

Pantheon Report

Generated at 2018-09-07 21:24:41 (UTC).

Data path: India on *em1 (remote)* → AWS India 1 on *ens5 (local)*.

Repeated the test of 18 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:

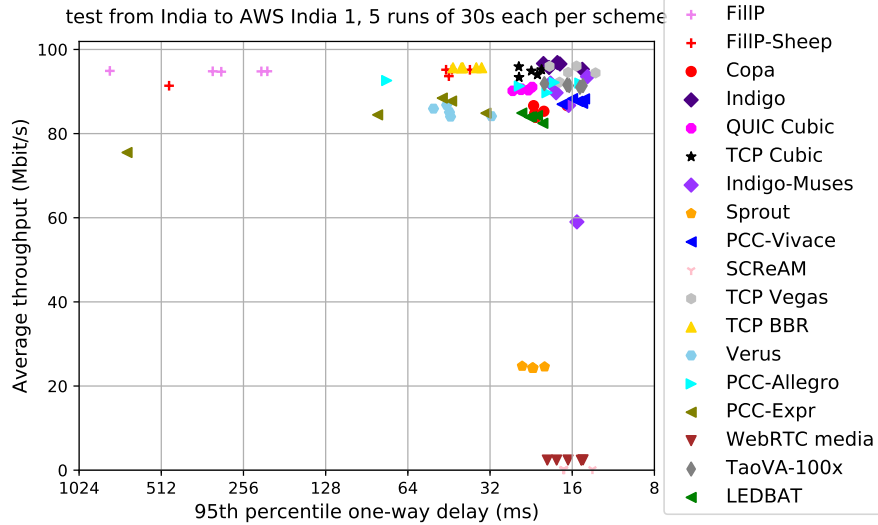
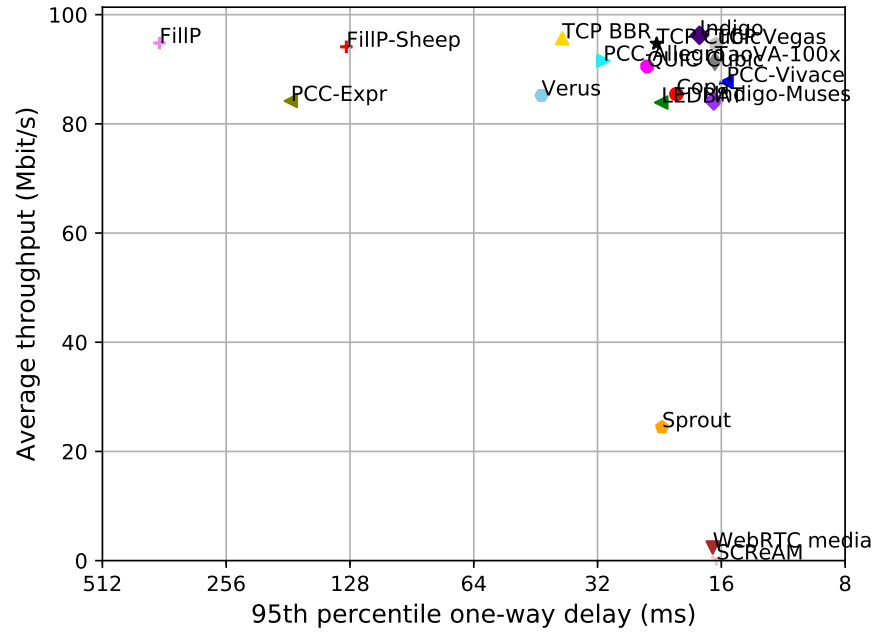
```
Linux 4.15.0-1020-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
net.ipv4.tcp_mem = 536870912 536870912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

Git summary:

