89.68 Mbit/s

95th percentile per-packet one-way delay: 28.402 ms

Loss rate: 0.10%

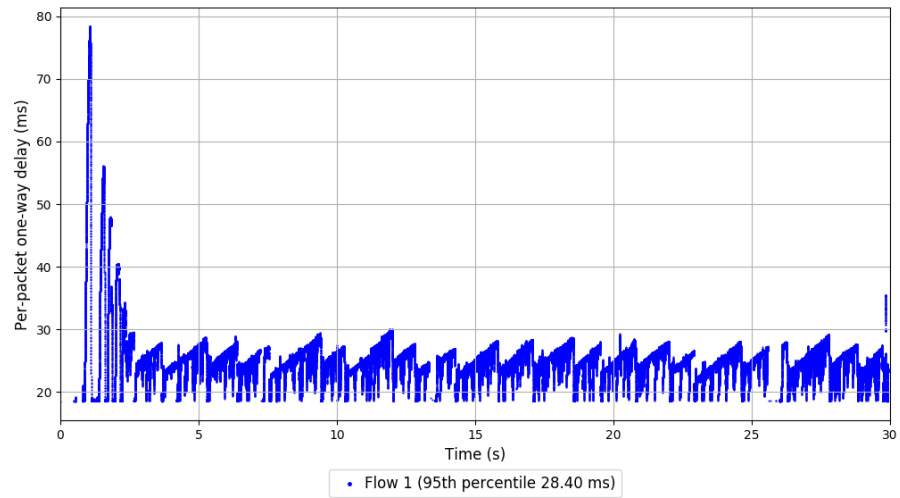
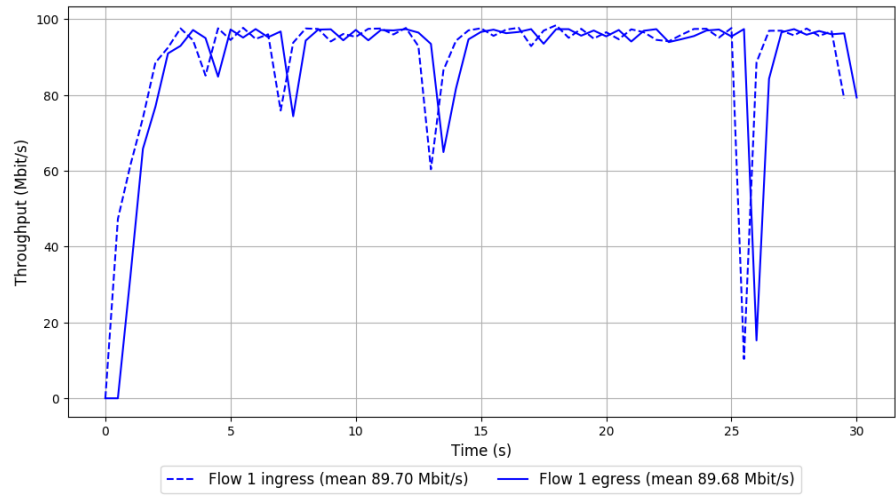
-- Flow 1:

Average throughput: 89.68 Mbit/s

95th percentile per-packet one-way delay: 28.402 ms

Loss rate: 0.10%

Run 3: Report of QUIC Cubic — Data Link

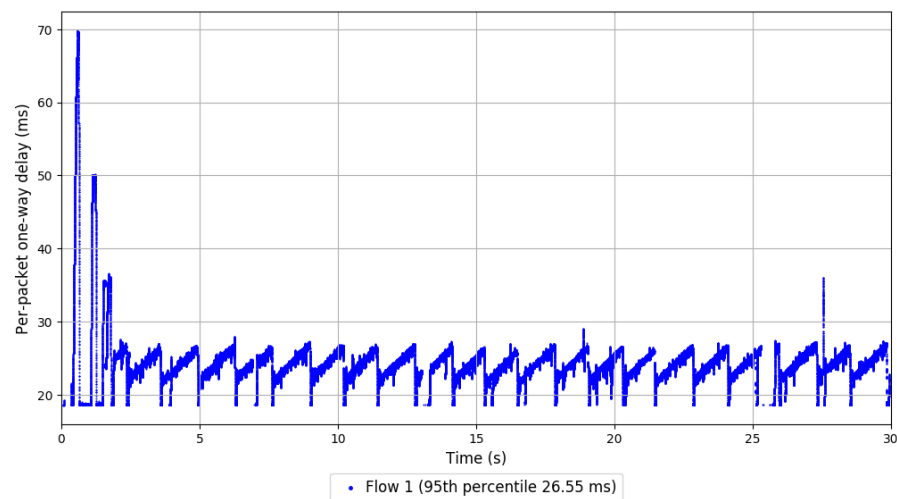
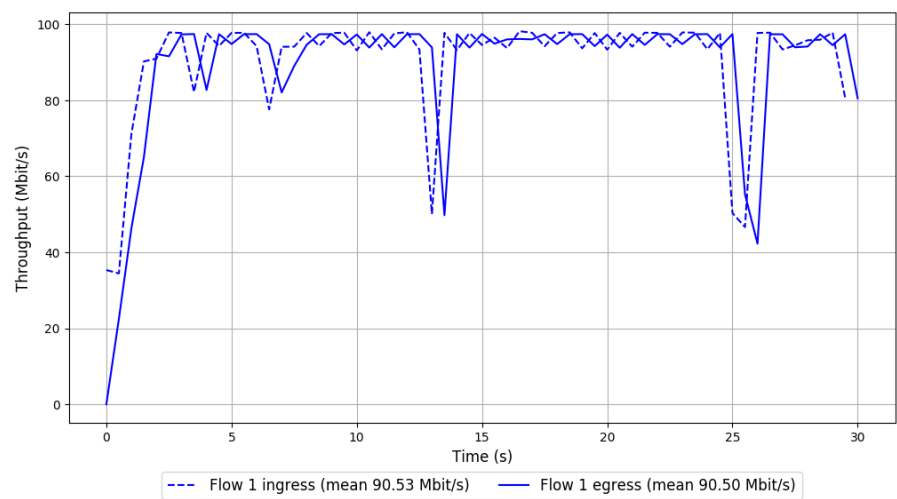


Run 4: Statistics of QUIC Cubic

Start at: 2018-09-25 13:41:19
End at: 2018-09-25 13:41:49
Local clock offset: -1.821 ms
Remote clock offset: -4.093 ms

Below is generated by plot.py at 2018-09-25 14:24:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 90.50 Mbit/s
95th percentile per-packet one-way delay: 26.547 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 90.50 Mbit/s
95th percentile per-packet one-way delay: 26.547 ms
Loss rate: 0.11%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-09-25 14:04:10

End at: 2018-09-25 14:04:40

Local clock offset: -1.727 ms

Remote clock offset: -2.44 ms

Below is generated by plot.py at 2018-09-25 14:24:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.50 Mbit/s

95th percentile per-packet one-way delay: 26.405 ms

Loss rate: 0.11%

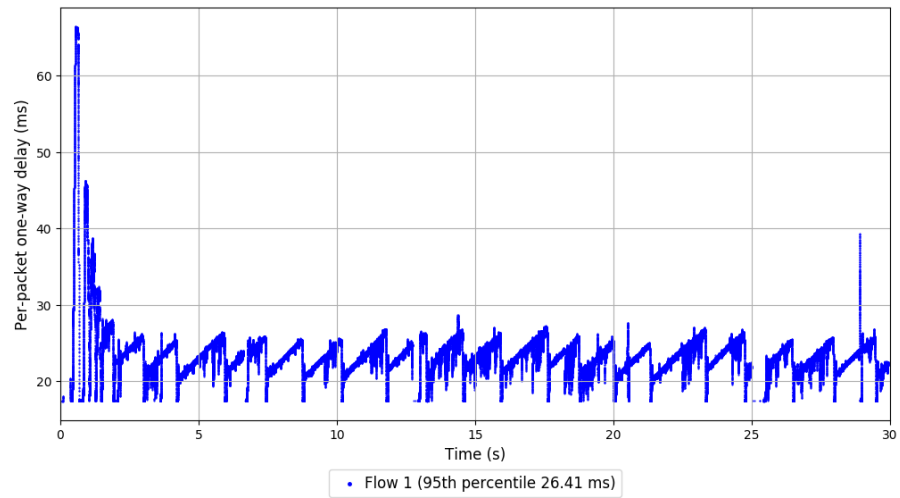
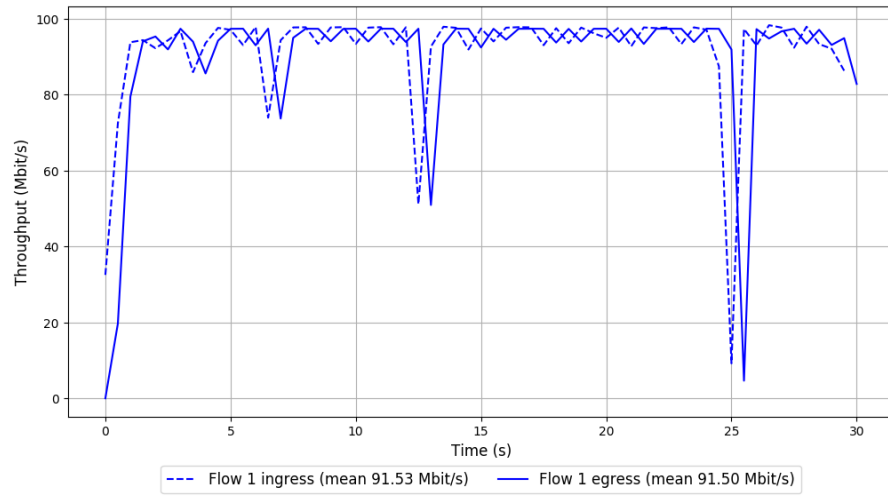
-- Flow 1:

Average throughput: 91.50 Mbit/s

95th percentile per-packet one-way delay: 26.405 ms

Loss rate: 0.11%

Run 5: Report of QUIC Cubic — Data Link

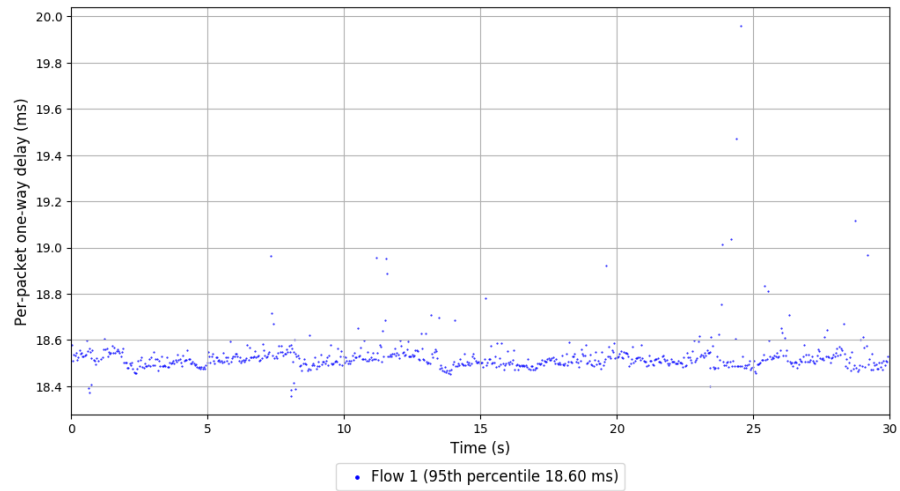
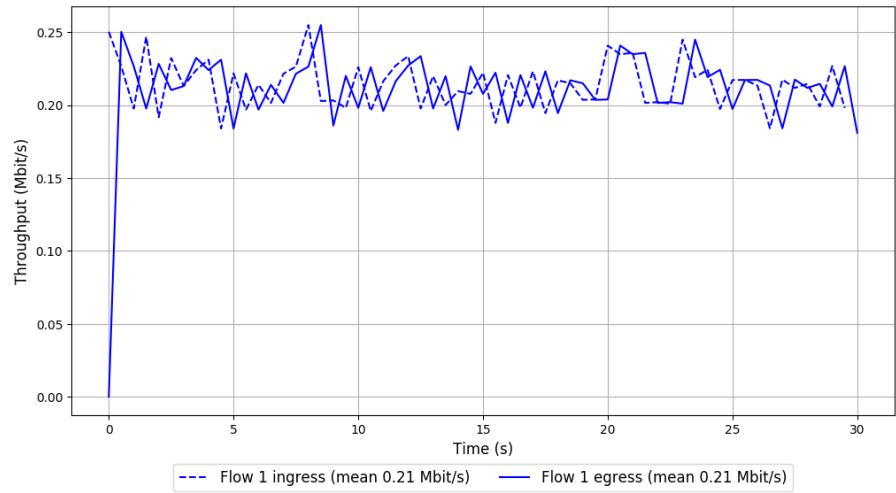


Run 1: Statistics of SCReAM

Start at: 2018-09-25 12:22:25
End at: 2018-09-25 12:22:55
Local clock offset: 3.068 ms
Remote clock offset: -0.086 ms

Below is generated by plot.py at 2018-09-25 14:24:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 18.604 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 18.604 ms
Loss rate: 0.13%

Run 1: Report of SReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2018-09-25 12:46:09

End at: 2018-09-25 12:46:39

Local clock offset: 0.911 ms

Remote clock offset: -0.17 ms

Below is generated by plot.py at 2018-09-25 14:24:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 15.737 ms

Loss rate: 0.00%

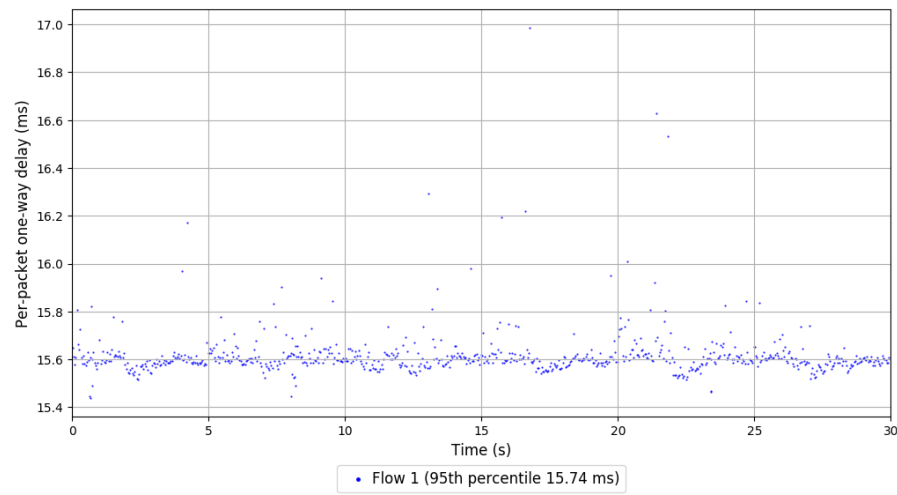
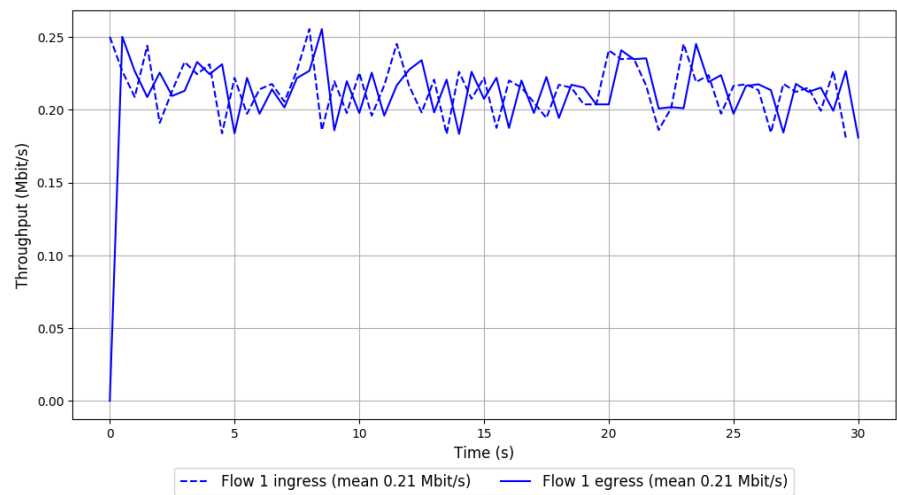
-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 15.737 ms

