

Pantheon Report

Generated at 2019-07-11 22:39:17 (UTC).

Data path: AWS California 1 on *ens5 (local)* → Stanford cellular on *ppp0 (remote)*.

Repeated the test of 24 congestion control schemes 3 times.

Each test lasted for 30 seconds running 1 flow.

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

System info:

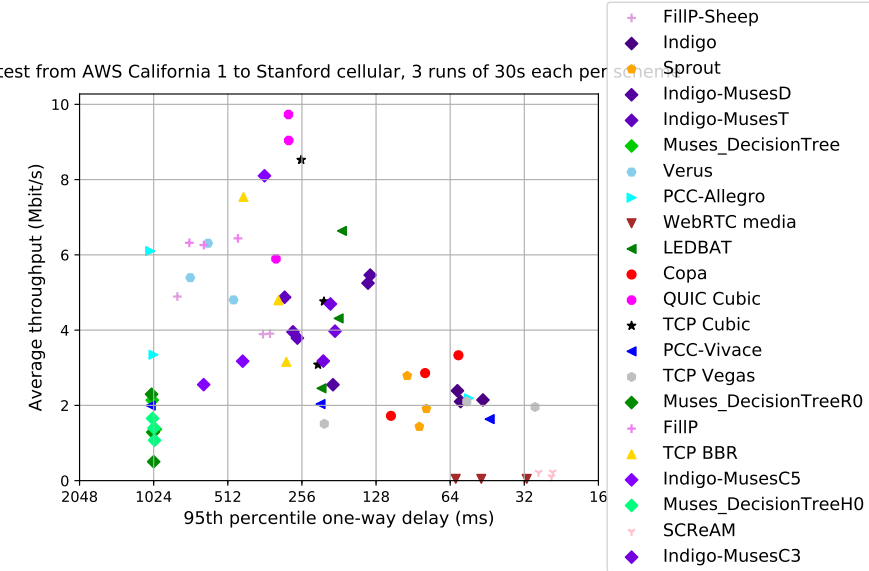
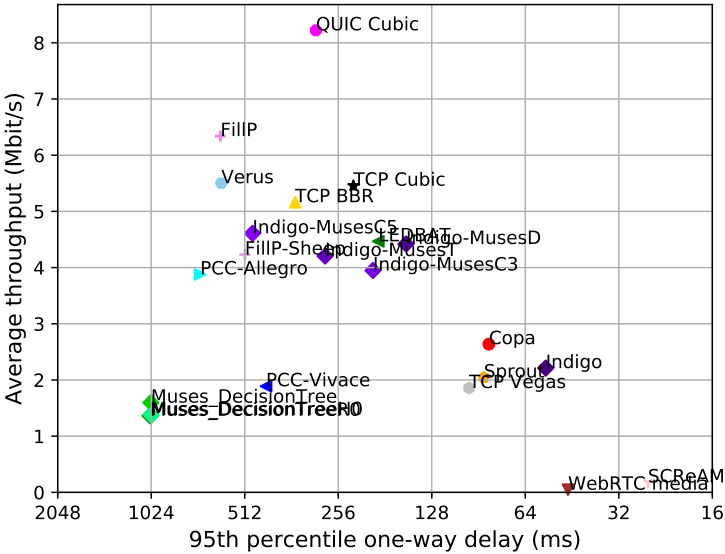
```
Linux 4.15.0-1041-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

```
branch: muses @ 2076e1149a241f3edb4365d686df32342bf9561f
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
third_party/muses_dtree @ 8bb93ffff2b107204a92d8b72449fc0c55e15f00
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
```

test from AWS California 1 to Stanford cellular, 3 runs of 30s each per scheme
(mean of all runs by scheme)



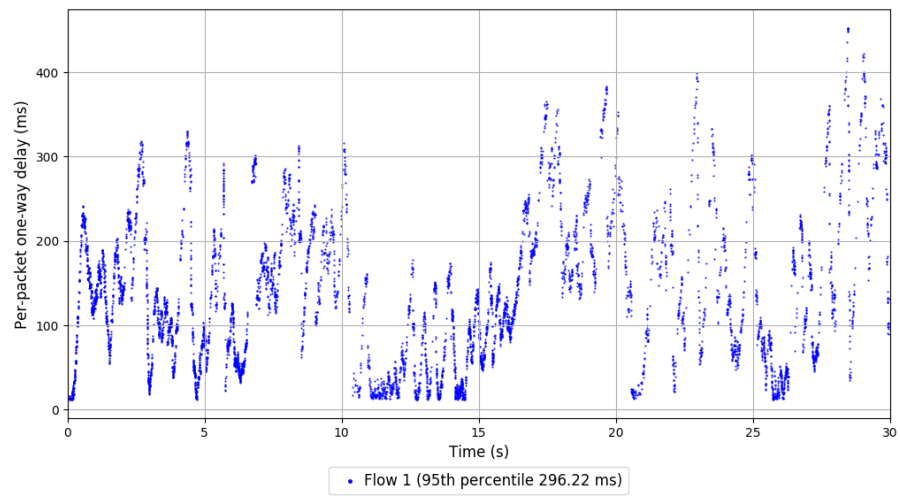
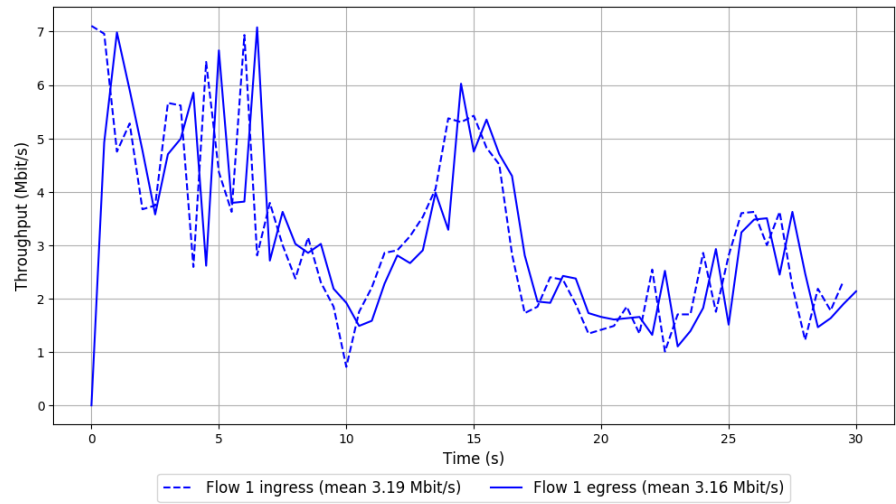
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	3	5.16	352.48	0.57
Copa	3	2.64	83.83	0.08
TCP Cubic	3	5.45	228.78	0.29
FillP	3	6.34	613.24	3.18
FillP-Sheep	3	4.23	511.41	4.10
Indigo	3	2.21	55.00	0.04
Indigo-MusesC3	3	3.95	197.87	0.38
Indigo-MusesC5	3	4.61	483.43	1.51
Indigo-MusesD	3	4.42	154.89	0.28
Indigo-MusesT	3	4.20	282.15	0.46
LEDBAT	3	4.47	190.28	0.36
Muses_DecisionTree	3	1.60	1026.51	7.16
Muses_DecisionTreeH0	3	1.37	1023.75	8.99
Muses_DecisionTreeR0	3	1.36	1032.46	9.89
PCC-Allegro	3	3.88	712.46	14.01
PCC-Expr	0	N/A	N/A	N/A
QUIC Cubic	3	8.22	302.07	0.71
SCReAM	3	0.18	25.78	0.29
Sprout	3	2.04	87.00	0.26
TaoVA-100x	0	N/A	N/A	N/A
TCP Vegas	3	1.86	97.14	0.09
Verus	3	5.50	609.33	2.14
PCC-Vivace	3	1.89	437.36	7.39
WebRTC media	3	0.05	46.63	0.00

Run 1: Statistics of TCP BBR

Start at: 2019-07-11 21:12:37
End at: 2019-07-11 21:13:07
Local clock offset: -0.648 ms
Remote clock offset: -0.157 ms

Below is generated by plot.py at 2019-07-11 22:38:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.16 Mbit/s
95th percentile per-packet one-way delay: 296.223 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 3.16 Mbit/s
95th percentile per-packet one-way delay: 296.223 ms
Loss rate: 0.90%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2019-07-11 21:42:10

End at: 2019-07-11 21:42:40

Local clock offset: 2.723 ms

Remote clock offset: 4.621 ms

Below is generated by plot.py at 2019-07-11 22:38:16

Datalink statistics

-- Total of 1 flow:

Average throughput: 4.79 Mbit/s

95th percentile per-packet one-way delay: 318.958 ms

Loss rate: 0.48%

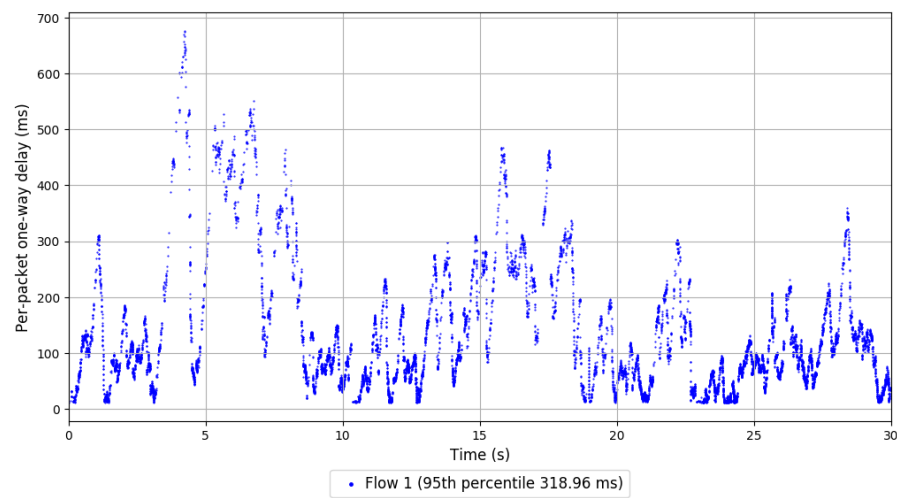
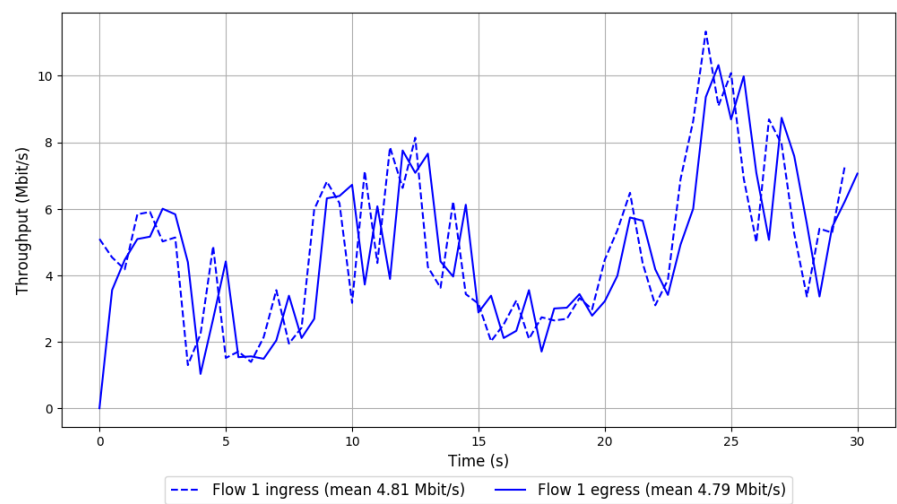
-- Flow 1:

Average throughput: 4.79 Mbit/s

95th percentile per-packet one-way delay: 318.958 ms

Loss rate: 0.48%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2019-07-11 22:11:43

End at: 2019-07-11 22:12:13

Local clock offset: 0.824 ms

Remote clock offset: 3.896 ms

Below is generated by plot.py at 2019-07-11 22:38:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 7.54 Mbit/s

95th percentile per-packet one-way delay: 442.253 ms

Loss rate: 0.34%

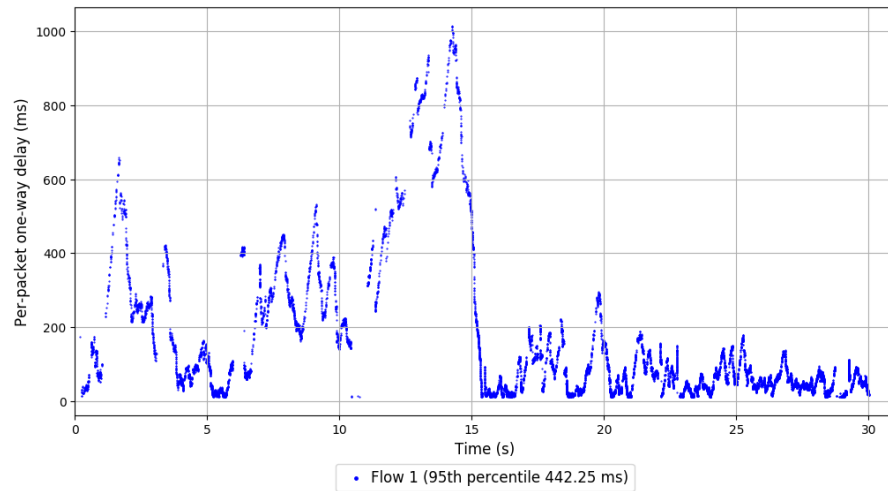
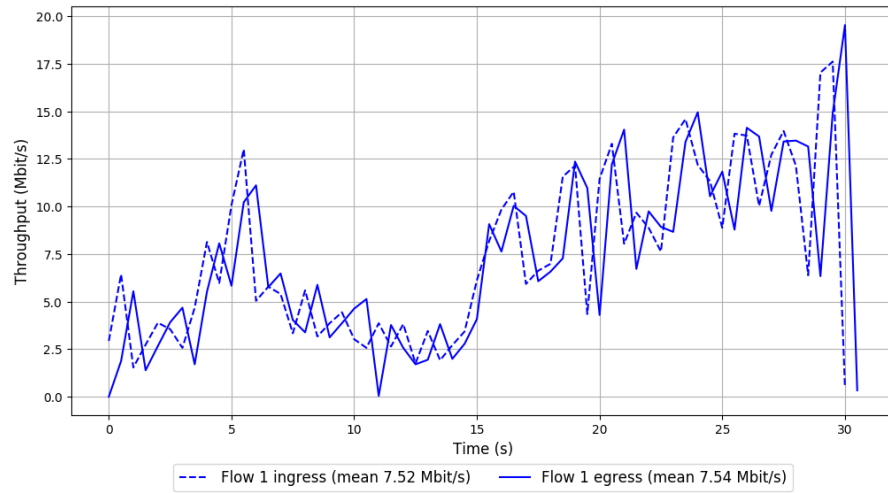
-- Flow 1:

Average throughput: 7.54 Mbit/s

95th percentile per-packet one-way delay: 442.253 ms

Loss rate: 0.34%

Run 3: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2019-07-11 21:24:56

End at: 2019-07-11 21:25:26

Local clock offset: 0.264 ms

Remote clock offset: 3.008 ms

Below is generated by plot.py at 2019-07-11 22:38:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.33 Mbit/s

95th percentile per-packet one-way delay: 59.247 ms

Loss rate: 0.05%

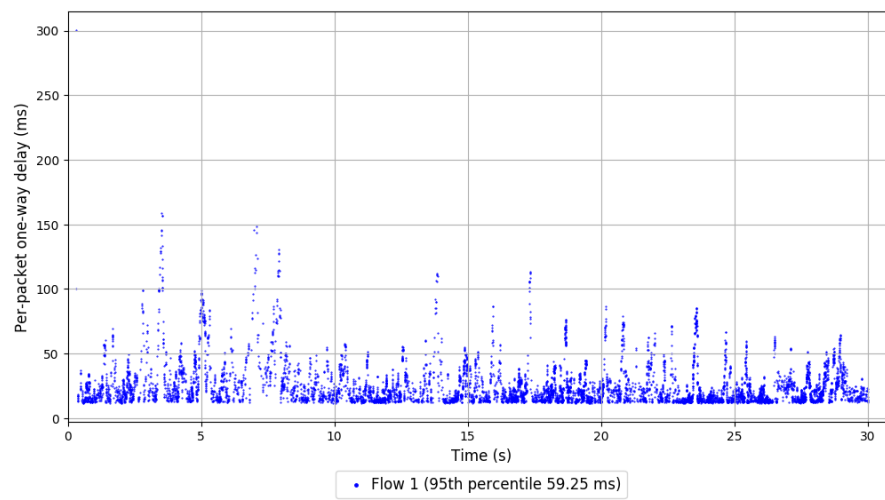
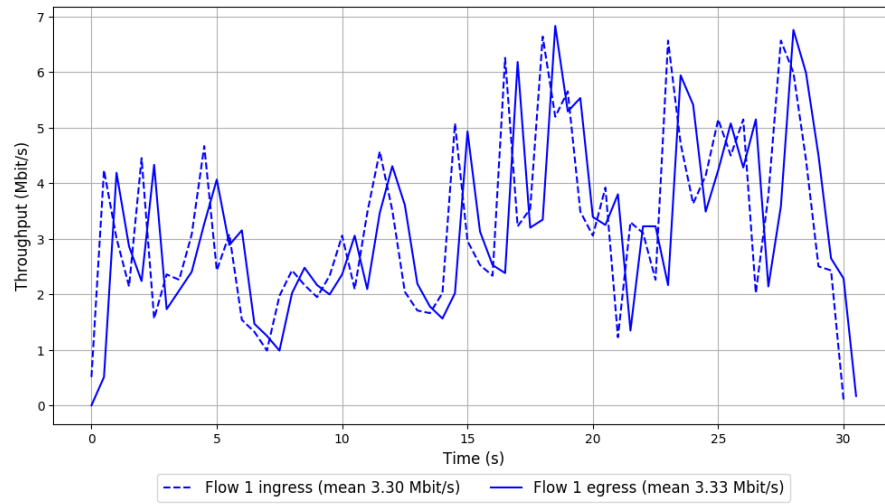
-- Flow 1:

Average throughput: 3.33 Mbit/s

95th percentile per-packet one-way delay: 59.247 ms

Loss rate: 0.05%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2019-07-11 21:54:29

End at: 2019-07-11 21:54:59

Local clock offset: 3.628 ms

Remote clock offset: 3.909 ms

Below is generated by plot.py at 2019-07-11 22:38:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.72 Mbit/s

95th percentile per-packet one-way delay: 111.341 ms

Loss rate: 0.14%

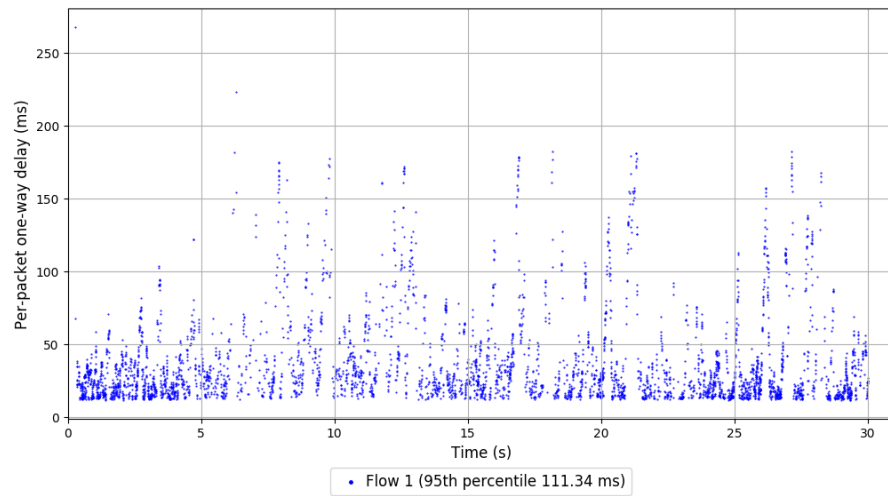
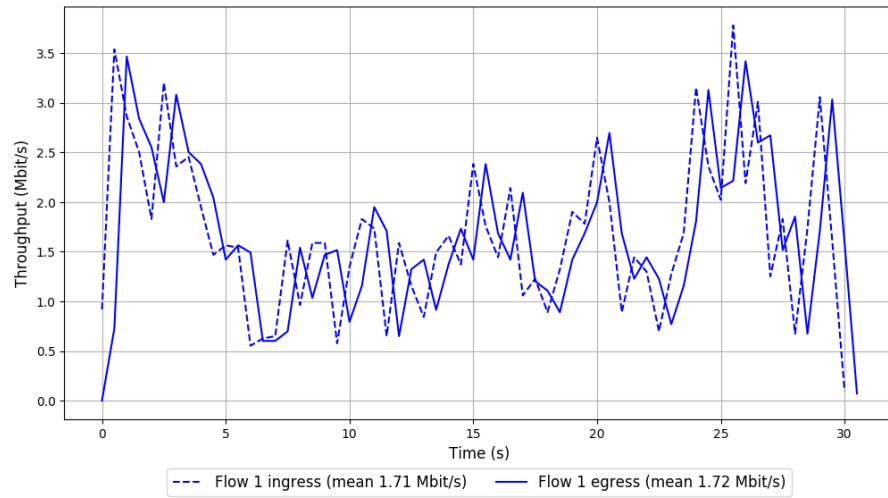
-- Flow 1:

Average throughput: 1.72 Mbit/s

95th percentile per-packet one-way delay: 111.341 ms

Loss rate: 0.14%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2019-07-11 22:24:01

End at: 2019-07-11 22:24:31

Local clock offset: 0.051 ms

Remote clock offset: 3.726 ms

Below is generated by plot.py at 2019-07-11 22:38:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.86 Mbit/s

95th percentile per-packet one-way delay: 80.914 ms

Loss rate: 0.06%

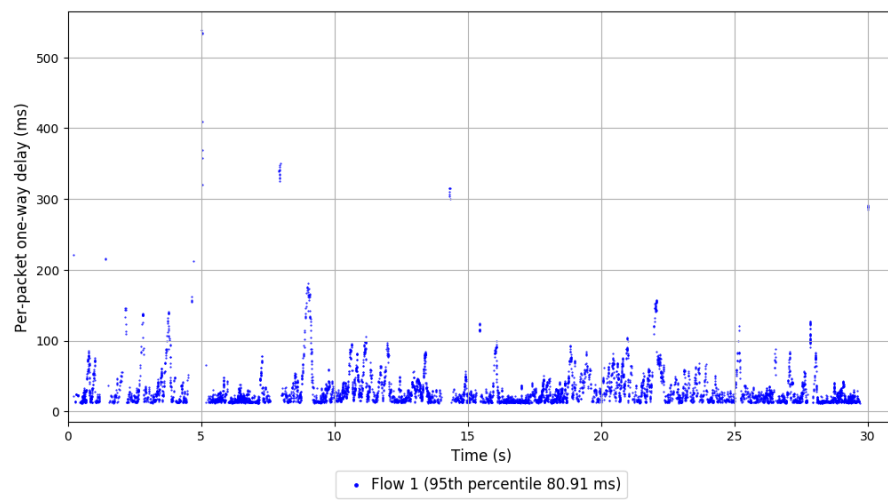
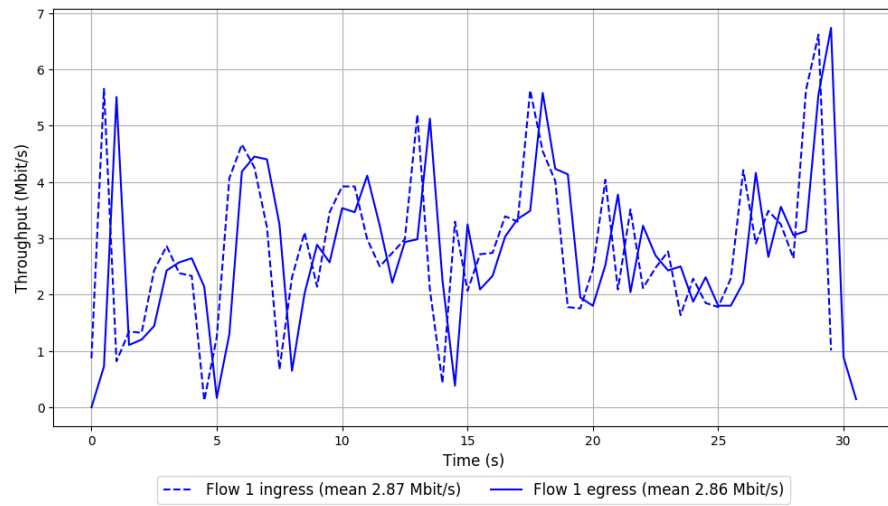
-- Flow 1:

Average throughput: 2.86 Mbit/s

95th percentile per-packet one-way delay: 80.914 ms

Loss rate: 0.06%

Run 3: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2019-07-11 21:15:04

End at: 2019-07-11 21:15:35

Local clock offset: -0.348 ms