```
branch: muses @ e0a9b05ad97d268013b7cc9a9c95637b593a1b4c
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 7631aea3923a3598767c87765ae5103aca0678d3
third_party/pantheon-tunnel @ cbfce6db5ff5740dafa1771f813cd646339e1952
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
```

third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851

test from India to AWS India 1, 5 runs of 30s each per scheme
(mean of all runs by scheme)



scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	95.66	39.01	1.49
Copa	5	85.45	20.58	0.08
TCP Cubic	5	94.68	22.98	0.12
FillP	5	94.80	372.02	3.59
FillP-Sheep	5	94.12	130.63	1.78
Indigo	5	96.22	18.09	0.09
LEDBAT	5	83.91	22.40	0.14
Indigo-Muses	5	84.19	16.70	0.09
PCC-Allegro	5	91.56	30.99	0.14
PCC-Expr	5	84.20	178.30	1.01
QUIC Cubic	5	90.52	24.25	0.12
SCReAM	5	0.21	16.46	0.13
Sprout	5	24.44	22.30	0.11
TaoVA-100x	5	91.46	16.59	0.10
TCP Vegas	5	94.64	16.47	0.10
Verus	5	85.20	43.80	0.27
PCC-Vivace	5	87.68	15.54	0.10
WebRTC media	5	2.41	16.80	0.10

Run 1: Statistics of TCP BBR

Start at: 2018-09-07 19:30:07

End at: 2018-09-07 19:30:37

Local clock offset: 1.745 ms

Remote clock offset: -3.936 ms

Below is generated by plot.py at 2018-09-07 21:13:18

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.65 Mbit/s

95th percentile per-packet one-way delay: 43.740 ms

Loss rate: 1.58%

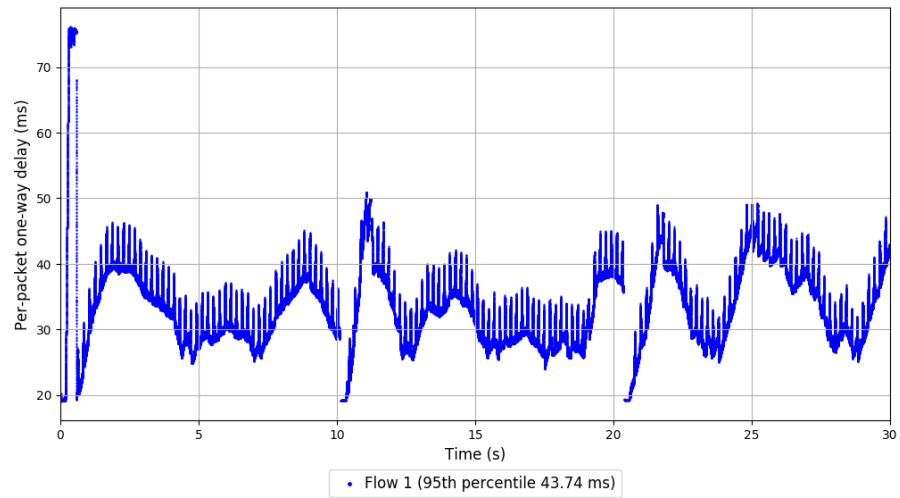
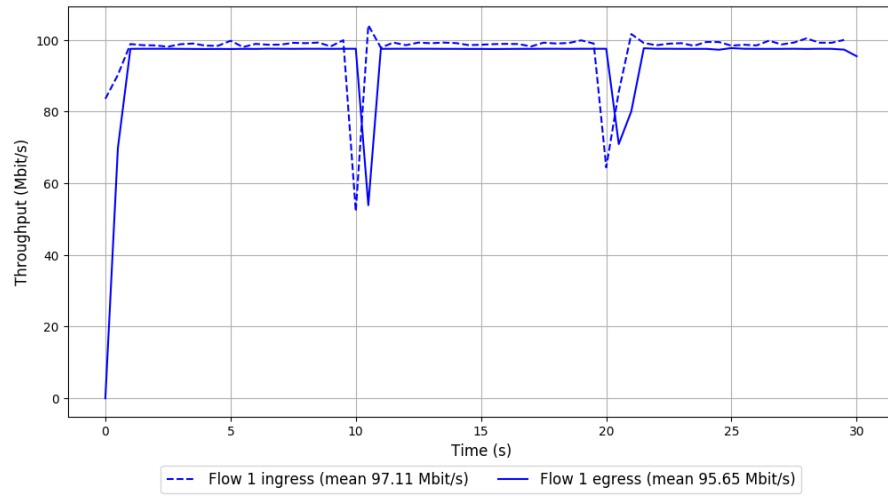
-- Flow 1:

Average throughput: 95.65 Mbit/s

95th percentile per-packet one-way delay: 43.740 ms

Loss rate: 1.58%

Run 1: Report of TCP BBR — Data Link

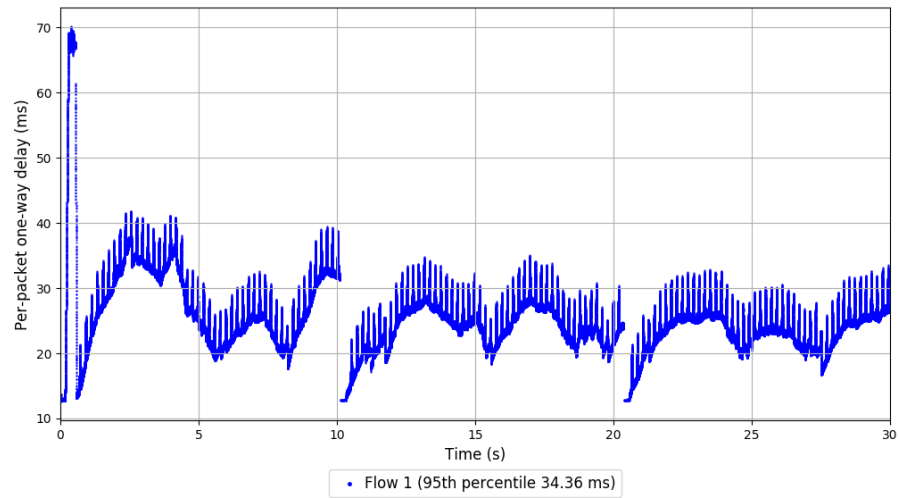
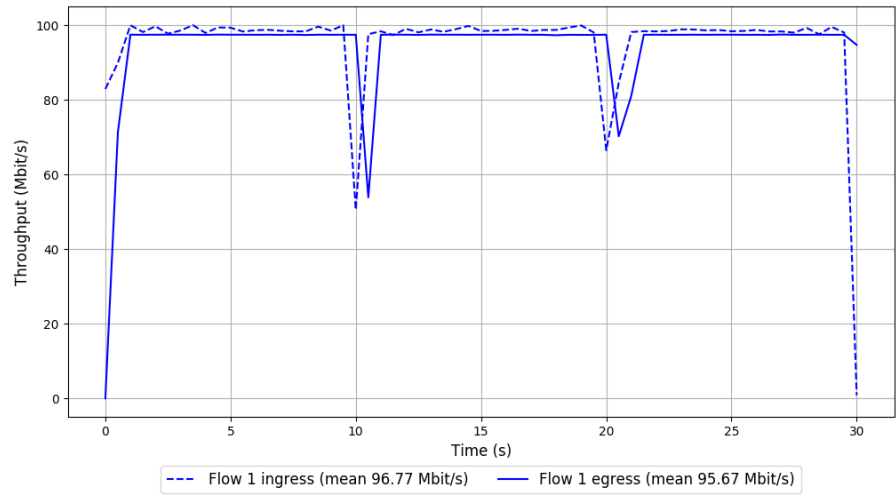


Run 2: Statistics of TCP BBR

Start at: 2018-09-07 19:52:14
End at: 2018-09-07 19:52:44
Local clock offset: -4.423 ms
Remote clock offset: -3.479 ms

Below is generated by plot.py at 2018-09-07 21:13:18
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.67 Mbit/s
95th percentile per-packet one-way delay: 34.357 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 95.67 Mbit/s
95th percentile per-packet one-way delay: 34.357 ms
Loss rate: 1.24%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-09-07 20:14:24

End at: 2018-09-07 20:14:54

Local clock offset: -3.652 ms

Remote clock offset: -5.929 ms

Below is generated by plot.py at 2018-09-07 21:13:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.67 Mbit/s

95th percentile per-packet one-way delay: 40.298 ms

Loss rate: 1.74%

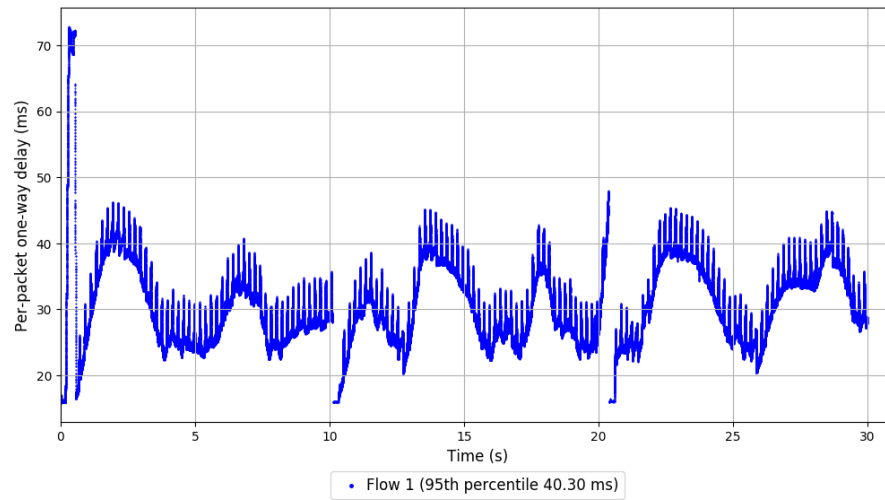
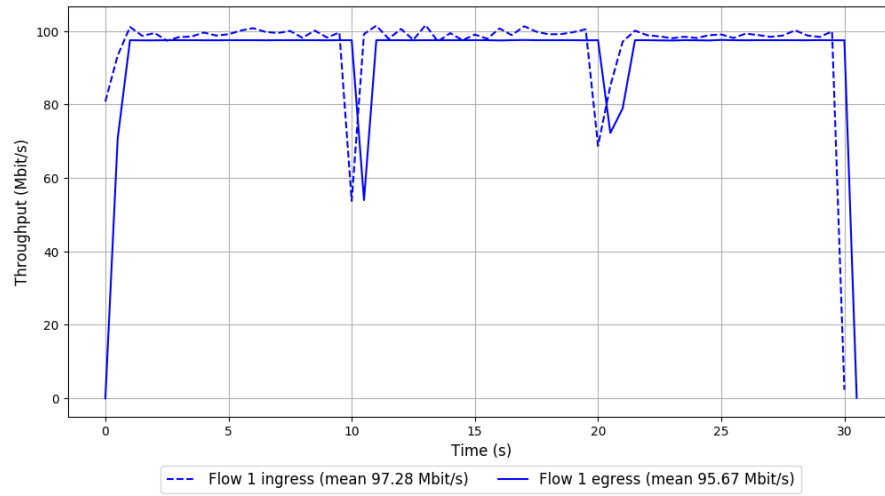
-- Flow 1:

Average throughput: 95.67 Mbit/s

95th percentile per-packet one-way delay: 40.298 ms

Loss rate: 1.74%

Run 3: Report of TCP BBR — Data Link

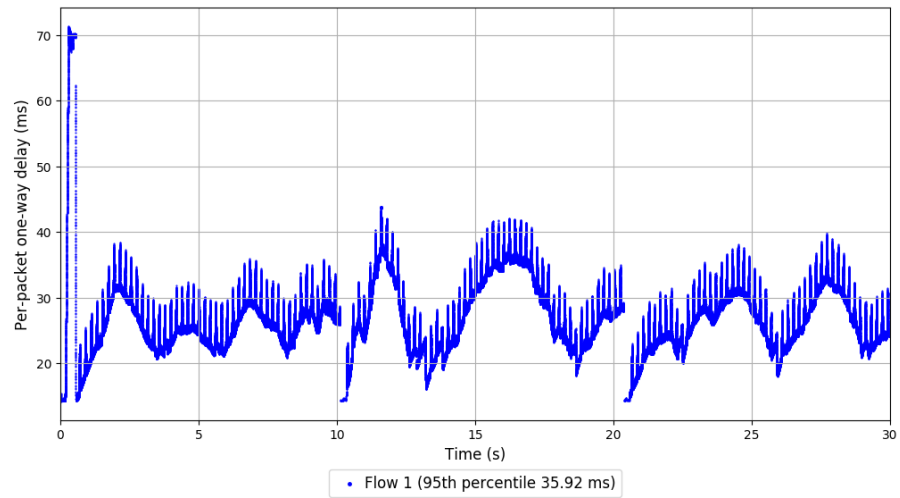
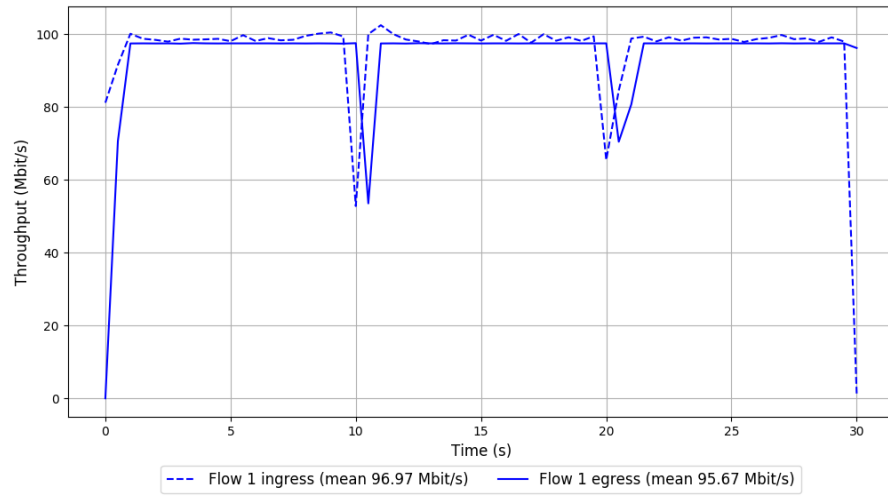


Run 4: Statistics of TCP BBR

Start at: 2018-09-07 20:36:15
End at: 2018-09-07 20:36:46
Local clock offset: -4.402 ms
Remote clock offset: -4.947 ms

Below is generated by plot.py at 2018-09-07 21:13:20
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.67 Mbit/s
95th percentile per-packet one-way delay: 35.917 ms
Loss rate: 1.44%
-- Flow 1:
Average throughput: 95.67 Mbit/s
95th percentile per-packet one-way delay: 35.917 ms
Loss rate: 1.44%

Run 4: Report of TCP BBR — Data Link

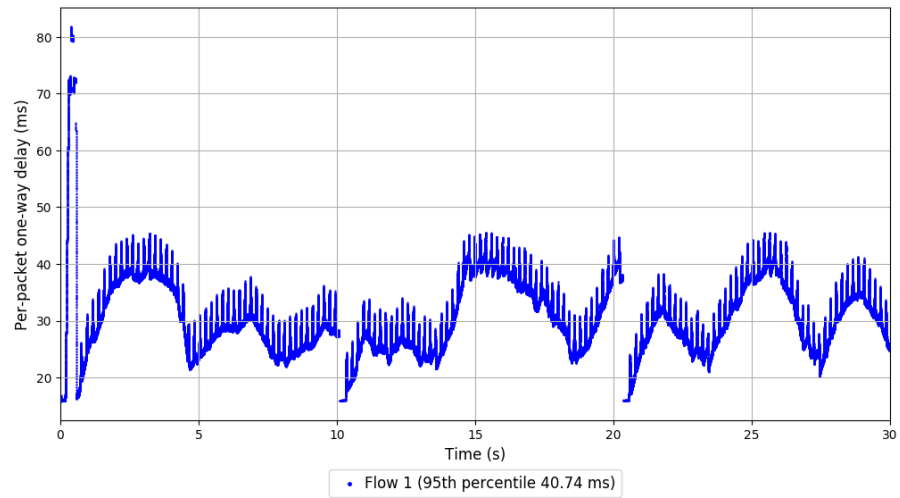
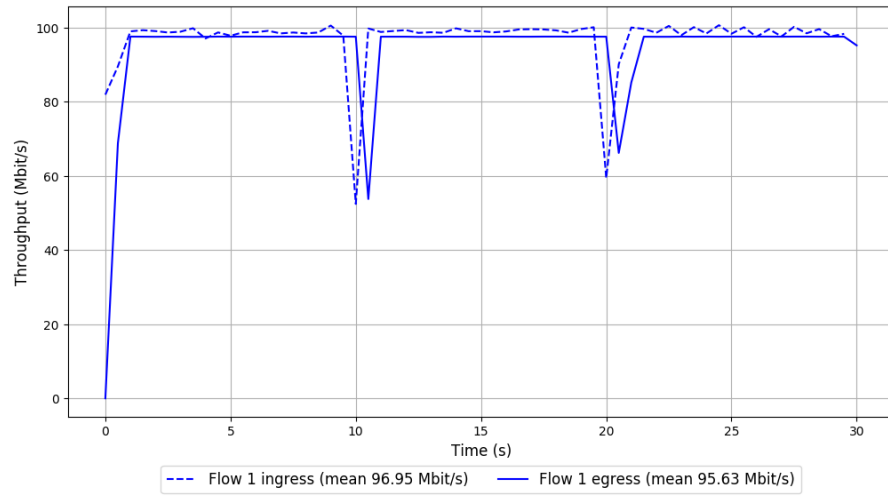


Run 5: Statistics of TCP BBR

Start at: 2018-09-07 20:58:12
End at: 2018-09-07 20:58:42
Local clock offset: -2.278 ms
Remote clock offset: -4.245 ms

Below is generated by plot.py at 2018-09-07 21:13:20
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.63 Mbit/s
95th percentile per-packet one-way delay: 40.740 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 95.63 Mbit/s
95th percentile per-packet one-way delay: 40.740 ms
Loss rate: 1.45%

Run 5: Report of TCP BBR — Data Link

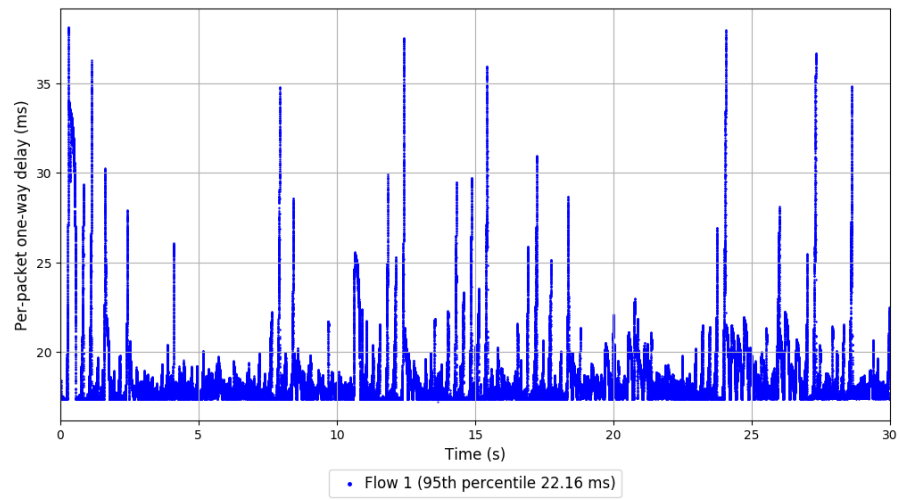
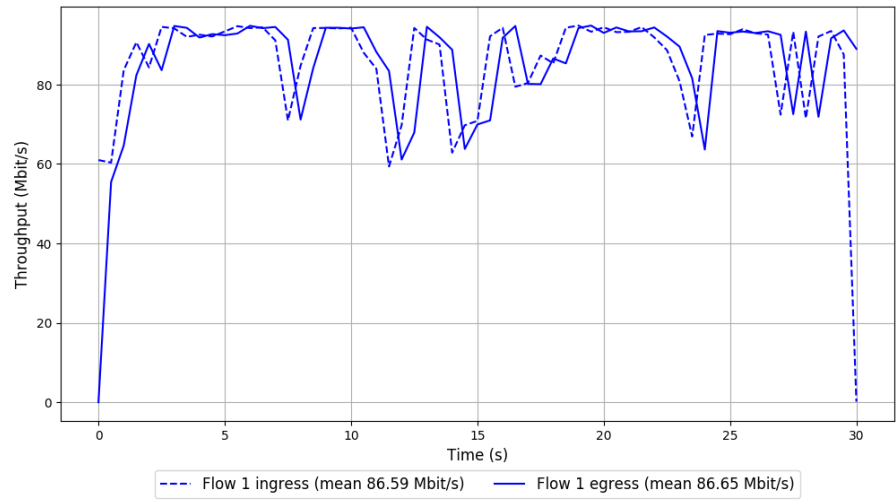


Run 1: Statistics of Copa

Start at: 2018-09-07 19:38:49
End at: 2018-09-07 19:39:19
Local clock offset: -1.054 ms
Remote clock offset: -4.329 ms

Below is generated by plot.py at 2018-09-07 21:14:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 86.65 Mbit/s
95th percentile per-packet one-way delay: 22.158 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 86.65 Mbit/s
95th percentile per-packet one-way delay: 22.158 ms
Loss rate: 0.04%

Run 1: Report of Copa — Data Link

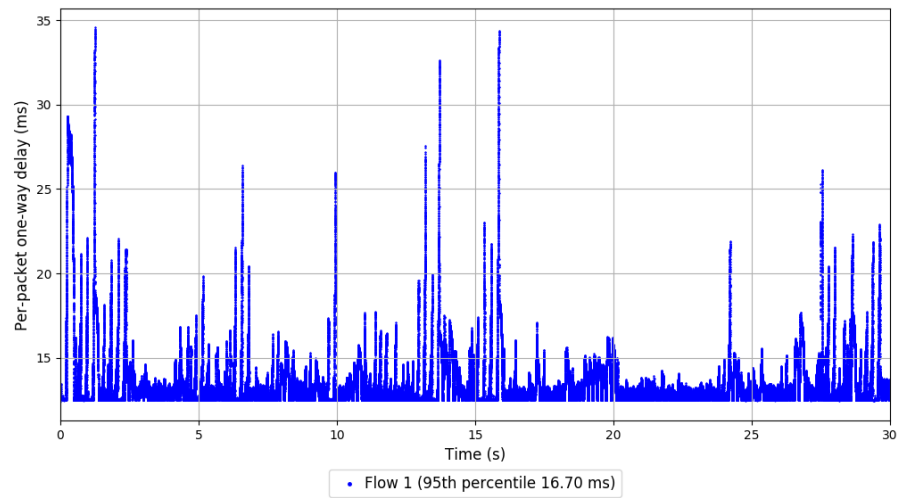
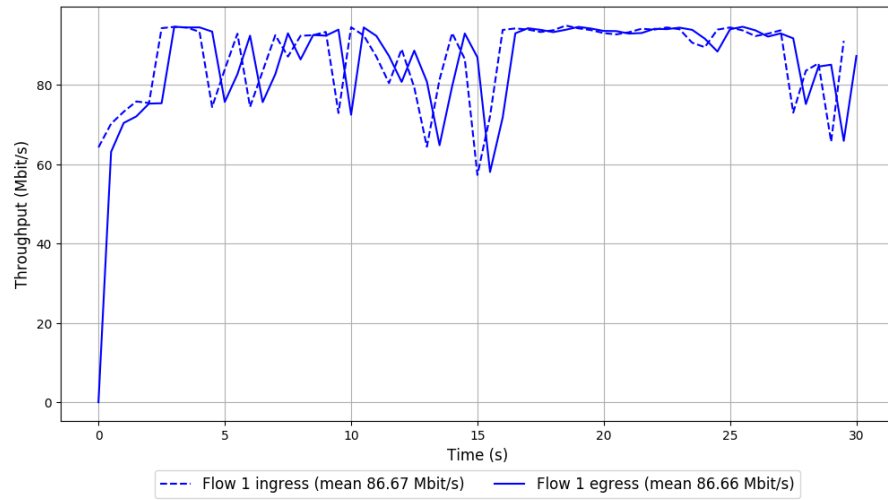


Run 2: Statistics of Copa

Start at: 2018-09-07 20:00:54
End at: 2018-09-07 20:01:24
Local clock offset: -8.863 ms
Remote clock offset: -8.017 ms

Below is generated by plot.py at 2018-09-07 21:14:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 86.66 Mbit/s
95th percentile per-packet one-way delay: 16.704 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 86.66 Mbit/s
95th percentile per-packet one-way delay: 16.704 ms
Loss rate: 0.10%

Run 2: Report of Copa — Data Link

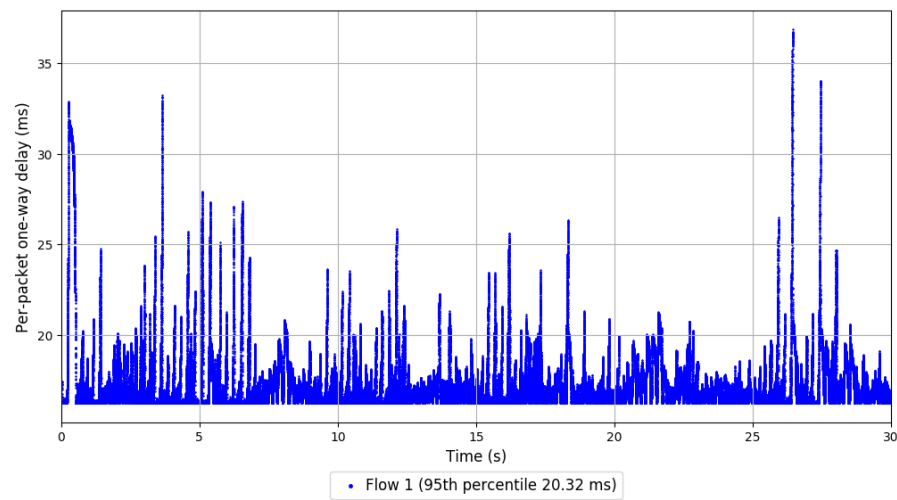
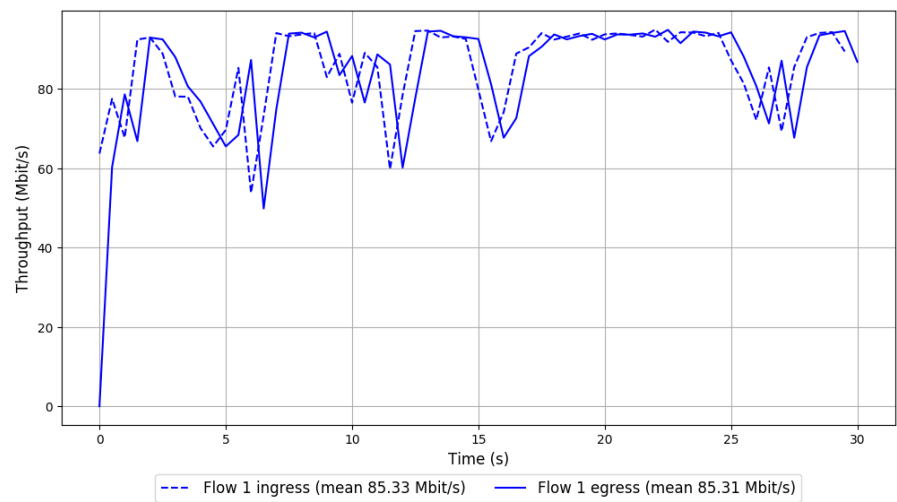


Run 3: Statistics of Copa

Start at: 2018-09-07 20:23:02
End at: 2018-09-07 20:23:32
Local clock offset: -2.399 ms
Remote clock offset: -4.964 ms

Below is generated by plot.py at 2018-09-07 21:14:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 85.31 Mbit/s
95th percentile per-packet one-way delay: 20.318 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 85.31 Mbit/s
95th percentile per-packet one-way delay: 20.318 ms
Loss rate: 0.11%

Run 3: Report of Copa — Data Link

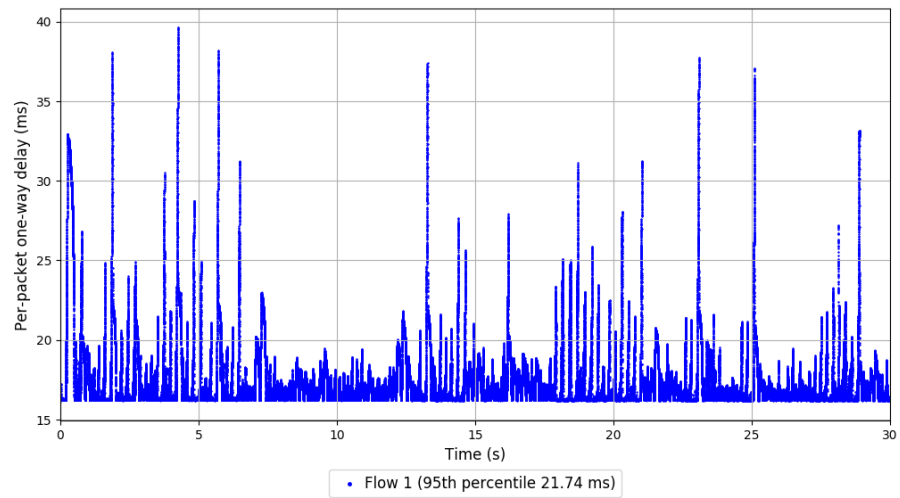
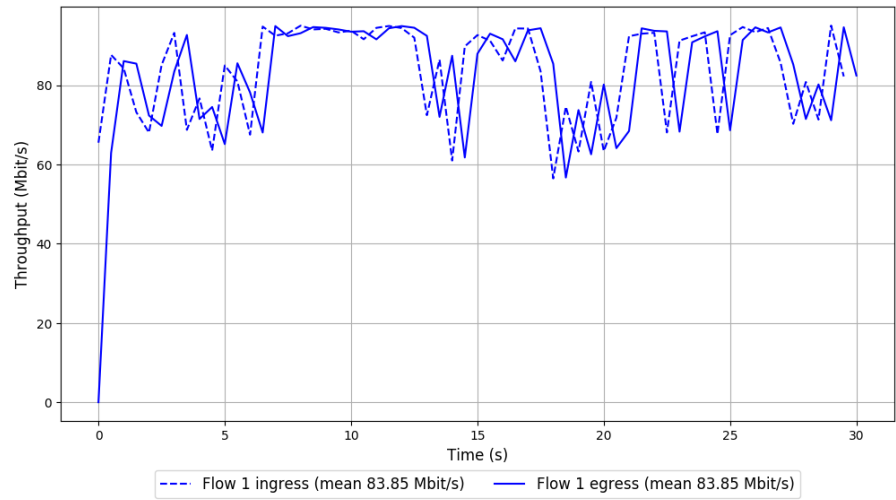


Run 4: Statistics of Copa

Start at: 2018-09-07 20:44:56
End at: 2018-09-07 20:45:26
Local clock offset: -2.352 ms
Remote clock offset: -4.599 ms

Below is generated by plot.py at 2018-09-07 21:15:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 83.85 Mbit/s
95th percentile per-packet one-way delay: 21.744 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 83.85 Mbit/s
95th percentile per-packet one-way delay: 21.744 ms
Loss rate: 0.08%

Run 4: Report of Copa — Data Link

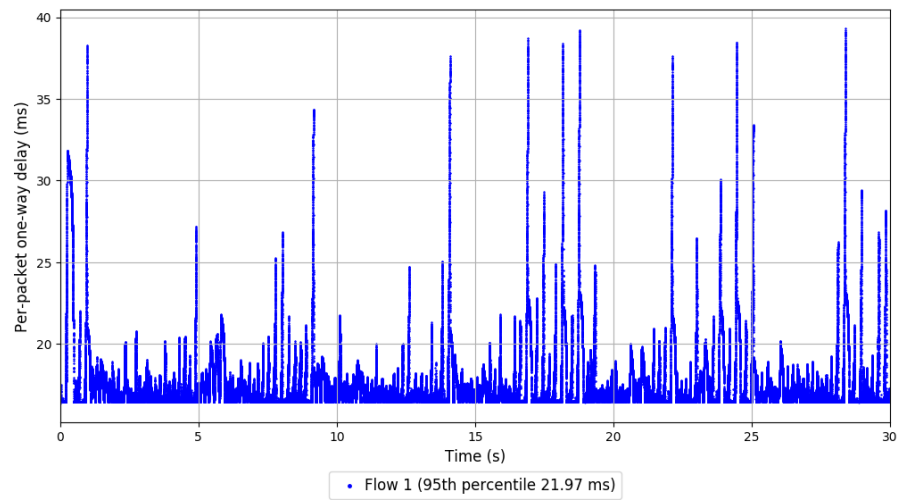
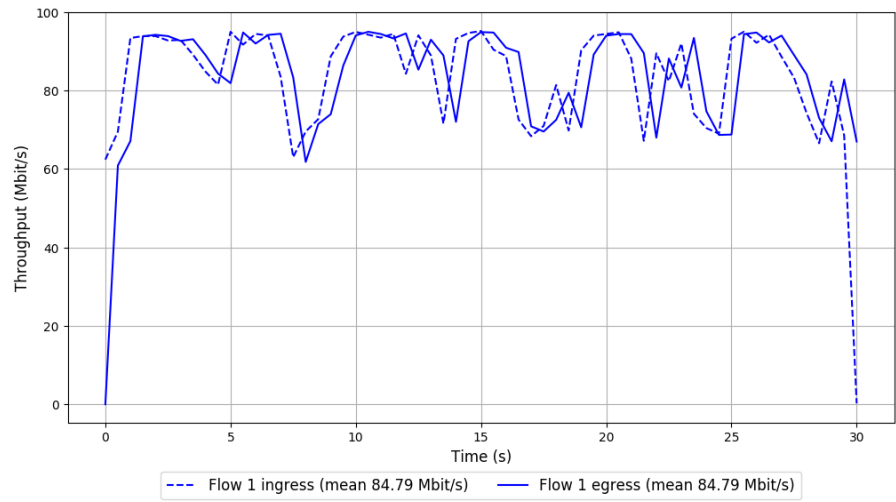


Run 5: Statistics of Copa

Start at: 2018-09-07 21:07:04
End at: 2018-09-07 21:07:34
Local clock offset: -1.982 ms
Remote clock offset: -4.409 ms

Below is generated by plot.py at 2018-09-07 21:15:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 84.79 Mbit/s
95th percentile per-packet one-way delay: 21.969 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 84.79 Mbit/s
95th percentile per-packet one-way delay: 21.969 ms
Loss rate: 0.09%

Run 5: Report of Copa — Data Link

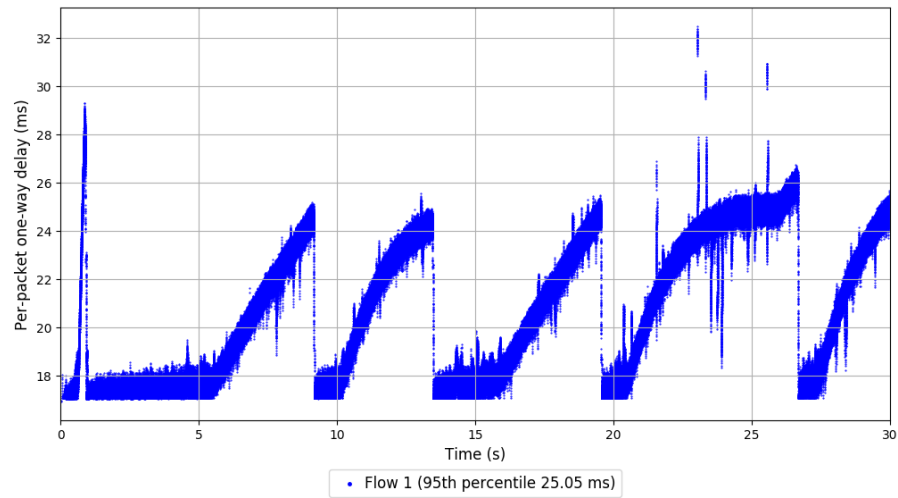
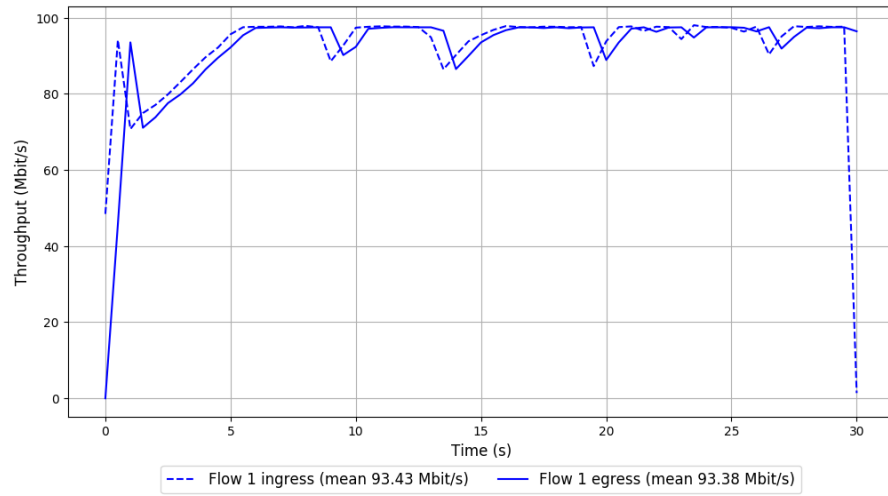


Run 1: Statistics of TCP Cubic

Start at: 2018-09-07 19:37:38
End at: 2018-09-07 19:38:08
Local clock offset: -1.233 ms
Remote clock offset: -4.263 ms

Below is generated by plot.py at 2018-09-07 21:15:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 93.38 Mbit/s
95th percentile per-packet one-way delay: 25.052 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 93.38 Mbit/s
95th percentile per-packet one-way delay: 25.052 ms
Loss rate: 0.15%

Run 1: Report of TCP Cubic — Data Link

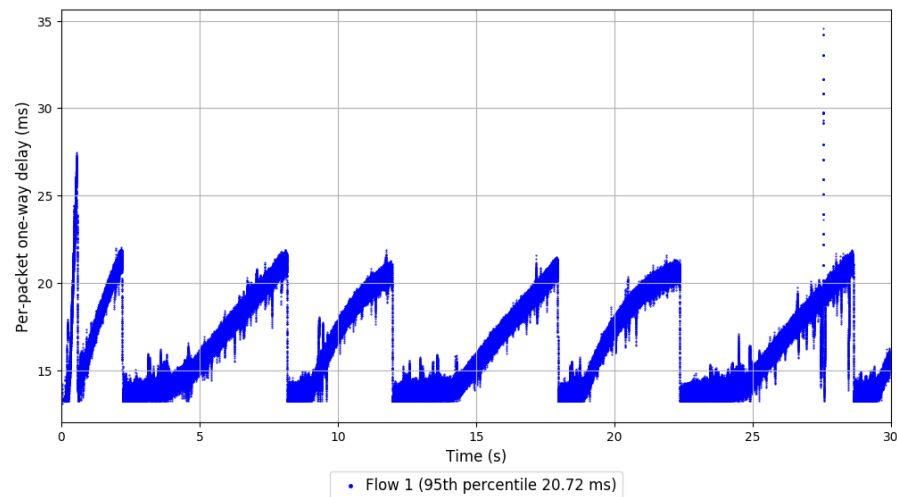
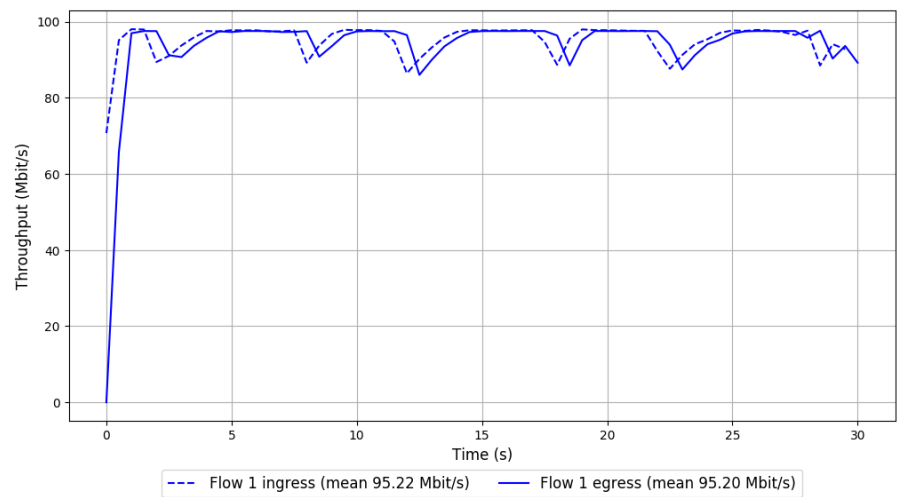


Run 2: Statistics of TCP Cubic

Start at: 2018-09-07 19:59:42
End at: 2018-09-07 20:00:12
Local clock offset: -4.721 ms
Remote clock offset: -4.618 ms

Below is generated by plot.py at 2018-09-07 21:15:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.20 Mbit/s
95th percentile per-packet one-way delay: 20.719 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 95.20 Mbit/s