Loss rate: 0.00%

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

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

End at: 2018-09-25 13:10:28

Local clock offset: 4.424 ms

Remote clock offset: -1.03 ms

Below is generated by plot.py at 2018-09-25 14:24:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 19.789 ms

Loss rate: 0.13%

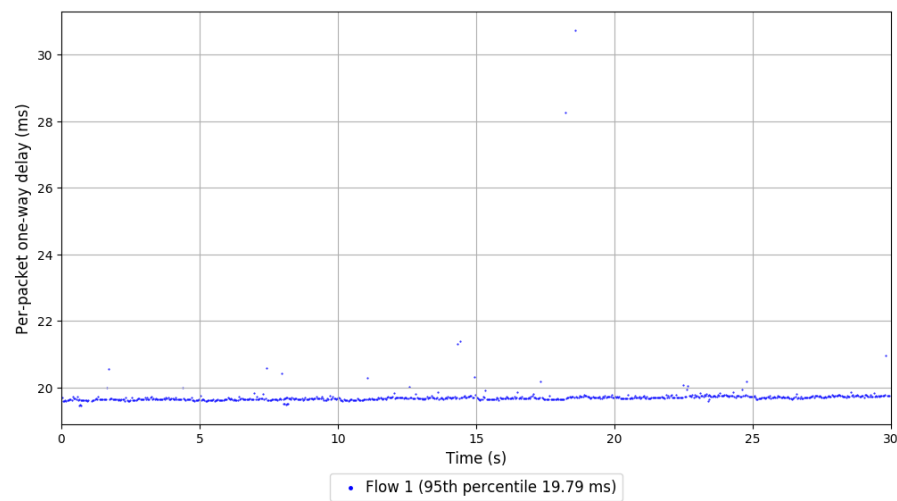
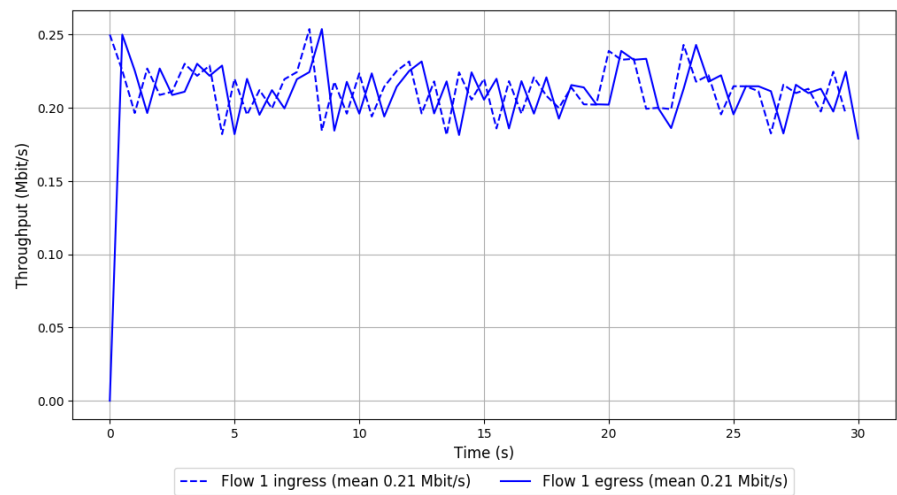
-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 19.789 ms

Loss rate: 0.13%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2018-09-25 13:33:44

End at: 2018-09-25 13:34:14

Local clock offset: 0.672 ms

Remote clock offset: -1.07 ms

Below is generated by plot.py at 2018-09-25 14:24:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 18.024 ms

Loss rate: 0.00%

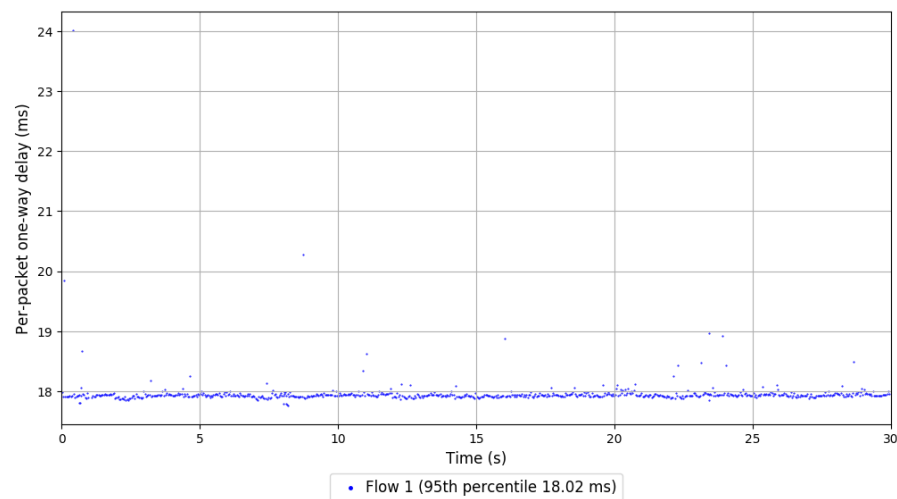
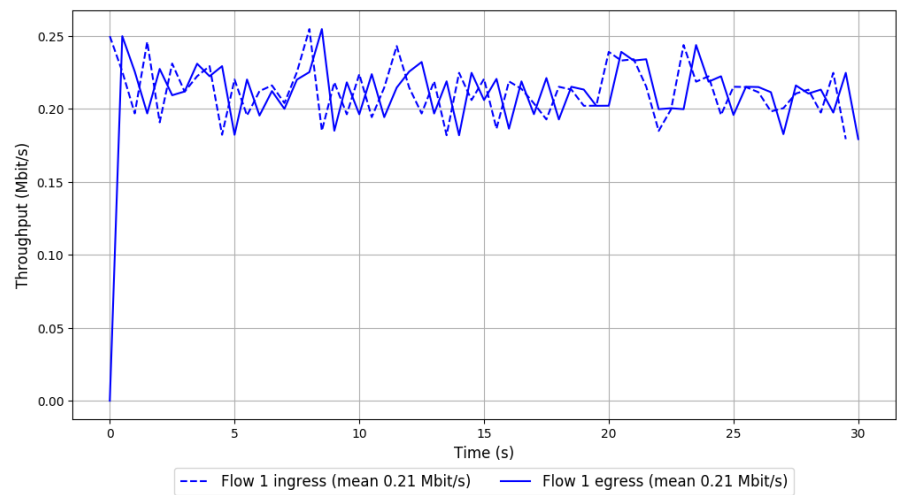
-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 18.024 ms

Loss rate: 0.00%

Run 4: Report of SReAM — Data Link

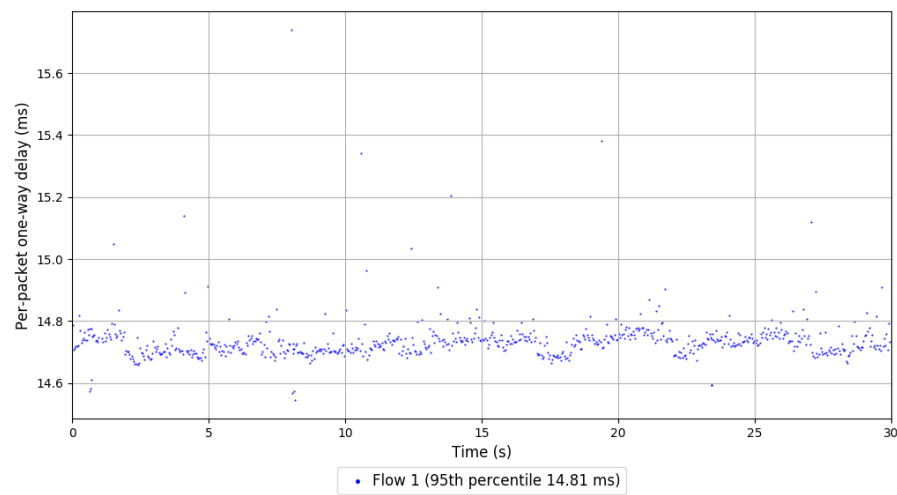
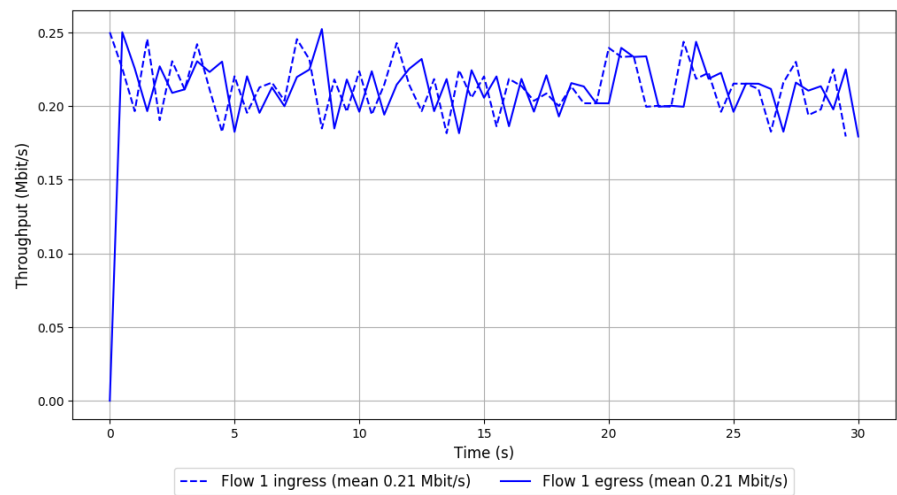


Run 5: Statistics of SCReAM

Start at: 2018-09-25 13:56:57
End at: 2018-09-25 13:57:27
Local clock offset: -3.193 ms
Remote clock offset: -1.261 ms

Below is generated by plot.py at 2018-09-25 14:24:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 14.806 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 14.806 ms
Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2018-09-25 12:31:29

End at: 2018-09-25 12:31:59

Local clock offset: 2.245 ms

Remote clock offset: 1.314 ms

Below is generated by plot.py at 2018-09-25 14:24:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 24.64 Mbit/s

95th percentile per-packet one-way delay: 24.181 ms

Loss rate: 0.14%

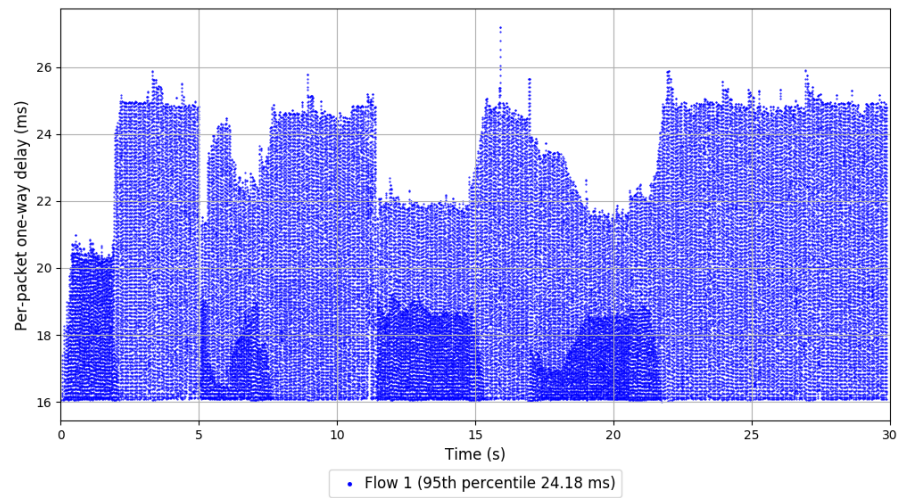
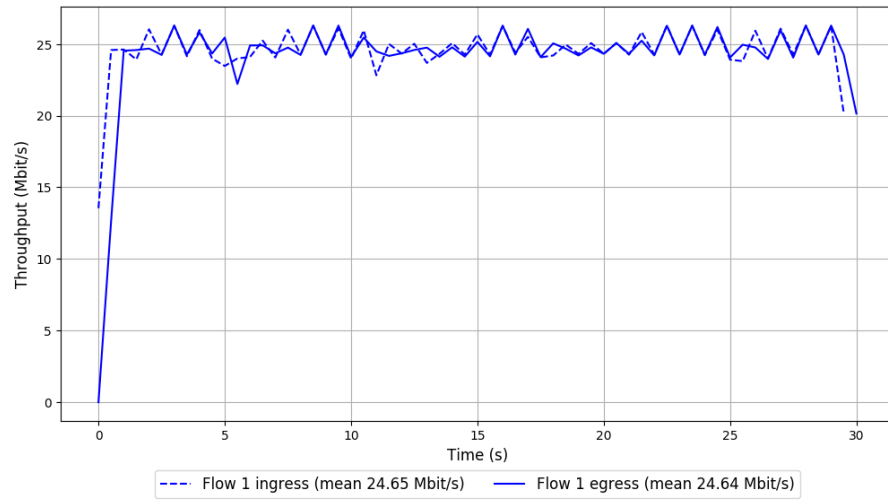
-- Flow 1:

Average throughput: 24.64 Mbit/s

95th percentile per-packet one-way delay: 24.181 ms

Loss rate: 0.14%

Run 1: Report of Sprout — Data Link

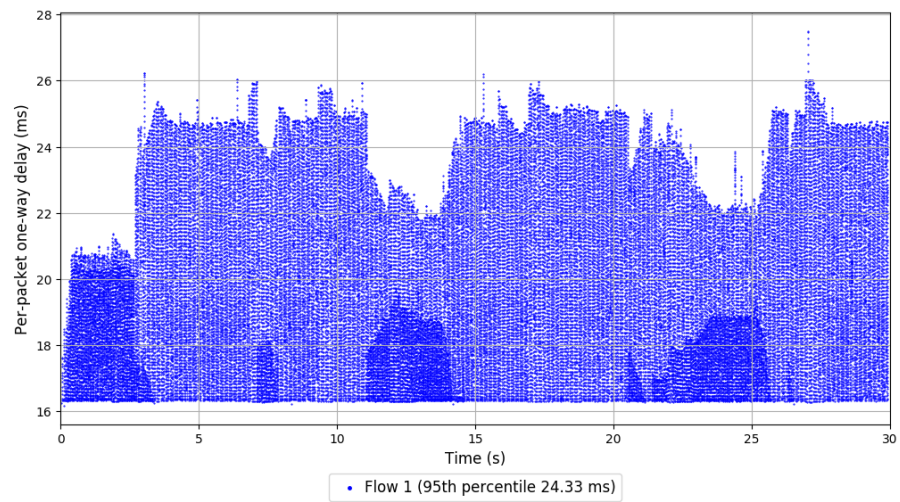
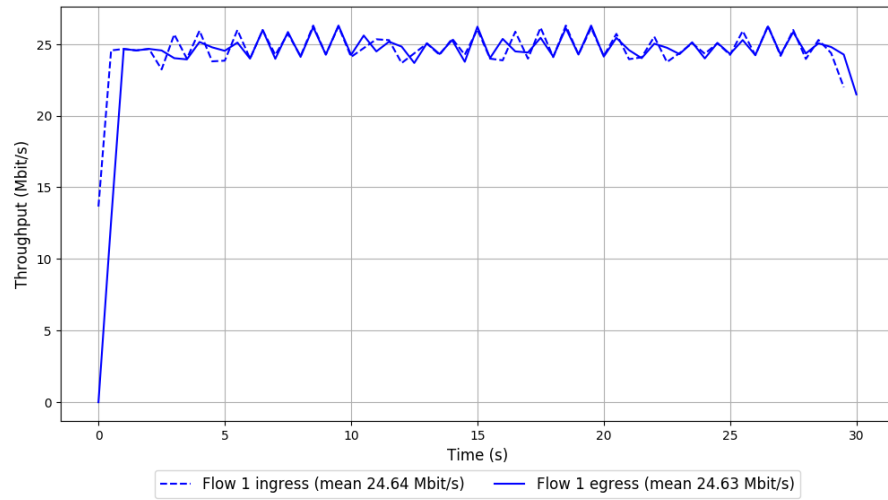


