

Pantheon Report

Generated at 2018-09-25 08:38:52 (UTC).

Data path: GCE Tokyo on **ens4** (*local*) → GCE London on **ens4** (*remote*).

Repeated the test of 19 congestion control schemes 5 times.

Each test lasted for 30 seconds running 1 flow.

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

System info:

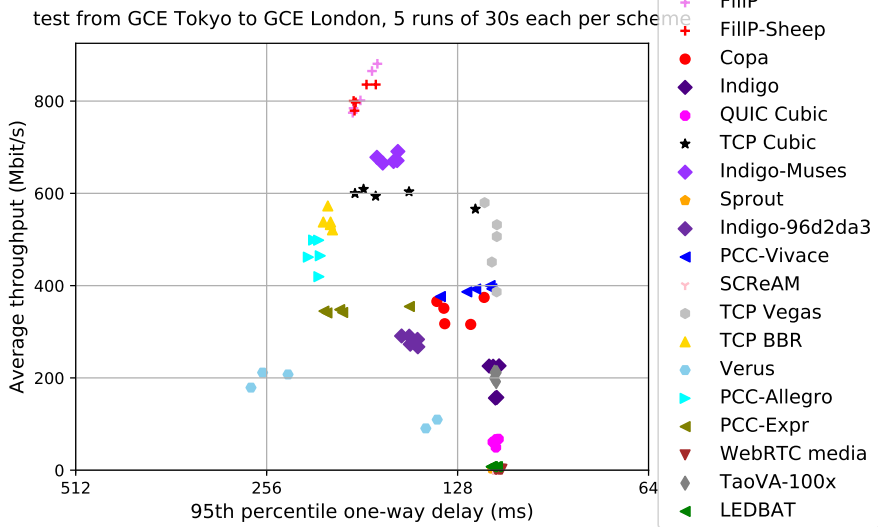
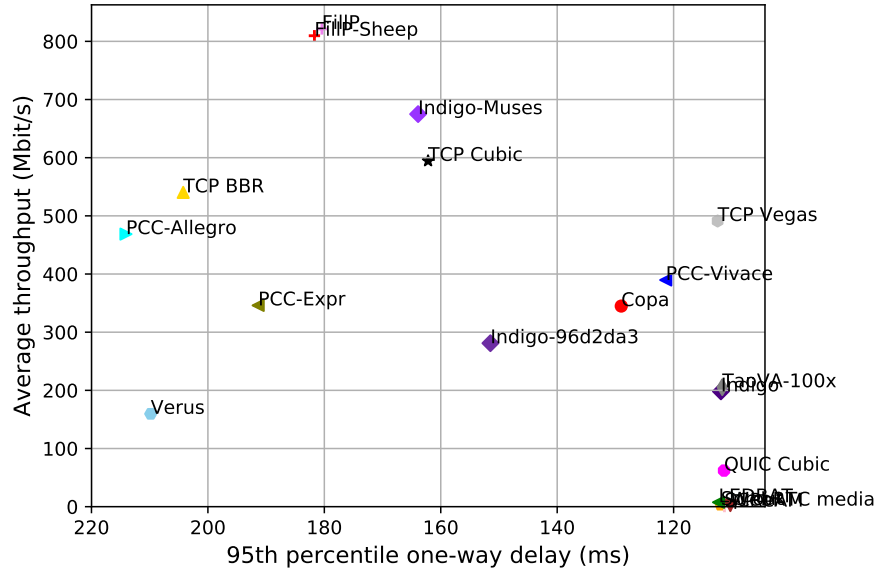
```
Linux 4.15.0-1019-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
net.ipv4.tcp_mem = 190986 254651 381972
```

