

Pantheon Report

Generated at 2018-09-08 07:22:55 (UTC).

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

Repeated the test of 18 congestion control schemes 5 times.

Each test lasted for 30 seconds running 1 flow.

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

System info:

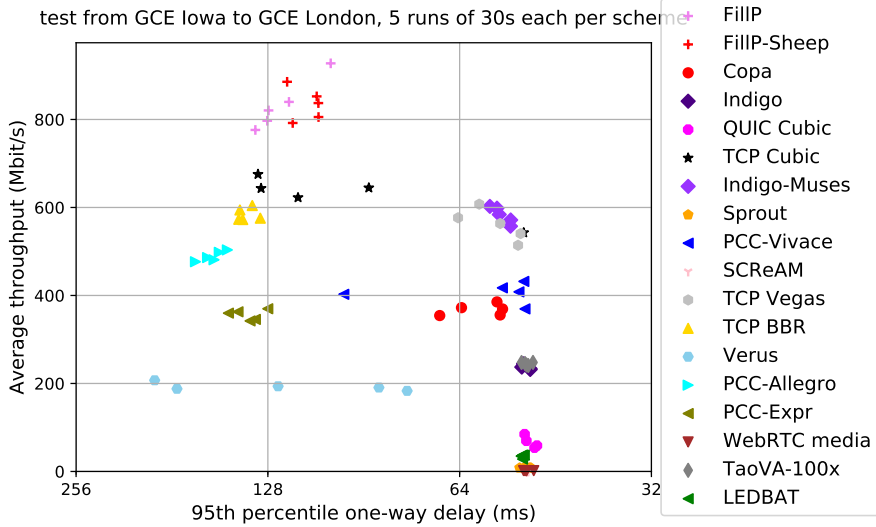
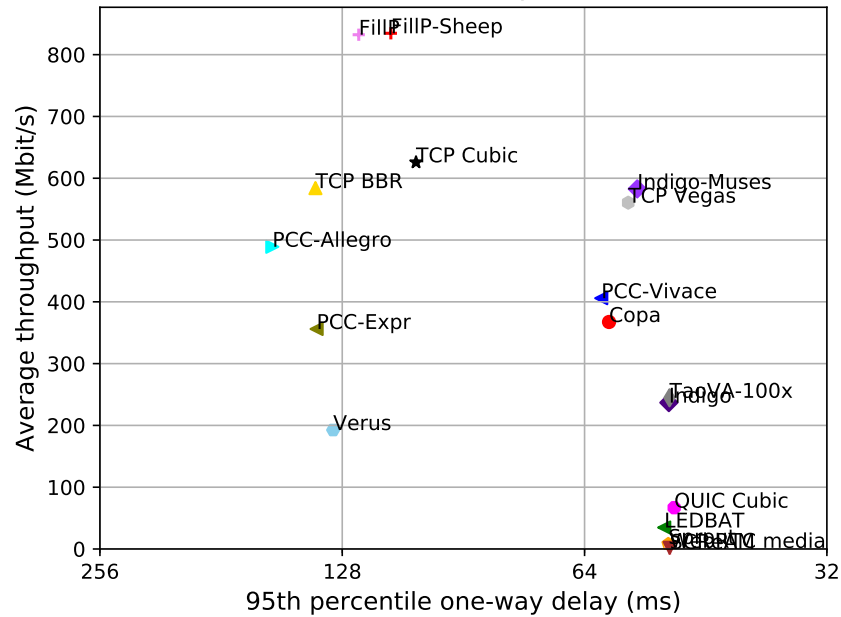
```
Linux 4.15.0-1018-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
net.ipv4.tcp_mem = 190986 254651 381972
```