Run 2: Statistics of Sprout

Start at: 2018-09-25 12:54:59
End at: 2018-09-25 12:55:29
Local clock offset: 1.568 ms
Remote clock offset: -0.422 ms

Below is generated by plot.py at 2018-09-25 14:24:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.63 Mbit/s
95th percentile per-packet one-way delay: 24.328 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 24.63 Mbit/s
95th percentile per-packet one-way delay: 24.328 ms
Loss rate: 0.14%

Run 2: Report of Sprout — Data Link

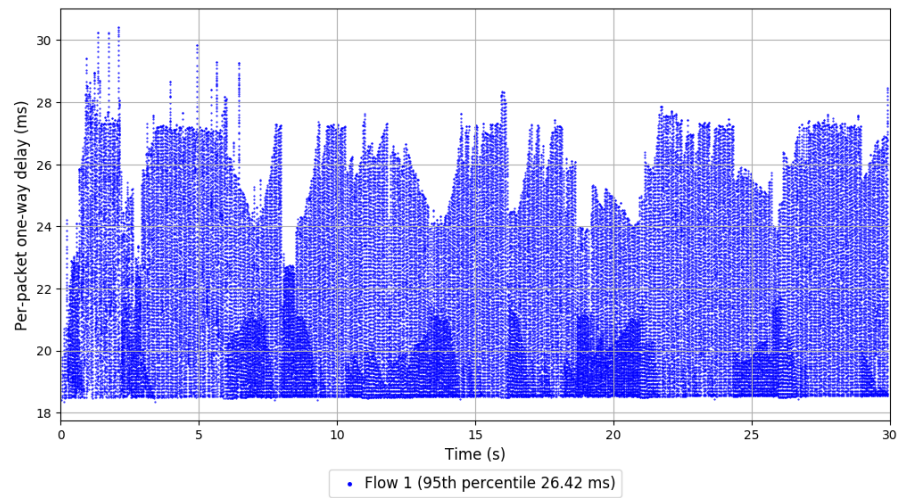
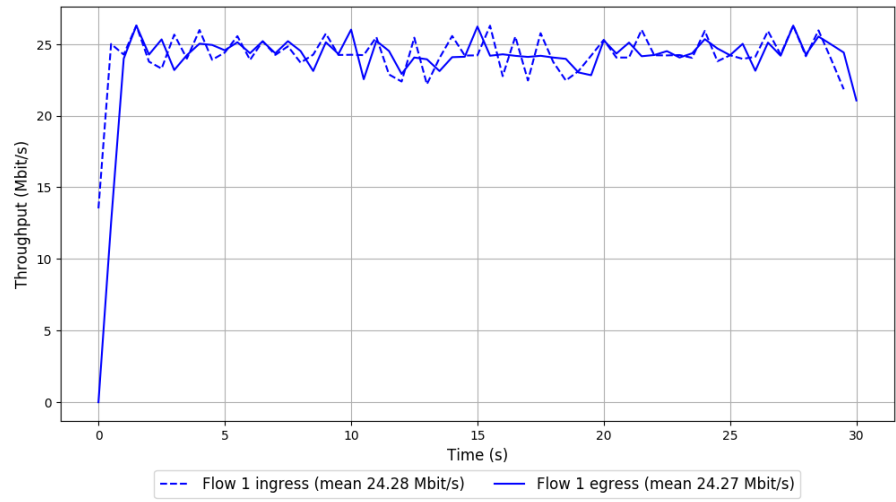


Run 3: Statistics of Sprout

Start at: 2018-09-25 13:18:35
End at: 2018-09-25 13:19:05
Local clock offset: 1.925 ms
Remote clock offset: -1.059 ms

Below is generated by plot.py at 2018-09-25 14:24:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.27 Mbit/s
95th percentile per-packet one-way delay: 26.419 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 24.27 Mbit/s
95th percentile per-packet one-way delay: 26.419 ms
Loss rate: 0.13%

Run 3: Report of Sprout — Data Link

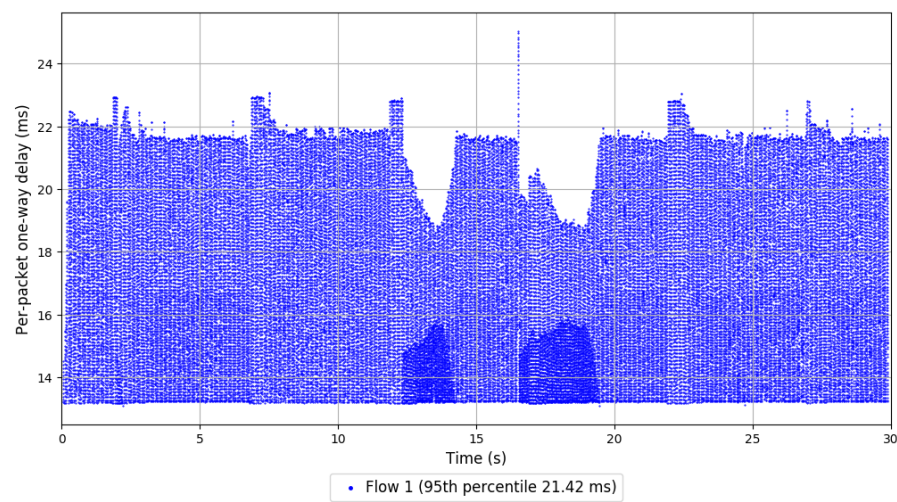
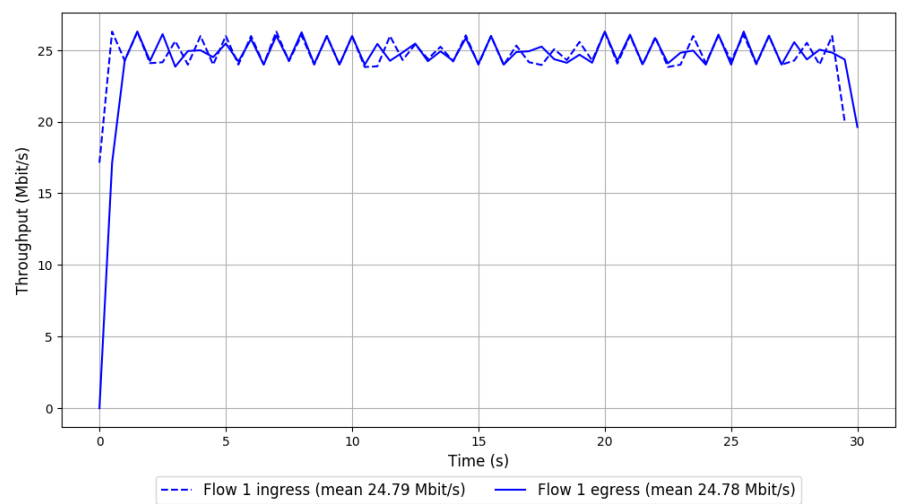


Run 4: Statistics of Sprout

Start at: 2018-09-25 13:42:32
End at: 2018-09-25 13:43:02
Local clock offset: -4.386 ms
Remote clock offset: -1.186 ms

Below is generated by plot.py at 2018-09-25 14:24:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.78 Mbit/s
95th percentile per-packet one-way delay: 21.416 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 24.78 Mbit/s
95th percentile per-packet one-way delay: 21.416 ms
Loss rate: 0.13%

Run 4: Report of Sprout — Data Link

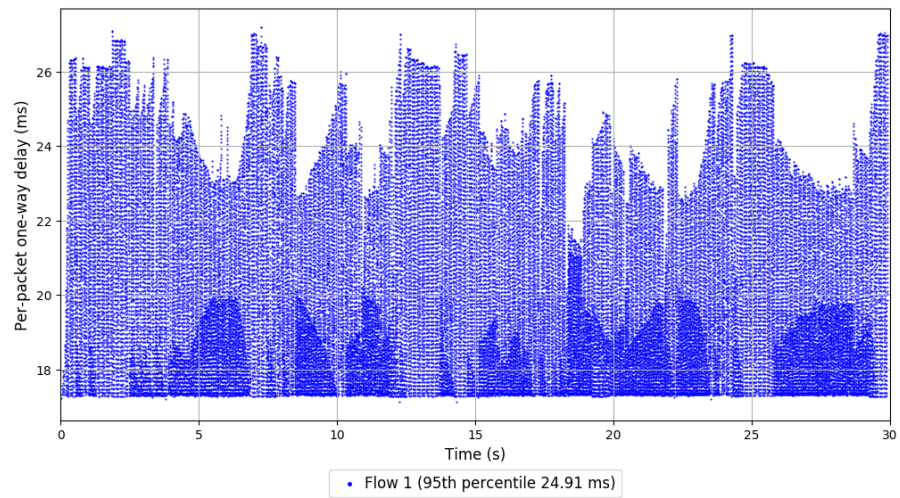
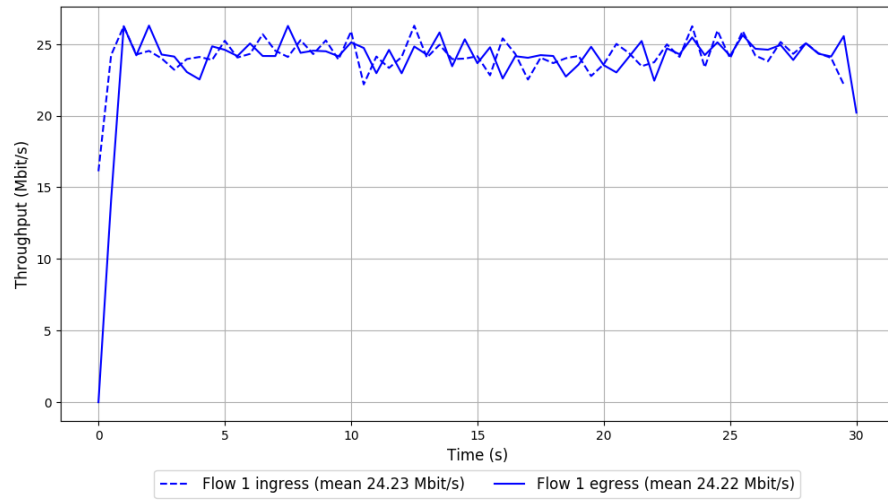


Run 5: Statistics of Sprout

Start at: 2018-09-25 14:05:25
End at: 2018-09-25 14:05:55
Local clock offset: -3.703 ms
Remote clock offset: -4.183 ms

Below is generated by plot.py at 2018-09-25 14:24:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.22 Mbit/s
95th percentile per-packet one-way delay: 24.913 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 24.22 Mbit/s
95th percentile per-packet one-way delay: 24.913 ms
Loss rate: 0.14%

Run 5: Report of Sprout — Data Link

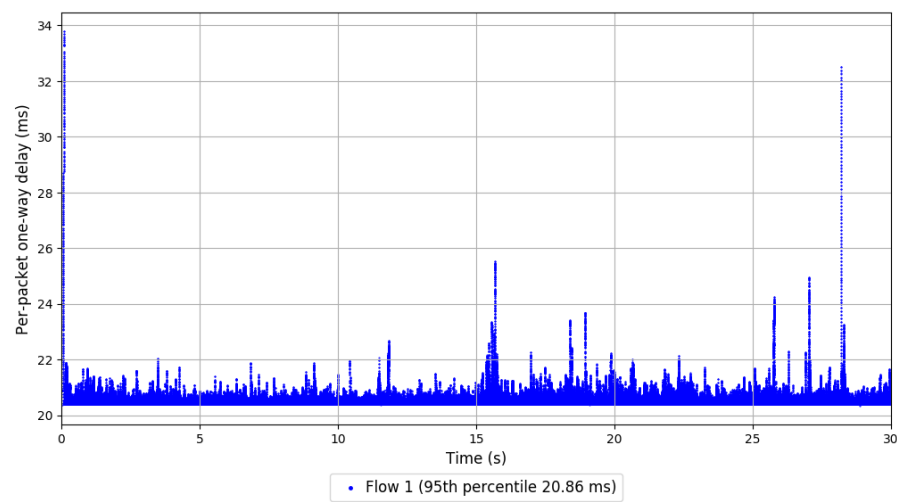
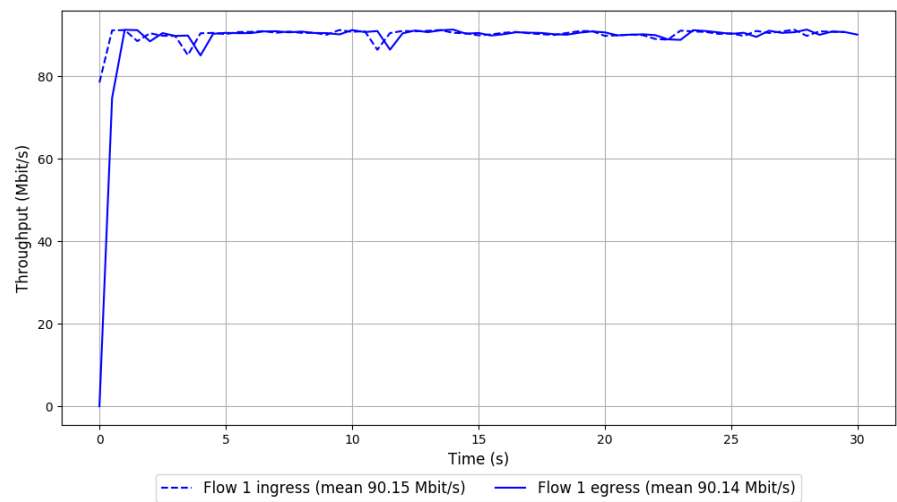


Run 1: Statistics of TaoVA-100x

Start at: 2018-09-25 12:27:36
End at: 2018-09-25 12:28:06
Local clock offset: -0.134 ms
Remote clock offset: -5.349 ms

Below is generated by plot.py at 2018-09-25 14:26:10
Datalink statistics
-- Total of 1 flow:
Average throughput: 90.14 Mbit/s
95th percentile per-packet one-way delay: 20.859 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 90.14 Mbit/s
95th percentile per-packet one-way delay: 20.859 ms
Loss rate: 0.08%

