

Pantheon Report

Generated at 2019-01-03 08:52:34 (UTC).

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

Repeated the test of 19 congestion control schemes 5 times.

Each test lasted for 30 seconds running 1 flow.

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

System info:

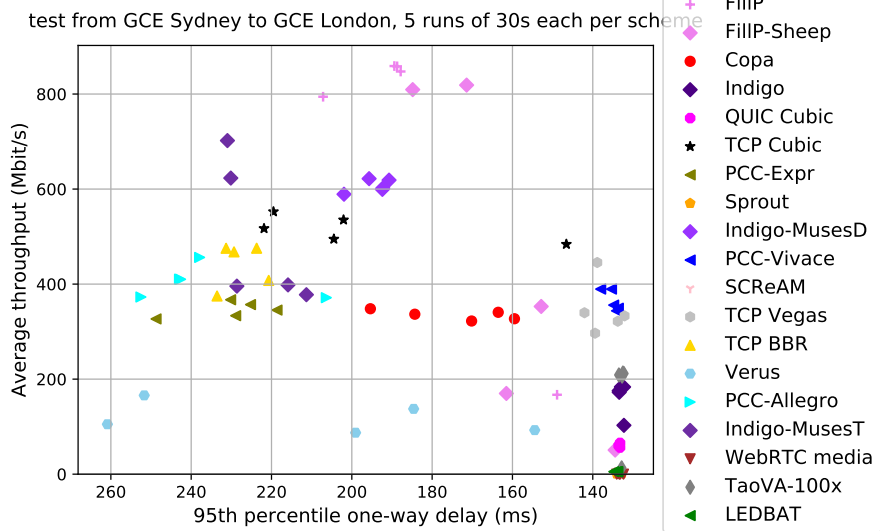
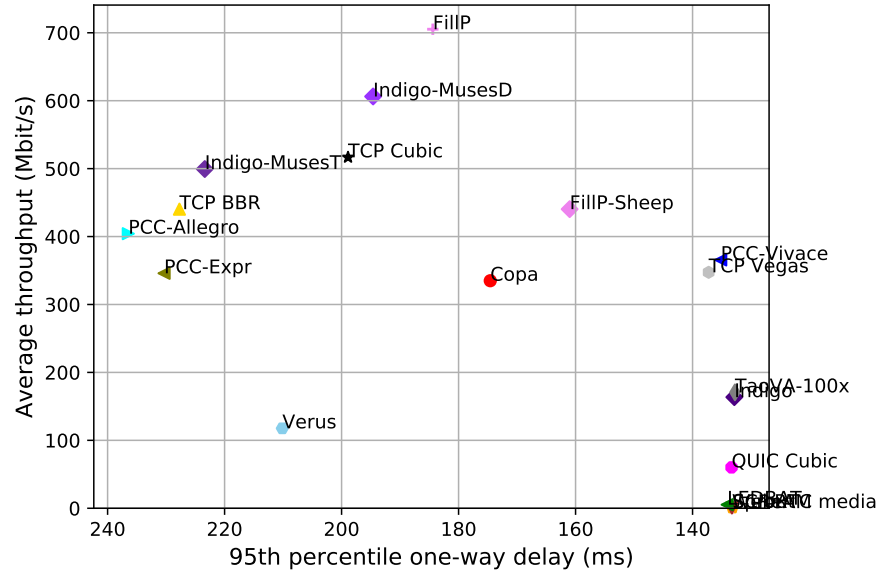
```
Linux 4.15.0-1025-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

```
branch: muses @ c654af0b7d59d4ef4b914cfac404e1fc2e96dc68
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfc58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a
third_party/muses-refactored @ 31f8f0ba8ef8b1da76c2bc0cd0a7850c33ff64fb
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)



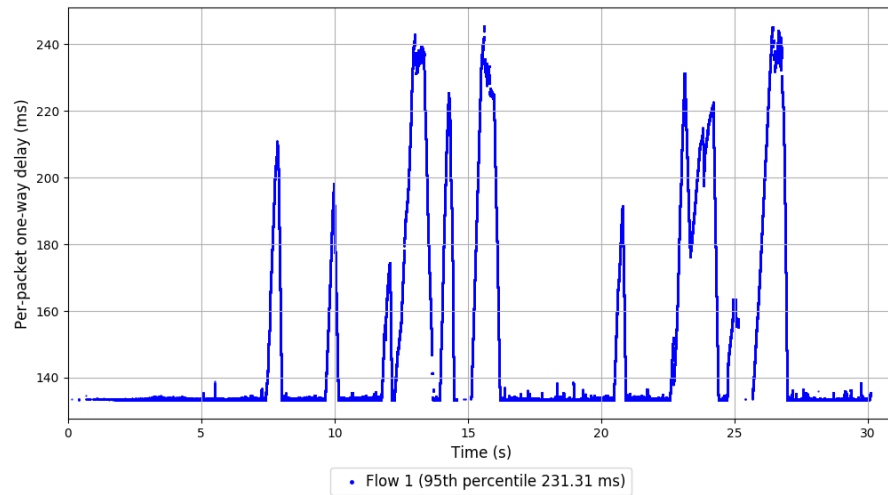
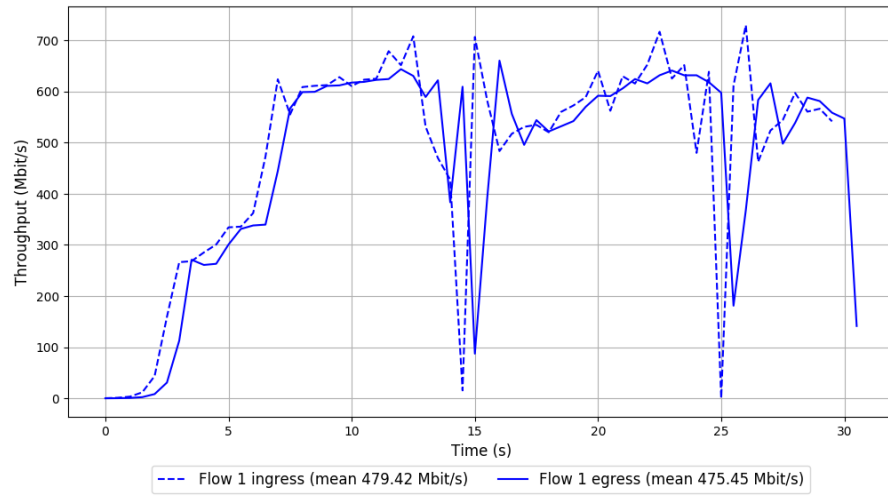
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	440.33	227.72	0.97
Copa	5	334.97	174.58	0.03
TCP Cubic	5	516.64	198.90	0.12
FillP	5	705.22	184.40	1.82
FillP-Sheep	5	440.35	161.01	0.44
Indigo	5	163.58	132.86	0.00
Indigo-MusesD	5	606.23	194.61	0.28
Indigo-MusesT	5	499.40	223.39	1.77
LEDBAT	5	5.27	134.08	0.00
PCC-Allegro	5	404.22	236.46	3.12
PCC-Expr	5	345.90	230.35	2.51
QUIC Cubic	4	60.17	133.34	0.00
SCReAM	5	0.16	133.16	0.00
Sprout	5	0.64	133.19	0.00
TaoVA-100x	5	170.62	132.76	0.00
TCP Vegas	5	347.35	137.25	0.05
Verus	5	117.66	210.13	0.68
PCC-Vivace	5	365.58	135.19	0.10
WebRTC media	5	0.42	133.27	0.00

Run 1: Statistics of TCP BBR

Start at: 2019-01-03 04:47:50
End at: 2019-01-03 04:48:20
Local clock offset: -0.295 ms
Remote clock offset: -0.409 ms

Below is generated by plot.py at 2019-01-03 07:20:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 475.45 Mbit/s
95th percentile per-packet one-way delay: 231.305 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 475.45 Mbit/s
95th percentile per-packet one-way delay: 231.305 ms
Loss rate: 0.83%

Run 1: Report of TCP BBR — Data Link

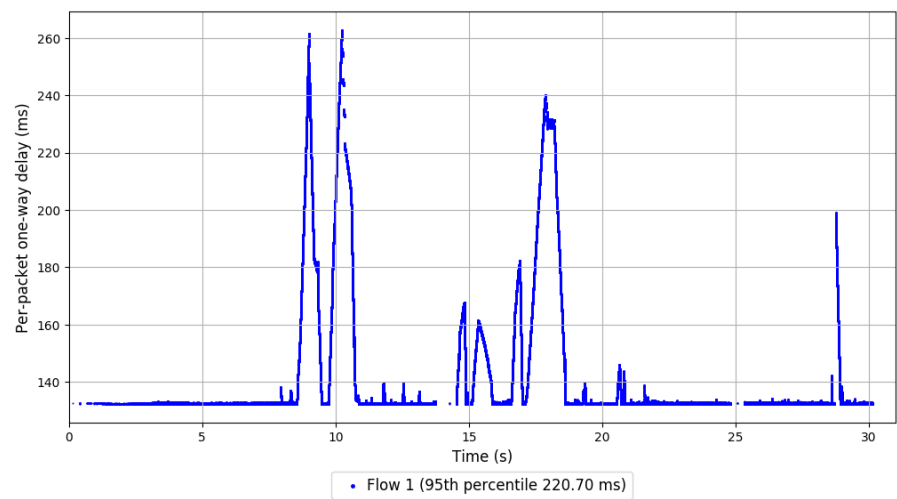
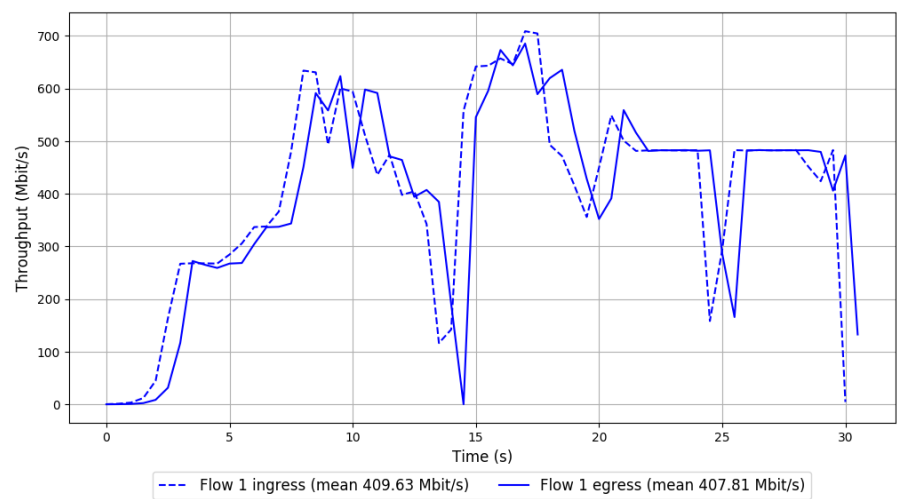


Run 2: Statistics of TCP BBR

Start at: 2019-01-03 05:17:02
End at: 2019-01-03 05:17:32
Local clock offset: -0.014 ms
Remote clock offset: -0.093 ms

Below is generated by plot.py at 2019-01-03 07:20:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 407.81 Mbit/s
95th percentile per-packet one-way delay: 220.698 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 407.81 Mbit/s
95th percentile per-packet one-way delay: 220.698 ms
Loss rate: 0.44%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2019-01-03 05:45:42

End at: 2019-01-03 05:46:12

Local clock offset: -0.1 ms

Remote clock offset: 0.243 ms

Below is generated by plot.py at 2019-01-03 07:20:22

Datalink statistics

-- Total of 1 flow:

Average throughput: 467.86 Mbit/s

95th percentile per-packet one-way delay: 229.332 ms

Loss rate: 1.22%

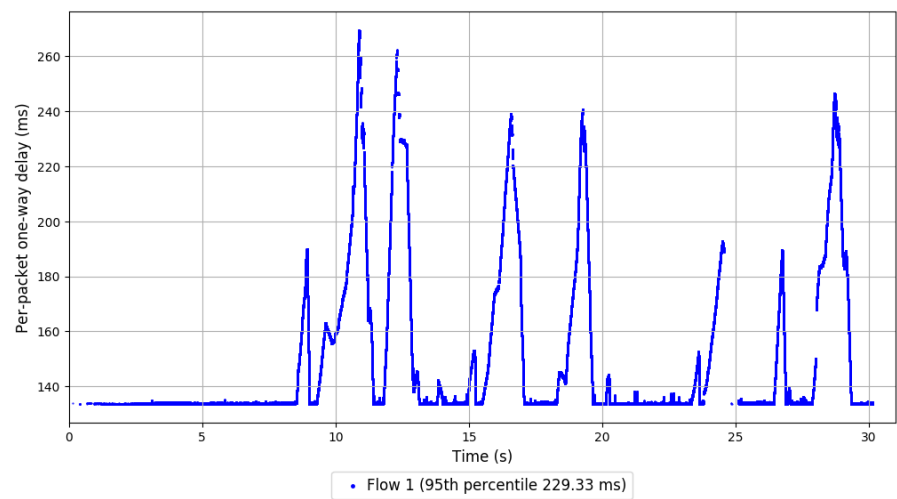
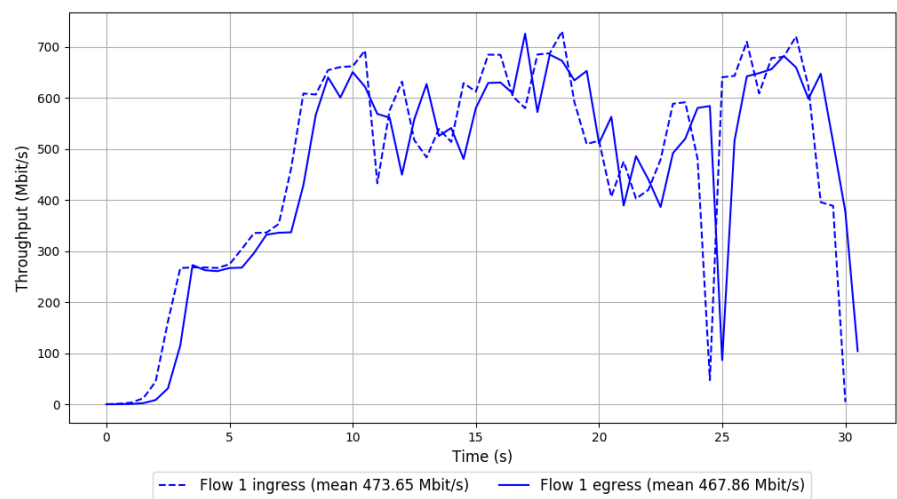
-- Flow 1:

Average throughput: 467.86 Mbit/s

95th percentile per-packet one-way delay: 229.332 ms

Loss rate: 1.22%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2019-01-03 06:15:01

End at: 2019-01-03 06:15:31

Local clock offset: -0.058 ms

Remote clock offset: 0.016 ms

Below is generated by plot.py at 2019-01-03 07:20:22

Datalink statistics

-- Total of 1 flow:

Average throughput: 475.55 Mbit/s

95th percentile per-packet one-way delay: 223.704 ms

Loss rate: 0.54%

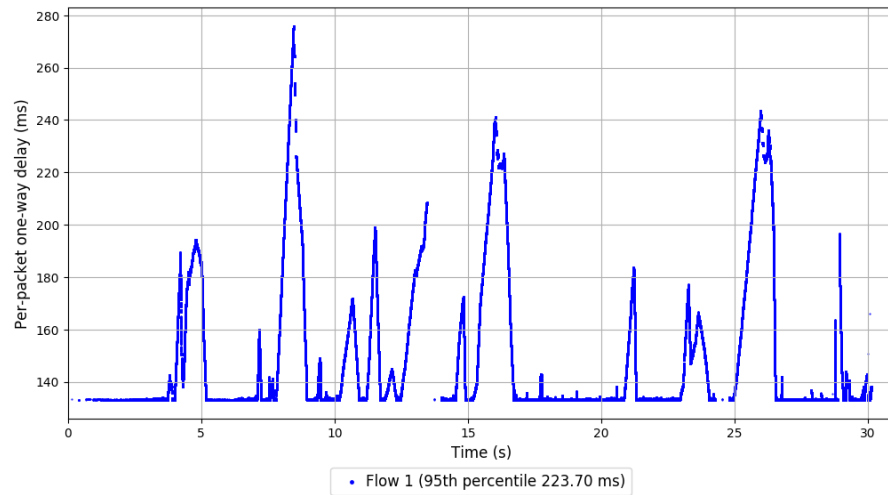
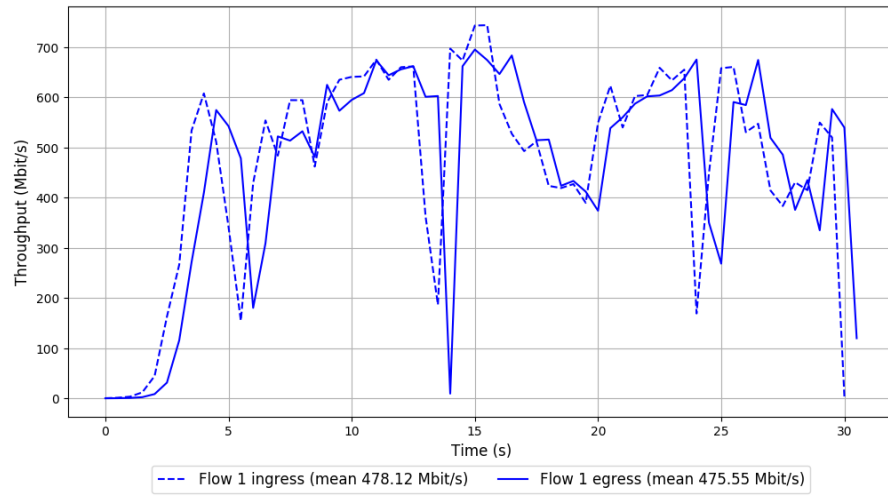
-- Flow 1:

Average throughput: 475.55 Mbit/s

95th percentile per-packet one-way delay: 223.704 ms

Loss rate: 0.54%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2019-01-03 06:43:50

End at: 2019-01-03 06:44:20

Local clock offset: -0.07 ms

Remote clock offset: -0.01 ms

Below is generated by plot.py at 2019-01-03 07:20:22

Datalink statistics

-- Total of 1 flow:

Average throughput: 374.98 Mbit/s

95th percentile per-packet one-way delay: 233.558 ms

Loss rate: 1.83%

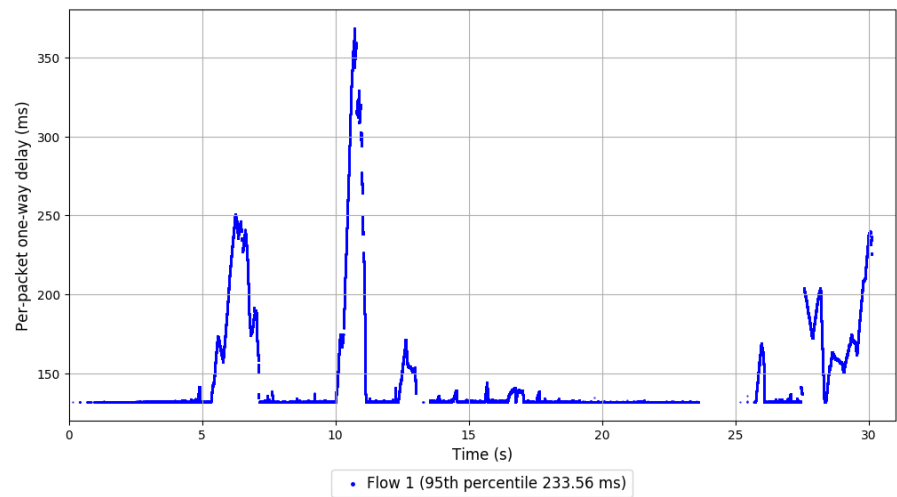
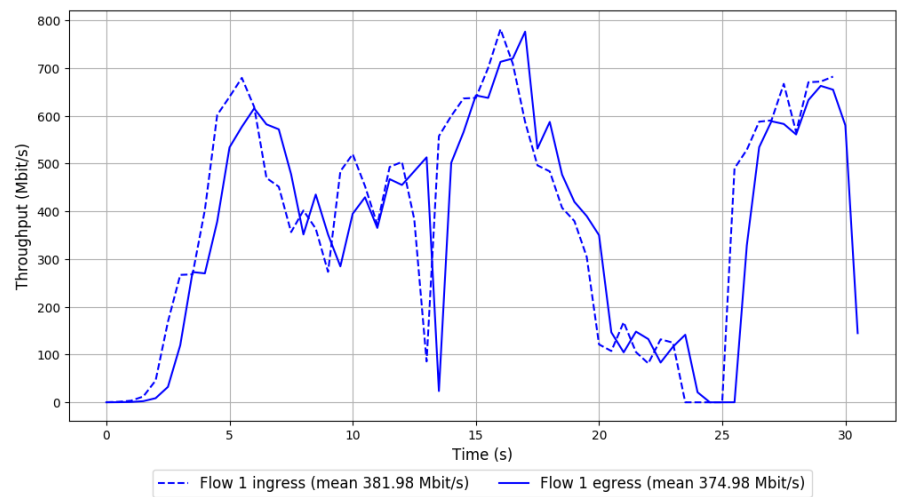
-- Flow 1:

Average throughput: 374.98 Mbit/s

95th percentile per-packet one-way delay: 233.558 ms

Loss rate: 1.83%

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2019-01-03 04:37:55

End at: 2019-01-03 04:38:25

Local clock offset: 0.299 ms

Remote clock offset: -0.06 ms

Below is generated by plot.py at 2019-01-03 07:23:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 348.15 Mbit/s

95th percentile per-packet one-way delay: 195.376 ms

Loss rate: 0.00%

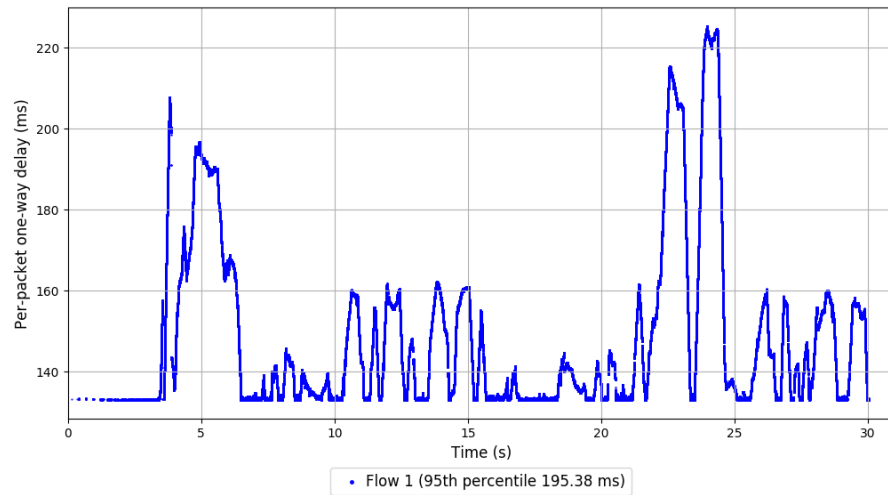
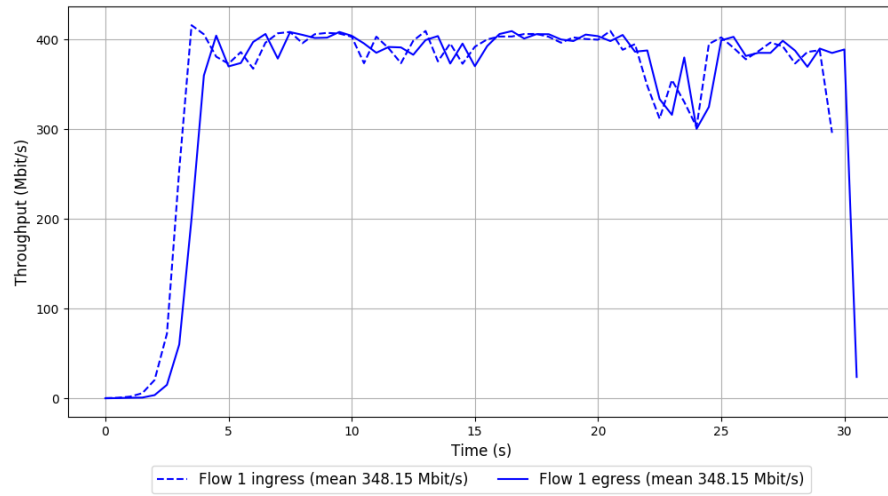
-- Flow 1:

Average throughput: 348.15 Mbit/s

95th percentile per-packet one-way delay: 195.376 ms

Loss rate: 0.00%

Run 1: Report of Copa — Data Link

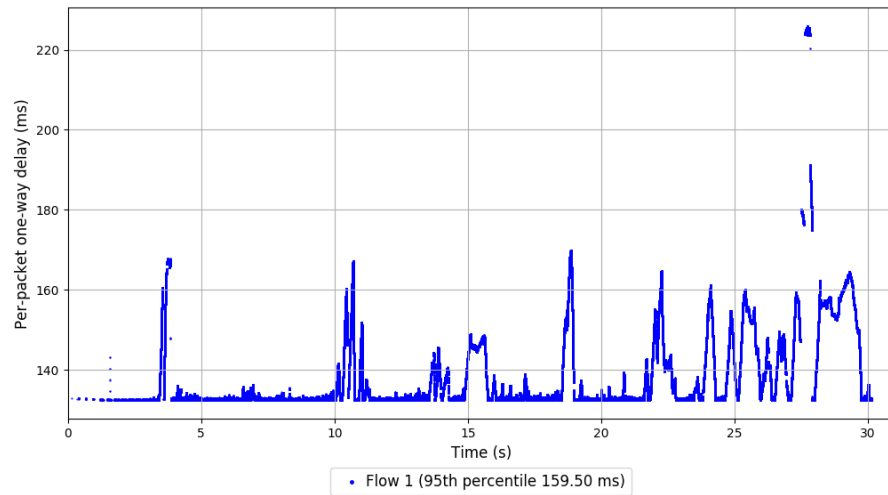
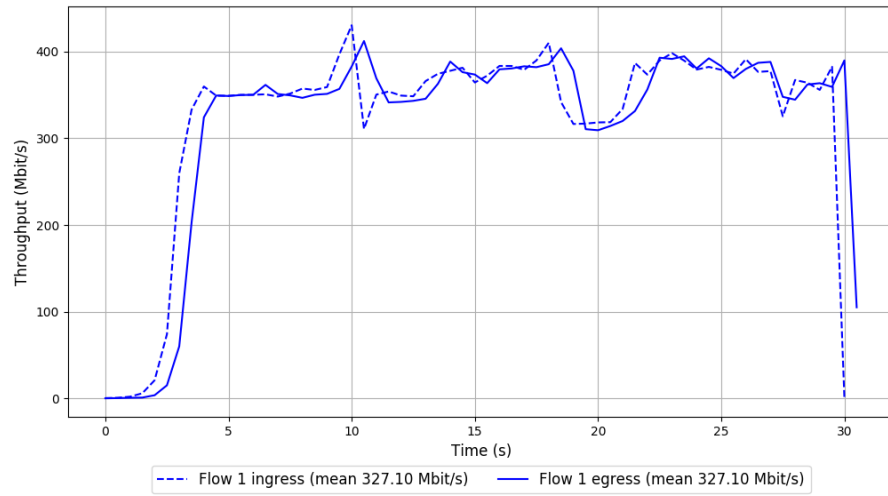


Run 2: Statistics of Copa

Start at: 2019-01-03 05:05:56
End at: 2019-01-03 05:06:26
Local clock offset: -0.192 ms
Remote clock offset: -0.023 ms

Below is generated by plot.py at 2019-01-03 07:23:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 327.10 Mbit/s
95th percentile per-packet one-way delay: 159.503 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 327.10 Mbit/s
95th percentile per-packet one-way delay: 159.503 ms
Loss rate: 0.00%

Run 2: Report of Copa — Data Link

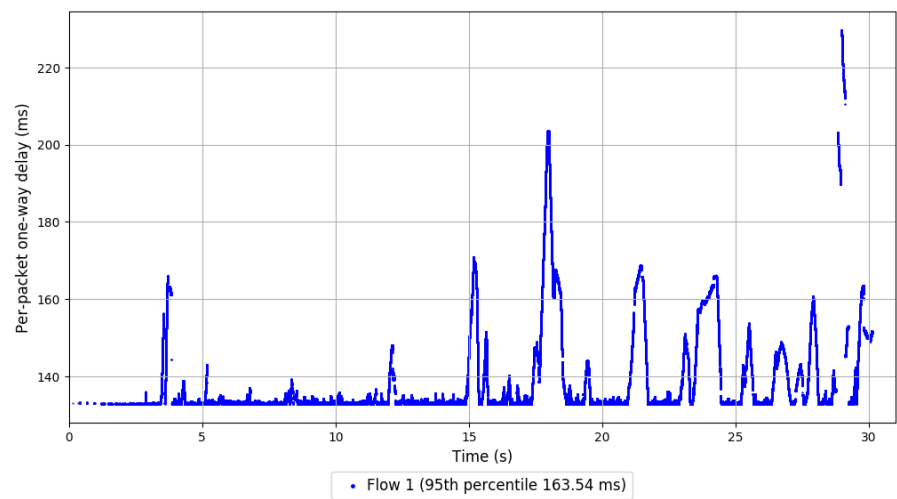
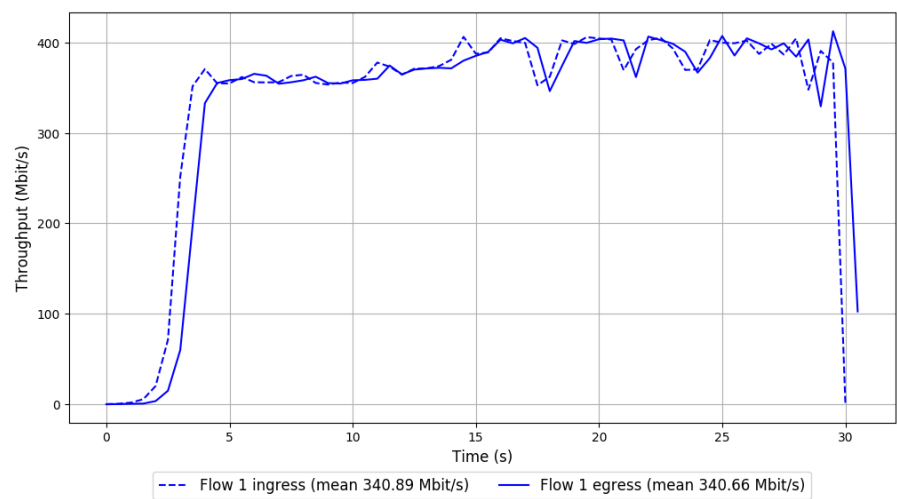


Run 3: Statistics of Copa

Start at: 2019-01-03 05:35:18
End at: 2019-01-03 05:35:48
Local clock offset: -0.108 ms
Remote clock offset: -0.081 ms

Below is generated by plot.py at 2019-01-03 07:23:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 340.66 Mbit/s
95th percentile per-packet one-way delay: 163.545 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 340.66 Mbit/s
95th percentile per-packet one-way delay: 163.545 ms
Loss rate: 0.06%

Run 3: Report of Copa — Data Link

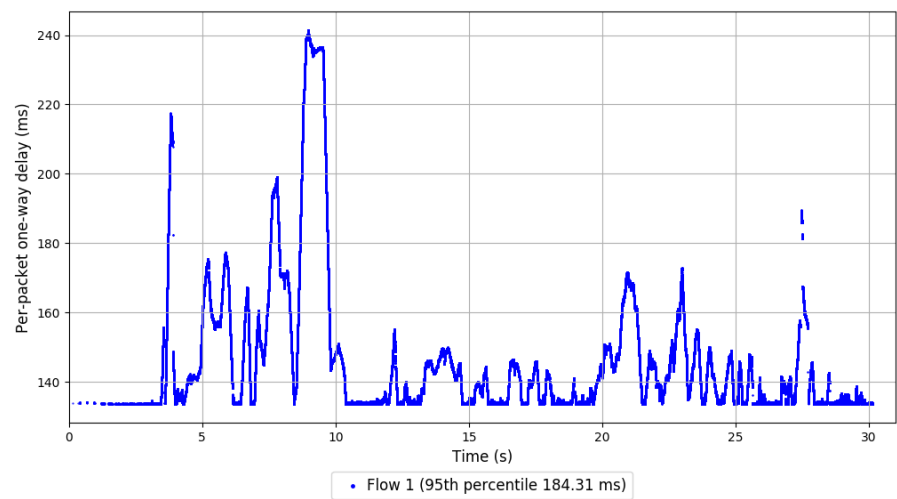
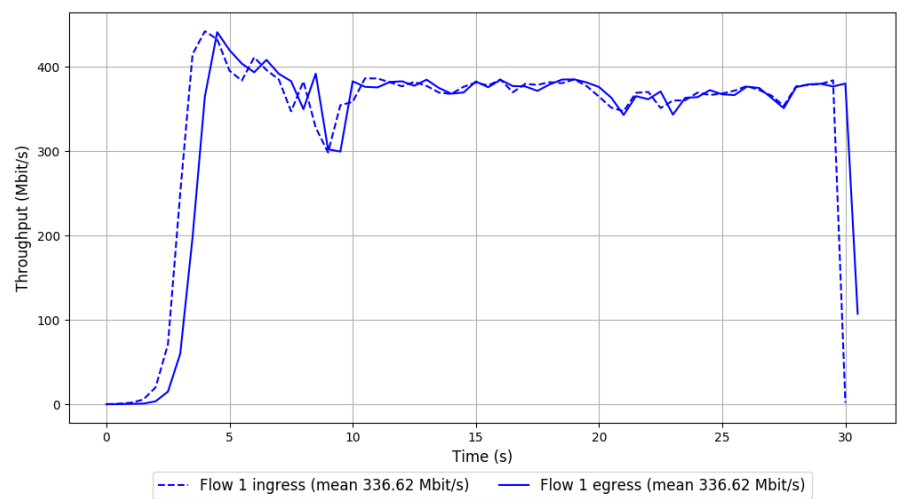


Run 4: Statistics of Copa

Start at: 2019-01-03 06:03:56
End at: 2019-01-03 06:04:26
Local clock offset: -0.475 ms
Remote clock offset: -0.024 ms

Below is generated by plot.py at 2019-01-03 07:32:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 336.62 Mbit/s
95th percentile per-packet one-way delay: 184.313 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 336.62 Mbit/s
95th percentile per-packet one-way delay: 184.313 ms
Loss rate: 0.00%

Run 4: Report of Copa — Data Link

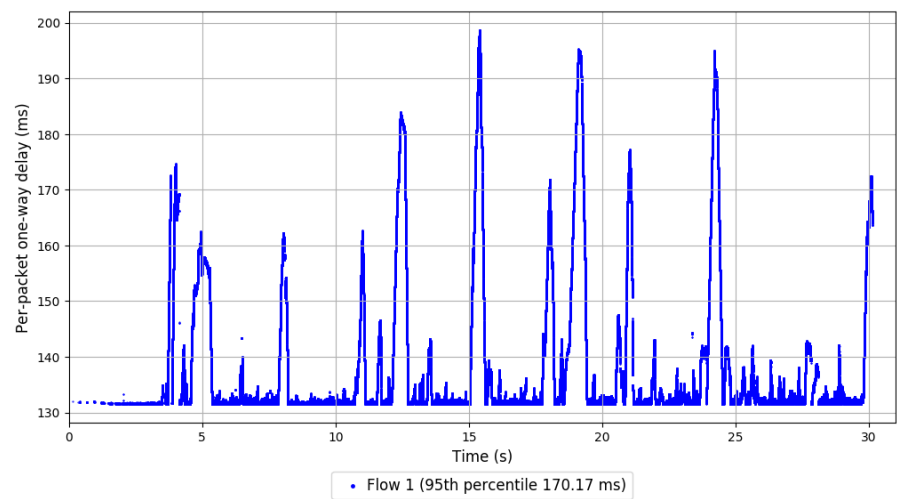
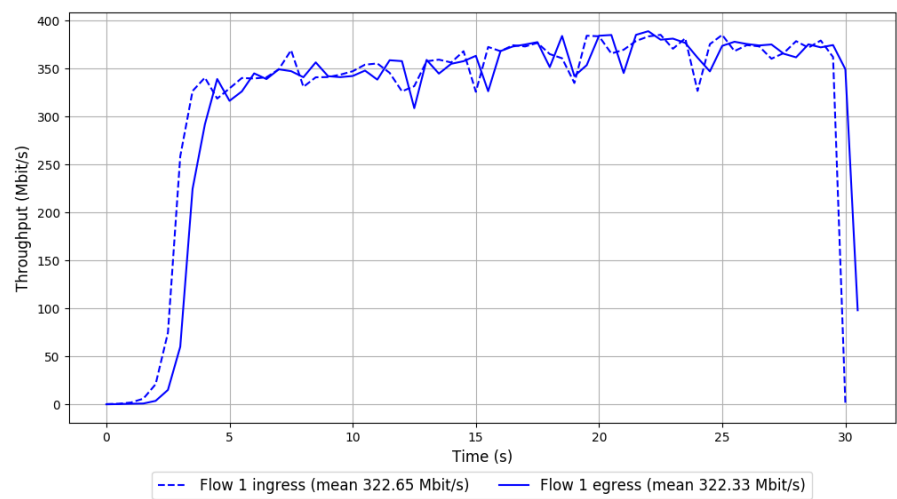


Run 5: Statistics of Copa

Start at: 2019-01-03 06:33:14
End at: 2019-01-03 06:33:44
Local clock offset: 0.316 ms
Remote clock offset: -0.379 ms

Below is generated by plot.py at 2019-01-03 07:32:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 322.33 Mbit/s
95th percentile per-packet one-way delay: 170.174 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 322.33 Mbit/s
95th percentile per-packet one-way delay: 170.174 ms
Loss rate: 0.10%

Run 5: Report of Copa — Data Link

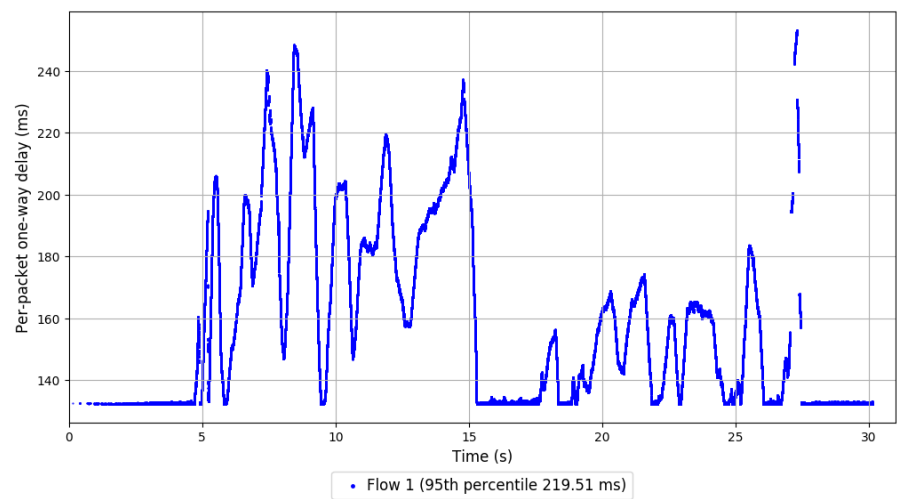
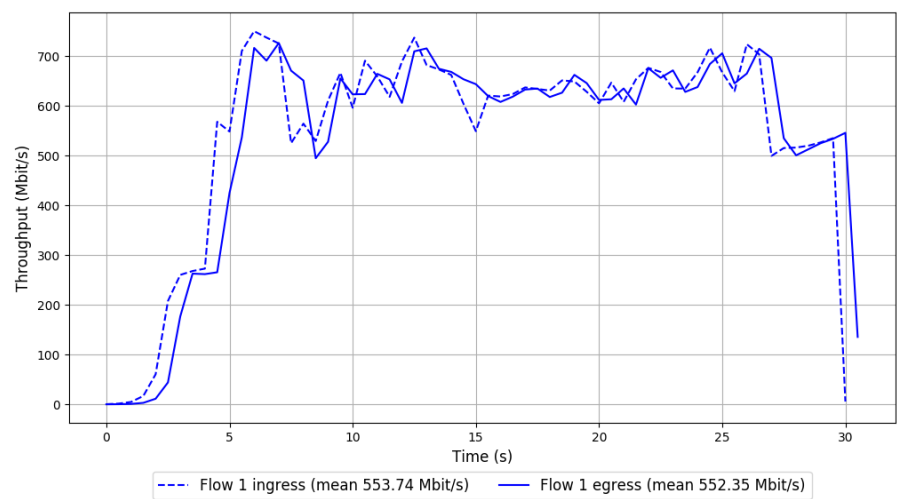


