

Pantheon Report

Generated at 2018-12-20 01:33:03 (UTC).

Data path: AWS California 1 on `ens5` (*local*) → Stanford on `eno1` (*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.stanford.edu` and have been applied to correct the timestamps in logs.

System info:

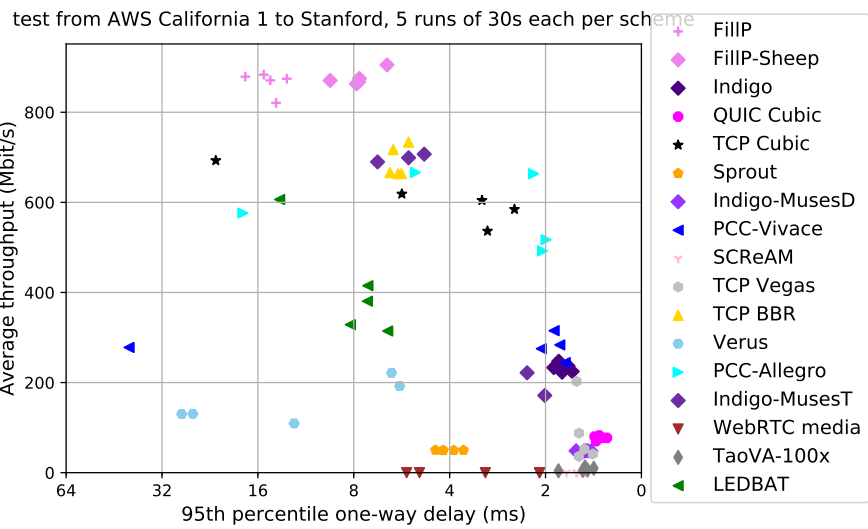
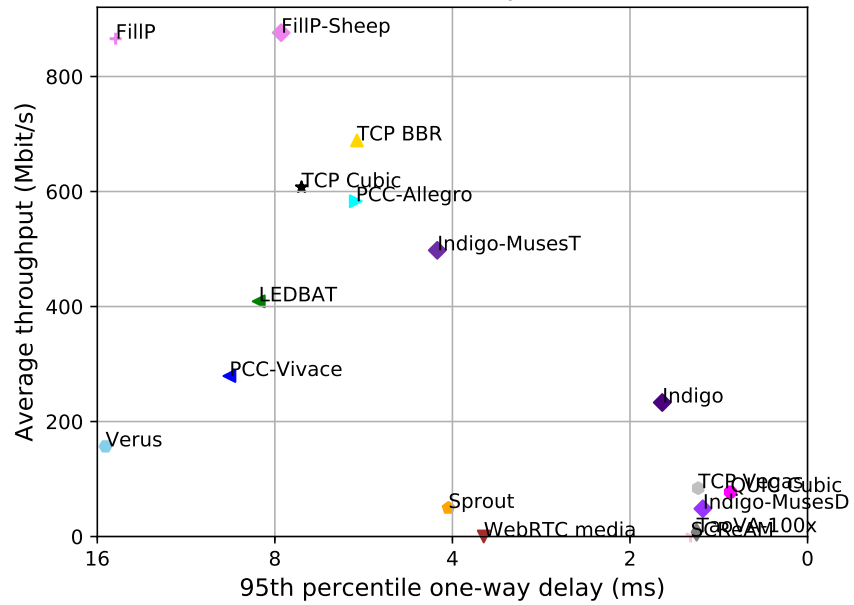
```
Linux 4.15.0-1029-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

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 AWS California 1 to Stanford, 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	688.84	5.81	0.29
Copa	0	N/A	N/A	N/A
TCP Cubic	5	607.42	7.21	0.15
FillP	5	865.72	14.89	4.05
FillP-Sheep	5	876.19	7.81	4.21
Indigo	5	233.08	1.64	0.03
Indigo-MusesD	5	48.40	1.18	0.01
Indigo-MusesT	5	497.77	4.24	0.41
LEDBAT	5	409.01	8.52	0.14
PCC-Allegro	5	583.10	5.83	0.39
PCC-Expr	0	N/A	N/A	N/A
QUIC Cubic	5	77.48	0.87	0.01
SCReAM	5	0.22	1.32	0.00
Sprout	5	49.74	4.06	0.37
TaoVA-100x	5	7.53	1.25	42.52
TCP Vegas	5	84.09	1.23	0.04
Verus	5	156.79	15.50	1.60
PCC-Vivace	5	279.19	9.55	0.17
WebRTC media	5	0.05	3.54	0.00

Run 1: Statistics of TCP BBR

Start at: 2018-12-19 22:54:55

End at: 2018-12-19 22:55:25

Local clock offset: 3.501 ms

Remote clock offset: -3.079 ms

Below is generated by plot.py at 2018-12-20 00:58:59

Datalink statistics

-- Total of 1 flow:

Average throughput: 663.53 Mbit/s

95th percentile per-packet one-way delay: 5.807 ms

Loss rate: 0.26%

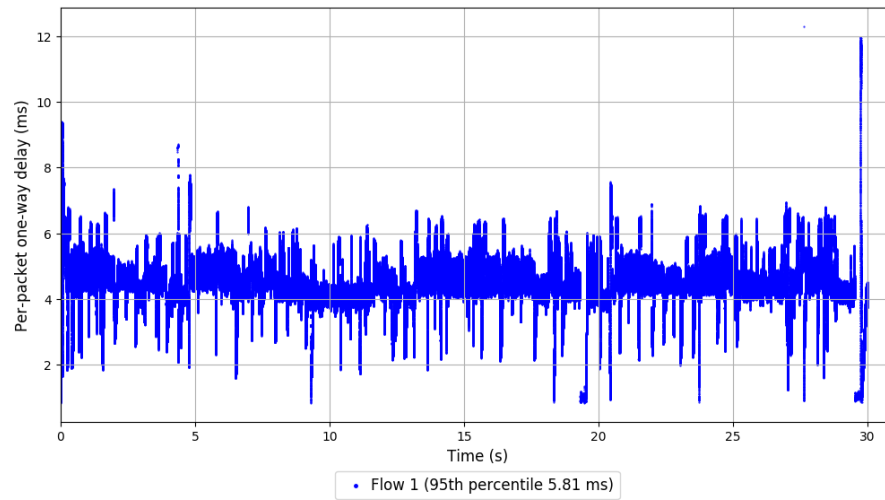
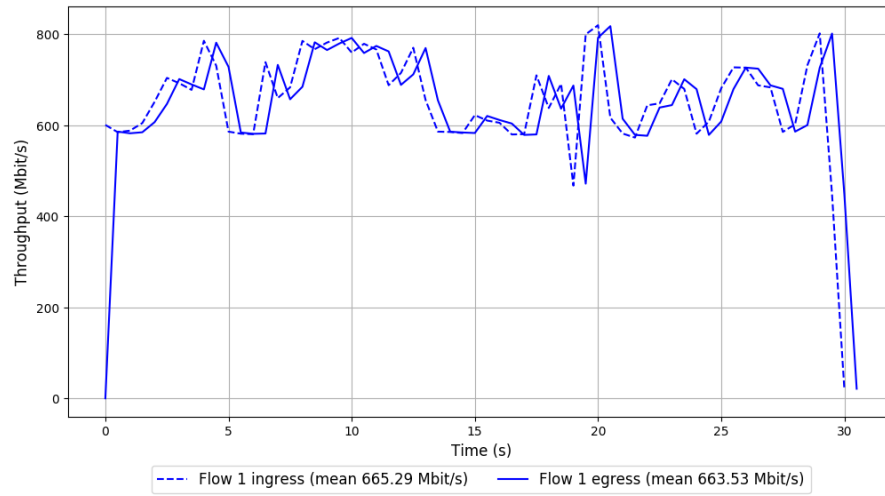
-- Flow 1:

Average throughput: 663.53 Mbit/s

95th percentile per-packet one-way delay: 5.807 ms

Loss rate: 0.26%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-12-19 23:20:37

End at: 2018-12-19 23:21:07

Local clock offset: 0.785 ms

Remote clock offset: -1.261 ms

Below is generated by plot.py at 2018-12-20 00:58:59

Datalink statistics

-- Total of 1 flow:

Average throughput: 663.93 Mbit/s

95th percentile per-packet one-way delay: 5.667 ms

Loss rate: 0.22%

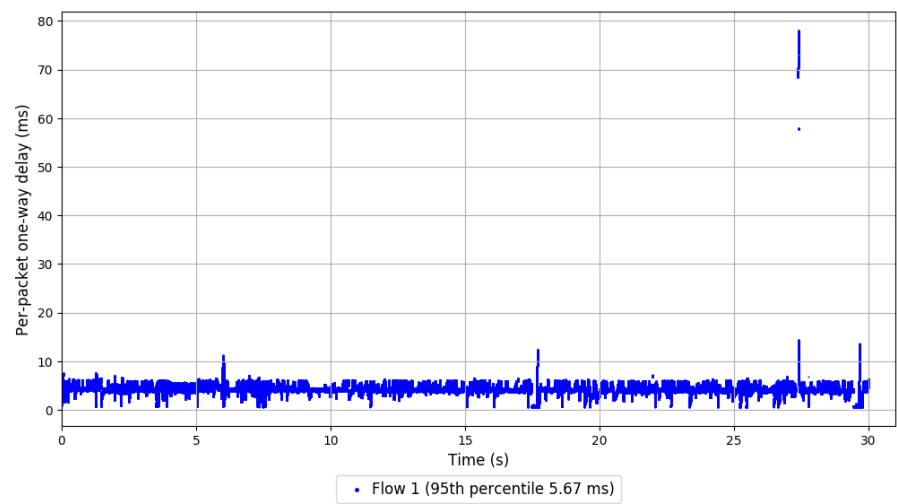
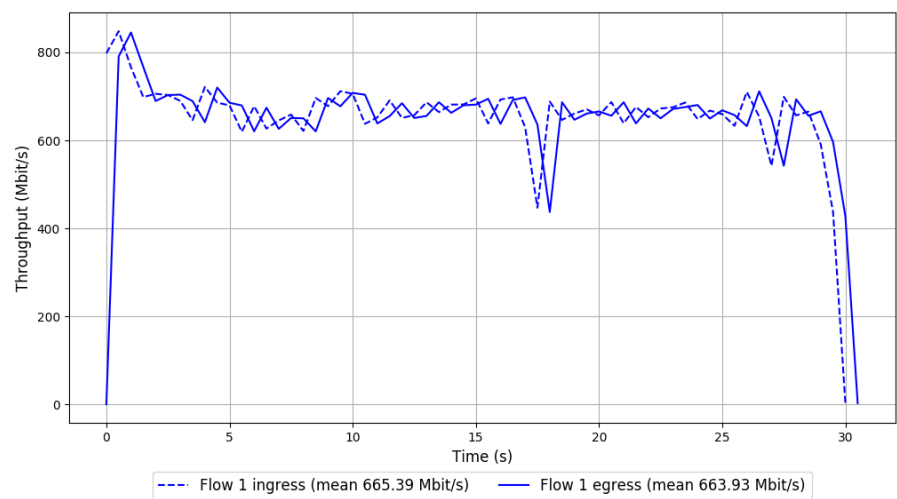
-- Flow 1:

Average throughput: 663.93 Mbit/s

95th percentile per-packet one-way delay: 5.667 ms

Loss rate: 0.22%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-12-19 23:46:22

End at: 2018-12-19 23:46:52

Local clock offset: 0.12 ms

Remote clock offset: 0.932 ms

Below is generated by plot.py at 2018-12-20 00:58:59

Datalink statistics

-- Total of 1 flow:

Average throughput: 665.98 Mbit/s

95th percentile per-packet one-way delay: 6.158 ms

Loss rate: 0.29%

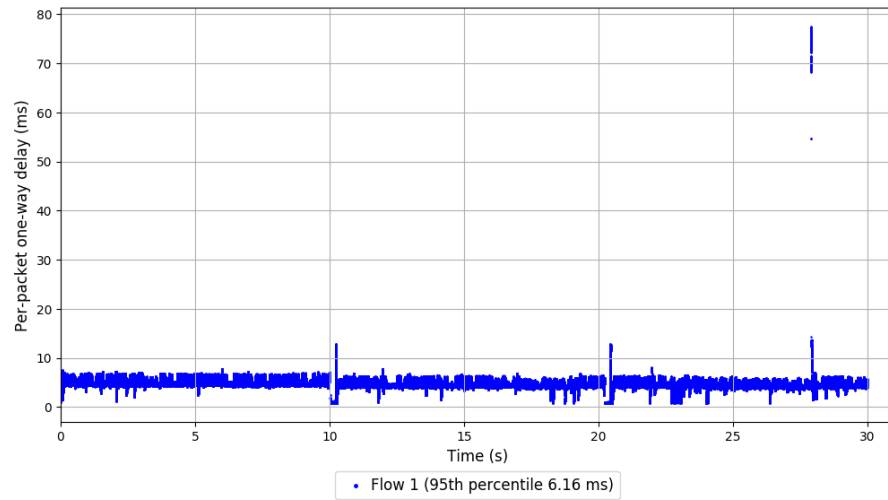
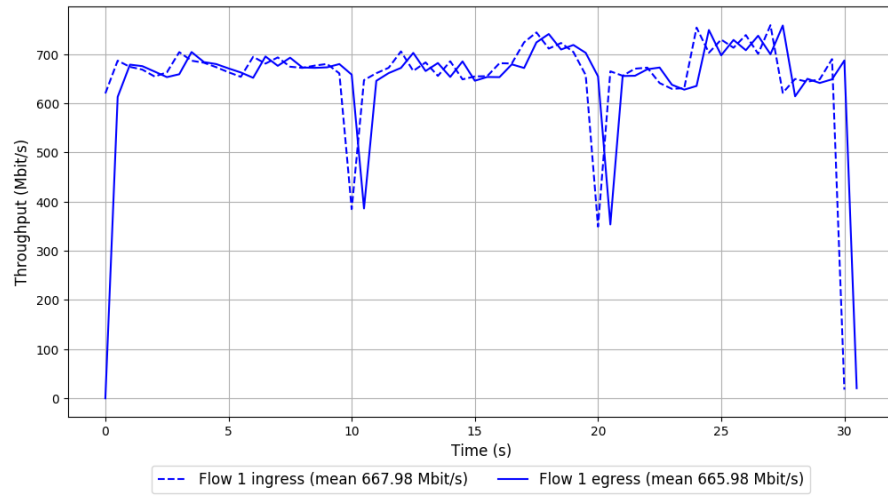
-- Flow 1:

Average throughput: 665.98 Mbit/s

95th percentile per-packet one-way delay: 6.158 ms

Loss rate: 0.29%

Run 3: Report of TCP BBR — Data Link

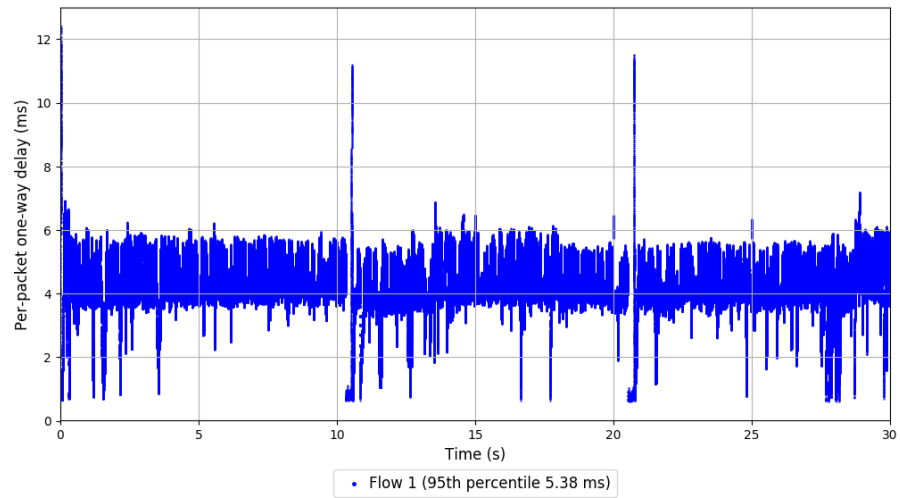
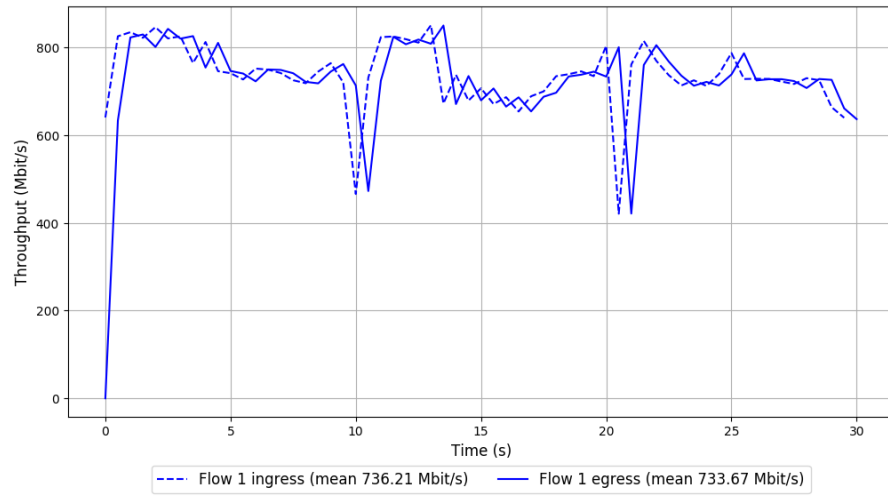


Run 4: Statistics of TCP BBR

Start at: 2018-12-20 00:12:17
End at: 2018-12-20 00:12:47
Local clock offset: -1.529 ms
Remote clock offset: -2.398 ms

Below is generated by plot.py at 2018-12-20 00:59:39
Datalink statistics
-- Total of 1 flow:
Average throughput: 733.67 Mbit/s
95th percentile per-packet one-way delay: 5.383 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 733.67 Mbit/s
95th percentile per-packet one-way delay: 5.383 ms
Loss rate: 0.34%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-12-20 00:38:22

End at: 2018-12-20 00:38:52

Local clock offset: -2.449 ms

Remote clock offset: -2.87 ms

Below is generated by plot.py at 2018-12-20 00:59:39

Datalink statistics

-- Total of 1 flow:

Average throughput: 717.10 Mbit/s

95th percentile per-packet one-way delay: 6.016 ms

Loss rate: 0.33%

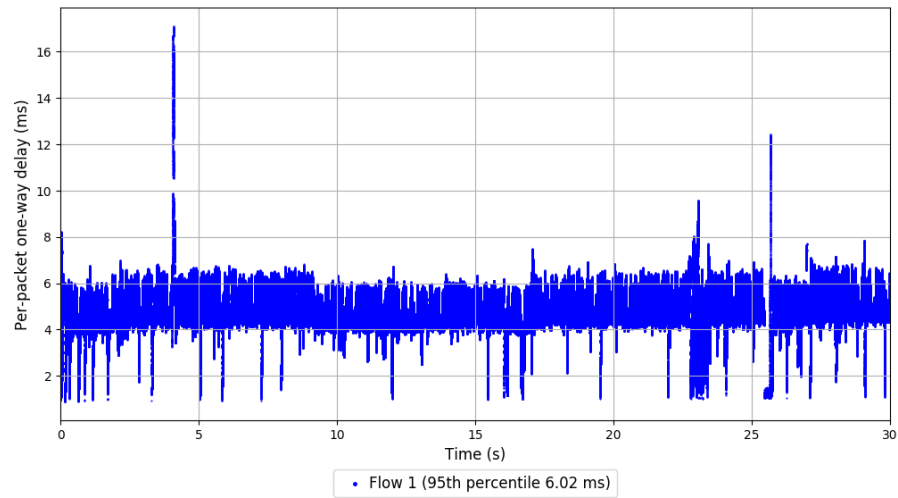
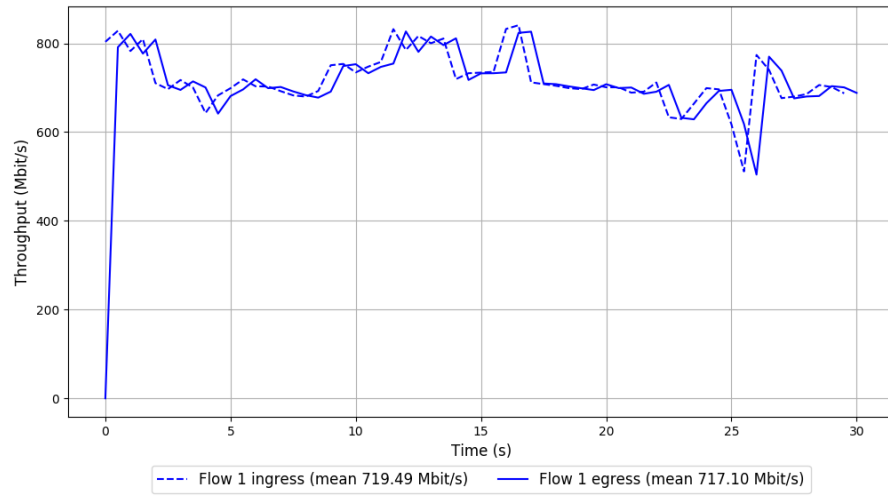
-- Flow 1:

Average throughput: 717.10 Mbit/s

95th percentile per-packet one-way delay: 6.016 ms

Loss rate: 0.33%

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

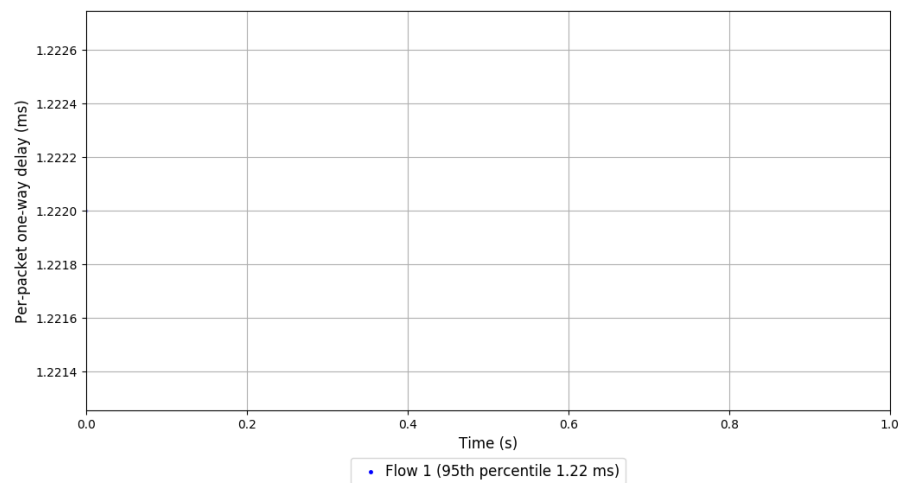
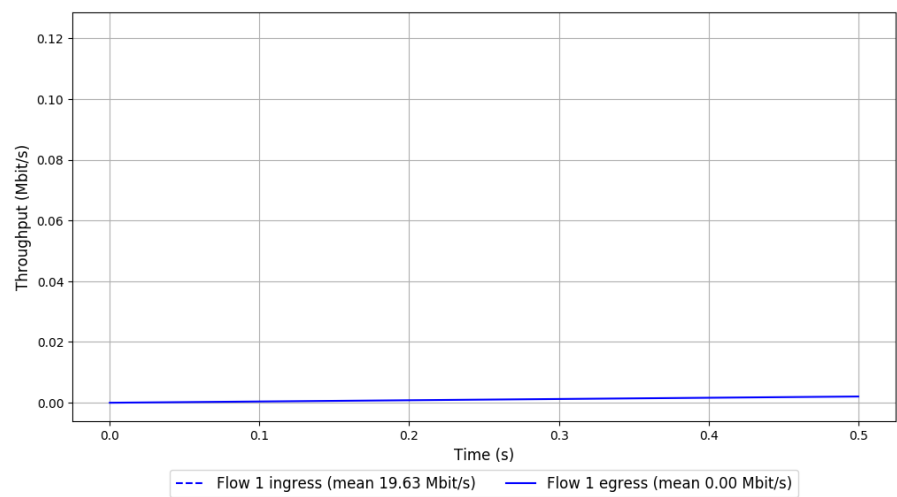
Start at: 2018-12-19 22:49:47

End at: 2018-12-19 22:50:17

Local clock offset: 3.018 ms

Remote clock offset: -2.696 ms

