

Pantheon Report

Generated at 2018-09-06 15:56:54 (UTC).

Data path: China on `eno1` (*remote*) → AWS Korea on `ens5` (*local*).

Repeated the test of 18 congestion control schemes 5 times.

Each test lasted for 30 seconds running 1 flow.

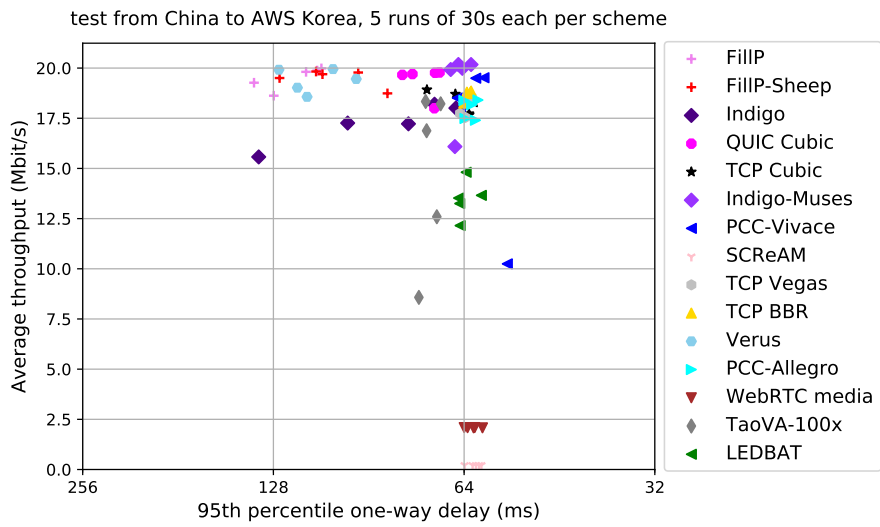
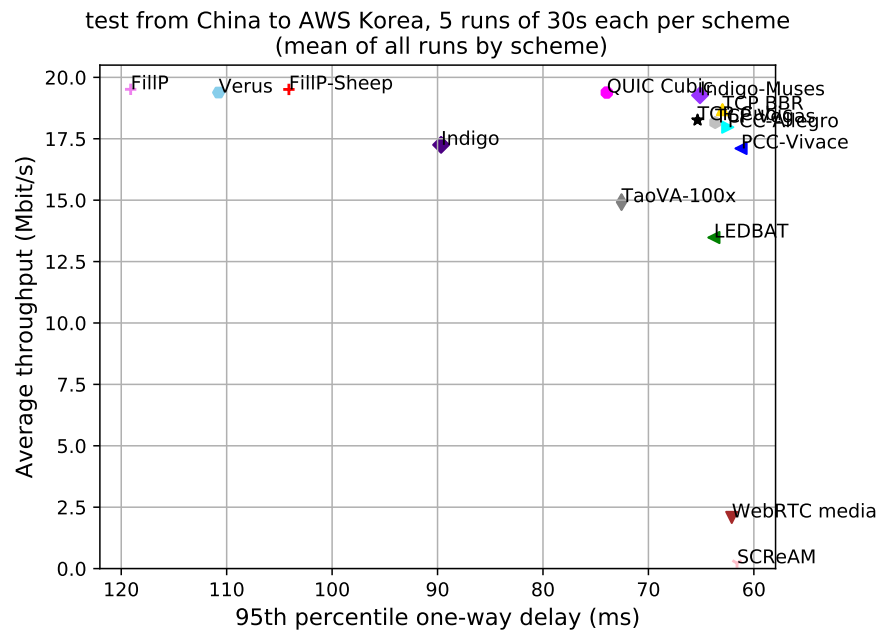
NTP offsets were measured against `ntp.nict.jp` and have been applied to correct the timestamps in logs.

System info:

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

Git summary:

```
branch: muses @ f392ce15d580343f4432c3d7e068b3290f03eb4a
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf5e5e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ a28d20fb82a95a965a3da65fd1eb71b8994e9b84
third_party/pantheon-tunnel @ cbfce6db5ff5740d4fe1771f813cd646339e1952
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
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	18.69	62.98	11.70
Copa	0	N/A	N/A	N/A
TCP Cubic	5	18.26	65.34	7.21
FillP	5	19.51	119.10	19.62
FillP-Sheep	5	19.51	104.10	24.79
Indigo	5	17.25	89.66	63.92
LEDBAT	5	13.48	63.79	1.07
Indigo-Muses	5	19.27	65.11	41.65
PCC-Allegro	5	17.97	62.48	31.91
PCC-Expr	0	N/A	N/A	N/A
QUIC Cubic	5	19.38	73.95	6.91
SCReAM	5	0.22	61.60	0.26
Sprout	0	N/A	N/A	N/A
TaoVA-100x	5	14.92	72.55	22.17
TCP Vegas	5	18.16	63.67	4.22
Verus	5	19.38	110.76	53.52
PCC-Vivace	5	17.11	61.22	5.50
WebRTC media	5	2.08	62.10	0.35

Run 1: Statistics of TCP BBR

Start at: 2018-09-06 14:21:00

End at: 2018-09-06 14:21:30

Local clock offset: 2.964 ms

Remote clock offset: 59.148 ms

Below is generated by plot.py at 2018-09-06 15:54:26

Datalink statistics

-- Total of 1 flow:

Average throughput: 18.80 Mbit/s

95th percentile per-packet one-way delay: 63.362 ms

Loss rate: 12.42%

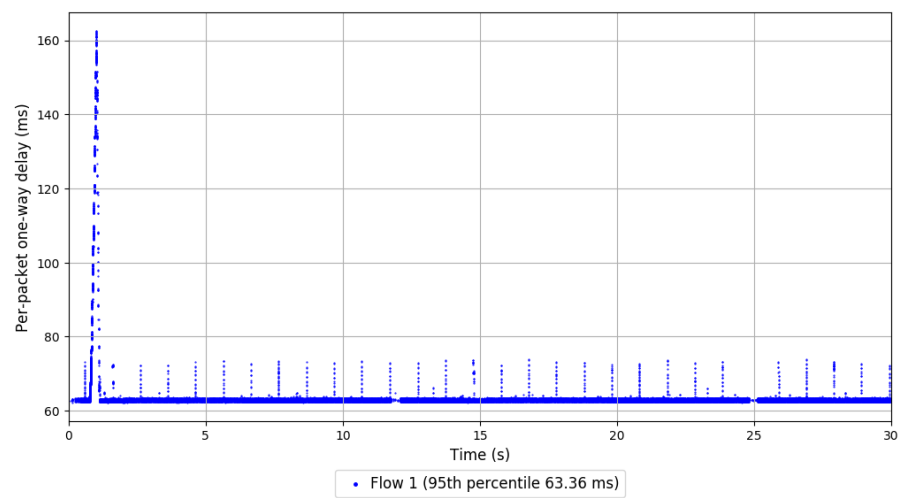
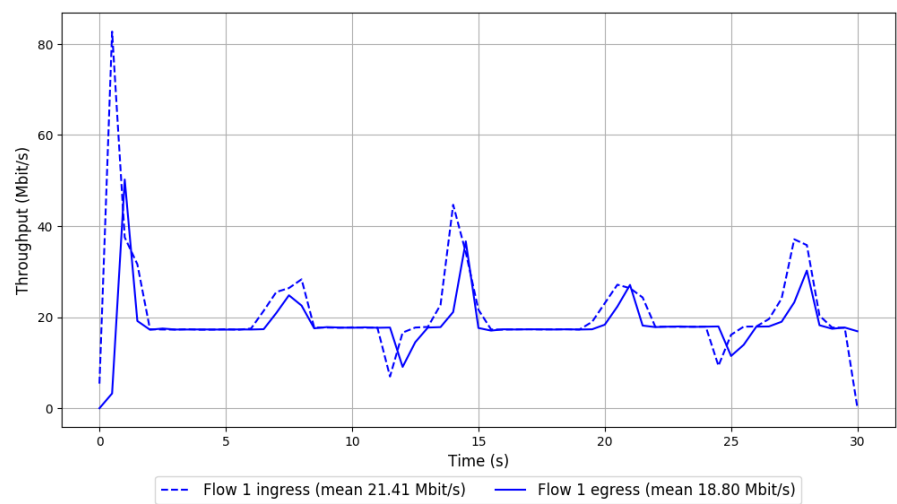
-- Flow 1:

Average throughput: 18.80 Mbit/s

95th percentile per-packet one-way delay: 63.362 ms

Loss rate: 12.42%

Run 1: Report of TCP BBR — Data Link

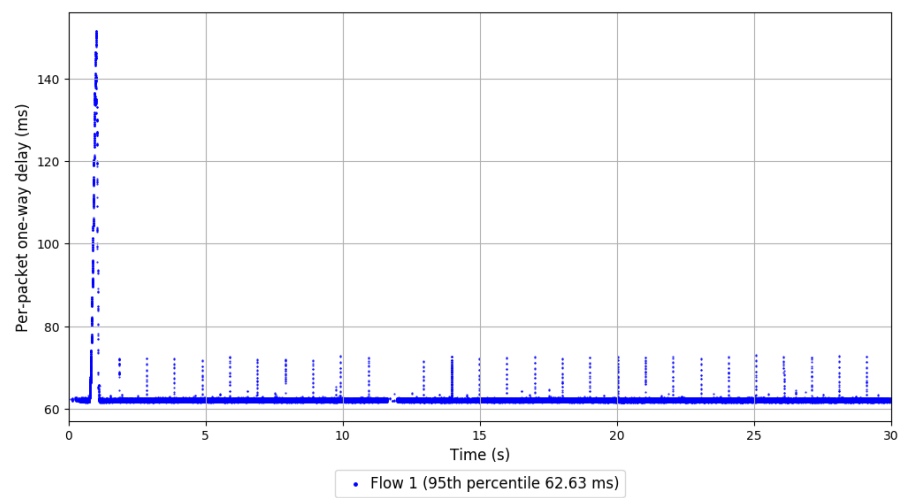
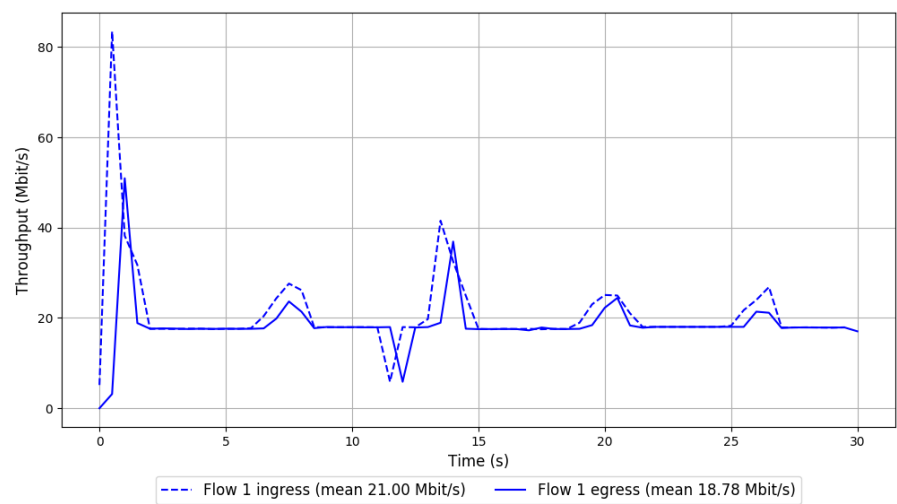


Run 2: Statistics of TCP BBR

Start at: 2018-09-06 14:42:17
End at: 2018-09-06 14:42:47
Local clock offset: 4.989 ms
Remote clock offset: 55.632 ms

Below is generated by plot.py at 2018-09-06 15:54:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 18.78 Mbit/s
95th percentile per-packet one-way delay: 62.626 ms
Loss rate: 10.84%
-- Flow 1:
Average throughput: 18.78 Mbit/s
95th percentile per-packet one-way delay: 62.626 ms
Loss rate: 10.84%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-09-06 15:03:08

End at: 2018-09-06 15:03:38

Local clock offset: 2.585 ms

Remote clock offset: 53.793 ms

Below is generated by plot.py at 2018-09-06 15:54:26

Datalink statistics

-- Total of 1 flow:

Average throughput: 18.74 Mbit/s

95th percentile per-packet one-way delay: 62.422 ms

Loss rate: 12.27%

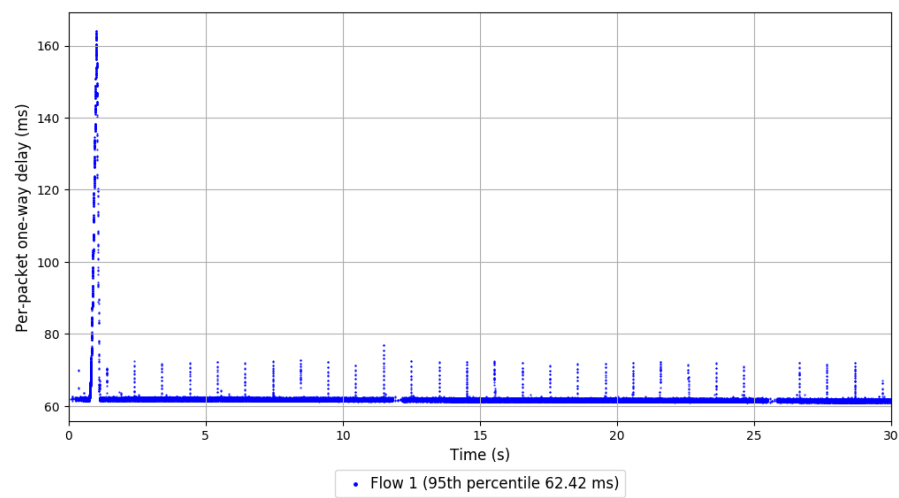
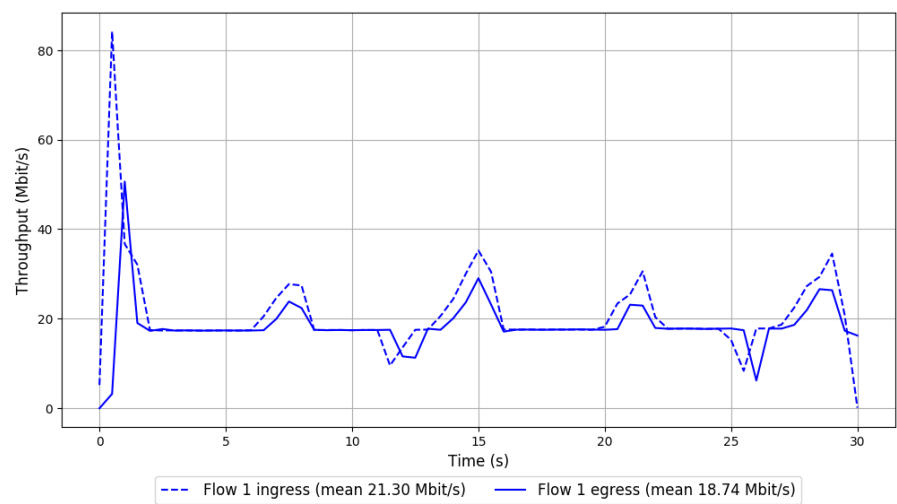
-- Flow 1:

Average throughput: 18.74 Mbit/s

95th percentile per-packet one-way delay: 62.422 ms

Loss rate: 12.27%

Run 3: Report of TCP BBR — Data Link

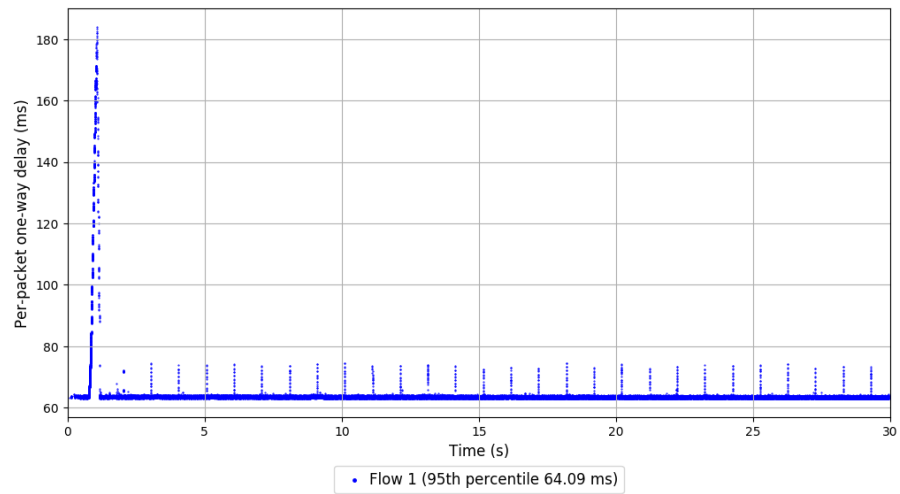
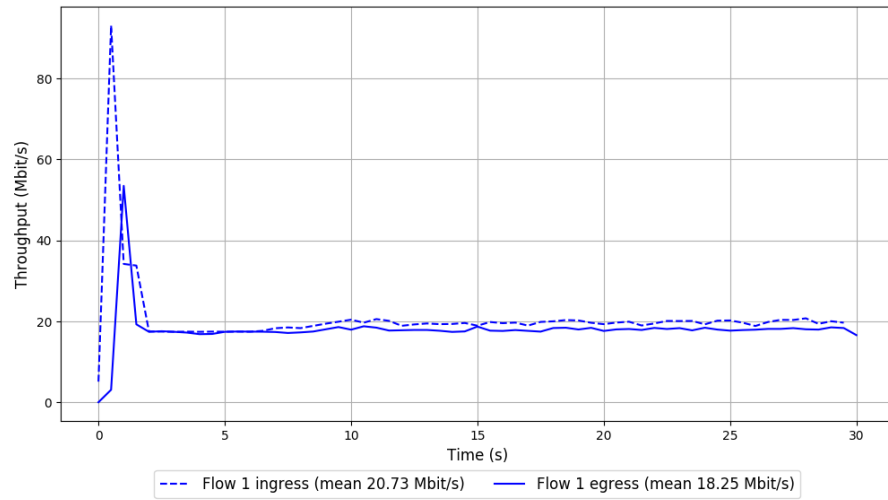


Run 4: Statistics of TCP BBR

Start at: 2018-09-06 15:24:01
End at: 2018-09-06 15:24:31
Local clock offset: 2.358 ms
Remote clock offset: 42.104 ms

Below is generated by plot.py at 2018-09-06 15:54:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 18.25 Mbit/s
95th percentile per-packet one-way delay: 64.086 ms
Loss rate: 12.22%
-- Flow 1:
Average throughput: 18.25 Mbit/s
95th percentile per-packet one-way delay: 64.086 ms
Loss rate: 12.22%

Run 4: Report of TCP BBR — Data Link

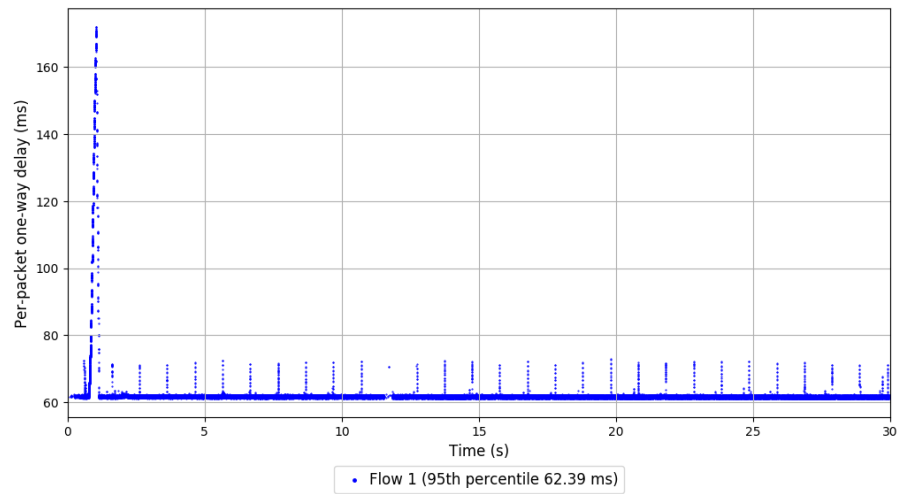
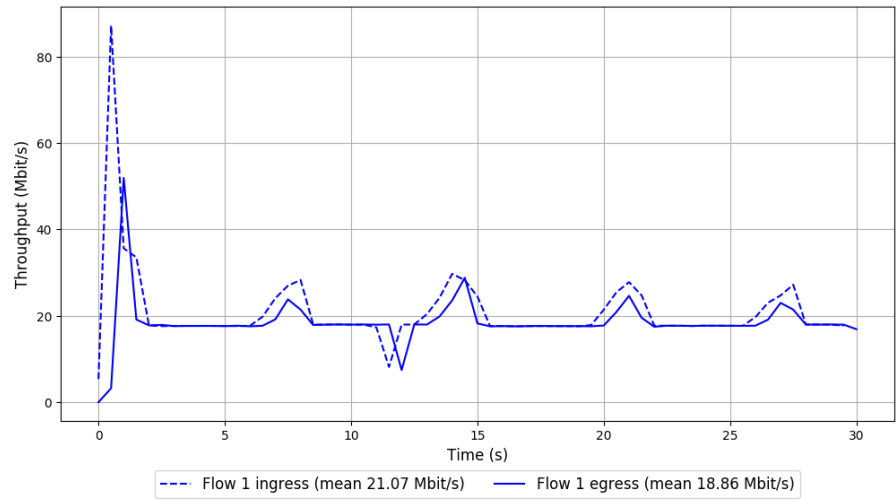


Run 5: Statistics of TCP BBR

Start at: 2018-09-06 15:44:59
End at: 2018-09-06 15:45:29
Local clock offset: 2.48 ms
Remote clock offset: 41.342 ms

Below is generated by plot.py at 2018-09-06 15:54:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 18.86 Mbit/s
95th percentile per-packet one-way delay: 62.391 ms
Loss rate: 10.77%
-- Flow 1:
Average throughput: 18.86 Mbit/s
95th percentile per-packet one-way delay: 62.391 ms
Loss rate: 10.77%

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

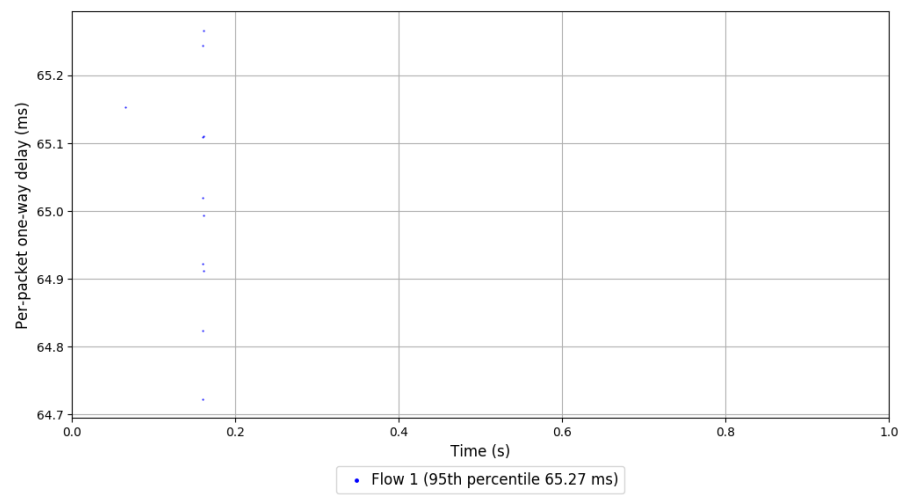
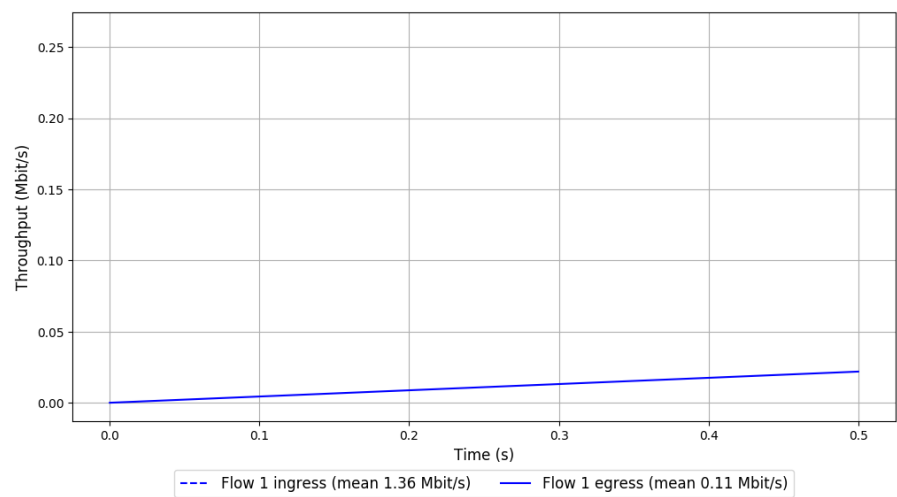
Start at: 2018-09-06 14:09:26

End at: 2018-09-06 14:09:56

Local clock offset: 1.242 ms

Remote clock offset: 53.198 ms

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

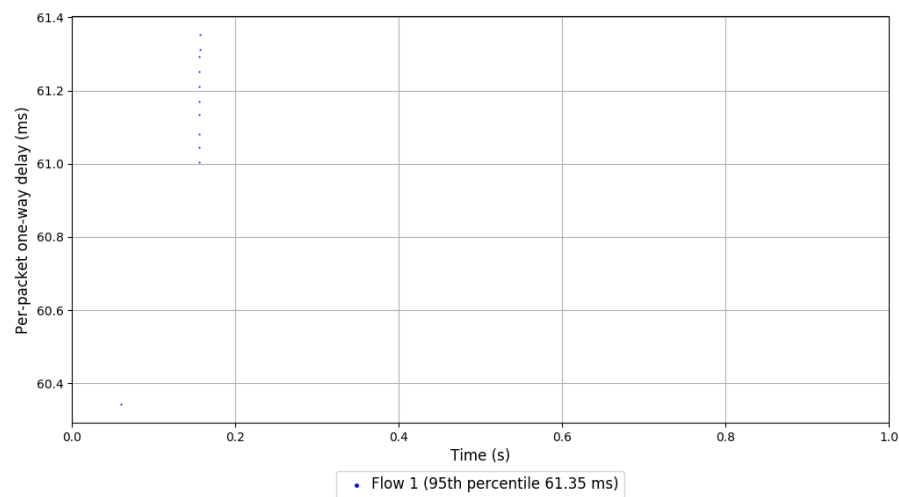
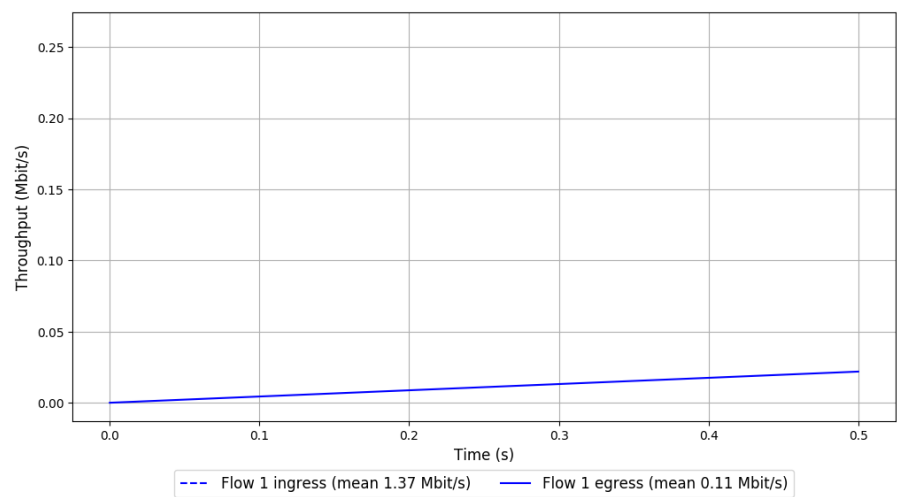
Start at: 2018-09-06 14:30:36

End at: 2018-09-06 14:31:06

Local clock offset: 4.332 ms

Remote clock offset: 59.655 ms

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

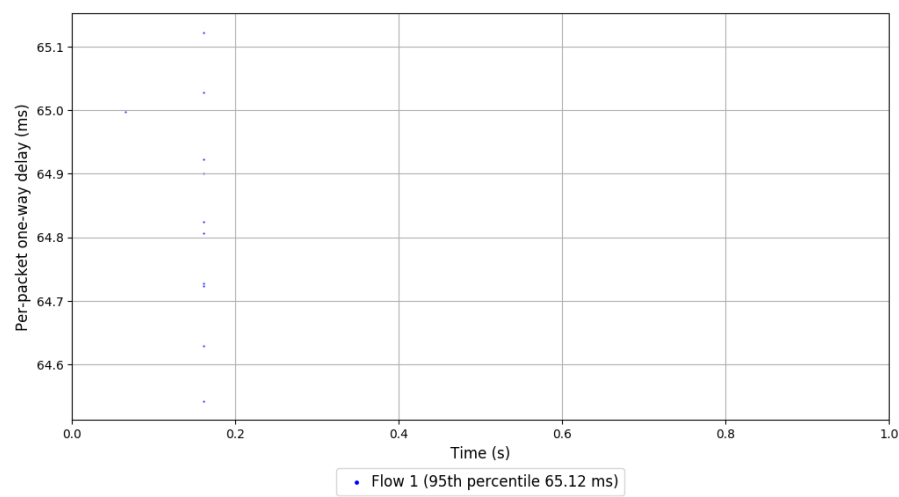
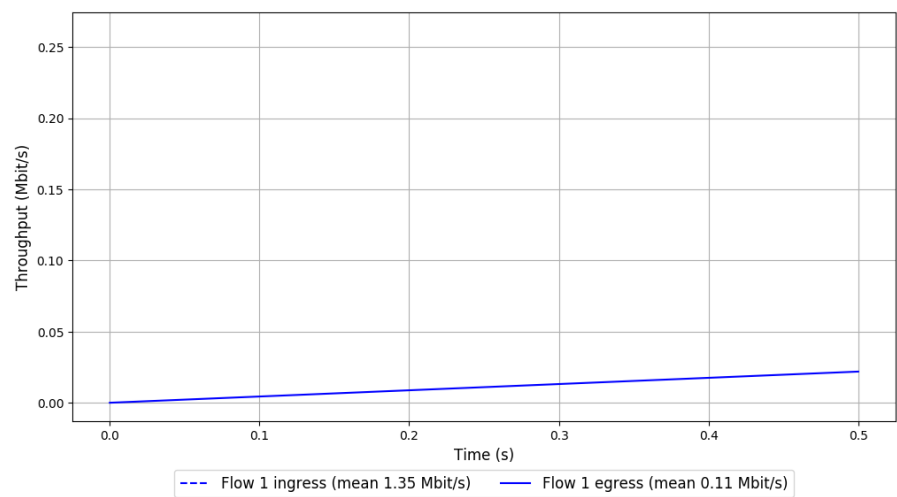
Start at: 2018-09-06 14:51:31

End at: 2018-09-06 14:52:01

Local clock offset: 3.832 ms

Remote clock offset: 53.577 ms

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

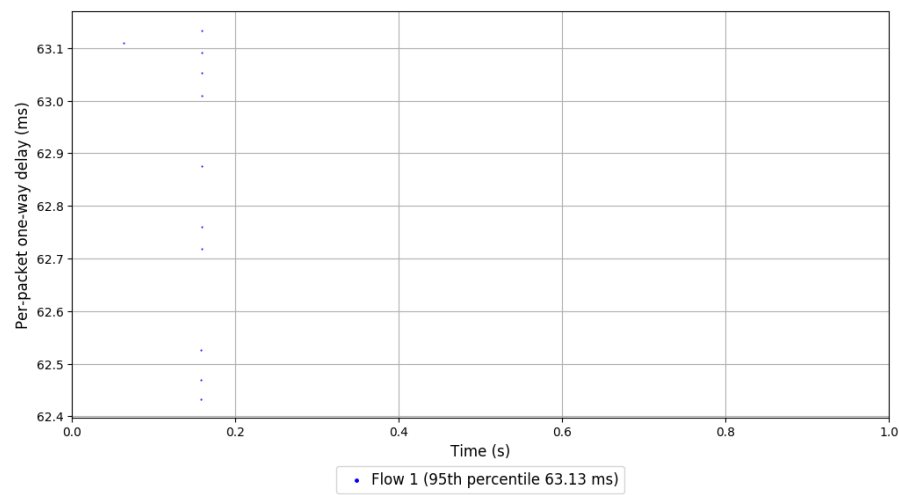
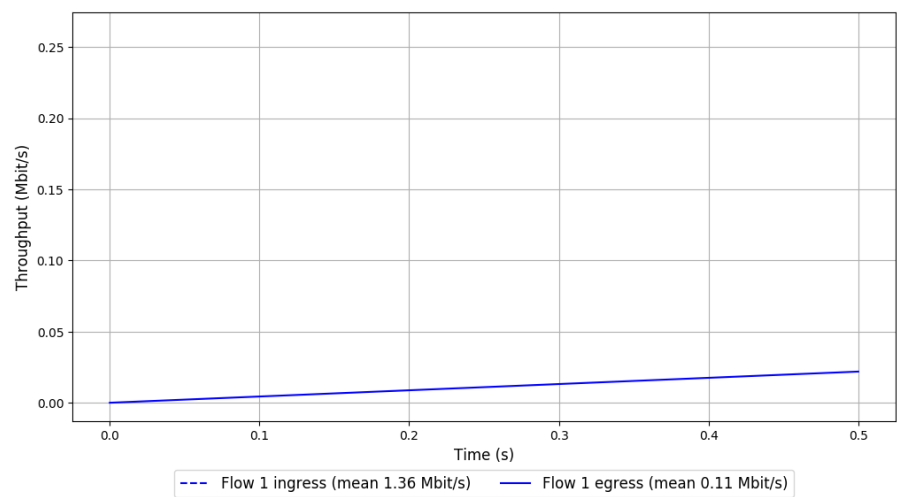
Start at: 2018-09-06 15:12:30

End at: 2018-09-06 15:13:00

Local clock offset: 2.261 ms

Remote clock offset: 46.355 ms

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

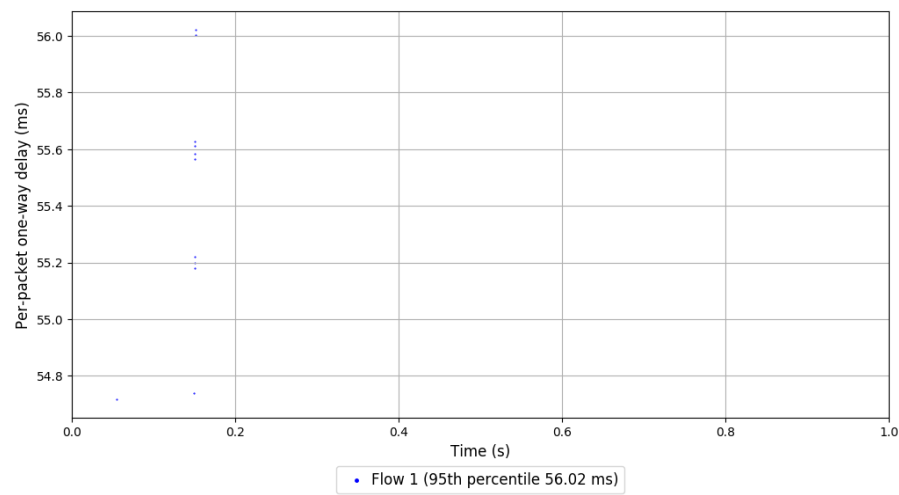
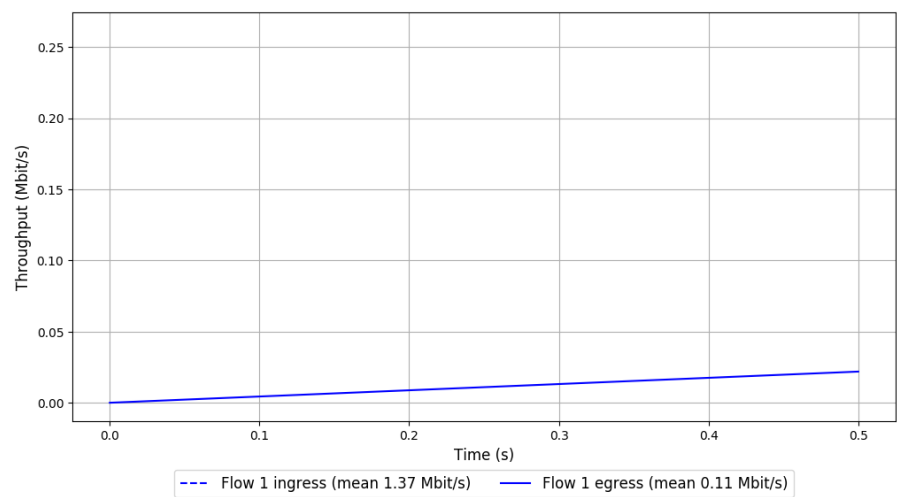
Start at: 2018-09-06 15:33:24

End at: 2018-09-06 15:33:54

Local clock offset: 2.474 ms

Remote clock offset: 49.094 ms

Run 5: Report of Copa — Data Link

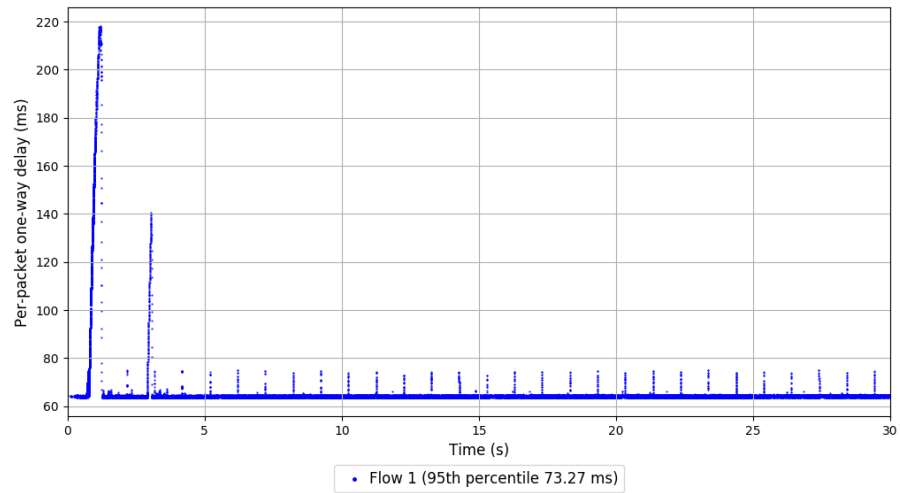
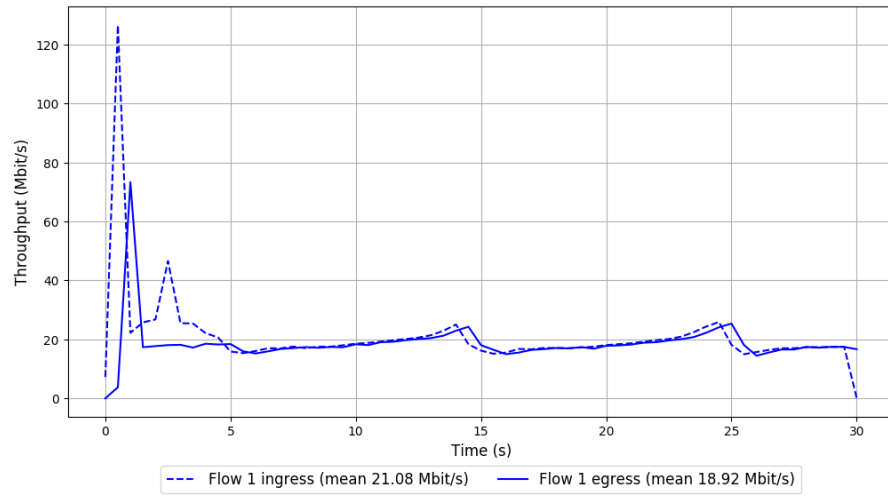


Run 1: Statistics of TCP Cubic

Start at: 2018-09-06 14:10:34
End at: 2018-09-06 14:11:04
Local clock offset: 1.652 ms
Remote clock offset: 55.534 ms

Below is generated by plot.py at 2018-09-06 15:54:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 18.92 Mbit/s
95th percentile per-packet one-way delay: 73.265 ms
Loss rate: 10.52%
-- Flow 1:
Average throughput: 18.92 Mbit/s
95th percentile per-packet one-way delay: 73.265 ms
Loss rate: 10.52%

Run 1: Report of TCP Cubic — Data Link

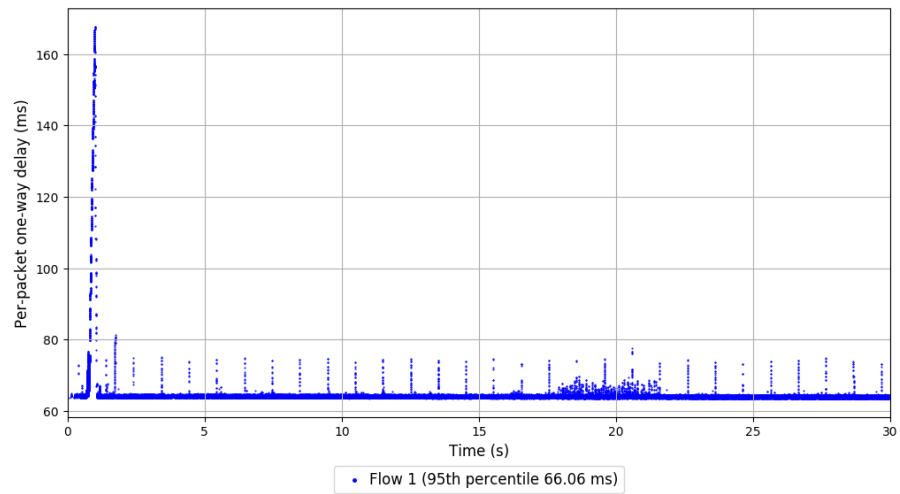
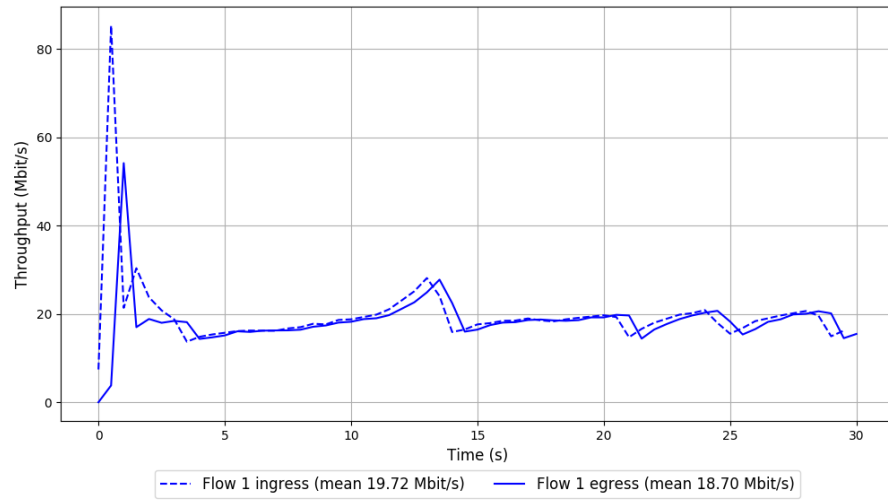


Run 2: Statistics of TCP Cubic

Start at: 2018-09-06 14:31:43
End at: 2018-09-06 14:32:13
Local clock offset: 4.277 ms
Remote clock offset: 55.458 ms

Below is generated by plot.py at 2018-09-06 15:54:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 18.70 Mbit/s
95th percentile per-packet one-way delay: 66.061 ms
Loss rate: 5.45%
-- Flow 1:
Average throughput: 18.70 Mbit/s
95th percentile per-packet one-way delay: 66.061 ms
Loss rate: 5.45%

Run 2: Report of TCP Cubic — Data Link

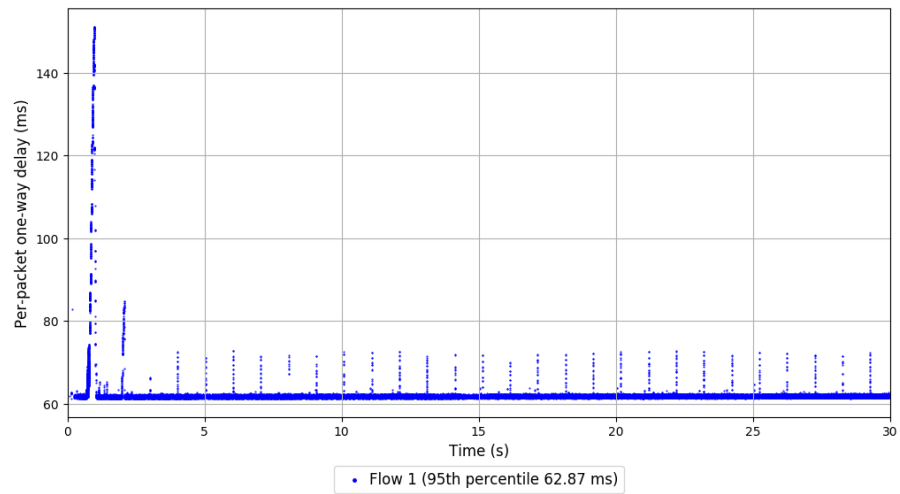
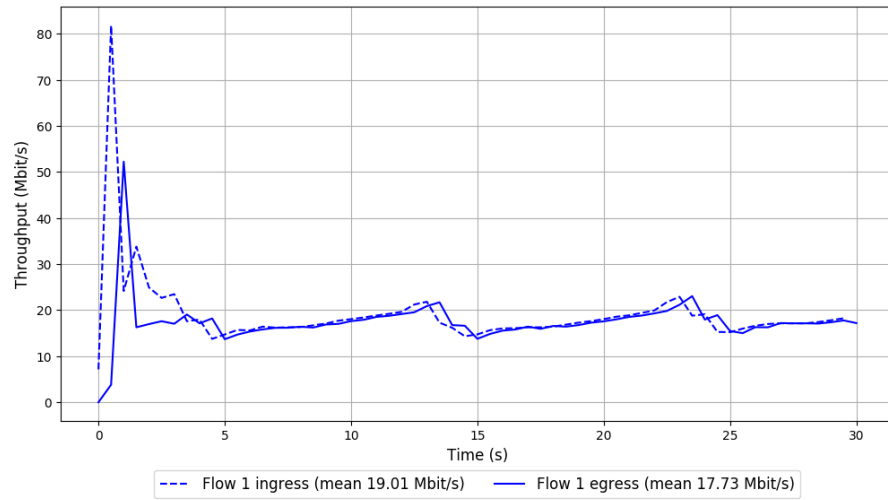


Run 3: Statistics of TCP Cubic

Start at: 2018-09-06 14:52:39
End at: 2018-09-06 14:53:09
Local clock offset: 3.499 ms
Remote clock offset: 56.595 ms

Below is generated by plot.py at 2018-09-06 15:54:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 17.73 Mbit/s
95th percentile per-packet one-way delay: 62.872 ms
Loss rate: 7.01%
-- Flow 1:
Average throughput: 17.73 Mbit/s
95th percentile per-packet one-way delay: 62.872 ms
Loss rate: 7.01%

Run 3: Report of TCP Cubic — Data Link

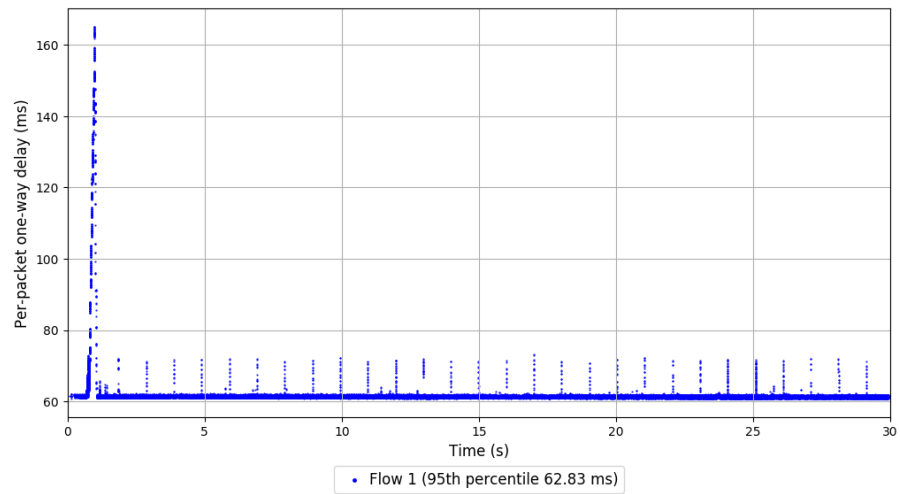
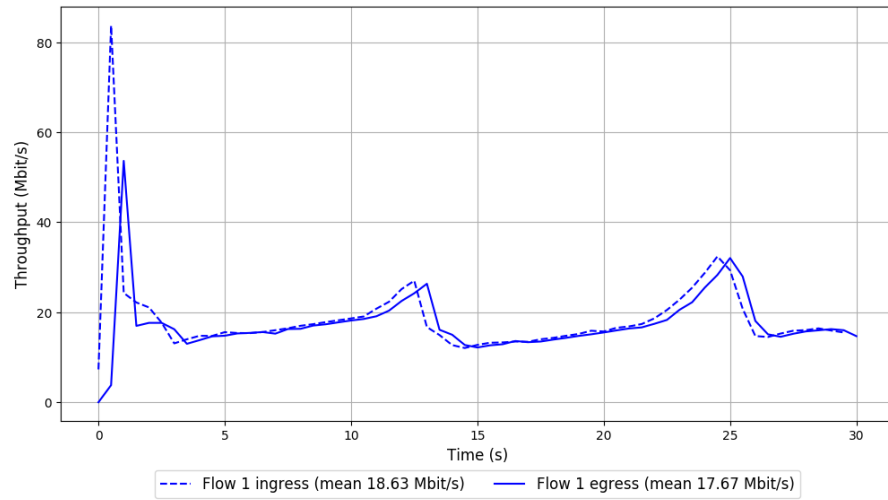