Run 1: Statistics of TCP Cubic

Start at: 2019-01-03 04:52:21
End at: 2019-01-03 04:52:51
Local clock offset: -0.008 ms
Remote clock offset: -0.015 ms

Below is generated by plot.py at 2019-01-03 07:32:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 552.35 Mbit/s
95th percentile per-packet one-way delay: 219.513 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 552.35 Mbit/s
95th percentile per-packet one-way delay: 219.513 ms
Loss rate: 0.25%

Run 1: Report of TCP Cubic — Data Link

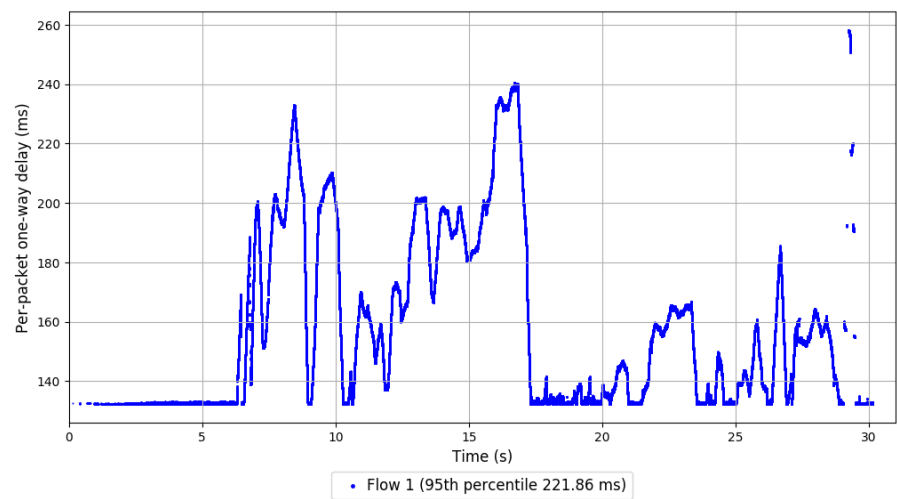
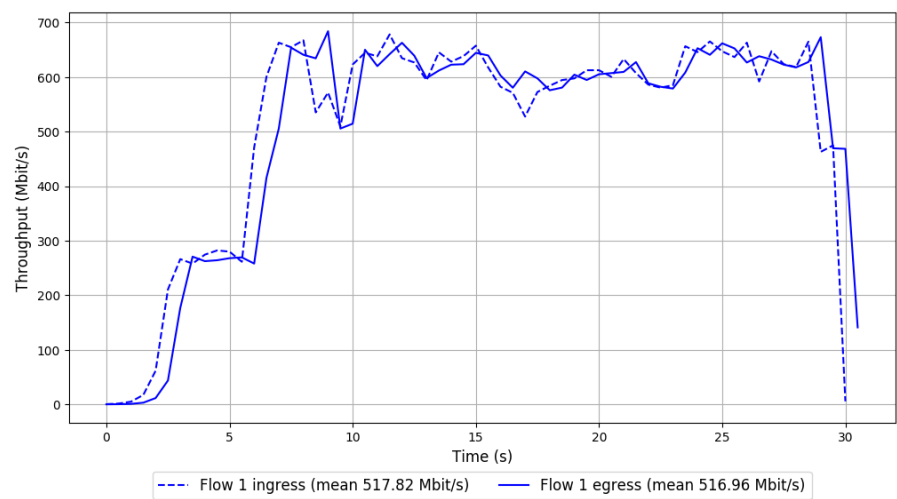


Run 2: Statistics of TCP Cubic

Start at: 2019-01-03 05:21:33
End at: 2019-01-03 05:22:03
Local clock offset: -0.314 ms
Remote clock offset: -0.027 ms

Below is generated by plot.py at 2019-01-03 07:32:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 516.96 Mbit/s
95th percentile per-packet one-way delay: 221.861 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 516.96 Mbit/s
95th percentile per-packet one-way delay: 221.861 ms
Loss rate: 0.16%

Run 2: Report of TCP Cubic — Data Link

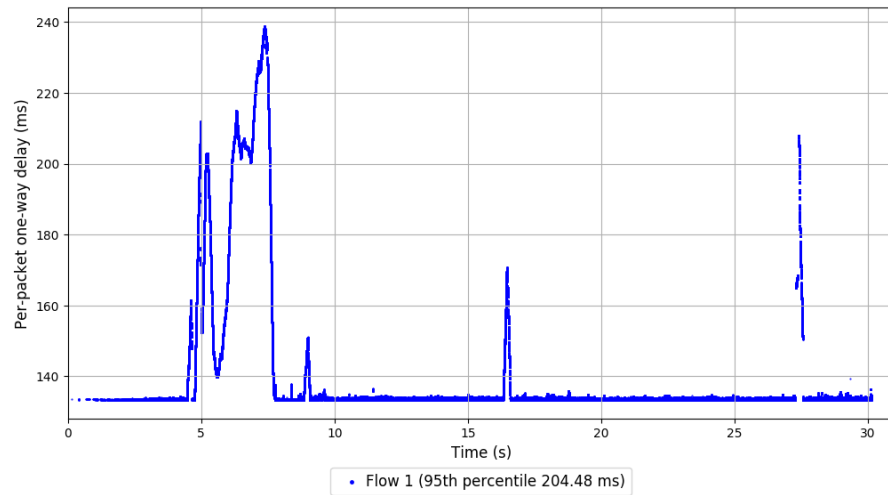
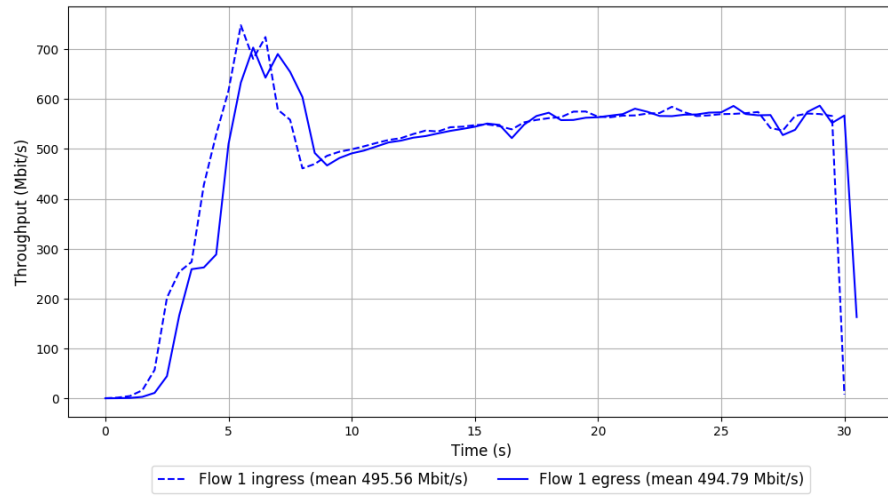


Run 3: Statistics of TCP Cubic

Start at: 2019-01-03 05:50:18
End at: 2019-01-03 05:50:48
Local clock offset: -0.081 ms
Remote clock offset: -0.137 ms

Below is generated by plot.py at 2019-01-03 07:32:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 494.79 Mbit/s
95th percentile per-packet one-way delay: 204.477 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 494.79 Mbit/s
95th percentile per-packet one-way delay: 204.477 ms
Loss rate: 0.15%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2019-01-03 06:19:37

End at: 2019-01-03 06:20:07

Local clock offset: 0.361 ms

Remote clock offset: 0.057 ms

Below is generated by plot.py at 2019-01-03 07:34:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 535.17 Mbit/s

95th percentile per-packet one-way delay: 202.067 ms

Loss rate: 0.05%

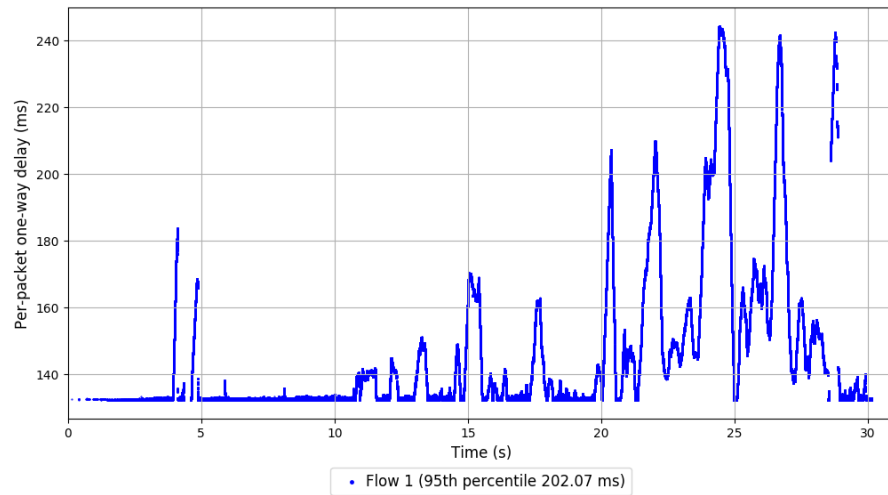
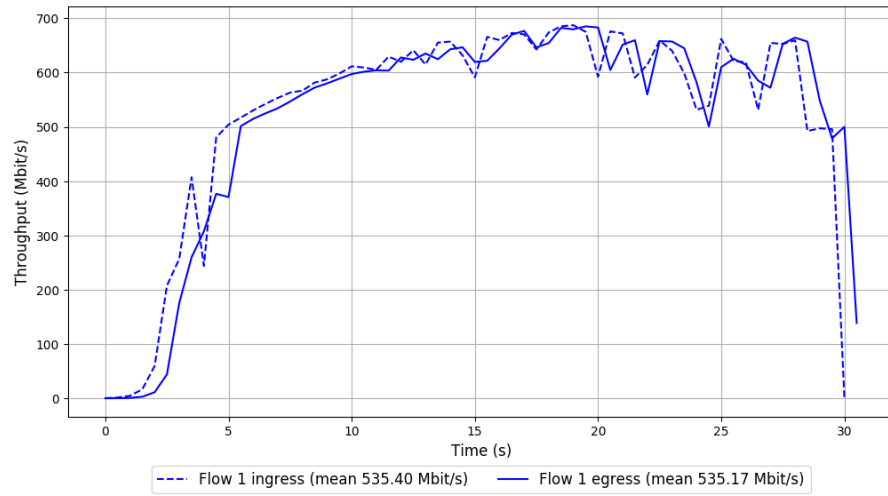
-- Flow 1:

Average throughput: 535.17 Mbit/s

95th percentile per-packet one-way delay: 202.067 ms

Loss rate: 0.05%

Run 4: Report of TCP Cubic — Data Link

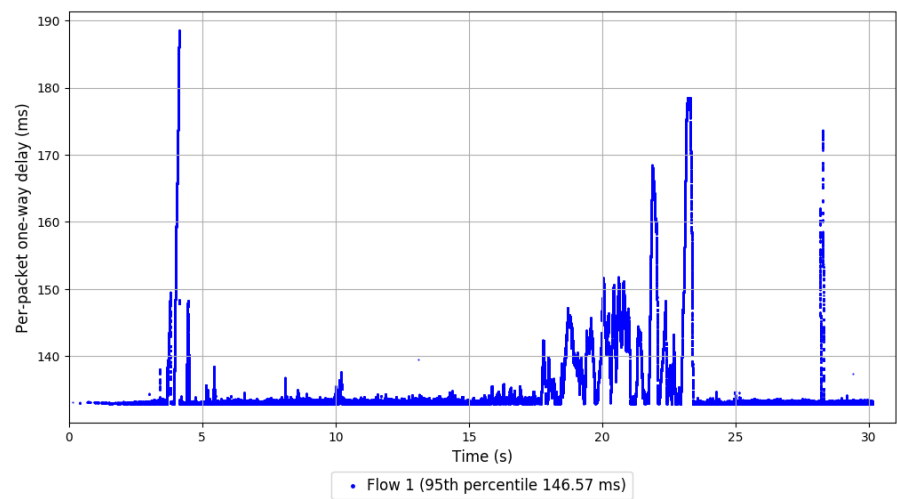
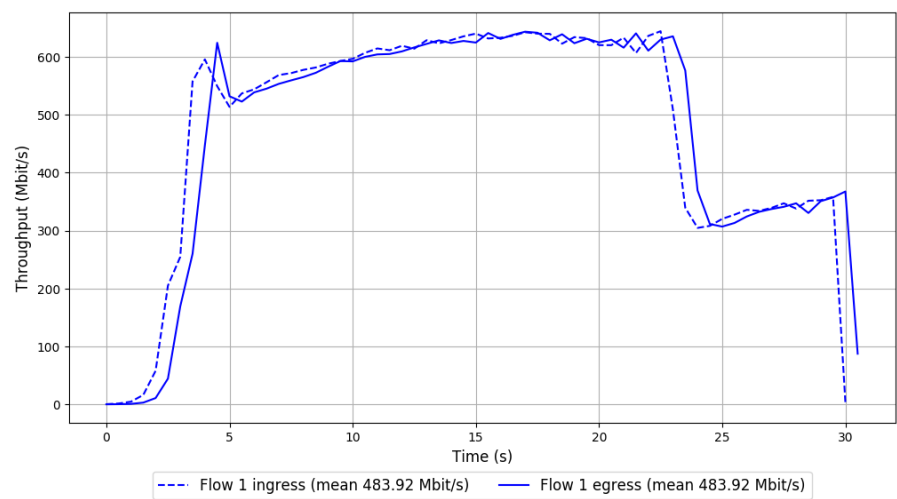


Run 5: Statistics of TCP Cubic

Start at: 2019-01-03 06:48:21
End at: 2019-01-03 06:48:51
Local clock offset: -0.548 ms
Remote clock offset: -0.396 ms

Below is generated by plot.py at 2019-01-03 07:34:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 483.92 Mbit/s
95th percentile per-packet one-way delay: 146.574 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 483.92 Mbit/s
95th percentile per-packet one-way delay: 146.574 ms
Loss rate: 0.00%

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2019-01-03 04:39:43

End at: 2019-01-03 04:40:13

Local clock offset: -0.197 ms

Remote clock offset: -0.06 ms

Below is generated by plot.py at 2019-01-03 07:34:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 167.11 Mbit/s

95th percentile per-packet one-way delay: 148.892 ms

Loss rate: 0.00%

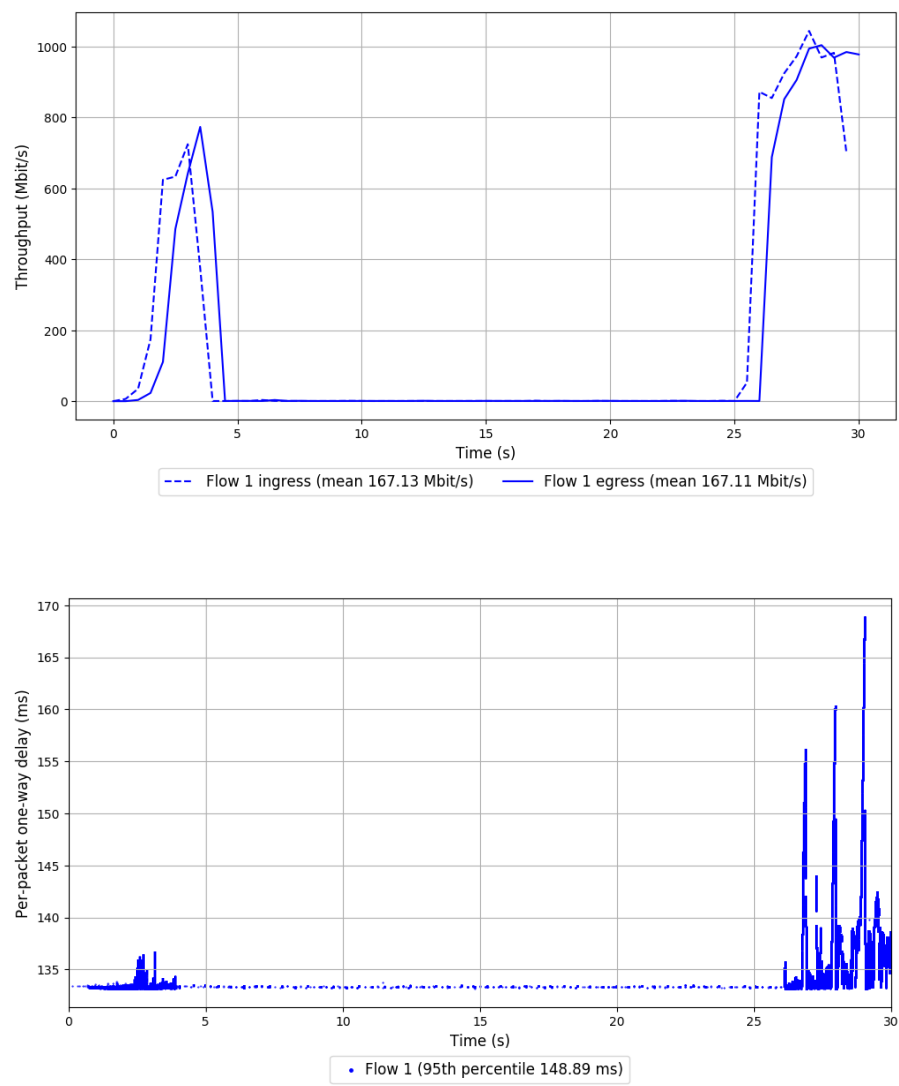
-- Flow 1:

Average throughput: 167.11 Mbit/s

95th percentile per-packet one-way delay: 148.892 ms

Loss rate: 0.00%

Run 1: Report of FillP — Data Link

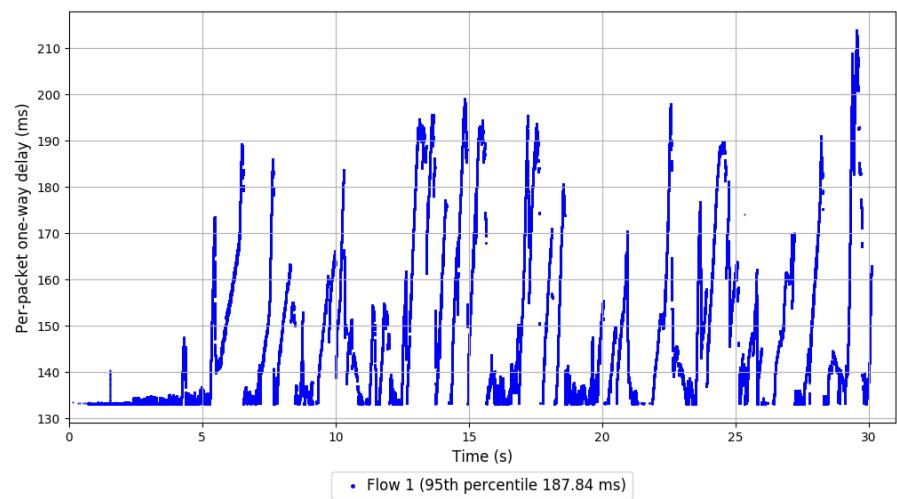
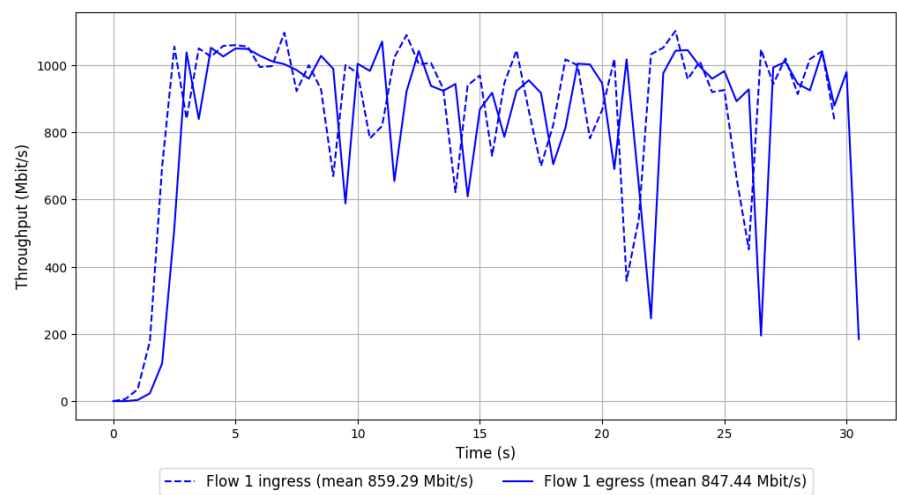


Run 2: Statistics of FillP

Start at: 2019-01-03 05:07:41
End at: 2019-01-03 05:08:11
Local clock offset: -0.362 ms
Remote clock offset: -0.017 ms

Below is generated by plot.py at 2019-01-03 07:53:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 847.44 Mbit/s
95th percentile per-packet one-way delay: 187.835 ms
Loss rate: 1.28%
-- Flow 1:
Average throughput: 847.44 Mbit/s
95th percentile per-packet one-way delay: 187.835 ms
Loss rate: 1.28%

Run 2: Report of FillP — Data Link

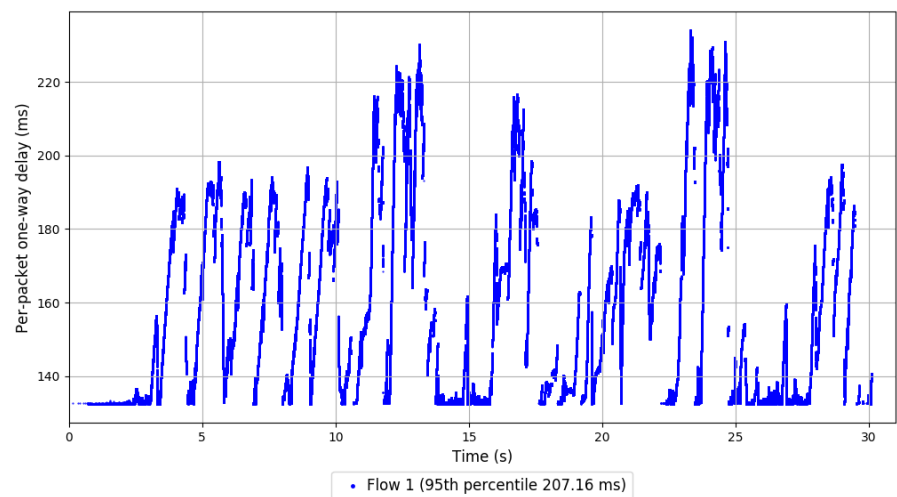
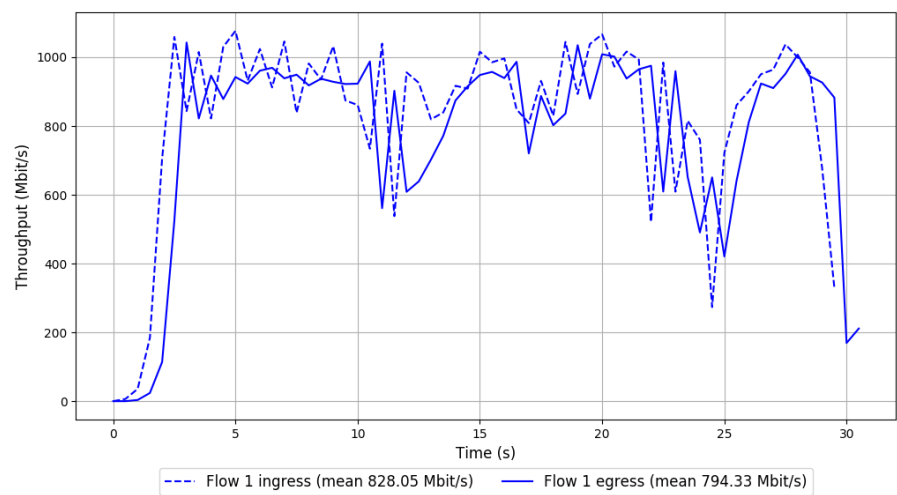


Run 3: Statistics of FillP

Start at: 2019-01-03 05:37:05
End at: 2019-01-03 05:37:35
Local clock offset: -0.084 ms
Remote clock offset: -0.064 ms

Below is generated by plot.py at 2019-01-03 07:54:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 794.33 Mbit/s
95th percentile per-packet one-way delay: 207.155 ms
Loss rate: 4.07%
-- Flow 1:
Average throughput: 794.33 Mbit/s
95th percentile per-packet one-way delay: 207.155 ms
Loss rate: 4.07%

Run 3: Report of FillP — Data Link

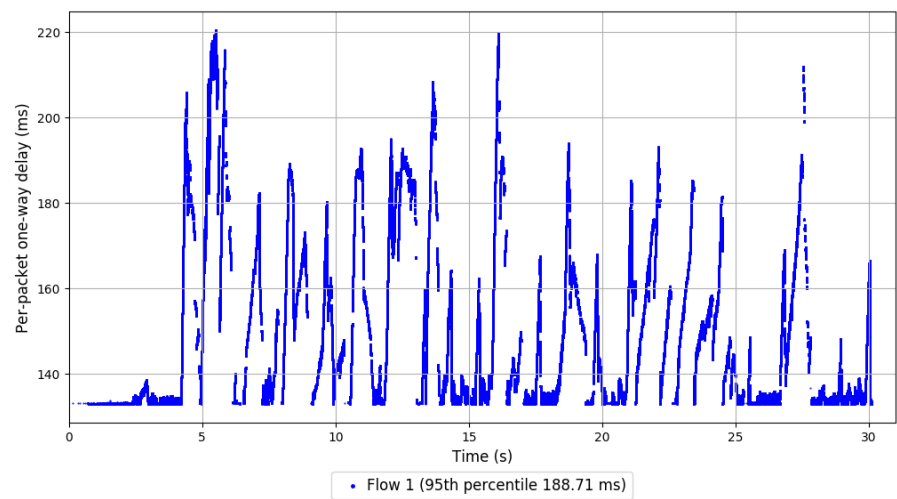
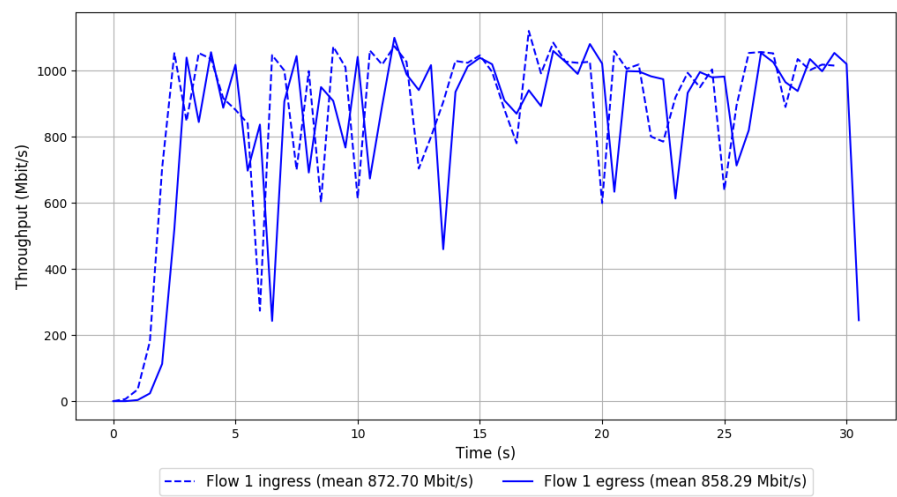


Run 4: Statistics of FillP

Start at: 2019-01-03 06:05:43
End at: 2019-01-03 06:06:13
Local clock offset: -0.346 ms
Remote clock offset: -0.035 ms

Below is generated by plot.py at 2019-01-03 07:55:27
Datalink statistics
-- Total of 1 flow:
Average throughput: 858.29 Mbit/s
95th percentile per-packet one-way delay: 188.714 ms
Loss rate: 1.65%
-- Flow 1:
Average throughput: 858.29 Mbit/s
95th percentile per-packet one-way delay: 188.714 ms
Loss rate: 1.65%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2019-01-03 06:34:58

End at: 2019-01-03 06:35:28

Local clock offset: -0.044 ms

Remote clock offset: 0.002 ms

Below is generated by plot.py at 2019-01-03 07:55:42

Datalink statistics

-- Total of 1 flow:

Average throughput: 858.91 Mbit/s

95th percentile per-packet one-way delay: 189.412 ms

Loss rate: 2.09%

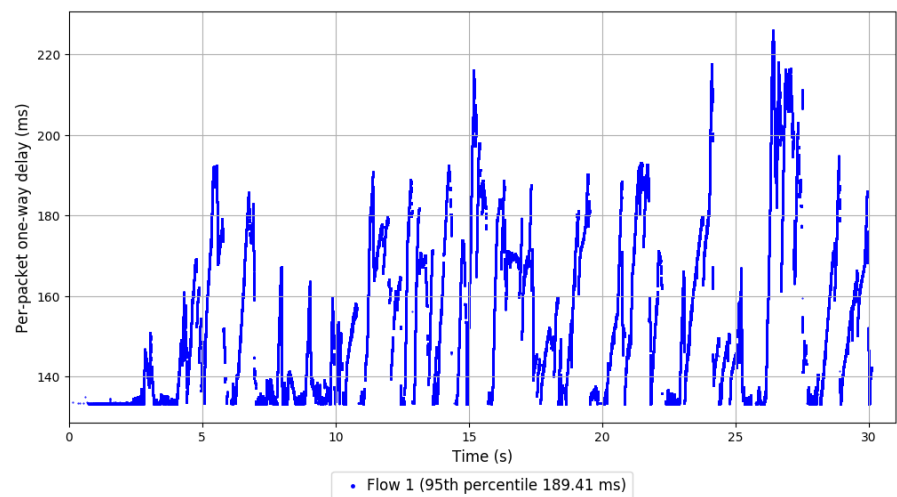
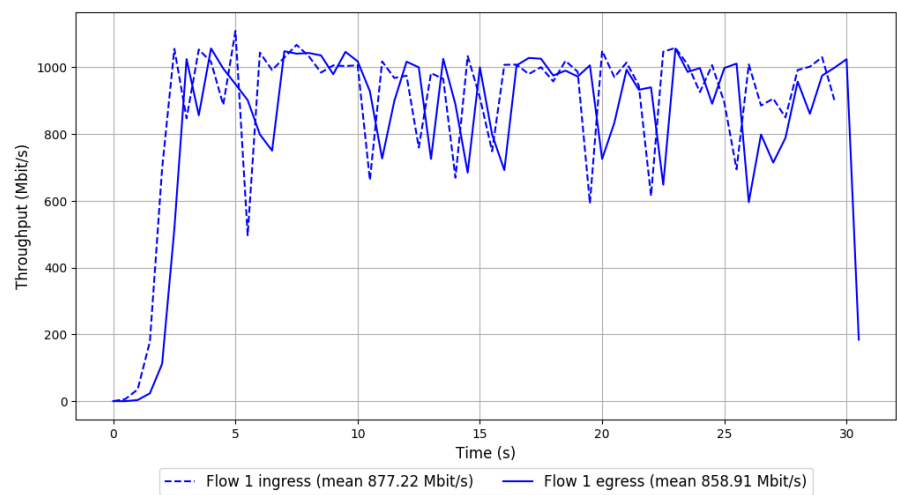
-- Flow 1:

Average throughput: 858.91 Mbit/s

95th percentile per-packet one-way delay: 189.412 ms

Loss rate: 2.09%

Run 5: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2019-01-03 04:43:52

End at: 2019-01-03 04:44:22

Local clock offset: -0.036 ms

Remote clock offset: -0.073 ms

Below is generated by plot.py at 2019-01-03 07:55:42

Datalink statistics

-- Total of 1 flow:

Average throughput: 50.76 Mbit/s

95th percentile per-packet one-way delay: 134.432 ms

Loss rate: 0.00%

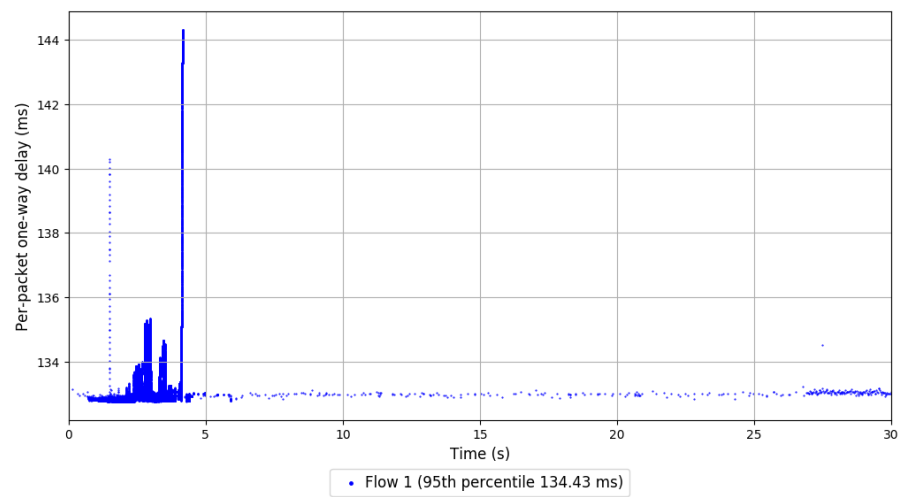
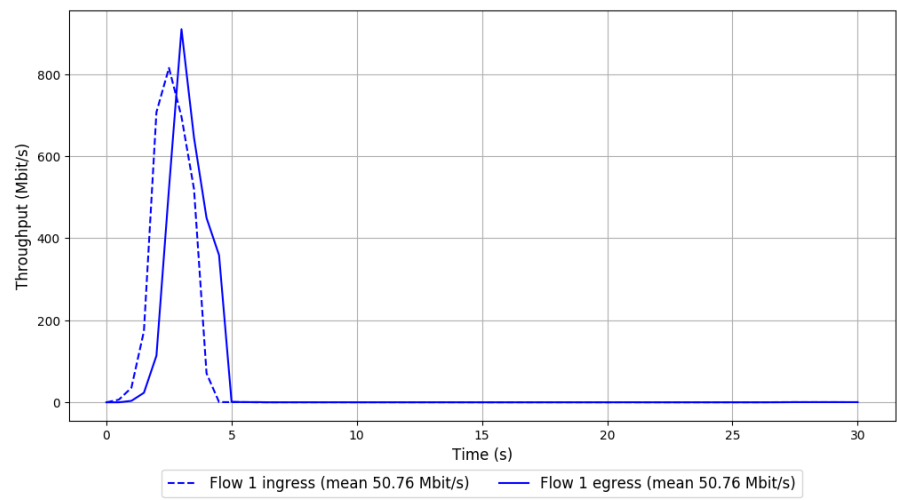
-- Flow 1:

Average throughput: 50.76 Mbit/s

95th percentile per-packet one-way delay: 134.432 ms

Loss rate: 0.00%

Run 1: Report of FillP-Sheep — Data Link



Run 2: Statistics of FillP-Sheep

Start at: 2019-01-03 05:12:31

End at: 2019-01-03 05:13:01

Local clock offset: -0.264 ms

Remote clock offset: 0.023 ms

Below is generated by plot.py at 2019-01-03 07:55:42

Datalink statistics

-- Total of 1 flow:

Average throughput: 818.82 Mbit/s

95th percentile per-packet one-way delay: 171.416 ms

Loss rate: 0.48%

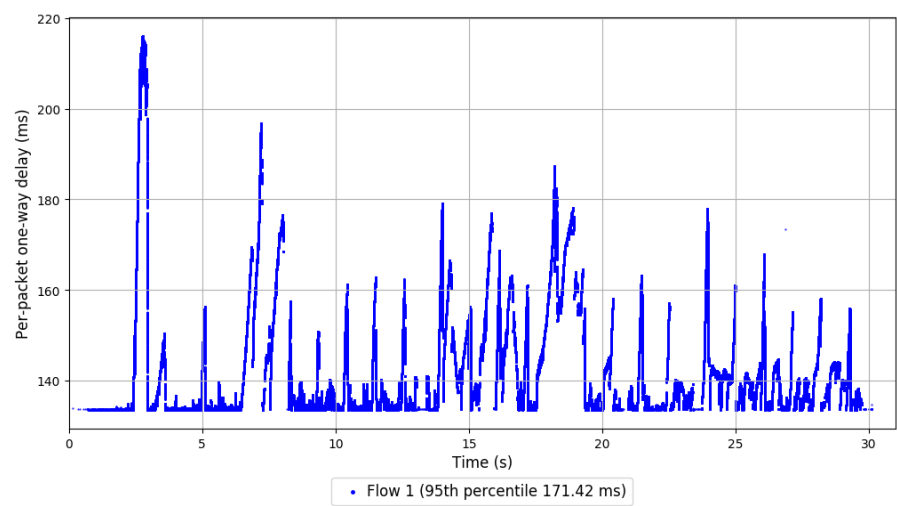
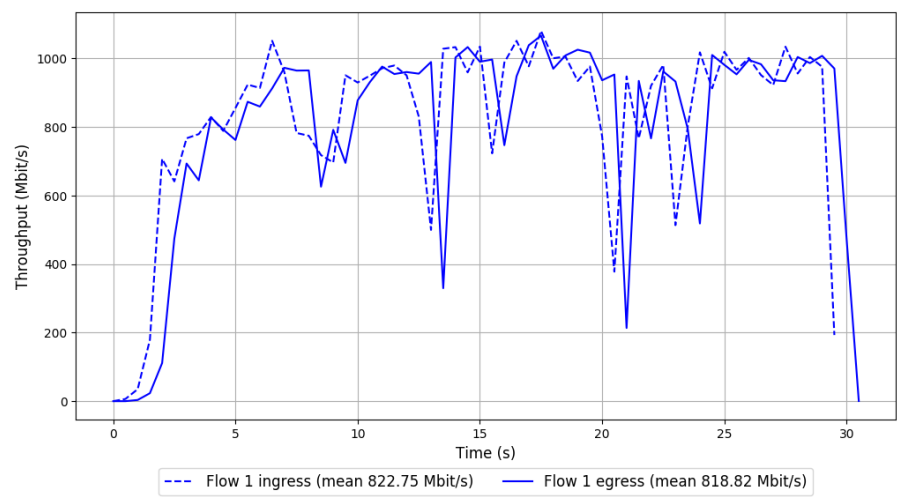
-- Flow 1:

Average throughput: 818.82 Mbit/s

95th percentile per-packet one-way delay: 171.416 ms

Loss rate: 0.48%

Run 2: Report of FillP-Sheep — Data Link

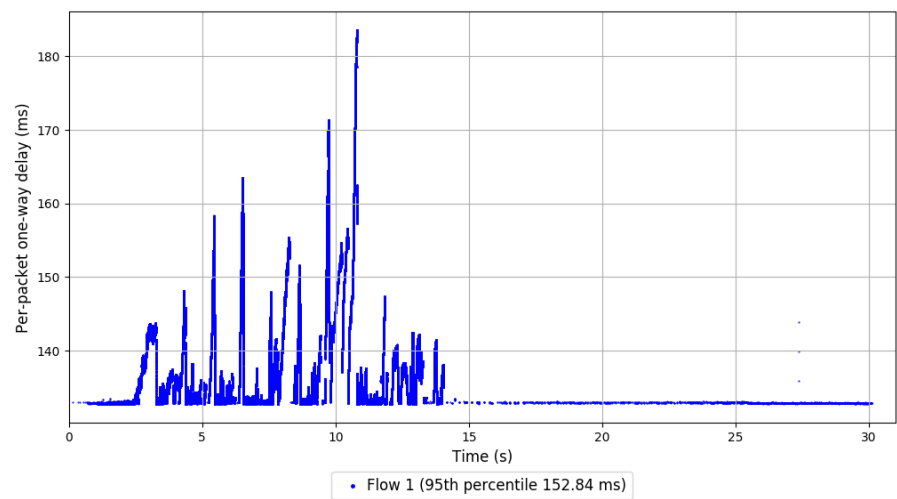
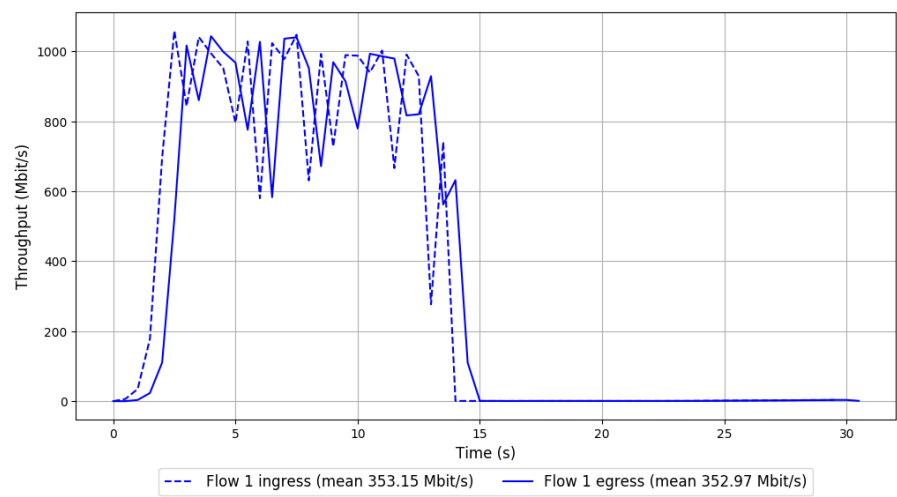


Run 3: Statistics of FillP-Sheep

Start at: 2019-01-03 05:41:52
End at: 2019-01-03 05:42:22
Local clock offset: -0.059 ms
Remote clock offset: -0.087 ms

Below is generated by plot.py at 2019-01-03 07:55:42
Datalink statistics
-- Total of 1 flow:
Average throughput: 352.97 Mbit/s
95th percentile per-packet one-way delay: 152.841 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 352.97 Mbit/s
95th percentile per-packet one-way delay: 152.841 ms
Loss rate: 0.05%

Run 3: Report of FillP-Sheep — Data Link



Run 4: Statistics of FillP-Sheep

Start at: 2019-01-03 06:10:30

End at: 2019-01-03 06:11:00

Local clock offset: 0.083 ms

Remote clock offset: 0.344 ms

Below is generated by plot.py at 2019-01-03 07:56:53

Datalink statistics

-- Total of 1 flow:

Average throughput: 809.32 Mbit/s

95th percentile per-packet one-way delay: 184.842 ms

Loss rate: 1.57%

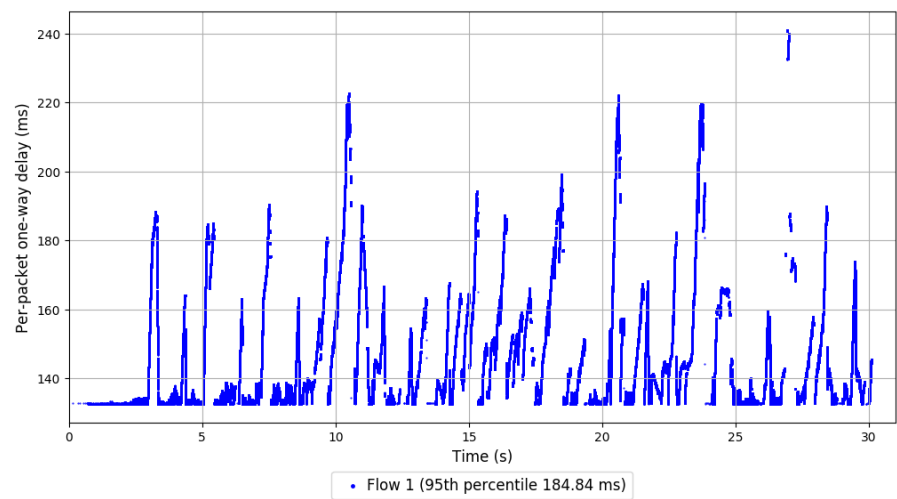
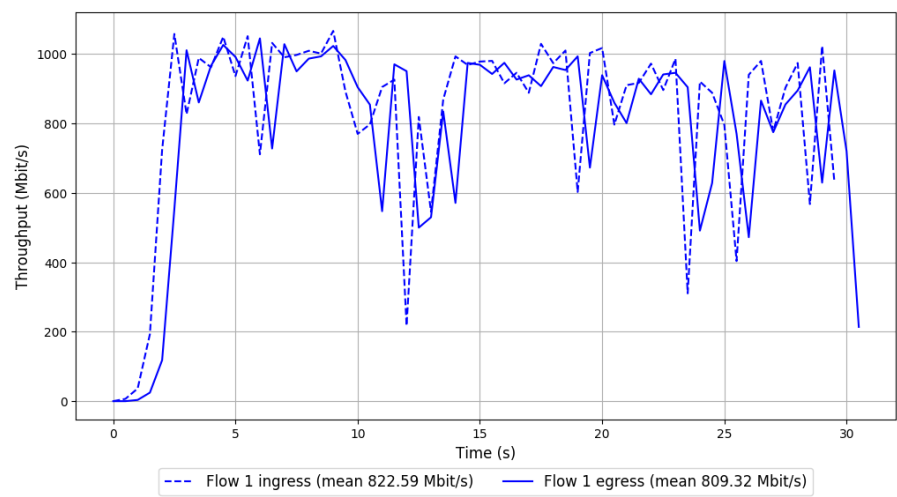
-- Flow 1:

Average throughput: 809.32 Mbit/s

95th percentile per-packet one-way delay: 184.842 ms

Loss rate: 1.57%

Run 4: Report of FillP-Sheep — Data Link

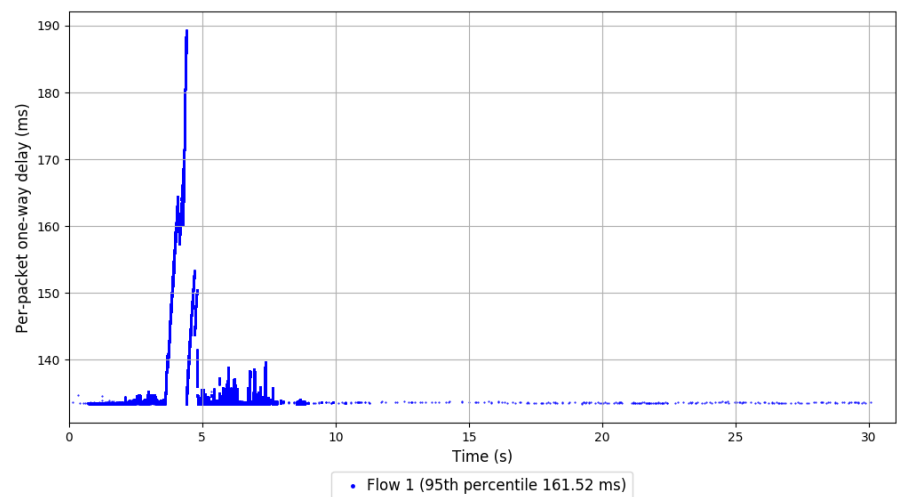
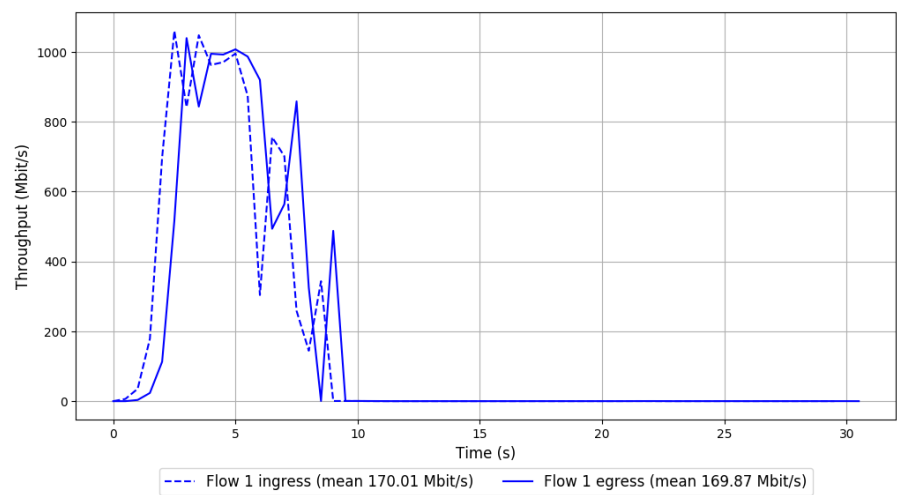


Run 5: Statistics of FillP-Sheep

Start at: 2019-01-03 06:39:44
End at: 2019-01-03 06:40:14
Local clock offset: -0.273 ms
Remote clock offset: 0.364 ms

Below is generated by plot.py at 2019-01-03 07:56:53
Datalink statistics
-- Total of 1 flow:
Average throughput: 169.87 Mbit/s
95th percentile per-packet one-way delay: 161.519 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 169.87 Mbit/s
95th percentile per-packet one-way delay: 161.519 ms
Loss rate: 0.08%

Run 5: Report of FillP-Sheep — Data Link

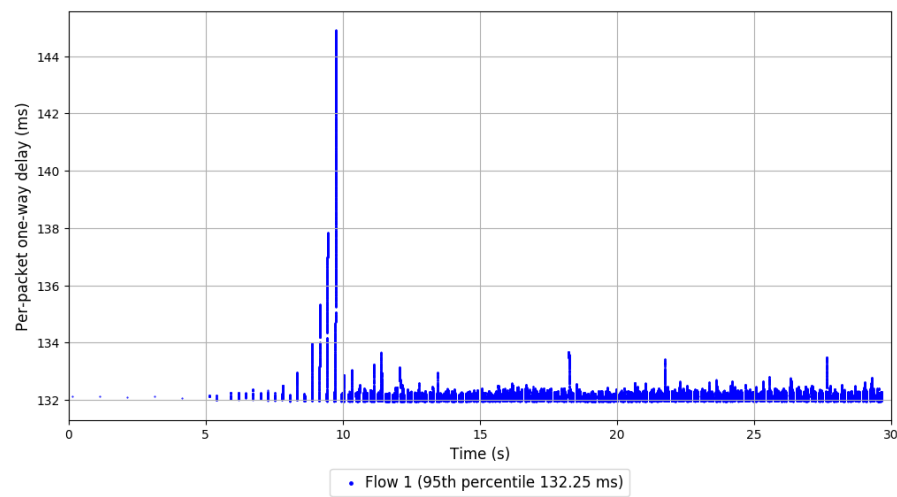
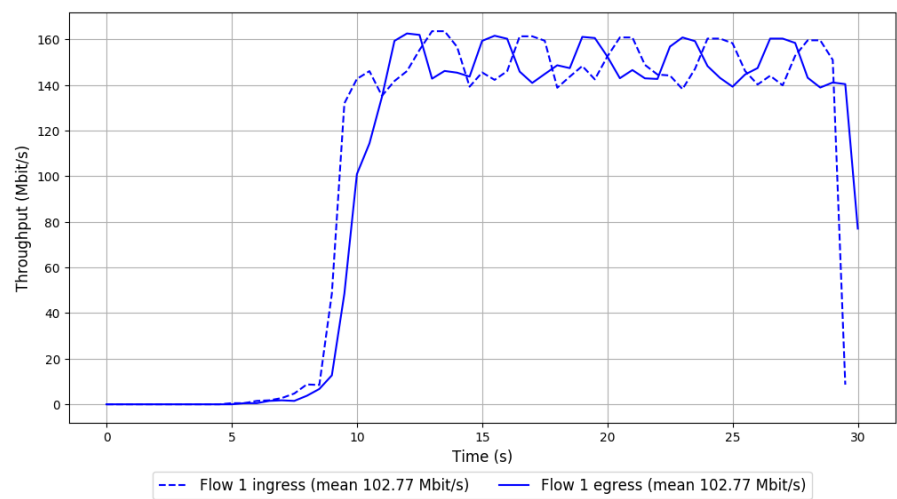


Run 1: Statistics of Indigo

Start at: 2019-01-03 04:58:16
End at: 2019-01-03 04:58:46
Local clock offset: -0.008 ms
Remote clock offset: -0.036 ms

Below is generated by plot.py at 2019-01-03 07:56:53
Datalink statistics
-- Total of 1 flow:
Average throughput: 102.77 Mbit/s
95th percentile per-packet one-way delay: 132.248 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 102.77 Mbit/s
95th percentile per-packet one-way delay: 132.248 ms
Loss rate: 0.00%

Run 1: Report of Indigo — Data Link

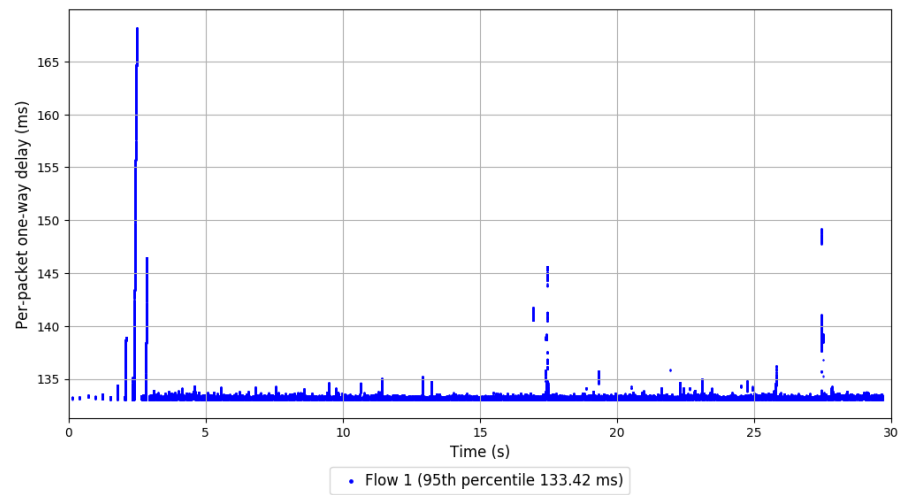
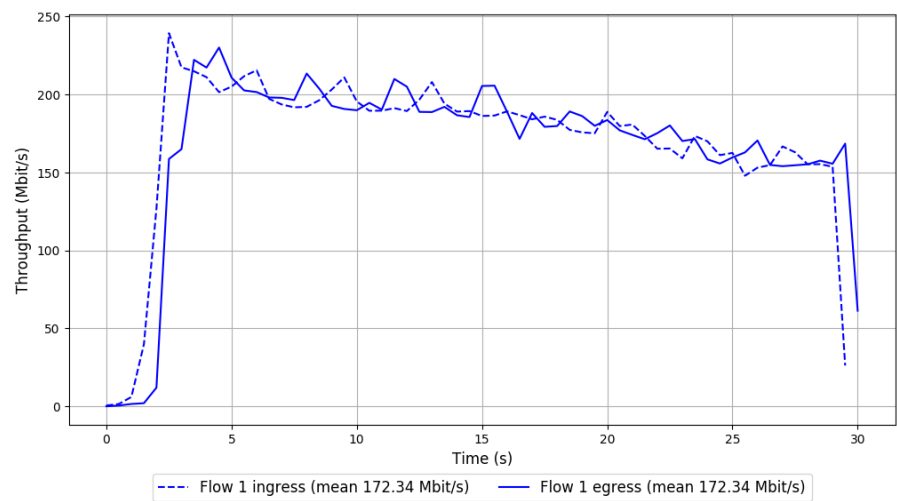


Run 2: Statistics of Indigo

Start at: 2019-01-03 05:27:25
End at: 2019-01-03 05:27:55
Local clock offset: -0.071 ms
Remote clock offset: -0.079 ms

Below is generated by plot.py at 2019-01-03 07:56:53
Datalink statistics
-- Total of 1 flow:
Average throughput: 172.34 Mbit/s
95th percentile per-packet one-way delay: 133.418 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 172.34 Mbit/s
95th percentile per-packet one-way delay: 133.418 ms
Loss rate: 0.00%

Run 2: Report of Indigo — Data Link

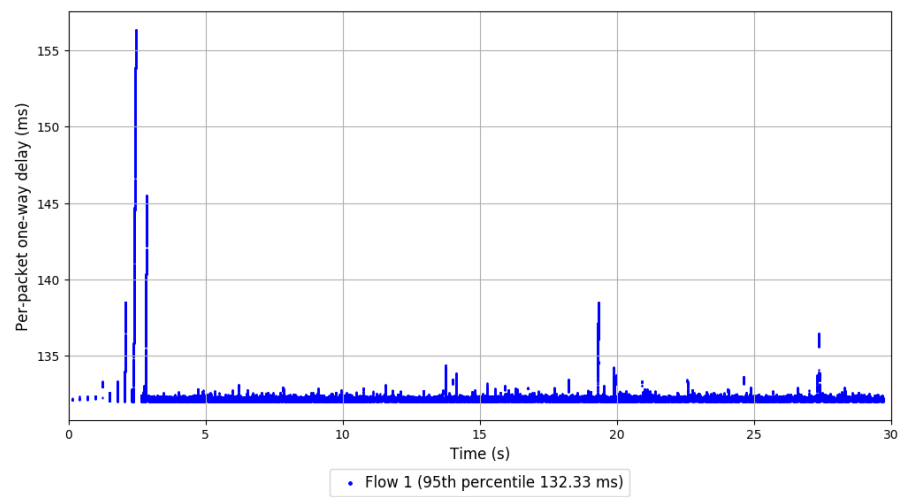
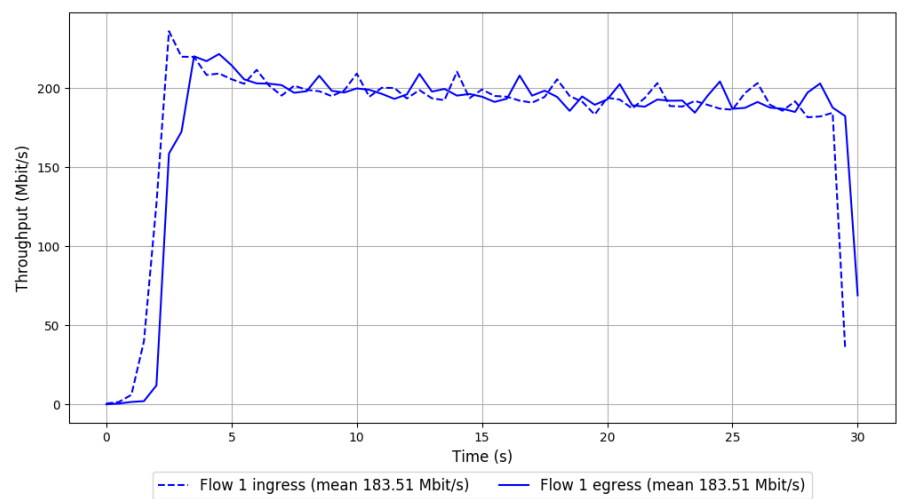


Run 3: Statistics of Indigo

Start at: 2019-01-03 05:55:58
End at: 2019-01-03 05:56:28
Local clock offset: -0.072 ms
Remote clock offset: -0.063 ms

Below is generated by plot.py at 2019-01-03 07:56:53
Datalink statistics
-- Total of 1 flow:
Average throughput: 183.51 Mbit/s
95th percentile per-packet one-way delay: 132.327 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 183.51 Mbit/s
95th percentile per-packet one-way delay: 132.327 ms
Loss rate: 0.00%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2019-01-03 06:25:26

End at: 2019-01-03 06:25:56

Local clock offset: -0.097 ms

Remote clock offset: 0.014 ms

Below is generated by plot.py at 2019-01-03 07:58:03

Datalink statistics

-- Total of 1 flow:

Average throughput: 175.67 Mbit/s

95th percentile per-packet one-way delay: 133.428 ms

Loss rate: 0.00%

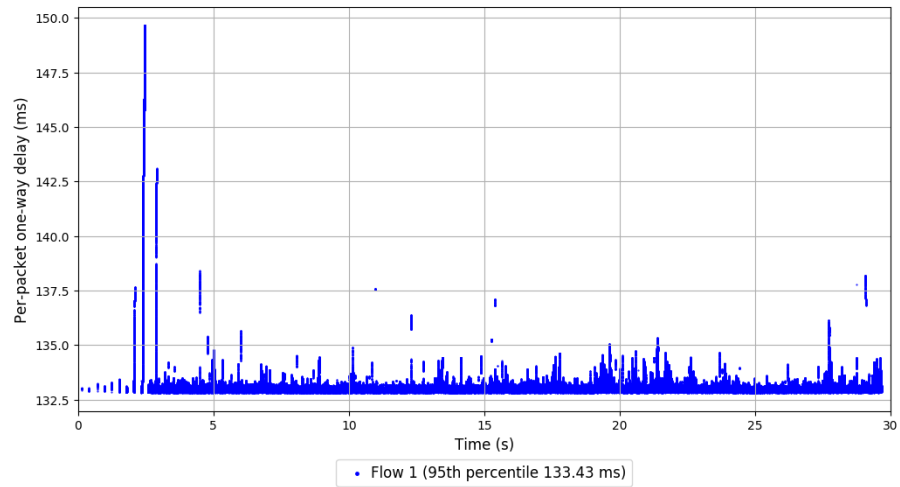
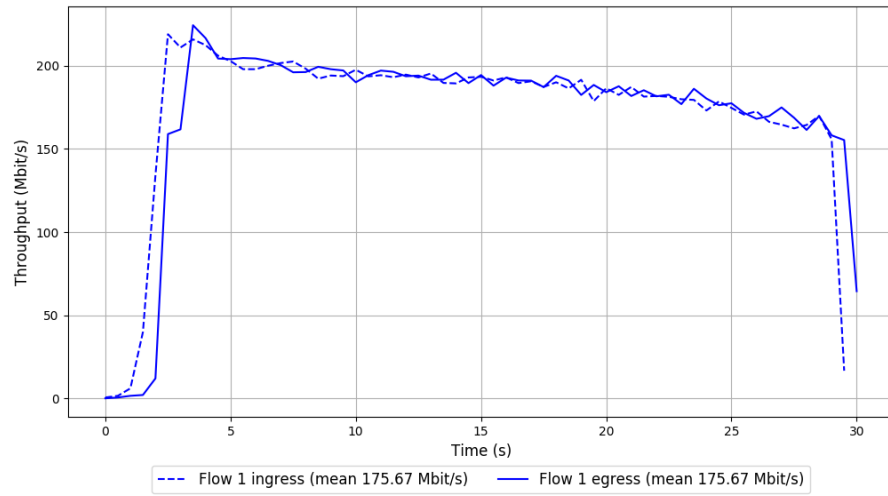
-- Flow 1:

Average throughput: 175.67 Mbit/s

95th percentile per-packet one-way delay: 133.428 ms

Loss rate: 0.00%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2019-01-03 06:54:06

End at: 2019-01-03 06:54:36

Local clock offset: -0.088 ms

Remote clock offset: -0.04 ms

Below is generated by plot.py at 2019-01-03 07:59:16

Datalink statistics

-- Total of 1 flow:

Average throughput: 183.63 Mbit/s

95th percentile per-packet one-way delay: 132.884 ms

Loss rate: 0.00%

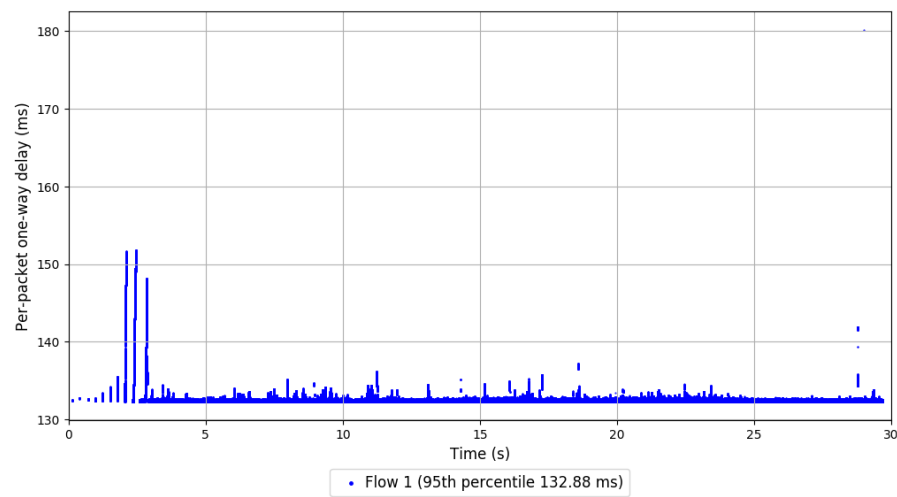
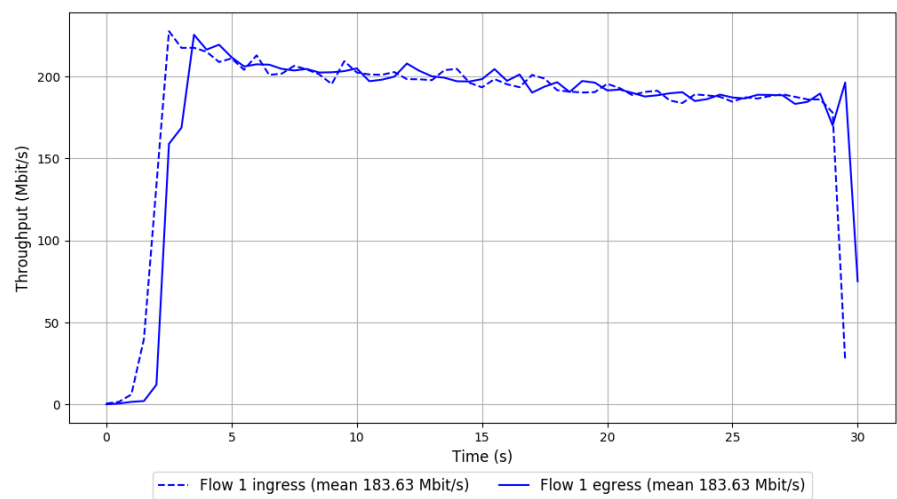
-- Flow 1:

Average throughput: 183.63 Mbit/s

95th percentile per-packet one-way delay: 132.884 ms

Loss rate: 0.00%

Run 5: Report of Indigo — Data Link

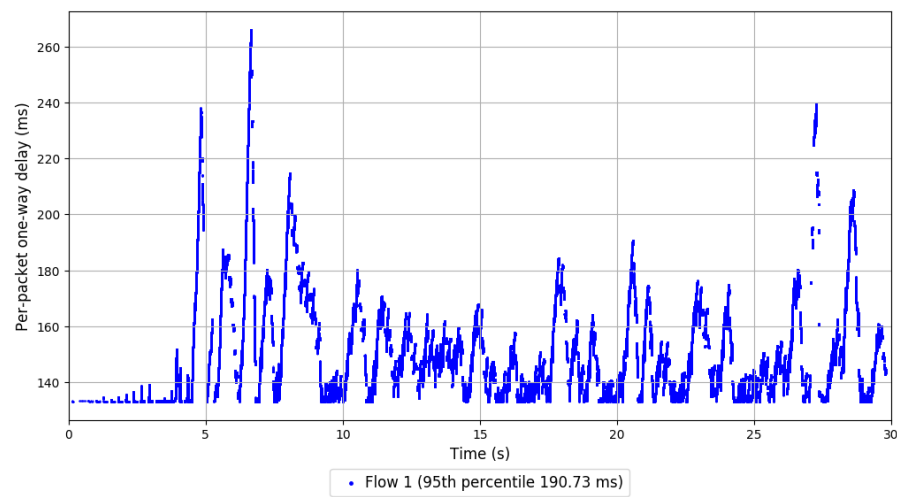
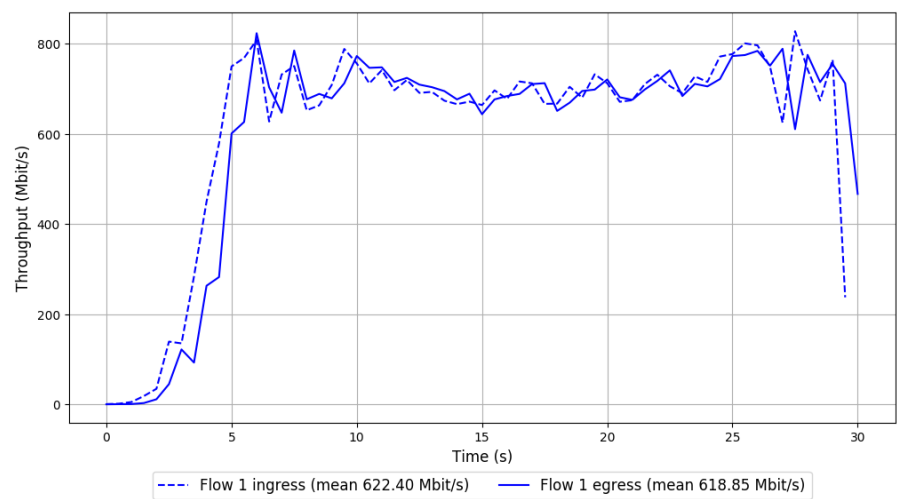



```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-01-03 04:59:38
End at: 2019-01-03 05:00:08
Local clock offset: -0.026 ms
Remote clock offset: 0.323 ms

# Below is generated by plot.py at 2019-01-03 08:07:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 618.85 Mbit/s
95th percentile per-packet one-way delay: 190.730 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 618.85 Mbit/s
95th percentile per-packet one-way delay: 190.730 ms
Loss rate: 0.56%
```

Run 1: Report of Indigo-MusesD — Data Link



Run 2: Statistics of Indigo-MusesD

Start at: 2019-01-03 05:28:54

End at: 2019-01-03 05:29:24

Local clock offset: -0.33 ms

Remote clock offset: -0.08 ms

Below is generated by plot.py at 2019-01-03 08:08:01

Datalink statistics

-- Total of 1 flow:

Average throughput: 601.88 Mbit/s

95th percentile per-packet one-way delay: 192.288 ms

Loss rate: 0.18%

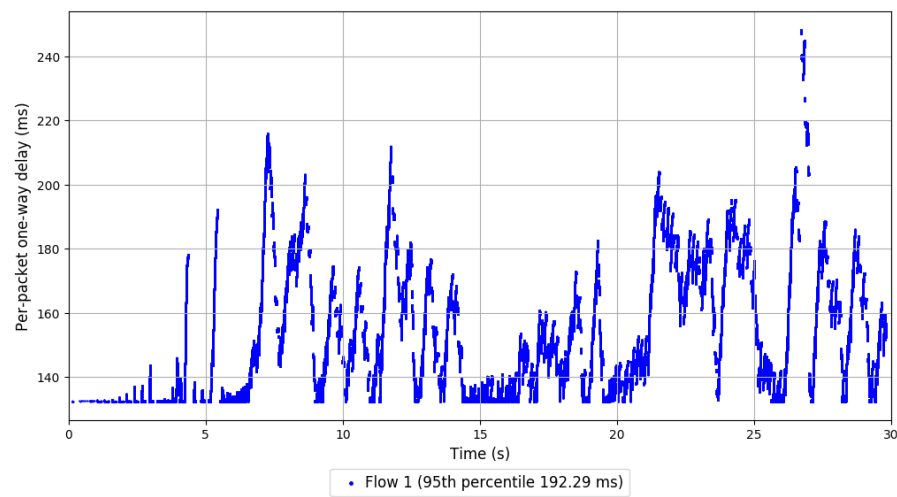
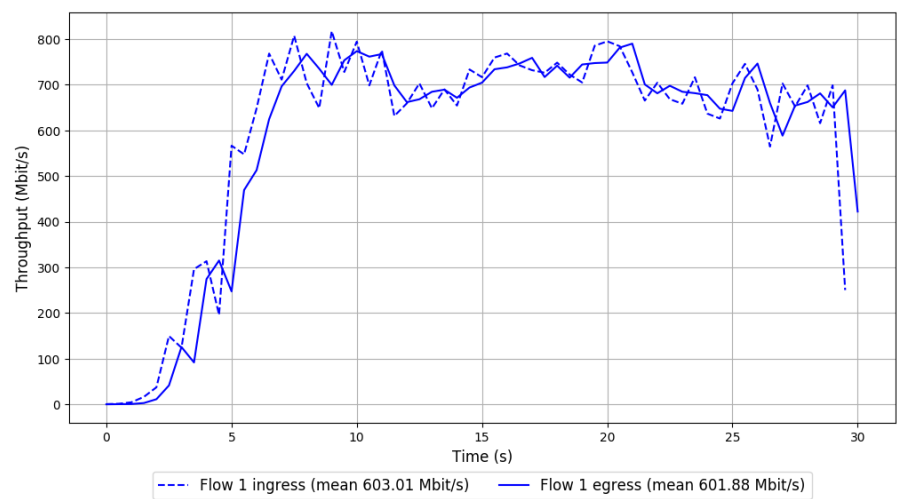
-- Flow 1:

Average throughput: 601.88 Mbit/s

95th percentile per-packet one-way delay: 192.288 ms

Loss rate: 0.18%

Run 2: Report of Indigo-MusesD — Data Link

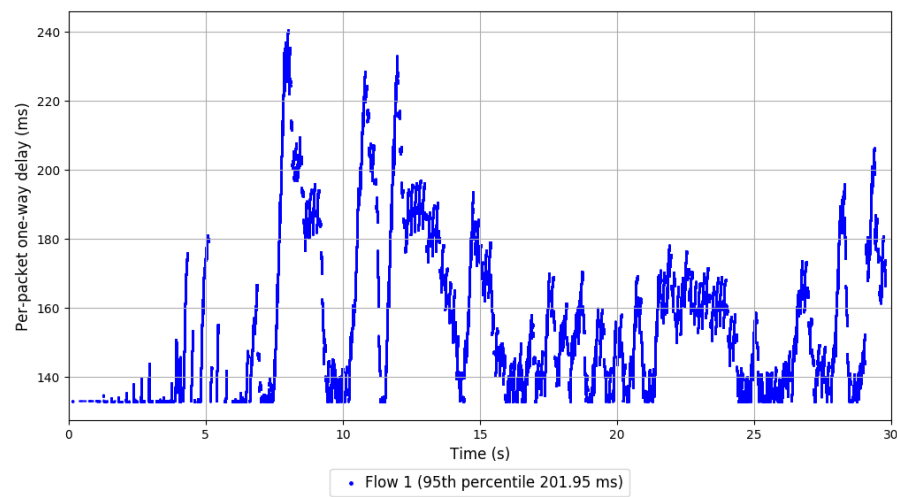
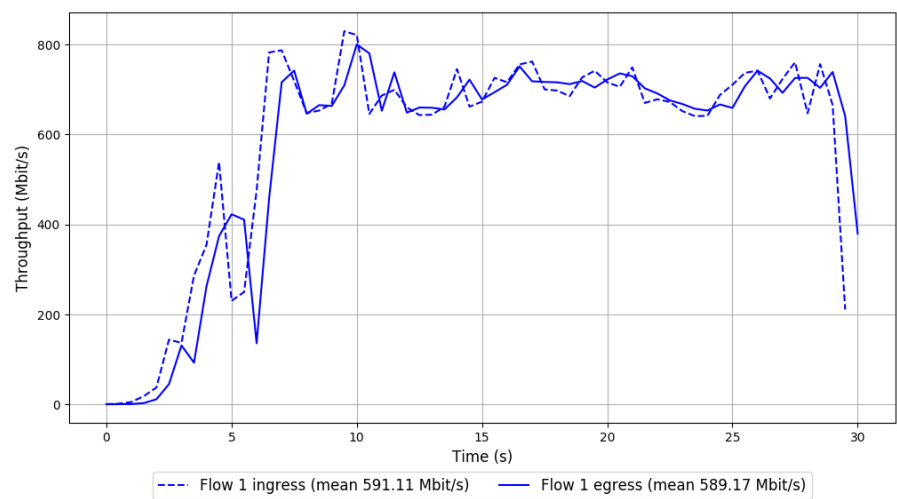


Run 3: Statistics of Indigo-MusesD

Start at: 2019-01-03 05:57:29
End at: 2019-01-03 05:57:59
Local clock offset: -0.144 ms
Remote clock offset: -0.072 ms

Below is generated by plot.py at 2019-01-03 08:08:58
Datalink statistics
-- Total of 1 flow:
Average throughput: 589.17 Mbit/s
95th percentile per-packet one-way delay: 201.950 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 589.17 Mbit/s
95th percentile per-packet one-way delay: 201.950 ms
Loss rate: 0.33%

Run 3: Report of Indigo-MusesD — Data Link



Run 4: Statistics of Indigo-MusesD

Start at: 2019-01-03 06:26:56

End at: 2019-01-03 06:27:26

Local clock offset: -0.063 ms

Remote clock offset: 0.025 ms

Below is generated by plot.py at 2019-01-03 08:09:58

Datalink statistics

-- Total of 1 flow:

Average throughput: 621.89 Mbit/s

95th percentile per-packet one-way delay: 195.695 ms

Loss rate: 0.15%

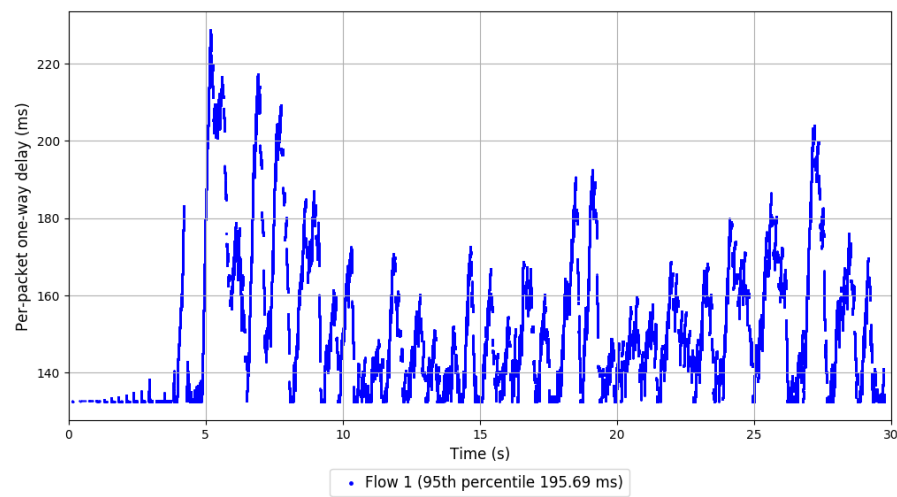
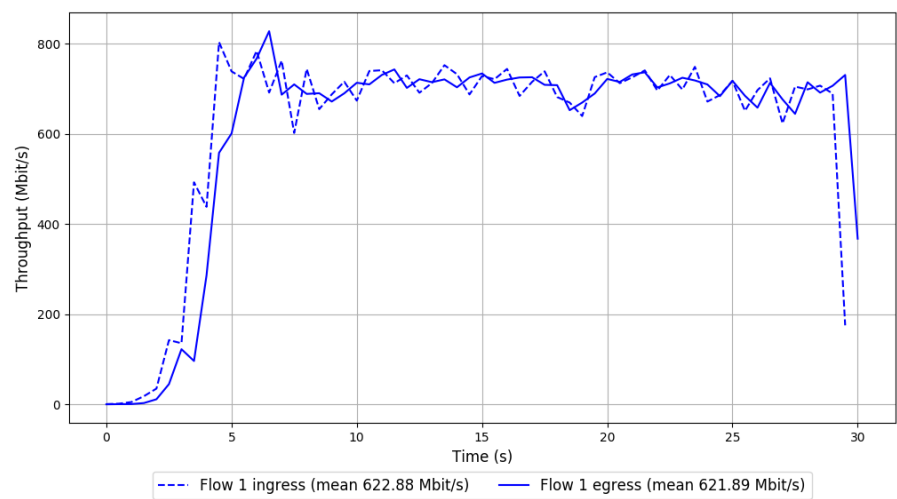
-- Flow 1:

Average throughput: 621.89 Mbit/s

95th percentile per-packet one-way delay: 195.695 ms

Loss rate: 0.15%

Run 4: Report of Indigo-MusesD — Data Link



Run 5: Statistics of Indigo-MusesD

Start at: 2019-01-03 06:55:44

End at: 2019-01-03 06:56:14

Local clock offset: -0.501 ms

Remote clock offset: -0.04 ms

Below is generated by plot.py at 2019-01-03 08:09:58

Datalink statistics

-- Total of 1 flow:

Average throughput: 599.36 Mbit/s

95th percentile per-packet one-way delay: 192.393 ms

Loss rate: 0.18%

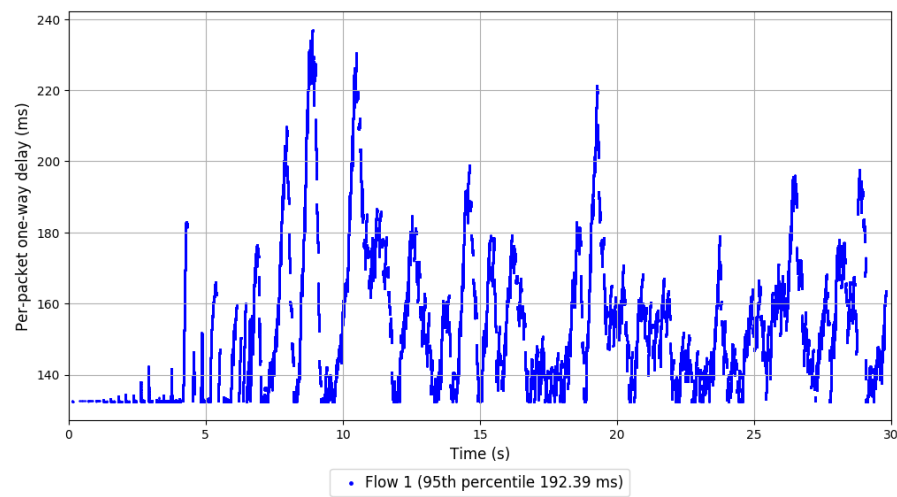
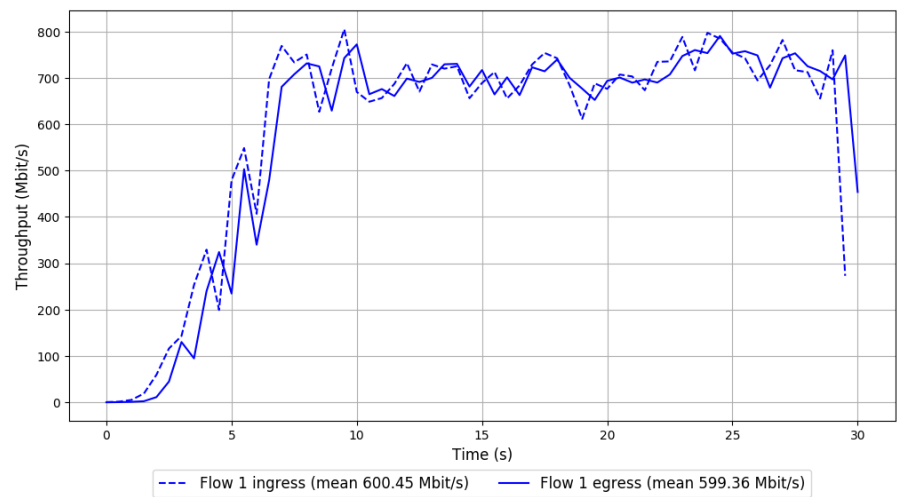
-- Flow 1:

Average throughput: 599.36 Mbit/s

95th percentile per-packet one-way delay: 192.393 ms

Loss rate: 0.18%

Run 5: Report of Indigo-MusesD — Data Link

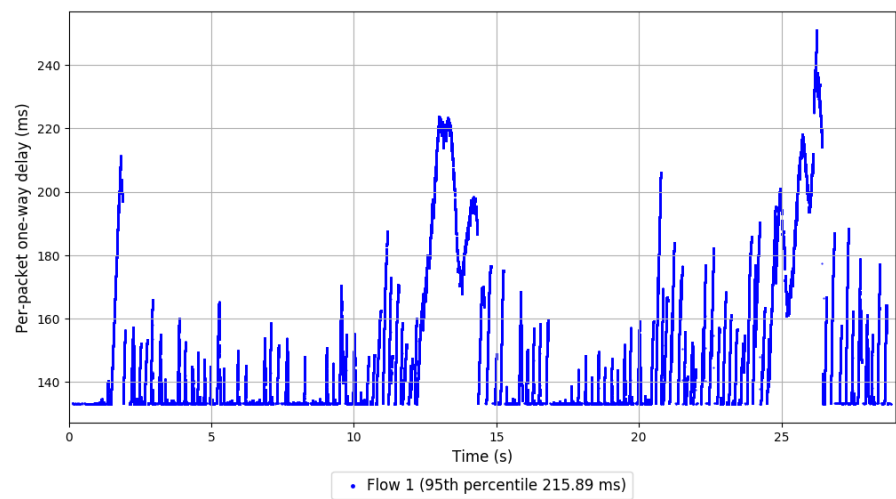
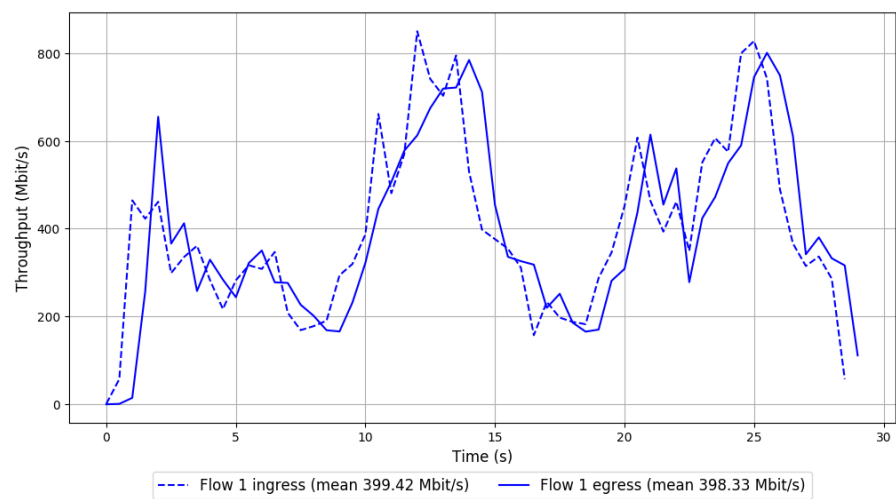


```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-01-03 05:01:25
End at: 2019-01-03 05:01:55
Local clock offset: 0.355 ms
Remote clock offset: -0.019 ms

# Below is generated by plot.py at 2019-01-03 08:09:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 398.33 Mbit/s
95th percentile per-packet one-way delay: 215.890 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 398.33 Mbit/s
95th percentile per-packet one-way delay: 215.890 ms
Loss rate: 0.27%
```

Run 1: Report of Indigo-MusesT — Data Link



Run 2: Statistics of Indigo-MusesT

Start at: 2019-01-03 05:30:38

End at: 2019-01-03 05:31:08

Local clock offset: -0.058 ms

Remote clock offset: -0.42 ms

Below is generated by plot.py at 2019-01-03 08:09:58

Datalink statistics

-- Total of 1 flow:

Average throughput: 395.75 Mbit/s

95th percentile per-packet one-way delay: 228.624 ms

Loss rate: 1.03%

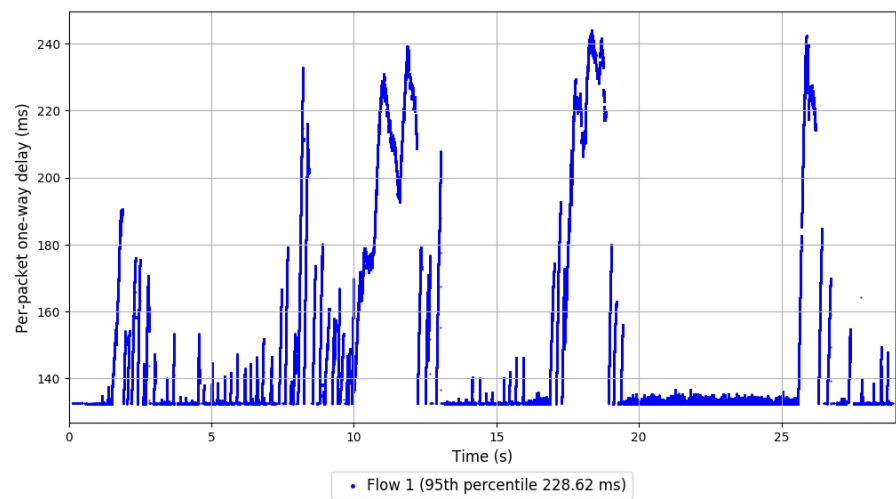
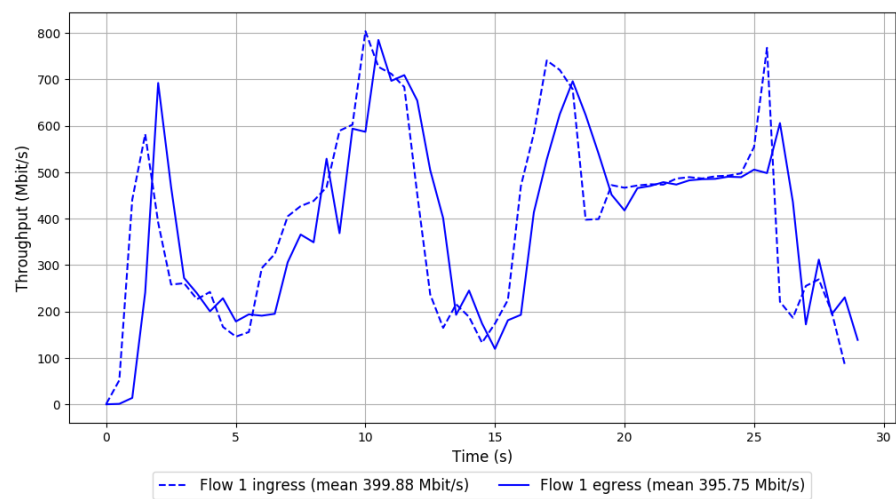
-- Flow 1:

Average throughput: 395.75 Mbit/s

95th percentile per-packet one-way delay: 228.624 ms

Loss rate: 1.03%

Run 2: Report of Indigo-MusesT — Data Link

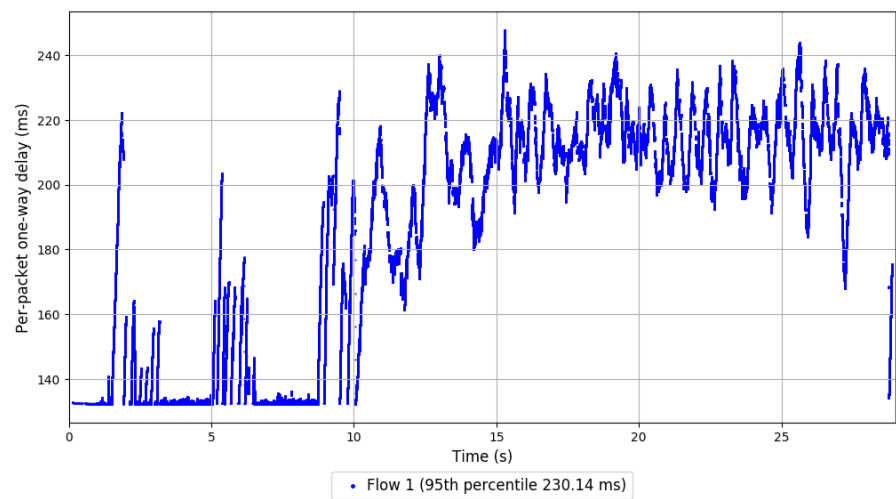
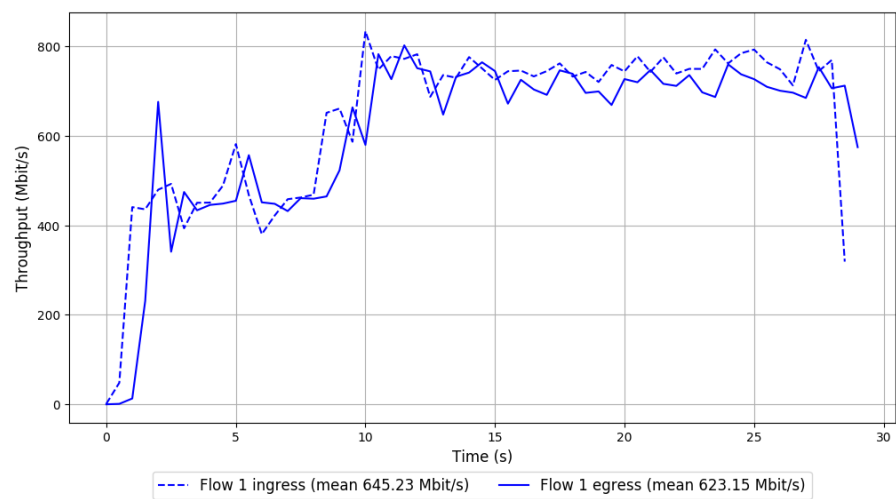


Run 3: Statistics of Indigo-MusesT

Start at: 2019-01-03 05:59:13
End at: 2019-01-03 05:59:43
Local clock offset: -0.334 ms
Remote clock offset: -0.431 ms

Below is generated by plot.py at 2019-01-03 08:13:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 623.15 Mbit/s
95th percentile per-packet one-way delay: 230.136 ms
Loss rate: 3.42%
-- Flow 1:
Average throughput: 623.15 Mbit/s
95th percentile per-packet one-way delay: 230.136 ms
Loss rate: 3.42%

Run 3: Report of Indigo-MusesT — Data Link



Run 4: Statistics of Indigo-MusesT

Start at: 2019-01-03 06:28:42

End at: 2019-01-03 06:29:12

Local clock offset: 0.192 ms

Remote clock offset: 0.03 ms

Below is generated by plot.py at 2019-01-03 08:13:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 377.69 Mbit/s

95th percentile per-packet one-way delay: 211.312 ms

Loss rate: 0.39%

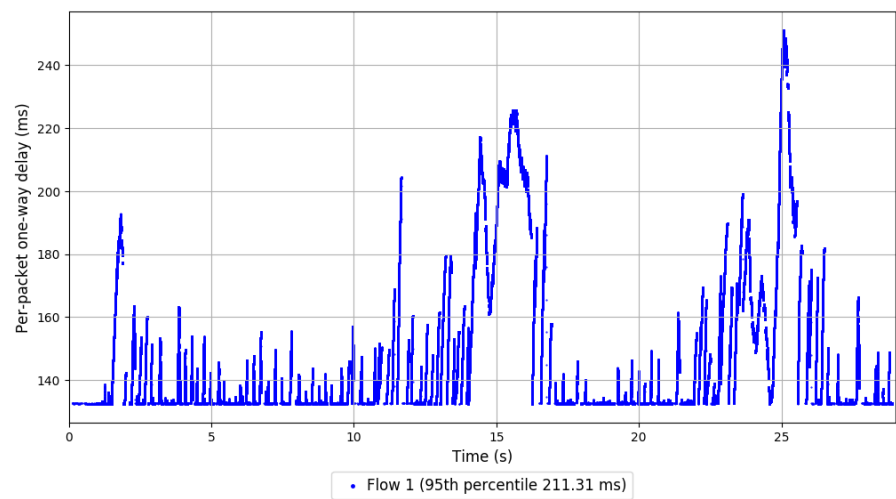
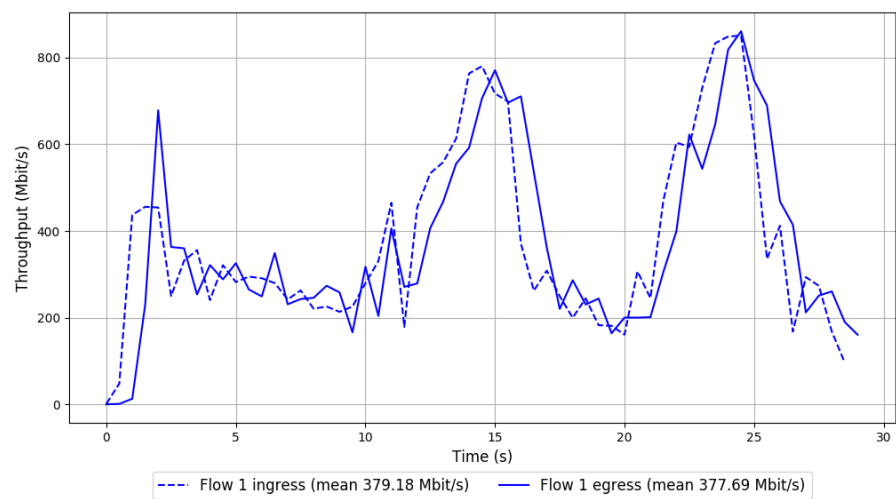
-- Flow 1:

Average throughput: 377.69 Mbit/s

95th percentile per-packet one-way delay: 211.312 ms

Loss rate: 0.39%

Run 4: Report of Indigo-MusesT — Data Link

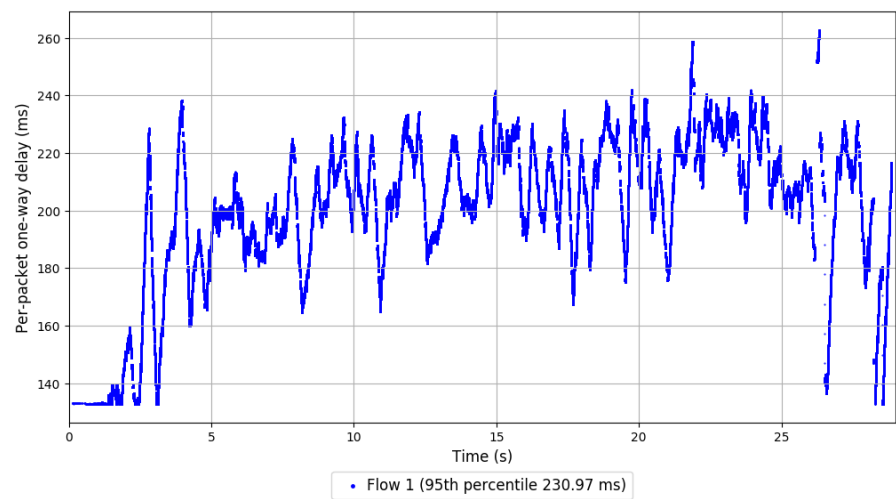
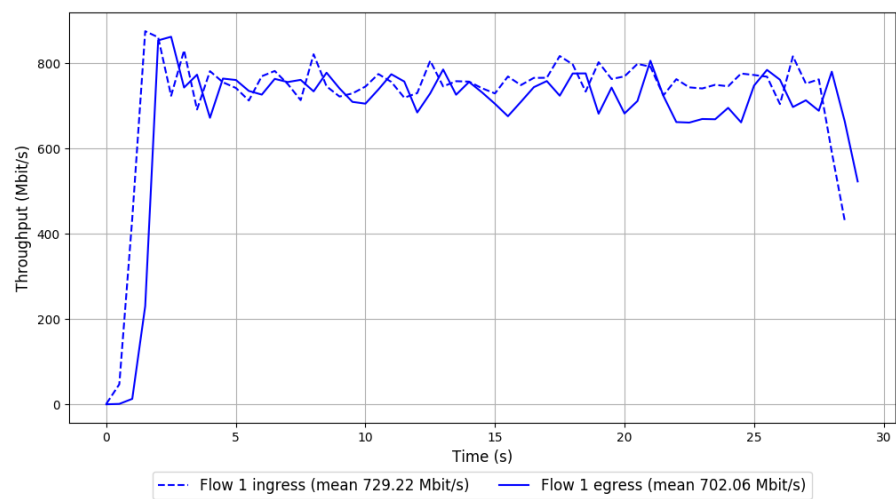


Run 5: Statistics of Indigo-MusesT

Start at: 2019-01-03 06:57:32
End at: 2019-01-03 06:58:02
Local clock offset: -0.505 ms
Remote clock offset: -0.041 ms

Below is generated by plot.py at 2019-01-03 08:22:58
Datalink statistics
-- Total of 1 flow:
Average throughput: 702.06 Mbit/s
95th percentile per-packet one-way delay: 230.975 ms
Loss rate: 3.72%
-- Flow 1:
Average throughput: 702.06 Mbit/s
95th percentile per-packet one-way delay: 230.975 ms
Loss rate: 3.72%

Run 5: Report of Indigo-MusesT — Data Link

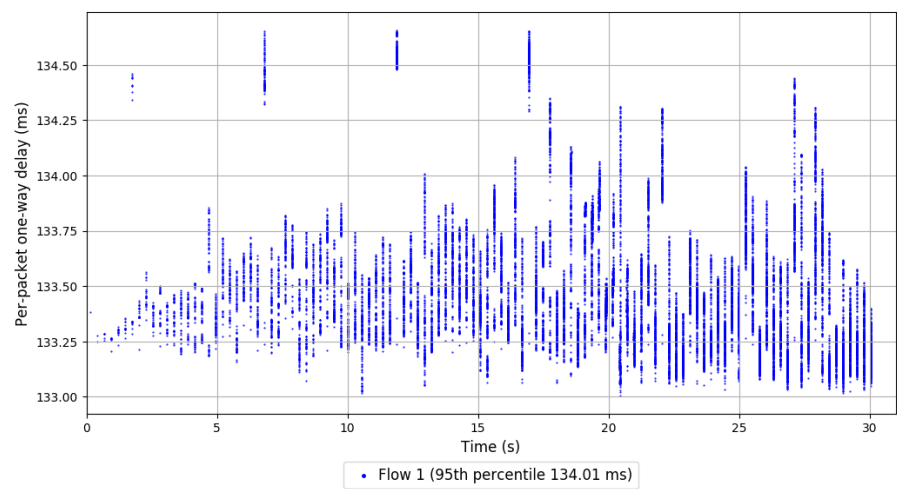
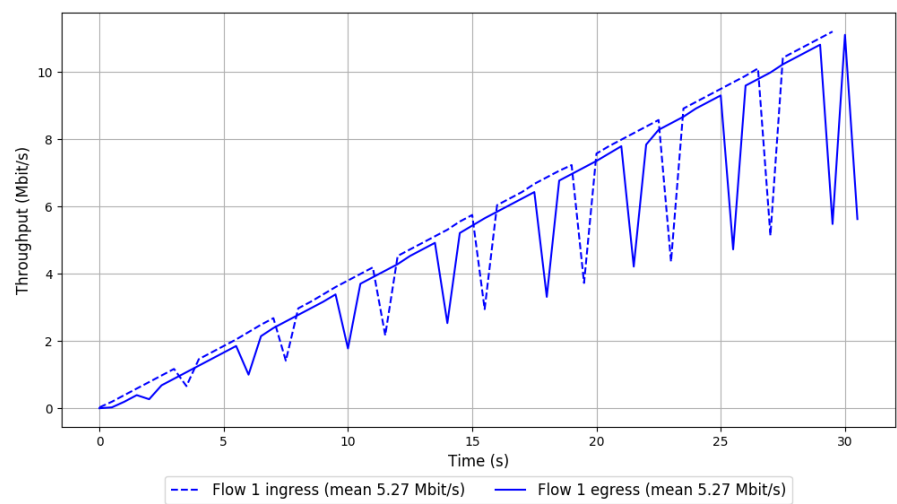


```
Run 1: Statistics of LEDBAT

Start at: 2019-01-03 04:51:09
End at: 2019-01-03 04:51:39
Local clock offset: -0.238 ms
Remote clock offset: -0.014 ms

# Below is generated by plot.py at 2019-01-03 08:22:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.27 Mbit/s
95th percentile per-packet one-way delay: 134.015 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 5.27 Mbit/s
95th percentile per-packet one-way delay: 134.015 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link

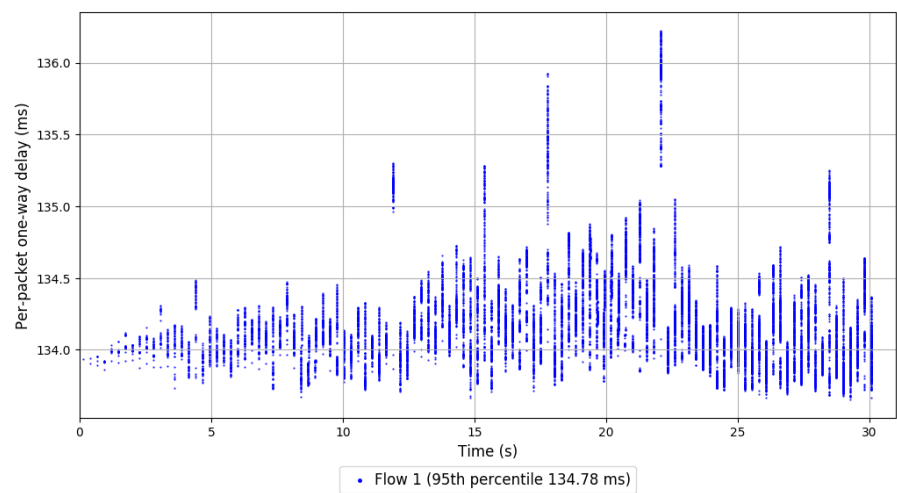
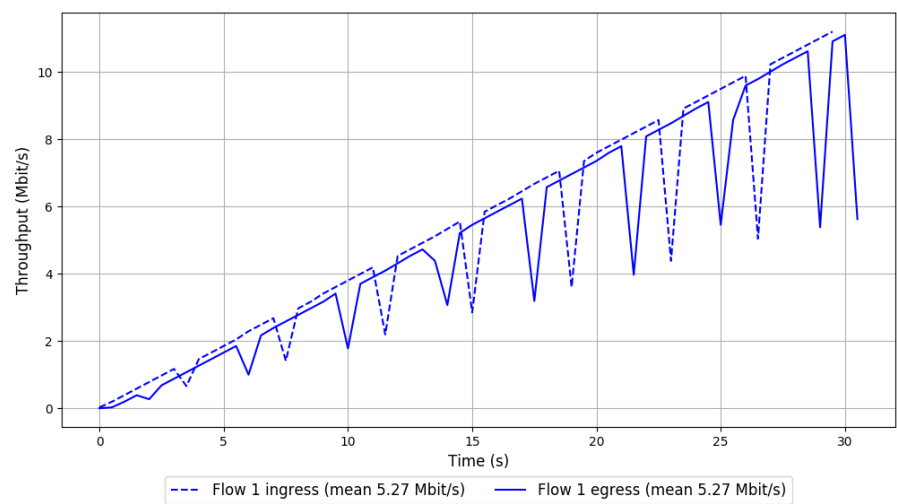


Run 2: Statistics of LEDBAT

Start at: 2019-01-03 05:20:21
End at: 2019-01-03 05:20:51
Local clock offset: -0.42 ms
Remote clock offset: -0.078 ms

Below is generated by plot.py at 2019-01-03 08:22:58
Datalink statistics
-- Total of 1 flow:
Average throughput: 5.27 Mbit/s
95th percentile per-packet one-way delay: 134.776 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 5.27 Mbit/s
95th percentile per-packet one-way delay: 134.776 ms
Loss rate: 0.00%

Run 2: Report of LEDBAT — Data Link

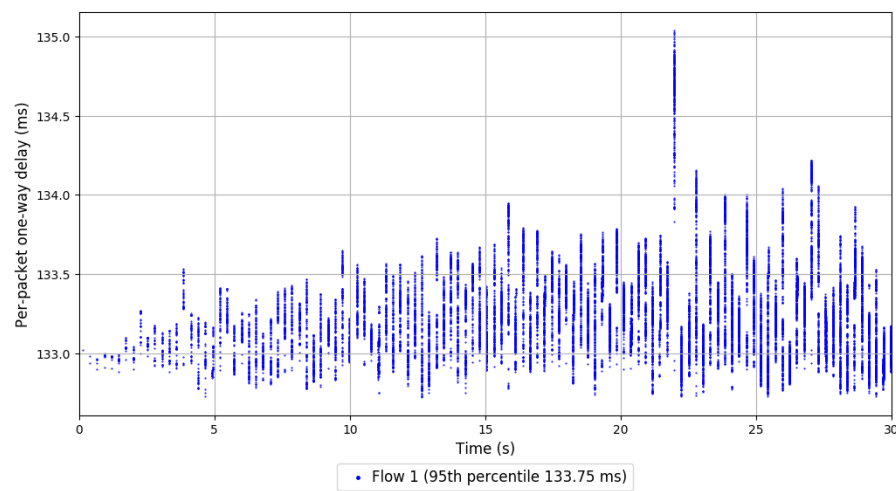
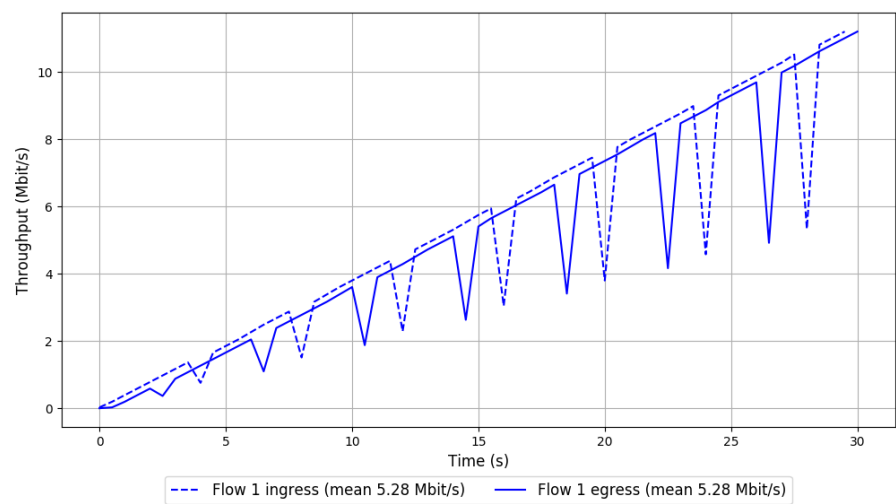


Run 3: Statistics of LEDBAT

Start at: 2019-01-03 05:49:06
End at: 2019-01-03 05:49:36
Local clock offset: 0.298 ms
Remote clock offset: -0.071 ms

Below is generated by plot.py at 2019-01-03 08:22:58
Datalink statistics
-- Total of 1 flow:
Average throughput: 5.28 Mbit/s
95th percentile per-packet one-way delay: 133.748 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 5.28 Mbit/s
95th percentile per-packet one-way delay: 133.748 ms
Loss rate: 0.00%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2019-01-03 06:18:25

End at: 2019-01-03 06:18:55

Local clock offset: -0.493 ms

Remote clock offset: 0.009 ms

Below is generated by plot.py at 2019-01-03 08:22:58

Datalink statistics

-- Total of 1 flow:

Average throughput: 5.27 Mbit/s

95th percentile per-packet one-way delay: 133.980 ms

Loss rate: 0.00%

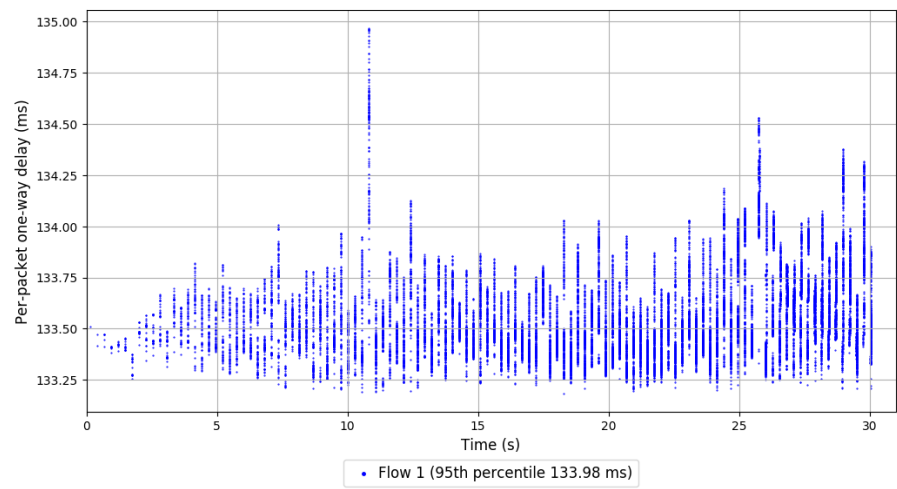
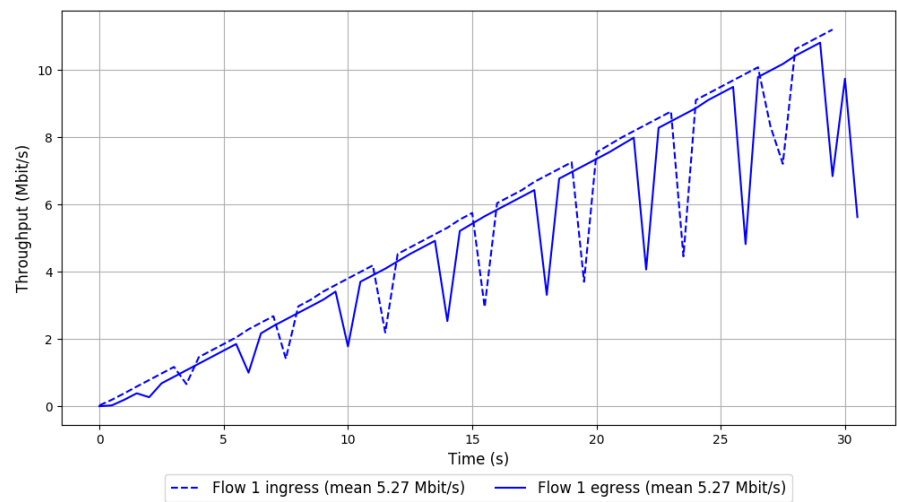
-- Flow 1:

Average throughput: 5.27 Mbit/s

95th percentile per-packet one-way delay: 133.980 ms

Loss rate: 0.00%

Run 4: Report of LEDBAT — Data Link

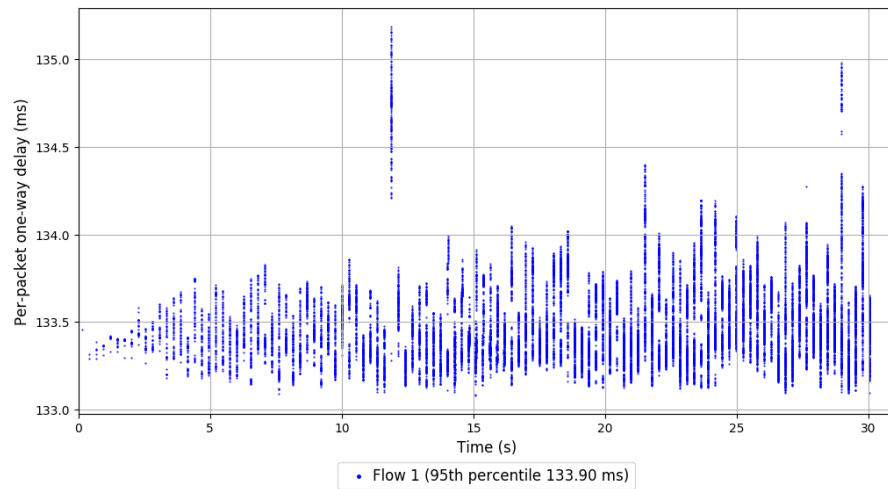
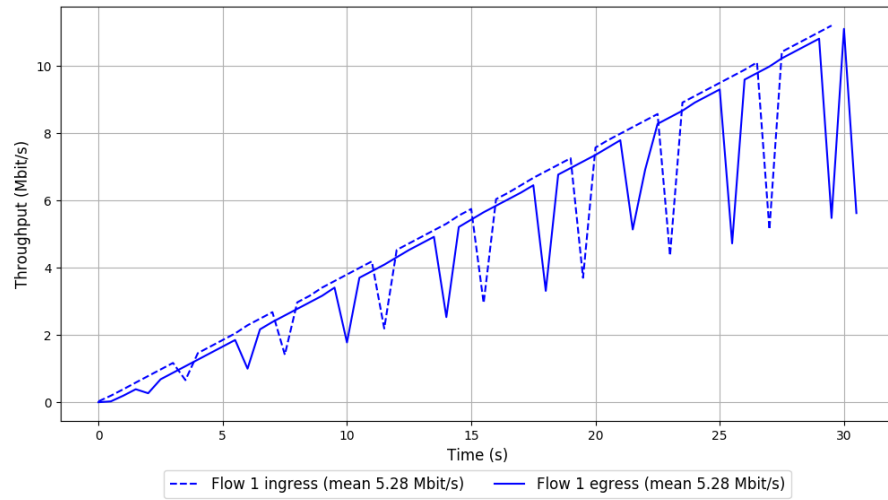


Run 5: Statistics of LEDBAT

Start at: 2019-01-03 06:47:09
End at: 2019-01-03 06:47:39
Local clock offset: 0.147 ms
Remote clock offset: -0.037 ms

Below is generated by plot.py at 2019-01-03 08:22:58
Datalink statistics
-- Total of 1 flow:
Average throughput: 5.28 Mbit/s
95th percentile per-packet one-way delay: 133.895 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 5.28 Mbit/s
95th percentile per-packet one-way delay: 133.895 ms
Loss rate: 0.00%

Run 5: Report of LEDBAT — Data Link

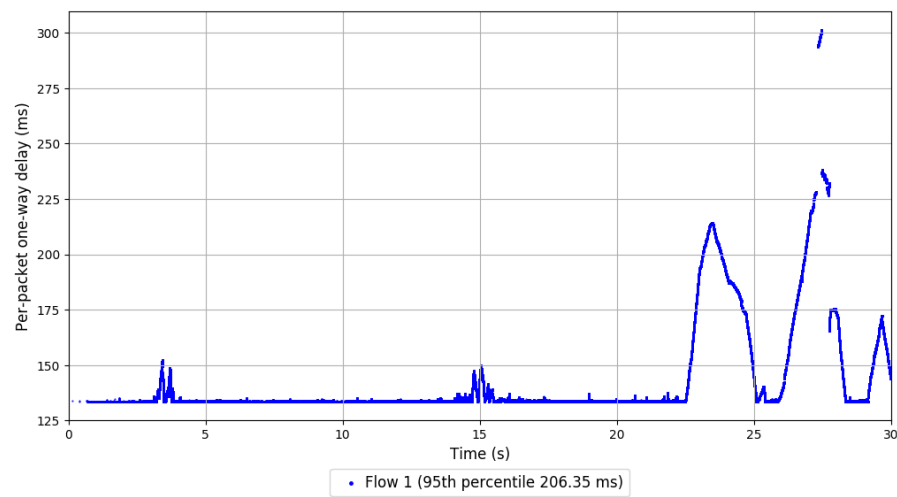
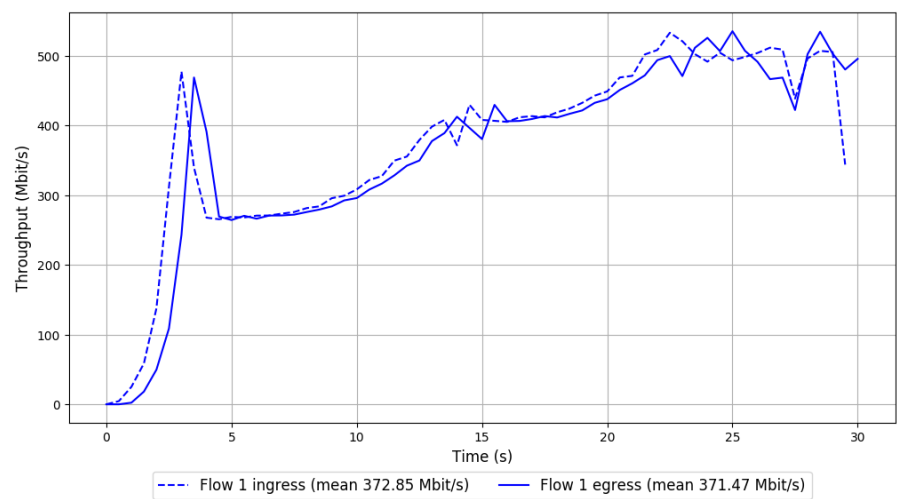