Git summary:

```
branch: muses @ e0a9b05ad97d268013b7cc9a9c95637b593a1b4c
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf5e58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 7631aea3923a3598767c87765ae5103aca0678d3
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 Iowa 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	584.04	138.20	1.11
Copa	5	367.38	59.67	0.35
TCP Cubic	5	625.75	103.65	0.45
FillP	5	832.25	122.10	4.76
FillP-Sheep	5	834.58	111.38	1.22
Indigo	4	236.86	50.29	0.33
LEDBAT	5	34.75	50.96	0.45
Indigo-Muses	5	582.76	55.05	0.34
PCC-Allegro	5	489.08	156.33	2.20
PCC-Expr	5	356.06	137.75	1.66
QUIC Cubic	4	66.84	49.53	0.52
SCReAM	5	0.22	50.16	0.33
Sprout	5	8.21	50.37	0.41
TaoVA-100x	5	244.69	50.20	0.33
TCP Vegas	5	560.44	56.49	0.28
Verus	5	192.53	131.38	2.86
PCC-Vivace	5	405.89	61.02	0.44
WebRTC media	5	1.89	50.17	0.38

Run 1: Statistics of TCP BBR

Start at: 2018-09-08 03:55:44

End at: 2018-09-08 03:56:14

Local clock offset: -0.419 ms

Remote clock offset: -0.088 ms

Below is generated by plot.py at 2018-09-08 06:04:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 604.44 Mbit/s

95th percentile per-packet one-way delay: 135.421 ms

Loss rate: 0.83%

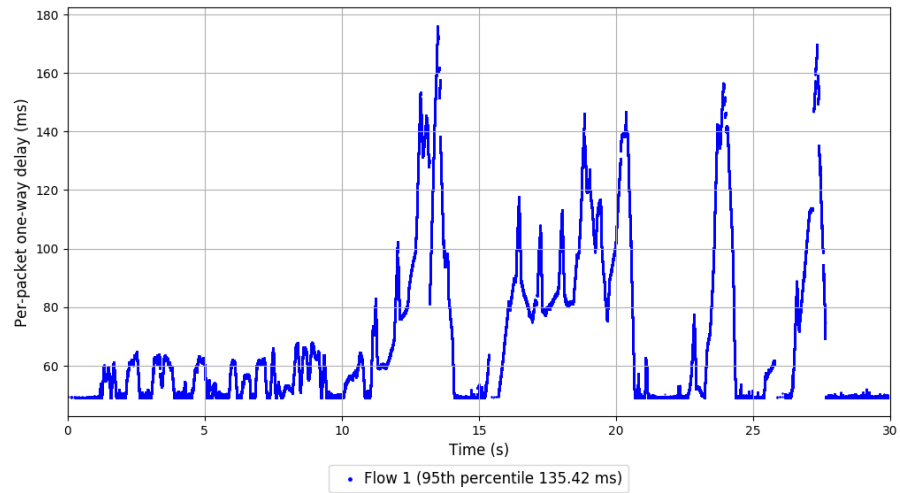
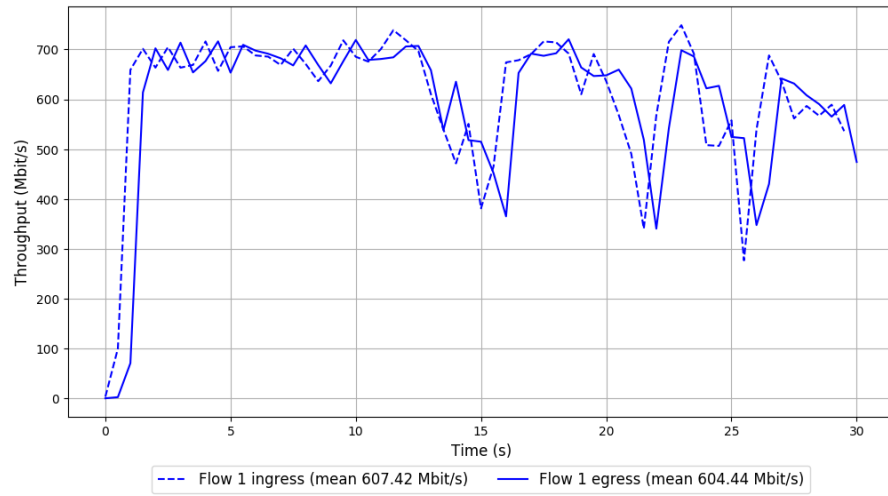
-- Flow 1:

Average throughput: 604.44 Mbit/s

95th percentile per-packet one-way delay: 135.421 ms

Loss rate: 0.83%

Run 1: Report of TCP BBR — Data Link

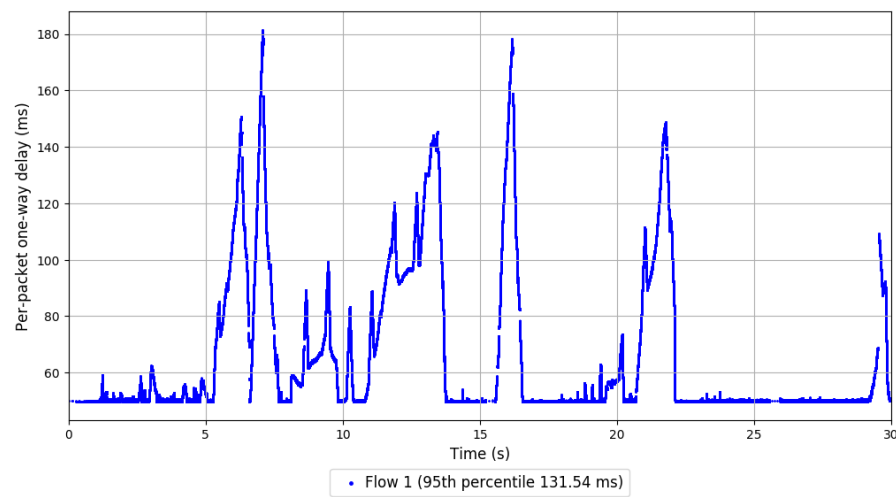
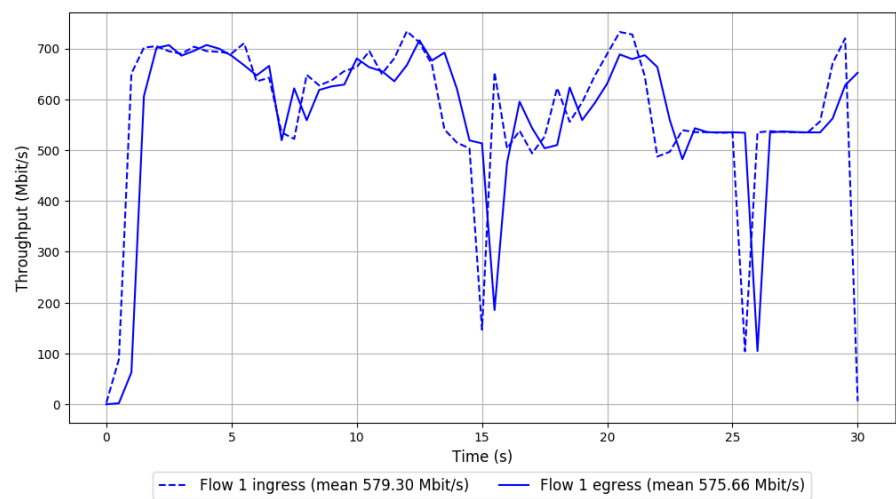


Run 2: Statistics of TCP BBR

Start at: 2018-09-08 04:21:37
End at: 2018-09-08 04:22:07
Local clock offset: -0.129 ms
Remote clock offset: -0.086 ms

Below is generated by plot.py at 2018-09-08 06:04:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 575.66 Mbit/s
95th percentile per-packet one-way delay: 131.545 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 575.66 Mbit/s
95th percentile per-packet one-way delay: 131.545 ms
Loss rate: 0.96%

Run 2: Report of TCP BBR — Data Link

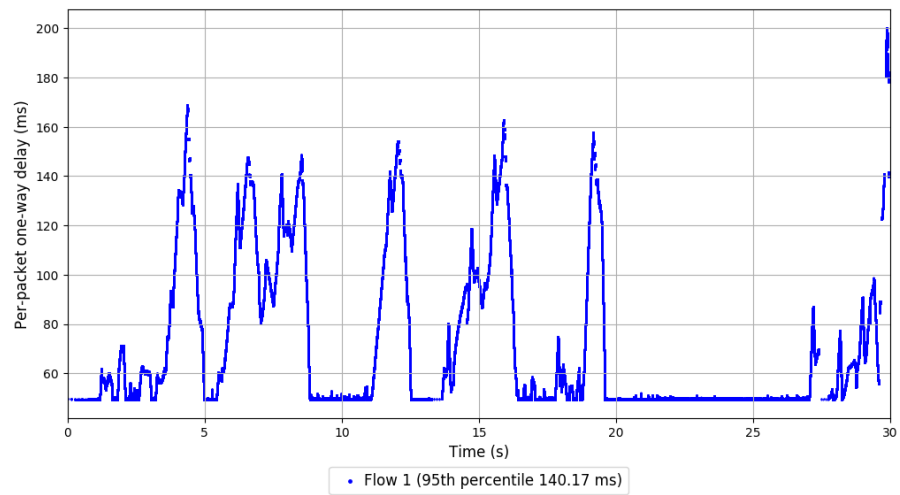
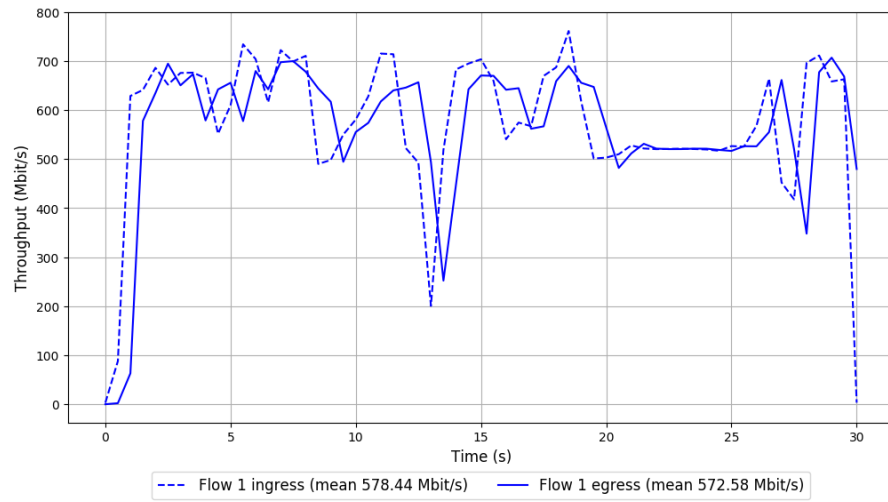


Run 3: Statistics of TCP BBR

Start at: 2018-09-08 04:47:39
End at: 2018-09-08 04:48:09
Local clock offset: -0.036 ms
Remote clock offset: -0.116 ms

Below is generated by plot.py at 2018-09-08 06:04:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 572.58 Mbit/s
95th percentile per-packet one-way delay: 140.173 ms
Loss rate: 1.35%
-- Flow 1:
Average throughput: 572.58 Mbit/s
95th percentile per-packet one-way delay: 140.173 ms
Loss rate: 1.35%

Run 3: Report of TCP BBR — Data Link

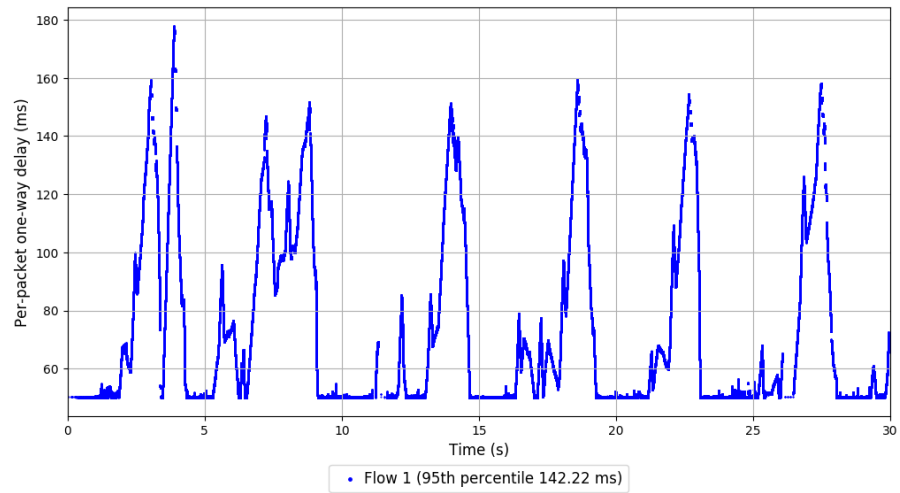
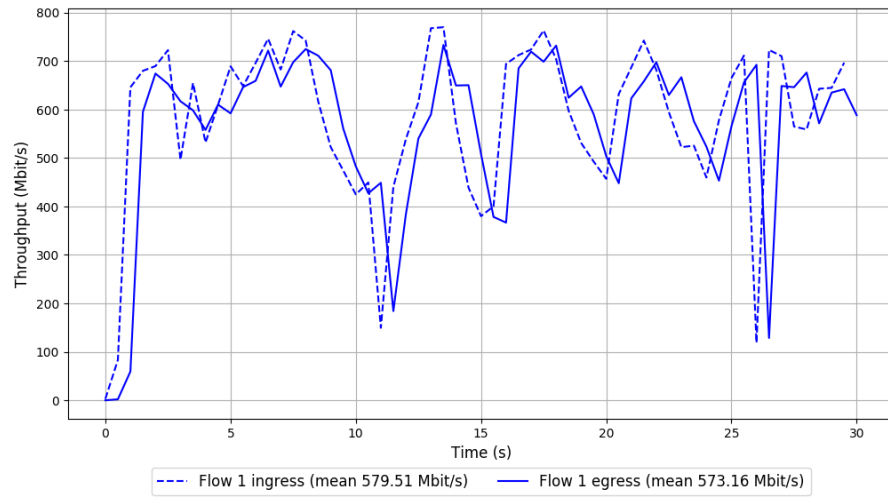


Run 4: Statistics of TCP BBR

Start at: 2018-09-08 05:13:42
End at: 2018-09-08 05:14:12
Local clock offset: -0.033 ms
Remote clock offset: -0.081 ms

Below is generated by plot.py at 2018-09-08 06:04:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 573.16 Mbit/s
95th percentile per-packet one-way delay: 142.220 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 573.16 Mbit/s
95th percentile per-packet one-way delay: 142.220 ms
Loss rate: 1.43%

Run 4: Report of TCP BBR — Data Link

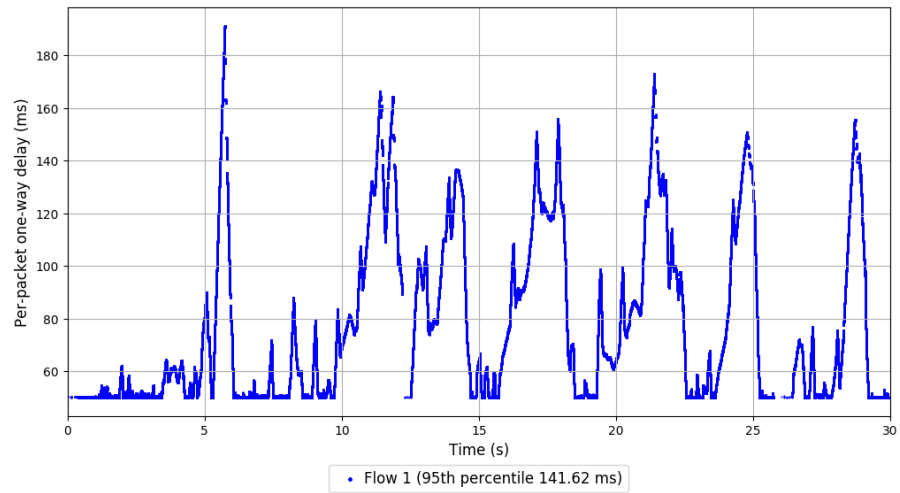
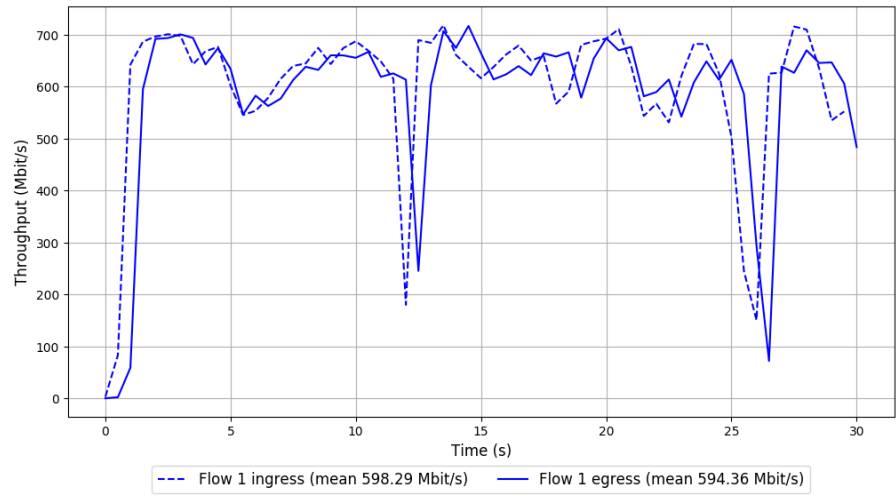


Run 5: Statistics of TCP BBR

Start at: 2018-09-08 05:39:44
End at: 2018-09-08 05:40:14
Local clock offset: -0.067 ms
Remote clock offset: -0.007 ms

Below is generated by plot.py at 2018-09-08 06:04:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 594.36 Mbit/s
95th percentile per-packet one-way delay: 141.620 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 594.36 Mbit/s
95th percentile per-packet one-way delay: 141.620 ms
Loss rate: 0.99%

Run 5: Report of TCP BBR — Data Link

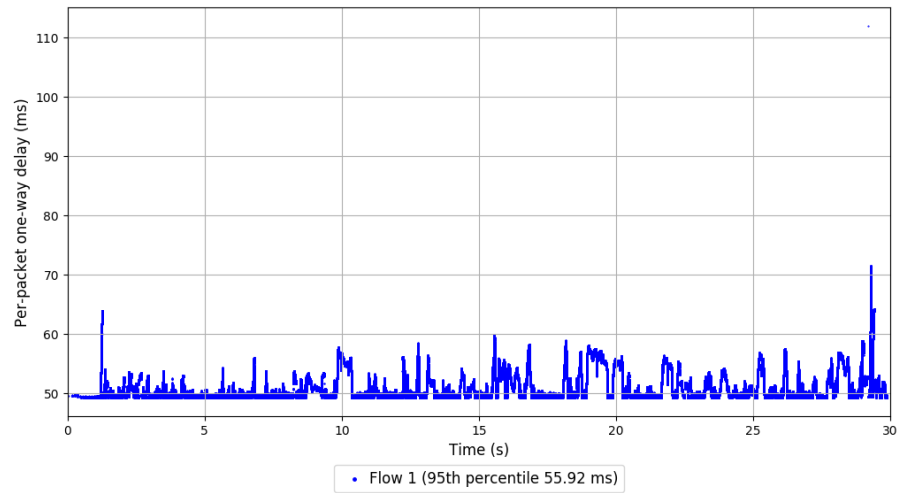
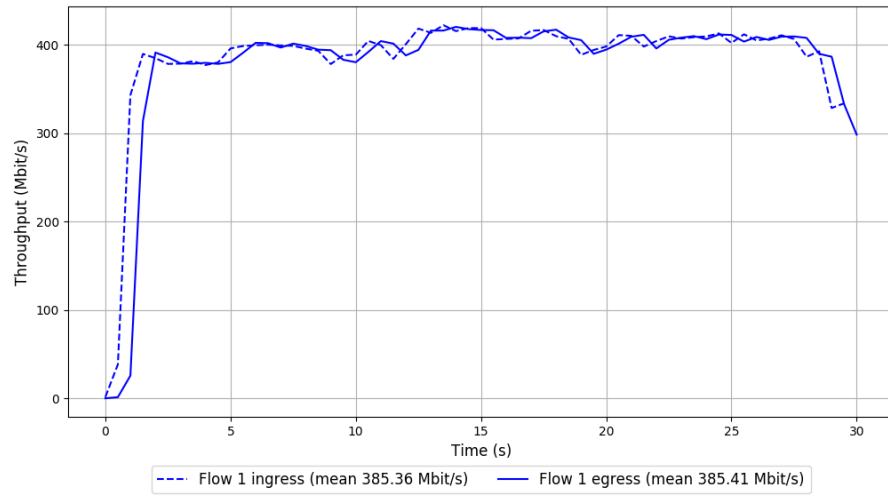


Run 1: Statistics of Copa

Start at: 2018-09-08 03:52:20
End at: 2018-09-08 03:52:50
Local clock offset: -0.137 ms
Remote clock offset: -0.097 ms

Below is generated by plot.py at 2018-09-08 06:06:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 385.41 Mbit/s
95th percentile per-packet one-way delay: 55.922 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 385.41 Mbit/s
95th percentile per-packet one-way delay: 55.922 ms
Loss rate: 0.32%

Run 1: Report of Copa — Data Link

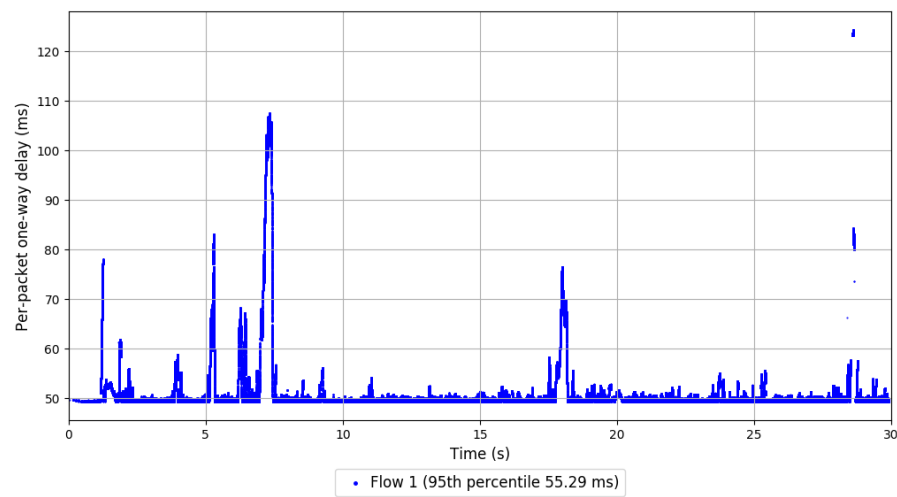
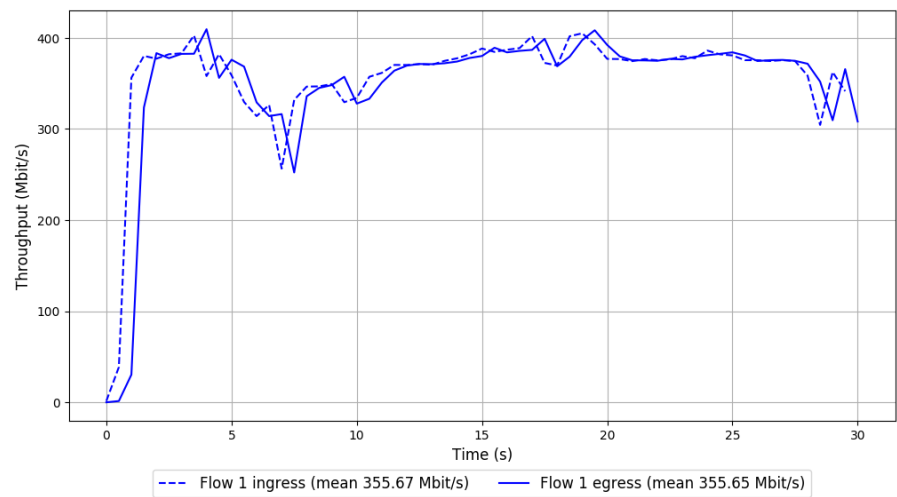


Run 2: Statistics of Copa

Start at: 2018-09-08 04:18:20
End at: 2018-09-08 04:18:50
Local clock offset: -0.062 ms
Remote clock offset: -0.056 ms

Below is generated by plot.py at 2018-09-08 06:06:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 355.65 Mbit/s
95th percentile per-packet one-way delay: 55.286 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 355.65 Mbit/s
95th percentile per-packet one-way delay: 55.286 ms
Loss rate: 0.34%

Run 2: Report of Copa — Data Link

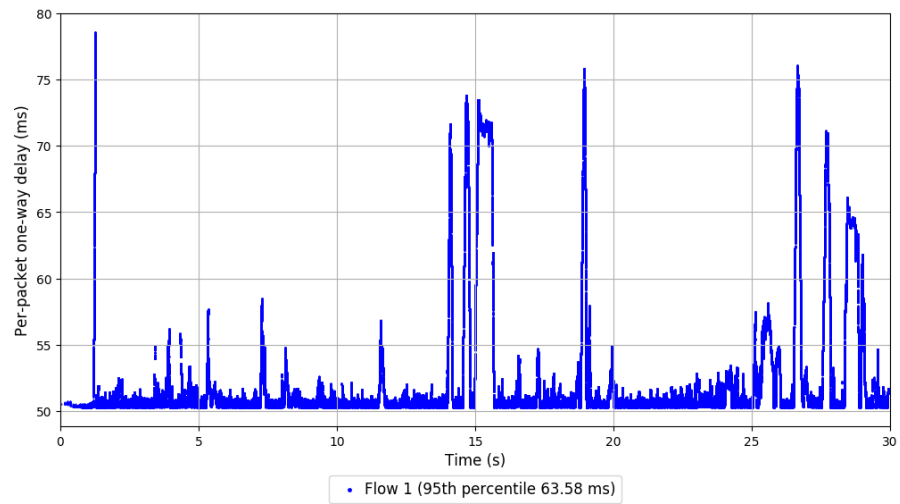
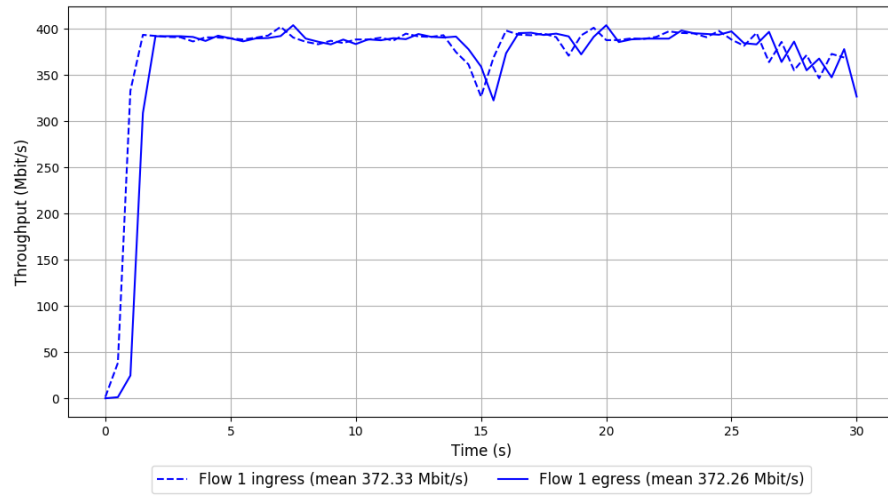


Run 3: Statistics of Copa

Start at: 2018-09-08 04:44:21
End at: 2018-09-08 04:44:51
Local clock offset: -0.041 ms
Remote clock offset: -0.091 ms

Below is generated by plot.py at 2018-09-08 06:06:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 372.26 Mbit/s
95th percentile per-packet one-way delay: 63.575 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 372.26 Mbit/s
95th percentile per-packet one-way delay: 63.575 ms
Loss rate: 0.36%

Run 3: Report of Copa — Data Link

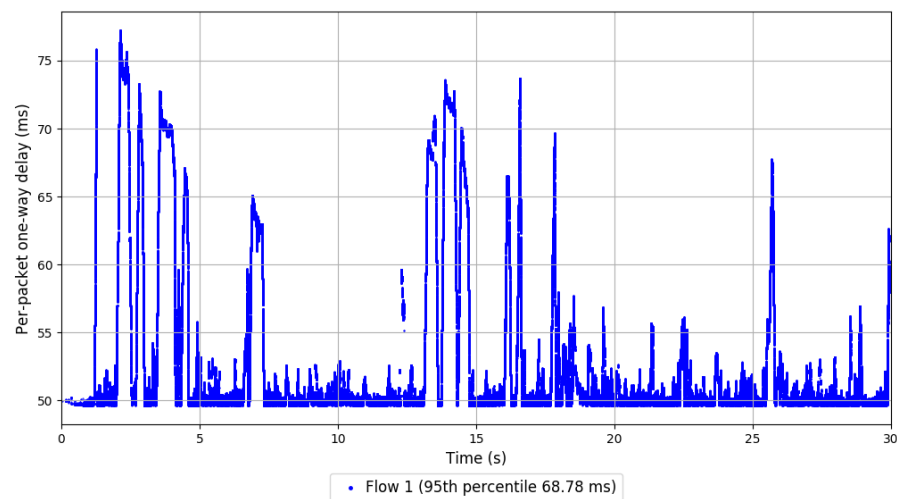
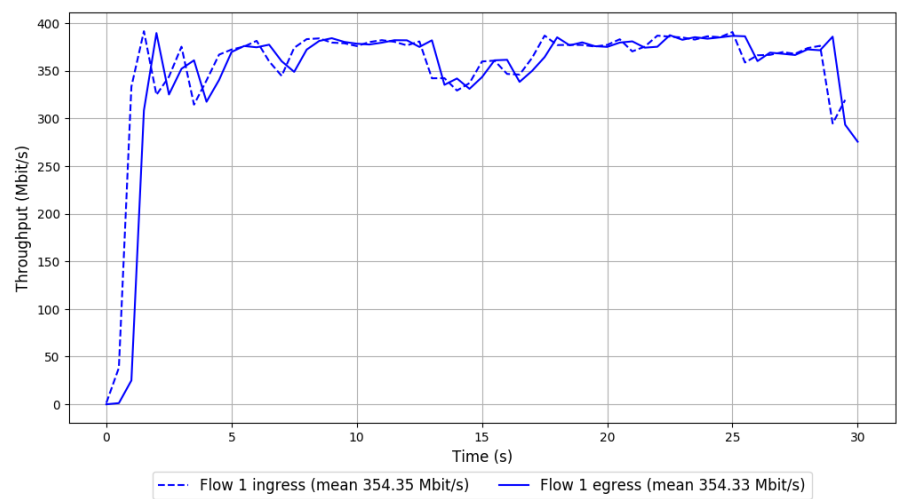


Run 4: Statistics of Copa

Start at: 2018-09-08 05:10:25
End at: 2018-09-08 05:10:55
Local clock offset: -0.408 ms
Remote clock offset: -0.052 ms

Below is generated by plot.py at 2018-09-08 06:14:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 354.33 Mbit/s
95th percentile per-packet one-way delay: 68.780 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 354.33 Mbit/s
95th percentile per-packet one-way delay: 68.780 ms
Loss rate: 0.34%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-09-08 05:36:26

End at: 2018-09-08 05:36:56

Local clock offset: -0.046 ms

Remote clock offset: -0.04 ms

Below is generated by plot.py at 2018-09-08 06:15:01

Datalink statistics

-- Total of 1 flow:

Average throughput: 369.25 Mbit/s

95th percentile per-packet one-way delay: 54.805 ms

Loss rate: 0.37%

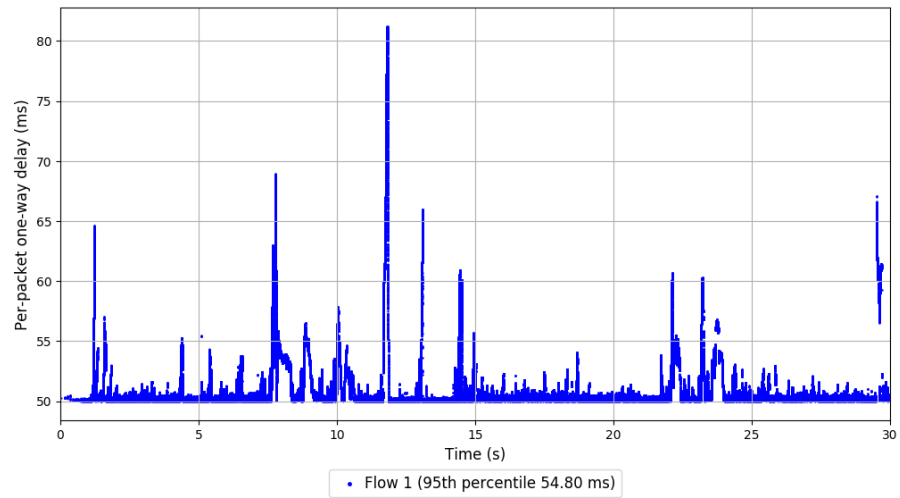
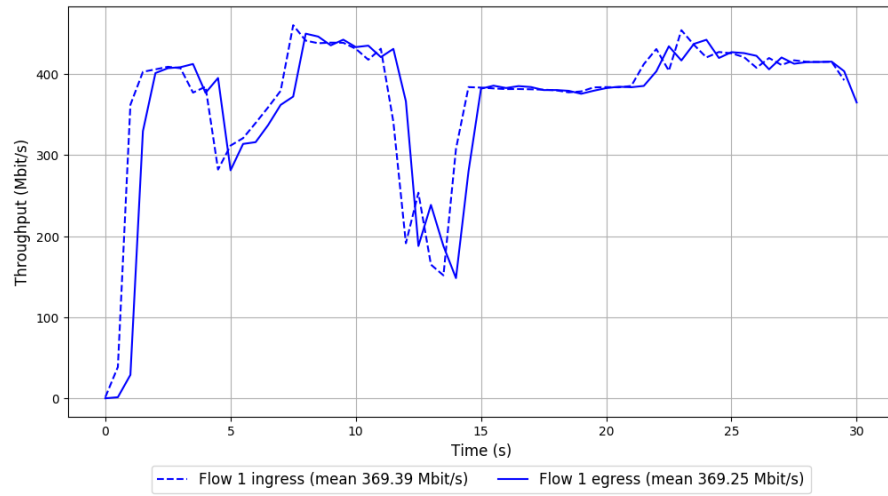
-- Flow 1:

Average throughput: 369.25 Mbit/s

95th percentile per-packet one-way delay: 54.805 ms

Loss rate: 0.37%

Run 5: Report of Copa — Data Link

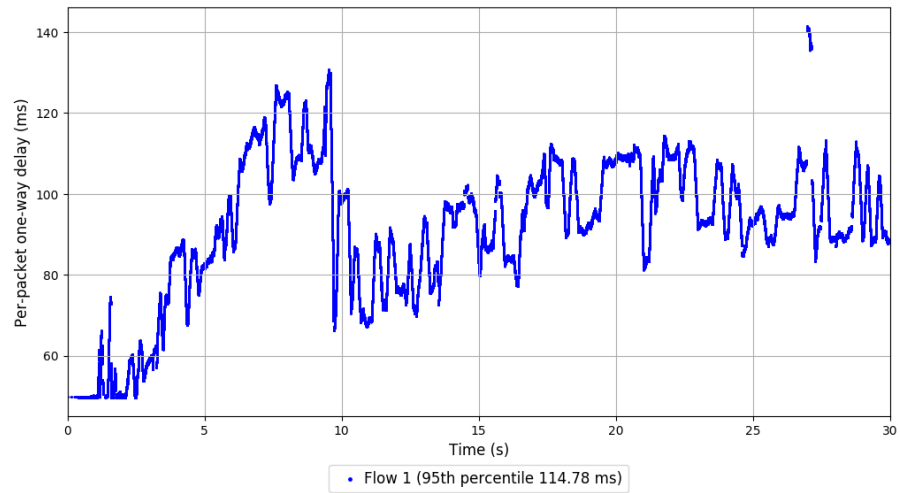
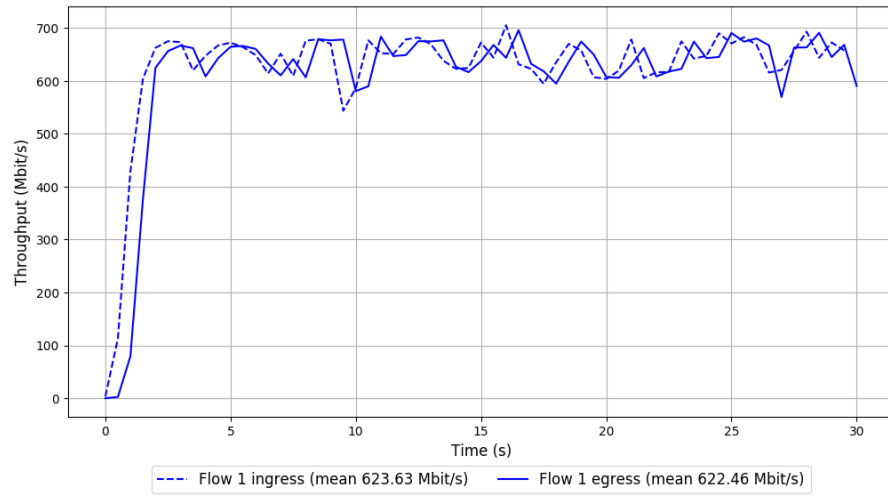


Run 1: Statistics of TCP Cubic

Start at: 2018-09-08 03:43:51
End at: 2018-09-08 03:44:21
Local clock offset: -0.498 ms
Remote clock offset: -0.086 ms

Below is generated by plot.py at 2018-09-08 06:15:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 622.46 Mbit/s
95th percentile per-packet one-way delay: 114.780 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 622.46 Mbit/s
95th percentile per-packet one-way delay: 114.780 ms
Loss rate: 0.52%

Run 1: Report of TCP Cubic — Data Link

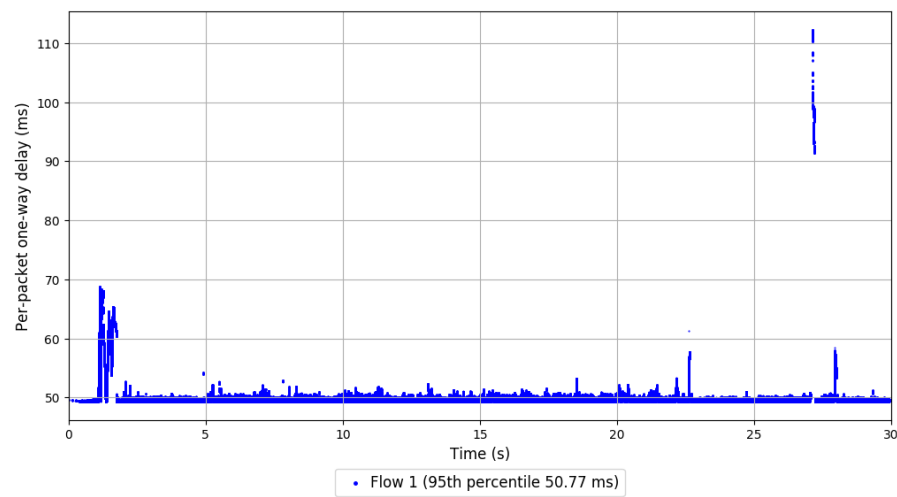
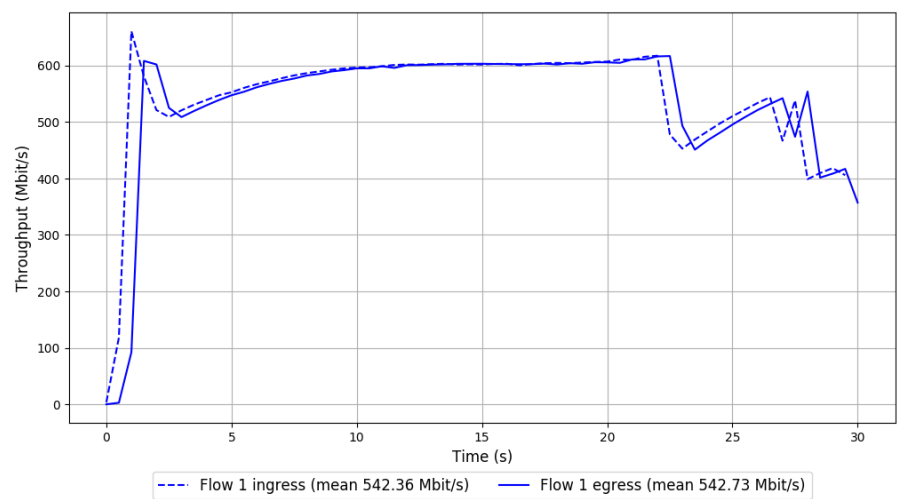


Run 2: Statistics of TCP Cubic

Start at: 2018-09-08 04:09:59
End at: 2018-09-08 04:10:29
Local clock offset: -0.076 ms
Remote clock offset: -0.072 ms

Below is generated by plot.py at 2018-09-08 06:15:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 542.73 Mbit/s
95th percentile per-packet one-way delay: 50.773 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 542.73 Mbit/s
95th percentile per-packet one-way delay: 50.773 ms
Loss rate: 0.26%

Run 2: Report of TCP Cubic — Data Link

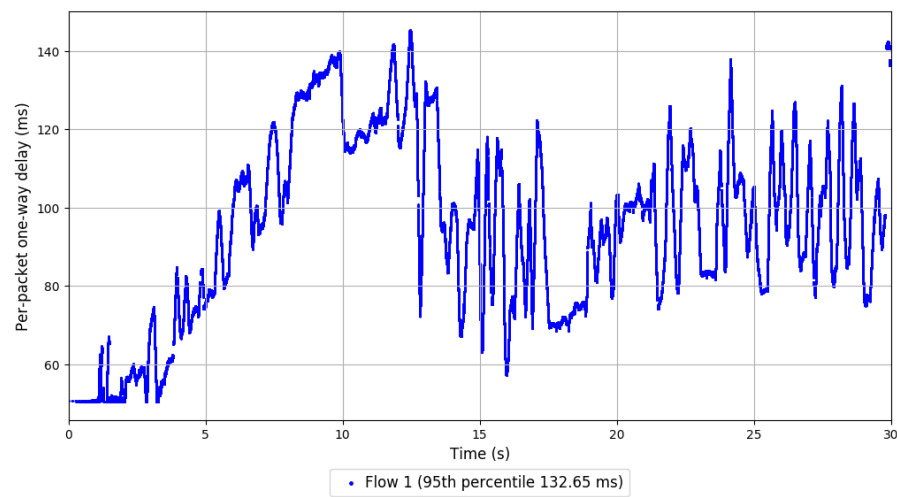
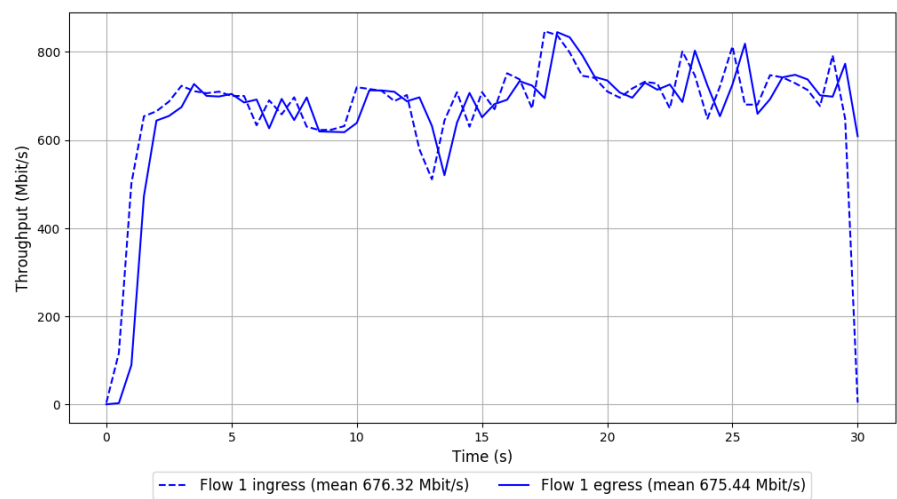


Run 3: Statistics of TCP Cubic

Start at: 2018-09-08 04:35:52
End at: 2018-09-08 04:36:22
Local clock offset: -0.055 ms
Remote clock offset: -0.092 ms

Below is generated by plot.py at 2018-09-08 06:15:10
Datalink statistics
-- Total of 1 flow:
Average throughput: 675.44 Mbit/s
95th percentile per-packet one-way delay: 132.646 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 675.44 Mbit/s
95th percentile per-packet one-way delay: 132.646 ms
Loss rate: 0.47%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-09-08 05:01:51

End at: 2018-09-08 05:02:21

Local clock offset: -0.047 ms

Remote clock offset: -0.07 ms

Below is generated by plot.py at 2018-09-08 06:15:36

Datalink statistics

-- Total of 1 flow:

Average throughput: 643.43 Mbit/s

95th percentile per-packet one-way delay: 131.184 ms

Loss rate: 0.53%

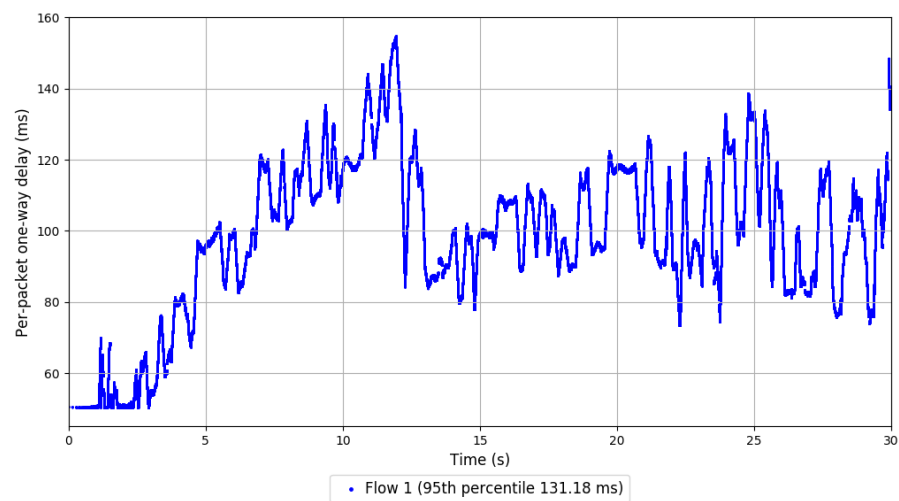
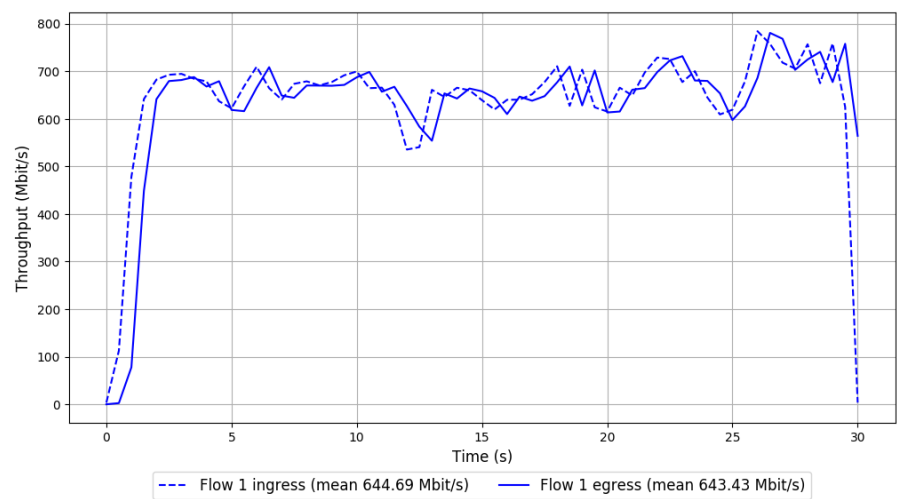
-- Flow 1:

Average throughput: 643.43 Mbit/s

95th percentile per-packet one-way delay: 131.184 ms

Loss rate: 0.53%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-09-08 05:27:58

End at: 2018-09-08 05:28:28

