

Pantheon Report

Generated at 2018-10-10 05:31:16 (UTC).

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

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:

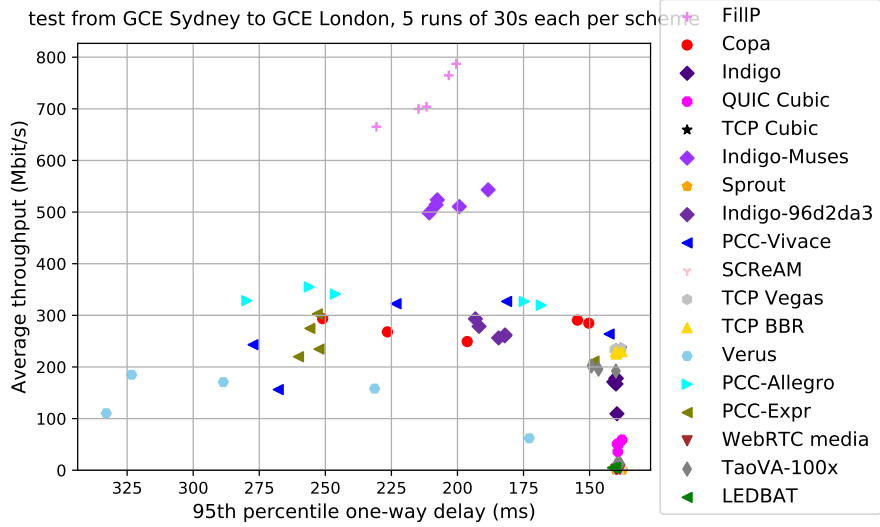
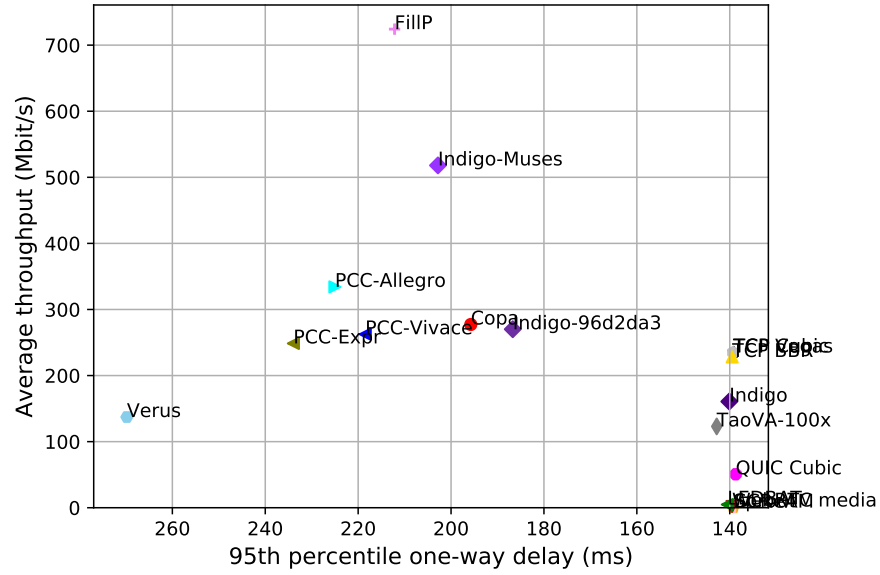
```
Linux 4.15.0-1021-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