95th percentile per-packet one-way delay: 20.719 ms
Loss rate: 0.11%

Run 2: Report of TCP Cubic — Data Link

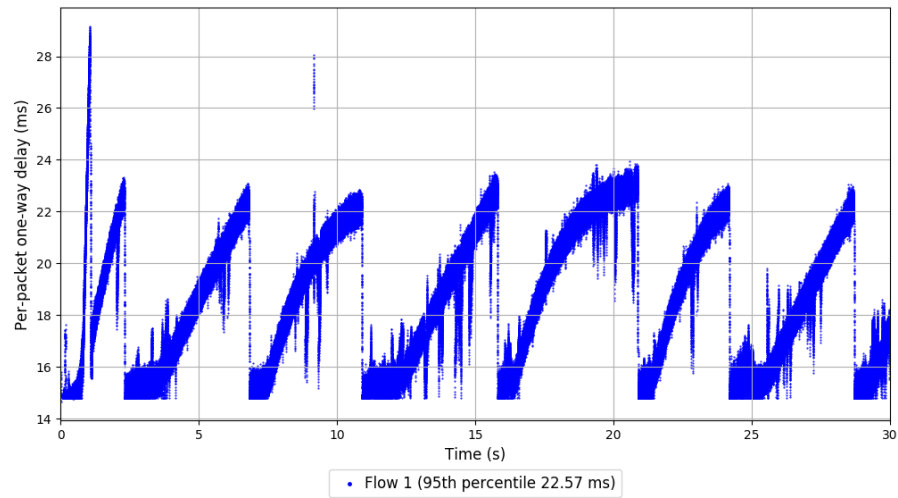
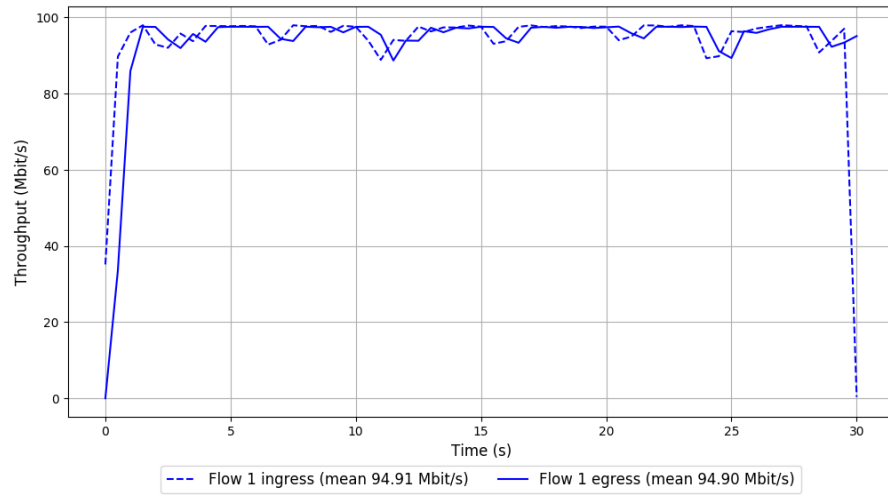


Run 3: Statistics of TCP Cubic

Start at: 2018-09-07 20:21:51
End at: 2018-09-07 20:22:21
Local clock offset: -4.667 ms
Remote clock offset: -5.762 ms

Below is generated by plot.py at 2018-09-07 21:15:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.90 Mbit/s
95th percentile per-packet one-way delay: 22.572 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 94.90 Mbit/s
95th percentile per-packet one-way delay: 22.572 ms
Loss rate: 0.10%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-09-07 20:43:41

End at: 2018-09-07 20:44:11

Local clock offset: -1.045 ms

Remote clock offset: -4.76 ms

Below is generated by plot.py at 2018-09-07 21:15:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.91 Mbit/s

95th percentile per-packet one-way delay: 25.107 ms

Loss rate: 0.11%

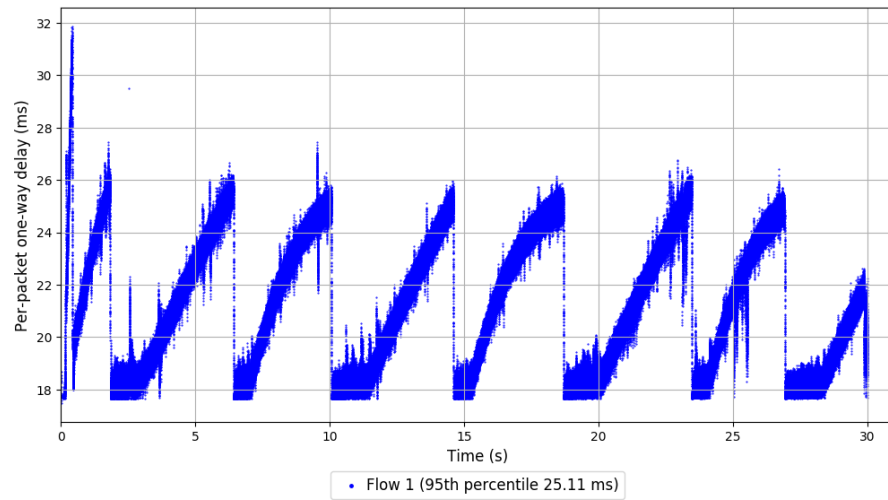
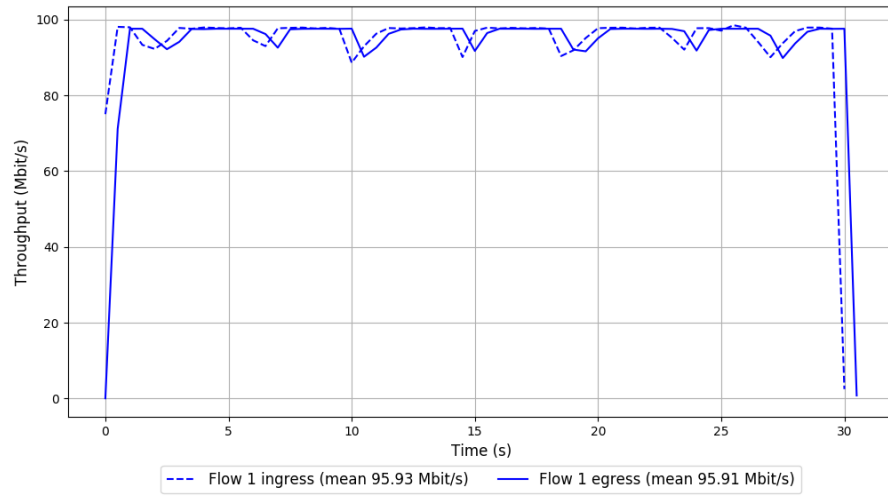
-- Flow 1:

Average throughput: 95.91 Mbit/s

95th percentile per-packet one-way delay: 25.107 ms

Loss rate: 0.11%

Run 4: Report of TCP Cubic — Data Link

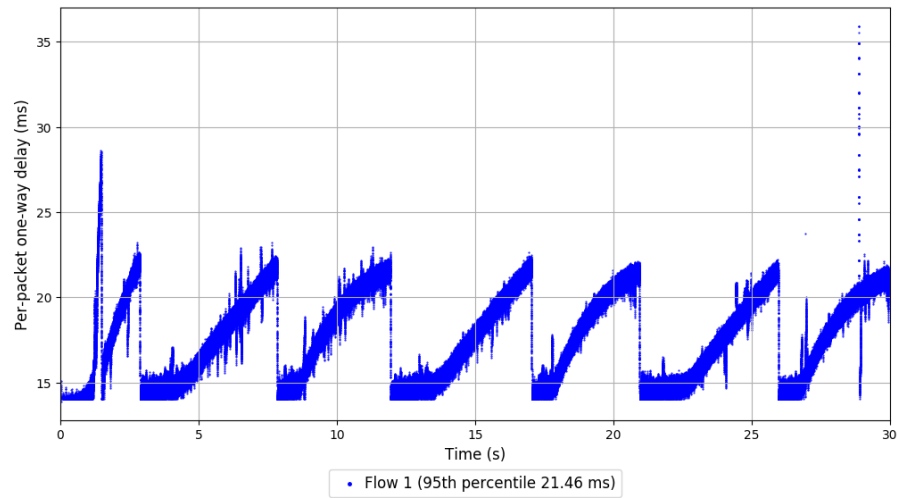
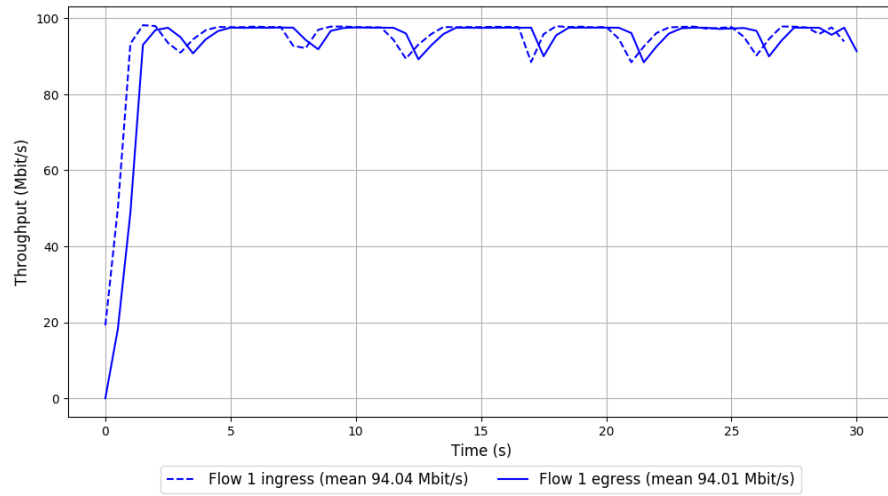


Run 5: Statistics of TCP Cubic

Start at: 2018-09-07 21:05:50
End at: 2018-09-07 21:06:20
Local clock offset: -3.599 ms
Remote clock offset: -3.642 ms

Below is generated by plot.py at 2018-09-07 21:15:16
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.01 Mbit/s
95th percentile per-packet one-way delay: 21.463 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 94.01 Mbit/s
95th percentile per-packet one-way delay: 21.463 ms
Loss rate: 0.12%

Run 5: Report of TCP Cubic — Data Link

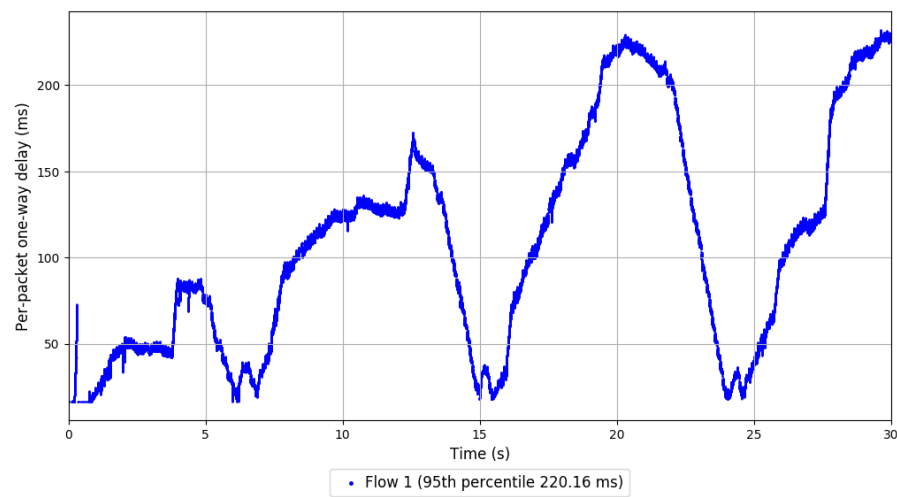
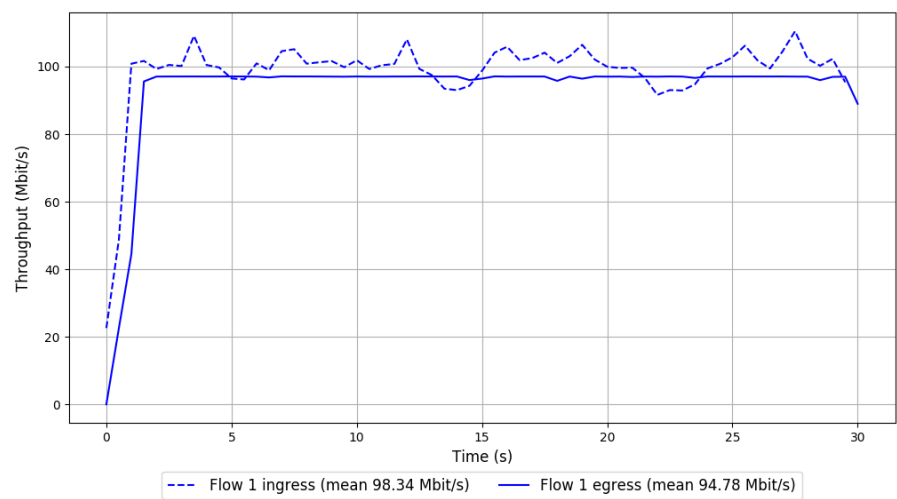


Run 1: Statistics of FillP

Start at: 2018-09-07 19:24:13
End at: 2018-09-07 19:24:43
Local clock offset: 0.004 ms
Remote clock offset: -3.661 ms

Below is generated by plot.py at 2018-09-07 21:15:37
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.78 Mbit/s
95th percentile per-packet one-way delay: 220.165 ms
Loss rate: 3.72%
-- Flow 1:
Average throughput: 94.78 Mbit/s
95th percentile per-packet one-way delay: 220.165 ms
Loss rate: 3.72%

Run 1: Report of FillP — Data Link

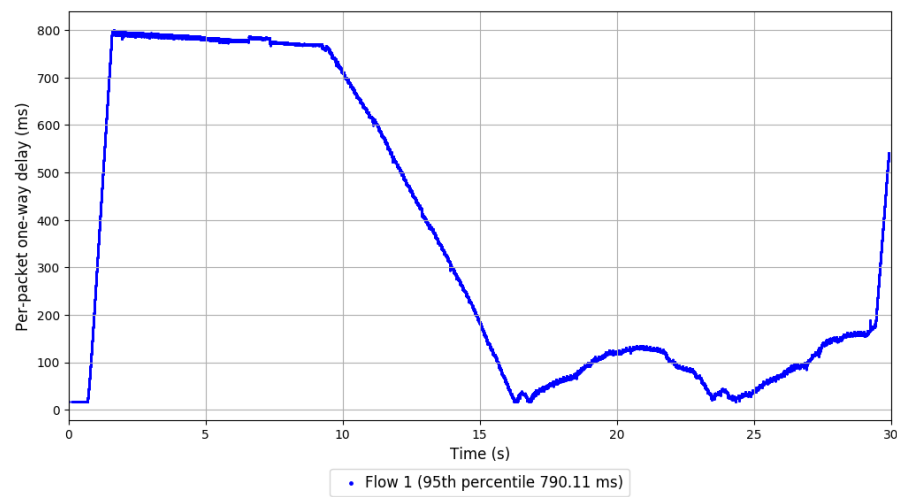
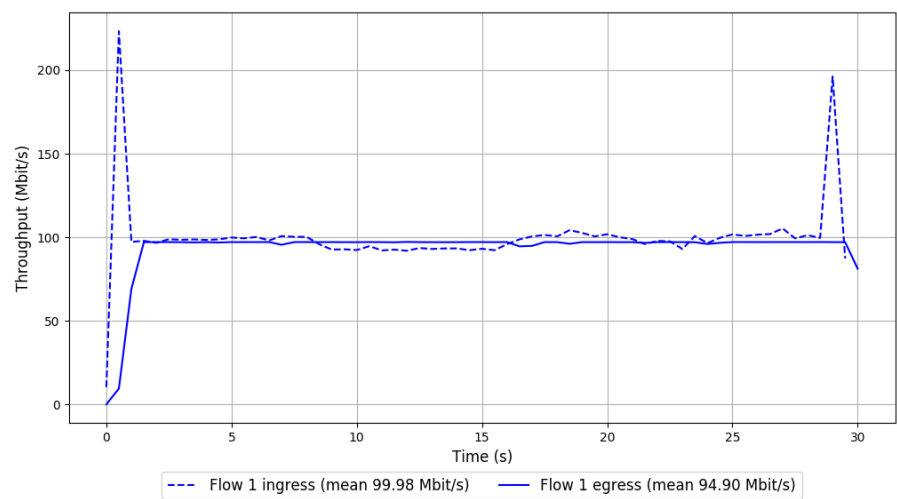


Run 2: Statistics of FillP

Start at: 2018-09-07 19:46:22
End at: 2018-09-07 19:46:52
Local clock offset: -0.514 ms
Remote clock offset: -3.303 ms

Below is generated by plot.py at 2018-09-07 21:15:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.90 Mbit/s
95th percentile per-packet one-way delay: 790.111 ms
Loss rate: 5.17%
-- Flow 1:
Average throughput: 94.90 Mbit/s
95th percentile per-packet one-way delay: 790.111 ms
Loss rate: 5.17%

Run 2: Report of FillP — Data Link

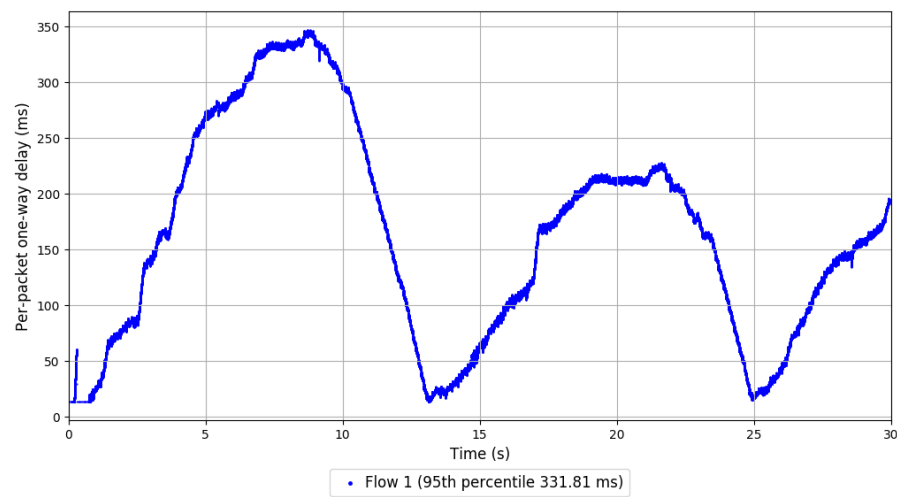
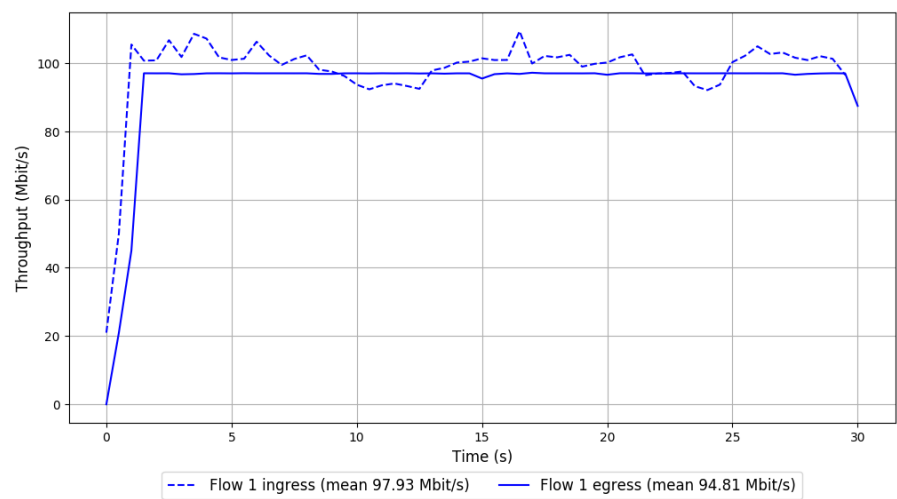


Run 3: Statistics of FillP

Start at: 2018-09-07 20:08:26
End at: 2018-09-07 20:08:56
Local clock offset: -4.239 ms
Remote clock offset: -4.192 ms

Below is generated by plot.py at 2018-09-07 21:15:47
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.81 Mbit/s
95th percentile per-packet one-way delay: 331.814 ms
Loss rate: 3.26%
-- Flow 1:
Average throughput: 94.81 Mbit/s
95th percentile per-packet one-way delay: 331.814 ms
Loss rate: 3.26%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-09-07 20:30:29

End at: 2018-09-07 20:30:59

Local clock offset: -1.729 ms

Remote clock offset: -5.31 ms

Below is generated by plot.py at 2018-09-07 21:15:48

Datalink statistics

-- Total of 1 flow:

Average throughput: 94.82 Mbit/s

95th percentile per-packet one-way delay: 209.330 ms

Loss rate: 2.83%

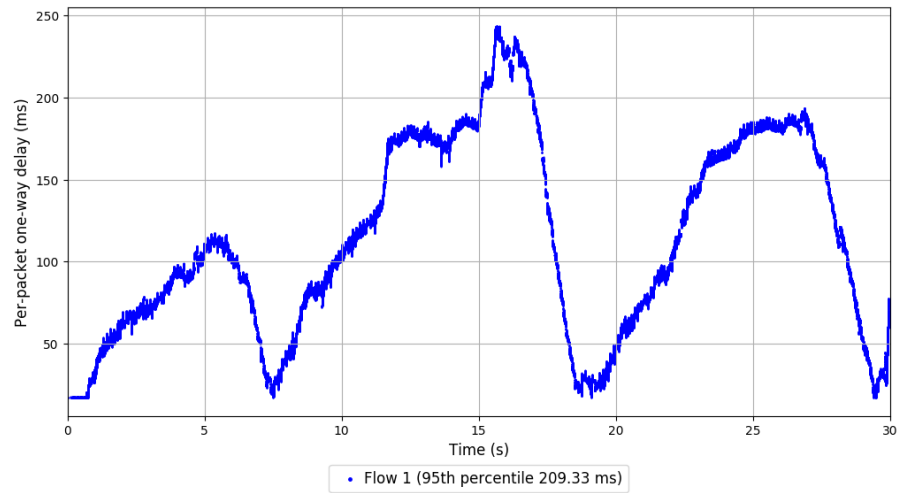
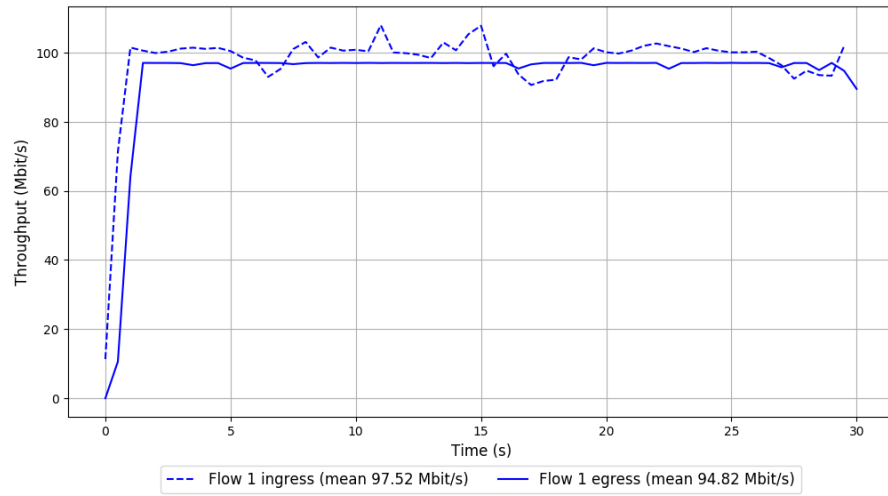
-- Flow 1:

Average throughput: 94.82 Mbit/s

95th percentile per-packet one-way delay: 209.330 ms

Loss rate: 2.83%

Run 4: Report of FillP — Data Link

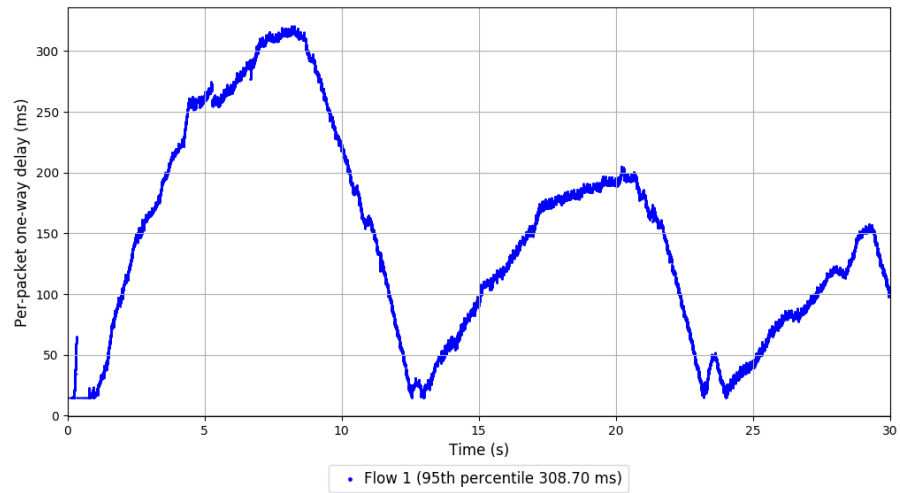
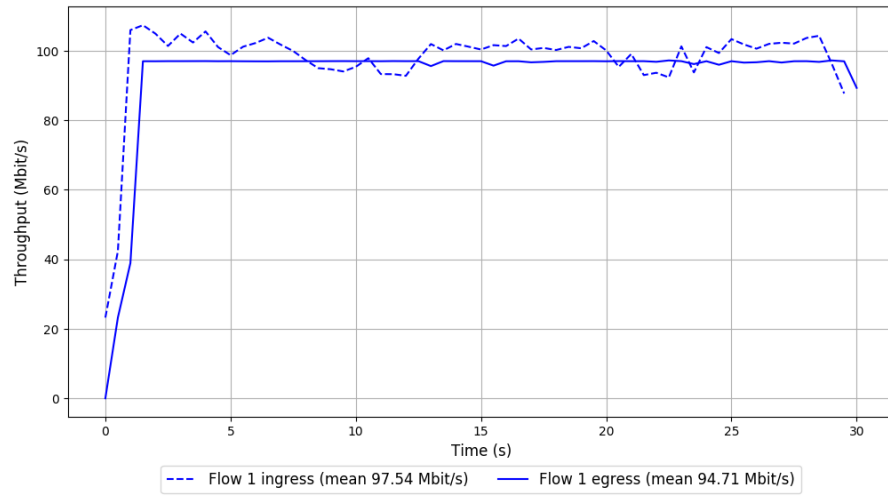


Run 5: Statistics of FillP

Start at: 2018-09-07 20:52:24
End at: 2018-09-07 20:52:54
Local clock offset: -3.028 ms
Remote clock offset: -3.905 ms

Below is generated by plot.py at 2018-09-07 21:16:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.71 Mbit/s
95th percentile per-packet one-way delay: 308.705 ms
Loss rate: 2.99%
-- Flow 1:
Average throughput: 94.71 Mbit/s
95th percentile per-packet one-way delay: 308.705 ms
Loss rate: 2.99%

Run 5: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2018-09-07 19:28:54

End at: 2018-09-07 19:29:24

Local clock offset: 1.66 ms

Remote clock offset: -4.352 ms

Below is generated by plot.py at 2018-09-07 21:16:34

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.18 Mbit/s

95th percentile per-packet one-way delay: 46.367 ms

Loss rate: 1.34%

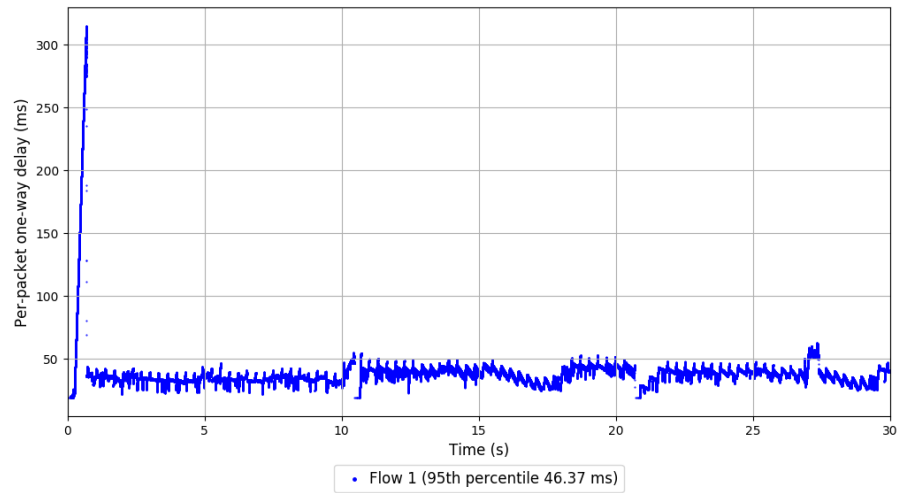
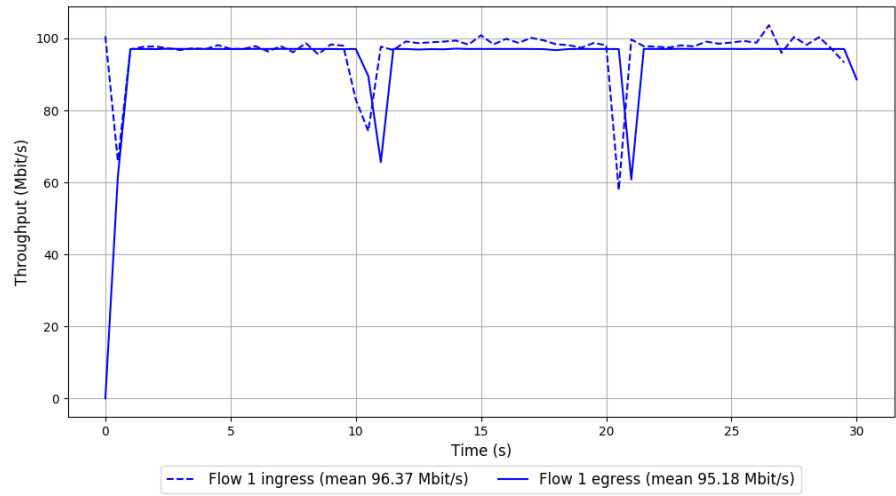
-- Flow 1:

Average throughput: 95.18 Mbit/s

95th percentile per-packet one-way delay: 46.367 ms

Loss rate: 1.34%

Run 1: Report of FillP-Sheep — Data Link

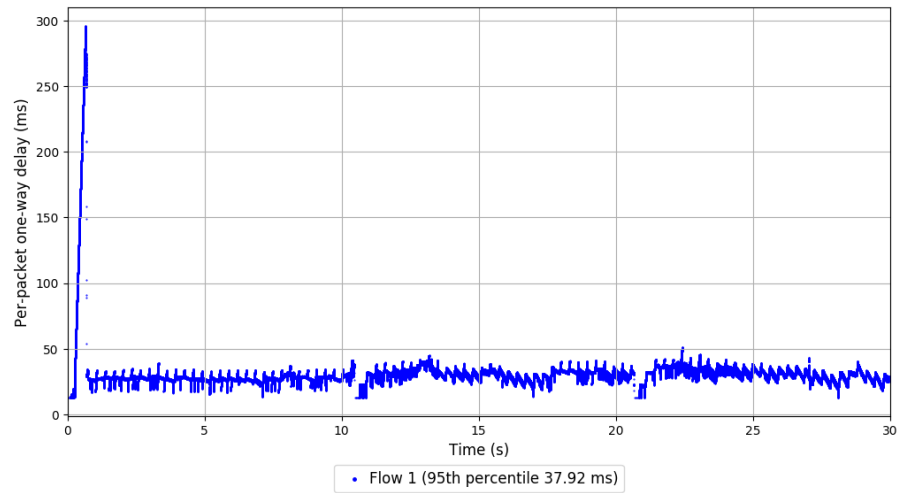
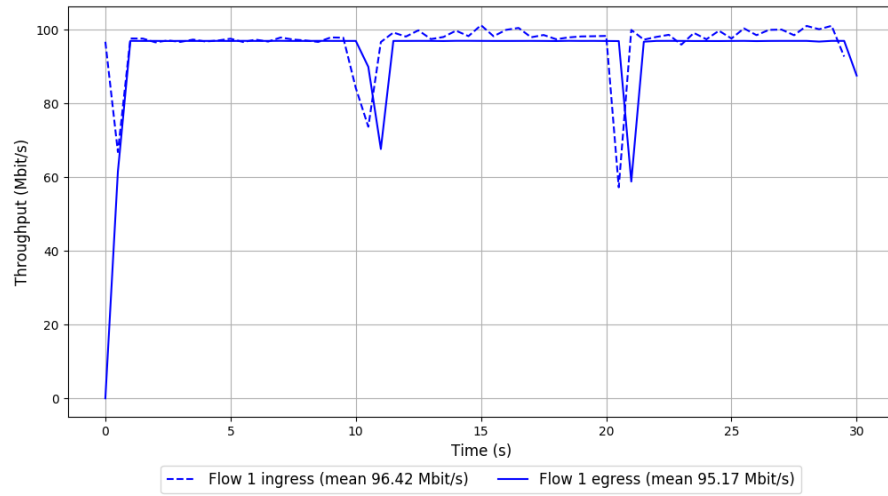


Run 2: Statistics of FillP-Sheep

Start at: 2018-09-07 19:51:00
End at: 2018-09-07 19:51:30
Local clock offset: -4.508 ms
Remote clock offset: -3.578 ms

Below is generated by plot.py at 2018-09-07 21:16:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.17 Mbit/s
95th percentile per-packet one-way delay: 37.924 ms
Loss rate: 1.39%
-- Flow 1:
Average throughput: 95.17 Mbit/s
95th percentile per-packet one-way delay: 37.924 ms
Loss rate: 1.39%

Run 2: Report of FillP-Sheep — Data Link

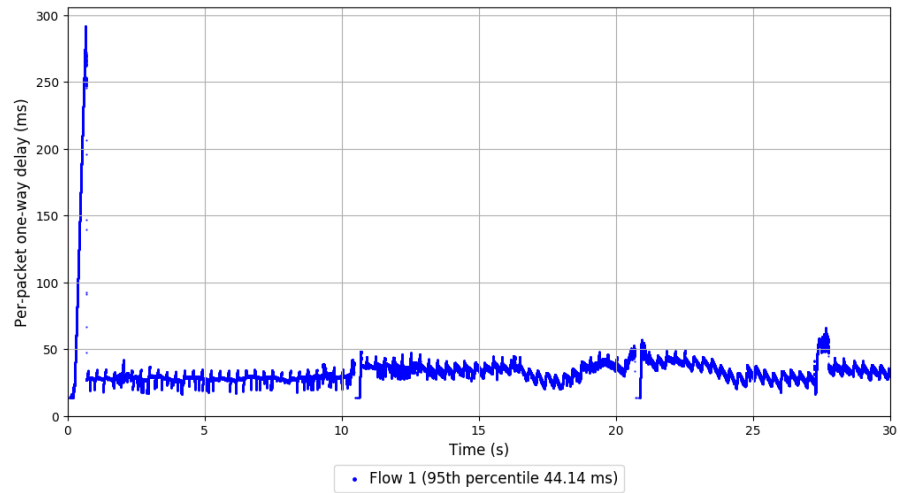
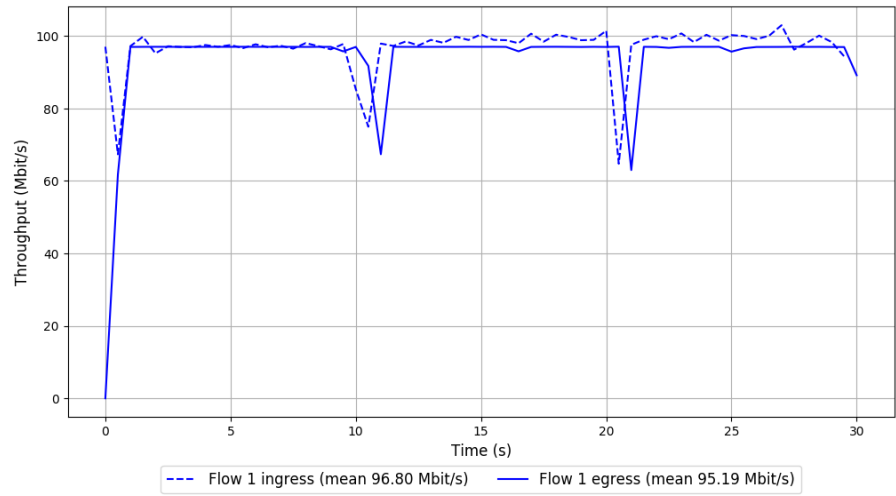


Run 3: Statistics of FillP-Sheep

Start at: 2018-09-07 20:13:07
End at: 2018-09-07 20:13:37
Local clock offset: -4.844 ms
Remote clock offset: -5.076 ms

Below is generated by plot.py at 2018-09-07 21:16:36
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.19 Mbit/s
95th percentile per-packet one-way delay: 44.140 ms
Loss rate: 1.73%
-- Flow 1:
Average throughput: 95.19 Mbit/s
95th percentile per-packet one-way delay: 44.140 ms
Loss rate: 1.73%

Run 3: Report of FillP-Sheep — Data Link

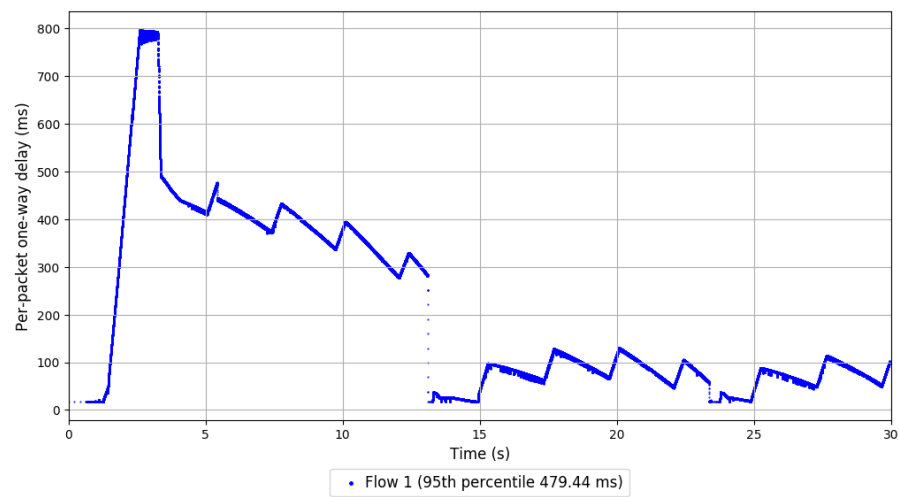
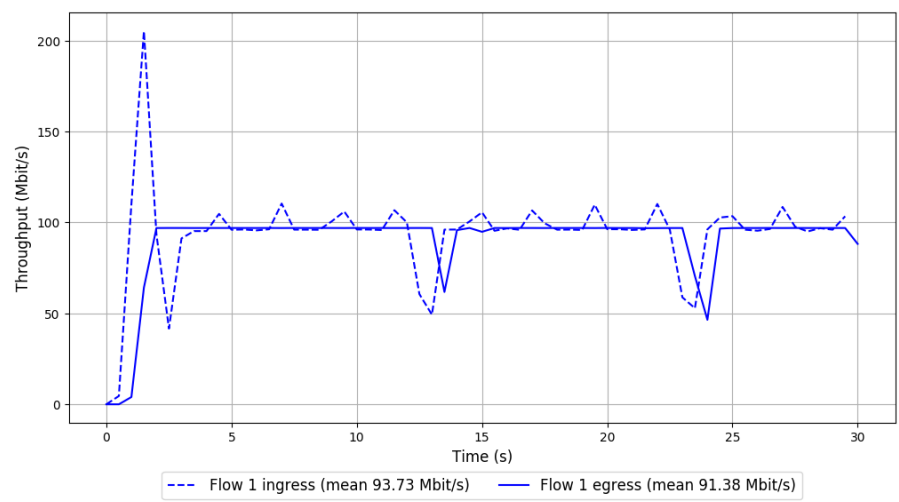


Run 4: Statistics of FillP-Sheep

Start at: 2018-09-07 20:35:03
End at: 2018-09-07 20:35:33
Local clock offset: -1.999 ms
Remote clock offset: -5.625 ms

Below is generated by plot.py at 2018-09-07 21:16:55
Datalink statistics
-- Total of 1 flow:
Average throughput: 91.38 Mbit/s
95th percentile per-packet one-way delay: 479.445 ms
Loss rate: 2.59%
-- Flow 1:
Average throughput: 91.38 Mbit/s
95th percentile per-packet one-way delay: 479.445 ms
Loss rate: 2.59%

Run 4: Report of FillP-Sheep — Data Link

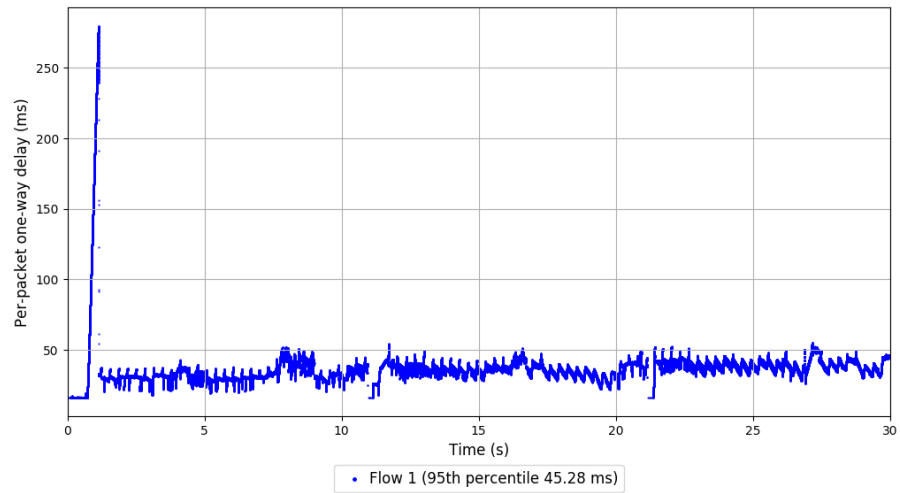
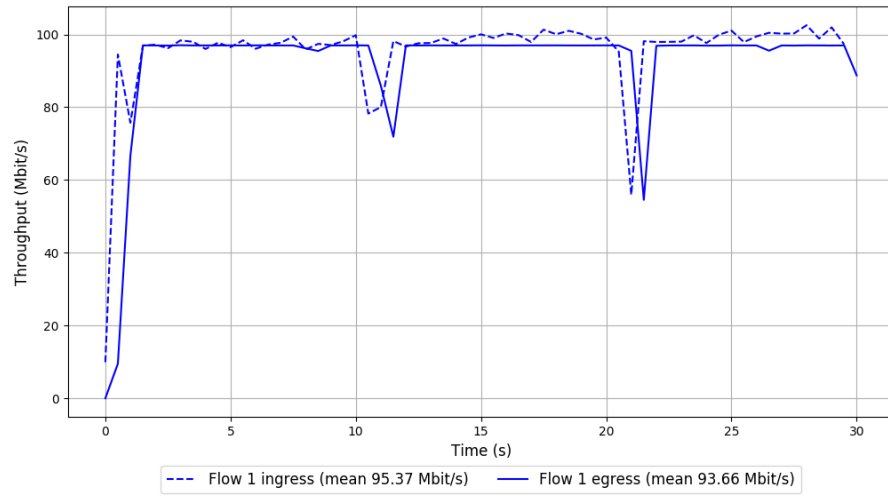


Run 5: Statistics of FillP-Sheep

Start at: 2018-09-07 20:56:59
End at: 2018-09-07 20:57:30
Local clock offset: -2.211 ms
Remote clock offset: -4.723 ms

Below is generated by plot.py at 2018-09-07 21:17:07
Datalink statistics
-- Total of 1 flow:
Average throughput: 93.66 Mbit/s
95th percentile per-packet one-way delay: 45.283 ms
Loss rate: 1.87%
-- Flow 1:
Average throughput: 93.66 Mbit/s
95th percentile per-packet one-way delay: 45.283 ms
Loss rate: 1.87%

Run 5: Report of FillP-Sheep — Data Link

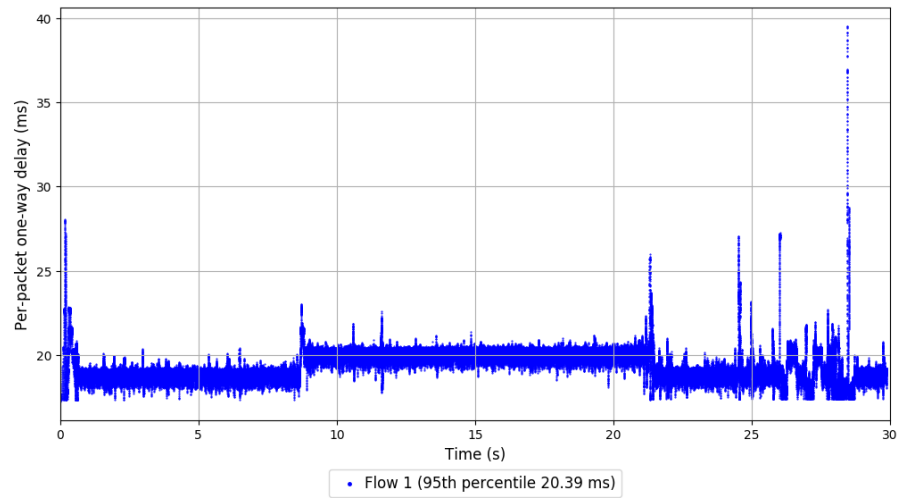
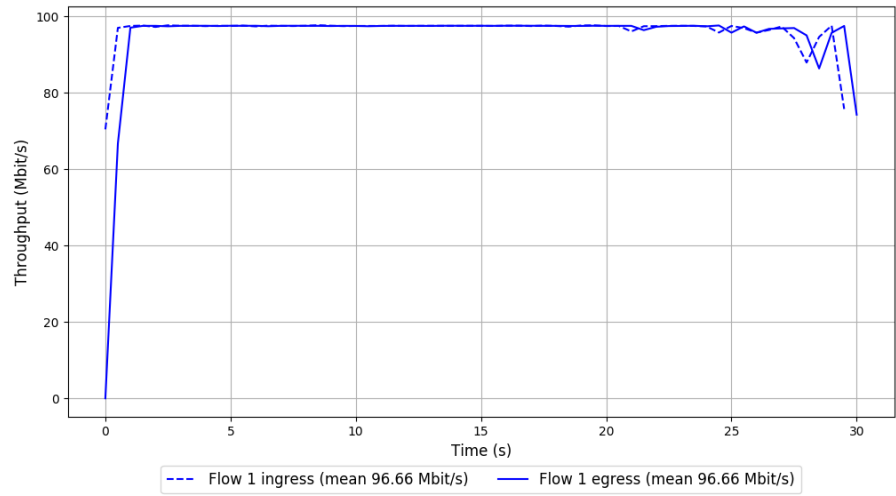


