

Pantheon Report

Generated at 2018-09-26 04:27:02 (UTC).

Data path: GCE London on *ens4 (local)* → GCE Iowa 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:

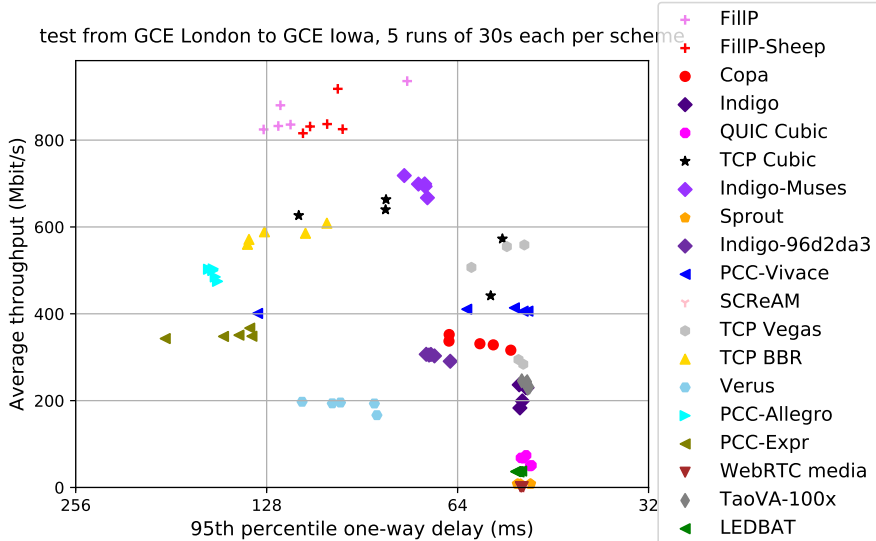
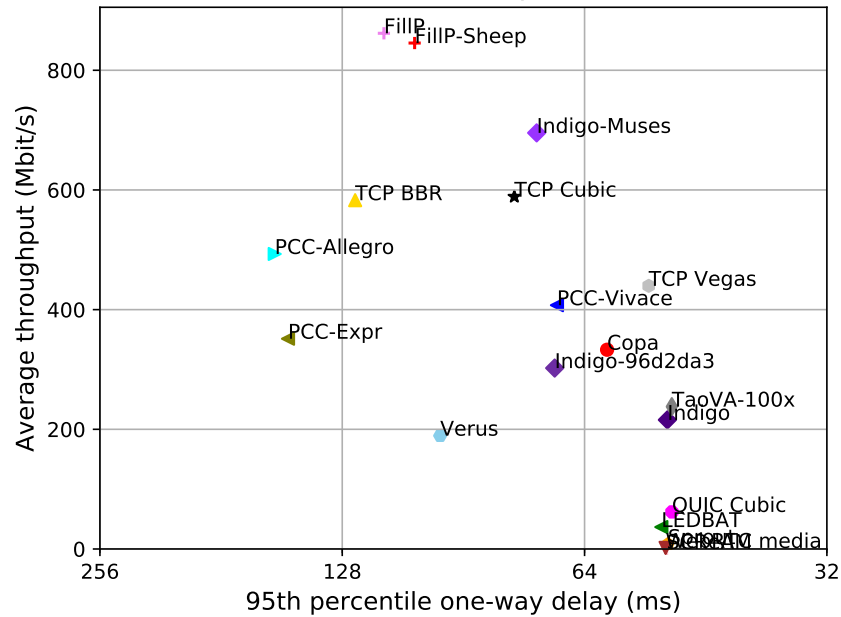
```
Linux 4.15.0-1019-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
net.ipv4.tcp_mem = 190986 254651 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 London to GCE Iowa, 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	582.90	123.36	0.56
Copa	5	333.00	60.01	0.00
TCP Cubic	5	588.72	78.24	0.08
FillP	5	861.79	113.62	2.98
FillP-Sheep	5	845.50	104.06	0.37
Indigo	5	215.75	50.50	0.00
Indigo-96d2da3	5	302.35	69.71	0.01
LEDBAT	5	36.66	51.39	0.00
Indigo-Muses	5	695.38	73.40	0.02
PCC-Allegro	5	493.03	155.27	1.85
PCC-Expr	5	351.37	149.49	2.63
QUIC Cubic	5	61.94	49.85	0.00
SCReAM	5	0.22	50.61	0.00
Sprout	5	8.25	50.43	0.00
TaoVA-100x	5	237.90	49.86	0.00
TCP Vegas	5	439.74	53.27	0.00
Verus	5	189.35	96.74	0.06
PCC-Vivace	5	407.43	69.26	0.33
WebRTC media	5	1.83	50.76	0.00

Run 1: Statistics of TCP BBR

Start at: 2018-09-26 00:40:36

End at: 2018-09-26 00:41:06

Local clock offset: 0.047 ms

Remote clock offset: -0.033 ms

Below is generated by plot.py at 2018-09-26 03:05:11

Datalink statistics

-- Total of 1 flow:

Average throughput: 571.30 Mbit/s

95th percentile per-packet one-way delay: 136.489 ms

Loss rate: 0.51%

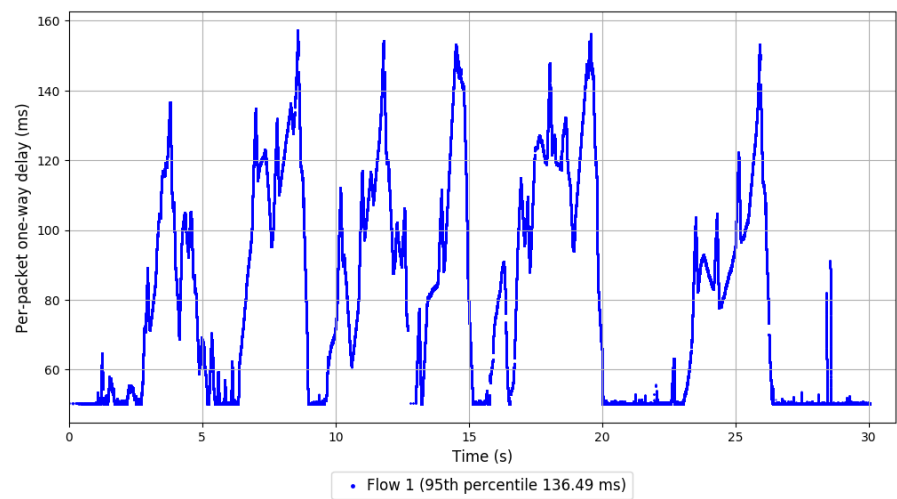
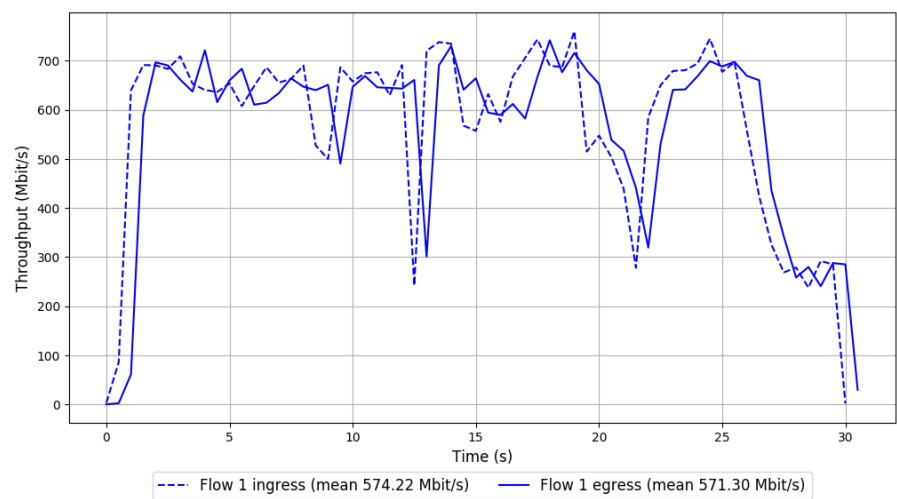
-- Flow 1:

Average throughput: 571.30 Mbit/s

95th percentile per-packet one-way delay: 136.489 ms

Loss rate: 0.51%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-09-26 01:07:56

End at: 2018-09-26 01:08:26

Local clock offset: 0.471 ms

Remote clock offset: 0.032 ms

Below is generated by plot.py at 2018-09-26 03:05:11

Datalink statistics

-- Total of 1 flow:

Average throughput: 560.08 Mbit/s

95th percentile per-packet one-way delay: 137.229 ms

Loss rate: 0.73%

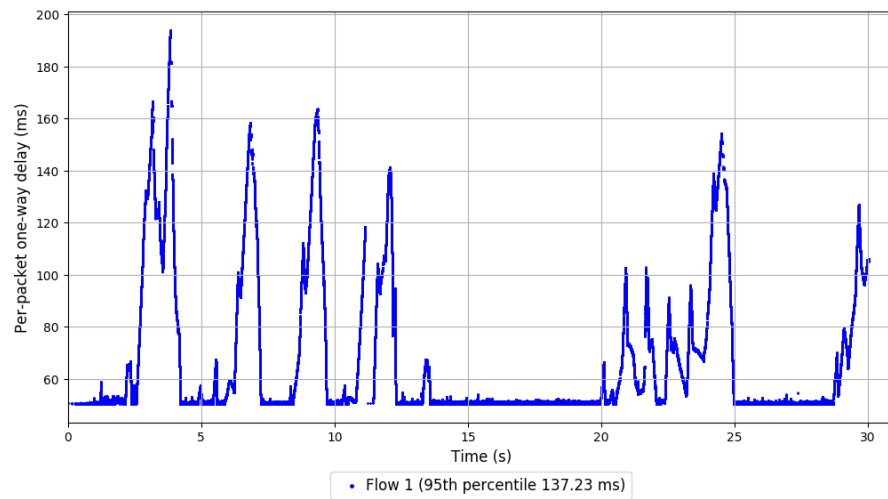
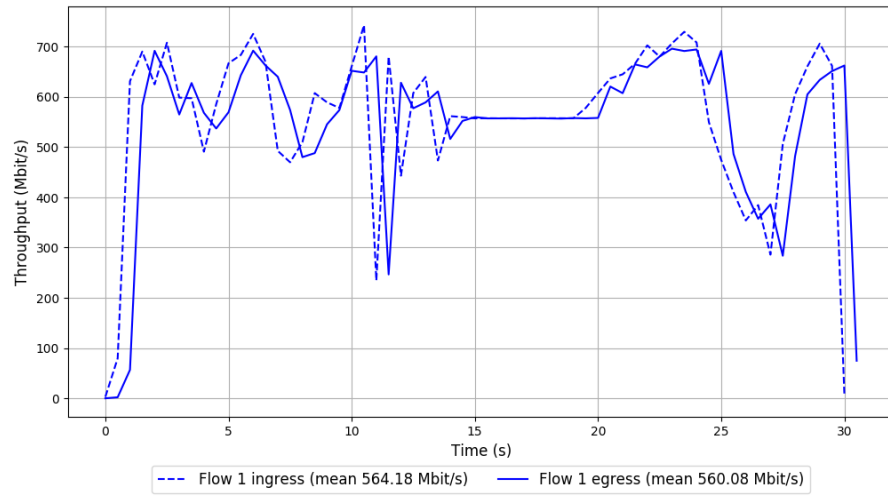
-- Flow 1:

Average throughput: 560.08 Mbit/s

95th percentile per-packet one-way delay: 137.229 ms

Loss rate: 0.73%

Run 2: Report of TCP BBR — Data Link

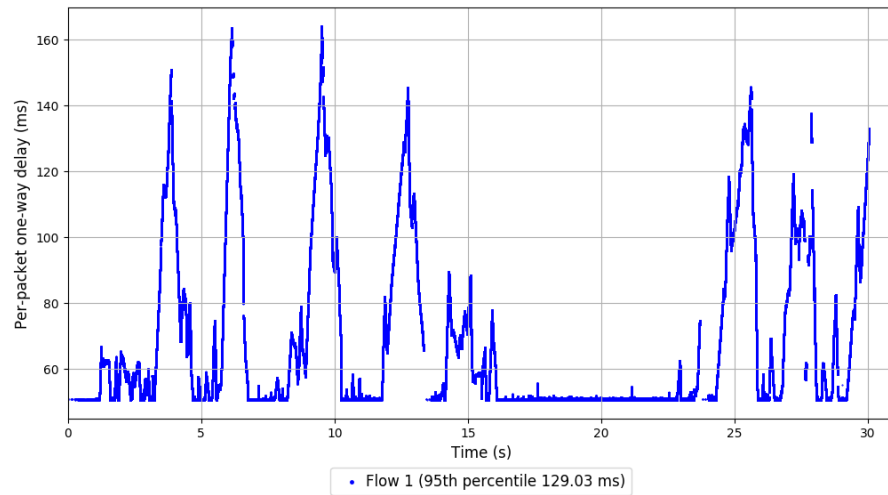
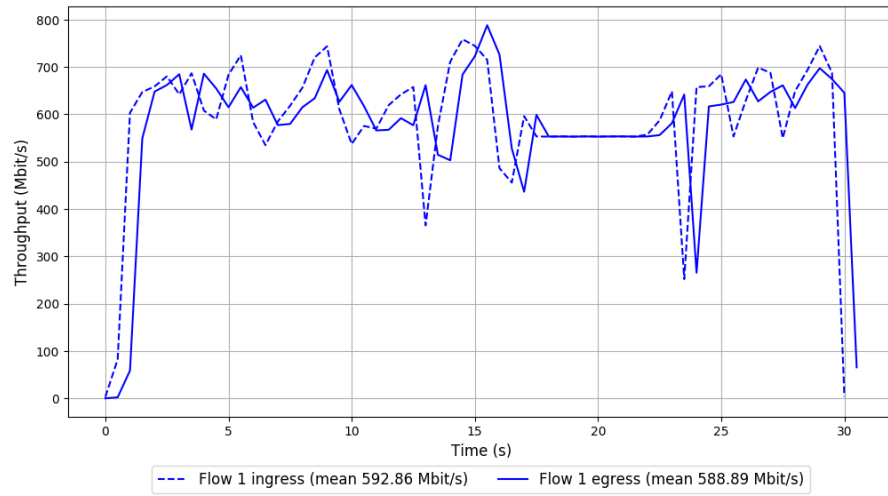


Run 3: Statistics of TCP BBR

Start at: 2018-09-26 01:35:07
End at: 2018-09-26 01:35:37
Local clock offset: -0.449 ms
Remote clock offset: -0.042 ms

Below is generated by plot.py at 2018-09-26 03:05:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 588.89 Mbit/s
95th percentile per-packet one-way delay: 129.031 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 588.89 Mbit/s
95th percentile per-packet one-way delay: 129.031 ms
Loss rate: 0.67%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-09-26 02:02:04

End at: 2018-09-26 02:02:34

Local clock offset: -0.42 ms

Remote clock offset: -0.052 ms

Below is generated by plot.py at 2018-09-26 03:05:38

Datalink statistics

-- Total of 1 flow:

Average throughput: 608.72 Mbit/s

95th percentile per-packet one-way delay: 102.873 ms

Loss rate: 0.14%

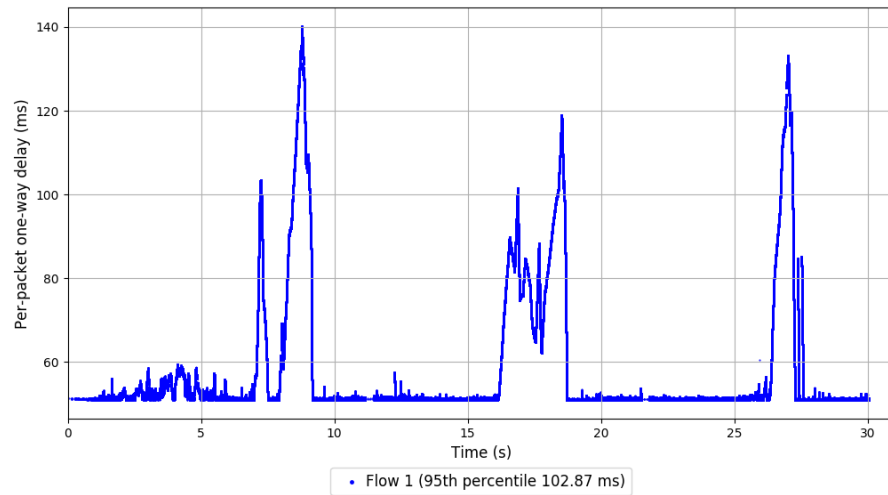
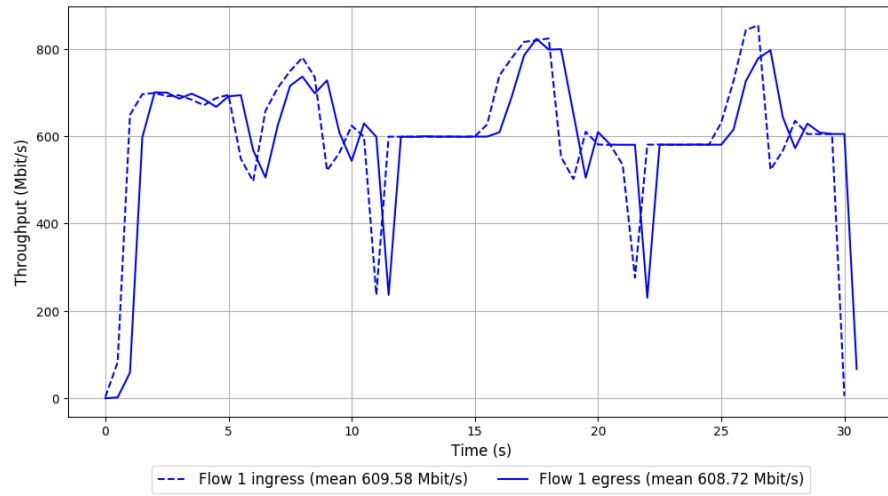
-- Flow 1:

Average throughput: 608.72 Mbit/s

95th percentile per-packet one-way delay: 102.873 ms

Loss rate: 0.14%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-09-26 02:29:27

End at: 2018-09-26 02:29:57

Local clock offset: -0.34 ms

Remote clock offset: -0.051 ms

Below is generated by plot.py at 2018-09-26 03:05:38

Datalink statistics

-- Total of 1 flow:

Average throughput: 585.50 Mbit/s

95th percentile per-packet one-way delay: 111.172 ms

Loss rate: 0.74%

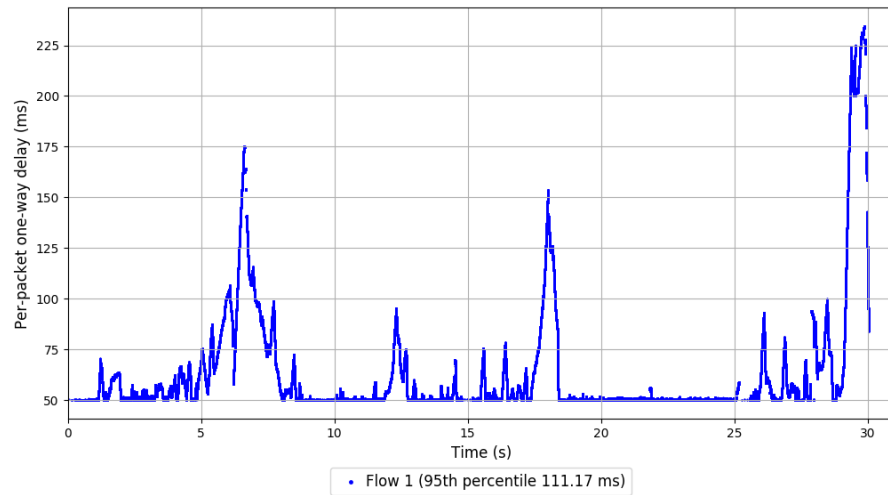
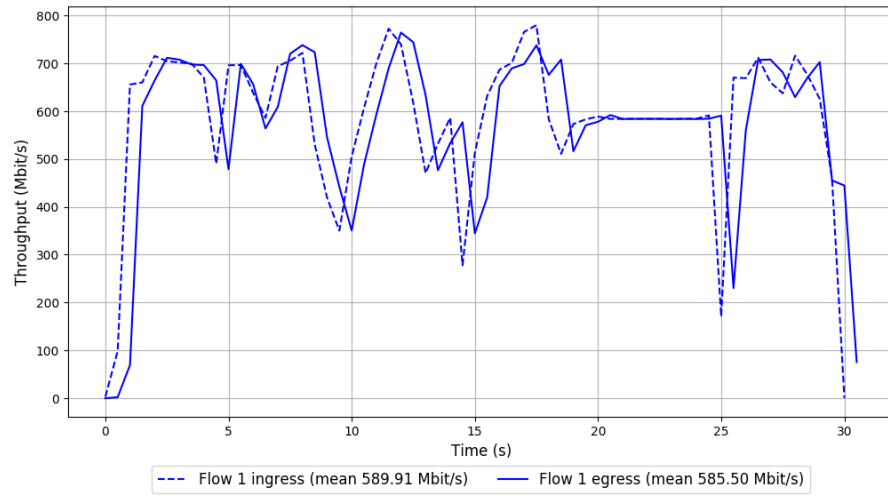
-- Flow 1:

Average throughput: 585.50 Mbit/s

95th percentile per-packet one-way delay: 111.172 ms

Loss rate: 0.74%

Run 5: Report of TCP BBR — Data Link

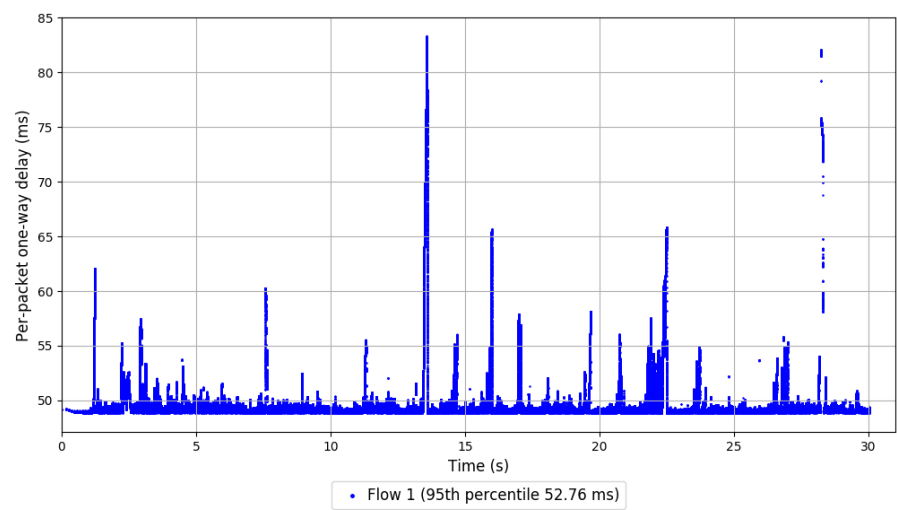
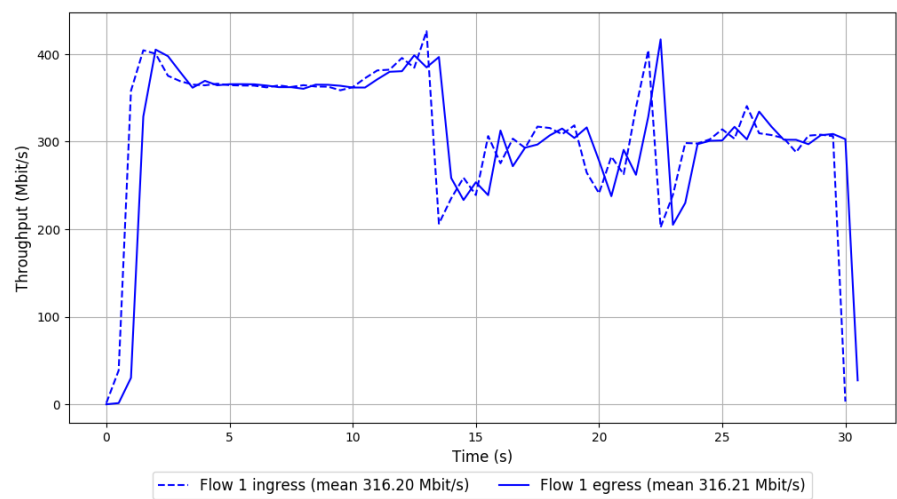


Run 1: Statistics of Copa

Start at: 2018-09-26 00:47:45
End at: 2018-09-26 00:48:15
Local clock offset: -0.024 ms
Remote clock offset: -0.035 ms

Below is generated by plot.py at 2018-09-26 03:05:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 316.21 Mbit/s
95th percentile per-packet one-way delay: 52.761 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 316.21 Mbit/s
95th percentile per-packet one-way delay: 52.761 ms
Loss rate: 0.00%

Run 1: Report of Copa — Data Link

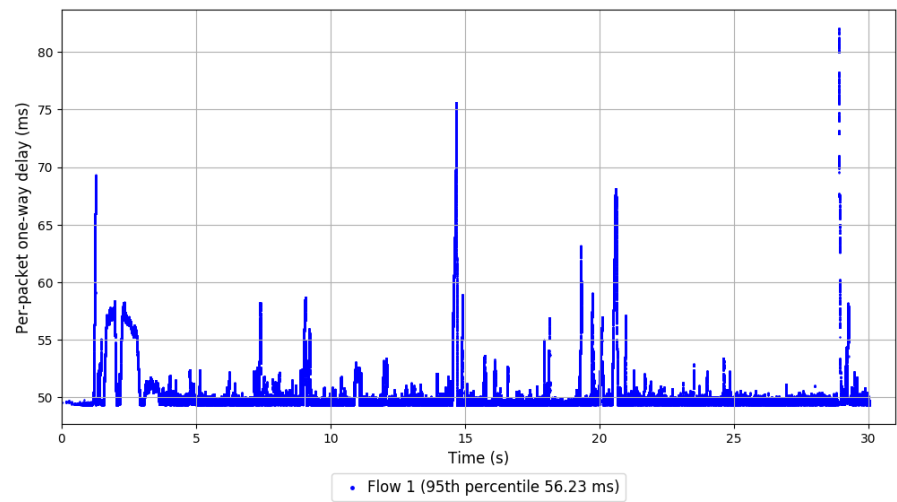
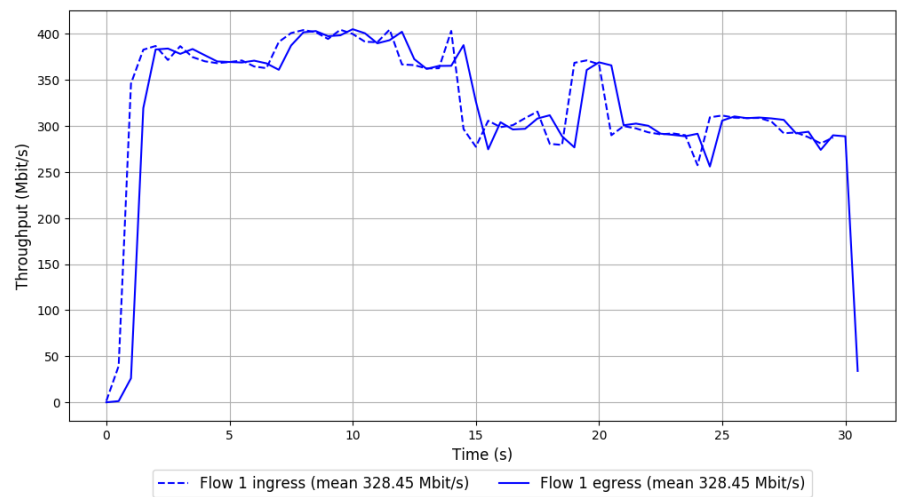


Run 2: Statistics of Copa

Start at: 2018-09-26 01:15:04
End at: 2018-09-26 01:15:34
Local clock offset: 0.06 ms
Remote clock offset: -0.052 ms

Below is generated by plot.py at 2018-09-26 03:05:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 328.45 Mbit/s
95th percentile per-packet one-way delay: 56.225 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 328.45 Mbit/s
95th percentile per-packet one-way delay: 56.225 ms
Loss rate: 0.00%

Run 2: Report of Copa — Data Link

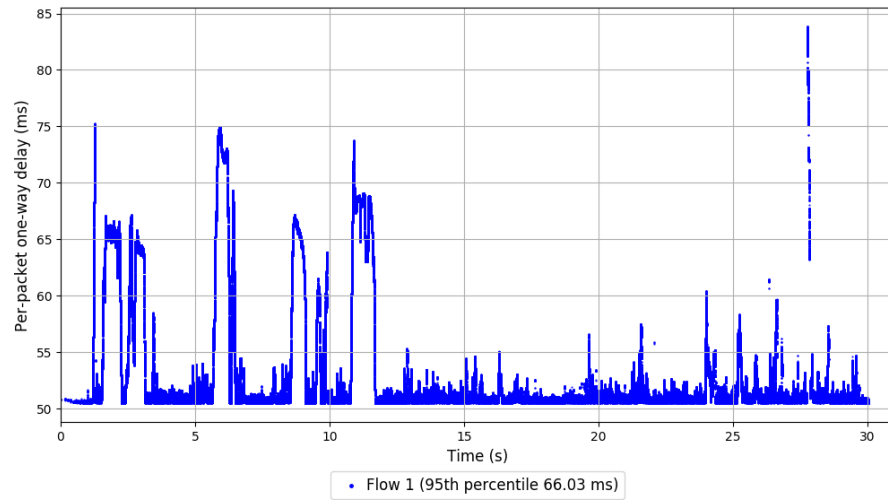
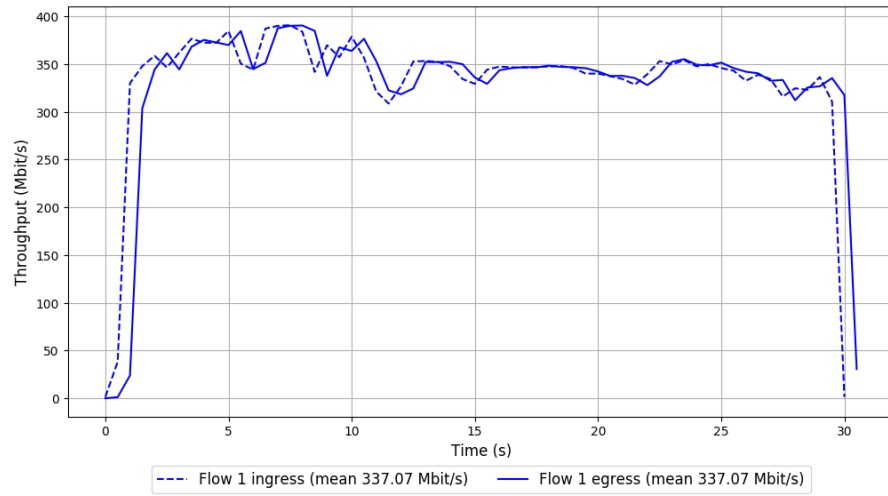


Run 3: Statistics of Copa

Start at: 2018-09-26 01:42:13
End at: 2018-09-26 01:42:43
Local clock offset: -0.074 ms
Remote clock offset: -0.165 ms

Below is generated by plot.py at 2018-09-26 03:06:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 337.07 Mbit/s
95th percentile per-packet one-way delay: 66.035 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 337.07 Mbit/s
95th percentile per-packet one-way delay: 66.035 ms
Loss rate: 0.00%

Run 3: Report of Copa — Data Link

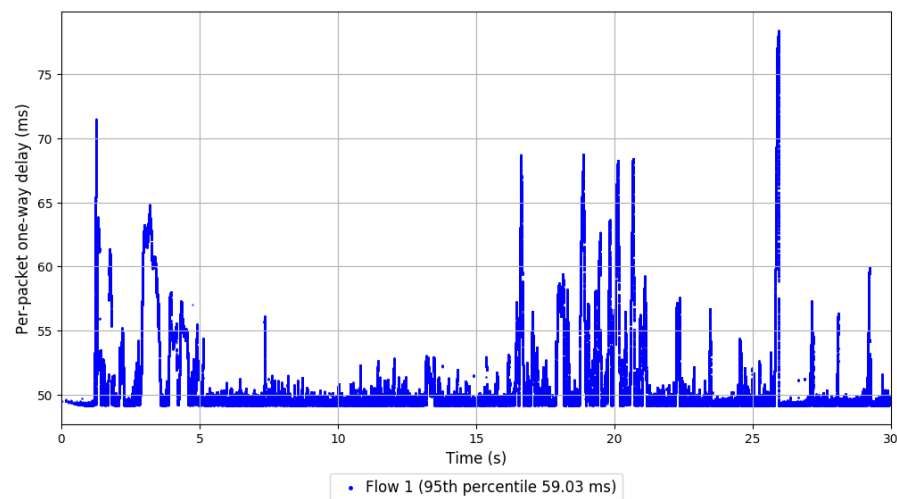
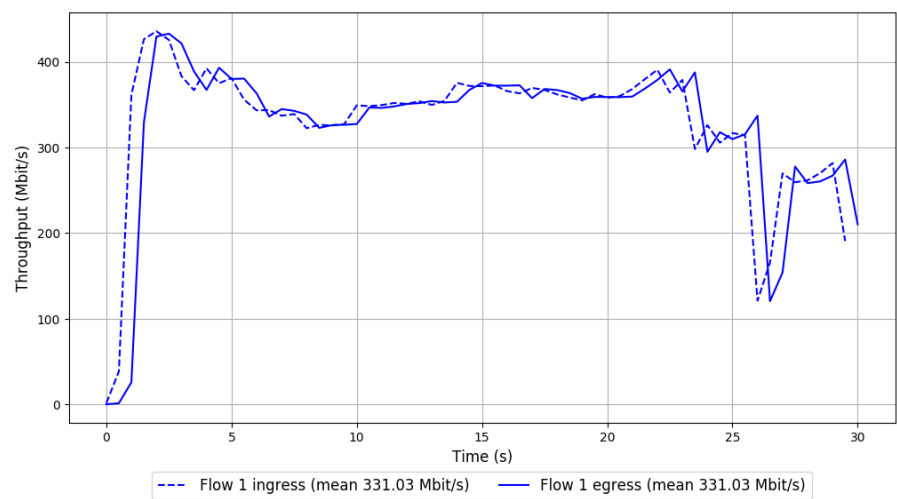


Run 4: Statistics of Copa

Start at: 2018-09-26 02:09:14
End at: 2018-09-26 02:09:44
Local clock offset: 0.308 ms
Remote clock offset: -0.057 ms

Below is generated by plot.py at 2018-09-26 03:15:06
Datalink statistics
-- Total of 1 flow:
Average throughput: 331.03 Mbit/s
95th percentile per-packet one-way delay: 59.029 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 331.03 Mbit/s
95th percentile per-packet one-way delay: 59.029 ms
Loss rate: 0.00%

Run 4: Report of Copa — Data Link

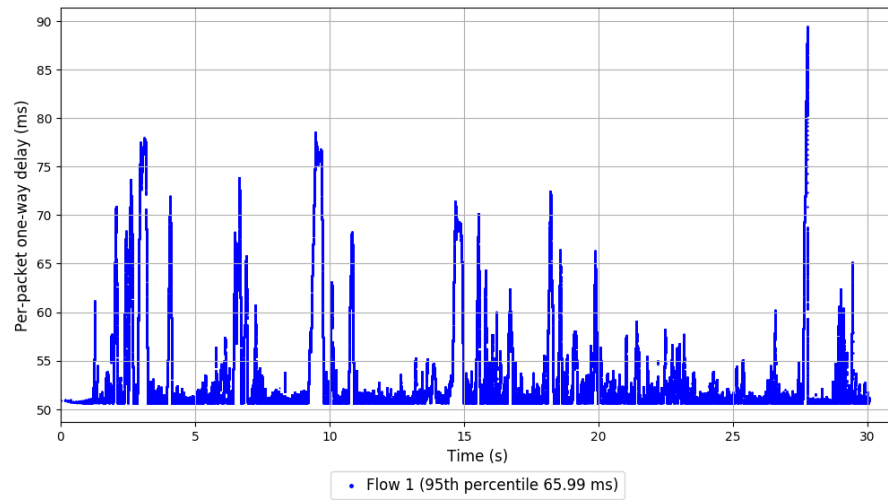
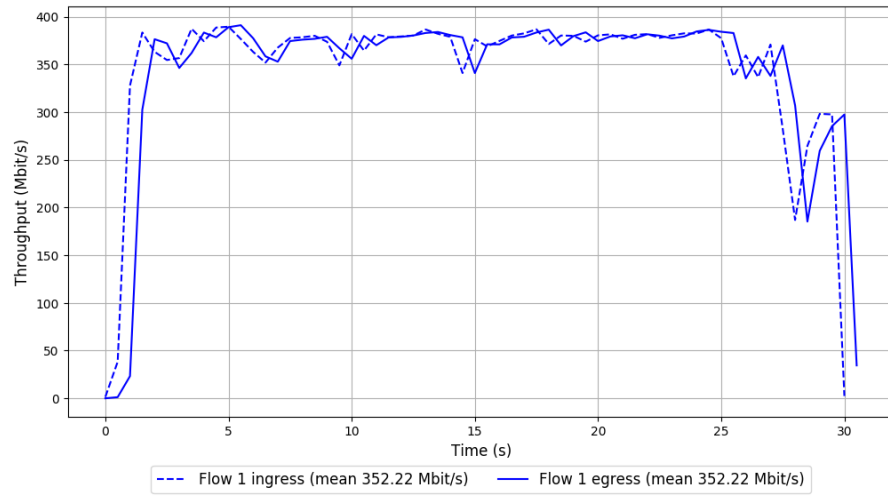


Run 5: Statistics of Copa

Start at: 2018-09-26 02:36:34
End at: 2018-09-26 02:37:04
Local clock offset: -0.027 ms
Remote clock offset: -0.057 ms

Below is generated by plot.py at 2018-09-26 03:15:40
Datalink statistics
-- Total of 1 flow:
Average throughput: 352.22 Mbit/s
95th percentile per-packet one-way delay: 65.988 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 352.22 Mbit/s
95th percentile per-packet one-way delay: 65.988 ms
Loss rate: 0.00%

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-09-26 00:34:25

End at: 2018-09-26 00:34:55

Local clock offset: -0.31 ms

Remote clock offset: -0.02 ms

Below is generated by plot.py at 2018-09-26 03:15:40

Datalink statistics

-- Total of 1 flow:

Average throughput: 572.62 Mbit/s

95th percentile per-packet one-way delay: 54.391 ms

Loss rate: 0.01%

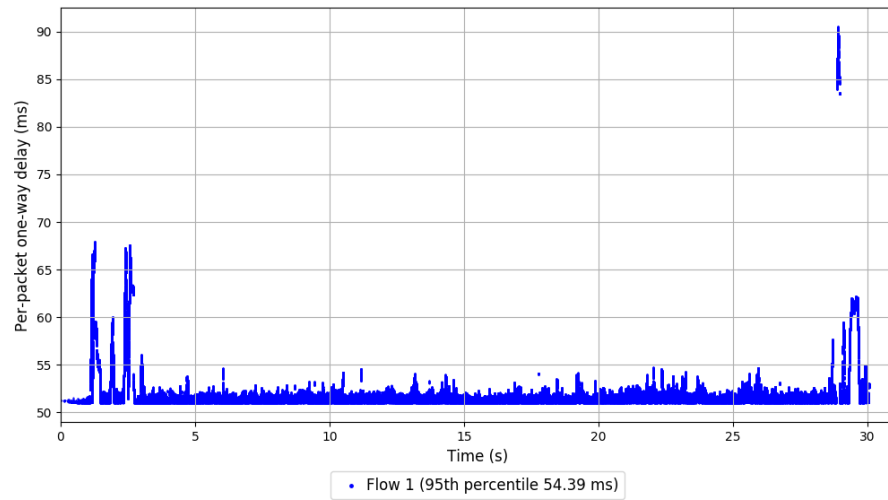