Git summary:

```
branch: muses @ 90192f6b64ce1a1191dcca0e9ff9ee24950674d7
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf5e58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a
third_party/pantheon-tunnel @ cbfce6db5ff5740dafa1771f813cd646339e1952
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
```

```
M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

test from GCE Tokyo to GCE London, 5 runs of 30s each per scheme
(mean of all runs by scheme)



scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	540.36	204.24	1.08
Copa	5	344.89	129.00	0.01
TCP Cubic	5	594.49	162.18	0.21
FillP	5	821.33	180.41	4.20
FillP-Sheep	5	809.66	181.70	4.61
Indigo	5	198.23	111.88	0.00
Indigo-96d2da3	5	281.05	151.47	0.05
LEDBAT	5	7.55	112.28	0.00
Indigo-Muses	5	674.94	163.90	0.19
PCC-Allegro	5	468.62	214.07	2.09
PCC-Expr	5	346.04	191.37	1.98
QUIC Cubic	5	62.08	111.34	0.00
SCReAM	5	0.22	111.26	0.00
Sprout	5	2.96	111.89	0.00
TaoVA-100x	5	205.36	111.64	0.00
TCP Vegas	5	491.14	112.44	0.00
Verus	5	159.64	209.83	7.77
PCC-Vivace	5	389.74	121.35	0.11
WebRTC media	5	1.88	110.26	0.00

Run 1: Statistics of TCP BBR

Start at: 2018-09-25 04:52:19

End at: 2018-09-25 04:52:49

Local clock offset: 9.67 ms

Remote clock offset: 9.671 ms

Below is generated by plot.py at 2018-09-25 07:22:05

Datalink statistics

-- Total of 1 flow:

Average throughput: 532.36 Mbit/s

95th percentile per-packet one-way delay: 203.162 ms

Loss rate: 0.93%

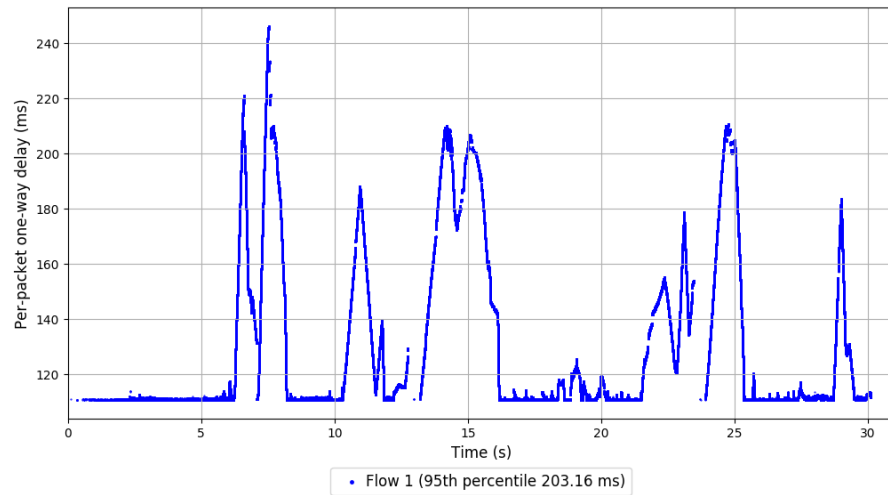
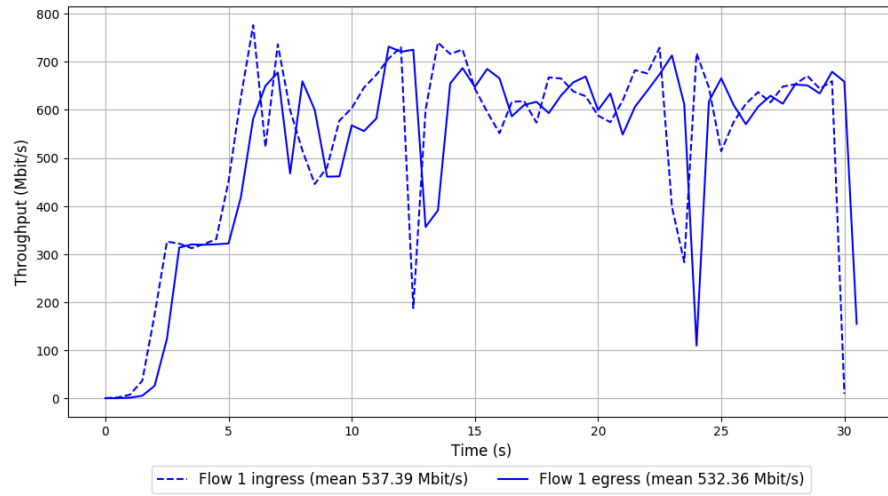
-- Flow 1:

Average throughput: 532.36 Mbit/s

95th percentile per-packet one-way delay: 203.162 ms

Loss rate: 0.93%

Run 1: Report of TCP BBR — Data Link

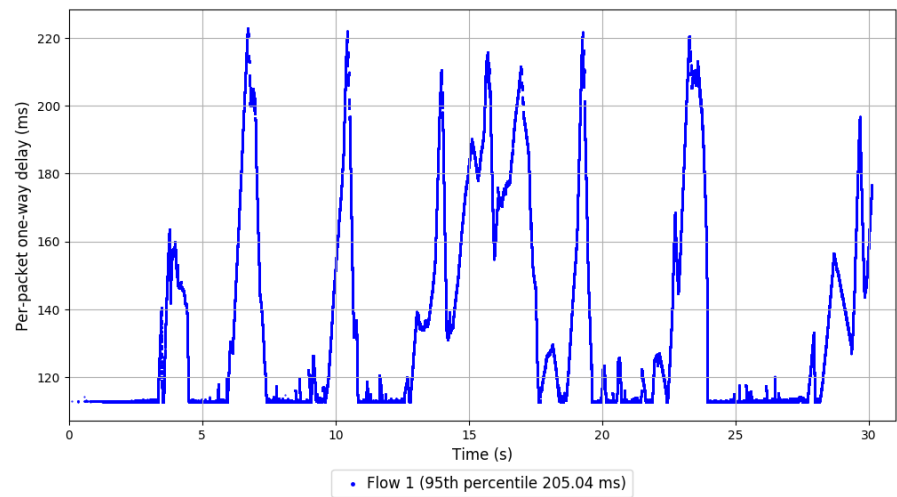
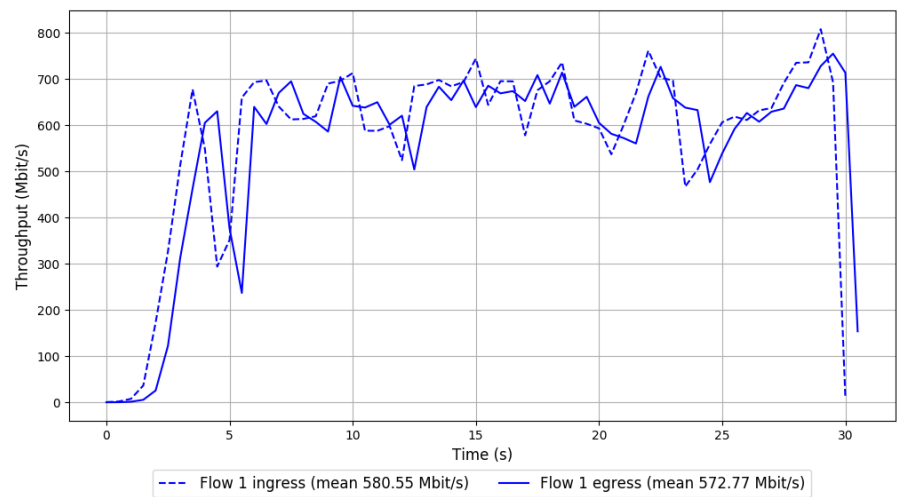


Run 2: Statistics of TCP BBR

Start at: 2018-09-25 05:21:05
End at: 2018-09-25 05:21:35
Local clock offset: 15.97 ms
Remote clock offset: 16.452 ms

Below is generated by plot.py at 2018-09-25 07:22:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 572.77 Mbit/s
95th percentile per-packet one-way delay: 205.036 ms
Loss rate: 1.35%
-- Flow 1:
Average throughput: 572.77 Mbit/s
95th percentile per-packet one-way delay: 205.036 ms
Loss rate: 1.35%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-09-25 05:49:19

End at: 2018-09-25 05:49:49

Local clock offset: 28.42 ms

Remote clock offset: 26.44 ms

Below is generated by plot.py at 2018-09-25 07:22:34

Datalink statistics

-- Total of 1 flow:

Average throughput: 537.87 Mbit/s

95th percentile per-packet one-way delay: 202.985 ms

Loss rate: 0.82%

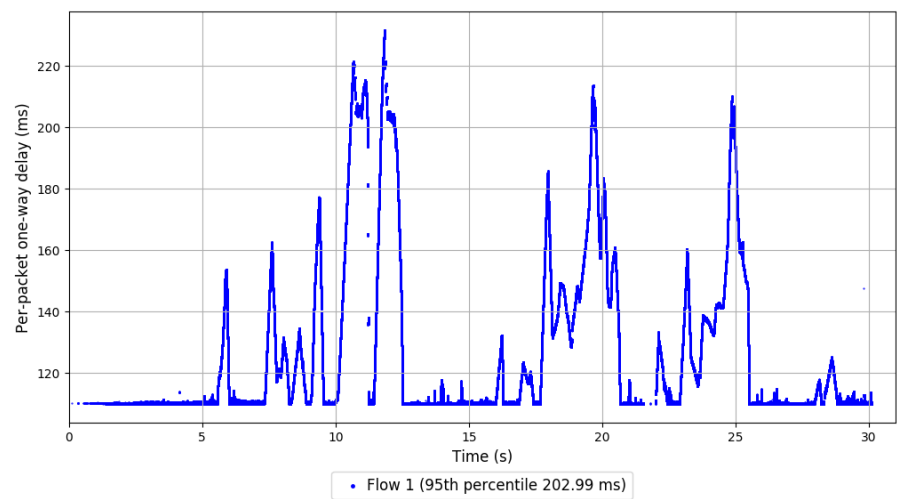
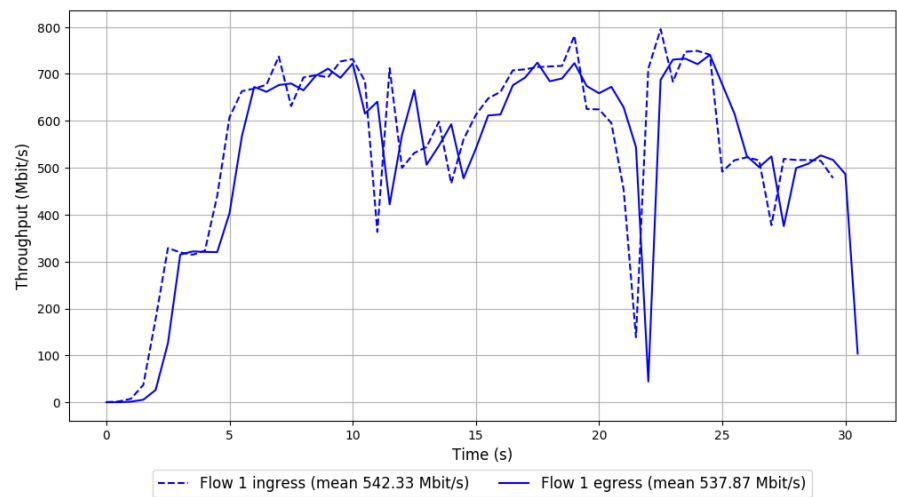
-- Flow 1:

Average throughput: 537.87 Mbit/s

95th percentile per-packet one-way delay: 202.985 ms

Loss rate: 0.82%

Run 3: Report of TCP BBR — Data Link

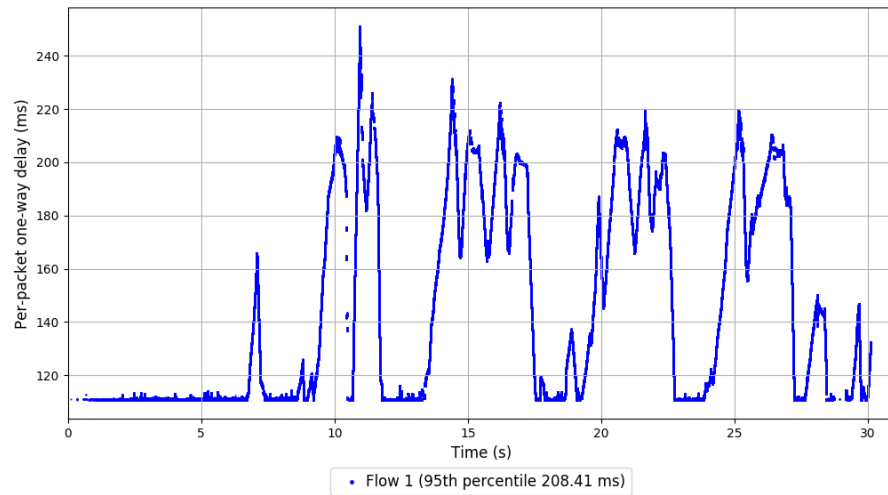
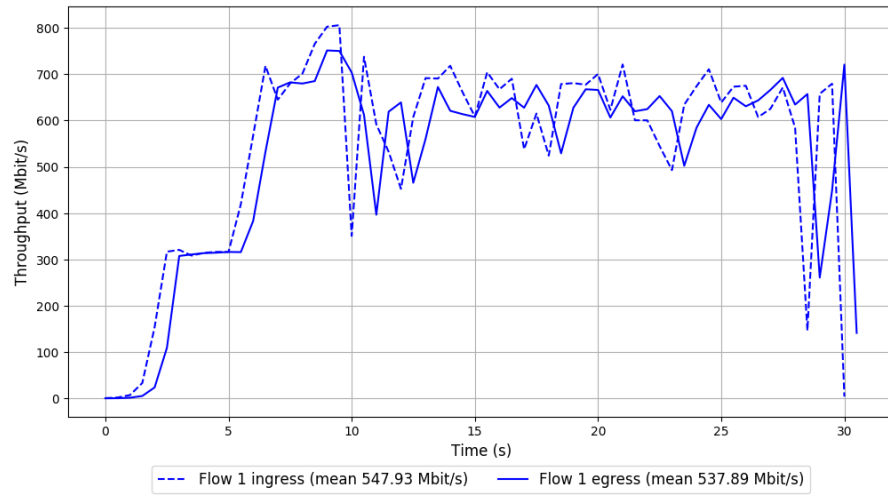


Run 4: Statistics of TCP BBR

Start at: 2018-09-25 06:17:33
End at: 2018-09-25 06:18:03
Local clock offset: 16.321 ms
Remote clock offset: 15.364 ms

Below is generated by plot.py at 2018-09-25 07:22:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 537.89 Mbit/s
95th percentile per-packet one-way delay: 208.407 ms
Loss rate: 1.83%
-- Flow 1:
Average throughput: 537.89 Mbit/s
95th percentile per-packet one-way delay: 208.407 ms
Loss rate: 1.83%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-09-25 06:46:14

End at: 2018-09-25 06:46:44

Local clock offset: 6.973 ms

Remote clock offset: 6.639 ms

Below is generated by plot.py at 2018-09-25 07:22:34

Datalink statistics

-- Total of 1 flow:

Average throughput: 520.92 Mbit/s

95th percentile per-packet one-way delay: 201.610 ms

Loss rate: 0.47%

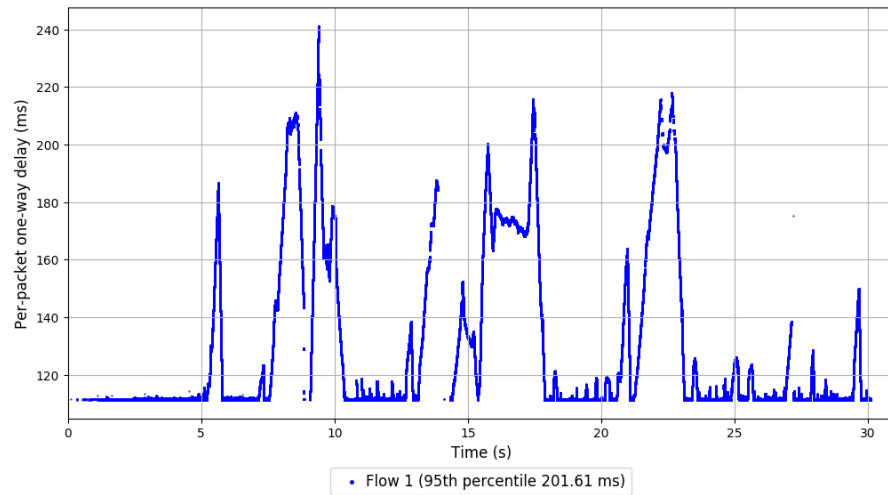
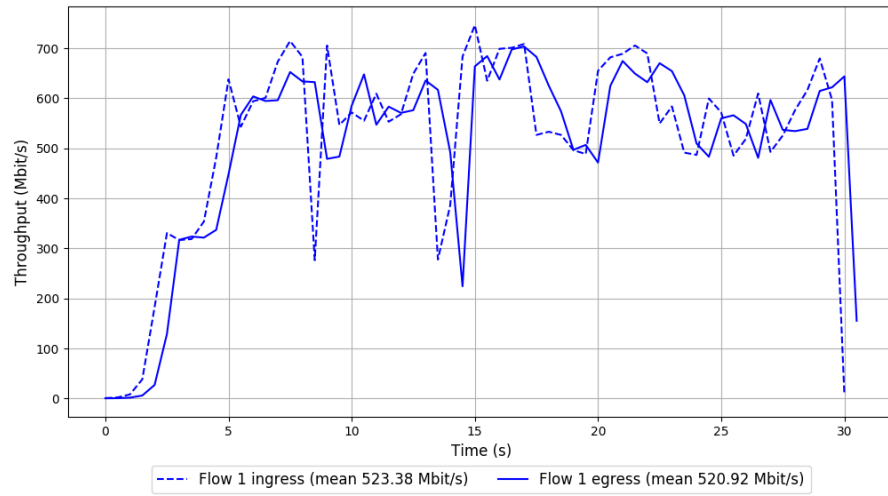
-- Flow 1:

Average throughput: 520.92 Mbit/s

95th percentile per-packet one-way delay: 201.610 ms

Loss rate: 0.47%

Run 5: Report of TCP BBR — Data Link

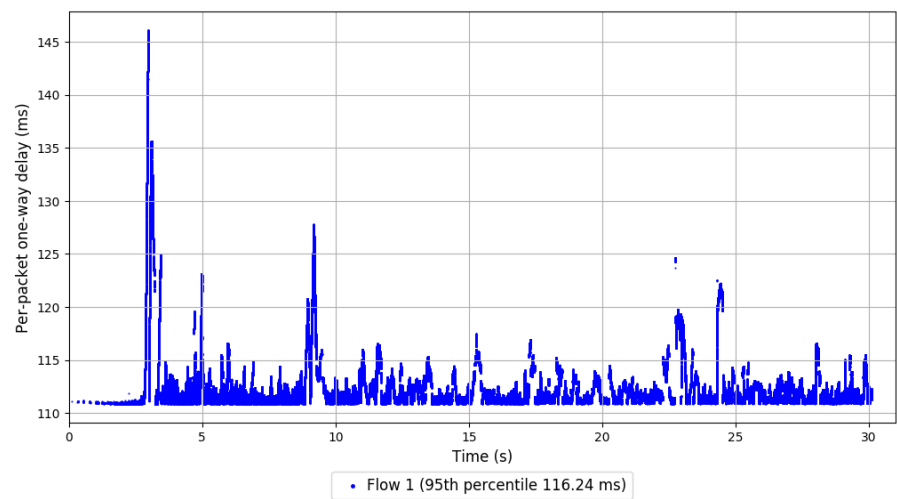
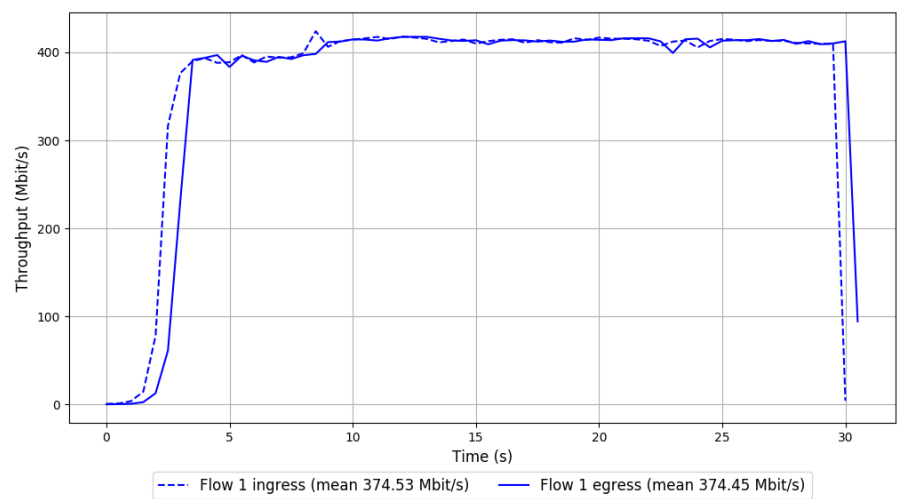


Run 1: Statistics of Copa

Start at: 2018-09-25 04:54:01
End at: 2018-09-25 04:54:31
Local clock offset: 12.344 ms
Remote clock offset: 12.672 ms

Below is generated by plot.py at 2018-09-25 07:24:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 374.45 Mbit/s
95th percentile per-packet one-way delay: 116.243 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 374.45 Mbit/s
95th percentile per-packet one-way delay: 116.243 ms
Loss rate: 0.02%

Run 1: Report of Copa — Data Link

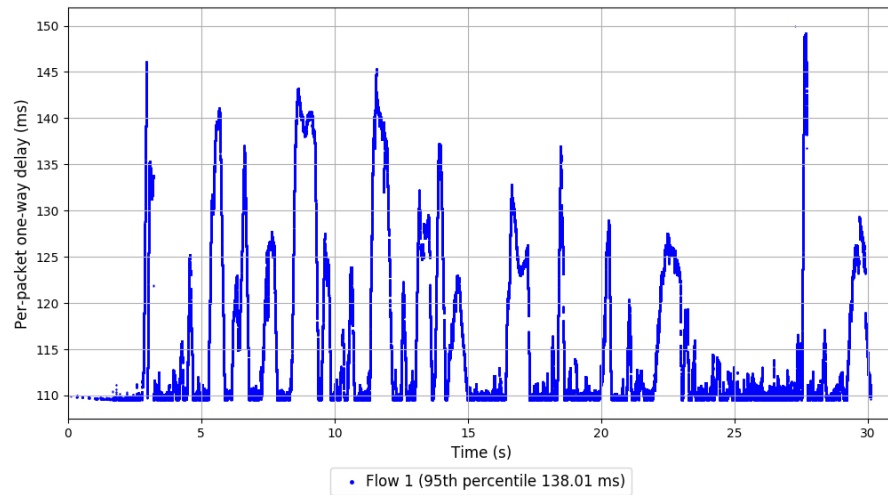
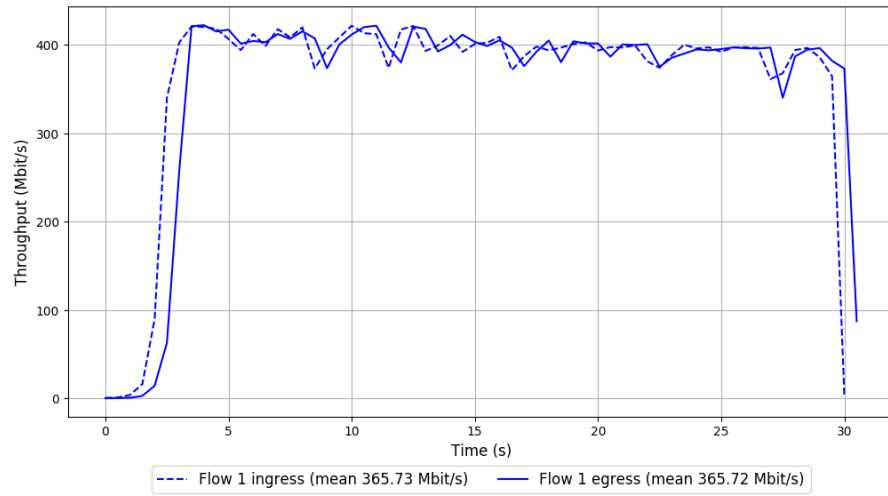


Run 2: Statistics of Copa

Start at: 2018-09-25 05:22:48
End at: 2018-09-25 05:23:18
Local clock offset: 17.568 ms
Remote clock offset: 16.204 ms

Below is generated by plot.py at 2018-09-25 07:24:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 365.72 Mbit/s
95th percentile per-packet one-way delay: 138.014 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 365.72 Mbit/s
95th percentile per-packet one-way delay: 138.014 ms
Loss rate: 0.00%

Run 2: Report of Copa — Data Link

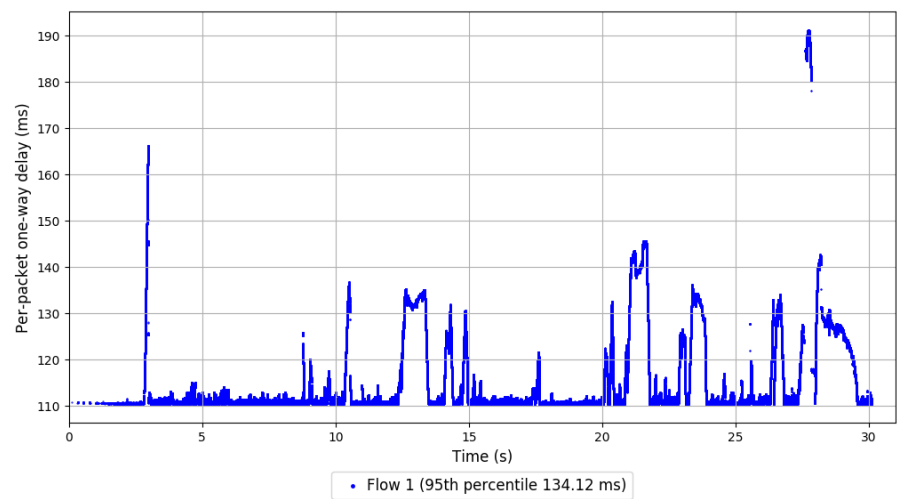
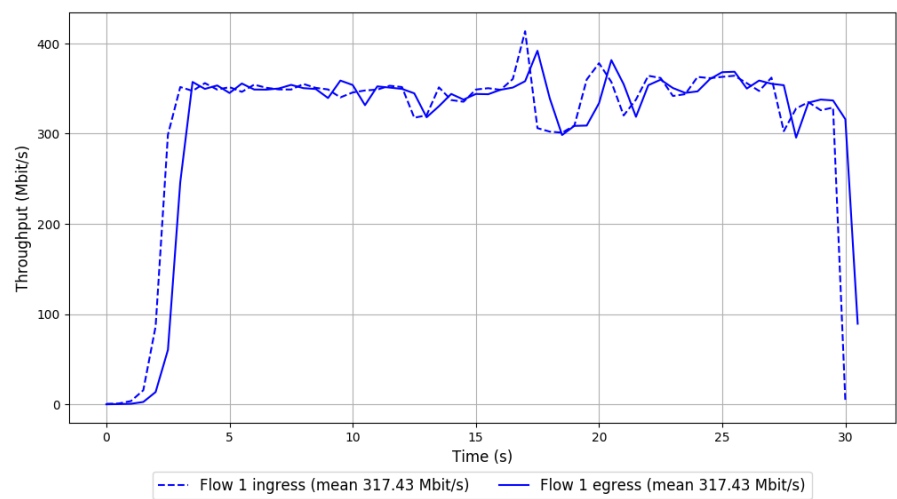


Run 3: Statistics of Copa

Start at: 2018-09-25 05:50:59
End at: 2018-09-25 05:51:29
Local clock offset: 23.558 ms
Remote clock offset: 22.554 ms

Below is generated by plot.py at 2018-09-25 07:24:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 317.43 Mbit/s
95th percentile per-packet one-way delay: 134.118 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 317.43 Mbit/s
95th percentile per-packet one-way delay: 134.118 ms
Loss rate: 0.00%

Run 3: Report of Copa — Data Link

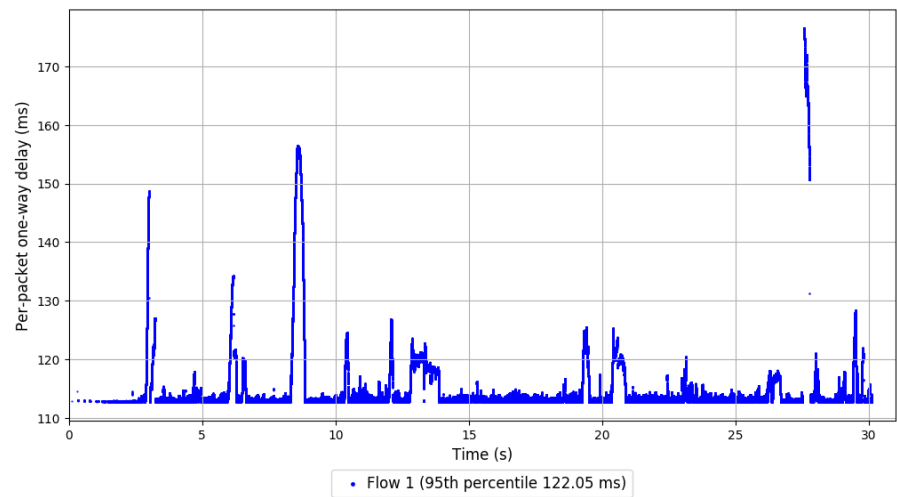
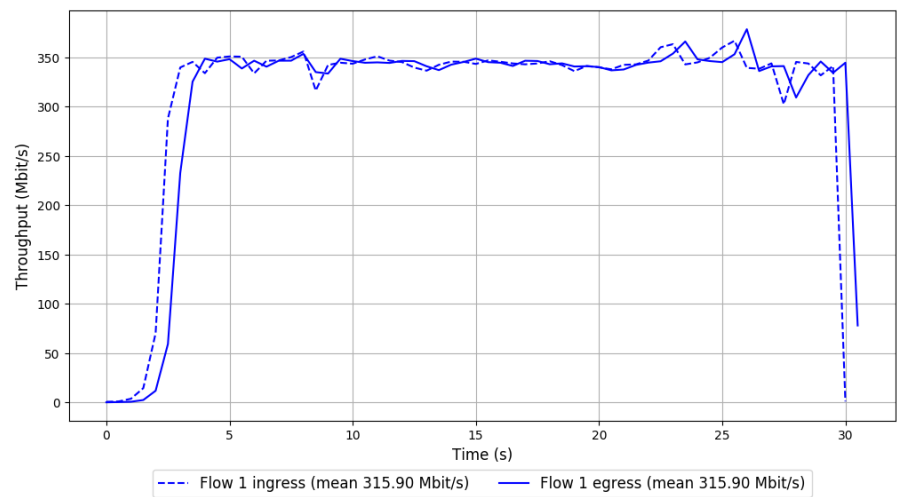


Run 4: Statistics of Copa

Start at: 2018-09-25 06:19:13
End at: 2018-09-25 06:19:43
Local clock offset: 16.248 ms
Remote clock offset: 15.985 ms

Below is generated by plot.py at 2018-09-25 07:31:20
Datalink statistics
-- Total of 1 flow:
Average throughput: 315.90 Mbit/s
95th percentile per-packet one-way delay: 122.050 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 315.90 Mbit/s
95th percentile per-packet one-way delay: 122.050 ms
Loss rate: 0.00%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-09-25 06:47:55

End at: 2018-09-25 06:48:25

Local clock offset: 7.351 ms

Remote clock offset: 6.409 ms

Below is generated by plot.py at 2018-09-25 07:32:07

Datalink statistics

-- Total of 1 flow:

Average throughput: 350.95 Mbit/s

95th percentile per-packet one-way delay: 134.555 ms

Loss rate: 0.02%

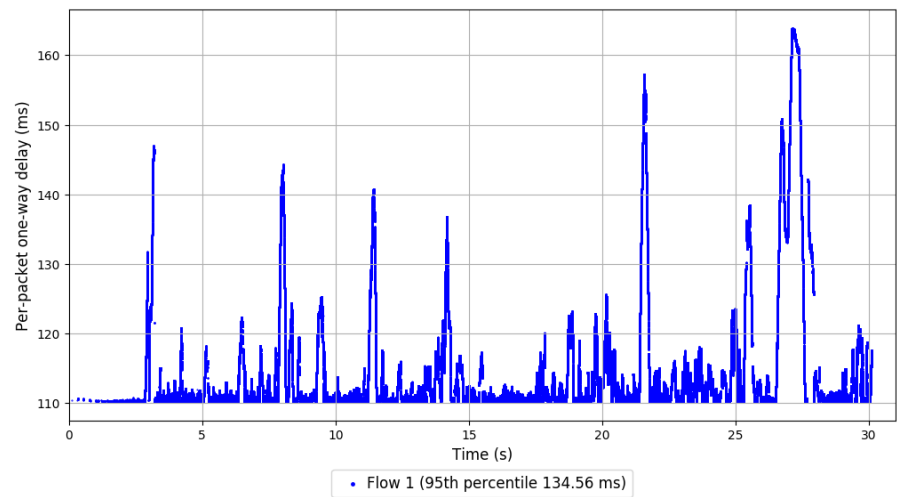
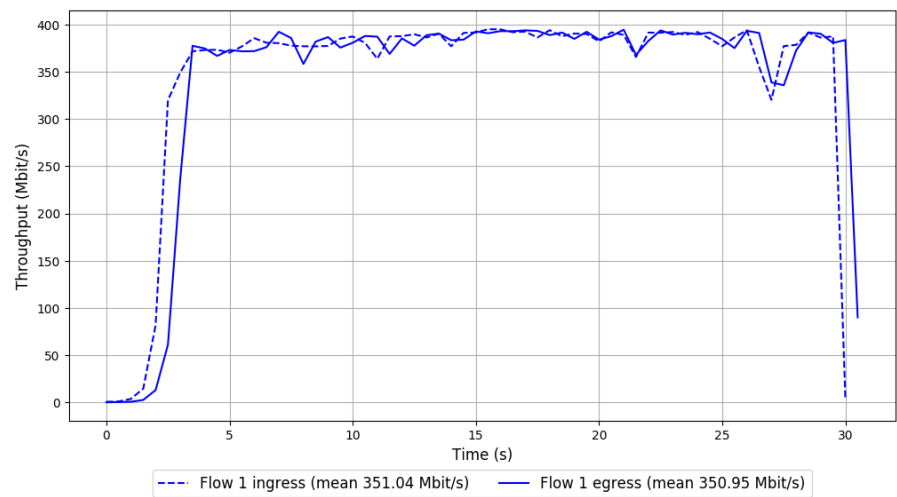
-- Flow 1:

Average throughput: 350.95 Mbit/s

95th percentile per-packet one-way delay: 134.555 ms

Loss rate: 0.02%

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-09-25 04:43:41

End at: 2018-09-25 04:44:11

Local clock offset: 5.769 ms

Remote clock offset: 5.417 ms

Below is generated by plot.py at 2018-09-25 07:32:07

Datalink statistics

-- Total of 1 flow:

Average throughput: 593.99 Mbit/s

95th percentile per-packet one-way delay: 172.354 ms

Loss rate: 0.23%

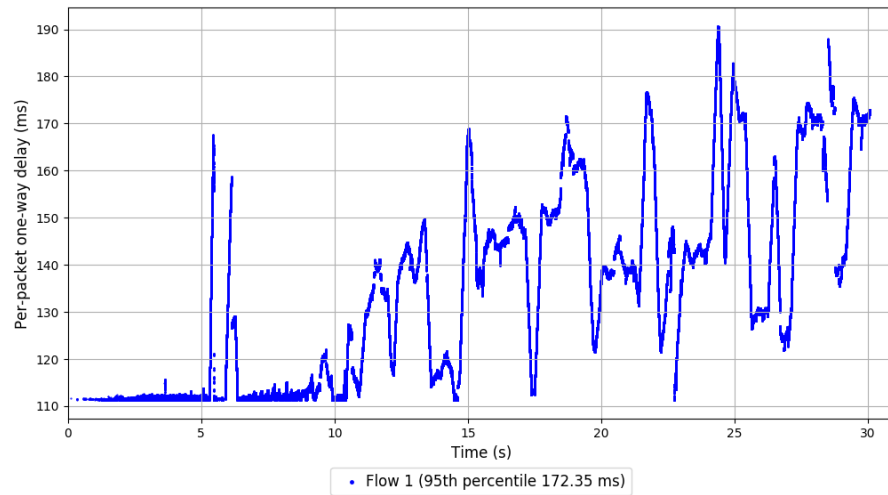
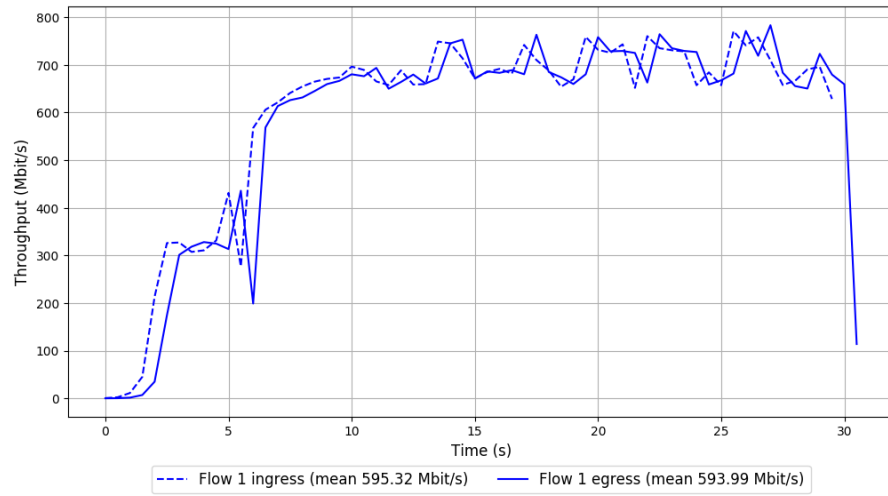
-- Flow 1:

Average throughput: 593.99 Mbit/s

95th percentile per-packet one-way delay: 172.354 ms

Loss rate: 0.23%

Run 1: Report of TCP Cubic — Data Link

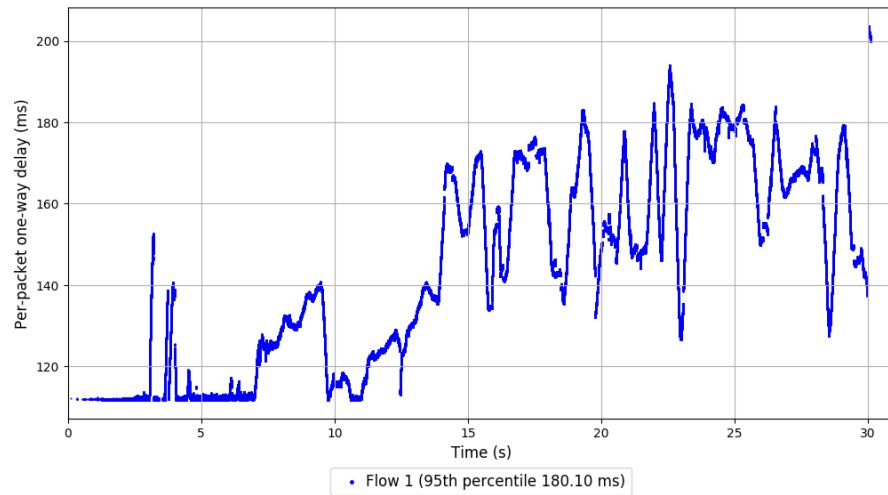
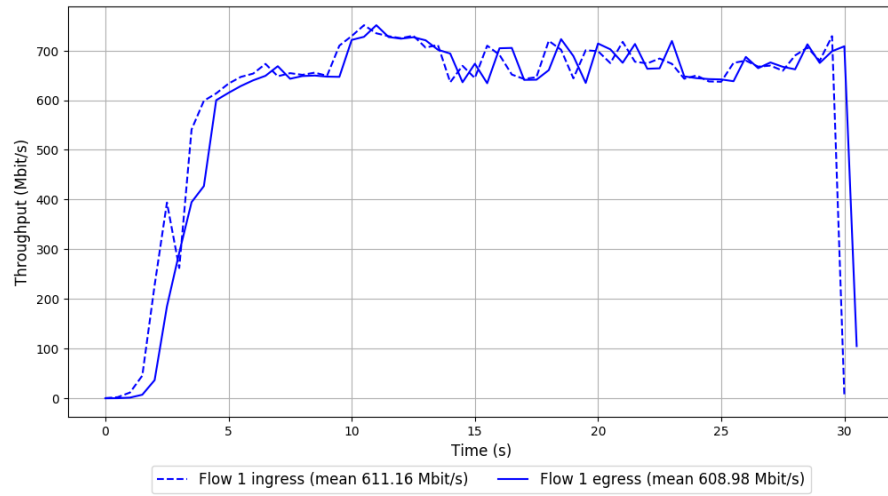


Run 2: Statistics of TCP Cubic

Start at: 2018-09-25 05:12:12
End at: 2018-09-25 05:12:42
Local clock offset: 22.163 ms
Remote clock offset: 21.376 ms

Below is generated by plot.py at 2018-09-25 07:32:07
Datalink statistics
-- Total of 1 flow:
Average throughput: 608.98 Mbit/s
95th percentile per-packet one-way delay: 180.099 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 608.98 Mbit/s
95th percentile per-packet one-way delay: 180.099 ms
Loss rate: 0.36%

Run 2: Report of TCP Cubic — Data Link

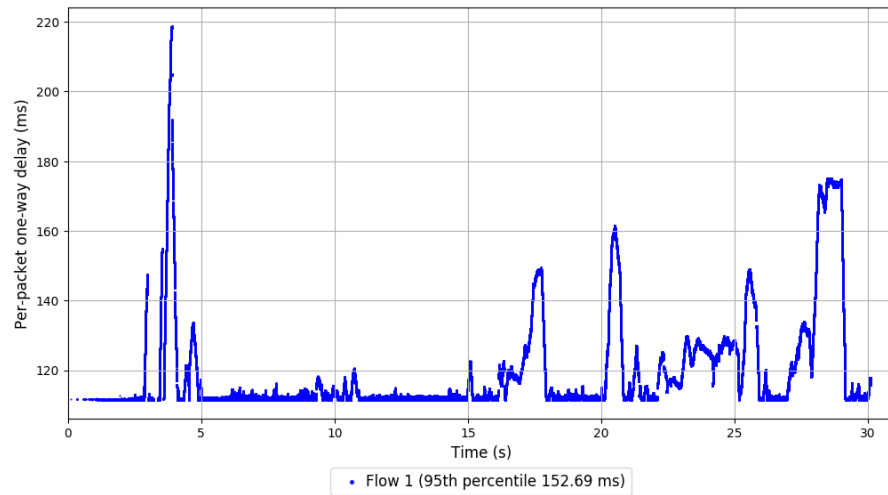
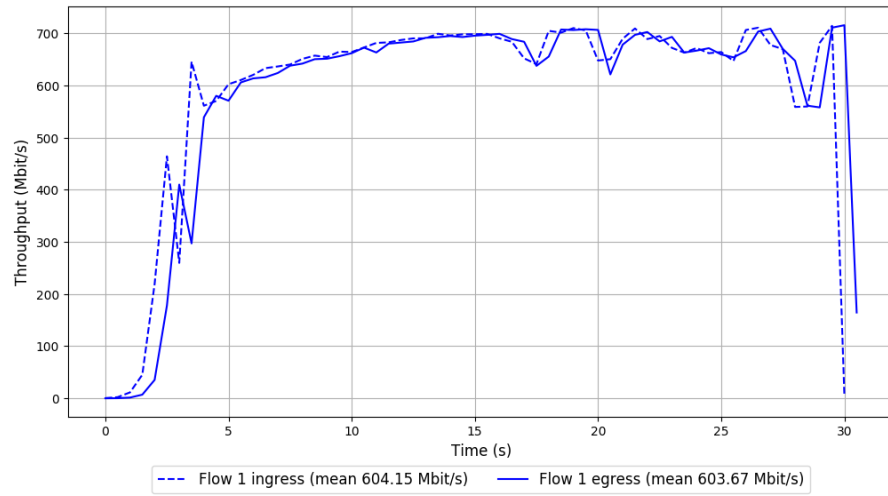


Run 3: Statistics of TCP Cubic

Start at: 2018-09-25 05:40:43
End at: 2018-09-25 05:41:13
Local clock offset: 28.823 ms
Remote clock offset: 27.269 ms

Below is generated by plot.py at 2018-09-25 07:32:07
Datalink statistics
-- Total of 1 flow:
Average throughput: 603.67 Mbit/s
95th percentile per-packet one-way delay: 152.691 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 603.67 Mbit/s
95th percentile per-packet one-way delay: 152.691 ms
Loss rate: 0.08%

Run 3: Report of TCP Cubic — Data Link

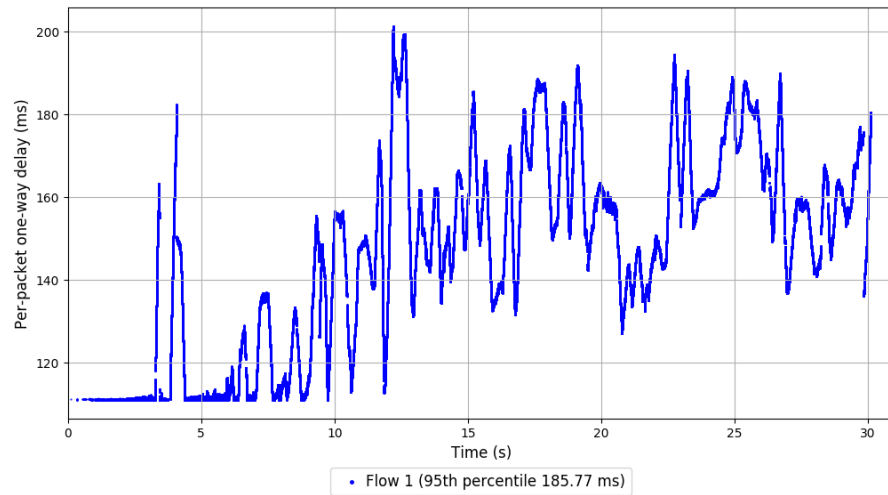
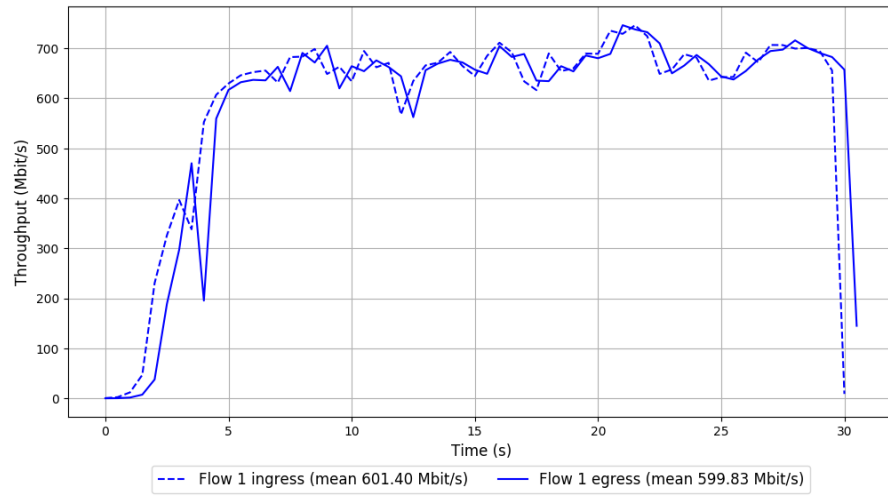


Run 4: Statistics of TCP Cubic

Start at: 2018-09-25 06:08:49
End at: 2018-09-25 06:09:19
Local clock offset: 12.432 ms
Remote clock offset: 12.527 ms

Below is generated by plot.py at 2018-09-25 07:32:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 599.83 Mbit/s
95th percentile per-packet one-way delay: 185.770 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 599.83 Mbit/s
95th percentile per-packet one-way delay: 185.770 ms
Loss rate: 0.26%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-09-25 06:37:27

End at: 2018-09-25 06:37:57

Local clock offset: 7.243 ms

Remote clock offset: 6.227 ms

Below is generated by plot.py at 2018-09-25 07:33:05

Datalink statistics

-- Total of 1 flow:

Average throughput: 565.99 Mbit/s

95th percentile per-packet one-way delay: 119.980 ms

Loss rate: 0.11%

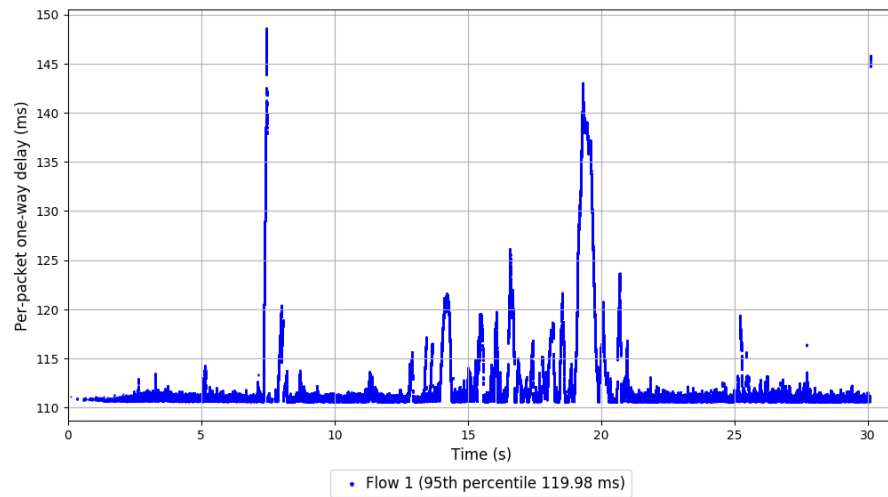
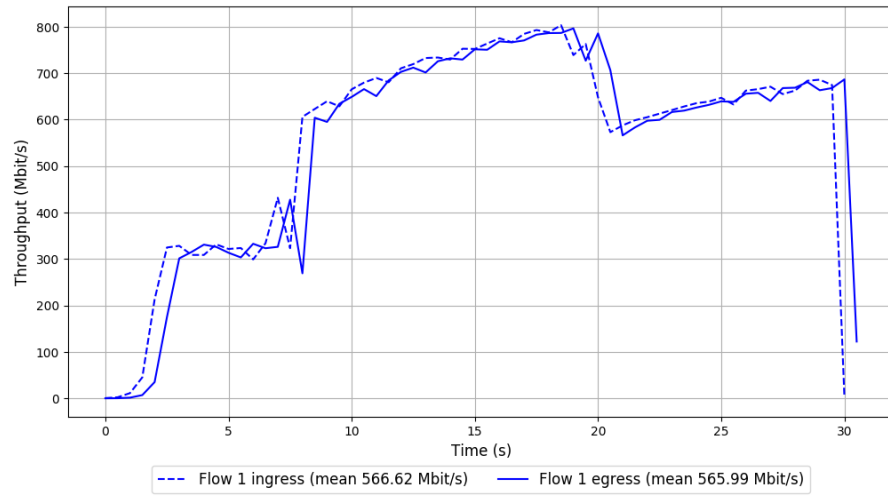
-- Flow 1:

Average throughput: 565.99 Mbit/s

95th percentile per-packet one-way delay: 119.980 ms

Loss rate: 0.11%

Run 5: Report of TCP Cubic — Data Link

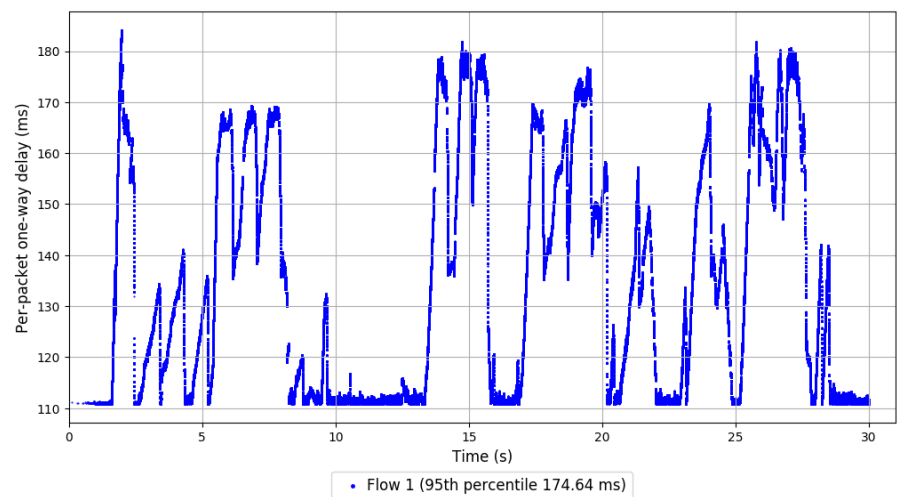
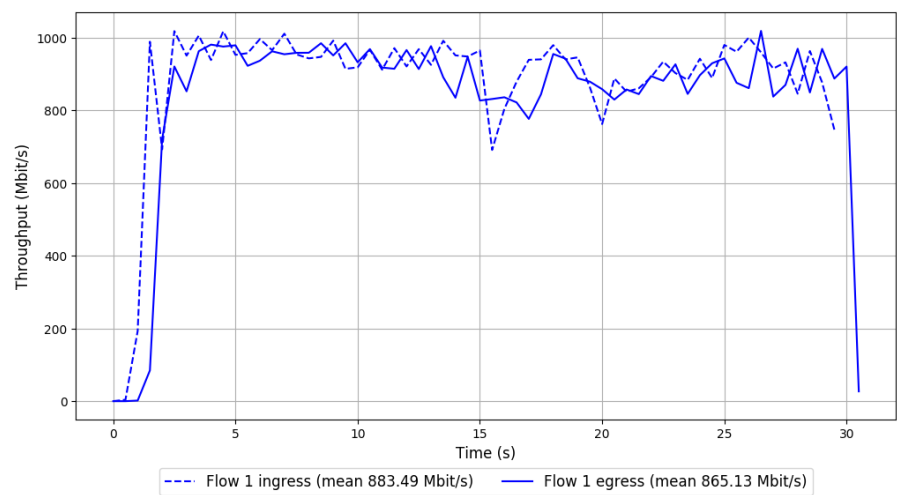


Run 1: Statistics of FillP

Start at: 2018-09-25 04:56:55
End at: 2018-09-25 04:57:25
Local clock offset: 14.14 ms
Remote clock offset: 12.991 ms

Below is generated by plot.py at 2018-09-25 07:39:19
Datalink statistics
-- Total of 1 flow:
Average throughput: 865.13 Mbit/s
95th percentile per-packet one-way delay: 174.639 ms
Loss rate: 2.08%
-- Flow 1:
Average throughput: 865.13 Mbit/s
95th percentile per-packet one-way delay: 174.639 ms
Loss rate: 2.08%

Run 1: Report of FillP — Data Link

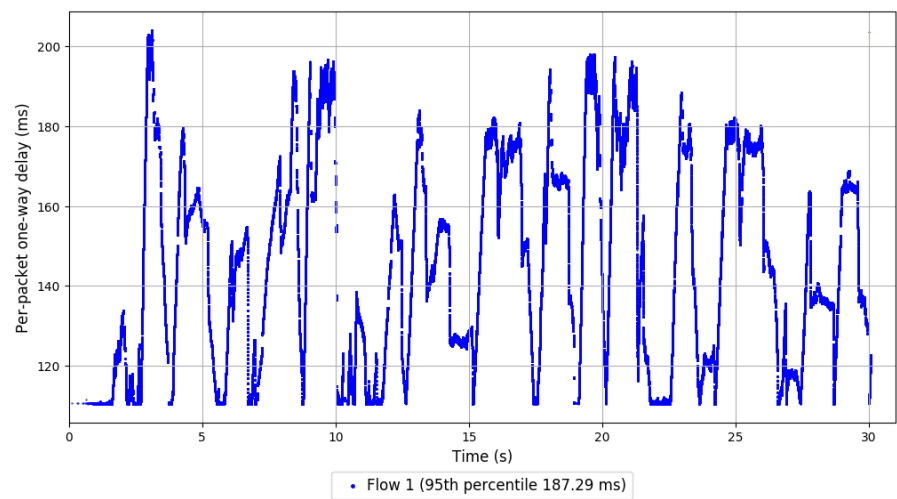
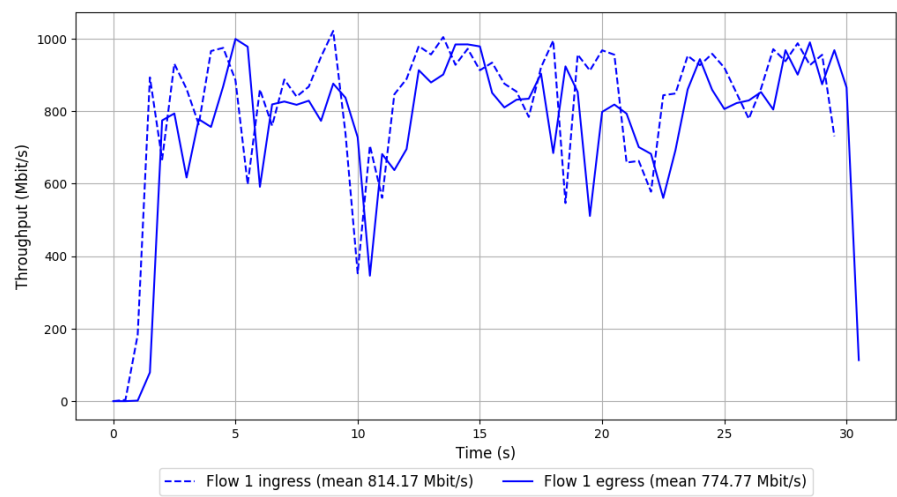


Run 2: Statistics of FillP

Start at: 2018-09-25 05:25:41
End at: 2018-09-25 05:26:11
Local clock offset: 18.633 ms
Remote clock offset: 17.286 ms

Below is generated by plot.py at 2018-09-25 07:47:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 774.77 Mbit/s
95th percentile per-packet one-way delay: 187.292 ms