Remote clock offset: 0.795 ms

Below is generated by plot.py at 2019-07-11 22:38:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.08 Mbit/s

95th percentile per-packet one-way delay: 220.274 ms

Loss rate: 0.40%

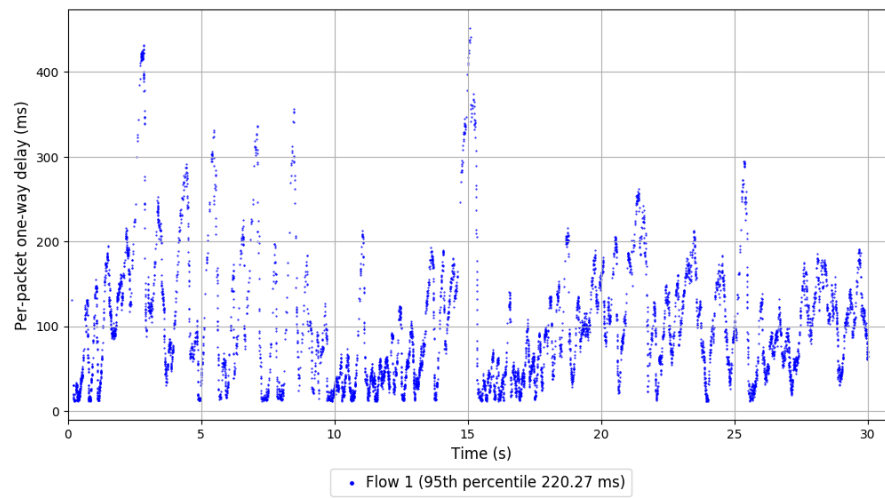
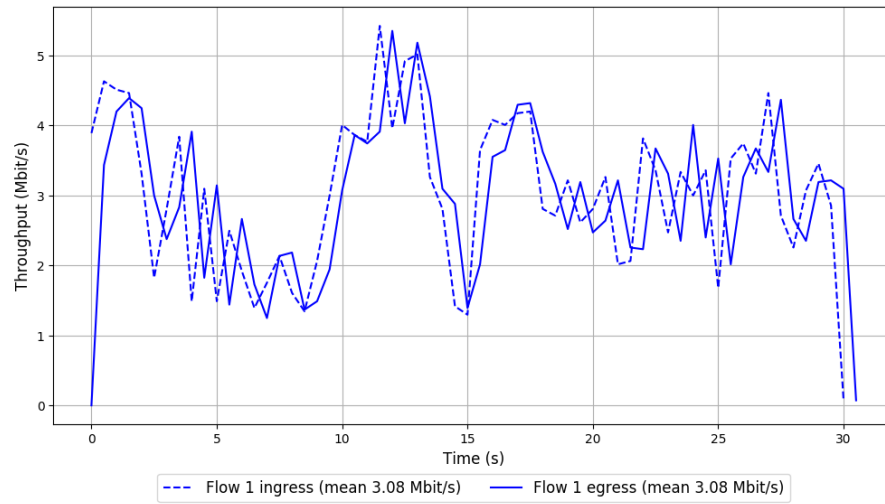
-- Flow 1:

Average throughput: 3.08 Mbit/s

95th percentile per-packet one-way delay: 220.274 ms

Loss rate: 0.40%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2019-07-11 21:44:38

End at: 2019-07-11 21:45:08

Local clock offset: 2.958 ms

Remote clock offset: 4.835 ms

Below is generated by plot.py at 2019-07-11 22:38:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 8.52 Mbit/s

95th percentile per-packet one-way delay: 257.715 ms

Loss rate: 0.15%

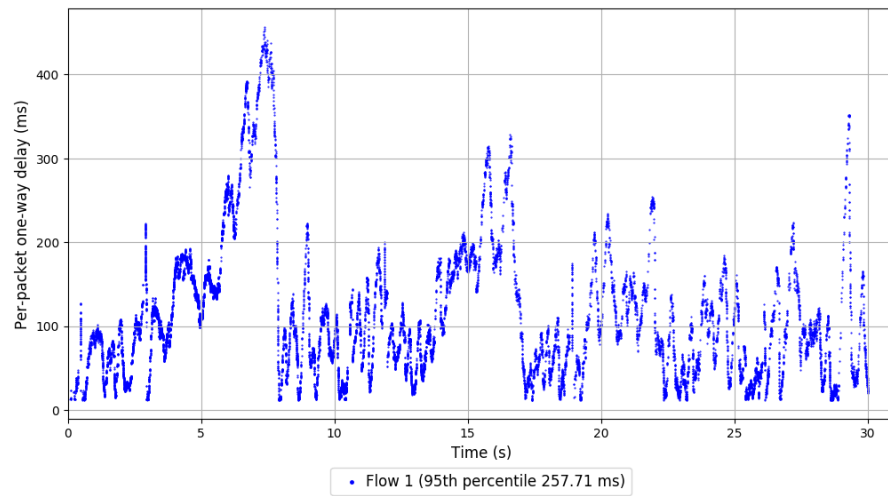
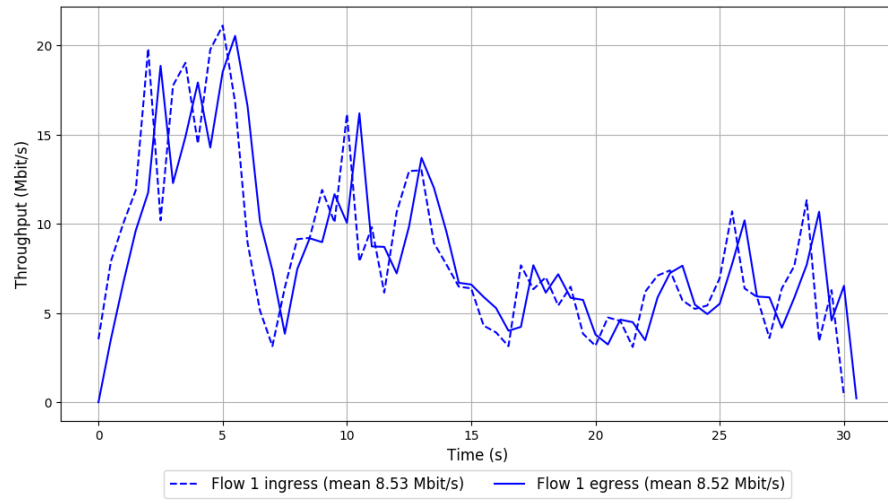
-- Flow 1:

Average throughput: 8.52 Mbit/s

95th percentile per-packet one-way delay: 257.715 ms

Loss rate: 0.15%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2019-07-11 22:14:11

End at: 2019-07-11 22:14:41

Local clock offset: 0.575 ms

Remote clock offset: 3.897 ms

Below is generated by plot.py at 2019-07-11 22:38:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 4.76 Mbit/s

95th percentile per-packet one-way delay: 208.349 ms

Loss rate: 0.32%

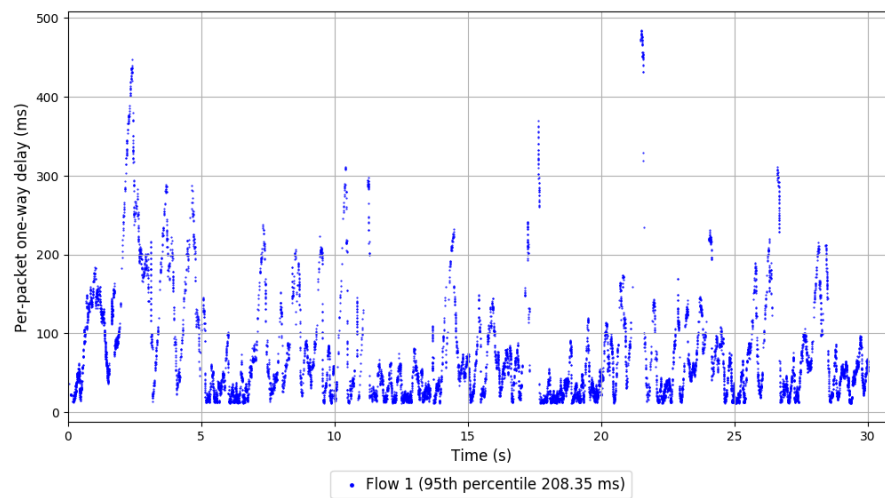
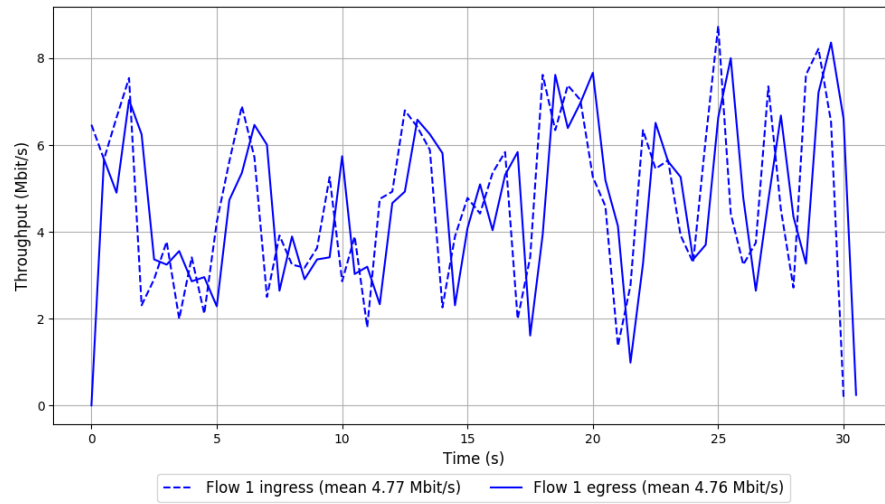
-- Flow 1:

Average throughput: 4.76 Mbit/s

95th percentile per-packet one-way delay: 208.349 ms

Loss rate: 0.32%

Run 3: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2019-07-11 21:16:18

End at: 2019-07-11 21:16:48

Local clock offset: -0.266 ms

Remote clock offset: 1.166 ms

Below is generated by plot.py at 2019-07-11 22:38:26

Datalink statistics

-- Total of 1 flow:

Average throughput: 6.26 Mbit/s

95th percentile per-packet one-way delay: 640.522 ms

Loss rate: 1.95%

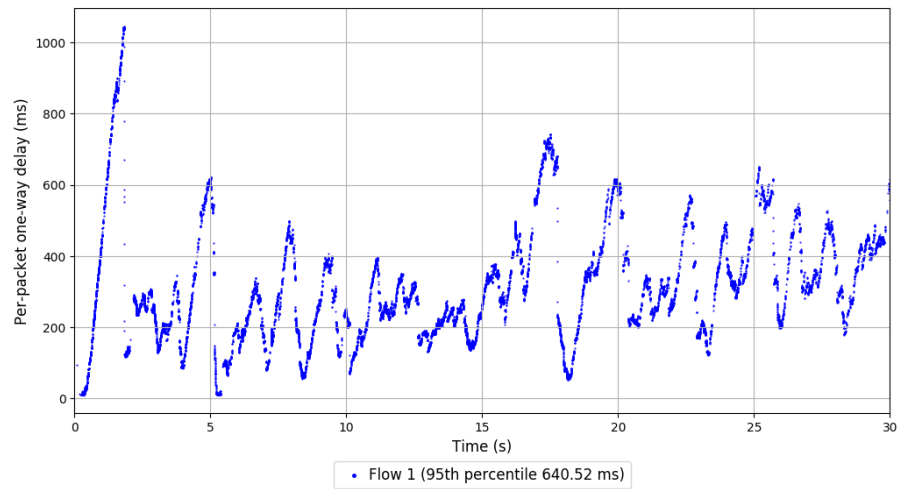
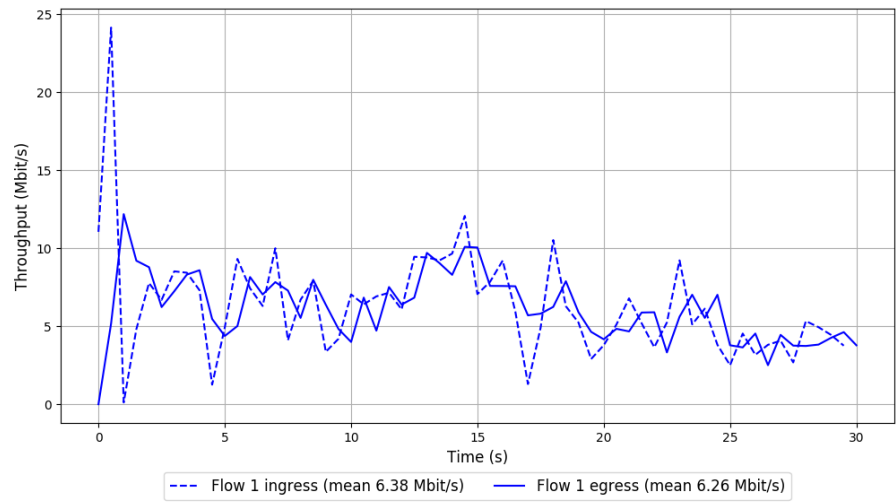
-- Flow 1:

Average throughput: 6.26 Mbit/s

95th percentile per-packet one-way delay: 640.522 ms

Loss rate: 1.95%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2019-07-11 21:45:52

End at: 2019-07-11 21:46:22

Local clock offset: 3.026 ms

Remote clock offset: 4.844 ms

Below is generated by plot.py at 2019-07-11 22:38:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 6.32 Mbit/s

95th percentile per-packet one-way delay: 733.459 ms

Loss rate: 6.92%

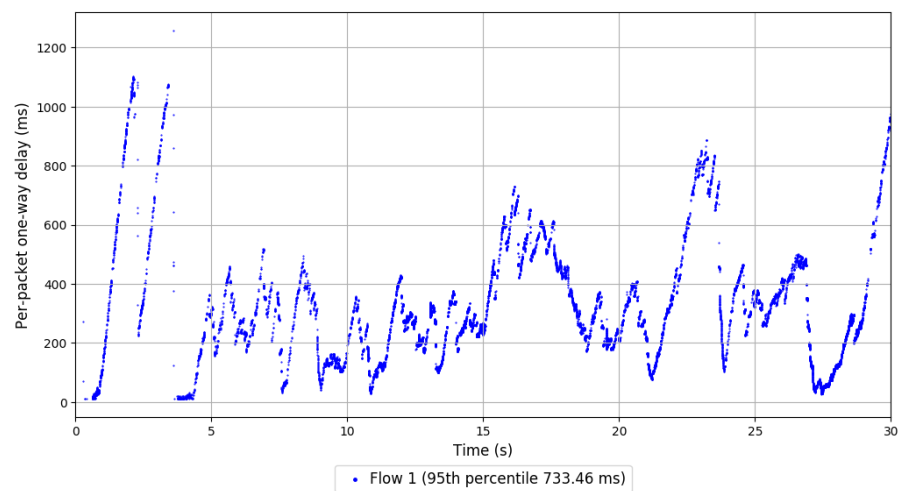
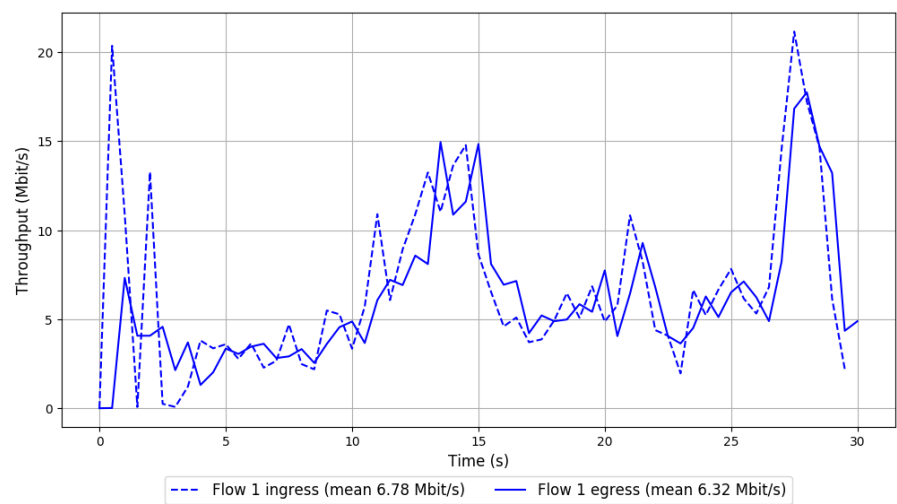
-- Flow 1:

Average throughput: 6.32 Mbit/s

95th percentile per-packet one-way delay: 733.459 ms

Loss rate: 6.92%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2019-07-11 22:15:25

End at: 2019-07-11 22:15:55

Local clock offset: 0.484 ms

Remote clock offset: 3.939 ms

Below is generated by plot.py at 2019-07-11 22:38:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 6.44 Mbit/s

95th percentile per-packet one-way delay: 465.728 ms

Loss rate: 0.67%

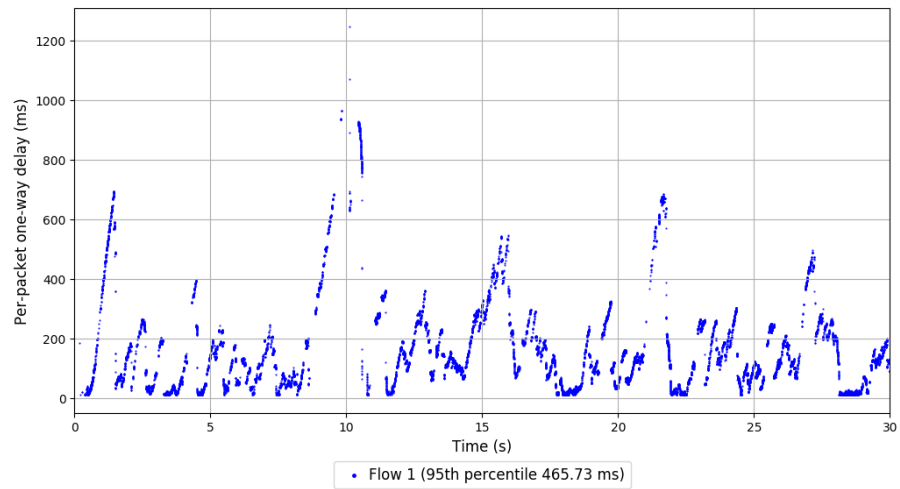
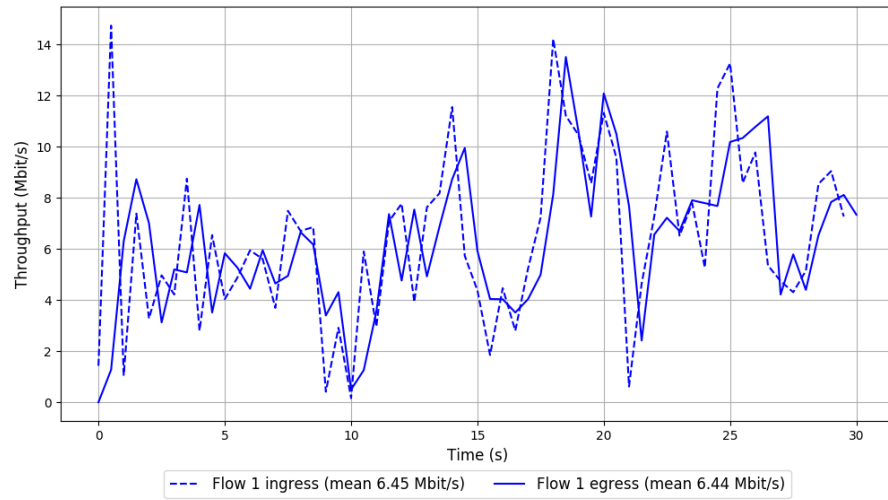
-- Flow 1:

Average throughput: 6.44 Mbit/s

95th percentile per-packet one-way delay: 465.728 ms

Loss rate: 0.67%

Run 3: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2019-07-11 21:34:47

End at: 2019-07-11 21:35:17

Local clock offset: 1.747 ms

Remote clock offset: 3.982 ms

Below is generated by plot.py at 2019-07-11 22:38:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.89 Mbit/s

95th percentile per-packet one-way delay: 368.461 ms

Loss rate: 0.29%

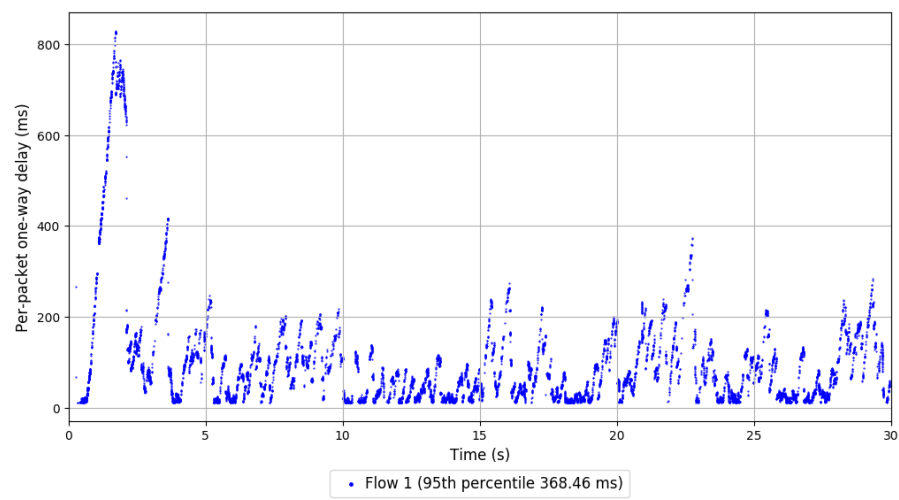
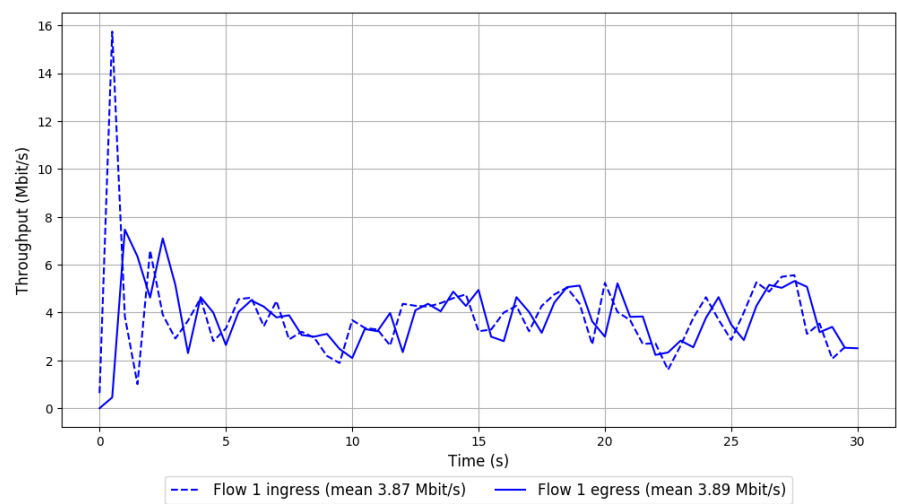
-- Flow 1:

Average throughput: 3.89 Mbit/s

95th percentile per-packet one-way delay: 368.461 ms

Loss rate: 0.29%

Run 1: Report of FillP-Sheep — Data Link



Run 2: Statistics of FillP-Sheep

Start at: 2019-07-11 22:04:20

End at: 2019-07-11 22:04:50

Local clock offset: 2.187 ms

Remote clock offset: 3.635 ms

Below is generated by plot.py at 2019-07-11 22:38:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 4.89 Mbit/s

95th percentile per-packet one-way delay: 820.554 ms

Loss rate: 9.82%

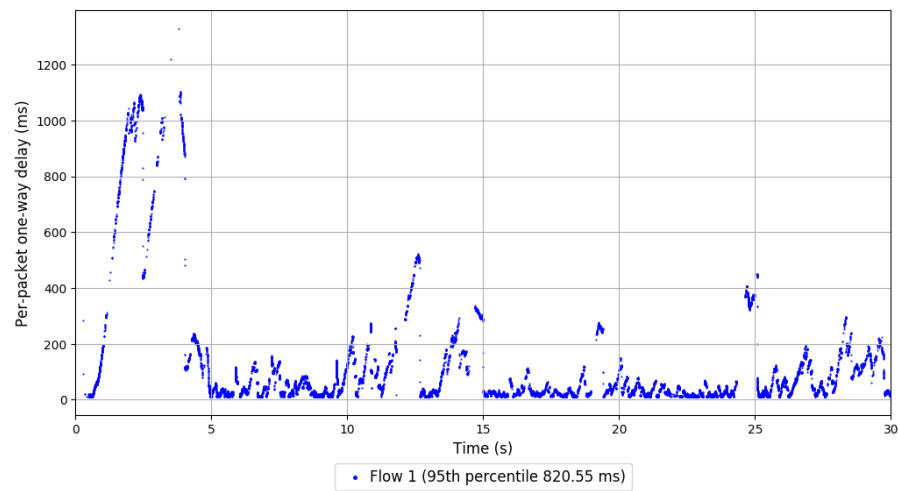
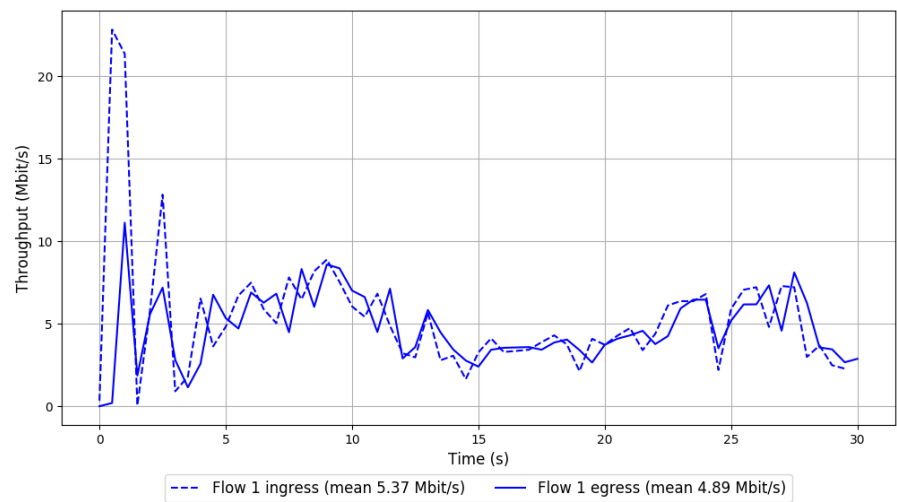
-- Flow 1:

Average throughput: 4.89 Mbit/s

95th percentile per-packet one-way delay: 820.554 ms

Loss rate: 9.82%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2019-07-11 22:33:53

End at: 2019-07-11 22:34:23

Local clock offset: 0.134 ms

Remote clock offset: 3.402 ms

Below is generated by plot.py at 2019-07-11 22:38:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.91 Mbit/s

95th percentile per-packet one-way delay: 345.223 ms

Loss rate: 2.19%

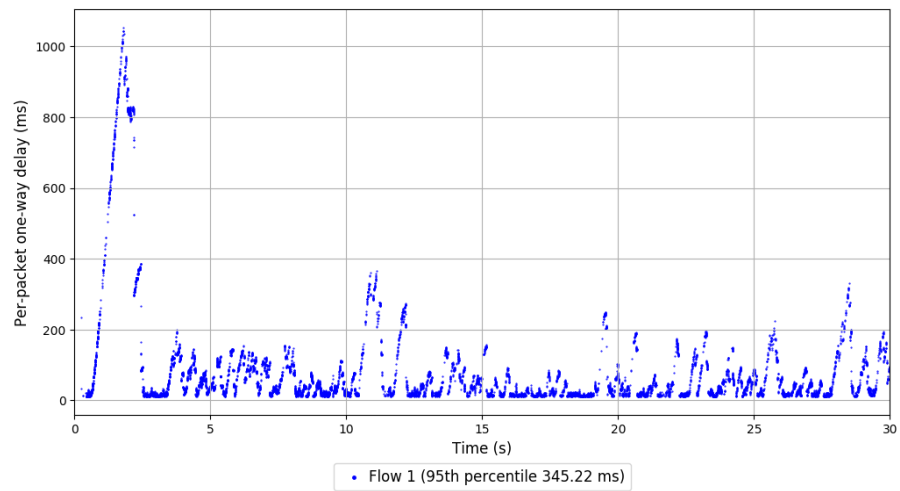
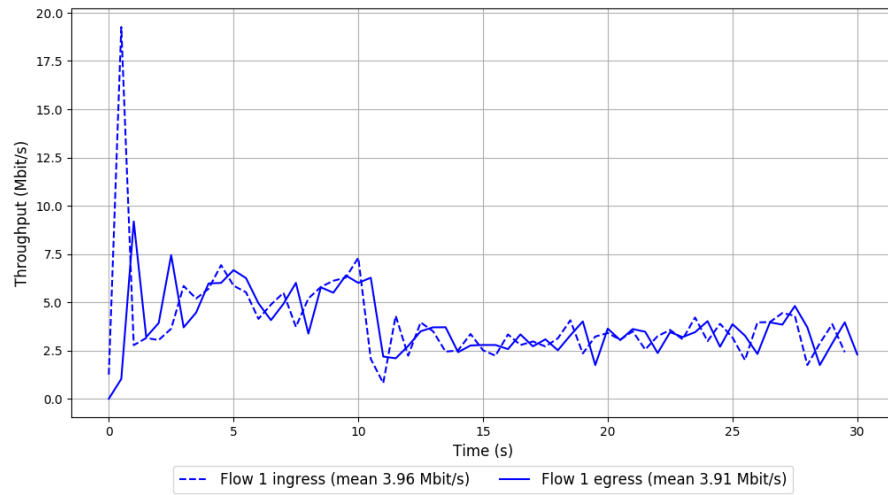
-- Flow 1:

Average throughput: 3.91 Mbit/s

95th percentile per-packet one-way delay: 345.223 ms

Loss rate: 2.19%

Run 3: Report of FillP-Sheep — Data Link

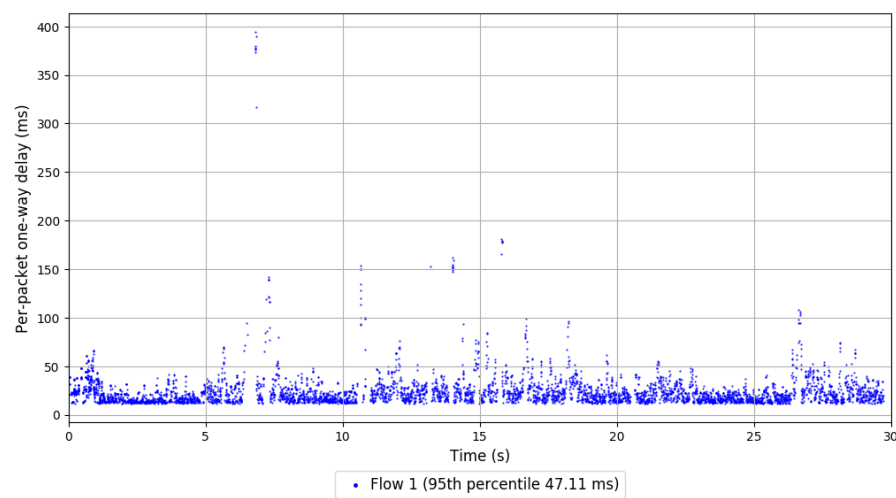
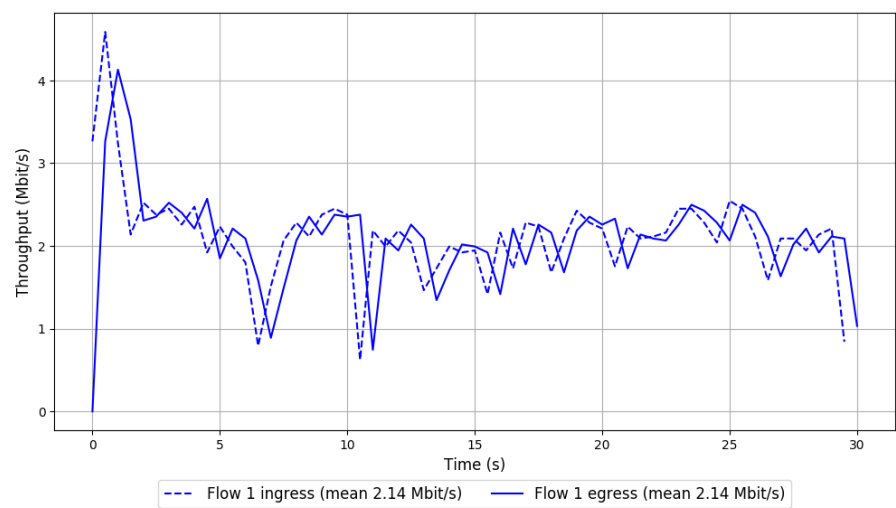