```
Run 1: Statistics of PCC-Allegro

Start at: 2019-01-03 04:42:13
End at: 2019-01-03 04:42:43
Local clock offset: -0.433 ms
Remote clock offset: -0.029 ms

# Below is generated by plot.py at 2019-01-03 08:24:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 371.47 Mbit/s
95th percentile per-packet one-way delay: 206.347 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 371.47 Mbit/s
95th percentile per-packet one-way delay: 206.347 ms
Loss rate: 0.36%
```

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2019-01-03 05:10:46

End at: 2019-01-03 05:11:16

Local clock offset: 0.261 ms

Remote clock offset: -0.056 ms

Below is generated by plot.py at 2019-01-03 08:28:43

Datalink statistics

-- Total of 1 flow:

Average throughput: 456.17 Mbit/s

95th percentile per-packet one-way delay: 237.895 ms

Loss rate: 2.02%

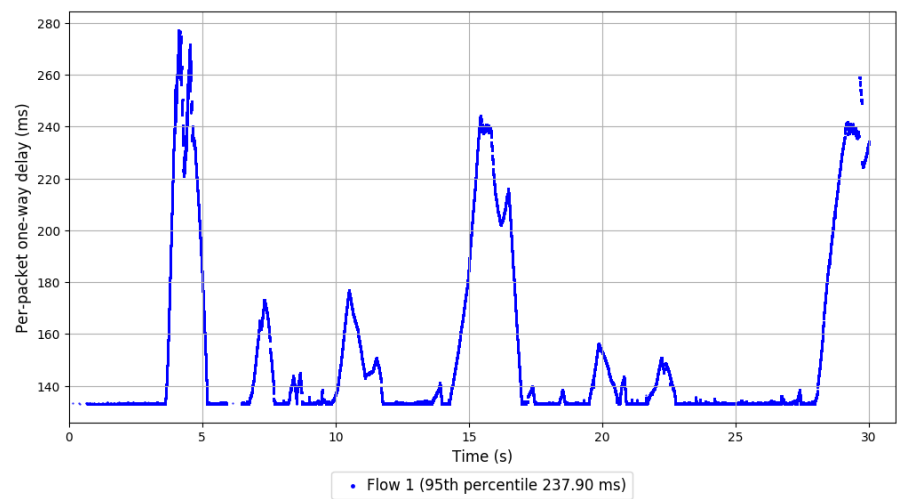
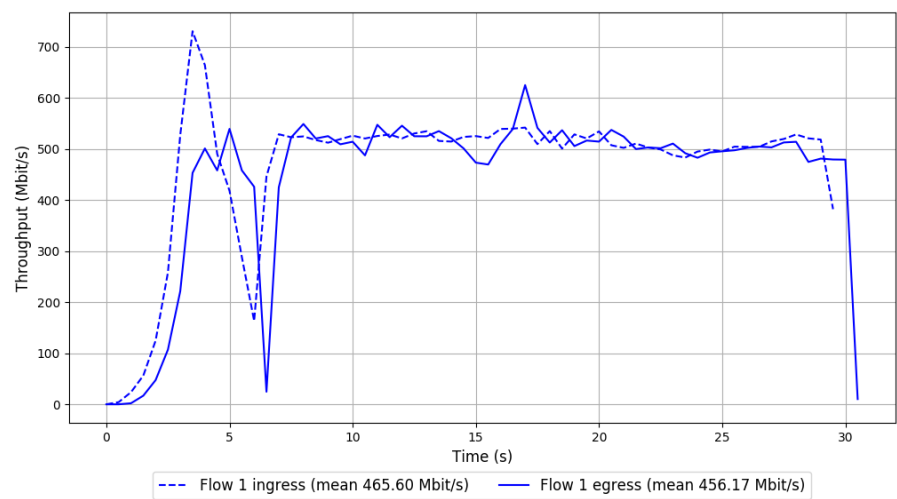
-- Flow 1:

Average throughput: 456.17 Mbit/s

95th percentile per-packet one-way delay: 237.895 ms

Loss rate: 2.02%

Run 2: Report of PCC-Allegro — Data Link

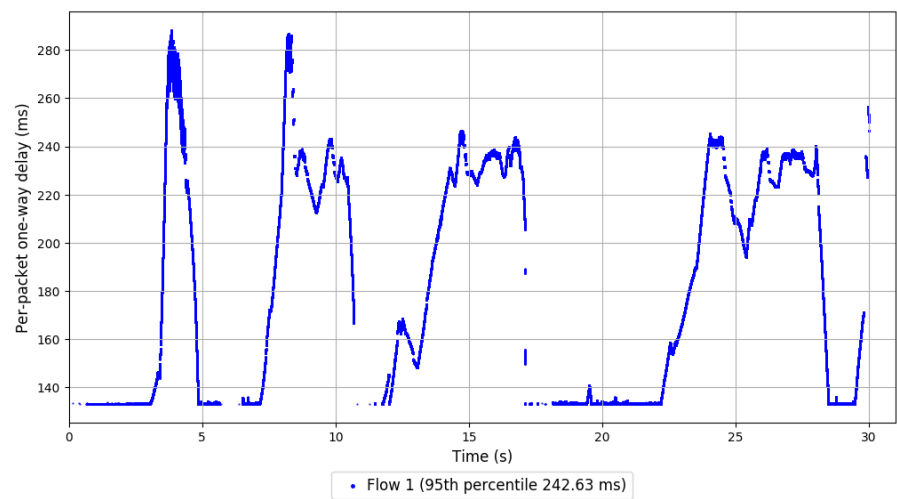
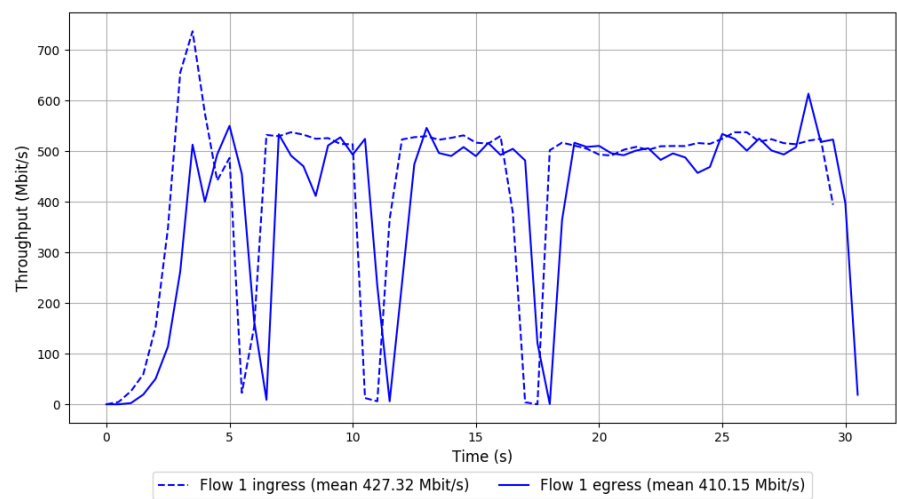


Run 3: Statistics of PCC-Allegro

Start at: 2019-01-03 05:40:09
End at: 2019-01-03 05:40:39
Local clock offset: -0.072 ms
Remote clock offset: -0.112 ms

Below is generated by plot.py at 2019-01-03 08:28:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 410.15 Mbit/s
95th percentile per-packet one-way delay: 242.635 ms
Loss rate: 4.01%
-- Flow 1:
Average throughput: 410.15 Mbit/s
95th percentile per-packet one-way delay: 242.635 ms
Loss rate: 4.01%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2019-01-03 06:08:48

End at: 2019-01-03 06:09:18

Local clock offset: -0.246 ms

Remote clock offset: -0.036 ms

Below is generated by plot.py at 2019-01-03 08:28:43

Datalink statistics

-- Total of 1 flow:

Average throughput: 410.45 Mbit/s

95th percentile per-packet one-way delay: 242.902 ms

Loss rate: 3.81%

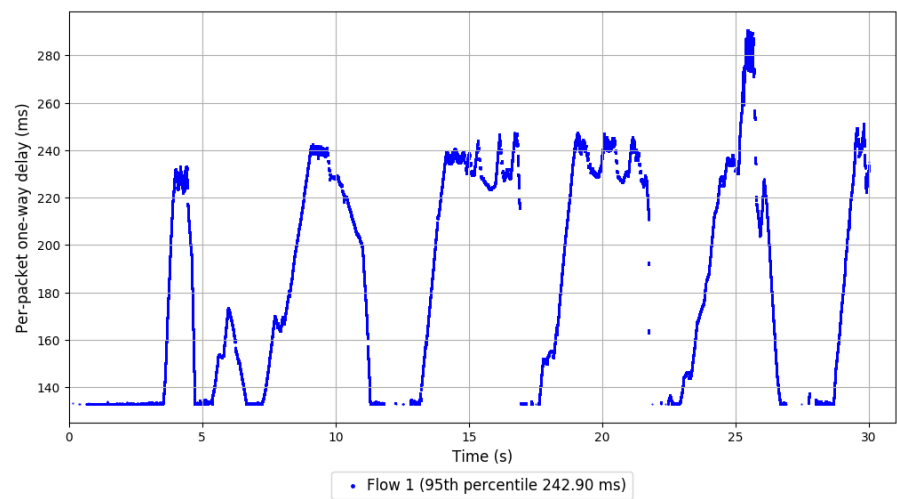
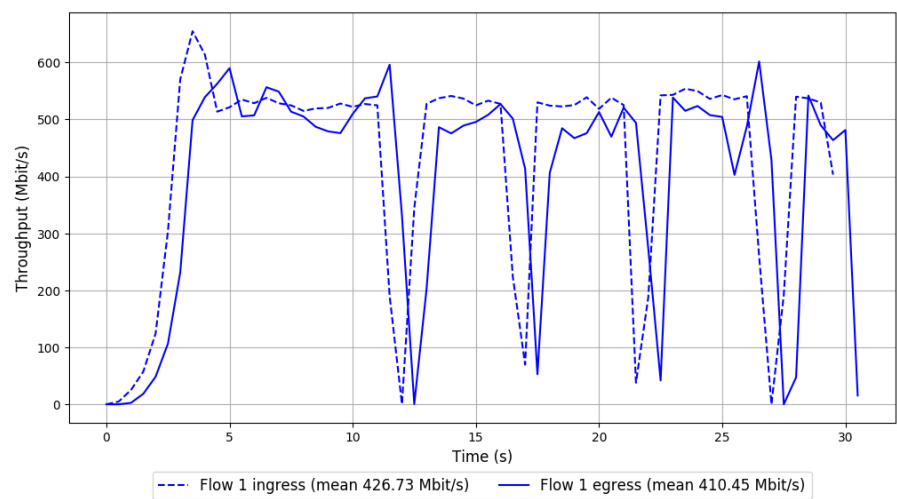
-- Flow 1:

Average throughput: 410.45 Mbit/s

95th percentile per-packet one-way delay: 242.902 ms

Loss rate: 3.81%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2019-01-03 06:38:04

End at: 2019-01-03 06:38:34

Local clock offset: -0.032 ms

Remote clock offset: -0.042 ms

Below is generated by plot.py at 2019-01-03 08:28:43

Datalink statistics

-- Total of 1 flow:

Average throughput: 372.86 Mbit/s

95th percentile per-packet one-way delay: 252.511 ms

Loss rate: 5.38%

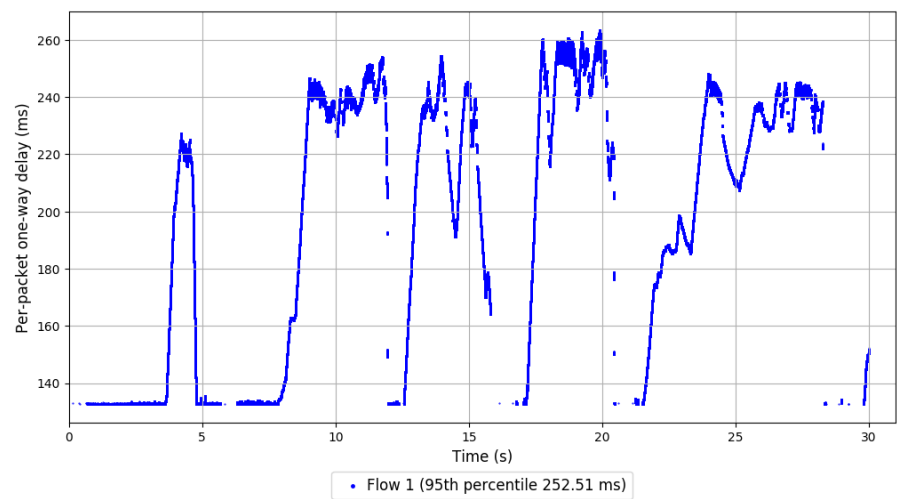
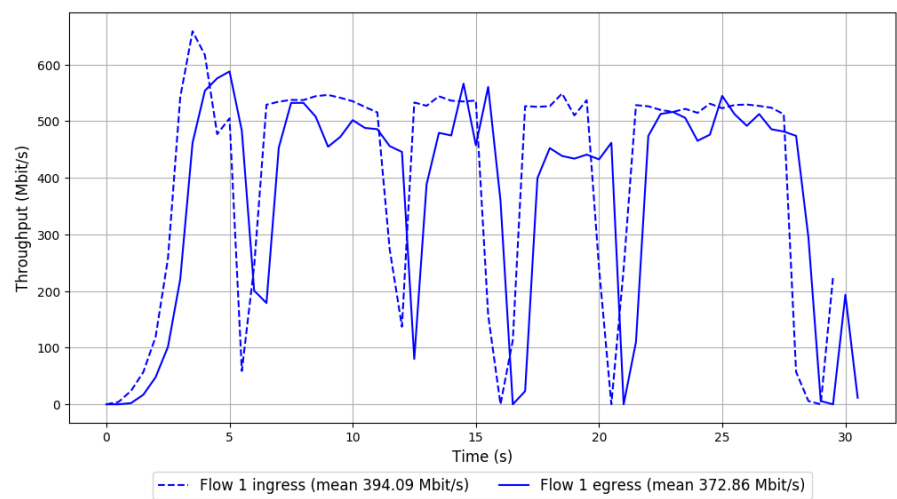
-- Flow 1:

Average throughput: 372.86 Mbit/s

95th percentile per-packet one-way delay: 252.511 ms

Loss rate: 5.38%

Run 5: Report of PCC-Allegro — Data Link

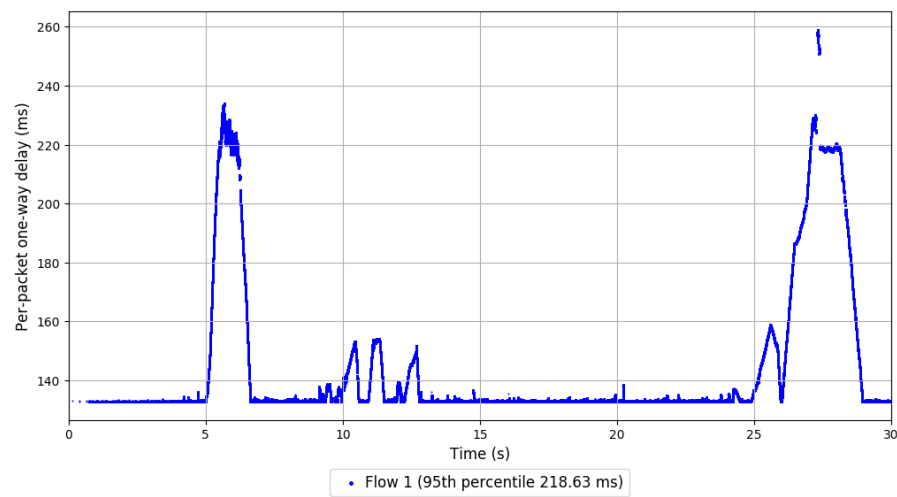
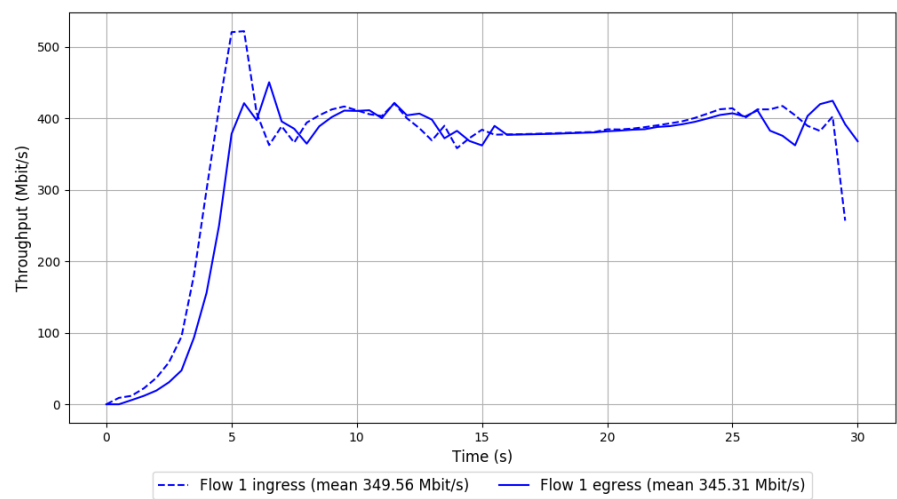



```
Run 1: Statistics of PCC-Expr

Start at: 2019-01-03 04:36:07
End at: 2019-01-03 04:36:37
Local clock offset: 0.4 ms
Remote clock offset: -0.055 ms