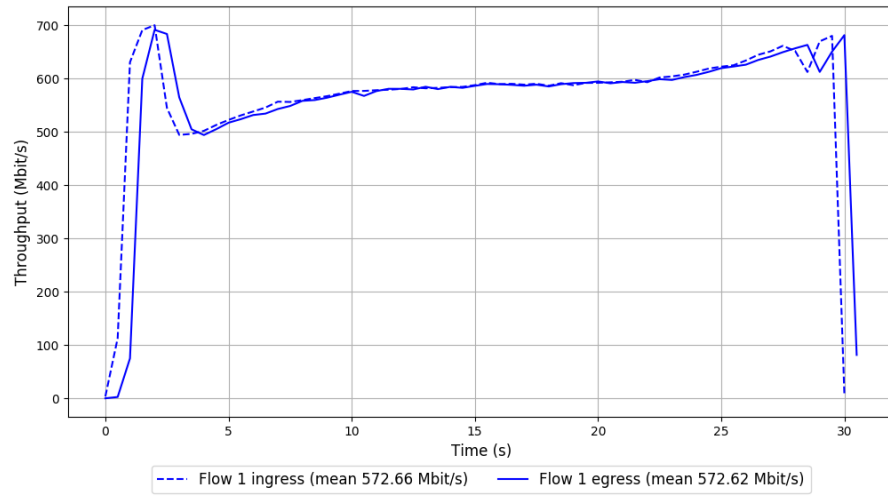
-- Flow 1:

Average throughput: 572.62 Mbit/s

95th percentile per-packet one-way delay: 54.391 ms

Loss rate: 0.01%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-09-26 01:01:52

End at: 2018-09-26 01:02:22

Local clock offset: 0.053 ms

Remote clock offset: 0.017 ms

Below is generated by plot.py at 2018-09-26 03:15:40

Datalink statistics

-- Total of 1 flow:

Average throughput: 639.82 Mbit/s

95th percentile per-packet one-way delay: 83.129 ms

Loss rate: 0.12%

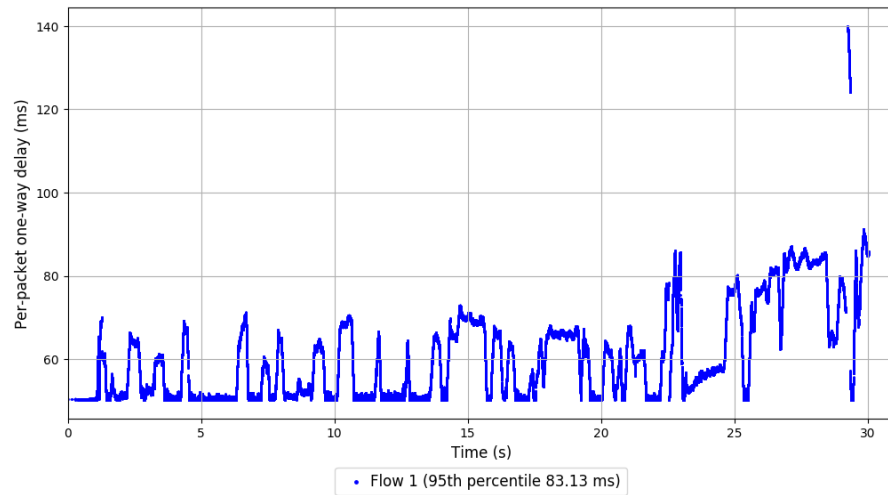
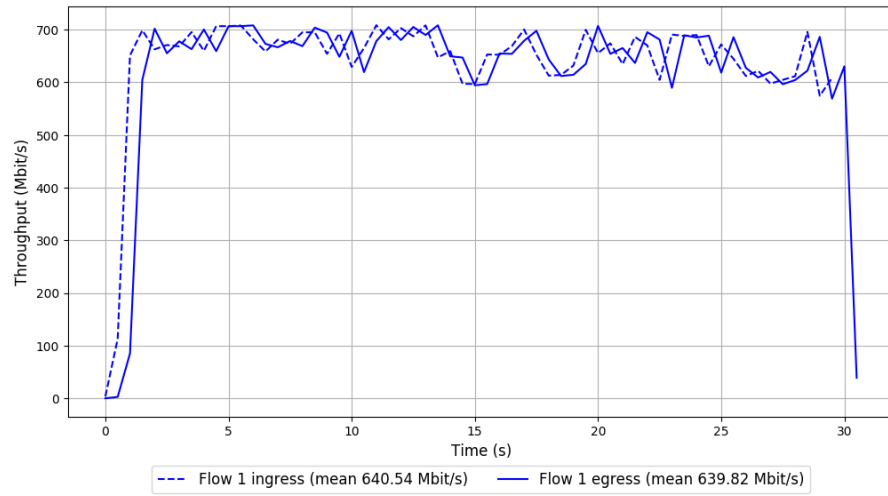
-- Flow 1:

Average throughput: 639.82 Mbit/s

95th percentile per-packet one-way delay: 83.129 ms

Loss rate: 0.12%

Run 2: Report of TCP Cubic — Data Link

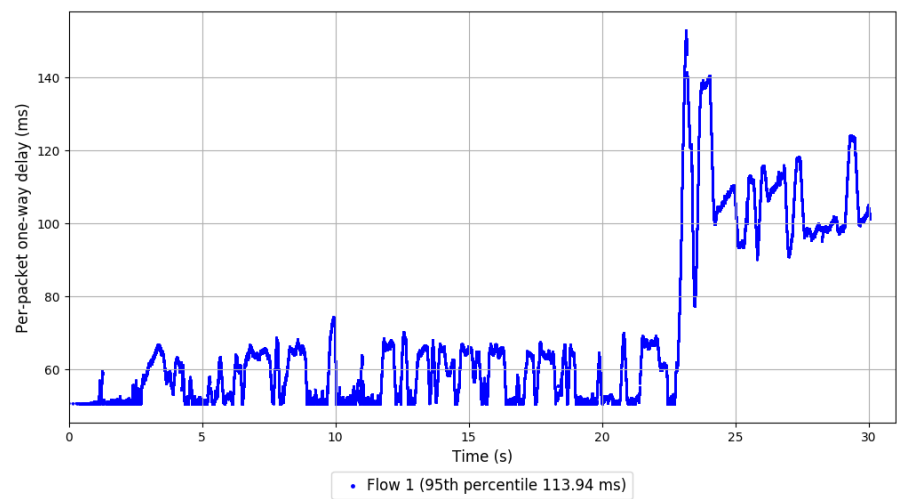
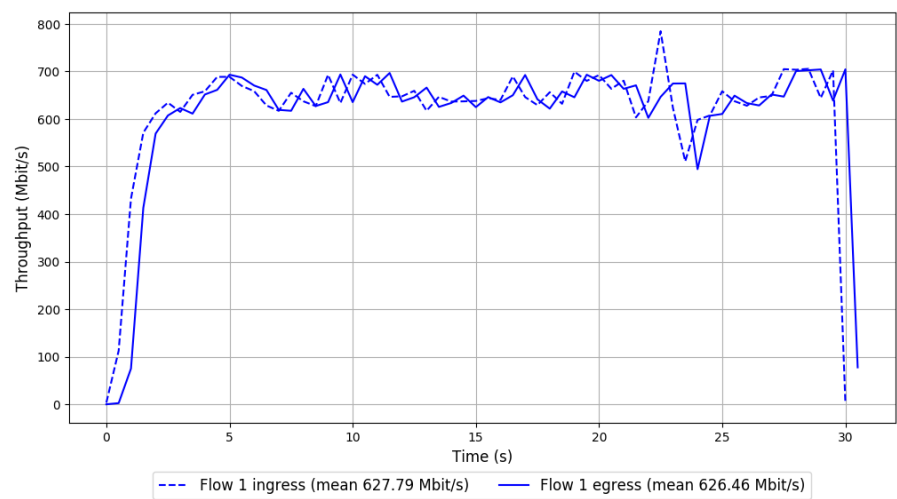


Run 3: Statistics of TCP Cubic

Start at: 2018-09-26 01:29:03
End at: 2018-09-26 01:29:33
Local clock offset: -0.045 ms
Remote clock offset: -0.042 ms

Below is generated by plot.py at 2018-09-26 03:15:40
Datalink statistics
-- Total of 1 flow:
Average throughput: 626.46 Mbit/s
95th percentile per-packet one-way delay: 113.938 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 626.46 Mbit/s
95th percentile per-packet one-way delay: 113.938 ms
Loss rate: 0.21%

Run 3: Report of TCP Cubic — Data Link

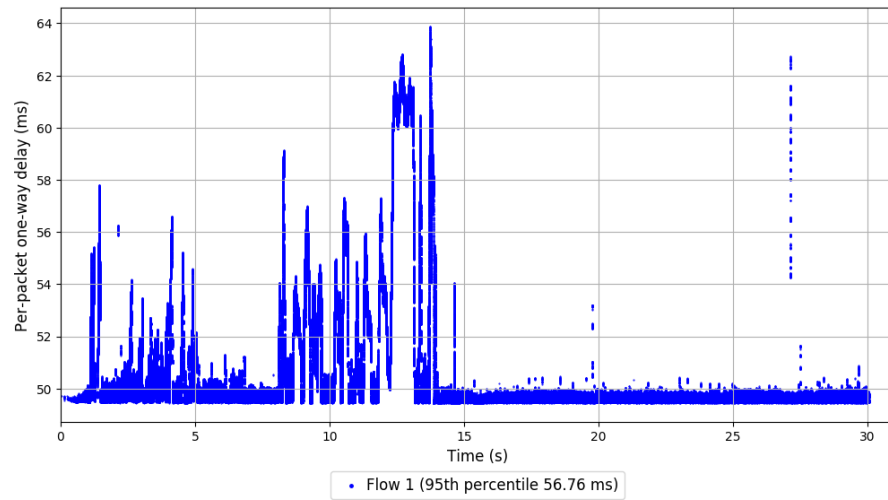
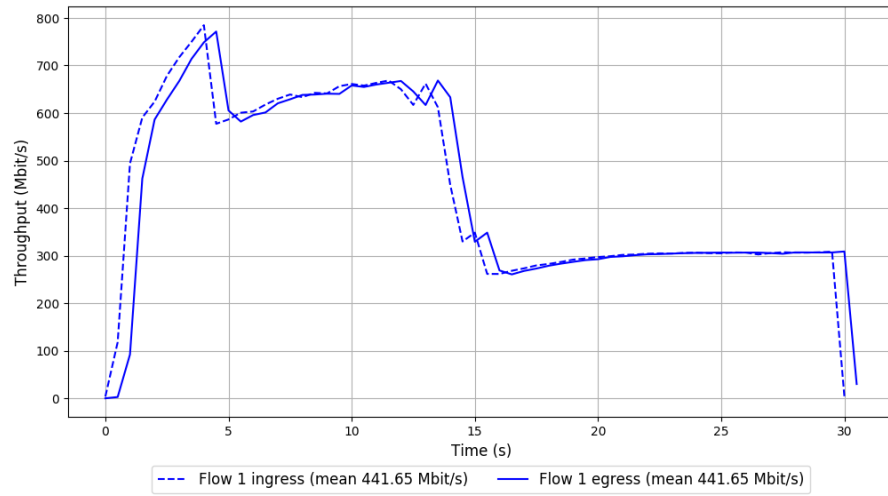


Run 4: Statistics of TCP Cubic

Start at: 2018-09-26 01:56:10
End at: 2018-09-26 01:56:40
Local clock offset: -0.053 ms
Remote clock offset: -0.032 ms

Below is generated by plot.py at 2018-09-26 03:15:40
Datalink statistics
-- Total of 1 flow:
Average throughput: 441.65 Mbit/s
95th percentile per-packet one-way delay: 56.760 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 441.65 Mbit/s
95th percentile per-packet one-way delay: 56.760 ms
Loss rate: 0.00%

Run 4: Report of TCP Cubic — Data Link

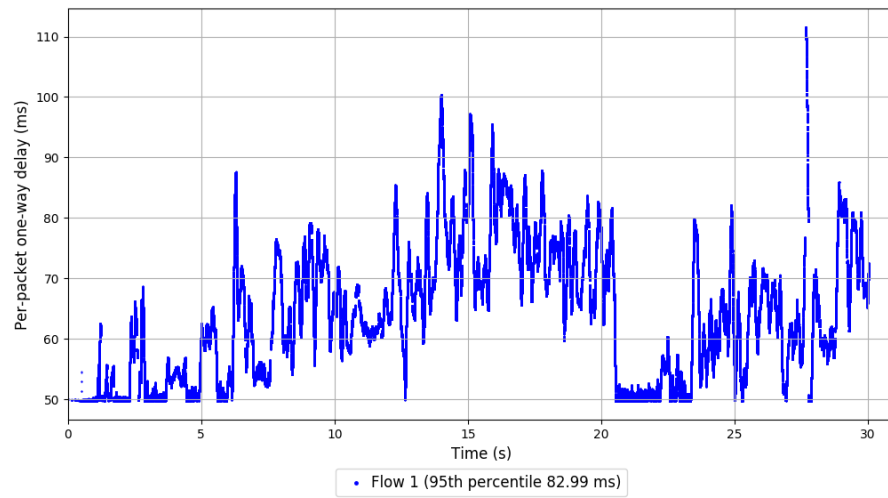
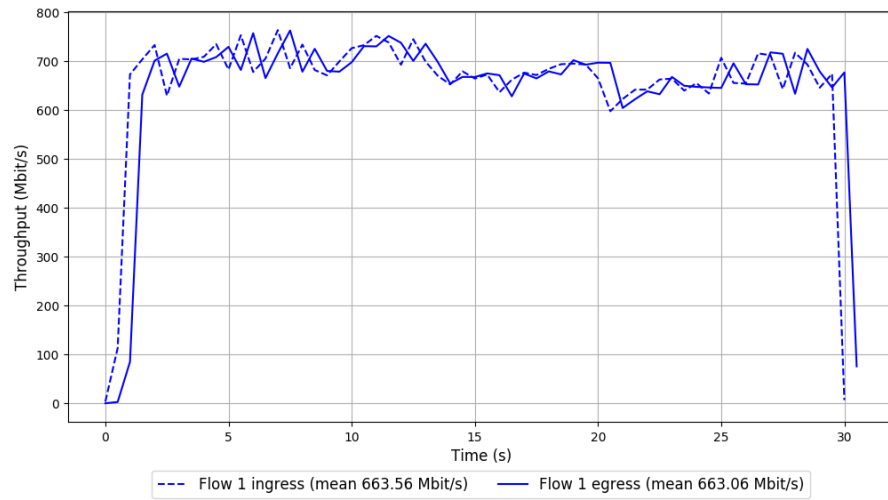


Run 5: Statistics of TCP Cubic

Start at: 2018-09-26 02:23:23
End at: 2018-09-26 02:23:53
Local clock offset: -0.017 ms
Remote clock offset: -0.049 ms

Below is generated by plot.py at 2018-09-26 03:16:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 663.06 Mbit/s
95th percentile per-packet one-way delay: 82.990 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 663.06 Mbit/s
95th percentile per-packet one-way delay: 82.990 ms
Loss rate: 0.07%

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2018-09-26 00:53:13

End at: 2018-09-26 00:53:43

Local clock offset: 0.06 ms

Remote clock offset: 0.014 ms

Below is generated by plot.py at 2018-09-26 03:21:19

Datalink statistics

-- Total of 1 flow:

Average throughput: 835.77 Mbit/s

95th percentile per-packet one-way delay: 117.367 ms

Loss rate: 3.18%

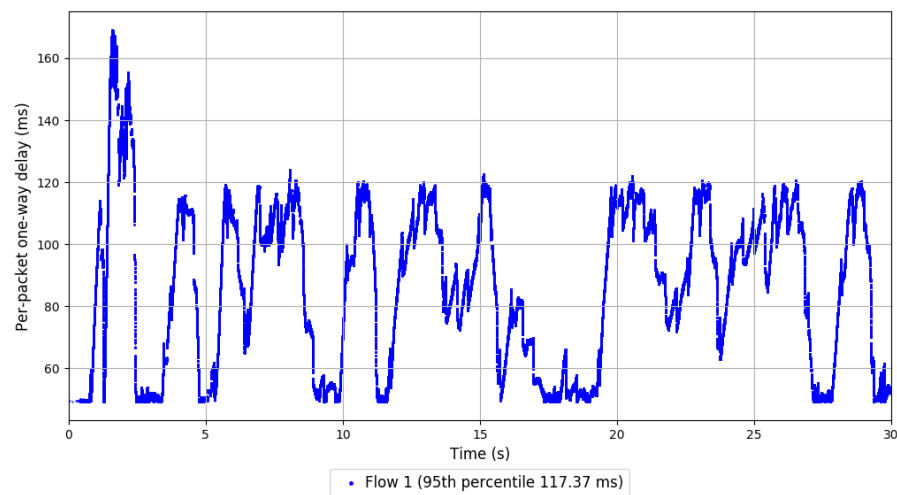
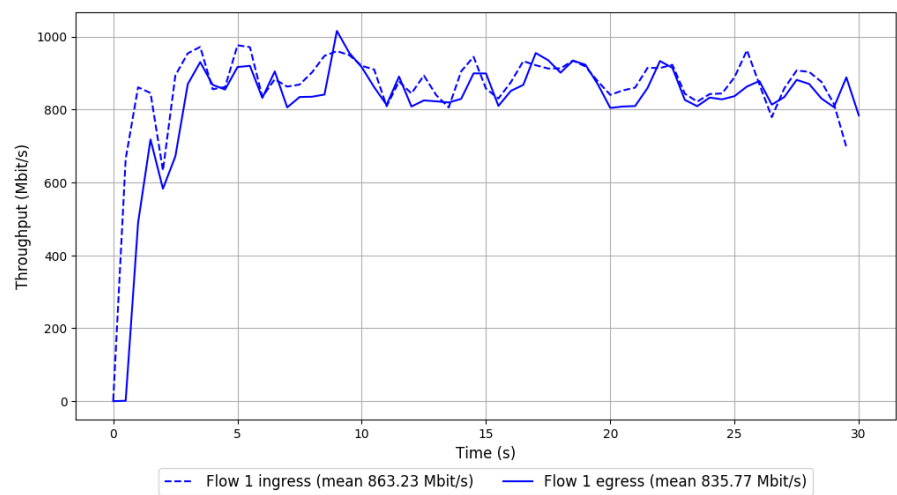
-- Flow 1:

Average throughput: 835.77 Mbit/s

95th percentile per-packet one-way delay: 117.367 ms

Loss rate: 3.18%

Run 1: Report of FillP — Data Link

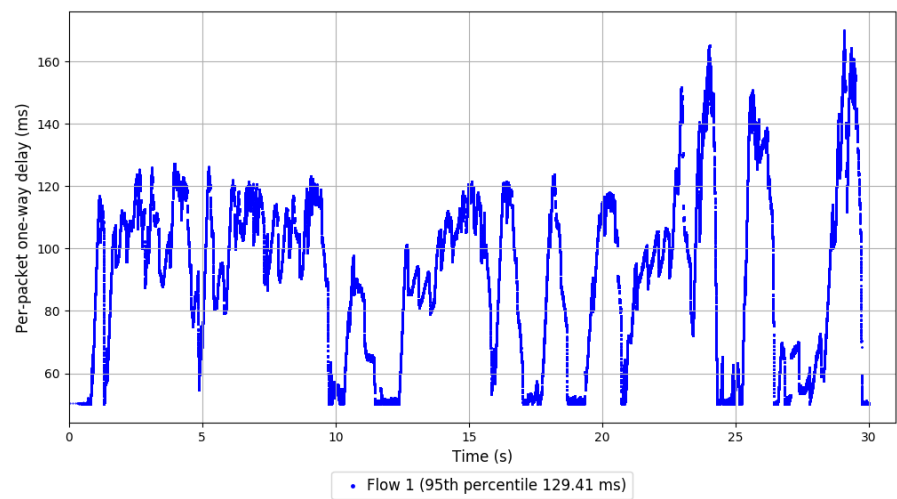
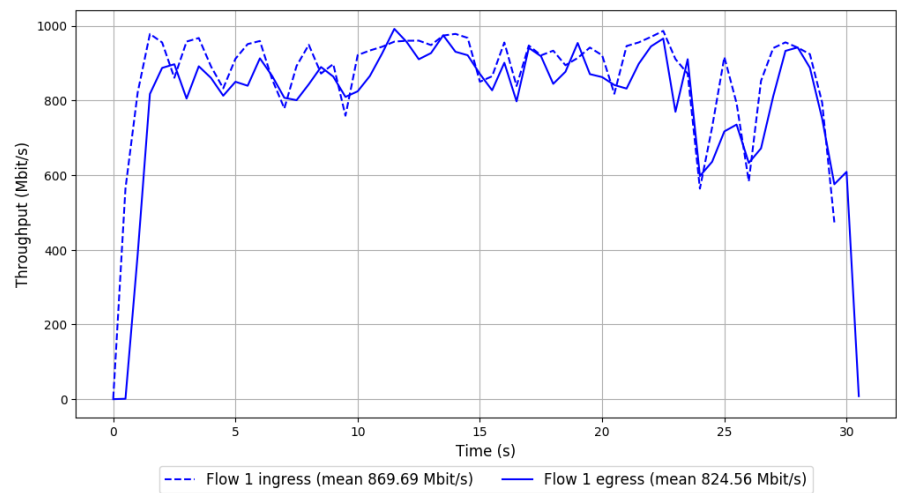


Run 2: Statistics of FillP

Start at: 2018-09-26 01:20:35
End at: 2018-09-26 01:21:05
Local clock offset: -0.007 ms
Remote clock offset: -0.018 ms

Below is generated by plot.py at 2018-09-26 03:30:39
Datalink statistics
-- Total of 1 flow:
Average throughput: 824.56 Mbit/s
95th percentile per-packet one-way delay: 129.408 ms
Loss rate: 5.19%
-- Flow 1:
Average throughput: 824.56 Mbit/s
95th percentile per-packet one-way delay: 129.408 ms
Loss rate: 5.19%

Run 2: Report of FillP — Data Link

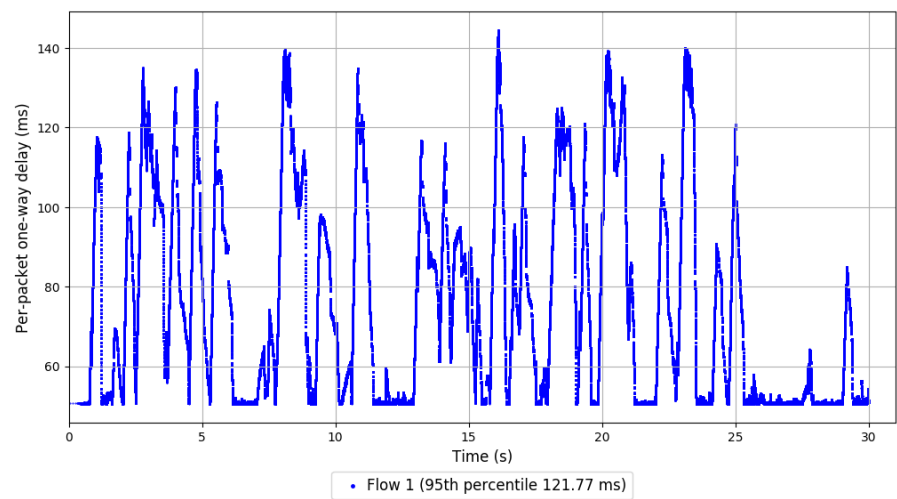
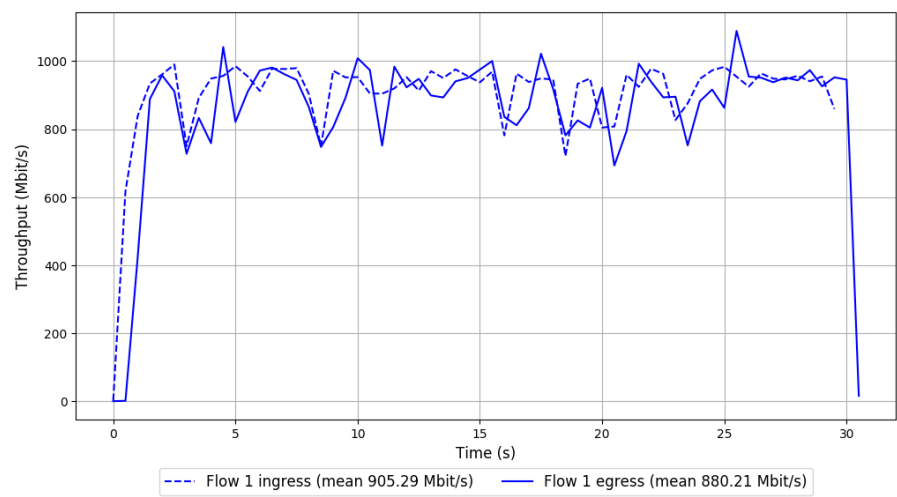


Run 3: Statistics of FillP

Start at: 2018-09-26 01:47:43
End at: 2018-09-26 01:48:13
Local clock offset: -0.424 ms
Remote clock offset: -0.029 ms

Below is generated by plot.py at 2018-09-26 03:32:21
Datalink statistics
-- Total of 1 flow:
Average throughput: 880.21 Mbit/s
95th percentile per-packet one-way delay: 121.768 ms
Loss rate: 2.77%
-- Flow 1:
Average throughput: 880.21 Mbit/s
95th percentile per-packet one-way delay: 121.768 ms
Loss rate: 2.77%

Run 3: Report of FillP — Data Link

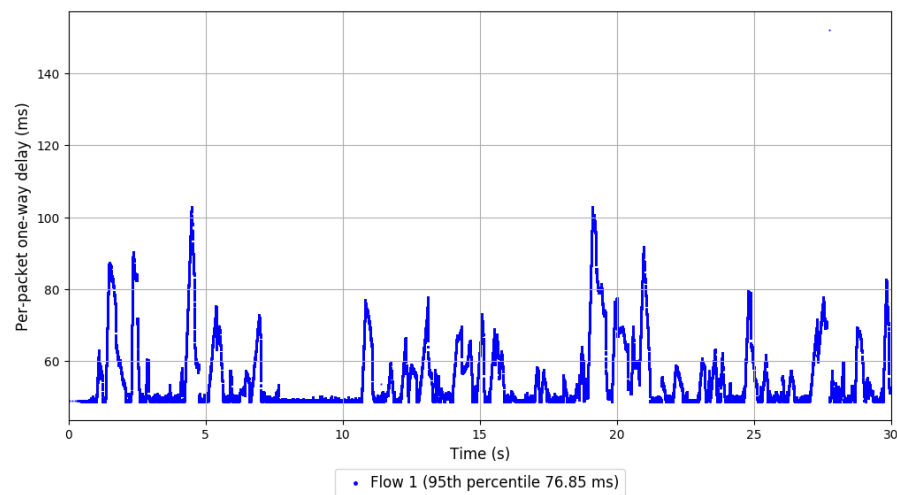
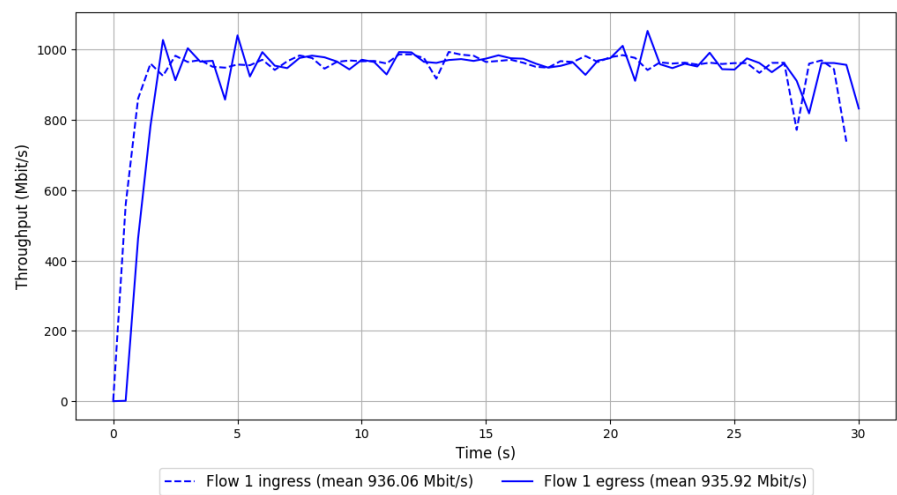


Run 4: Statistics of FillP

Start at: 2018-09-26 02:14:44
End at: 2018-09-26 02:15:14
Local clock offset: -0.05 ms
Remote clock offset: -0.049 ms

Below is generated by plot.py at 2018-09-26 03:33:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 935.92 Mbit/s
95th percentile per-packet one-way delay: 76.850 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 935.92 Mbit/s
95th percentile per-packet one-way delay: 76.850 ms
Loss rate: 0.01%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-09-26 02:42:13

End at: 2018-09-26 02:42:43

Local clock offset: -0.344 ms

Remote clock offset: -0.09 ms

Below is generated by plot.py at 2018-09-26 03:33:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 832.50 Mbit/s

95th percentile per-packet one-way delay: 122.697 ms

Loss rate: 3.77%

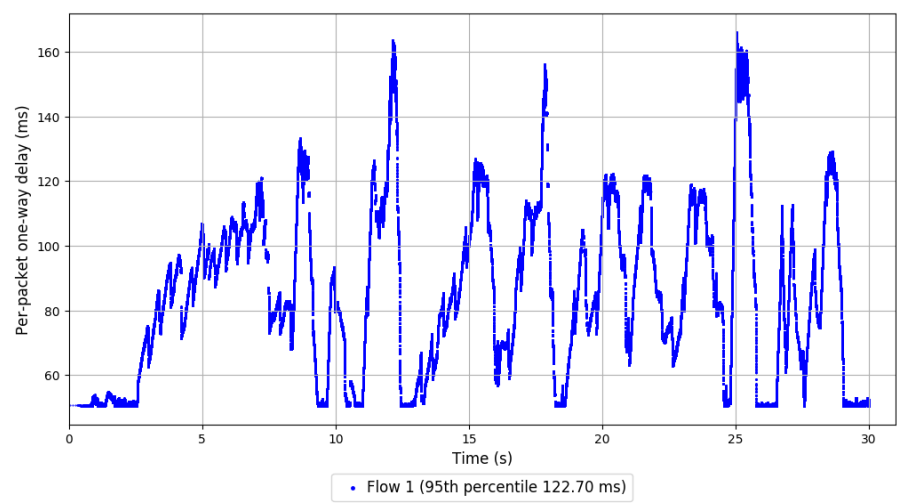
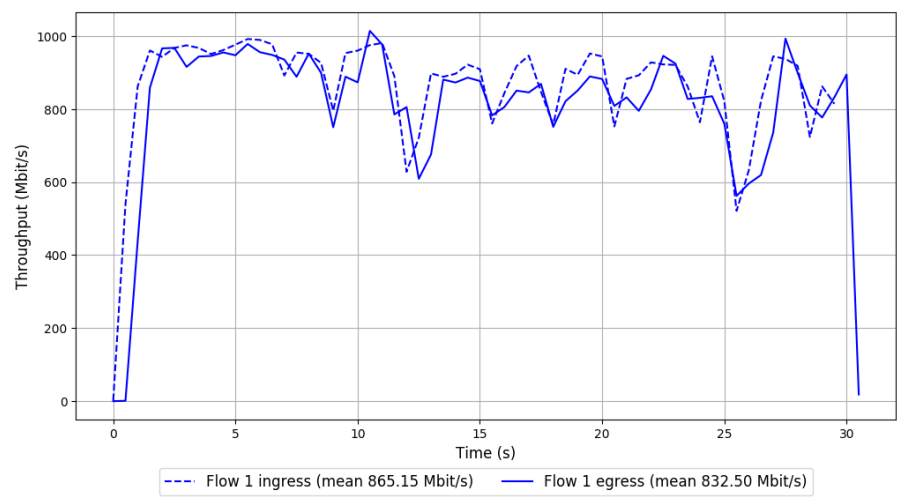
-- Flow 1:

Average throughput: 832.50 Mbit/s

95th percentile per-packet one-way delay: 122.697 ms

Loss rate: 3.77%

Run 5: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2018-09-26 00:49:20

End at: 2018-09-26 00:49:50

Local clock offset: 0.006 ms

Remote clock offset: 0.131 ms

Below is generated by plot.py at 2018-09-26 03:33:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 825.25 Mbit/s

95th percentile per-packet one-way delay: 97.142 ms

Loss rate: 0.08%

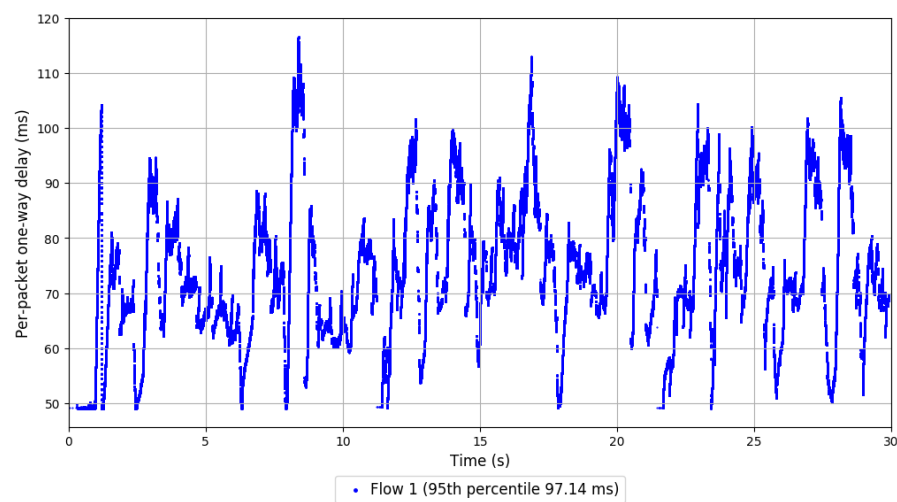
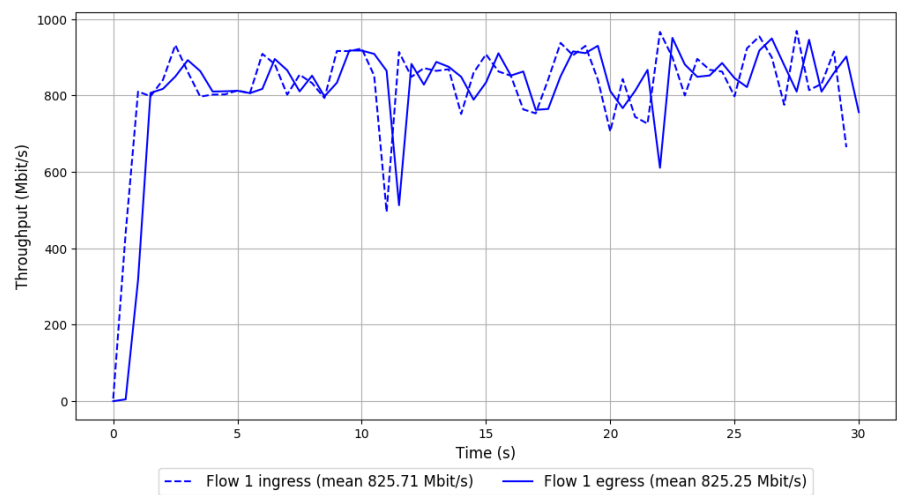
-- Flow 1:

Average throughput: 825.25 Mbit/s

95th percentile per-packet one-way delay: 97.142 ms

Loss rate: 0.08%

Run 1: Report of FillP-Sheep — Data Link

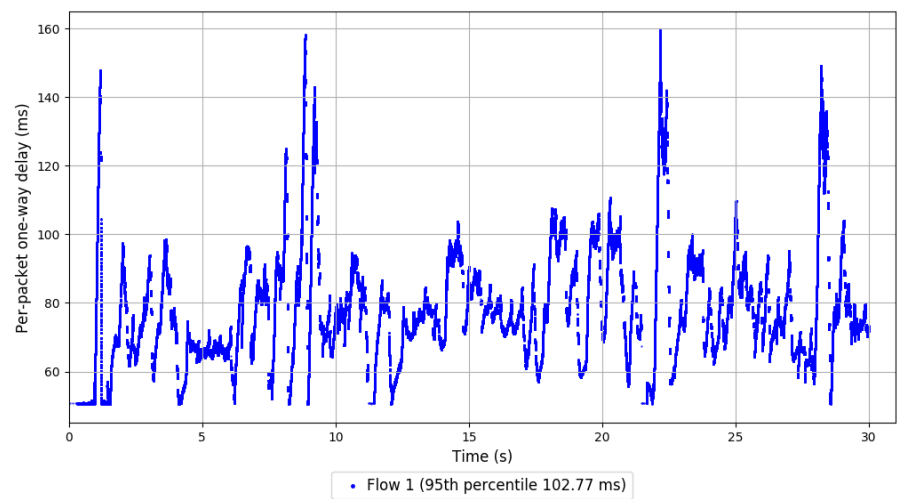
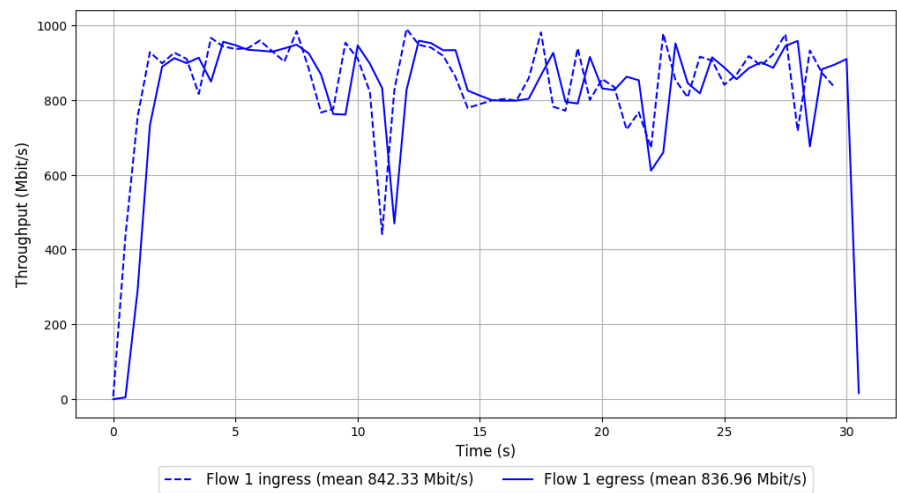


Run 2: Statistics of FillP-Sheep

Start at: 2018-09-26 01:16:39
End at: 2018-09-26 01:17:10
Local clock offset: -0.351 ms
Remote clock offset: -0.024 ms

Below is generated by plot.py at 2018-09-26 03:33:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 836.96 Mbit/s
95th percentile per-packet one-way delay: 102.767 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 836.96 Mbit/s
95th percentile per-packet one-way delay: 102.767 ms
Loss rate: 0.63%

Run 2: Report of FillP-Sheep — Data Link

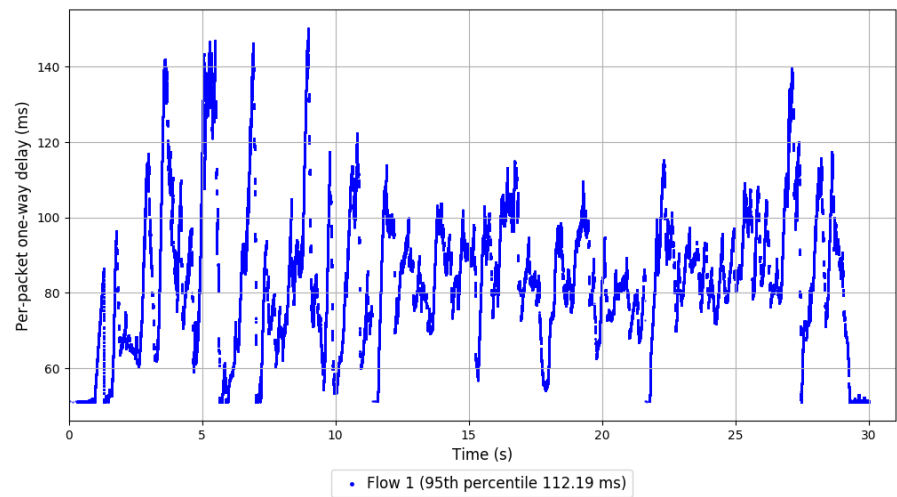
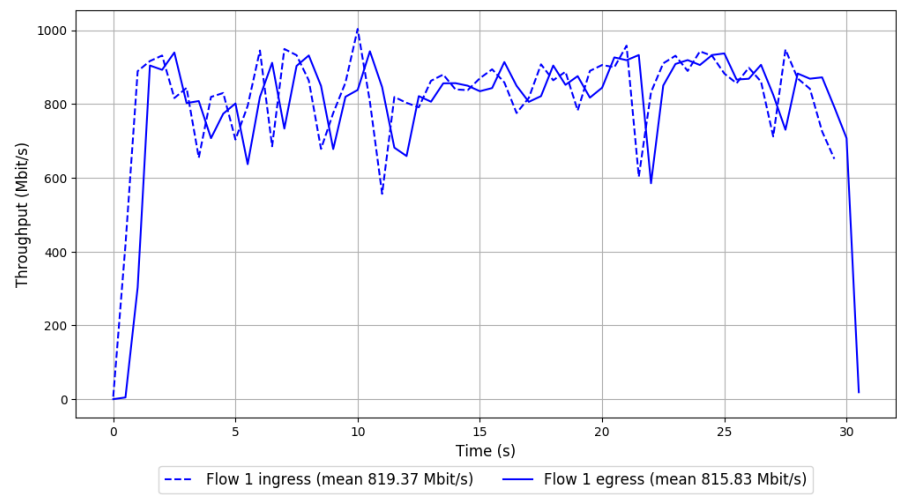


Run 3: Statistics of FillP-Sheep

Start at: 2018-09-26 01:43:49
End at: 2018-09-26 01:44:19
Local clock offset: -0.434 ms
Remote clock offset: -0.068 ms

Below is generated by plot.py at 2018-09-26 03:33:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 815.83 Mbit/s
95th percentile per-packet one-way delay: 112.192 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 815.83 Mbit/s
95th percentile per-packet one-way delay: 112.192 ms
Loss rate: 0.43%

Run 3: Report of FillP-Sheep — Data Link