Run 4: Statistics of TCP Cubic

Start at: 2018-09-06 15:13:38
End at: 2018-09-06 15:14:08
Local clock offset: 2.286 ms
Remote clock offset: 47.022 ms

Below is generated by plot.py at 2018-09-06 15:54:37
Datalink statistics
-- Total of 1 flow:
Average throughput: 17.67 Mbit/s
95th percentile per-packet one-way delay: 62.831 ms
Loss rate: 5.43%
-- Flow 1:
Average throughput: 17.67 Mbit/s
95th percentile per-packet one-way delay: 62.831 ms
Loss rate: 5.43%

Run 4: Report of TCP Cubic — Data Link

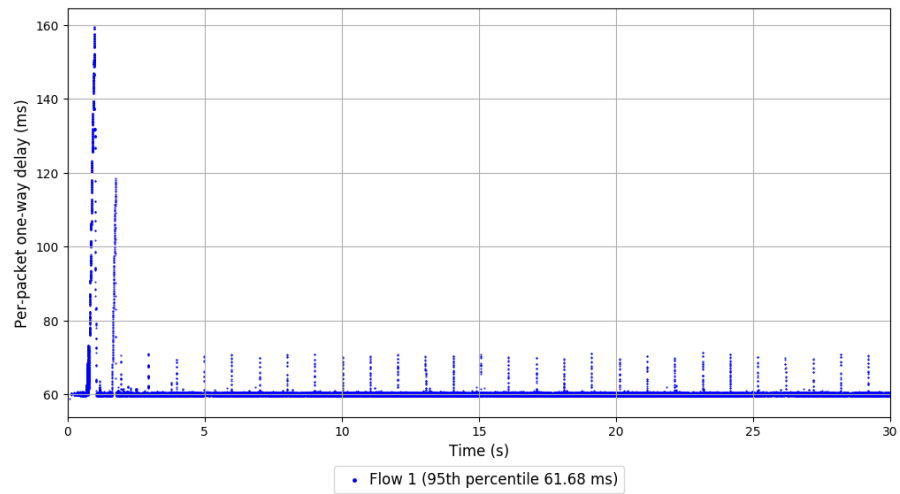
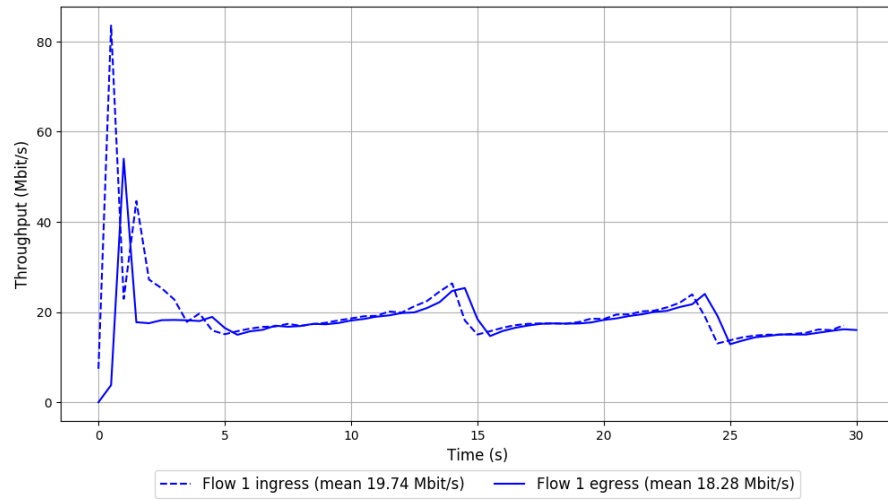


Run 5: Statistics of TCP Cubic

Start at: 2018-09-06 15:34:31
End at: 2018-09-06 15:35:01
Local clock offset: 2.264 ms
Remote clock offset: 43.823 ms

Below is generated by plot.py at 2018-09-06 15:54:39
Datalink statistics
-- Total of 1 flow:
Average throughput: 18.28 Mbit/s
95th percentile per-packet one-way delay: 61.679 ms
Loss rate: 7.66%
-- Flow 1:
Average throughput: 18.28 Mbit/s
95th percentile per-packet one-way delay: 61.679 ms
Loss rate: 7.66%

Run 5: Report of TCP Cubic — Data Link

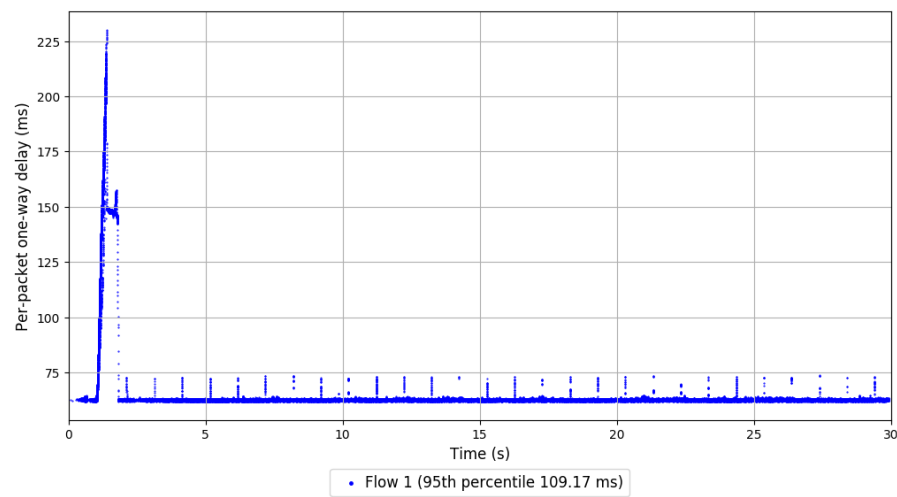
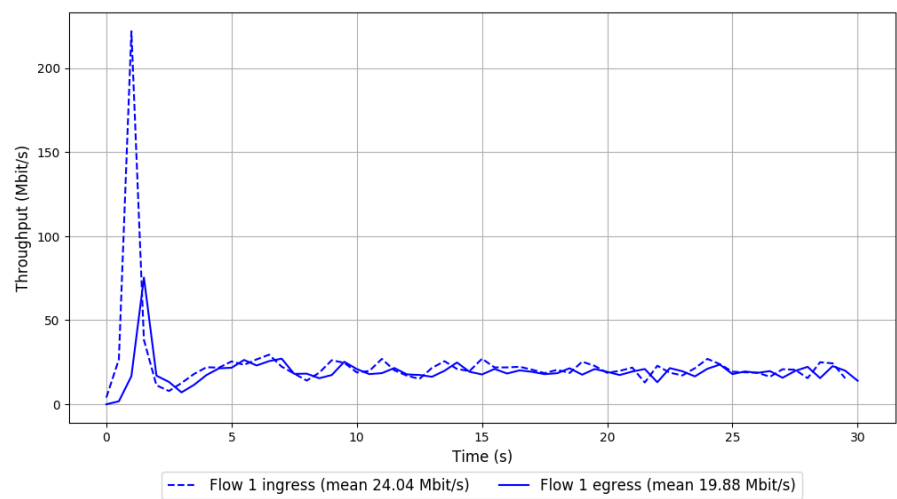


Run 1: Statistics of FillP

Start at: 2018-09-06 14:17:36
End at: 2018-09-06 14:18:06
Local clock offset: 2.029 ms
Remote clock offset: 58.443 ms

Below is generated by plot.py at 2018-09-06 15:54:45
Datalink statistics
-- Total of 1 flow:
Average throughput: 19.88 Mbit/s
95th percentile per-packet one-way delay: 109.172 ms
Loss rate: 17.58%
-- Flow 1:
Average throughput: 19.88 Mbit/s
95th percentile per-packet one-way delay: 109.172 ms
Loss rate: 17.58%

Run 1: Report of FillP — Data Link

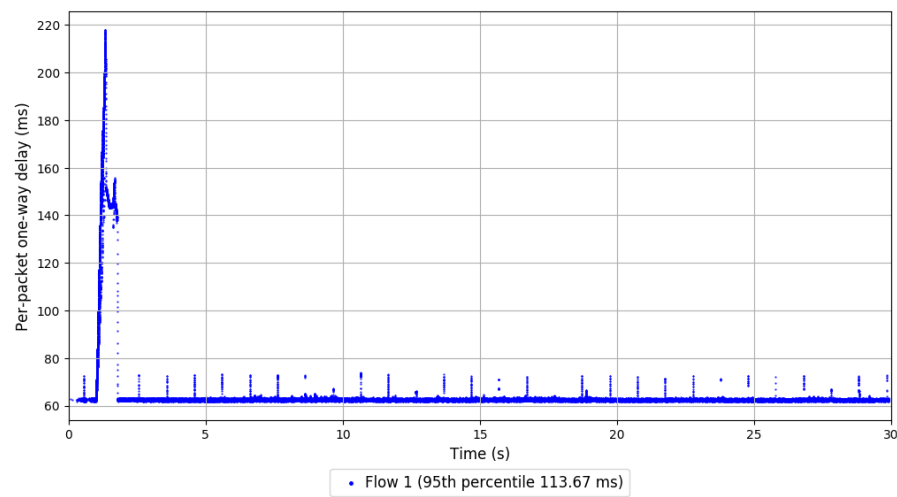
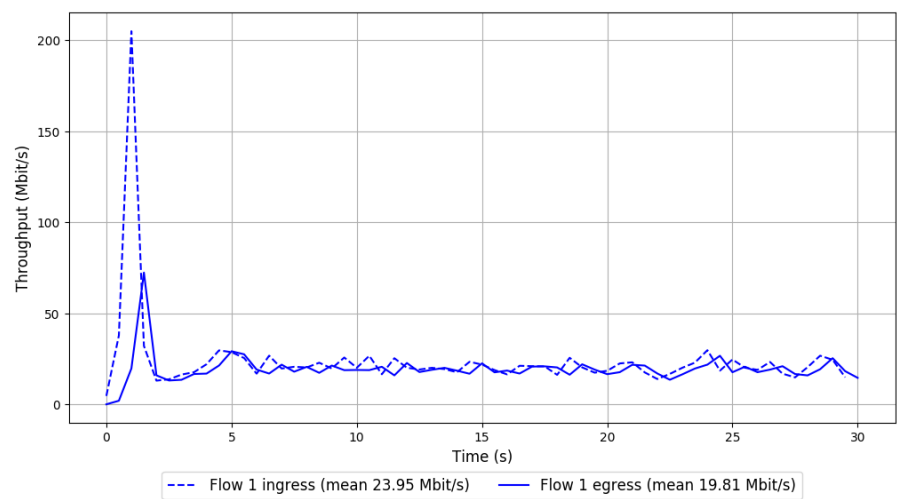


Run 2: Statistics of FillP

Start at: 2018-09-06 14:38:48
End at: 2018-09-06 14:39:18
Local clock offset: 4.671 ms
Remote clock offset: 54.623 ms

Below is generated by plot.py at 2018-09-06 15:54:45
Datalink statistics
-- Total of 1 flow:
Average throughput: 19.81 Mbit/s
95th percentile per-packet one-way delay: 113.671 ms
Loss rate: 17.50%
-- Flow 1:
Average throughput: 19.81 Mbit/s
95th percentile per-packet one-way delay: 113.671 ms
Loss rate: 17.50%

Run 2: Report of FillP — Data Link

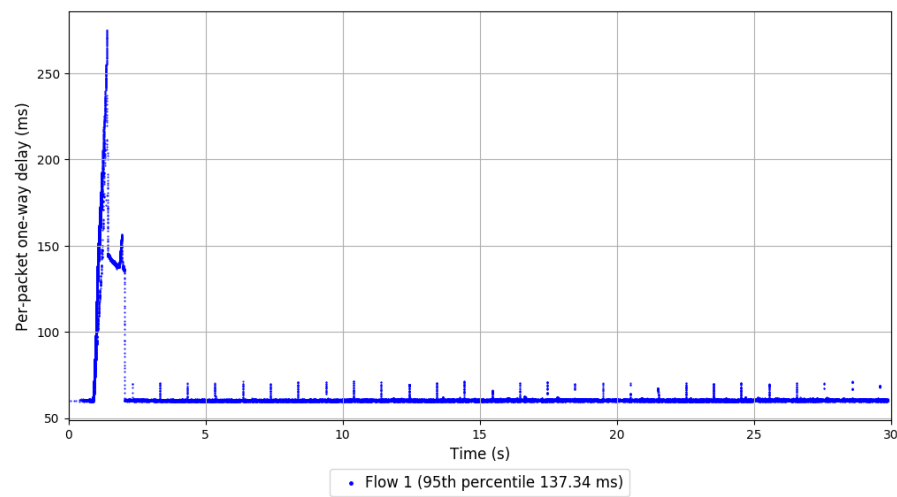
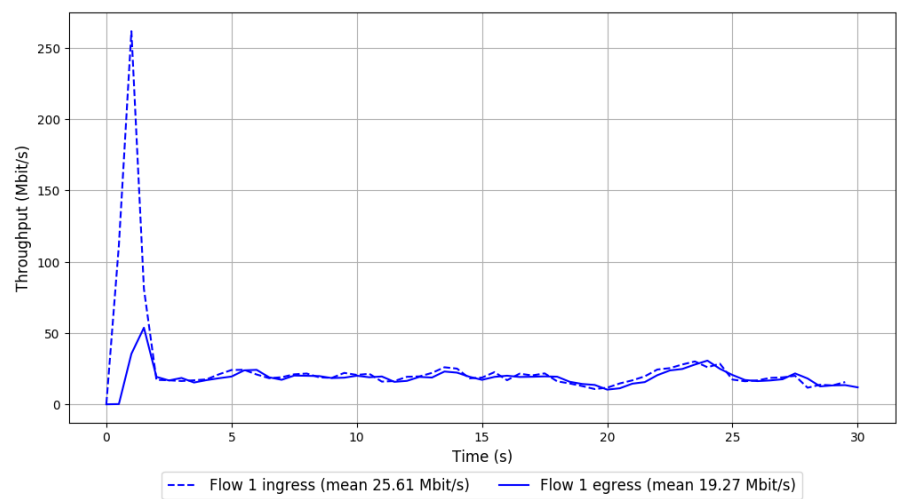


Run 3: Statistics of FillP

Start at: 2018-09-06 14:59:40
End at: 2018-09-06 15:00:10
Local clock offset: 2.913 ms
Remote clock offset: 58.822 ms

Below is generated by plot.py at 2018-09-06 15:54:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 19.27 Mbit/s
95th percentile per-packet one-way delay: 137.344 ms
Loss rate: 25.21%
-- Flow 1:
Average throughput: 19.27 Mbit/s
95th percentile per-packet one-way delay: 137.344 ms
Loss rate: 25.21%

Run 3: Report of FillP — Data Link

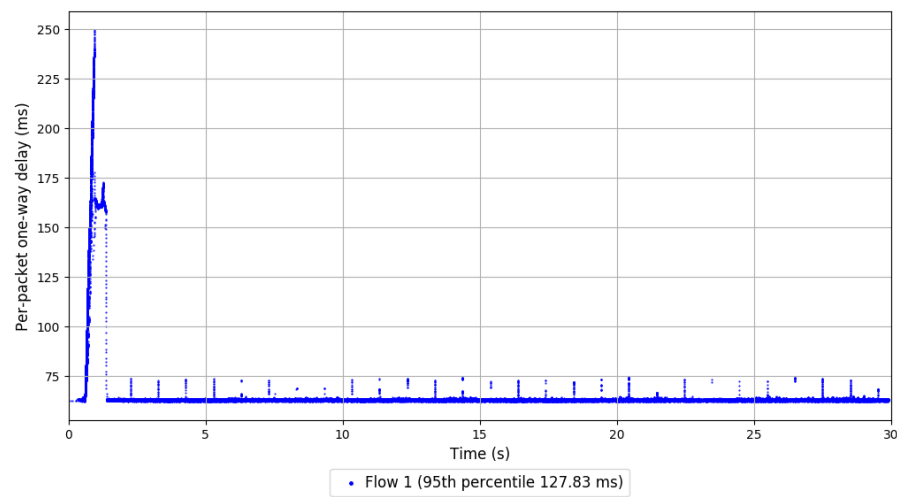
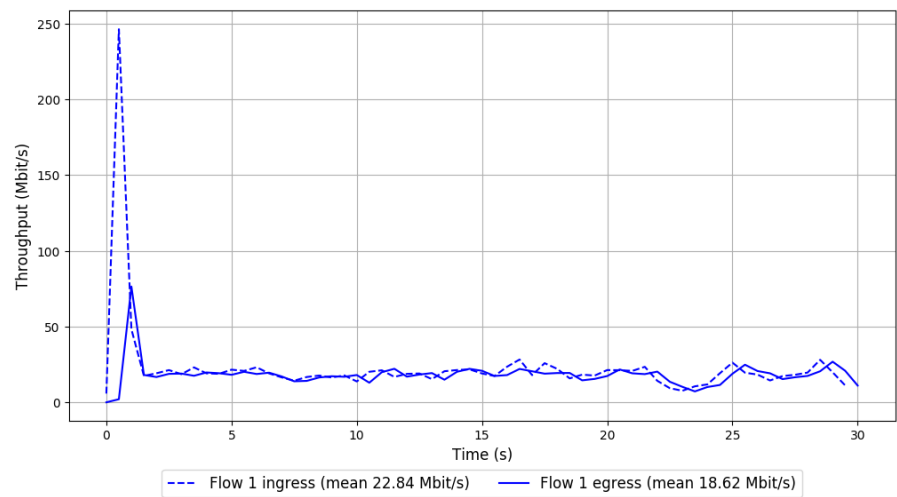


Run 4: Statistics of FillP

Start at: 2018-09-06 15:20:37
End at: 2018-09-06 15:21:07
Local clock offset: 2.552 ms
Remote clock offset: 43.412 ms

Below is generated by plot.py at 2018-09-06 15:54:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 18.62 Mbit/s
95th percentile per-packet one-way delay: 127.825 ms
Loss rate: 18.70%
-- Flow 1:
Average throughput: 18.62 Mbit/s
95th percentile per-packet one-way delay: 127.825 ms
Loss rate: 18.70%

Run 4: Report of FillP — Data Link

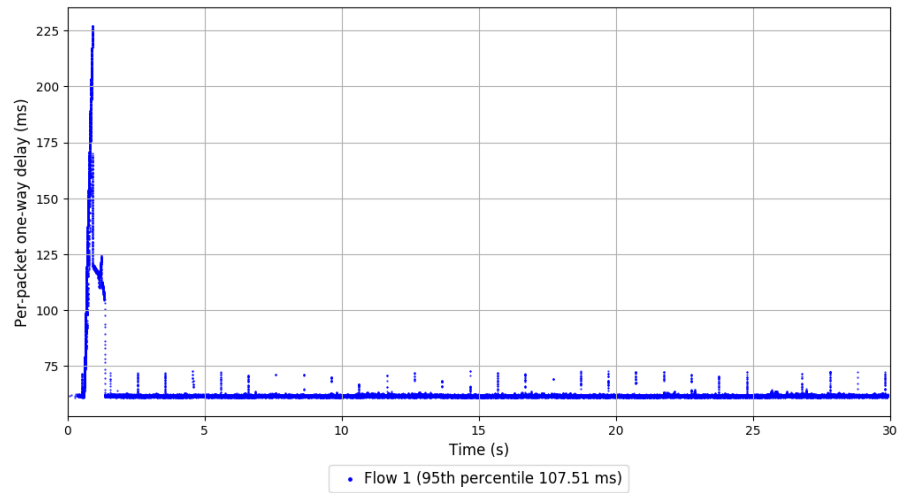
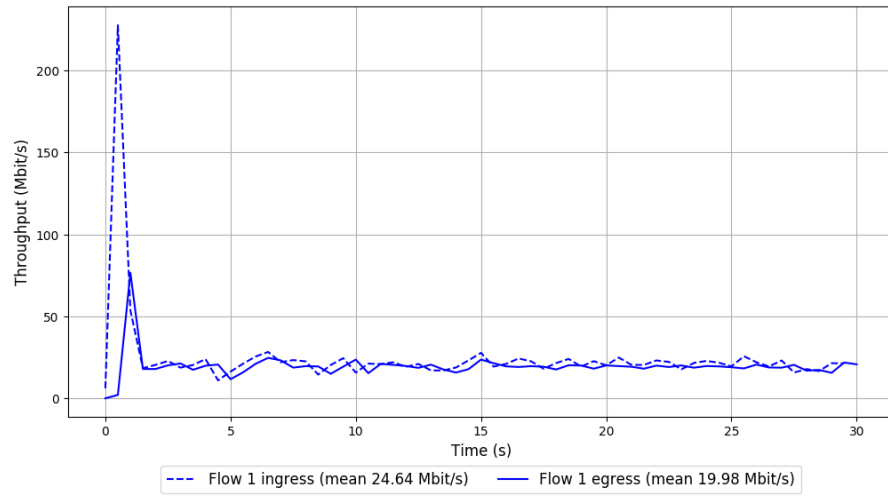


Run 5: Statistics of FillP

Start at: 2018-09-06 15:41:34
End at: 2018-09-06 15:42:04
Local clock offset: 2.374 ms
Remote clock offset: 41.623 ms

Below is generated by plot.py at 2018-09-06 15:54:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 19.98 Mbit/s
95th percentile per-packet one-way delay: 107.513 ms
Loss rate: 19.13%
-- Flow 1:
Average throughput: 19.98 Mbit/s
95th percentile per-packet one-way delay: 107.513 ms
Loss rate: 19.13%

Run 5: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2018-09-06 14:28:15

End at: 2018-09-06 14:28:45

Local clock offset: 4.024 ms

Remote clock offset: 58.411 ms

Below is generated by plot.py at 2018-09-06 15:54:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 19.83 Mbit/s

95th percentile per-packet one-way delay: 109.617 ms

Loss rate: 24.63%

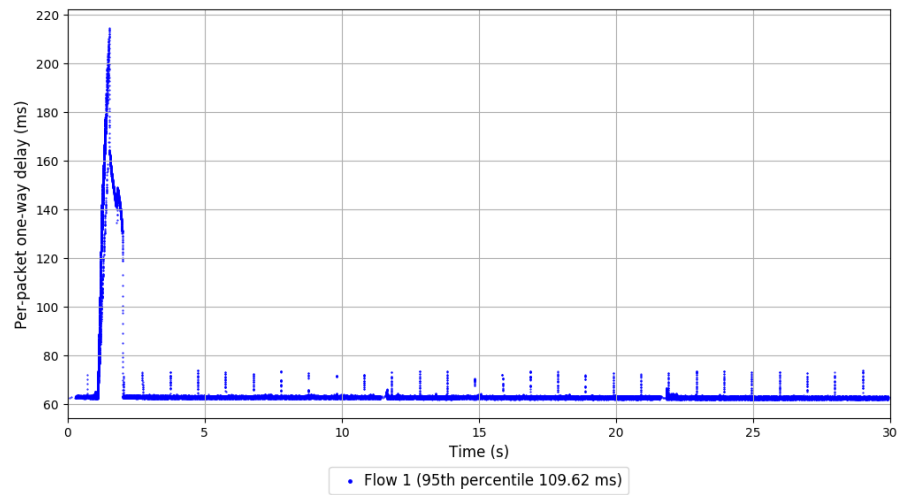
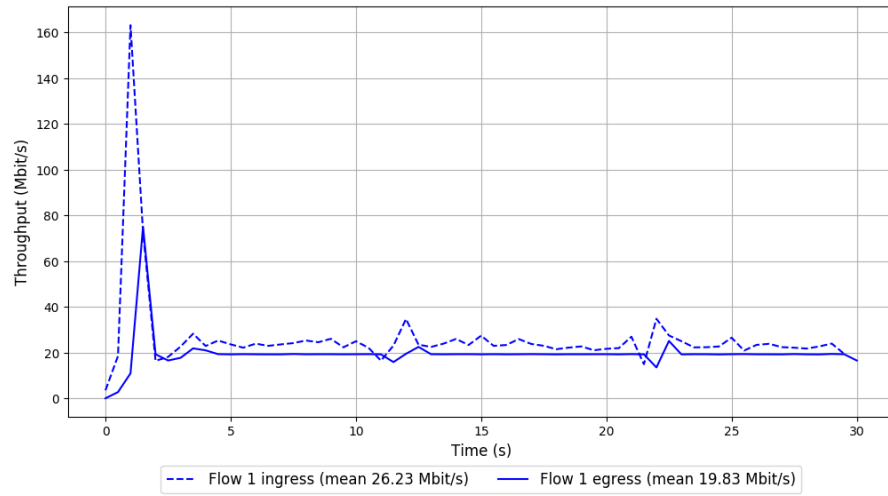
-- Flow 1:

Average throughput: 19.83 Mbit/s

95th percentile per-packet one-way delay: 109.617 ms

Loss rate: 24.63%

Run 1: Report of FillP-Sheep — Data Link

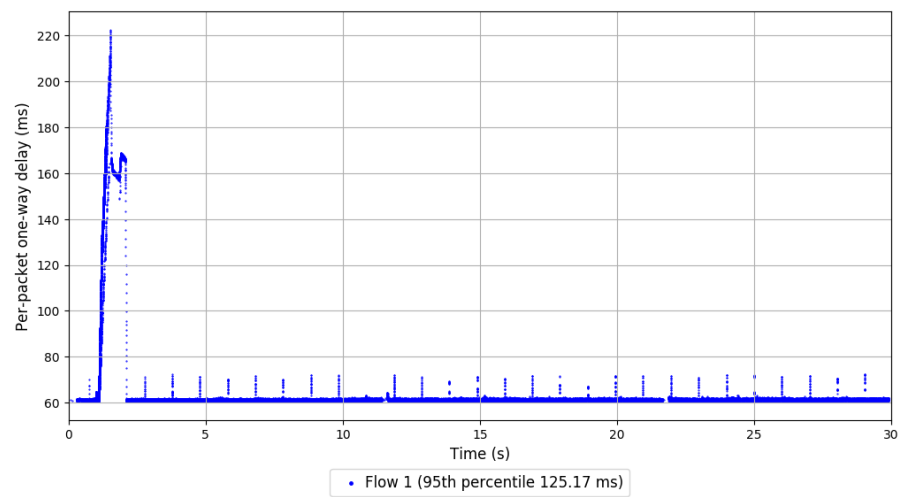
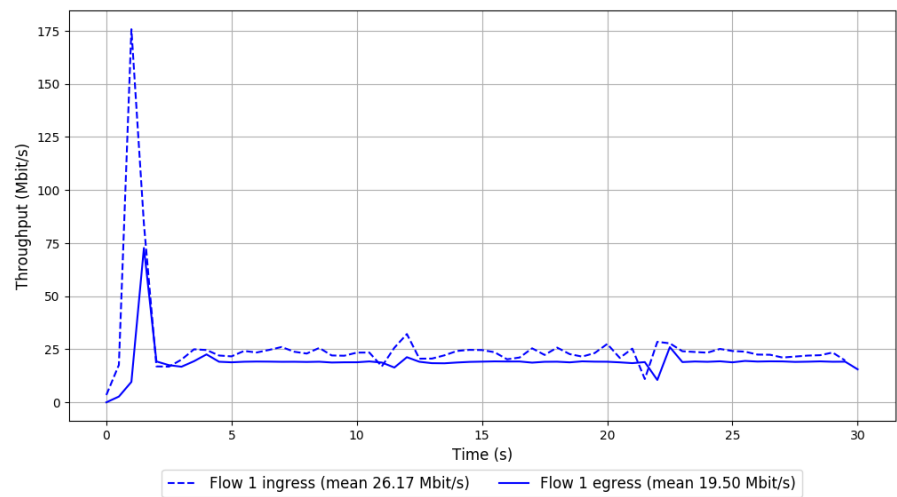


Run 2: Statistics of FillP-Sheep

Start at: 2018-09-06 14:49:11
End at: 2018-09-06 14:49:41
Local clock offset: 3.962 ms
Remote clock offset: 56.337 ms

Below is generated by plot.py at 2018-09-06 15:54:58
Datalink statistics
-- Total of 1 flow:
Average throughput: 19.50 Mbit/s
95th percentile per-packet one-way delay: 125.167 ms
Loss rate: 25.67%
-- Flow 1:
Average throughput: 19.50 Mbit/s
95th percentile per-packet one-way delay: 125.167 ms
Loss rate: 25.67%

Run 2: Report of FillP-Sheep — Data Link

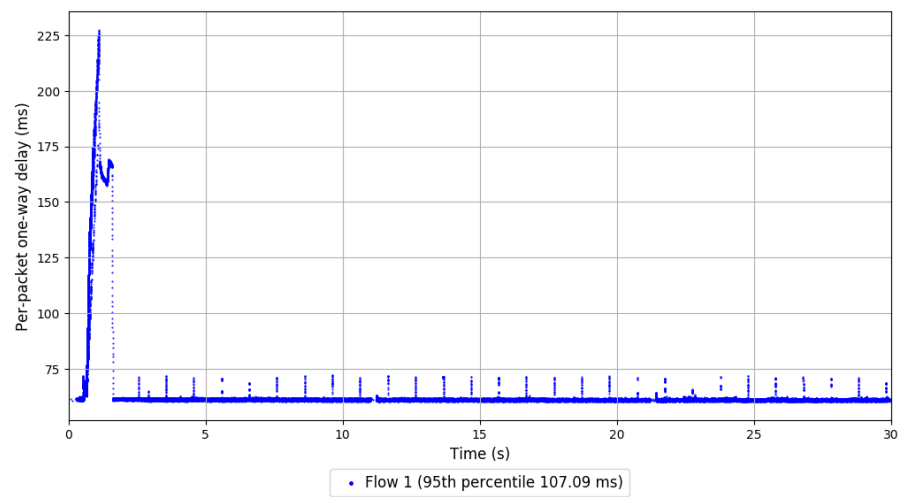
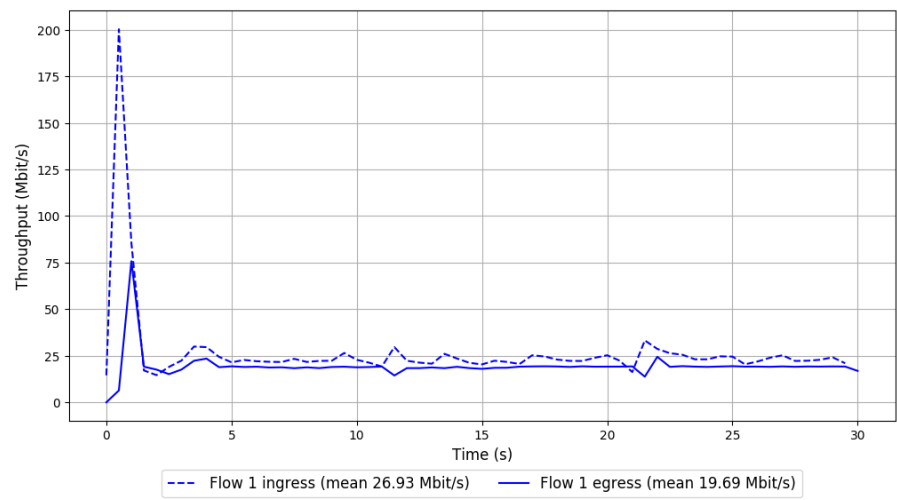


Run 3: Statistics of FillP-Sheep

Start at: 2018-09-06 15:10:11
End at: 2018-09-06 15:10:41
Local clock offset: 2.461 ms
Remote clock offset: 48.691 ms

Below is generated by plot.py at 2018-09-06 15:55:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 19.69 Mbit/s
95th percentile per-packet one-way delay: 107.093 ms
Loss rate: 27.08%
-- Flow 1:
Average throughput: 19.69 Mbit/s
95th percentile per-packet one-way delay: 107.093 ms
Loss rate: 27.08%

Run 3: Report of FillP-Sheep — Data Link

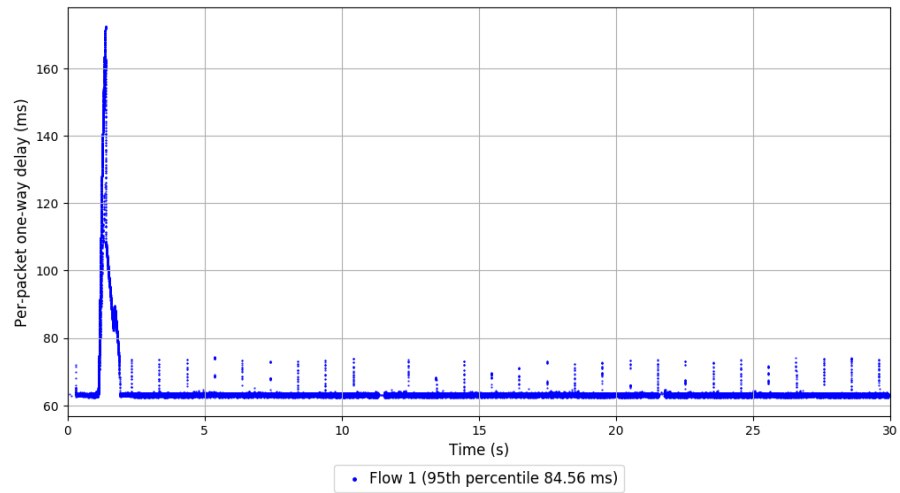
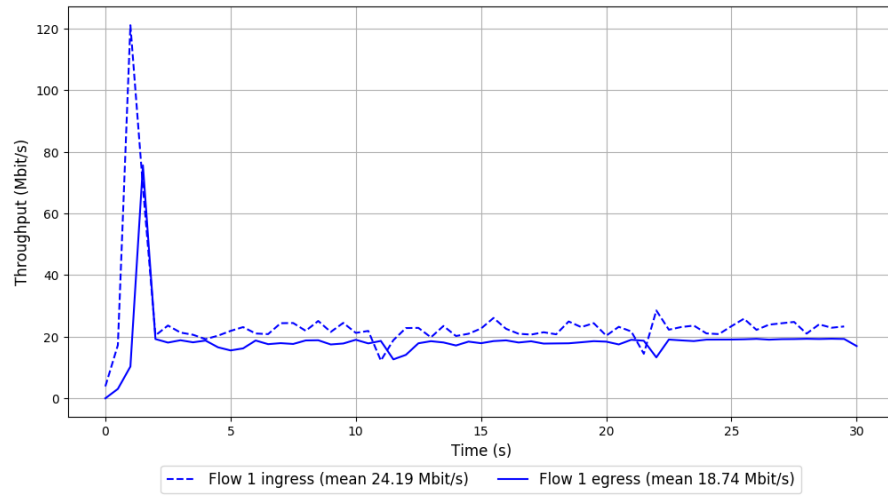


Run 4: Statistics of FillP-Sheep

Start at: 2018-09-06 15:31:05
End at: 2018-09-06 15:31:35
Local clock offset: 2.611 ms
Remote clock offset: 41.642 ms

Below is generated by plot.py at 2018-09-06 15:55:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 18.74 Mbit/s
95th percentile per-packet one-way delay: 84.564 ms
Loss rate: 22.86%
-- Flow 1:
Average throughput: 18.74 Mbit/s
95th percentile per-packet one-way delay: 84.564 ms
Loss rate: 22.86%

Run 4: Report of FillP-Sheep — Data Link

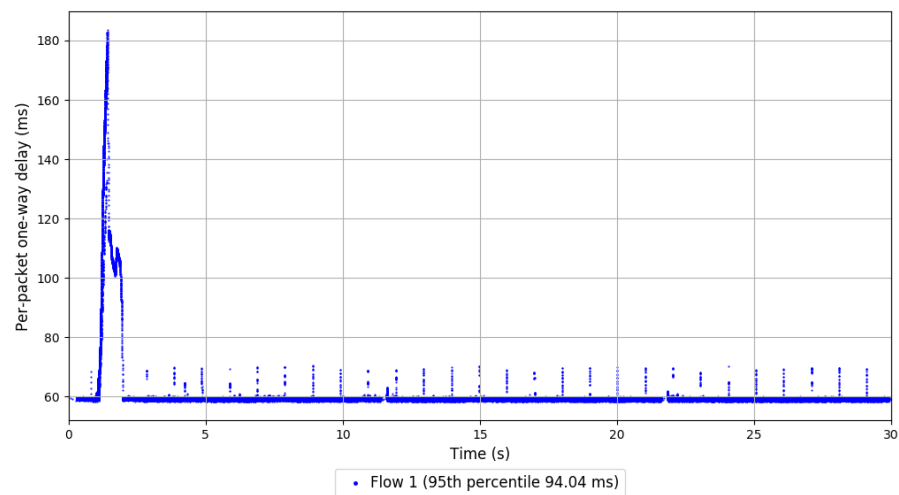
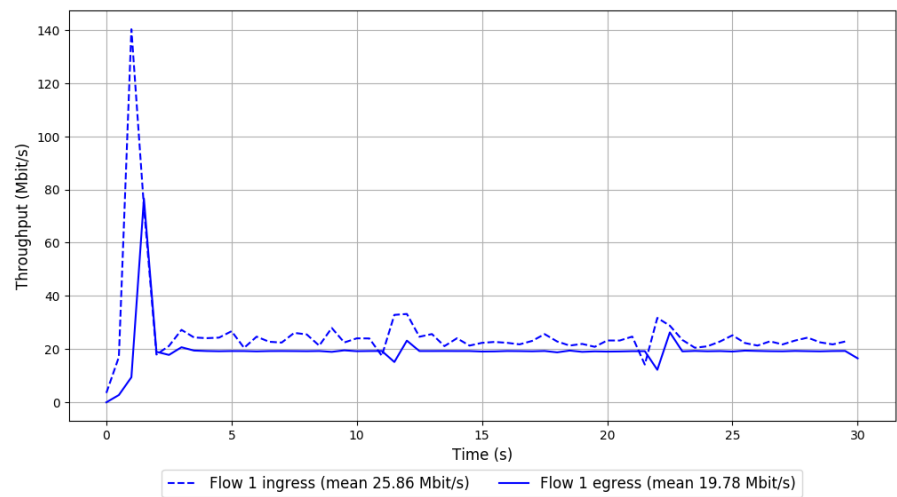


Run 5: Statistics of FillP-Sheep

Start at: 2018-09-06 15:51:59
End at: 2018-09-06 15:52:29
Local clock offset: 3.051 ms
Remote clock offset: 42.829 ms

Below is generated by plot.py at 2018-09-06 15:55:05
Datalink statistics
-- Total of 1 flow:
Average throughput: 19.78 Mbit/s
95th percentile per-packet one-way delay: 94.044 ms
Loss rate: 23.72%
-- Flow 1:
Average throughput: 19.78 Mbit/s
95th percentile per-packet one-way delay: 94.044 ms
Loss rate: 23.72%

Run 5: Report of FillP-Sheep — Data Link

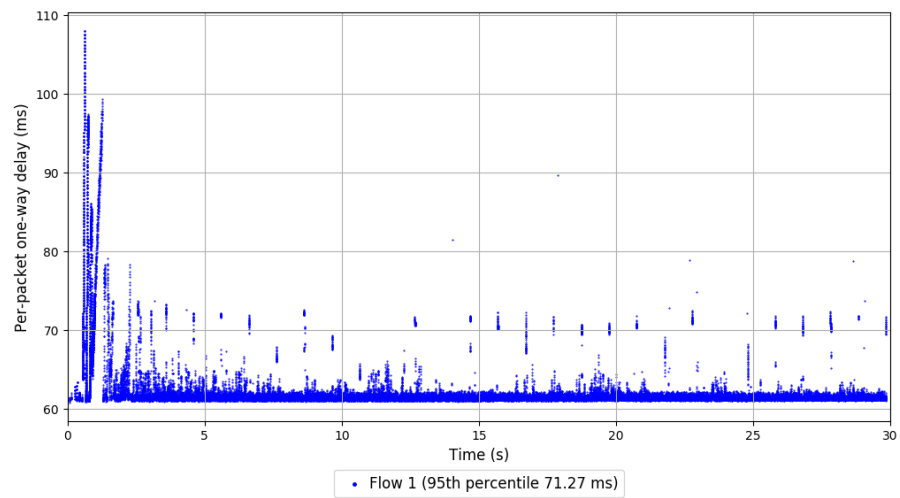
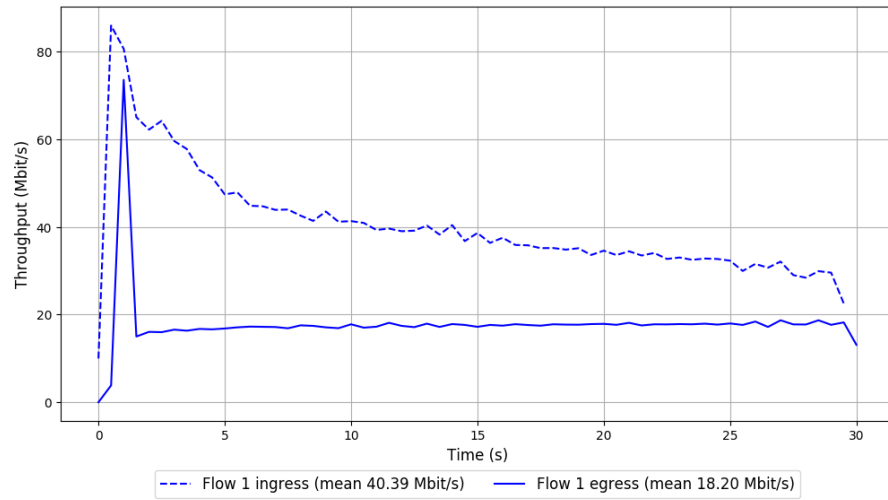