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

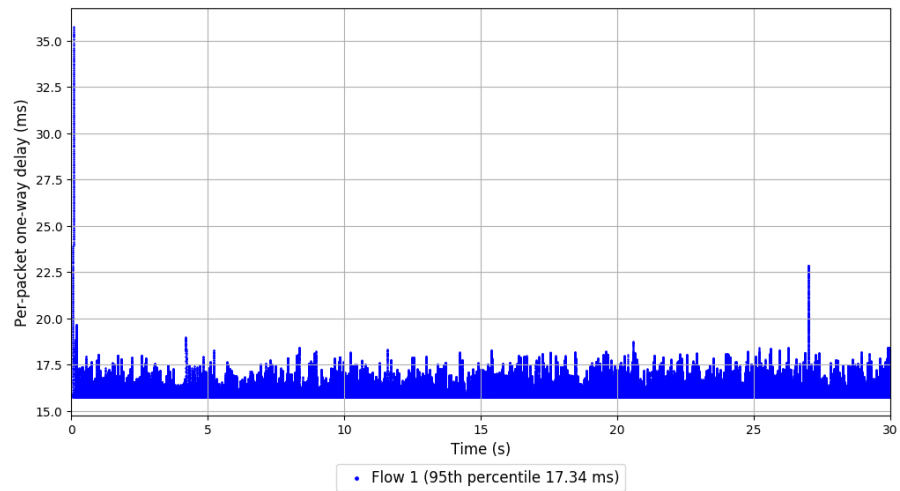
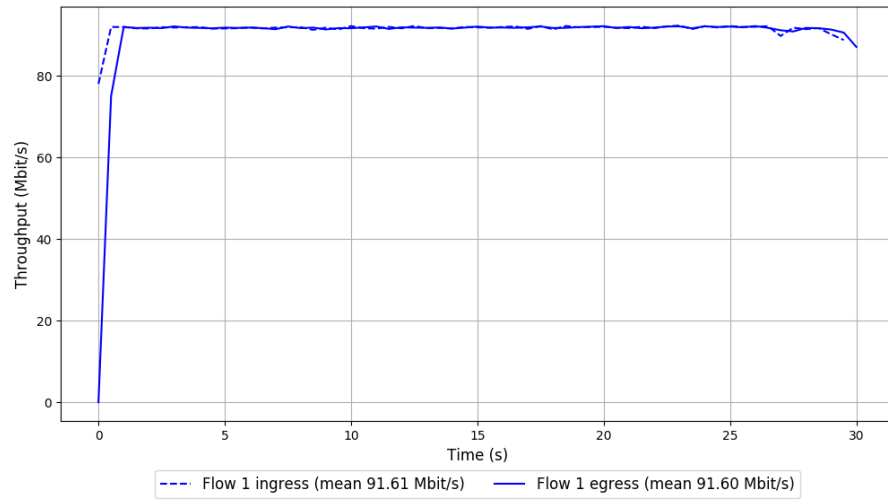


Run 2: Statistics of TaoVA-100x

Start at: 2018-09-25 12:51:11
End at: 2018-09-25 12:51:41
Local clock offset: 1.375 ms
Remote clock offset: -0.021 ms

Below is generated by plot.py at 2018-09-25 14:26:16
Datalink statistics
-- Total of 1 flow:
Average throughput: 91.60 Mbit/s
95th percentile per-packet one-way delay: 17.341 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 91.60 Mbit/s
95th percentile per-packet one-way delay: 17.341 ms
Loss rate: 0.08%

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-09-25 13:14:53

End at: 2018-09-25 13:15:23

Local clock offset: 2.37 ms

Remote clock offset: -1.091 ms

Below is generated by plot.py at 2018-09-25 14:26:16

Datalink statistics

-- Total of 1 flow:

Average throughput: 90.05 Mbit/s

95th percentile per-packet one-way delay: 19.993 ms

Loss rate: 0.08%

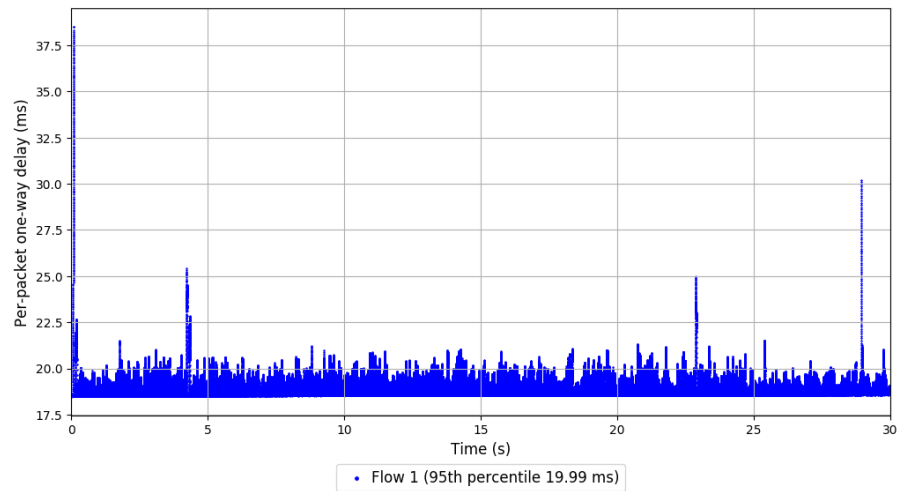
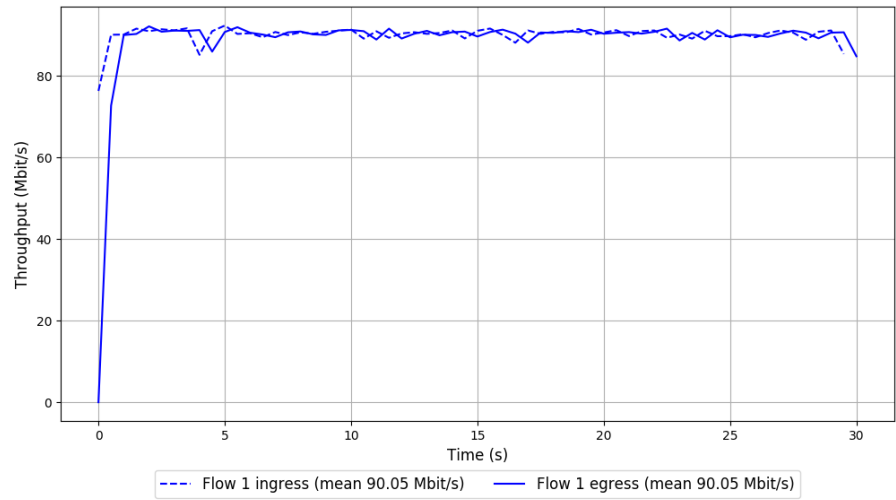
-- Flow 1:

Average throughput: 90.05 Mbit/s

95th percentile per-packet one-way delay: 19.993 ms

Loss rate: 0.08%

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-09-25 13:38:49

End at: 2018-09-25 13:39:19

Local clock offset: 0.972 ms

Remote clock offset: -0.989 ms

Below is generated by plot.py at 2018-09-25 14:26:22

Datalink statistics

-- Total of 1 flow:

Average throughput: 90.51 Mbit/s

95th percentile per-packet one-way delay: 18.787 ms

Loss rate: 0.08%

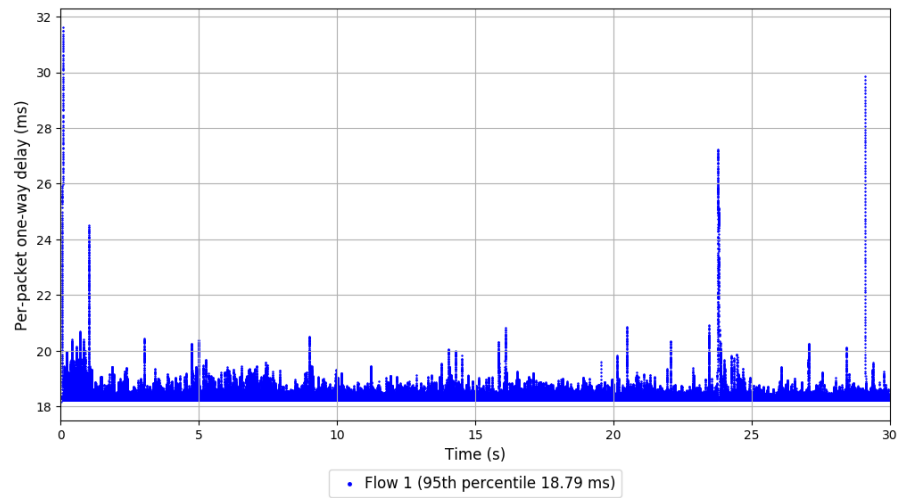
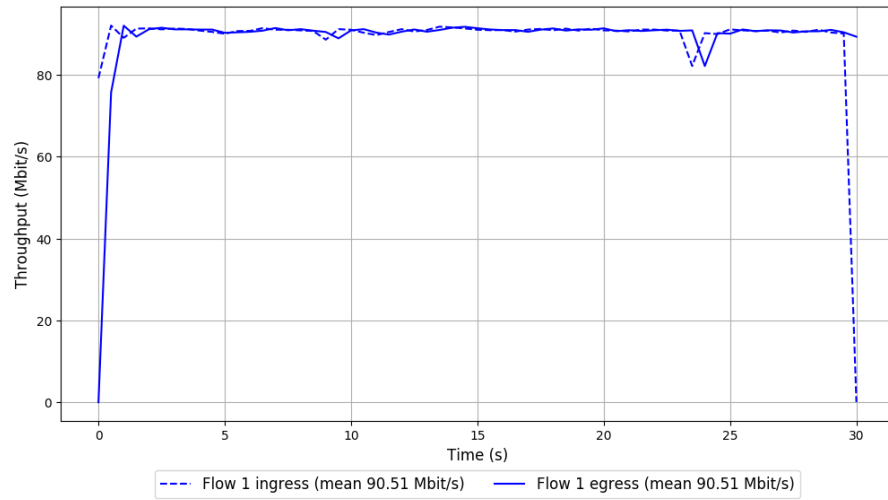
-- Flow 1:

Average throughput: 90.51 Mbit/s

95th percentile per-packet one-way delay: 18.787 ms

Loss rate: 0.08%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-09-25 14:01:43

End at: 2018-09-25 14:02:13

Local clock offset: -1.71 ms

Remote clock offset: -1.774 ms

Below is generated by plot.py at 2018-09-25 14:26:24

Datalink statistics

-- Total of 1 flow:

Average throughput: 90.56 Mbit/s

95th percentile per-packet one-way delay: 17.367 ms

Loss rate: 0.08%

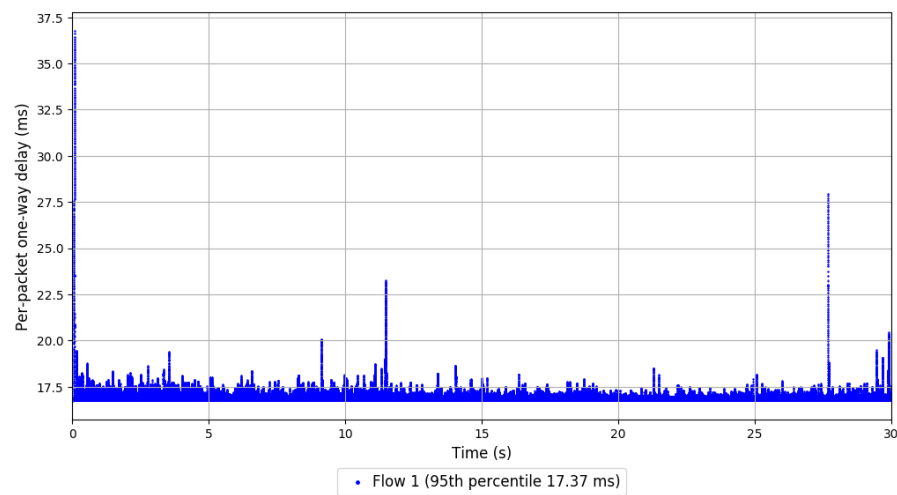
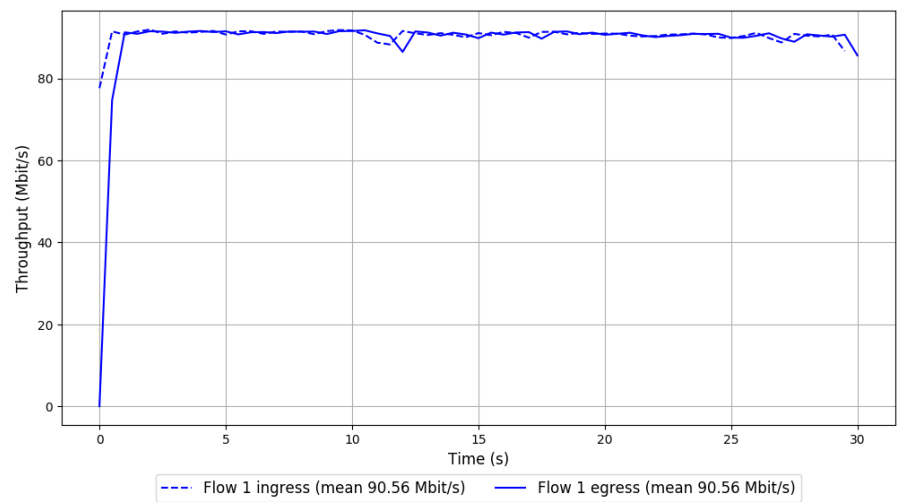
-- Flow 1:

Average throughput: 90.56 Mbit/s

95th percentile per-packet one-way delay: 17.367 ms

Loss rate: 0.08%

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

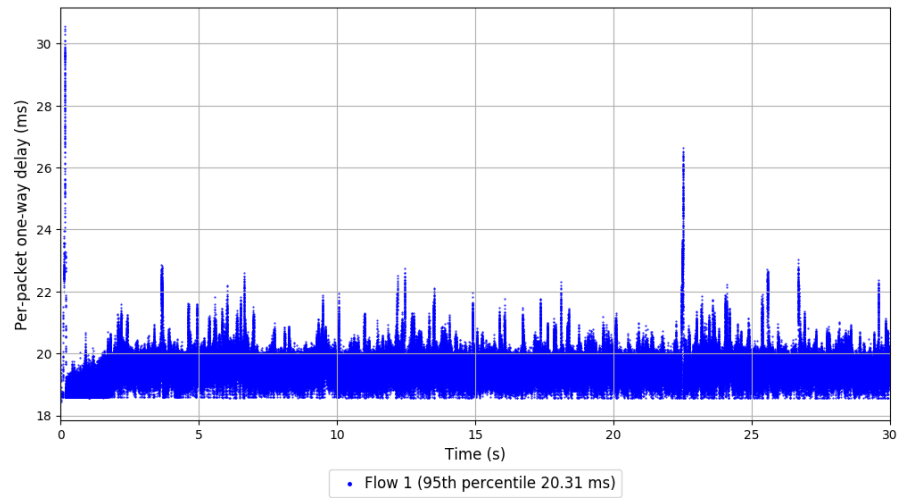
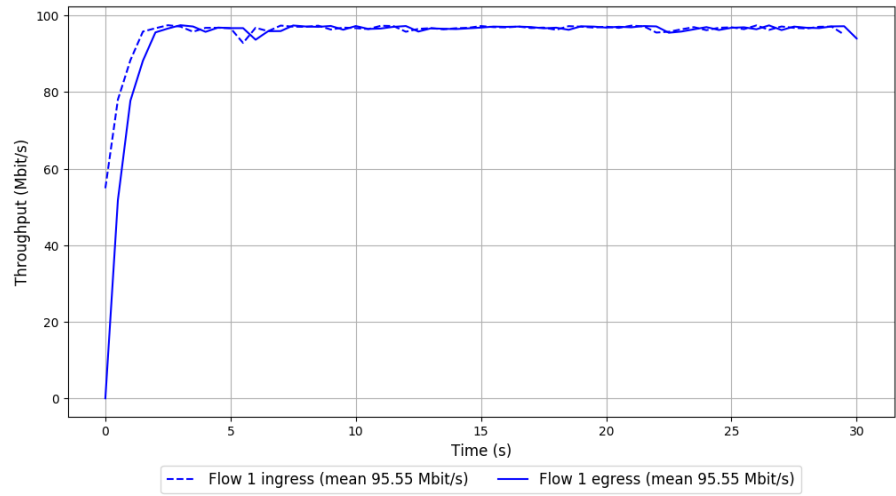