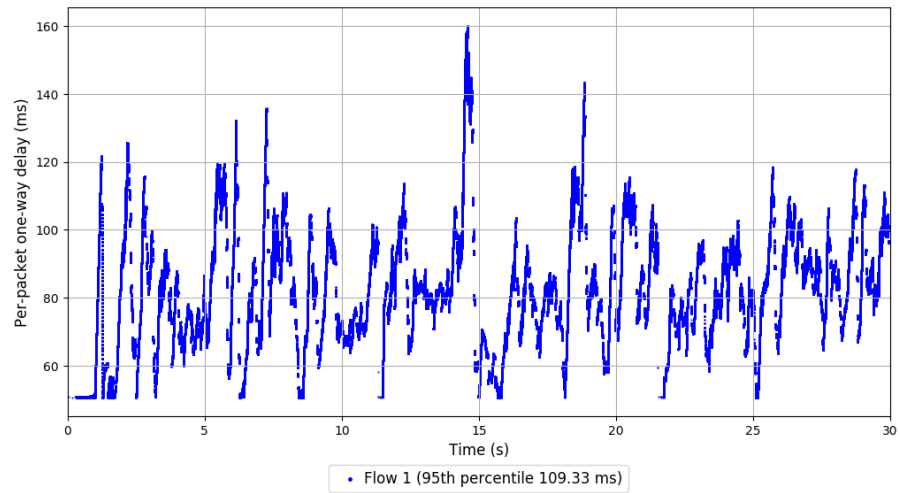
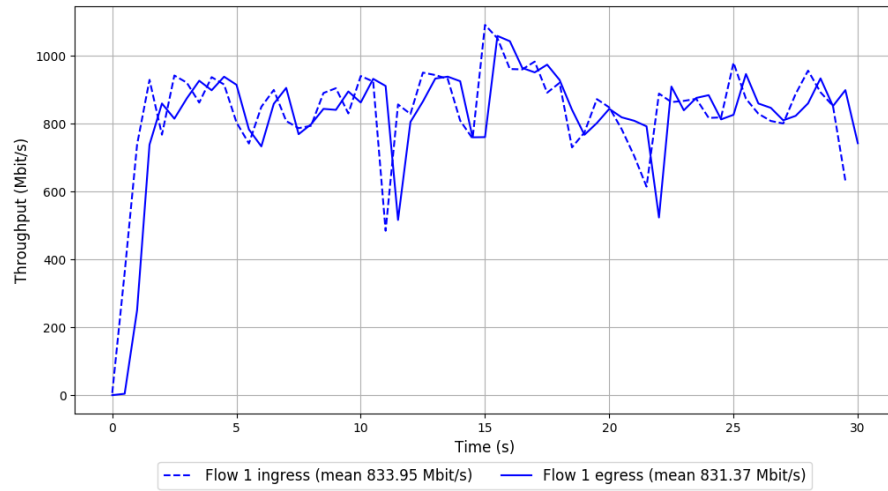


Run 4: Statistics of FillP-Sheep

Start at: 2018-09-26 02:10:50
End at: 2018-09-26 02:11:20
Local clock offset: -0.063 ms
Remote clock offset: -0.025 ms

Below is generated by plot.py at 2018-09-26 03:40:06
Datalink statistics
-- Total of 1 flow:
Average throughput: 831.37 Mbit/s
95th percentile per-packet one-way delay: 109.335 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 831.37 Mbit/s
95th percentile per-packet one-way delay: 109.335 ms
Loss rate: 0.50%

Run 4: Report of FillP-Sheep — Data Link

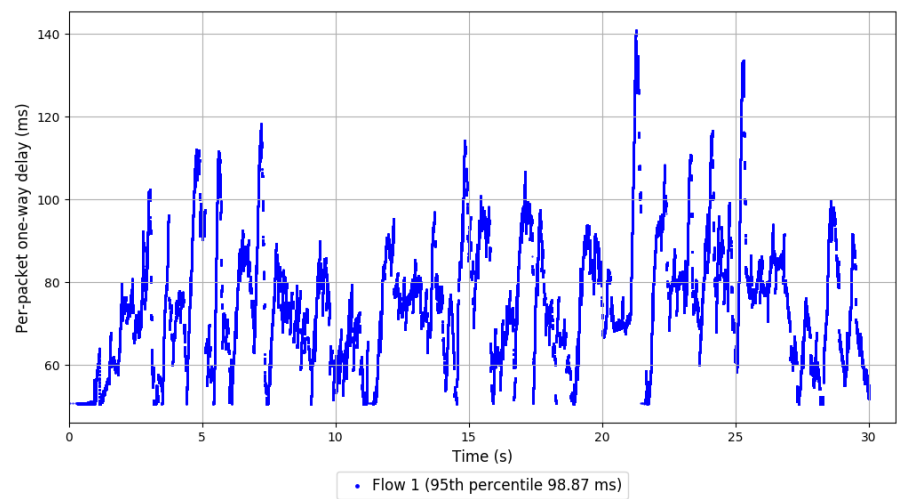
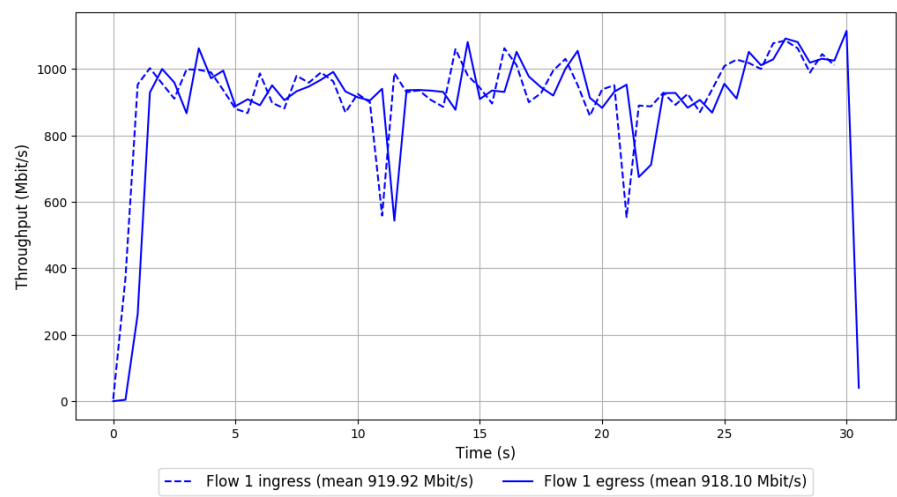


Run 5: Statistics of FillP-Sheep

Start at: 2018-09-26 02:38:13
End at: 2018-09-26 02:38:43
Local clock offset: -0.019 ms
Remote clock offset: -0.072 ms

Below is generated by plot.py at 2018-09-26 03:47:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 918.10 Mbit/s
95th percentile per-packet one-way delay: 98.866 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 918.10 Mbit/s
95th percentile per-packet one-way delay: 98.866 ms
Loss rate: 0.20%

Run 5: Report of FillP-Sheep — Data Link

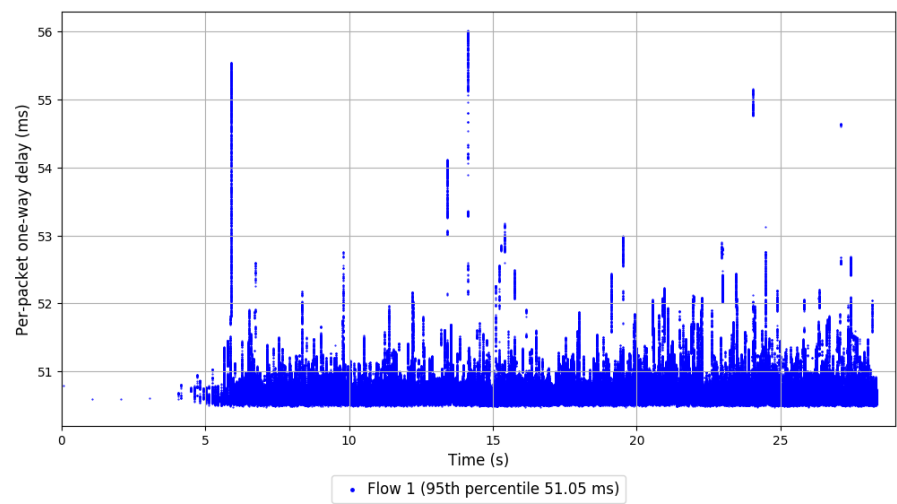
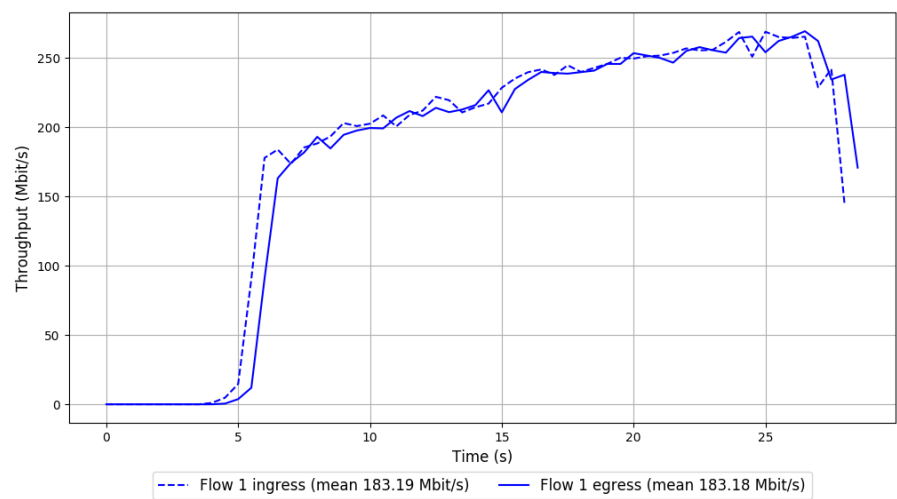


Run 1: Statistics of Indigo

Start at: 2018-09-26 00:36:10
End at: 2018-09-26 00:36:40
Local clock offset: -0.296 ms
Remote clock offset: -0.072 ms

Below is generated by plot.py at 2018-09-26 03:47:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 183.18 Mbit/s
95th percentile per-packet one-way delay: 51.046 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 183.18 Mbit/s
95th percentile per-packet one-way delay: 51.046 ms
Loss rate: 0.01%

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2018-09-26 01:03:30

End at: 2018-09-26 01:04:00

Local clock offset: 0.107 ms

Remote clock offset: 0.006 ms

Below is generated by plot.py at 2018-09-26 03:47:33

Datalink statistics

-- Total of 1 flow:

Average throughput: 229.76 Mbit/s

95th percentile per-packet one-way delay: 49.745 ms

Loss rate: 0.00%

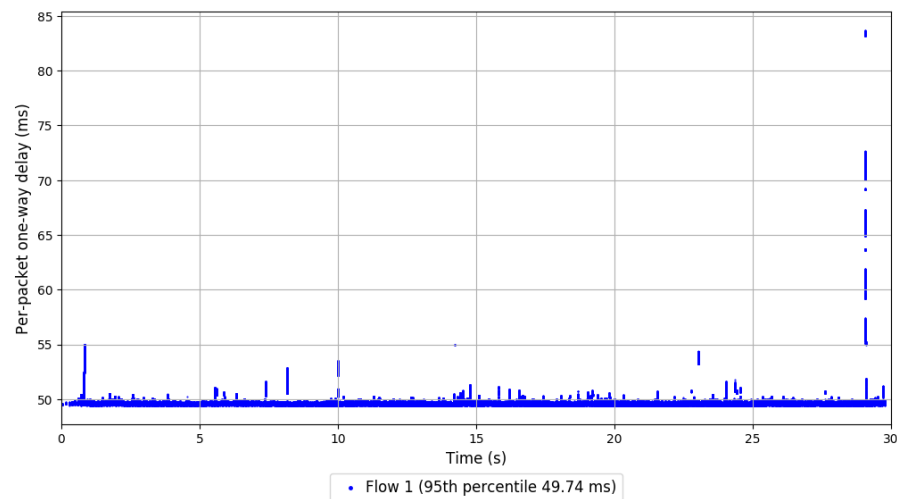
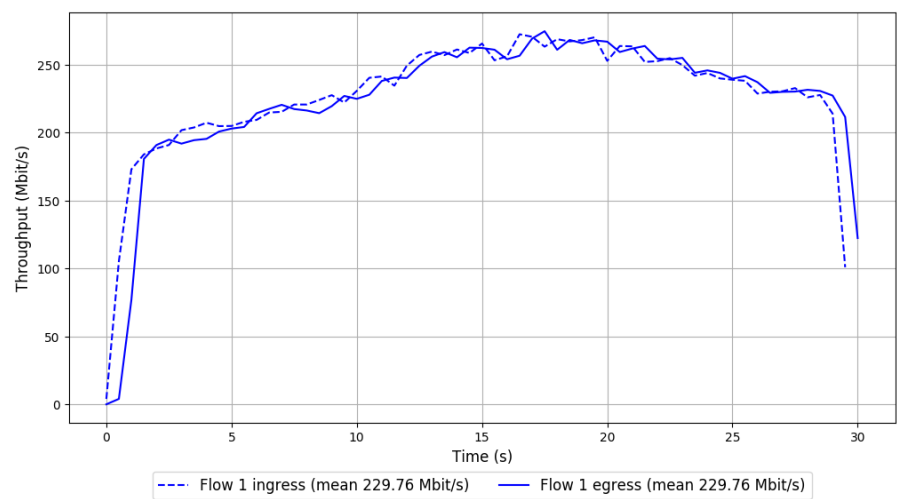
-- Flow 1:

Average throughput: 229.76 Mbit/s

95th percentile per-packet one-way delay: 49.745 ms

Loss rate: 0.00%

Run 2: Report of Indigo — Data Link

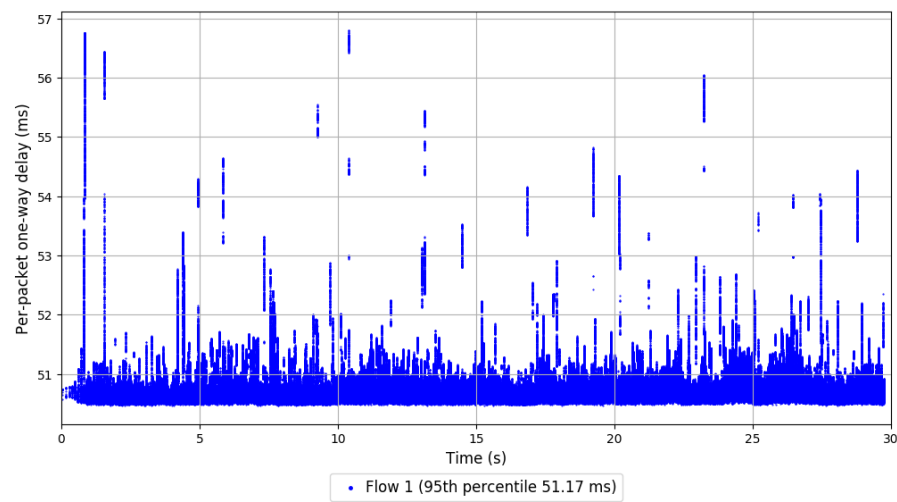
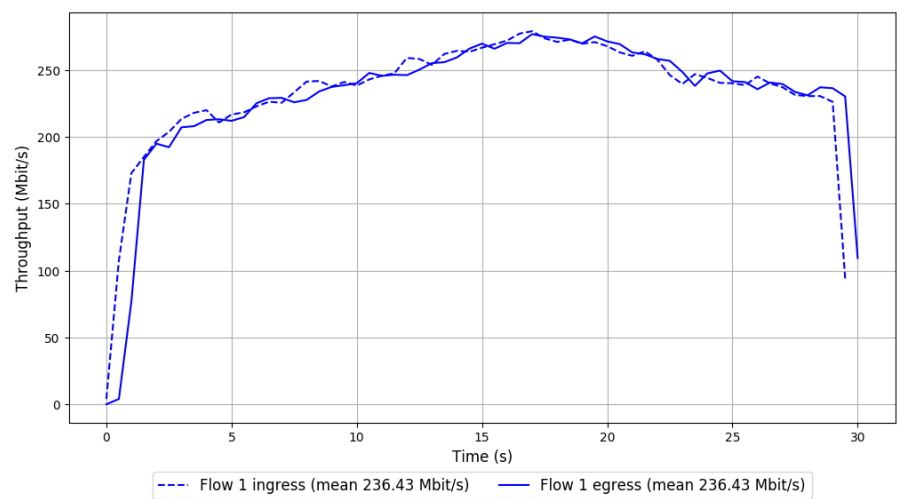


Run 3: Statistics of Indigo

Start at: 2018-09-26 01:30:39
End at: 2018-09-26 01:31:09
Local clock offset: -0.052 ms
Remote clock offset: -0.048 ms

Below is generated by plot.py at 2018-09-26 03:47:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 236.43 Mbit/s
95th percentile per-packet one-way delay: 51.173 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 236.43 Mbit/s
95th percentile per-packet one-way delay: 51.173 ms
Loss rate: 0.00%

Run 3: Report of Indigo — Data Link

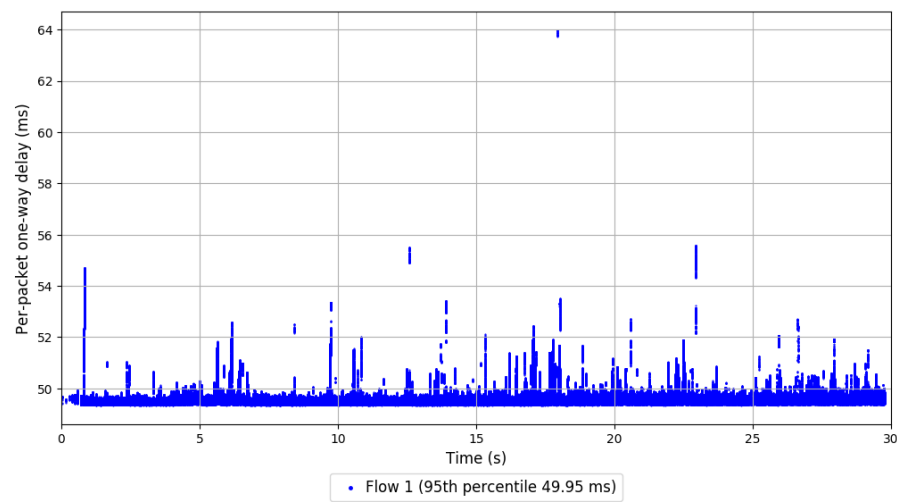
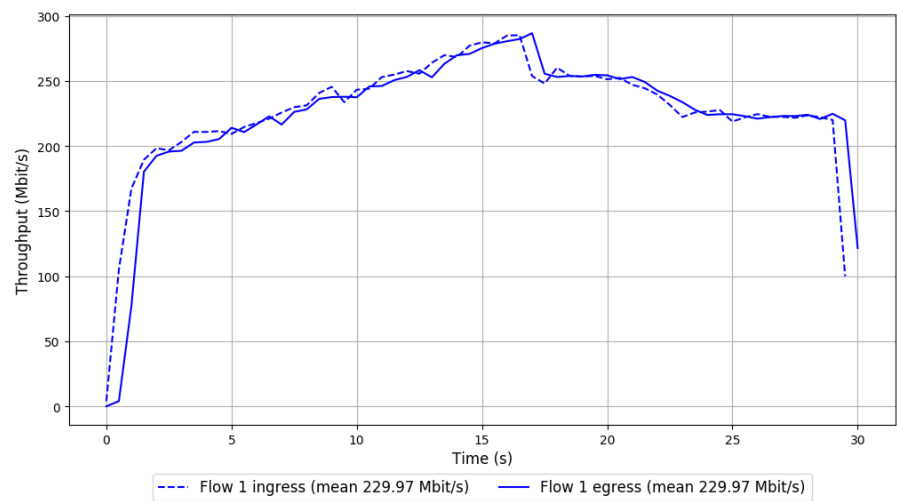


Run 4: Statistics of Indigo

Start at: 2018-09-26 01:57:38
End at: 2018-09-26 01:58:08
Local clock offset: -0.031 ms
Remote clock offset: -0.072 ms

Below is generated by plot.py at 2018-09-26 03:47:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 229.97 Mbit/s
95th percentile per-packet one-way delay: 49.954 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 229.97 Mbit/s
95th percentile per-packet one-way delay: 49.954 ms
Loss rate: 0.00%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2018-09-26 02:25:01

End at: 2018-09-26 02:25:31

Local clock offset: 0.341 ms

Remote clock offset: -0.05 ms

Below is generated by plot.py at 2018-09-26 03:47:33

Datalink statistics

-- Total of 1 flow:

Average throughput: 199.41 Mbit/s

95th percentile per-packet one-way delay: 50.593 ms

Loss rate: 0.00%

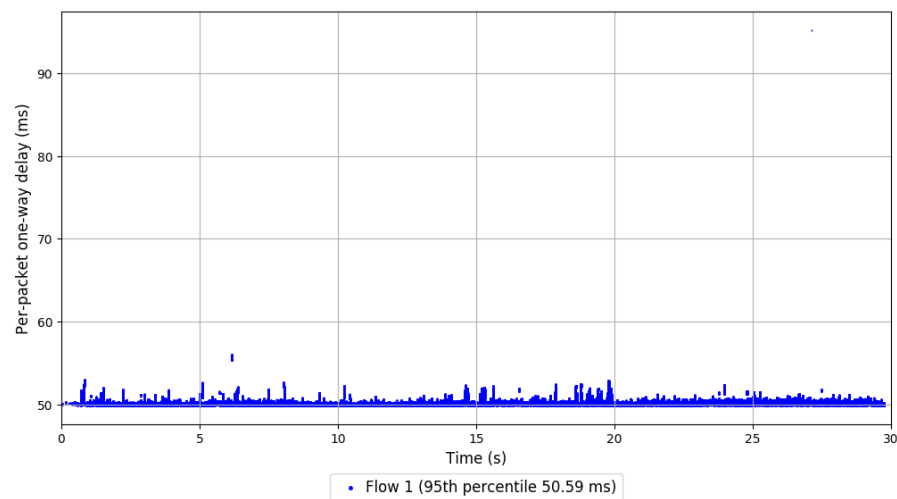
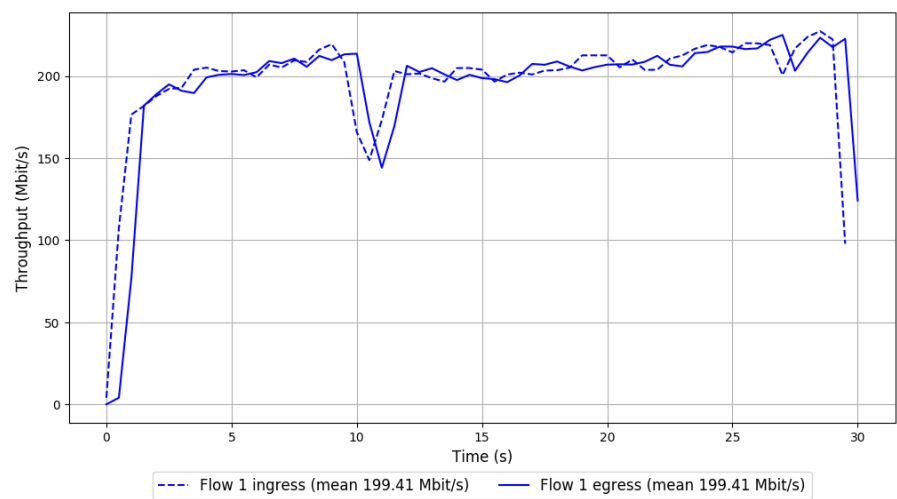
-- Flow 1:

Average throughput: 199.41 Mbit/s

95th percentile per-packet one-way delay: 50.593 ms

Loss rate: 0.00%

Run 5: Report of Indigo — Data Link

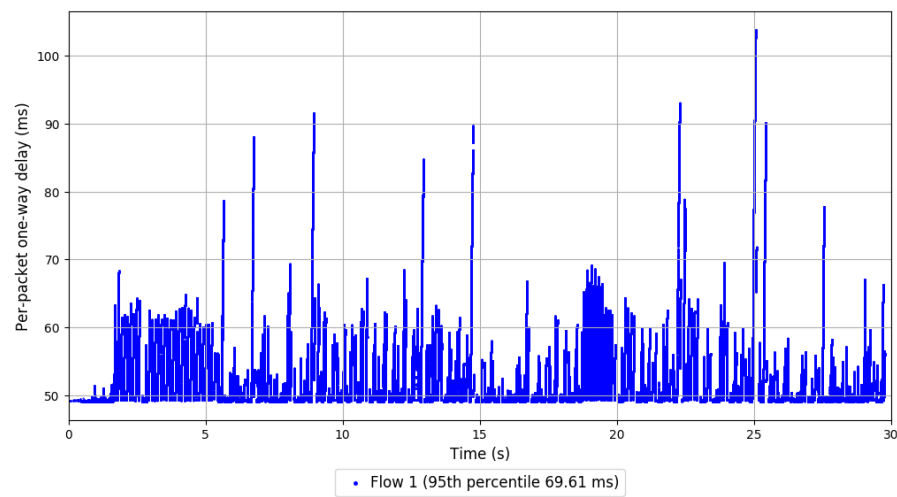
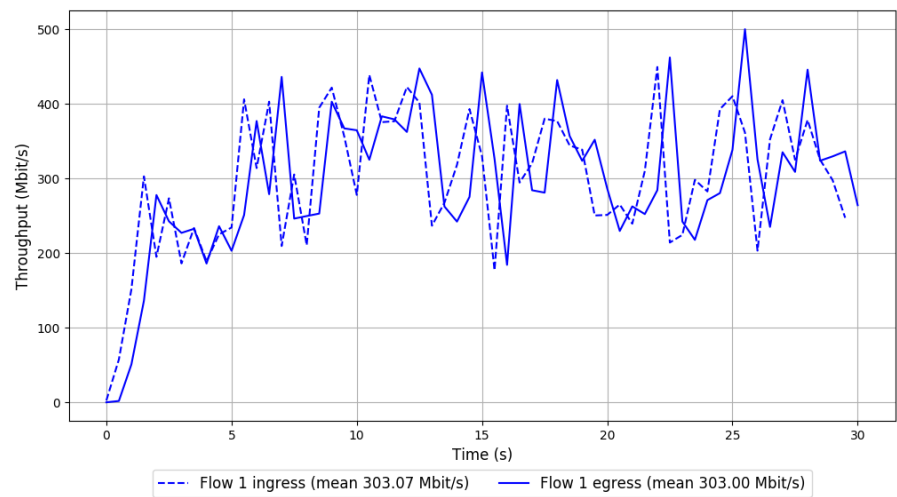


Run 1: Statistics of Indigo-96d2da3

Start at: 2018-09-26 00:54:52
End at: 2018-09-26 00:55:22
Local clock offset: -0.284 ms
Remote clock offset: -0.005 ms

Below is generated by plot.py at 2018-09-26 03:47:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 303.00 Mbit/s
95th percentile per-packet one-way delay: 69.608 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 303.00 Mbit/s
95th percentile per-packet one-way delay: 69.608 ms
Loss rate: 0.00%

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

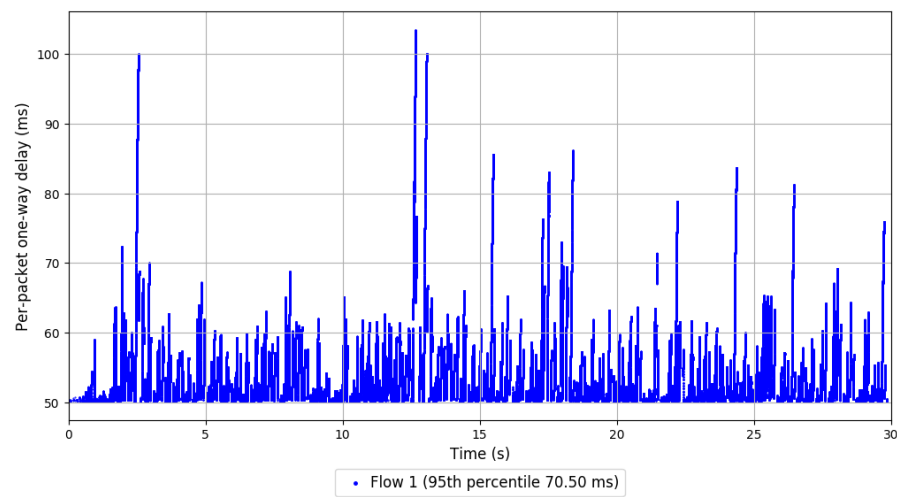
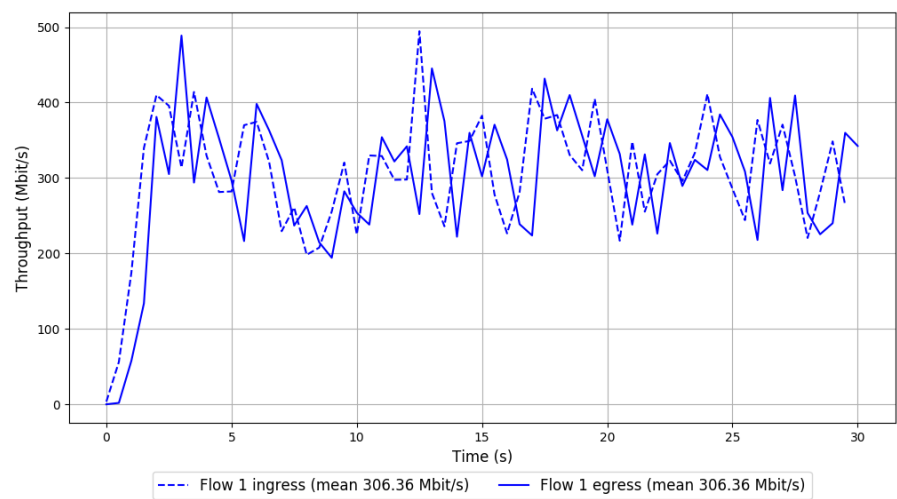


Run 2: Statistics of Indigo-96d2da3

Start at: 2018-09-26 01:22:13
End at: 2018-09-26 01:22:43
Local clock offset: 0.314 ms
Remote clock offset: -0.049 ms

Below is generated by plot.py at 2018-09-26 03:47:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 306.36 Mbit/s
95th percentile per-packet one-way delay: 70.502 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 306.36 Mbit/s
95th percentile per-packet one-way delay: 70.502 ms
Loss rate: 0.00%

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

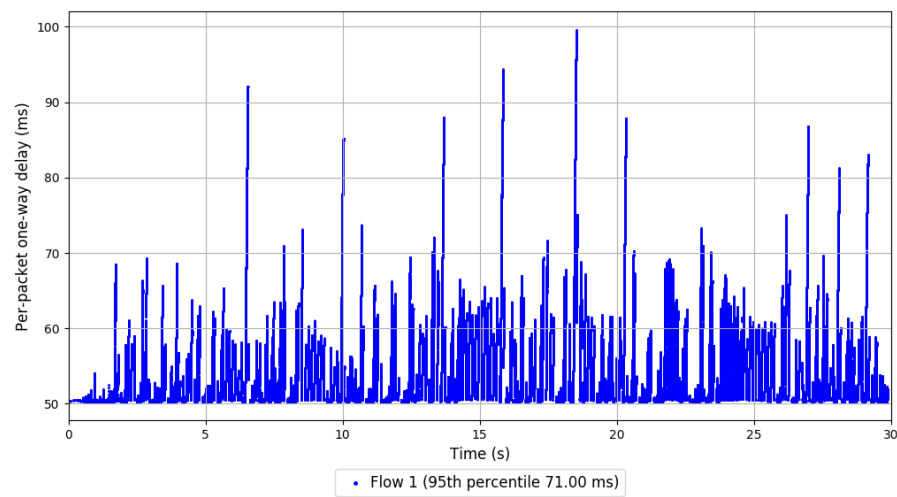
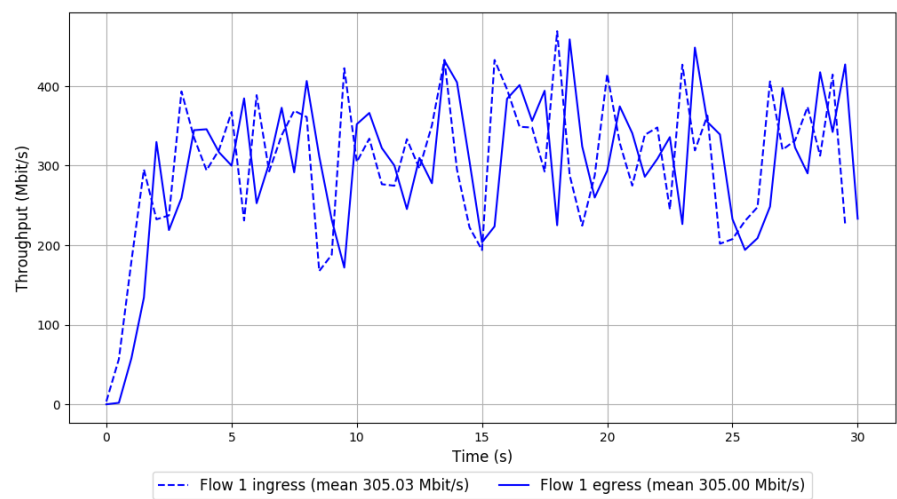


Run 3: Statistics of Indigo-96d2da3

Start at: 2018-09-26 01:49:23
End at: 2018-09-26 01:49:53
Local clock offset: -0.066 ms
Remote clock offset: -0.058 ms

Below is generated by plot.py at 2018-09-26 03:47:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 305.00 Mbit/s
95th percentile per-packet one-way delay: 70.997 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 305.00 Mbit/s
95th percentile per-packet one-way delay: 70.997 ms
Loss rate: 0.01%

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

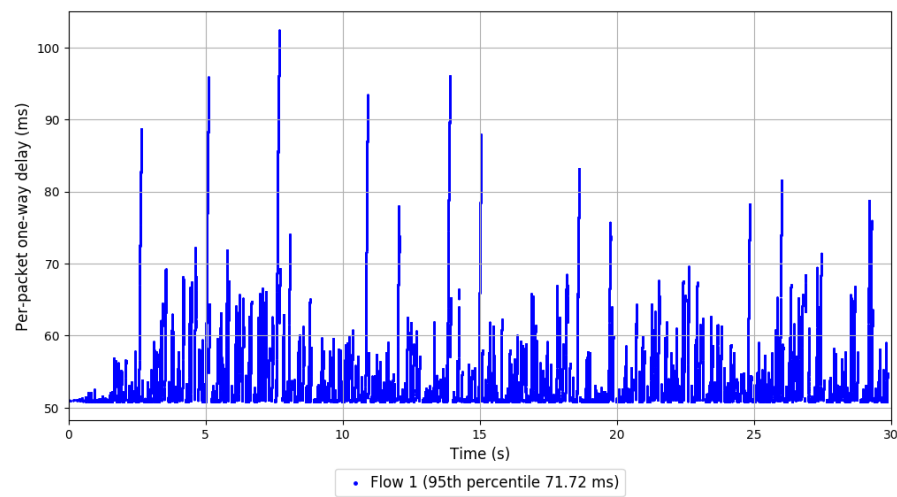
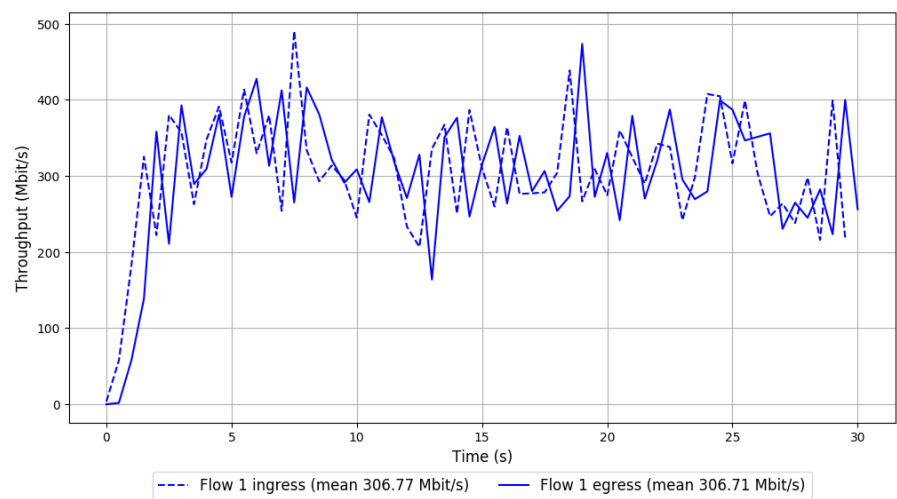


Run 4: Statistics of Indigo-96d2da3

Start at: 2018-09-26 02:16:25
End at: 2018-09-26 02:16:55
Local clock offset: -0.393 ms
Remote clock offset: -0.024 ms

Below is generated by plot.py at 2018-09-26 03:47:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 306.71 Mbit/s
95th percentile per-packet one-way delay: 71.719 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 306.71 Mbit/s
95th percentile per-packet one-way delay: 71.719 ms
Loss rate: 0.02%

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

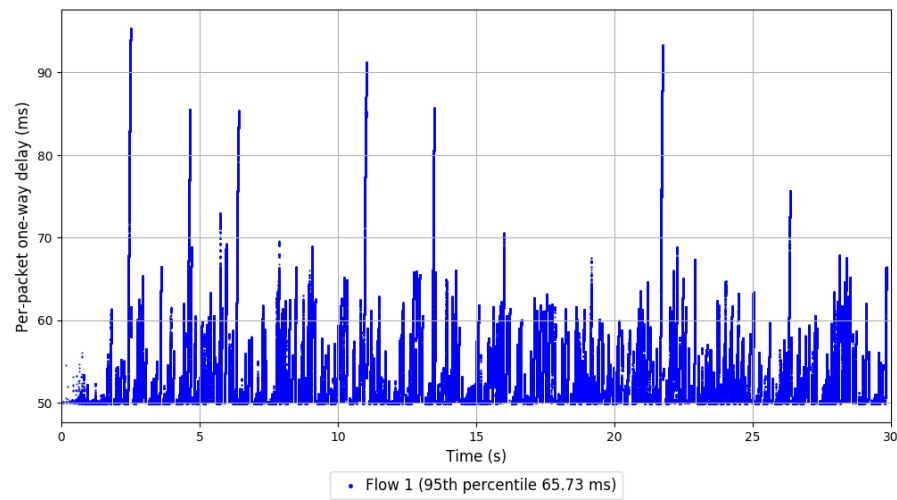
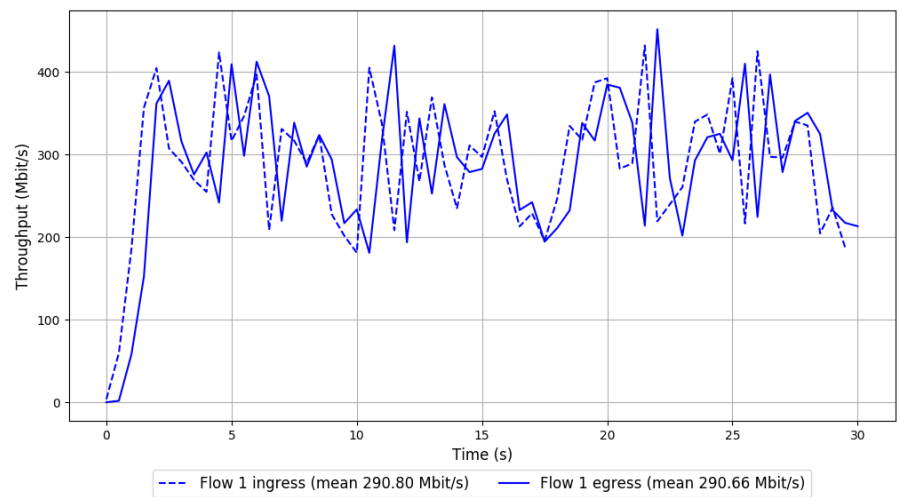


Run 5: Statistics of Indigo-96d2da3

Start at: 2018-09-26 02:43:51
End at: 2018-09-26 02:44:21
Local clock offset: -0.322 ms
Remote clock offset: -0.098 ms

Below is generated by plot.py at 2018-09-26 03:47:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 290.66 Mbit/s
95th percentile per-packet one-way delay: 65.733 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 290.66 Mbit/s
95th percentile per-packet one-way delay: 65.733 ms
Loss rate: 0.00%

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

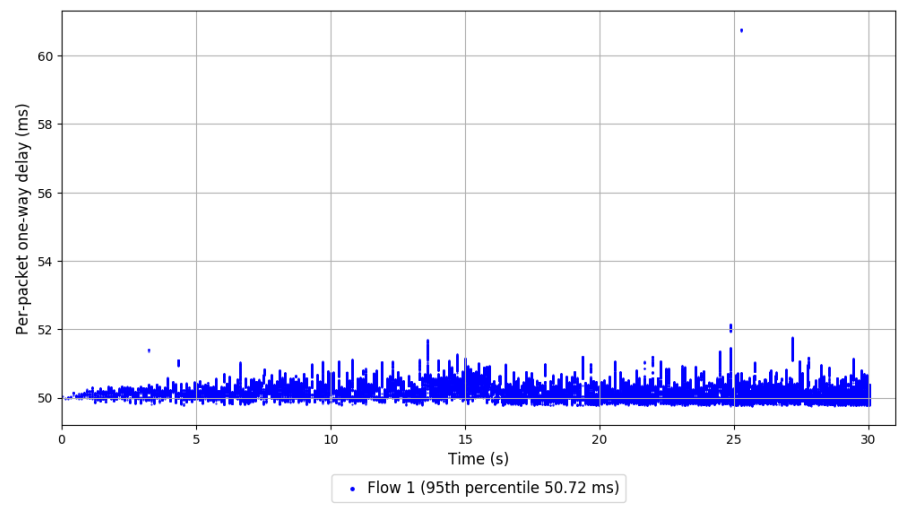
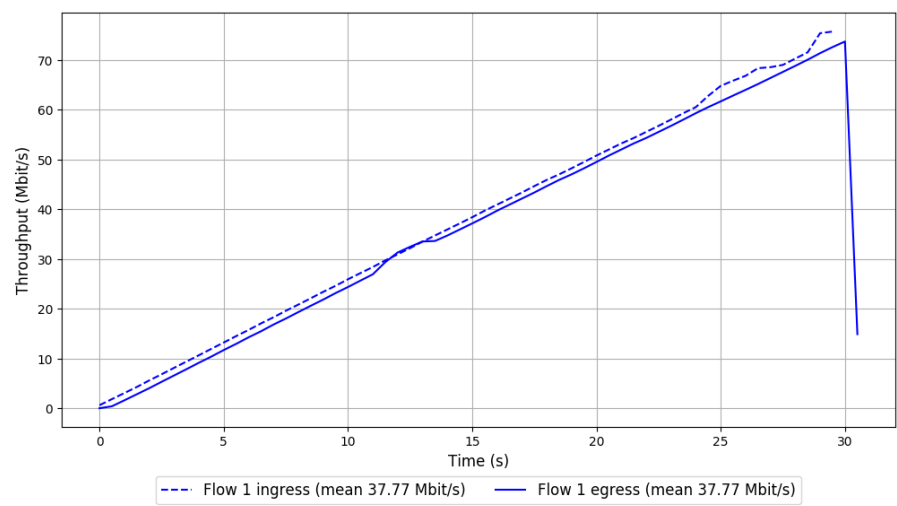