Local clock offset: -0.073 ms

Remote clock offset: -0.04 ms

Below is generated by plot.py at 2018-09-08 06:16:06

Datalink statistics

-- Total of 1 flow:

Average throughput: 644.67 Mbit/s

95th percentile per-packet one-way delay: 88.865 ms

Loss rate: 0.47%

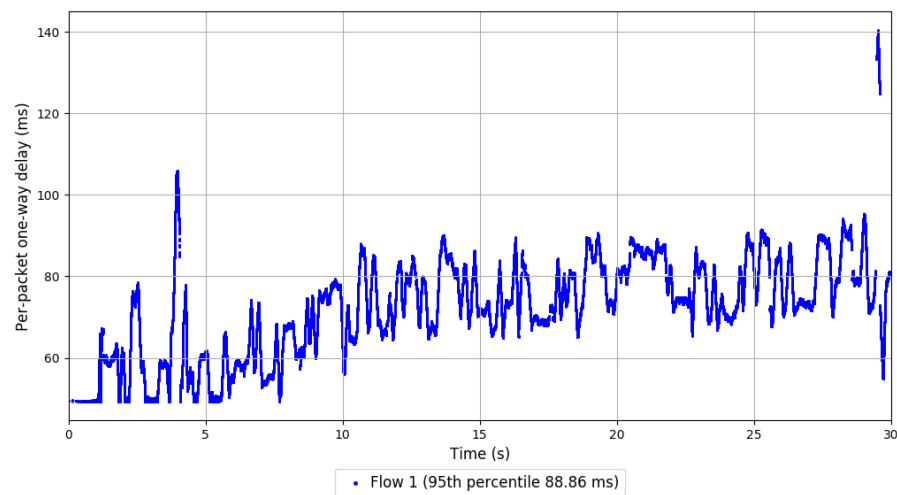
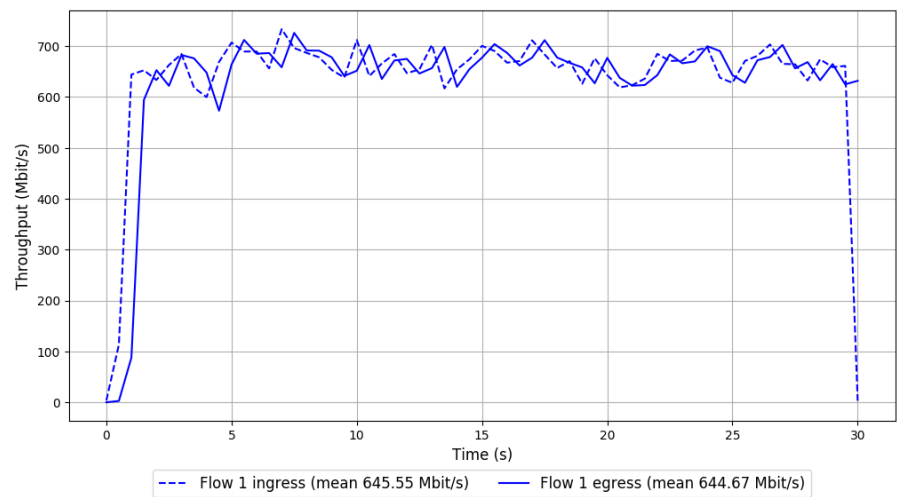
-- Flow 1:

Average throughput: 644.67 Mbit/s

95th percentile per-packet one-way delay: 88.865 ms

Loss rate: 0.47%

Run 5: Report of TCP Cubic — Data Link

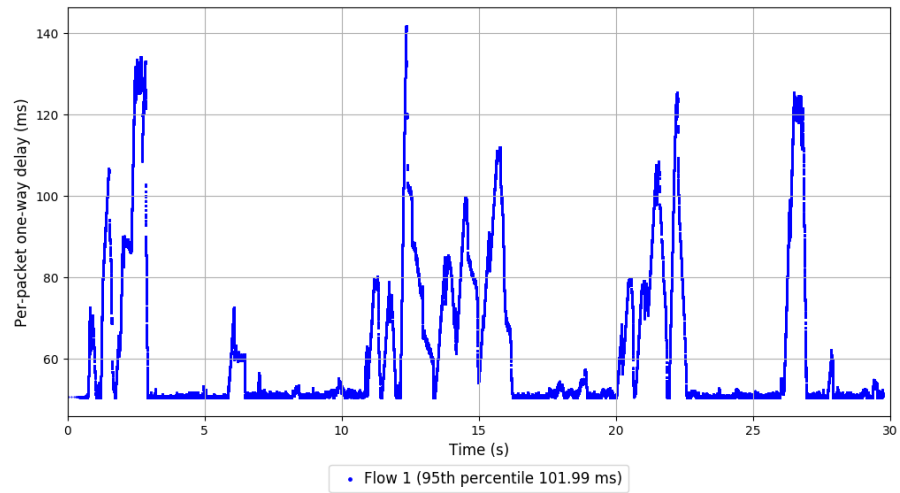
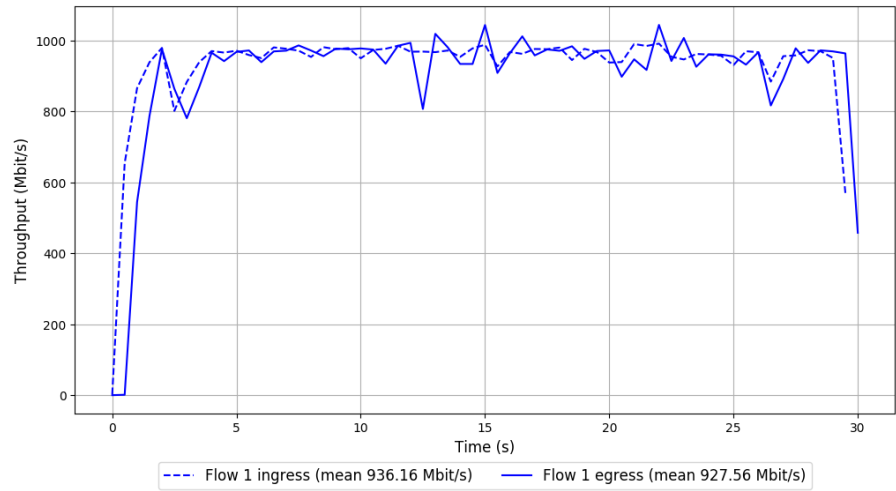


Run 1: Statistics of FillP

Start at: 2018-09-08 03:54:01
End at: 2018-09-08 03:54:31
Local clock offset: -0.111 ms
Remote clock offset: -0.119 ms

Below is generated by plot.py at 2018-09-08 06:23:44
Datalink statistics
-- Total of 1 flow:
Average throughput: 927.56 Mbit/s
95th percentile per-packet one-way delay: 101.993 ms
Loss rate: 1.26%
-- Flow 1:
Average throughput: 927.56 Mbit/s
95th percentile per-packet one-way delay: 101.993 ms
Loss rate: 1.26%

Run 1: Report of FillP — Data Link

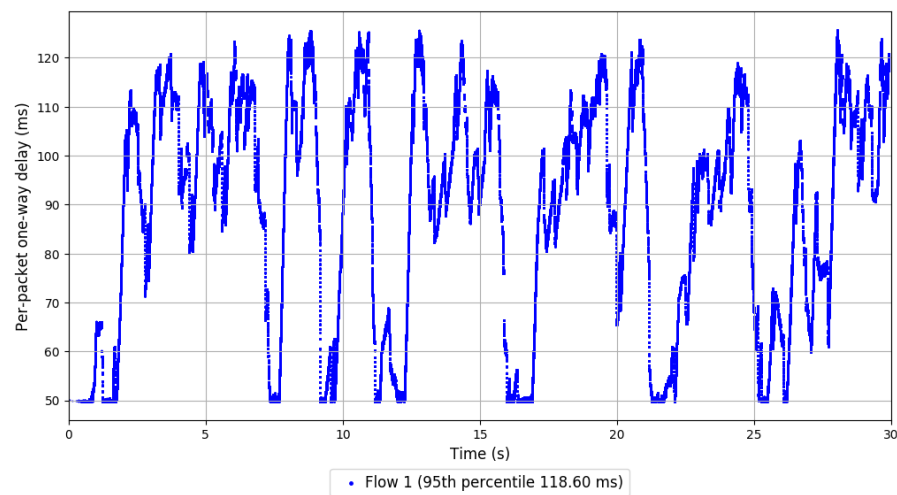
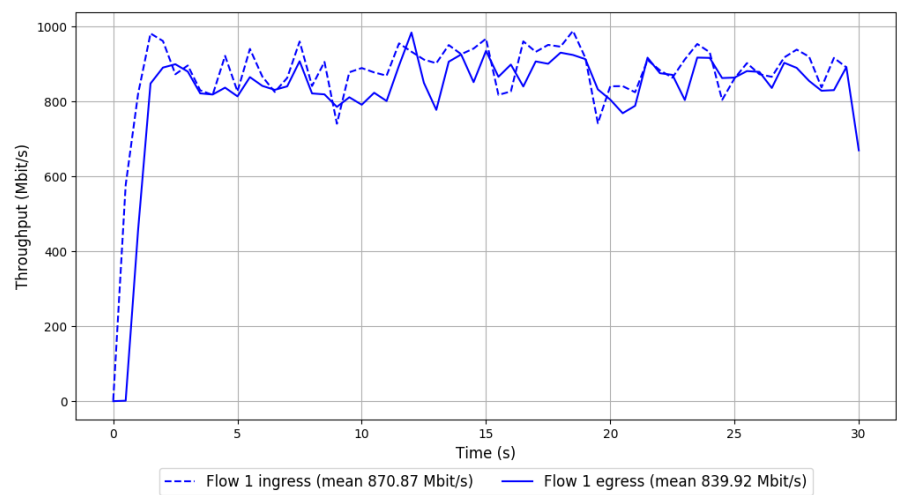


Run 2: Statistics of FillP

Start at: 2018-09-08 04:19:58
End at: 2018-09-08 04:20:28
Local clock offset: -0.09 ms
Remote clock offset: -0.102 ms

Below is generated by plot.py at 2018-09-08 06:30:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 839.92 Mbit/s
95th percentile per-packet one-way delay: 118.596 ms
Loss rate: 3.88%
-- Flow 1:
Average throughput: 839.92 Mbit/s
95th percentile per-packet one-way delay: 118.596 ms
Loss rate: 3.88%

Run 2: Report of FillP — Data Link

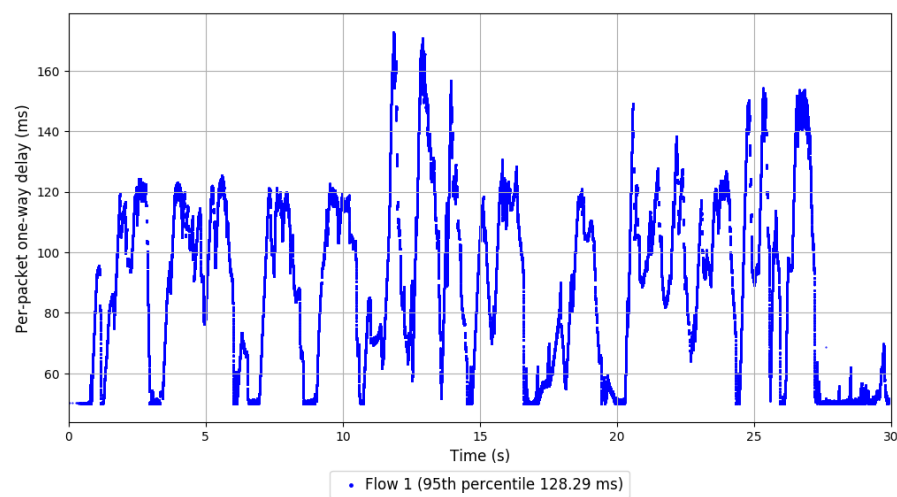
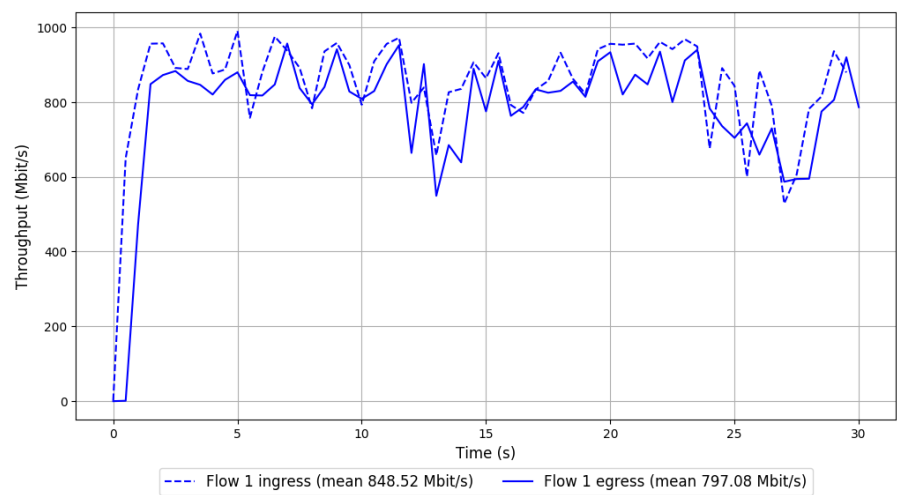


Run 3: Statistics of FillP

Start at: 2018-09-08 04:46:01
End at: 2018-09-08 04:46:31
Local clock offset: -0.366 ms
Remote clock offset: -0.123 ms

Below is generated by plot.py at 2018-09-08 06:30:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 797.08 Mbit/s
95th percentile per-packet one-way delay: 128.291 ms
Loss rate: 6.38%
-- Flow 1:
Average throughput: 797.08 Mbit/s
95th percentile per-packet one-way delay: 128.291 ms
Loss rate: 6.38%

Run 3: Report of FillP — Data Link

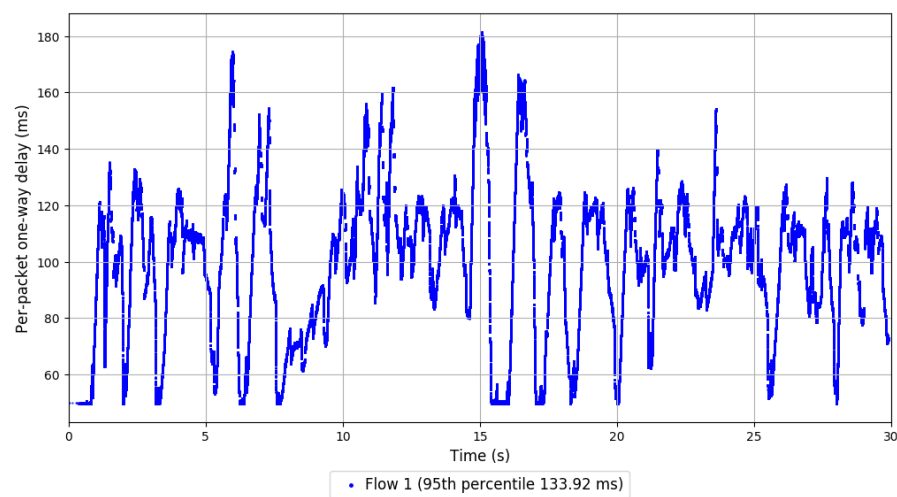
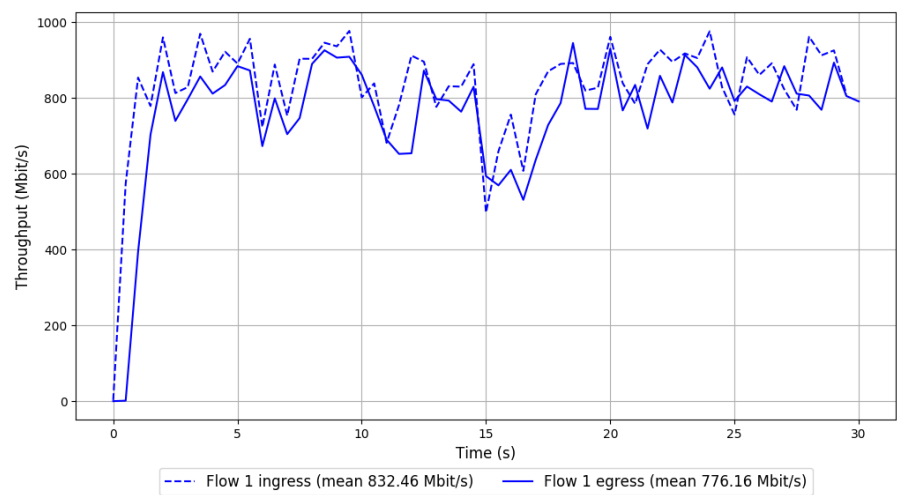


Run 4: Statistics of FillP

Start at: 2018-09-08 05:12:04
End at: 2018-09-08 05:12:34
Local clock offset: 0.303 ms
Remote clock offset: -0.081 ms

Below is generated by plot.py at 2018-09-08 06:30:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 776.16 Mbit/s
95th percentile per-packet one-way delay: 133.922 ms
Loss rate: 7.07%
-- Flow 1:
Average throughput: 776.16 Mbit/s
95th percentile per-packet one-way delay: 133.922 ms
Loss rate: 7.07%

Run 4: Report of FillP — Data Link

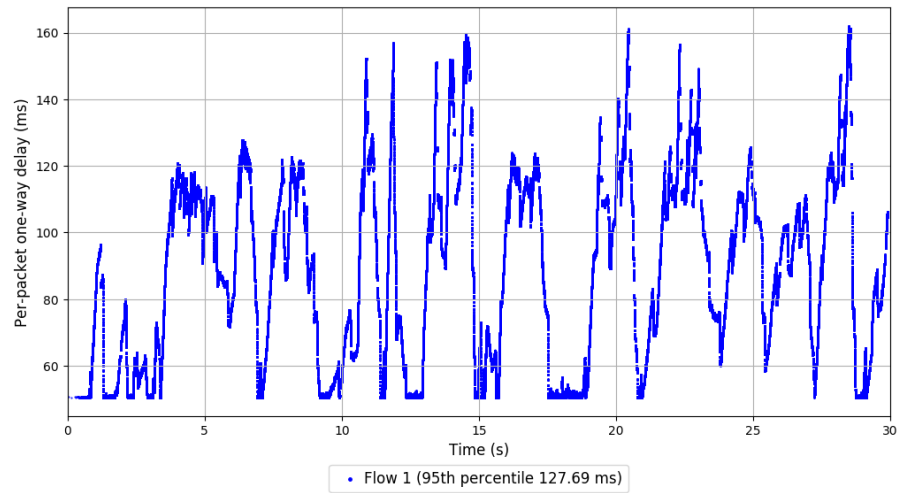
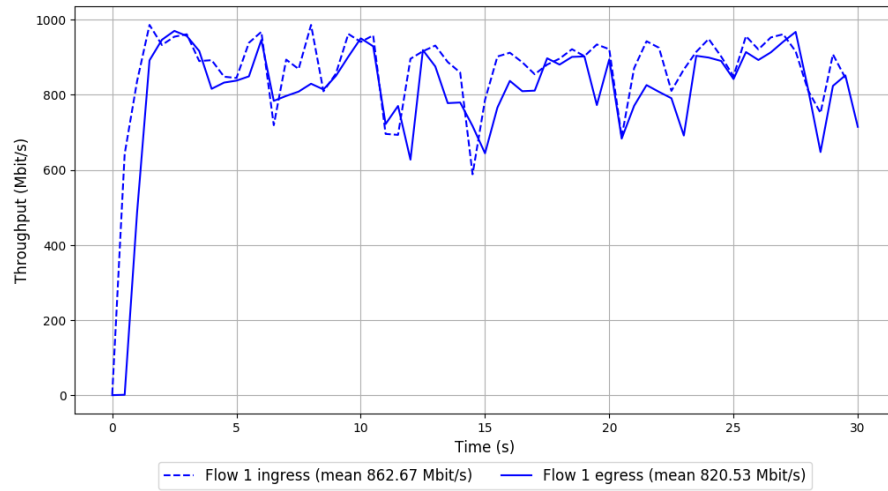


Run 5: Statistics of FillP

Start at: 2018-09-08 05:38:06
End at: 2018-09-08 05:38:36
Local clock offset: -0.078 ms
Remote clock offset: -0.023 ms

Below is generated by plot.py at 2018-09-08 06:31:47
Datalink statistics
-- Total of 1 flow:
Average throughput: 820.53 Mbit/s
95th percentile per-packet one-way delay: 127.686 ms
Loss rate: 5.21%
-- Flow 1:
Average throughput: 820.53 Mbit/s
95th percentile per-packet one-way delay: 127.686 ms
Loss rate: 5.21%

Run 5: Report of FillP — Data Link

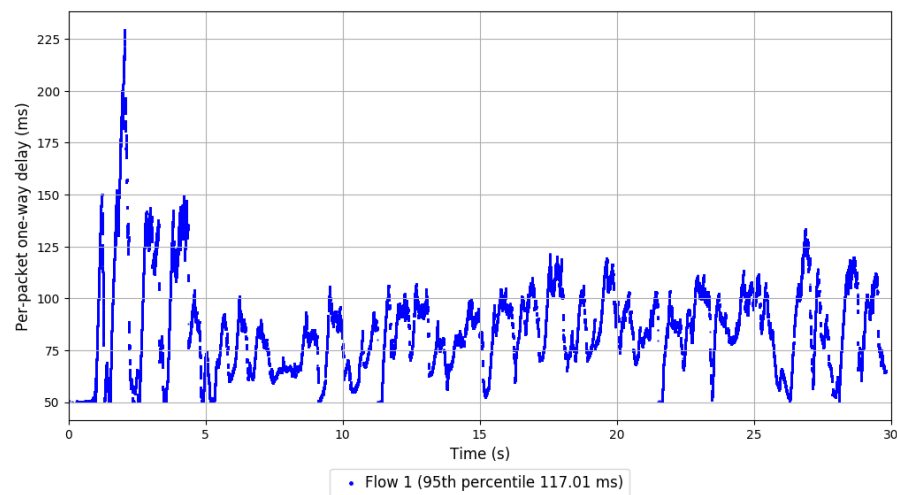
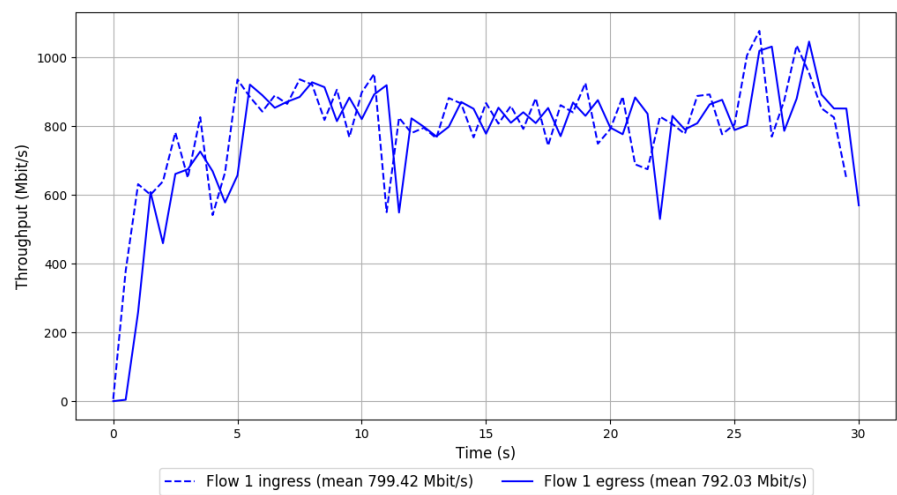


Run 1: Statistics of FillP-Sheep

Start at: 2018-09-08 03:48:11
End at: 2018-09-08 03:48:41
Local clock offset: -0.534 ms
Remote clock offset: -0.099 ms

Below is generated by plot.py at 2018-09-08 06:31:47
Datalink statistics
-- Total of 1 flow:
Average throughput: 792.03 Mbit/s
95th percentile per-packet one-way delay: 117.008 ms
Loss rate: 1.26%
-- Flow 1:
Average throughput: 792.03 Mbit/s
95th percentile per-packet one-way delay: 117.008 ms
Loss rate: 1.26%

Run 1: Report of FillP-Sheep — Data Link

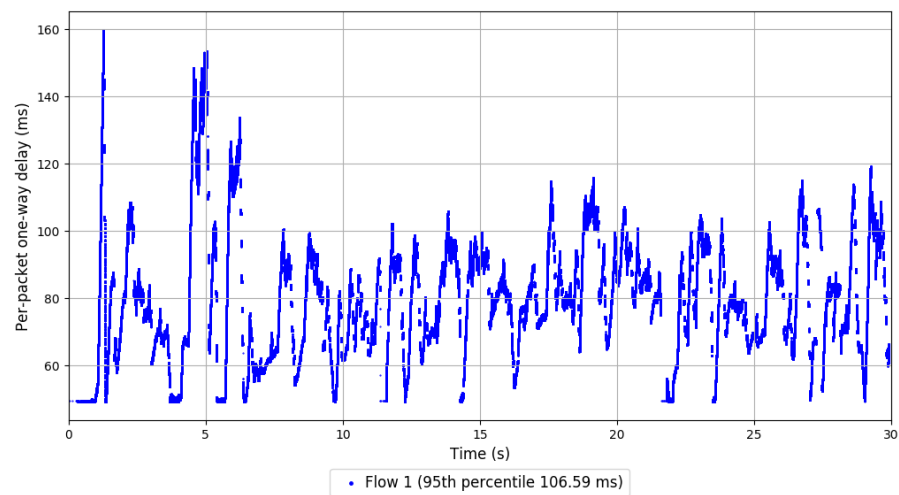
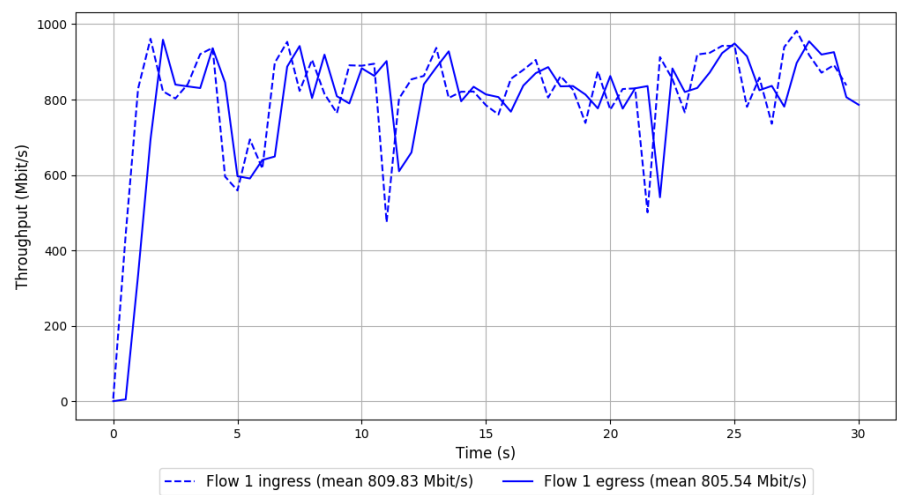


Run 2: Statistics of FillP-Sheep

Start at: 2018-09-08 04:14:12
End at: 2018-09-08 04:14:42
Local clock offset: -0.46 ms
Remote clock offset: -0.082 ms

Below is generated by plot.py at 2018-09-08 06:32:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 805.54 Mbit/s
95th percentile per-packet one-way delay: 106.588 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 805.54 Mbit/s
95th percentile per-packet one-way delay: 106.588 ms
Loss rate: 0.86%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2018-09-08 04:40:14

End at: 2018-09-08 04:40:44

Local clock offset: 0.326 ms

Remote clock offset: -0.1 ms

Below is generated by plot.py at 2018-09-08 06:33:13

Datalink statistics

-- Total of 1 flow:

Average throughput: 837.25 Mbit/s

95th percentile per-packet one-way delay: 106.645 ms

Loss rate: 0.95%

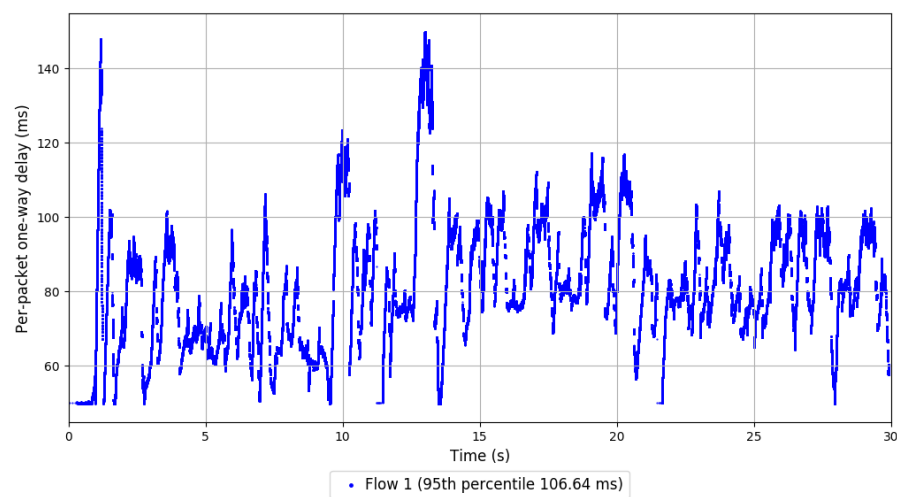
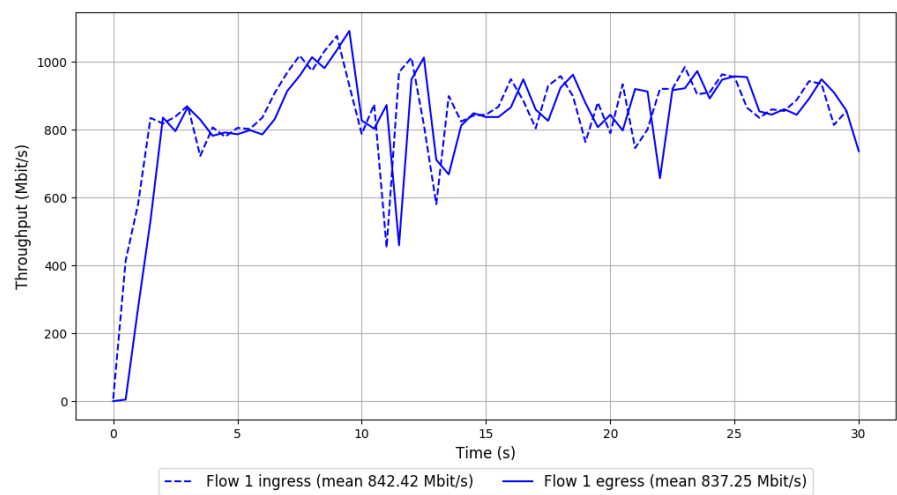
-- Flow 1:

Average throughput: 837.25 Mbit/s

95th percentile per-packet one-way delay: 106.645 ms

Loss rate: 0.95%

Run 3: Report of FillP-Sheep — Data Link

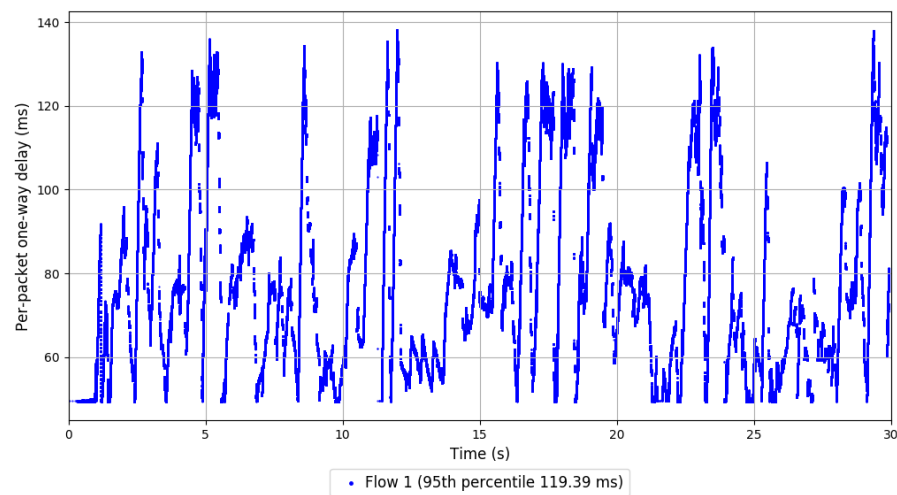
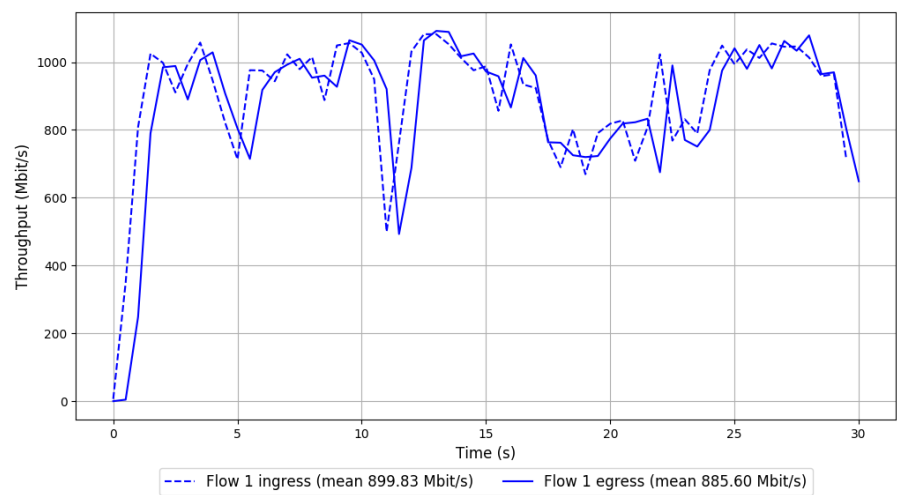


Run 4: Statistics of FillP-Sheep

Start at: 2018-09-08 05:06:13
End at: 2018-09-08 05:06:43
Local clock offset: -0.415 ms
Remote clock offset: -0.091 ms

Below is generated by plot.py at 2018-09-08 06:44:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 885.60 Mbit/s
95th percentile per-packet one-way delay: 119.395 ms
Loss rate: 1.91%
-- Flow 1:
Average throughput: 885.60 Mbit/s
95th percentile per-packet one-way delay: 119.395 ms
Loss rate: 1.91%

Run 4: Report of FillP-Sheep — Data Link



Run 5: Statistics of FillP-Sheep

Start at: 2018-09-08 05:32:18

End at: 2018-09-08 05:32:48

Local clock offset: 0.274 ms

Remote clock offset: -0.094 ms

Below is generated by plot.py at 2018-09-08 06:47:22

Datalink statistics

-- Total of 1 flow:

Average throughput: 852.46 Mbit/s

95th percentile per-packet one-way delay: 107.287 ms

Loss rate: 1.14%

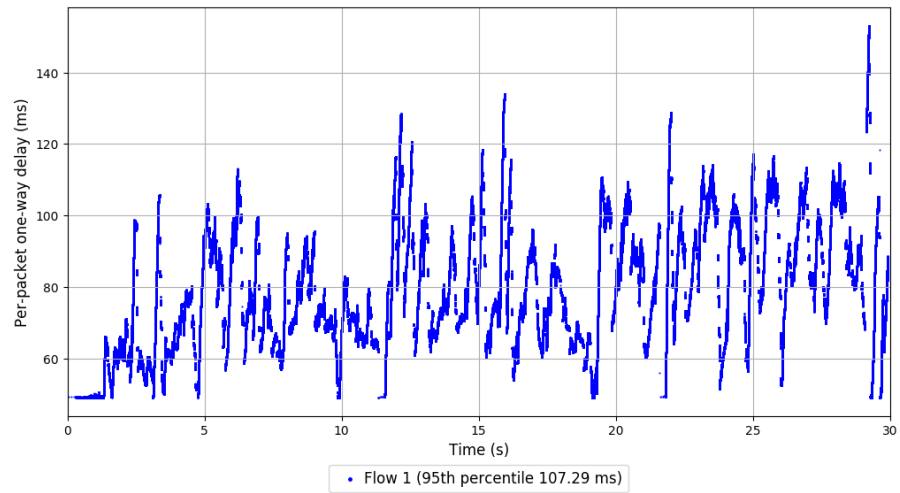
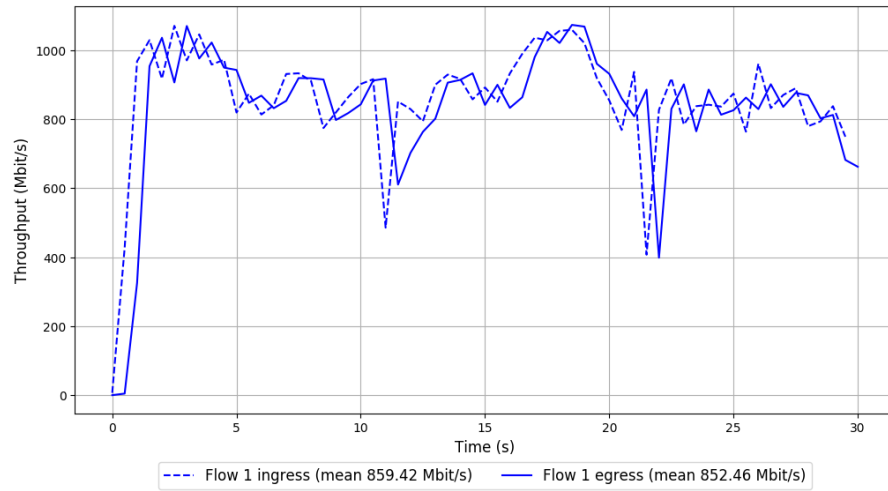
-- Flow 1:

Average throughput: 852.46 Mbit/s

95th percentile per-packet one-way delay: 107.287 ms

Loss rate: 1.14%

Run 5: Report of FillP-Sheep — Data Link



Run 1: Statistics of Indigo

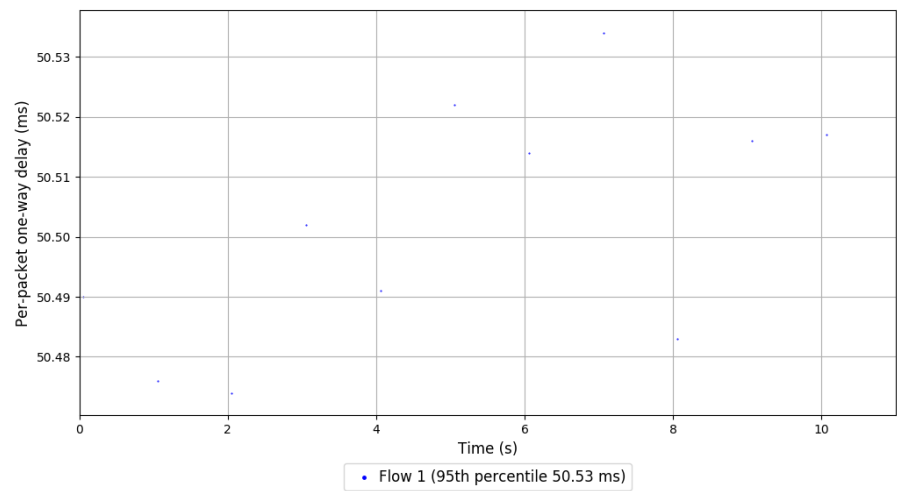
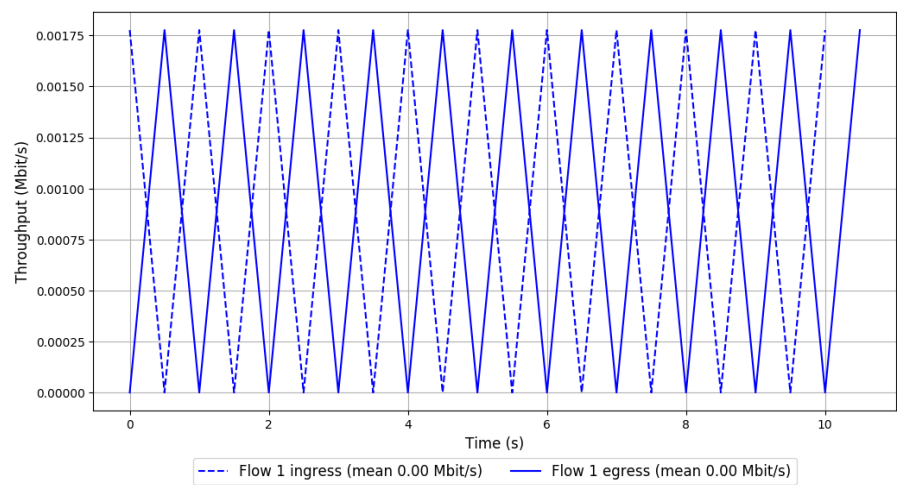
Start at: 2018-09-08 03:37:20

End at: 2018-09-08 03:37:50

Local clock offset: -0.494 ms

Remote clock offset: -0.121 ms

Run 1: Report of Indigo — Data Link

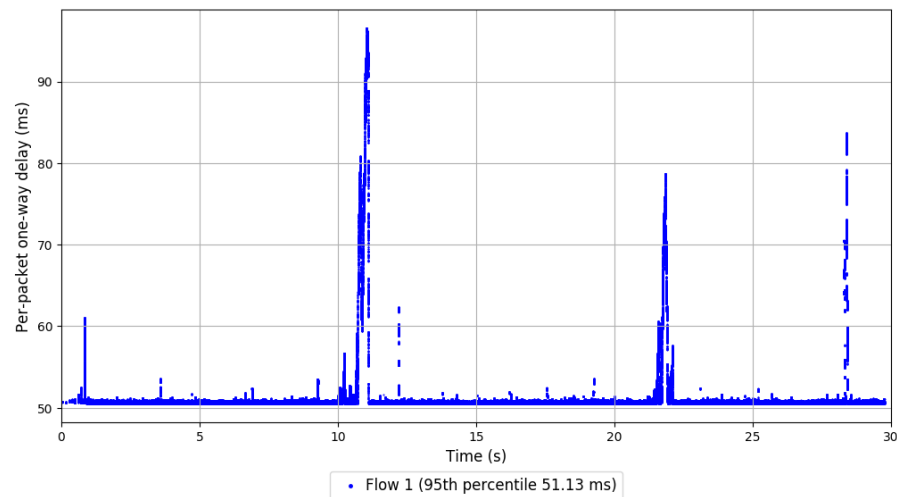
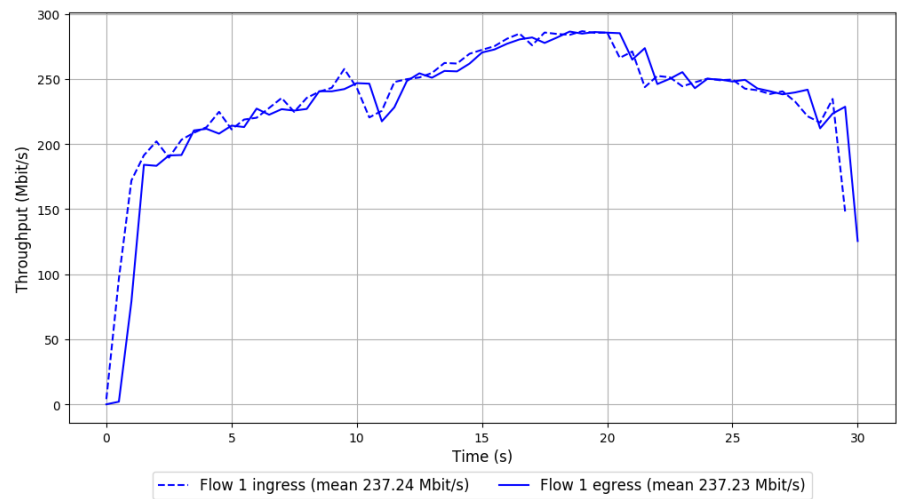


Run 2: Statistics of Indigo

Start at: 2018-09-08 04:03:03
End at: 2018-09-08 04:03:33
Local clock offset: -0.097 ms
Remote clock offset: -0.097 ms

Below is generated by plot.py at 2018-09-08 06:47:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 237.23 Mbit/s
95th percentile per-packet one-way delay: 51.127 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 237.23 Mbit/s
95th percentile per-packet one-way delay: 51.127 ms
Loss rate: 0.34%

Run 2: Report of Indigo — Data Link

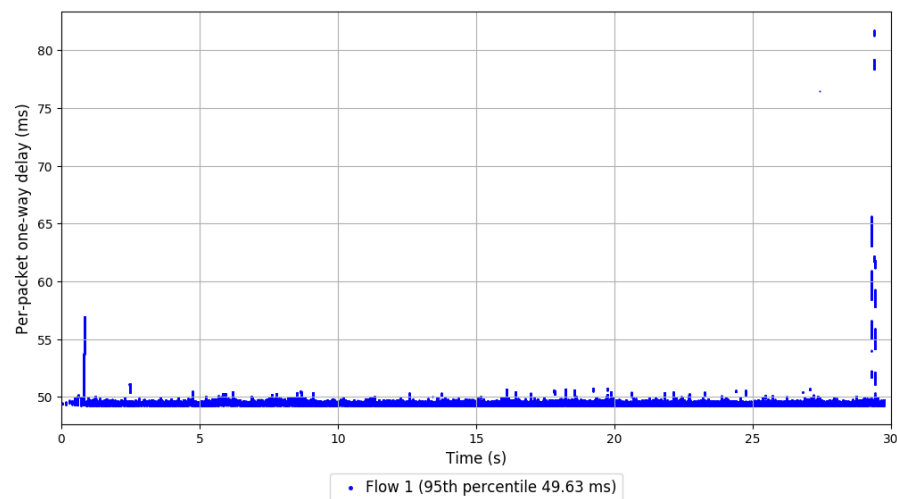
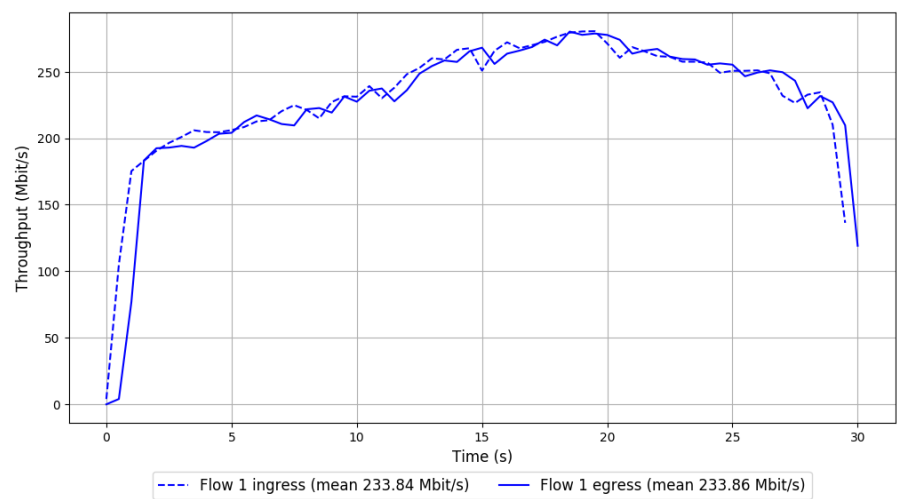


Run 3: Statistics of Indigo

Start at: 2018-09-08 04:28:59
End at: 2018-09-08 04:29:29
Local clock offset: -0.056 ms
Remote clock offset: -0.088 ms

Below is generated by plot.py at 2018-09-08 06:47:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 233.86 Mbit/s
95th percentile per-packet one-way delay: 49.631 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 233.86 Mbit/s
95th percentile per-packet one-way delay: 49.631 ms
Loss rate: 0.33%

Run 3: Report of Indigo — Data Link

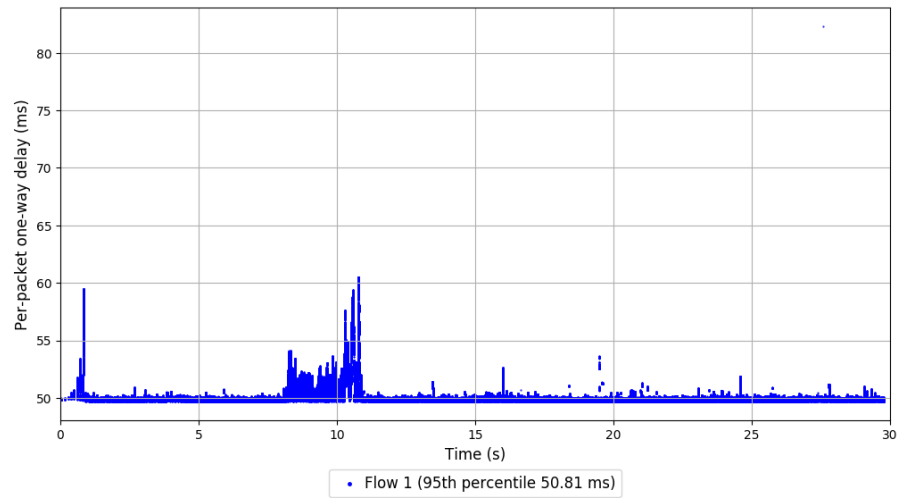
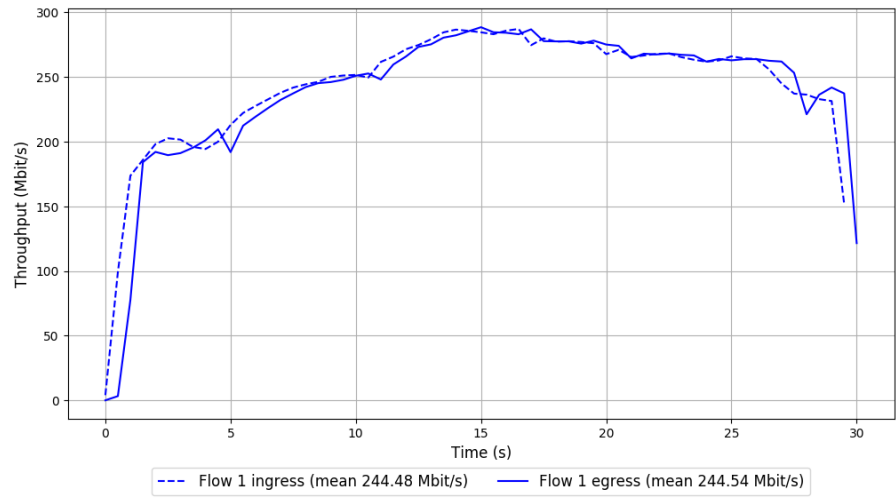


Run 4: Statistics of Indigo

Start at: 2018-09-08 04:55:00
End at: 2018-09-08 04:55:30
Local clock offset: -0.001 ms
Remote clock offset: -0.113 ms

Below is generated by plot.py at 2018-09-08 06:47:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 244.54 Mbit/s
95th percentile per-packet one-way delay: 50.807 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 244.54 Mbit/s
95th percentile per-packet one-way delay: 50.807 ms
Loss rate: 0.31%

Run 4: Report of Indigo — Data Link

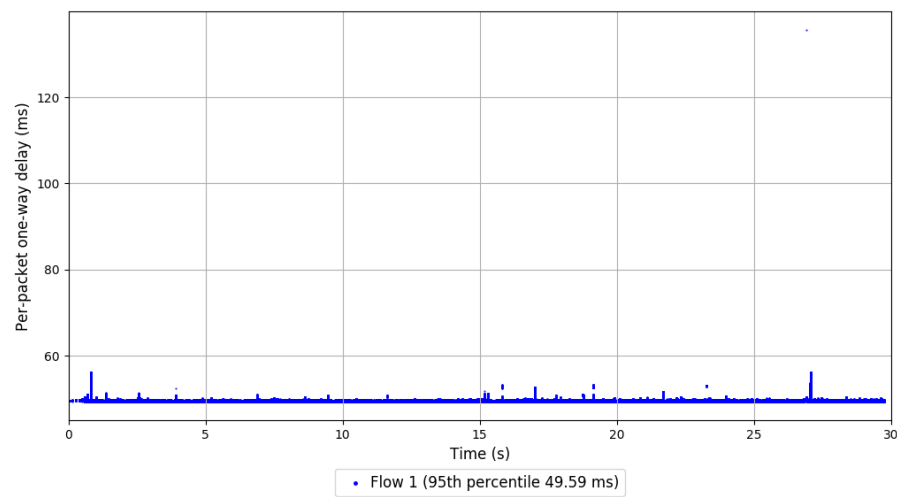
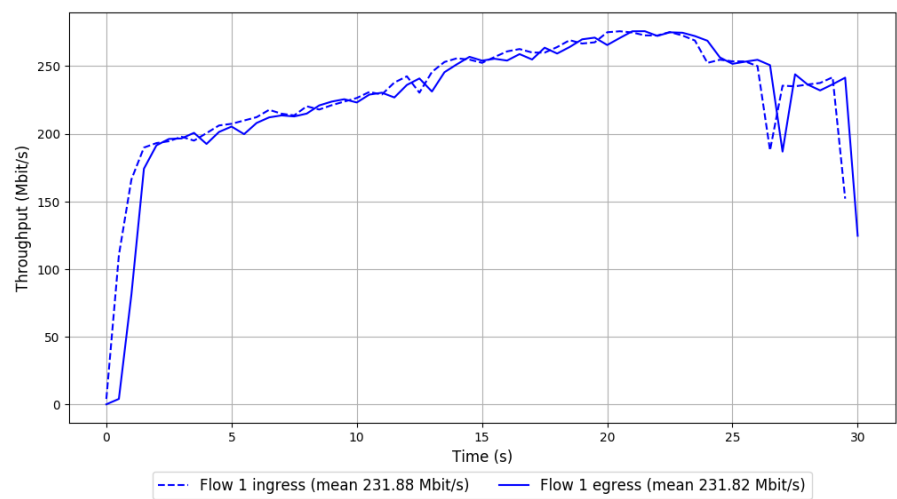


Run 5: Statistics of Indigo

Start at: 2018-09-08 05:21:03
End at: 2018-09-08 05:21:33
Local clock offset: -0.402 ms
Remote clock offset: -0.081 ms

Below is generated by plot.py at 2018-09-08 06:47:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 231.82 Mbit/s
95th percentile per-packet one-way delay: 49.592 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 231.82 Mbit/s
95th percentile per-packet one-way delay: 49.592 ms
Loss rate: 0.36%

Run 5: Report of Indigo — Data Link

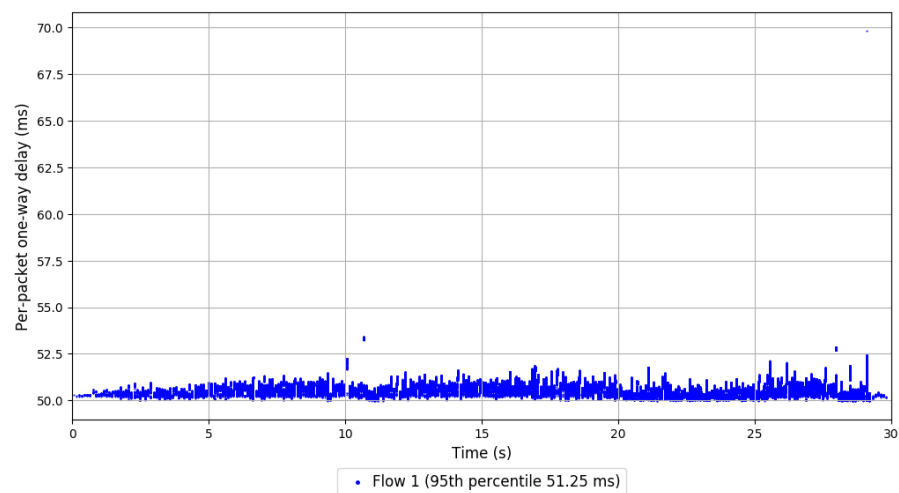
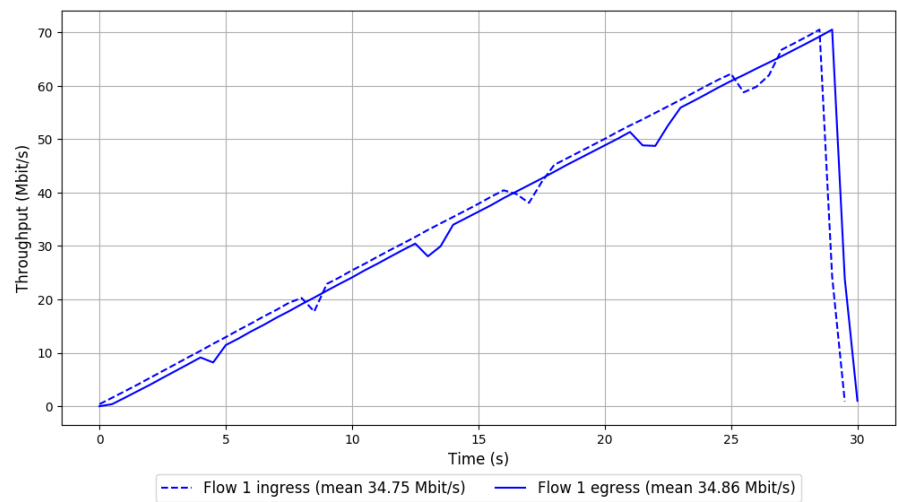