```
branch: muses @ 2e19c0464530faa92c63f8217c9971438a26a3be
third_party/fillp @ 5332fc9127c63565e13f4933b336c02d1aabdac6
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
```

third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851

test from GCE Sydney 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	228.14	139.47	0.00
Copa	5	277.26	195.75	0.02
TCP Cubic	5	235.10	139.14	0.00
FillP	5	724.21	212.16	4.93
Indigo	5	160.72	140.09	0.00
Indigo-96d2da3	5	270.09	186.72	0.05
LEDBAT	5	4.83	140.52	0.00
Indigo-Muses	5	518.01	202.82	0.31
PCC-Allegro	5	334.20	225.00	3.98
PCC-Expr	5	248.62	233.95	4.42
QUIC Cubic	5	50.63	138.73	0.00
SCReAM	5	0.22	138.91	0.00
Sprout	5	0.50	139.24	0.00
TaoVA-100x	5	123.03	142.81	0.00
TCP Vegas	5	234.94	139.30	0.00
Verus	5	137.24	269.80	6.05
PCC-Vivace	5	262.52	218.49	1.17
WebRTC media	5	1.84	139.51	0.00

Run 1: Statistics of TCP BBR

Start at: 2018-10-10 02:27:45

End at: 2018-10-10 02:28:15

Local clock offset: -0.143 ms

Remote clock offset: -0.183 ms

Below is generated by plot.py at 2018-10-10 04:40:14

Datalink statistics

-- Total of 1 flow:

Average throughput: 227.68 Mbit/s

95th percentile per-packet one-way delay: 139.774 ms

Loss rate: 0.00%

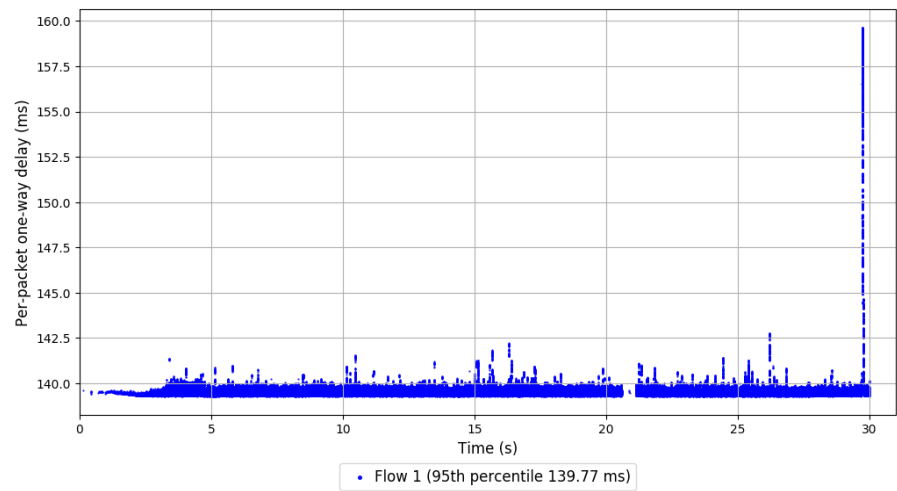
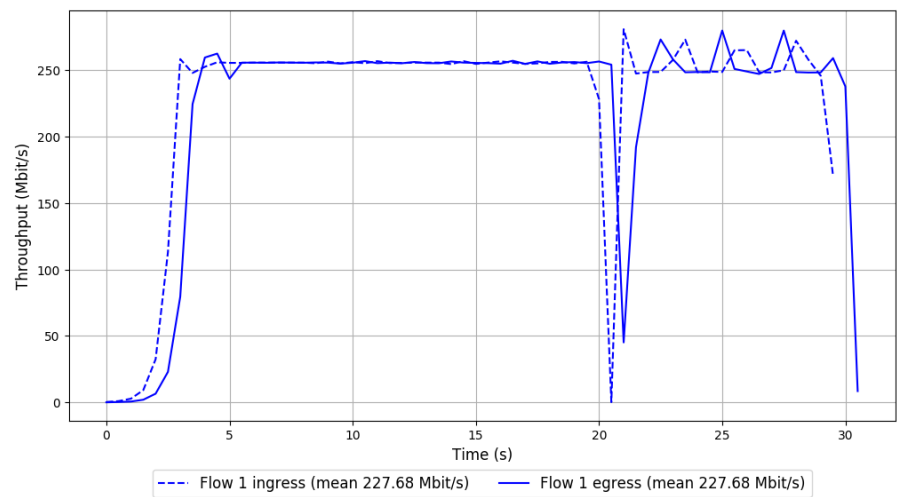
-- Flow 1:

Average throughput: 227.68 Mbit/s

95th percentile per-packet one-way delay: 139.774 ms

Loss rate: 0.00%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-10-10 02:53:08

End at: 2018-10-10 02:53:39

Local clock offset: -0.043 ms

Remote clock offset: -0.118 ms

Below is generated by plot.py at 2018-10-10 04:40:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 228.81 Mbit/s

95th percentile per-packet one-way delay: 140.221 ms

Loss rate: 0.00%

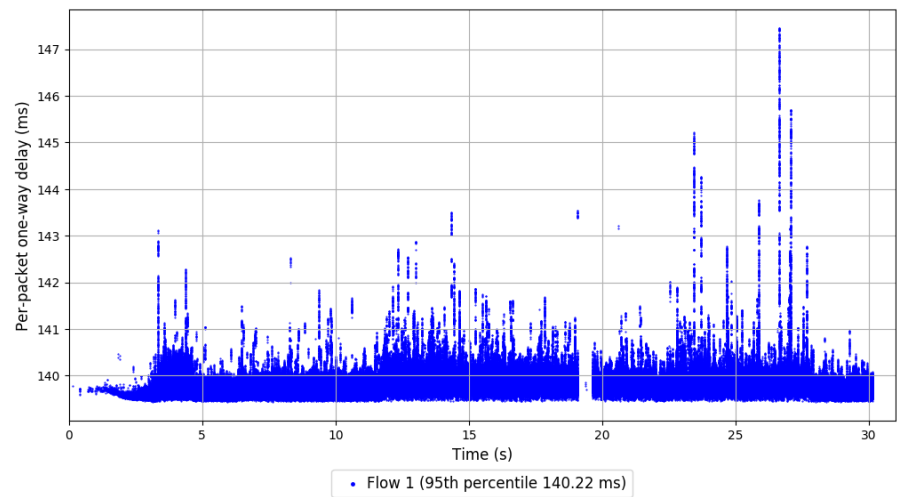
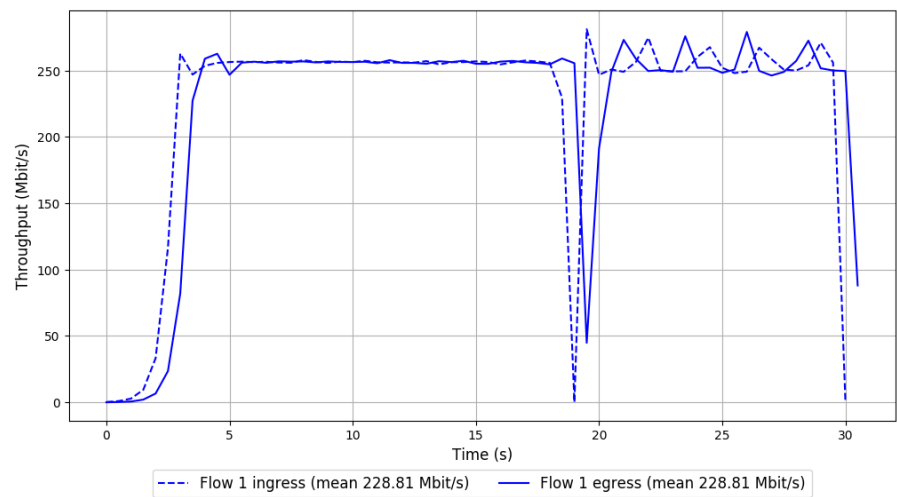
-- Flow 1:

Average throughput: 228.81 Mbit/s

95th percentile per-packet one-way delay: 140.221 ms

Loss rate: 0.00%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-10-10 03:18:27

End at: 2018-10-10 03:18:57

Local clock offset: 0.045 ms

Remote clock offset: -0.181 ms

Below is generated by plot.py at 2018-10-10 04:40:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 229.54 Mbit/s

95th percentile per-packet one-way delay: 139.800 ms

Loss rate: 0.00%

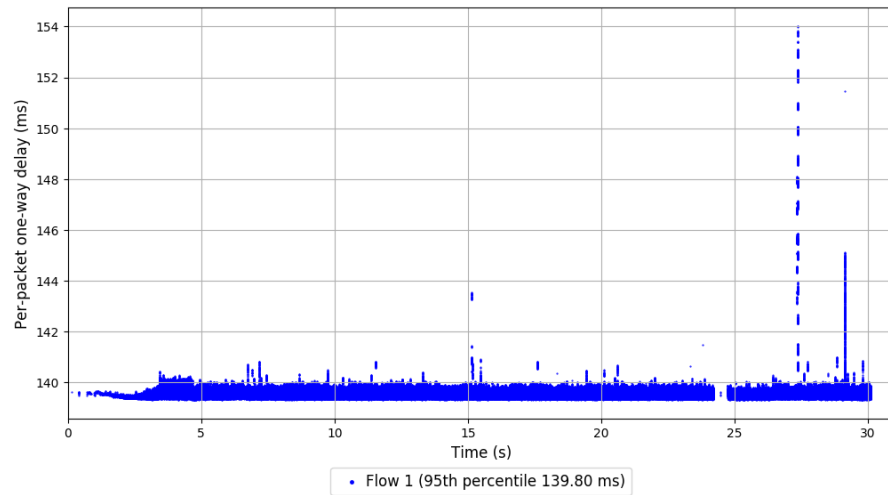
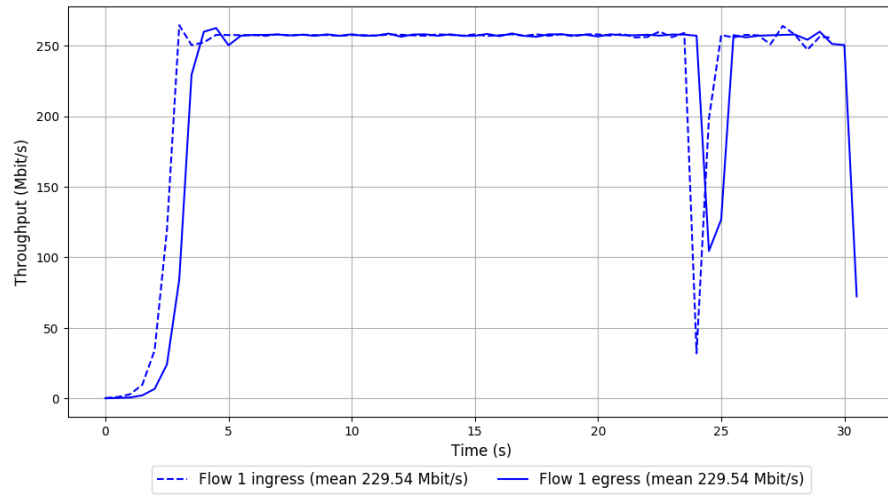
-- Flow 1:

Average throughput: 229.54 Mbit/s

95th percentile per-packet one-way delay: 139.800 ms

Loss rate: 0.00%

Run 3: Report of TCP BBR — Data Link

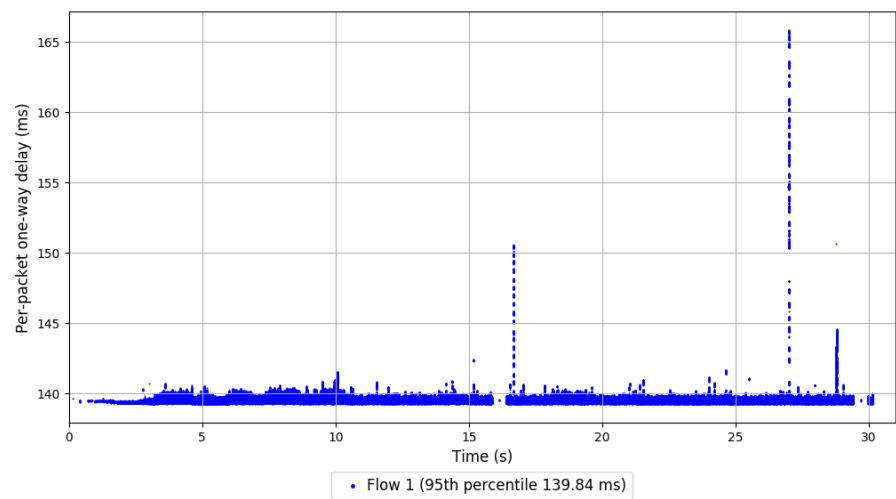
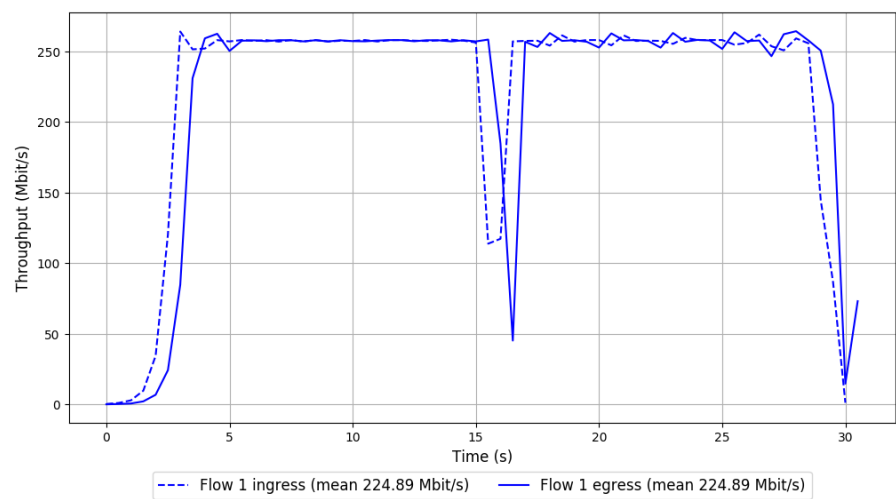


Run 4: Statistics of TCP BBR

Start at: 2018-10-10 03:43:47
End at: 2018-10-10 03:44:17
Local clock offset: -0.12 ms
Remote clock offset: -0.205 ms

Below is generated by plot.py at 2018-10-10 04:40:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 224.89 Mbit/s
95th percentile per-packet one-way delay: 139.840 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 224.89 Mbit/s
95th percentile per-packet one-way delay: 139.840 ms
Loss rate: 0.00%

Run 4: Report of TCP BBR — Data Link

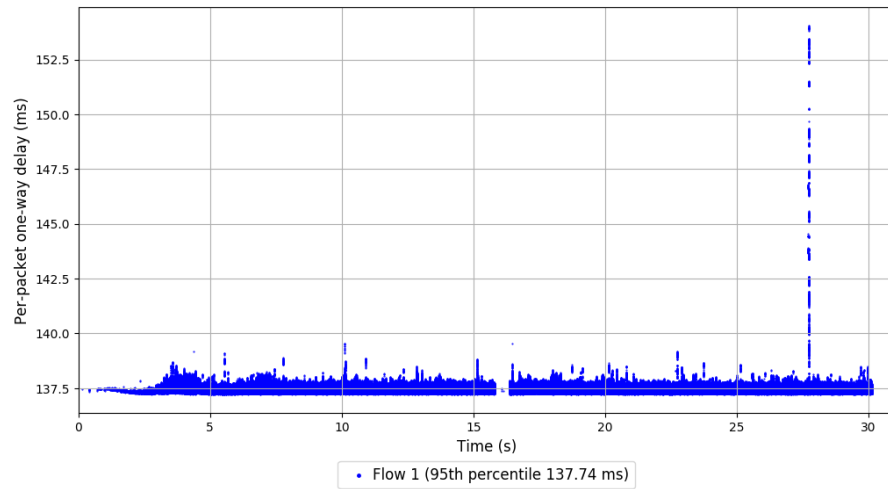
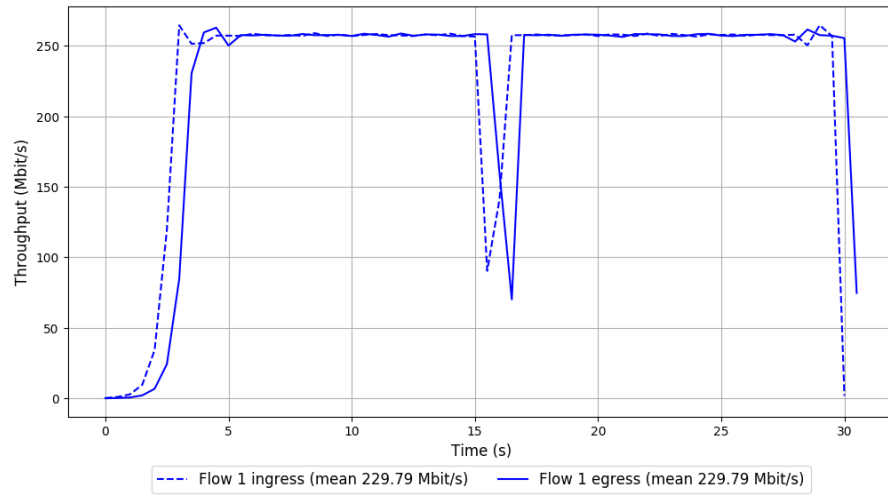


Run 5: Statistics of TCP BBR

Start at: 2018-10-10 04:09:38
End at: 2018-10-10 04:10:08
Local clock offset: -0.179 ms
Remote clock offset: -0.221 ms

Below is generated by plot.py at 2018-10-10 04:40:19
Datalink statistics
-- Total of 1 flow:
Average throughput: 229.79 Mbit/s
95th percentile per-packet one-way delay: 137.737 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 229.79 Mbit/s
95th percentile per-packet one-way delay: 137.737 ms
Loss rate: 0.00%

Run 5: Report of TCP BBR — Data Link

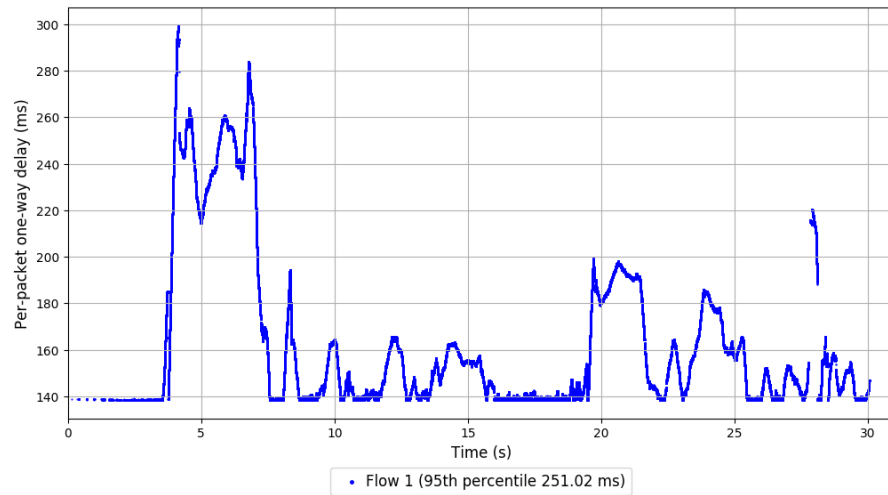
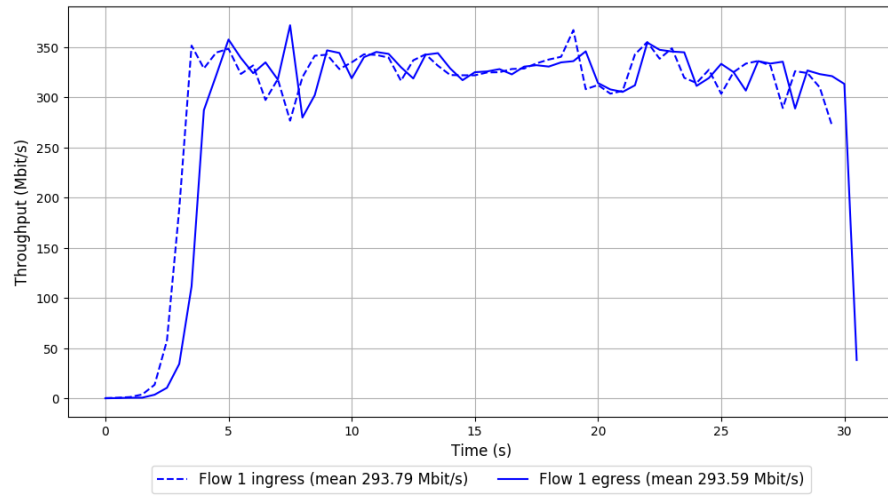


Run 1: Statistics of Copa

Start at: 2018-10-10 02:29:09
End at: 2018-10-10 02:29:39
Local clock offset: -0.101 ms
Remote clock offset: -0.214 ms

Below is generated by plot.py at 2018-10-10 04:45:42
Datalink statistics
-- Total of 1 flow:
Average throughput: 293.59 Mbit/s
95th percentile per-packet one-way delay: 251.021 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 293.59 Mbit/s
95th percentile per-packet one-way delay: 251.021 ms
Loss rate: 0.07%

Run 1: Report of Copa — Data Link

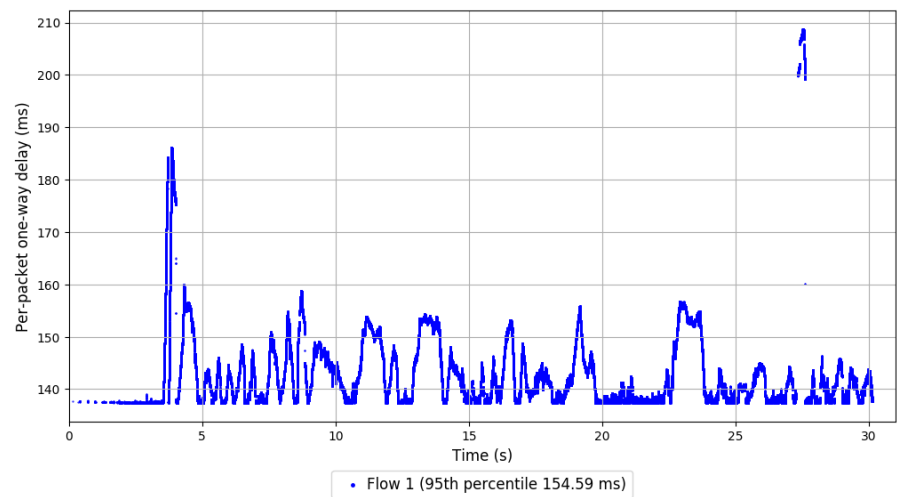
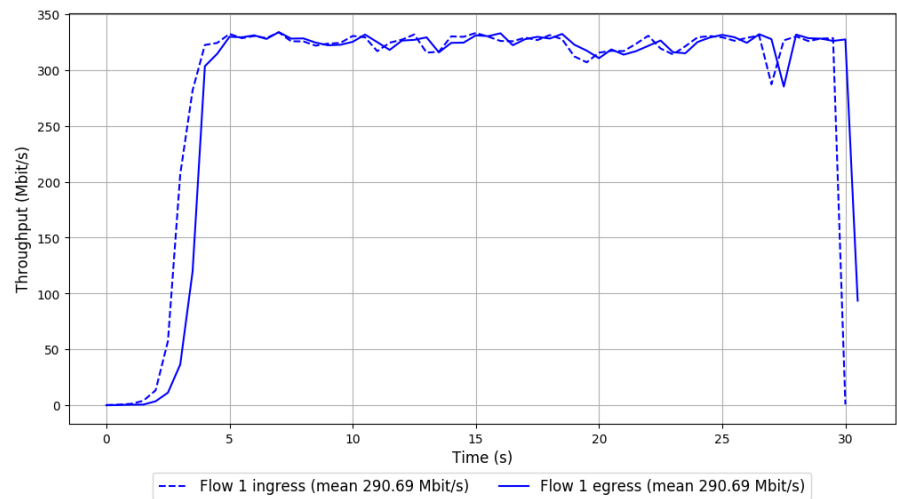


Run 2: Statistics of Copa

Start at: 2018-10-10 02:54:31
End at: 2018-10-10 02:55:01
Local clock offset: -0.093 ms
Remote clock offset: -0.134 ms

Below is generated by plot.py at 2018-10-10 04:45:42
Datalink statistics
-- Total of 1 flow:
Average throughput: 290.69 Mbit/s
95th percentile per-packet one-way delay: 154.594 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 290.69 Mbit/s
95th percentile per-packet one-way delay: 154.594 ms
Loss rate: 0.00%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-10-10 03:19:50

End at: 2018-10-10 03:20:20

Local clock offset: -0.015 ms

Remote clock offset: -0.2 ms

Below is generated by plot.py at 2018-10-10 04:45:42

Datalink statistics

-- Total of 1 flow:

Average throughput: 284.80 Mbit/s

95th percentile per-packet one-way delay: 150.314 ms

Loss rate: 0.00%

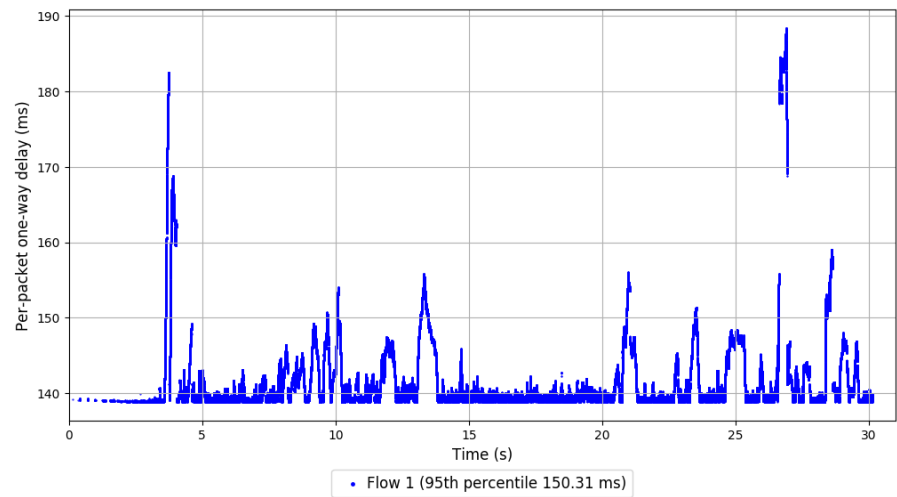
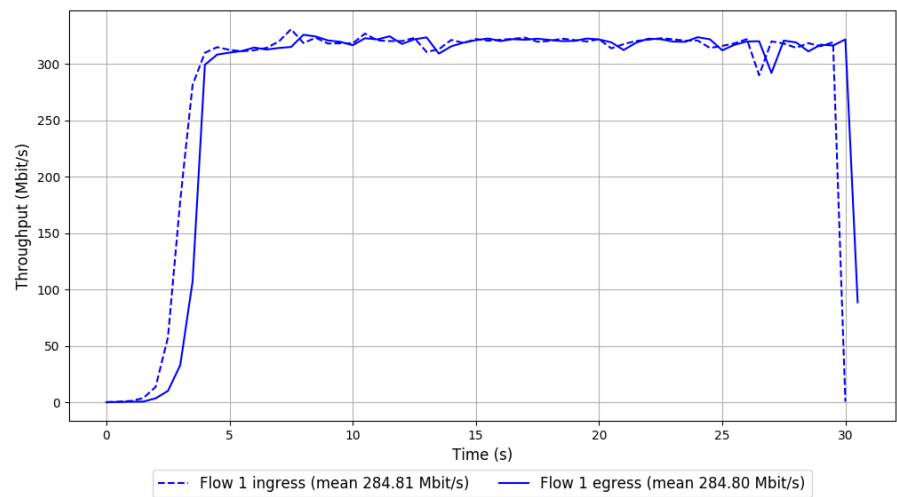
-- Flow 1:

Average throughput: 284.80 Mbit/s

95th percentile per-packet one-way delay: 150.314 ms

Loss rate: 0.00%

Run 3: Report of Copa — Data Link

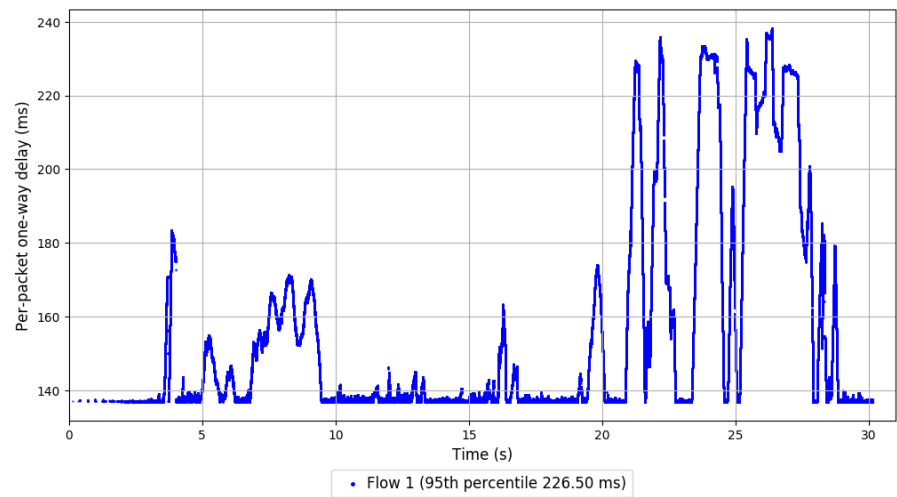
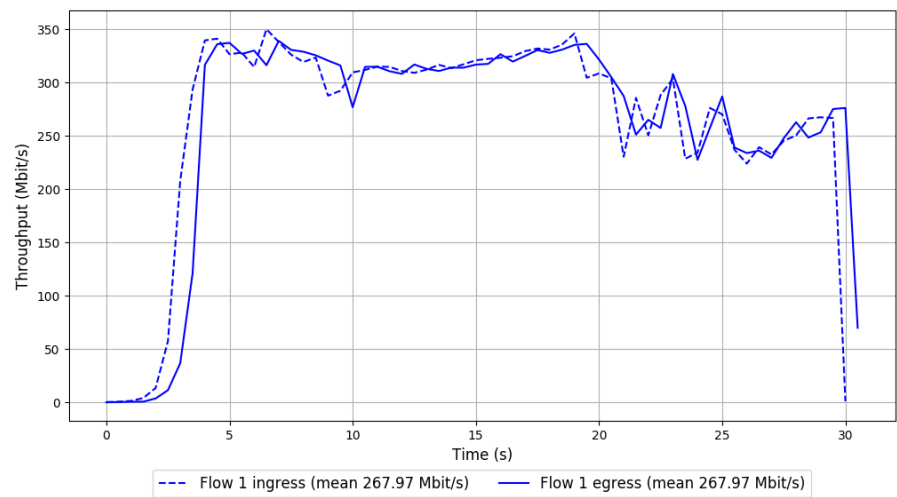


Run 4: Statistics of Copa

Start at: 2018-10-10 03:45:10
End at: 2018-10-10 03:45:40
Local clock offset: -0.103 ms
Remote clock offset: -0.548 ms

Below is generated by plot.py at 2018-10-10 04:48:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 267.97 Mbit/s
95th percentile per-packet one-way delay: 226.497 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 267.97 Mbit/s
95th percentile per-packet one-way delay: 226.497 ms
Loss rate: 0.00%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-10-10 04:11:01

End at: 2018-10-10 04:11:31

Local clock offset: -0.194 ms

Remote clock offset: 0.161 ms

Below is generated by plot.py at 2018-10-10 04:48:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 249.27 Mbit/s

95th percentile per-packet one-way delay: 196.312 ms

Loss rate: 0.01%

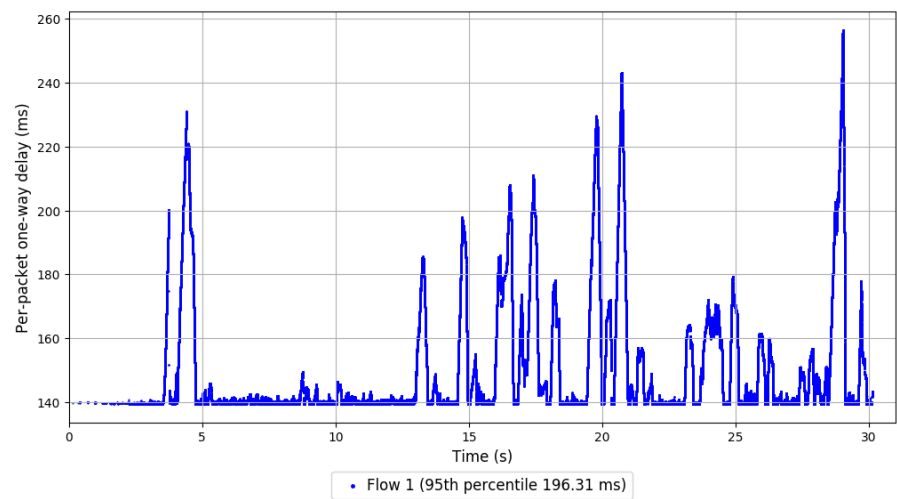
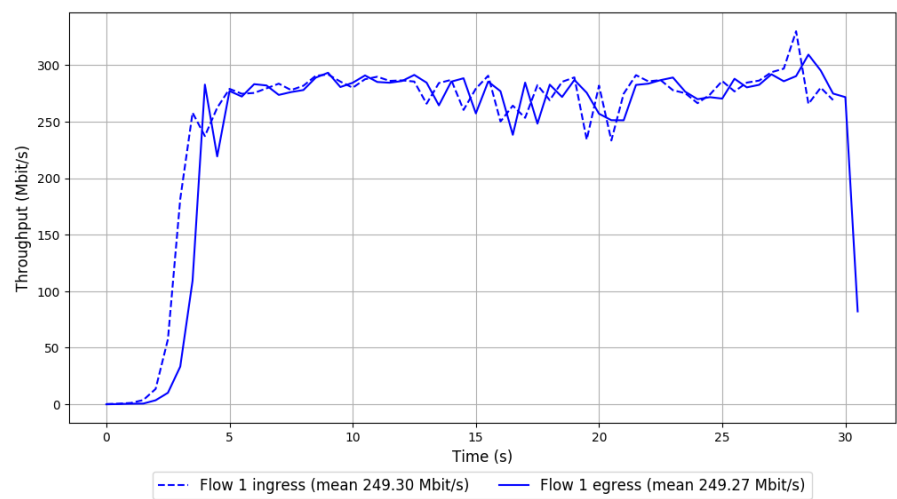
-- Flow 1:

Average throughput: 249.27 Mbit/s

95th percentile per-packet one-way delay: 196.312 ms

Loss rate: 0.01%

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-10-10 02:30:49

End at: 2018-10-10 02:31:19

Local clock offset: 0.032 ms

Remote clock offset: 0.17 ms

Below is generated by plot.py at 2018-10-10 04:48:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 234.07 Mbit/s

95th percentile per-packet one-way delay: 139.395 ms

Loss rate: 0.00%

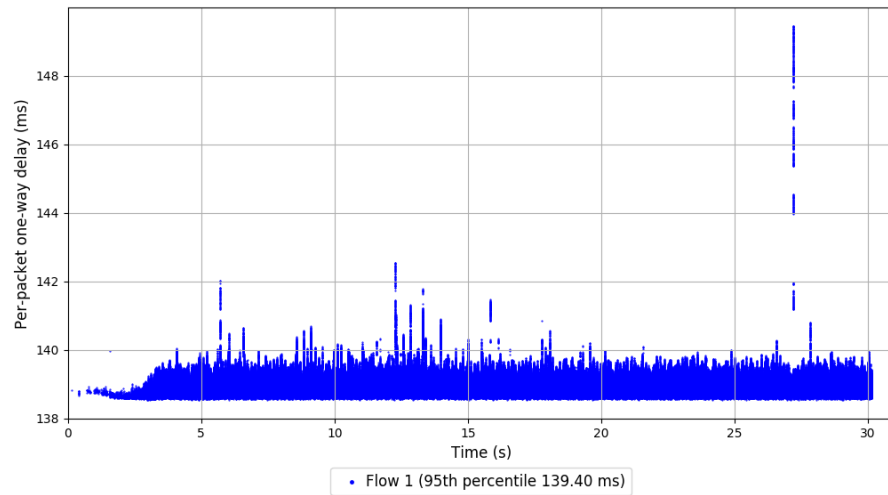
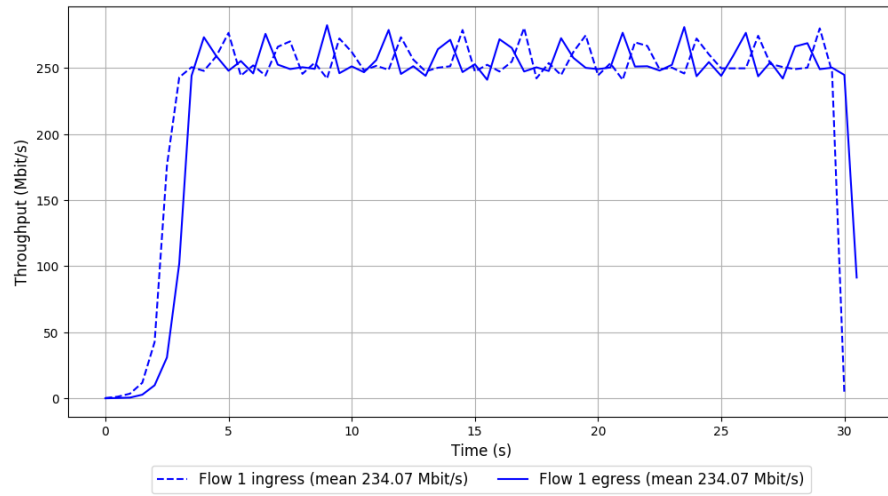
-- Flow 1:

Average throughput: 234.07 Mbit/s

95th percentile per-packet one-way delay: 139.395 ms

Loss rate: 0.00%

Run 1: Report of TCP Cubic — Data Link

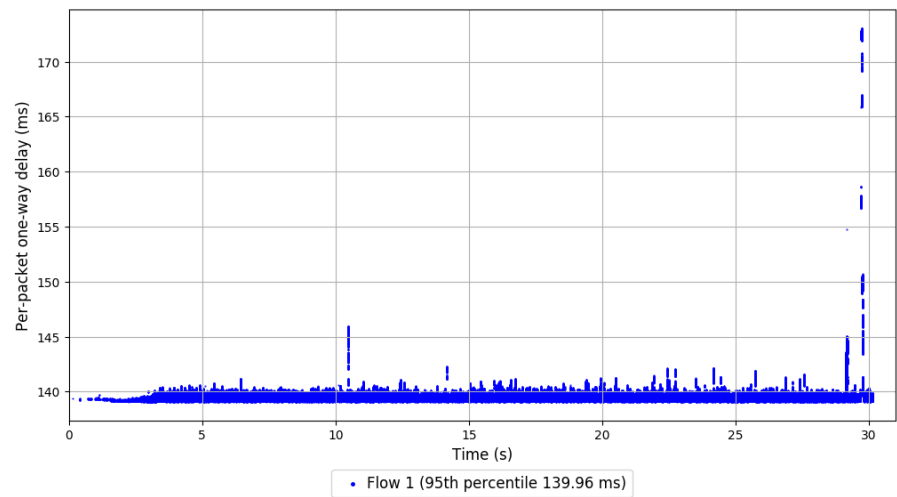
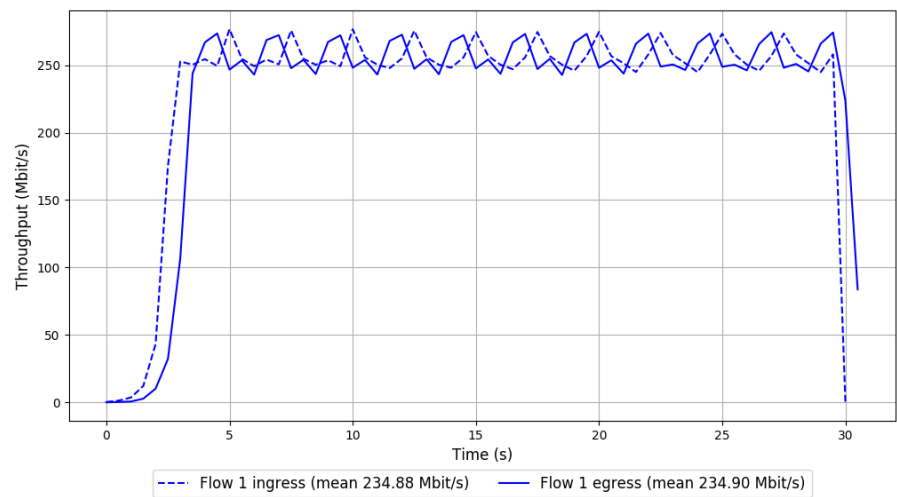


Run 2: Statistics of TCP Cubic

Start at: 2018-10-10 02:56:12
End at: 2018-10-10 02:56:42
Local clock offset: 0.092 ms
Remote clock offset: -0.457 ms

Below is generated by plot.py at 2018-10-10 04:48:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 234.90 Mbit/s
95th percentile per-packet one-way delay: 139.959 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 234.90 Mbit/s
95th percentile per-packet one-way delay: 139.959 ms
Loss rate: 0.00%

Run 2: Report of TCP Cubic — Data Link

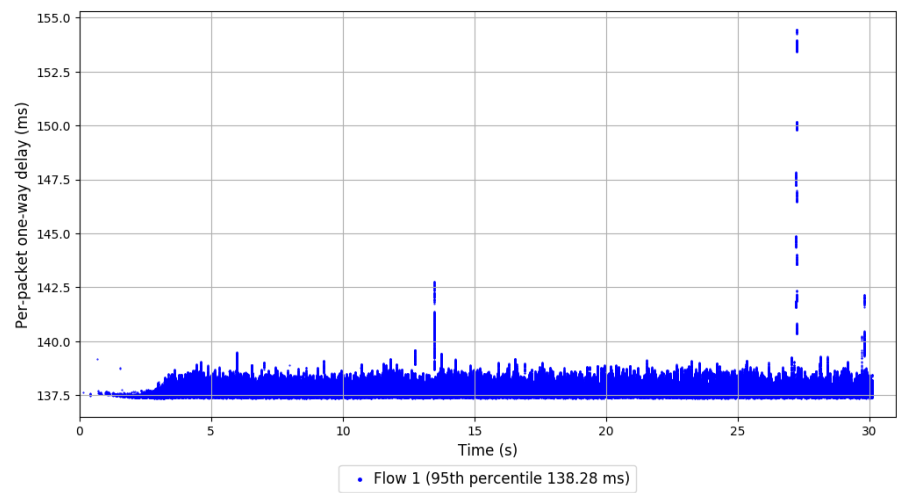
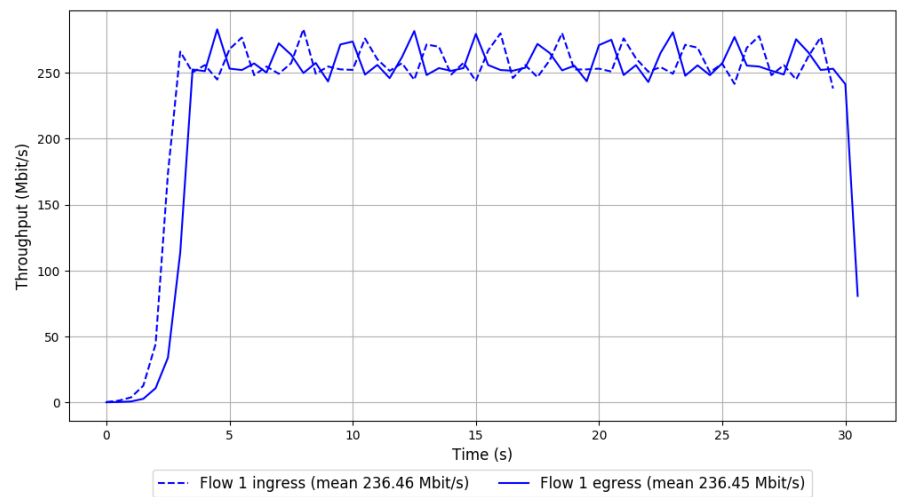


Run 3: Statistics of TCP Cubic

Start at: 2018-10-10 03:21:30
End at: 2018-10-10 03:22:00
Local clock offset: -0.061 ms
Remote clock offset: -0.201 ms

Below is generated by plot.py at 2018-10-10 04:48:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 236.45 Mbit/s
95th percentile per-packet one-way delay: 138.285 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 236.45 Mbit/s
95th percentile per-packet one-way delay: 138.285 ms
Loss rate: 0.00%

Run 3: Report of TCP Cubic — Data Link

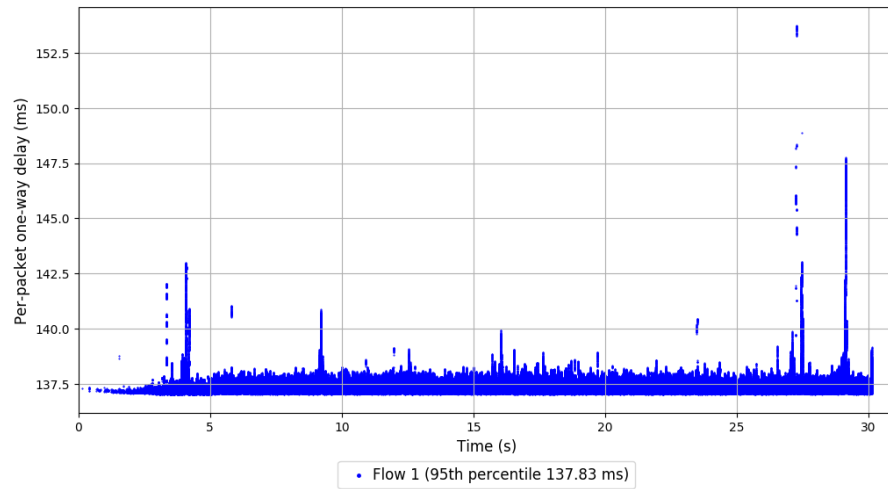
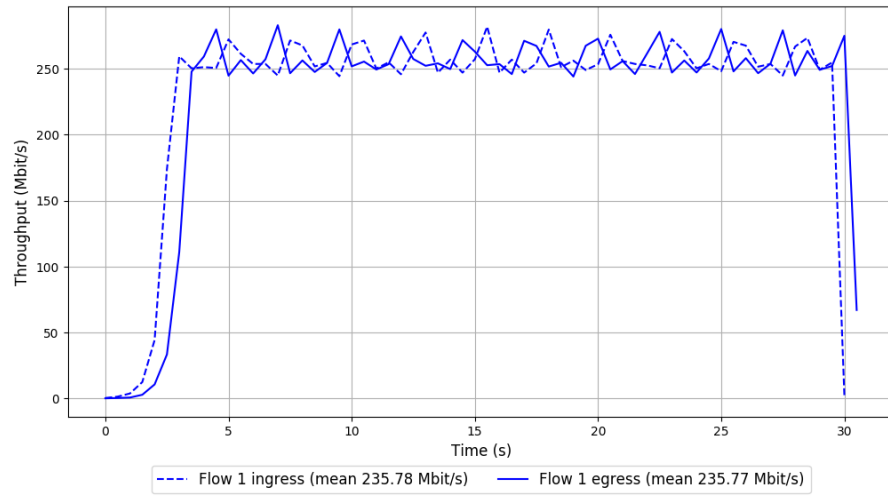


Run 4: Statistics of TCP Cubic

Start at: 2018-10-10 03:46:49
End at: 2018-10-10 03:47:19
Local clock offset: 0.13 ms
Remote clock offset: -0.172 ms

Below is generated by plot.py at 2018-10-10 04:48:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 235.77 Mbit/s
95th percentile per-packet one-way delay: 137.833 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 235.77 Mbit/s
95th percentile per-packet one-way delay: 137.833 ms
Loss rate: 0.00%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-10-10 04:12:38

End at: 2018-10-10 04:13:08

Local clock offset: -0.227 ms

Remote clock offset: 0.131 ms

Below is generated by plot.py at 2018-10-10 04:48:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 234.29 Mbit/s

95th percentile per-packet one-way delay: 140.227 ms

Loss rate: 0.00%

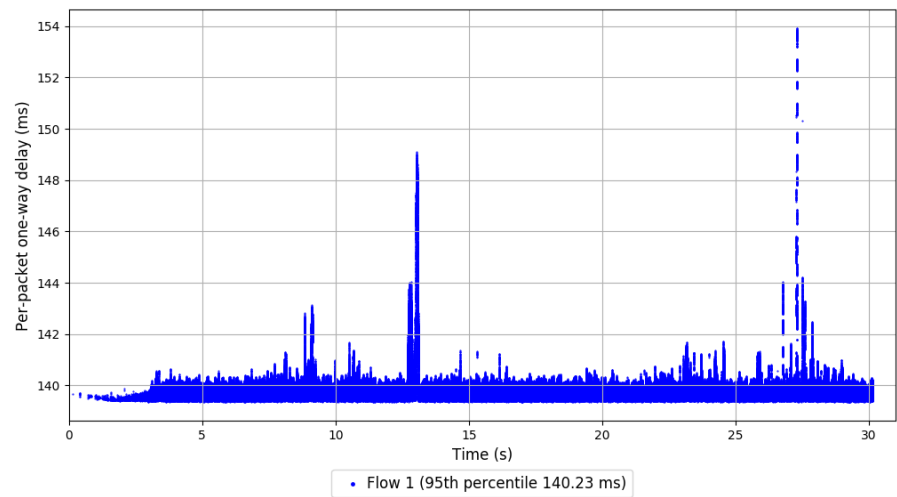
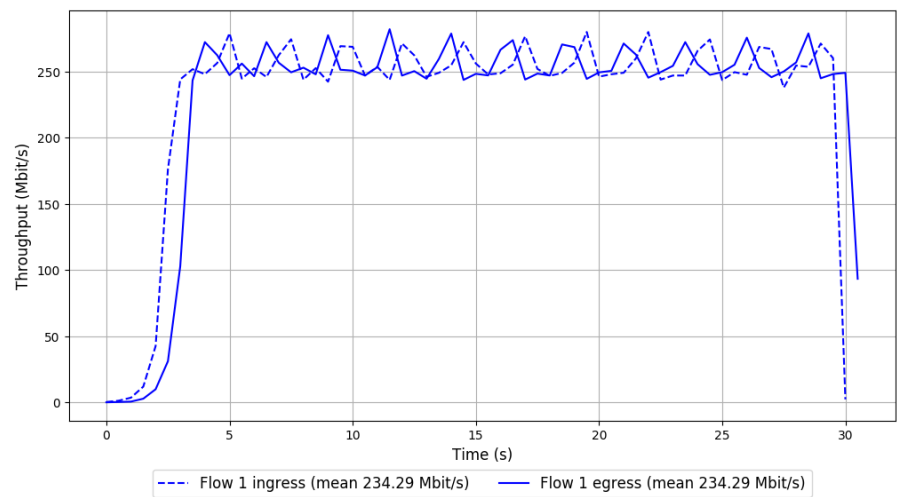
-- Flow 1:

Average throughput: 234.29 Mbit/s

95th percentile per-packet one-way delay: 140.227 ms

Loss rate: 0.00%

Run 5: Report of TCP Cubic — Data Link

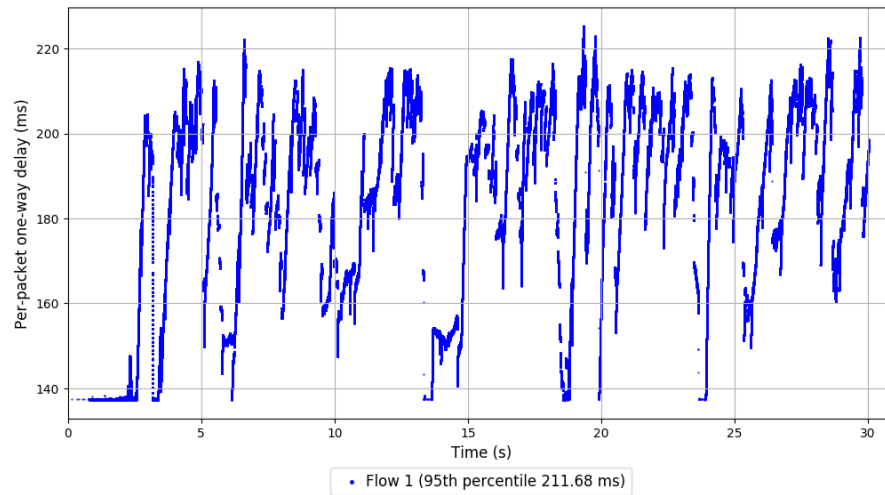
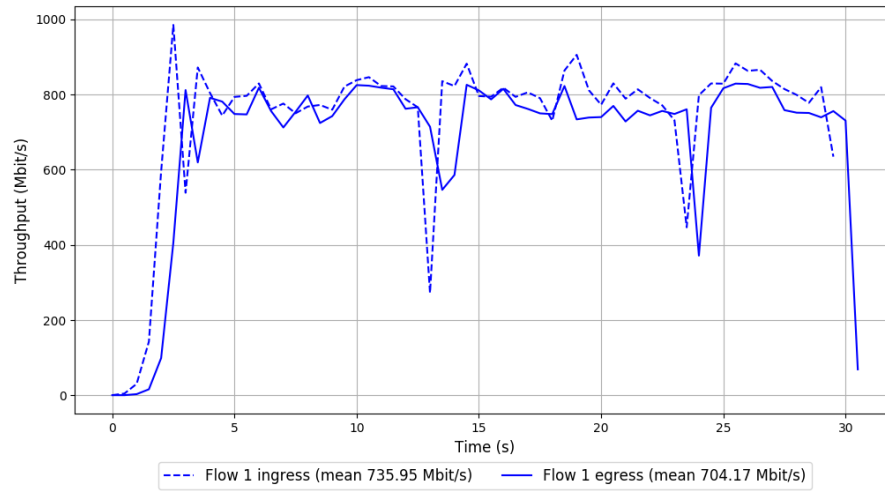


Run 1: Statistics of FillP

Start at: 2018-10-10 02:23:39
End at: 2018-10-10 02:24:09
Local clock offset: -0.015 ms
Remote clock offset: -0.217 ms

Below is generated by plot.py at 2018-10-10 04:58:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 704.17 Mbit/s
95th percentile per-packet one-way delay: 211.681 ms
Loss rate: 4.31%
-- Flow 1:
Average throughput: 704.17 Mbit/s
95th percentile per-packet one-way delay: 211.681 ms
Loss rate: 4.31%

Run 1: Report of FillP — Data Link

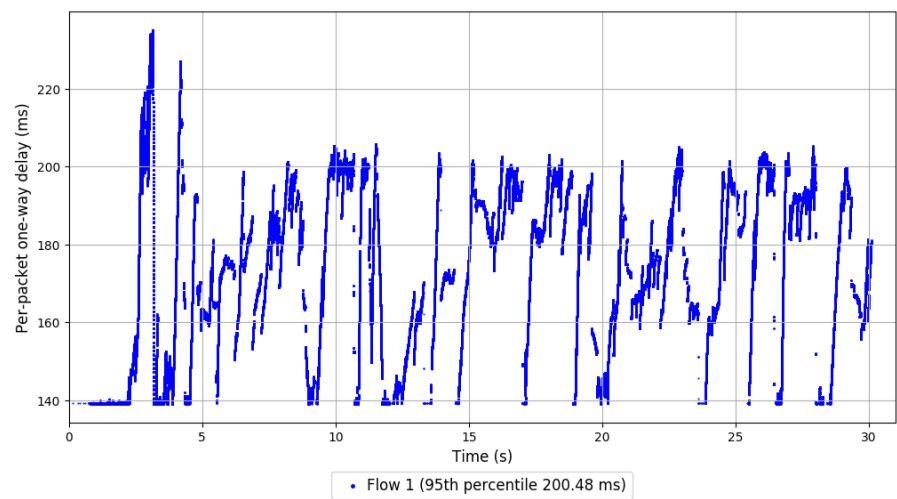
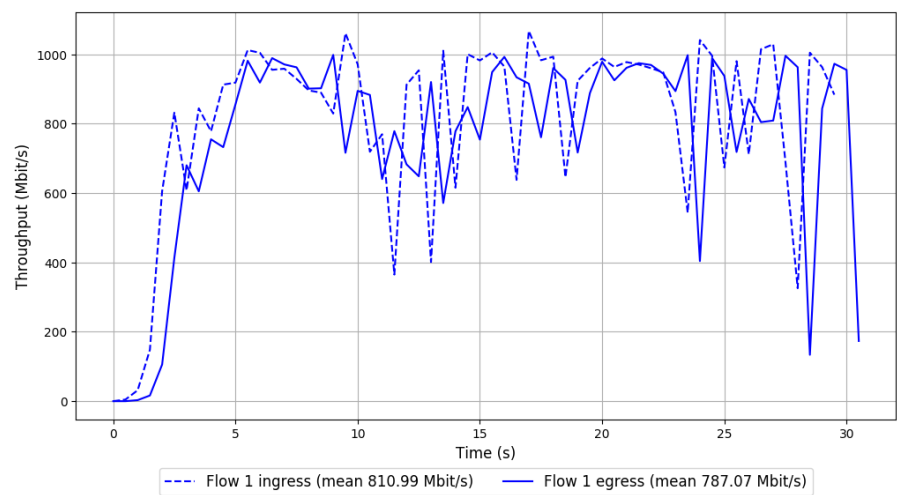


Run 2: Statistics of FillP

Start at: 2018-10-10 02:48:57
End at: 2018-10-10 02:49:27
Local clock offset: -0.032 ms
Remote clock offset: -0.136 ms

Below is generated by plot.py at 2018-10-10 05:02:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 787.07 Mbit/s
95th percentile per-packet one-way delay: 200.479 ms
Loss rate: 2.95%
-- Flow 1:
Average throughput: 787.07 Mbit/s
95th percentile per-packet one-way delay: 200.479 ms
Loss rate: 2.95%

Run 2: Report of FillP — Data Link

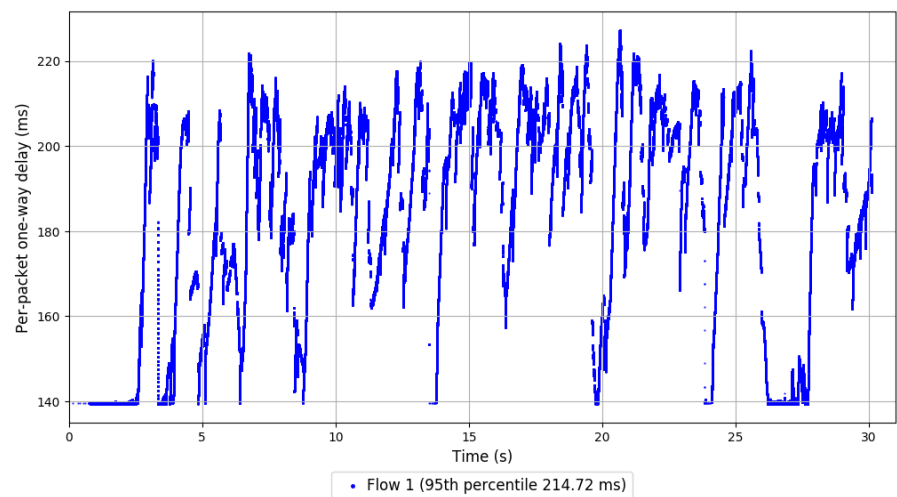
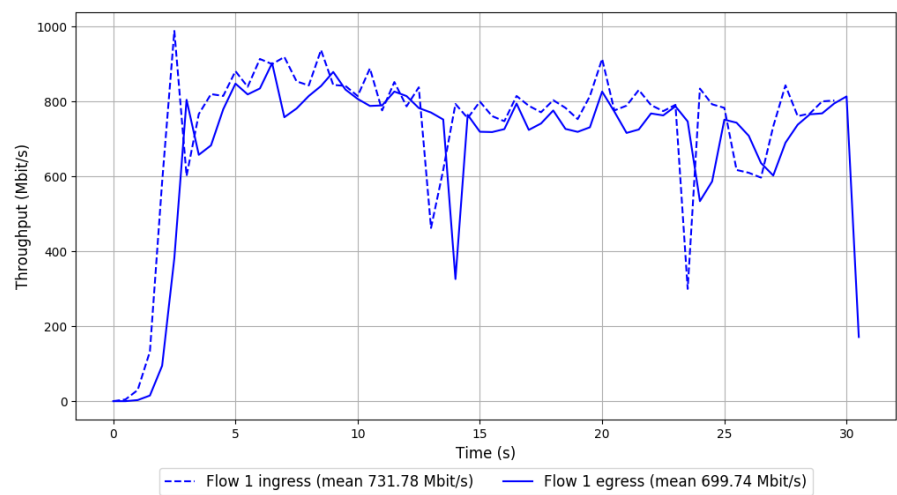


Run 3: Statistics of FillP

Start at: 2018-10-10 03:14:20
End at: 2018-10-10 03:14:50
Local clock offset: -0.052 ms
Remote clock offset: -0.204 ms

Below is generated by plot.py at 2018-10-10 05:02:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 699.74 Mbit/s
95th percentile per-packet one-way delay: 214.718 ms
Loss rate: 4.35%
-- Flow 1:
Average throughput: 699.74 Mbit/s
95th percentile per-packet one-way delay: 214.718 ms
Loss rate: 4.35%

Run 3: Report of FillP — Data Link

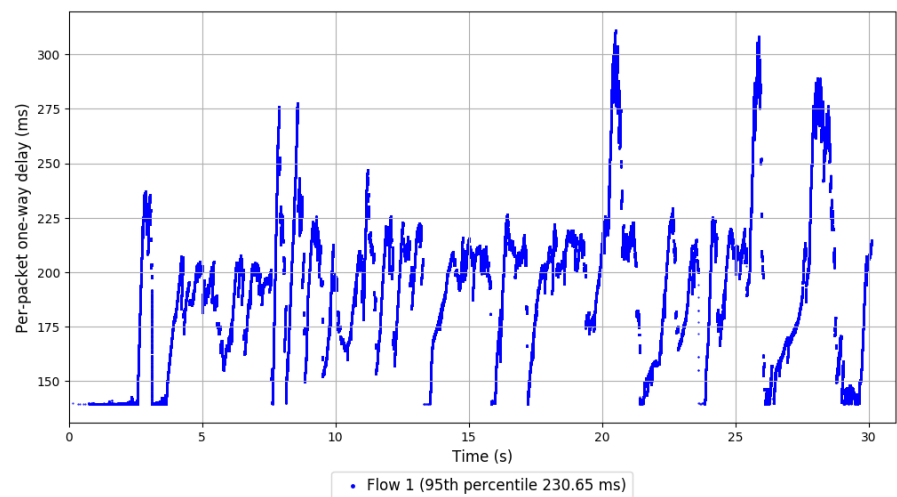
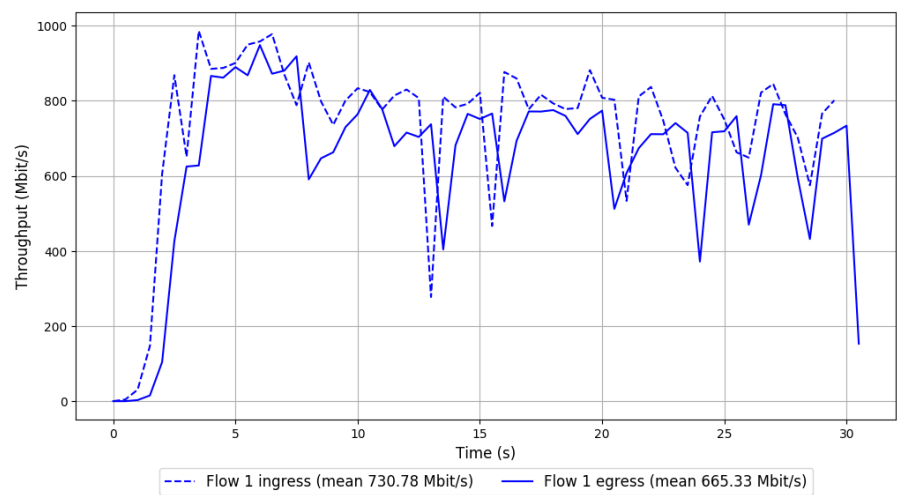


Run 4: Statistics of FillP

Start at: 2018-10-10 03:39:41
End at: 2018-10-10 03:40:11
Local clock offset: -0.039 ms
Remote clock offset: -0.205 ms

Below is generated by plot.py at 2018-10-10 05:02:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 665.33 Mbit/s
95th percentile per-packet one-way delay: 230.650 ms
Loss rate: 8.96%
-- Flow 1:
Average throughput: 665.33 Mbit/s
95th percentile per-packet one-way delay: 230.650 ms
Loss rate: 8.96%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-10-10 04:05:29

End at: 2018-10-10 04:05:59

Local clock offset: -0.338 ms

Remote clock offset: 0.158 ms

Below is generated by plot.py at 2018-10-10 05:04:01

Datalink statistics

-- Total of 1 flow:

Average throughput: 764.75 Mbit/s

95th percentile per-packet one-way delay: 203.282 ms

Loss rate: 4.07%

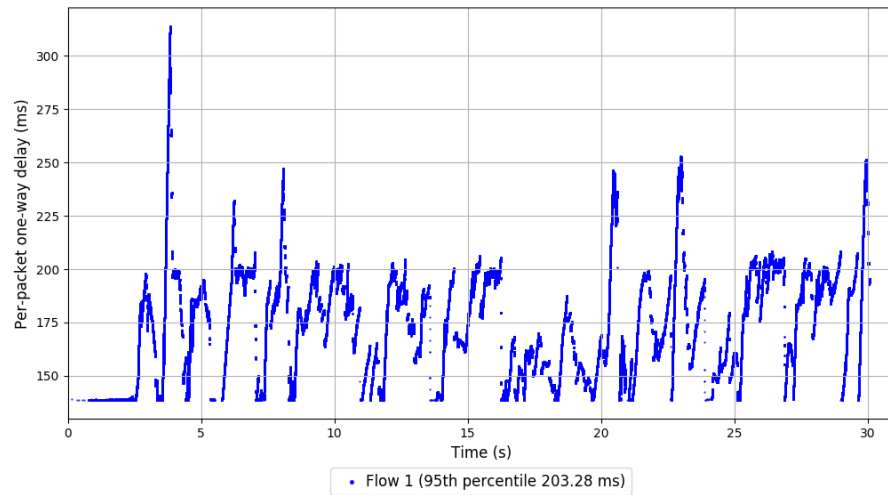
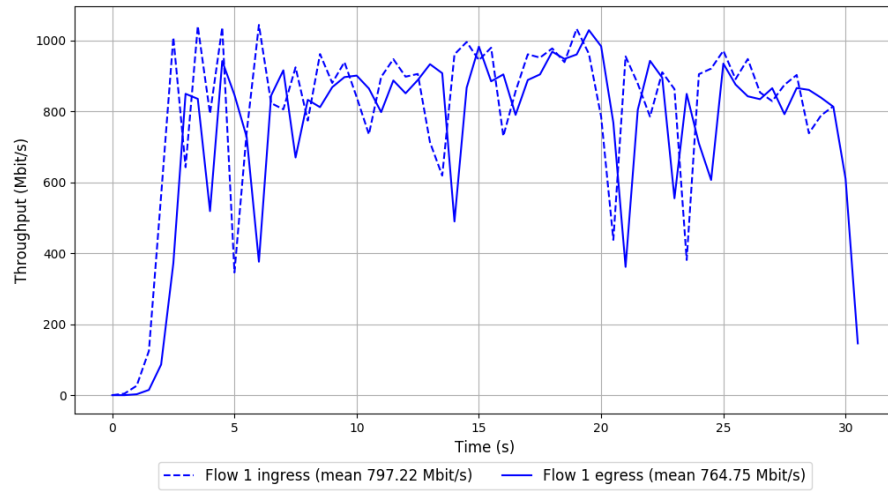
-- Flow 1:

Average throughput: 764.75 Mbit/s

95th percentile per-packet one-way delay: 203.282 ms

Loss rate: 4.07%

Run 5: Report of FillP — Data Link

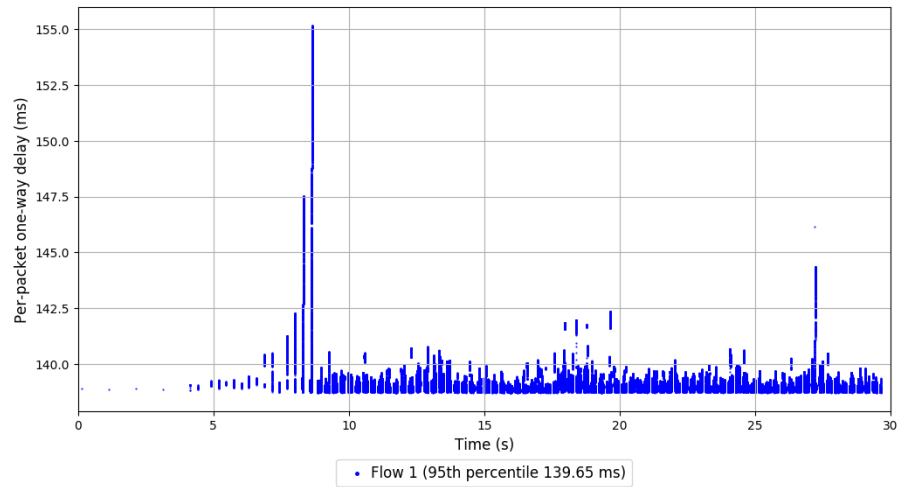
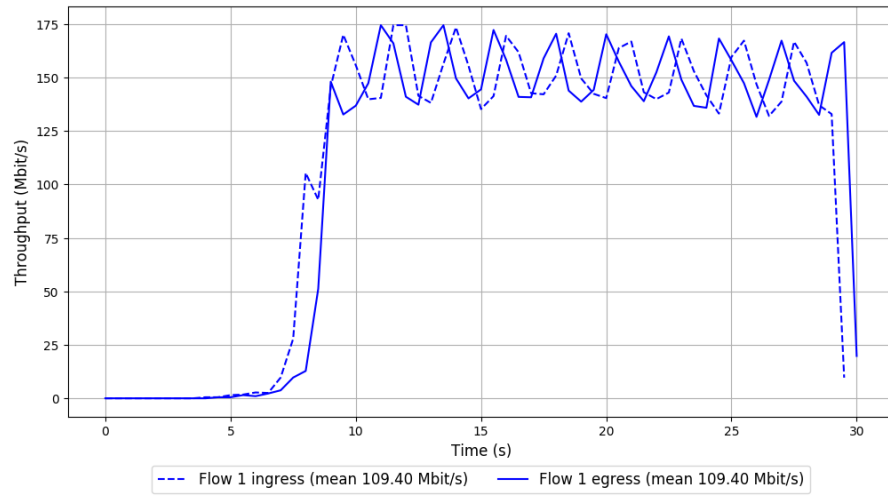


```
Run 1: Statistics of Indigo

Start at: 2018-10-10 02:33:43
End at: 2018-10-10 02:34:13
Local clock offset: 0.083 ms
Remote clock offset: -0.153 ms

# Below is generated by plot.py at 2018-10-10 05:04:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 109.40 Mbit/s
95th percentile per-packet one-way delay: 139.646 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 109.40 Mbit/s
95th percentile per-packet one-way delay: 139.646 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo — Data Link