```
Run 1: Statistics of Indigo

Start at: 2018-09-07 19:31:21
End at: 2018-09-07 19:31:51
Local clock offset: -1.12 ms
Remote clock offset: -4.9 ms

# Below is generated by plot.py at 2018-09-07 21:17:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.66 Mbit/s
95th percentile per-packet one-way delay: 20.395 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 96.66 Mbit/s
95th percentile per-packet one-way delay: 20.395 ms
Loss rate: 0.09%
```

Run 1: Report of Indigo — Data Link

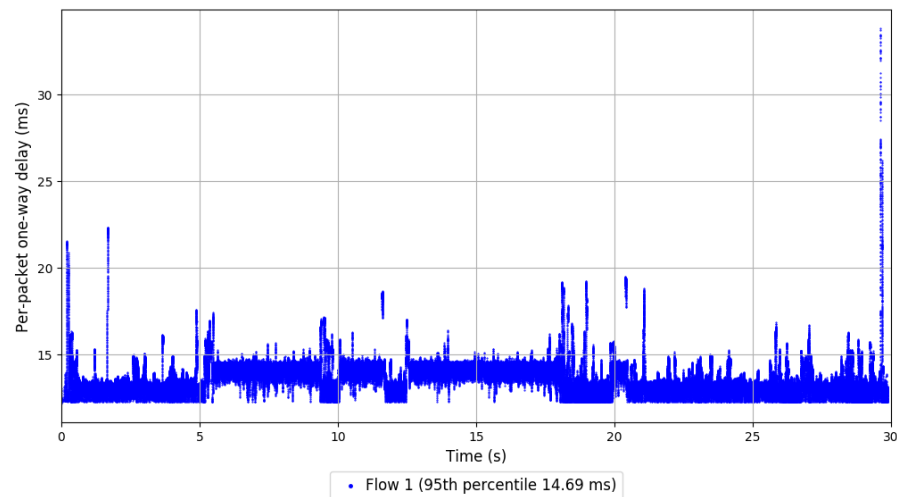
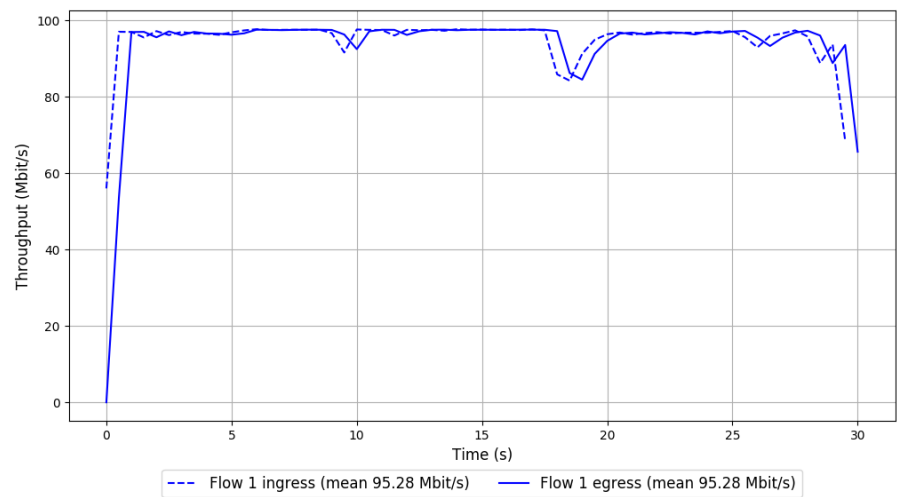


Run 2: Statistics of Indigo

Start at: 2018-09-07 19:53:31
End at: 2018-09-07 19:54:01
Local clock offset: -4.942 ms
Remote clock offset: -3.685 ms

Below is generated by plot.py at 2018-09-07 21:17:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.28 Mbit/s
95th percentile per-packet one-way delay: 14.692 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 95.28 Mbit/s
95th percentile per-packet one-way delay: 14.692 ms
Loss rate: 0.10%

Run 2: Report of Indigo — Data Link

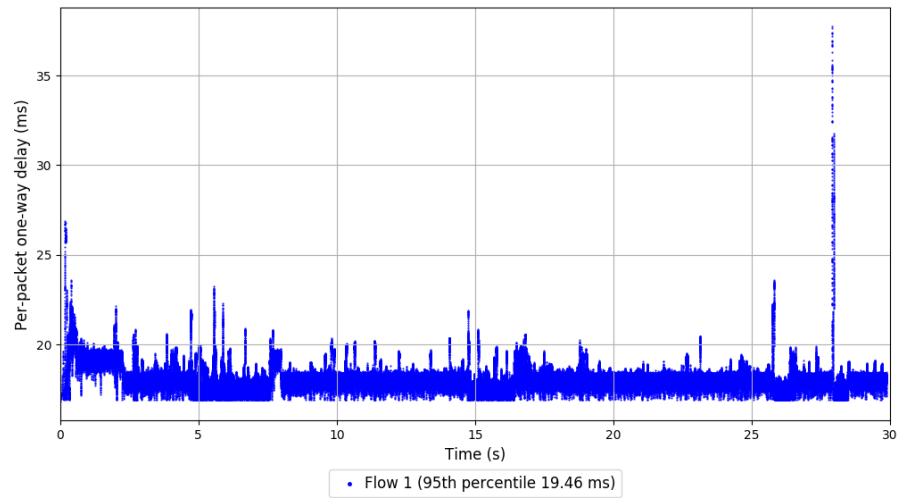
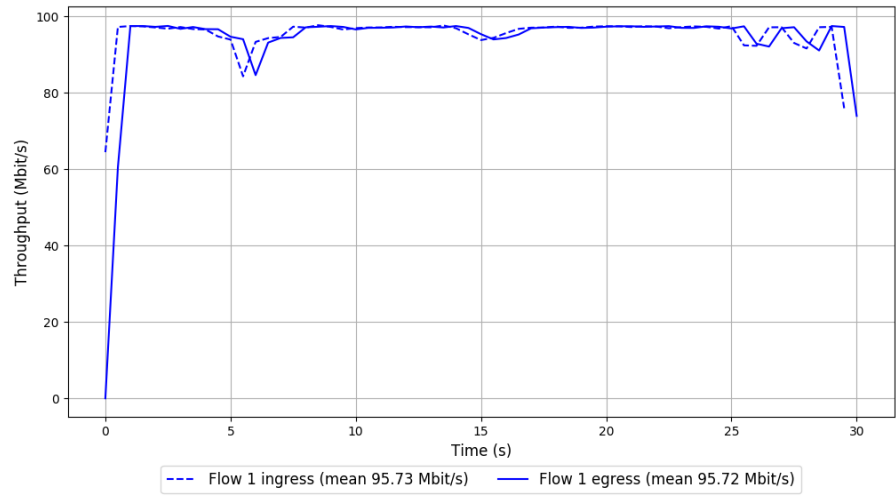


Run 3: Statistics of Indigo

Start at: 2018-09-07 20:15:40
End at: 2018-09-07 20:16:10
Local clock offset: -2.047 ms
Remote clock offset: -5.296 ms

Below is generated by plot.py at 2018-09-07 21:17:45
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.72 Mbit/s
95th percentile per-packet one-way delay: 19.459 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 95.72 Mbit/s
95th percentile per-packet one-way delay: 19.459 ms
Loss rate: 0.09%

Run 3: Report of Indigo — Data Link

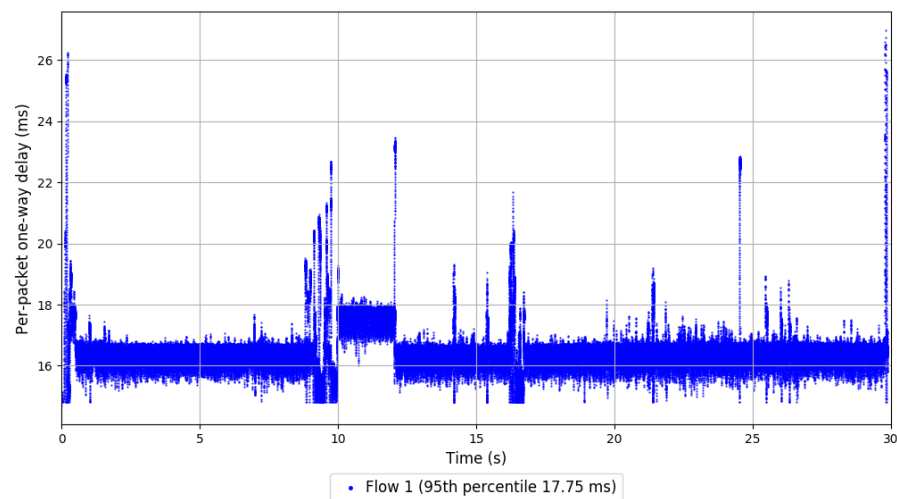
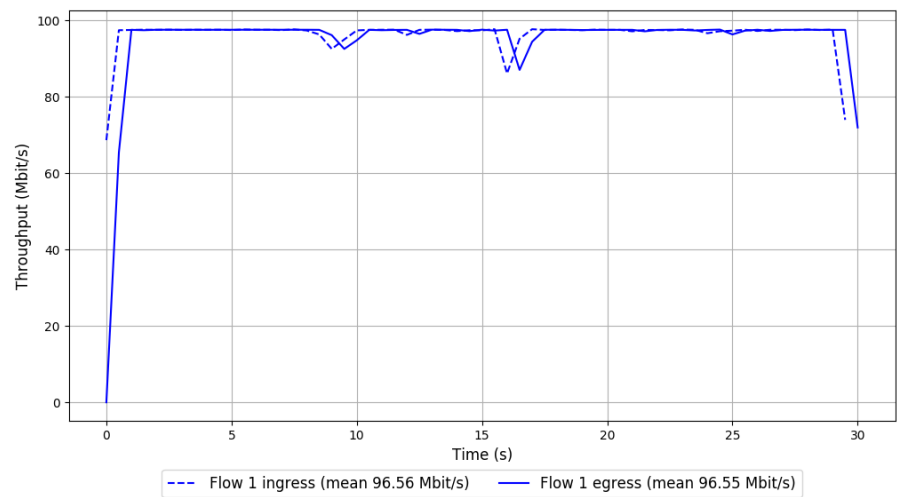


Run 4: Statistics of Indigo

Start at: 2018-09-07 20:37:29
End at: 2018-09-07 20:37:59
Local clock offset: -4.255 ms
Remote clock offset: -5.236 ms

Below is generated by plot.py at 2018-09-07 21:17:47
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.55 Mbit/s
95th percentile per-packet one-way delay: 17.748 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 96.55 Mbit/s
95th percentile per-packet one-way delay: 17.748 ms
Loss rate: 0.09%

Run 4: Report of Indigo — Data Link

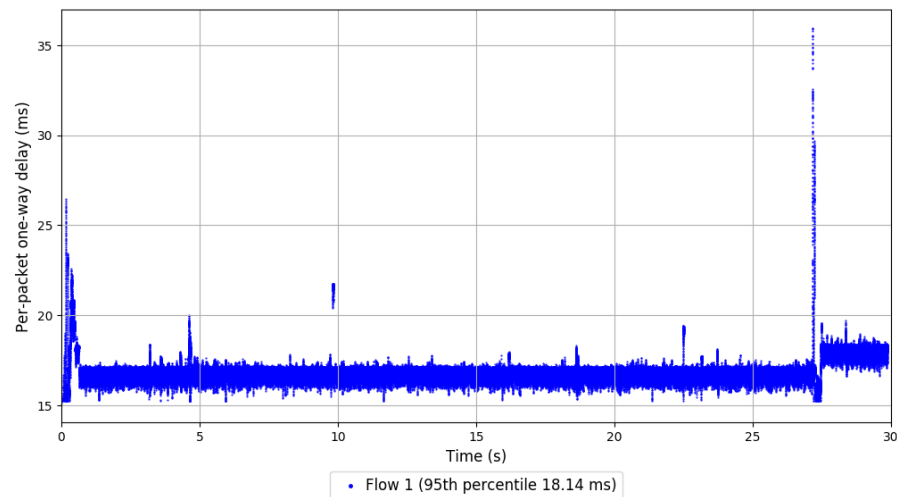
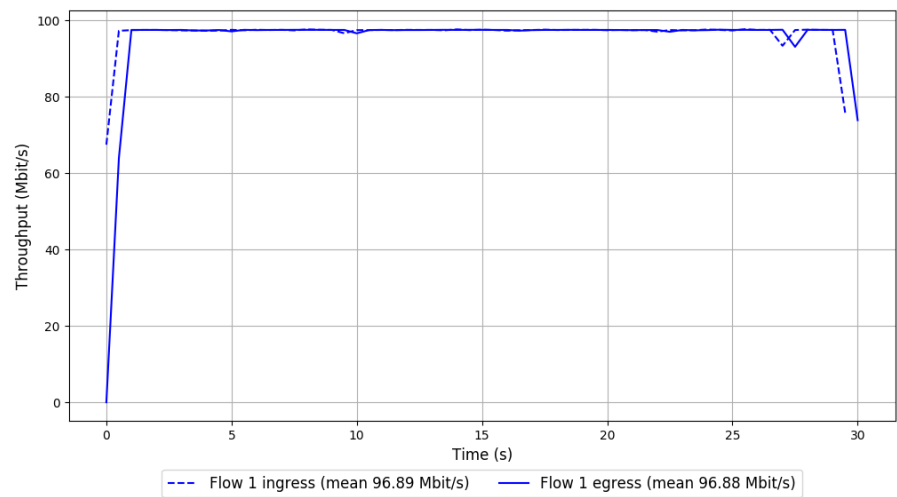


Run 5: Statistics of Indigo

Start at: 2018-09-07 20:59:28
End at: 2018-09-07 20:59:58
Local clock offset: -3.664 ms
Remote clock offset: -4.916 ms

Below is generated by plot.py at 2018-09-07 21:17:48
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.88 Mbit/s
95th percentile per-packet one-way delay: 18.139 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 96.88 Mbit/s
95th percentile per-packet one-way delay: 18.139 ms
Loss rate: 0.09%

Run 5: Report of Indigo — Data Link

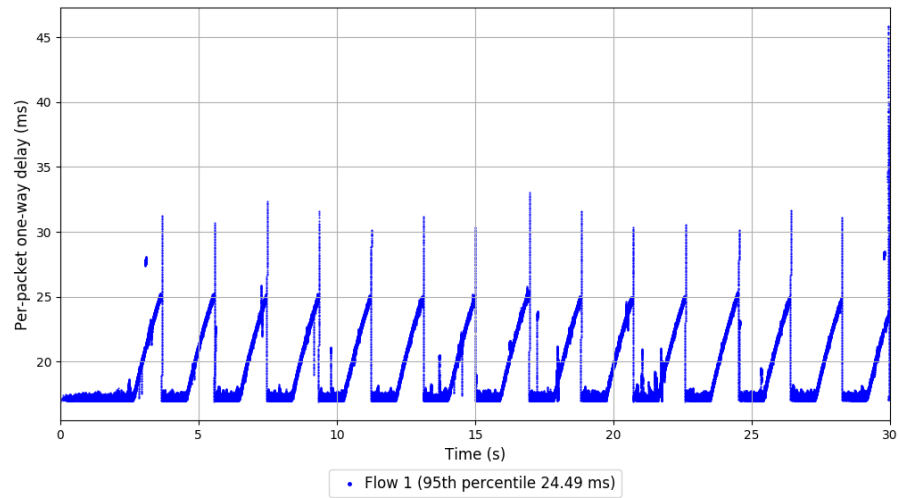
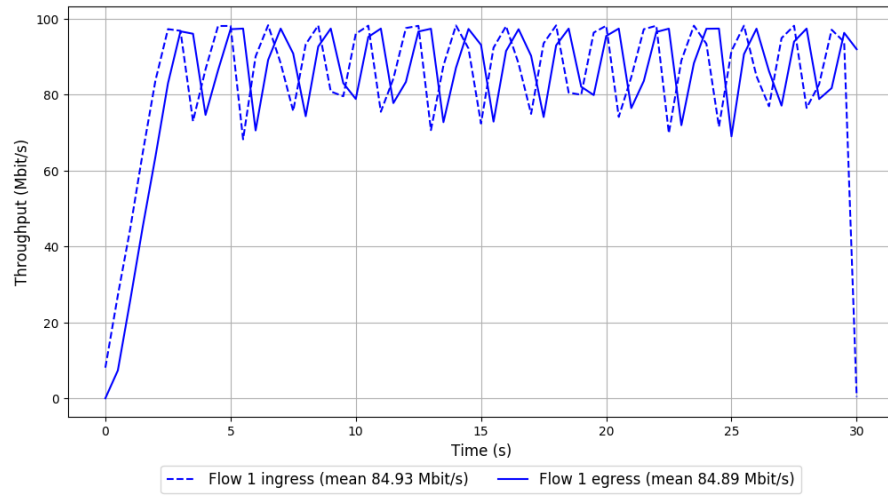


Run 1: Statistics of LEDBAT

Start at: 2018-09-07 19:36:27
End at: 2018-09-07 19:36:57
Local clock offset: -1.079 ms
Remote clock offset: -4.112 ms

Below is generated by plot.py at 2018-09-07 21:17:48
Datalink statistics
-- Total of 1 flow:
Average throughput: 84.89 Mbit/s
95th percentile per-packet one-way delay: 24.488 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 84.89 Mbit/s
95th percentile per-packet one-way delay: 24.488 ms
Loss rate: 0.13%

Run 1: Report of LEDBAT — Data Link

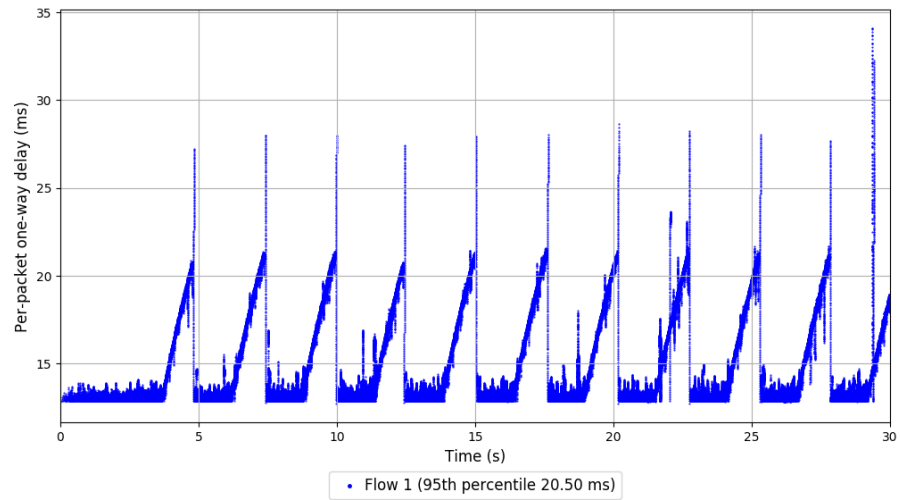
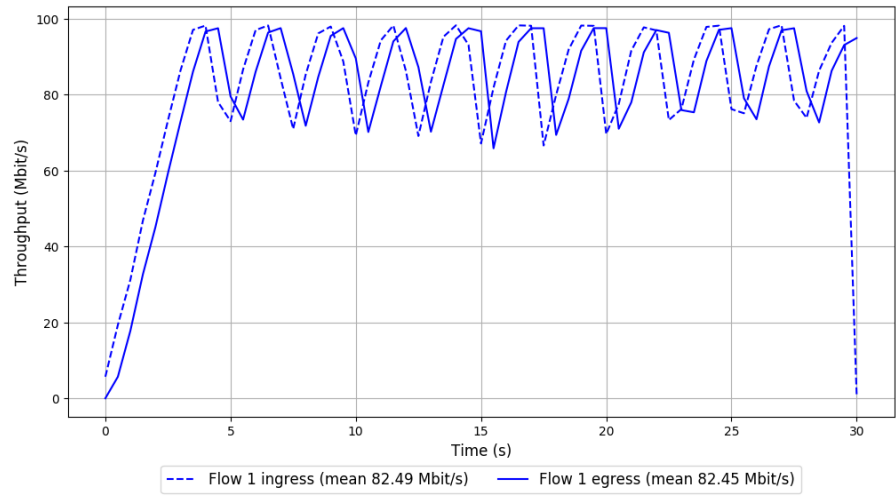


Run 2: Statistics of LEDBAT

Start at: 2018-09-07 19:58:29
End at: 2018-09-07 19:58:59
Local clock offset: -4.065 ms
Remote clock offset: -3.554 ms

Below is generated by plot.py at 2018-09-07 21:17:53
Datalink statistics
-- Total of 1 flow:
Average throughput: 82.45 Mbit/s
95th percentile per-packet one-way delay: 20.497 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 82.45 Mbit/s
95th percentile per-packet one-way delay: 20.497 ms
Loss rate: 0.15%

Run 2: Report of LEDBAT — Data Link

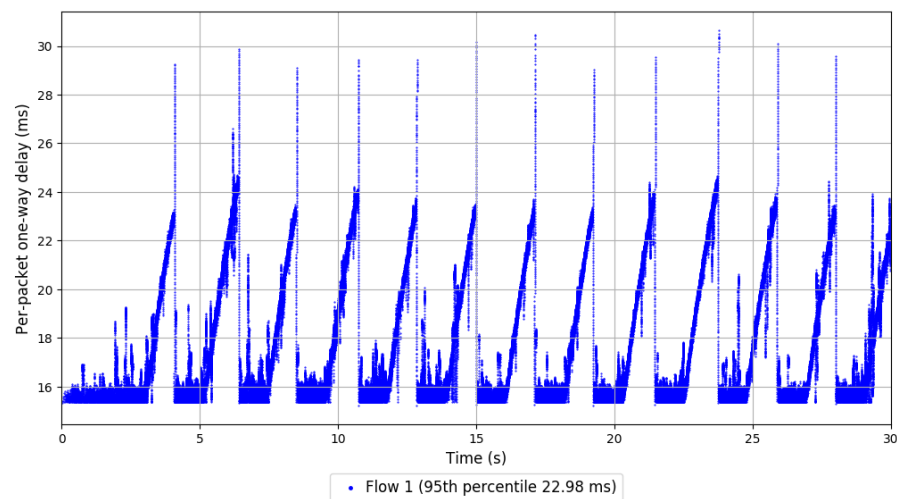
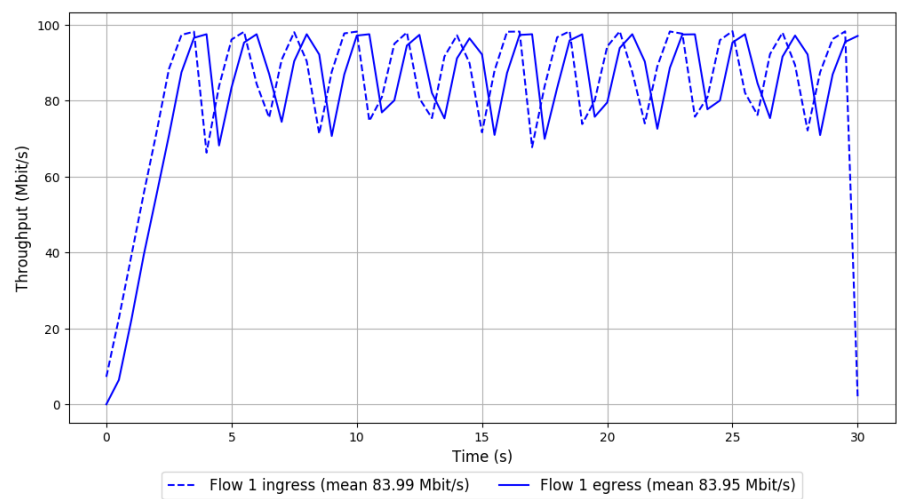


Run 3: Statistics of LEDBAT

Start at: 2018-09-07 20:20:35
End at: 2018-09-07 20:21:05
Local clock offset: -4.004 ms
Remote clock offset: -5.685 ms

Below is generated by plot.py at 2018-09-07 21:17:59
Datalink statistics
-- Total of 1 flow:
Average throughput: 83.95 Mbit/s
95th percentile per-packet one-way delay: 22.984 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 83.95 Mbit/s
95th percentile per-packet one-way delay: 22.984 ms
Loss rate: 0.14%

Run 3: Report of LEDBAT — Data Link

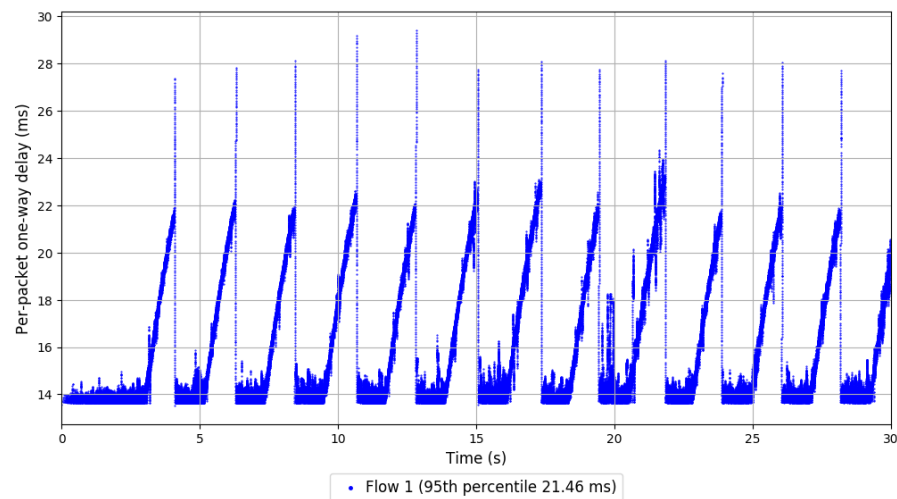
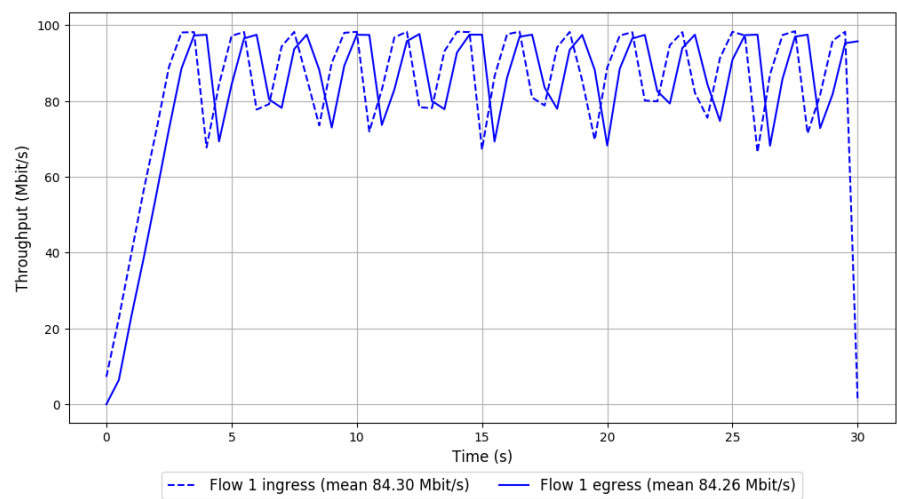


Run 4: Statistics of LEDBAT

Start at: 2018-09-07 20:42:24
End at: 2018-09-07 20:42:54
Local clock offset: -3.97 ms
Remote clock offset: -3.704 ms

Below is generated by plot.py at 2018-09-07 21:18:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 84.26 Mbit/s
95th percentile per-packet one-way delay: 21.457 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 84.26 Mbit/s
95th percentile per-packet one-way delay: 21.457 ms
Loss rate: 0.13%

Run 4: Report of LEDBAT — Data Link

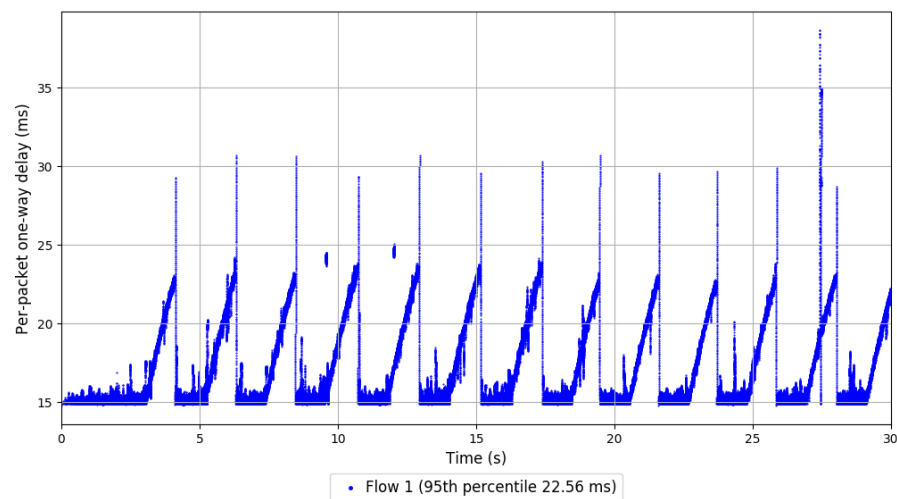
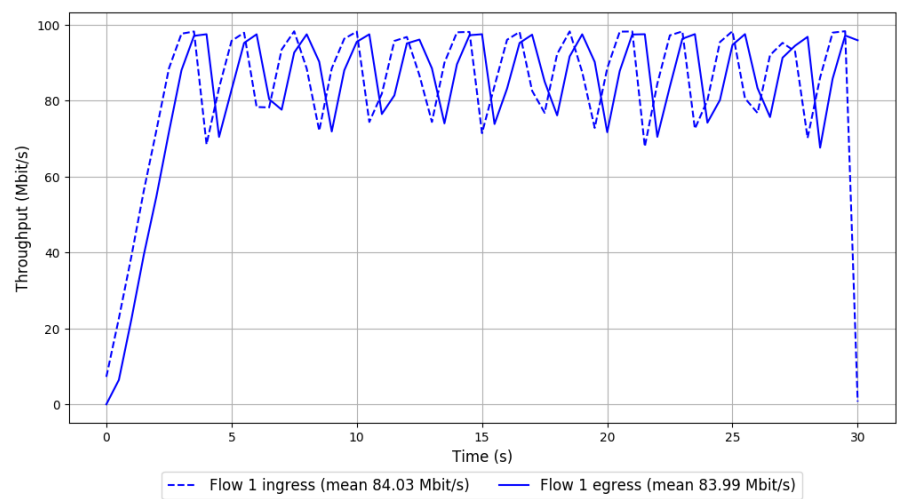


Run 5: Statistics of LEDBAT

Start at: 2018-09-07 21:04:30
End at: 2018-09-07 21:05:00
Local clock offset: -3.846 ms
Remote clock offset: -4.708 ms

Below is generated by plot.py at 2018-09-07 21:18:10
Datalink statistics
-- Total of 1 flow:
Average throughput: 83.99 Mbit/s
95th percentile per-packet one-way delay: 22.558 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 83.99 Mbit/s
95th percentile per-packet one-way delay: 22.558 ms
Loss rate: 0.14%

Run 5: Report of LEDBAT — Data Link

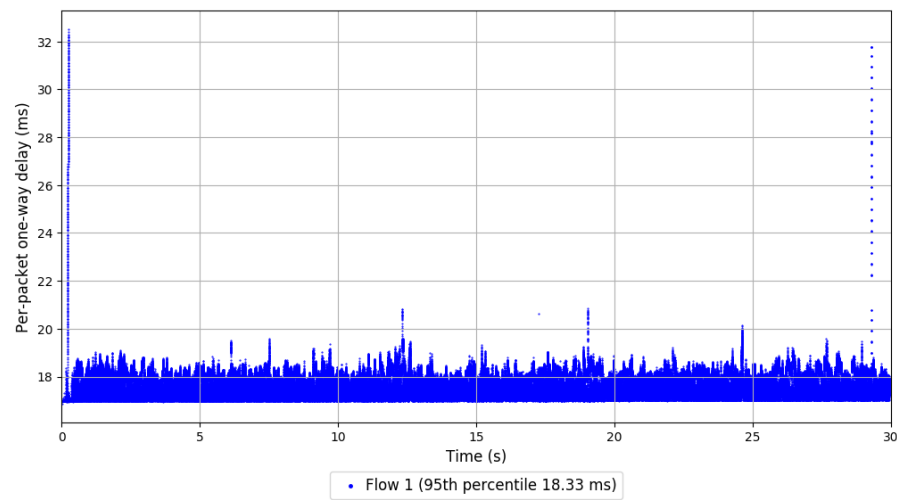
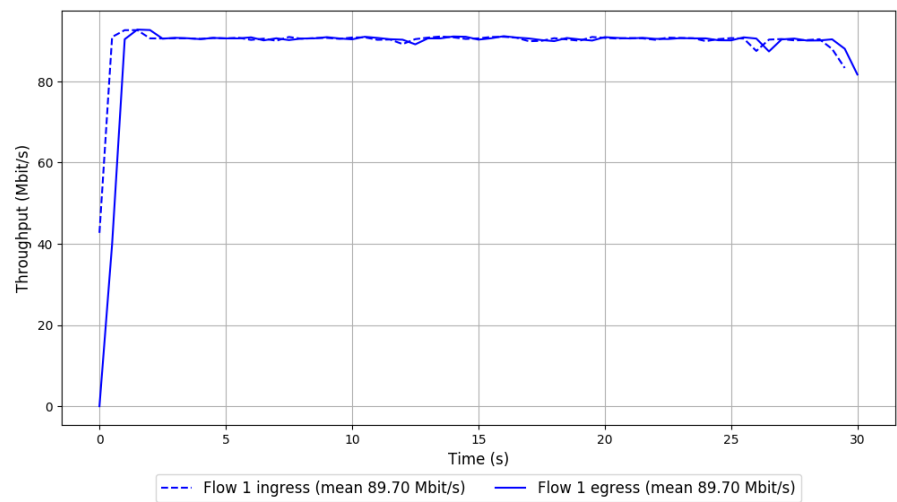