```
Run 1: Statistics of LEDBAT

Start at: 2018-09-08 03:47:02
End at: 2018-09-08 03:47:32
Local clock offset: -0.15 ms
Remote clock offset: -0.11 ms

# Below is generated by plot.py at 2018-09-08 06:47:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 34.86 Mbit/s
95th percentile per-packet one-way delay: 51.247 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 34.86 Mbit/s
95th percentile per-packet one-way delay: 51.247 ms
Loss rate: 0.01%
```

Run 1: Report of LEDBAT — Data Link

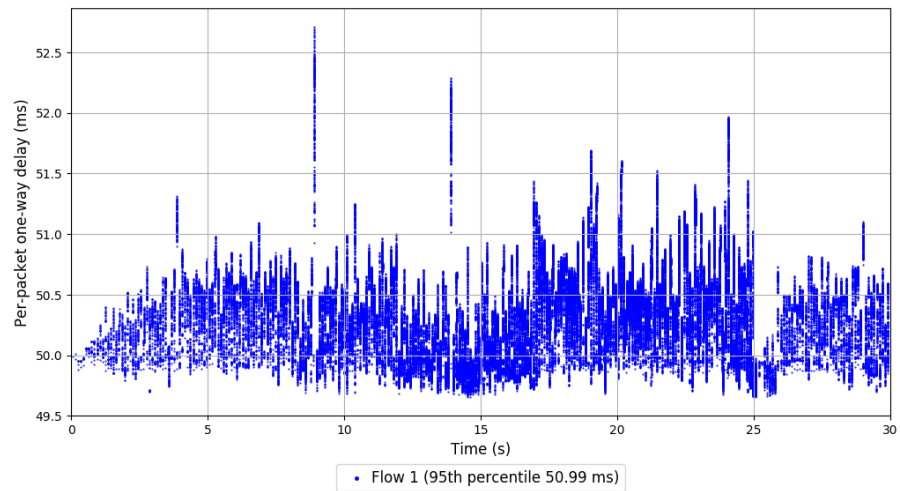
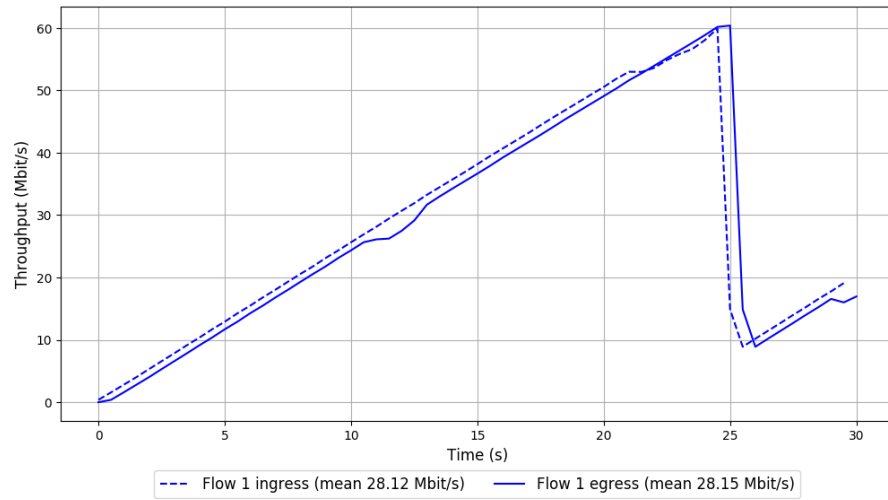


Run 2: Statistics of LEDBAT

Start at: 2018-09-08 04:13:03
End at: 2018-09-08 04:13:33
Local clock offset: 0.26 ms
Remote clock offset: -0.092 ms

Below is generated by plot.py at 2018-09-08 06:47:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 28.15 Mbit/s
95th percentile per-packet one-way delay: 50.990 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 28.15 Mbit/s
95th percentile per-packet one-way delay: 50.990 ms
Loss rate: 0.23%

Run 2: Report of LEDBAT — Data Link

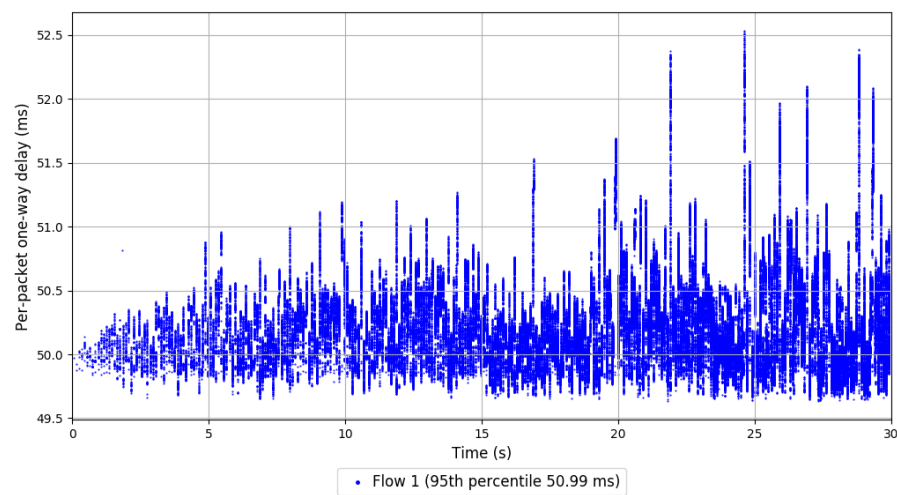
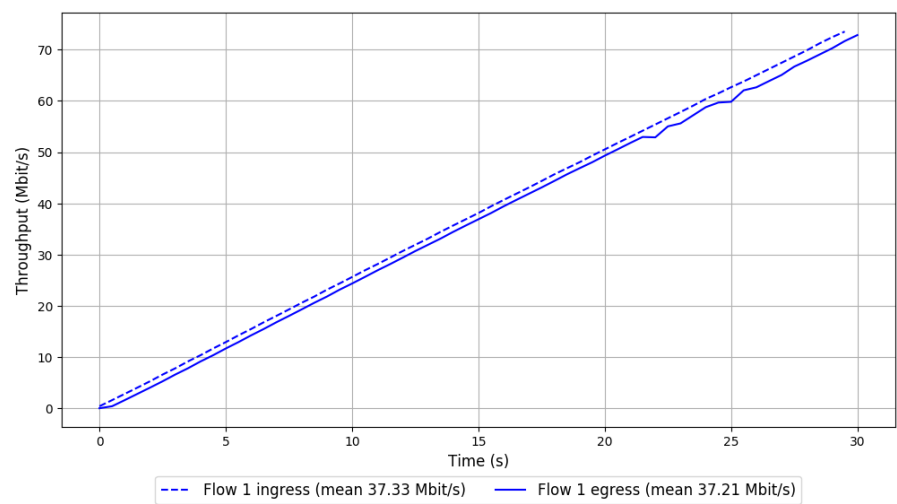


Run 3: Statistics of LEDBAT

Start at: 2018-09-08 04:39:04
End at: 2018-09-08 04:39:35
Local clock offset: -0.043 ms
Remote clock offset: -0.085 ms

Below is generated by plot.py at 2018-09-08 06:47:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 37.21 Mbit/s
95th percentile per-packet one-way delay: 50.994 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 37.21 Mbit/s
95th percentile per-packet one-way delay: 50.994 ms
Loss rate: 0.66%

Run 3: Report of LEDBAT — Data Link

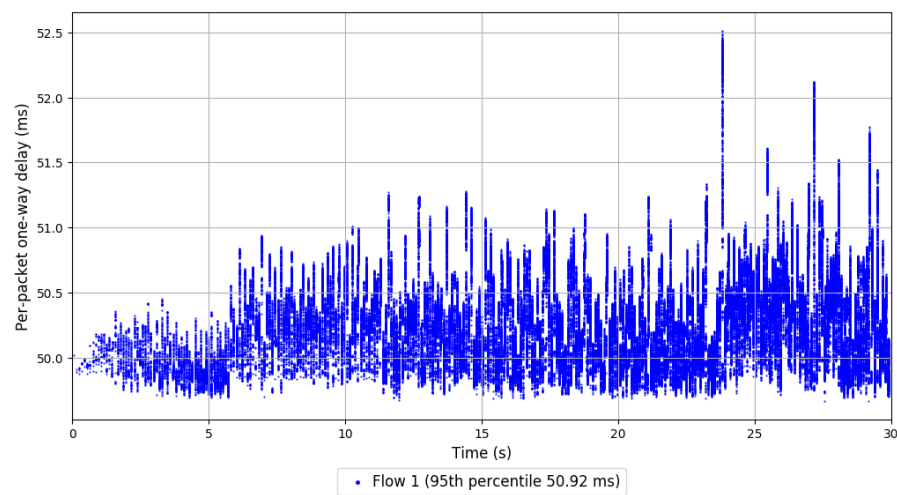
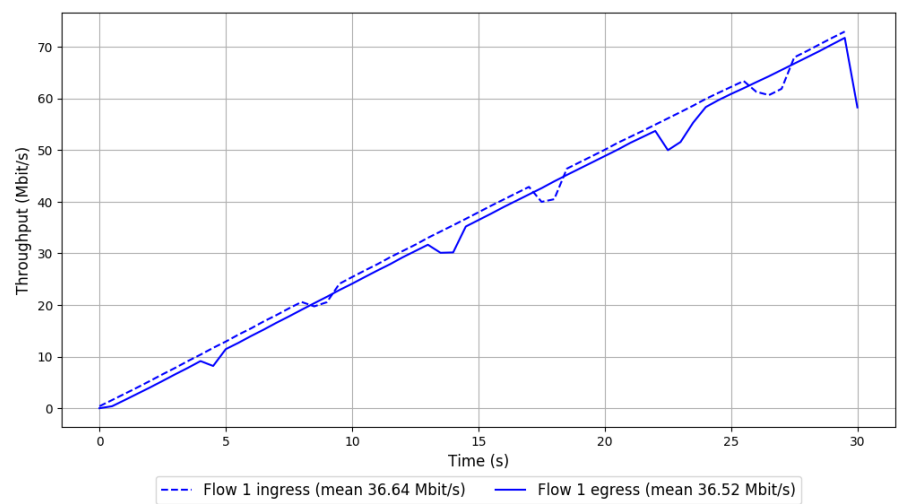


Run 4: Statistics of LEDBAT

Start at: 2018-09-08 05:05:03
End at: 2018-09-08 05:05:33
Local clock offset: -0.05 ms
Remote clock offset: -0.115 ms

Below is generated by plot.py at 2018-09-08 06:47:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 36.52 Mbit/s
95th percentile per-packet one-way delay: 50.918 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 36.52 Mbit/s
95th percentile per-packet one-way delay: 50.918 ms
Loss rate: 0.67%

Run 4: Report of LEDBAT — Data Link

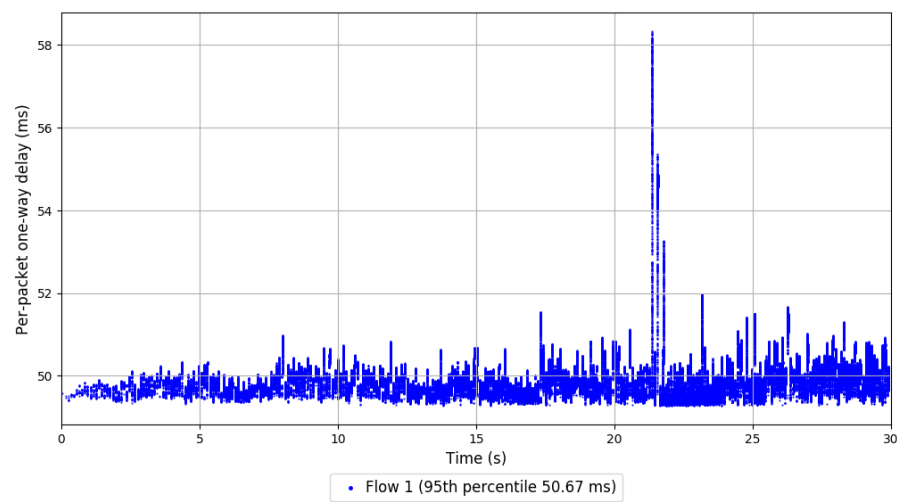
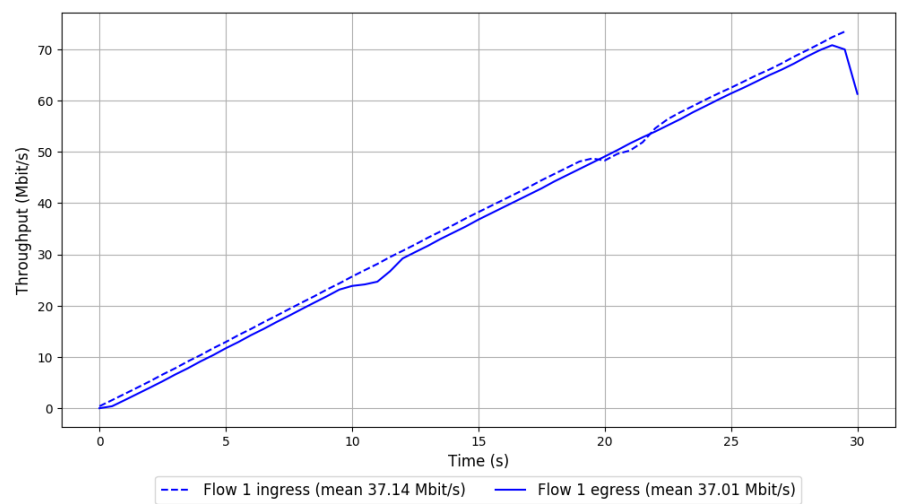


Run 5: Statistics of LEDBAT

Start at: 2018-09-08 05:31:08
End at: 2018-09-08 05:31:38
Local clock offset: -0.053 ms
Remote clock offset: -0.068 ms

Below is generated by plot.py at 2018-09-08 06:47:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 37.01 Mbit/s
95th percentile per-packet one-way delay: 50.674 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 37.01 Mbit/s
95th percentile per-packet one-way delay: 50.674 ms
Loss rate: 0.66%

Run 5: Report of LEDBAT — Data Link



Run 1: Statistics of Indigo-Muses

Start at: 2018-09-08 03:45:28

End at: 2018-09-08 03:45:58

Local clock offset: 0.252 ms

Remote clock offset: -0.098 ms

Below is generated by plot.py at 2018-09-08 06:47:22

Datalink statistics

-- Total of 1 flow:

Average throughput: 583.97 Mbit/s

95th percentile per-packet one-way delay: 55.463 ms

Loss rate: 0.34%

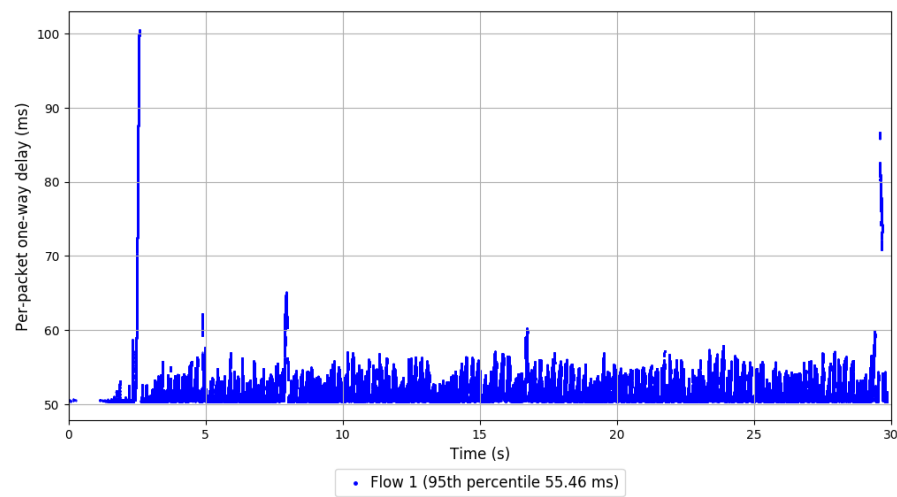
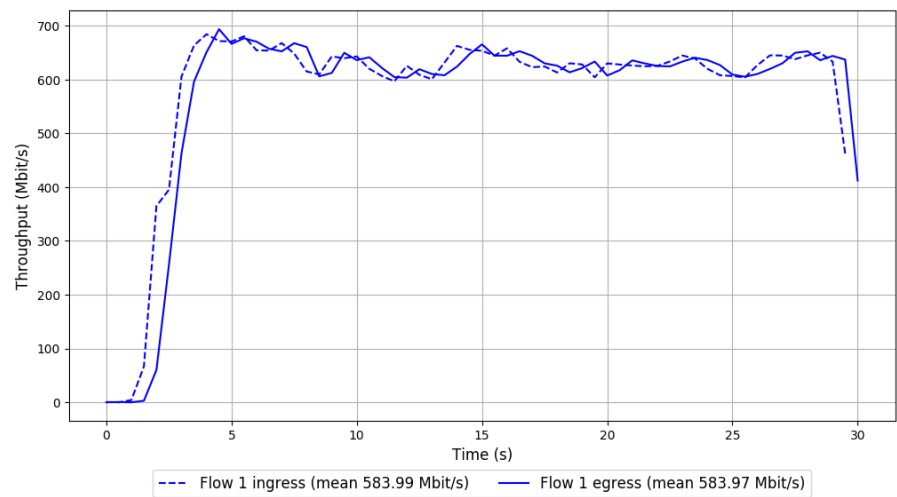
-- Flow 1:

Average throughput: 583.97 Mbit/s

95th percentile per-packet one-way delay: 55.463 ms

Loss rate: 0.34%

Run 1: Report of Indigo-Muses — Data Link

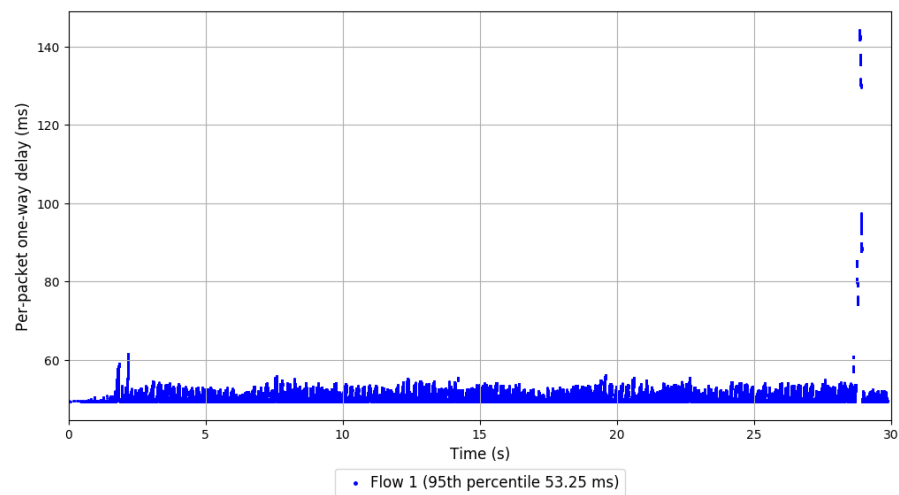
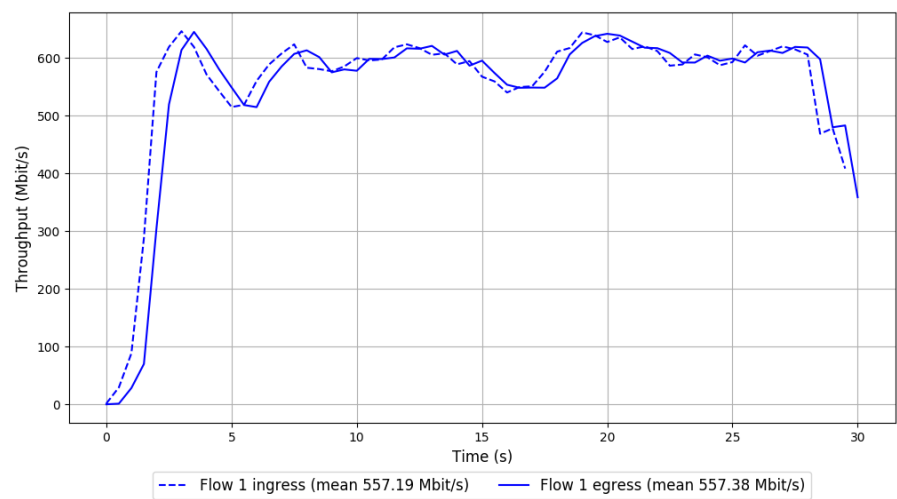


Run 2: Statistics of Indigo-Muses

Start at: 2018-09-08 04:11:31
End at: 2018-09-08 04:12:01
Local clock offset: -0.105 ms
Remote clock offset: -0.095 ms

Below is generated by plot.py at 2018-09-08 06:47:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 557.38 Mbit/s
95th percentile per-packet one-way delay: 53.254 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 557.38 Mbit/s
95th percentile per-packet one-way delay: 53.254 ms
Loss rate: 0.30%

Run 2: Report of Indigo-Muses — Data Link

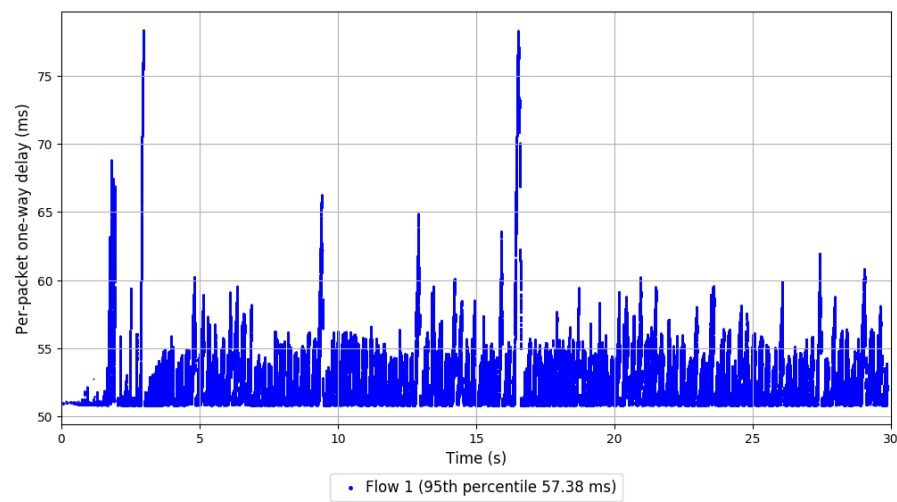
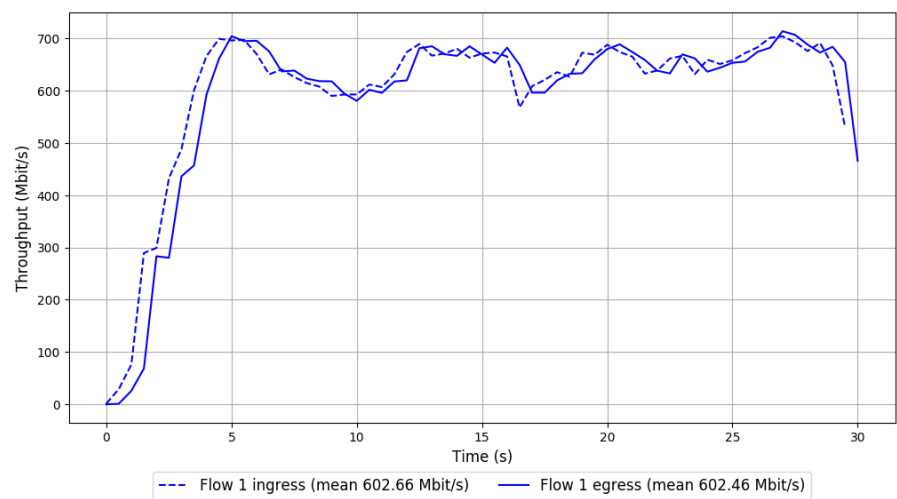


Run 3: Statistics of Indigo-Muses

Start at: 2018-09-08 04:37:30
End at: 2018-09-08 04:38:00
Local clock offset: 0.334 ms
Remote clock offset: -0.093 ms

Below is generated by plot.py at 2018-09-08 06:47:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 602.46 Mbit/s
95th percentile per-packet one-way delay: 57.378 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 602.46 Mbit/s
95th percentile per-packet one-way delay: 57.378 ms
Loss rate: 0.37%

Run 3: Report of Indigo-Muses — Data Link

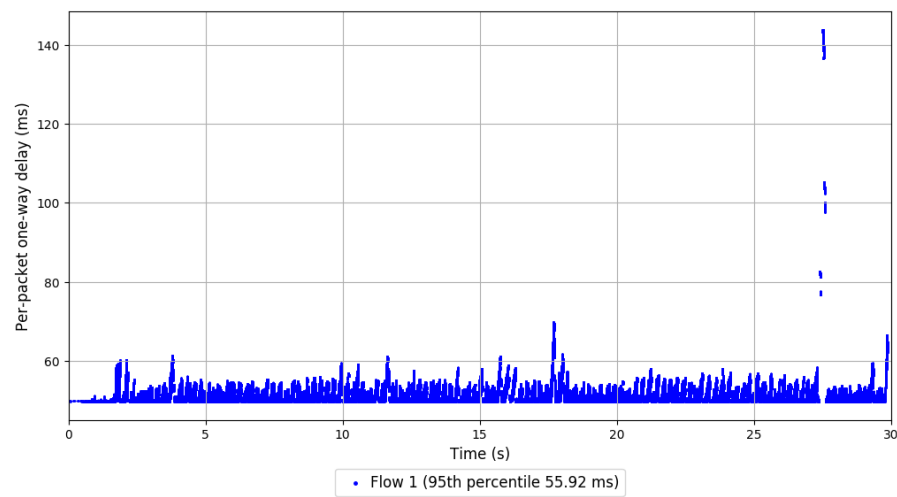
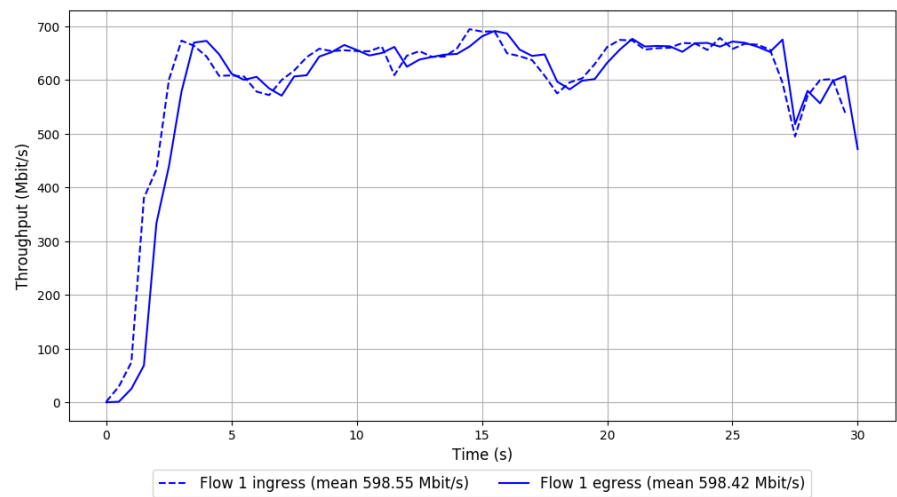


Run 4: Statistics of Indigo-Muses

Start at: 2018-09-08 05:03:28
End at: 2018-09-08 05:03:58
Local clock offset: -0.047 ms
Remote clock offset: -0.101 ms

Below is generated by plot.py at 2018-09-08 06:47:44
Datalink statistics
-- Total of 1 flow:
Average throughput: 598.42 Mbit/s
95th percentile per-packet one-way delay: 55.920 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 598.42 Mbit/s
95th percentile per-packet one-way delay: 55.920 ms
Loss rate: 0.36%

Run 4: Report of Indigo-Muses — Data Link

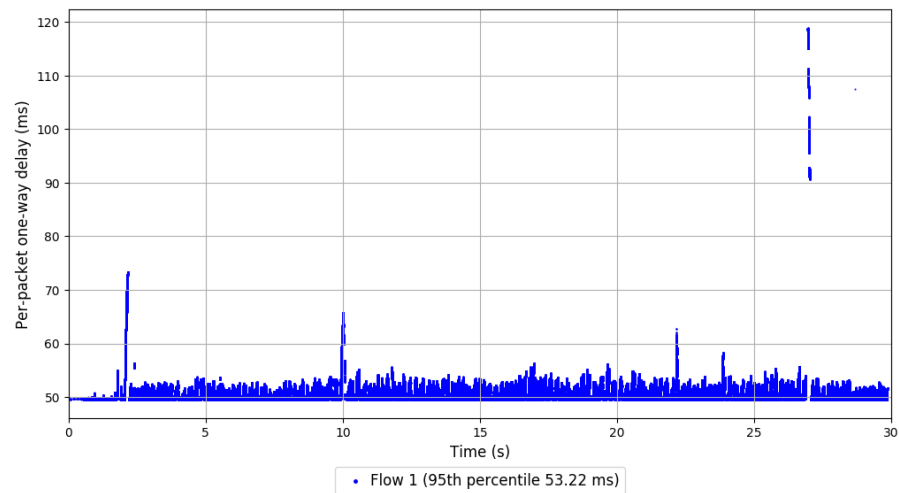
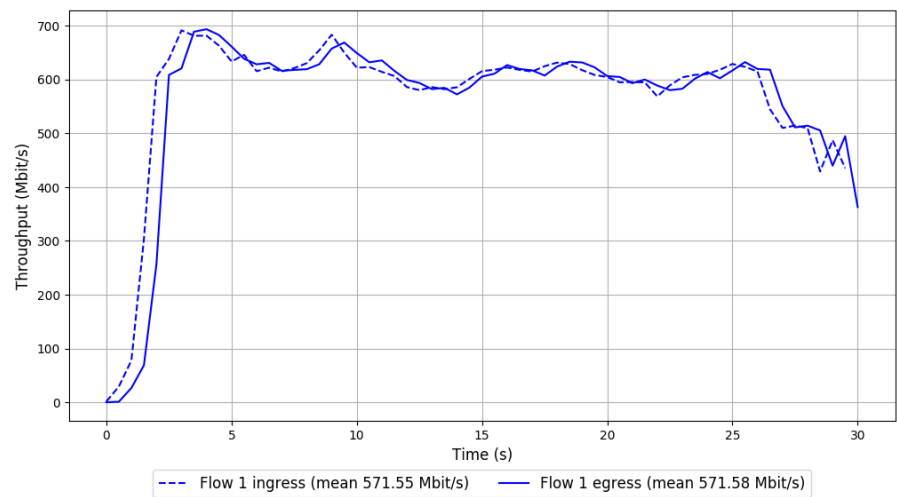


Run 5: Statistics of Indigo-Muses

Start at: 2018-09-08 05:29:35
End at: 2018-09-08 05:30:05
Local clock offset: -0.081 ms
Remote clock offset: -0.027 ms

Below is generated by plot.py at 2018-09-08 06:48:07
Datalink statistics
-- Total of 1 flow:
Average throughput: 571.58 Mbit/s
95th percentile per-packet one-way delay: 53.218 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 571.58 Mbit/s
95th percentile per-packet one-way delay: 53.218 ms
Loss rate: 0.33%

Run 5: Report of Indigo-Muses — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2018-09-08 03:38:26

End at: 2018-09-08 03:38:56

Local clock offset: -0.519 ms

Remote clock offset: -0.042 ms

Below is generated by plot.py at 2018-09-08 06:54:40

Datalink statistics

-- Total of 1 flow:

Average throughput: 503.54 Mbit/s

95th percentile per-packet one-way delay: 148.172 ms

Loss rate: 1.03%

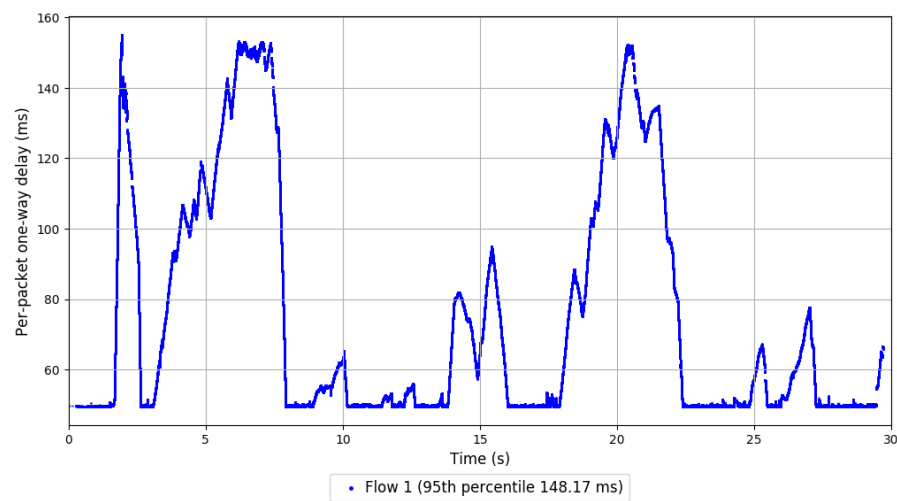
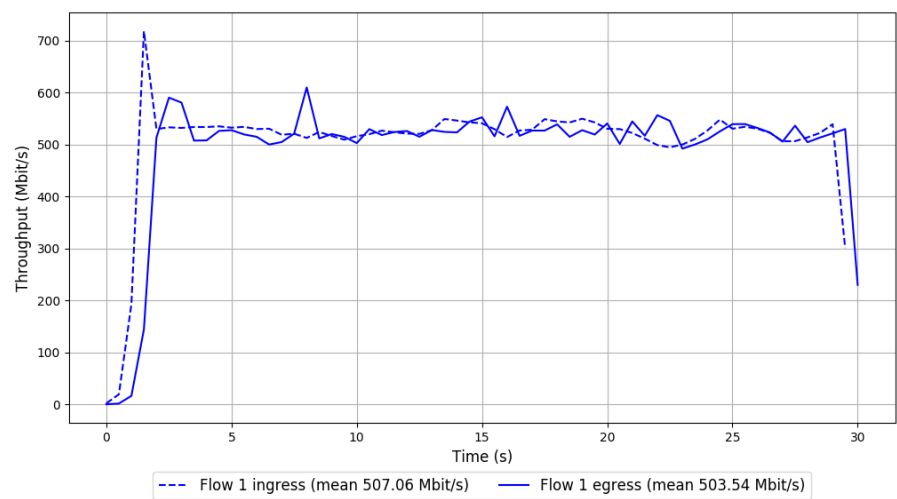
-- Flow 1:

Average throughput: 503.54 Mbit/s

95th percentile per-packet one-way delay: 148.172 ms

Loss rate: 1.03%

Run 1: Report of PCC-Allegro — Data Link

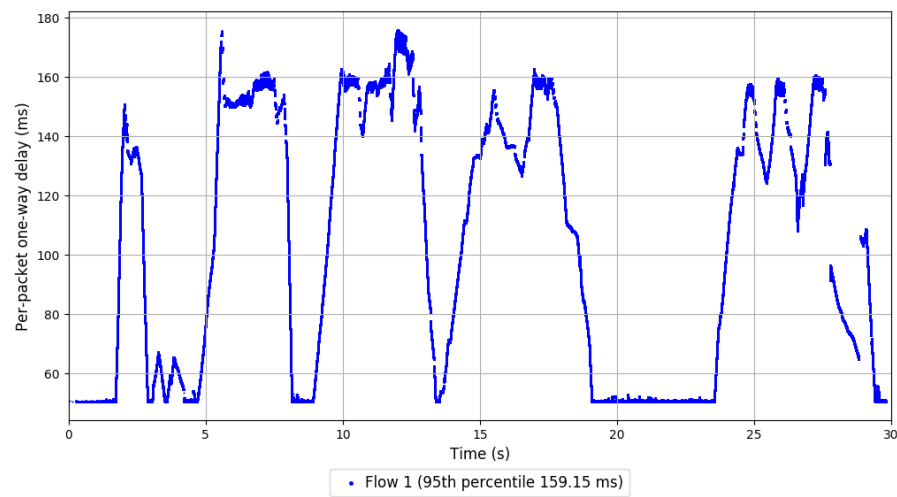
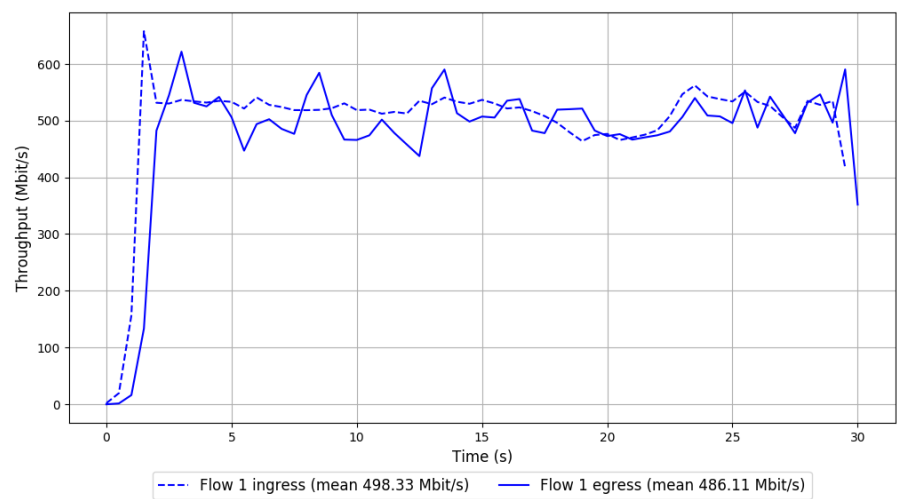


Run 2: Statistics of PCC-Allegro

Start at: 2018-09-08 04:04:31
End at: 2018-09-08 04:05:01
Local clock offset: -0.078 ms
Remote clock offset: -0.046 ms

Below is generated by plot.py at 2018-09-08 07:00:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 486.11 Mbit/s
95th percentile per-packet one-way delay: 159.154 ms
Loss rate: 2.81%
-- Flow 1:
Average throughput: 486.11 Mbit/s
95th percentile per-packet one-way delay: 159.154 ms
Loss rate: 2.81%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-09-08 04:30:26

End at: 2018-09-08 04:30:56

Local clock offset: -0.409 ms

Remote clock offset: -0.093 ms