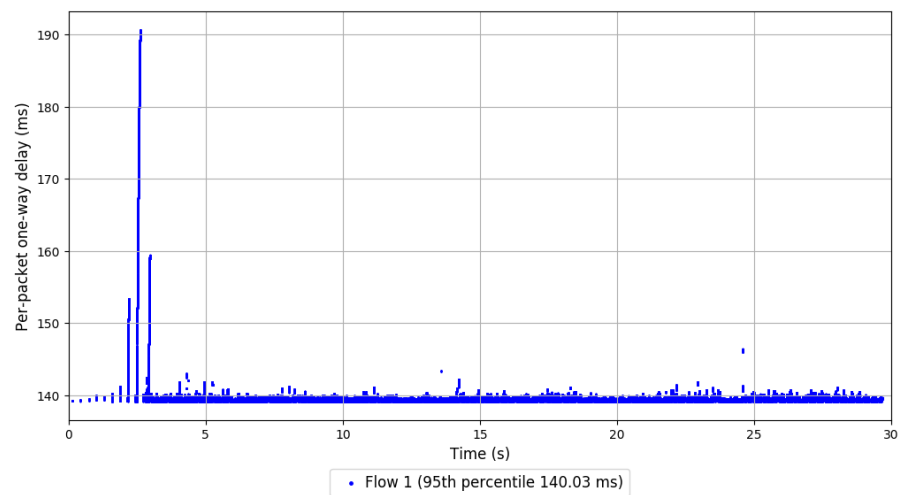
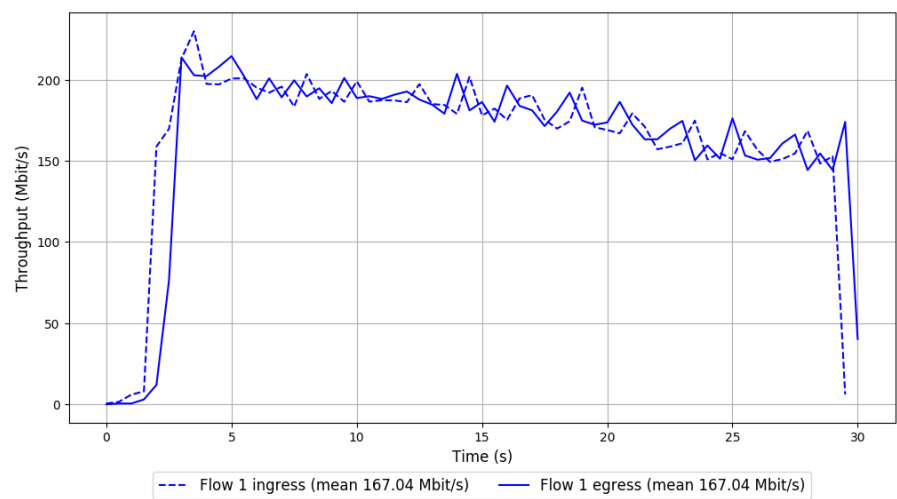


Run 2: Statistics of Indigo

Start at: 2018-10-10 02:59:11
End at: 2018-10-10 02:59:41
Local clock offset: -0.086 ms
Remote clock offset: -0.499 ms

Below is generated by plot.py at 2018-10-10 05:04:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 167.04 Mbit/s
95th percentile per-packet one-way delay: 140.025 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 167.04 Mbit/s
95th percentile per-packet one-way delay: 140.025 ms
Loss rate: 0.01%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2018-10-10 03:24:22

End at: 2018-10-10 03:24:52

Local clock offset: -0.144 ms

Remote clock offset: 0.173 ms

Below is generated by plot.py at 2018-10-10 05:04:01

Datalink statistics

-- Total of 1 flow:

Average throughput: 171.14 Mbit/s

95th percentile per-packet one-way delay: 140.829 ms

Loss rate: 0.00%

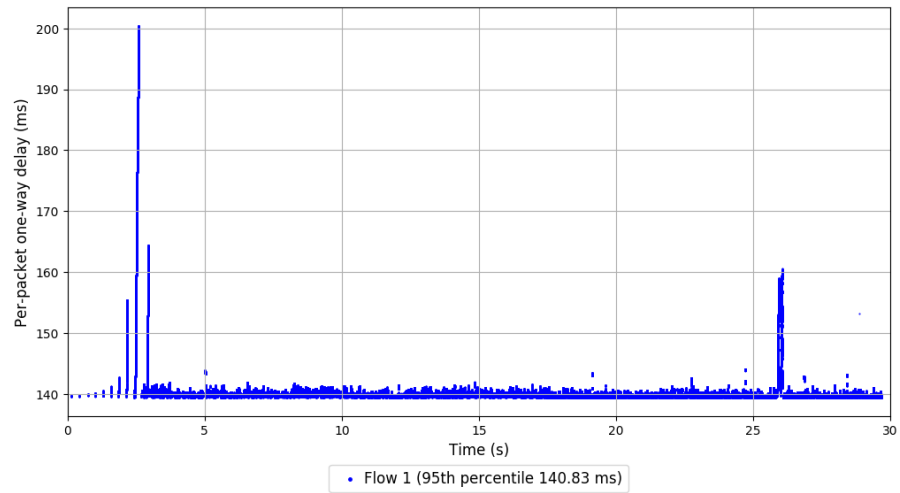
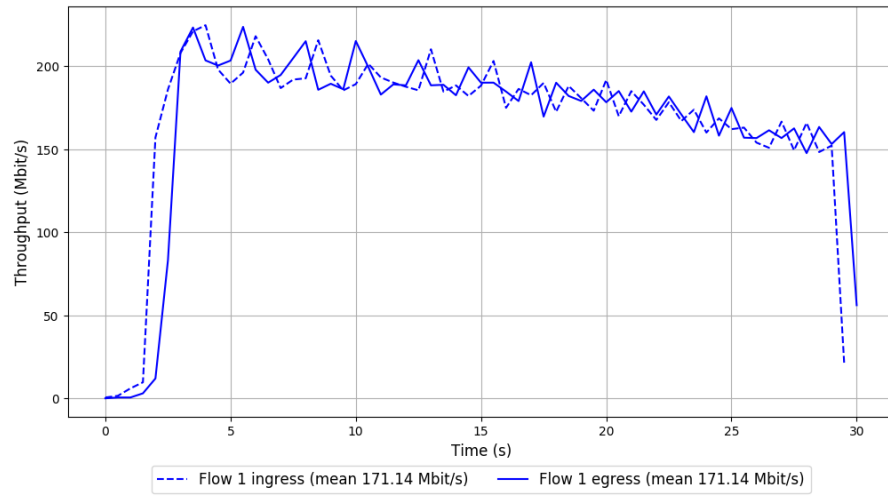
-- Flow 1:

Average throughput: 171.14 Mbit/s

95th percentile per-packet one-way delay: 140.829 ms

Loss rate: 0.00%

Run 3: Report of Indigo — Data Link

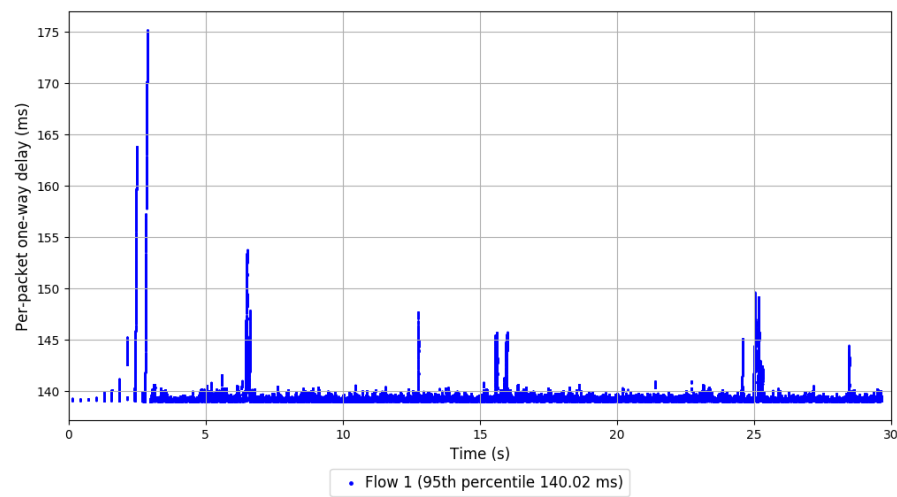
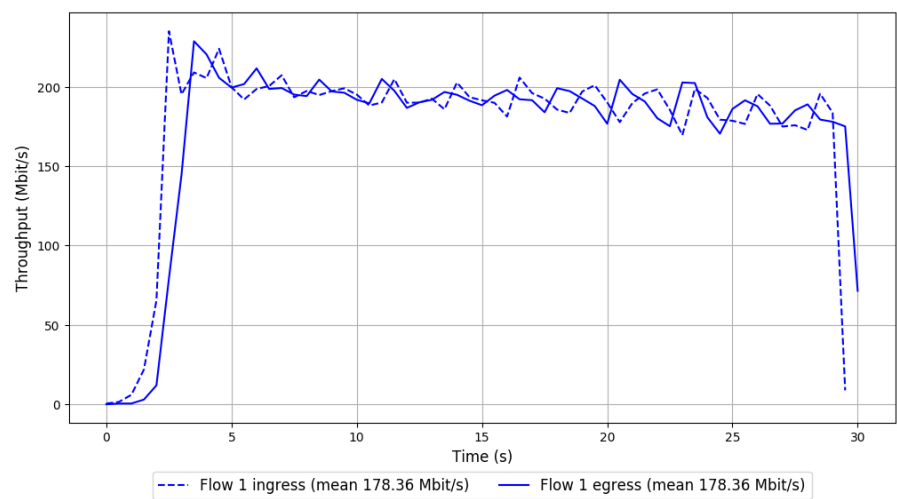


Run 4: Statistics of Indigo

Start at: 2018-10-10 03:49:47
End at: 2018-10-10 03:50:17
Local clock offset: -0.149 ms
Remote clock offset: -0.212 ms

Below is generated by plot.py at 2018-10-10 05:04:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 178.36 Mbit/s
95th percentile per-packet one-way delay: 140.023 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 178.36 Mbit/s
95th percentile per-packet one-way delay: 140.023 ms
Loss rate: 0.00%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2018-10-10 04:15:23

End at: 2018-10-10 04:15:53

Local clock offset: -0.165 ms

Remote clock offset: 0.156 ms

Below is generated by plot.py at 2018-10-10 05:04:01

Datalink statistics

-- Total of 1 flow:

Average throughput: 177.68 Mbit/s

95th percentile per-packet one-way delay: 139.945 ms

Loss rate: 0.00%

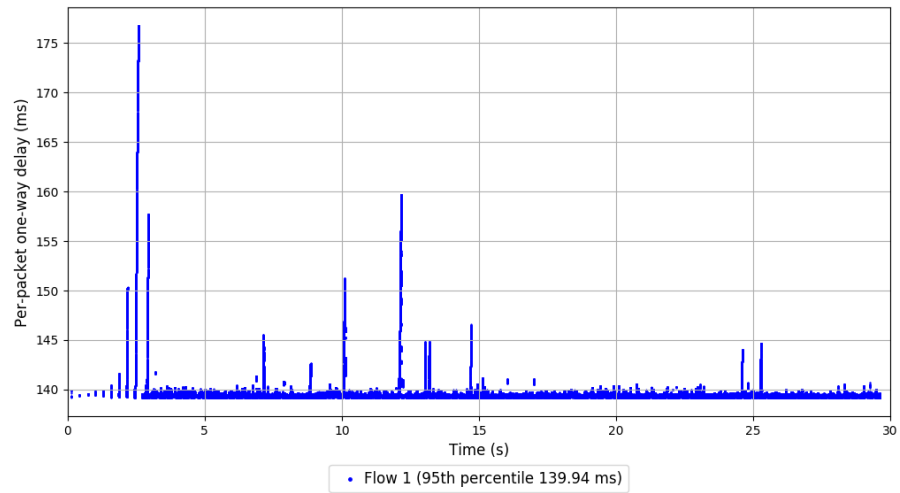
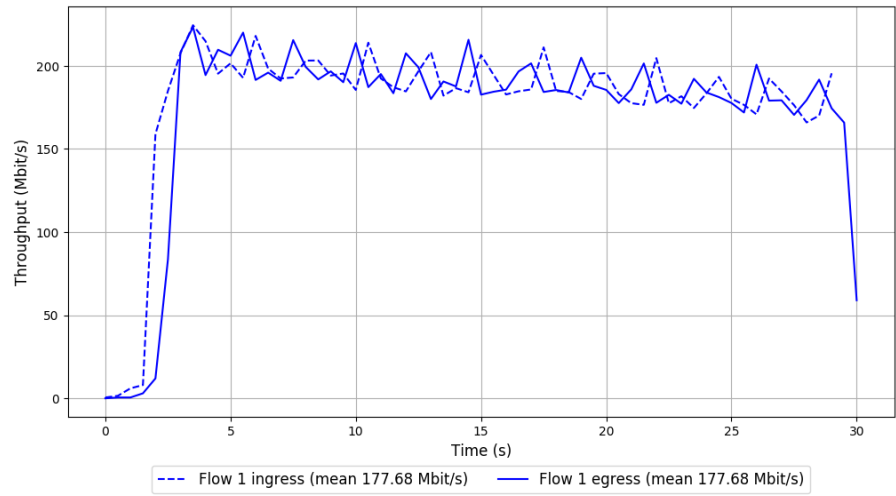
-- Flow 1:

Average throughput: 177.68 Mbit/s

95th percentile per-packet one-way delay: 139.945 ms

Loss rate: 0.00%

Run 5: Report of Indigo — Data Link

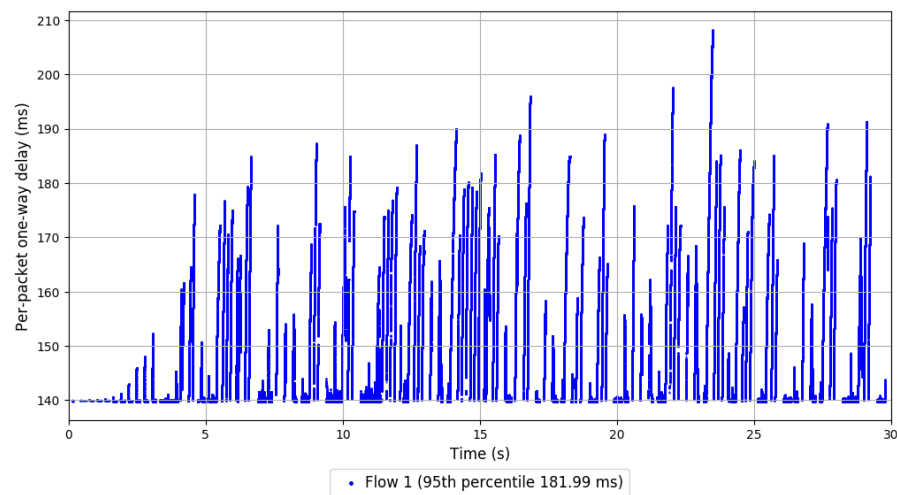
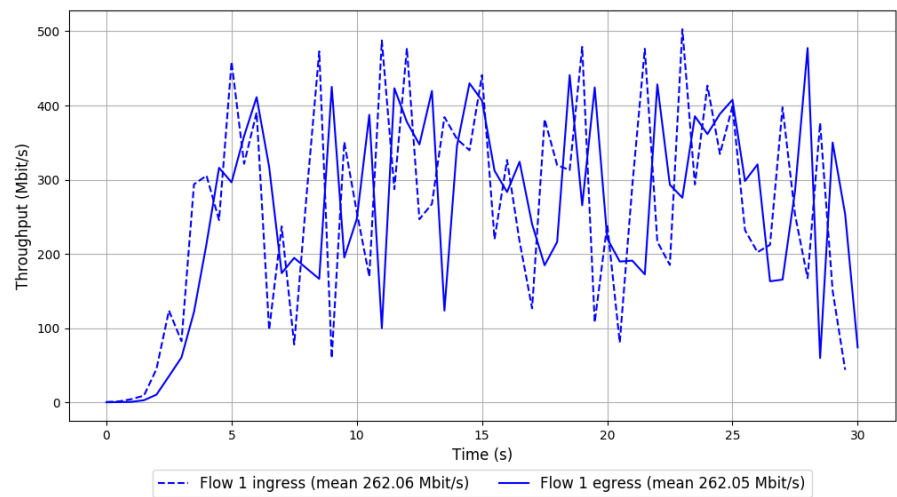


Run 1: Statistics of Indigo-96d2da3

Start at: 2018-10-10 02:42:39
End at: 2018-10-10 02:43:09
Local clock offset: -0.052 ms
Remote clock offset: -0.169 ms

Below is generated by plot.py at 2018-10-10 05:04:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 262.05 Mbit/s
95th percentile per-packet one-way delay: 181.992 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 262.05 Mbit/s
95th percentile per-packet one-way delay: 181.992 ms
Loss rate: 0.00%

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

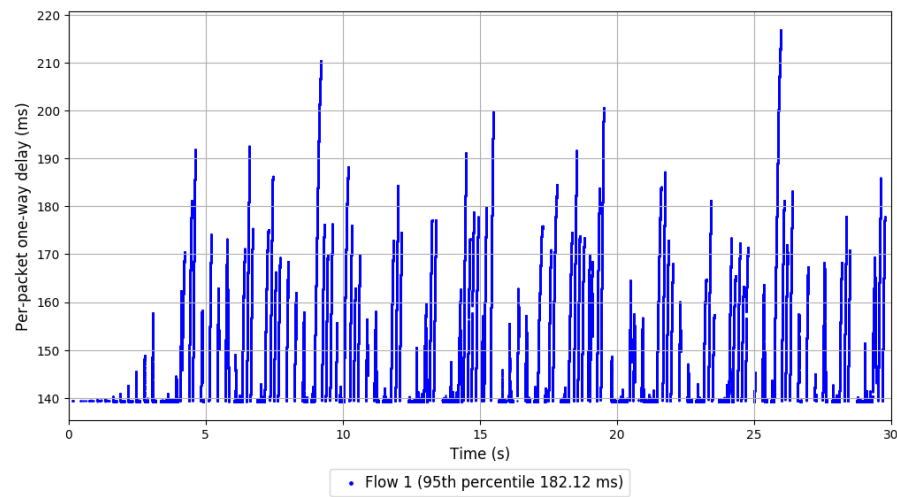
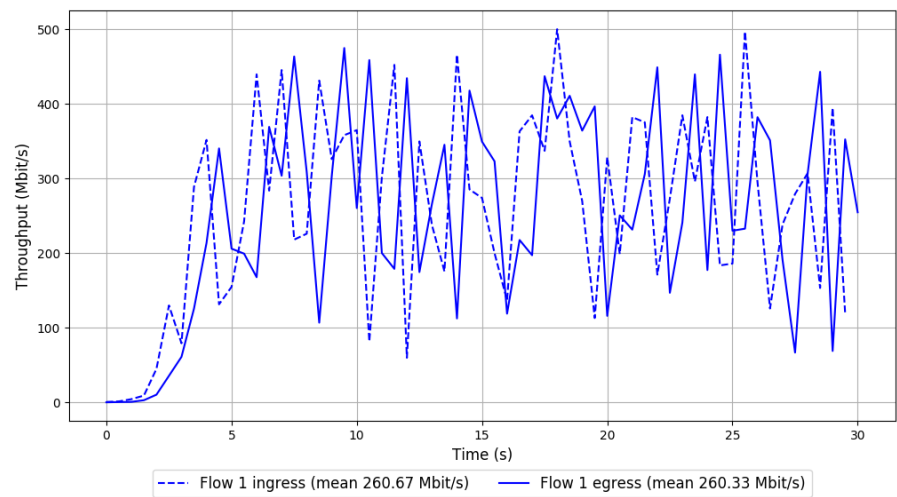


Run 2: Statistics of Indigo-96d2da3

Start at: 2018-10-10 03:08:01
End at: 2018-10-10 03:08:31
Local clock offset: 0.101 ms
Remote clock offset: -0.167 ms

Below is generated by plot.py at 2018-10-10 05:04:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 260.33 Mbit/s
95th percentile per-packet one-way delay: 182.122 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 260.33 Mbit/s
95th percentile per-packet one-way delay: 182.122 ms
Loss rate: 0.00%

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



Run 3: Statistics of Indigo-96d2da3

Start at: 2018-10-10 03:33:22

End at: 2018-10-10 03:33:52

Local clock offset: 0.095 ms

Remote clock offset: -0.218 ms

Below is generated by plot.py at 2018-10-10 05:04:01

Datalink statistics

-- Total of 1 flow:

Average throughput: 256.26 Mbit/s

95th percentile per-packet one-way delay: 184.427 ms

Loss rate: 0.00%

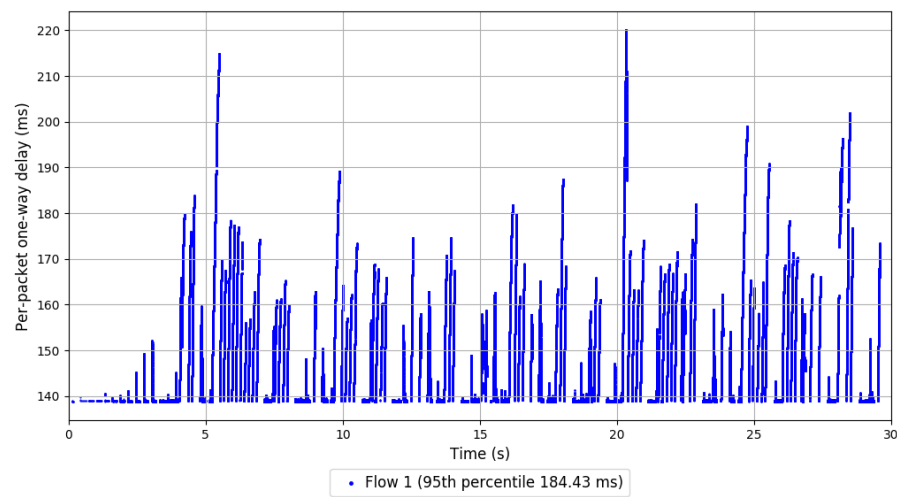
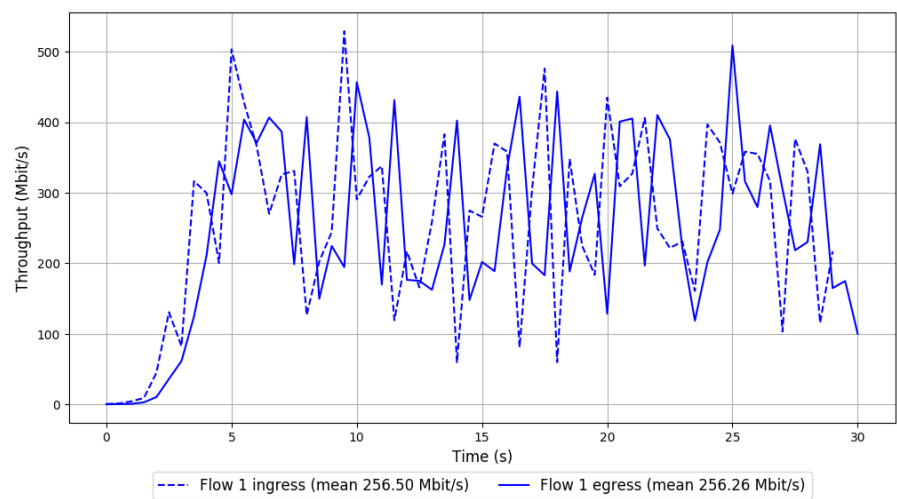
-- Flow 1:

Average throughput: 256.26 Mbit/s

95th percentile per-packet one-way delay: 184.427 ms

Loss rate: 0.00%

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



Run 4: Statistics of Indigo-96d2da3

Start at: 2018-10-10 03:59:08

End at: 2018-10-10 03:59:38

Local clock offset: -0.173 ms

Remote clock offset: 0.174 ms

Below is generated by plot.py at 2018-10-10 05:04:01

Datalink statistics

-- Total of 1 flow:

Average throughput: 293.18 Mbit/s

95th percentile per-packet one-way delay: 193.206 ms

Loss rate: 0.12%

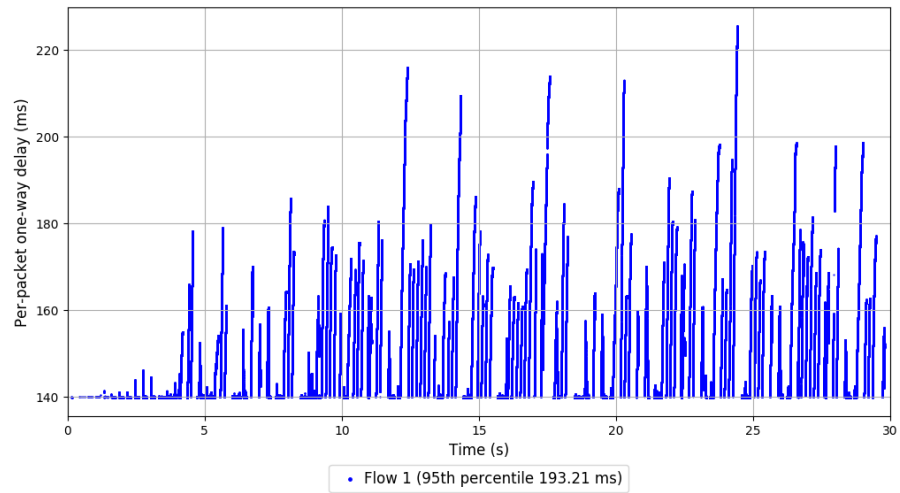
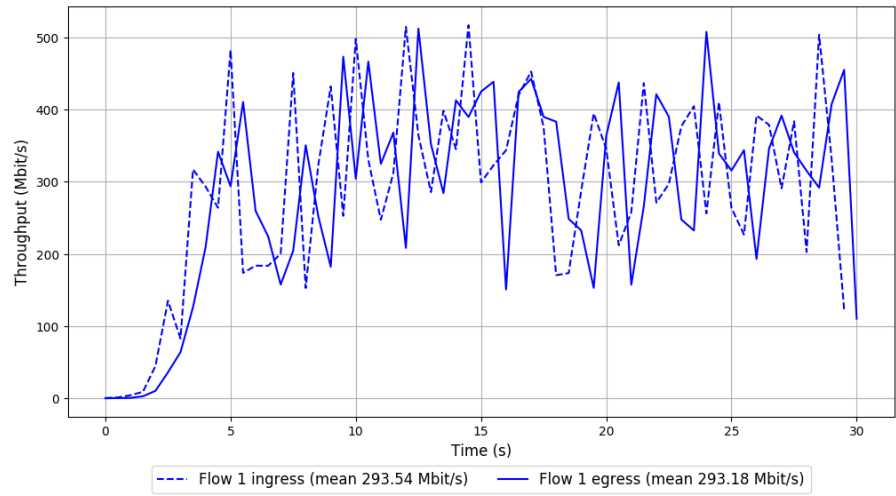
-- Flow 1:

Average throughput: 293.18 Mbit/s

95th percentile per-packet one-way delay: 193.206 ms

Loss rate: 0.12%

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

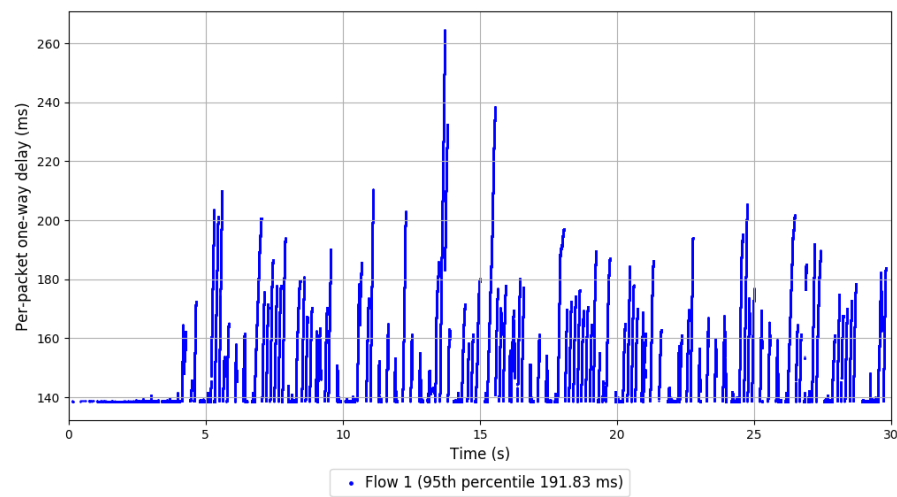
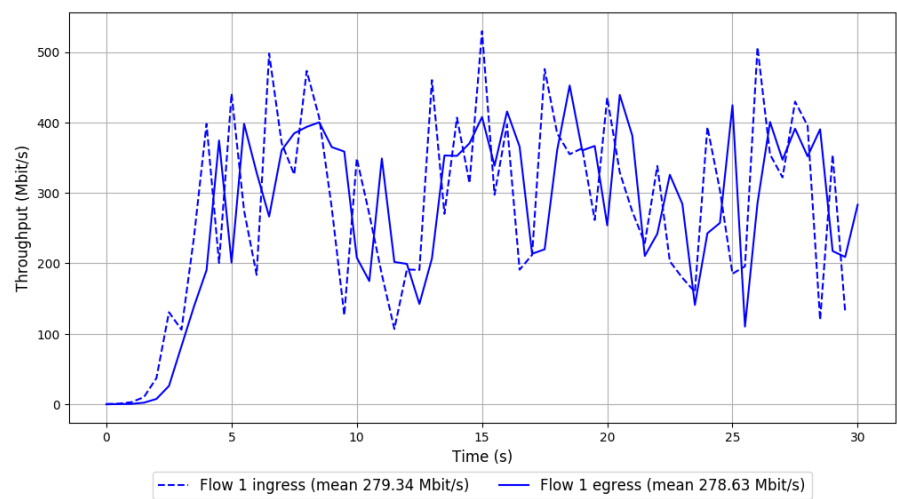


Run 5: Statistics of Indigo-96d2da3

Start at: 2018-10-10 04:24:46
End at: 2018-10-10 04:25:16
Local clock offset: -0.221 ms
Remote clock offset: -0.598 ms

Below is generated by plot.py at 2018-10-10 05:04:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 278.63 Mbit/s
95th percentile per-packet one-way delay: 191.833 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 278.63 Mbit/s
95th percentile per-packet one-way delay: 191.833 ms
Loss rate: 0.14%