Run 1: Statistics of TCP Vegas

Start at: 2018-09-25 12:37:29
End at: 2018-09-25 12:37:59
Local clock offset: 3.218 ms
Remote clock offset: -0.538 ms

Below is generated by plot.py at 2018-09-25 14:26:24
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.55 Mbit/s
95th percentile per-packet one-way delay: 20.307 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 95.55 Mbit/s
95th percentile per-packet one-way delay: 20.307 ms
Loss rate: 0.08%

Run 1: Report of TCP Vegas — Data Link

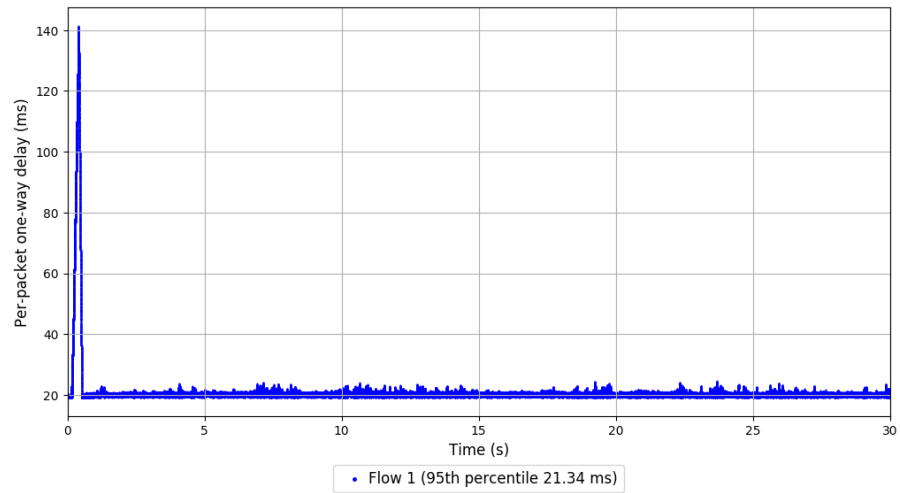
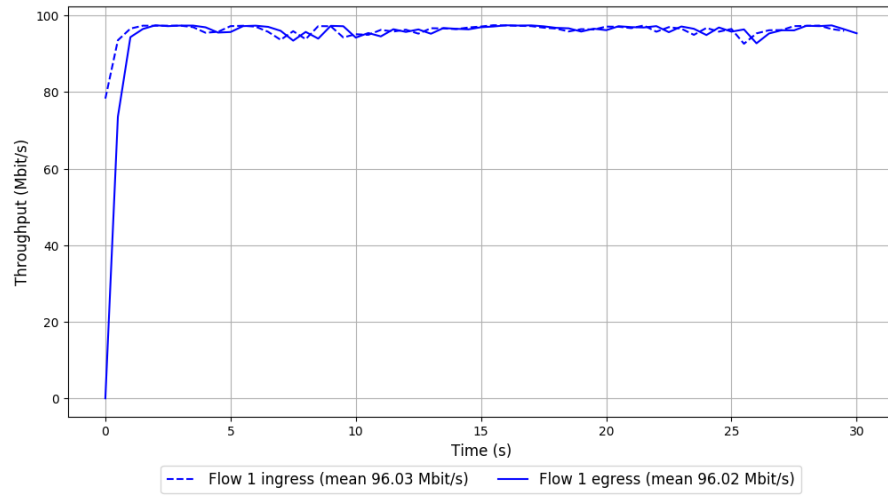


Run 2: Statistics of TCP Vegas

Start at: 2018-09-25 13:01:10
End at: 2018-09-25 13:01:40
Local clock offset: 4.399 ms
Remote clock offset: -0.731 ms

Below is generated by plot.py at 2018-09-25 14:26:24
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.02 Mbit/s
95th percentile per-packet one-way delay: 21.338 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 96.02 Mbit/s
95th percentile per-packet one-way delay: 21.338 ms
Loss rate: 0.08%

Run 2: Report of TCP Vegas — Data Link

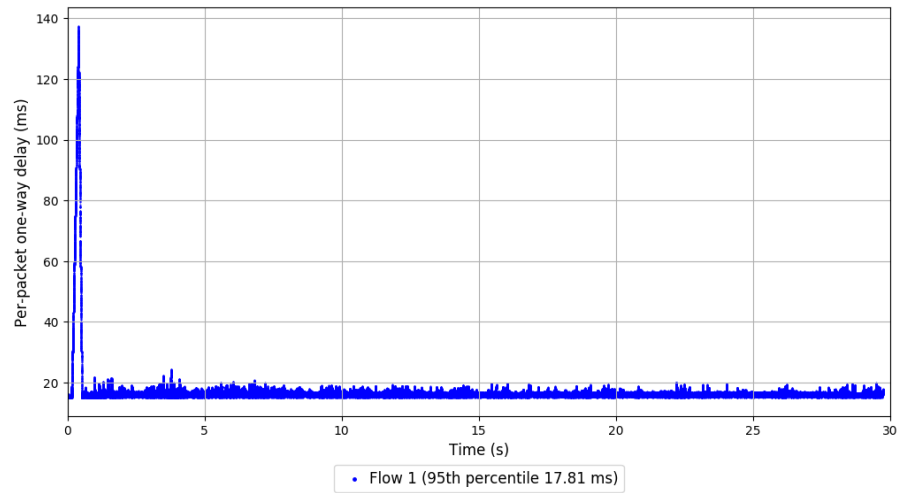
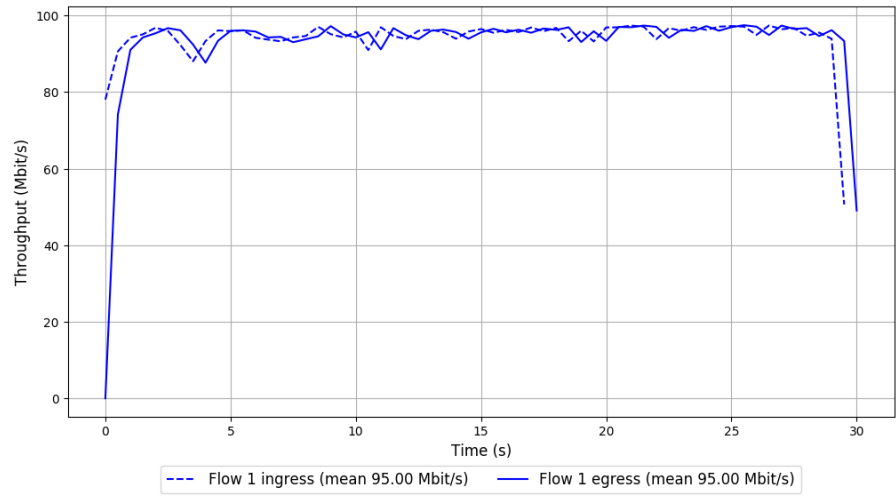


Run 3: Statistics of TCP Vegas

Start at: 2018-09-25 13:24:51
End at: 2018-09-25 13:25:21
Local clock offset: -2.085 ms
Remote clock offset: -1.315 ms

Below is generated by plot.py at 2018-09-25 14:26:24
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.00 Mbit/s
95th percentile per-packet one-way delay: 17.812 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 95.00 Mbit/s
95th percentile per-packet one-way delay: 17.812 ms
Loss rate: 0.08%

Run 3: Report of TCP Vegas — Data Link

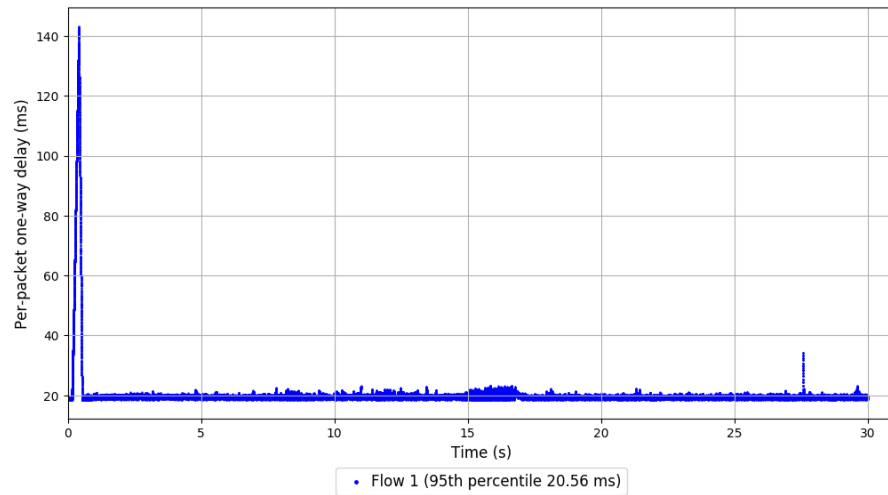
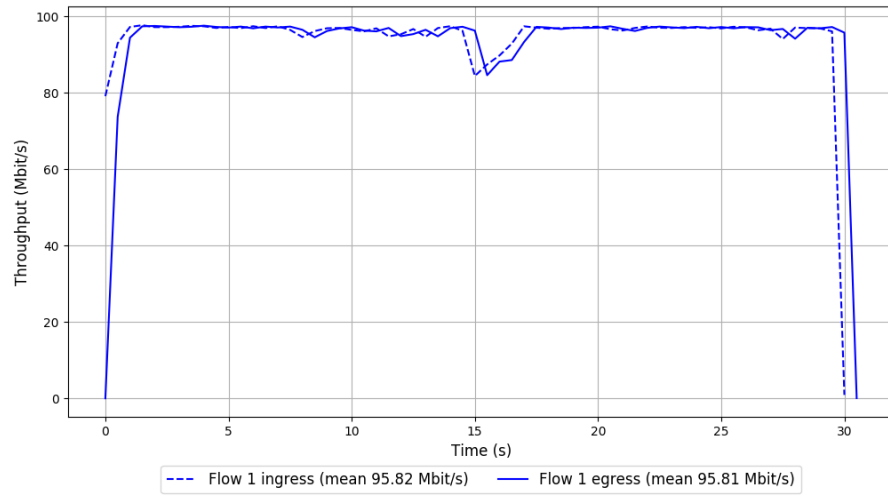


Run 4: Statistics of TCP Vegas

Start at: 2018-09-25 13:48:29
End at: 2018-09-25 13:48:59
Local clock offset: -0.168 ms
Remote clock offset: -2.186 ms

Below is generated by plot.py at 2018-09-25 14:26:36
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.81 Mbit/s
95th percentile per-packet one-way delay: 20.562 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 95.81 Mbit/s
95th percentile per-packet one-way delay: 20.562 ms
Loss rate: 0.08%

Run 4: Report of TCP Vegas — Data Link

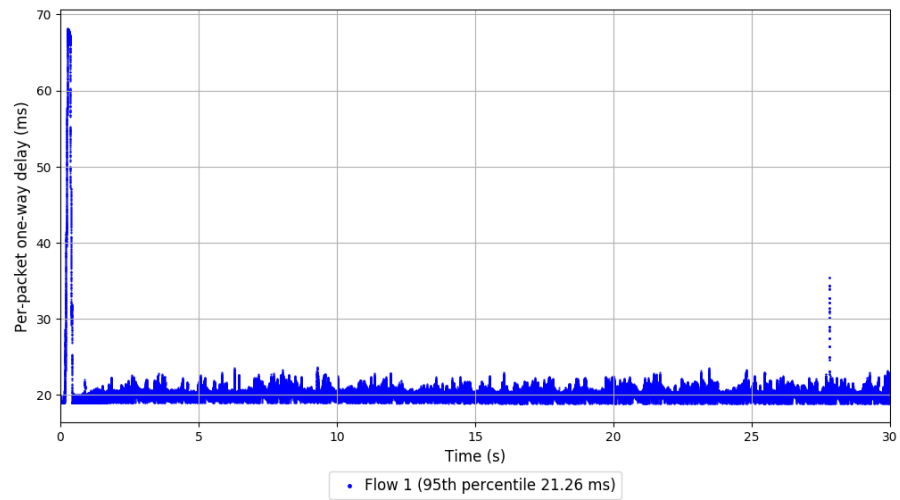
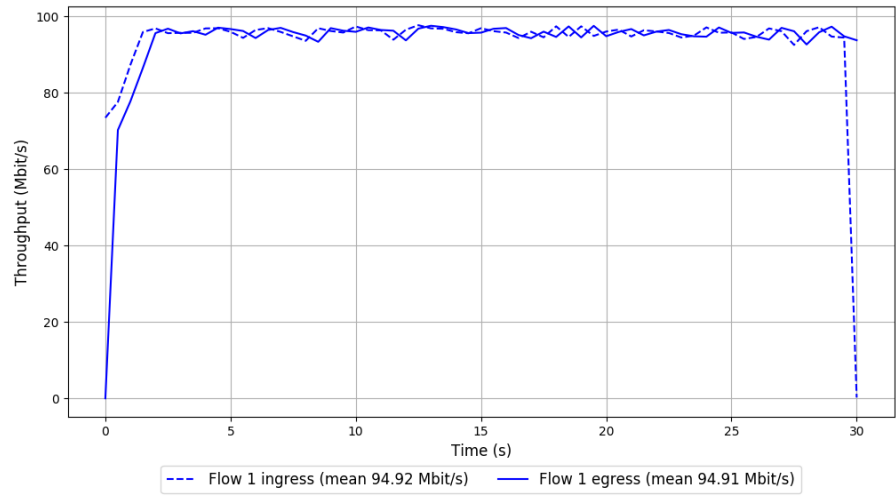


Run 5: Statistics of TCP Vegas

Start at: 2018-09-25 14:11:22
End at: 2018-09-25 14:11:52
Local clock offset: -0.933 ms
Remote clock offset: -3.903 ms

Below is generated by plot.py at 2018-09-25 14:27:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.91 Mbit/s
95th percentile per-packet one-way delay: 21.259 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 94.91 Mbit/s
95th percentile per-packet one-way delay: 21.259 ms
Loss rate: 0.09%

