

Pantheon Report

Generated at 2018-11-30 12:59:03 (UTC).

Data path: Mexico on **em1** (*remote*) → AWS California 2 on **ens5** (*local*).

Repeated the test of 19 congestion control schemes 5 times.

Each test lasted for 30 seconds running 1 flow.

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

System info:

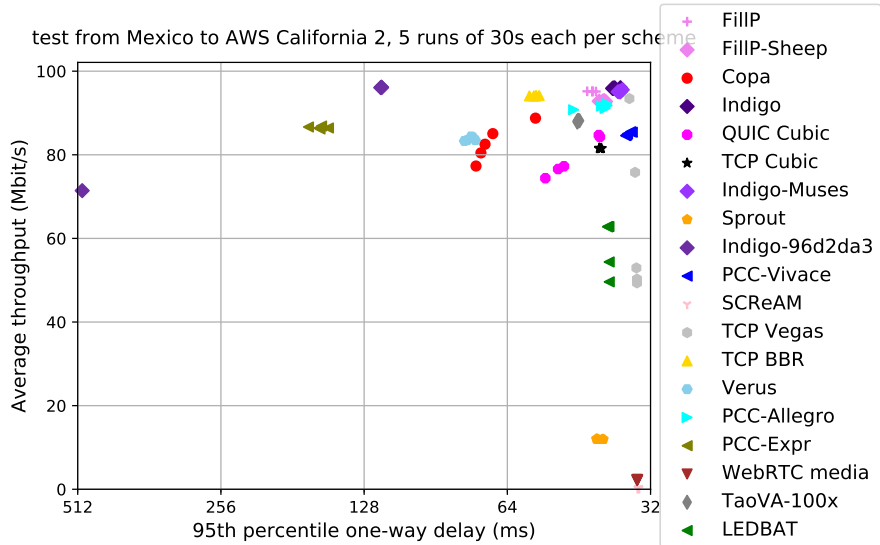
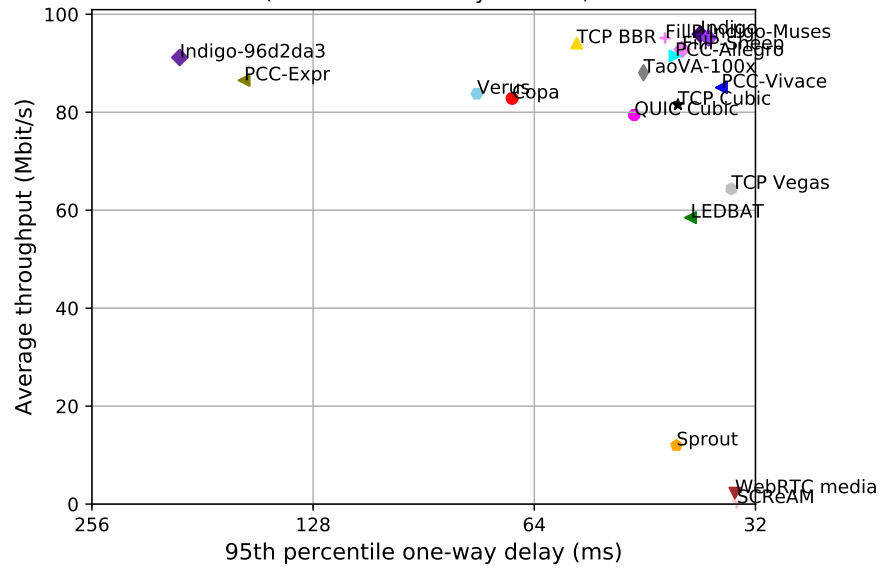
```
Linux 4.15.0-1027-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

```
branch: muses @ 7b6dad87cde3ab65f7c4052140eb54098aa58e9d
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf5e58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
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-quic @ 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 Mexico to AWS California 2, 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	94.11	56.04	0.54
Copa	5	82.82	68.60	0.21
TCP Cubic	5	81.53	40.80	0.32
FillP	5	95.15	42.48	0.25
FillP-Sheep	5	92.84	40.28	0.23
Indigo	5	95.96	38.04	0.23
Indigo-96d2da3	5	91.17	194.45	7.21
LEDBAT	5	58.48	39.22	0.35
Indigo-Muses	5	95.19	37.08	0.24
PCC-Allegro	5	91.50	41.18	0.24
PCC-Expr	5	86.51	158.93	0.29
QUIC Cubic	5	79.45	46.79	0.28
SCReAM	5	0.21	33.93	0.26
Sprout	5	11.98	40.99	0.16
TaoVA-100x	5	88.08	45.45	0.26
TCP Vegas	5	64.36	34.51	0.25
Verus	5	83.78	76.61	0.48
PCC-Vivace	5	85.05	35.60	0.24
WebRTC media	5	2.23	34.13	0.25

Run 1: Statistics of TCP BBR

Start at: 2018-11-30 11:09:32

End at: 2018-11-30 11:10:02

Local clock offset: -3.446 ms

Remote clock offset: -6.308 ms

Below is generated by plot.py at 2018-11-30 12:47:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 94.16 Mbit/s

95th percentile per-packet one-way delay: 54.862 ms

Loss rate: 0.43%

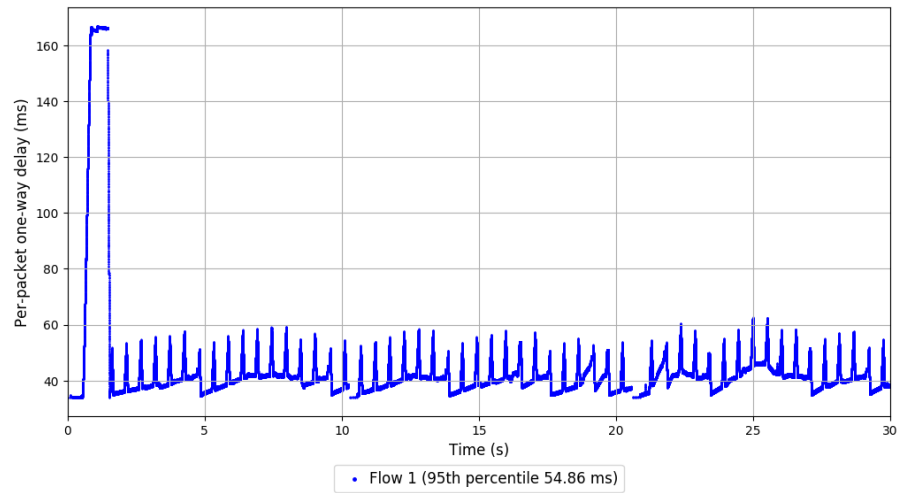
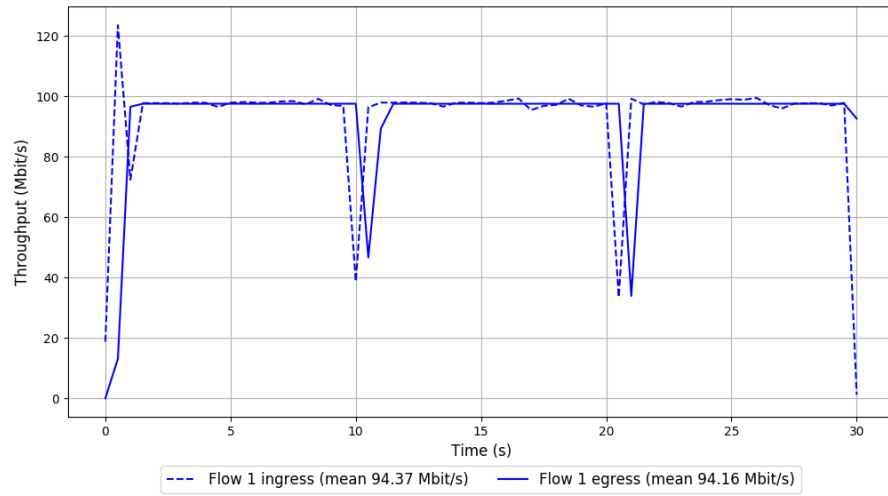
-- Flow 1:

Average throughput: 94.16 Mbit/s

95th percentile per-packet one-way delay: 54.862 ms

Loss rate: 0.43%

Run 1: Report of TCP BBR — Data Link

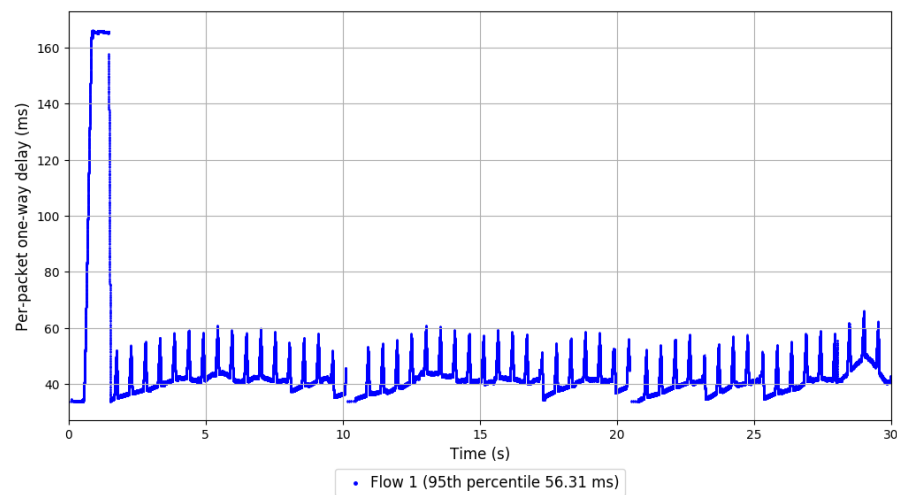
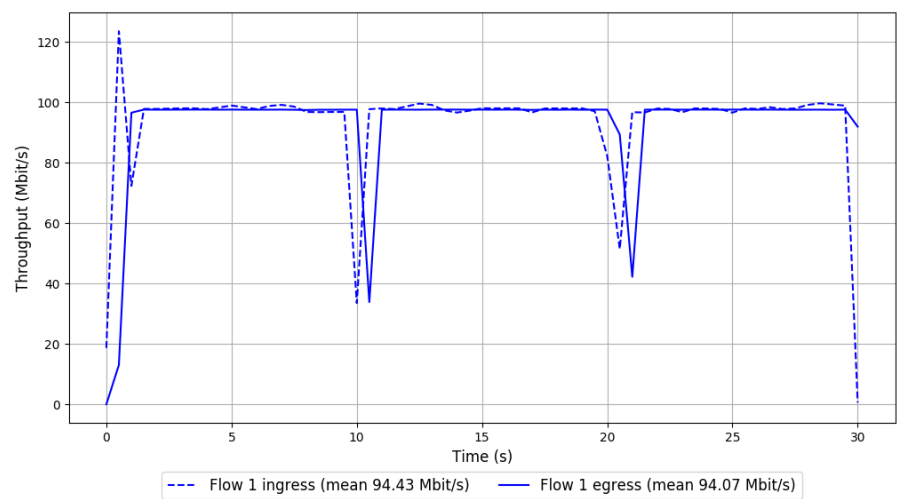


Run 2: Statistics of TCP BBR

Start at: 2018-11-30 11:31:41
End at: 2018-11-30 11:32:11
Local clock offset: -0.084 ms
Remote clock offset: -5.359 ms

Below is generated by plot.py at 2018-11-30 12:47:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.07 Mbit/s
95th percentile per-packet one-way delay: 56.307 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 94.07 Mbit/s
95th percentile per-packet one-way delay: 56.307 ms
Loss rate: 0.60%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-11-30 11:53:46

End at: 2018-11-30 11:54:16

Local clock offset: 2.664 ms

Remote clock offset: -4.304 ms

Below is generated by plot.py at 2018-11-30 12:47:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 94.17 Mbit/s

95th percentile per-packet one-way delay: 55.680 ms

Loss rate: 0.46%

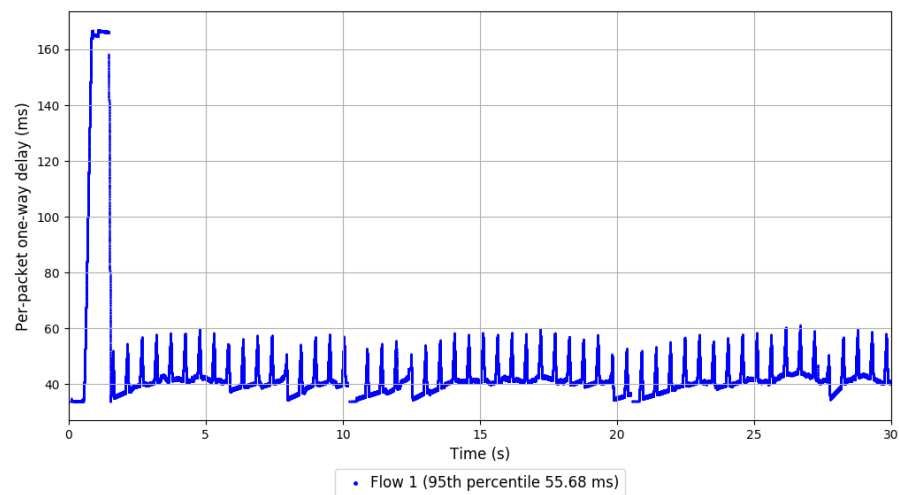
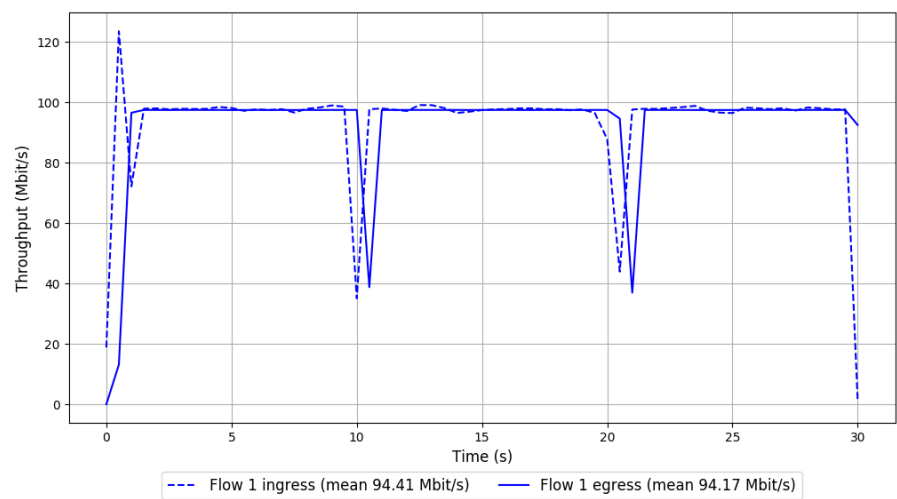
-- Flow 1:

Average throughput: 94.17 Mbit/s

95th percentile per-packet one-way delay: 55.680 ms

Loss rate: 0.46%

Run 3: Report of TCP BBR — Data Link

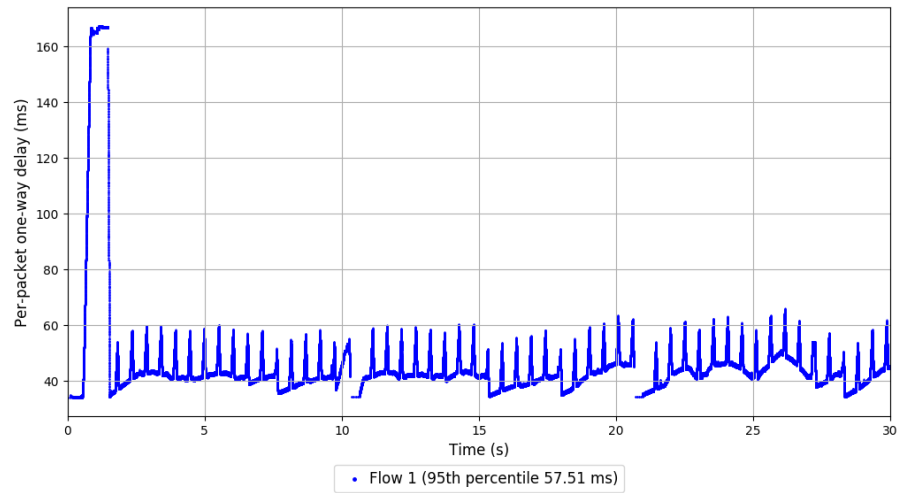
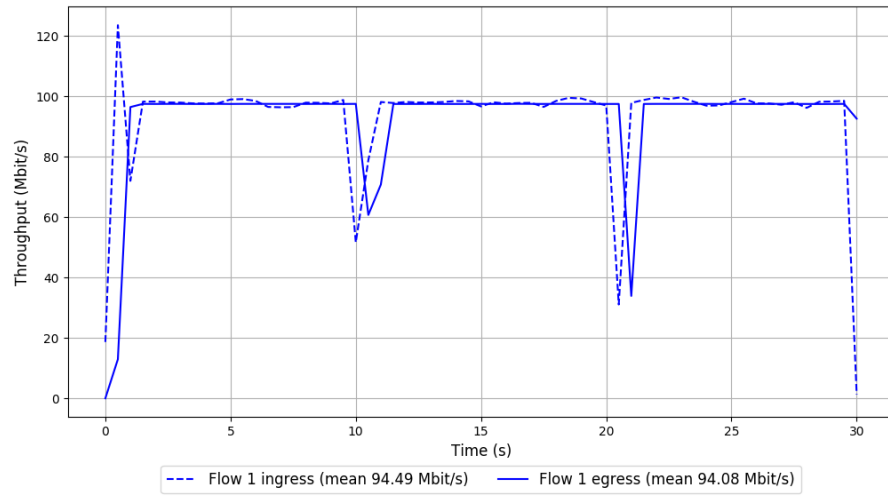


Run 4: Statistics of TCP BBR

Start at: 2018-11-30 12:15:47
End at: 2018-11-30 12:16:18
Local clock offset: 4.223 ms
Remote clock offset: -3.302 ms

Below is generated by plot.py at 2018-11-30 12:47:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.08 Mbit/s
95th percentile per-packet one-way delay: 57.511 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 94.08 Mbit/s
95th percentile per-packet one-way delay: 57.511 ms
Loss rate: 0.65%

Run 4: Report of TCP BBR — Data Link

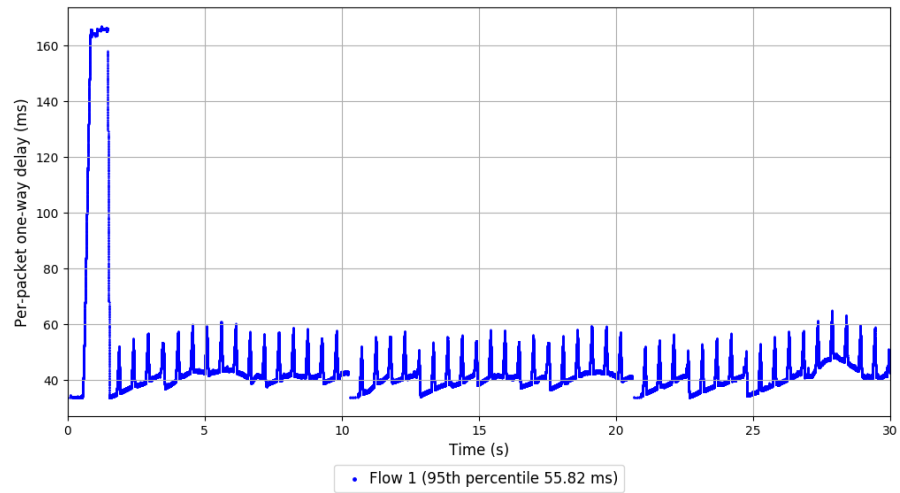
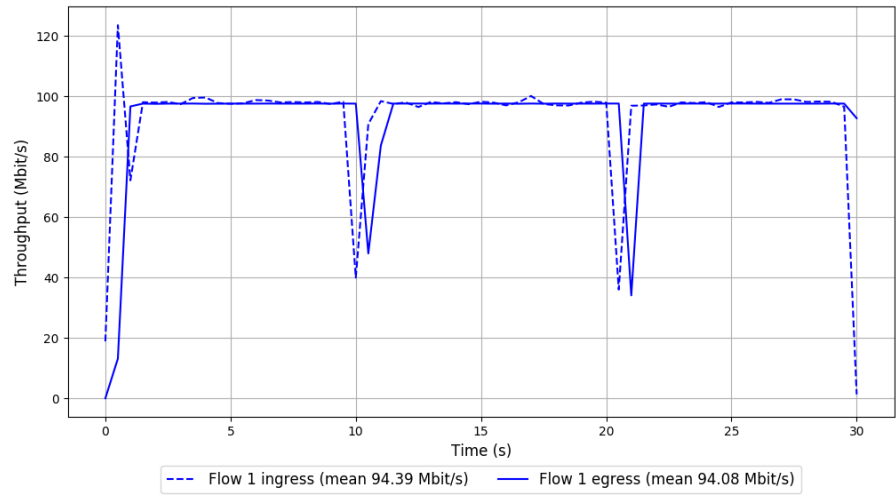


Run 5: Statistics of TCP BBR

Start at: 2018-11-30 12:38:01
End at: 2018-11-30 12:38:31
Local clock offset: 0.37 ms
Remote clock offset: -3.021 ms

Below is generated by plot.py at 2018-11-30 12:47:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.08 Mbit/s
95th percentile per-packet one-way delay: 55.820 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 94.08 Mbit/s
95th percentile per-packet one-way delay: 55.820 ms
Loss rate: 0.54%

Run 5: Report of TCP BBR — Data Link

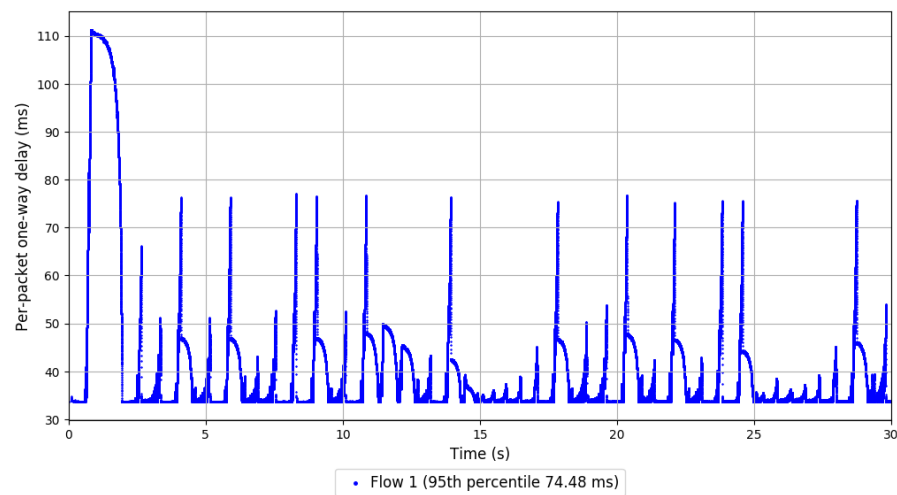
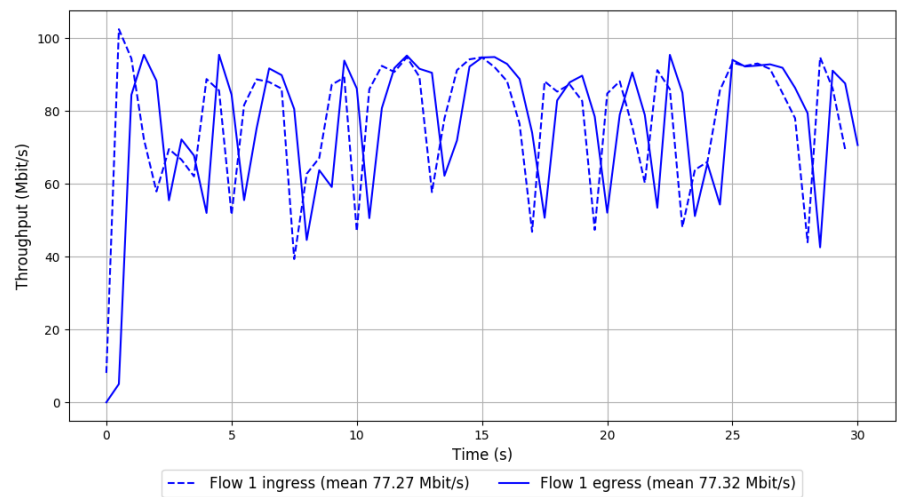


Run 1: Statistics of Copa

Start at: 2018-11-30 11:11:52
End at: 2018-11-30 11:12:22
Local clock offset: -3.585 ms
Remote clock offset: -6.044 ms

Below is generated by plot.py at 2018-11-30 12:47:57
Datalink statistics
-- Total of 1 flow:
Average throughput: 77.32 Mbit/s
95th percentile per-packet one-way delay: 74.480 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 77.32 Mbit/s
95th percentile per-packet one-way delay: 74.480 ms
Loss rate: 0.16%

Run 1: Report of Copa — Data Link

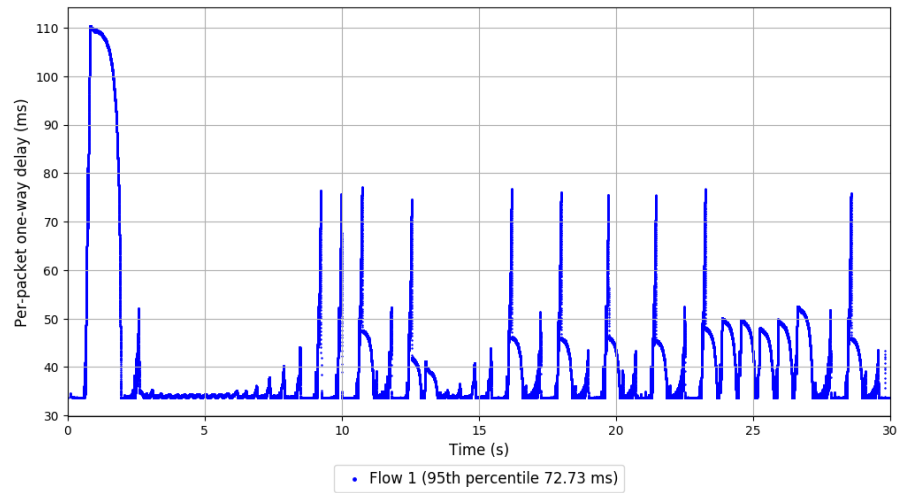
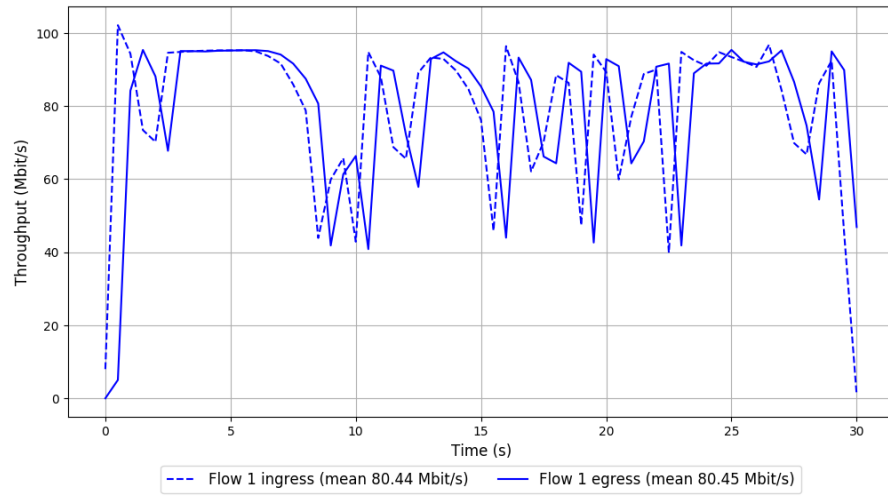


Run 2: Statistics of Copa

Start at: 2018-11-30 11:34:03
End at: 2018-11-30 11:34:33
Local clock offset: 0.094 ms
Remote clock offset: -5.173 ms

Below is generated by plot.py at 2018-11-30 12:48:06
Datalink statistics
-- Total of 1 flow:
Average throughput: 80.45 Mbit/s
95th percentile per-packet one-way delay: 72.732 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 80.45 Mbit/s
95th percentile per-packet one-way delay: 72.732 ms
Loss rate: 0.21%

Run 2: Report of Copa — Data Link

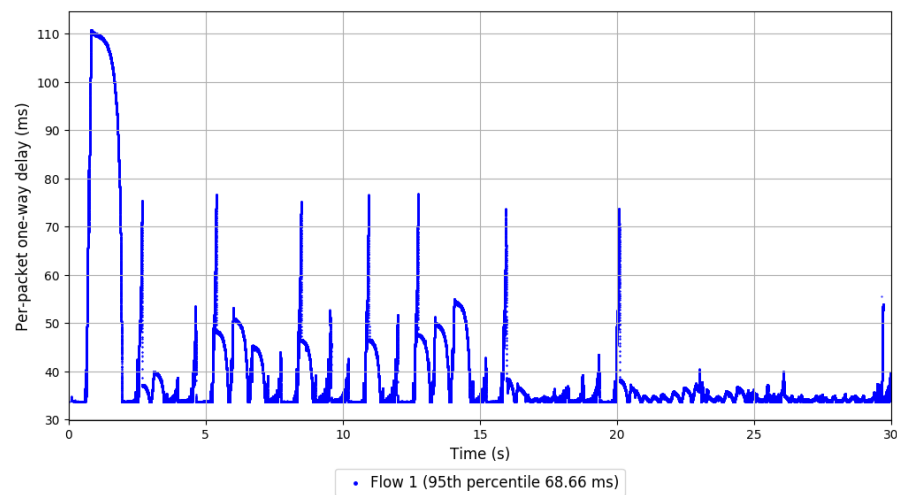
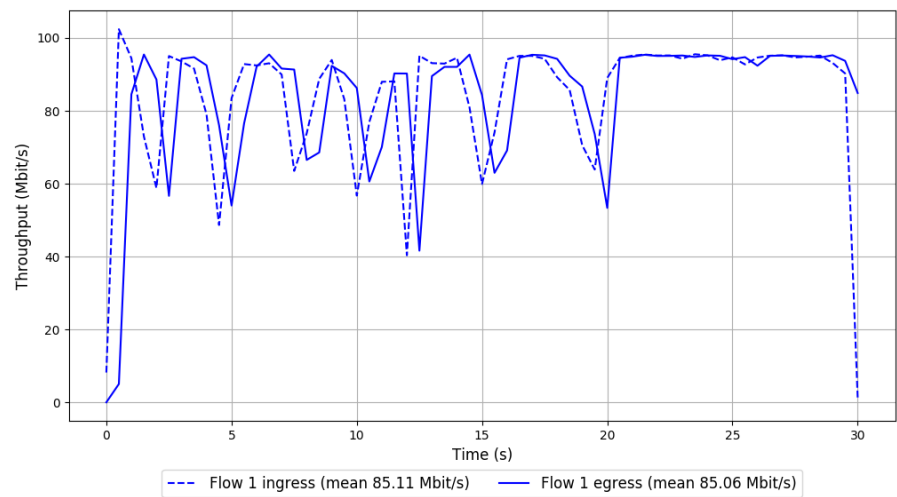


Run 3: Statistics of Copa

Start at: 2018-11-30 11:56:06
End at: 2018-11-30 11:56:36
Local clock offset: 3.04 ms
Remote clock offset: -4.086 ms

Below is generated by plot.py at 2018-11-30 12:48:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 85.06 Mbit/s
95th percentile per-packet one-way delay: 68.663 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 85.06 Mbit/s
95th percentile per-packet one-way delay: 68.663 ms
Loss rate: 0.28%

Run 3: Report of Copa — Data Link

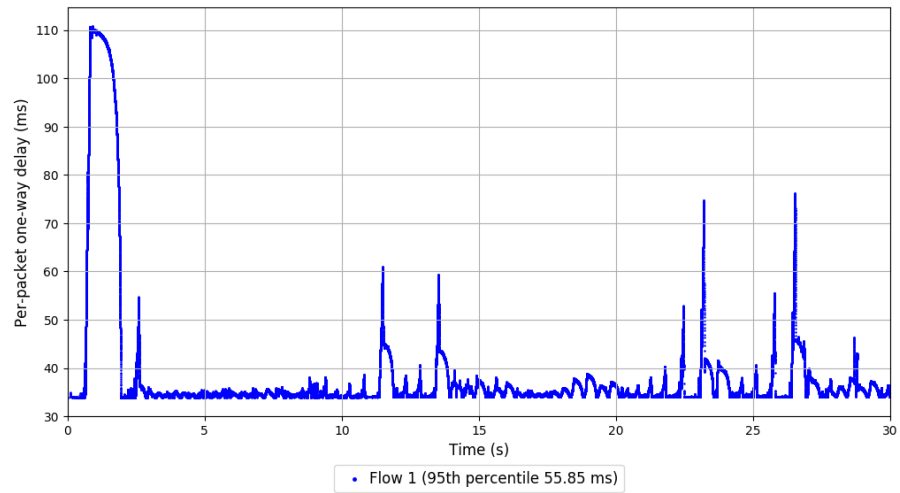
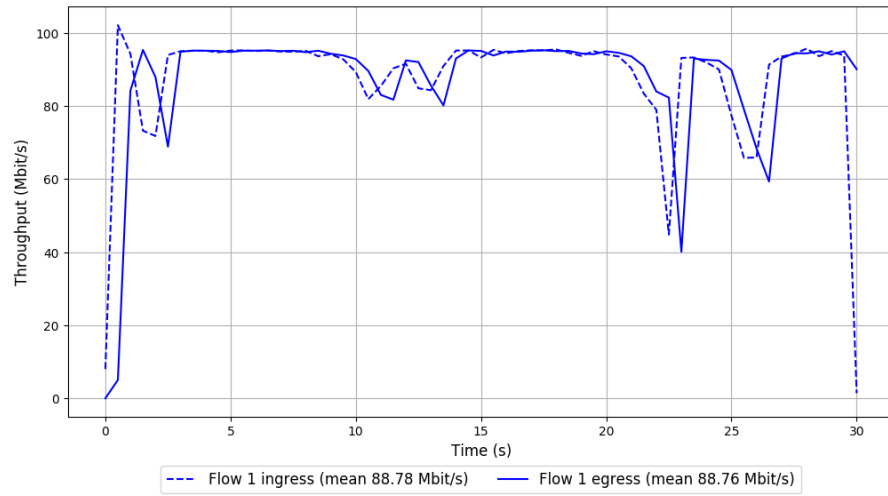


Run 4: Statistics of Copa

Start at: 2018-11-30 12:18:07
End at: 2018-11-30 12:18:37
Local clock offset: 3.249 ms
Remote clock offset: -3.268 ms

Below is generated by plot.py at 2018-11-30 12:49:27
Datalink statistics
-- Total of 1 flow:
Average throughput: 88.76 Mbit/s
95th percentile per-packet one-way delay: 55.848 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 88.76 Mbit/s
95th percentile per-packet one-way delay: 55.848 ms
Loss rate: 0.24%

Run 4: Report of Copa — Data Link

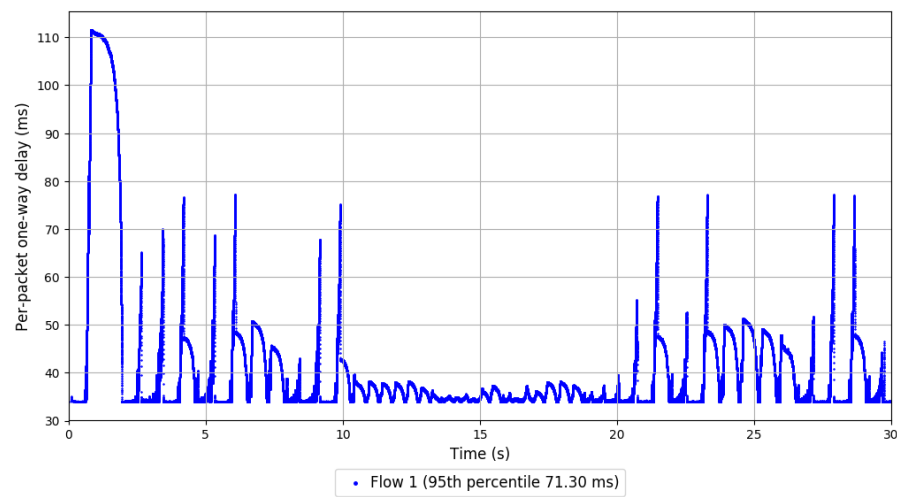
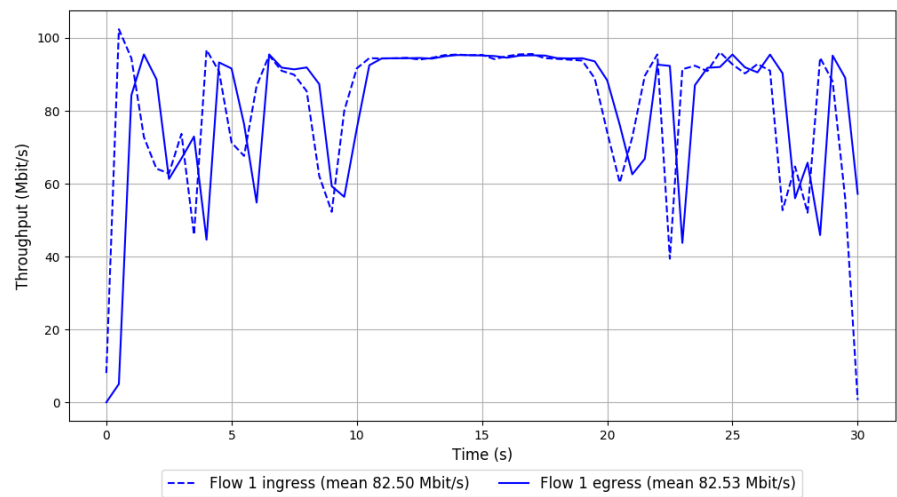


Run 5: Statistics of Copa

Start at: 2018-11-30 12:40:21
End at: 2018-11-30 12:40:51
Local clock offset: 0.268 ms
Remote clock offset: -3.129 ms

Below is generated by plot.py at 2018-11-30 12:49:27
Datalink statistics
-- Total of 1 flow:
Average throughput: 82.53 Mbit/s
95th percentile per-packet one-way delay: 71.300 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 82.53 Mbit/s
95th percentile per-packet one-way delay: 71.300 ms
Loss rate: 0.18%

Run 5: Report of Copa — Data Link

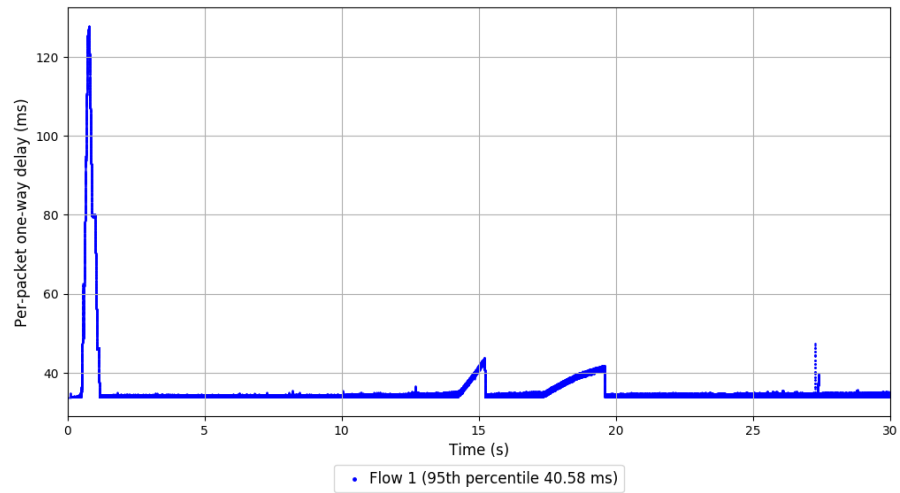
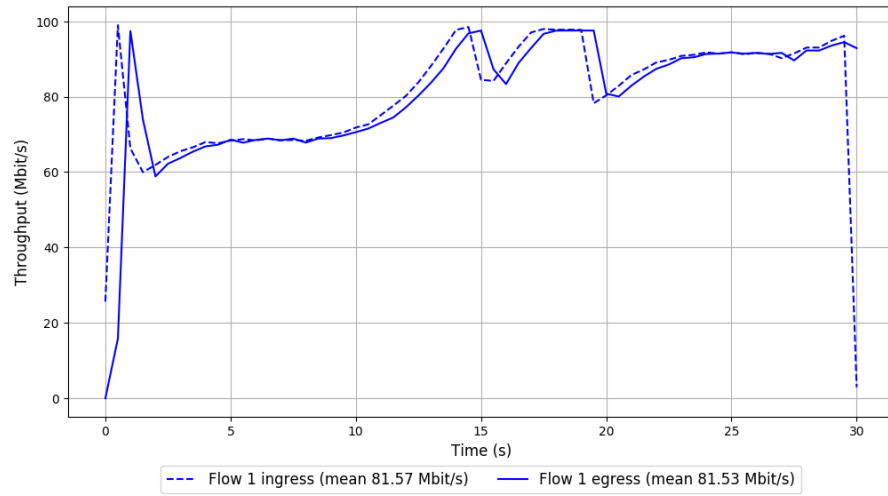