```
Run 1: Statistics of Indigo

Start at: 2019-07-11 21:13:51
End at: 2019-07-11 21:14:21
Local clock offset: -0.504 ms
Remote clock offset: 0.402 ms

# Below is generated by plot.py at 2019-07-11 22:38:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 47.111 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 47.111 ms
Loss rate: 0.02%
```

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2019-07-11 21:43:24

End at: 2019-07-11 21:43:54

Local clock offset: 2.825 ms

Remote clock offset: 4.749 ms

Below is generated by plot.py at 2019-07-11 22:38:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.39 Mbit/s

95th percentile per-packet one-way delay: 59.809 ms

Loss rate: 0.03%

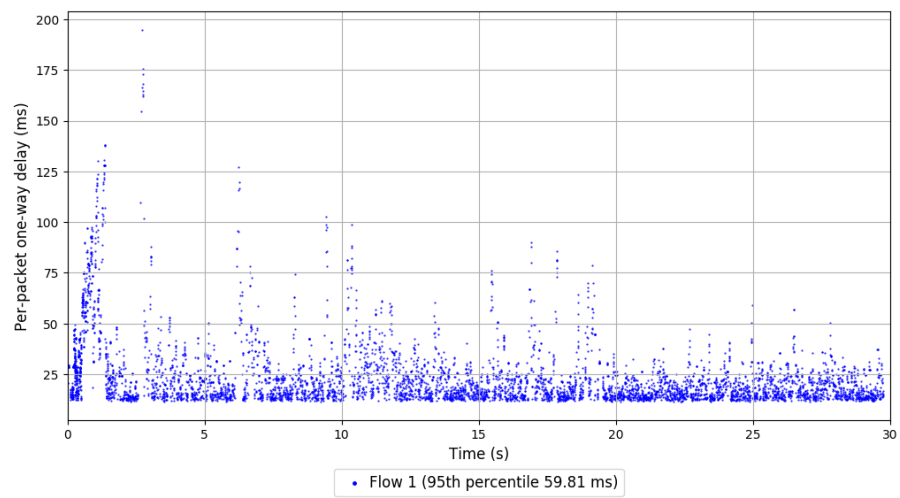
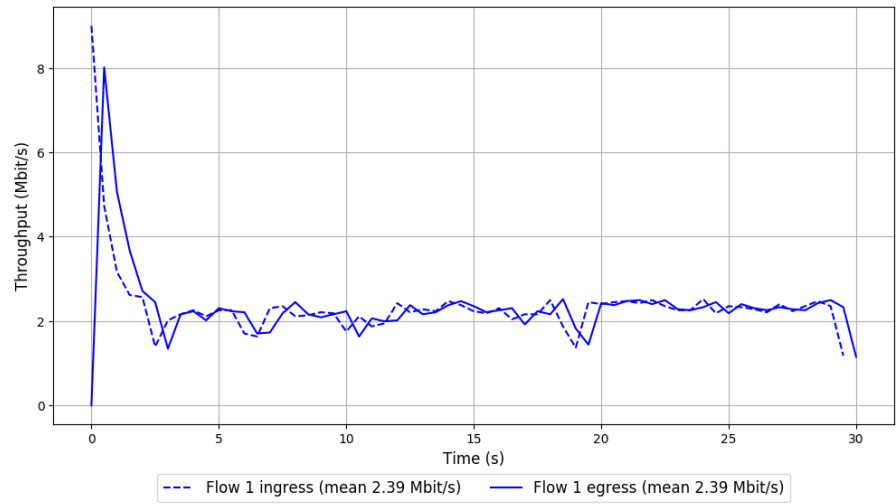
-- Flow 1:

Average throughput: 2.39 Mbit/s

95th percentile per-packet one-way delay: 59.809 ms

Loss rate: 0.03%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2019-07-11 22:12:57

End at: 2019-07-11 22:13:27

Local clock offset: 0.705 ms

Remote clock offset: 3.888 ms

Below is generated by plot.py at 2019-07-11 22:38:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 58.071 ms

Loss rate: 0.08%

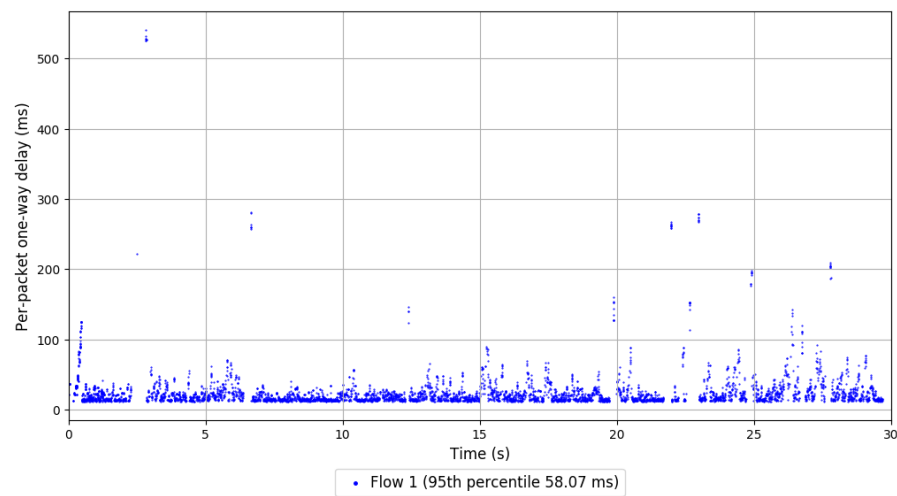
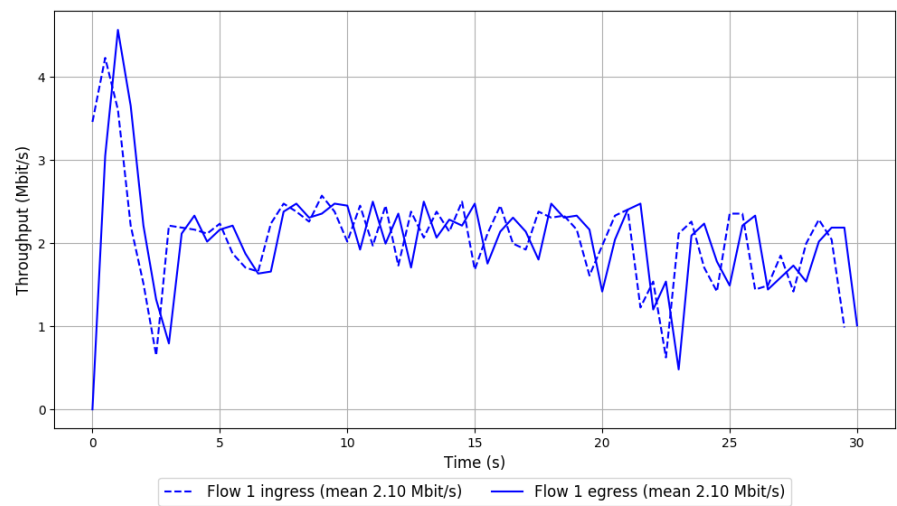
-- Flow 1:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 58.071 ms

Loss rate: 0.08%

Run 3: Report of Indigo — Data Link

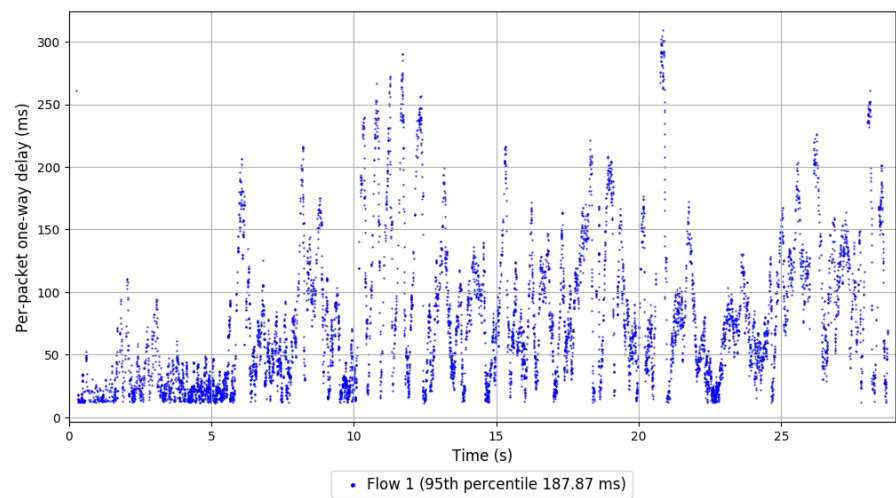
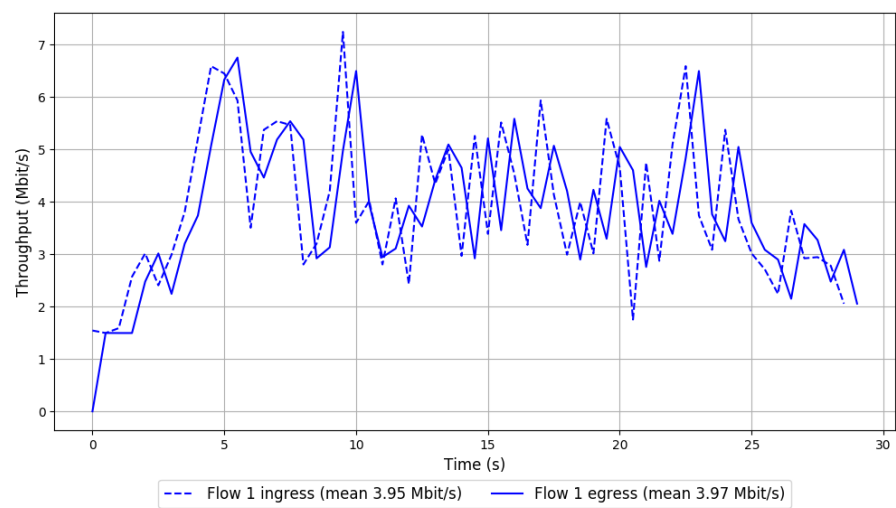


Run 1: Statistics of Indigo-MusesC3

Start at: 2019-07-11 21:11:23
End at: 2019-07-11 21:11:53
Local clock offset: -0.839 ms
Remote clock offset: -0.553 ms

Below is generated by plot.py at 2019-07-11 22:38:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.97 Mbit/s
95th percentile per-packet one-way delay: 187.874 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 3.97 Mbit/s
95th percentile per-packet one-way delay: 187.874 ms
Loss rate: 0.38%

Run 1: Report of Indigo-MusesC3 — Data Link



Run 2: Statistics of Indigo-MusesC3

Start at: 2019-07-11 21:40:56

End at: 2019-07-11 21:41:26

Local clock offset: 2.586 ms

Remote clock offset: 4.476 ms

Below is generated by plot.py at 2019-07-11 22:38:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.18 Mbit/s

95th percentile per-packet one-way delay: 209.616 ms

Loss rate: 0.52%

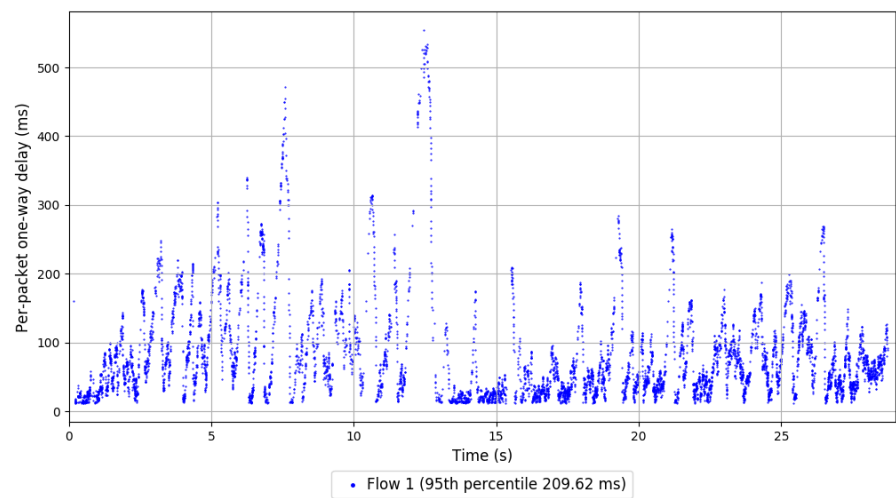
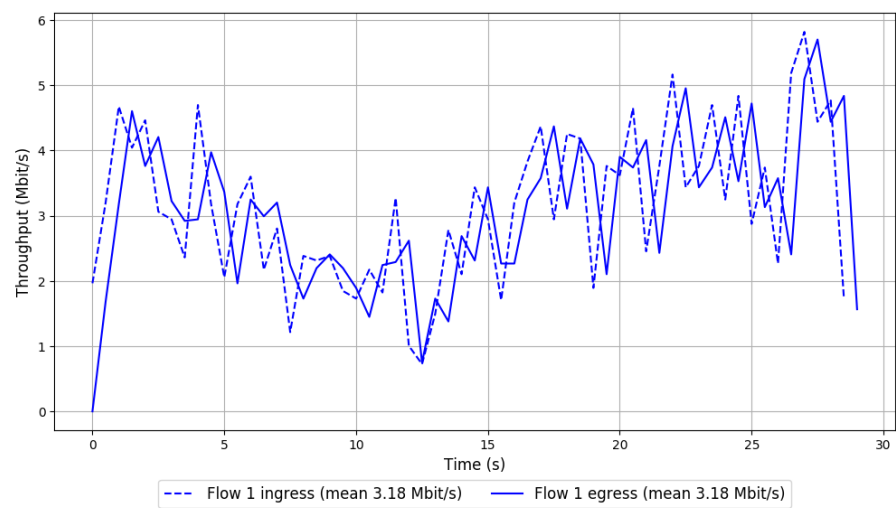
-- Flow 1:

Average throughput: 3.18 Mbit/s

95th percentile per-packet one-way delay: 209.616 ms

Loss rate: 0.52%

Run 2: Report of Indigo-MusesC3 — Data Link



Run 3: Statistics of Indigo-MusesC3

Start at: 2019-07-11 22:10:29

End at: 2019-07-11 22:10:59

Local clock offset: 0.96 ms

Remote clock offset: 3.821 ms

Below is generated by plot.py at 2019-07-11 22:38:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 4.69 Mbit/s

95th percentile per-packet one-way delay: 196.130 ms

Loss rate: 0.25%

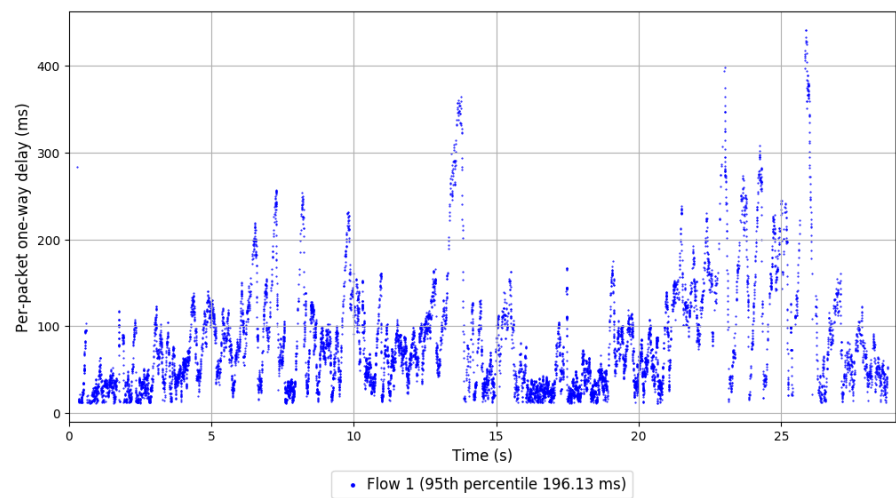
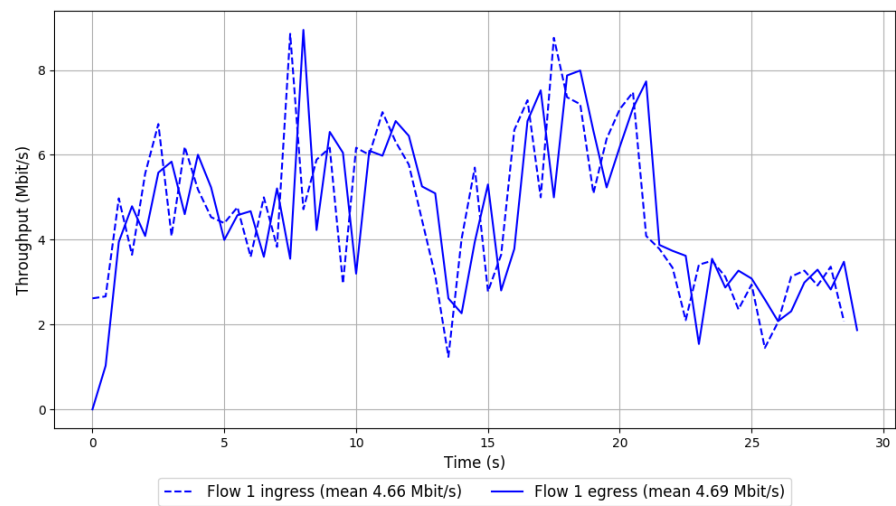
-- Flow 1:

Average throughput: 4.69 Mbit/s

95th percentile per-packet one-way delay: 196.130 ms

Loss rate: 0.25%

Run 3: Report of Indigo-MusesC3 — Data Link



Run 1: Statistics of Indigo-MusesC5

Start at: 2019-07-11 21:33:33

End at: 2019-07-11 21:34:03

Local clock offset: 1.462 ms

Remote clock offset: 3.965 ms

Below is generated by plot.py at 2019-07-11 22:38:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.55 Mbit/s

95th percentile per-packet one-way delay: 641.636 ms

Loss rate: 1.85%

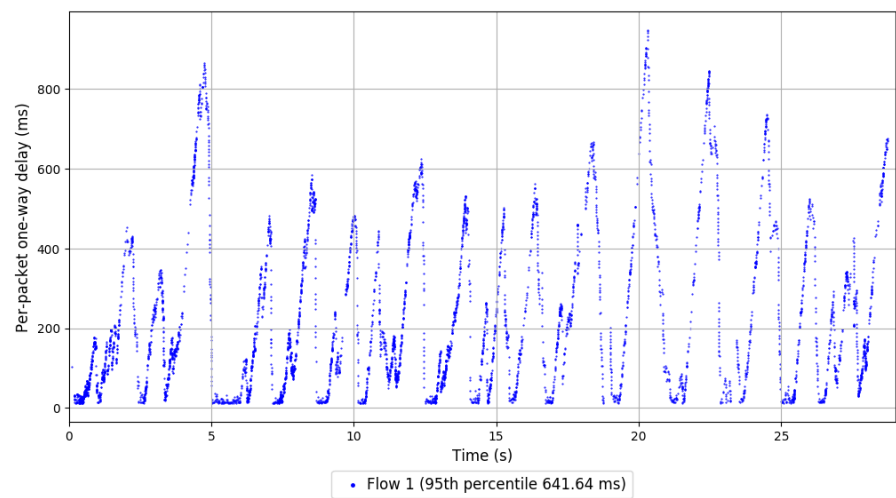
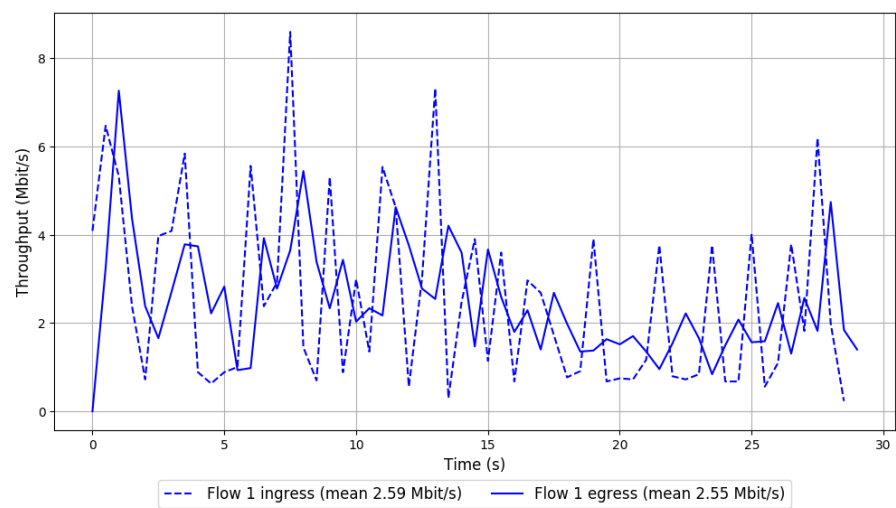
-- Flow 1:

Average throughput: 2.55 Mbit/s

95th percentile per-packet one-way delay: 641.636 ms

Loss rate: 1.85%

Run 1: Report of Indigo-MusesC5 — Data Link



Run 2: Statistics of Indigo-MusesC5

Start at: 2019-07-11 22:03:06

End at: 2019-07-11 22:03:36

Local clock offset: 2.491 ms

Remote clock offset: 3.749 ms

Below is generated by plot.py at 2019-07-11 22:38:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.17 Mbit/s

95th percentile per-packet one-way delay: 445.443 ms

Loss rate: 1.98%

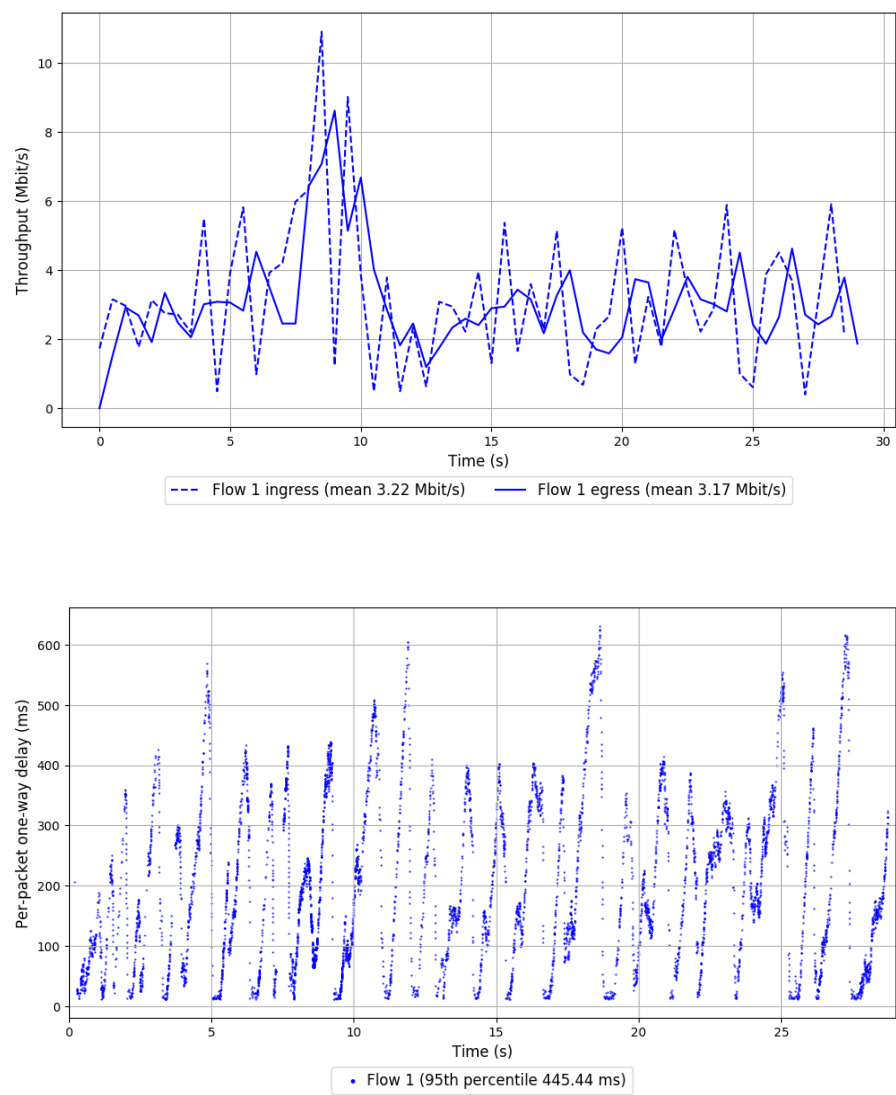
-- Flow 1:

Average throughput: 3.17 Mbit/s

95th percentile per-packet one-way delay: 445.443 ms

Loss rate: 1.98%

Run 2: Report of Indigo-MusesC5 — Data Link



Run 3: Statistics of Indigo-MusesC5

Start at: 2019-07-11 22:32:38

End at: 2019-07-11 22:33:09

Local clock offset: 0.085 ms

Remote clock offset: 3.397 ms

Below is generated by plot.py at 2019-07-11 22:38:42

Datalink statistics

-- Total of 1 flow:

Average throughput: 8.10 Mbit/s

95th percentile per-packet one-way delay: 363.213 ms

Loss rate: 0.71%

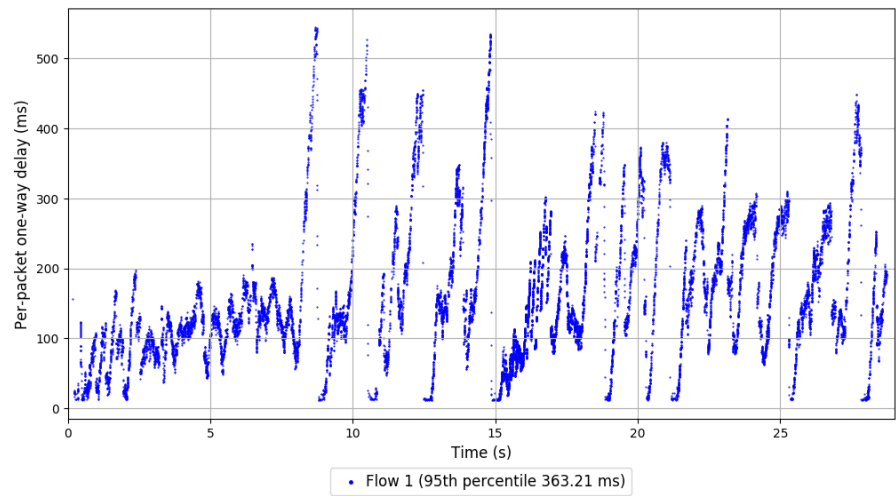
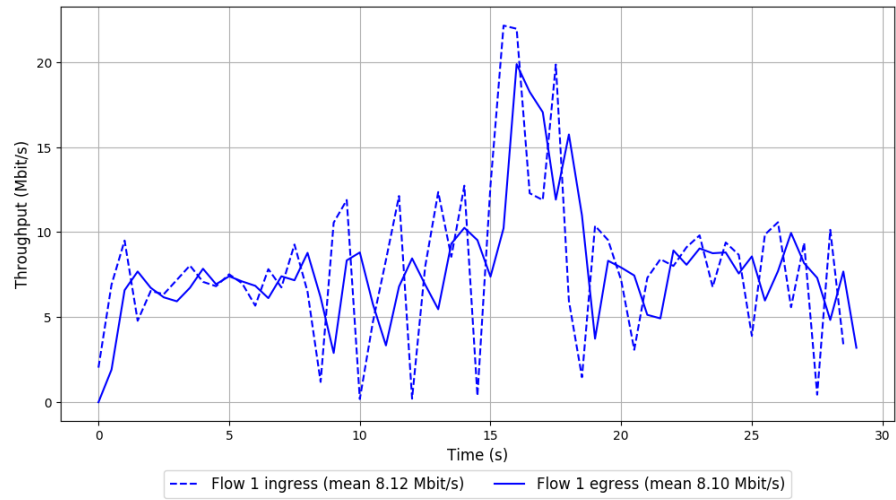
-- Flow 1:

Average throughput: 8.10 Mbit/s

95th percentile per-packet one-way delay: 363.213 ms

Loss rate: 0.71%

Run 3: Report of Indigo-MusesC5 — Data Link



Run 1: Statistics of Indigo-MusesD

Start at: 2019-07-11 21:27:23

End at: 2019-07-11 21:27:53

Local clock offset: 0.38 ms

Remote clock offset: 3.373 ms

Below is generated by plot.py at 2019-07-11 22:38:42

Datalink statistics

-- Total of 1 flow:

Average throughput: 5.46 Mbit/s

95th percentile per-packet one-way delay: 135.184 ms

Loss rate: 0.42%

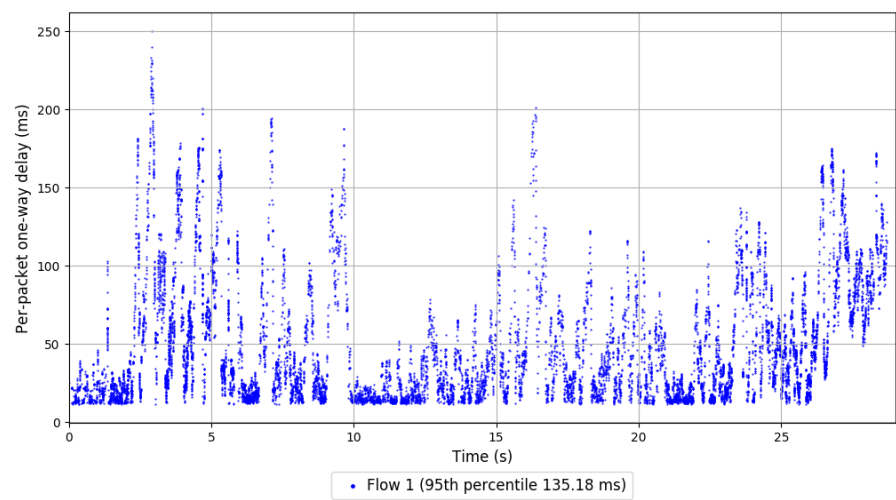
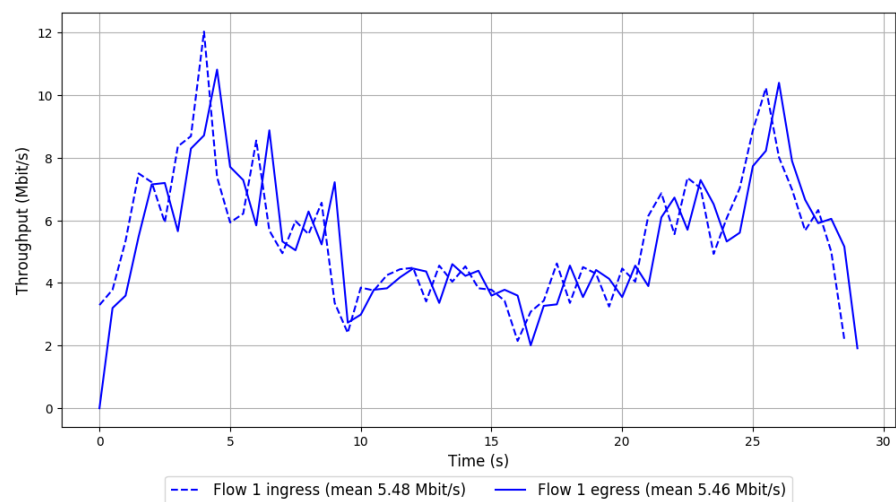
-- Flow 1:

Average throughput: 5.46 Mbit/s

95th percentile per-packet one-way delay: 135.184 ms

Loss rate: 0.42%

Run 1: Report of Indigo-MusesD — Data Link



Run 2: Statistics of Indigo-MusesD

Start at: 2019-07-11 21:56:57

End at: 2019-07-11 21:57:27

Local clock offset: 3.758 ms

Remote clock offset: 3.776 ms

Below is generated by plot.py at 2019-07-11 22:38:42

Datalink statistics

-- Total of 1 flow:

Average throughput: 5.25 Mbit/s

95th percentile per-packet one-way delay: 138.008 ms

Loss rate: 0.19%

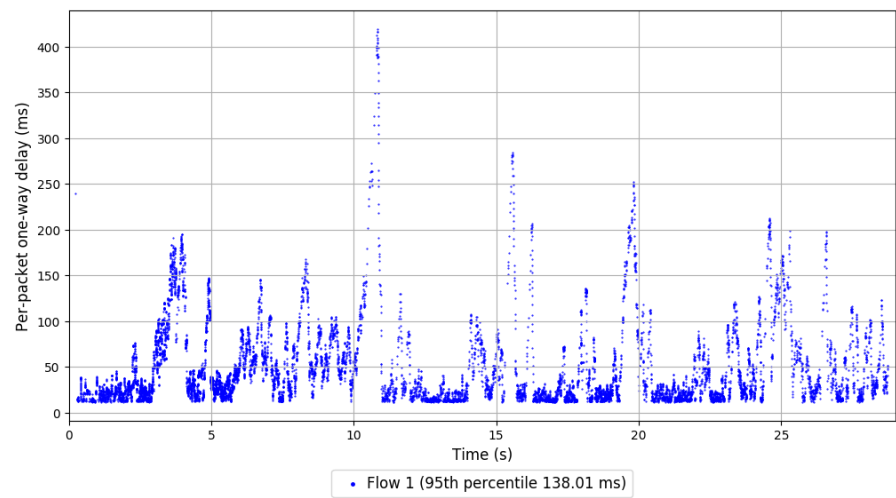
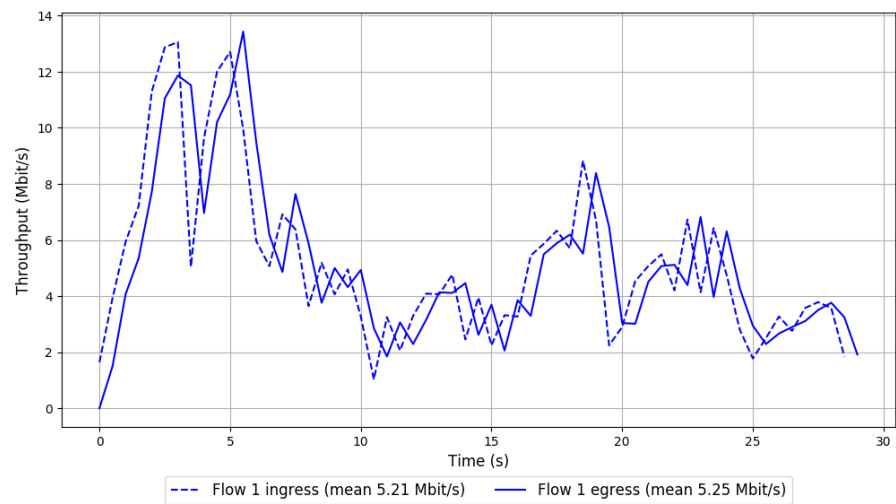
-- Flow 1:

Average throughput: 5.25 Mbit/s

95th percentile per-packet one-way delay: 138.008 ms

Loss rate: 0.19%

Run 2: Report of Indigo-MusesD — Data Link



Run 3: Statistics of Indigo-MusesD

Start at: 2019-07-11 22:26:29

End at: 2019-07-11 22:26:59

Local clock offset: -0.006 ms

Remote clock offset: 3.538 ms

Below is generated by plot.py at 2019-07-11 22:38:42

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.55 Mbit/s

95th percentile per-packet one-way delay: 191.477 ms

Loss rate: 0.24%

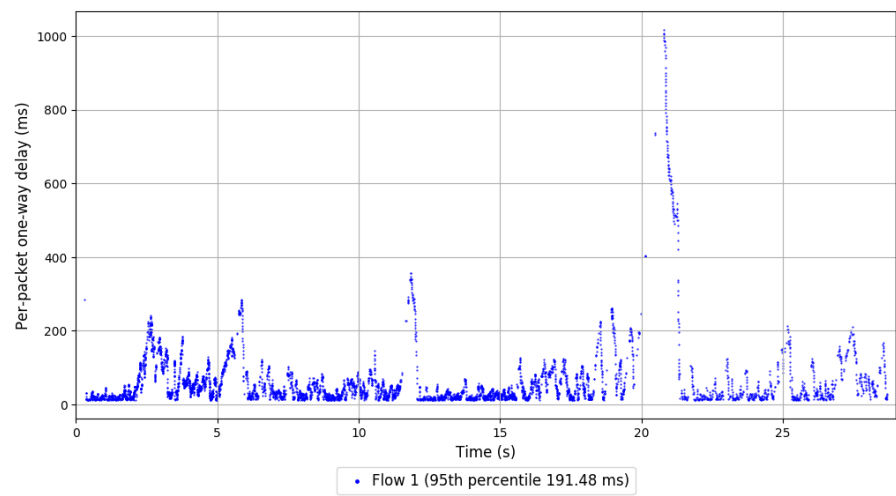
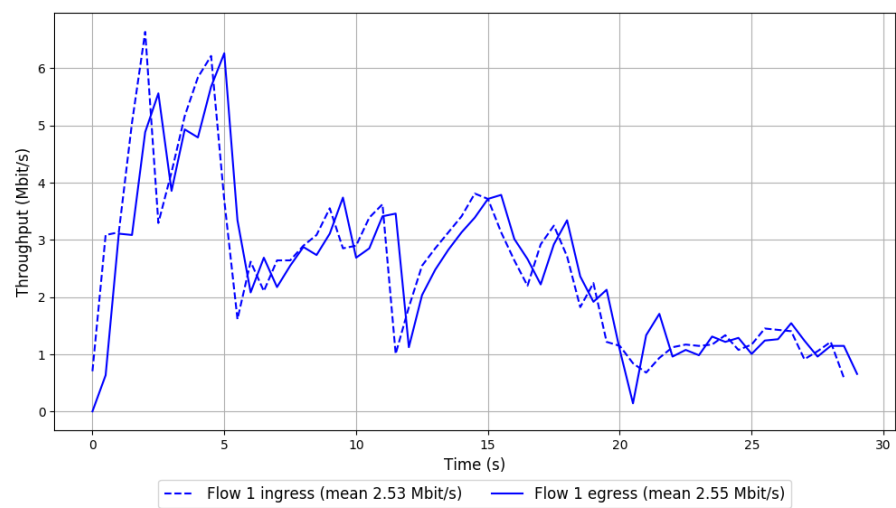
-- Flow 1:

Average throughput: 2.55 Mbit/s

95th percentile per-packet one-way delay: 191.477 ms

Loss rate: 0.24%

Run 3: Report of Indigo-MusesD — Data Link



Run 1: Statistics of Indigo-MusesT

Start at: 2019-07-11 21:29:51

End at: 2019-07-11 21:30:21

Local clock offset: 0.575 ms

Remote clock offset: 3.568 ms

Below is generated by plot.py at 2019-07-11 22:38:42

Datalink statistics

-- Total of 1 flow:

Average throughput: 4.87 Mbit/s

95th percentile per-packet one-way delay: 300.948 ms

Loss rate: 0.61%

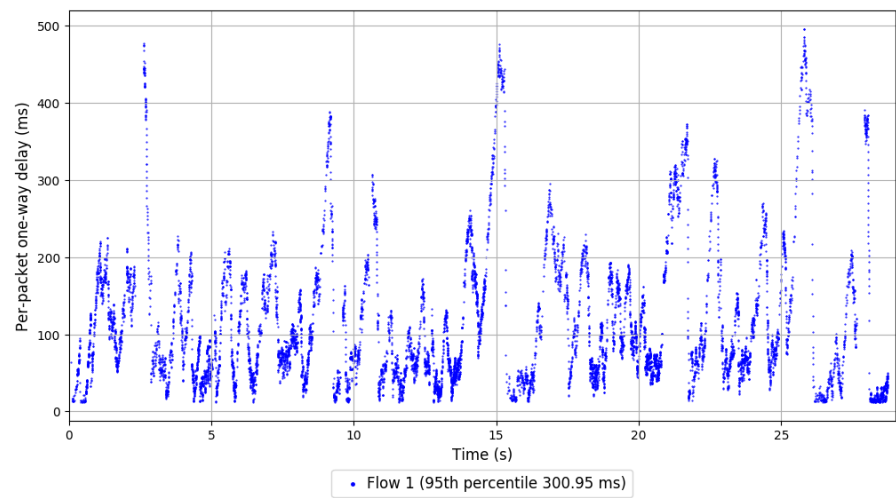
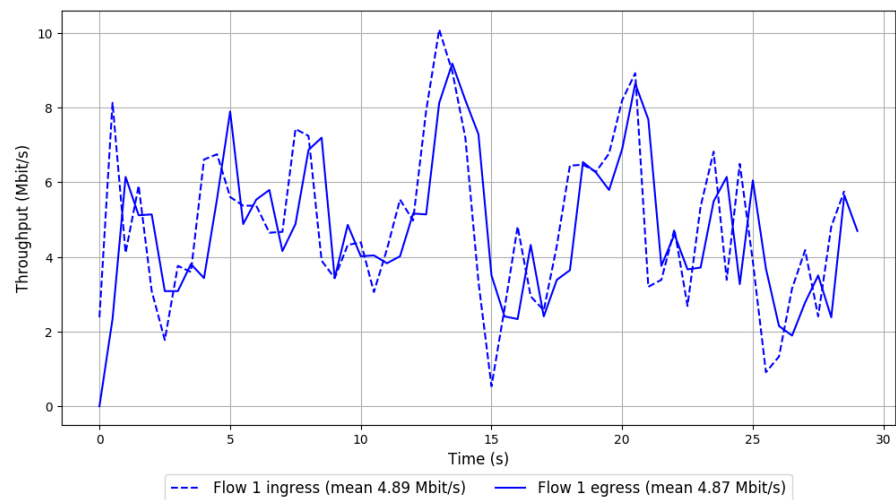
-- Flow 1:

Average throughput: 4.87 Mbit/s

95th percentile per-packet one-way delay: 300.948 ms

Loss rate: 0.61%

Run 1: Report of Indigo-MusesT — Data Link



Run 2: Statistics of Indigo-MusesT

Start at: 2019-07-11 21:59:24

End at: 2019-07-11 21:59:54

Local clock offset: 3.899 ms

Remote clock offset: 3.772 ms

Below is generated by plot.py at 2019-07-11 22:38:42

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.79 Mbit/s

95th percentile per-packet one-way delay: 267.114 ms

Loss rate: 0.28%

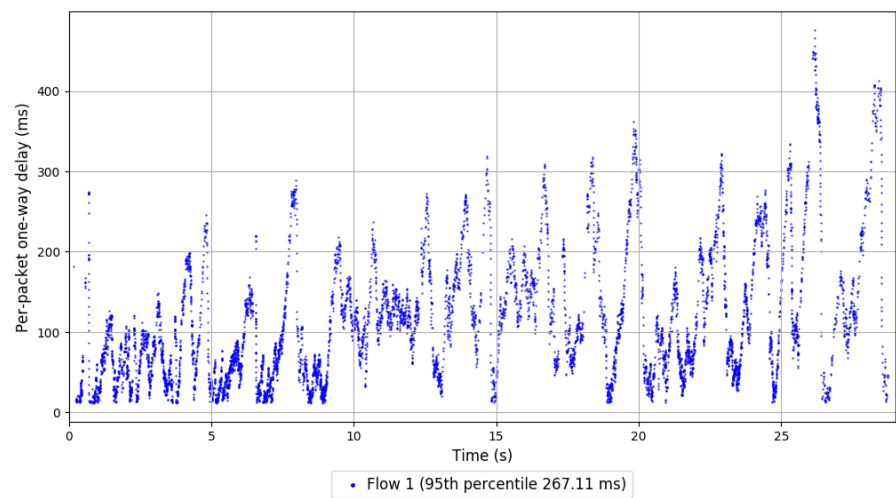
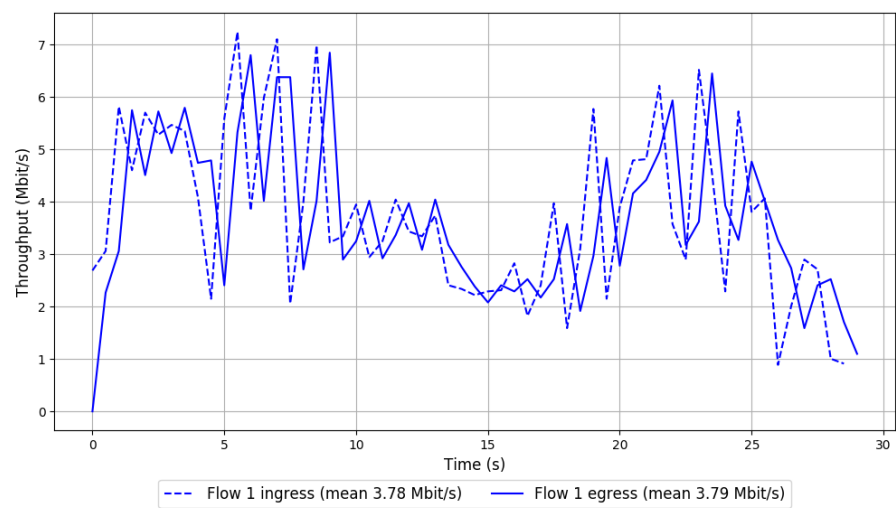
-- Flow 1:

Average throughput: 3.79 Mbit/s

95th percentile per-packet one-way delay: 267.114 ms

Loss rate: 0.28%

Run 2: Report of Indigo-MusesT — Data Link



Run 3: Statistics of Indigo-MusesT

Start at: 2019-07-11 22:28:57

End at: 2019-07-11 22:29:27

Local clock offset: -0.091 ms

Remote clock offset: 3.511 ms

Below is generated by plot.py at 2019-07-11 22:38:42

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.95 Mbit/s

95th percentile per-packet one-way delay: 278.398 ms

Loss rate: 0.50%

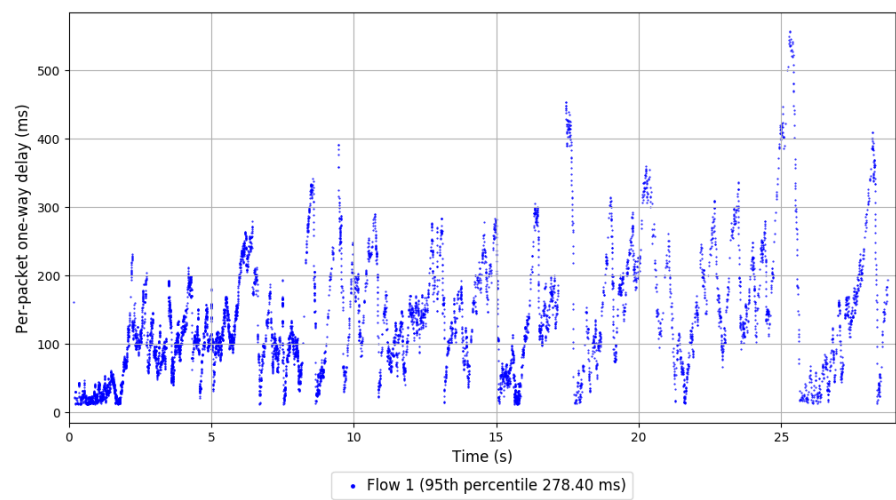
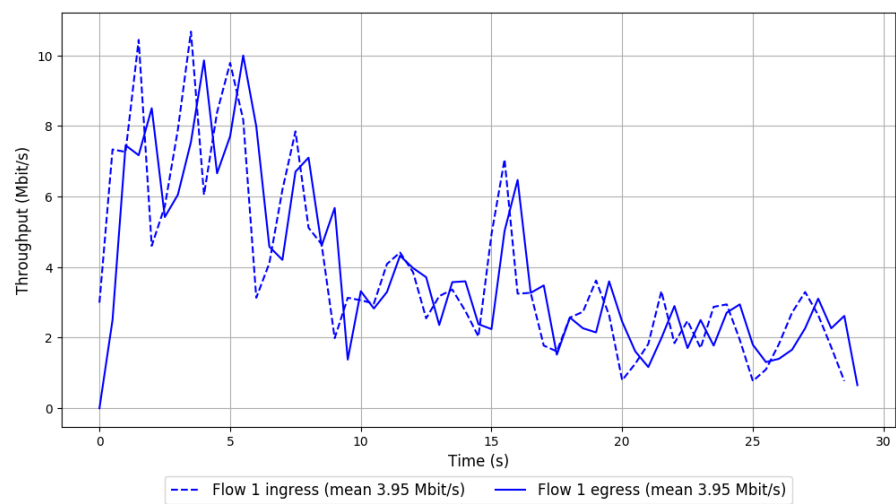
-- Flow 1:

Average throughput: 3.95 Mbit/s

95th percentile per-packet one-way delay: 278.398 ms

Loss rate: 0.50%

Run 3: Report of Indigo-MusesT — Data Link

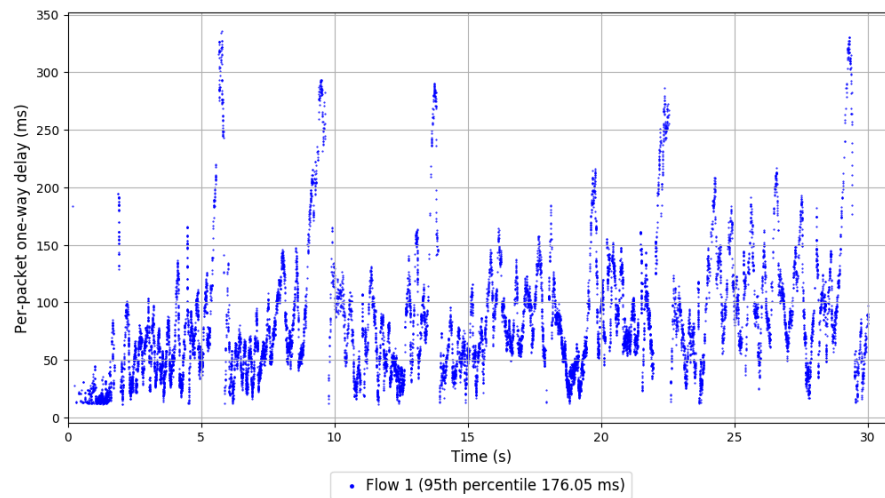
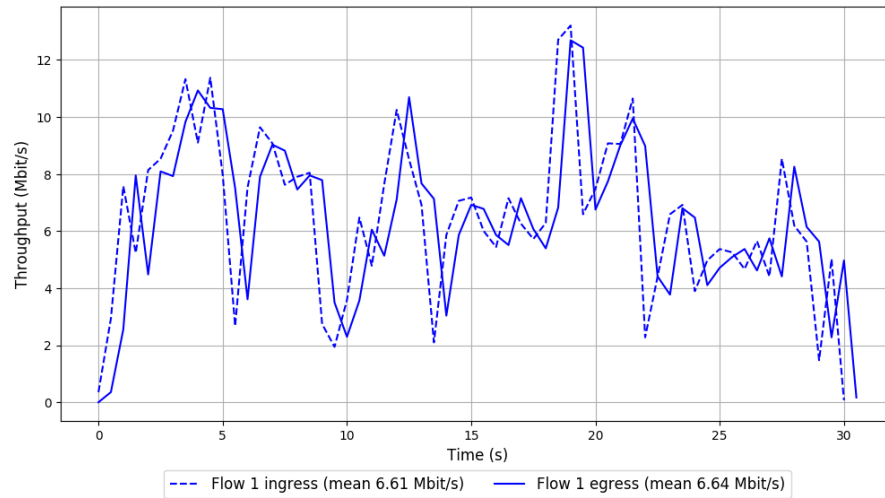