```
Run 1: Statistics of LEDBAT

Start at: 2018-09-26 00:42:12
End at: 2018-09-26 00:42:42
Local clock offset: 0.399 ms
Remote clock offset: -0.061 ms

# Below is generated by plot.py at 2018-09-26 03:47:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 37.77 Mbit/s
95th percentile per-packet one-way delay: 50.722 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 37.77 Mbit/s
95th percentile per-packet one-way delay: 50.722 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link

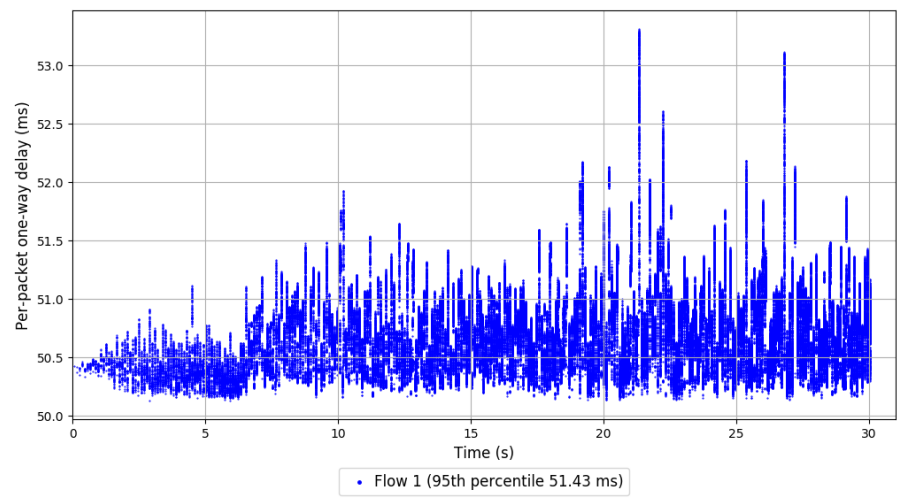
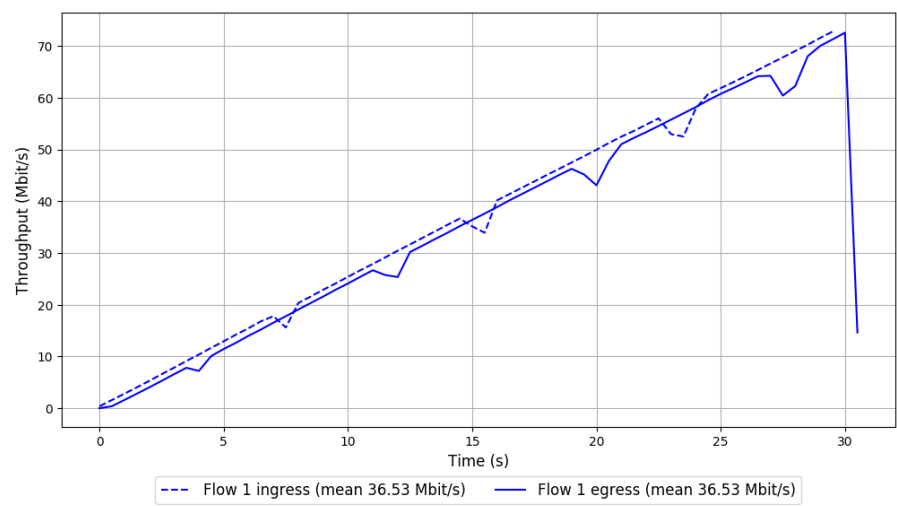


Run 2: Statistics of LEDBAT

Start at: 2018-09-26 01:09:31
End at: 2018-09-26 01:10:01
Local clock offset: 0.074 ms
Remote clock offset: -0.008 ms

Below is generated by plot.py at 2018-09-26 03:47:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 36.53 Mbit/s
95th percentile per-packet one-way delay: 51.429 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 36.53 Mbit/s
95th percentile per-packet one-way delay: 51.429 ms
Loss rate: 0.00%

Run 2: Report of LEDBAT — Data Link

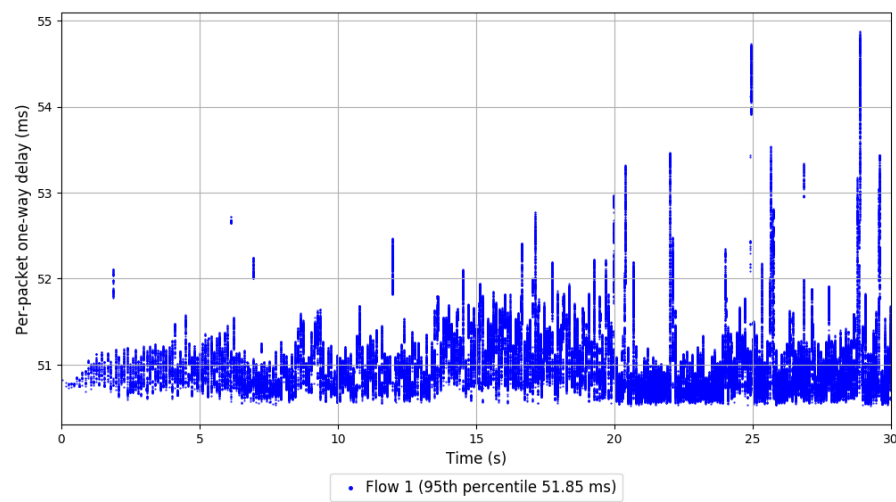
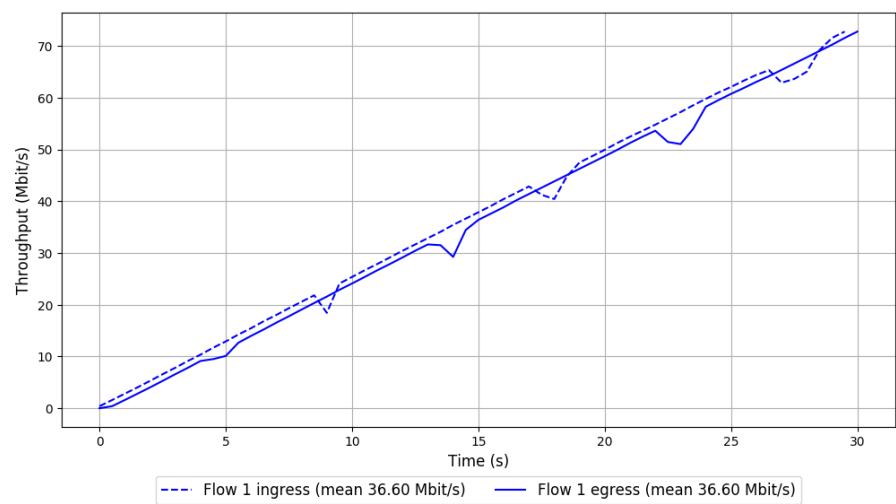


Run 3: Statistics of LEDBAT

Start at: 2018-09-26 01:36:43
End at: 2018-09-26 01:37:13
Local clock offset: -0.063 ms
Remote clock offset: -0.063 ms

Below is generated by plot.py at 2018-09-26 03:47:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 36.60 Mbit/s
95th percentile per-packet one-way delay: 51.847 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 36.60 Mbit/s
95th percentile per-packet one-way delay: 51.847 ms
Loss rate: 0.00%

Run 3: Report of LEDBAT — Data Link

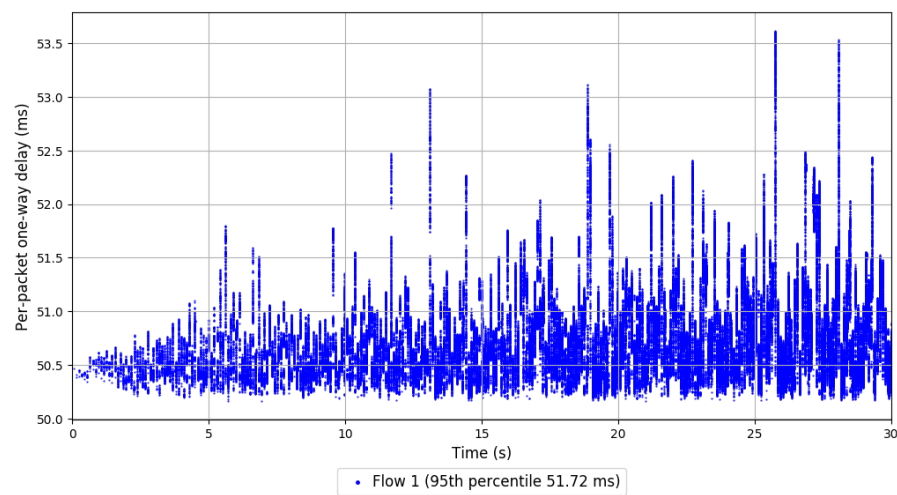
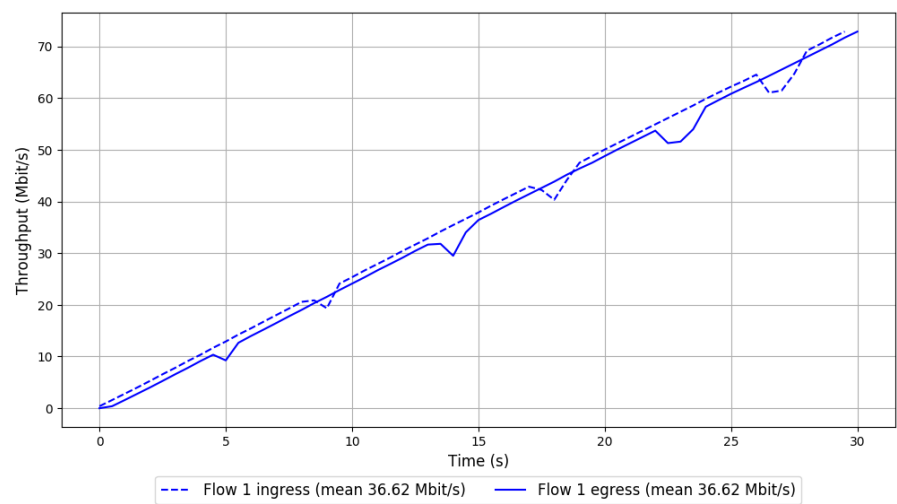


Run 4: Statistics of LEDBAT

Start at: 2018-09-26 02:03:42
End at: 2018-09-26 02:04:12
Local clock offset: -0.046 ms
Remote clock offset: -0.076 ms

Below is generated by plot.py at 2018-09-26 03:47:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 36.62 Mbit/s
95th percentile per-packet one-way delay: 51.719 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 36.62 Mbit/s
95th percentile per-packet one-way delay: 51.719 ms
Loss rate: 0.00%

Run 4: Report of LEDBAT — Data Link

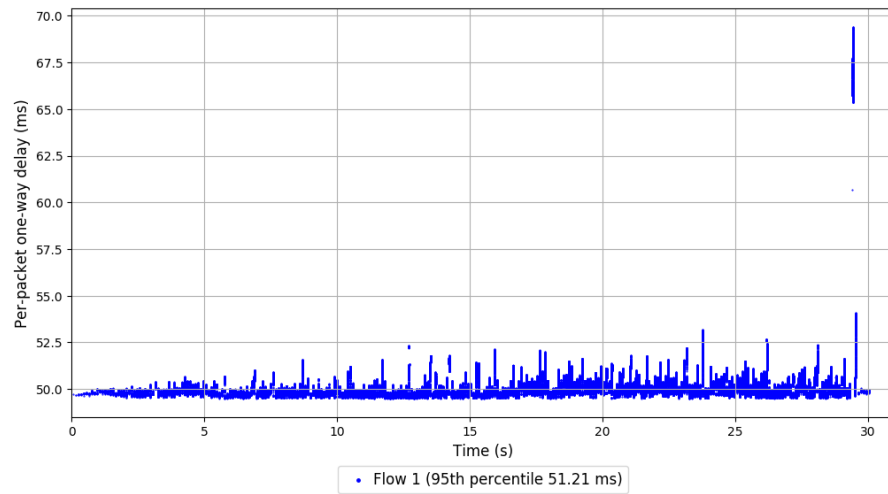
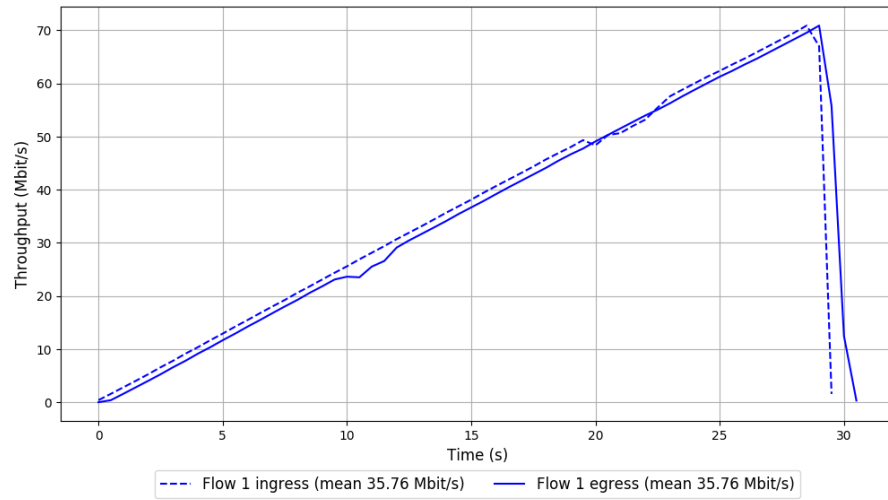


Run 5: Statistics of LEDBAT

Start at: 2018-09-26 02:31:03
End at: 2018-09-26 02:31:33
Local clock offset: 0.002 ms
Remote clock offset: -0.064 ms

Below is generated by plot.py at 2018-09-26 03:47:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 35.76 Mbit/s
95th percentile per-packet one-way delay: 51.209 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 35.76 Mbit/s
95th percentile per-packet one-way delay: 51.209 ms
Loss rate: 0.00%

Run 5: Report of LEDBAT — Data Link



Run 1: Statistics of Indigo-Muses

Start at: 2018-09-26 00:44:59

End at: 2018-09-26 00:45:29

Local clock offset: 0.088 ms

Remote clock offset: -0.05 ms

Below is generated by plot.py at 2018-09-26 03:52:59

Datalink statistics

-- Total of 1 flow:

Average throughput: 698.78 Mbit/s

95th percentile per-packet one-way delay: 73.777 ms

Loss rate: 0.10%

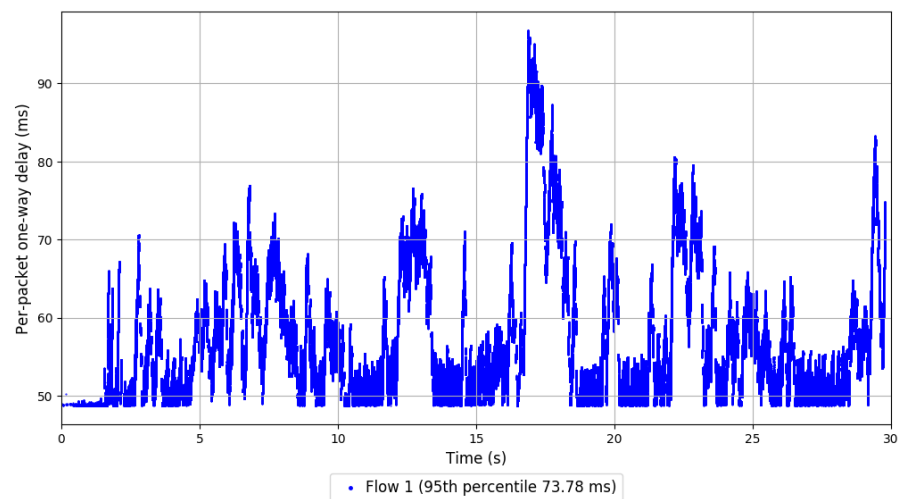
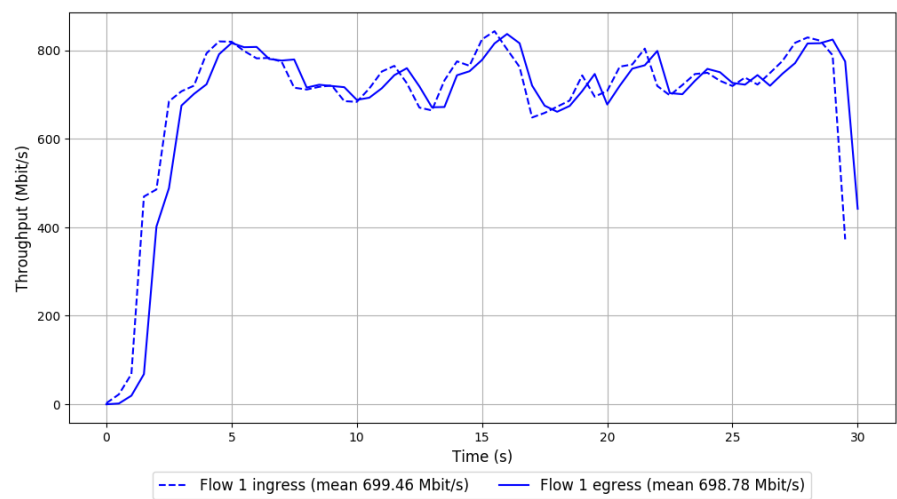
-- Flow 1:

Average throughput: 698.78 Mbit/s

95th percentile per-packet one-way delay: 73.777 ms

Loss rate: 0.10%

Run 1: Report of Indigo-Muses — Data Link



Run 2: Statistics of Indigo-Muses

Start at: 2018-09-26 01:12:19

End at: 2018-09-26 01:12:49

Local clock offset: 0.087 ms

Remote clock offset: 0.052 ms

Below is generated by plot.py at 2018-09-26 03:53:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 693.38 Mbit/s

95th percentile per-packet one-way delay: 72.011 ms

Loss rate: 0.00%

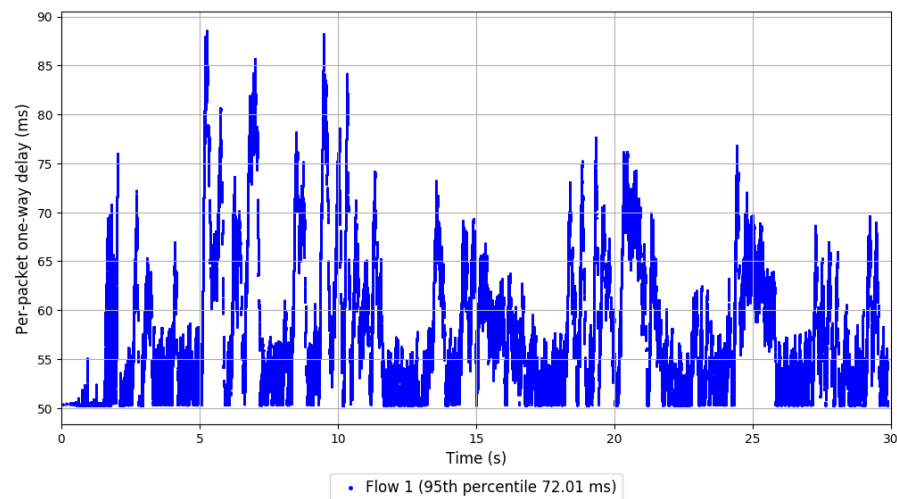
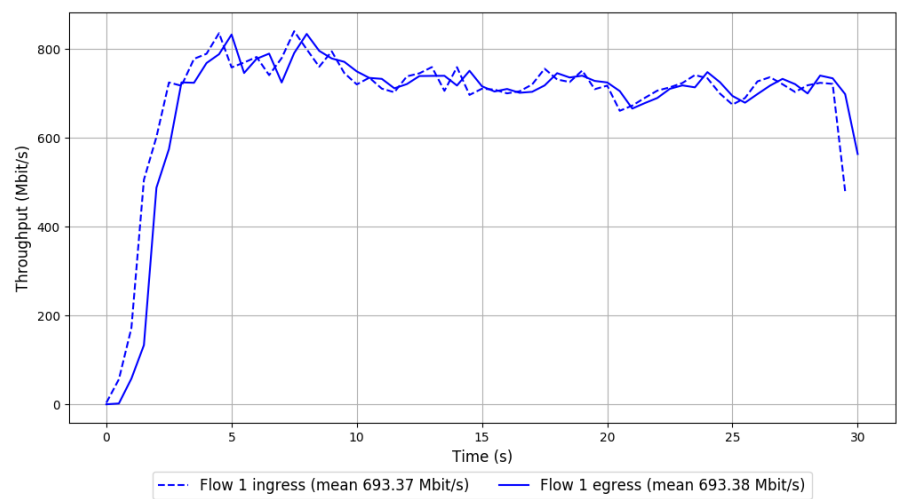
-- Flow 1:

Average throughput: 693.38 Mbit/s

95th percentile per-packet one-way delay: 72.011 ms

Loss rate: 0.00%

Run 2: Report of Indigo-Muses — Data Link

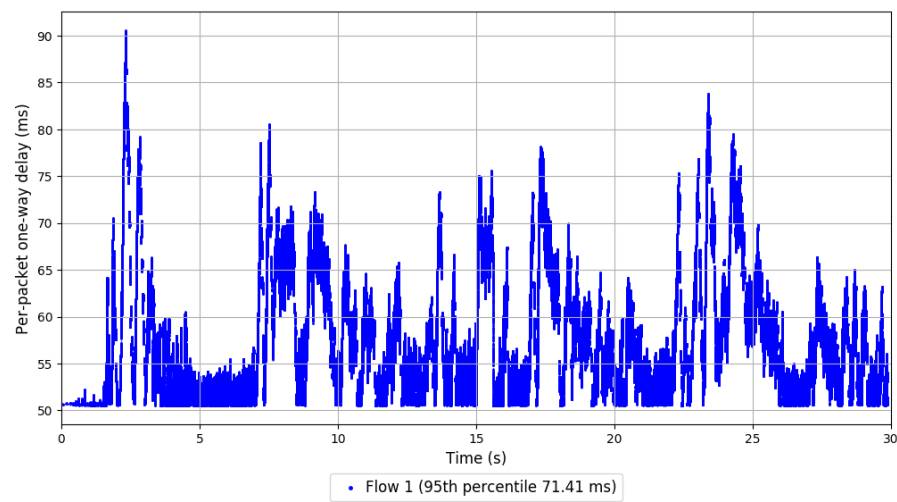
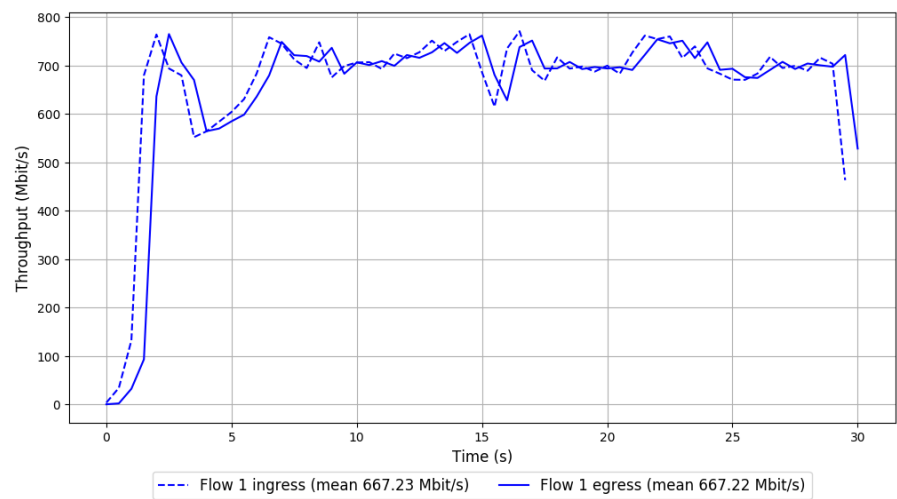


Run 3: Statistics of Indigo-Muses

Start at: 2018-09-26 01:39:29
End at: 2018-09-26 01:39:59
Local clock offset: -0.086 ms
Remote clock offset: -0.032 ms

Below is generated by plot.py at 2018-09-26 03:53:20
Datalink statistics
-- Total of 1 flow:
Average throughput: 667.22 Mbit/s
95th percentile per-packet one-way delay: 71.412 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 667.22 Mbit/s
95th percentile per-packet one-way delay: 71.412 ms
Loss rate: 0.00%

Run 3: Report of Indigo-Muses — Data Link

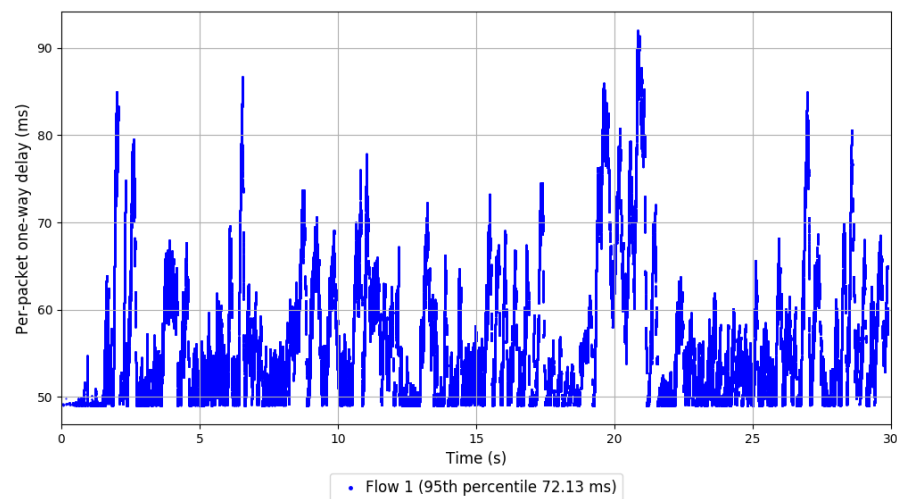
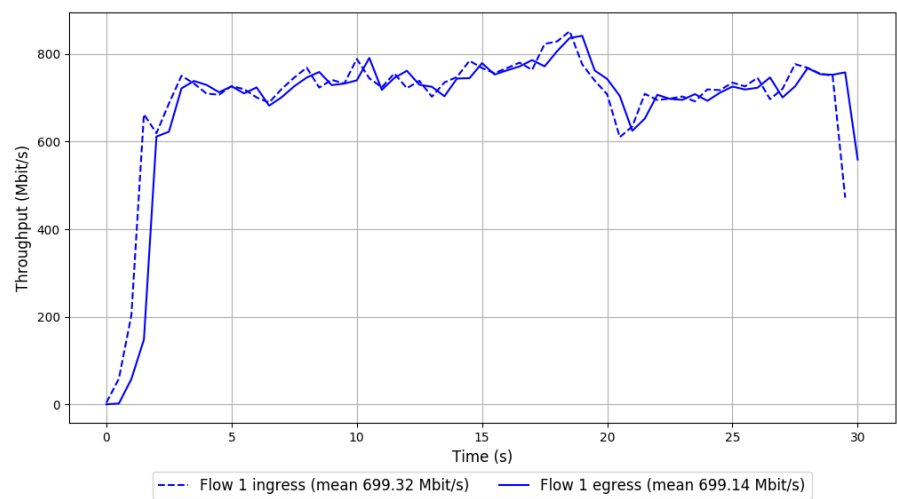


Run 4: Statistics of Indigo-Muses

Start at: 2018-09-26 02:06:28
End at: 2018-09-26 02:06:58
Local clock offset: 0.323 ms
Remote clock offset: -0.078 ms

Below is generated by plot.py at 2018-09-26 03:54:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 699.14 Mbit/s
95th percentile per-packet one-way delay: 72.129 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 699.14 Mbit/s
95th percentile per-packet one-way delay: 72.129 ms
Loss rate: 0.02%

Run 4: Report of Indigo-Muses — Data Link

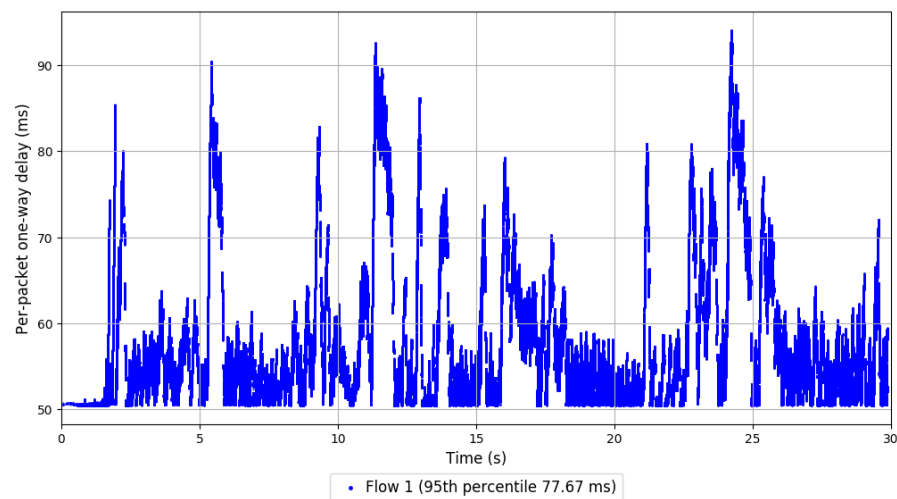
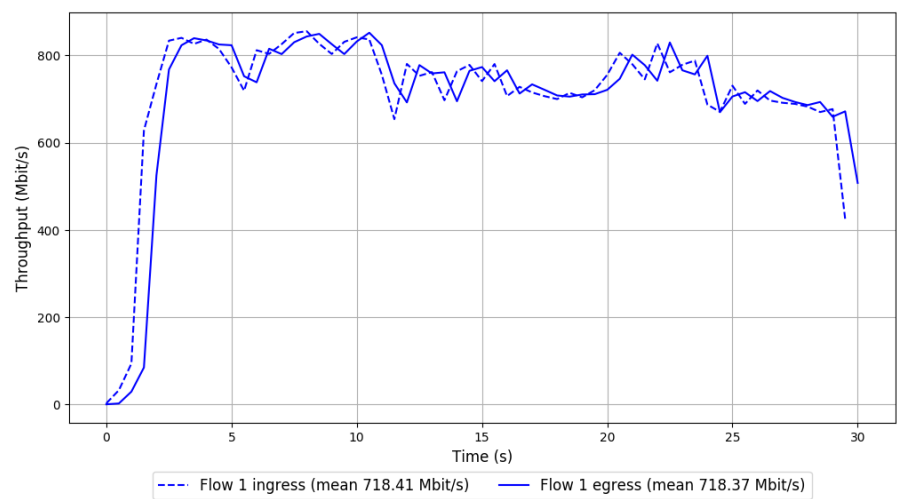


Run 5: Statistics of Indigo-Muses

Start at: 2018-09-26 02:33:48
End at: 2018-09-26 02:34:18
Local clock offset: 0.009 ms
Remote clock offset: -0.081 ms

Below is generated by plot.py at 2018-09-26 03:56:23
Datalink statistics
-- Total of 1 flow:
Average throughput: 718.37 Mbit/s
95th percentile per-packet one-way delay: 77.670 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 718.37 Mbit/s
95th percentile per-packet one-way delay: 77.670 ms
Loss rate: 0.00%

Run 5: Report of Indigo-Muses — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2018-09-26 00:38:59

End at: 2018-09-26 00:39:29

Local clock offset: 0.09 ms

Remote clock offset: -0.024 ms

Below is generated by plot.py at 2018-09-26 03:58:24

Datalink statistics

-- Total of 1 flow:

Average throughput: 474.72 Mbit/s

95th percentile per-packet one-way delay: 152.986 ms

Loss rate: 1.23%

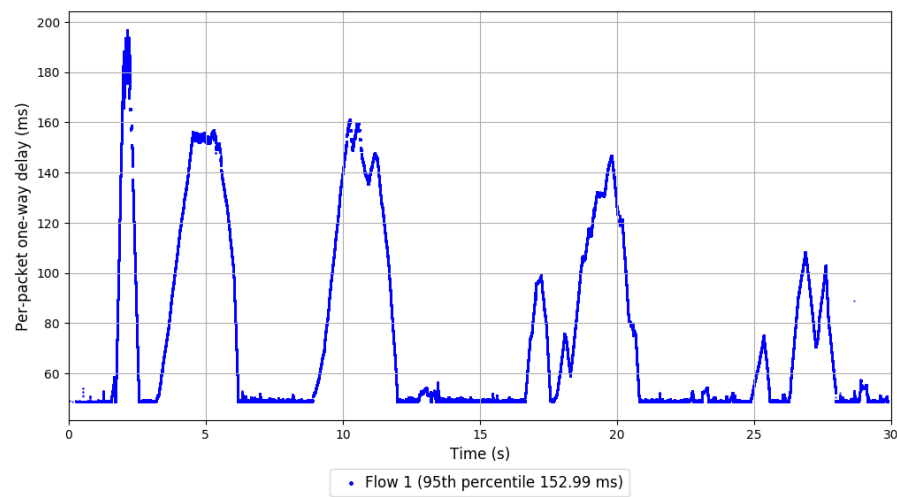
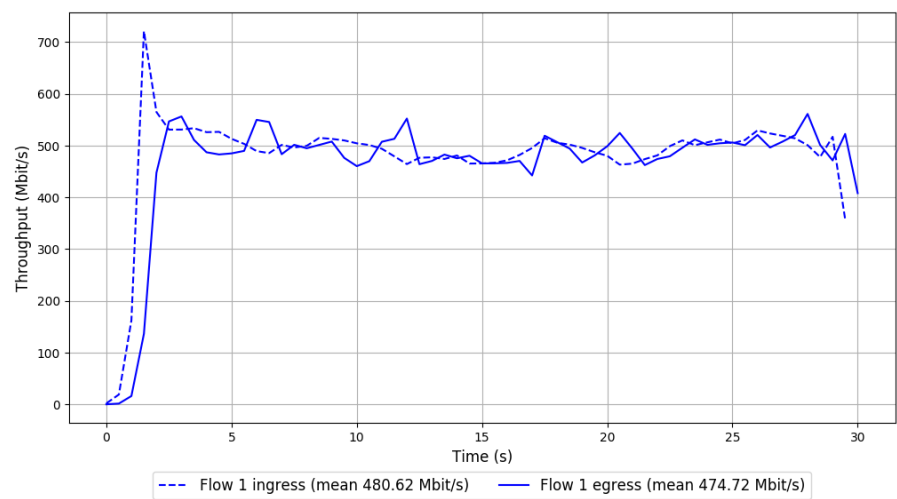
-- Flow 1:

Average throughput: 474.72 Mbit/s

95th percentile per-packet one-way delay: 152.986 ms

Loss rate: 1.23%

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-09-26 01:06:19

End at: 2018-09-26 01:06:50

Local clock offset: 0.069 ms

Remote clock offset: -0.002 ms

Below is generated by plot.py at 2018-09-26 03:58:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 484.87 Mbit/s