```
Run 1: Statistics of Indigo-Muses

Start at: 2018-09-07 19:25:27
End at: 2018-09-07 19:25:57
Local clock offset: -0.263 ms
Remote clock offset: -4.259 ms

# Below is generated by plot.py at 2018-09-07 21:18:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.70 Mbit/s
95th percentile per-packet one-way delay: 18.331 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 89.70 Mbit/s
95th percentile per-packet one-way delay: 18.331 ms
Loss rate: 0.09%
```

Run 1: Report of Indigo-Muses — Data Link

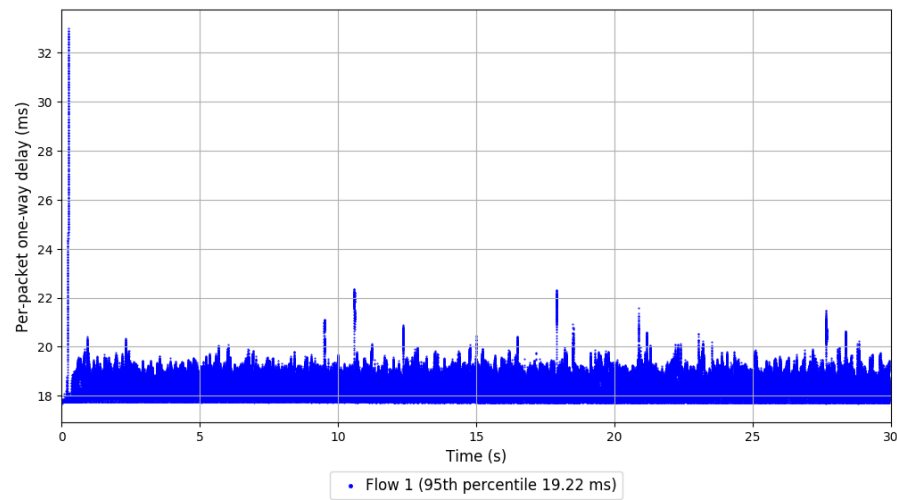
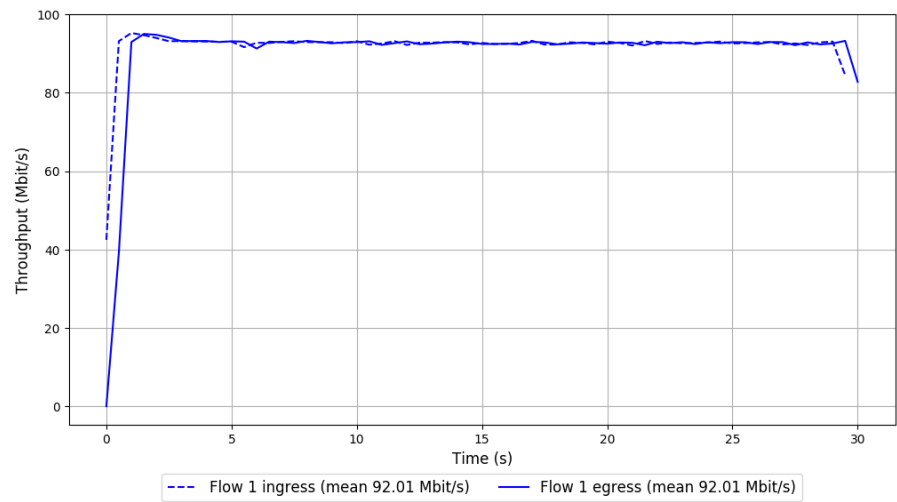


Run 2: Statistics of Indigo-Muses

Start at: 2018-09-07 19:47:36
End at: 2018-09-07 19:48:06
Local clock offset: -0.192 ms
Remote clock offset: -3.935 ms

Below is generated by plot.py at 2018-09-07 21:18:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 92.01 Mbit/s
95th percentile per-packet one-way delay: 19.219 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 92.01 Mbit/s
95th percentile per-packet one-way delay: 19.219 ms
Loss rate: 0.09%

Run 2: Report of Indigo-Muses — Data Link

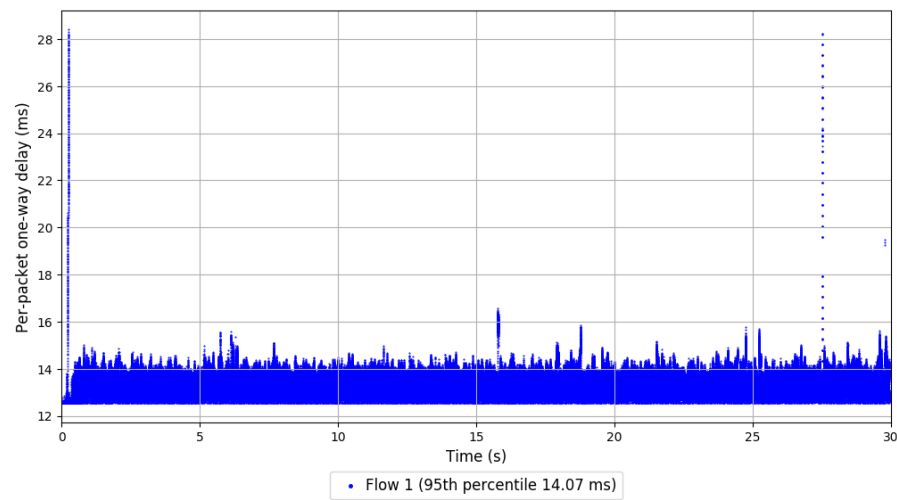
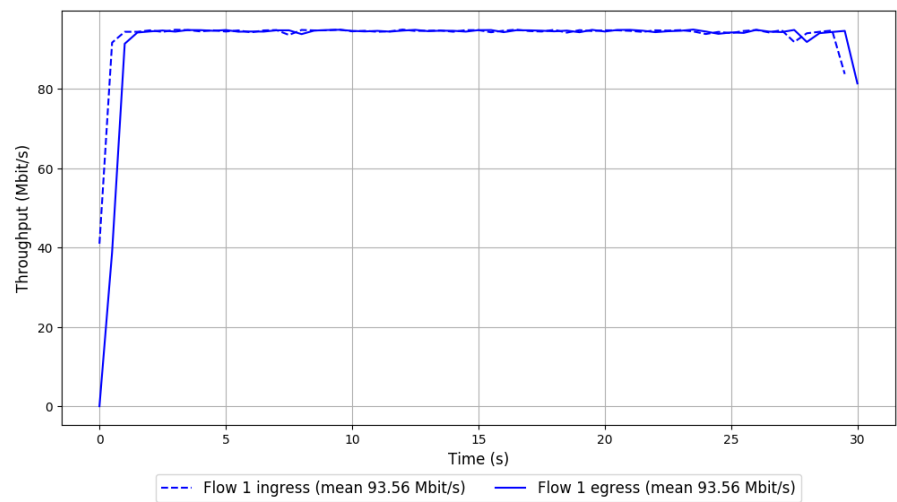


Run 3: Statistics of Indigo-Muses

Start at: 2018-09-07 20:09:42
End at: 2018-09-07 20:10:12
Local clock offset: -3.873 ms
Remote clock offset: -2.919 ms

Below is generated by plot.py at 2018-09-07 21:18:53
Datalink statistics
-- Total of 1 flow:
Average throughput: 93.56 Mbit/s
95th percentile per-packet one-way delay: 14.066 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 93.56 Mbit/s
95th percentile per-packet one-way delay: 14.066 ms
Loss rate: 0.09%

Run 3: Report of Indigo-Muses — Data Link

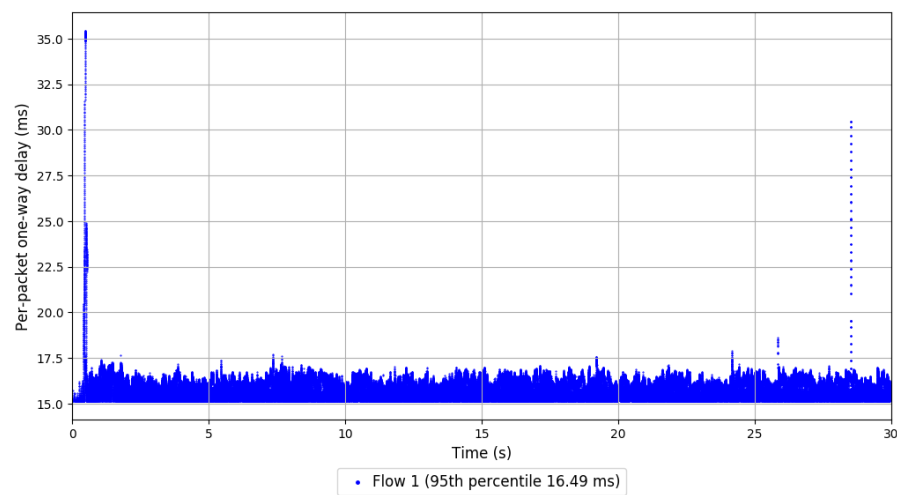
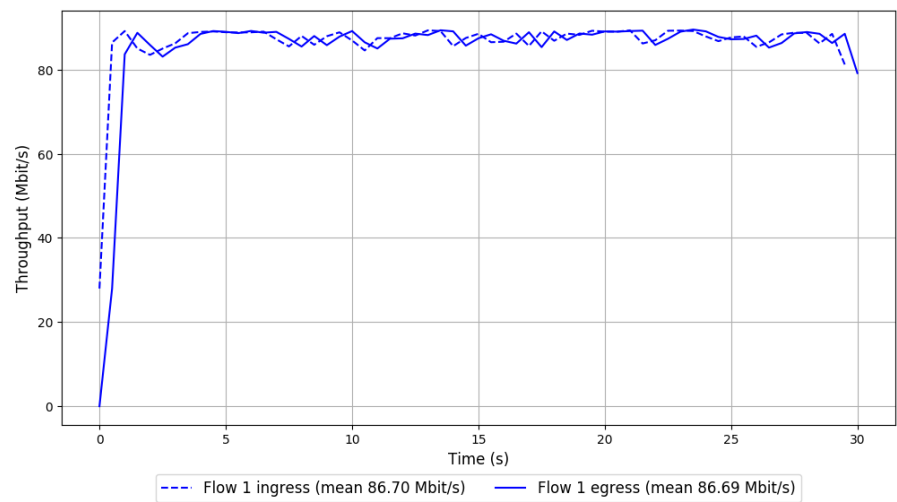


Run 4: Statistics of Indigo-Muses

Start at: 2018-09-07 20:31:42
End at: 2018-09-07 20:32:12
Local clock offset: -3.627 ms
Remote clock offset: -5.018 ms

Below is generated by plot.py at 2018-09-07 21:18:53
Datalink statistics
-- Total of 1 flow:
Average throughput: 86.69 Mbit/s
95th percentile per-packet one-way delay: 16.488 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 86.69 Mbit/s
95th percentile per-packet one-way delay: 16.488 ms
Loss rate: 0.09%

Run 4: Report of Indigo-Muses — Data Link

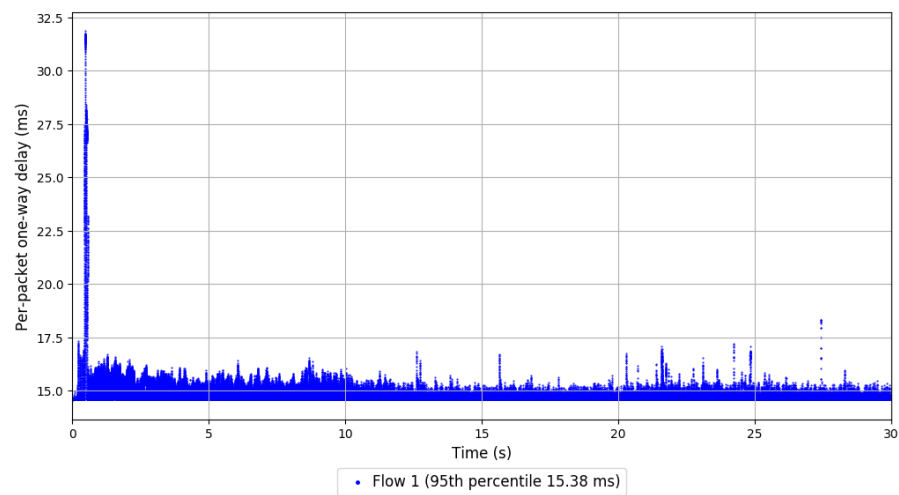
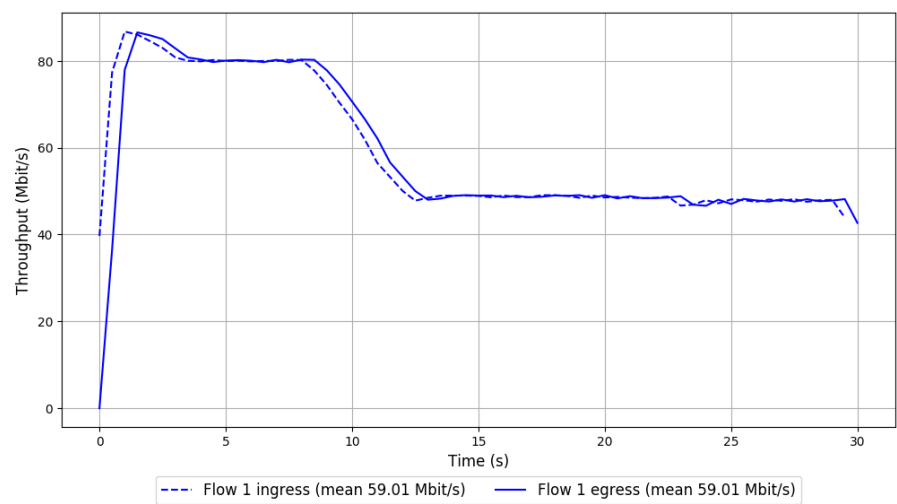


Run 5: Statistics of Indigo-Muses

Start at: 2018-09-07 20:53:39
End at: 2018-09-07 20:54:09
Local clock offset: -3.967 ms
Remote clock offset: -4.635 ms

Below is generated by plot.py at 2018-09-07 21:18:53
Datalink statistics
-- Total of 1 flow:
Average throughput: 59.01 Mbit/s
95th percentile per-packet one-way delay: 15.382 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 59.01 Mbit/s
95th percentile per-packet one-way delay: 15.382 ms
Loss rate: 0.07%

Run 5: Report of Indigo-Muses — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2018-09-07 19:22:55

End at: 2018-09-07 19:23:25

Local clock offset: -0.067 ms

Remote clock offset: -3.462 ms

Below is generated by plot.py at 2018-09-07 21:19:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 89.72 Mbit/s

95th percentile per-packet one-way delay: 19.797 ms

Loss rate: 0.11%

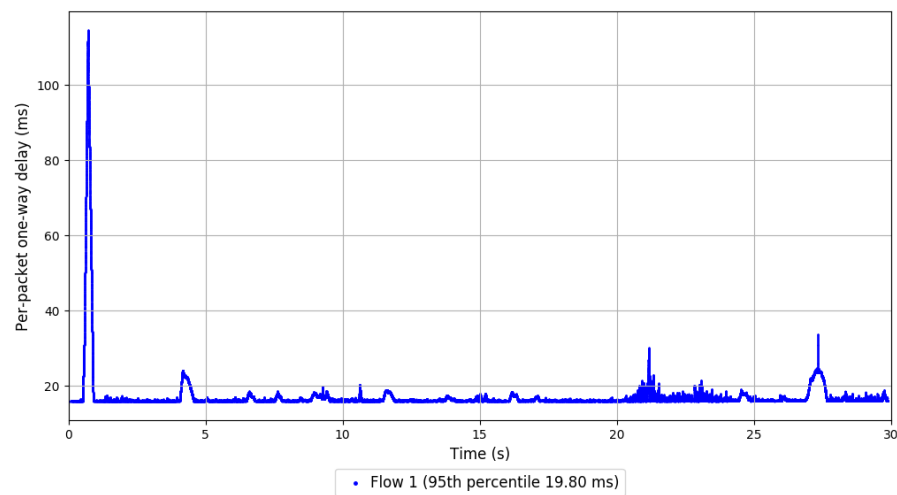
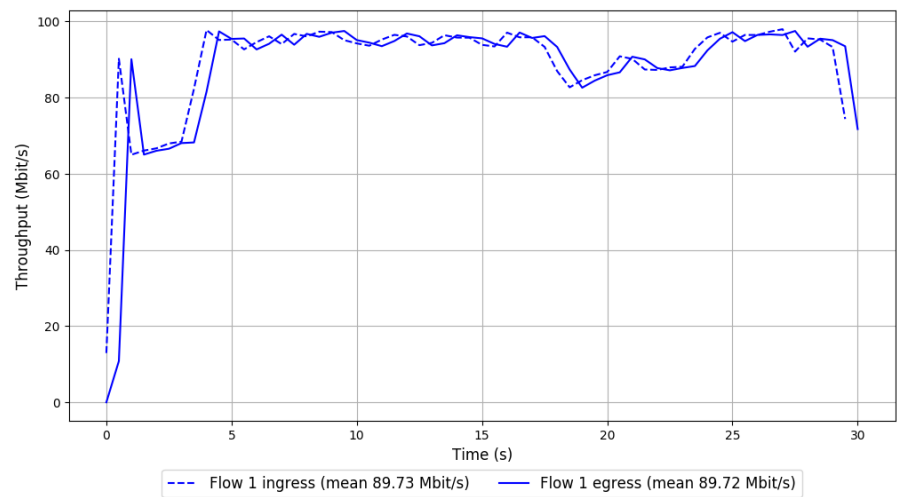
-- Flow 1:

Average throughput: 89.72 Mbit/s

95th percentile per-packet one-way delay: 19.797 ms

Loss rate: 0.11%

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-09-07 19:45:10

End at: 2018-09-07 19:45:40

Local clock offset: -0.521 ms

Remote clock offset: -4.099 ms

Below is generated by plot.py at 2018-09-07 21:19:06

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.30 Mbit/s

95th percentile per-packet one-way delay: 24.993 ms

Loss rate: 0.12%

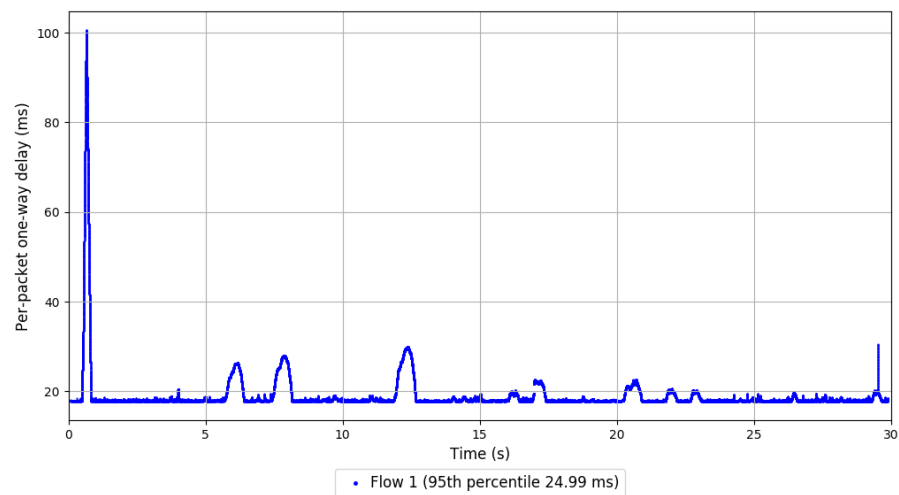
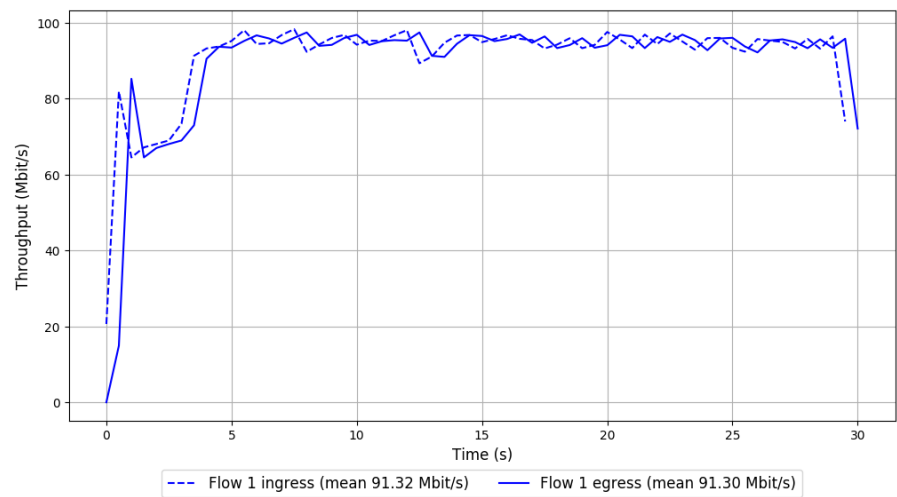
-- Flow 1:

Average throughput: 91.30 Mbit/s

95th percentile per-packet one-way delay: 24.993 ms

Loss rate: 0.12%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-09-07 20:07:16

End at: 2018-09-07 20:07:46

Local clock offset: -4.079 ms

Remote clock offset: -3.471 ms

Below is generated by plot.py at 2018-09-07 21:19:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 92.00 Mbit/s

95th percentile per-packet one-way delay: 15.003 ms

Loss rate: 0.09%

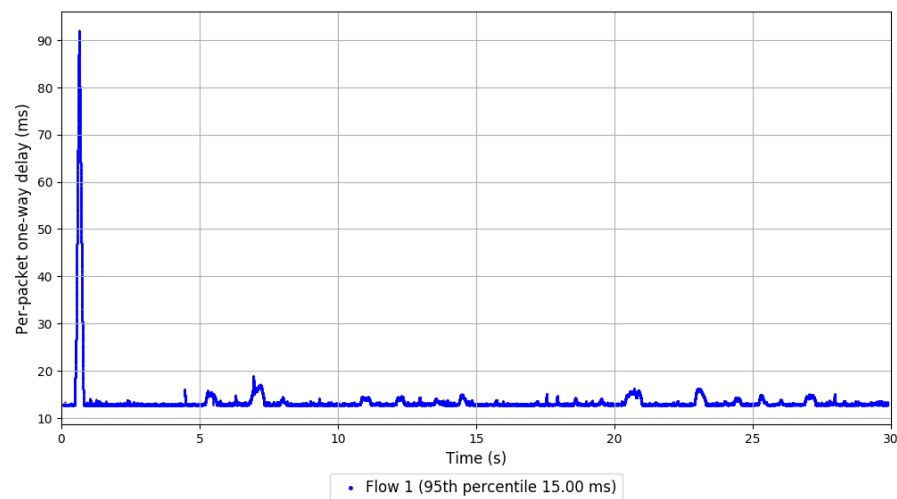
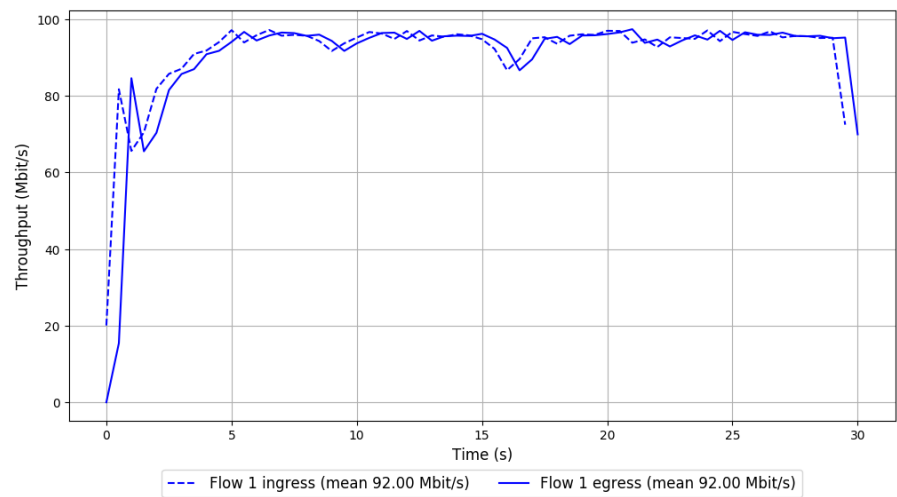
-- Flow 1:

Average throughput: 92.00 Mbit/s

95th percentile per-packet one-way delay: 15.003 ms

Loss rate: 0.09%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-09-07 20:29:18

End at: 2018-09-07 20:29:48

Local clock offset: -3.902 ms

Remote clock offset: -5.068 ms

Below is generated by plot.py at 2018-09-07 21:19:36

Datalink statistics

-- Total of 1 flow:

Average throughput: 92.61 Mbit/s

95th percentile per-packet one-way delay: 76.516 ms

Loss rate: 0.30%

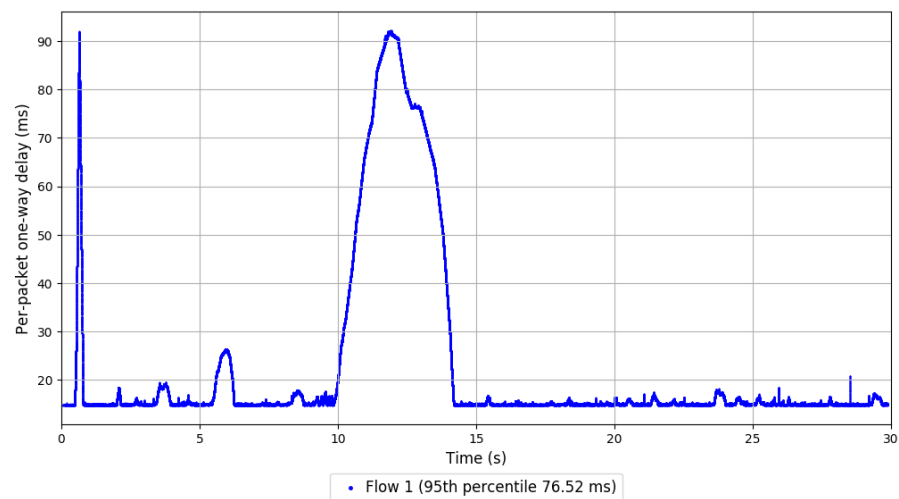
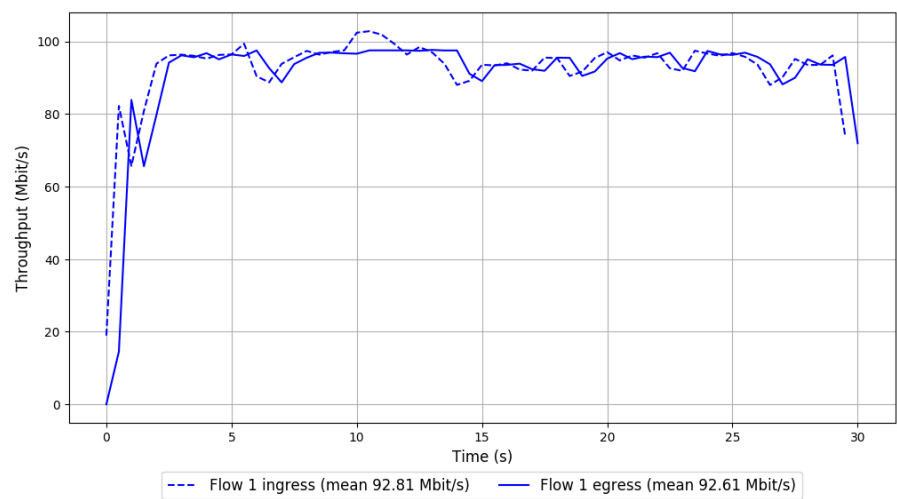
-- Flow 1:

Average throughput: 92.61 Mbit/s

95th percentile per-packet one-way delay: 76.516 ms

Loss rate: 0.30%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-09-07 20:51:12

End at: 2018-09-07 20:51:42

Local clock offset: -2.255 ms

Remote clock offset: -4.219 ms

Below is generated by plot.py at 2018-09-07 21:19:42

Datalink statistics

-- Total of 1 flow:

Average throughput: 92.15 Mbit/s

95th percentile per-packet one-way delay: 18.636 ms

Loss rate: 0.09%

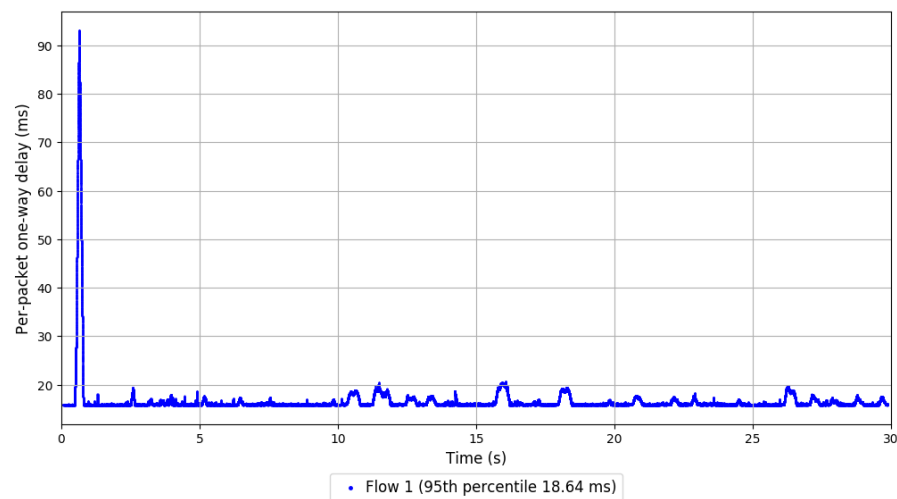
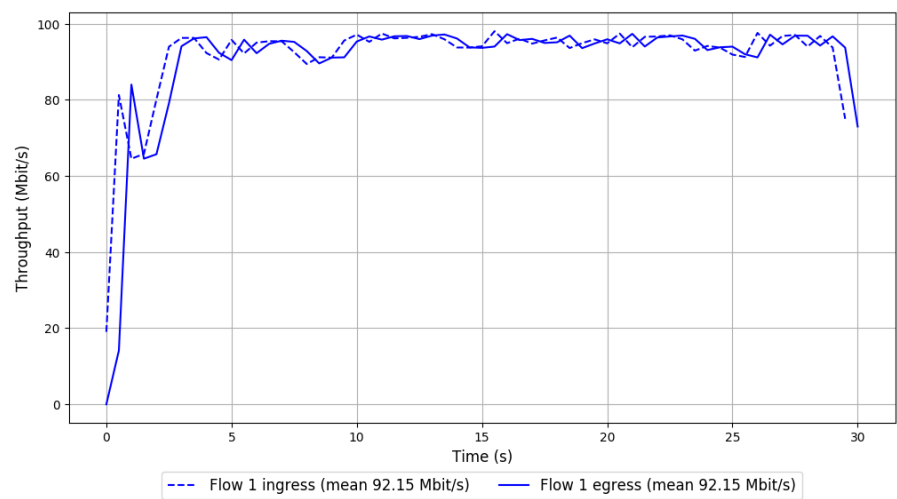
-- Flow 1:

Average throughput: 92.15 Mbit/s

95th percentile per-packet one-way delay: 18.636 ms

Loss rate: 0.09%

Run 5: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

Start at: 2018-09-07 19:41:27

End at: 2018-09-07 19:41:57

Local clock offset: 0.438 ms

Remote clock offset: -4.055 ms

Below is generated by plot.py at 2018-09-07 21:20:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 87.74 Mbit/s

95th percentile per-packet one-way delay: 44.263 ms

Loss rate: 0.12%

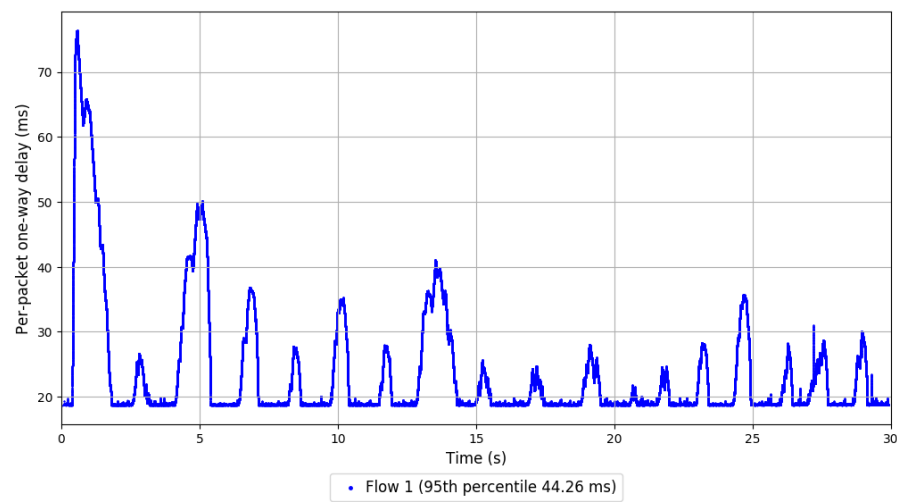
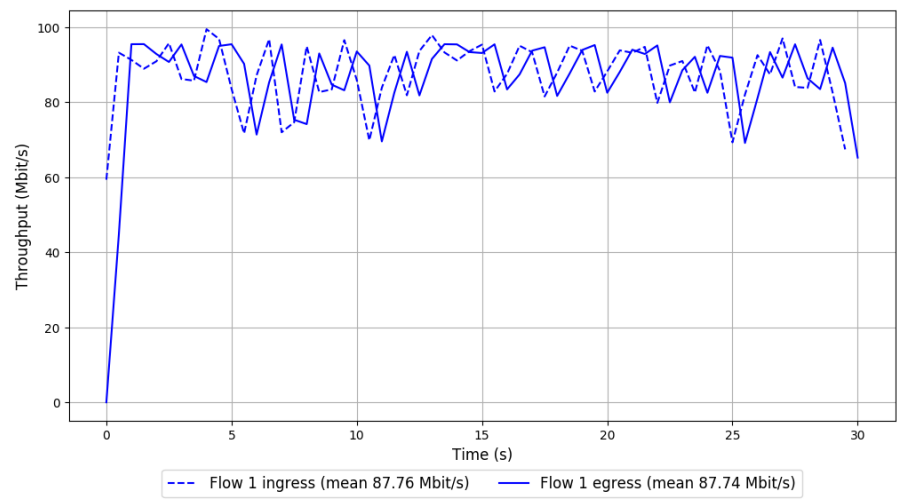
-- Flow 1:

Average throughput: 87.74 Mbit/s

95th percentile per-packet one-way delay: 44.263 ms

Loss rate: 0.12%

Run 1: Report of PCC-Expr — Data Link

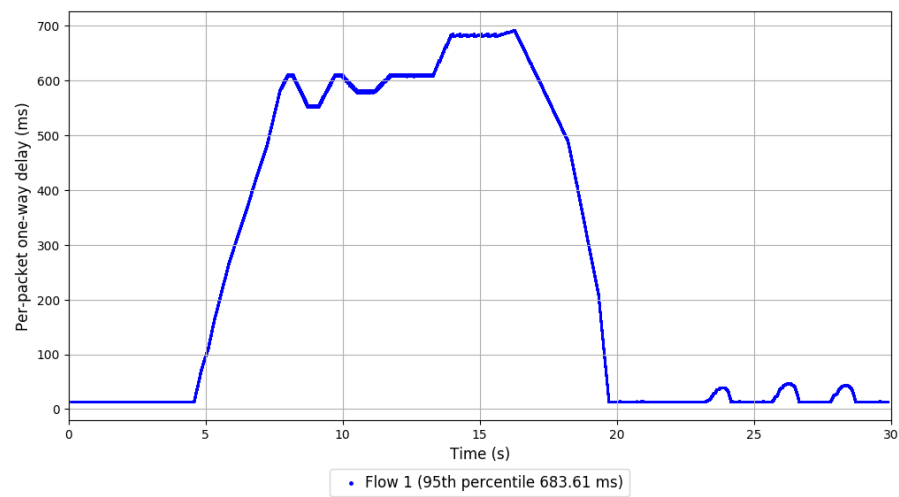
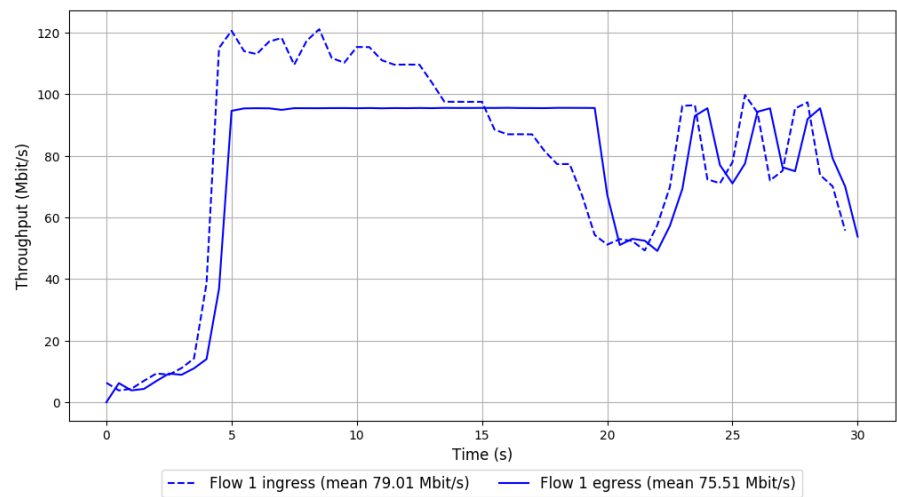


Run 2: Statistics of PCC-Expr

Start at: 2018-09-07 20:03:35
End at: 2018-09-07 20:04:05
Local clock offset: -3.579 ms
Remote clock offset: -3.683 ms

Below is generated by plot.py at 2018-09-07 21:20:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 75.51 Mbit/s
95th percentile per-packet one-way delay: 683.611 ms
Loss rate: 4.52%
-- Flow 1:
Average throughput: 75.51 Mbit/s
95th percentile per-packet one-way delay: 683.611 ms
Loss rate: 4.52%

Run 2: Report of PCC-Expr — Data Link

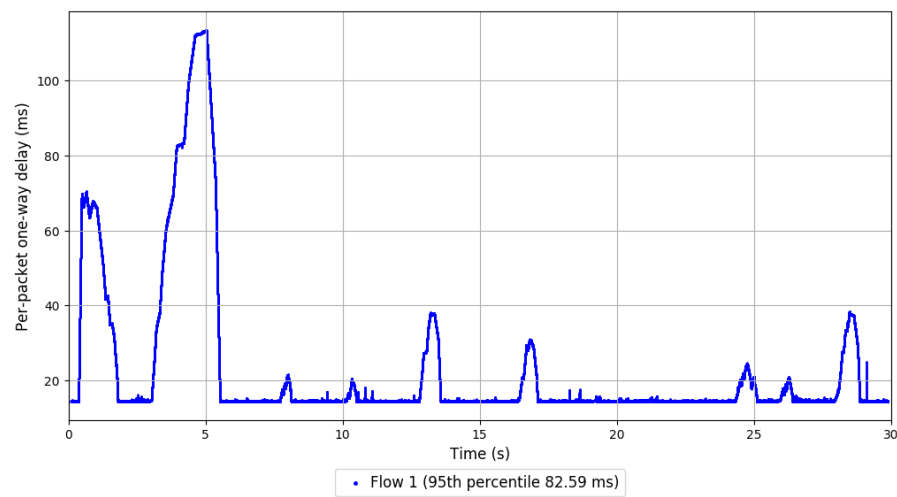
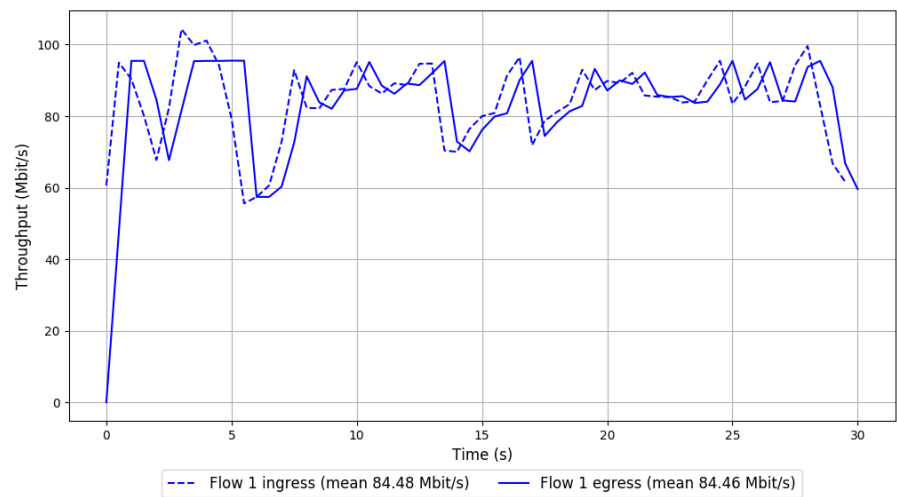


Run 3: Statistics of PCC-Expr

Start at: 2018-09-07 20:25:43
End at: 2018-09-07 20:26:13
Local clock offset: -4.019 ms
Remote clock offset: -4.789 ms

Below is generated by plot.py at 2018-09-07 21:20:42
Datalink statistics
-- Total of 1 flow:
Average throughput: 84.46 Mbit/s
95th percentile per-packet one-way delay: 82.589 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 84.46 Mbit/s
95th percentile per-packet one-way delay: 82.589 ms
Loss rate: 0.12%

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

Start at: 2018-09-07 20:47:34

End at: 2018-09-07 20:48:04

Local clock offset: -3.658 ms

Remote clock offset: -4.12 ms

Below is generated by plot.py at 2018-09-07 21:20:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 84.85 Mbit/s

95th percentile per-packet one-way delay: 33.145 ms

Loss rate: 0.16%

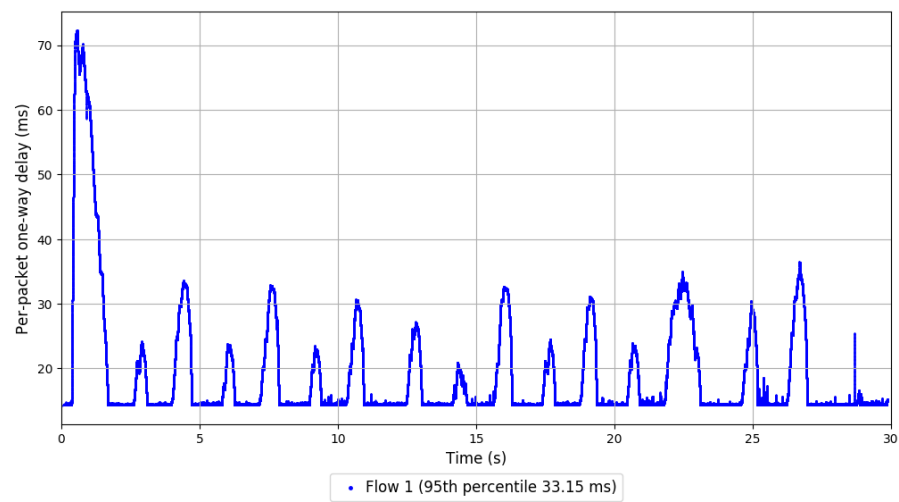
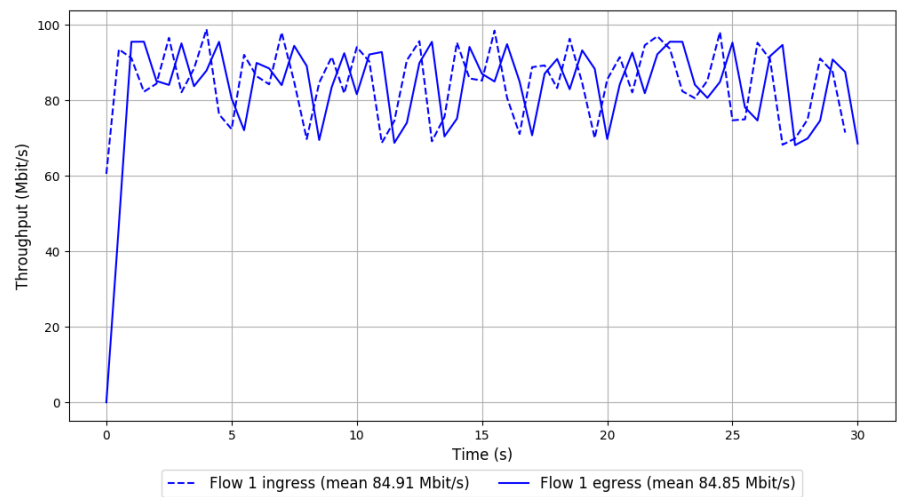
-- Flow 1:

Average throughput: 84.85 Mbit/s

95th percentile per-packet one-way delay: 33.145 ms

Loss rate: 0.16%

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

Start at: 2018-09-07 21:09:44

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

Local clock offset: -1.588 ms

Remote clock offset: -3.435 ms

Below is generated by plot.py at 2018-09-07 21:21:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 88.44 Mbit/s

95th percentile per-packet one-way delay: 47.878 ms

Loss rate: 0.15%

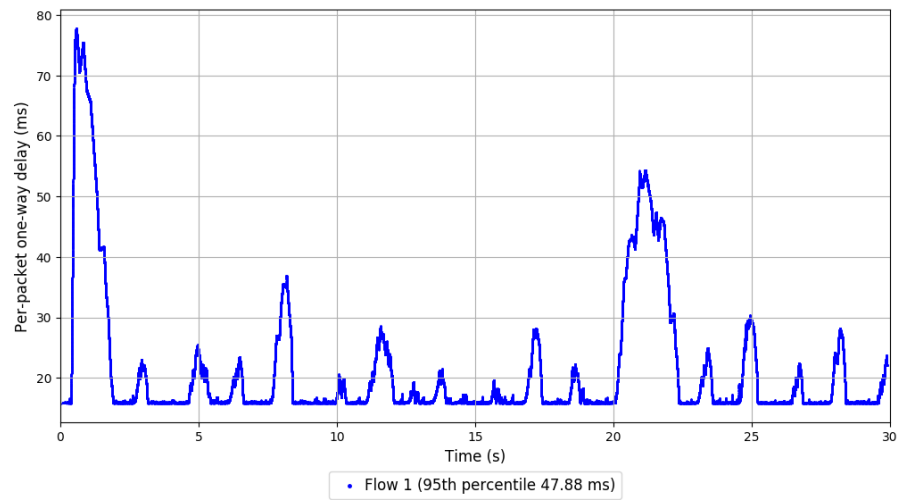
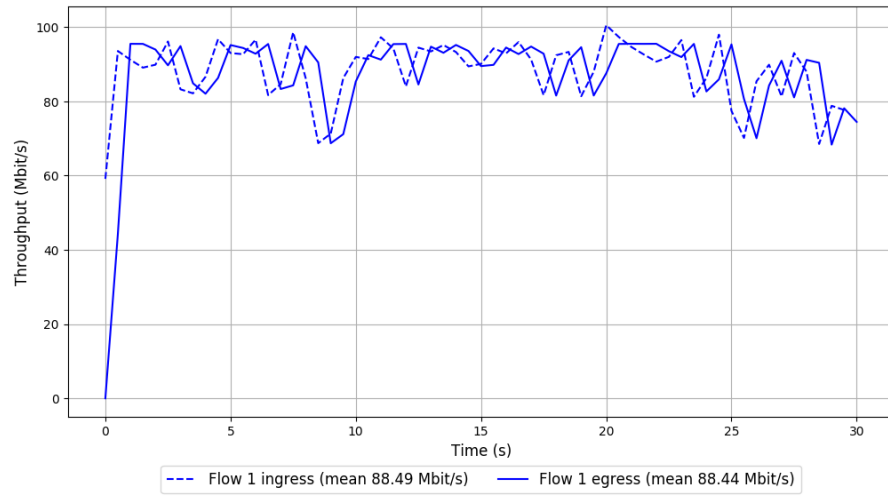
-- Flow 1:

Average throughput: 88.44 Mbit/s

95th percentile per-packet one-way delay: 47.878 ms

Loss rate: 0.15%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2018-09-07 19:20:33

End at: 2018-09-07 19:21:03

Local clock offset: 0.135 ms

Remote clock offset: -4.47 ms

Below is generated by plot.py at 2018-09-07 21:21:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 90.66 Mbit/s

95th percentile per-packet one-way delay: 24.572 ms

Loss rate: 0.12%

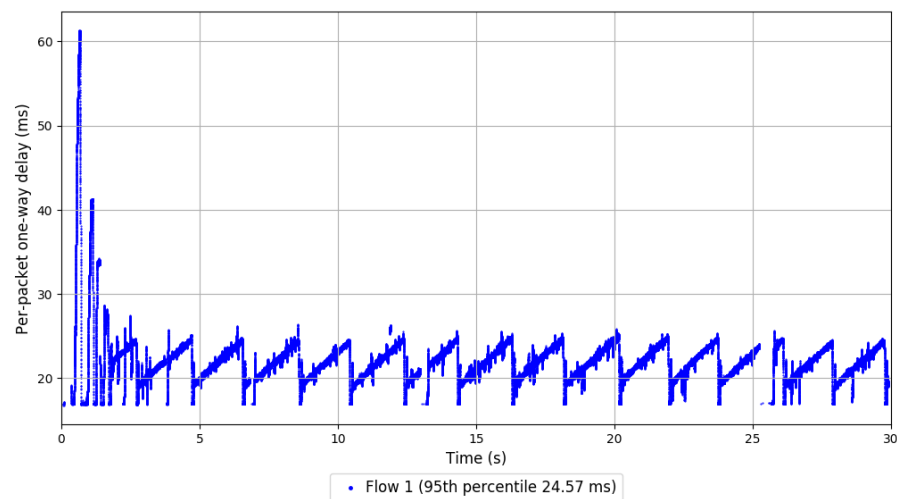
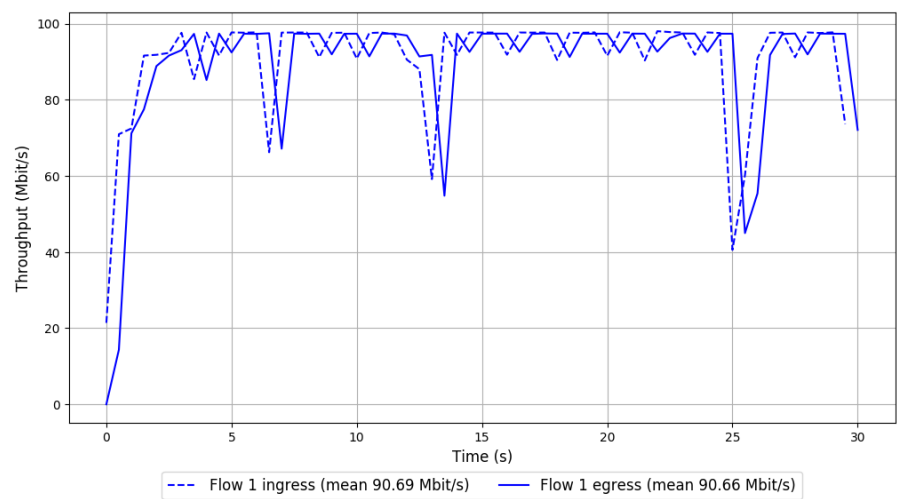
-- Flow 1:

Average throughput: 90.66 Mbit/s

95th percentile per-packet one-way delay: 24.572 ms

Loss rate: 0.12%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-09-07 19:42:48

End at: 2018-09-07 19:43:18

Local clock offset: 0.817 ms

Remote clock offset: -3.642 ms

Below is generated by plot.py at 2018-09-07 21:21:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 90.17 Mbit/s

95th percentile per-packet one-way delay: 26.424 ms

Loss rate: 0.13%

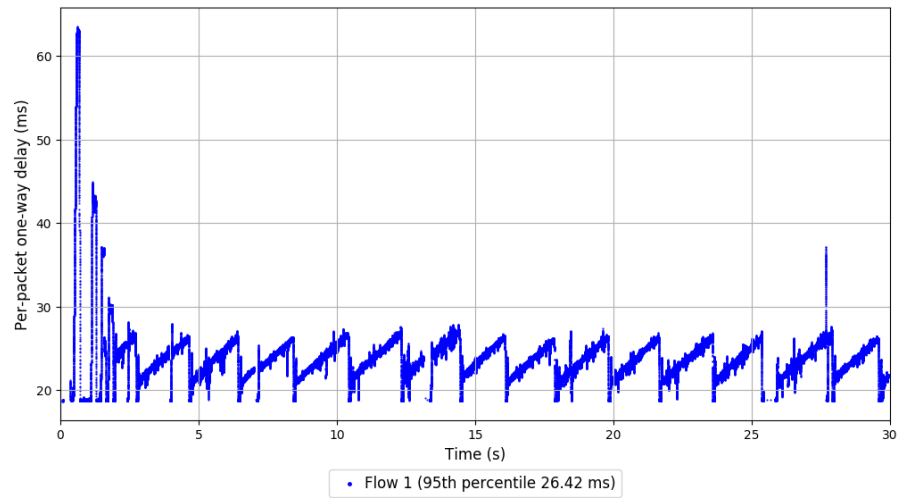
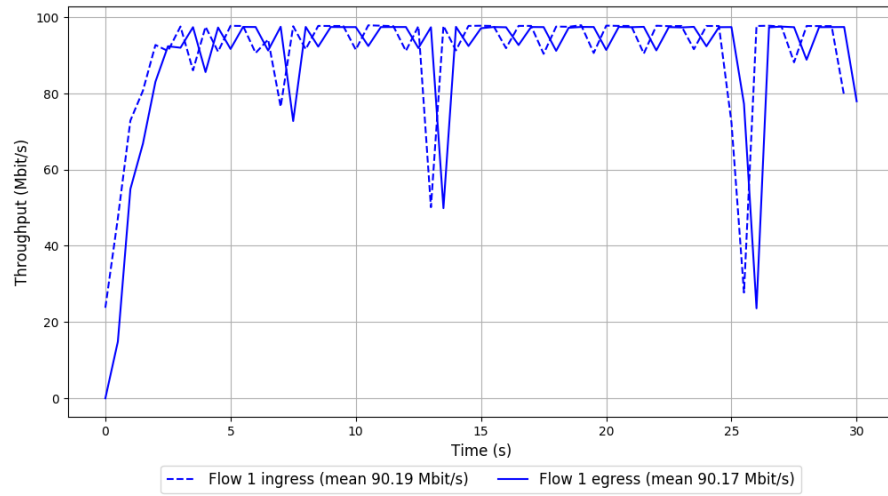
-- Flow 1:

Average throughput: 90.17 Mbit/s

95th percentile per-packet one-way delay: 26.424 ms

Loss rate: 0.13%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-09-07 20:04:54

End at: 2018-09-07 20:05:24

Local clock offset: -4.198 ms

Remote clock offset: -3.998 ms

Below is generated by plot.py at 2018-09-07 21:21:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.06 Mbit/s

95th percentile per-packet one-way delay: 22.442 ms

Loss rate: 0.12%

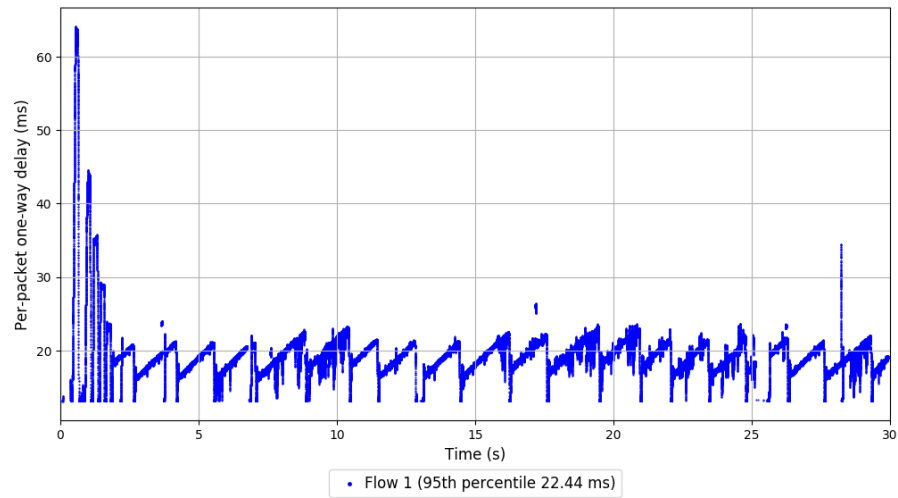
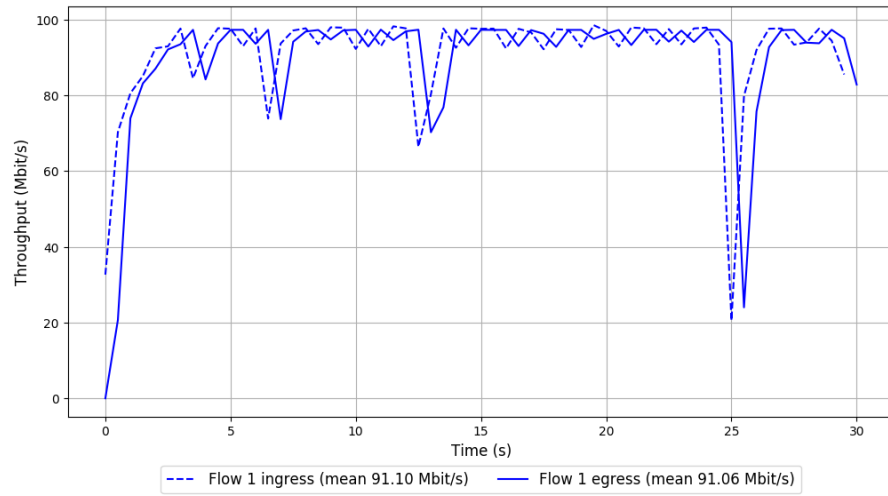
-- Flow 1:

Average throughput: 91.06 Mbit/s

95th percentile per-packet one-way delay: 22.442 ms

Loss rate: 0.12%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-09-07 20:27:00

End at: 2018-09-07 20:27:30

Local clock offset: -2.35 ms

Remote clock offset: -5.121 ms

Below is generated by plot.py at 2018-09-07 21:21:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 90.41 Mbit/s

95th percentile per-packet one-way delay: 24.641 ms

Loss rate: 0.12%

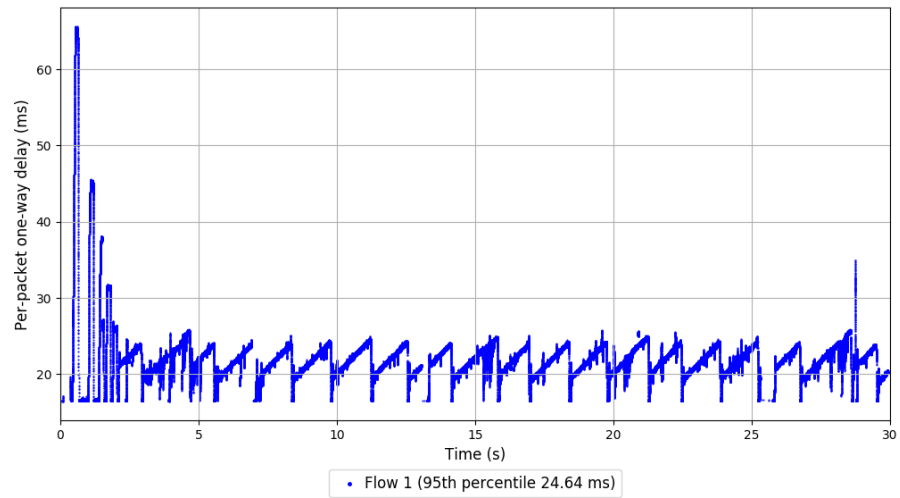
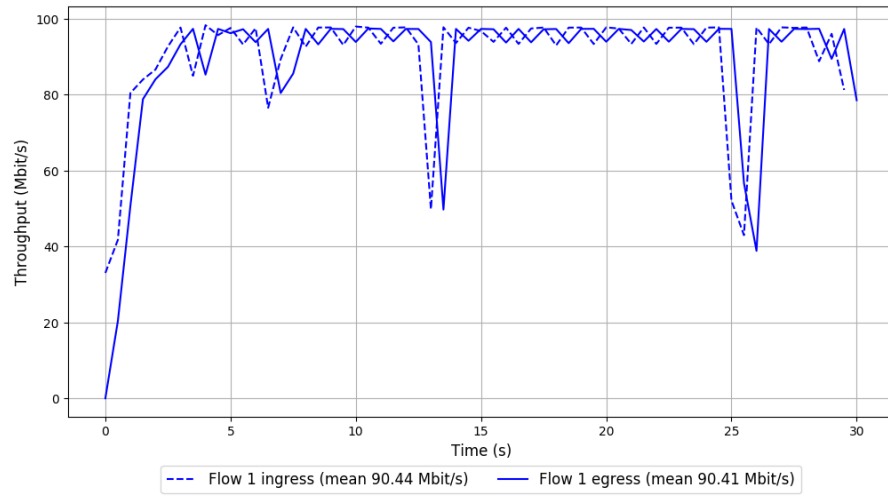
-- Flow 1:

Average throughput: 90.41 Mbit/s

95th percentile per-packet one-way delay: 24.641 ms

Loss rate: 0.12%

Run 4: Report of QUIC Cubic — Data Link

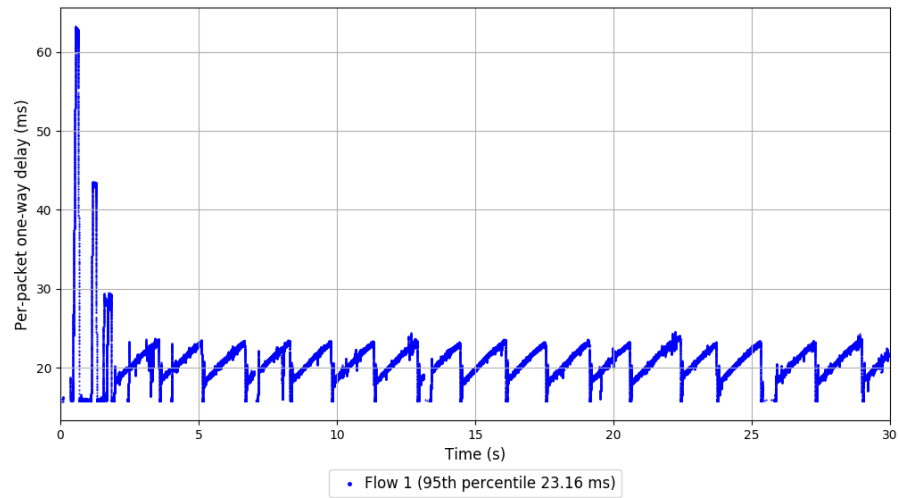
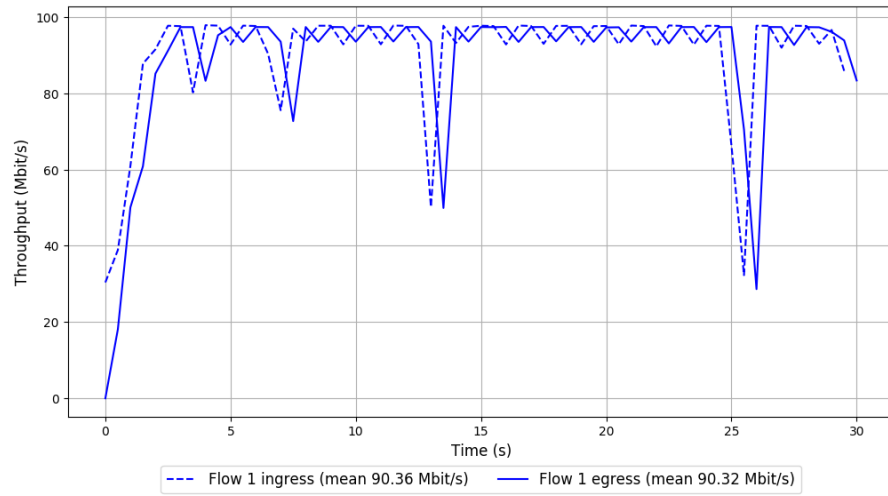


Run 5: Statistics of QUIC Cubic

Start at: 2018-09-07 20:48:53
End at: 2018-09-07 20:49:23
Local clock offset: -2.508 ms
Remote clock offset: -4.414 ms

Below is generated by plot.py at 2018-09-07 21:21:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 90.32 Mbit/s
95th percentile per-packet one-way delay: 23.159 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 90.32 Mbit/s
95th percentile per-packet one-way delay: 23.159 ms
Loss rate: 0.13%

Run 5: Report of QUIC Cubic — Data Link

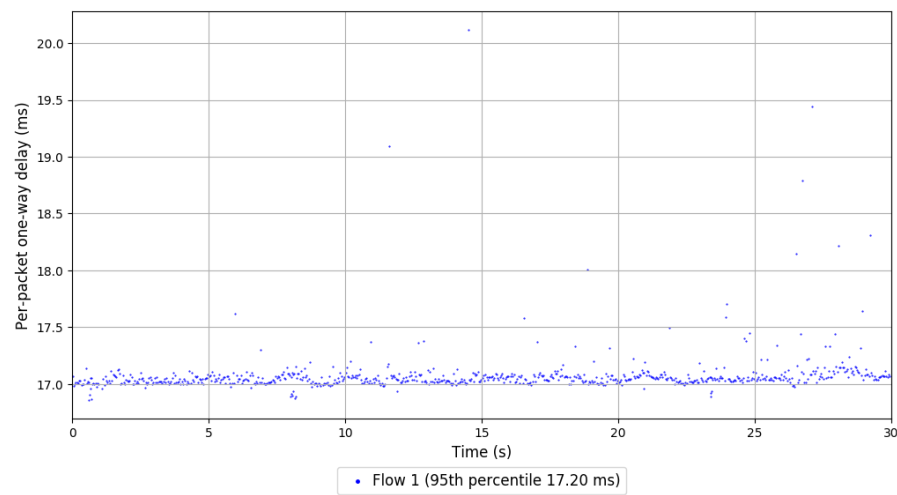
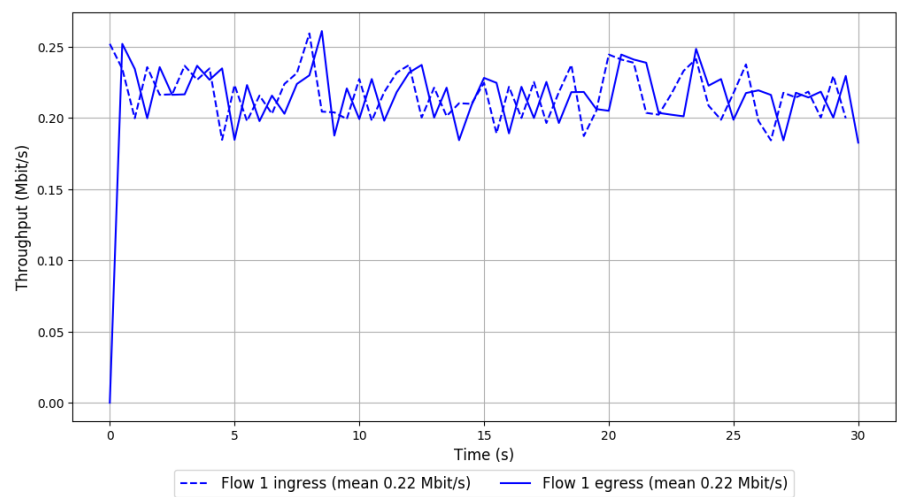