```
Run 1: Statistics of LEDBAT

Start at: 2019-07-11 21:38:28
End at: 2019-07-11 21:38:58
Local clock offset: 2.25 ms
Remote clock offset: 4.39 ms

# Below is generated by plot.py at 2019-07-11 22:38:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.64 Mbit/s
95th percentile per-packet one-way delay: 176.051 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 6.64 Mbit/s
95th percentile per-packet one-way delay: 176.051 ms
Loss rate: 0.19%
```

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2019-07-11 22:08:01

End at: 2019-07-11 22:08:31

Local clock offset: 1.363 ms

Remote clock offset: 3.74 ms

Below is generated by plot.py at 2019-07-11 22:38:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.45 Mbit/s

95th percentile per-packet one-way delay: 213.186 ms

Loss rate: 0.51%

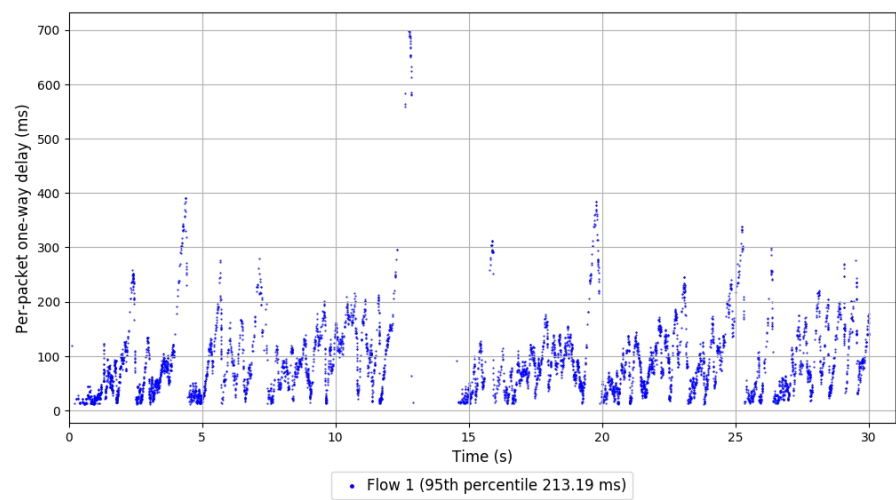
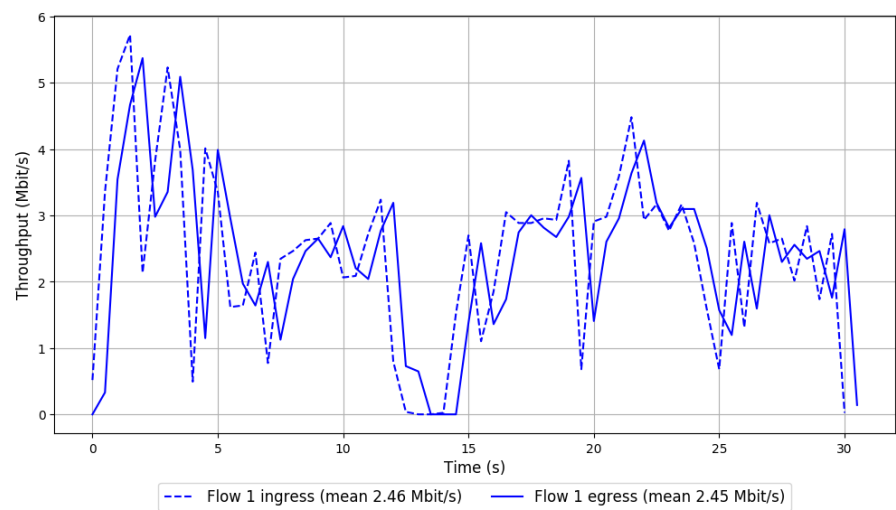
-- Flow 1:

Average throughput: 2.45 Mbit/s

95th percentile per-packet one-way delay: 213.186 ms

Loss rate: 0.51%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2019-07-11 22:37:34

End at: 2019-07-11 22:38:04

Local clock offset: 0.21 ms

Remote clock offset: 3.453 ms

Below is generated by plot.py at 2019-07-11 22:38:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 4.31 Mbit/s

95th percentile per-packet one-way delay: 181.610 ms

Loss rate: 0.39%

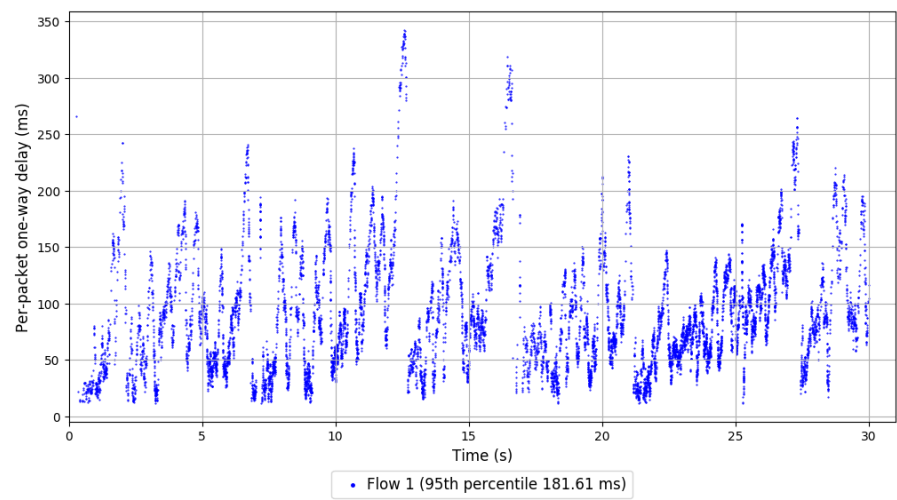
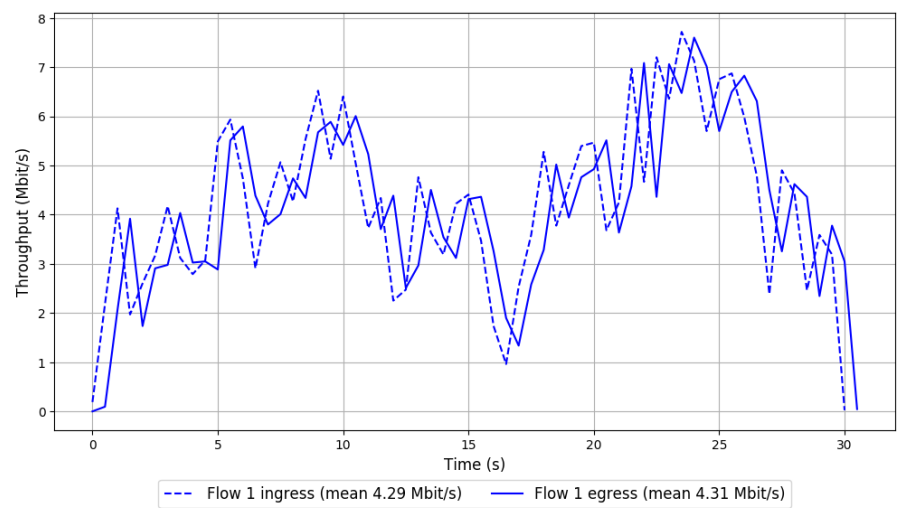
-- Flow 1:

Average throughput: 4.31 Mbit/s

95th percentile per-packet one-way delay: 181.610 ms

Loss rate: 0.39%

Run 3: Report of LEDBAT — Data Link



Run 1: Statistics of Muses_DecisionTree

Start at: 2019-07-11 21:17:32

End at: 2019-07-11 21:18:02

Local clock offset: -0.14 ms

Remote clock offset: 1.542 ms

Below is generated by plot.py at 2019-07-11 22:38:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.29 Mbit/s

95th percentile per-packet one-way delay: 1033.568 ms

Loss rate: 11.92%

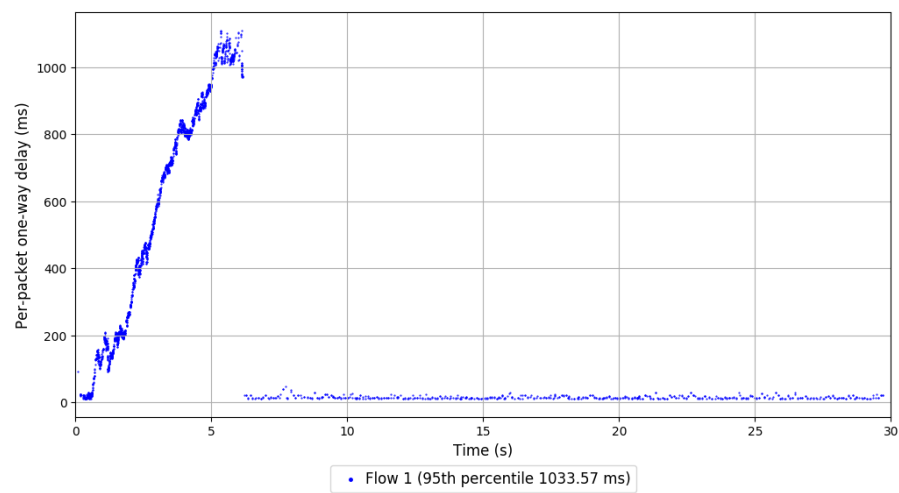
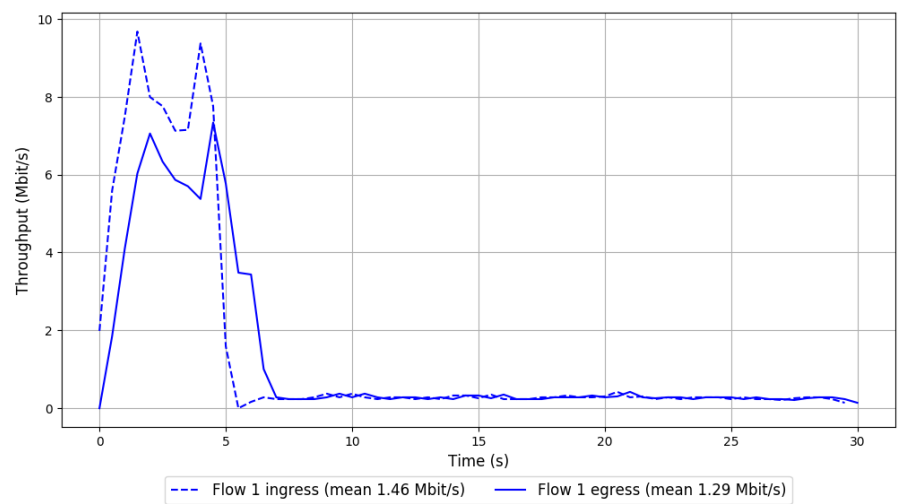
-- Flow 1:

Average throughput: 1.29 Mbit/s

95th percentile per-packet one-way delay: 1033.568 ms

Loss rate: 11.92%

Run 1: Report of Muses_DecisionTree — Data Link



Run 2: Statistics of Muses_DecisionTree

Start at: 2019-07-11 21:47:06

End at: 2019-07-11 21:47:36

Local clock offset: 3.151 ms

Remote clock offset: 4.623 ms

Below is generated by plot.py at 2019-07-11 22:38:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.36 Mbit/s

95th percentile per-packet one-way delay: 1008.435 ms

Loss rate: 1.91%

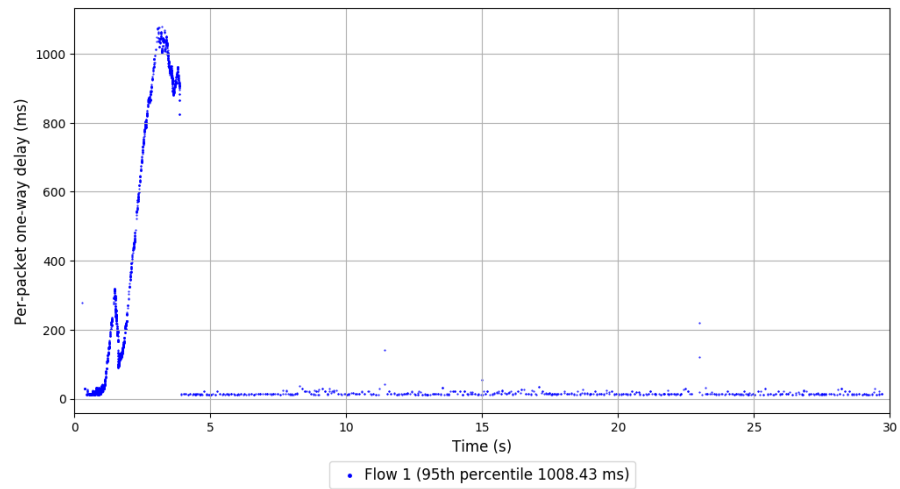
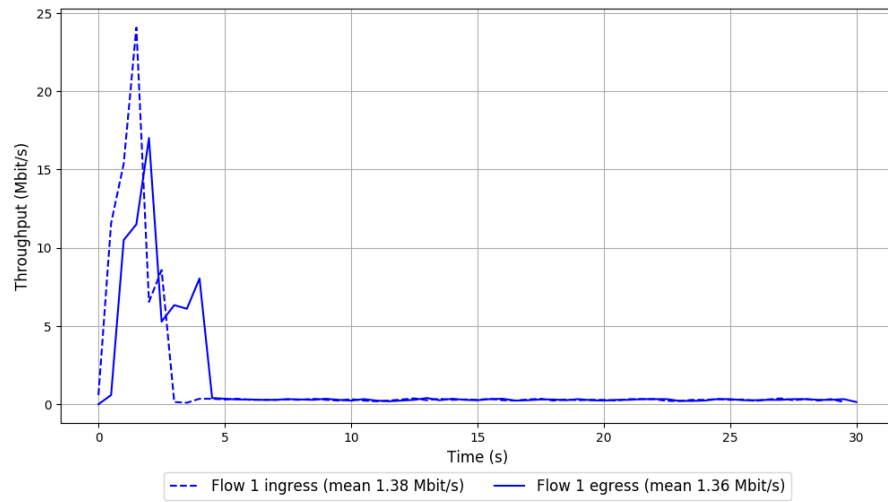
-- Flow 1:

Average throughput: 1.36 Mbit/s

95th percentile per-packet one-way delay: 1008.435 ms

Loss rate: 1.91%

Run 2: Report of Muses_DecisionTree — Data Link



Run 3: Statistics of Muses_DecisionTree

Start at: 2019-07-11 22:16:38

End at: 2019-07-11 22:17:08

Local clock offset: 0.396 ms

Remote clock offset: 3.924 ms

Below is generated by plot.py at 2019-07-11 22:38:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.14 Mbit/s

95th percentile per-packet one-way delay: 1037.537 ms

Loss rate: 7.64%

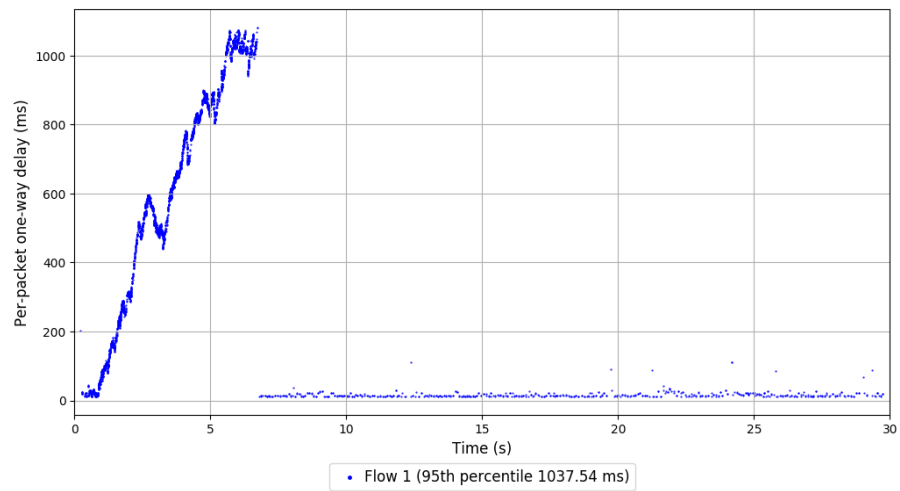
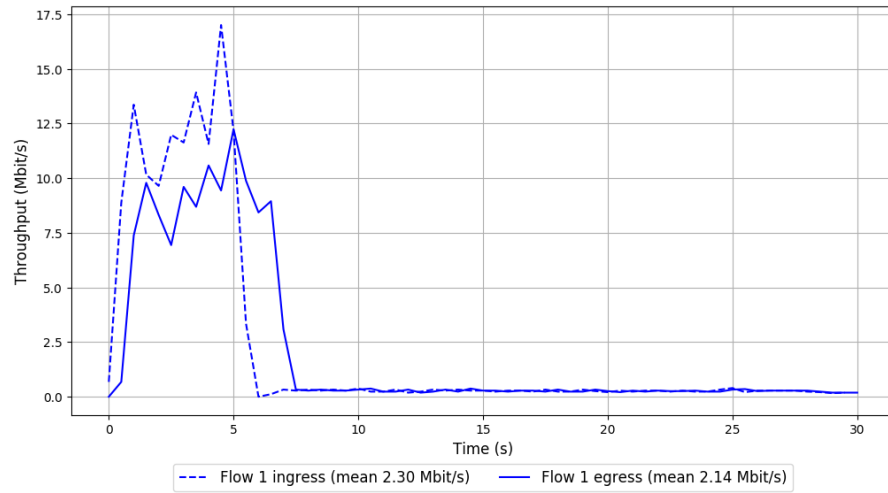
-- Flow 1:

Average throughput: 2.14 Mbit/s

95th percentile per-packet one-way delay: 1037.537 ms

Loss rate: 7.64%

Run 3: Report of Muses_DecisionTree — Data Link



Run 1: Statistics of Muses_DecisionTreeH0

Start at: 2019-07-11 21:37:14

End at: 2019-07-11 21:37:44

Local clock offset: 2.148 ms

Remote clock offset: 4.267 ms

Below is generated by plot.py at 2019-07-11 22:38:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.40 Mbit/s

95th percentile per-packet one-way delay: 1021.565 ms

Loss rate: 9.21%

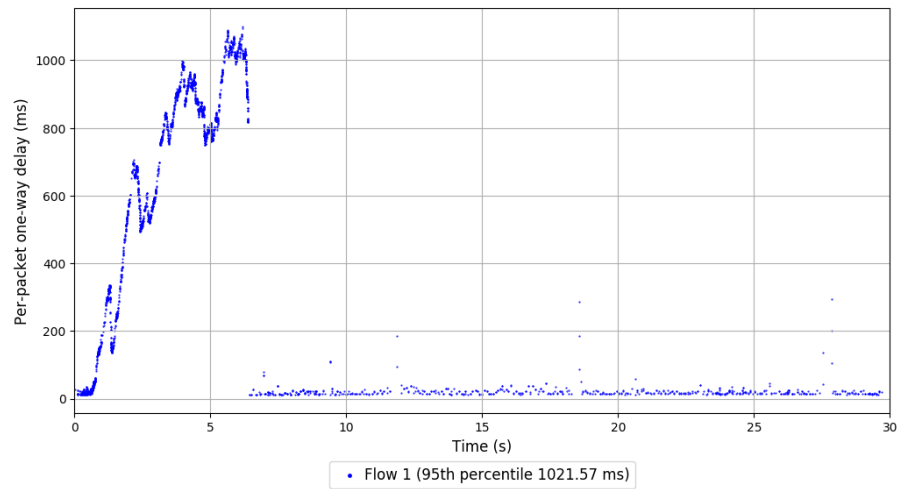
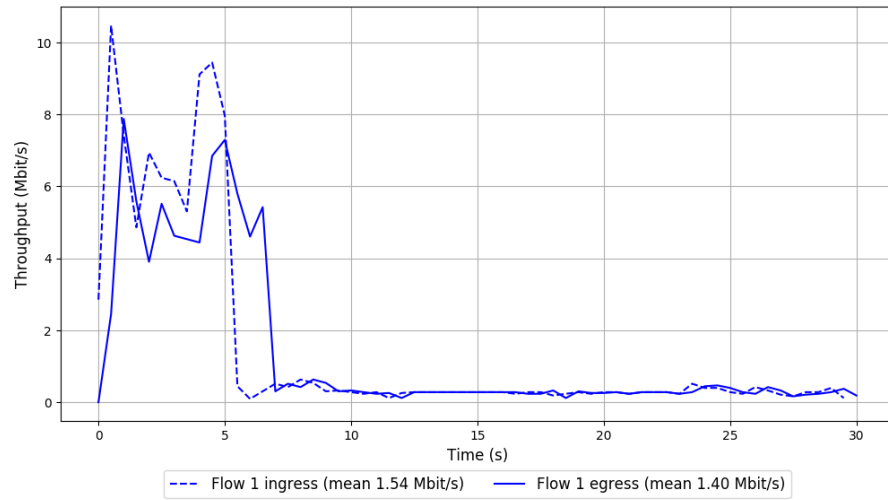
-- Flow 1:

Average throughput: 1.40 Mbit/s

95th percentile per-packet one-way delay: 1021.565 ms

Loss rate: 9.21%

Run 1: Report of Muses_DecisionTreeH0 — Data Link



Run 2: Statistics of Muses_DecisionTreeH0

Start at: 2019-07-11 22:06:47

End at: 2019-07-11 22:07:17

Local clock offset: 1.592 ms

Remote clock offset: 3.771 ms

Below is generated by plot.py at 2019-07-11 22:38:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.07 Mbit/s

95th percentile per-packet one-way delay: 1015.352 ms

Loss rate: 8.66%

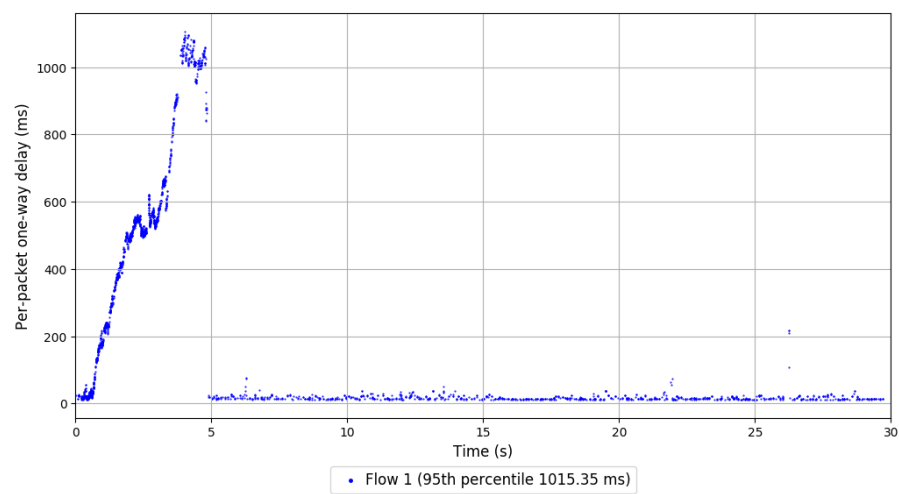
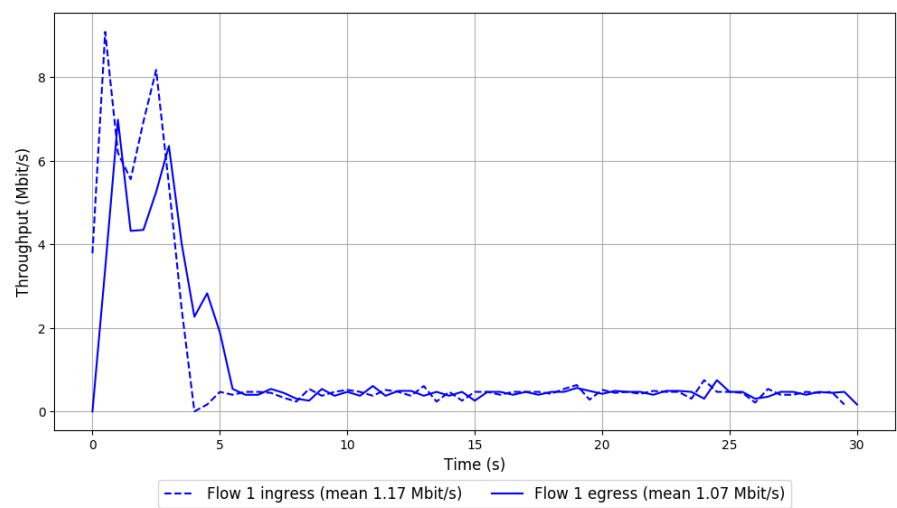
-- Flow 1:

Average throughput: 1.07 Mbit/s

95th percentile per-packet one-way delay: 1015.352 ms

Loss rate: 8.66%

Run 2: Report of Muses_DecisionTreeH0 — Data Link



Run 3: Statistics of Muses_DecisionTreeH0

Start at: 2019-07-11 22:36:20

End at: 2019-07-11 22:36:50

Local clock offset: 0.177 ms

Remote clock offset: 3.308 ms

Below is generated by plot.py at 2019-07-11 22:38:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.65 Mbit/s

95th percentile per-packet one-way delay: 1034.319 ms

Loss rate: 9.09%

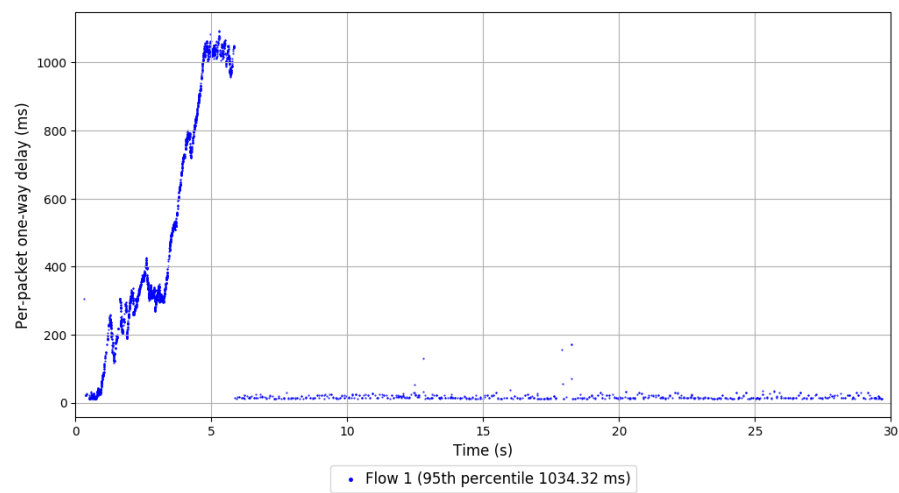
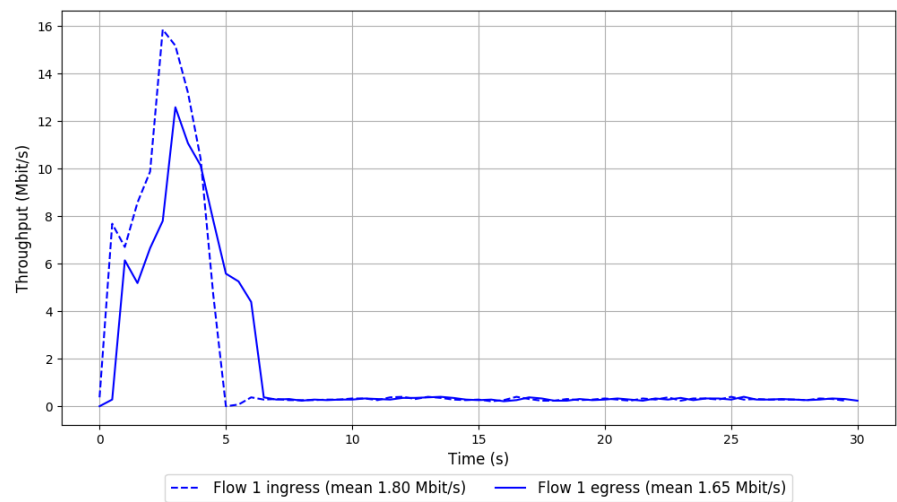
-- Flow 1:

Average throughput: 1.65 Mbit/s

95th percentile per-packet one-way delay: 1034.319 ms

Loss rate: 9.09%

Run 3: Report of Muses_DecisionTreeH0 — Data Link

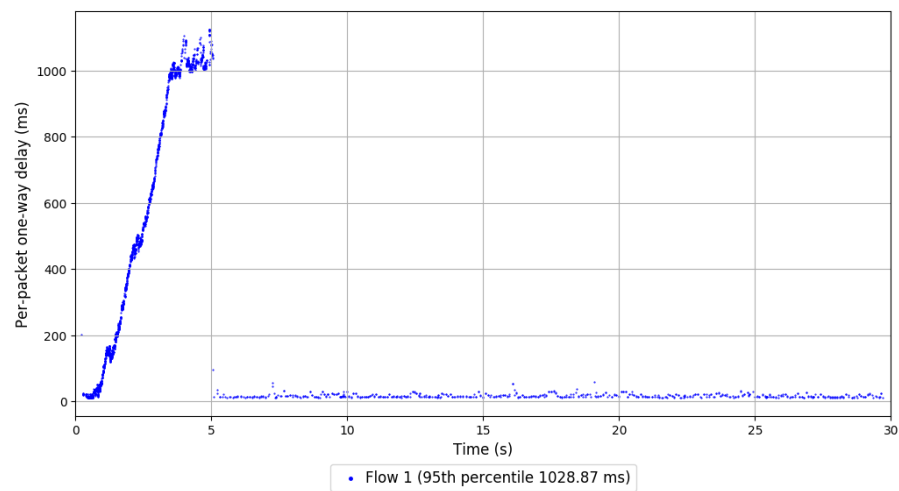
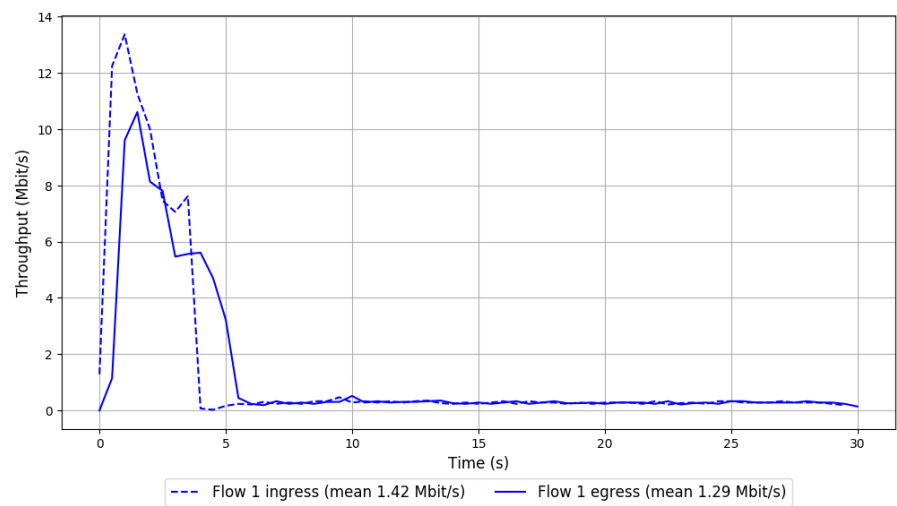


```
Run 1: Statistics of Muses\_DecisionTreeR0

Start at: 2019-07-11 21:18:46
End at: 2019-07-11 21:19:16
Local clock offset: -0.032 ms
Remote clock offset: 1.842 ms