95th percentile per-packet one-way delay: 154.250 ms

Loss rate: 1.38%

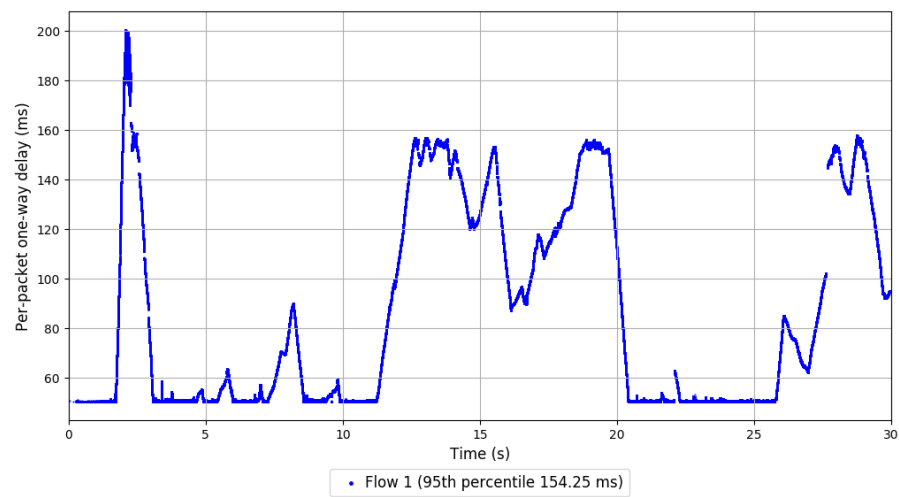
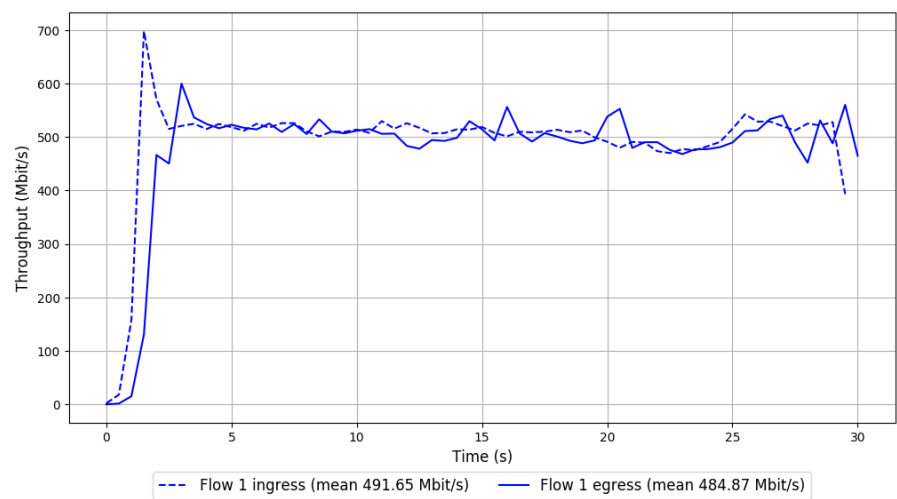
-- Flow 1:

Average throughput: 484.87 Mbit/s

95th percentile per-packet one-way delay: 154.250 ms

Loss rate: 1.38%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-09-26 01:33:29

End at: 2018-09-26 01:33:59

Local clock offset: 0.293 ms

Remote clock offset: -0.039 ms

Below is generated by plot.py at 2018-09-26 04:05:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 503.30 Mbit/s

95th percentile per-packet one-way delay: 155.410 ms

Loss rate: 2.22%

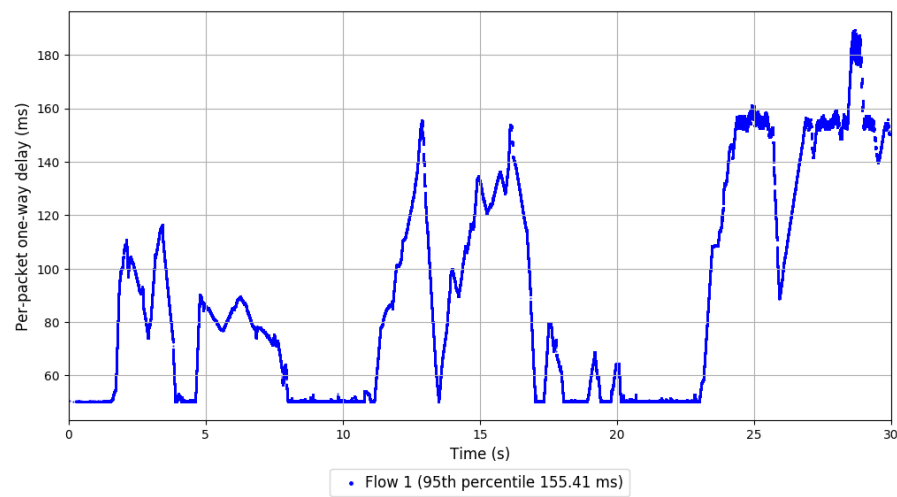
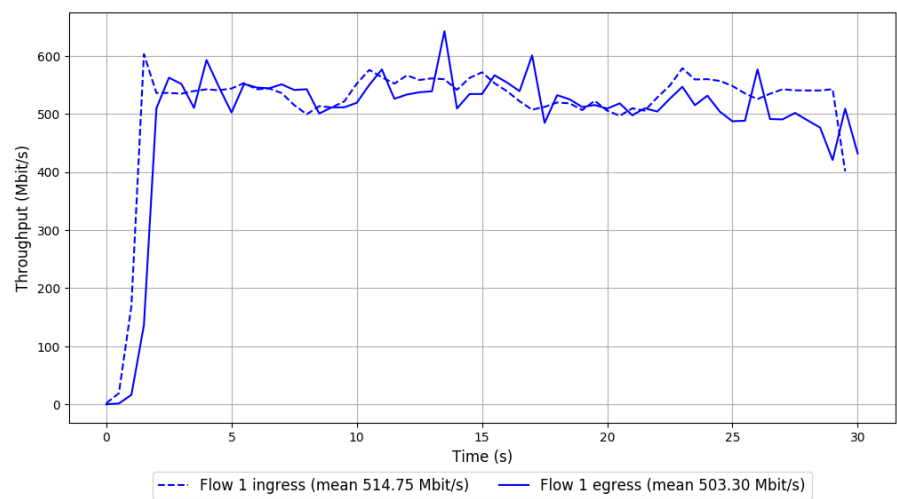
-- Flow 1:

Average throughput: 503.30 Mbit/s

95th percentile per-packet one-way delay: 155.410 ms

Loss rate: 2.22%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-09-26 02:00:26

End at: 2018-09-26 02:00:56

Local clock offset: -0.387 ms

Remote clock offset: -0.023 ms

Below is generated by plot.py at 2018-09-26 04:09:39

Datalink statistics

-- Total of 1 flow:

Average throughput: 499.67 Mbit/s

95th percentile per-packet one-way delay: 155.631 ms

Loss rate: 1.82%

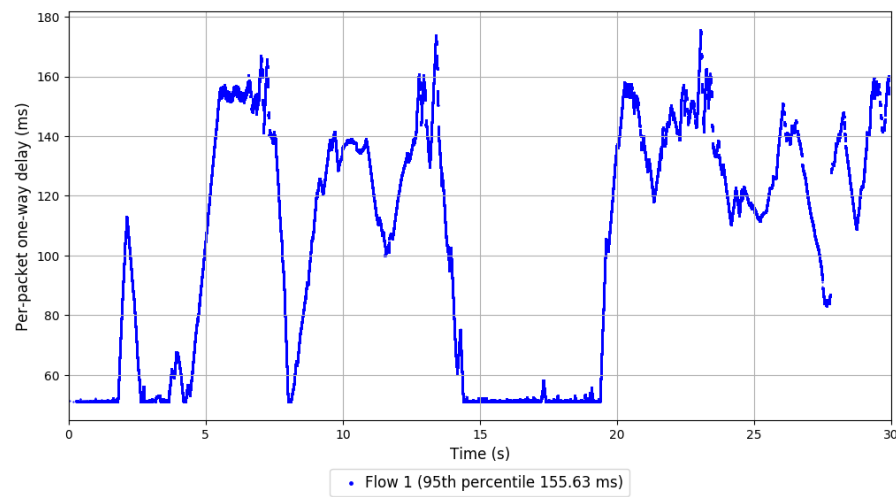
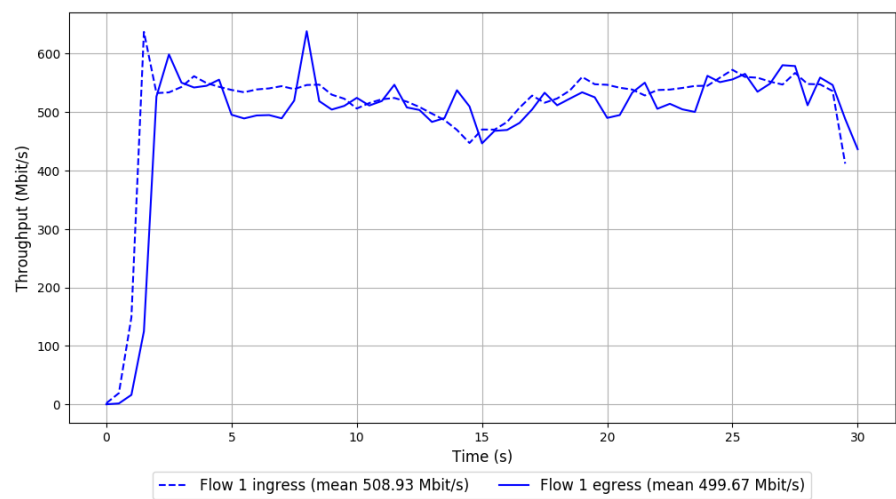
-- Flow 1:

Average throughput: 499.67 Mbit/s

95th percentile per-packet one-way delay: 155.631 ms

Loss rate: 1.82%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-09-26 02:27:49

End at: 2018-09-26 02:28:19

Local clock offset: -0.007 ms

Remote clock offset: -0.038 ms

Below is generated by plot.py at 2018-09-26 04:09:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 502.60 Mbit/s

95th percentile per-packet one-way delay: 158.073 ms

Loss rate: 2.58%

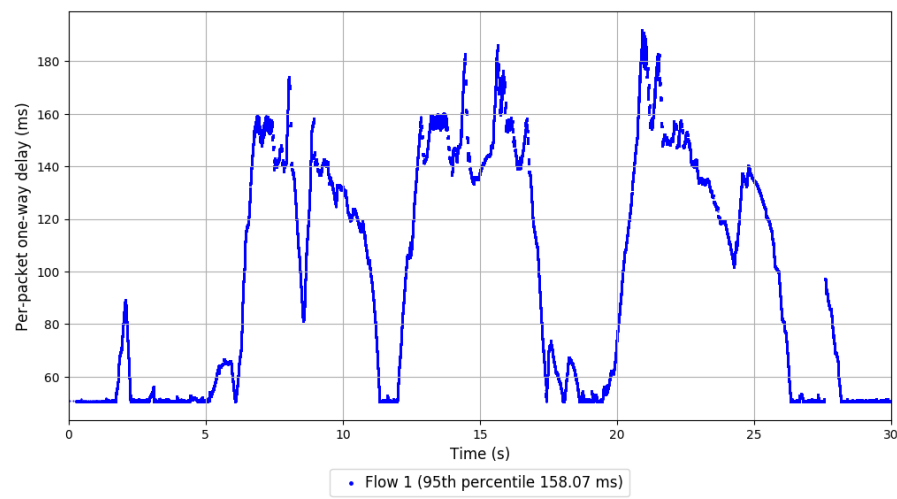
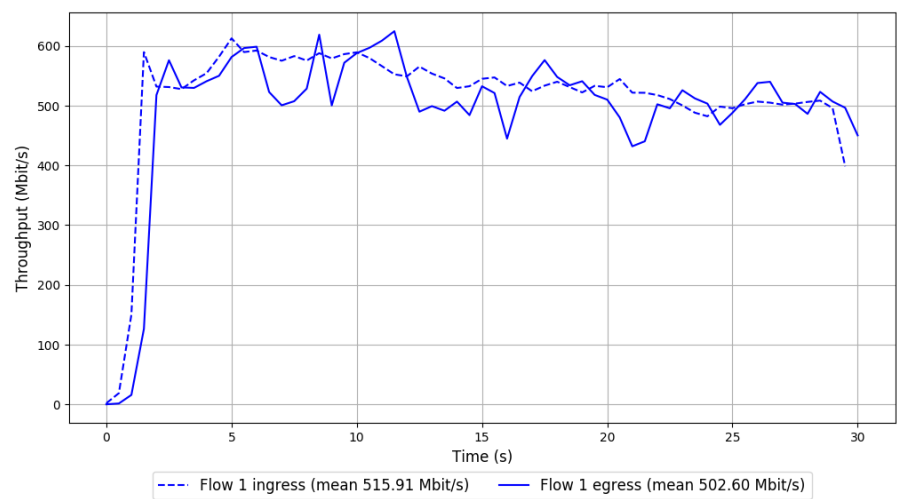
-- Flow 1:

Average throughput: 502.60 Mbit/s

95th percentile per-packet one-way delay: 158.073 ms

Loss rate: 2.58%

Run 5: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

Start at: 2018-09-26 00:43:22

End at: 2018-09-26 00:43:52

Local clock offset: 0.42 ms

Remote clock offset: -0.079 ms

Below is generated by plot.py at 2018-09-26 04:09:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 350.79 Mbit/s

95th percentile per-packet one-way delay: 141.557 ms

Loss rate: 1.57%

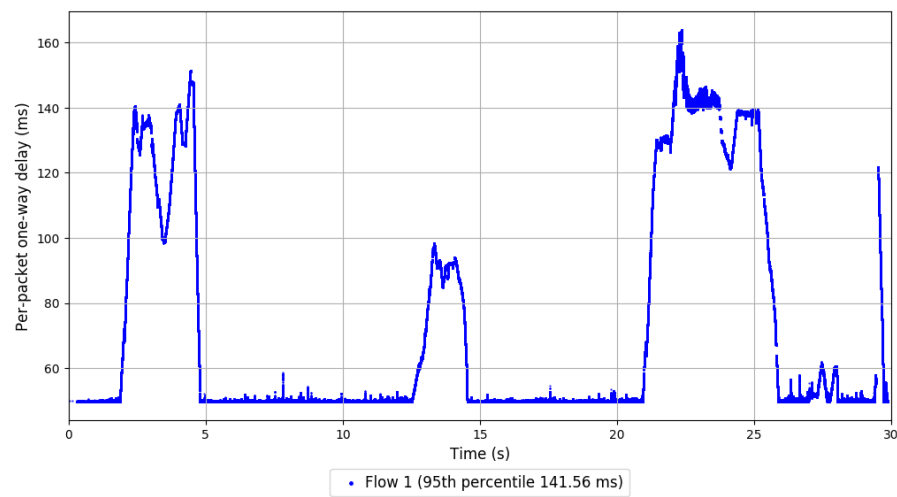
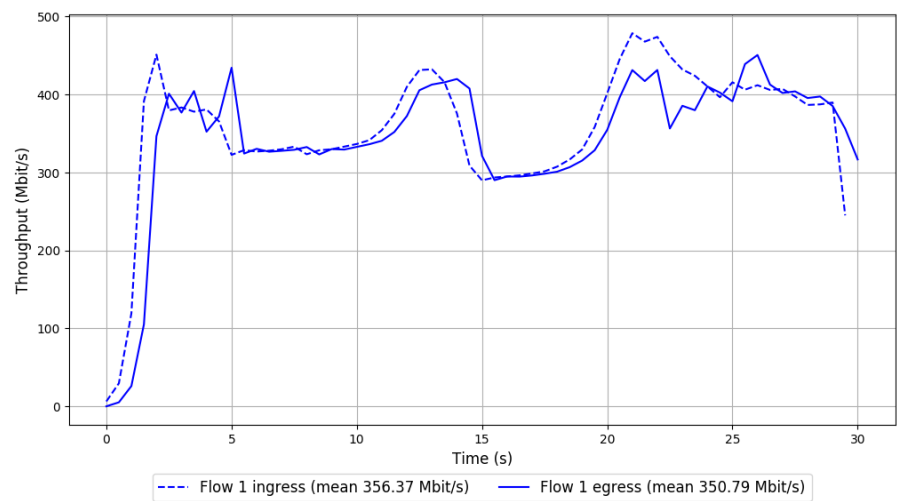
-- Flow 1:

Average throughput: 350.79 Mbit/s

95th percentile per-packet one-way delay: 141.557 ms

Loss rate: 1.57%

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2018-09-26 01:10:41

End at: 2018-09-26 01:11:11

Local clock offset: 0.114 ms

Remote clock offset: 0.031 ms

Below is generated by plot.py at 2018-09-26 04:09:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 367.02 Mbit/s

95th percentile per-packet one-way delay: 136.122 ms

Loss rate: 1.10%

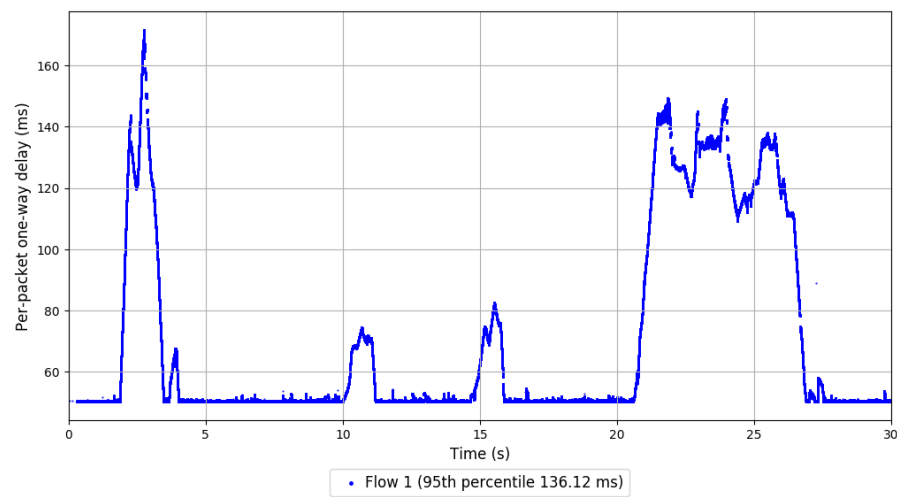
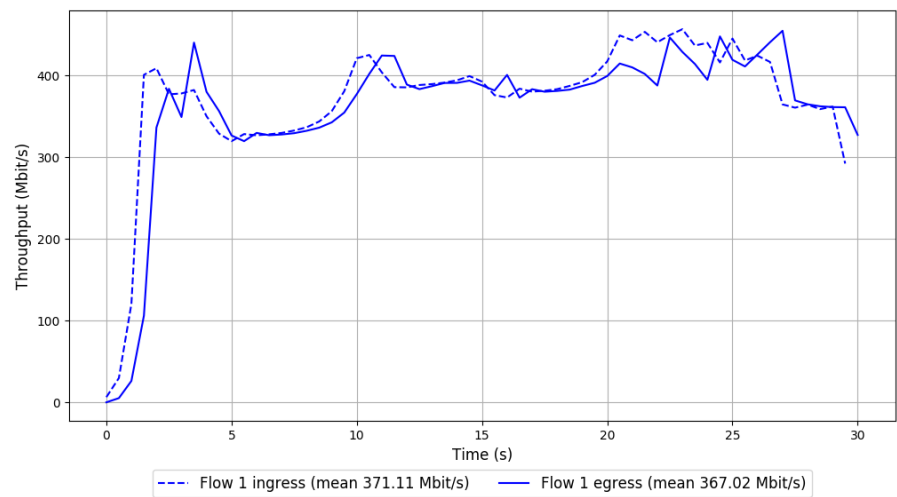
-- Flow 1:

Average throughput: 367.02 Mbit/s

95th percentile per-packet one-way delay: 136.122 ms

Loss rate: 1.10%

Run 2: Report of PCC-Expr — Data Link

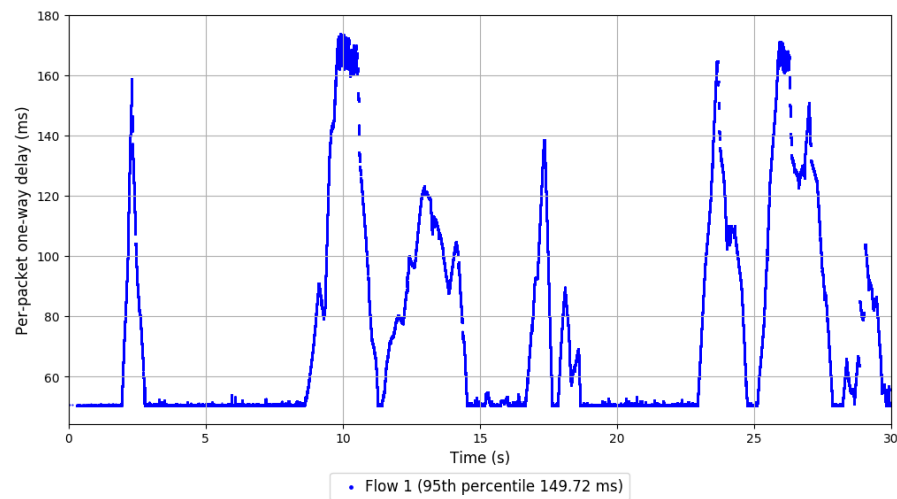
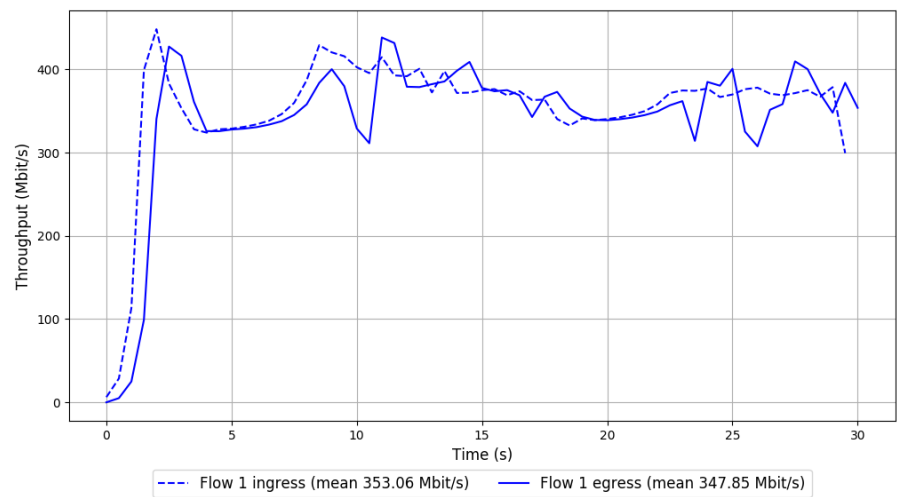


Run 3: Statistics of PCC-Expr

Start at: 2018-09-26 01:37:53
End at: 2018-09-26 01:38:23
Local clock offset: -0.103 ms
Remote clock offset: -0.073 ms

Below is generated by plot.py at 2018-09-26 04:09:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 347.85 Mbit/s
95th percentile per-packet one-way delay: 149.715 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 347.85 Mbit/s
95th percentile per-packet one-way delay: 149.715 ms
Loss rate: 1.48%

Run 3: Report of PCC-Expr — Data Link

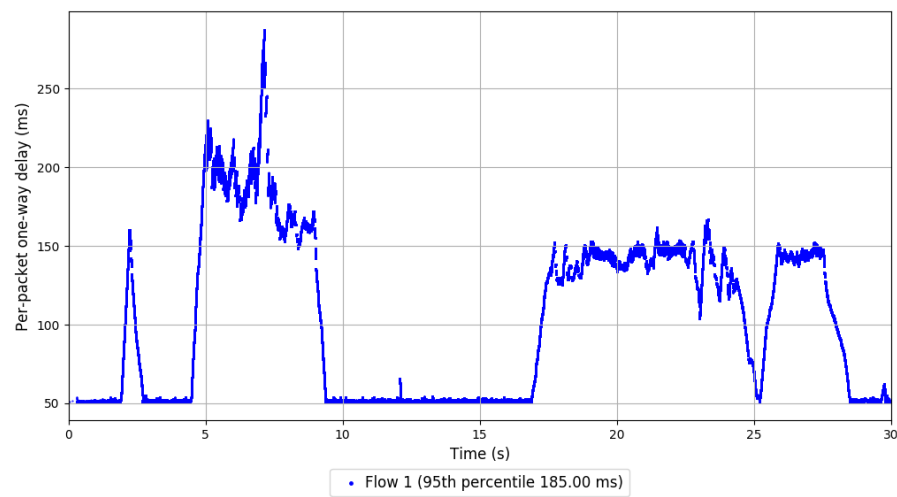
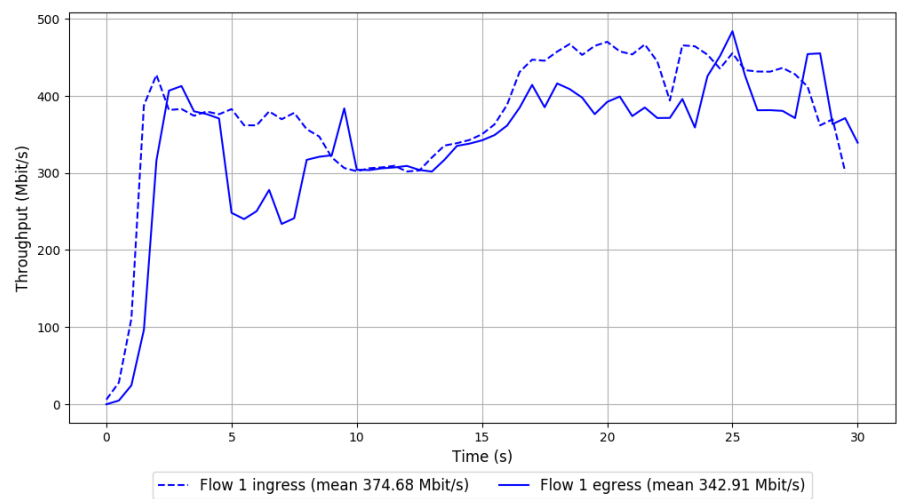


Run 4: Statistics of PCC-Expr

Start at: 2018-09-26 02:04:51
End at: 2018-09-26 02:05:21
Local clock offset: -0.018 ms
Remote clock offset: -0.035 ms

Below is generated by plot.py at 2018-09-26 04:10:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 342.91 Mbit/s
95th percentile per-packet one-way delay: 184.995 ms
Loss rate: 8.48%
-- Flow 1:
Average throughput: 342.91 Mbit/s
95th percentile per-packet one-way delay: 184.995 ms
Loss rate: 8.48%

Run 4: Report of PCC-Expr — Data Link

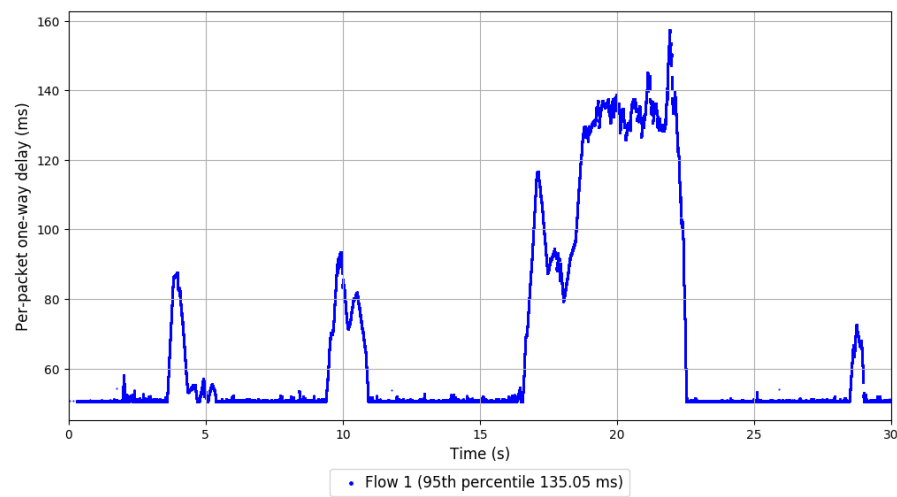
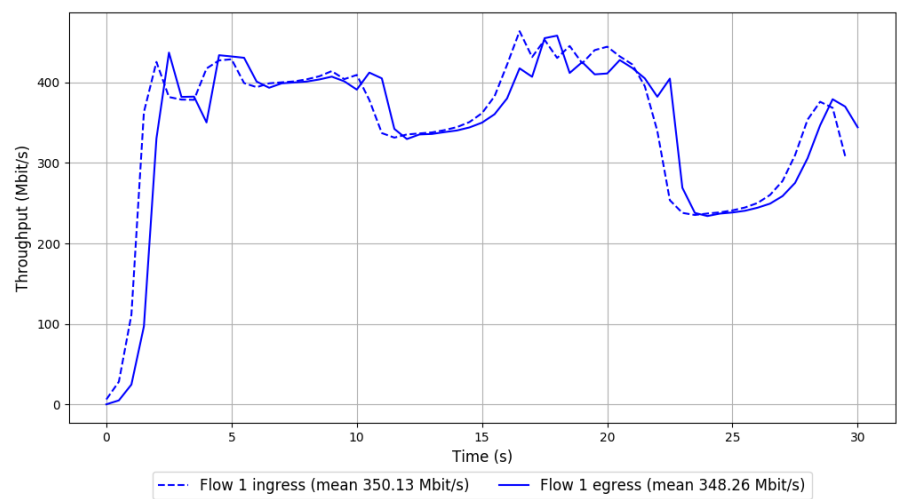


Run 5: Statistics of PCC-Expr

Start at: 2018-09-26 02:32:12
End at: 2018-09-26 02:32:42
Local clock offset: -0.372 ms
Remote clock offset: -0.058 ms

Below is generated by plot.py at 2018-09-26 04:10:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 348.26 Mbit/s
95th percentile per-packet one-way delay: 135.053 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 348.26 Mbit/s
95th percentile per-packet one-way delay: 135.053 ms
Loss rate: 0.53%

Run 5: Report of PCC-Expr — Data Link

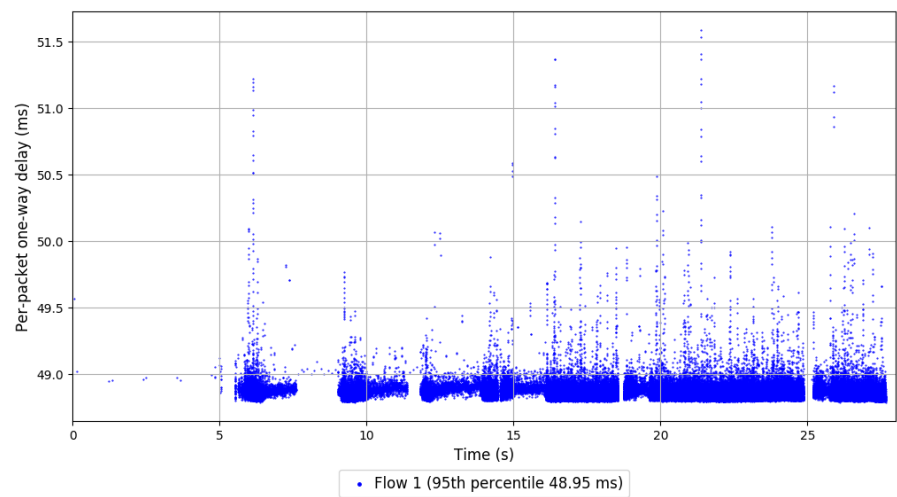
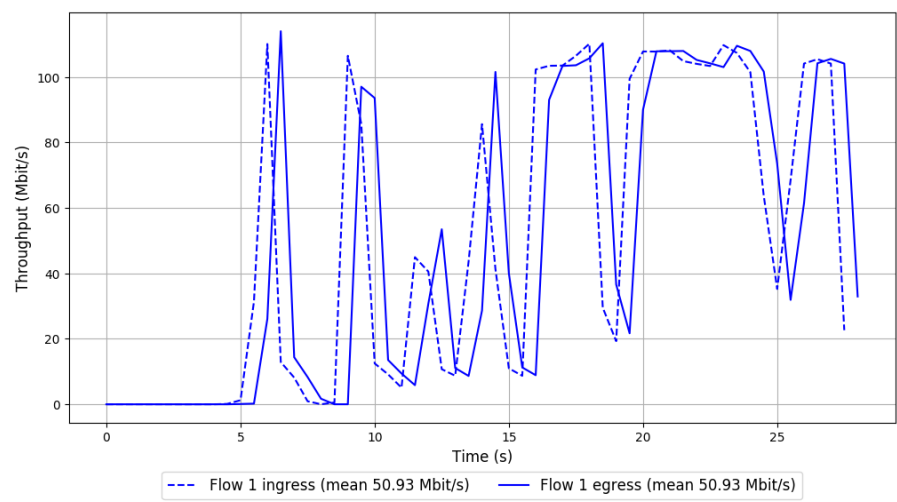


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-09-26 00:52:04
End at: 2018-09-26 00:52:34
Local clock offset: 0.048 ms
Remote clock offset: 0.006 ms