```
Run 1: Statistics of SCReAM

Start at: 2018-09-07 19:26:44
End at: 2018-09-07 19:27:14
Local clock offset: 0.44 ms
Remote clock offset: -3.444 ms

# Below is generated by plot.py at 2018-09-07 21:21:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 17.196 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 17.196 ms
Loss rate: 0.13%
```

Run 1: Report of SReAM — Data Link

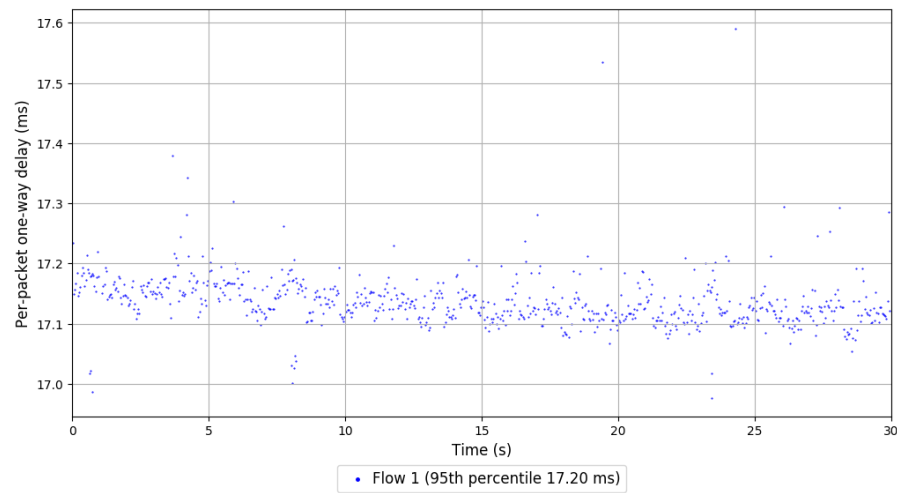
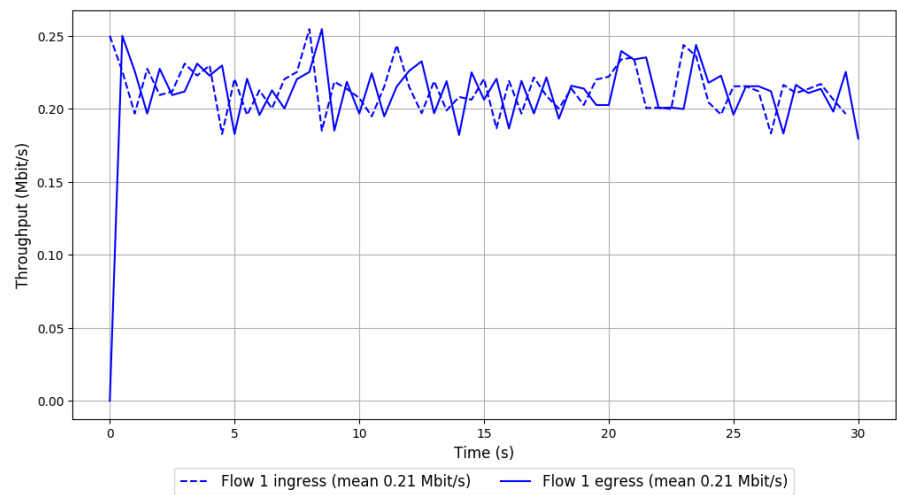


Run 2: Statistics of SCReAM

Start at: 2018-09-07 19:48:50
End at: 2018-09-07 19:49:20
Local clock offset: -0.706 ms
Remote clock offset: -3.961 ms

Below is generated by plot.py at 2018-09-07 21:21:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 17.197 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 17.197 ms
Loss rate: 0.13%

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2018-09-07 20:10:57

End at: 2018-09-07 20:11:27

Local clock offset: -2.429 ms

Remote clock offset: -5.94 ms

Below is generated by plot.py at 2018-09-07 21:21:38

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 17.132 ms

Loss rate: 0.13%

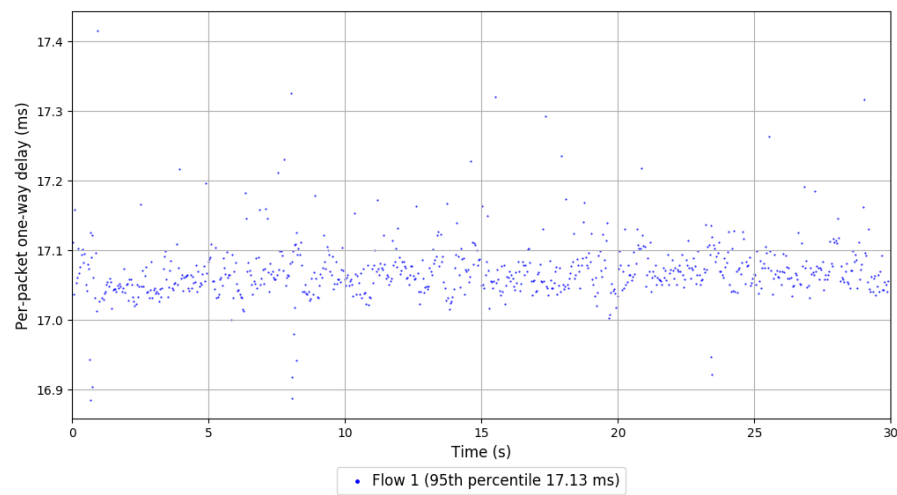
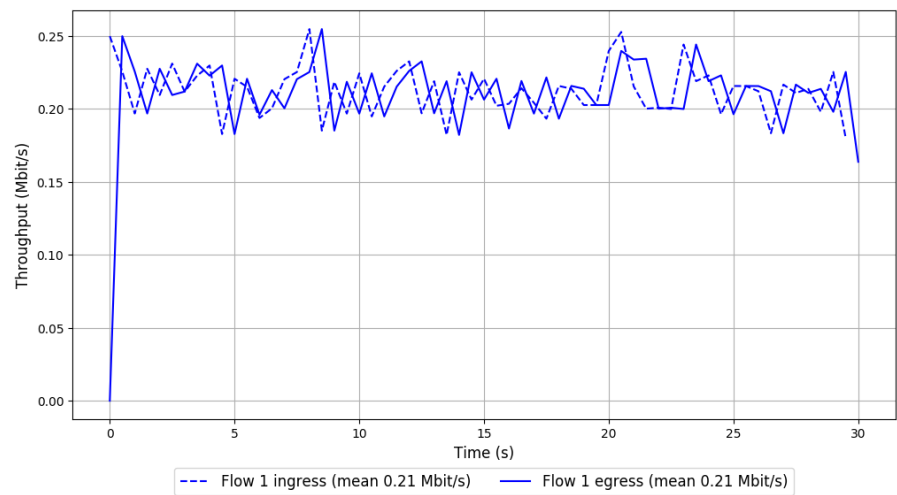
-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 17.132 ms

Loss rate: 0.13%

Run 3: Report of SReAM — Data Link

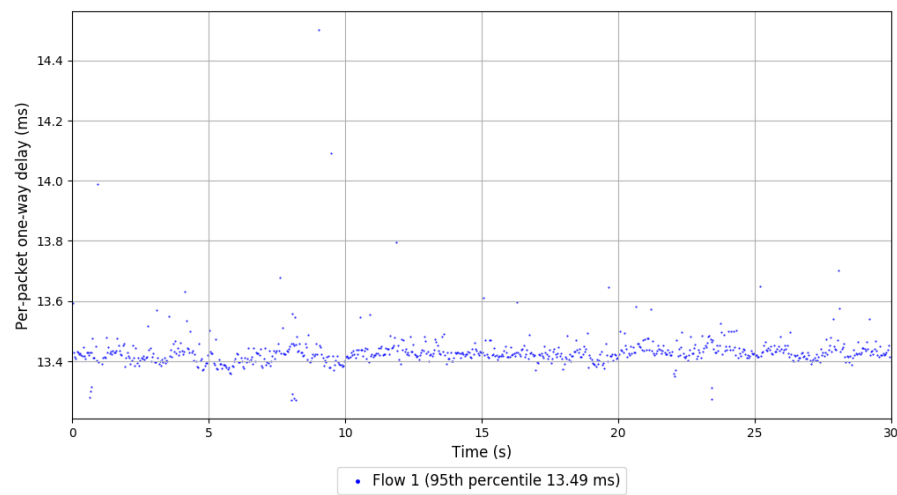
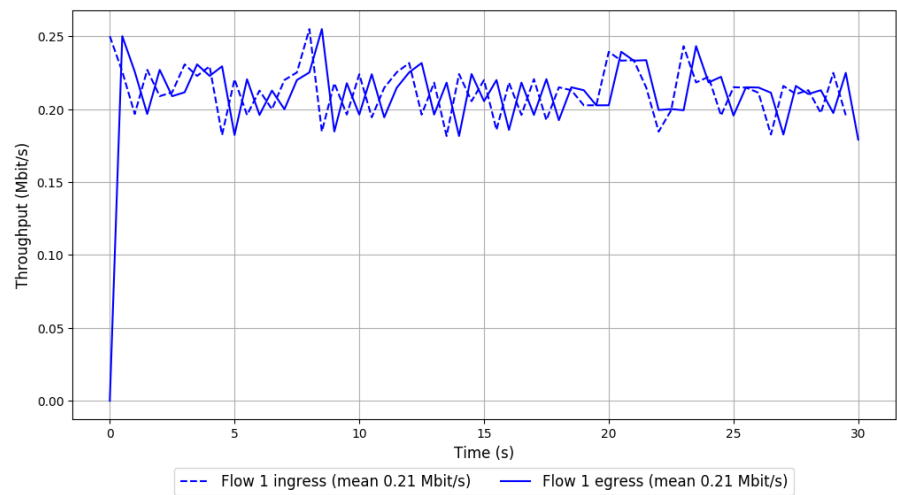


Run 4: Statistics of SCReAM

Start at: 2018-09-07 20:32:53
End at: 2018-09-07 20:33:23
Local clock offset: -4.396 ms
Remote clock offset: -4.032 ms

Below is generated by plot.py at 2018-09-07 21:21:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 13.492 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 13.492 ms
Loss rate: 0.13%

Run 4: Report of SReAM — Data Link

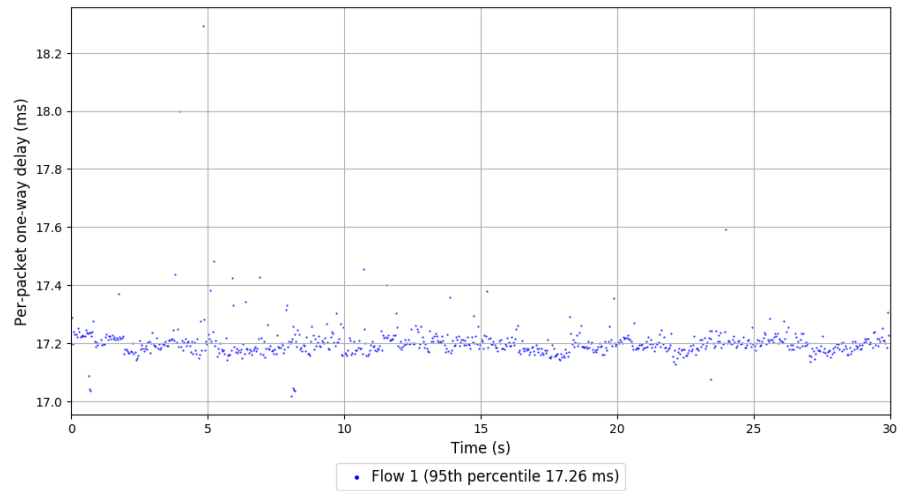
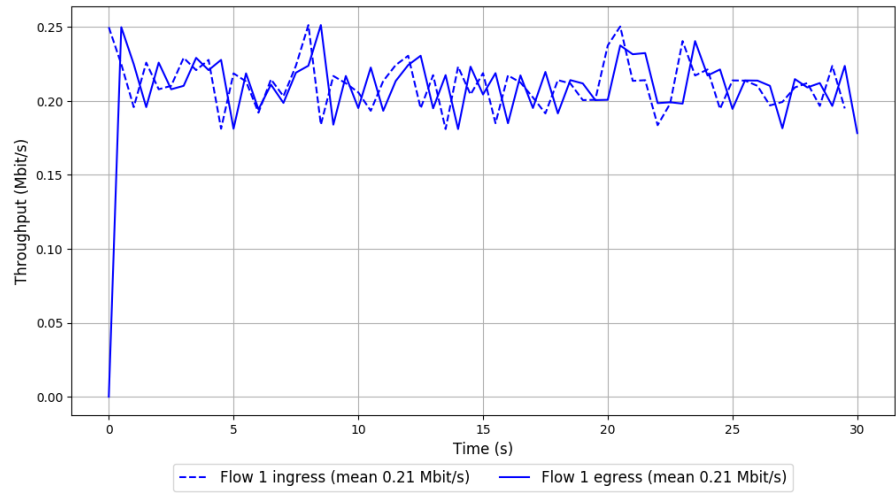


Run 5: Statistics of SCReAM

Start at: 2018-09-07 20:54:49
End at: 2018-09-07 20:55:19
Local clock offset: -1.757 ms
Remote clock offset: -5.012 ms

Below is generated by plot.py at 2018-09-07 21:21:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 17.259 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 17.259 ms
Loss rate: 0.13%

Run 5: Report of SReAM — Data Link

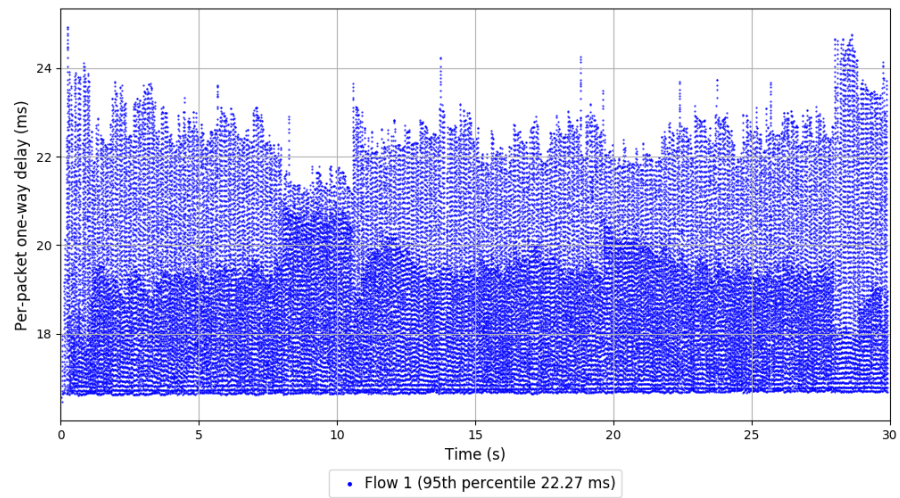
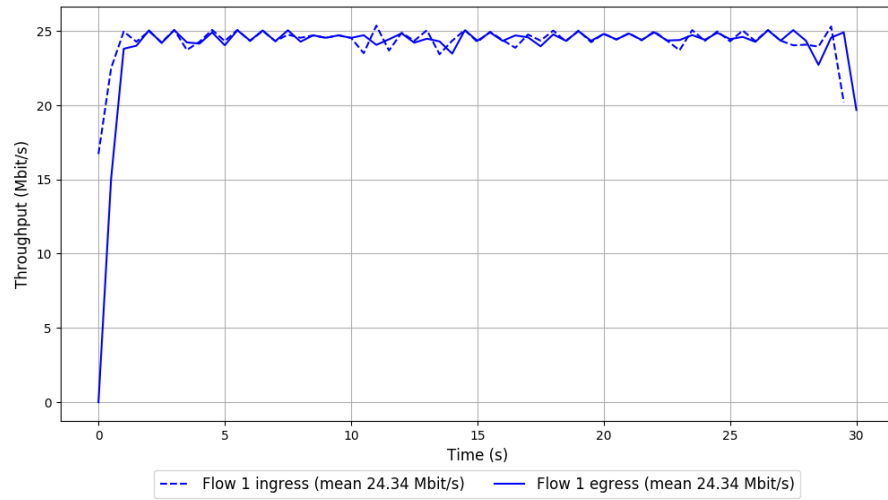


Run 1: Statistics of Sprout

Start at: 2018-09-07 19:21:48
End at: 2018-09-07 19:22:18
Local clock offset: -0.161 ms
Remote clock offset: -4.255 ms

Below is generated by plot.py at 2018-09-07 21:21:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.34 Mbit/s
95th percentile per-packet one-way delay: 22.269 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 24.34 Mbit/s
95th percentile per-packet one-way delay: 22.269 ms
Loss rate: 0.14%

Run 1: Report of Sprout — Data Link

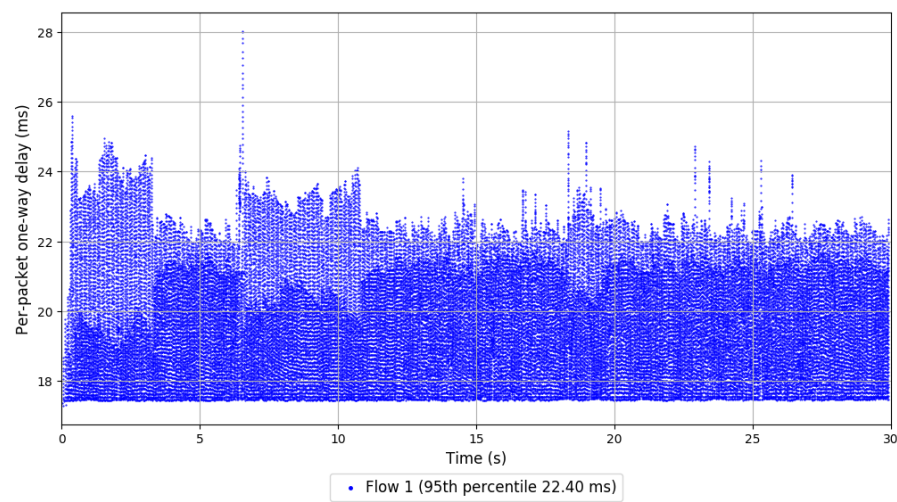
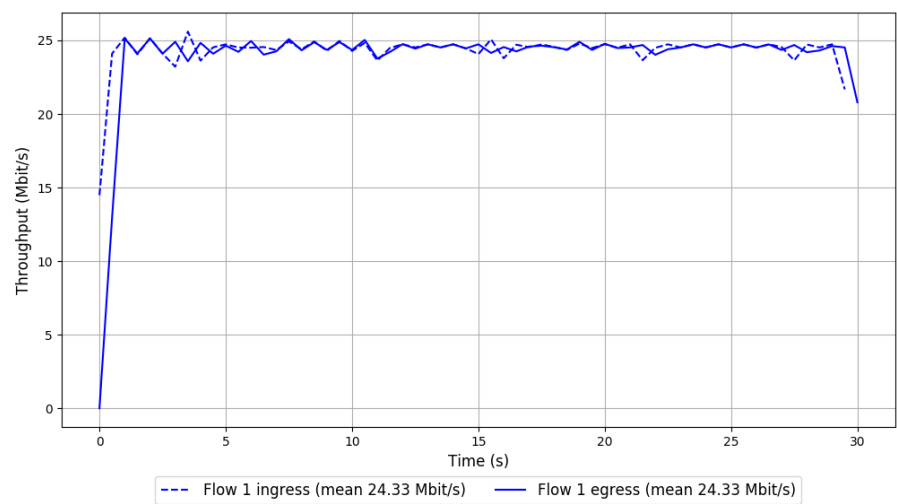


Run 2: Statistics of Sprout

Start at: 2018-09-07 19:44:03
End at: 2018-09-07 19:44:33
Local clock offset: -0.485 ms
Remote clock offset: -3.539 ms

Below is generated by plot.py at 2018-09-07 21:21:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.33 Mbit/s
95th percentile per-packet one-way delay: 22.399 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 24.33 Mbit/s
95th percentile per-packet one-way delay: 22.399 ms
Loss rate: 0.14%

Run 2: Report of Sprout — Data Link

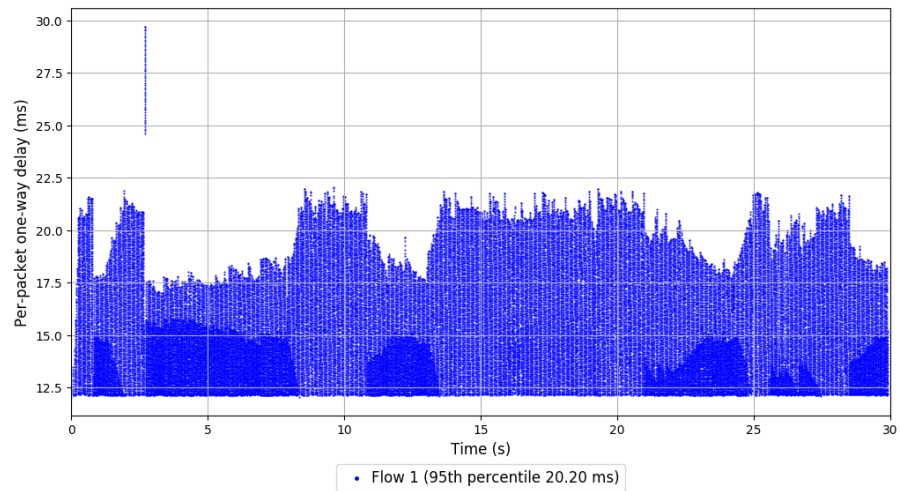
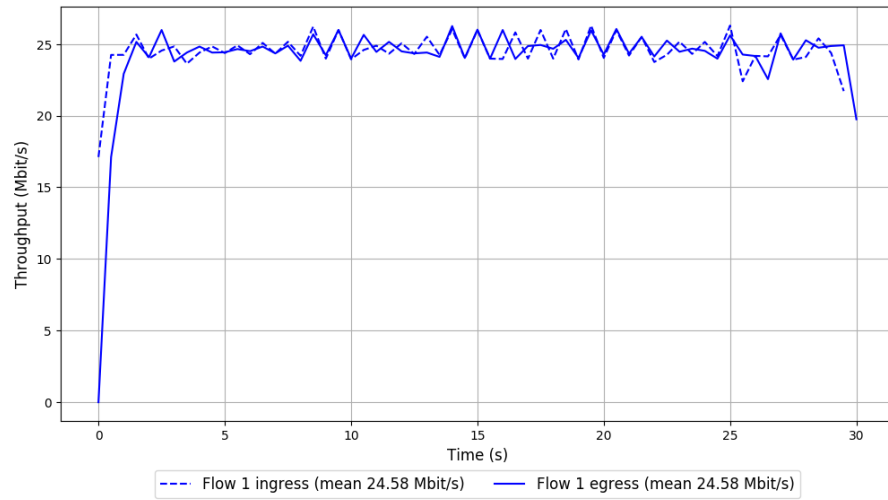


Run 3: Statistics of Sprout

Start at: 2018-09-07 20:06:09
End at: 2018-09-07 20:06:39
Local clock offset: -4.241 ms
Remote clock offset: -2.948 ms

Below is generated by plot.py at 2018-09-07 21:21:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.58 Mbit/s
95th percentile per-packet one-way delay: 20.201 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 24.58 Mbit/s
95th percentile per-packet one-way delay: 20.201 ms
Loss rate: 0.13%

Run 3: Report of Sprout — Data Link

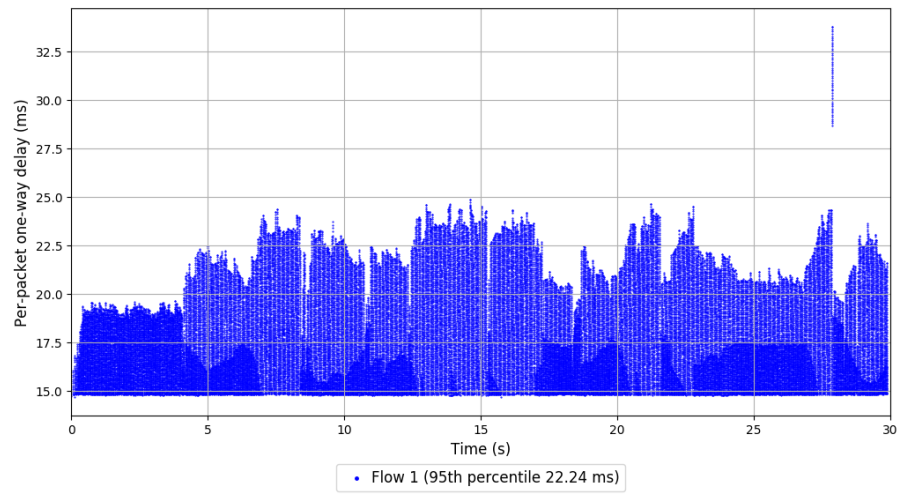
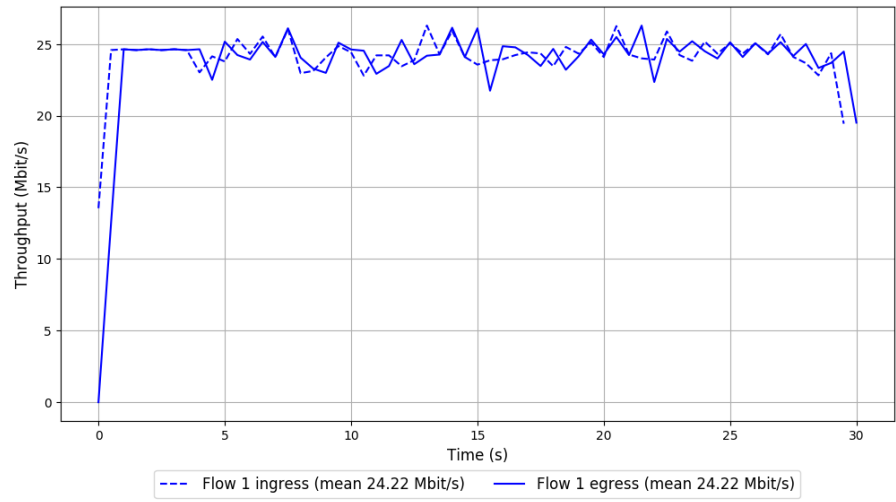


Run 4: Statistics of Sprout

Start at: 2018-09-07 20:28:12
End at: 2018-09-07 20:28:42
Local clock offset: -4.159 ms
Remote clock offset: -5.225 ms

Below is generated by plot.py at 2018-09-07 21:21:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.22 Mbit/s
95th percentile per-packet one-way delay: 22.243 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 24.22 Mbit/s
95th percentile per-packet one-way delay: 22.243 ms
Loss rate: 0.03%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-09-07 20:50:06

End at: 2018-09-07 20:50:36

Local clock offset: -3.214 ms

Remote clock offset: -5.33 ms

Below is generated by plot.py at 2018-09-07 21:21:38

Datalink statistics

-- Total of 1 flow:

Average throughput: 24.73 Mbit/s

95th percentile per-packet one-way delay: 24.405 ms

Loss rate: 0.10%

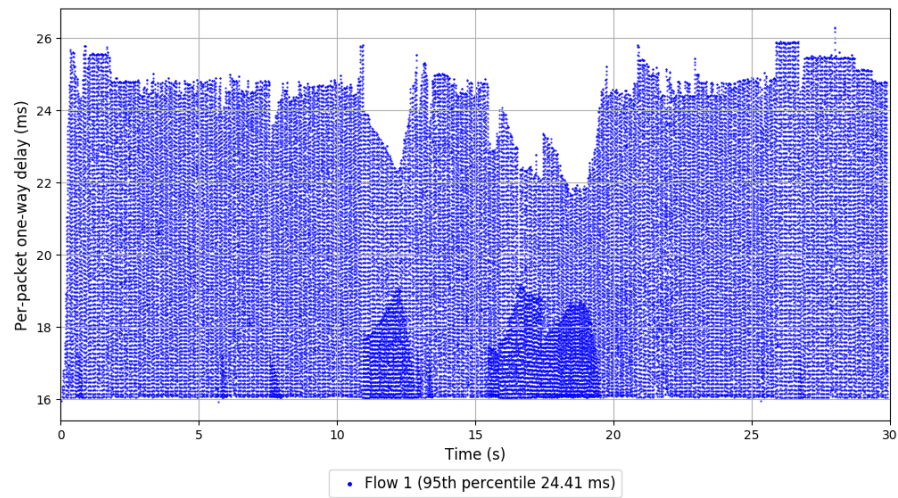
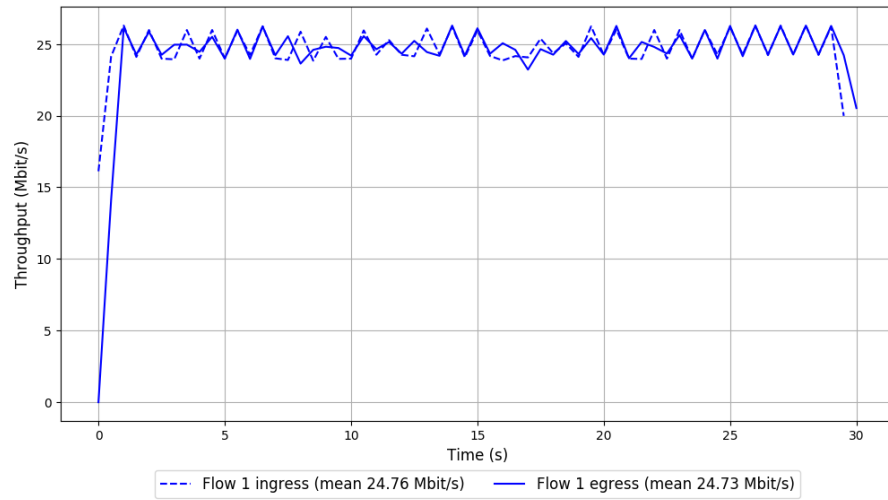
-- Flow 1:

Average throughput: 24.73 Mbit/s

95th percentile per-packet one-way delay: 24.405 ms

Loss rate: 0.10%

Run 5: Report of Sprout — Data Link

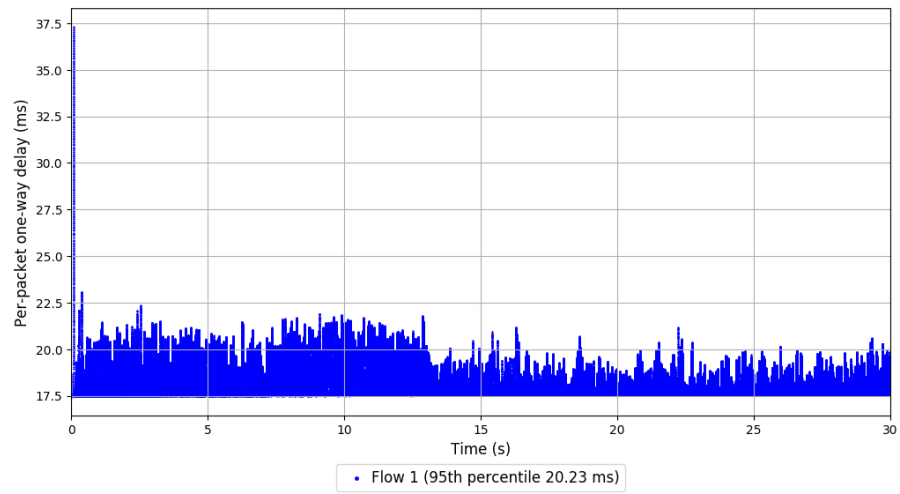
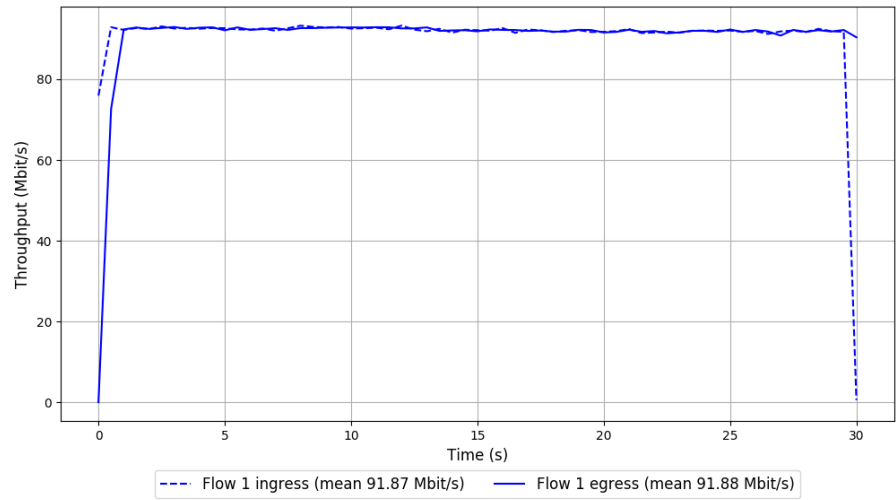


Run 1: Statistics of TaoVA-100x

Start at: 2018-09-07 19:40:07
End at: 2018-09-07 19:40:37
Local clock offset: -1.066 ms
Remote clock offset: -4.395 ms

Below is generated by plot.py at 2018-09-07 21:23:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 91.88 Mbit/s
95th percentile per-packet one-way delay: 20.233 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 91.88 Mbit/s
95th percentile per-packet one-way delay: 20.233 ms
Loss rate: 0.10%

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

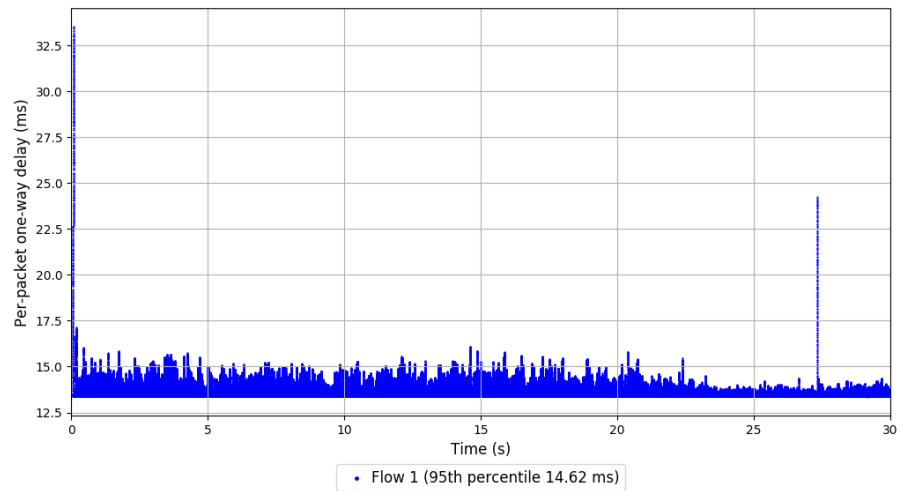
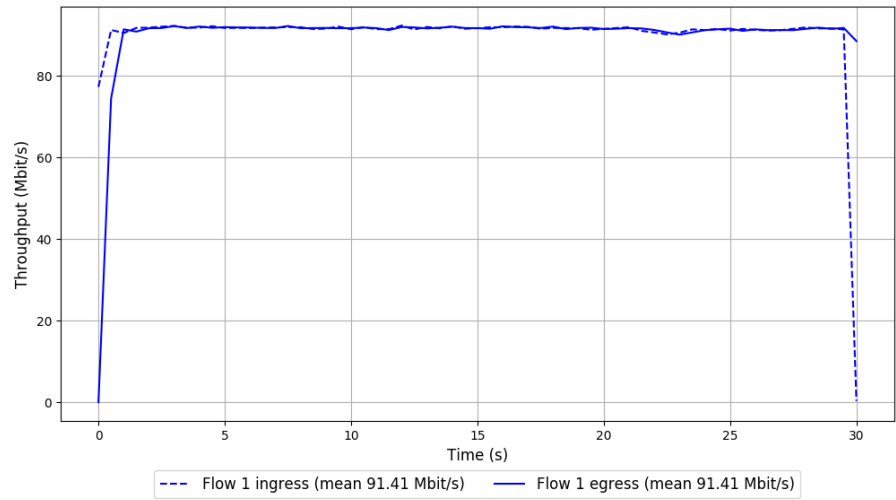


Run 2: Statistics of TaoVA-100x

Start at: 2018-09-07 20:02:11
End at: 2018-09-07 20:02:41
Local clock offset: -4.166 ms
Remote clock offset: -4.249 ms

Below is generated by plot.py at 2018-09-07 21:23:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 91.41 Mbit/s
95th percentile per-packet one-way delay: 14.619 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 91.41 Mbit/s
95th percentile per-packet one-way delay: 14.619 ms
Loss rate: 0.10%

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

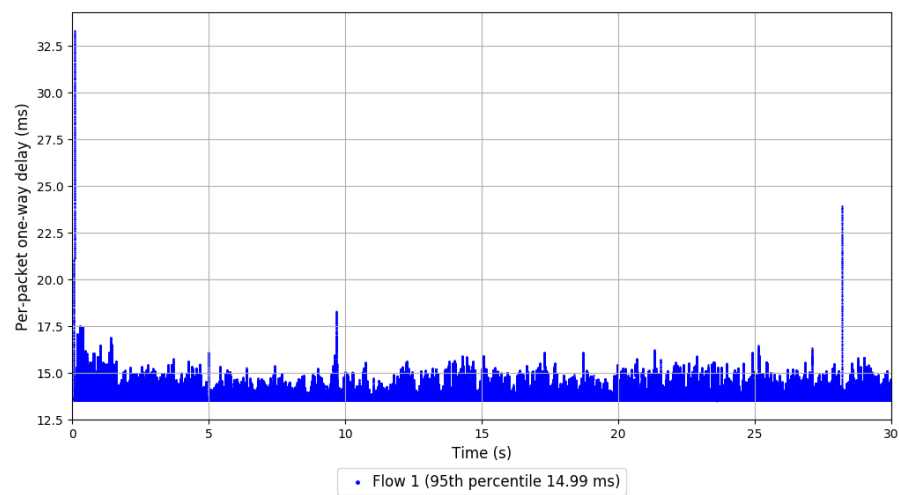
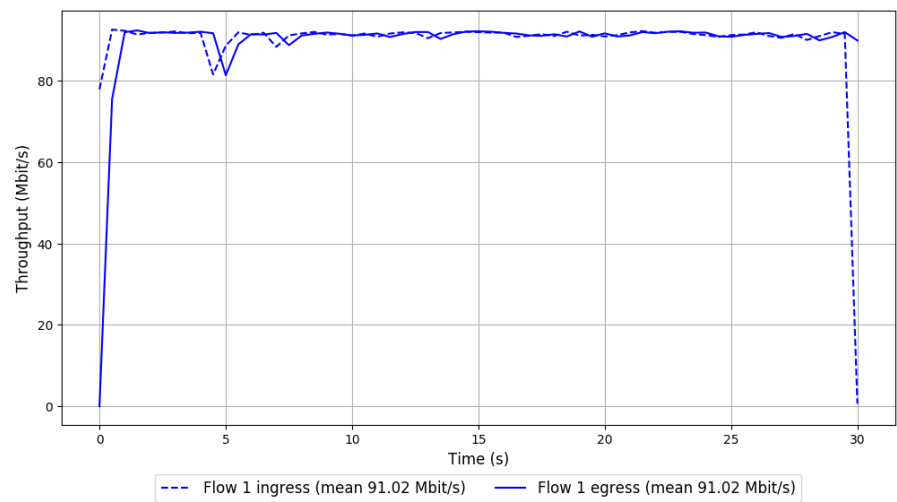


Run 3: Statistics of TaoVA-100x

Start at: 2018-09-07 20:24:22
End at: 2018-09-07 20:24:52