Run 5: Report of TCP Vegas — Data Link

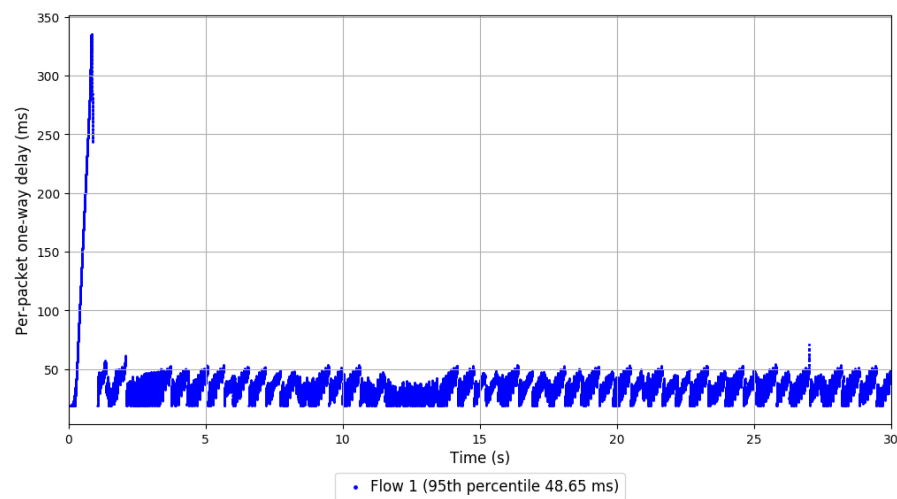
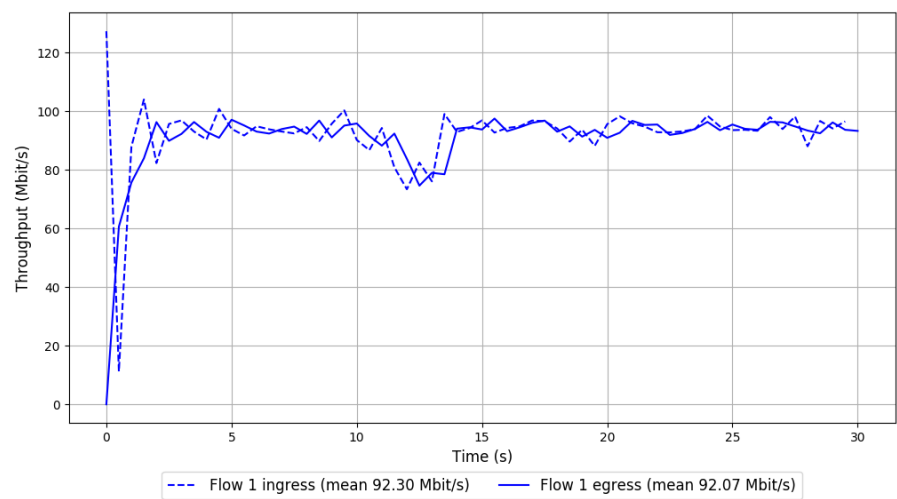


Run 1: Statistics of Verus

Start at: 2018-09-25 12:24:54
End at: 2018-09-25 12:25:24
Local clock offset: 3.265 ms
Remote clock offset: -0.316 ms

Below is generated by plot.py at 2018-09-25 14:27:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 92.07 Mbit/s
95th percentile per-packet one-way delay: 48.650 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 92.07 Mbit/s
95th percentile per-packet one-way delay: 48.650 ms
Loss rate: 0.32%

Run 1: Report of Verus — Data Link

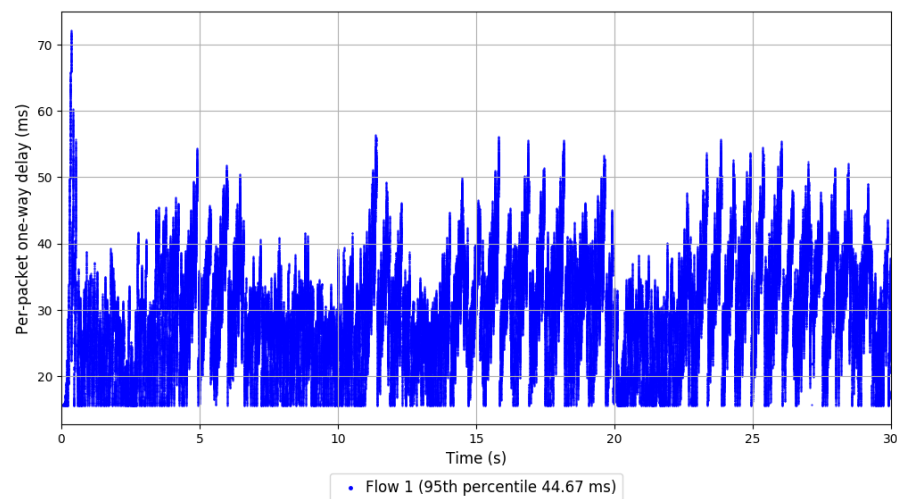
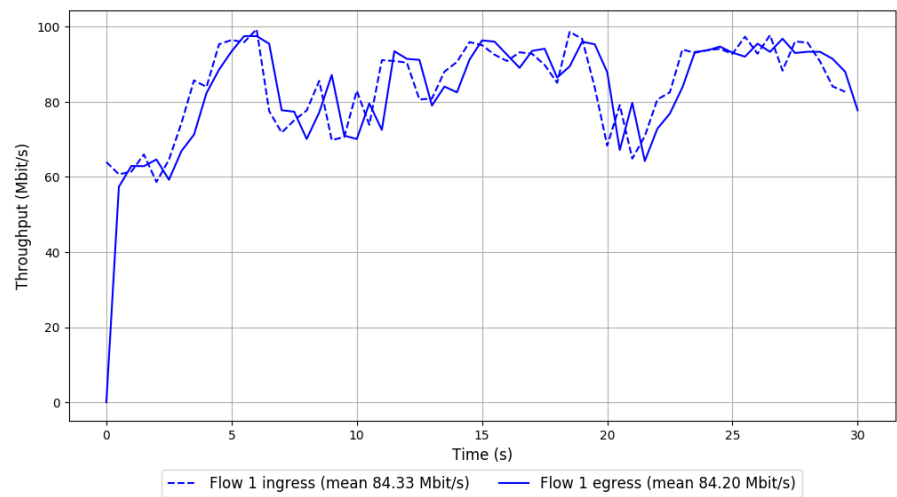


Run 2: Statistics of Verus

Start at: 2018-09-25 12:48:32
End at: 2018-09-25 12:49:02
Local clock offset: 0.52 ms
Remote clock offset: -0.617 ms

Below is generated by plot.py at 2018-09-25 14:27:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 84.20 Mbit/s
95th percentile per-packet one-way delay: 44.666 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 84.20 Mbit/s
95th percentile per-packet one-way delay: 44.666 ms
Loss rate: 0.23%

Run 2: Report of Verus — Data Link

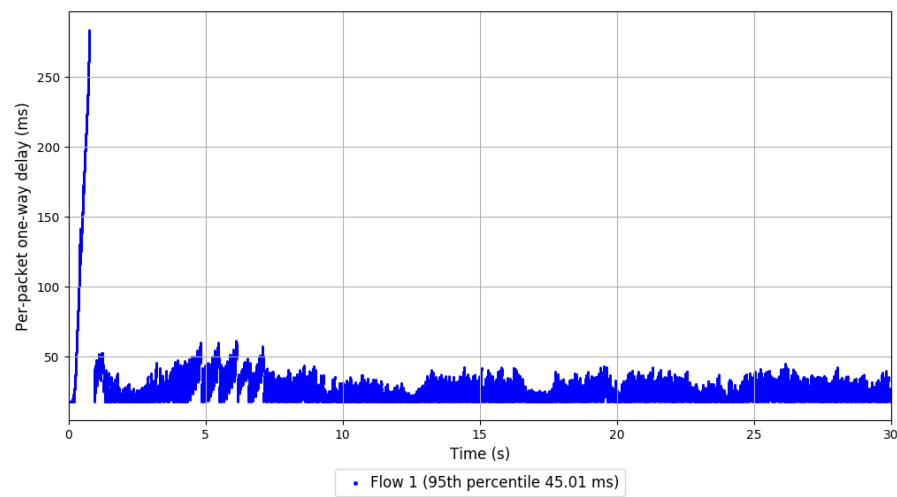
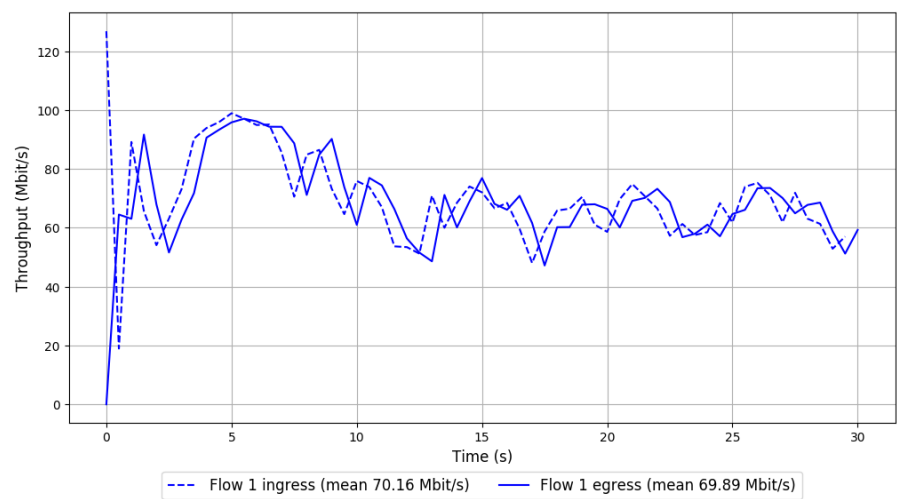


Run 3: Statistics of Verus

Start at: 2018-09-25 13:12:26
End at: 2018-09-25 13:12:56
Local clock offset: 1.901 ms
Remote clock offset: -1.373 ms

Below is generated by plot.py at 2018-09-25 14:27:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 69.89 Mbit/s
95th percentile per-packet one-way delay: 45.008 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 69.89 Mbit/s
95th percentile per-packet one-way delay: 45.008 ms
Loss rate: 0.39%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-09-25 13:36:12

End at: 2018-09-25 13:36:42

Local clock offset: -0.724 ms

Remote clock offset: -1.08 ms

Below is generated by plot.py at 2018-09-25 14:27:22

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.17 Mbit/s

95th percentile per-packet one-way delay: 53.122 ms

Loss rate: 0.26%

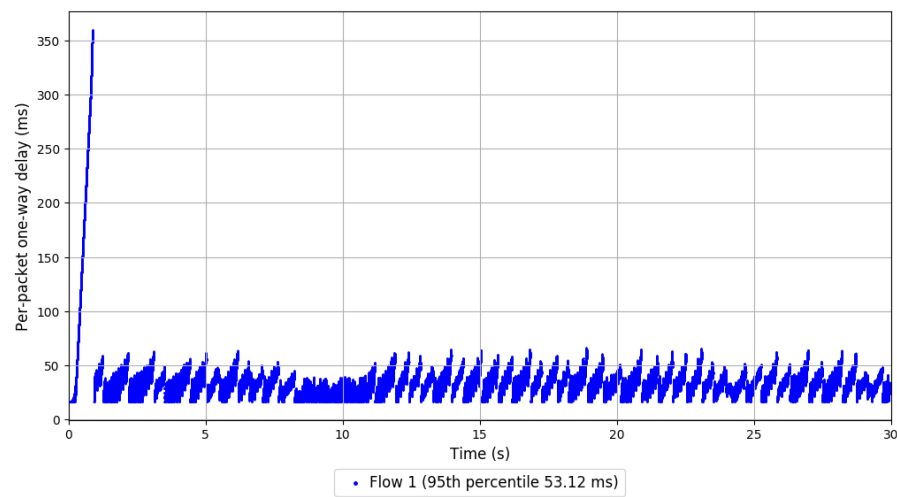
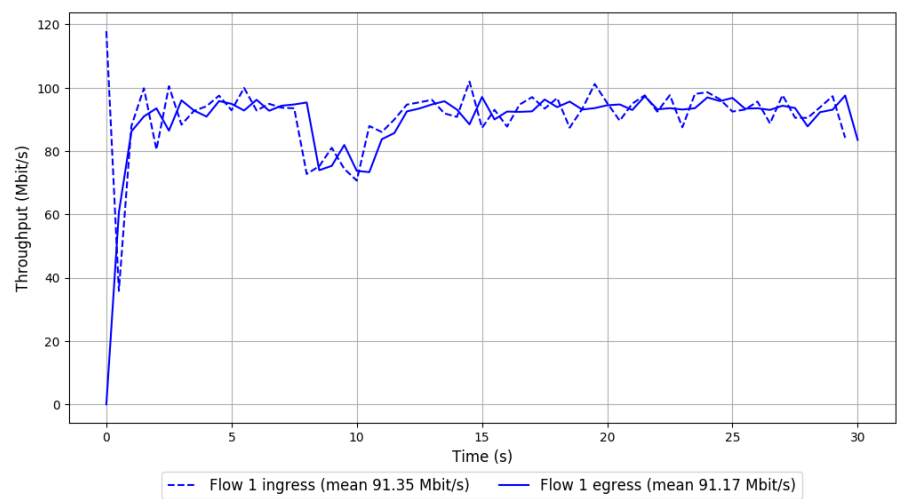
-- Flow 1:

Average throughput: 91.17 Mbit/s

95th percentile per-packet one-way delay: 53.122 ms

Loss rate: 0.26%

Run 4: Report of Verus — Data Link

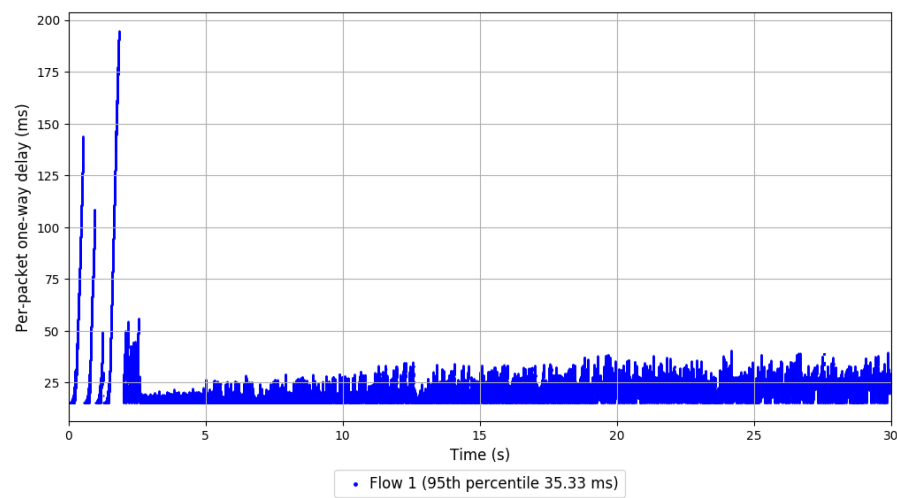
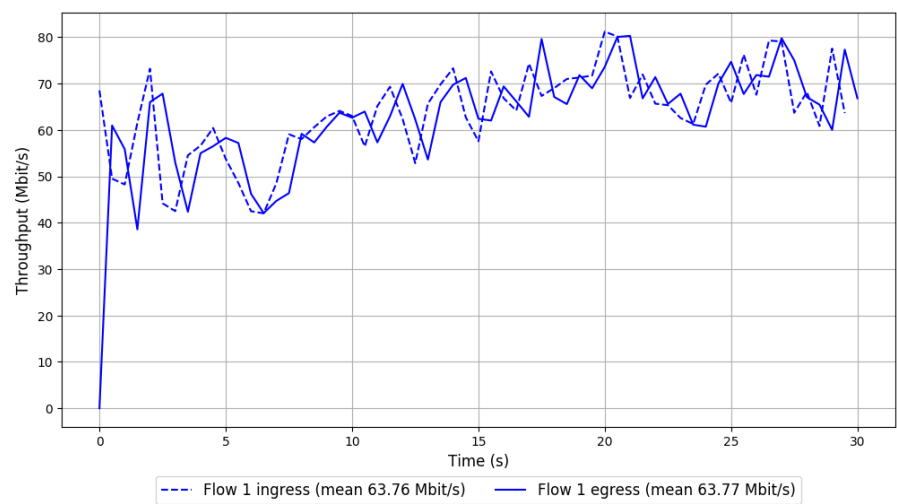


Run 5: Statistics of Verus

Start at: 2018-09-25 13:59:19
End at: 2018-09-25 13:59:49
Local clock offset: -2.419 ms
Remote clock offset: -1.076 ms