# Below is generated by plot.py at 2019-07-11 22:38:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.29 Mbit/s
95th percentile per-packet one-way delay: 1028.868 ms
Loss rate: 9.84%
-- Flow 1:
Average throughput: 1.29 Mbit/s
95th percentile per-packet one-way delay: 1028.868 ms
Loss rate: 9.84%
```

Run 1: Report of Muses_DecisionTreeR0 — Data Link



Run 2: Statistics of Muses_DecisionTreeR0

Start at: 2019-07-11 21:48:19

End at: 2019-07-11 21:48:49

Local clock offset: 3.271 ms

Remote clock offset: 4.492 ms

Below is generated by plot.py at 2019-07-11 22:38:51

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.30 Mbit/s

95th percentile per-packet one-way delay: 1044.501 ms

Loss rate: 12.00%

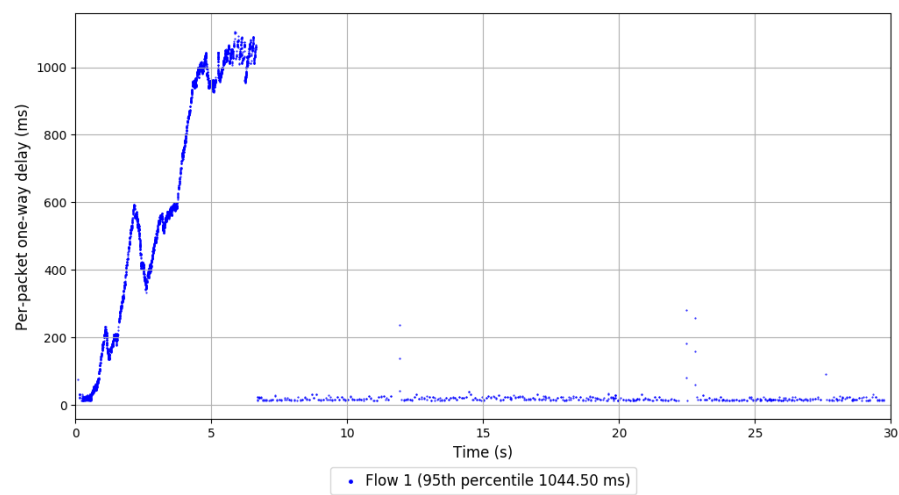
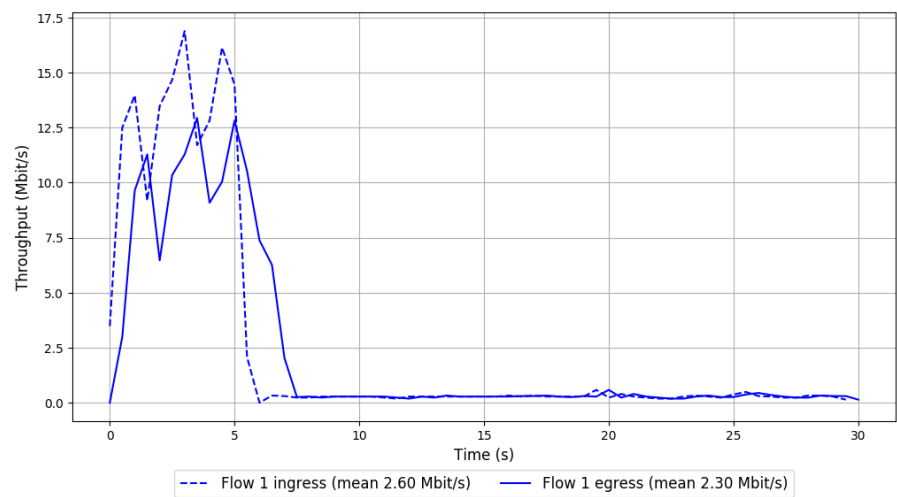
-- Flow 1:

Average throughput: 2.30 Mbit/s

95th percentile per-packet one-way delay: 1044.501 ms

Loss rate: 12.00%

Run 2: Report of Muses_DecisionTreeR0 — Data Link



Run 3: Statistics of Muses_DecisionTreeR0

Start at: 2019-07-11 22:17:52

End at: 2019-07-11 22:18:22

Local clock offset: 0.341 ms

Remote clock offset: 4.024 ms

Below is generated by plot.py at 2019-07-11 22:38:51

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.50 Mbit/s

95th percentile per-packet one-way delay: 1024.019 ms

Loss rate: 7.84%

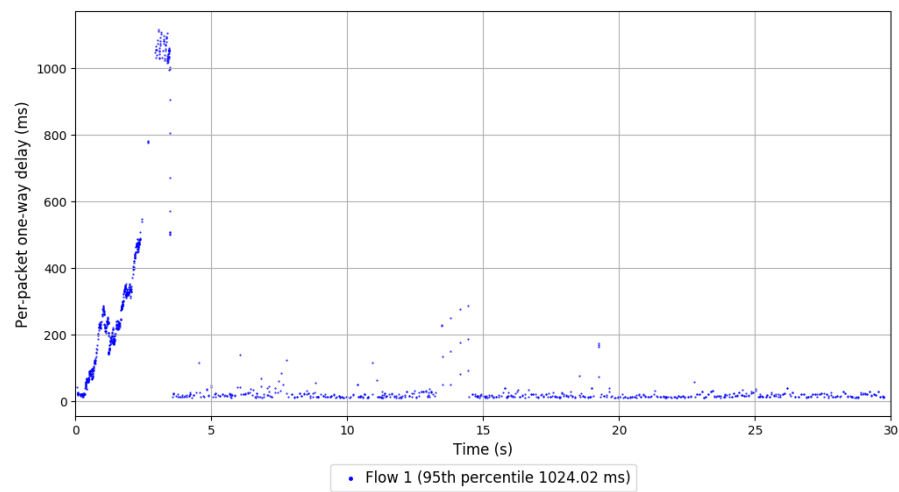
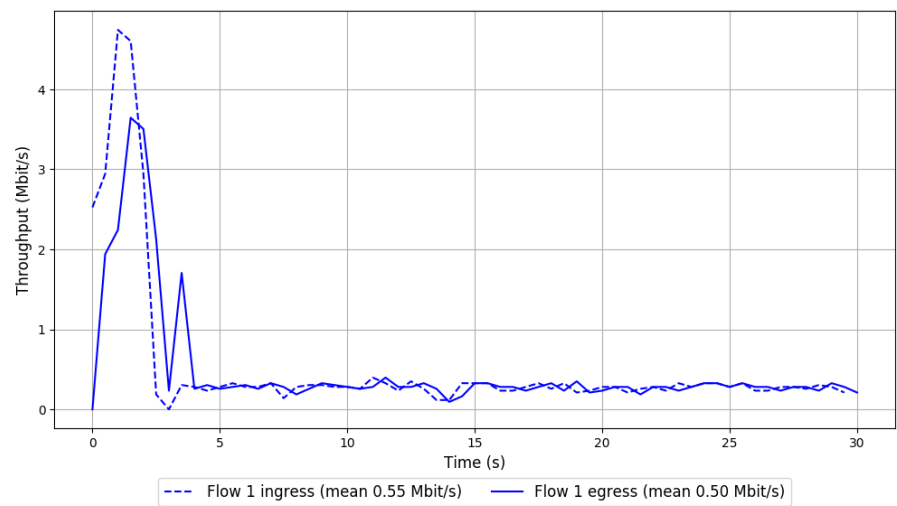
-- Flow 1:

Average throughput: 0.50 Mbit/s

95th percentile per-packet one-way delay: 1024.019 ms

Loss rate: 7.84%

Run 3: Report of Muses_DecisionTreeR0 — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2019-07-11 21:22:27

End at: 2019-07-11 21:22:57

Local clock offset: 0.145 ms

Remote clock offset: 2.577 ms

Below is generated by plot.py at 2019-07-11 22:39:02

Datalink statistics

-- Total of 1 flow:

Average throughput: 6.10 Mbit/s

95th percentile per-packet one-way delay: 1057.958 ms

Loss rate: 31.77%

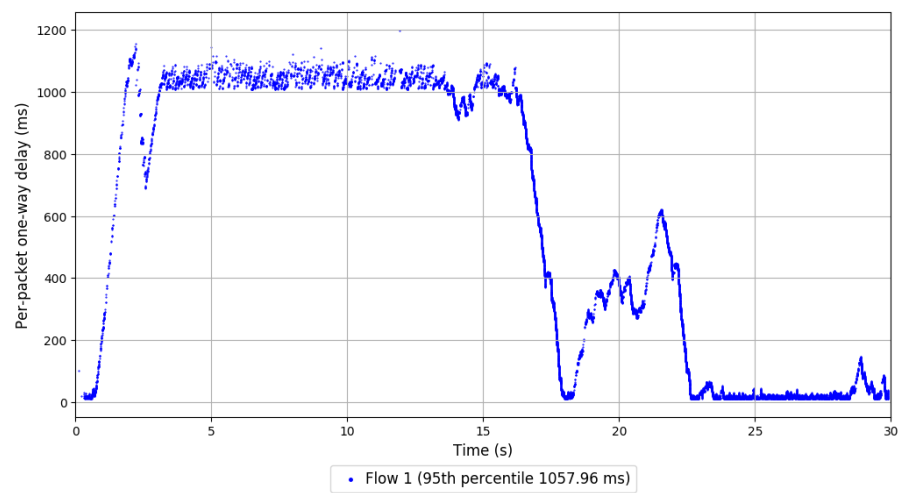
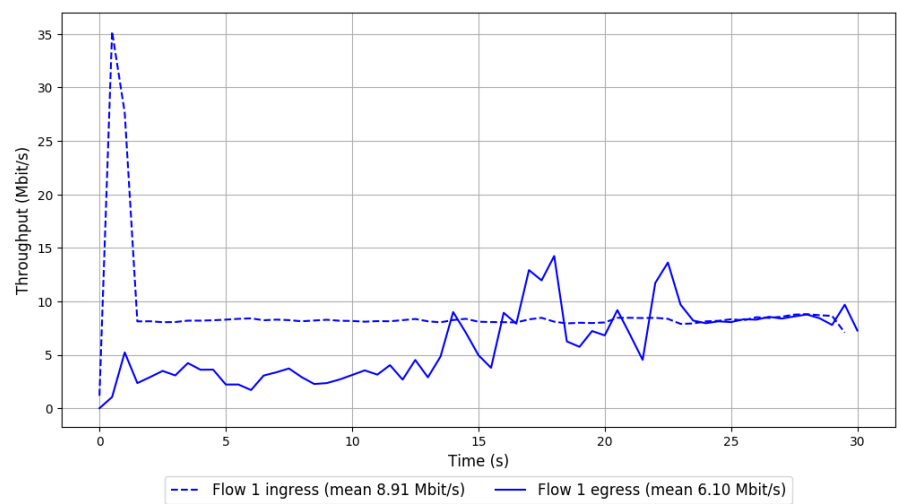
-- Flow 1:

Average throughput: 6.10 Mbit/s

95th percentile per-packet one-way delay: 1057.958 ms

Loss rate: 31.77%

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2019-07-11 21:52:01

End at: 2019-07-11 21:52:31

Local clock offset: 3.464 ms

Remote clock offset: 4.026 ms

Below is generated by plot.py at 2019-07-11 22:39:02

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.35 Mbit/s

95th percentile per-packet one-way delay: 1025.656 ms

Loss rate: 10.19%

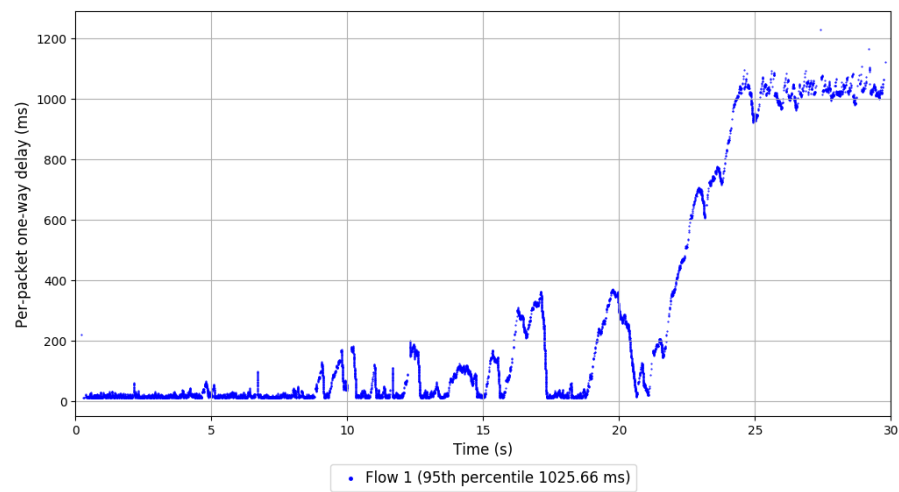
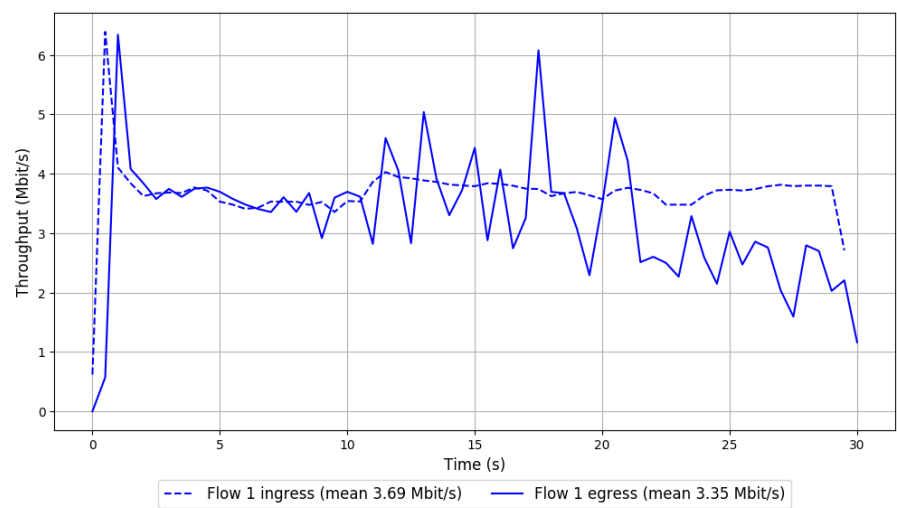
-- Flow 1:

Average throughput: 3.35 Mbit/s

95th percentile per-packet one-way delay: 1025.656 ms

Loss rate: 10.19%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2019-07-11 22:21:34

End at: 2019-07-11 22:22:04

Local clock offset: 0.169 ms

Remote clock offset: 3.895 ms

Below is generated by plot.py at 2019-07-11 22:39:02

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.19 Mbit/s

95th percentile per-packet one-way delay: 53.755 ms

Loss rate: 0.06%

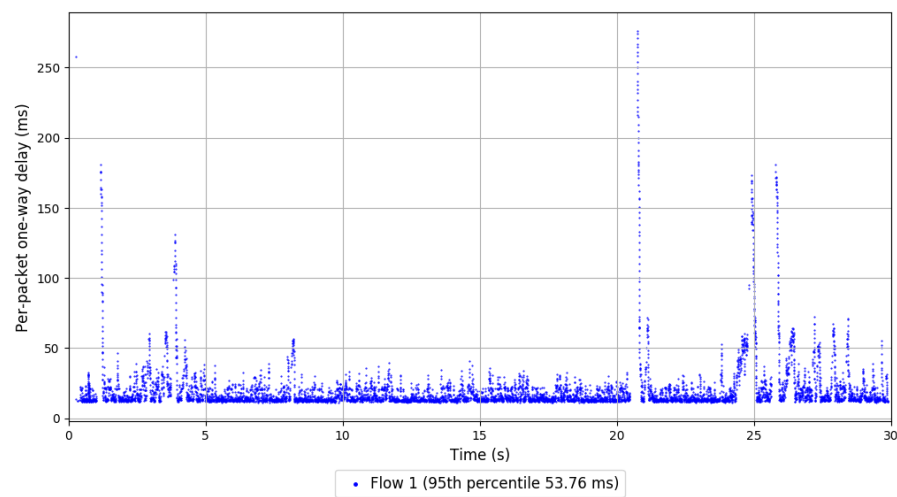
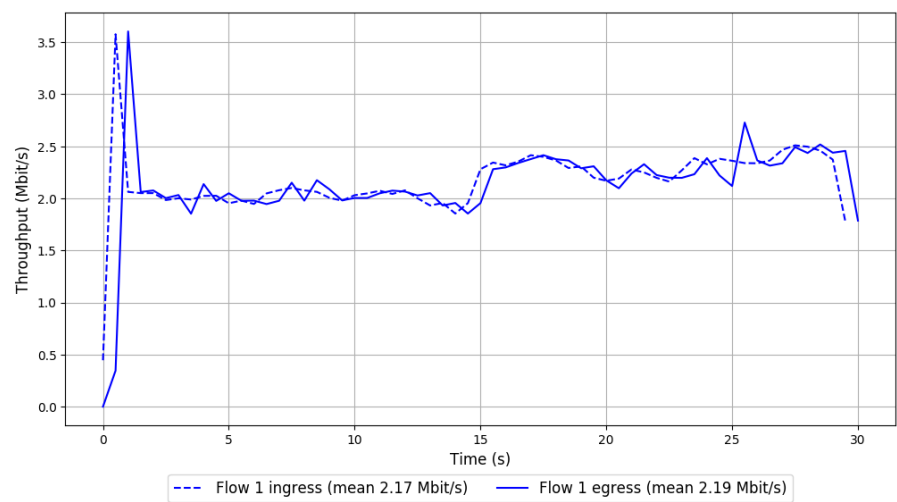
-- Flow 1:

Average throughput: 2.19 Mbit/s

95th percentile per-packet one-way delay: 53.755 ms

Loss rate: 0.06%

Run 3: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

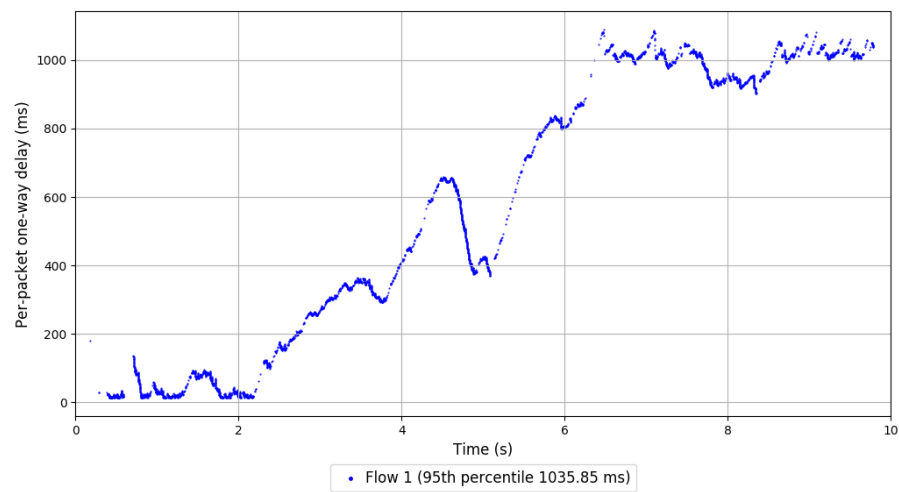
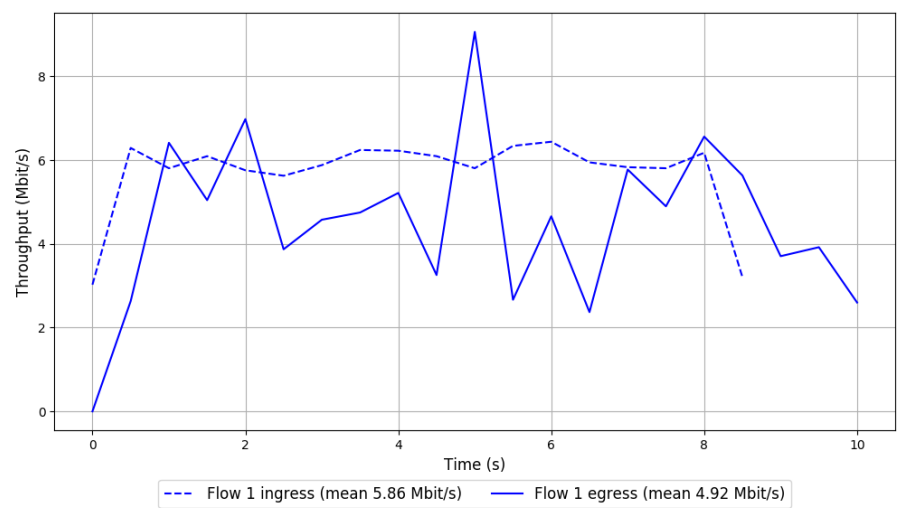
Start at: 2019-07-11 21:31:05

End at: 2019-07-11 21:31:35

Local clock offset: 0.938 ms

Remote clock offset: 3.694 ms

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

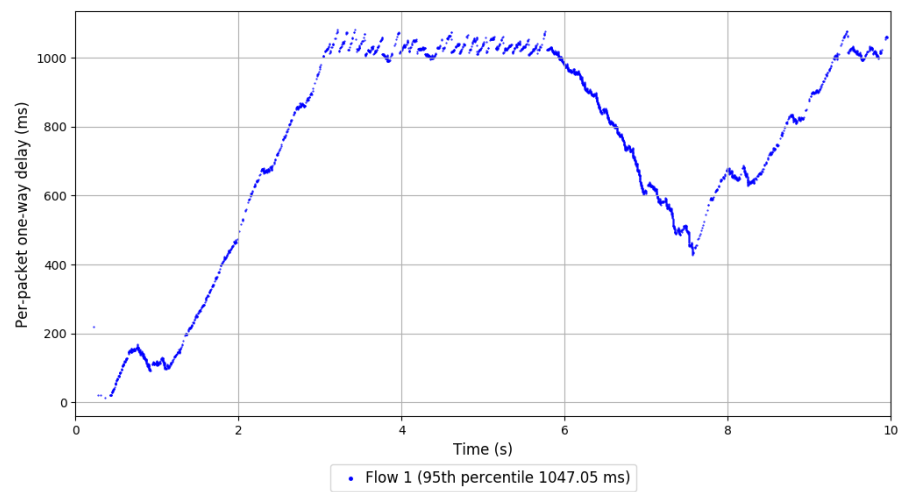
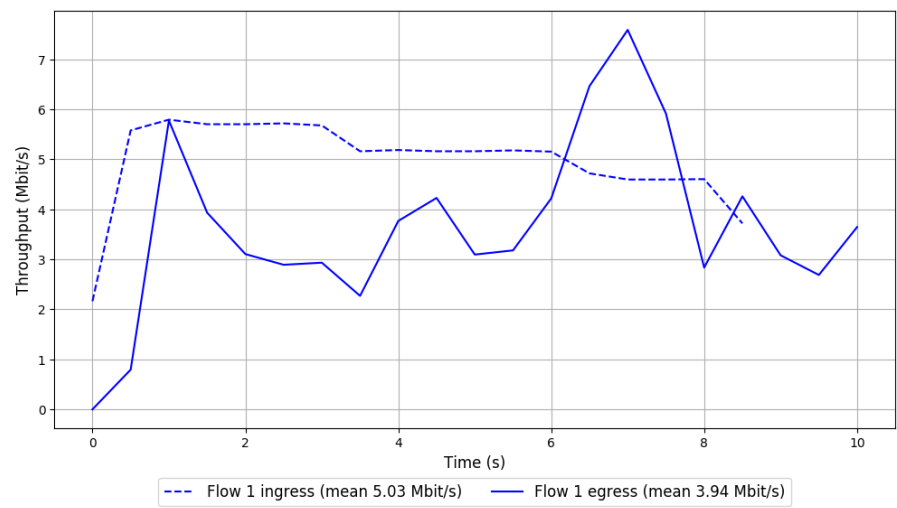
Start at: 2019-07-11 22:00:38

End at: 2019-07-11 22:01:08

Local clock offset: 3.264 ms

Remote clock offset: 3.681 ms

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

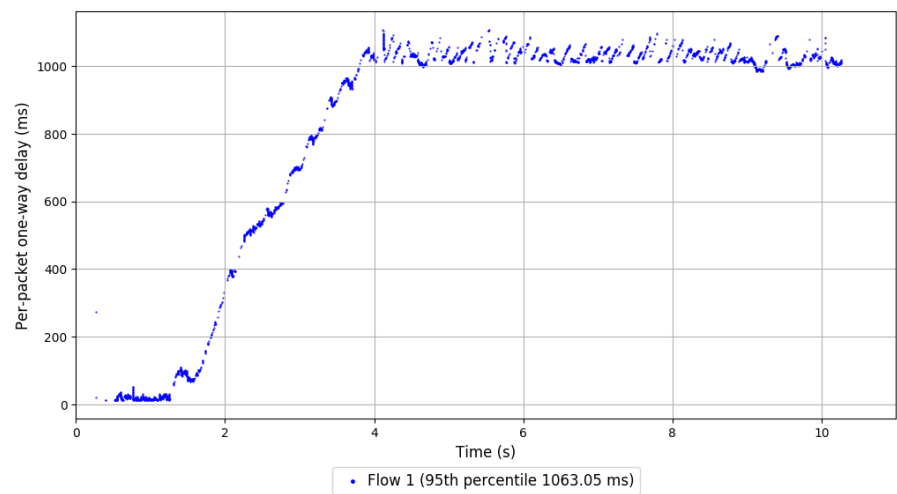
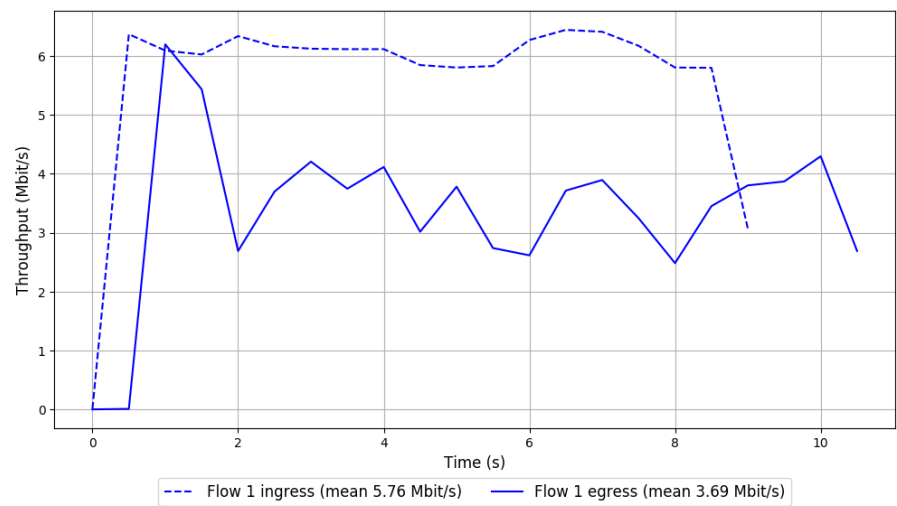
Start at: 2019-07-11 22:30:11

End at: 2019-07-11 22:30:41

Local clock offset: -0.038 ms

Remote clock offset: 3.497 ms

Run 3: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2019-07-11 21:23:41

End at: 2019-07-11 21:24:11

Local clock offset: 0.204 ms

Remote clock offset: 2.824 ms

Below is generated by plot.py at 2019-07-11 22:39:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 9.04 Mbit/s

95th percentile per-packet one-way delay: 289.640 ms

Loss rate: 0.77%

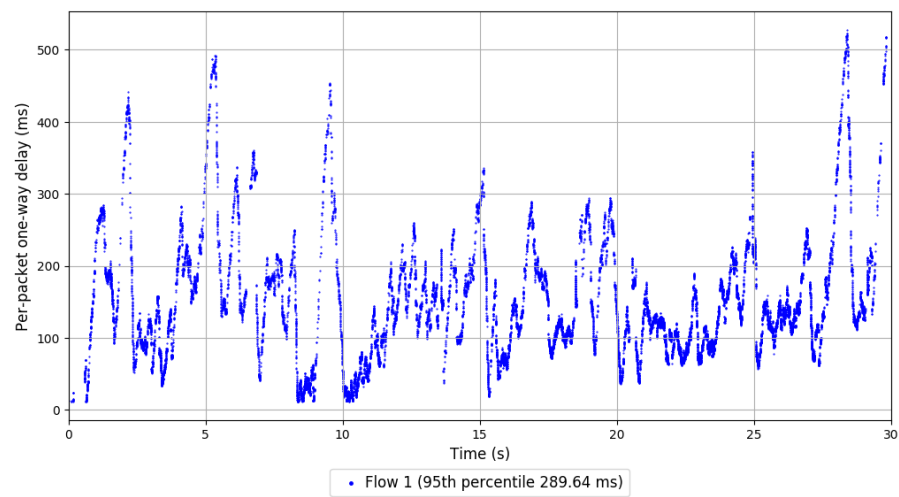
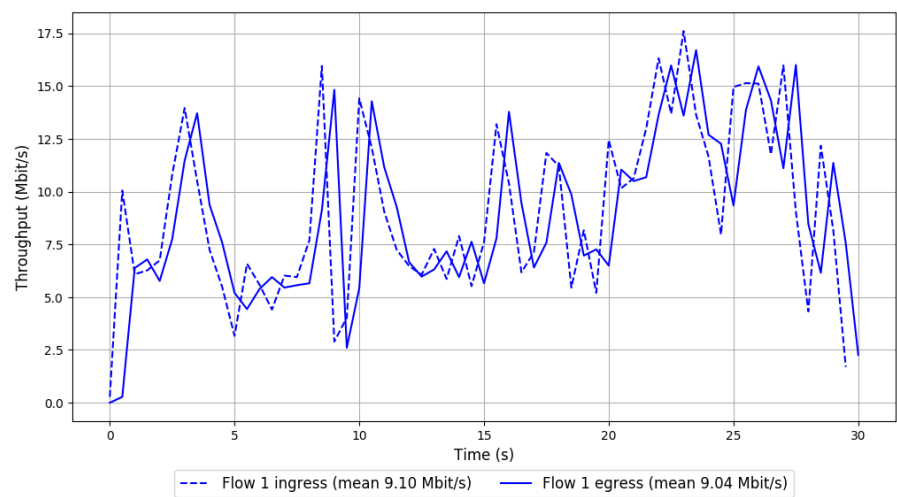
-- Flow 1:

Average throughput: 9.04 Mbit/s

95th percentile per-packet one-way delay: 289.640 ms

Loss rate: 0.77%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2019-07-11 21:53:15

End at: 2019-07-11 21:53:45

Local clock offset: 3.542 ms

Remote clock offset: 3.975 ms

Below is generated by plot.py at 2019-07-11 22:39:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 5.90 Mbit/s

95th percentile per-packet one-way delay: 326.304 ms