Local clock offset: -4.487 ms
Remote clock offset: -4.325 ms

Below is generated by plot.py at 2018-09-07 21:23:05
Datalink statistics
-- Total of 1 flow:
Average throughput: 91.02 Mbit/s
95th percentile per-packet one-way delay: 14.992 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 91.02 Mbit/s
95th percentile per-packet one-way delay: 14.992 ms
Loss rate: 0.09%

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

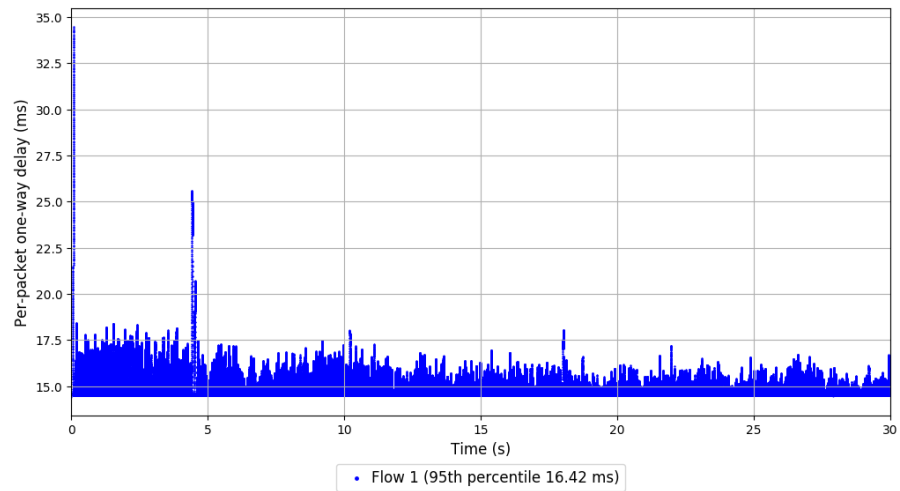
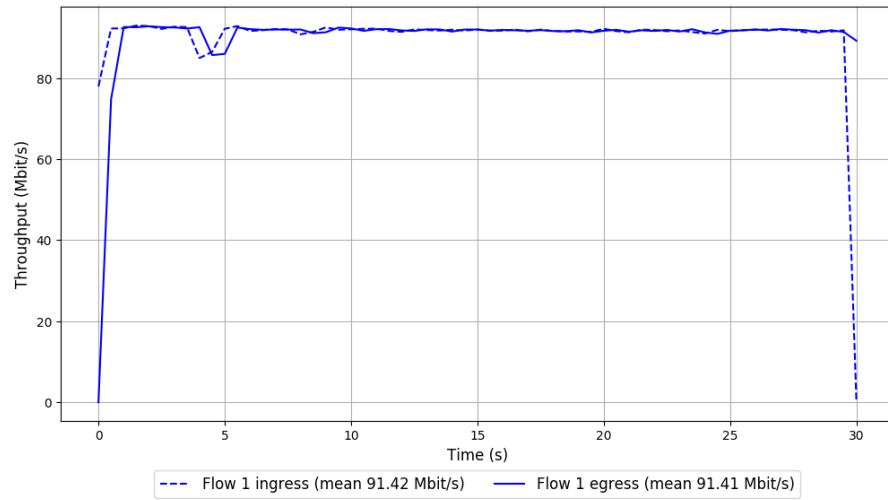


Run 4: Statistics of TaoVA-100x

Start at: 2018-09-07 20:46:15
End at: 2018-09-07 20:46:45
Local clock offset: -4.24 ms
Remote clock offset: -4.812 ms

Below is generated by plot.py at 2018-09-07 21:23:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 91.41 Mbit/s
95th percentile per-packet one-way delay: 16.416 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 91.41 Mbit/s
95th percentile per-packet one-way delay: 16.416 ms
Loss rate: 0.10%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-09-07 21:08:22

End at: 2018-09-07 21:08:52

Local clock offset: -3.253 ms

Remote clock offset: -3.951 ms

Below is generated by plot.py at 2018-09-07 21:23:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.58 Mbit/s

95th percentile per-packet one-way delay: 16.705 ms

Loss rate: 0.09%

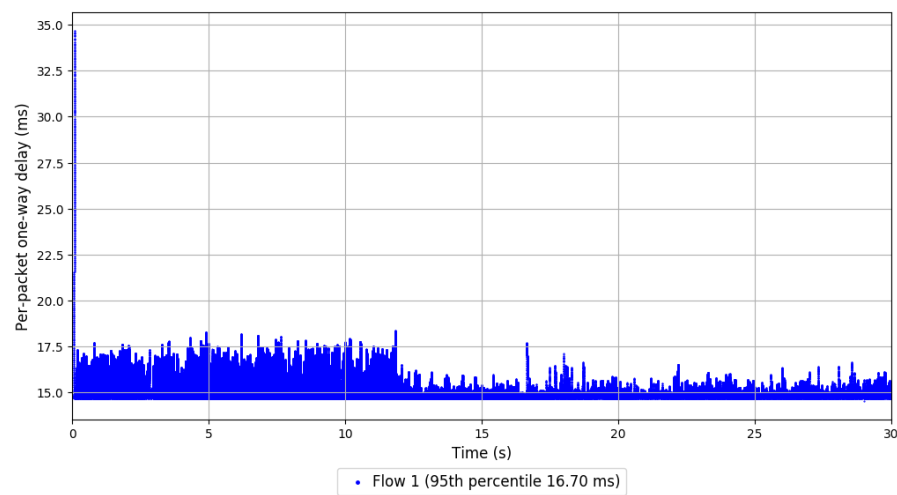
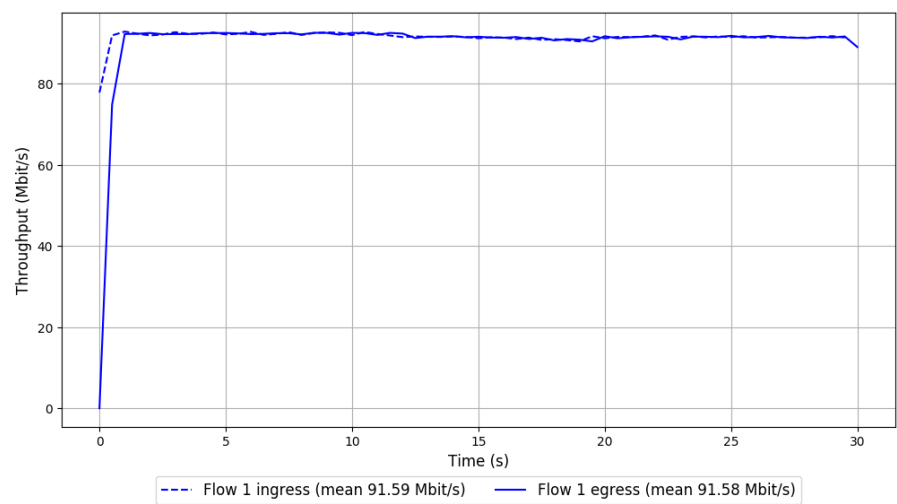
-- Flow 1:

Average throughput: 91.58 Mbit/s

95th percentile per-packet one-way delay: 16.705 ms

Loss rate: 0.09%

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

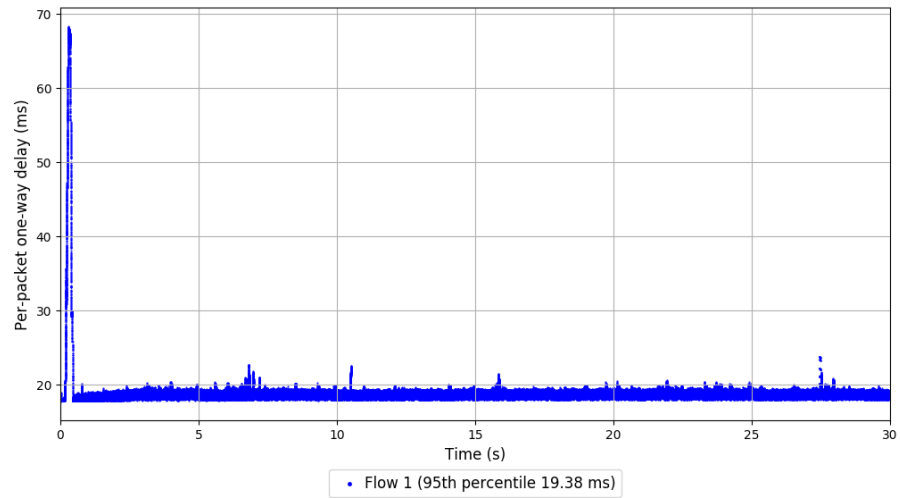
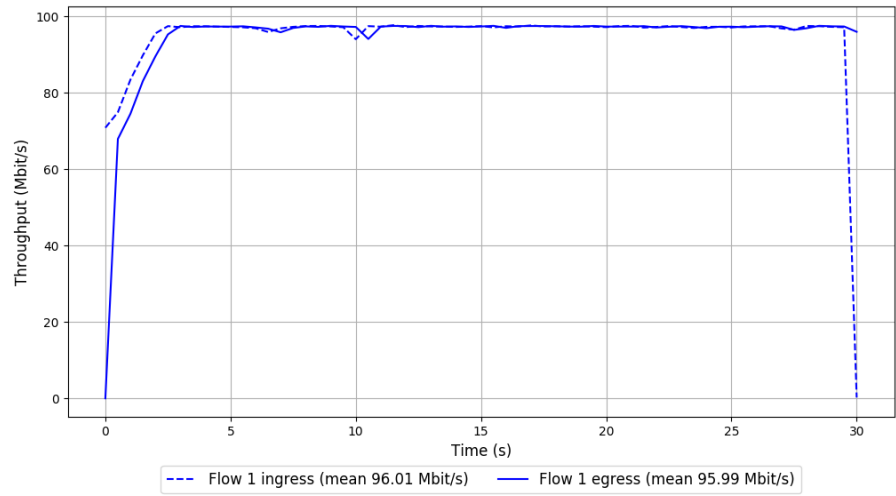


Run 1: Statistics of TCP Vegas

Start at: 2018-09-07 19:32:44
End at: 2018-09-07 19:33:14
Local clock offset: -0.383 ms
Remote clock offset: -4.631 ms

Below is generated by plot.py at 2018-09-07 21:23:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.99 Mbit/s
95th percentile per-packet one-way delay: 19.379 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 95.99 Mbit/s
95th percentile per-packet one-way delay: 19.379 ms
Loss rate: 0.10%

Run 1: Report of TCP Vegas — Data Link

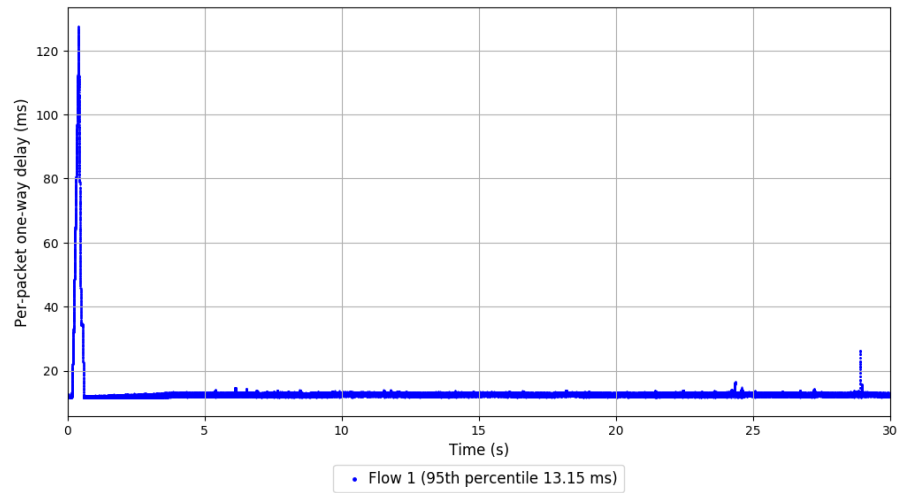
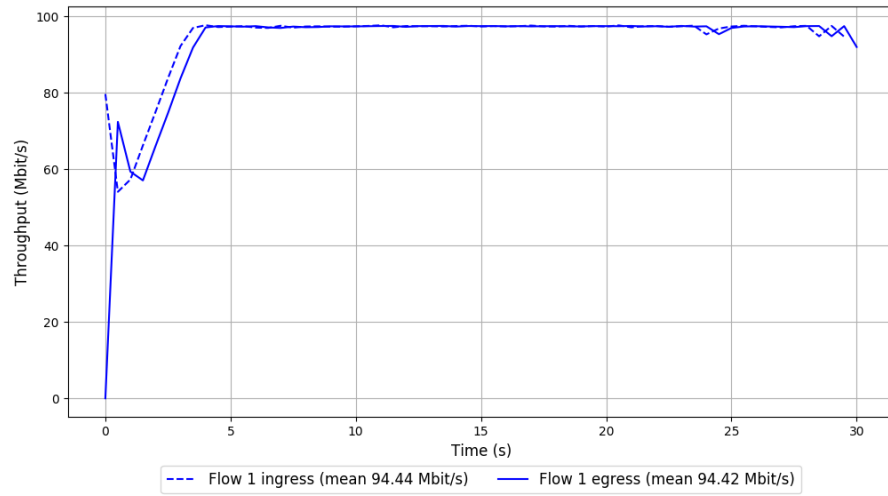


Run 2: Statistics of TCP Vegas

Start at: 2018-09-07 19:54:49
End at: 2018-09-07 19:55:19
Local clock offset: -5.304 ms
Remote clock offset: -3.483 ms

Below is generated by plot.py at 2018-09-07 21:23:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.42 Mbit/s
95th percentile per-packet one-way delay: 13.147 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 94.42 Mbit/s
95th percentile per-packet one-way delay: 13.147 ms
Loss rate: 0.10%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-09-07 20:16:53

End at: 2018-09-07 20:17:23

Local clock offset: -4.857 ms

Remote clock offset: -5.18 ms

Below is generated by plot.py at 2018-09-07 21:23:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.04 Mbit/s

95th percentile per-packet one-way delay: 15.430 ms

Loss rate: 0.09%

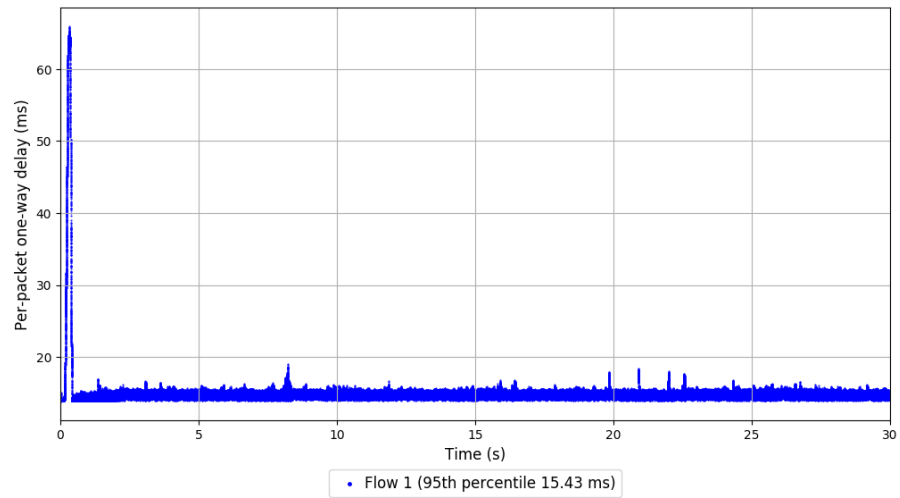
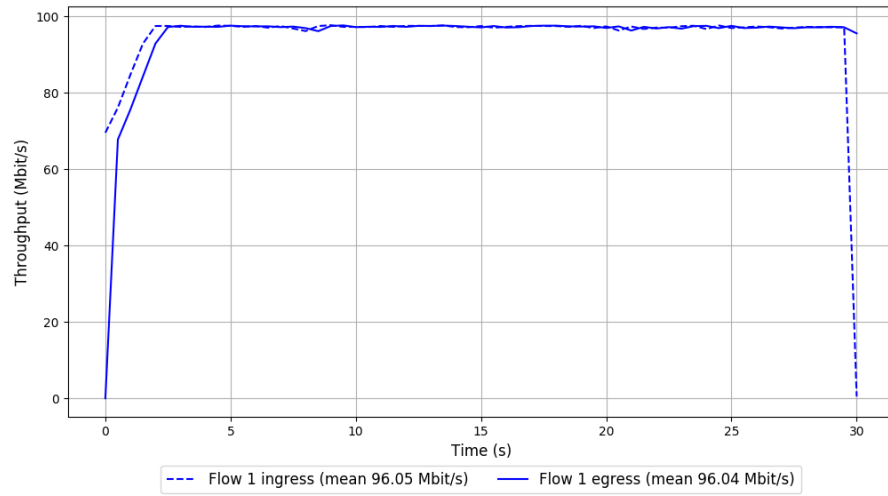
-- Flow 1:

Average throughput: 96.04 Mbit/s

95th percentile per-packet one-way delay: 15.430 ms

Loss rate: 0.09%

Run 3: Report of TCP Vegas — Data Link

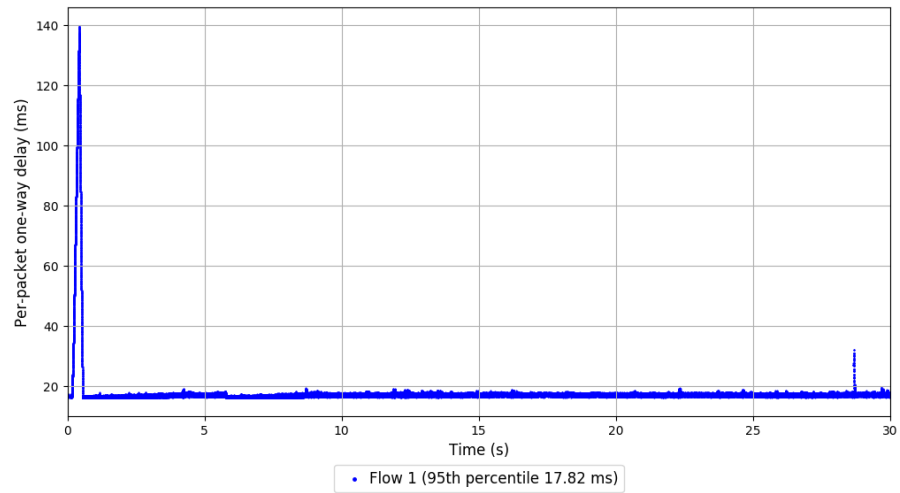
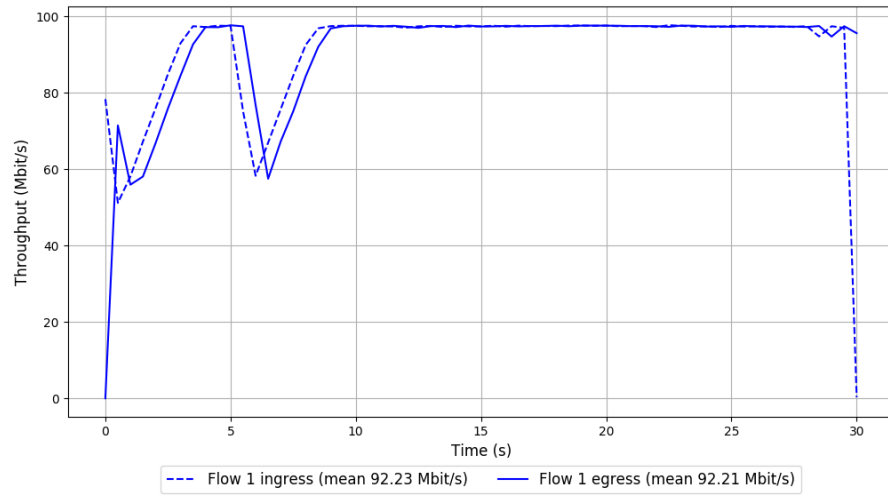


Run 4: Statistics of TCP Vegas

Start at: 2018-09-07 20:38:47
End at: 2018-09-07 20:39:17
Local clock offset: -1.87 ms
Remote clock offset: -4.411 ms

Below is generated by plot.py at 2018-09-07 21:23:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 92.21 Mbit/s
95th percentile per-packet one-way delay: 17.815 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 92.21 Mbit/s
95th percentile per-packet one-way delay: 17.815 ms
Loss rate: 0.09%

Run 4: Report of TCP Vegas — Data Link

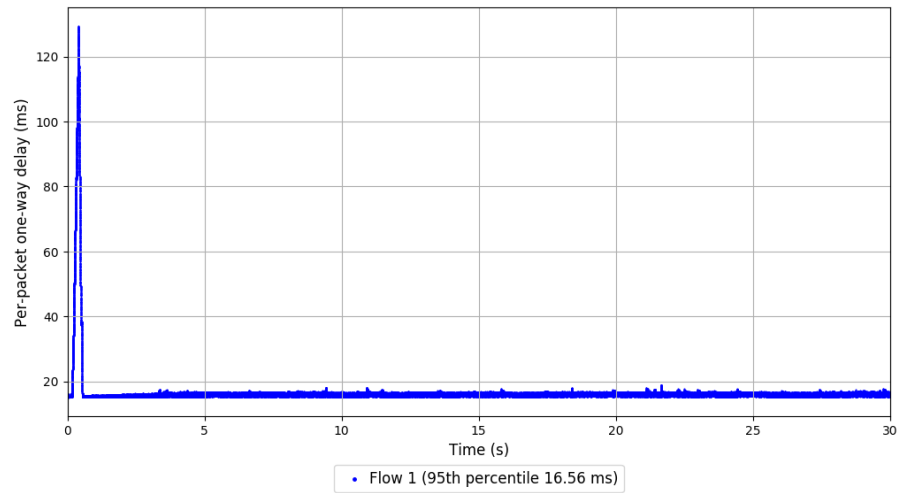
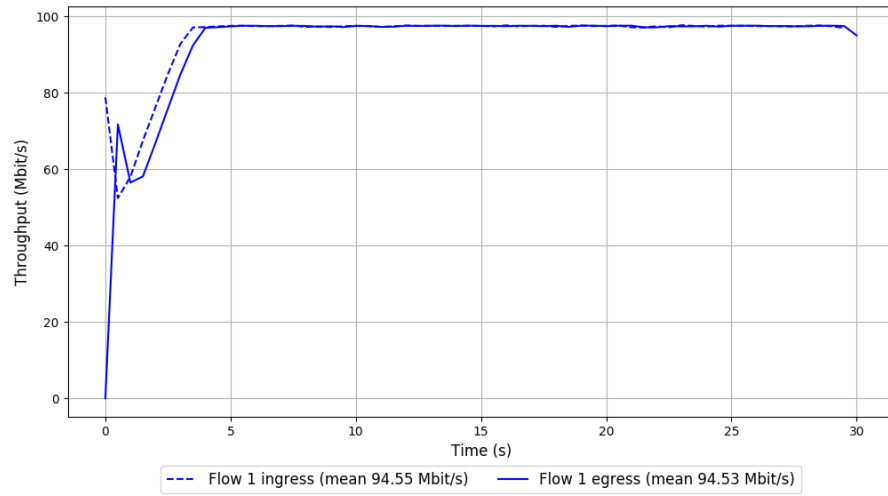


Run 5: Statistics of TCP Vegas

Start at: 2018-09-07 21:00:46
End at: 2018-09-07 21:01:16
Local clock offset: -3.009 ms
Remote clock offset: -4.173 ms

Below is generated by plot.py at 2018-09-07 21:23:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.53 Mbit/s
95th percentile per-packet one-way delay: 16.564 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 94.53 Mbit/s
95th percentile per-packet one-way delay: 16.564 ms
Loss rate: 0.11%

Run 5: Report of TCP Vegas — Data Link

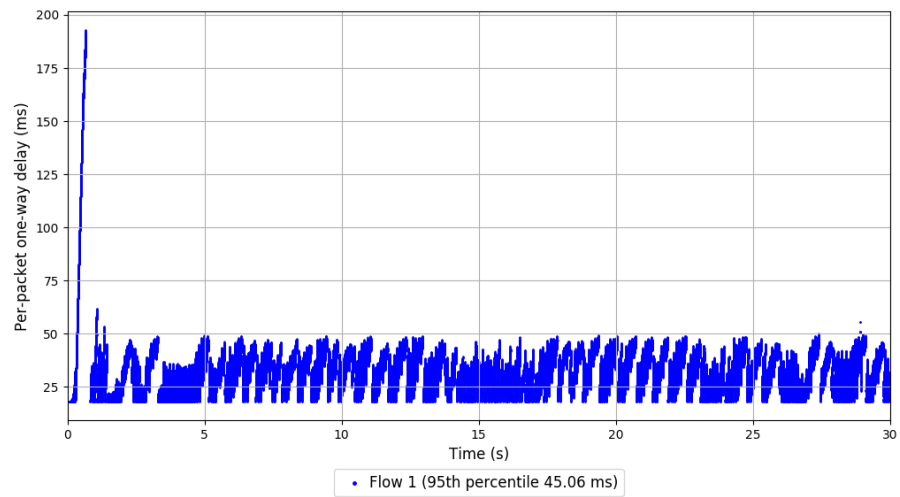
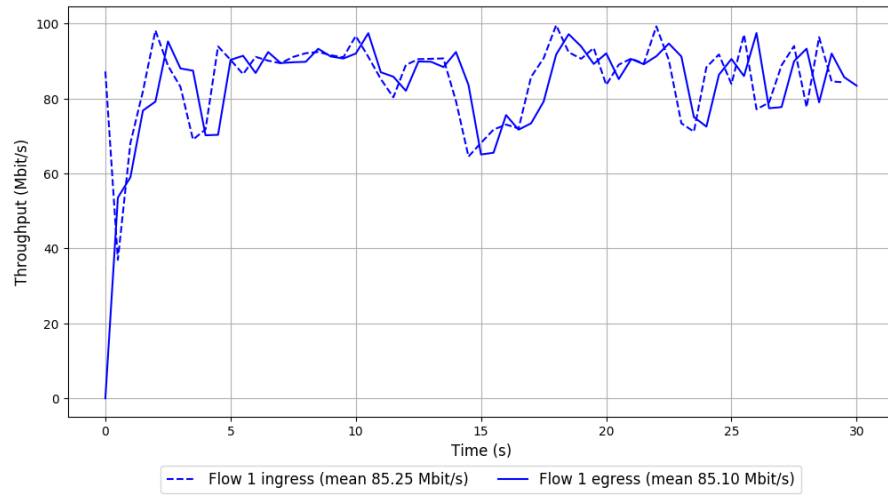


Run 1: Statistics of Verus

Start at: 2018-09-07 19:33:59
End at: 2018-09-07 19:34:29
Local clock offset: -0.303 ms
Remote clock offset: -4.426 ms

Below is generated by plot.py at 2018-09-07 21:23:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 85.10 Mbit/s
95th percentile per-packet one-way delay: 45.061 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 85.10 Mbit/s
95th percentile per-packet one-way delay: 45.061 ms
Loss rate: 0.26%

Run 1: Report of Verus — Data Link

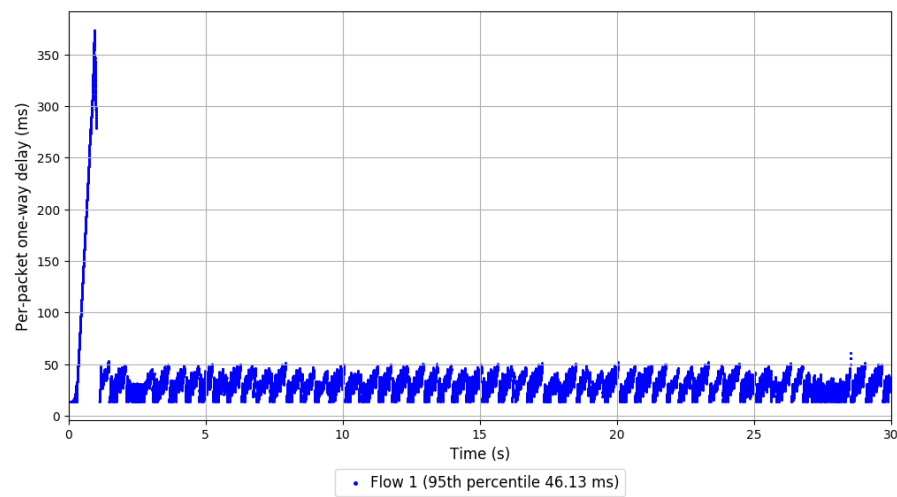
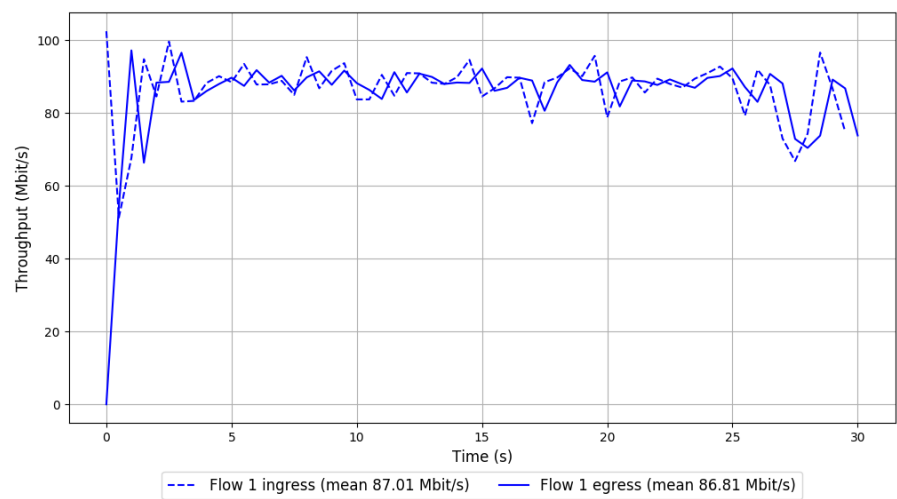


Run 2: Statistics of Verus

Start at: 2018-09-07 19:56:01
End at: 2018-09-07 19:56:31
Local clock offset: -4.367 ms
Remote clock offset: -4.483 ms

Below is generated by plot.py at 2018-09-07 21:24:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 86.81 Mbit/s
95th percentile per-packet one-way delay: 46.127 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 86.81 Mbit/s
95th percentile per-packet one-way delay: 46.127 ms
Loss rate: 0.33%

Run 2: Report of Verus — Data Link

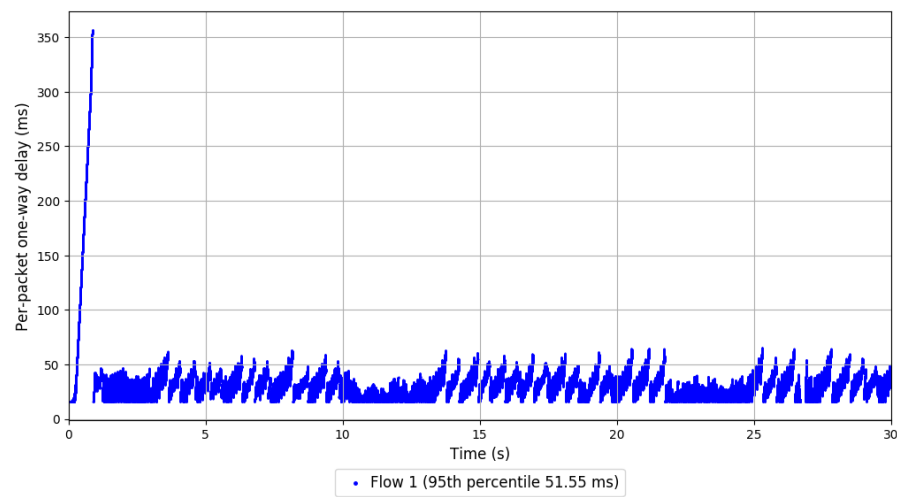
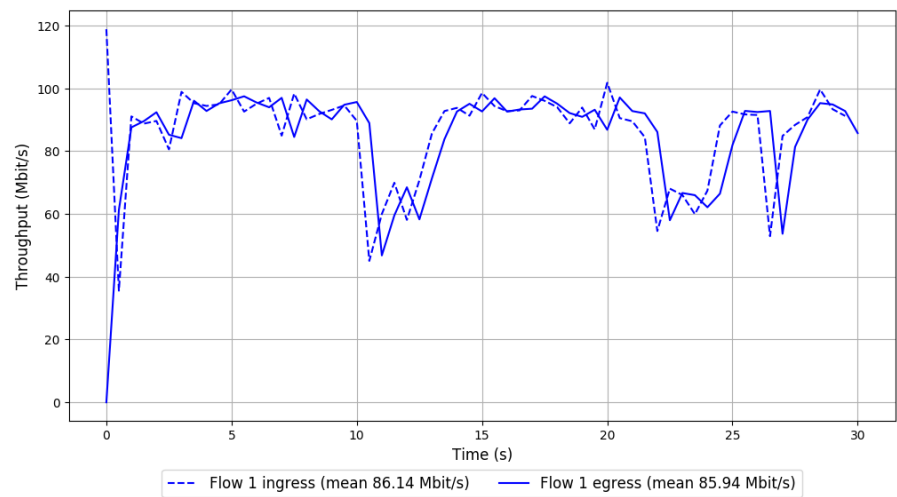


Run 3: Statistics of Verus

Start at: 2018-09-07 20:18:06
End at: 2018-09-07 20:18:36
Local clock offset: -3.188 ms
Remote clock offset: -5.304 ms

Below is generated by plot.py at 2018-09-07 21:24:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 85.94 Mbit/s
95th percentile per-packet one-way delay: 51.550 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 85.94 Mbit/s
95th percentile per-packet one-way delay: 51.550 ms
Loss rate: 0.32%

Run 3: Report of Verus — Data Link

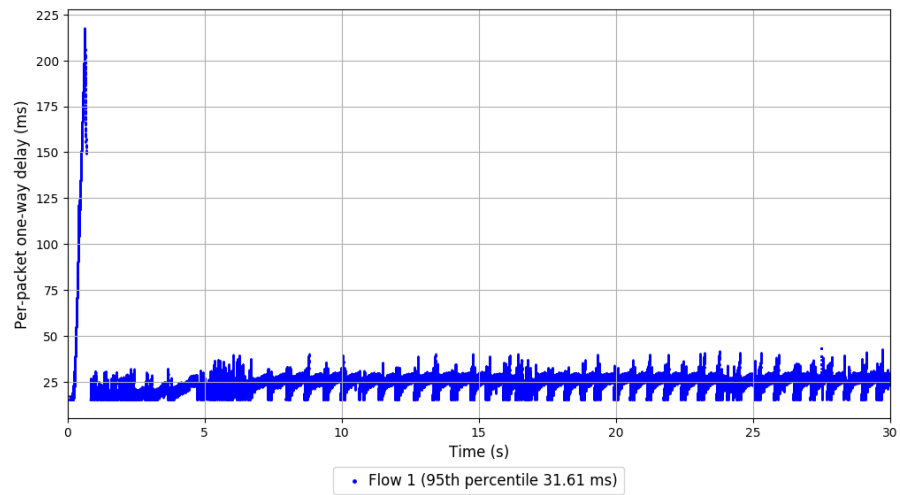
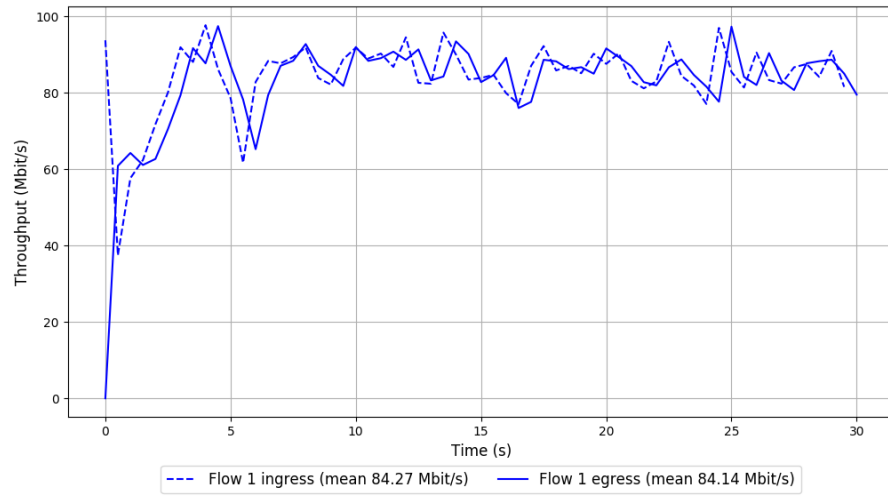


Run 4: Statistics of Verus

Start at: 2018-09-07 20:39:59
End at: 2018-09-07 20:40:30
Local clock offset: -4.197 ms
Remote clock offset: -5.537 ms

Below is generated by plot.py at 2018-09-07 21:24:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 84.14 Mbit/s