Run 1: Statistics of TCP Cubic

Start at: 2018-11-30 11:10:42
End at: 2018-11-30 11:11:12
Local clock offset: -3.498 ms
Remote clock offset: -6.032 ms

Below is generated by plot.py at 2018-11-30 12:49:27
Datalink statistics
-- Total of 1 flow:
Average throughput: 81.53 Mbit/s
95th percentile per-packet one-way delay: 40.577 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 81.53 Mbit/s
95th percentile per-packet one-way delay: 40.577 ms
Loss rate: 0.27%

Run 1: Report of TCP Cubic — Data Link

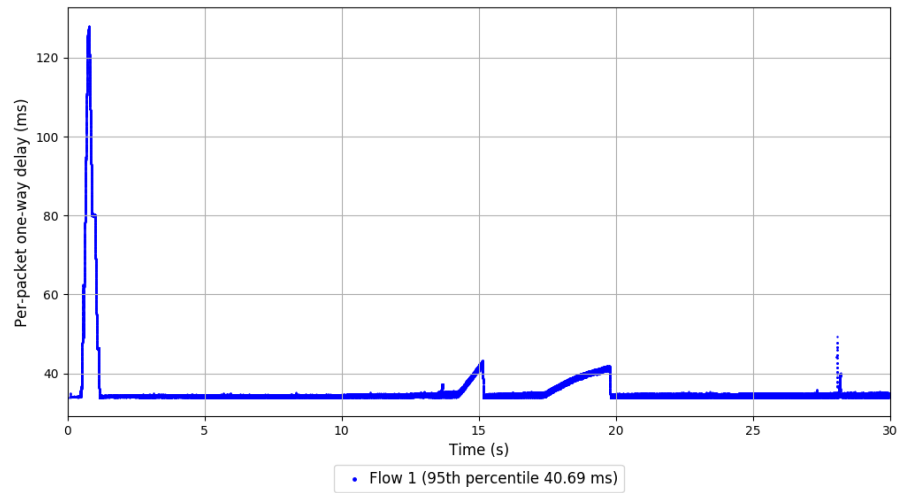
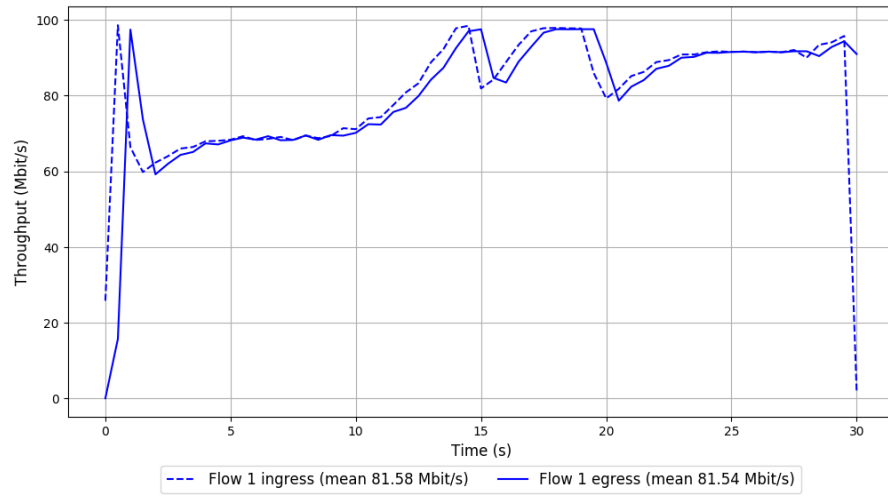


Run 2: Statistics of TCP Cubic

Start at: 2018-11-30 11:32:52
End at: 2018-11-30 11:33:22
Local clock offset: 0.02 ms
Remote clock offset: -5.489 ms

Below is generated by plot.py at 2018-11-30 12:49:27
Datalink statistics
-- Total of 1 flow:
Average throughput: 81.54 Mbit/s
95th percentile per-packet one-way delay: 40.686 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 81.54 Mbit/s
95th percentile per-packet one-way delay: 40.686 ms
Loss rate: 0.27%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-11-30 11:54:57

End at: 2018-11-30 11:55:27

Local clock offset: 2.871 ms

Remote clock offset: -4.25 ms

Below is generated by plot.py at 2018-11-30 12:49:27

Datalink statistics

-- Total of 1 flow:

Average throughput: 81.47 Mbit/s

95th percentile per-packet one-way delay: 40.755 ms

Loss rate: 0.28%

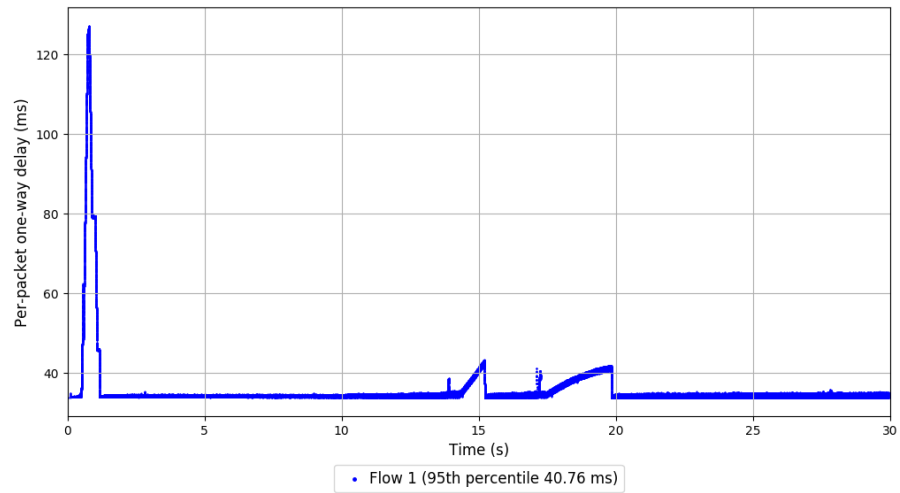
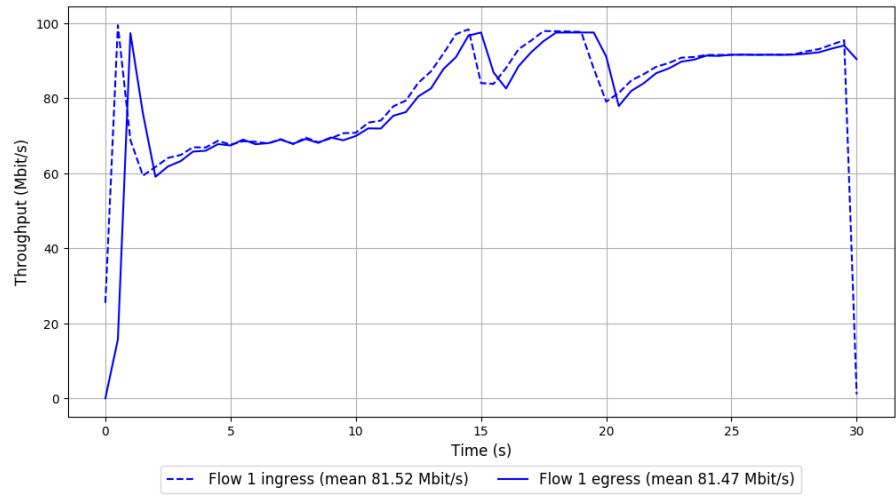
-- Flow 1:

Average throughput: 81.47 Mbit/s

95th percentile per-packet one-way delay: 40.755 ms

Loss rate: 0.28%

Run 3: Report of TCP Cubic — Data Link

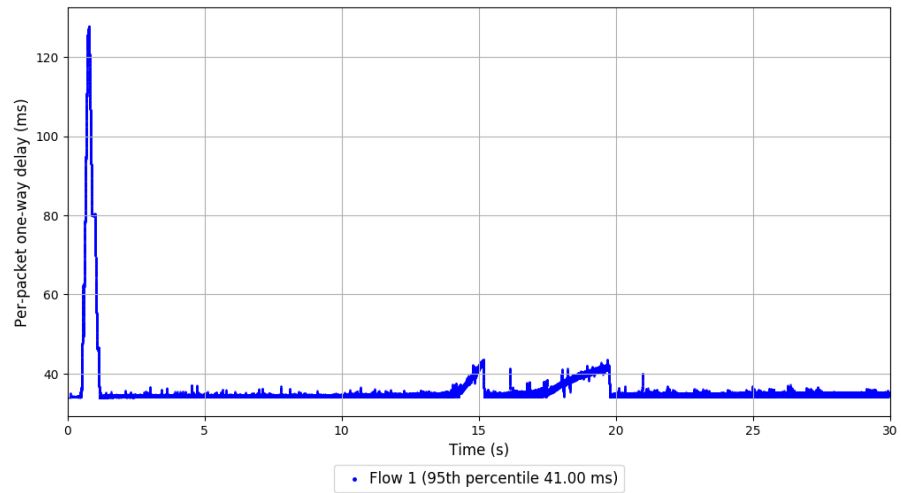
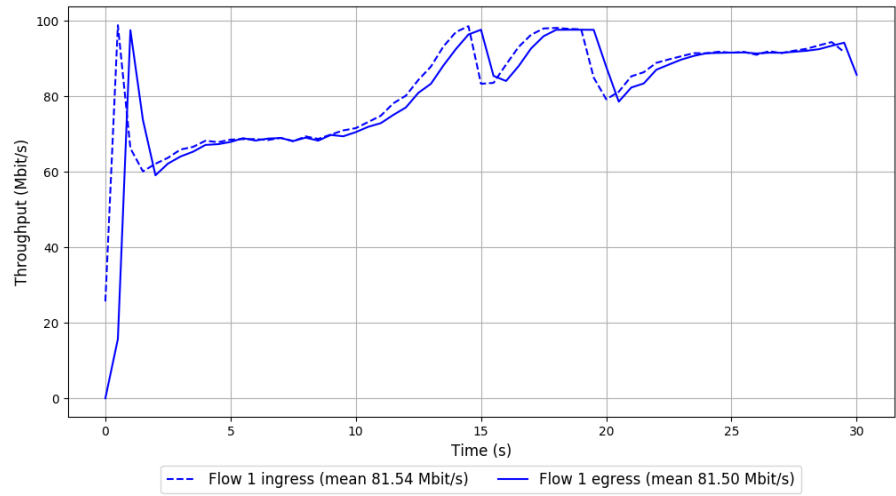


Run 4: Statistics of TCP Cubic

Start at: 2018-11-30 12:16:58
End at: 2018-11-30 12:17:28
Local clock offset: 3.647 ms
Remote clock offset: -3.443 ms

Below is generated by plot.py at 2018-11-30 12:49:27
Datalink statistics
-- Total of 1 flow:
Average throughput: 81.50 Mbit/s
95th percentile per-packet one-way delay: 40.998 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 81.50 Mbit/s
95th percentile per-packet one-way delay: 40.998 ms
Loss rate: 0.27%

Run 4: Report of TCP Cubic — Data Link

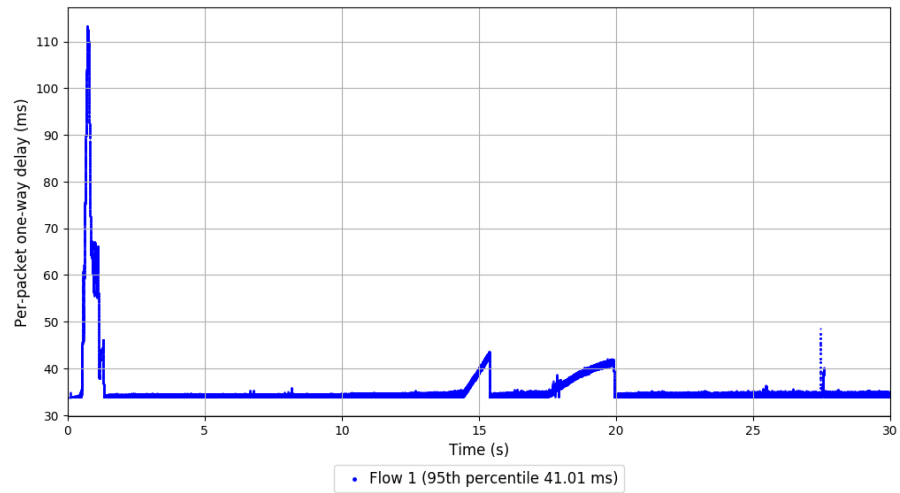
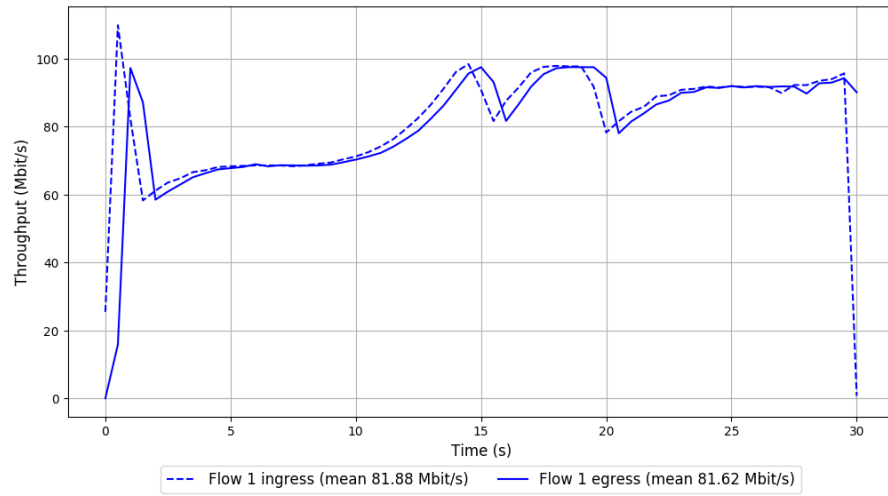


Run 5: Statistics of TCP Cubic

Start at: 2018-11-30 12:39:11
End at: 2018-11-30 12:39:41
Local clock offset: 0.318 ms
Remote clock offset: -2.996 ms

Below is generated by plot.py at 2018-11-30 12:49:27
Datalink statistics
-- Total of 1 flow:
Average throughput: 81.62 Mbit/s
95th percentile per-packet one-way delay: 41.008 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 81.62 Mbit/s
95th percentile per-packet one-way delay: 41.008 ms
Loss rate: 0.53%

Run 5: Report of TCP Cubic — Data Link

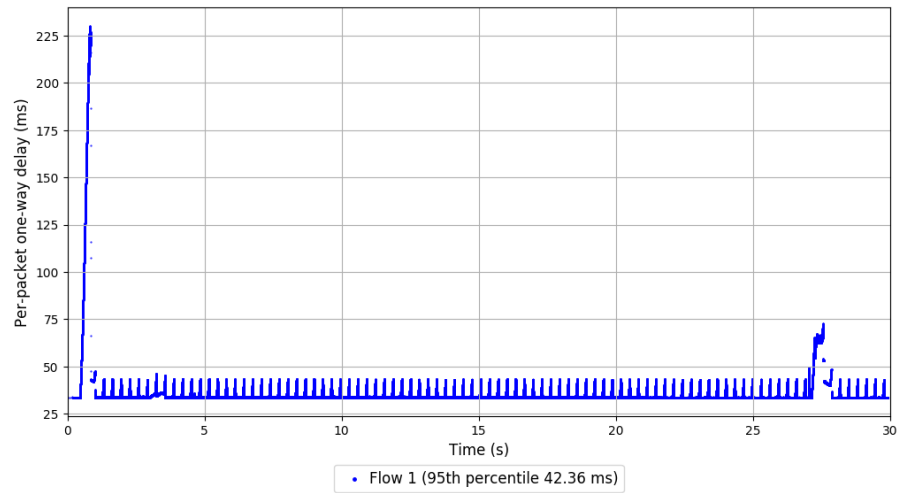
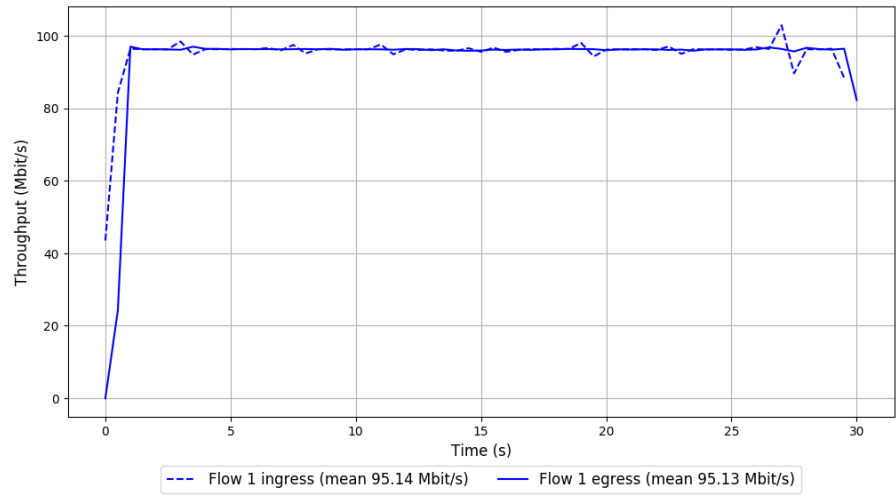


Run 1: Statistics of FillP

Start at: 2018-11-30 11:14:17
End at: 2018-11-30 11:14:47
Local clock offset: -3.734 ms
Remote clock offset: -5.981 ms

Below is generated by plot.py at 2018-11-30 12:49:37
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.13 Mbit/s
95th percentile per-packet one-way delay: 42.363 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 95.13 Mbit/s
95th percentile per-packet one-way delay: 42.363 ms
Loss rate: 0.23%

Run 1: Report of FillP — Data Link

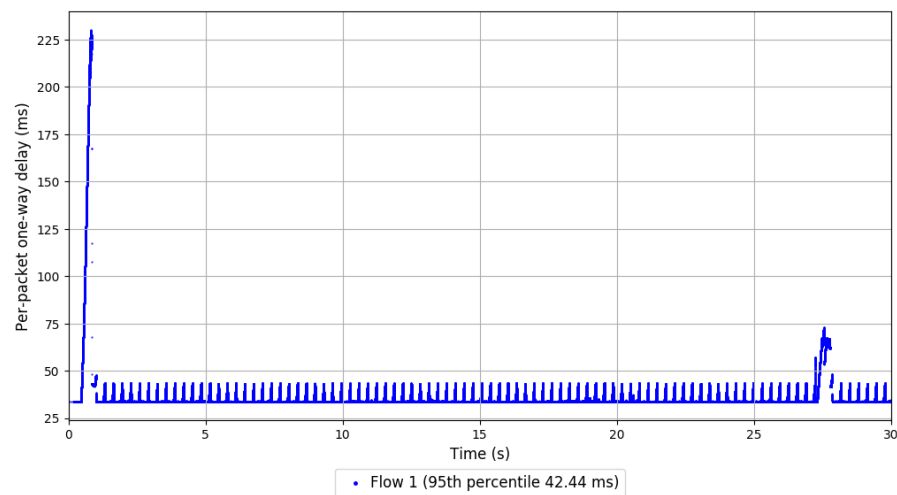
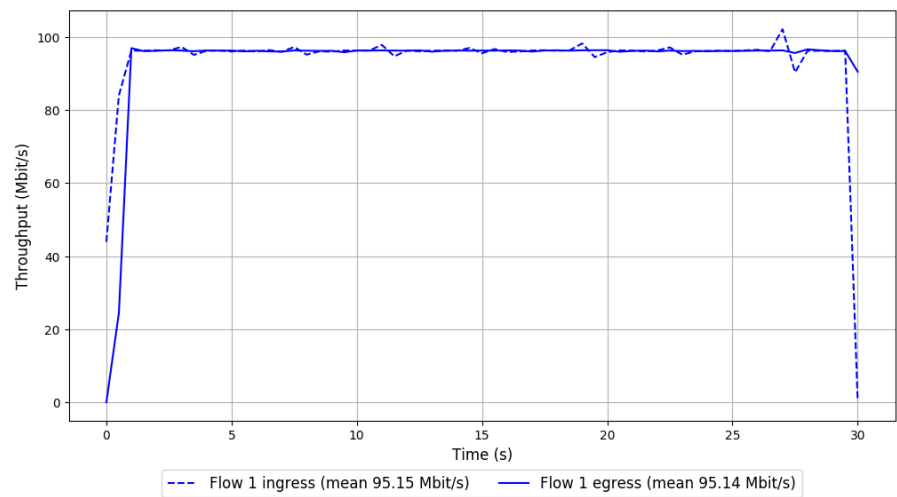


Run 2: Statistics of FillP

Start at: 2018-11-30 11:36:30
End at: 2018-11-30 11:37:00
Local clock offset: 0.217 ms
Remote clock offset: -5.093 ms

Below is generated by plot.py at 2018-11-30 12:49:42
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.14 Mbit/s
95th percentile per-packet one-way delay: 42.440 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 95.14 Mbit/s
95th percentile per-packet one-way delay: 42.440 ms
Loss rate: 0.23%

Run 2: Report of FillP — Data Link

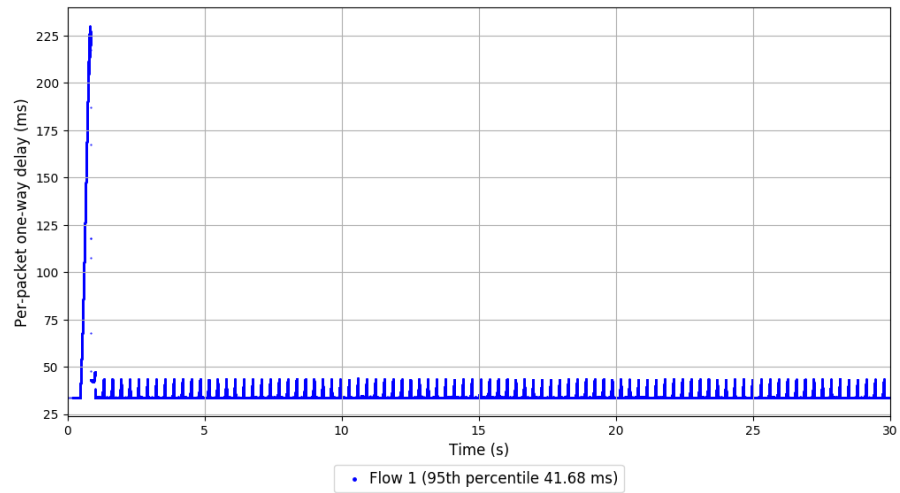
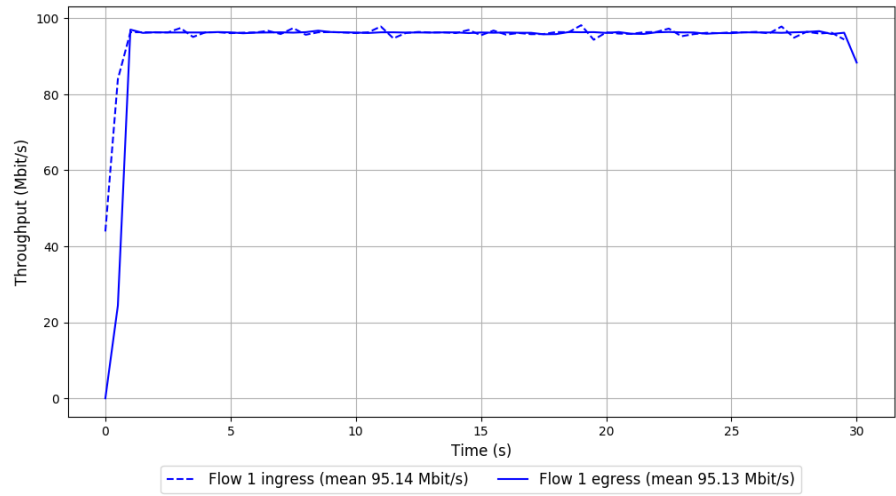


Run 3: Statistics of FillP

Start at: 2018-11-30 11:58:31
End at: 2018-11-30 11:59:02
Local clock offset: 3.3 ms
Remote clock offset: -3.977 ms

Below is generated by plot.py at 2018-11-30 12:49:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.13 Mbit/s
95th percentile per-packet one-way delay: 41.683 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 95.13 Mbit/s
95th percentile per-packet one-way delay: 41.683 ms
Loss rate: 0.22%

Run 3: Report of FillP — Data Link

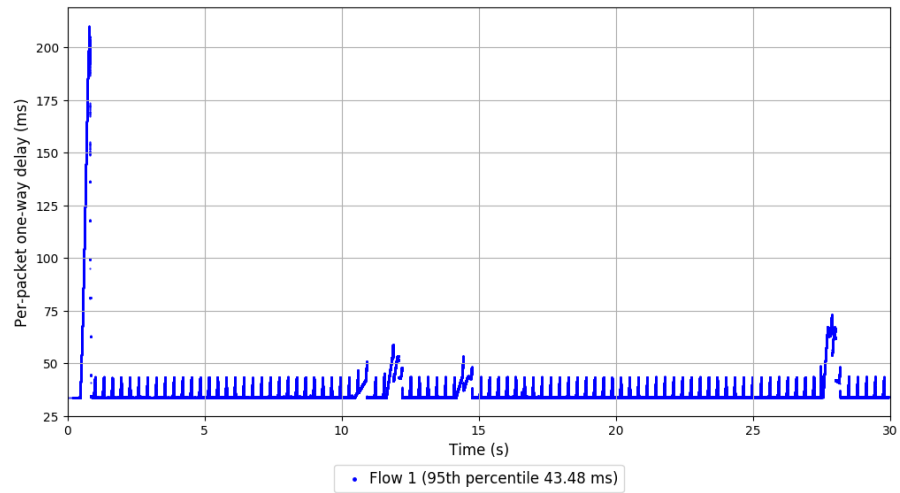
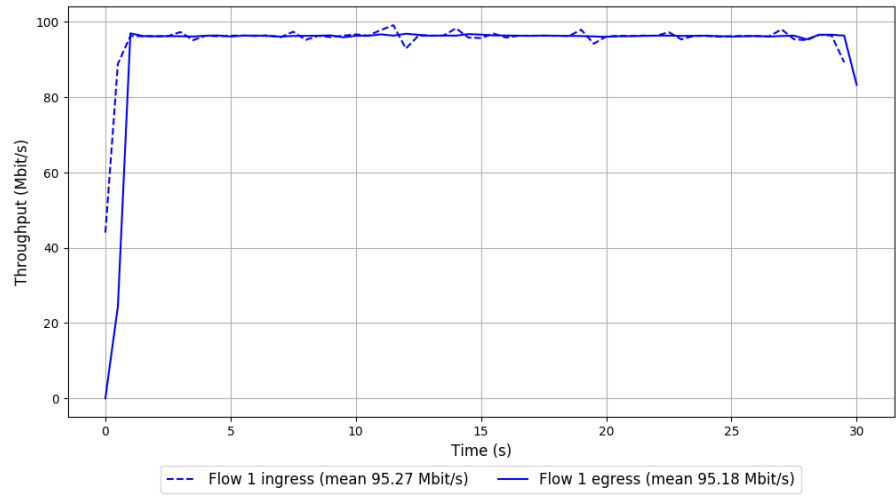


Run 4: Statistics of FillP

Start at: 2018-11-30 12:20:33
End at: 2018-11-30 12:21:03
Local clock offset: 2.495 ms
Remote clock offset: -3.289 ms

Below is generated by plot.py at 2018-11-30 12:49:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.18 Mbit/s
95th percentile per-packet one-way delay: 43.481 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 95.18 Mbit/s
95th percentile per-packet one-way delay: 43.481 ms
Loss rate: 0.32%

Run 4: Report of FillP — Data Link

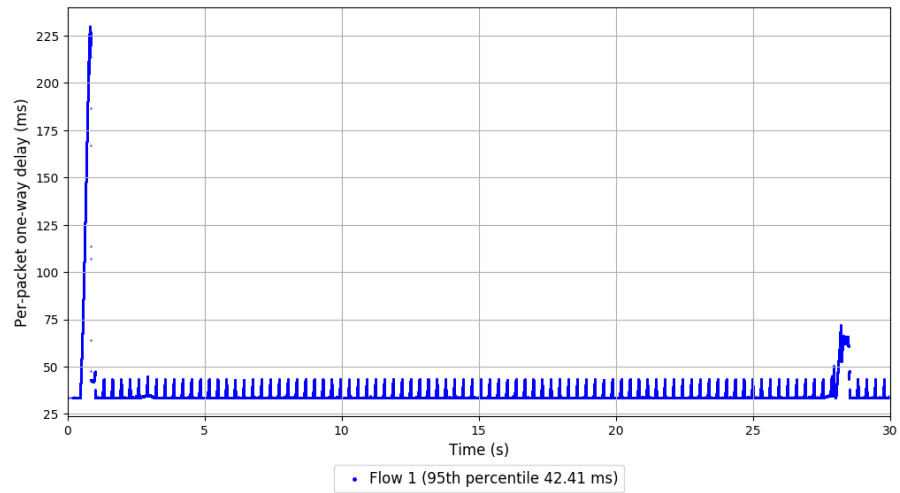
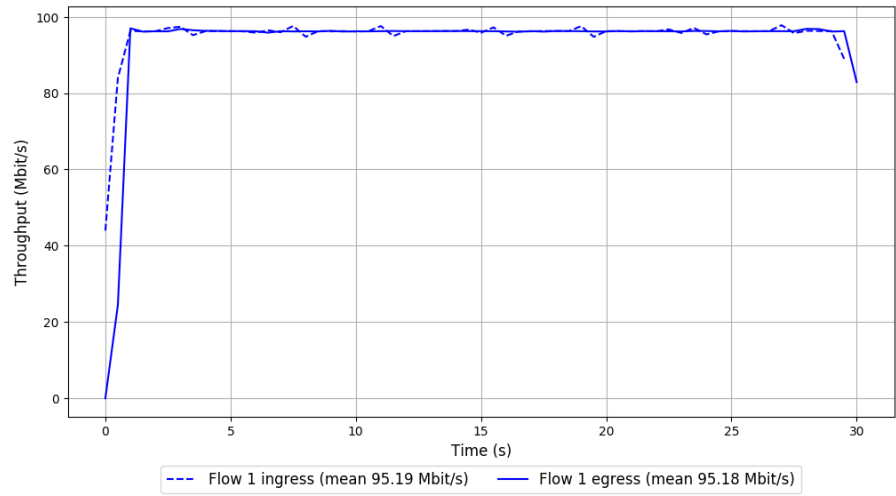


Run 5: Statistics of FillP

Start at: 2018-11-30 12:42:46
End at: 2018-11-30 12:43:16
Local clock offset: 0.183 ms
Remote clock offset: -2.857 ms

Below is generated by plot.py at 2018-11-30 12:50:24
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.18 Mbit/s
95th percentile per-packet one-way delay: 42.410 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 95.18 Mbit/s
95th percentile per-packet one-way delay: 42.410 ms
Loss rate: 0.23%

Run 5: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2018-11-30 10:54:32

End at: 2018-11-30 10:55:02

Local clock offset: -2.429 ms

Remote clock offset: -6.365 ms

Below is generated by plot.py at 2018-11-30 12:50:24

Datalink statistics

-- Total of 1 flow:

Average throughput: 92.83 Mbit/s

95th percentile per-packet one-way delay: 41.036 ms

Loss rate: 0.22%

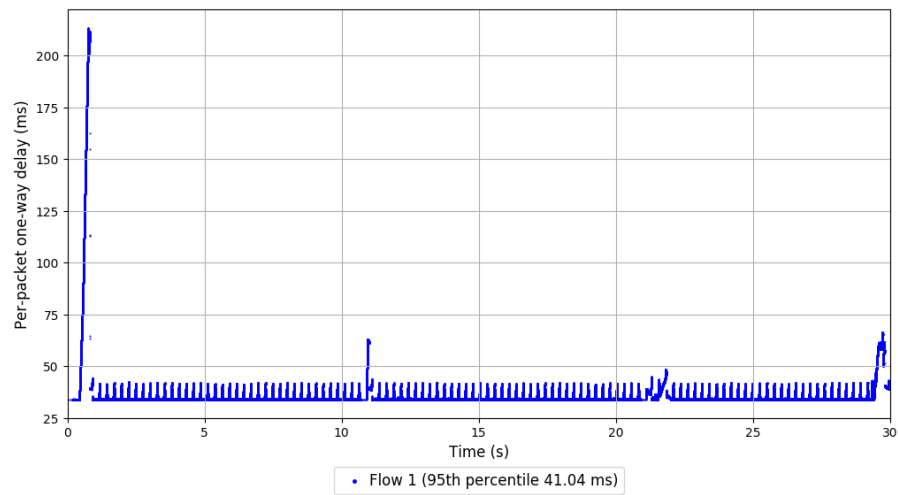
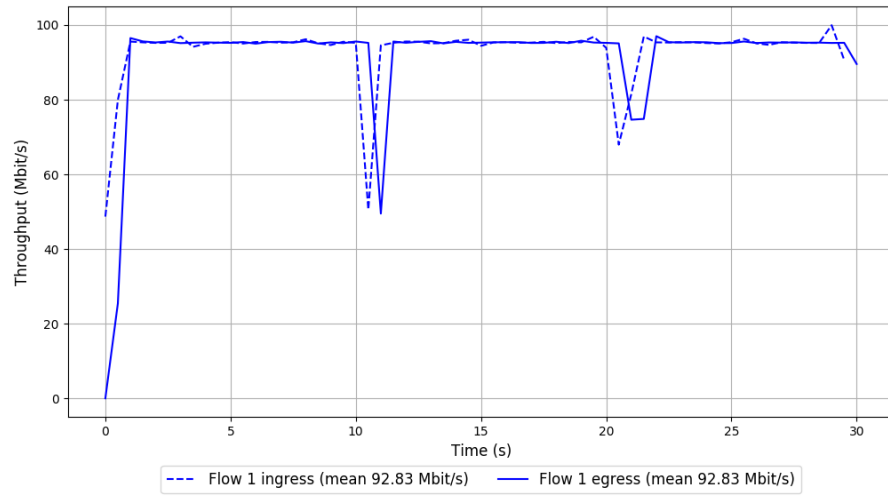
-- Flow 1:

Average throughput: 92.83 Mbit/s

95th percentile per-packet one-way delay: 41.036 ms

Loss rate: 0.22%

Run 1: Report of FillP-Sheep — Data Link



Run 2: Statistics of FillP-Sheep

Start at: 2018-11-30 11:16:36

End at: 2018-11-30 11:17:06

Local clock offset: -2.997 ms

Remote clock offset: -6.03 ms

Below is generated by plot.py at 2018-11-30 12:50:40

Datalink statistics

-- Total of 1 flow:

Average throughput: 92.75 Mbit/s

95th percentile per-packet one-way delay: 39.793 ms

Loss rate: 0.27%

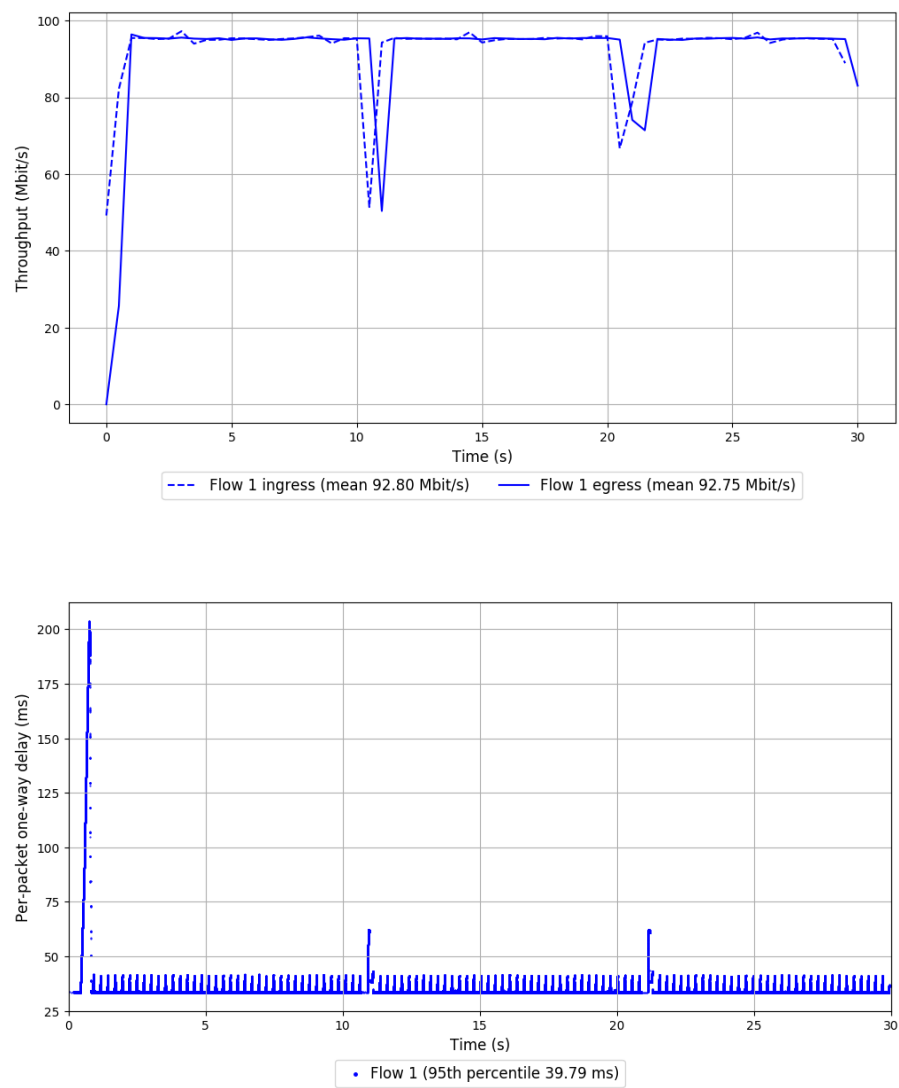
-- Flow 1:

Average throughput: 92.75 Mbit/s

95th percentile per-packet one-way delay: 39.793 ms

Loss rate: 0.27%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2018-11-30 11:38:47

End at: 2018-11-30 11:39:17

Local clock offset: 0.325 ms

Remote clock offset: -5.163 ms

Below is generated by plot.py at 2018-11-30 12:50:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 92.95 Mbit/s