Loss rate: 0.84%

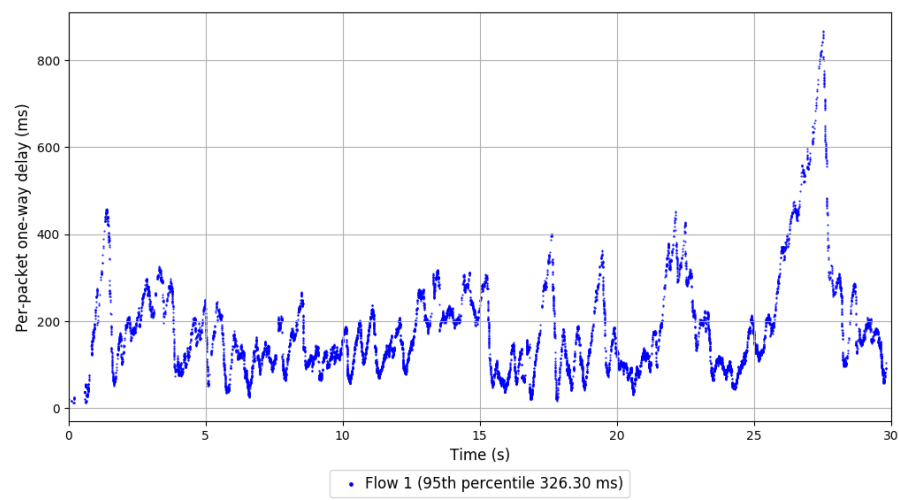
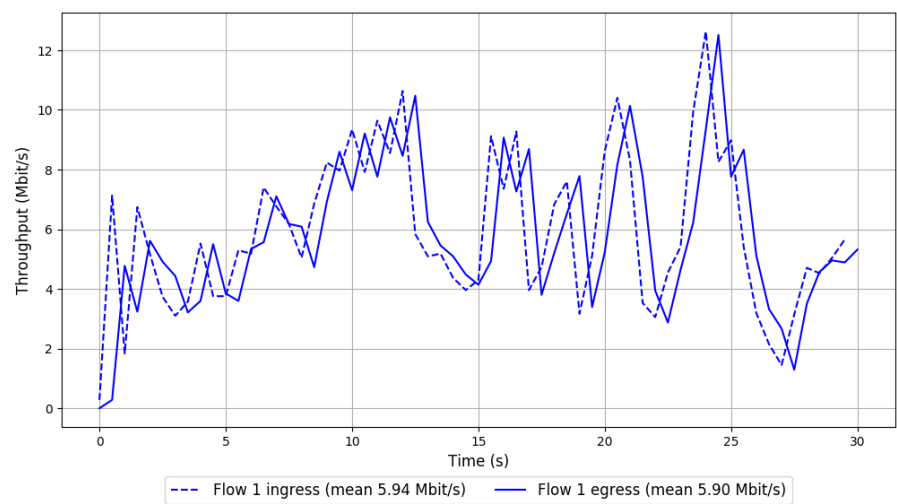
-- Flow 1:

Average throughput: 5.90 Mbit/s

95th percentile per-packet one-way delay: 326.304 ms

Loss rate: 0.84%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2019-07-11 22:22:47

End at: 2019-07-11 22:23:17

Local clock offset: 0.105 ms

Remote clock offset: 3.772 ms

Below is generated by plot.py at 2019-07-11 22:39:14

Datalink statistics

-- Total of 1 flow:

Average throughput: 9.73 Mbit/s

95th percentile per-packet one-way delay: 290.263 ms

Loss rate: 0.52%

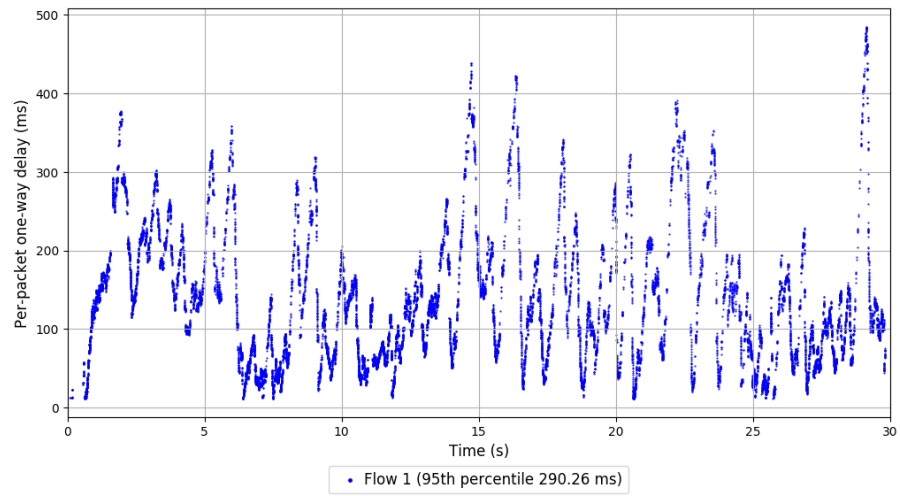
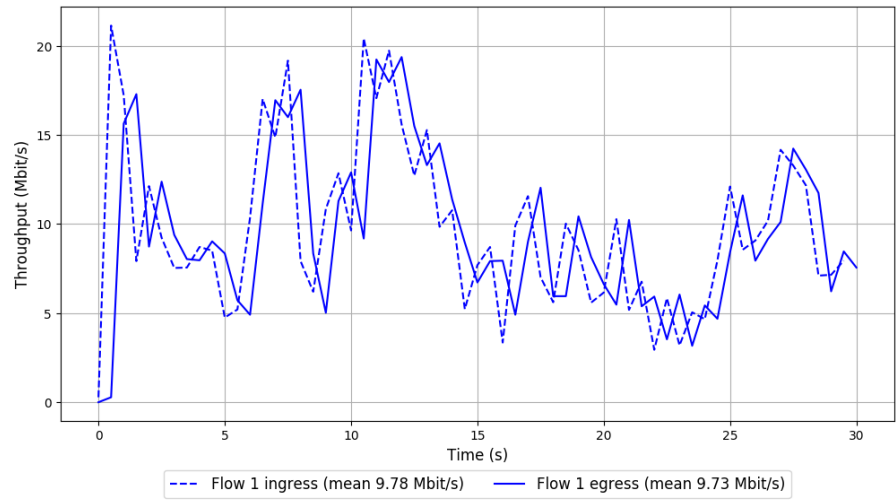
-- Flow 1:

Average throughput: 9.73 Mbit/s

95th percentile per-packet one-way delay: 290.263 ms

Loss rate: 0.52%

Run 3: Report of QUIC Cubic — Data Link



Run 1: Statistics of SCReAM

Start at: 2019-07-11 21:28:37

End at: 2019-07-11 21:29:07

Local clock offset: 0.402 ms

Remote clock offset: 3.481 ms

Below is generated by plot.py at 2019-07-11 22:39:14

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 28.000 ms

Loss rate: 0.00%

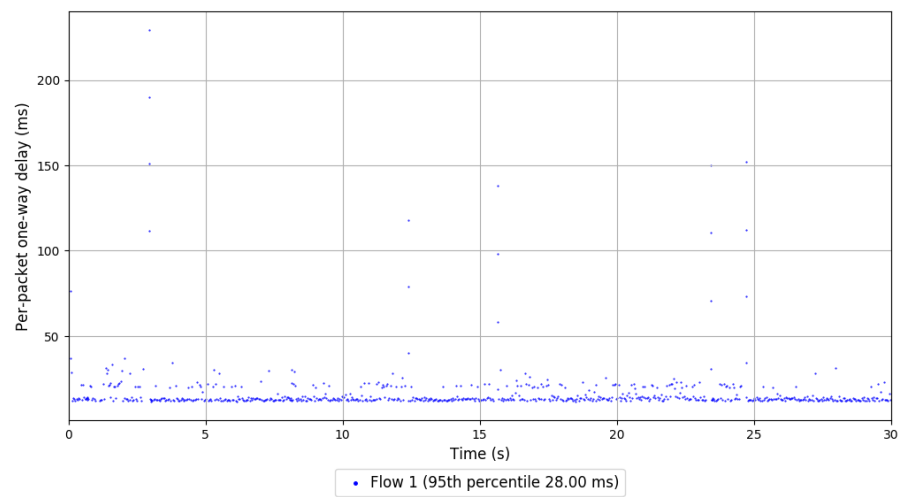
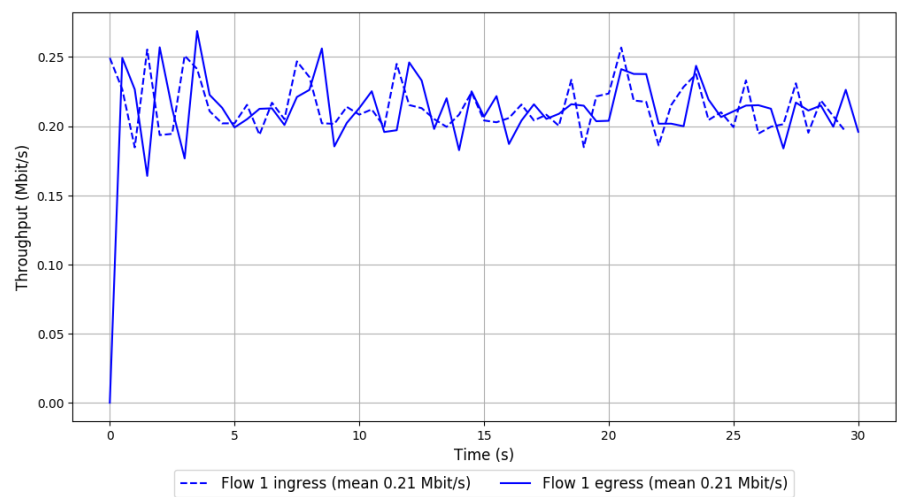
-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 28.000 ms

Loss rate: 0.00%

Run 1: Report of SReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2019-07-11 21:58:10

End at: 2019-07-11 21:58:41

Local clock offset: 3.849 ms

Remote clock offset: 3.789 ms

Below is generated by plot.py at 2019-07-11 22:39:14

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 24.537 ms

Loss rate: 0.76%

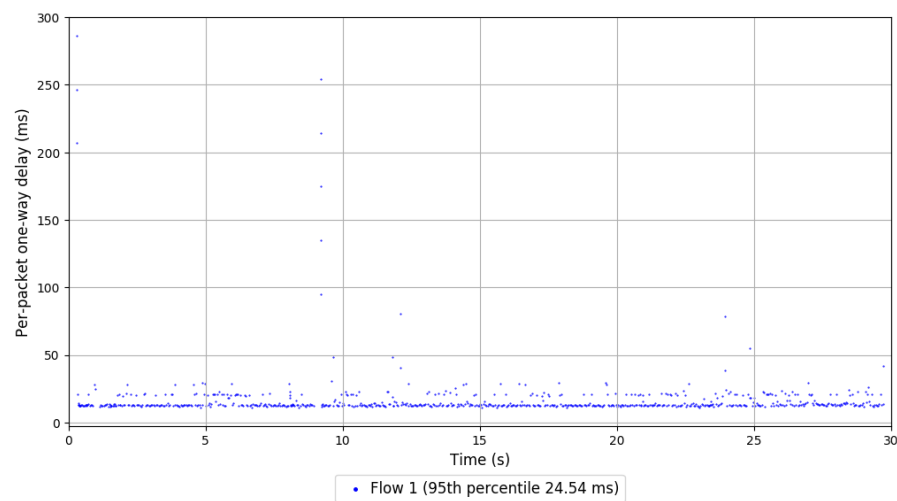
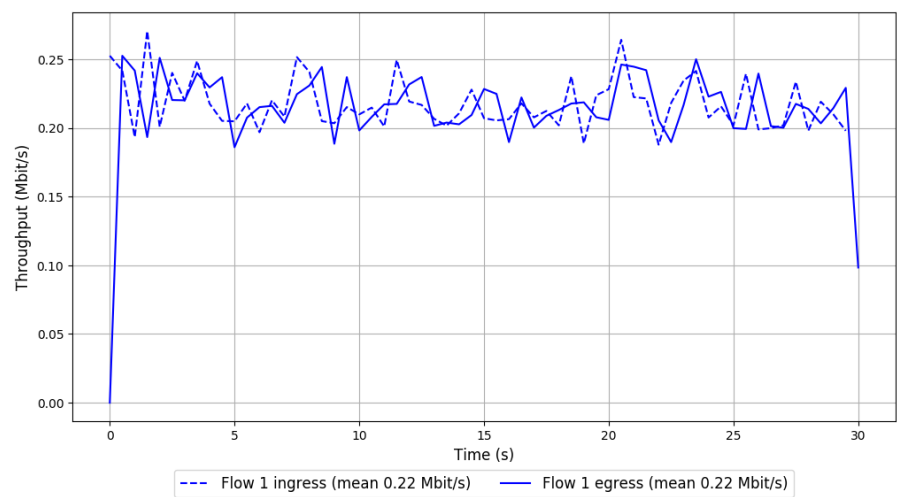
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 24.537 ms

Loss rate: 0.76%

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2019-07-11 22:27:43

End at: 2019-07-11 22:28:13

Local clock offset: -0.079 ms

Remote clock offset: 3.51 ms

Below is generated by plot.py at 2019-07-11 22:39:14

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.10 Mbit/s

95th percentile per-packet one-way delay: 24.811 ms

Loss rate: 0.11%

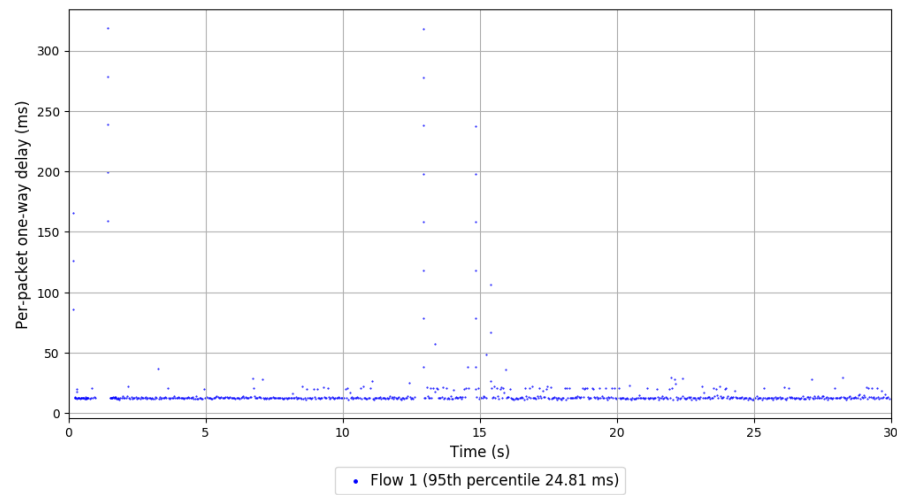
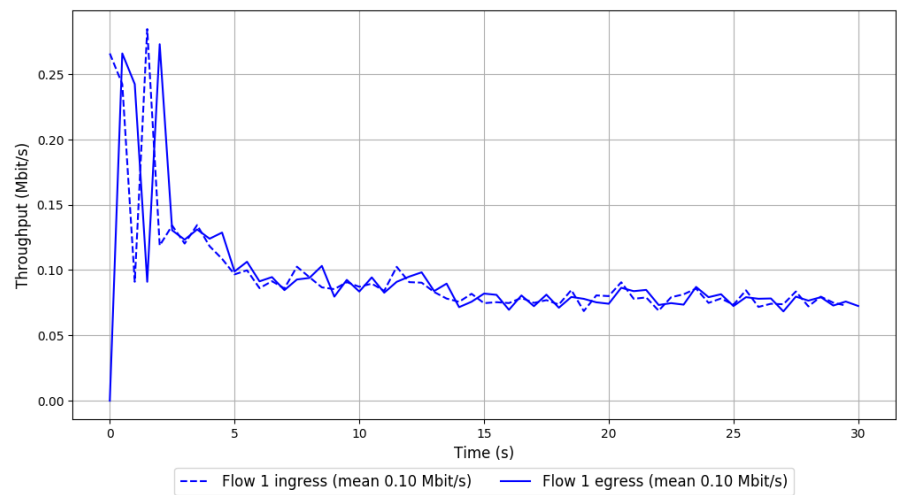
-- Flow 1:

Average throughput: 0.10 Mbit/s

95th percentile per-packet one-way delay: 24.811 ms

Loss rate: 0.11%

Run 3: Report of SReAM — Data Link

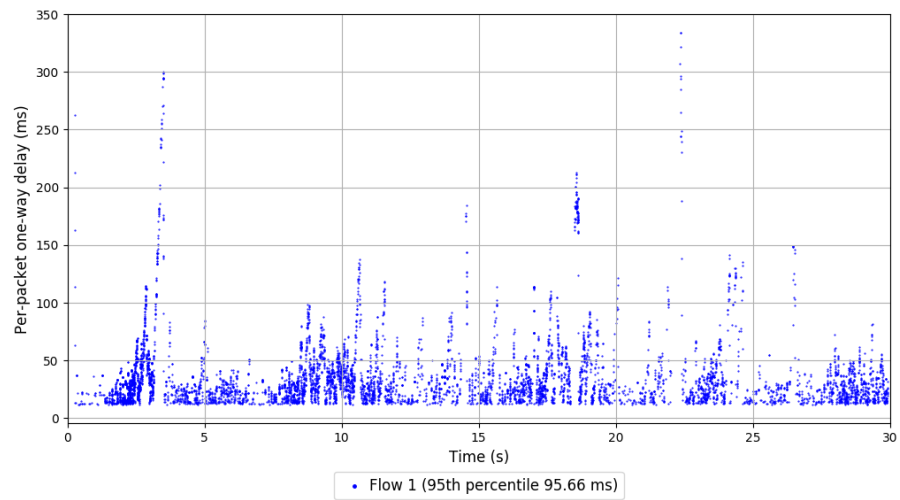
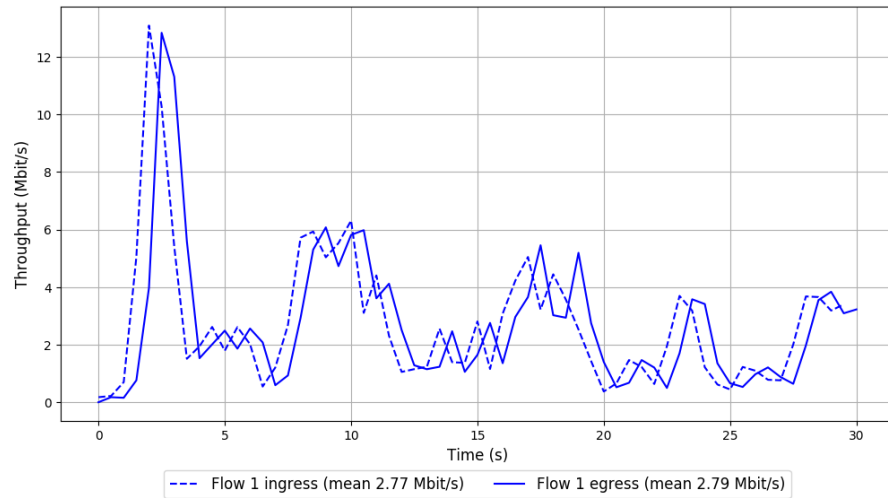


Run 1: Statistics of Sprout

Start at: 2019-07-11 21:10:09
End at: 2019-07-11 21:10:39
Local clock offset: -0.991 ms
Remote clock offset: -0.462 ms

Below is generated by plot.py at 2019-07-11 22:39:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.79 Mbit/s
95th percentile per-packet one-way delay: 95.663 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 2.79 Mbit/s
95th percentile per-packet one-way delay: 95.663 ms
Loss rate: 0.28%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2019-07-11 21:39:42

End at: 2019-07-11 21:40:12

Local clock offset: 2.451 ms

Remote clock offset: 4.475 ms

Below is generated by plot.py at 2019-07-11 22:39:14

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.43 Mbit/s

95th percentile per-packet one-way delay: 85.392 ms

Loss rate: 0.43%

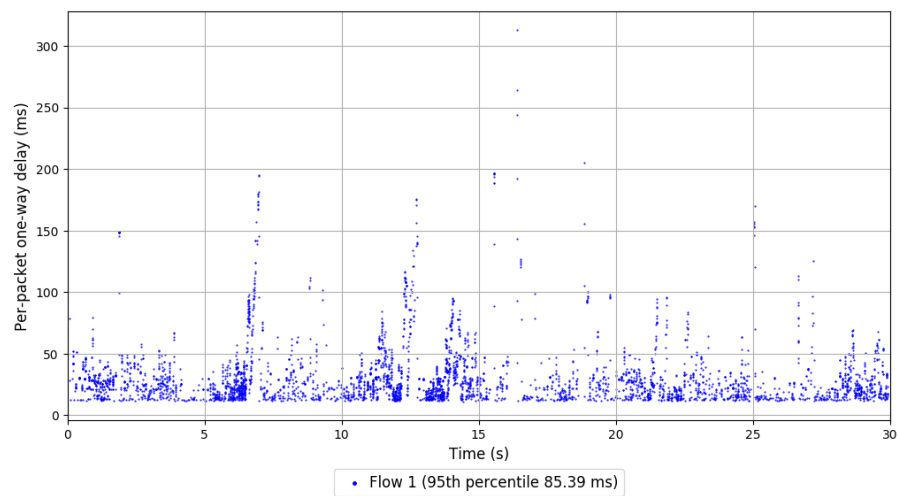
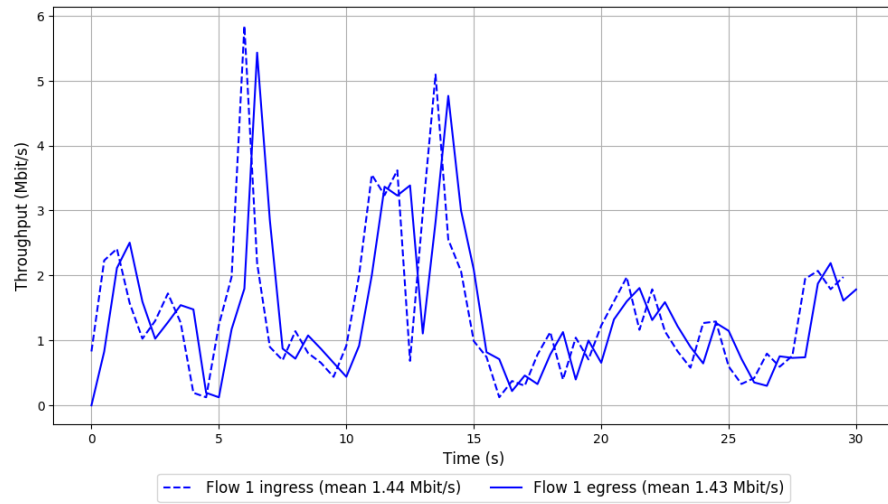
-- Flow 1:

Average throughput: 1.43 Mbit/s

95th percentile per-packet one-way delay: 85.392 ms

Loss rate: 0.43%

Run 2: Report of Sprout — Data Link

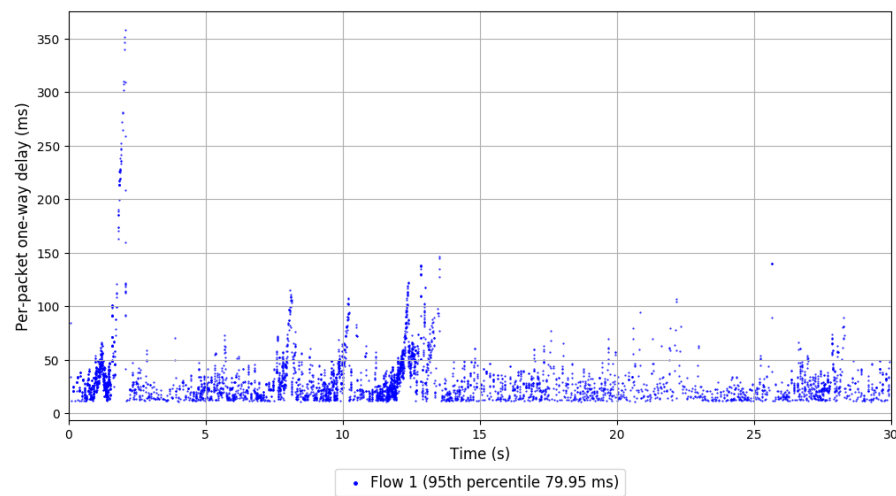
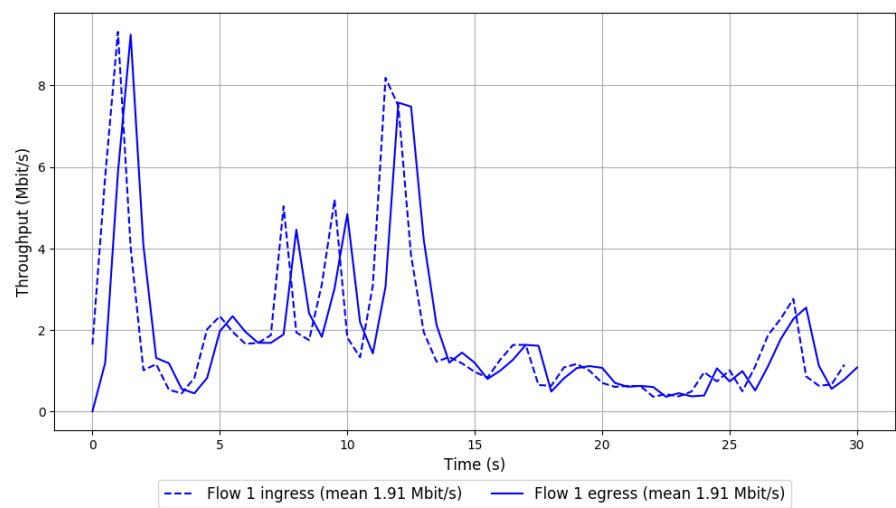


Run 3: Statistics of Sprout

Start at: 2019-07-11 22:09:15
End at: 2019-07-11 22:09:45
Local clock offset: 1.167 ms
Remote clock offset: 3.733 ms

Below is generated by plot.py at 2019-07-11 22:39:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.91 Mbit/s
95th percentile per-packet one-way delay: 79.952 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 1.91 Mbit/s
95th percentile per-packet one-way delay: 79.952 ms
Loss rate: 0.08%

Run 3: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

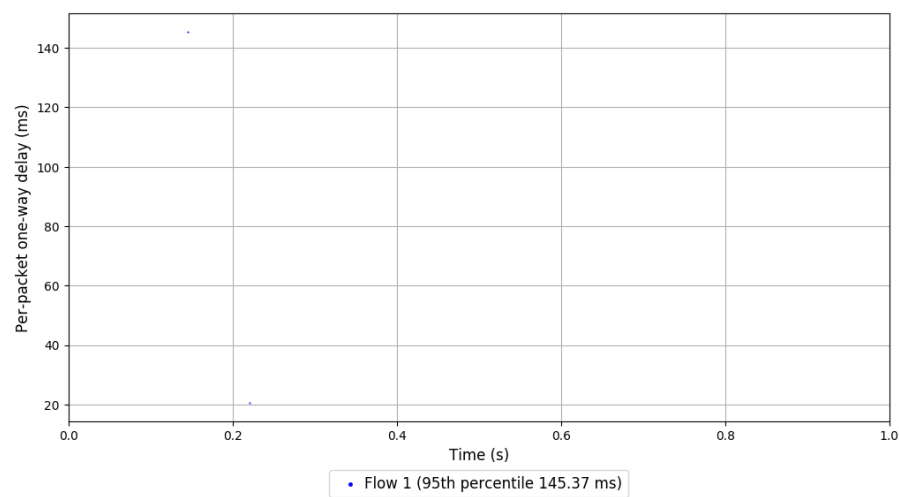
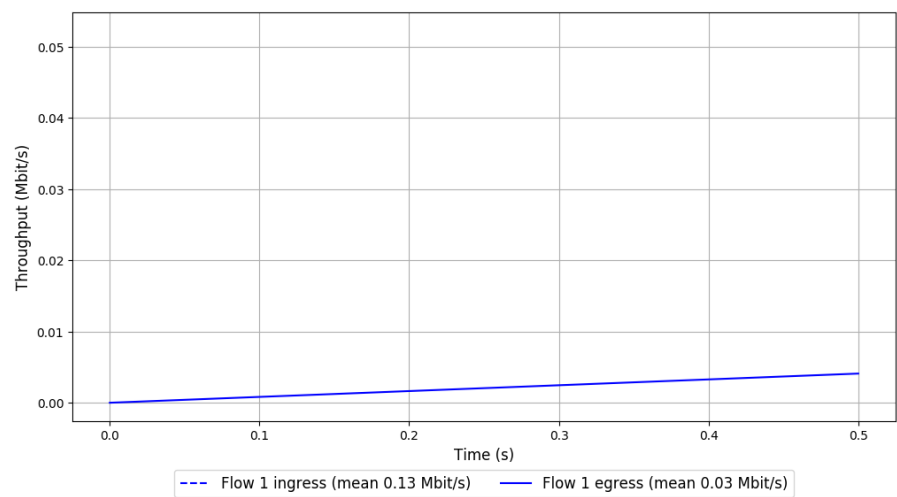
Start at: 2019-07-11 21:21:14

End at: 2019-07-11 21:21:44

Local clock offset: 0.098 ms

Remote clock offset: 2.408 ms

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



Run 2: Statistics of TaoVA-100x

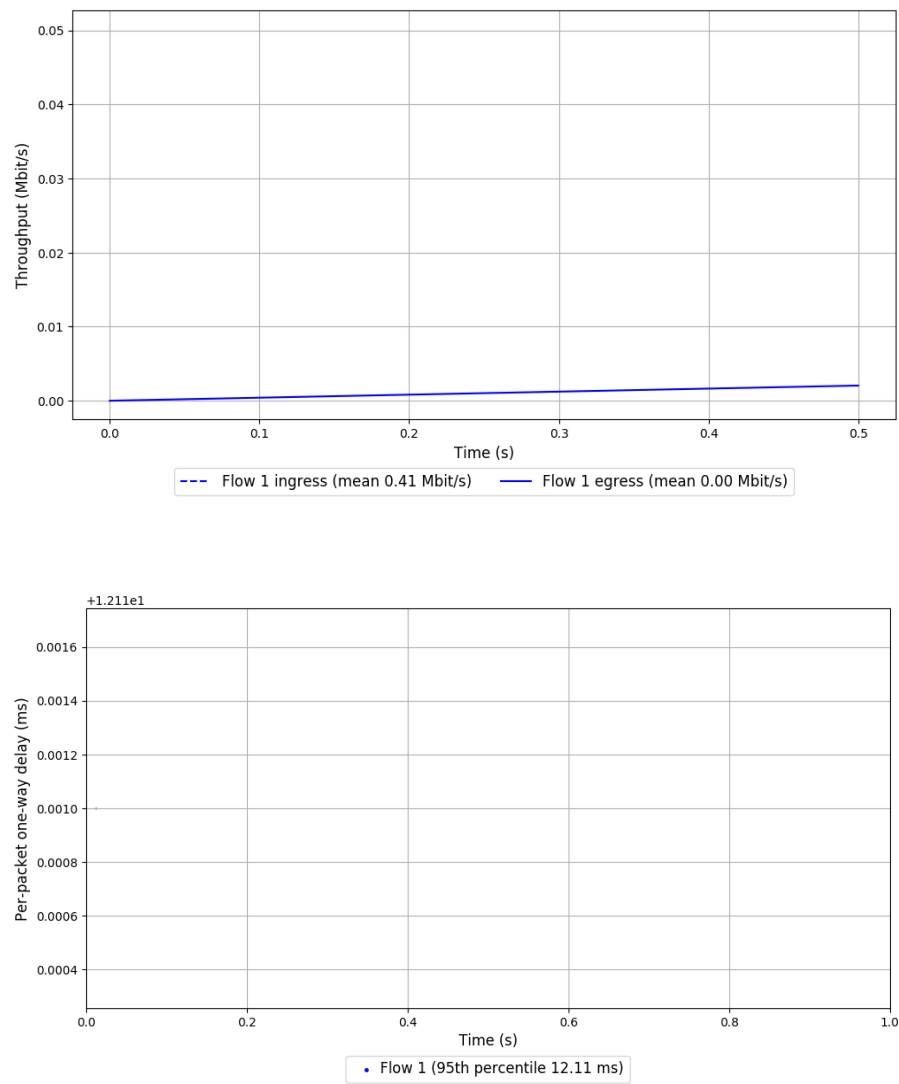
Start at: 2019-07-11 21:50:47

End at: 2019-07-11 21:51:17

Local clock offset: 3.452 ms

Remote clock offset: 4.1 ms

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



Run 3: Statistics of TaoVA-100x

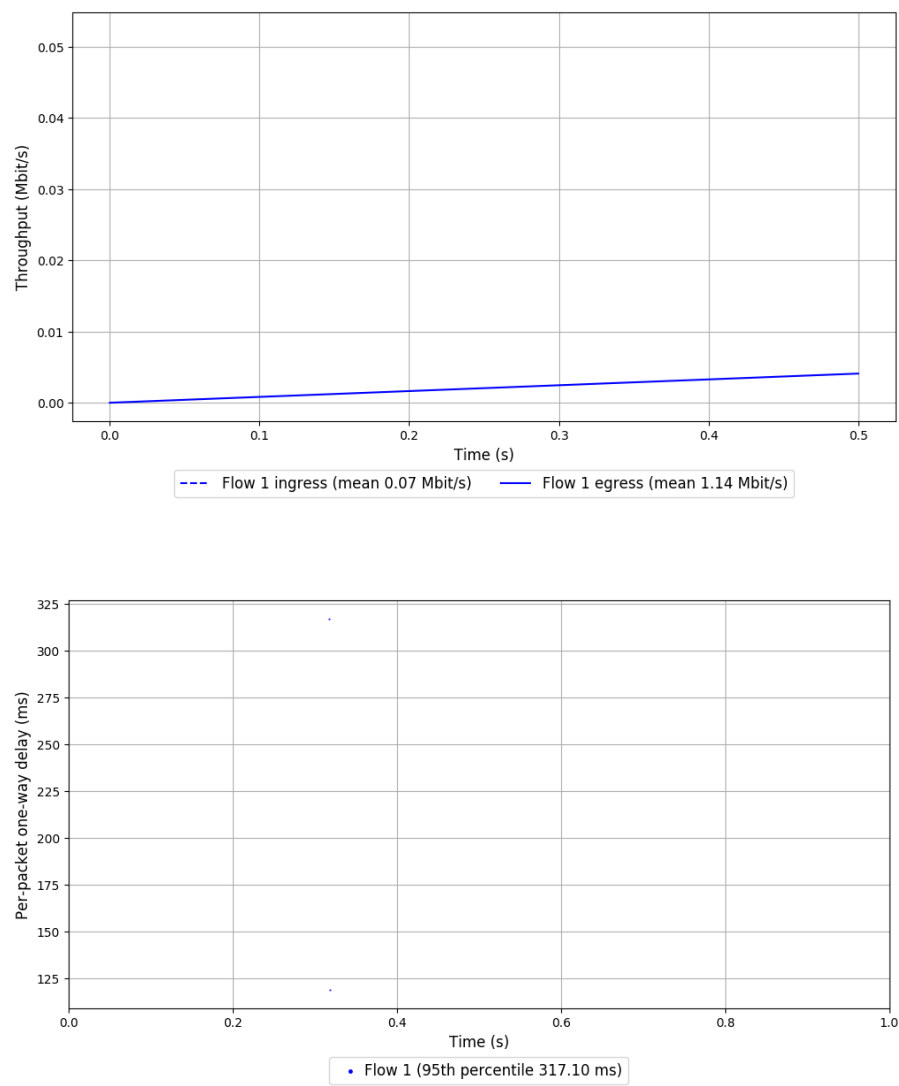
Start at: 2019-07-11 22:20:20

End at: 2019-07-11 22:20:50

Local clock offset: 0.209 ms

Remote clock offset: 4.012 ms

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



Run 1: Statistics of TCP Vegas

Start at: 2019-07-11 21:20:00

End at: 2019-07-11 21:20:30