Loss rate: 4.84%
-- Flow 1:
Average throughput: 774.77 Mbit/s
95th percentile per-packet one-way delay: 187.292 ms
Loss rate: 4.84%

Run 2: Report of FillP — Data Link

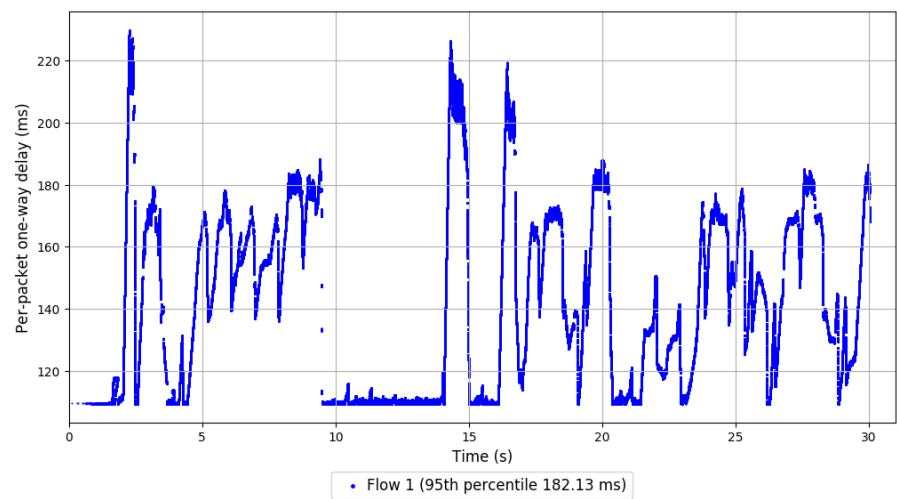
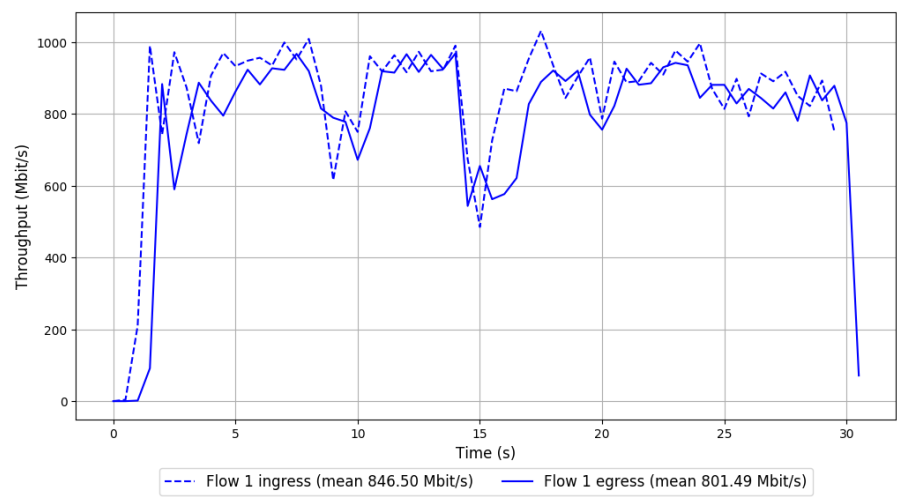


Run 3: Statistics of FillP

Start at: 2018-09-25 05:53:47
End at: 2018-09-25 05:54:17
Local clock offset: 19.0 ms
Remote clock offset: 18.123 ms

Below is generated by plot.py at 2018-09-25 07:47:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 801.49 Mbit/s
95th percentile per-packet one-way delay: 182.130 ms
Loss rate: 5.31%
-- Flow 1:
Average throughput: 801.49 Mbit/s
95th percentile per-packet one-way delay: 182.130 ms
Loss rate: 5.31%

Run 3: Report of FillP — Data Link

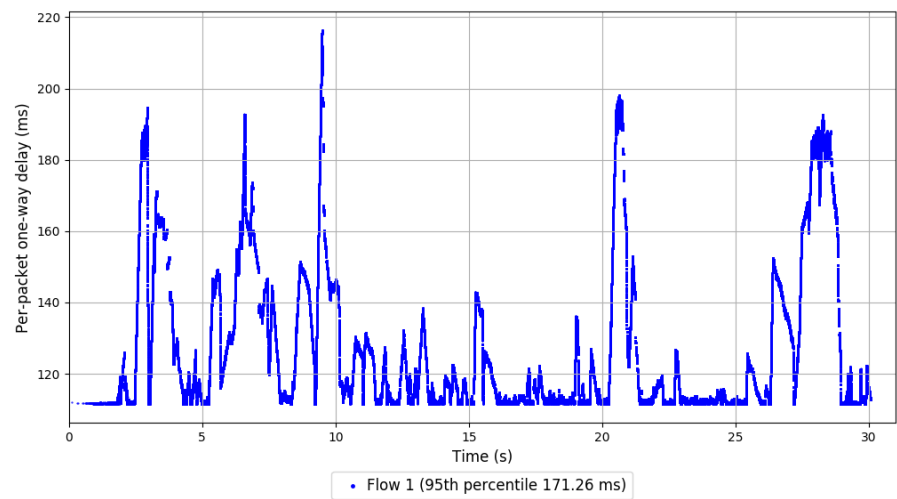
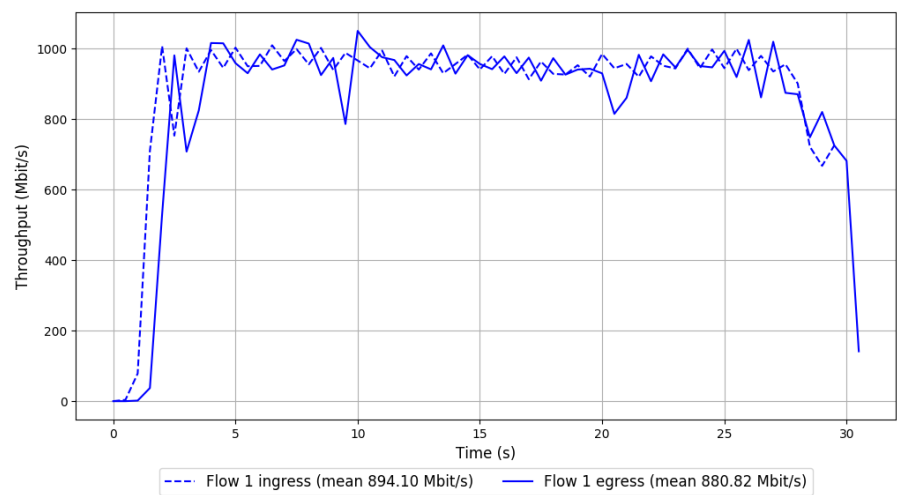


Run 4: Statistics of FillP

Start at: 2018-09-25 06:22:02
End at: 2018-09-25 06:22:32
Local clock offset: 15.575 ms
Remote clock offset: 15.374 ms

Below is generated by plot.py at 2018-09-25 07:48:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 880.82 Mbit/s
95th percentile per-packet one-way delay: 171.265 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 880.82 Mbit/s
95th percentile per-packet one-way delay: 171.265 ms
Loss rate: 1.48%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-09-25 06:50:47

End at: 2018-09-25 06:51:17

Local clock offset: 8.273 ms

Remote clock offset: 6.955 ms

Below is generated by plot.py at 2018-09-25 07:48:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 784.46 Mbit/s

95th percentile per-packet one-way delay: 186.743 ms

Loss rate: 7.28%

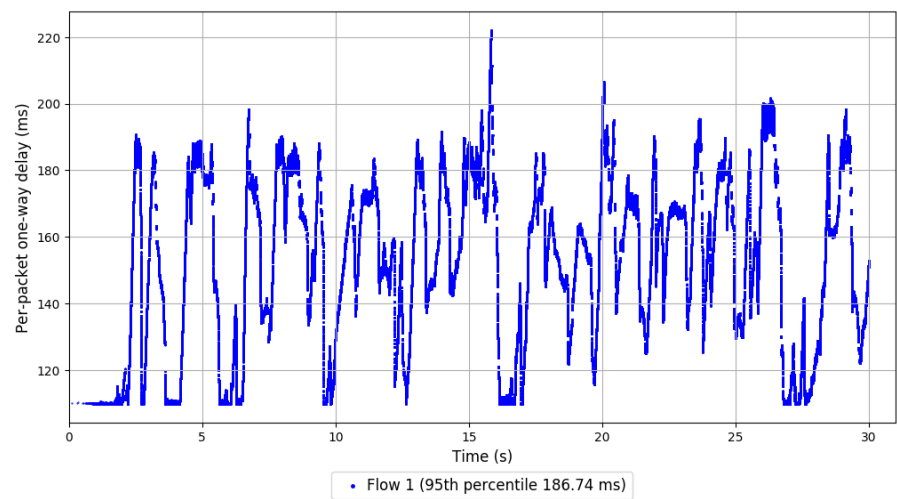
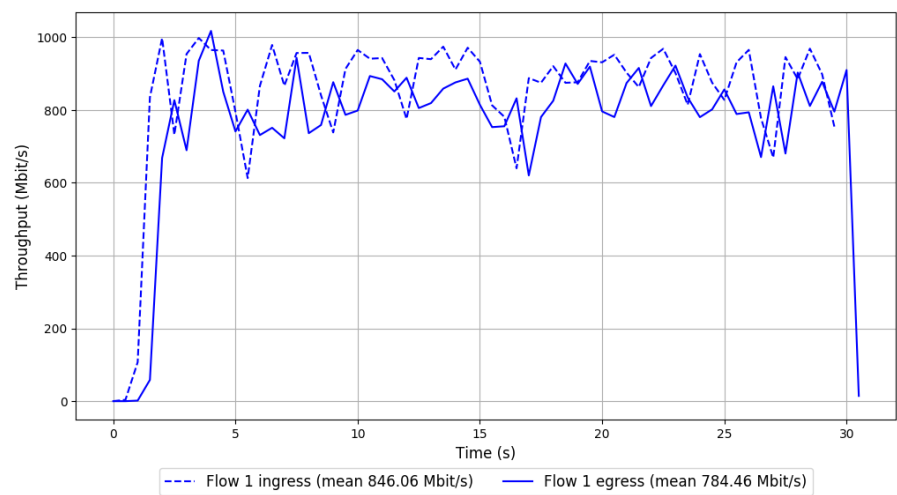
-- Flow 1:

Average throughput: 784.46 Mbit/s

95th percentile per-packet one-way delay: 186.743 ms

Loss rate: 7.28%

Run 5: Report of FillP — Data Link

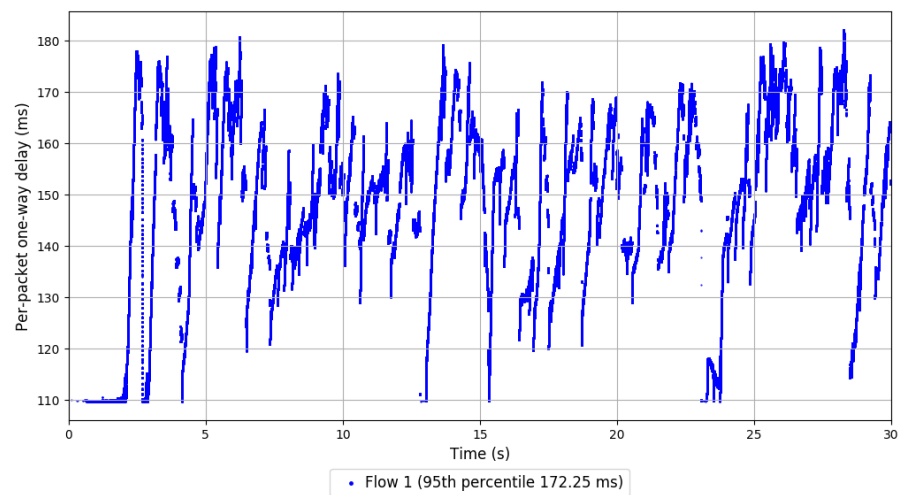
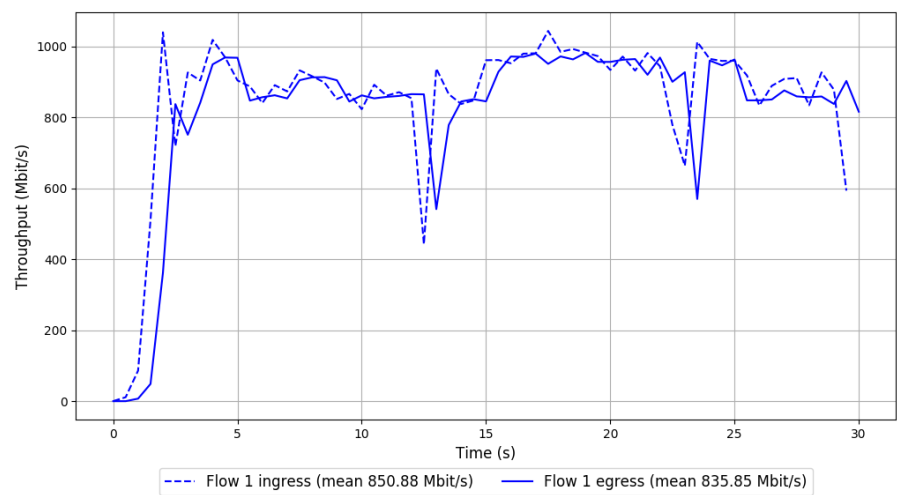


Run 1: Statistics of FillP-Sheep

Start at: 2018-09-25 05:03:15
End at: 2018-09-25 05:03:45
Local clock offset: 13.404 ms
Remote clock offset: 12.257 ms

Below is generated by plot.py at 2018-09-25 07:48:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 835.85 Mbit/s
95th percentile per-packet one-way delay: 172.247 ms
Loss rate: 1.88%
-- Flow 1:
Average throughput: 835.85 Mbit/s
95th percentile per-packet one-way delay: 172.247 ms
Loss rate: 1.88%

Run 1: Report of FillP-Sheep — Data Link

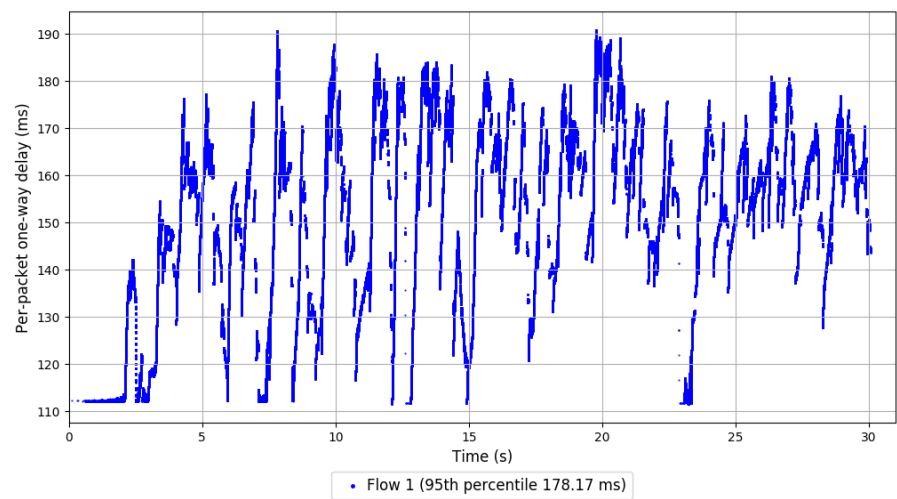
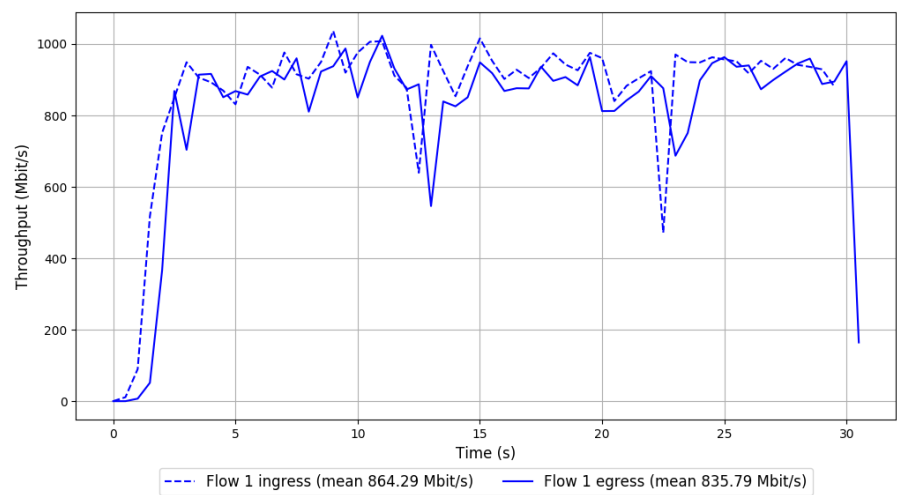


Run 2: Statistics of FillP-Sheep

Start at: 2018-09-25 05:31:57
End at: 2018-09-25 05:32:27
Local clock offset: 20.93 ms
Remote clock offset: 21.064 ms

Below is generated by plot.py at 2018-09-25 07:48:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 835.79 Mbit/s
95th percentile per-packet one-way delay: 178.173 ms
Loss rate: 3.29%
-- Flow 1:
Average throughput: 835.79 Mbit/s
95th percentile per-packet one-way delay: 178.173 ms
Loss rate: 3.29%

Run 2: Report of FillP-Sheep — Data Link

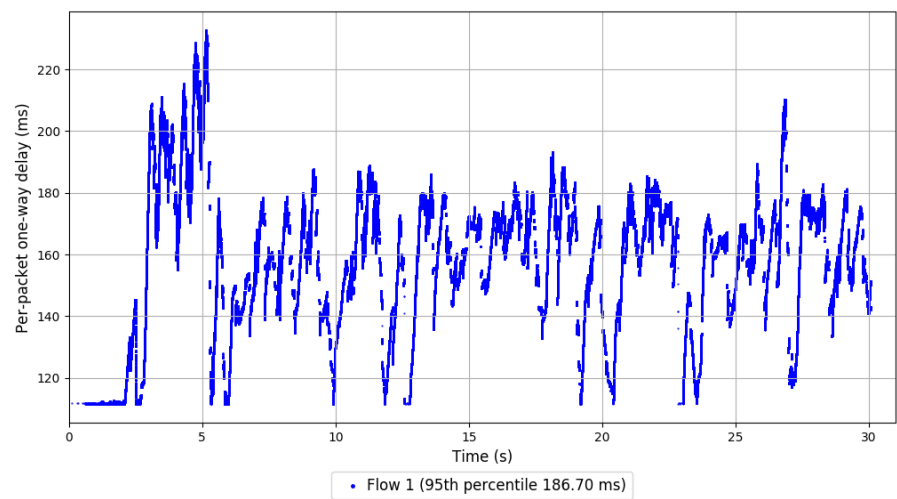
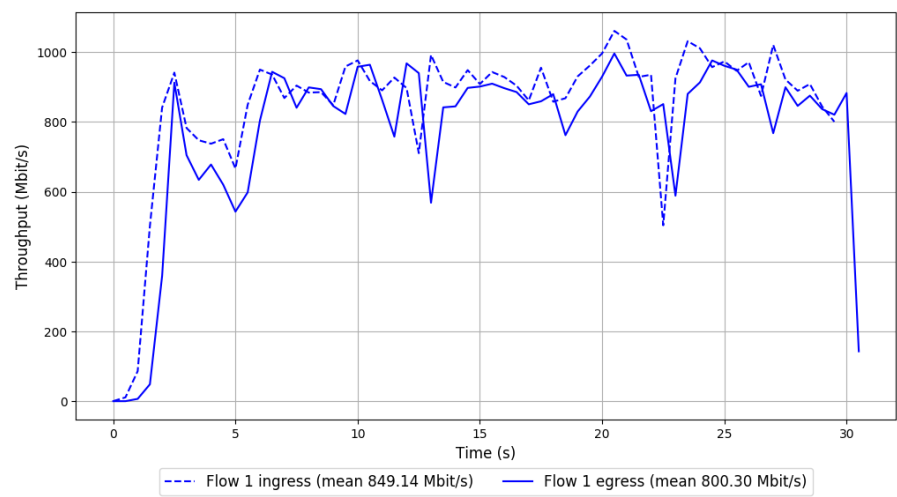


Run 3: Statistics of FillP-Sheep

Start at: 2018-09-25 06:00:05
End at: 2018-09-25 06:00:36
Local clock offset: 14.118 ms
Remote clock offset: 13.794 ms

Below is generated by plot.py at 2018-09-25 07:49:16
Datalink statistics
-- Total of 1 flow:
Average throughput: 800.30 Mbit/s
95th percentile per-packet one-way delay: 186.698 ms
Loss rate: 5.75%
-- Flow 1:
Average throughput: 800.30 Mbit/s
95th percentile per-packet one-way delay: 186.698 ms
Loss rate: 5.75%

Run 3: Report of FillP-Sheep — Data Link



Run 4: Statistics of FillP-Sheep

Start at: 2018-09-25 06:28:28

End at: 2018-09-25 06:28:58

Local clock offset: 10.108 ms

Remote clock offset: 8.75 ms

Below is generated by plot.py at 2018-09-25 07:58:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 797.17 Mbit/s

95th percentile per-packet one-way delay: 185.322 ms

Loss rate: 6.49%

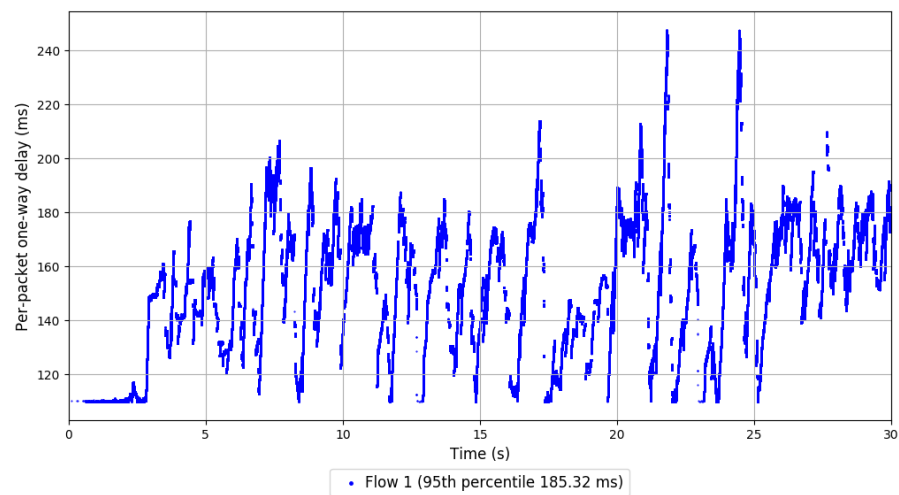
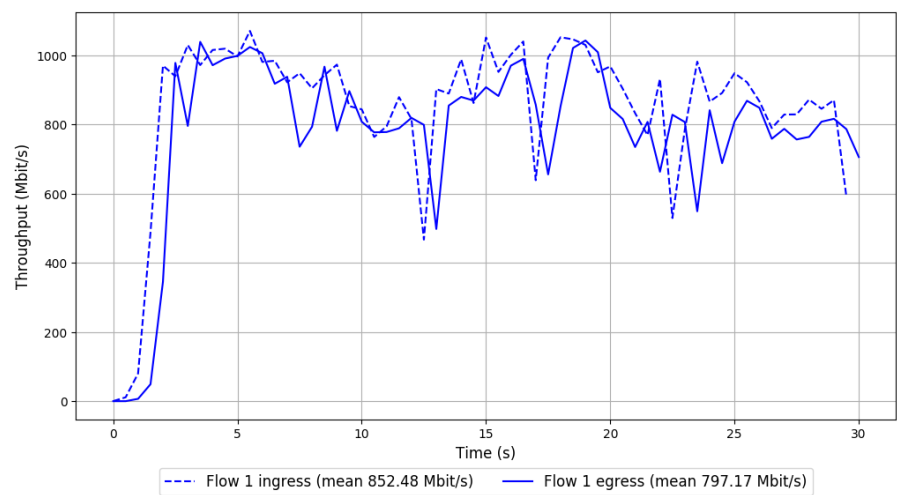
-- Flow 1:

Average throughput: 797.17 Mbit/s

95th percentile per-packet one-way delay: 185.322 ms

Loss rate: 6.49%

Run 4: Report of FillP-Sheep — Data Link



Run 5: Statistics of FillP-Sheep

Start at: 2018-09-25 06:57:07

End at: 2018-09-25 06:57:37

Local clock offset: 5.96 ms

Remote clock offset: 6.652 ms

Below is generated by plot.py at 2018-09-25 08:01:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 779.17 Mbit/s

95th percentile per-packet one-way delay: 186.074 ms

Loss rate: 5.66%

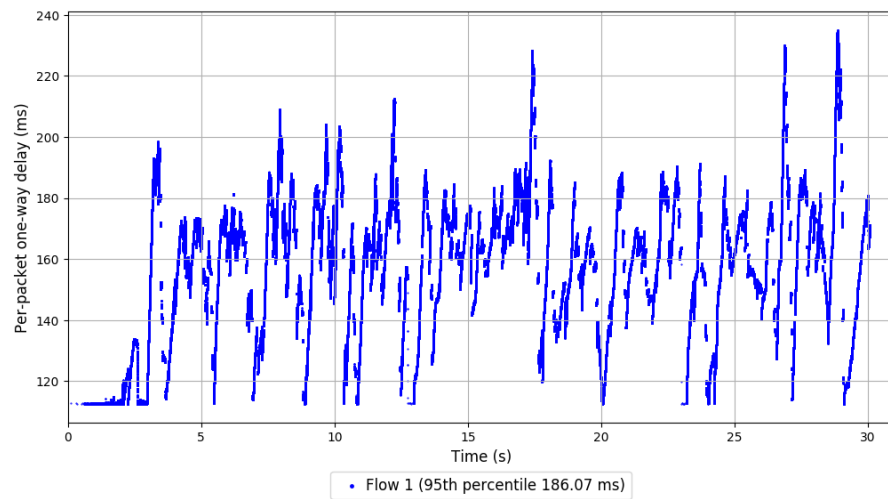
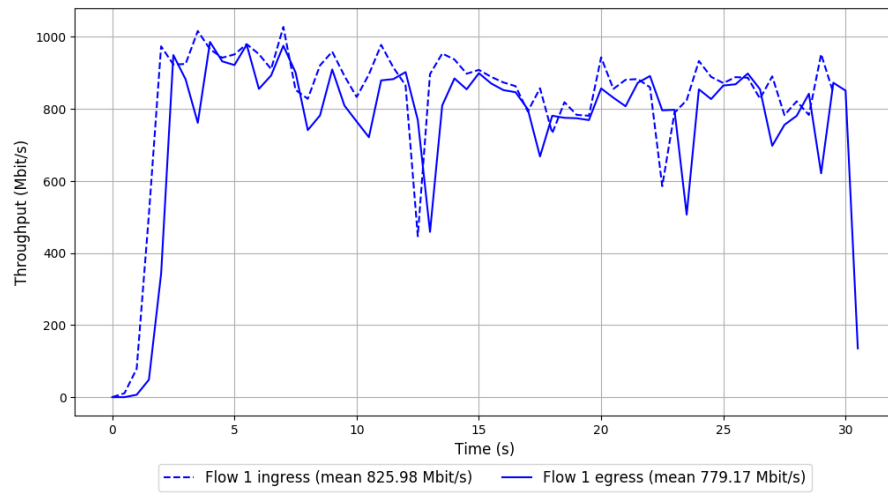
-- Flow 1:

Average throughput: 779.17 Mbit/s

95th percentile per-packet one-way delay: 186.074 ms

Loss rate: 5.66%

Run 5: Report of FillP-Sheep — Data Link



Run 1: Statistics of Indigo

Start at: 2018-09-25 04:45:20

End at: 2018-09-25 04:45:50

Local clock offset: 5.927 ms

Remote clock offset: 6.503 ms

Below is generated by plot.py at 2018-09-25 08:01:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 156.34 Mbit/s

95th percentile per-packet one-way delay: 111.587 ms

Loss rate: 0.00%

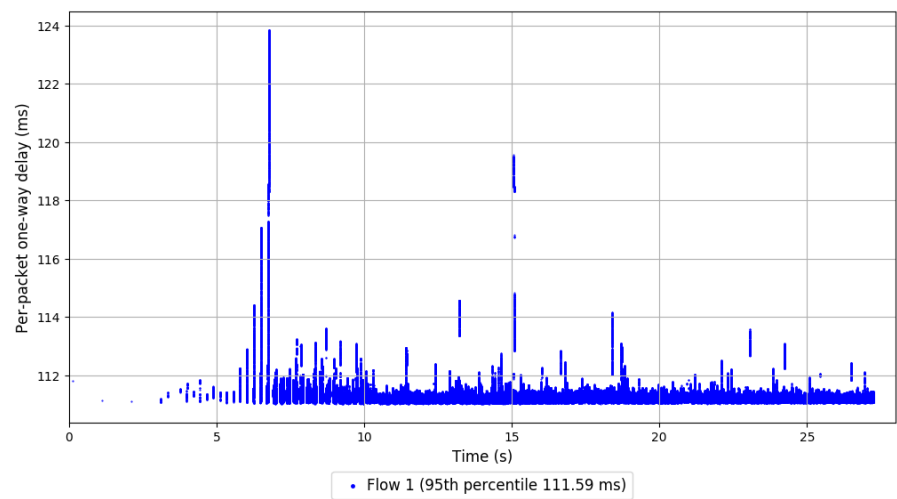
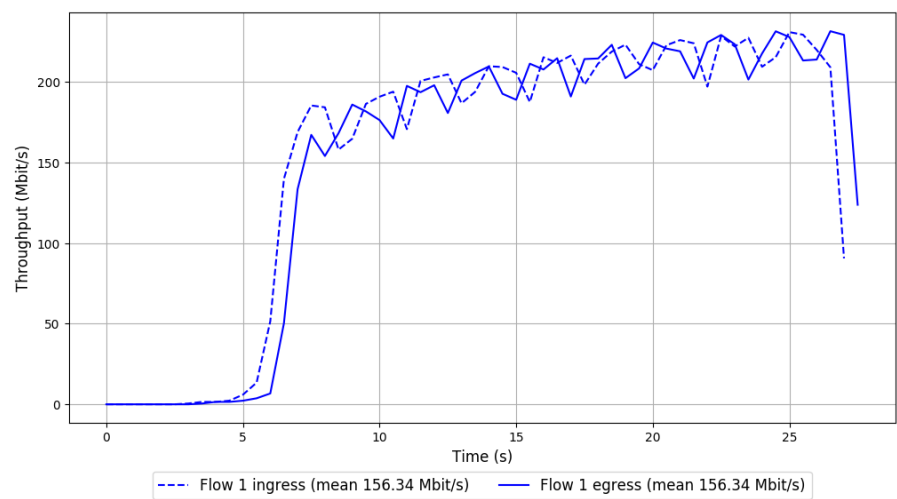
-- Flow 1:

Average throughput: 156.34 Mbit/s

95th percentile per-packet one-way delay: 111.587 ms

Loss rate: 0.00%

Run 1: Report of Indigo — Data Link

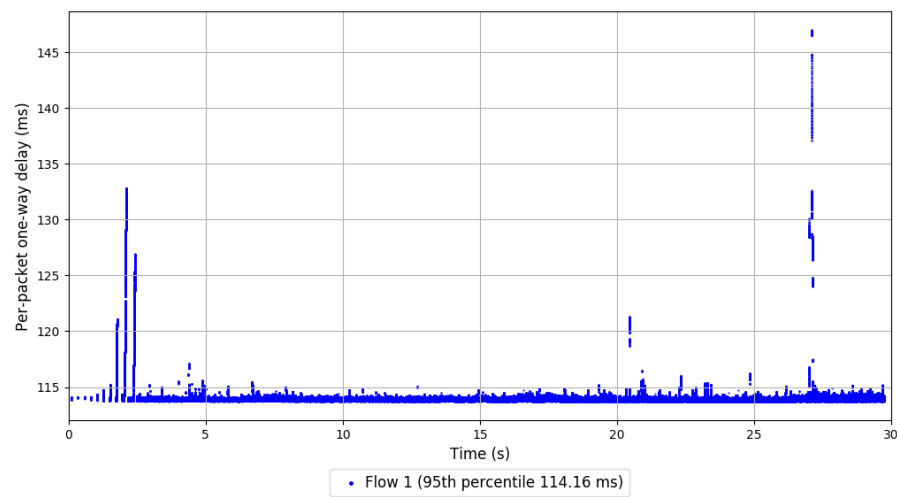
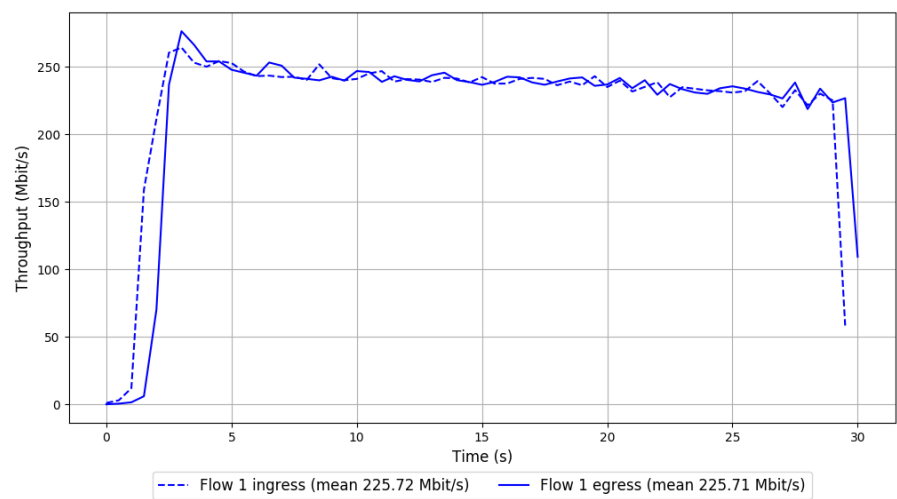


Run 2: Statistics of Indigo

Start at: 2018-09-25 05:13:53
End at: 2018-09-25 05:14:23
Local clock offset: 21.209 ms
Remote clock offset: 21.167 ms

Below is generated by plot.py at 2018-09-25 08:01:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 225.71 Mbit/s
95th percentile per-packet one-way delay: 114.157 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 225.71 Mbit/s
95th percentile per-packet one-way delay: 114.157 ms
Loss rate: 0.01%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2018-09-25 05:42:24

End at: 2018-09-25 05:42:54

Local clock offset: 31.127 ms

Remote clock offset: 29.21 ms

Below is generated by plot.py at 2018-09-25 08:01:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 157.63 Mbit/s

95th percentile per-packet one-way delay: 111.022 ms

Loss rate: 0.00%

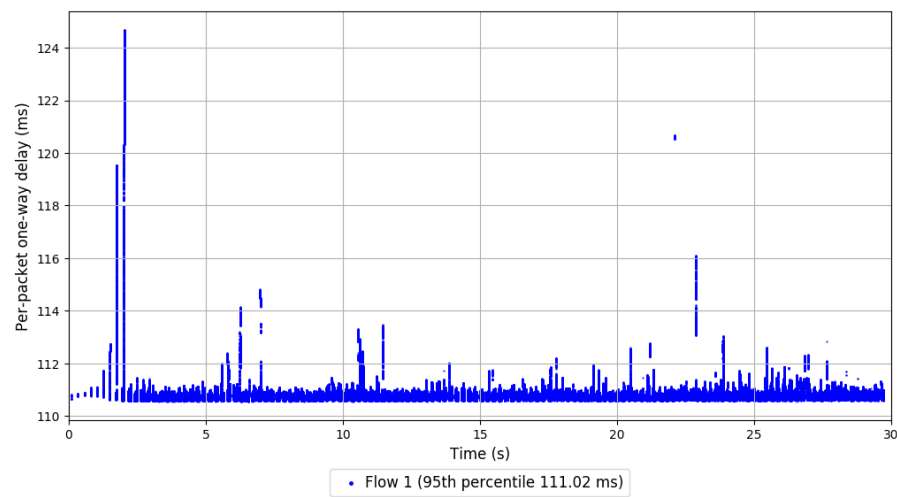
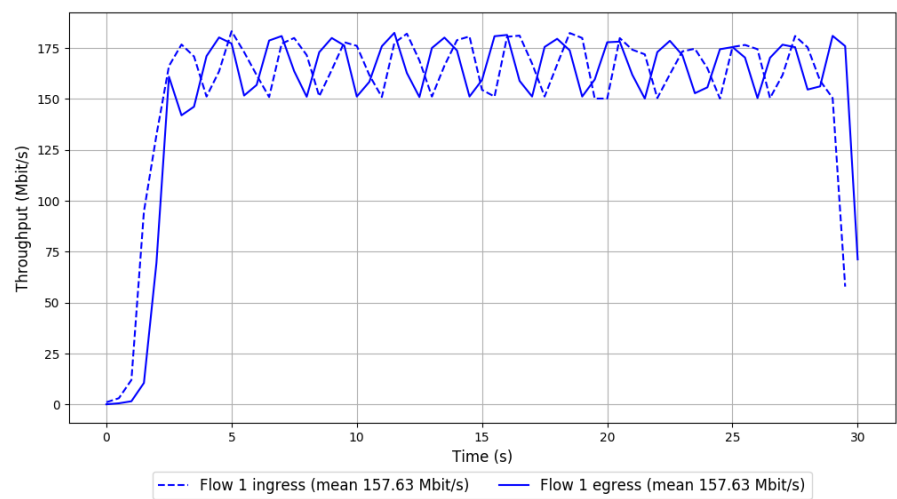
-- Flow 1:

Average throughput: 157.63 Mbit/s

95th percentile per-packet one-way delay: 111.022 ms

Loss rate: 0.00%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2018-09-25 06:10:29

End at: 2018-09-25 06:10:59

Local clock offset: 12.518 ms

Remote clock offset: 12.86 ms

Below is generated by plot.py at 2018-09-25 08:01:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 225.32 Mbit/s

95th percentile per-packet one-way delay: 112.504 ms

Loss rate: 0.00%

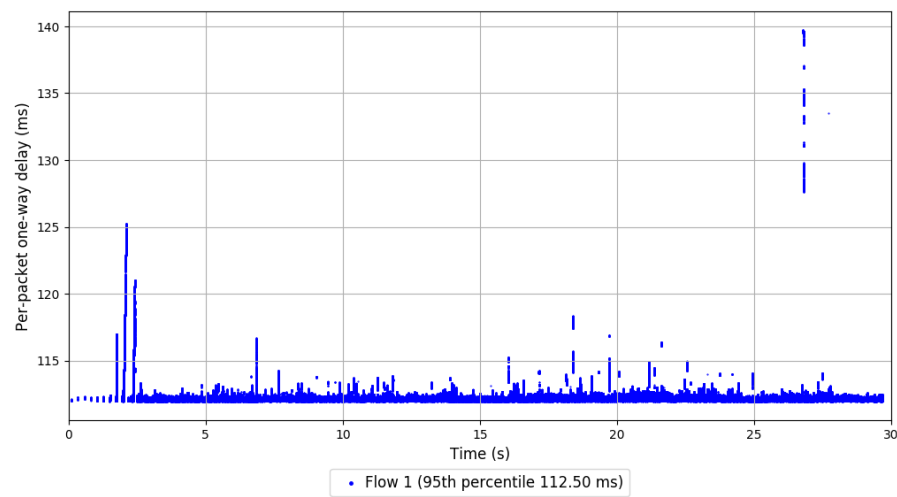
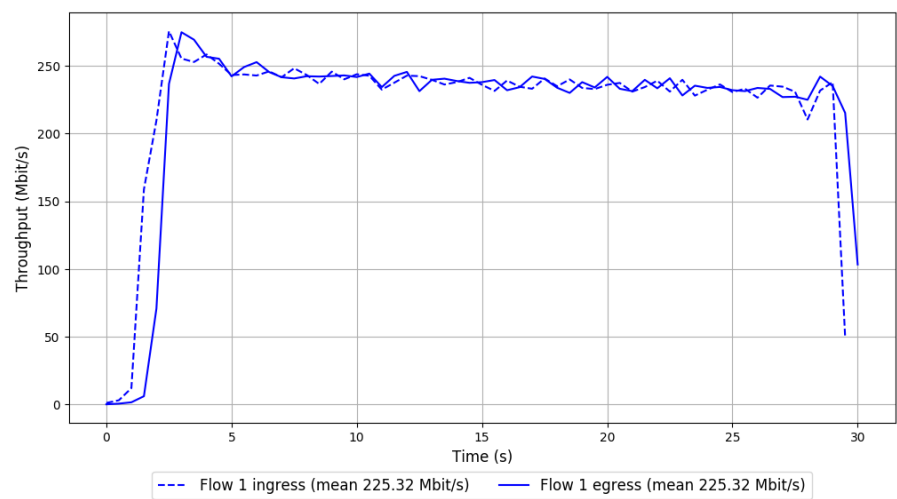
-- Flow 1:

Average throughput: 225.32 Mbit/s

95th percentile per-packet one-way delay: 112.504 ms

Loss rate: 0.00%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2018-09-25 06:39:05

End at: 2018-09-25 06:39:35

Local clock offset: 6.344 ms

Remote clock offset: 6.534 ms

Below is generated by plot.py at 2018-09-25 08:01:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 226.17 Mbit/s

95th percentile per-packet one-way delay: 110.113 ms

Loss rate: 0.00%

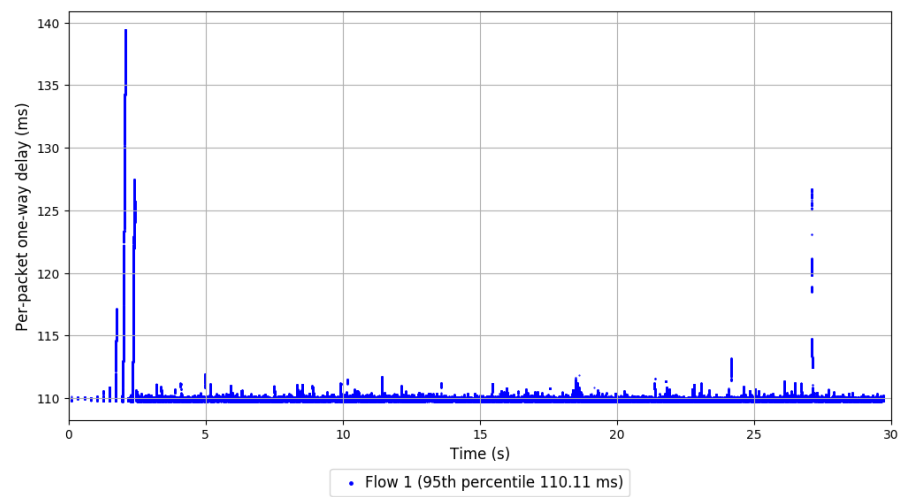
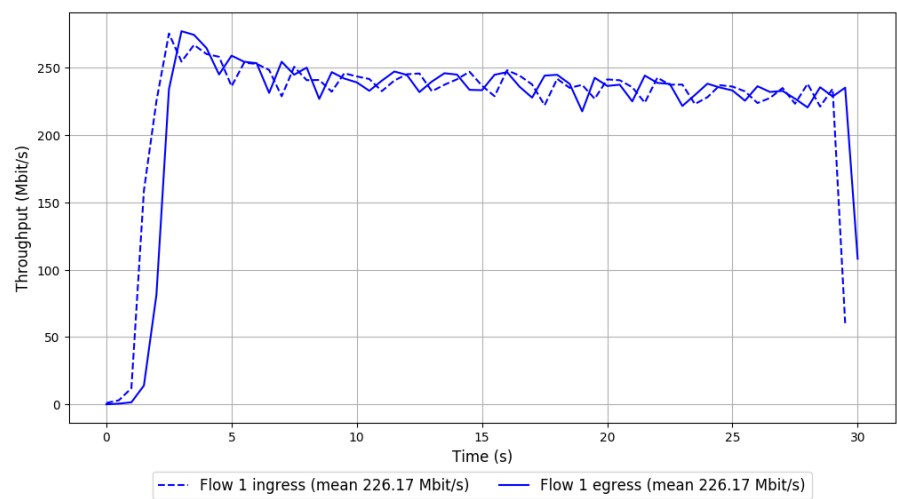
-- Flow 1:

Average throughput: 226.17 Mbit/s

95th percentile per-packet one-way delay: 110.113 ms

Loss rate: 0.00%

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-96d2da3

Start at: 2018-09-25 05:06:29

End at: 2018-09-25 05:06:59

Local clock offset: 15.137 ms

Remote clock offset: 15.48 ms

Below is generated by plot.py at 2018-09-25 08:01:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 290.89 Mbit/s

95th percentile per-packet one-way delay: 156.864 ms

Loss rate: 0.00%

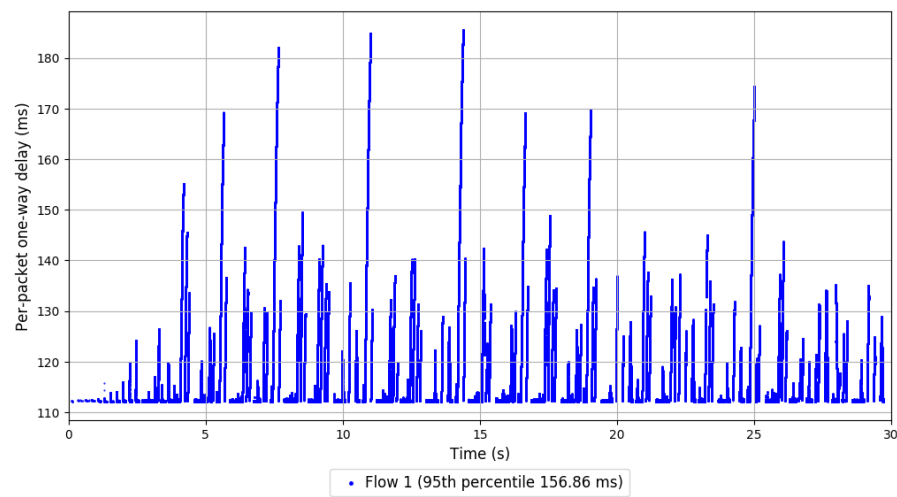
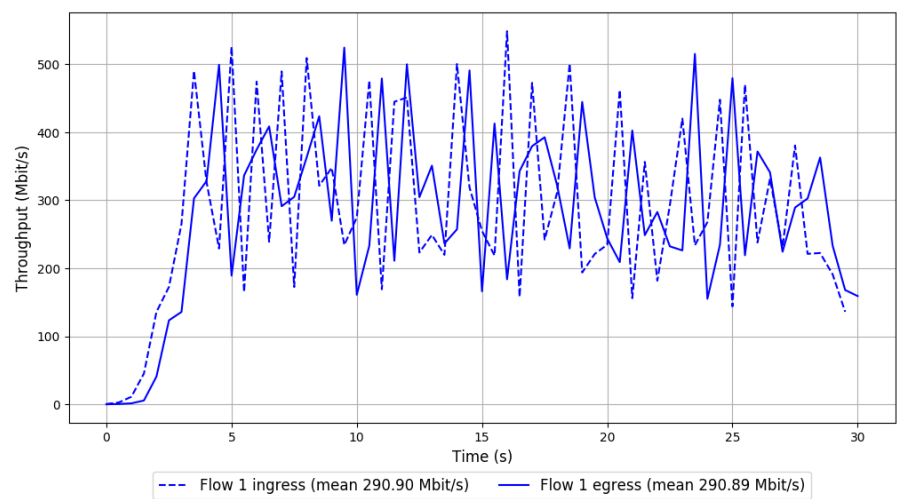
-- Flow 1:

Average throughput: 290.89 Mbit/s

95th percentile per-packet one-way delay: 156.864 ms

Loss rate: 0.00%

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

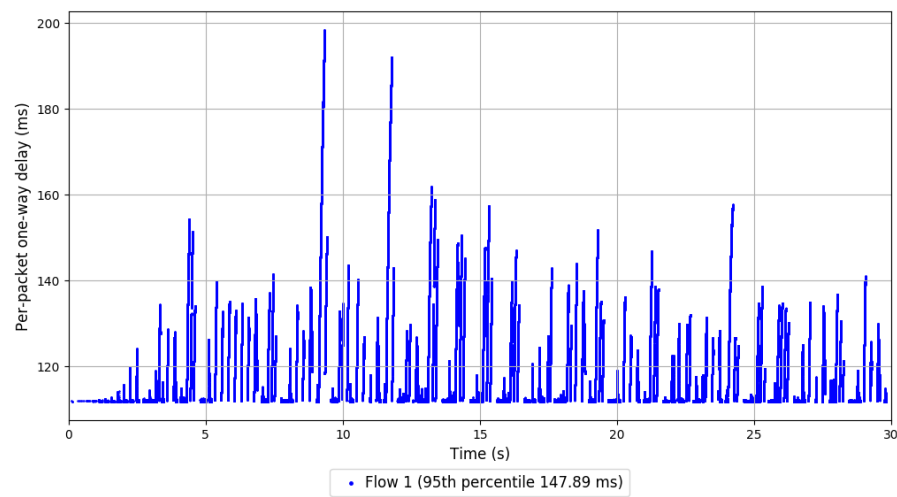
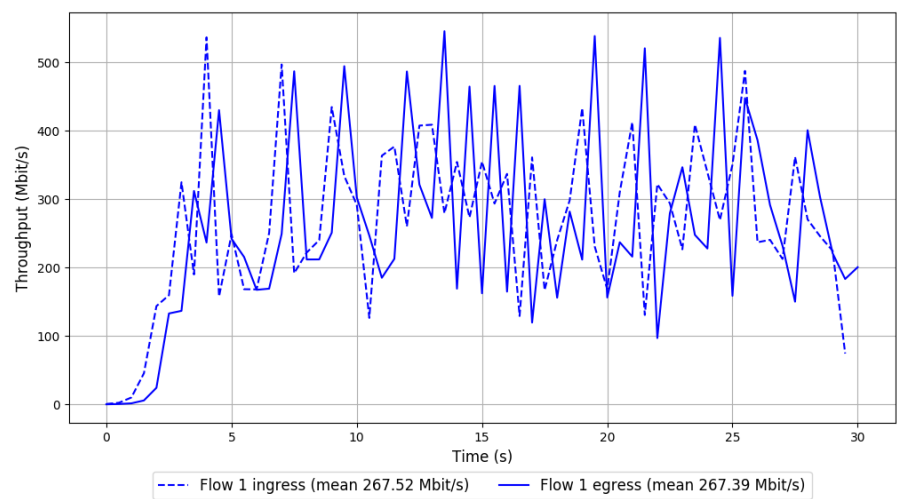


Run 2: Statistics of Indigo-96d2da3

Start at: 2018-09-25 05:35:02
End at: 2018-09-25 05:35:32
Local clock offset: 23.915 ms
Remote clock offset: 23.415 ms

Below is generated by plot.py at 2018-09-25 08:01:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 267.39 Mbit/s
95th percentile per-packet one-way delay: 147.892 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 267.39 Mbit/s
95th percentile per-packet one-way delay: 147.892 ms
Loss rate: 0.05%

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

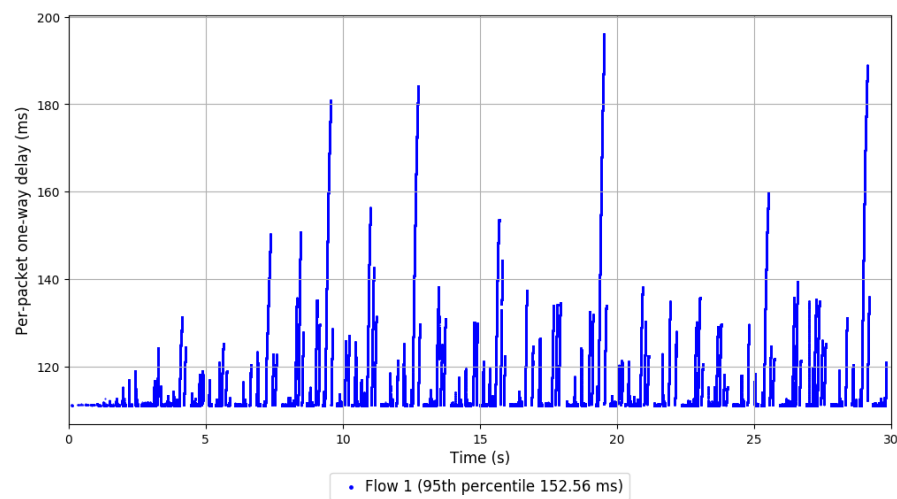
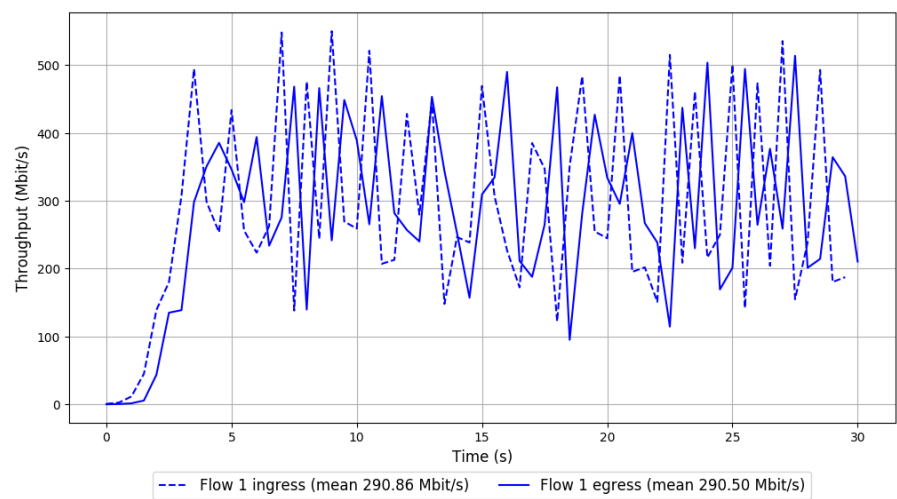


Run 3: Statistics of Indigo-96d2da3

Start at: 2018-09-25 06:03:07
End at: 2018-09-25 06:03:37
Local clock offset: 13.547 ms
Remote clock offset: 13.002 ms

Below is generated by plot.py at 2018-09-25 08:01:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 290.50 Mbit/s
95th percentile per-packet one-way delay: 152.559 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 290.50 Mbit/s
95th percentile per-packet one-way delay: 152.559 ms
Loss rate: 0.12%

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



Run 4: Statistics of Indigo-96d2da3

Start at: 2018-09-25 06:31:43

End at: 2018-09-25 06:32:13

Local clock offset: 7.533 ms

Remote clock offset: 6.92 ms

Below is generated by plot.py at 2018-09-25 08:01:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 283.48 Mbit/s

95th percentile per-packet one-way delay: 148.058 ms

Loss rate: 0.08%

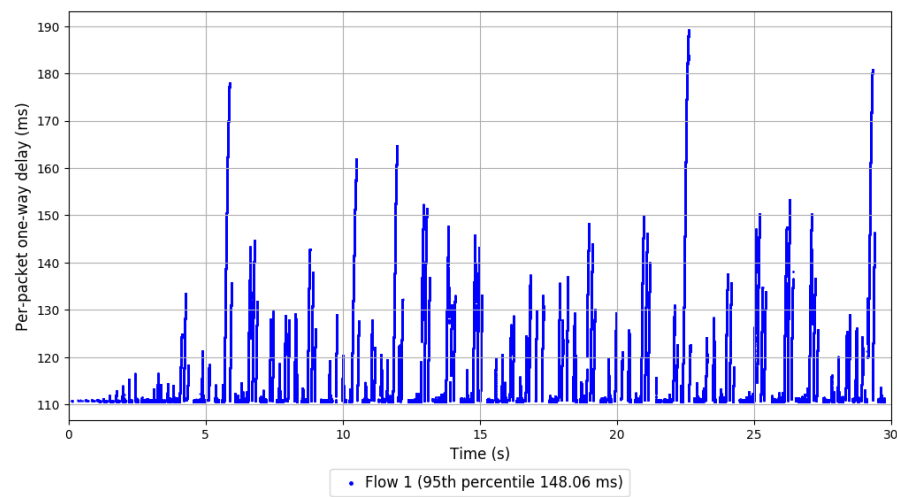
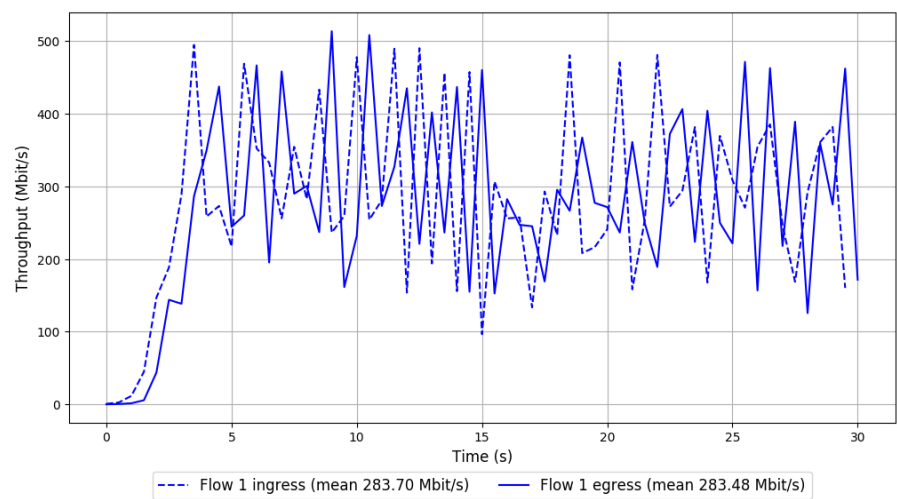
-- Flow 1:

Average throughput: 283.48 Mbit/s

95th percentile per-packet one-way delay: 148.058 ms

Loss rate: 0.08%

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



Run 5: Statistics of Indigo-96d2da3

Start at: 2018-09-25 07:00:18

End at: 2018-09-25 07:00:48

Local clock offset: 5.433 ms

Remote clock offset: 4.391 ms

Below is generated by plot.py at 2018-09-25 08:01:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 273.01 Mbit/s

95th percentile per-packet one-way delay: 151.991 ms

Loss rate: 0.01%

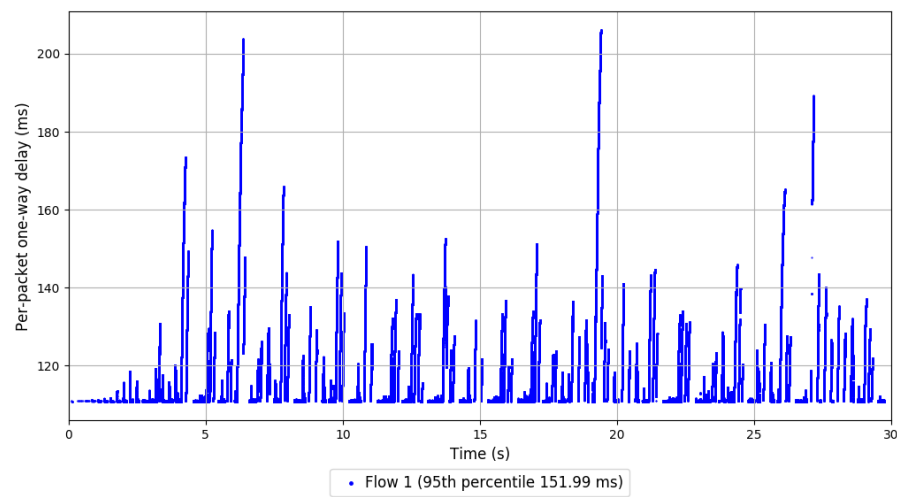
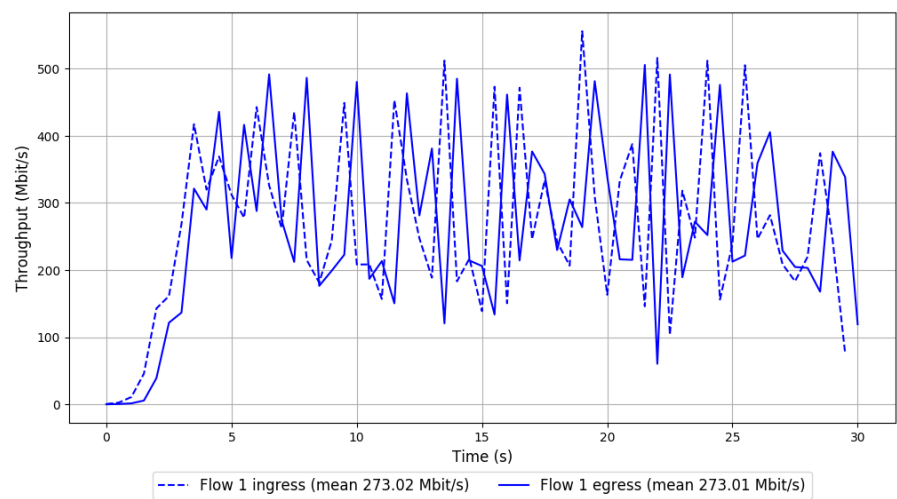
-- Flow 1:

Average throughput: 273.01 Mbit/s

95th percentile per-packet one-way delay: 151.991 ms

Loss rate: 0.01%

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

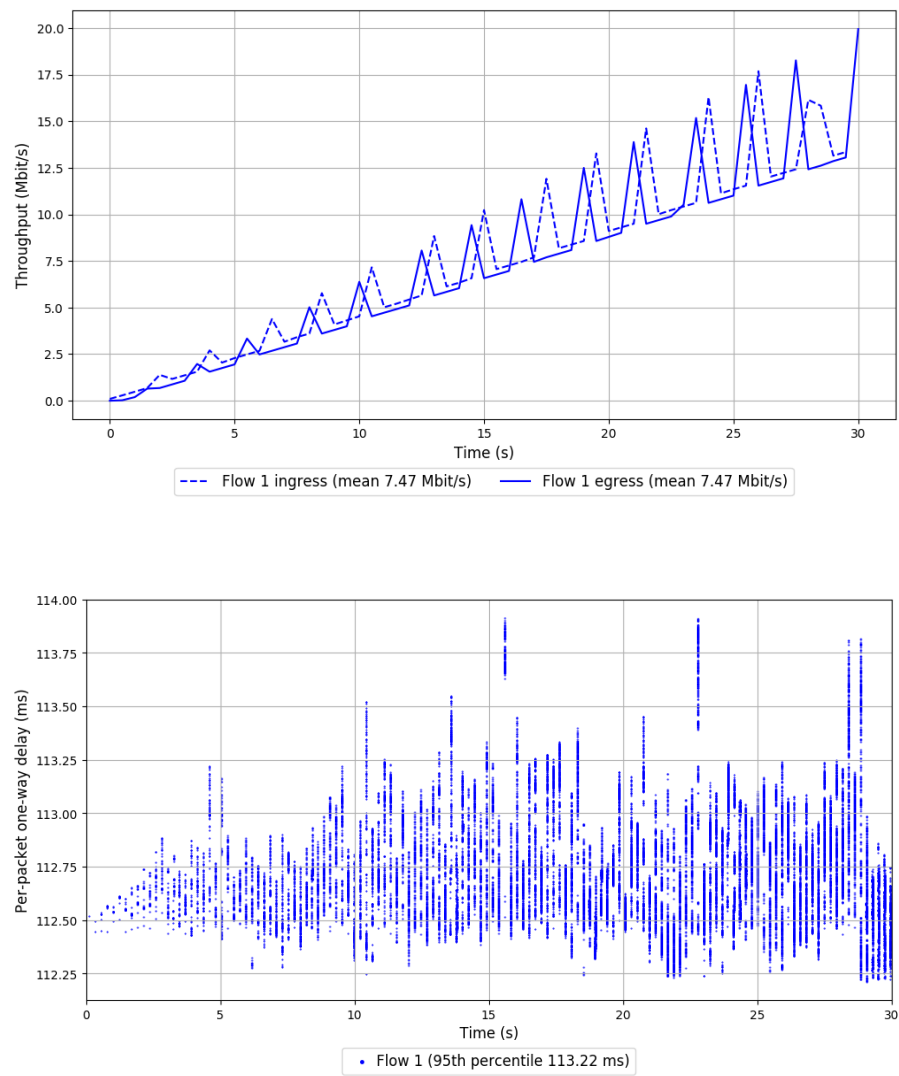