95th percentile per-packet one-way delay: 40.028 ms

Loss rate: 0.23%

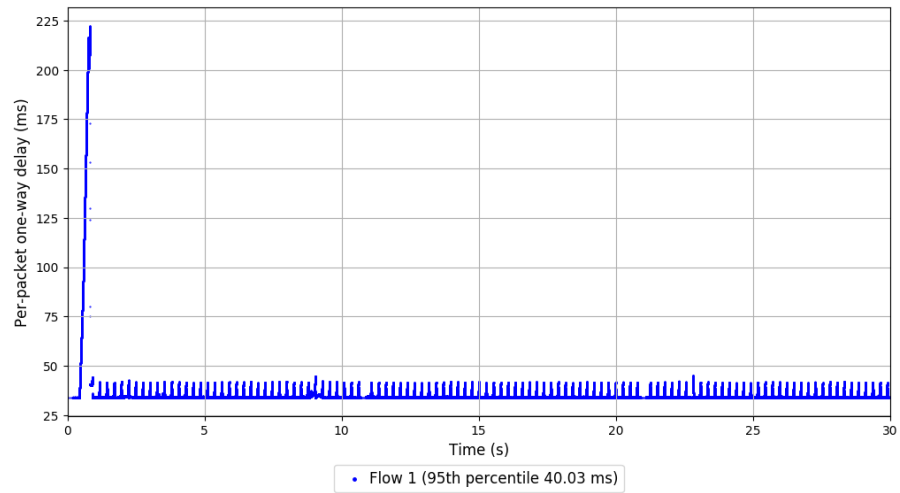
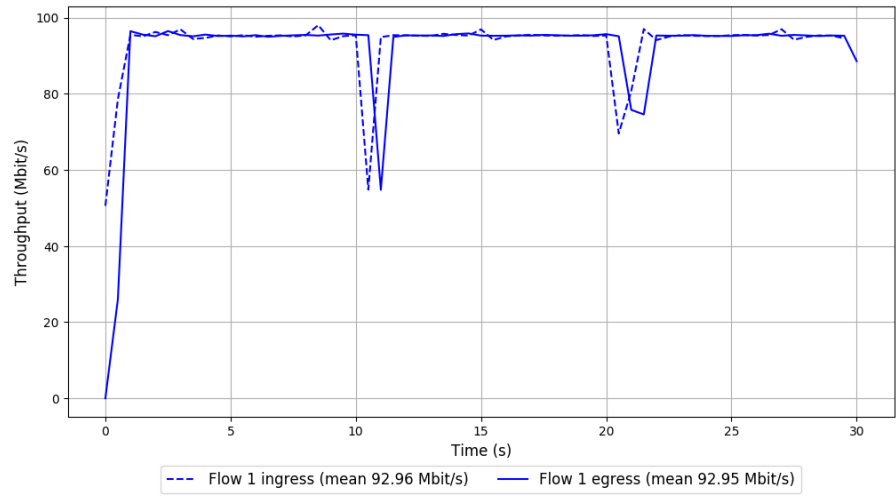
-- Flow 1:

Average throughput: 92.95 Mbit/s

95th percentile per-packet one-way delay: 40.028 ms

Loss rate: 0.23%

Run 3: Report of FillP-Sheep — Data Link

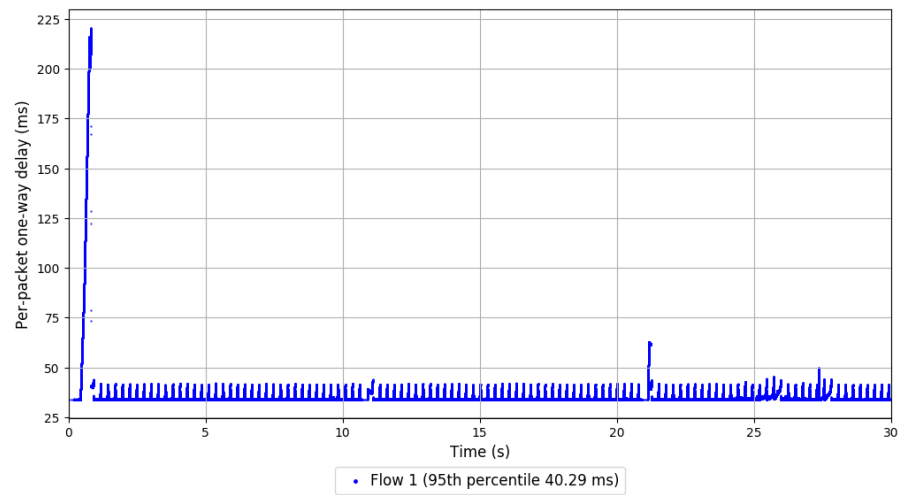
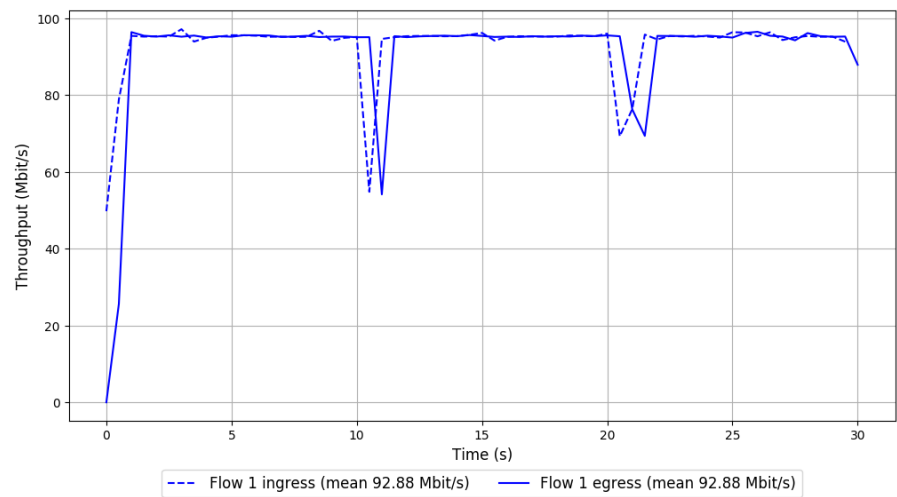


Run 4: Statistics of FillP-Sheep

Start at: 2018-11-30 12:00:49
End at: 2018-11-30 12:01:19
Local clock offset: 3.562 ms
Remote clock offset: -4.083 ms

Below is generated by plot.py at 2018-11-30 12:50:59
Datalink statistics
-- Total of 1 flow:
Average throughput: 92.88 Mbit/s
95th percentile per-packet one-way delay: 40.287 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 92.88 Mbit/s
95th percentile per-packet one-way delay: 40.287 ms
Loss rate: 0.23%

Run 4: Report of FillP-Sheep — Data Link



Run 5: Statistics of FillP-Sheep

Start at: 2018-11-30 12:22:52

End at: 2018-11-30 12:23:22

Local clock offset: 1.932 ms

Remote clock offset: -3.345 ms

Below is generated by plot.py at 2018-11-30 12:51:05

Datalink statistics

-- Total of 1 flow:

Average throughput: 92.79 Mbit/s

95th percentile per-packet one-way delay: 40.255 ms

Loss rate: 0.22%

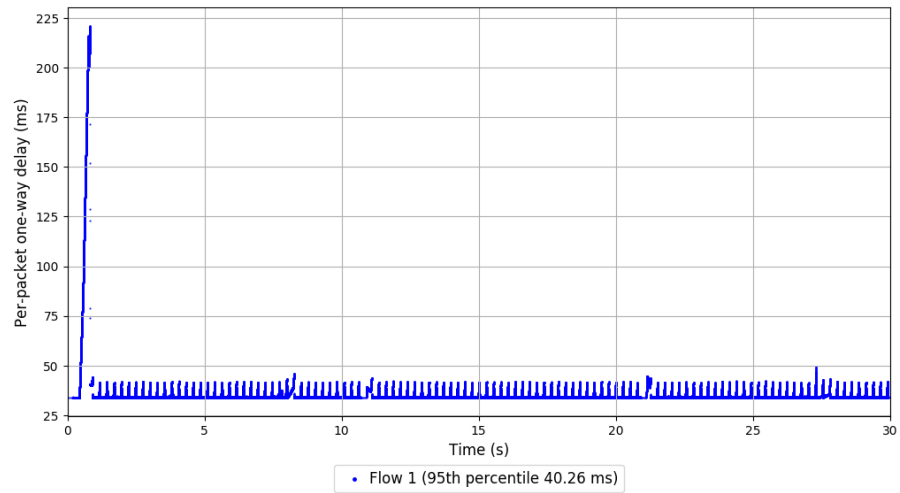
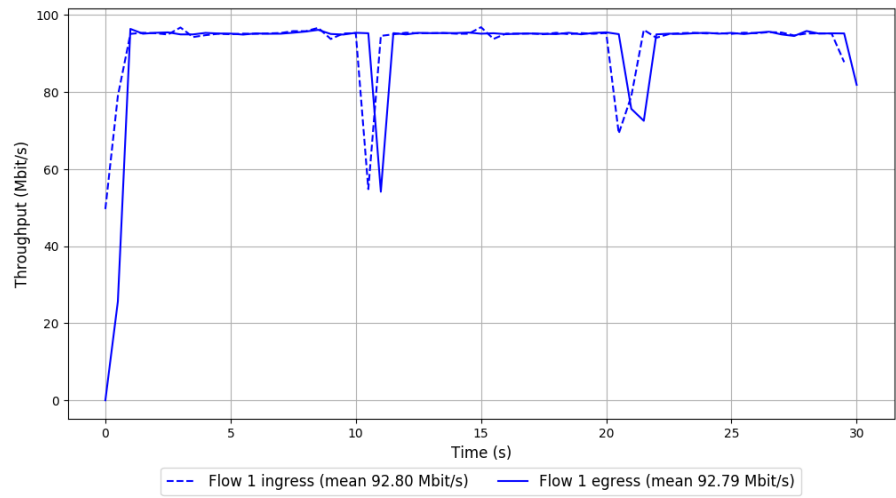
-- Flow 1:

Average throughput: 92.79 Mbit/s

95th percentile per-packet one-way delay: 40.255 ms

Loss rate: 0.22%

Run 5: Report of FillP-Sheep — Data Link

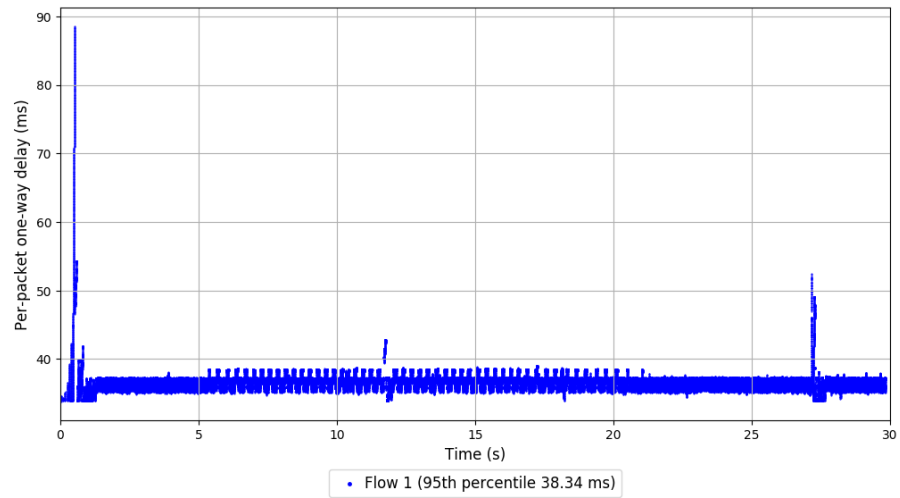
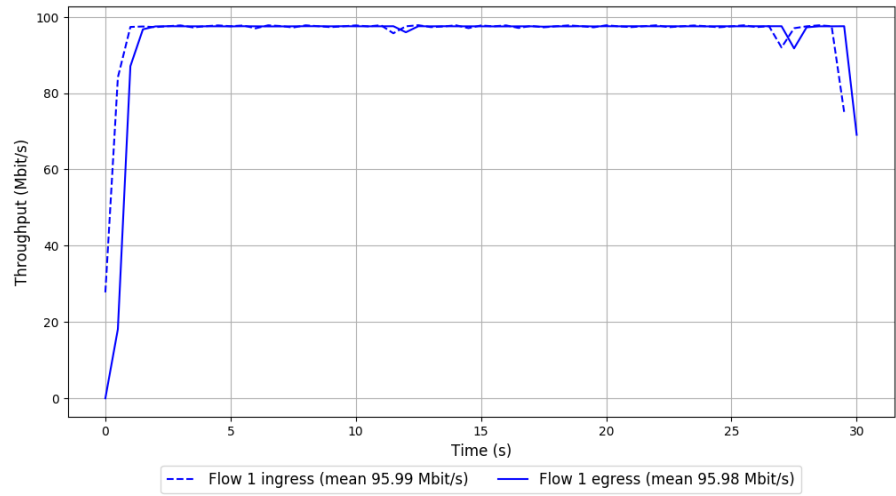


Run 1: Statistics of Indigo

Start at: 2018-11-30 11:02:37
End at: 2018-11-30 11:03:07
Local clock offset: -2.965 ms
Remote clock offset: -6.199 ms

Below is generated by plot.py at 2018-11-30 12:51:05
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.98 Mbit/s
95th percentile per-packet one-way delay: 38.341 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 95.98 Mbit/s
95th percentile per-packet one-way delay: 38.341 ms
Loss rate: 0.23%

Run 1: Report of Indigo — Data Link

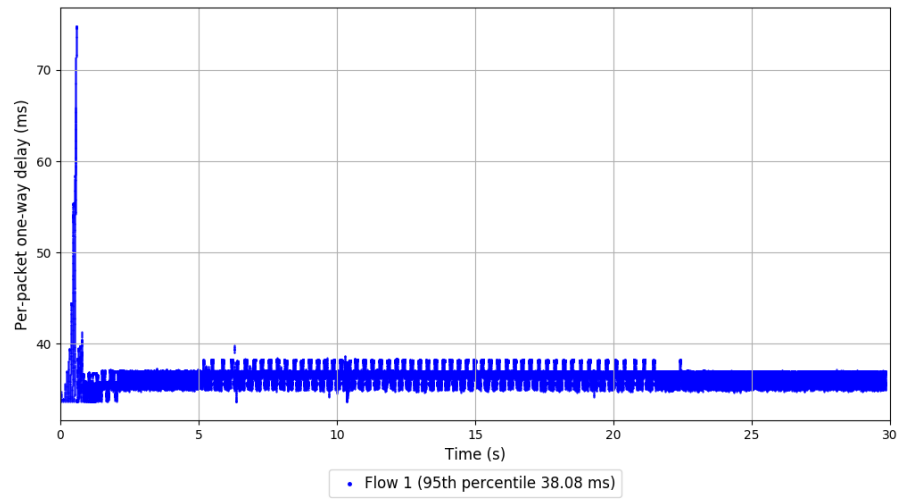
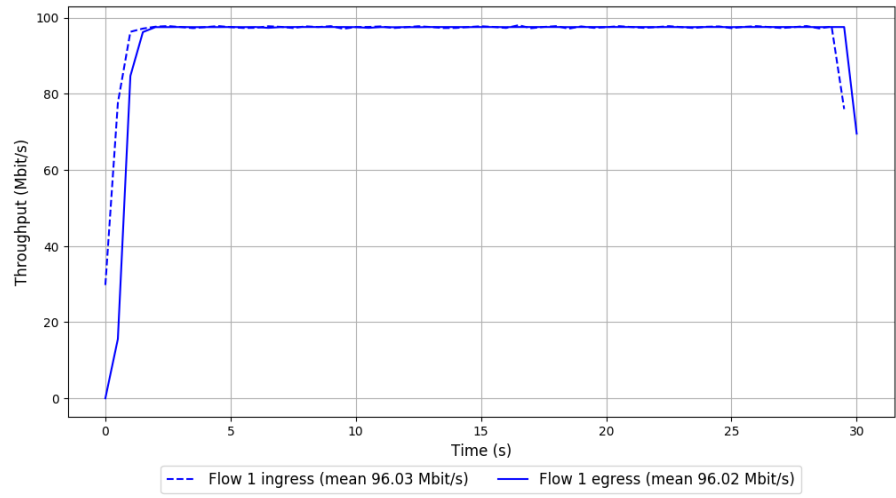


Run 2: Statistics of Indigo

Start at: 2018-11-30 11:24:43
End at: 2018-11-30 11:25:13
Local clock offset: -0.901 ms
Remote clock offset: -5.604 ms

Below is generated by plot.py at 2018-11-30 12:51:05
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.02 Mbit/s
95th percentile per-packet one-way delay: 38.075 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 96.02 Mbit/s
95th percentile per-packet one-way delay: 38.075 ms
Loss rate: 0.23%

Run 2: Report of Indigo — Data Link

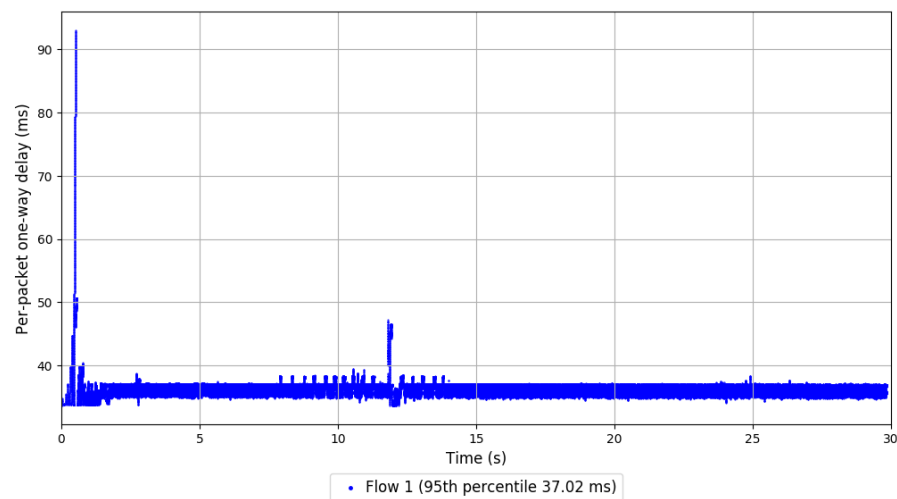
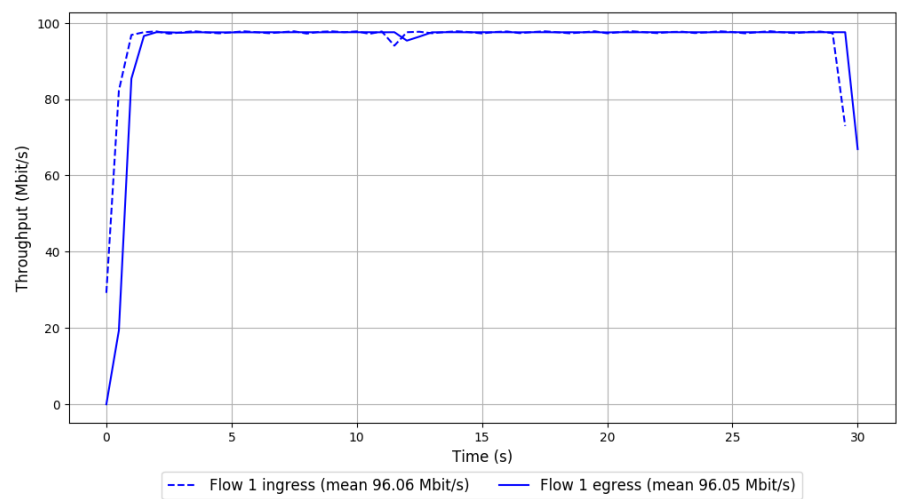


Run 3: Statistics of Indigo

Start at: 2018-11-30 11:46:51
End at: 2018-11-30 11:47:21
Local clock offset: 1.173 ms
Remote clock offset: -4.503 ms

Below is generated by plot.py at 2018-11-30 12:51:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.05 Mbit/s
95th percentile per-packet one-way delay: 37.021 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 96.05 Mbit/s
95th percentile per-packet one-way delay: 37.021 ms
Loss rate: 0.23%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2018-11-30 12:08:52

End at: 2018-11-30 12:09:22

Local clock offset: 4.212 ms

Remote clock offset: -3.763 ms

Below is generated by plot.py at 2018-11-30 12:51:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.87 Mbit/s

95th percentile per-packet one-way delay: 38.447 ms

Loss rate: 0.23%

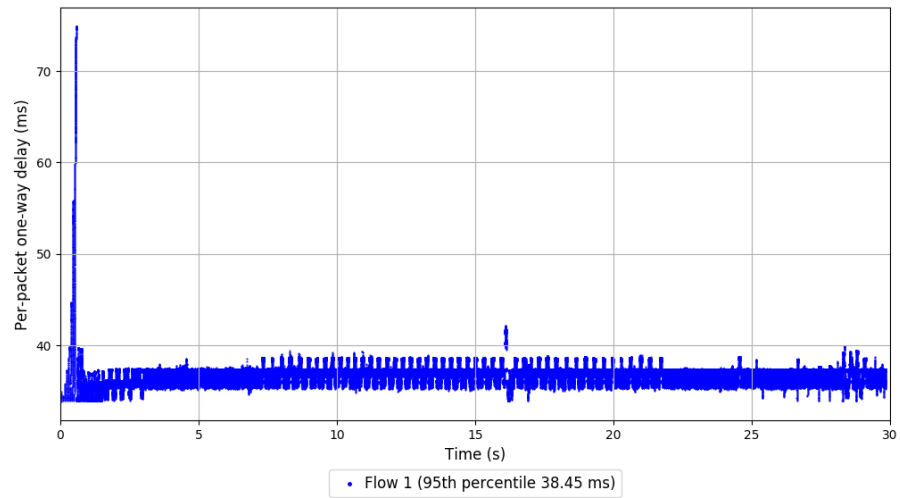
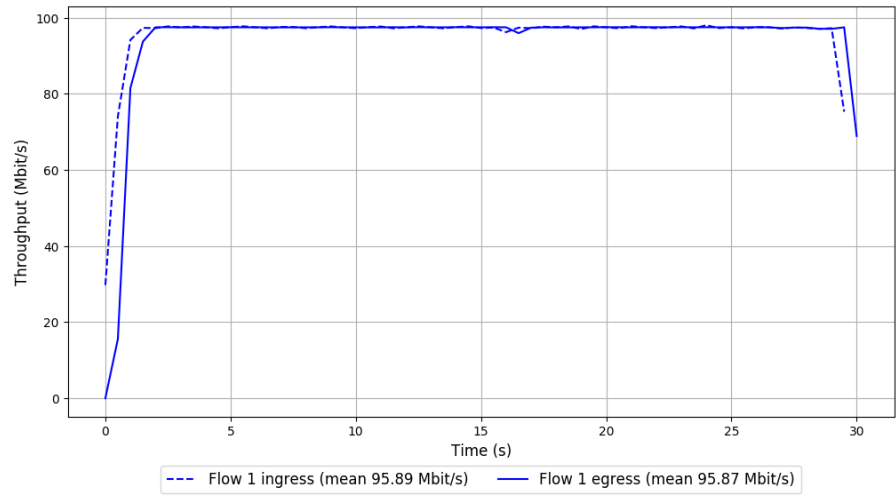
-- Flow 1:

Average throughput: 95.87 Mbit/s

95th percentile per-packet one-way delay: 38.447 ms

Loss rate: 0.23%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2018-11-30 12:30:56

End at: 2018-11-30 12:31:26

Local clock offset: 0.844 ms

Remote clock offset: -3.094 ms

Below is generated by plot.py at 2018-11-30 12:51:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.87 Mbit/s

95th percentile per-packet one-way delay: 38.332 ms

Loss rate: 0.23%

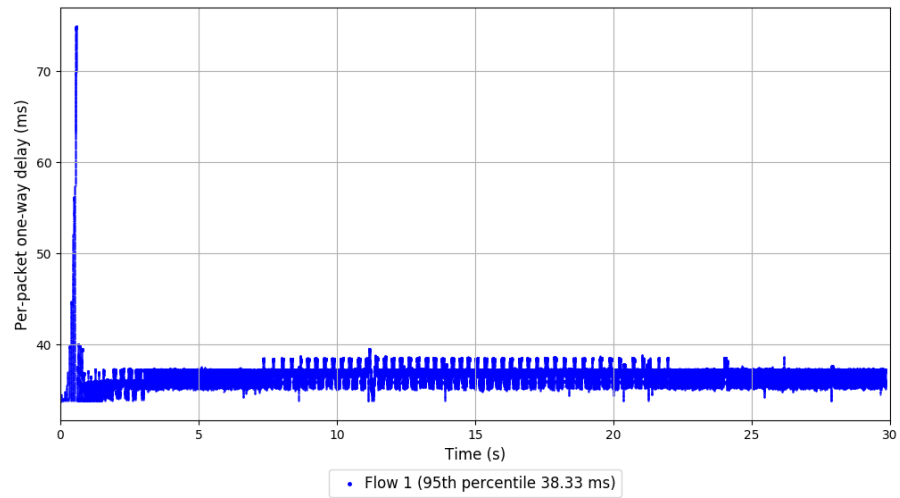
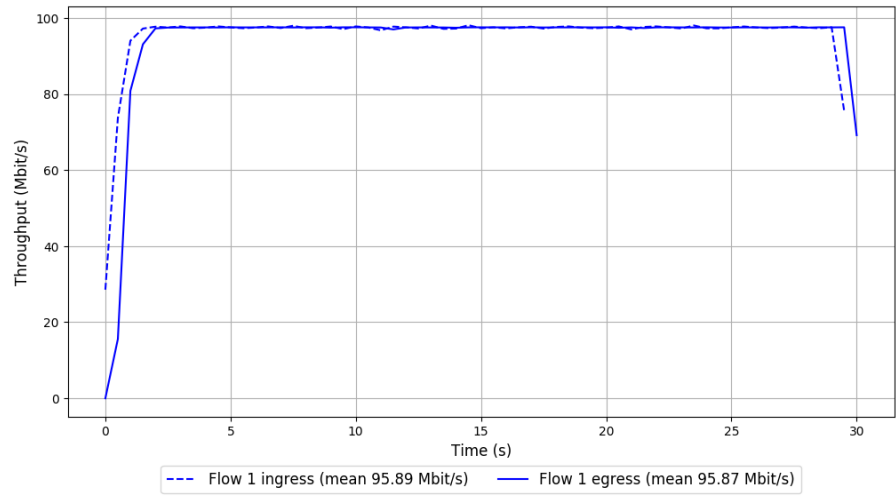
-- Flow 1:

Average throughput: 95.87 Mbit/s

95th percentile per-packet one-way delay: 38.332 ms

Loss rate: 0.23%

Run 5: Report of Indigo — Data Link

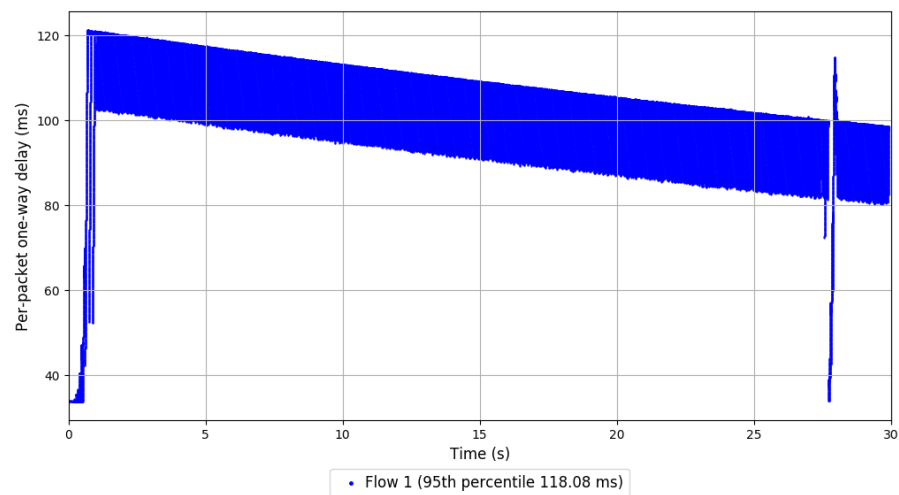
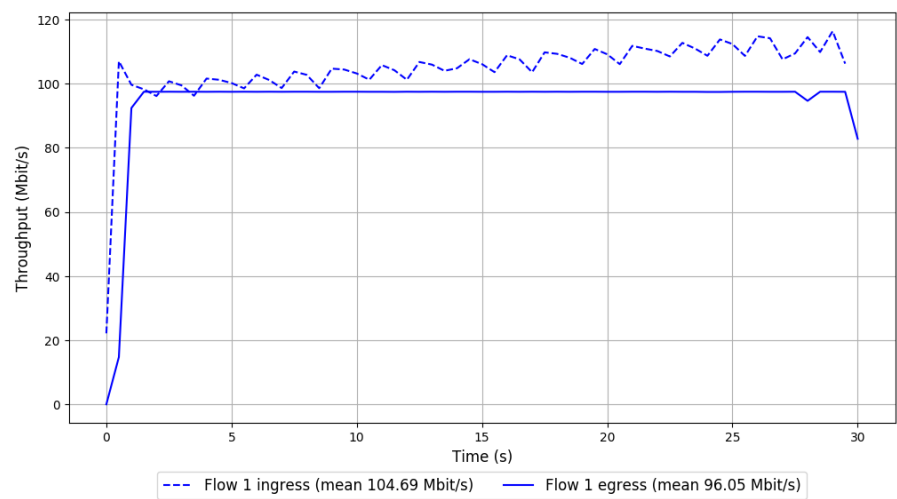


Run 1: Statistics of Indigo-96d2da3

Start at: 2018-11-30 10:56:48
End at: 2018-11-30 10:57:18
Local clock offset: -2.578 ms
Remote clock offset: -6.172 ms

Below is generated by plot.py at 2018-11-30 12:51:58
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.05 Mbit/s
95th percentile per-packet one-way delay: 118.076 ms
Loss rate: 8.45%
-- Flow 1:
Average throughput: 96.05 Mbit/s
95th percentile per-packet one-way delay: 118.076 ms
Loss rate: 8.45%

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

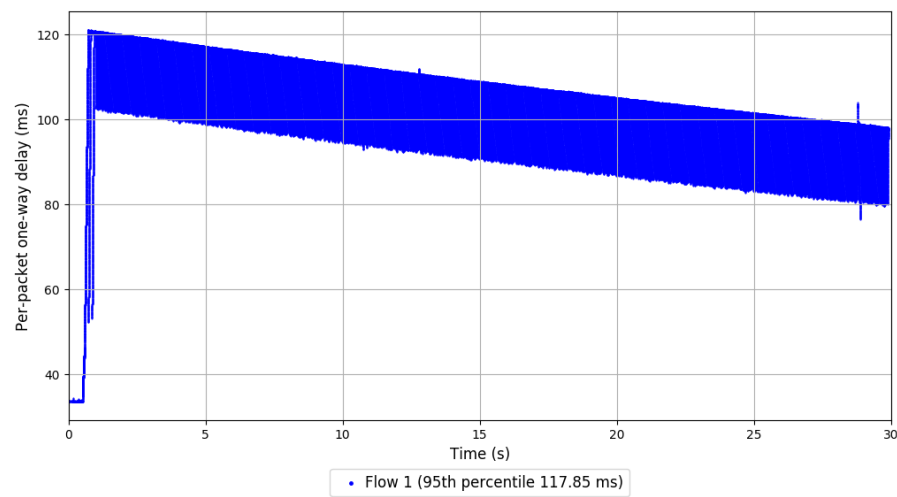
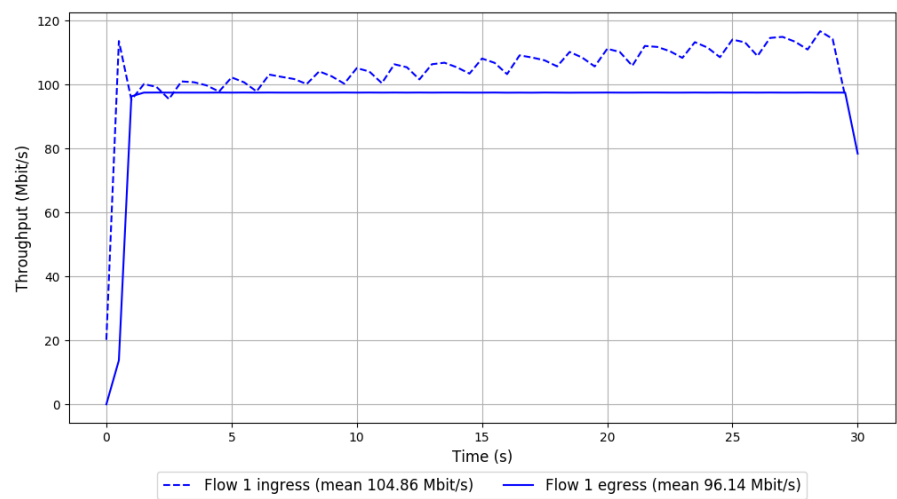


Run 2: Statistics of Indigo-96d2da3

Start at: 2018-11-30 11:18:52
End at: 2018-11-30 11:19:22
Local clock offset: -2.276 ms
Remote clock offset: -6.016 ms

Below is generated by plot.py at 2018-11-30 12:52:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.14 Mbit/s
95th percentile per-packet one-way delay: 117.852 ms
Loss rate: 8.47%
-- Flow 1:
Average throughput: 96.14 Mbit/s
95th percentile per-packet one-way delay: 117.852 ms
Loss rate: 8.47%

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

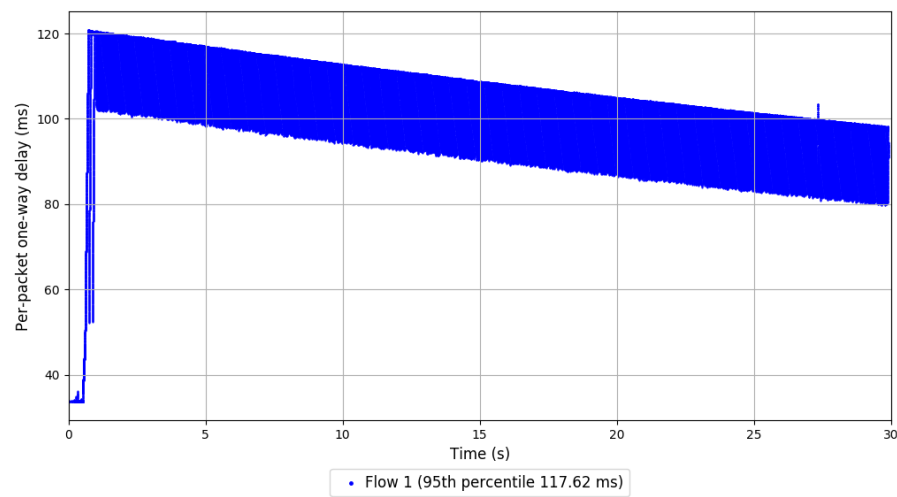
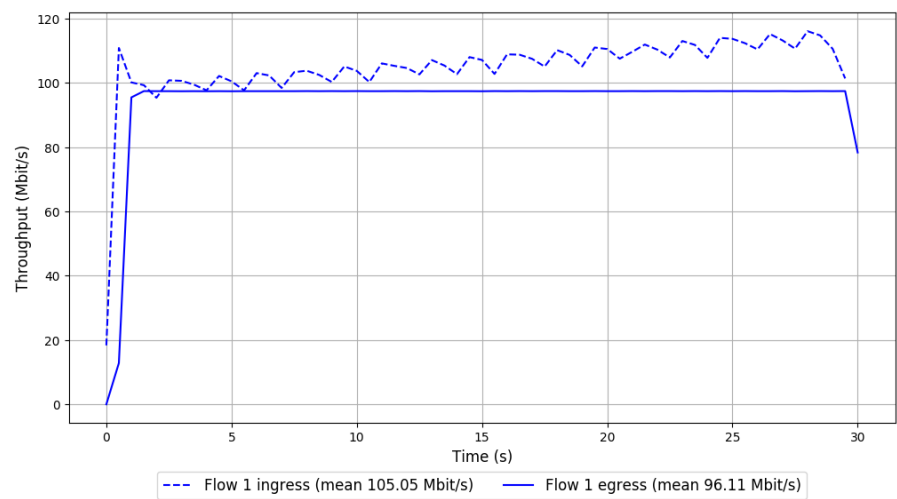


Run 3: Statistics of Indigo-96d2da3

Start at: 2018-11-30 11:41:03
End at: 2018-11-30 11:41:33
Local clock offset: 0.423 ms
Remote clock offset: -4.785 ms

Below is generated by plot.py at 2018-11-30 12:52:10
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.11 Mbit/s
95th percentile per-packet one-way delay: 117.621 ms
Loss rate: 8.68%
-- Flow 1:
Average throughput: 96.11 Mbit/s
95th percentile per-packet one-way delay: 117.621 ms
Loss rate: 8.68%

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



Run 4: Statistics of Indigo-96d2da3

Start at: 2018-11-30 12:03:04

End at: 2018-11-30 12:03:34

Local clock offset: 3.763 ms

Remote clock offset: -3.942 ms

Below is generated by plot.py at 2018-11-30 12:52:10

Datalink statistics

-- Total of 1 flow:

Average throughput: 71.43 Mbit/s

95th percentile per-packet one-way delay: 500.996 ms

Loss rate: 1.81%

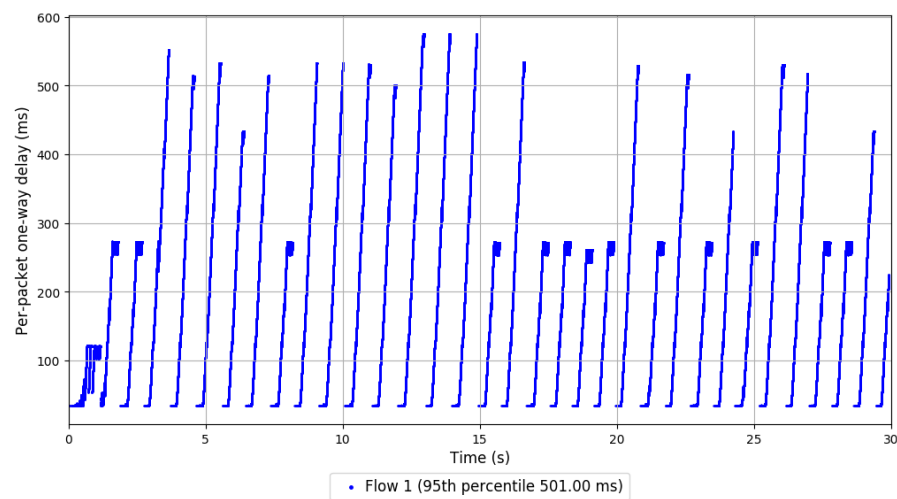
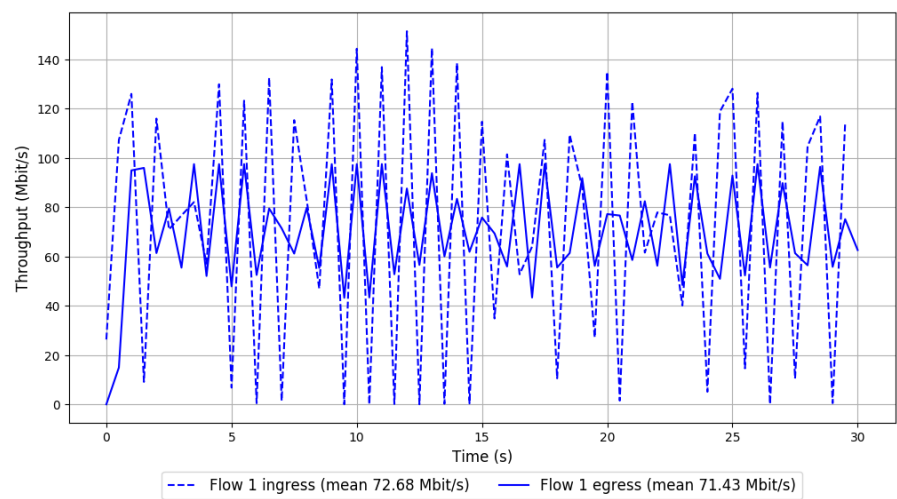
-- Flow 1:

Average throughput: 71.43 Mbit/s

95th percentile per-packet one-way delay: 500.996 ms

Loss rate: 1.81%

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

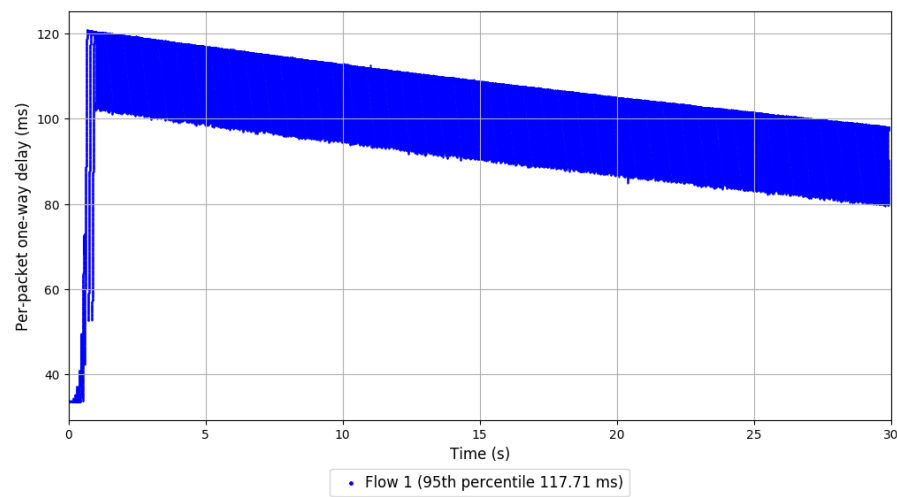
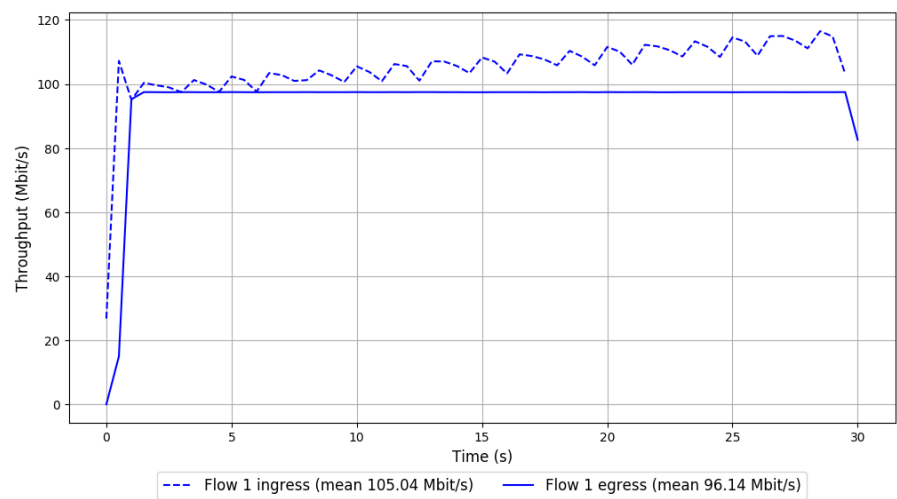


Run 5: Statistics of Indigo-96d2da3

Start at: 2018-11-30 12:25:07
End at: 2018-11-30 12:25:37
Local clock offset: 1.555 ms
Remote clock offset: -3.059 ms

Below is generated by plot.py at 2018-11-30 12:52:23
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.14 Mbit/s
95th percentile per-packet one-way delay: 117.708 ms
Loss rate: 8.66%
-- Flow 1:
Average throughput: 96.14 Mbit/s
95th percentile per-packet one-way delay: 117.708 ms
Loss rate: 8.66%

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

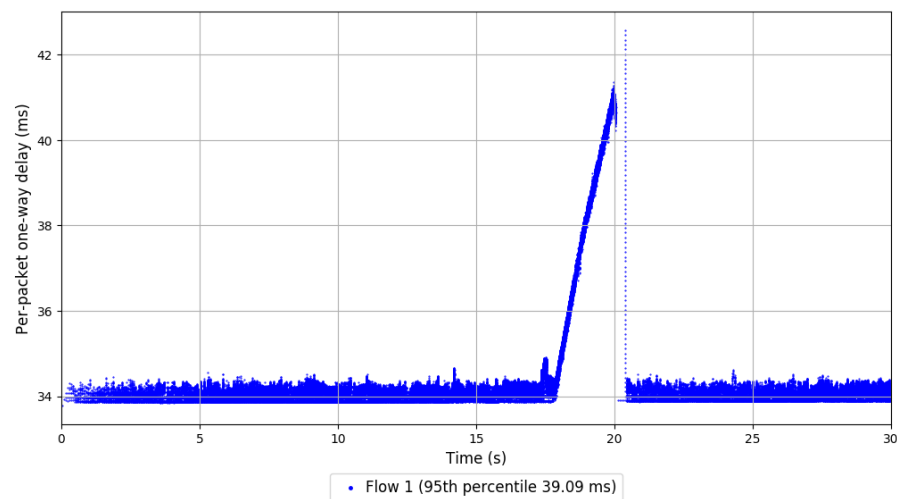
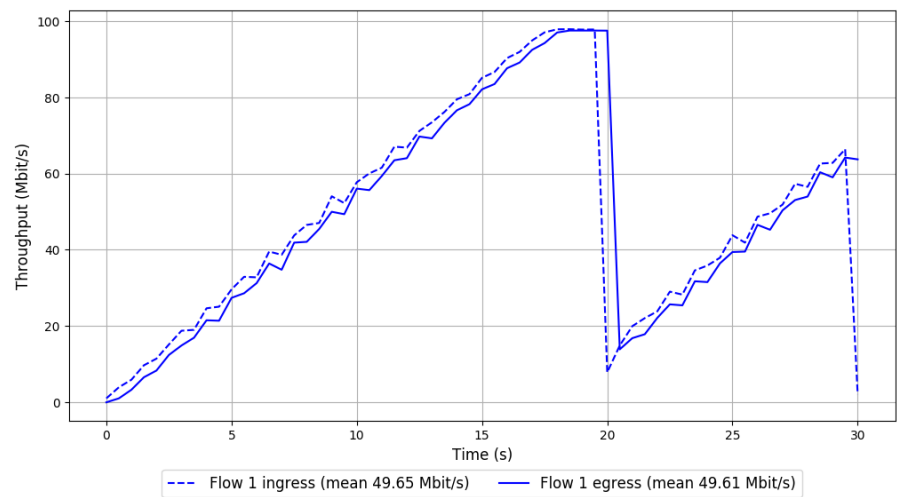


```
Run 1: Statistics of LEDBAT

Start at: 2018-11-30 11:08:23
End at: 2018-11-30 11:08:53
Local clock offset: -3.348 ms
Remote clock offset: -6.176 ms

# Below is generated by plot.py at 2018-11-30 12:52:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 49.61 Mbit/s
95th percentile per-packet one-way delay: 39.090 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 49.61 Mbit/s
95th percentile per-packet one-way delay: 39.090 ms
Loss rate: 0.30%
```

Run 1: Report of LEDBAT — Data Link

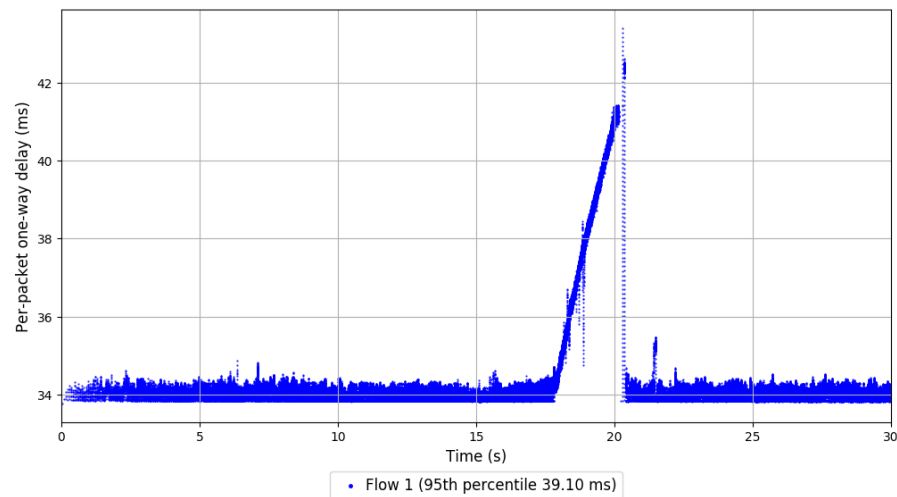
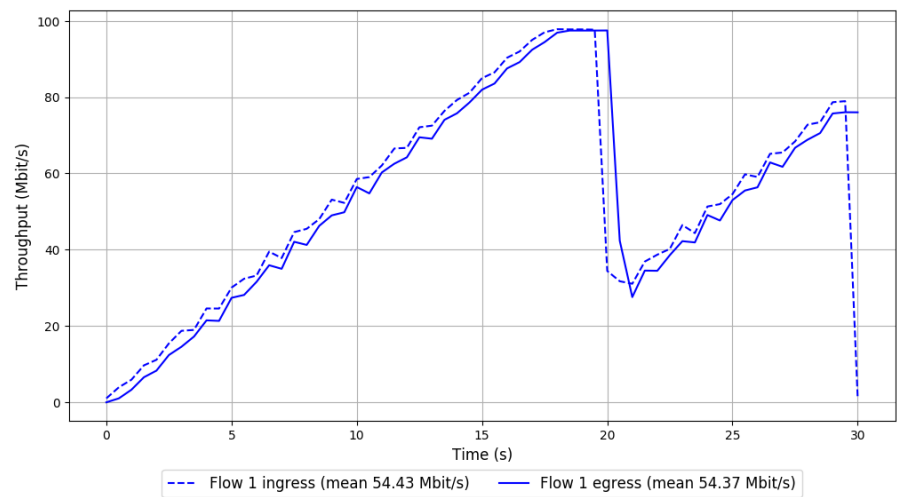


Run 2: Statistics of LEDBAT

Start at: 2018-11-30 11:30:31
End at: 2018-11-30 11:31:01
Local clock offset: -0.165 ms
Remote clock offset: -5.454 ms

Below is generated by plot.py at 2018-11-30 12:52:23
Datalink statistics
-- Total of 1 flow:
Average throughput: 54.37 Mbit/s
95th percentile per-packet one-way delay: 39.103 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 54.37 Mbit/s
95th percentile per-packet one-way delay: 39.103 ms
Loss rate: 0.33%

Run 2: Report of LEDBAT — Data Link

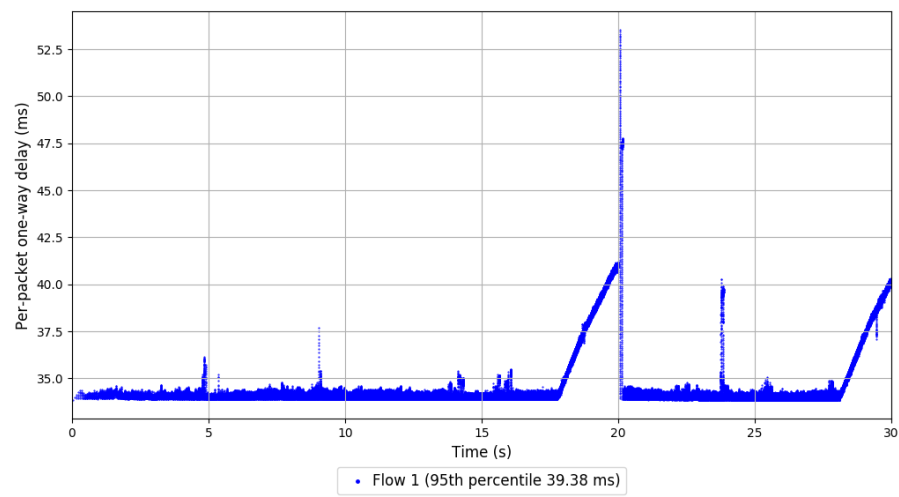
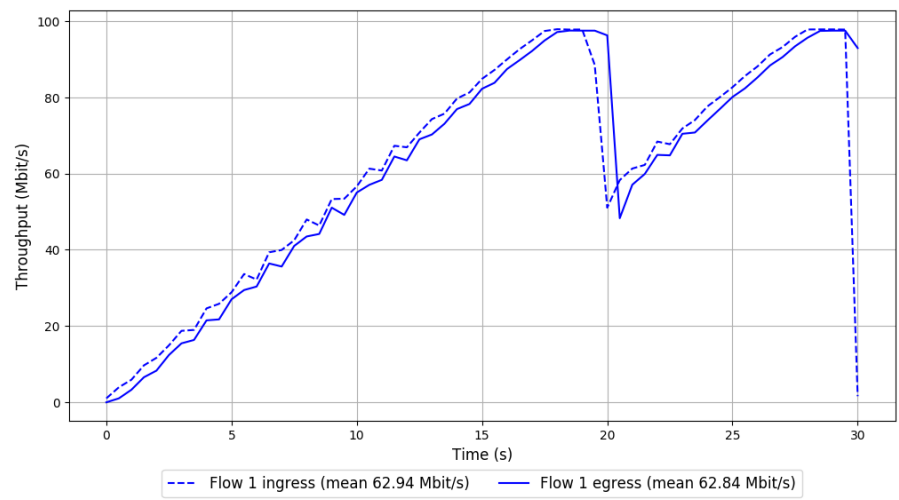


Run 3: Statistics of LEDBAT

Start at: 2018-11-30 11:52:37
End at: 2018-11-30 11:53:07
Local clock offset: 2.49 ms
Remote clock offset: -4.385 ms

Below is generated by plot.py at 2018-11-30 12:52:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 62.84 Mbit/s
95th percentile per-packet one-way delay: 39.378 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 62.84 Mbit/s
95th percentile per-packet one-way delay: 39.378 ms
Loss rate: 0.37%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-11-30 12:14:38

End at: 2018-11-30 12:15:08

Local clock offset: 4.578 ms

Remote clock offset: -3.34 ms

Below is generated by plot.py at 2018-11-30 12:52:38

Datalink statistics

-- Total of 1 flow:

Average throughput: 62.75 Mbit/s

95th percentile per-packet one-way delay: 39.396 ms

Loss rate: 0.37%

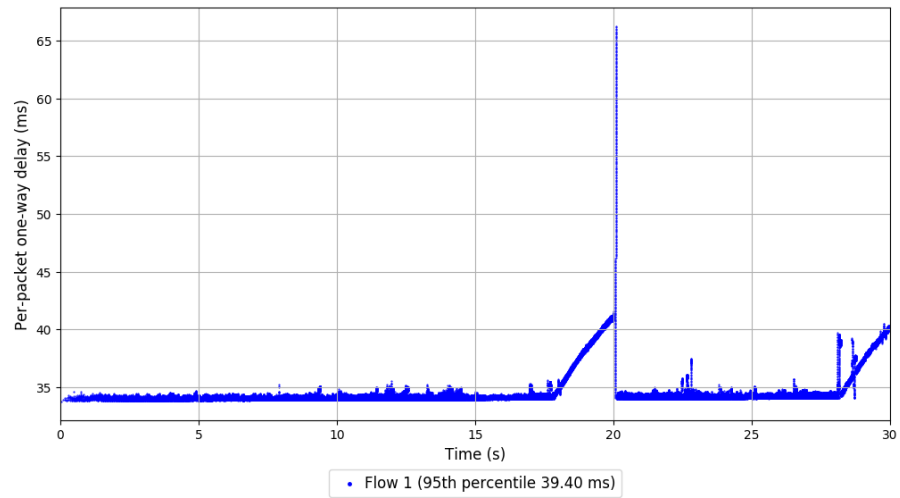
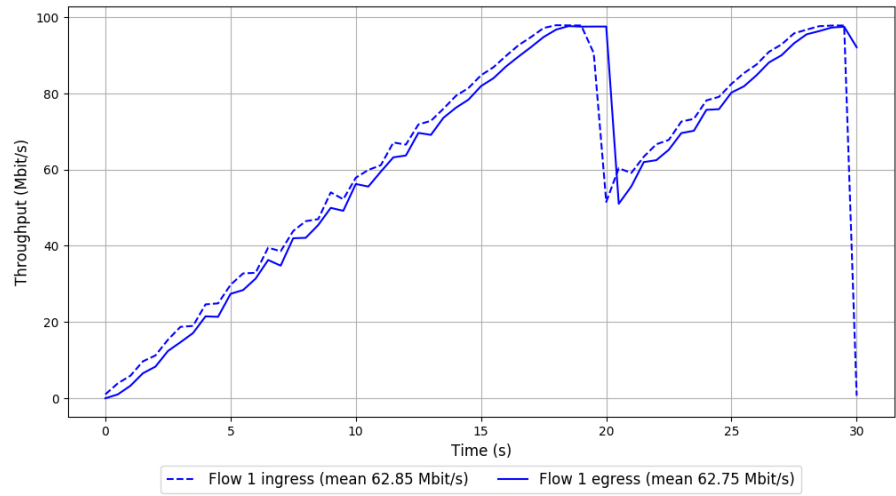
-- Flow 1:

Average throughput: 62.75 Mbit/s

95th percentile per-packet one-way delay: 39.396 ms

Loss rate: 0.37%

Run 4: Report of LEDBAT — Data Link

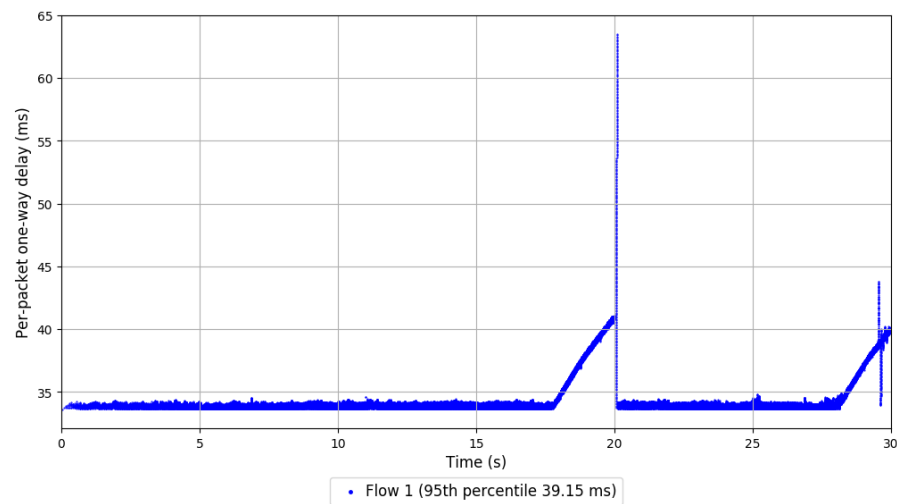
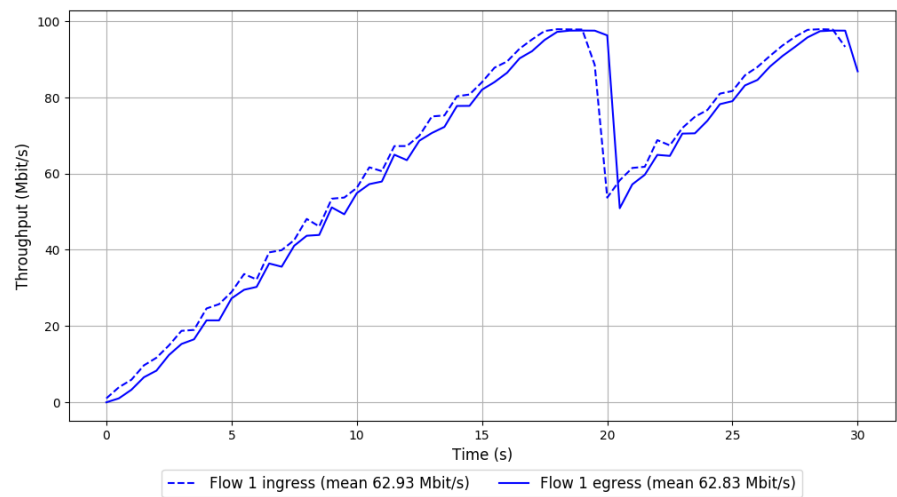


Run 5: Statistics of LEDBAT

Start at: 2018-11-30 12:36:51
End at: 2018-11-30 12:37:21
Local clock offset: 0.441 ms
Remote clock offset: -2.911 ms

Below is generated by plot.py at 2018-11-30 12:52:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 62.83 Mbit/s
95th percentile per-packet one-way delay: 39.149 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 62.83 Mbit/s
95th percentile per-packet one-way delay: 39.149 ms
Loss rate: 0.37%

Run 5: Report of LEDBAT — Data Link

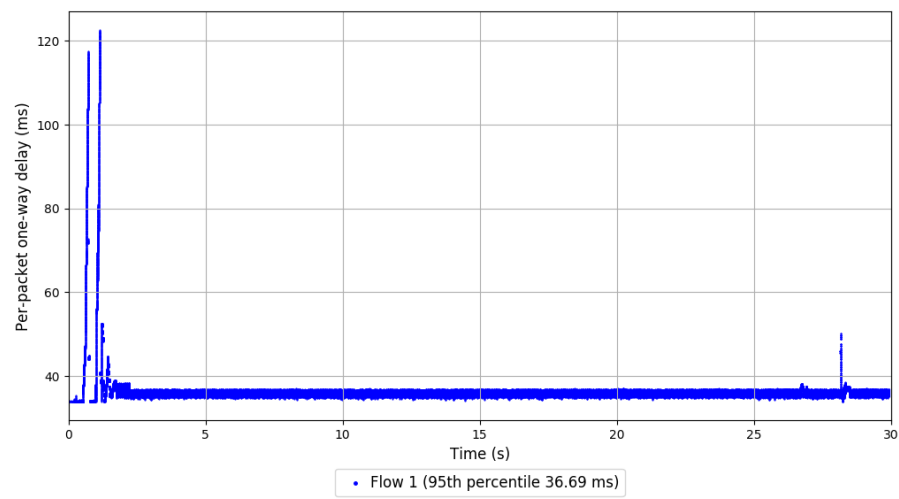
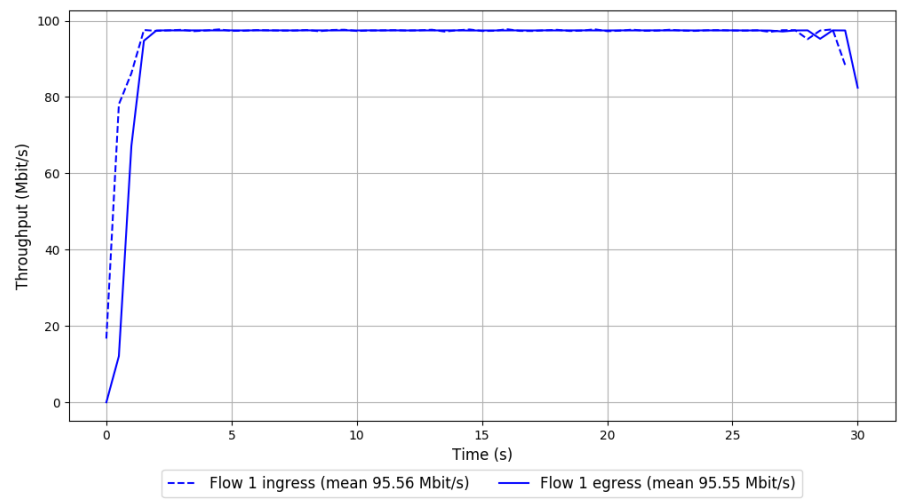


Run 1: Statistics of Indigo-Muses

Start at: 2018-11-30 11:06:04
End at: 2018-11-30 11:06:34
Local clock offset: -3.197 ms
Remote clock offset: -6.228 ms

Below is generated by plot.py at 2018-11-30 12:53:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.55 Mbit/s
95th percentile per-packet one-way delay: 36.690 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 95.55 Mbit/s
95th percentile per-packet one-way delay: 36.690 ms
Loss rate: 0.23%

Run 1: Report of Indigo-Muses — Data Link

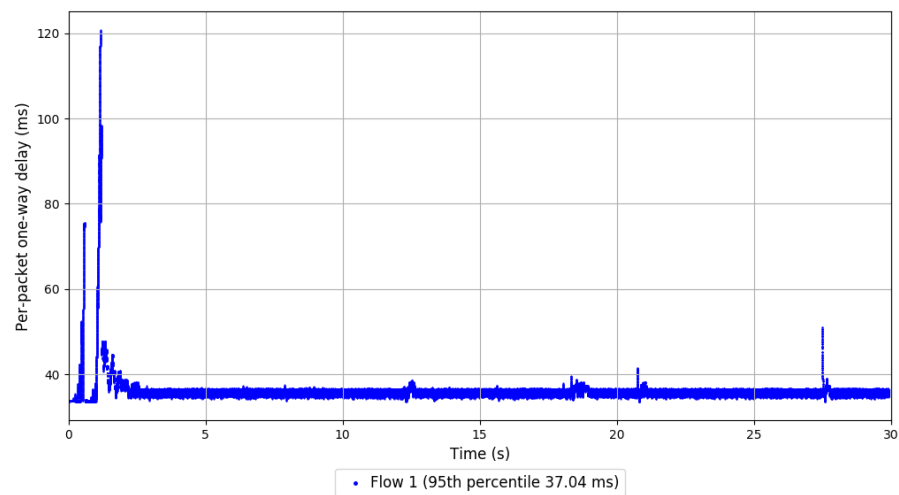
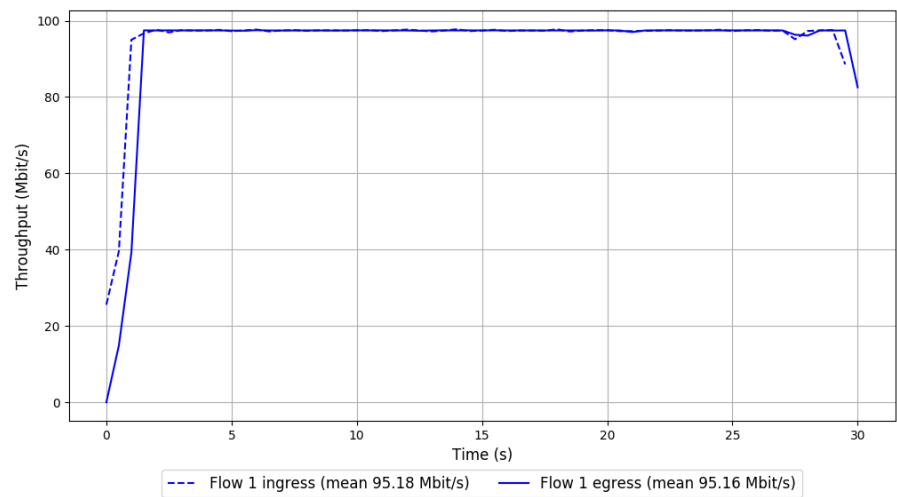


Run 2: Statistics of Indigo-Muses

Start at: 2018-11-30 11:28:11
End at: 2018-11-30 11:28:41
Local clock offset: -0.387 ms
Remote clock offset: -5.426 ms

Below is generated by plot.py at 2018-11-30 12:53:18
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.16 Mbit/s
95th percentile per-packet one-way delay: 37.043 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 95.16 Mbit/s
95th percentile per-packet one-way delay: 37.043 ms
Loss rate: 0.24%

Run 2: Report of Indigo-Muses — Data Link

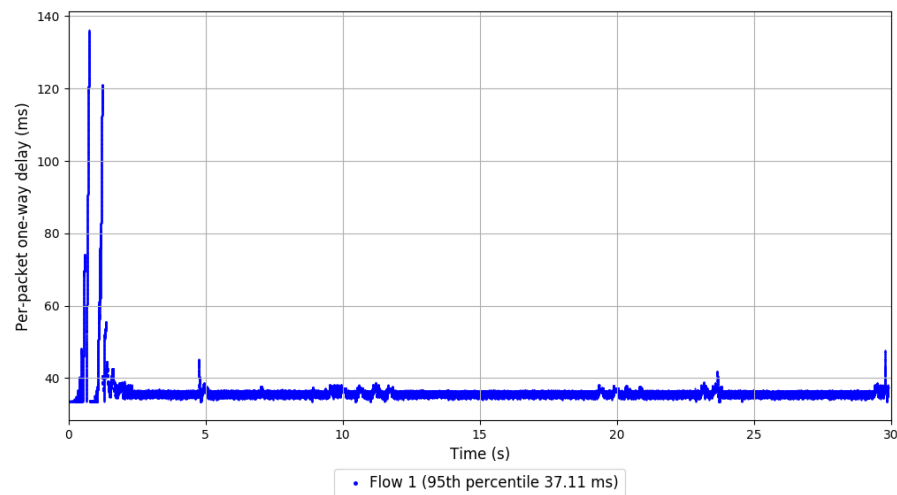
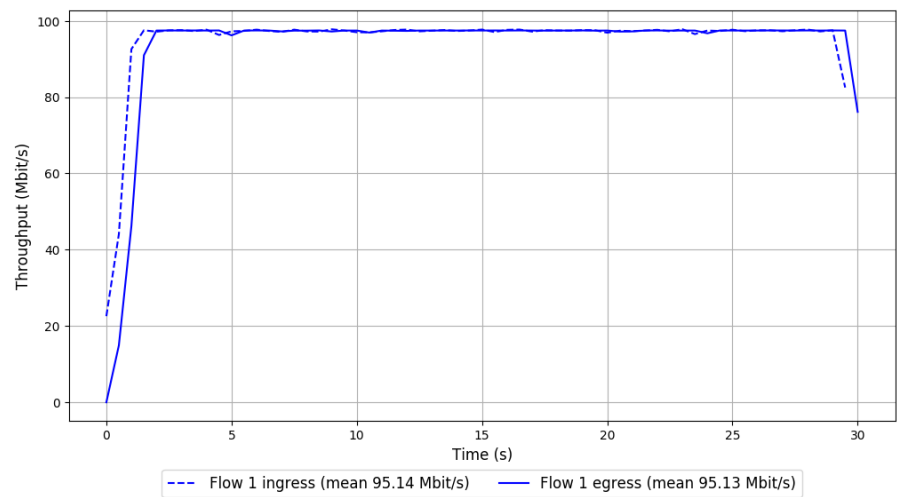


Run 3: Statistics of Indigo-Muses

Start at: 2018-11-30 11:50:18
End at: 2018-11-30 11:50:48
Local clock offset: 2.017 ms
Remote clock offset: -4.284 ms

Below is generated by plot.py at 2018-11-30 12:53:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.13 Mbit/s
95th percentile per-packet one-way delay: 37.107 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 95.13 Mbit/s
95th percentile per-packet one-way delay: 37.107 ms
Loss rate: 0.23%

Run 3: Report of Indigo-Muses — Data Link

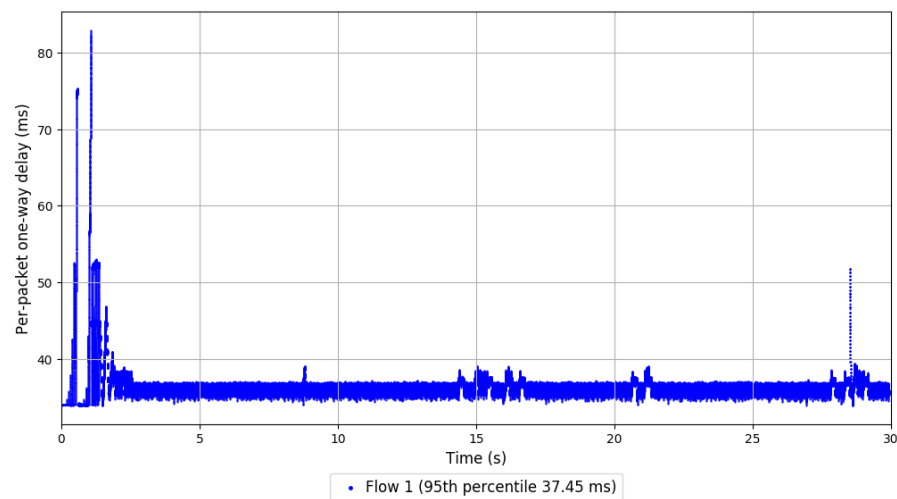
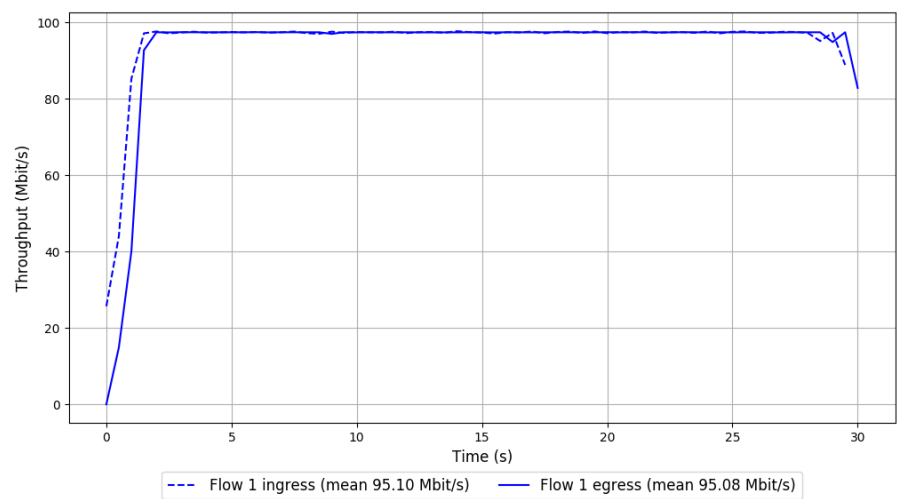


Run 4: Statistics of Indigo-Muses

Start at: 2018-11-30 12:12:19
End at: 2018-11-30 12:12:49
Local clock offset: 4.453 ms
Remote clock offset: -3.699 ms

Below is generated by plot.py at 2018-11-30 12:53:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.08 Mbit/s
95th percentile per-packet one-way delay: 37.449 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 95.08 Mbit/s
95th percentile per-packet one-way delay: 37.449 ms
Loss rate: 0.23%

Run 4: Report of Indigo-Muses — Data Link



Run 5: Statistics of Indigo-Muses

Start at: 2018-11-30 12:34:24

End at: 2018-11-30 12:34:54

Local clock offset: 0.567 ms

Remote clock offset: -3.05 ms

Below is generated by plot.py at 2018-11-30 12:53:34

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.03 Mbit/s

95th percentile per-packet one-way delay: 37.098 ms

Loss rate: 0.26%

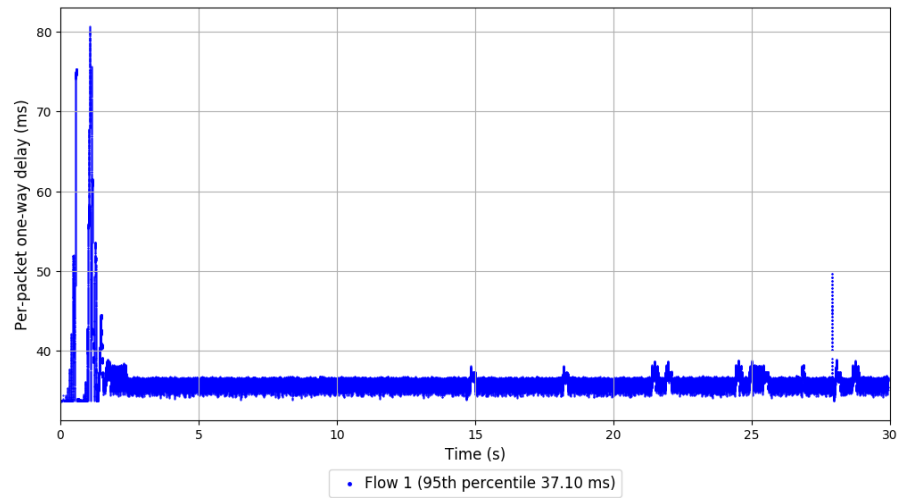
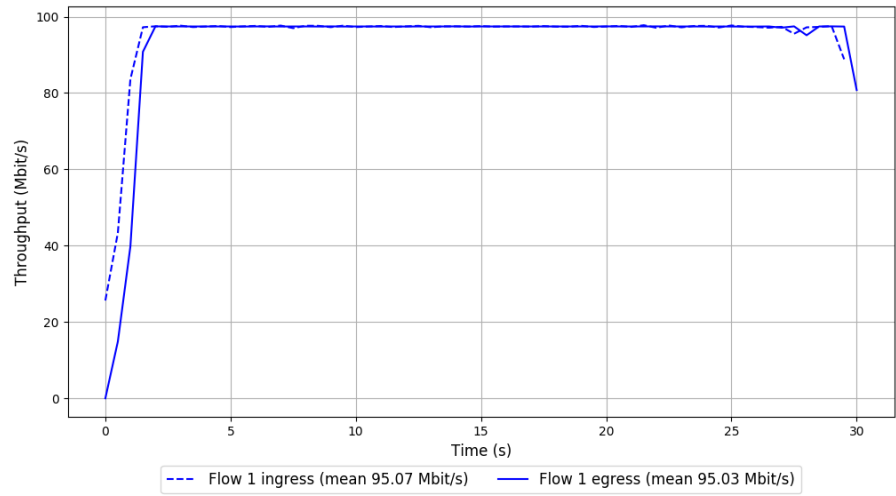
-- Flow 1:

Average throughput: 95.03 Mbit/s

95th percentile per-packet one-way delay: 37.098 ms

Loss rate: 0.26%

Run 5: Report of Indigo-Muses — Data Link

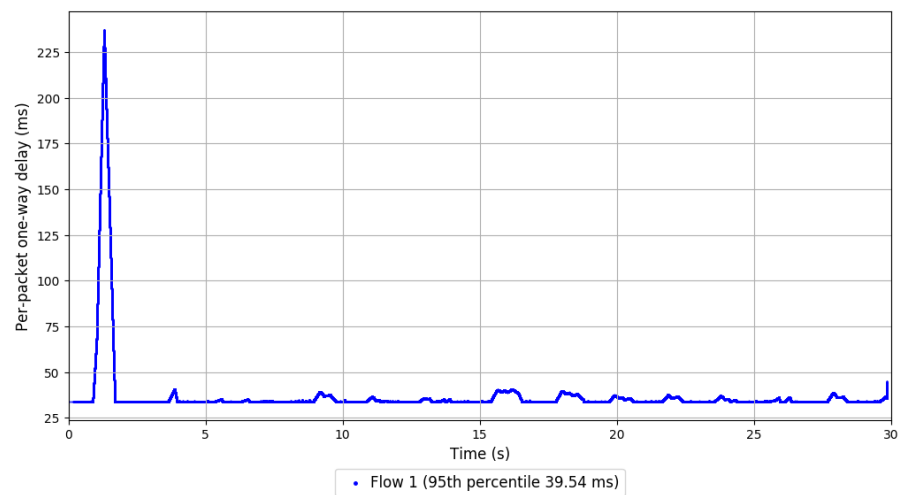
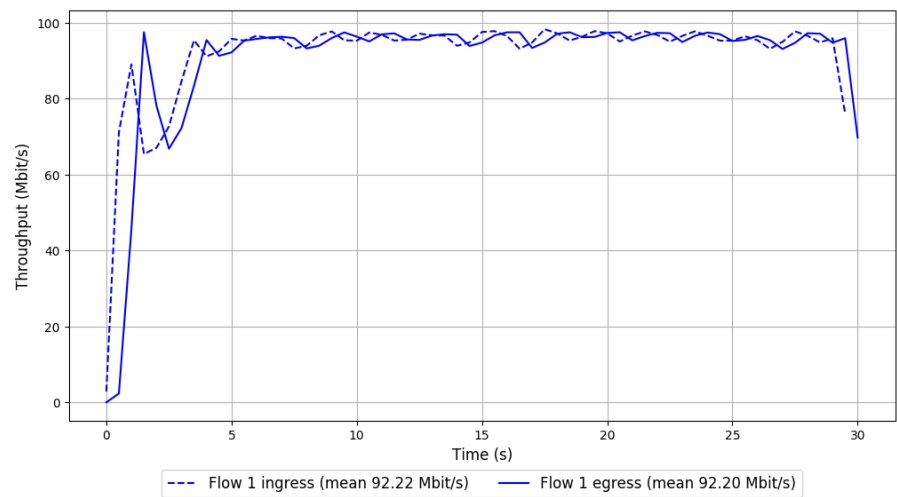


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-11-30 11:07:14
End at: 2018-11-30 11:07:44
Local clock offset: -3.275 ms
Remote clock offset: -6.409 ms