```
Run 1: Statistics of Indigo

Start at: 2018-09-06 14:11:43
End at: 2018-09-06 14:12:13
Local clock offset: 1.388 ms
Remote clock offset: 58.046 ms

# Below is generated by plot.py at 2018-09-06 15:55:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 18.20 Mbit/s
95th percentile per-packet one-way delay: 71.269 ms
Loss rate: 55.07%
-- Flow 1:
Average throughput: 18.20 Mbit/s
95th percentile per-packet one-way delay: 71.269 ms
Loss rate: 55.07%
```

Run 1: Report of Indigo — Data Link

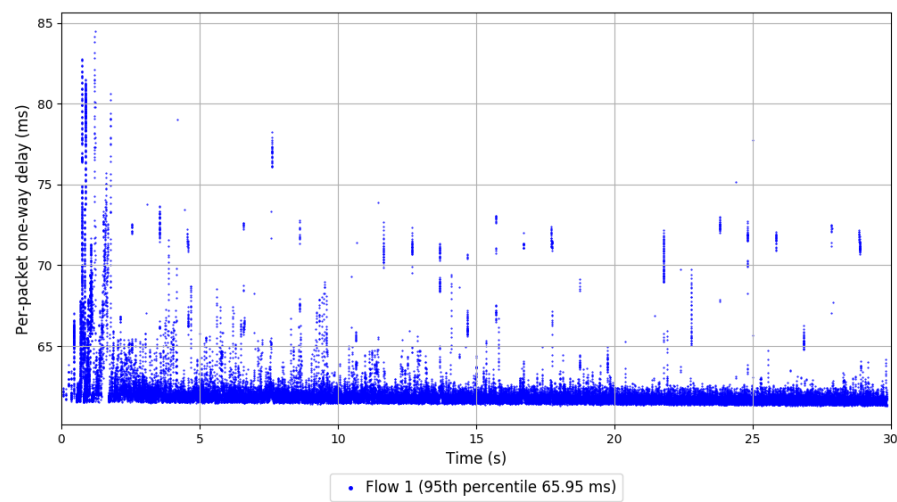
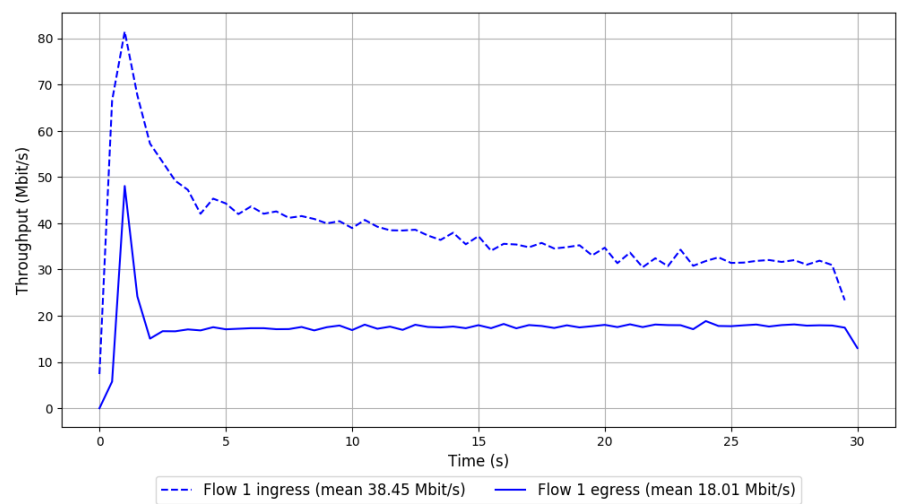


Run 2: Statistics of Indigo

Start at: 2018-09-06 14:32:53
End at: 2018-09-06 14:33:23
Local clock offset: 4.552 ms
Remote clock offset: 57.392 ms

Below is generated by plot.py at 2018-09-06 15:55:05
Datalink statistics
-- Total of 1 flow:
Average throughput: 18.01 Mbit/s
95th percentile per-packet one-way delay: 65.948 ms
Loss rate: 53.31%
-- Flow 1:
Average throughput: 18.01 Mbit/s
95th percentile per-packet one-way delay: 65.948 ms
Loss rate: 53.31%

Run 2: Report of Indigo — Data Link

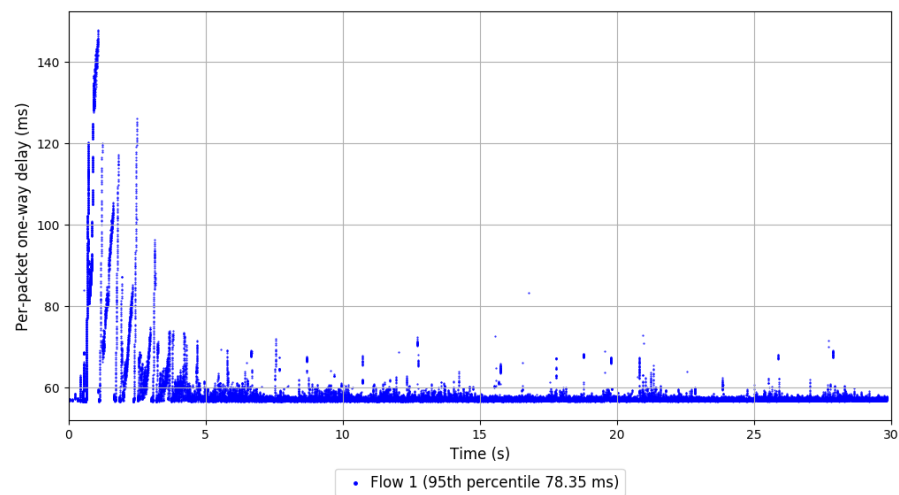
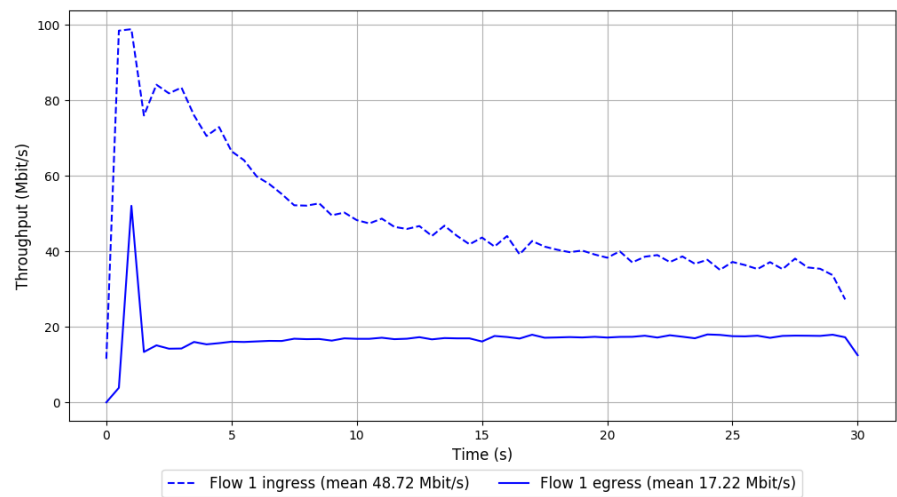


Run 3: Statistics of Indigo

Start at: 2018-09-06 14:53:48
End at: 2018-09-06 14:54:18
Local clock offset: 3.454 ms
Remote clock offset: 61.514 ms

Below is generated by plot.py at 2018-09-06 15:55:06
Datalink statistics
-- Total of 1 flow:
Average throughput: 17.22 Mbit/s
95th percentile per-packet one-way delay: 78.353 ms
Loss rate: 64.76%
-- Flow 1:
Average throughput: 17.22 Mbit/s
95th percentile per-packet one-way delay: 78.353 ms
Loss rate: 64.76%

Run 3: Report of Indigo — Data Link

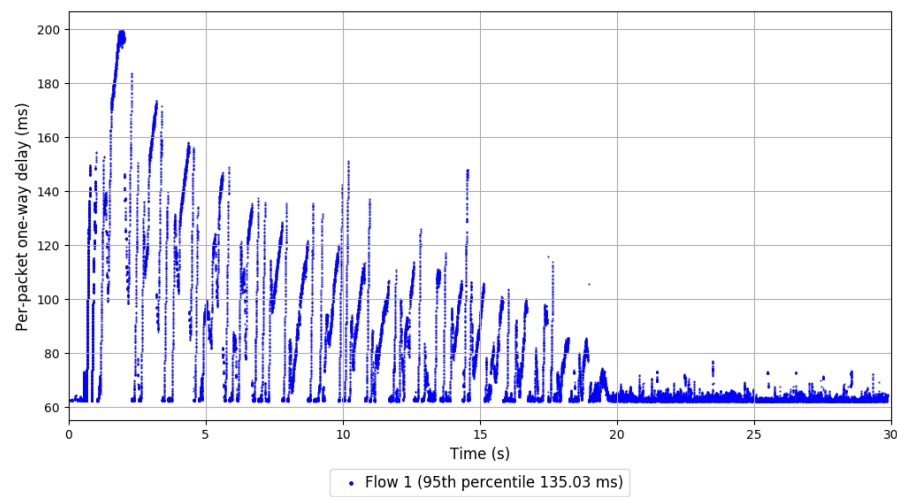
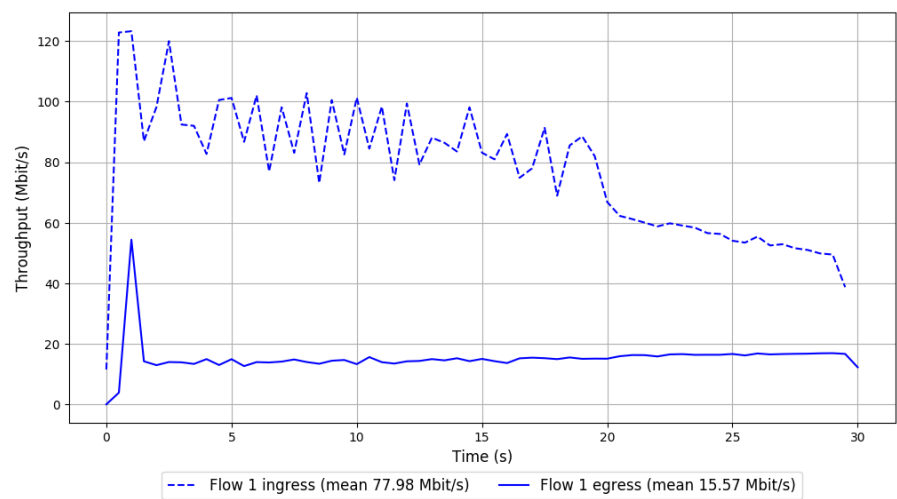


Run 4: Statistics of Indigo

Start at: 2018-09-06 15:14:47
End at: 2018-09-06 15:15:17
Local clock offset: 2.243 ms
Remote clock offset: 45.454 ms

Below is generated by plot.py at 2018-09-06 15:55:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 15.57 Mbit/s
95th percentile per-packet one-way delay: 135.030 ms
Loss rate: 80.09%
-- Flow 1:
Average throughput: 15.57 Mbit/s
95th percentile per-packet one-way delay: 135.030 ms
Loss rate: 80.09%

Run 4: Report of Indigo — Data Link

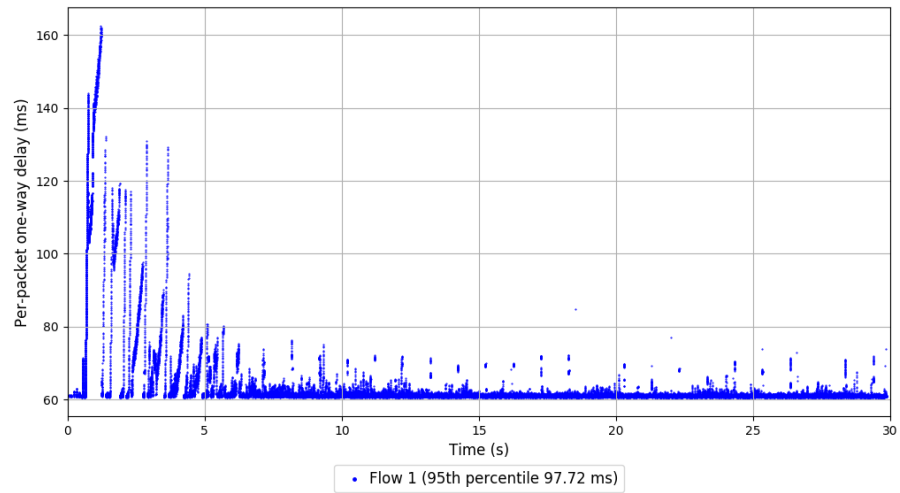
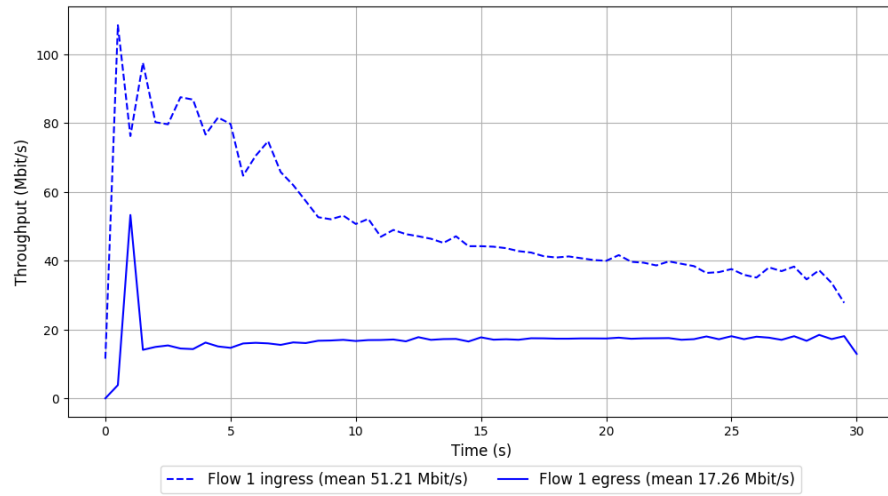


Run 5: Statistics of Indigo

Start at: 2018-09-06 15:35:41
End at: 2018-09-06 15:36:11
Local clock offset: 2.659 ms
Remote clock offset: 43.187 ms

Below is generated by plot.py at 2018-09-06 15:55:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 17.26 Mbit/s
95th percentile per-packet one-way delay: 97.724 ms
Loss rate: 66.39%
-- Flow 1:
Average throughput: 17.26 Mbit/s
95th percentile per-packet one-way delay: 97.724 ms
Loss rate: 66.39%

Run 5: Report of Indigo — Data Link

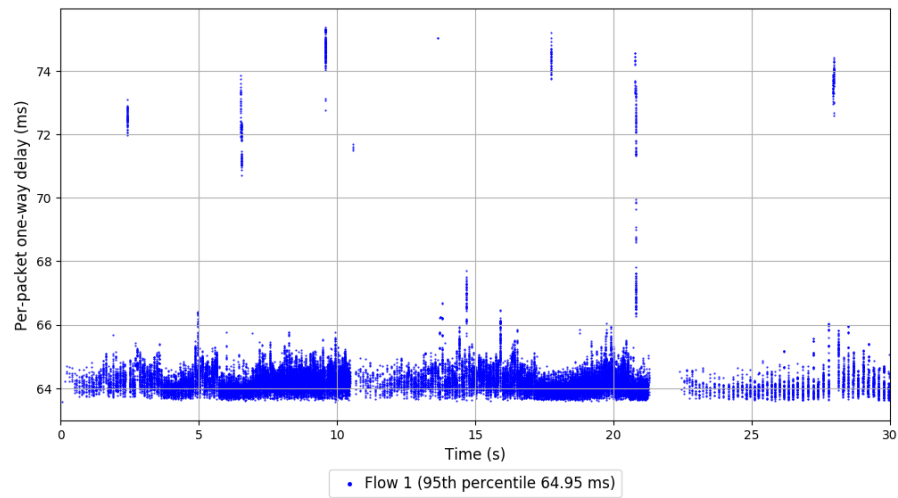
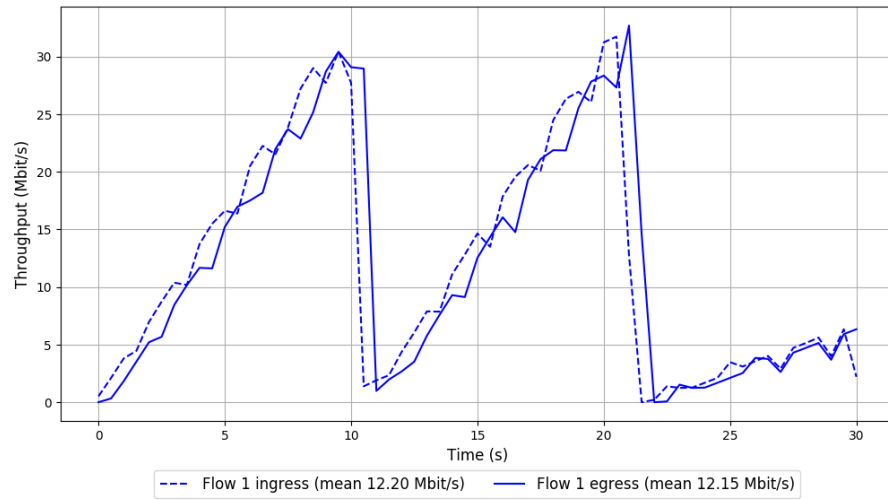


Run 1: Statistics of LEDBAT

Start at: 2018-09-06 14:15:13
End at: 2018-09-06 14:15:43
Local clock offset: 1.478 ms
Remote clock offset: 56.327 ms

Below is generated by plot.py at 2018-09-06 15:55:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.15 Mbit/s
95th percentile per-packet one-way delay: 64.954 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 12.15 Mbit/s
95th percentile per-packet one-way delay: 64.954 ms
Loss rate: 0.96%

Run 1: Report of LEDBAT — Data Link

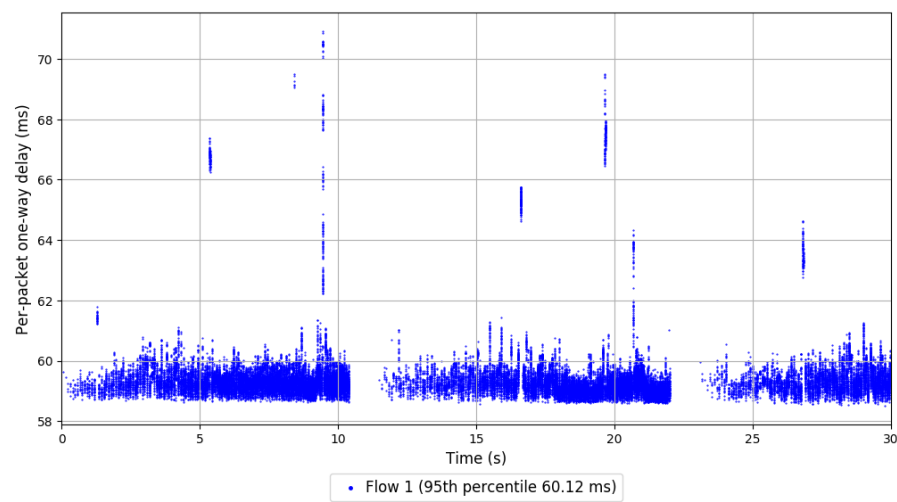
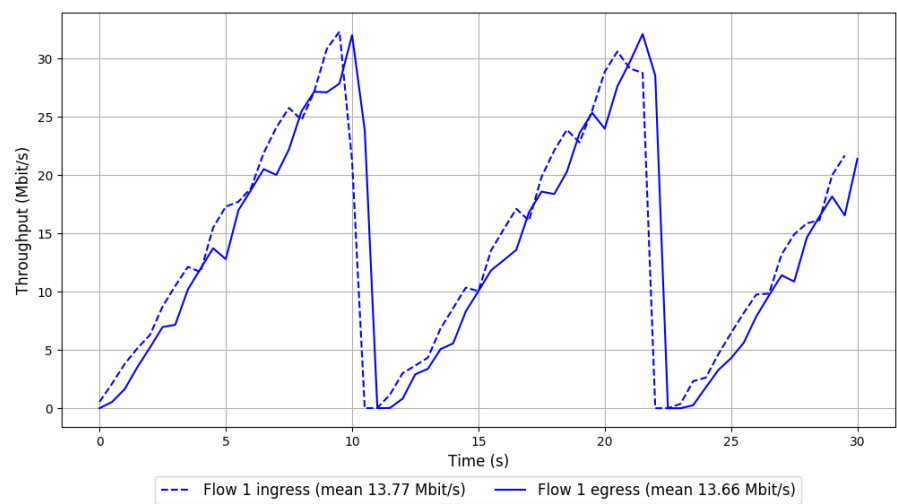


Run 2: Statistics of LEDBAT

Start at: 2018-09-06 14:36:27
End at: 2018-09-06 14:36:57
Local clock offset: 4.669 ms
Remote clock offset: 59.012 ms

Below is generated by plot.py at 2018-09-06 15:55:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 13.66 Mbit/s
95th percentile per-packet one-way delay: 60.117 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 13.66 Mbit/s
95th percentile per-packet one-way delay: 60.117 ms
Loss rate: 1.08%

Run 2: Report of LEDBAT — Data Link

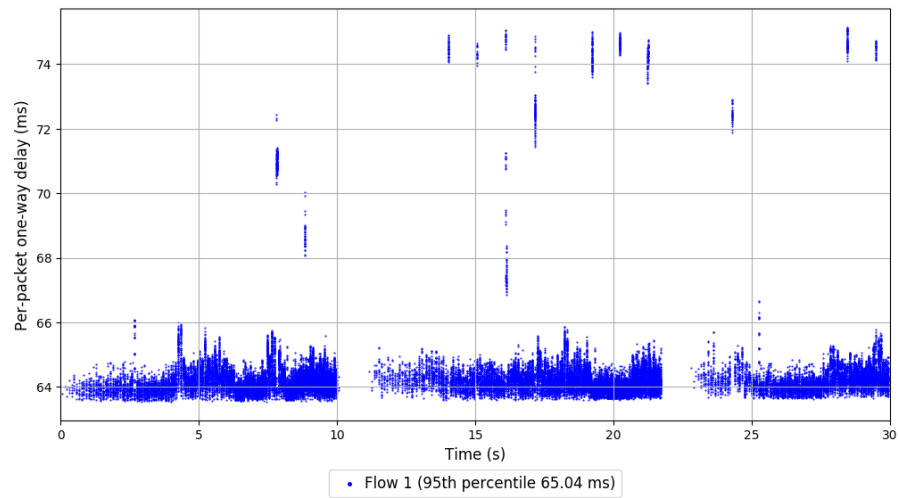
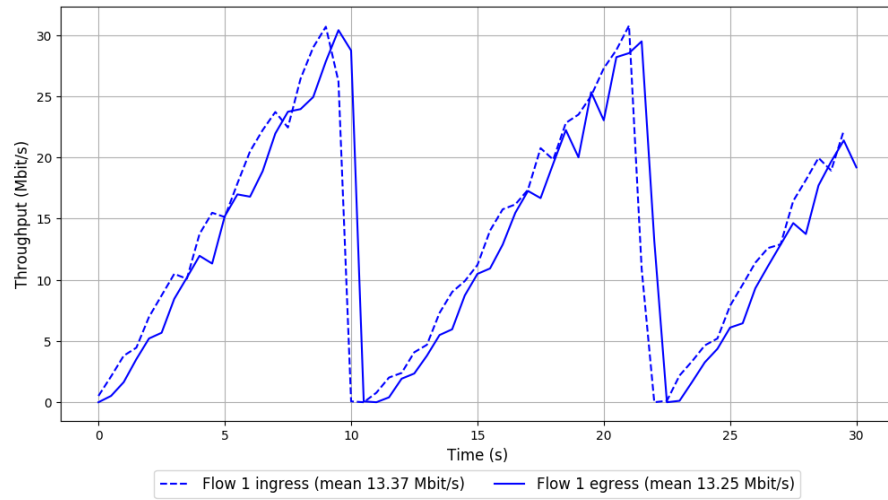


Run 3: Statistics of LEDBAT

Start at: 2018-09-06 14:57:17
End at: 2018-09-06 14:57:47
Local clock offset: 3.009 ms
Remote clock offset: 54.793 ms

Below is generated by plot.py at 2018-09-06 15:55:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 13.25 Mbit/s
95th percentile per-packet one-way delay: 65.041 ms
Loss rate: 1.15%
-- Flow 1:
Average throughput: 13.25 Mbit/s
95th percentile per-packet one-way delay: 65.041 ms
Loss rate: 1.15%

Run 3: Report of LEDBAT — Data Link

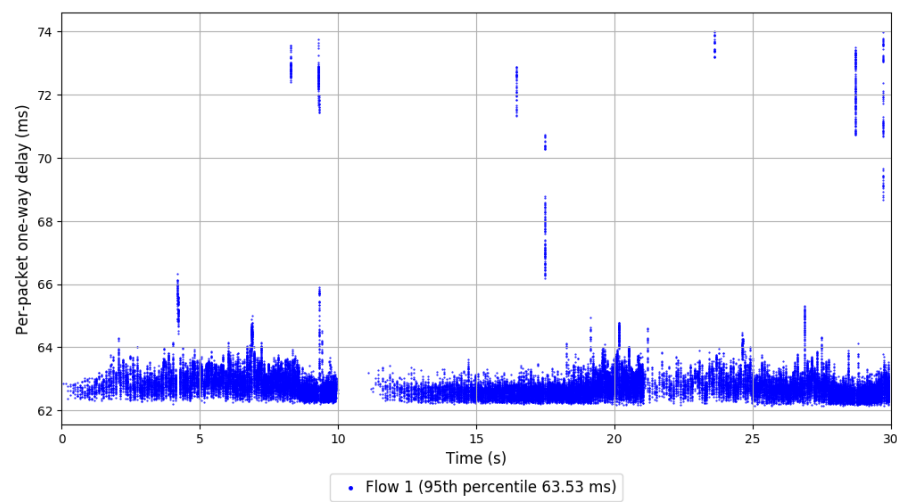
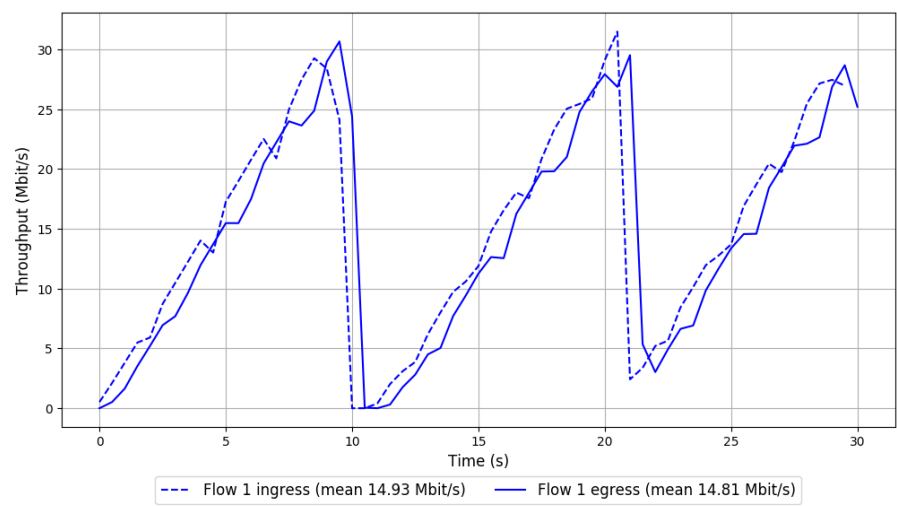


Run 4: Statistics of LEDBAT

Start at: 2018-09-06 15:18:17
End at: 2018-09-06 15:18:47
Local clock offset: 2.392 ms
Remote clock offset: 43.738 ms

Below is generated by plot.py at 2018-09-06 15:55:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 14.81 Mbit/s
95th percentile per-packet one-way delay: 63.535 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 14.81 Mbit/s
95th percentile per-packet one-way delay: 63.535 ms
Loss rate: 1.09%

Run 4: Report of LEDBAT — Data Link

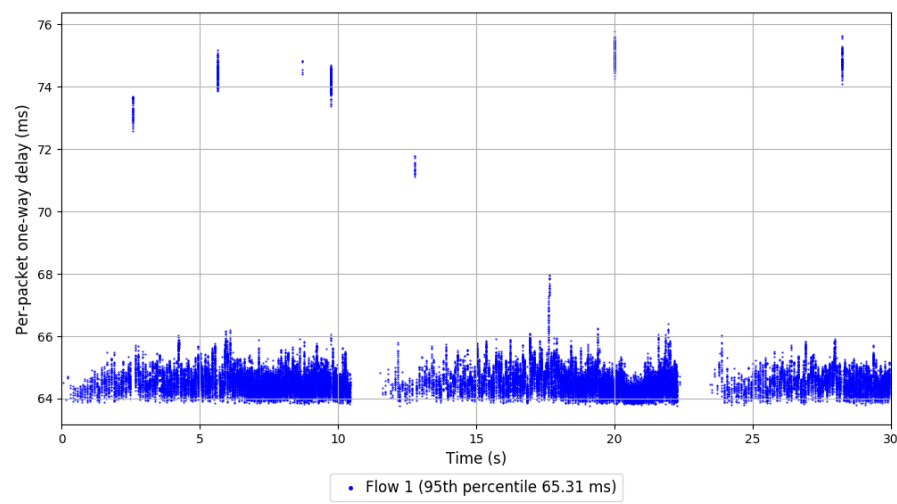
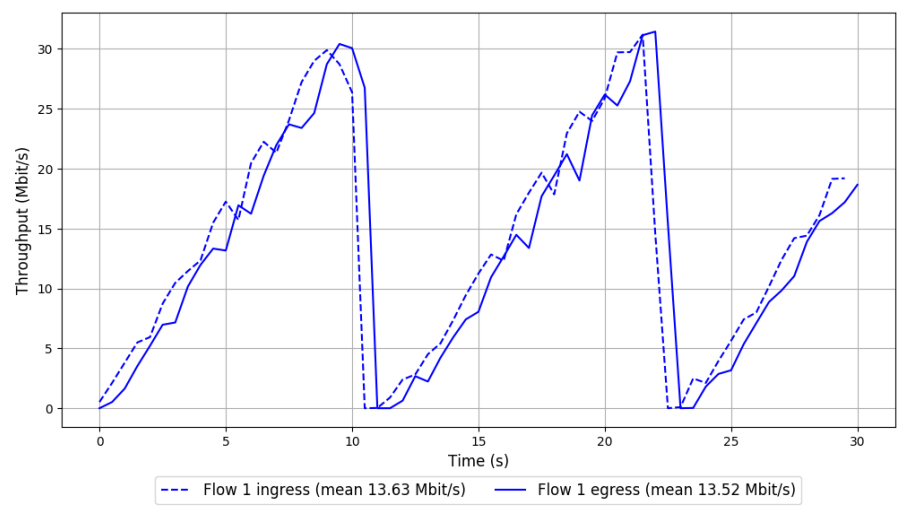


Run 5: Statistics of LEDBAT

Start at: 2018-09-06 15:39:14
End at: 2018-09-06 15:39:44
Local clock offset: 2.382 ms
Remote clock offset: 39.149 ms

Below is generated by plot.py at 2018-09-06 15:55:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 13.52 Mbit/s
95th percentile per-packet one-way delay: 65.311 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 13.52 Mbit/s
95th percentile per-packet one-way delay: 65.311 ms
Loss rate: 1.09%

Run 5: Report of LEDBAT — Data Link



Run 1: Statistics of Indigo-Muses

Start at: 2018-09-06 14:23:23

End at: 2018-09-06 14:23:53

Local clock offset: 3.214 ms

Remote clock offset: 59.693 ms

Below is generated by plot.py at 2018-09-06 15:55:27

Datalink statistics

-- Total of 1 flow:

Average throughput: 19.99 Mbit/s

95th percentile per-packet one-way delay: 64.418 ms

Loss rate: 40.51%

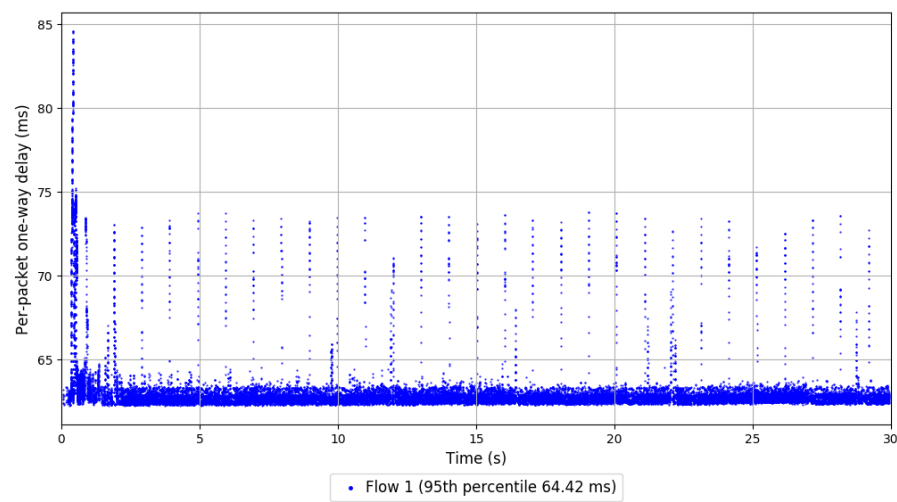
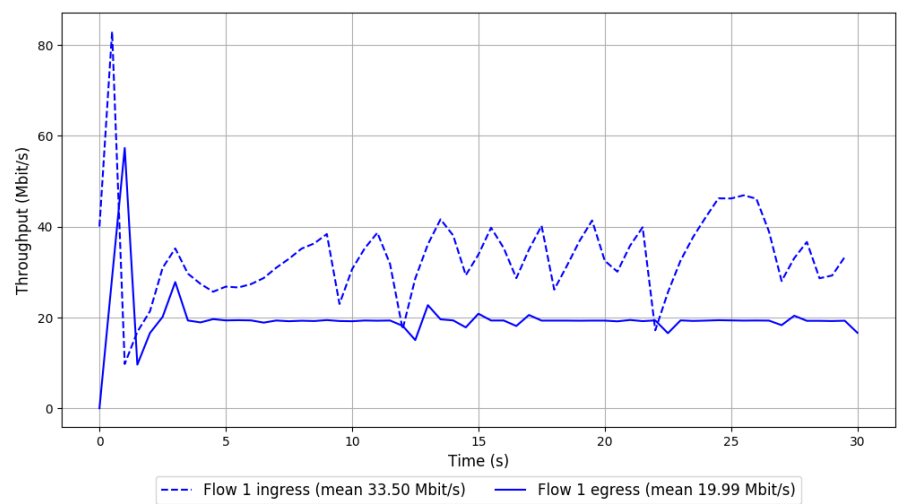
-- Flow 1:

Average throughput: 19.99 Mbit/s

95th percentile per-packet one-way delay: 64.418 ms

Loss rate: 40.51%

Run 1: Report of Indigo-Muses — Data Link

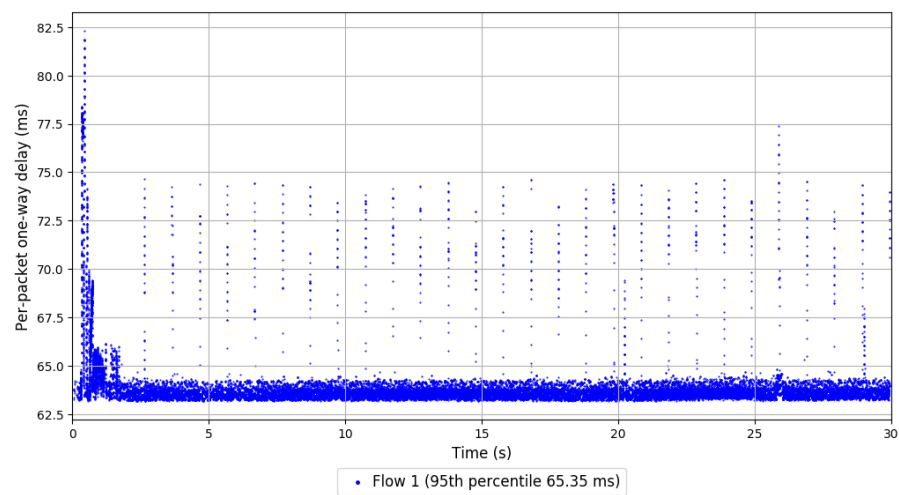
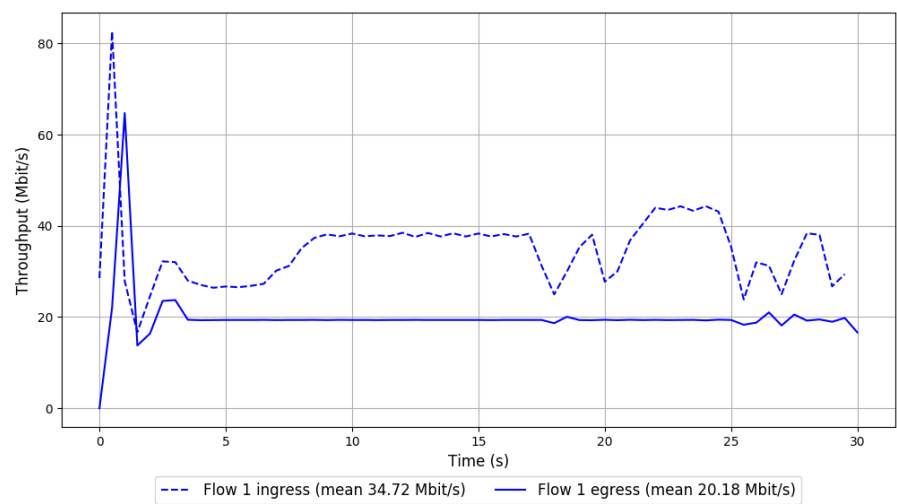


Run 2: Statistics of Indigo-Muses

Start at: 2018-09-06 14:44:36
End at: 2018-09-06 14:45:06
Local clock offset: 4.974 ms
Remote clock offset: 53.913 ms

Below is generated by plot.py at 2018-09-06 15:55:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 20.18 Mbit/s
95th percentile per-packet one-way delay: 65.346 ms
Loss rate: 42.05%
-- Flow 1:
Average throughput: 20.18 Mbit/s
95th percentile per-packet one-way delay: 65.346 ms
Loss rate: 42.05%

Run 2: Report of Indigo-Muses — Data Link

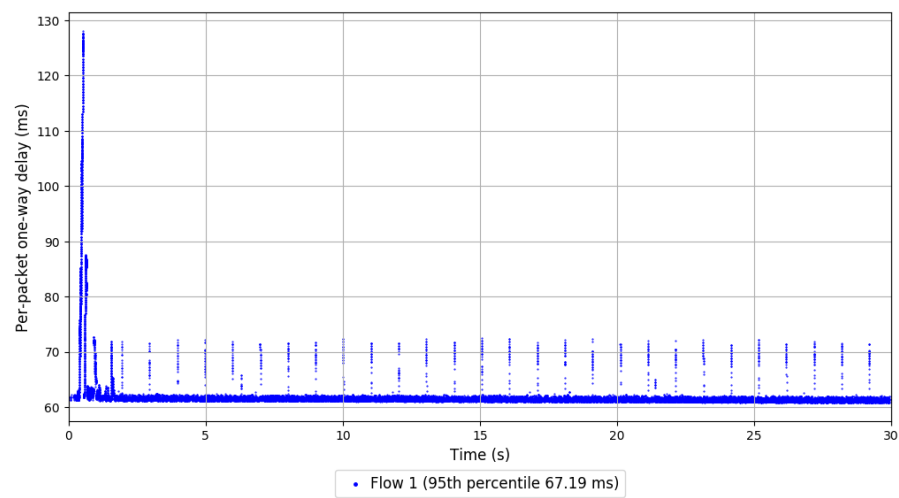
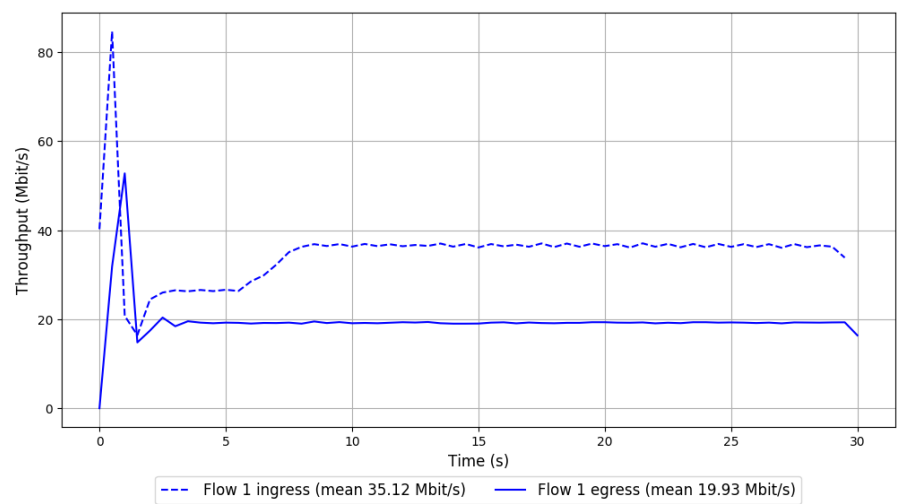


Run 3: Statistics of Indigo-Muses

Start at: 2018-09-06 15:05:27
End at: 2018-09-06 15:05:57
Local clock offset: 2.531 ms
Remote clock offset: 51.593 ms

Below is generated by plot.py at 2018-09-06 15:55:37
Datalink statistics
-- Total of 1 flow:
Average throughput: 19.93 Mbit/s
95th percentile per-packet one-way delay: 67.192 ms
Loss rate: 43.42%
-- Flow 1:
Average throughput: 19.93 Mbit/s
95th percentile per-packet one-way delay: 67.192 ms
Loss rate: 43.42%

Run 3: Report of Indigo-Muses — Data Link

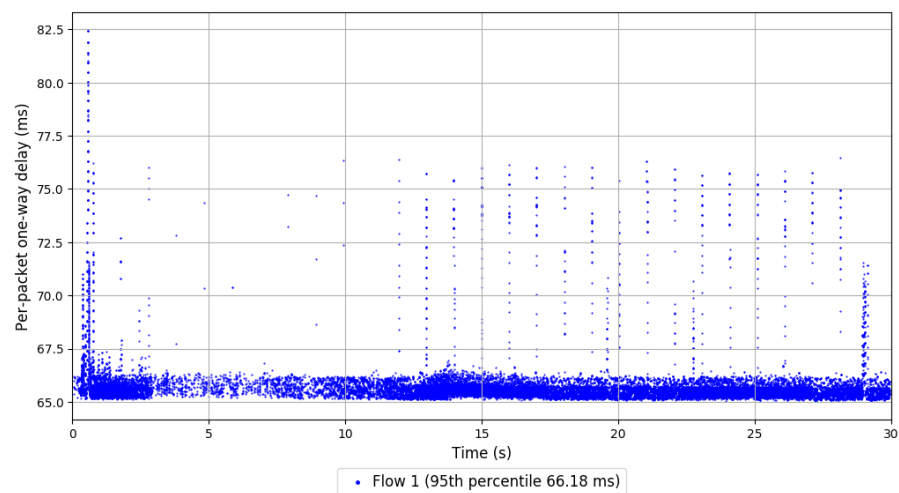
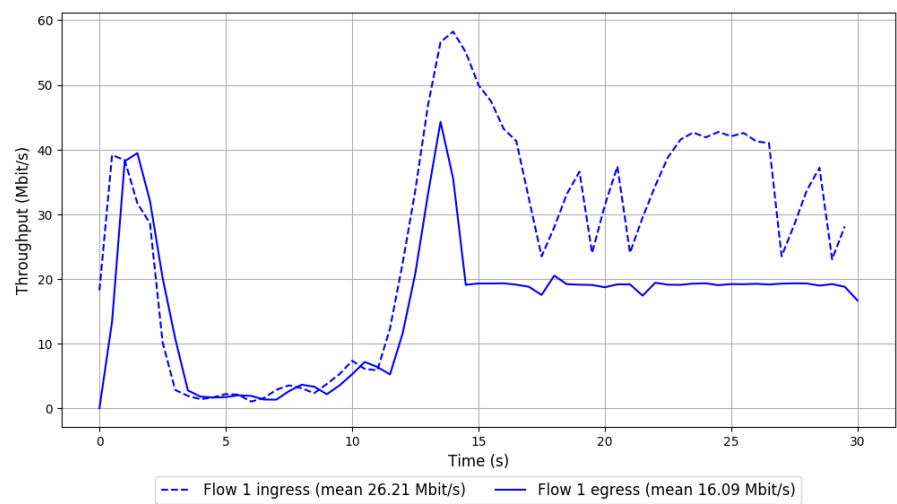


Run 4: Statistics of Indigo-Muses

Start at: 2018-09-06 15:26:21
End at: 2018-09-06 15:26:51
Local clock offset: 2.537 ms
Remote clock offset: 39.645 ms

Below is generated by plot.py at 2018-09-06 15:55:37
Datalink statistics
-- Total of 1 flow:
Average throughput: 16.09 Mbit/s
95th percentile per-packet one-way delay: 66.182 ms
Loss rate: 38.81%
-- Flow 1:
Average throughput: 16.09 Mbit/s
95th percentile per-packet one-way delay: 66.182 ms
Loss rate: 38.81%

Run 4: Report of Indigo-Muses — Data Link

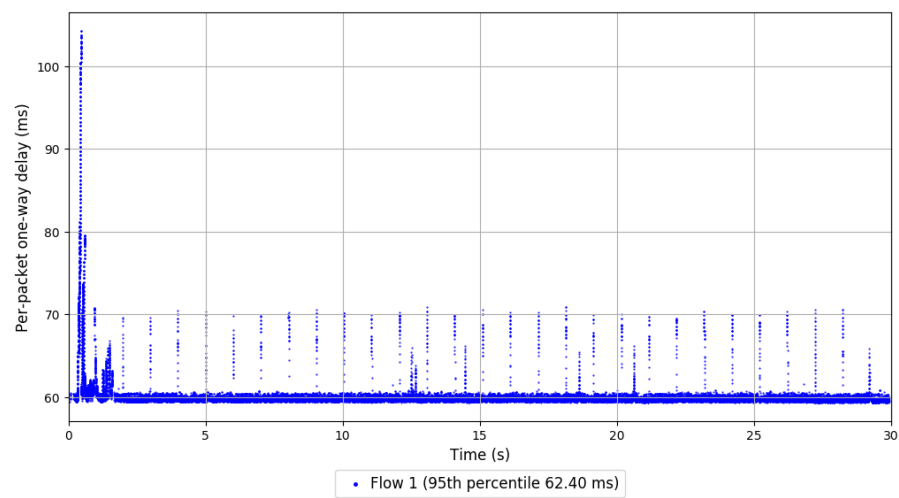
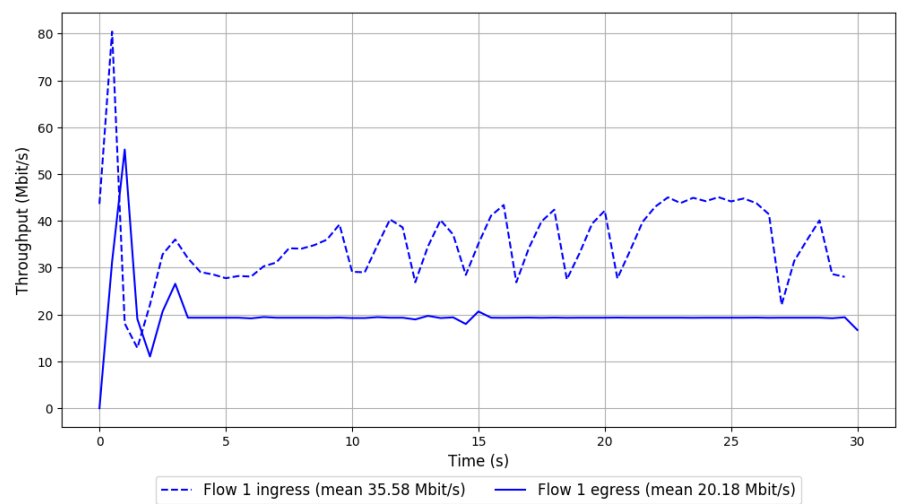


Run 5: Statistics of Indigo-Muses

Start at: 2018-09-06 15:47:18
End at: 2018-09-06 15:47:48
Local clock offset: 2.544 ms
Remote clock offset: 42.709 ms

Below is generated by plot.py at 2018-09-06 15:55:39
Datalink statistics
-- Total of 1 flow:
Average throughput: 20.18 Mbit/s
95th percentile per-packet one-way delay: 62.403 ms
Loss rate: 43.45%
-- Flow 1:
Average throughput: 20.18 Mbit/s
95th percentile per-packet one-way delay: 62.403 ms
Loss rate: 43.45%

Run 5: Report of Indigo-Muses — Data Link

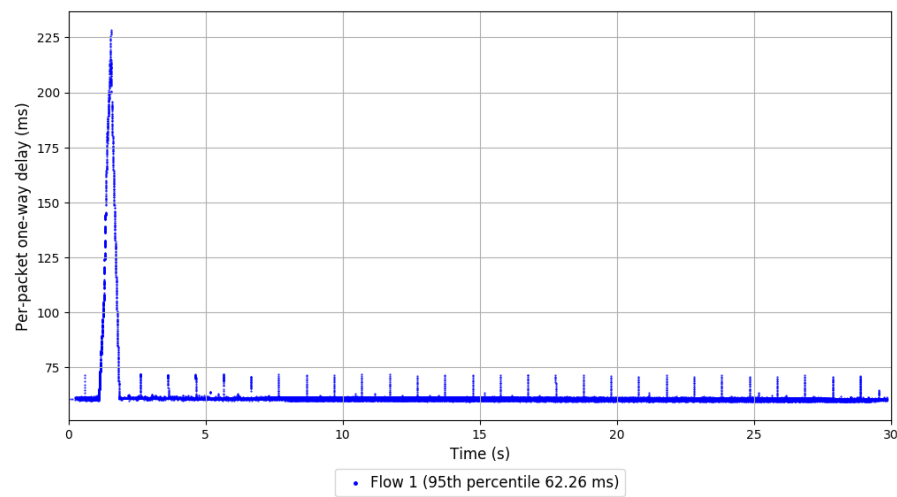
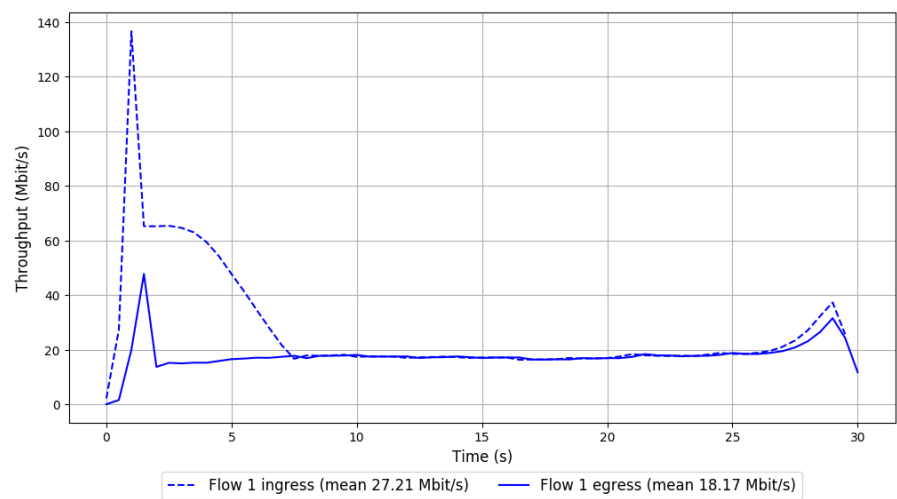


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-09-06 14:26:58
End at: 2018-09-06 14:27:28
Local clock offset: 3.963 ms
Remote clock offset: 61.895 ms

# Below is generated by plot.py at 2018-09-06 15:55:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 18.17 Mbit/s
95th percentile per-packet one-way delay: 62.263 ms
Loss rate: 33.41%
-- Flow 1:
Average throughput: 18.17 Mbit/s
95th percentile per-packet one-way delay: 62.263 ms
Loss rate: 33.41%
```

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-09-06 14:48:02

End at: 2018-09-06 14:48:32

Local clock offset: 4.412 ms

Remote clock offset: 55.665 ms

Below is generated by plot.py at 2018-09-06 15:55:39

Datalink statistics

-- Total of 1 flow:

Average throughput: 18.39 Mbit/s

95th percentile per-packet one-way delay: 64.048 ms

Loss rate: 28.13%

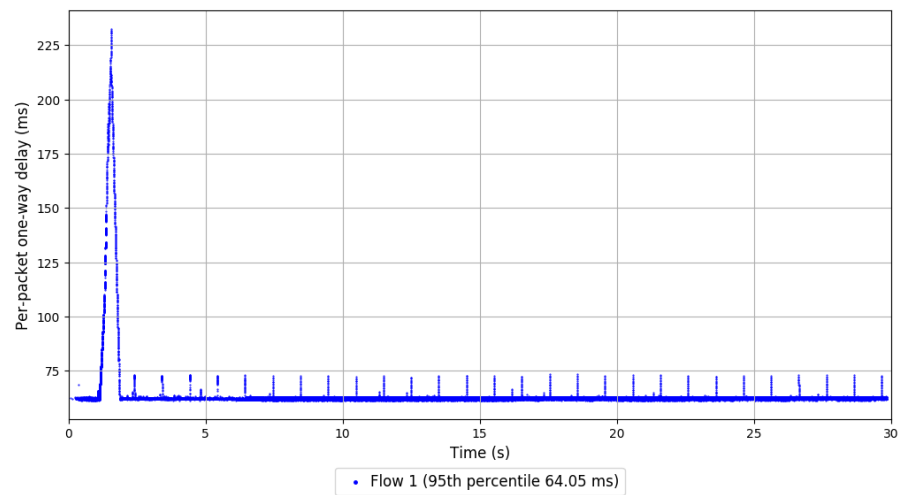
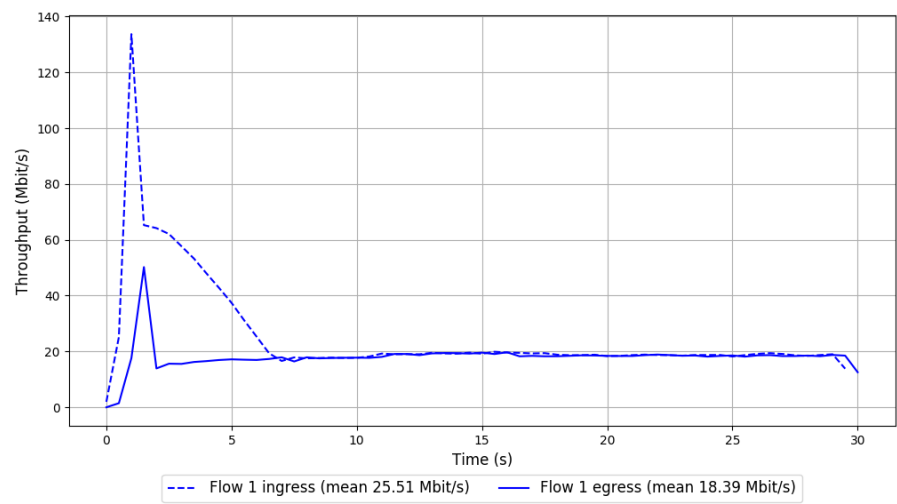
-- Flow 1:

Average throughput: 18.39 Mbit/s

95th percentile per-packet one-way delay: 64.048 ms

Loss rate: 28.13%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-09-06 15:09:02

End at: 2018-09-06 15:09:32

Local clock offset: 2.404 ms

Remote clock offset: 49.141 ms

Below is generated by plot.py at 2018-09-06 15:55:42

Datalink statistics

-- Total of 1 flow:

Average throughput: 17.49 Mbit/s

95th percentile per-packet one-way delay: 63.794 ms

Loss rate: 31.00%

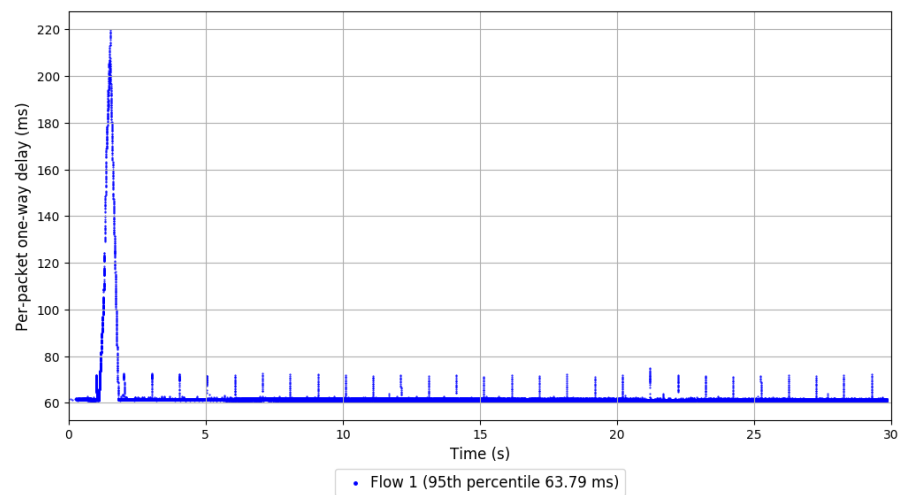
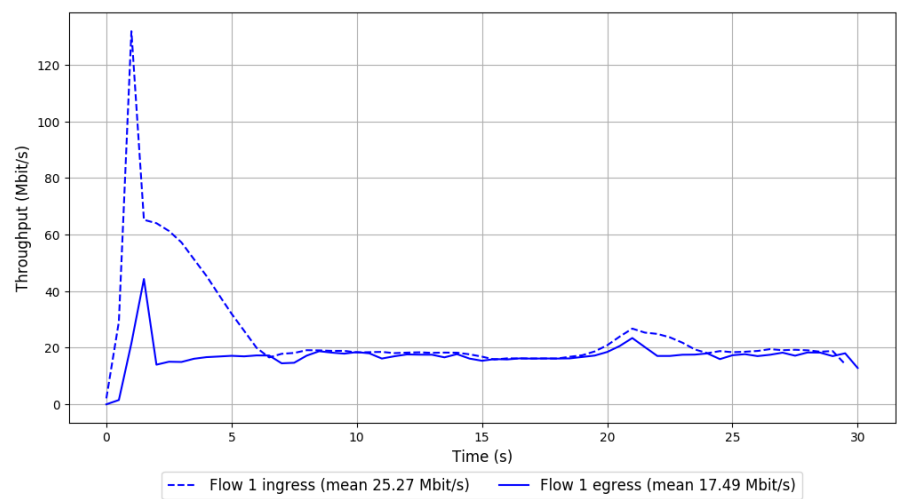
-- Flow 1:

Average throughput: 17.49 Mbit/s

95th percentile per-packet one-way delay: 63.794 ms

Loss rate: 31.00%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-09-06 15:29:55

End at: 2018-09-06 15:30:25

Local clock offset: 2.518 ms

Remote clock offset: 45.54 ms

Below is generated by plot.py at 2018-09-06 15:55:51

Datalink statistics

-- Total of 1 flow:

