

Pantheon Report

Generated at 2018-11-30 12:57:35 (UTC).

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

Repeated the test of 19 congestion control schemes 5 times.

Each test lasted for 30 seconds running 1 flow.

NTP offsets were measured against **nets.org.sg** and have been applied to correct the timestamps in logs.

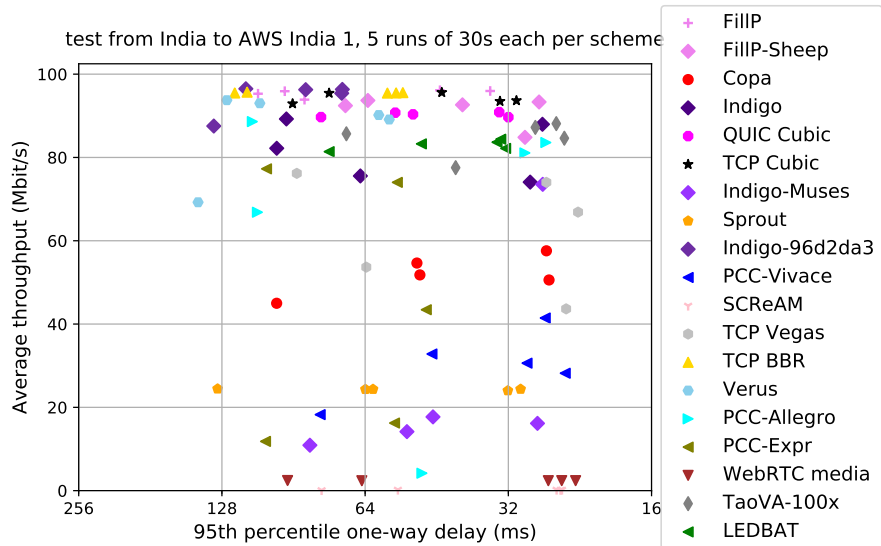
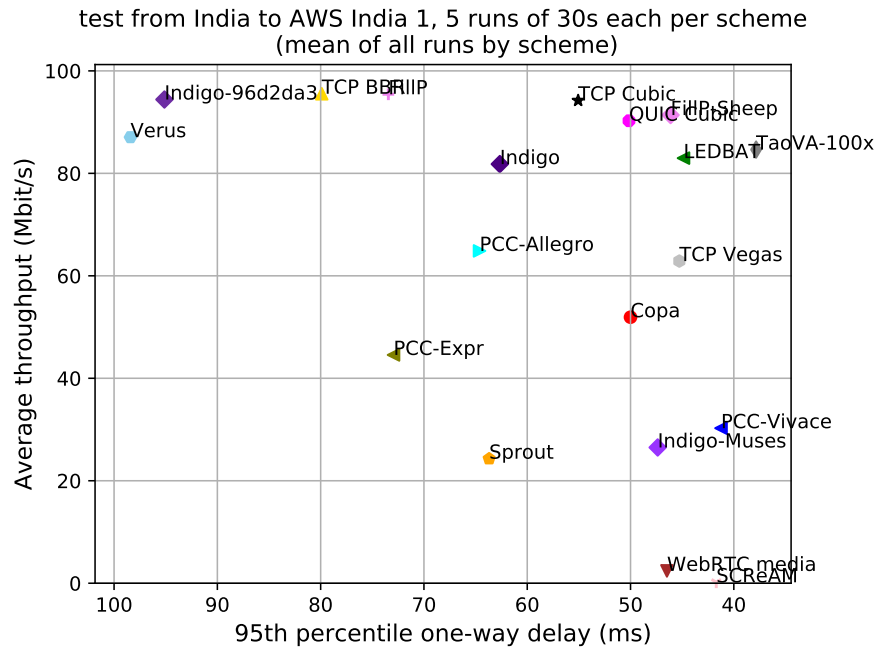
System info:

Linux 4.15.0-1027-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 @ d0153f8e594aa89e93b032143cedbdf58e562f4
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-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py

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



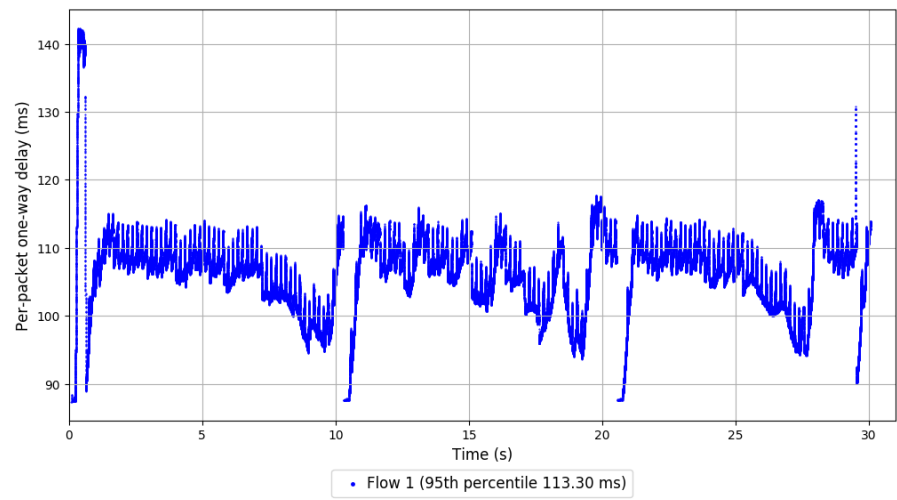
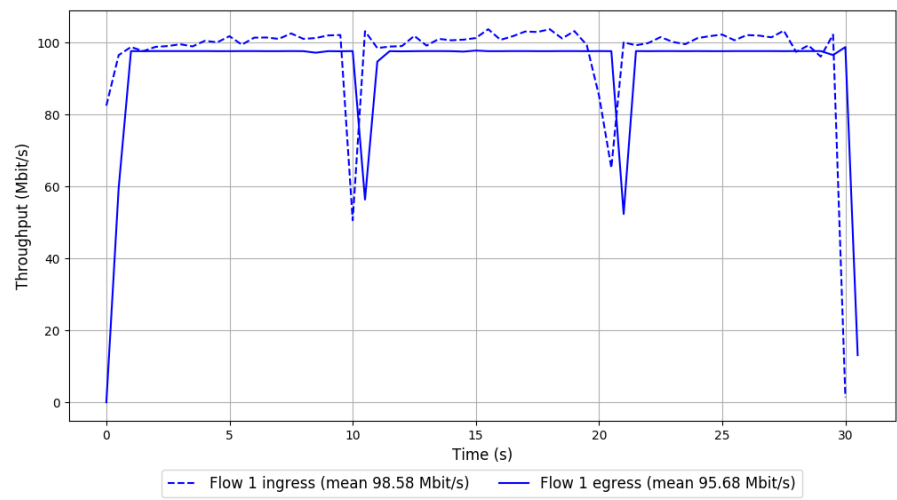
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	95.54	79.89	3.28
Copa	5	51.92	50.00	0.09
TCP Cubic	5	94.22	55.07	0.11
FillP	5	95.44	73.45	0.13
FillP-Sheep	5	91.38	46.12	0.12
Indigo	5	81.81	62.66	0.07
Indigo-96d2da3	5	94.41	95.12	2.65
LEDBAT	5	82.97	44.87	0.13
Indigo-Muses	5	26.50	47.37	0.04
PCC-Allegro	5	64.86	64.62	0.11
PCC-Expr	5	44.55	72.95	0.22
QUIC Cubic	5	90.27	50.15	0.12
SCReAM	5	0.18	41.70	0.56
Sprout	5	24.30	63.69	0.10
TaoVA-100x	5	84.64	37.85	0.09
TCP Vegas	5	62.88	45.28	0.09
Verus	5	87.06	98.41	0.27
PCC-Vivace	5	30.26	41.24	0.19
WebRTC media	5	2.40	46.48	0.08

Run 1: Statistics of TCP BBR

Start at: 2018-11-30 11:15:19
End at: 2018-11-30 11:15:49
Local clock offset: 0.617 ms
Remote clock offset: -40.009 ms

Below is generated by plot.py at 2018-11-30 12:47:42
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.68 Mbit/s
95th percentile per-packet one-way delay: 113.301 ms
Loss rate: 3.04%
-- Flow 1:
Average throughput: 95.68 Mbit/s
95th percentile per-packet one-way delay: 113.301 ms
Loss rate: 3.04%

Run 1: Report of TCP BBR — Data Link

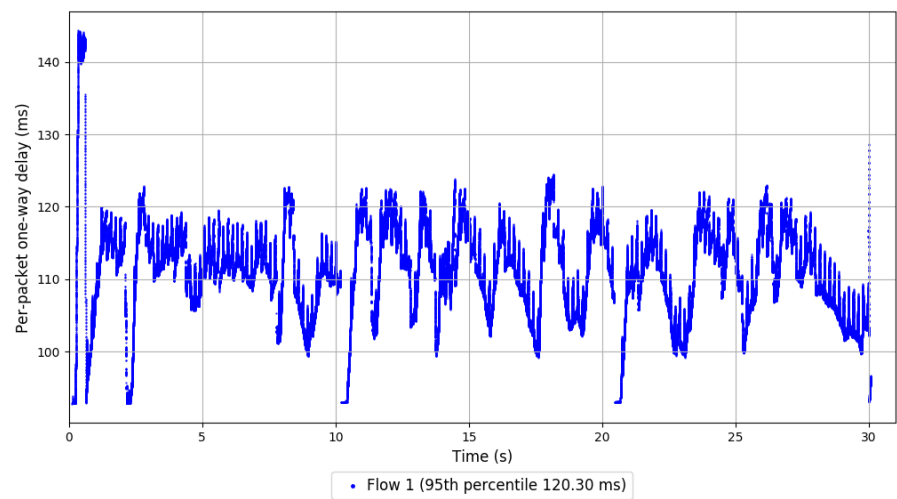
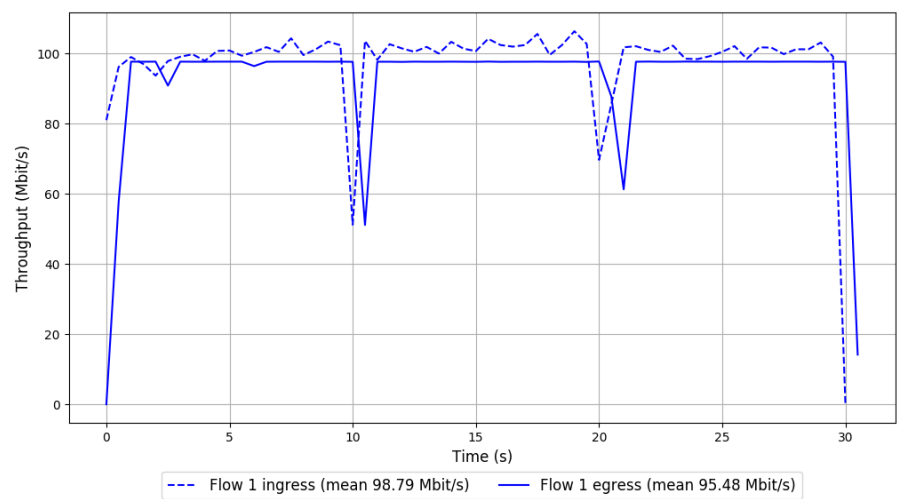


Run 2: Statistics of TCP BBR

Start at: 2018-11-30 11:37:40
End at: 2018-11-30 11:38:10
Local clock offset: 2.822 ms
Remote clock offset: -34.182 ms

Below is generated by plot.py at 2018-11-30 12:47:42
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.48 Mbit/s
95th percentile per-packet one-way delay: 120.303 ms
Loss rate: 3.43%
-- Flow 1:
Average throughput: 95.48 Mbit/s
95th percentile per-packet one-way delay: 120.303 ms
Loss rate: 3.43%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-11-30 11:59:32

End at: 2018-11-30 12:00:02

Local clock offset: 3.741 ms

Remote clock offset: 40.351 ms

Below is generated by plot.py at 2018-11-30 12:47:42

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.46 Mbit/s

95th percentile per-packet one-way delay: 57.455 ms

Loss rate: 3.06%

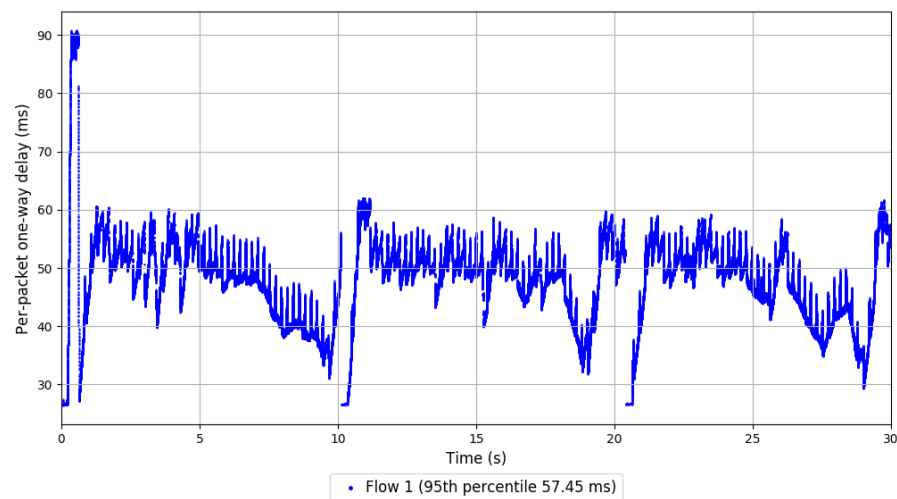
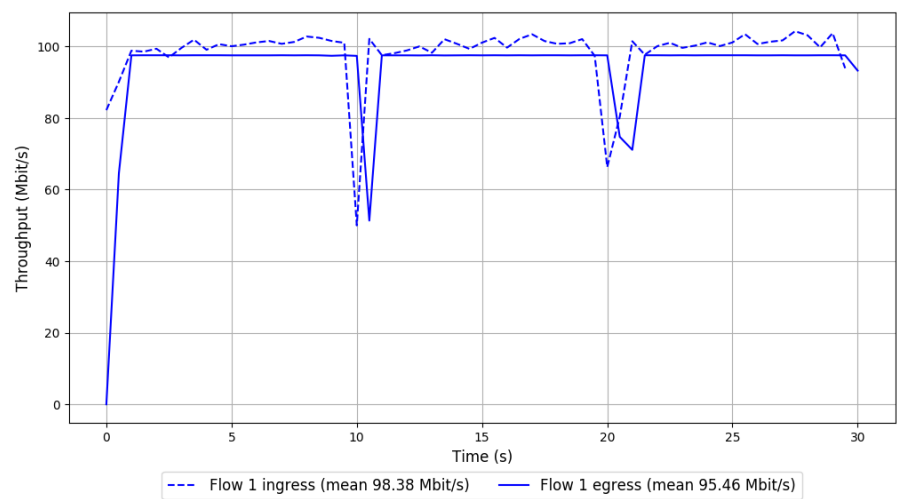
-- Flow 1:

Average throughput: 95.46 Mbit/s

95th percentile per-packet one-way delay: 57.455 ms

Loss rate: 3.06%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-11-30 12:22:08

End at: 2018-11-30 12:22:38

Local clock offset: 2.153 ms

Remote clock offset: 42.519 ms

Below is generated by plot.py at 2018-11-30 12:47:42

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.57 Mbit/s

95th percentile per-packet one-way delay: 53.320 ms

Loss rate: 2.91%

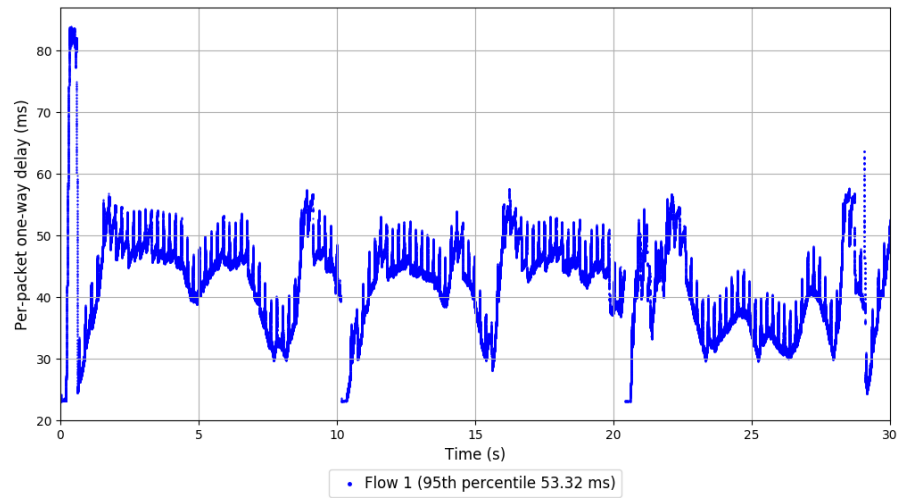
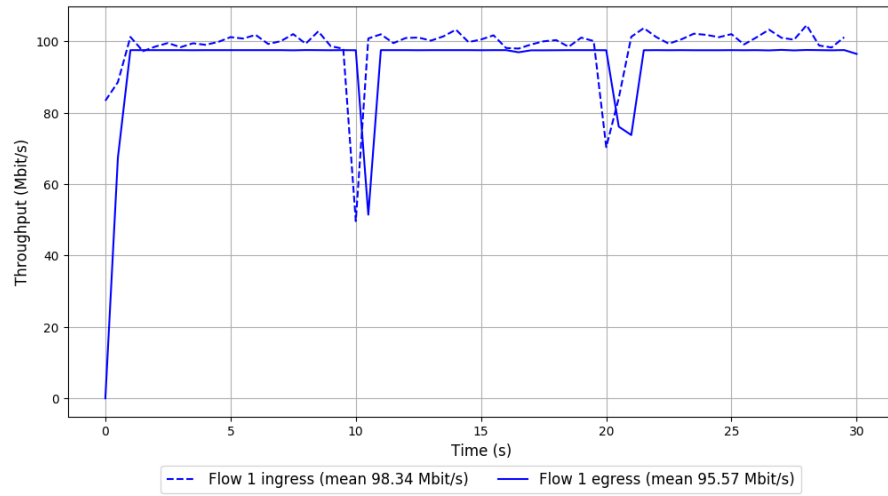
-- Flow 1:

Average throughput: 95.57 Mbit/s

95th percentile per-packet one-way delay: 53.320 ms

Loss rate: 2.91%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-11-30 12:44:18

End at: 2018-11-30 12:44:49

Local clock offset: 5.138 ms

Remote clock offset: 39.706 ms

Below is generated by plot.py at 2018-11-30 12:47:42

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.49 Mbit/s

95th percentile per-packet one-way delay: 55.089 ms

Loss rate: 3.98%

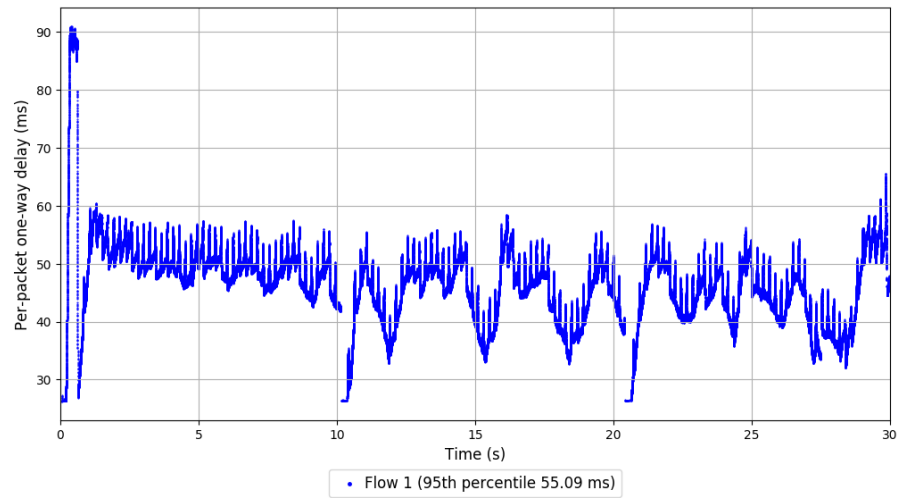
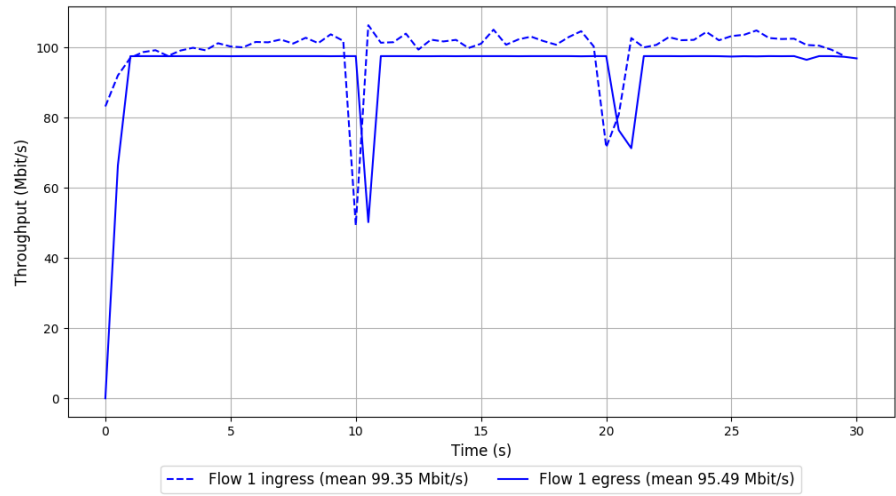
-- Flow 1:

Average throughput: 95.49 Mbit/s

95th percentile per-packet one-way delay: 55.089 ms

Loss rate: 3.98%

Run 5: Report of TCP BBR — Data Link

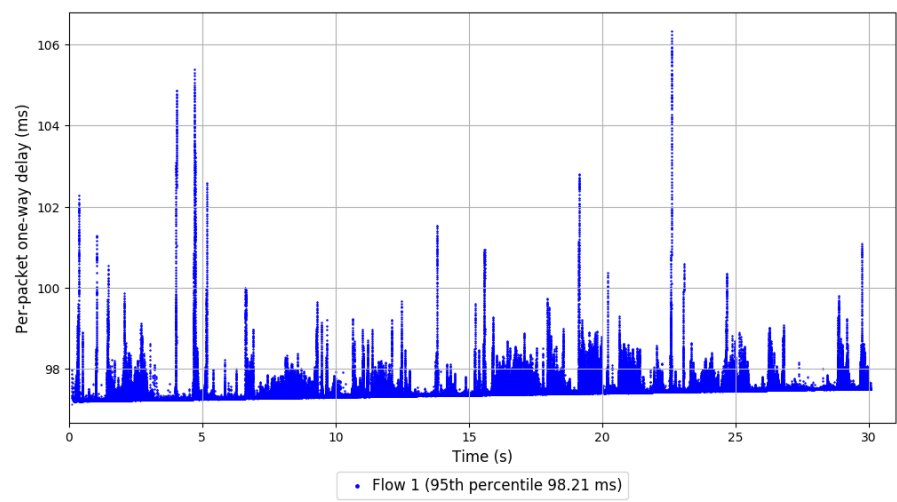
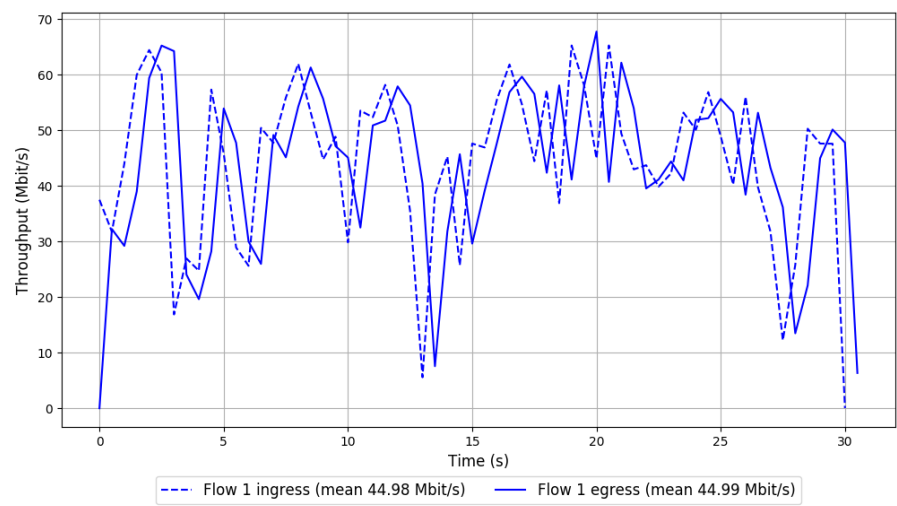


Run 1: Statistics of Copa

Start at: 2018-11-30 11:06:06
End at: 2018-11-30 11:06:36
Local clock offset: 2.087 ms
Remote clock offset: -53.546 ms

Below is generated by plot.py at 2018-11-30 12:47:42
Datalink statistics
-- Total of 1 flow:
Average throughput: 44.99 Mbit/s
95th percentile per-packet one-way delay: 98.212 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 44.99 Mbit/s
95th percentile per-packet one-way delay: 98.212 ms
Loss rate: 0.07%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-11-30 11:28:13

End at: 2018-11-30 11:28:43

Local clock offset: 3.506 ms

Remote clock offset: 6.892 ms

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

Datalink statistics

-- Total of 1 flow:

Average throughput: 54.65 Mbit/s

95th percentile per-packet one-way delay: 49.813 ms

Loss rate: 0.08%

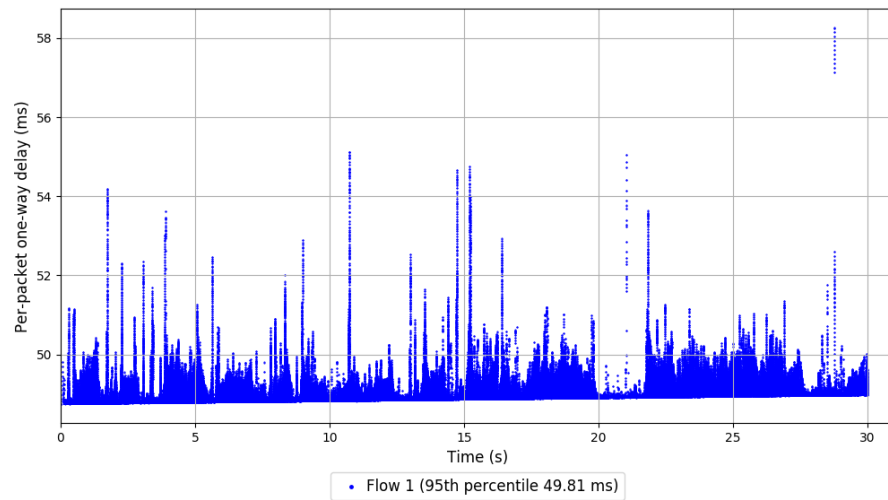
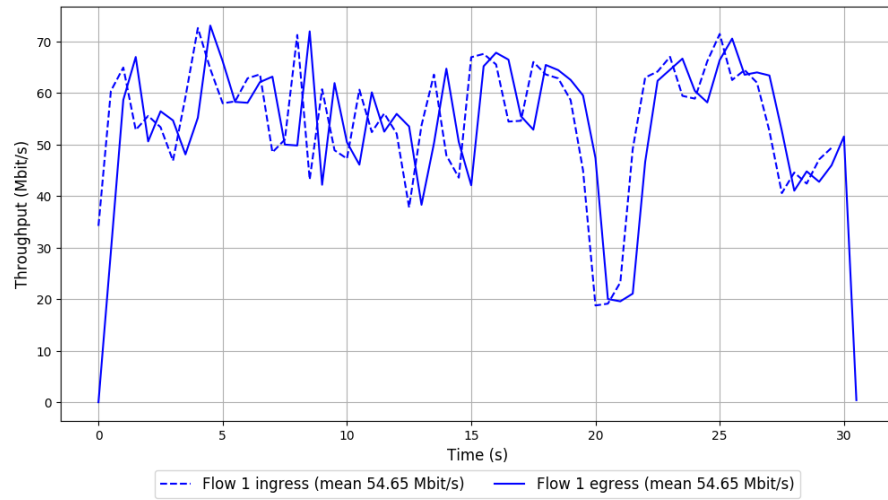
-- Flow 1:

Average throughput: 54.65 Mbit/s

95th percentile per-packet one-way delay: 49.813 ms

Loss rate: 0.08%

Run 2: Report of Copa — Data Link

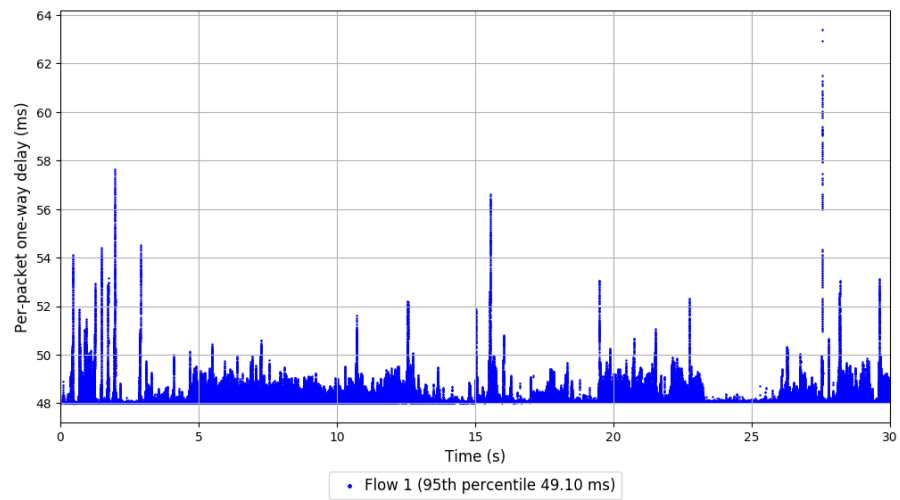
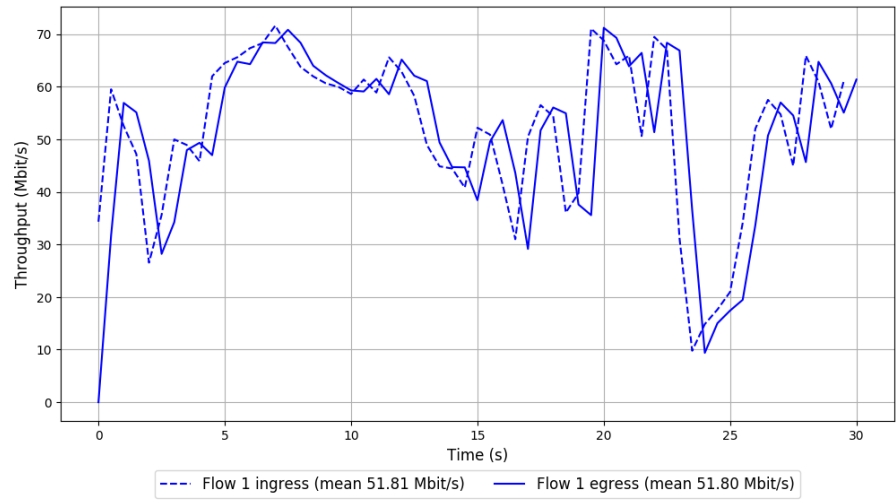


Run 3: Statistics of Copa

Start at: 2018-11-30 11:50:10
End at: 2018-11-30 11:50:40
Local clock offset: 2.778 ms
Remote clock offset: 16.499 ms

Below is generated by plot.py at 2018-11-30 12:47:47
Datalink statistics
-- Total of 1 flow:
Average throughput: 51.80 Mbit/s
95th percentile per-packet one-way delay: 49.099 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 51.80 Mbit/s
95th percentile per-packet one-way delay: 49.099 ms
Loss rate: 0.10%

Run 3: Report of Copa — Data Link

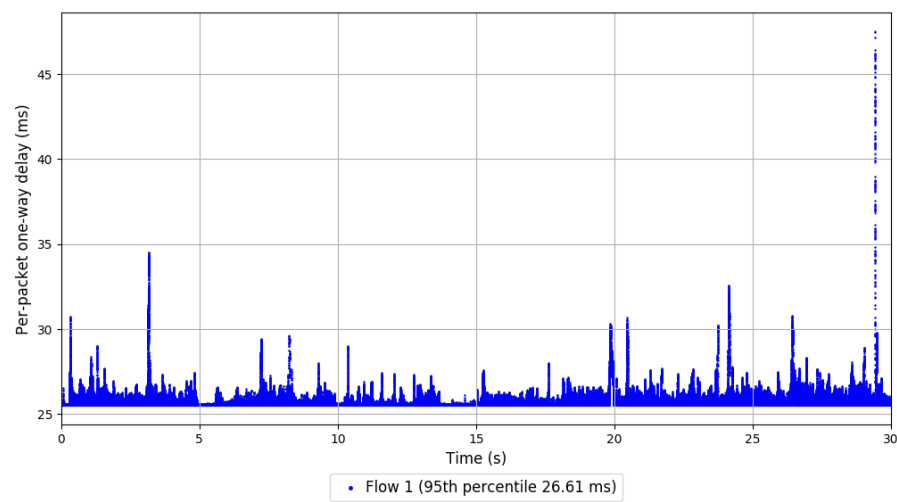
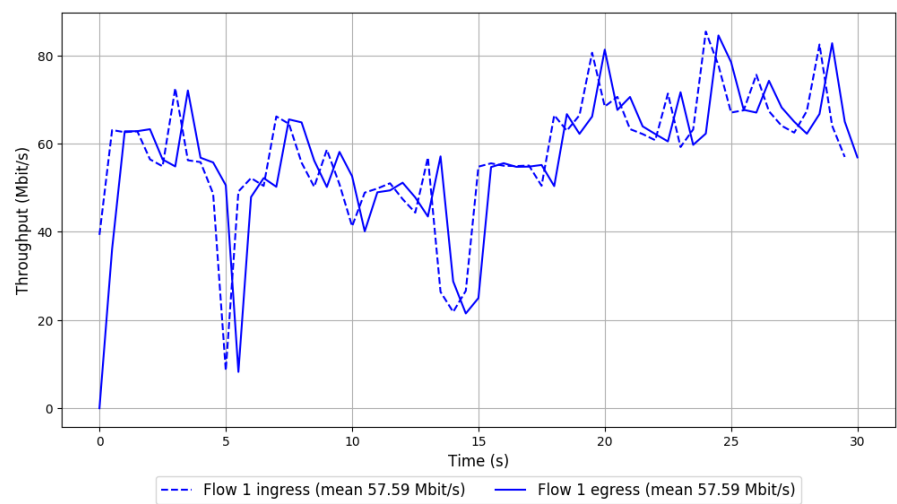


Run 4: Statistics of Copa

Start at: 2018-11-30 12:12:29
End at: 2018-11-30 12:12:59
Local clock offset: 4.224 ms
Remote clock offset: 42.248 ms

Below is generated by plot.py at 2018-11-30 12:48:57
Datalink statistics
-- Total of 1 flow:
Average throughput: 57.59 Mbit/s
95th percentile per-packet one-way delay: 26.614 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 57.59 Mbit/s
95th percentile per-packet one-way delay: 26.614 ms
Loss rate: 0.09%

Run 4: Report of Copa — Data Link

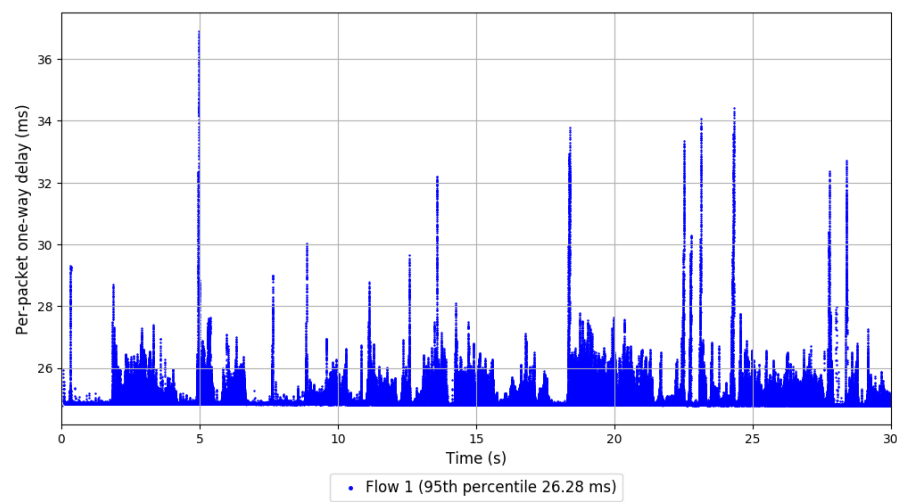
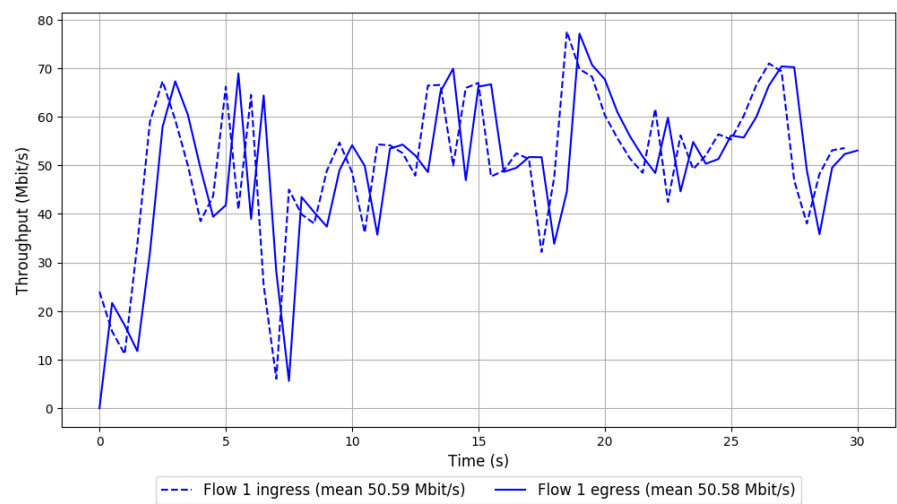


Run 5: Statistics of Copa

Start at: 2018-11-30 12:34:53
End at: 2018-11-30 12:35:23
Local clock offset: 2.966 ms
Remote clock offset: 39.829 ms

Below is generated by plot.py at 2018-11-30 12:48:57
Datalink statistics
-- Total of 1 flow:
Average throughput: 50.58 Mbit/s
95th percentile per-packet one-way delay: 26.280 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 50.58 Mbit/s
95th percentile per-packet one-way delay: 26.280 ms
Loss rate: 0.10%

Run 5: Report of Copa — Data Link

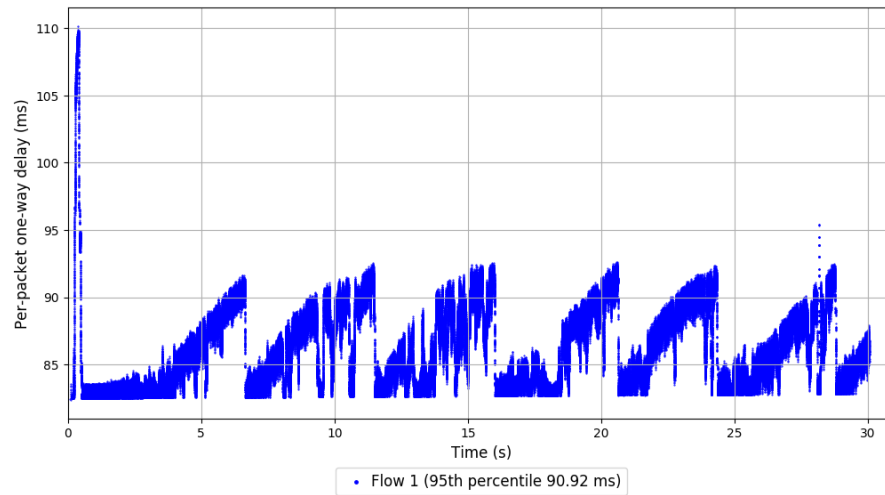
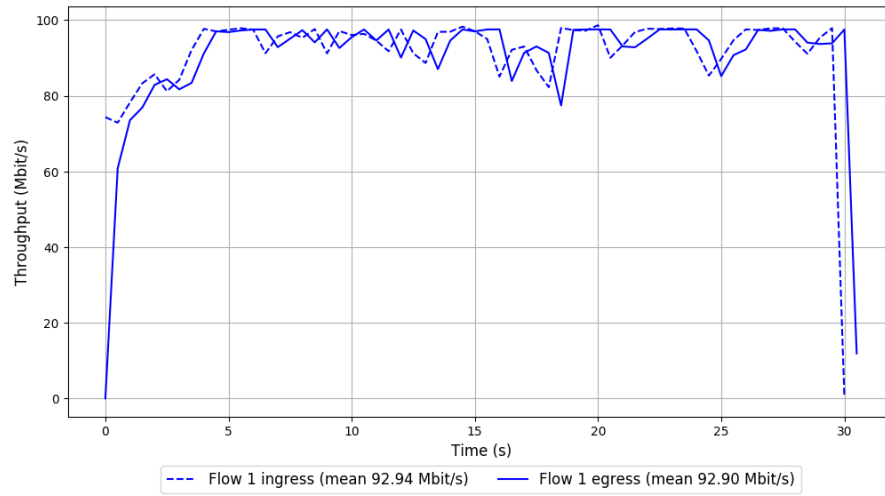