# Below is generated by plot.py at 2019-01-03 08:29:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 345.31 Mbit/s
95th percentile per-packet one-way delay: 218.634 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 345.31 Mbit/s
95th percentile per-packet one-way delay: 218.634 ms
Loss rate: 1.22%
```

Run 1: Report of PCC-Expr — Data Link

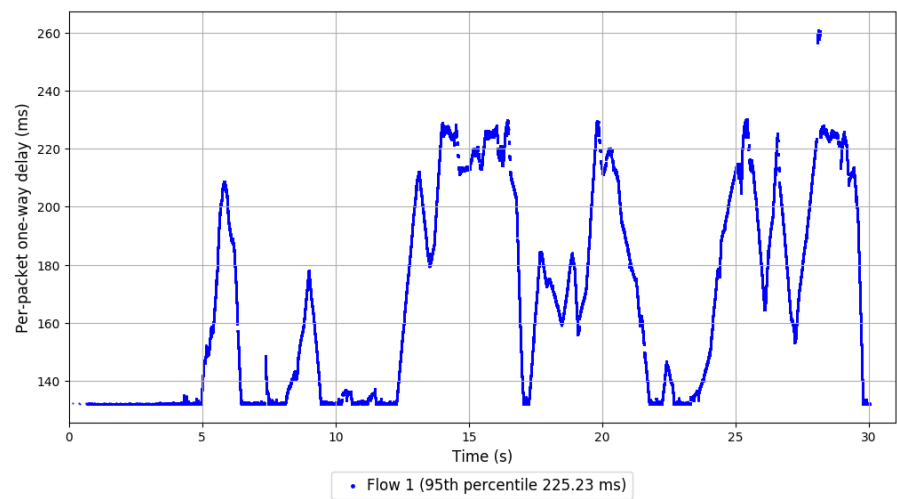
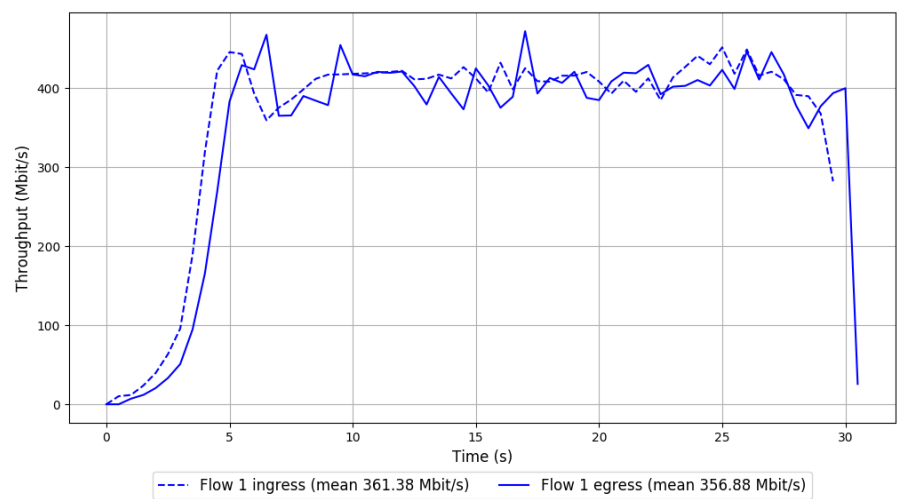


Run 2: Statistics of PCC-Expr

Start at: 2019-01-03 05:04:08
End at: 2019-01-03 05:04:38
Local clock offset: -0.044 ms
Remote clock offset: -0.041 ms

Below is generated by plot.py at 2019-01-03 08:29:59
Datalink statistics
-- Total of 1 flow:
Average throughput: 356.88 Mbit/s
95th percentile per-packet one-way delay: 225.231 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 356.88 Mbit/s
95th percentile per-packet one-way delay: 225.231 ms
Loss rate: 1.25%

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2019-01-03 05:33:23

End at: 2019-01-03 05:33:53

Local clock offset: 0.153 ms

Remote clock offset: -0.117 ms

Below is generated by plot.py at 2019-01-03 08:37:58

Datalink statistics

-- Total of 1 flow:

Average throughput: 333.52 Mbit/s

95th percentile per-packet one-way delay: 228.928 ms

Loss rate: 2.38%

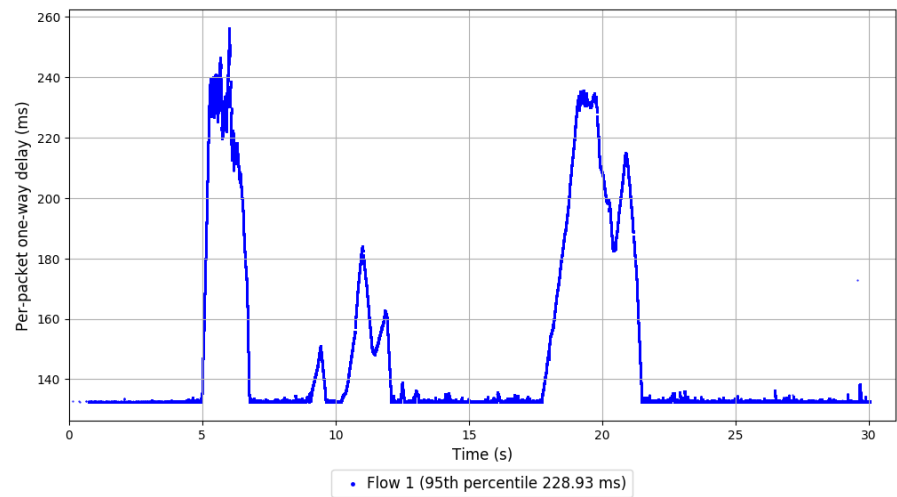
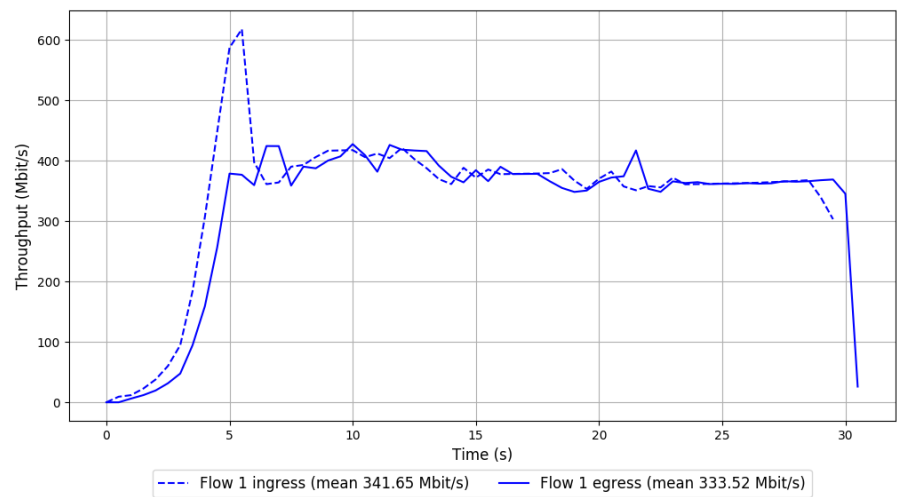
-- Flow 1:

Average throughput: 333.52 Mbit/s

95th percentile per-packet one-way delay: 228.928 ms

Loss rate: 2.38%

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

Start at: 2019-01-03 06:02:11

End at: 2019-01-03 06:02:41

Local clock offset: -0.308 ms

Remote clock offset: 0.0 ms

Below is generated by plot.py at 2019-01-03 08:39:10

Datalink statistics

-- Total of 1 flow:

Average throughput: 326.72 Mbit/s

95th percentile per-packet one-way delay: 248.757 ms

Loss rate: 4.34%

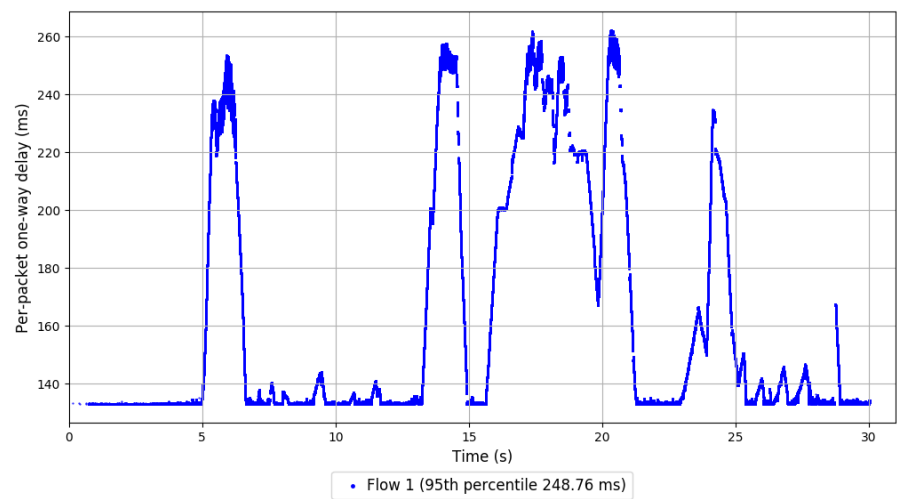
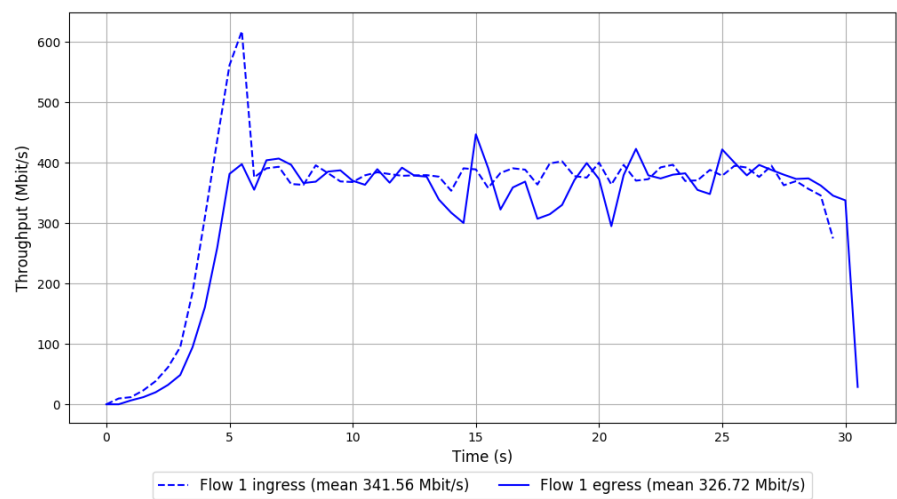
-- Flow 1:

Average throughput: 326.72 Mbit/s

95th percentile per-packet one-way delay: 248.757 ms

Loss rate: 4.34%

Run 4: Report of PCC-Expr — Data Link

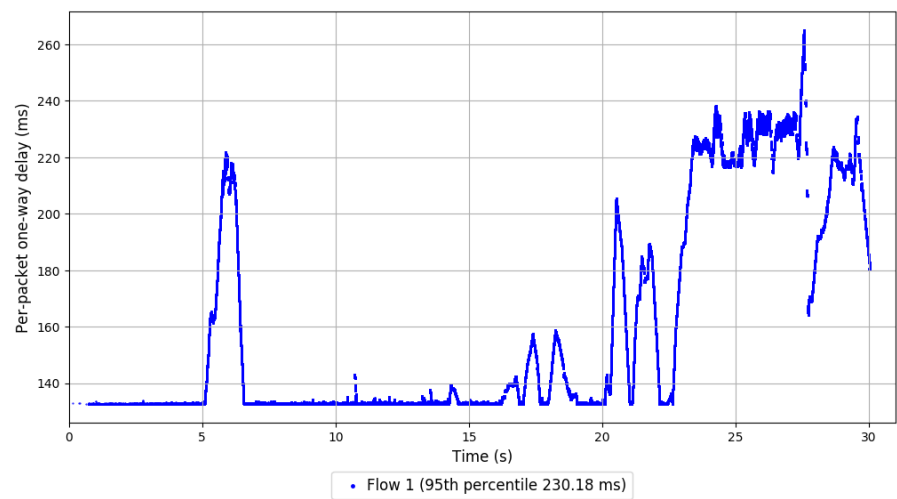
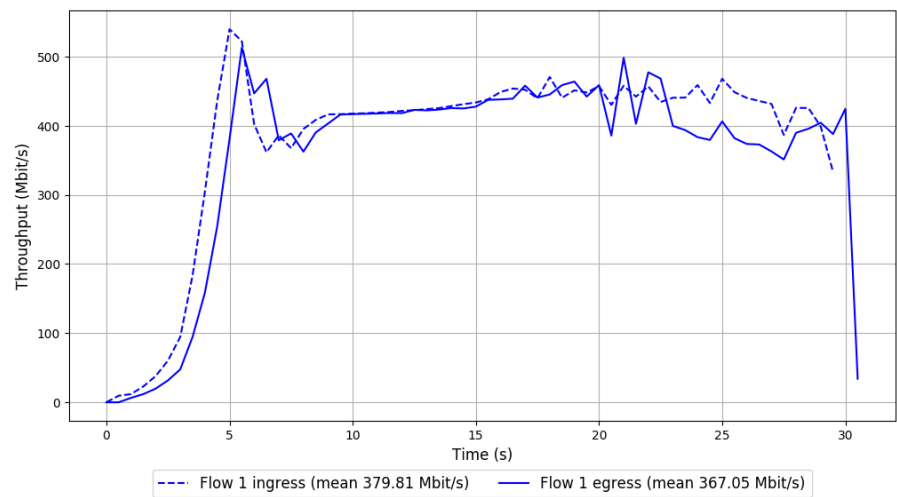


Run 5: Statistics of PCC-Expr

Start at: 2019-01-03 06:31:24
End at: 2019-01-03 06:31:54
Local clock offset: 0.079 ms
Remote clock offset: -0.021 ms

Below is generated by plot.py at 2019-01-03 08:42:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 367.05 Mbit/s
95th percentile per-packet one-way delay: 230.184 ms
Loss rate: 3.36%
-- Flow 1:
Average throughput: 367.05 Mbit/s
95th percentile per-packet one-way delay: 230.184 ms
Loss rate: 3.36%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

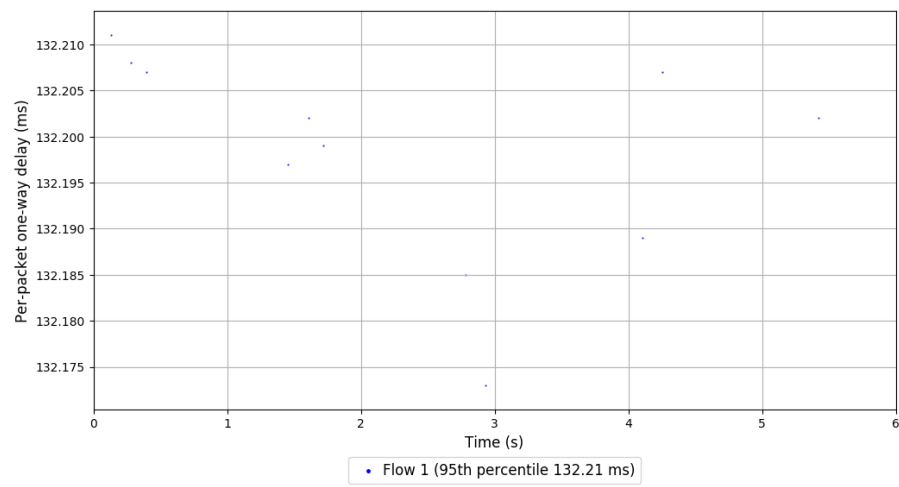
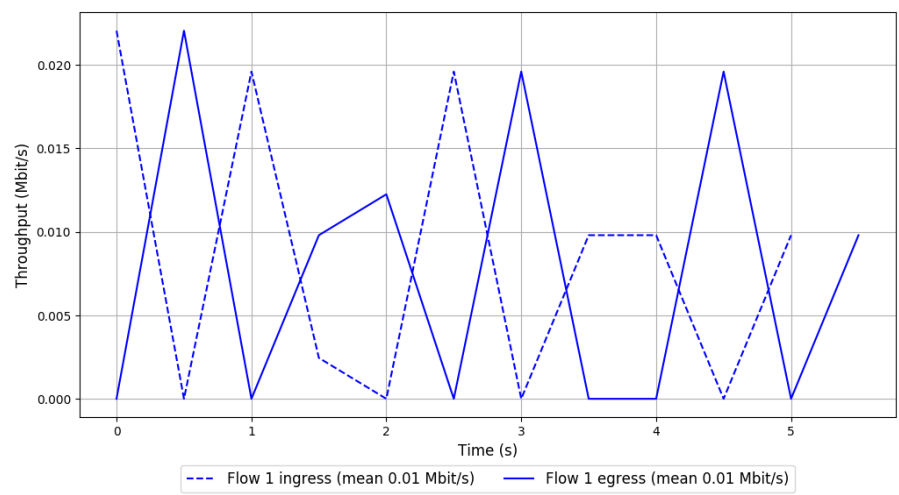
Start at: 2019-01-03 04:41:03

End at: 2019-01-03 04:41:33

Local clock offset: 0.01 ms

Remote clock offset: -0.01 ms

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2019-01-03 05:09:31

End at: 2019-01-03 05:10:01

Local clock offset: 0.005 ms

Remote clock offset: -0.03 ms

Below is generated by plot.py at 2019-01-03 08:42:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 58.69 Mbit/s

95th percentile per-packet one-way delay: 133.356 ms

Loss rate: 0.00%

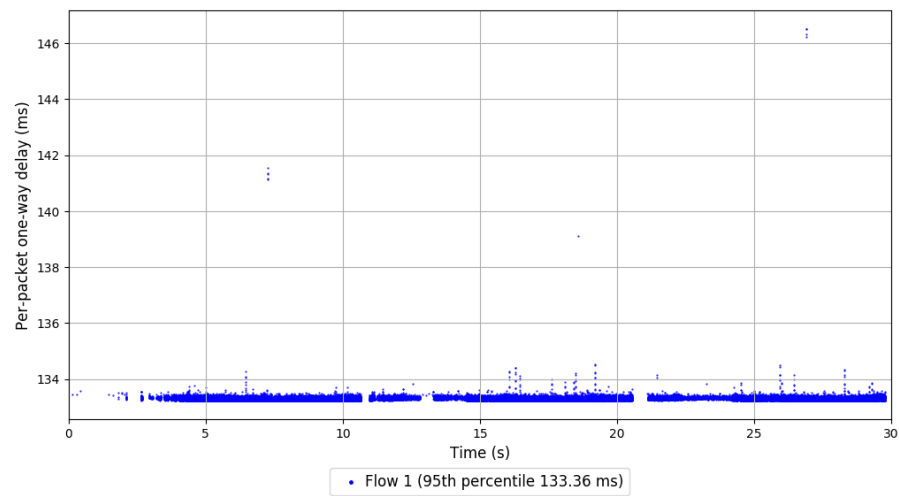
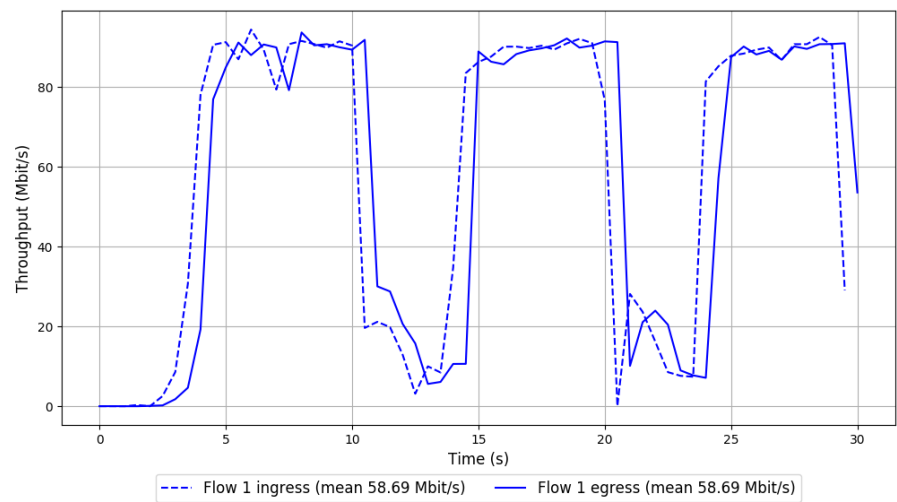
-- Flow 1:

Average throughput: 58.69 Mbit/s

95th percentile per-packet one-way delay: 133.356 ms

Loss rate: 0.00%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2019-01-03 05:38:54

End at: 2019-01-03 05:39:24

Local clock offset: -0.332 ms

Remote clock offset: -0.093 ms

Below is generated by plot.py at 2019-01-03 08:42:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 56.07 Mbit/s

95th percentile per-packet one-way delay: 133.213 ms

Loss rate: 0.00%

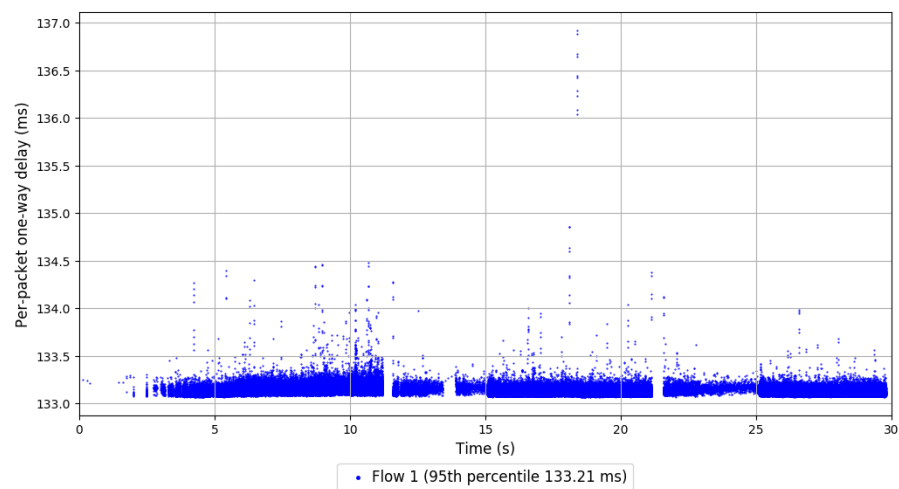
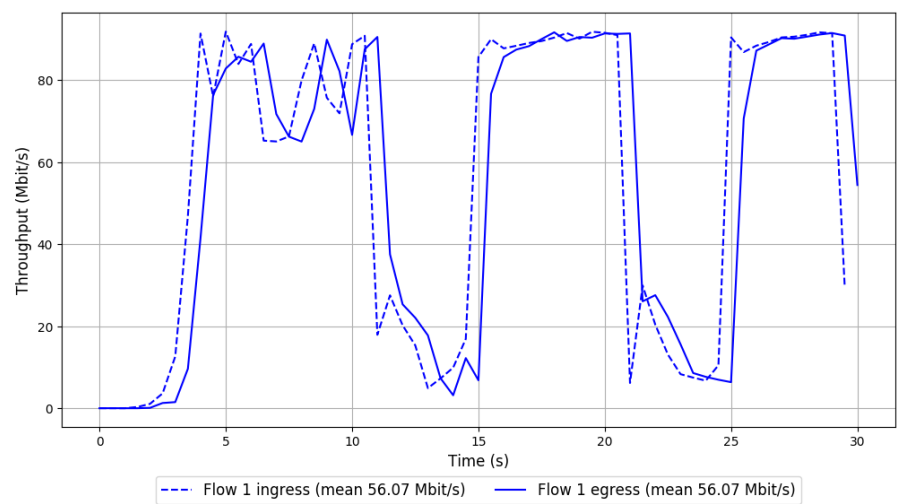
-- Flow 1:

Average throughput: 56.07 Mbit/s

95th percentile per-packet one-way delay: 133.213 ms

Loss rate: 0.00%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2019-01-03 06:07:33

End at: 2019-01-03 06:08:03

Local clock offset: -0.212 ms

Remote clock offset: -0.019 ms

Below is generated by plot.py at 2019-01-03 08:42:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 60.18 Mbit/s

95th percentile per-packet one-way delay: 133.563 ms

Loss rate: 0.00%

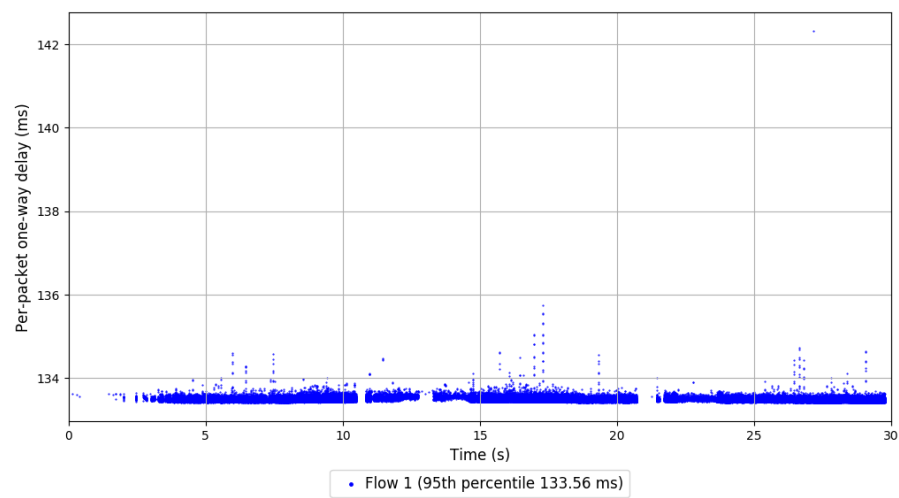
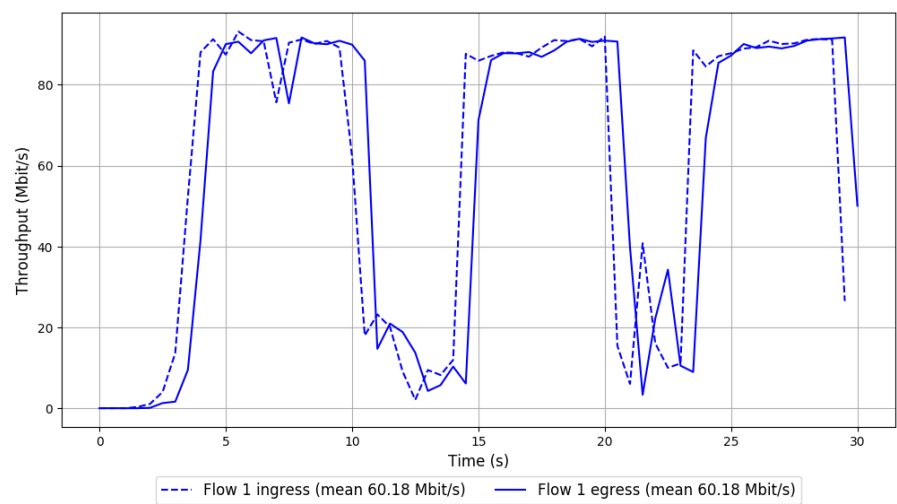
-- Flow 1:

Average throughput: 60.18 Mbit/s

95th percentile per-packet one-way delay: 133.563 ms

Loss rate: 0.00%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2019-01-03 06:36:49

End at: 2019-01-03 06:37:19

Local clock offset: -0.114 ms

Remote clock offset: 0.334 ms

Below is generated by plot.py at 2019-01-03 08:42:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 65.73 Mbit/s

95th percentile per-packet one-way delay: 133.212 ms

Loss rate: 0.00%

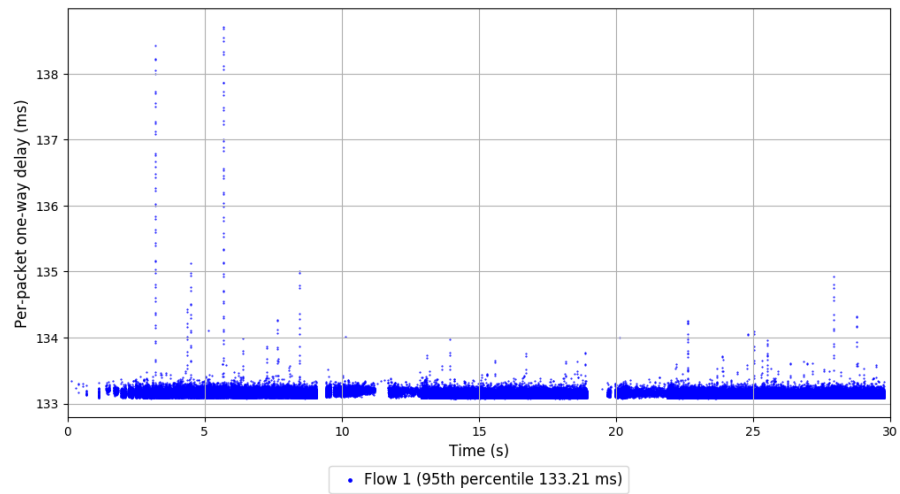
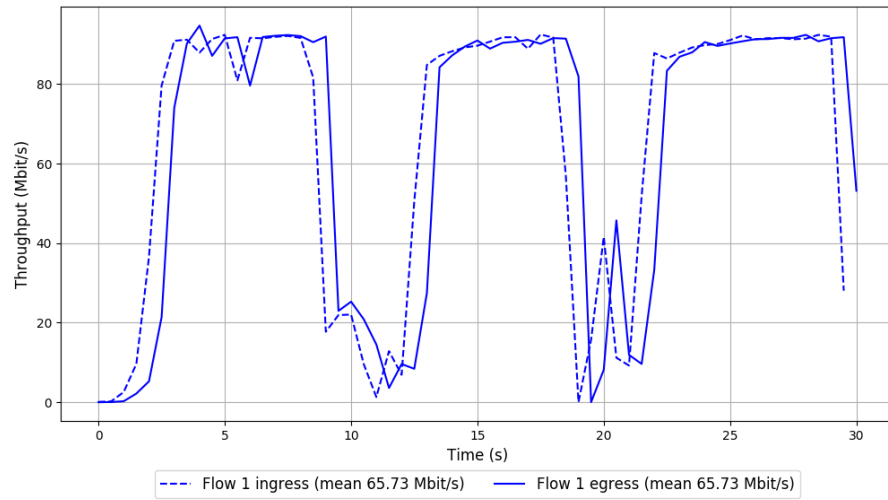
-- Flow 1:

Average throughput: 65.73 Mbit/s

95th percentile per-packet one-way delay: 133.212 ms

Loss rate: 0.00%

Run 5: Report of QUIC Cubic — Data Link

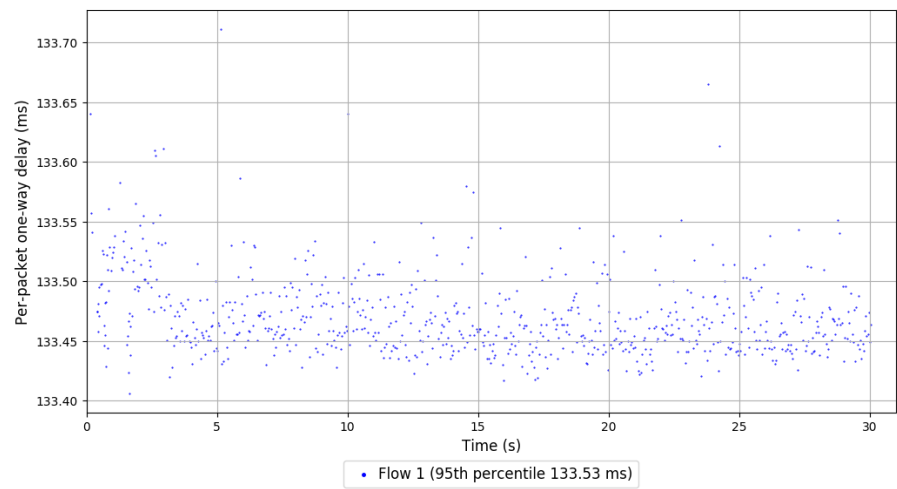
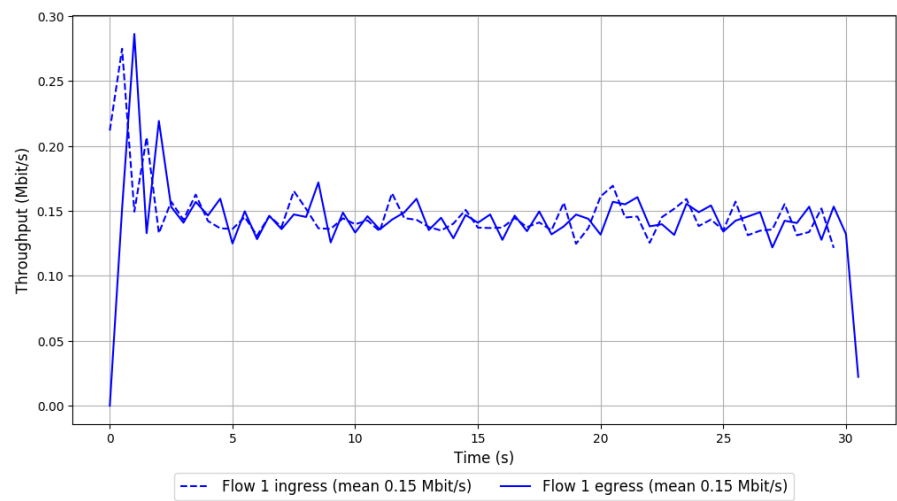


Run 1: Statistics of SCReAM

Start at: 2019-01-03 04:45:06
End at: 2019-01-03 04:45:36
Local clock offset: -0.038 ms
Remote clock offset: -0.057 ms

Below is generated by plot.py at 2019-01-03 08:42:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 133.533 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 133.533 ms
Loss rate: 0.00%

Run 1: Report of SReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2019-01-03 05:14:19

End at: 2019-01-03 05:14:49

Local clock offset: 0.186 ms

Remote clock offset: 0.339 ms

Below is generated by plot.py at 2019-01-03 08:42:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.15 Mbit/s

95th percentile per-packet one-way delay: 133.708 ms

Loss rate: 0.00%

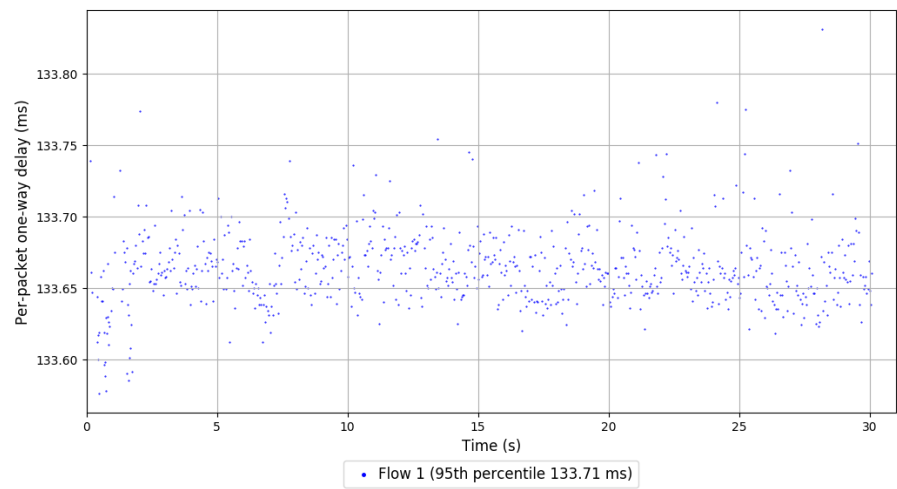
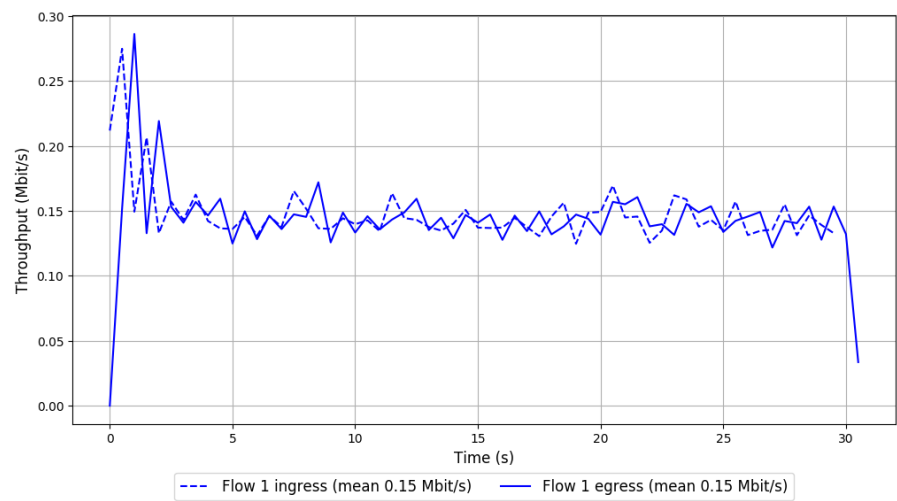
-- Flow 1:

Average throughput: 0.15 Mbit/s

95th percentile per-packet one-way delay: 133.708 ms

Loss rate: 0.00%

Run 2: Report of SReAM — Data Link

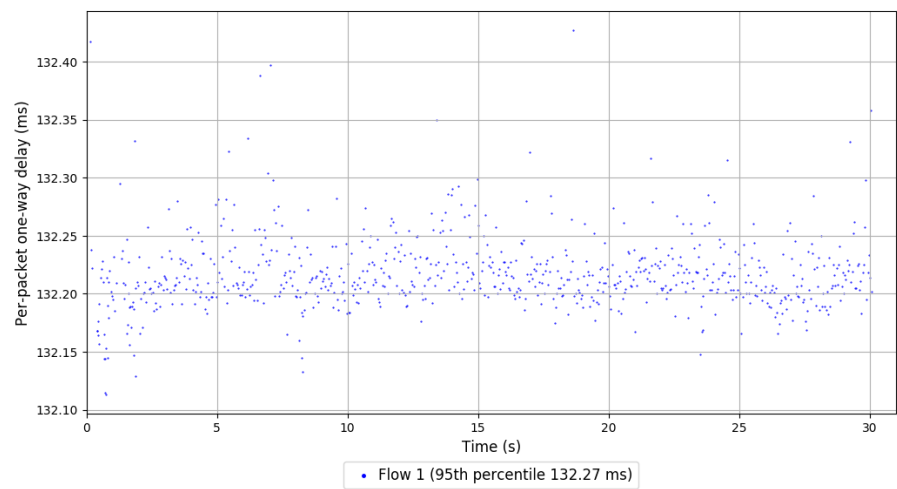
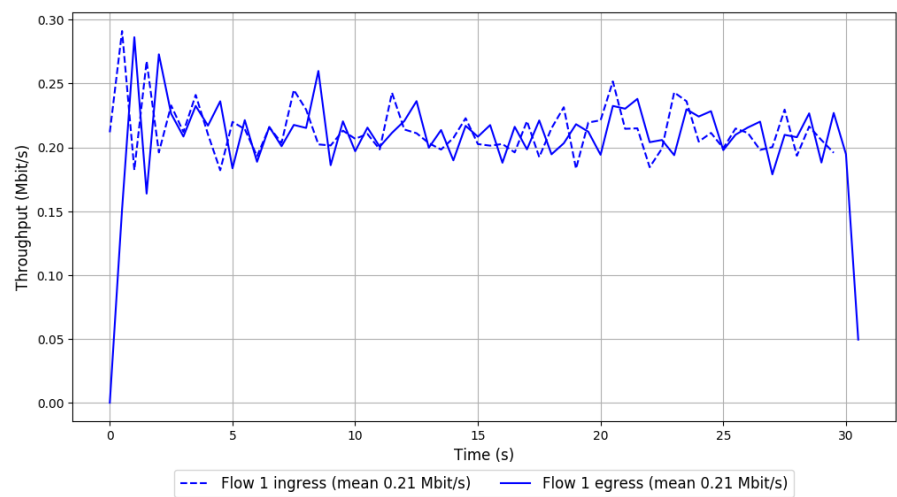


Run 3: Statistics of SReAM

Start at: 2019-01-03 05:43:19
End at: 2019-01-03 05:43:49
Local clock offset: 0.346 ms
Remote clock offset: -0.075 ms

Below is generated by plot.py at 2019-01-03 08:42:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 132.274 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 132.274 ms
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2019-01-03 06:12:18

End at: 2019-01-03 06:12:48

Local clock offset: -0.19 ms

Remote clock offset: 0.008 ms

Below is generated by plot.py at 2019-01-03 08:42:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.15 Mbit/s

95th percentile per-packet one-way delay: 133.238 ms

Loss rate: 0.00%

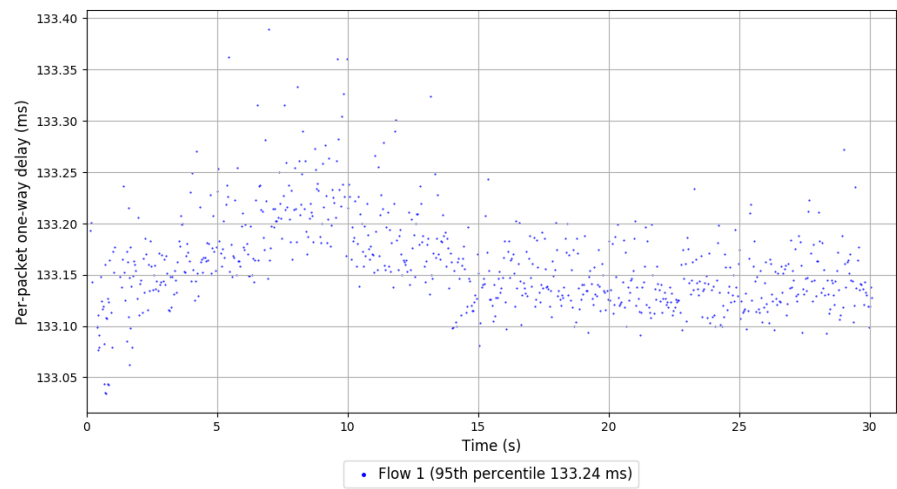
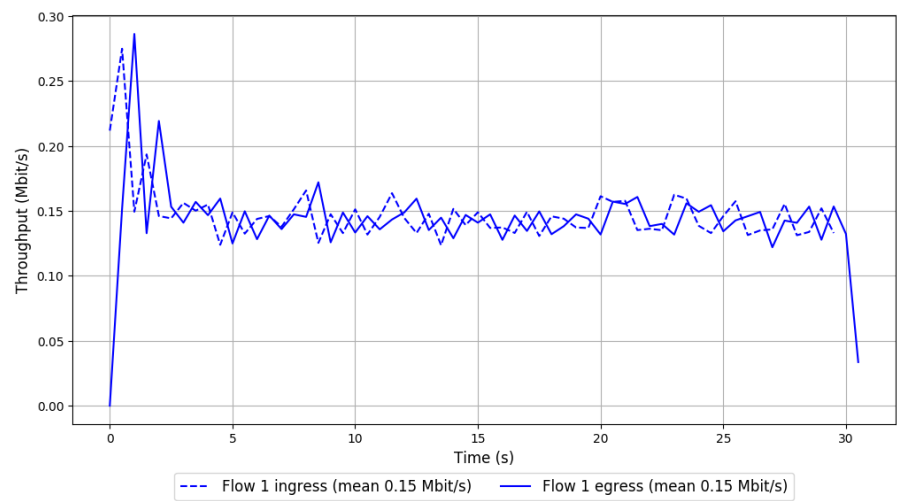
-- Flow 1:

Average throughput: 0.15 Mbit/s

95th percentile per-packet one-way delay: 133.238 ms

Loss rate: 0.00%

Run 4: Report of SReAM — Data Link

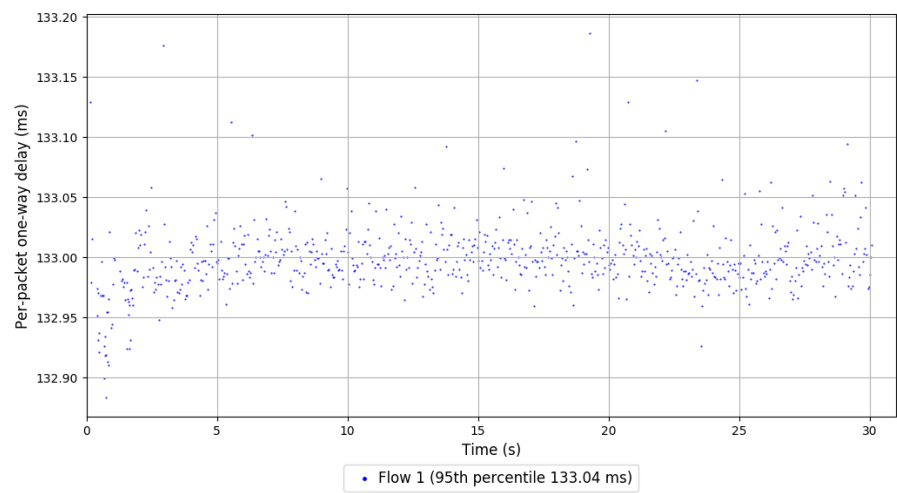
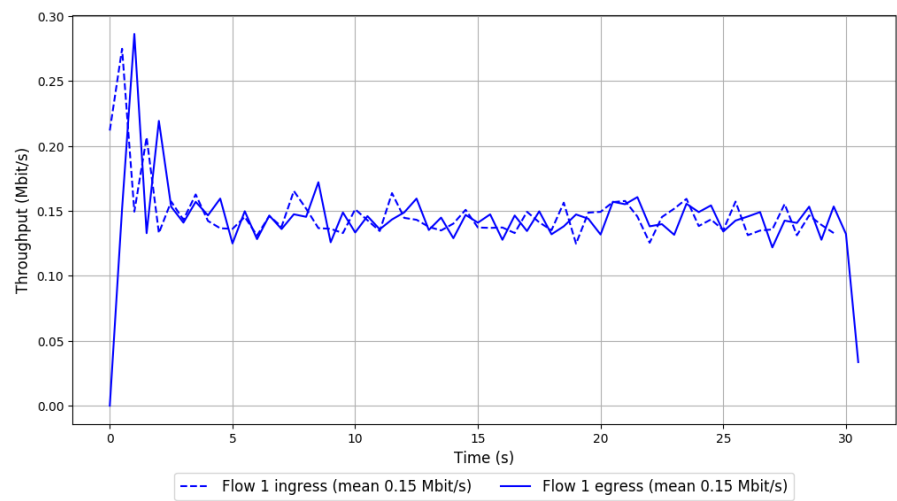


Run 5: Statistics of SCReAM

Start at: 2019-01-03 06:41:04
End at: 2019-01-03 06:41:34
Local clock offset: -0.097 ms
Remote clock offset: -0.015 ms

Below is generated by plot.py at 2019-01-03 08:42:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 133.041 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 133.041 ms
Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2019-01-03 05:02:57

End at: 2019-01-03 05:03:27

Local clock offset: -0.027 ms

Remote clock offset: 0.348 ms

Below is generated by plot.py at 2019-01-03 08:42:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.61 Mbit/s

95th percentile per-packet one-way delay: 132.809 ms

Loss rate: 0.00%

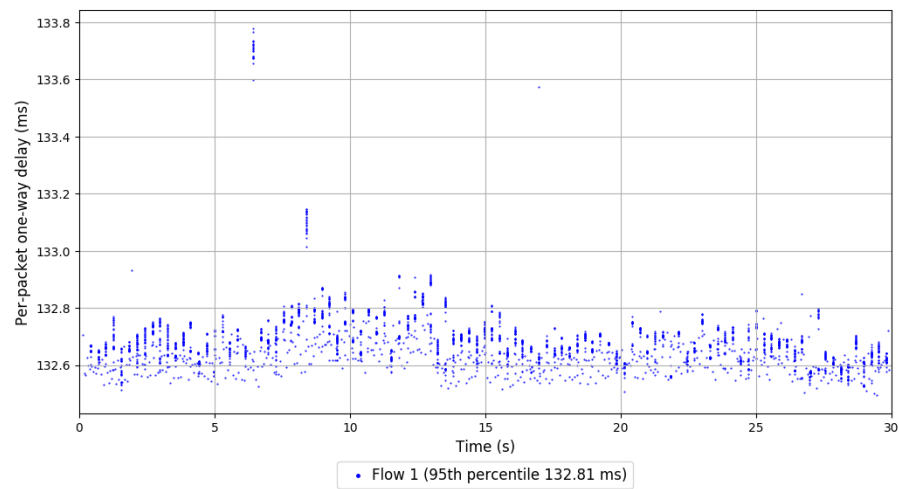