Below is generated by plot.py at 2018-09-25 14:27:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 63.77 Mbit/s
95th percentile per-packet one-way delay: 35.325 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 63.77 Mbit/s
95th percentile per-packet one-way delay: 35.325 ms
Loss rate: 0.07%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2018-09-25 12:26:20

End at: 2018-09-25 12:26:50

Local clock offset: 3.236 ms

Remote clock offset: 1.144 ms

Below is generated by plot.py at 2018-09-25 14:27:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 84.92 Mbit/s

95th percentile per-packet one-way delay: 17.878 ms

Loss rate: 0.09%

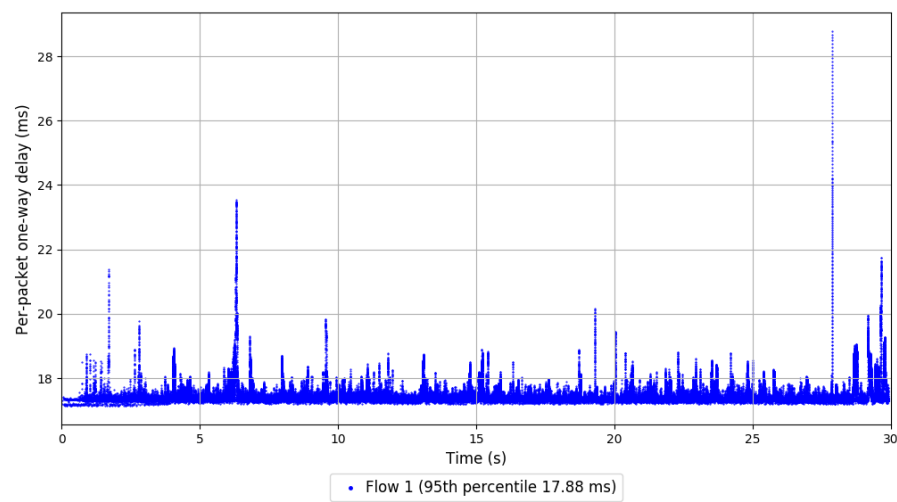
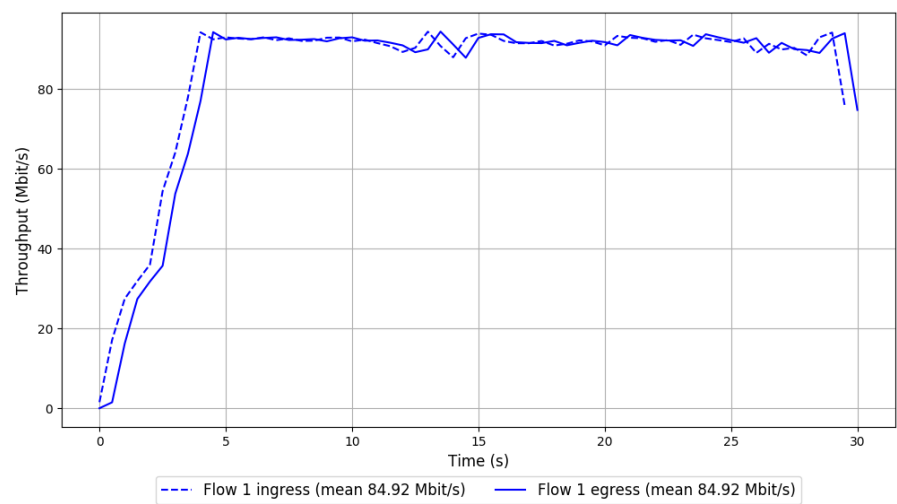
-- Flow 1:

Average throughput: 84.92 Mbit/s

95th percentile per-packet one-way delay: 17.878 ms

Loss rate: 0.09%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2018-09-25 12:49:51

End at: 2018-09-25 12:50:21

Local clock offset: 0.8 ms

Remote clock offset: -0.222 ms

Below is generated by plot.py at 2018-09-25 14:27:34

Datalink statistics

-- Total of 1 flow:

Average throughput: 85.80 Mbit/s

95th percentile per-packet one-way delay: 16.114 ms

Loss rate: 0.08%

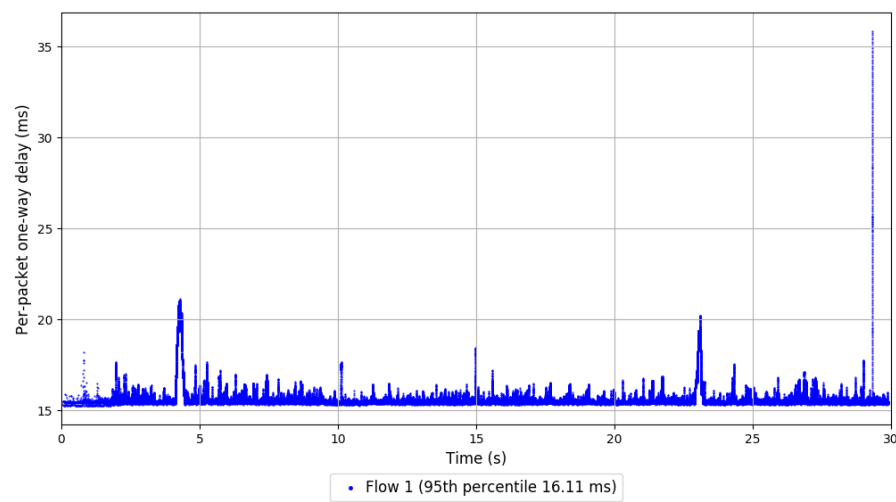
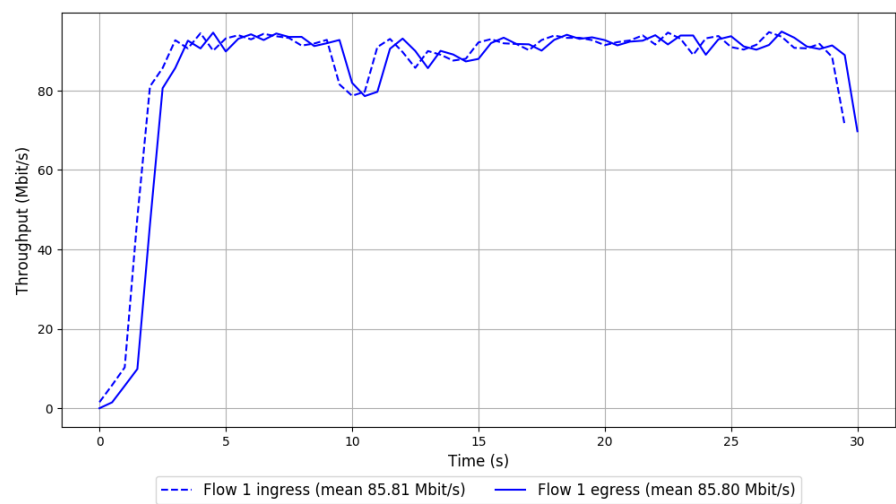
-- Flow 1:

Average throughput: 85.80 Mbit/s

95th percentile per-packet one-way delay: 16.114 ms

Loss rate: 0.08%

Run 2: Report of PCC-Vivace — Data Link

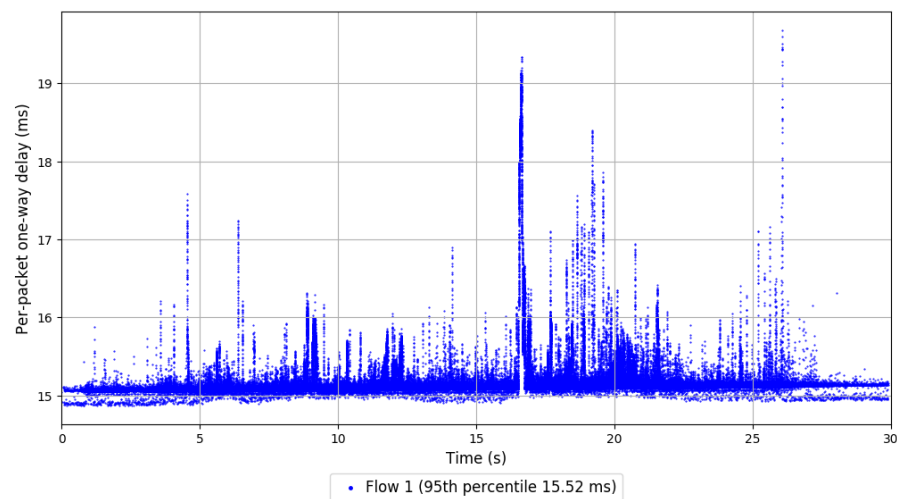
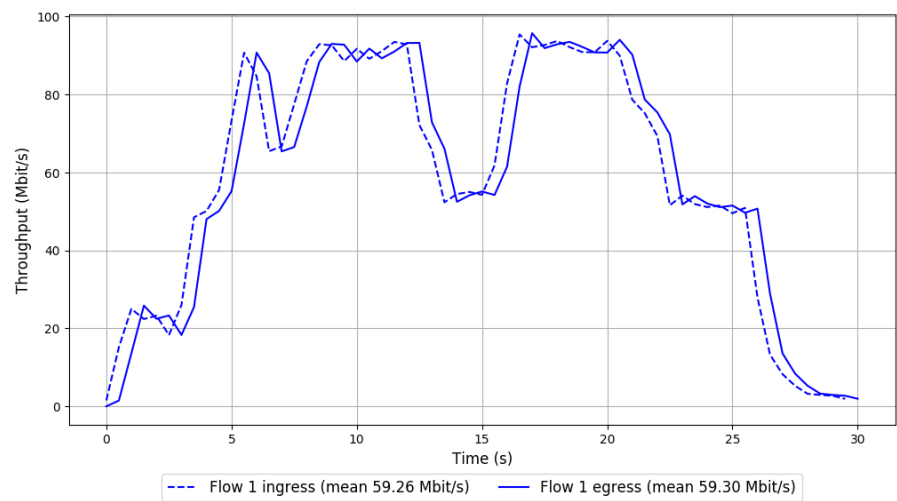


Run 3: Statistics of PCC-Vivace

Start at: 2018-09-25 13:13:37
End at: 2018-09-25 13:14:07
Local clock offset: -1.05 ms
Remote clock offset: -1.244 ms

Below is generated by plot.py at 2018-09-25 14:27:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 59.30 Mbit/s
95th percentile per-packet one-way delay: 15.517 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 59.30 Mbit/s
95th percentile per-packet one-way delay: 15.517 ms
Loss rate: 0.00%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2018-09-25 13:37:30

End at: 2018-09-25 13:38:00

Local clock offset: 1.491 ms

Remote clock offset: -1.351 ms

Below is generated by plot.py at 2018-09-25 14:27:37

Datalink statistics

-- Total of 1 flow:

Average throughput: 87.03 Mbit/s

95th percentile per-packet one-way delay: 19.747 ms

Loss rate: 0.08%

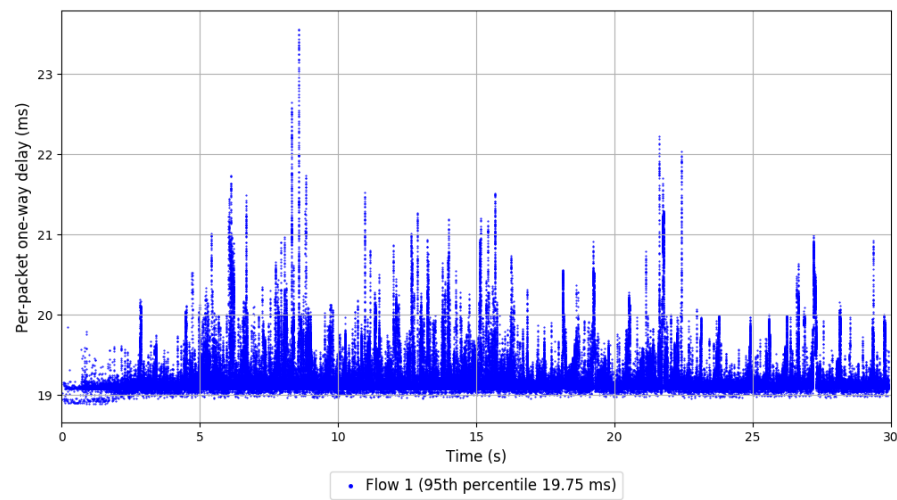
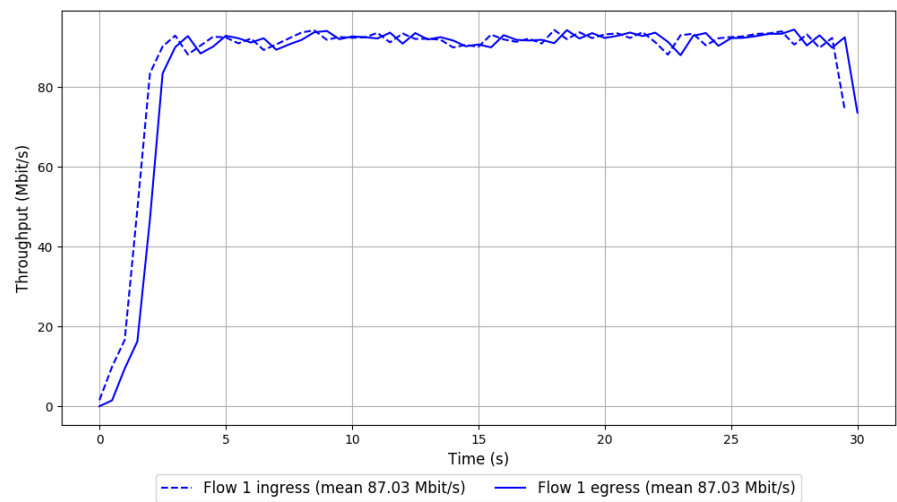
-- Flow 1:

Average throughput: 87.03 Mbit/s

95th percentile per-packet one-way delay: 19.747 ms

Loss rate: 0.08%

Run 4: Report of PCC-Vivace — Data Link

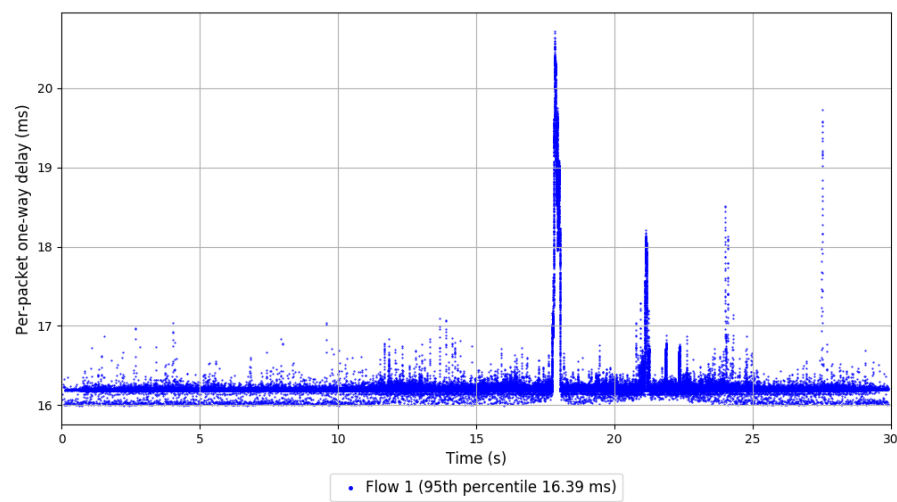
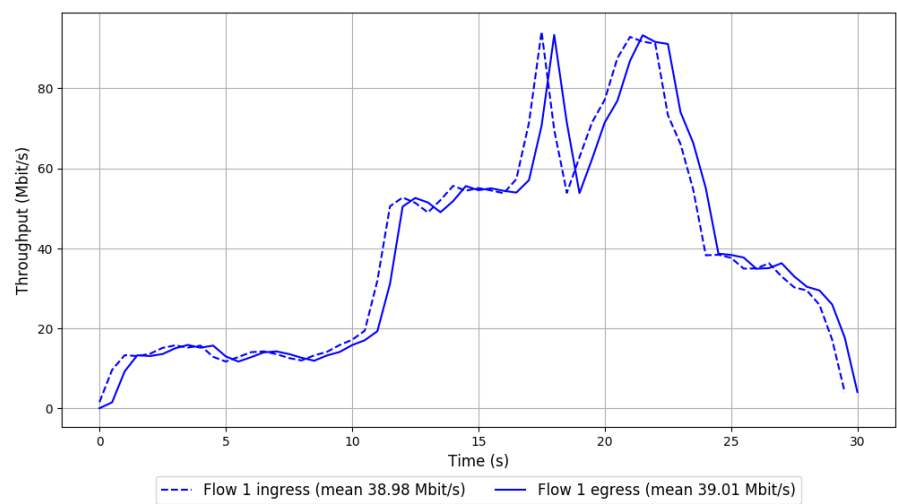