# Below is generated by plot.py at 2018-11-30 12:53:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.20 Mbit/s
95th percentile per-packet one-way delay: 39.539 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 92.20 Mbit/s
95th percentile per-packet one-way delay: 39.539 ms
Loss rate: 0.24%
```

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-11-30 11:29:22

End at: 2018-11-30 11:29:52

Local clock offset: -0.285 ms

Remote clock offset: -5.513 ms

Below is generated by plot.py at 2018-11-30 12:53:48

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.79 Mbit/s

95th percentile per-packet one-way delay: 39.488 ms

Loss rate: 0.24%

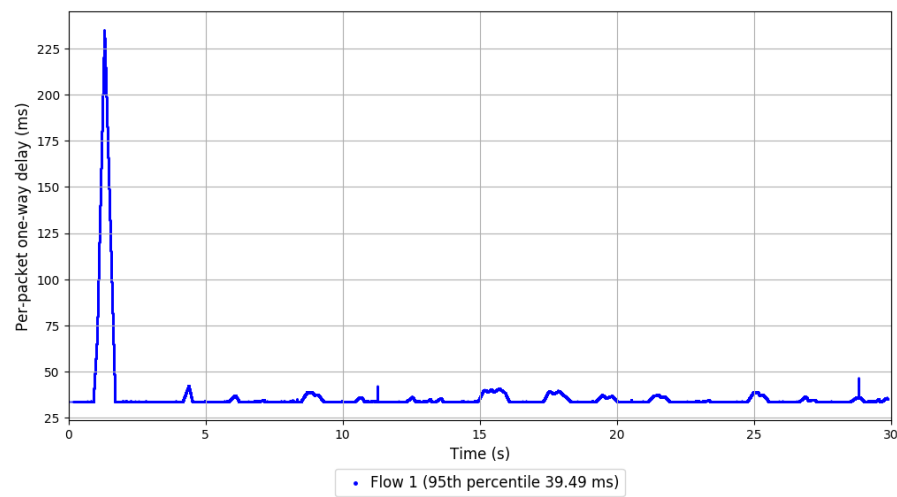
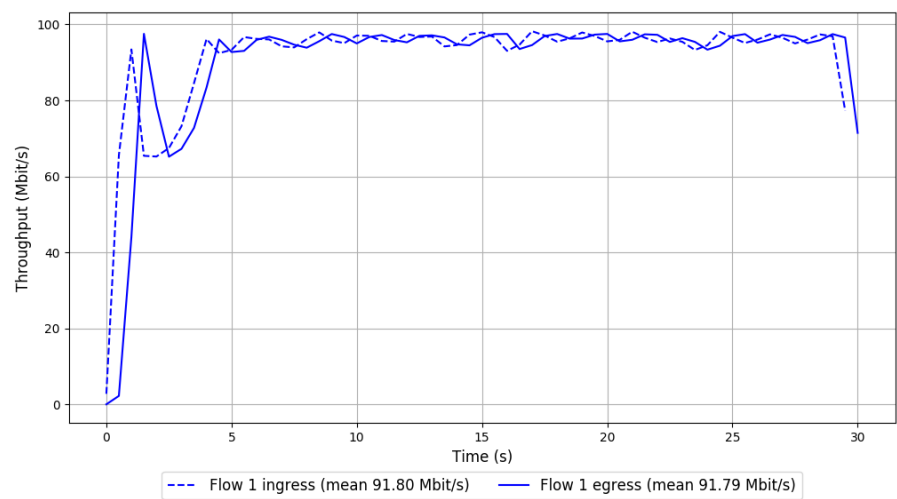
-- Flow 1:

Average throughput: 91.79 Mbit/s

95th percentile per-packet one-way delay: 39.488 ms

Loss rate: 0.24%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-11-30 11:51:28

End at: 2018-11-30 11:51:58

Local clock offset: 2.279 ms

Remote clock offset: -4.207 ms

Below is generated by plot.py at 2018-11-30 12:53:53

Datalink statistics

-- Total of 1 flow:

Average throughput: 90.77 Mbit/s

95th percentile per-packet one-way delay: 46.419 ms

Loss rate: 0.26%

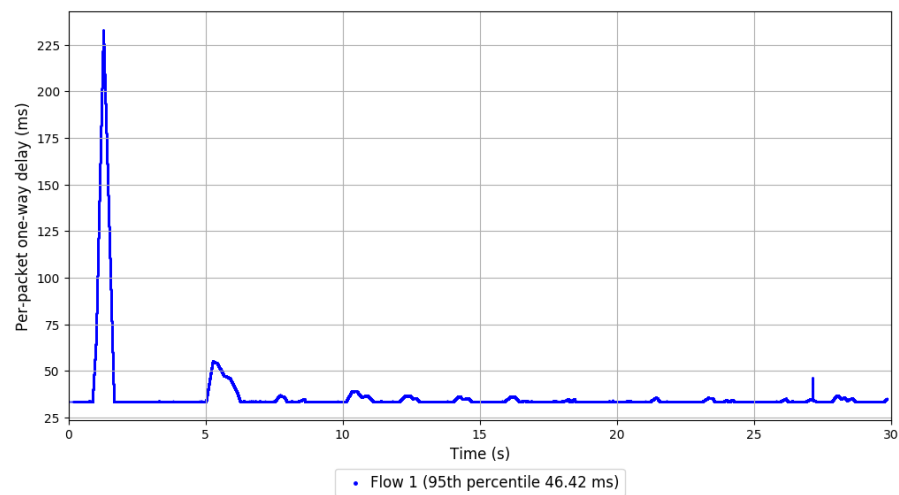
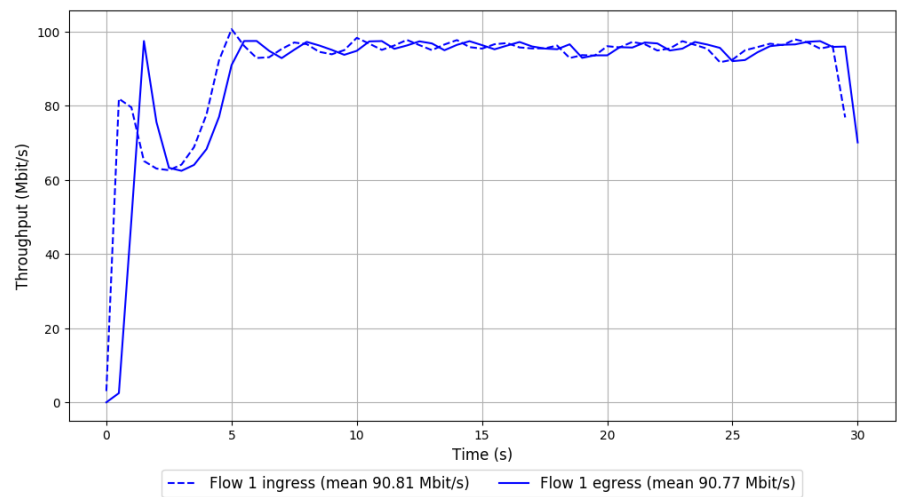
-- Flow 1:

Average throughput: 90.77 Mbit/s

95th percentile per-packet one-way delay: 46.419 ms

Loss rate: 0.26%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-11-30 12:13:29

End at: 2018-11-30 12:13:59

Local clock offset: 4.509 ms

Remote clock offset: -3.582 ms

Below is generated by plot.py at 2018-11-30 12:54:19

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.66 Mbit/s

95th percentile per-packet one-way delay: 40.567 ms

Loss rate: 0.24%

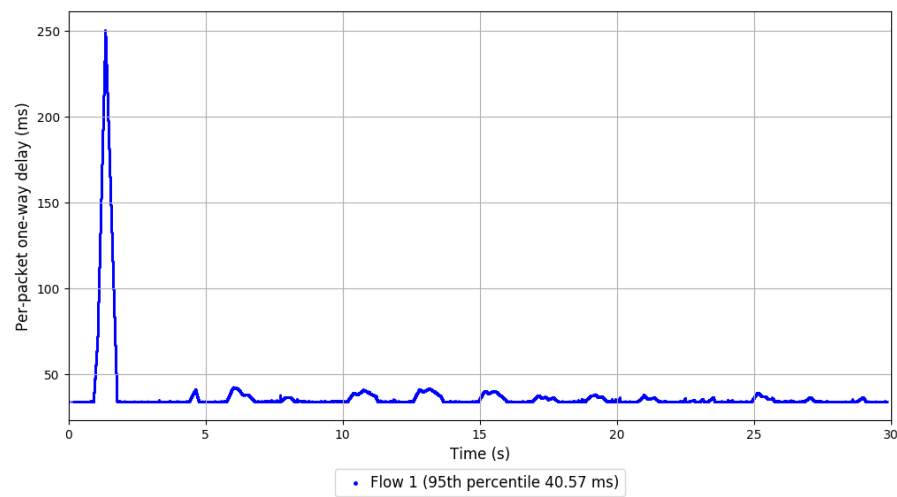
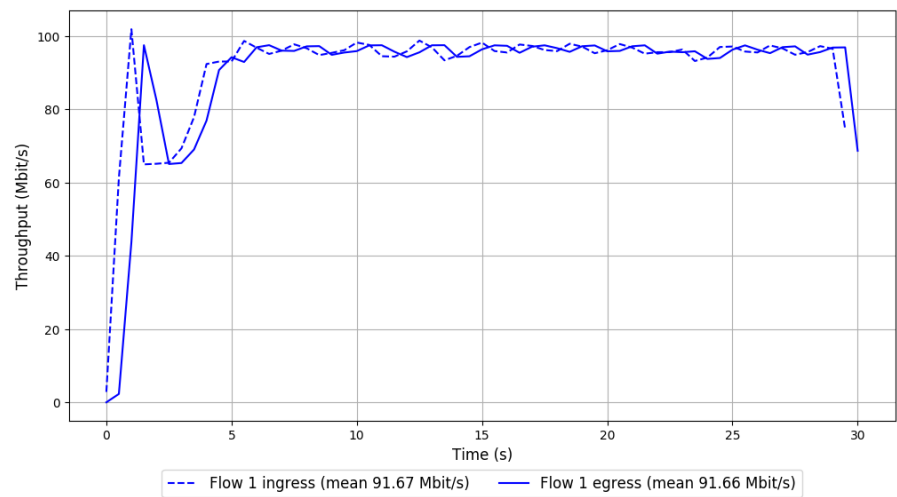
-- Flow 1:

Average throughput: 91.66 Mbit/s

95th percentile per-packet one-way delay: 40.567 ms

Loss rate: 0.24%

Run 4: Report of PCC-Allegro — Data Link

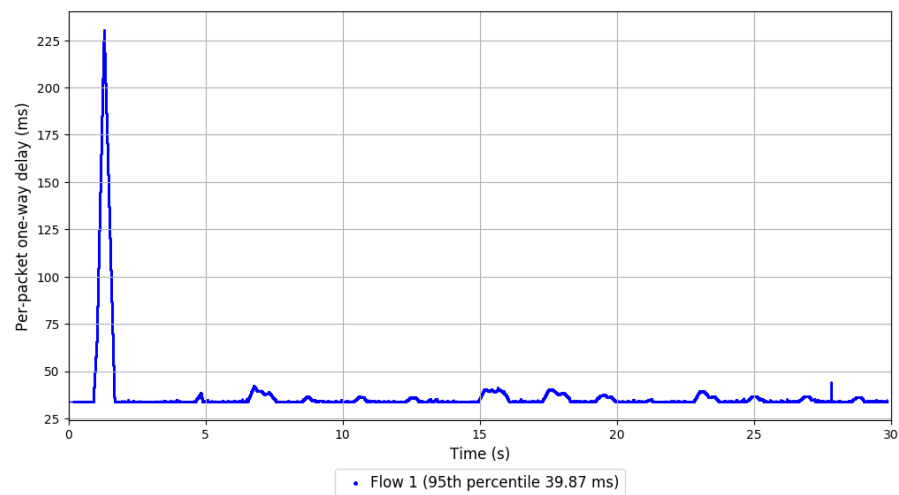
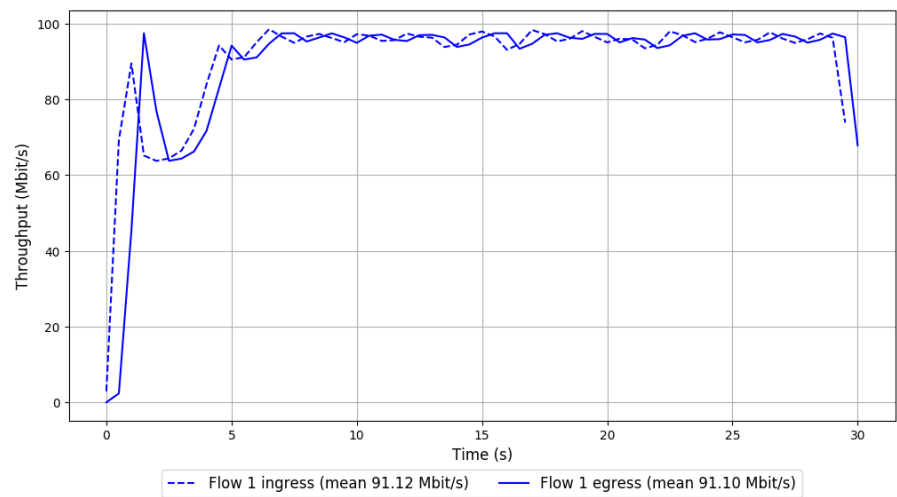


Run 5: Statistics of PCC-Allegro

Start at: 2018-11-30 12:35:41
End at: 2018-11-30 12:36:11
Local clock offset: 0.489 ms
Remote clock offset: -3.241 ms

Below is generated by plot.py at 2018-11-30 12:54:20
Datalink statistics
-- Total of 1 flow:
Average throughput: 91.10 Mbit/s
95th percentile per-packet one-way delay: 39.872 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 91.10 Mbit/s
95th percentile per-packet one-way delay: 39.872 ms
Loss rate: 0.24%

Run 5: Report of PCC-Allegro — Data Link

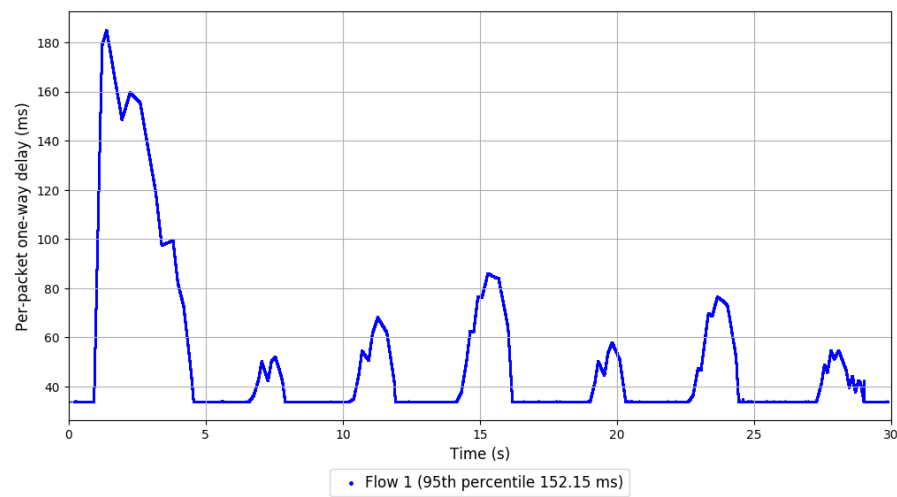
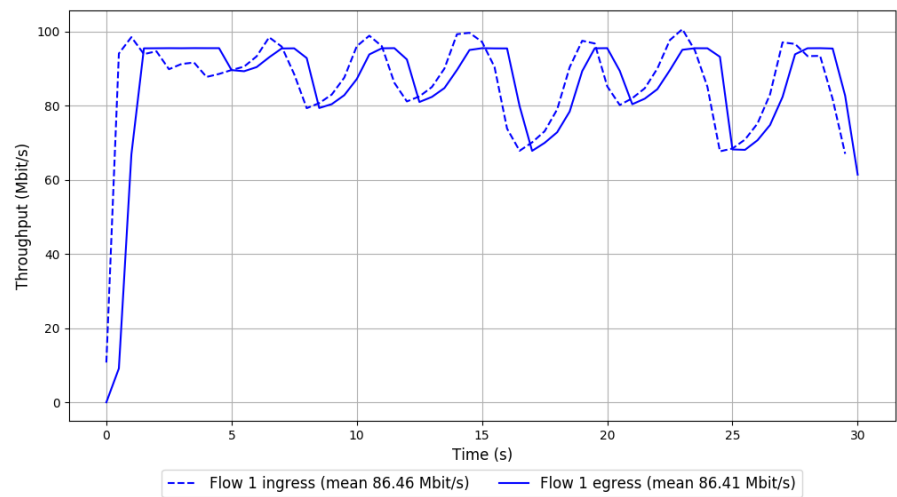


Run 1: Statistics of PCC-Expr

Start at: 2018-11-30 10:57:58
End at: 2018-11-30 10:58:28
Local clock offset: -2.639 ms
Remote clock offset: -6.161 ms

Below is generated by plot.py at 2018-11-30 12:55:23
Datalink statistics
-- Total of 1 flow:
Average throughput: 86.41 Mbit/s
95th percentile per-packet one-way delay: 152.146 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 86.41 Mbit/s
95th percentile per-packet one-way delay: 152.146 ms
Loss rate: 0.28%

Run 1: Report of PCC-Expr — Data Link

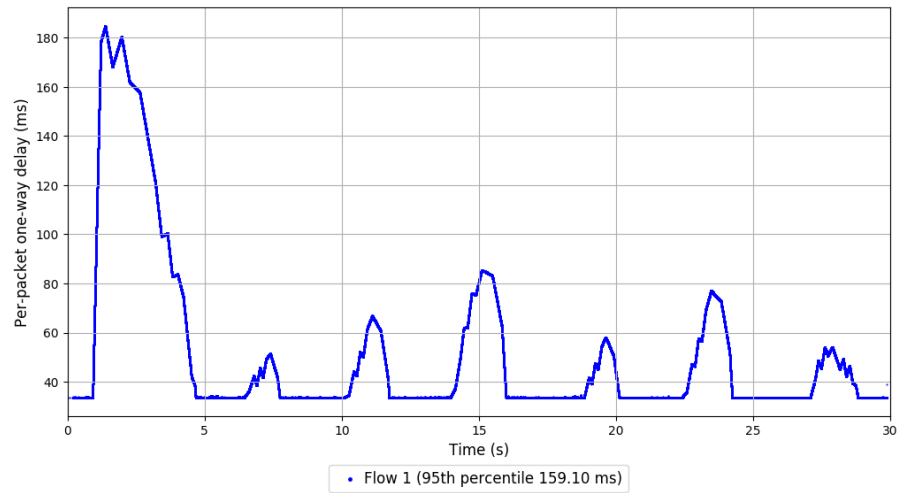
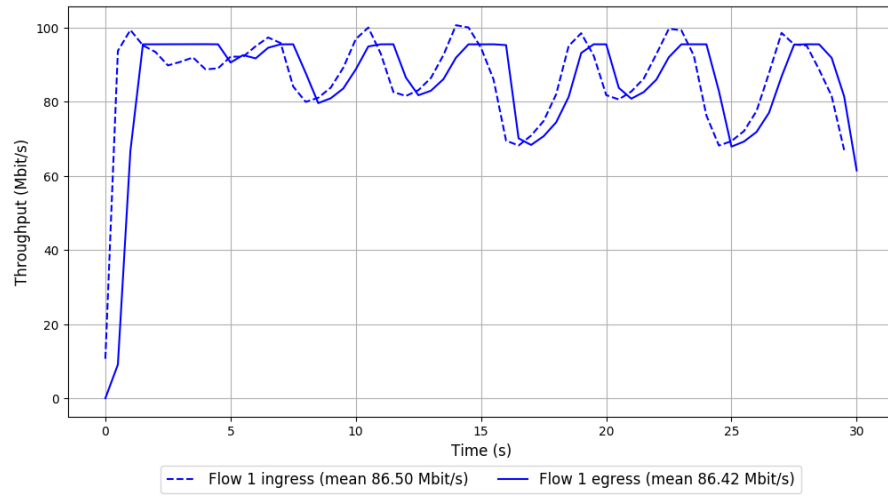


Run 2: Statistics of PCC-Expr

Start at: 2018-11-30 11:20:02
End at: 2018-11-30 11:20:32
Local clock offset: -1.926 ms
Remote clock offset: -5.958 ms

Below is generated by plot.py at 2018-11-30 12:55:27
Datalink statistics
-- Total of 1 flow:
Average throughput: 86.42 Mbit/s
95th percentile per-packet one-way delay: 159.098 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 86.42 Mbit/s
95th percentile per-packet one-way delay: 159.098 ms
Loss rate: 0.30%

Run 2: Report of PCC-Expr — Data Link

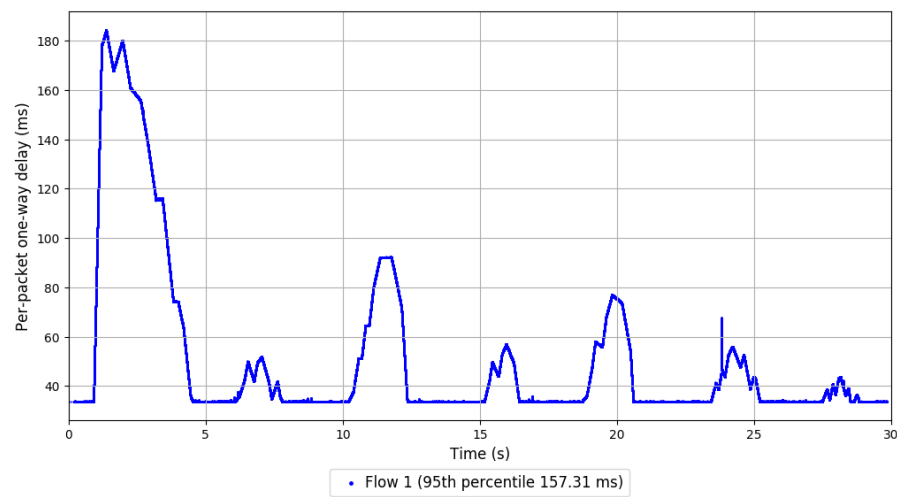
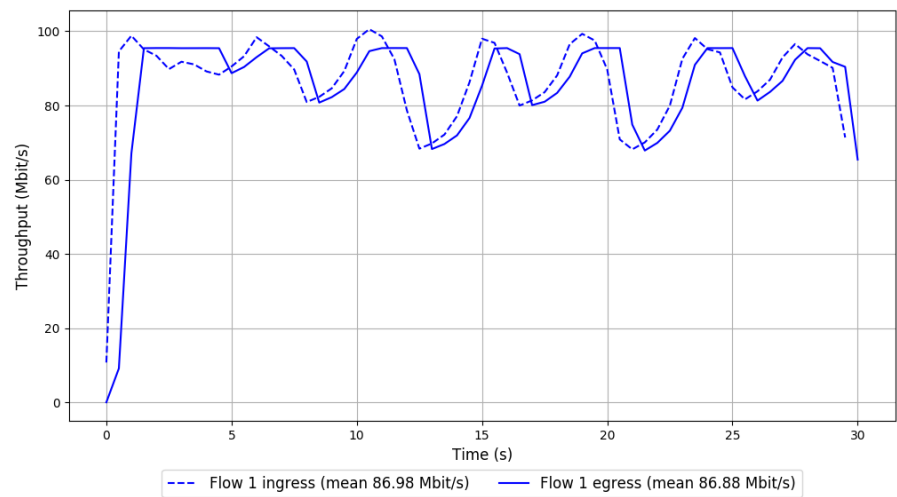


Run 3: Statistics of PCC-Expr

Start at: 2018-11-30 11:42:13
End at: 2018-11-30 11:42:43
Local clock offset: 0.463 ms
Remote clock offset: -4.736 ms

Below is generated by plot.py at 2018-11-30 12:55:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 86.88 Mbit/s
95th percentile per-packet one-way delay: 157.311 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 86.88 Mbit/s
95th percentile per-packet one-way delay: 157.311 ms
Loss rate: 0.33%

Run 3: Report of PCC-Expr — Data Link

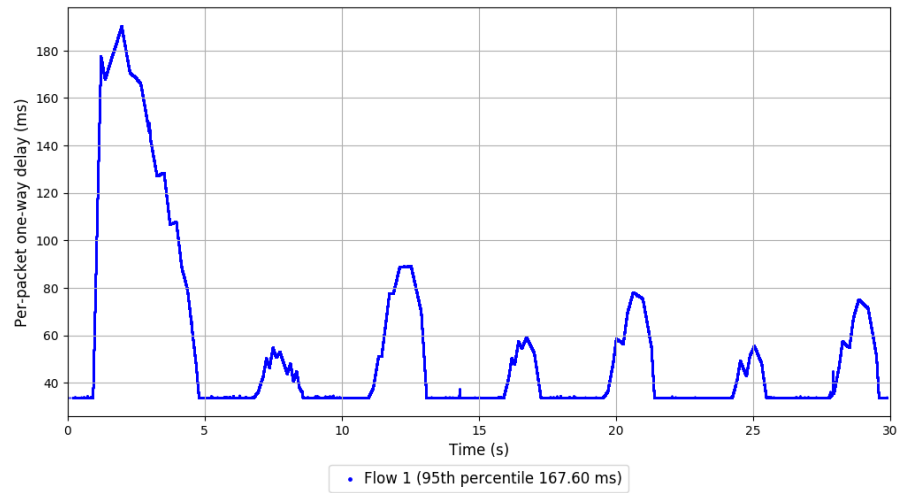
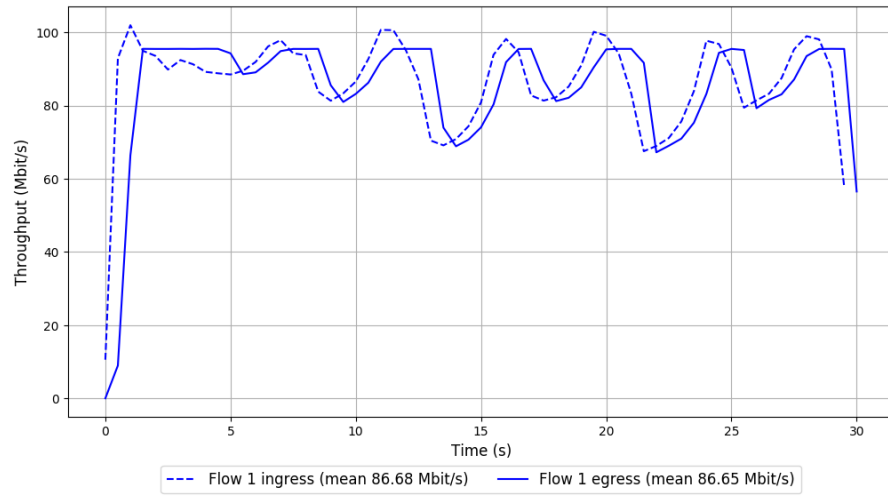


Run 4: Statistics of PCC-Expr

Start at: 2018-11-30 12:04:13
End at: 2018-11-30 12:04:43
Local clock offset: 3.869 ms
Remote clock offset: -3.765 ms

Below is generated by plot.py at 2018-11-30 12:55:45
Datalink statistics
-- Total of 1 flow:
Average throughput: 86.65 Mbit/s
95th percentile per-packet one-way delay: 167.603 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 86.65 Mbit/s
95th percentile per-packet one-way delay: 167.603 ms
Loss rate: 0.25%

Run 4: Report of PCC-Expr — Data Link

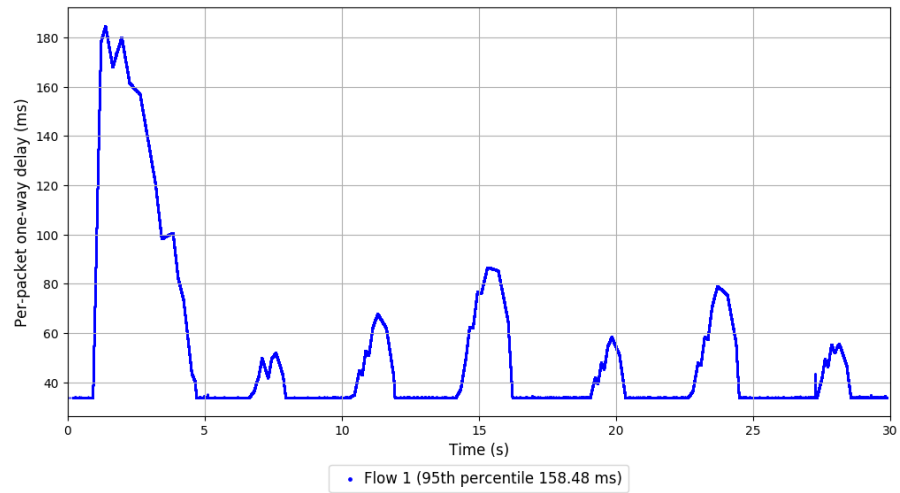
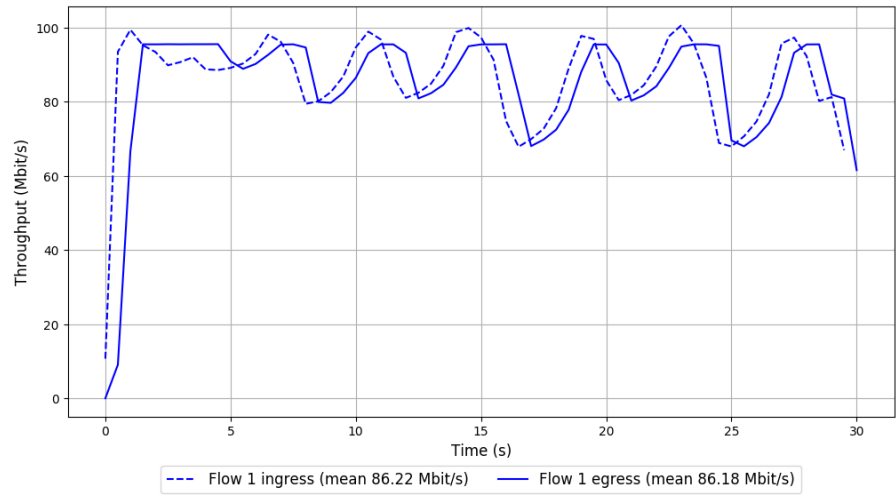


Run 5: Statistics of PCC-Expr

Start at: 2018-11-30 12:26:17
End at: 2018-11-30 12:26:47
Local clock offset: 1.356 ms
Remote clock offset: -3.209 ms

Below is generated by plot.py at 2018-11-30 12:55:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 86.18 Mbit/s
95th percentile per-packet one-way delay: 158.483 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 86.18 Mbit/s
95th percentile per-packet one-way delay: 158.483 ms
Loss rate: 0.27%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2018-11-30 11:01:27

End at: 2018-11-30 11:01:57

Local clock offset: -2.893 ms

Remote clock offset: -6.165 ms

Below is generated by plot.py at 2018-11-30 12:55:52

Datalink statistics

-- Total of 1 flow:

Average throughput: 84.26 Mbit/s

95th percentile per-packet one-way delay: 40.886 ms

Loss rate: 0.29%

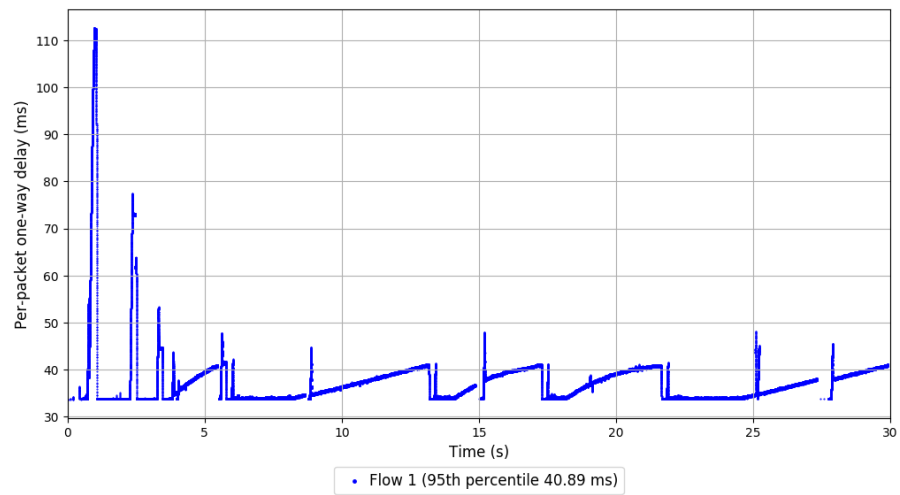
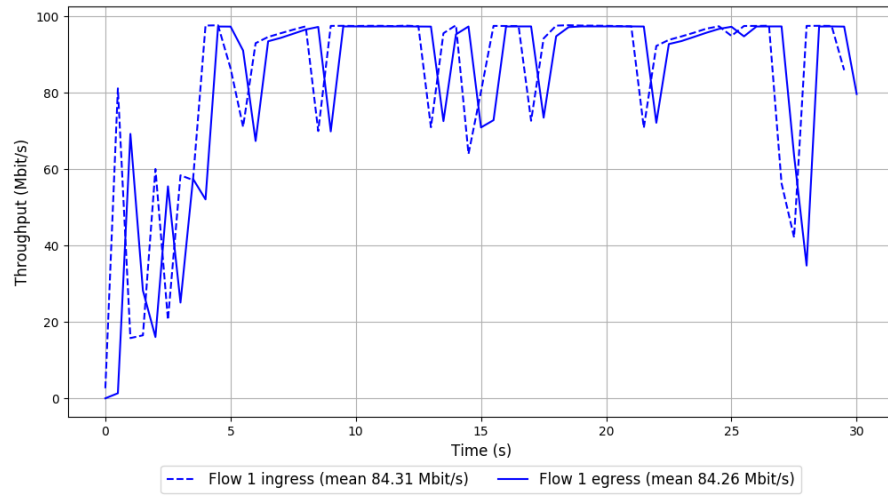
-- Flow 1:

Average throughput: 84.26 Mbit/s

95th percentile per-packet one-way delay: 40.886 ms

Loss rate: 0.29%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-11-30 11:23:33

End at: 2018-11-30 11:24:03

Local clock offset: -1.074 ms

Remote clock offset: -5.753 ms

Below is generated by plot.py at 2018-11-30 12:55:52

Datalink statistics

-- Total of 1 flow:

Average throughput: 77.26 Mbit/s

95th percentile per-packet one-way delay: 48.654 ms

Loss rate: 0.26%

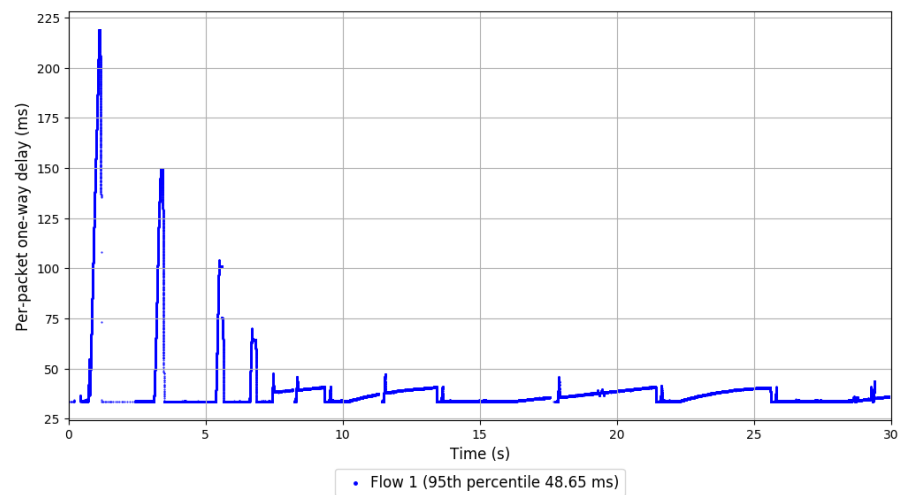
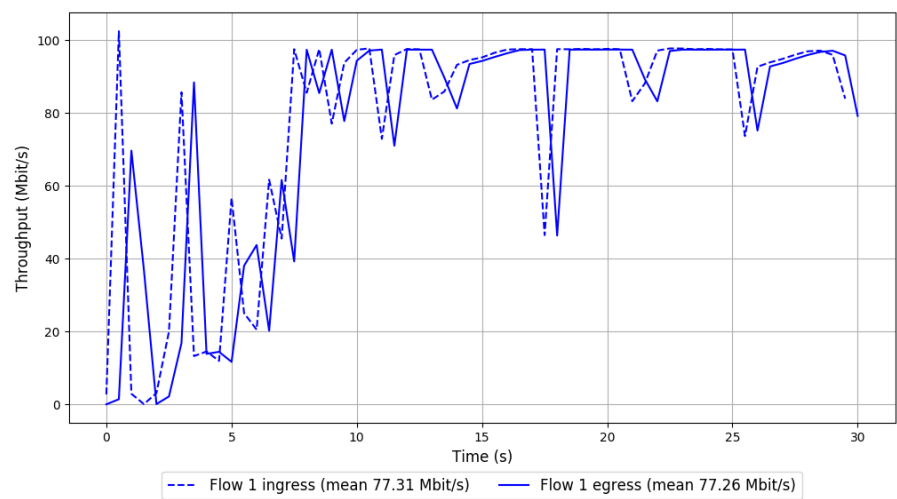
-- Flow 1:

Average throughput: 77.26 Mbit/s

95th percentile per-packet one-way delay: 48.654 ms

Loss rate: 0.26%

Run 2: Report of QUIC Cubic — Data Link

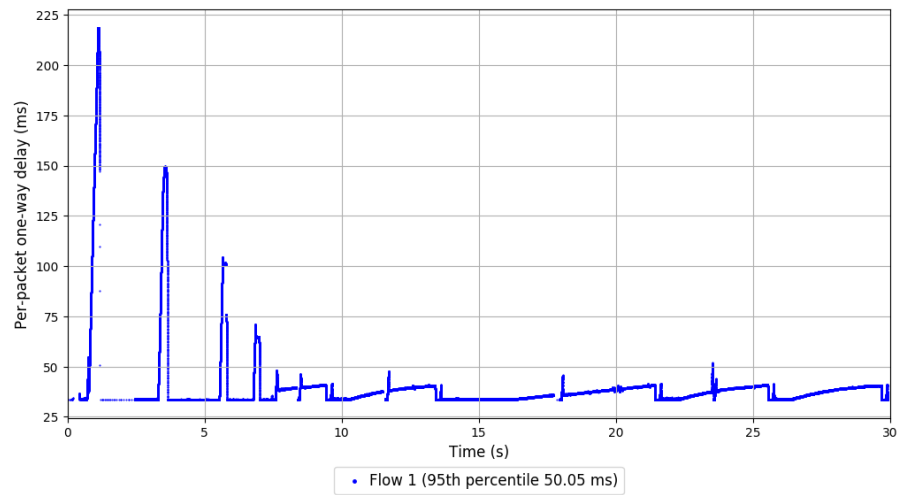
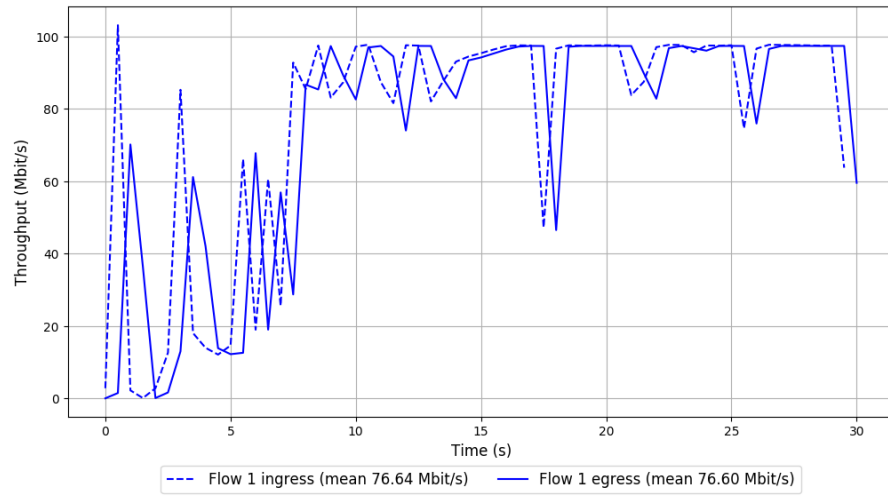


Run 3: Statistics of QUIC Cubic

Start at: 2018-11-30 11:45:41
End at: 2018-11-30 11:46:12
Local clock offset: 0.75 ms
Remote clock offset: -4.624 ms