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

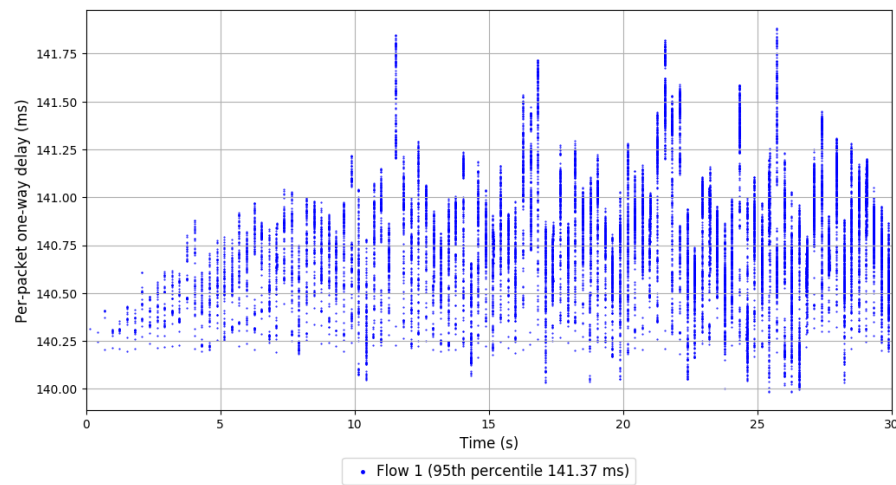
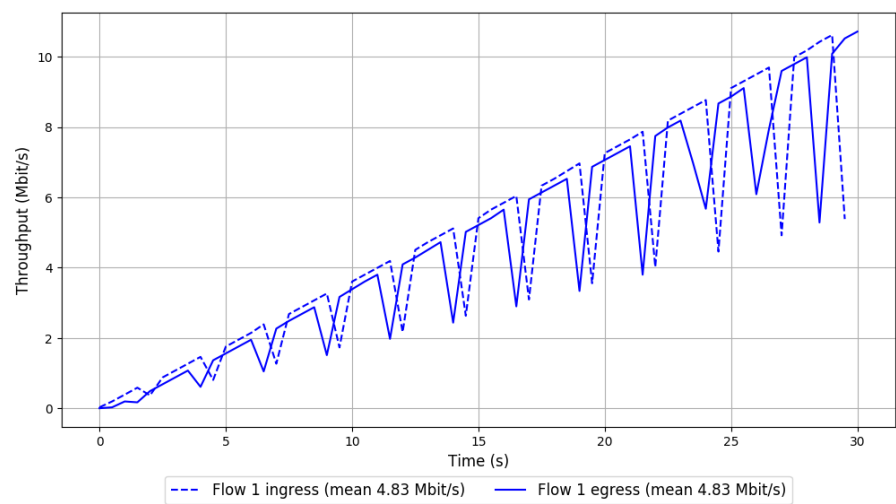


```
Run 1: Statistics of LEDBAT

Start at: 2018-10-10 02:45:13
End at: 2018-10-10 02:45:43
Local clock offset: -0.129 ms
Remote clock offset: -0.162 ms

# Below is generated by plot.py at 2018-10-10 05:04:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.83 Mbit/s
95th percentile per-packet one-way delay: 141.368 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.83 Mbit/s
95th percentile per-packet one-way delay: 141.368 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2018-10-10 03:10:36

End at: 2018-10-10 03:11:06

Local clock offset: 0.084 ms

Remote clock offset: -0.15 ms

Below is generated by plot.py at 2018-10-10 05:04:01

Datalink statistics

-- Total of 1 flow:

Average throughput: 4.81 Mbit/s

95th percentile per-packet one-way delay: 140.471 ms

Loss rate: 0.00%

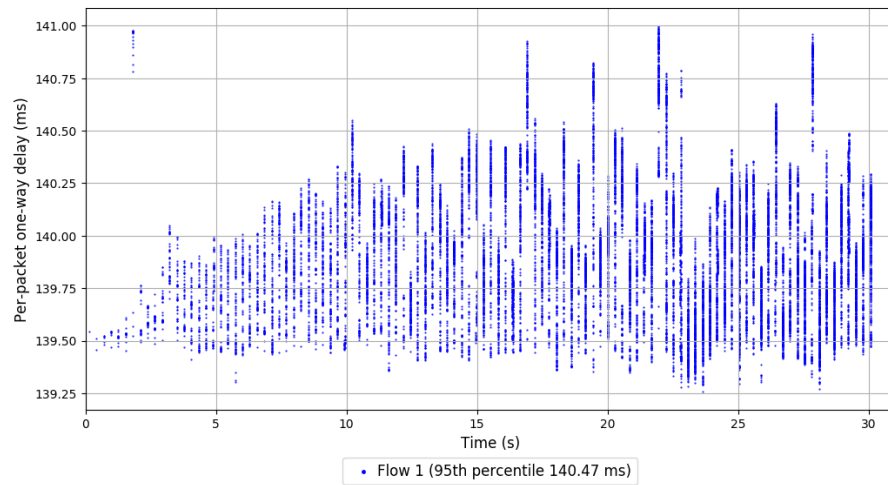
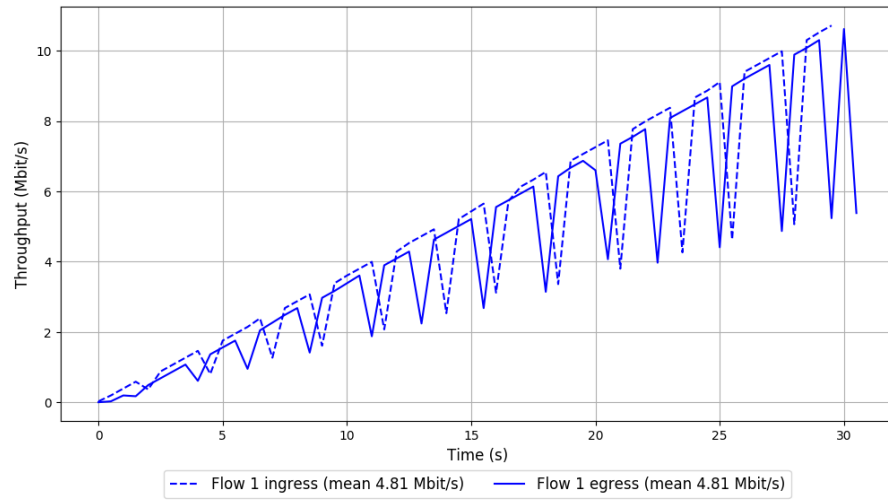
-- Flow 1:

Average throughput: 4.81 Mbit/s

95th percentile per-packet one-way delay: 140.471 ms

Loss rate: 0.00%

Run 2: Report of LEDBAT — Data Link

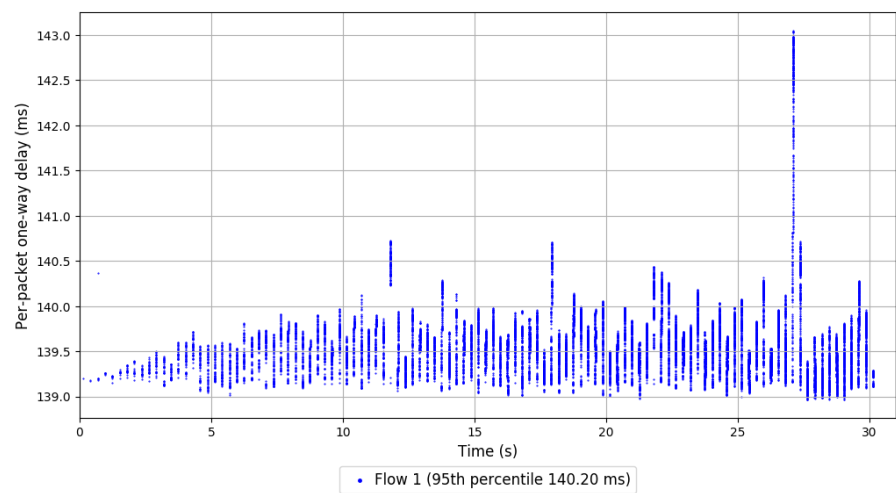
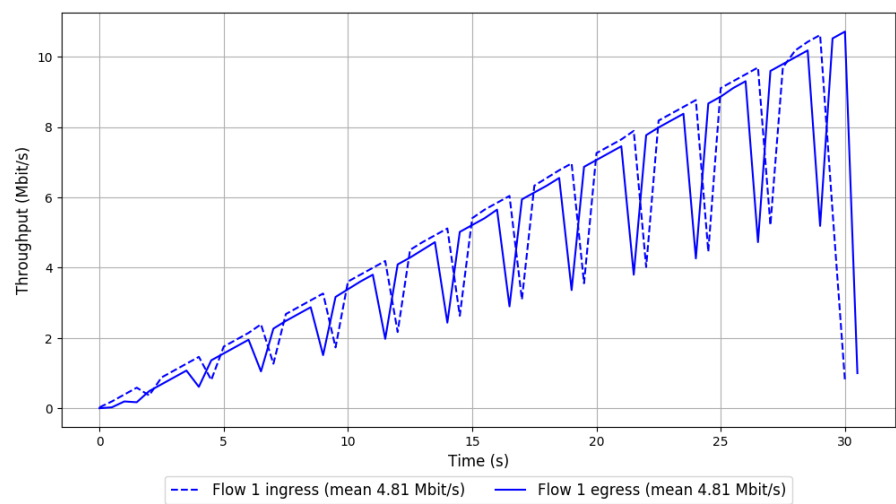


Run 3: Statistics of LEDBAT

Start at: 2018-10-10 03:35:56
End at: 2018-10-10 03:36:26
Local clock offset: 0.02 ms
Remote clock offset: -0.177 ms

Below is generated by plot.py at 2018-10-10 05:04:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 4.81 Mbit/s
95th percentile per-packet one-way delay: 140.204 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.81 Mbit/s
95th percentile per-packet one-way delay: 140.204 ms
Loss rate: 0.00%

Run 3: Report of LEDBAT — Data Link

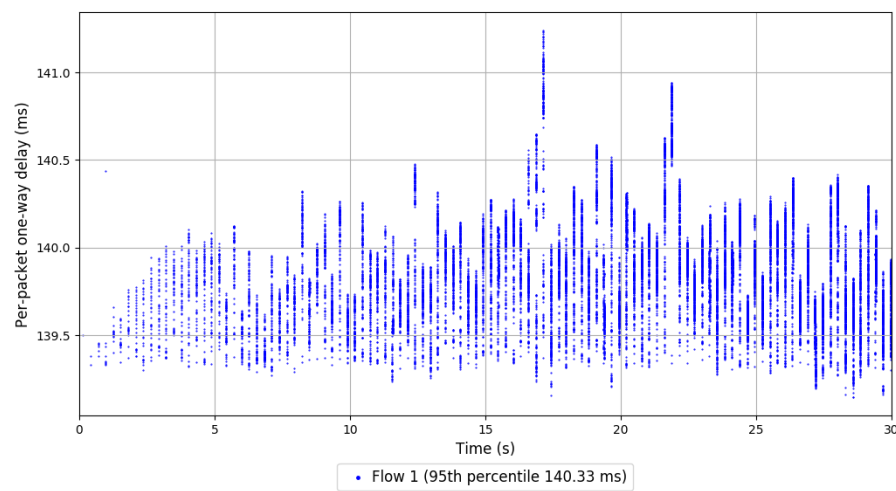
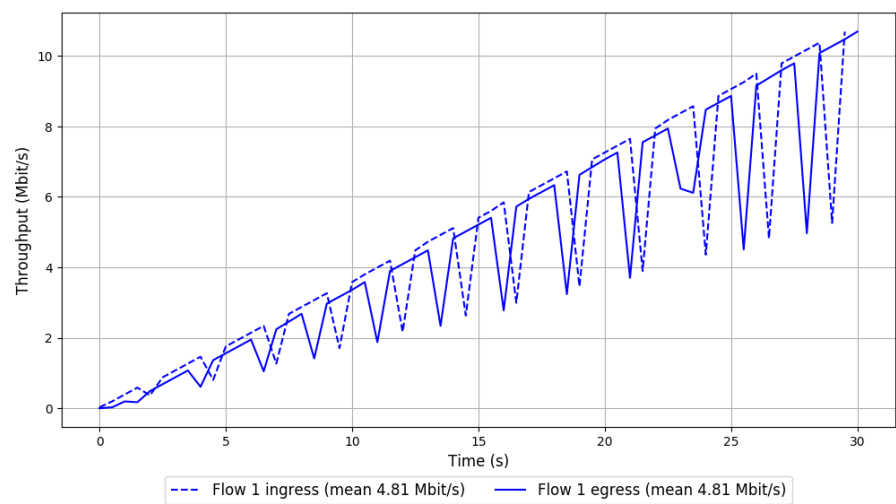


Run 4: Statistics of LEDBAT

Start at: 2018-10-10 04:01:45
End at: 2018-10-10 04:02:15
Local clock offset: -0.053 ms
Remote clock offset: -0.188 ms

Below is generated by plot.py at 2018-10-10 05:04:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 4.81 Mbit/s
95th percentile per-packet one-way delay: 140.334 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.81 Mbit/s
95th percentile per-packet one-way delay: 140.334 ms
Loss rate: 0.00%

Run 4: Report of LEDBAT — Data Link

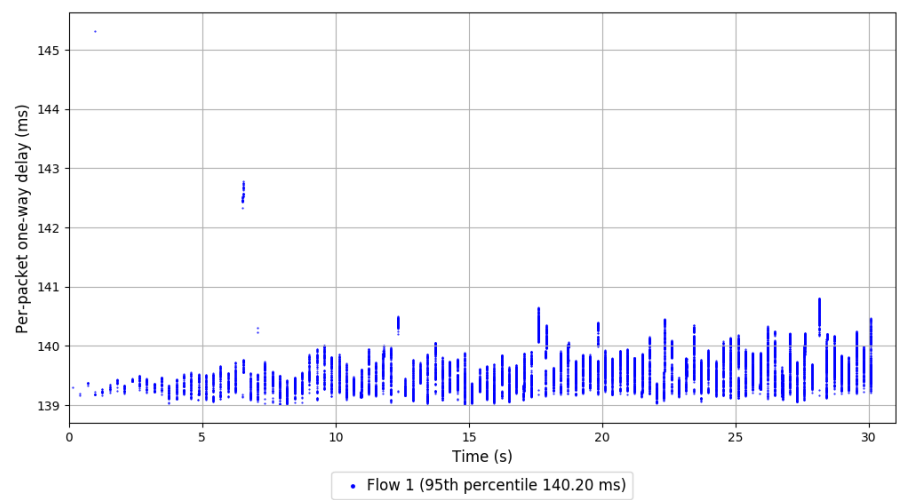
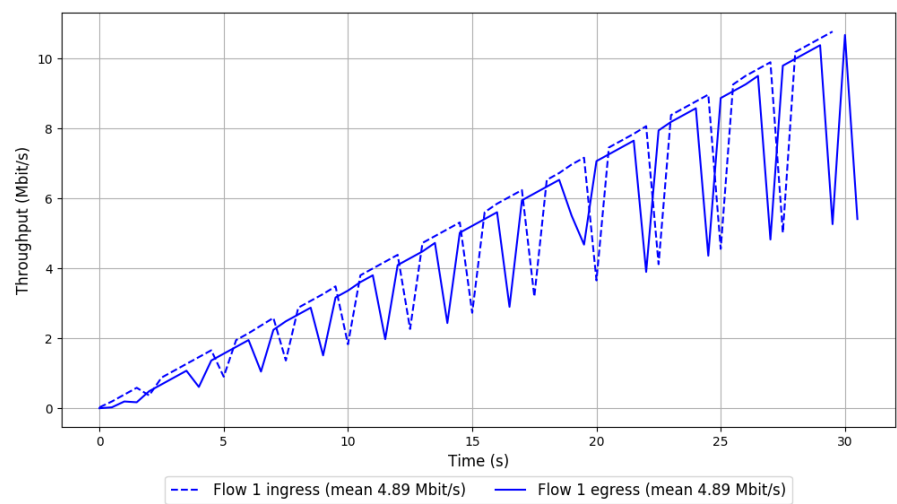


Run 5: Statistics of LEDBAT

Start at: 2018-10-10 04:27:21
End at: 2018-10-10 04:27:51
Local clock offset: -0.082 ms
Remote clock offset: -0.227 ms

Below is generated by plot.py at 2018-10-10 05:04:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 4.89 Mbit/s
95th percentile per-packet one-way delay: 140.202 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.89 Mbit/s
95th percentile per-packet one-way delay: 140.202 ms
Loss rate: 0.00%

Run 5: Report of LEDBAT — Data Link

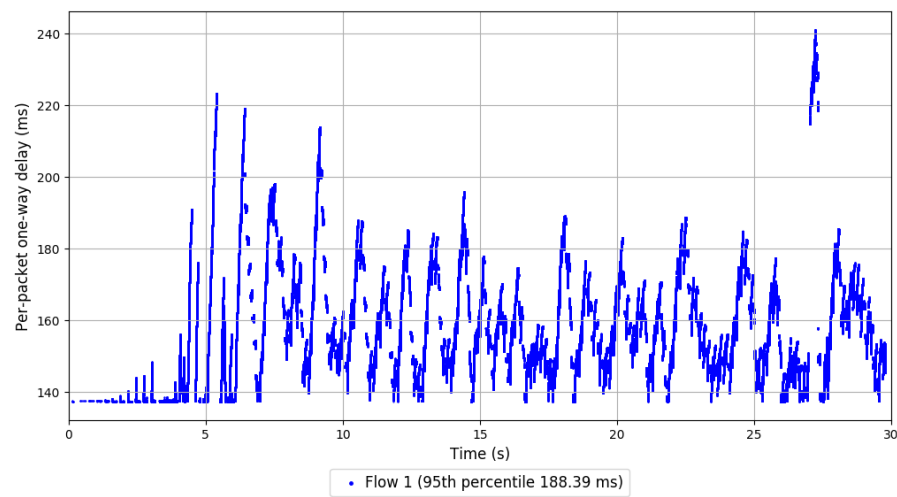
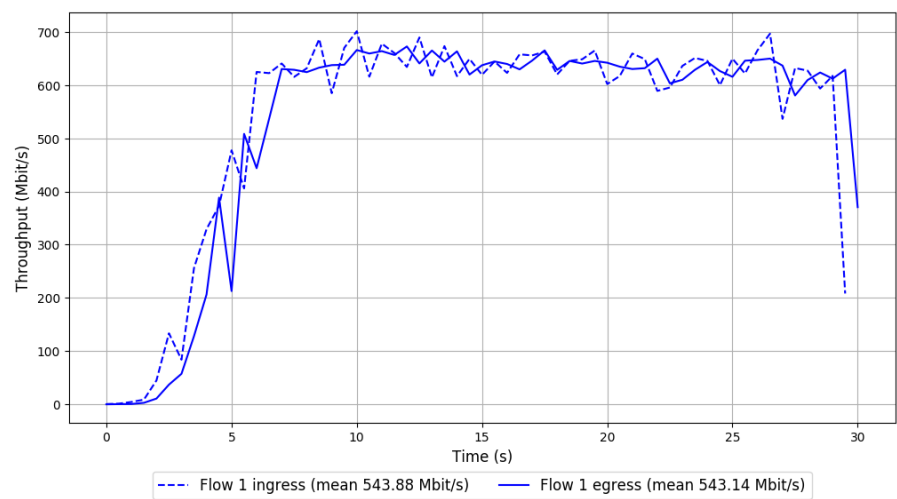


```
Run 1: Statistics of Indigo-Muses

Start at: 2018-10-10 02:35:04
End at: 2018-10-10 02:35:35
Local clock offset: -0.006 ms
Remote clock offset: -0.2 ms