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

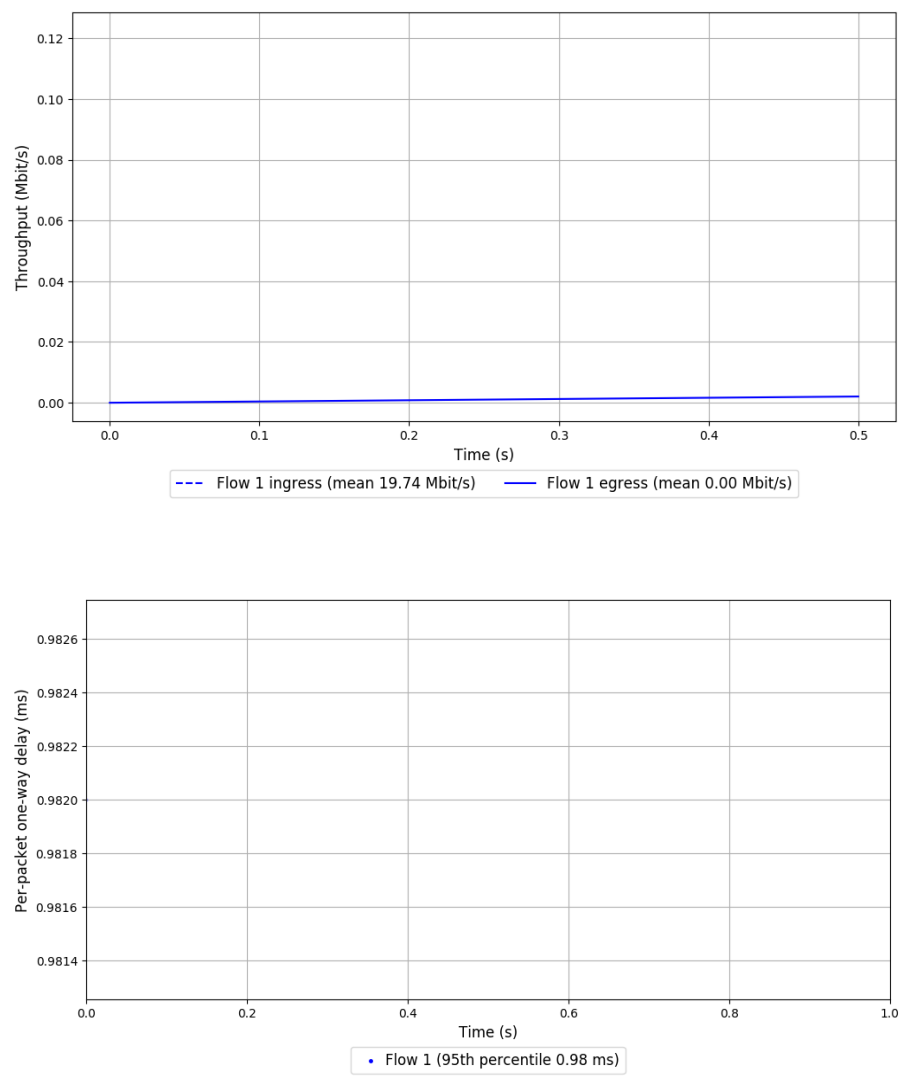
Start at: 2018-12-19 23:15:32

End at: 2018-12-19 23:16:02

Local clock offset: 1.392 ms

Remote clock offset: -2.676 ms

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

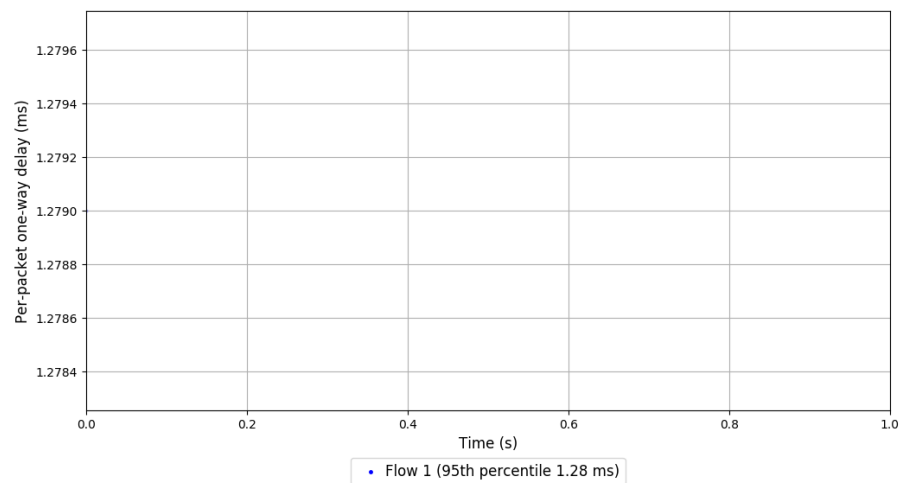
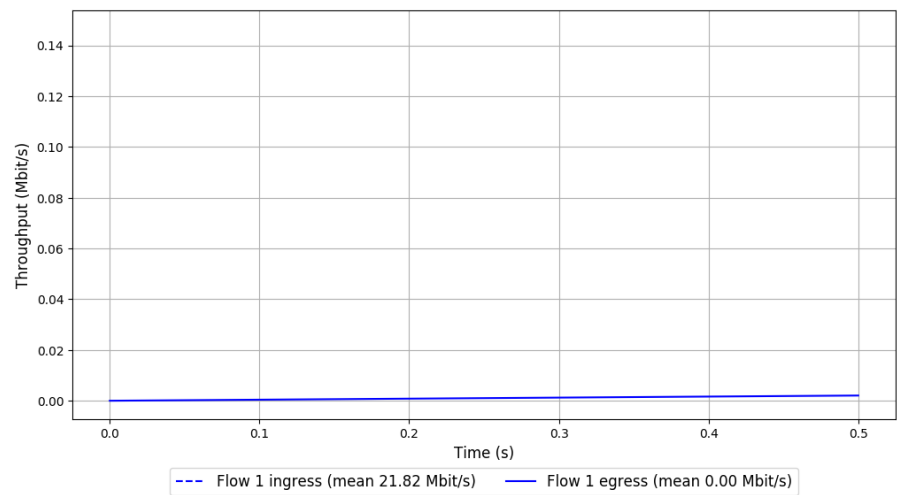
Start at: 2018-12-19 23:41:12

End at: 2018-12-19 23:41:42

Local clock offset: 0.069 ms

Remote clock offset: 0.667 ms

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

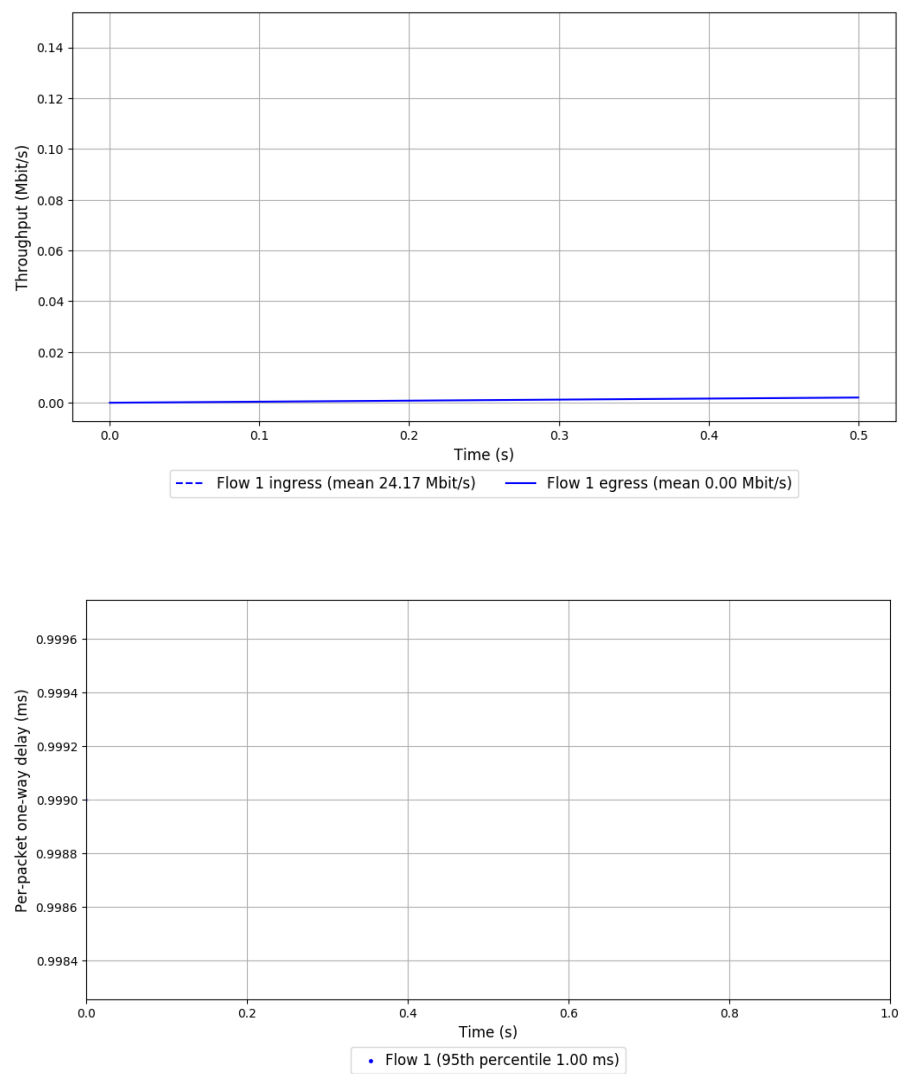
Start at: 2018-12-20 00:07:10

End at: 2018-12-20 00:07:40

Local clock offset: -0.407 ms

Remote clock offset: -2.173 ms

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

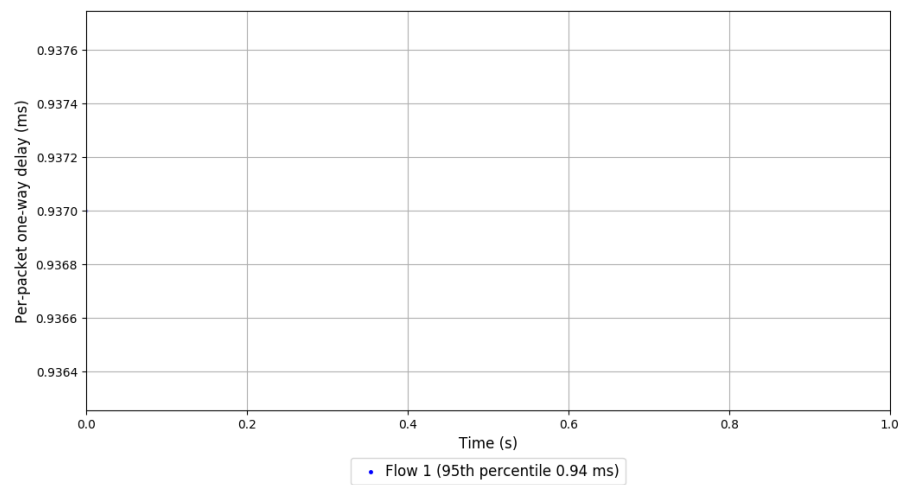
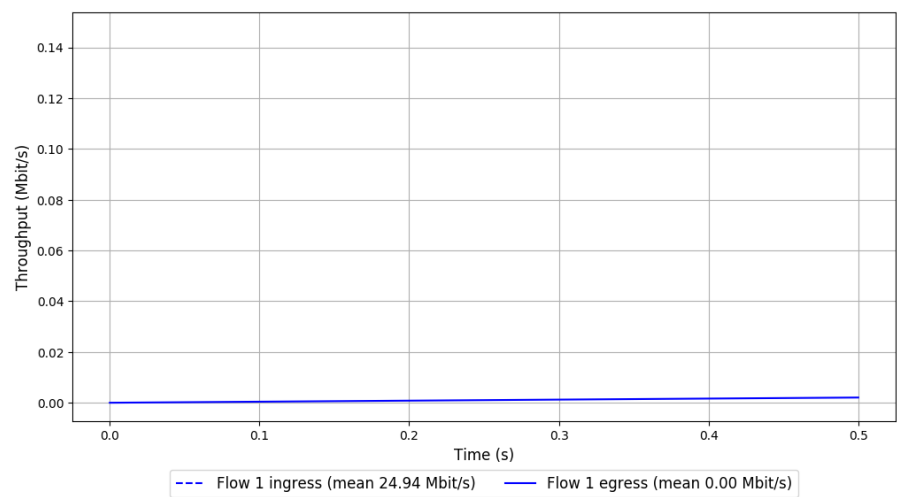
Start at: 2018-12-20 00:33:13

End at: 2018-12-20 00:33:43

Local clock offset: -3.477 ms

Remote clock offset: -2.759 ms

Run 5: Report of Copa — Data Link

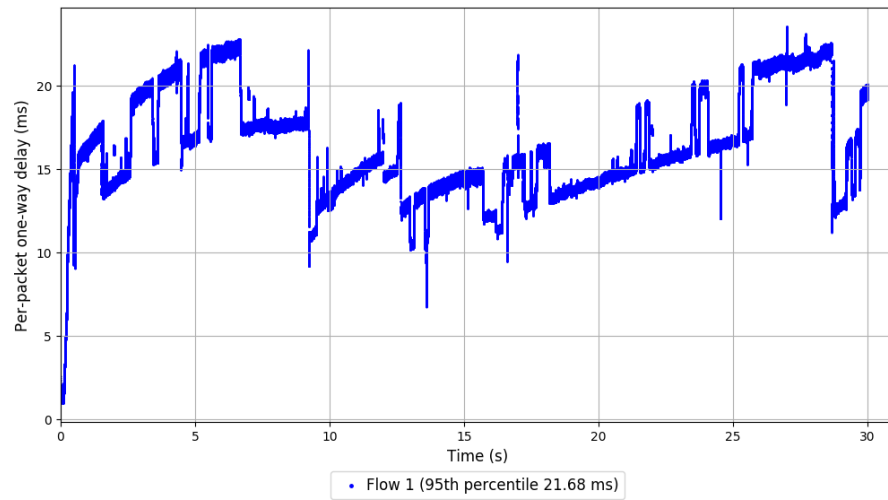
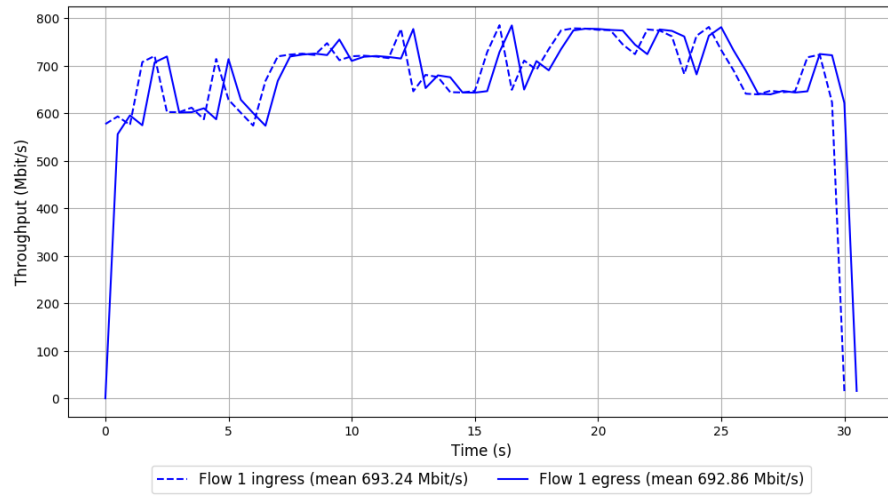


Run 1: Statistics of TCP Cubic

Start at: 2018-12-19 22:41:10
End at: 2018-12-19 22:41:40
Local clock offset: 1.66 ms
Remote clock offset: -1.401 ms

Below is generated by plot.py at 2018-12-20 00:59:39
Datalink statistics
-- Total of 1 flow:
Average throughput: 692.86 Mbit/s
95th percentile per-packet one-way delay: 21.684 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 692.86 Mbit/s
95th percentile per-packet one-way delay: 21.684 ms
Loss rate: 0.05%

Run 1: Report of TCP Cubic — Data Link

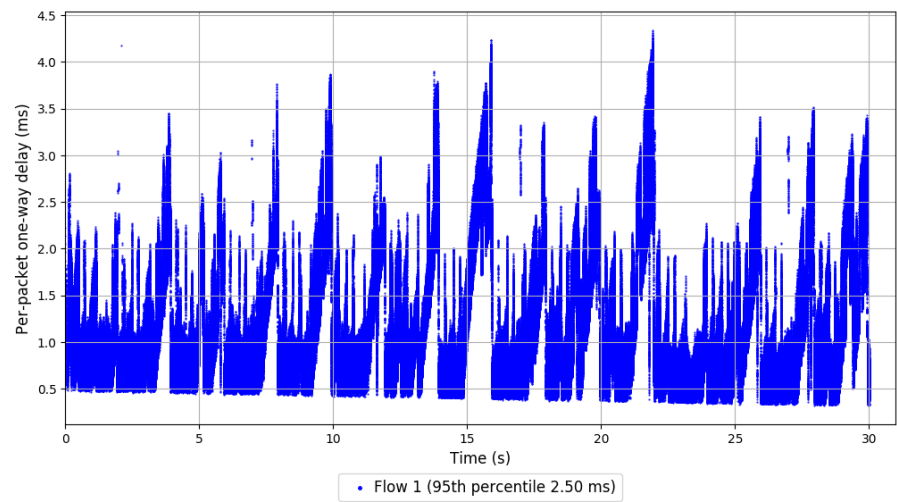
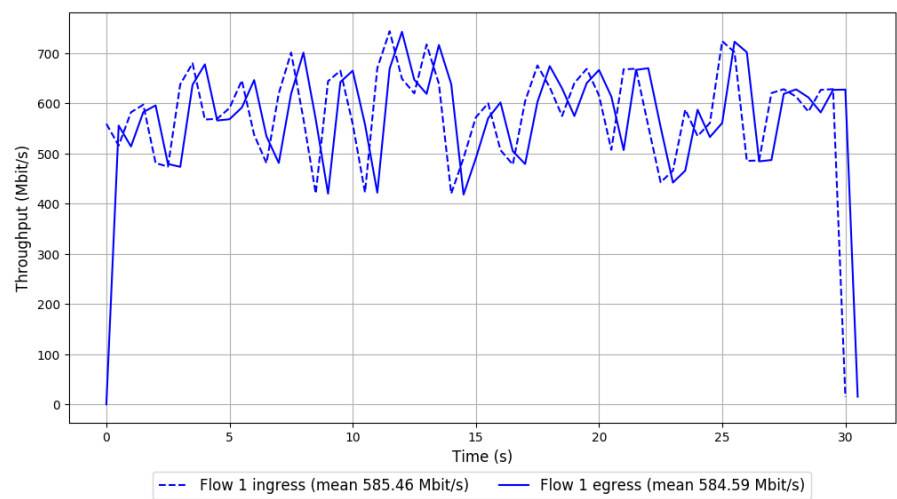


Run 2: Statistics of TCP Cubic

Start at: 2018-12-19 23:07:11
End at: 2018-12-19 23:07:41
Local clock offset: 3.618 ms
Remote clock offset: -3.585 ms

Below is generated by plot.py at 2018-12-20 00:59:39
Datalink statistics
-- Total of 1 flow:
Average throughput: 584.59 Mbit/s
95th percentile per-packet one-way delay: 2.503 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 584.59 Mbit/s
95th percentile per-packet one-way delay: 2.503 ms
Loss rate: 0.15%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-12-19 23:32:56

End at: 2018-12-19 23:33:26

Local clock offset: 0.01 ms

Remote clock offset: 0.273 ms

Below is generated by plot.py at 2018-12-20 00:59:39

Datalink statistics

-- Total of 1 flow:

Average throughput: 536.35 Mbit/s

95th percentile per-packet one-way delay: 3.042 ms

Loss rate: 0.22%

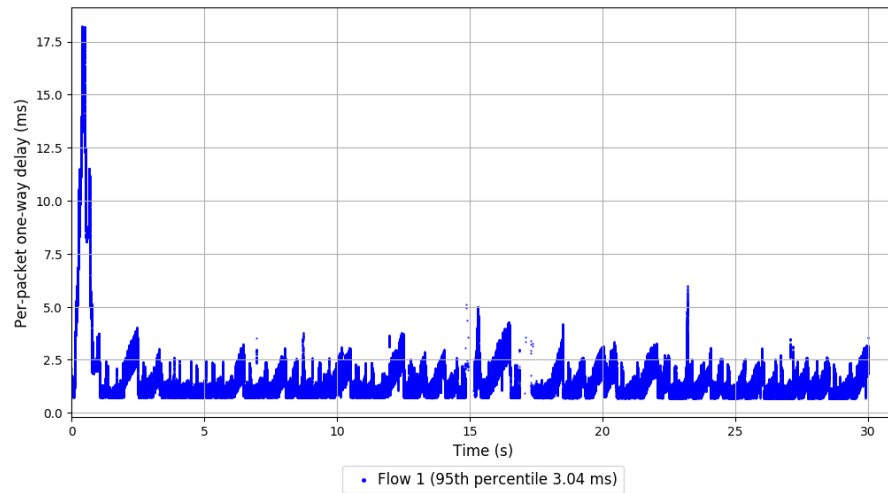
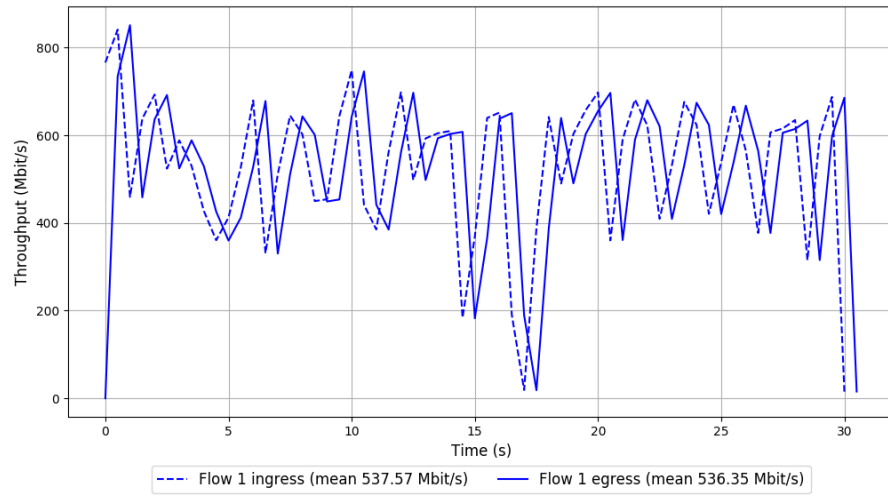
-- Flow 1:

Average throughput: 536.35 Mbit/s

95th percentile per-packet one-way delay: 3.042 ms

Loss rate: 0.22%

Run 3: Report of TCP Cubic — Data Link

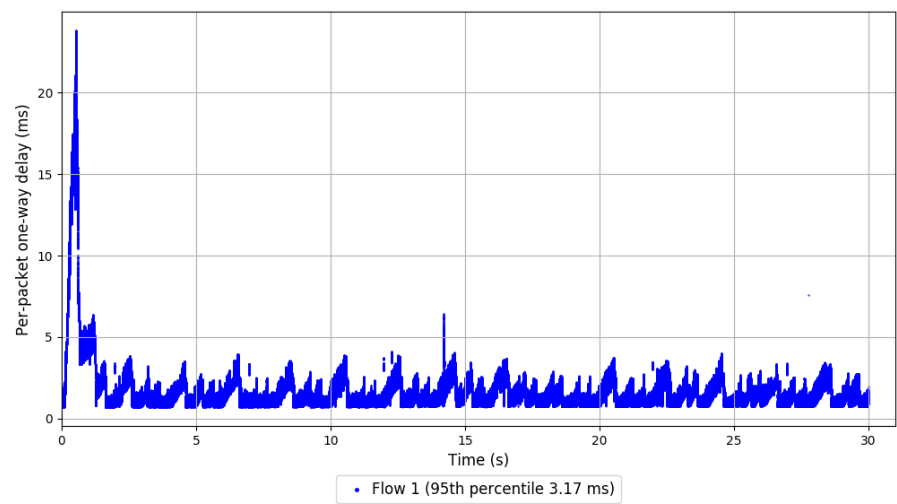
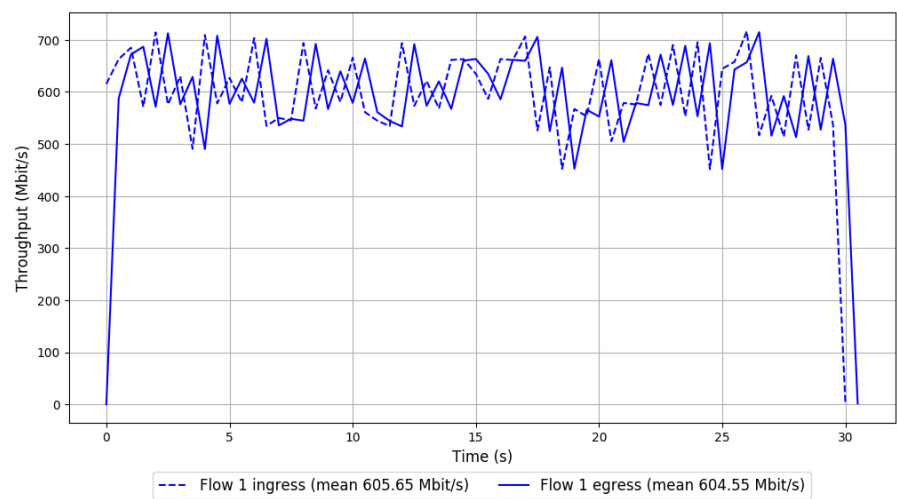


Run 4: Statistics of TCP Cubic

Start at: 2018-12-19 23:58:52
End at: 2018-12-19 23:59:22
Local clock offset: 0.085 ms
Remote clock offset: -1.619 ms

Below is generated by plot.py at 2018-12-20 01:03:24
Datalink statistics
-- Total of 1 flow:
Average throughput: 604.55 Mbit/s
95th percentile per-packet one-way delay: 3.166 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 604.55 Mbit/s
95th percentile per-packet one-way delay: 3.166 ms
Loss rate: 0.18%

Run 4: Report of TCP Cubic — Data Link

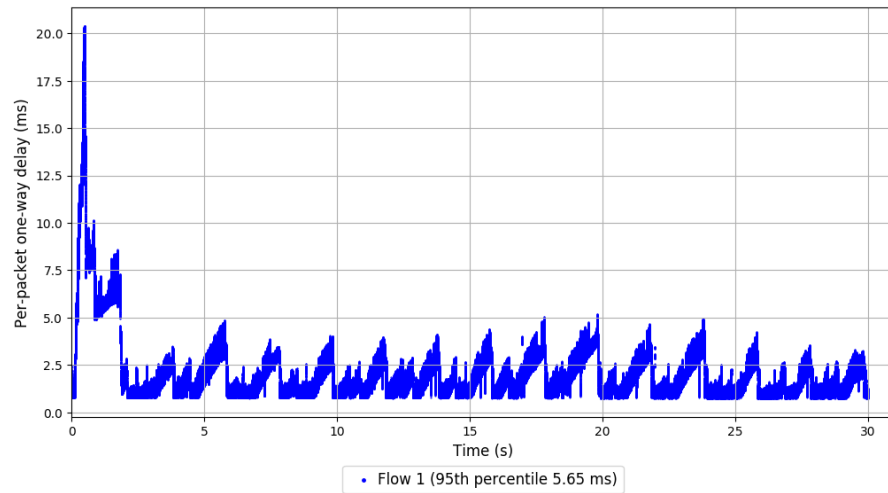
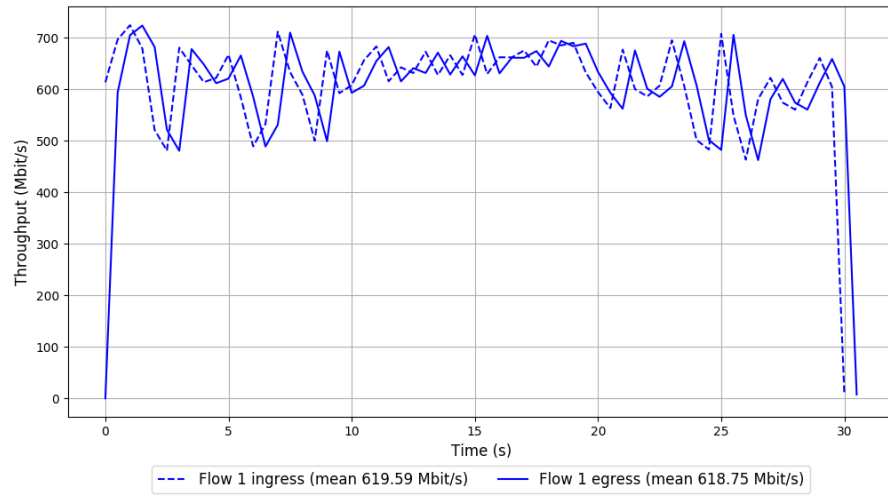


Run 5: Statistics of TCP Cubic

Start at: 2018-12-20 00:24:55
End at: 2018-12-20 00:25:25
Local clock offset: -2.946 ms
Remote clock offset: -2.574 ms

Below is generated by plot.py at 2018-12-20 01:03:55
Datalink statistics
-- Total of 1 flow:
Average throughput: 618.75 Mbit/s
95th percentile per-packet one-way delay: 5.651 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 618.75 Mbit/s
95th percentile per-packet one-way delay: 5.651 ms
Loss rate: 0.14%

Run 5: Report of TCP Cubic — Data Link

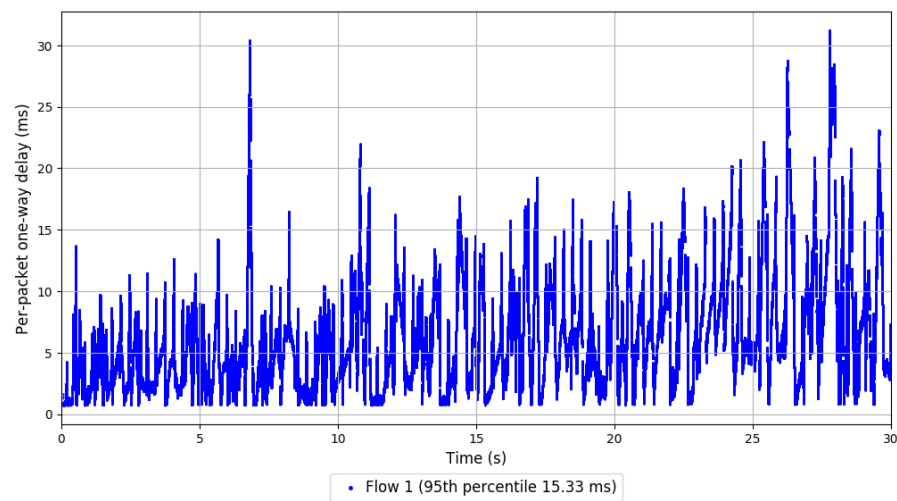
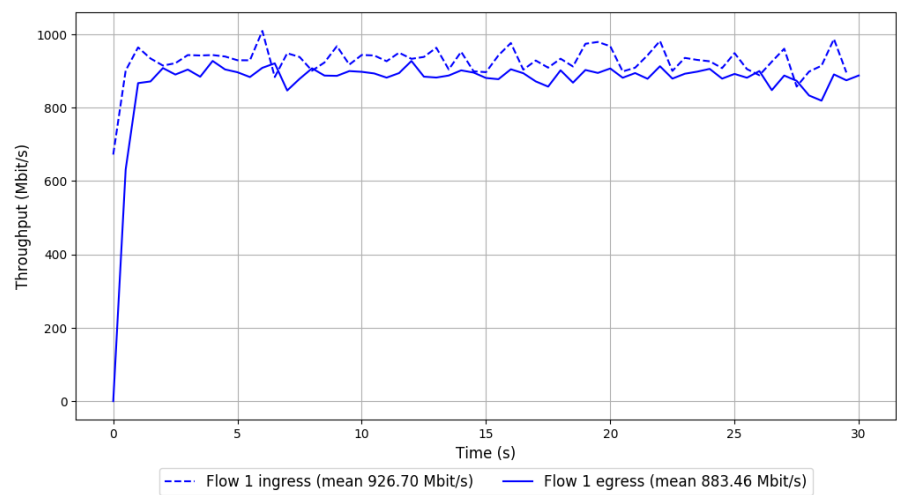


Run 1: Statistics of FillP

Start at: 2018-12-19 22:59:17
End at: 2018-12-19 22:59:47
Local clock offset: 3.819 ms
Remote clock offset: -3.312 ms