Below is generated by plot.py at 2018-11-30 12:55:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 76.60 Mbit/s
95th percentile per-packet one-way delay: 50.053 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 76.60 Mbit/s
95th percentile per-packet one-way delay: 50.053 ms
Loss rate: 0.28%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-11-30 12:07:42

End at: 2018-11-30 12:08:12

Local clock offset: 4.135 ms

Remote clock offset: -3.62 ms

Below is generated by plot.py at 2018-11-30 12:56:02

Datalink statistics

-- Total of 1 flow:

Average throughput: 74.40 Mbit/s

95th percentile per-packet one-way delay: 53.244 ms

Loss rate: 0.30%

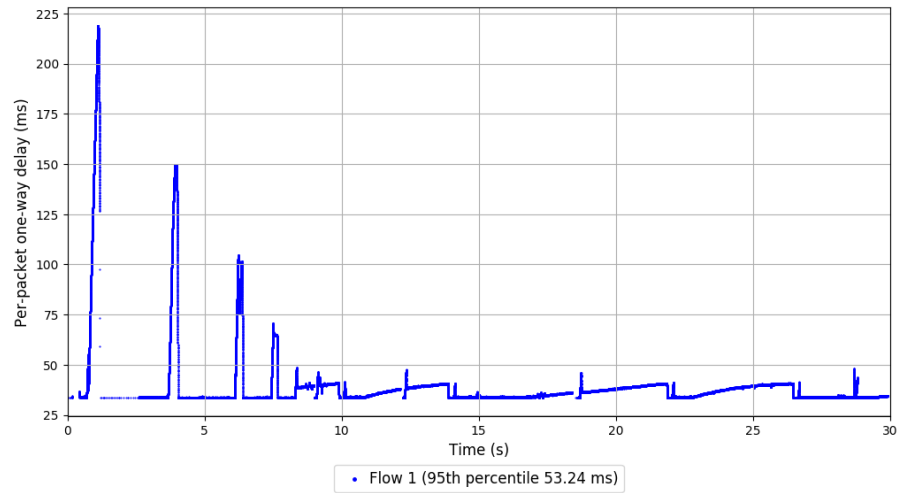
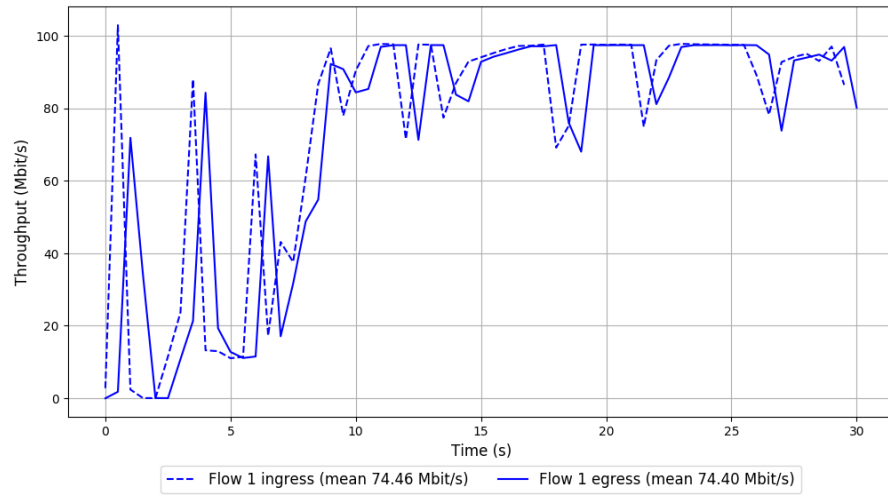
-- Flow 1:

Average throughput: 74.40 Mbit/s

95th percentile per-packet one-way delay: 53.244 ms

Loss rate: 0.30%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-11-30 12:29:47

End at: 2018-11-30 12:30:17

Local clock offset: 0.934 ms

Remote clock offset: -3.08 ms

Below is generated by plot.py at 2018-11-30 12:56:24

Datalink statistics

-- Total of 1 flow:

Average throughput: 84.72 Mbit/s

95th percentile per-packet one-way delay: 41.105 ms

Loss rate: 0.28%

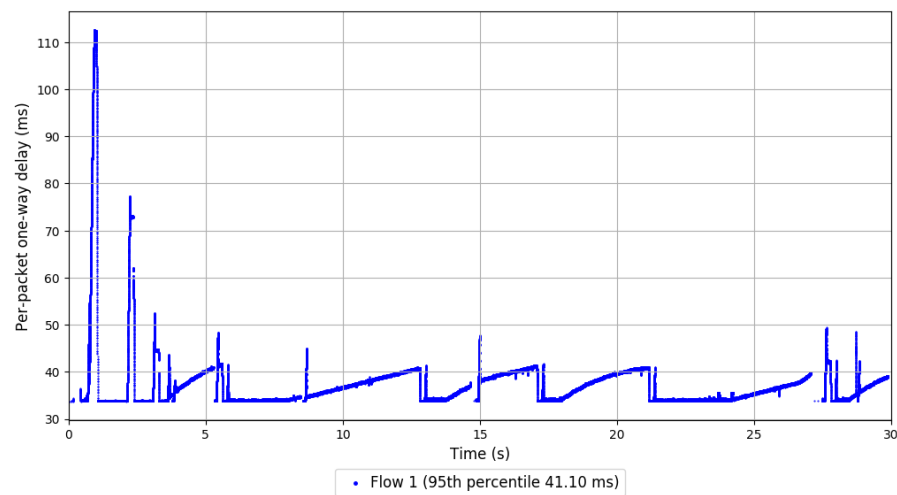
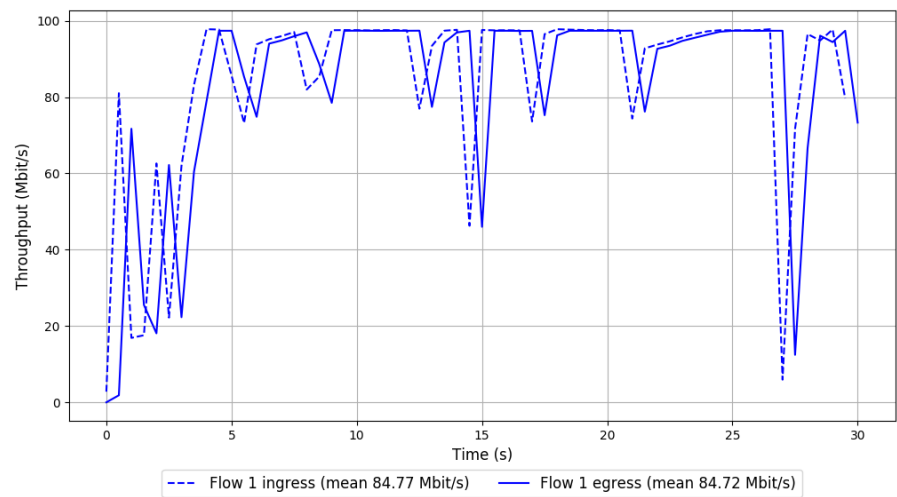
-- Flow 1:

Average throughput: 84.72 Mbit/s

95th percentile per-packet one-way delay: 41.105 ms

Loss rate: 0.28%

Run 5: Report of QUIC Cubic — Data Link

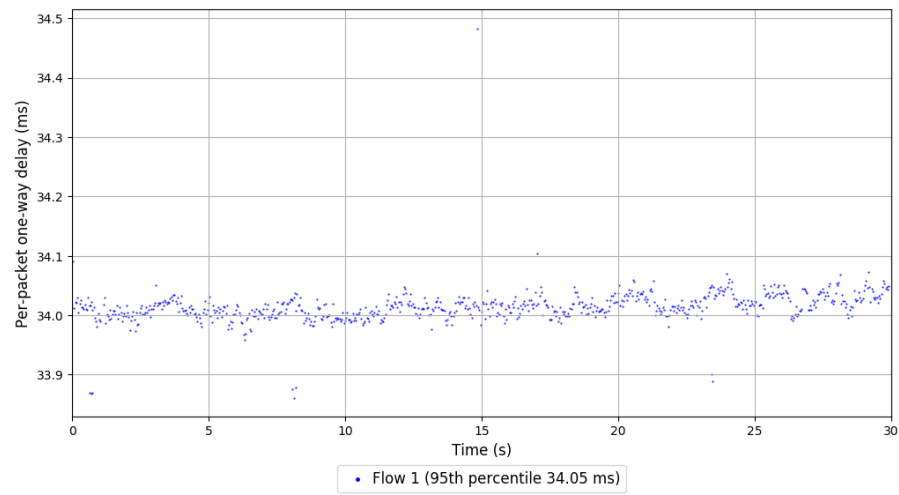
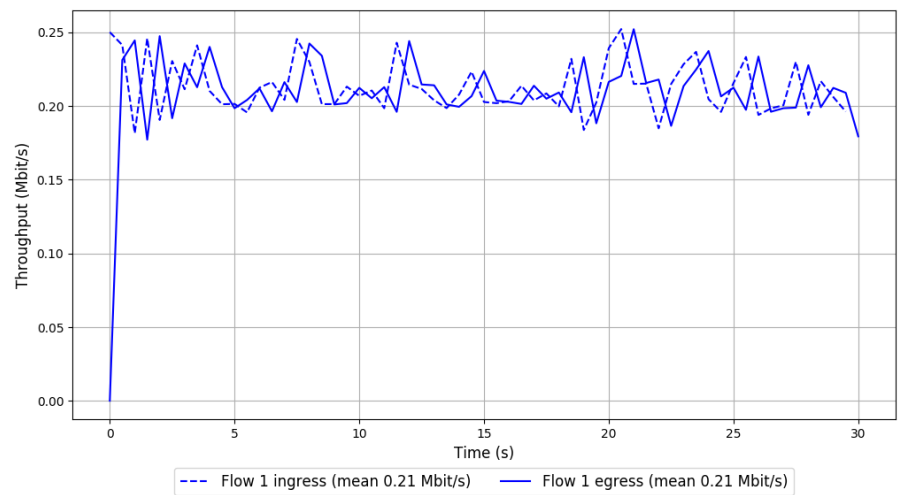


Run 1: Statistics of SCReAM

Start at: 2018-11-30 10:59:10
End at: 2018-11-30 10:59:40
Local clock offset: -2.722 ms
Remote clock offset: -6.388 ms

Below is generated by plot.py at 2018-11-30 12:56:24
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 34.047 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 34.047 ms
Loss rate: 0.26%

Run 1: Report of SReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2018-11-30 11:21:16

End at: 2018-11-30 11:21:46

Local clock offset: -1.566 ms

Remote clock offset: -6.06 ms

Below is generated by plot.py at 2018-11-30 12:56:24

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 33.850 ms

Loss rate: 0.26%

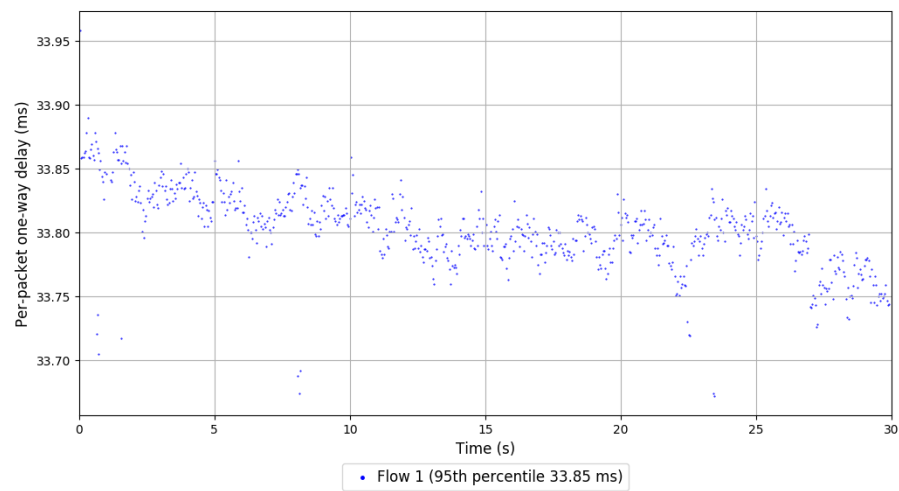
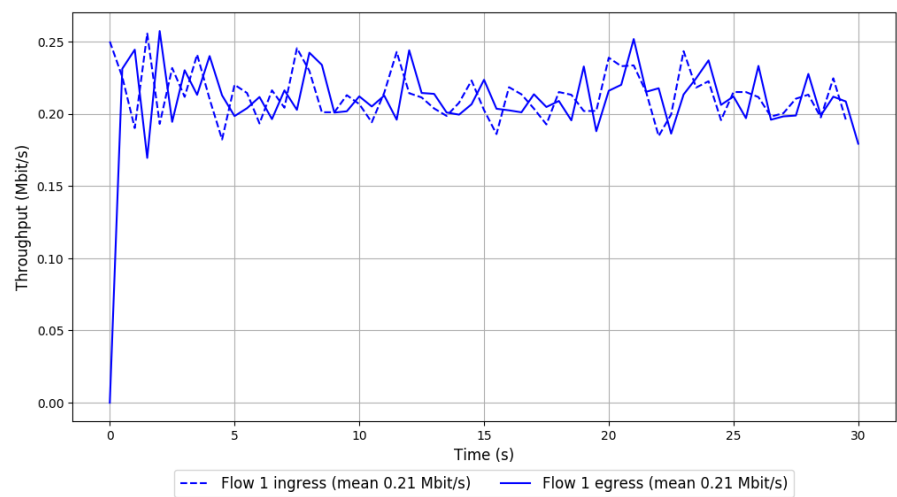
-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 33.850 ms

Loss rate: 0.26%

Run 2: Report of SReAM — Data Link

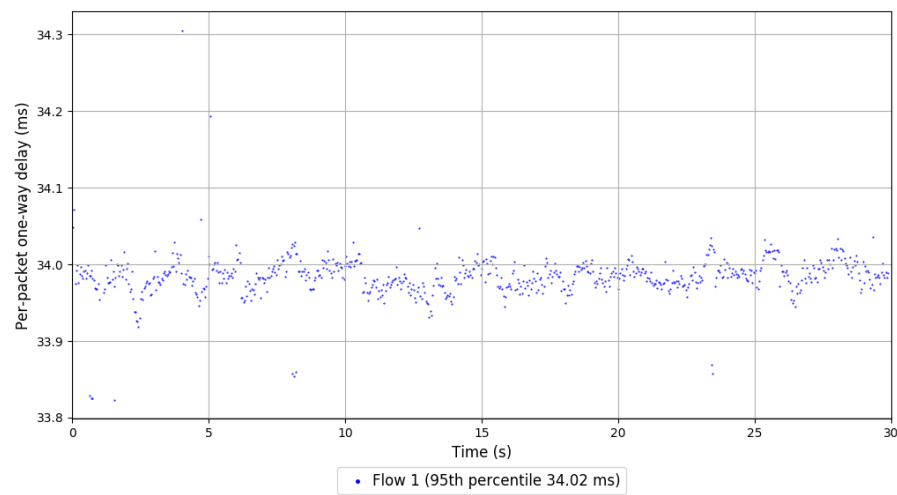
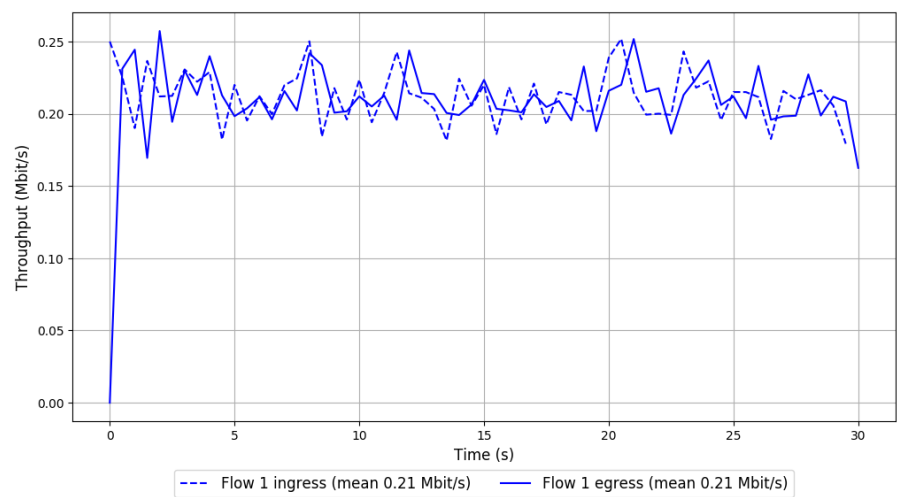


Run 3: Statistics of SCReAM

Start at: 2018-11-30 11:43:25
End at: 2018-11-30 11:43:55
Local clock offset: 0.489 ms
Remote clock offset: -4.896 ms

Below is generated by plot.py at 2018-11-30 12:56:24
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 34.016 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 34.016 ms
Loss rate: 0.26%

Run 3: Report of SReAM — Data Link

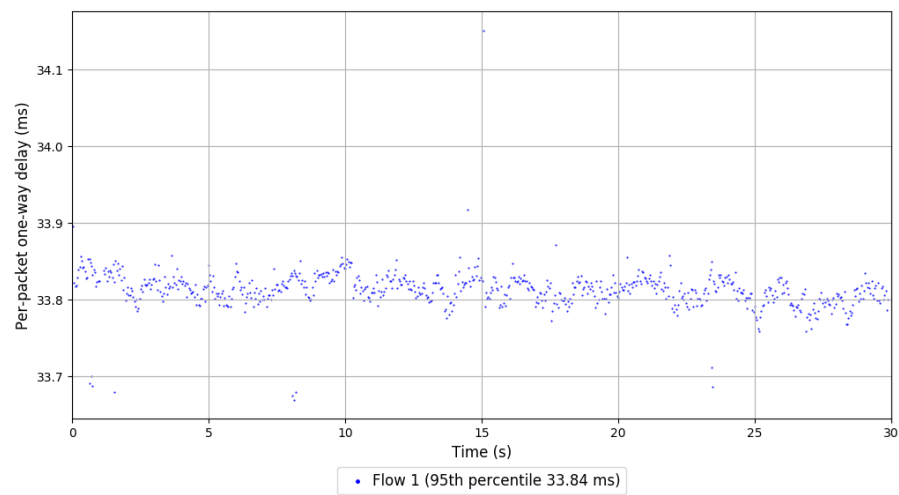
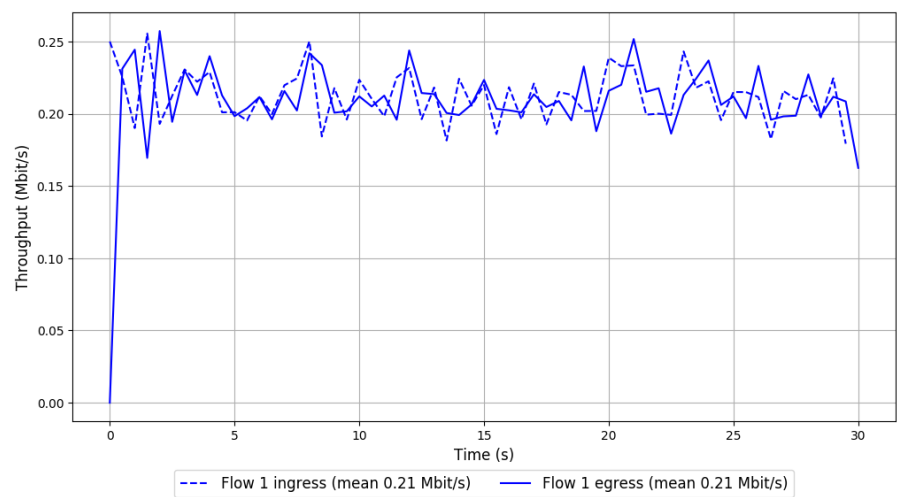


Run 4: Statistics of SCReAM

Start at: 2018-11-30 12:05:26
End at: 2018-11-30 12:05:56
Local clock offset: 3.958 ms
Remote clock offset: -3.722 ms

Below is generated by plot.py at 2018-11-30 12:56:24
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.843 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.843 ms
Loss rate: 0.26%

Run 4: Report of SCRaM — Data Link

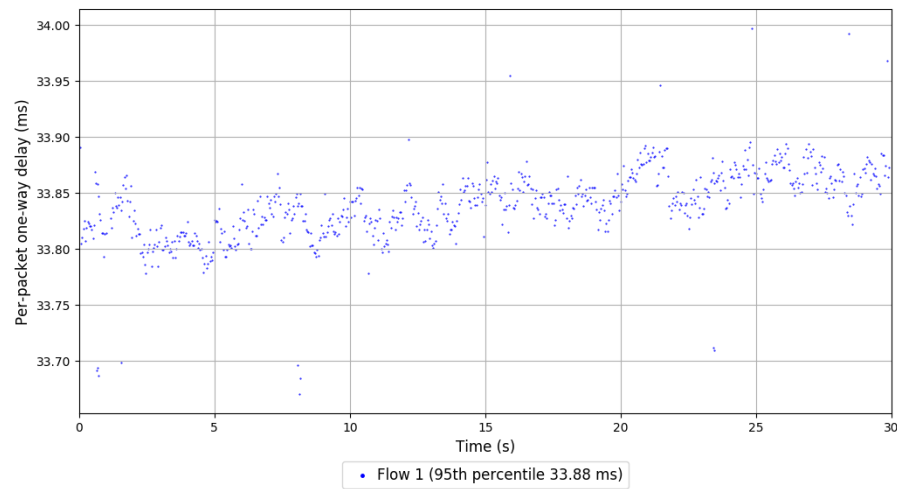
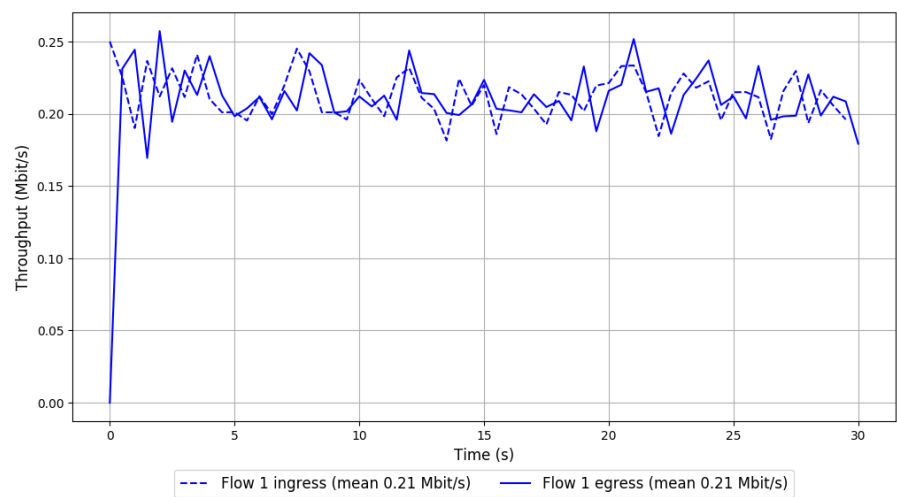


Run 5: Statistics of SCReAM

Start at: 2018-11-30 12:27:30
End at: 2018-11-30 12:28:00
Local clock offset: 1.207 ms
Remote clock offset: -3.121 ms

Below is generated by plot.py at 2018-11-30 12:56:24
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.882 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.882 ms
Loss rate: 0.26%

Run 5: Report of SReAM — Data Link

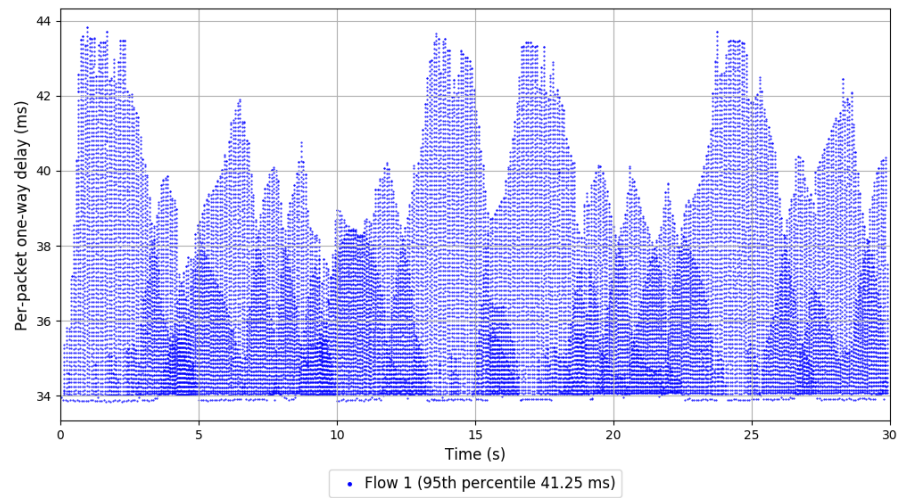
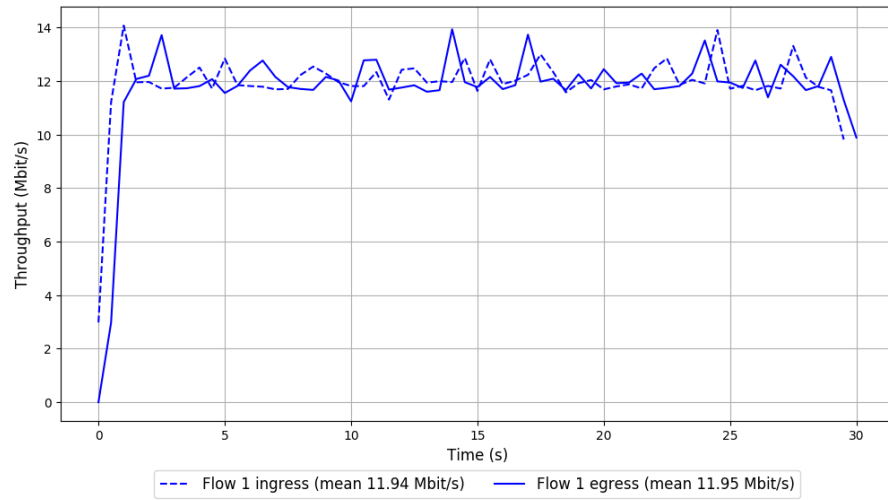


Run 1: Statistics of Sprout

Start at: 2018-11-30 10:55:42
End at: 2018-11-30 10:56:12
Local clock offset: -2.502 ms
Remote clock offset: -6.378 ms

Below is generated by plot.py at 2018-11-30 12:56:24
Datalink statistics
-- Total of 1 flow:
Average throughput: 11.95 Mbit/s
95th percentile per-packet one-way delay: 41.250 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 11.95 Mbit/s
95th percentile per-packet one-way delay: 41.250 ms
Loss rate: 0.16%

Run 1: Report of Sprout — Data Link

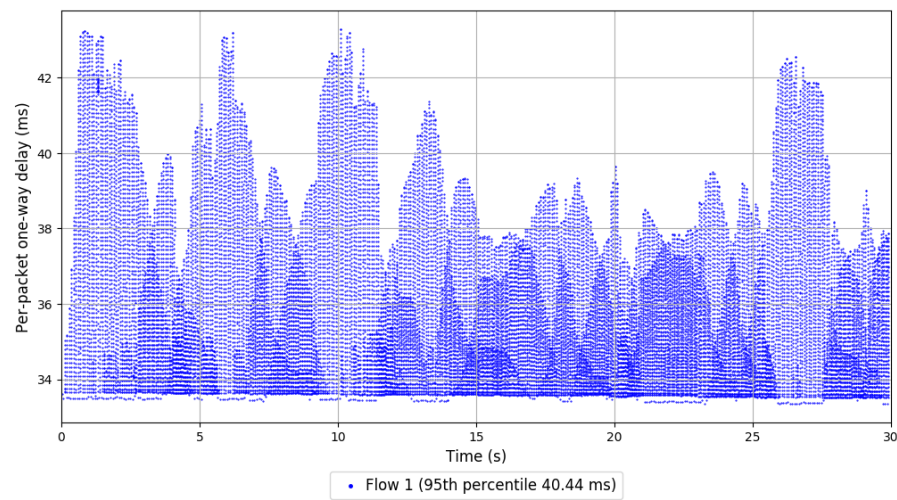
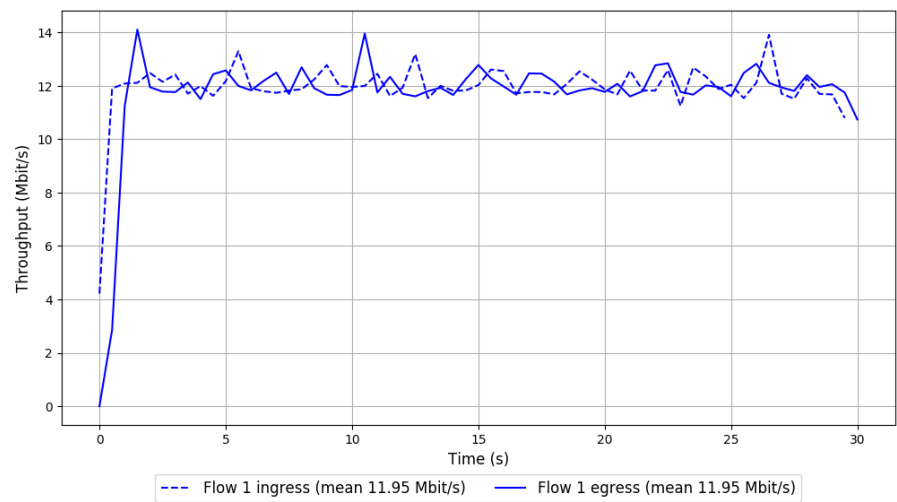


Run 2: Statistics of Sprout

Start at: 2018-11-30 11:17:45
End at: 2018-11-30 11:18:16
Local clock offset: -2.618 ms
Remote clock offset: -6.025 ms

Below is generated by plot.py at 2018-11-30 12:56:24
Datalink statistics
-- Total of 1 flow:
Average throughput: 11.95 Mbit/s
95th percentile per-packet one-way delay: 40.441 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 11.95 Mbit/s
95th percentile per-packet one-way delay: 40.441 ms
Loss rate: 0.13%

Run 2: Report of Sprout — Data Link

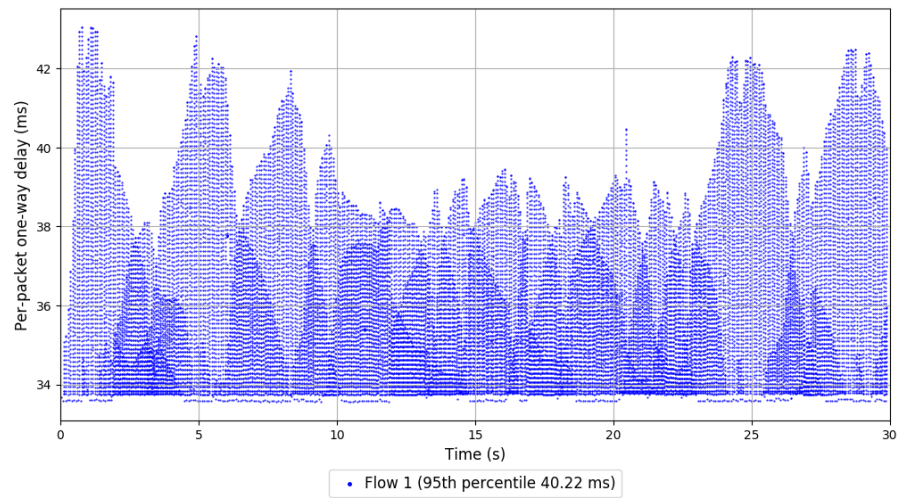
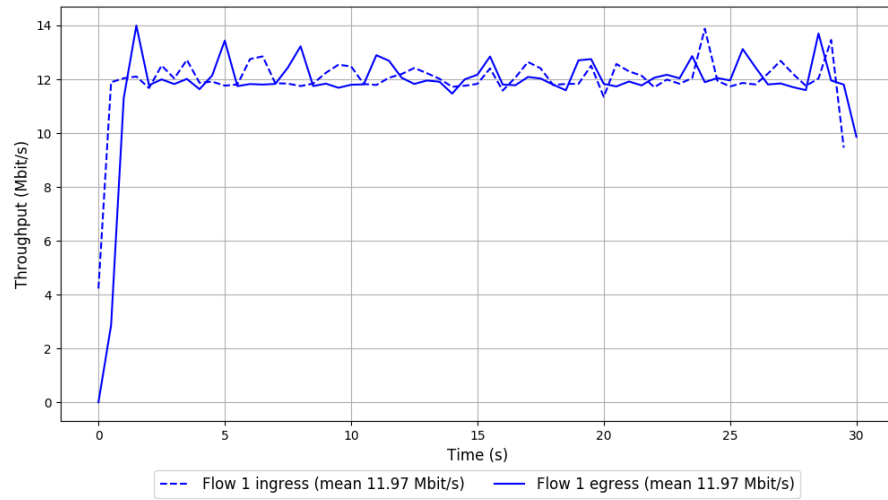


Run 3: Statistics of Sprout

Start at: 2018-11-30 11:39:56
End at: 2018-11-30 11:40:26
Local clock offset: 0.372 ms
Remote clock offset: -4.845 ms

Below is generated by plot.py at 2018-11-30 12:56:24
Datalink statistics
-- Total of 1 flow:
Average throughput: 11.97 Mbit/s
95th percentile per-packet one-way delay: 40.220 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 11.97 Mbit/s
95th percentile per-packet one-way delay: 40.220 ms
Loss rate: 0.19%

Run 3: Report of Sprout — Data Link

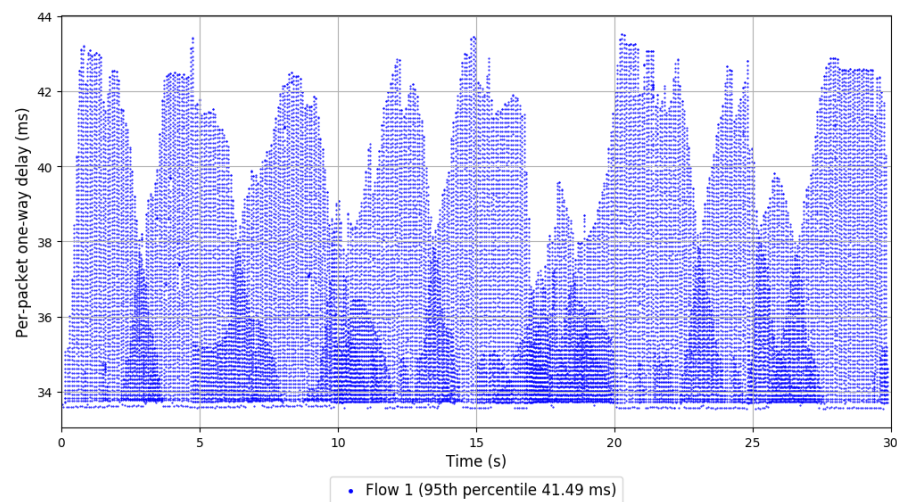
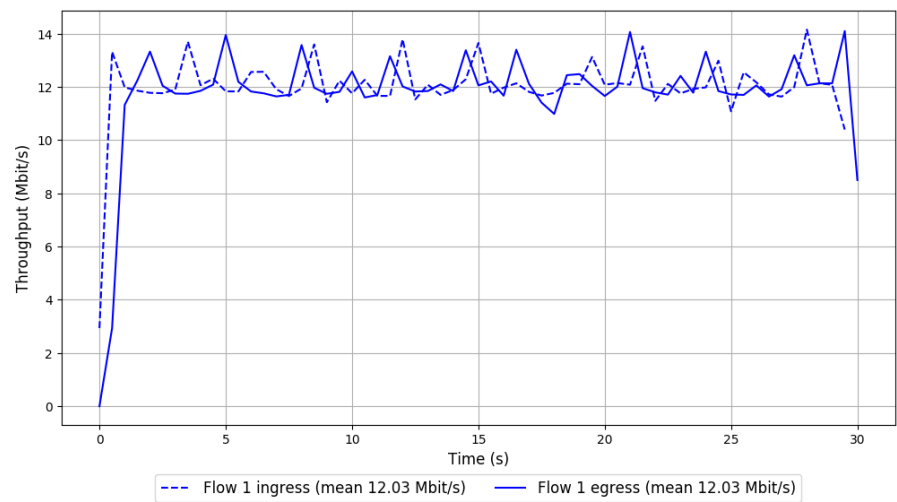


Run 4: Statistics of Sprout

Start at: 2018-11-30 12:01:58
End at: 2018-11-30 12:02:28
Local clock offset: 3.66 ms
Remote clock offset: -3.824 ms

Below is generated by plot.py at 2018-11-30 12:56:24
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.03 Mbit/s
95th percentile per-packet one-way delay: 41.488 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 12.03 Mbit/s
95th percentile per-packet one-way delay: 41.488 ms
Loss rate: 0.26%

Run 4: Report of Sprout — Data Link

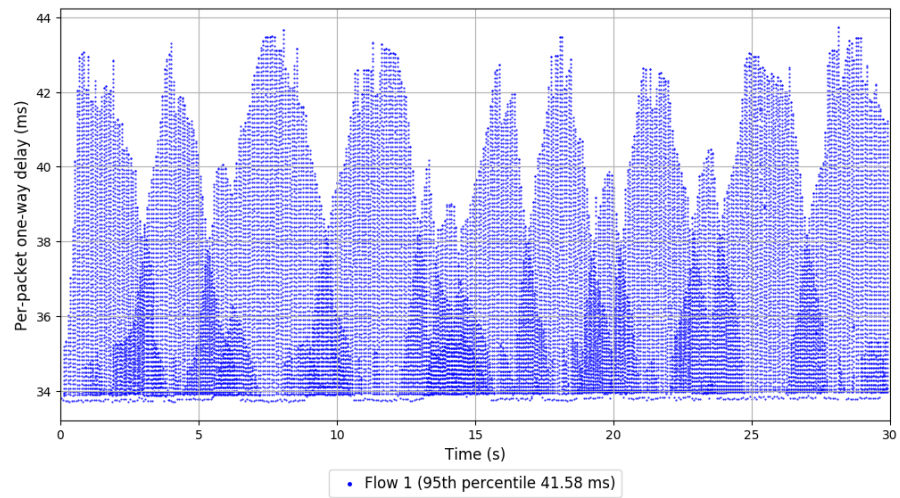
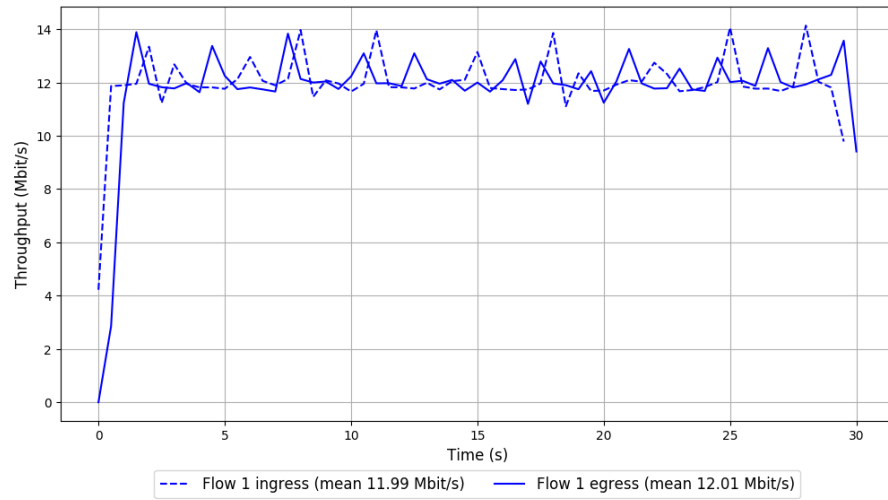


Run 5: Statistics of Sprout

Start at: 2018-11-30 12:24:01
End at: 2018-11-30 12:24:31
Local clock offset: 1.716 ms
Remote clock offset: -3.242 ms

Below is generated by plot.py at 2018-11-30 12:56:24
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.01 Mbit/s
95th percentile per-packet one-way delay: 41.576 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 12.01 Mbit/s
95th percentile per-packet one-way delay: 41.576 ms
Loss rate: 0.05%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2018-11-30 11:13:04

End at: 2018-11-30 11:13:34

Local clock offset: -3.652 ms

Remote clock offset: -6.191 ms

Below is generated by plot.py at 2018-11-30 12:57:40

Datalink statistics

-- Total of 1 flow:

Average throughput: 87.83 Mbit/s

95th percentile per-packet one-way delay: 45.616 ms