Average throughput: 17.40 Mbit/s

95th percentile per-packet one-way delay: 61.422 ms

Loss rate: 36.14%

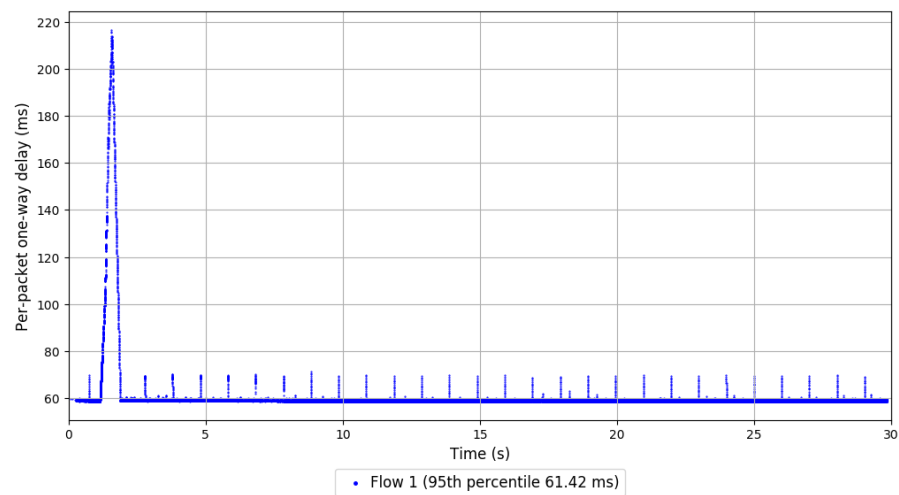
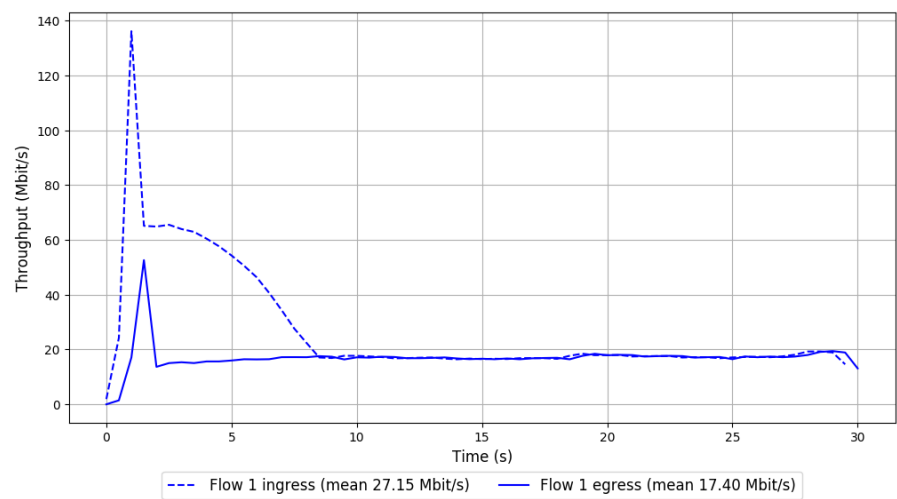
-- Flow 1:

Average throughput: 17.40 Mbit/s

95th percentile per-packet one-way delay: 61.422 ms

Loss rate: 36.14%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-09-06 15:50:50

End at: 2018-09-06 15:51:20

Local clock offset: 2.953 ms

Remote clock offset: 42.95 ms

Below is generated by plot.py at 2018-09-06 15:55:58

Datalink statistics

-- Total of 1 flow:

Average throughput: 18.41 Mbit/s

95th percentile per-packet one-way delay: 60.852 ms

Loss rate: 30.85%

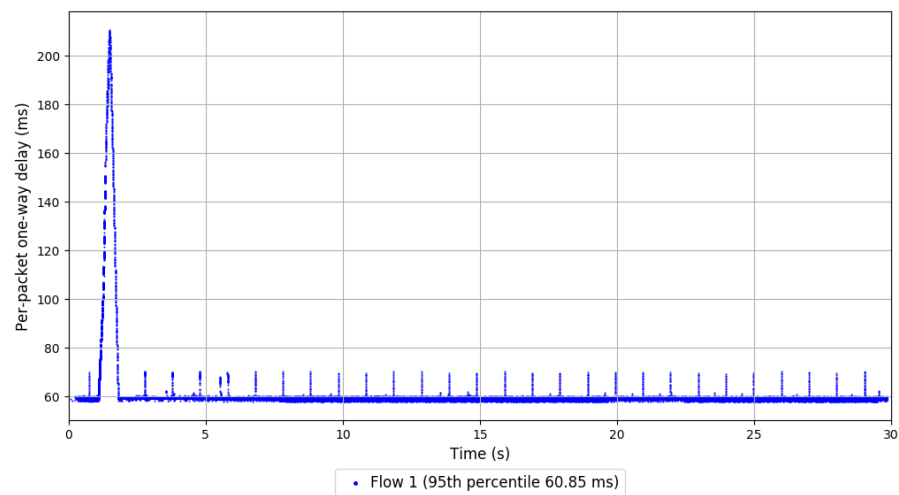
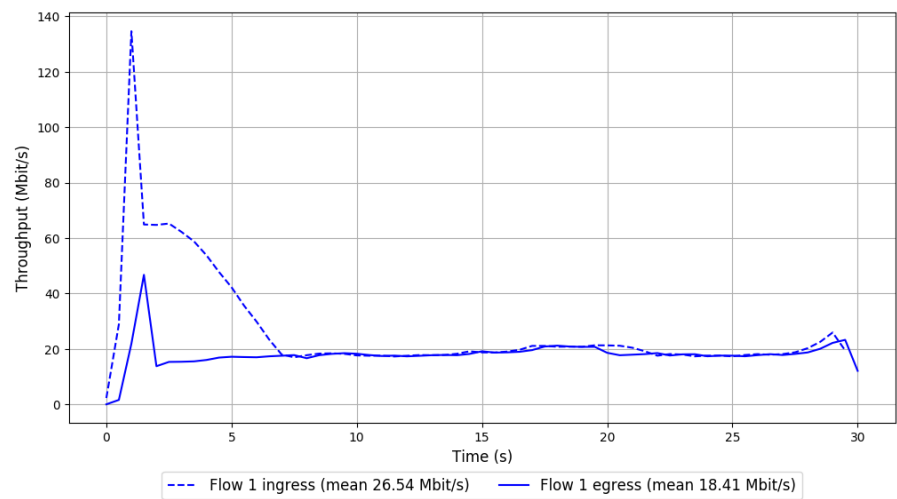
-- Flow 1:

Average throughput: 18.41 Mbit/s

95th percentile per-packet one-way delay: 60.852 ms

Loss rate: 30.85%

Run 5: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

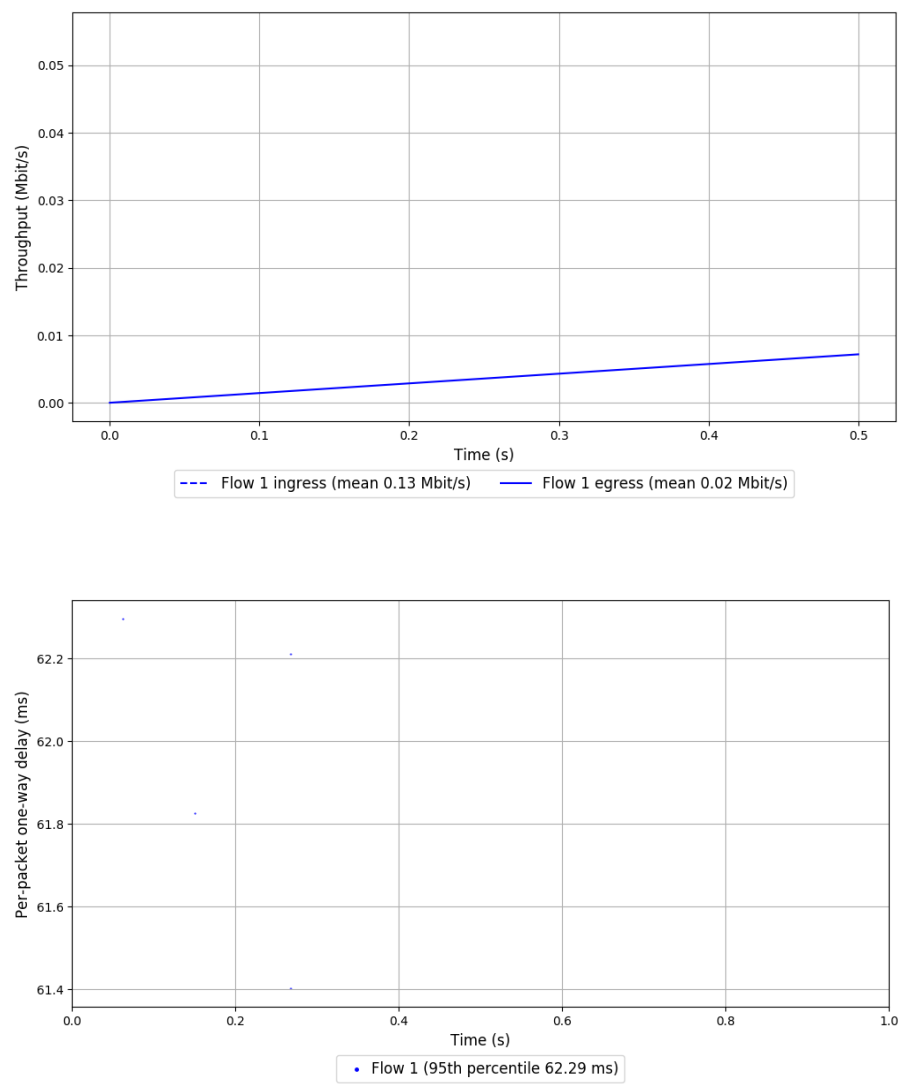
Start at: 2018-09-06 14:19:53

End at: 2018-09-06 14:20:23

Local clock offset: 2.586 ms

Remote clock offset: 59.578 ms

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

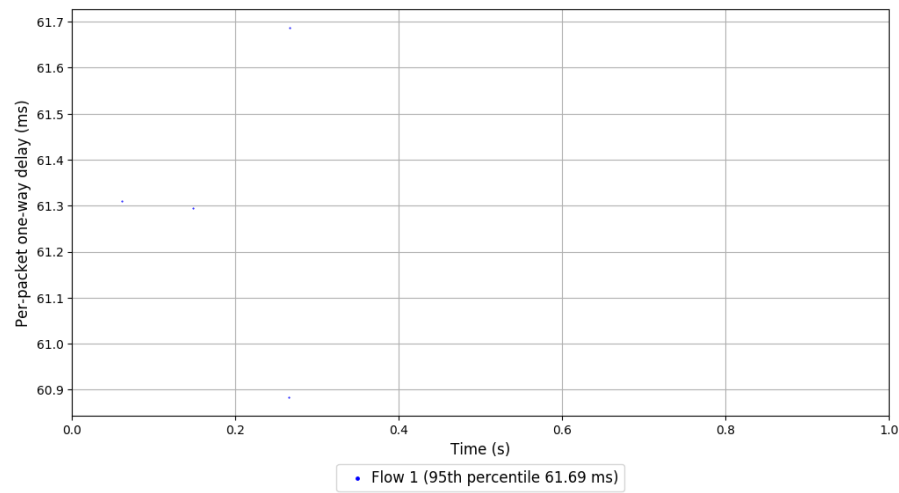
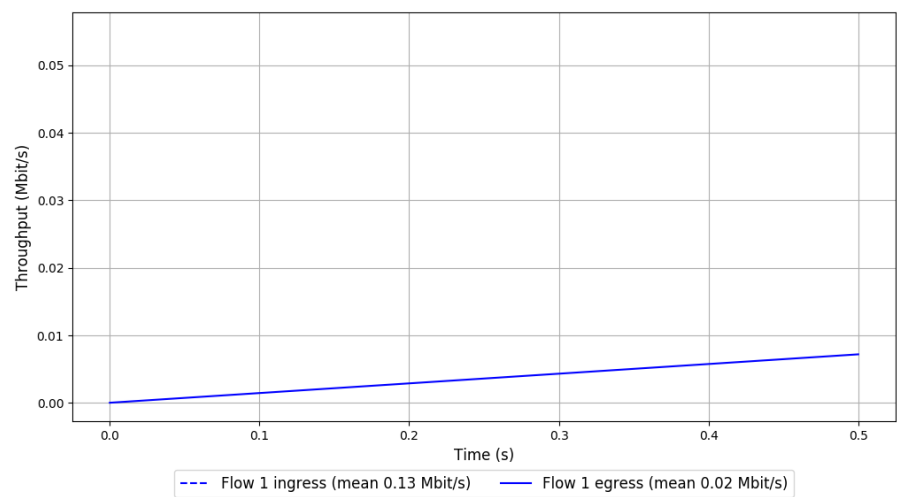
Start at: 2018-09-06 14:41:10

End at: 2018-09-06 14:41:40

Local clock offset: 4.844 ms

Remote clock offset: 56.401 ms

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

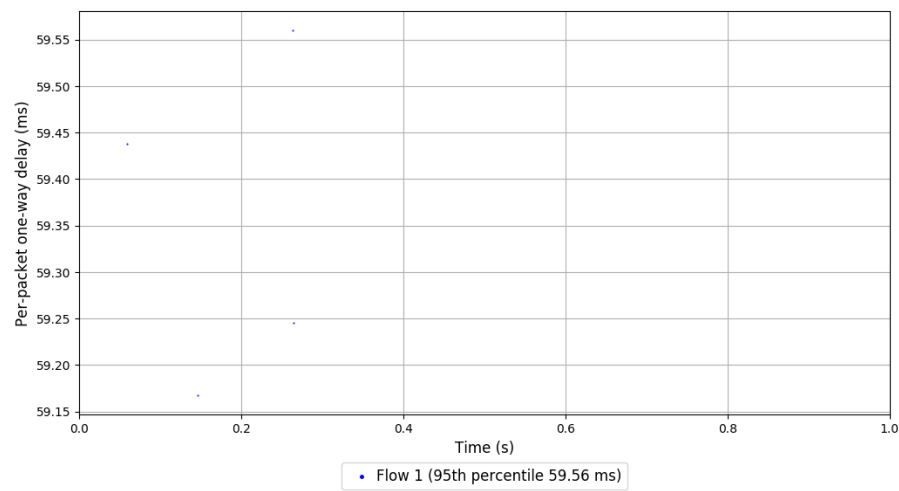
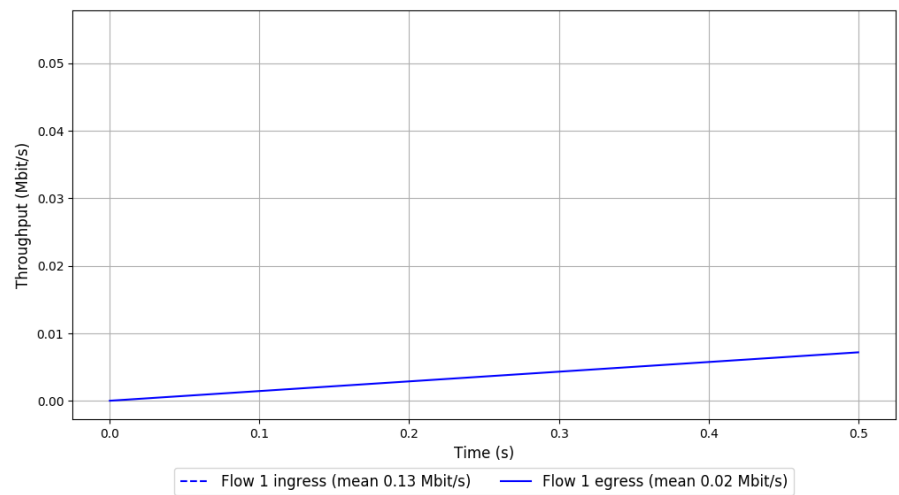
Start at: 2018-09-06 15:02:01

End at: 2018-09-06 15:02:31

Local clock offset: 2.684 ms

Remote clock offset: 57.968 ms

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

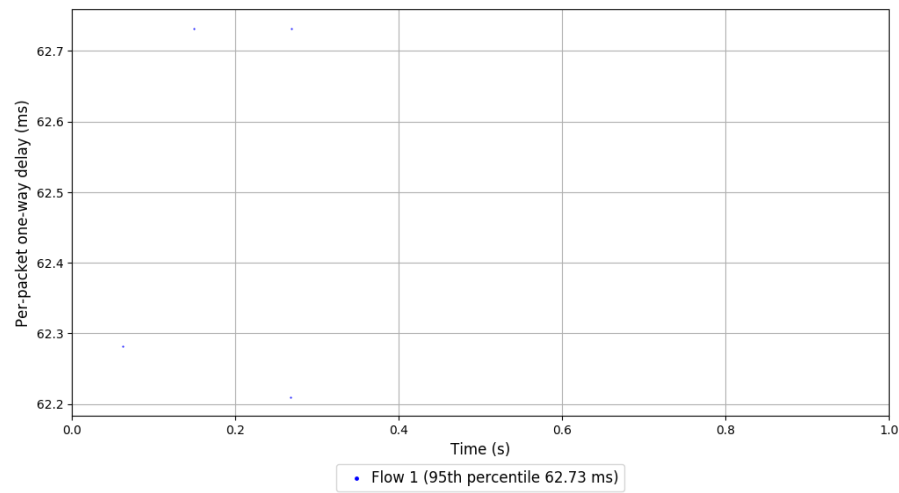
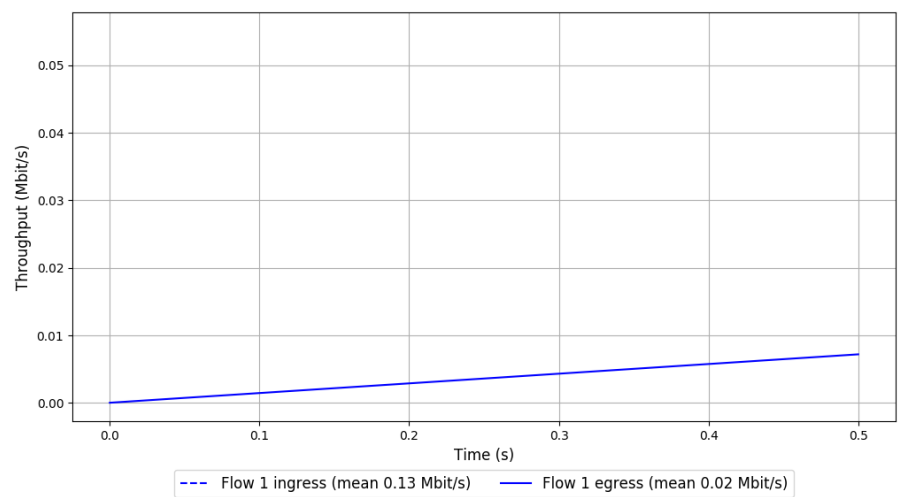
Start at: 2018-09-06 15:22:54

End at: 2018-09-06 15:23:24

Local clock offset: 2.421 ms

Remote clock offset: 43.274 ms

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

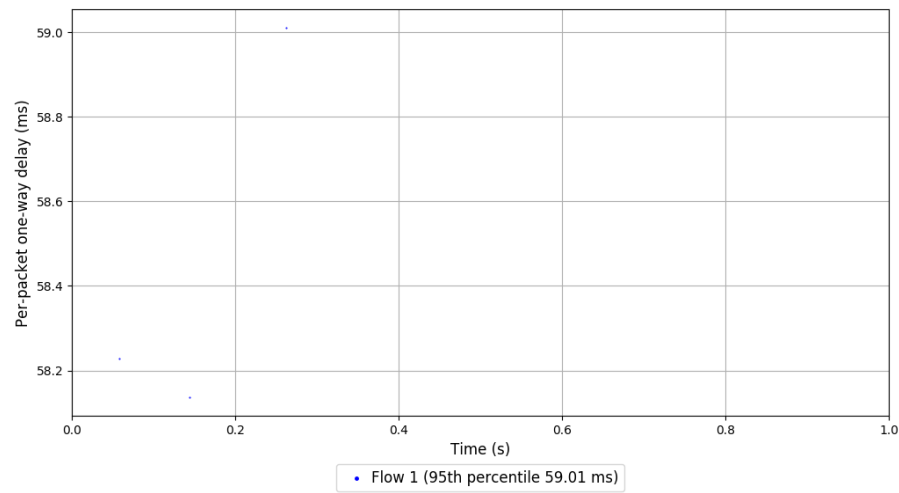
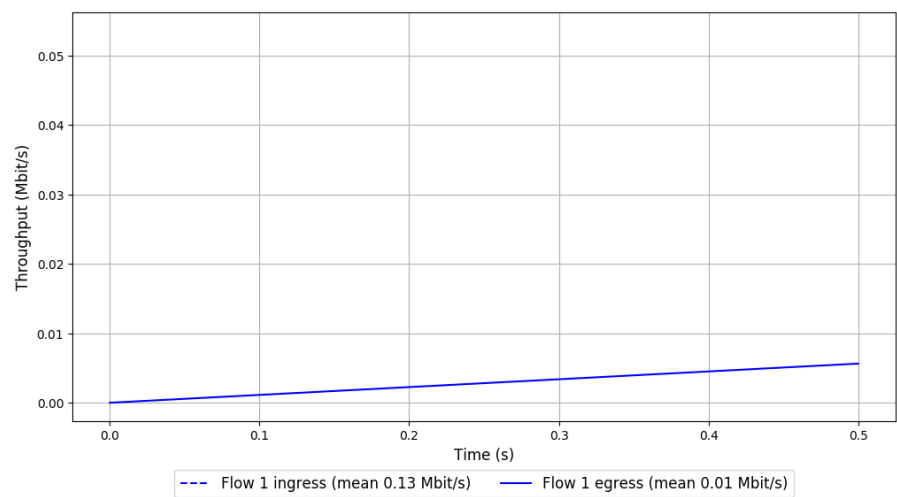
Start at: 2018-09-06 15:43:52

End at: 2018-09-06 15:44:22

Local clock offset: 2.475 ms

Remote clock offset: 44.471 ms

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2018-09-06 14:22:14

End at: 2018-09-06 14:22:44

Local clock offset: 3.219 ms

Remote clock offset: 59.741 ms

Below is generated by plot.py at 2018-09-06 15:56:00

Datalink statistics

-- Total of 1 flow:

Average throughput: 19.78 Mbit/s

95th percentile per-packet one-way delay: 69.973 ms

Loss rate: 6.73%

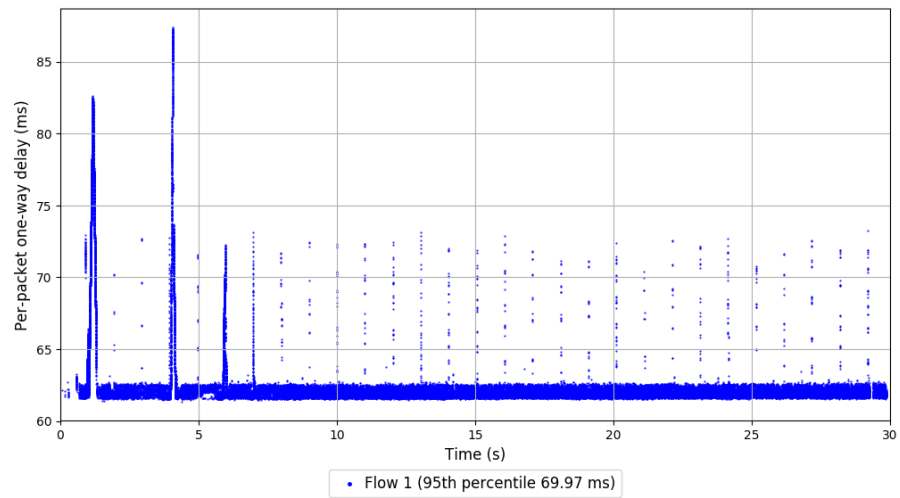
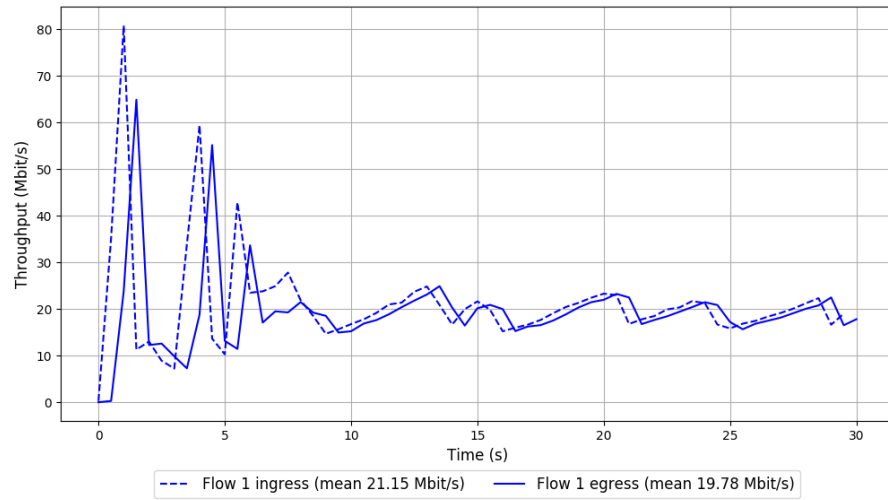
-- Flow 1:

Average throughput: 19.78 Mbit/s

95th percentile per-packet one-way delay: 69.973 ms

Loss rate: 6.73%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-09-06 14:43:26

End at: 2018-09-06 14:43:56

Local clock offset: 5.018 ms

Remote clock offset: 54.546 ms

Below is generated by plot.py at 2018-09-06 15:56:00

Datalink statistics

-- Total of 1 flow:

Average throughput: 19.77 Mbit/s

95th percentile per-packet one-way delay: 71.132 ms

Loss rate: 6.72%

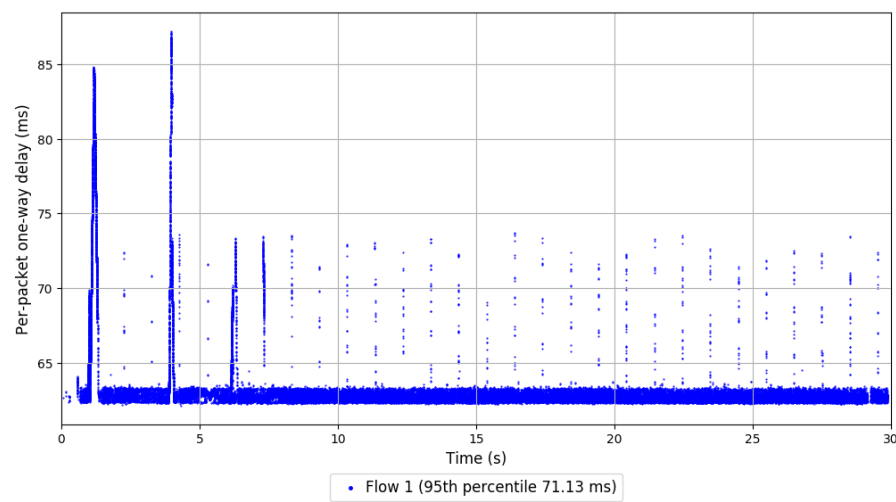
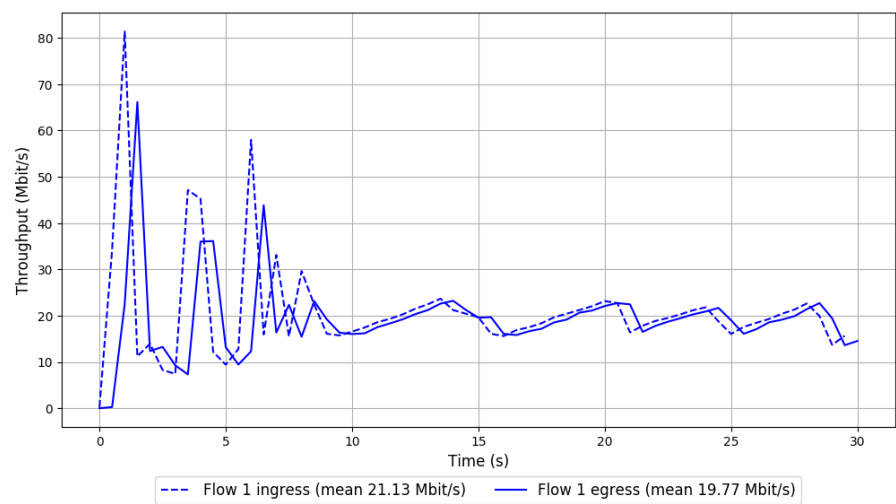
-- Flow 1:

Average throughput: 19.77 Mbit/s

95th percentile per-packet one-way delay: 71.132 ms

Loss rate: 6.72%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-09-06 15:04:17

End at: 2018-09-06 15:04:47

Local clock offset: 2.778 ms

Remote clock offset: 52.545 ms

Below is generated by plot.py at 2018-09-06 15:56:00

Datalink statistics

-- Total of 1 flow:

Average throughput: 19.66 Mbit/s

95th percentile per-packet one-way delay: 80.109 ms

Loss rate: 7.19%

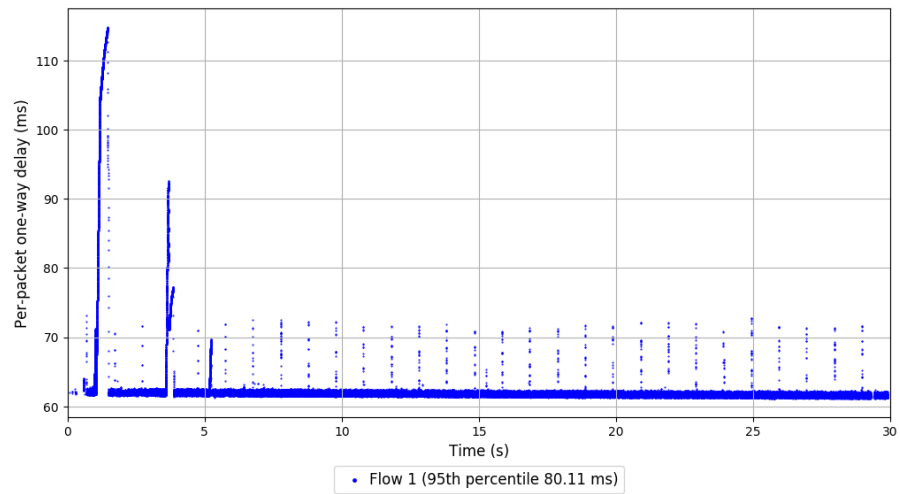
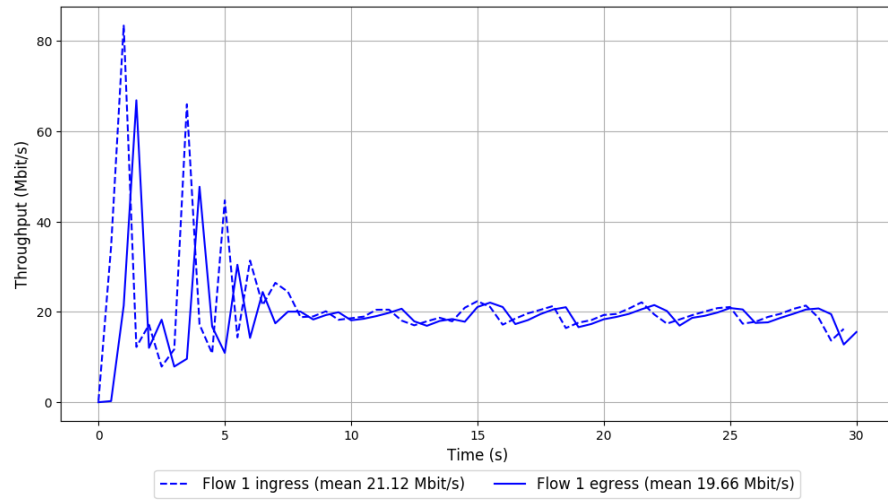
-- Flow 1:

Average throughput: 19.66 Mbit/s

95th percentile per-packet one-way delay: 80.109 ms

Loss rate: 7.19%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-09-06 15:25:11

End at: 2018-09-06 15:25:41

Local clock offset: 2.371 ms

Remote clock offset: 41.81 ms

Below is generated by plot.py at 2018-09-06 15:56:00

Datalink statistics

-- Total of 1 flow:

Average throughput: 18.00 Mbit/s

95th percentile per-packet one-way delay: 71.305 ms

Loss rate: 7.43%

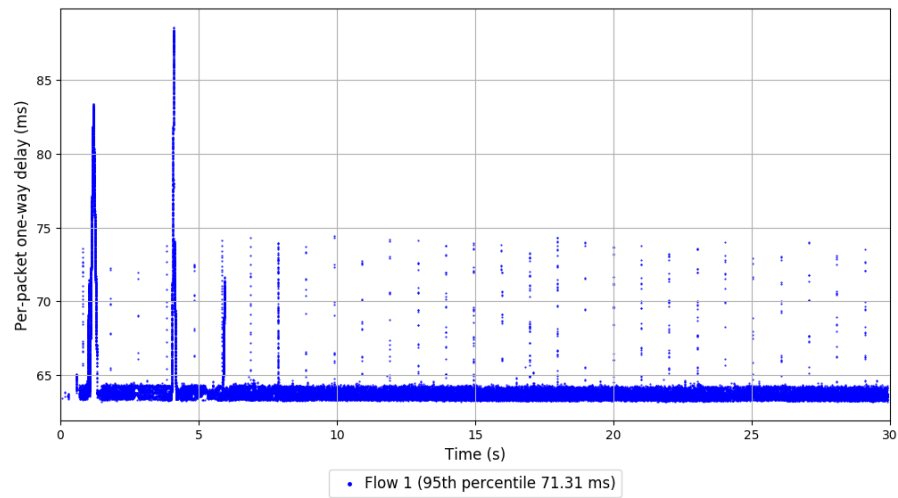
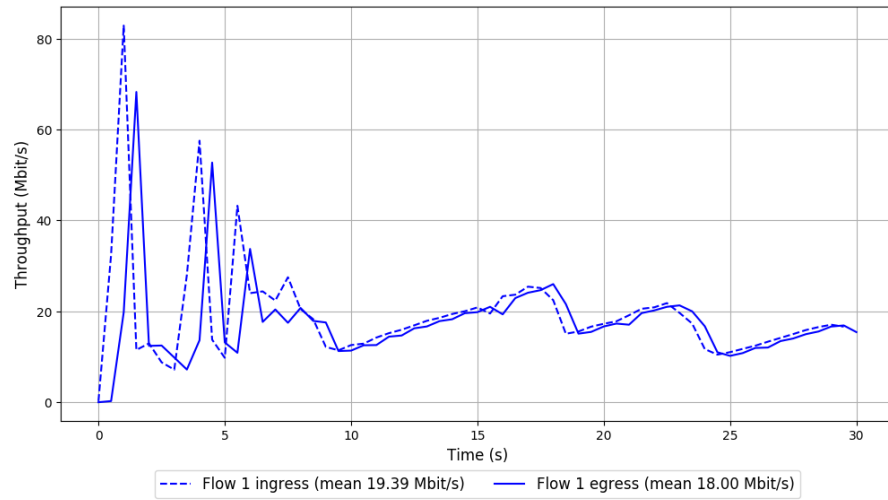
-- Flow 1:

Average throughput: 18.00 Mbit/s

95th percentile per-packet one-way delay: 71.305 ms

Loss rate: 7.43%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-09-06 15:46:08

End at: 2018-09-06 15:46:38

Local clock offset: 2.525 ms

Remote clock offset: 40.507 ms

Below is generated by plot.py at 2018-09-06 15:56:02

Datalink statistics

-- Total of 1 flow:

Average throughput: 19.70 Mbit/s

95th percentile per-packet one-way delay: 77.221 ms

Loss rate: 6.49%

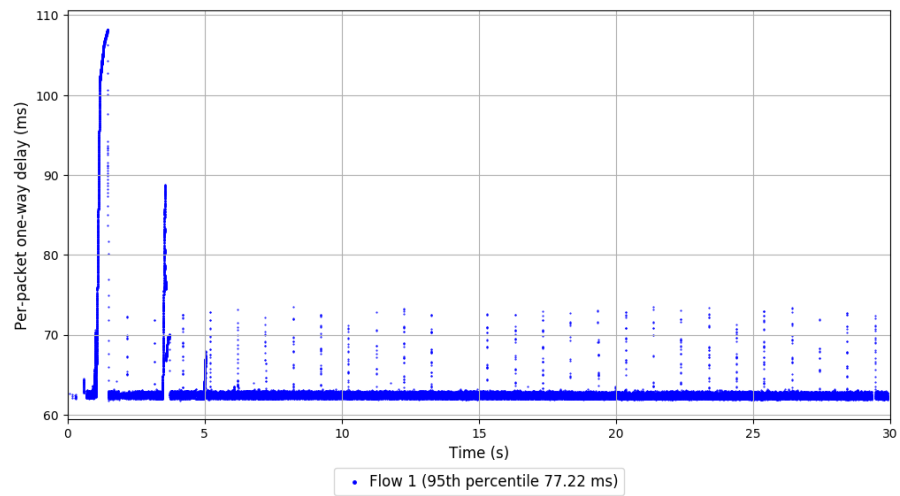
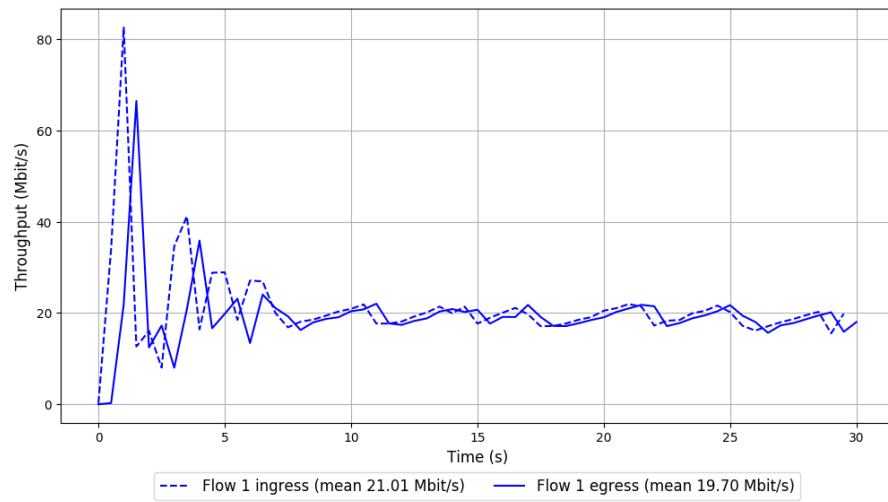
-- Flow 1:

Average throughput: 19.70 Mbit/s

95th percentile per-packet one-way delay: 77.221 ms

Loss rate: 6.49%

Run 5: Report of QUIC Cubic — Data Link

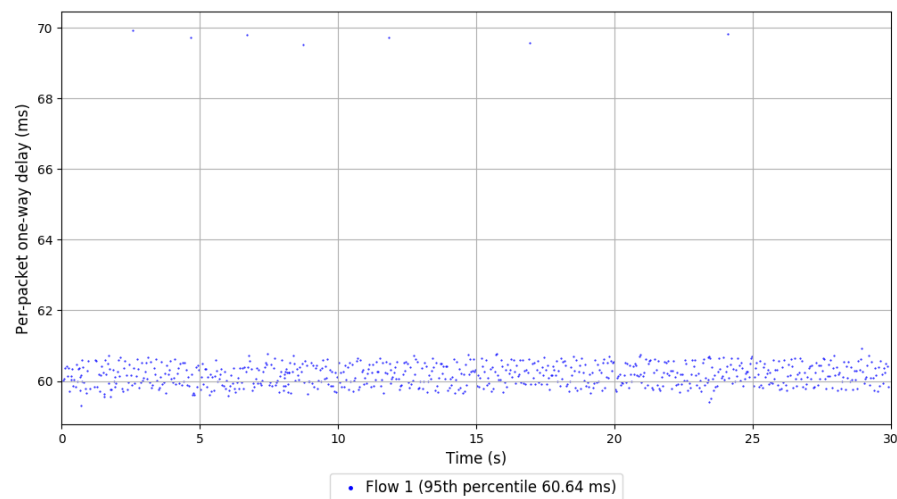
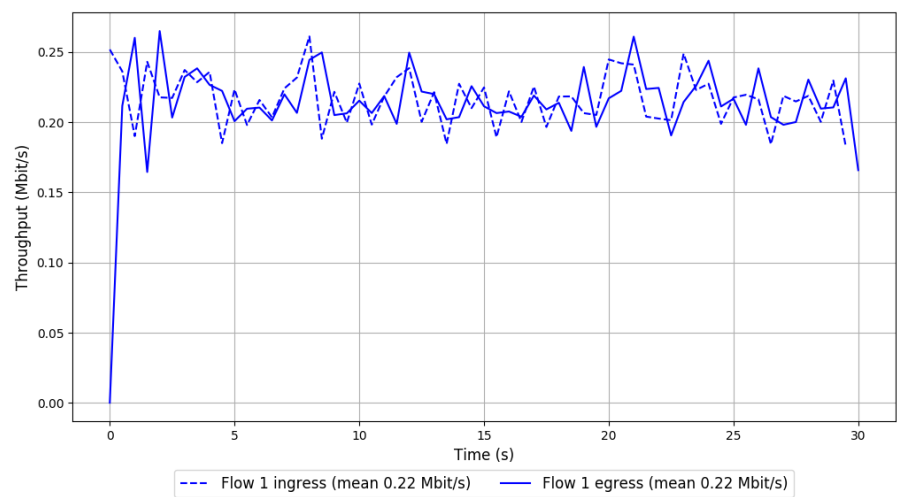


```
Run 1: Statistics of SCReAM

Start at: 2018-09-06 14:12:54
End at: 2018-09-06 14:13:24
Local clock offset: 1.464 ms
Remote clock offset: 60.15 ms

# Below is generated by plot.py at 2018-09-06 15:56:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.640 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.640 ms
Loss rate: 0.26%
```

Run 1: Report of SReAM — Data Link

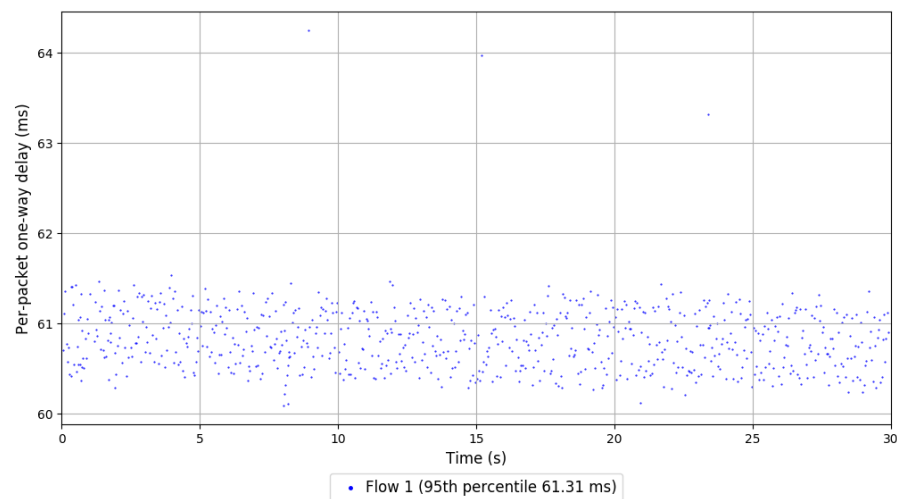
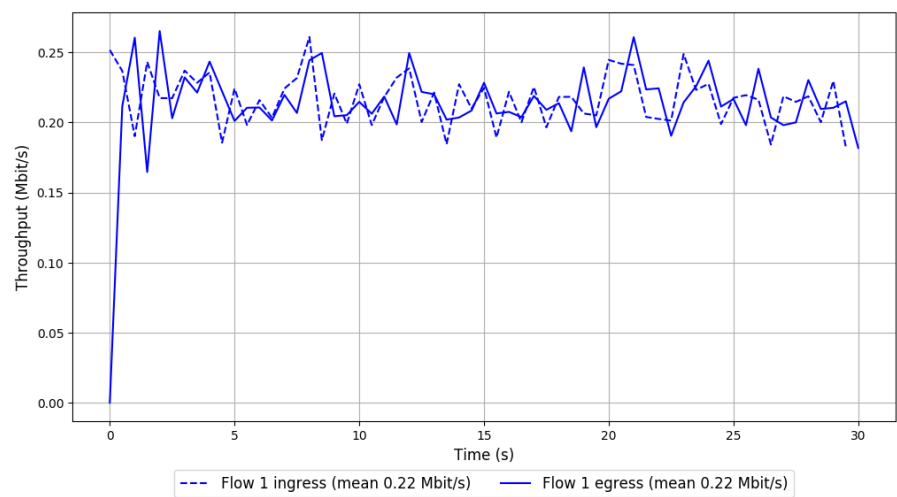


Run 2: Statistics of SCReAM

Start at: 2018-09-06 14:34:05
End at: 2018-09-06 14:34:35
Local clock offset: 4.571 ms
Remote clock offset: 57.943 ms

Below is generated by plot.py at 2018-09-06 15:56:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.312 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.312 ms
Loss rate: 0.26%

Run 2: Report of SReAM — Data Link

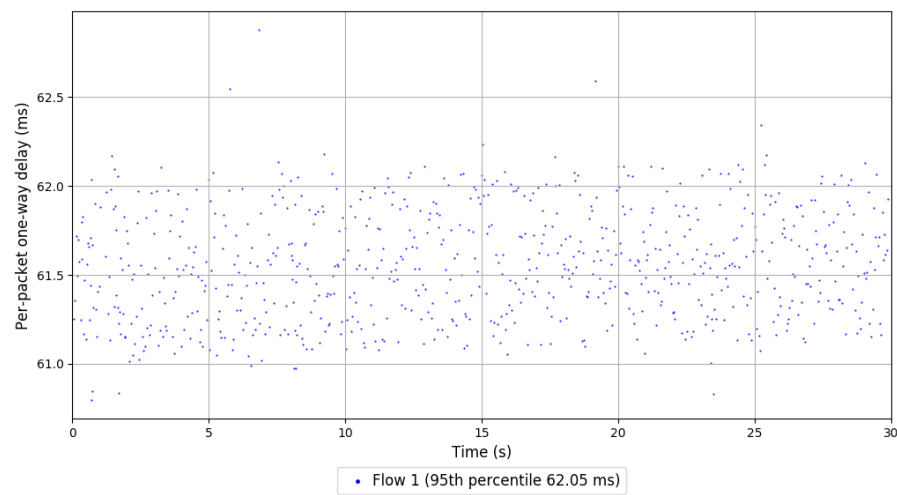
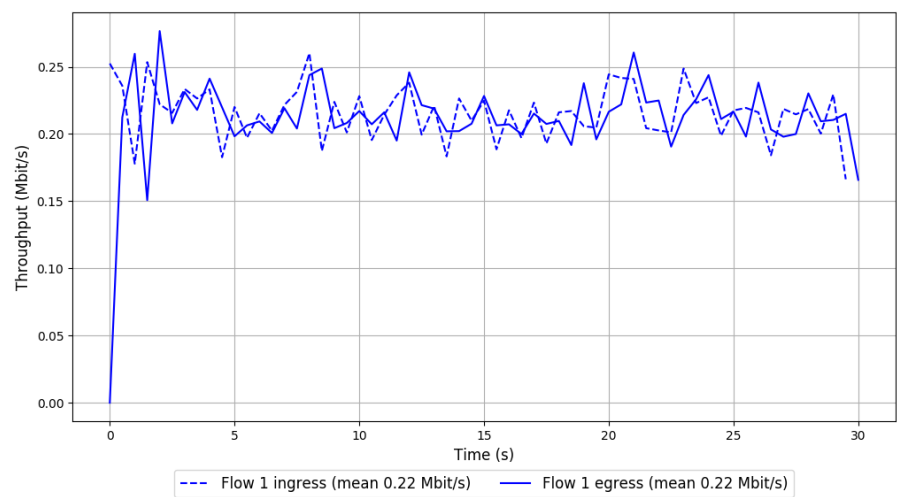


Run 3: Statistics of SCReAM

Start at: 2018-09-06 14:54:59
End at: 2018-09-06 14:55:29
Local clock offset: 3.195 ms
Remote clock offset: 57.486 ms

Below is generated by plot.py at 2018-09-06 15:56:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.055 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.055 ms
Loss rate: 0.25%

Run 3: Report of SReAM — Data Link

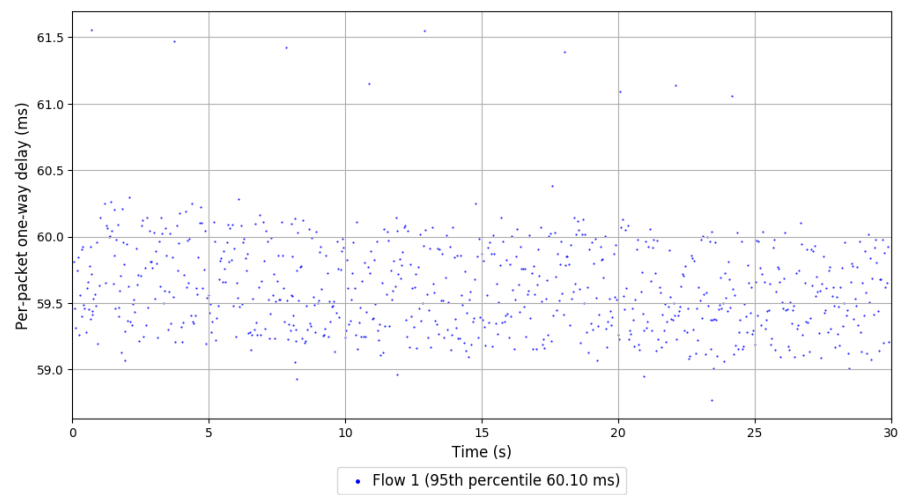
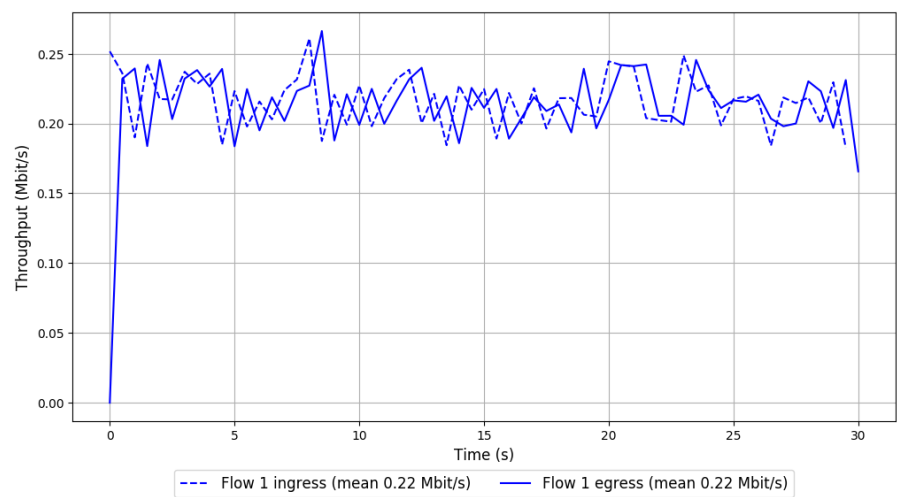


Run 4: Statistics of SCReAM

Start at: 2018-09-06 15:15:59
End at: 2018-09-06 15:16:29
Local clock offset: 2.276 ms
Remote clock offset: 47.585 ms

Below is generated by plot.py at 2018-09-06 15:56:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.104 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.104 ms
Loss rate: 0.26%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2018-09-06 15:36:51

End at: 2018-09-06 15:37:21

Local clock offset: 2.51 ms

Remote clock offset: 40.8 ms

Below is generated by plot.py at 2018-09-06 15:56:02

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.879 ms

Loss rate: 0.26%

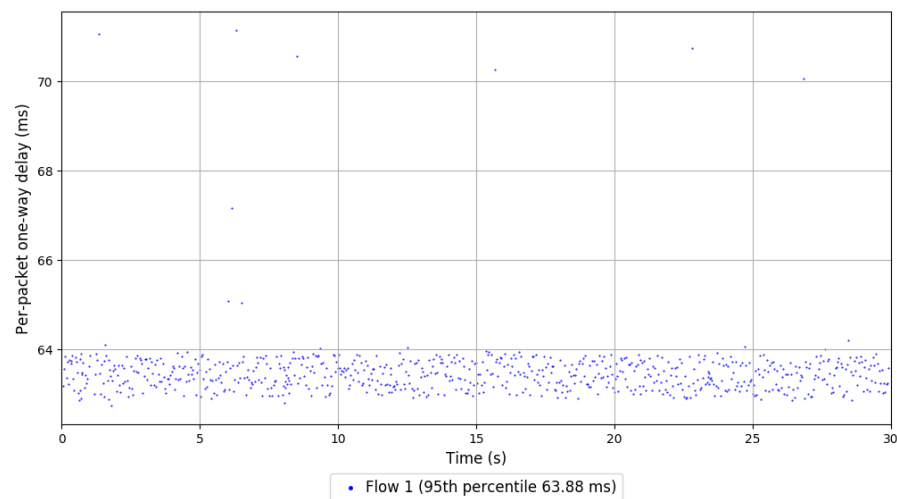
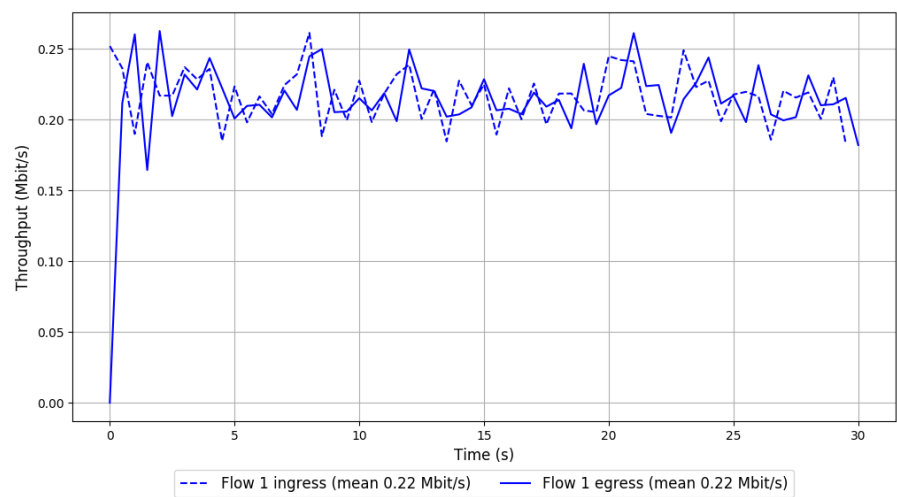
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.879 ms

Loss rate: 0.26%

Run 5: Report of SReAM — Data Link



Run 1: Statistics of Sprout

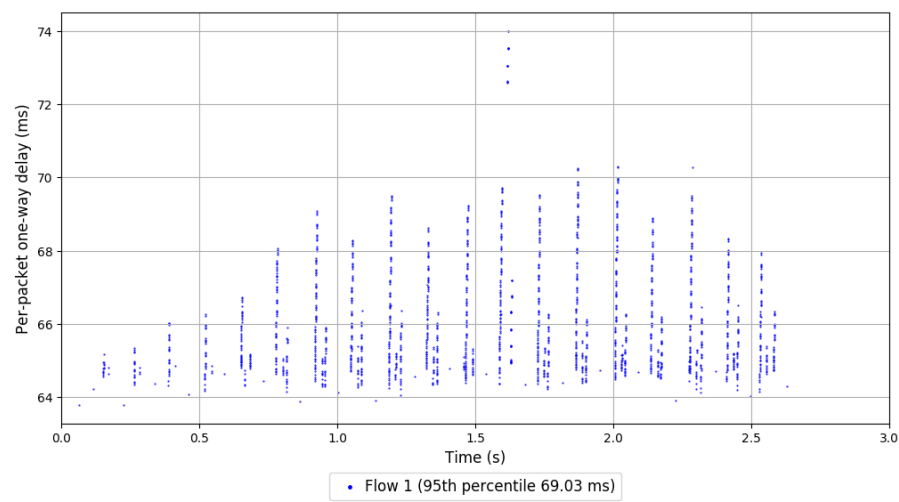
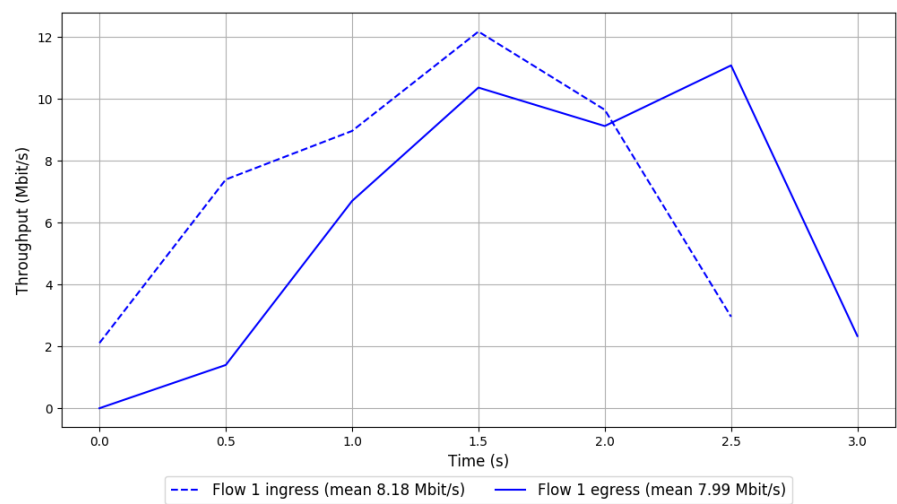
Start at: 2018-09-06 14:18:45

End at: 2018-09-06 14:19:15

Local clock offset: 2.494 ms

Remote clock offset: 56.806 ms

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

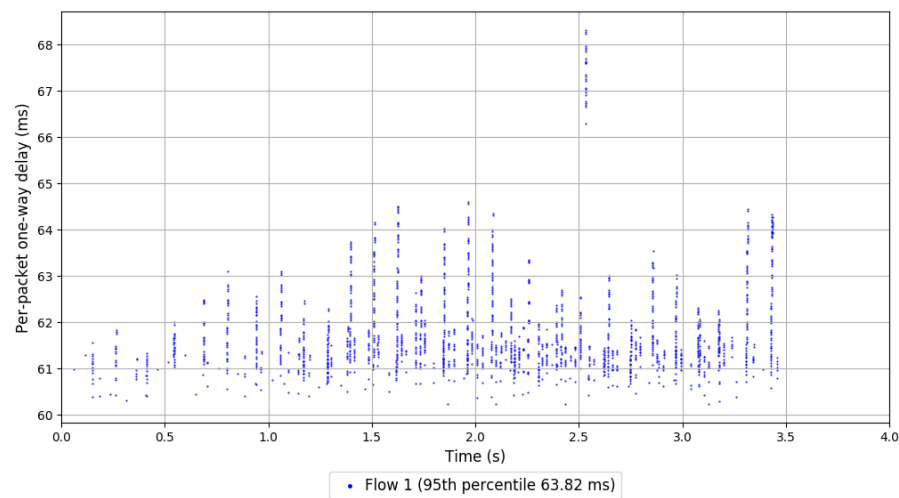
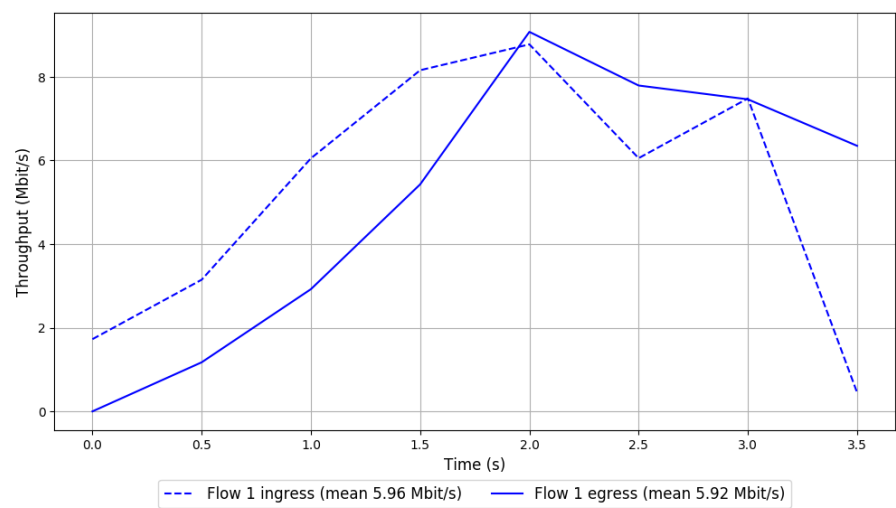
Start at: 2018-09-06 14:39:57

End at: 2018-09-06 14:40:27

Local clock offset: 4.863 ms

Remote clock offset: 57.268 ms

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

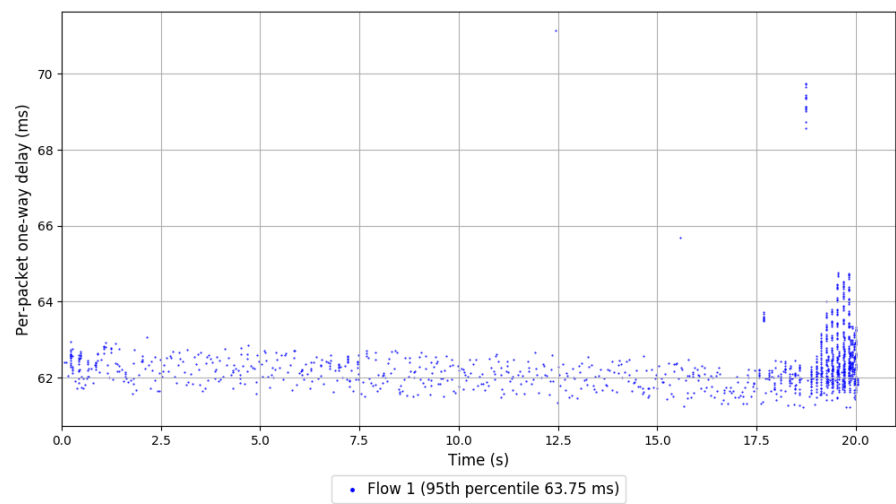
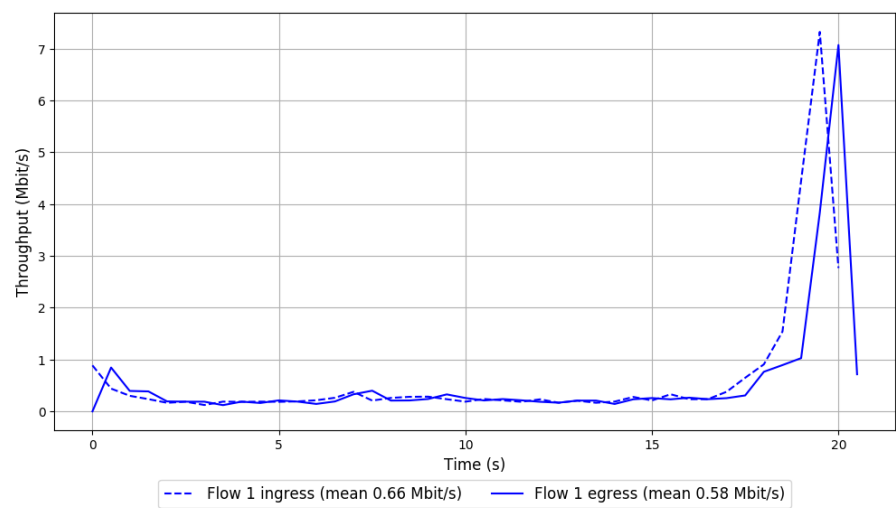
Start at: 2018-09-06 15:00:53

End at: 2018-09-06 15:01:23

Local clock offset: 3.027 ms

Remote clock offset: 56.985 ms

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

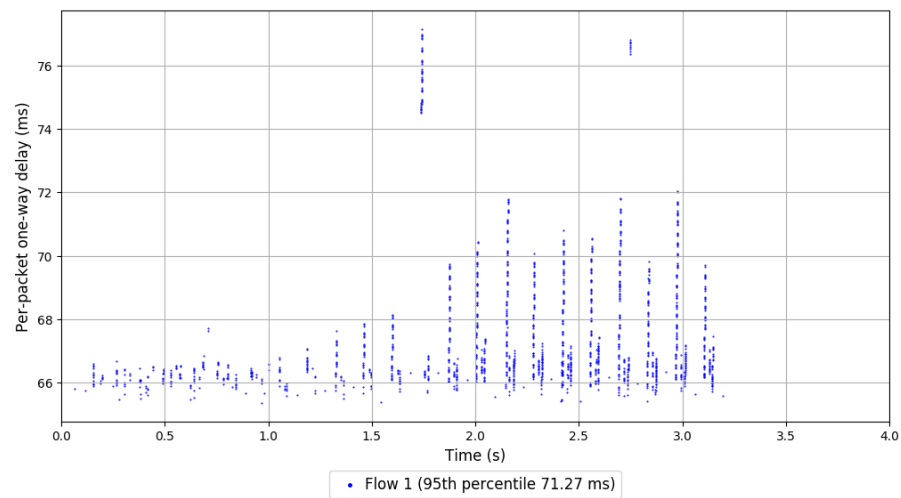
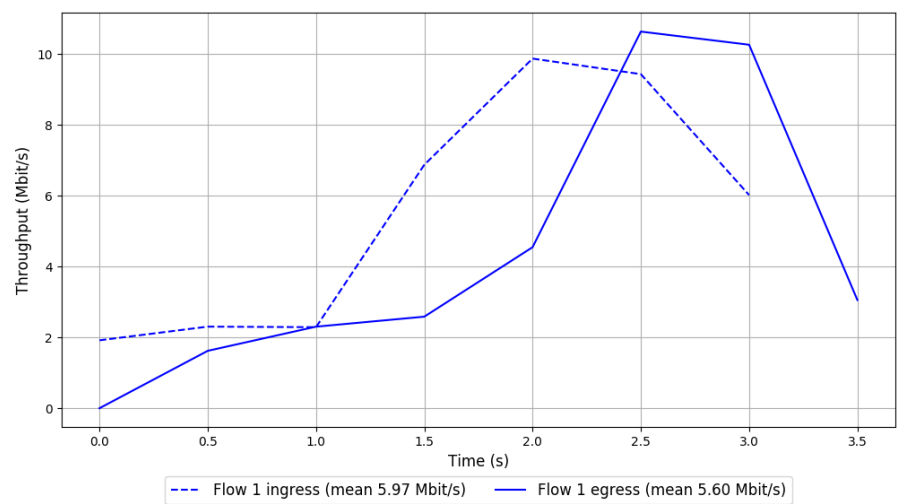
Start at: 2018-09-06 15:21:46

End at: 2018-09-06 15:22:16

Local clock offset: 2.428 ms

Remote clock offset: 40.279 ms

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

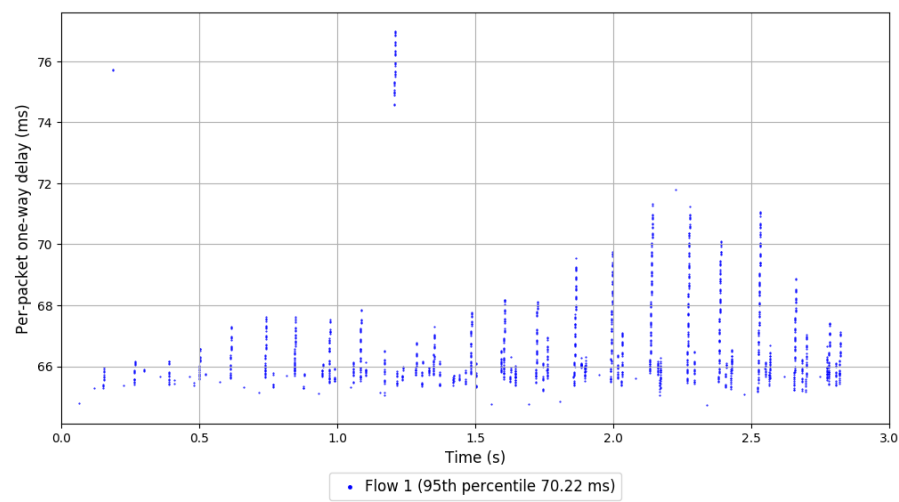
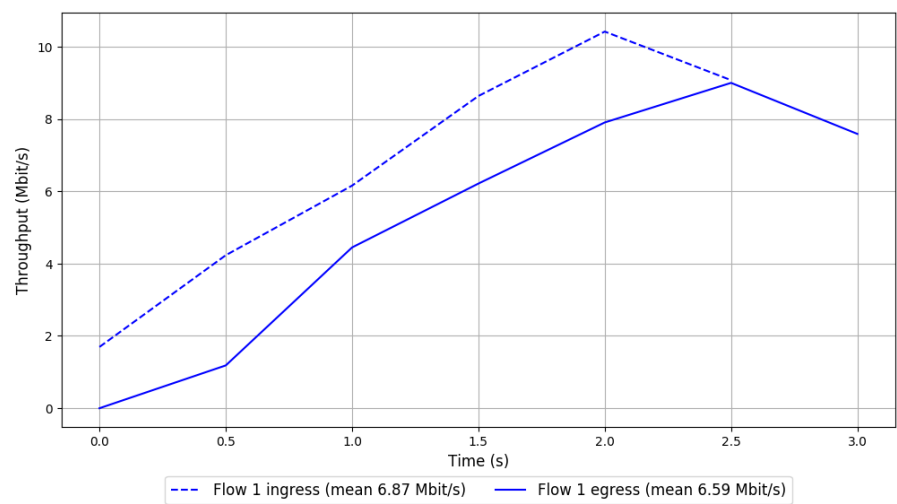
Start at: 2018-09-06 15:42:44

End at: 2018-09-06 15:43:14

Local clock offset: 2.511 ms

Remote clock offset: 37.97 ms

Run 5: Report of Sprout — Data Link

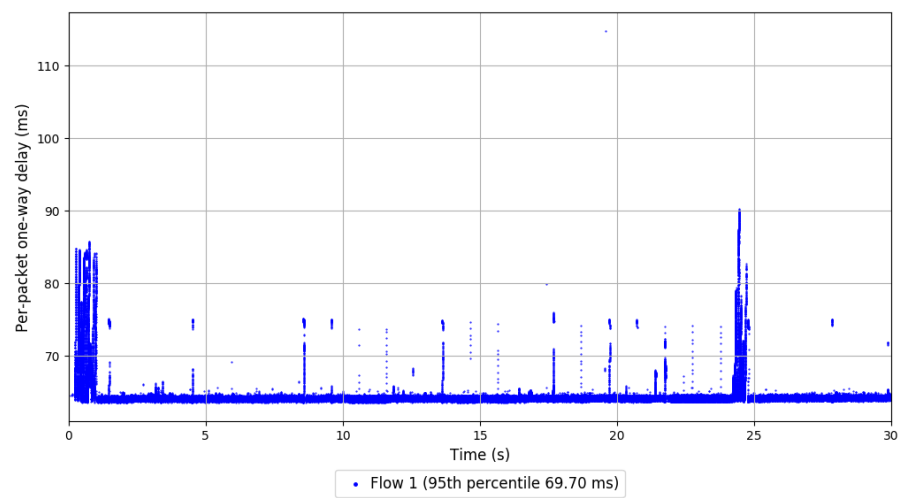
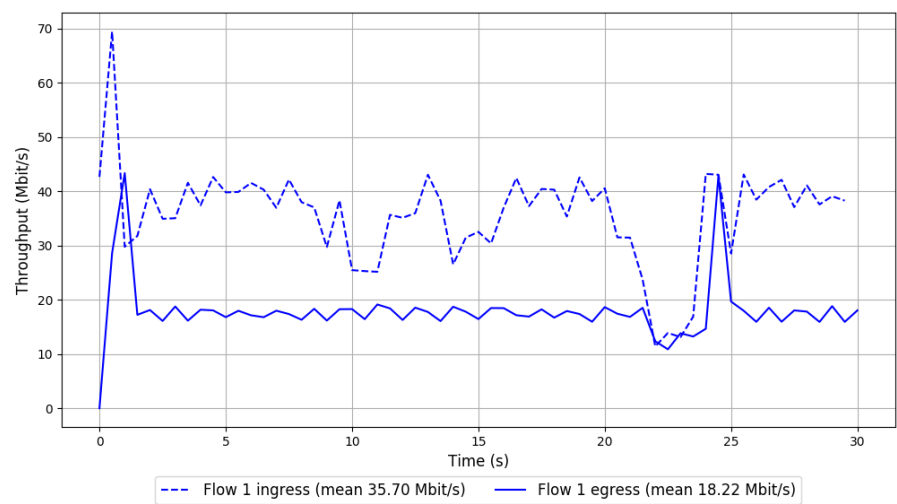


Run 1: Statistics of TaoVA-100x

Start at: 2018-09-06 14:14:01
End at: 2018-09-06 14:14:31
Local clock offset: 1.382 ms
Remote clock offset: 55.715 ms

Below is generated by plot.py at 2018-09-06 15:56:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 18.22 Mbit/s
95th percentile per-packet one-way delay: 69.697 ms
Loss rate: 49.11%
-- Flow 1:
Average throughput: 18.22 Mbit/s
95th percentile per-packet one-way delay: 69.697 ms
Loss rate: 49.11%

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

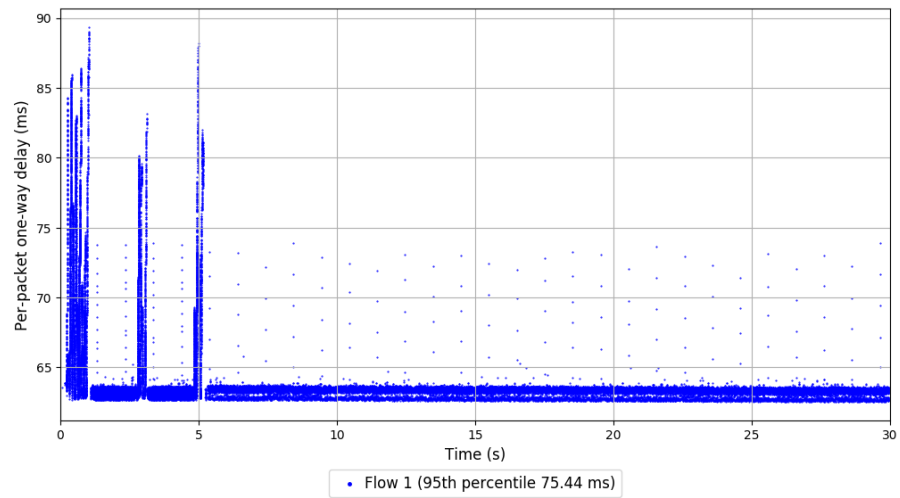
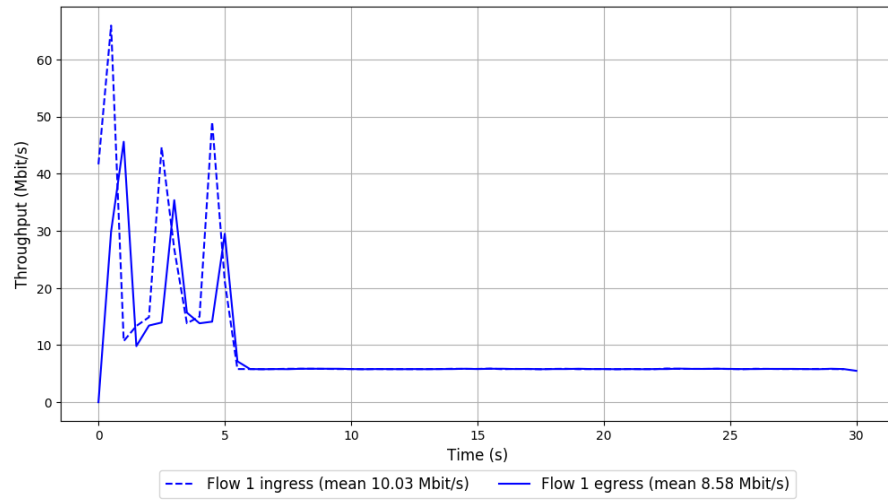