Below is generated by plot.py at 2018-09-08 07:01:26

Datalink statistics

-- Total of 1 flow:

Average throughput: 498.02 Mbit/s

95th percentile per-packet one-way delay: 152.558 ms

Loss rate: 1.75%

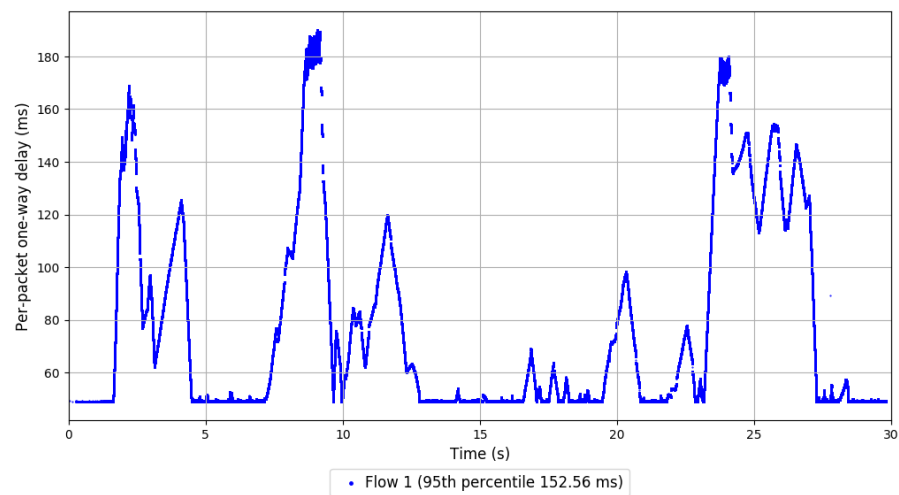
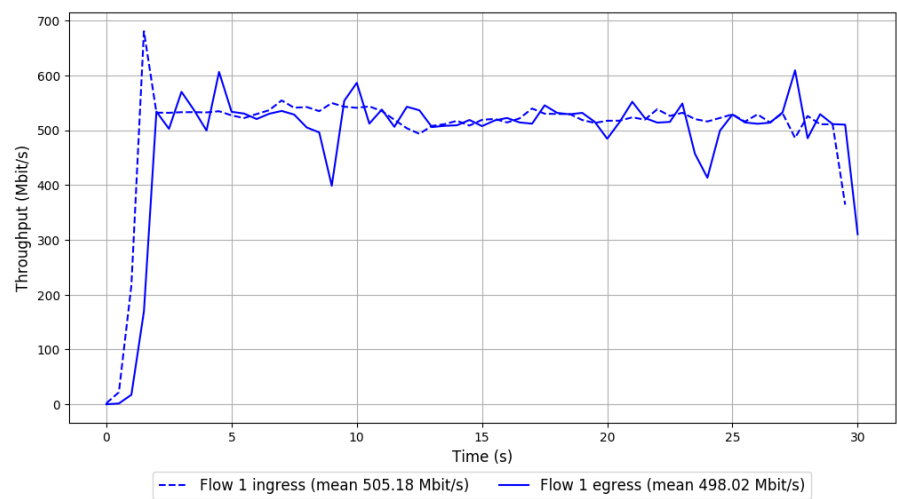
-- Flow 1:

Average throughput: 498.02 Mbit/s

95th percentile per-packet one-way delay: 152.558 ms

Loss rate: 1.75%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-09-08 04:56:28

End at: 2018-09-08 04:56:58

Local clock offset: -0.046 ms

Remote clock offset: -0.099 ms

Below is generated by plot.py at 2018-09-08 07:01:26

Datalink statistics

-- Total of 1 flow:

Average throughput: 481.10 Mbit/s

95th percentile per-packet one-way delay: 155.483 ms

Loss rate: 1.78%

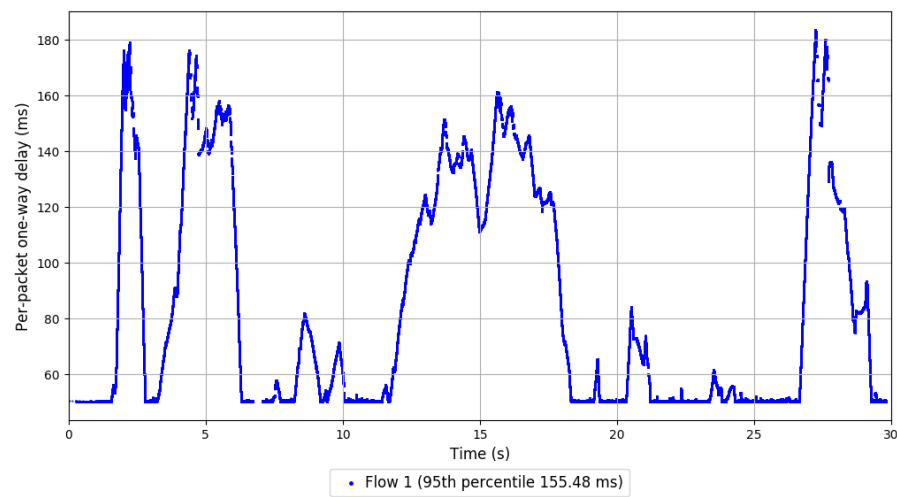
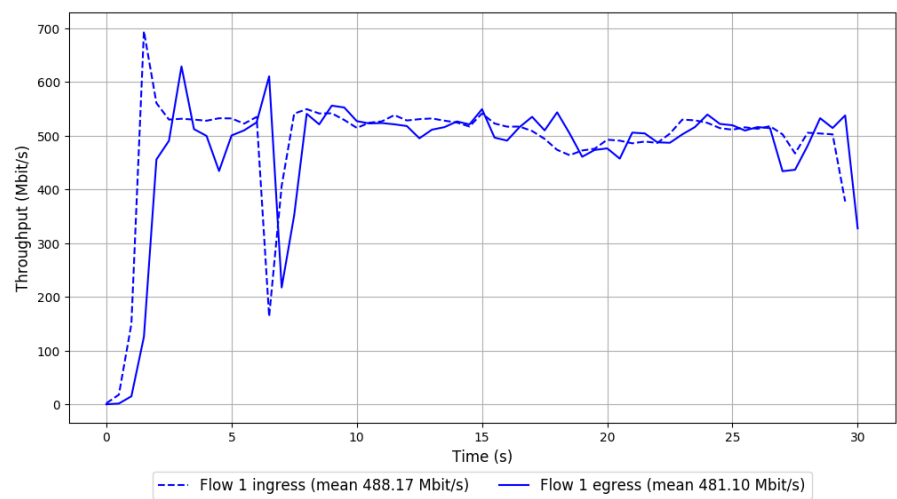
-- Flow 1:

Average throughput: 481.10 Mbit/s

95th percentile per-packet one-way delay: 155.483 ms

Loss rate: 1.78%

Run 4: Report of PCC-Allegro — Data Link

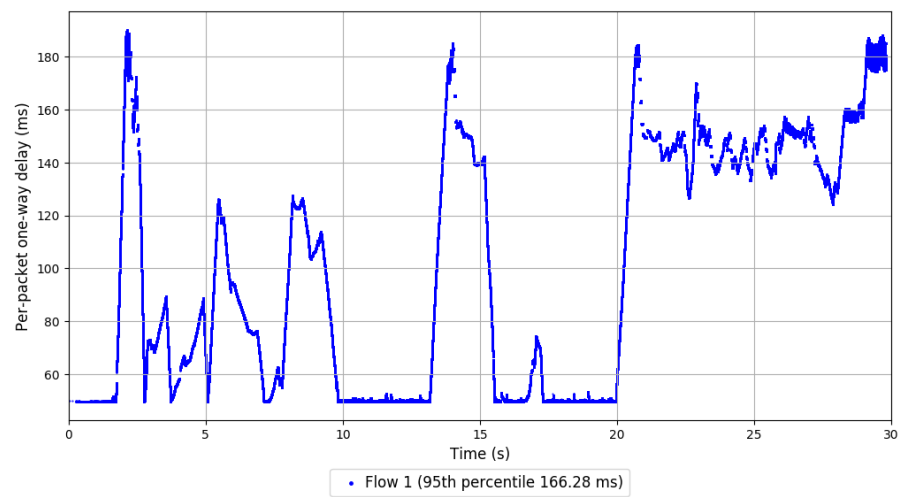
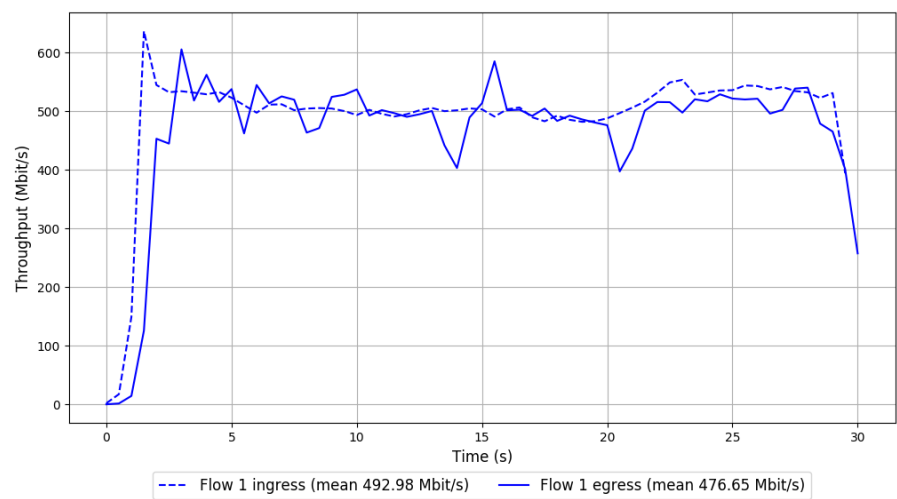


Run 5: Statistics of PCC-Allegro

Start at: 2018-09-08 05:22:31
End at: 2018-09-08 05:23:01
Local clock offset: -0.065 ms
Remote clock offset: -0.056 ms

Below is generated by plot.py at 2018-09-08 07:02:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 476.65 Mbit/s
95th percentile per-packet one-way delay: 166.282 ms
Loss rate: 3.64%
-- Flow 1:
Average throughput: 476.65 Mbit/s
95th percentile per-packet one-way delay: 166.282 ms
Loss rate: 3.64%

Run 5: Report of PCC-Allegro — Data Link

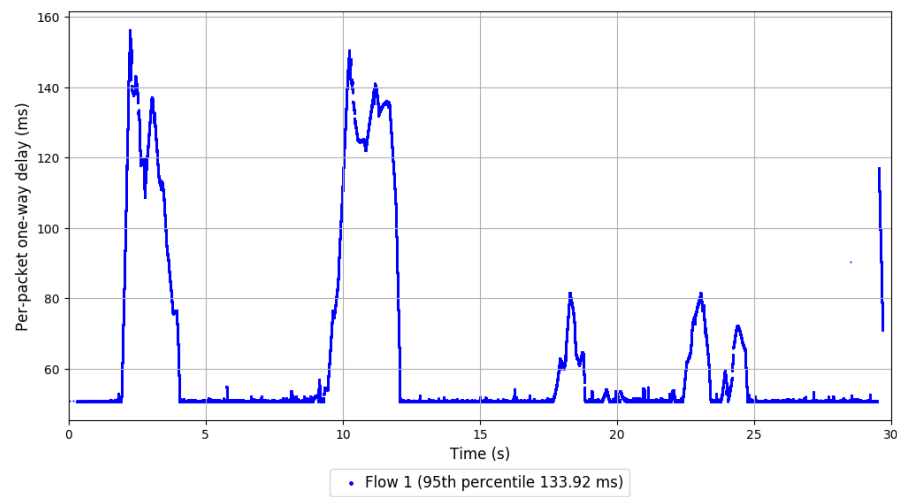
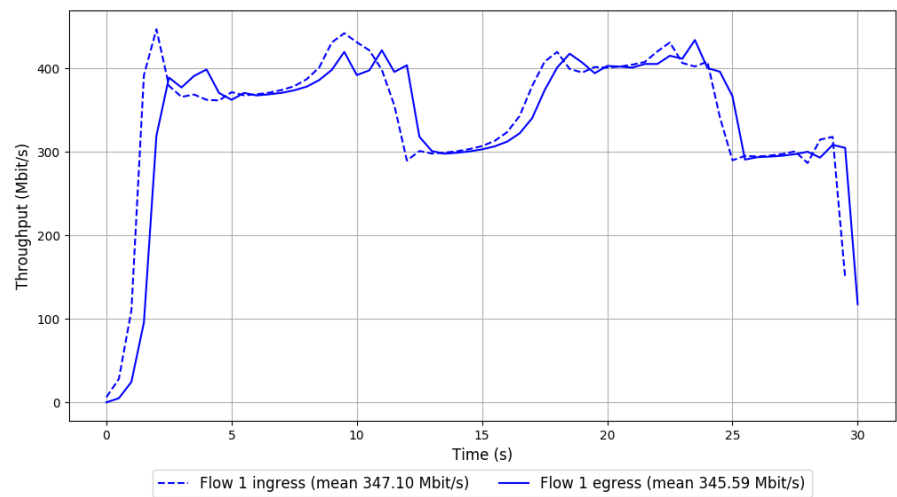


Run 1: Statistics of PCC-Expr

Start at: 2018-09-08 03:57:20
End at: 2018-09-08 03:57:50
Local clock offset: -0.157 ms
Remote clock offset: -0.099 ms

Below is generated by plot.py at 2018-09-08 07:02:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 345.59 Mbit/s
95th percentile per-packet one-way delay: 133.918 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 345.59 Mbit/s
95th percentile per-packet one-way delay: 133.918 ms
Loss rate: 0.78%

Run 1: Report of PCC-Expr — Data Link

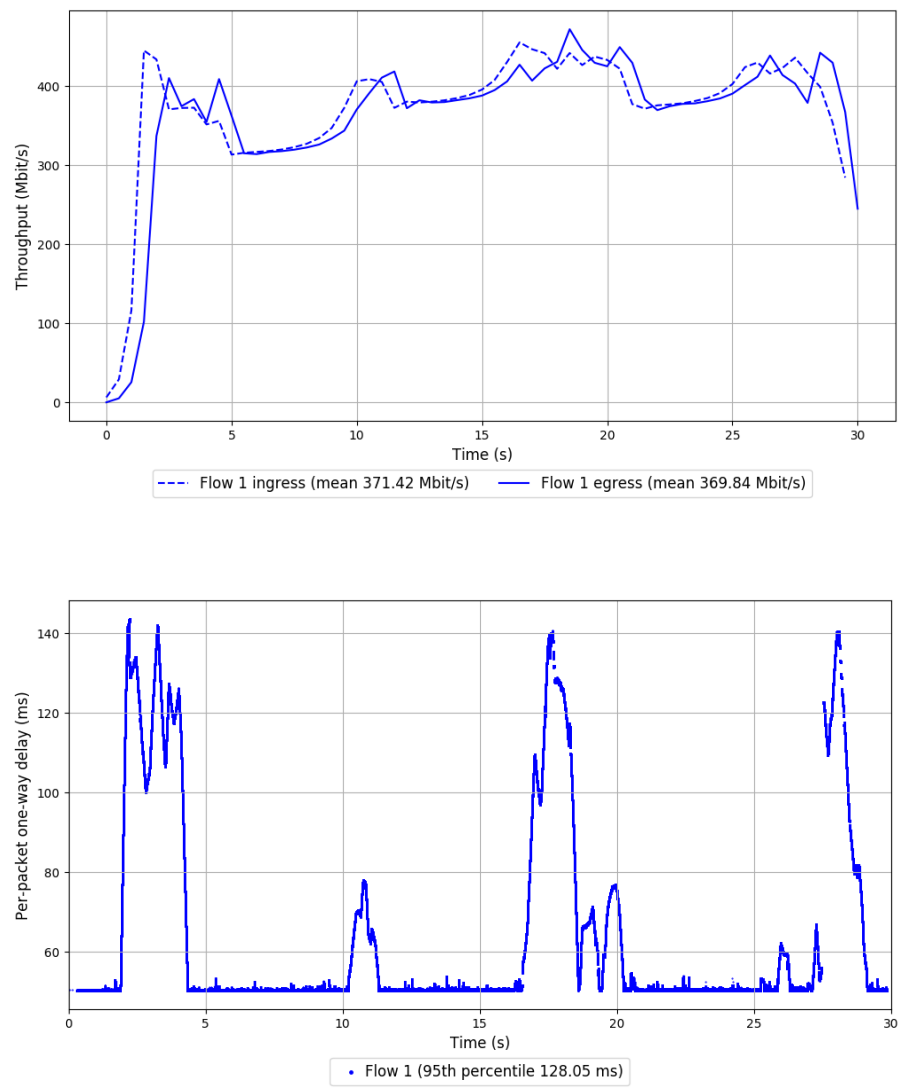


Run 2: Statistics of PCC-Expr

Start at: 2018-09-08 04:23:13
End at: 2018-09-08 04:23:43
Local clock offset: -0.109 ms
Remote clock offset: -0.059 ms

Below is generated by plot.py at 2018-09-08 07:02:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 369.84 Mbit/s
95th percentile per-packet one-way delay: 128.054 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 369.84 Mbit/s
95th percentile per-packet one-way delay: 128.054 ms
Loss rate: 0.76%

Run 2: Report of PCC-Expr — Data Link

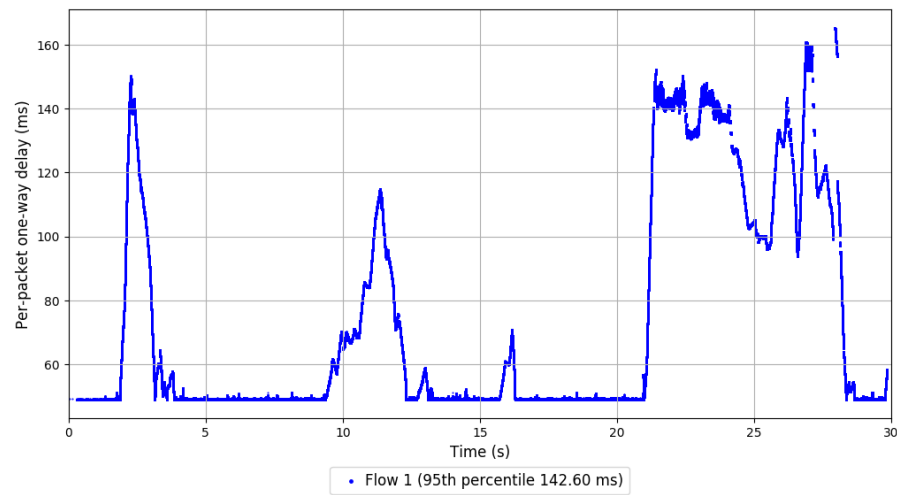
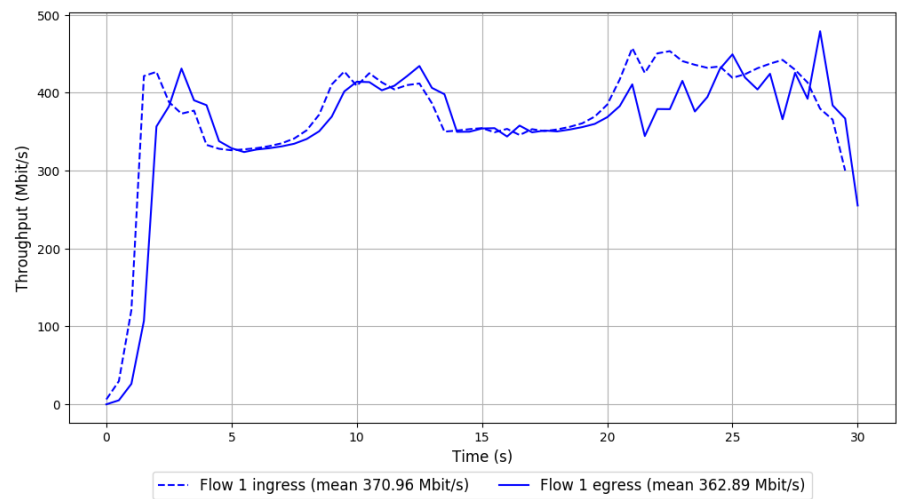


Run 3: Statistics of PCC-Expr

Start at: 2018-09-08 04:49:14
End at: 2018-09-08 04:49:44
Local clock offset: 0.348 ms
Remote clock offset: -0.102 ms

Below is generated by plot.py at 2018-09-08 07:02:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 362.89 Mbit/s
95th percentile per-packet one-way delay: 142.604 ms
Loss rate: 2.50%
-- Flow 1:
Average throughput: 362.89 Mbit/s
95th percentile per-packet one-way delay: 142.604 ms
Loss rate: 2.50%

Run 3: Report of PCC-Expr — Data Link

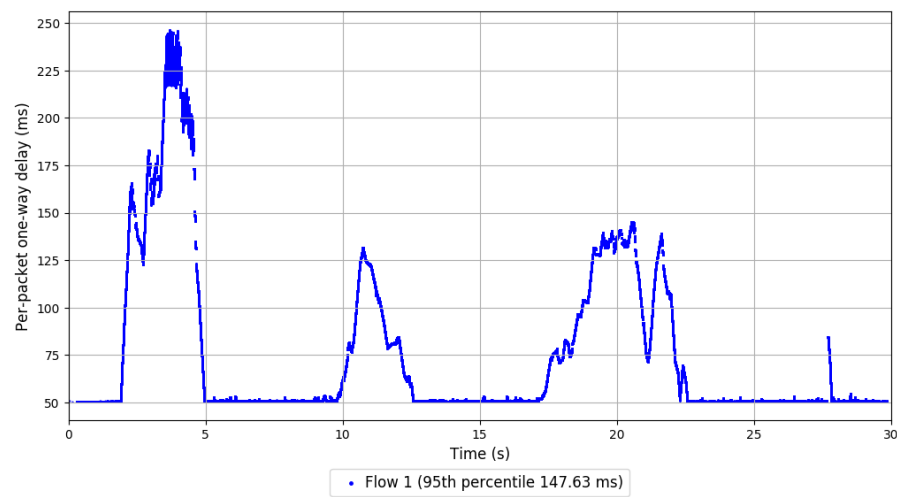
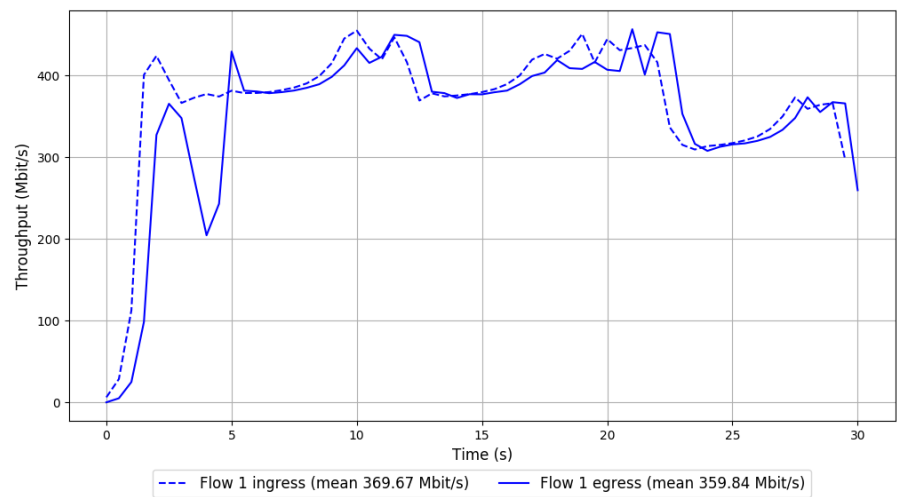


Run 4: Statistics of PCC-Expr

Start at: 2018-09-08 05:15:18
End at: 2018-09-08 05:15:49
Local clock offset: 0.328 ms
Remote clock offset: -0.053 ms

Below is generated by plot.py at 2018-09-08 07:07:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 359.84 Mbit/s
95th percentile per-packet one-way delay: 147.634 ms
Loss rate: 2.99%
-- Flow 1:
Average throughput: 359.84 Mbit/s
95th percentile per-packet one-way delay: 147.634 ms
Loss rate: 2.99%

Run 4: Report of PCC-Expr — Data Link

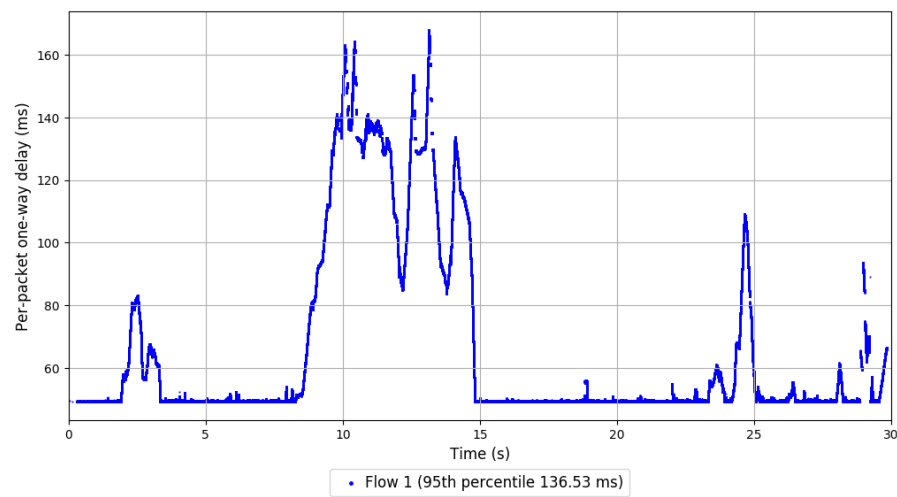
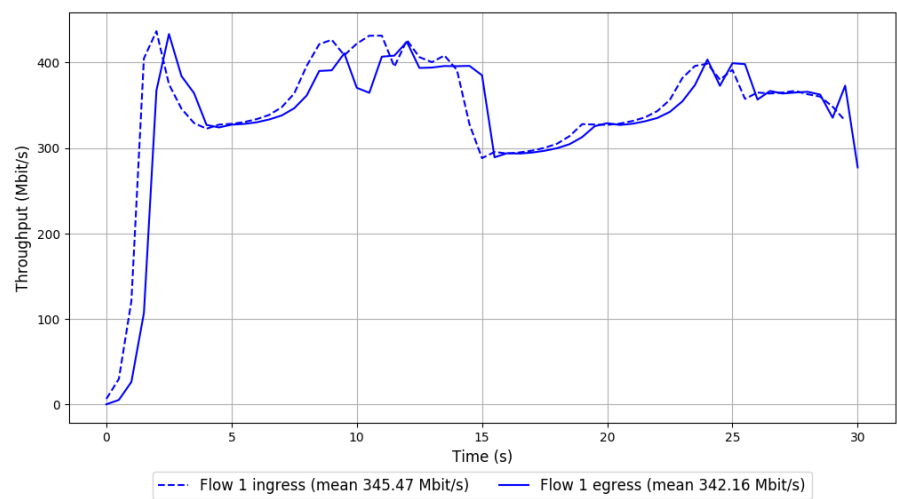


Run 5: Statistics of PCC-Expr

Start at: 2018-09-08 05:41:20
End at: 2018-09-08 05:41:50
Local clock offset: -0.462 ms
Remote clock offset: -0.016 ms

Below is generated by plot.py at 2018-09-08 07:09:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 342.16 Mbit/s
95th percentile per-packet one-way delay: 136.525 ms
Loss rate: 1.29%
-- Flow 1:
Average throughput: 342.16 Mbit/s
95th percentile per-packet one-way delay: 136.525 ms
Loss rate: 1.29%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

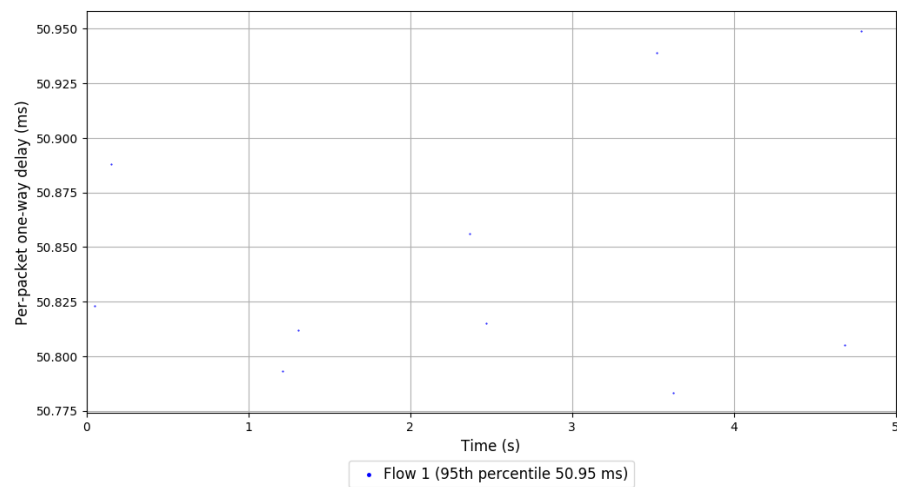
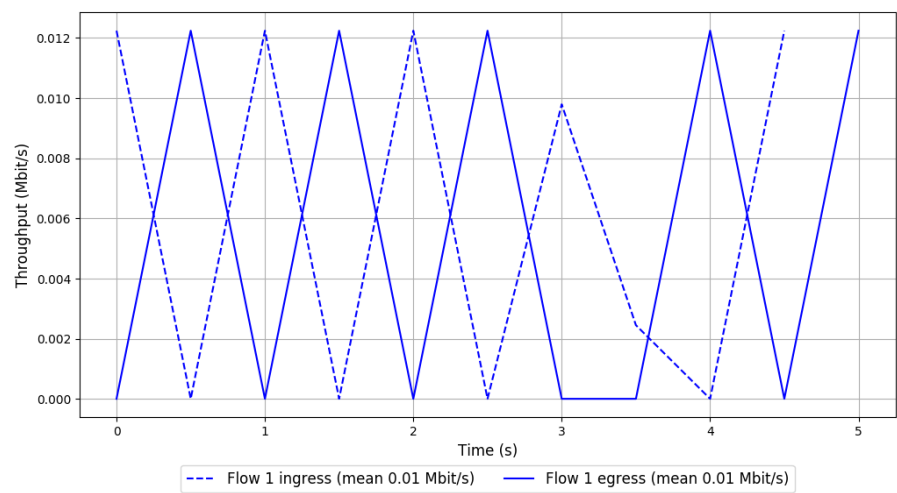
Start at: 2018-09-08 03:42:45

End at: 2018-09-08 03:43:15

Local clock offset: -0.14 ms

Remote clock offset: -0.115 ms

Run 1: Report of QUIC Cubic — Data Link

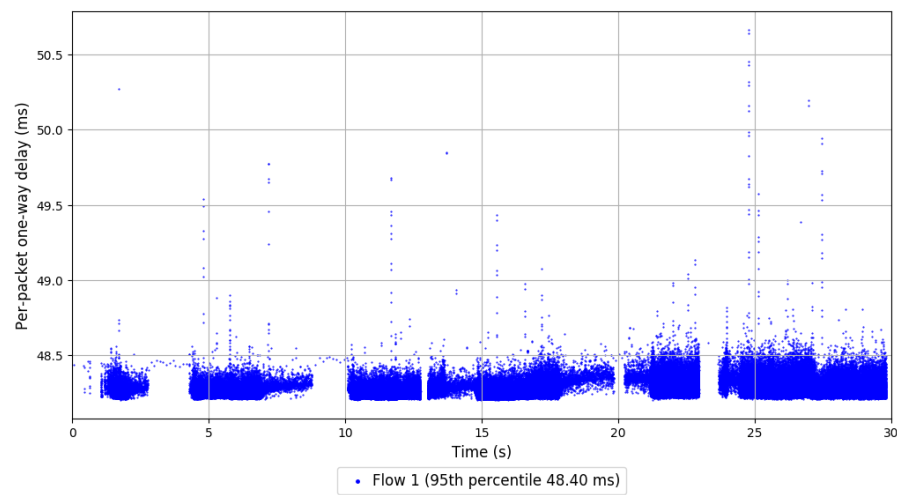
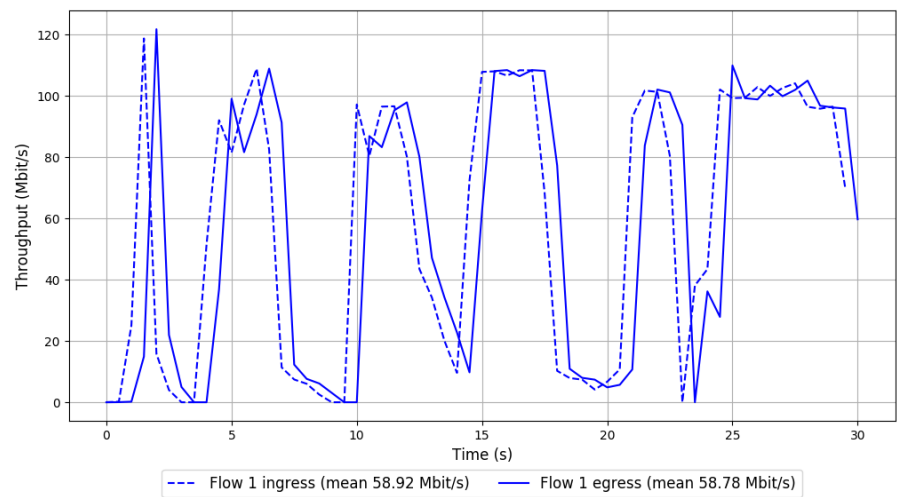


Run 2: Statistics of QUIC Cubic

Start at: 2018-09-08 04:08:49
End at: 2018-09-08 04:09:19
Local clock offset: -0.426 ms
Remote clock offset: -0.096 ms

Below is generated by plot.py at 2018-09-08 07:09:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 58.78 Mbit/s
95th percentile per-packet one-way delay: 48.398 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 58.78 Mbit/s
95th percentile per-packet one-way delay: 48.398 ms
Loss rate: 0.56%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-09-08 04:34:43

End at: 2018-09-08 04:35:13

Local clock offset: 0.02 ms

Remote clock offset: -0.089 ms

Below is generated by plot.py at 2018-09-08 07:09:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 54.06 Mbit/s

95th percentile per-packet one-way delay: 48.828 ms

Loss rate: 0.54%

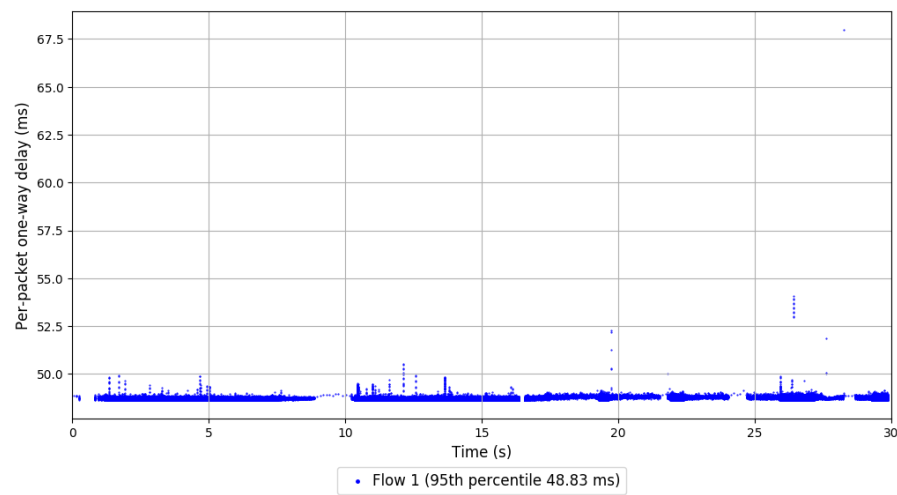
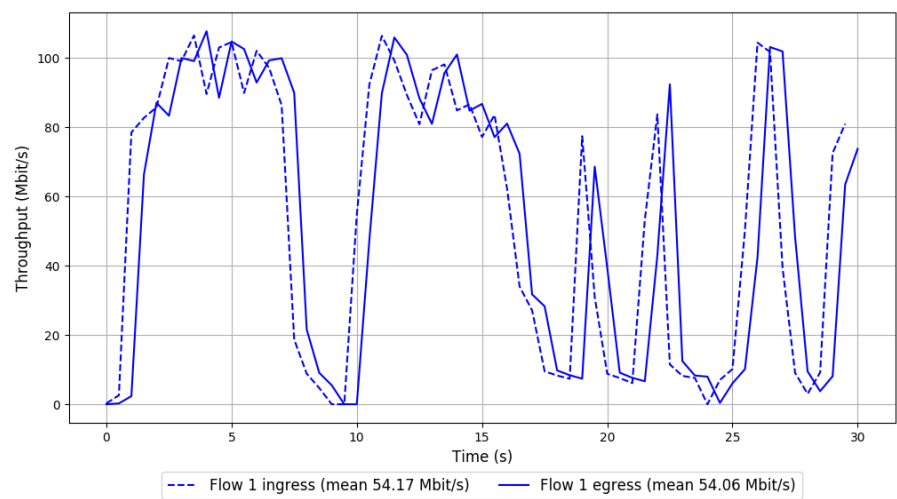
-- Flow 1:

Average throughput: 54.06 Mbit/s

95th percentile per-packet one-way delay: 48.828 ms

Loss rate: 0.54%

Run 3: Report of QUIC Cubic — Data Link

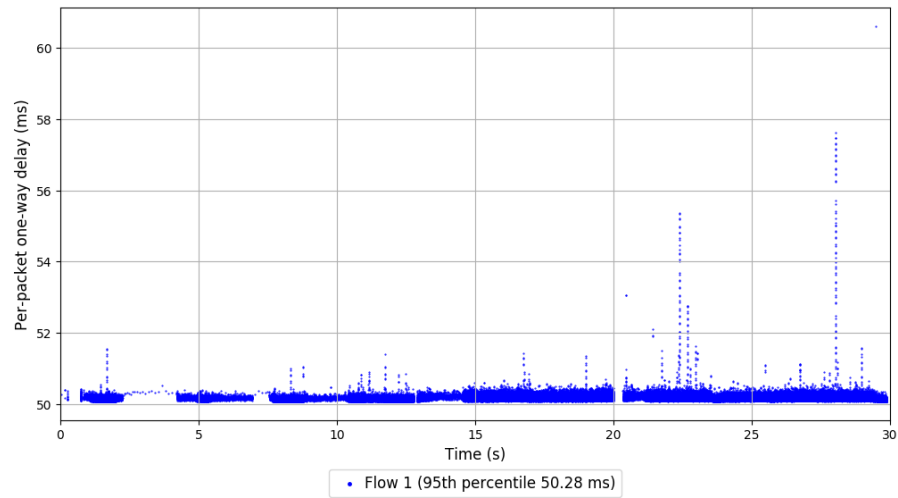
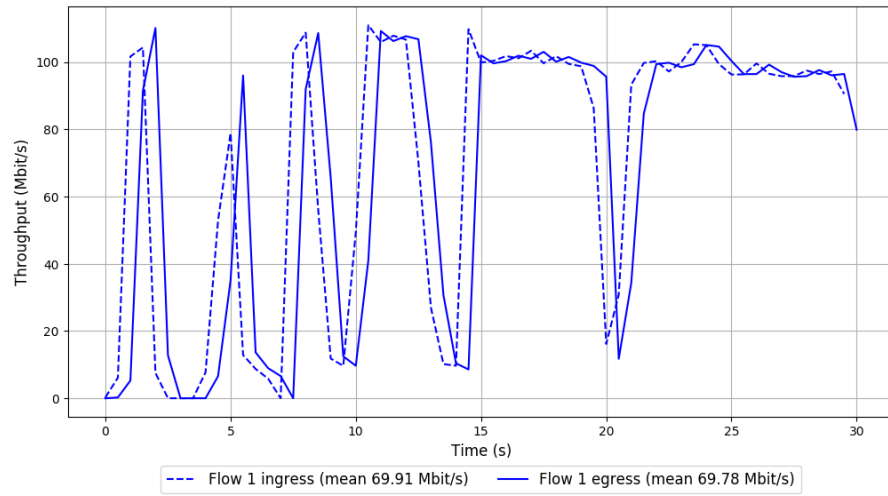


Run 4: Statistics of QUIC Cubic

Start at: 2018-09-08 05:00:41
End at: 2018-09-08 05:01:11
Local clock offset: 0.324 ms
Remote clock offset: -0.094 ms

Below is generated by plot.py at 2018-09-08 07:09:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 69.78 Mbit/s
95th percentile per-packet one-way delay: 50.285 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 69.78 Mbit/s
95th percentile per-packet one-way delay: 50.285 ms
Loss rate: 0.51%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-09-08 05:26:48

End at: 2018-09-08 05:27:18

Local clock offset: 0.289 ms

Remote clock offset: -0.072 ms

Below is generated by plot.py at 2018-09-08 07:09:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 84.73 Mbit/s

95th percentile per-packet one-way delay: 50.607 ms

Loss rate: 0.45%

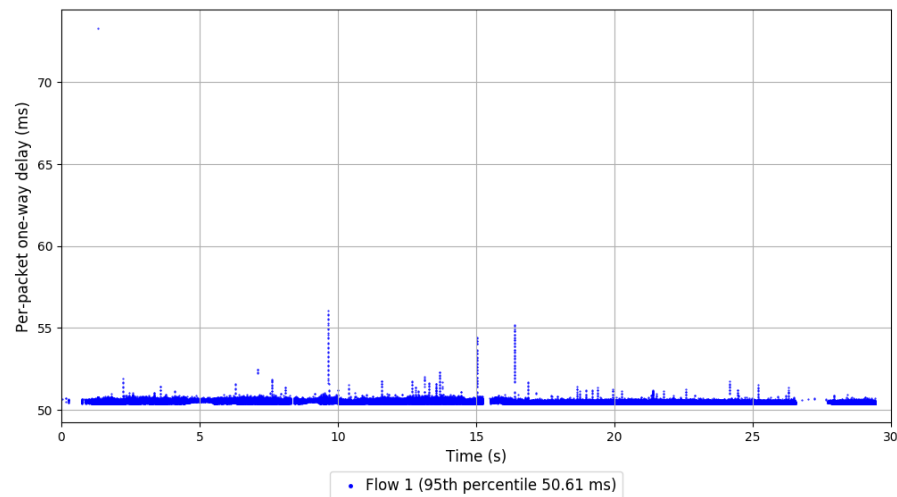
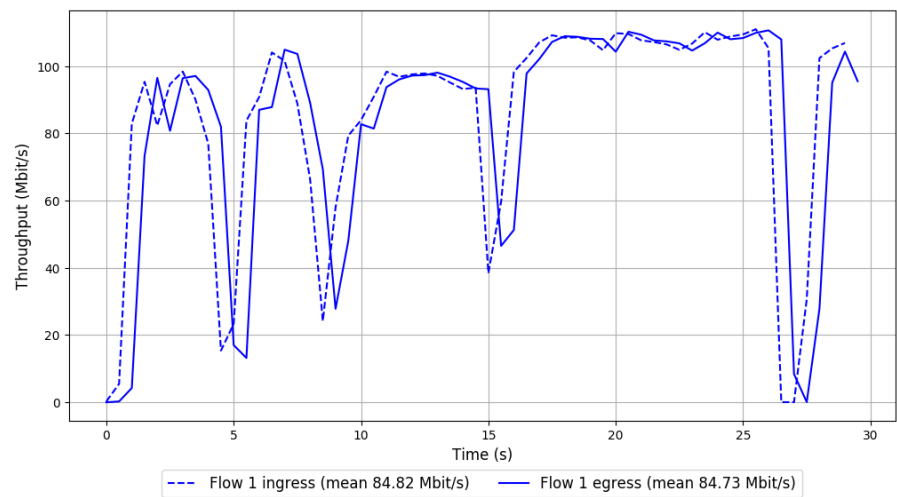
-- Flow 1:

Average throughput: 84.73 Mbit/s

95th percentile per-packet one-way delay: 50.607 ms

Loss rate: 0.45%

Run 5: Report of QUIC Cubic — Data Link

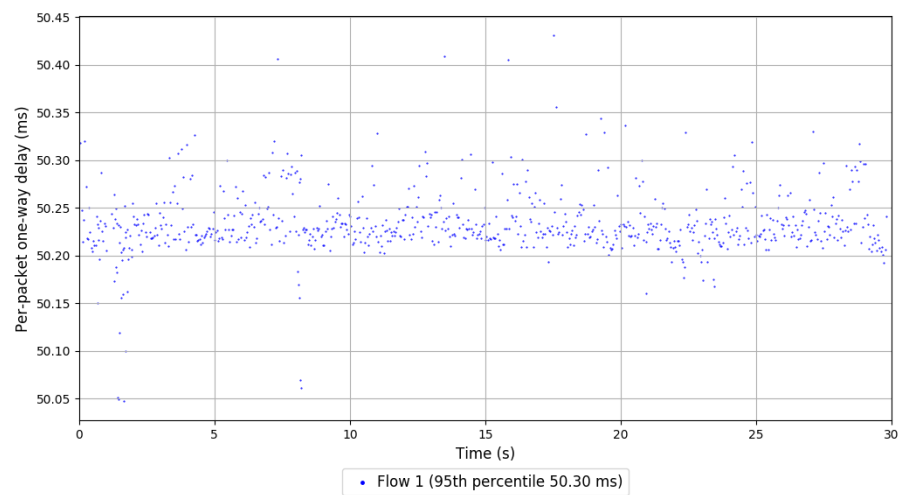
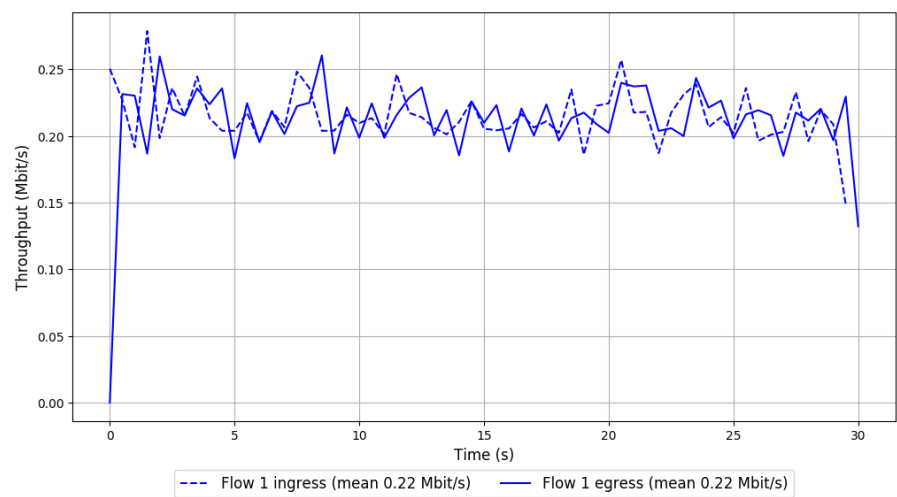