Run 1: Statistics of TCP Cubic

Start at: 2018-11-30 10:59:18
End at: 2018-11-30 10:59:48
Local clock offset: -0.72 ms
Remote clock offset: -45.941 ms

Below is generated by plot.py at 2018-11-30 12:48:57
Datalink statistics
-- Total of 1 flow:
Average throughput: 92.90 Mbit/s
95th percentile per-packet one-way delay: 90.923 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 92.90 Mbit/s
95th percentile per-packet one-way delay: 90.923 ms
Loss rate: 0.12%

Run 1: Report of TCP Cubic — Data Link

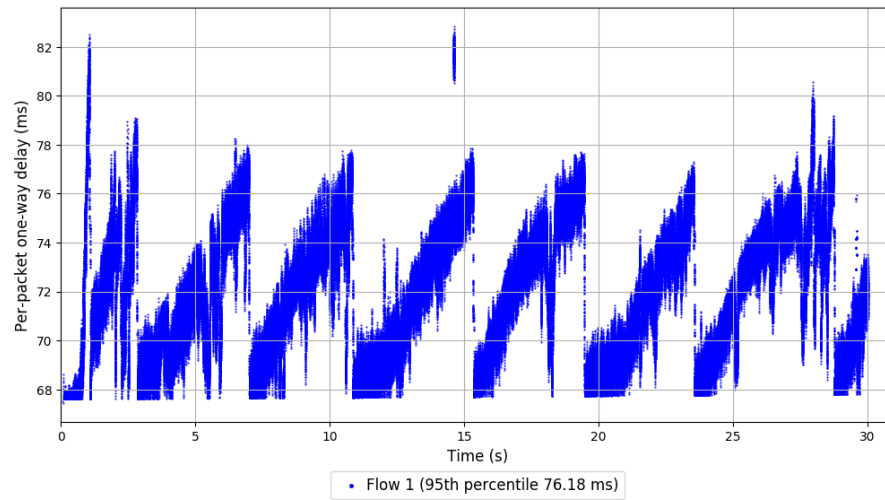
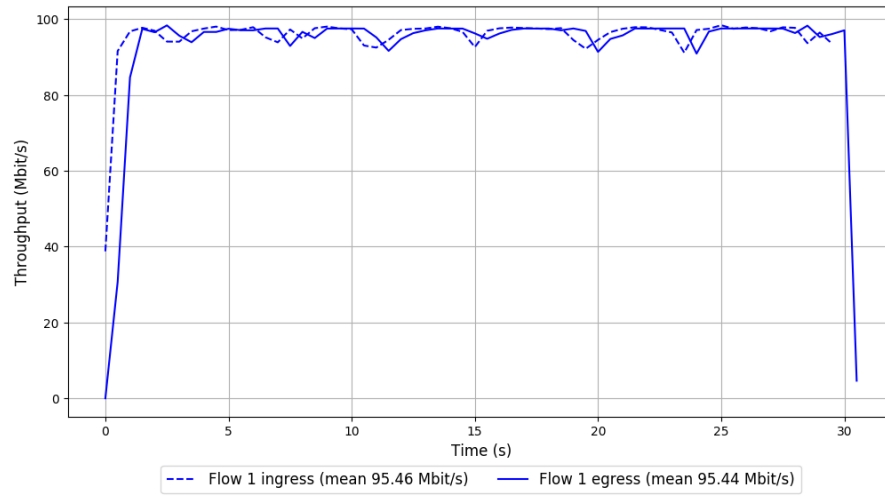


Run 2: Statistics of TCP Cubic

Start at: 2018-11-30 11:21:13
End at: 2018-11-30 11:21:43
Local clock offset: 1.089 ms
Remote clock offset: -17.383 ms

Below is generated by plot.py at 2018-11-30 12:48:57
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.44 Mbit/s
95th percentile per-packet one-way delay: 76.180 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 95.44 Mbit/s
95th percentile per-packet one-way delay: 76.180 ms
Loss rate: 0.10%

Run 2: Report of TCP Cubic — Data Link

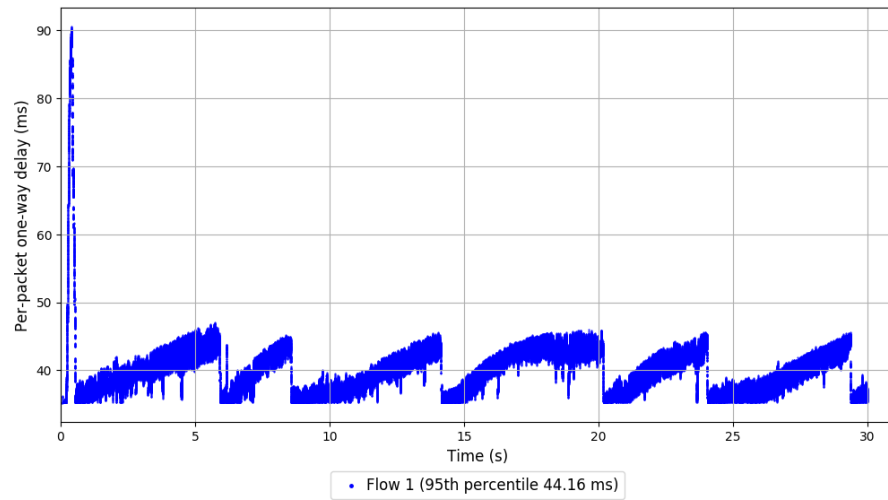
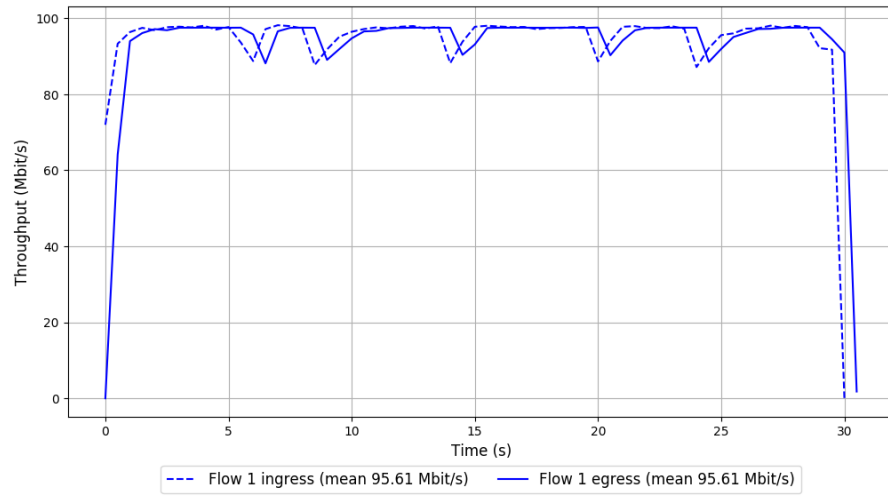


Run 3: Statistics of TCP Cubic

Start at: 2018-11-30 11:43:28
End at: 2018-11-30 11:43:58
Local clock offset: 2.308 ms
Remote clock offset: 28.172 ms

Below is generated by plot.py at 2018-11-30 12:48:57
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.61 Mbit/s
95th percentile per-packet one-way delay: 44.164 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 95.61 Mbit/s
95th percentile per-packet one-way delay: 44.164 ms
Loss rate: 0.09%

Run 3: Report of TCP Cubic — Data Link

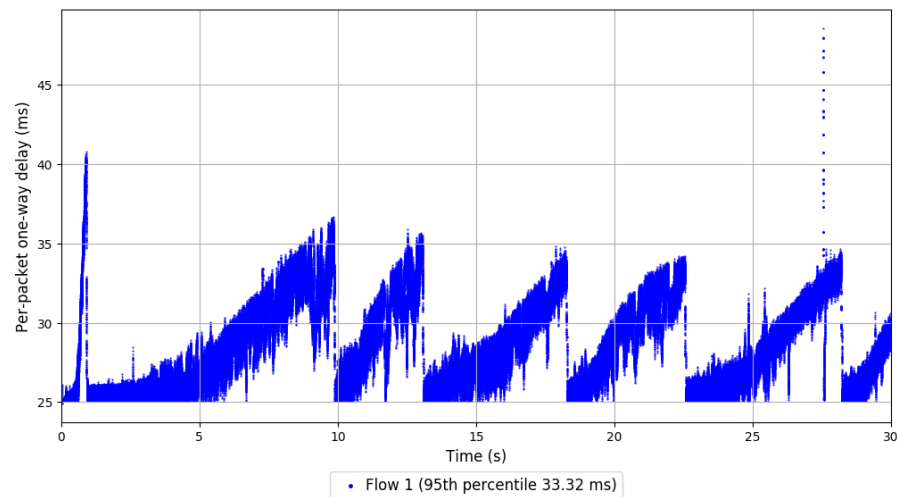
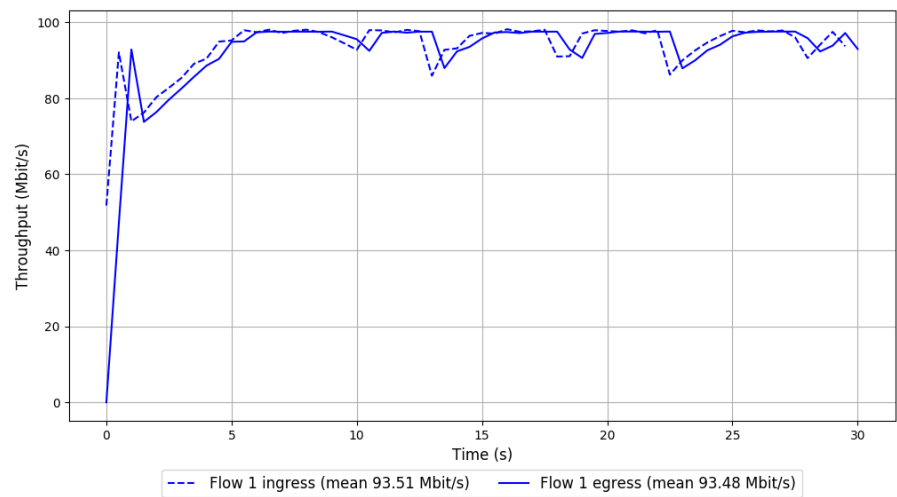


Run 4: Statistics of TCP Cubic

Start at: 2018-11-30 12:05:28
End at: 2018-11-30 12:05:58
Local clock offset: 4.31 ms
Remote clock offset: 42.752 ms

Below is generated by plot.py at 2018-11-30 12:48:57
Datalink statistics
-- Total of 1 flow:
Average throughput: 93.48 Mbit/s
95th percentile per-packet one-way delay: 33.322 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 93.48 Mbit/s
95th percentile per-packet one-way delay: 33.322 ms
Loss rate: 0.11%

Run 4: Report of TCP Cubic — Data Link

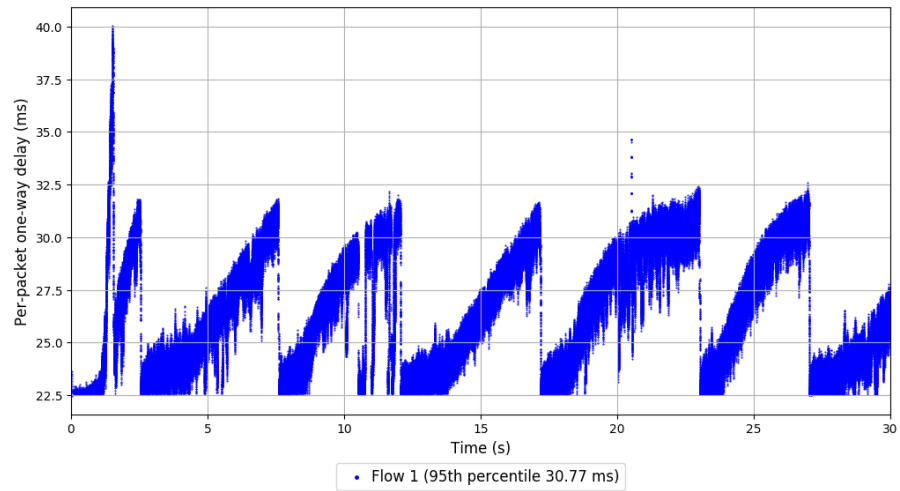
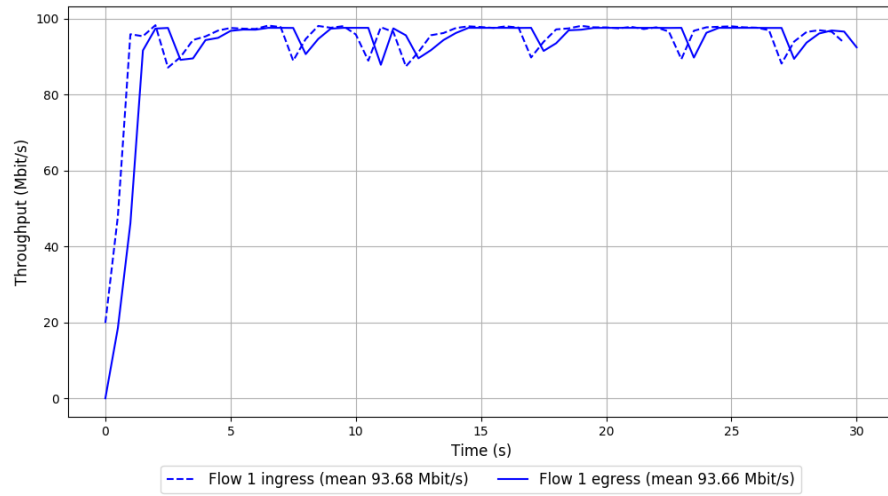


Run 5: Statistics of TCP Cubic

Start at: 2018-11-30 12:28:00
End at: 2018-11-30 12:28:30
Local clock offset: 1.808 ms
Remote clock offset: 41.705 ms

Below is generated by plot.py at 2018-11-30 12:48:57
Datalink statistics
-- Total of 1 flow:
Average throughput: 93.66 Mbit/s
95th percentile per-packet one-way delay: 30.769 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 93.66 Mbit/s
95th percentile per-packet one-way delay: 30.769 ms
Loss rate: 0.11%

Run 5: Report of TCP Cubic — Data Link

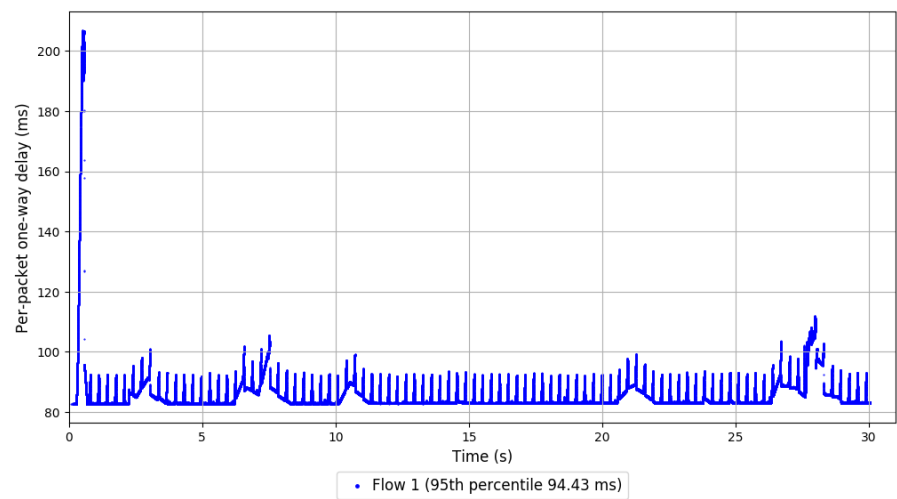
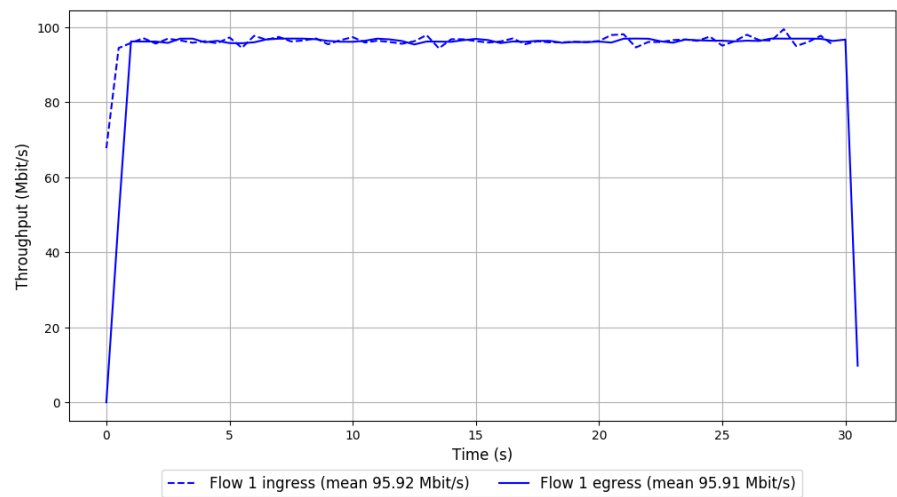


Run 1: Statistics of FillP

Start at: 2018-11-30 10:54:42
End at: 2018-11-30 10:55:12
Local clock offset: 2.455 ms
Remote clock offset: -46.13 ms

Below is generated by plot.py at 2018-11-30 12:49:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.91 Mbit/s
95th percentile per-packet one-way delay: 94.429 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 95.91 Mbit/s
95th percentile per-packet one-way delay: 94.429 ms
Loss rate: 0.12%

Run 1: Report of FillP — Data Link

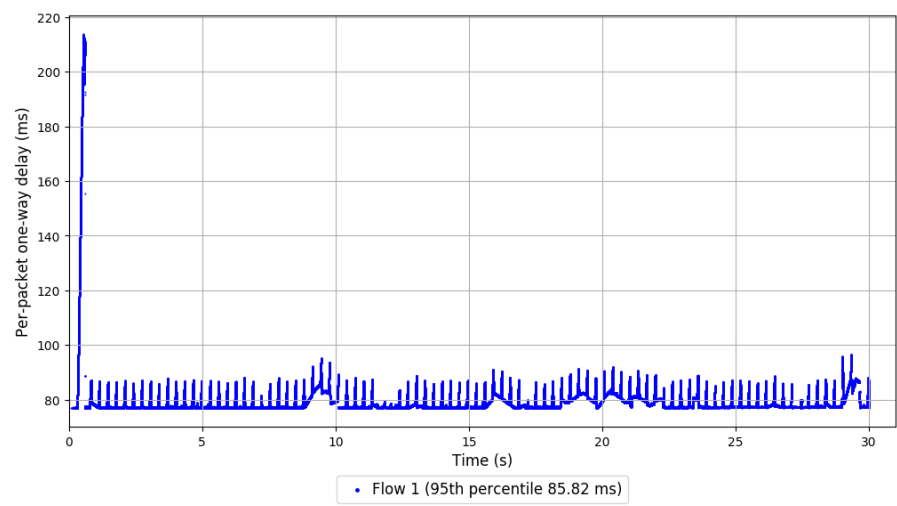
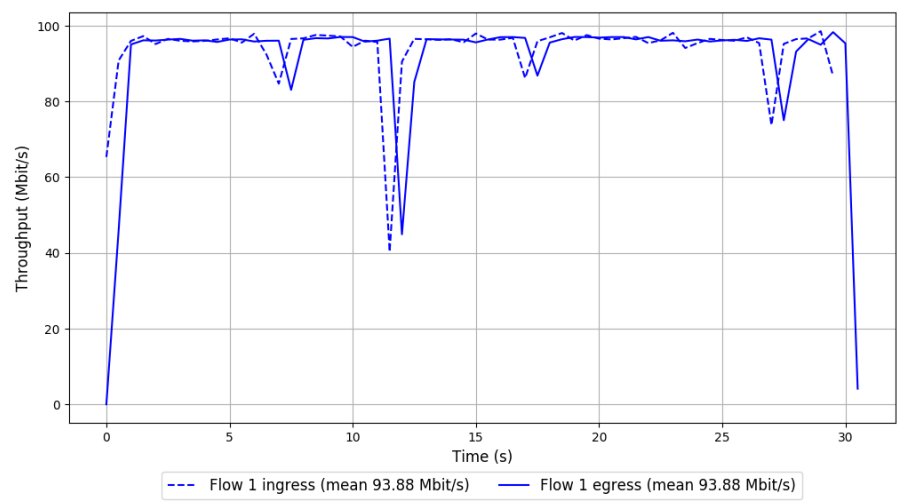


Run 2: Statistics of FillP

Start at: 2018-11-30 11:16:32
End at: 2018-11-30 11:17:02
Local clock offset: 1.121 ms
Remote clock offset: -28.655 ms

Below is generated by plot.py at 2018-11-30 12:50:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 93.88 Mbit/s
95th percentile per-packet one-way delay: 85.822 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 93.88 Mbit/s
95th percentile per-packet one-way delay: 85.822 ms
Loss rate: 0.08%

Run 2: Report of FillP — Data Link

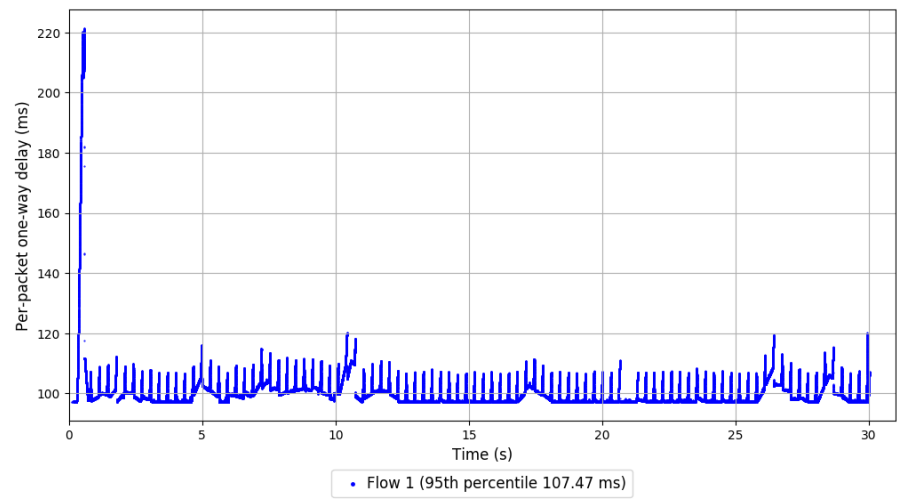
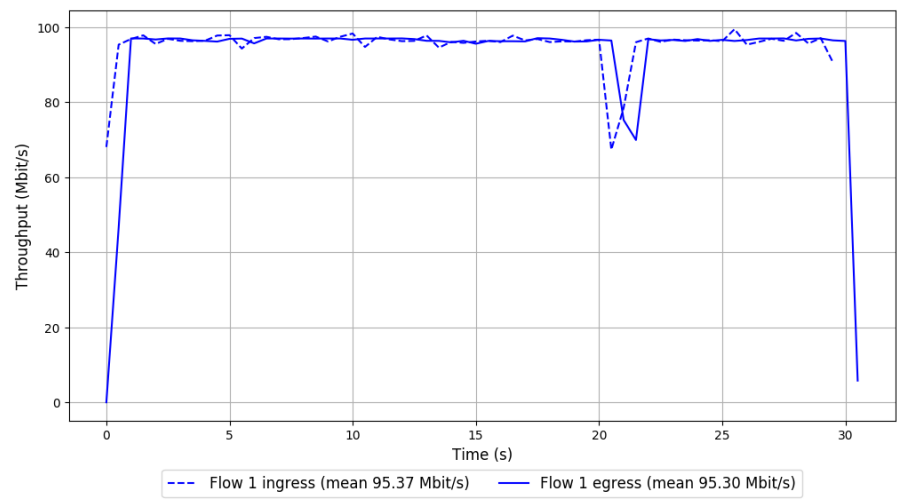


Run 3: Statistics of FillP

Start at: 2018-11-30 11:38:52
End at: 2018-11-30 11:39:22
Local clock offset: 4.085 ms
Remote clock offset: -37.182 ms

Below is generated by plot.py at 2018-11-30 12:50:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.30 Mbit/s
95th percentile per-packet one-way delay: 107.474 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 95.30 Mbit/s
95th percentile per-packet one-way delay: 107.474 ms
Loss rate: 0.15%

Run 3: Report of FillP — Data Link

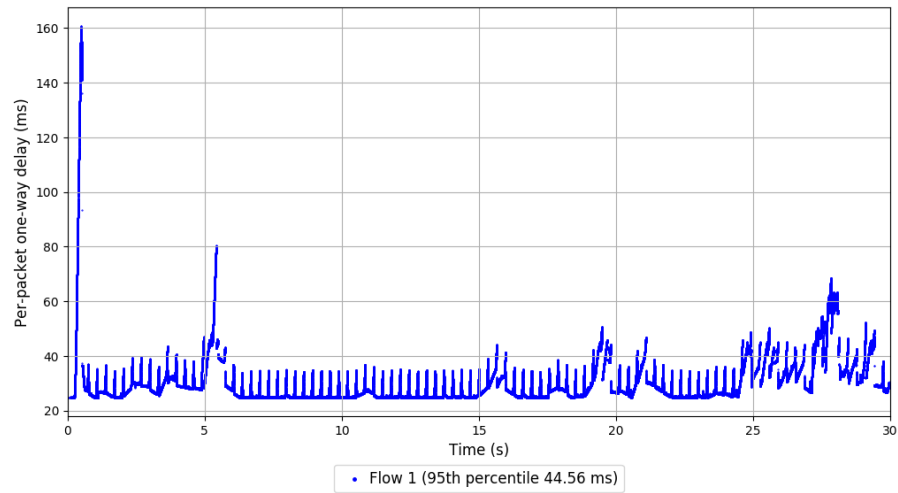
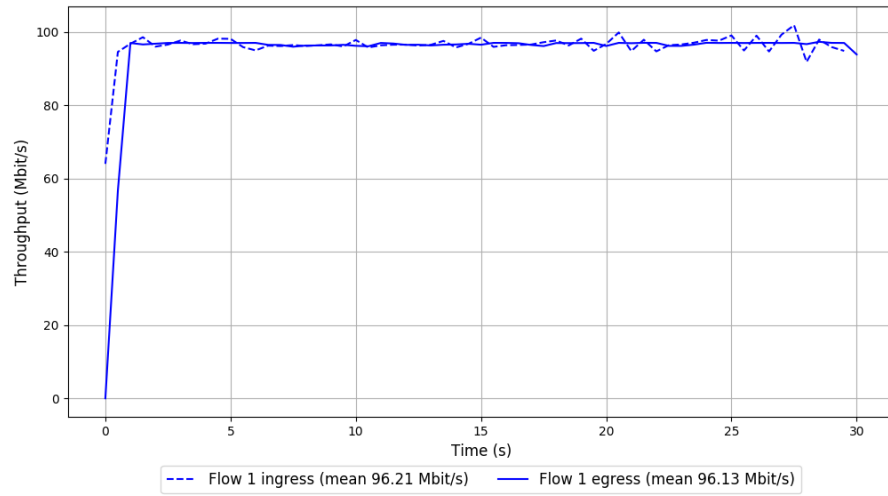


Run 4: Statistics of FillP

Start at: 2018-11-30 12:00:44
End at: 2018-11-30 12:01:14
Local clock offset: 3.05 ms
Remote clock offset: 41.416 ms

Below is generated by plot.py at 2018-11-30 12:50:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.13 Mbit/s
95th percentile per-packet one-way delay: 44.564 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 96.13 Mbit/s
95th percentile per-packet one-way delay: 44.564 ms
Loss rate: 0.17%

Run 4: Report of FillP — Data Link

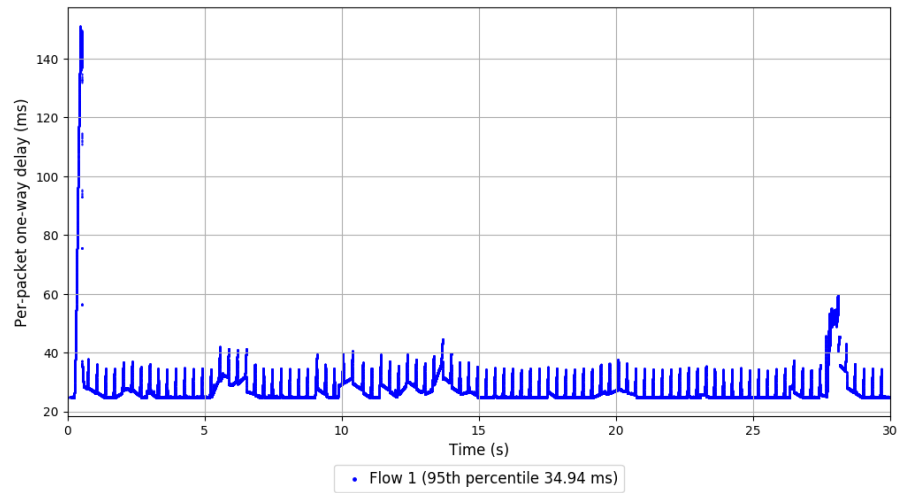
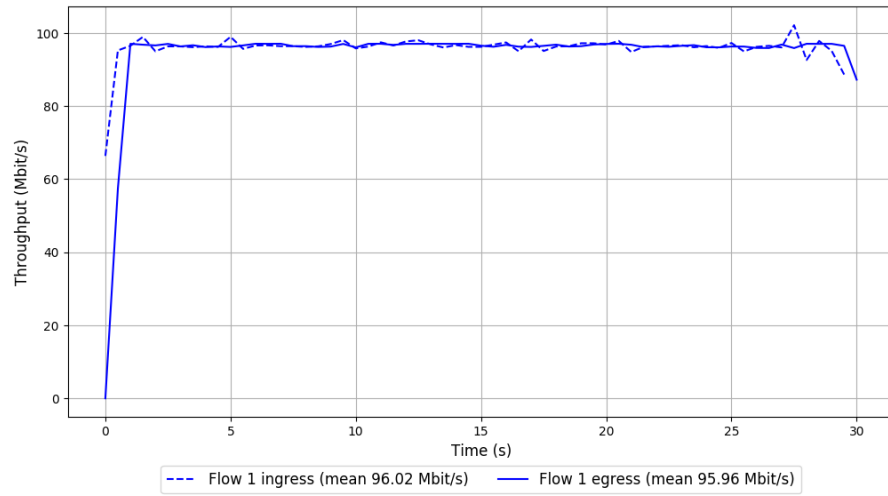


Run 5: Statistics of FillP

Start at: 2018-11-30 12:23:21
End at: 2018-11-30 12:23:51
Local clock offset: 3.924 ms
Remote clock offset: 42.261 ms

Below is generated by plot.py at 2018-11-30 12:50:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.96 Mbit/s
95th percentile per-packet one-way delay: 34.940 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 95.96 Mbit/s
95th percentile per-packet one-way delay: 34.940 ms
Loss rate: 0.15%

Run 5: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2018-11-30 11:04:56

End at: 2018-11-30 11:05:26

Local clock offset: 0.564 ms

Remote clock offset: -23.509 ms

Below is generated by plot.py at 2018-11-30 12:50:13

Datalink statistics

-- Total of 1 flow:

Average throughput: 92.43 Mbit/s

95th percentile per-packet one-way delay: 70.406 ms

Loss rate: 0.15%

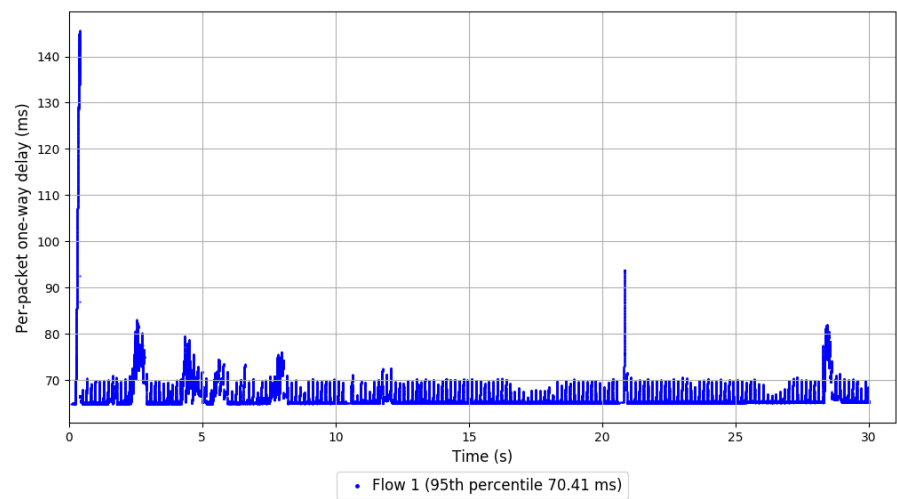
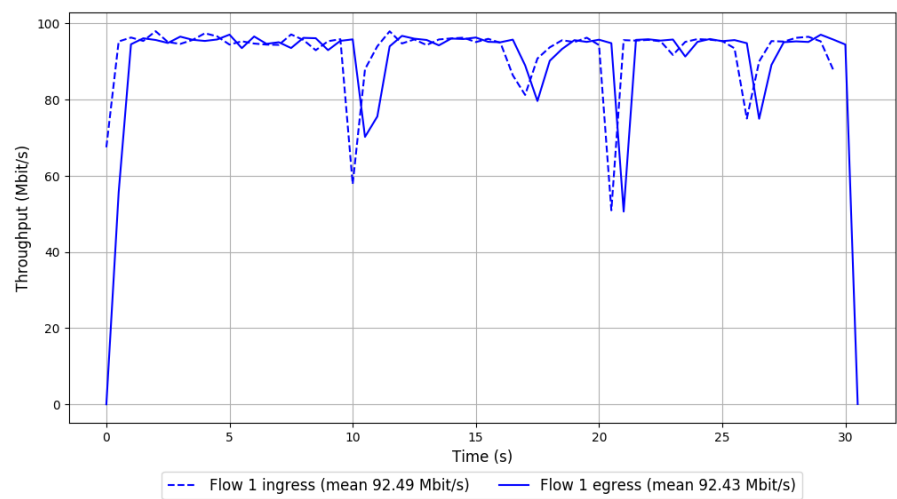
-- Flow 1:

Average throughput: 92.43 Mbit/s

95th percentile per-packet one-way delay: 70.406 ms

Loss rate: 0.15%

Run 1: Report of FillP-Sheep — Data Link



Run 2: Statistics of FillP-Sheep

Start at: 2018-11-30 11:27:02

End at: 2018-11-30 11:27:32

Local clock offset: 2.498 ms

Remote clock offset: -4.638 ms

Below is generated by plot.py at 2018-11-30 12:50:13

Datalink statistics

-- Total of 1 flow:

Average throughput: 93.69 Mbit/s

95th percentile per-packet one-way delay: 63.157 ms

Loss rate: 0.07%

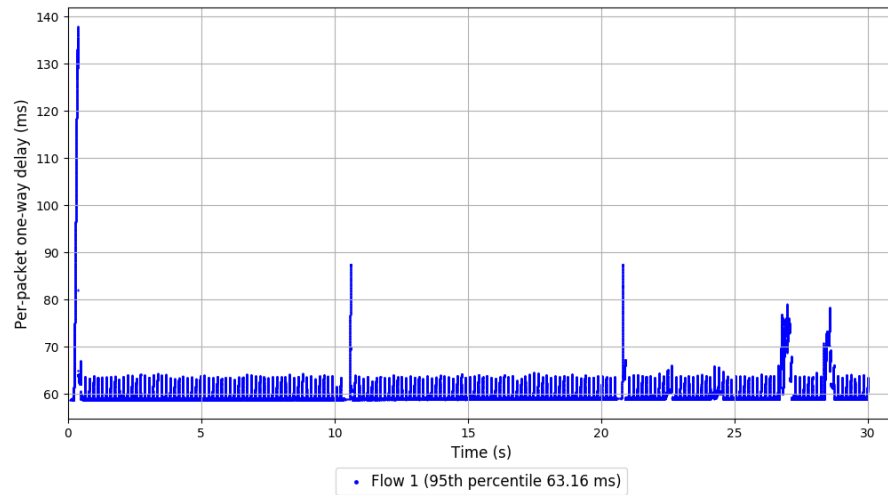
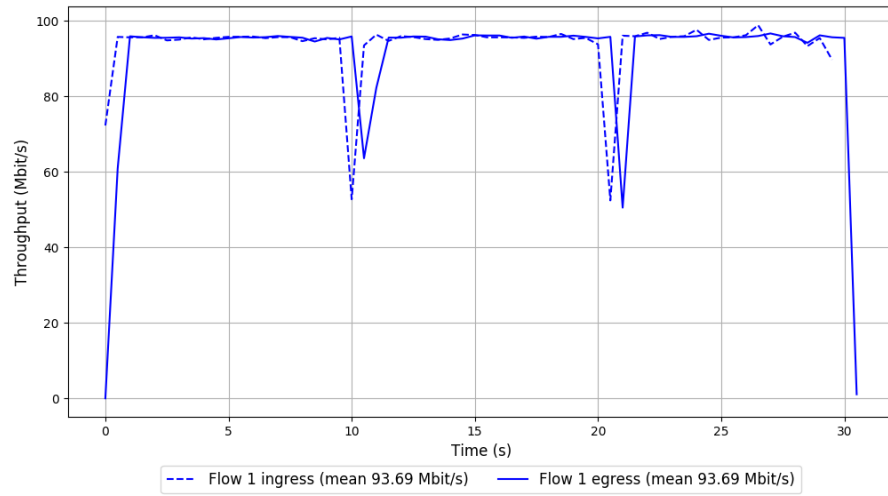
-- Flow 1:

Average throughput: 93.69 Mbit/s

95th percentile per-packet one-way delay: 63.157 ms

Loss rate: 0.07%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2018-11-30 11:49:01

End at: 2018-11-30 11:49:31

Local clock offset: 1.338 ms

Remote clock offset: 26.91 ms

Below is generated by plot.py at 2018-11-30 12:50:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 92.64 Mbit/s