Below is generated by plot.py at 2018-12-20 01:10:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 883.46 Mbit/s
95th percentile per-packet one-way delay: 15.331 ms
Loss rate: 4.66%
-- Flow 1:
Average throughput: 883.46 Mbit/s
95th percentile per-packet one-way delay: 15.331 ms
Loss rate: 4.66%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-12-19 23:25:02

End at: 2018-12-19 23:25:32

Local clock offset: 0.424 ms

Remote clock offset: -0.53 ms

Below is generated by plot.py at 2018-12-20 01:10:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 870.86 Mbit/s

95th percentile per-packet one-way delay: 14.626 ms

Loss rate: 3.30%

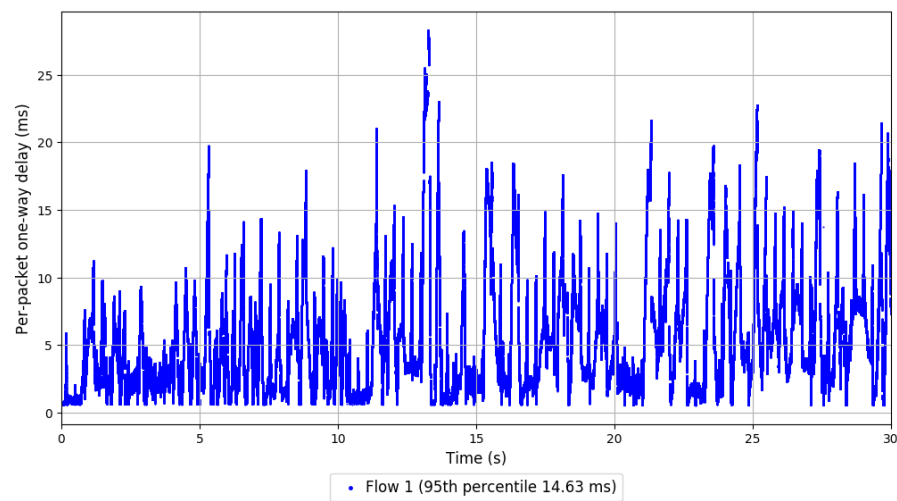
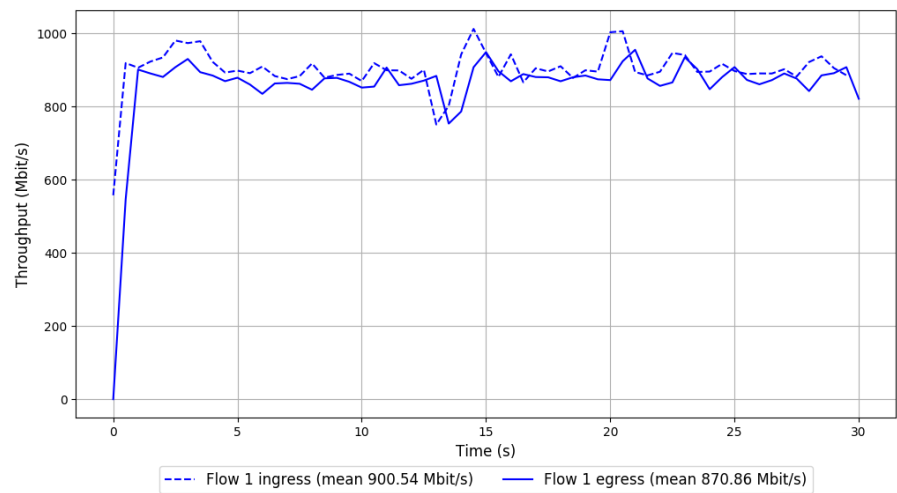
-- Flow 1:

Average throughput: 870.86 Mbit/s

95th percentile per-packet one-way delay: 14.626 ms

Loss rate: 3.30%

Run 2: Report of FillP — Data Link

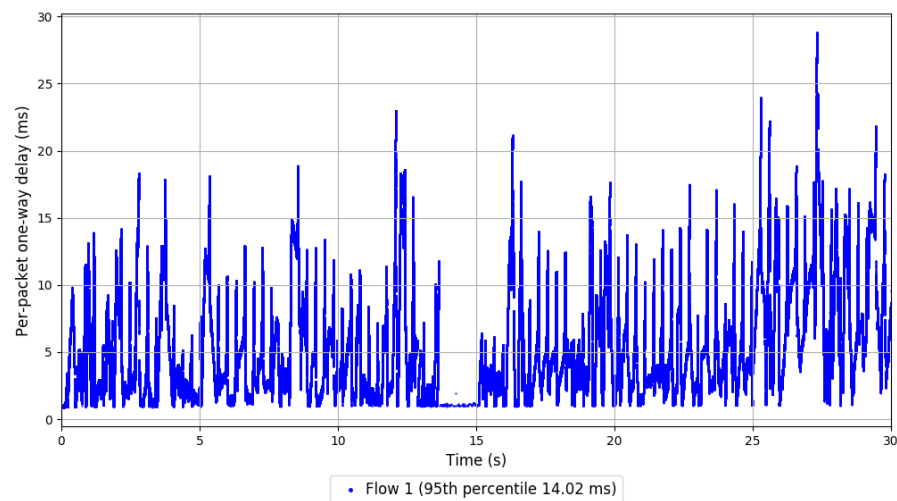
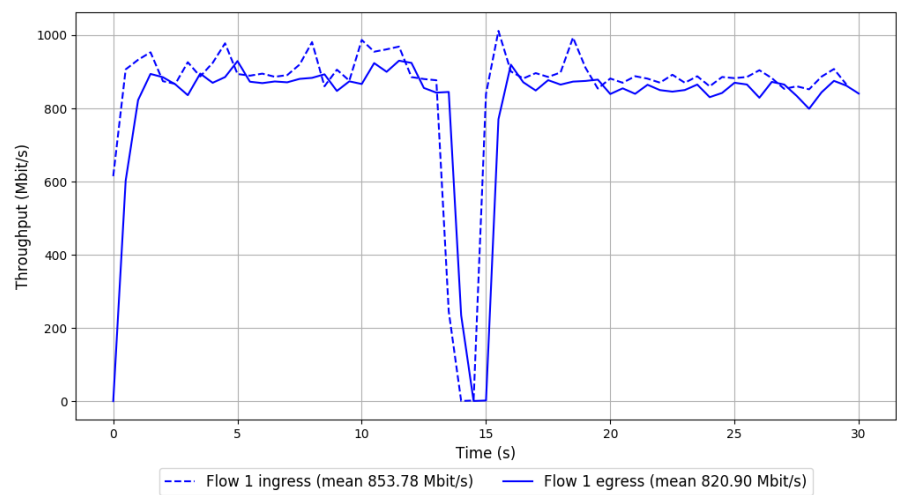


Run 3: Statistics of FillP

Start at: 2018-12-19 23:50:43
End at: 2018-12-19 23:51:13
Local clock offset: 0.135 ms
Remote clock offset: -0.125 ms

Below is generated by plot.py at 2018-12-20 01:10:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 820.90 Mbit/s
95th percentile per-packet one-way delay: 14.024 ms
Loss rate: 3.85%
-- Flow 1:
Average throughput: 820.90 Mbit/s
95th percentile per-packet one-way delay: 14.024 ms
Loss rate: 3.85%

Run 3: Report of FillP — Data Link

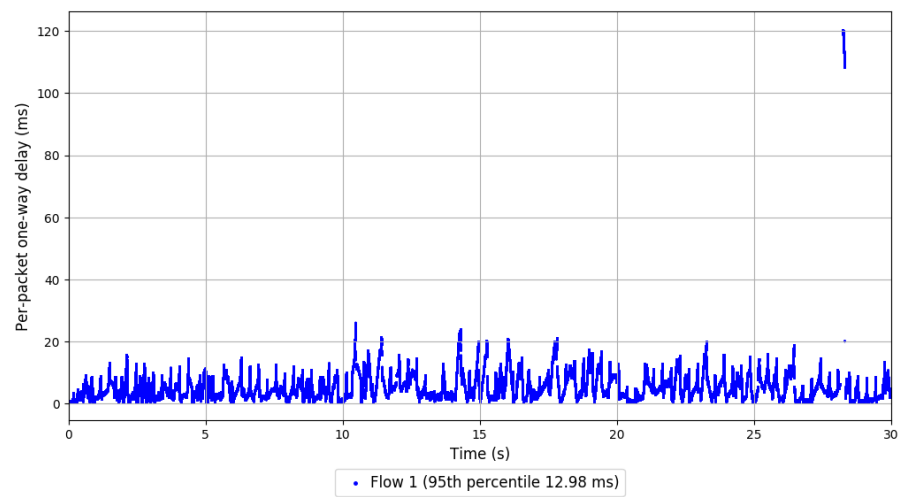
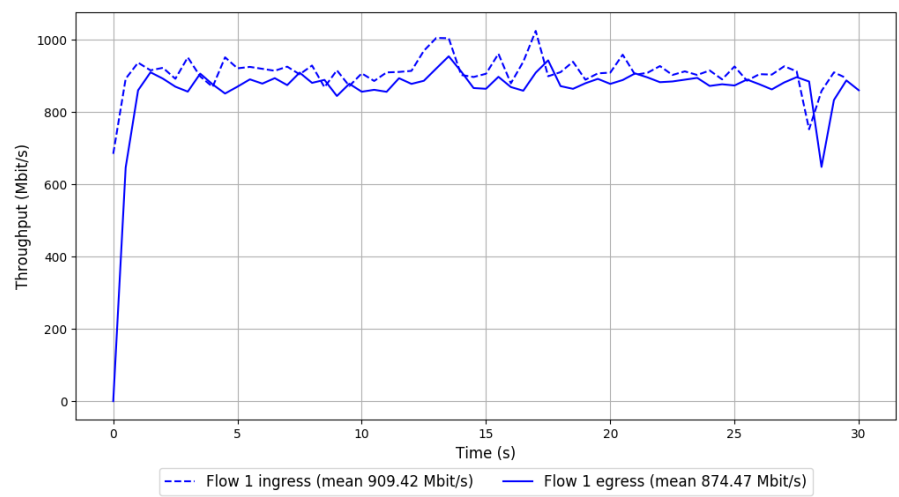


Run 4: Statistics of FillP

Start at: 2018-12-20 00:16:41
End at: 2018-12-20 00:17:11
Local clock offset: -2.123 ms
Remote clock offset: -2.496 ms

Below is generated by plot.py at 2018-12-20 01:10:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 874.47 Mbit/s
95th percentile per-packet one-way delay: 12.979 ms
Loss rate: 3.84%
-- Flow 1:
Average throughput: 874.47 Mbit/s
95th percentile per-packet one-way delay: 12.979 ms
Loss rate: 3.84%

Run 4: Report of FillP — Data Link

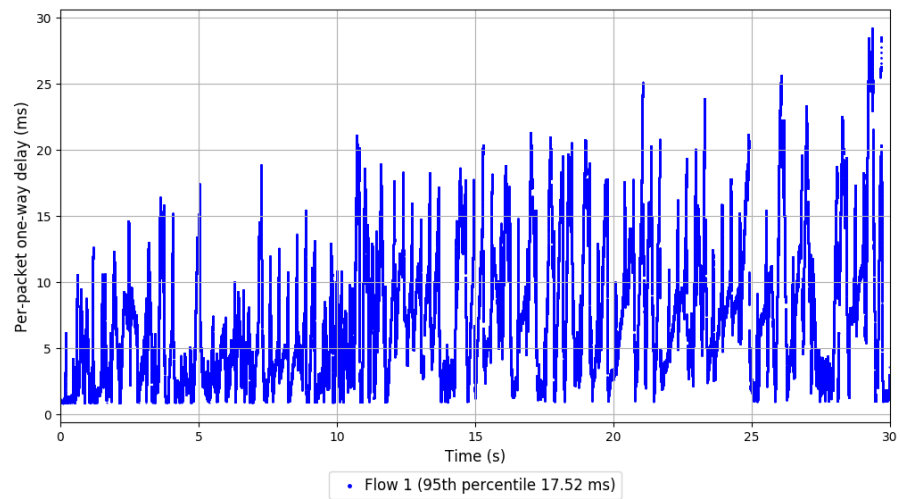
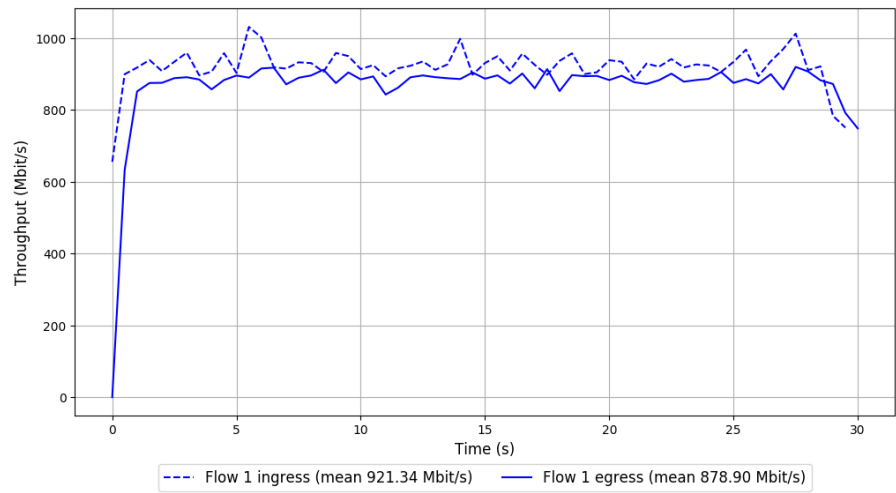


Run 5: Statistics of FillP

Start at: 2018-12-20 00:42:45
End at: 2018-12-20 00:43:15
Local clock offset: -1.228 ms
Remote clock offset: -2.866 ms

Below is generated by plot.py at 2018-12-20 01:10:57
Datalink statistics
-- Total of 1 flow:
Average throughput: 878.90 Mbit/s
95th percentile per-packet one-way delay: 17.515 ms
Loss rate: 4.60%
-- Flow 1:
Average throughput: 878.90 Mbit/s
95th percentile per-packet one-way delay: 17.515 ms
Loss rate: 4.60%

Run 5: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2018-12-19 22:42:45

End at: 2018-12-19 22:43:15

Local clock offset: 2.002 ms

Remote clock offset: -1.674 ms

Below is generated by plot.py at 2018-12-20 01:11:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 905.09 Mbit/s

95th percentile per-packet one-way delay: 6.289 ms

Loss rate: 2.64%

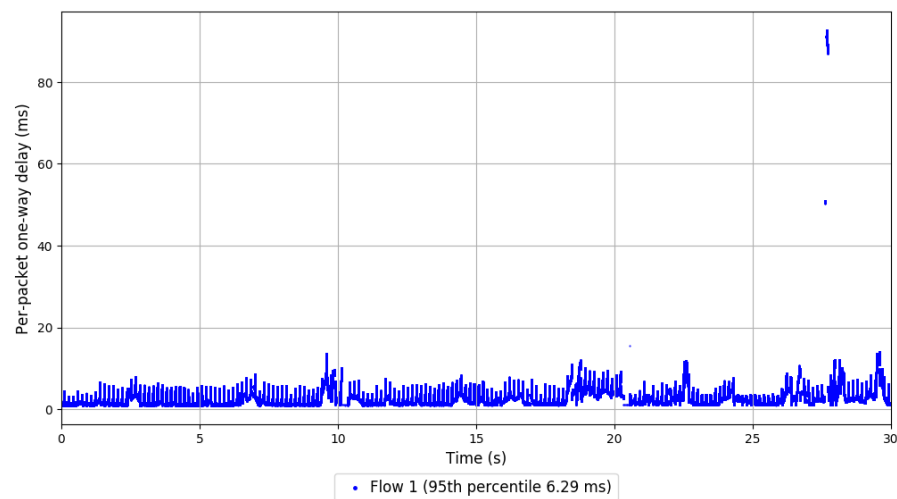
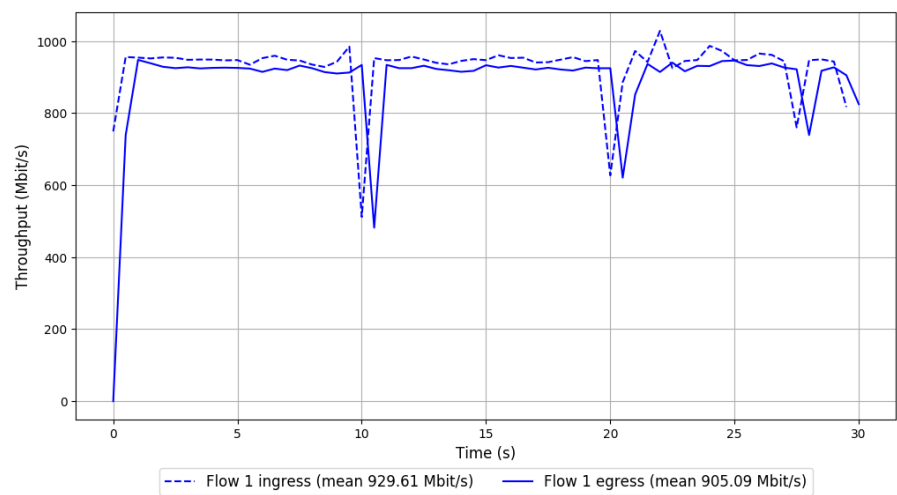
-- Flow 1:

Average throughput: 905.09 Mbit/s

95th percentile per-packet one-way delay: 6.289 ms

Loss rate: 2.64%

Run 1: Report of FillP-Sheep — Data Link

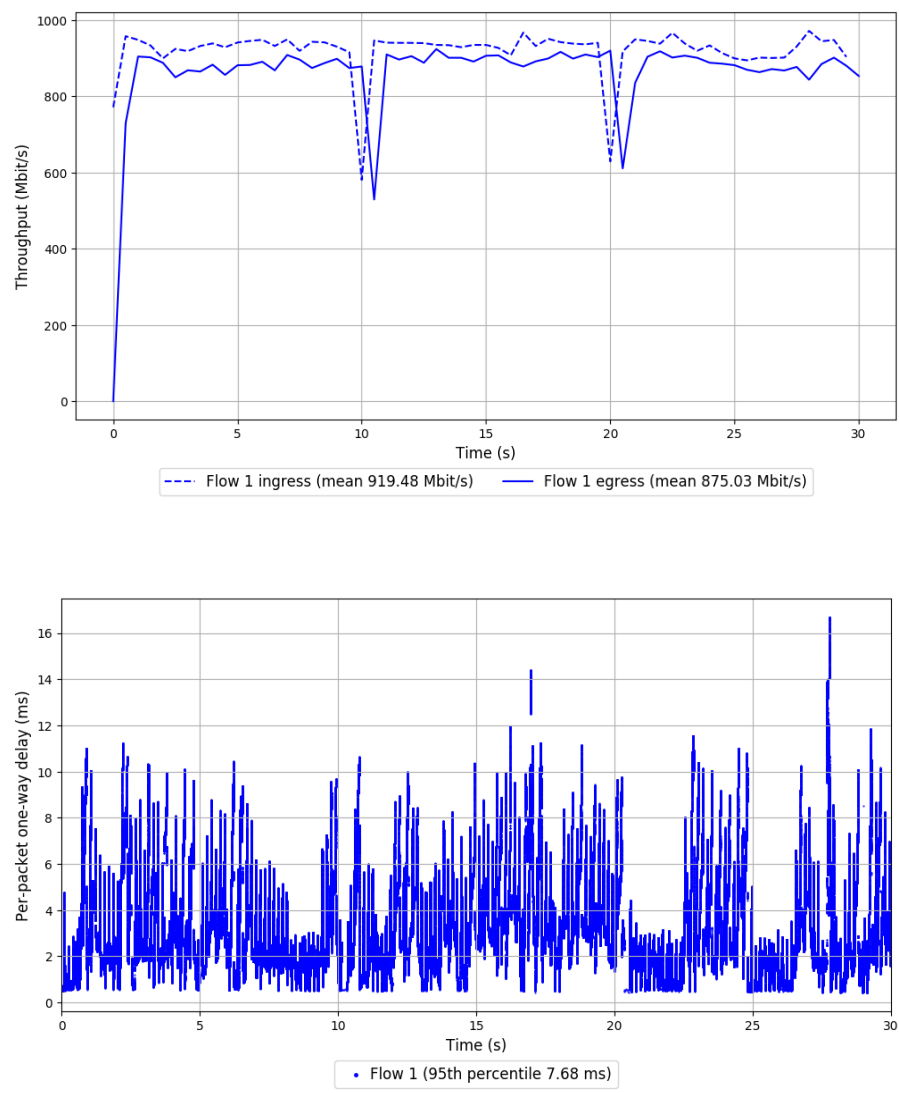


Run 2: Statistics of FillP-Sheep

Start at: 2018-12-19 23:08:43
End at: 2018-12-19 23:09:13
Local clock offset: 3.059 ms
Remote clock offset: -3.604 ms

Below is generated by plot.py at 2018-12-20 01:16:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 875.03 Mbit/s
95th percentile per-packet one-way delay: 7.682 ms
Loss rate: 4.83%
-- Flow 1:
Average throughput: 875.03 Mbit/s
95th percentile per-packet one-way delay: 7.682 ms
Loss rate: 4.83%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2018-12-19 23:34:26

End at: 2018-12-19 23:34:56

Local clock offset: -0.051 ms

Remote clock offset: 0.385 ms

Below is generated by plot.py at 2018-12-20 01:16:37

Datalink statistics

-- Total of 1 flow:

Average throughput: 863.02 Mbit/s

95th percentile per-packet one-way delay: 7.850 ms

Loss rate: 4.78%

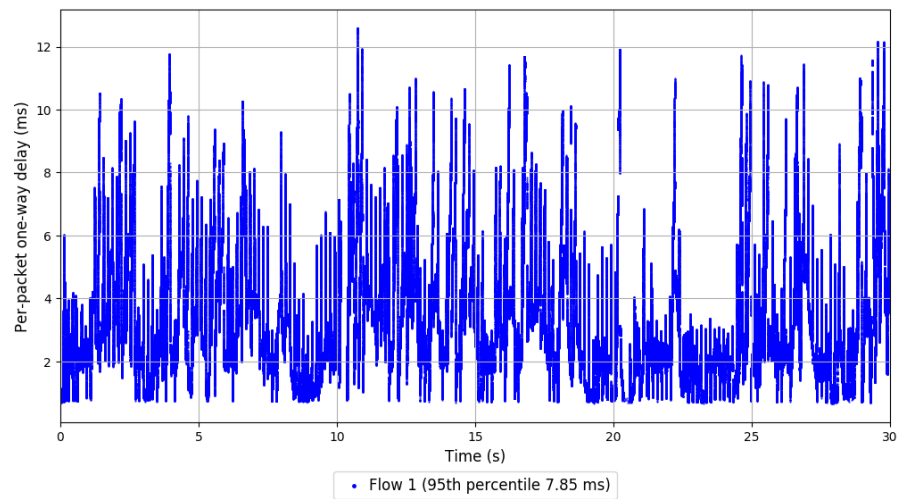
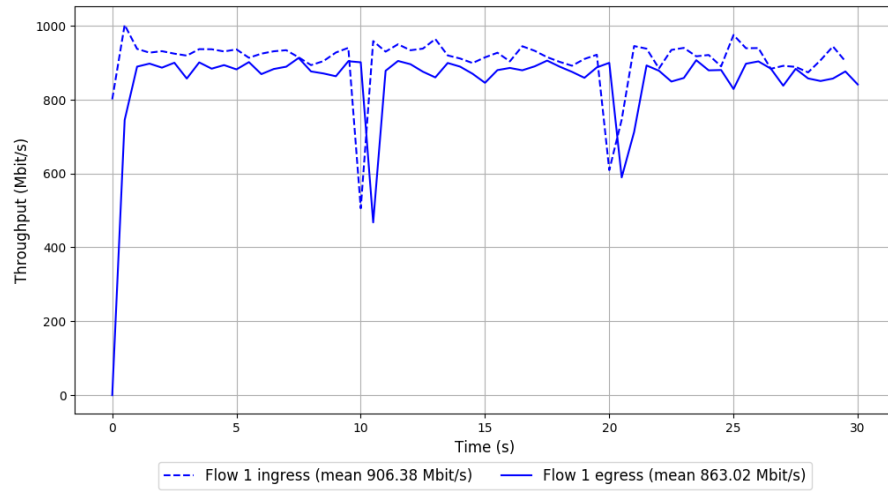
-- Flow 1:

Average throughput: 863.02 Mbit/s

95th percentile per-packet one-way delay: 7.850 ms