```
Run 1: Statistics of LEDBAT

Start at: 2018-09-25 05:00:21
End at: 2018-09-25 05:00:51
Local clock offset: 11.301 ms
Remote clock offset: 10.712 ms

# Below is generated by plot.py at 2018-09-25 08:01:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.47 Mbit/s
95th percentile per-packet one-way delay: 113.220 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.47 Mbit/s
95th percentile per-packet one-way delay: 113.220 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link

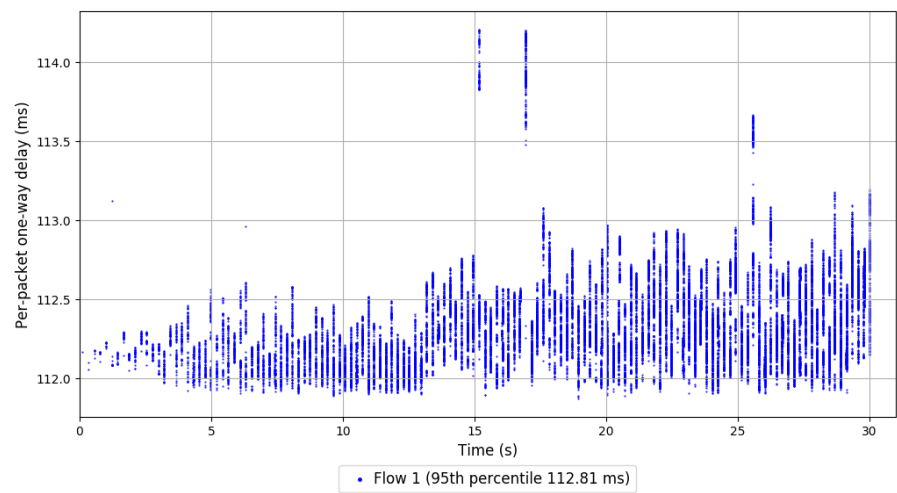
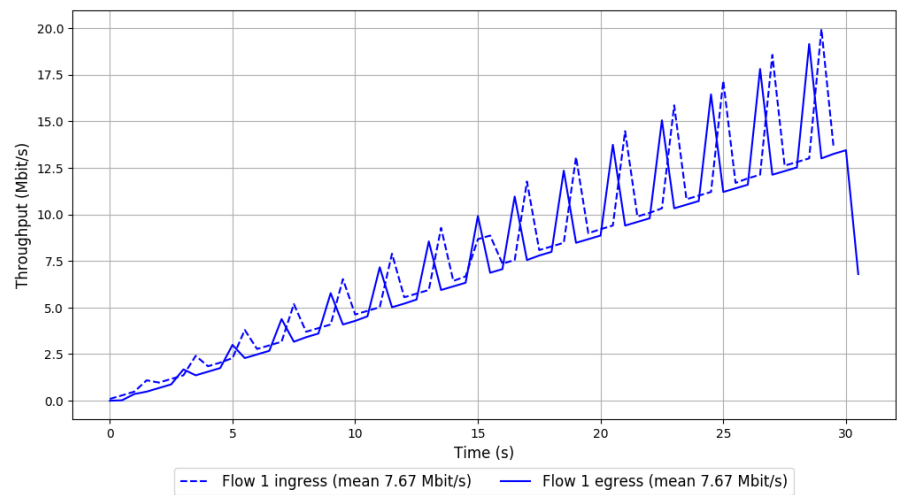


Run 2: Statistics of LEDBAT

Start at: 2018-09-25 05:29:02
End at: 2018-09-25 05:29:32
Local clock offset: 19.449 ms
Remote clock offset: 18.943 ms

Below is generated by plot.py at 2018-09-25 08:01:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 7.67 Mbit/s
95th percentile per-packet one-way delay: 112.805 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.67 Mbit/s
95th percentile per-packet one-way delay: 112.805 ms
Loss rate: 0.00%

Run 2: Report of LEDBAT — Data Link

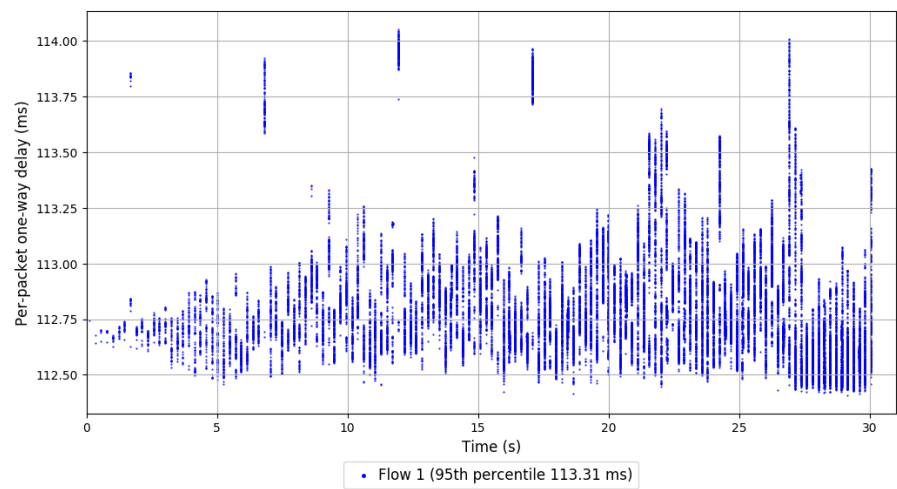
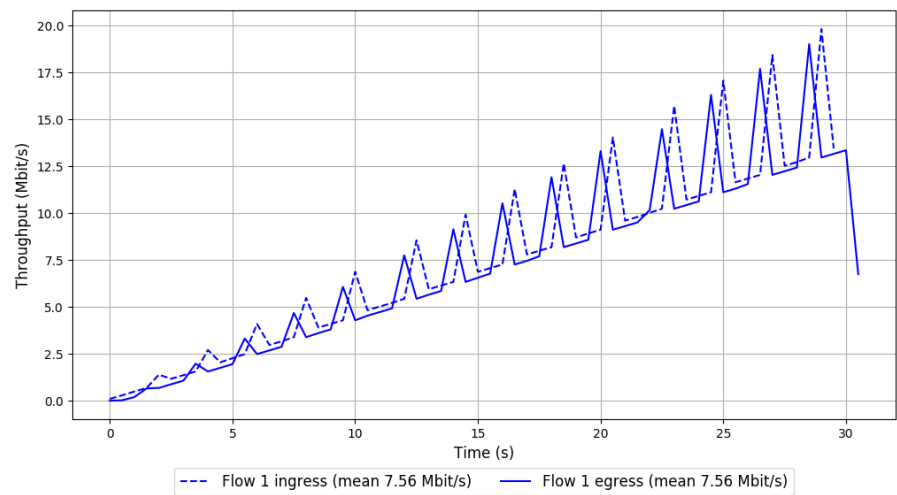


Run 3: Statistics of LEDBAT

Start at: 2018-09-25 05:57:12
End at: 2018-09-25 05:57:42
Local clock offset: 16.056 ms
Remote clock offset: 15.303 ms

Below is generated by plot.py at 2018-09-25 08:01:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 7.56 Mbit/s
95th percentile per-packet one-way delay: 113.315 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.56 Mbit/s
95th percentile per-packet one-way delay: 113.315 ms
Loss rate: 0.00%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-09-25 06:25:34

End at: 2018-09-25 06:26:04

Local clock offset: 12.485 ms

Remote clock offset: 10.63 ms

Below is generated by plot.py at 2018-09-25 08:01:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 7.61 Mbit/s

95th percentile per-packet one-way delay: 110.777 ms

Loss rate: 0.00%

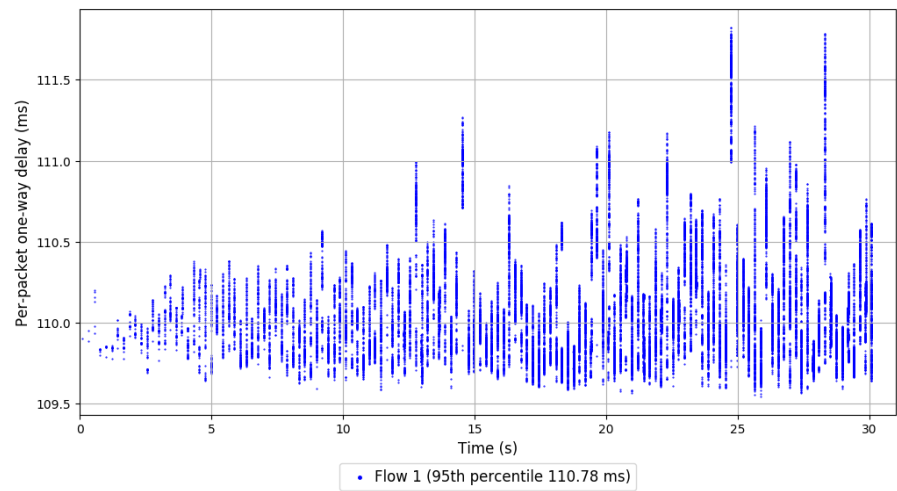
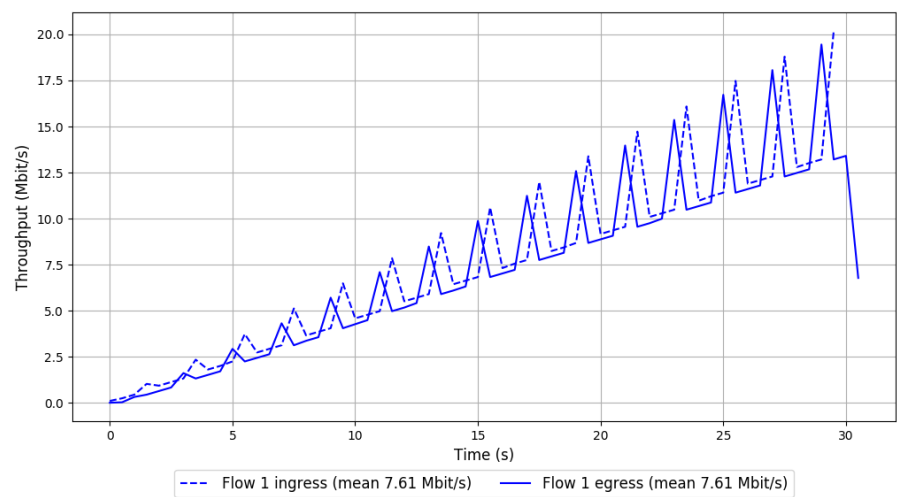
-- Flow 1:

Average throughput: 7.61 Mbit/s

95th percentile per-packet one-way delay: 110.777 ms

Loss rate: 0.00%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-09-25 06:54:14

End at: 2018-09-25 06:54:44

Local clock offset: 8.635 ms

Remote clock offset: 7.572 ms

Below is generated by plot.py at 2018-09-25 08:01:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 7.46 Mbit/s

95th percentile per-packet one-way delay: 111.291 ms

Loss rate: 0.00%

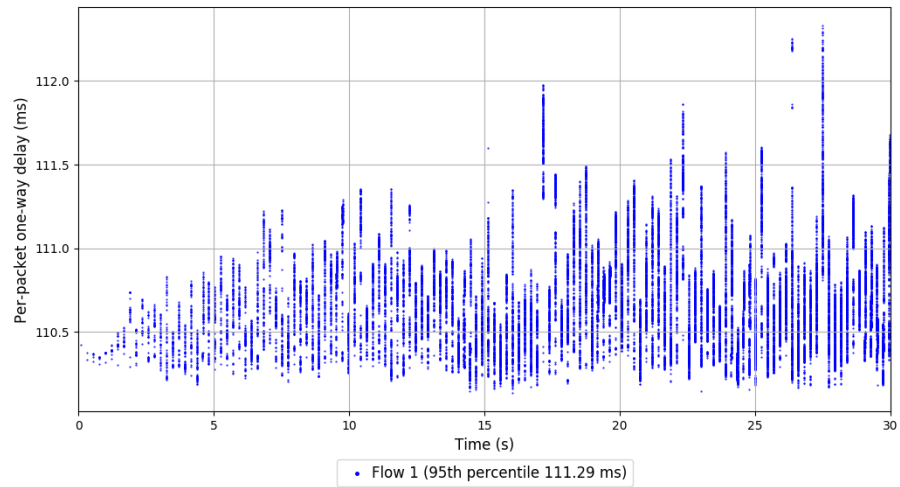
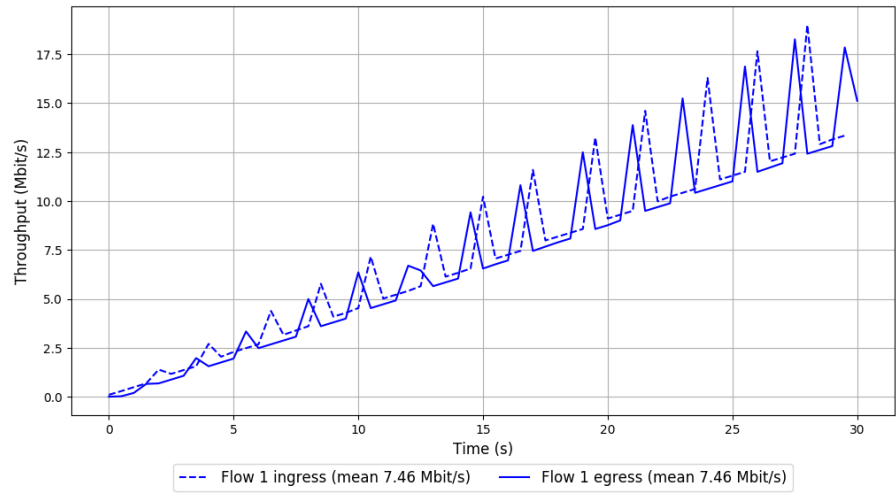
-- Flow 1:

Average throughput: 7.46 Mbit/s

95th percentile per-packet one-way delay: 111.291 ms

Loss rate: 0.00%

Run 5: Report of LEDBAT — Data Link

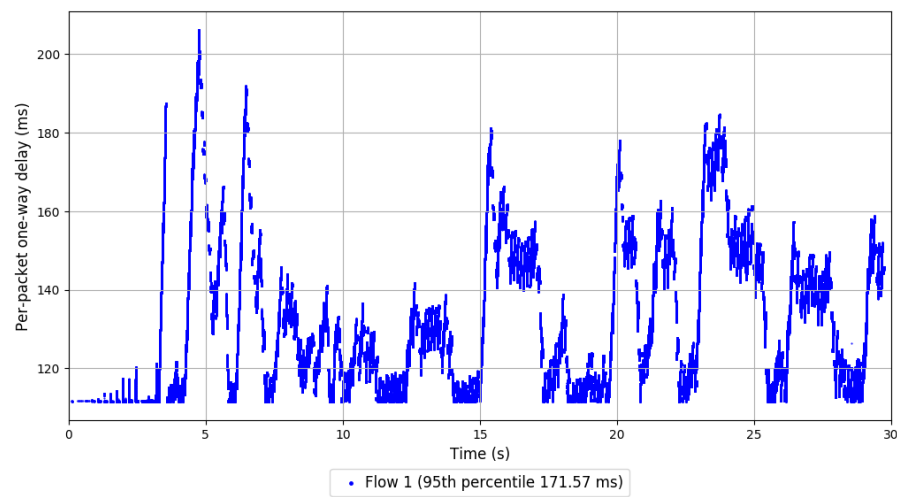
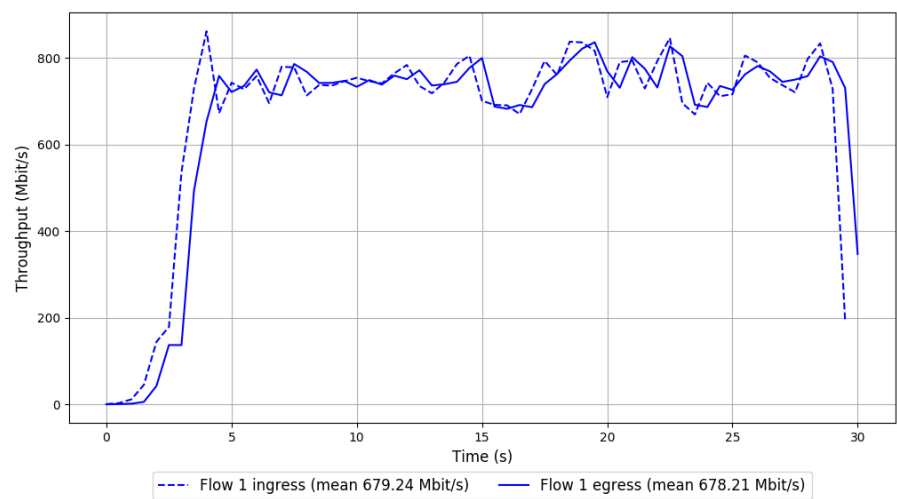



```
Run 1: Statistics of Indigo-Muses

Start at: 2018-09-25 05:01:31
End at: 2018-09-25 05:02:01
Local clock offset: 10.575 ms
Remote clock offset: 11.657 ms

# Below is generated by plot.py at 2018-09-25 08:06:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 678.21 Mbit/s
95th percentile per-packet one-way delay: 171.567 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 678.21 Mbit/s
95th percentile per-packet one-way delay: 171.567 ms
Loss rate: 0.15%
```

Run 1: Report of Indigo-Muses — Data Link



Run 2: Statistics of Indigo-Muses

Start at: 2018-09-25 05:30:12

End at: 2018-09-25 05:30:42

Local clock offset: 20.691 ms

Remote clock offset: 19.58 ms

Below is generated by plot.py at 2018-09-25 08:07:03

Datalink statistics

-- Total of 1 flow:

Average throughput: 690.87 Mbit/s

95th percentile per-packet one-way delay: 158.995 ms

Loss rate: 0.21%

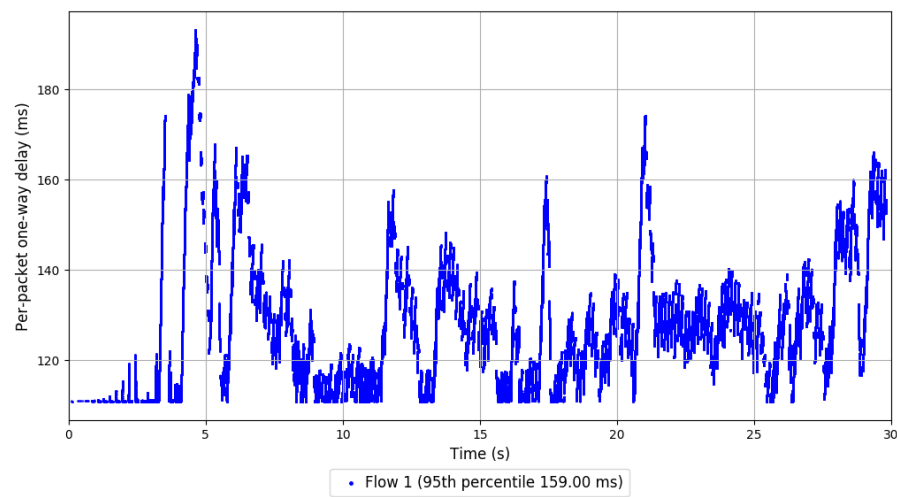
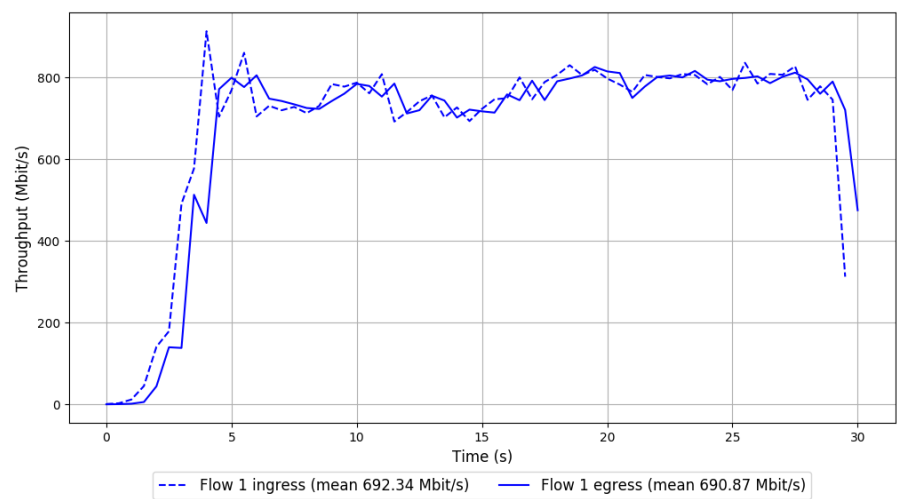
-- Flow 1:

Average throughput: 690.87 Mbit/s

95th percentile per-packet one-way delay: 158.995 ms

Loss rate: 0.21%

Run 2: Report of Indigo-Muses — Data Link



Run 3: Statistics of Indigo-Muses

Start at: 2018-09-25 05:58:22

End at: 2018-09-25 05:58:52

Local clock offset: 15.546 ms

Remote clock offset: 14.1 ms

Below is generated by plot.py at 2018-09-25 08:07:03

Datalink statistics

-- Total of 1 flow:

Average throughput: 670.98 Mbit/s

95th percentile per-packet one-way delay: 159.426 ms

Loss rate: 0.24%

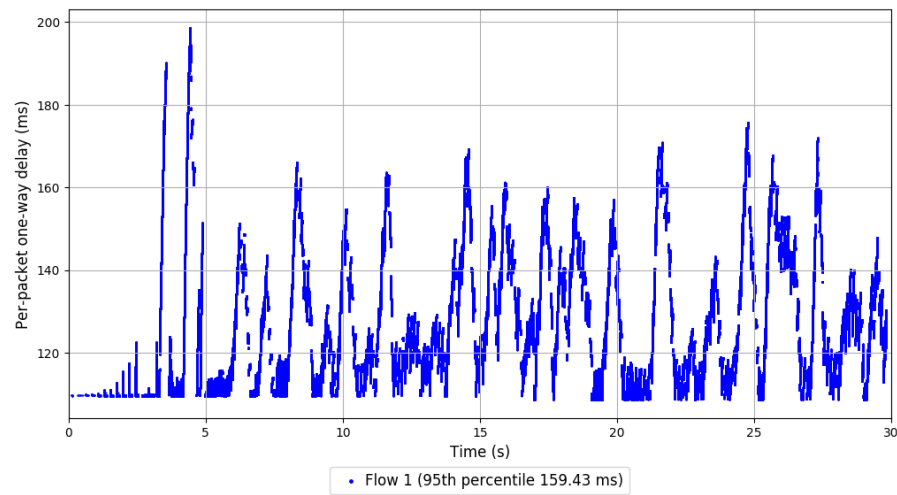
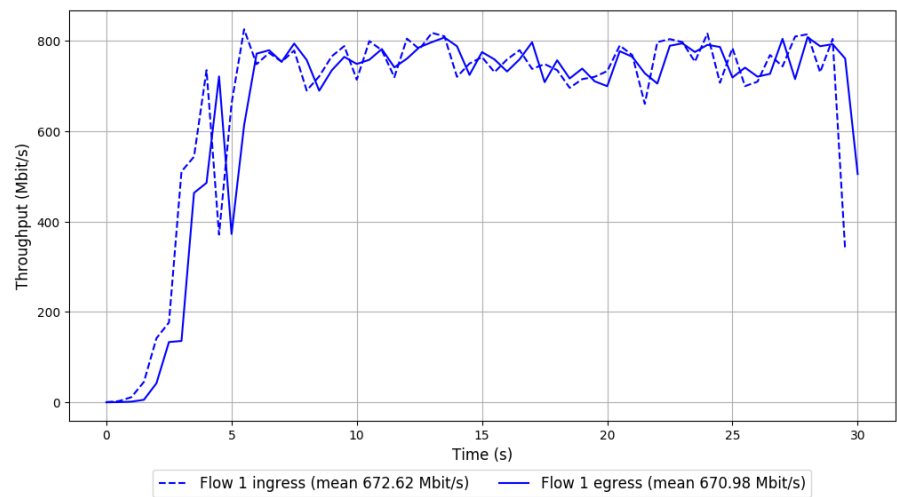
-- Flow 1:

Average throughput: 670.98 Mbit/s

95th percentile per-packet one-way delay: 159.426 ms

Loss rate: 0.24%

Run 3: Report of Indigo-Muses — Data Link

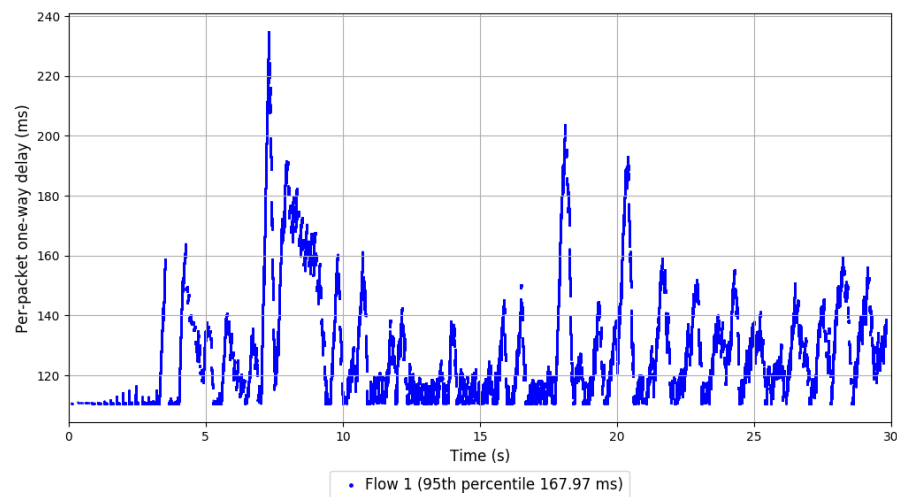
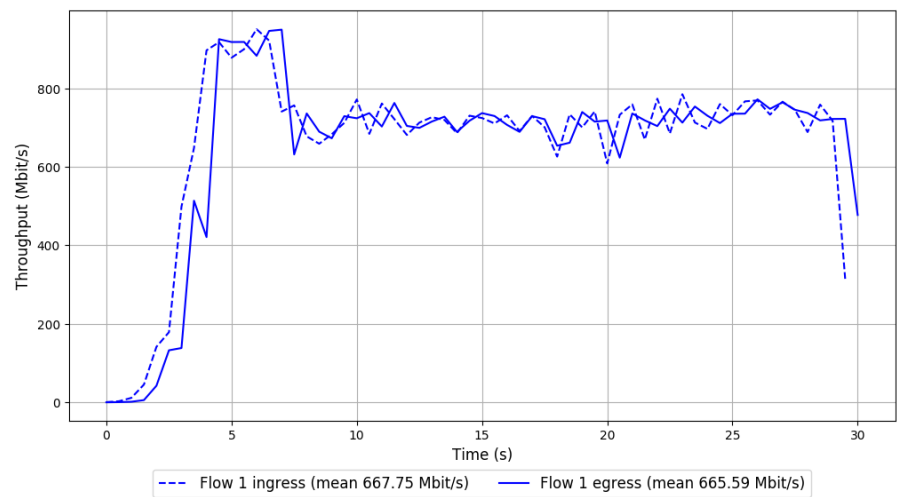


Run 4: Statistics of Indigo-Muses

Start at: 2018-09-25 06:26:44
End at: 2018-09-25 06:27:14
Local clock offset: 11.288 ms
Remote clock offset: 10.371 ms

Below is generated by plot.py at 2018-09-25 08:08:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 665.59 Mbit/s
95th percentile per-packet one-way delay: 167.974 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 665.59 Mbit/s
95th percentile per-packet one-way delay: 167.974 ms
Loss rate: 0.32%

Run 4: Report of Indigo-Muses — Data Link



Run 5: Statistics of Indigo-Muses

Start at: 2018-09-25 06:55:23

End at: 2018-09-25 06:55:53

Local clock offset: 9.817 ms

Remote clock offset: 7.997 ms

Below is generated by plot.py at 2018-09-25 08:08:55

Datalink statistics

-- Total of 1 flow:

Average throughput: 669.05 Mbit/s

95th percentile per-packet one-way delay: 161.513 ms

Loss rate: 0.05%

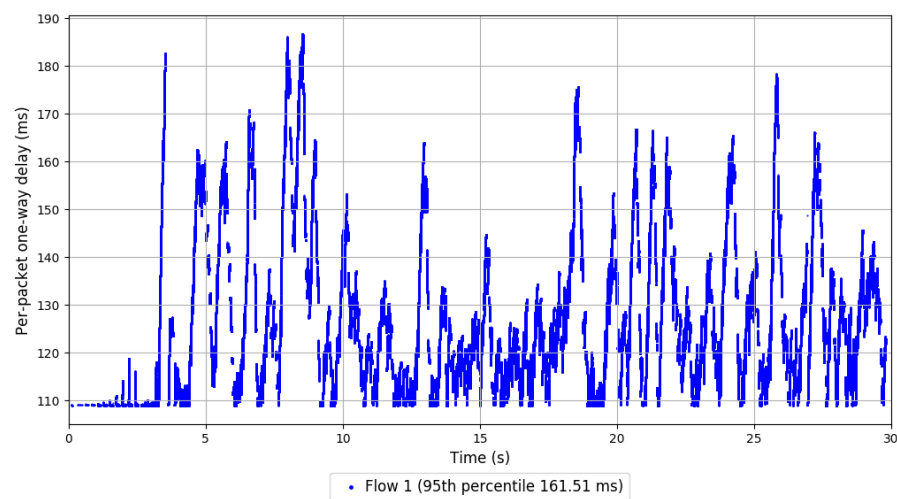
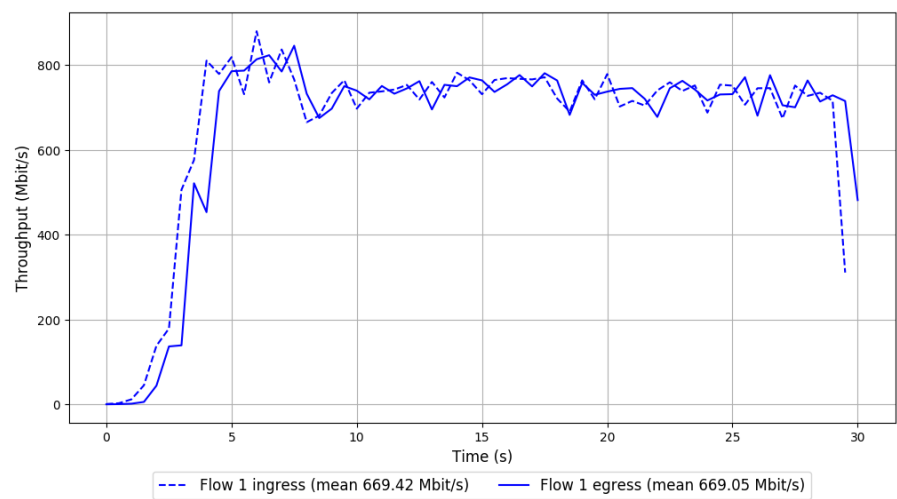
-- Flow 1:

Average throughput: 669.05 Mbit/s

95th percentile per-packet one-way delay: 161.513 ms

Loss rate: 0.05%

Run 5: Report of Indigo-Muses — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2018-09-25 04:58:40

End at: 2018-09-25 04:59:10

Local clock offset: 12.727 ms

Remote clock offset: 11.38 ms

Below is generated by plot.py at 2018-09-25 08:13:07

Datalink statistics

-- Total of 1 flow:

Average throughput: 464.72 Mbit/s

95th percentile per-packet one-way delay: 210.724 ms

Loss rate: 1.55%

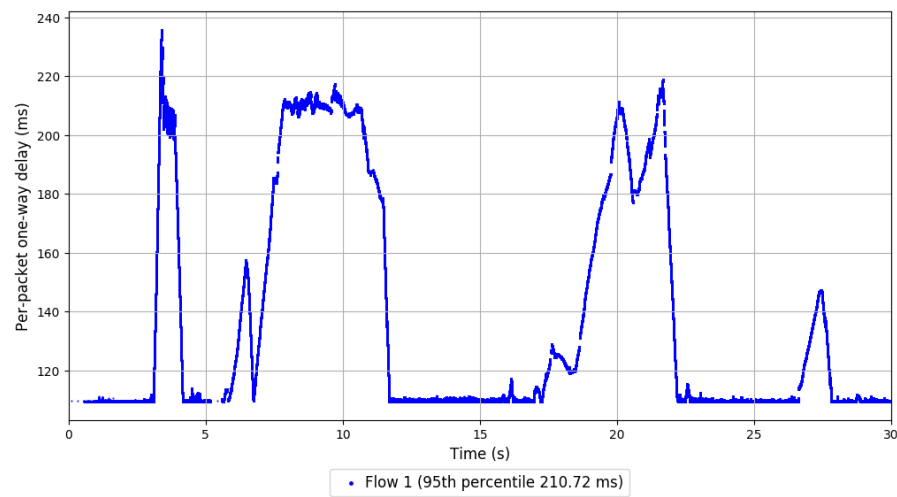
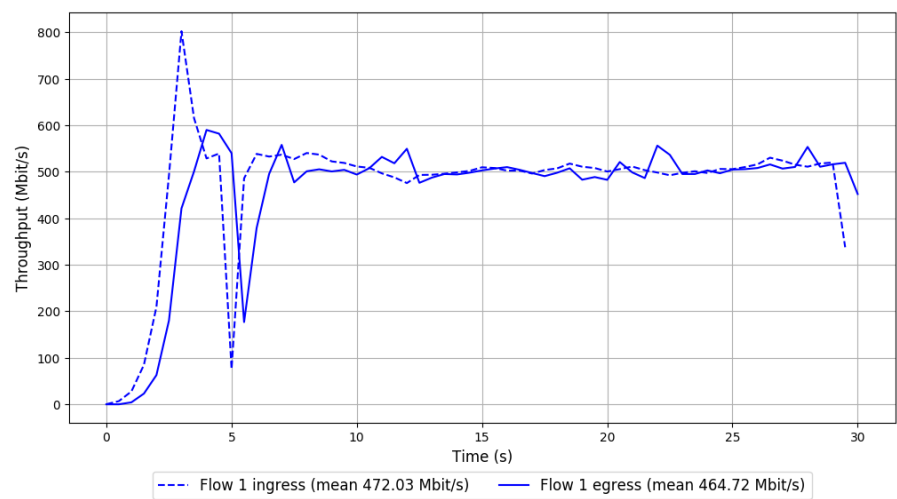
-- Flow 1:

Average throughput: 464.72 Mbit/s

95th percentile per-packet one-way delay: 210.724 ms

Loss rate: 1.55%

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-09-25 05:27:24

End at: 2018-09-25 05:27:54

Local clock offset: 18.981 ms

Remote clock offset: 17.72 ms

Below is generated by plot.py at 2018-09-25 08:13:07

Datalink statistics

-- Total of 1 flow:

Average throughput: 419.41 Mbit/s

95th percentile per-packet one-way delay: 211.760 ms

Loss rate: 1.61%

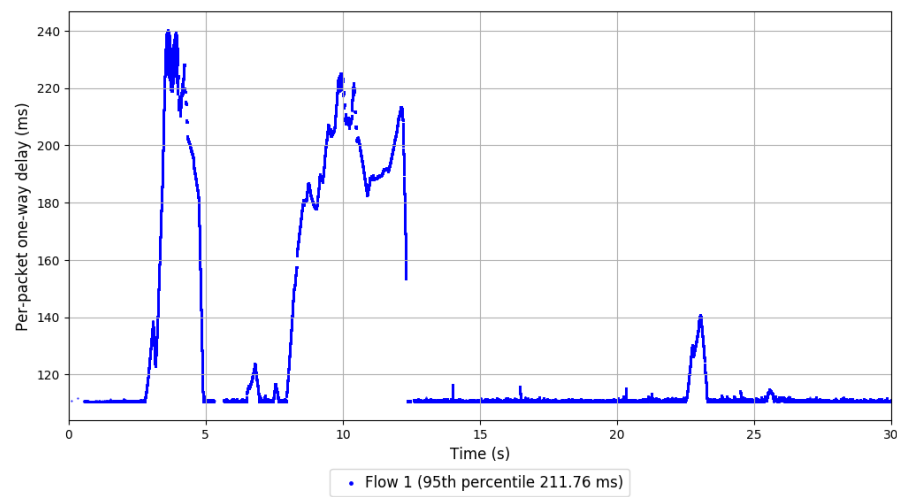
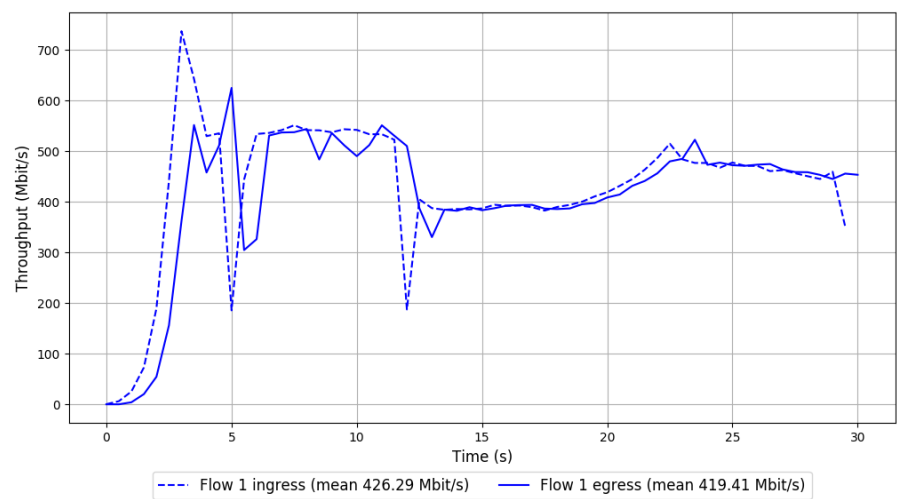
-- Flow 1:

Average throughput: 419.41 Mbit/s

95th percentile per-packet one-way delay: 211.760 ms

Loss rate: 1.61%

Run 2: Report of PCC-Allegro — Data Link

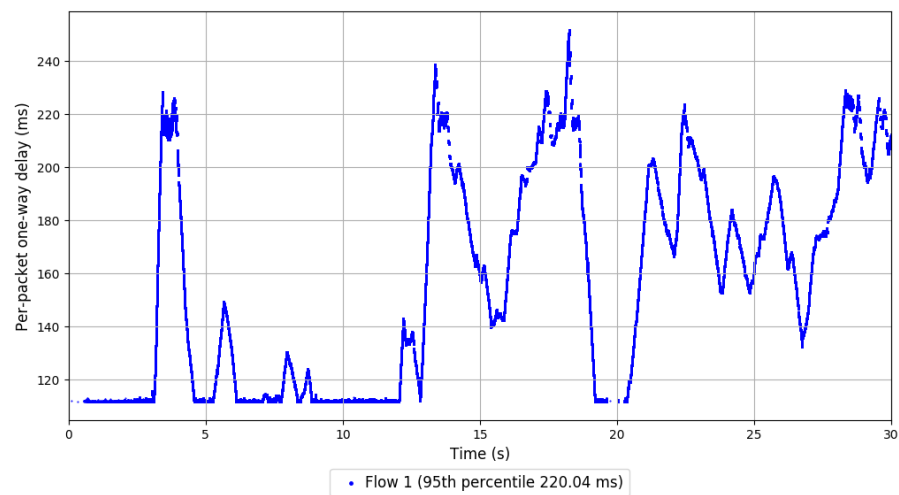
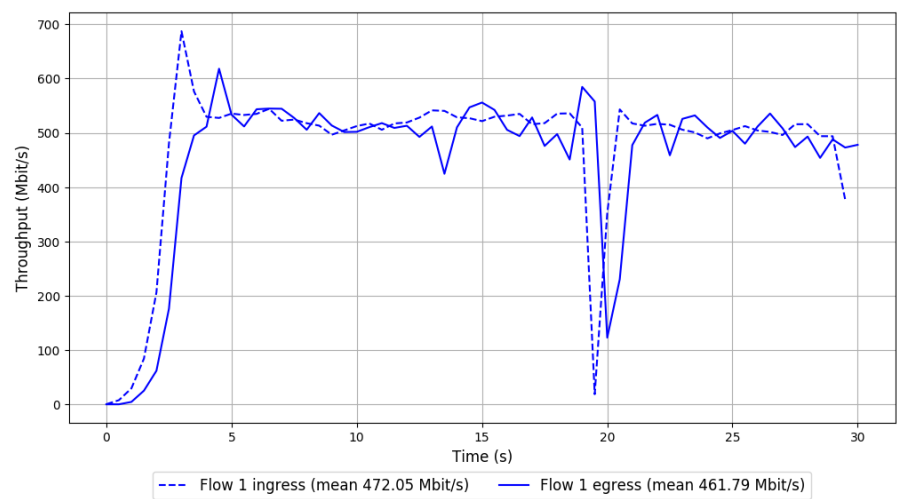


Run 3: Statistics of PCC-Allegro

Start at: 2018-09-25 05:55:31
End at: 2018-09-25 05:56:01
Local clock offset: 16.391 ms
Remote clock offset: 16.377 ms

Below is generated by plot.py at 2018-09-25 08:16:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 461.79 Mbit/s
95th percentile per-packet one-way delay: 220.043 ms
Loss rate: 2.17%
-- Flow 1:
Average throughput: 461.79 Mbit/s
95th percentile per-packet one-way delay: 220.043 ms
Loss rate: 2.17%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-09-25 06:23:49

End at: 2018-09-25 06:24:19

Local clock offset: 14.526 ms

Remote clock offset: 13.004 ms

Below is generated by plot.py at 2018-09-25 08:23:10

Datalink statistics

-- Total of 1 flow:

Average throughput: 498.74 Mbit/s

95th percentile per-packet one-way delay: 215.869 ms

Loss rate: 2.77%

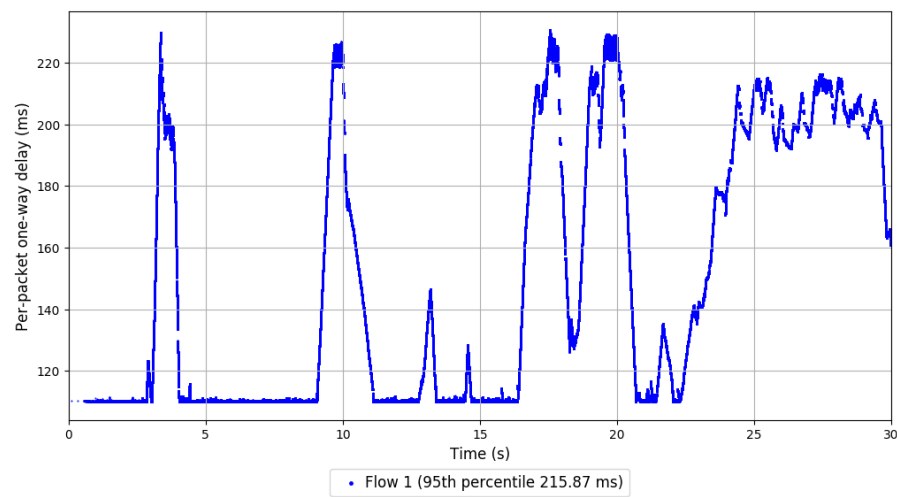
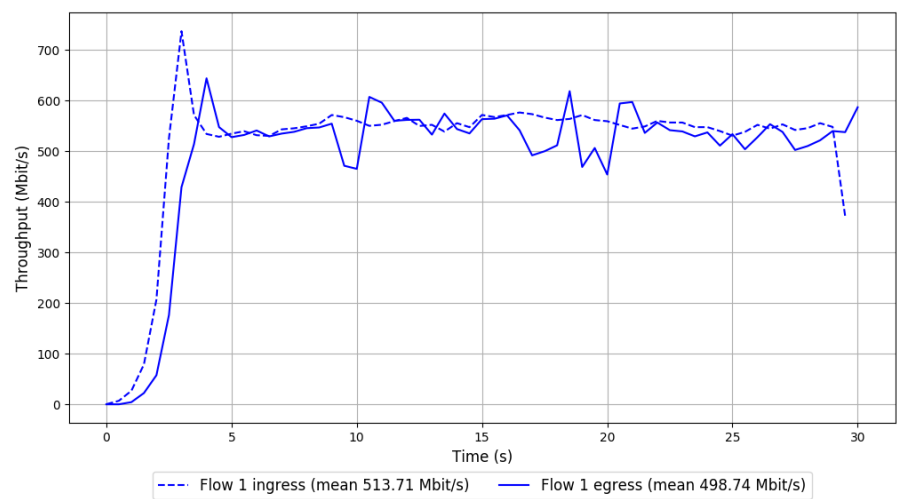
-- Flow 1:

Average throughput: 498.74 Mbit/s

95th percentile per-packet one-way delay: 215.869 ms

Loss rate: 2.77%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-09-25 06:52:30

End at: 2018-09-25 06:53:00

Local clock offset: 8.13 ms

Remote clock offset: 7.593 ms

Below is generated by plot.py at 2018-09-25 08:23:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 498.46 Mbit/s

95th percentile per-packet one-way delay: 211.968 ms

Loss rate: 2.36%

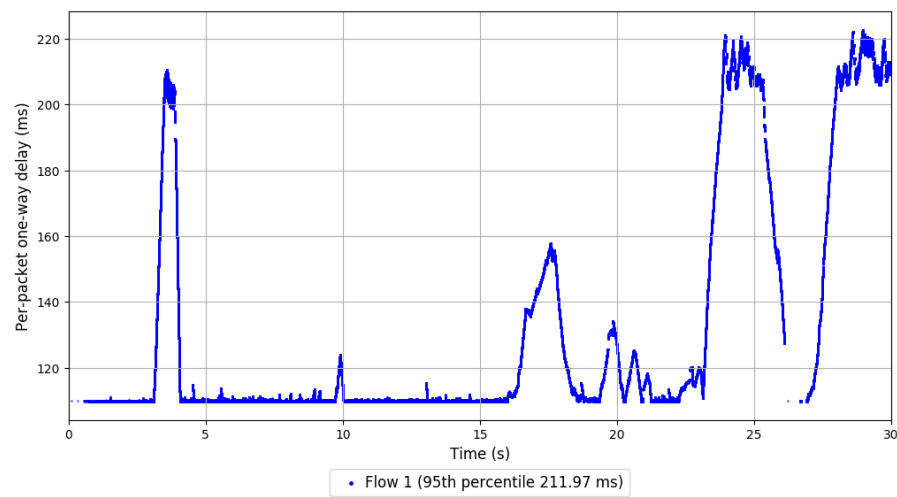
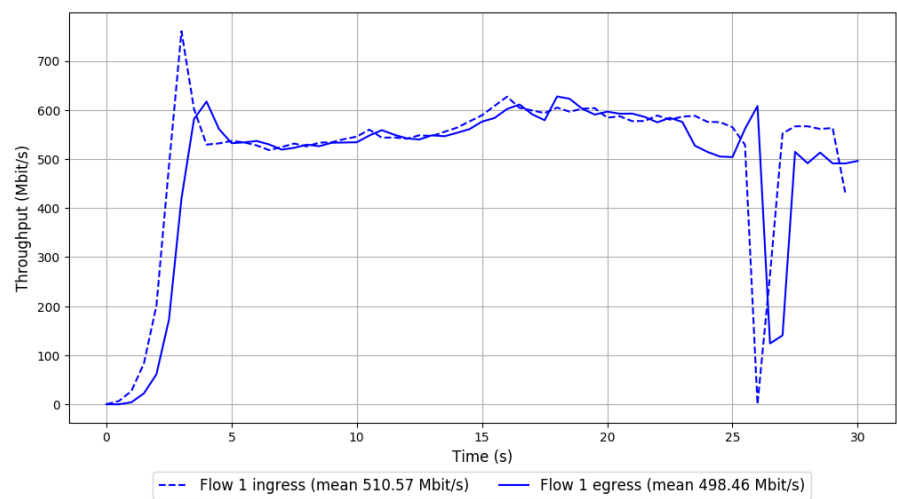
-- Flow 1:

Average throughput: 498.46 Mbit/s

95th percentile per-packet one-way delay: 211.968 ms

Loss rate: 2.36%

Run 5: Report of PCC-Allegro — Data Link

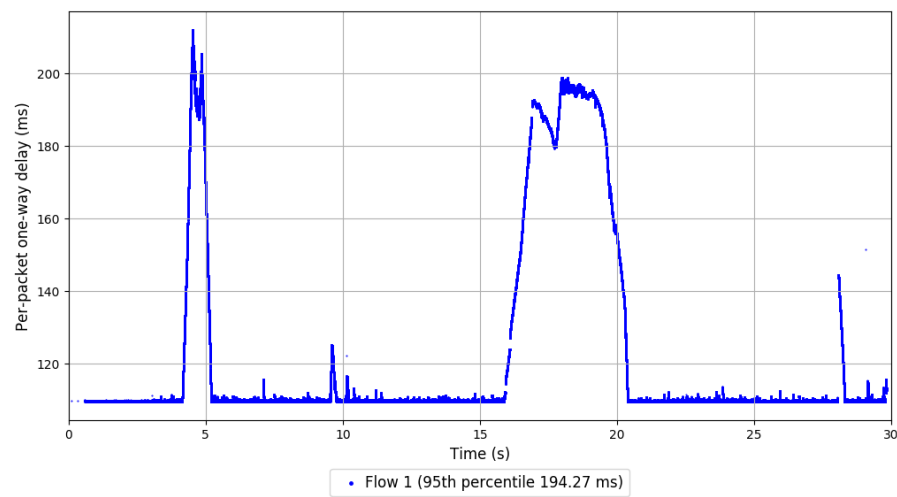
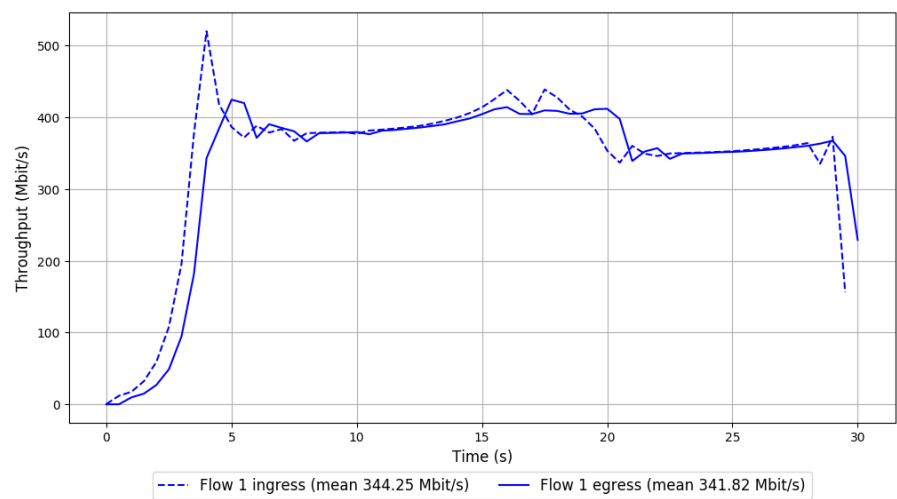


```
Run 1: Statistics of PCC-Expr

Start at: 2018-09-25 04:47:52
End at: 2018-09-25 04:48:22
Local clock offset: 10.334 ms
Remote clock offset: 8.676 ms

# Below is generated by plot.py at 2018-09-25 08:23:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 341.82 Mbit/s
95th percentile per-packet one-way delay: 194.274 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 341.82 Mbit/s
95th percentile per-packet one-way delay: 194.274 ms
Loss rate: 0.71%
```

Run 1: Report of PCC-Expr — Data Link

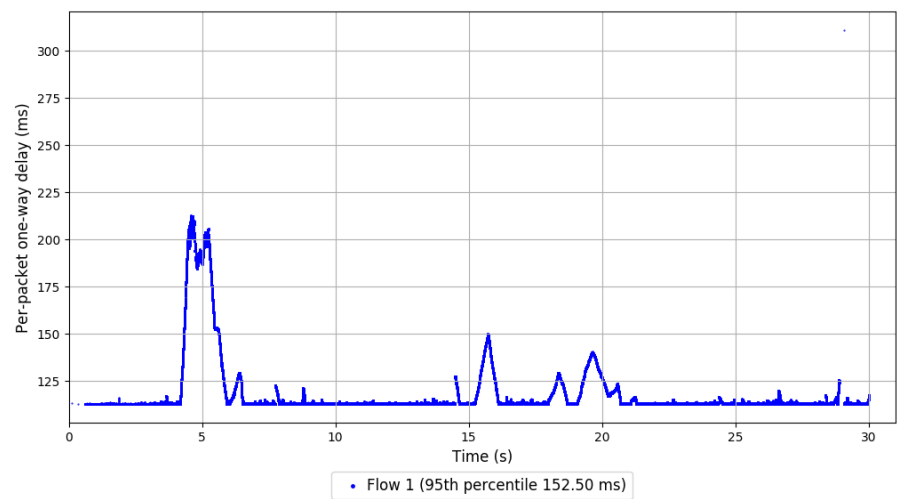
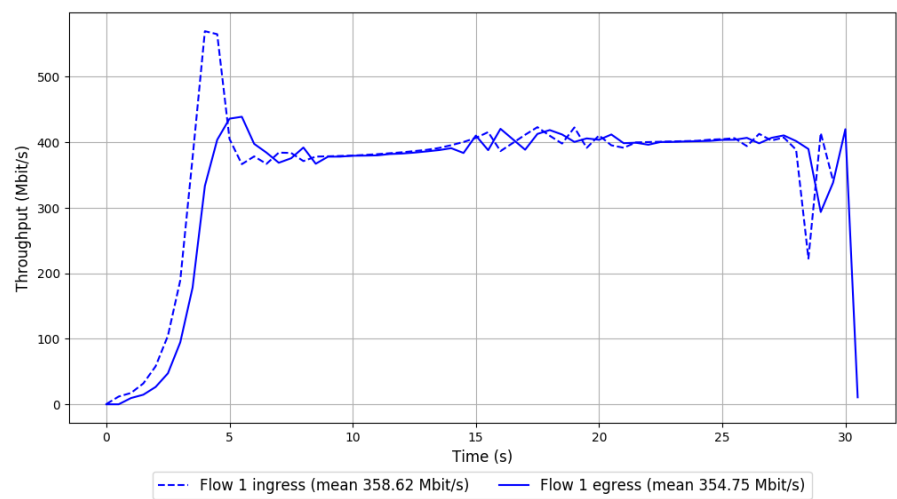


Run 2: Statistics of PCC-Expr

Start at: 2018-09-25 05:16:33
End at: 2018-09-25 05:17:03
Local clock offset: 19.083 ms
Remote clock offset: 18.068 ms

Below is generated by plot.py at 2018-09-25 08:23:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 354.75 Mbit/s
95th percentile per-packet one-way delay: 152.504 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 354.75 Mbit/s
95th percentile per-packet one-way delay: 152.504 ms
Loss rate: 1.08%

Run 2: Report of PCC-Expr — Data Link

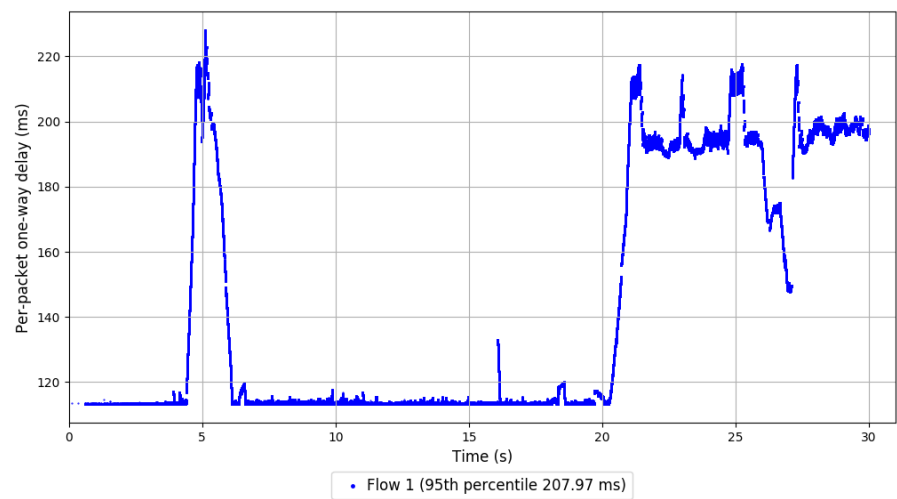
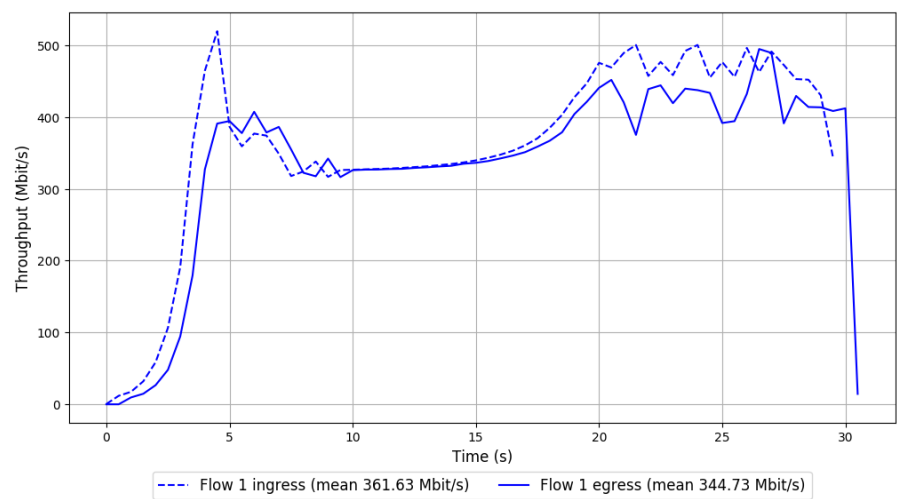


Run 3: Statistics of PCC-Expr

Start at: 2018-09-25 05:44:57
End at: 2018-09-25 05:45:27
Local clock offset: 32.628 ms
Remote clock offset: 31.845 ms

Below is generated by plot.py at 2018-09-25 08:23:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 344.73 Mbit/s
95th percentile per-packet one-way delay: 207.972 ms
Loss rate: 4.67%
-- Flow 1:
Average throughput: 344.73 Mbit/s
95th percentile per-packet one-way delay: 207.972 ms
Loss rate: 4.67%

Run 3: Report of PCC-Expr — Data Link

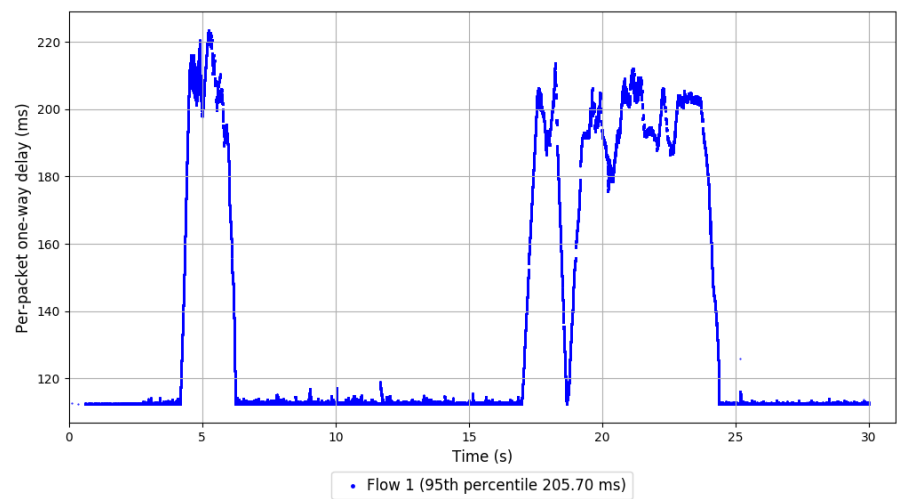
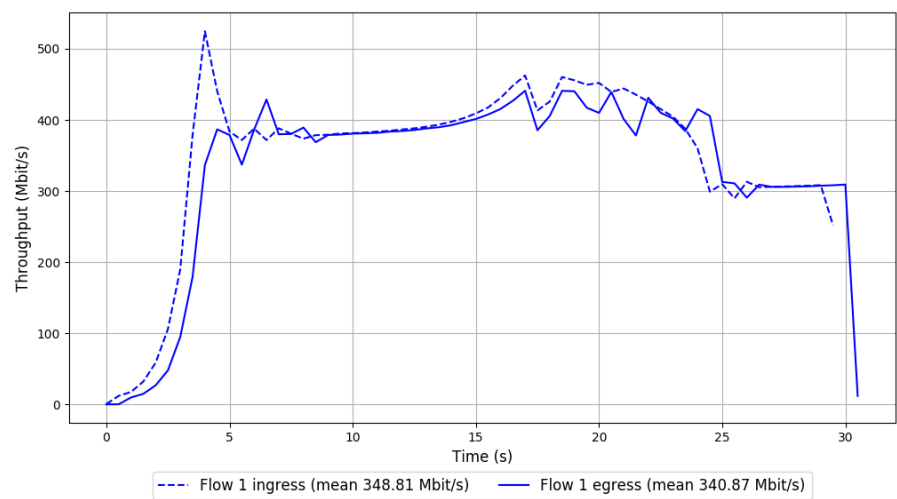


Run 4: Statistics of PCC-Expr

Start at: 2018-09-25 06:13:09
End at: 2018-09-25 06:13:39
Local clock offset: 14.769 ms
Remote clock offset: 14.311 ms

Below is generated by plot.py at 2018-09-25 08:23:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 340.87 Mbit/s
95th percentile per-packet one-way delay: 205.704 ms
Loss rate: 2.28%
-- Flow 1:
Average throughput: 340.87 Mbit/s
95th percentile per-packet one-way delay: 205.704 ms
Loss rate: 2.28%

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

Start at: 2018-09-25 06:41:46

End at: 2018-09-25 06:42:16

Local clock offset: 5.679 ms

Remote clock offset: 6.217 ms

Below is generated by plot.py at 2018-09-25 08:24:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 348.03 Mbit/s

95th percentile per-packet one-way delay: 196.392 ms

Loss rate: 1.18%

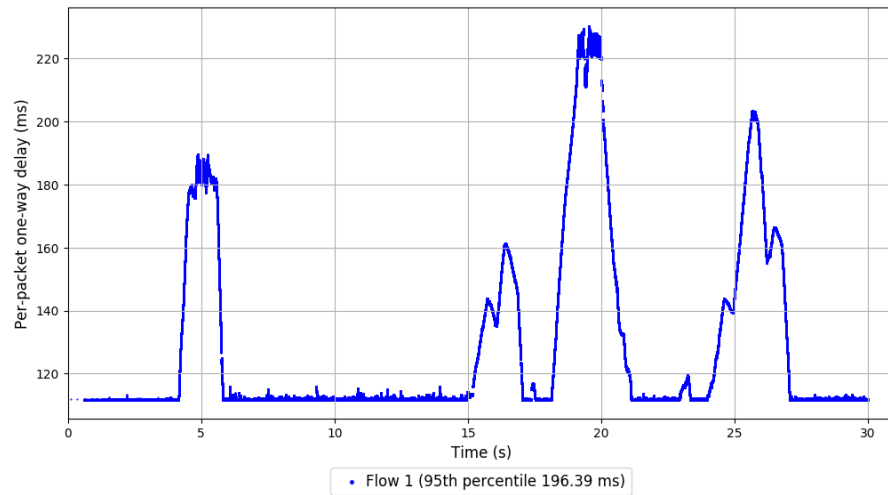
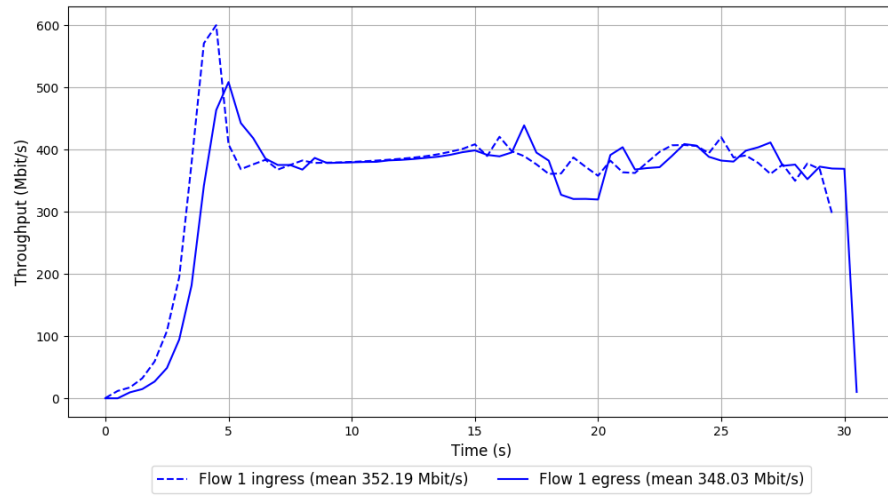
-- Flow 1:

Average throughput: 348.03 Mbit/s

95th percentile per-packet one-way delay: 196.392 ms

Loss rate: 1.18%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2018-09-25 04:42:29

End at: 2018-09-25 04:42:59

Local clock offset: 5.021 ms

Remote clock offset: 5.525 ms

Below is generated by plot.py at 2018-09-25 08:24:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 49.47 Mbit/s

95th percentile per-packet one-way delay: 111.387 ms

Loss rate: 0.00%

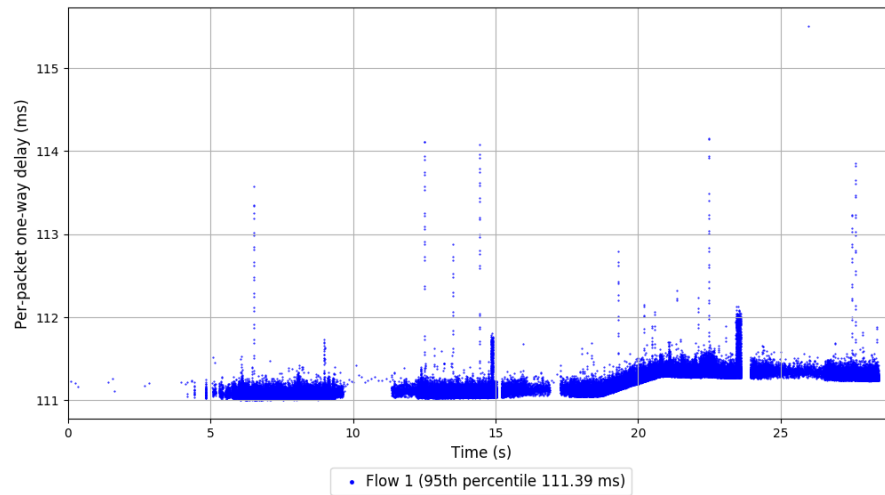
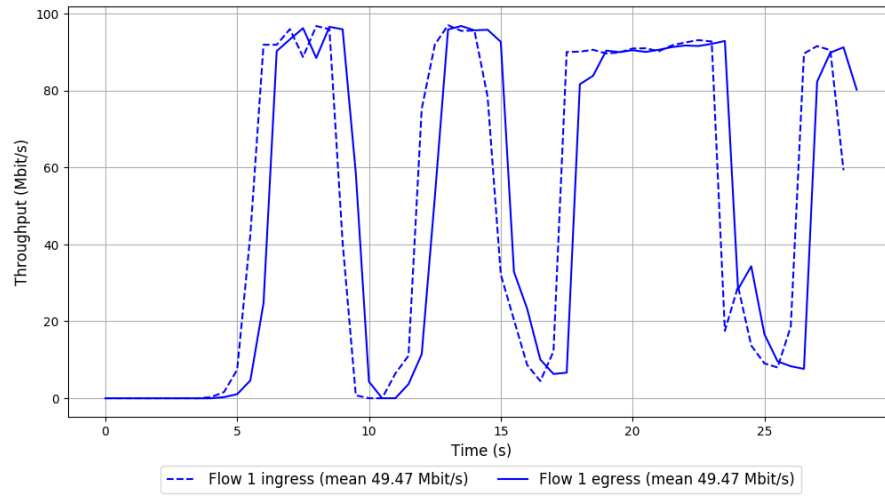
-- Flow 1:

Average throughput: 49.47 Mbit/s

95th percentile per-packet one-way delay: 111.387 ms

Loss rate: 0.00%

Run 1: Report of QUIC Cubic — Data Link

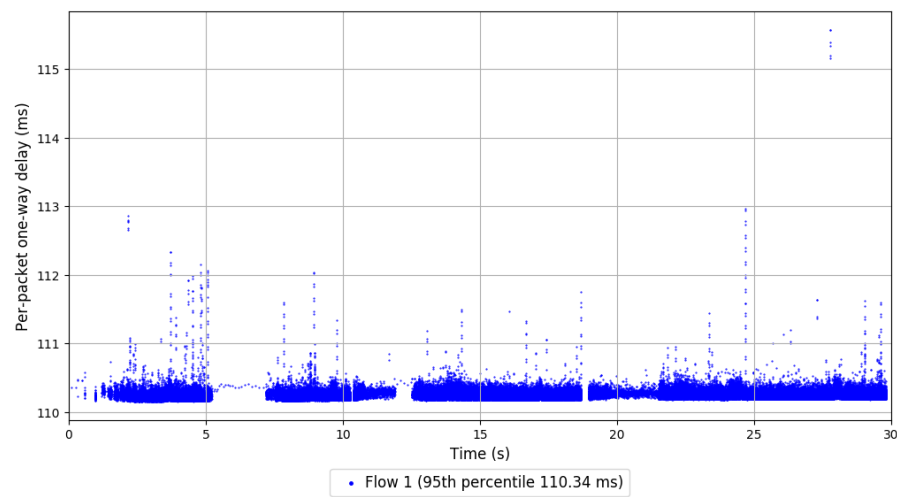
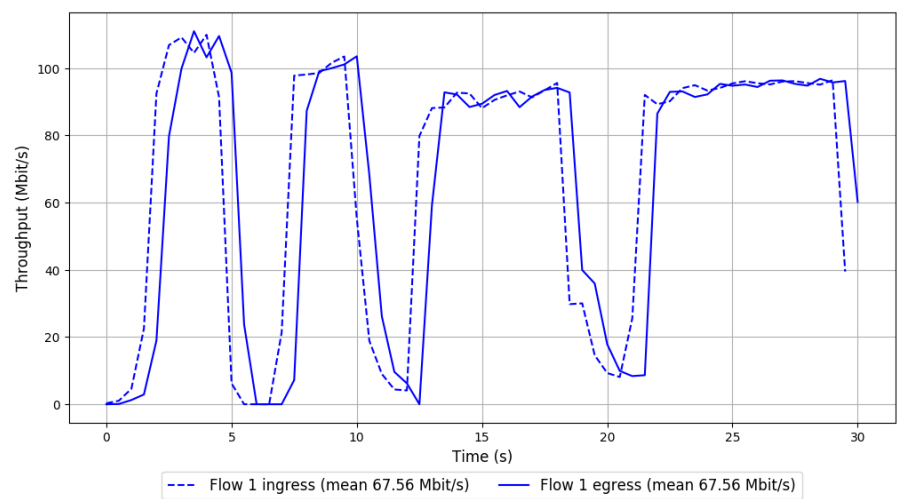


Run 2: Statistics of QUIC Cubic

Start at: 2018-09-25 05:10:59
End at: 2018-09-25 05:11:29
Local clock offset: 20.997 ms
Remote clock offset: 19.987 ms

Below is generated by plot.py at 2018-09-25 08:24:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 67.56 Mbit/s
95th percentile per-packet one-way delay: 110.340 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 67.56 Mbit/s
95th percentile per-packet one-way delay: 110.340 ms
Loss rate: 0.00%

Run 2: Report of QUIC Cubic — Data Link

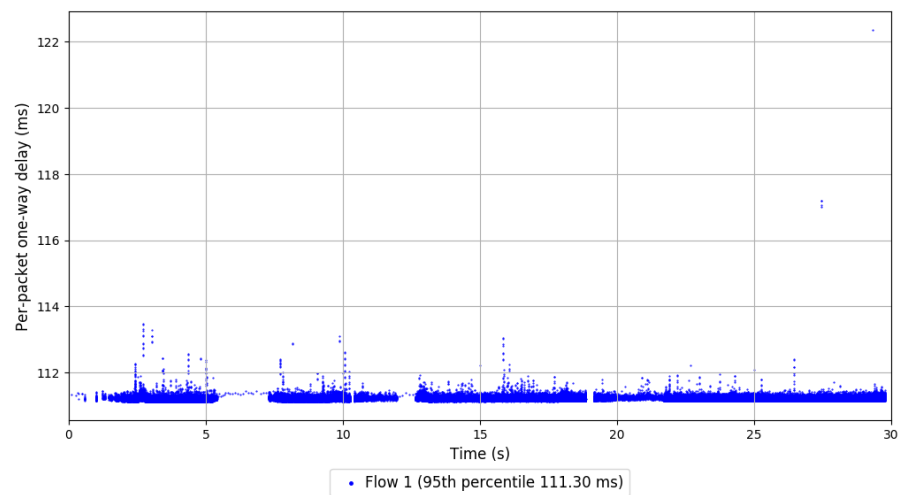
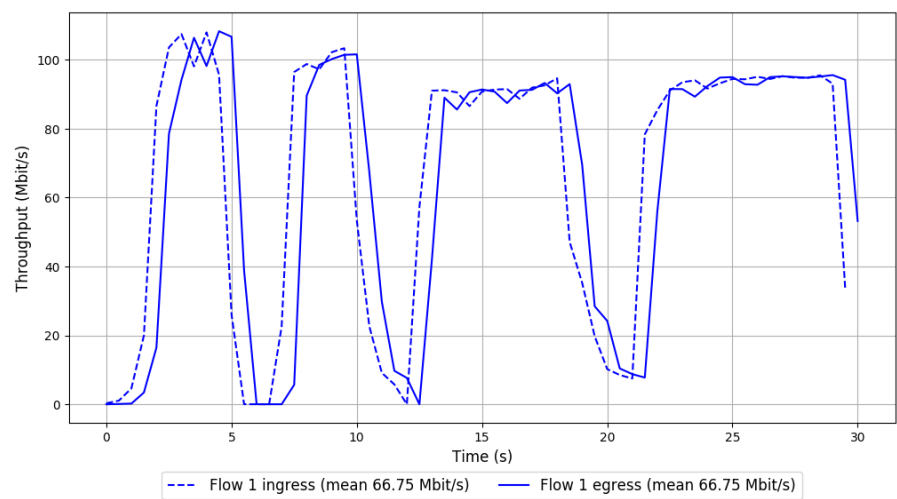