95th percentile per-packet one-way delay: 39.955 ms

Loss rate: 0.09%

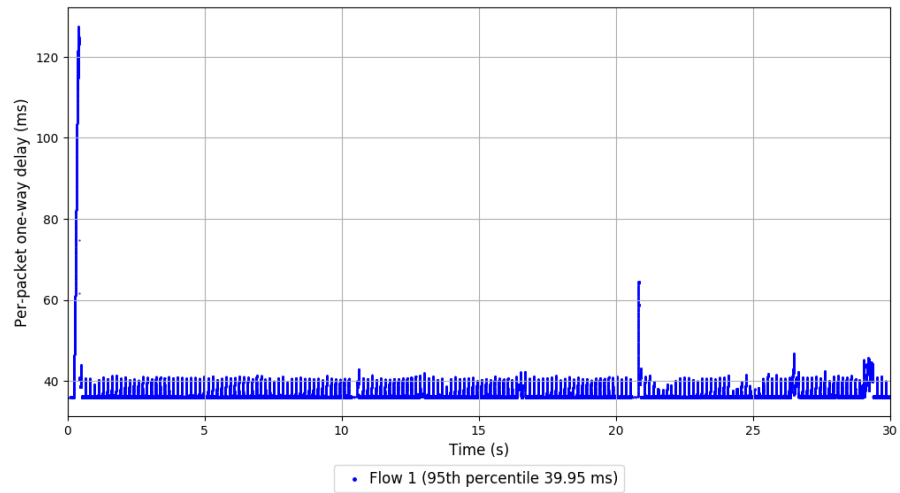
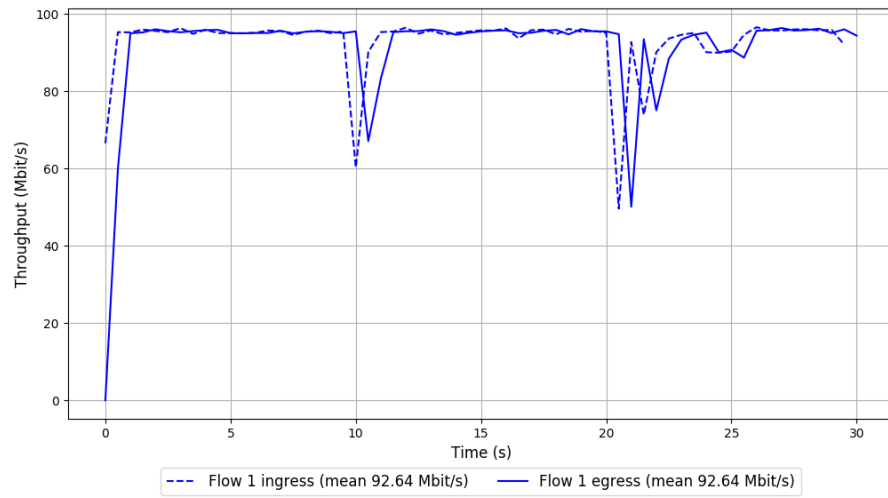
-- Flow 1:

Average throughput: 92.64 Mbit/s

95th percentile per-packet one-way delay: 39.955 ms

Loss rate: 0.09%

Run 3: Report of FillP-Sheep — Data Link

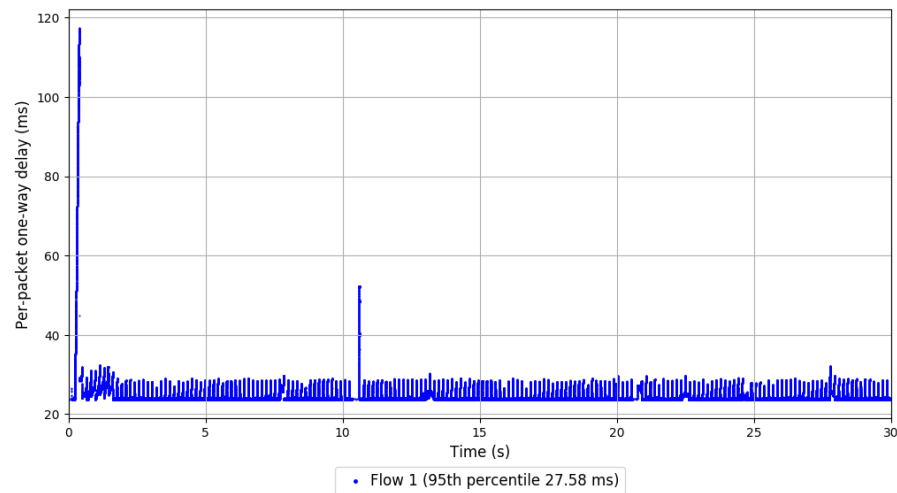
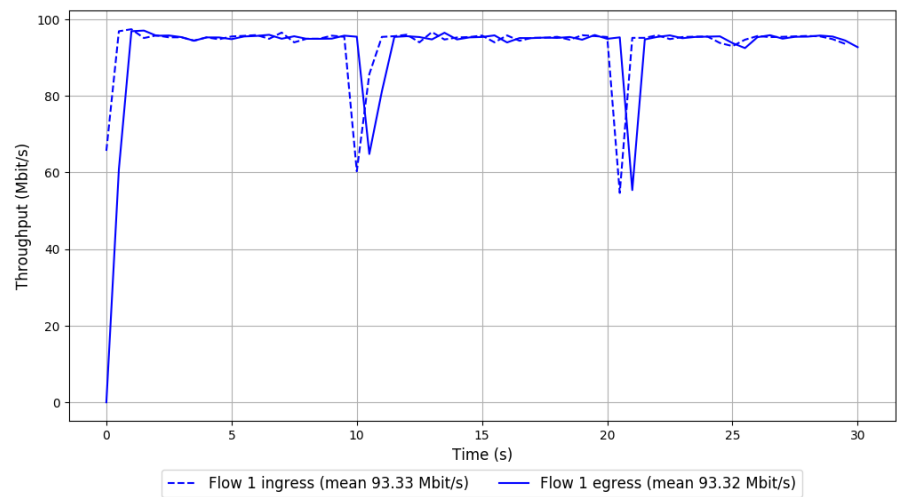


Run 4: Statistics of FillP-Sheep

Start at: 2018-11-30 12:11:18
End at: 2018-11-30 12:11:48
Local clock offset: 3.685 ms
Remote clock offset: 43.446 ms

Below is generated by plot.py at 2018-11-30 12:50:36
Datalink statistics
-- Total of 1 flow:
Average throughput: 93.32 Mbit/s
95th percentile per-packet one-way delay: 27.576 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 93.32 Mbit/s
95th percentile per-packet one-way delay: 27.576 ms
Loss rate: 0.10%

Run 4: Report of FillP-Sheep — Data Link



Run 5: Statistics of FillP-Sheep

Start at: 2018-11-30 12:33:43

End at: 2018-11-30 12:34:13

Local clock offset: 2.201 ms

Remote clock offset: 40.916 ms

Below is generated by plot.py at 2018-11-30 12:51:23

Datalink statistics

-- Total of 1 flow:

Average throughput: 84.83 Mbit/s

95th percentile per-packet one-way delay: 29.524 ms

Loss rate: 0.18%

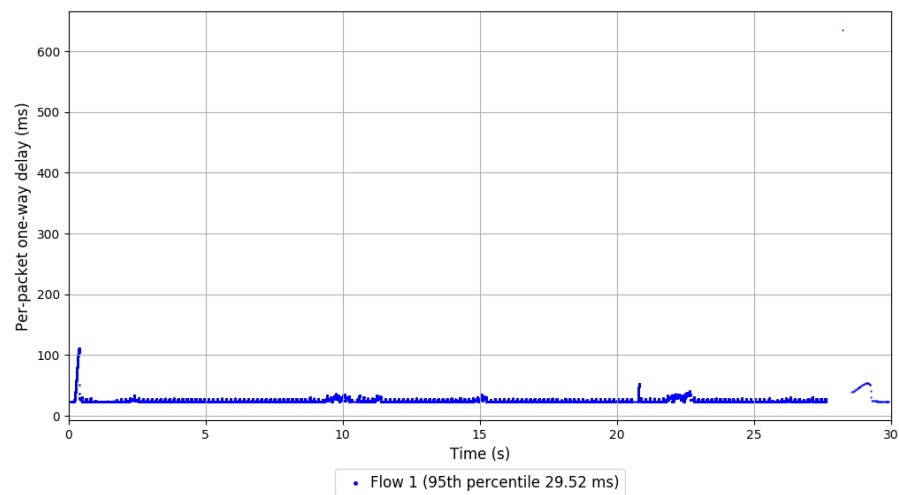
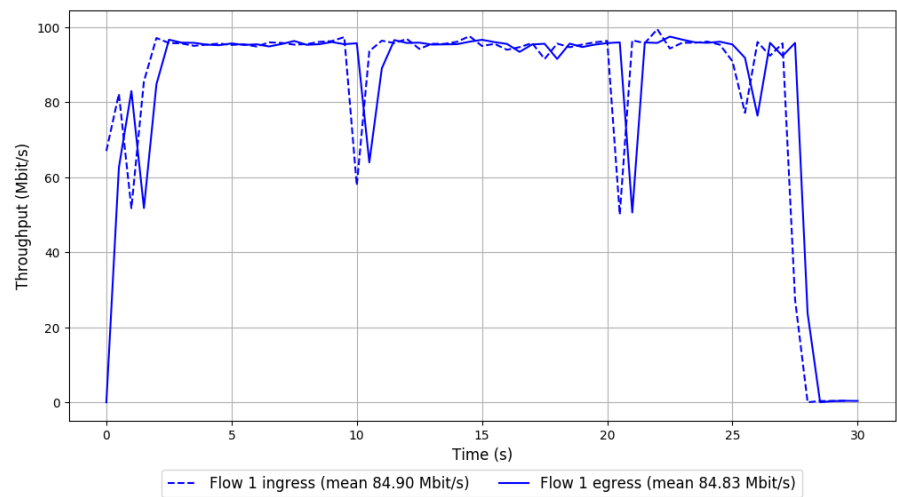
-- Flow 1:

Average throughput: 84.83 Mbit/s

95th percentile per-packet one-way delay: 29.524 ms

Loss rate: 0.18%

Run 5: Report of FillP-Sheep — Data Link

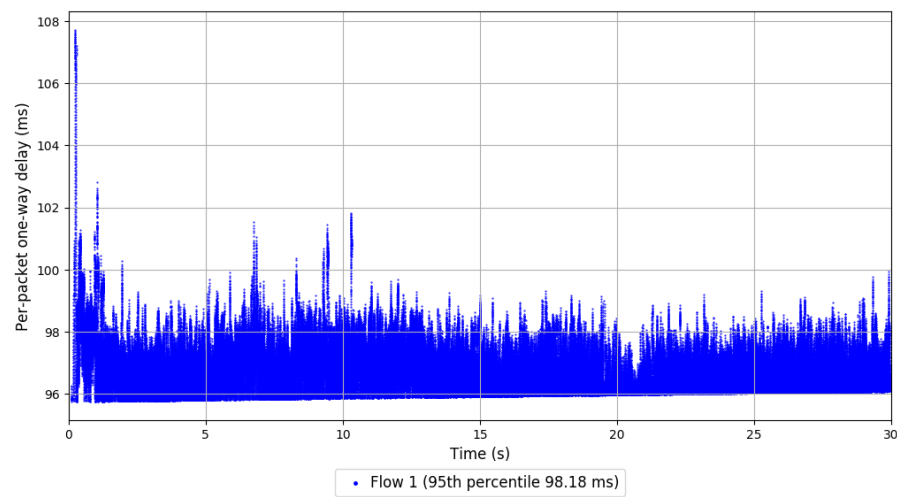
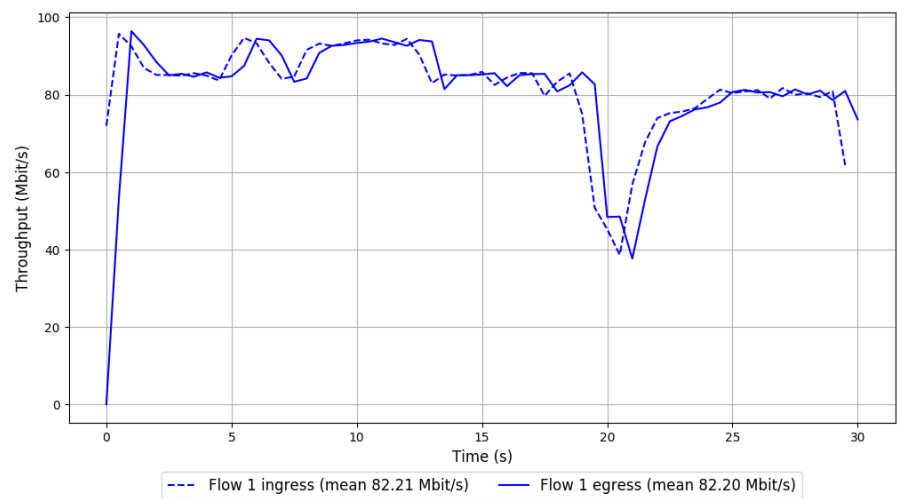


```
Run 1: Statistics of Indigo

Start at: 2018-11-30 10:57:02
End at: 2018-11-30 10:57:32
Local clock offset: -0.025 ms
Remote clock offset: -59.985 ms

# Below is generated by plot.py at 2018-11-30 12:51:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 82.20 Mbit/s
95th percentile per-packet one-way delay: 98.180 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 82.20 Mbit/s
95th percentile per-packet one-way delay: 98.180 ms
Loss rate: 0.08%
```

Run 1: Report of Indigo — Data Link

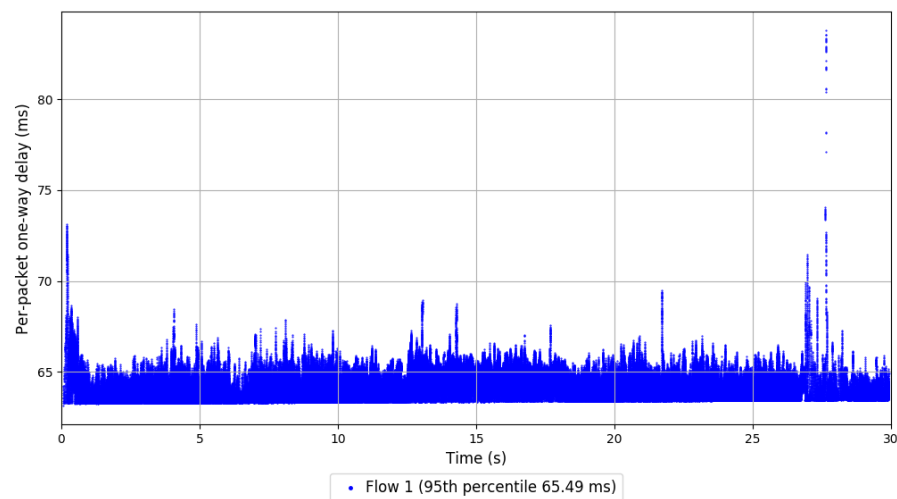
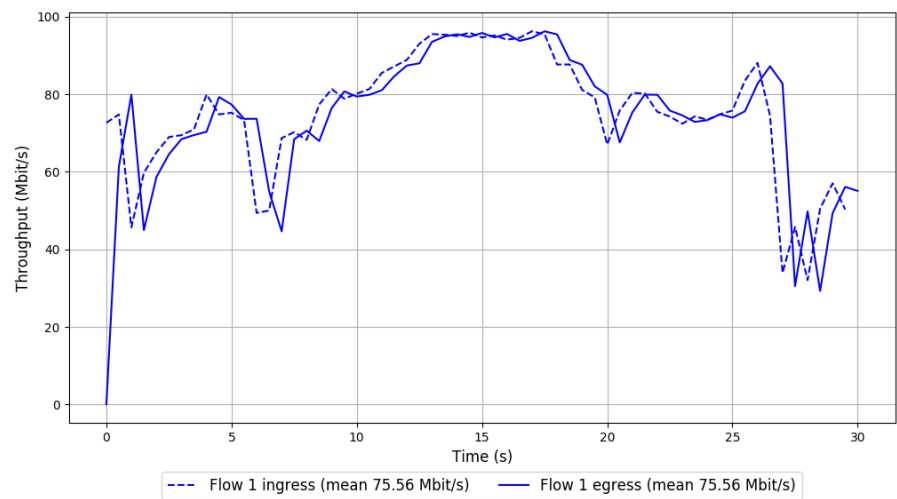


Run 2: Statistics of Indigo

Start at: 2018-11-30 11:18:56
End at: 2018-11-30 11:19:26
Local clock offset: -0.659 ms
Remote clock offset: -15.722 ms

Below is generated by plot.py at 2018-11-30 12:51:23
Datalink statistics
-- Total of 1 flow:
Average throughput: 75.56 Mbit/s
95th percentile per-packet one-way delay: 65.490 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 75.56 Mbit/s
95th percentile per-packet one-way delay: 65.490 ms
Loss rate: 0.06%

Run 2: Report of Indigo — Data Link

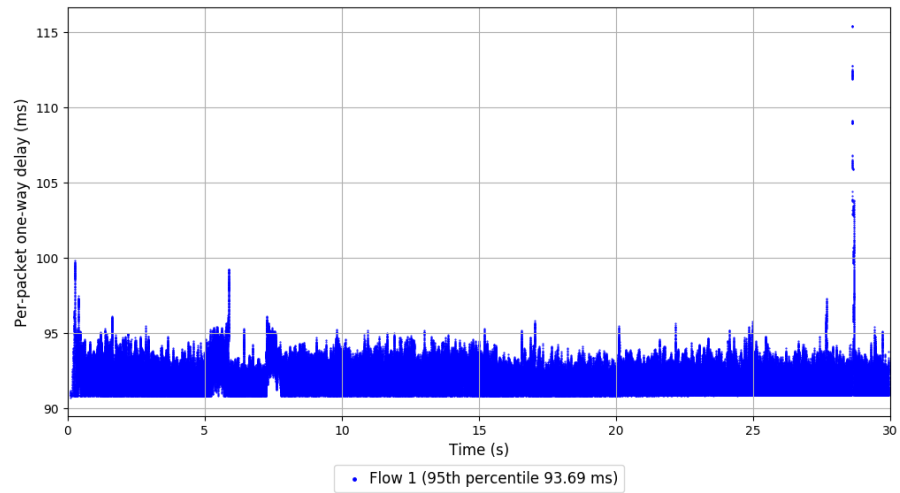
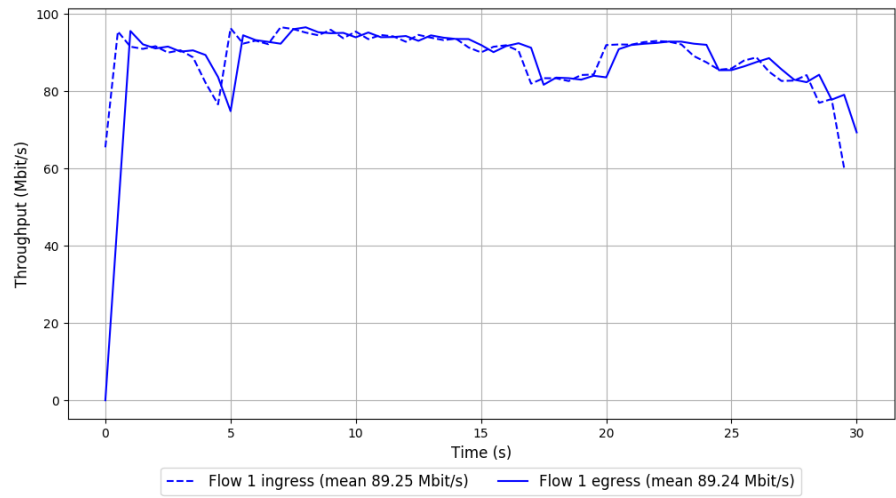


Run 3: Statistics of Indigo

Start at: 2018-11-30 11:41:12
End at: 2018-11-30 11:41:42
Local clock offset: 2.872 ms
Remote clock offset: -27.163 ms

Below is generated by plot.py at 2018-11-30 12:51:23
Datalink statistics
-- Total of 1 flow:
Average throughput: 89.24 Mbit/s
95th percentile per-packet one-way delay: 93.687 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 89.24 Mbit/s
95th percentile per-packet one-way delay: 93.687 ms
Loss rate: 0.08%

Run 3: Report of Indigo — Data Link

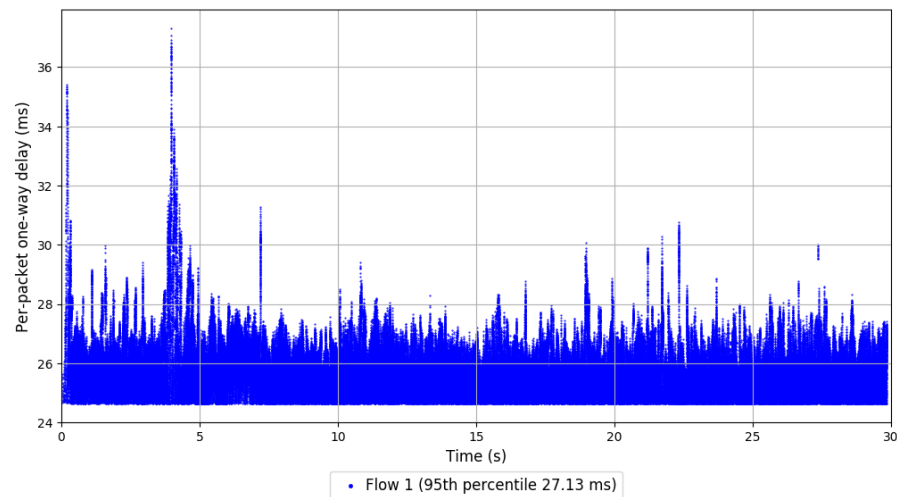
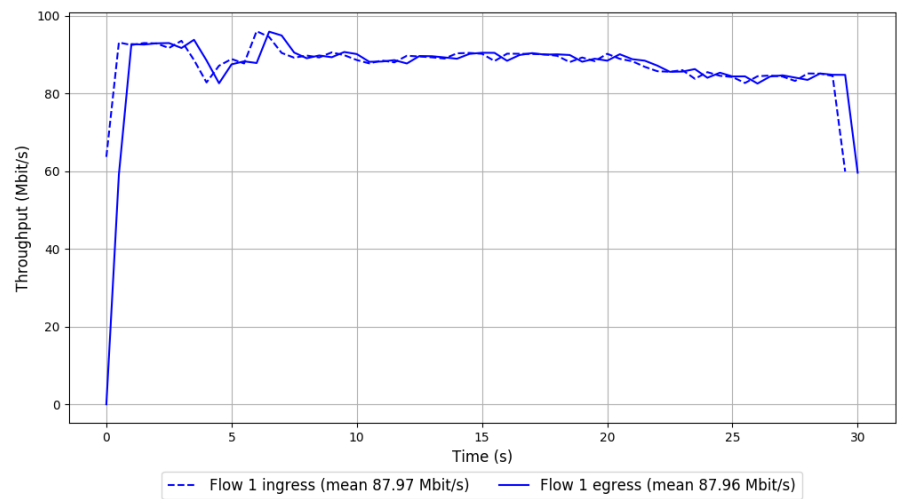


Run 4: Statistics of Indigo

Start at: 2018-11-30 12:03:11
End at: 2018-11-30 12:03:41
Local clock offset: 3.657 ms
Remote clock offset: 42.546 ms

Below is generated by plot.py at 2018-11-30 12:51:23
Datalink statistics
-- Total of 1 flow:
Average throughput: 87.96 Mbit/s
95th percentile per-packet one-way delay: 27.131 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 87.96 Mbit/s
95th percentile per-packet one-way delay: 27.131 ms
Loss rate: 0.09%

Run 4: Report of Indigo — Data Link

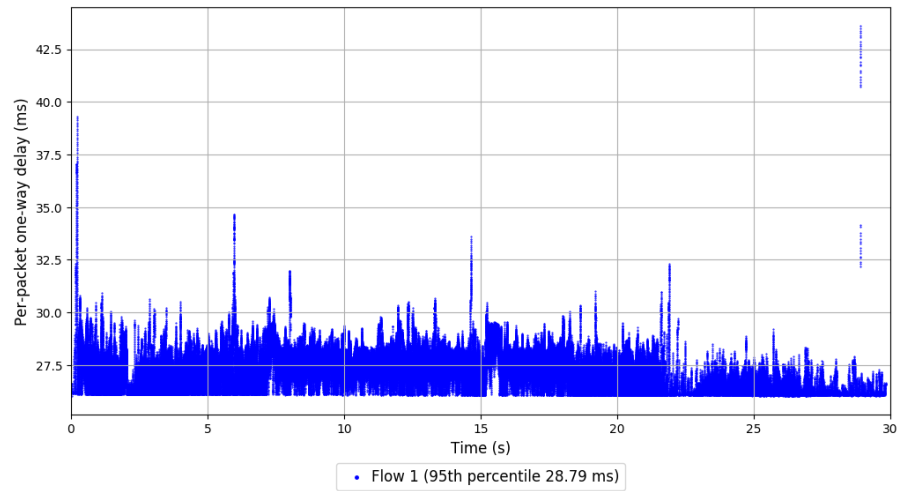
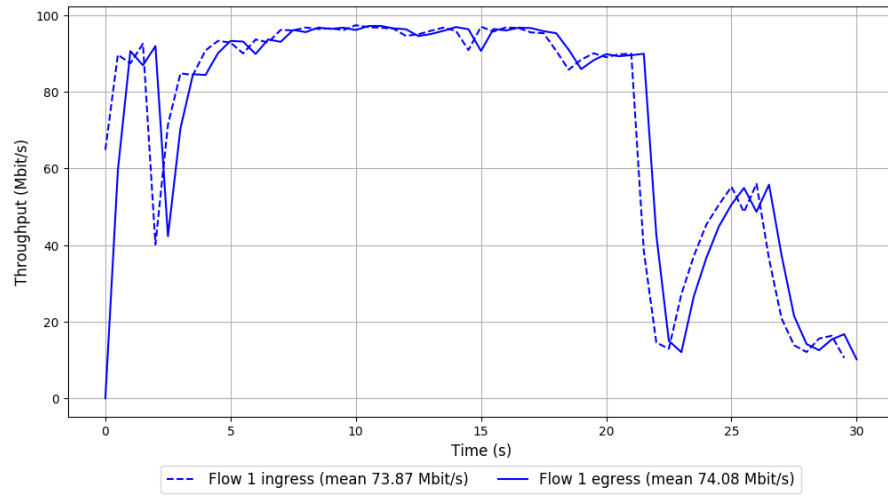


Run 5: Statistics of Indigo

Start at: 2018-11-30 12:25:43
End at: 2018-11-30 12:26:13
Local clock offset: -1.376 ms
Remote clock offset: 35.361 ms

Below is generated by plot.py at 2018-11-30 12:51:23
Datalink statistics
-- Total of 1 flow:
Average throughput: 74.08 Mbit/s
95th percentile per-packet one-way delay: 28.788 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 74.08 Mbit/s
95th percentile per-packet one-way delay: 28.788 ms
Loss rate: 0.02%

Run 5: Report of Indigo — Data Link

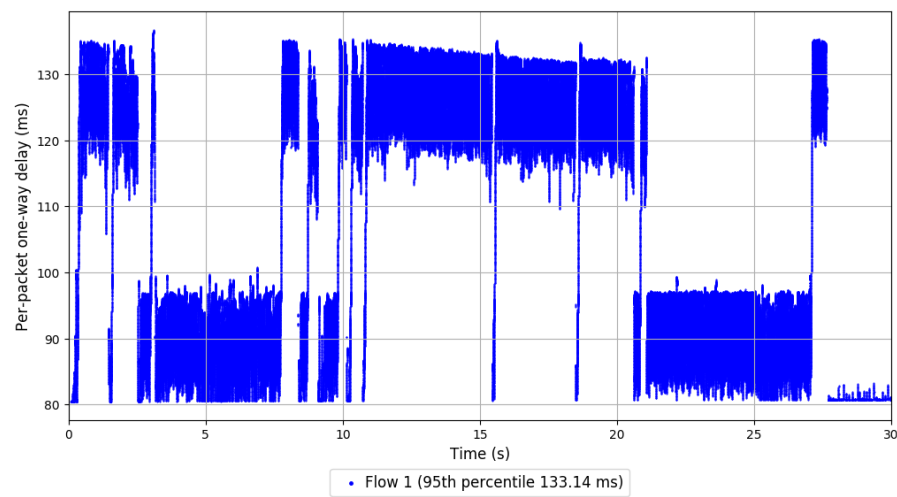
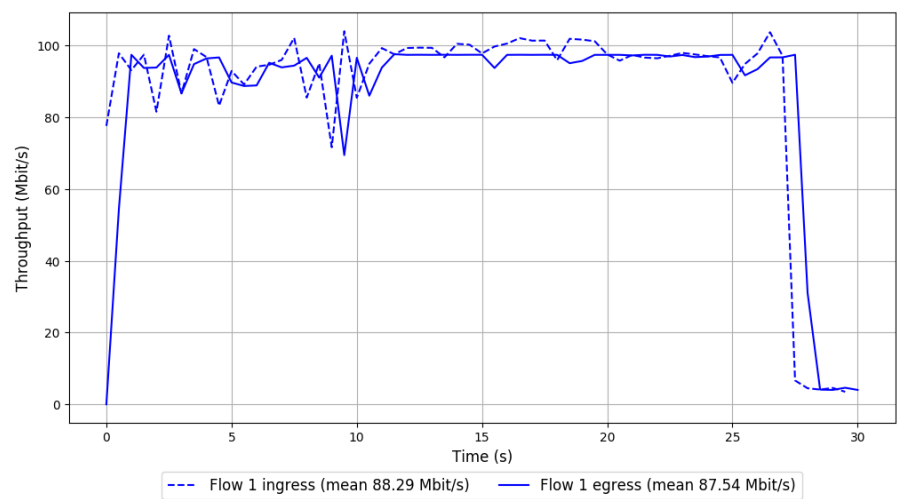


Run 1: Statistics of Indigo-96d2da3

Start at: 2018-11-30 11:07:15
End at: 2018-11-30 11:07:45
Local clock offset: 2.901 ms
Remote clock offset: -35.269 ms

Below is generated by plot.py at 2018-11-30 12:51:23
Datalink statistics
-- Total of 1 flow:
Average throughput: 87.54 Mbit/s
95th percentile per-packet one-way delay: 133.140 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 87.54 Mbit/s
95th percentile per-packet one-way delay: 133.140 ms
Loss rate: 1.11%

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

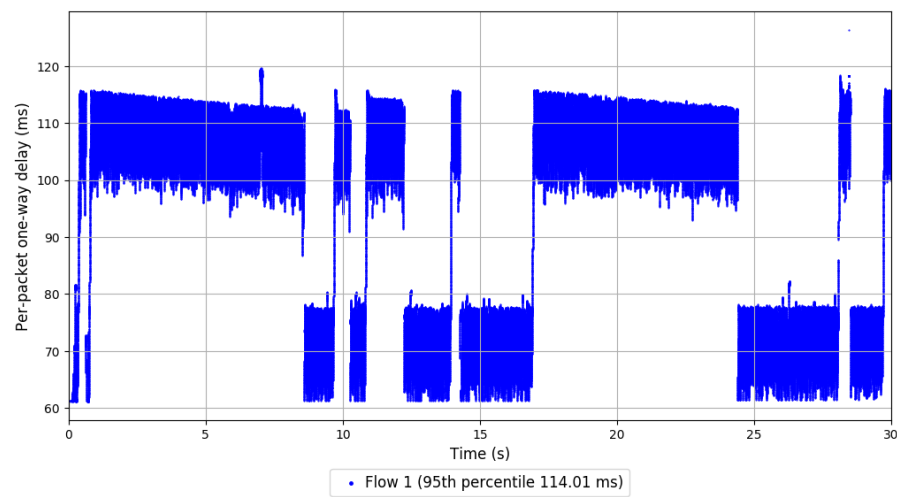
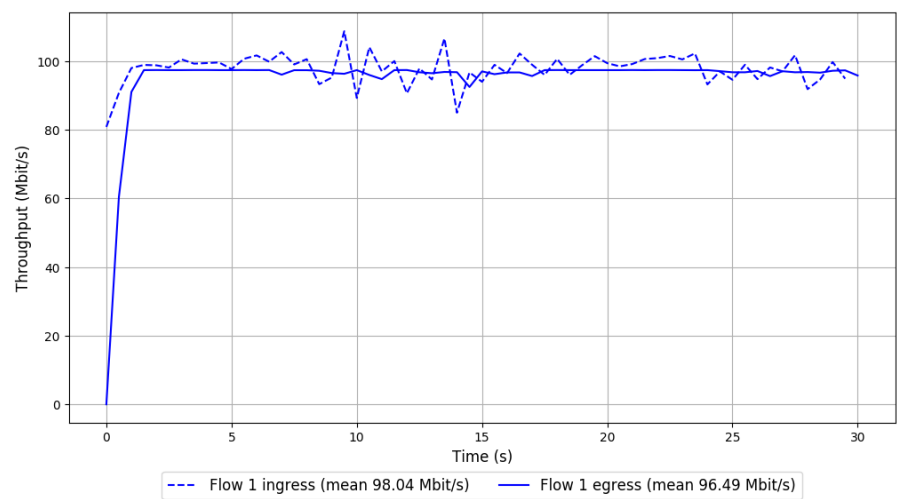


Run 2: Statistics of Indigo-96d2da3

Start at: 2018-11-30 11:29:25
End at: 2018-11-30 11:29:55
Local clock offset: 0.917 ms
Remote clock offset: -7.555 ms

Below is generated by plot.py at 2018-11-30 12:51:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.49 Mbit/s
95th percentile per-packet one-way delay: 114.008 ms
Loss rate: 1.63%
-- Flow 1:
Average throughput: 96.49 Mbit/s
95th percentile per-packet one-way delay: 114.008 ms
Loss rate: 1.63%

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

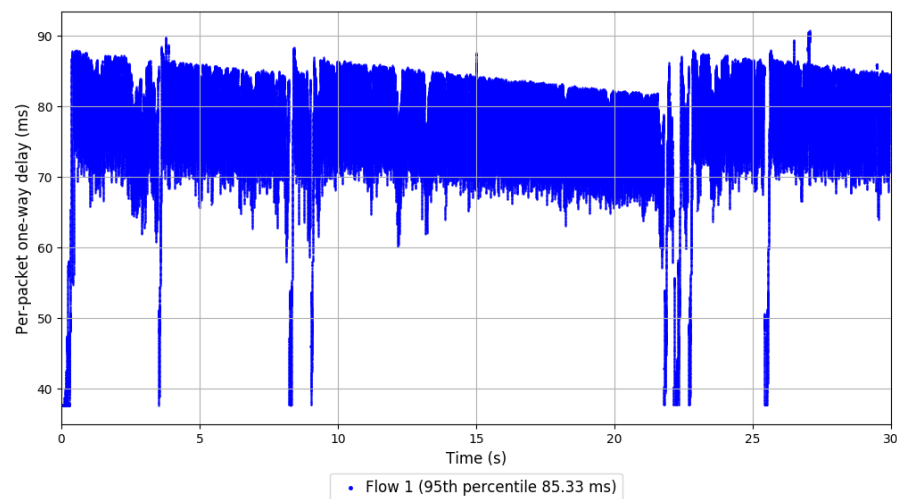
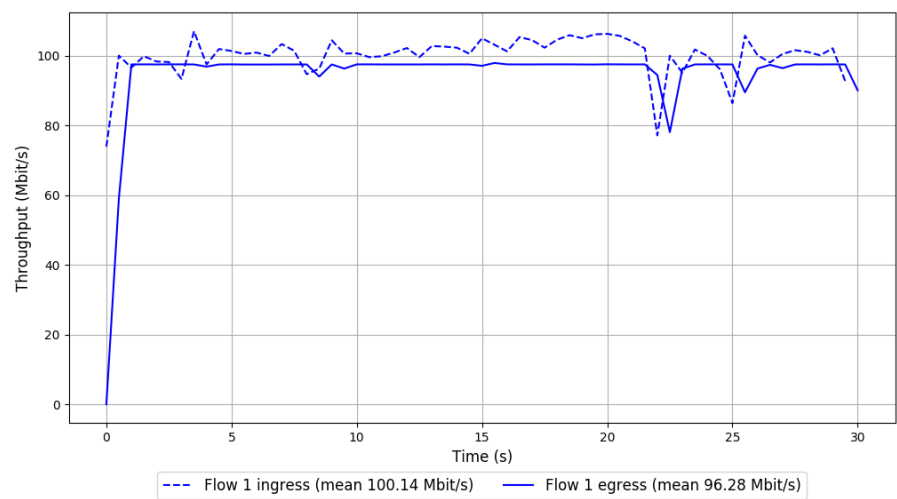


Run 3: Statistics of Indigo-96d2da3

Start at: 2018-11-30 11:51:20
End at: 2018-11-30 11:51:50
Local clock offset: 4.185 ms
Remote clock offset: 28.374 ms

Below is generated by plot.py at 2018-11-30 12:52:18
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.28 Mbit/s
95th percentile per-packet one-way delay: 85.332 ms
Loss rate: 3.94%
-- Flow 1:
Average throughput: 96.28 Mbit/s
95th percentile per-packet one-way delay: 85.332 ms
Loss rate: 3.94%

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

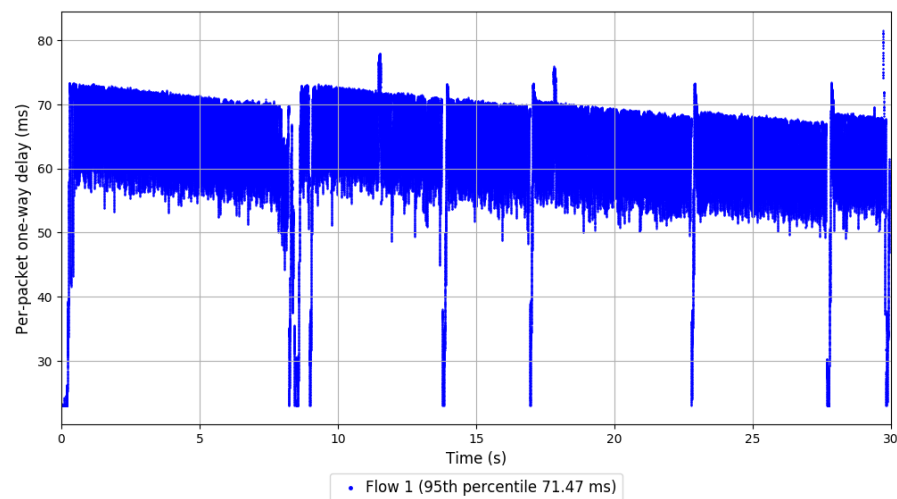
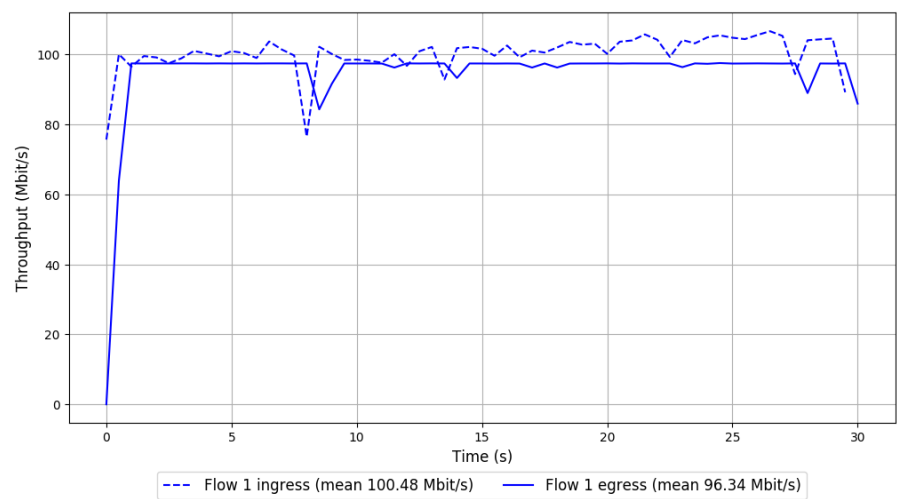


Run 4: Statistics of Indigo-96d2da3

Start at: 2018-11-30 12:13:40
End at: 2018-11-30 12:14:10
Local clock offset: 2.853 ms
Remote clock offset: 43.334 ms

Below is generated by plot.py at 2018-11-30 12:52:19
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.34 Mbit/s
95th percentile per-packet one-way delay: 71.466 ms
Loss rate: 4.17%
-- Flow 1:
Average throughput: 96.34 Mbit/s
95th percentile per-packet one-way delay: 71.466 ms
Loss rate: 4.17%