```
Run 1: Statistics of SCReAM

Start at: 2018-09-08 03:49:48
End at: 2018-09-08 03:50:19
Local clock offset: -0.126 ms
Remote clock offset: -0.101 ms

# Below is generated by plot.py at 2018-09-08 07:09:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.296 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.296 ms
Loss rate: 0.25%
```

Run 1: Report of SReAM — Data Link

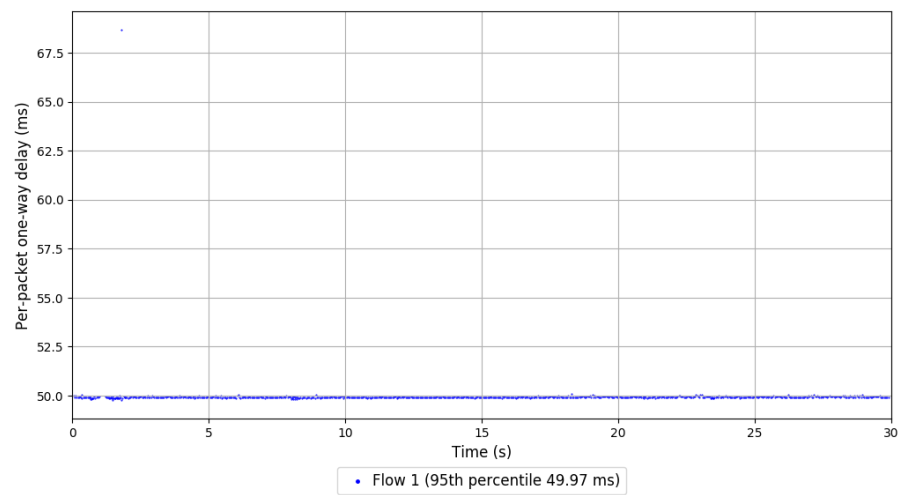
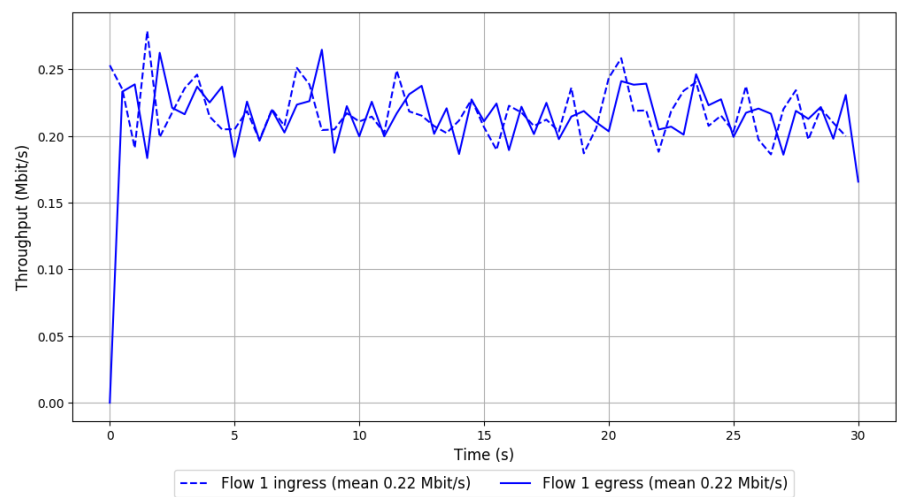


Run 2: Statistics of SCReAM

Start at: 2018-09-08 04:15:50
End at: 2018-09-08 04:16:20
Local clock offset: 0.266 ms
Remote clock offset: -0.086 ms

Below is generated by plot.py at 2018-09-08 07:09:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.970 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.970 ms
Loss rate: 0.39%

Run 2: Report of SReAM — Data Link

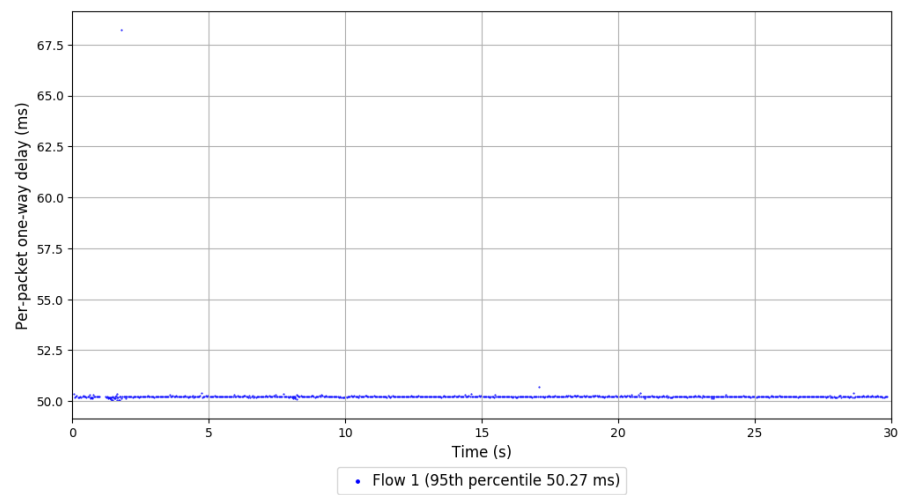
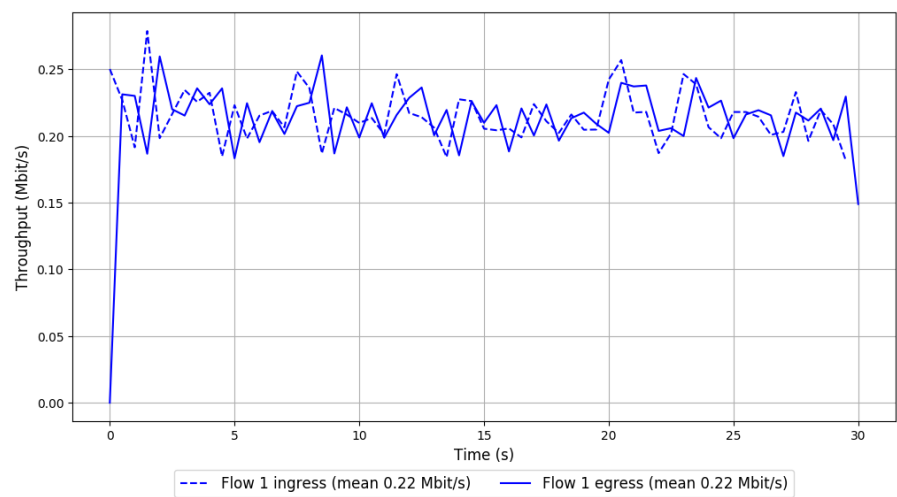


Run 3: Statistics of SCReAM

Start at: 2018-09-08 04:41:52
End at: 2018-09-08 04:42:22
Local clock offset: -0.379 ms
Remote clock offset: -0.136 ms

Below is generated by plot.py at 2018-09-08 07:09:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.275 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.275 ms
Loss rate: 0.38%

Run 3: Report of SReAM — Data Link

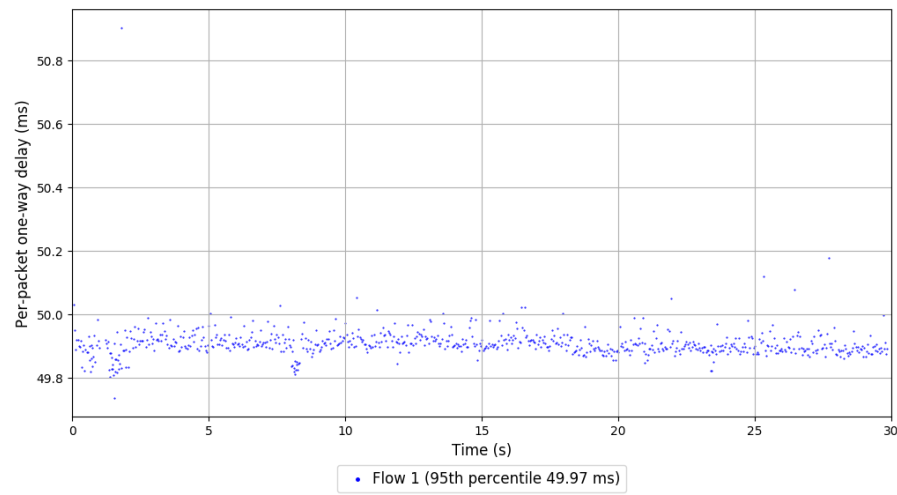
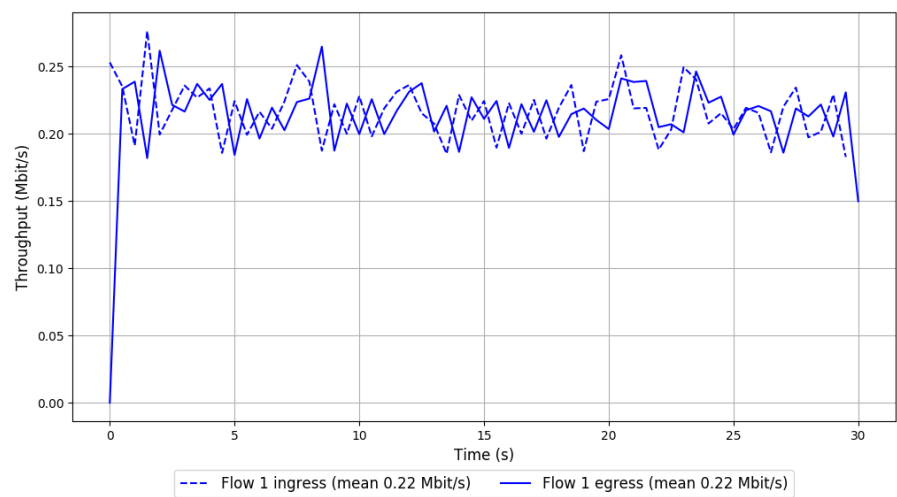


Run 4: Statistics of SCReAM

Start at: 2018-09-08 05:07:55
End at: 2018-09-08 05:08:25
Local clock offset: -0.395 ms
Remote clock offset: -0.094 ms

Below is generated by plot.py at 2018-09-08 07:09:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.973 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.973 ms
Loss rate: 0.38%

Run 4: Report of SReAM — Data Link

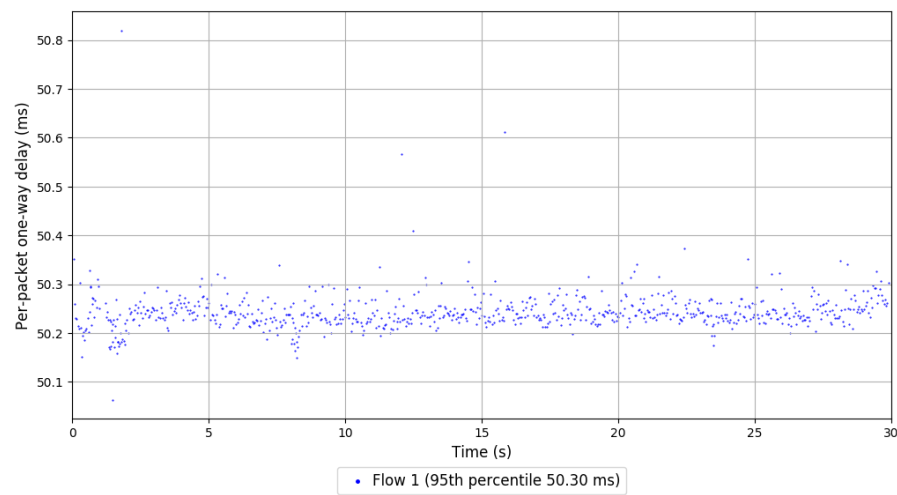
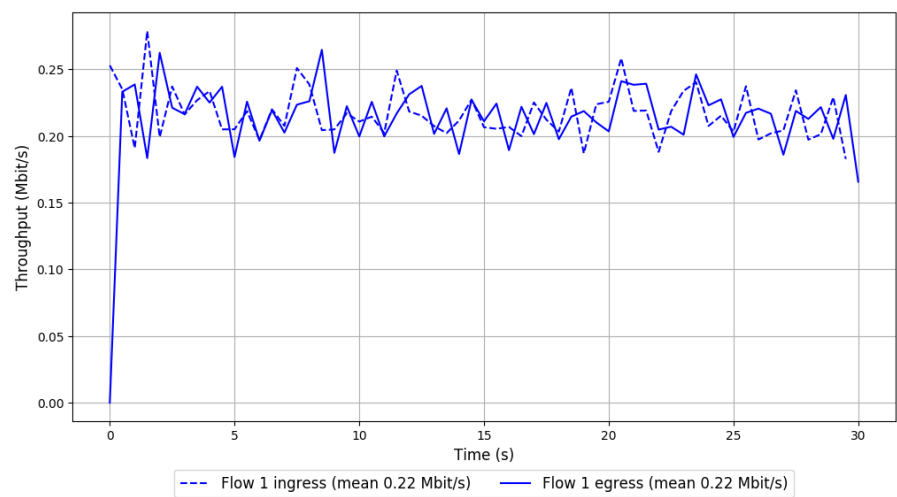


Run 5: Statistics of SCReAM

Start at: 2018-09-08 05:33:56
End at: 2018-09-08 05:34:26
Local clock offset: -0.048 ms
Remote clock offset: -0.021 ms

Below is generated by plot.py at 2018-09-08 07:09:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.295 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.295 ms
Loss rate: 0.26%

Run 5: Report of SReAM — Data Link

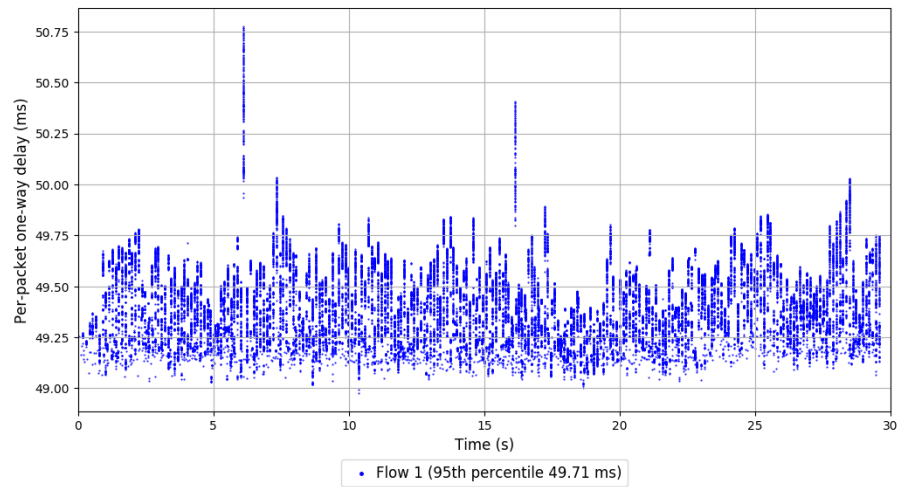
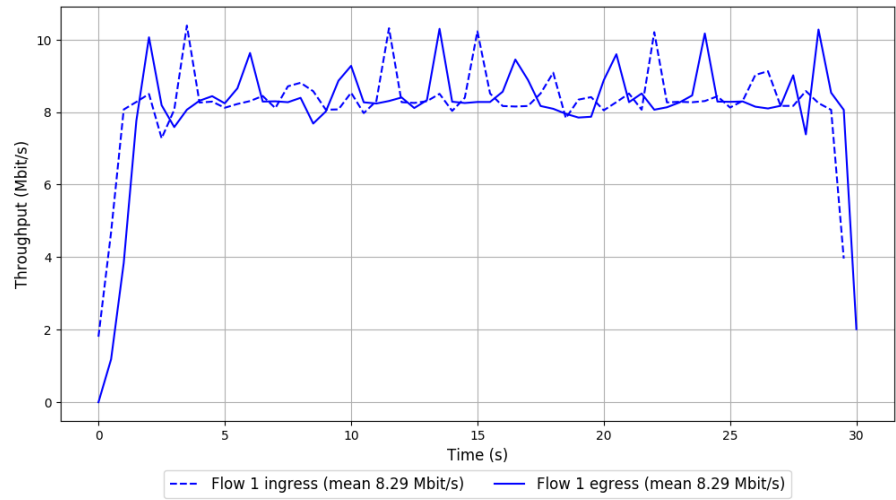


Run 1: Statistics of Sprout

Start at: 2018-09-08 03:40:04
End at: 2018-09-08 03:40:34
Local clock offset: 0.195 ms
Remote clock offset: -0.107 ms

Below is generated by plot.py at 2018-09-08 07:09:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 8.29 Mbit/s
95th percentile per-packet one-way delay: 49.712 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 8.29 Mbit/s
95th percentile per-packet one-way delay: 49.712 ms
Loss rate: 0.40%

Run 1: Report of Sprout — Data Link

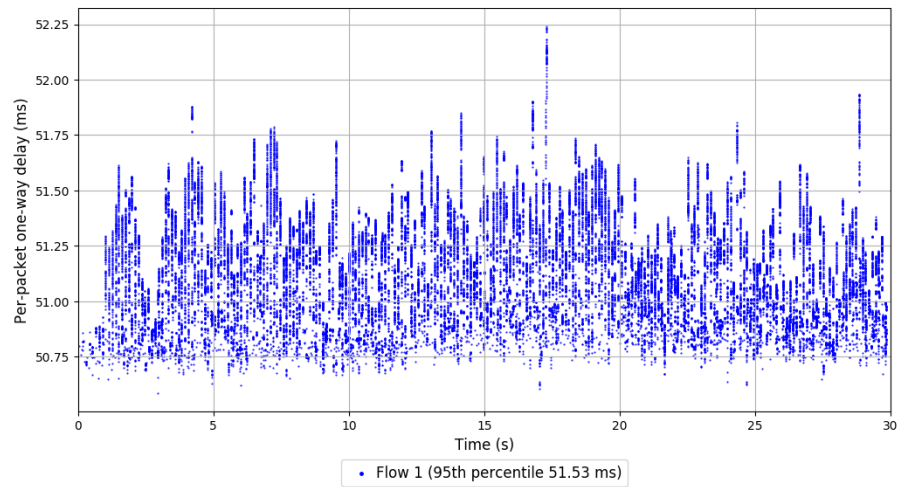
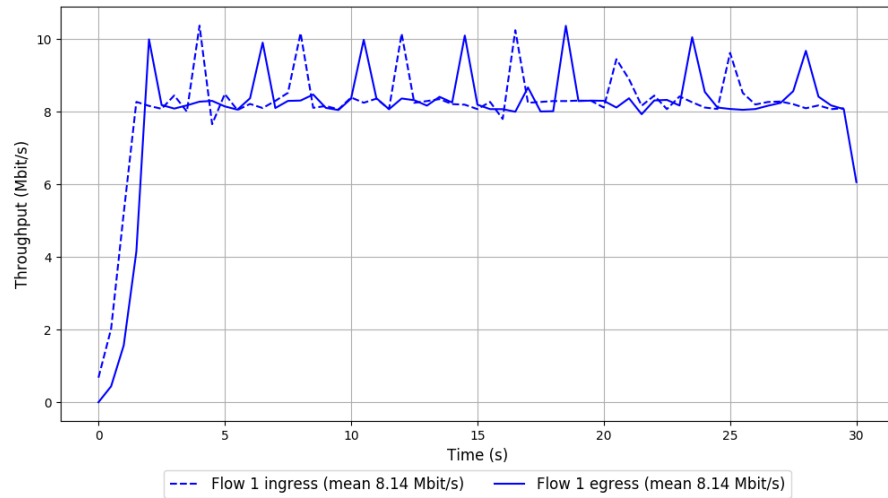


Run 2: Statistics of Sprout

Start at: 2018-09-08 04:06:09
End at: 2018-09-08 04:06:39
Local clock offset: -0.069 ms
Remote clock offset: -0.112 ms

Below is generated by plot.py at 2018-09-08 07:09:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 8.14 Mbit/s
95th percentile per-packet one-way delay: 51.526 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 8.14 Mbit/s
95th percentile per-packet one-way delay: 51.526 ms
Loss rate: 0.42%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-09-08 04:32:03

End at: 2018-09-08 04:32:33

Local clock offset: -0.034 ms

Remote clock offset: -0.05 ms

Below is generated by plot.py at 2018-09-08 07:09:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 8.10 Mbit/s

95th percentile per-packet one-way delay: 49.463 ms

Loss rate: 0.41%

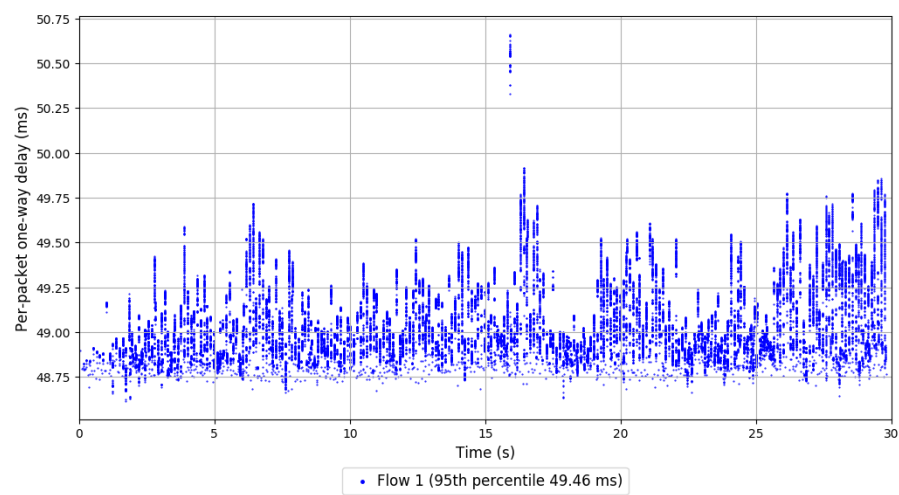
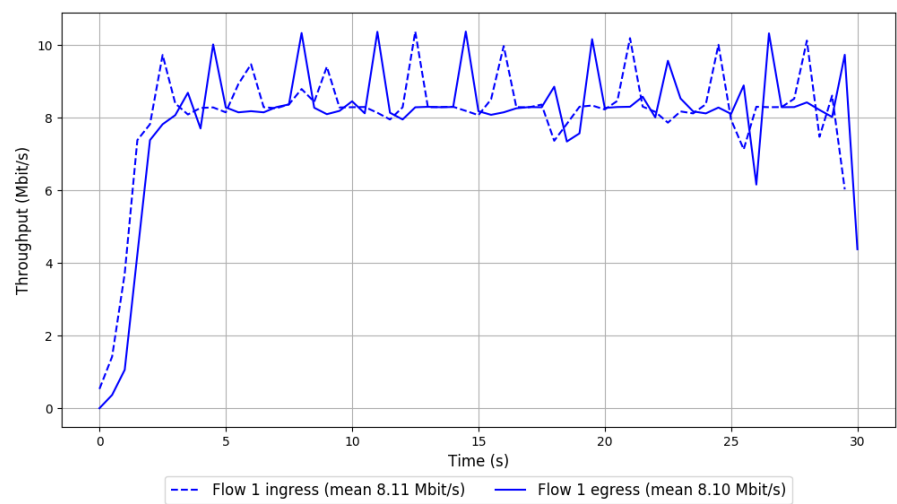
-- Flow 1:

Average throughput: 8.10 Mbit/s

95th percentile per-packet one-way delay: 49.463 ms

Loss rate: 0.41%

Run 3: Report of Sprout — Data Link

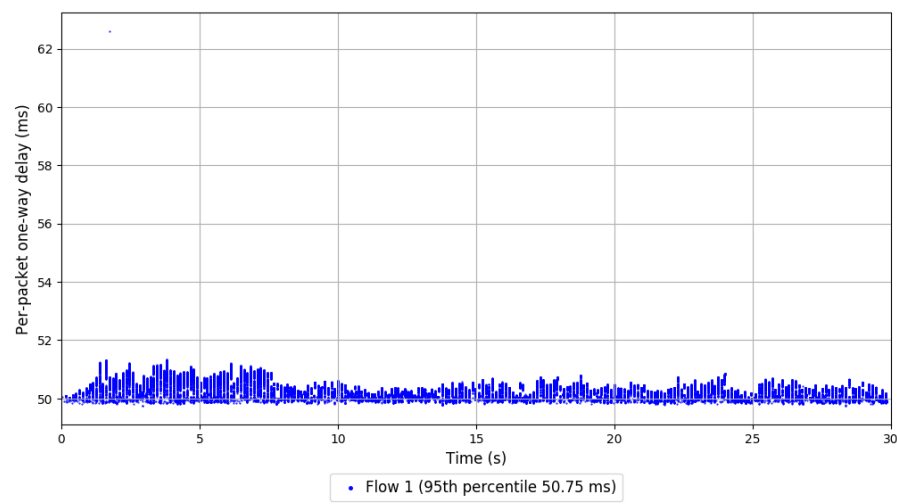
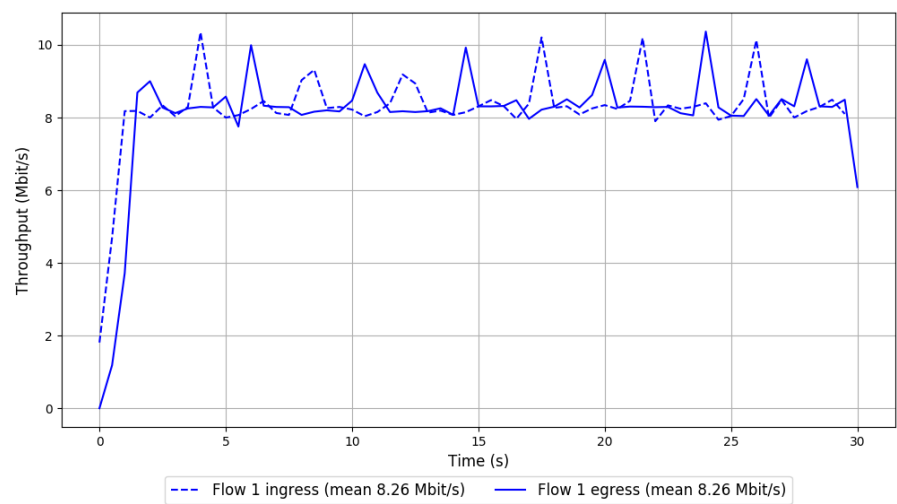


Run 4: Statistics of Sprout

Start at: 2018-09-08 04:58:04
End at: 2018-09-08 04:58:34
Local clock offset: -0.02 ms
Remote clock offset: -0.091 ms

Below is generated by plot.py at 2018-09-08 07:09:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 8.26 Mbit/s
95th percentile per-packet one-way delay: 50.751 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 8.26 Mbit/s
95th percentile per-packet one-way delay: 50.751 ms
Loss rate: 0.41%

Run 4: Report of Sprout — Data Link

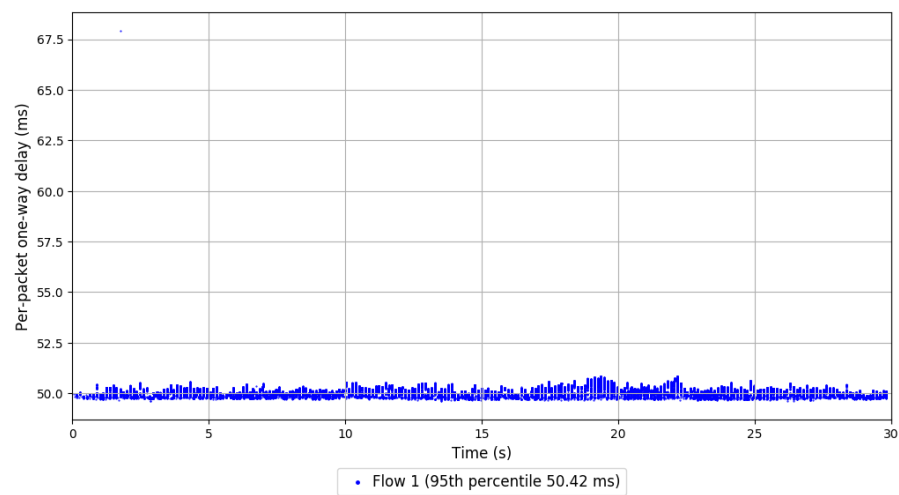
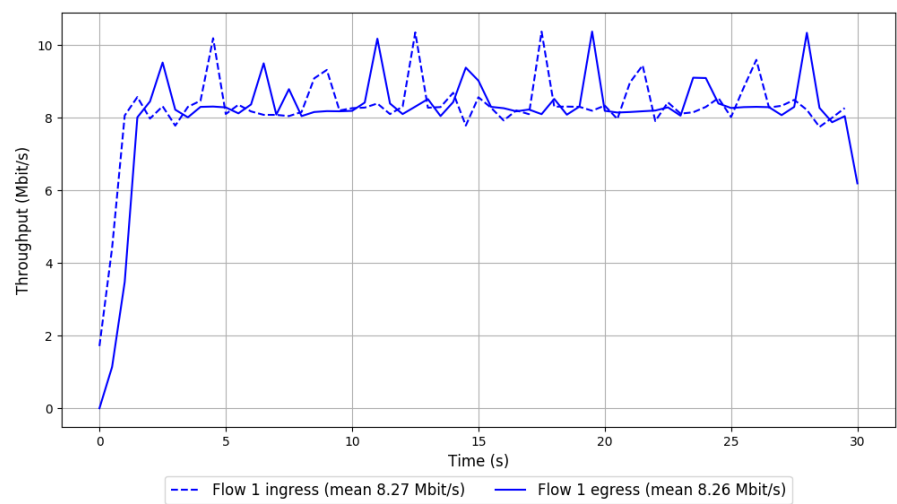


Run 5: Statistics of Sprout

Start at: 2018-09-08 05:24:08
End at: 2018-09-08 05:24:38
Local clock offset: -0.443 ms
Remote clock offset: -0.067 ms

Below is generated by plot.py at 2018-09-08 07:09:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 8.26 Mbit/s
95th percentile per-packet one-way delay: 50.420 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 8.26 Mbit/s
95th percentile per-packet one-way delay: 50.420 ms
Loss rate: 0.42%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2018-09-08 03:58:56

End at: 2018-09-08 03:59:26

Local clock offset: 0.268 ms

Remote clock offset: -0.113 ms

Below is generated by plot.py at 2018-09-08 07:09:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 247.57 Mbit/s

95th percentile per-packet one-way delay: 51.171 ms

Loss rate: 0.35%

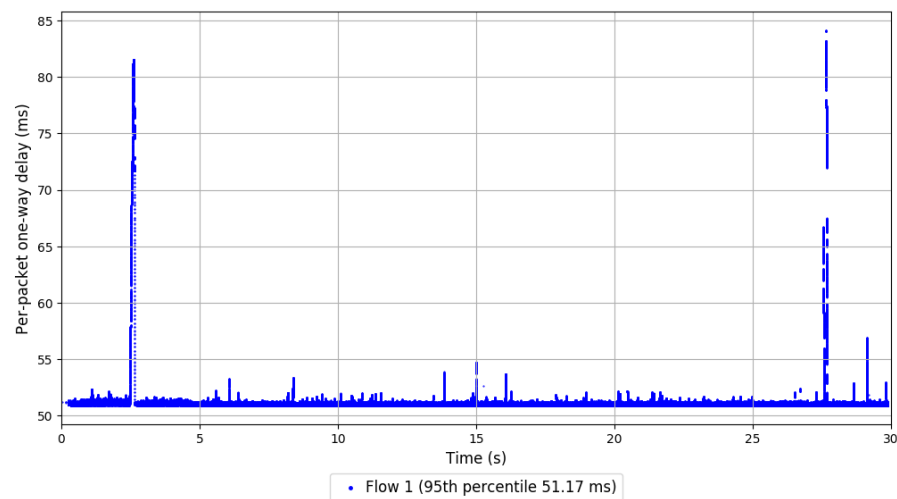
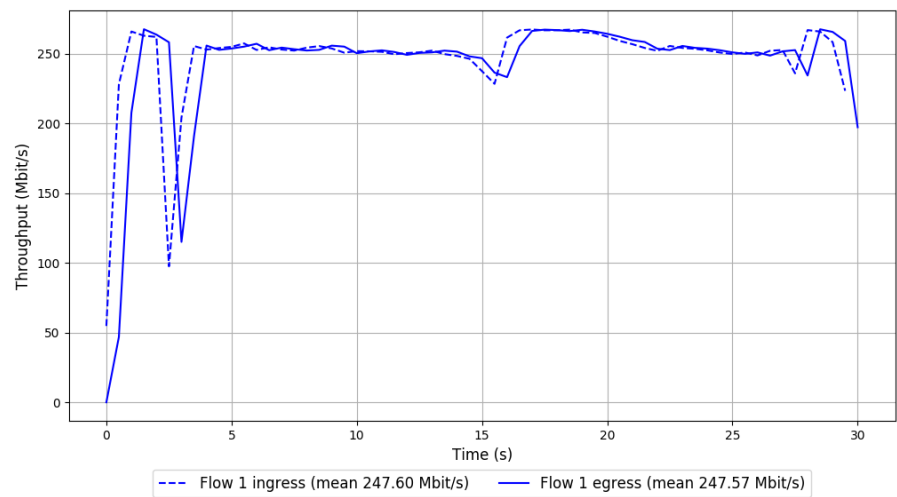
-- Flow 1:

Average throughput: 247.57 Mbit/s

95th percentile per-packet one-way delay: 51.171 ms

Loss rate: 0.35%

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

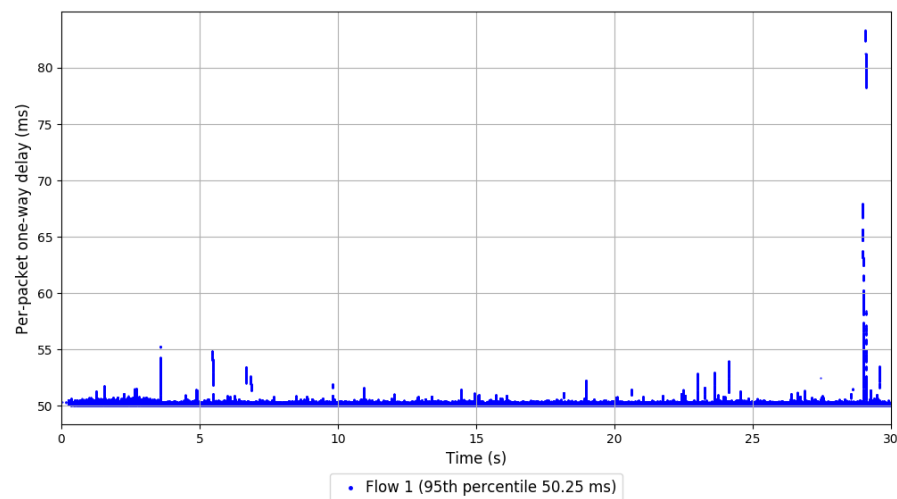
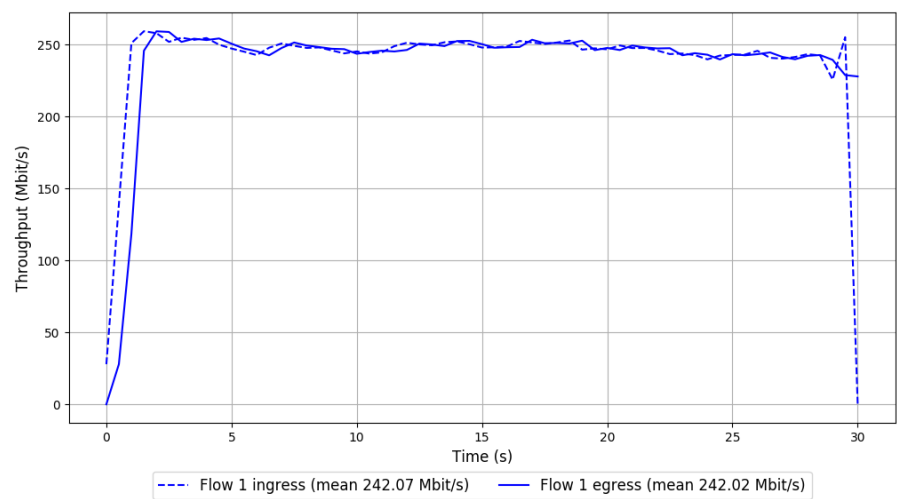


Run 2: Statistics of TaoVA-100x

Start at: 2018-09-08 04:24:51
End at: 2018-09-08 04:25:21
Local clock offset: 0.268 ms
Remote clock offset: -0.004 ms

Below is generated by plot.py at 2018-09-08 07:09:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 242.02 Mbit/s
95th percentile per-packet one-way delay: 50.254 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 242.02 Mbit/s
95th percentile per-packet one-way delay: 50.254 ms
Loss rate: 0.36%

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-09-08 04:50:52

End at: 2018-09-08 04:51:22

Local clock offset: -0.018 ms

Remote clock offset: -0.07 ms

Below is generated by plot.py at 2018-09-08 07:09:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 245.33 Mbit/s