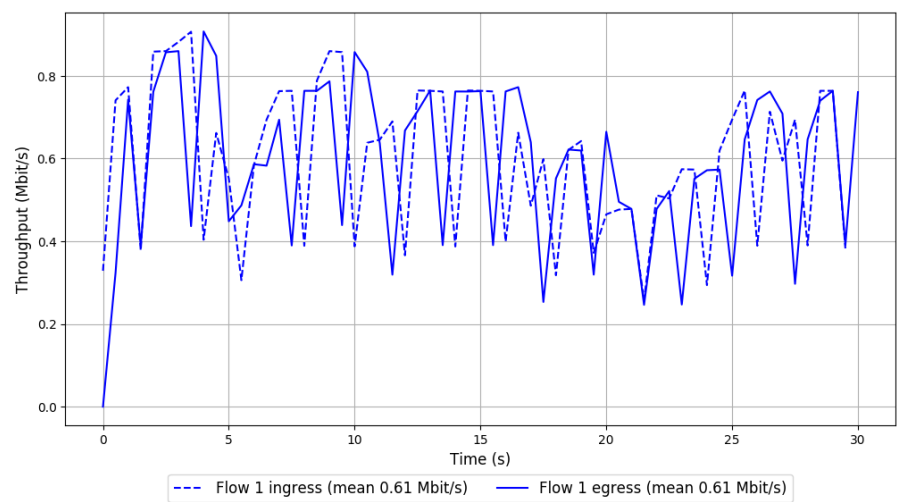
-- Flow 1:

Average throughput: 0.61 Mbit/s

95th percentile per-packet one-way delay: 132.809 ms

Loss rate: 0.00%

Run 1: Report of Sprout — Data Link

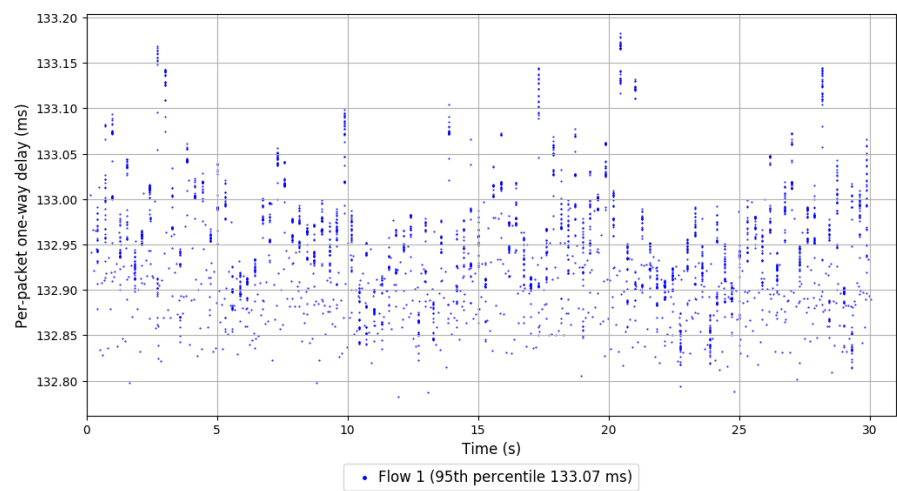
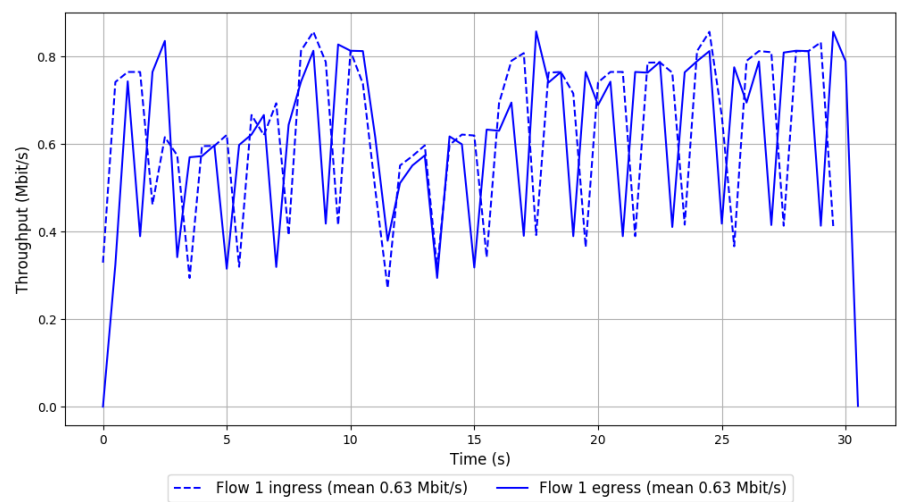


Run 2: Statistics of Sprout

Start at: 2019-01-03 05:32:12
End at: 2019-01-03 05:32:42
Local clock offset: -0.091 ms
Remote clock offset: -0.065 ms

Below is generated by plot.py at 2019-01-03 08:42:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 133.073 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 133.073 ms
Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

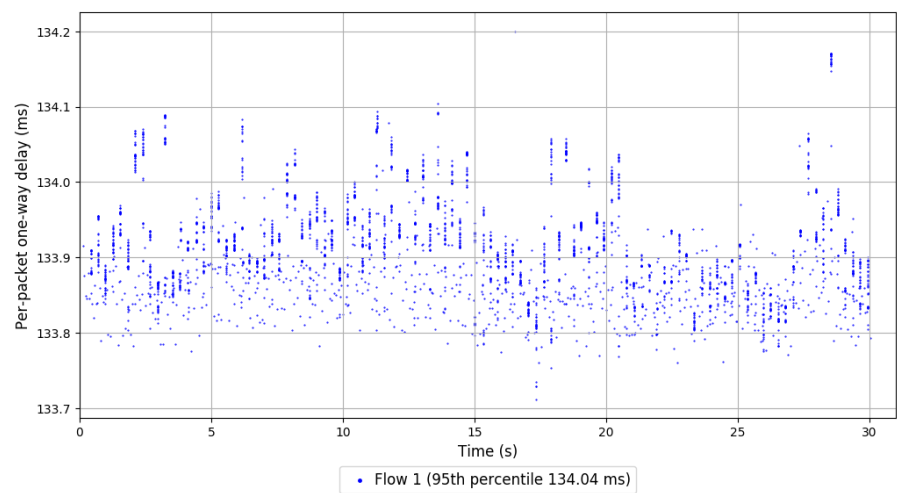
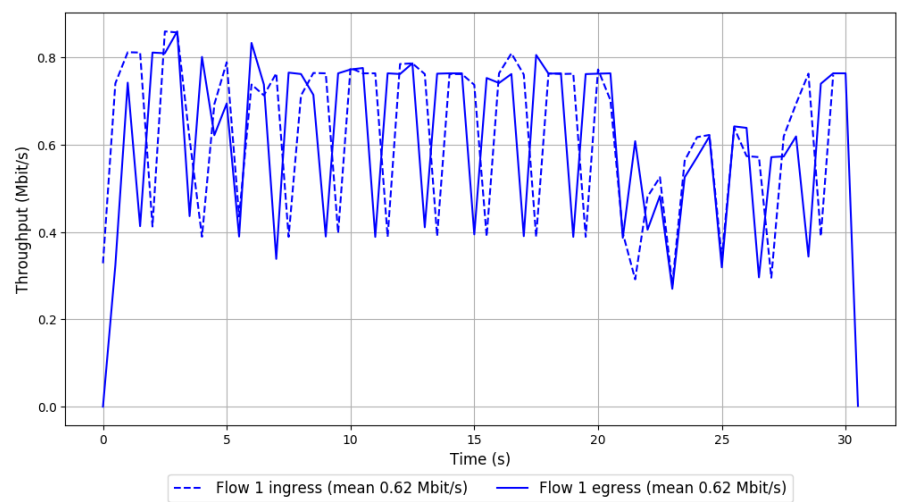


Run 3: Statistics of Sprout

Start at: 2019-01-03 06:01:00
End at: 2019-01-03 06:01:30
Local clock offset: -0.044 ms
Remote clock offset: 0.326 ms

Below is generated by plot.py at 2019-01-03 08:42:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.62 Mbit/s
95th percentile per-packet one-way delay: 134.038 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.62 Mbit/s
95th percentile per-packet one-way delay: 134.038 ms
Loss rate: 0.00%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2019-01-03 06:30:13

End at: 2019-01-03 06:30:43

Local clock offset: -0.53 ms

Remote clock offset: 0.028 ms

Below is generated by plot.py at 2019-01-03 08:42:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.65 Mbit/s

95th percentile per-packet one-way delay: 132.843 ms

Loss rate: 0.00%

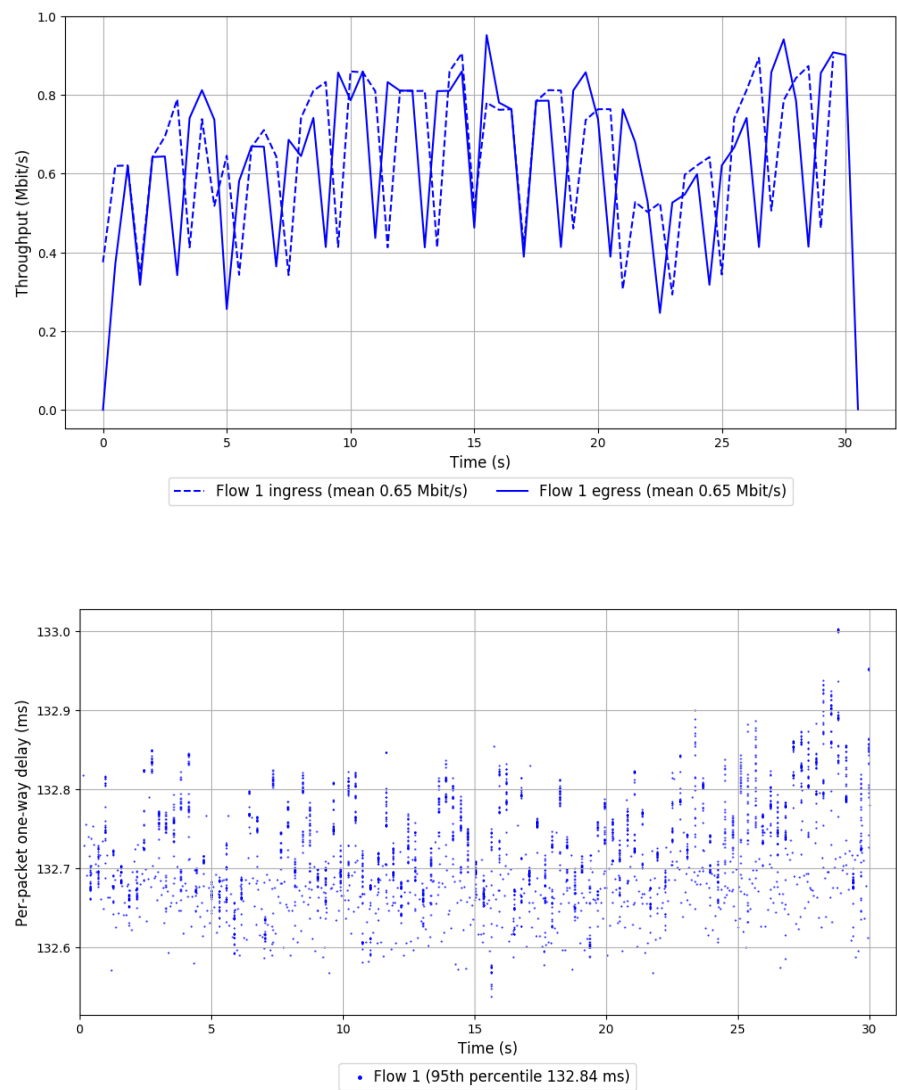
-- Flow 1:

Average throughput: 0.65 Mbit/s

95th percentile per-packet one-way delay: 132.843 ms

Loss rate: 0.00%

Run 4: Report of Sprout — Data Link

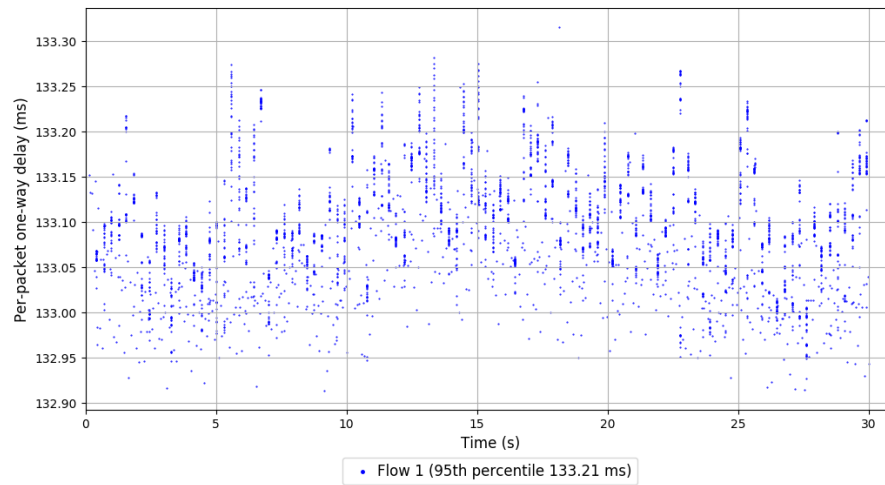
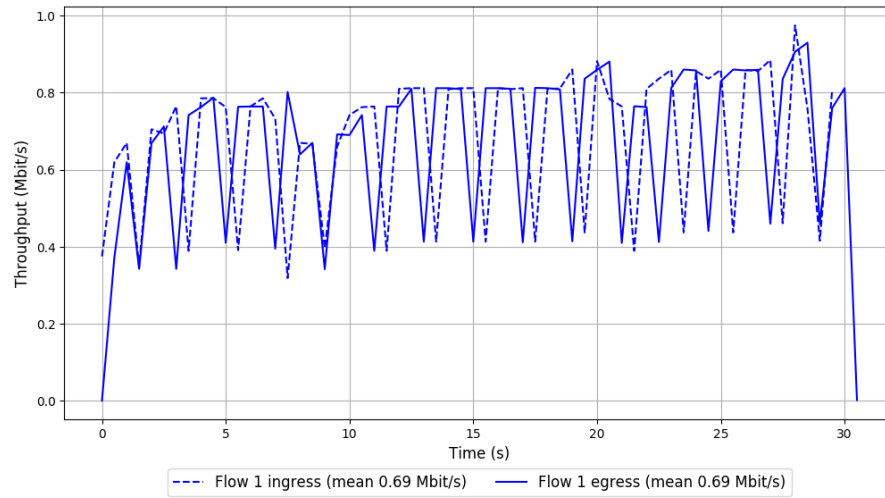


Run 5: Statistics of Sprout

Start at: 2019-01-03 06:59:21
End at: 2019-01-03 06:59:51
Local clock offset: -0.118 ms
Remote clock offset: -0.036 ms

Below is generated by plot.py at 2019-01-03 08:42:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.69 Mbit/s
95th percentile per-packet one-way delay: 133.208 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.69 Mbit/s
95th percentile per-packet one-way delay: 133.208 ms
Loss rate: 0.00%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2019-01-03 04:46:16

End at: 2019-01-03 04:46:46

Local clock offset: 0.364 ms

Remote clock offset: -0.066 ms

Below is generated by plot.py at 2019-01-03 08:42:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 212.88 Mbit/s

95th percentile per-packet one-way delay: 132.501 ms

Loss rate: 0.00%

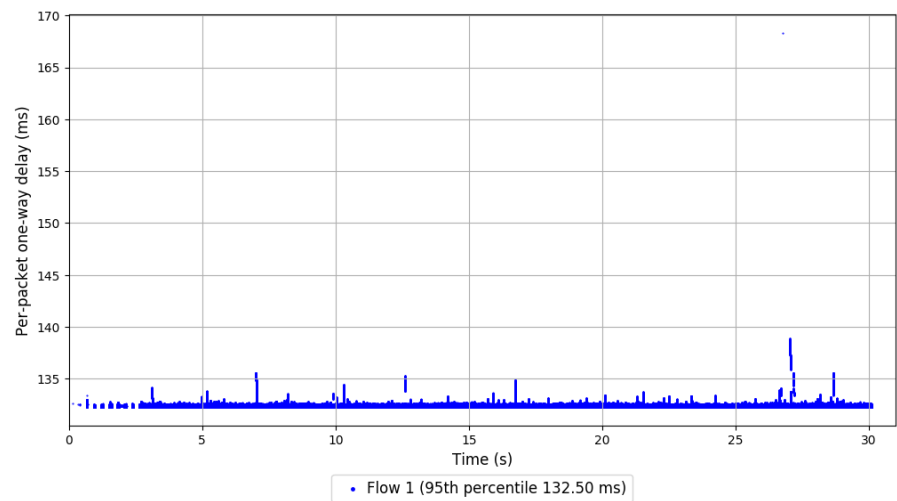
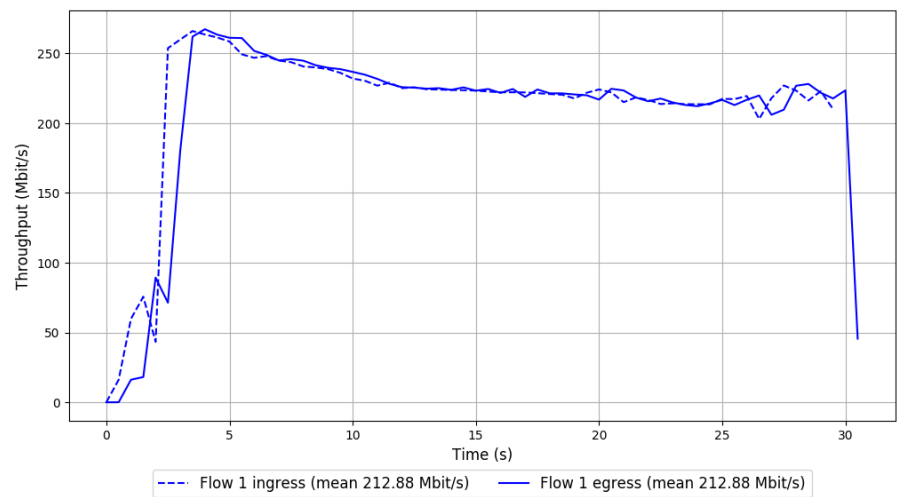
-- Flow 1:

Average throughput: 212.88 Mbit/s

95th percentile per-packet one-way delay: 132.501 ms

Loss rate: 0.00%

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

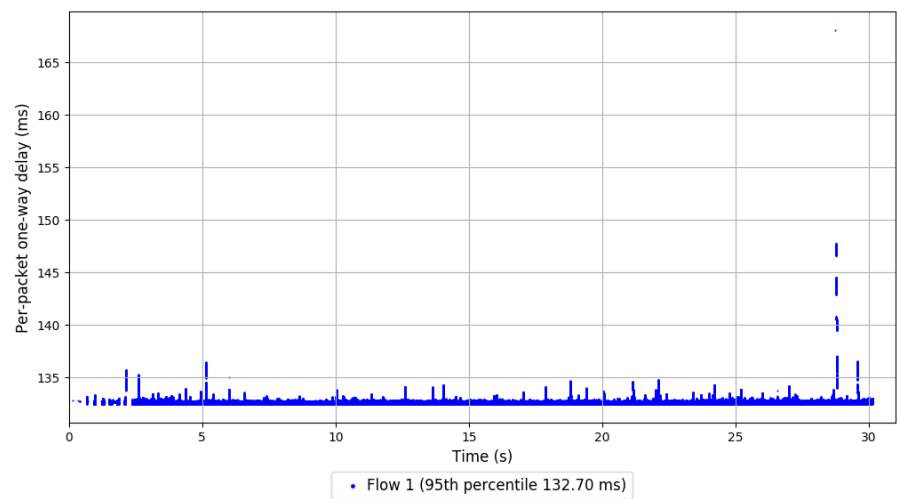
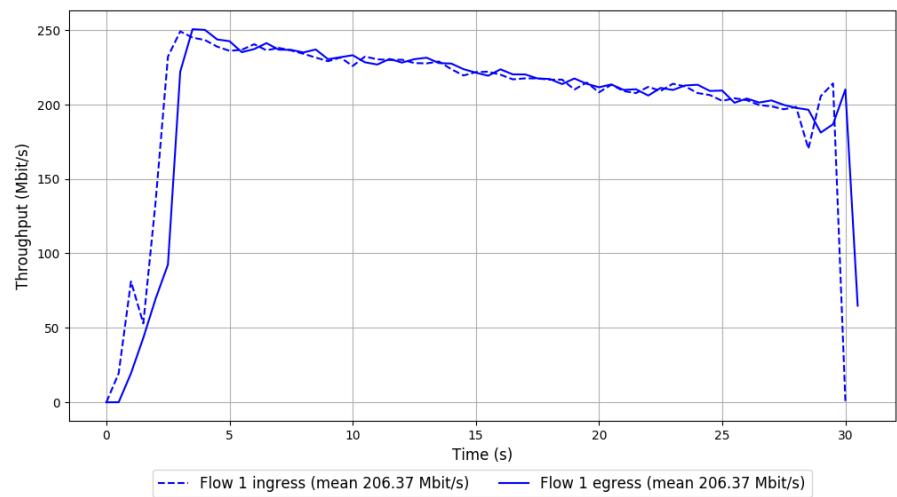


Run 2: Statistics of TaoVA-100x

Start at: 2019-01-03 05:15:30
End at: 2019-01-03 05:16:00
Local clock offset: 0.246 ms
Remote clock offset: -0.009 ms

Below is generated by plot.py at 2019-01-03 08:42:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 206.37 Mbit/s
95th percentile per-packet one-way delay: 132.703 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 206.37 Mbit/s
95th percentile per-packet one-way delay: 132.703 ms
Loss rate: 0.00%

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



Run 3: Statistics of TaoVA-100x

Start at: 2019-01-03 05:44:29

End at: 2019-01-03 05:44:59

Local clock offset: -0.066 ms

Remote clock offset: 0.27 ms

Below is generated by plot.py at 2019-01-03 08:42:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 13.24 Mbit/s

95th percentile per-packet one-way delay: 132.813 ms

Loss rate: 0.00%

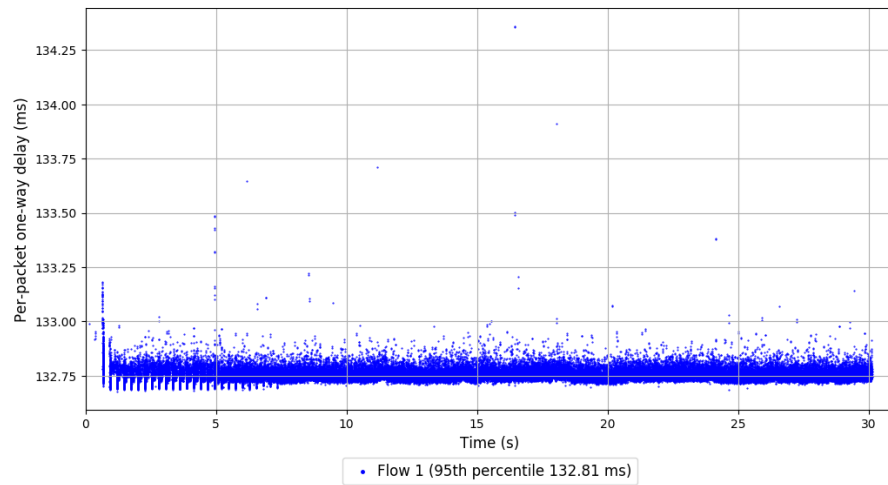
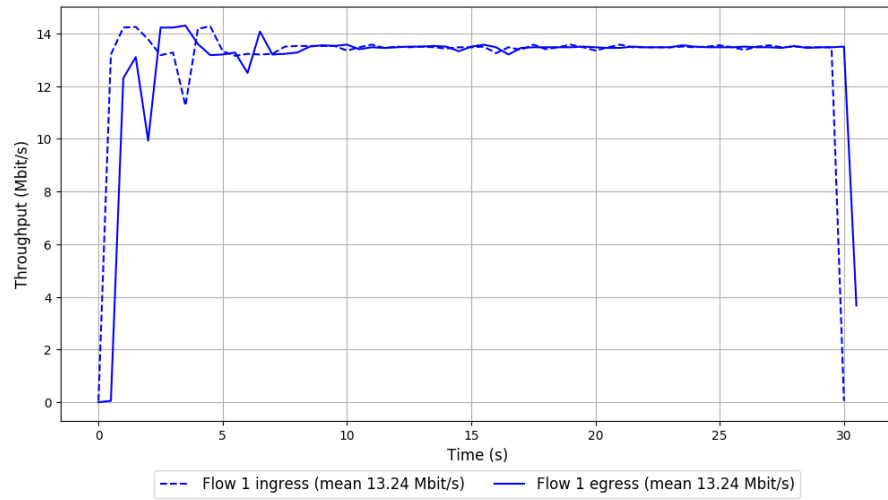
-- Flow 1:

Average throughput: 13.24 Mbit/s

95th percentile per-packet one-way delay: 132.813 ms

Loss rate: 0.00%

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



Run 4: Statistics of TaoVA-100x

Start at: 2019-01-03 06:13:29

End at: 2019-01-03 06:13:59

Local clock offset: -0.039 ms

Remote clock offset: 0.027 ms

Below is generated by plot.py at 2019-01-03 08:42:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 208.82 Mbit/s

95th percentile per-packet one-way delay: 133.500 ms

Loss rate: 0.00%

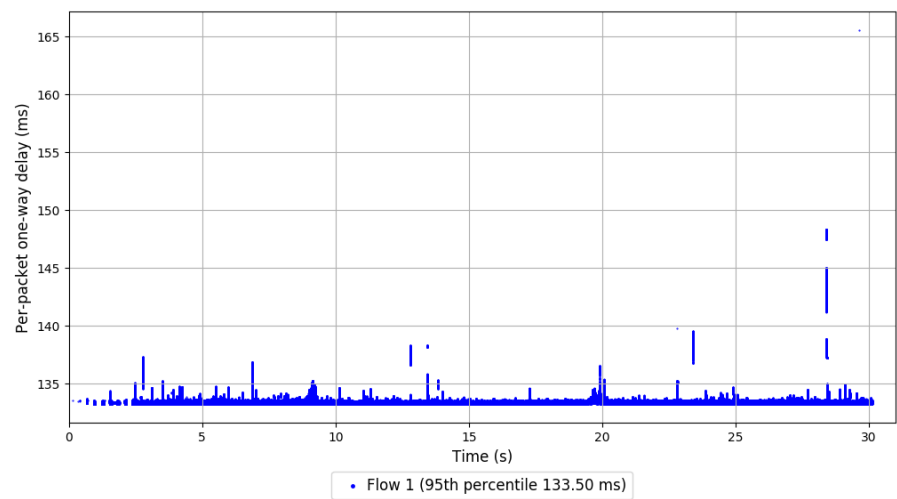
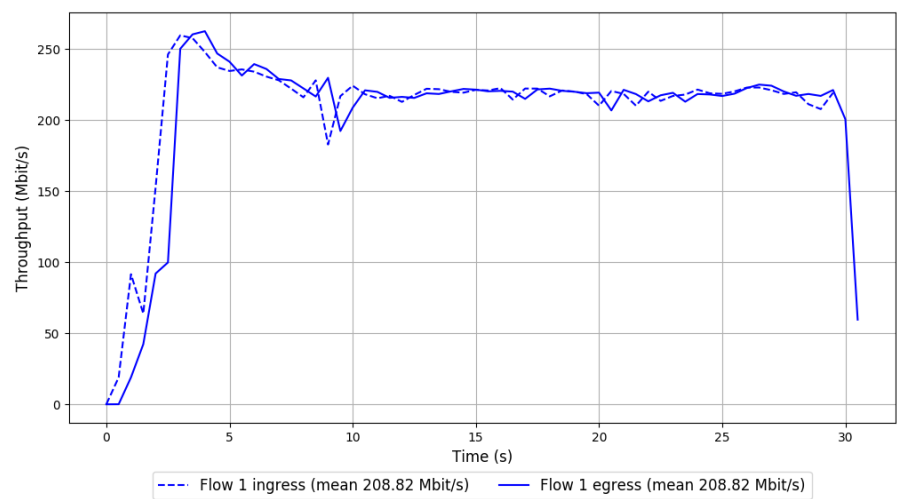
-- Flow 1:

Average throughput: 208.82 Mbit/s

95th percentile per-packet one-way delay: 133.500 ms

Loss rate: 0.00%

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



Run 5: Statistics of TaoVA-100x

Start at: 2019-01-03 06:42:14

End at: 2019-01-03 06:42:44

Local clock offset: -0.108 ms

Remote clock offset: -0.009 ms

Below is generated by plot.py at 2019-01-03 08:42:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 211.78 Mbit/s

95th percentile per-packet one-way delay: 132.264 ms

Loss rate: 0.00%

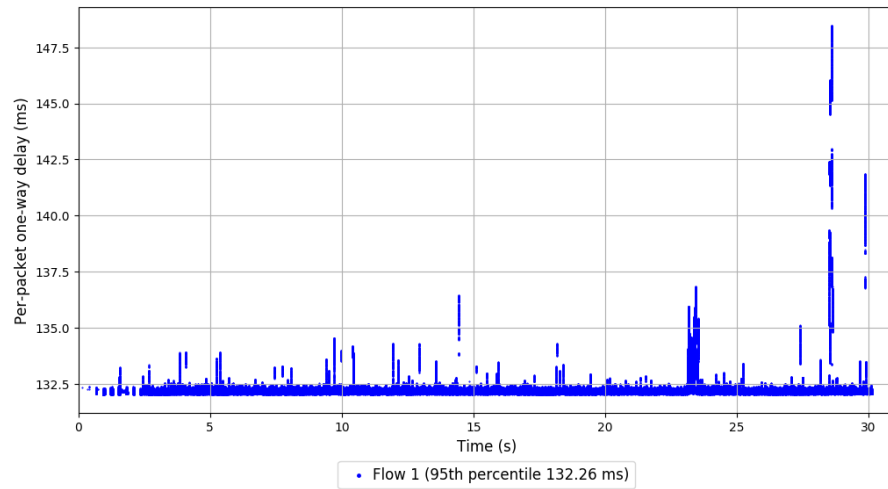
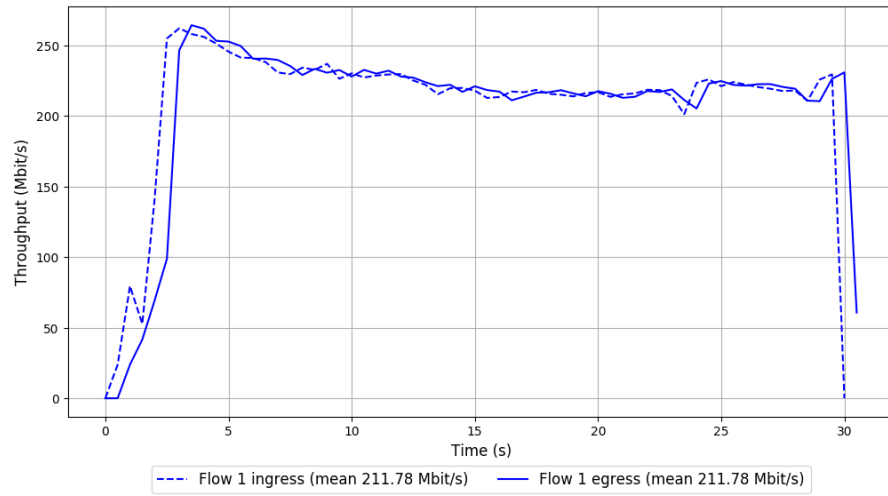
-- Flow 1:

Average throughput: 211.78 Mbit/s

95th percentile per-packet one-way delay: 132.264 ms

Loss rate: 0.00%

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

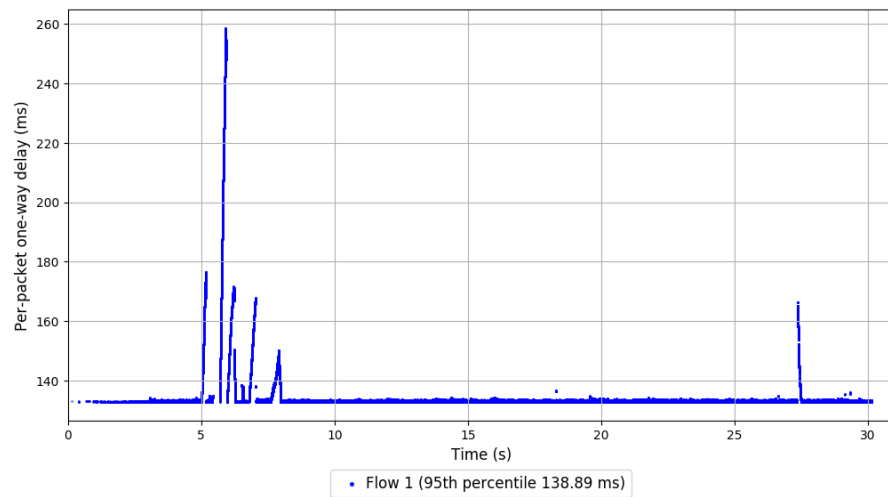
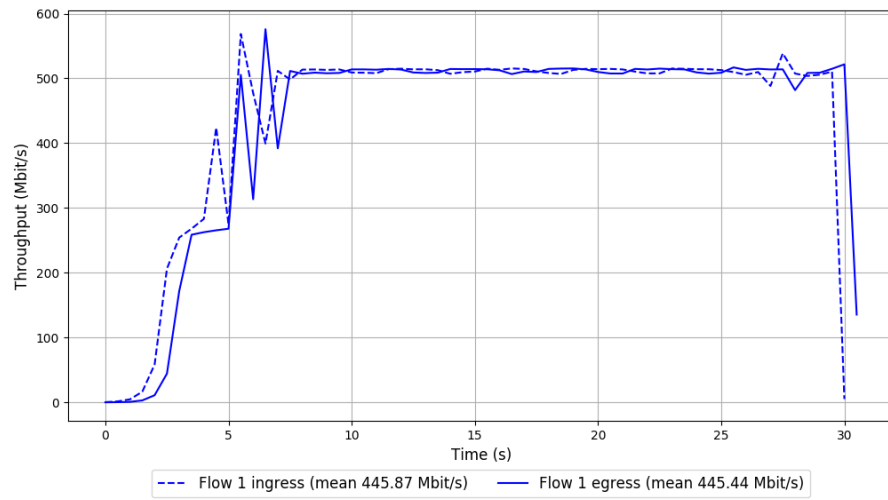


Run 1: Statistics of TCP Vegas

Start at: 2019-01-03 04:56:38
End at: 2019-01-03 04:57:08
Local clock offset: -0.027 ms
Remote clock offset: -0.029 ms

Below is generated by plot.py at 2019-01-03 08:42:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 445.44 Mbit/s
95th percentile per-packet one-way delay: 138.887 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 445.44 Mbit/s
95th percentile per-packet one-way delay: 138.887 ms
Loss rate: 0.10%

Run 1: Report of TCP Vegas — Data Link

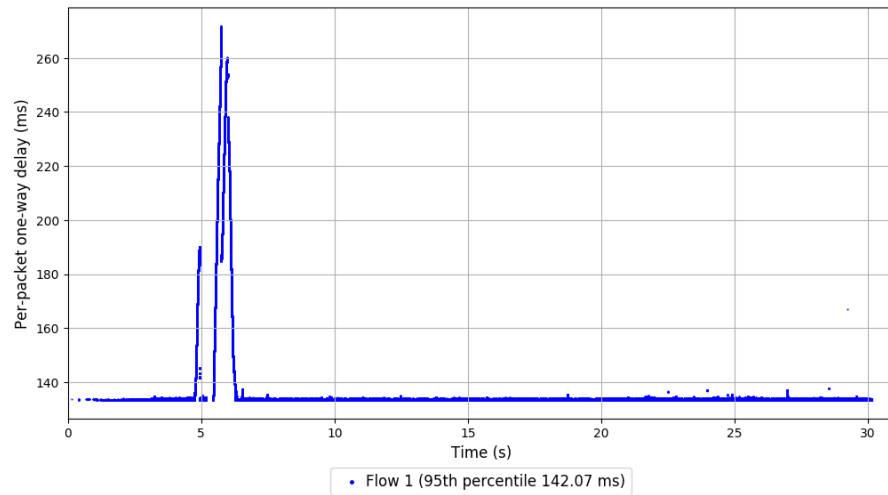
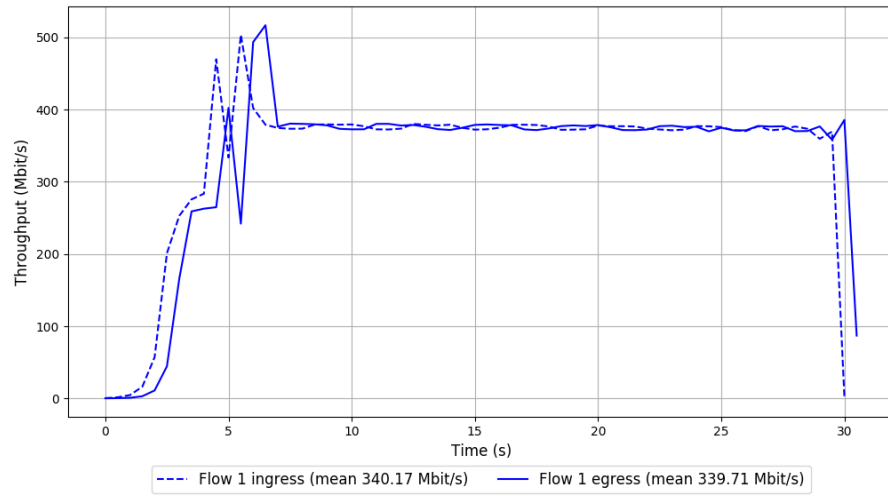


Run 2: Statistics of TCP Vegas

Start at: 2019-01-03 05:25:54
End at: 2019-01-03 05:26:24
Local clock offset: -0.099 ms
Remote clock offset: -0.077 ms

Below is generated by plot.py at 2019-01-03 08:46:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 339.71 Mbit/s
95th percentile per-packet one-way delay: 142.068 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 339.71 Mbit/s
95th percentile per-packet one-way delay: 142.068 ms
Loss rate: 0.14%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2019-01-03 05:54:28

End at: 2019-01-03 05:54:59

Local clock offset: -0.54 ms

Remote clock offset: 0.247 ms

Below is generated by plot.py at 2019-01-03 08:46:25

Datalink statistics

-- Total of 1 flow:

Average throughput: 296.65 Mbit/s

95th percentile per-packet one-way delay: 139.423 ms

Loss rate: 0.00%

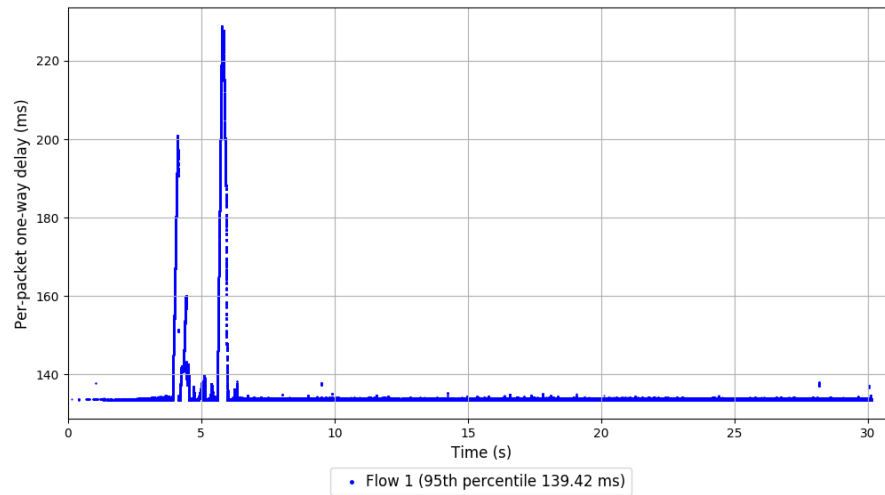
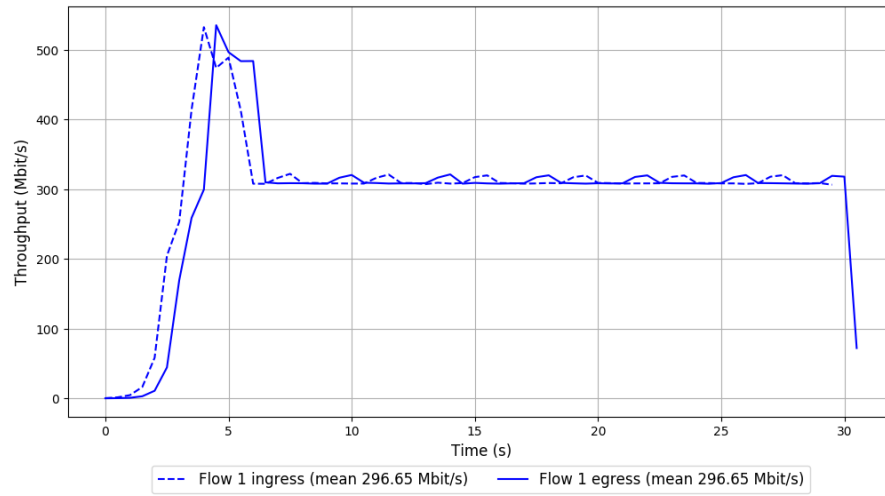
-- Flow 1:

Average throughput: 296.65 Mbit/s

95th percentile per-packet one-way delay: 139.423 ms

Loss rate: 0.00%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2019-01-03 06:23:55

End at: 2019-01-03 06:24:25

Local clock offset: 0.327 ms

Remote clock offset: 0.005 ms

Below is generated by plot.py at 2019-01-03 08:47:02

Datalink statistics

-- Total of 1 flow:

Average throughput: 333.14 Mbit/s

95th percentile per-packet one-way delay: 132.090 ms

Loss rate: 0.00%

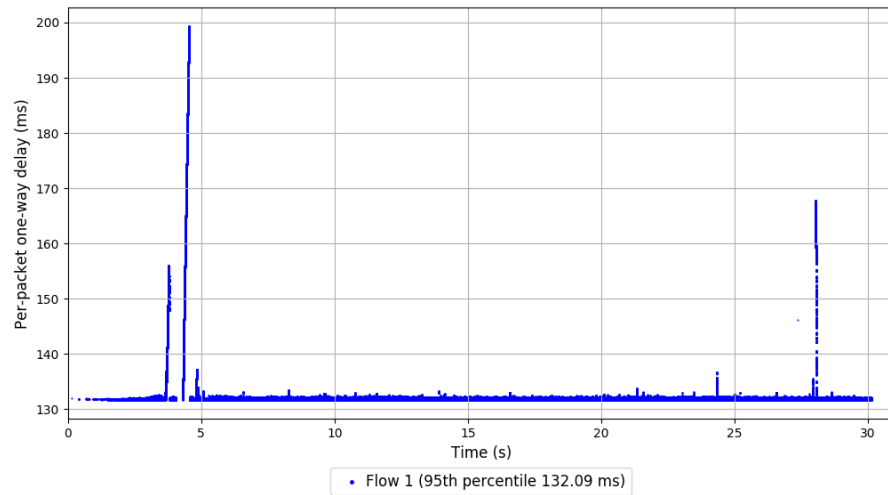
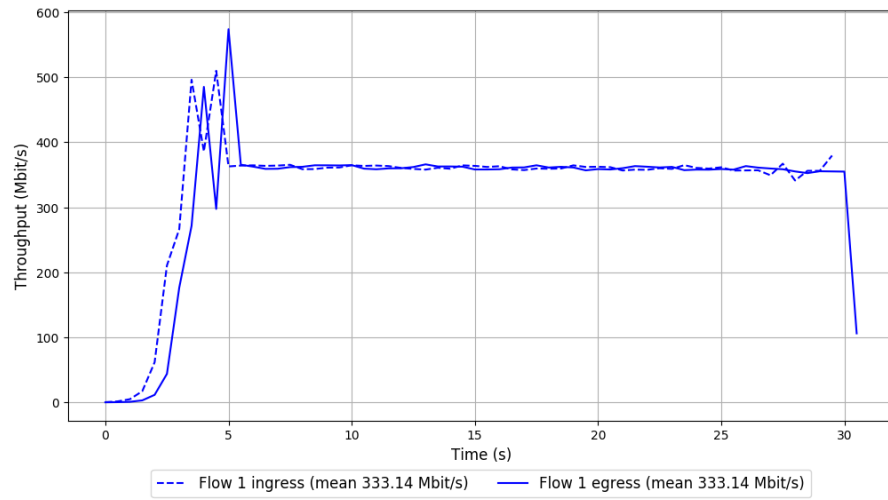
-- Flow 1:

Average throughput: 333.14 Mbit/s

95th percentile per-packet one-way delay: 132.090 ms

Loss rate: 0.00%

Run 4: Report of TCP Vegas — Data Link

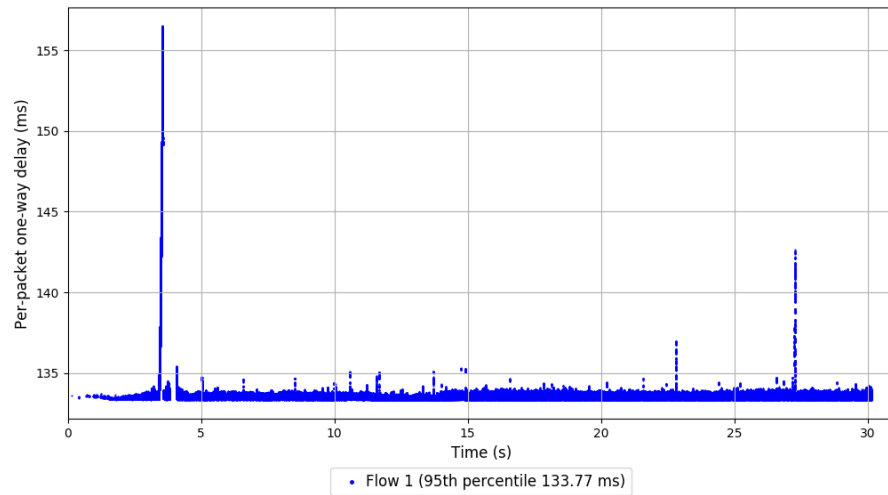
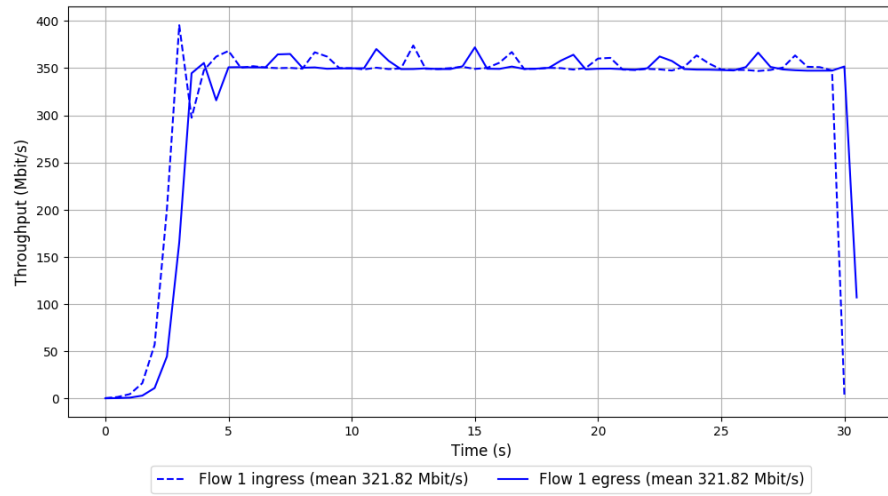


Run 5: Statistics of TCP Vegas

Start at: 2019-01-03 06:52:36
End at: 2019-01-03 06:53:06
Local clock offset: -0.115 ms
Remote clock offset: -0.034 ms

Below is generated by plot.py at 2019-01-03 08:47:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 321.82 Mbit/s