# Below is generated by plot.py at 2018-10-10 05:09:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 543.14 Mbit/s
95th percentile per-packet one-way delay: 188.386 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 543.14 Mbit/s
95th percentile per-packet one-way delay: 188.386 ms
Loss rate: 0.13%
```

Run 1: Report of Indigo-Muses — Data Link



Run 2: Statistics of Indigo-Muses

Start at: 2018-10-10 03:00:38

End at: 2018-10-10 03:01:08

Local clock offset: 0.214 ms

Remote clock offset: -0.14 ms

Below is generated by plot.py at 2018-10-10 05:09:26

Datalink statistics

-- Total of 1 flow:

Average throughput: 510.68 Mbit/s

95th percentile per-packet one-way delay: 199.298 ms

Loss rate: 0.15%

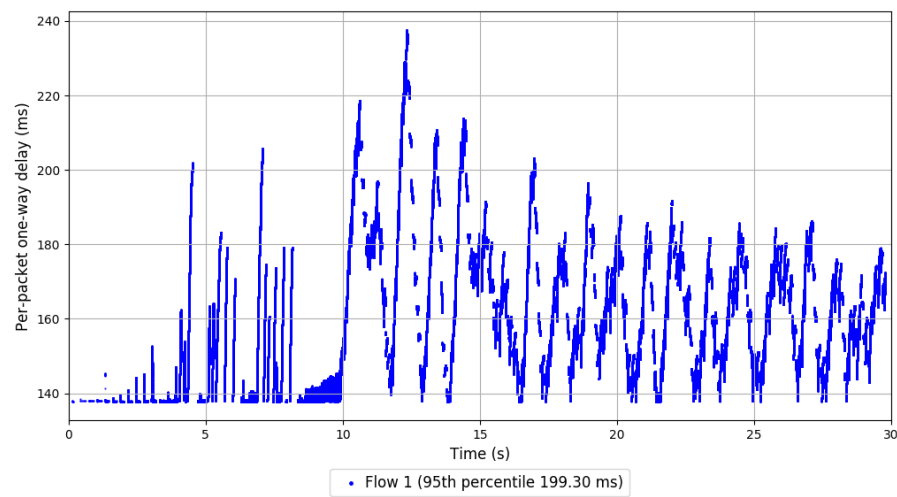
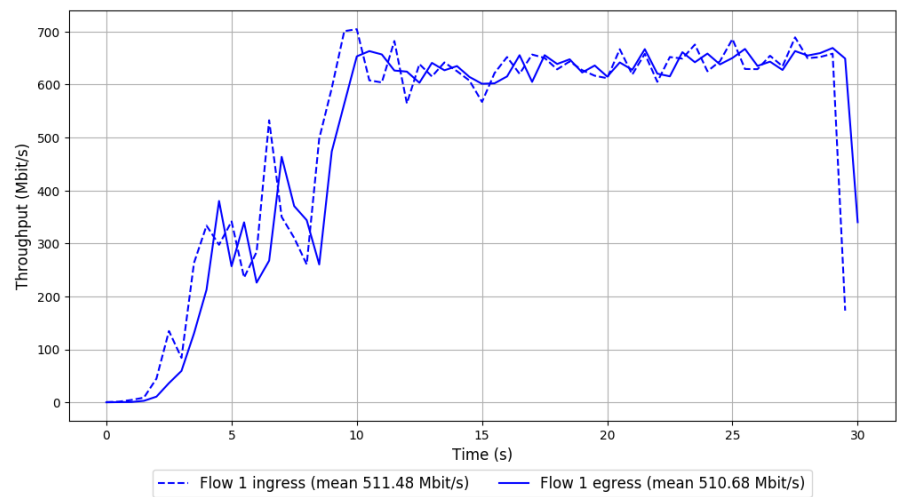
-- Flow 1:

Average throughput: 510.68 Mbit/s

95th percentile per-packet one-way delay: 199.298 ms

Loss rate: 0.15%

Run 2: Report of Indigo-Muses — Data Link

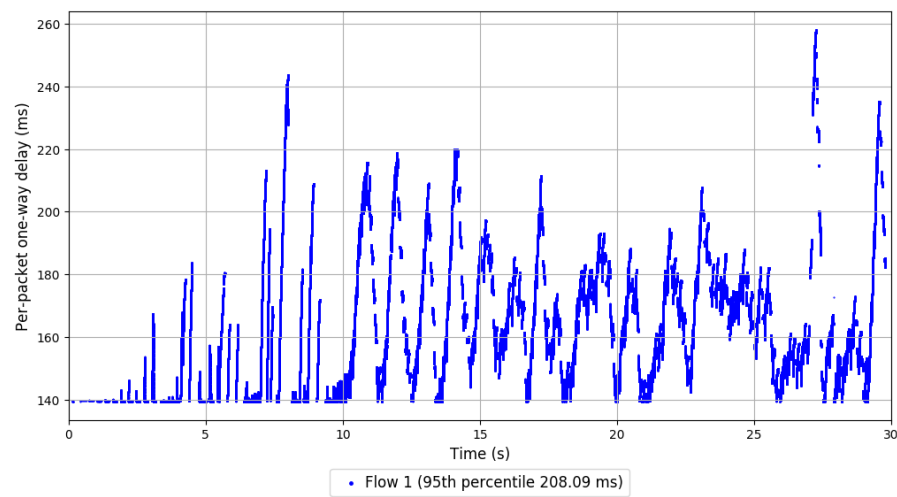
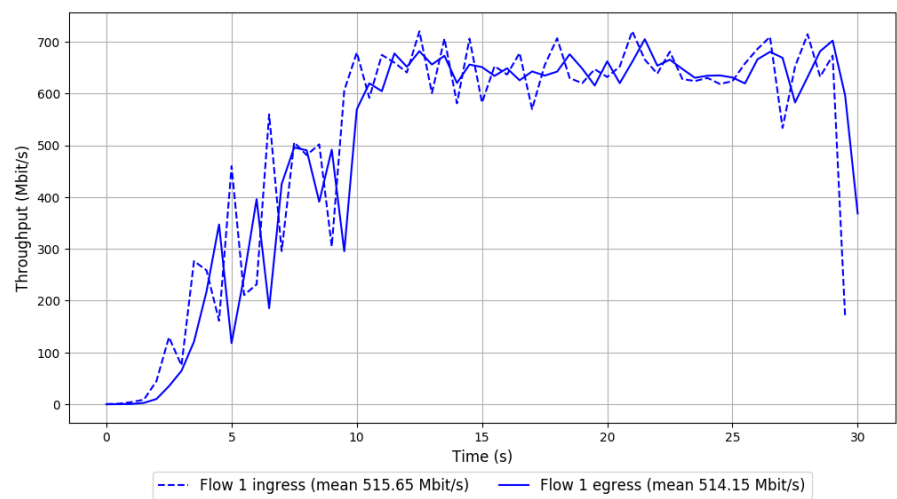


Run 3: Statistics of Indigo-Muses

Start at: 2018-10-10 03:25:51
End at: 2018-10-10 03:26:21
Local clock offset: -0.07 ms
Remote clock offset: -0.218 ms

Below is generated by plot.py at 2018-10-10 05:09:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 514.15 Mbit/s
95th percentile per-packet one-way delay: 208.088 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 514.15 Mbit/s
95th percentile per-packet one-way delay: 208.088 ms
Loss rate: 0.29%

Run 3: Report of Indigo-Muses — Data Link

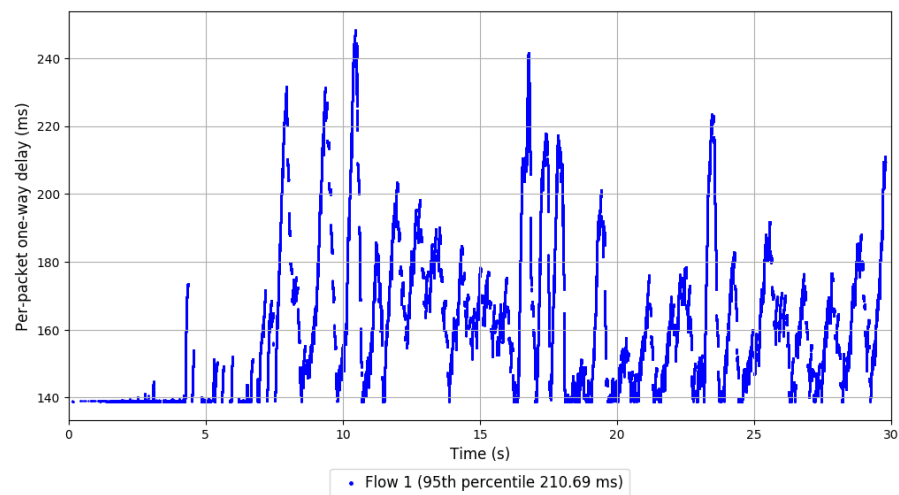
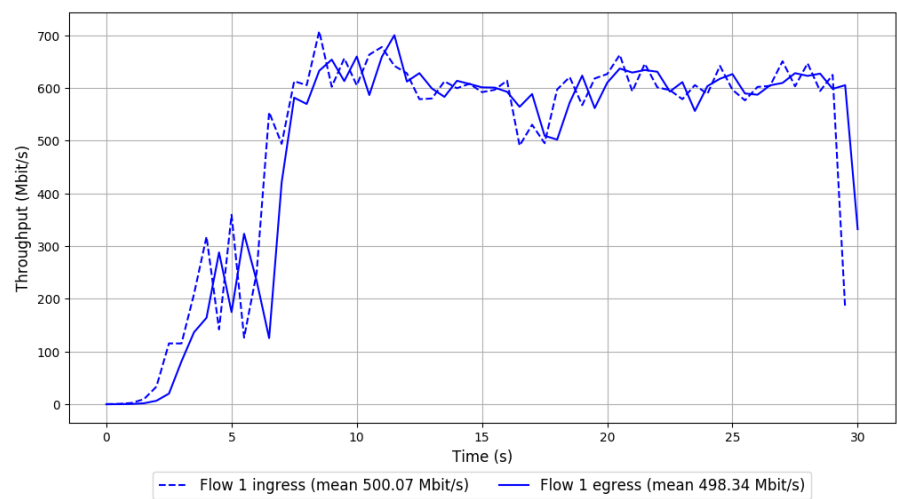


Run 4: Statistics of Indigo-Muses

Start at: 2018-10-10 03:51:16
End at: 2018-10-10 03:51:46
Local clock offset: 0.035 ms
Remote clock offset: -0.201 ms

Below is generated by plot.py at 2018-10-10 05:09:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 498.34 Mbit/s
95th percentile per-packet one-way delay: 210.689 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 498.34 Mbit/s
95th percentile per-packet one-way delay: 210.689 ms
Loss rate: 0.34%

Run 4: Report of Indigo-Muses — Data Link



Run 5: Statistics of Indigo-Muses

Start at: 2018-10-10 04:16:52

End at: 2018-10-10 04:17:22

Local clock offset: -0.168 ms

Remote clock offset: 0.147 ms

Below is generated by plot.py at 2018-10-10 05:11:55

Datalink statistics

-- Total of 1 flow:

Average throughput: 523.73 Mbit/s

95th percentile per-packet one-way delay: 207.631 ms

Loss rate: 0.63%

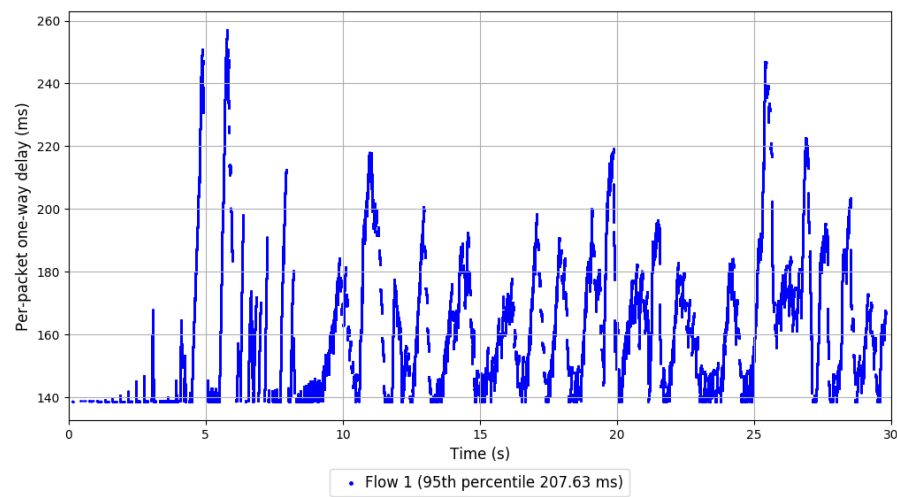
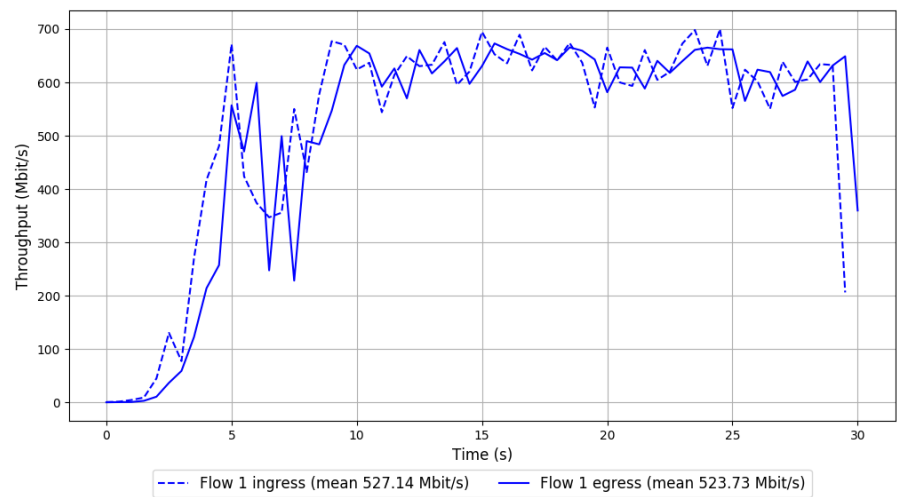
-- Flow 1:

Average throughput: 523.73 Mbit/s

95th percentile per-packet one-way delay: 207.631 ms

Loss rate: 0.63%

Run 5: Report of Indigo-Muses — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2018-10-10 02:36:44

End at: 2018-10-10 02:37:14

Local clock offset: -0.077 ms

Remote clock offset: -0.136 ms

Below is generated by plot.py at 2018-10-10 05:14:07

Datalink statistics

-- Total of 1 flow:

Average throughput: 341.19 Mbit/s

95th percentile per-packet one-way delay: 246.187 ms

Loss rate: 1.86%

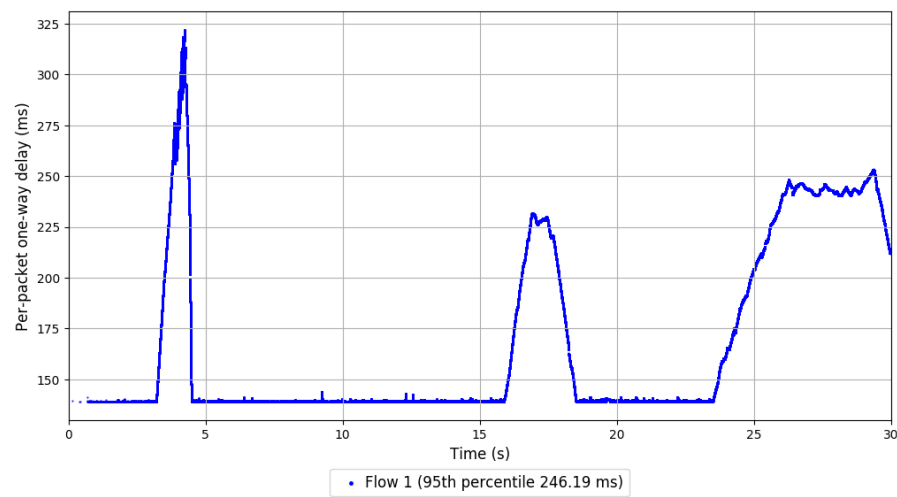
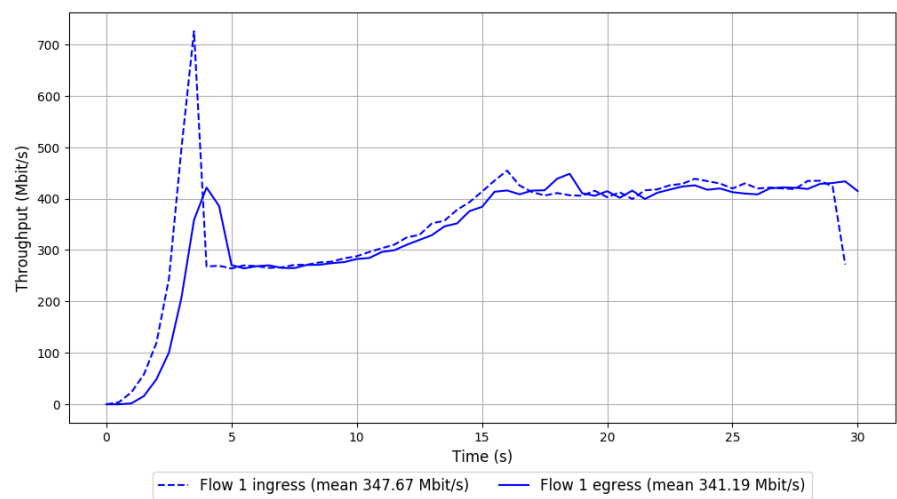
-- Flow 1:

Average throughput: 341.19 Mbit/s

95th percentile per-packet one-way delay: 246.187 ms

Loss rate: 1.86%

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-10-10 03:02:16

End at: 2018-10-10 03:02:46

Local clock offset: 0.012 ms

Remote clock offset: 0.236 ms

Below is generated by plot.py at 2018-10-10 05:15:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 355.02 Mbit/s

95th percentile per-packet one-way delay: 256.087 ms

Loss rate: 1.76%

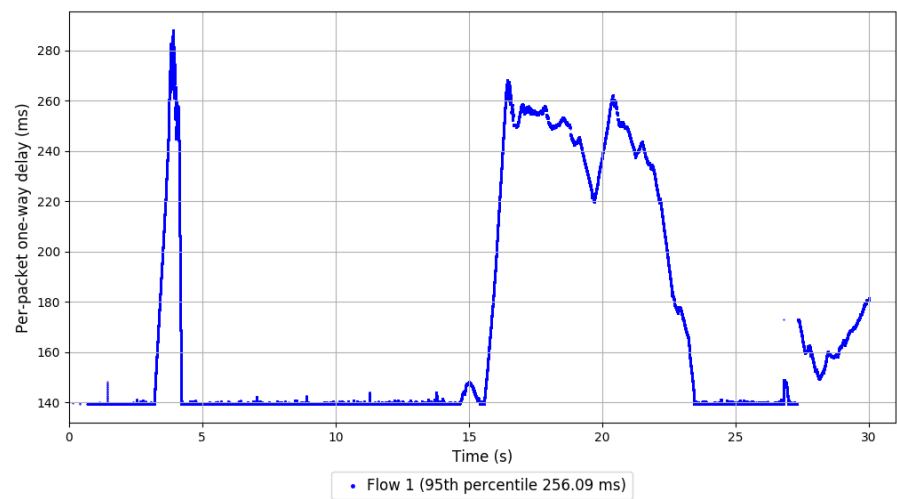
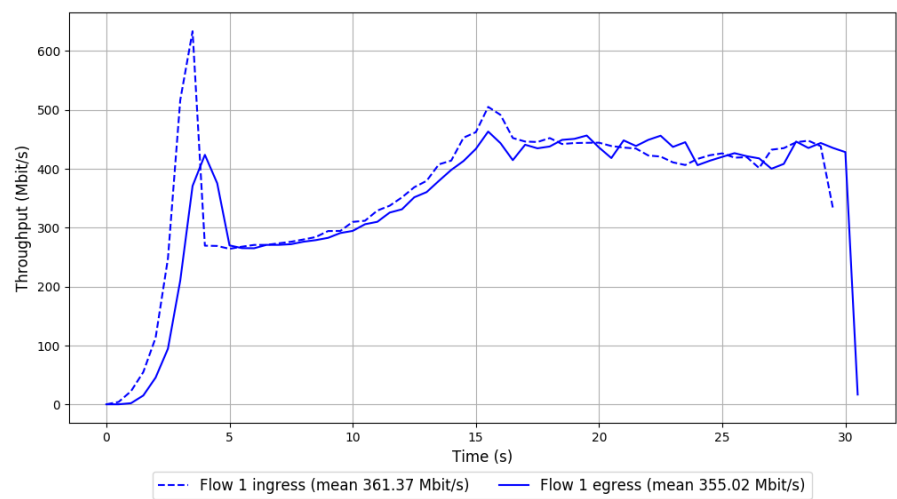
-- Flow 1:

Average throughput: 355.02 Mbit/s

95th percentile per-packet one-way delay: 256.087 ms

Loss rate: 1.76%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-10-10 03:27:30

End at: 2018-10-10 03:28:00

Local clock offset: 0.086 ms

Remote clock offset: 0.169 ms

Below is generated by plot.py at 2018-10-10 05:15:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 326.75 Mbit/s

95th percentile per-packet one-way delay: 174.724 ms

Loss rate: 0.94%

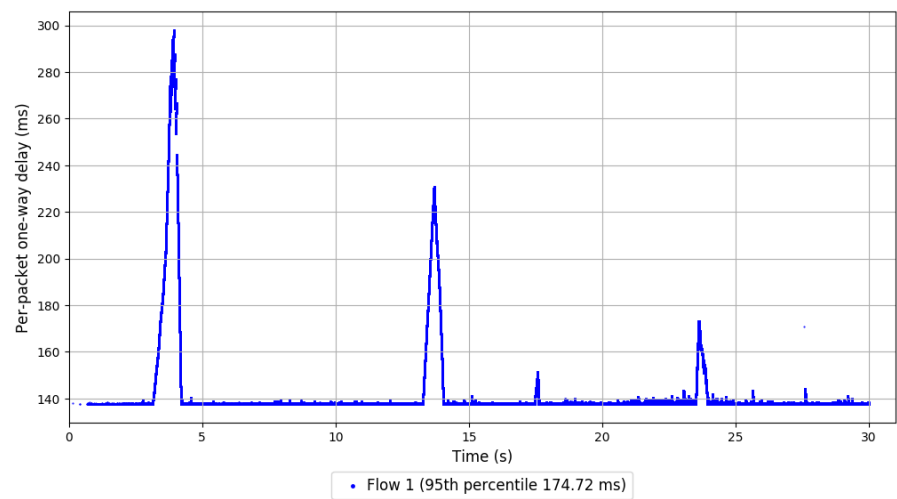
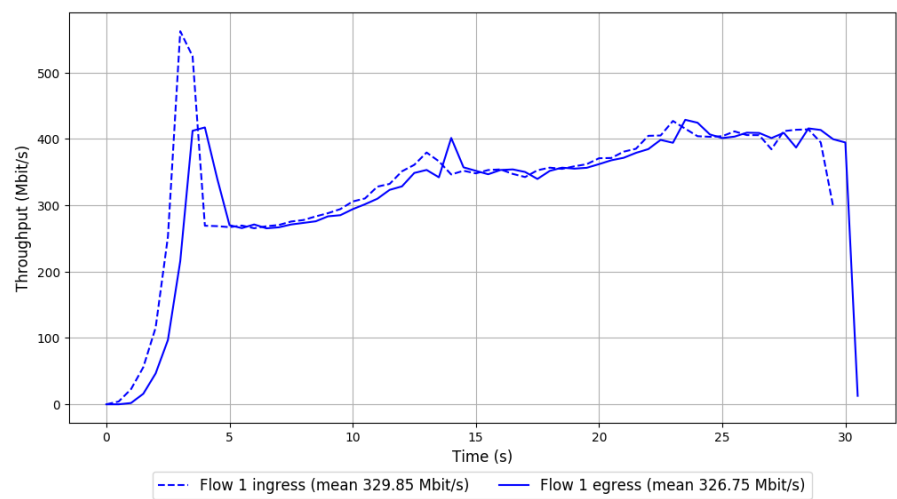
-- Flow 1:

Average throughput: 326.75 Mbit/s

95th percentile per-packet one-way delay: 174.724 ms

Loss rate: 0.94%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-10-10 03:52:53

End at: 2018-10-10 03:53:24

Local clock offset: -0.076 ms

Remote clock offset: 0.169 ms

Below is generated by plot.py at 2018-10-10 05:19:38

Datalink statistics

-- Total of 1 flow:

Average throughput: 319.65 Mbit/s

95th percentile per-packet one-way delay: 168.295 ms

Loss rate: 0.77%

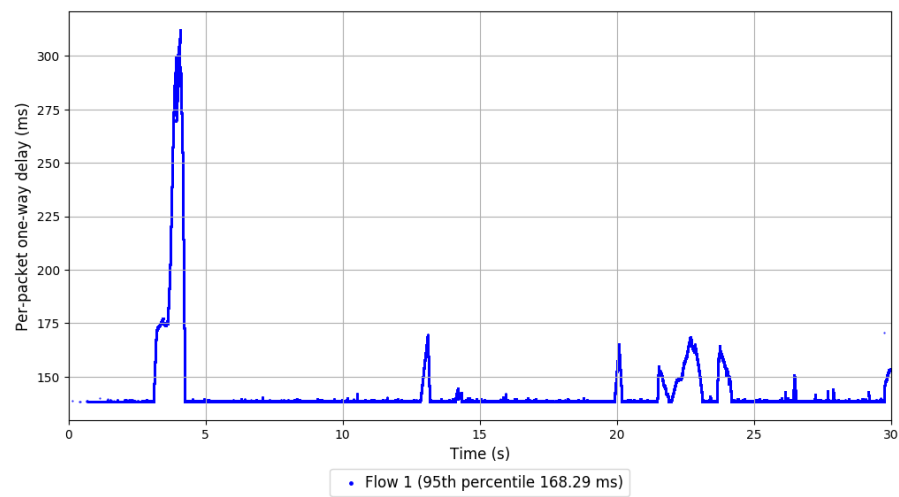
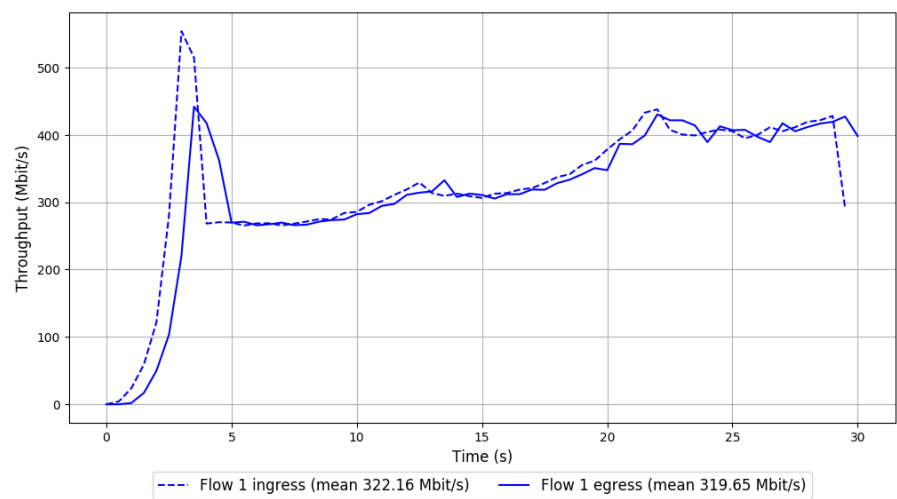
-- Flow 1:

Average throughput: 319.65 Mbit/s

95th percentile per-packet one-way delay: 168.295 ms

Loss rate: 0.77%

Run 4: Report of PCC-Allegro — Data Link

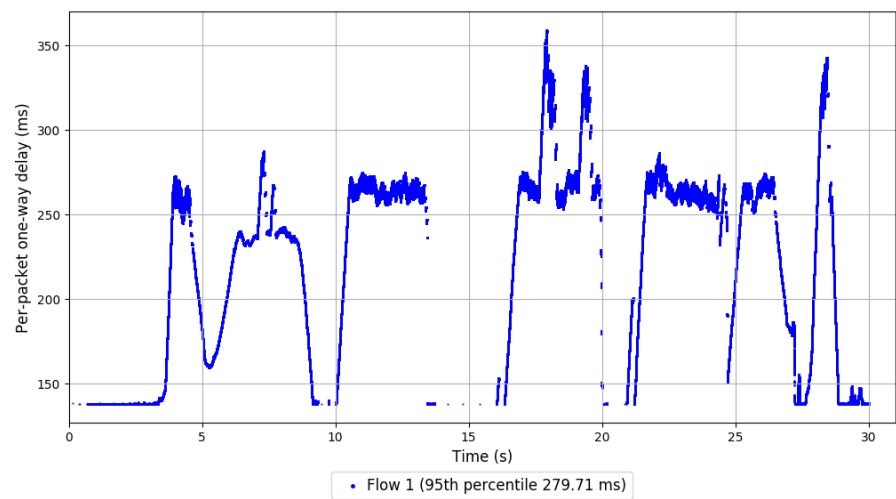
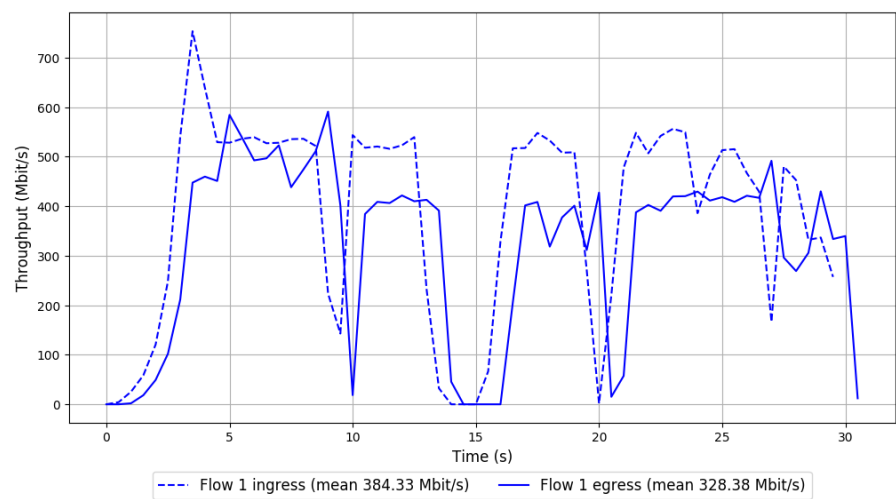


Run 5: Statistics of PCC-Allegro

Start at: 2018-10-10 04:18:32
End at: 2018-10-10 04:19:02
Local clock offset: -0.319 ms
Remote clock offset: -0.583 ms

Below is generated by plot.py at 2018-10-10 05:20:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 328.38 Mbit/s
95th percentile per-packet one-way delay: 279.707 ms
Loss rate: 14.56%
-- Flow 1:
Average throughput: 328.38 Mbit/s
95th percentile per-packet one-way delay: 279.707 ms
Loss rate: 14.56%

Run 5: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

Start at: 2018-10-10 02:38:19

End at: 2018-10-10 02:38:49

Local clock offset: -0.13 ms

Remote clock offset: -0.185 ms

Below is generated by plot.py at 2018-10-10 05:20:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 211.36 Mbit/s

95th percentile per-packet one-way delay: 148.336 ms

Loss rate: 0.05%

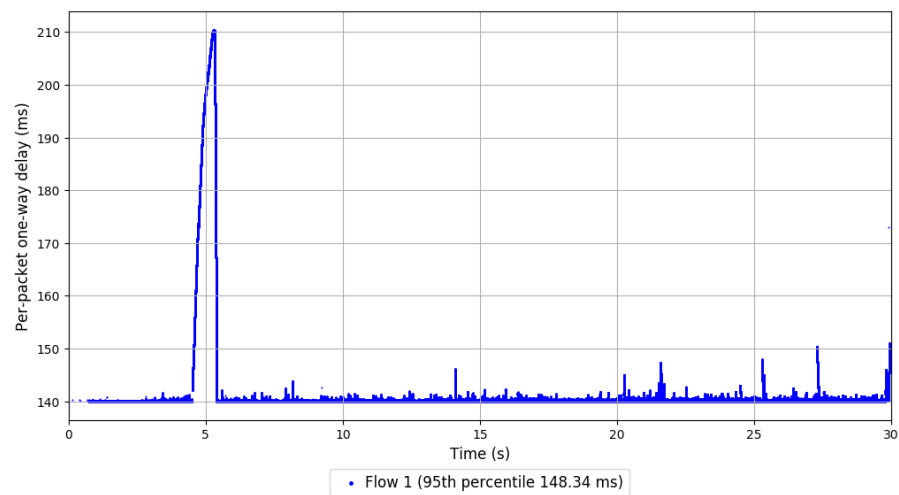
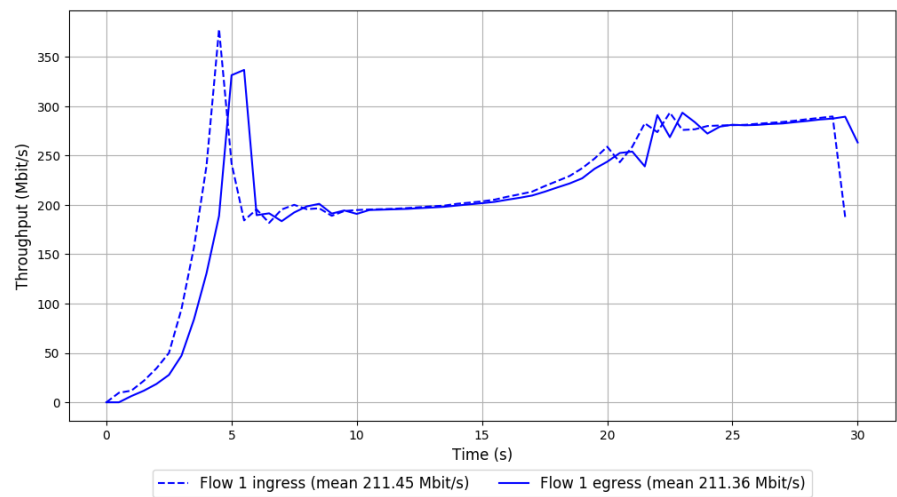
-- Flow 1:

Average throughput: 211.36 Mbit/s

95th percentile per-packet one-way delay: 148.336 ms

Loss rate: 0.05%

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2018-10-10 03:03:53

End at: 2018-10-10 03:04:23

Local clock offset: 0.085 ms

Remote clock offset: 0.2 ms

Below is generated by plot.py at 2018-10-10 05:20:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 219.81 Mbit/s

95th percentile per-packet one-way delay: 260.154 ms

Loss rate: 7.50%

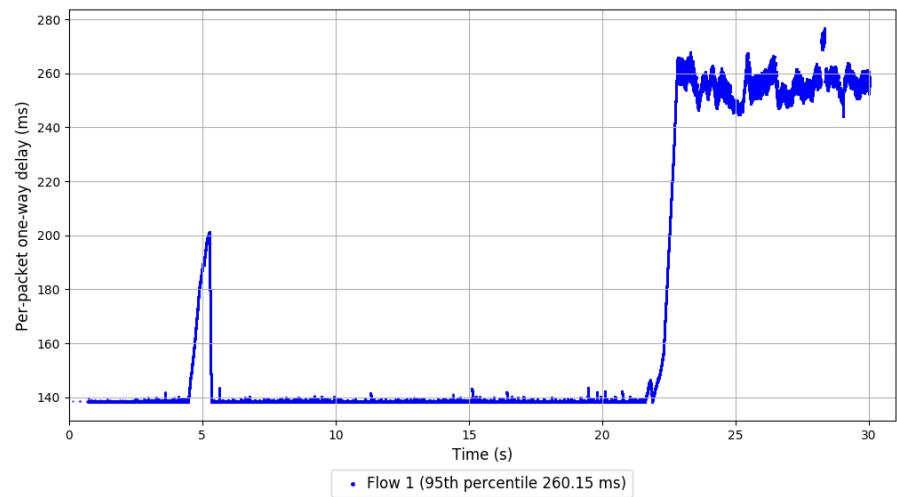
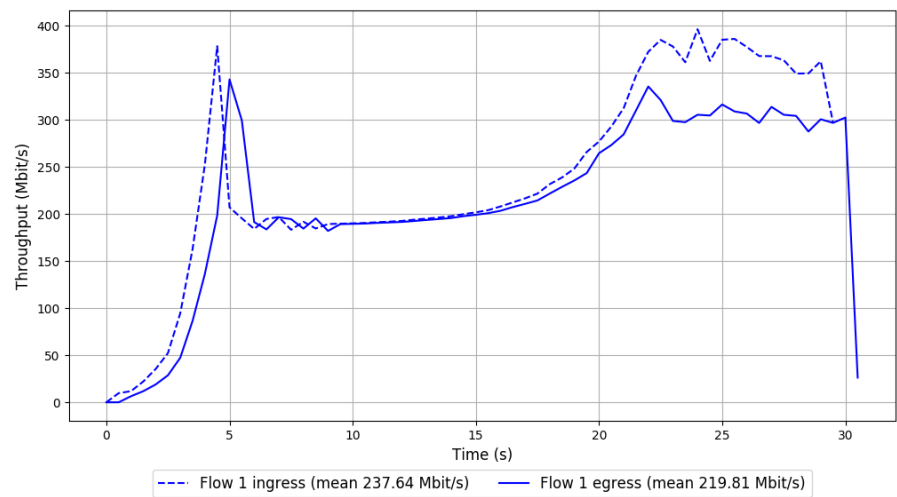
-- Flow 1:

Average throughput: 219.81 Mbit/s

95th percentile per-packet one-way delay: 260.154 ms

Loss rate: 7.50%

Run 2: Report of PCC-Expr — Data Link

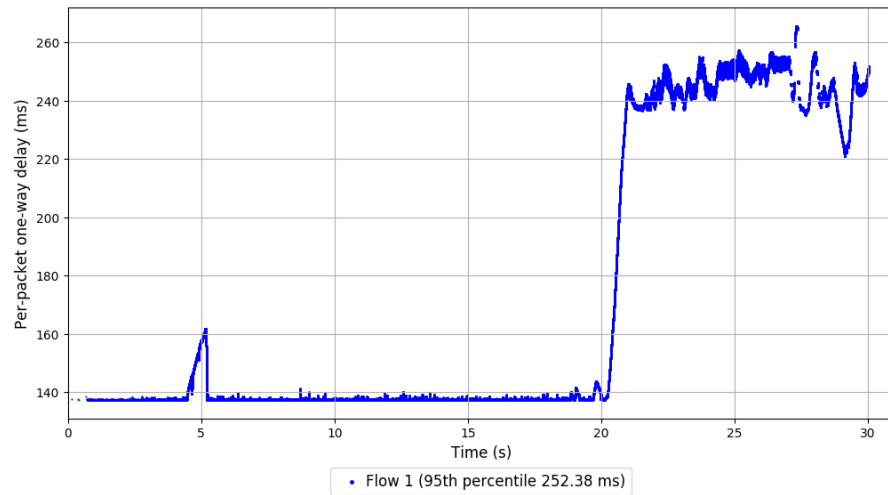
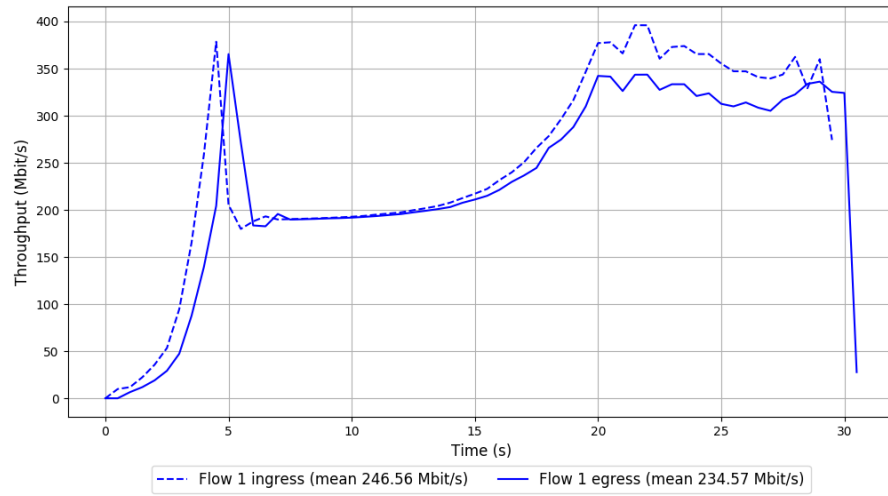


Run 3: Statistics of PCC-Expr

Start at: 2018-10-10 03:29:05
End at: 2018-10-10 03:29:35
Local clock offset: -0.023 ms
Remote clock offset: -0.195 ms

Below is generated by plot.py at 2018-10-10 05:20:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 234.57 Mbit/s
95th percentile per-packet one-way delay: 252.383 ms
Loss rate: 4.85%
-- Flow 1:
Average throughput: 234.57 Mbit/s
95th percentile per-packet one-way delay: 252.383 ms
Loss rate: 4.85%

Run 3: Report of PCC-Expr — Data Link

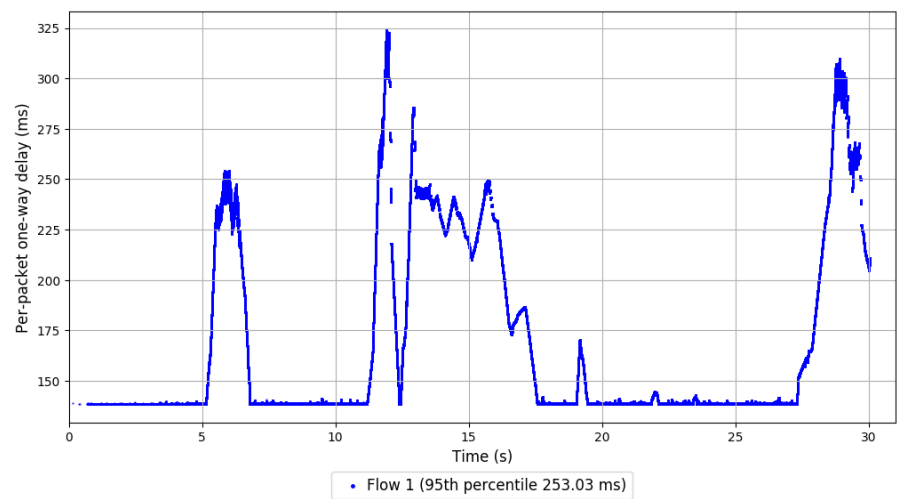
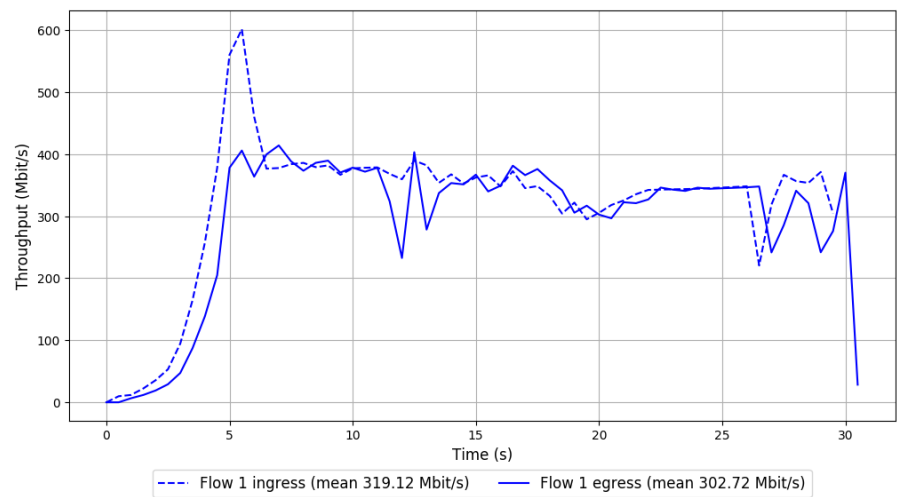


Run 4: Statistics of PCC-Expr

Start at: 2018-10-10 03:54:27
End at: 2018-10-10 03:54:57
Local clock offset: -0.184 ms
Remote clock offset: -0.606 ms

Below is generated by plot.py at 2018-10-10 05:24:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 302.72 Mbit/s
95th percentile per-packet one-way delay: 253.027 ms
Loss rate: 5.14%
-- Flow 1:
Average throughput: 302.72 Mbit/s
95th percentile per-packet one-way delay: 253.027 ms
Loss rate: 5.14%

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

Start at: 2018-10-10 04:20:07

End at: 2018-10-10 04:20:37

Local clock offset: -0.273 ms

Remote clock offset: 0.193 ms

Below is generated by plot.py at 2018-10-10 05:24:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 274.66 Mbit/s

95th percentile per-packet one-way delay: 255.866 ms

Loss rate: 4.54%

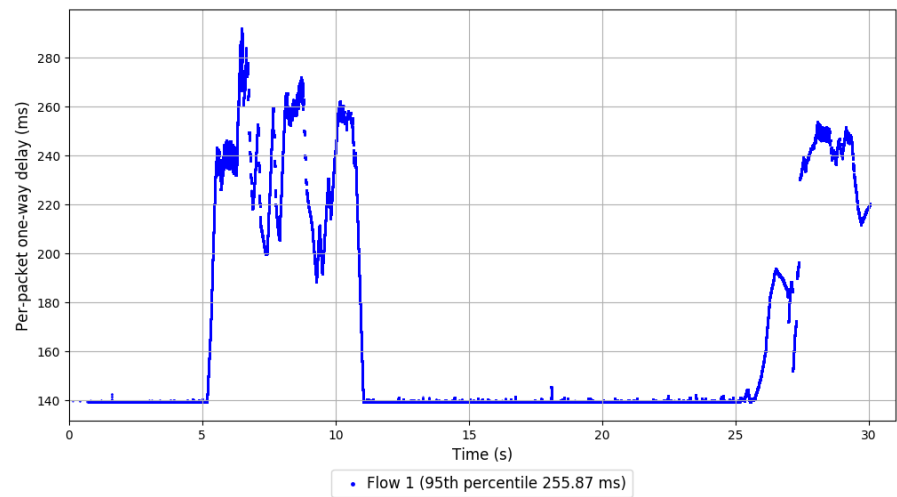
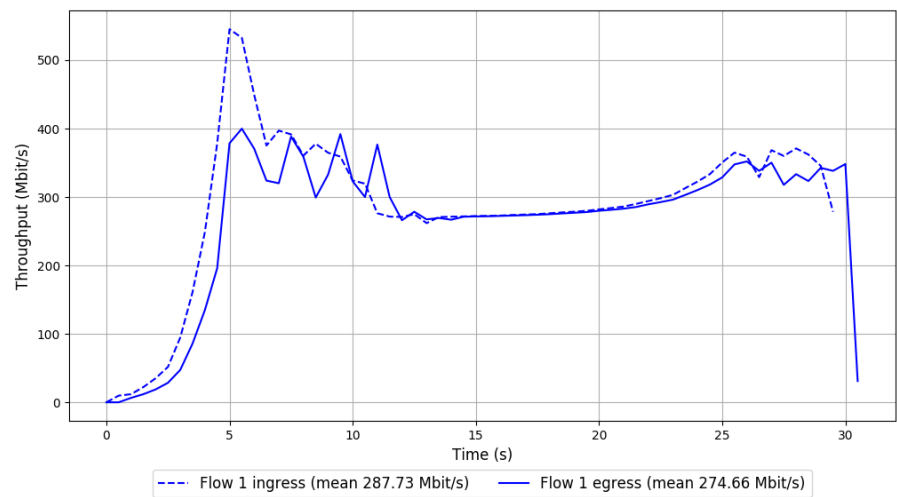
-- Flow 1:

Average throughput: 274.66 Mbit/s

95th percentile per-packet one-way delay: 255.866 ms

Loss rate: 4.54%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2018-10-10 02:25:22

End at: 2018-10-10 02:25:52

Local clock offset: -0.12 ms

Remote clock offset: -0.245 ms

Below is generated by plot.py at 2018-10-10 05:24:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 35.87 Mbit/s

95th percentile per-packet one-way delay: 139.335 ms

Loss rate: 0.00%

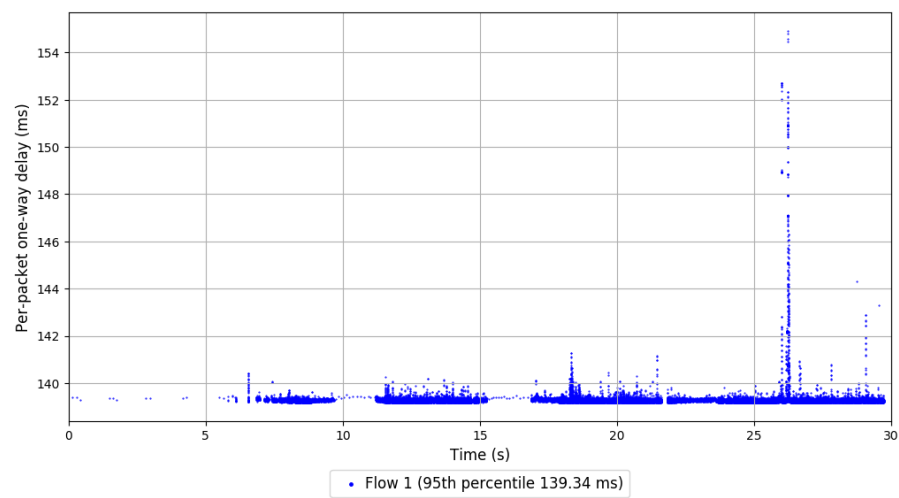
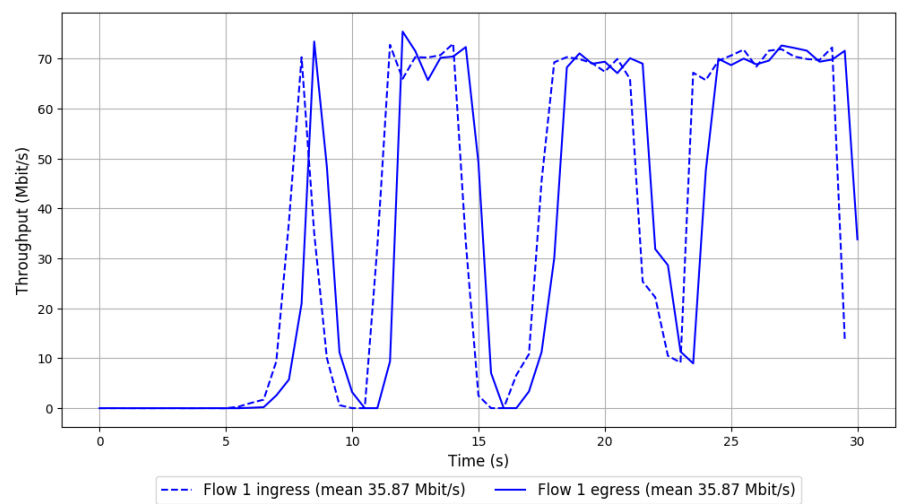
-- Flow 1:

Average throughput: 35.87 Mbit/s

95th percentile per-packet one-way delay: 139.335 ms

Loss rate: 0.00%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-10-10 02:50:44

End at: 2018-10-10 02:51:14

Local clock offset: -0.008 ms

Remote clock offset: 0.225 ms

Below is generated by plot.py at 2018-10-10 05:24:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 58.12 Mbit/s

95th percentile per-packet one-way delay: 137.807 ms

Loss rate: 0.00%

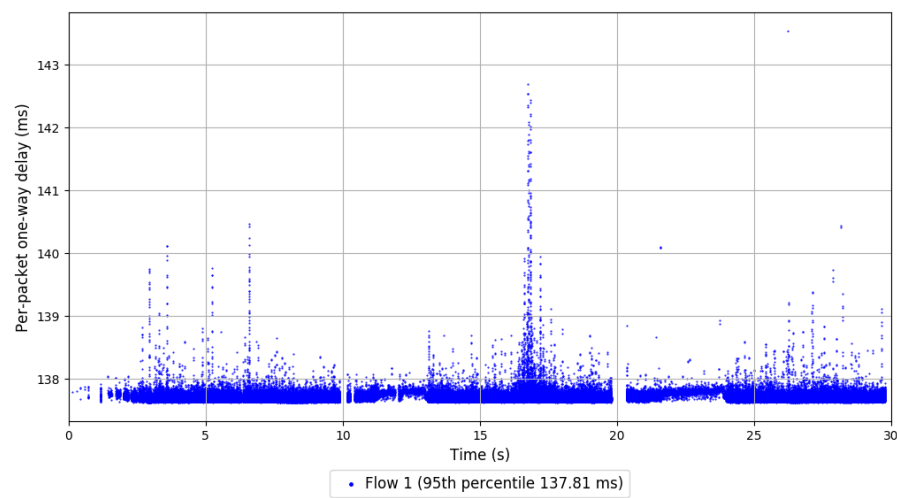
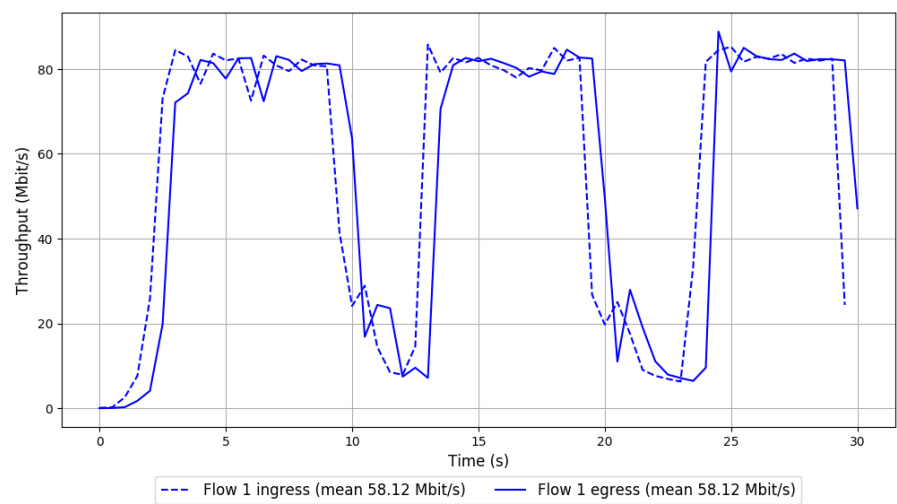
-- Flow 1:

Average throughput: 58.12 Mbit/s

95th percentile per-packet one-way delay: 137.807 ms

Loss rate: 0.00%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-10-10 03:16:03

End at: 2018-10-10 03:16:33

Local clock offset: -0.084 ms

Remote clock offset: -0.176 ms

Below is generated by plot.py at 2018-10-10 05:24:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 50.91 Mbit/s

95th percentile per-packet one-way delay: 139.567 ms

Loss rate: 0.00%

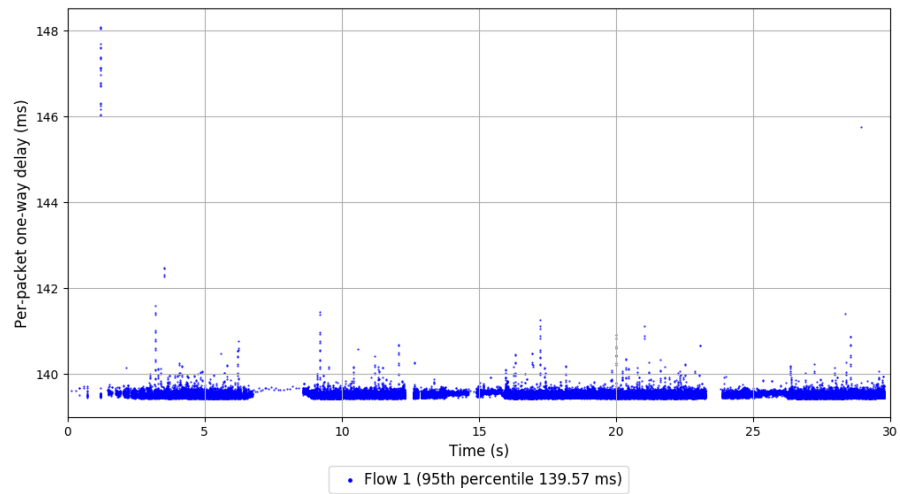
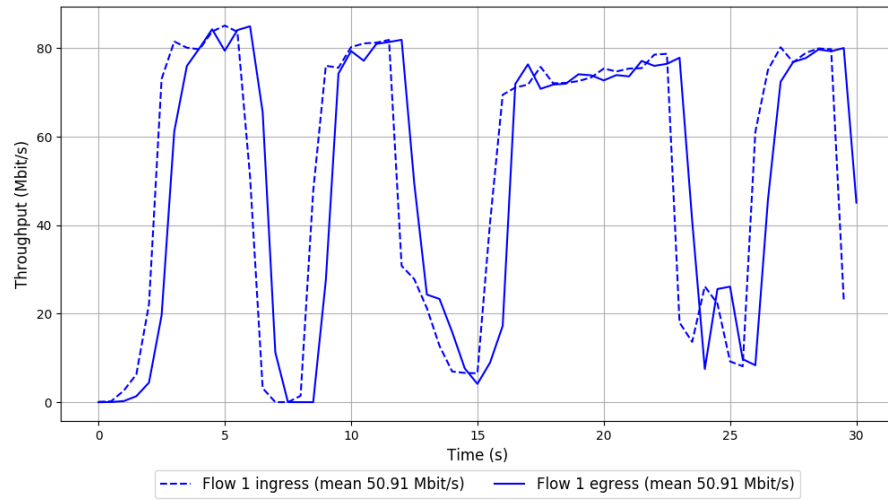
-- Flow 1:

Average throughput: 50.91 Mbit/s

95th percentile per-packet one-way delay: 139.567 ms

Loss rate: 0.00%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-10-10 03:41:23

End at: 2018-10-10 03:41:53

Local clock offset: -0.075 ms

Remote clock offset: 0.171 ms

Below is generated by plot.py at 2018-10-10 05:24:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 59.14 Mbit/s

95th percentile per-packet one-way delay: 137.726 ms

Loss rate: 0.00%

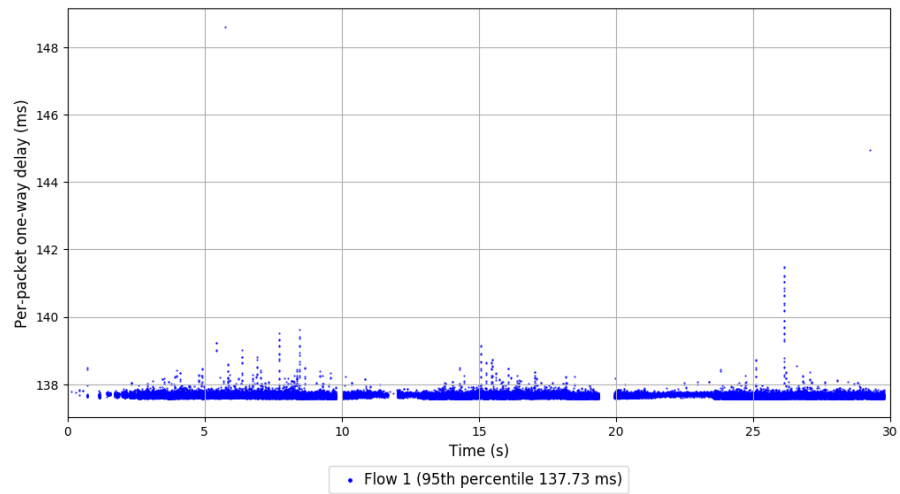
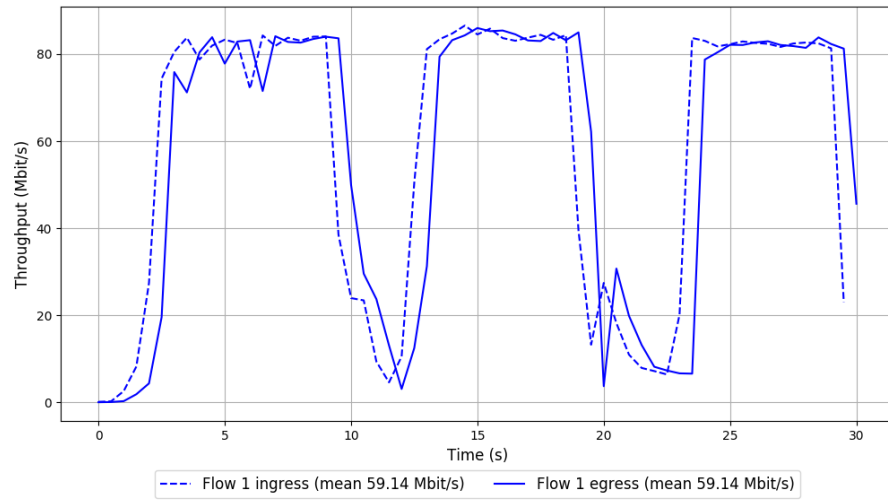
-- Flow 1:

Average throughput: 59.14 Mbit/s

95th percentile per-packet one-way delay: 137.726 ms

Loss rate: 0.00%

Run 4: Report of QUIC Cubic — Data Link

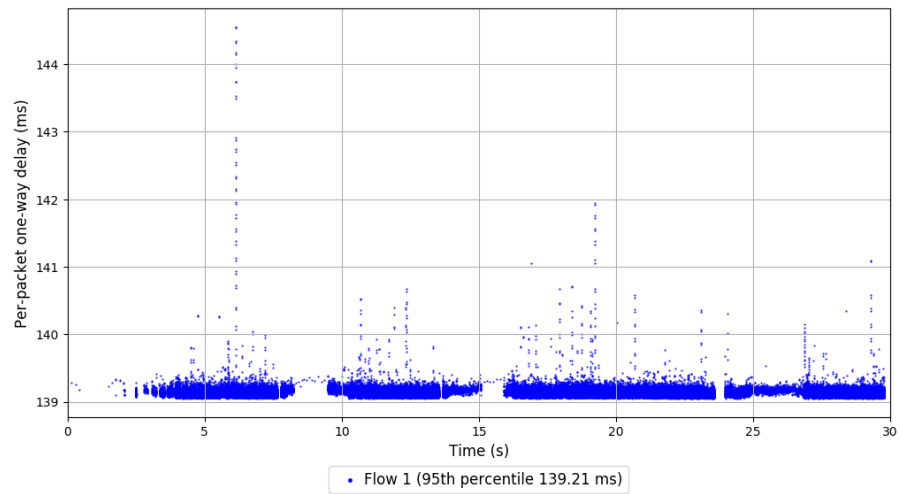
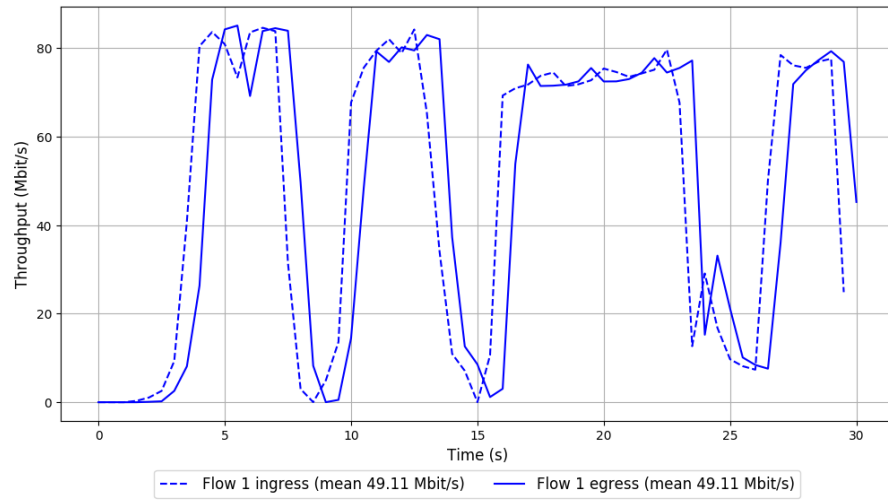


Run 5: Statistics of QUIC Cubic

Start at: 2018-10-10 04:07:15
End at: 2018-10-10 04:07:45
Local clock offset: -0.284 ms
Remote clock offset: -0.242 ms

Below is generated by plot.py at 2018-10-10 05:24:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 49.11 Mbit/s
95th percentile per-packet one-way delay: 139.211 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 49.11 Mbit/s
95th percentile per-packet one-way delay: 139.211 ms
Loss rate: 0.00%

Run 5: Report of QUIC Cubic — Data Link

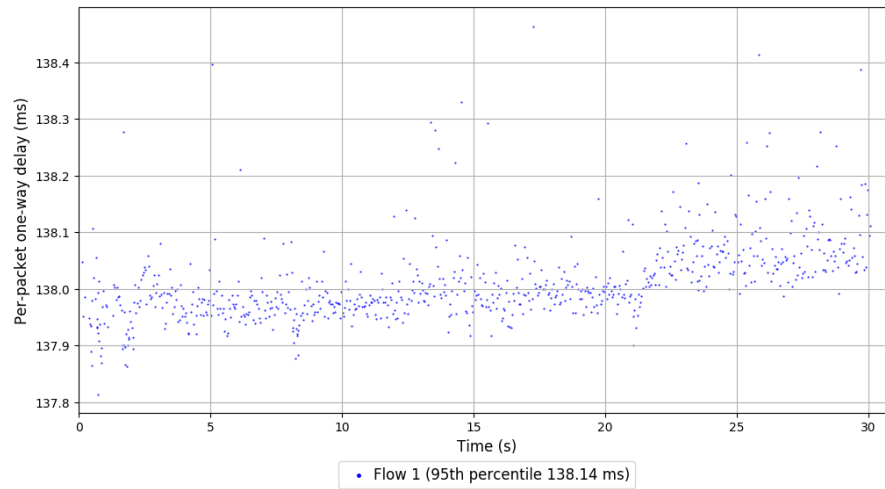
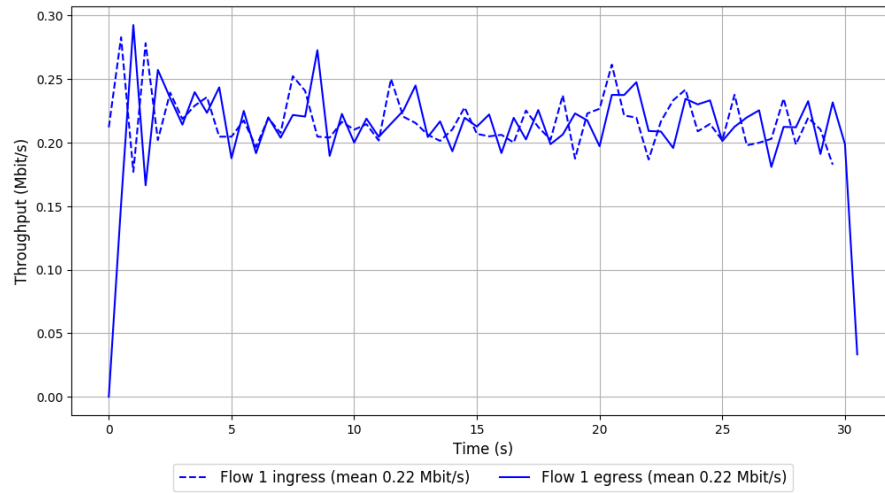