# Below is generated by plot.py at 2018-09-26 04:10:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.93 Mbit/s
95th percentile per-packet one-way delay: 48.949 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.93 Mbit/s
95th percentile per-packet one-way delay: 48.949 ms
Loss rate: 0.00%
```

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-09-26 01:19:24

End at: 2018-09-26 01:19:54

Local clock offset: 0.339 ms

Remote clock offset: -0.028 ms

Below is generated by plot.py at 2018-09-26 04:10:51

Datalink statistics

-- Total of 1 flow:

Average throughput: 74.02 Mbit/s

95th percentile per-packet one-way delay: 49.908 ms

Loss rate: 0.00%

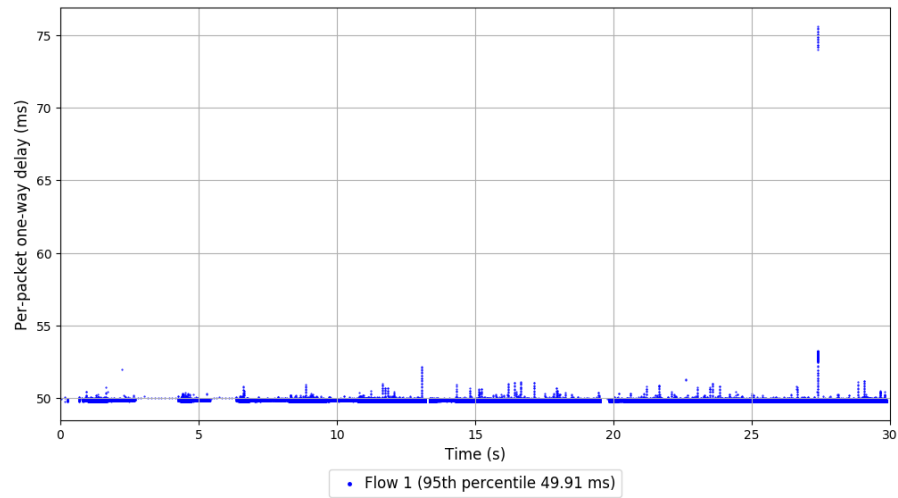
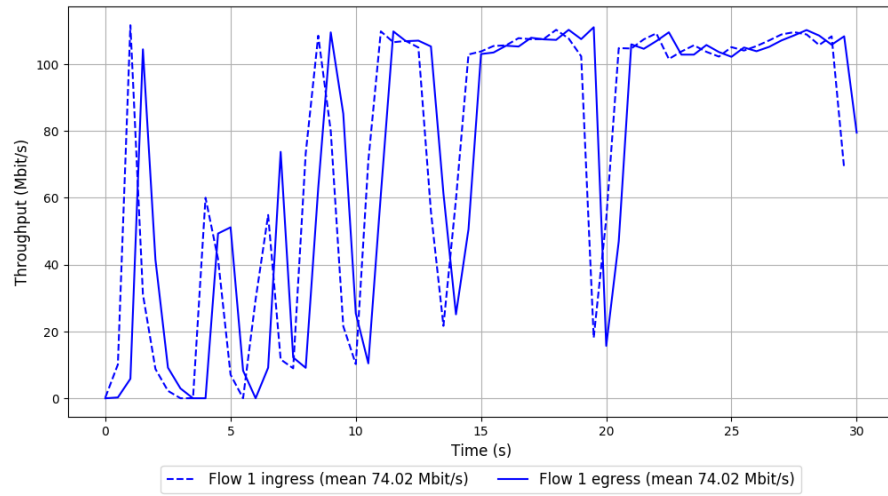
-- Flow 1:

Average throughput: 74.02 Mbit/s

95th percentile per-packet one-way delay: 49.908 ms

Loss rate: 0.00%

Run 2: Report of QUIC Cubic — Data Link

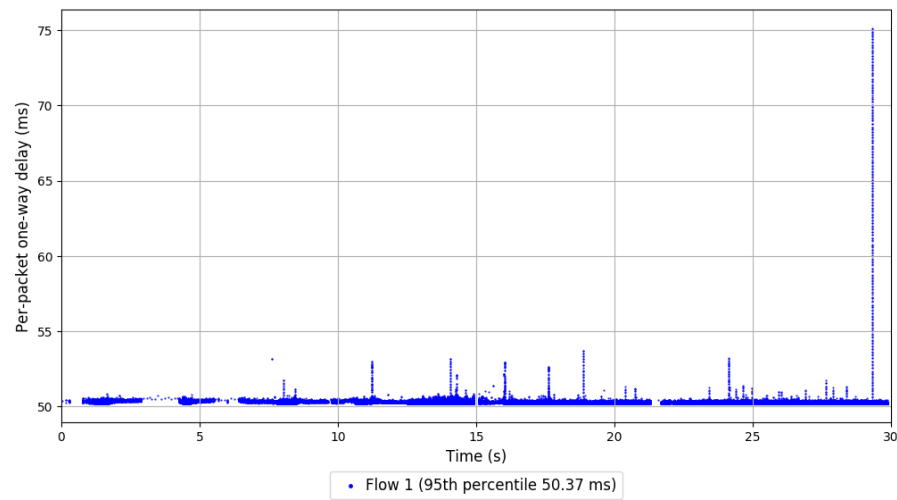
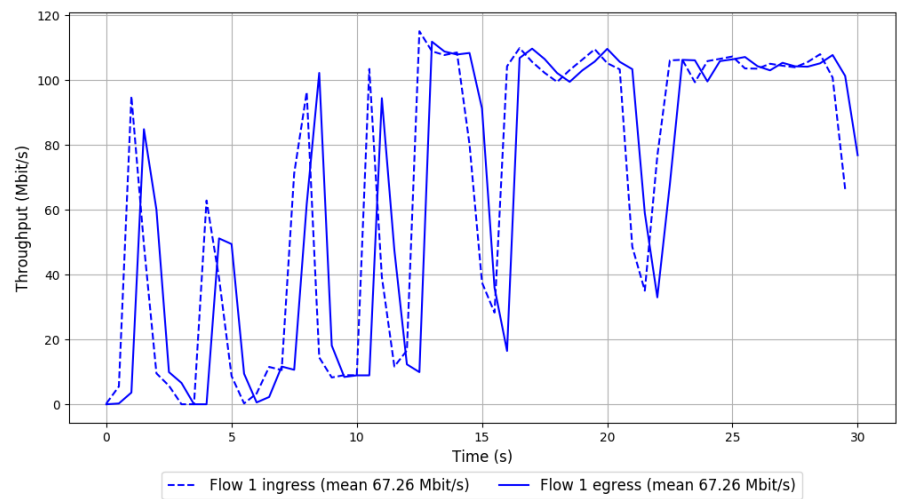


Run 3: Statistics of QUIC Cubic

Start at: 2018-09-26 01:46:33
End at: 2018-09-26 01:47:03
Local clock offset: 0.255 ms
Remote clock offset: -0.055 ms

Below is generated by plot.py at 2018-09-26 04:10:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 67.26 Mbit/s
95th percentile per-packet one-way delay: 50.371 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 67.26 Mbit/s
95th percentile per-packet one-way delay: 50.371 ms
Loss rate: 0.00%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-09-26 02:13:35

End at: 2018-09-26 02:14:05

Local clock offset: -0.371 ms

Remote clock offset: -0.072 ms

Below is generated by plot.py at 2018-09-26 04:10:51

Datalink statistics

-- Total of 1 flow:

Average throughput: 49.40 Mbit/s

95th percentile per-packet one-way delay: 49.176 ms

Loss rate: 0.00%

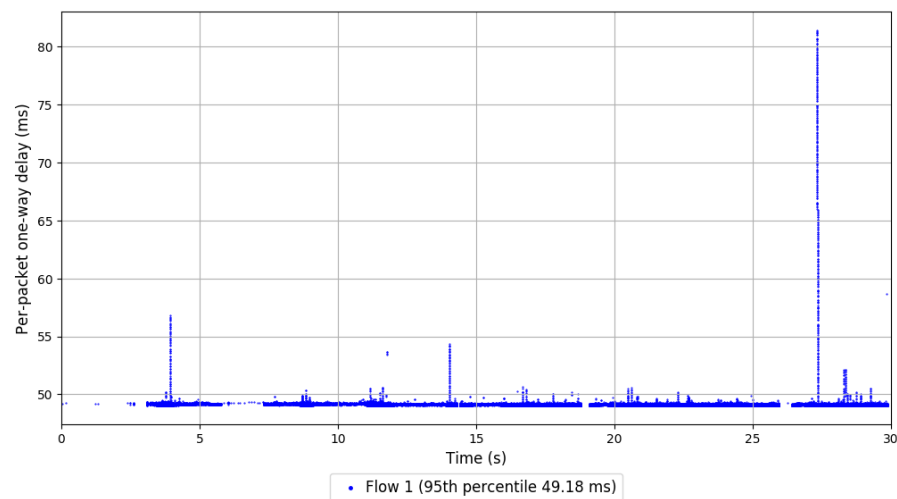
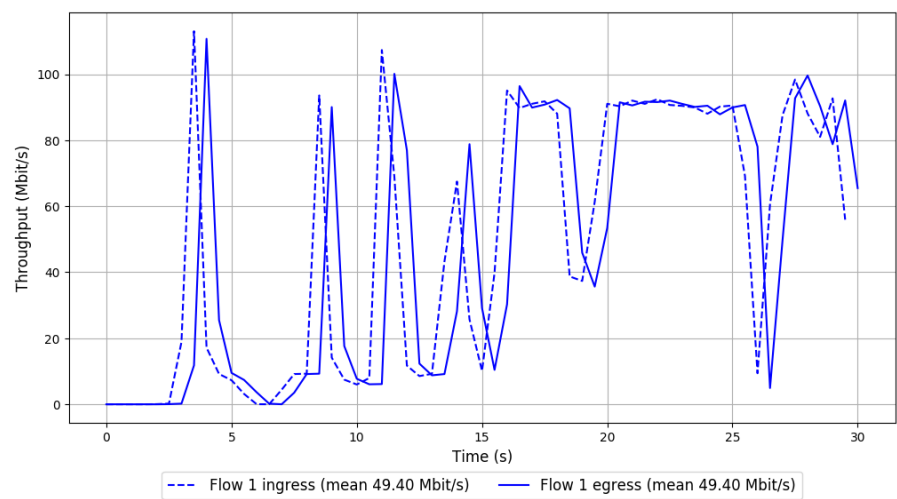
-- Flow 1:

Average throughput: 49.40 Mbit/s

95th percentile per-packet one-way delay: 49.176 ms

Loss rate: 0.00%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-09-26 02:41:02

End at: 2018-09-26 02:41:32

Local clock offset: -0.328 ms

Remote clock offset: -0.05 ms

Below is generated by plot.py at 2018-09-26 04:10:51

Datalink statistics

-- Total of 1 flow:

Average throughput: 68.11 Mbit/s

95th percentile per-packet one-way delay: 50.856 ms

Loss rate: 0.00%

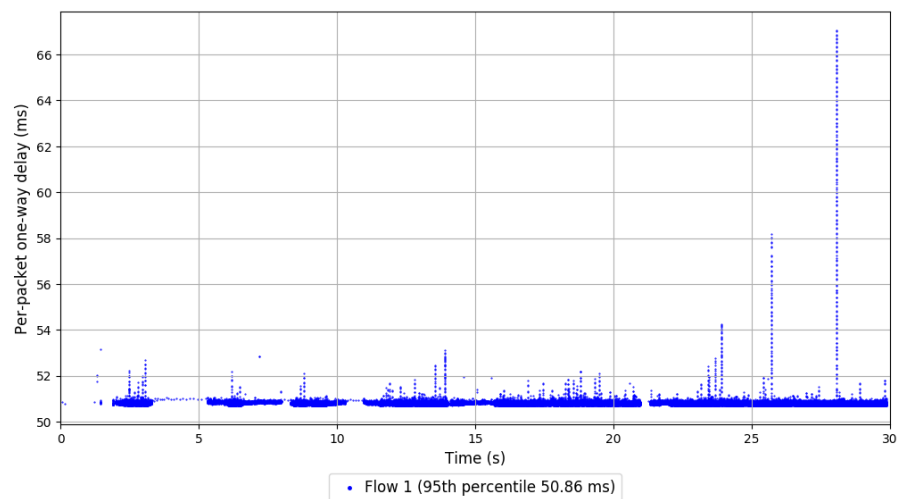
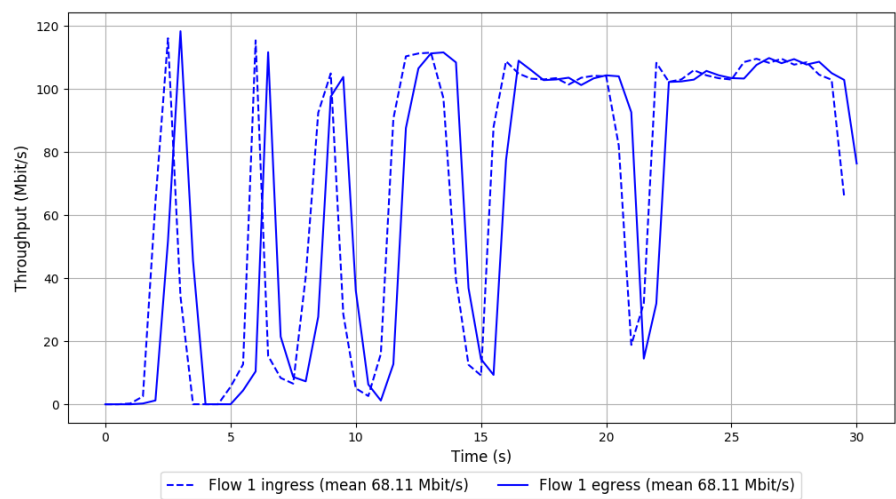
-- Flow 1:

Average throughput: 68.11 Mbit/s

95th percentile per-packet one-way delay: 50.856 ms

Loss rate: 0.00%

Run 5: Report of QUIC Cubic — Data Link

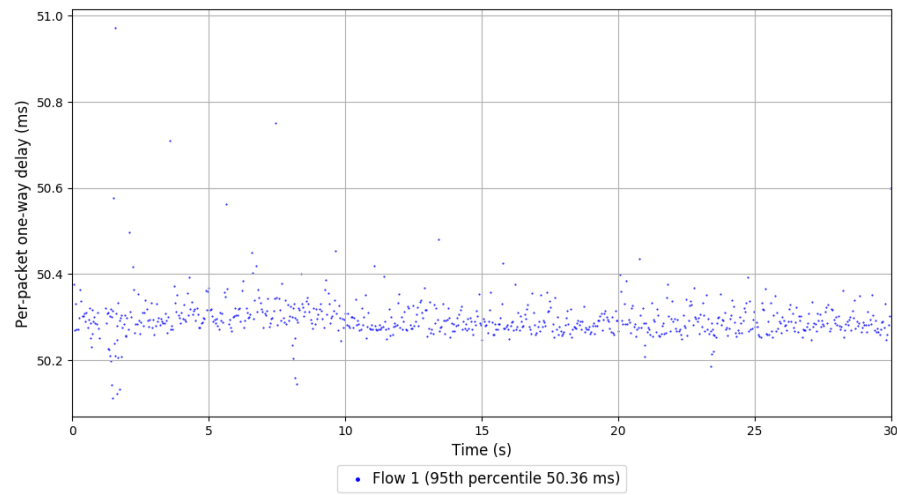
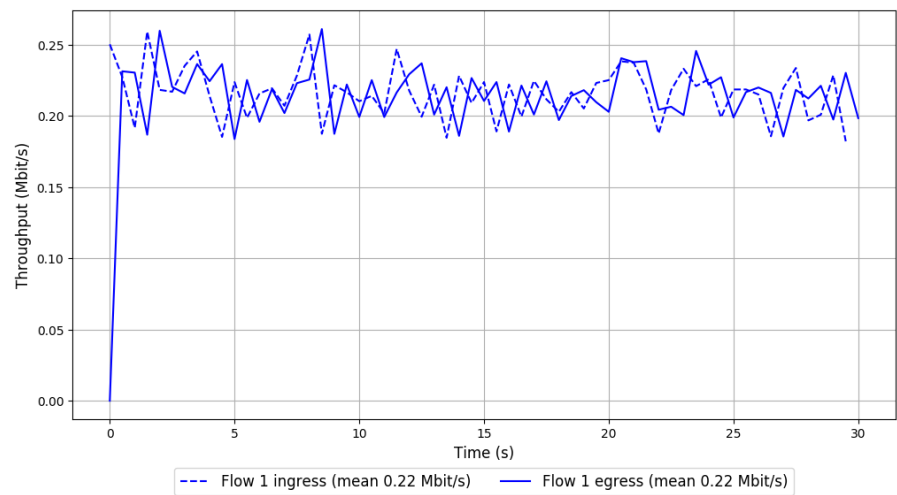


Run 1: Statistics of SCReAM

Start at: 2018-09-26 00:46:39
End at: 2018-09-26 00:47:09
Local clock offset: 0.103 ms
Remote clock offset: -0.037 ms

Below is generated by plot.py at 2018-09-26 04:10:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.362 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.362 ms
Loss rate: 0.00%

Run 1: Report of SReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2018-09-26 01:13:58

End at: 2018-09-26 01:14:28

Local clock offset: 0.032 ms

Remote clock offset: 0.006 ms

Below is generated by plot.py at 2018-09-26 04:10:51

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.436 ms

Loss rate: 0.00%

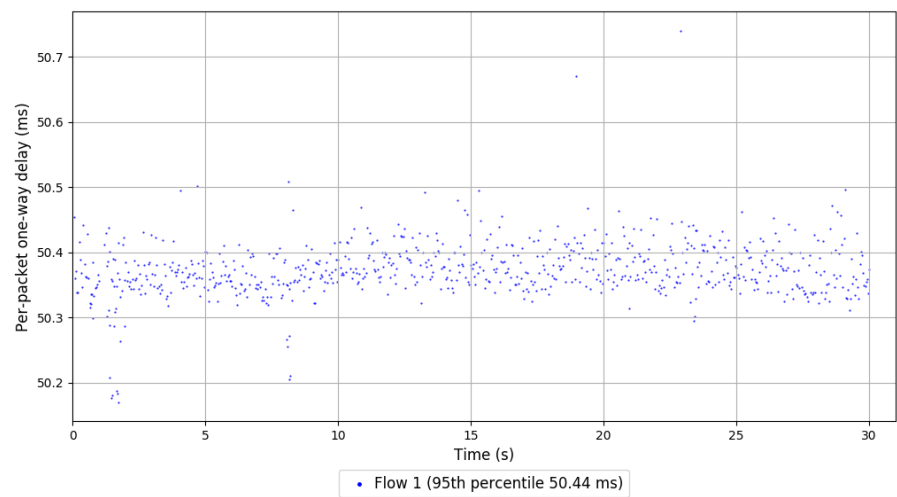
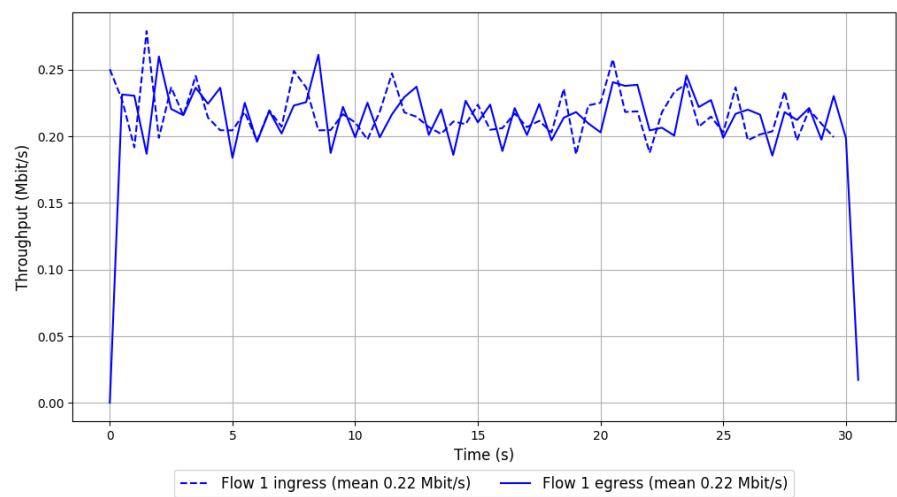
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.436 ms

Loss rate: 0.00%

Run 2: Report of SReAM — Data Link

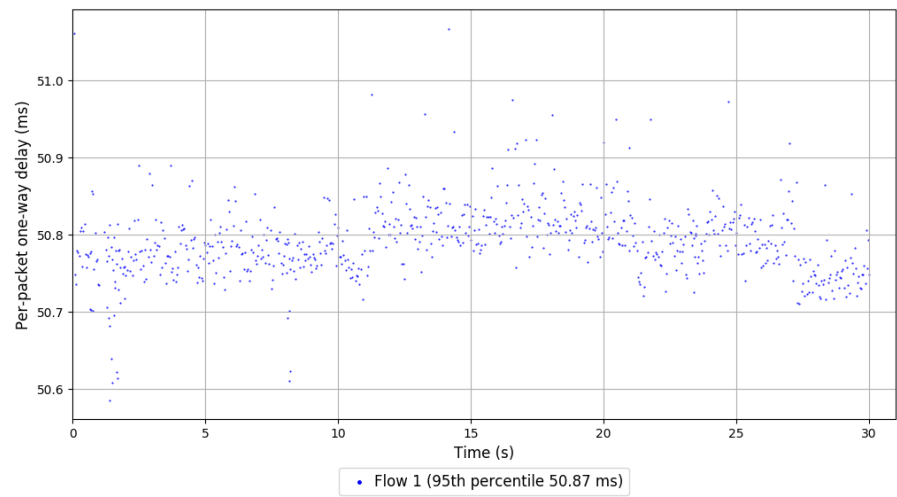
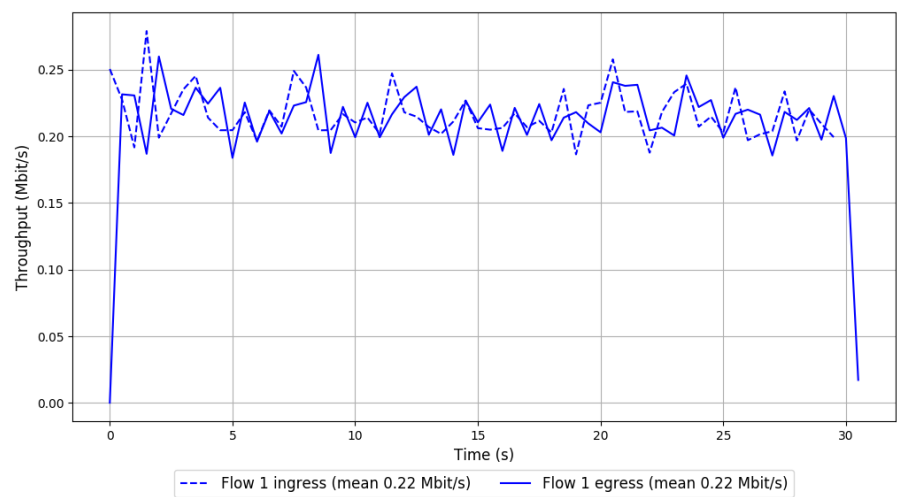


Run 3: Statistics of SCReAM

Start at: 2018-09-26 01:41:07
End at: 2018-09-26 01:41:37
Local clock offset: -0.445 ms
Remote clock offset: -0.047 ms

Below is generated by plot.py at 2018-09-26 04:10:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.865 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.865 ms
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link

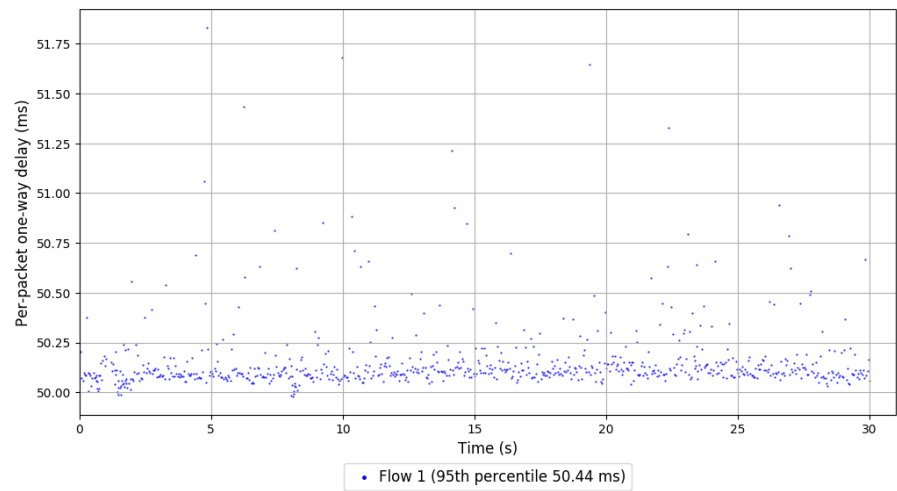
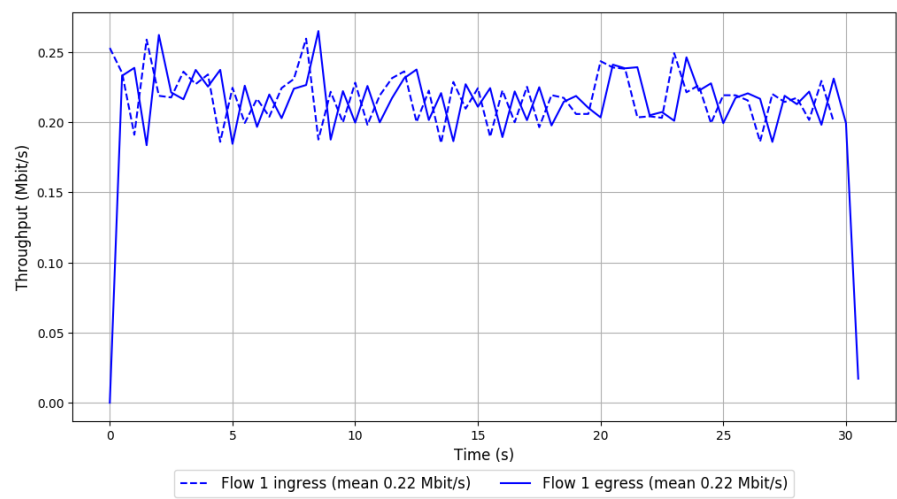


Run 4: Statistics of SCReAM

Start at: 2018-09-26 02:08:07
End at: 2018-09-26 02:08:37
Local clock offset: 0.327 ms
Remote clock offset: -0.006 ms

Below is generated by plot.py at 2018-09-26 04:10:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.440 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.440 ms
Loss rate: 0.00%

Run 4: Report of SReAM — Data Link

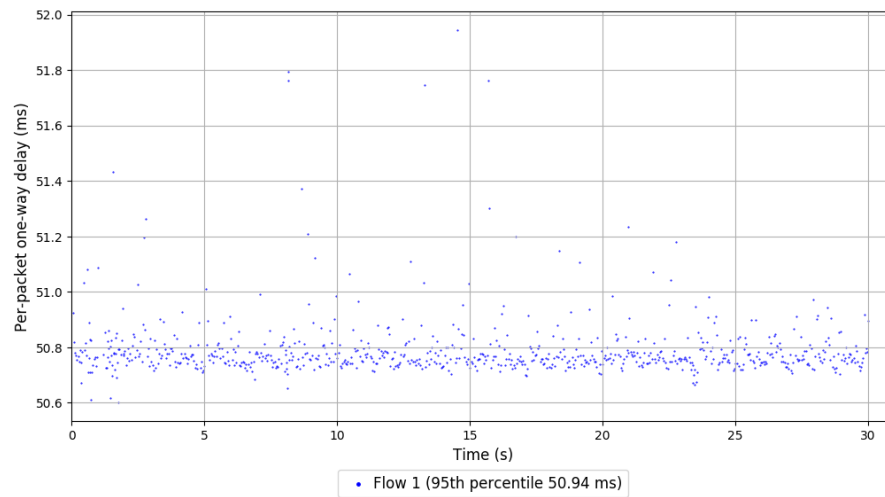
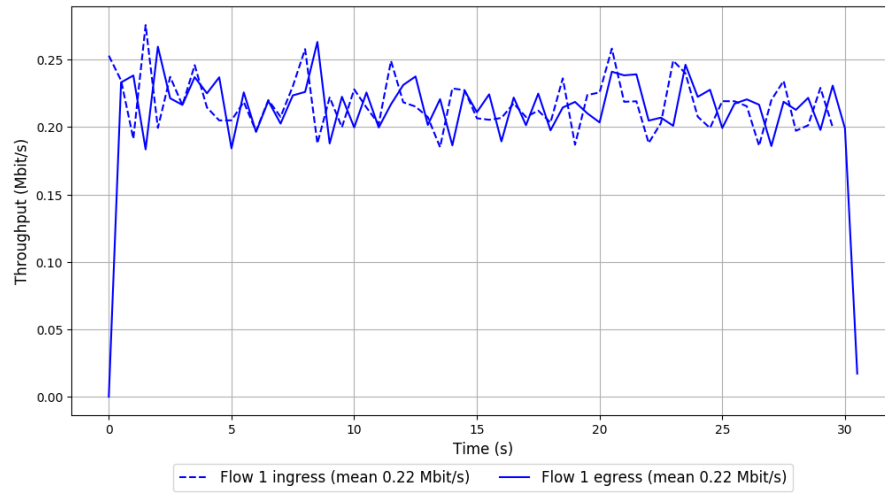


Run 5: Statistics of SCReAM

Start at: 2018-09-26 02:35:28
End at: 2018-09-26 02:35:58
Local clock offset: -0.012 ms
Remote clock offset: -0.073 ms

Below is generated by plot.py at 2018-09-26 04:10:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.943 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.943 ms
Loss rate: 0.00%

Run 5: Report of SReAM — Data Link

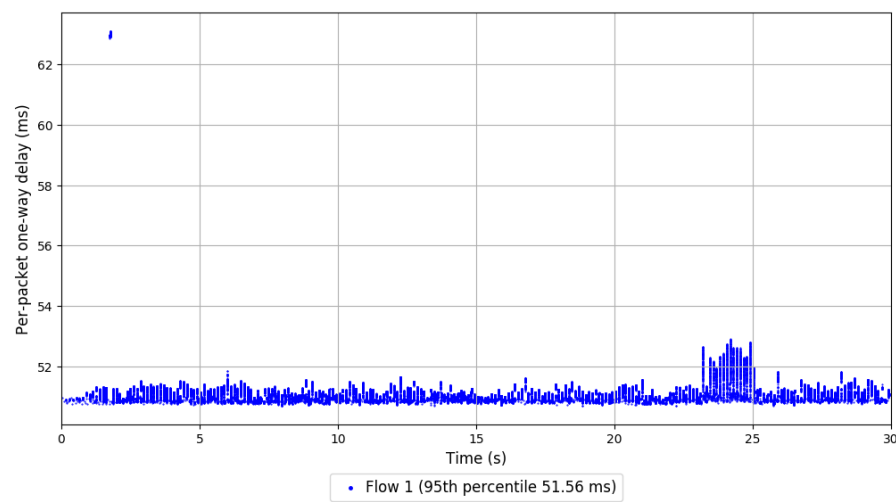
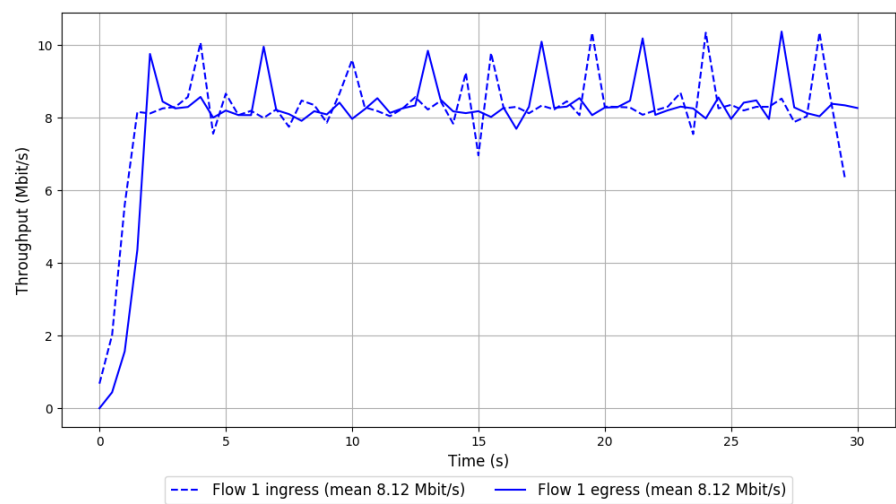


Run 1: Statistics of Sprout

Start at: 2018-09-26 00:33:18
End at: 2018-09-26 00:33:48
Local clock offset: -0.282 ms
Remote clock offset: -0.057 ms

Below is generated by plot.py at 2018-09-26 04:10:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 8.12 Mbit/s
95th percentile per-packet one-way delay: 51.561 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 8.12 Mbit/s
95th percentile per-packet one-way delay: 51.561 ms
Loss rate: 0.00%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-09-26 01:00:45

End at: 2018-09-26 01:01:15

Local clock offset: 0.431 ms

Remote clock offset: 0.149 ms

Below is generated by plot.py at 2018-09-26 04:10:51

Datalink statistics

-- Total of 1 flow:

Average throughput: 8.24 Mbit/s

95th percentile per-packet one-way delay: 50.928 ms

Loss rate: 0.00%

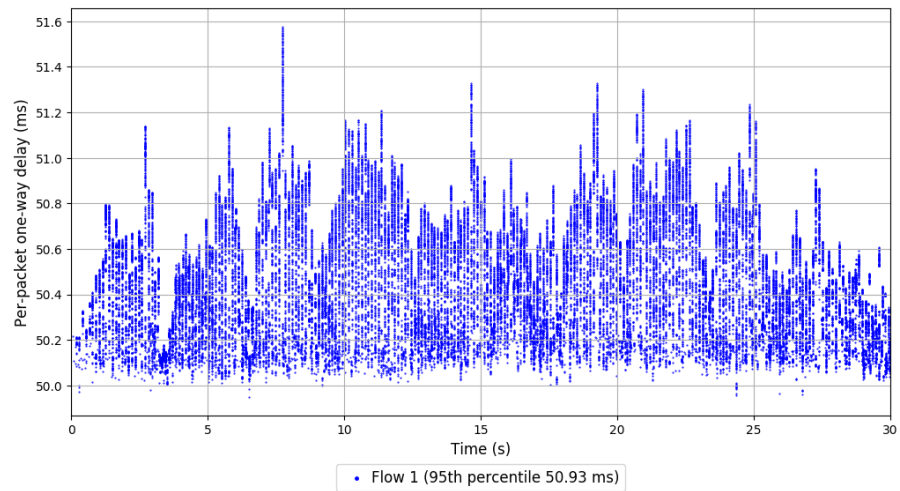
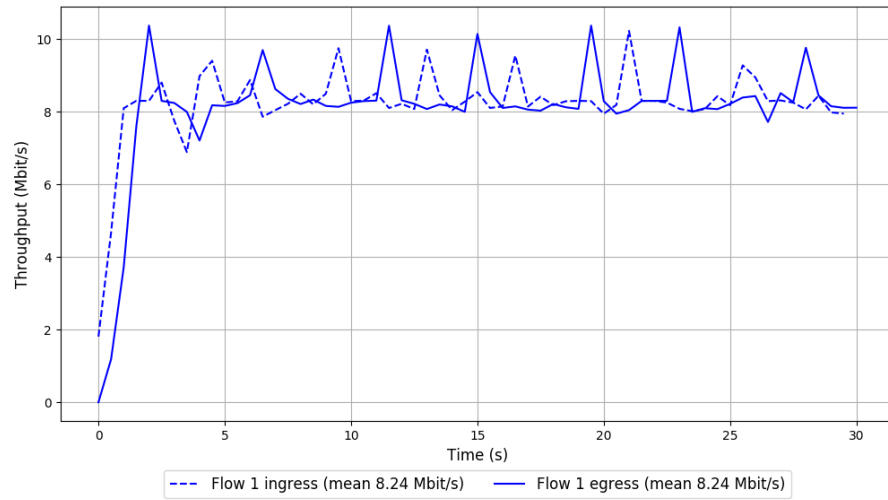
-- Flow 1:

Average throughput: 8.24 Mbit/s

95th percentile per-packet one-way delay: 50.928 ms

Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

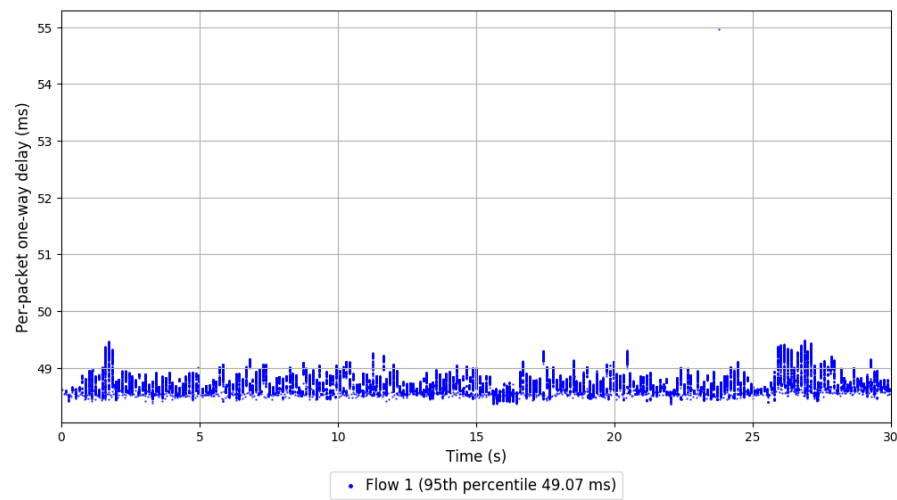
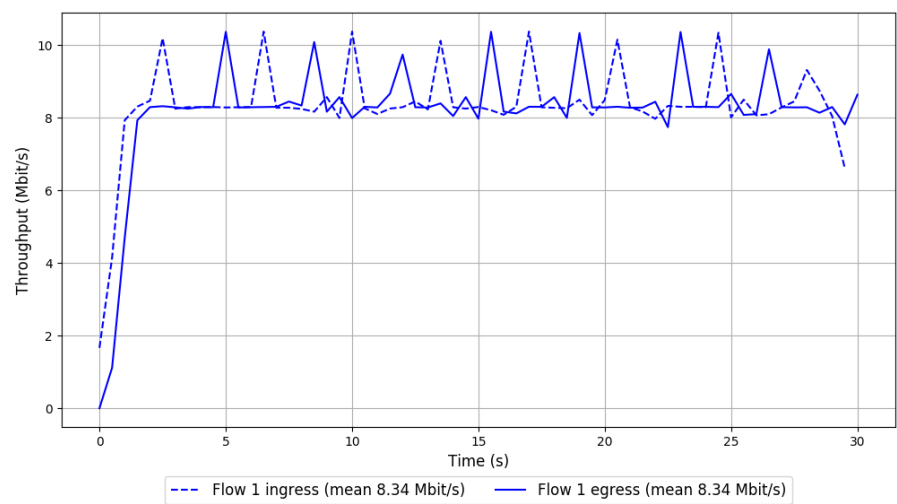


Run 3: Statistics of Sprout

Start at: 2018-09-26 01:27:56
End at: 2018-09-26 01:28:26
Local clock offset: 0.299 ms
Remote clock offset: -0.044 ms

Below is generated by plot.py at 2018-09-26 04:10:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 8.34 Mbit/s
95th percentile per-packet one-way delay: 49.066 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 8.34 Mbit/s
95th percentile per-packet one-way delay: 49.066 ms
Loss rate: 0.00%

Run 3: Report of Sprout — Data Link

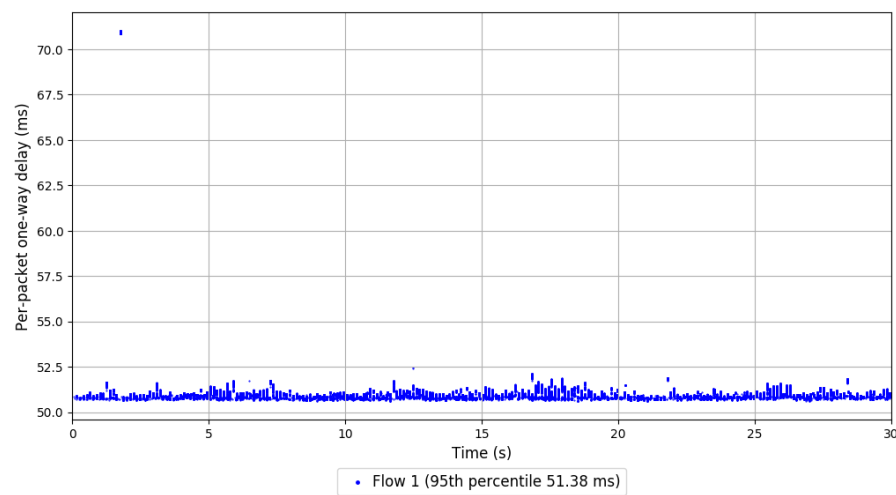
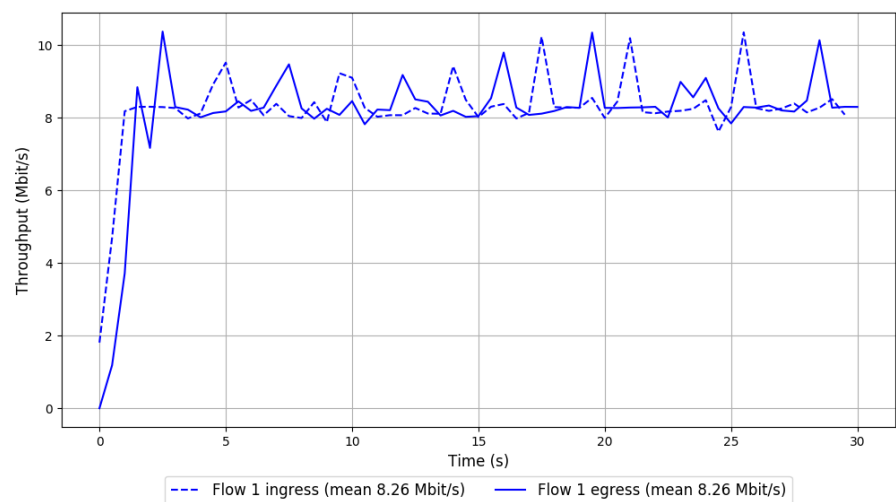


Run 4: Statistics of Sprout

Start at: 2018-09-26 01:55:03
End at: 2018-09-26 01:55:33
Local clock offset: -0.398 ms
Remote clock offset: -0.017 ms

Below is generated by plot.py at 2018-09-26 04:10:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 8.26 Mbit/s
95th percentile per-packet one-way delay: 51.384 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 8.26 Mbit/s
95th percentile per-packet one-way delay: 51.384 ms
Loss rate: 0.00%

Run 4: Report of Sprout — Data Link

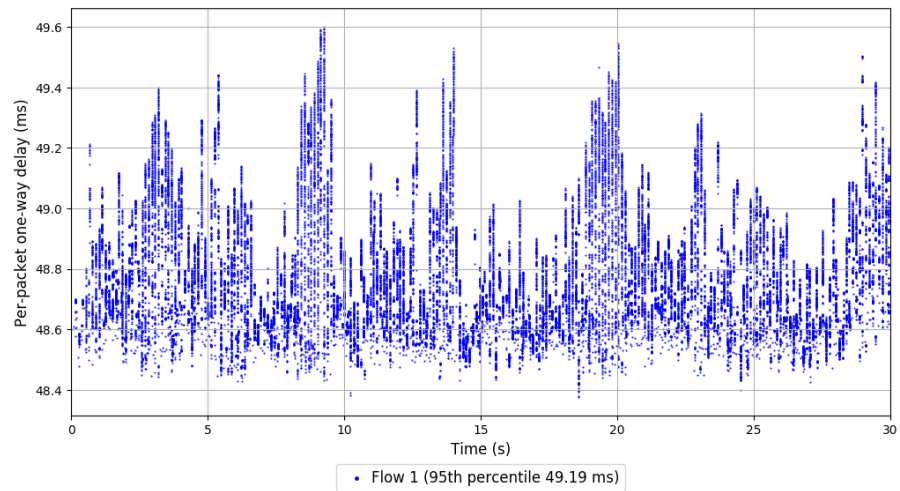
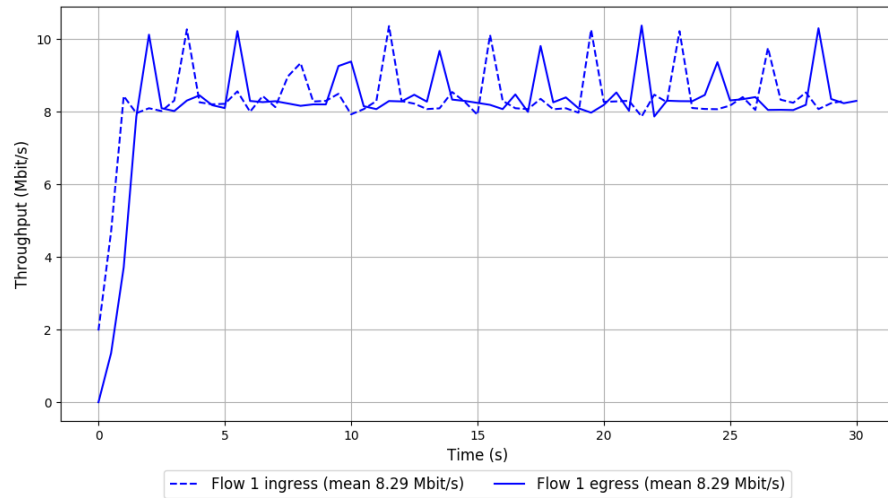


Run 5: Statistics of Sprout