Local clock offset: 0.028 ms

Remote clock offset: 2.102 ms

Below is generated by plot.py at 2019-07-11 22:39:14

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 54.825 ms

Loss rate: 0.06%

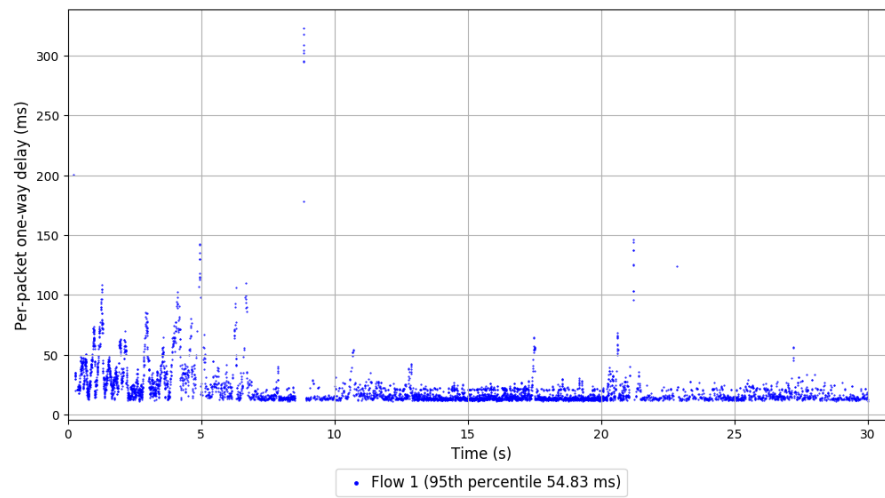
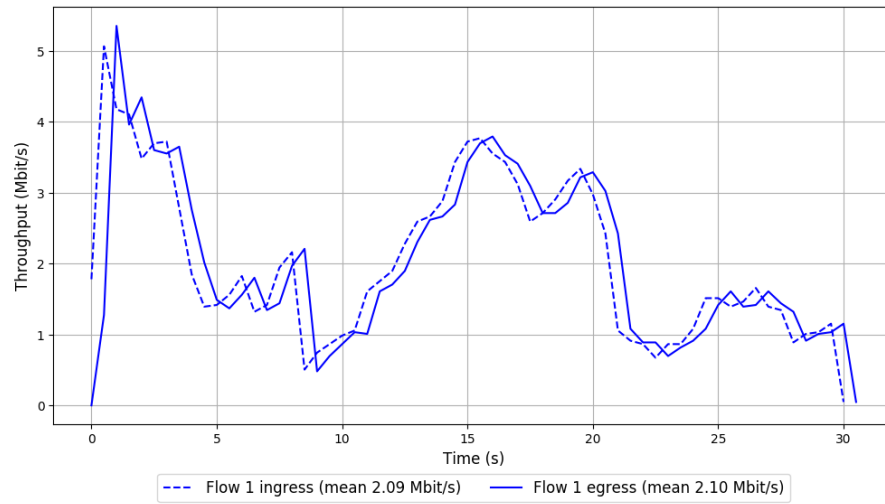
-- Flow 1:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 54.825 ms

Loss rate: 0.06%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2019-07-11 21:49:33

End at: 2019-07-11 21:50:03

Local clock offset: 3.313 ms

Remote clock offset: 4.251 ms

Below is generated by plot.py at 2019-07-11 22:39:14

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.96 Mbit/s

95th percentile per-packet one-way delay: 28.931 ms

Loss rate: 0.00%

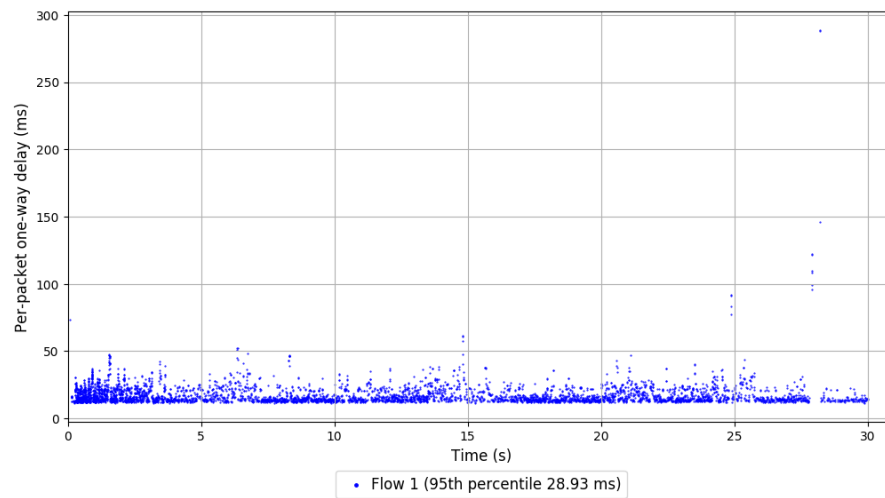
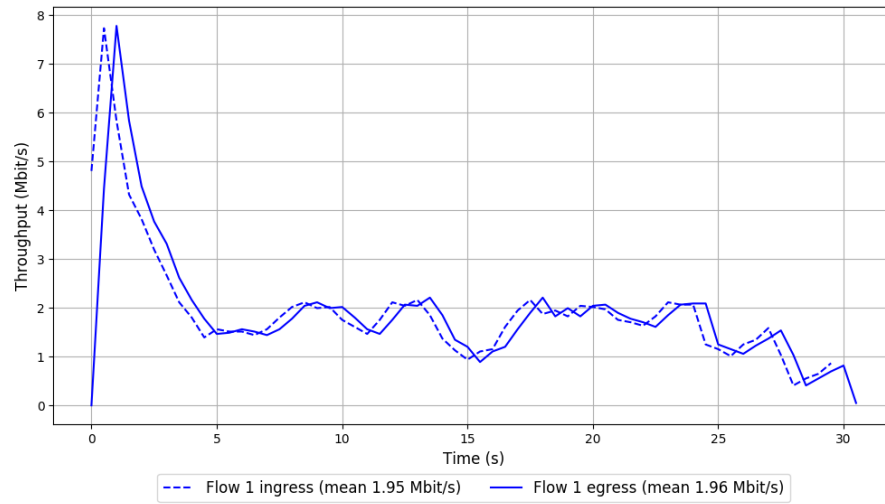
-- Flow 1:

Average throughput: 1.96 Mbit/s

95th percentile per-packet one-way delay: 28.931 ms

Loss rate: 0.00%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2019-07-11 22:19:06

End at: 2019-07-11 22:19:36

Local clock offset: 0.236 ms

Remote clock offset: 4.027 ms

Below is generated by plot.py at 2019-07-11 22:39:14

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.51 Mbit/s

95th percentile per-packet one-way delay: 207.661 ms

Loss rate: 0.21%

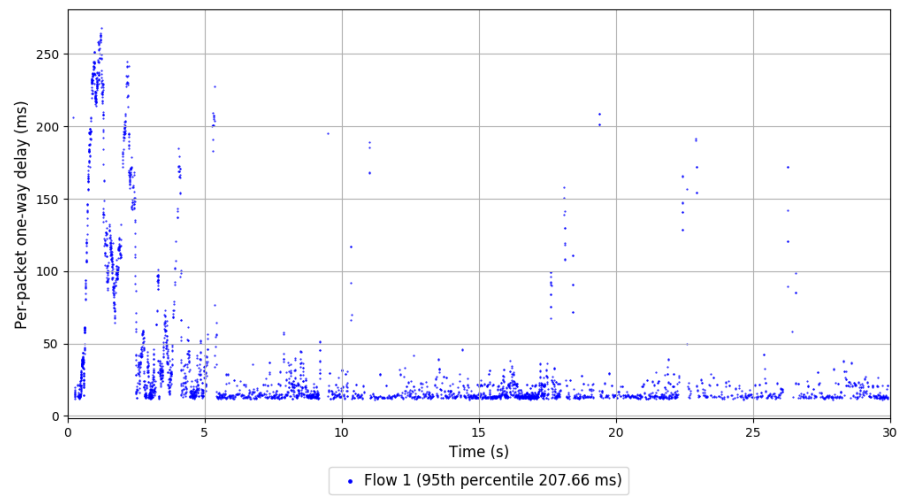
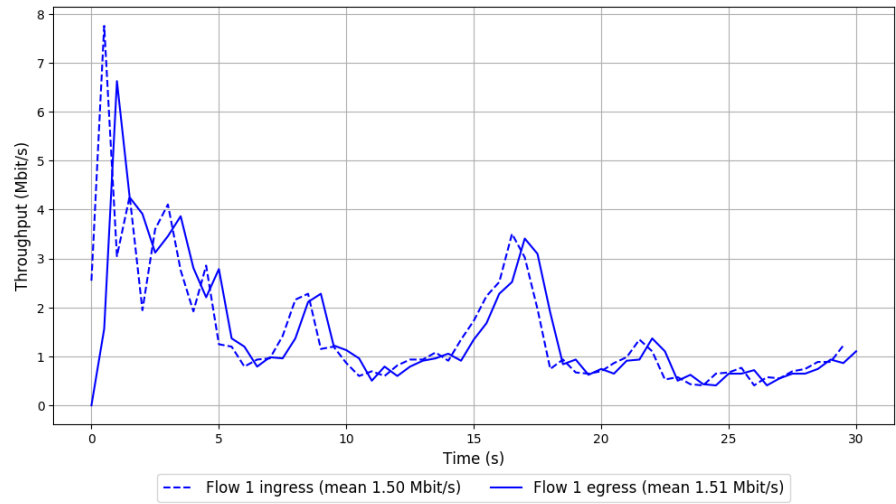
-- Flow 1:

Average throughput: 1.51 Mbit/s

95th percentile per-packet one-way delay: 207.661 ms

Loss rate: 0.21%

Run 3: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2019-07-11 21:26:09

End at: 2019-07-11 21:26:39

Local clock offset: 0.35 ms

Remote clock offset: 3.182 ms

Below is generated by plot.py at 2019-07-11 22:39:14

Datalink statistics

-- Total of 1 flow:

Average throughput: 4.80 Mbit/s

95th percentile per-packet one-way delay: 485.046 ms

Loss rate: 2.80%

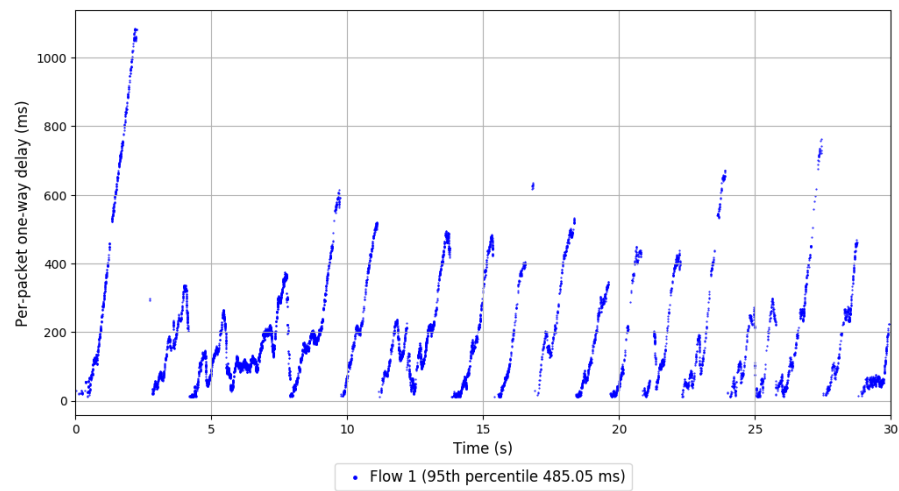
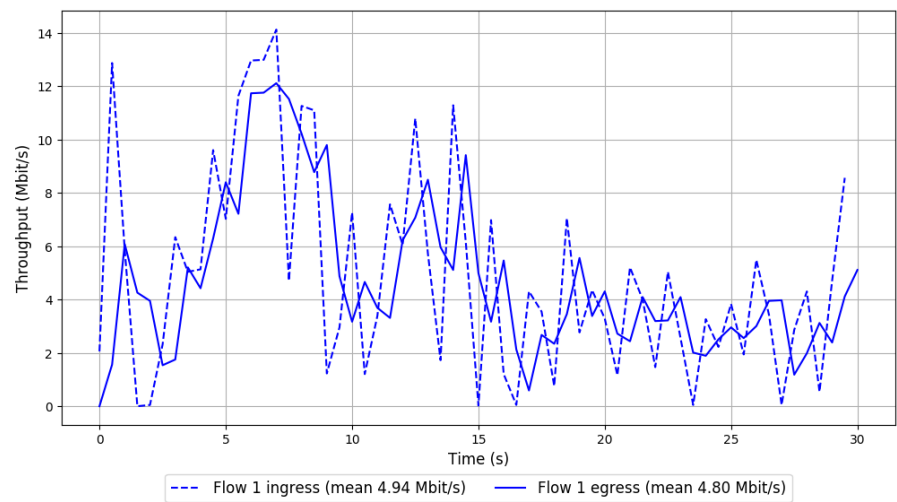
-- Flow 1:

Average throughput: 4.80 Mbit/s

95th percentile per-packet one-way delay: 485.046 ms

Loss rate: 2.80%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2019-07-11 21:55:42

End at: 2019-07-11 21:56:13

Local clock offset: 3.716 ms

Remote clock offset: 3.88 ms

Below is generated by plot.py at 2019-07-11 22:39:14

Datalink statistics

-- Total of 1 flow:

Average throughput: 6.31 Mbit/s

95th percentile per-packet one-way delay: 615.723 ms

Loss rate: 1.96%

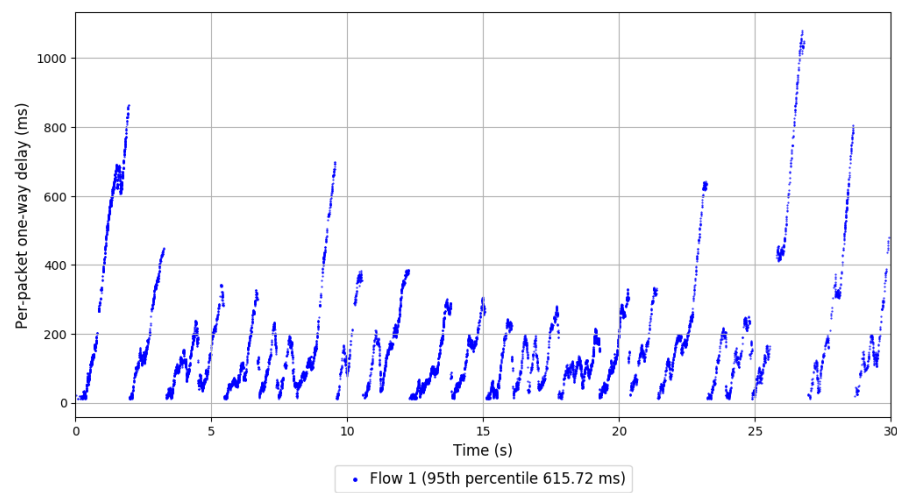
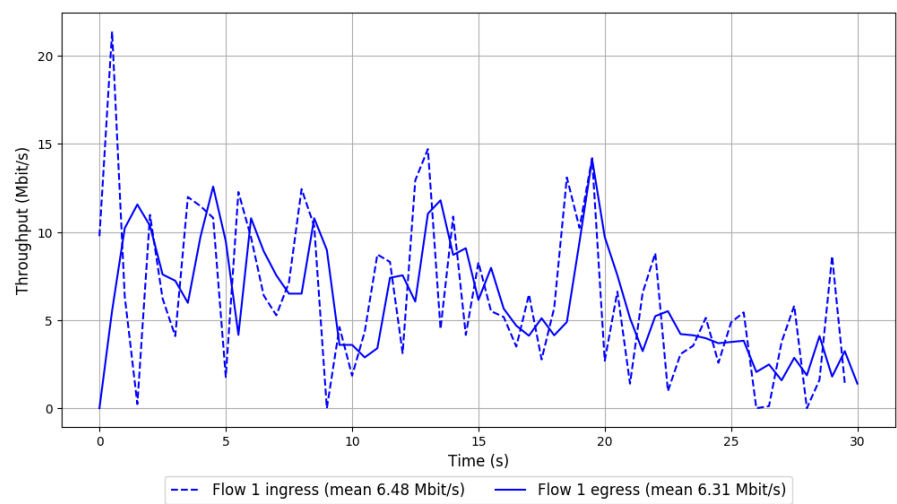
-- Flow 1:

Average throughput: 6.31 Mbit/s

95th percentile per-packet one-way delay: 615.723 ms

Loss rate: 1.96%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2019-07-11 22:25:15

End at: 2019-07-11 22:25:45

Local clock offset: 0.012 ms

Remote clock offset: 3.633 ms

Below is generated by plot.py at 2019-07-11 22:39:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 5.39 Mbit/s

95th percentile per-packet one-way delay: 727.210 ms

Loss rate: 1.67%

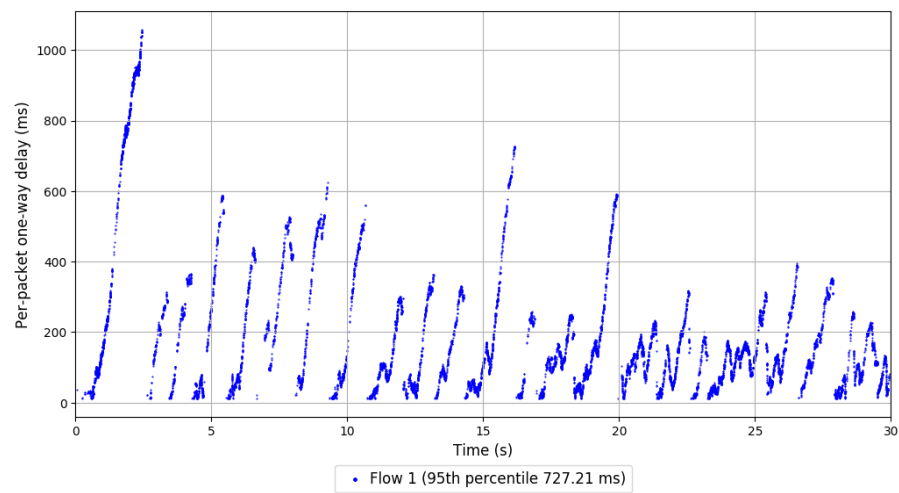
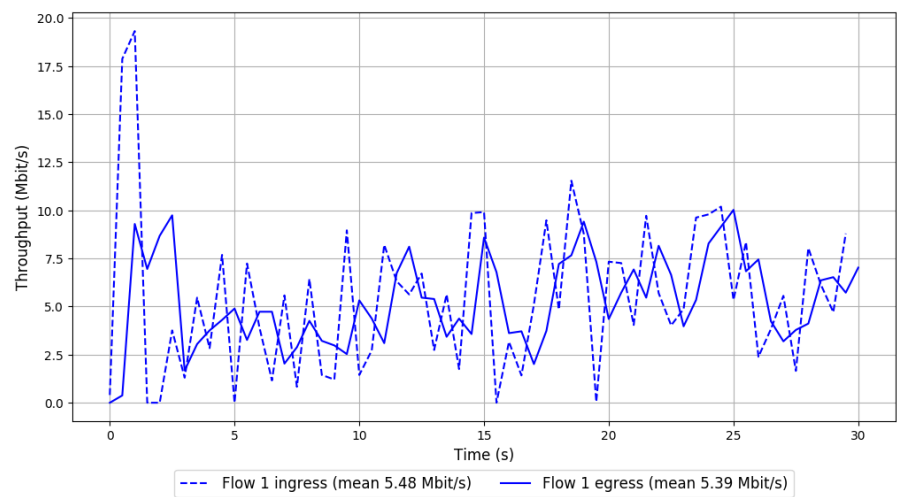
-- Flow 1:

Average throughput: 5.39 Mbit/s

95th percentile per-packet one-way delay: 727.210 ms

Loss rate: 1.67%

Run 3: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2019-07-11 21:32:19

End at: 2019-07-11 21:32:49

Local clock offset: 1.248 ms

Remote clock offset: 3.802 ms

Below is generated by plot.py at 2019-07-11 22:39:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.63 Mbit/s

95th percentile per-packet one-way delay: 44.238 ms

Loss rate: 0.07%

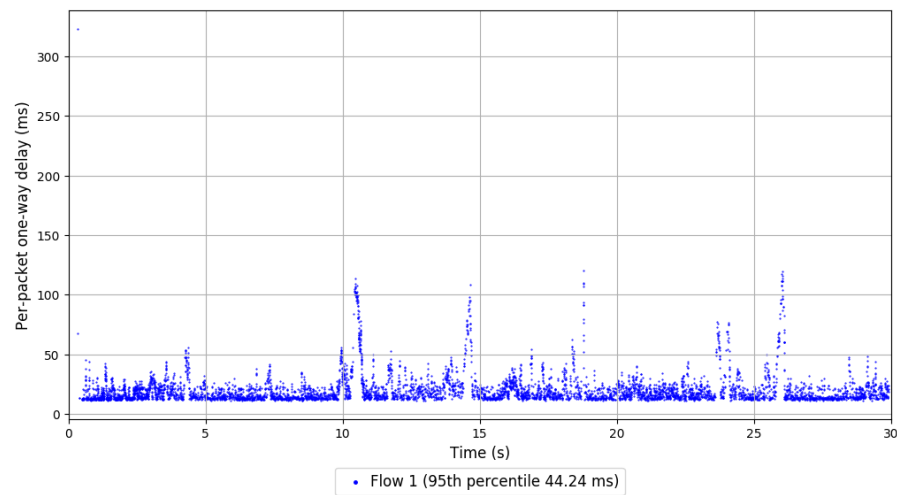
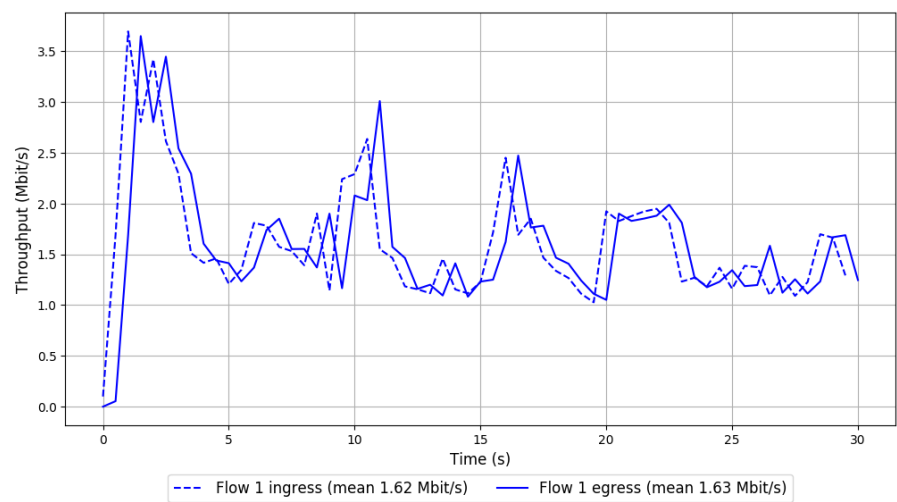
-- Flow 1:

Average throughput: 1.63 Mbit/s

95th percentile per-packet one-way delay: 44.238 ms

Loss rate: 0.07%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2019-07-11 22:01:52

End at: 2019-07-11 22:02:22

Local clock offset: 2.867 ms

Remote clock offset: 3.677 ms

Below is generated by plot.py at 2019-07-11 22:39:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.00 Mbit/s

95th percentile per-packet one-way delay: 1052.686 ms

Loss rate: 21.98%

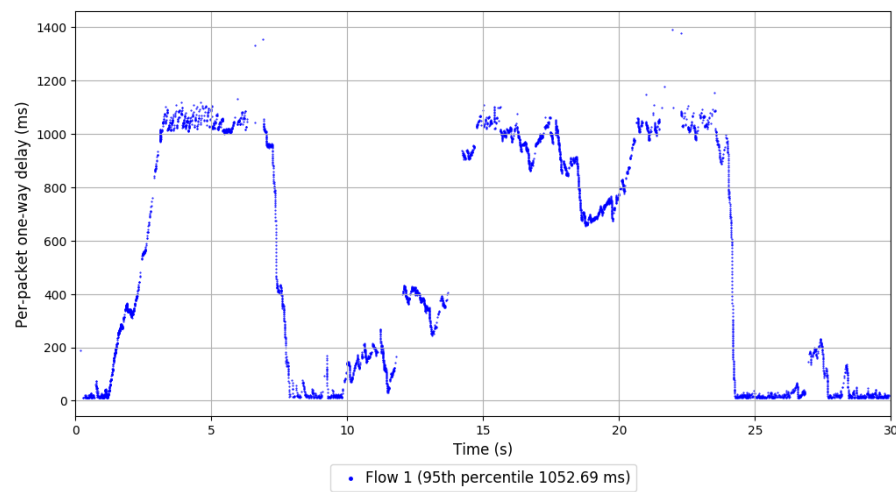
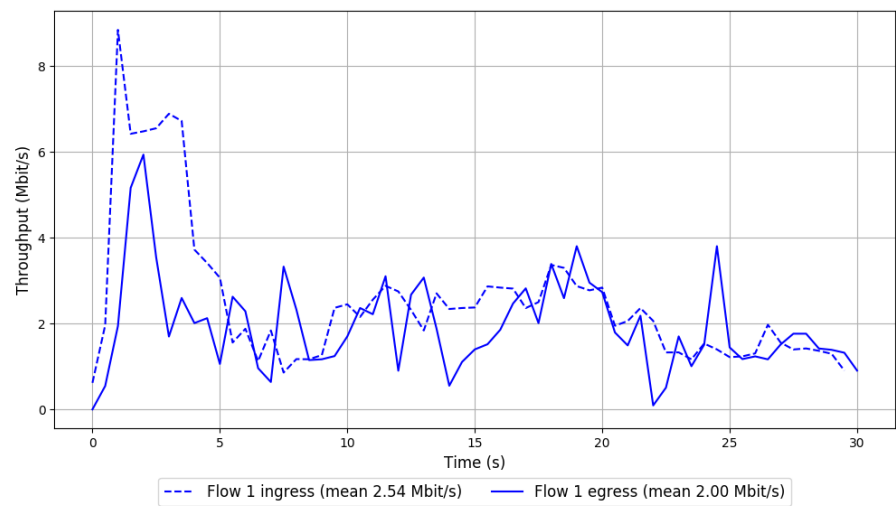
-- Flow 1:

Average throughput: 2.00 Mbit/s

95th percentile per-packet one-way delay: 1052.686 ms

Loss rate: 21.98%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2019-07-11 22:31:25

End at: 2019-07-11 22:31:55

Local clock offset: 0.027 ms

Remote clock offset: 3.464 ms

Below is generated by plot.py at 2019-07-11 22:39:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.03 Mbit/s

95th percentile per-packet one-way delay: 215.162 ms

Loss rate: 0.12%

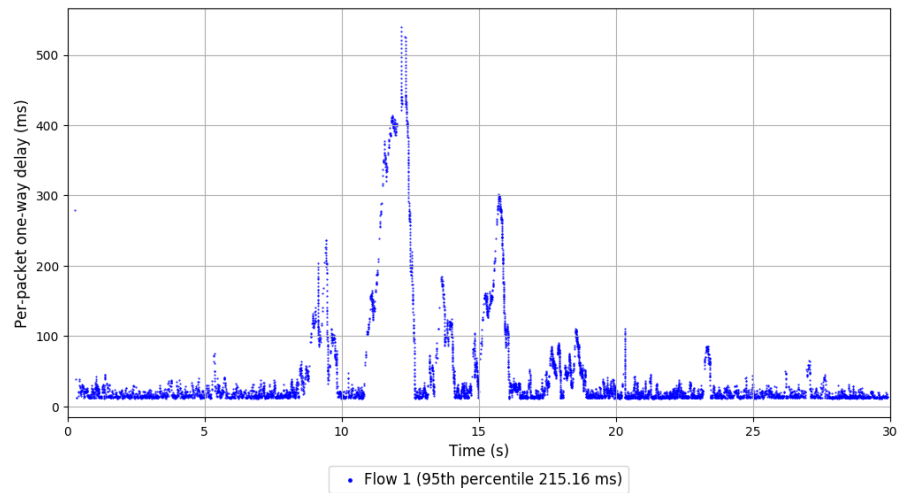
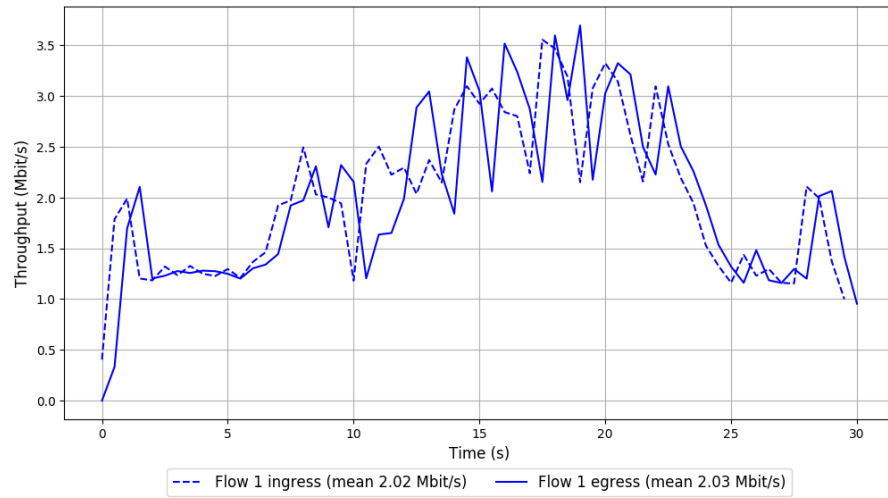
-- Flow 1:

Average throughput: 2.03 Mbit/s

95th percentile per-packet one-way delay: 215.162 ms

Loss rate: 0.12%

Run 3: Report of PCC-Vivace — Data Link

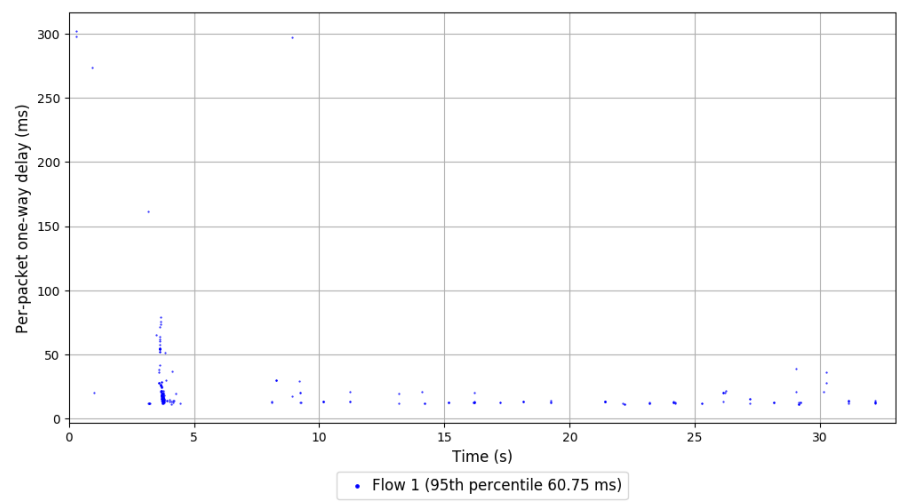
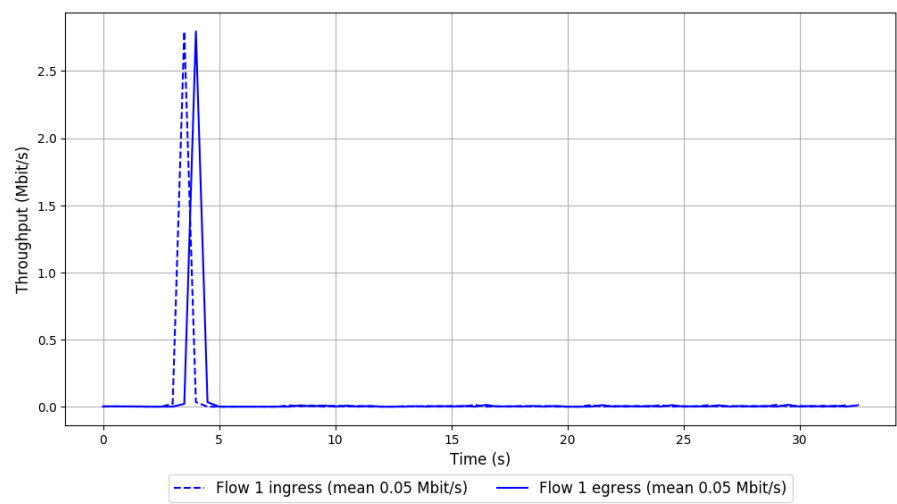