Run 5: Statistics of PCC-Vivace

Start at: 2018-09-25 14:00:33
End at: 2018-09-25 14:01:03
Local clock offset: -2.19 ms
Remote clock offset: -1.693 ms

Below is generated by plot.py at 2018-09-25 14:27:37
Datalink statistics
-- Total of 1 flow:
Average throughput: 39.01 Mbit/s
95th percentile per-packet one-way delay: 16.387 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 39.01 Mbit/s
95th percentile per-packet one-way delay: 16.387 ms
Loss rate: 0.01%

Run 5: Report of PCC-Vivace — Data Link

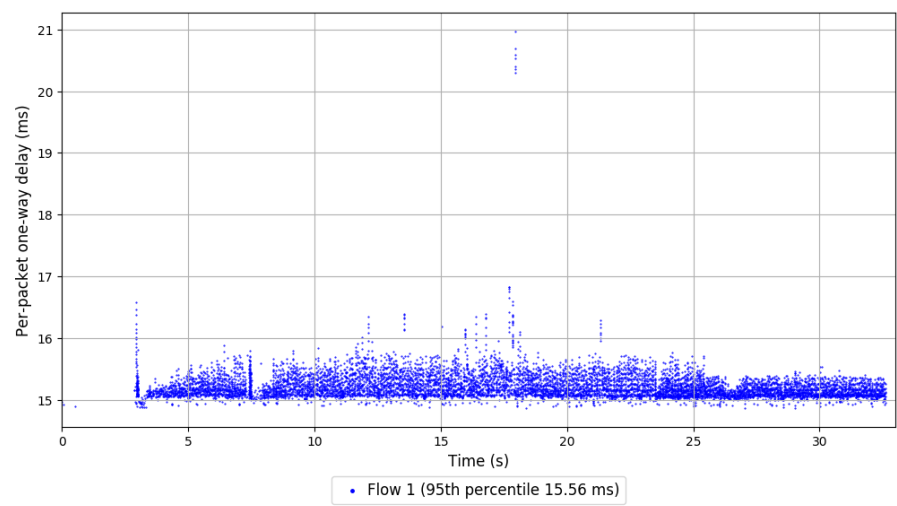
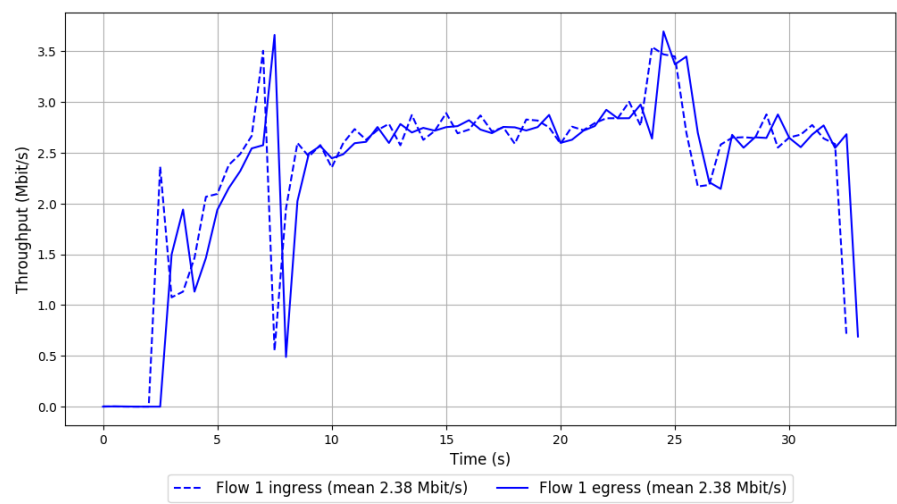


Run 1: Statistics of WebRTC media

Start at: 2018-09-25 12:35:07
End at: 2018-09-25 12:35:37
Local clock offset: -0.043 ms
Remote clock offset: -0.153 ms

Below is generated by plot.py at 2018-09-25 14:27:37
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.38 Mbit/s
95th percentile per-packet one-way delay: 15.561 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 2.38 Mbit/s
95th percentile per-packet one-way delay: 15.561 ms
Loss rate: 0.06%

Run 1: Report of WebRTC media — Data Link

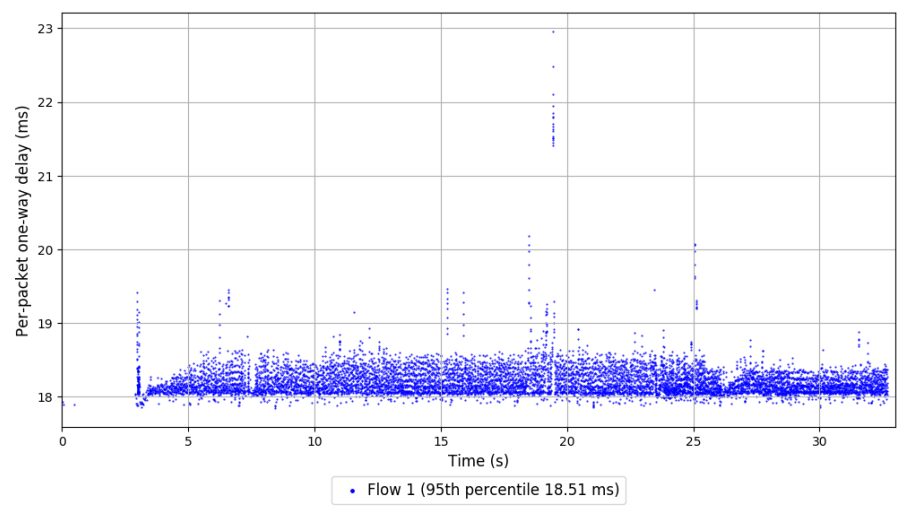
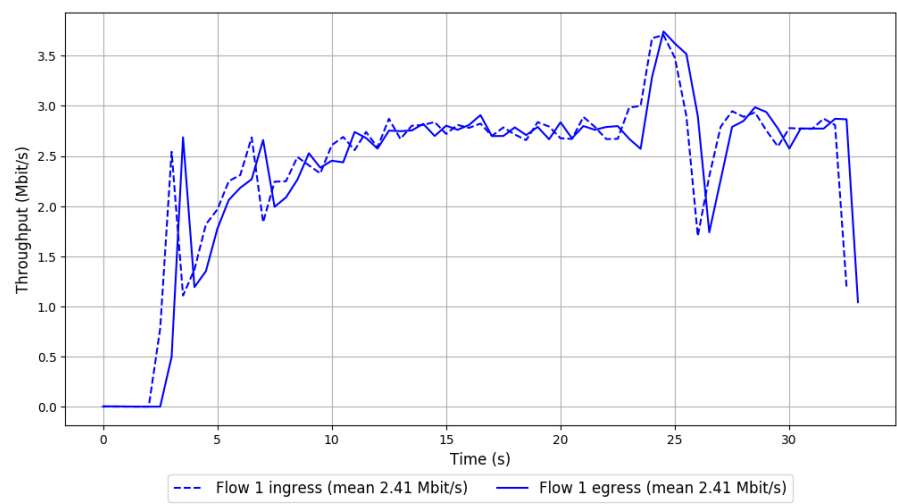


Run 2: Statistics of WebRTC media

Start at: 2018-09-25 12:58:48
End at: 2018-09-25 12:59:18
Local clock offset: 2.919 ms
Remote clock offset: -0.921 ms

Below is generated by plot.py at 2018-09-25 14:27:37
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 18.506 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 18.506 ms
Loss rate: 0.13%

Run 2: Report of WebRTC media — Data Link

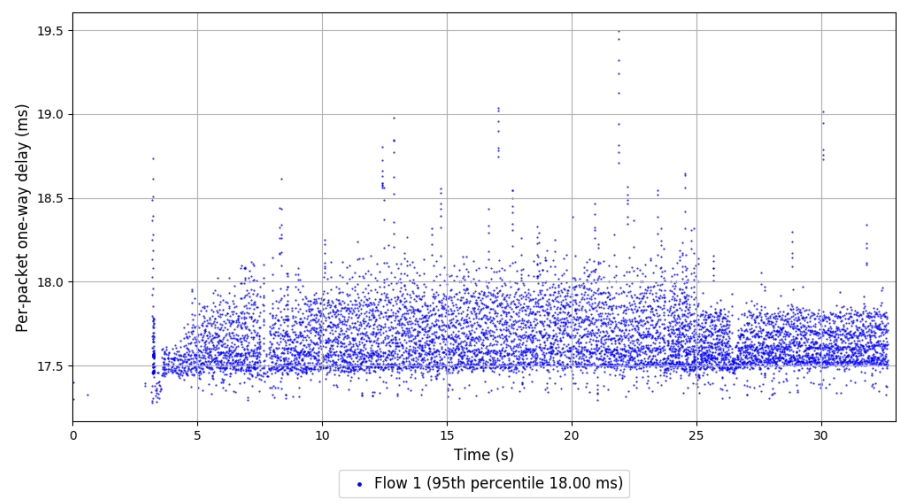
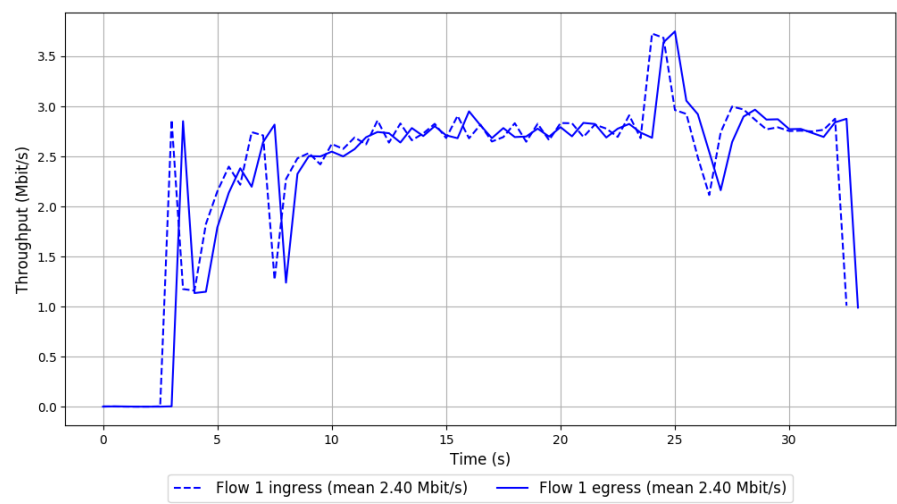


Run 3: Statistics of WebRTC media

Start at: 2018-09-25 13:22:26
End at: 2018-09-25 13:22:56
Local clock offset: 1.079 ms
Remote clock offset: -0.607 ms

Below is generated by plot.py at 2018-09-25 14:27:37
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.40 Mbit/s
95th percentile per-packet one-way delay: 17.998 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 2.40 Mbit/s
95th percentile per-packet one-way delay: 17.998 ms
Loss rate: 0.08%

Run 3: Report of WebRTC media — Data Link

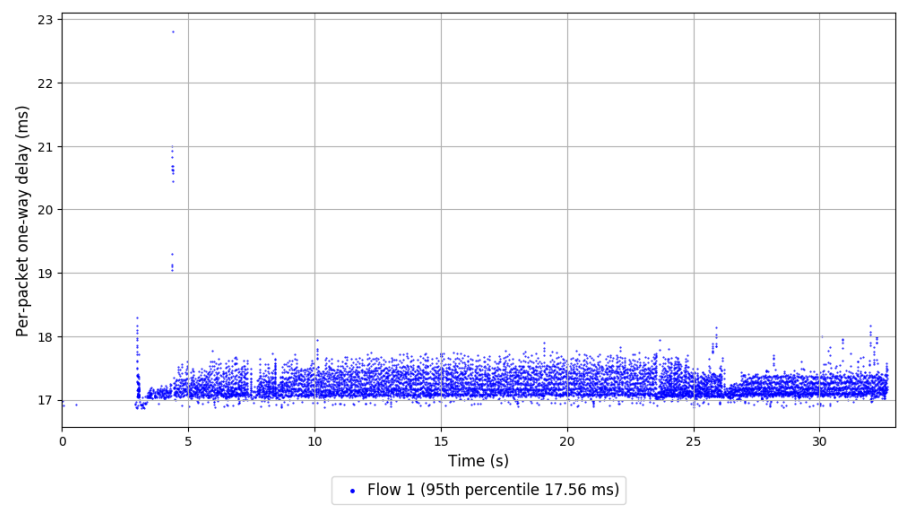
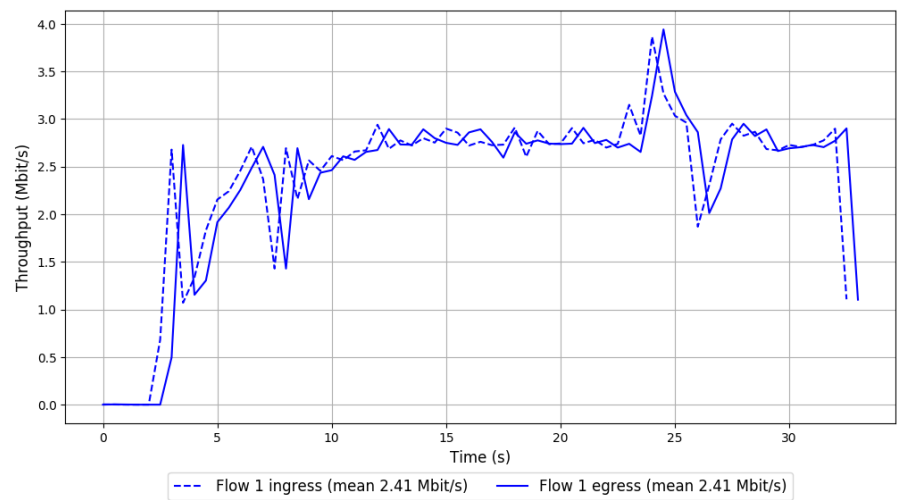


Run 4: Statistics of WebRTC media

Start at: 2018-09-25 13:46:10
End at: 2018-09-25 13:46:40
Local clock offset: -0.757 ms
Remote clock offset: -1.355 ms

Below is generated by plot.py at 2018-09-25 14:27:37
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 17.556 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 17.556 ms
Loss rate: 0.07%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-09-25 14:09:03
End at: 2018-09-25 14:09:33
Local clock offset: -2.021 ms
Remote clock offset: -3.681 ms

Below is generated by plot.py at 2018-09-25 14:27:37
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 18.841 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 18.841 ms
Loss rate: 0.06%

Run 5: Report of WebRTC media — Data Link