Run 3: Statistics of QUIC Cubic

Start at: 2018-09-25 05:39:30
End at: 2018-09-25 05:40:00
Local clock offset: 27.786 ms
Remote clock offset: 26.677 ms

Below is generated by plot.py at 2018-09-25 08:24:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 66.75 Mbit/s
95th percentile per-packet one-way delay: 111.295 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 66.75 Mbit/s
95th percentile per-packet one-way delay: 111.295 ms
Loss rate: 0.00%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-09-25 06:07:36

End at: 2018-09-25 06:08:06

Local clock offset: 13.408 ms

Remote clock offset: 12.712 ms

Below is generated by plot.py at 2018-09-25 08:24:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 65.55 Mbit/s

95th percentile per-packet one-way delay: 111.047 ms

Loss rate: 0.00%

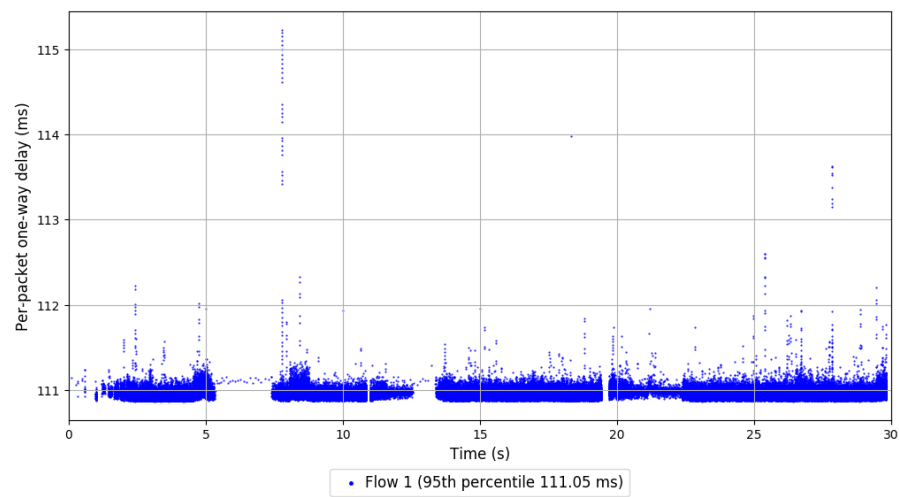
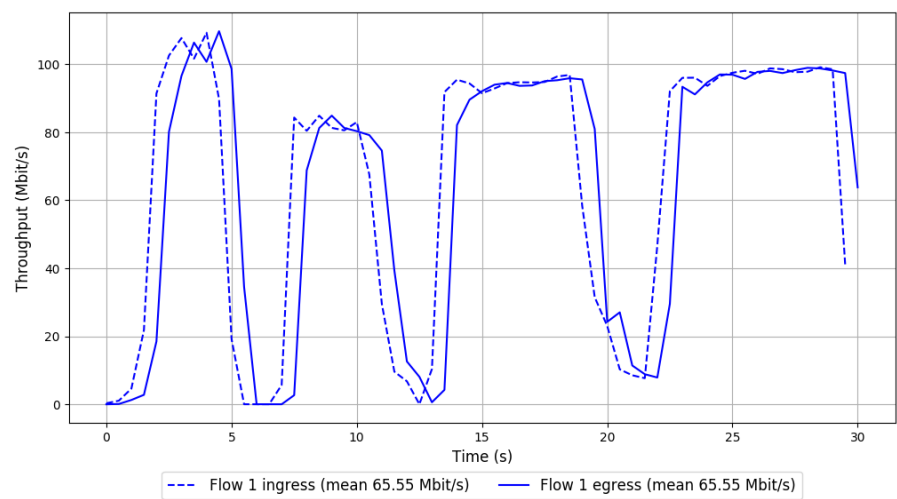
-- Flow 1:

Average throughput: 65.55 Mbit/s

95th percentile per-packet one-way delay: 111.047 ms

Loss rate: 0.00%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-09-25 06:36:14

End at: 2018-09-25 06:36:44

Local clock offset: 5.57 ms

Remote clock offset: 6.313 ms

Below is generated by plot.py at 2018-09-25 08:24:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 61.06 Mbit/s

95th percentile per-packet one-way delay: 112.645 ms

Loss rate: 0.00%

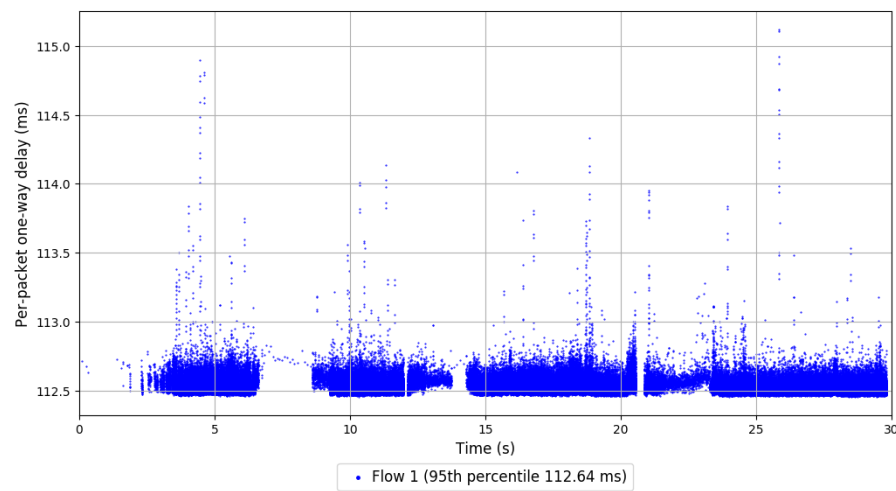
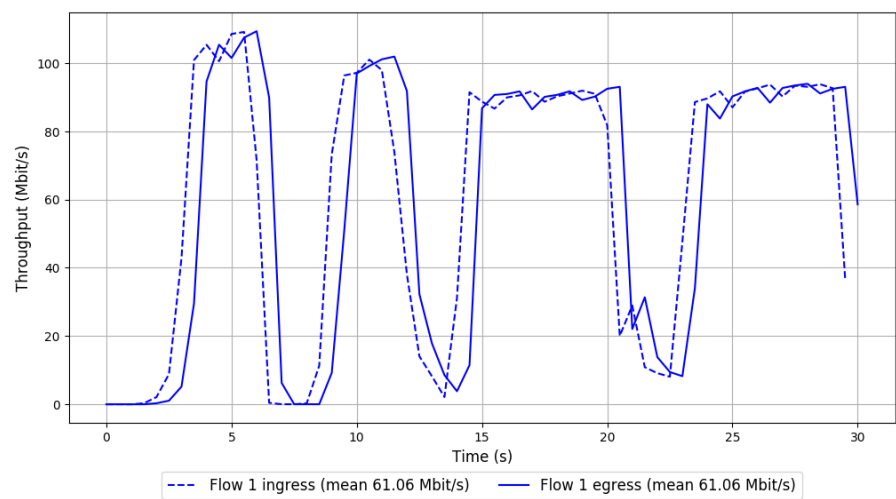
-- Flow 1:

Average throughput: 61.06 Mbit/s

95th percentile per-packet one-way delay: 112.645 ms

Loss rate: 0.00%

Run 5: Report of QUIC Cubic — Data Link

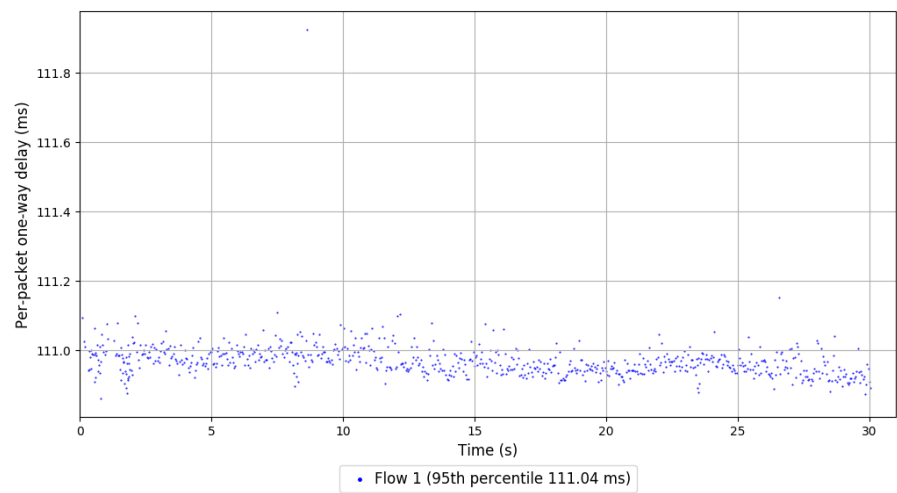
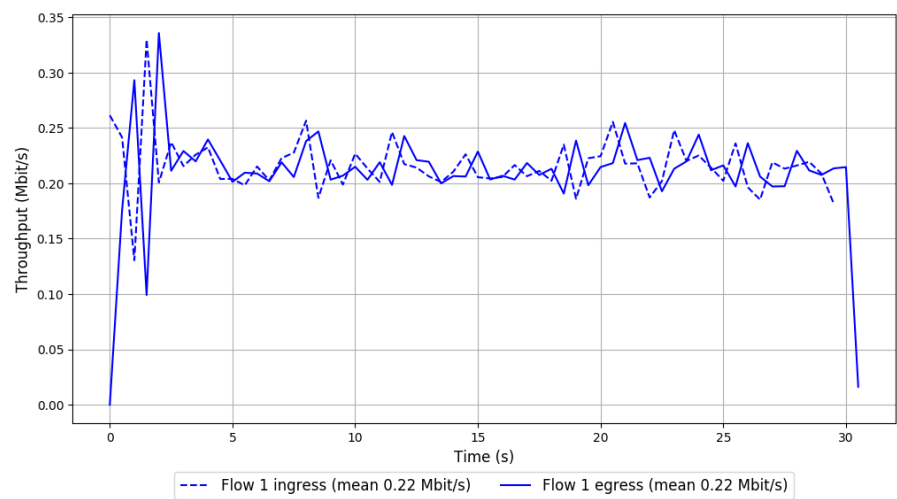


Run 1: Statistics of SCReAM

Start at: 2018-09-25 04:55:46
End at: 2018-09-25 04:56:16
Local clock offset: 15.073 ms
Remote clock offset: 14.974 ms

Below is generated by plot.py at 2018-09-25 08:24:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.036 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.036 ms
Loss rate: 0.00%

Run 1: Report of SReAM — Data Link

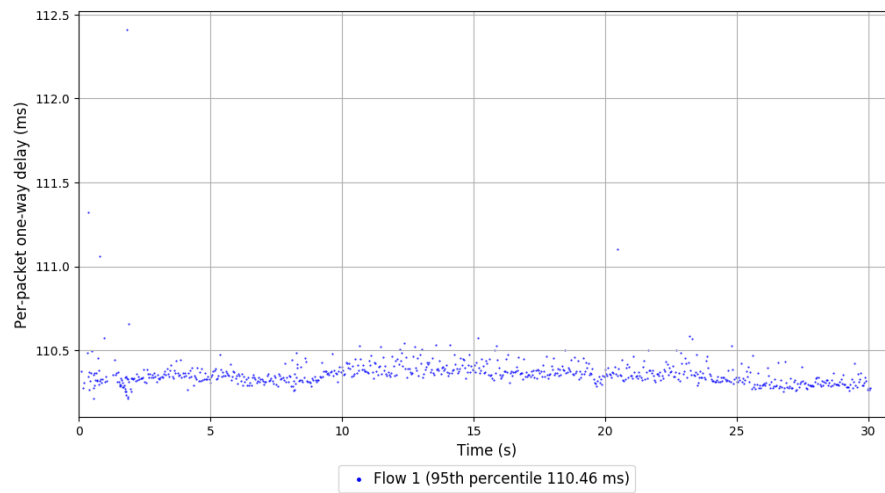
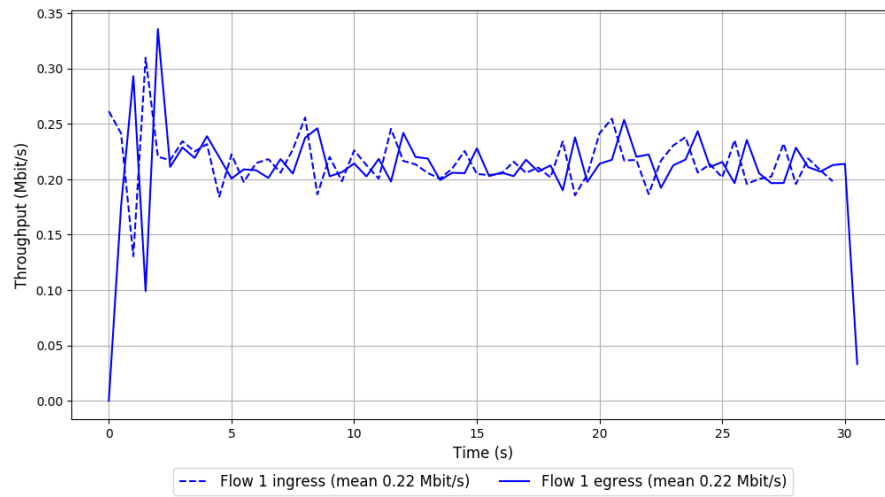


Run 2: Statistics of SCReAM

Start at: 2018-09-25 05:24:33
End at: 2018-09-25 05:25:03
Local clock offset: 18.496 ms
Remote clock offset: 16.914 ms

Below is generated by plot.py at 2018-09-25 08:24:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.462 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.462 ms
Loss rate: 0.00%

Run 2: Report of SReAM — Data Link

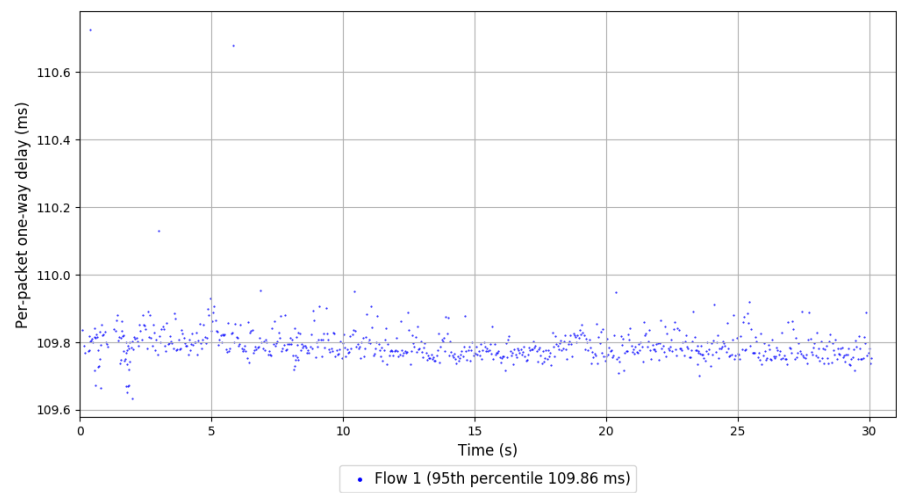
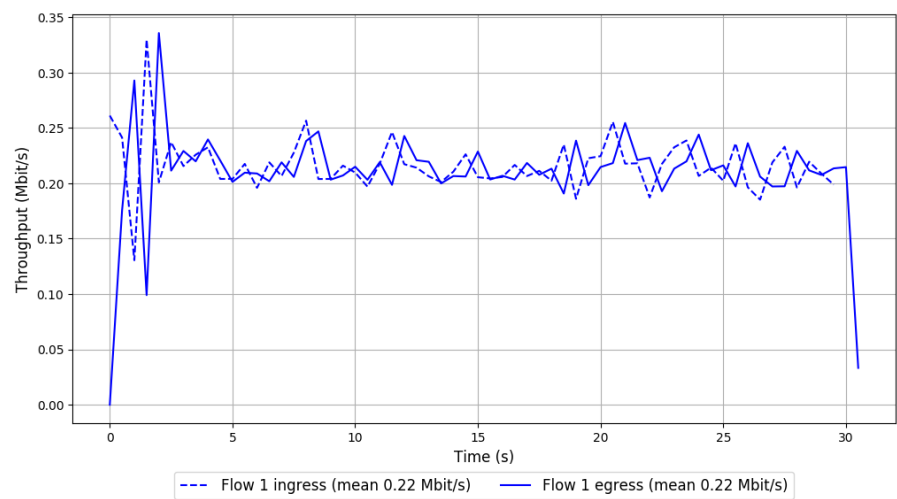


Run 3: Statistics of SCReAM

Start at: 2018-09-25 05:52:39
End at: 2018-09-25 05:53:09
Local clock offset: 21.005 ms
Remote clock offset: 20.319 ms

Below is generated by plot.py at 2018-09-25 08:24:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 109.864 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 109.864 ms
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link

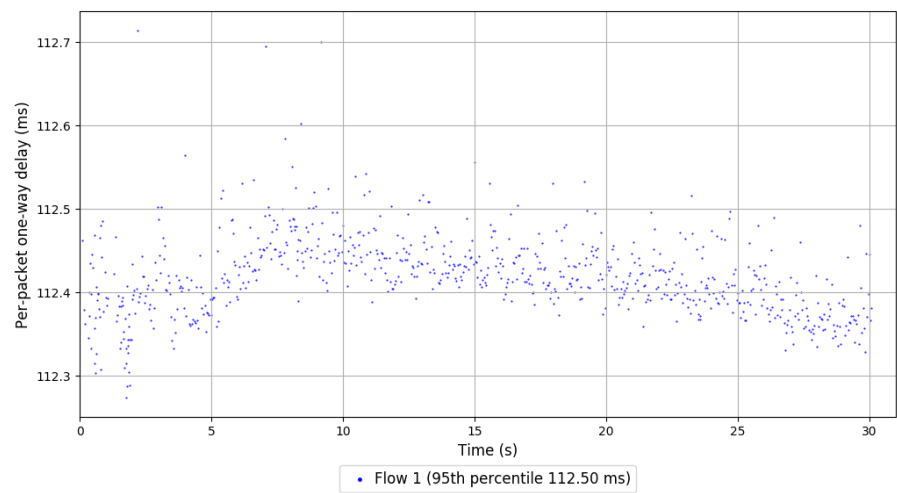
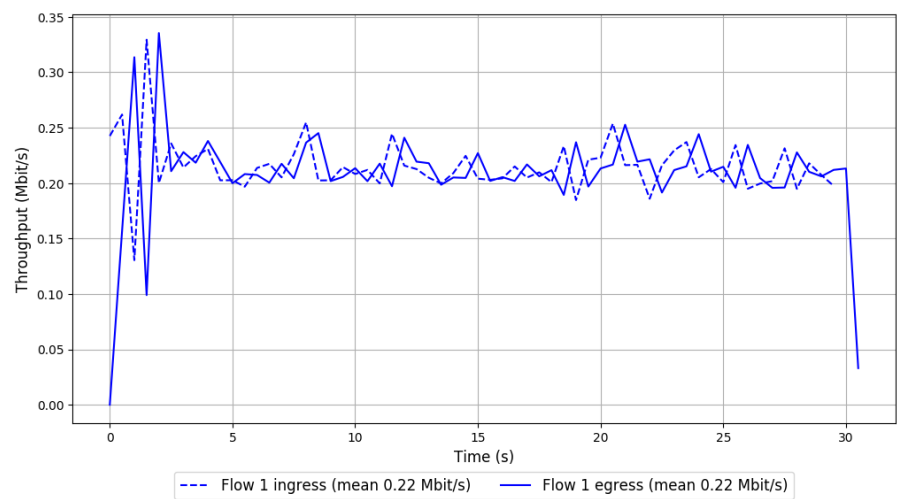


Run 4: Statistics of SCReAM

Start at: 2018-09-25 06:20:53
End at: 2018-09-25 06:21:24
Local clock offset: 17.497 ms
Remote clock offset: 16.592 ms

Below is generated by plot.py at 2018-09-25 08:24:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.496 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.496 ms
Loss rate: 0.00%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2018-09-25 06:49:39

End at: 2018-09-25 06:50:09

Local clock offset: 6.347 ms

Remote clock offset: 7.485 ms

Below is generated by plot.py at 2018-09-25 08:24:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.467 ms

Loss rate: 0.00%

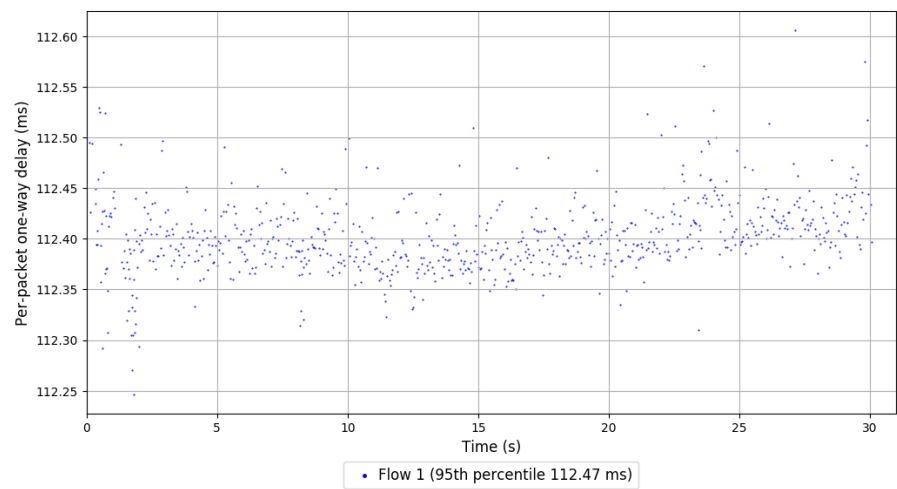
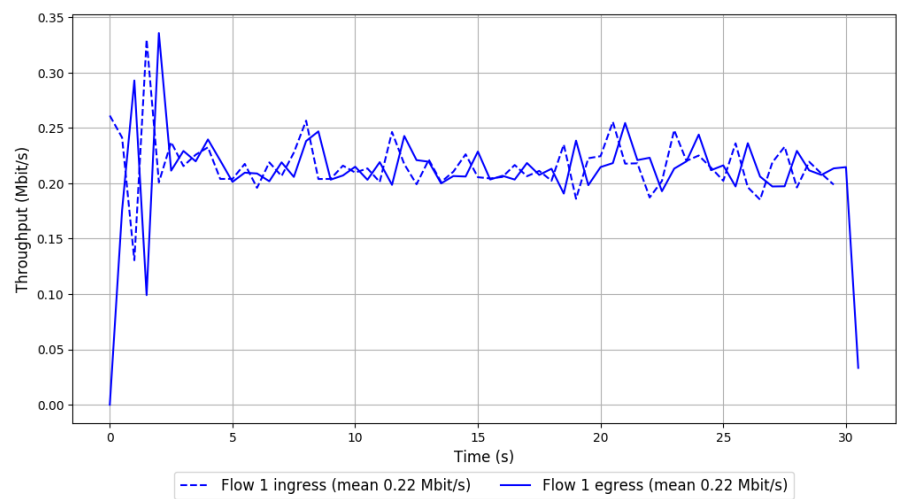
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.467 ms

Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2018-09-25 04:51:10

End at: 2018-09-25 04:51:40

Local clock offset: 8.689 ms

Remote clock offset: 8.369 ms

Below is generated by plot.py at 2018-09-25 08:24:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.64 Mbit/s

95th percentile per-packet one-way delay: 111.585 ms

Loss rate: 0.00%

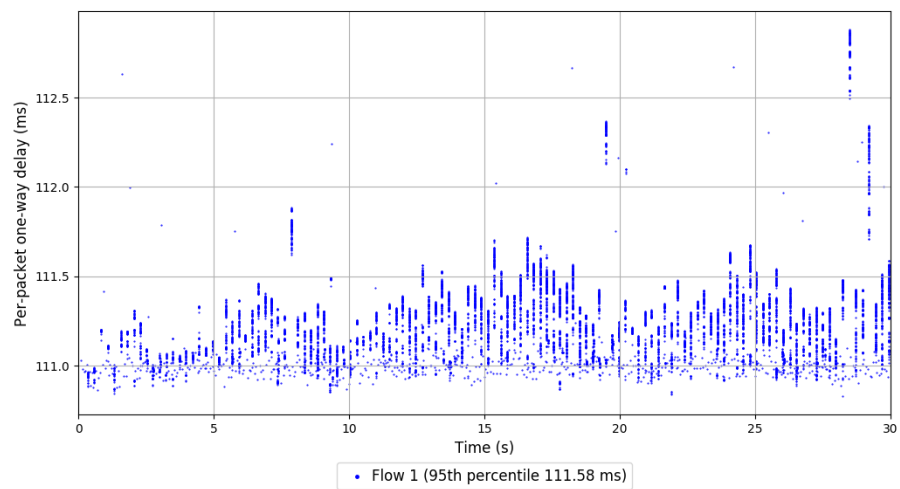
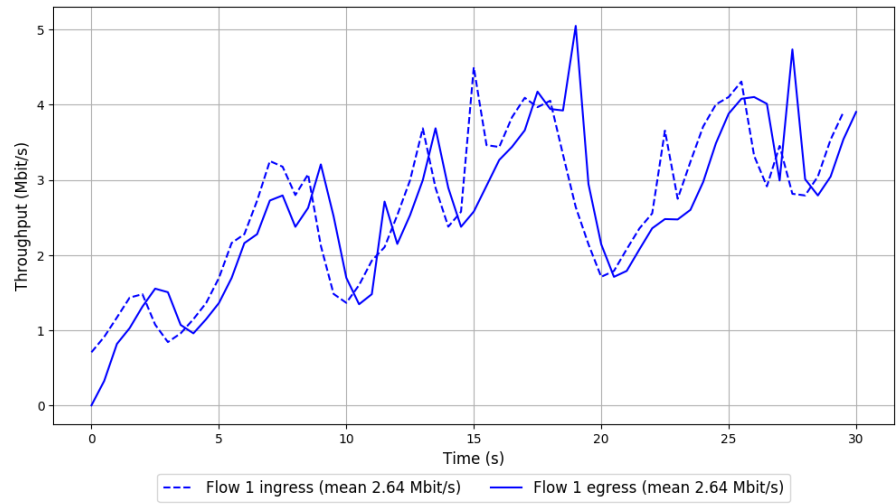
-- Flow 1:

Average throughput: 2.64 Mbit/s

95th percentile per-packet one-way delay: 111.585 ms

Loss rate: 0.00%

Run 1: Report of Sprout — Data Link

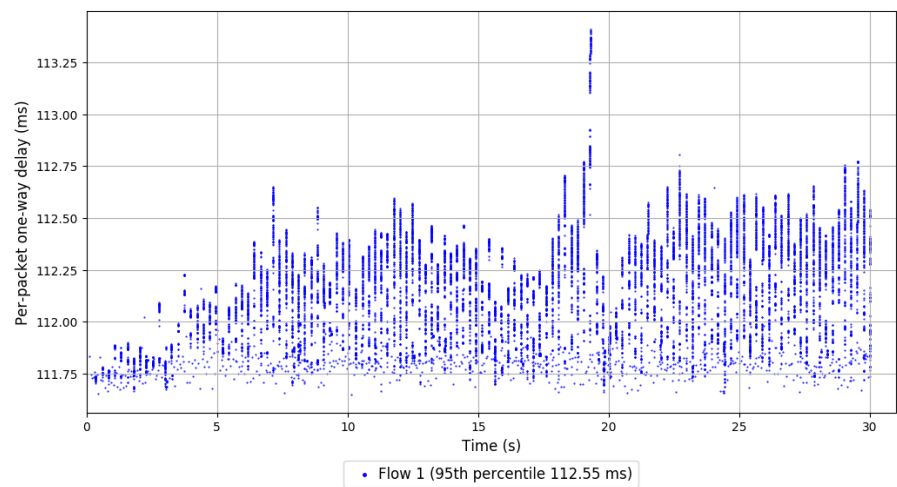
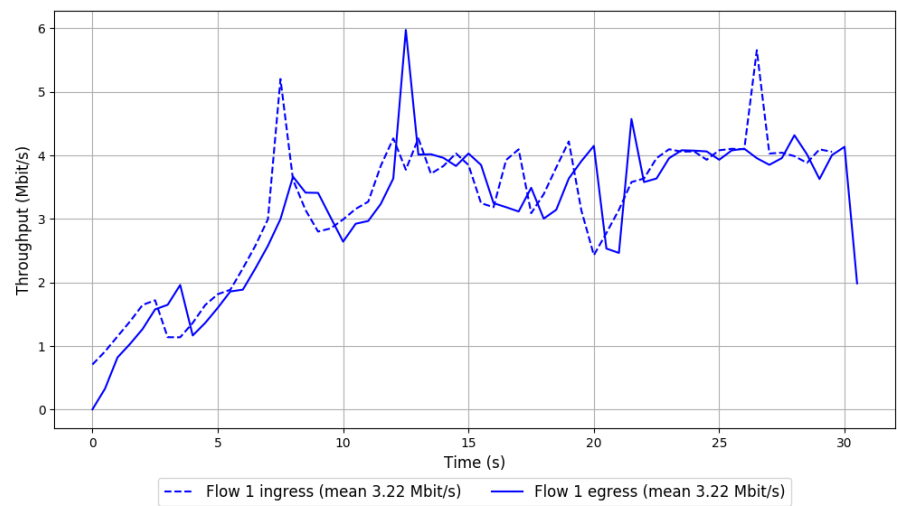


Run 2: Statistics of Sprout

Start at: 2018-09-25 05:19:56
End at: 2018-09-25 05:20:26
Local clock offset: 16.172 ms
Remote clock offset: 16.536 ms

Below is generated by plot.py at 2018-09-25 08:24:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.22 Mbit/s
95th percentile per-packet one-way delay: 112.552 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 3.22 Mbit/s
95th percentile per-packet one-way delay: 112.552 ms
Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

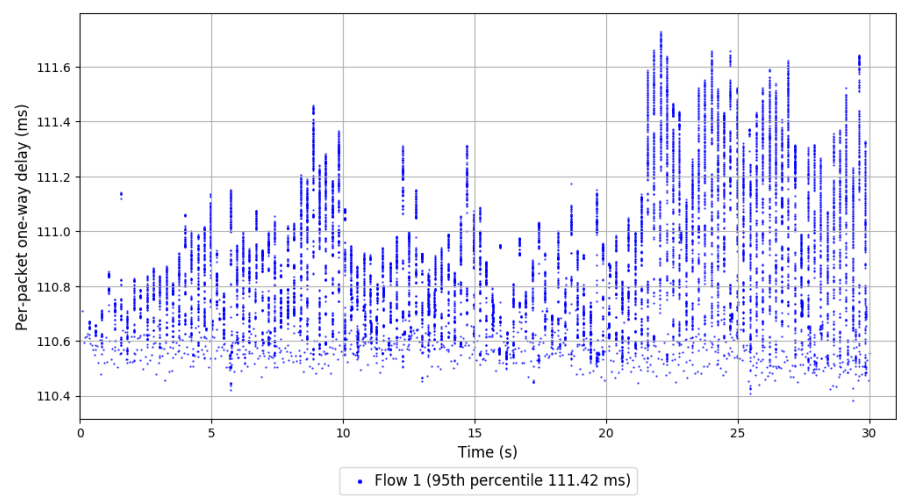
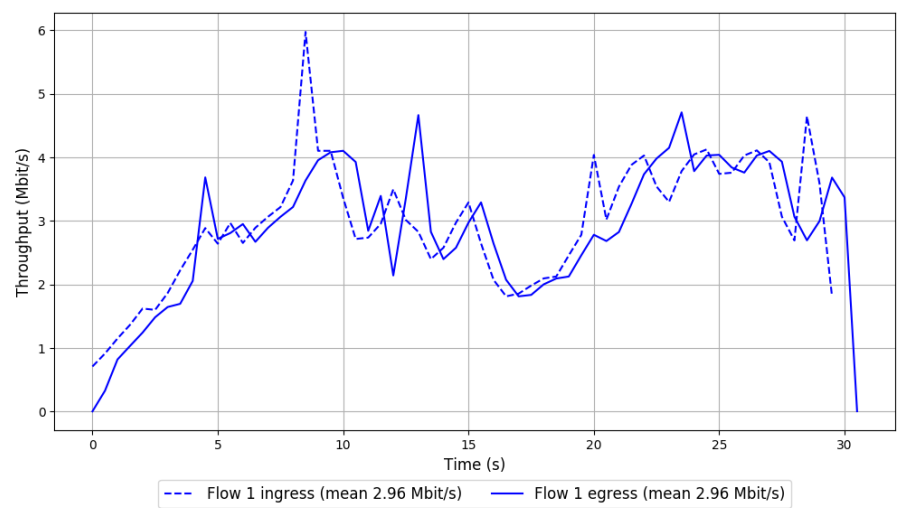


Run 3: Statistics of Sprout

Start at: 2018-09-25 05:48:09
End at: 2018-09-25 05:48:39
Local clock offset: 32.486 ms
Remote clock offset: 29.819 ms

Below is generated by plot.py at 2018-09-25 08:24:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.96 Mbit/s
95th percentile per-packet one-way delay: 111.416 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.96 Mbit/s
95th percentile per-packet one-way delay: 111.416 ms
Loss rate: 0.00%

Run 3: Report of Sprout — Data Link

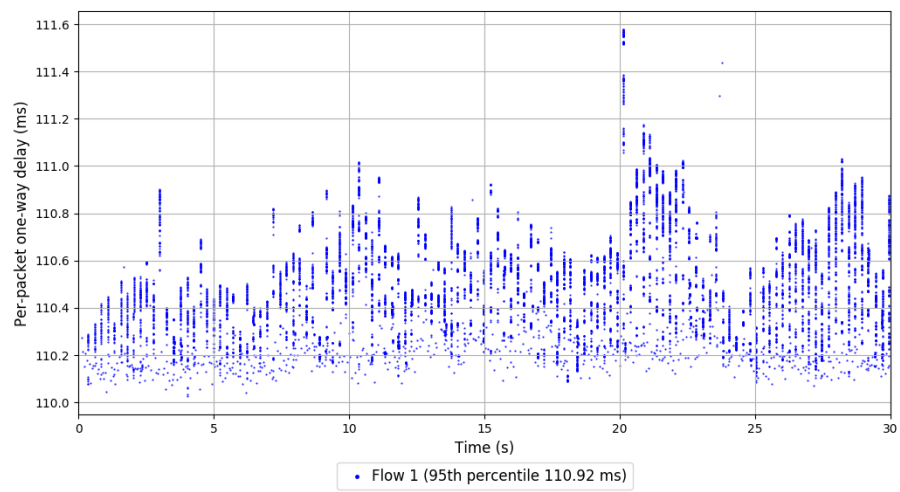
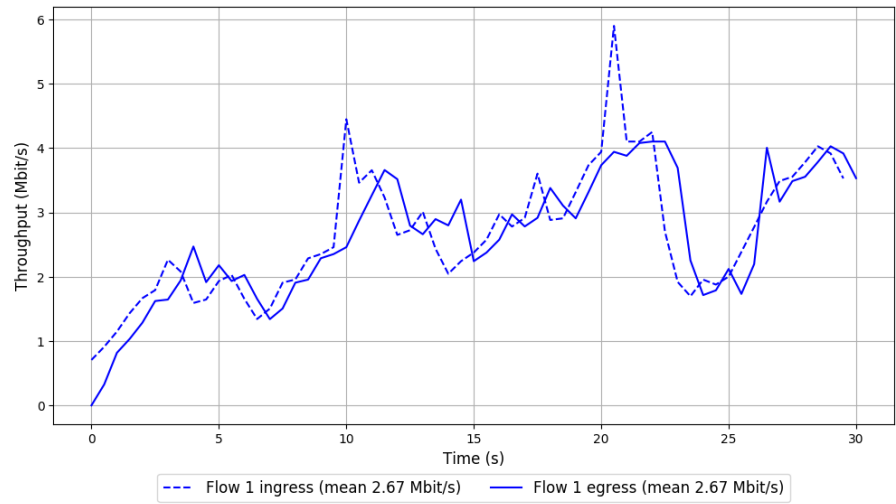


Run 4: Statistics of Sprout

Start at: 2018-09-25 06:16:24
End at: 2018-09-25 06:16:54
Local clock offset: 16.523 ms
Remote clock offset: 14.589 ms

Below is generated by plot.py at 2018-09-25 08:24:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.67 Mbit/s
95th percentile per-packet one-way delay: 110.923 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.67 Mbit/s
95th percentile per-packet one-way delay: 110.923 ms
Loss rate: 0.00%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-09-25 06:45:04

End at: 2018-09-25 06:45:34

Local clock offset: 6.108 ms

Remote clock offset: 6.837 ms

Below is generated by plot.py at 2018-09-25 08:24:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.30 Mbit/s

95th percentile per-packet one-way delay: 112.998 ms

Loss rate: 0.00%

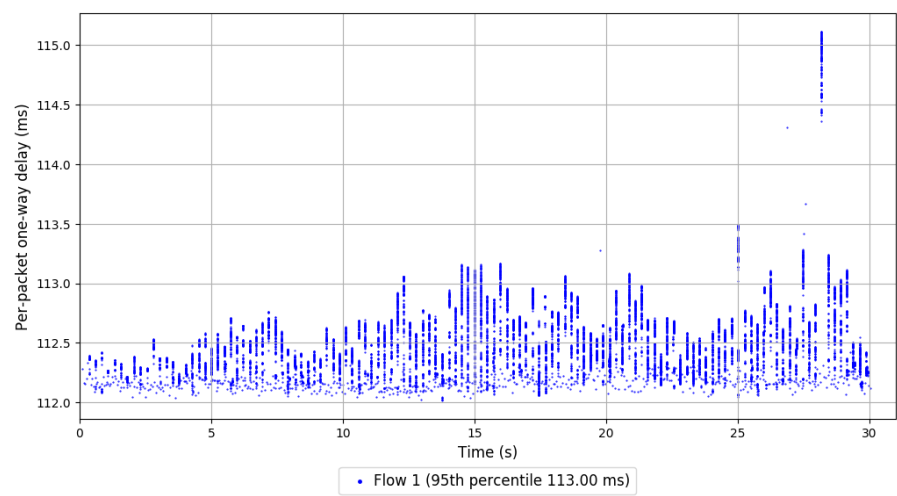
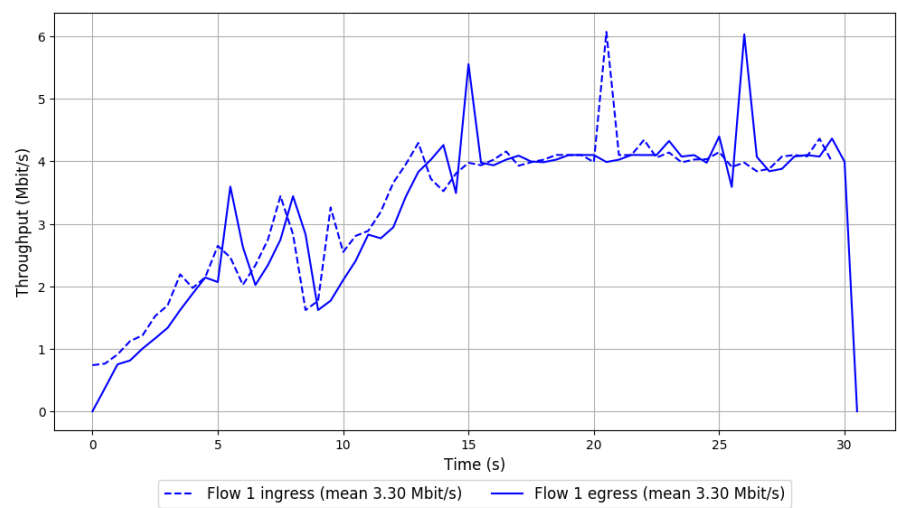
-- Flow 1:

Average throughput: 3.30 Mbit/s

95th percentile per-packet one-way delay: 112.998 ms

Loss rate: 0.00%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2018-09-25 04:40:59

End at: 2018-09-25 04:41:29

Local clock offset: 4.842 ms

Remote clock offset: 3.875 ms

Below is generated by plot.py at 2018-09-25 08:26:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 199.21 Mbit/s