Run 2: Statistics of TaoVA-100x

Start at: 2018-09-06 14:35:17
End at: 2018-09-06 14:35:47
Local clock offset: 4.721 ms
Remote clock offset: 55.152 ms

Below is generated by plot.py at 2018-09-06 15:56:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 8.58 Mbit/s
95th percentile per-packet one-way delay: 75.437 ms
Loss rate: 14.78%
-- Flow 1:
Average throughput: 8.58 Mbit/s
95th percentile per-packet one-way delay: 75.437 ms
Loss rate: 14.78%

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-09-06 14:56:07

End at: 2018-09-06 14:56:37

Local clock offset: 3.202 ms

Remote clock offset: 58.378 ms

Below is generated by plot.py at 2018-09-06 15:56:34

Datalink statistics

-- Total of 1 flow:

Average throughput: 12.59 Mbit/s

95th percentile per-packet one-way delay: 70.675 ms

Loss rate: 13.37%

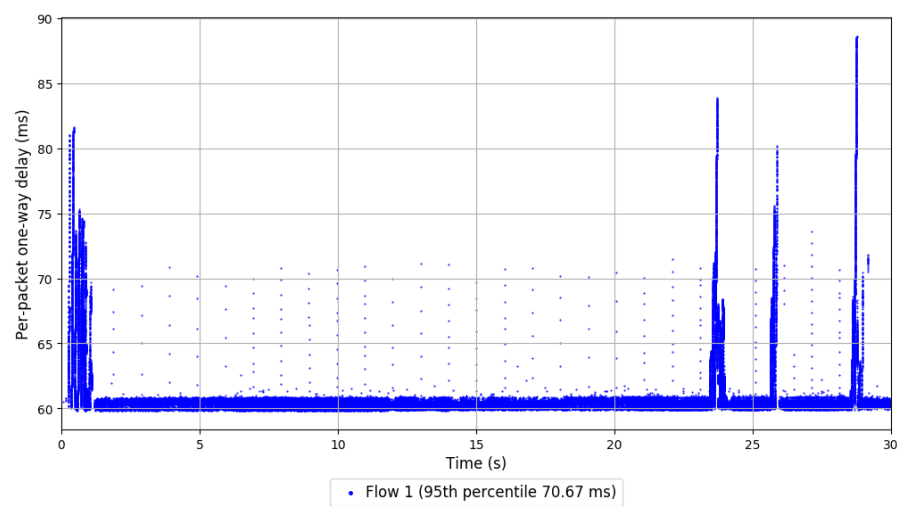
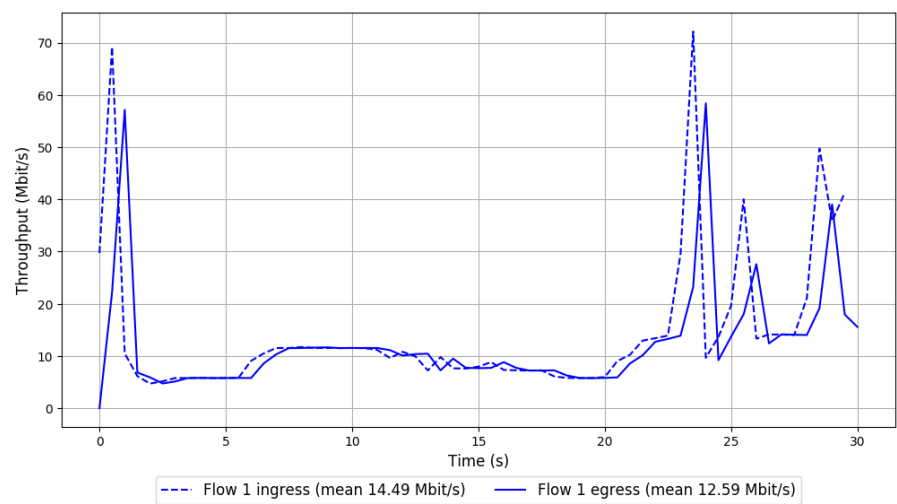
-- Flow 1:

Average throughput: 12.59 Mbit/s

95th percentile per-packet one-way delay: 70.675 ms

Loss rate: 13.37%

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-09-06 15:17:06

End at: 2018-09-06 15:17:36

Local clock offset: 2.247 ms

Remote clock offset: 44.319 ms

Below is generated by plot.py at 2018-09-06 15:56:34

Datalink statistics

-- Total of 1 flow:

Average throughput: 16.88 Mbit/s

95th percentile per-packet one-way delay: 73.346 ms

Loss rate: 18.23%

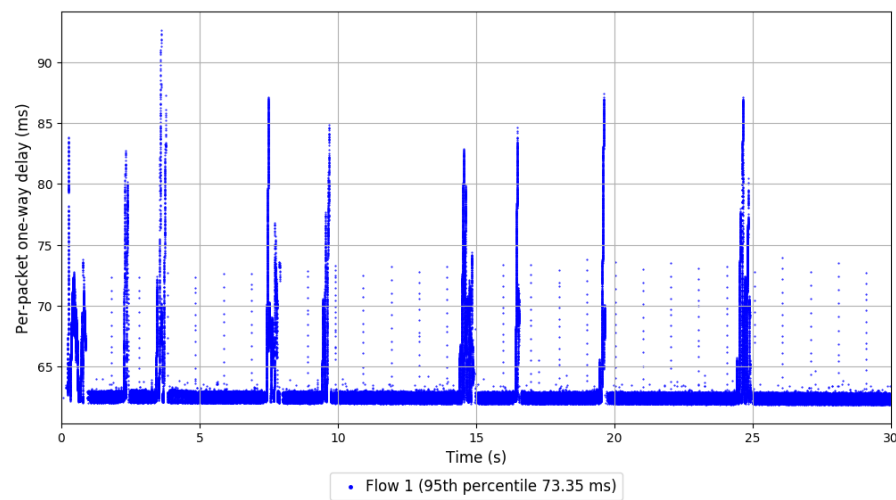
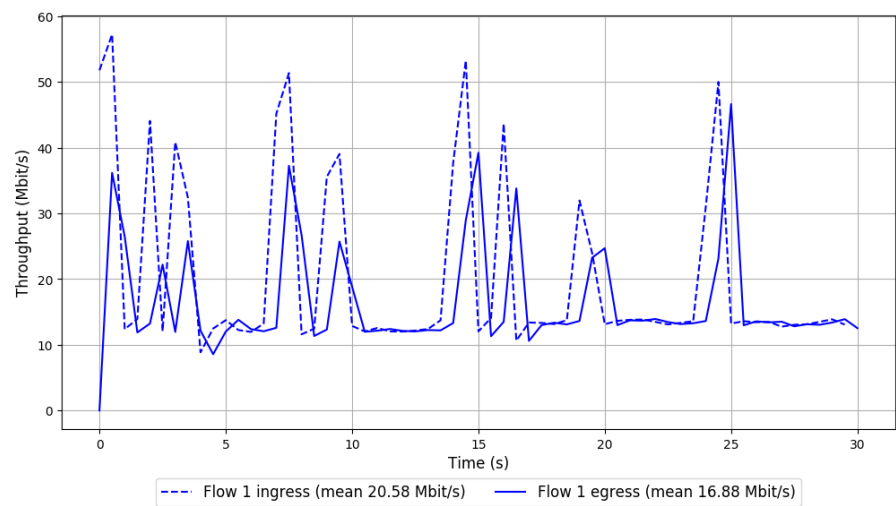
-- Flow 1:

Average throughput: 16.88 Mbit/s

95th percentile per-packet one-way delay: 73.346 ms

Loss rate: 18.23%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-09-06 15:37:59

End at: 2018-09-06 15:38:29

Local clock offset: 2.464 ms

Remote clock offset: 41.347 ms

Below is generated by plot.py at 2018-09-06 15:56:34

Datalink statistics

-- Total of 1 flow:

Average throughput: 18.34 Mbit/s

95th percentile per-packet one-way delay: 73.603 ms

Loss rate: 15.37%

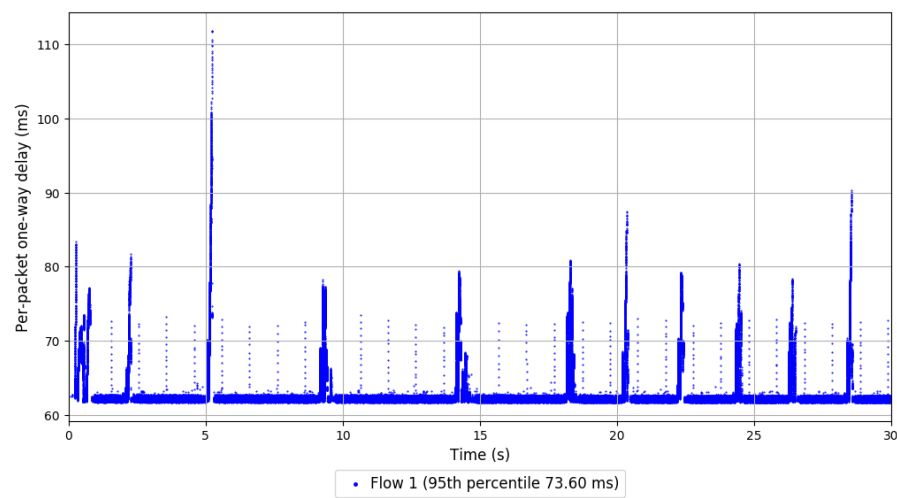
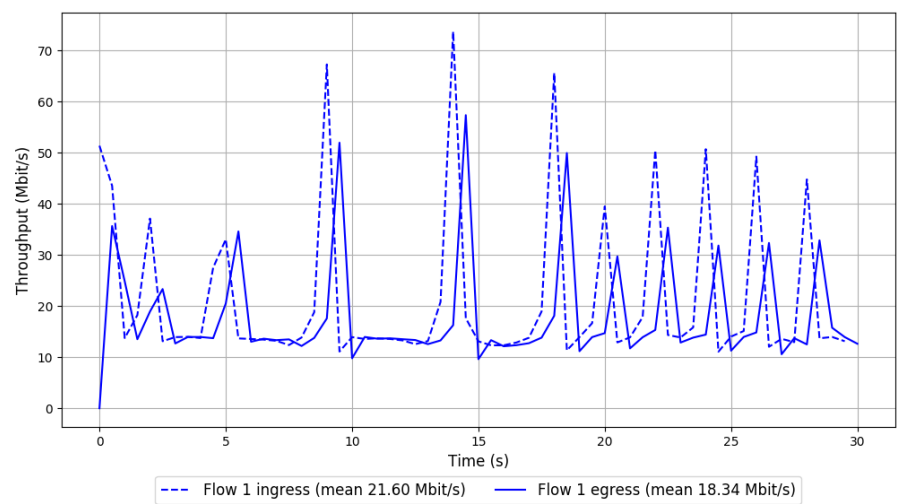
-- Flow 1:

Average throughput: 18.34 Mbit/s

95th percentile per-packet one-way delay: 73.603 ms

Loss rate: 15.37%

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

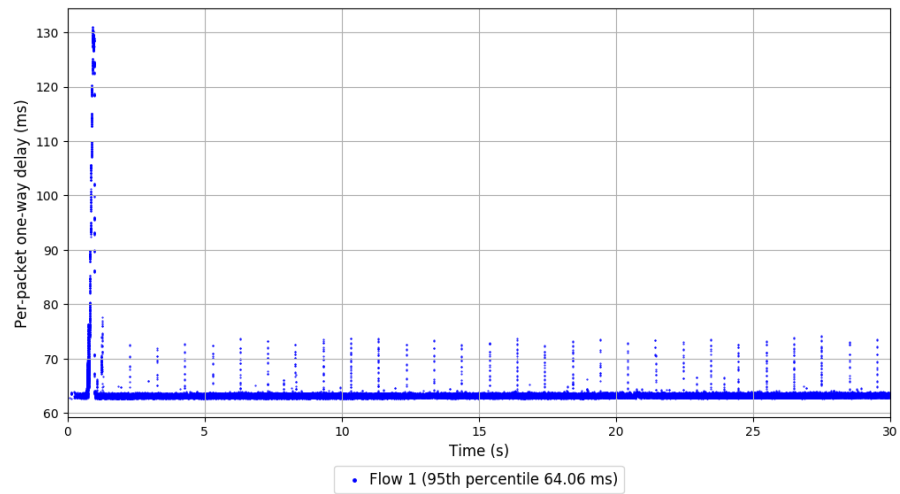
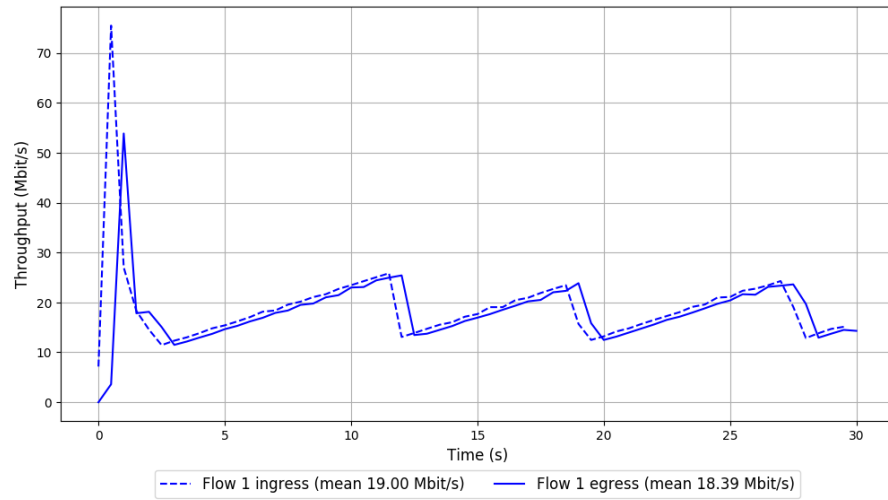


Run 1: Statistics of TCP Vegas

Start at: 2018-09-06 14:24:41
End at: 2018-09-06 14:25:11
Local clock offset: 3.594 ms
Remote clock offset: 59.871 ms

Below is generated by plot.py at 2018-09-06 15:56:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 18.39 Mbit/s
95th percentile per-packet one-way delay: 64.055 ms
Loss rate: 3.45%
-- Flow 1:
Average throughput: 18.39 Mbit/s
95th percentile per-packet one-way delay: 64.055 ms
Loss rate: 3.45%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-09-06 14:45:45

End at: 2018-09-06 14:46:15

Local clock offset: 4.943 ms

Remote clock offset: 55.3 ms

Below is generated by plot.py at 2018-09-06 15:56:34

Datalink statistics

-- Total of 1 flow:

Average throughput: 18.58 Mbit/s

95th percentile per-packet one-way delay: 63.347 ms

Loss rate: 4.19%

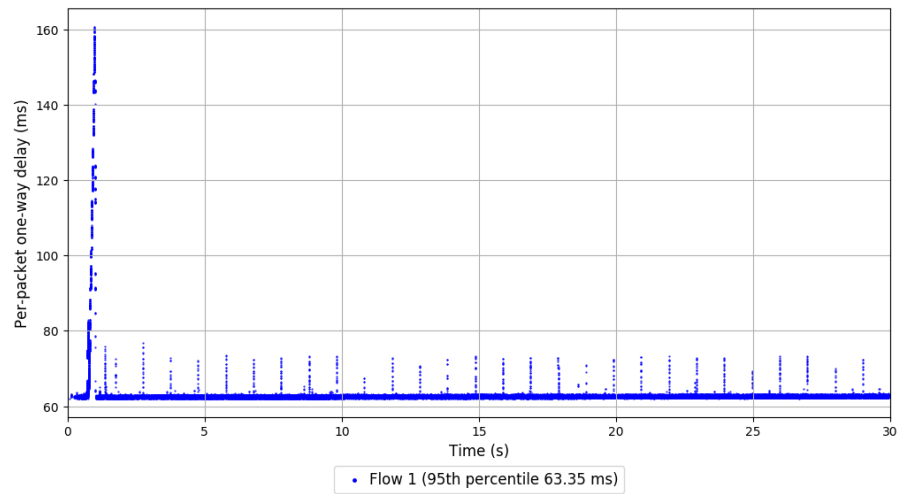
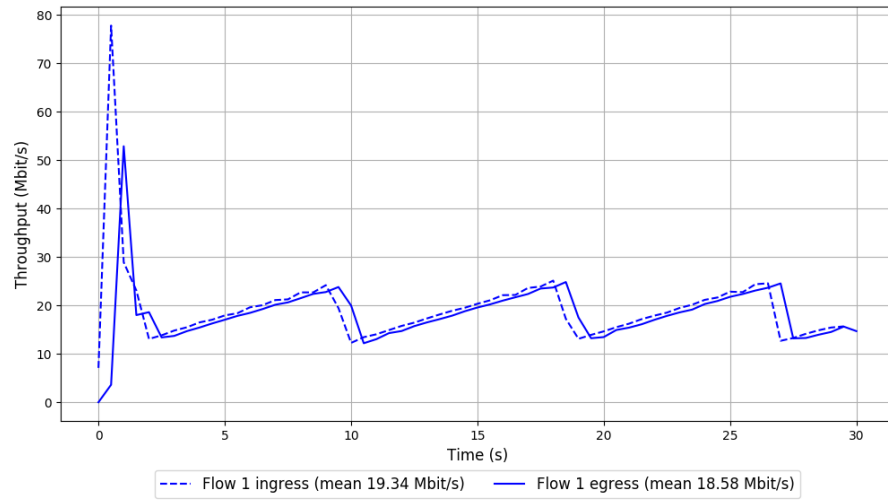
-- Flow 1:

Average throughput: 18.58 Mbit/s

95th percentile per-packet one-way delay: 63.347 ms

Loss rate: 4.19%

Run 2: Report of TCP Vegas — Data Link

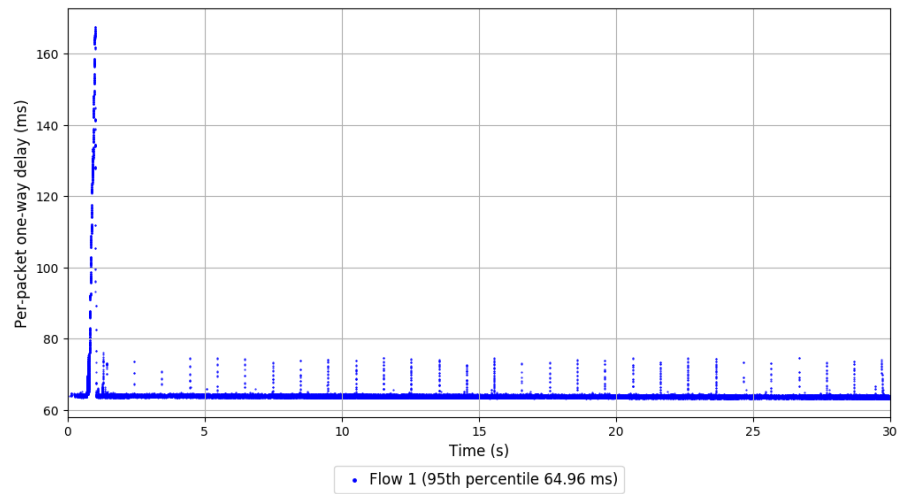
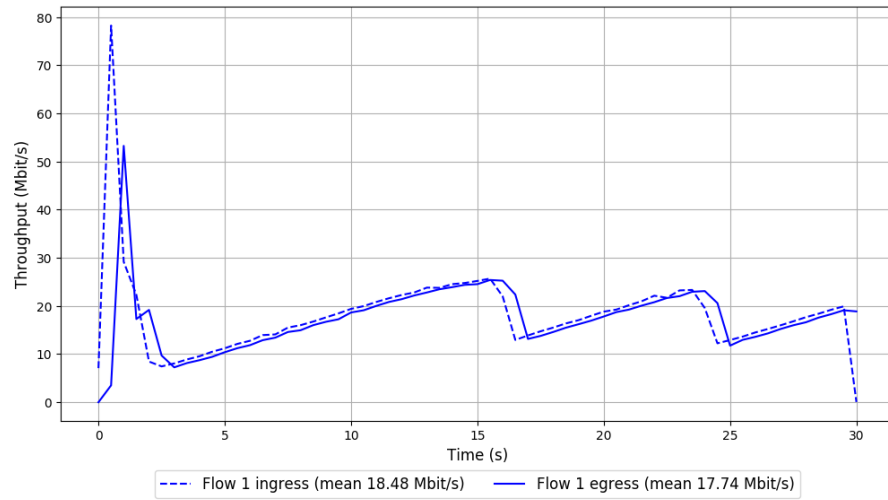


Run 3: Statistics of TCP Vegas

Start at: 2018-09-06 15:06:44
End at: 2018-09-06 15:07:14
Local clock offset: 2.481 ms
Remote clock offset: 48.352 ms

Below is generated by plot.py at 2018-09-06 15:56:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 17.74 Mbit/s
95th percentile per-packet one-way delay: 64.959 ms
Loss rate: 4.28%
-- Flow 1:
Average throughput: 17.74 Mbit/s
95th percentile per-packet one-way delay: 64.959 ms
Loss rate: 4.28%

Run 3: Report of TCP Vegas — Data Link

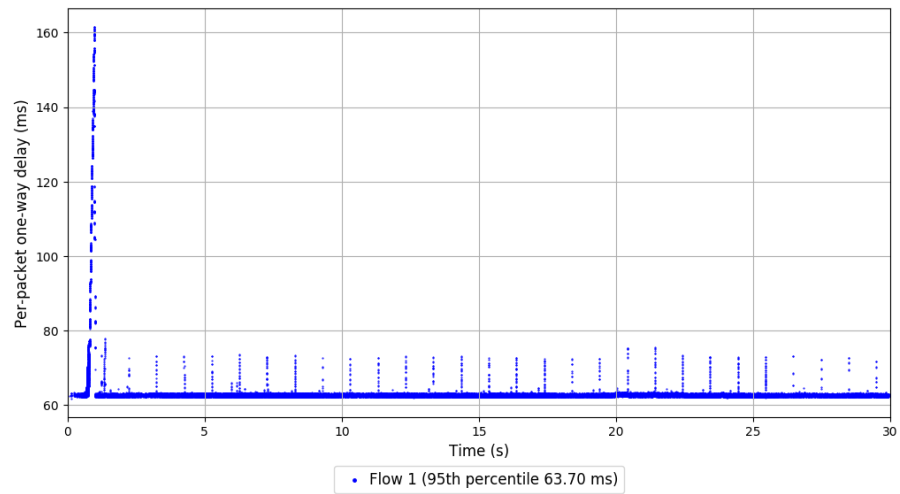
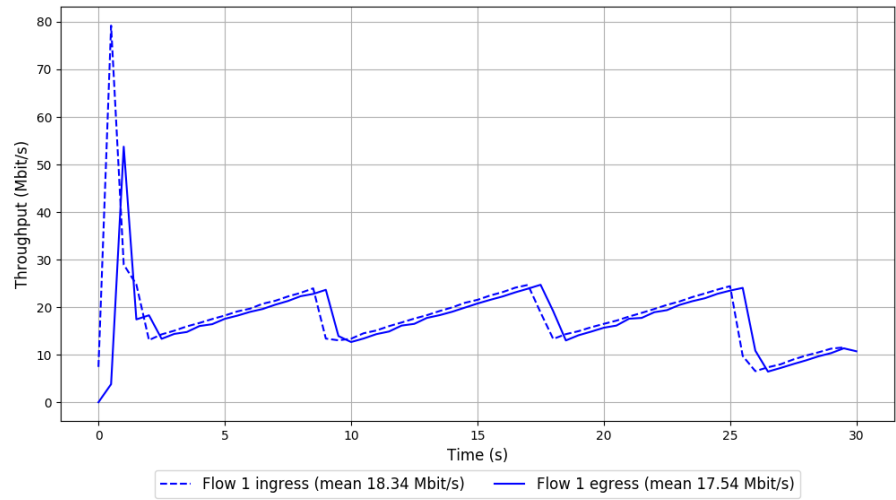


Run 4: Statistics of TCP Vegas

Start at: 2018-09-06 15:27:37
End at: 2018-09-06 15:28:07
Local clock offset: 2.487 ms
Remote clock offset: 42.455 ms

Below is generated by plot.py at 2018-09-06 15:56:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 17.54 Mbit/s
95th percentile per-packet one-way delay: 63.699 ms
Loss rate: 4.64%
-- Flow 1:
Average throughput: 17.54 Mbit/s
95th percentile per-packet one-way delay: 63.699 ms
Loss rate: 4.64%

Run 4: Report of TCP Vegas — Data Link

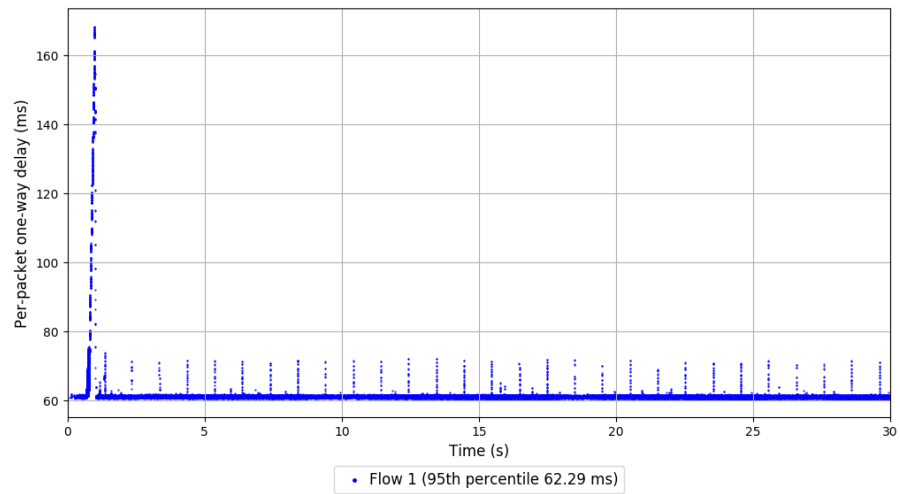
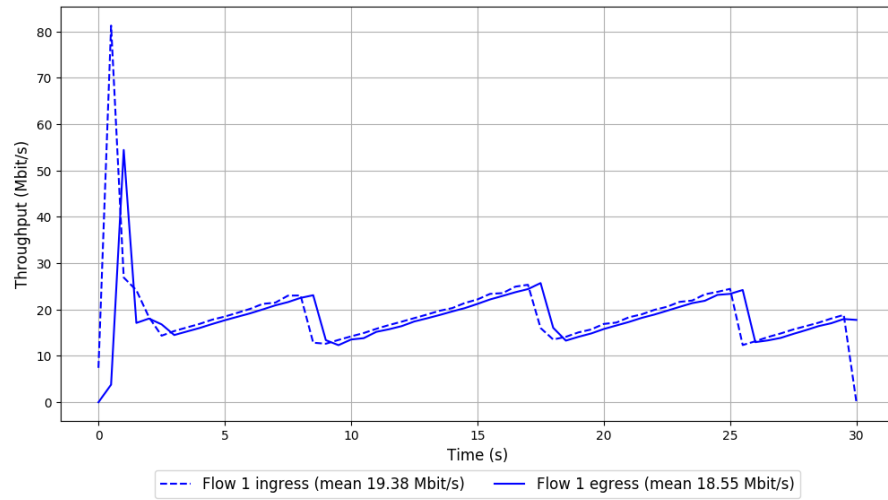


Run 5: Statistics of TCP Vegas

Start at: 2018-09-06 15:48:28
End at: 2018-09-06 15:48:58
Local clock offset: 2.751 ms
Remote clock offset: 41.432 ms

Below is generated by plot.py at 2018-09-06 15:56:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 18.55 Mbit/s
95th percentile per-packet one-way delay: 62.286 ms
Loss rate: 4.56%
-- Flow 1:
Average throughput: 18.55 Mbit/s
95th percentile per-packet one-way delay: 62.286 ms
Loss rate: 4.56%

Run 5: Report of TCP Vegas — Data Link

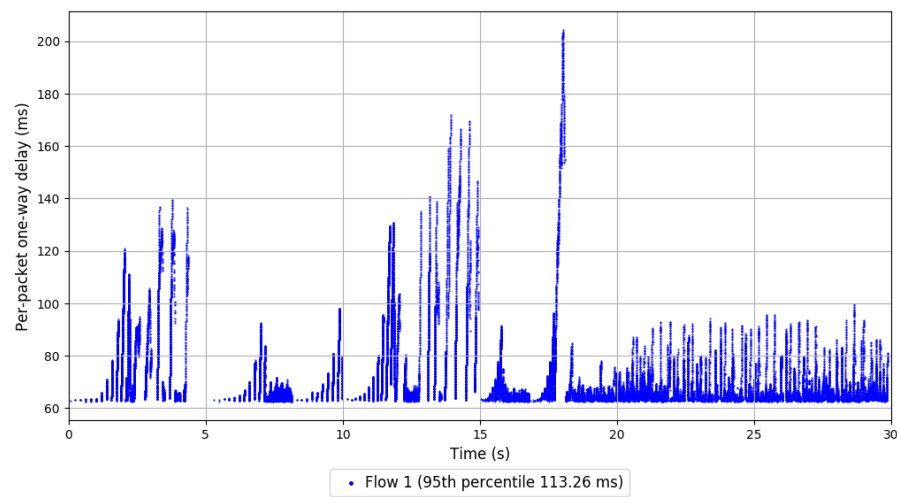
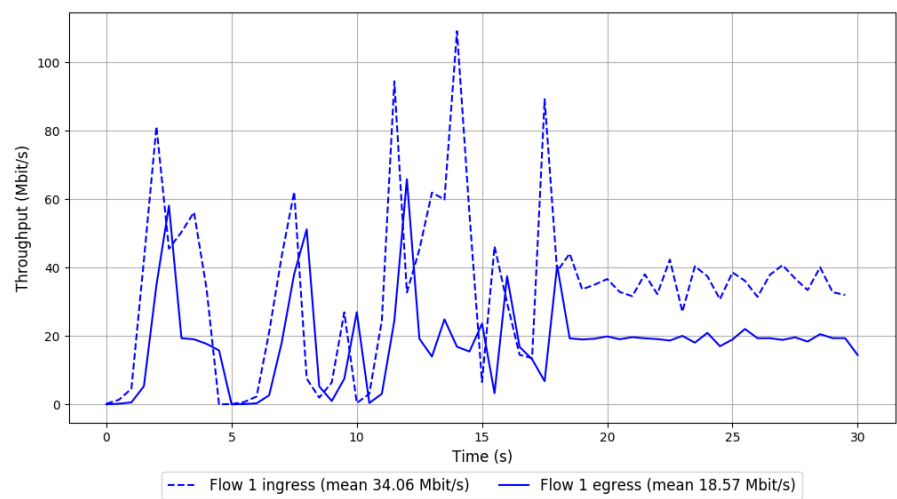


Run 1: Statistics of Verus

Start at: 2018-09-06 14:16:26
End at: 2018-09-06 14:16:56
Local clock offset: 1.673 ms
Remote clock offset: 57.322 ms

Below is generated by plot.py at 2018-09-06 15:56:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 18.57 Mbit/s
95th percentile per-packet one-way delay: 113.260 ms
Loss rate: 45.63%
-- Flow 1:
Average throughput: 18.57 Mbit/s
95th percentile per-packet one-way delay: 113.260 ms
Loss rate: 45.63%

Run 1: Report of Verus — Data Link

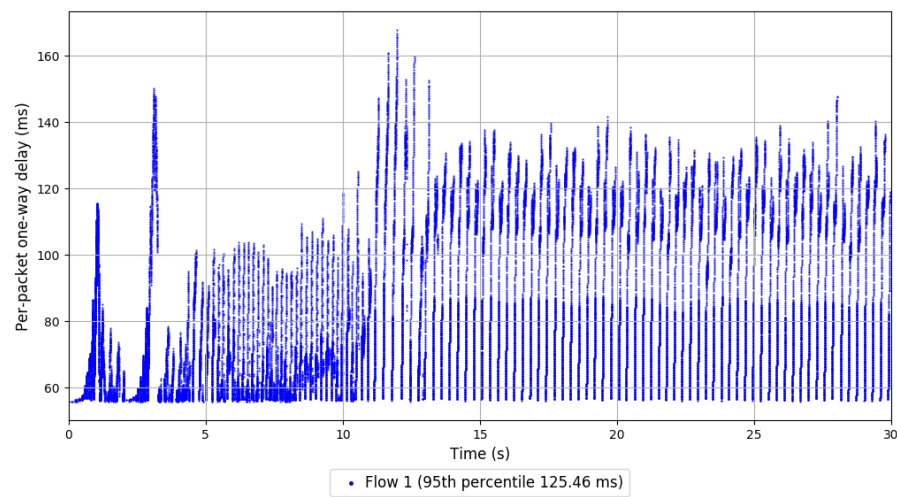
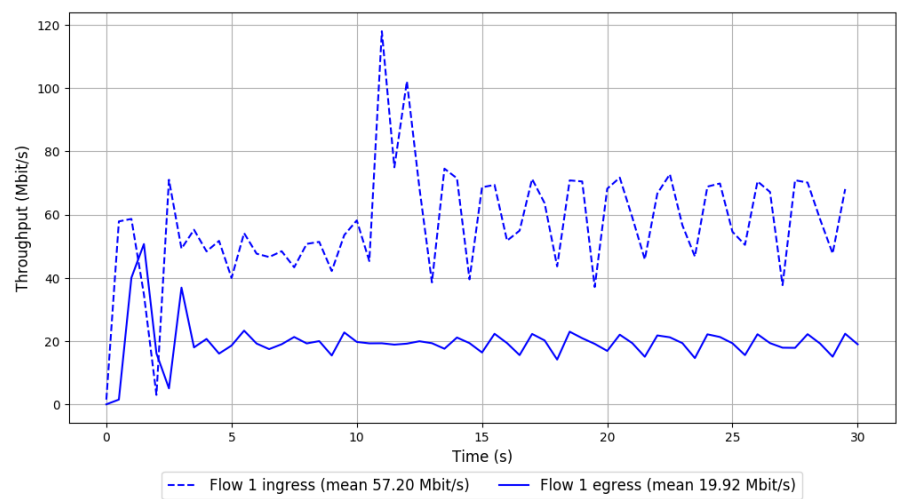


Run 2: Statistics of Verus

Start at: 2018-09-06 14:37:36
End at: 2018-09-06 14:38:06
Local clock offset: 4.752 ms
Remote clock offset: 61.584 ms

Below is generated by plot.py at 2018-09-06 15:56:42
Datalink statistics
-- Total of 1 flow:
Average throughput: 19.92 Mbit/s
95th percentile per-packet one-way delay: 125.464 ms
Loss rate: 65.19%
-- Flow 1:
Average throughput: 19.92 Mbit/s
95th percentile per-packet one-way delay: 125.464 ms
Loss rate: 65.19%

Run 2: Report of Verus — Data Link

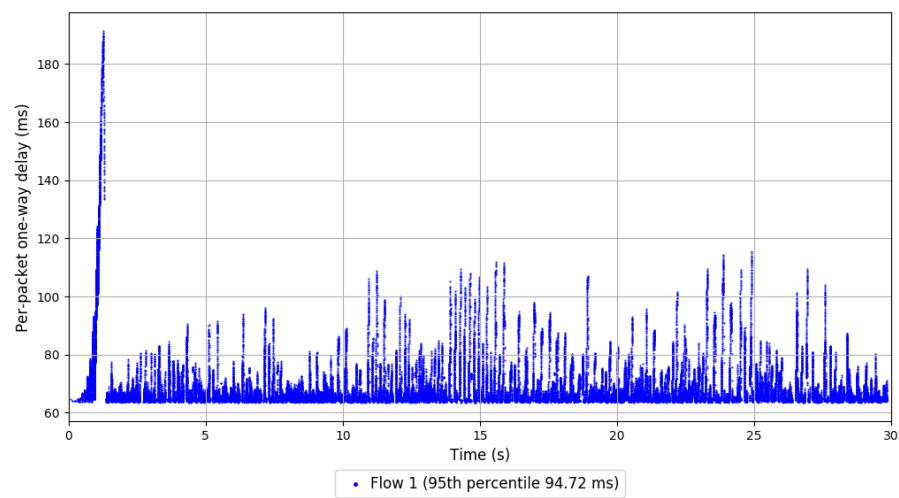
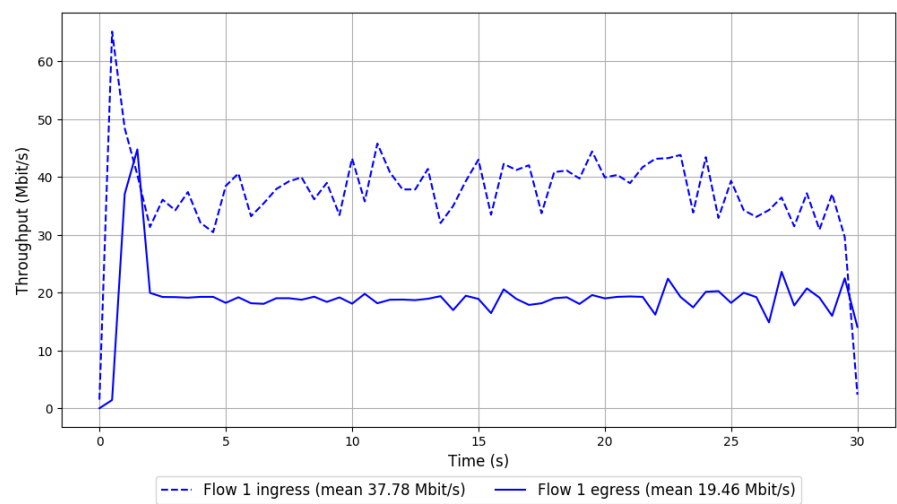