Start at: 2018-09-26 02:22:16
End at: 2018-09-26 02:22:46
Local clock offset: 0.334 ms
Remote clock offset: -0.072 ms

Below is generated by plot.py at 2018-09-26 04:10:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 8.29 Mbit/s
95th percentile per-packet one-way delay: 49.194 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 8.29 Mbit/s
95th percentile per-packet one-way delay: 49.194 ms
Loss rate: 0.00%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2018-09-26 00:30:17

End at: 2018-09-26 00:30:47

Local clock offset: 0.021 ms

Remote clock offset: -0.073 ms

Below is generated by plot.py at 2018-09-26 04:15:23

Datalink statistics

-- Total of 1 flow:

Average throughput: 243.51 Mbit/s

95th percentile per-packet one-way delay: 49.711 ms

Loss rate: 0.00%

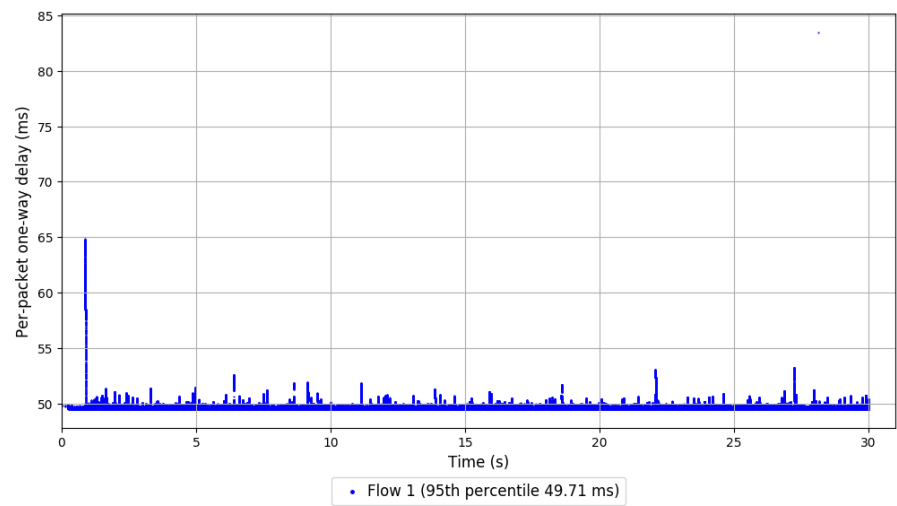
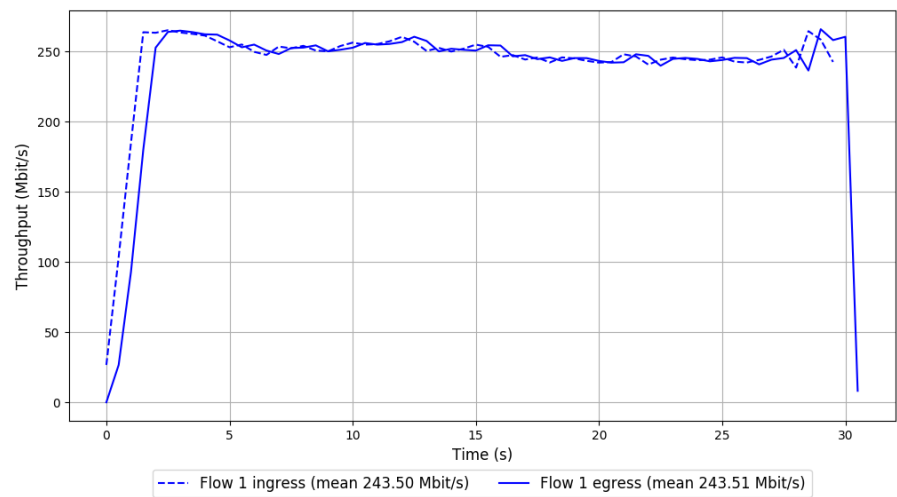
-- Flow 1:

Average throughput: 243.51 Mbit/s

95th percentile per-packet one-way delay: 49.711 ms

Loss rate: 0.00%

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

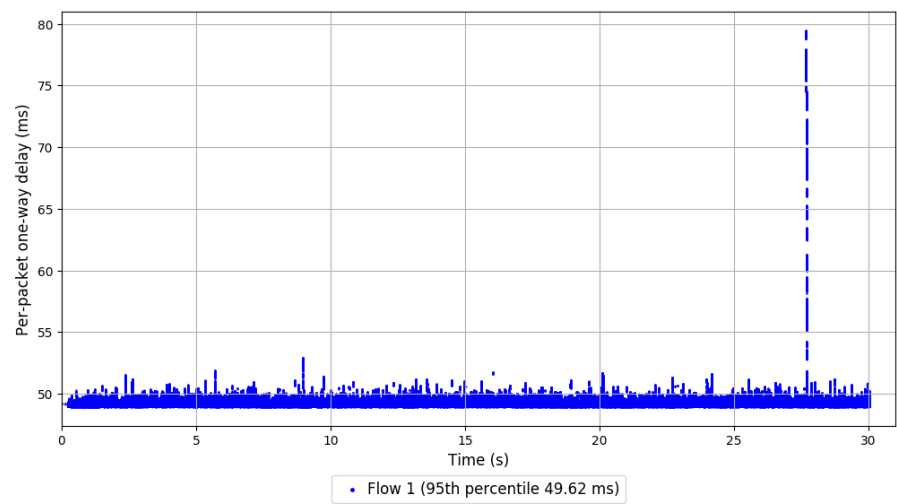
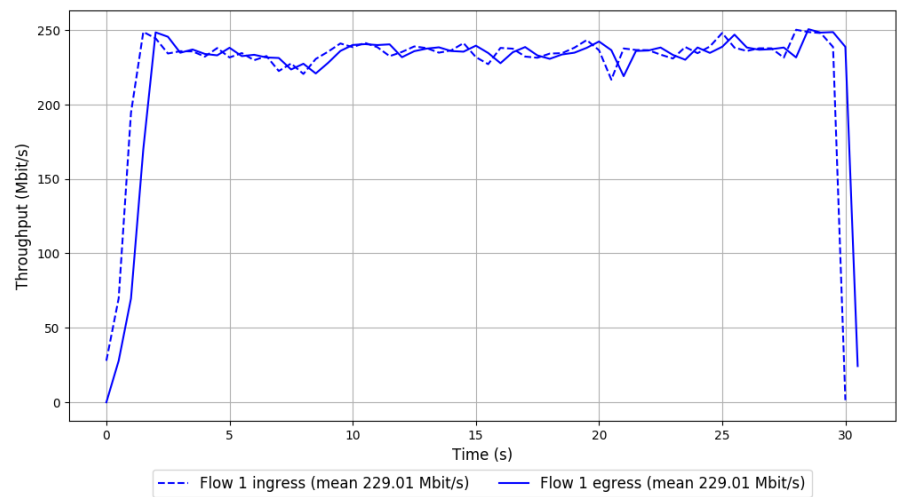


Run 2: Statistics of TaoVA-100x

Start at: 2018-09-26 00:57:45
End at: 2018-09-26 00:58:15
Local clock offset: 0.099 ms
Remote clock offset: -0.017 ms

Below is generated by plot.py at 2018-09-26 04:15:23
Datalink statistics
-- Total of 1 flow:
Average throughput: 229.01 Mbit/s
95th percentile per-packet one-way delay: 49.623 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 229.01 Mbit/s
95th percentile per-packet one-way delay: 49.623 ms
Loss rate: 0.00%

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-09-26 01:24:54

End at: 2018-09-26 01:25:24

Local clock offset: -0.371 ms

Remote clock offset: -0.025 ms

Below is generated by plot.py at 2018-09-26 04:15:37

Datalink statistics

-- Total of 1 flow:

Average throughput: 245.65 Mbit/s

95th percentile per-packet one-way delay: 50.705 ms

Loss rate: 0.00%

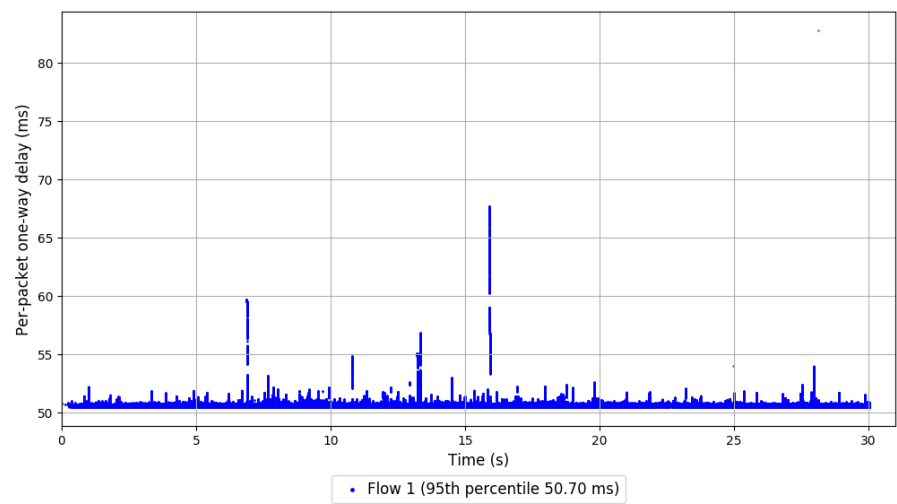
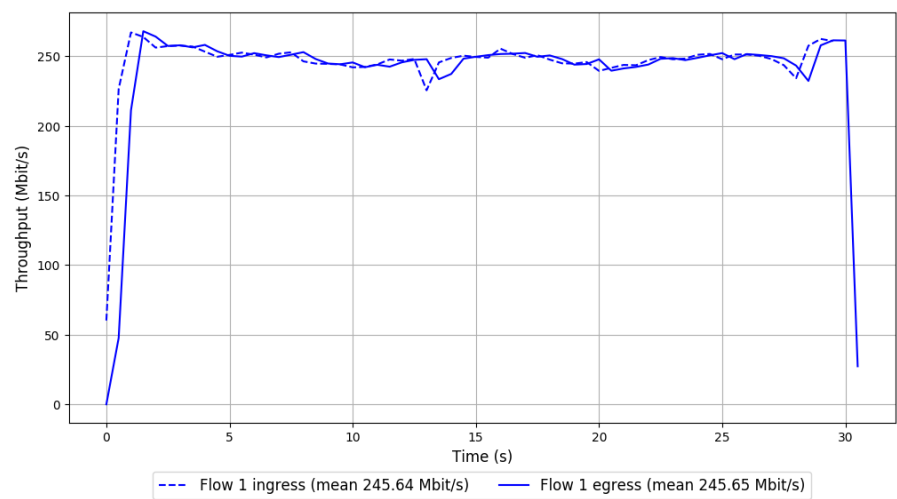
-- Flow 1:

Average throughput: 245.65 Mbit/s

95th percentile per-packet one-way delay: 50.705 ms

Loss rate: 0.00%

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-09-26 01:52:03

End at: 2018-09-26 01:52:33

Local clock offset: 0.323 ms

Remote clock offset: -0.071 ms

Below is generated by plot.py at 2018-09-26 04:15:37

Datalink statistics

-- Total of 1 flow:

Average throughput: 240.01 Mbit/s

95th percentile per-packet one-way delay: 49.973 ms

Loss rate: 0.00%

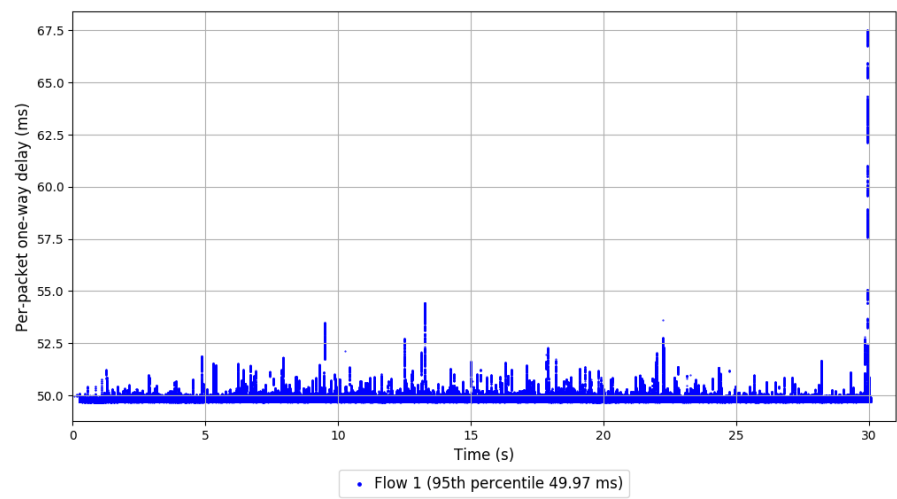
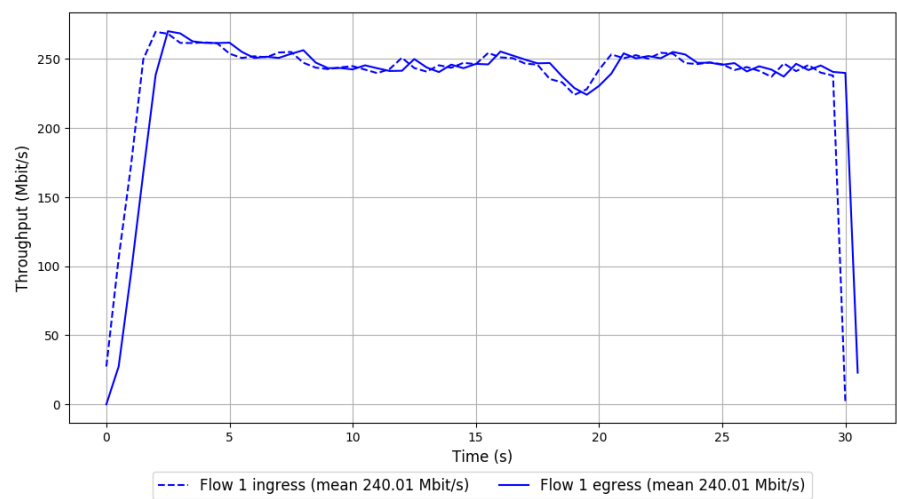
-- Flow 1:

Average throughput: 240.01 Mbit/s

95th percentile per-packet one-way delay: 49.973 ms

Loss rate: 0.00%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-09-26 02:19:16

End at: 2018-09-26 02:19:46

Local clock offset: 0.269 ms

Remote clock offset: -0.043 ms

Below is generated by plot.py at 2018-09-26 04:16:58

Datalink statistics

-- Total of 1 flow:

Average throughput: 231.34 Mbit/s

95th percentile per-packet one-way delay: 49.312 ms

Loss rate: 0.00%

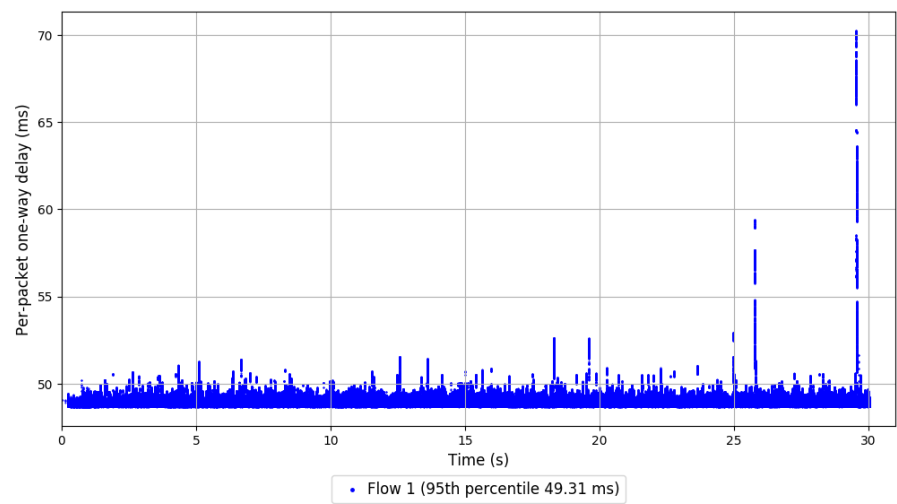
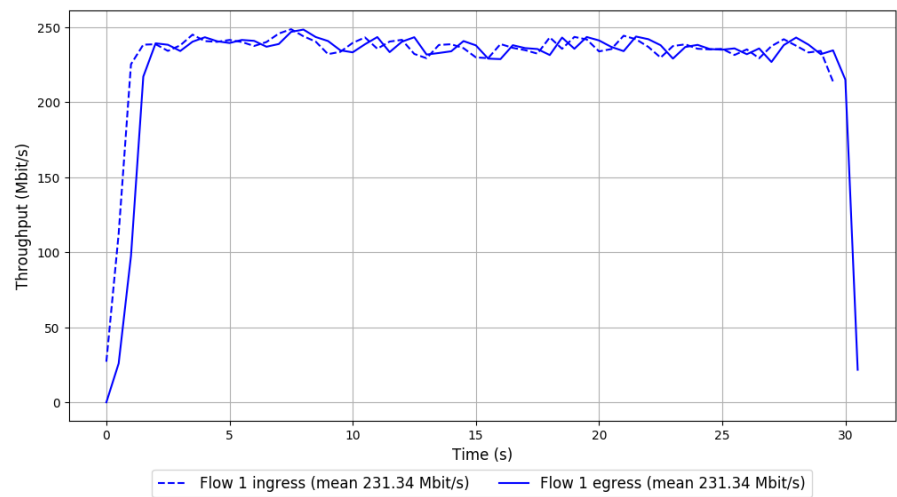
-- Flow 1:

Average throughput: 231.34 Mbit/s

95th percentile per-packet one-way delay: 49.312 ms

Loss rate: 0.00%

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



Run 1: Statistics of TCP Vegas

Start at: 2018-09-26 00:28:43

End at: 2018-09-26 00:29:13

Local clock offset: 0.045 ms

Remote clock offset: -0.09 ms

Below is generated by plot.py at 2018-09-26 04:19:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 558.60 Mbit/s

95th percentile per-packet one-way delay: 50.227 ms

Loss rate: 0.00%

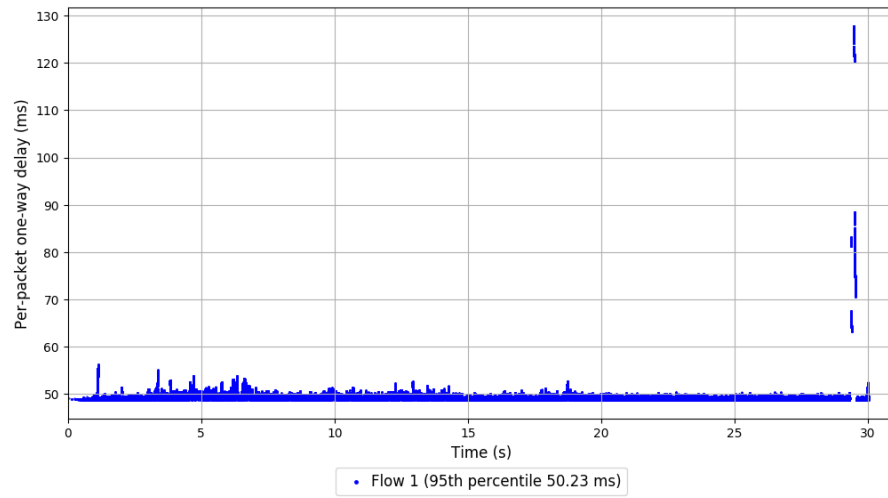
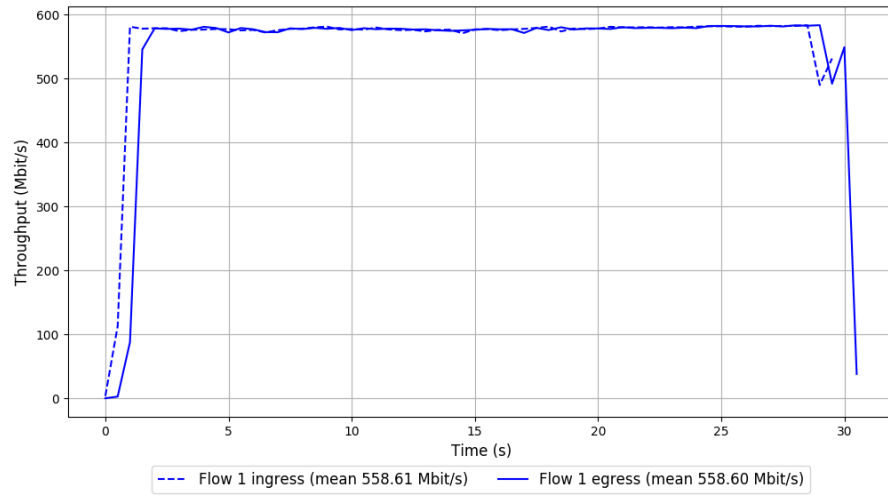
-- Flow 1:

Average throughput: 558.60 Mbit/s

95th percentile per-packet one-way delay: 50.227 ms

Loss rate: 0.00%

Run 1: Report of TCP Vegas — Data Link

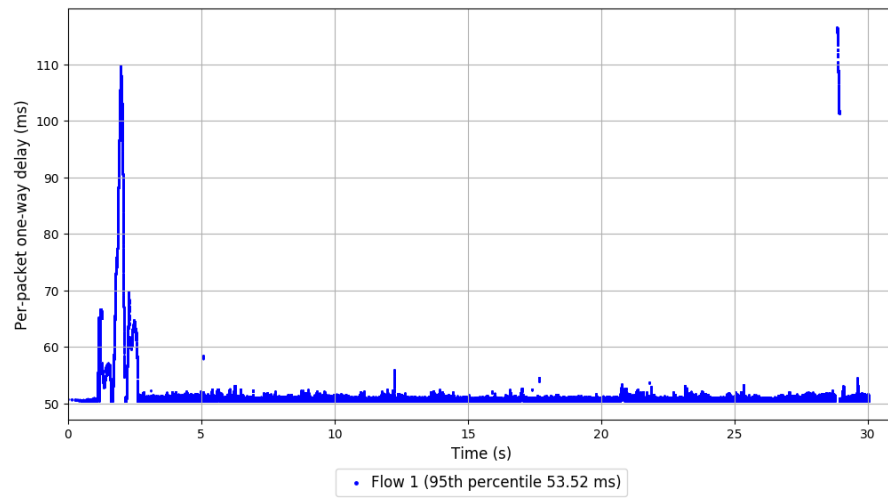
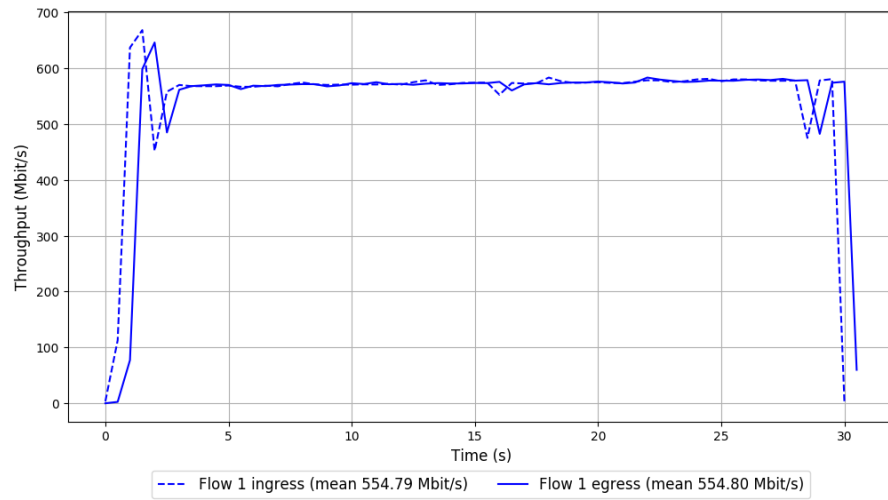


Run 2: Statistics of TCP Vegas

Start at: 2018-09-26 00:56:13
End at: 2018-09-26 00:56:43
Local clock offset: 0.104 ms
Remote clock offset: -0.008 ms

Below is generated by plot.py at 2018-09-26 04:20:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 554.80 Mbit/s
95th percentile per-packet one-way delay: 53.520 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 554.80 Mbit/s
95th percentile per-packet one-way delay: 53.520 ms
Loss rate: 0.00%

Run 2: Report of TCP Vegas — Data Link

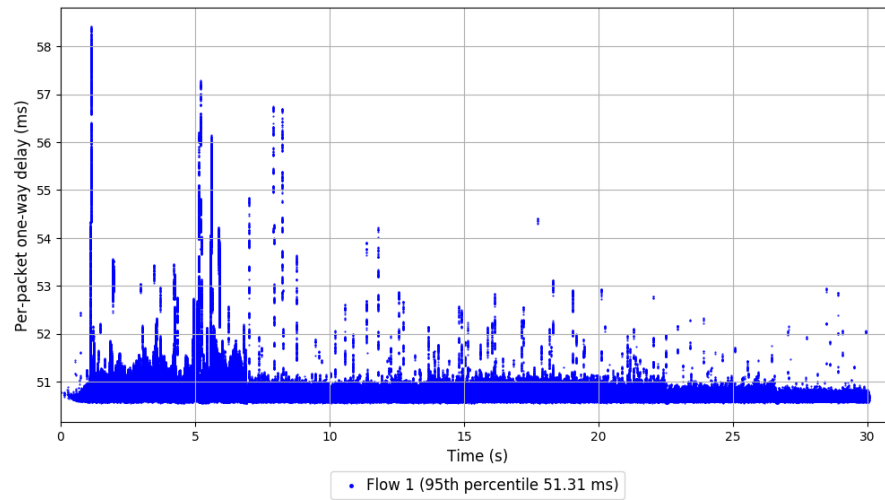
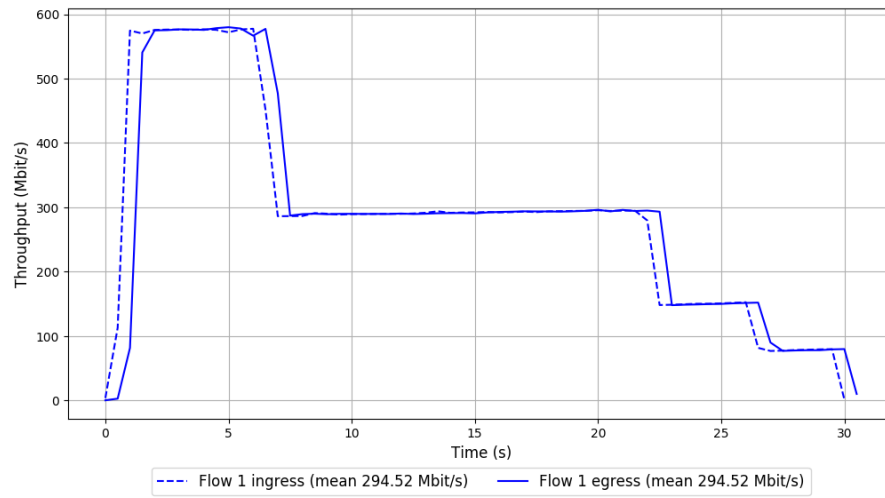


Run 3: Statistics of TCP Vegas

Start at: 2018-09-26 01:23:33
End at: 2018-09-26 01:24:03
Local clock offset: 0.005 ms
Remote clock offset: -0.019 ms

Below is generated by plot.py at 2018-09-26 04:20:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 294.52 Mbit/s
95th percentile per-packet one-way delay: 51.310 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 294.52 Mbit/s
95th percentile per-packet one-way delay: 51.310 ms
Loss rate: 0.00%

Run 3: Report of TCP Vegas — Data Link

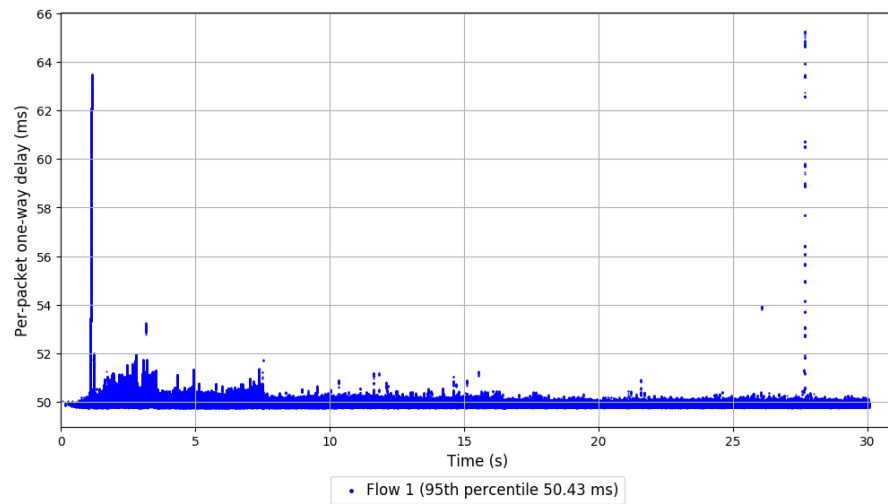
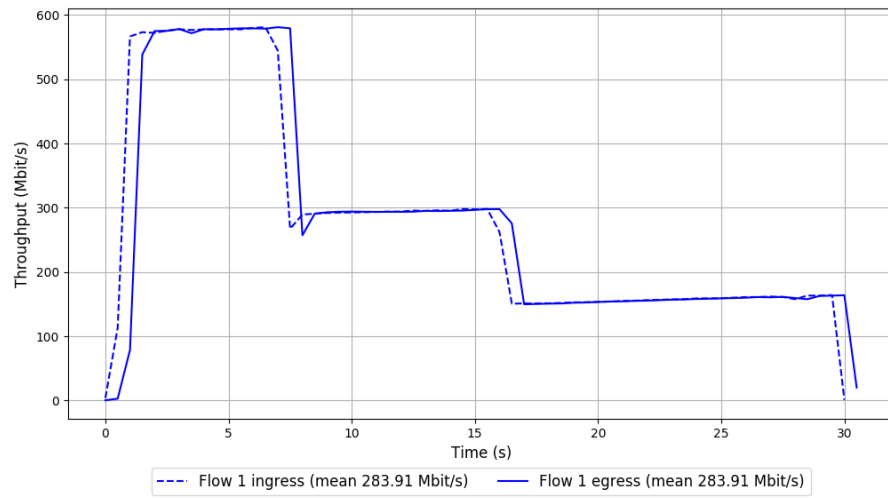


Run 4: Statistics of TCP Vegas

Start at: 2018-09-26 01:50:43
End at: 2018-09-26 01:51:13
Local clock offset: 0.307 ms
Remote clock offset: -0.052 ms

Below is generated by plot.py at 2018-09-26 04:20:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 283.91 Mbit/s
95th percentile per-packet one-way delay: 50.428 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 283.91 Mbit/s
95th percentile per-packet one-way delay: 50.428 ms
Loss rate: 0.00%

Run 4: Report of TCP Vegas — Data Link

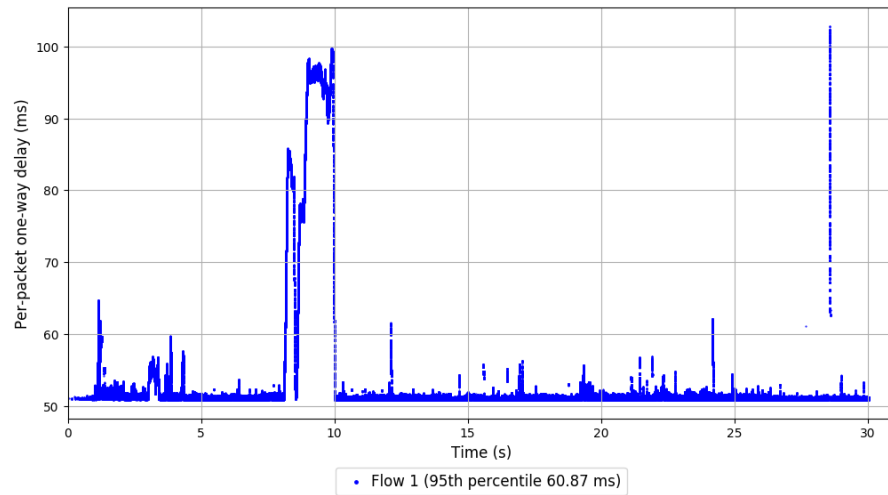
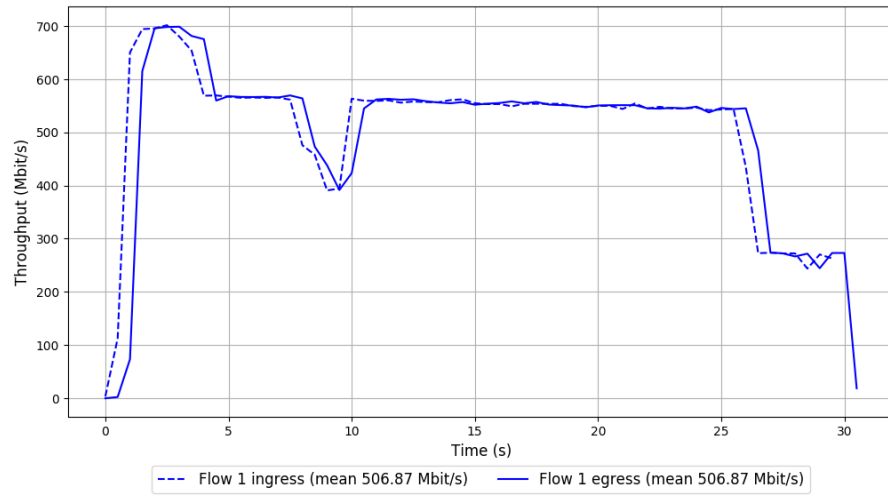


Run 5: Statistics of TCP Vegas

Start at: 2018-09-26 02:17:46
End at: 2018-09-26 02:18:16
Local clock offset: -0.389 ms
Remote clock offset: -0.028 ms

Below is generated by plot.py at 2018-09-26 04:23:57
Datalink statistics
-- Total of 1 flow:
Average throughput: 506.87 Mbit/s
95th percentile per-packet one-way delay: 60.873 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 506.87 Mbit/s
95th percentile per-packet one-way delay: 60.873 ms
Loss rate: 0.00%

Run 5: Report of TCP Vegas — Data Link

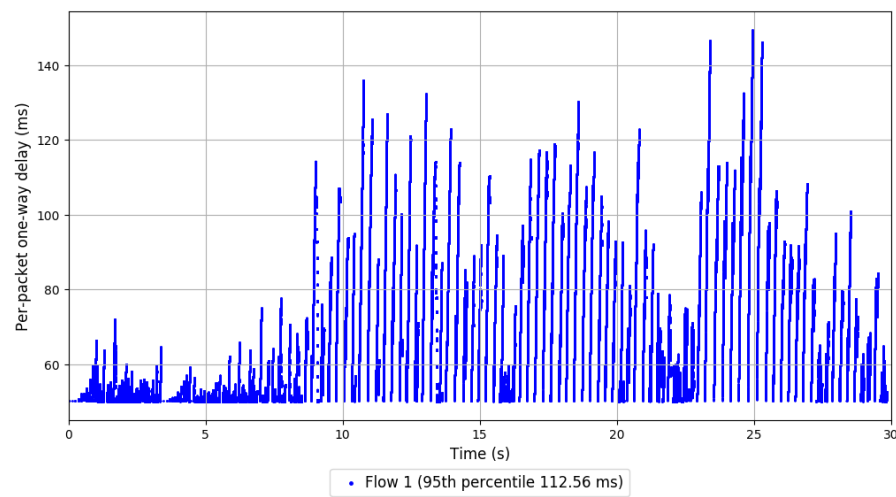
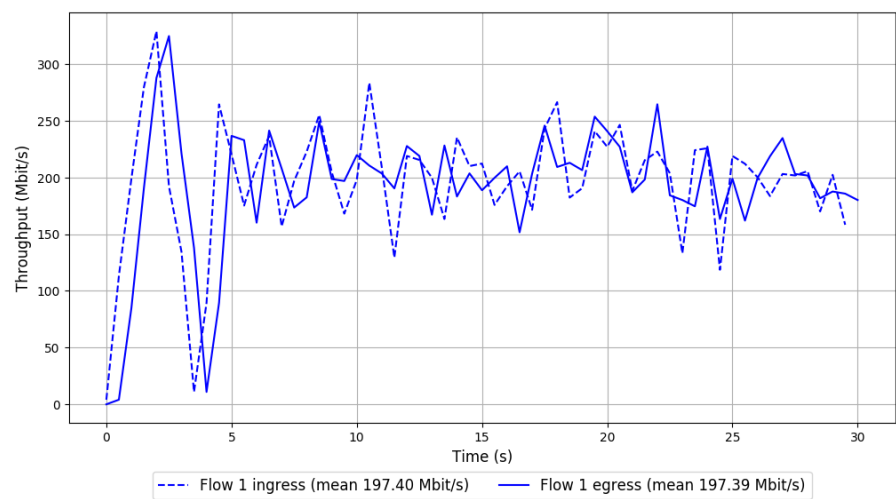


Run 1: Statistics of Verus

Start at: 2018-09-26 00:37:34
End at: 2018-09-26 00:38:04
Local clock offset: -0.274 ms
Remote clock offset: -0.045 ms

Below is generated by plot.py at 2018-09-26 04:23:57
Datalink statistics
-- Total of 1 flow:
Average throughput: 197.39 Mbit/s
95th percentile per-packet one-way delay: 112.555 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 197.39 Mbit/s
95th percentile per-packet one-way delay: 112.555 ms
Loss rate: 0.01%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-09-26 01:04:56

End at: 2018-09-26 01:05:26

Local clock offset: 0.449 ms

Remote clock offset: 0.031 ms

Below is generated by plot.py at 2018-09-26 04:23:57

Datalink statistics

-- Total of 1 flow:

Average throughput: 193.40 Mbit/s

95th percentile per-packet one-way delay: 86.569 ms

Loss rate: 0.11%

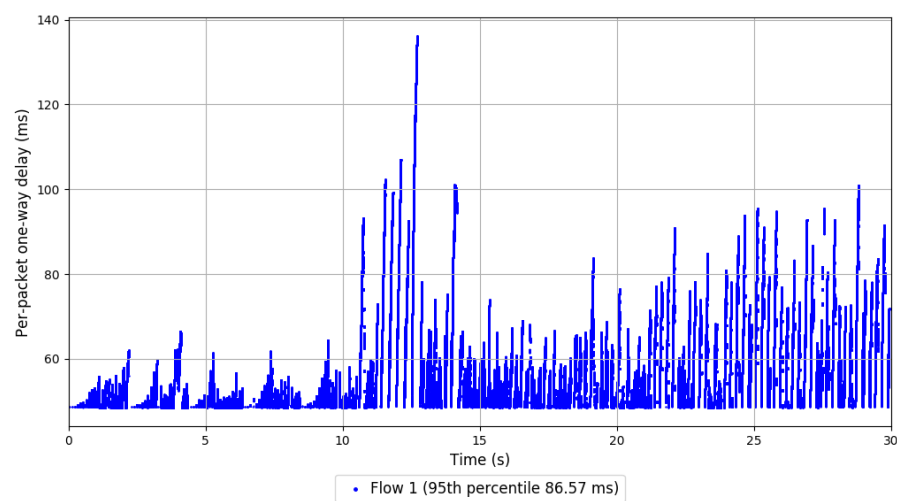
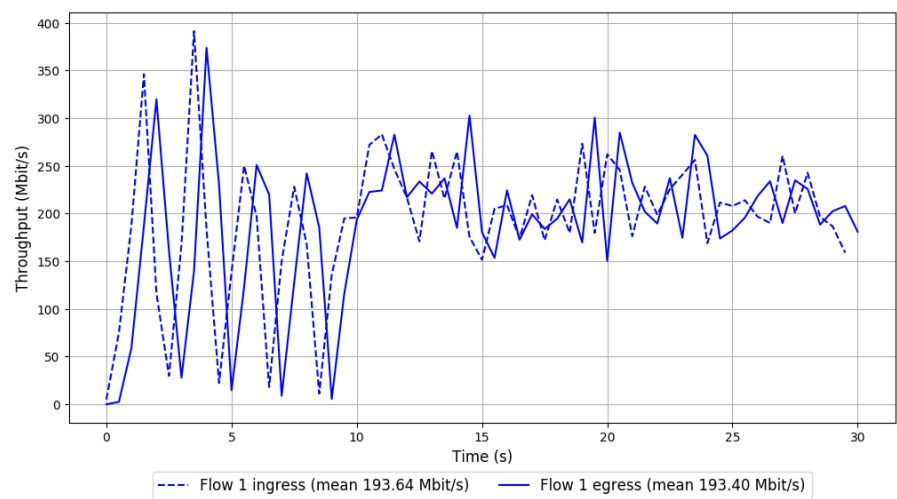
-- Flow 1:

Average throughput: 193.40 Mbit/s

95th percentile per-packet one-way delay: 86.569 ms