95th percentile per-packet one-way delay: 112.149 ms

Loss rate: 0.00%

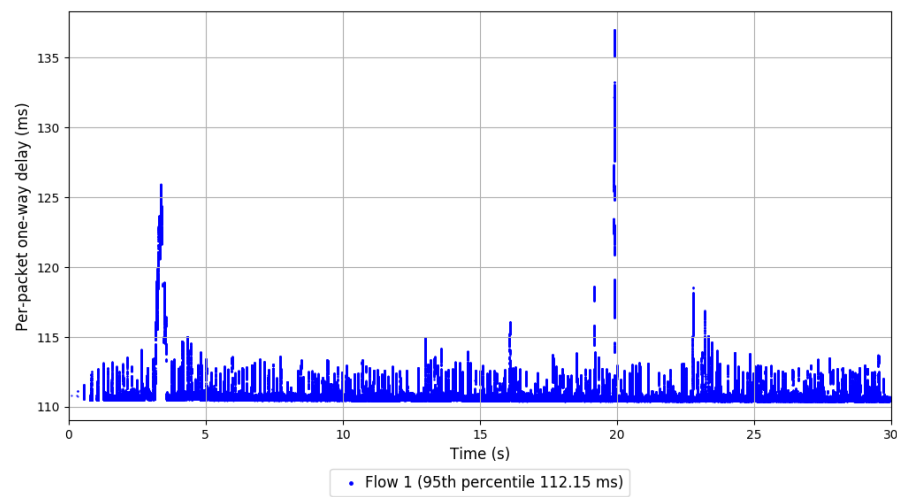
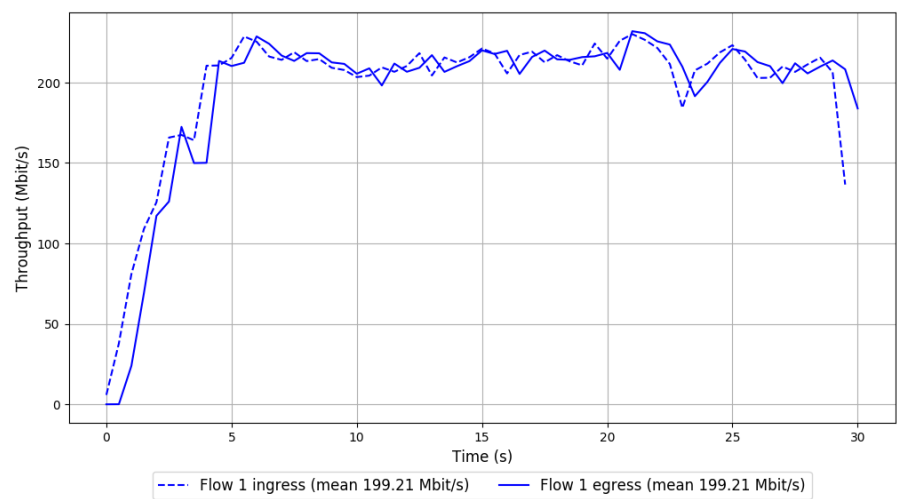
-- Flow 1:

Average throughput: 199.21 Mbit/s

95th percentile per-packet one-way delay: 112.149 ms

Loss rate: 0.00%

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

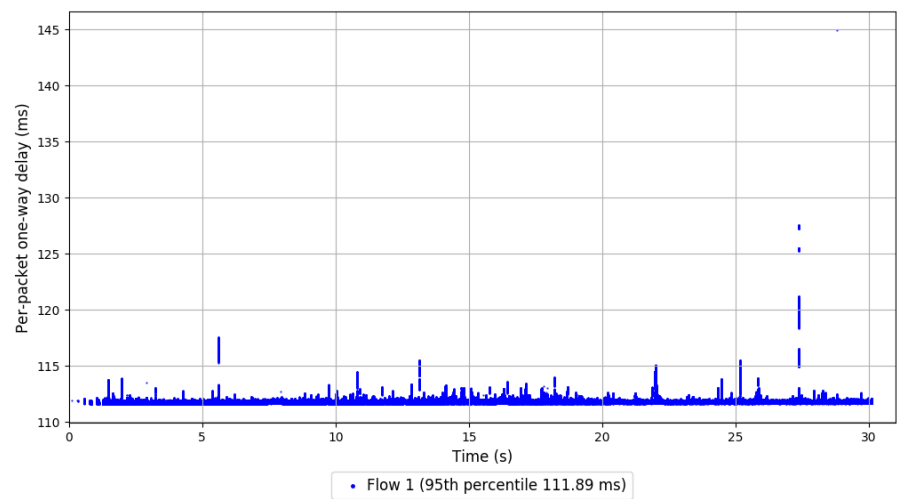
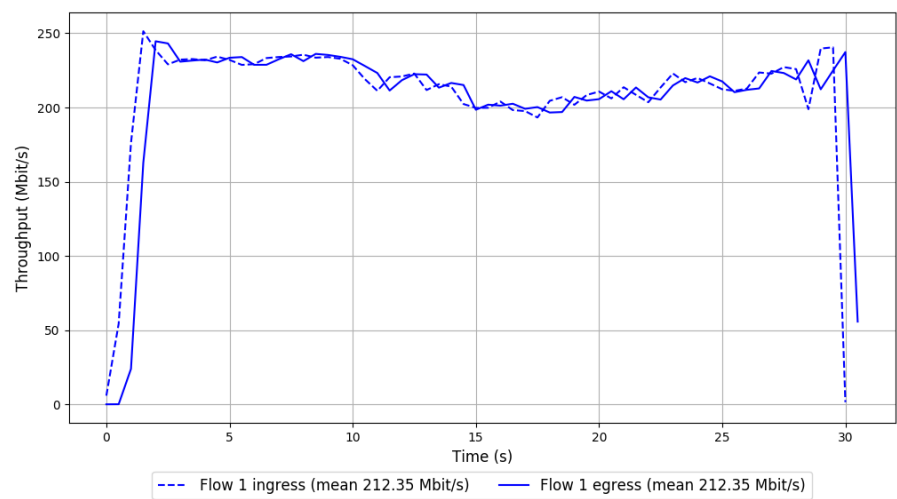


Run 2: Statistics of TaoVA-100x

Start at: 2018-09-25 05:09:30
End at: 2018-09-25 05:10:00
Local clock offset: 18.964 ms
Remote clock offset: 18.311 ms

Below is generated by plot.py at 2018-09-25 08:26:55
Datalink statistics
-- Total of 1 flow:
Average throughput: 212.35 Mbit/s
95th percentile per-packet one-way delay: 111.893 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 212.35 Mbit/s
95th percentile per-packet one-way delay: 111.893 ms
Loss rate: 0.00%

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

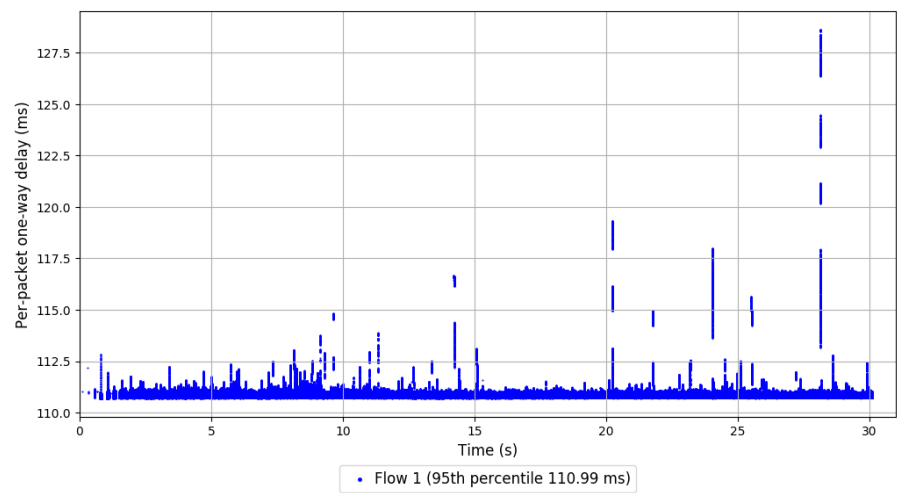
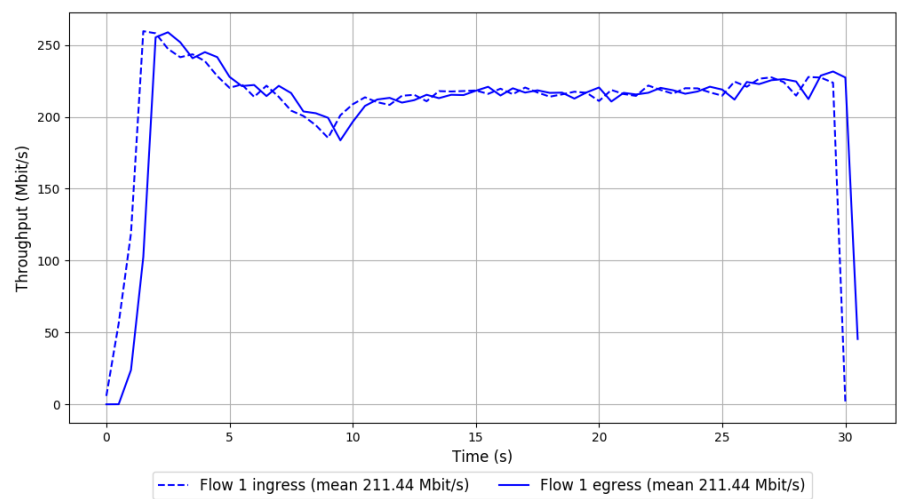


Run 3: Statistics of TaoVA-100x

Start at: 2018-09-25 05:38:01
End at: 2018-09-25 05:38:31
Local clock offset: 26.784 ms
Remote clock offset: 25.301 ms

Below is generated by plot.py at 2018-09-25 08:26:55
Datalink statistics
-- Total of 1 flow:
Average throughput: 211.44 Mbit/s
95th percentile per-packet one-way delay: 110.992 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 211.44 Mbit/s
95th percentile per-packet one-way delay: 110.992 ms
Loss rate: 0.00%

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

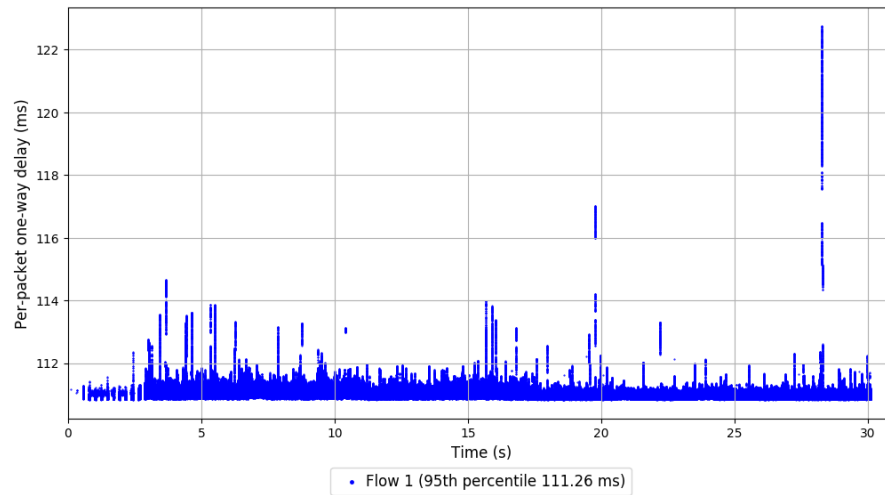
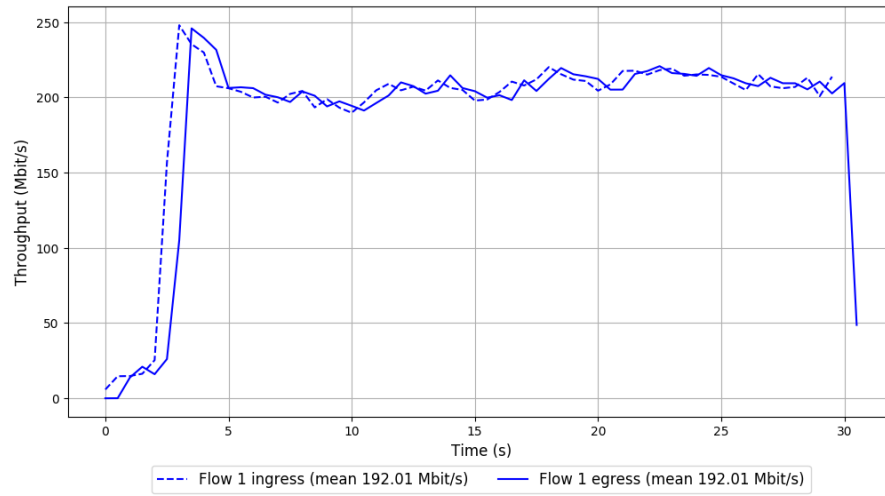


Run 4: Statistics of TaoVA-100x

Start at: 2018-09-25 06:06:09
End at: 2018-09-25 06:06:39
Local clock offset: 13.919 ms
Remote clock offset: 12.575 ms

Below is generated by plot.py at 2018-09-25 08:26:55
Datalink statistics
-- Total of 1 flow:
Average throughput: 192.01 Mbit/s
95th percentile per-packet one-way delay: 111.260 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 192.01 Mbit/s
95th percentile per-packet one-way delay: 111.260 ms
Loss rate: 0.00%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-09-25 06:34:44

End at: 2018-09-25 06:35:14

Local clock offset: 6.966 ms

Remote clock offset: 6.893 ms

Below is generated by plot.py at 2018-09-25 08:29:45

Datalink statistics

-- Total of 1 flow:

Average throughput: 211.80 Mbit/s

95th percentile per-packet one-way delay: 111.927 ms

Loss rate: 0.00%

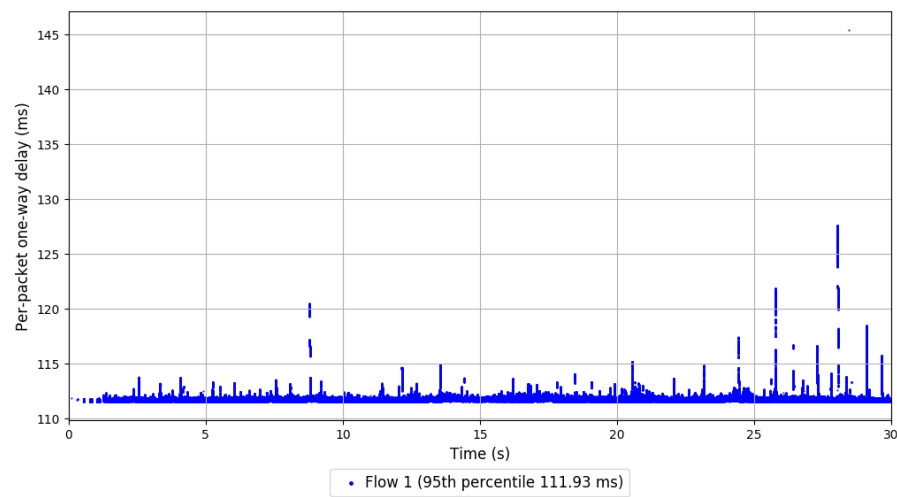
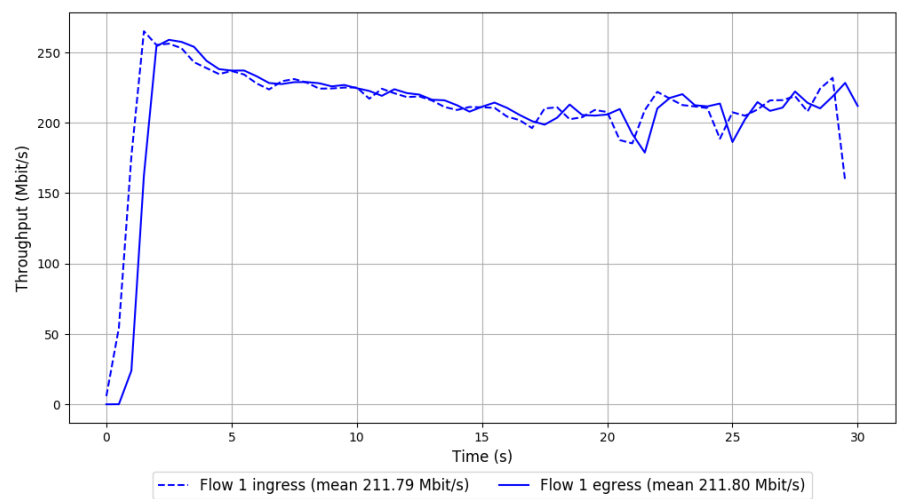
-- Flow 1:

Average throughput: 211.80 Mbit/s

95th percentile per-packet one-way delay: 111.927 ms

Loss rate: 0.00%

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



Run 1: Statistics of TCP Vegas

Start at: 2018-09-25 04:49:33

End at: 2018-09-25 04:50:03

Local clock offset: 7.802 ms

Remote clock offset: 7.052 ms

Below is generated by plot.py at 2018-09-25 08:32:26

Datalink statistics

-- Total of 1 flow:

Average throughput: 531.96 Mbit/s

95th percentile per-packet one-way delay: 110.985 ms

Loss rate: 0.00%

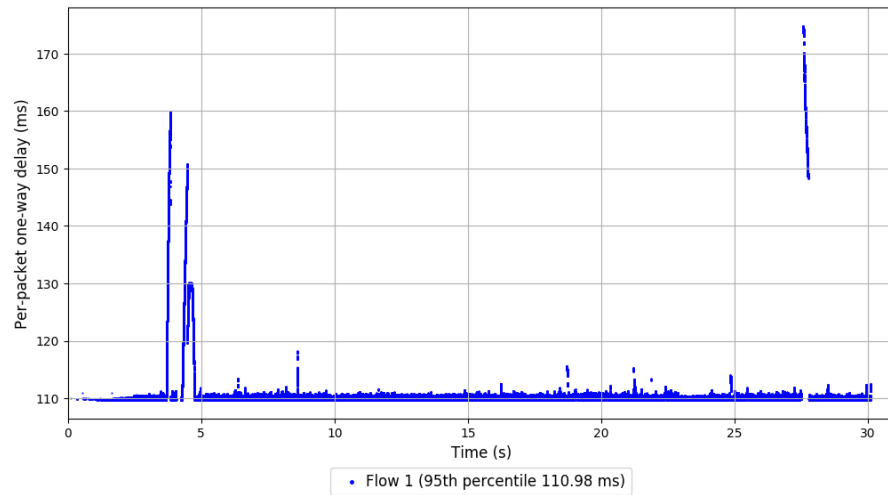
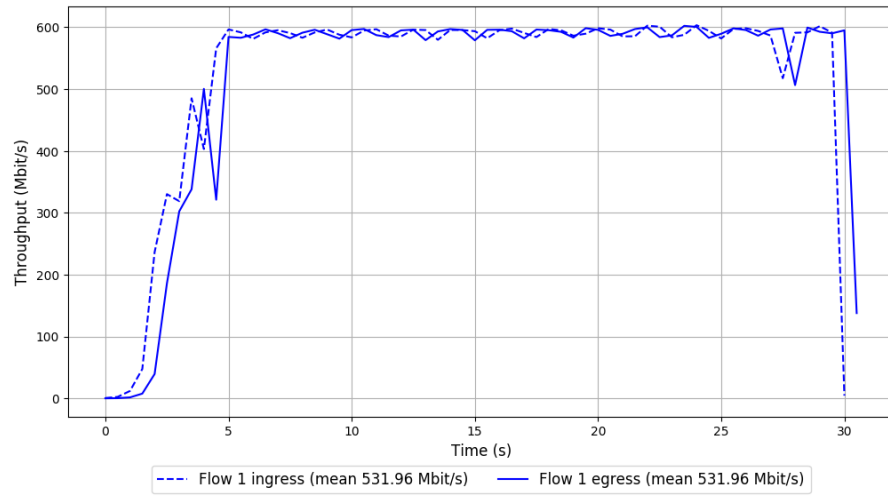
-- Flow 1:

Average throughput: 531.96 Mbit/s

95th percentile per-packet one-way delay: 110.985 ms

Loss rate: 0.00%

Run 1: Report of TCP Vegas — Data Link

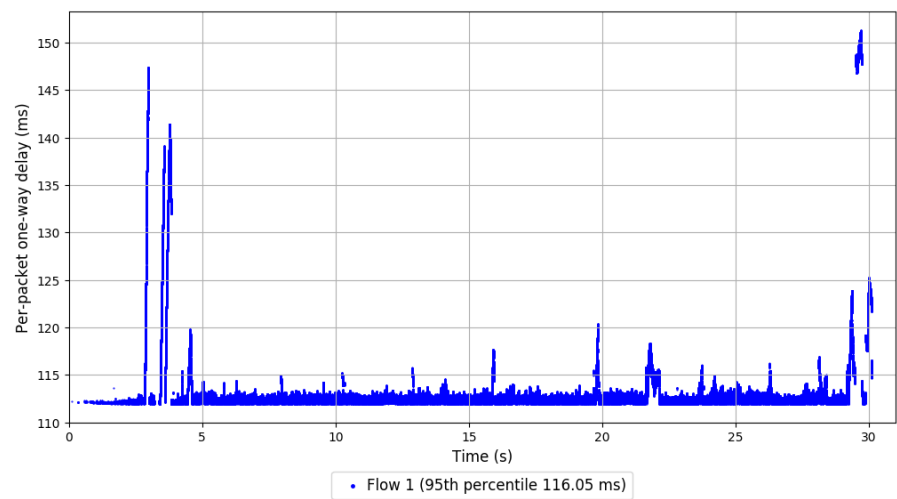
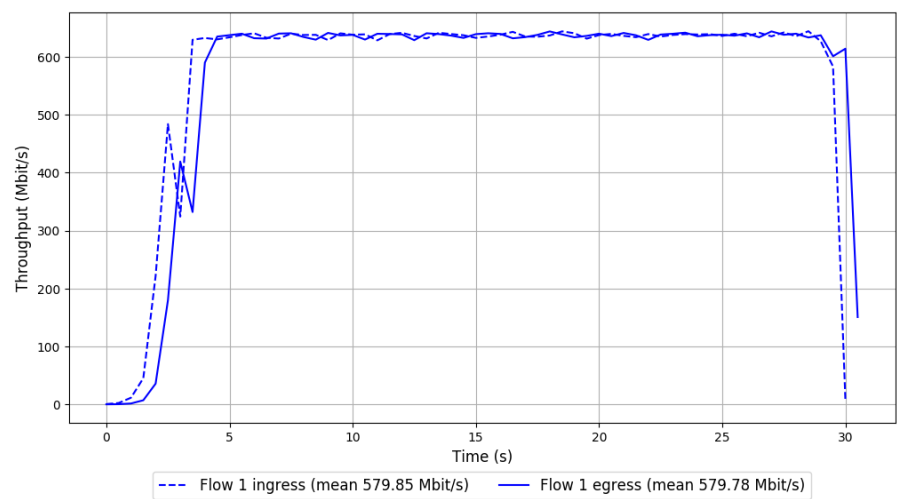


Run 2: Statistics of TCP Vegas

Start at: 2018-09-25 05:18:16
End at: 2018-09-25 05:18:46
Local clock offset: 16.842 ms
Remote clock offset: 17.051 ms

Below is generated by plot.py at 2018-09-25 08:33:27
Datalink statistics
-- Total of 1 flow:
Average throughput: 579.78 Mbit/s
95th percentile per-packet one-way delay: 116.052 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 579.78 Mbit/s
95th percentile per-packet one-way delay: 116.052 ms
Loss rate: 0.01%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-09-25 05:46:40

End at: 2018-09-25 05:47:10

Local clock offset: 35.004 ms

Remote clock offset: 32.51 ms

Below is generated by plot.py at 2018-09-25 08:33:27

Datalink statistics

-- Total of 1 flow:

Average throughput: 386.51 Mbit/s

95th percentile per-packet one-way delay: 111.097 ms

Loss rate: 0.00%

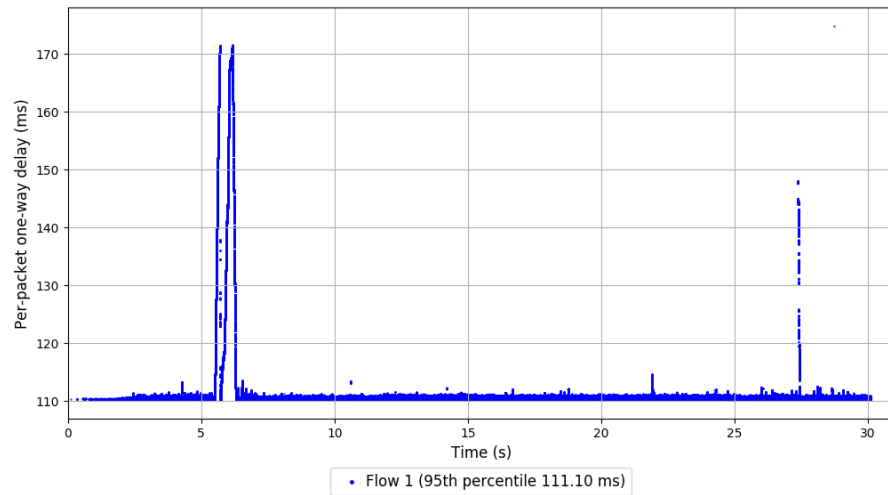
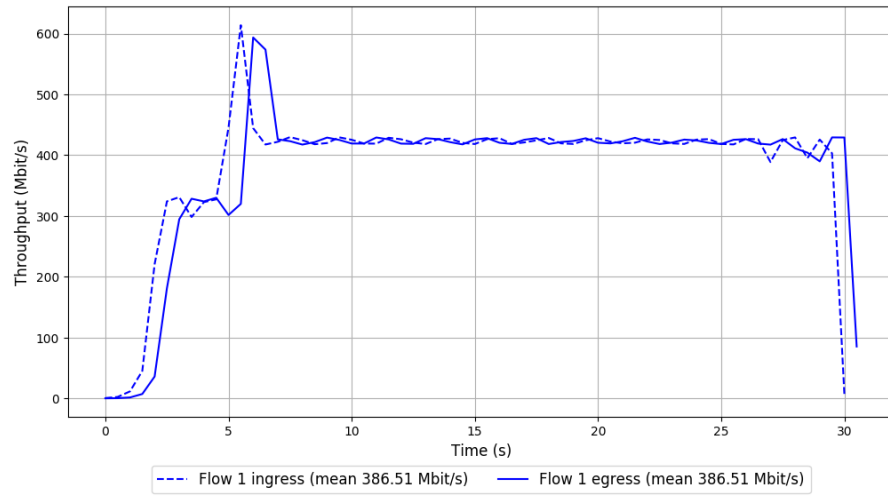
-- Flow 1:

Average throughput: 386.51 Mbit/s

95th percentile per-packet one-way delay: 111.097 ms

Loss rate: 0.00%

Run 3: Report of TCP Vegas — Data Link

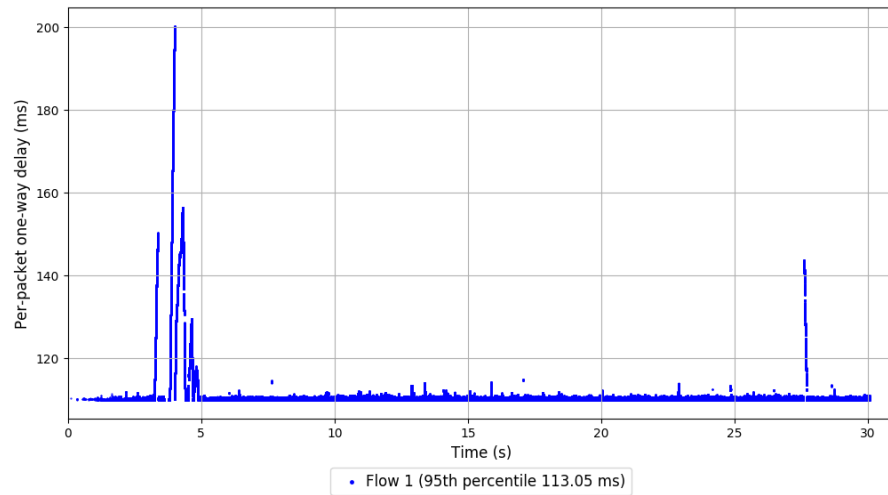
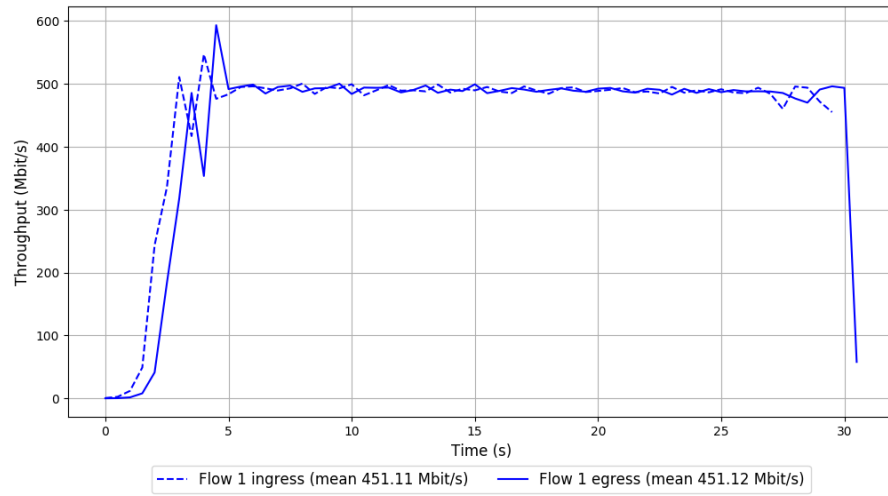


Run 4: Statistics of TCP Vegas

Start at: 2018-09-25 06:14:51
End at: 2018-09-25 06:15:21
Local clock offset: 14.246 ms
Remote clock offset: 14.121 ms

Below is generated by plot.py at 2018-09-25 08:34:07
Datalink statistics
-- Total of 1 flow:
Average throughput: 451.12 Mbit/s
95th percentile per-packet one-way delay: 113.045 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 451.12 Mbit/s
95th percentile per-packet one-way delay: 113.045 ms
Loss rate: 0.00%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-09-25 06:43:28

End at: 2018-09-25 06:43:58

Local clock offset: 7.37 ms

Remote clock offset: 6.327 ms

Below is generated by plot.py at 2018-09-25 08:34:52

Datalink statistics

-- Total of 1 flow:

Average throughput: 506.35 Mbit/s

95th percentile per-packet one-way delay: 111.022 ms

Loss rate: 0.00%

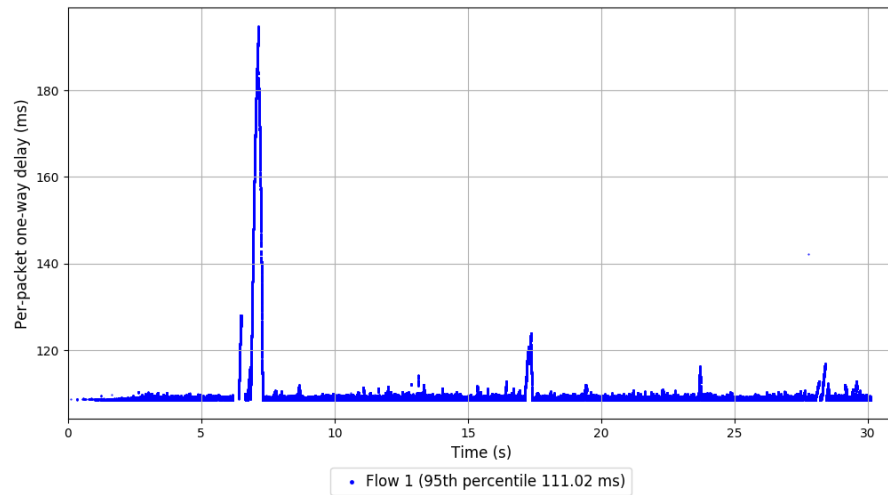
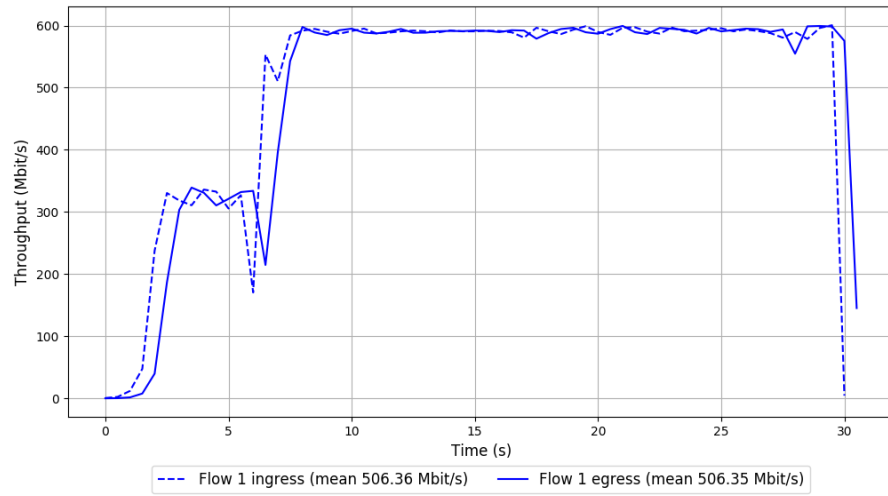
-- Flow 1:

Average throughput: 506.35 Mbit/s

95th percentile per-packet one-way delay: 111.022 ms

Loss rate: 0.00%

Run 5: Report of TCP Vegas — Data Link

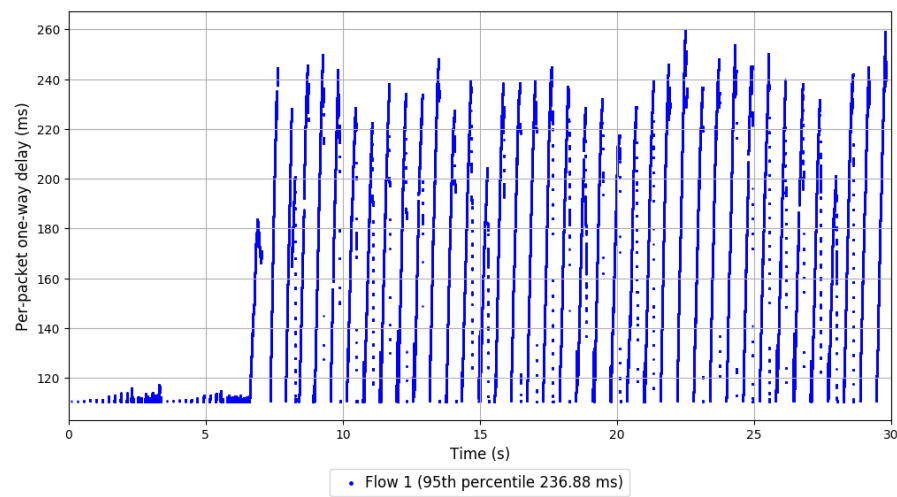
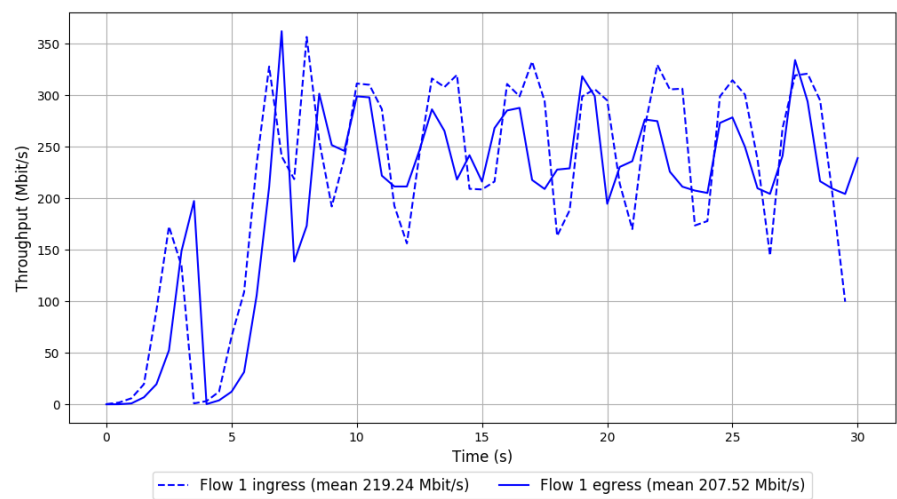


Run 1: Statistics of Verus

Start at: 2018-09-25 05:04:59
End at: 2018-09-25 05:05:29
Local clock offset: 14.126 ms
Remote clock offset: 13.637 ms

Below is generated by plot.py at 2018-09-25 08:34:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 207.52 Mbit/s
95th percentile per-packet one-way delay: 236.877 ms
Loss rate: 5.05%
-- Flow 1:
Average throughput: 207.52 Mbit/s
95th percentile per-packet one-way delay: 236.877 ms
Loss rate: 5.05%

Run 1: Report of Verus — Data Link

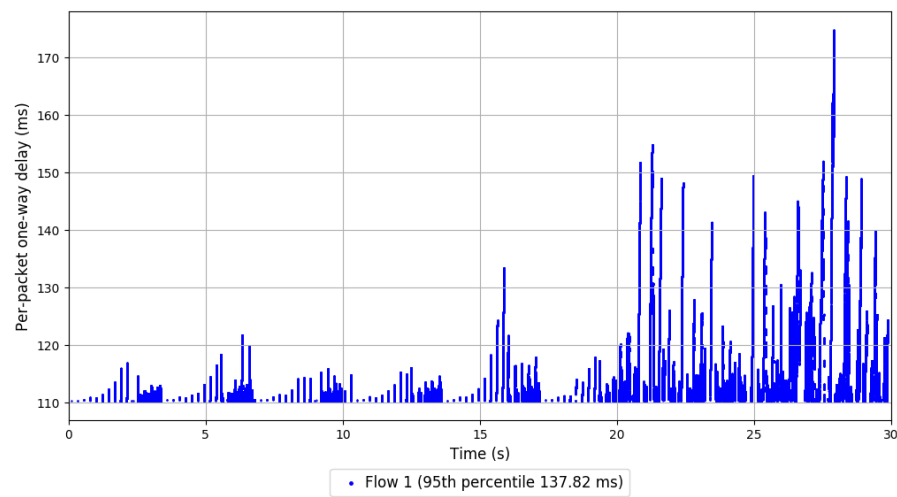
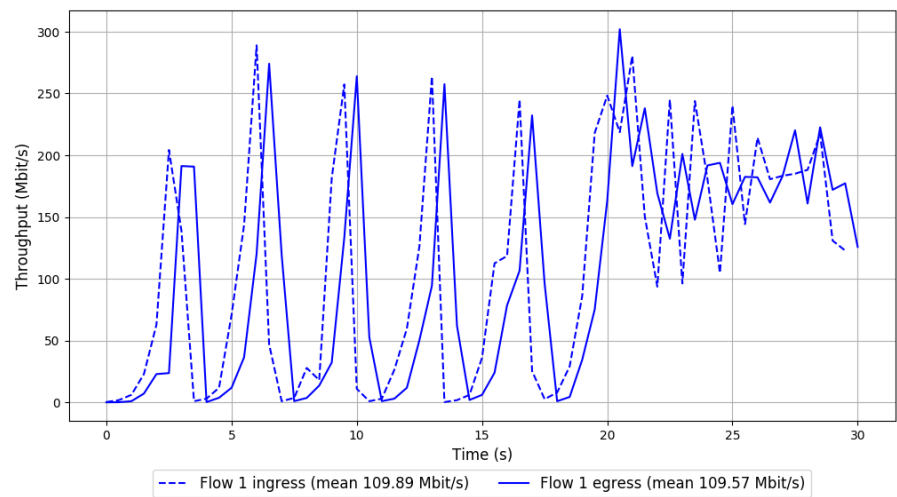


Run 2: Statistics of Verus

Start at: 2018-09-25 05:33:42
End at: 2018-09-25 05:34:12
Local clock offset: 23.818 ms
Remote clock offset: 21.956 ms

Below is generated by plot.py at 2018-09-25 08:34:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 109.57 Mbit/s
95th percentile per-packet one-way delay: 137.824 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 109.57 Mbit/s
95th percentile per-packet one-way delay: 137.824 ms
Loss rate: 0.28%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-09-25 06:01:49