```
Run 1: Statistics of SCReAM

Start at: 2018-10-10 02:47:48
End at: 2018-10-10 02:48:18
Local clock offset: -0.148 ms
Remote clock offset: -0.51 ms

# Below is generated by plot.py at 2018-10-10 05:24:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 138.139 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 138.139 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2018-10-10 03:13:10

End at: 2018-10-10 03:13:40

Local clock offset: -0.138 ms

Remote clock offset: 0.145 ms

Below is generated by plot.py at 2018-10-10 05:24:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 140.425 ms

Loss rate: 0.00%

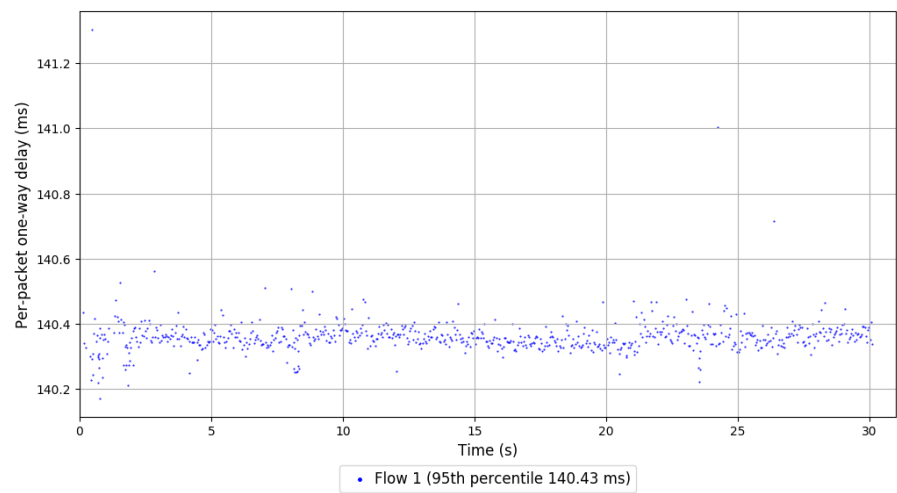
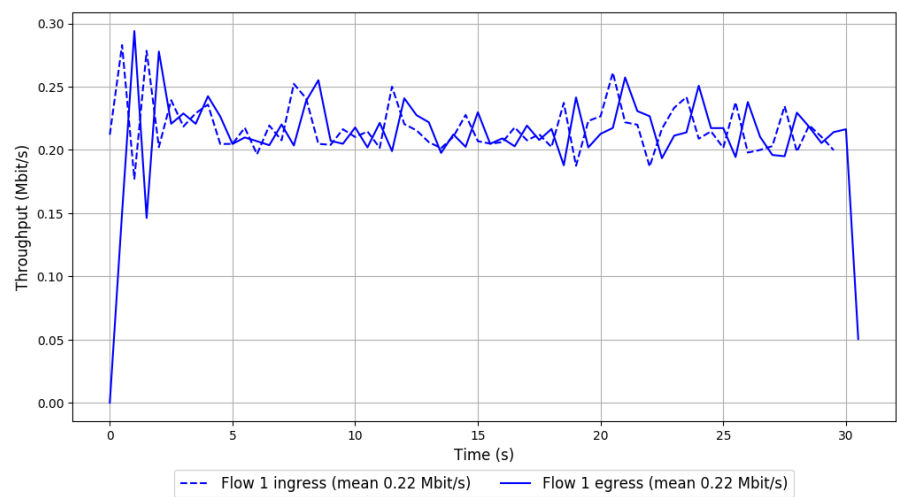
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 140.425 ms

Loss rate: 0.00%

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2018-10-10 03:38:31

End at: 2018-10-10 03:39:01

Local clock offset: -0.048 ms

Remote clock offset: 0.169 ms

Below is generated by plot.py at 2018-10-10 05:24:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 139.488 ms

Loss rate: 0.00%

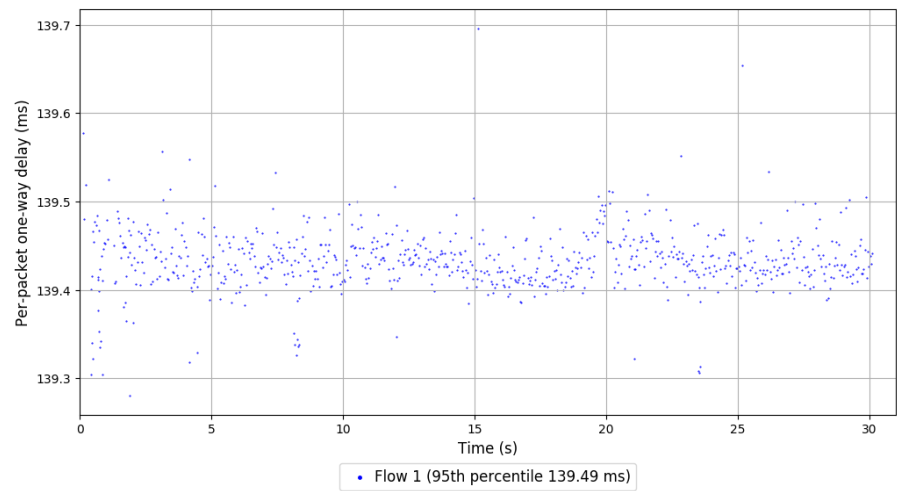
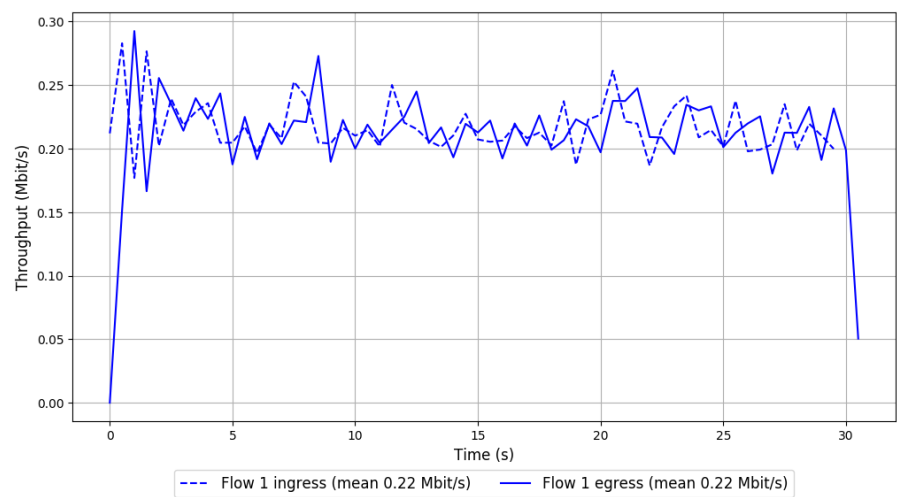
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 139.488 ms

Loss rate: 0.00%

Run 3: Report of SReAM — Data Link

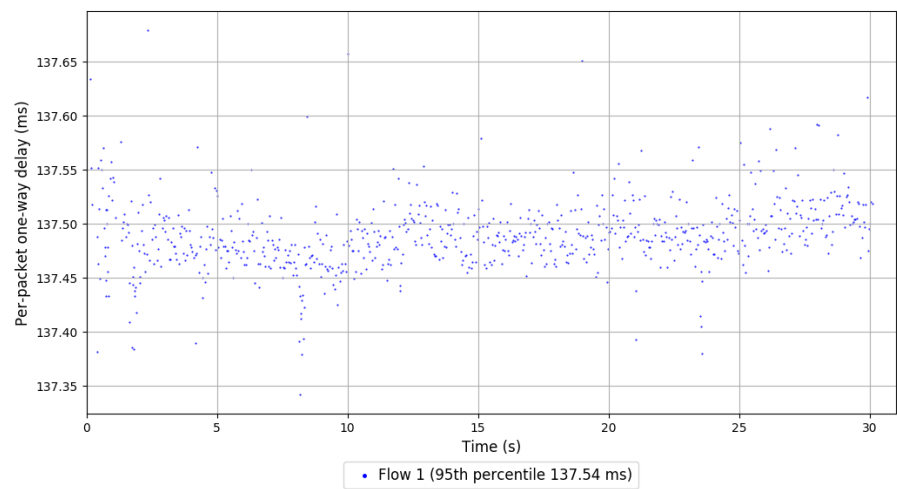
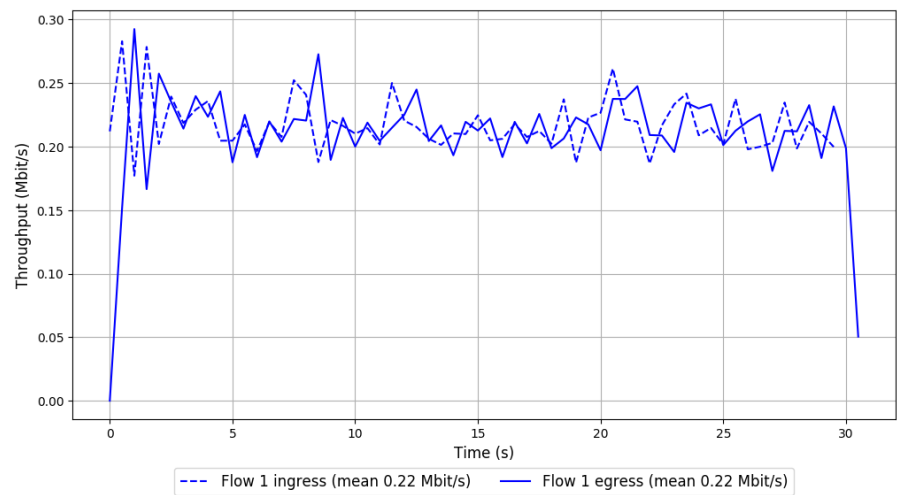


Run 4: Statistics of SCReAM

Start at: 2018-10-10 04:04:19
End at: 2018-10-10 04:04:49
Local clock offset: -0.245 ms
Remote clock offset: -0.216 ms

Below is generated by plot.py at 2018-10-10 05:24:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 137.545 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 137.545 ms
Loss rate: 0.00%

Run 4: Report of SReAM — Data Link

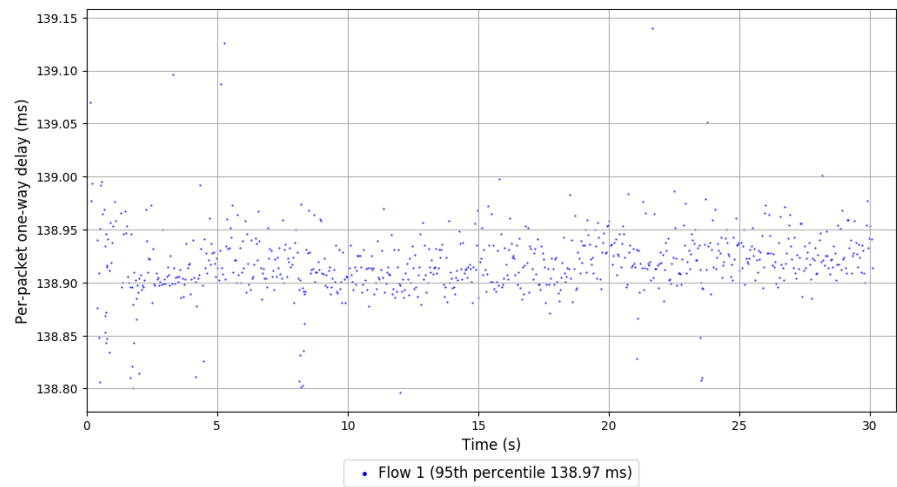
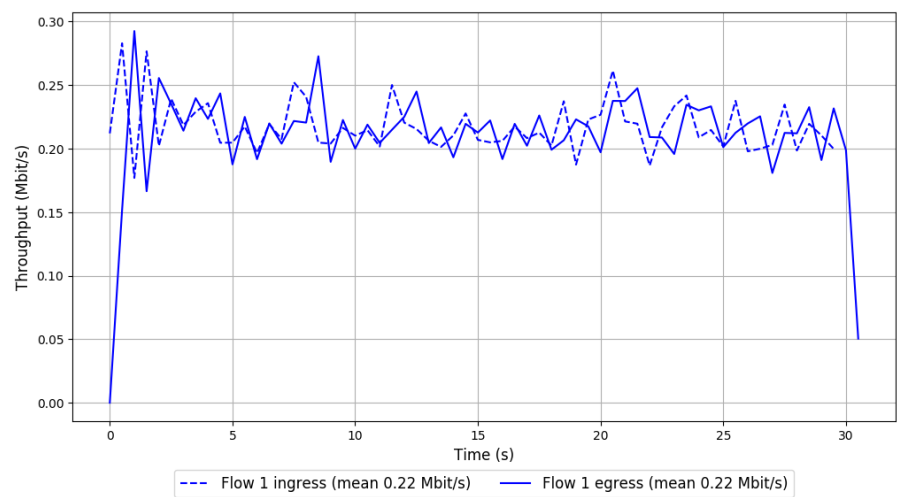


Run 5: Statistics of SCReAM

Start at: 2018-10-10 04:29:56
End at: 2018-10-10 04:30:26
Local clock offset: -0.179 ms
Remote clock offset: -0.584 ms

Below is generated by plot.py at 2018-10-10 05:24:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 138.966 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 138.966 ms
Loss rate: 0.00%

Run 5: Report of SReAM — Data Link

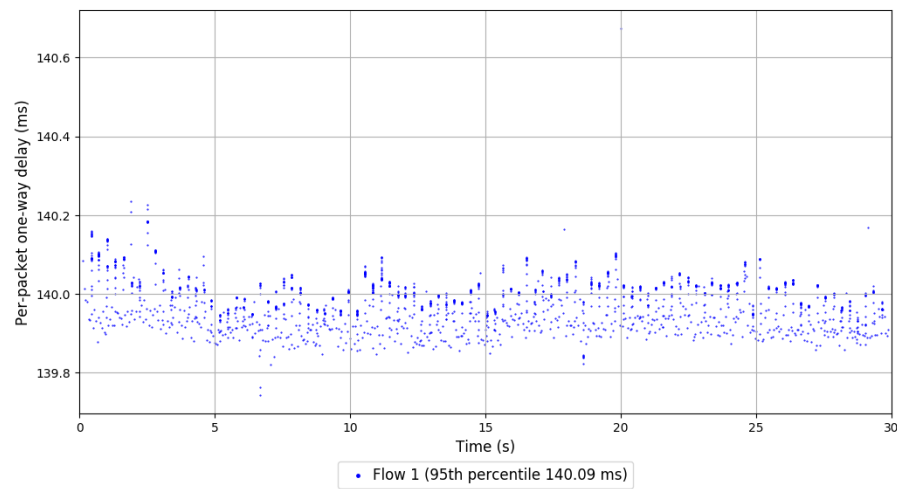
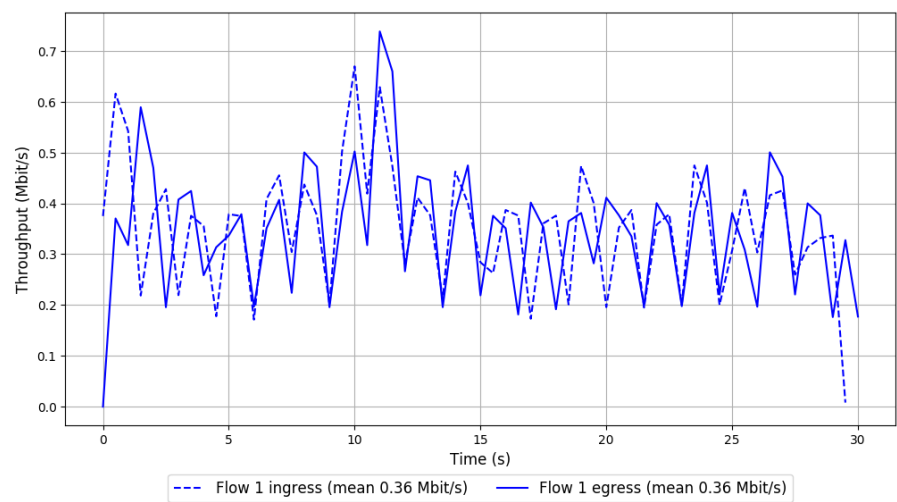


Run 1: Statistics of Sprout

Start at: 2018-10-10 02:44:03
End at: 2018-10-10 02:44:33
Local clock offset: 0.046 ms
Remote clock offset: -0.108 ms

Below is generated by plot.py at 2018-10-10 05:24:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 140.090 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 140.090 ms
Loss rate: 0.00%

Run 1: Report of Sprout — Data Link

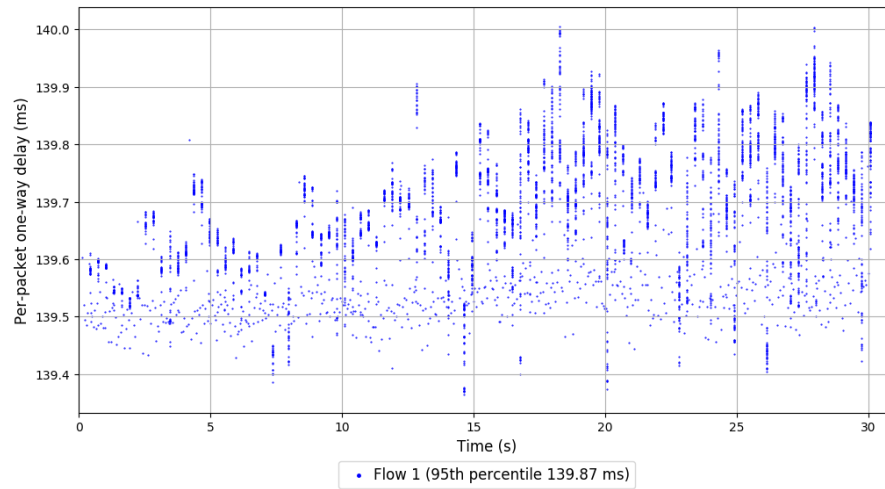
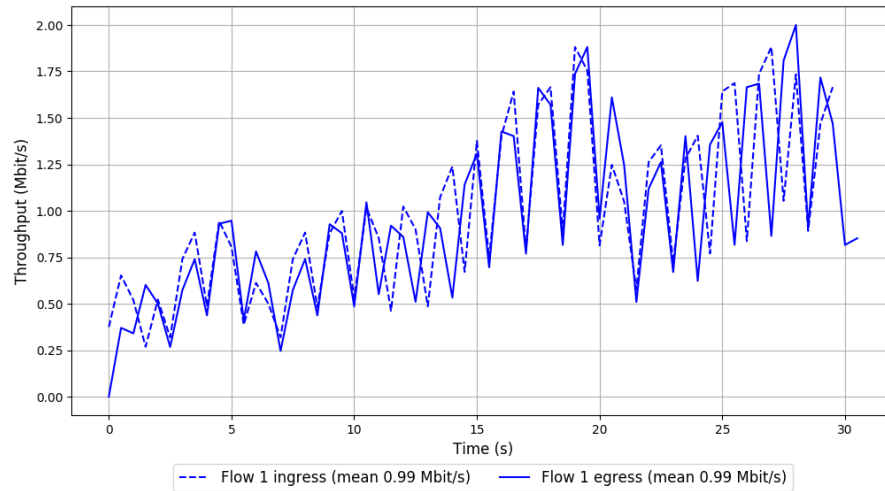


Run 2: Statistics of Sprout

Start at: 2018-10-10 03:09:26
End at: 2018-10-10 03:09:56
Local clock offset: -0.124 ms
Remote clock offset: -0.176 ms

Below is generated by plot.py at 2018-10-10 05:24:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.99 Mbit/s
95th percentile per-packet one-way delay: 139.871 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.99 Mbit/s
95th percentile per-packet one-way delay: 139.871 ms
Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

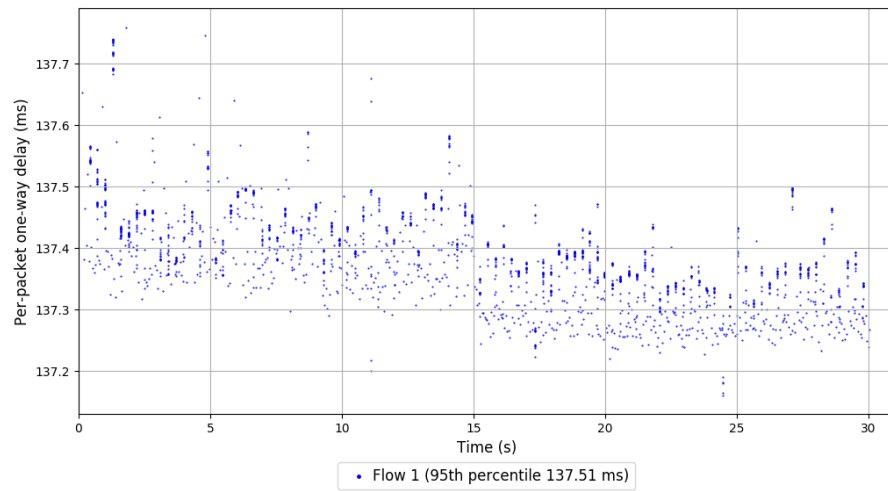
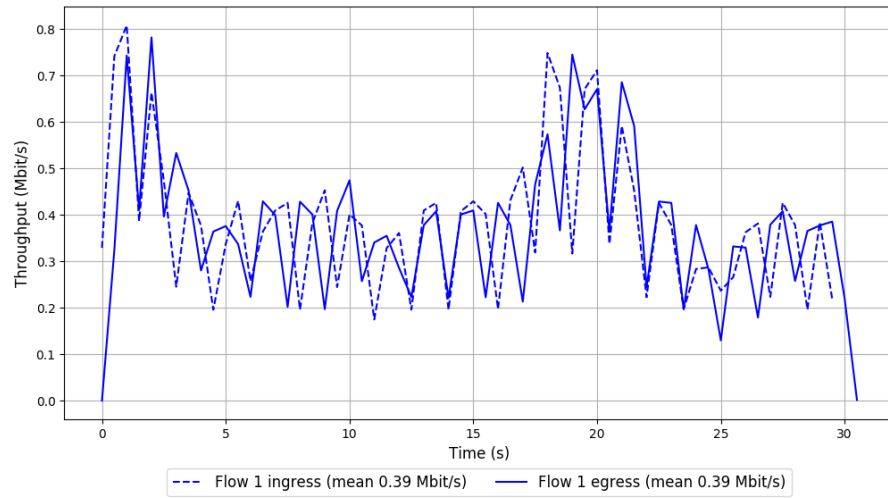


Run 3: Statistics of Sprout

Start at: 2018-10-10 03:34:47
End at: 2018-10-10 03:35:17
Local clock offset: 0.114 ms
Remote clock offset: -0.228 ms

Below is generated by plot.py at 2018-10-10 05:24:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 137.511 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 137.511 ms
Loss rate: 0.00%

Run 3: Report of Sprout — Data Link

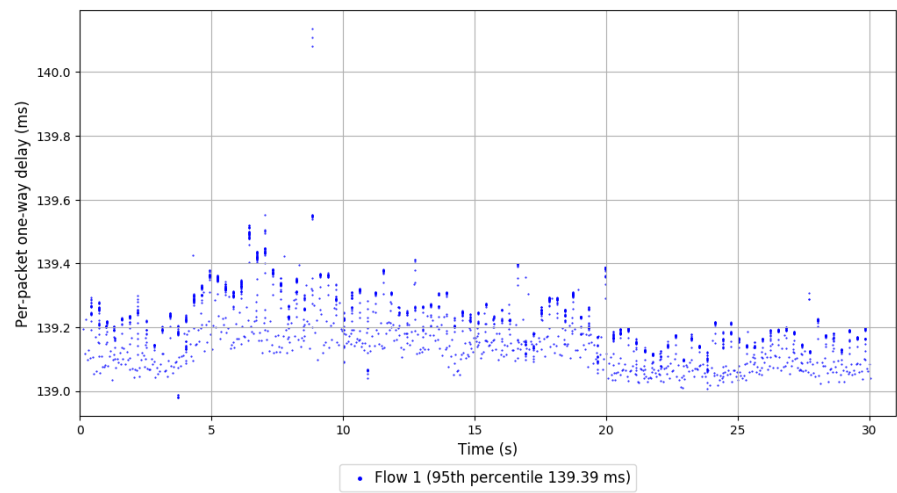
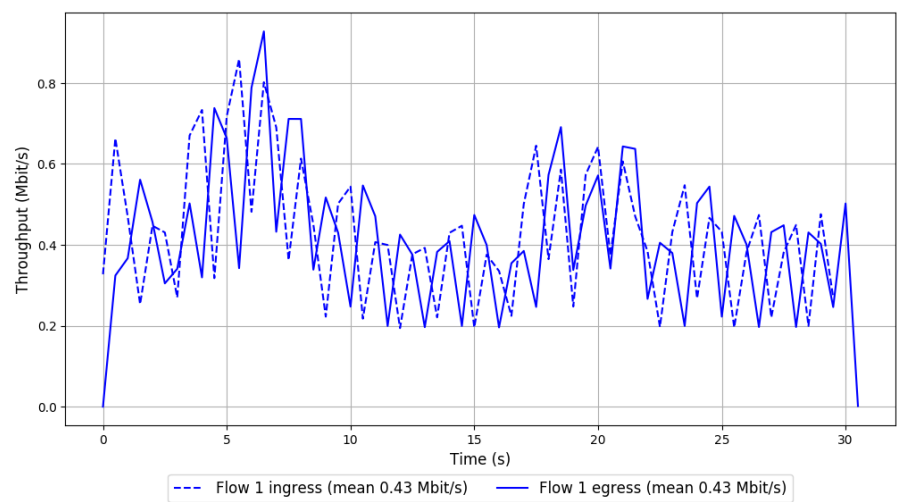


Run 4: Statistics of Sprout

Start at: 2018-10-10 04:00:35
End at: 2018-10-10 04:01:05
Local clock offset: -0.081 ms
Remote clock offset: -0.214 ms

Below is generated by plot.py at 2018-10-10 05:24:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 139.387 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 139.387 ms
Loss rate: 0.00%

Run 4: Report of Sprout — Data Link

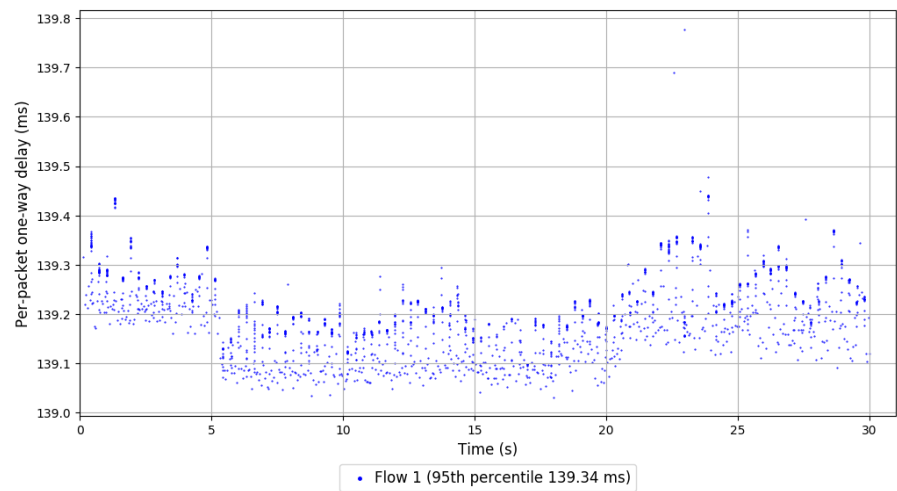
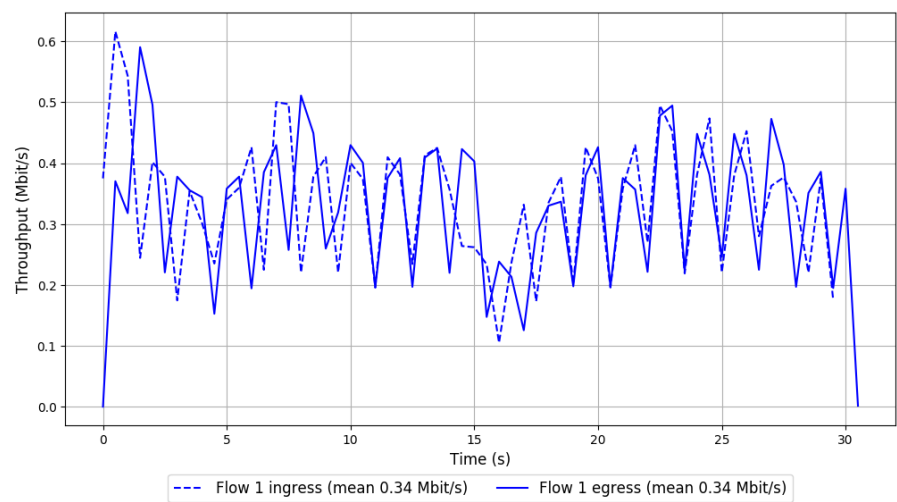


Run 5: Statistics of Sprout

Start at: 2018-10-10 04:26:12
End at: 2018-10-10 04:26:42
Local clock offset: -0.216 ms
Remote clock offset: -0.217 ms

Below is generated by plot.py at 2018-10-10 05:24:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 139.344 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 139.344 ms
Loss rate: 0.00%

Run 5: Report of Sprout — Data Link

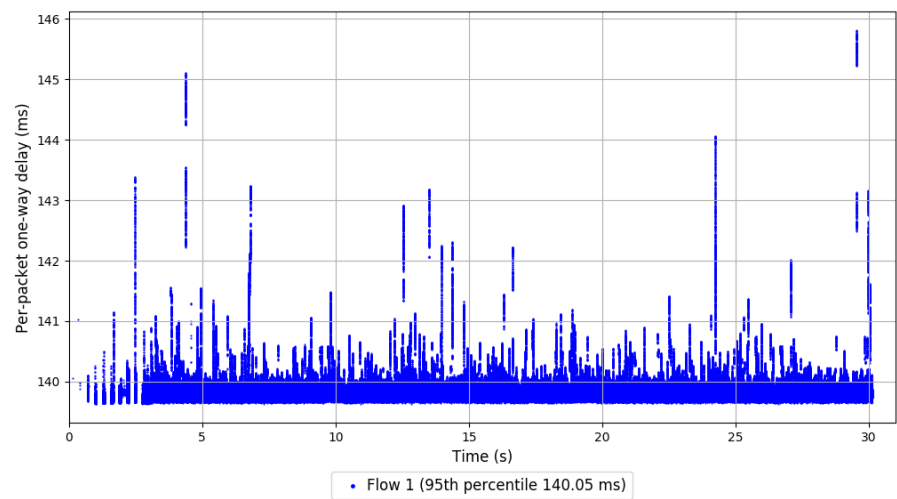
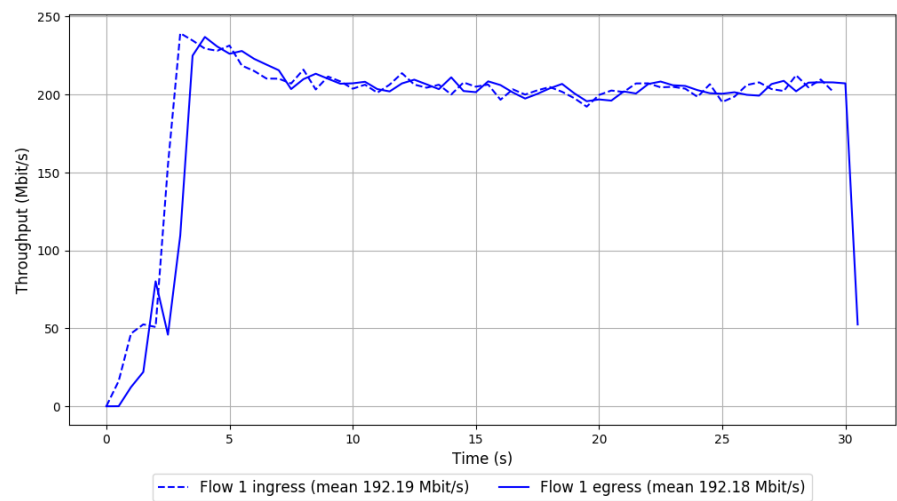


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-10-10 02:41:08
End at: 2018-10-10 02:41:38
Local clock offset: 0.175 ms
Remote clock offset: -0.165 ms