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

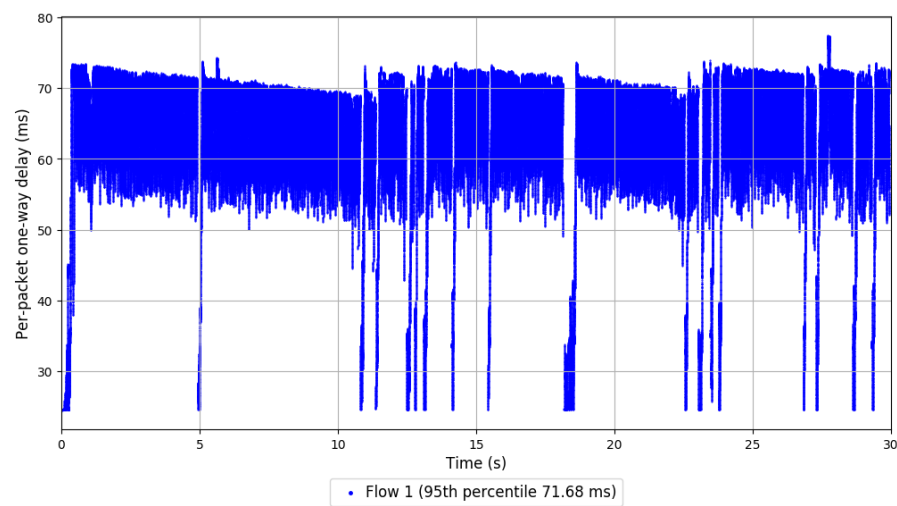
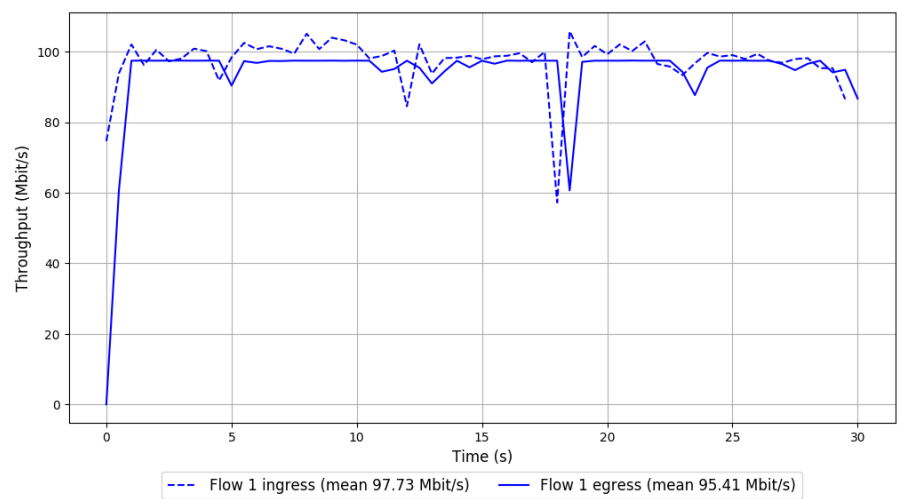


Run 5: Statistics of Indigo-96d2da3

Start at: 2018-11-30 12:36:06
End at: 2018-11-30 12:36:36
Local clock offset: 3.379 ms
Remote clock offset: 40.338 ms

Below is generated by plot.py at 2018-11-30 12:52:21
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.41 Mbit/s
95th percentile per-packet one-way delay: 71.678 ms
Loss rate: 2.42%
-- Flow 1:
Average throughput: 95.41 Mbit/s
95th percentile per-packet one-way delay: 71.678 ms
Loss rate: 2.42%

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



Run 1: Statistics of LEDBAT

Start at: 2018-11-30 11:14:07

End at: 2018-11-30 11:14:37

Local clock offset: 0.046 ms

Remote clock offset: 6.505 ms

Below is generated by plot.py at 2018-11-30 12:52:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 83.26 Mbit/s

95th percentile per-packet one-way delay: 48.750 ms

Loss rate: 0.13%

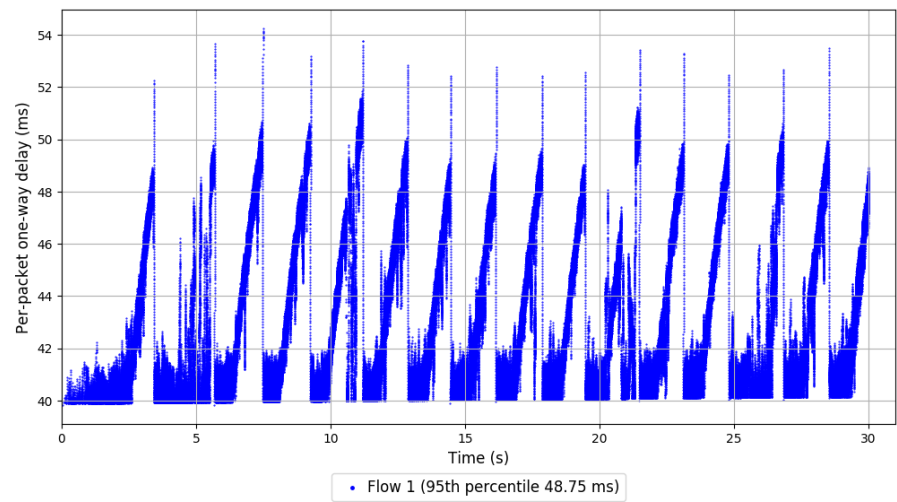
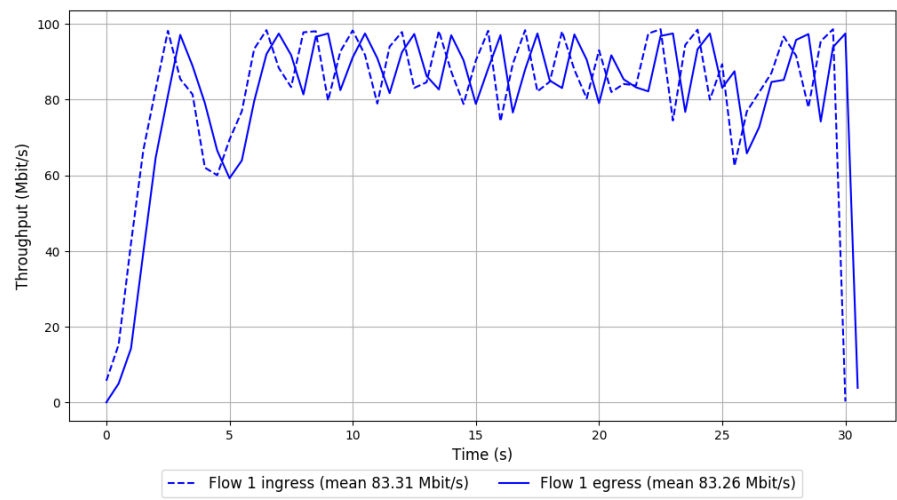
-- Flow 1:

Average throughput: 83.26 Mbit/s

95th percentile per-packet one-way delay: 48.750 ms

Loss rate: 0.13%

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2018-11-30 11:36:29

End at: 2018-11-30 11:36:59

Local clock offset: 1.407 ms

Remote clock offset: -9.11 ms

Below is generated by plot.py at 2018-11-30 12:52:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 81.39 Mbit/s

95th percentile per-packet one-way delay: 76.186 ms

Loss rate: 0.14%

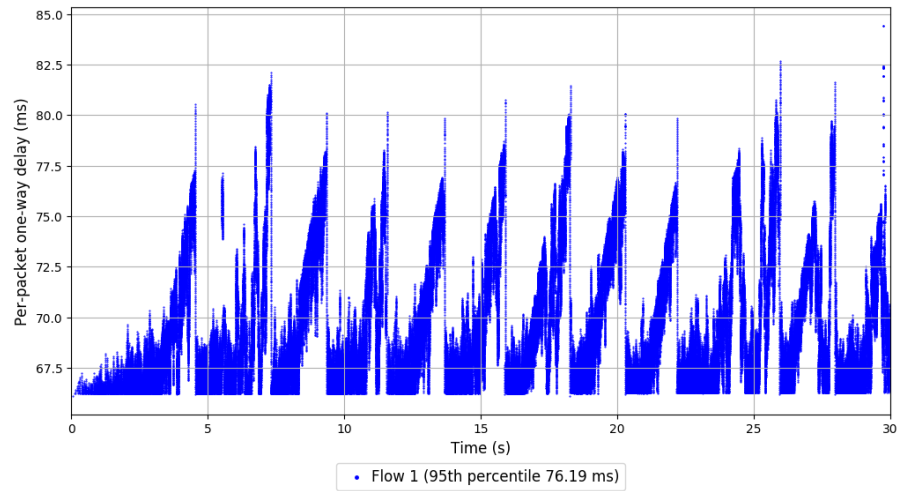
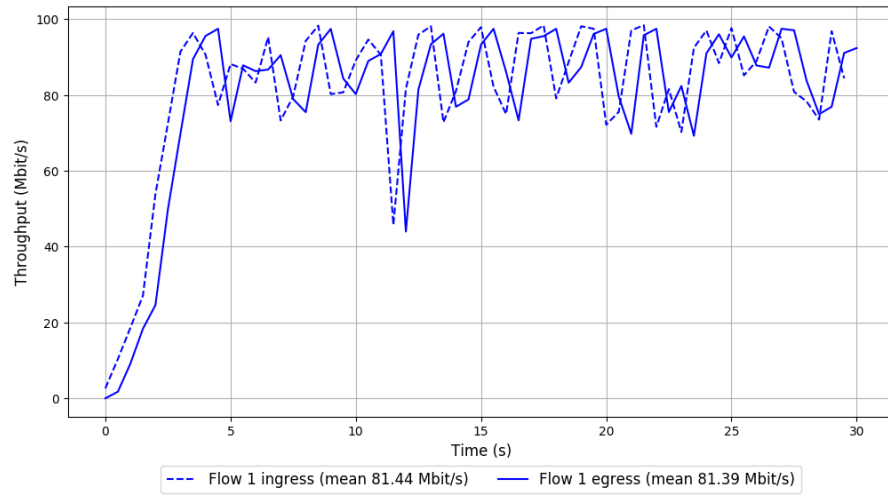
-- Flow 1:

Average throughput: 81.39 Mbit/s

95th percentile per-packet one-way delay: 76.186 ms

Loss rate: 0.14%

Run 2: Report of LEDBAT — Data Link

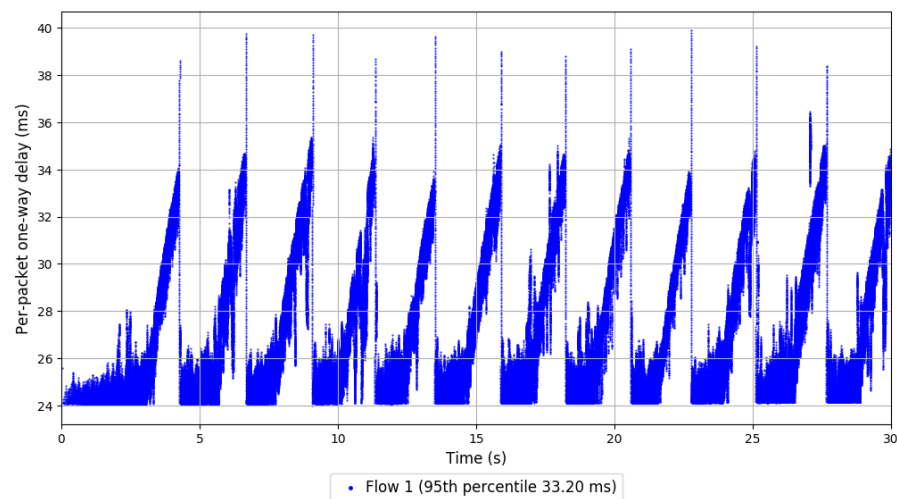
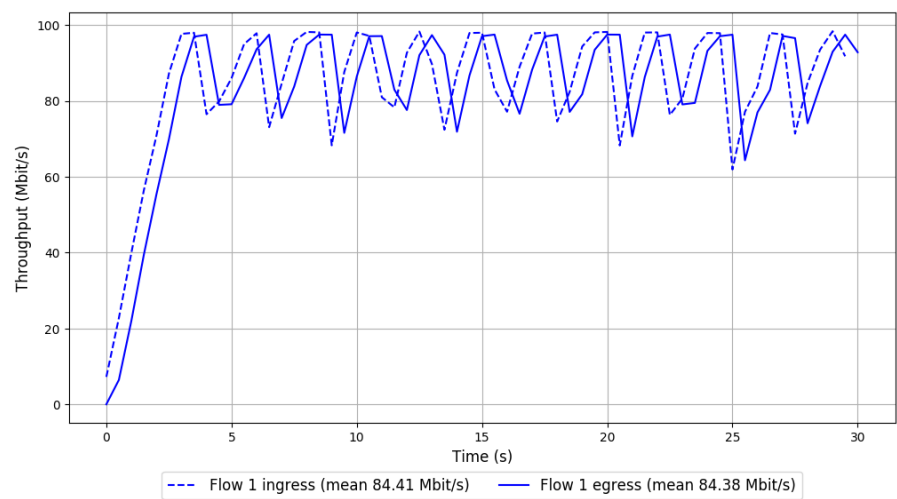


Run 3: Statistics of LEDBAT

Start at: 2018-11-30 11:58:21
End at: 2018-11-30 11:58:51
Local clock offset: 1.904 ms
Remote clock offset: 40.676 ms

Below is generated by plot.py at 2018-11-30 12:52:24
Datalink statistics
-- Total of 1 flow:
Average throughput: 84.38 Mbit/s
95th percentile per-packet one-way delay: 33.196 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 84.38 Mbit/s
95th percentile per-packet one-way delay: 33.196 ms
Loss rate: 0.11%

Run 3: Report of LEDBAT — Data Link

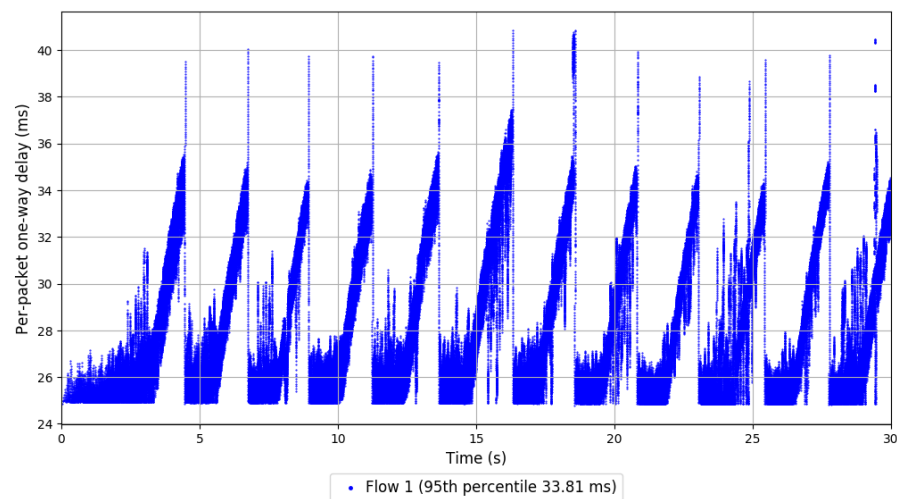
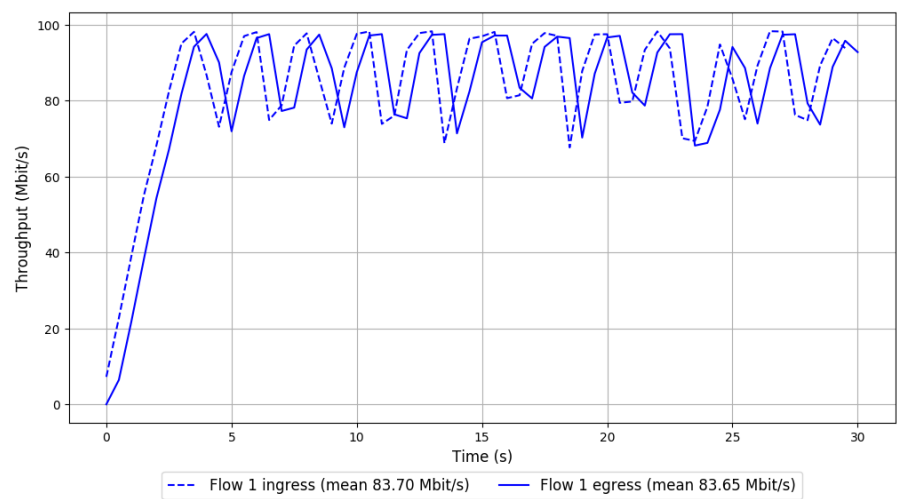


Run 4: Statistics of LEDBAT

Start at: 2018-11-30 12:20:56
End at: 2018-11-30 12:21:26
Local clock offset: 4.333 ms
Remote clock offset: 43.074 ms

Below is generated by plot.py at 2018-11-30 12:52:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 83.65 Mbit/s
95th percentile per-packet one-way delay: 33.811 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 83.65 Mbit/s
95th percentile per-packet one-way delay: 33.811 ms
Loss rate: 0.14%

Run 4: Report of LEDBAT — Data Link

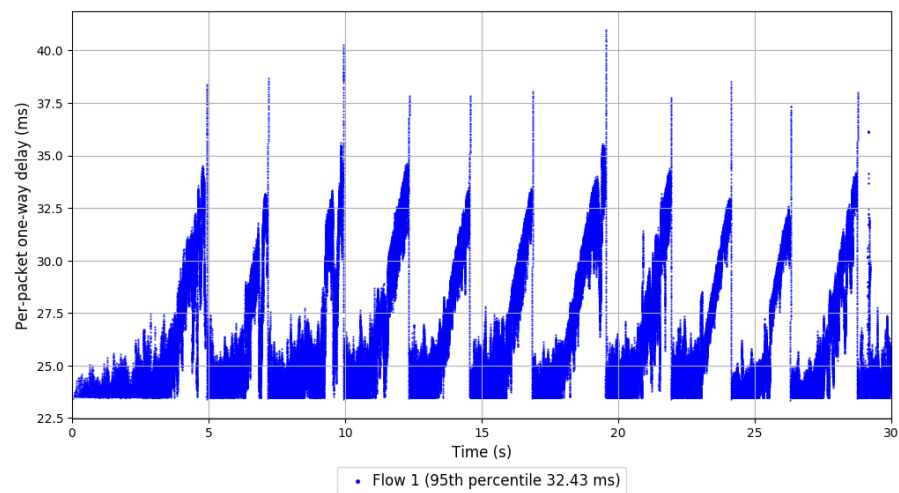
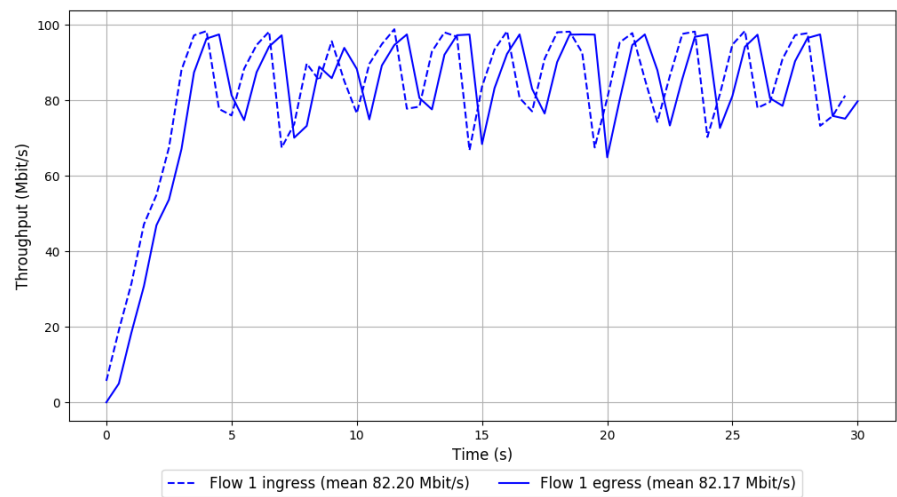


Run 5: Statistics of LEDBAT

Start at: 2018-11-30 12:43:08
End at: 2018-11-30 12:43:38
Local clock offset: 3.047 ms
Remote clock offset: 40.487 ms

Below is generated by plot.py at 2018-11-30 12:52:59
Datalink statistics
-- Total of 1 flow:
Average throughput: 82.17 Mbit/s
95th percentile per-packet one-way delay: 32.426 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 82.17 Mbit/s
95th percentile per-packet one-way delay: 32.426 ms
Loss rate: 0.12%

Run 5: Report of LEDBAT — Data Link

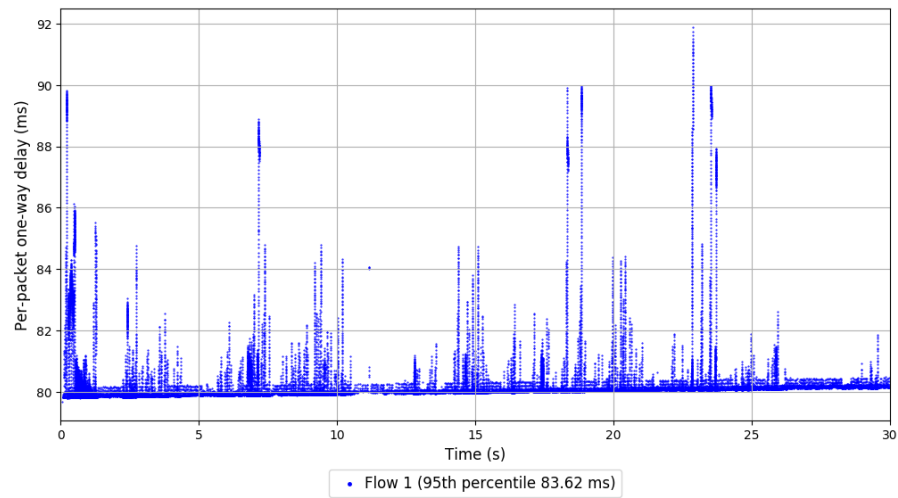
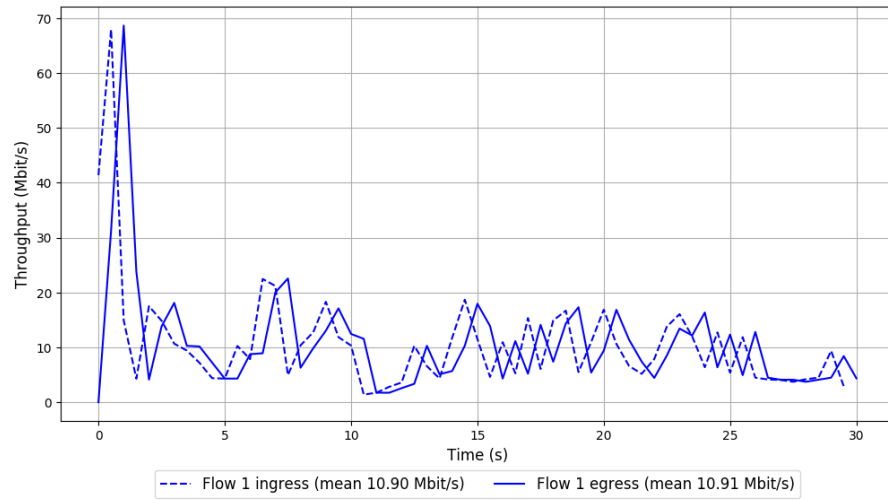



```
Run 1: Statistics of Indigo-Muses

Start at: 2018-11-30 11:03:50
End at: 2018-11-30 11:04:20
Local clock offset: 2.424 ms
Remote clock offset: -37.223 ms

# Below is generated by plot.py at 2018-11-30 12:52:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 10.91 Mbit/s
95th percentile per-packet one-way delay: 83.618 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 10.91 Mbit/s
95th percentile per-packet one-way delay: 83.618 ms
Loss rate: 0.03%
```

Run 1: Report of Indigo-Muses — Data Link



Run 2: Statistics of Indigo-Muses

Start at: 2018-11-30 11:25:56

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

Local clock offset: 1.249 ms

Remote clock offset: 1.541 ms

Below is generated by plot.py at 2018-11-30 12:52:59

Datalink statistics

-- Total of 1 flow:

Average throughput: 14.17 Mbit/s

95th percentile per-packet one-way delay: 52.276 ms

Loss rate: 0.08%

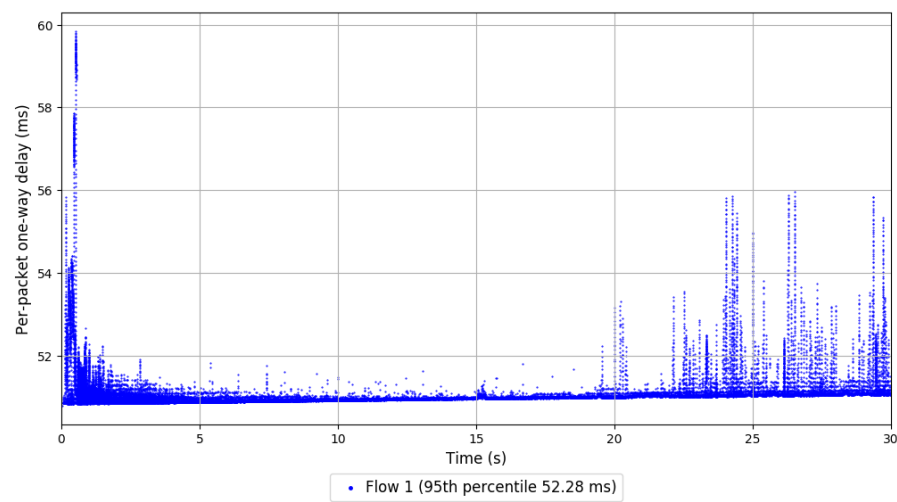
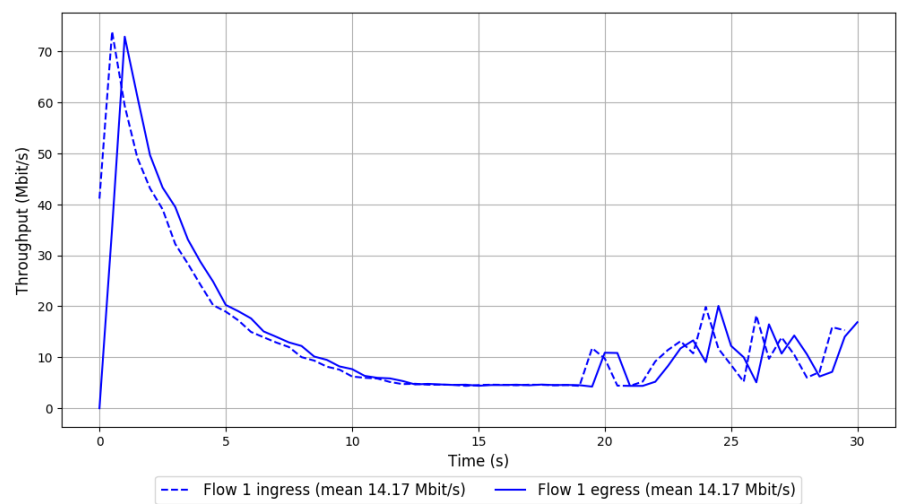
-- Flow 1:

Average throughput: 14.17 Mbit/s

95th percentile per-packet one-way delay: 52.276 ms

Loss rate: 0.08%

Run 2: Report of Indigo-Muses — Data Link

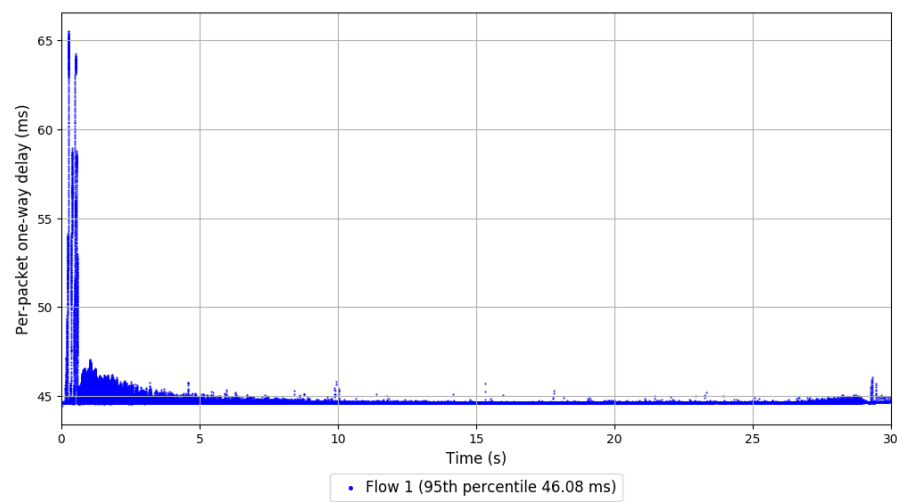
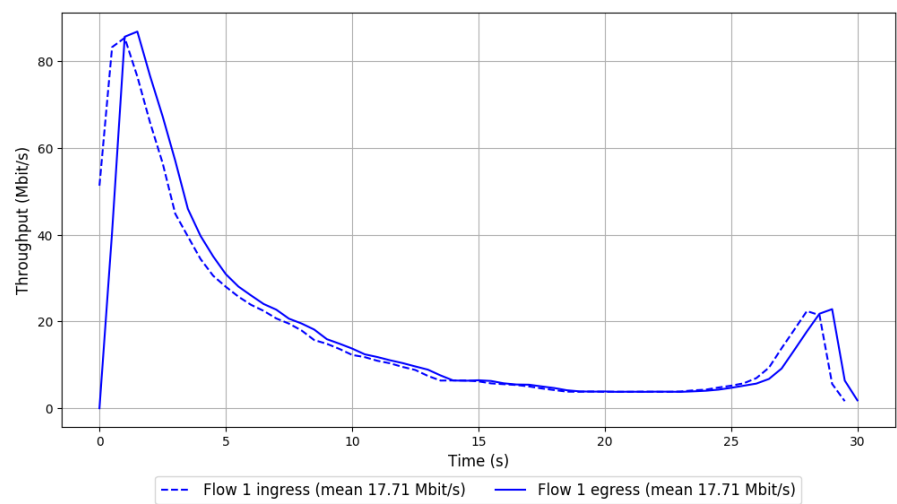


Run 3: Statistics of Indigo-Muses

Start at: 2018-11-30 11:47:55
End at: 2018-11-30 11:48:25
Local clock offset: 2.22 ms
Remote clock offset: 19.151 ms

Below is generated by plot.py at 2018-11-30 12:52:59
Datalink statistics
-- Total of 1 flow:
Average throughput: 17.71 Mbit/s
95th percentile per-packet one-way delay: 46.083 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 17.71 Mbit/s
95th percentile per-packet one-way delay: 46.083 ms
Loss rate: 0.00%

Run 3: Report of Indigo-Muses — Data Link

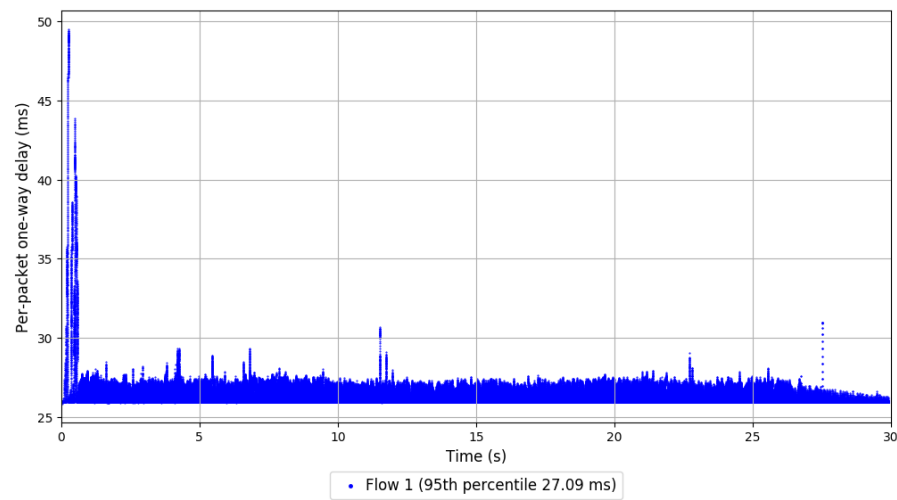
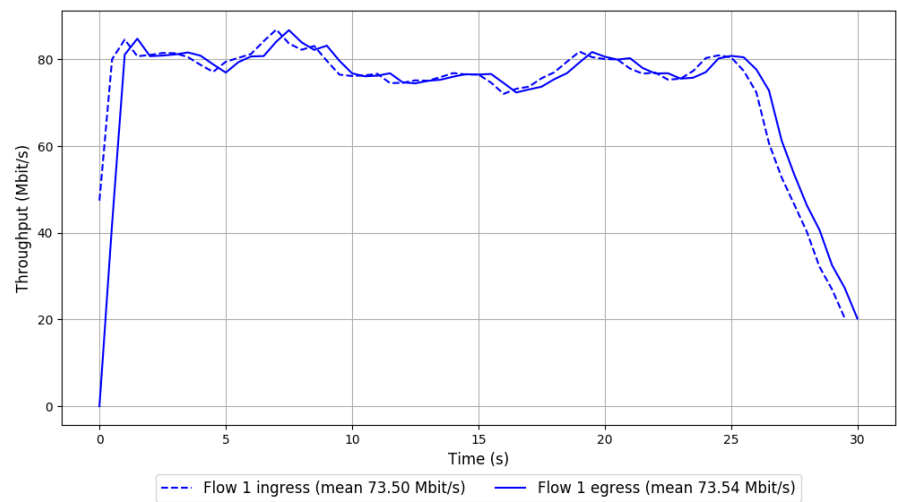


Run 4: Statistics of Indigo-Muses

Start at: 2018-11-30 12:10:07
End at: 2018-11-30 12:10:37
Local clock offset: 4.958 ms
Remote clock offset: 42.605 ms

Below is generated by plot.py at 2018-11-30 12:53:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 73.54 Mbit/s
95th percentile per-packet one-way delay: 27.095 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 73.54 Mbit/s
95th percentile per-packet one-way delay: 27.095 ms
Loss rate: 0.03%

Run 4: Report of Indigo-Muses — Data Link

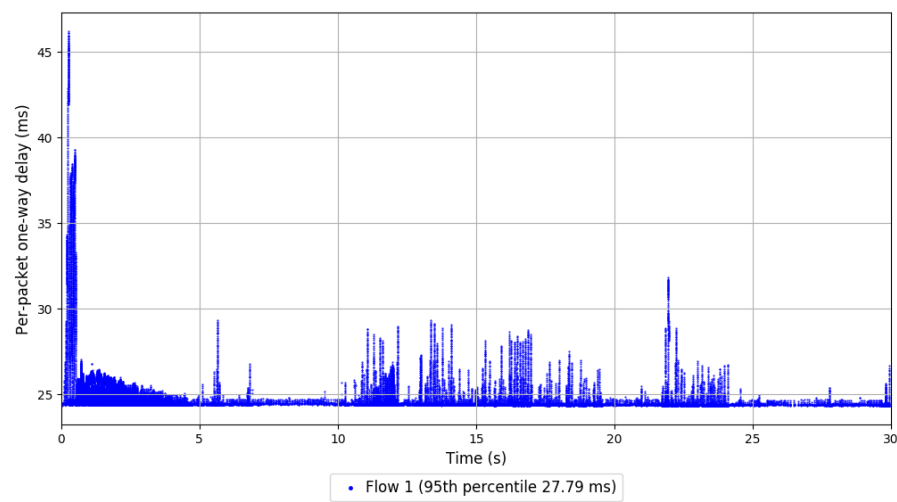
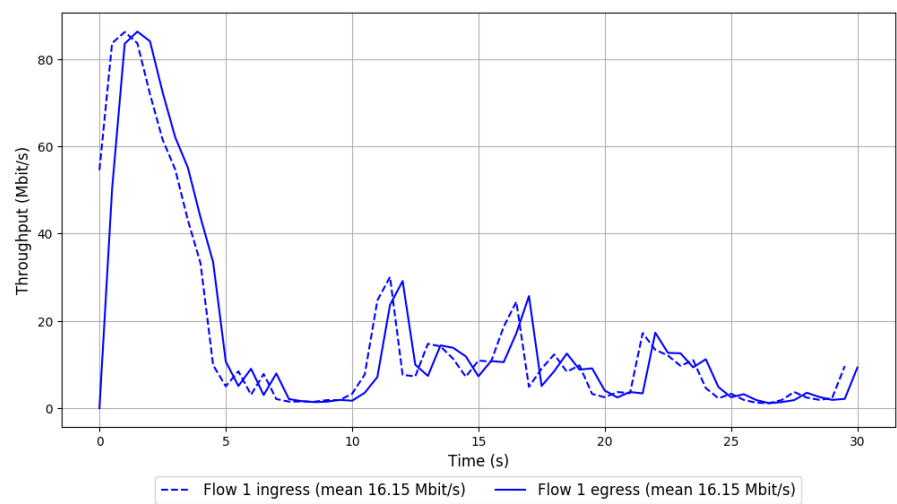


Run 5: Statistics of Indigo-Muses

Start at: 2018-11-30 12:32:37
End at: 2018-11-30 12:33:07
Local clock offset: 3.078 ms
Remote clock offset: 40.516 ms

Below is generated by plot.py at 2018-11-30 12:53:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 16.15 Mbit/s
95th percentile per-packet one-way delay: 27.792 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 16.15 Mbit/s
95th percentile per-packet one-way delay: 27.792 ms
Loss rate: 0.06%

Run 5: Report of Indigo-Muses — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2018-11-30 11:02:42

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

Local clock offset: 0.441 ms

Remote clock offset: -67.568 ms

Below is generated by plot.py at 2018-11-30 12:53:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 66.85 Mbit/s

95th percentile per-packet one-way delay: 107.787 ms

Loss rate: 0.08%

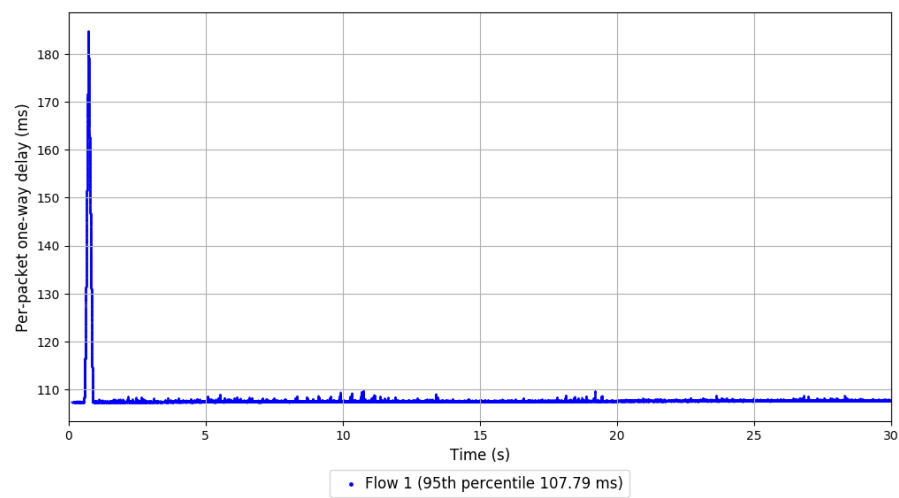
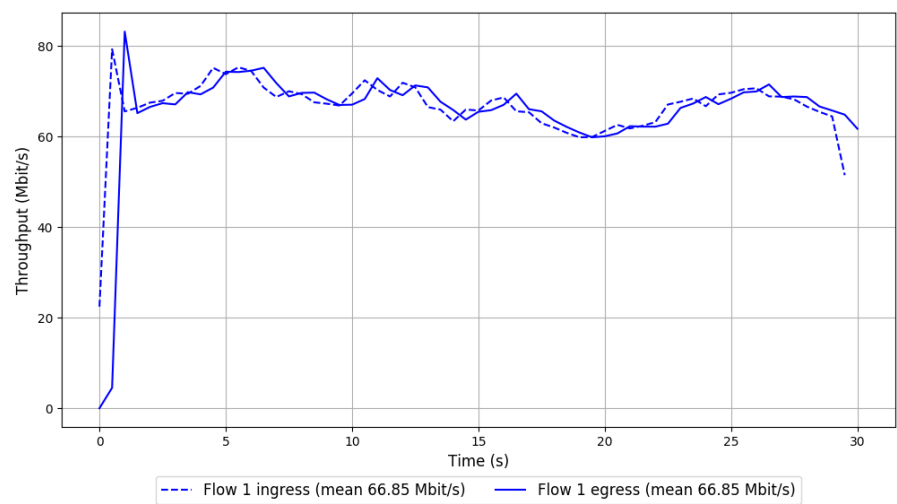
-- Flow 1:

Average throughput: 66.85 Mbit/s

95th percentile per-packet one-way delay: 107.787 ms

Loss rate: 0.08%

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-11-30 11:24:46

End at: 2018-11-30 11:25:16

Local clock offset: 1.11 ms

Remote clock offset: -36.641 ms

Below is generated by plot.py at 2018-11-30 12:53:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 88.61 Mbit/s

95th percentile per-packet one-way delay: 110.468 ms

Loss rate: 0.12%

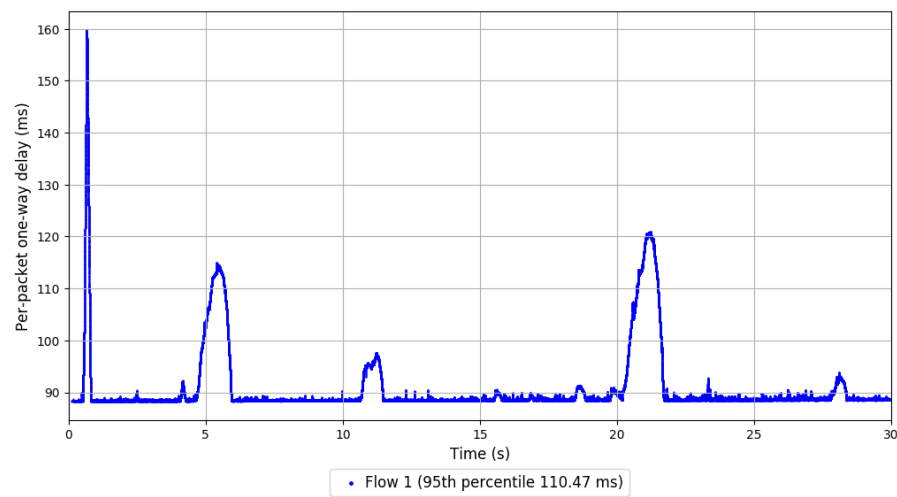
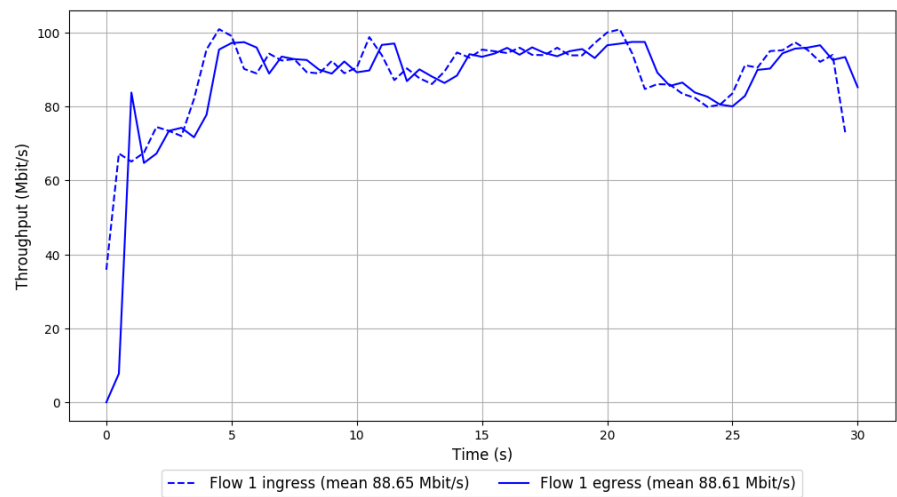
-- Flow 1:

Average throughput: 88.61 Mbit/s

95th percentile per-packet one-way delay: 110.468 ms

Loss rate: 0.12%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-11-30 11:46:50

End at: 2018-11-30 11:47:20

Local clock offset: 3.061 ms

Remote clock offset: 15.93 ms

Below is generated by plot.py at 2018-11-30 12:53:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 4.18 Mbit/s

95th percentile per-packet one-way delay: 48.617 ms

Loss rate: 0.16%

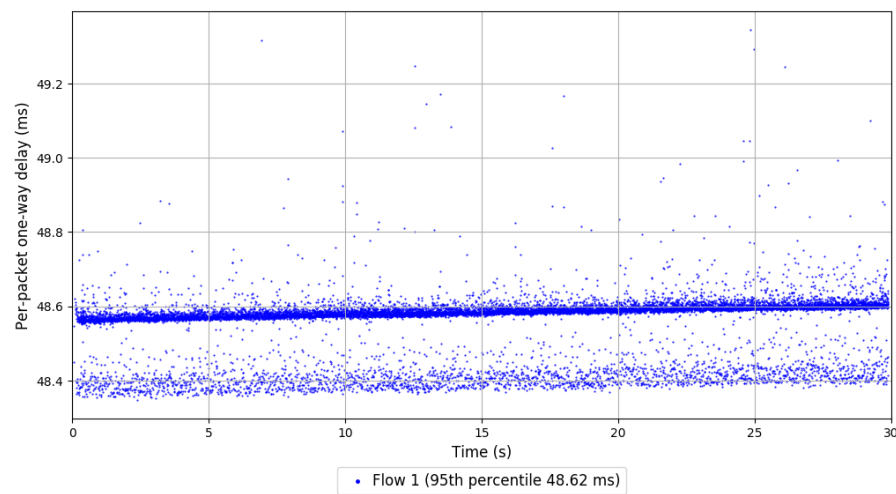
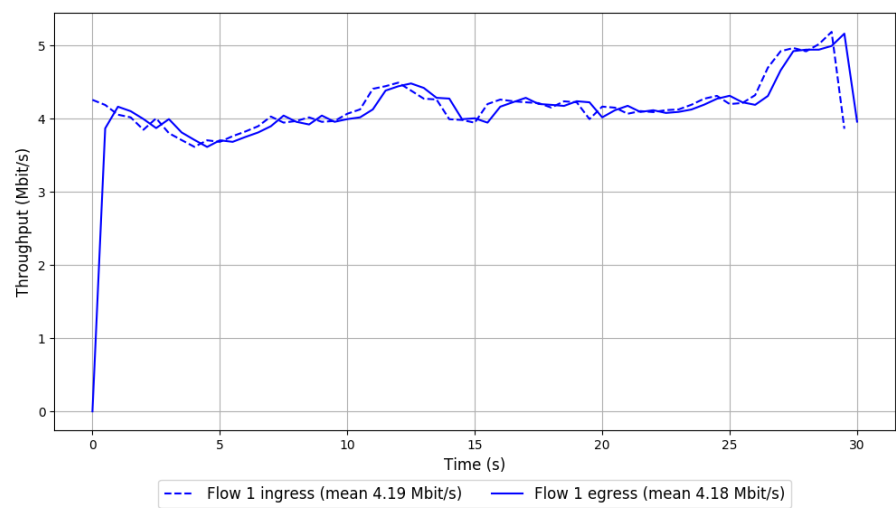
-- Flow 1:

Average throughput: 4.18 Mbit/s

95th percentile per-packet one-way delay: 48.617 ms

Loss rate: 0.16%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-11-30 12:08:57

End at: 2018-11-30 12:09:27

Local clock offset: 4.208 ms

Remote clock offset: 41.865 ms

Below is generated by plot.py at 2018-11-30 12:53:33

Datalink statistics

-- Total of 1 flow:

Average throughput: 83.58 Mbit/s

95th percentile per-packet one-way delay: 26.685 ms

Loss rate: 0.10%

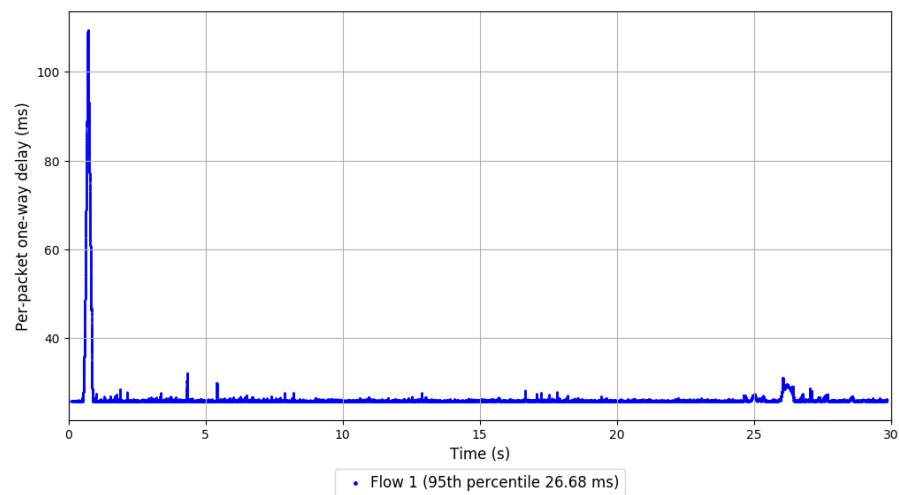
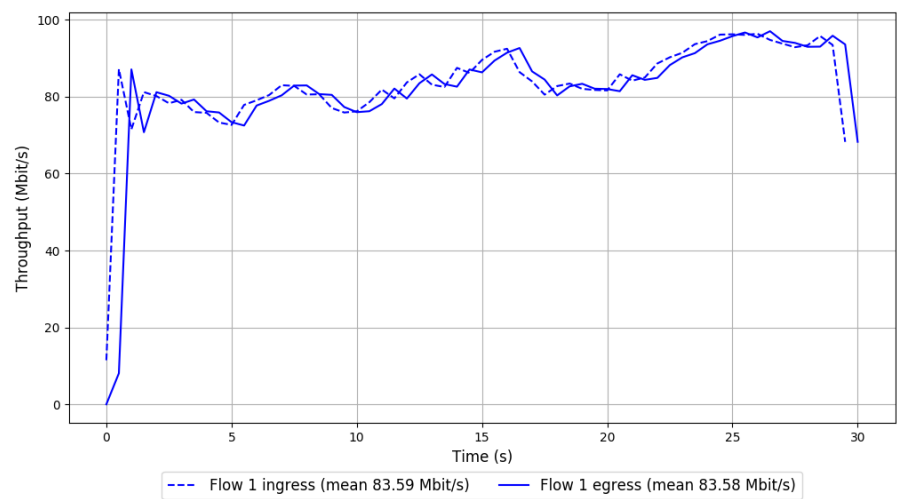
-- Flow 1:

Average throughput: 83.58 Mbit/s

95th percentile per-packet one-way delay: 26.685 ms

Loss rate: 0.10%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-11-30 12:31:25

End at: 2018-11-30 12:31:55

Local clock offset: 2.055 ms

Remote clock offset: 40.489 ms

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

Datalink statistics

-- Total of 1 flow:

Average throughput: 81.09 Mbit/s

95th percentile per-packet one-way delay: 29.533 ms

Loss rate: 0.10%

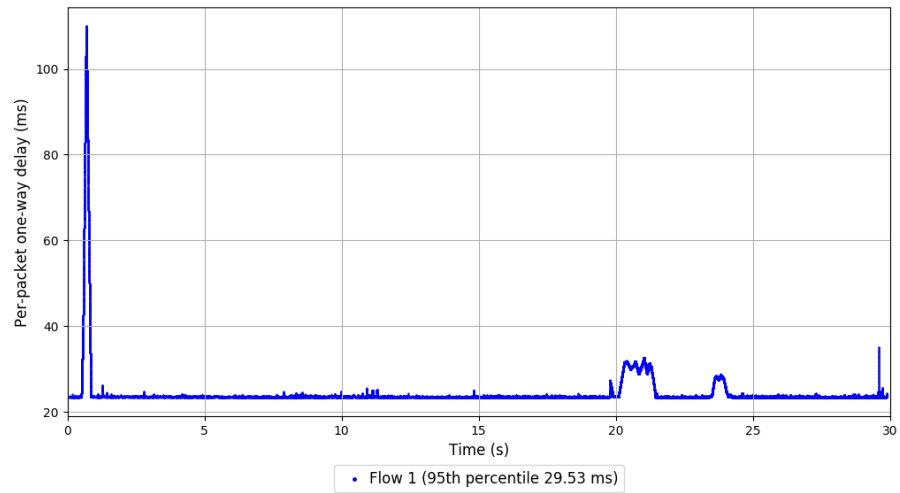
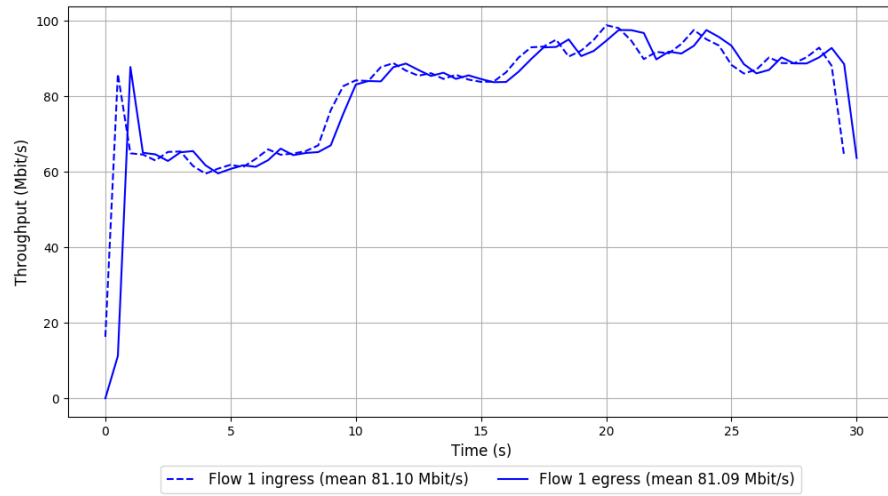
-- Flow 1:

Average throughput: 81.09 Mbit/s

95th percentile per-packet one-way delay: 29.533 ms

Loss rate: 0.10%

Run 5: Report of PCC-Allegro — Data Link

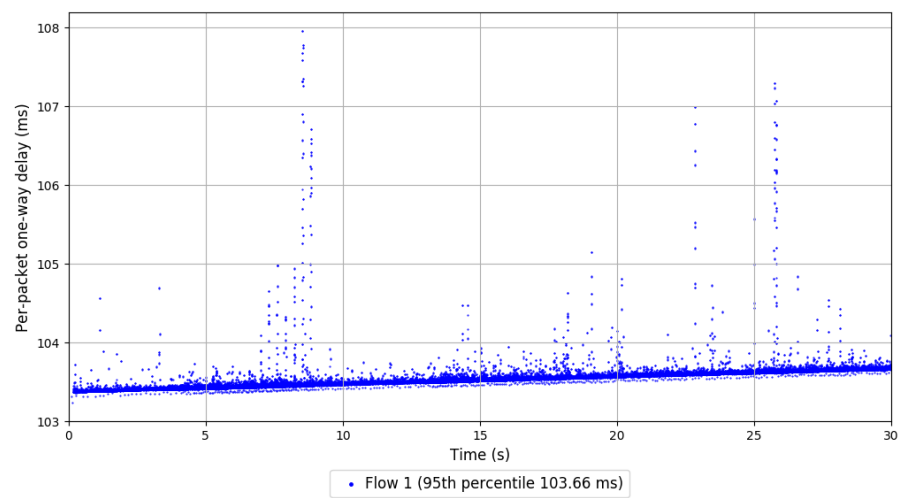
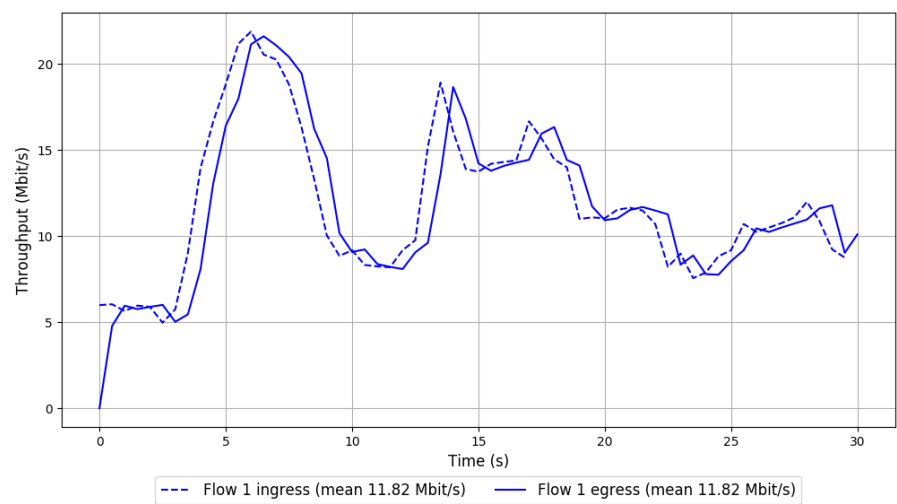


```
Run 1: Statistics of PCC-Expr

Start at: 2018-11-30 11:10:45
End at: 2018-11-30 11:11:15
Local clock offset: -1.106 ms
Remote clock offset: -60.094 ms

# Below is generated by plot.py at 2018-11-30 12:53:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 11.82 Mbit/s
95th percentile per-packet one-way delay: 103.664 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 11.82 Mbit/s
95th percentile per-packet one-way delay: 103.664 ms
Loss rate: 0.10%
```

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2018-11-30 11:33:05

End at: 2018-11-30 11:33:36

Local clock offset: 3.551 ms

Remote clock offset: 2.614 ms

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

Datalink statistics

-- Total of 1 flow:

Average throughput: 16.23 Mbit/s

95th percentile per-packet one-way delay: 55.519 ms

Loss rate: 0.22%

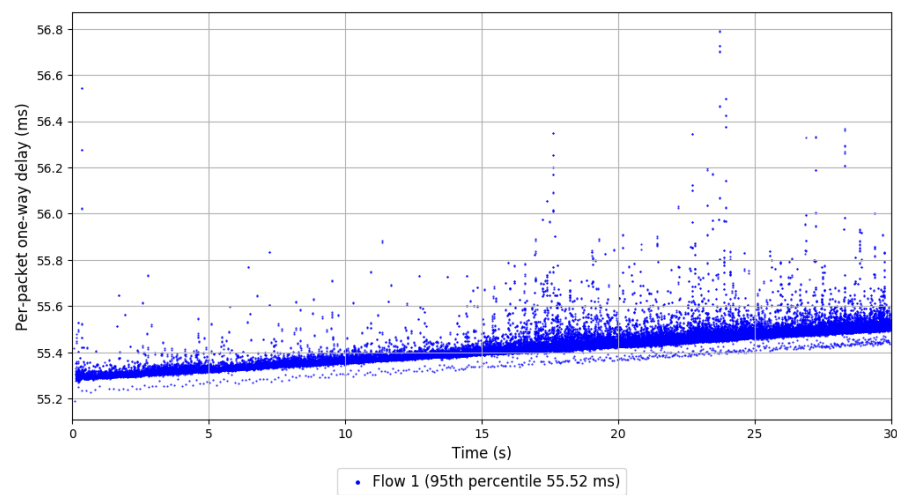
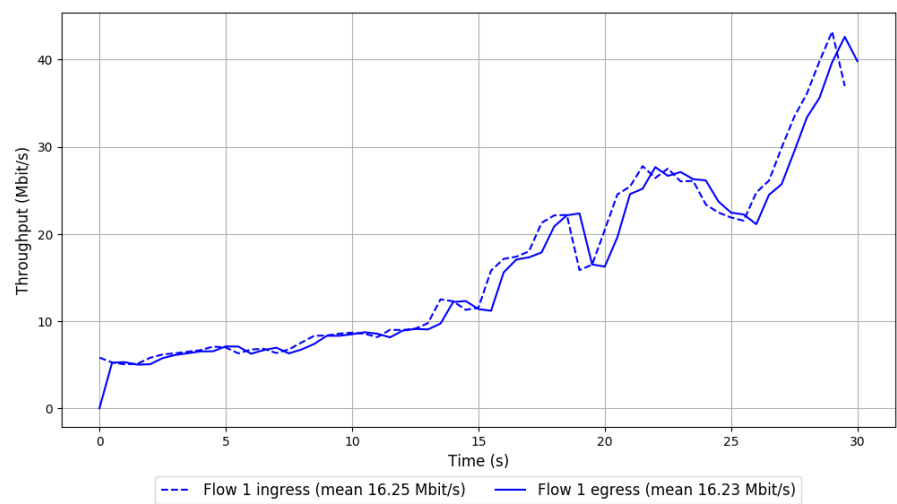
-- Flow 1:

Average throughput: 16.23 Mbit/s

95th percentile per-packet one-way delay: 55.519 ms

Loss rate: 0.22%

Run 2: Report of PCC-Expr — Data Link

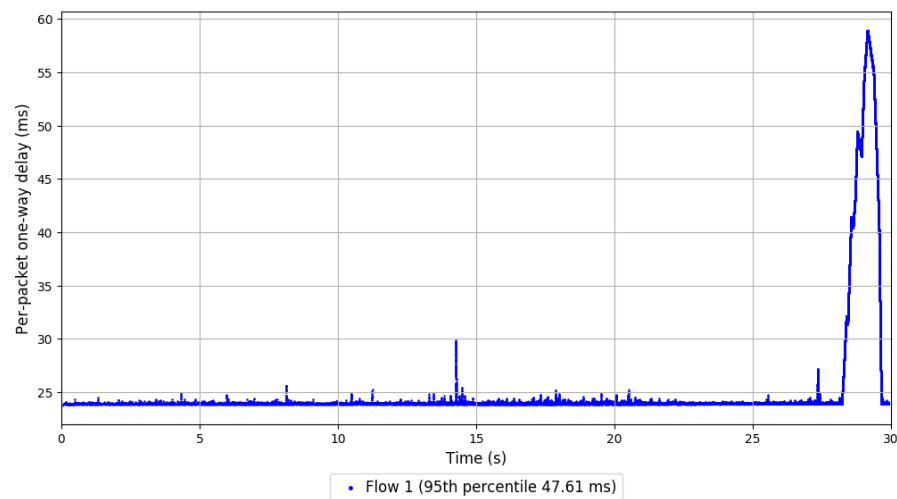
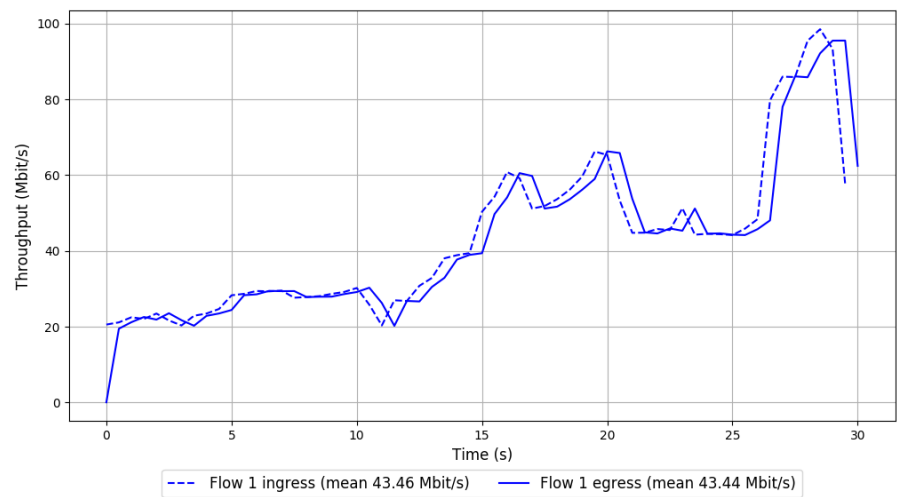


Run 3: Statistics of PCC-Expr

Start at: 2018-11-30 11:54:57
End at: 2018-11-30 11:55:27
Local clock offset: 1.952 ms
Remote clock offset: 40.401 ms

Below is generated by plot.py at 2018-11-30 12:53:45
Datalink statistics
-- Total of 1 flow:
Average throughput: 43.44 Mbit/s
95th percentile per-packet one-way delay: 47.613 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 43.44 Mbit/s
95th percentile per-packet one-way delay: 47.613 ms
Loss rate: 0.14%

Run 3: Report of PCC-Expr — Data Link

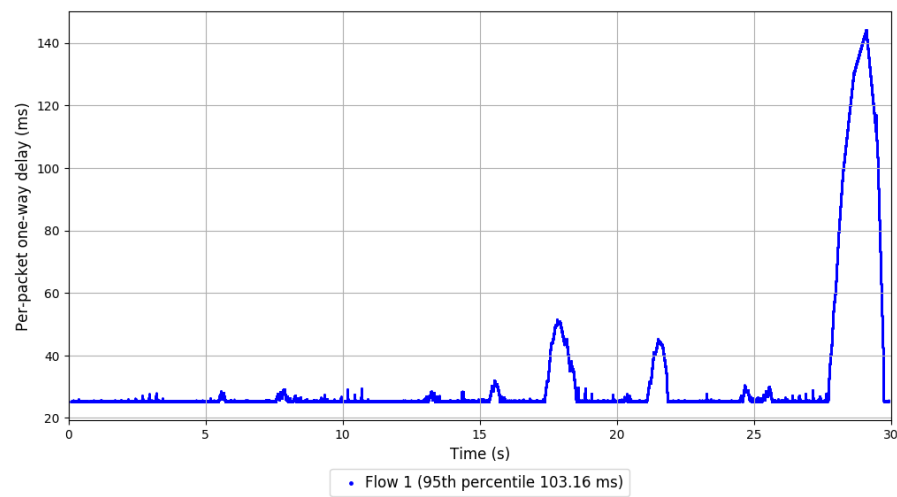
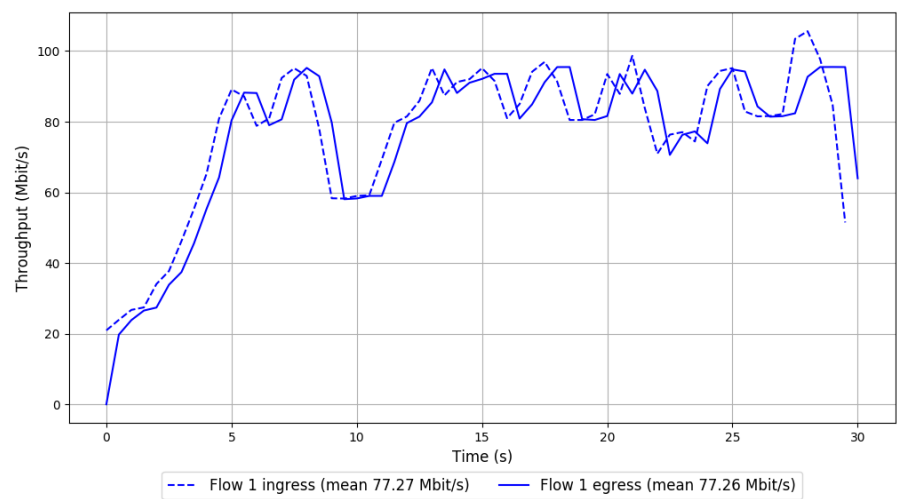


Run 4: Statistics of PCC-Expr

Start at: 2018-11-30 12:17:26
End at: 2018-11-30 12:17:56
Local clock offset: 4.444 ms
Remote clock offset: 42.836 ms

Below is generated by plot.py at 2018-11-30 12:54:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 77.26 Mbit/s
95th percentile per-packet one-way delay: 103.162 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 77.26 Mbit/s
95th percentile per-packet one-way delay: 103.162 ms
Loss rate: 0.09%

Run 4: Report of PCC-Expr — Data Link

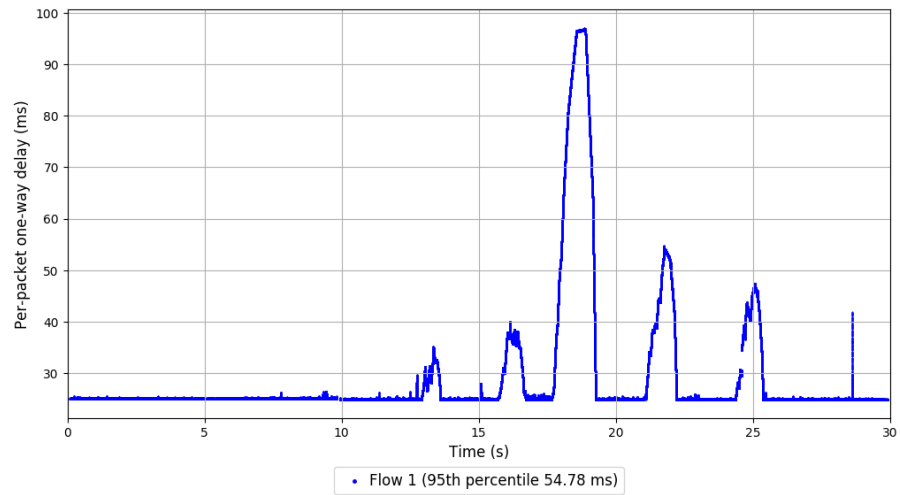
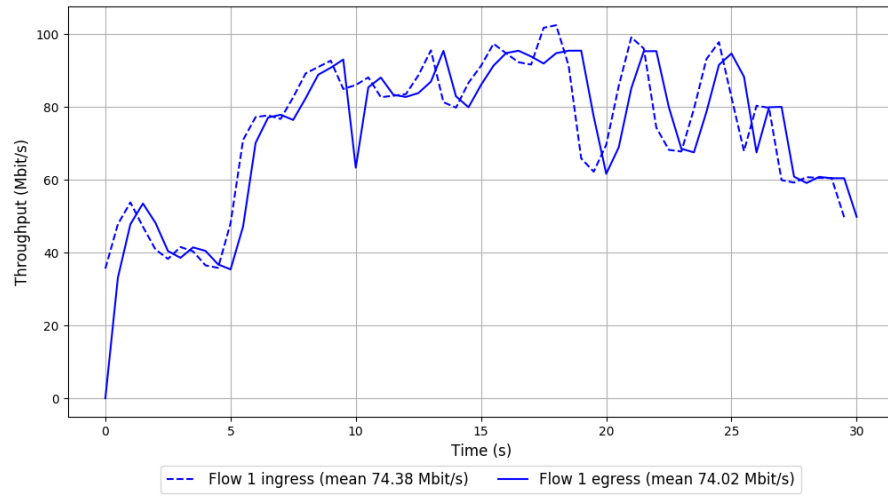


Run 5: Statistics of PCC-Expr

Start at: 2018-11-30 12:39:38
End at: 2018-11-30 12:40:08
Local clock offset: 3.974 ms
Remote clock offset: 40.105 ms

Below is generated by plot.py at 2018-11-30 12:54:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 74.02 Mbit/s
95th percentile per-packet one-way delay: 54.778 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 74.02 Mbit/s
95th percentile per-packet one-way delay: 54.778 ms
Loss rate: 0.57%

Run 5: Report of PCC-Expr — Data Link

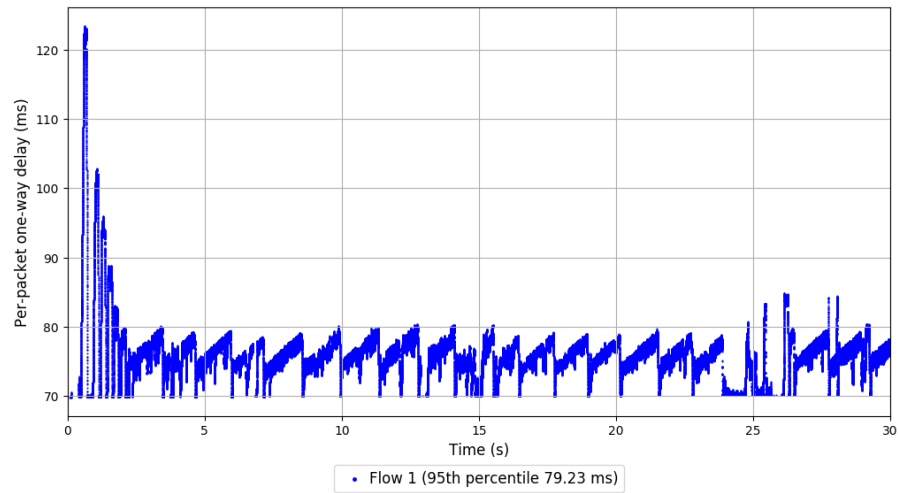
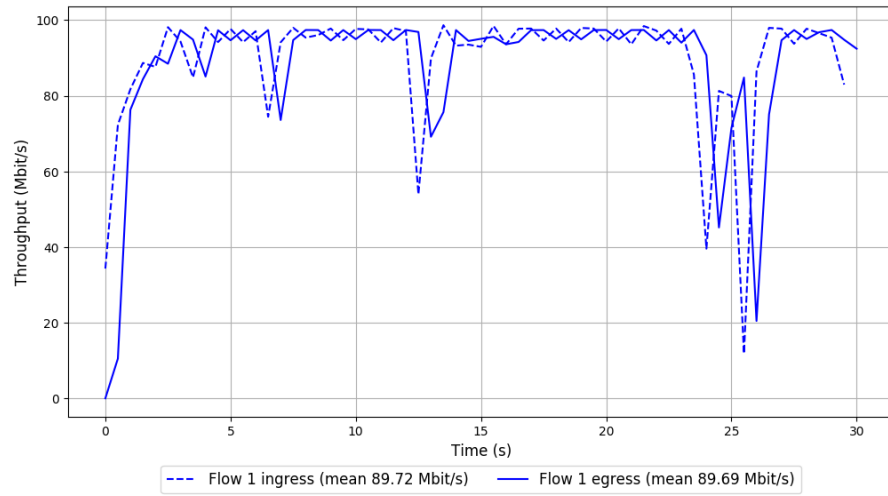


Run 1: Statistics of QUIC Cubic

Start at: 2018-11-30 11:11:51
End at: 2018-11-30 11:12:21
Local clock offset: -5.151 ms
Remote clock offset: -30.022 ms

Below is generated by plot.py at 2018-11-30 12:54:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 89.69 Mbit/s
95th percentile per-packet one-way delay: 79.232 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 89.69 Mbit/s
95th percentile per-packet one-way delay: 79.232 ms
Loss rate: 0.11%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

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

End at: 2018-11-30 11:34:42

Local clock offset: 4.16 ms

Remote clock offset: 17.909 ms

Below is generated by plot.py at 2018-11-30 12:54:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 90.35 Mbit/s

95th percentile per-packet one-way delay: 50.756 ms

Loss rate: 0.12%

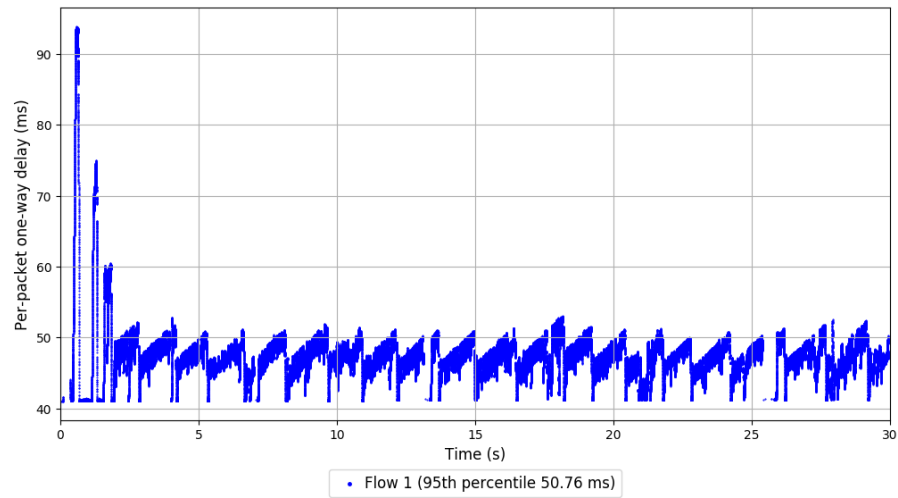
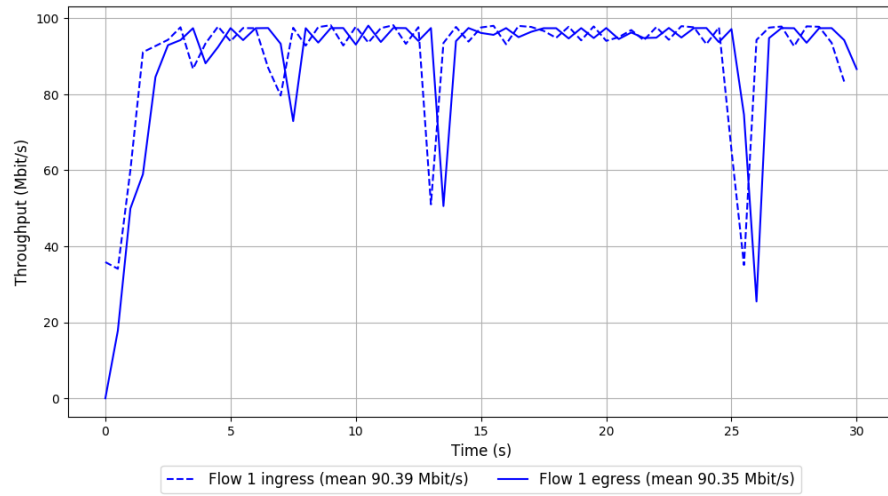
-- Flow 1:

Average throughput: 90.35 Mbit/s

95th percentile per-packet one-way delay: 50.756 ms

Loss rate: 0.12%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-11-30 11:56:06

End at: 2018-11-30 11:56:36

Local clock offset: 2.434 ms

Remote clock offset: 18.63 ms

Below is generated by plot.py at 2018-11-30 12:54:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 90.75 Mbit/s

95th percentile per-packet one-way delay: 55.319 ms

Loss rate: 0.14%

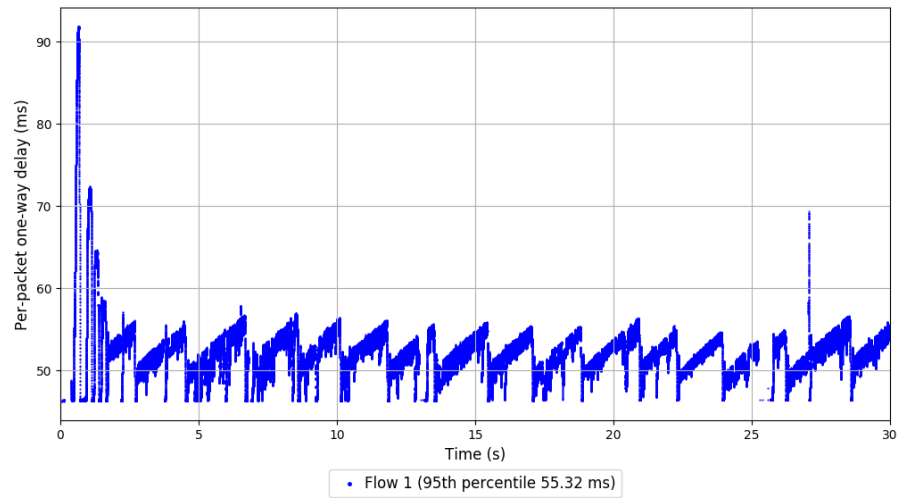
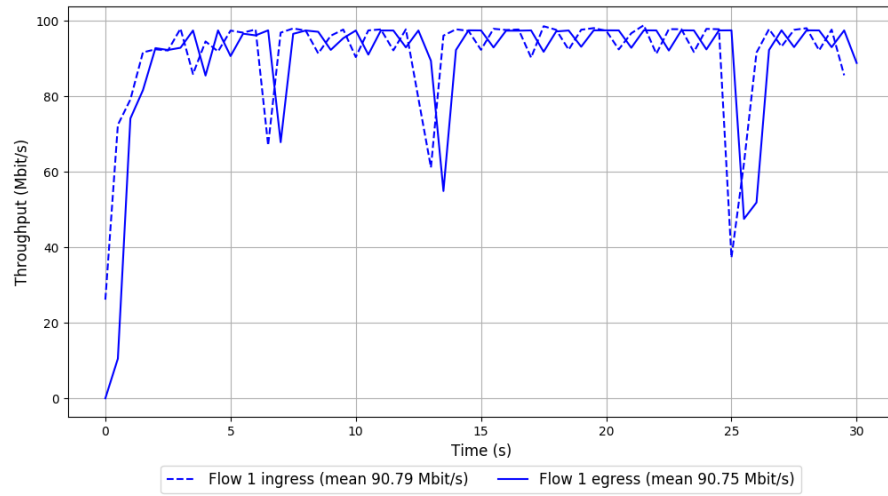
-- Flow 1:

Average throughput: 90.75 Mbit/s

95th percentile per-packet one-way delay: 55.319 ms

Loss rate: 0.14%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-11-30 12:18:39

End at: 2018-11-30 12:19:09

Local clock offset: 4.053 ms

Remote clock offset: 43.816 ms

Below is generated by plot.py at 2018-11-30 12:54:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 90.87 Mbit/s

95th percentile per-packet one-way delay: 33.442 ms

Loss rate: 0.12%

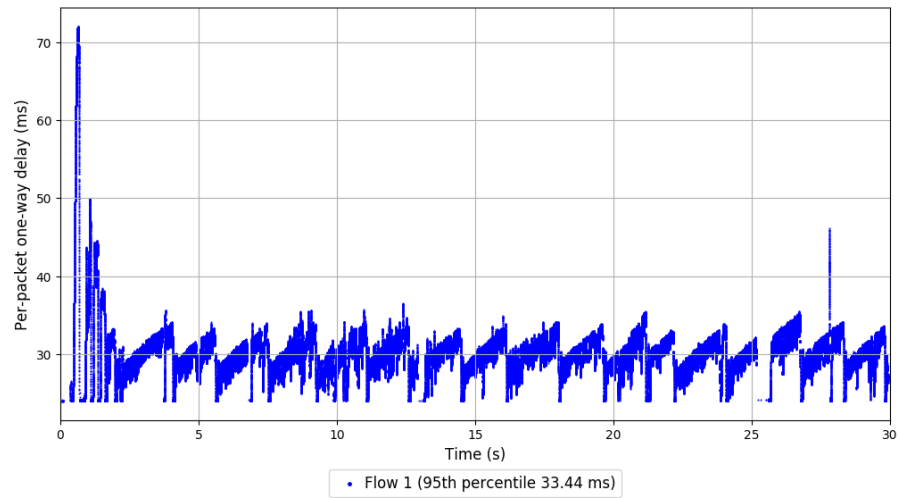
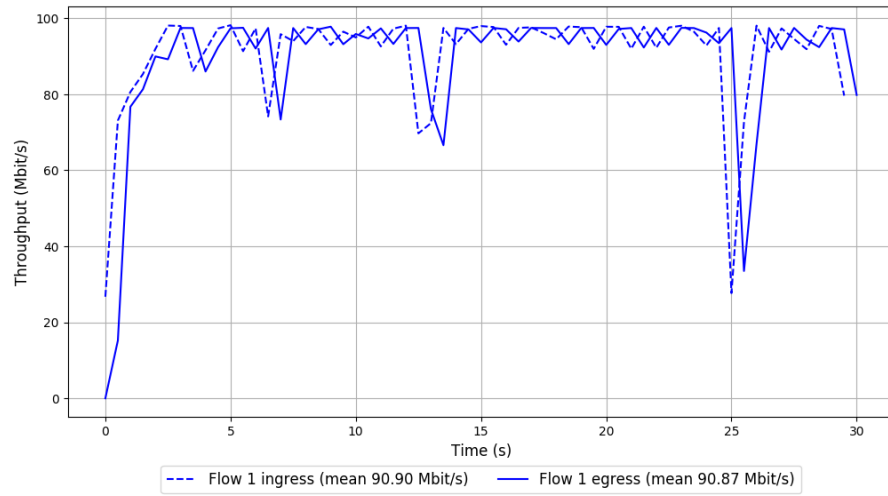
-- Flow 1:

Average throughput: 90.87 Mbit/s

95th percentile per-packet one-way delay: 33.442 ms

Loss rate: 0.12%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-11-30 12:40:53

End at: 2018-11-30 12:41:23

Local clock offset: 1.359 ms

Remote clock offset: 39.913 ms

Below is generated by plot.py at 2018-11-30 12:54:51

Datalink statistics

-- Total of 1 flow:

Average throughput: 89.67 Mbit/s

95th percentile per-packet one-way delay: 31.996 ms

Loss rate: 0.12%

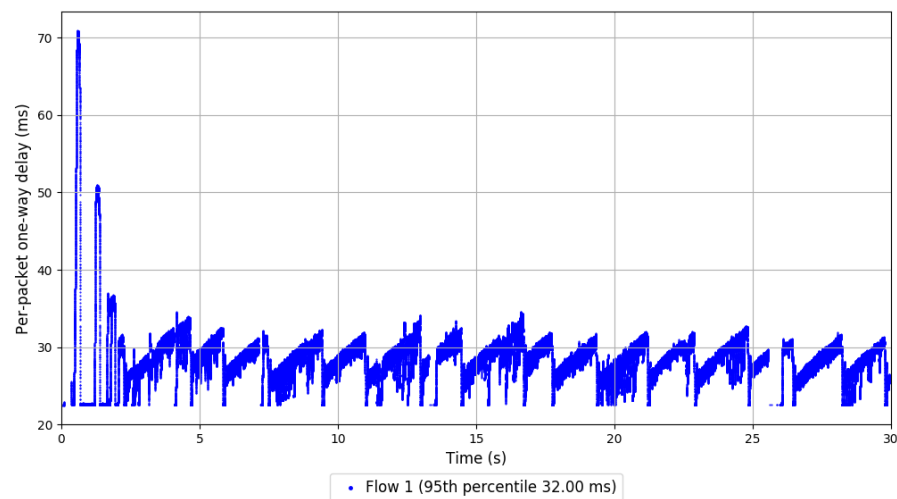
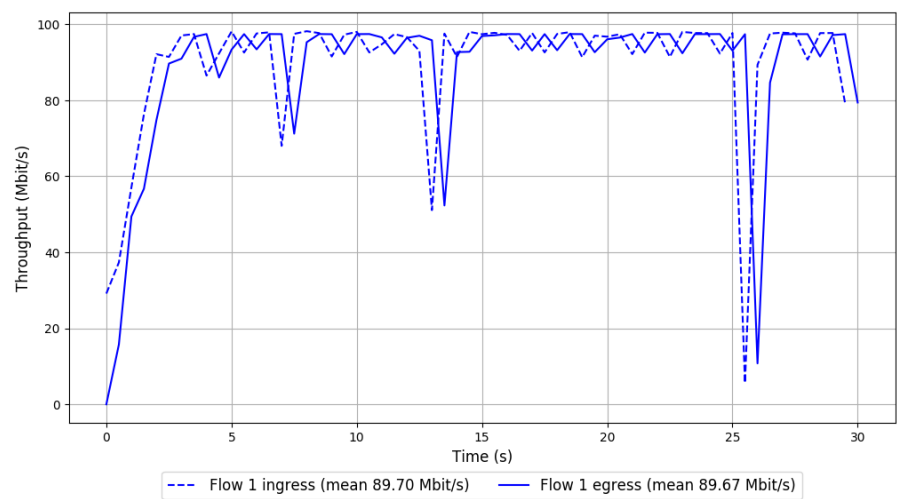
-- Flow 1:

Average throughput: 89.67 Mbit/s

95th percentile per-packet one-way delay: 31.996 ms

Loss rate: 0.12%

Run 5: Report of QUIC Cubic — Data Link

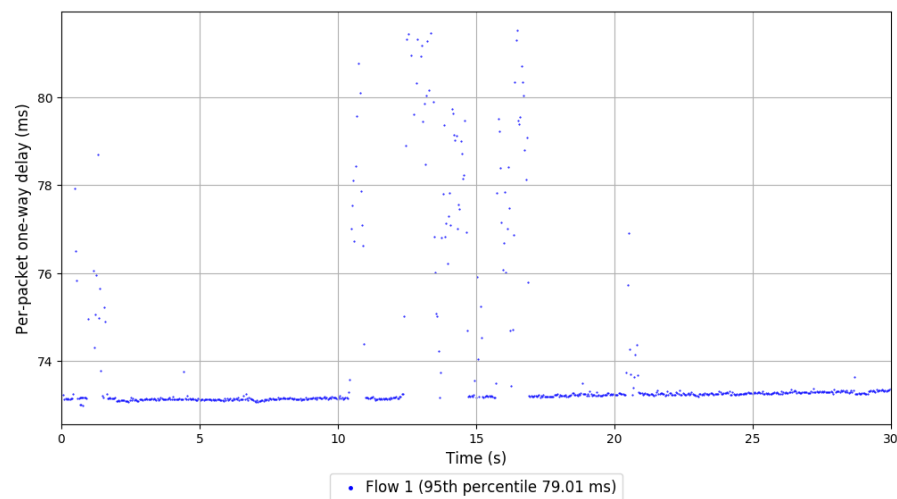
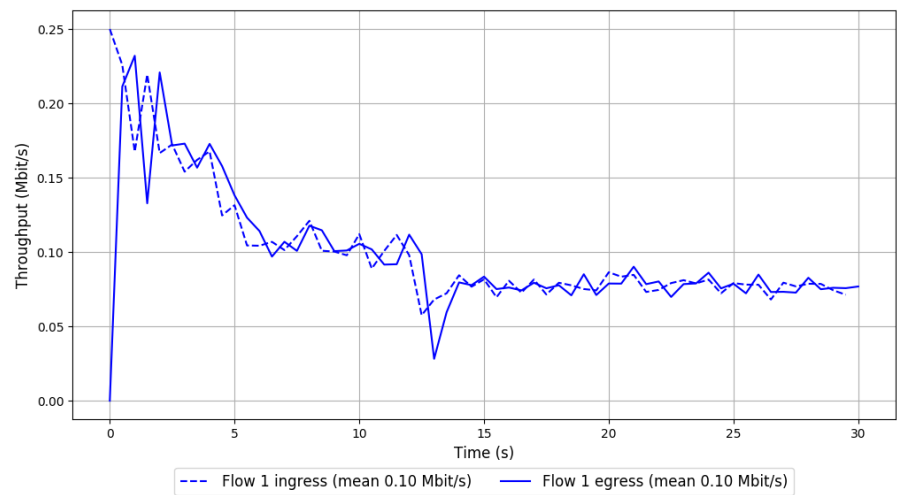


Run 1: Statistics of SCReAM

Start at: 2018-11-30 11:13:01
End at: 2018-11-30 11:13:32
Local clock offset: 0.901 ms
Remote clock offset: -26.47 ms

Below is generated by plot.py at 2018-11-30 12:54:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 79.009 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 79.009 ms
Loss rate: 1.42%

Run 1: Report of SReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2018-11-30 11:35:24

End at: 2018-11-30 11:35:54

Local clock offset: 2.177 ms

Remote clock offset: 3.194 ms

Below is generated by plot.py at 2018-11-30 12:54:51

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 54.617 ms

Loss rate: 0.13%

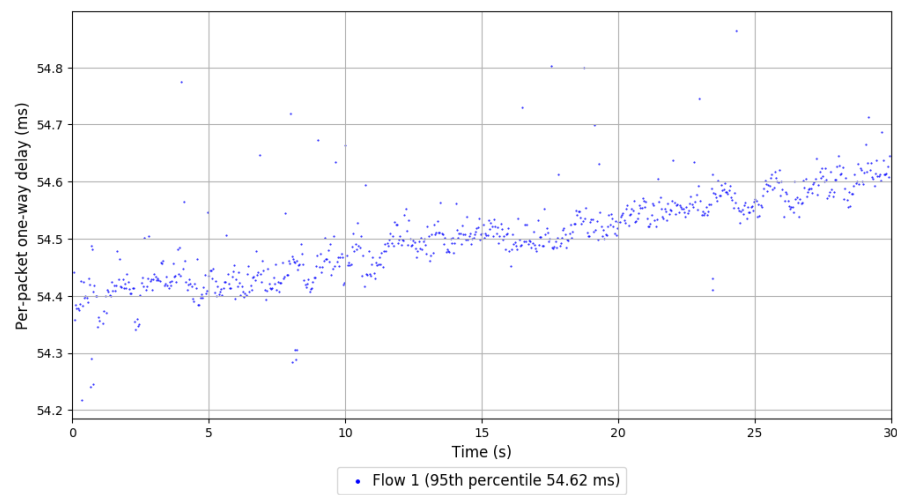
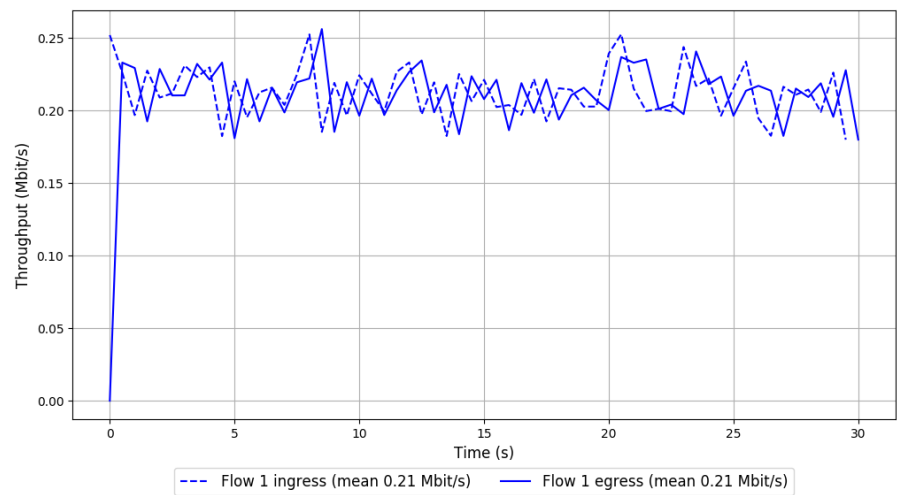
-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 54.617 ms

Loss rate: 0.13%

Run 2: Report of SReAM — Data Link

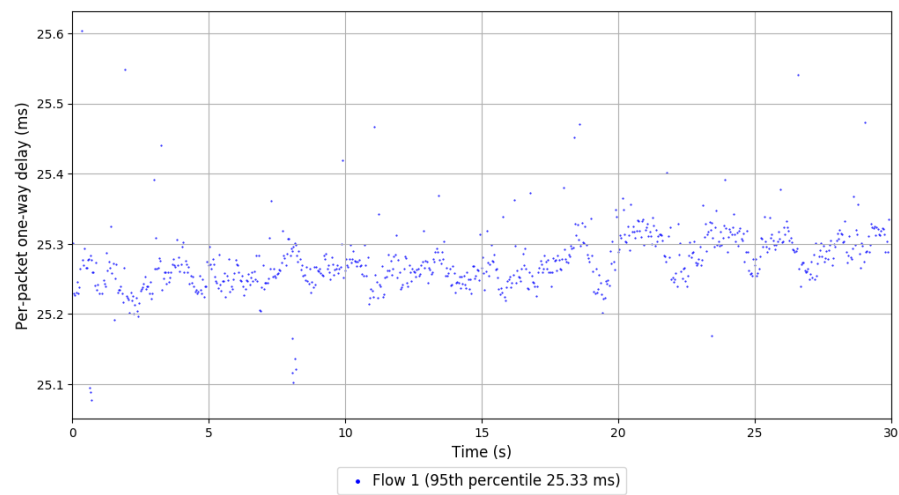
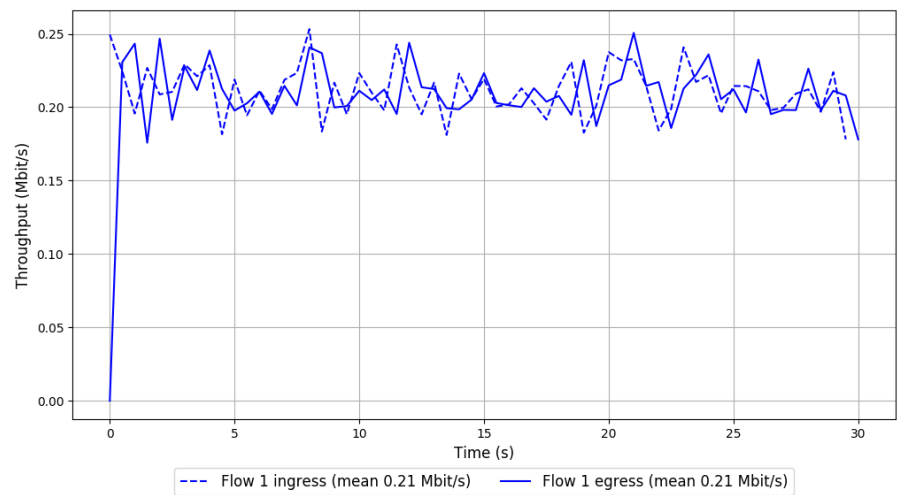


Run 3: Statistics of SCReAM

Start at: 2018-11-30 11:57:16
End at: 2018-11-30 11:57:46
Local clock offset: 3.802 ms
Remote clock offset: 41.257 ms

Below is generated by plot.py at 2018-11-30 12:54:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 25.333 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 25.333 ms
Loss rate: 0.13%

Run 3: Report of SReAM — Data Link

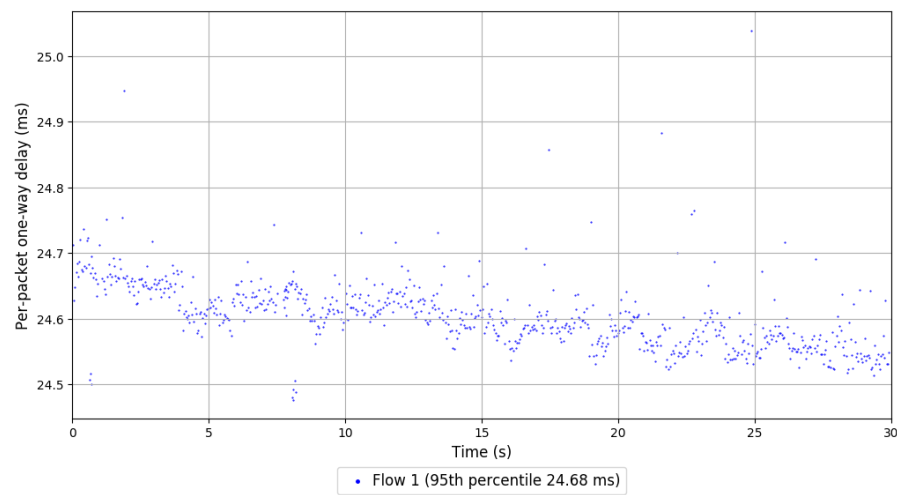
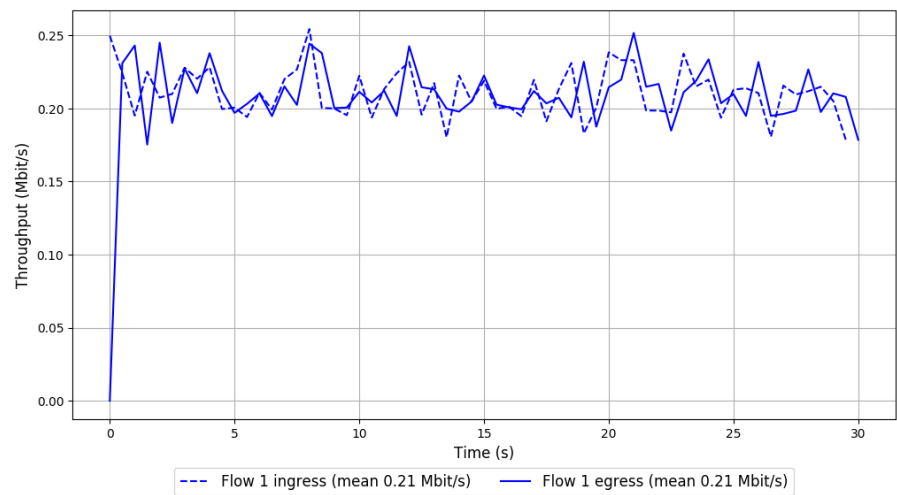


Run 4: Statistics of SCReAM

Start at: 2018-11-30 12:19:51
End at: 2018-11-30 12:20:21
Local clock offset: 3.274 ms
Remote clock offset: 42.525 ms

Below is generated by plot.py at 2018-11-30 12:54:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 24.681 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 24.681 ms
Loss rate: 0.13%

Run 4: Report of SReAM — Data Link

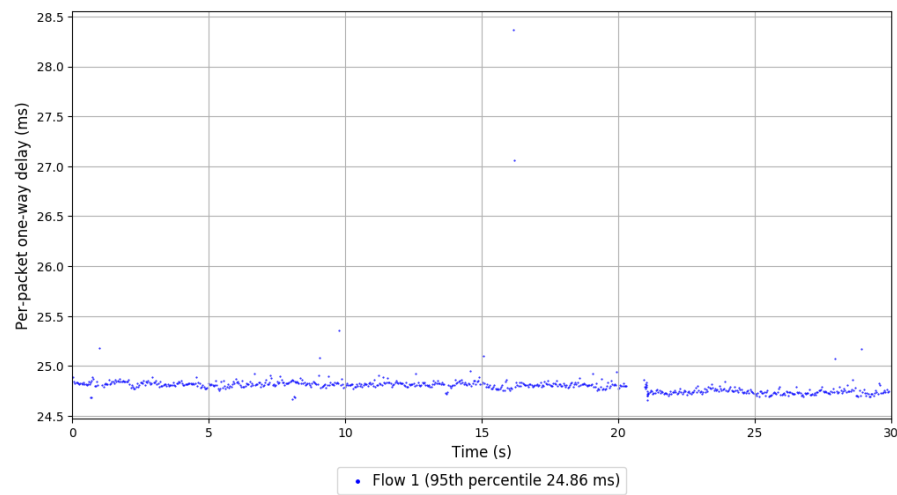
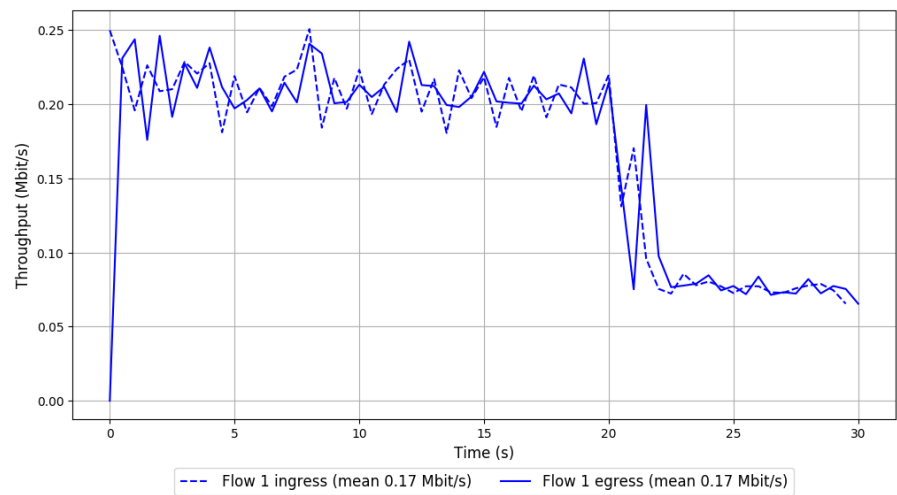


Run 5: Statistics of SCReAM

Start at: 2018-11-30 12:42:03
End at: 2018-11-30 12:42:33
Local clock offset: 3.617 ms
Remote clock offset: 39.802 ms

Below is generated by plot.py at 2018-11-30 12:54:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 24.861 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 24.861 ms
Loss rate: 0.98%

Run 5: Report of SReAM — Data Link

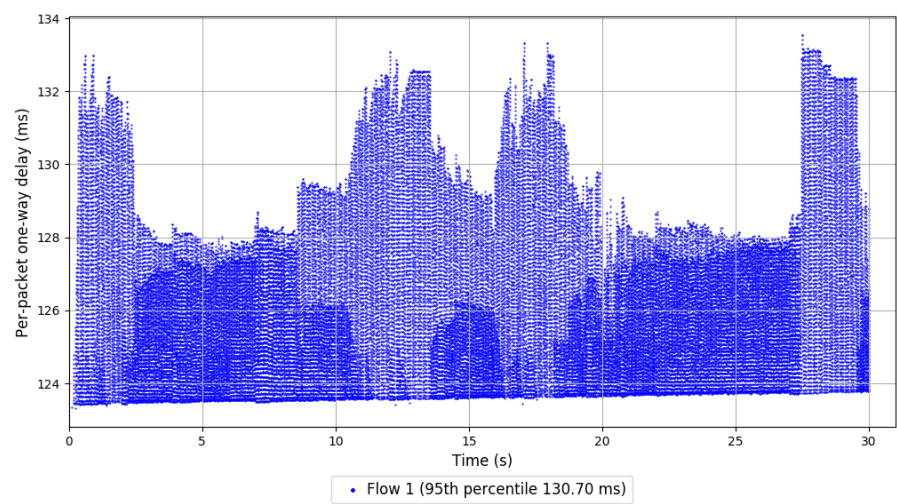
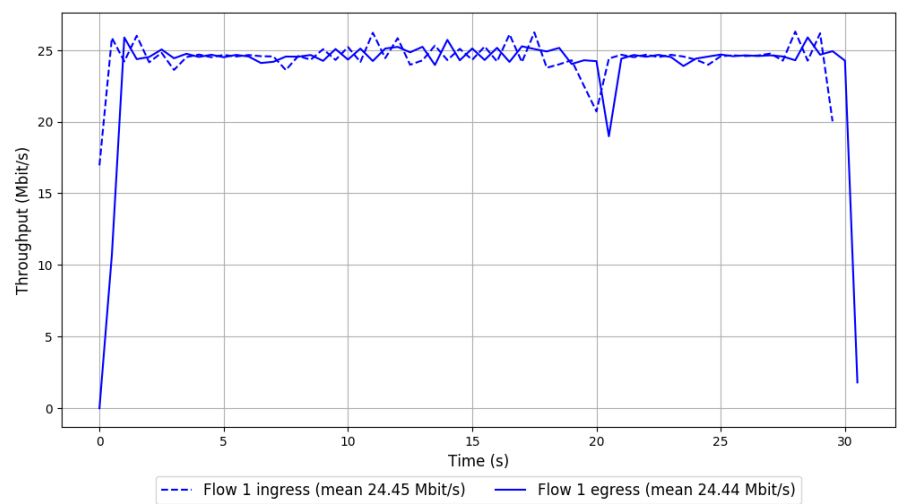


Run 1: Statistics of Sprout

Start at: 2018-11-30 10:58:12
End at: 2018-11-30 10:58:42
Local clock offset: 1.427 ms
Remote clock offset: -85.415 ms

Below is generated by plot.py at 2018-11-30 12:54:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.44 Mbit/s
95th percentile per-packet one-way delay: 130.703 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 24.44 Mbit/s
95th percentile per-packet one-way delay: 130.703 ms
Loss rate: 0.09%

Run 1: Report of Sprout — Data Link

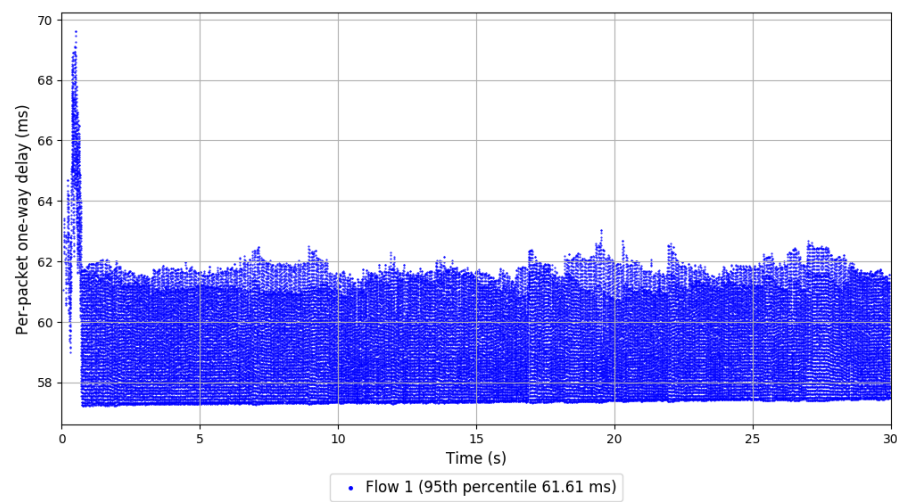
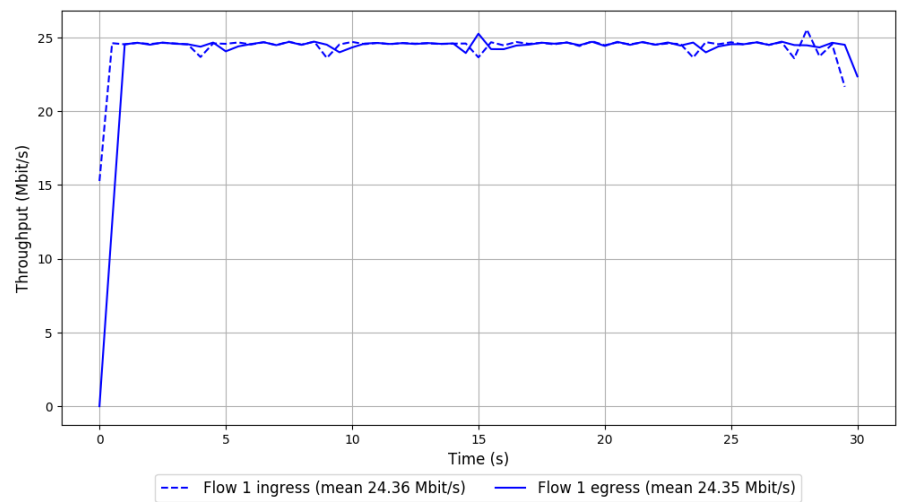


Run 2: Statistics of Sprout

Start at: 2018-11-30 11:20:07
End at: 2018-11-30 11:20:37
Local clock offset: -1.0 ms
Remote clock offset: -9.524 ms

Below is generated by plot.py at 2018-11-30 12:54:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.35 Mbit/s
95th percentile per-packet one-way delay: 61.606 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 24.35 Mbit/s
95th percentile per-packet one-way delay: 61.606 ms
Loss rate: 0.12%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-11-30 11:42:22

End at: 2018-11-30 11:42:52

Local clock offset: 2.808 ms

Remote clock offset: 6.131 ms

Below is generated by plot.py at 2018-11-30 12:54:51

Datalink statistics

-- Total of 1 flow:

Average throughput: 24.33 Mbit/s

95th percentile per-packet one-way delay: 63.904 ms

Loss rate: 0.09%

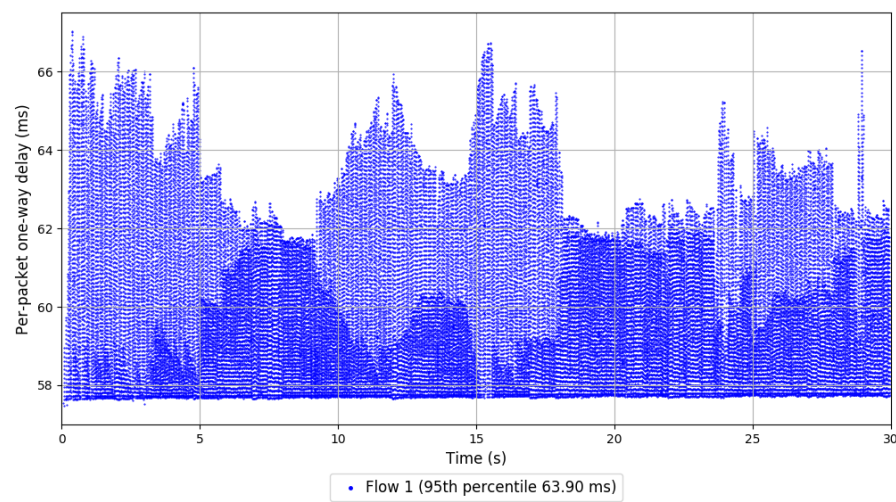
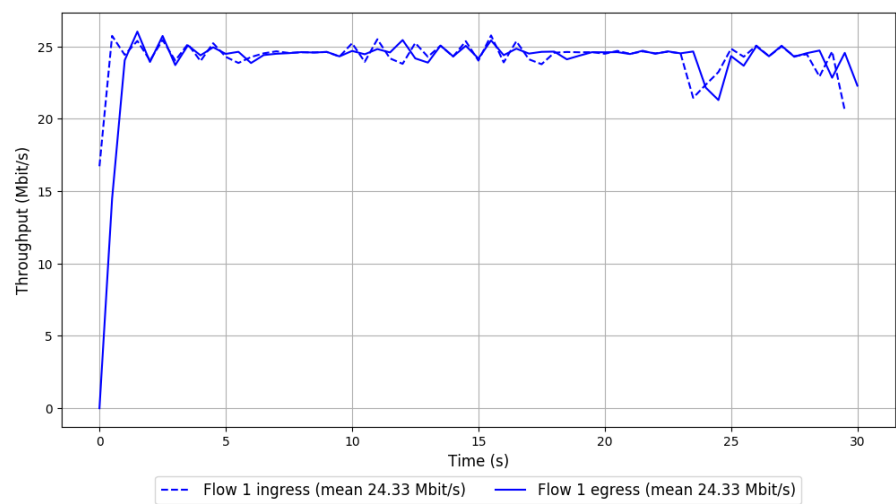
-- Flow 1:

Average throughput: 24.33 Mbit/s

95th percentile per-packet one-way delay: 63.904 ms

Loss rate: 0.09%

Run 3: Report of Sprout — Data Link

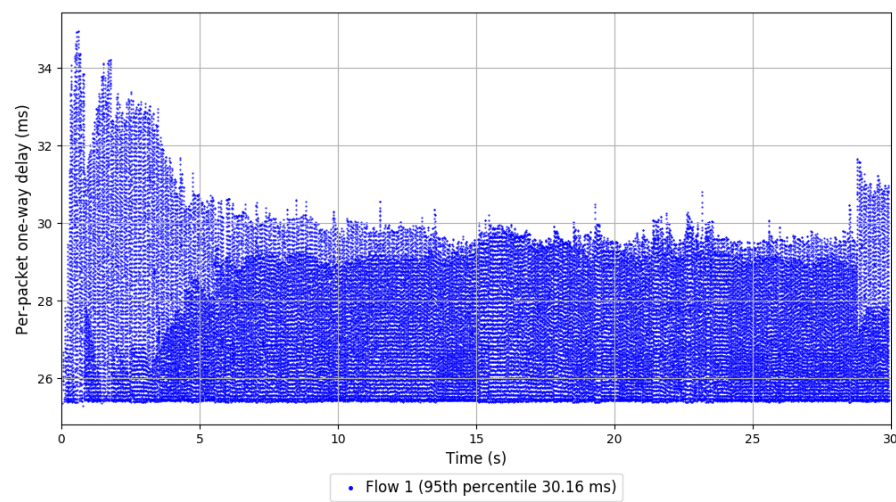
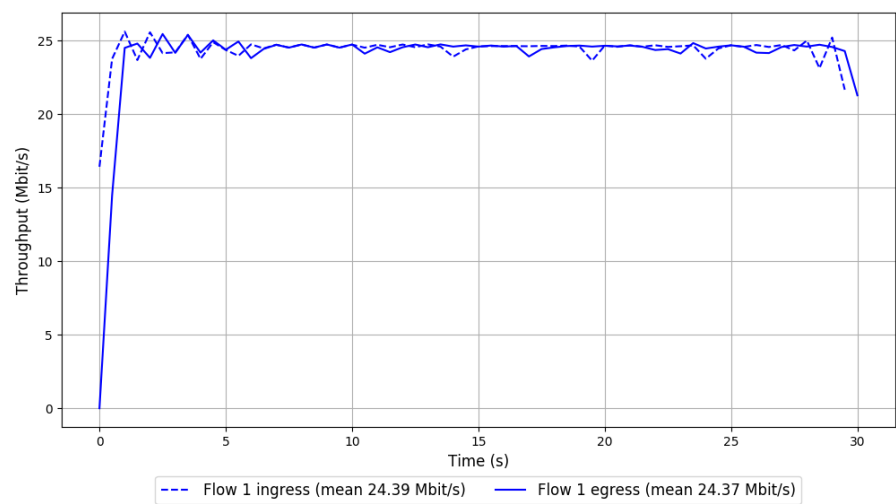


Run 4: Statistics of Sprout

Start at: 2018-11-30 12:04:22
End at: 2018-11-30 12:04:52
Local clock offset: 4.254 ms
Remote clock offset: 42.423 ms

Below is generated by plot.py at 2018-11-30 12:54:53
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.37 Mbit/s
95th percentile per-packet one-way delay: 30.156 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 24.37 Mbit/s
95th percentile per-packet one-way delay: 30.156 ms
Loss rate: 0.13%

Run 4: Report of Sprout — Data Link

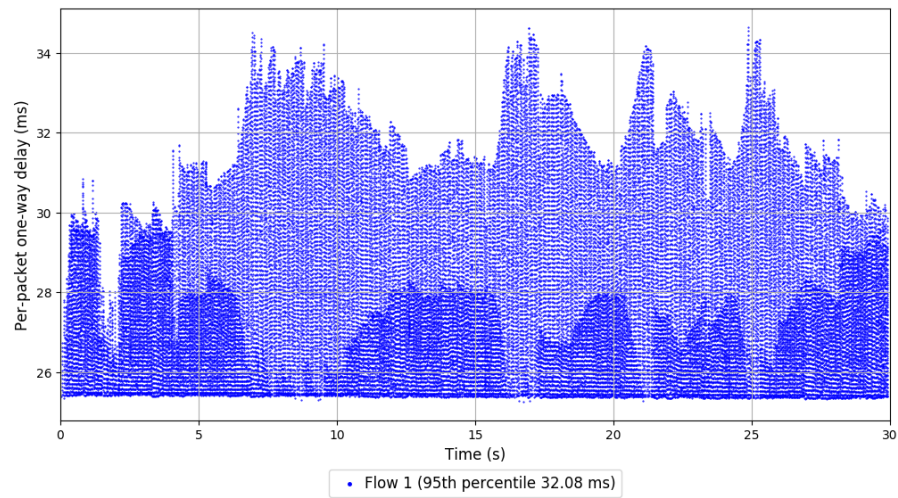
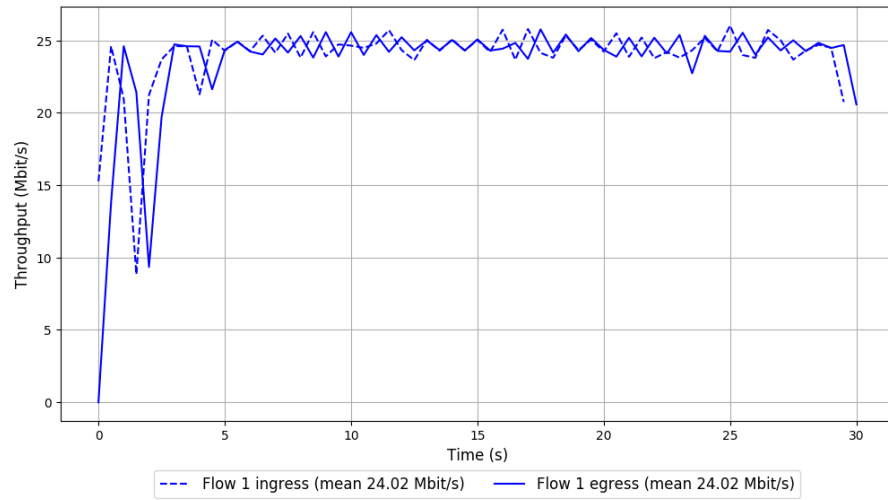


Run 5: Statistics of Sprout

Start at: 2018-11-30 12:26:54
End at: 2018-11-30 12:27:24
Local clock offset: 4.516 ms
Remote clock offset: 41.791 ms

Below is generated by plot.py at 2018-11-30 12:54:55
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.02 Mbit/s
95th percentile per-packet one-way delay: 32.076 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 24.02 Mbit/s
95th percentile per-packet one-way delay: 32.076 ms
Loss rate: 0.07%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

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

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

Local clock offset: 1.011 ms

Remote clock offset: 4.062 ms

Below is generated by plot.py at 2018-11-30 12:56:33

Datalink statistics

-- Total of 1 flow:

Average throughput: 77.55 Mbit/s

95th percentile per-packet one-way delay: 41.297 ms

Loss rate: 0.08%

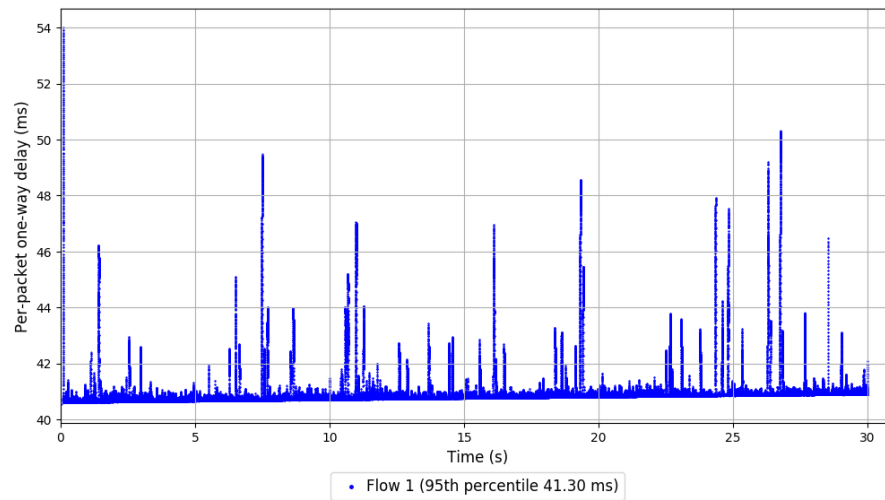
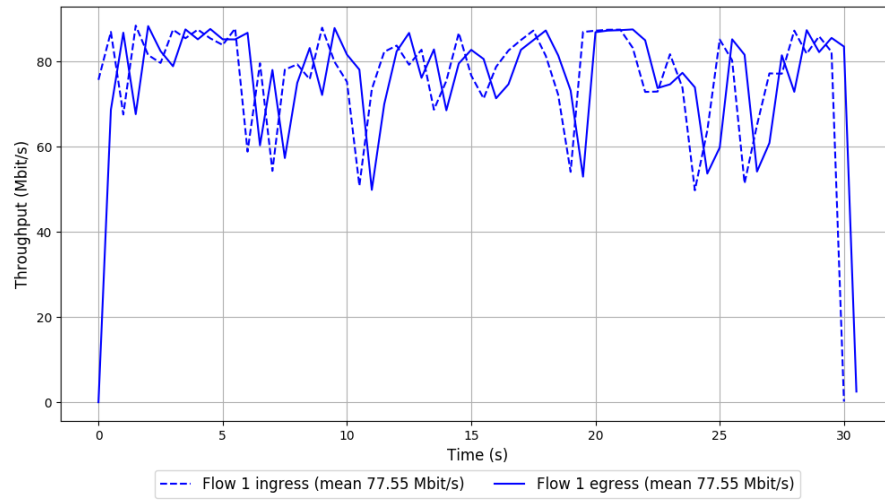
-- Flow 1:

Average throughput: 77.55 Mbit/s

95th percentile per-packet one-way delay: 41.297 ms

Loss rate: 0.08%

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

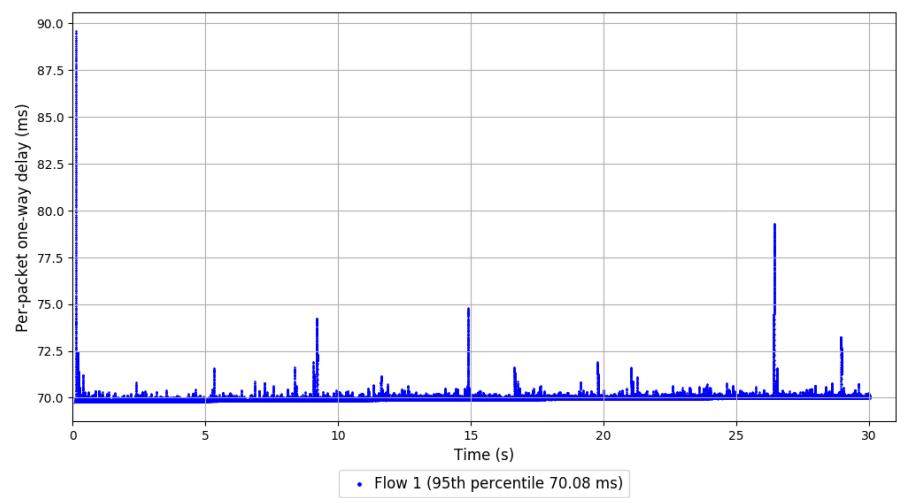
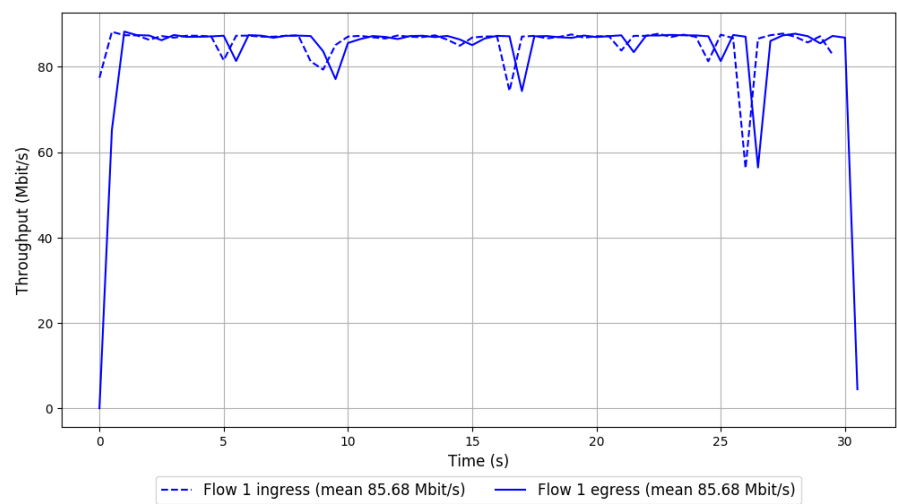


Run 2: Statistics of TaoVA-100x

Start at: 2018-11-30 11:31:51
End at: 2018-11-30 11:32:21
Local clock offset: -0.043 ms
Remote clock offset: -16.039 ms

Below is generated by plot.py at 2018-11-30 12:56:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 85.68 Mbit/s
95th percentile per-packet one-way delay: 70.076 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 85.68 Mbit/s
95th percentile per-packet one-way delay: 70.076 ms
Loss rate: 0.07%

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-11-30 11:53:38

End at: 2018-11-30 11:54:08

Local clock offset: 2.79 ms

Remote clock offset: 37.532 ms

Below is generated by plot.py at 2018-11-30 12:56:47

Datalink statistics

-- Total of 1 flow:

Average throughput: 87.22 Mbit/s

95th percentile per-packet one-way delay: 28.081 ms

Loss rate: 0.09%

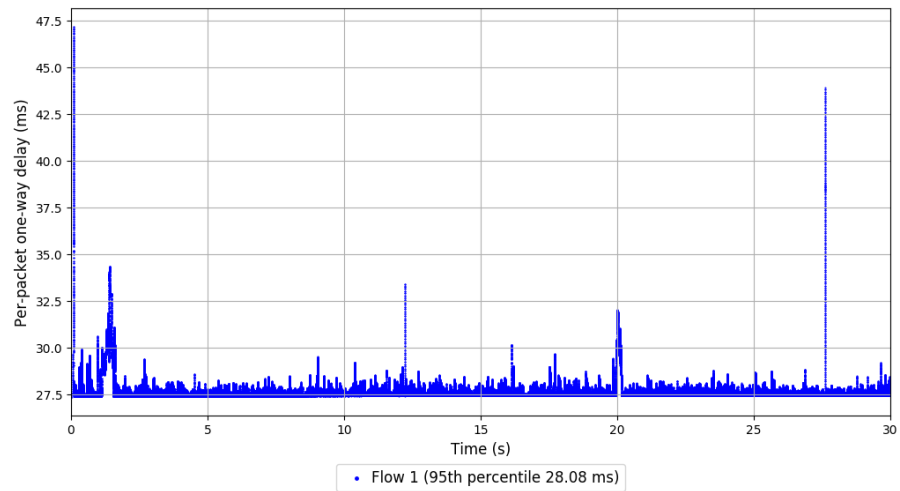
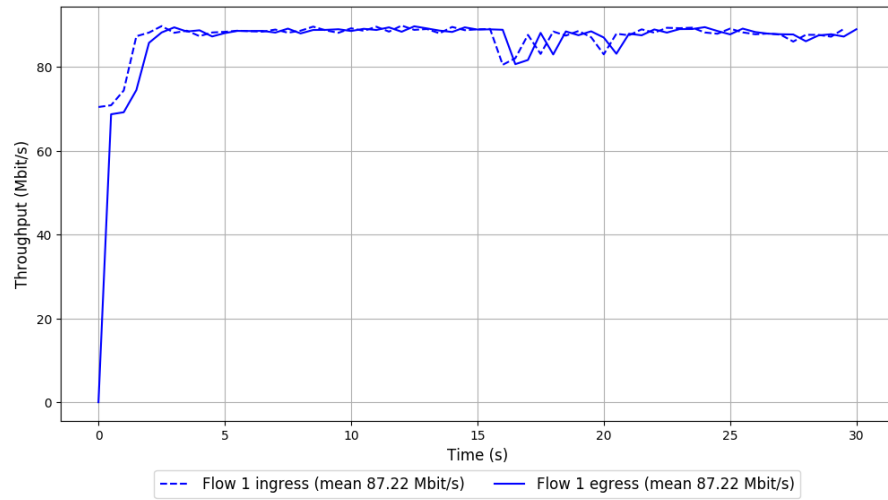
-- Flow 1:

Average throughput: 87.22 Mbit/s

95th percentile per-packet one-way delay: 28.081 ms

Loss rate: 0.09%

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

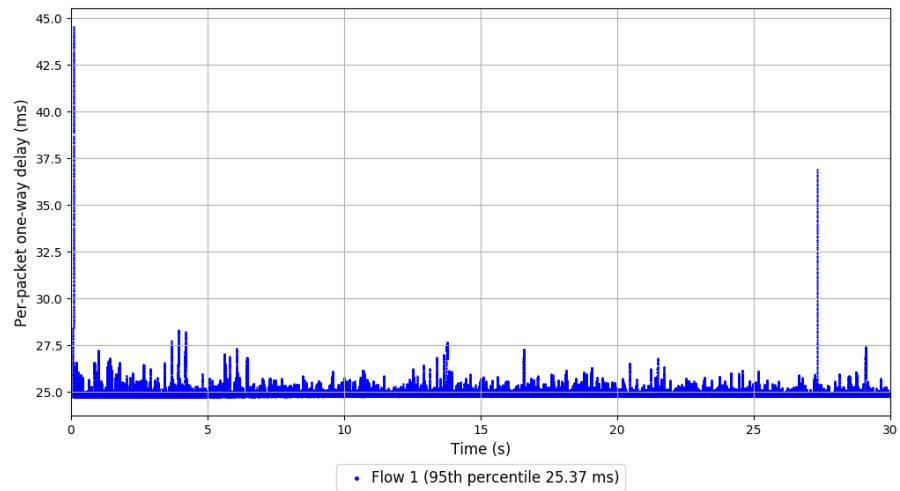
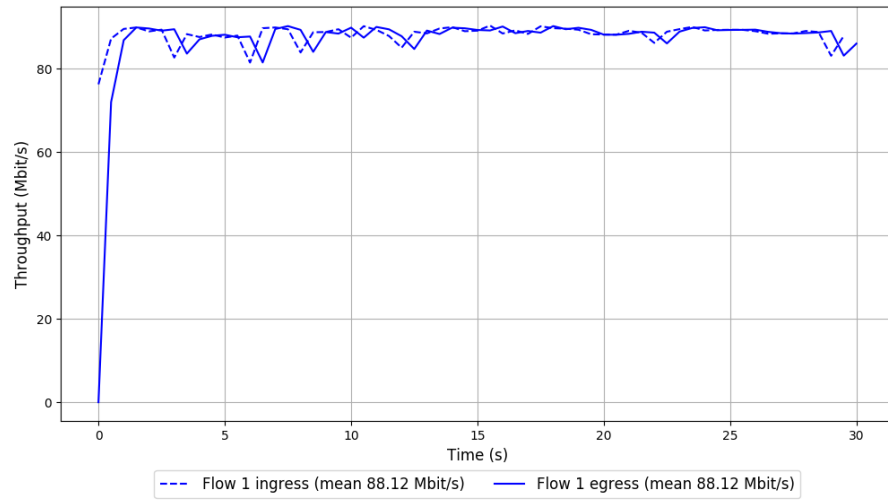


Run 4: Statistics of TaoVA-100x

Start at: 2018-11-30 12:16:06
End at: 2018-11-30 12:16:36
Local clock offset: 4.219 ms
Remote clock offset: 43.132 ms

Below is generated by plot.py at 2018-11-30 12:56:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 88.12 Mbit/s
95th percentile per-packet one-way delay: 25.373 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 88.12 Mbit/s
95th percentile per-packet one-way delay: 25.373 ms
Loss rate: 0.12%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-11-30 12:38:25

End at: 2018-11-30 12:38:55

Local clock offset: 3.344 ms

Remote clock offset: 40.484 ms

Below is generated by plot.py at 2018-11-30 12:56:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 84.62 Mbit/s

95th percentile per-packet one-way delay: 24.401 ms

Loss rate: 0.09%

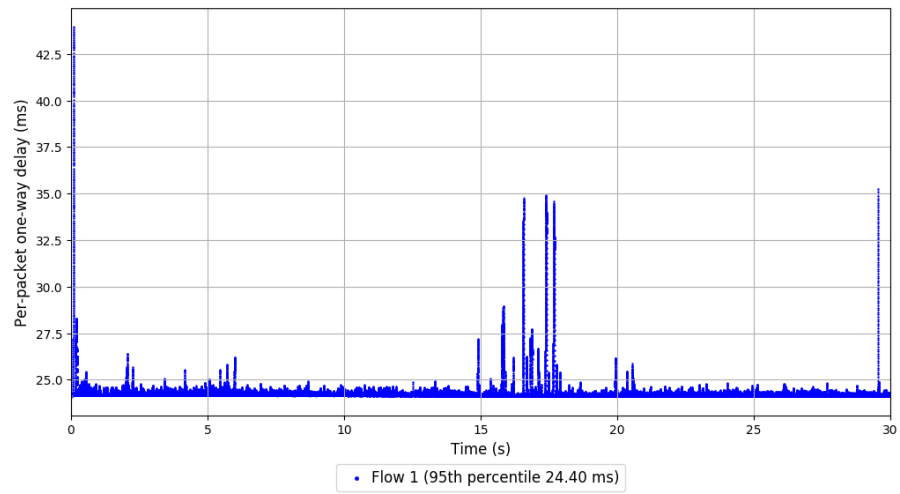
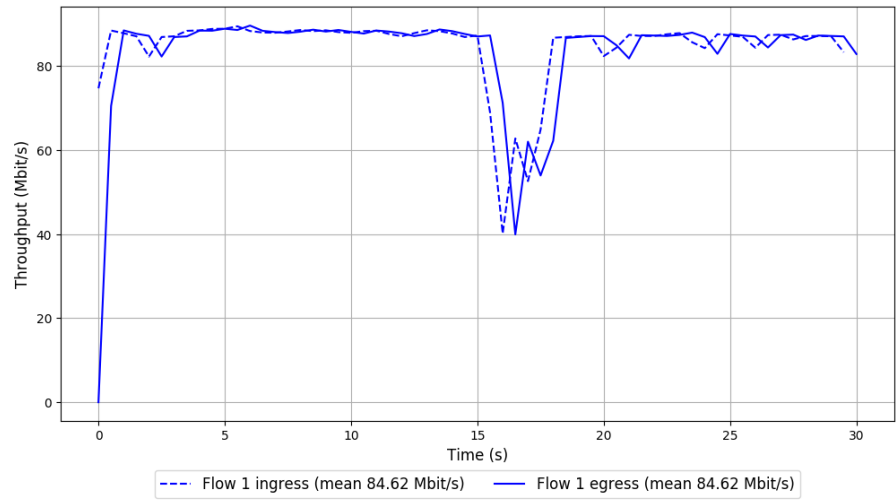
-- Flow 1:

Average throughput: 84.62 Mbit/s

95th percentile per-packet one-way delay: 24.401 ms

Loss rate: 0.09%

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

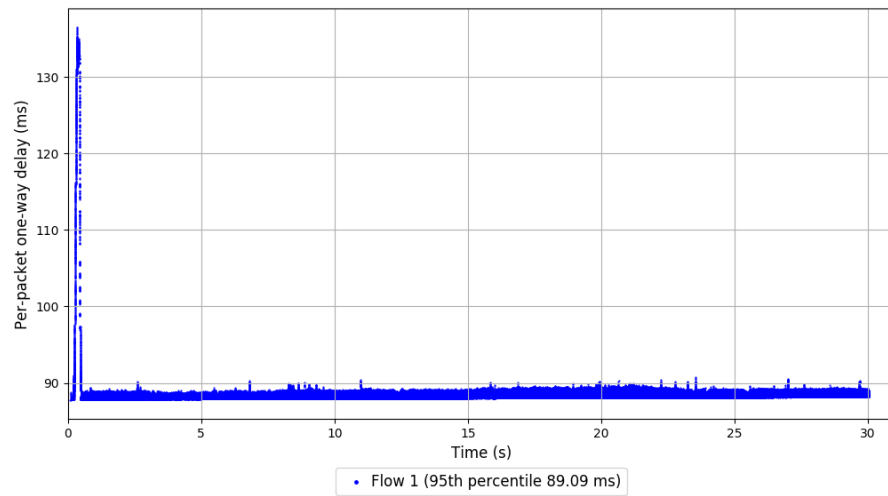
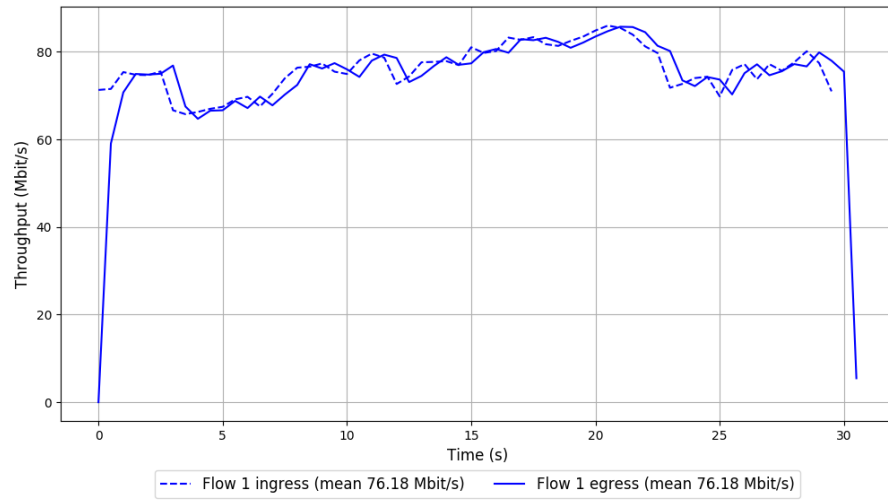


Run 1: Statistics of TCP Vegas

Start at: 2018-11-30 11:01:33
End at: 2018-11-30 11:02:03
Local clock offset: -0.471 ms
Remote clock offset: -49.611 ms

Below is generated by plot.py at 2018-11-30 12:56:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 76.18 Mbit/s
95th percentile per-packet one-way delay: 89.087 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 76.18 Mbit/s
95th percentile per-packet one-way delay: 89.087 ms
Loss rate: 0.08%

Run 1: Report of TCP Vegas — Data Link

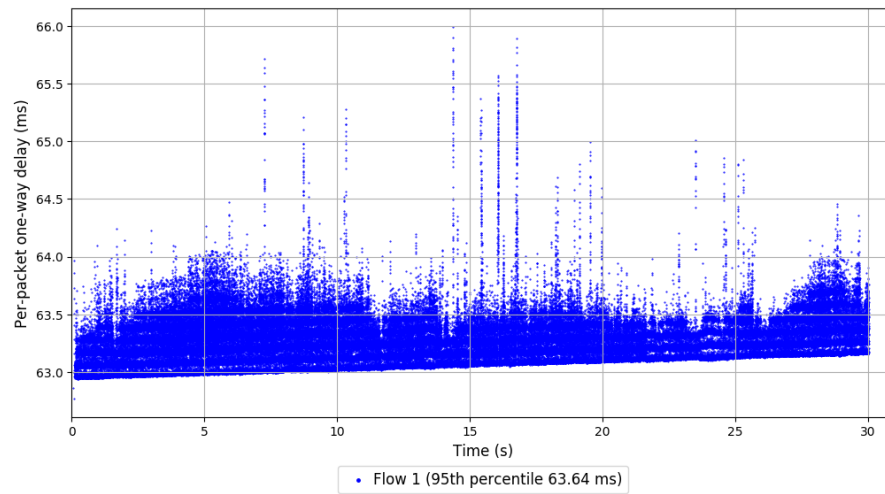
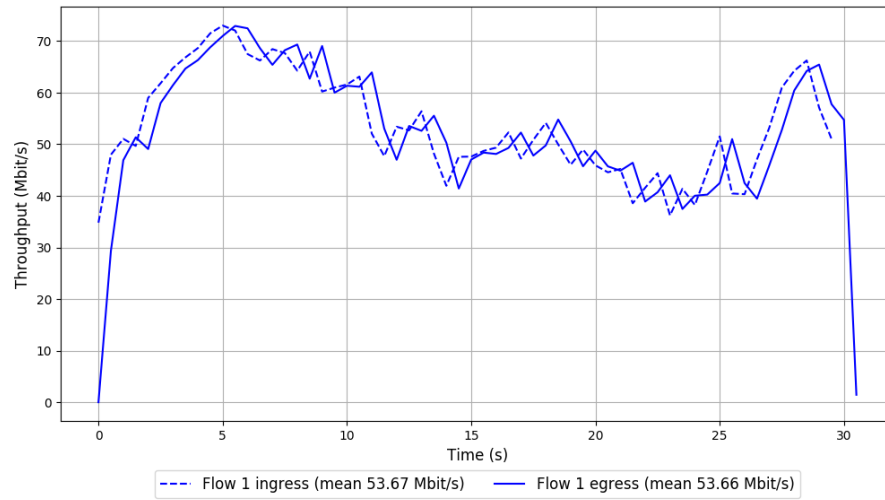


Run 2: Statistics of TCP Vegas

Start at: 2018-11-30 11:23:35
End at: 2018-11-30 11:24:05
Local clock offset: 1.217 ms
Remote clock offset: -11.597 ms

Below is generated by plot.py at 2018-11-30 12:56:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 53.66 Mbit/s
95th percentile per-packet one-way delay: 63.640 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 53.66 Mbit/s
95th percentile per-packet one-way delay: 63.640 ms
Loss rate: 0.08%

Run 2: Report of TCP Vegas — Data Link

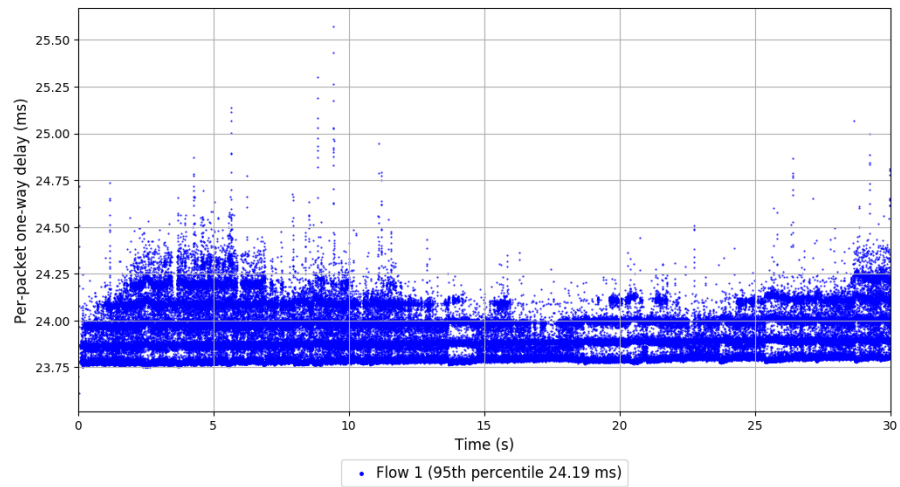
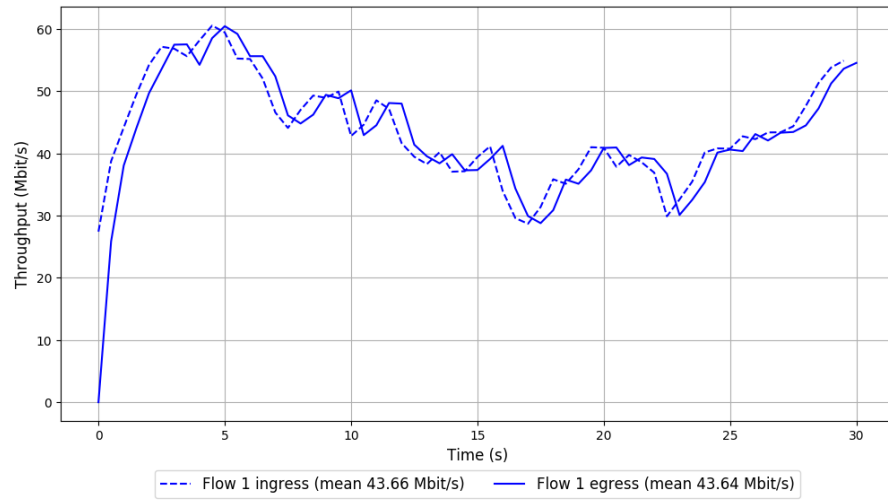


Run 3: Statistics of TCP Vegas

Start at: 2018-11-30 11:45:43
End at: 2018-11-30 11:46:13
Local clock offset: 1.146 ms
Remote clock offset: 38.744 ms

Below is generated by plot.py at 2018-11-30 12:56:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 43.64 Mbit/s
95th percentile per-packet one-way delay: 24.192 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 43.64 Mbit/s
95th percentile per-packet one-way delay: 24.192 ms
Loss rate: 0.12%

Run 3: Report of TCP Vegas — Data Link

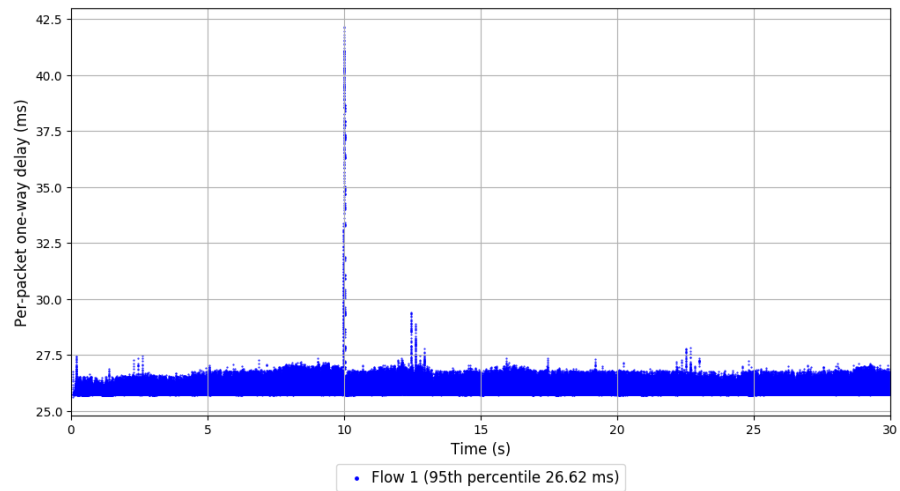
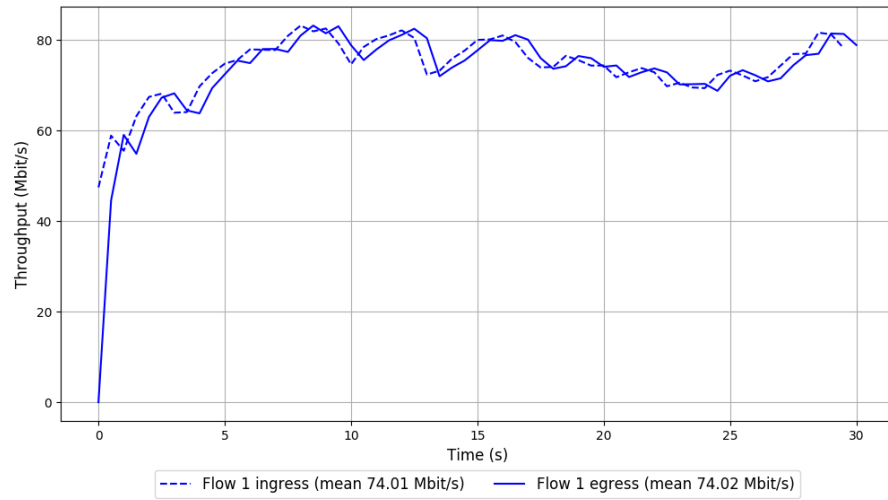


Run 4: Statistics of TCP Vegas

Start at: 2018-11-30 12:07:43
End at: 2018-11-30 12:08:13
Local clock offset: 4.305 ms
Remote clock offset: 42.117 ms

Below is generated by plot.py at 2018-11-30 12:56:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 74.02 Mbit/s
95th percentile per-packet one-way delay: 26.624 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 74.02 Mbit/s
95th percentile per-packet one-way delay: 26.624 ms
Loss rate: 0.08%

Run 4: Report of TCP Vegas — Data Link

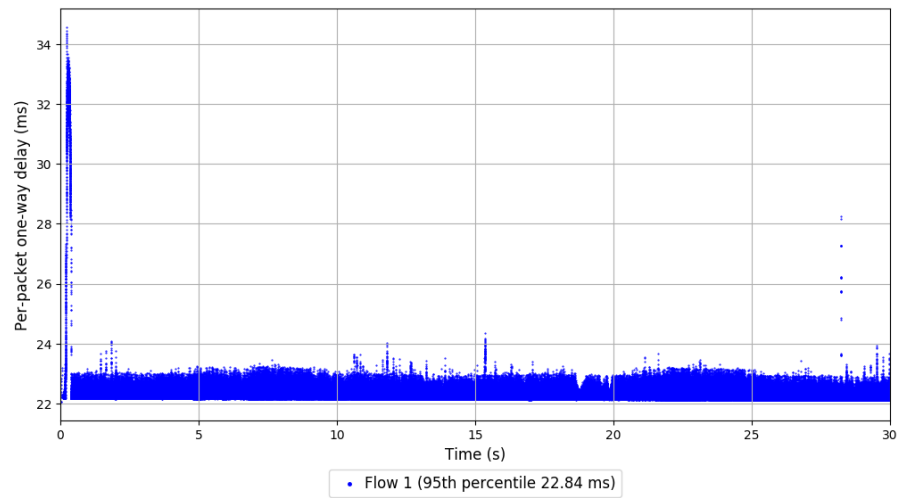
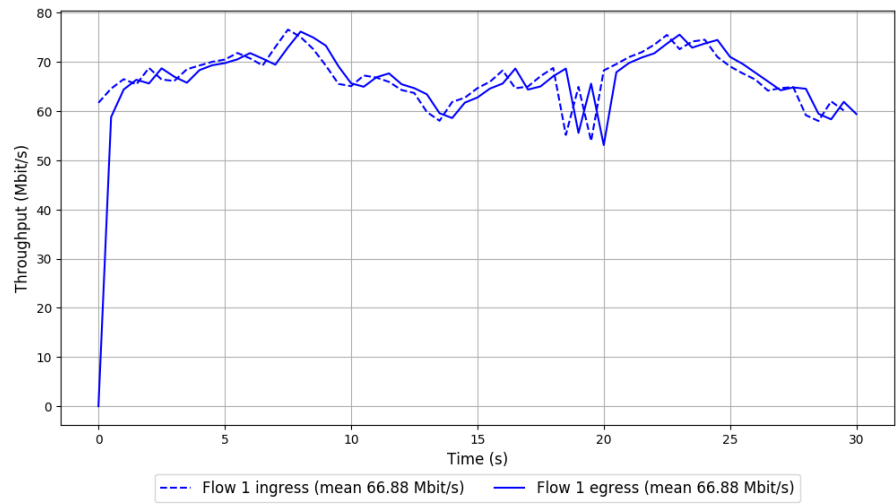


Run 5: Statistics of TCP Vegas

Start at: 2018-11-30 12:30:15
End at: 2018-11-30 12:30:45
Local clock offset: 1.713 ms
Remote clock offset: 41.717 ms

Below is generated by plot.py at 2018-11-30 12:56:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 66.88 Mbit/s
95th percentile per-packet one-way delay: 22.836 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 66.88 Mbit/s
95th percentile per-packet one-way delay: 22.836 ms
Loss rate: 0.08%

Run 5: Report of TCP Vegas — Data Link

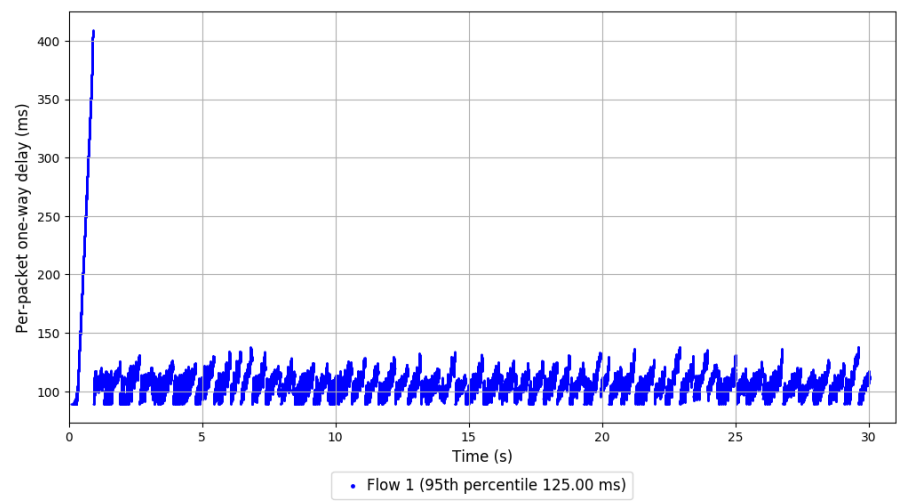
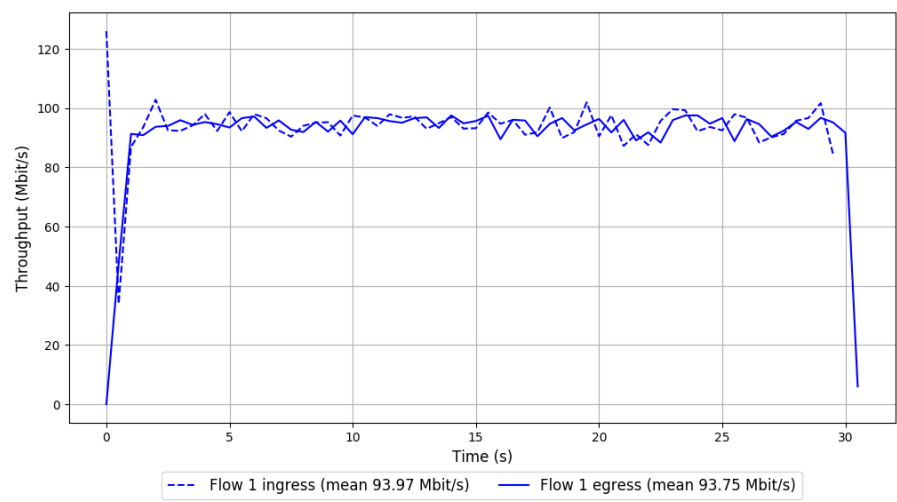


Run 1: Statistics of Verus

Start at: 2018-11-30 10:55:51
End at: 2018-11-30 10:56:21
Local clock offset: 1.993 ms
Remote clock offset: -51.984 ms

Below is generated by plot.py at 2018-11-30 12:56:53
Datalink statistics
-- Total of 1 flow:
Average throughput: 93.75 Mbit/s
95th percentile per-packet one-way delay: 125.002 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 93.75 Mbit/s
95th percentile per-packet one-way delay: 125.002 ms
Loss rate: 0.31%

Run 1: Report of Verus — Data Link

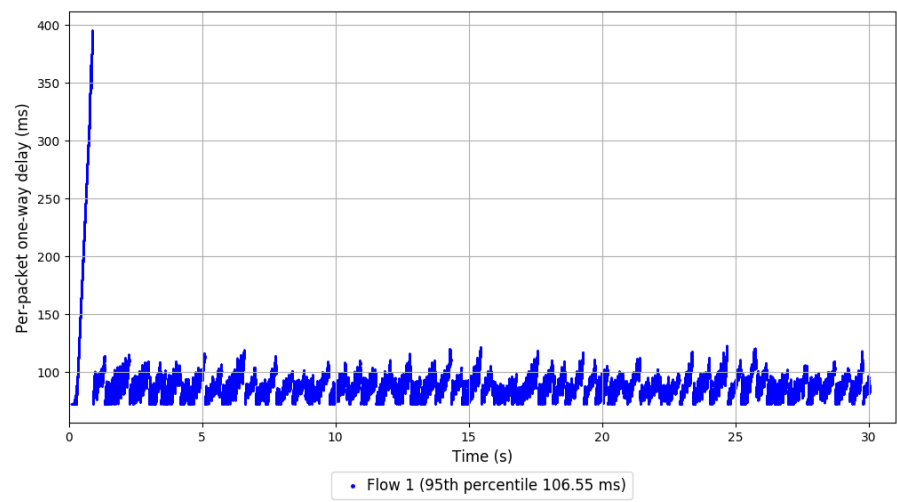
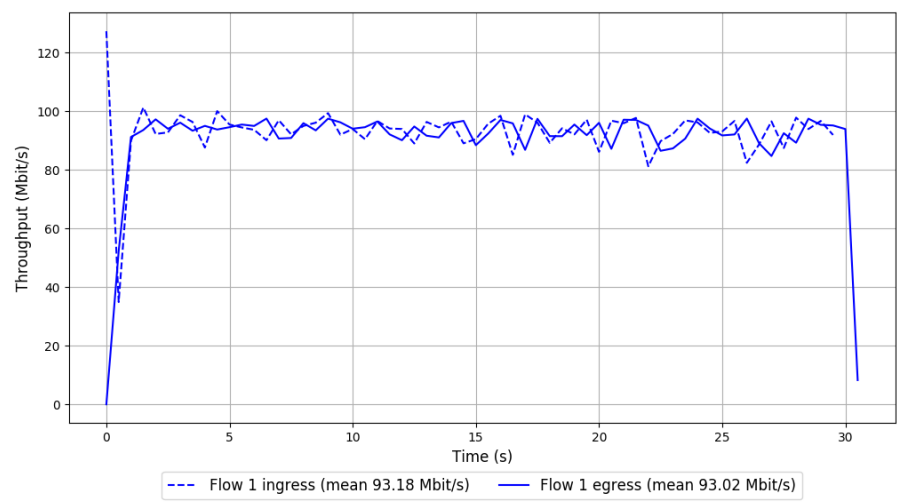


Run 2: Statistics of Verus

Start at: 2018-11-30 11:17:41
End at: 2018-11-30 11:18:11
Local clock offset: 1.794 ms
Remote clock offset: -22.567 ms

Below is generated by plot.py at 2018-11-30 12:57:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 93.02 Mbit/s
95th percentile per-packet one-way delay: 106.549 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 93.02 Mbit/s
95th percentile per-packet one-way delay: 106.549 ms
Loss rate: 0.25%