95th percentile per-packet one-way delay: 50.532 ms

Loss rate: 0.34%

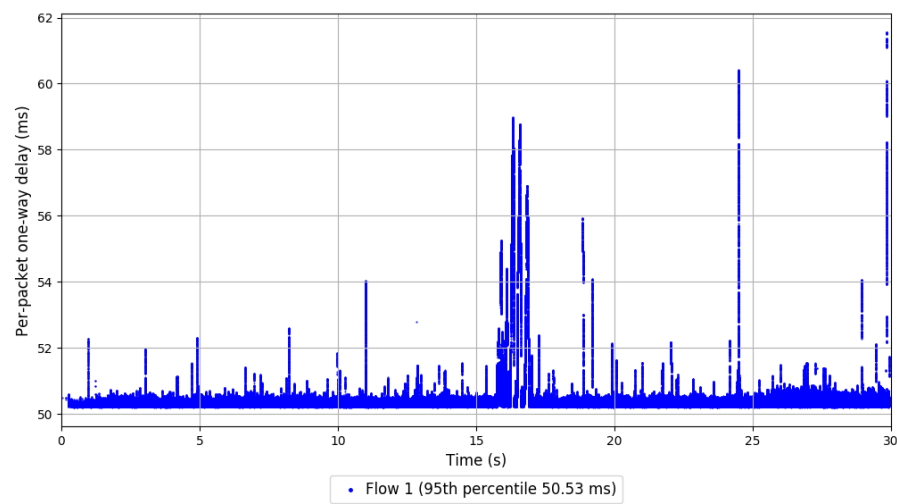
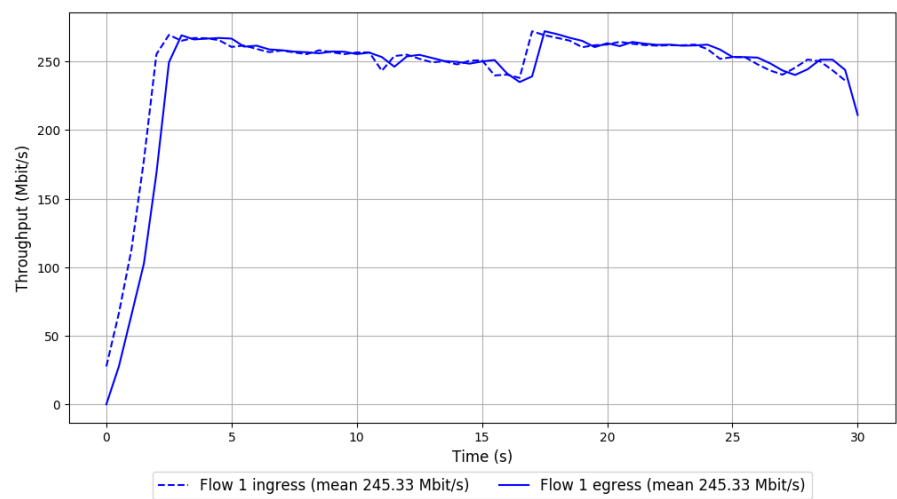
-- Flow 1:

Average throughput: 245.33 Mbit/s

95th percentile per-packet one-way delay: 50.532 ms

Loss rate: 0.34%

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

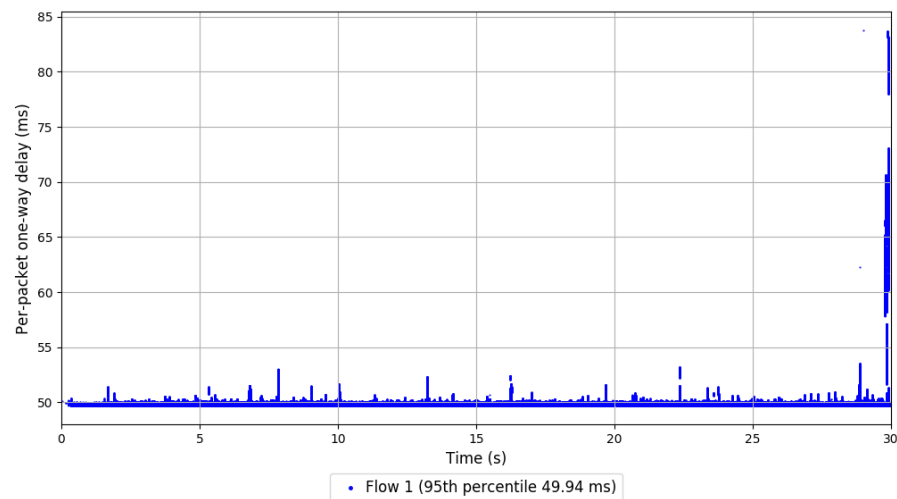
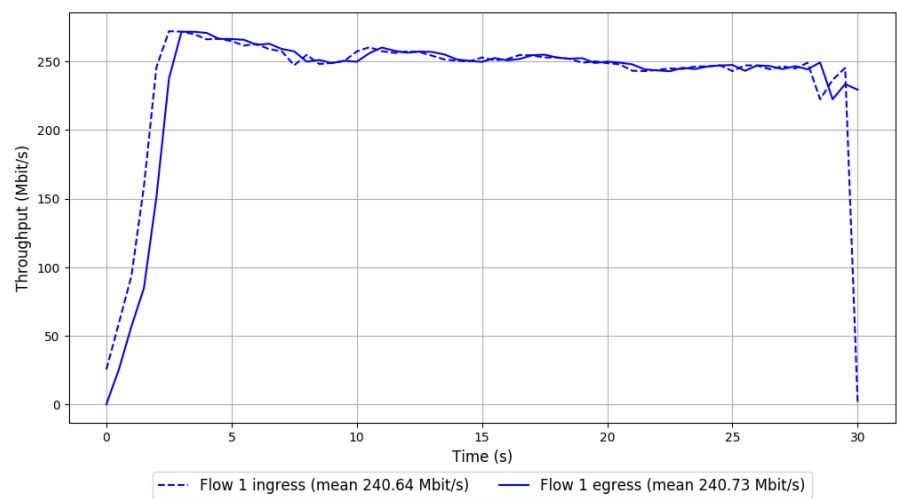


Run 4: Statistics of TaoVA-100x

Start at: 2018-09-08 05:16:56
End at: 2018-09-08 05:17:26
Local clock offset: -0.035 ms
Remote clock offset: -0.069 ms

Below is generated by plot.py at 2018-09-08 07:09:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 240.73 Mbit/s
95th percentile per-packet one-way delay: 49.939 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 240.73 Mbit/s
95th percentile per-packet one-way delay: 49.939 ms
Loss rate: 0.30%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-09-08 05:42:56

End at: 2018-09-08 05:43:26

Local clock offset: -0.46 ms

Remote clock offset: 0.005 ms

Below is generated by plot.py at 2018-09-08 07:10:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 247.81 Mbit/s

95th percentile per-packet one-way delay: 49.094 ms

Loss rate: 0.32%

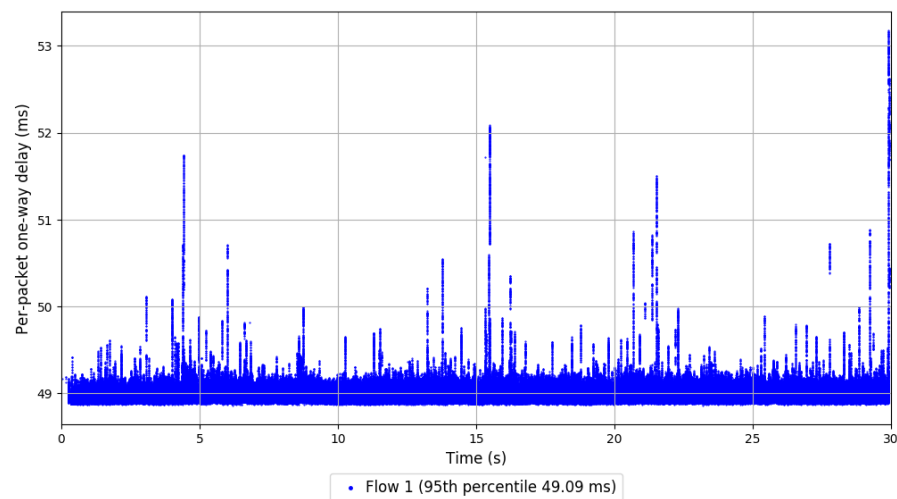
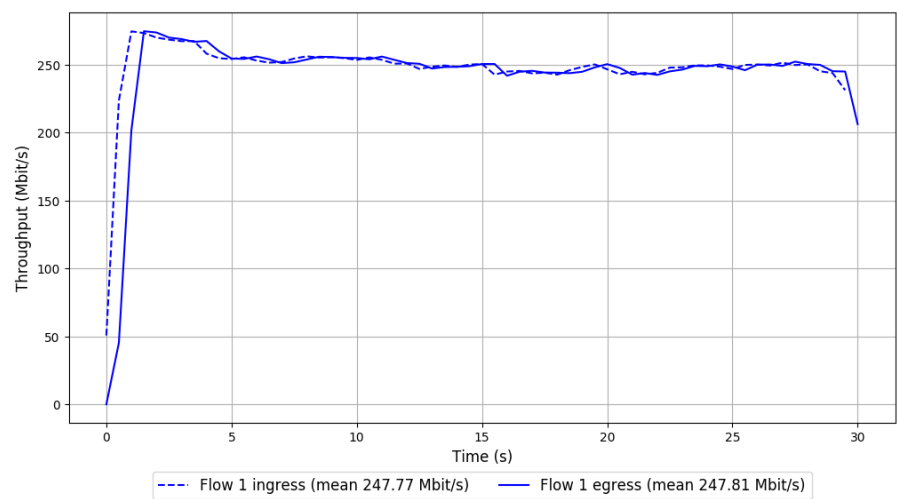
-- Flow 1:

Average throughput: 247.81 Mbit/s

95th percentile per-packet one-way delay: 49.094 ms

Loss rate: 0.32%

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



Run 1: Statistics of TCP Vegas

Start at: 2018-09-08 03:35:49

End at: 2018-09-08 03:36:19

Local clock offset: 0.204 ms

Remote clock offset: -0.11 ms

Below is generated by plot.py at 2018-09-08 07:11:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 514.07 Mbit/s

95th percentile per-packet one-way delay: 51.815 ms

Loss rate: 0.18%

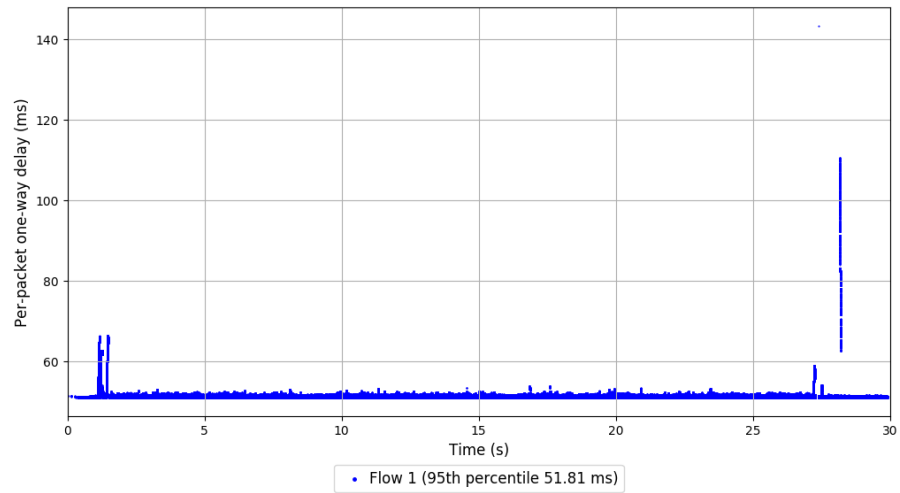
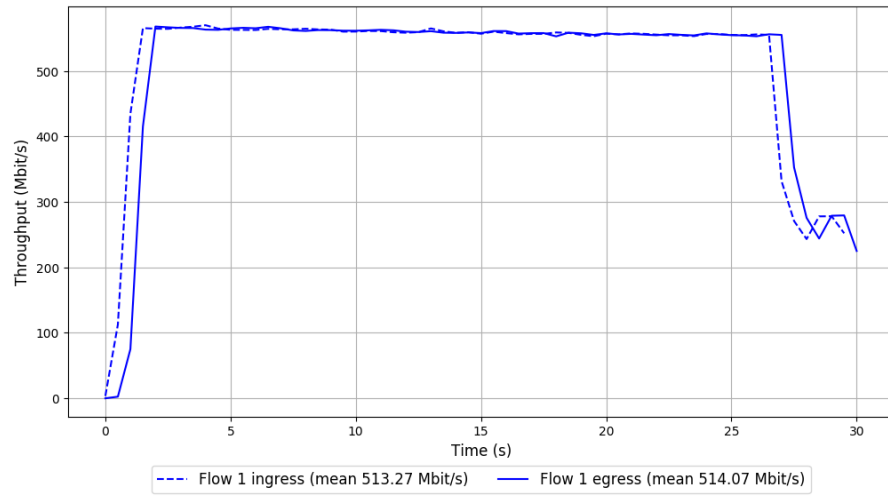
-- Flow 1:

Average throughput: 514.07 Mbit/s

95th percentile per-packet one-way delay: 51.815 ms

Loss rate: 0.18%

Run 1: Report of TCP Vegas — Data Link

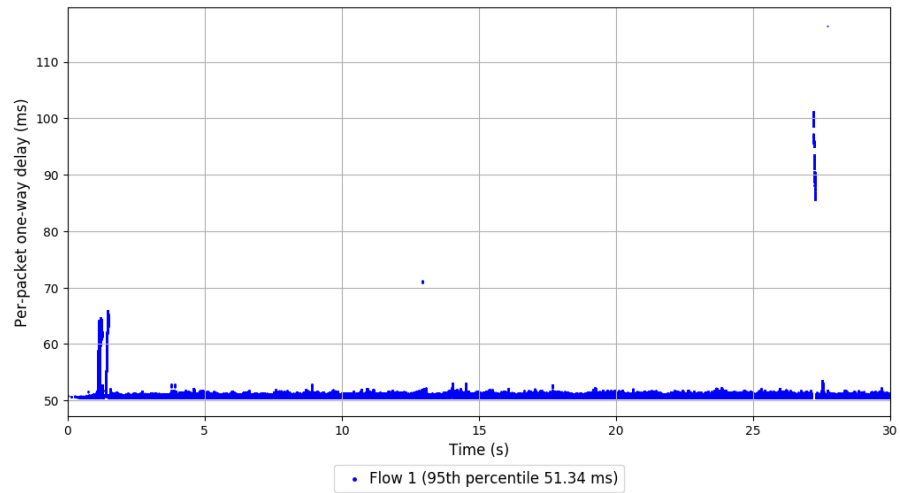
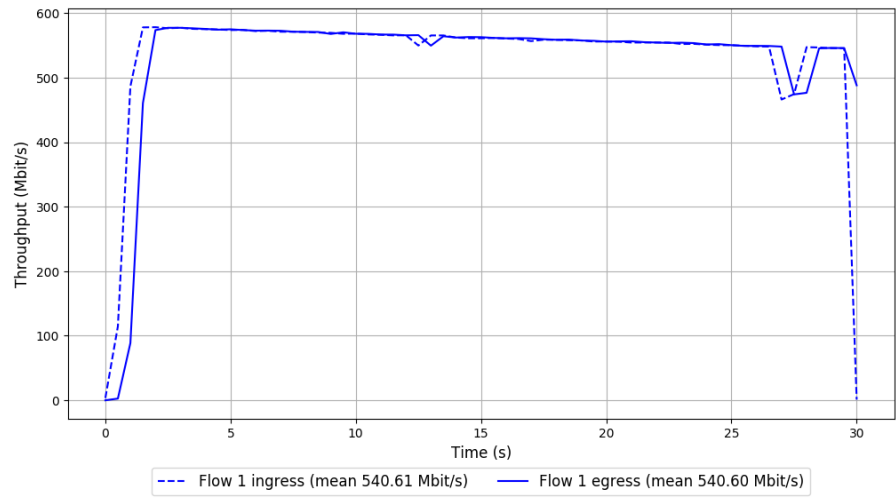


Run 2: Statistics of TCP Vegas

Start at: 2018-09-08 04:01:31
End at: 2018-09-08 04:02:01
Local clock offset: -0.107 ms
Remote clock offset: -0.075 ms

Below is generated by plot.py at 2018-09-08 07:17:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 540.60 Mbit/s
95th percentile per-packet one-way delay: 51.345 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 540.60 Mbit/s
95th percentile per-packet one-way delay: 51.345 ms
Loss rate: 0.34%

Run 2: Report of TCP Vegas — Data Link

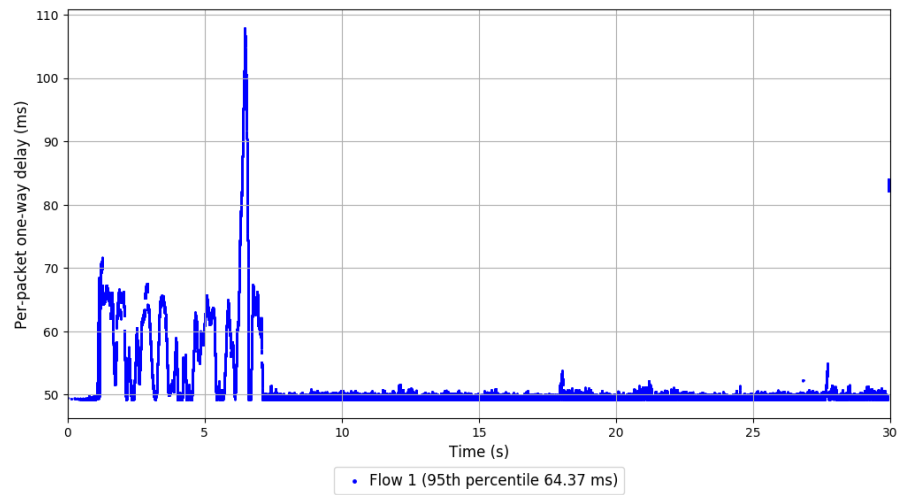
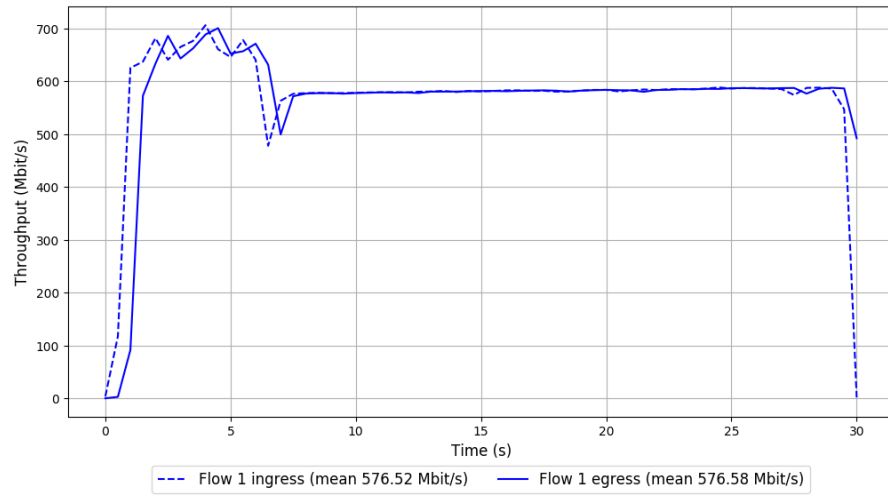


Run 3: Statistics of TCP Vegas

Start at: 2018-09-08 04:27:25
End at: 2018-09-08 04:27:55
Local clock offset: -0.432 ms
Remote clock offset: -0.084 ms

Below is generated by plot.py at 2018-09-08 07:18:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 576.58 Mbit/s
95th percentile per-packet one-way delay: 64.368 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 576.58 Mbit/s
95th percentile per-packet one-way delay: 64.368 ms
Loss rate: 0.33%

Run 3: Report of TCP Vegas — Data Link

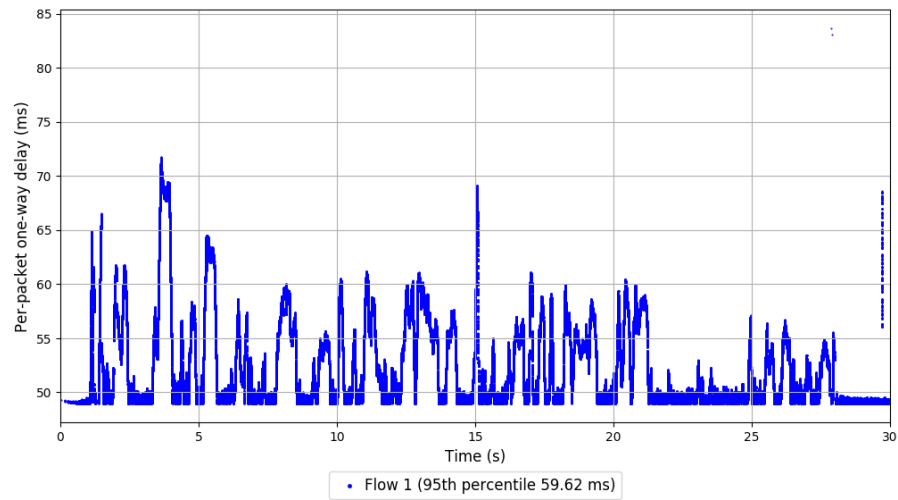
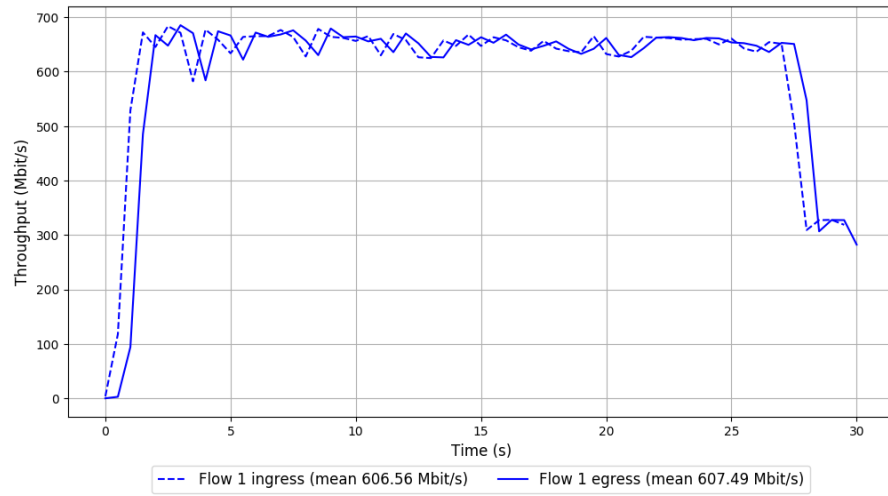


Run 4: Statistics of TCP Vegas

Start at: 2018-09-08 04:53:26
End at: 2018-09-08 04:53:56
Local clock offset: -0.347 ms
Remote clock offset: -0.113 ms

Below is generated by plot.py at 2018-09-08 07:19:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 607.49 Mbit/s
95th percentile per-packet one-way delay: 59.625 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 607.49 Mbit/s
95th percentile per-packet one-way delay: 59.625 ms
Loss rate: 0.18%

Run 4: Report of TCP Vegas — Data Link

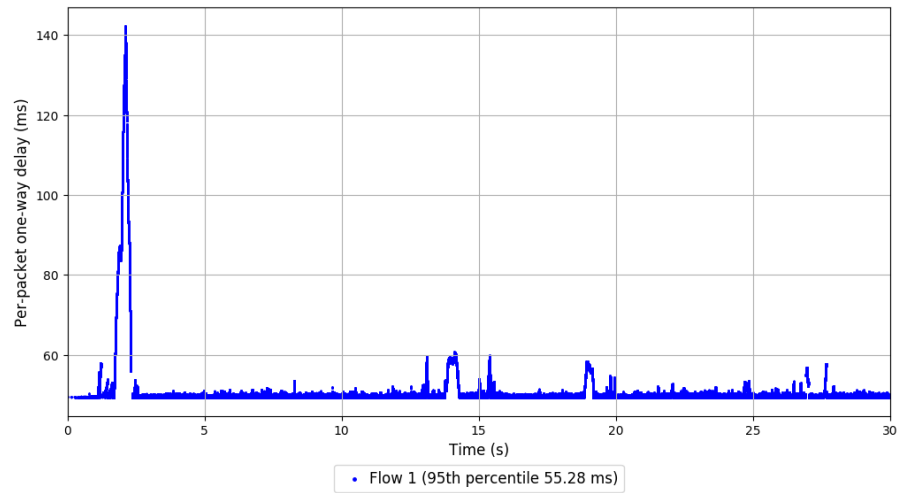
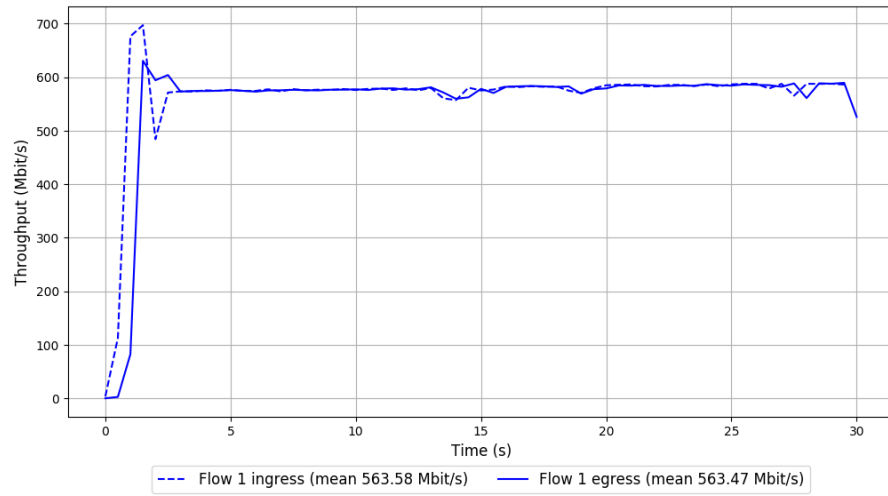


Run 5: Statistics of TCP Vegas

Start at: 2018-09-08 05:19:30
End at: 2018-09-08 05:20:00
Local clock offset: -0.406 ms
Remote clock offset: -0.083 ms

Below is generated by plot.py at 2018-09-08 07:19:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 563.47 Mbit/s
95th percentile per-packet one-way delay: 55.279 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 563.47 Mbit/s
95th percentile per-packet one-way delay: 55.279 ms
Loss rate: 0.35%

Run 5: Report of TCP Vegas — Data Link

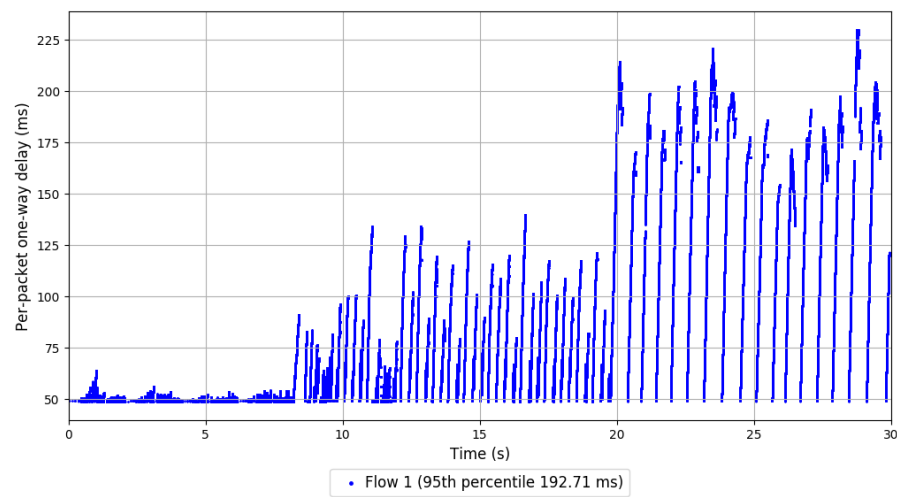
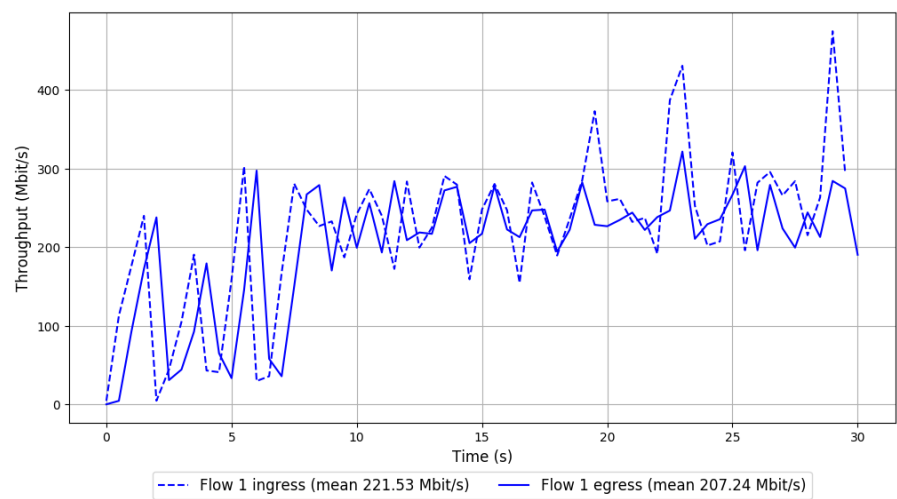


Run 1: Statistics of Verus

Start at: 2018-09-08 03:50:55
End at: 2018-09-08 03:51:25
Local clock offset: -0.161 ms
Remote clock offset: -0.106 ms

Below is generated by plot.py at 2018-09-08 07:19:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 207.24 Mbit/s
95th percentile per-packet one-way delay: 192.708 ms
Loss rate: 6.77%
-- Flow 1:
Average throughput: 207.24 Mbit/s
95th percentile per-packet one-way delay: 192.708 ms
Loss rate: 6.77%

Run 1: Report of Verus — Data Link

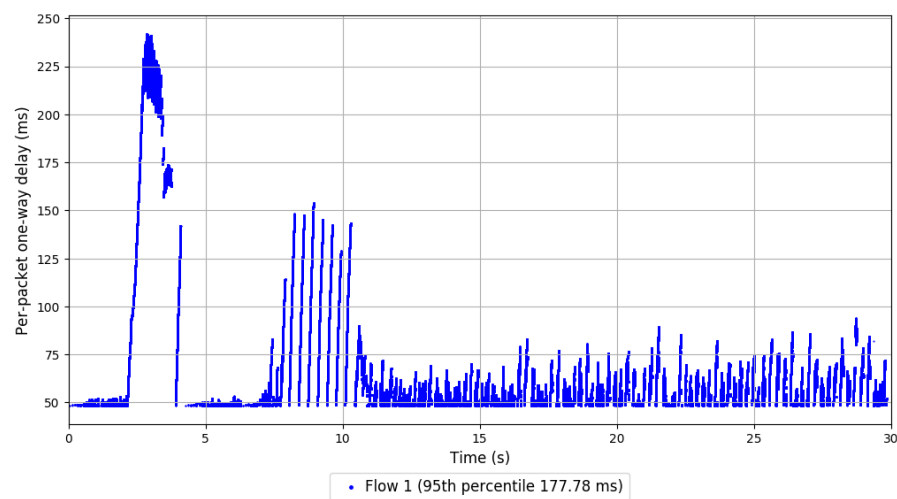
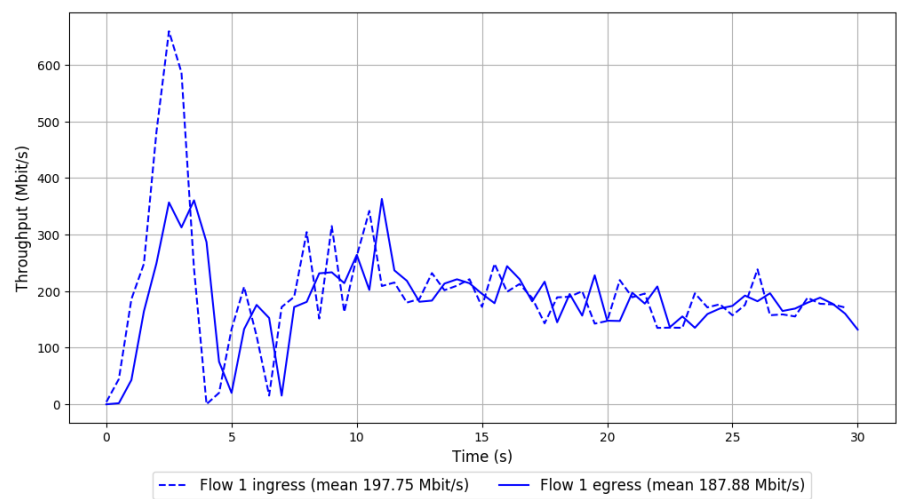


Run 2: Statistics of Verus

Start at: 2018-09-08 04:16:56
End at: 2018-09-08 04:17:26
Local clock offset: -0.418 ms
Remote clock offset: -0.112 ms

Below is generated by plot.py at 2018-09-08 07:19:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 187.88 Mbit/s
95th percentile per-packet one-way delay: 177.778 ms
Loss rate: 5.53%
-- Flow 1:
Average throughput: 187.88 Mbit/s
95th percentile per-packet one-way delay: 177.778 ms
Loss rate: 5.53%

Run 2: Report of Verus — Data Link

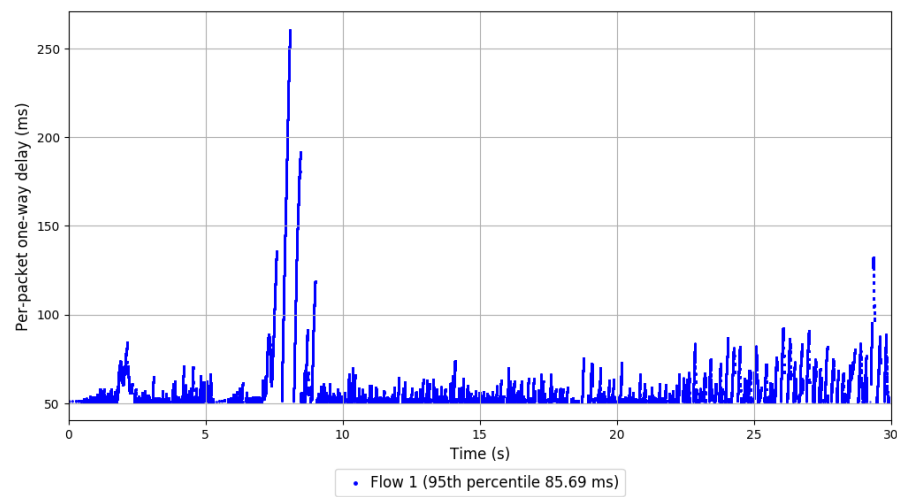
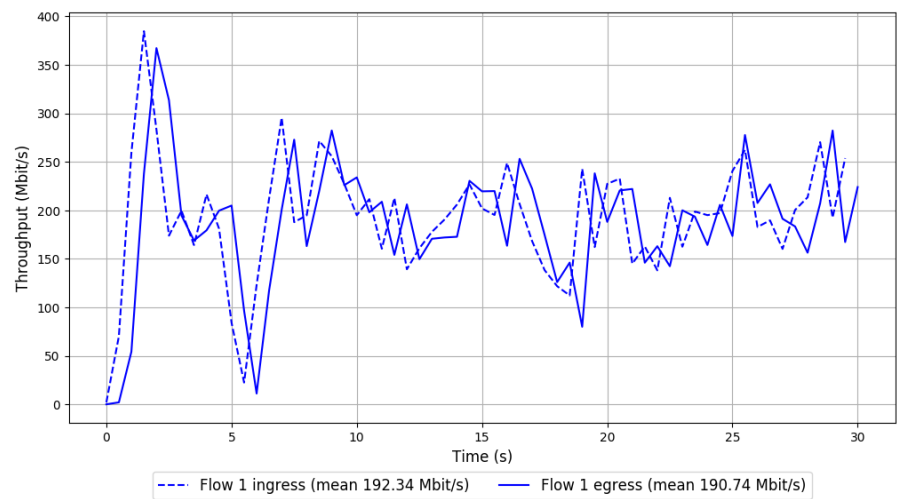


Run 3: Statistics of Verus

Start at: 2018-09-08 04:42:58
End at: 2018-09-08 04:43:28
Local clock offset: 0.344 ms
Remote clock offset: -0.137 ms

Below is generated by plot.py at 2018-09-08 07:19:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 190.74 Mbit/s
95th percentile per-packet one-way delay: 85.687 ms
Loss rate: 1.15%
-- Flow 1:
Average throughput: 190.74 Mbit/s
95th percentile per-packet one-way delay: 85.687 ms
Loss rate: 1.15%

Run 3: Report of Verus — Data Link

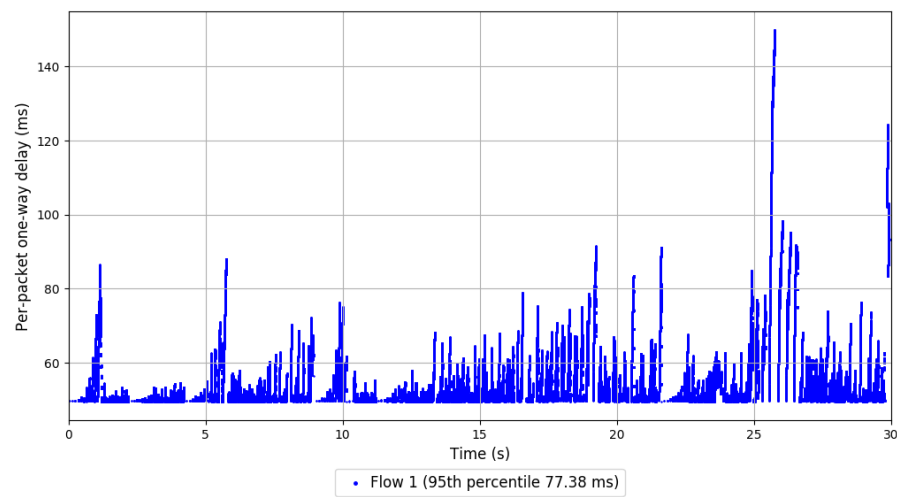
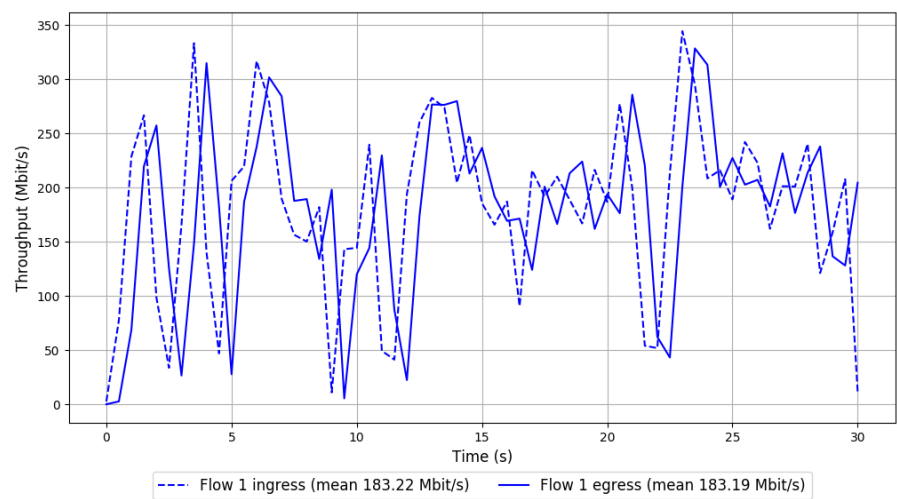


Run 4: Statistics of Verus

Start at: 2018-09-08 05:09:02
End at: 2018-09-08 05:09:32
Local clock offset: -0.036 ms
Remote clock offset: -0.128 ms

Below is generated by plot.py at 2018-09-08 07:19:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 183.19 Mbit/s