Run 3: Statistics of Verus

Start at: 2018-09-06 14:58:26
End at: 2018-09-06 14:58:56
Local clock offset: 2.912 ms
Remote clock offset: 55.208 ms

Below is generated by plot.py at 2018-09-06 15:56:42
Datalink statistics
-- Total of 1 flow:
Average throughput: 19.46 Mbit/s
95th percentile per-packet one-way delay: 94.722 ms
Loss rate: 48.91%
-- Flow 1:
Average throughput: 19.46 Mbit/s
95th percentile per-packet one-way delay: 94.722 ms
Loss rate: 48.91%

Run 3: Report of Verus — Data Link

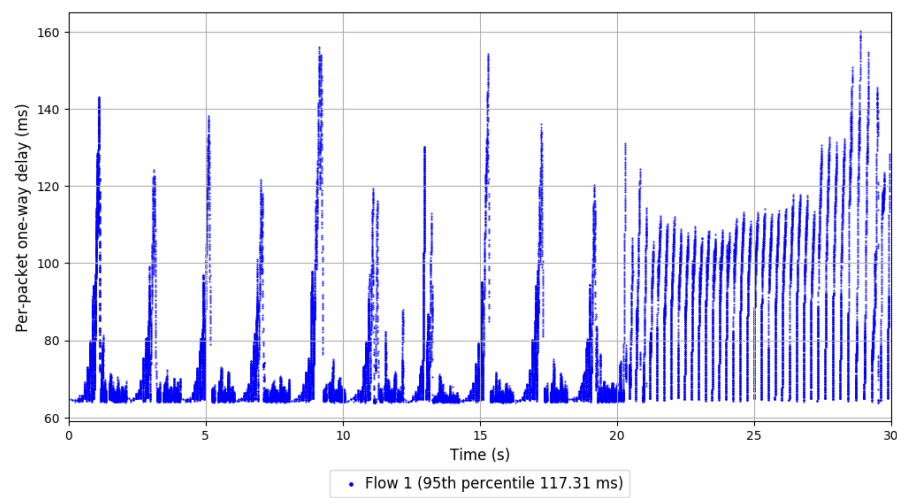
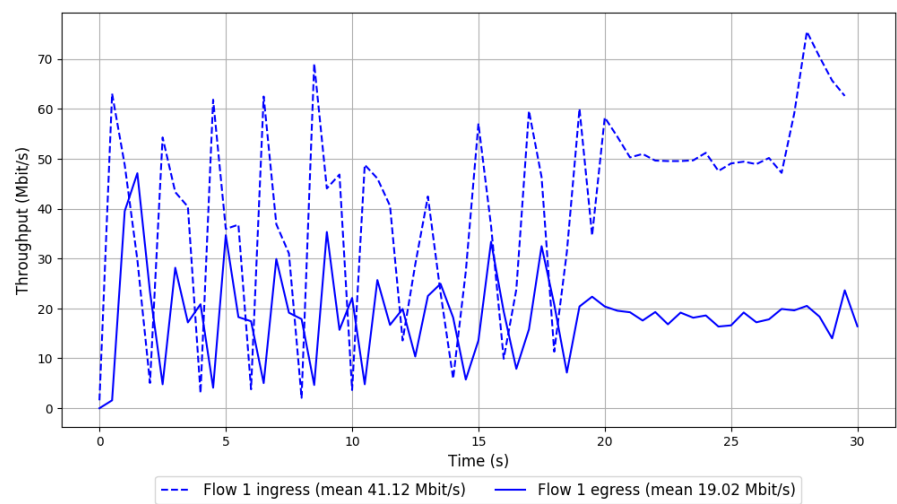


Run 4: Statistics of Verus

Start at: 2018-09-06 15:19:26
End at: 2018-09-06 15:19:56
Local clock offset: 2.418 ms
Remote clock offset: 42.202 ms

Below is generated by plot.py at 2018-09-06 15:56:45
Datalink statistics
-- Total of 1 flow:
Average throughput: 19.02 Mbit/s
95th percentile per-packet one-way delay: 117.313 ms
Loss rate: 53.77%
-- Flow 1:
Average throughput: 19.02 Mbit/s
95th percentile per-packet one-way delay: 117.313 ms
Loss rate: 53.77%

Run 4: Report of Verus — Data Link

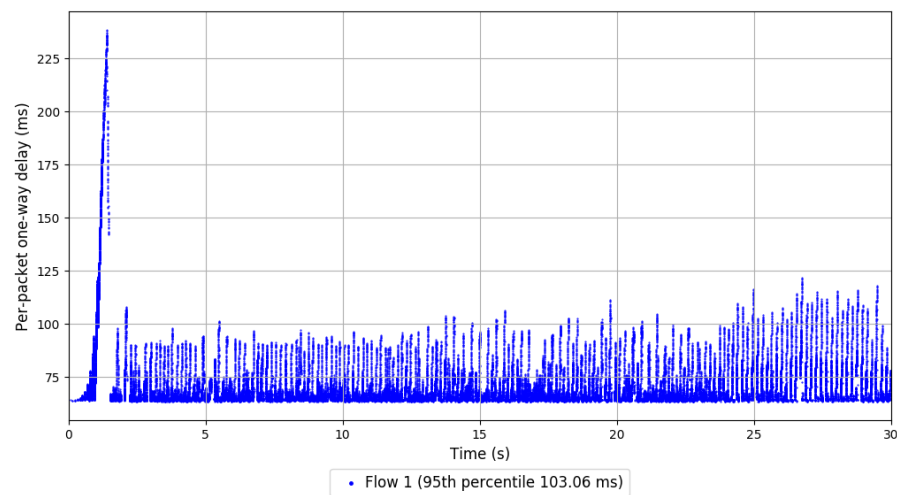
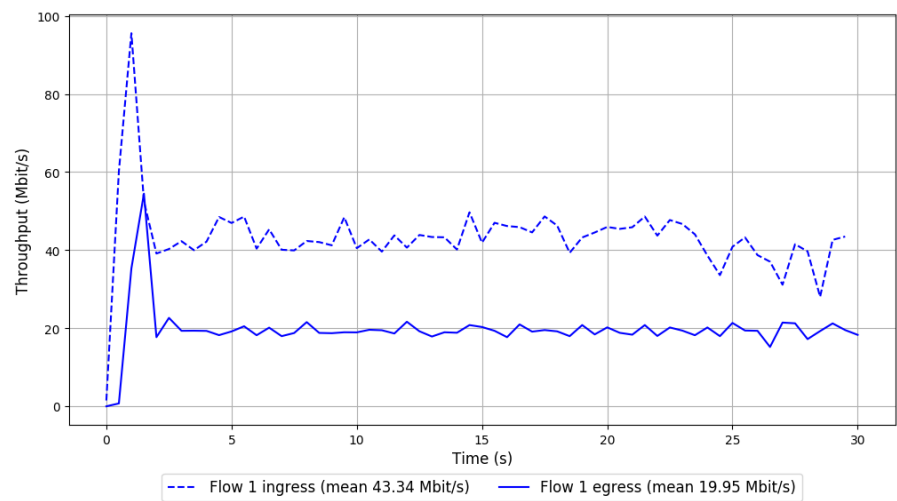


Run 5: Statistics of Verus

Start at: 2018-09-06 15:40:23
End at: 2018-09-06 15:40:53
Local clock offset: 2.572 ms
Remote clock offset: 39.975 ms

Below is generated by plot.py at 2018-09-06 15:56:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 19.95 Mbit/s
95th percentile per-packet one-way delay: 103.062 ms
Loss rate: 54.10%
-- Flow 1:
Average throughput: 19.95 Mbit/s
95th percentile per-packet one-way delay: 103.062 ms
Loss rate: 54.10%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2018-09-06 14:29:26

End at: 2018-09-06 14:29:56

Local clock offset: 4.289 ms

Remote clock offset: 60.316 ms

Below is generated by plot.py at 2018-09-06 15:56:51

Datalink statistics

-- Total of 1 flow:

Average throughput: 19.49 Mbit/s

95th percentile per-packet one-way delay: 61.354 ms

Loss rate: 10.06%

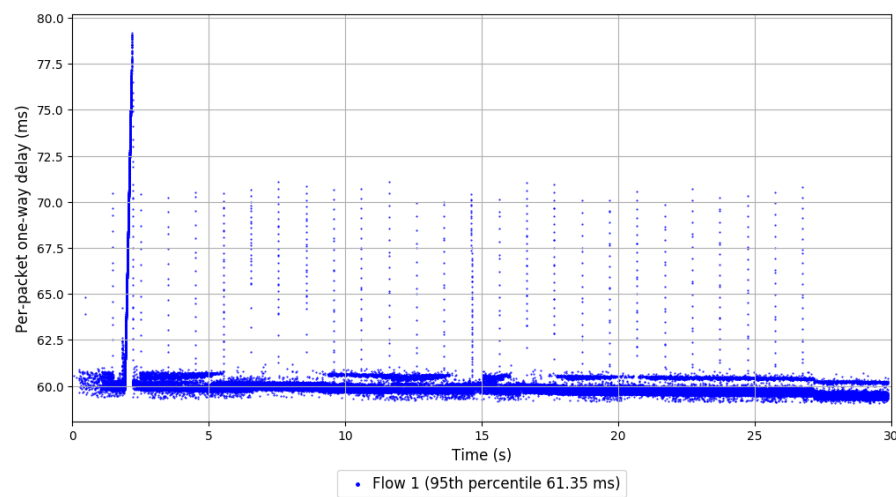
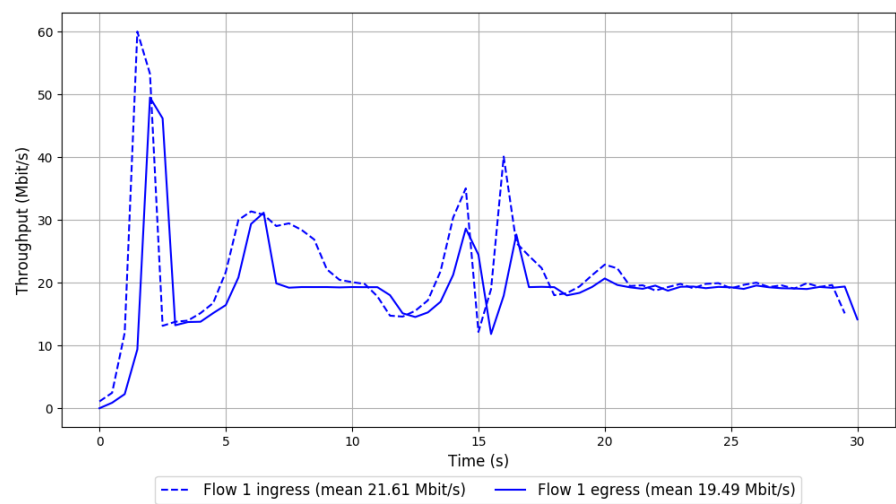
-- Flow 1:

Average throughput: 19.49 Mbit/s

95th percentile per-packet one-way delay: 61.354 ms

Loss rate: 10.06%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2018-09-06 14:50:22

End at: 2018-09-06 14:50:52

Local clock offset: 3.799 ms

Remote clock offset: 54.375 ms

Below is generated by plot.py at 2018-09-06 15:56:51

Datalink statistics

-- Total of 1 flow:

Average throughput: 18.51 Mbit/s

95th percentile per-packet one-way delay: 65.581 ms

Loss rate: 4.59%

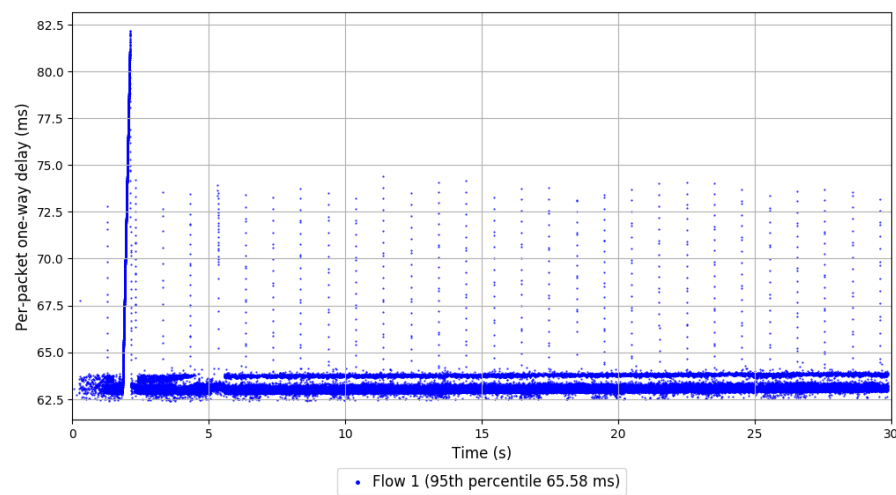
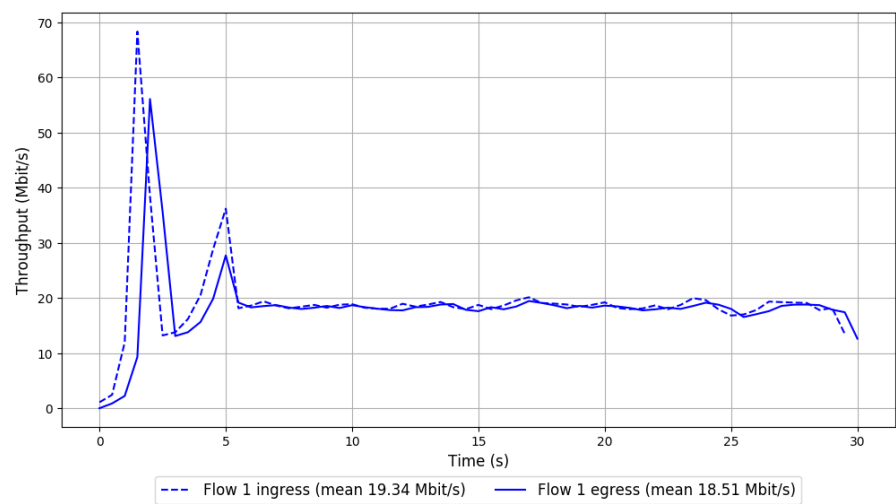
-- Flow 1:

Average throughput: 18.51 Mbit/s

95th percentile per-packet one-way delay: 65.581 ms

Loss rate: 4.59%

Run 2: Report of PCC-Vivace — Data Link

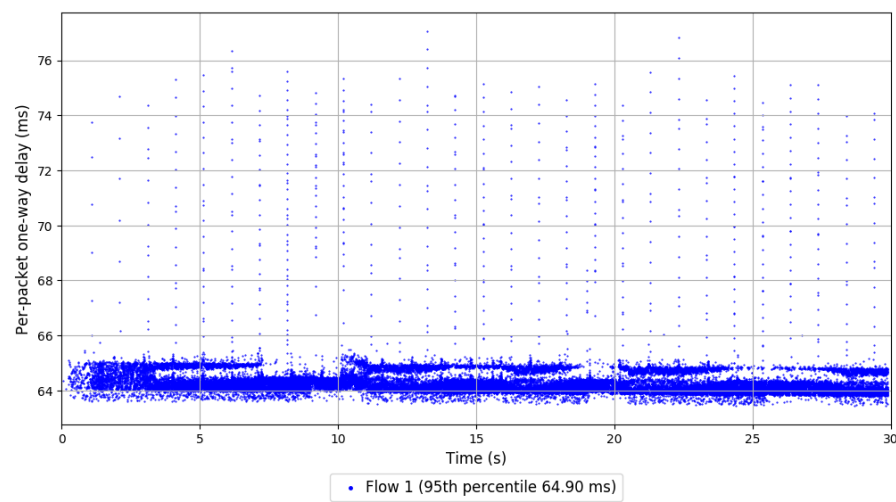
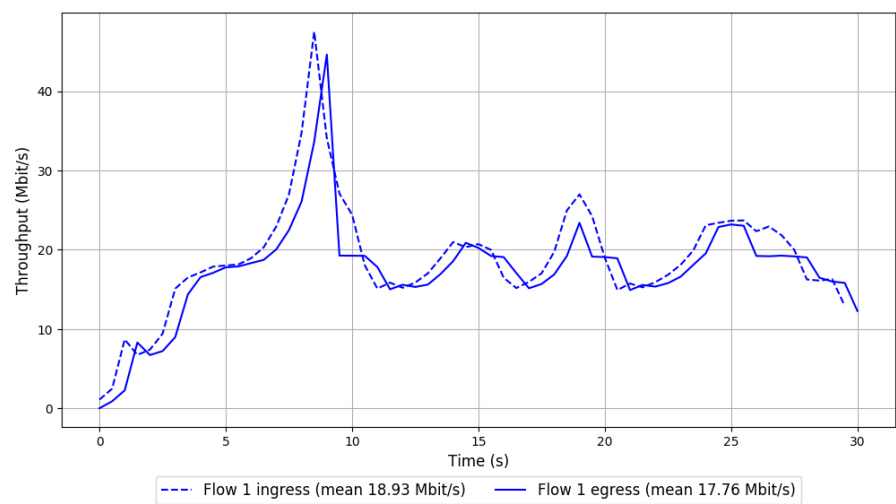


Run 3: Statistics of PCC-Vivace

Start at: 2018-09-06 15:11:21
End at: 2018-09-06 15:11:51
Local clock offset: 2.34 ms
Remote clock offset: 44.585 ms

Below is generated by plot.py at 2018-09-06 15:56:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 17.76 Mbit/s
95th percentile per-packet one-way delay: 64.904 ms
Loss rate: 6.42%
-- Flow 1:
Average throughput: 17.76 Mbit/s
95th percentile per-packet one-way delay: 64.904 ms
Loss rate: 6.42%

Run 3: Report of PCC-Vivace — Data Link

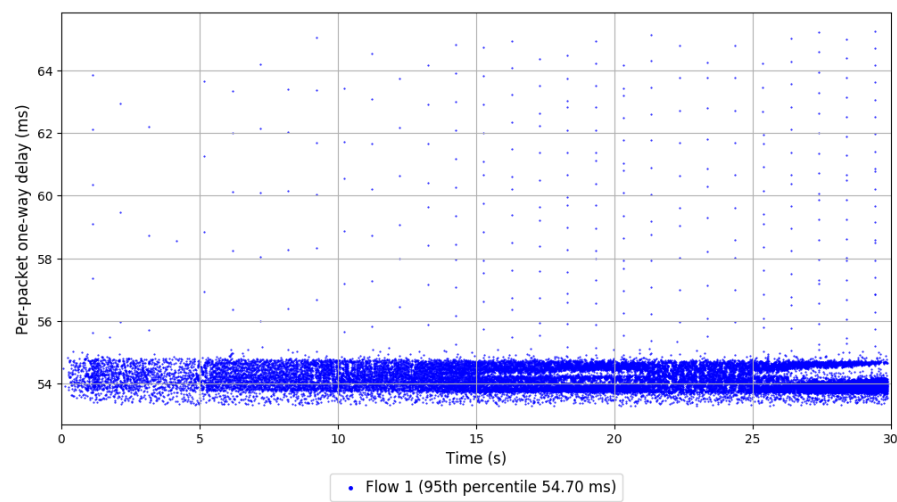
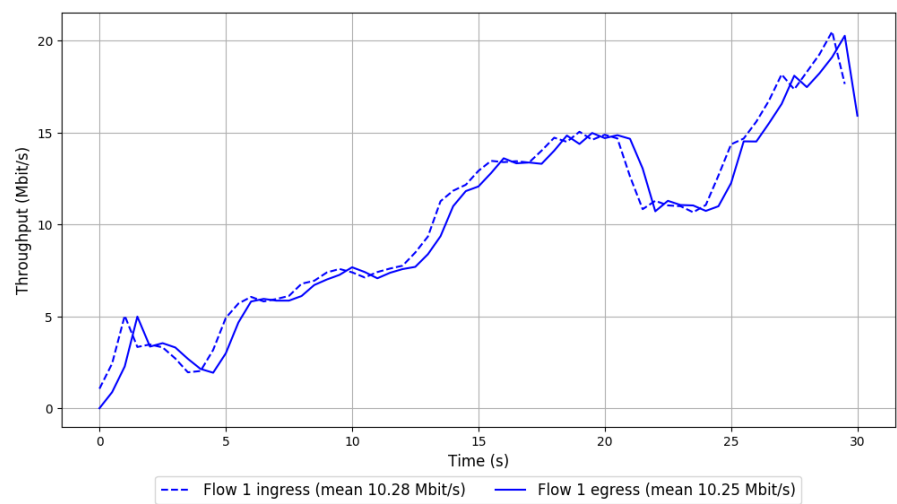


Run 4: Statistics of PCC-Vivace

Start at: 2018-09-06 15:32:15
End at: 2018-09-06 15:32:45
Local clock offset: 2.492 ms
Remote clock offset: 50.375 ms

Below is generated by plot.py at 2018-09-06 15:56:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 10.25 Mbit/s
95th percentile per-packet one-way delay: 54.705 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 10.25 Mbit/s
95th percentile per-packet one-way delay: 54.705 ms
Loss rate: 0.65%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2018-09-06 15:53:09

End at: 2018-09-06 15:53:39

Local clock offset: 2.891 ms

Remote clock offset: 42.7 ms

Below is generated by plot.py at 2018-09-06 15:56:53

Datalink statistics

-- Total of 1 flow:

Average throughput: 19.52 Mbit/s

95th percentile per-packet one-way delay: 59.543 ms

Loss rate: 5.78%

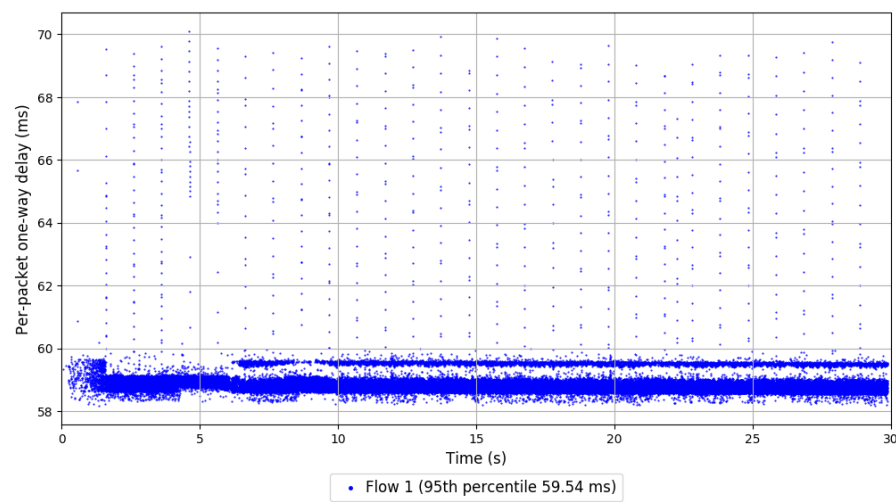
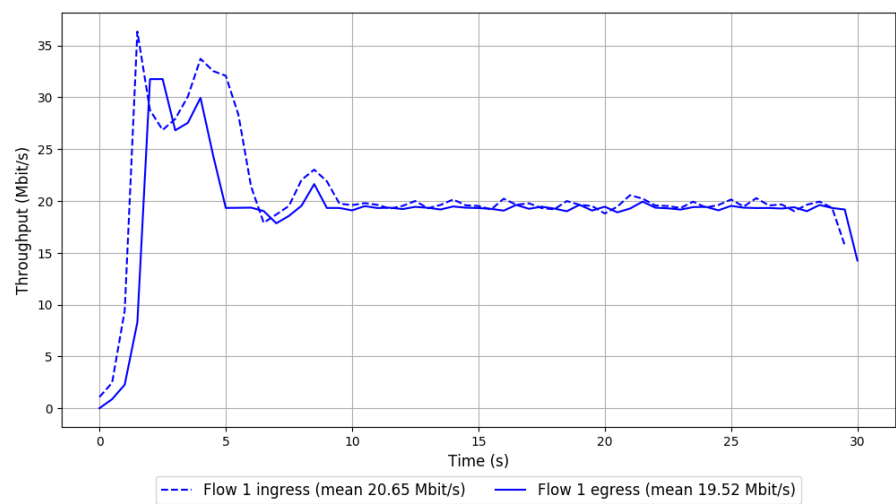
-- Flow 1:

Average throughput: 19.52 Mbit/s

95th percentile per-packet one-way delay: 59.543 ms

Loss rate: 5.78%

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2018-09-06 14:25:50

End at: 2018-09-06 14:26:20

Local clock offset: 3.56 ms

Remote clock offset: 62.4 ms

Below is generated by plot.py at 2018-09-06 15:56:53

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.08 Mbit/s

95th percentile per-packet one-way delay: 61.846 ms

Loss rate: 0.27%

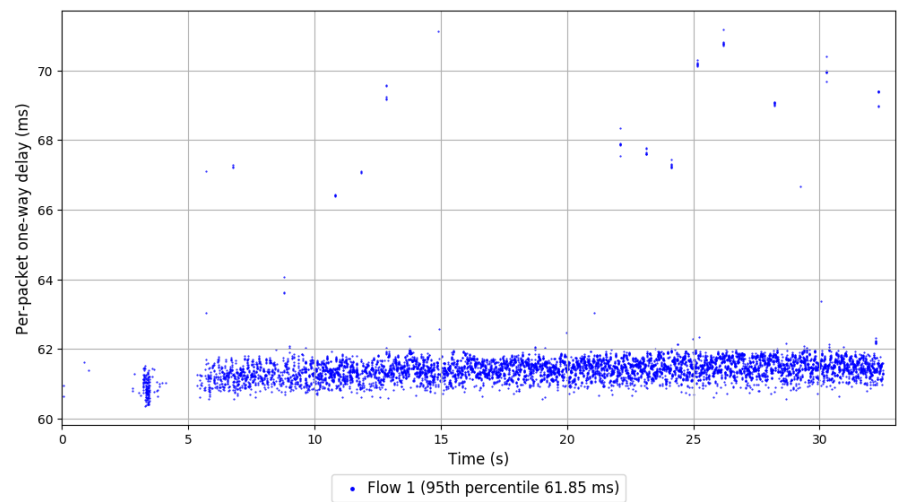
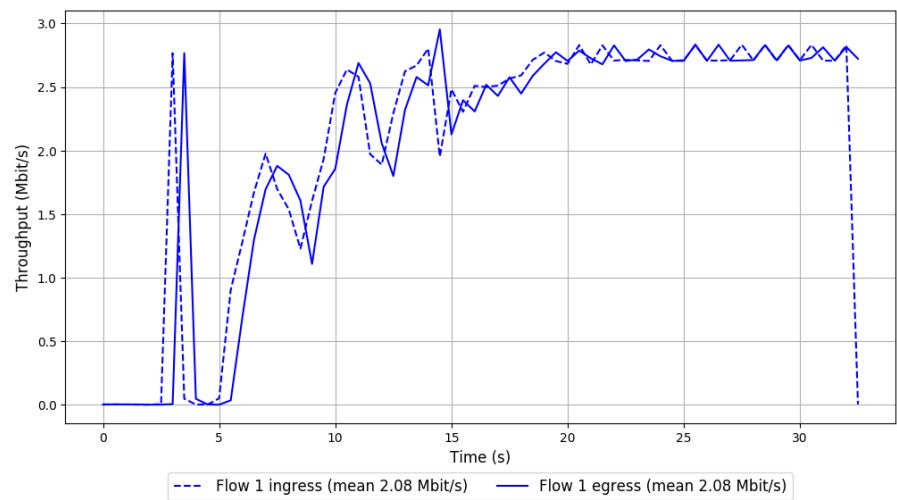
-- Flow 1:

Average throughput: 2.08 Mbit/s

95th percentile per-packet one-way delay: 61.846 ms

Loss rate: 0.27%

Run 1: Report of WebRTC media — Data Link

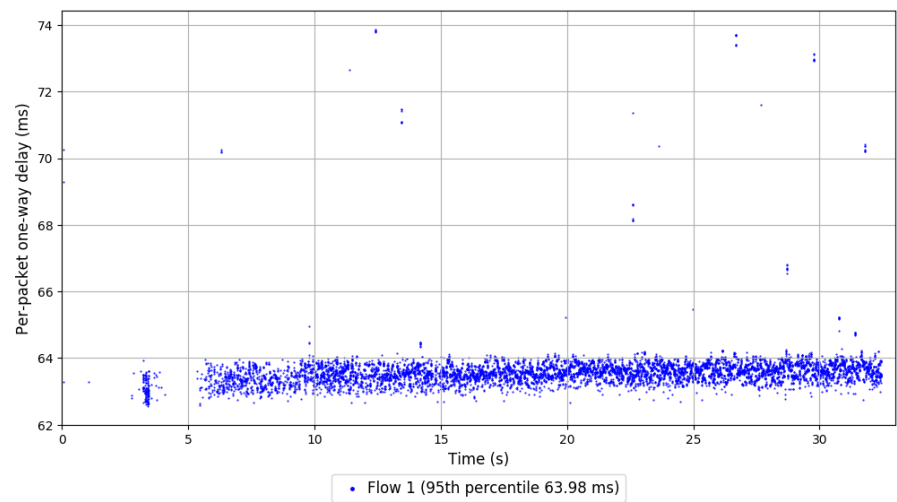
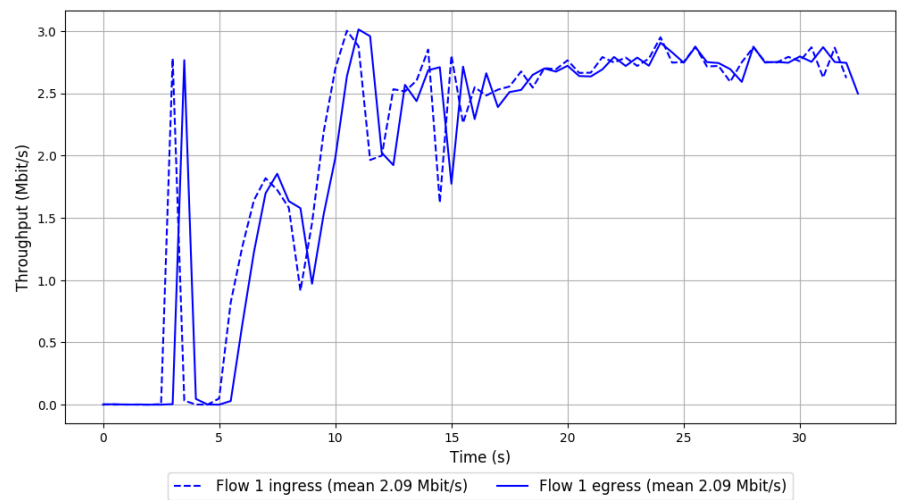


Run 2: Statistics of WebRTC media

Start at: 2018-09-06 14:46:54
End at: 2018-09-06 14:47:24
Local clock offset: 4.735 ms
Remote clock offset: 54.958 ms

Below is generated by plot.py at 2018-09-06 15:56:53
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.09 Mbit/s
95th percentile per-packet one-way delay: 63.976 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 2.09 Mbit/s
95th percentile per-packet one-way delay: 63.976 ms
Loss rate: 0.37%

Run 2: Report of WebRTC media — Data Link

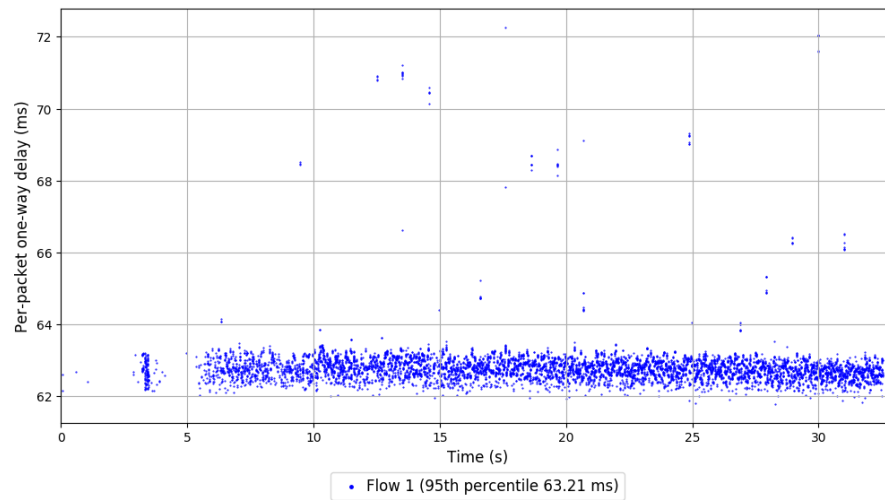
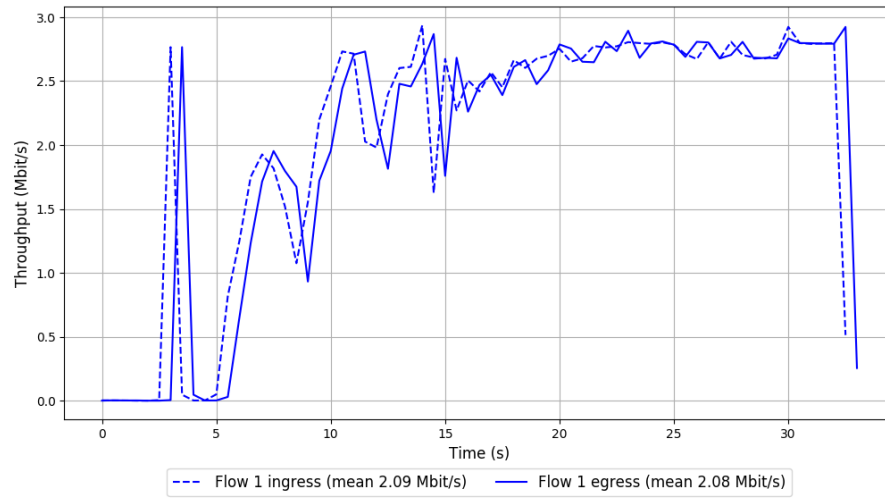


Run 3: Statistics of WebRTC media

Start at: 2018-09-06 15:07:54
End at: 2018-09-06 15:08:24
Local clock offset: 2.449 ms
Remote clock offset: 48.906 ms

Below is generated by plot.py at 2018-09-06 15:56:53
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 63.207 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 63.207 ms
Loss rate: 0.38%

Run 3: Report of WebRTC media — Data Link

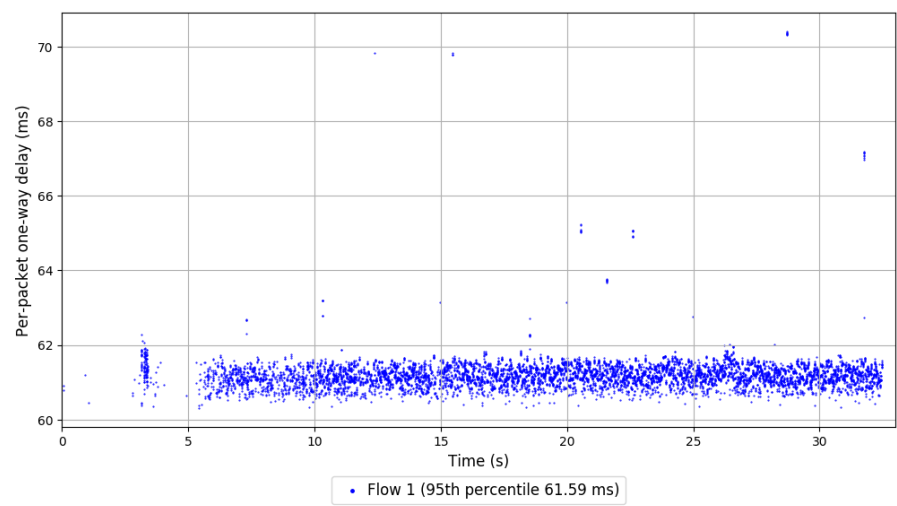
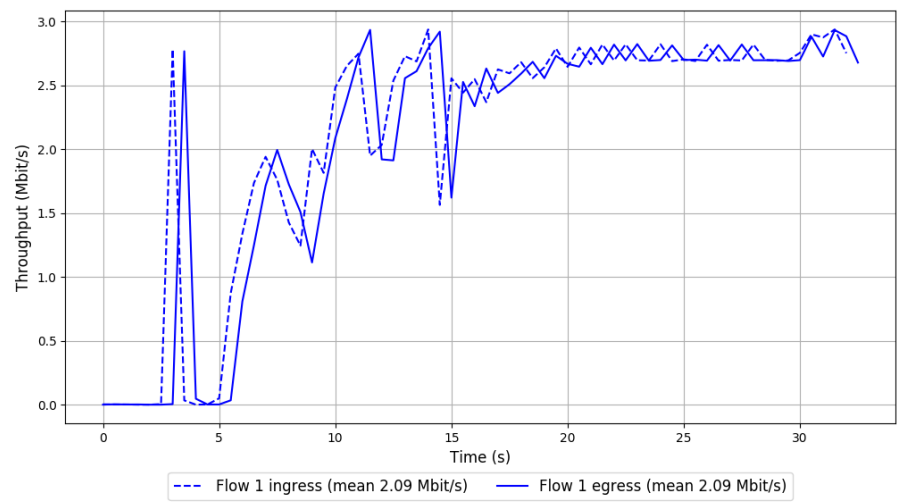


Run 4: Statistics of WebRTC media

Start at: 2018-09-06 15:28:47
End at: 2018-09-06 15:29:17
Local clock offset: 2.396 ms
Remote clock offset: 43.375 ms

Below is generated by plot.py at 2018-09-06 15:56:53
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.09 Mbit/s
95th percentile per-packet one-way delay: 61.586 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 2.09 Mbit/s
95th percentile per-packet one-way delay: 61.586 ms
Loss rate: 0.36%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-09-06 15:49:37
End at: 2018-09-06 15:50:07
Local clock offset: 2.848 ms
Remote clock offset: 42.844 ms

Below is generated by plot.py at 2018-09-06 15:56:53
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 59.869 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 59.869 ms
Loss rate: 0.38%

Run 5: Report of WebRTC media — Data Link