# Below is generated by plot.py at 2018-10-10 05:24:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 192.18 Mbit/s
95th percentile per-packet one-way delay: 140.054 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 192.18 Mbit/s
95th percentile per-packet one-way delay: 140.054 ms
Loss rate: 0.01%
```

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



Run 2: Statistics of TaoVA-100x

Start at: 2018-10-10 03:06:49

End at: 2018-10-10 03:07:19

Local clock offset: -0.023 ms

Remote clock offset: 0.181 ms

Below is generated by plot.py at 2018-10-10 05:24:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 12.66 Mbit/s

95th percentile per-packet one-way delay: 138.458 ms

Loss rate: 0.00%

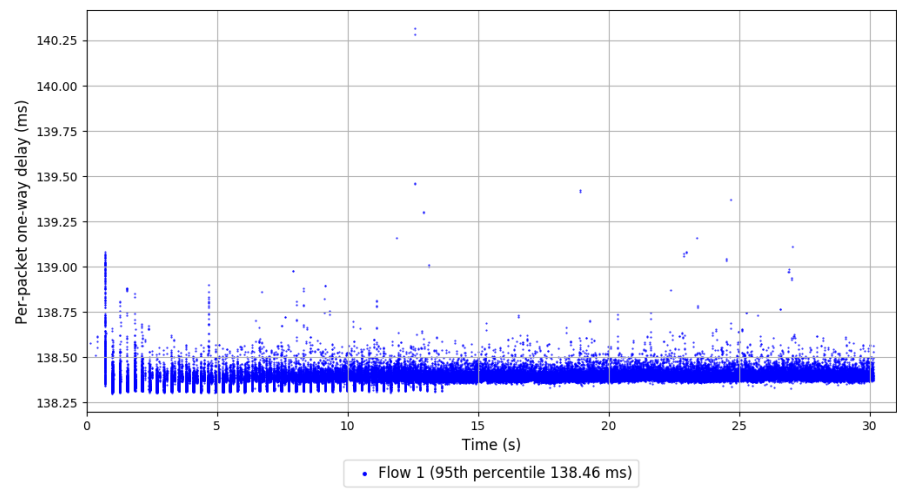
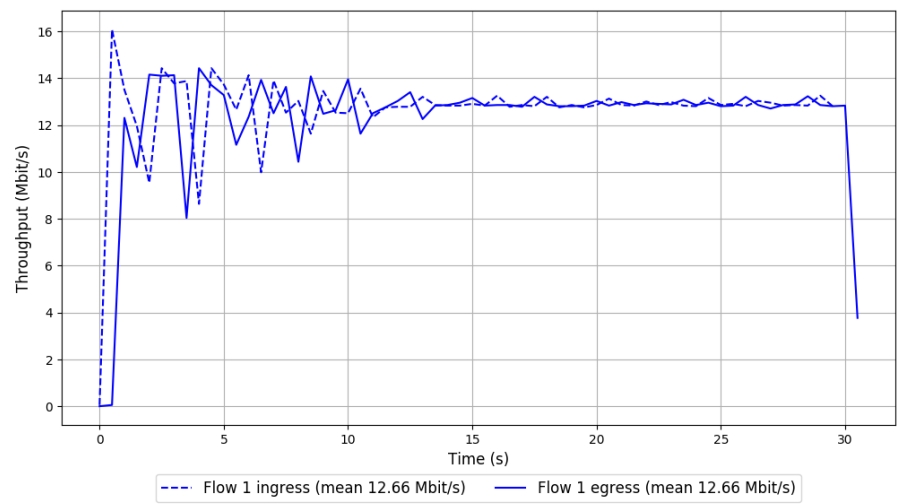
-- Flow 1:

Average throughput: 12.66 Mbit/s

95th percentile per-packet one-way delay: 138.458 ms

Loss rate: 0.00%

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

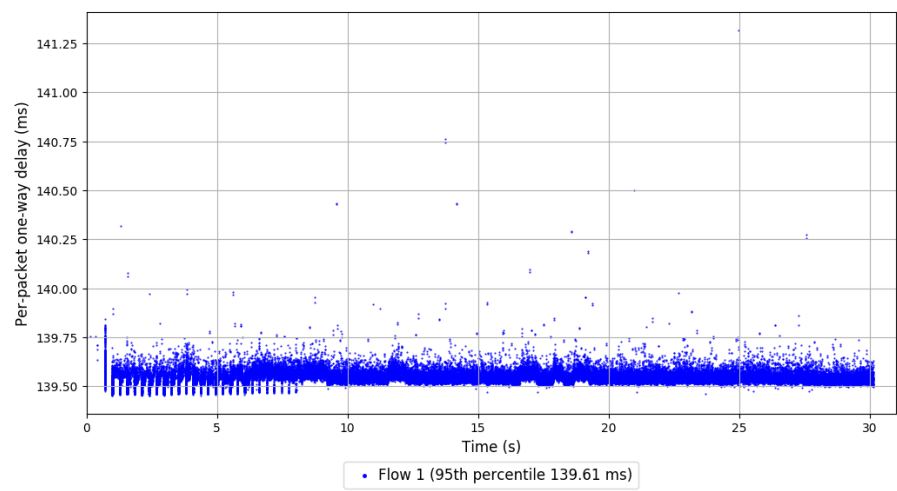
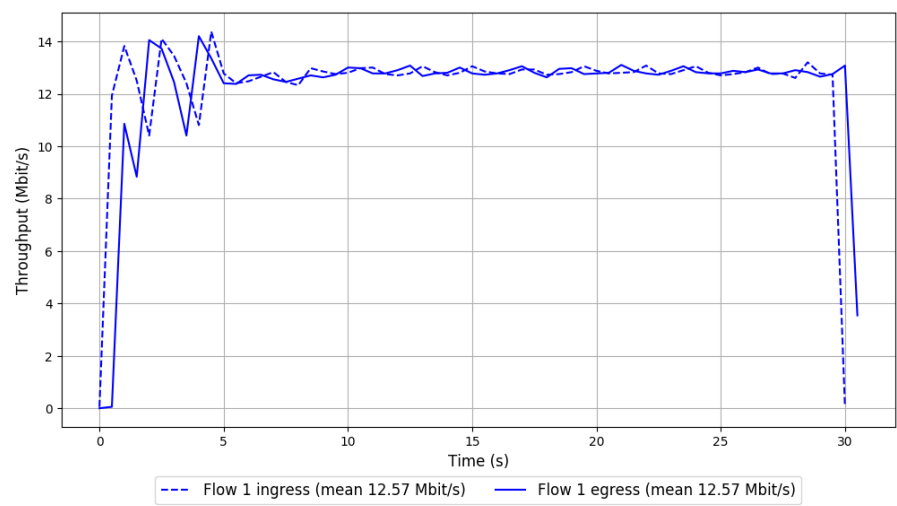


Run 3: Statistics of TaoVA-100x

Start at: 2018-10-10 03:32:10
End at: 2018-10-10 03:32:40
Local clock offset: 0.007 ms
Remote clock offset: -0.198 ms

Below is generated by plot.py at 2018-10-10 05:24:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.57 Mbit/s
95th percentile per-packet one-way delay: 139.608 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.57 Mbit/s
95th percentile per-packet one-way delay: 139.608 ms
Loss rate: 0.00%

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

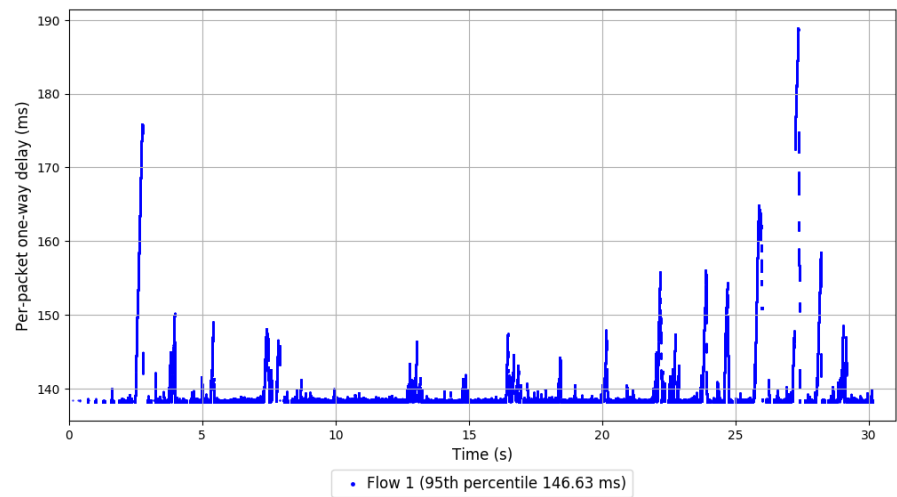
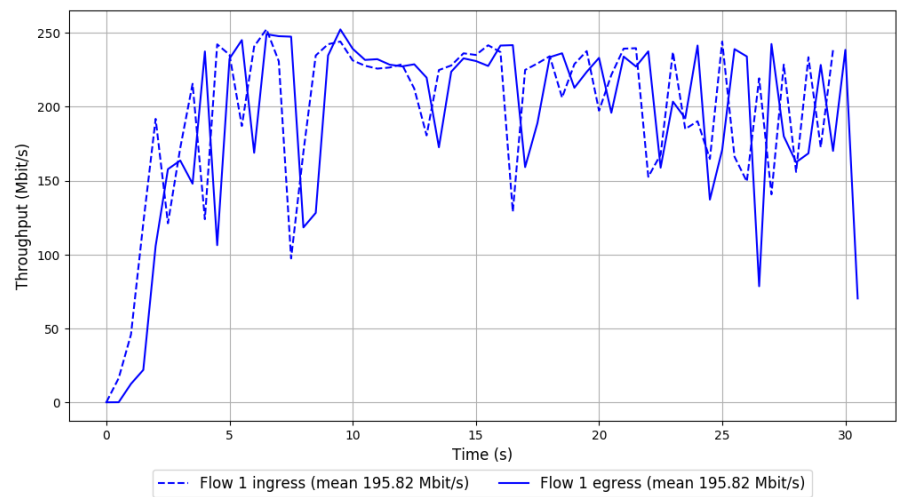


Run 4: Statistics of TaoVA-100x

Start at: 2018-10-10 03:57:37
End at: 2018-10-10 03:58:07
Local clock offset: -0.064 ms
Remote clock offset: -0.206 ms

Below is generated by plot.py at 2018-10-10 05:25:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 195.82 Mbit/s
95th percentile per-packet one-way delay: 146.626 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 195.82 Mbit/s
95th percentile per-packet one-way delay: 146.626 ms
Loss rate: 0.00%

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

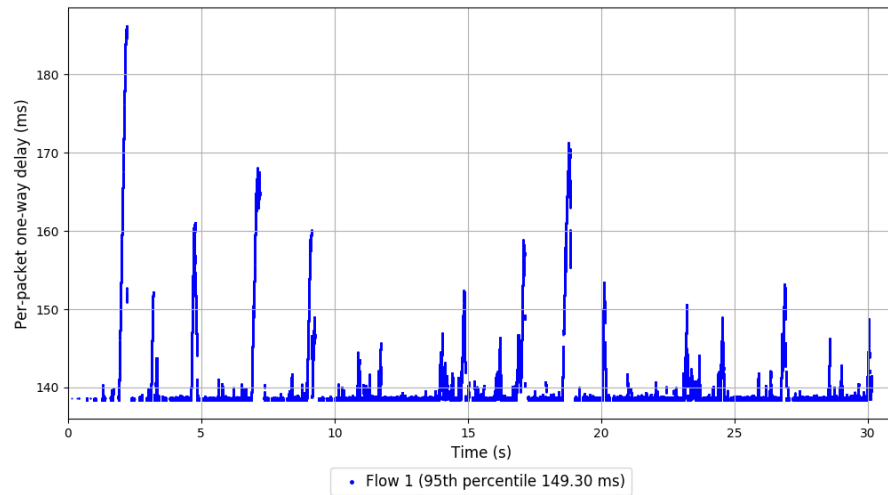
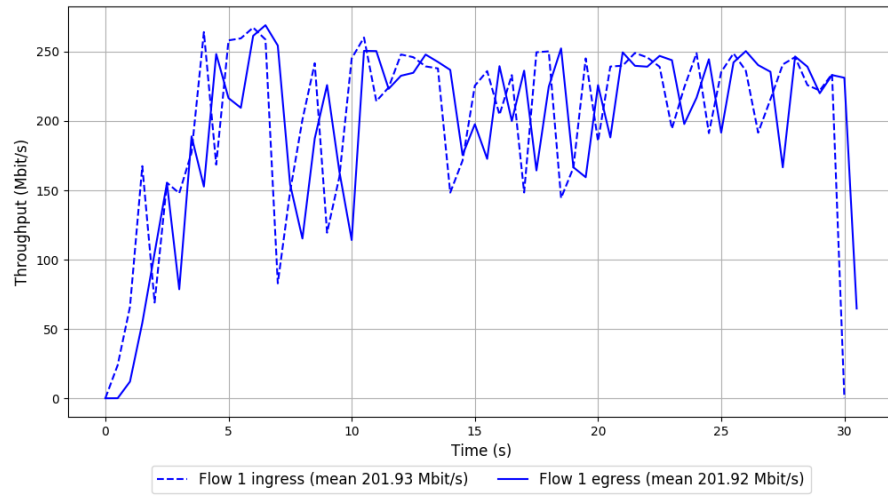


Run 5: Statistics of TaoVA-100x

Start at: 2018-10-10 04:23:14
End at: 2018-10-10 04:23:44
Local clock offset: -0.116 ms
Remote clock offset: -0.566 ms

Below is generated by plot.py at 2018-10-10 05:25:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 201.92 Mbit/s
95th percentile per-packet one-way delay: 149.299 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 201.92 Mbit/s
95th percentile per-packet one-way delay: 149.299 ms
Loss rate: 0.01%

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



Run 1: Statistics of TCP Vegas

Start at: 2018-10-10 02:46:24

End at: 2018-10-10 02:46:54

Local clock offset: -0.196 ms

Remote clock offset: -0.15 ms

Below is generated by plot.py at 2018-10-10 05:25:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 233.34 Mbit/s

95th percentile per-packet one-way delay: 140.547 ms

Loss rate: 0.00%

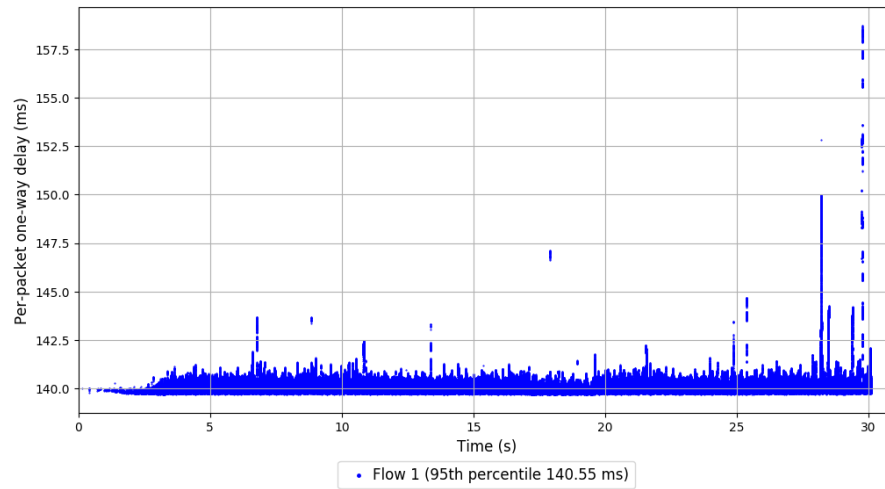
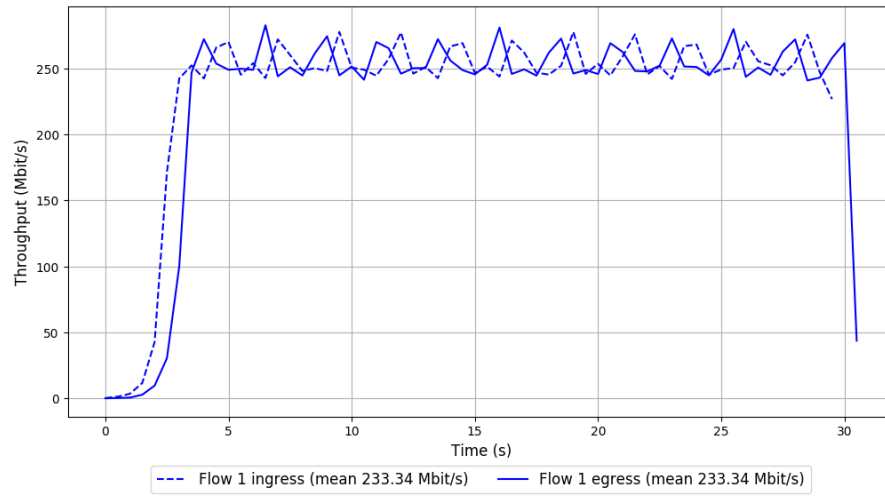
-- Flow 1:

Average throughput: 233.34 Mbit/s

95th percentile per-packet one-way delay: 140.547 ms

Loss rate: 0.00%

Run 1: Report of TCP Vegas — Data Link

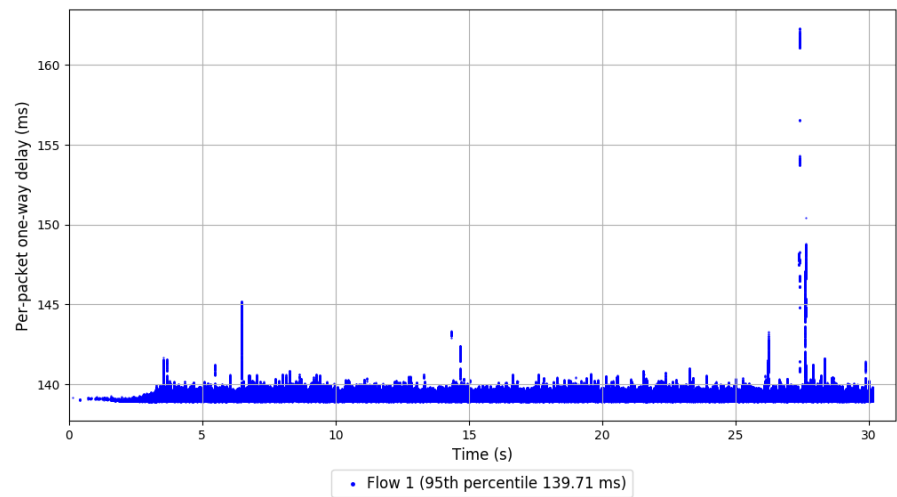
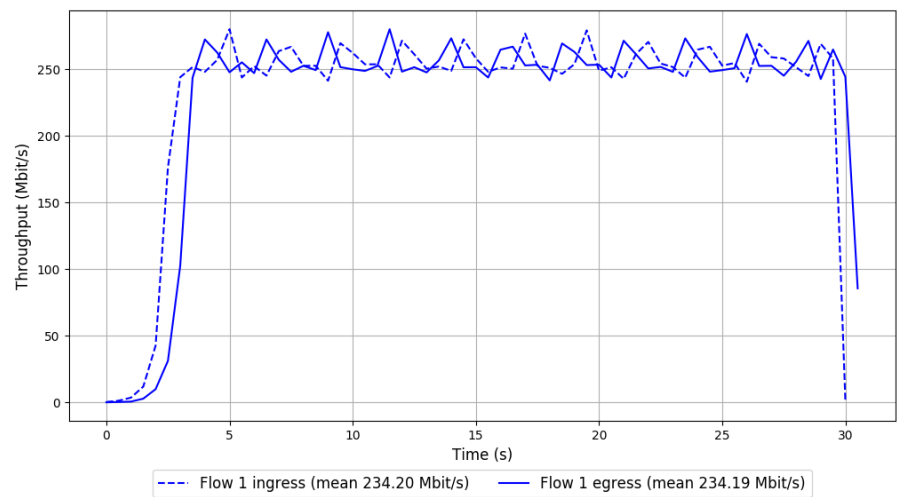


Run 2: Statistics of TCP Vegas

Start at: 2018-10-10 03:11:47
End at: 2018-10-10 03:12:17
Local clock offset: -0.064 ms
Remote clock offset: -0.189 ms

Below is generated by plot.py at 2018-10-10 05:25:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 234.19 Mbit/s
95th percentile per-packet one-way delay: 139.707 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 234.19 Mbit/s
95th percentile per-packet one-way delay: 139.707 ms
Loss rate: 0.00%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-10-10 03:37:07

End at: 2018-10-10 03:37:37

Local clock offset: 0.071 ms

Remote clock offset: 0.163 ms

Below is generated by plot.py at 2018-10-10 05:25:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 235.47 Mbit/s

95th percentile per-packet one-way delay: 140.177 ms

Loss rate: 0.00%

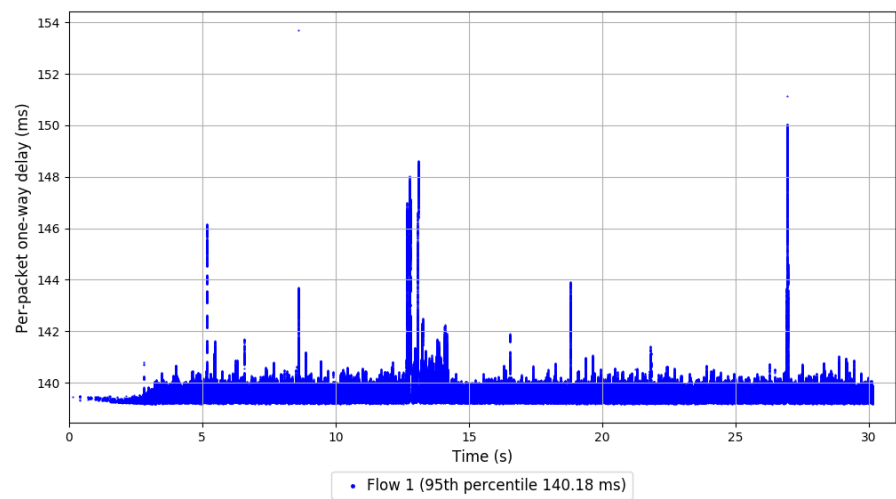
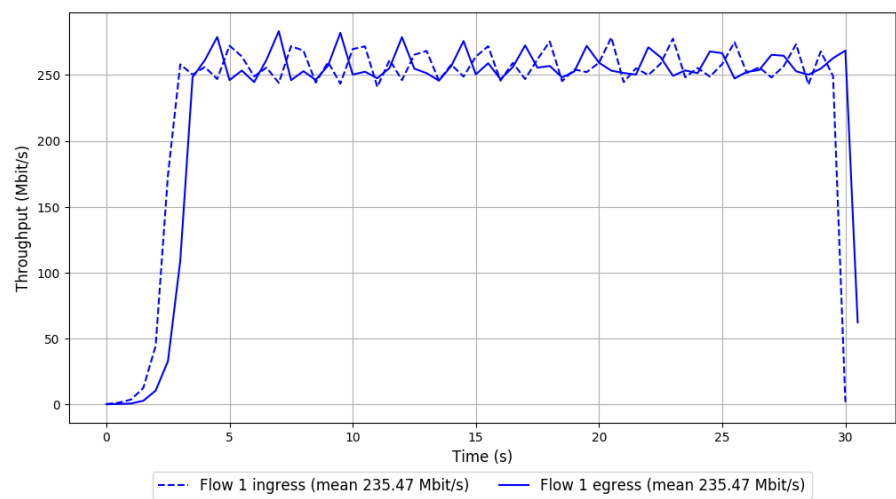
-- Flow 1:

Average throughput: 235.47 Mbit/s

95th percentile per-packet one-way delay: 140.177 ms

Loss rate: 0.00%

Run 3: Report of TCP Vegas — Data Link

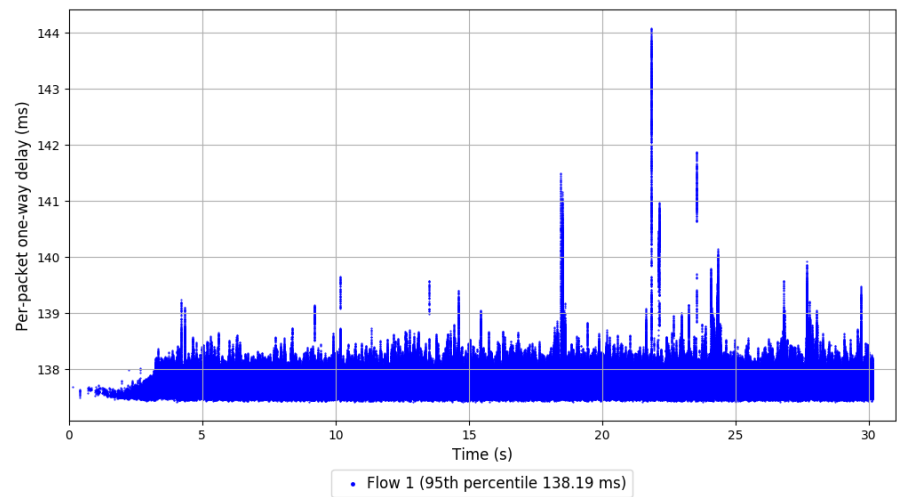
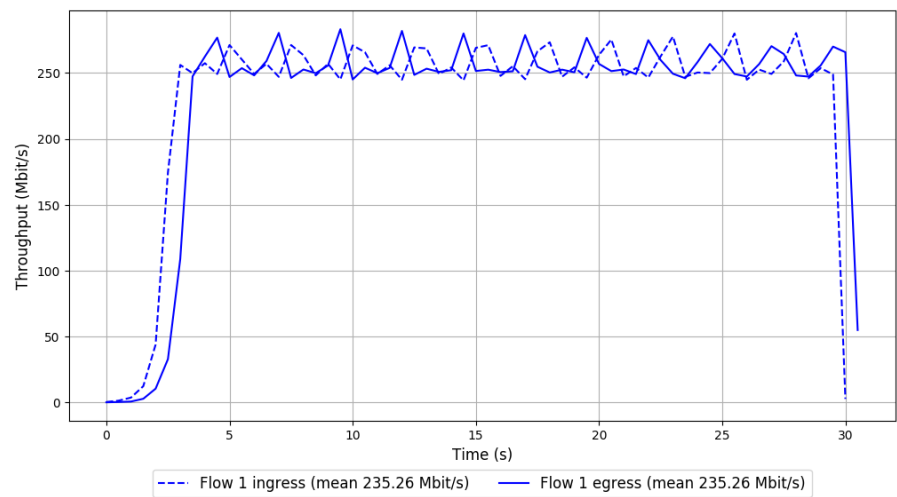


Run 4: Statistics of TCP Vegas

Start at: 2018-10-10 04:02:56
End at: 2018-10-10 04:03:26
Local clock offset: -0.284 ms
Remote clock offset: -0.205 ms

Below is generated by plot.py at 2018-10-10 05:27:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 235.26 Mbit/s
95th percentile per-packet one-way delay: 138.185 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 235.26 Mbit/s
95th percentile per-packet one-way delay: 138.185 ms
Loss rate: 0.00%

Run 4: Report of TCP Vegas — Data Link

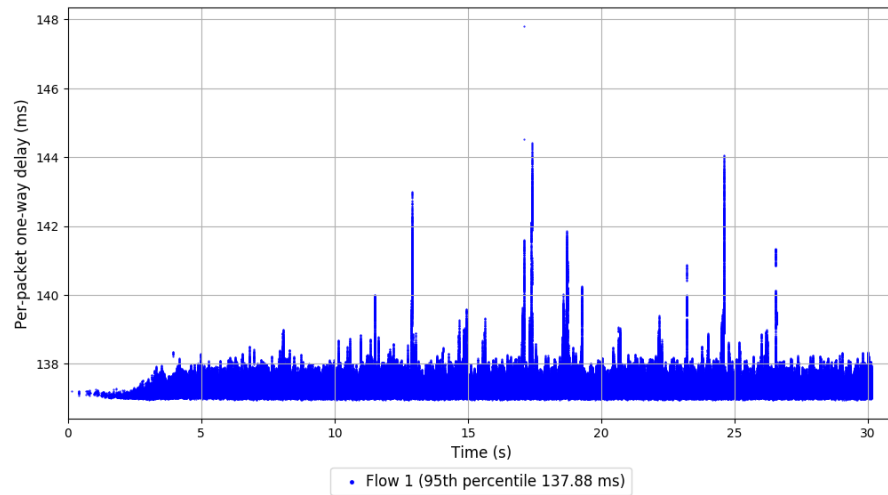
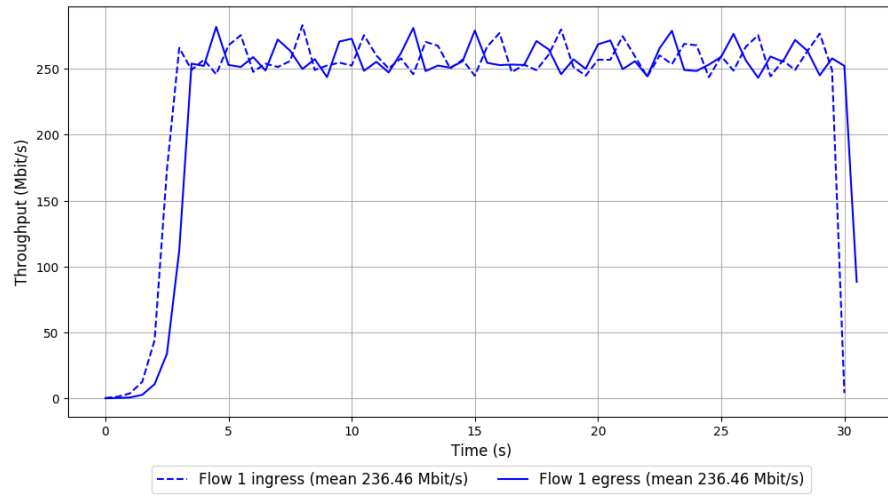


Run 5: Statistics of TCP Vegas

Start at: 2018-10-10 04:28:32
End at: 2018-10-10 04:29:02
Local clock offset: -0.24 ms
Remote clock offset: -0.584 ms

Below is generated by plot.py at 2018-10-10 05:27:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 236.46 Mbit/s
95th percentile per-packet one-way delay: 137.879 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 236.46 Mbit/s
95th percentile per-packet one-way delay: 137.879 ms
Loss rate: 0.00%

Run 5: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2018-10-10 02:39:51

End at: 2018-10-10 02:40:21

Local clock offset: 0.004 ms

Remote clock offset: 0.2 ms

Below is generated by plot.py at 2018-10-10 05:27:33

Datalink statistics

-- Total of 1 flow:

Average throughput: 61.95 Mbit/s

95th percentile per-packet one-way delay: 172.846 ms

Loss rate: 0.00%

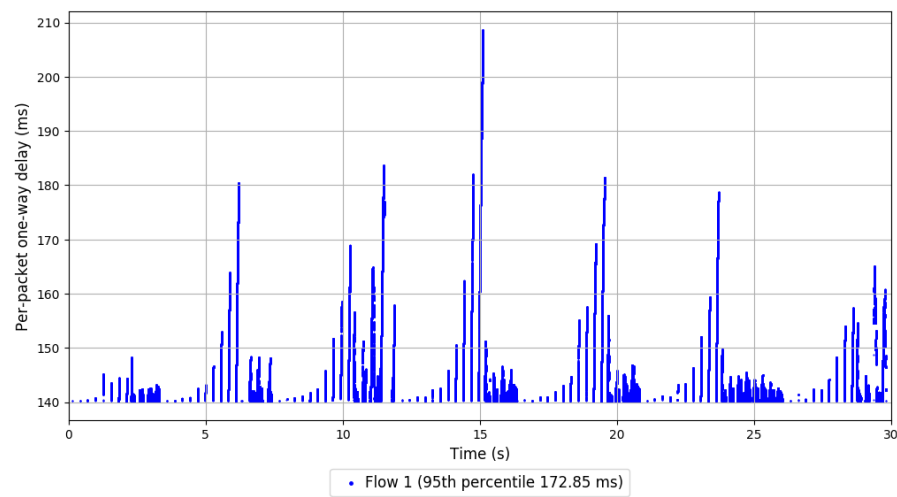
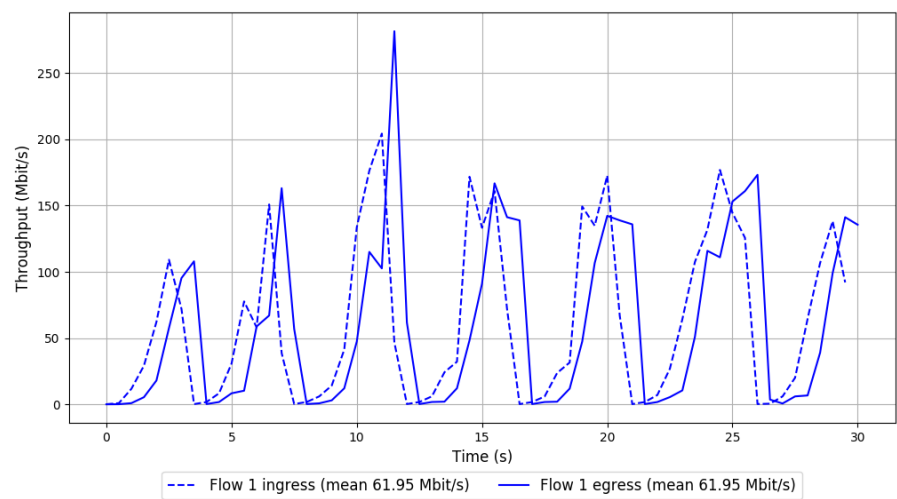
-- Flow 1:

Average throughput: 61.95 Mbit/s

95th percentile per-packet one-way delay: 172.846 ms

Loss rate: 0.00%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-10-10 03:05:27

End at: 2018-10-10 03:05:57

Local clock offset: 0.08 ms

Remote clock offset: 0.171 ms

Below is generated by plot.py at 2018-10-10 05:27:42

Datalink statistics

-- Total of 1 flow:

Average throughput: 110.51 Mbit/s

95th percentile per-packet one-way delay: 332.905 ms

Loss rate: 6.86%

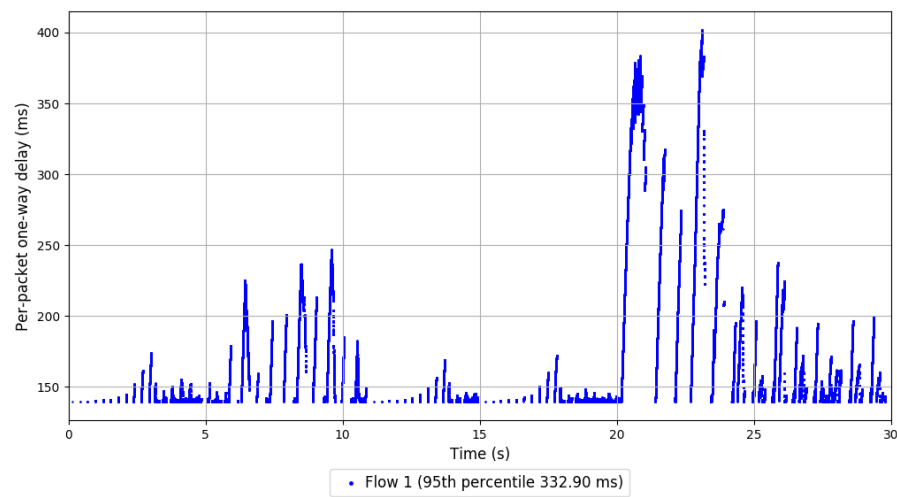
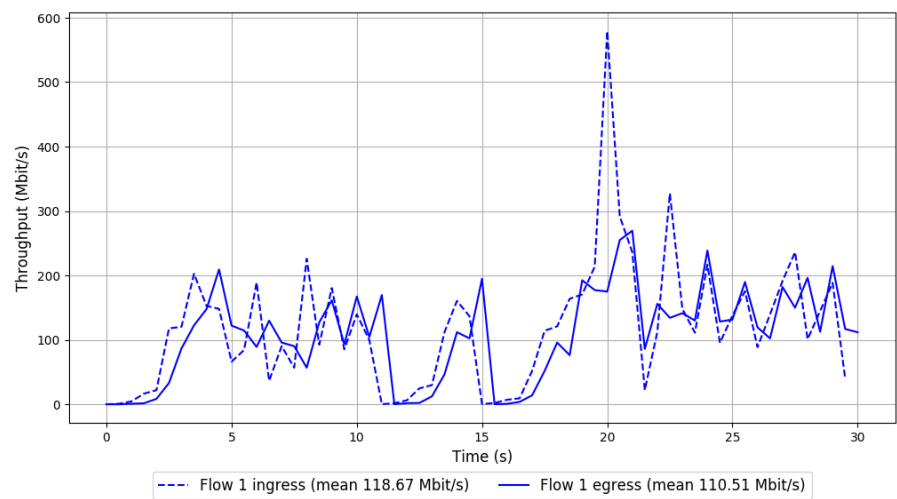
-- Flow 1:

Average throughput: 110.51 Mbit/s

95th percentile per-packet one-way delay: 332.905 ms

Loss rate: 6.86%

Run 2: Report of Verus — Data Link

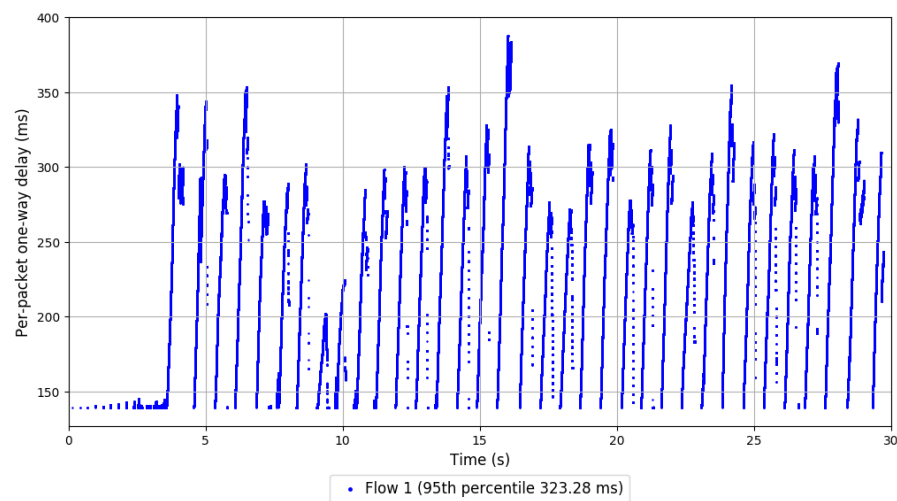
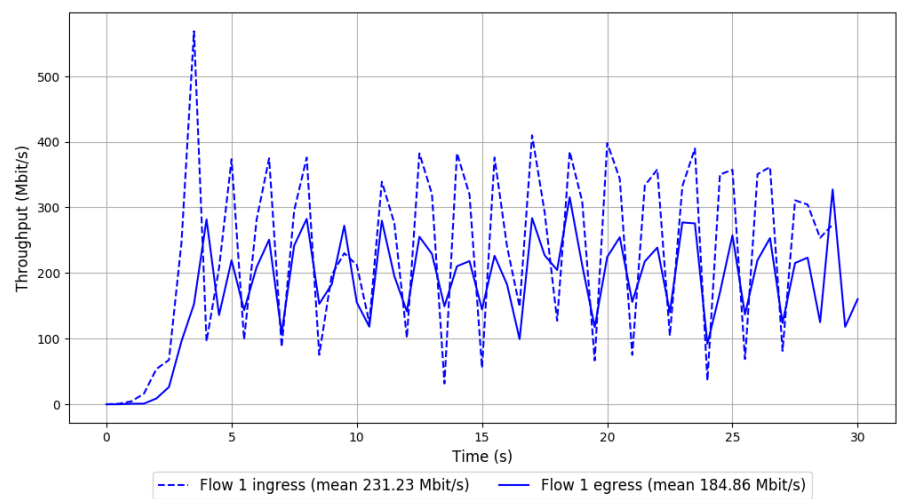


Run 3: Statistics of Verus

Start at: 2018-10-10 03:30:39
End at: 2018-10-10 03:31:09
Local clock offset: 0.041 ms
Remote clock offset: -0.193 ms

Below is generated by plot.py at 2018-10-10 05:30:55
Datalink statistics
-- Total of 1 flow:
Average throughput: 184.86 Mbit/s
95th percentile per-packet one-way delay: 323.276 ms
Loss rate: 19.77%
-- Flow 1:
Average throughput: 184.86 Mbit/s
95th percentile per-packet one-way delay: 323.276 ms
Loss rate: 19.77%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-10-10 03:56:09

End at: 2018-10-10 03:56:39

Local clock offset: -0.402 ms

Remote clock offset: -0.19 ms

Below is generated by plot.py at 2018-10-10 05:30:55

Datalink statistics

-- Total of 1 flow:

Average throughput: 170.76 Mbit/s

95th percentile per-packet one-way delay: 288.601 ms

Loss rate: 1.77%

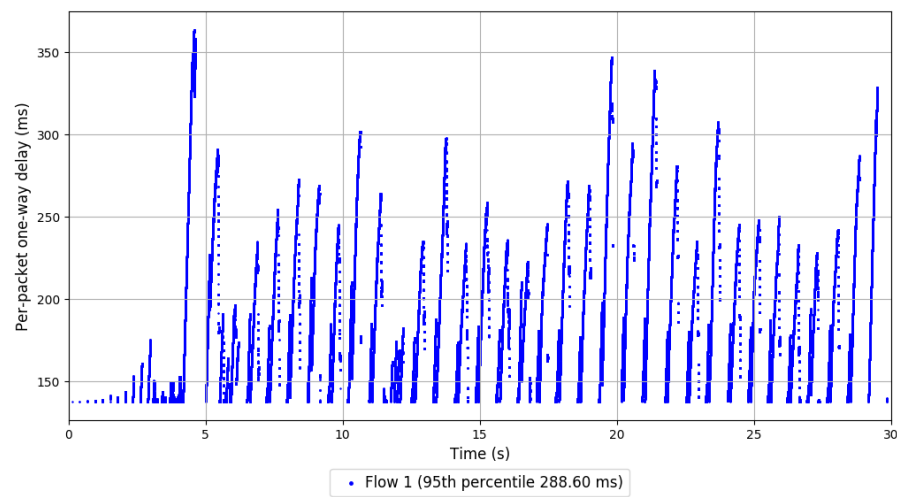
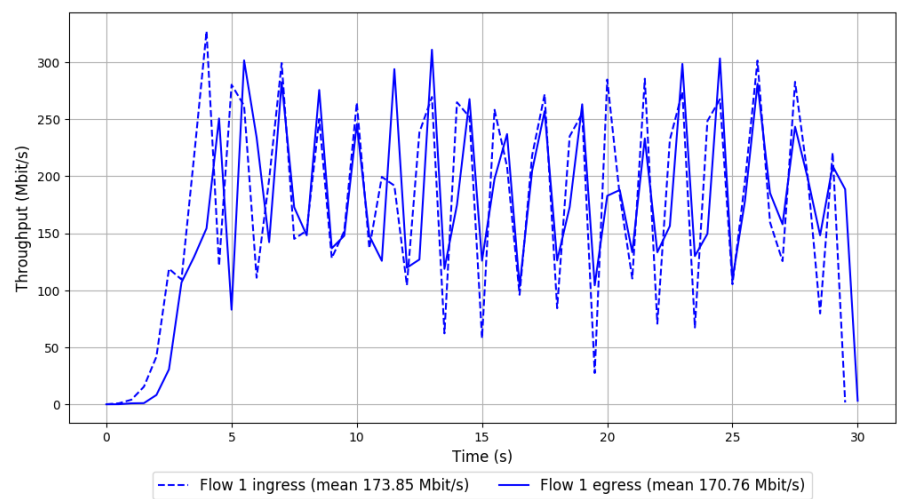
-- Flow 1:

Average throughput: 170.76 Mbit/s

95th percentile per-packet one-way delay: 288.601 ms

Loss rate: 1.77%

Run 4: Report of Verus — Data Link

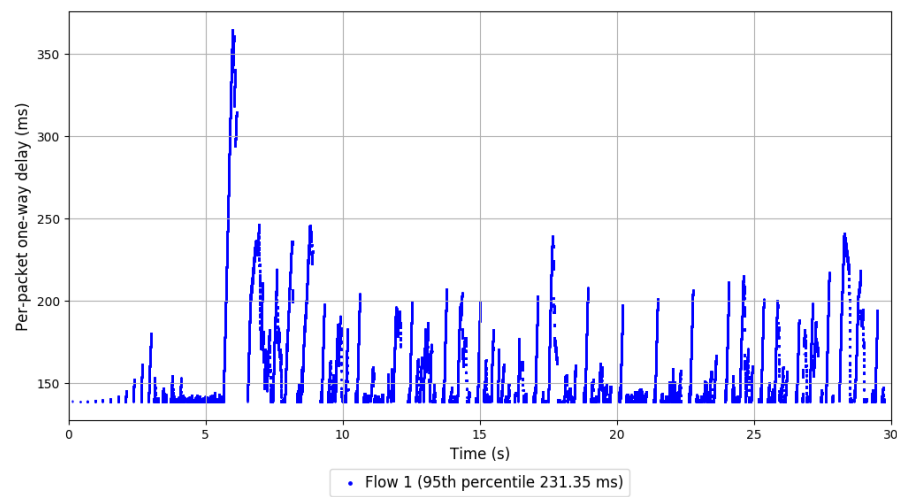
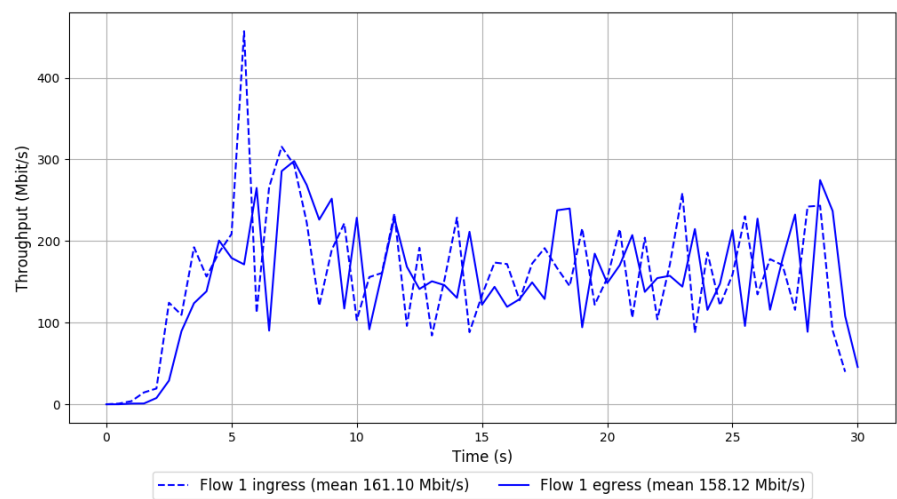


Run 5: Statistics of Verus

Start at: 2018-10-10 04:21:46
End at: 2018-10-10 04:22:16
Local clock offset: -0.445 ms
Remote clock offset: -0.207 ms

Below is generated by plot.py at 2018-10-10 05:30:55
Datalink statistics
-- Total of 1 flow:
Average throughput: 158.12 Mbit/s
95th percentile per-packet one-way delay: 231.349 ms
Loss rate: 1.85%
-- Flow 1:
Average throughput: 158.12 Mbit/s
95th percentile per-packet one-way delay: 231.349 ms
Loss rate: 1.85%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2018-10-10 02:32:12

End at: 2018-10-10 02:32:42

Local clock offset: 0.07 ms

Remote clock offset: 0.189 ms

Below is generated by plot.py at 2018-10-10 05:30:55

Datalink statistics

-- Total of 1 flow:

Average throughput: 263.81 Mbit/s

95th percentile per-packet one-way delay: 142.614 ms

Loss rate: 0.96%

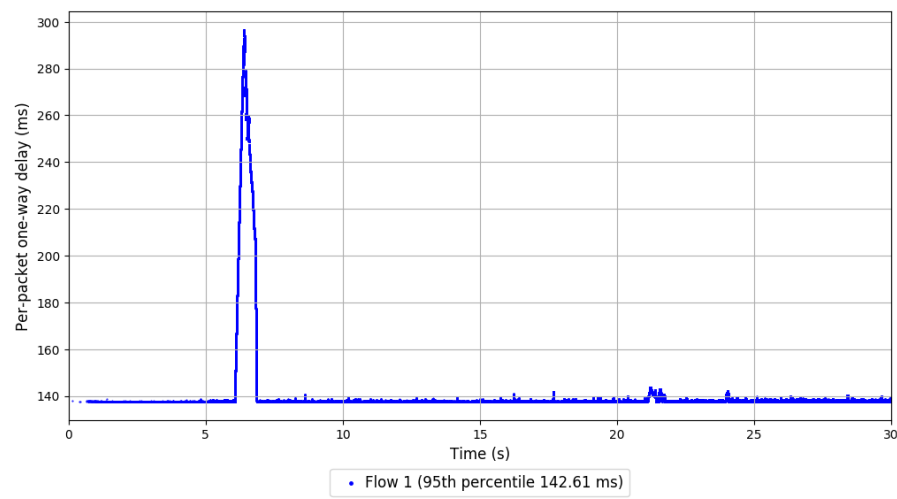
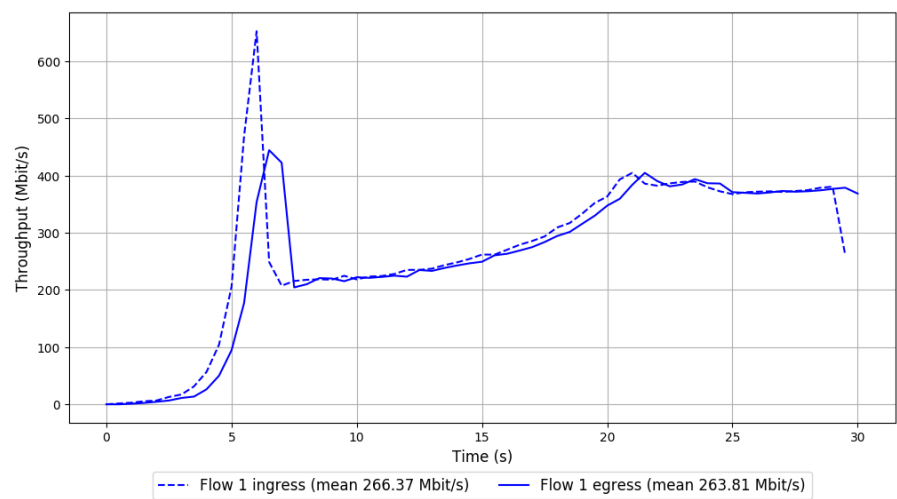
-- Flow 1:

Average throughput: 263.81 Mbit/s

95th percentile per-packet one-way delay: 142.614 ms

Loss rate: 0.96%

Run 1: Report of PCC-Vivace — Data Link

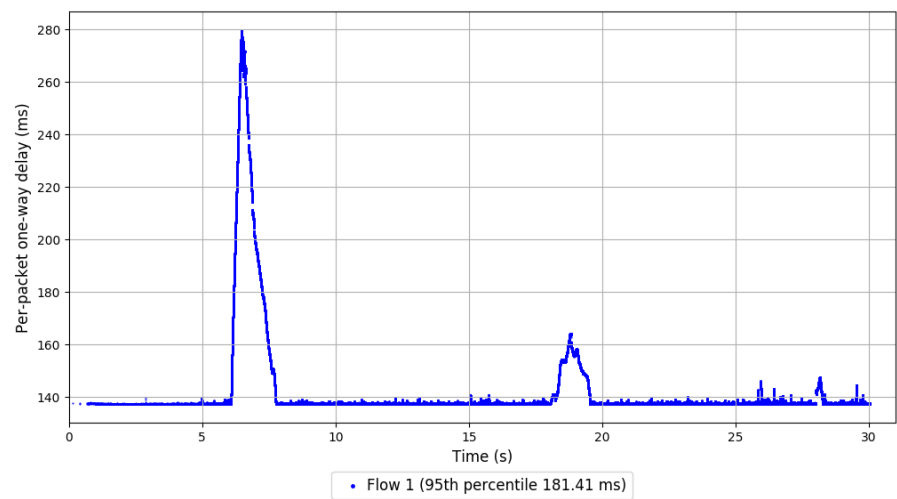
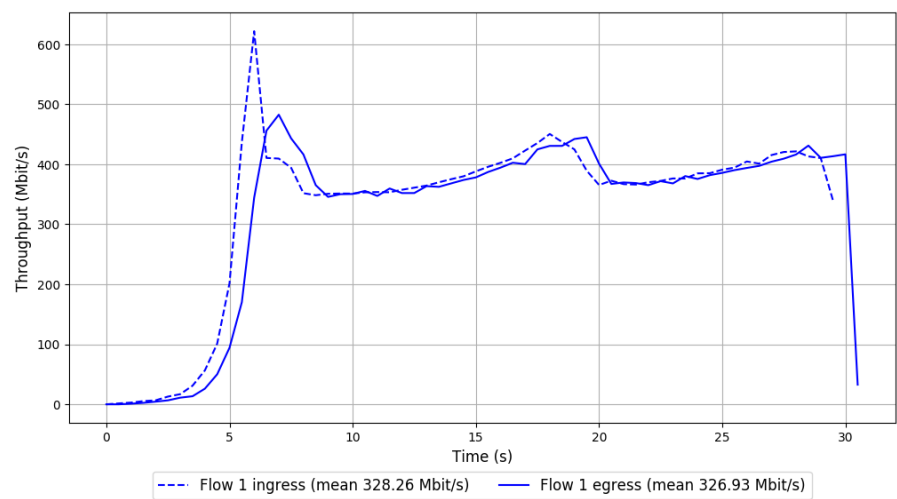


Run 2: Statistics of PCC-Vivace

Start at: 2018-10-10 02:57:35
End at: 2018-10-10 02:58:05
Local clock offset: 0.051 ms
Remote clock offset: -0.129 ms

Below is generated by plot.py at 2018-10-10 05:31:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 326.93 Mbit/s
95th percentile per-packet one-way delay: 181.412 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 326.93 Mbit/s
95th percentile per-packet one-way delay: 181.412 ms
Loss rate: 0.41%

Run 2: Report of PCC-Vivace — Data Link

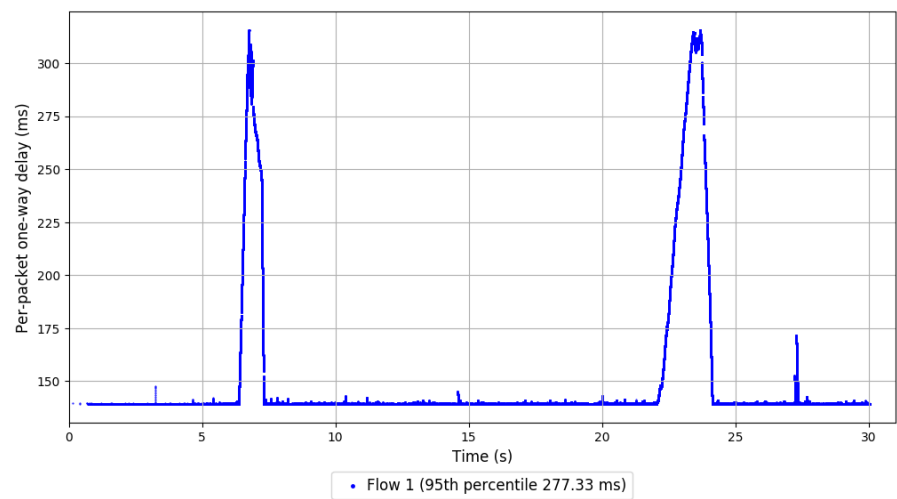
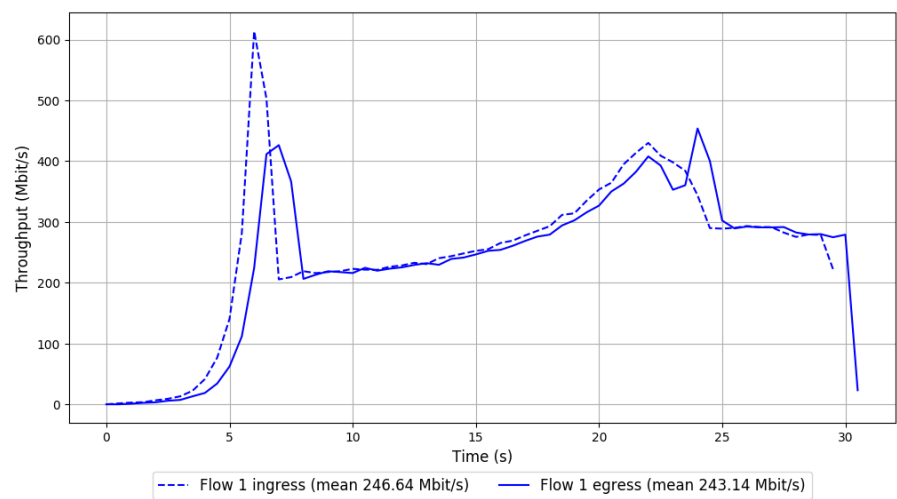


Run 3: Statistics of PCC-Vivace

Start at: 2018-10-10 03:22:53
End at: 2018-10-10 03:23:23
Local clock offset: -0.041 ms
Remote clock offset: -0.514 ms

Below is generated by plot.py at 2018-10-10 05:31:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 243.14 Mbit/s
95th percentile per-packet one-way delay: 277.331 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 243.14 Mbit/s
95th percentile per-packet one-way delay: 277.331 ms
Loss rate: 1.42%

Run 3: Report of PCC-Vivace — Data Link

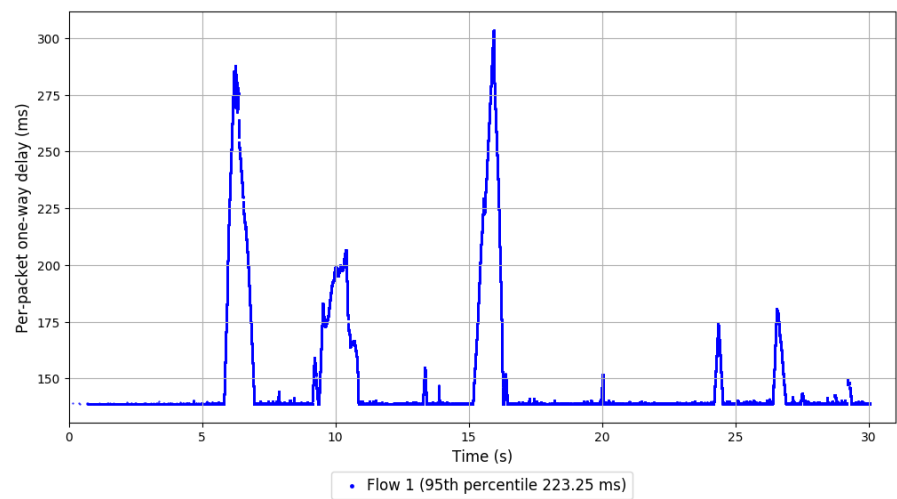
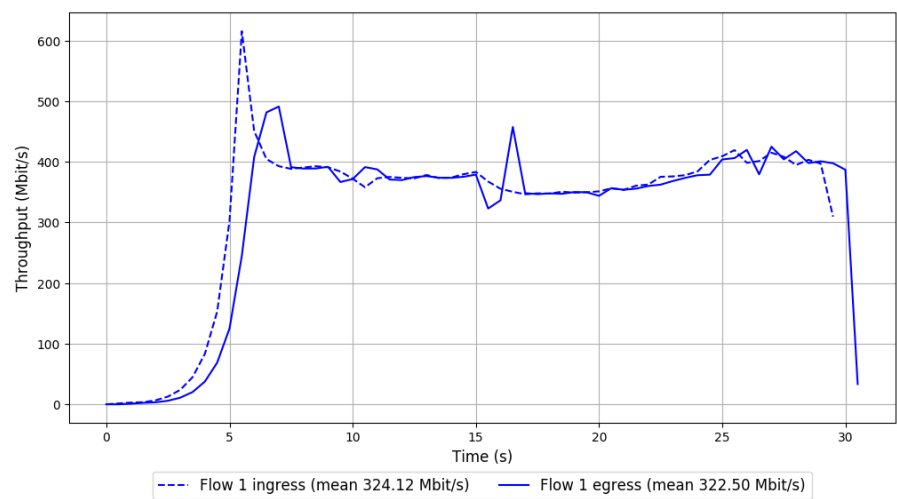


Run 4: Statistics of PCC-Vivace

Start at: 2018-10-10 03:48:12
End at: 2018-10-10 03:48:42
Local clock offset: -0.094 ms
Remote clock offset: -0.557 ms

Below is generated by plot.py at 2018-10-10 05:31:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 322.50 Mbit/s
95th percentile per-packet one-way delay: 223.251 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 322.50 Mbit/s
95th percentile per-packet one-way delay: 223.251 ms
Loss rate: 0.50%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2018-10-10 04:14:01

End at: 2018-10-10 04:14:31

Local clock offset: -0.267 ms

Remote clock offset: -0.22 ms

Below is generated by plot.py at 2018-10-10 05:31:13

Datalink statistics

-- Total of 1 flow:

Average throughput: 156.22 Mbit/s

95th percentile per-packet one-way delay: 267.823 ms

Loss rate: 2.57%

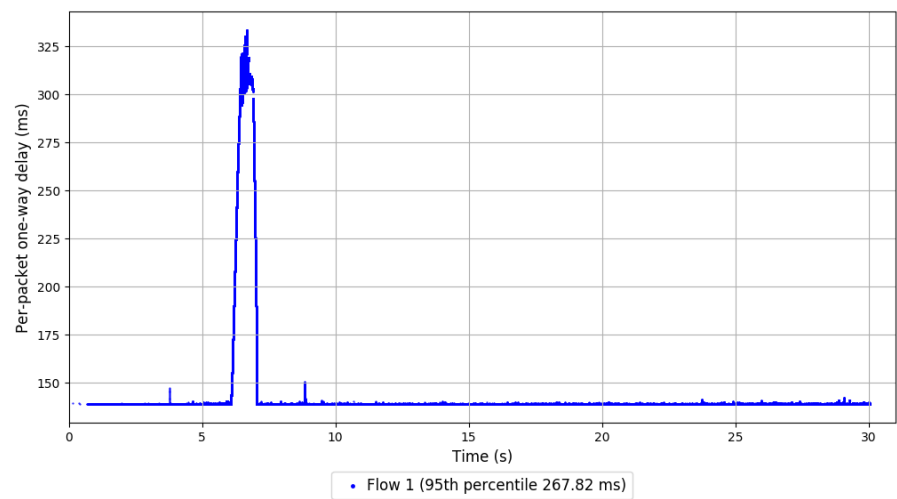
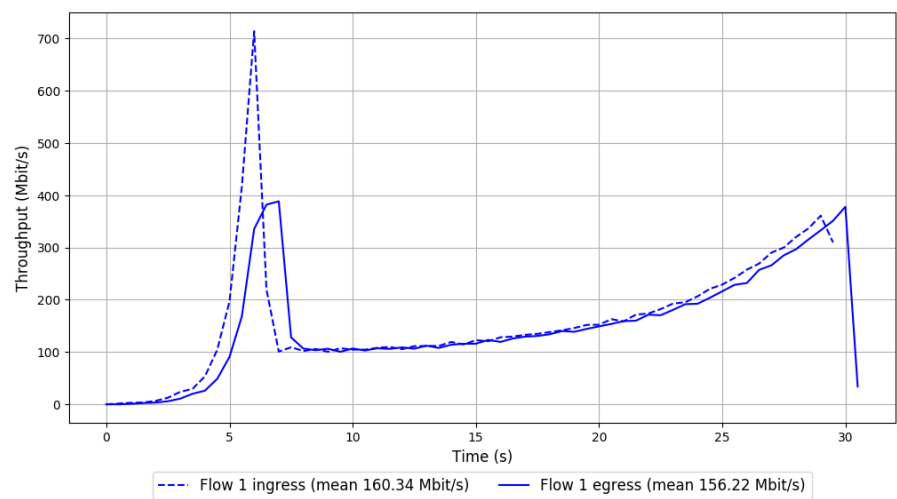
-- Flow 1:

Average throughput: 156.22 Mbit/s

95th percentile per-packet one-way delay: 267.823 ms

Loss rate: 2.57%

Run 5: Report of PCC-Vivace — Data Link

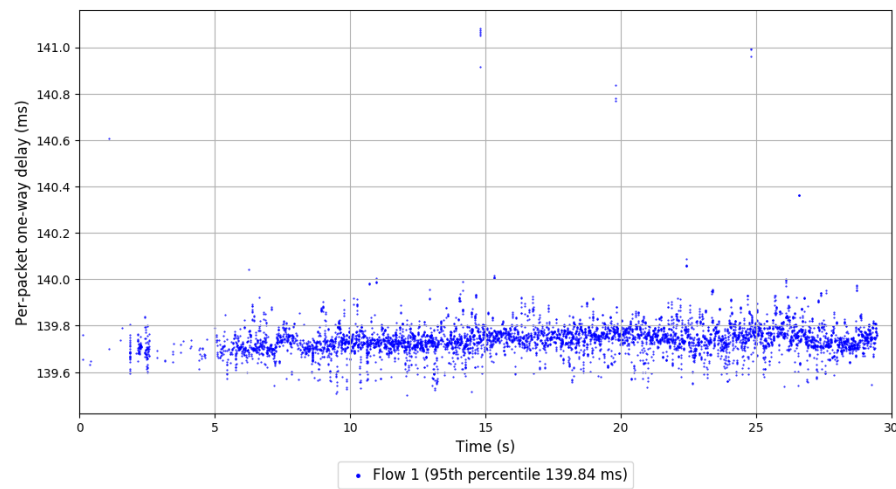
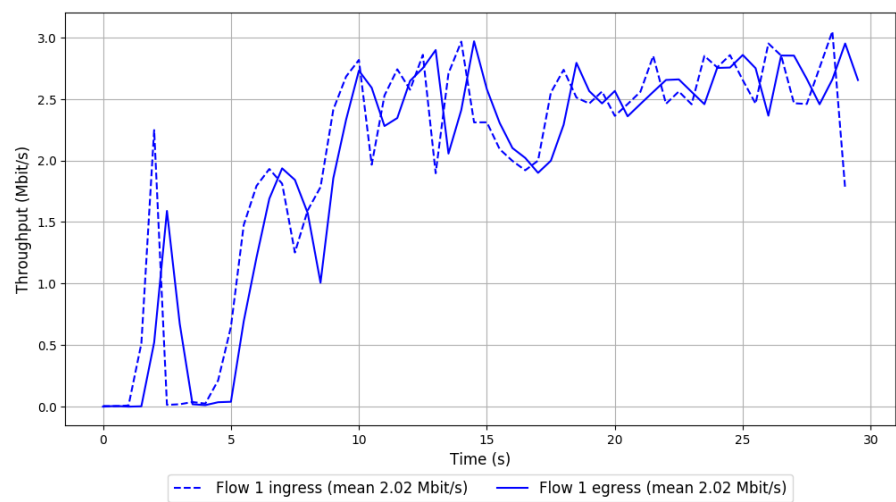