Loss rate: 4.78%

Run 3: Report of FillP-Sheep — Data Link

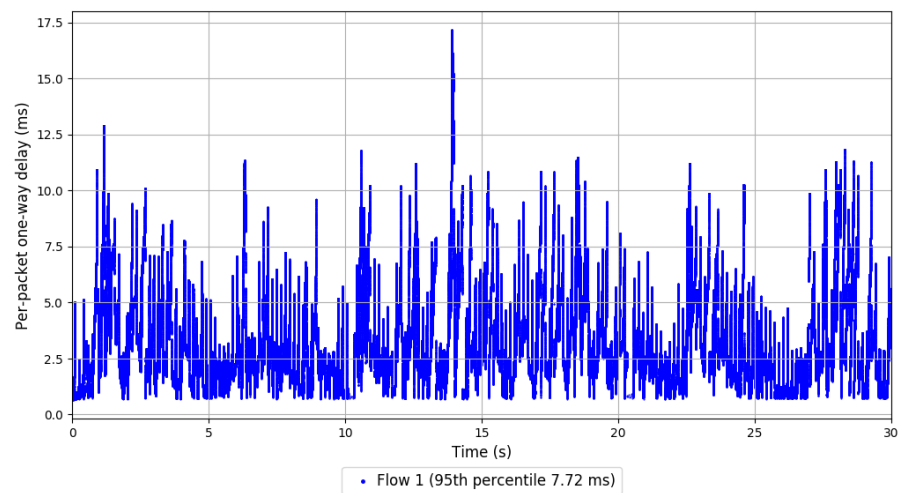
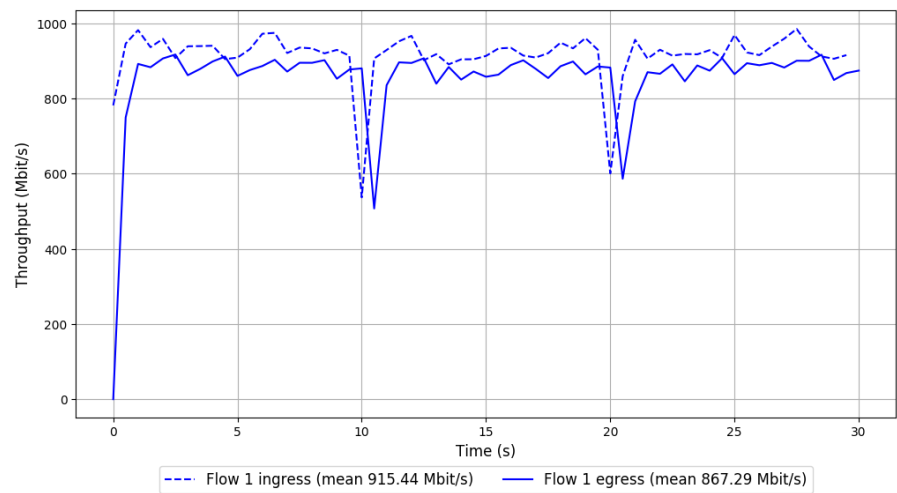


Run 4: Statistics of FillP-Sheep

Start at: 2018-12-20 00:00:25
End at: 2018-12-20 00:00:55
Local clock offset: 0.076 ms
Remote clock offset: -1.765 ms

Below is generated by plot.py at 2018-12-20 01:22:24
Datalink statistics
-- Total of 1 flow:
Average throughput: 867.29 Mbit/s
95th percentile per-packet one-way delay: 7.722 ms
Loss rate: 5.26%
-- Flow 1:
Average throughput: 867.29 Mbit/s
95th percentile per-packet one-way delay: 7.722 ms
Loss rate: 5.26%

Run 4: Report of FillP-Sheep — Data Link

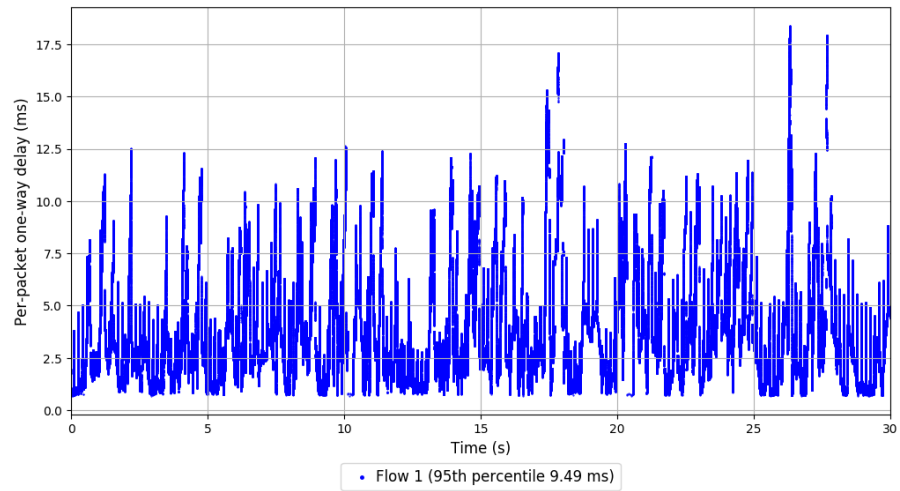
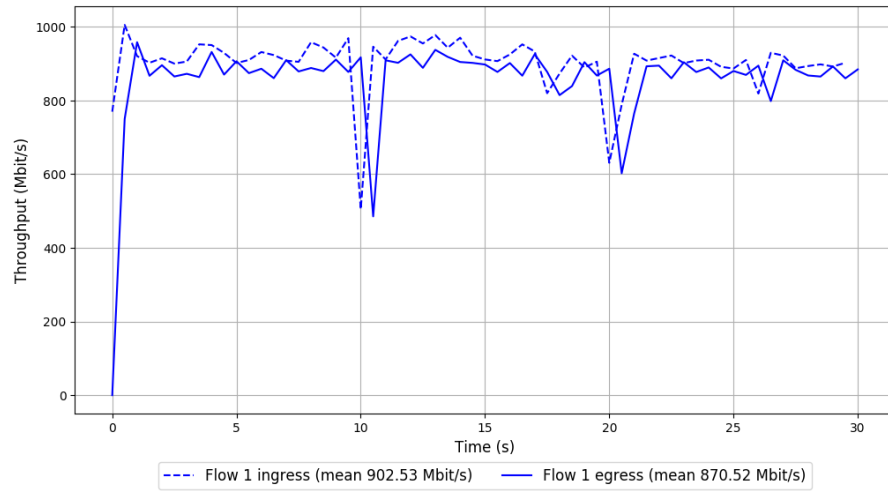


Run 5: Statistics of FillP-Sheep

Start at: 2018-12-20 00:26:27
End at: 2018-12-20 00:26:57
Local clock offset: -3.068 ms
Remote clock offset: -2.643 ms

Below is generated by plot.py at 2018-12-20 01:22:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 870.52 Mbit/s
95th percentile per-packet one-way delay: 9.487 ms
Loss rate: 3.54%
-- Flow 1:
Average throughput: 870.52 Mbit/s
95th percentile per-packet one-way delay: 9.487 ms
Loss rate: 3.54%

Run 5: Report of FillP-Sheep — Data Link



Run 1: Statistics of Indigo

Start at: 2018-12-19 22:57:54

End at: 2018-12-19 22:58:25

Local clock offset: 3.732 ms

Remote clock offset: -3.249 ms

Below is generated by plot.py at 2018-12-20 01:22:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 237.09 Mbit/s

95th percentile per-packet one-way delay: 1.532 ms

Loss rate: 0.03%

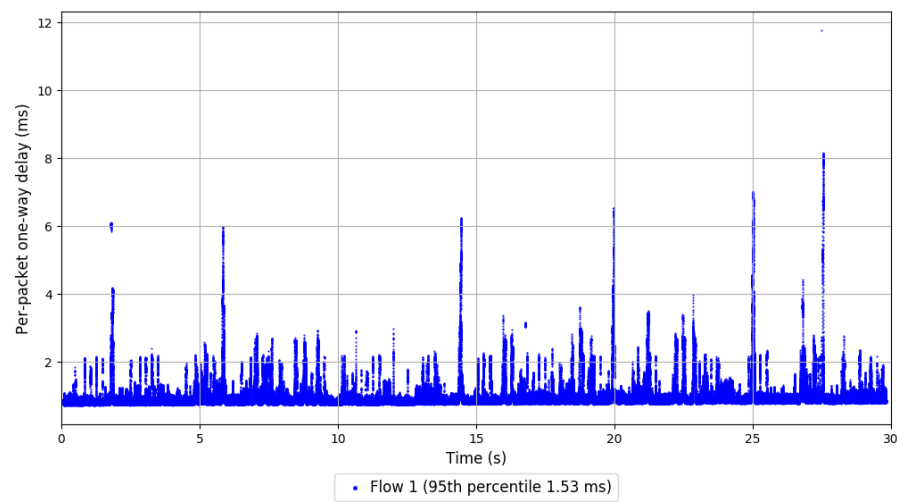
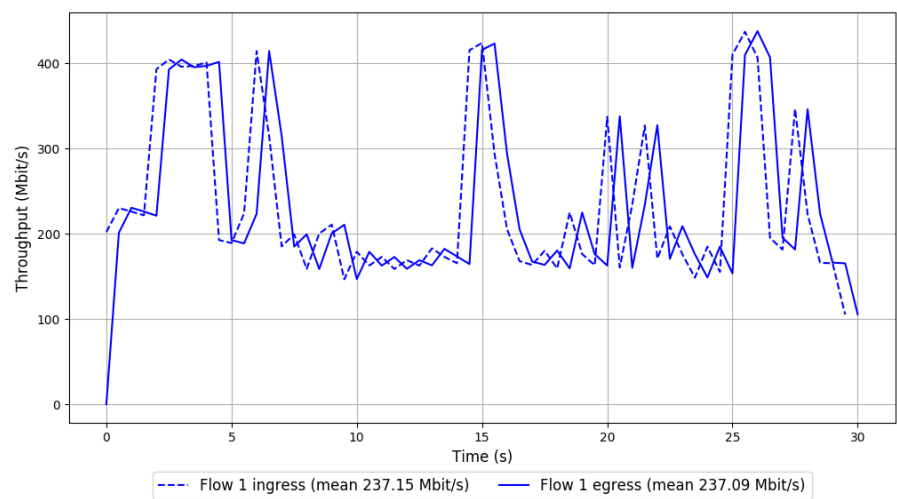
-- Flow 1:

Average throughput: 237.09 Mbit/s

95th percentile per-packet one-way delay: 1.532 ms

Loss rate: 0.03%

Run 1: Report of Indigo — Data Link

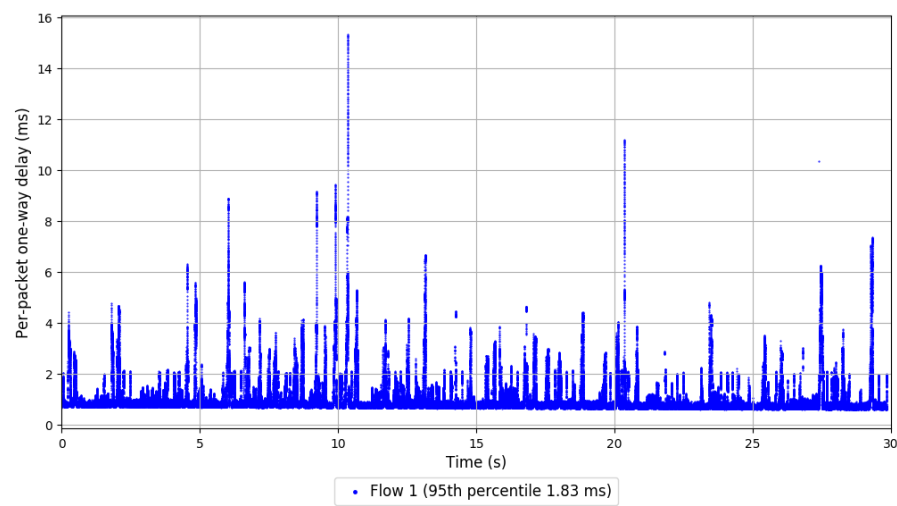
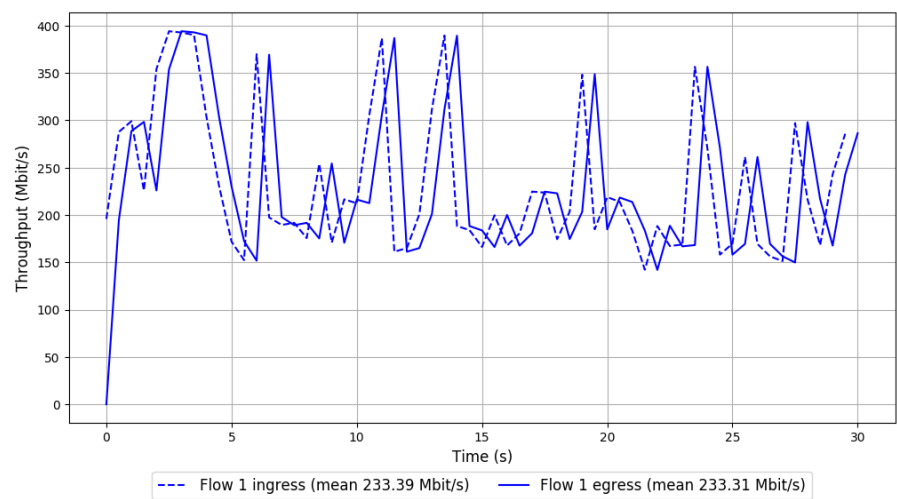


Run 2: Statistics of Indigo

Start at: 2018-12-19 23:23:39
End at: 2018-12-19 23:24:09
Local clock offset: 0.509 ms
Remote clock offset: -0.706 ms

Below is generated by plot.py at 2018-12-20 01:22:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 233.31 Mbit/s
95th percentile per-packet one-way delay: 1.828 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 233.31 Mbit/s
95th percentile per-packet one-way delay: 1.828 ms
Loss rate: 0.03%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2018-12-19 23:49:20

End at: 2018-12-19 23:49:50

Local clock offset: 0.13 ms

Remote clock offset: 0.119 ms

Below is generated by plot.py at 2018-12-20 01:22:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 247.31 Mbit/s

95th percentile per-packet one-way delay: 1.724 ms

Loss rate: 0.03%

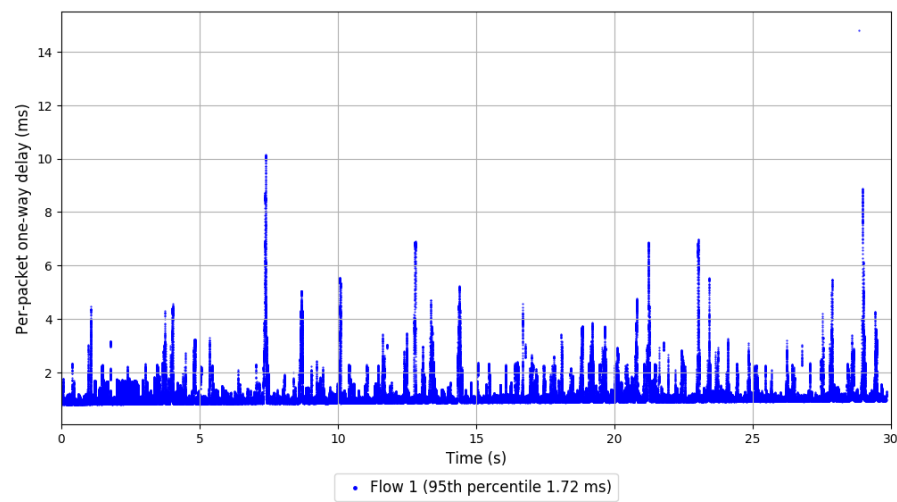
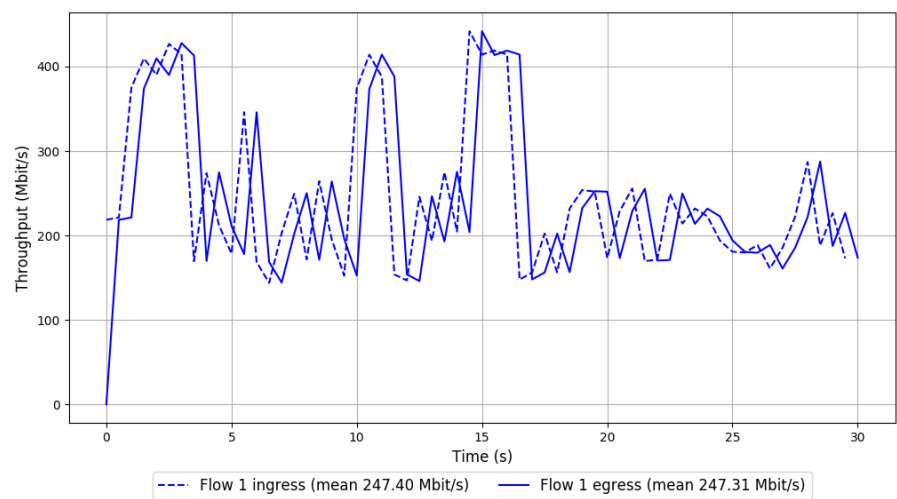
-- Flow 1:

Average throughput: 247.31 Mbit/s

95th percentile per-packet one-way delay: 1.724 ms

Loss rate: 0.03%

Run 3: Report of Indigo — Data Link

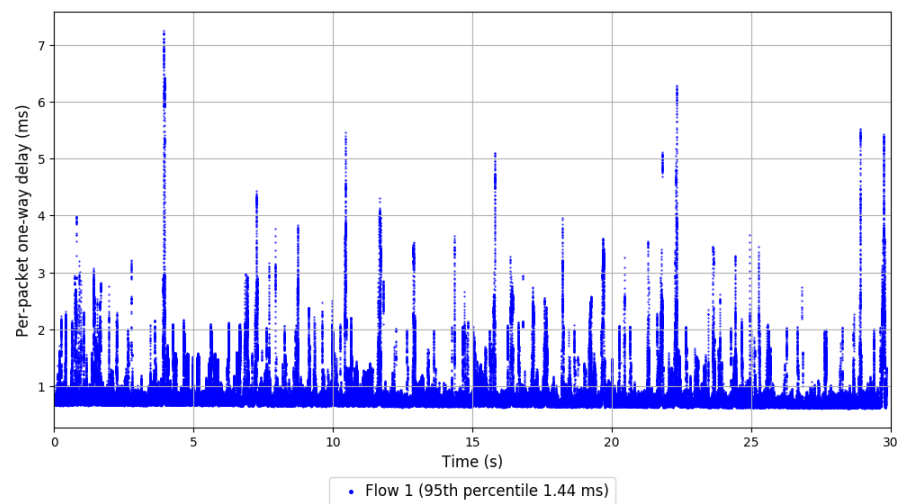
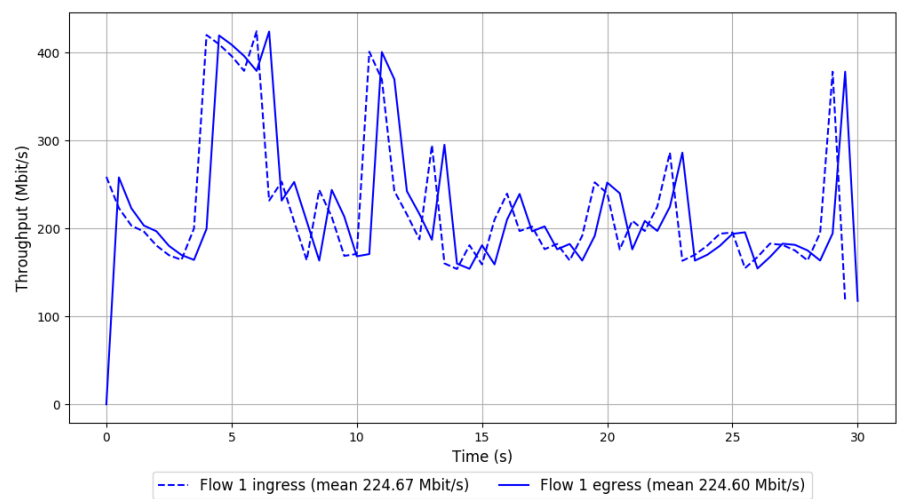


Run 4: Statistics of Indigo

Start at: 2018-12-20 00:15:19
End at: 2018-12-20 00:15:49
Local clock offset: -1.994 ms
Remote clock offset: -2.482 ms

Below is generated by plot.py at 2018-12-20 01:22:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 224.60 Mbit/s
95th percentile per-packet one-way delay: 1.444 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 224.60 Mbit/s
95th percentile per-packet one-way delay: 1.444 ms
Loss rate: 0.03%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2018-12-20 00:41:23

End at: 2018-12-20 00:41:53

Local clock offset: -1.573 ms

Remote clock offset: -2.79 ms

Below is generated by plot.py at 2018-12-20 01:22:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 223.07 Mbit/s

95th percentile per-packet one-way delay: 1.655 ms

Loss rate: 0.04%

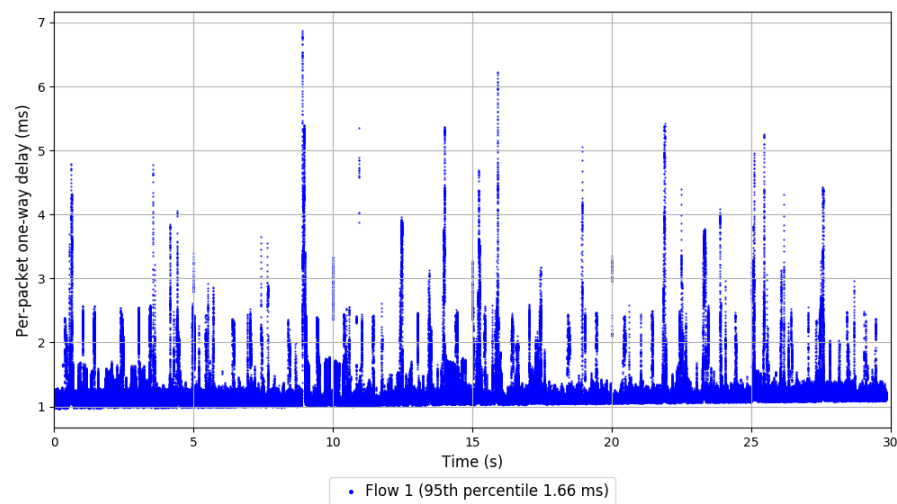
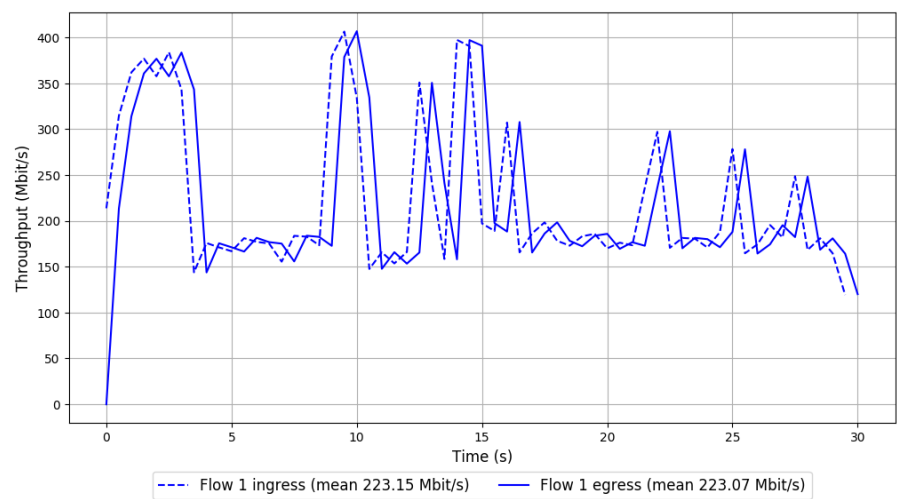
-- Flow 1:

Average throughput: 223.07 Mbit/s

95th percentile per-packet one-way delay: 1.655 ms

Loss rate: 0.04%

Run 5: Report of Indigo — Data Link

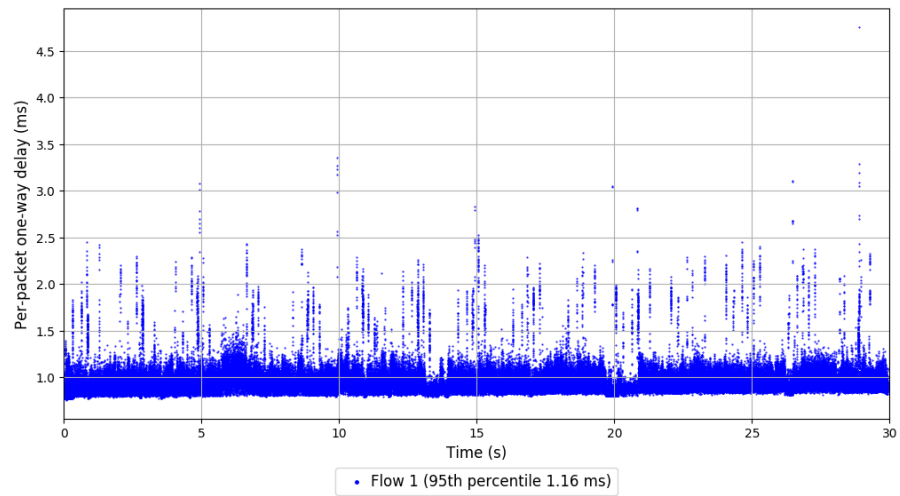
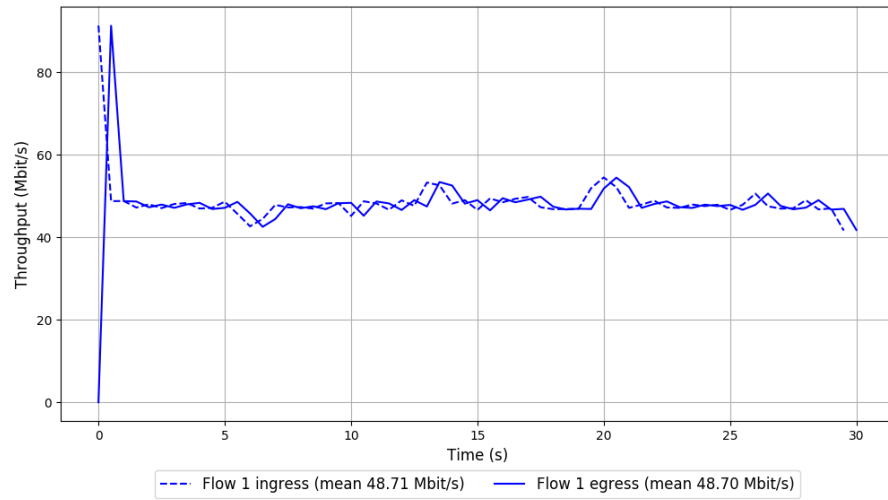