End at: 2018-09-25 06:02:19

Local clock offset: 14.525 ms

Remote clock offset: 12.49 ms

Below is generated by plot.py at 2018-09-25 08:34:52

Datalink statistics

-- Total of 1 flow:

Average throughput: 90.59 Mbit/s

95th percentile per-packet one-way delay: 143.660 ms

Loss rate: 0.00%

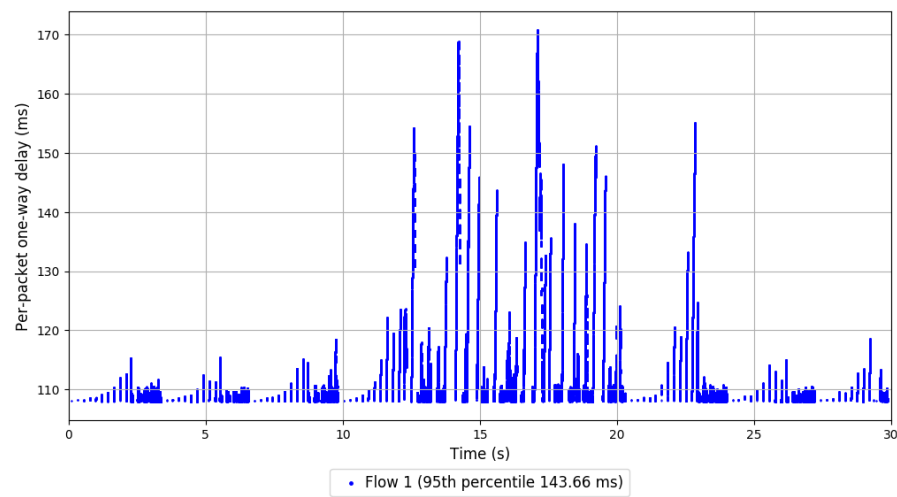
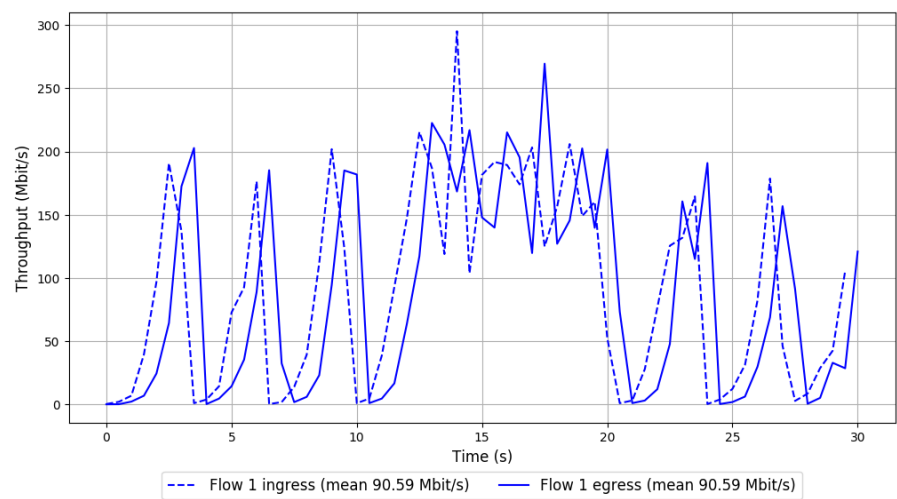
-- Flow 1:

Average throughput: 90.59 Mbit/s

95th percentile per-packet one-way delay: 143.660 ms

Loss rate: 0.00%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-09-25 06:30:12

End at: 2018-09-25 06:30:42

Local clock offset: 8.154 ms

Remote clock offset: 8.247 ms

Below is generated by plot.py at 2018-09-25 08:37:18

Datalink statistics

-- Total of 1 flow:

Average throughput: 211.54 Mbit/s

95th percentile per-packet one-way delay: 259.780 ms

Loss rate: 15.58%

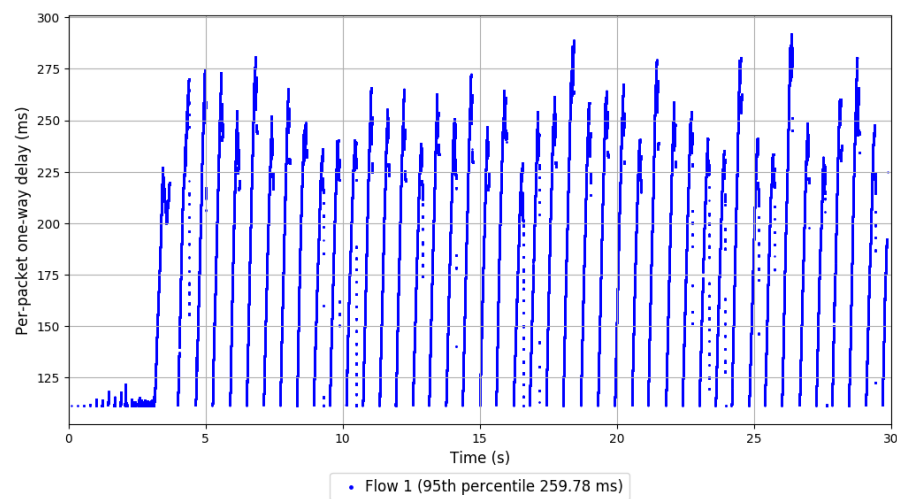
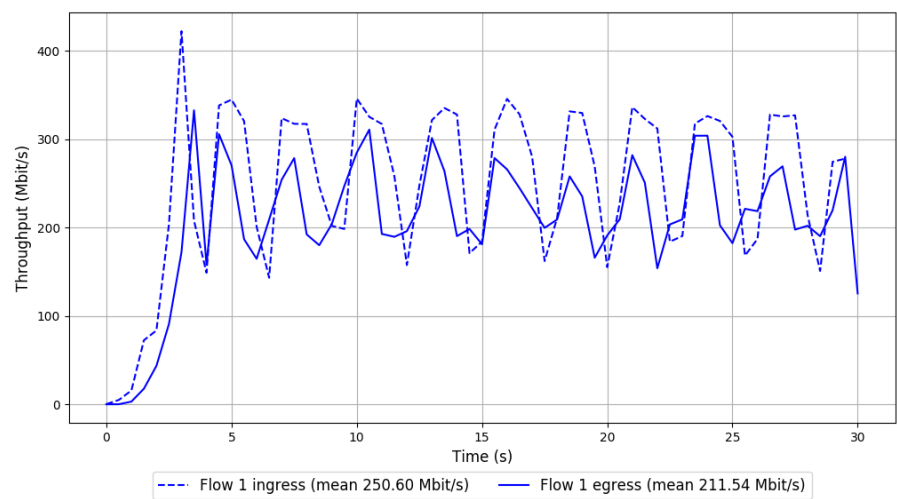
-- Flow 1:

Average throughput: 211.54 Mbit/s

95th percentile per-packet one-way delay: 259.780 ms

Loss rate: 15.58%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-09-25 06:58:50

End at: 2018-09-25 06:59:20

Local clock offset: 6.299 ms

Remote clock offset: 5.133 ms

Below is generated by plot.py at 2018-09-25 08:37:18

Datalink statistics

-- Total of 1 flow:

Average throughput: 178.96 Mbit/s

95th percentile per-packet one-way delay: 270.994 ms

Loss rate: 17.92%

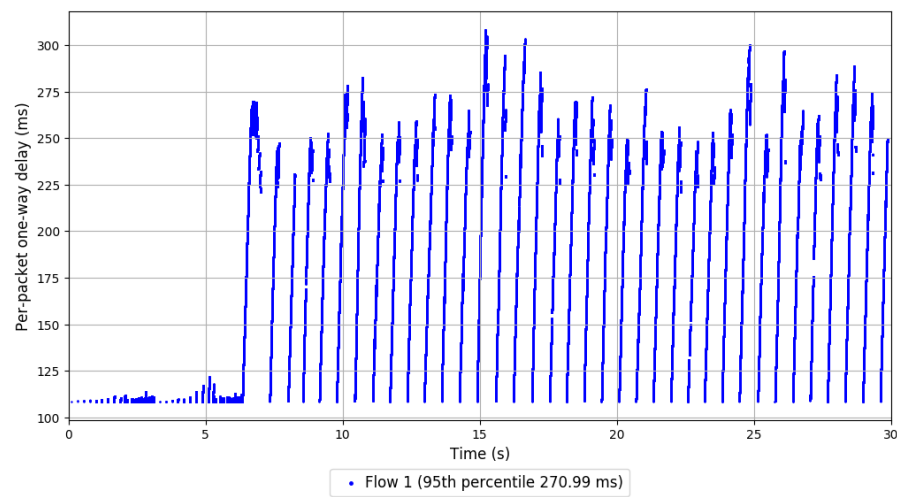
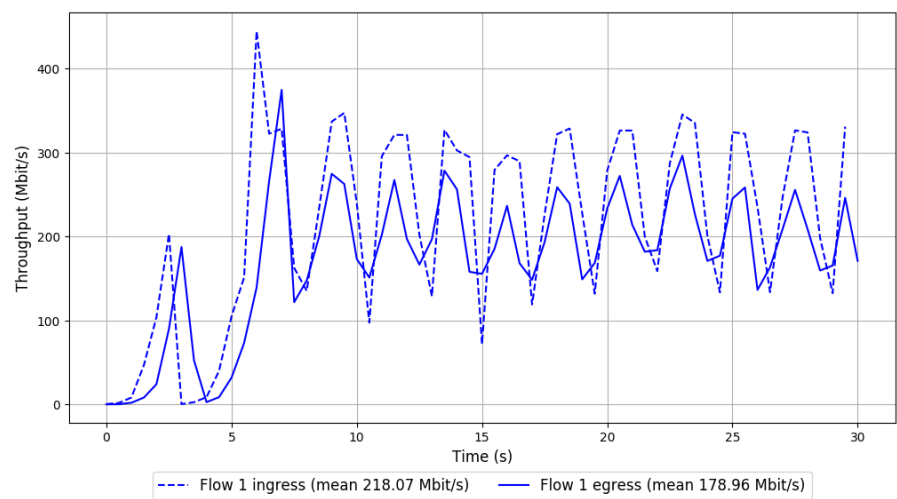
-- Flow 1:

Average throughput: 178.96 Mbit/s

95th percentile per-packet one-way delay: 270.994 ms

Loss rate: 17.92%

Run 5: Report of Verus — Data Link

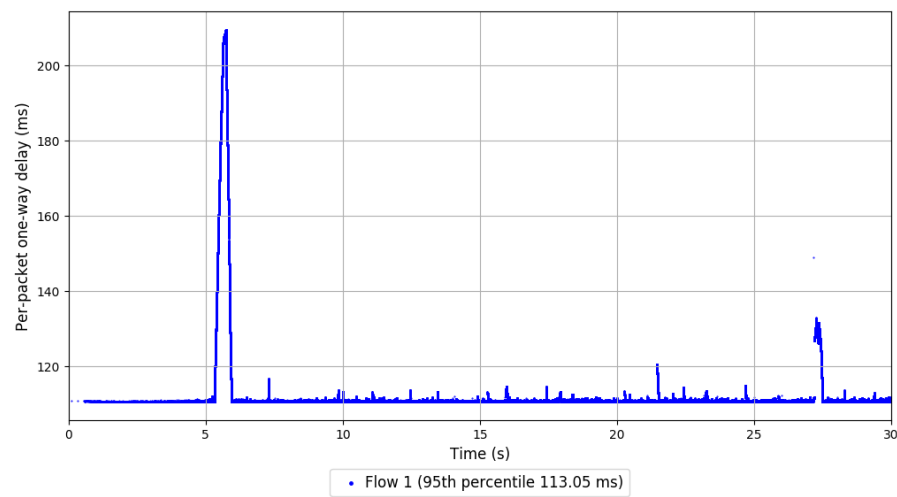
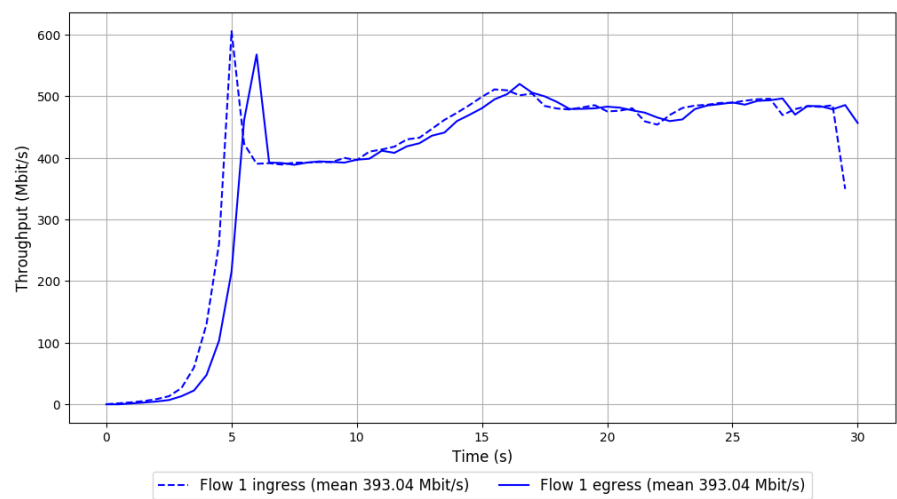


Run 1: Statistics of PCC-Vivace

Start at: 2018-09-25 05:07:53
End at: 2018-09-25 05:08:23
Local clock offset: 17.662 ms
Remote clock offset: 16.067 ms

Below is generated by plot.py at 2018-09-25 08:38:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 393.04 Mbit/s
95th percentile per-packet one-way delay: 113.053 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 393.04 Mbit/s
95th percentile per-packet one-way delay: 113.053 ms
Loss rate: 0.00%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2018-09-25 05:36:24

End at: 2018-09-25 05:36:54

Local clock offset: 24.28 ms

Remote clock offset: 24.433 ms

Below is generated by plot.py at 2018-09-25 08:38:38

Datalink statistics

-- Total of 1 flow:

Average throughput: 386.52 Mbit/s

95th percentile per-packet one-way delay: 123.800 ms

Loss rate: 0.07%

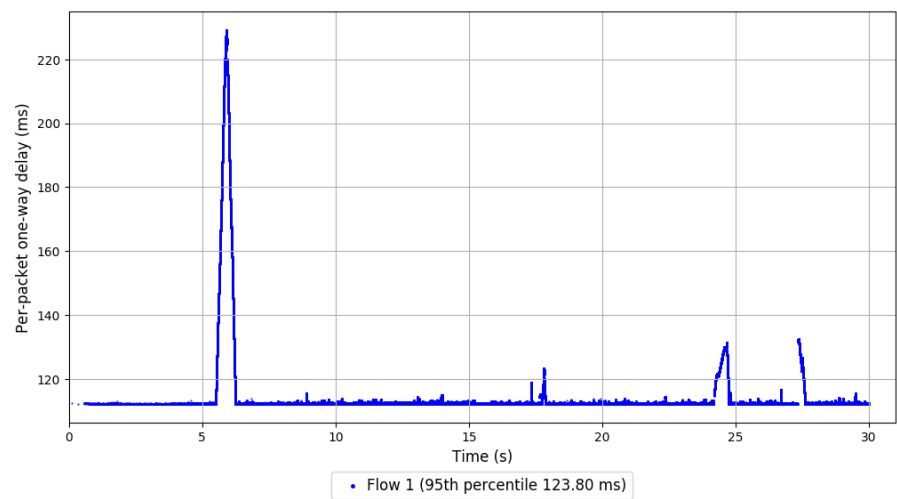
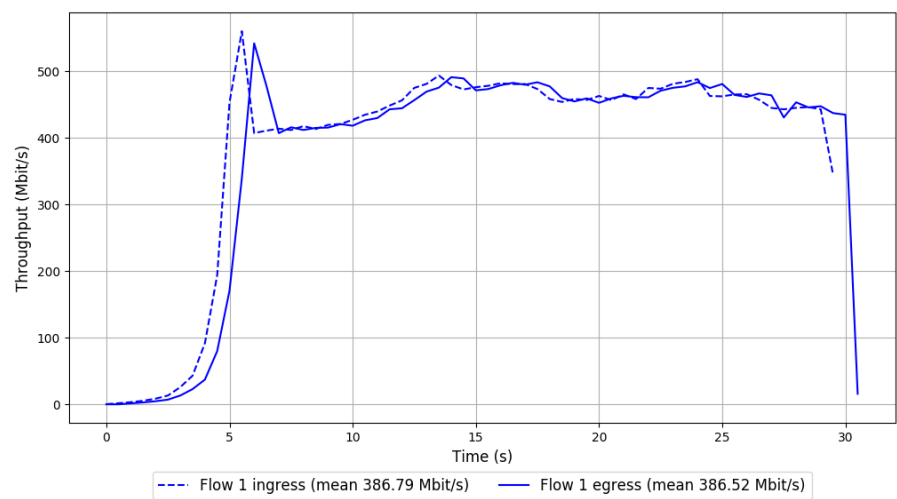
-- Flow 1:

Average throughput: 386.52 Mbit/s

95th percentile per-packet one-way delay: 123.800 ms

Loss rate: 0.07%

Run 2: Report of PCC-Vivace — Data Link

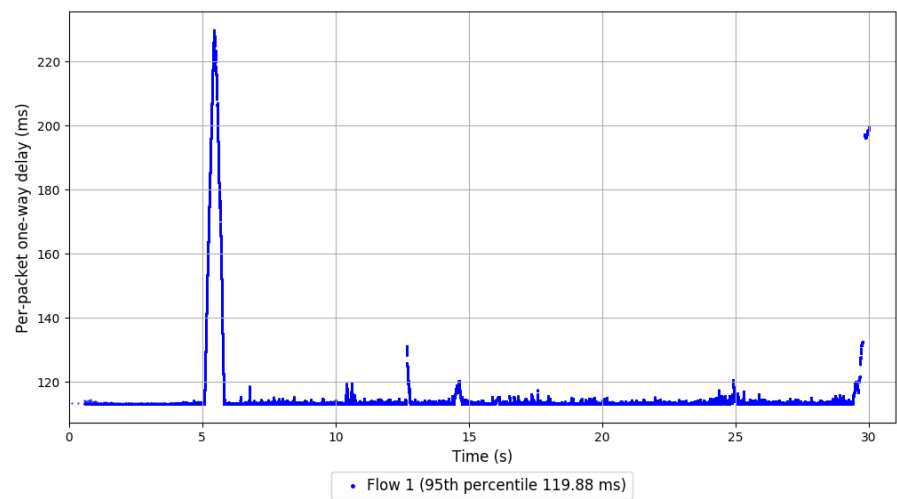
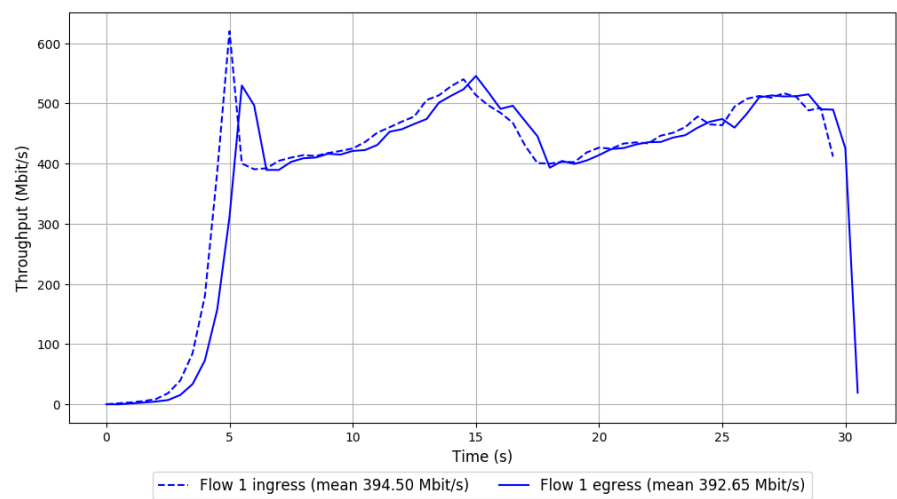


Run 3: Statistics of PCC-Vivace

Start at: 2018-09-25 06:04:31
End at: 2018-09-25 06:05:01
Local clock offset: 11.817 ms
Remote clock offset: 12.904 ms

Below is generated by plot.py at 2018-09-25 08:38:44
Datalink statistics
-- Total of 1 flow:
Average throughput: 392.65 Mbit/s
95th percentile per-packet one-way delay: 119.879 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 392.65 Mbit/s
95th percentile per-packet one-way delay: 119.879 ms
Loss rate: 0.47%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2018-09-25 06:33:07

End at: 2018-09-25 06:33:37

Local clock offset: 6.524 ms

Remote clock offset: 6.852 ms

Below is generated by plot.py at 2018-09-25 08:38:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 400.12 Mbit/s

95th percentile per-packet one-way delay: 113.773 ms

Loss rate: 0.00%

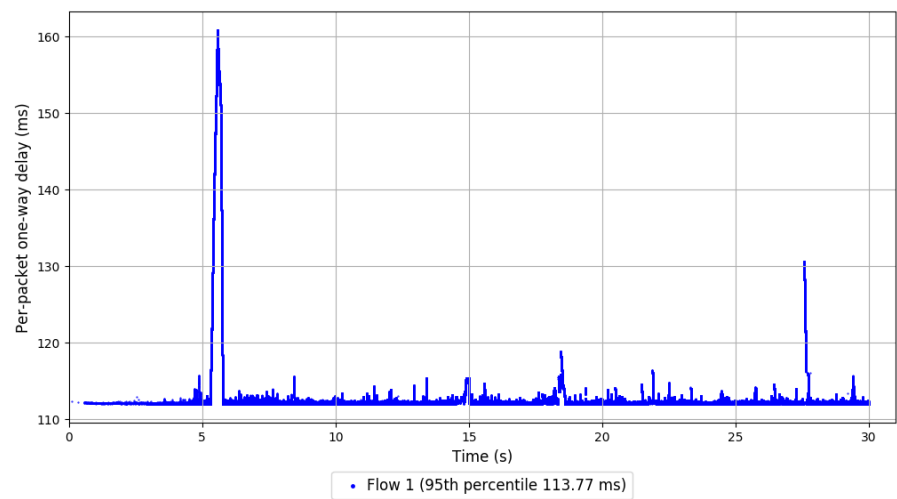
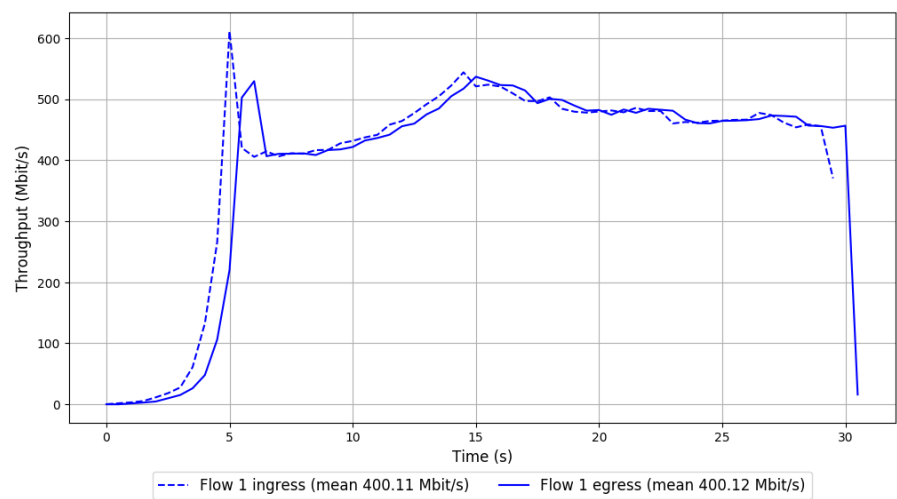
-- Flow 1:

Average throughput: 400.12 Mbit/s

95th percentile per-packet one-way delay: 113.773 ms

Loss rate: 0.00%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2018-09-25 07:01:42

End at: 2018-09-25 07:02:12

Local clock offset: 4.725 ms

Remote clock offset: 4.202 ms

Below is generated by plot.py at 2018-09-25 08:38:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 376.35 Mbit/s

95th percentile per-packet one-way delay: 136.252 ms

Loss rate: 0.00%

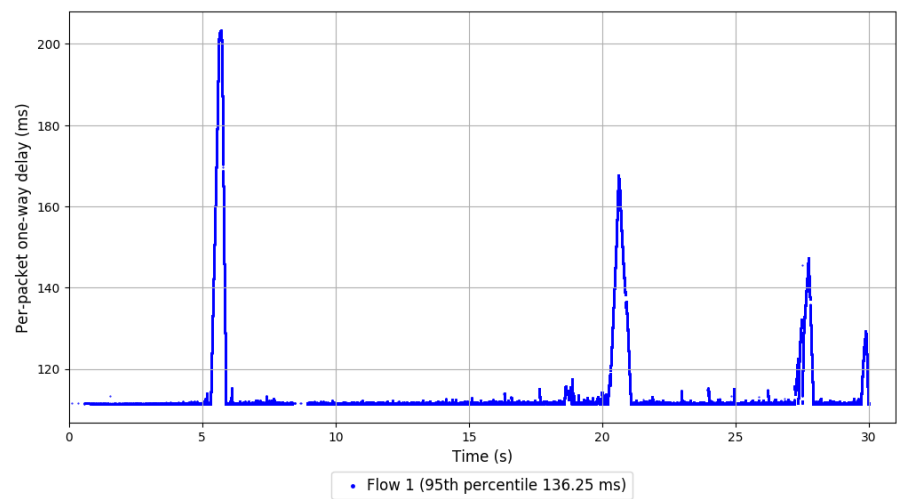
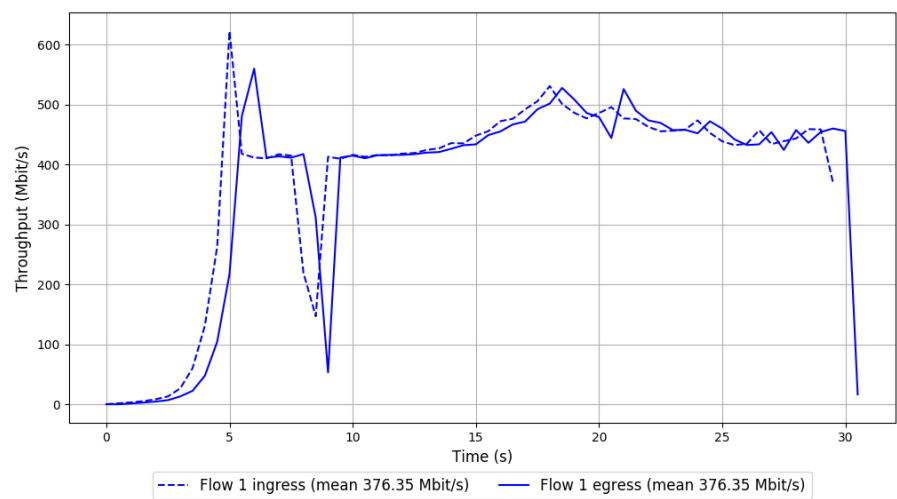
-- Flow 1:

Average throughput: 376.35 Mbit/s

95th percentile per-packet one-way delay: 136.252 ms

Loss rate: 0.00%

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2018-09-25 04:46:43

End at: 2018-09-25 04:47:13

Local clock offset: 8.86 ms

Remote clock offset: 8.993 ms

Below is generated by plot.py at 2018-09-25 08:38:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.78 Mbit/s

95th percentile per-packet one-way delay: 111.068 ms

Loss rate: 0.00%

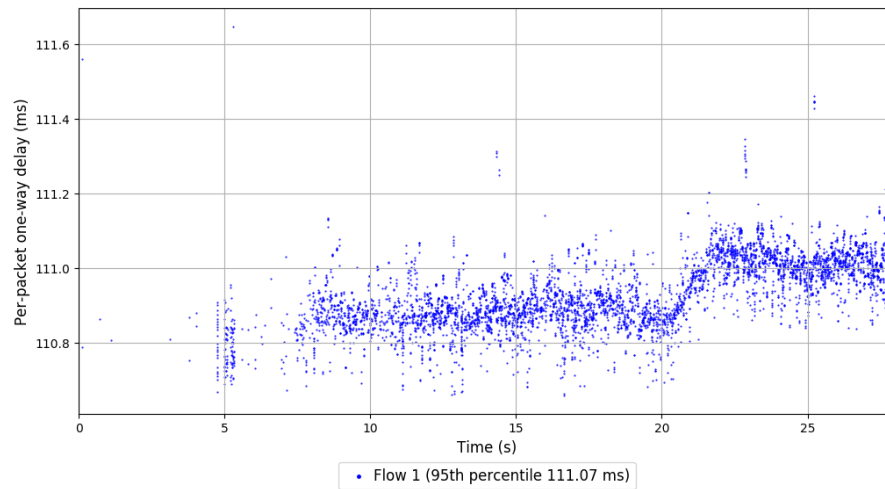
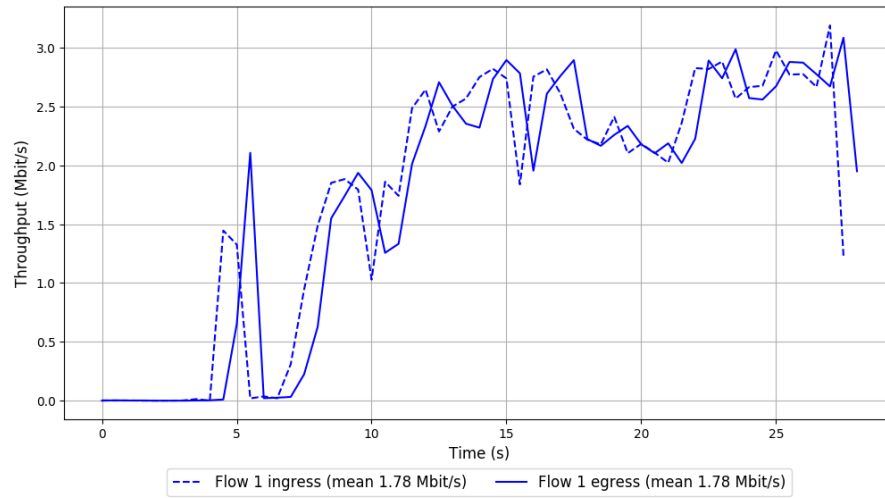
-- Flow 1:

Average throughput: 1.78 Mbit/s

95th percentile per-packet one-way delay: 111.068 ms

Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link

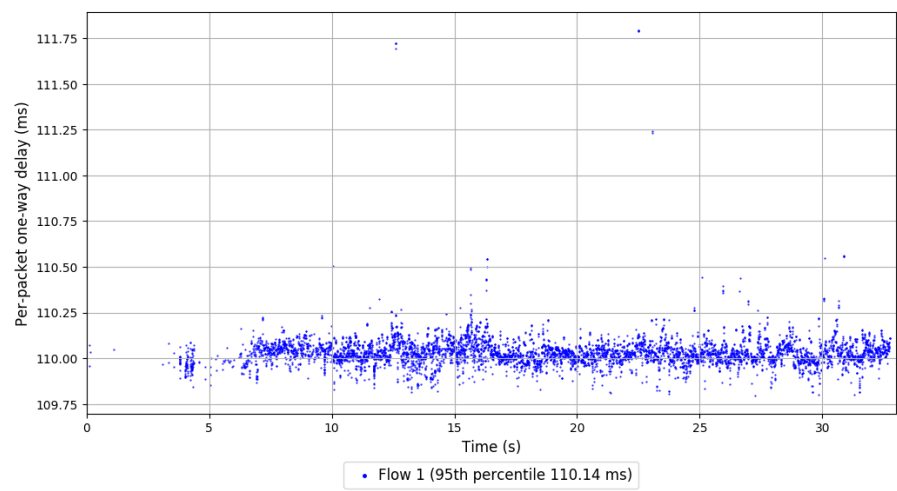
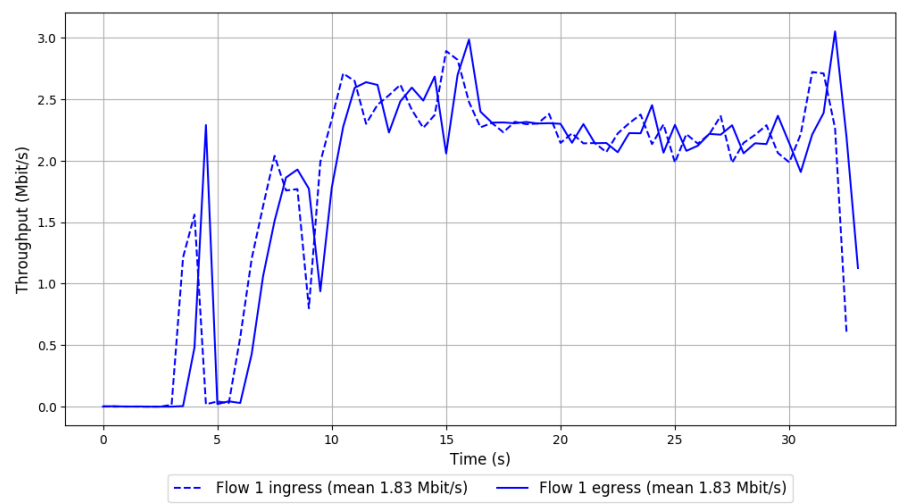


Run 2: Statistics of WebRTC media

Start at: 2018-09-25 05:15:24
End at: 2018-09-25 05:15:54
Local clock offset: 21.429 ms
Remote clock offset: 19.377 ms

Below is generated by plot.py at 2018-09-25 08:38:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.83 Mbit/s
95th percentile per-packet one-way delay: 110.136 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.83 Mbit/s
95th percentile per-packet one-way delay: 110.136 ms
Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link

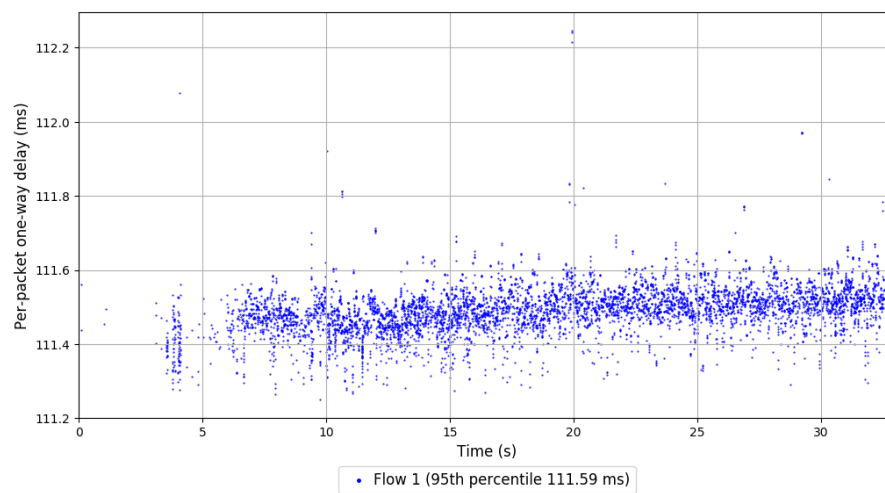
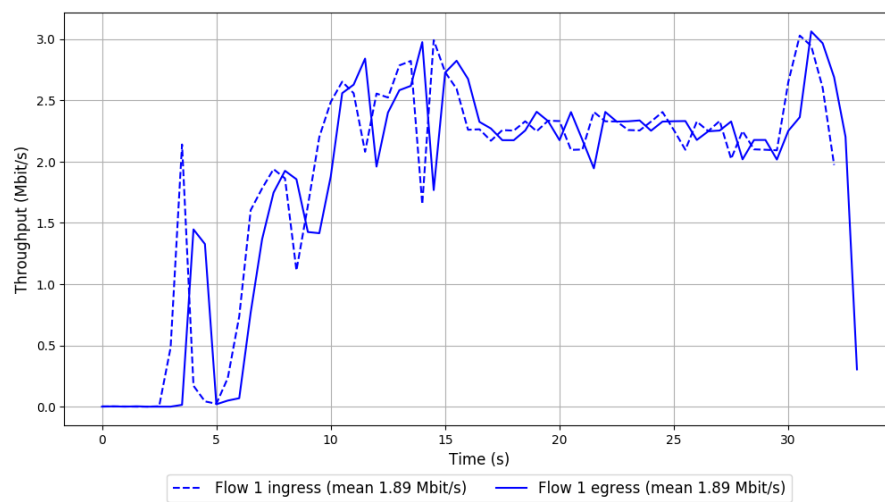


Run 3: Statistics of WebRTC media

Start at: 2018-09-25 05:43:49
End at: 2018-09-25 05:44:19
Local clock offset: 32.122 ms
Remote clock offset: 30.747 ms

Below is generated by plot.py at 2018-09-25 08:38:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 111.588 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 111.588 ms
Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

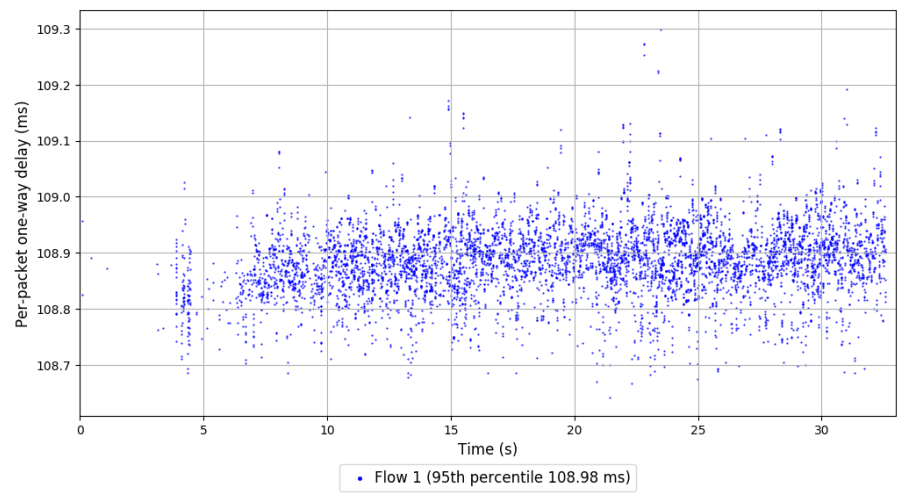
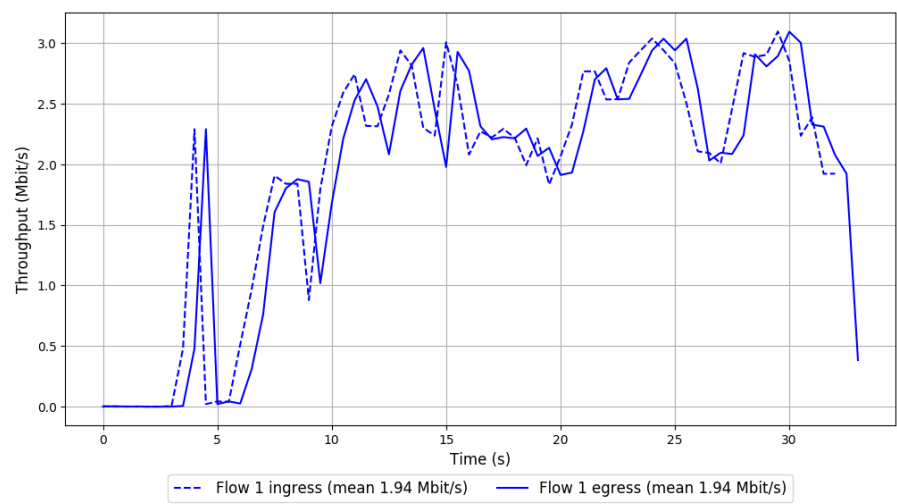


Run 4: Statistics of WebRTC media

Start at: 2018-09-25 06:12:00
End at: 2018-09-25 06:12:30
Local clock offset: 15.122 ms
Remote clock offset: 13.731 ms

Below is generated by plot.py at 2018-09-25 08:38:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 108.981 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 108.981 ms
Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-09-25 06:40:37

End at: 2018-09-25 06:41:07

Local clock offset: 6.529 ms

Remote clock offset: 6.133 ms

Below is generated by plot.py at 2018-09-25 08:38:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.96 Mbit/s

95th percentile per-packet one-way delay: 109.505 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 1.96 Mbit/s

95th percentile per-packet one-way delay: 109.505 ms

Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