```
Run 1: Statistics of WebRTC media

Start at: 2018-10-10 02:26:35
End at: 2018-10-10 02:27:05
Local clock offset: -0.064 ms
Remote clock offset: 0.134 ms

# Below is generated by plot.py at 2018-10-10 05:31:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.02 Mbit/s
95th percentile per-packet one-way delay: 139.843 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.02 Mbit/s
95th percentile per-packet one-way delay: 139.843 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link

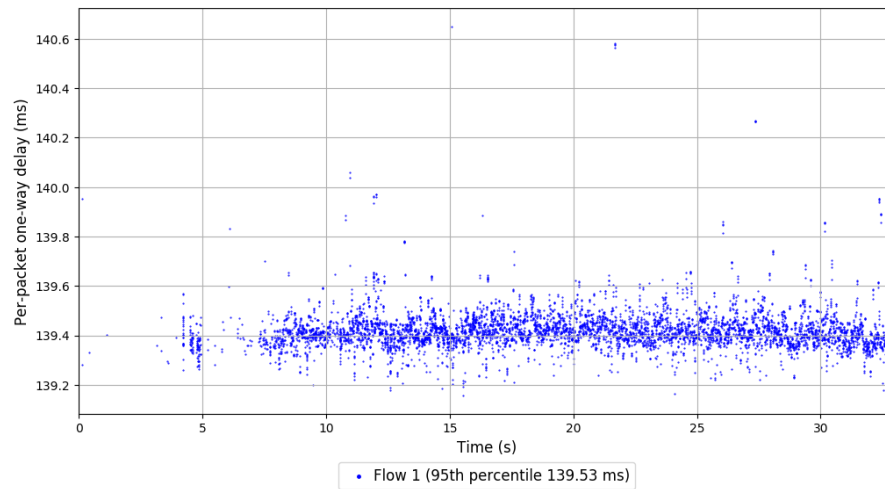
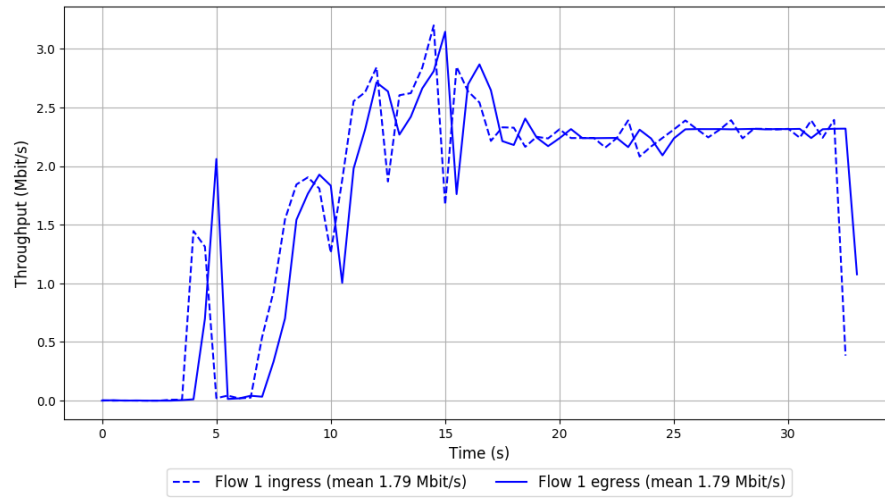


Run 2: Statistics of WebRTC media

Start at: 2018-10-10 02:51:58
End at: 2018-10-10 02:52:28
Local clock offset: 0.242 ms
Remote clock offset: -0.481 ms

Below is generated by plot.py at 2018-10-10 05:31:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.79 Mbit/s
95th percentile per-packet one-way delay: 139.533 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.79 Mbit/s
95th percentile per-packet one-way delay: 139.533 ms
Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link

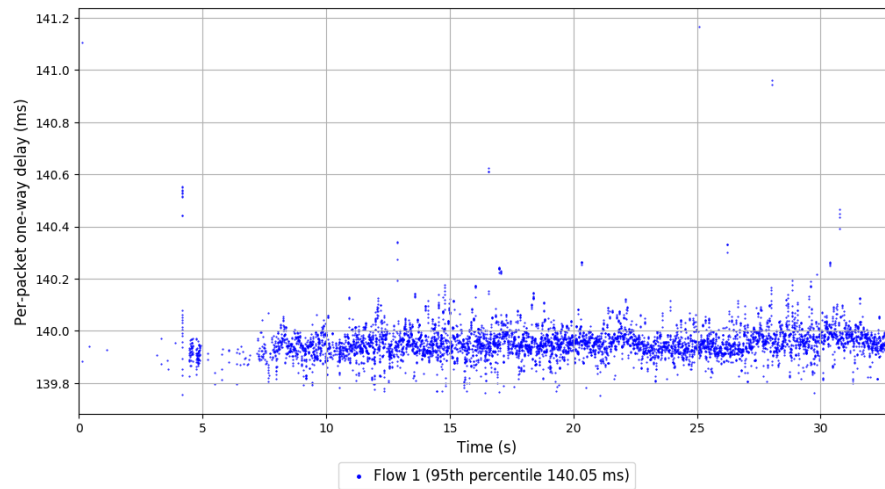
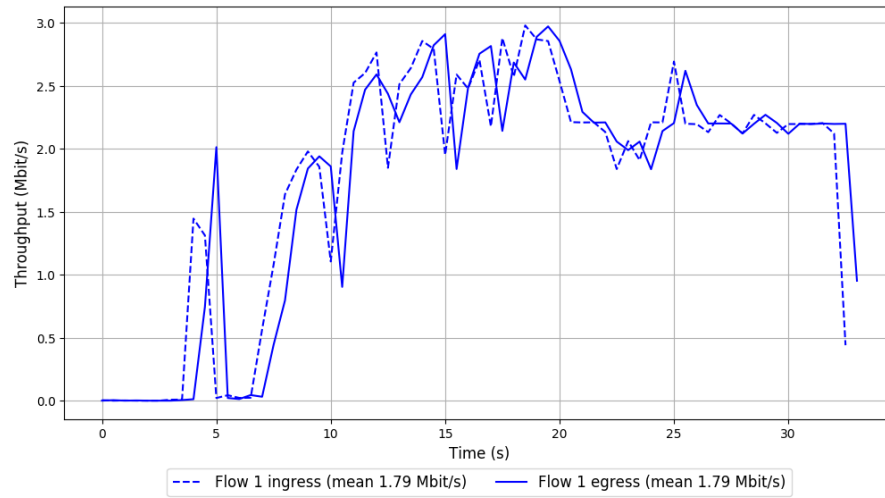


Run 3: Statistics of WebRTC media

Start at: 2018-10-10 03:17:17
End at: 2018-10-10 03:17:47
Local clock offset: -0.037 ms
Remote clock offset: -0.184 ms

Below is generated by plot.py at 2018-10-10 05:31:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.79 Mbit/s
95th percentile per-packet one-way delay: 140.051 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.79 Mbit/s
95th percentile per-packet one-way delay: 140.051 ms
Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-10-10 03:42:37

End at: 2018-10-10 03:43:07

Local clock offset: -0.088 ms

Remote clock offset: 0.175 ms

Below is generated by plot.py at 2018-10-10 05:31:13

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.83 Mbit/s

95th percentile per-packet one-way delay: 139.614 ms

Loss rate: 0.00%

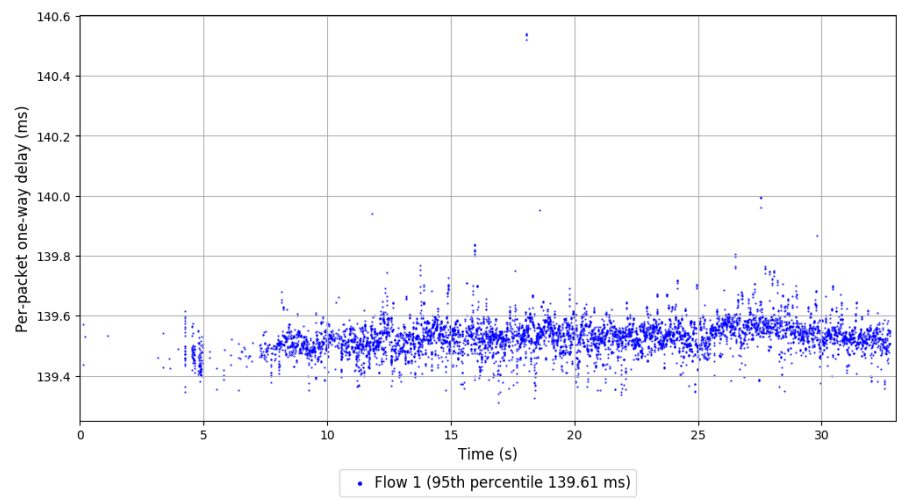
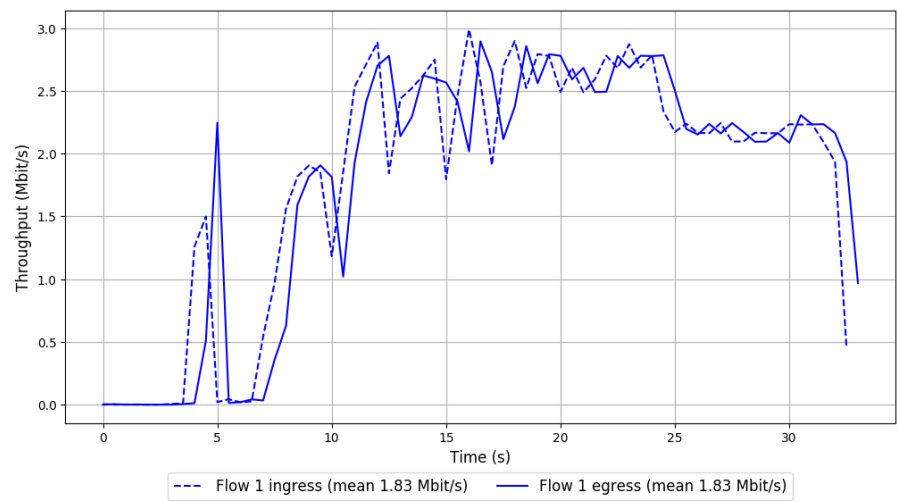
-- Flow 1:

Average throughput: 1.83 Mbit/s

95th percentile per-packet one-way delay: 139.614 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-10-10 04:08:28
End at: 2018-10-10 04:08:58
Local clock offset: -0.089 ms
Remote clock offset: -0.213 ms

Below is generated by plot.py at 2018-10-10 05:31:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.78 Mbit/s
95th percentile per-packet one-way delay: 138.513 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.78 Mbit/s
95th percentile per-packet one-way delay: 138.513 ms
Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