```
Run 1: Statistics of Indigo-MusesD

Start at: 2018-12-19 23:00:55
End at: 2018-12-19 23:01:25
Local clock offset: 3.913 ms
Remote clock offset: -3.364 ms

# Below is generated by plot.py at 2018-12-20 01:22:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 48.70 Mbit/s
95th percentile per-packet one-way delay: 1.162 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 48.70 Mbit/s
95th percentile per-packet one-way delay: 1.162 ms
Loss rate: 0.02%
```

Run 1: Report of Indigo-MusesD — Data Link



Run 2: Statistics of Indigo-MusesD

Start at: 2018-12-19 23:26:39

End at: 2018-12-19 23:27:09

Local clock offset: 0.336 ms

Remote clock offset: -0.222 ms

Below is generated by plot.py at 2018-12-20 01:22:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 47.85 Mbit/s

95th percentile per-packet one-way delay: 1.054 ms

Loss rate: 0.01%

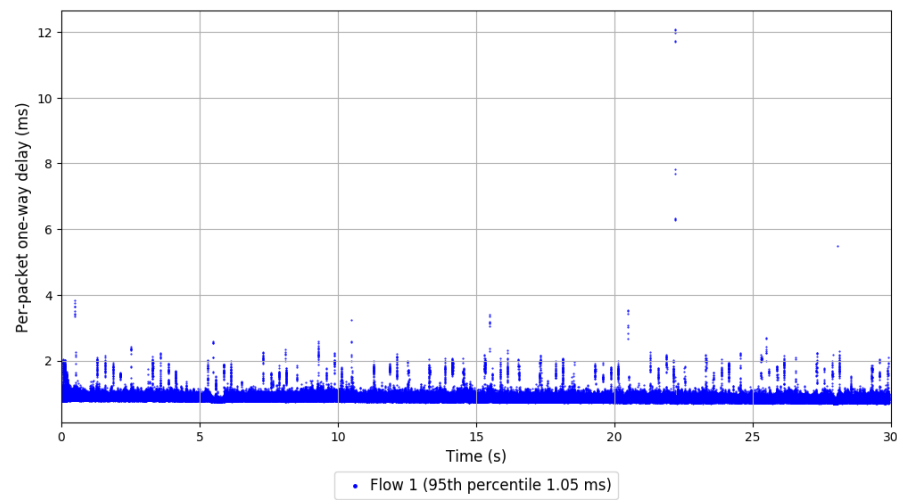
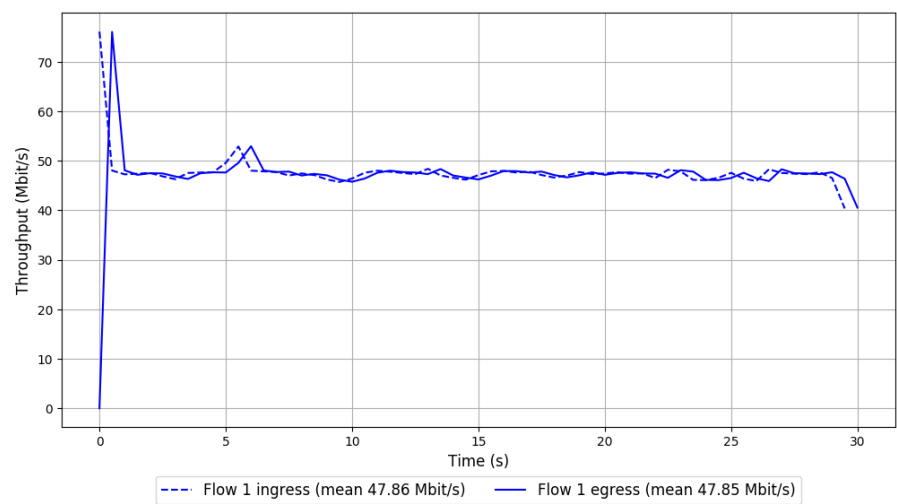
-- Flow 1:

Average throughput: 47.85 Mbit/s

95th percentile per-packet one-way delay: 1.054 ms

Loss rate: 0.01%

Run 2: Report of Indigo-MusesD — Data Link



Run 3: Statistics of Indigo-MusesD

Start at: 2018-12-19 23:52:19

End at: 2018-12-19 23:52:49

Local clock offset: 0.134 ms

Remote clock offset: -0.597 ms

Below is generated by plot.py at 2018-12-20 01:22:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 48.25 Mbit/s

95th percentile per-packet one-way delay: 1.197 ms

Loss rate: 0.00%

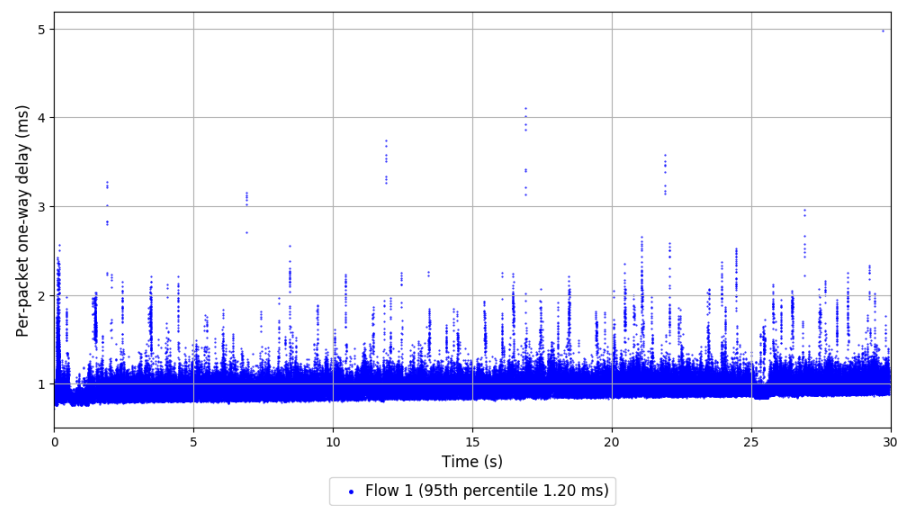
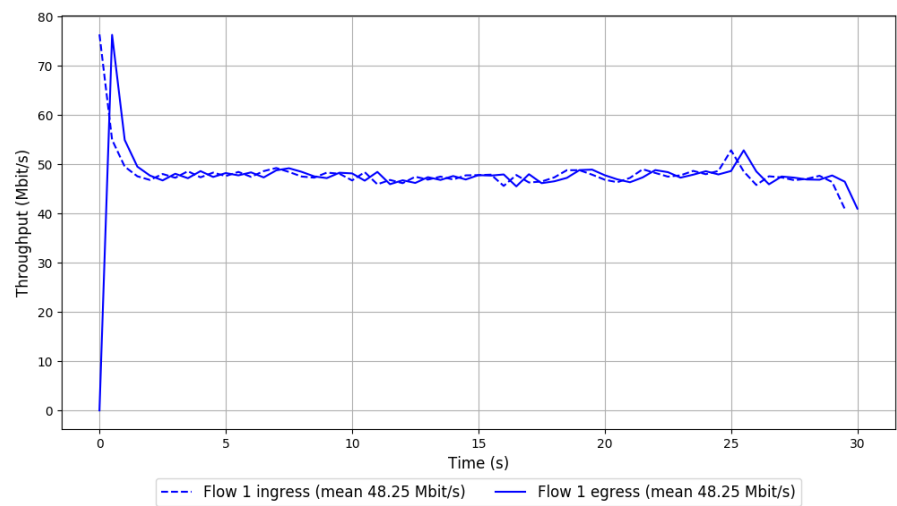
-- Flow 1:

Average throughput: 48.25 Mbit/s

95th percentile per-packet one-way delay: 1.197 ms

Loss rate: 0.00%

Run 3: Report of Indigo-MusesD — Data Link



Run 4: Statistics of Indigo-MusesD

Start at: 2018-12-20 00:18:18

End at: 2018-12-20 00:18:49

Local clock offset: -2.357 ms

Remote clock offset: -2.455 ms

Below is generated by plot.py at 2018-12-20 01:22:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 48.67 Mbit/s

95th percentile per-packet one-way delay: 1.122 ms

Loss rate: 0.02%

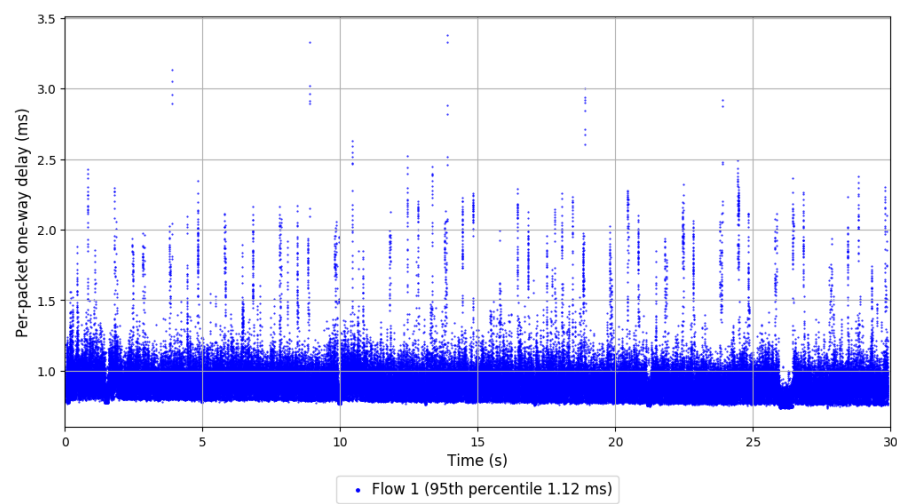
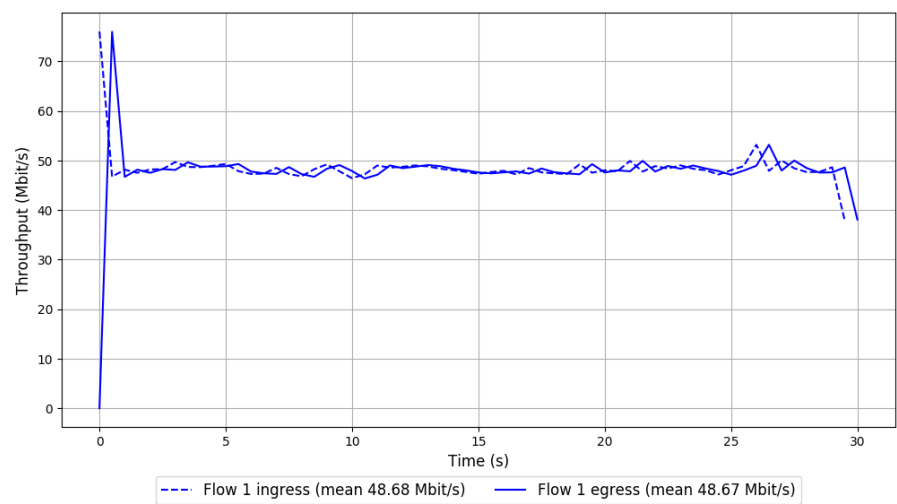
-- Flow 1:

Average throughput: 48.67 Mbit/s

95th percentile per-packet one-way delay: 1.122 ms

Loss rate: 0.02%

Run 4: Report of Indigo-MusesD — Data Link



Run 5: Statistics of Indigo-MusesD

Start at: 2018-12-20 00:44:23

End at: 2018-12-20 00:44:53

Local clock offset: -0.894 ms

Remote clock offset: -2.791 ms

Below is generated by plot.py at 2018-12-20 01:22:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 48.53 Mbit/s

95th percentile per-packet one-way delay: 1.362 ms

Loss rate: 0.02%

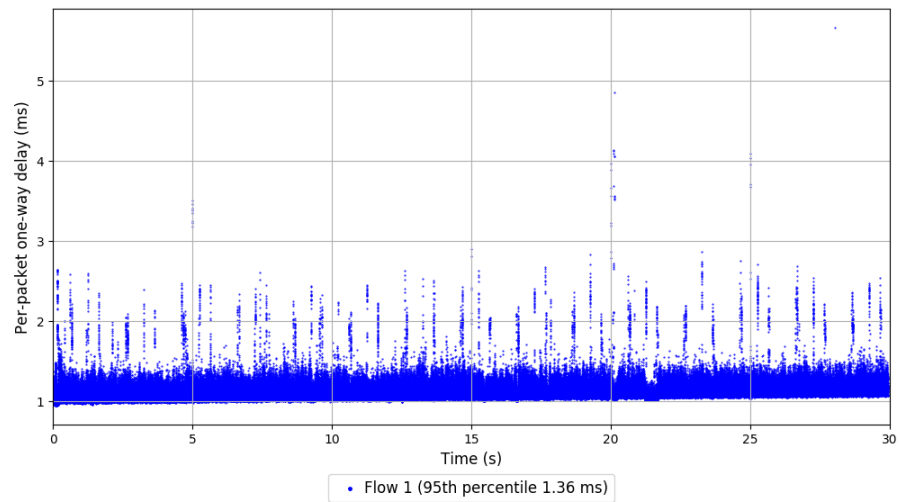
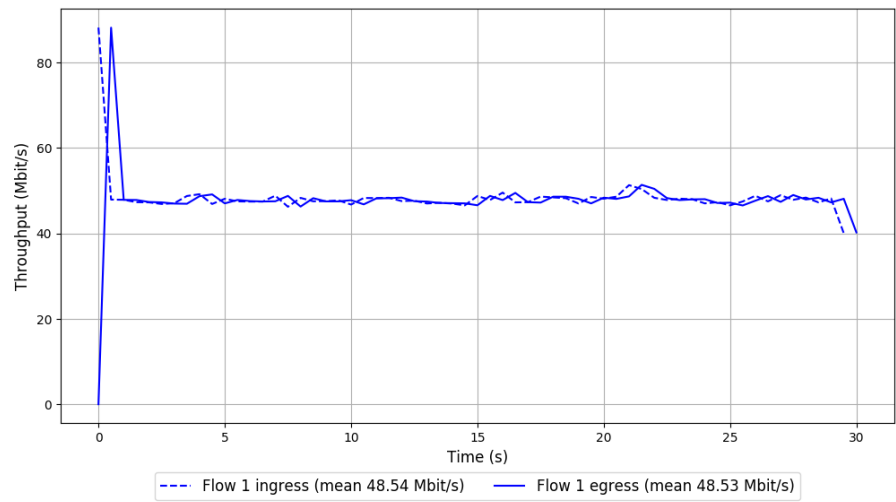
-- Flow 1:

Average throughput: 48.53 Mbit/s

95th percentile per-packet one-way delay: 1.362 ms

Loss rate: 0.02%

Run 5: Report of Indigo-MusesD — Data Link

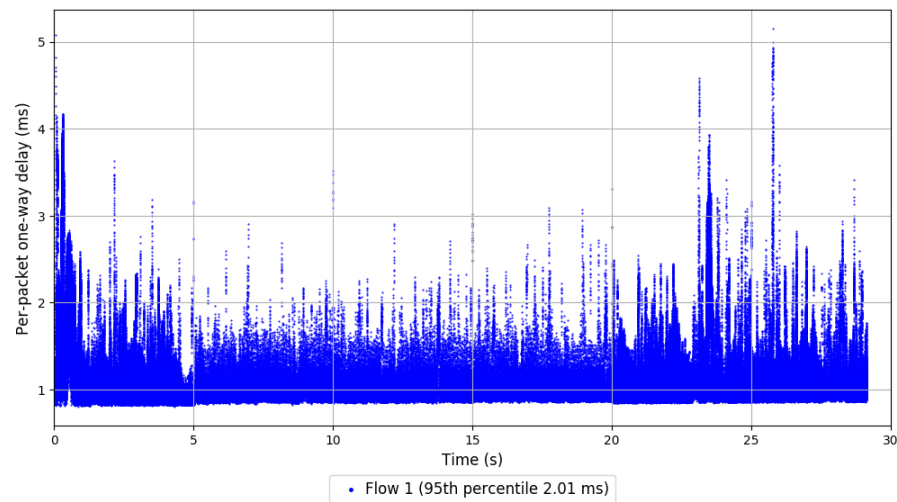
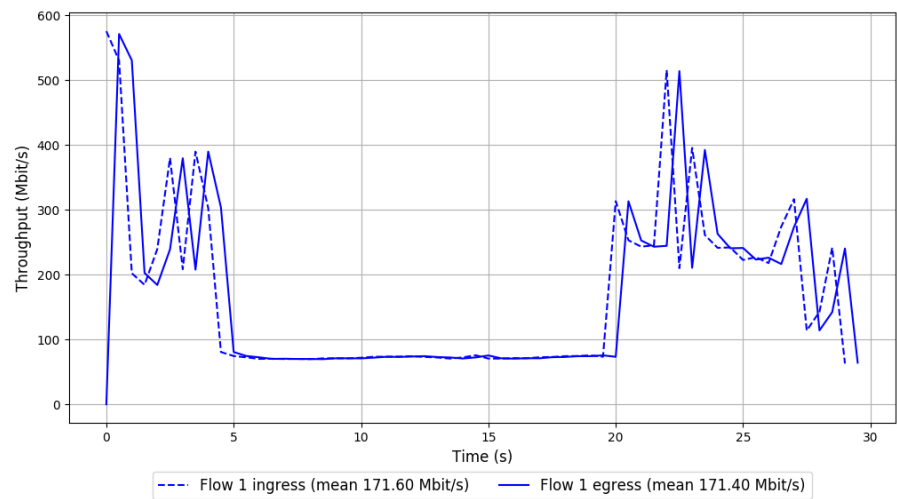


```
Run 1: Statistics of Indigo-MusesT

Start at: 2018-12-19 23:02:09
End at: 2018-12-19 23:02:39
Local clock offset: 3.98 ms
Remote clock offset: -3.357 ms

# Below is generated by plot.py at 2018-12-20 01:22:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 171.40 Mbit/s
95th percentile per-packet one-way delay: 2.011 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 171.40 Mbit/s
95th percentile per-packet one-way delay: 2.011 ms
Loss rate: 0.12%
```

Run 1: Report of Indigo-MusesT — Data Link



Run 2: Statistics of Indigo-MusesT

Start at: 2018-12-19 23:27:53

End at: 2018-12-19 23:28:23

Local clock offset: 0.245 ms

Remote clock offset: -0.183 ms

Below is generated by plot.py at 2018-12-20 01:22:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 221.74 Mbit/s

95th percentile per-packet one-way delay: 2.285 ms

Loss rate: 0.16%

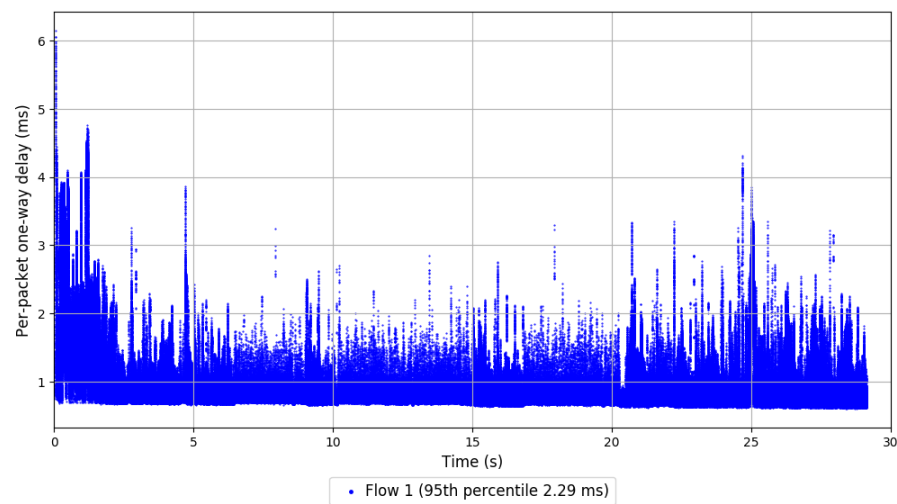
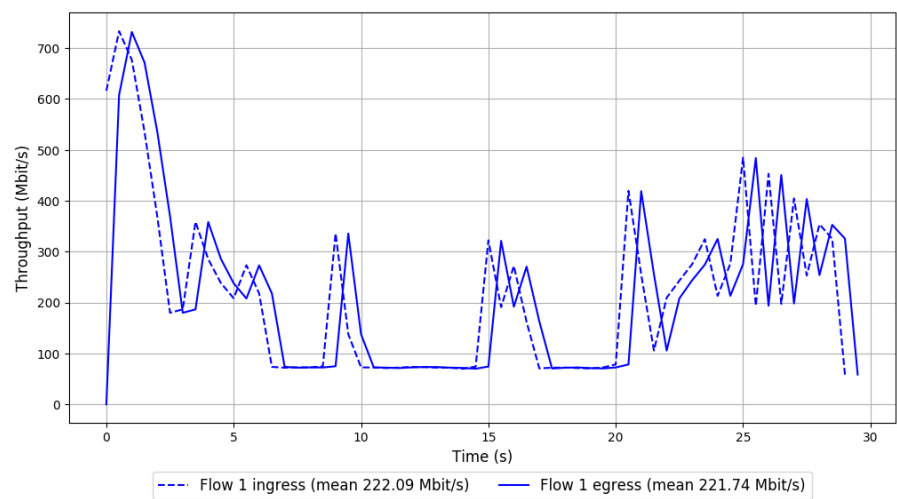
-- Flow 1:

Average throughput: 221.74 Mbit/s

95th percentile per-packet one-way delay: 2.285 ms

Loss rate: 0.16%

Run 2: Report of Indigo-MusesT — Data Link



Run 3: Statistics of Indigo-MusesT

Start at: 2018-12-19 23:53:34

End at: 2018-12-19 23:54:04

Local clock offset: 0.121 ms

Remote clock offset: -0.748 ms

Below is generated by plot.py at 2018-12-20 01:22:55

Datalink statistics

-- Total of 1 flow:

Average throughput: 698.92 Mbit/s

95th percentile per-packet one-way delay: 5.382 ms

Loss rate: 0.60%

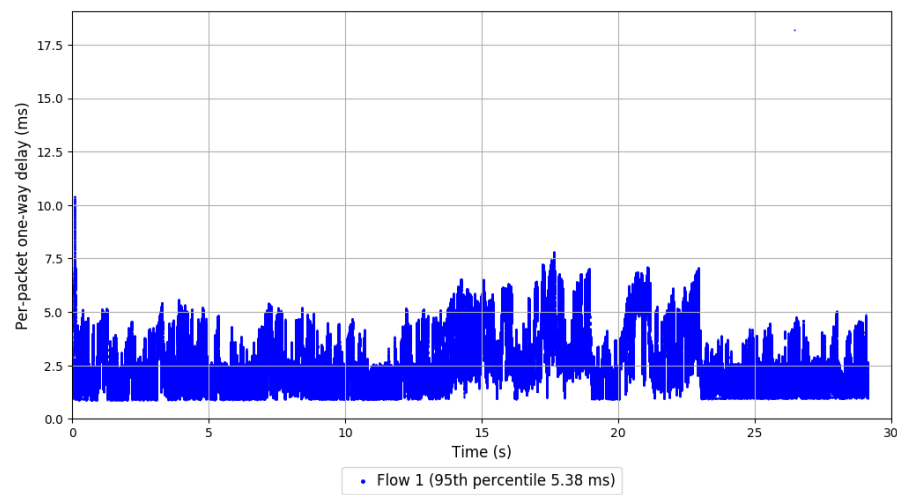
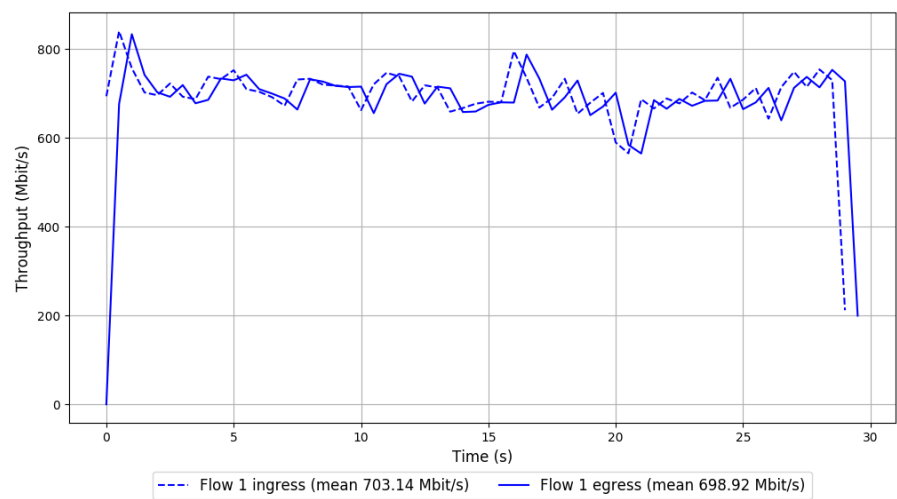
-- Flow 1:

Average throughput: 698.92 Mbit/s

95th percentile per-packet one-way delay: 5.382 ms

Loss rate: 0.60%

Run 3: Report of Indigo-MusesT — Data Link



Run 4: Statistics of Indigo-MusesT

Start at: 2018-12-20 00:19:33

End at: 2018-12-20 00:20:03

Local clock offset: -2.476 ms

Remote clock offset: -2.546 ms

Below is generated by plot.py at 2018-12-20 01:23:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 707.01 Mbit/s

95th percentile per-packet one-way delay: 4.806 ms

Loss rate: 0.59%

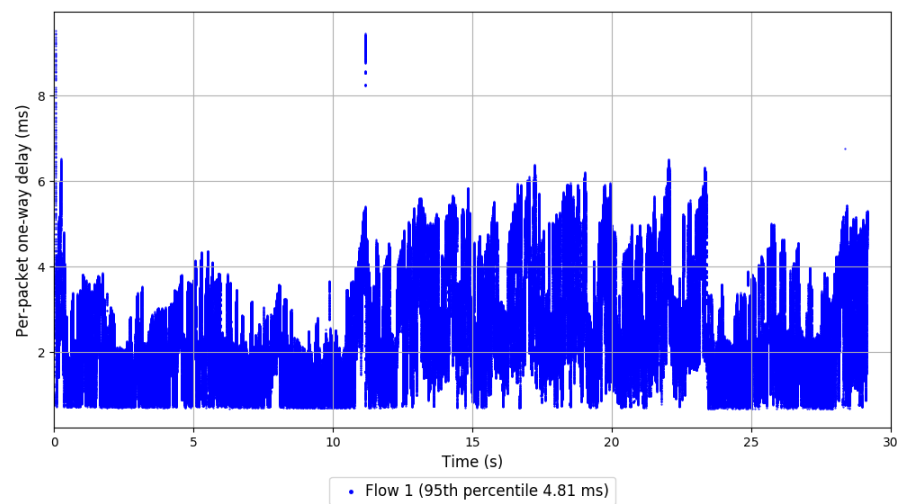
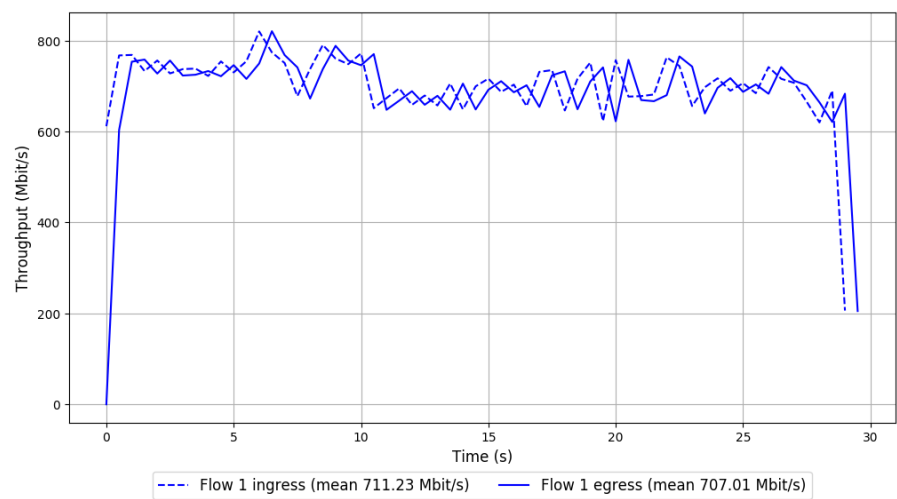
-- Flow 1:

Average throughput: 707.01 Mbit/s

95th percentile per-packet one-way delay: 4.806 ms

Loss rate: 0.59%

Run 4: Report of Indigo-MusesT — Data Link

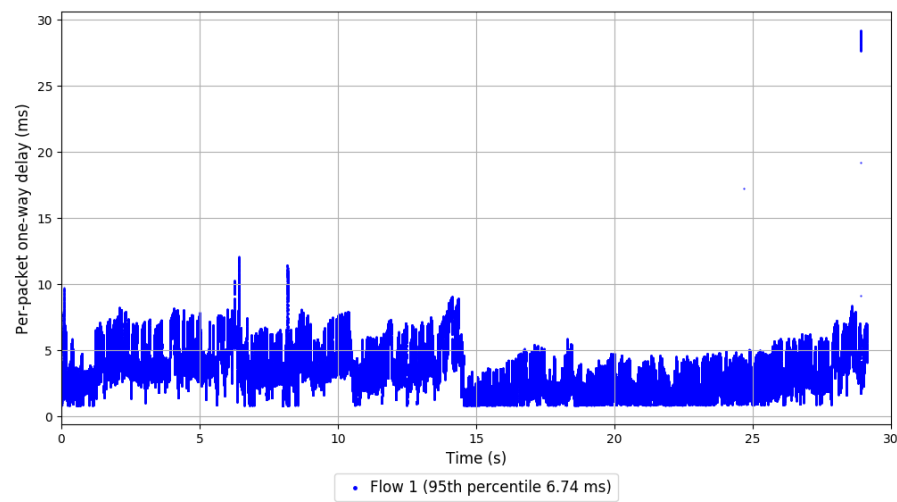
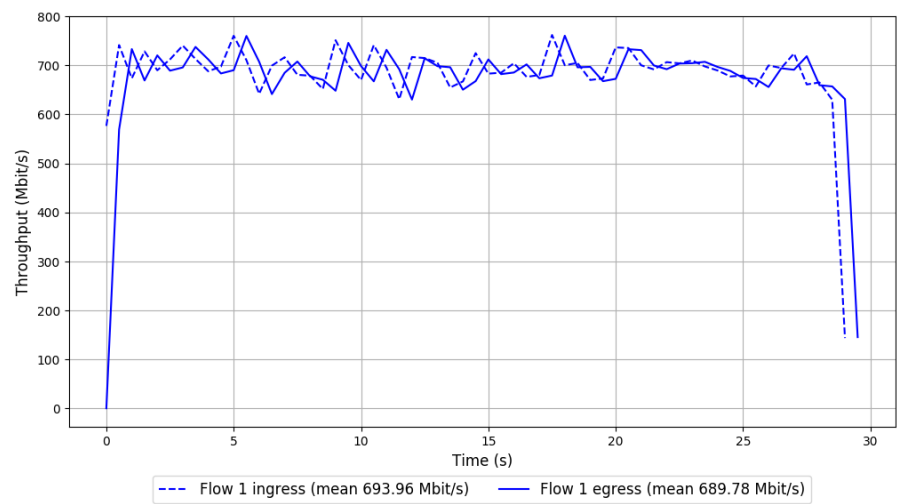


Run 5: Statistics of Indigo-MusesT

Start at: 2018-12-20 00:45:38
End at: 2018-12-20 00:46:08
Local clock offset: -0.689 ms
Remote clock offset: -2.929 ms

Below is generated by plot.py at 2018-12-20 01:23:47
Datalink statistics
-- Total of 1 flow:
Average throughput: 689.78 Mbit/s
95th percentile per-packet one-way delay: 6.735 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 689.78 Mbit/s
95th percentile per-packet one-way delay: 6.735 ms
Loss rate: 0.60%

Run 5: Report of Indigo-MusesT — Data Link

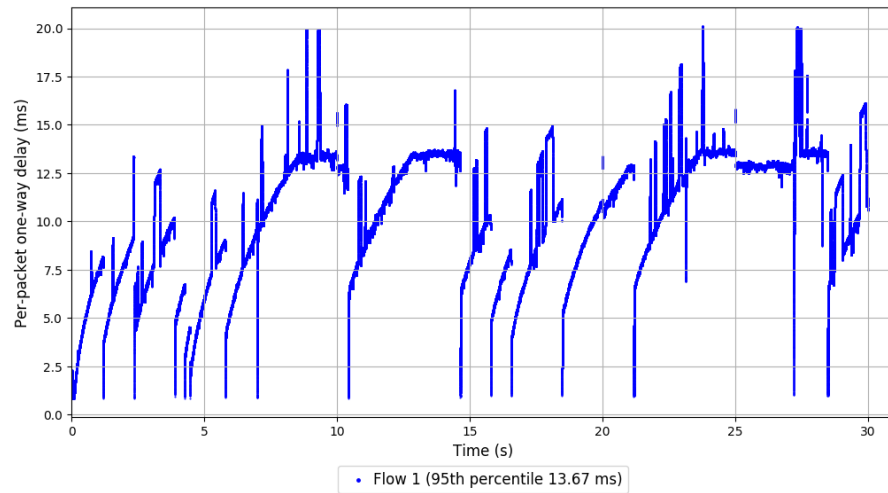
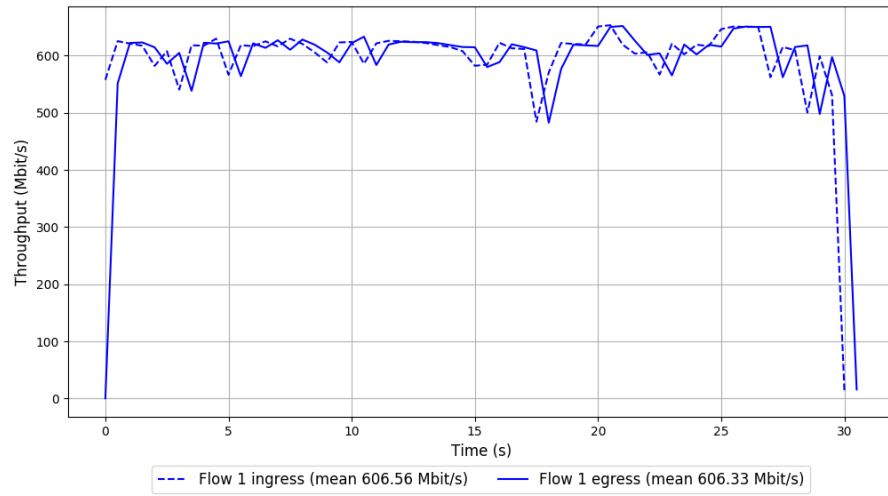