95th percentile per-packet one-way delay: 31.611 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 84.14 Mbit/s
95th percentile per-packet one-way delay: 31.611 ms
Loss rate: 0.24%

Run 4: Report of Verus — Data Link

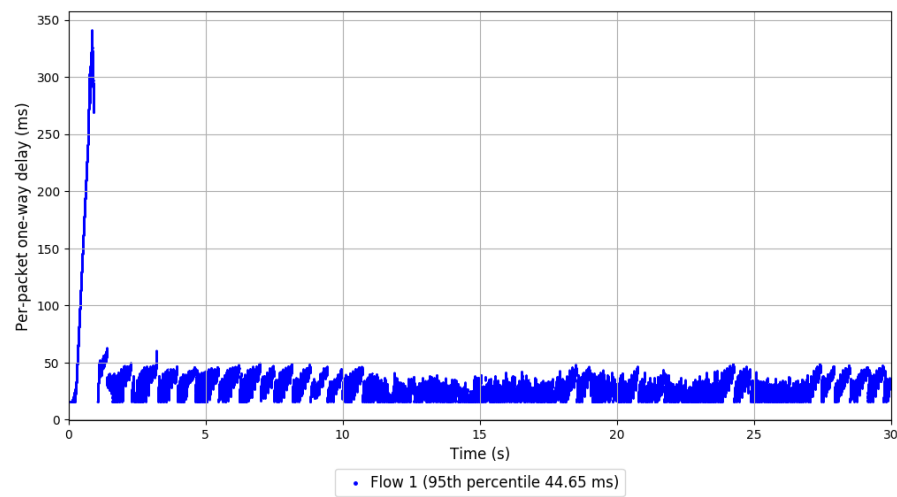
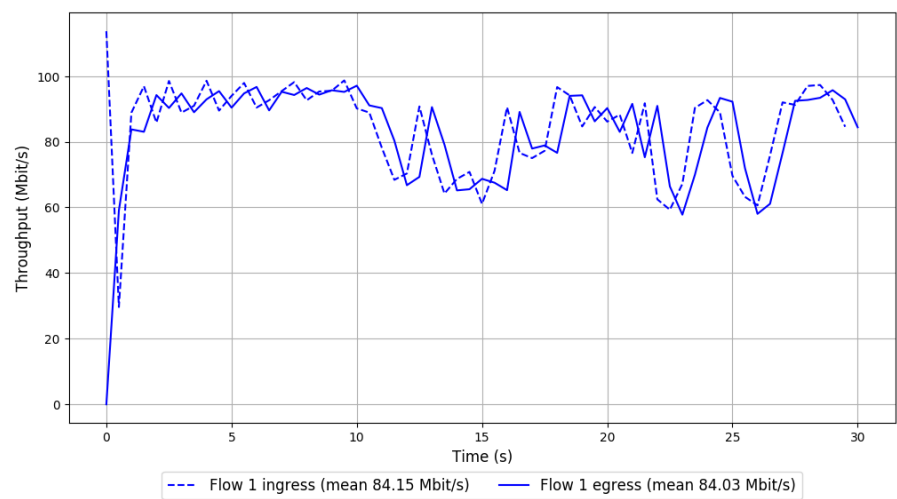


Run 5: Statistics of Verus

Start at: 2018-09-07 21:01:58
End at: 2018-09-07 21:02:28
Local clock offset: -3.077 ms
Remote clock offset: -4.798 ms

Below is generated by plot.py at 2018-09-07 21:24:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 84.03 Mbit/s
95th percentile per-packet one-way delay: 44.648 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 84.03 Mbit/s
95th percentile per-packet one-way delay: 44.648 ms
Loss rate: 0.22%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2018-09-07 19:35:14

End at: 2018-09-07 19:35:44

Local clock offset: -0.67 ms

Remote clock offset: -3.405 ms

Below is generated by plot.py at 2018-09-07 21:24:22

Datalink statistics

-- Total of 1 flow:

Average throughput: 86.98 Mbit/s

95th percentile per-packet one-way delay: 17.432 ms

Loss rate: 0.10%

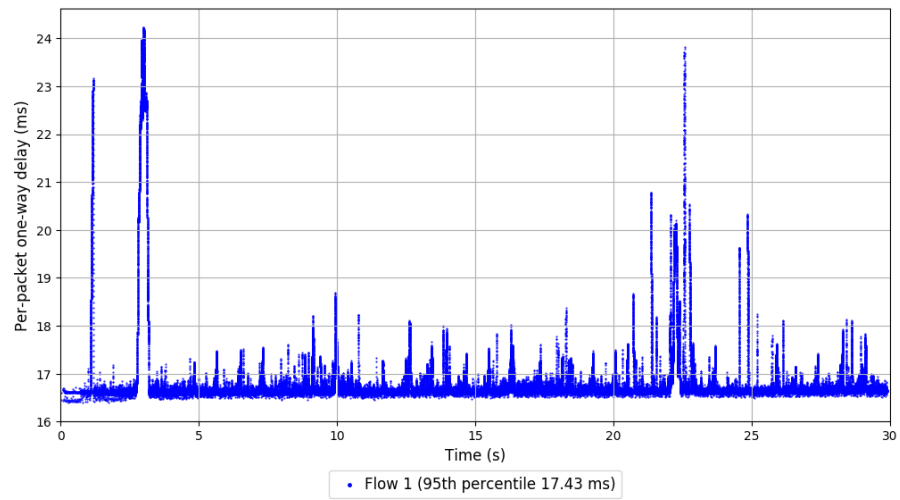
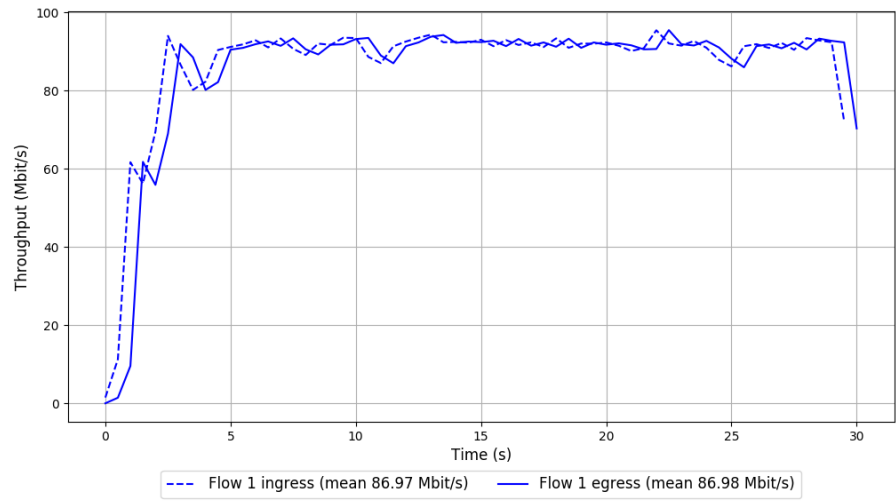
-- Flow 1:

Average throughput: 86.98 Mbit/s

95th percentile per-packet one-way delay: 17.432 ms

Loss rate: 0.10%

Run 1: Report of PCC-Vivace — Data Link

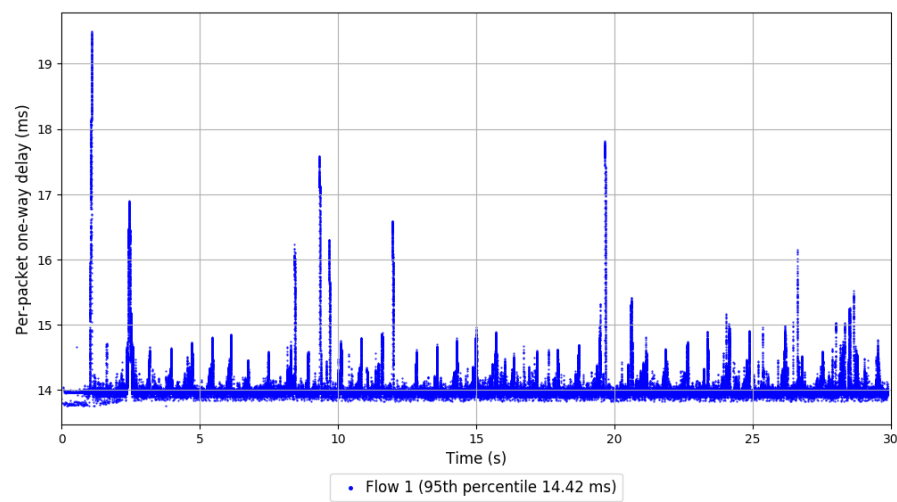
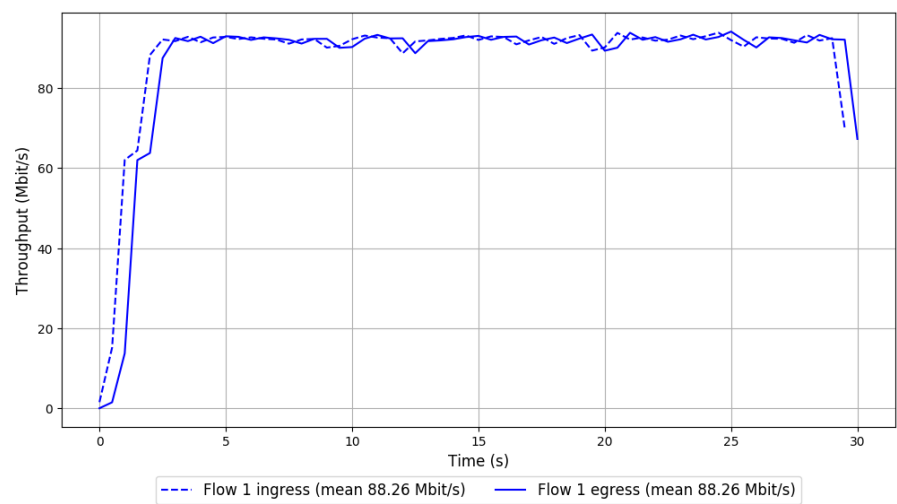


Run 2: Statistics of PCC-Vivace

Start at: 2018-09-07 19:57:14
End at: 2018-09-07 19:57:44
Local clock offset: -2.639 ms
Remote clock offset: -3.194 ms

Below is generated by plot.py at 2018-09-07 21:24:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 88.26 Mbit/s
95th percentile per-packet one-way delay: 14.421 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 88.26 Mbit/s
95th percentile per-packet one-way delay: 14.421 ms
Loss rate: 0.10%

Run 2: Report of PCC-Vivace — Data Link

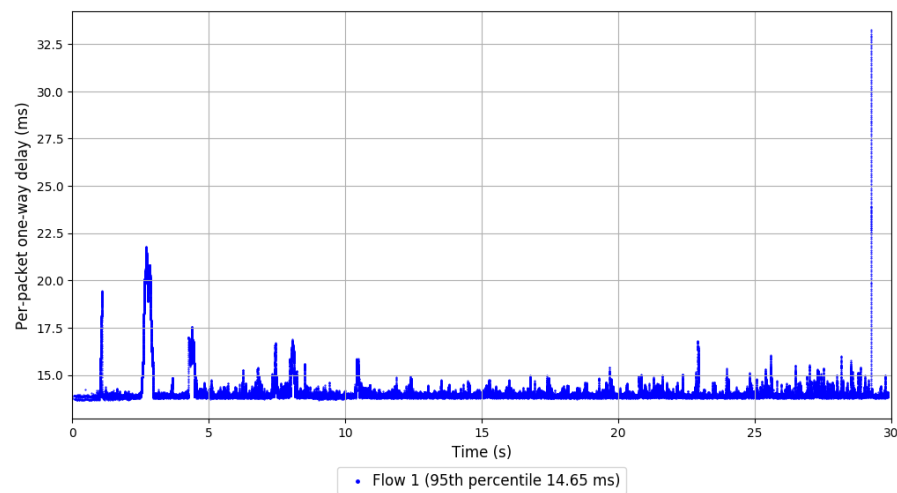
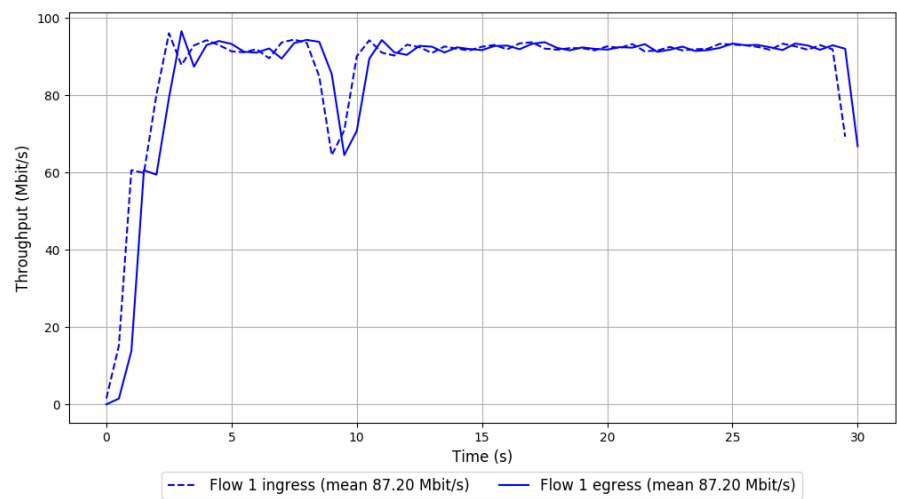


Run 3: Statistics of PCC-Vivace

Start at: 2018-09-07 20:19:19
End at: 2018-09-07 20:19:49
Local clock offset: -4.153 ms
Remote clock offset: -4.341 ms

Below is generated by plot.py at 2018-09-07 21:24:37
Datalink statistics
-- Total of 1 flow:
Average throughput: 87.20 Mbit/s
95th percentile per-packet one-way delay: 14.654 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 87.20 Mbit/s
95th percentile per-packet one-way delay: 14.654 ms
Loss rate: 0.09%

Run 3: Report of PCC-Vivace — Data Link

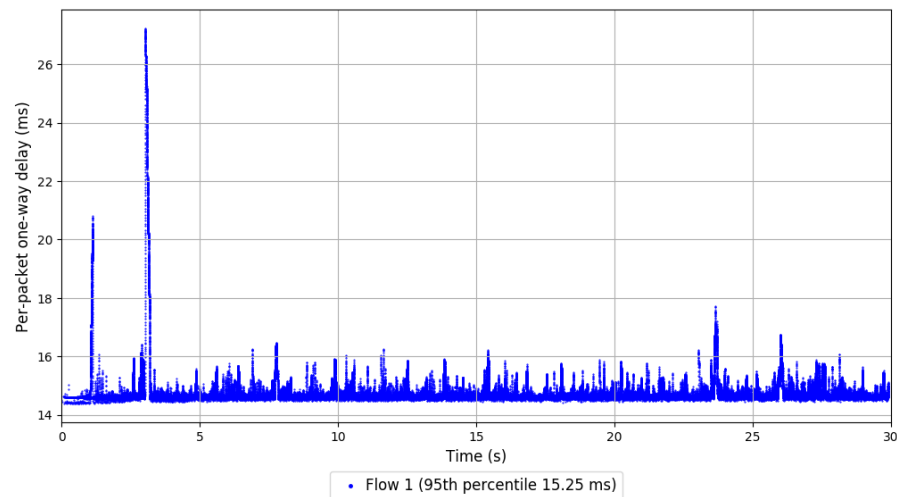
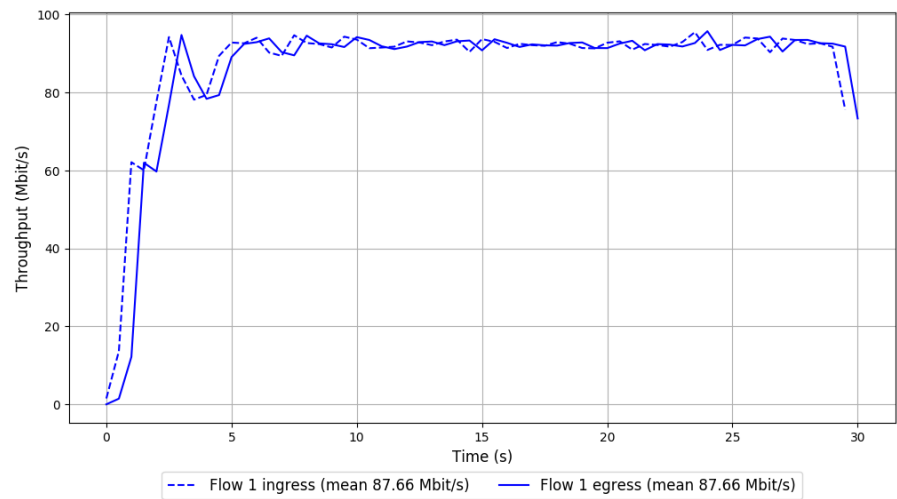


Run 4: Statistics of PCC-Vivace

Start at: 2018-09-07 20:41:12
End at: 2018-09-07 20:41:42
Local clock offset: -4.049 ms
Remote clock offset: -4.747 ms

Below is generated by plot.py at 2018-09-07 21:24:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 87.66 Mbit/s
95th percentile per-packet one-way delay: 15.254 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 87.66 Mbit/s
95th percentile per-packet one-way delay: 15.254 ms
Loss rate: 0.10%

Run 4: Report of PCC-Vivace — Data Link

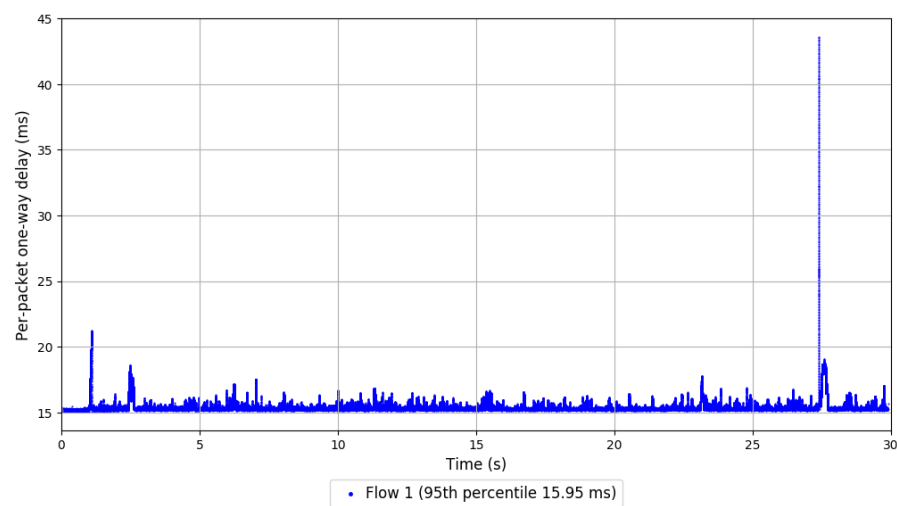
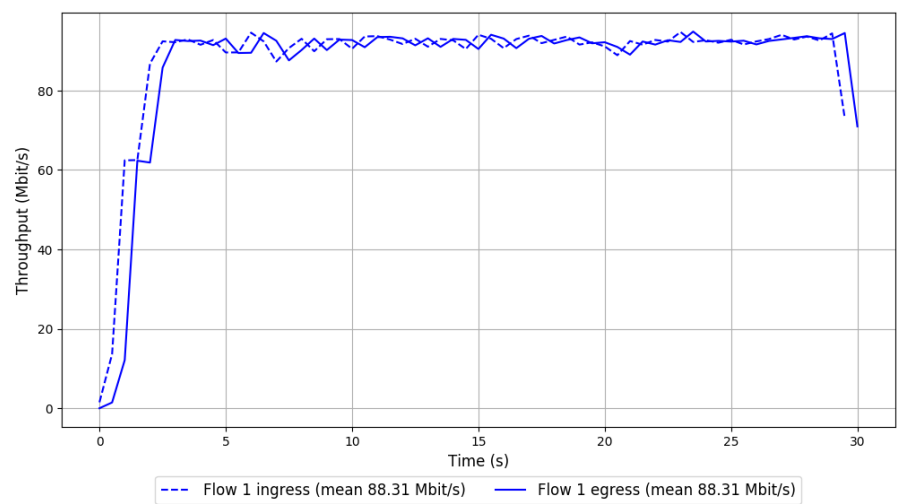


Run 5: Statistics of PCC-Vivace

Start at: 2018-09-07 21:03:13
End at: 2018-09-07 21:03:43
Local clock offset: -3.524 ms
Remote clock offset: -4.797 ms

Below is generated by plot.py at 2018-09-07 21:24:39
Datalink statistics
-- Total of 1 flow:
Average throughput: 88.31 Mbit/s
95th percentile per-packet one-way delay: 15.951 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 88.31 Mbit/s
95th percentile per-packet one-way delay: 15.951 ms
Loss rate: 0.09%

Run 5: Report of PCC-Vivace — Data Link

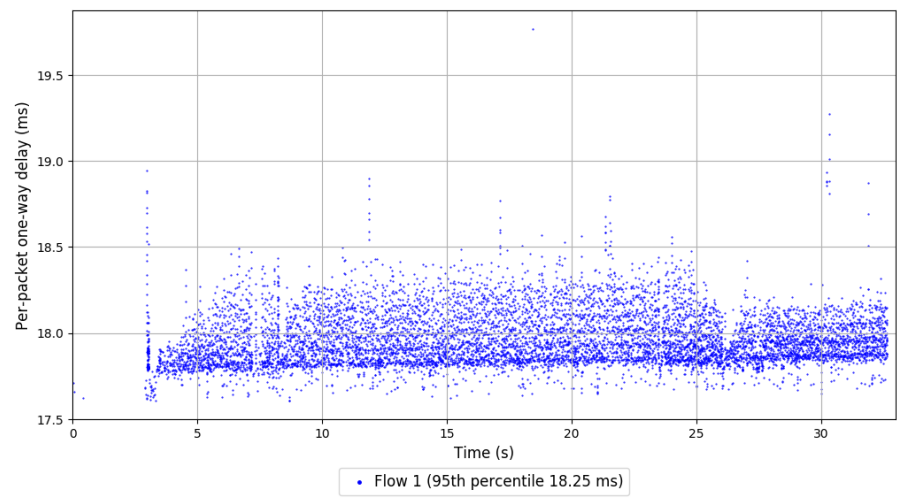
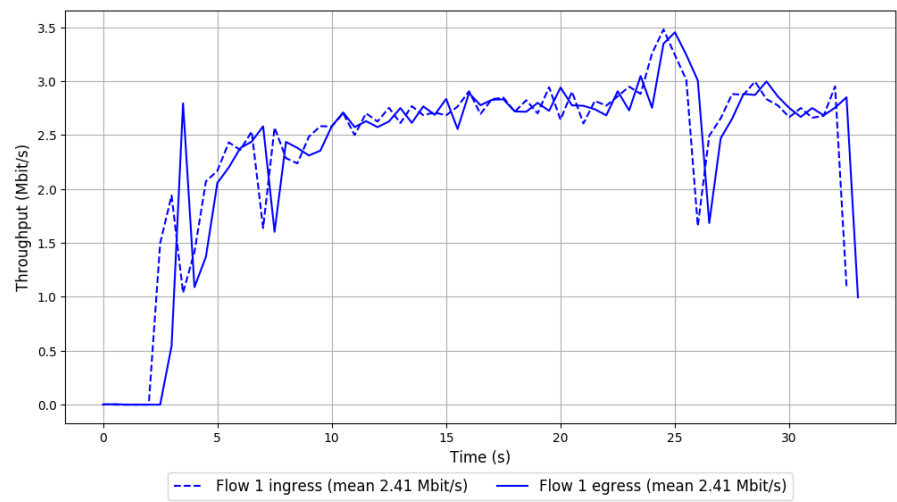


Run 1: Statistics of WebRTC media

Start at: 2018-09-07 19:27:49
End at: 2018-09-07 19:28:19
Local clock offset: -0.005 ms
Remote clock offset: -4.549 ms

Below is generated by plot.py at 2018-09-07 21:24:39
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 18.250 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 18.250 ms
Loss rate: 0.13%

Run 1: Report of WebRTC media — Data Link

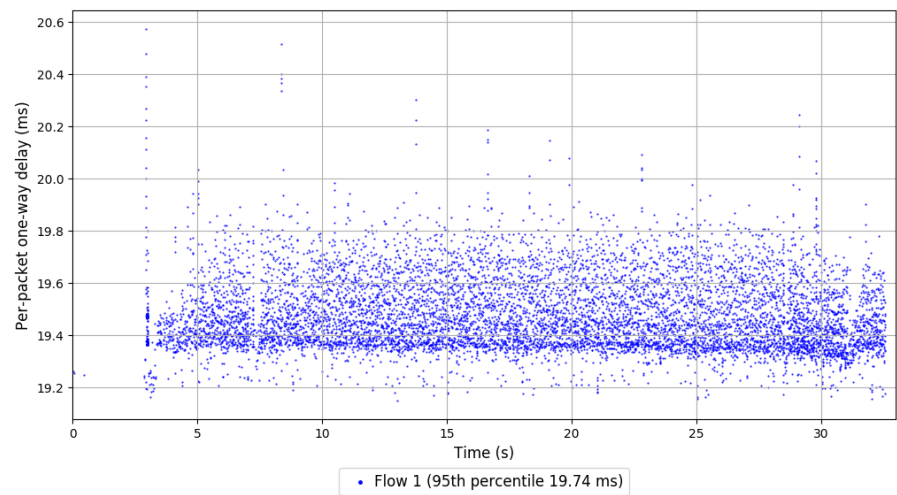
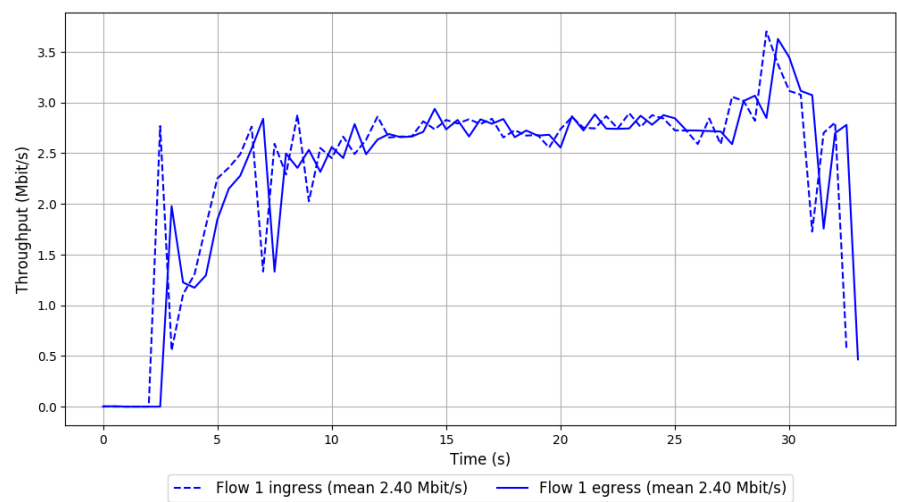


Run 2: Statistics of WebRTC media

Start at: 2018-09-07 19:49:55
End at: 2018-09-07 19:50:25
Local clock offset: 1.647 ms
Remote clock offset: -3.908 ms

Below is generated by plot.py at 2018-09-07 21:24:39
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.40 Mbit/s
95th percentile per-packet one-way delay: 19.737 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 2.40 Mbit/s
95th percentile per-packet one-way delay: 19.737 ms
Loss rate: 0.13%

Run 2: Report of WebRTC media — Data Link

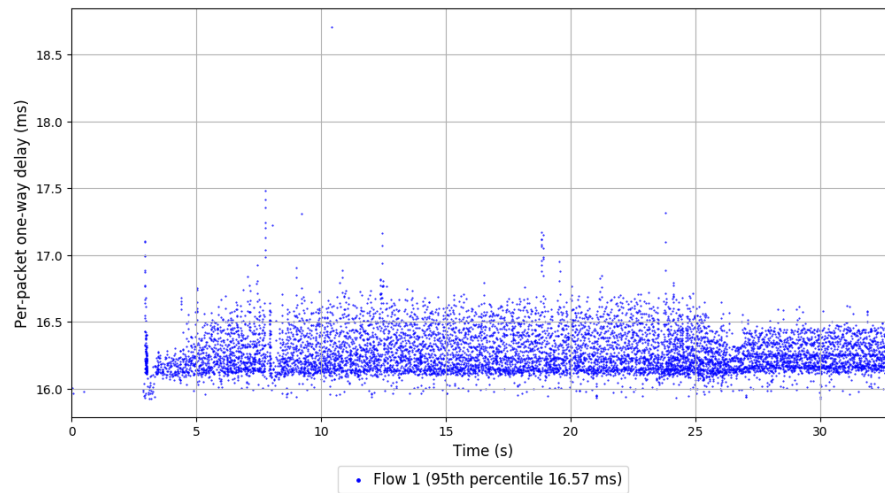
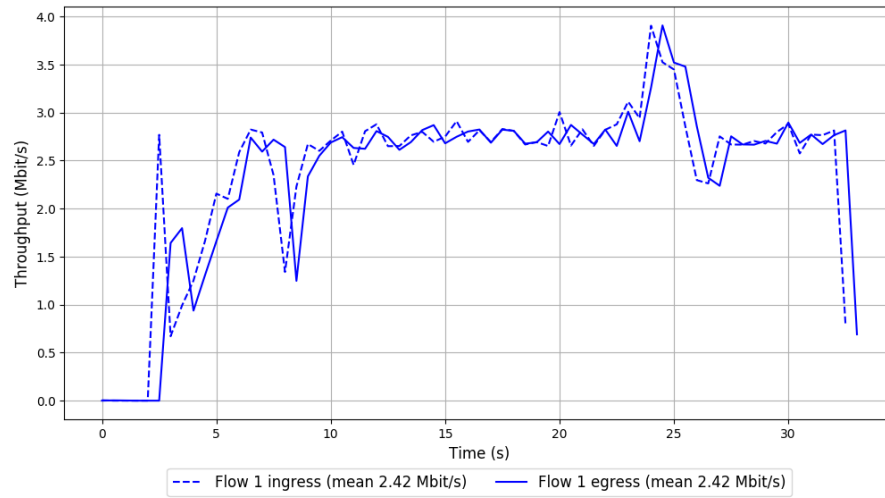


Run 3: Statistics of WebRTC media

Start at: 2018-09-07 20:12:01
End at: 2018-09-07 20:12:32
Local clock offset: -2.618 ms
Remote clock offset: -5.143 ms

Below is generated by plot.py at 2018-09-07 21:24:39
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.42 Mbit/s
95th percentile per-packet one-way delay: 16.574 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 2.42 Mbit/s
95th percentile per-packet one-way delay: 16.574 ms
Loss rate: 0.12%

Run 3: Report of WebRTC media — Data Link

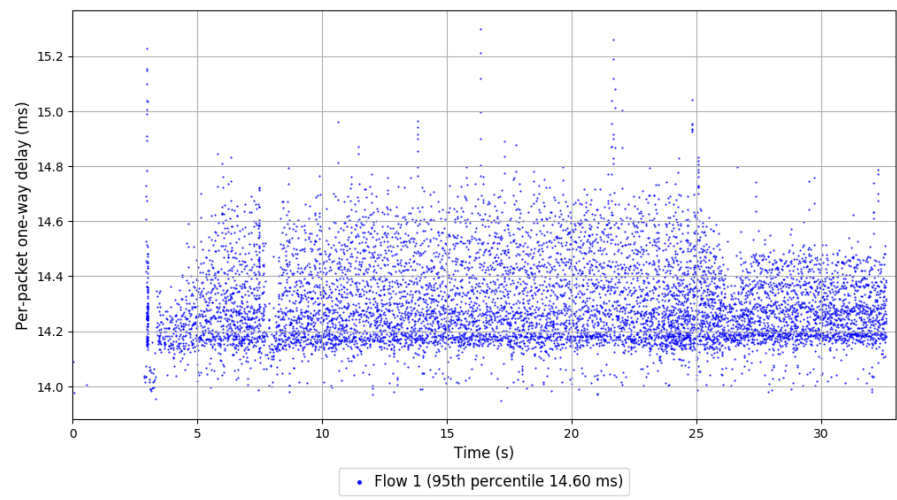
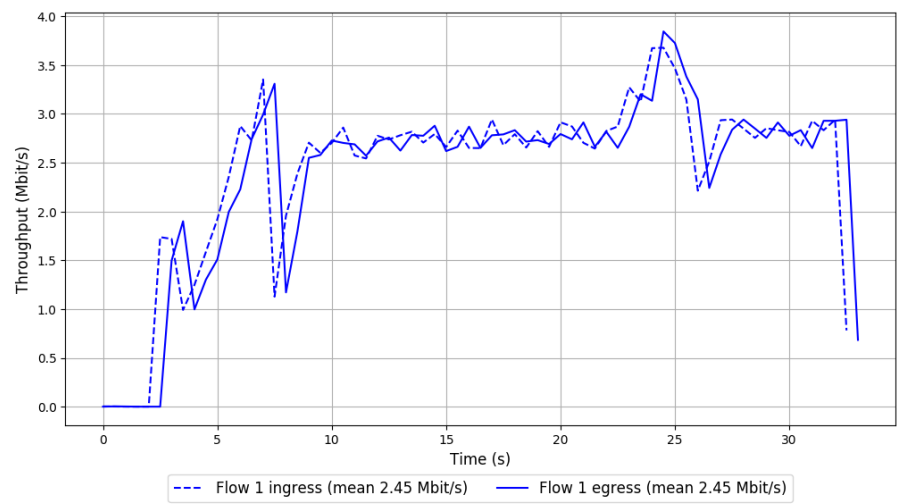


Run 4: Statistics of WebRTC media

Start at: 2018-09-07 20:33:58
End at: 2018-09-07 20:34:28
Local clock offset: -3.795 ms
Remote clock offset: -4.151 ms

Below is generated by plot.py at 2018-09-07 21:24:39
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.45 Mbit/s
95th percentile per-packet one-way delay: 14.604 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 2.45 Mbit/s
95th percentile per-packet one-way delay: 14.604 ms
Loss rate: 0.06%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-09-07 20:55:54

End at: 2018-09-07 20:56:24

Local clock offset: -3.94 ms

Remote clock offset: -4.32 ms

Below is generated by plot.py at 2018-09-07 21:24:39

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.36 Mbit/s

95th percentile per-packet one-way delay: 14.815 ms

Loss rate: 0.07%

-- Flow 1:

Average throughput: 2.36 Mbit/s

95th percentile per-packet one-way delay: 14.815 ms

Loss rate: 0.07%

Run 5: Report of WebRTC media — Data Link