Loss rate: 0.11%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-09-26 01:32:06

End at: 2018-09-26 01:32:36

Local clock offset: -0.083 ms

Remote clock offset: 0.008 ms

Below is generated by plot.py at 2018-09-26 04:23:57

Datalink statistics

-- Total of 1 flow:

Average throughput: 195.65 Mbit/s

95th percentile per-packet one-way delay: 97.910 ms

Loss rate: 0.16%

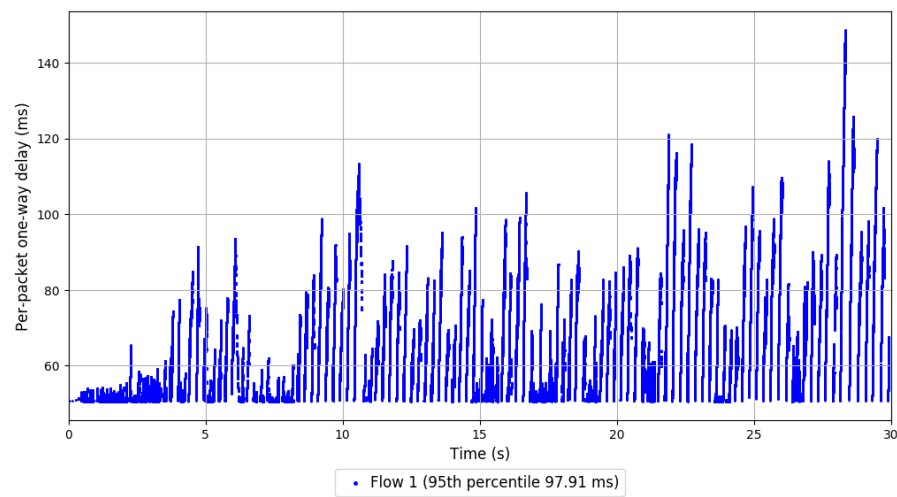
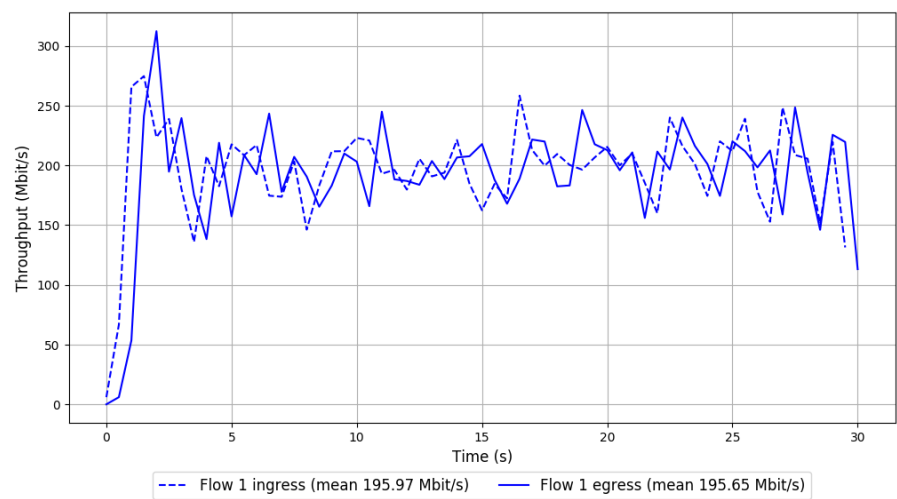
-- Flow 1:

Average throughput: 195.65 Mbit/s

95th percentile per-packet one-way delay: 97.910 ms

Loss rate: 0.16%

Run 3: Report of Verus — Data Link

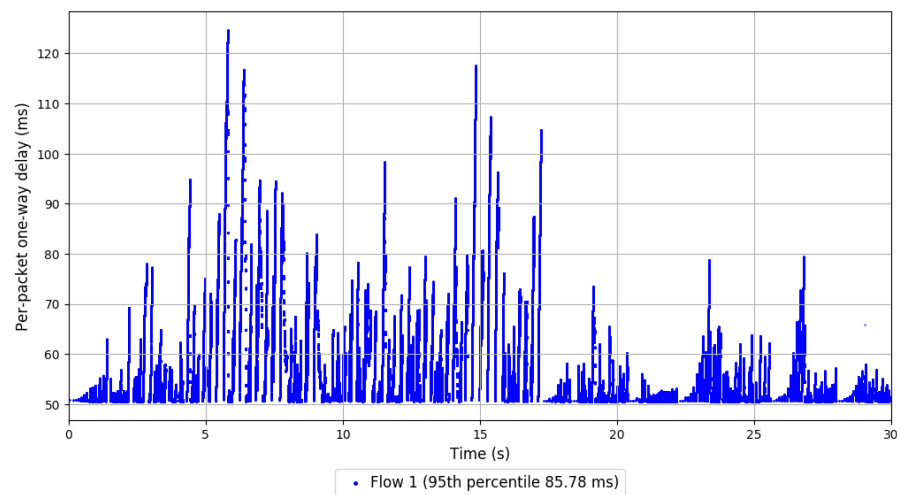
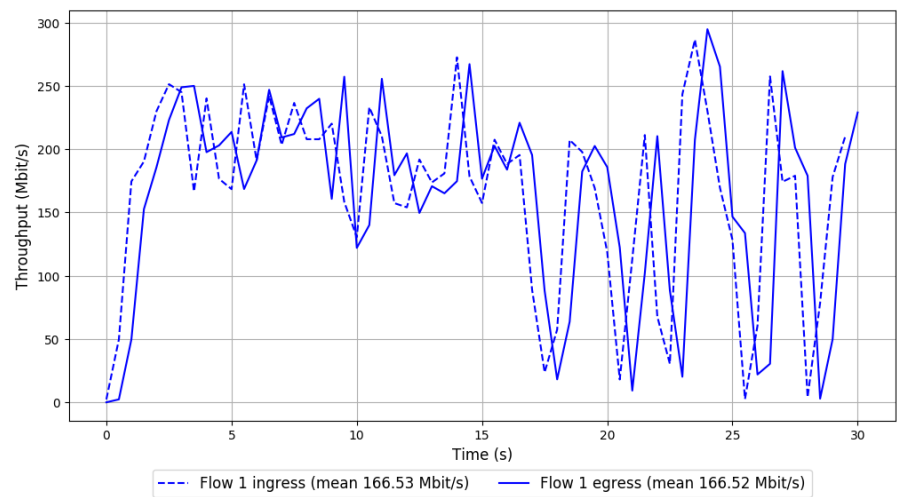


Run 4: Statistics of Verus

Start at: 2018-09-26 01:59:04
End at: 2018-09-26 01:59:34
Local clock offset: -0.019 ms
Remote clock offset: -0.041 ms

Below is generated by plot.py at 2018-09-26 04:23:57
Datalink statistics
-- Total of 1 flow:
Average throughput: 166.52 Mbit/s
95th percentile per-packet one-way delay: 85.782 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 166.52 Mbit/s
95th percentile per-packet one-way delay: 85.782 ms
Loss rate: 0.00%

Run 4: Report of Verus — Data Link

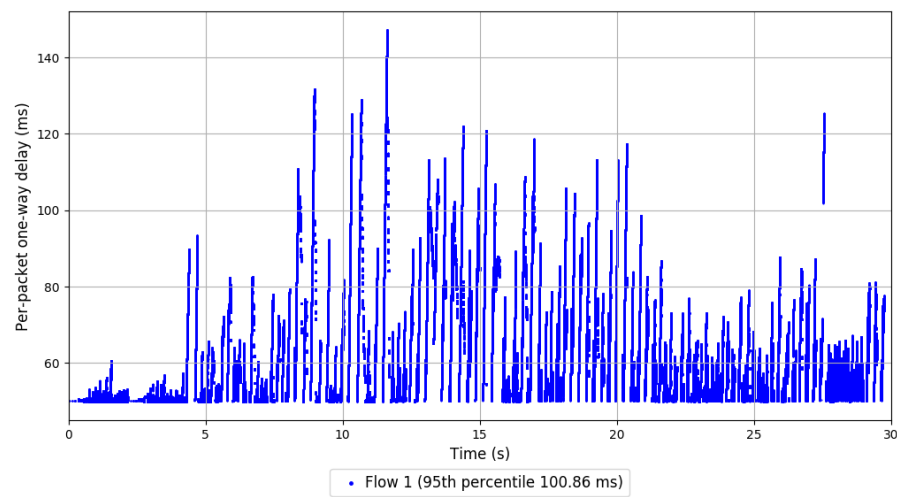
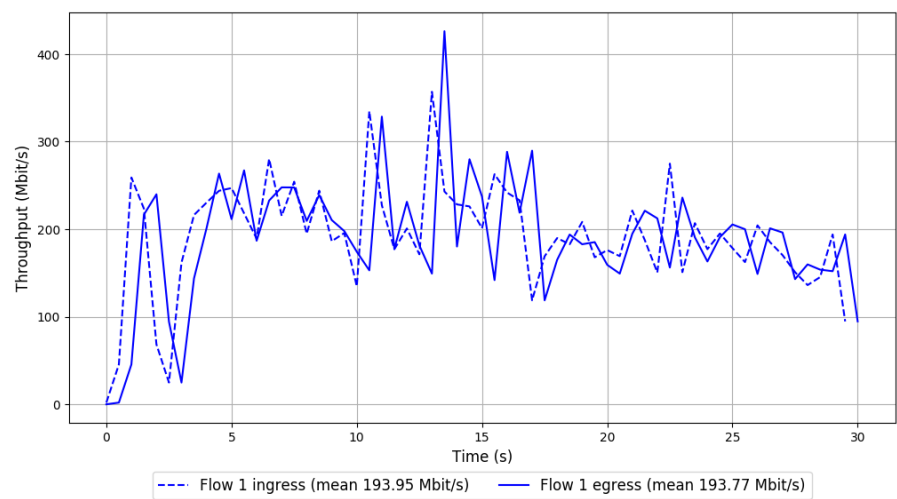


Run 5: Statistics of Verus

Start at: 2018-09-26 02:26:25
End at: 2018-09-26 02:26:55
Local clock offset: -0.356 ms
Remote clock offset: -0.142 ms

Below is generated by plot.py at 2018-09-26 04:25:21
Datalink statistics
-- Total of 1 flow:
Average throughput: 193.77 Mbit/s
95th percentile per-packet one-way delay: 100.864 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 193.77 Mbit/s
95th percentile per-packet one-way delay: 100.864 ms
Loss rate: 0.00%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2018-09-26 00:31:45

End at: 2018-09-26 00:32:15

Local clock offset: 0.382 ms

Remote clock offset: -0.068 ms

Below is generated by plot.py at 2018-09-26 04:26:12

Datalink statistics

-- Total of 1 flow:

Average throughput: 406.04 Mbit/s

95th percentile per-packet one-way delay: 50.456 ms

Loss rate: 0.03%

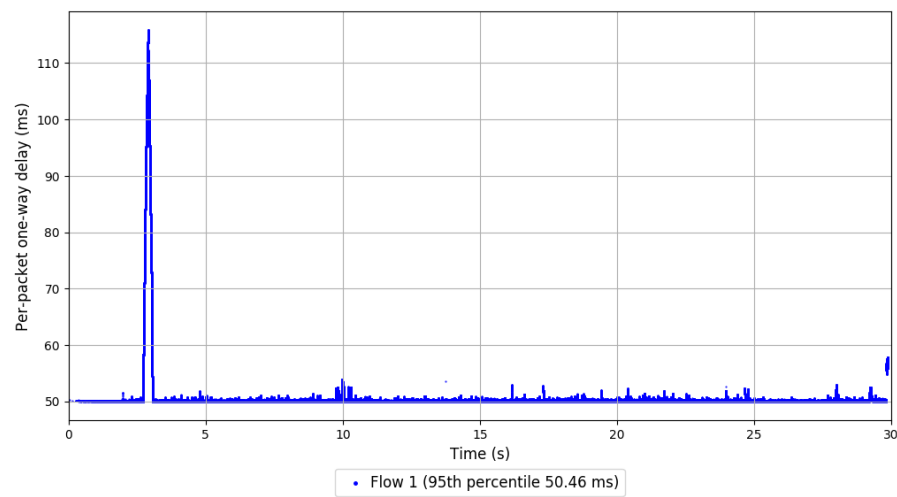
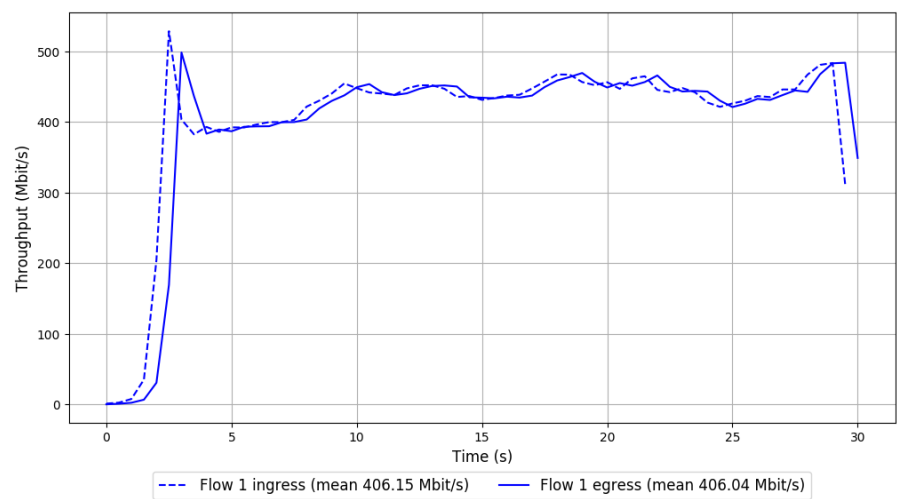
-- Flow 1:

Average throughput: 406.04 Mbit/s

95th percentile per-packet one-way delay: 50.456 ms

Loss rate: 0.03%

Run 1: Report of PCC-Vivace — Data Link

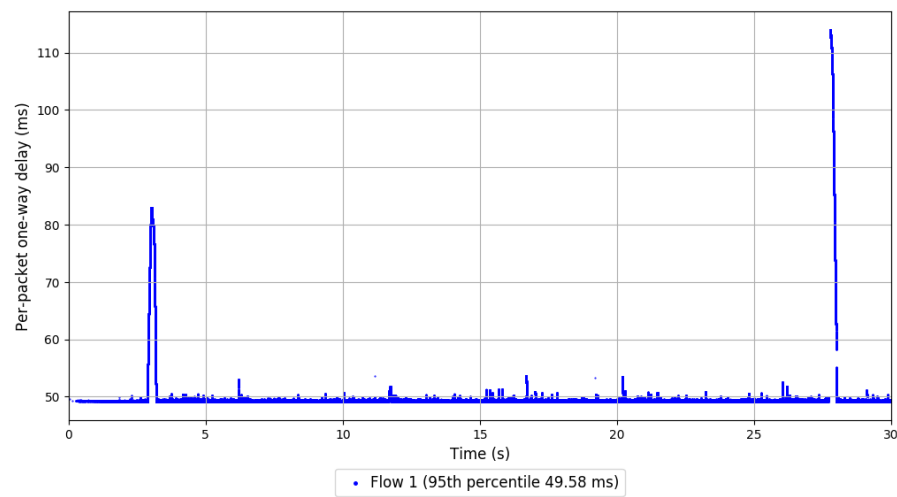
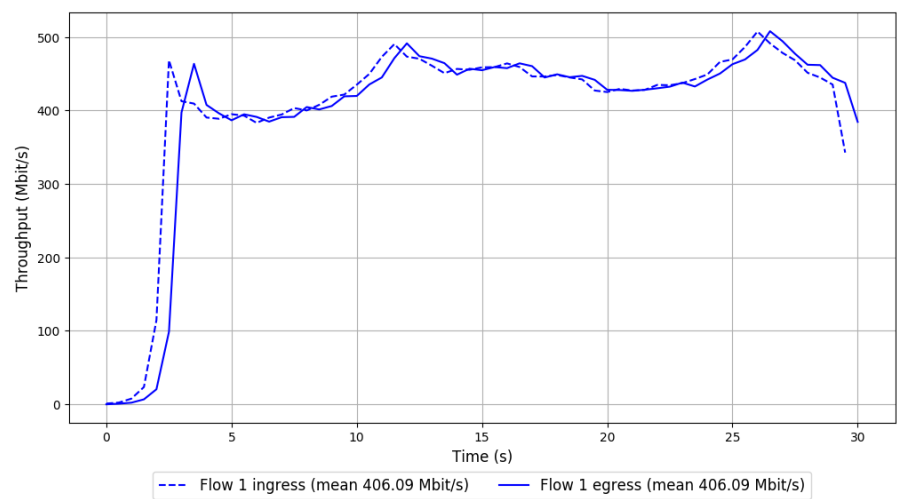


Run 2: Statistics of PCC-Vivace

Start at: 2018-09-26 00:59:12
End at: 2018-09-26 00:59:42
Local clock offset: -0.297 ms
Remote clock offset: -0.011 ms

Below is generated by plot.py at 2018-09-26 04:26:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 406.09 Mbit/s
95th percentile per-packet one-way delay: 49.581 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 406.09 Mbit/s
95th percentile per-packet one-way delay: 49.581 ms
Loss rate: 0.00%

Run 2: Report of PCC-Vivace — Data Link

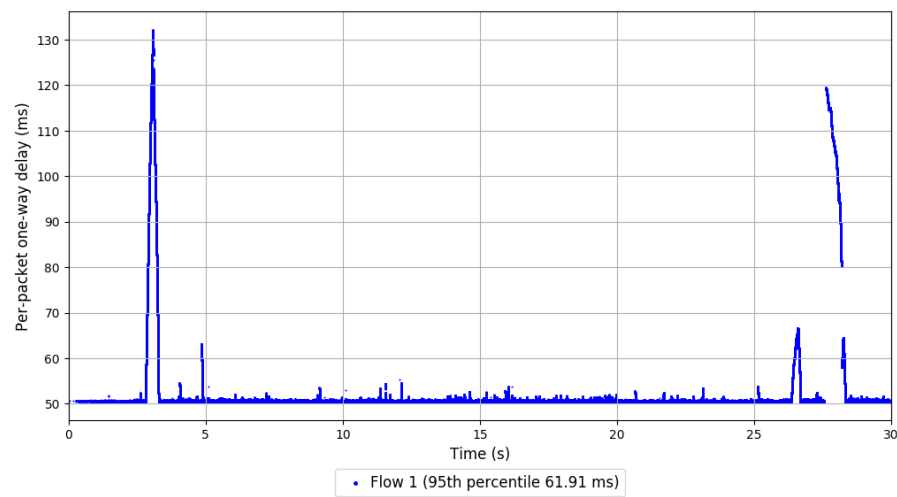
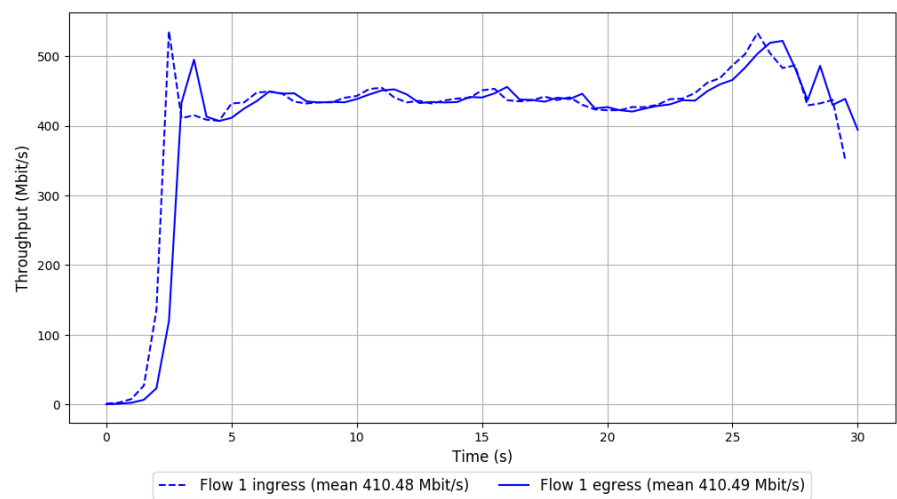


Run 3: Statistics of PCC-Vivace

Start at: 2018-09-26 01:26:22
End at: 2018-09-26 01:26:52
Local clock offset: -0.061 ms
Remote clock offset: -0.014 ms

Below is generated by plot.py at 2018-09-26 04:26:57
Datalink statistics
-- Total of 1 flow:
Average throughput: 410.49 Mbit/s
95th percentile per-packet one-way delay: 61.914 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 410.49 Mbit/s
95th percentile per-packet one-way delay: 61.914 ms
Loss rate: 0.00%

Run 3: Report of PCC-Vivace — Data Link

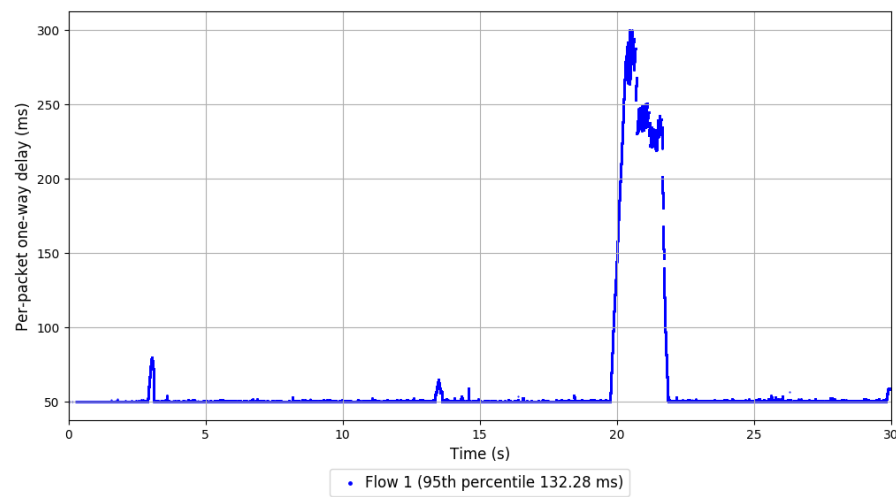
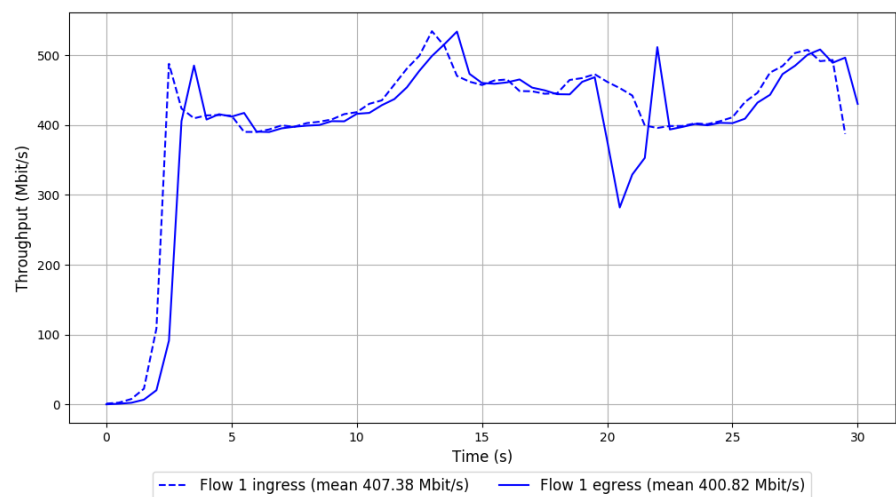


Run 4: Statistics of PCC-Vivace

Start at: 2018-09-26 01:53:31
End at: 2018-09-26 01:54:01
Local clock offset: -0.052 ms
Remote clock offset: -0.082 ms

Below is generated by plot.py at 2018-09-26 04:26:57
Datalink statistics
-- Total of 1 flow:
Average throughput: 400.82 Mbit/s
95th percentile per-packet one-way delay: 132.281 ms
Loss rate: 1.61%
-- Flow 1:
Average throughput: 400.82 Mbit/s
95th percentile per-packet one-way delay: 132.281 ms
Loss rate: 1.61%

Run 4: Report of PCC-Vivace — Data Link

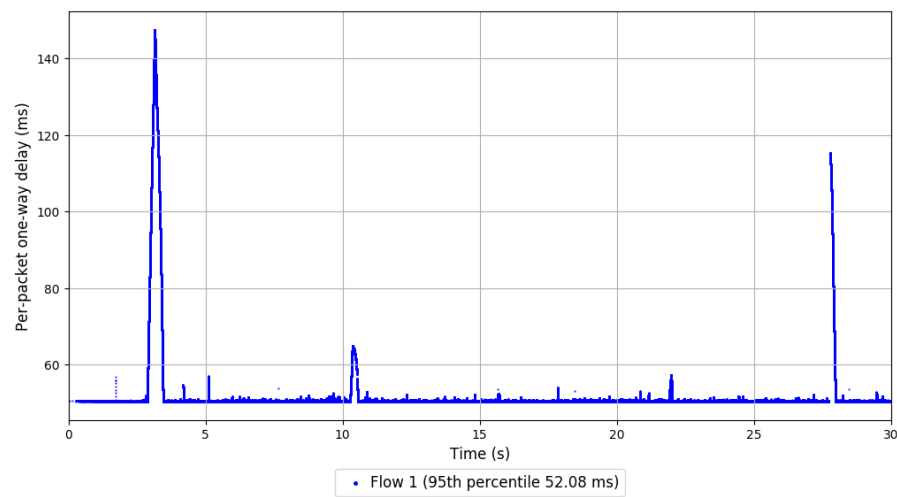
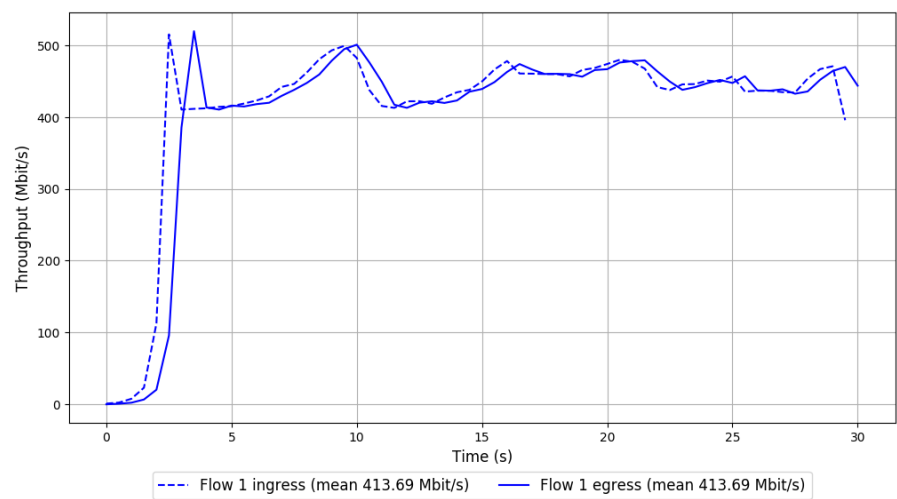


Run 5: Statistics of PCC-Vivace

Start at: 2018-09-26 02:20:43
End at: 2018-09-26 02:21:13
Local clock offset: -0.019 ms
Remote clock offset: -0.056 ms

Below is generated by plot.py at 2018-09-26 04:26:59
Datalink statistics
-- Total of 1 flow:
Average throughput: 413.69 Mbit/s
95th percentile per-packet one-way delay: 52.080 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 413.69 Mbit/s
95th percentile per-packet one-way delay: 52.080 ms
Loss rate: 0.00%

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2018-09-26 00:50:58

End at: 2018-09-26 00:51:28

Local clock offset: -0.282 ms

Remote clock offset: 0.006 ms

Below is generated by plot.py at 2018-09-26 04:26:59

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.39 Mbit/s

95th percentile per-packet one-way delay: 50.733 ms

Loss rate: 0.00%

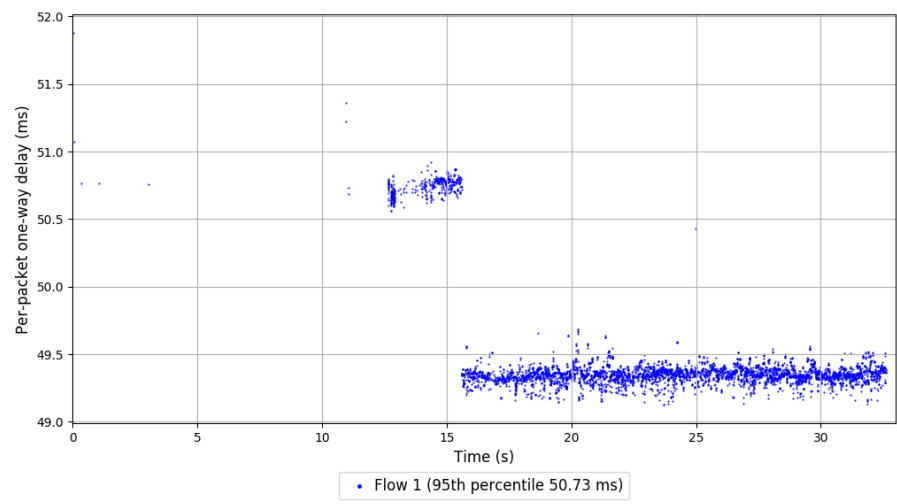
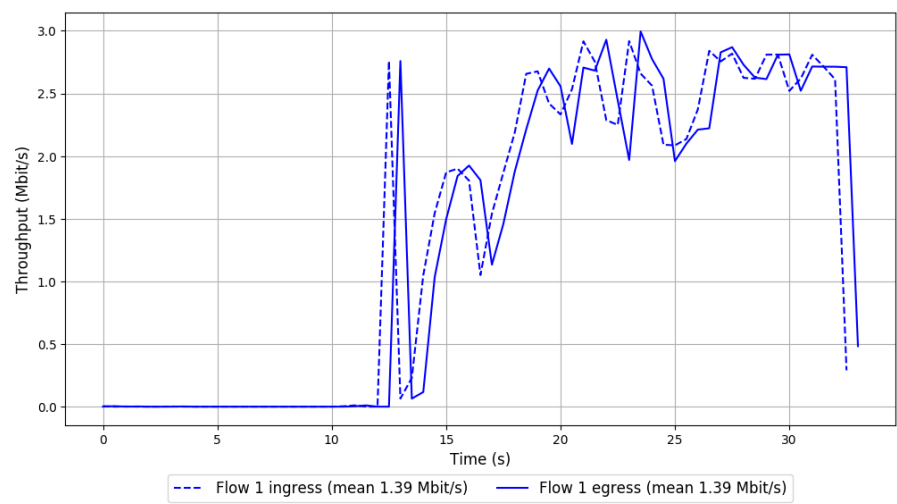
-- Flow 1:

Average throughput: 1.39 Mbit/s

95th percentile per-packet one-way delay: 50.733 ms

Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-09-26 01:18:18

End at: 2018-09-26 01:18:48

Local clock offset: -0.004 ms

Remote clock offset: 0.006 ms

Below is generated by plot.py at 2018-09-26 04:26:59

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.92 Mbit/s

95th percentile per-packet one-way delay: 50.904 ms

Loss rate: 0.00%

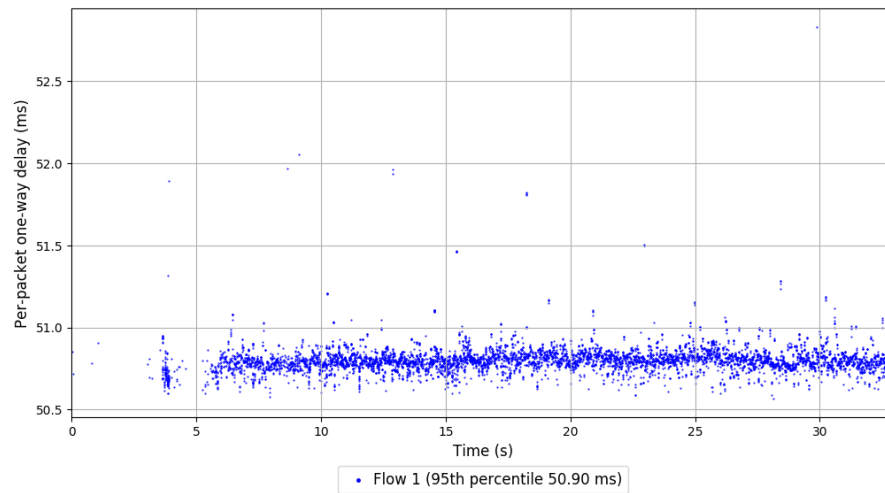
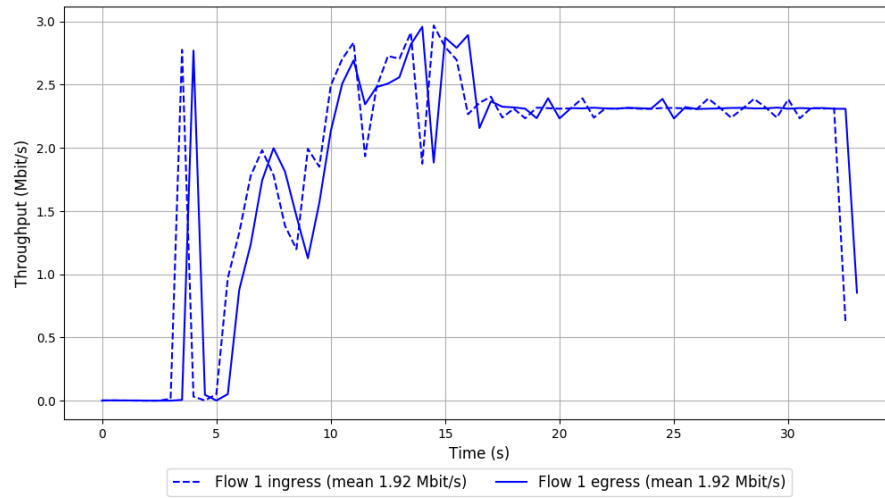
-- Flow 1:

Average throughput: 1.92 Mbit/s

95th percentile per-packet one-way delay: 50.904 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link

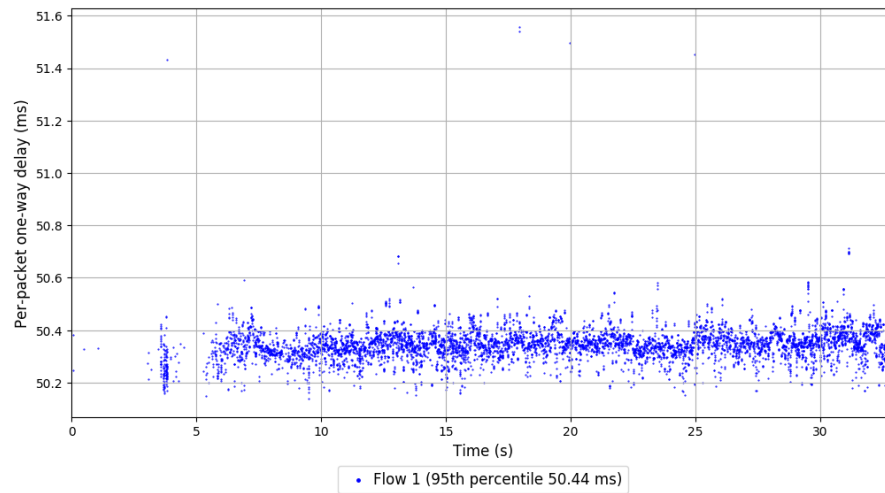
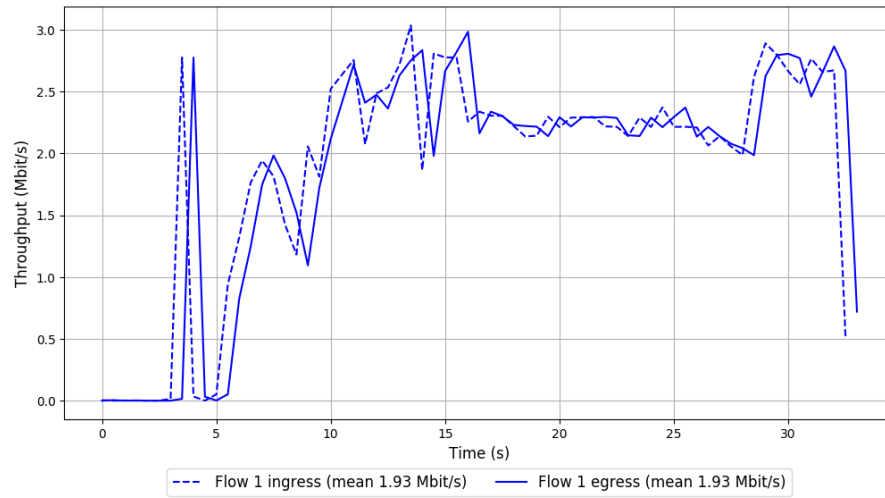


Run 3: Statistics of WebRTC media

Start at: 2018-09-26 01:45:26
End at: 2018-09-26 01:45:56
Local clock offset: -0.108 ms
Remote clock offset: -0.058 ms

Below is generated by plot.py at 2018-09-26 04:26:59
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 50.436 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 50.436 ms
Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

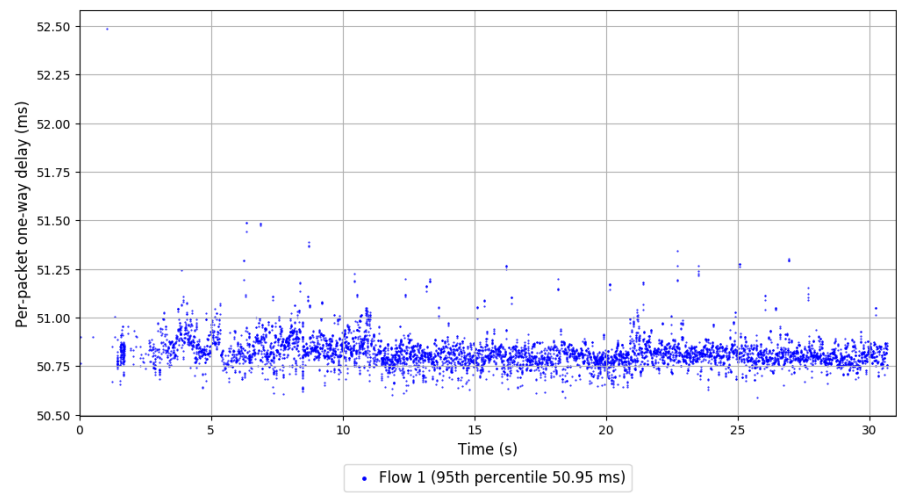
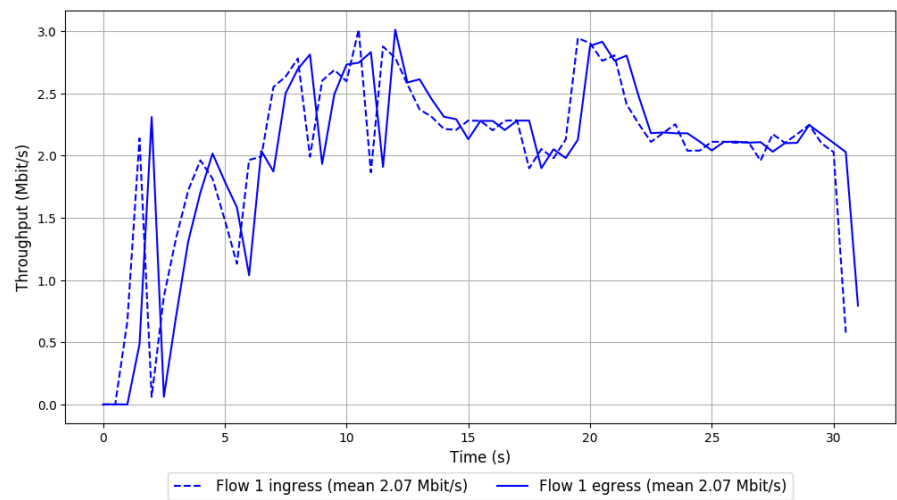


Run 4: Statistics of WebRTC media

Start at: 2018-09-26 02:12:28
End at: 2018-09-26 02:12:58
Local clock offset: -0.036 ms
Remote clock offset: -0.074 ms

Below is generated by plot.py at 2018-09-26 04:26:59
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.07 Mbit/s
95th percentile per-packet one-way delay: 50.954 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.07 Mbit/s
95th percentile per-packet one-way delay: 50.954 ms
Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-09-26 02:39:56
End at: 2018-09-26 02:40:26
Local clock offset: 0.002 ms
Remote clock offset: -0.074 ms

Below is generated by plot.py at 2018-09-26 04:26:59
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.84 Mbit/s
95th percentile per-packet one-way delay: 50.778 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.84 Mbit/s
95th percentile per-packet one-way delay: 50.778 ms
Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