```
Run 1: Statistics of WebRTC media

Start at: 2019-07-11 21:36:01
End at: 2019-07-11 21:36:31
Local clock offset: 1.932 ms
Remote clock offset: 4.072 ms

# Below is generated by plot.py at 2019-07-11 22:39:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 60.750 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 60.750 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2019-07-11 22:05:34

End at: 2019-07-11 22:06:04

Local clock offset: 1.873 ms

Remote clock offset: 3.642 ms

Below is generated by plot.py at 2019-07-11 22:39:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 47.846 ms

Loss rate: 0.00%

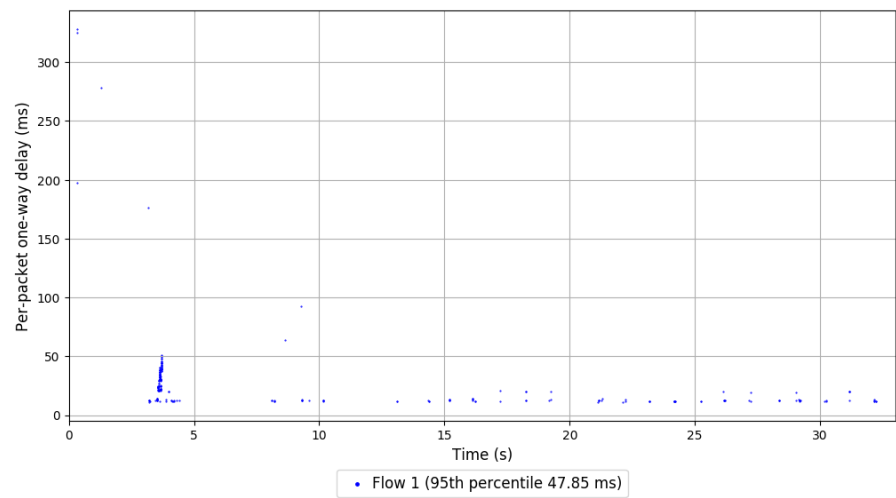
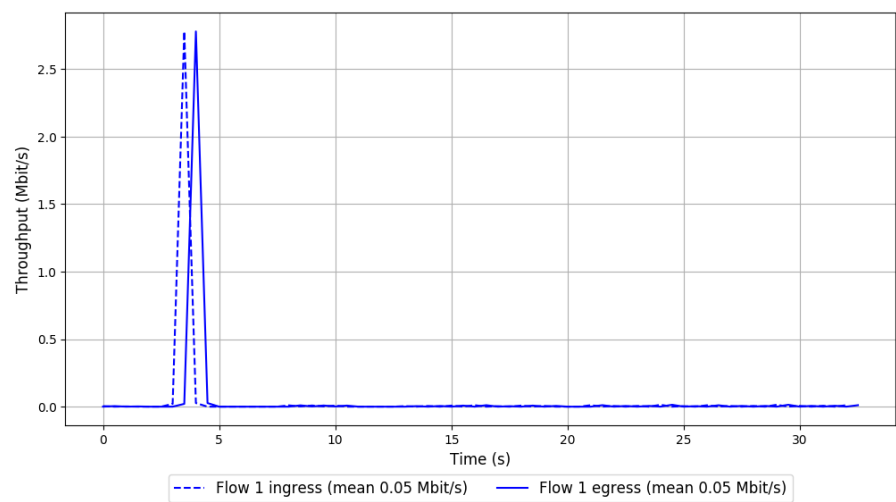
-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 47.846 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2019-07-11 22:35:06

End at: 2019-07-11 22:35:36

Local clock offset: 0.153 ms

Remote clock offset: 3.391 ms

Below is generated by plot.py at 2019-07-11 22:39:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 31.285 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 31.285 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