95th percentile per-packet one-way delay: 133.769 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 321.82 Mbit/s
95th percentile per-packet one-way delay: 133.769 ms
Loss rate: 0.00%

Run 5: Report of TCP Vegas — Data Link

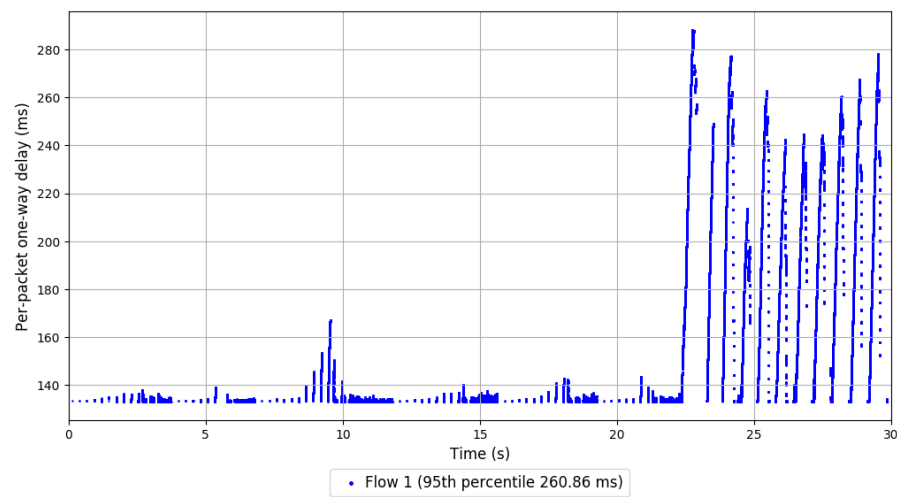
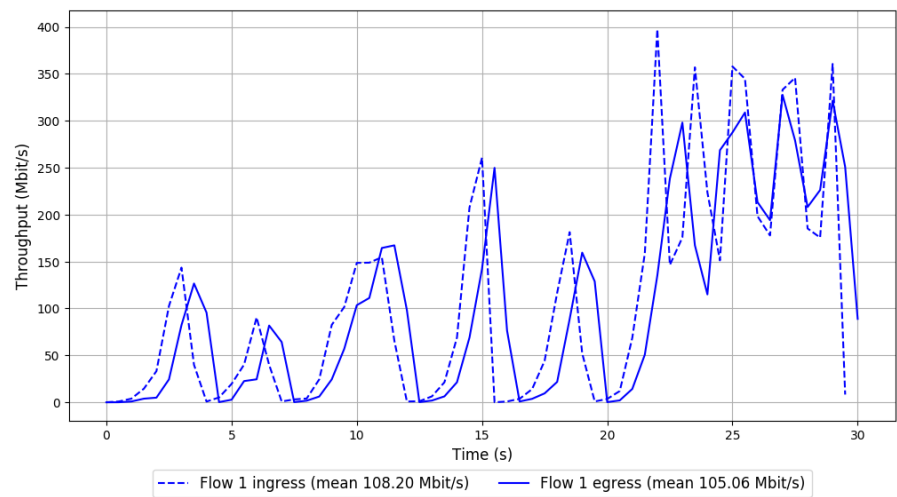


Run 1: Statistics of Verus

Start at: 2019-01-03 04:55:16
End at: 2019-01-03 04:55:46
Local clock offset: -0.002 ms
Remote clock offset: -0.013 ms

Below is generated by plot.py at 2019-01-03 08:47:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 105.06 Mbit/s
95th percentile per-packet one-way delay: 260.863 ms
Loss rate: 2.91%
-- Flow 1:
Average throughput: 105.06 Mbit/s
95th percentile per-packet one-way delay: 260.863 ms
Loss rate: 2.91%

Run 1: Report of Verus — Data Link

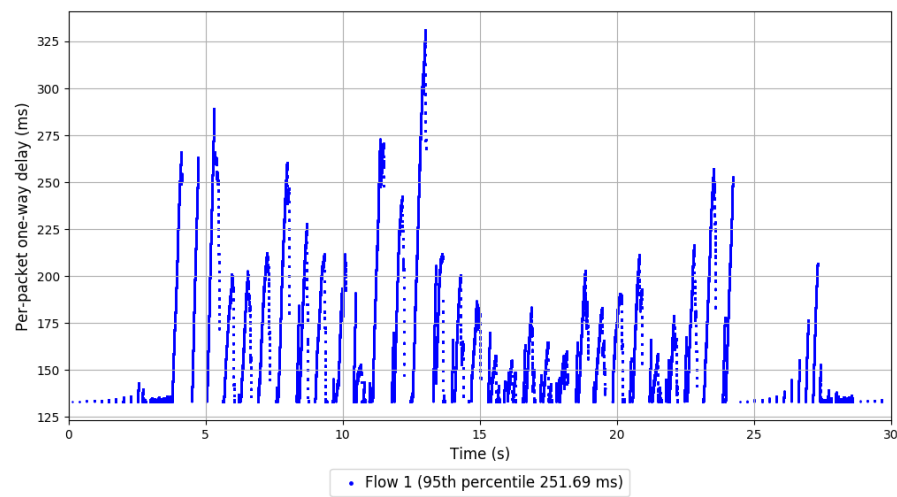
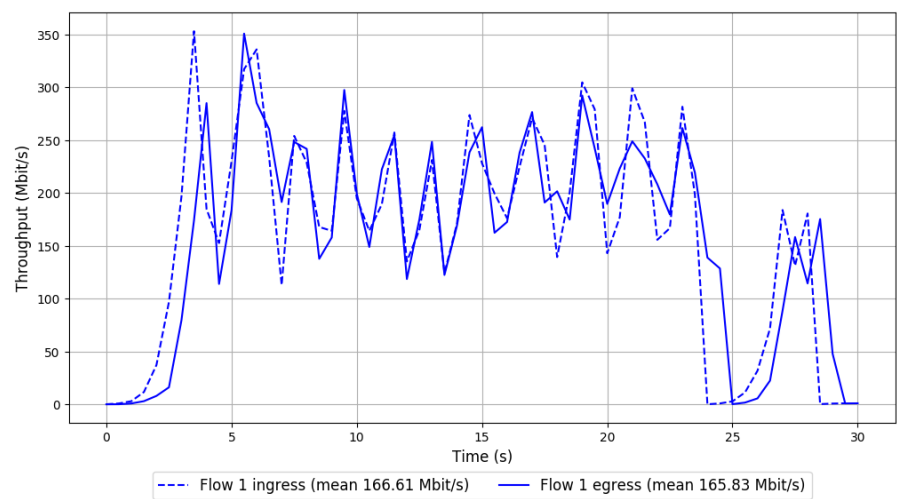


Run 2: Statistics of Verus

Start at: 2019-01-03 05:24:25
End at: 2019-01-03 05:24:55
Local clock offset: -0.276 ms
Remote clock offset: -0.042 ms

Below is generated by plot.py at 2019-01-03 08:47:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 165.83 Mbit/s
95th percentile per-packet one-way delay: 251.691 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 165.83 Mbit/s
95th percentile per-packet one-way delay: 251.691 ms
Loss rate: 0.47%

Run 2: Report of Verus — Data Link

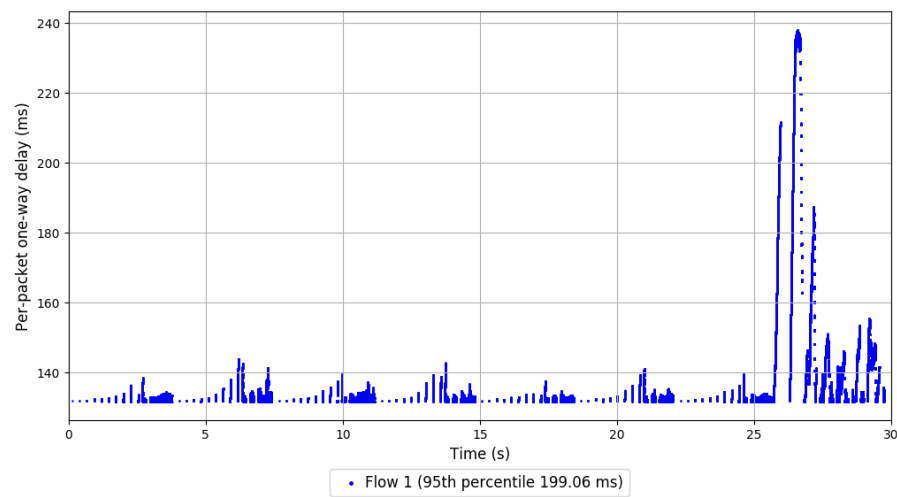
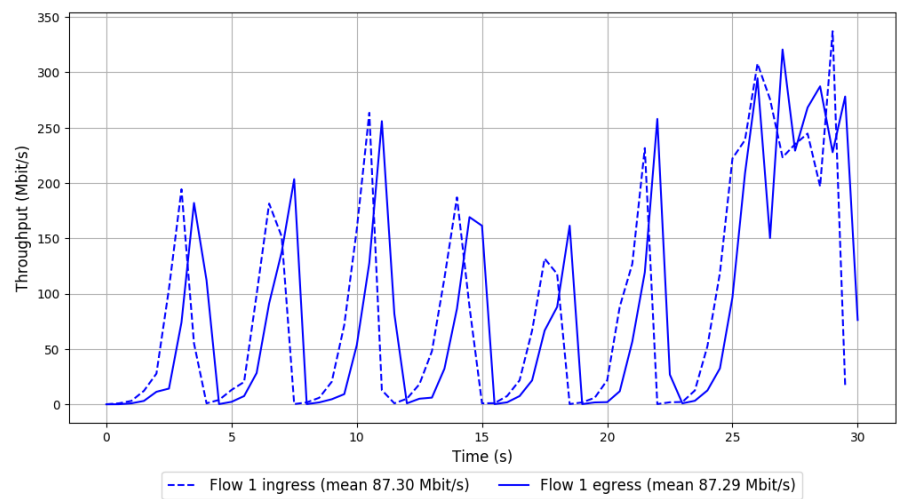


Run 3: Statistics of Verus

Start at: 2019-01-03 05:53:08
End at: 2019-01-03 05:53:38
Local clock offset: 0.323 ms
Remote clock offset: -0.114 ms

Below is generated by plot.py at 2019-01-03 08:47:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 87.29 Mbit/s
95th percentile per-packet one-way delay: 199.058 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 87.29 Mbit/s
95th percentile per-packet one-way delay: 199.058 ms
Loss rate: 0.00%

Run 3: Report of Verus — Data Link

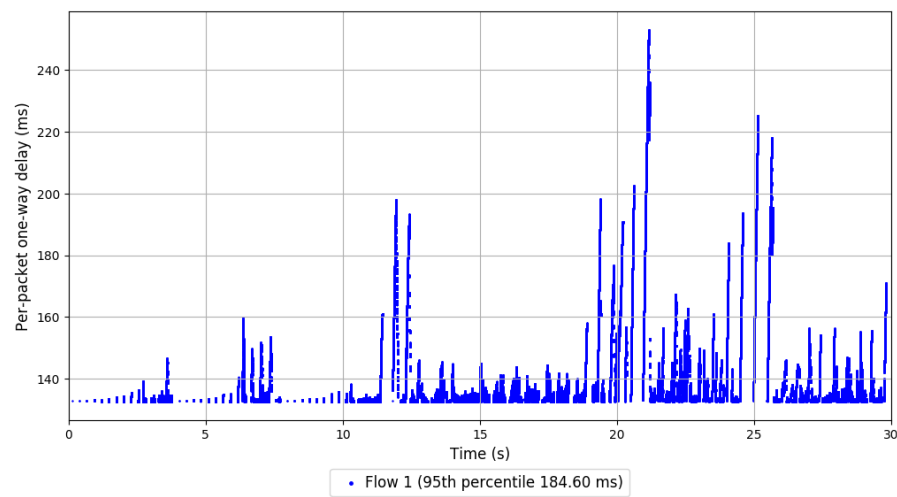
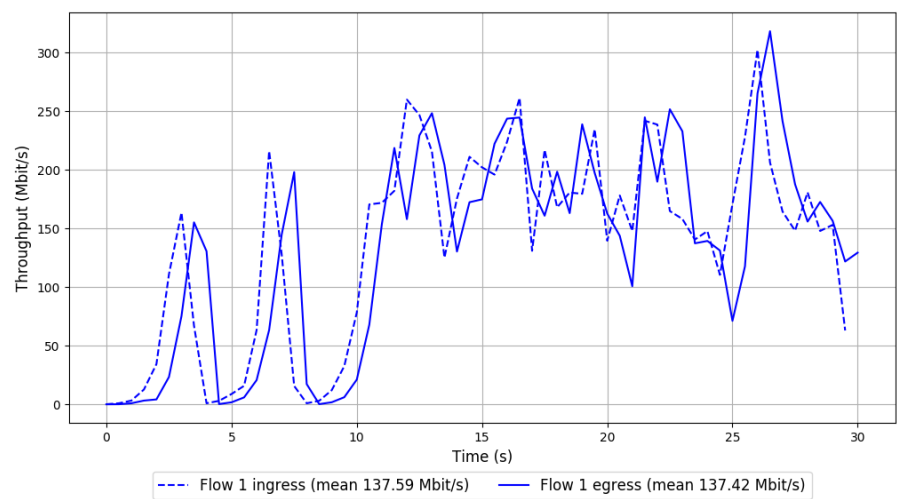


Run 4: Statistics of Verus

Start at: 2019-01-03 06:22:29
End at: 2019-01-03 06:22:59
Local clock offset: -0.021 ms
Remote clock offset: -0.015 ms

Below is generated by plot.py at 2019-01-03 08:49:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 137.42 Mbit/s
95th percentile per-packet one-way delay: 184.599 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 137.42 Mbit/s
95th percentile per-packet one-way delay: 184.599 ms
Loss rate: 0.00%

Run 4: Report of Verus — Data Link

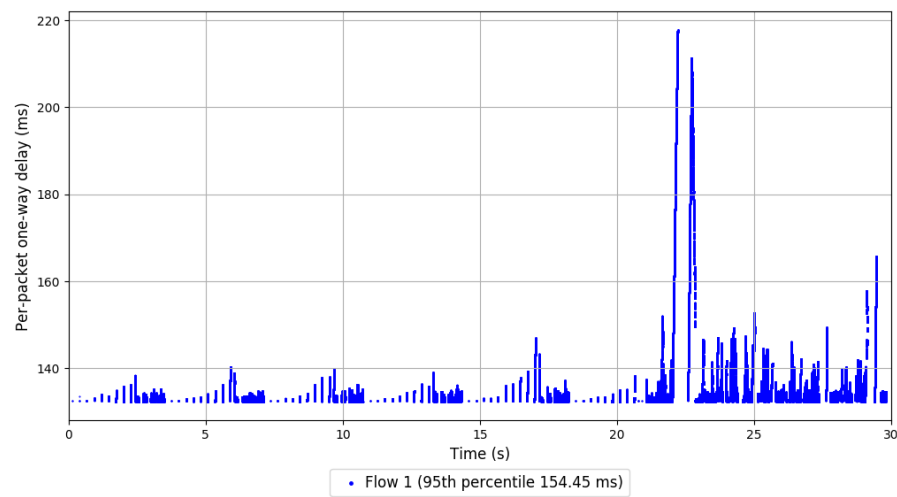
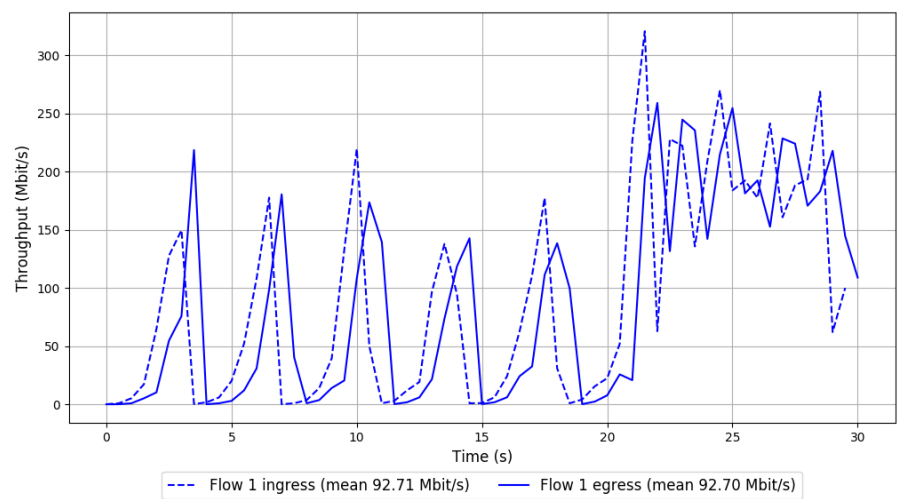


Run 5: Statistics of Verus

Start at: 2019-01-03 06:51:14
End at: 2019-01-03 06:51:44
Local clock offset: -0.113 ms
Remote clock offset: -0.033 ms

Below is generated by plot.py at 2019-01-03 08:49:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 92.70 Mbit/s
95th percentile per-packet one-way delay: 154.452 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 92.70 Mbit/s
95th percentile per-packet one-way delay: 154.452 ms
Loss rate: 0.00%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2019-01-03 04:49:31

End at: 2019-01-03 04:50:01

Local clock offset: -0.261 ms

Remote clock offset: 0.314 ms

Below is generated by plot.py at 2019-01-03 08:51:23

Datalink statistics

-- Total of 1 flow:

Average throughput: 343.74 Mbit/s

95th percentile per-packet one-way delay: 134.102 ms

Loss rate: 0.00%

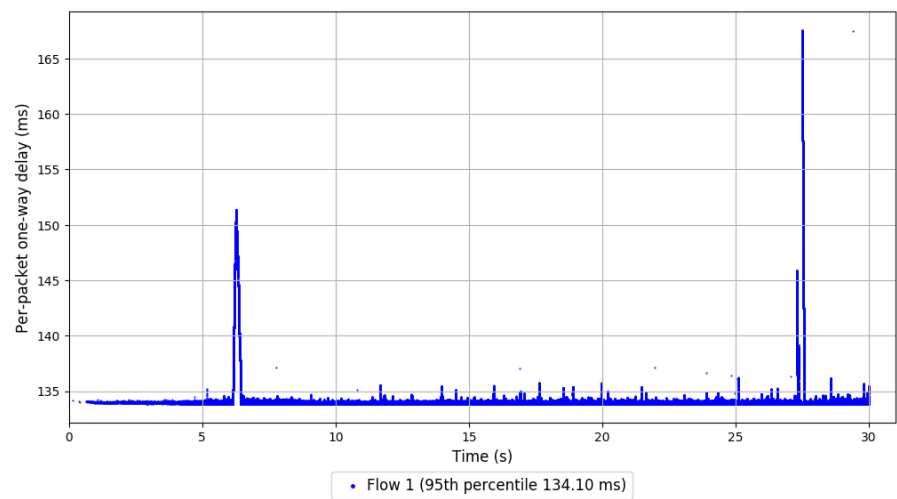
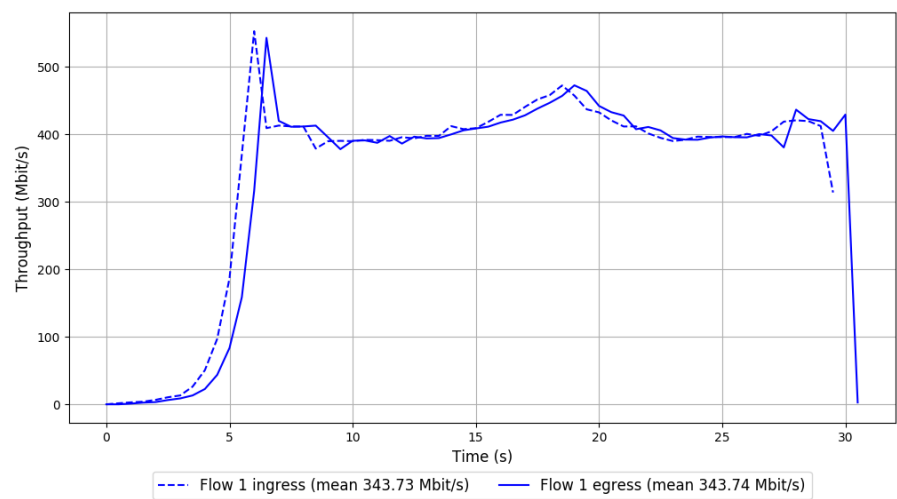
-- Flow 1:

Average throughput: 343.74 Mbit/s

95th percentile per-packet one-way delay: 134.102 ms

Loss rate: 0.00%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2019-01-03 05:18:41

End at: 2019-01-03 05:19:11

Local clock offset: -0.016 ms

Remote clock offset: -0.04 ms

Below is generated by plot.py at 2019-01-03 08:52:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 355.83 Mbit/s

95th percentile per-packet one-way delay: 134.803 ms

Loss rate: 0.11%

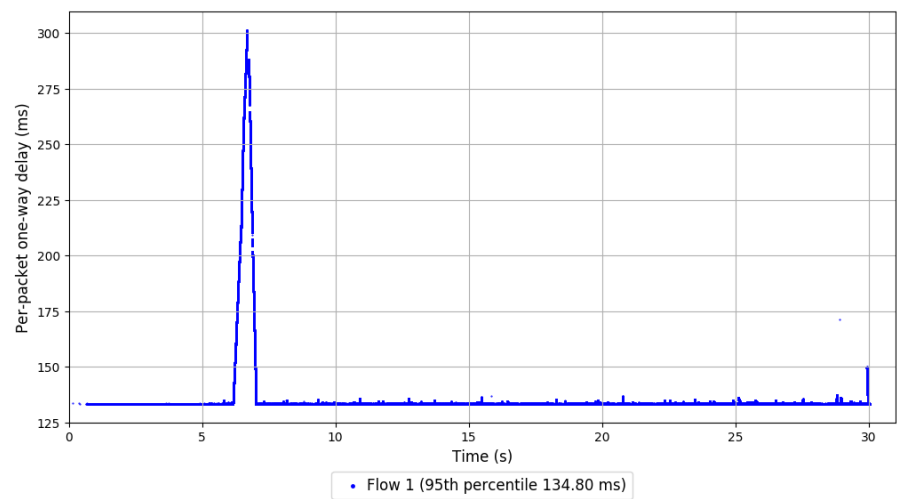
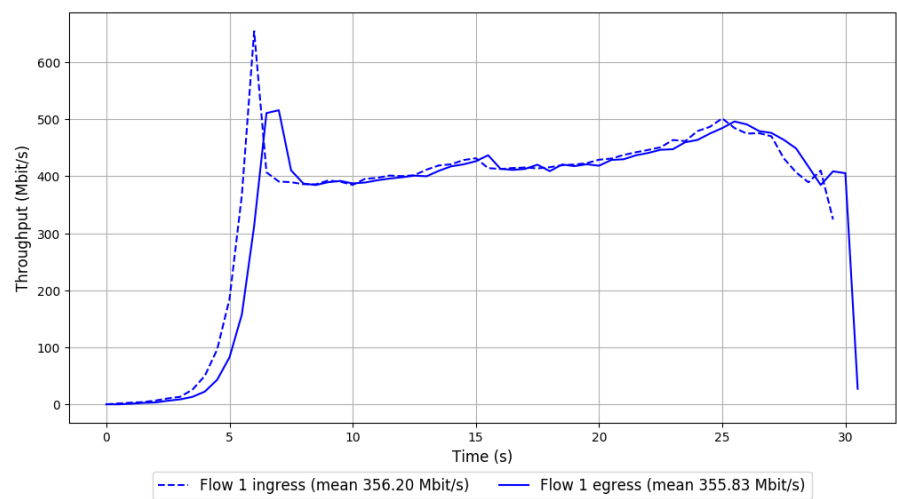
-- Flow 1:

Average throughput: 355.83 Mbit/s

95th percentile per-packet one-way delay: 134.803 ms

Loss rate: 0.11%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2019-01-03 05:47:26

End at: 2019-01-03 05:47:56

Local clock offset: 0.271 ms

Remote clock offset: -0.121 ms

Below is generated by plot.py at 2019-01-03 08:52:23

Datalink statistics

-- Total of 1 flow:

Average throughput: 349.30 Mbit/s

95th percentile per-packet one-way delay: 133.648 ms

Loss rate: 0.00%

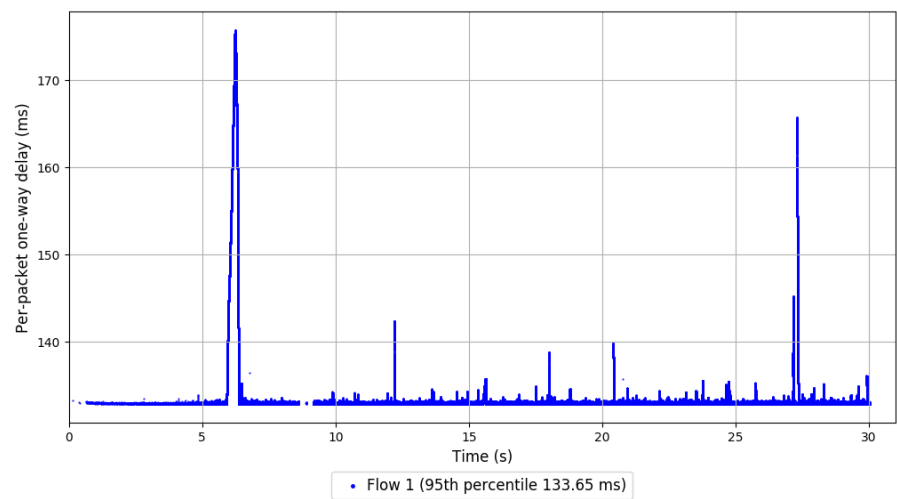
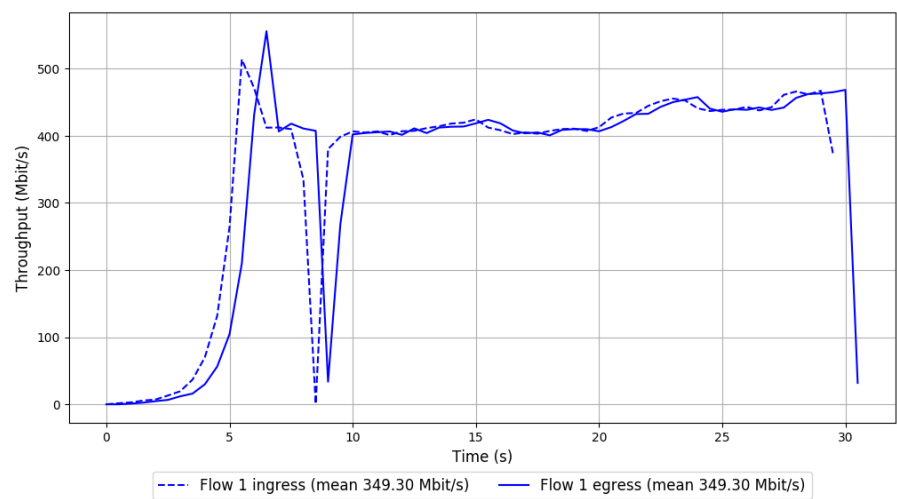
-- Flow 1:

Average throughput: 349.30 Mbit/s

95th percentile per-packet one-way delay: 133.648 ms

Loss rate: 0.00%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2019-01-03 06:16:44

End at: 2019-01-03 06:17:14

Local clock offset: 0.146 ms

Remote clock offset: 0.021 ms

Below is generated by plot.py at 2019-01-03 08:52:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 389.50 Mbit/s

95th percentile per-packet one-way delay: 135.348 ms

Loss rate: 0.20%

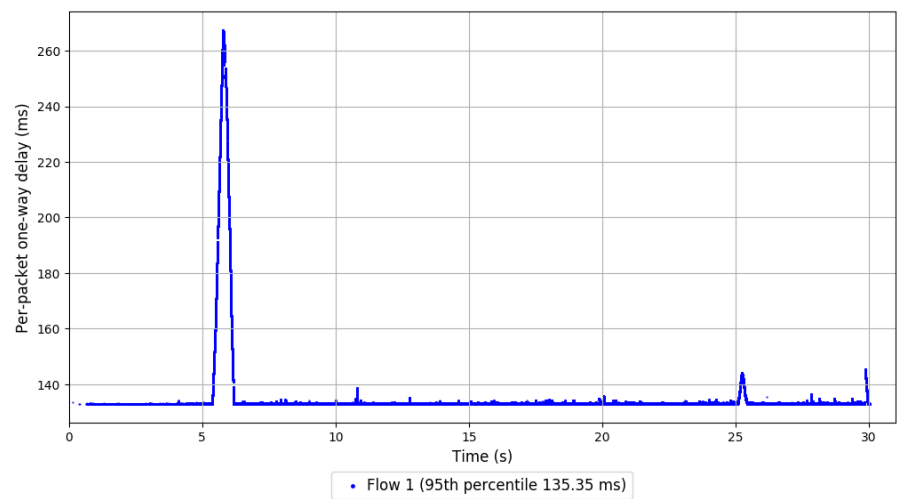
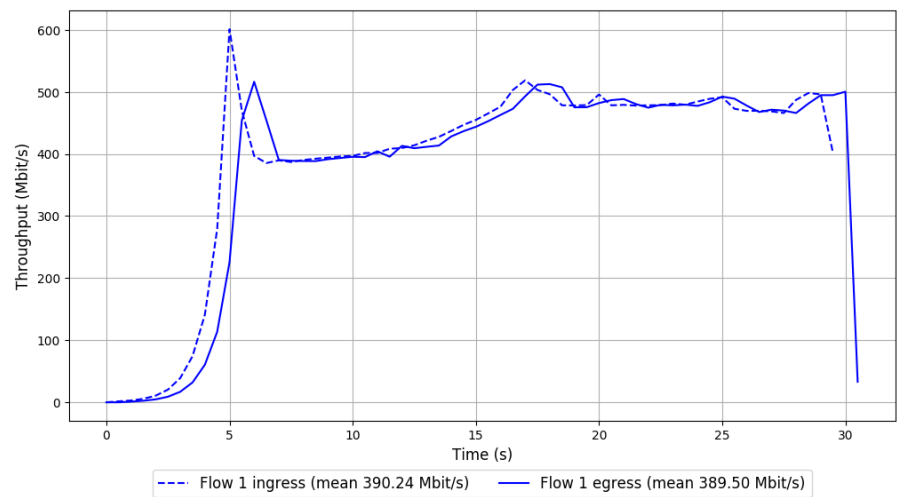
-- Flow 1:

Average throughput: 389.50 Mbit/s

95th percentile per-packet one-way delay: 135.348 ms

Loss rate: 0.20%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2019-01-03 06:45:28

End at: 2019-01-03 06:45:58

Local clock offset: 0.079 ms

Remote clock offset: -0.023 ms

Below is generated by plot.py at 2019-01-03 08:52:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 389.52 Mbit/s

95th percentile per-packet one-way delay: 138.038 ms

Loss rate: 0.18%

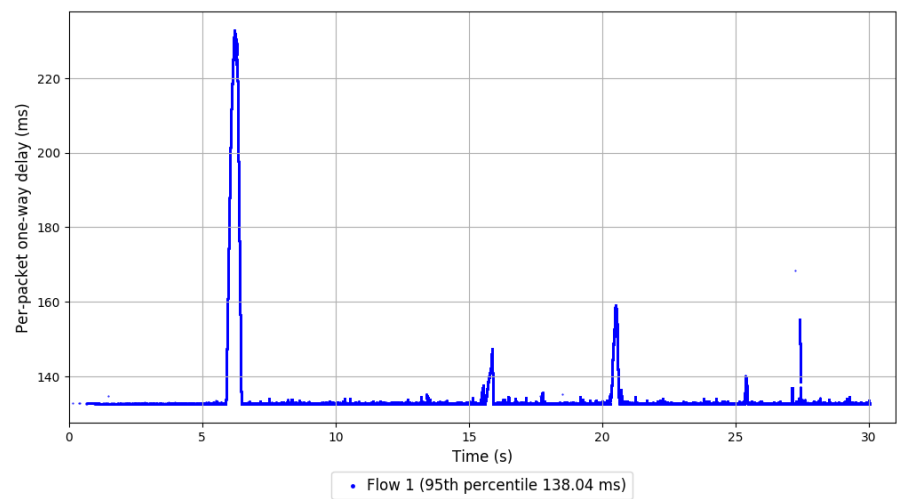
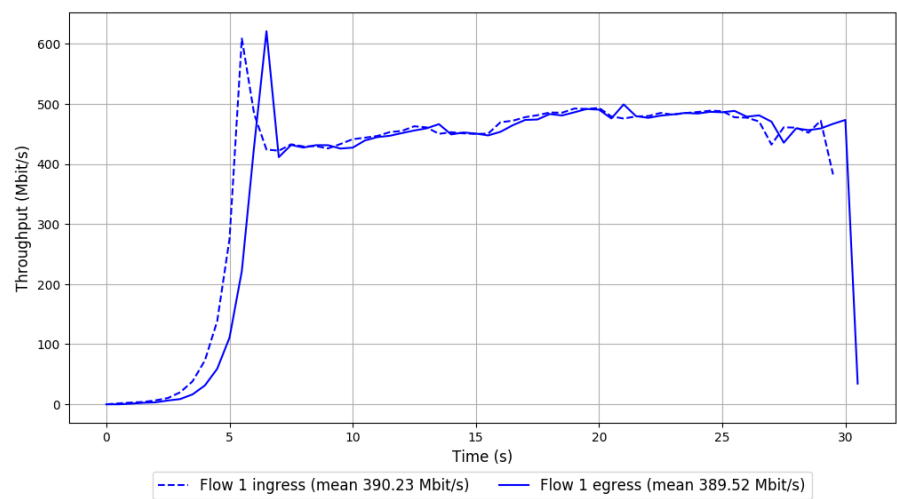
-- Flow 1:

Average throughput: 389.52 Mbit/s

95th percentile per-packet one-way delay: 138.038 ms

Loss rate: 0.18%

Run 5: Report of PCC-Vivace — Data Link

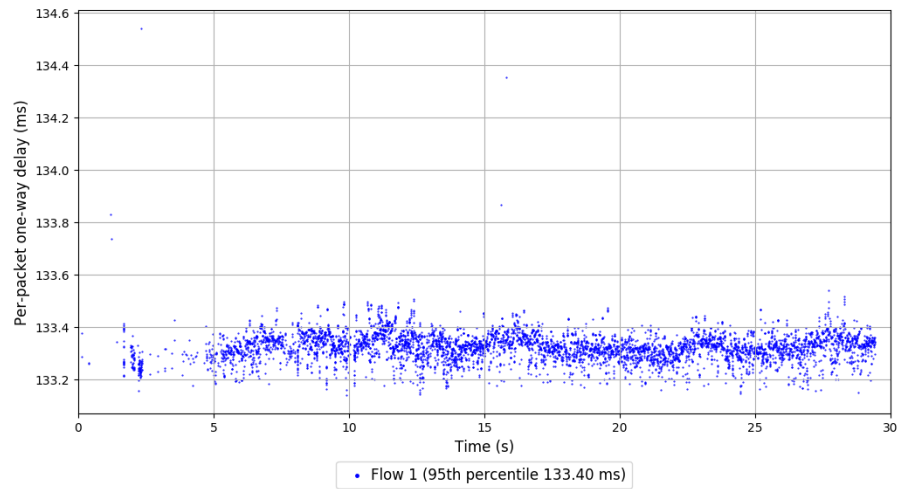
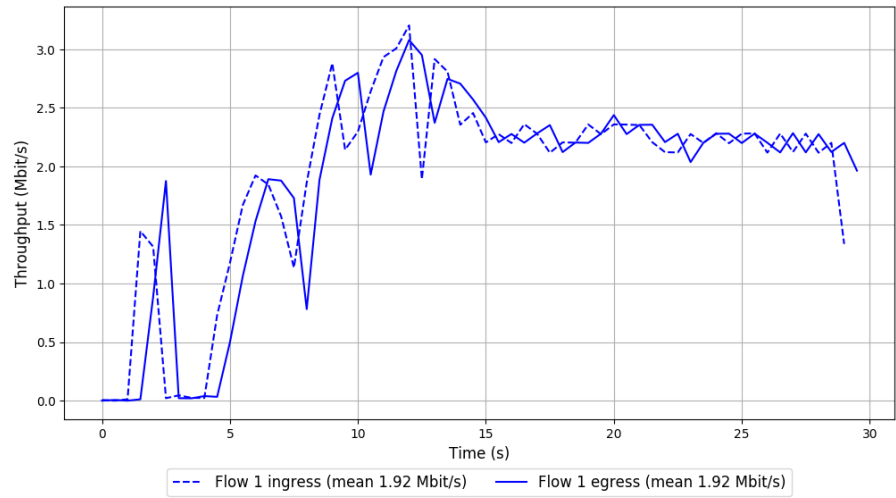


Run 1: Statistics of WebRTC media

Start at: 2019-01-03 04:54:05
End at: 2019-01-03 04:54:35
Local clock offset: 0.096 ms
Remote clock offset: -0.005 ms

Below is generated by plot.py at 2019-01-03 08:52:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 133.402 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 133.402 ms
Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2019-01-03 05:23:15

End at: 2019-01-03 05:23:45

Local clock offset: -0.039 ms

Remote clock offset: 0.323 ms

Below is generated by plot.py at 2019-01-03 08:52:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 133.389 ms

Loss rate: 0.00%

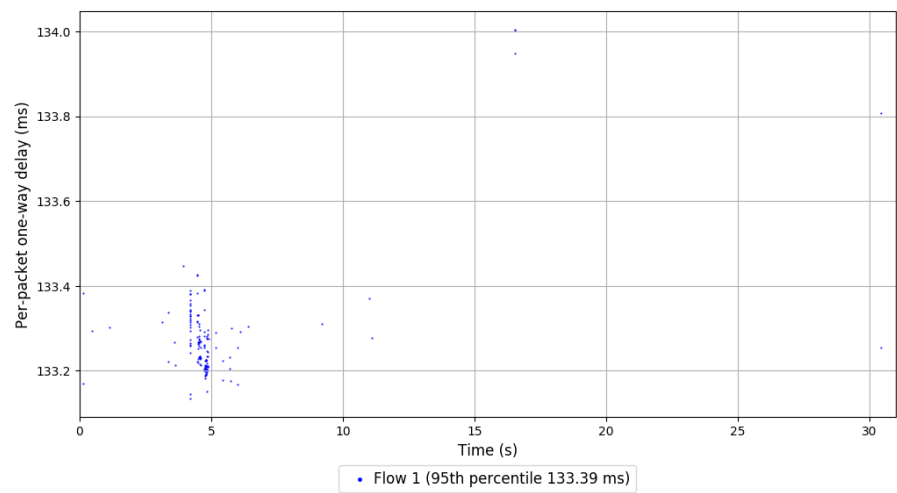
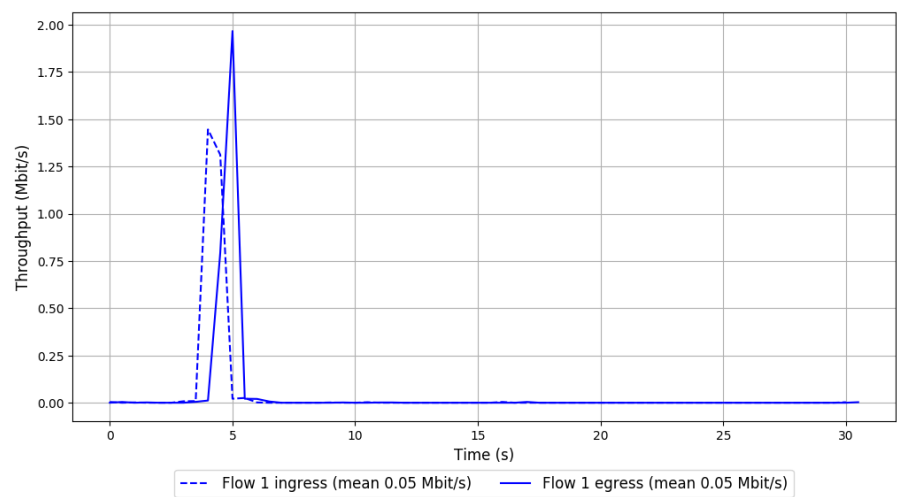
-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 133.389 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2019-01-03 05:51:58

End at: 2019-01-03 05:52:28

Local clock offset: -0.083 ms

Remote clock offset: -0.09 ms

Below is generated by plot.py at 2019-01-03 08:52:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 132.359 ms

Loss rate: 0.00%

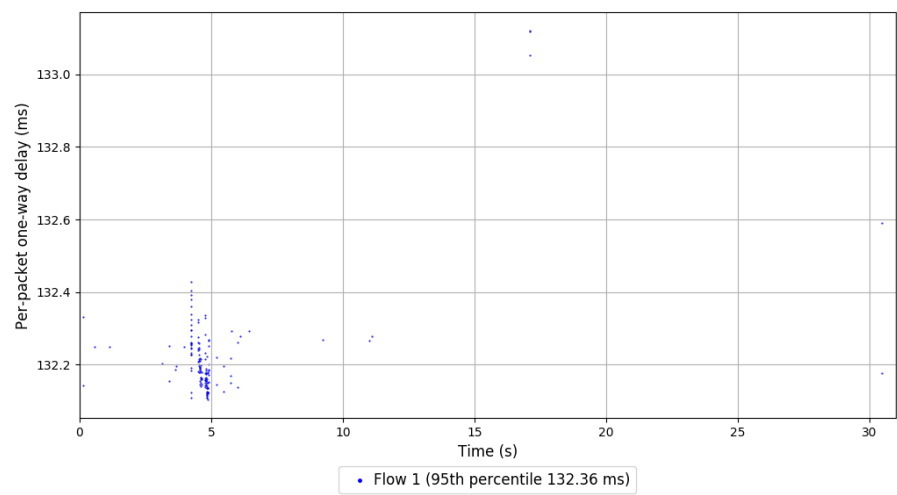
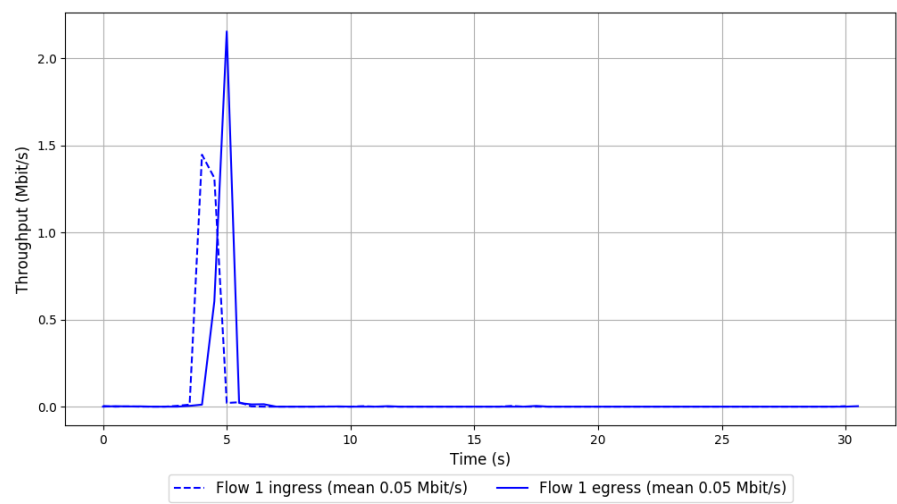
-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 132.359 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2019-01-03 06:21:19

End at: 2019-01-03 06:21:49

Local clock offset: 0.08 ms

Remote clock offset: 0.037 ms

Below is generated by plot.py at 2019-01-03 08:52:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 133.191 ms

Loss rate: 0.00%

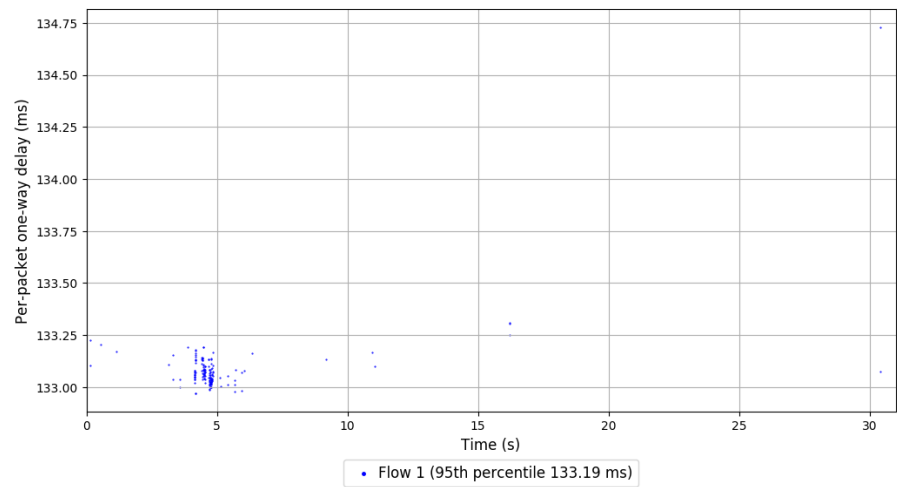
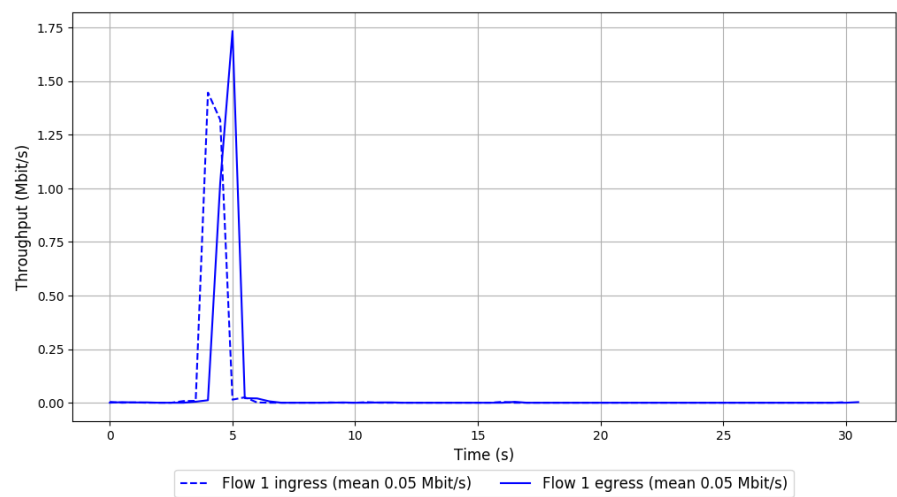
-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 133.191 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2019-01-03 06:50:04
End at: 2019-01-03 06:50:34
Local clock offset: -0.507 ms
Remote clock offset: -0.036 ms

Below is generated by plot.py at 2019-01-03 08:52:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 134.029 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 134.029 ms
Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