Loss rate: 0.27%

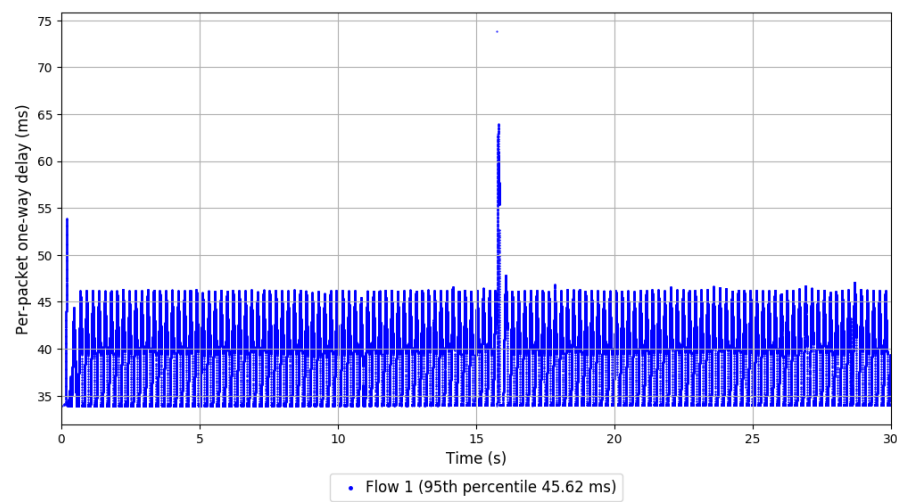
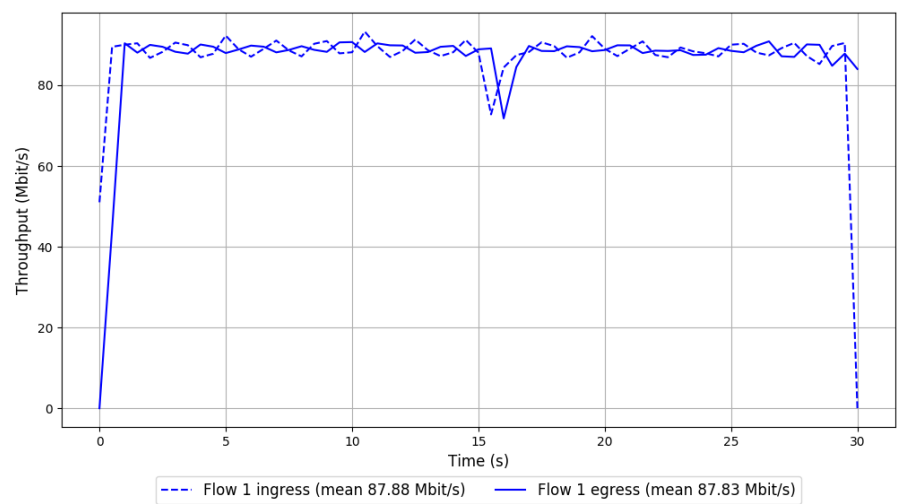
-- Flow 1:

Average throughput: 87.83 Mbit/s

95th percentile per-packet one-way delay: 45.616 ms

Loss rate: 0.27%

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



Run 2: Statistics of TaoVA-100x

Start at: 2018-11-30 11:35:16

End at: 2018-11-30 11:35:46

Local clock offset: 0.167 ms

Remote clock offset: -5.203 ms

Below is generated by plot.py at 2018-11-30 12:57:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 88.26 Mbit/s

95th percentile per-packet one-way delay: 45.433 ms

Loss rate: 0.27%

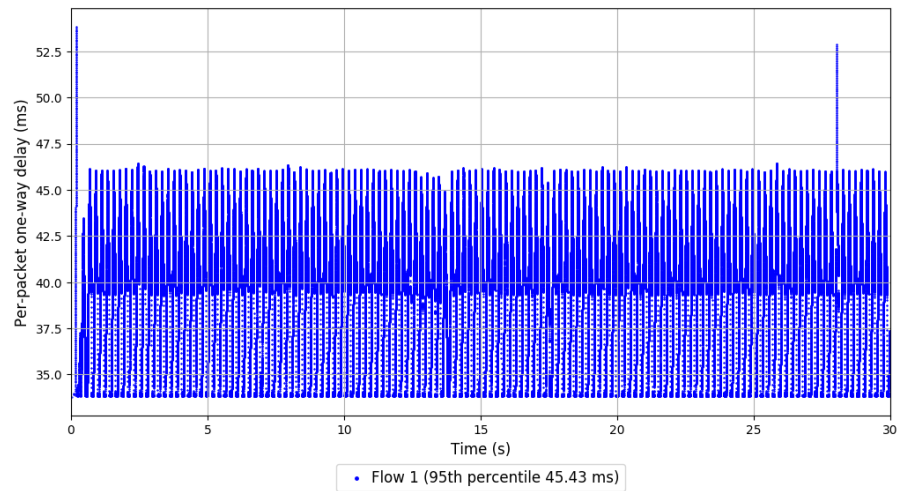
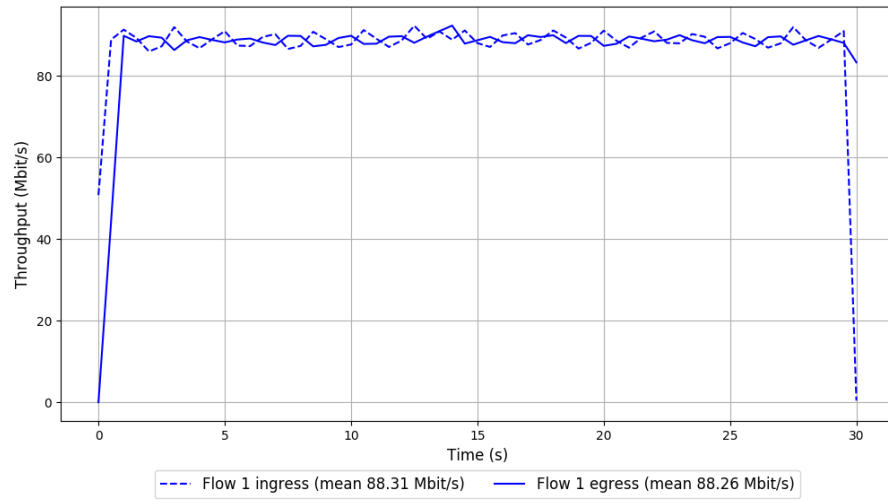
-- Flow 1:

Average throughput: 88.26 Mbit/s

95th percentile per-packet one-way delay: 45.433 ms

Loss rate: 0.27%

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-11-30 11:57:19

End at: 2018-11-30 11:57:49

Local clock offset: 3.163 ms

Remote clock offset: -3.911 ms

Below is generated by plot.py at 2018-11-30 12:57:44

Datalink statistics

-- Total of 1 flow:

Average throughput: 88.15 Mbit/s

95th percentile per-packet one-way delay: 45.138 ms

Loss rate: 0.28%

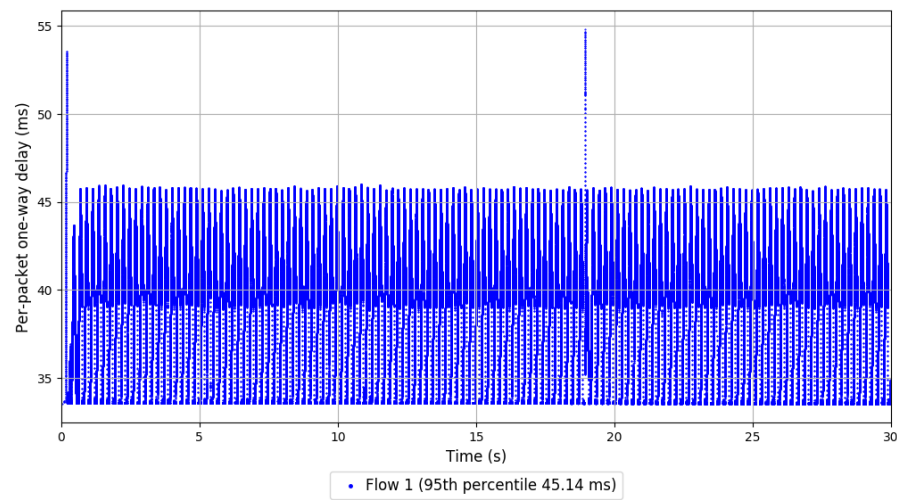
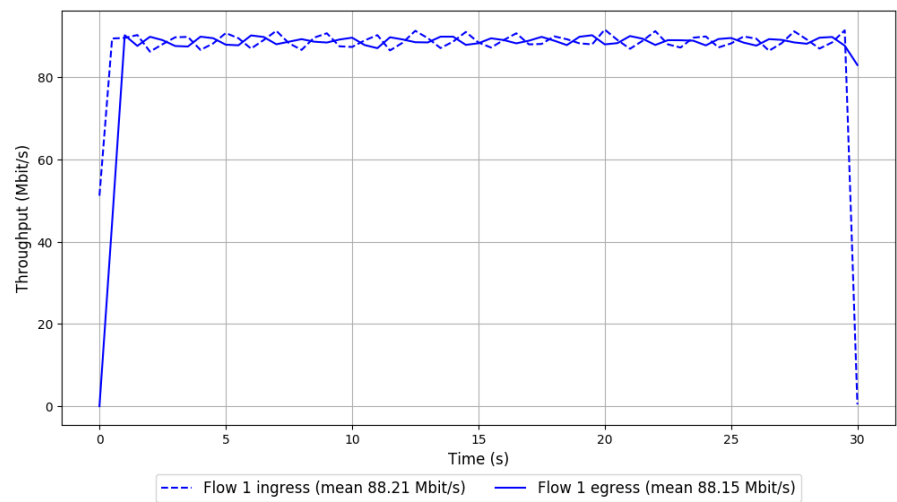
-- Flow 1:

Average throughput: 88.15 Mbit/s

95th percentile per-packet one-way delay: 45.138 ms

Loss rate: 0.28%

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-11-30 12:19:20

End at: 2018-11-30 12:19:50

Local clock offset: 2.877 ms

Remote clock offset: -3.315 ms

Below is generated by plot.py at 2018-11-30 12:57:45

Datalink statistics

-- Total of 1 flow:

Average throughput: 88.04 Mbit/s

95th percentile per-packet one-way delay: 45.657 ms

Loss rate: 0.22%

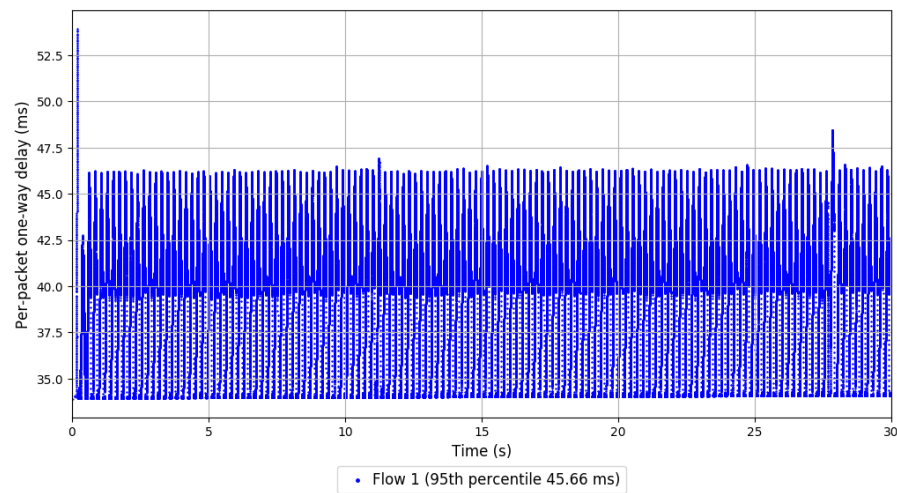
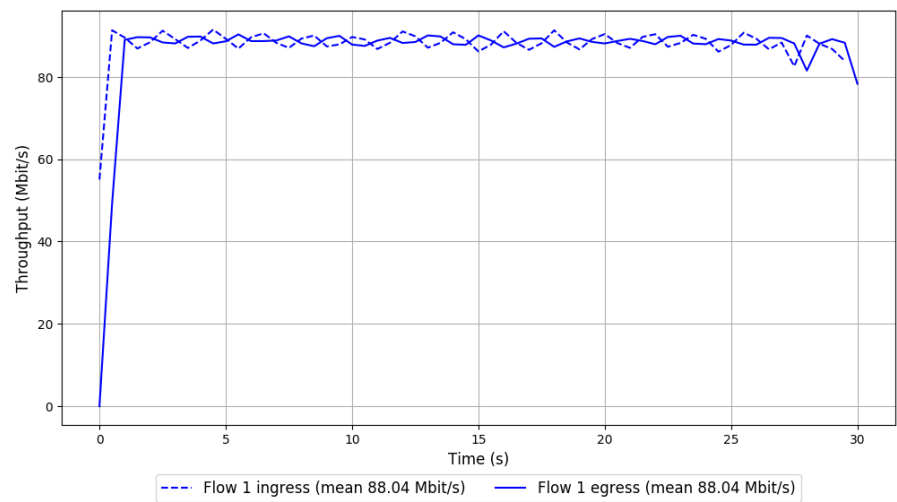
-- Flow 1:

Average throughput: 88.04 Mbit/s

95th percentile per-packet one-way delay: 45.657 ms

Loss rate: 0.22%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-11-30 12:41:33

End at: 2018-11-30 12:42:03

Local clock offset: 0.237 ms

Remote clock offset: -2.963 ms

Below is generated by plot.py at 2018-11-30 12:57:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 88.10 Mbit/s

95th percentile per-packet one-way delay: 45.431 ms

Loss rate: 0.24%

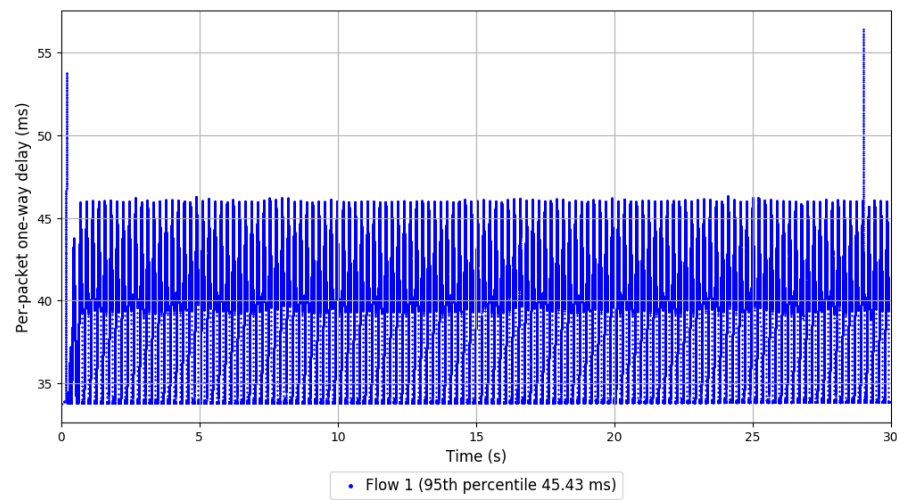
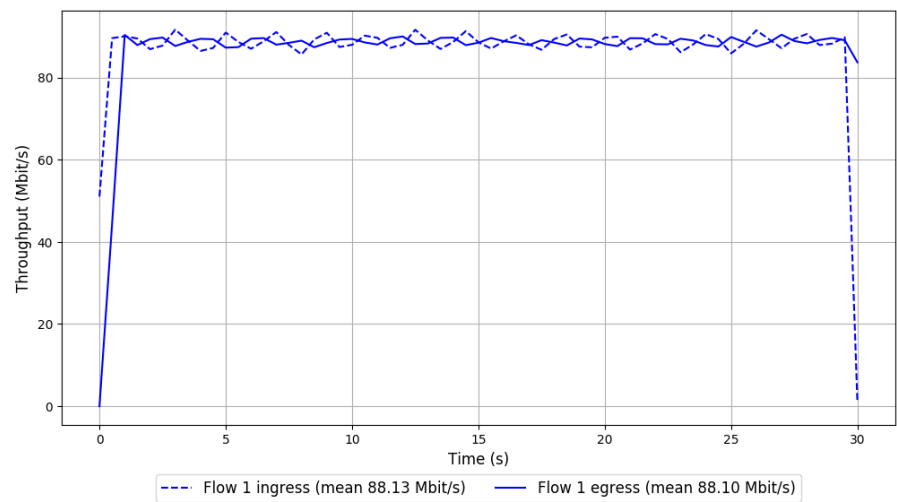
-- Flow 1:

Average throughput: 88.10 Mbit/s

95th percentile per-packet one-way delay: 45.431 ms

Loss rate: 0.24%

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

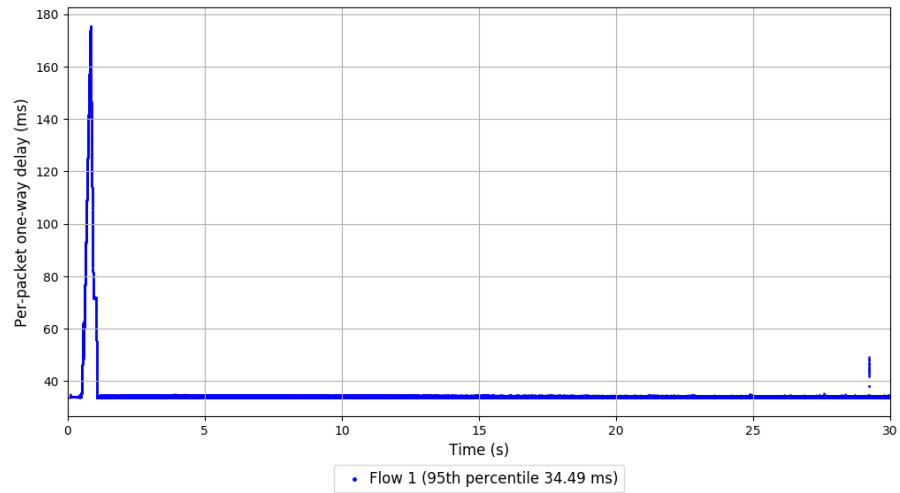
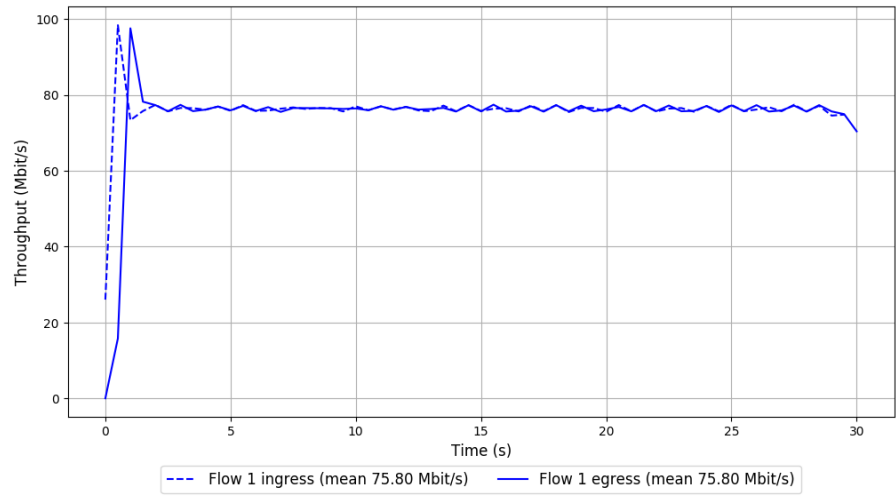


Run 1: Statistics of TCP Vegas

Start at: 2018-11-30 11:15:27
End at: 2018-11-30 11:15:57
Local clock offset: -3.495 ms
Remote clock offset: -6.279 ms

Below is generated by plot.py at 2018-11-30 12:57:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 75.80 Mbit/s
95th percentile per-packet one-way delay: 34.488 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 75.80 Mbit/s
95th percentile per-packet one-way delay: 34.488 ms
Loss rate: 0.23%

Run 1: Report of TCP Vegas — Data Link

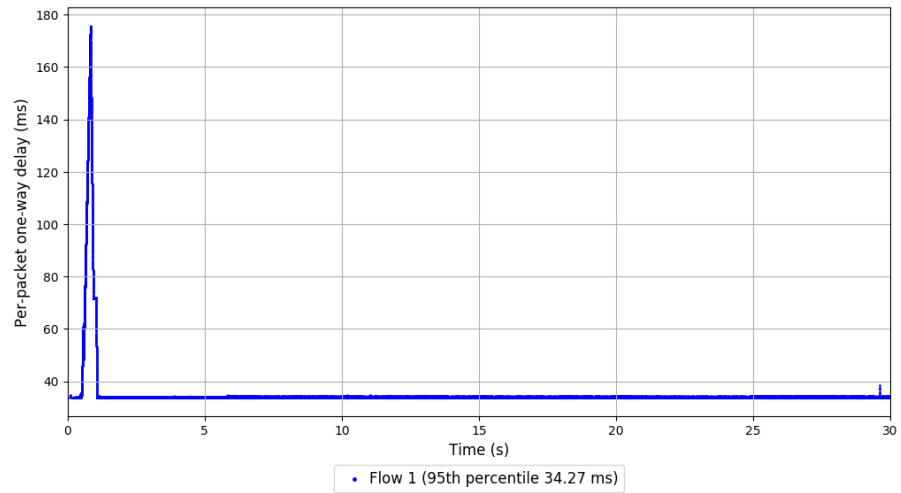
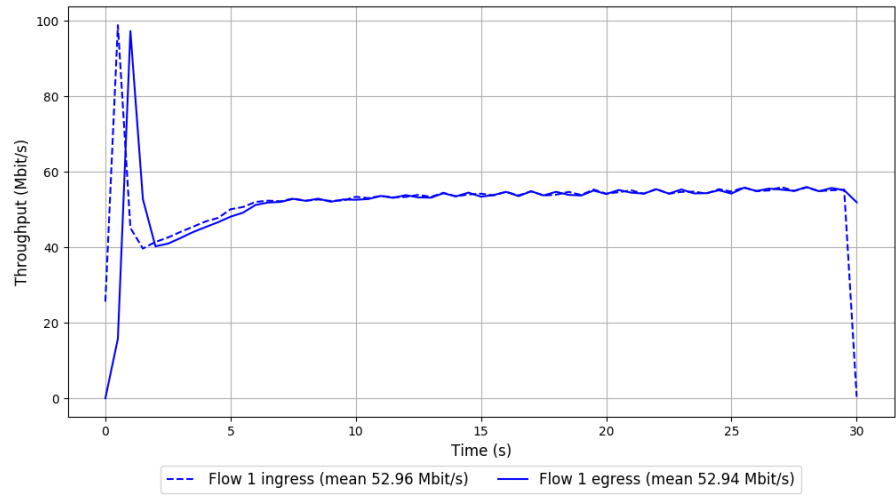


Run 2: Statistics of TCP Vegas

Start at: 2018-11-30 11:37:39
End at: 2018-11-30 11:38:09
Local clock offset: 0.289 ms
Remote clock offset: -5.039 ms

Below is generated by plot.py at 2018-11-30 12:57:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 52.94 Mbit/s
95th percentile per-packet one-way delay: 34.270 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 52.94 Mbit/s
95th percentile per-packet one-way delay: 34.270 ms
Loss rate: 0.25%

Run 2: Report of TCP Vegas — Data Link

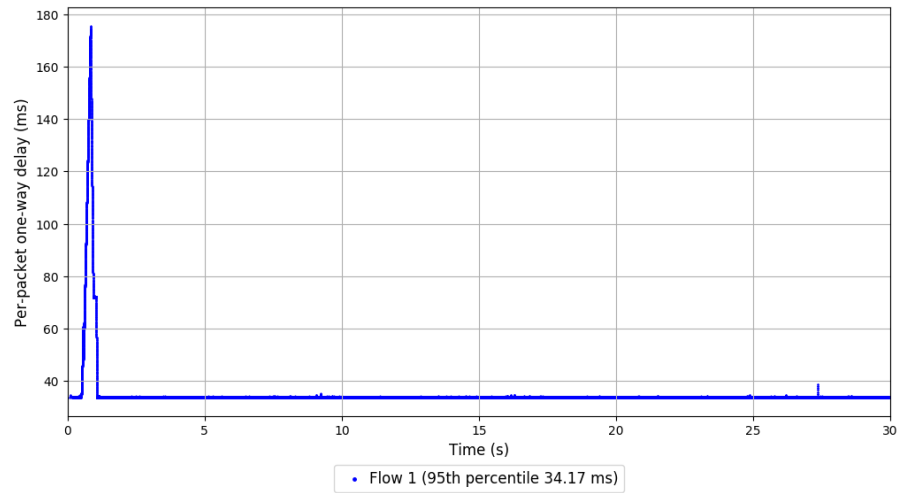
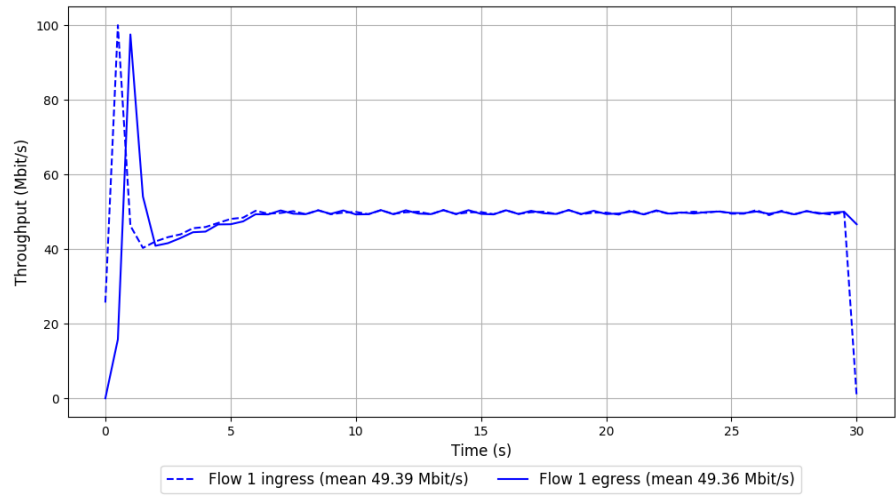


Run 3: Statistics of TCP Vegas

Start at: 2018-11-30 11:59:41
End at: 2018-11-30 12:00:11
Local clock offset: 3.436 ms
Remote clock offset: -3.947 ms

Below is generated by plot.py at 2018-11-30 12:57:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 49.36 Mbit/s
95th percentile per-packet one-way delay: 34.166 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 49.36 Mbit/s
95th percentile per-packet one-way delay: 34.166 ms
Loss rate: 0.27%

Run 3: Report of TCP Vegas — Data Link

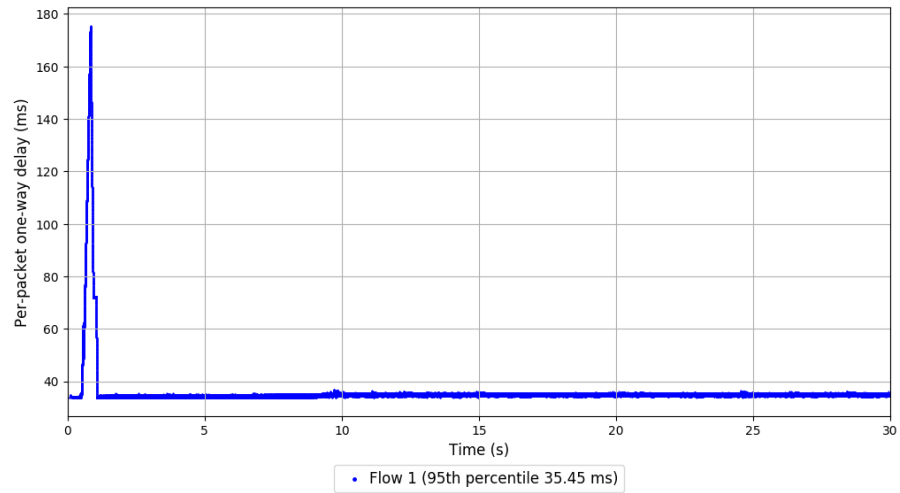
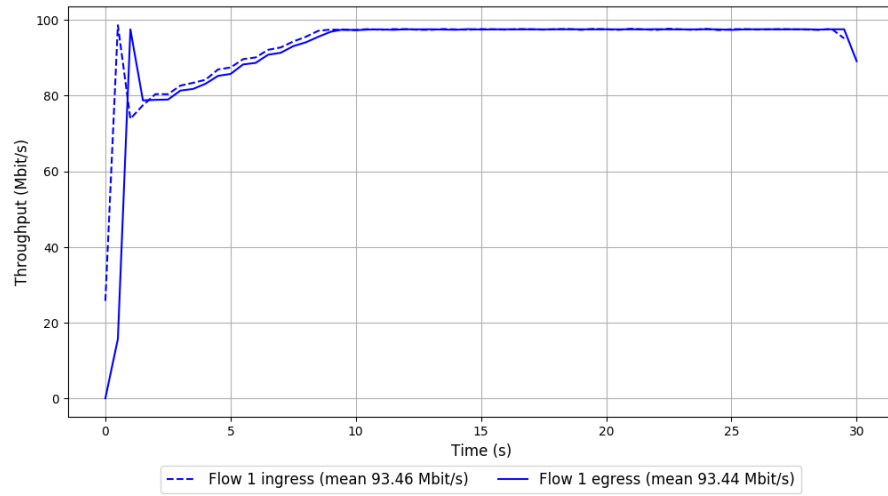


Run 4: Statistics of TCP Vegas

Start at: 2018-11-30 12:21:42
End at: 2018-11-30 12:22:12
Local clock offset: 2.195 ms
Remote clock offset: -3.255 ms

Below is generated by plot.py at 2018-11-30 12:57:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 93.44 Mbit/s
95th percentile per-packet one-way delay: 35.455 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 93.44 Mbit/s
95th percentile per-packet one-way delay: 35.455 ms
Loss rate: 0.23%

Run 4: Report of TCP Vegas — Data Link

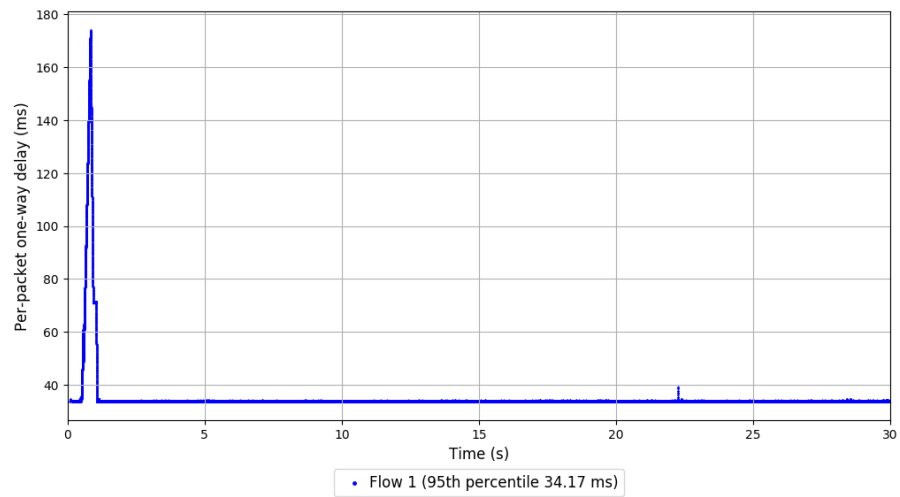
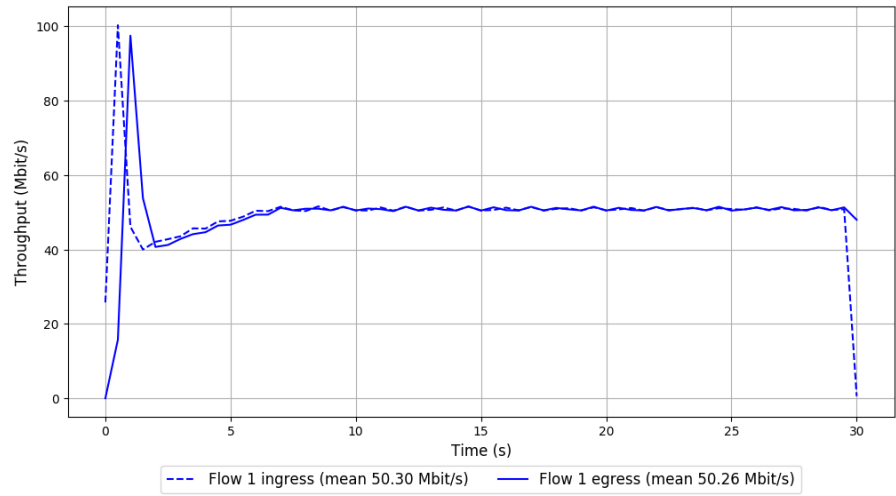


Run 5: Statistics of TCP Vegas

Start at: 2018-11-30 12:43:55
End at: 2018-11-30 12:44:25
Local clock offset: 0.148 ms
Remote clock offset: -2.857 ms

Below is generated by plot.py at 2018-11-30 12:57:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 50.26 Mbit/s
95th percentile per-packet one-way delay: 34.174 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 50.26 Mbit/s
95th percentile per-packet one-way delay: 34.174 ms
Loss rate: 0.29%

Run 5: Report of TCP Vegas — Data Link

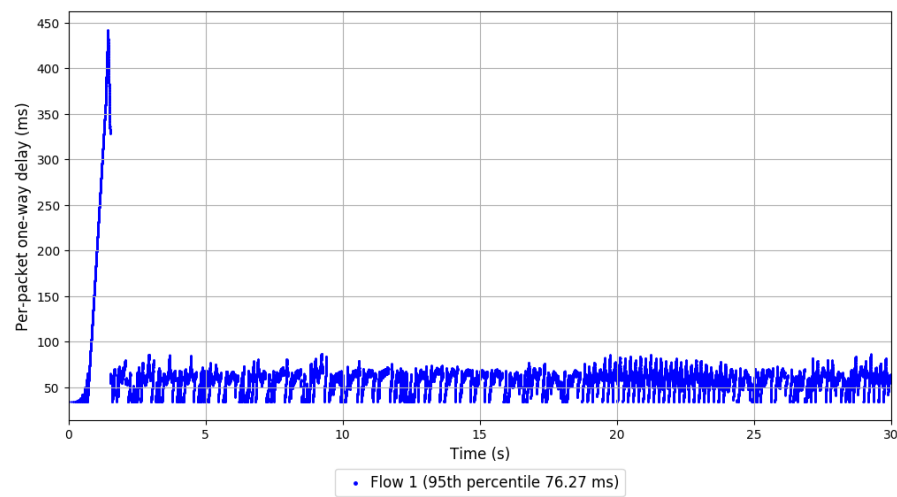
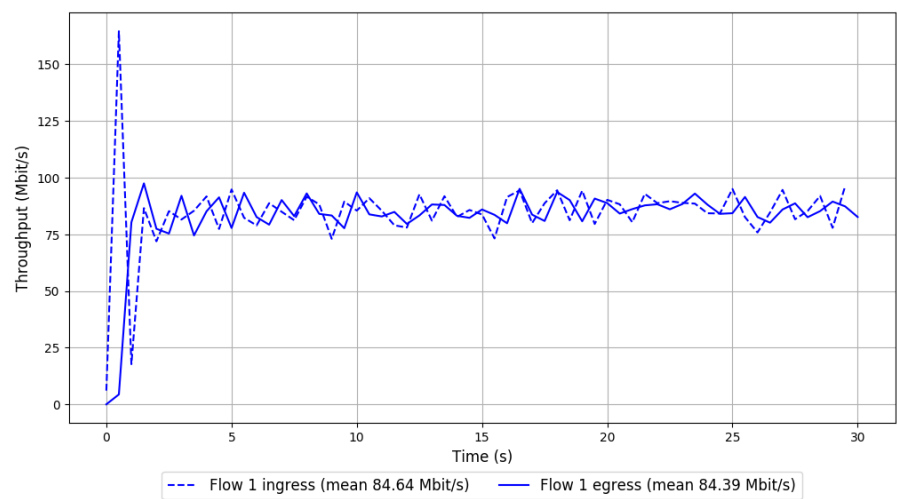


Run 1: Statistics of Verus

Start at: 2018-11-30 11:04:54
End at: 2018-11-30 11:05:24
Local clock offset: -3.13 ms
Remote clock offset: -6.417 ms

Below is generated by plot.py at 2018-11-30 12:58:07
Datalink statistics
-- Total of 1 flow:
Average throughput: 84.39 Mbit/s
95th percentile per-packet one-way delay: 76.265 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 84.39 Mbit/s
95th percentile per-packet one-way delay: 76.265 ms
Loss rate: 0.50%

Run 1: Report of Verus — Data Link

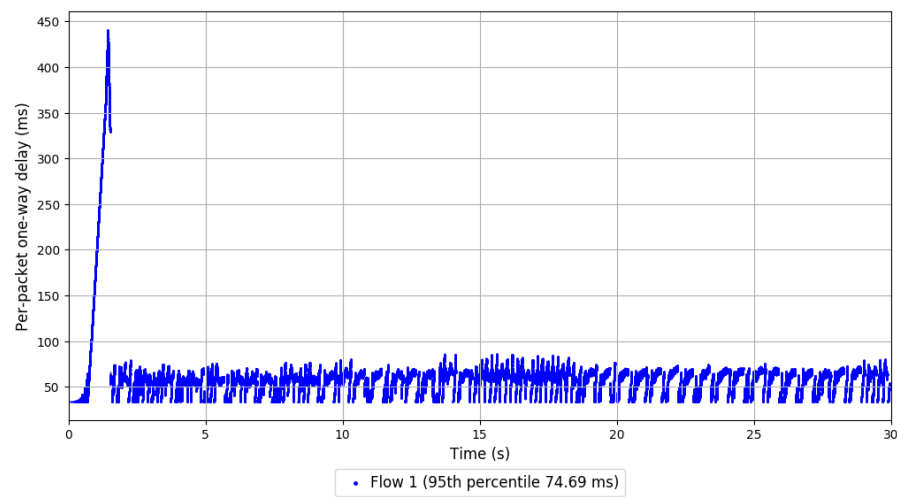
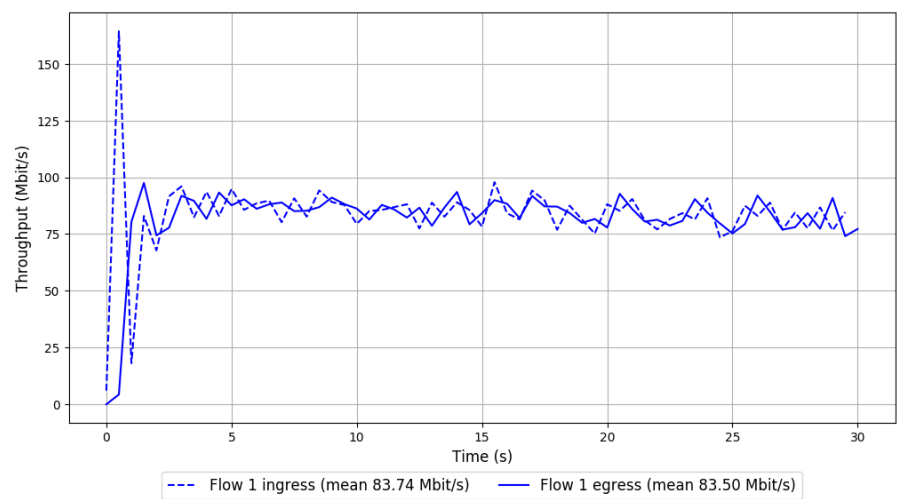


Run 2: Statistics of Verus

Start at: 2018-11-30 11:27:00
End at: 2018-11-30 11:27:30
Local clock offset: -0.54 ms
Remote clock offset: -5.587 ms

Below is generated by plot.py at 2018-11-30 12:58:16
Datalink statistics
-- Total of 1 flow:
Average throughput: 83.50 Mbit/s
95th percentile per-packet one-way delay: 74.695 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 83.50 Mbit/s
95th percentile per-packet one-way delay: 74.695 ms
Loss rate: 0.50%

Run 2: Report of Verus — Data Link

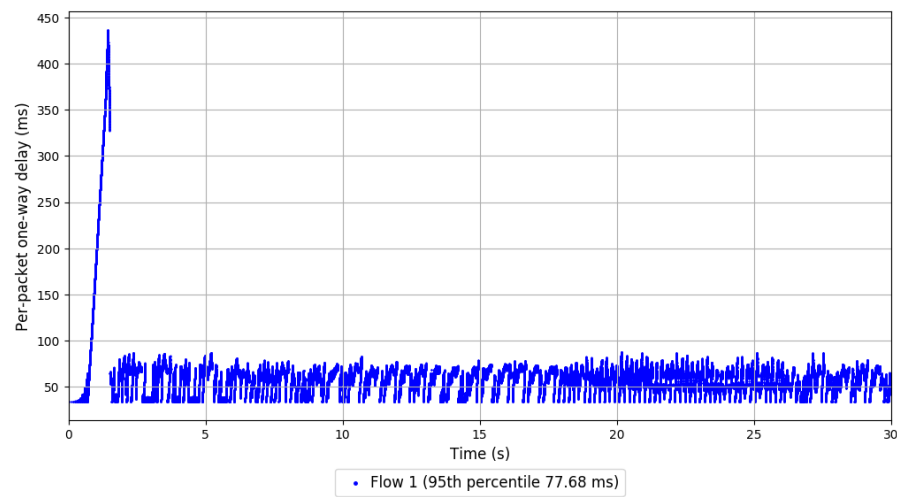
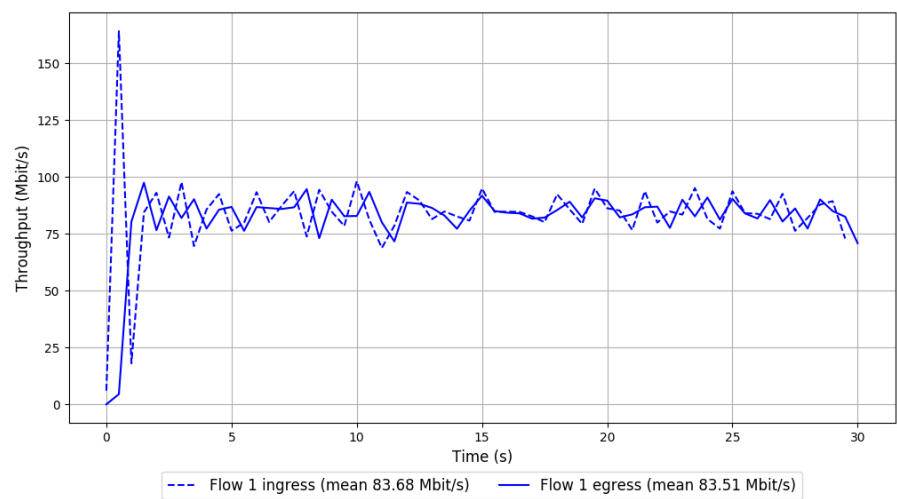


Run 3: Statistics of Verus

Start at: 2018-11-30 11:49:08
End at: 2018-11-30 11:49:38
Local clock offset: 1.744 ms
Remote clock offset: -4.395 ms

Below is generated by plot.py at 2018-11-30 12:58:42
Datalink statistics