95th percentile per-packet one-way delay: 77.377 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 183.19 Mbit/s
95th percentile per-packet one-way delay: 77.377 ms
Loss rate: 0.48%

Run 4: Report of Verus — Data Link

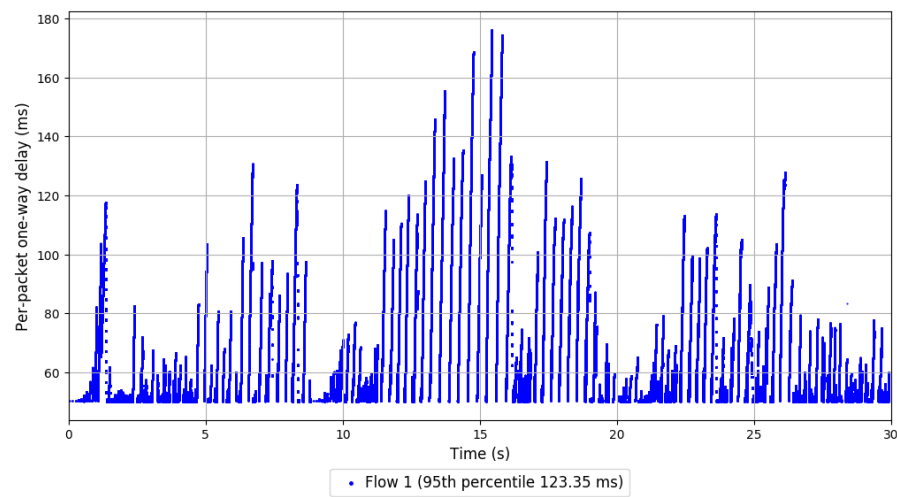
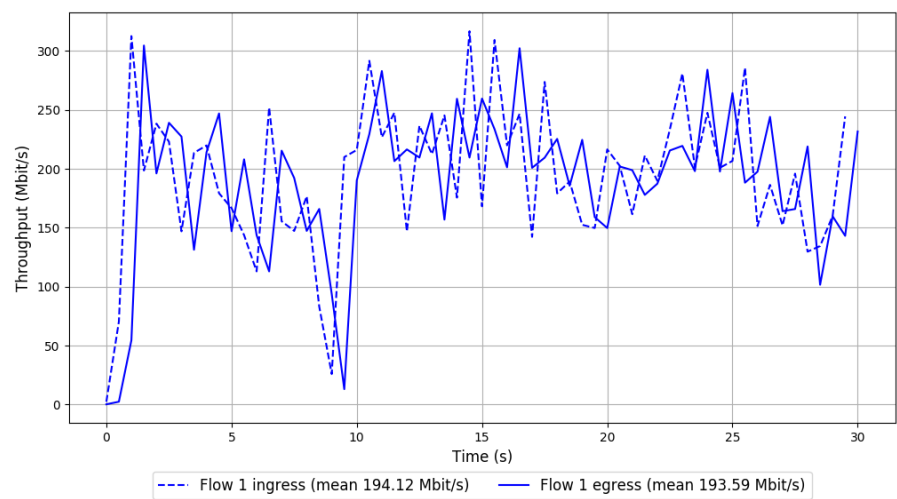


Run 5: Statistics of Verus

Start at: 2018-09-08 05:35:03
End at: 2018-09-08 05:35:33
Local clock offset: -0.062 ms
Remote clock offset: -0.075 ms

Below is generated by plot.py at 2018-09-08 07:21:39
Datalink statistics
-- Total of 1 flow:
Average throughput: 193.59 Mbit/s
95th percentile per-packet one-way delay: 123.352 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 193.59 Mbit/s
95th percentile per-packet one-way delay: 123.352 ms
Loss rate: 0.36%

Run 5: Report of Verus — Data Link

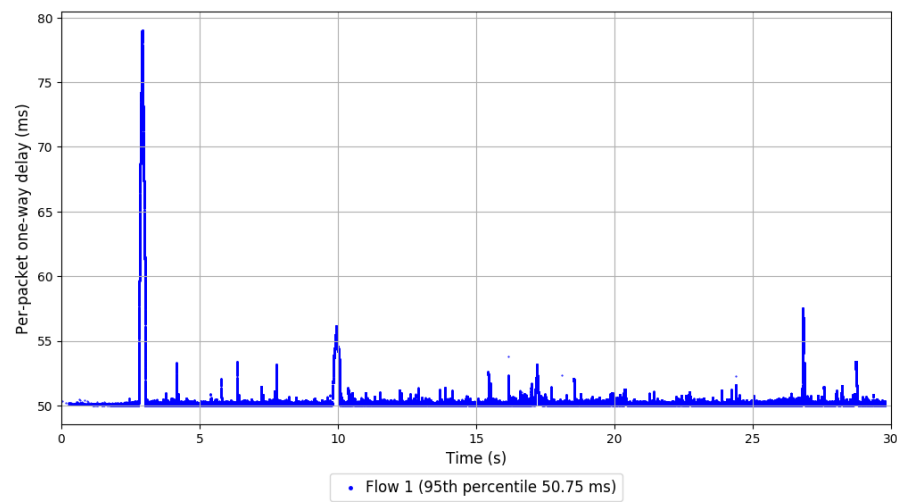
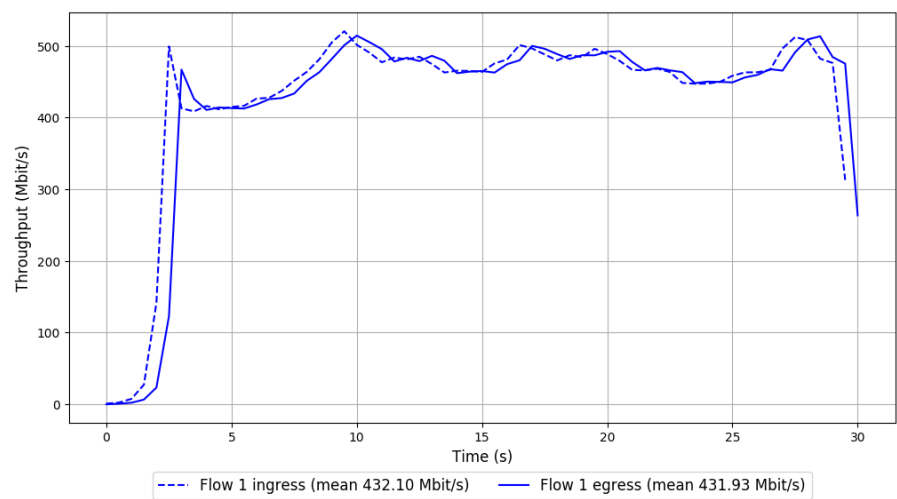


Run 1: Statistics of PCC-Vivace

Start at: 2018-09-08 03:41:11
End at: 2018-09-08 03:41:41
Local clock offset: -0.113 ms
Remote clock offset: -0.127 ms

Below is generated by plot.py at 2018-09-08 07:22:27
Datalink statistics
-- Total of 1 flow:
Average throughput: 431.93 Mbit/s
95th percentile per-packet one-way delay: 50.754 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 431.93 Mbit/s
95th percentile per-packet one-way delay: 50.754 ms
Loss rate: 0.38%

Run 1: Report of PCC-Vivace — Data Link

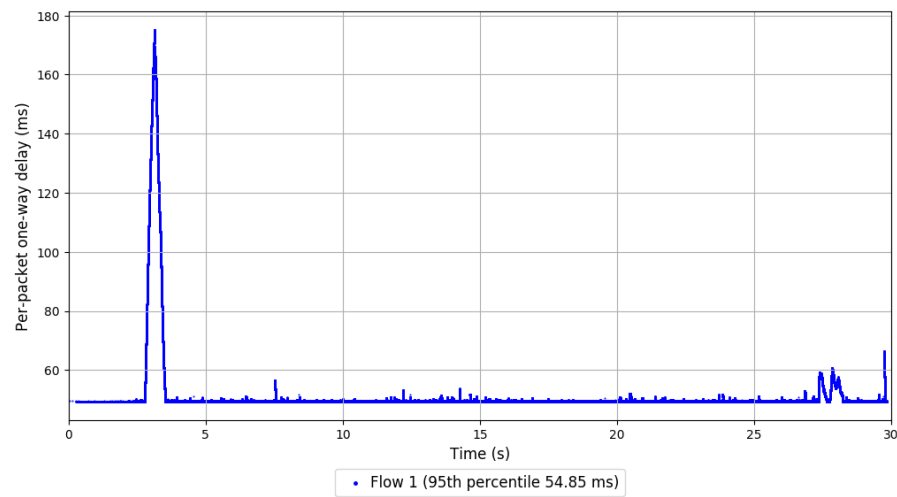
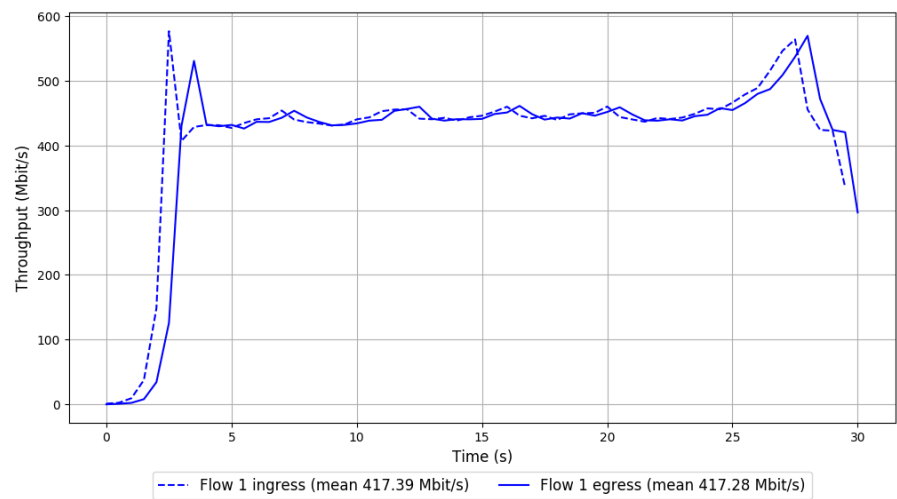


Run 2: Statistics of PCC-Vivace

Start at: 2018-09-08 04:07:16
End at: 2018-09-08 04:07:46
Local clock offset: -0.108 ms
Remote clock offset: -0.115 ms

Below is generated by plot.py at 2018-09-08 07:22:27
Datalink statistics
-- Total of 1 flow:
Average throughput: 417.28 Mbit/s
95th percentile per-packet one-way delay: 54.851 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 417.28 Mbit/s
95th percentile per-packet one-way delay: 54.851 ms
Loss rate: 0.36%

Run 2: Report of PCC-Vivace — Data Link

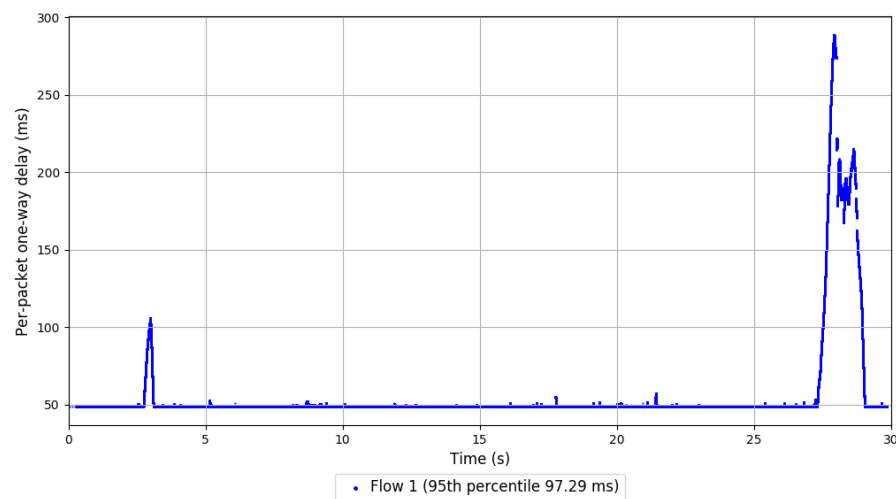
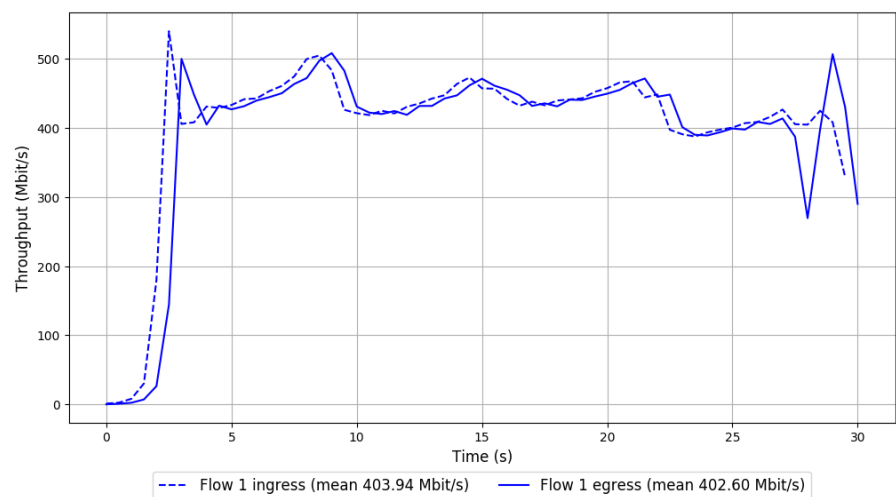


Run 3: Statistics of PCC-Vivace

Start at: 2018-09-08 04:33:11
End at: 2018-09-08 04:33:41
Local clock offset: -0.057 ms
Remote clock offset: -0.109 ms

Below is generated by plot.py at 2018-09-08 07:22:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 402.60 Mbit/s
95th percentile per-packet one-way delay: 97.286 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 402.60 Mbit/s
95th percentile per-packet one-way delay: 97.286 ms
Loss rate: 0.66%

Run 3: Report of PCC-Vivace — Data Link

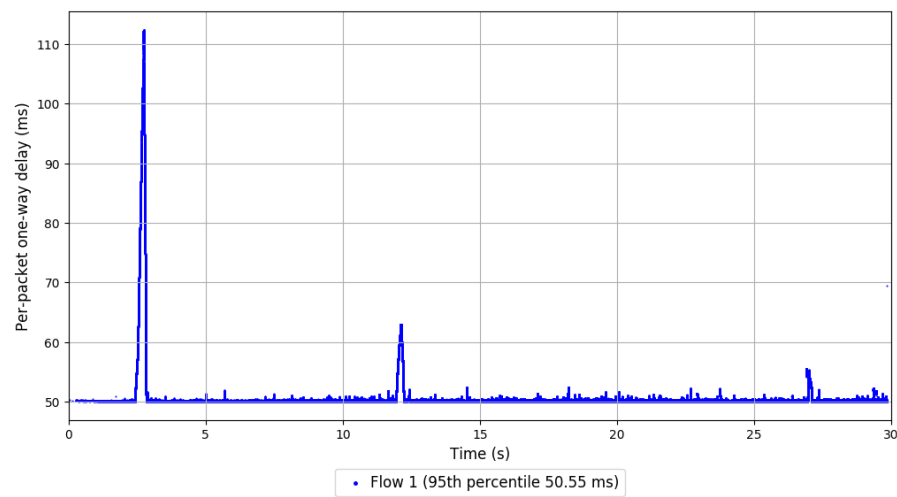
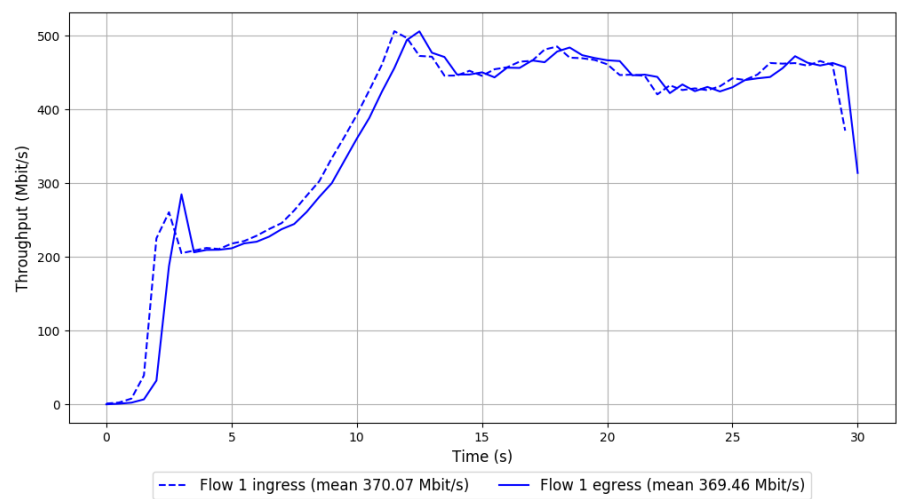


Run 4: Statistics of PCC-Vivace

Start at: 2018-09-08 04:59:11
End at: 2018-09-08 04:59:41
Local clock offset: -0.007 ms
Remote clock offset: -0.099 ms

Below is generated by plot.py at 2018-09-08 07:22:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 369.46 Mbit/s
95th percentile per-packet one-way delay: 50.546 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 369.46 Mbit/s
95th percentile per-packet one-way delay: 50.546 ms
Loss rate: 0.48%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2018-09-08 05:25:15

End at: 2018-09-08 05:25:45

Local clock offset: -0.09 ms

Remote clock offset: -0.077 ms

Below is generated by plot.py at 2018-09-08 07:22:52

Datalink statistics

-- Total of 1 flow:

Average throughput: 408.16 Mbit/s

95th percentile per-packet one-way delay: 51.662 ms

Loss rate: 0.33%

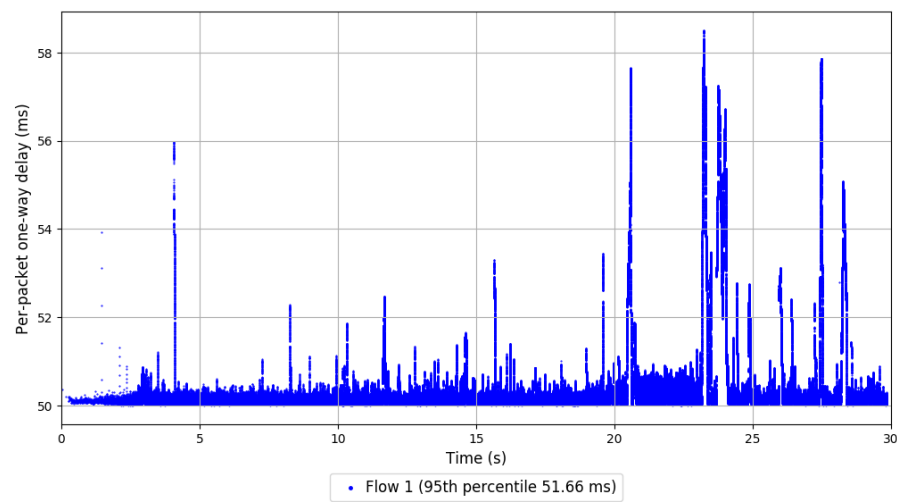
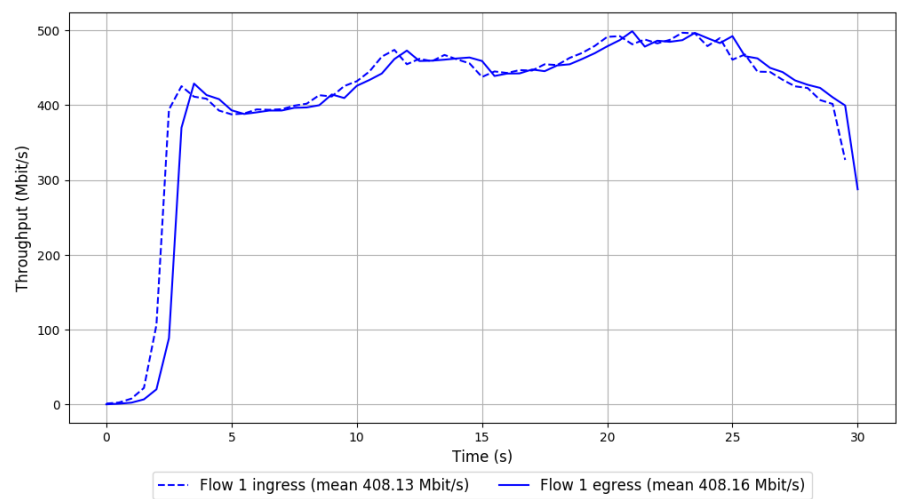
-- Flow 1:

Average throughput: 408.16 Mbit/s

95th percentile per-packet one-way delay: 51.662 ms

Loss rate: 0.33%

Run 5: Report of PCC-Vivace — Data Link

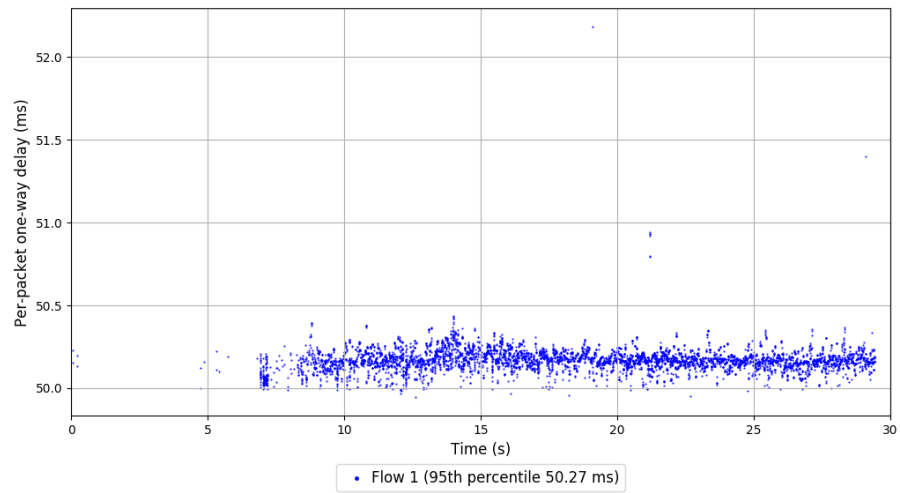
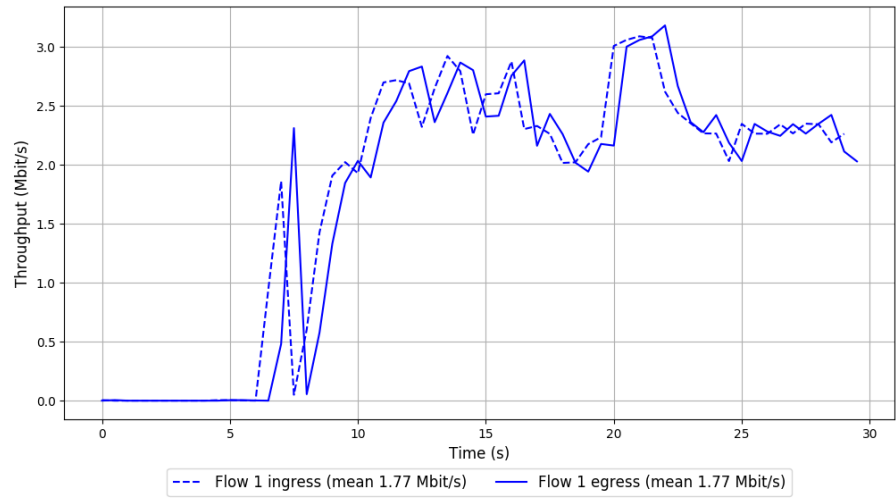


Run 1: Statistics of WebRTC media

Start at: 2018-09-08 03:34:42
End at: 2018-09-08 03:35:12
Local clock offset: -0.175 ms
Remote clock offset: -0.131 ms

Below is generated by plot.py at 2018-09-08 07:22:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.77 Mbit/s
95th percentile per-packet one-way delay: 50.267 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 1.77 Mbit/s
95th percentile per-packet one-way delay: 50.267 ms
Loss rate: 0.45%

Run 1: Report of WebRTC media — Data Link

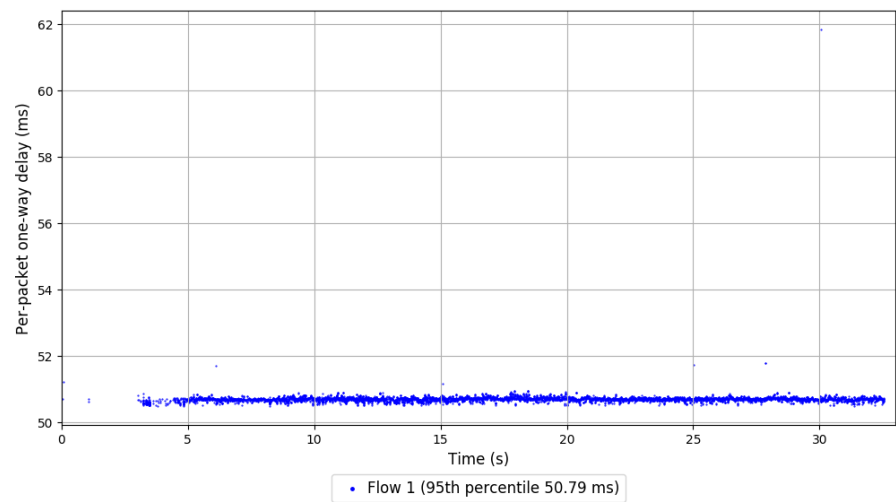
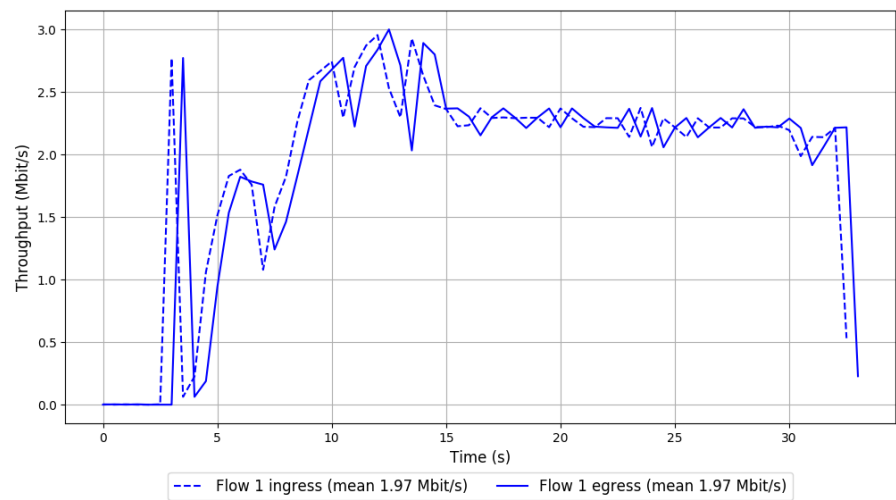


Run 2: Statistics of WebRTC media

Start at: 2018-09-08 04:00:25
End at: 2018-09-08 04:00:55
Local clock offset: -0.103 ms
Remote clock offset: -0.095 ms

Below is generated by plot.py at 2018-09-08 07:22:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.97 Mbit/s
95th percentile per-packet one-way delay: 50.791 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 1.97 Mbit/s
95th percentile per-packet one-way delay: 50.791 ms
Loss rate: 0.41%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-09-08 04:26:19

End at: 2018-09-08 04:26:49

Local clock offset: -0.064 ms

Remote clock offset: -0.1 ms

Below is generated by plot.py at 2018-09-08 07:22:52

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.92 Mbit/s

95th percentile per-packet one-way delay: 48.963 ms

Loss rate: 0.31%

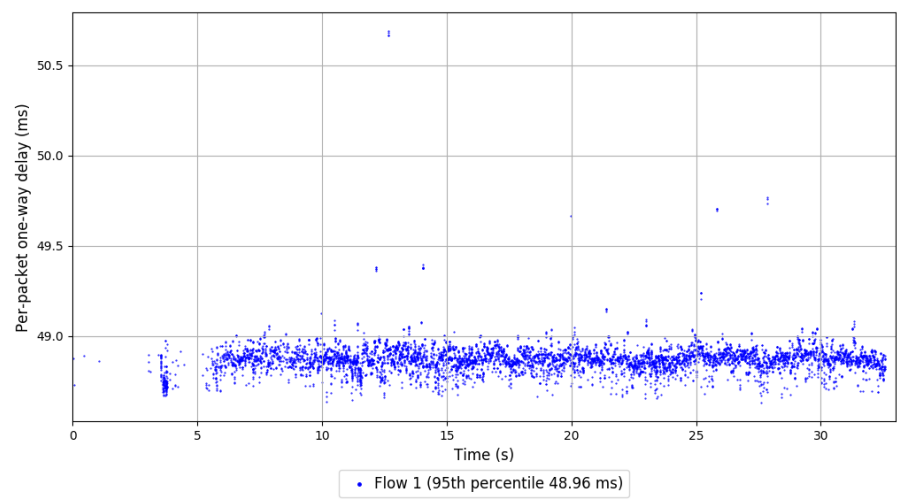
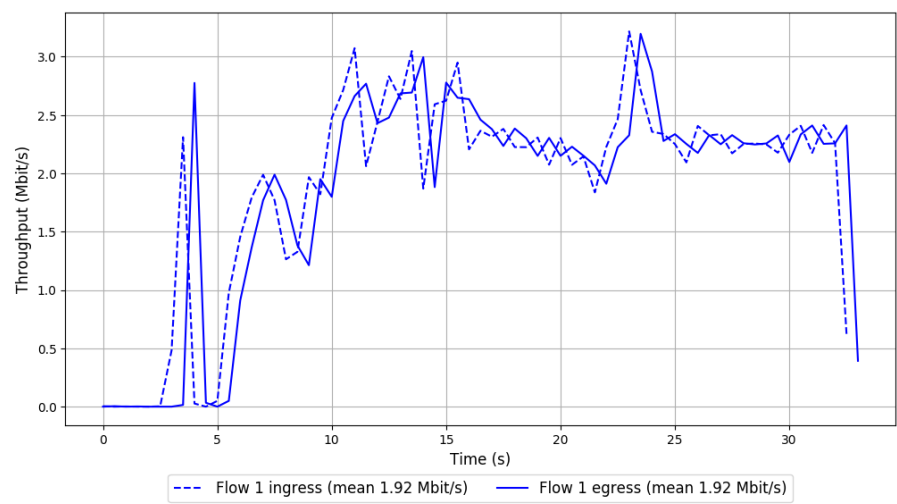
-- Flow 1:

Average throughput: 1.92 Mbit/s

95th percentile per-packet one-way delay: 48.963 ms

Loss rate: 0.31%

Run 3: Report of WebRTC media — Data Link

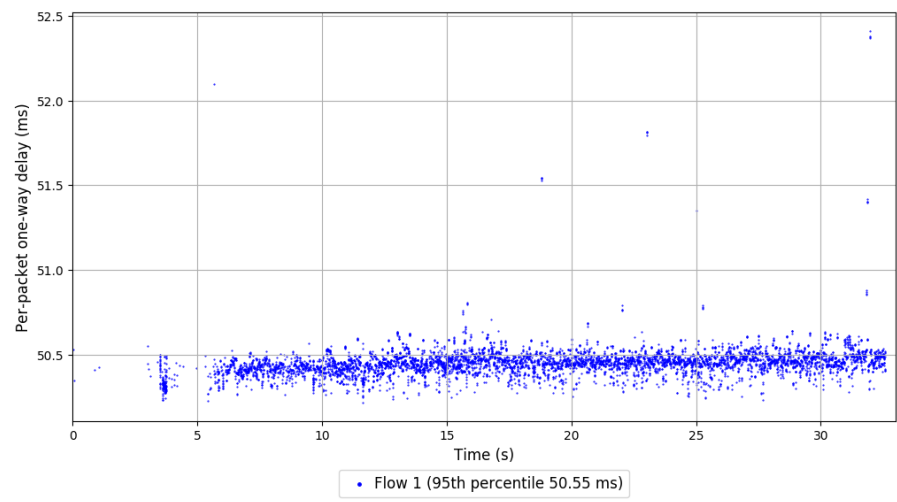
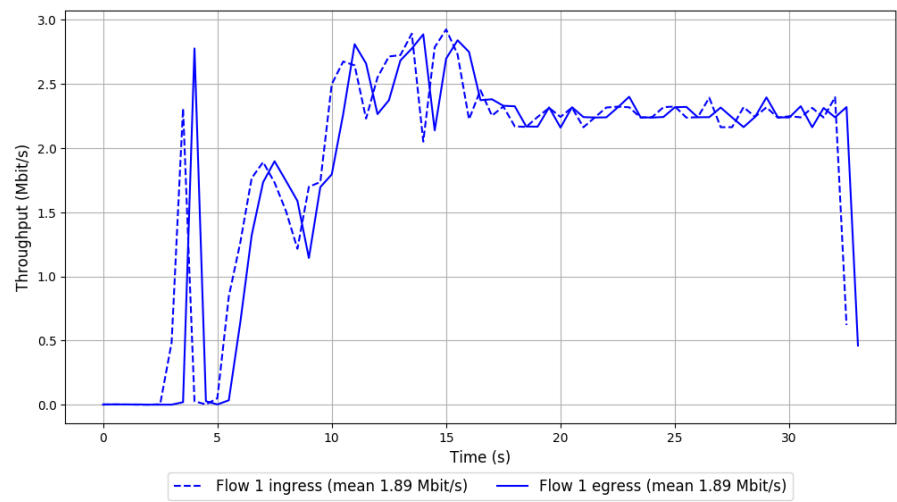


Run 4: Statistics of WebRTC media

Start at: 2018-09-08 04:52:19
End at: 2018-09-08 04:52:49
Local clock offset: -0.037 ms
Remote clock offset: -0.114 ms

Below is generated by plot.py at 2018-09-08 07:22:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 50.546 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 50.546 ms
Loss rate: 0.38%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-09-08 05:18:24
End at: 2018-09-08 05:18:54
Local clock offset: -0.07 ms
Remote clock offset: -0.095 ms

Below is generated by plot.py at 2018-09-08 07:22:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.88 Mbit/s
95th percentile per-packet one-way delay: 50.289 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 1.88 Mbit/s
95th percentile per-packet one-way delay: 50.289 ms
Loss rate: 0.37%

Run 5: Report of WebRTC media — Data Link