Run 2: Report of Verus — Data Link

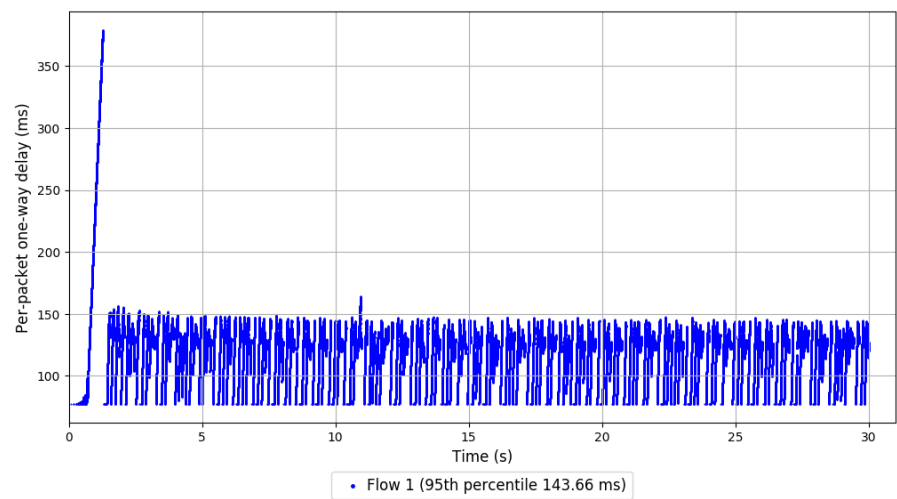
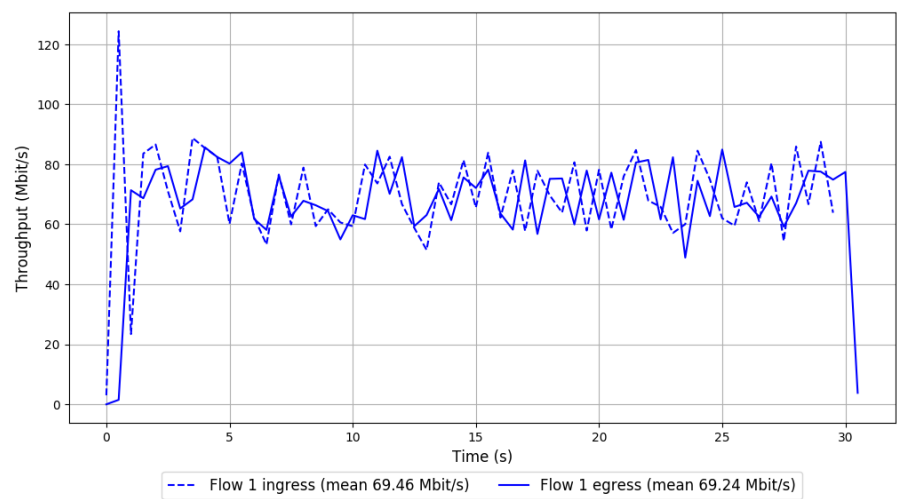


Run 3: Statistics of Verus

Start at: 2018-11-30 11:40:01
End at: 2018-11-30 11:40:31
Local clock offset: 2.061 ms
Remote clock offset: -18.827 ms

Below is generated by plot.py at 2018-11-30 12:57:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 69.24 Mbit/s
95th percentile per-packet one-way delay: 143.665 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 69.24 Mbit/s
95th percentile per-packet one-way delay: 143.665 ms
Loss rate: 0.21%

Run 3: Report of Verus — Data Link

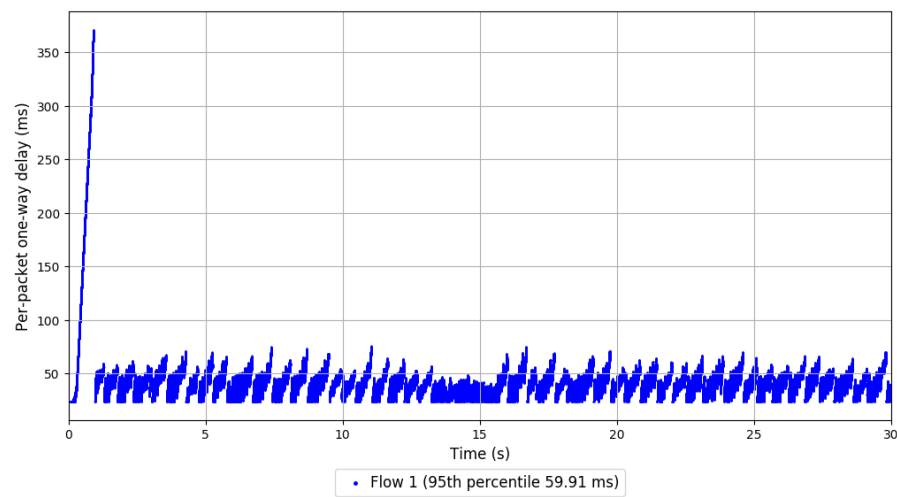
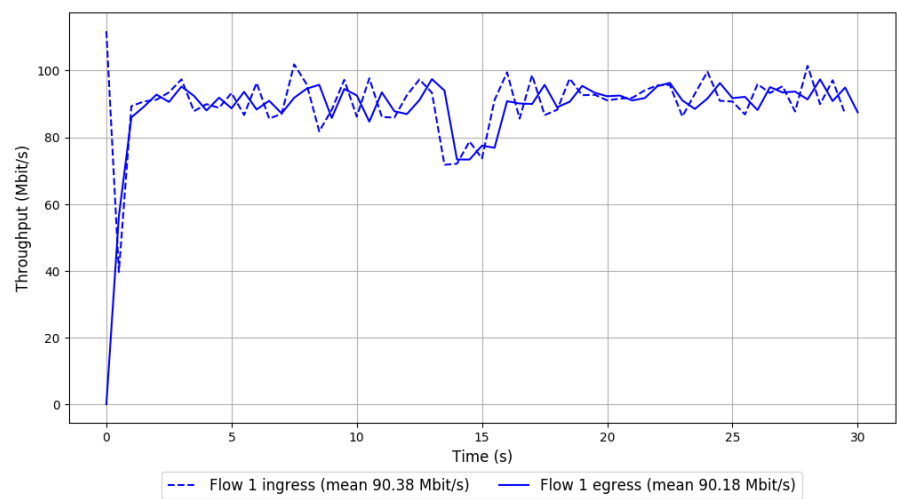


Run 4: Statistics of Verus

Start at: 2018-11-30 12:01:56
End at: 2018-11-30 12:02:26
Local clock offset: 3.243 ms
Remote clock offset: 42.916 ms

Below is generated by plot.py at 2018-11-30 12:57:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 90.18 Mbit/s
95th percentile per-packet one-way delay: 59.907 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 90.18 Mbit/s
95th percentile per-packet one-way delay: 59.907 ms
Loss rate: 0.31%

Run 4: Report of Verus — Data Link

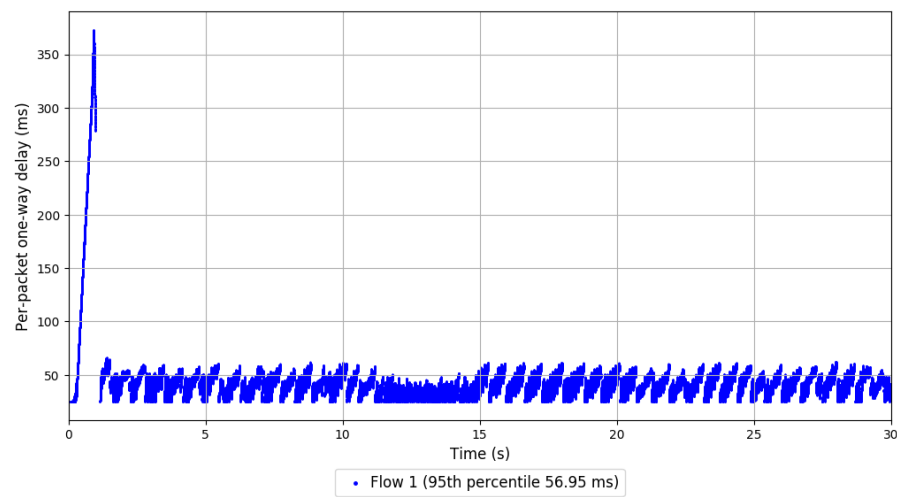
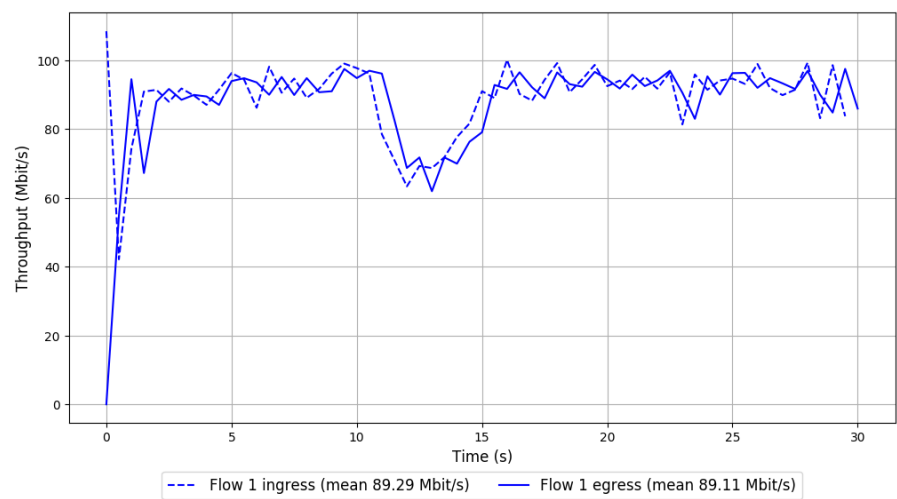


Run 5: Statistics of Verus

Start at: 2018-11-30 12:24:32
End at: 2018-11-30 12:25:02
Local clock offset: 4.009 ms
Remote clock offset: 42.045 ms

Below is generated by plot.py at 2018-11-30 12:57:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 89.11 Mbit/s
95th percentile per-packet one-way delay: 56.952 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 89.11 Mbit/s
95th percentile per-packet one-way delay: 56.952 ms
Loss rate: 0.29%

Run 5: Report of Verus — Data Link

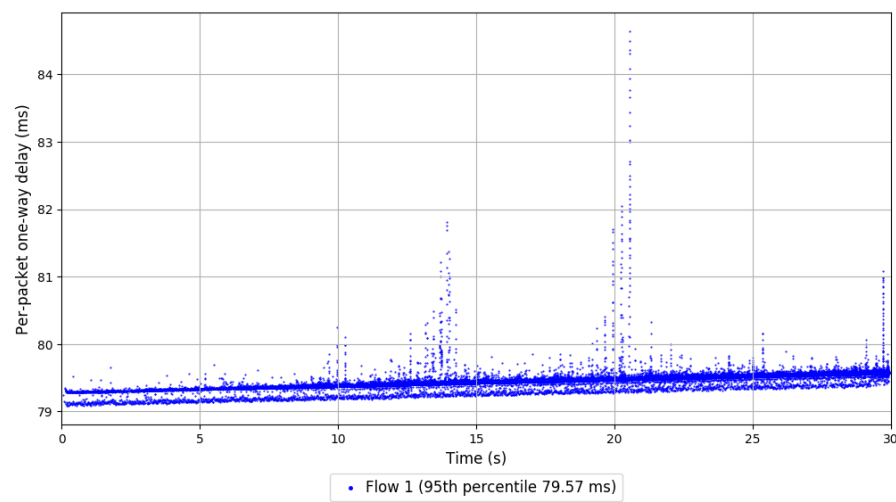
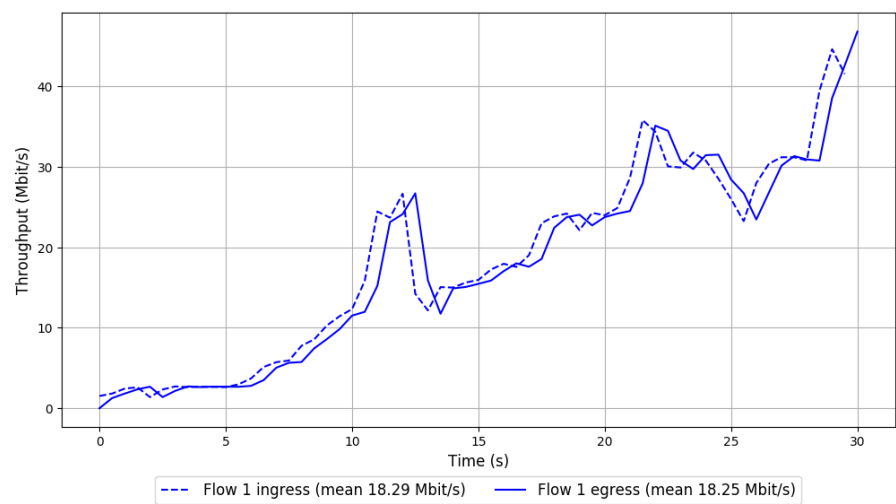


Run 1: Statistics of PCC-Vivace

Start at: 2018-11-30 11:08:26
End at: 2018-11-30 11:08:56
Local clock offset: 1.156 ms
Remote clock offset: -35.117 ms

Below is generated by plot.py at 2018-11-30 12:57:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 18.25 Mbit/s
95th percentile per-packet one-way delay: 79.574 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 18.25 Mbit/s
95th percentile per-packet one-way delay: 79.574 ms
Loss rate: 0.25%

Run 1: Report of PCC-Vivace — Data Link

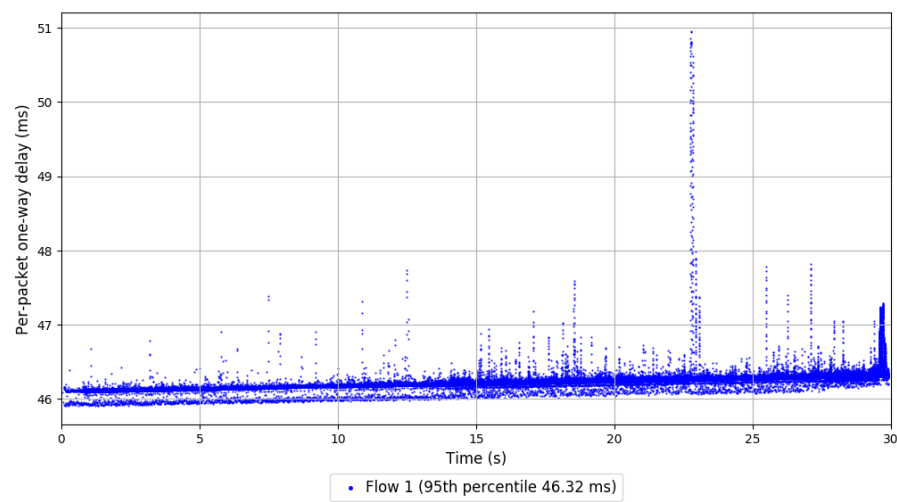
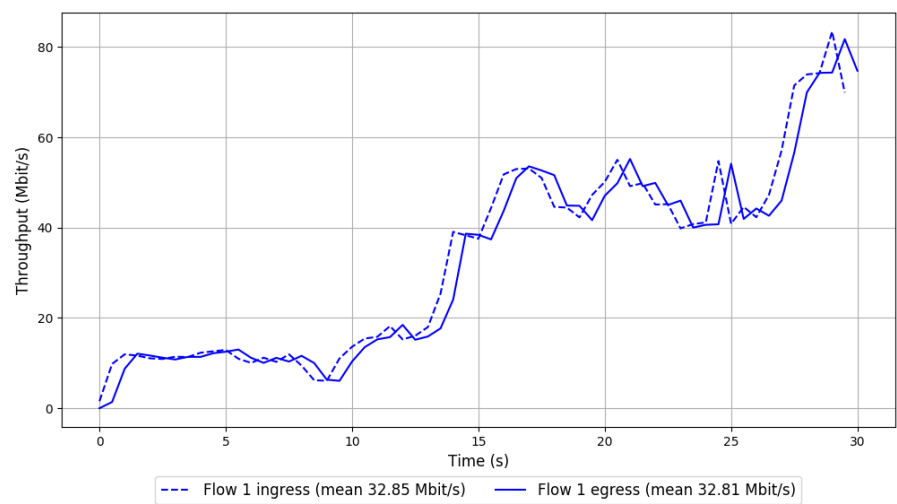


Run 2: Statistics of PCC-Vivace

Start at: 2018-11-30 11:30:42
End at: 2018-11-30 11:31:12
Local clock offset: 3.863 ms
Remote clock offset: 11.038 ms

Below is generated by plot.py at 2018-11-30 12:57:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 32.81 Mbit/s
95th percentile per-packet one-way delay: 46.324 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 32.81 Mbit/s
95th percentile per-packet one-way delay: 46.324 ms
Loss rate: 0.18%

Run 2: Report of PCC-Vivace — Data Link

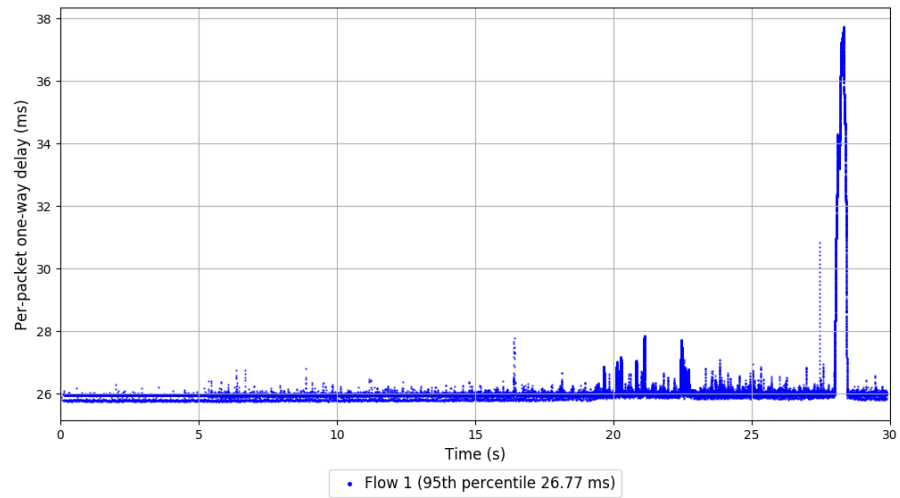
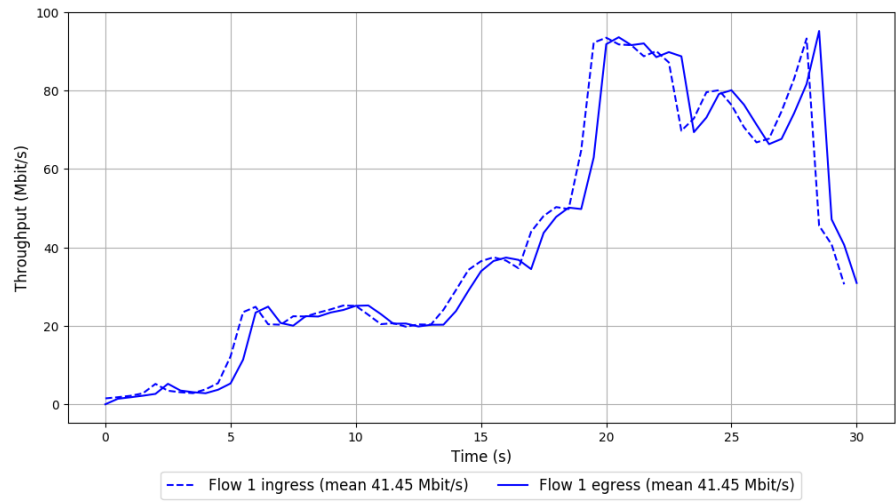


Run 3: Statistics of PCC-Vivace

Start at: 2018-11-30 11:52:30
End at: 2018-11-30 11:53:00
Local clock offset: 3.808 ms
Remote clock offset: 39.865 ms

Below is generated by plot.py at 2018-11-30 12:57:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 41.45 Mbit/s
95th percentile per-packet one-way delay: 26.772 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 41.45 Mbit/s
95th percentile per-packet one-way delay: 26.772 ms
Loss rate: 0.08%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2018-11-30 12:14:56

End at: 2018-11-30 12:15:26

Local clock offset: 3.433 ms

Remote clock offset: 42.805 ms

Below is generated by plot.py at 2018-11-30 12:57:33

Datalink statistics

-- Total of 1 flow:

Average throughput: 28.19 Mbit/s

95th percentile per-packet one-way delay: 24.303 ms

Loss rate: 0.19%

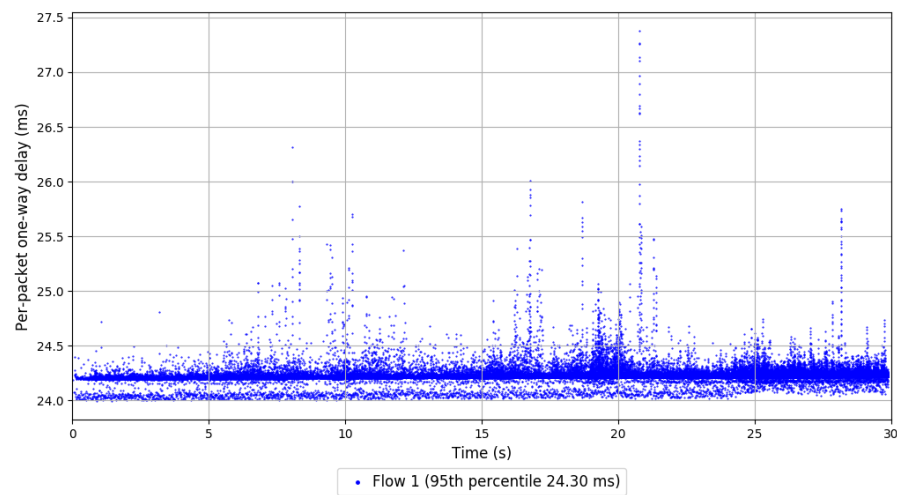
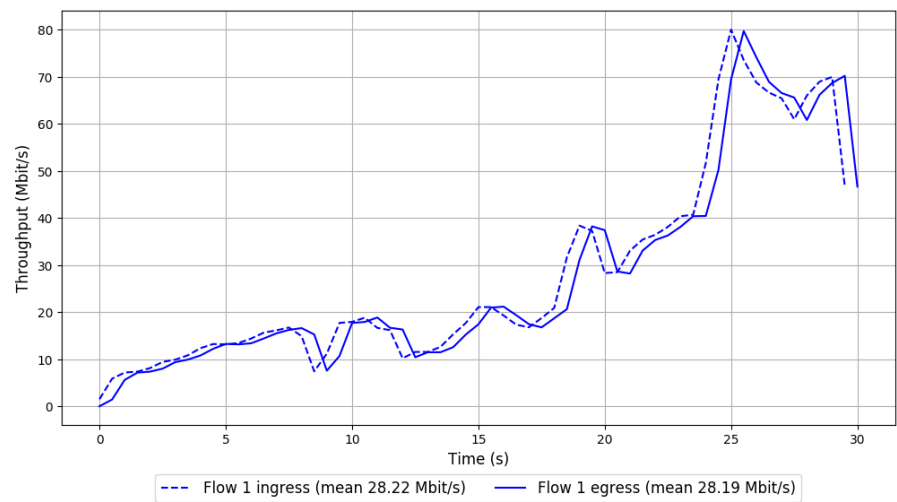
-- Flow 1:

Average throughput: 28.19 Mbit/s

95th percentile per-packet one-way delay: 24.303 ms

Loss rate: 0.19%

Run 4: Report of PCC-Vivace — Data Link

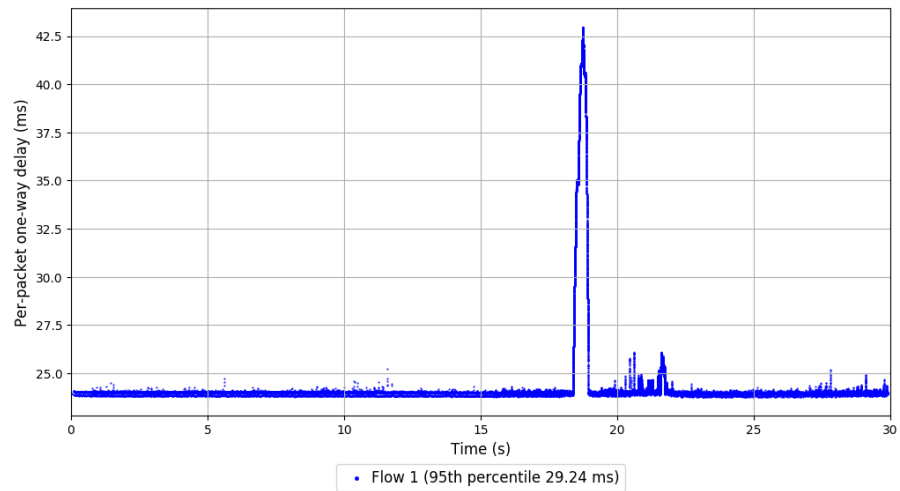
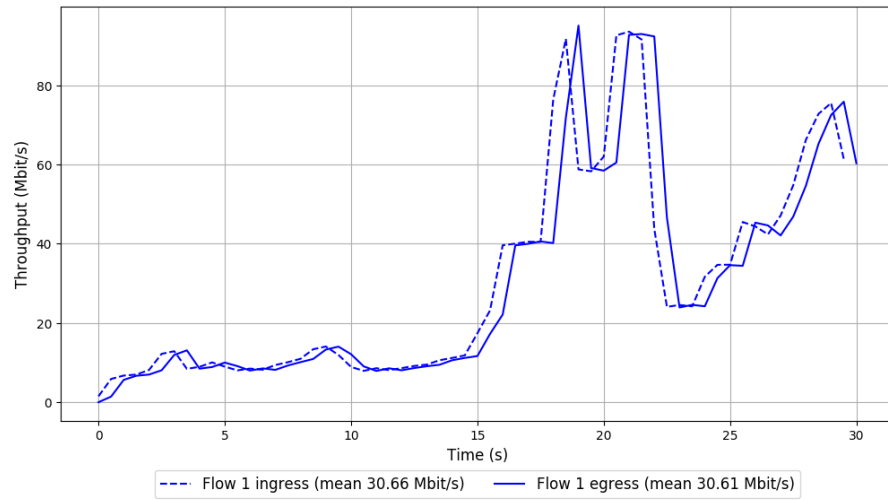


Run 5: Statistics of PCC-Vivace

Start at: 2018-11-30 12:37:17
End at: 2018-11-30 12:37:47
Local clock offset: 3.473 ms
Remote clock offset: 40.883 ms

Below is generated by plot.py at 2018-11-30 12:57:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 30.61 Mbit/s
95th percentile per-packet one-way delay: 29.236 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 30.61 Mbit/s
95th percentile per-packet one-way delay: 29.236 ms
Loss rate: 0.26%

Run 5: Report of PCC-Vivace — Data Link

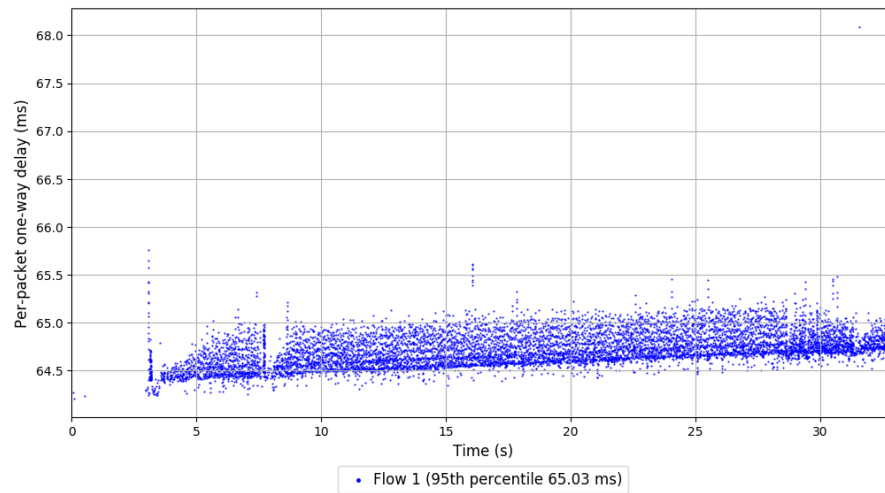
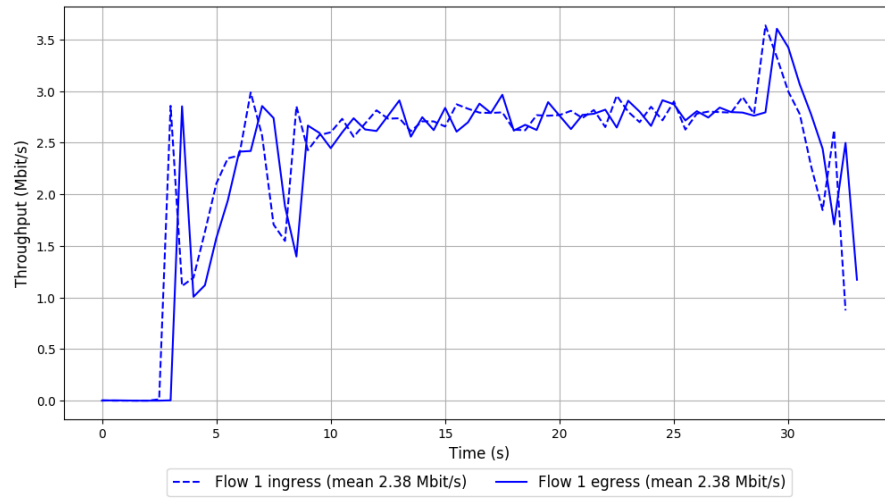


Run 1: Statistics of WebRTC media

Start at: 2018-11-30 11:00:28
End at: 2018-11-30 11:00:58
Local clock offset: -0.452 ms
Remote clock offset: -26.805 ms

Below is generated by plot.py at 2018-11-30 12:57:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.38 Mbit/s
95th percentile per-packet one-way delay: 65.033 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 2.38 Mbit/s
95th percentile per-packet one-way delay: 65.033 ms
Loss rate: 0.06%

Run 1: Report of WebRTC media — Data Link

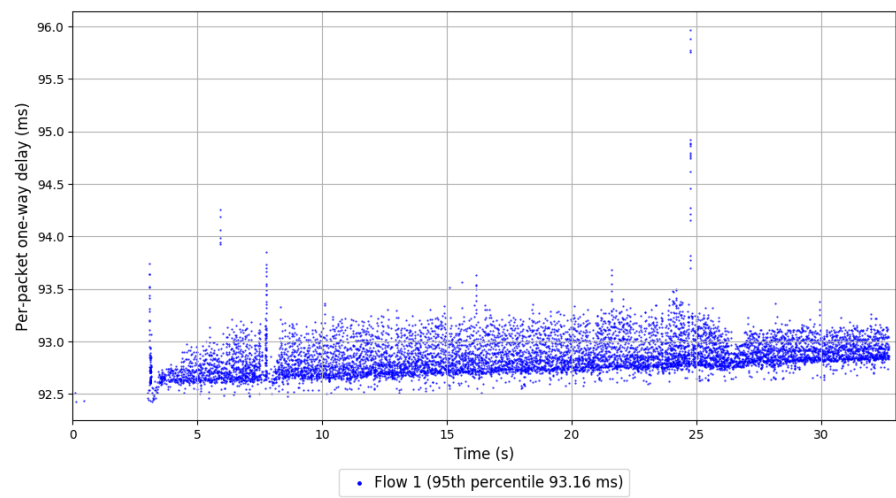
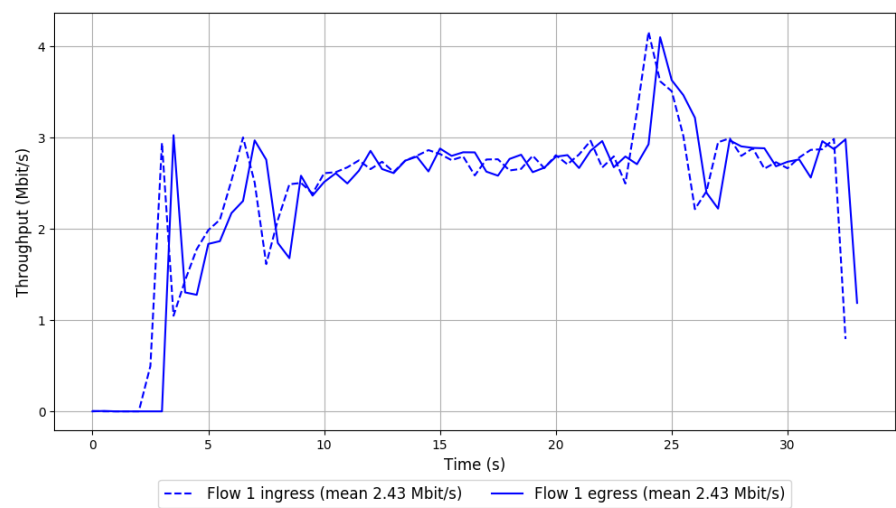


Run 2: Statistics of WebRTC media

Start at: 2018-11-30 11:22:30
End at: 2018-11-30 11:23:00
Local clock offset: -0.251 ms
Remote clock offset: -43.18 ms

Below is generated by plot.py at 2018-11-30 12:57:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.43 Mbit/s
95th percentile per-packet one-way delay: 93.156 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 2.43 Mbit/s
95th percentile per-packet one-way delay: 93.156 ms
Loss rate: 0.06%

Run 2: Report of WebRTC media — Data Link

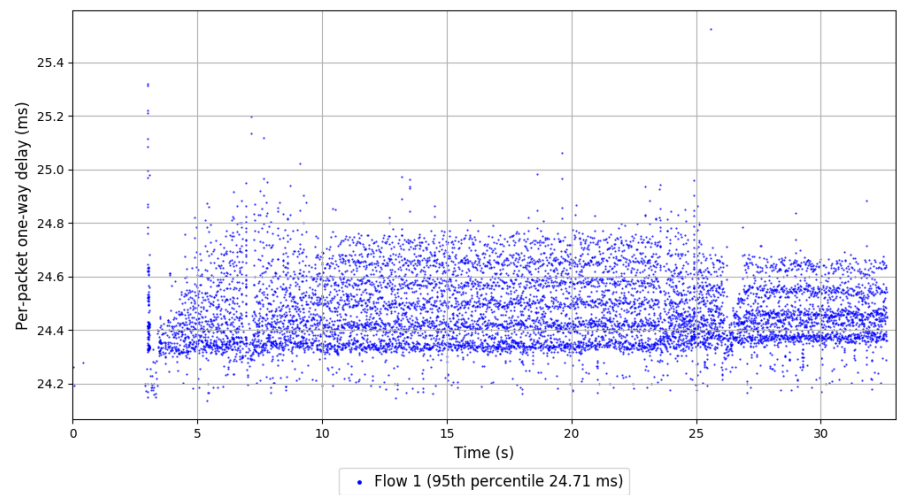
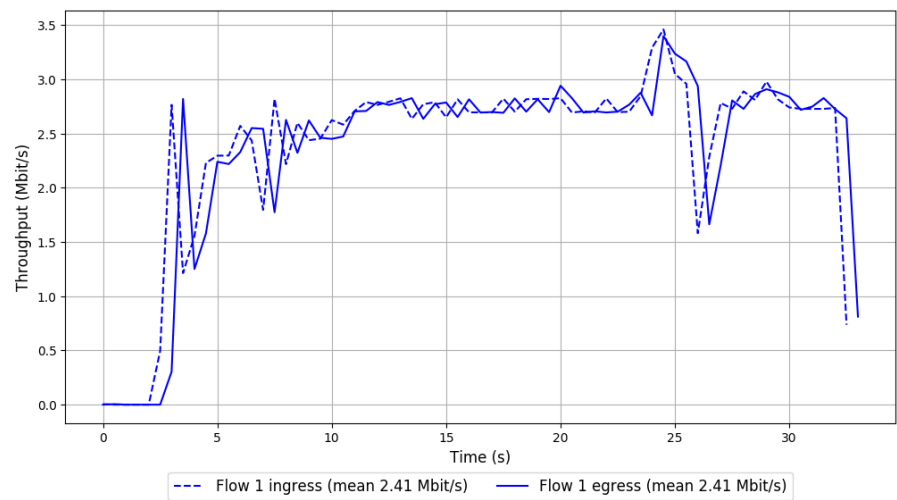


Run 3: Statistics of WebRTC media

Start at: 2018-11-30 11:44:38
End at: 2018-11-30 11:45:08
Local clock offset: 0.237 ms
Remote clock offset: 37.217 ms

Below is generated by plot.py at 2018-11-30 12:57:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 24.714 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 24.714 ms
Loss rate: 0.06%

Run 3: Report of WebRTC media — Data Link

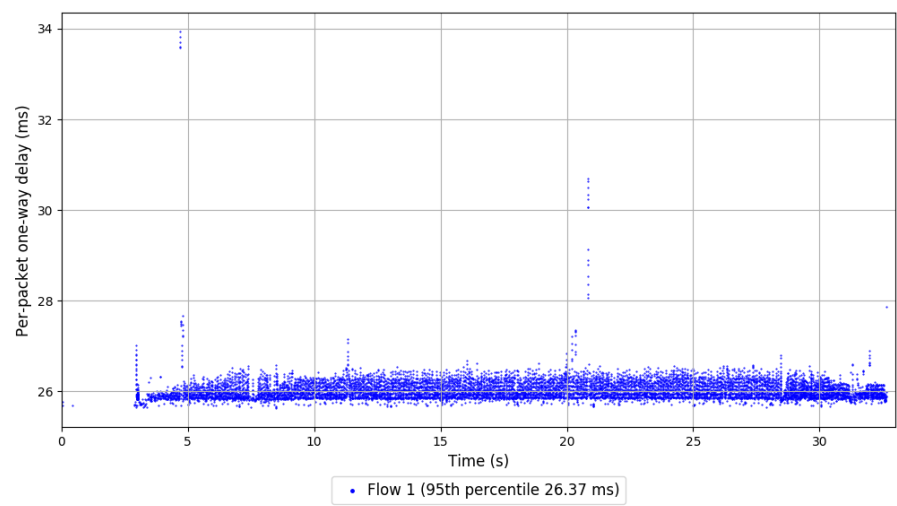
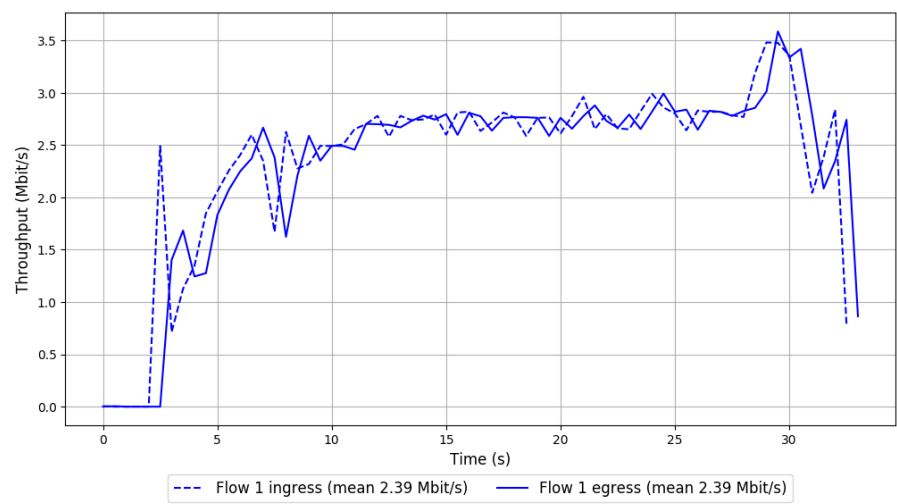


Run 4: Statistics of WebRTC media

Start at: 2018-11-30 12:06:38
End at: 2018-11-30 12:07:08
Local clock offset: 4.338 ms
Remote clock offset: 42.039 ms

Below is generated by plot.py at 2018-11-30 12:57:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.39 Mbit/s
95th percentile per-packet one-way delay: 26.368 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 2.39 Mbit/s
95th percentile per-packet one-way delay: 26.368 ms
Loss rate: 0.08%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-11-30 12:29:10
End at: 2018-11-30 12:29:40
Local clock offset: 1.835 ms
Remote clock offset: 41.476 ms

Below is generated by plot.py at 2018-11-30 12:57:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.40 Mbit/s
95th percentile per-packet one-way delay: 23.109 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 2.40 Mbit/s
95th percentile per-packet one-way delay: 23.109 ms
Loss rate: 0.13%

Run 5: Report of WebRTC media — Data Link