-- Total of 1 flow:
Average throughput: 83.51 Mbit/s
95th percentile per-packet one-way delay: 77.678 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 83.51 Mbit/s
95th percentile per-packet one-way delay: 77.678 ms
Loss rate: 0.42%

Run 3: Report of Verus — Data Link

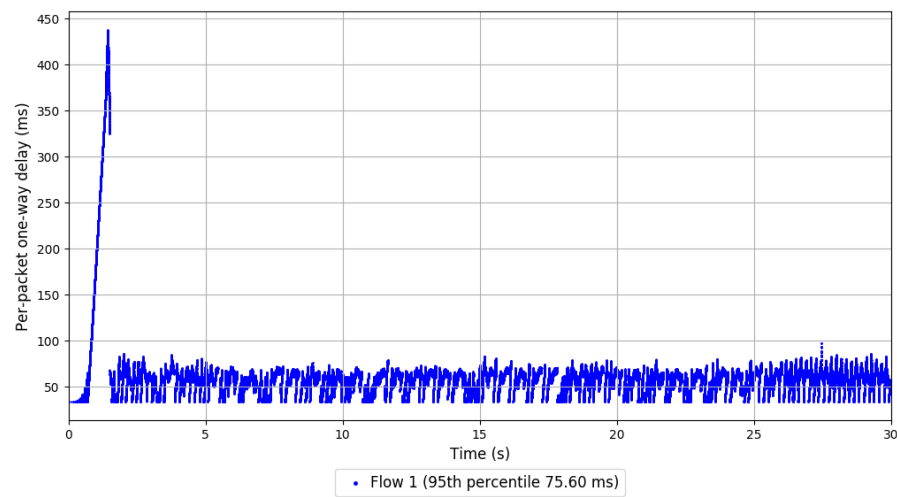
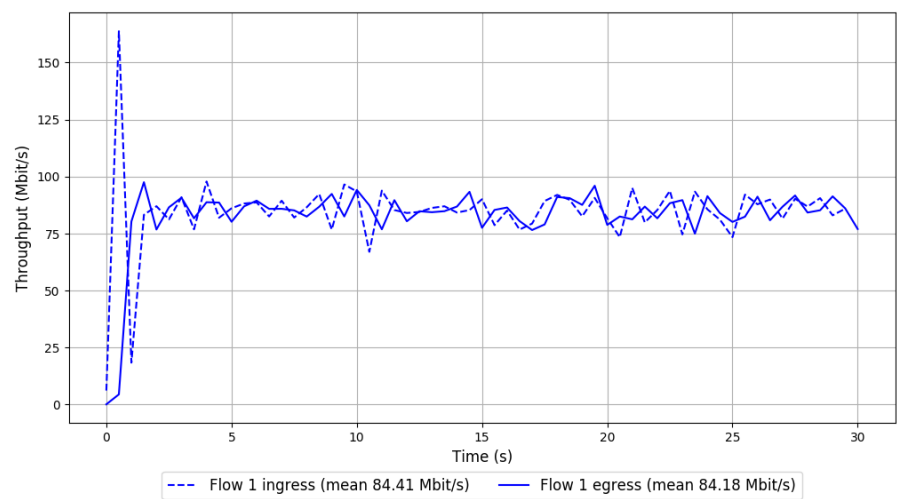


Run 4: Statistics of Verus

Start at: 2018-11-30 12:11:09
End at: 2018-11-30 12:11:39
Local clock offset: 4.388 ms
Remote clock offset: -3.663 ms

Below is generated by plot.py at 2018-11-30 12:58:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 84.18 Mbit/s
95th percentile per-packet one-way delay: 75.603 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 84.18 Mbit/s
95th percentile per-packet one-way delay: 75.603 ms
Loss rate: 0.48%

Run 4: Report of Verus — Data Link

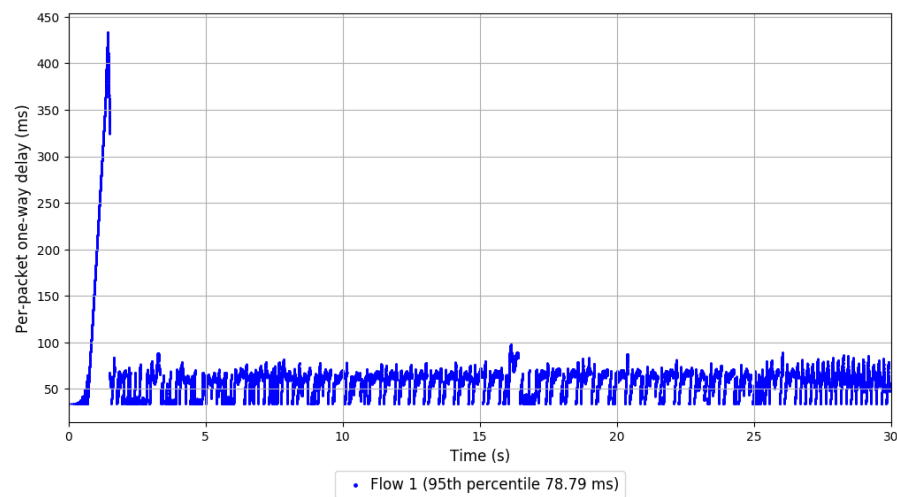
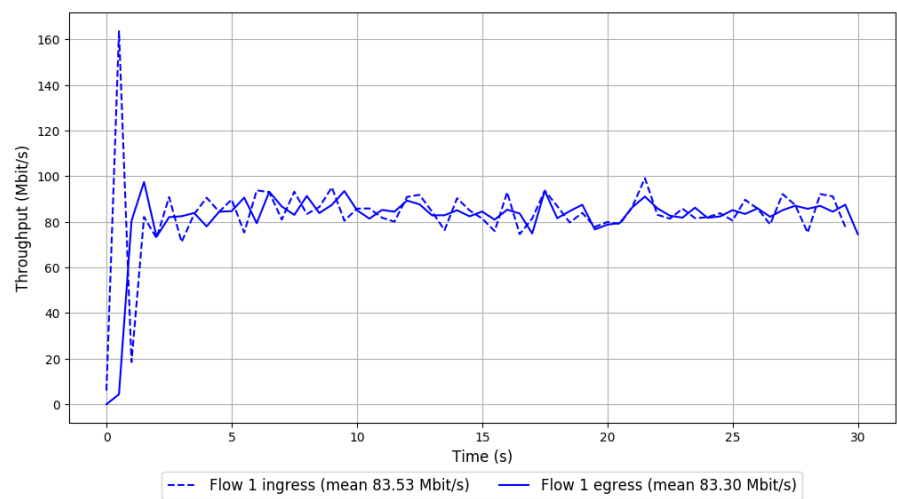


Run 5: Statistics of Verus

Start at: 2018-11-30 12:33:14
End at: 2018-11-30 12:33:44
Local clock offset: 0.656 ms
Remote clock offset: -3.325 ms

Below is generated by plot.py at 2018-11-30 12:58:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 83.30 Mbit/s
95th percentile per-packet one-way delay: 78.792 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 83.30 Mbit/s
95th percentile per-packet one-way delay: 78.792 ms
Loss rate: 0.49%

Run 5: Report of Verus — Data Link

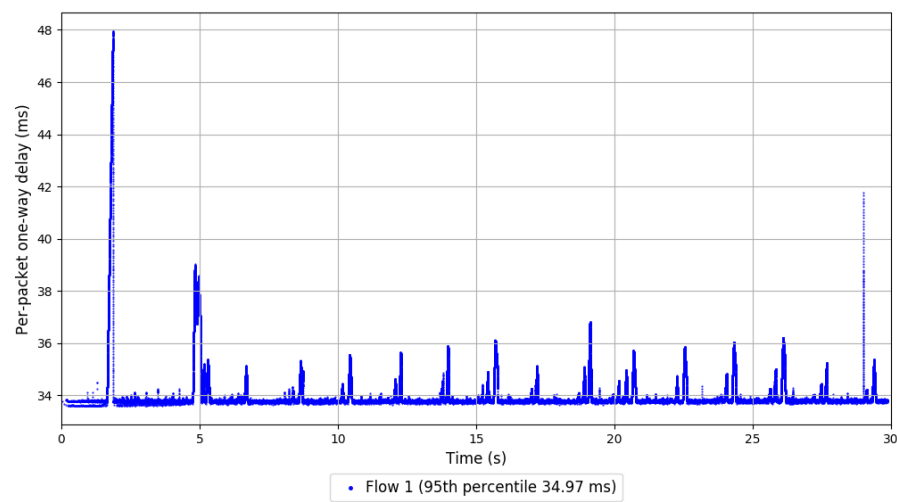
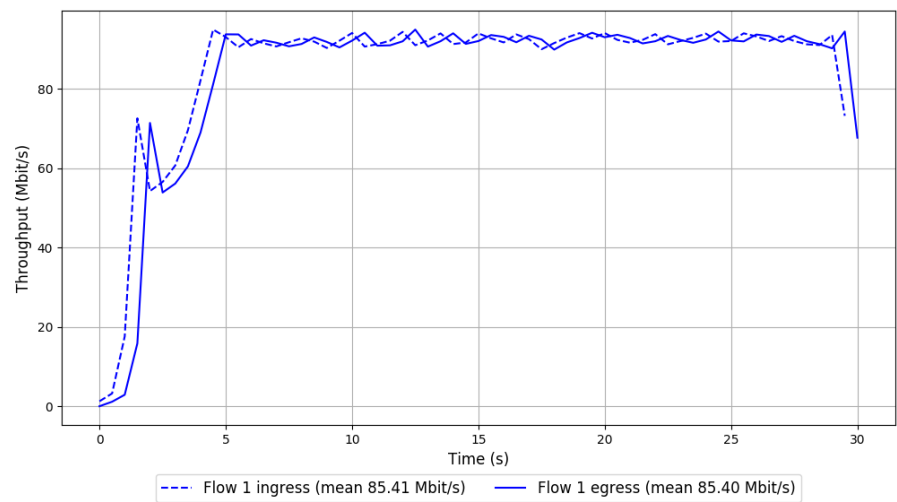


Run 1: Statistics of PCC-Vivace

Start at: 2018-11-30 11:00:16
End at: 2018-11-30 11:00:46
Local clock offset: -2.82 ms
Remote clock offset: -6.188 ms

Below is generated by plot.py at 2018-11-30 12:58:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 85.40 Mbit/s
95th percentile per-packet one-way delay: 34.966 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 85.40 Mbit/s
95th percentile per-packet one-way delay: 34.966 ms
Loss rate: 0.23%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2018-11-30 11:22:22

End at: 2018-11-30 11:22:52

Local clock offset: -1.315 ms

Remote clock offset: -5.818 ms

Below is generated by plot.py at 2018-11-30 12:58:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 85.02 Mbit/s

95th percentile per-packet one-way delay: 35.786 ms

Loss rate: 0.23%

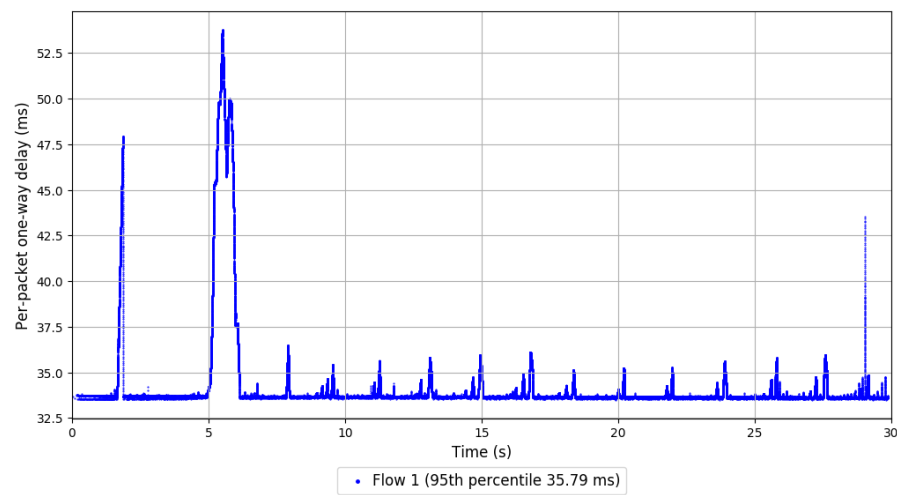
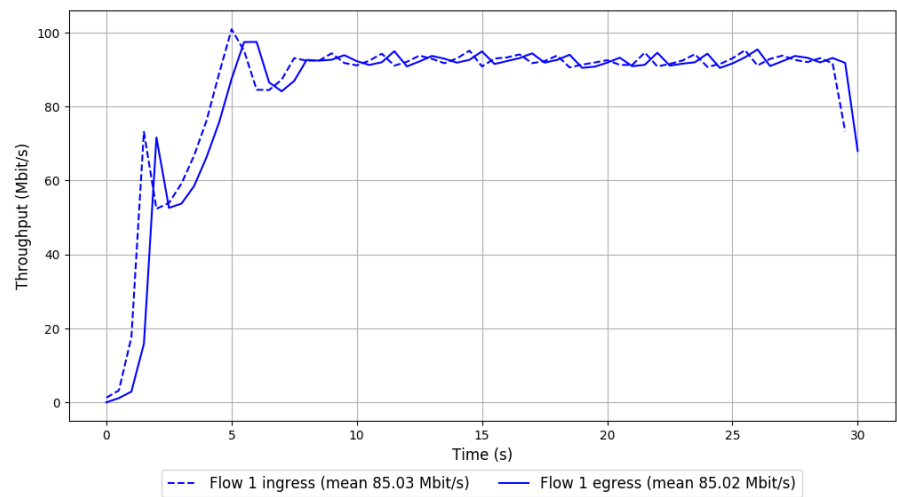
-- Flow 1:

Average throughput: 85.02 Mbit/s

95th percentile per-packet one-way delay: 35.786 ms

Loss rate: 0.23%

Run 2: Report of PCC-Vivace — Data Link

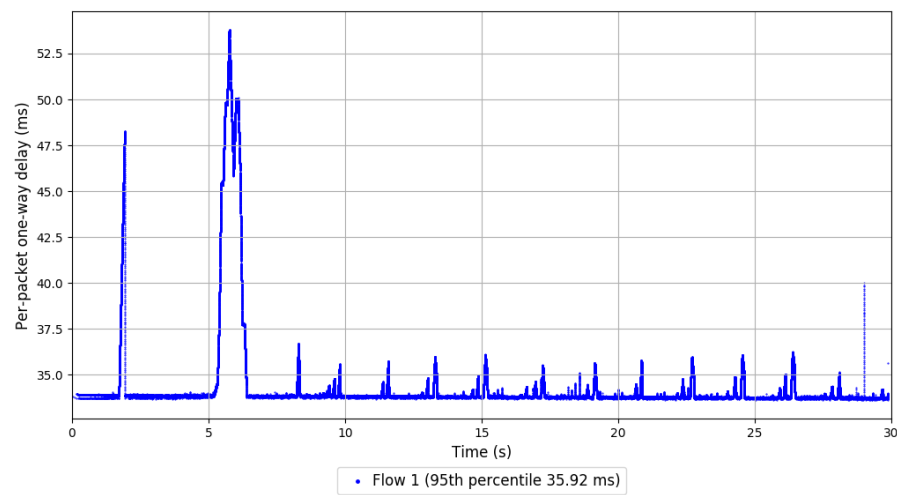
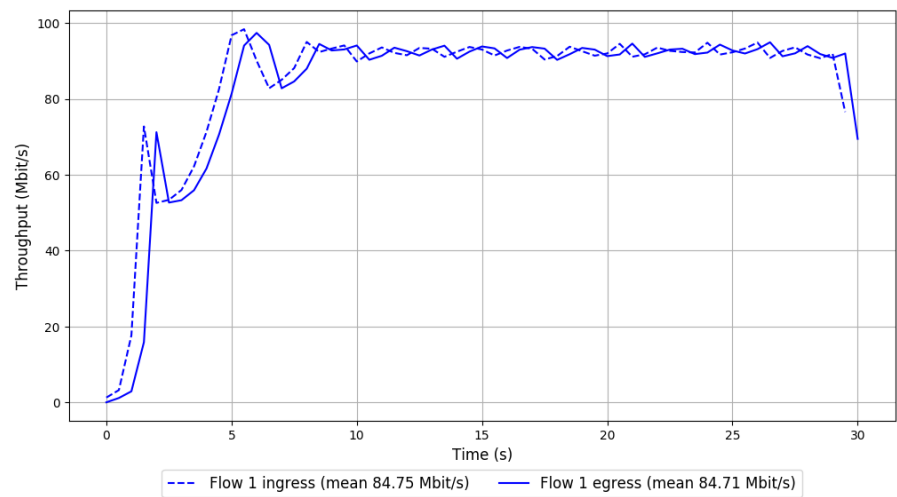


Run 3: Statistics of PCC-Vivace

Start at: 2018-11-30 11:44:31
End at: 2018-11-30 11:45:01
Local clock offset: 0.519 ms
Remote clock offset: -4.792 ms

Below is generated by plot.py at 2018-11-30 12:58:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 84.71 Mbit/s
95th percentile per-packet one-way delay: 35.919 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 84.71 Mbit/s
95th percentile per-packet one-way delay: 35.919 ms
Loss rate: 0.27%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2018-11-30 12:06:32

End at: 2018-11-30 12:07:02

Local clock offset: 4.051 ms

Remote clock offset: -3.708 ms

Below is generated by plot.py at 2018-11-30 12:59:01

Datalink statistics

-- Total of 1 flow:

Average throughput: 85.51 Mbit/s

95th percentile per-packet one-way delay: 35.236 ms

Loss rate: 0.24%

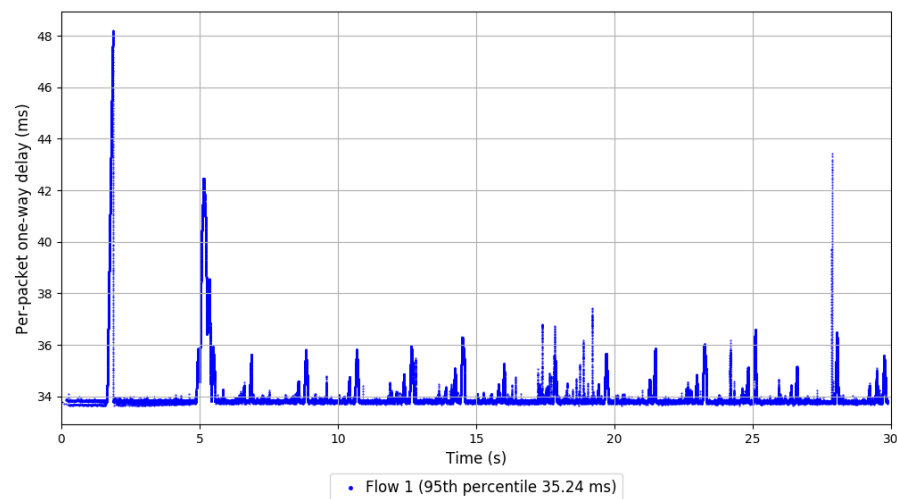
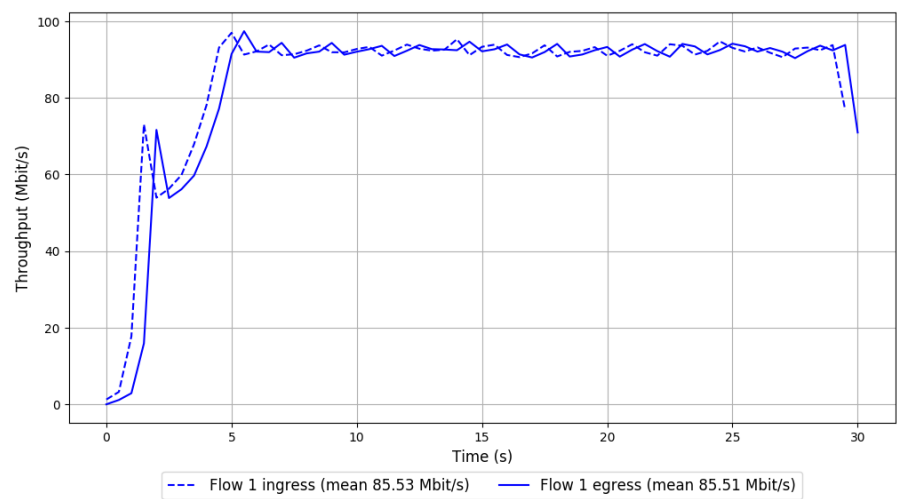
-- Flow 1:

Average throughput: 85.51 Mbit/s

95th percentile per-packet one-way delay: 35.236 ms

Loss rate: 0.24%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2018-11-30 12:28:36

End at: 2018-11-30 12:29:06

Local clock offset: 1.069 ms

Remote clock offset: -3.168 ms

Below is generated by plot.py at 2018-11-30 12:59:01

Datalink statistics

-- Total of 1 flow:

Average throughput: 84.59 Mbit/s

95th percentile per-packet one-way delay: 36.114 ms

Loss rate: 0.25%

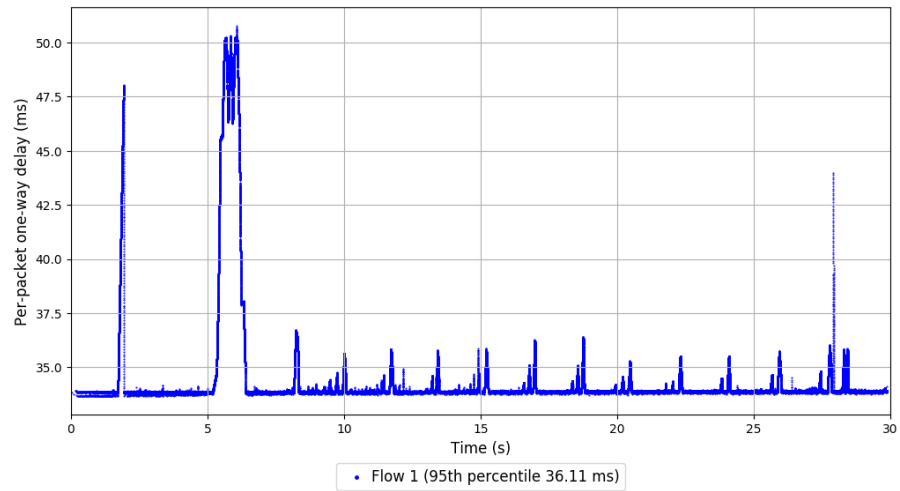
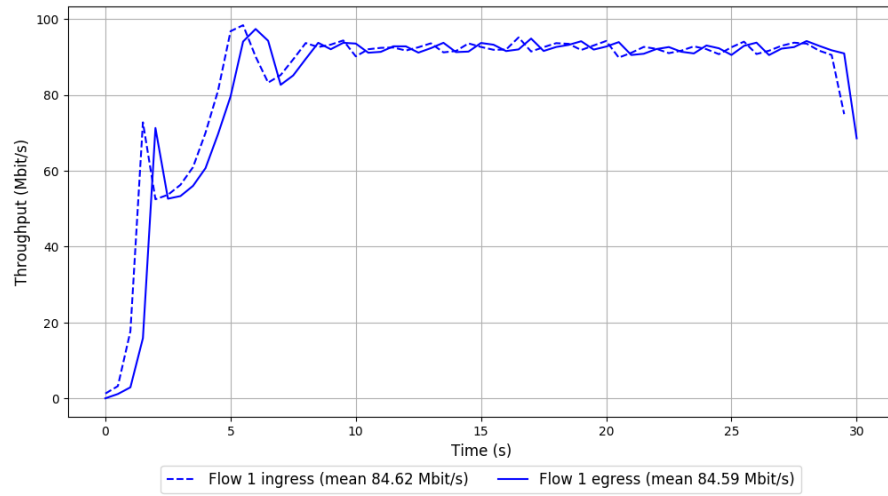
-- Flow 1:

Average throughput: 84.59 Mbit/s

95th percentile per-packet one-way delay: 36.114 ms

Loss rate: 0.25%

Run 5: Report of PCC-Vivace — Data Link

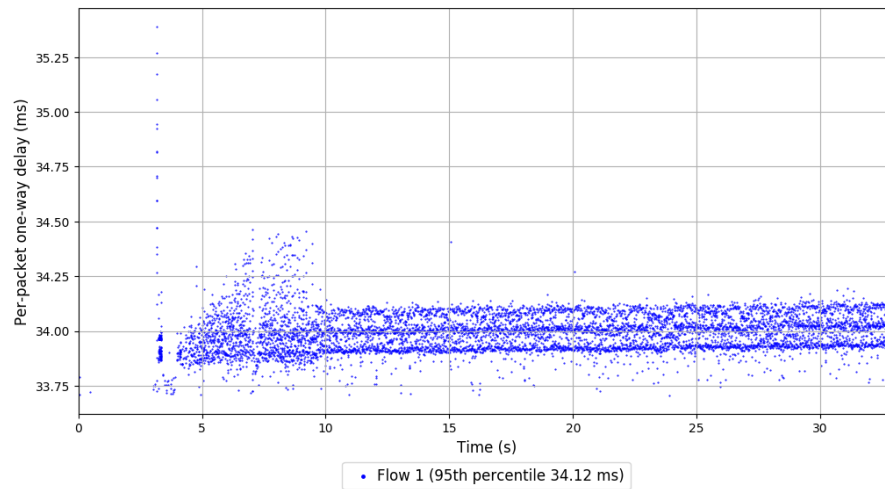
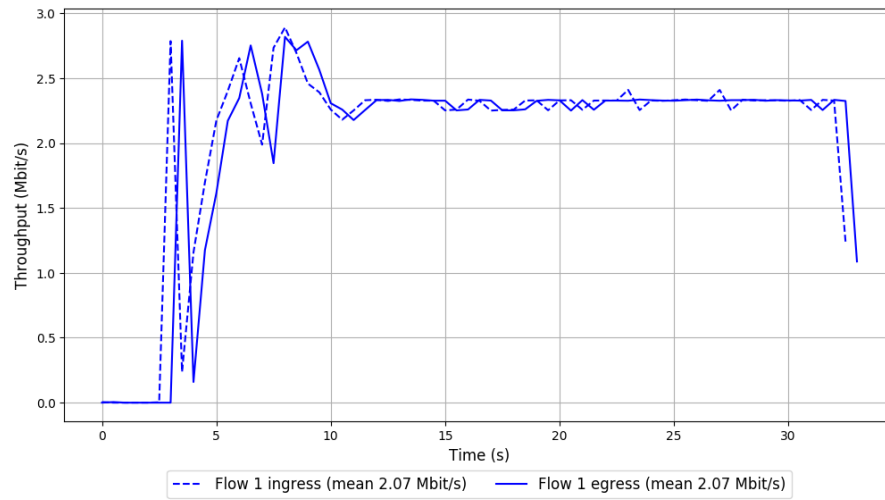


Run 1: Statistics of WebRTC media

Start at: 2018-11-30 11:03:48
End at: 2018-11-30 11:04:18
Local clock offset: -3.071 ms
Remote clock offset: -6.245 ms

Below is generated by plot.py at 2018-11-30 12:59:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.07 Mbit/s
95th percentile per-packet one-way delay: 34.117 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 2.07 Mbit/s
95th percentile per-packet one-way delay: 34.117 ms
Loss rate: 0.23%

Run 1: Report of WebRTC media — Data Link

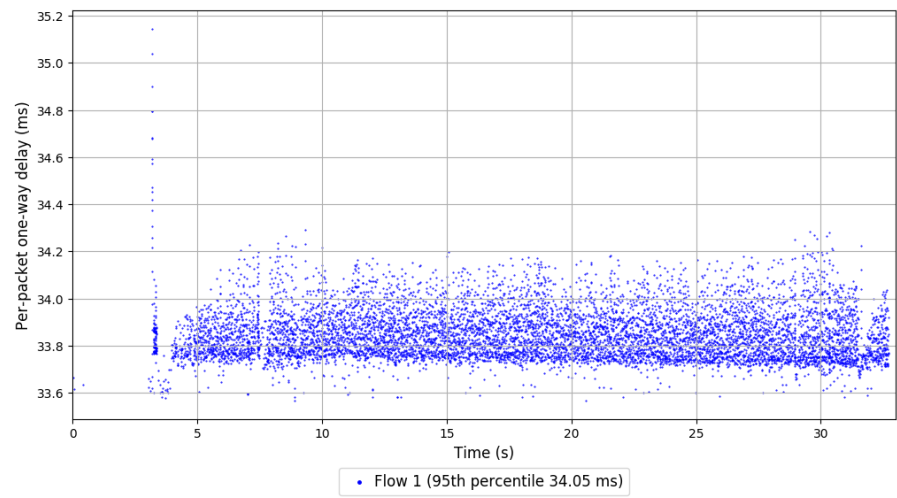
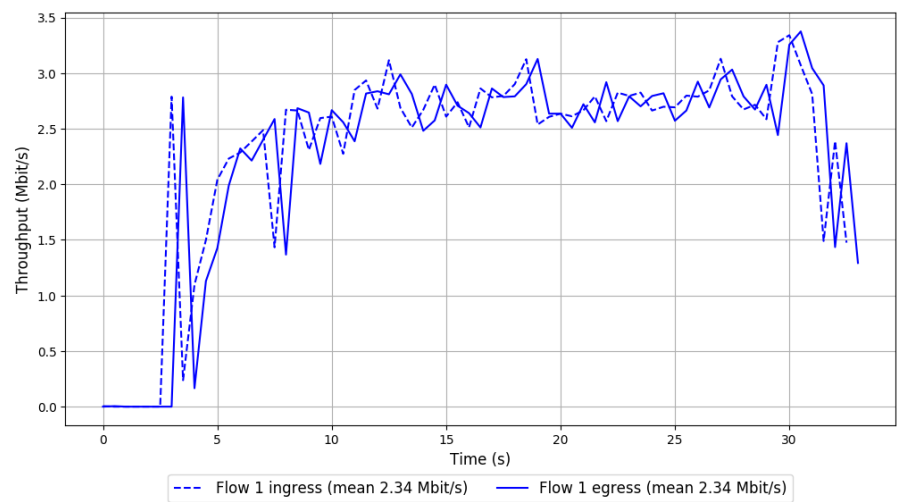


Run 2: Statistics of WebRTC media

Start at: 2018-11-30 11:25:54
End at: 2018-11-30 11:26:24
Local clock offset: -0.721 ms
Remote clock offset: -5.633 ms

Below is generated by plot.py at 2018-11-30 12:59:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.34 Mbit/s
95th percentile per-packet one-way delay: 34.054 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 2.34 Mbit/s
95th percentile per-packet one-way delay: 34.054 ms
Loss rate: 0.25%

Run 2: Report of WebRTC media — Data Link

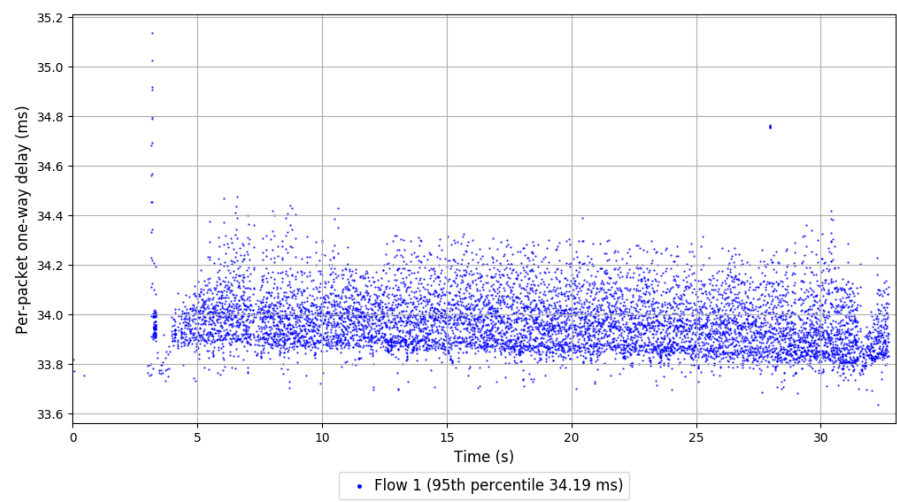
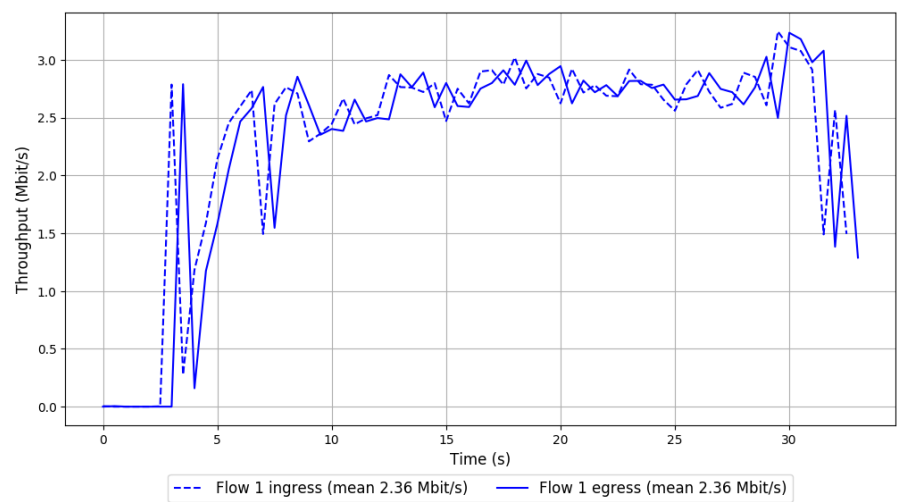


Run 3: Statistics of WebRTC media

Start at: 2018-11-30 11:48:02
End at: 2018-11-30 11:48:32
Local clock offset: 1.501 ms
Remote clock offset: -4.614 ms

Below is generated by plot.py at 2018-11-30 12:59:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.36 Mbit/s
95th percentile per-packet one-way delay: 34.193 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 2.36 Mbit/s
95th percentile per-packet one-way delay: 34.193 ms
Loss rate: 0.26%

Run 3: Report of WebRTC media — Data Link

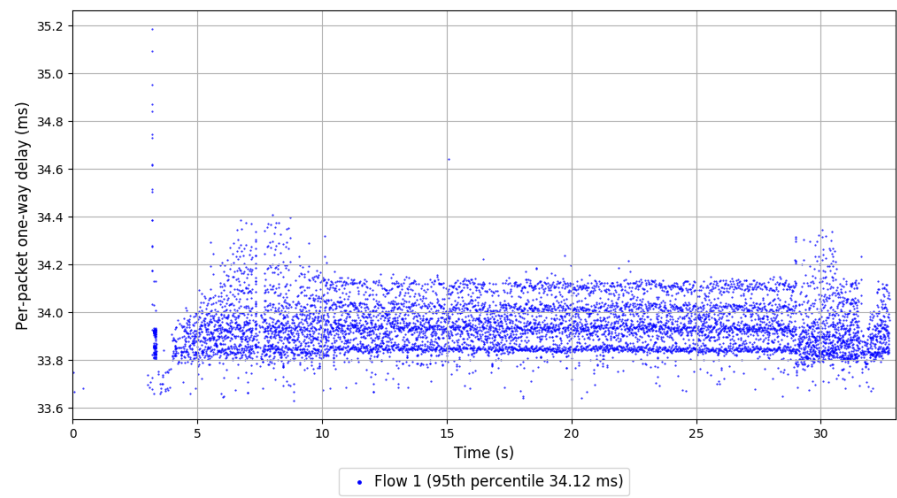
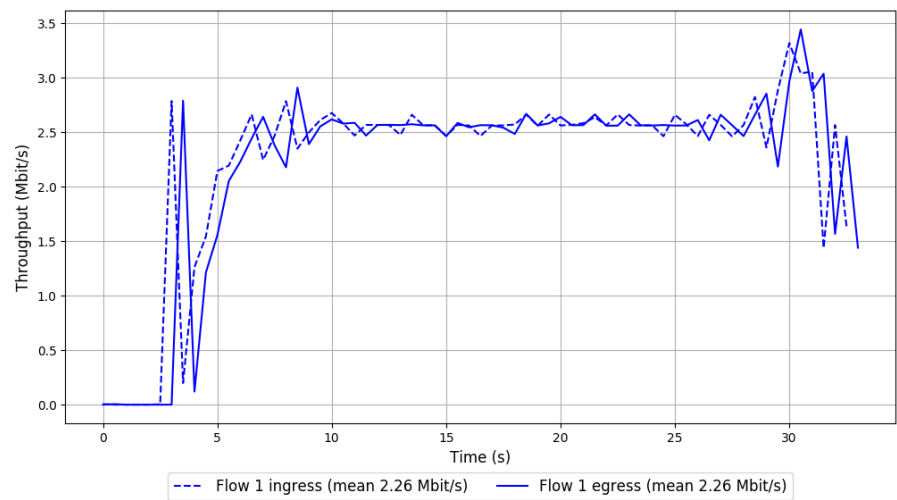


Run 4: Statistics of WebRTC media

Start at: 2018-11-30 12:10:03
End at: 2018-11-30 12:10:33
Local clock offset: 4.288 ms
Remote clock offset: -3.606 ms

Below is generated by plot.py at 2018-11-30 12:59:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 34.124 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 34.124 ms
Loss rate: 0.26%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-11-30 12:32:07
End at: 2018-11-30 12:32:37
Local clock offset: 0.741 ms
Remote clock offset: -3.079 ms

Below is generated by plot.py at 2018-11-30 12:59:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.11 Mbit/s
95th percentile per-packet one-way delay: 34.165 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 2.11 Mbit/s
95th percentile per-packet one-way delay: 34.165 ms
Loss rate: 0.24%

Run 5: Report of WebRTC media — Data Link