```
Run 1: Statistics of LEDBAT

Start at: 2018-12-19 22:44:22
End at: 2018-12-19 22:44:52
Local clock offset: 2.274 ms
Remote clock offset: -2.061 ms

# Below is generated by plot.py at 2018-12-20 01:23:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 606.33 Mbit/s
95th percentile per-packet one-way delay: 13.670 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 606.33 Mbit/s
95th percentile per-packet one-way delay: 13.670 ms
Loss rate: 0.04%
```

Run 1: Report of LEDBAT — Data Link

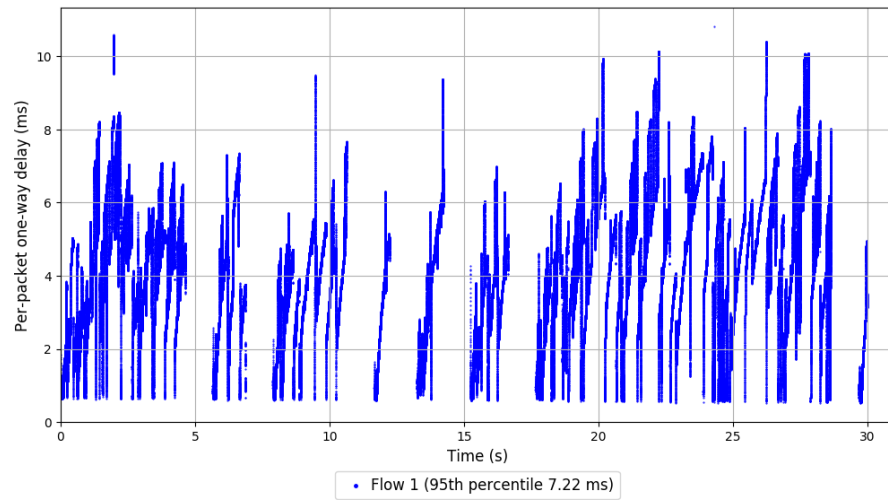
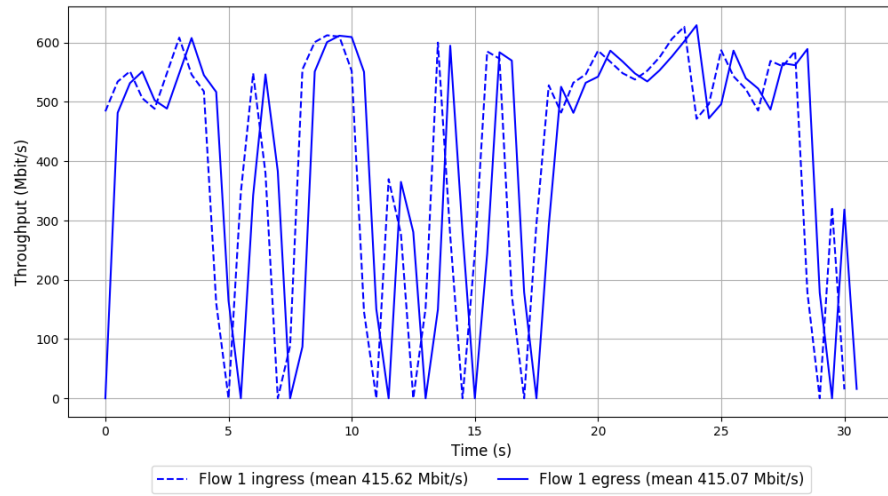


Run 2: Statistics of LEDBAT

Start at: 2018-12-19 23:10:21
End at: 2018-12-19 23:10:51
Local clock offset: 2.476 ms
Remote clock offset: -3.666 ms

Below is generated by plot.py at 2018-12-20 01:23:47
Datalink statistics
-- Total of 1 flow:
Average throughput: 415.07 Mbit/s
95th percentile per-packet one-way delay: 7.224 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 415.07 Mbit/s
95th percentile per-packet one-way delay: 7.224 ms
Loss rate: 0.13%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-12-19 23:36:03

End at: 2018-12-19 23:36:33

Local clock offset: -0.098 ms

Remote clock offset: 0.502 ms

Below is generated by plot.py at 2018-12-20 01:23:47

Datalink statistics

-- Total of 1 flow:

Average throughput: 380.63 Mbit/s

95th percentile per-packet one-way delay: 7.248 ms

Loss rate: 0.12%

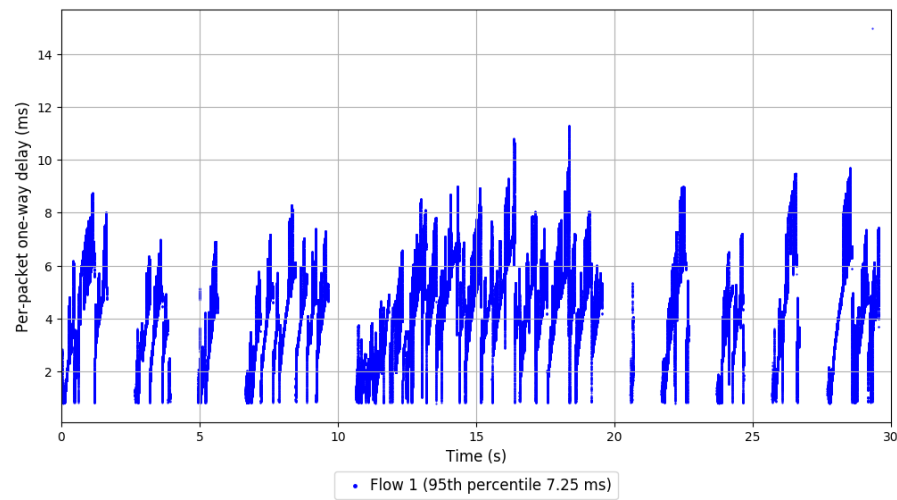
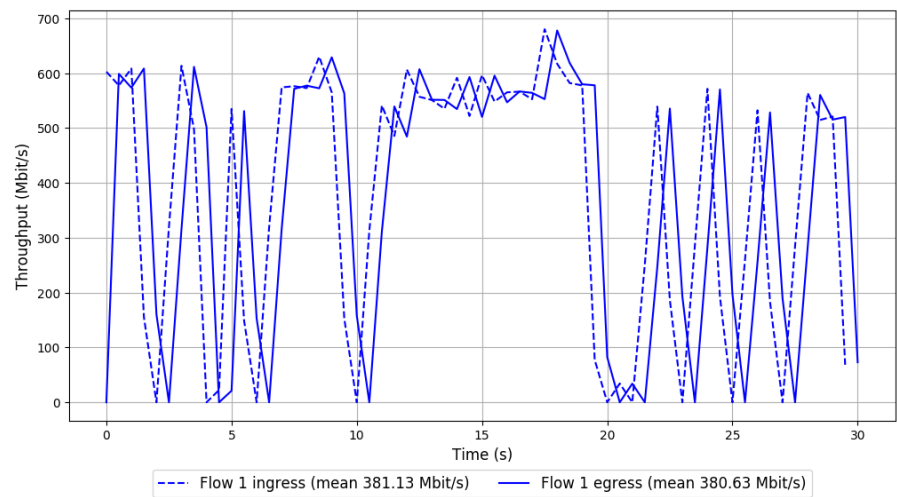
-- Flow 1:

Average throughput: 380.63 Mbit/s

95th percentile per-packet one-way delay: 7.248 ms

Loss rate: 0.12%

Run 3: Report of LEDBAT — Data Link

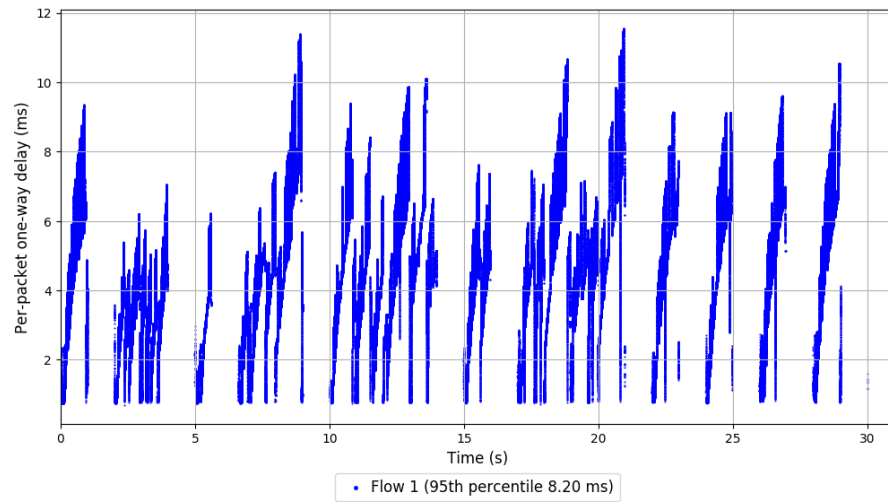
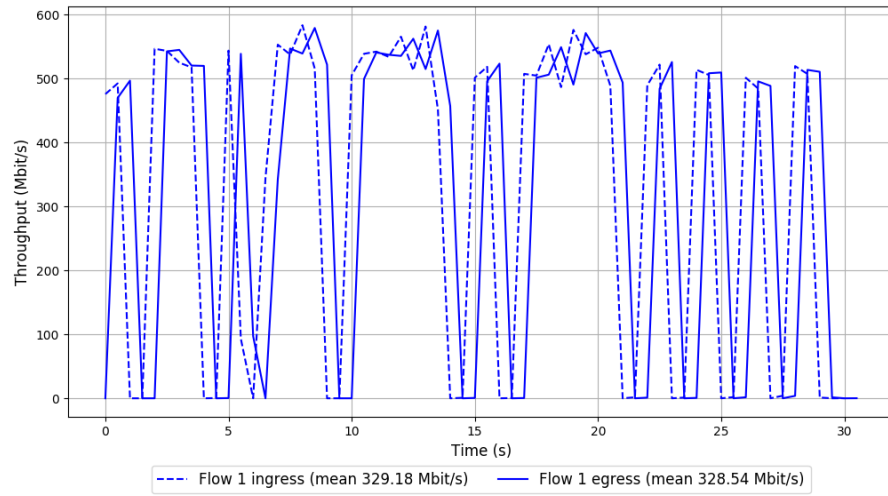


Run 4: Statistics of LEDBAT

Start at: 2018-12-20 00:02:02
End at: 2018-12-20 00:02:32
Local clock offset: 0.078 ms
Remote clock offset: -1.846 ms

Below is generated by plot.py at 2018-12-20 01:25:07
Datalink statistics
-- Total of 1 flow:
Average throughput: 328.54 Mbit/s
95th percentile per-packet one-way delay: 8.200 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 328.54 Mbit/s
95th percentile per-packet one-way delay: 8.200 ms
Loss rate: 0.19%

Run 4: Report of LEDBAT — Data Link

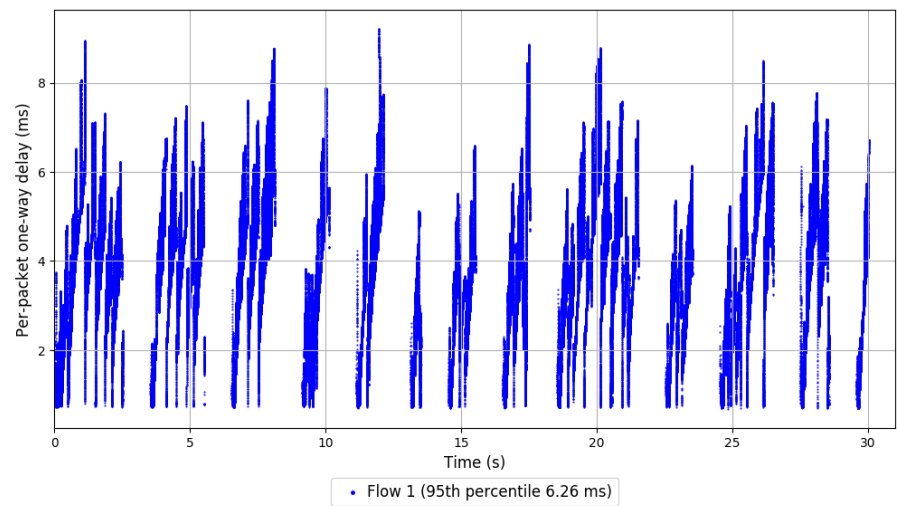
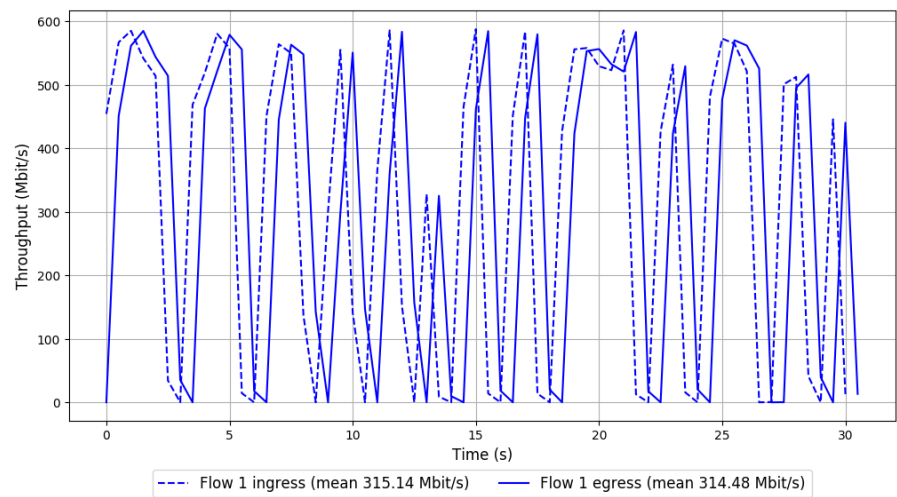


Run 5: Statistics of LEDBAT

Start at: 2018-12-20 00:28:04
End at: 2018-12-20 00:28:34
Local clock offset: -3.169 ms
Remote clock offset: -2.637 ms

Below is generated by plot.py at 2018-12-20 01:25:07
Datalink statistics
-- Total of 1 flow:
Average throughput: 314.48 Mbit/s
95th percentile per-packet one-way delay: 6.260 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 314.48 Mbit/s
95th percentile per-packet one-way delay: 6.260 ms
Loss rate: 0.21%

Run 5: Report of LEDBAT — Data Link

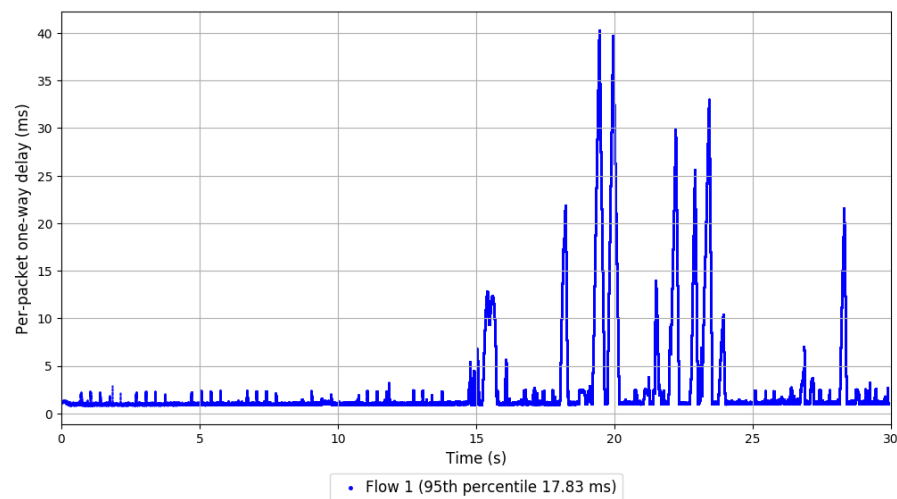
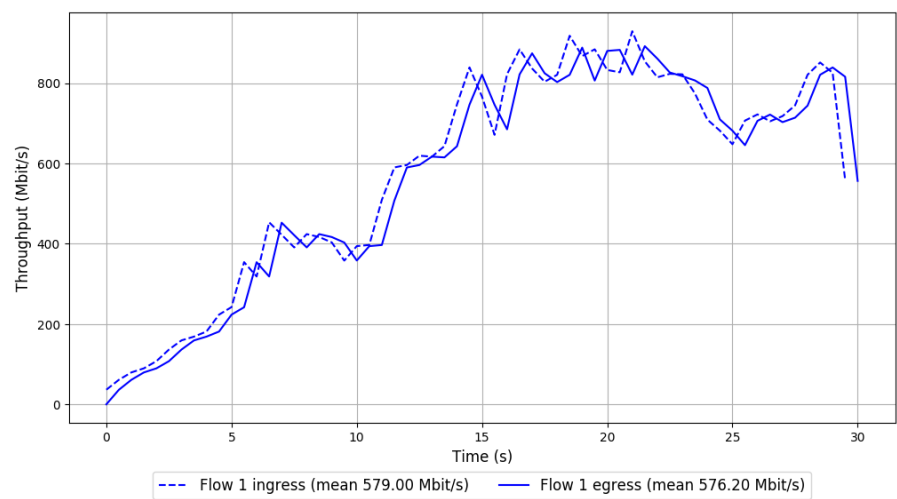


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-12-19 22:53:29
End at: 2018-12-19 22:53:59
Local clock offset: 3.387 ms
Remote clock offset: -2.885 ms

# Below is generated by plot.py at 2018-12-20 01:28:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 576.20 Mbit/s
95th percentile per-packet one-way delay: 17.832 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 576.20 Mbit/s
95th percentile per-packet one-way delay: 17.832 ms
Loss rate: 0.49%
```

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-12-19 23:19:13

End at: 2018-12-19 23:19:43

Local clock offset: 0.918 ms

Remote clock offset: -1.546 ms

Below is generated by plot.py at 2018-12-20 01:28:52

Datalink statistics

-- Total of 1 flow:

Average throughput: 492.12 Mbit/s

95th percentile per-packet one-way delay: 2.042 ms

Loss rate: 0.35%

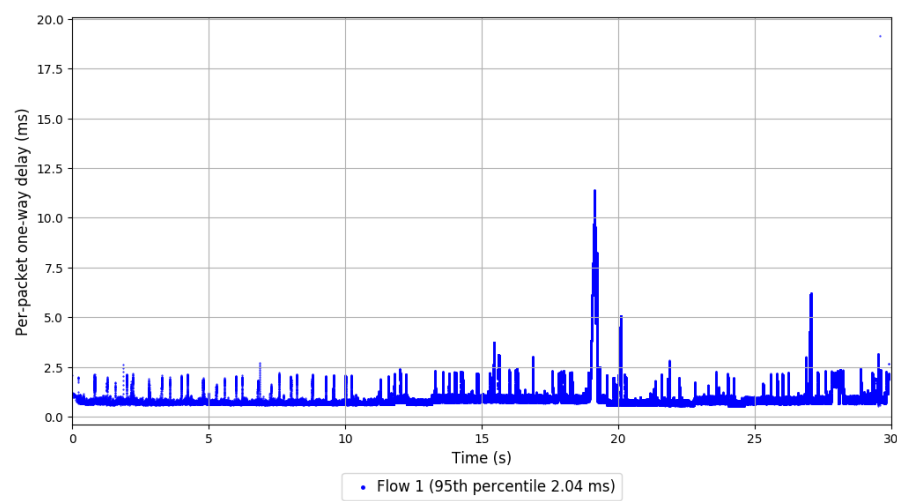
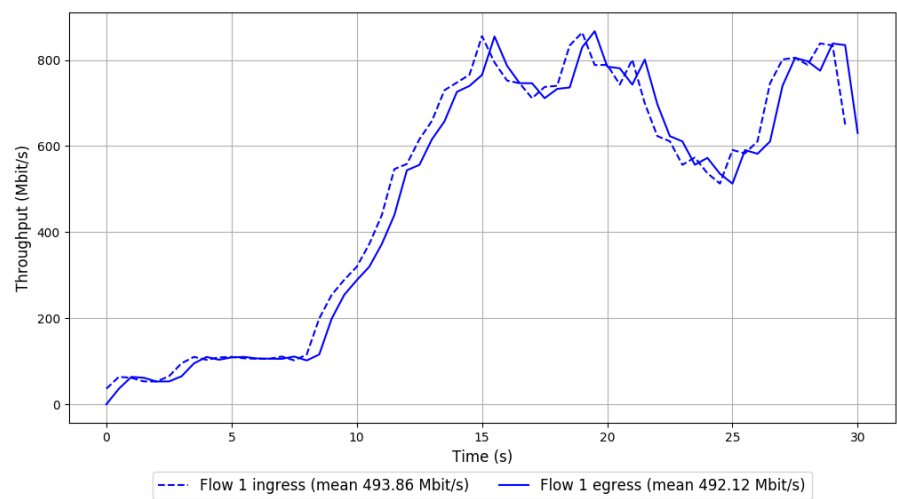
-- Flow 1:

Average throughput: 492.12 Mbit/s

95th percentile per-packet one-way delay: 2.042 ms

Loss rate: 0.35%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-12-19 23:44:53

End at: 2018-12-19 23:45:23

Local clock offset: 0.116 ms

Remote clock offset: 0.849 ms

Below is generated by plot.py at 2018-12-20 01:30:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 663.60 Mbit/s

95th percentile per-packet one-way delay: 2.180 ms

Loss rate: 0.35%

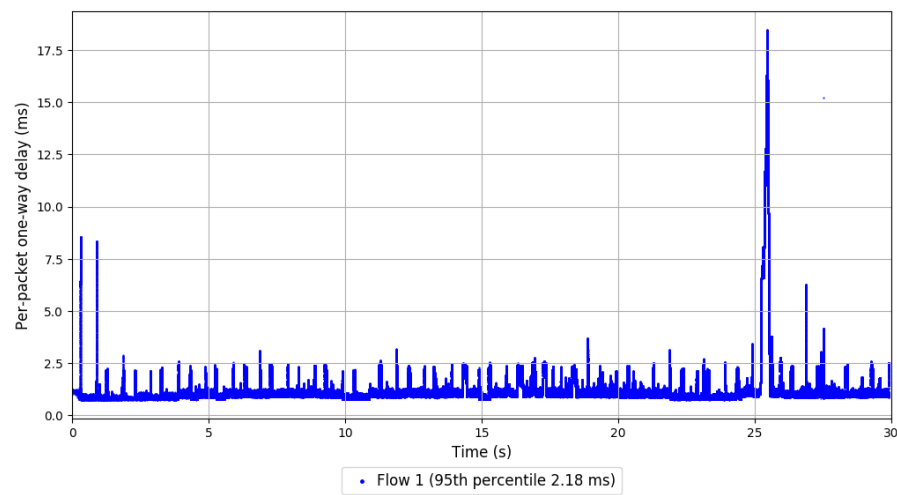
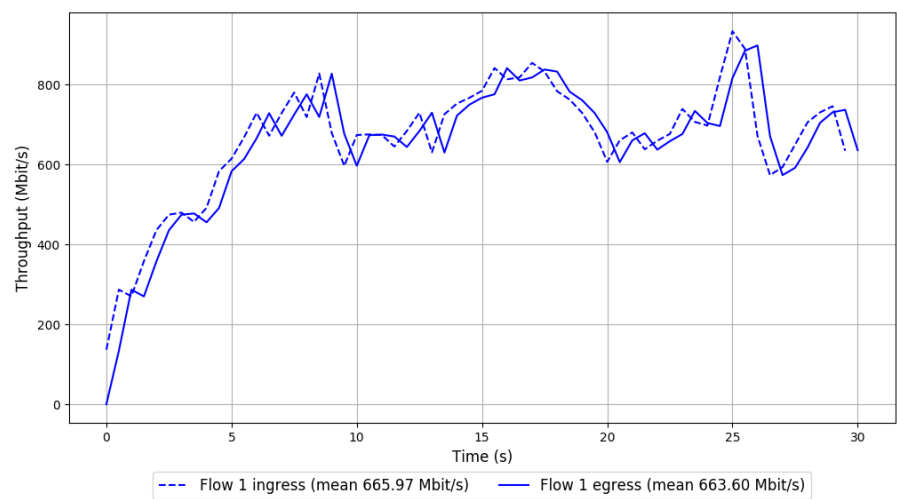
-- Flow 1:

Average throughput: 663.60 Mbit/s

95th percentile per-packet one-way delay: 2.180 ms

Loss rate: 0.35%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-12-20 00:10:52

End at: 2018-12-20 00:11:22

Local clock offset: -1.261 ms

Remote clock offset: -2.37 ms

Below is generated by plot.py at 2018-12-20 01:30:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 517.23 Mbit/s

95th percentile per-packet one-way delay: 1.987 ms

Loss rate: 0.33%

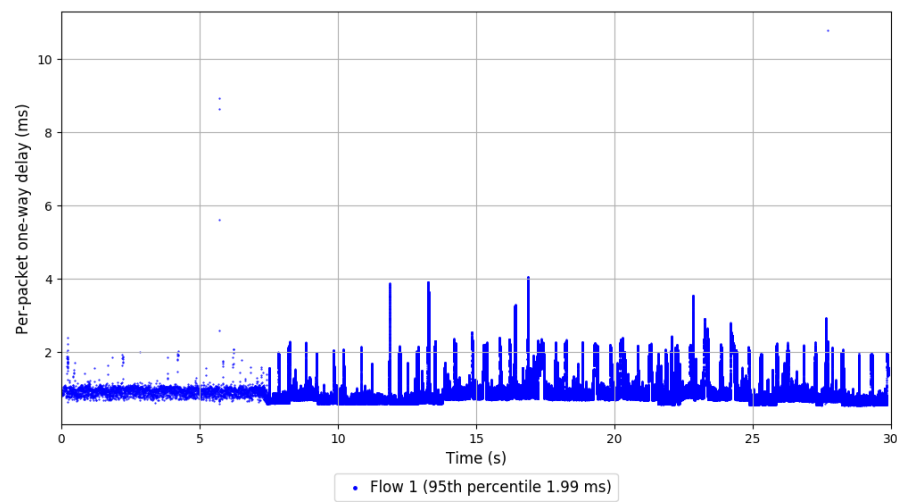
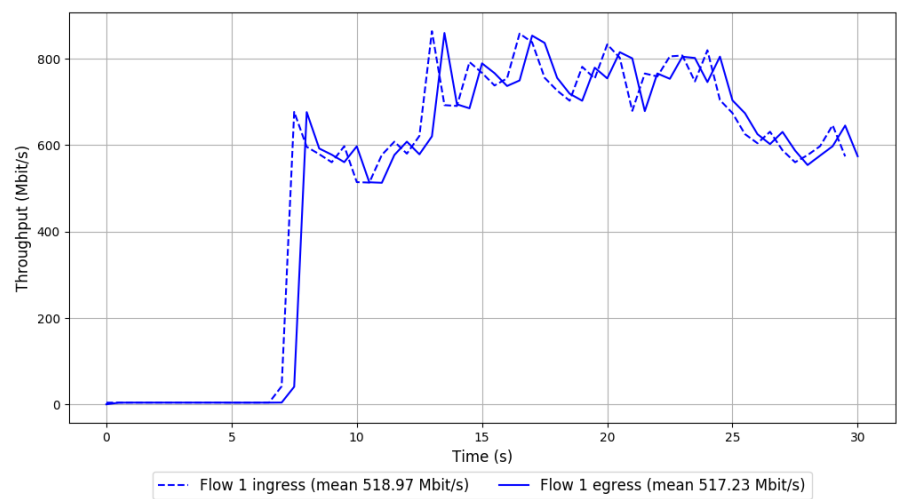
-- Flow 1:

Average throughput: 517.23 Mbit/s

95th percentile per-packet one-way delay: 1.987 ms

Loss rate: 0.33%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-12-20 00:36:54

End at: 2018-12-20 00:37:24

Local clock offset: -3.093 ms

Remote clock offset: -2.778 ms

Below is generated by plot.py at 2018-12-20 01:31:25

Datalink statistics

-- Total of 1 flow:

Average throughput: 666.36 Mbit/s

95th percentile per-packet one-way delay: 5.122 ms

Loss rate: 0.44%

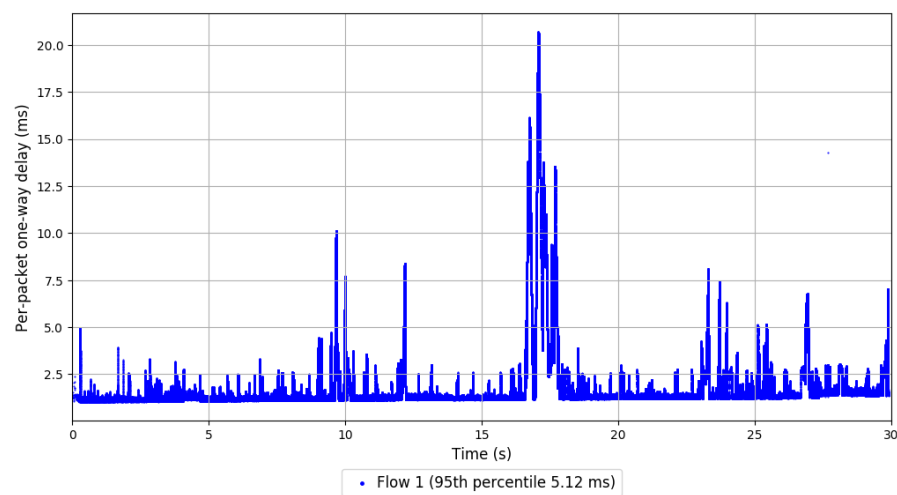
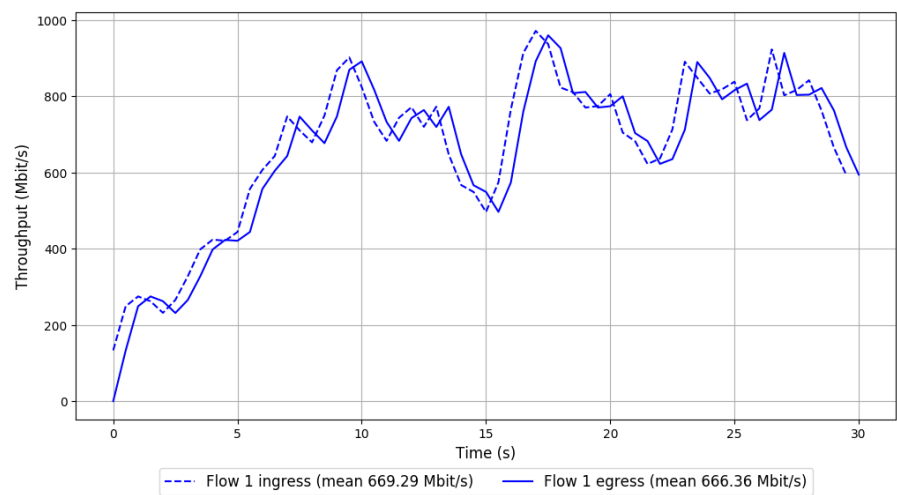
-- Flow 1:

Average throughput: 666.36 Mbit/s

95th percentile per-packet one-way delay: 5.122 ms

Loss rate: 0.44%

Run 5: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

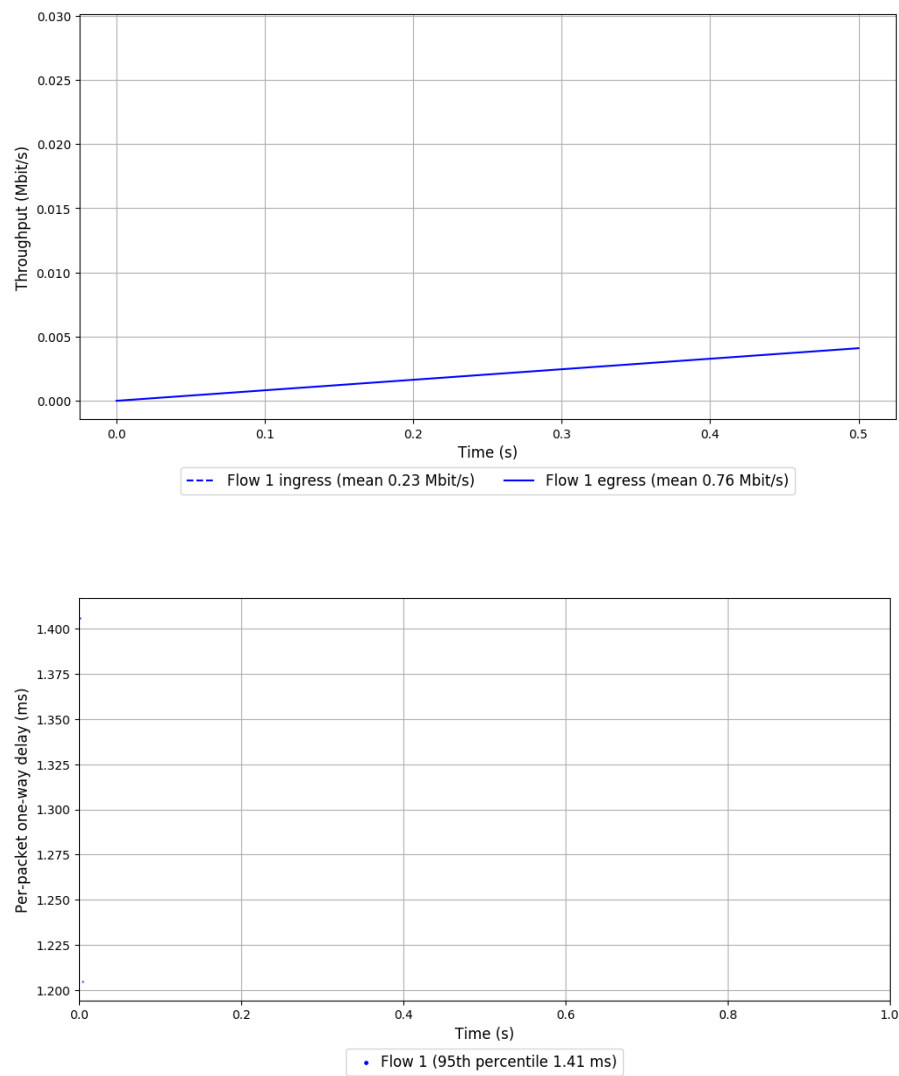
Start at: 2018-12-19 22:37:23

End at: 2018-12-19 22:37:53

Local clock offset: 0.601 ms

Remote clock offset: -0.748 ms

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

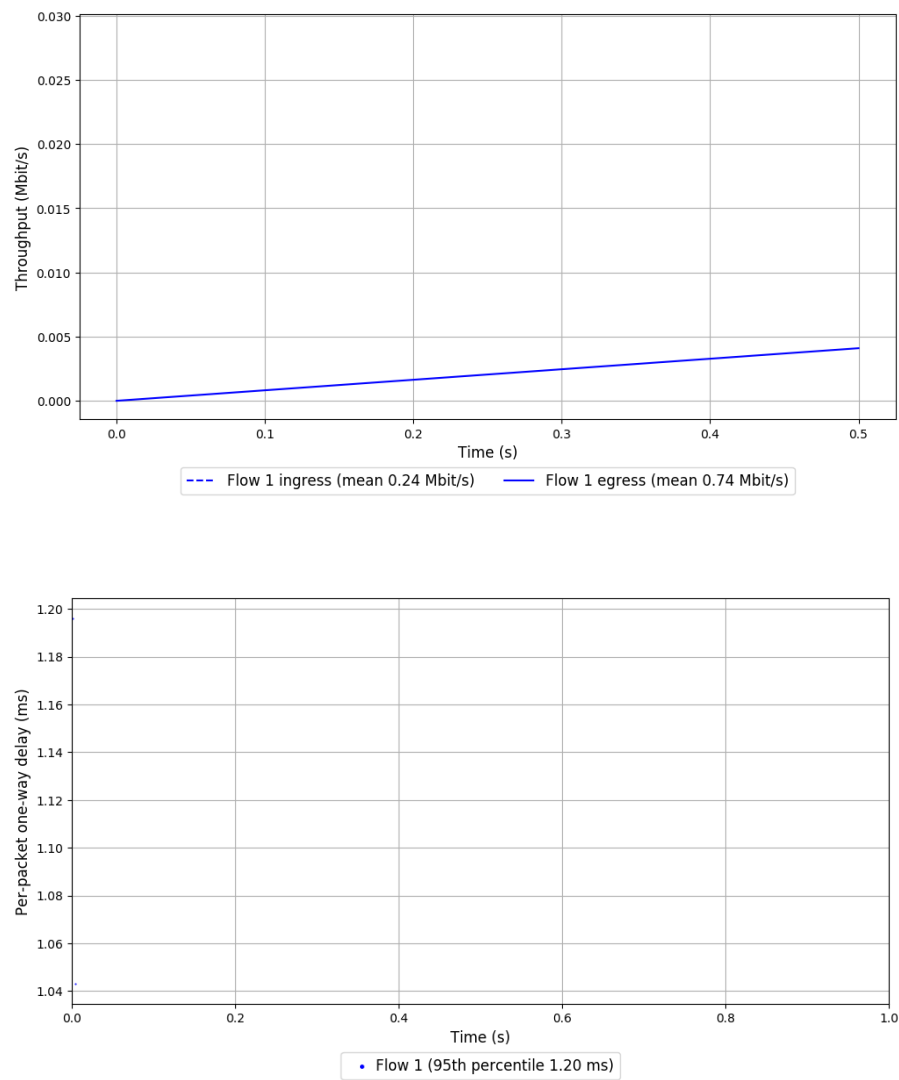
Start at: 2018-12-19 23:03:27

End at: 2018-12-19 23:03:57

Local clock offset: 4.052 ms

Remote clock offset: -3.474 ms

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

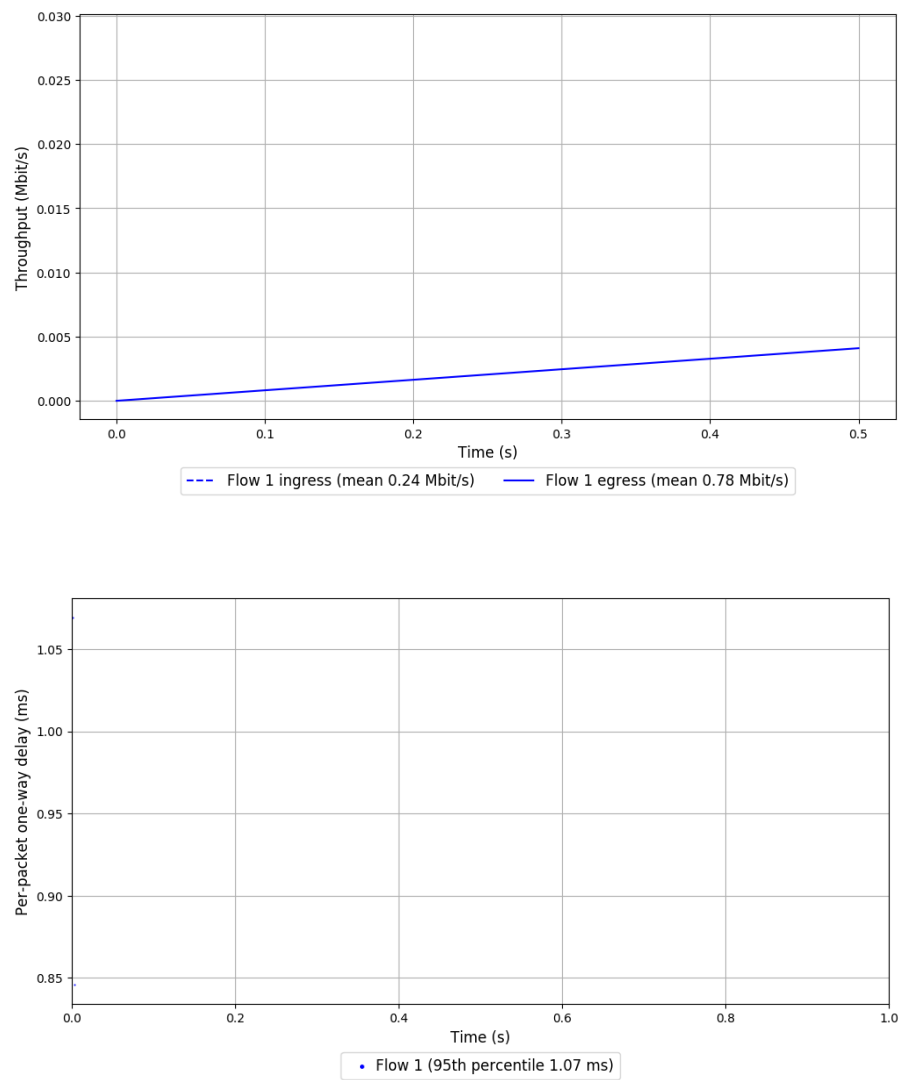
Start at: 2018-12-19 23:29:13

End at: 2018-12-19 23:29:43

Local clock offset: 0.183 ms

Remote clock offset: -0.077 ms

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

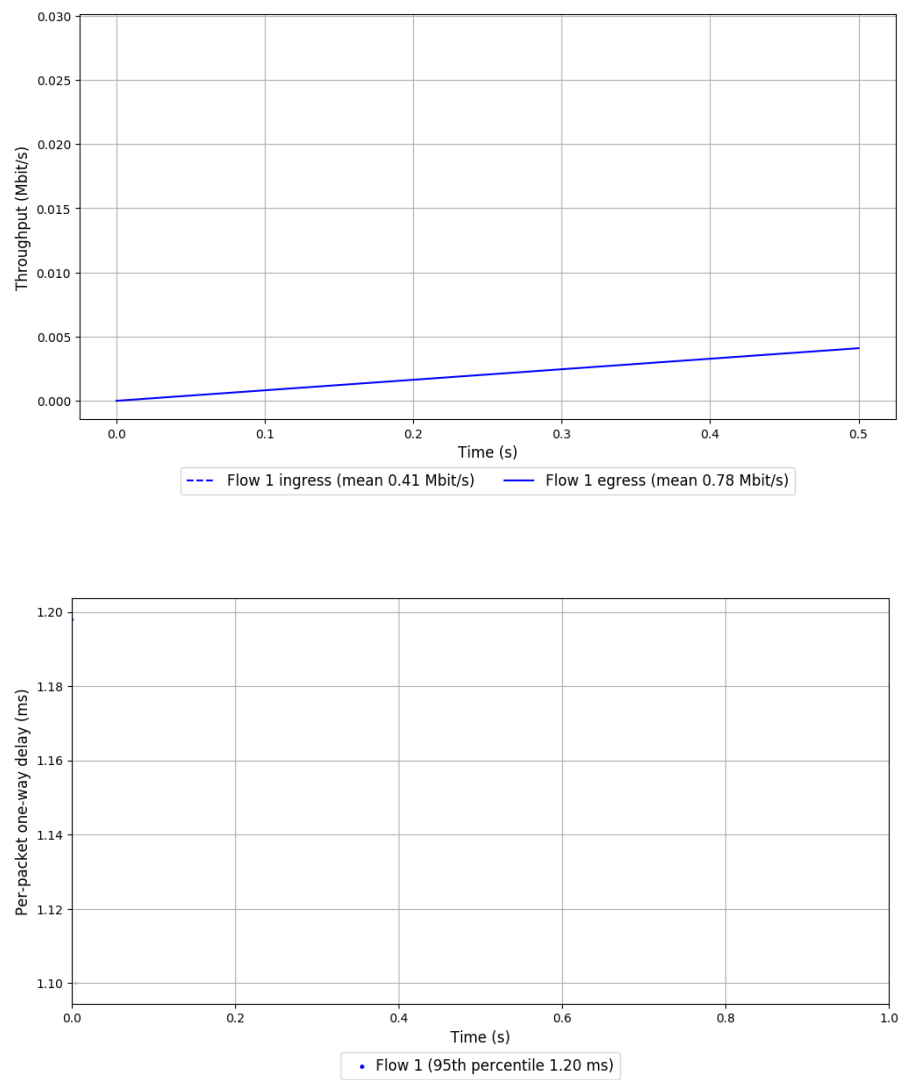
Start at: 2018-12-19 23:55:09

End at: 2018-12-19 23:55:39

Local clock offset: 0.121 ms

Remote clock offset: -1.015 ms

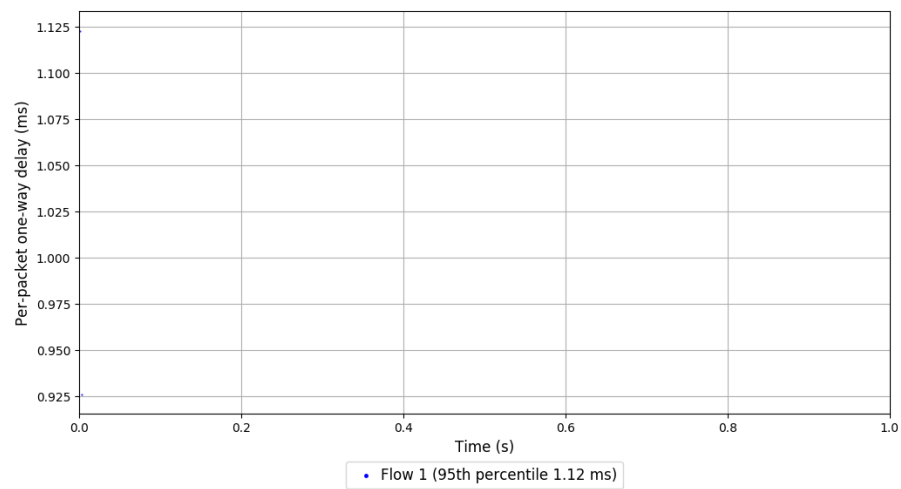
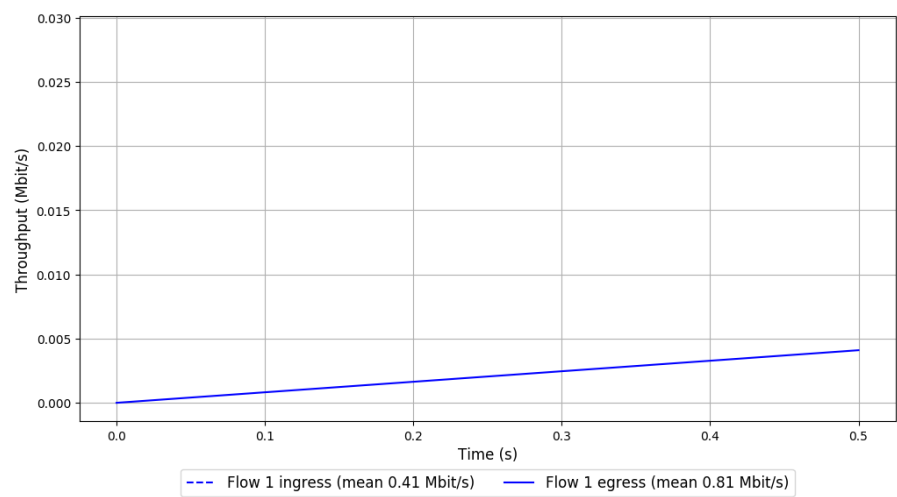
Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

Start at: 2018-12-20 00:21:08
End at: 2018-12-20 00:21:38
Local clock offset: -2.63 ms
Remote clock offset: -2.605 ms

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2018-12-19 22:51:00

End at: 2018-12-19 22:51:30

Local clock offset: 3.191 ms

Remote clock offset: -2.805 ms

Below is generated by plot.py at 2018-12-20 01:31:25

Datalink statistics

-- Total of 1 flow:

Average throughput: 70.01 Mbit/s

95th percentile per-packet one-way delay: 0.944 ms

Loss rate: 0.00%

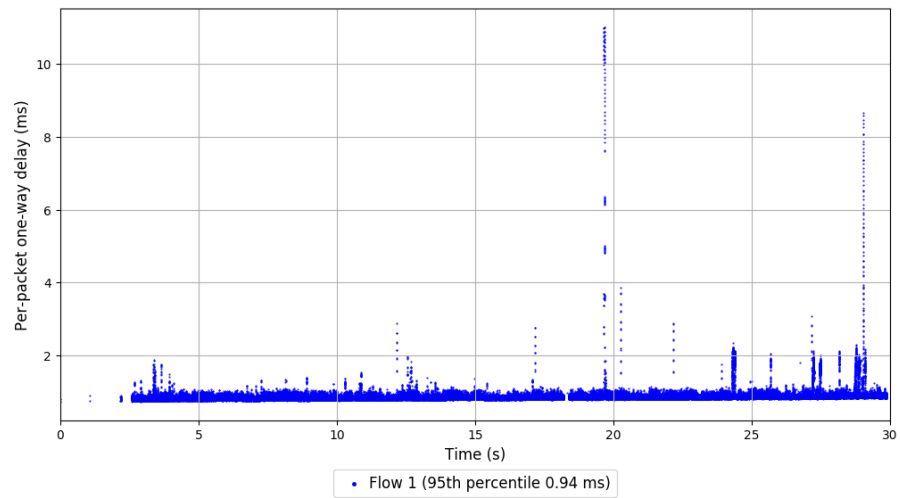
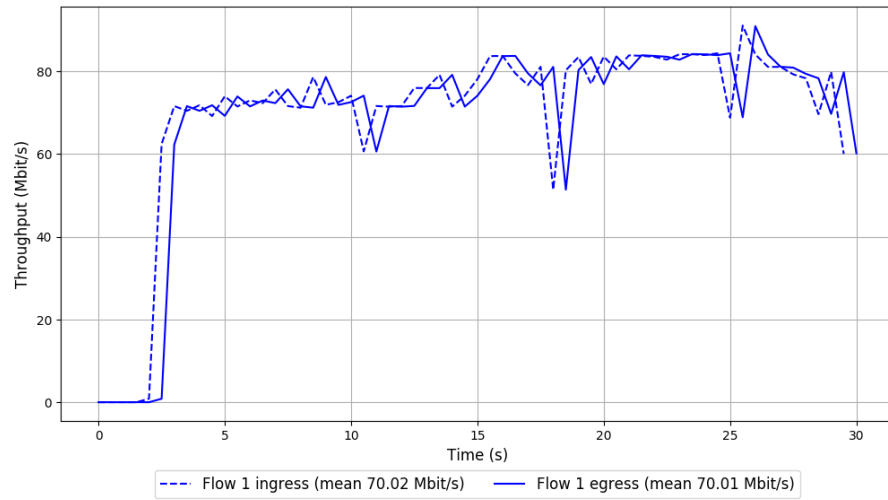
-- Flow 1:

Average throughput: 70.01 Mbit/s

95th percentile per-packet one-way delay: 0.944 ms

Loss rate: 0.00%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-12-19 23:16:45

End at: 2018-12-19 23:17:15

Local clock offset: 1.225 ms

Remote clock offset: -2.206 ms

Below is generated by plot.py at 2018-12-20 01:31:25

Datalink statistics

-- Total of 1 flow:

Average throughput: 77.25 Mbit/s

95th percentile per-packet one-way delay: 0.720 ms

Loss rate: 0.01%

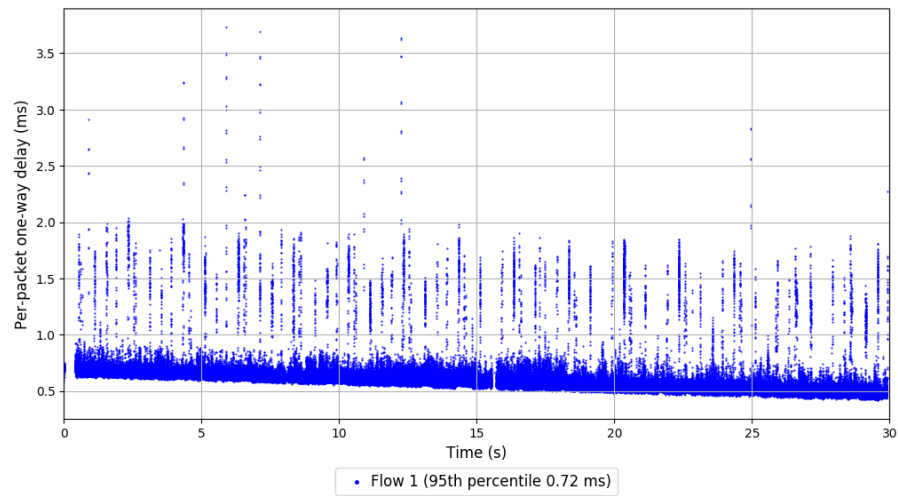
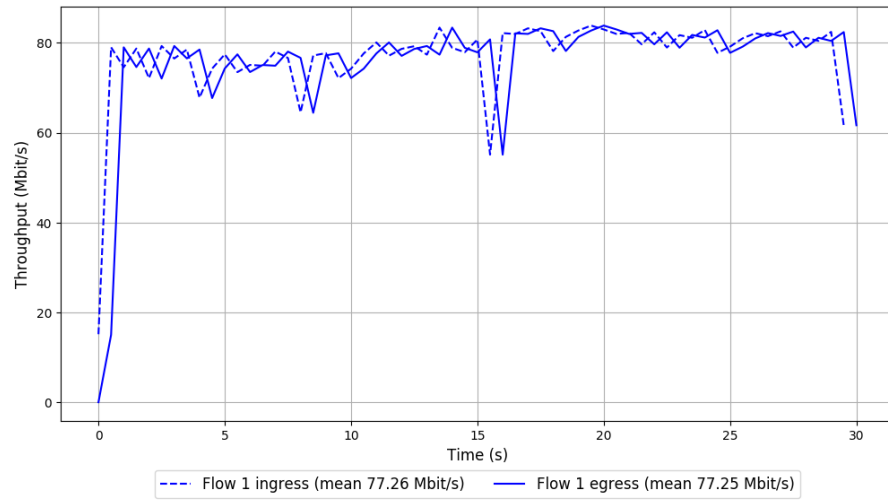
-- Flow 1:

Average throughput: 77.25 Mbit/s

95th percentile per-packet one-way delay: 0.720 ms

Loss rate: 0.01%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-12-19 23:42:25

End at: 2018-12-19 23:42:55

Local clock offset: 0.068 ms

Remote clock offset: 0.761 ms

Below is generated by plot.py at 2018-12-20 01:31:25

Datalink statistics

-- Total of 1 flow:

Average throughput: 80.14 Mbit/s

95th percentile per-packet one-way delay: 0.976 ms

Loss rate: 0.01%

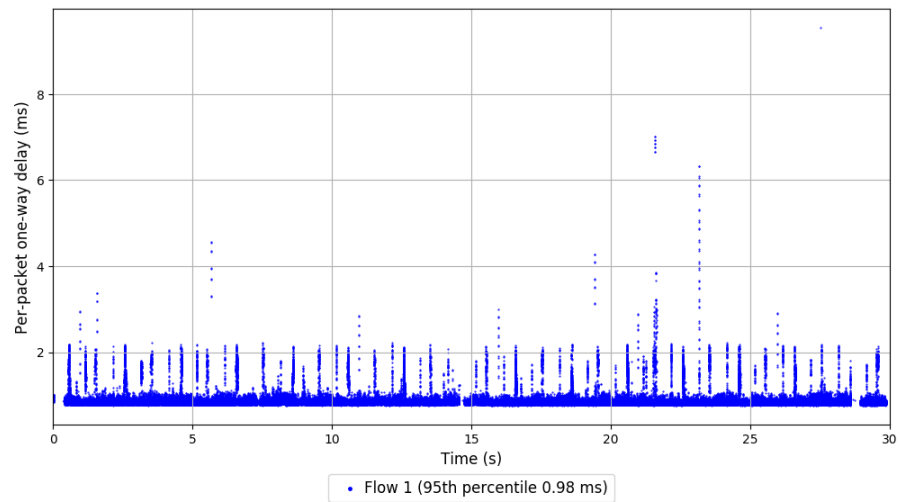
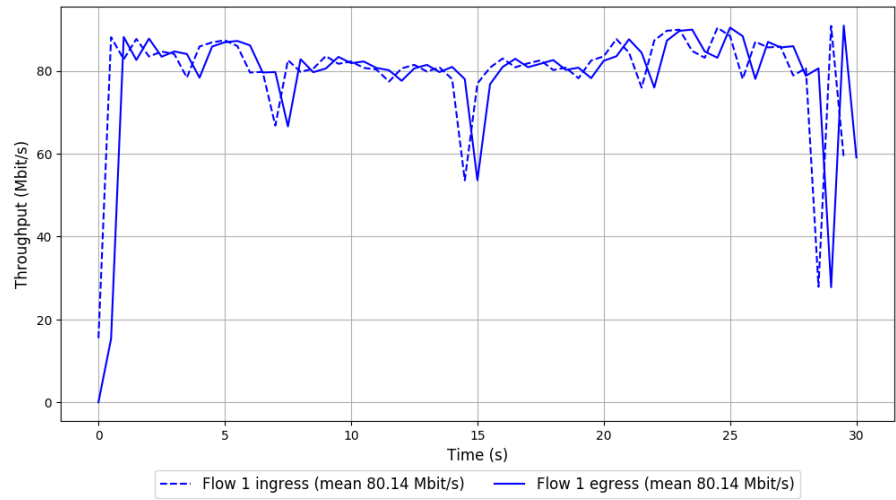
-- Flow 1:

Average throughput: 80.14 Mbit/s

95th percentile per-packet one-way delay: 0.976 ms

Loss rate: 0.01%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-12-20 00:08:23

End at: 2018-12-20 00:08:53

Local clock offset: -0.714 ms

Remote clock offset: -2.19 ms

Below is generated by plot.py at 2018-12-20 01:31:25

Datalink statistics

-- Total of 1 flow:

Average throughput: 77.39 Mbit/s

95th percentile per-packet one-way delay: 0.826 ms

Loss rate: 0.00%

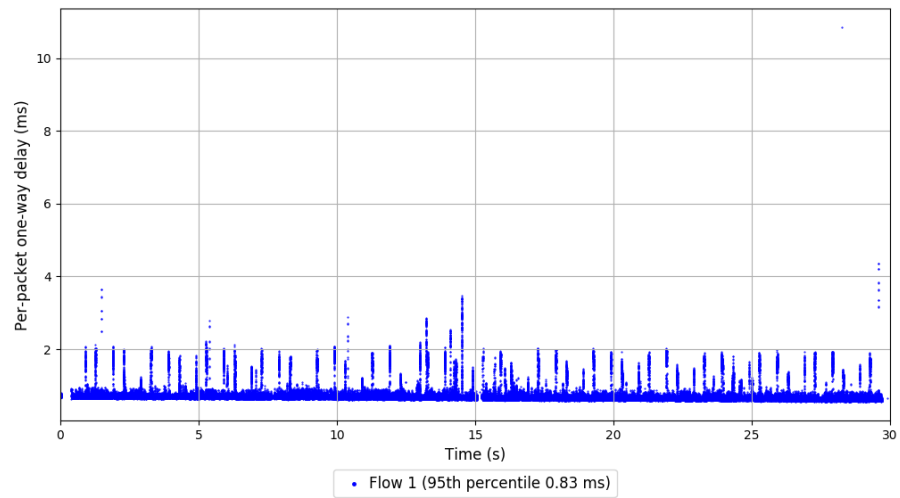
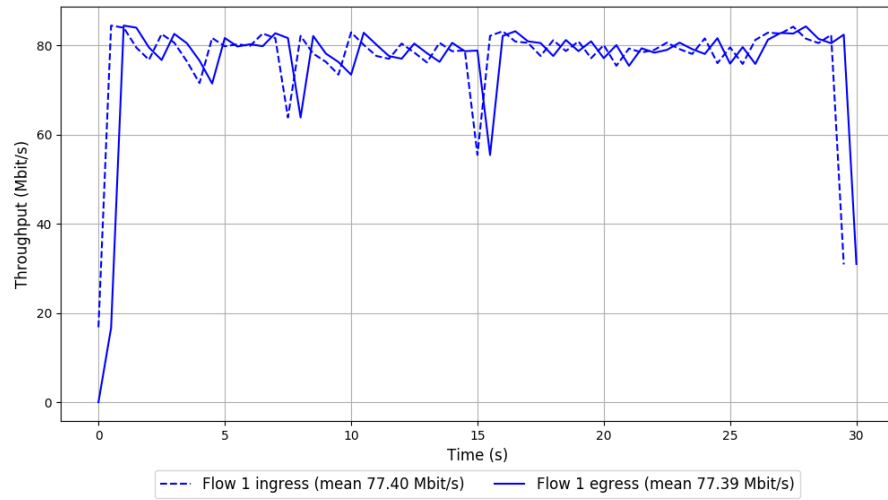
-- Flow 1:

Average throughput: 77.39 Mbit/s

95th percentile per-packet one-way delay: 0.826 ms

Loss rate: 0.00%

Run 4: Report of QUIC Cubic — Data Link

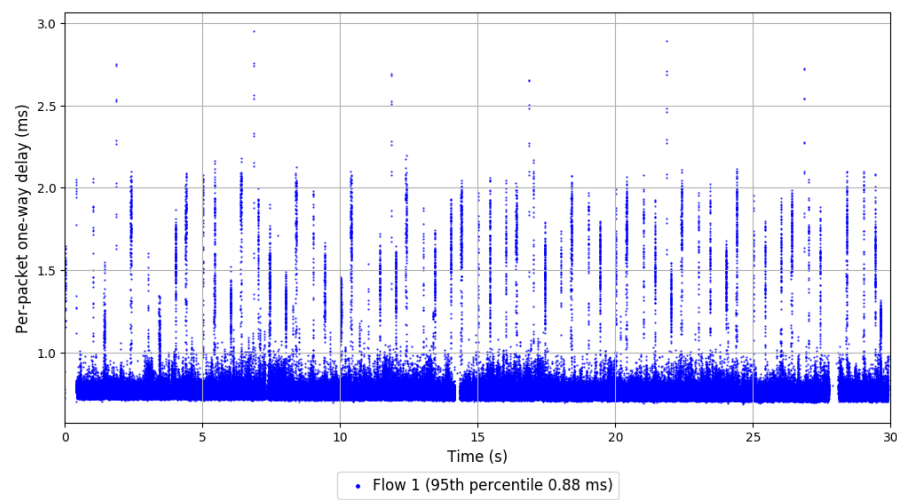
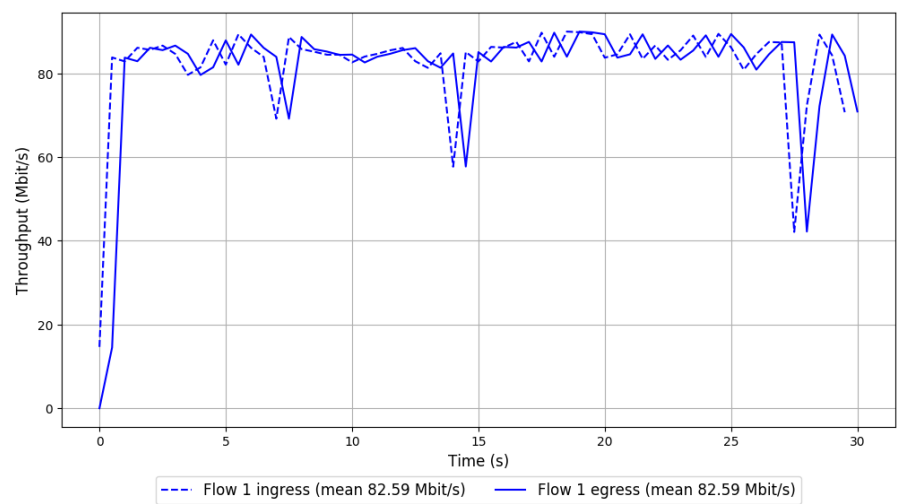


Run 5: Statistics of QUIC Cubic

Start at: 2018-12-20 00:34:25
End at: 2018-12-20 00:34:55
Local clock offset: -3.525 ms
Remote clock offset: -2.716 ms

Below is generated by plot.py at 2018-12-20 01:31:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 82.59 Mbit/s
95th percentile per-packet one-way delay: 0.878 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 82.59 Mbit/s
95th percentile per-packet one-way delay: 0.878 ms
Loss rate: 0.01%

Run 5: Report of QUIC Cubic — Data Link

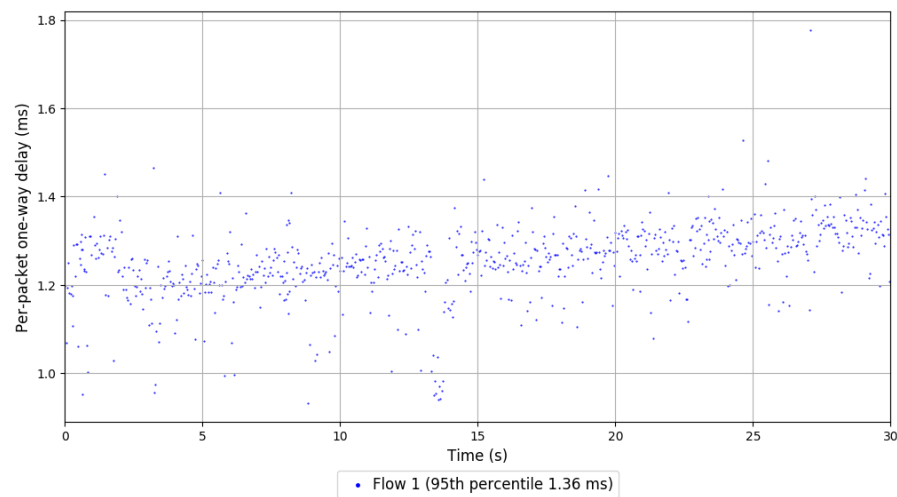
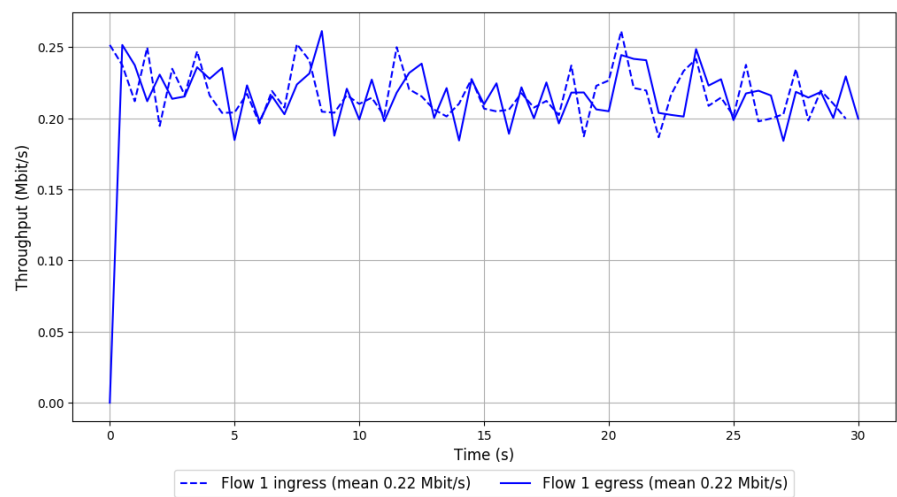



```
Run 1: Statistics of SCReAM

Start at: 2018-12-19 22:46:01
End at: 2018-12-19 22:46:31
Local clock offset: 2.55 ms
Remote clock offset: -2.236 ms

# Below is generated by plot.py at 2018-12-20 01:31:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.359 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.359 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link

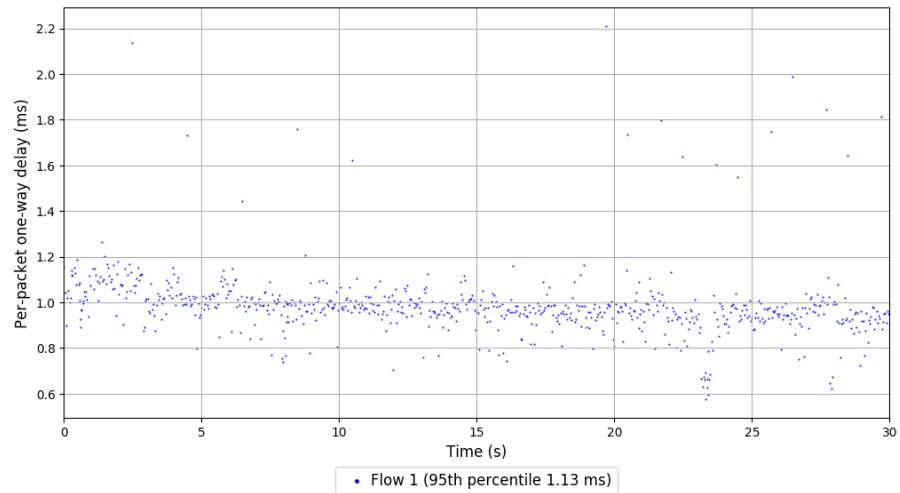
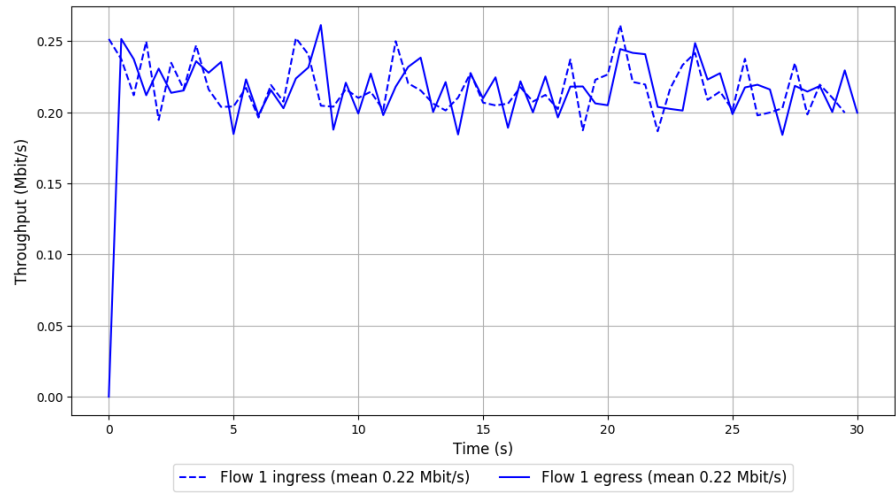


Run 2: Statistics of SCReAM

Start at: 2018-12-19 23:11:51
End at: 2018-12-19 23:12:22
Local clock offset: 2.106 ms
Remote clock offset: -3.707 ms

Below is generated by plot.py at 2018-12-20 01:31:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.133 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.133 ms
Loss rate: 0.00%

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2018-12-19 23:37:32

End at: 2018-12-19 23:38:02

Local clock offset: -0.039 ms

Remote clock offset: 0.486 ms

Below is generated by plot.py at 2018-12-20 01:31:25

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.192 ms

Loss rate: 0.00%

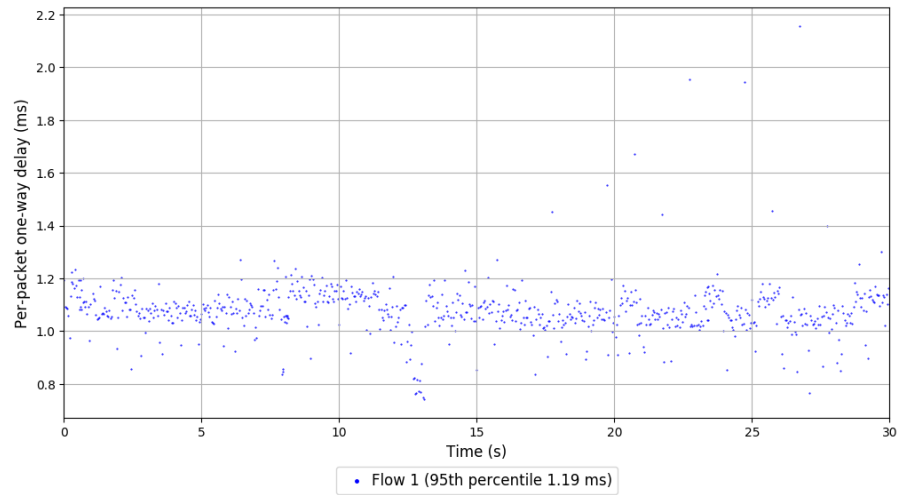
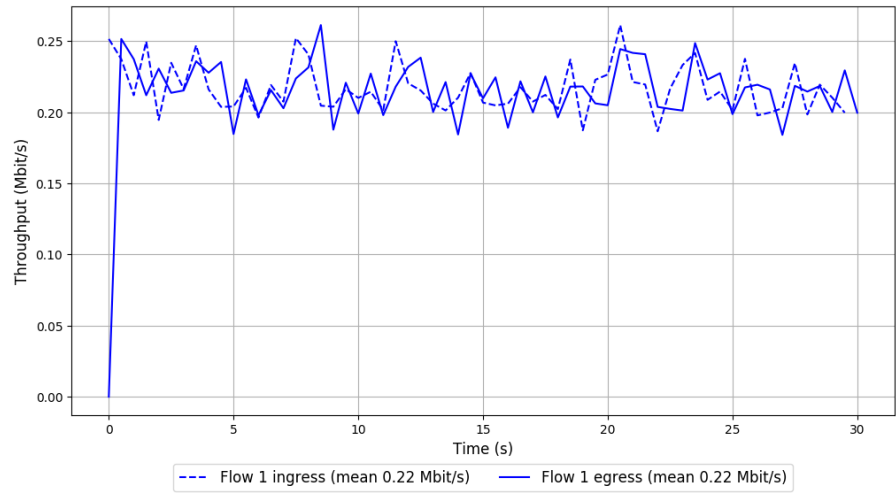
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.192 ms

Loss rate: 0.00%

Run 3: Report of SReAM — Data Link

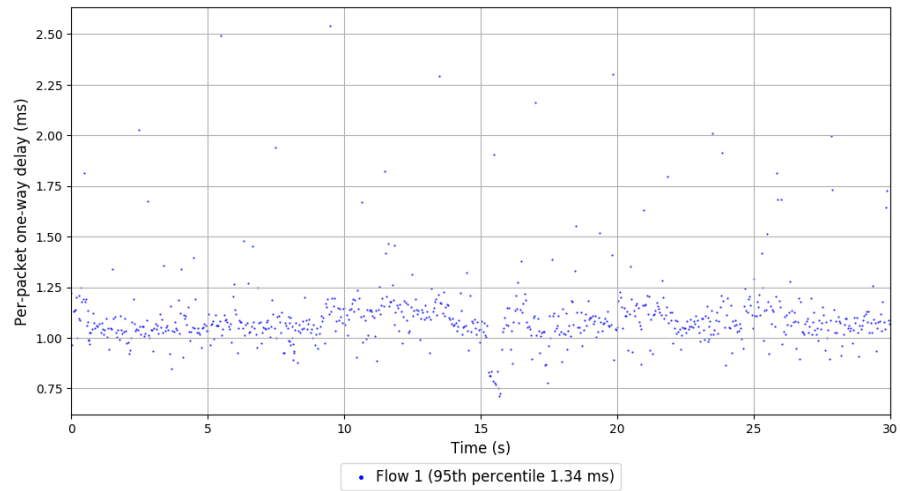
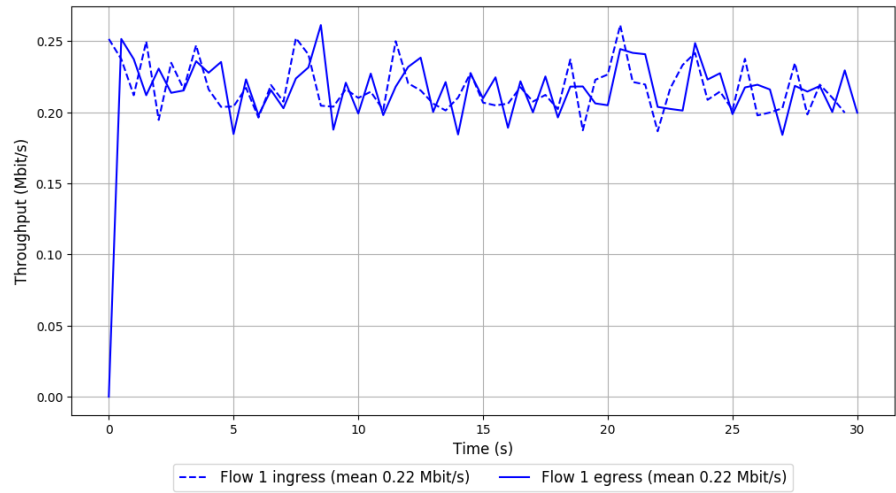


Run 4: Statistics of SCReAM

Start at: 2018-12-20 00:03:29
End at: 2018-12-20 00:03:59
Local clock offset: 0.046 ms
Remote clock offset: -1.994 ms

Below is generated by plot.py at 2018-12-20 01:31:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.339 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.339 ms
Loss rate: 0.00%

Run 4: Report of SReAM — Data Link

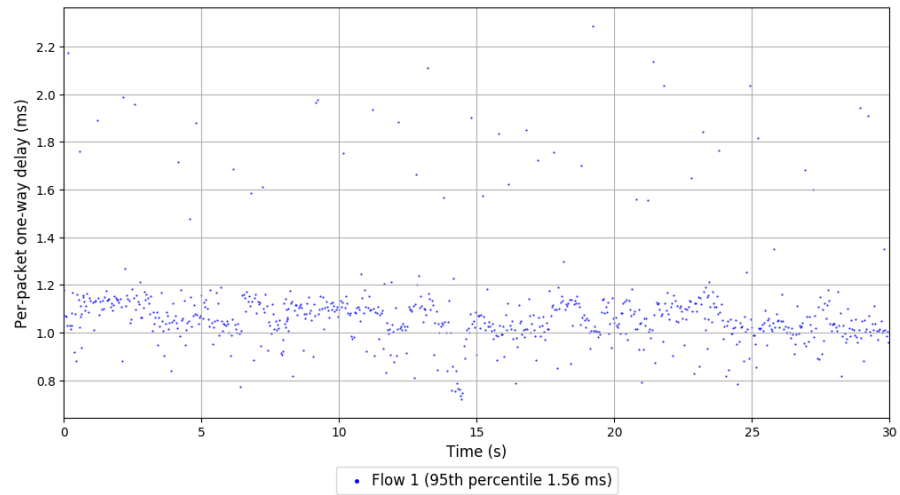
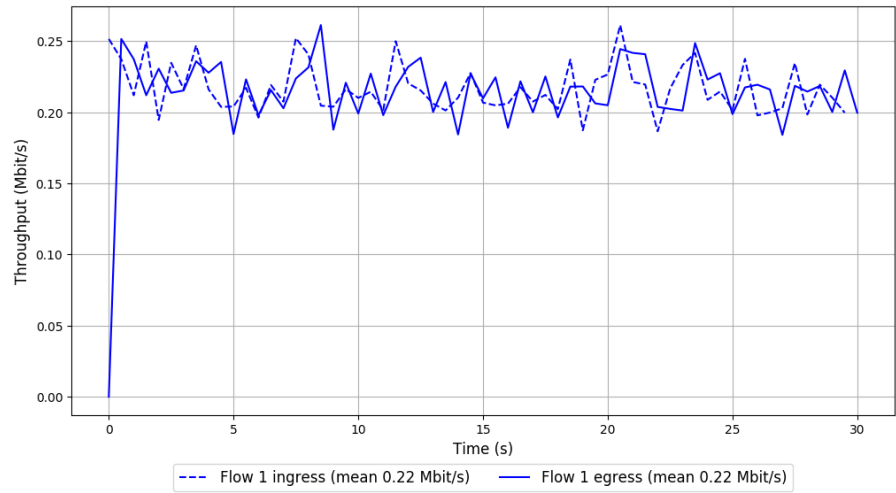


Run 5: Statistics of SCReAM

Start at: 2018-12-20 00:29:30
End at: 2018-12-20 00:30:00
Local clock offset: -3.257 ms
Remote clock offset: -2.704 ms

Below is generated by plot.py at 2018-12-20 01:31:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.560 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.560 ms
Loss rate: 0.00%

Run 5: Report of SReAM — Data Link

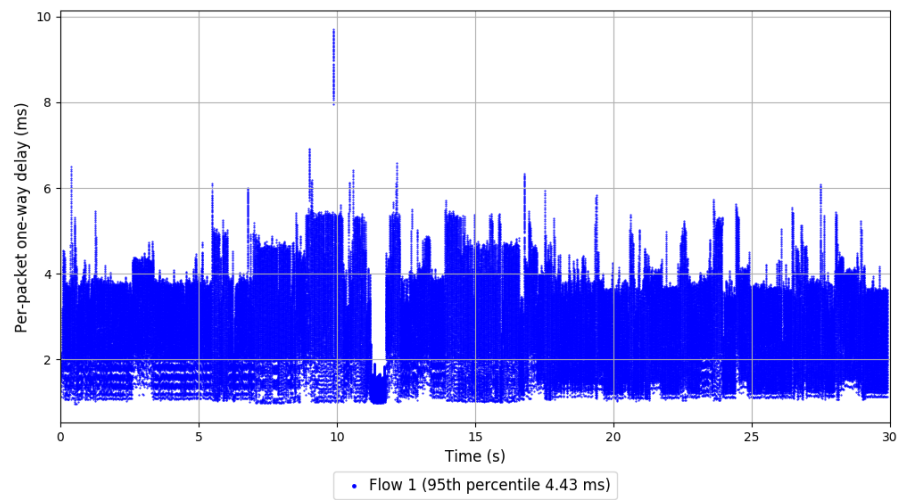
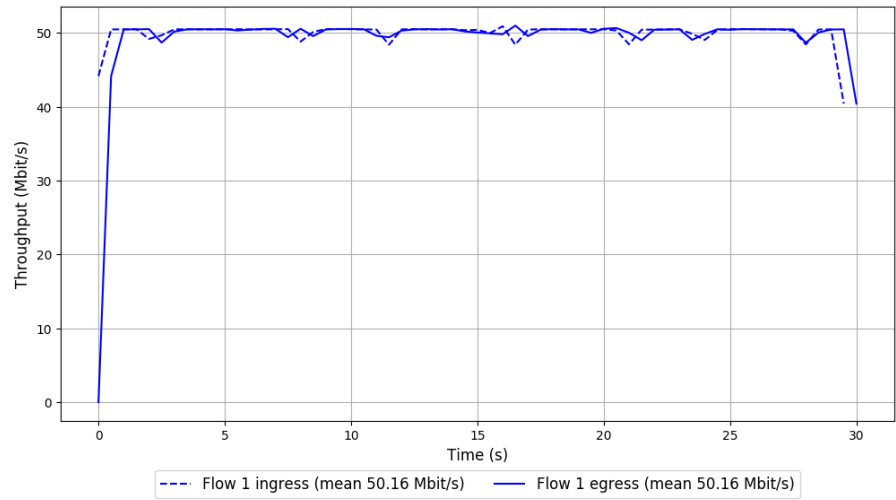


Run 1: Statistics of Sprout

Start at: 2018-12-19 22:48:33
End at: 2018-12-19 22:49:03
Local clock offset: 2.901 ms
Remote clock offset: -2.454 ms

Below is generated by plot.py at 2018-12-20 01:31:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 50.16 Mbit/s
95th percentile per-packet one-way delay: 4.431 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.16 Mbit/s
95th percentile per-packet one-way delay: 4.431 ms
Loss rate: 0.00%

Run 1: Report of Sprout — Data Link

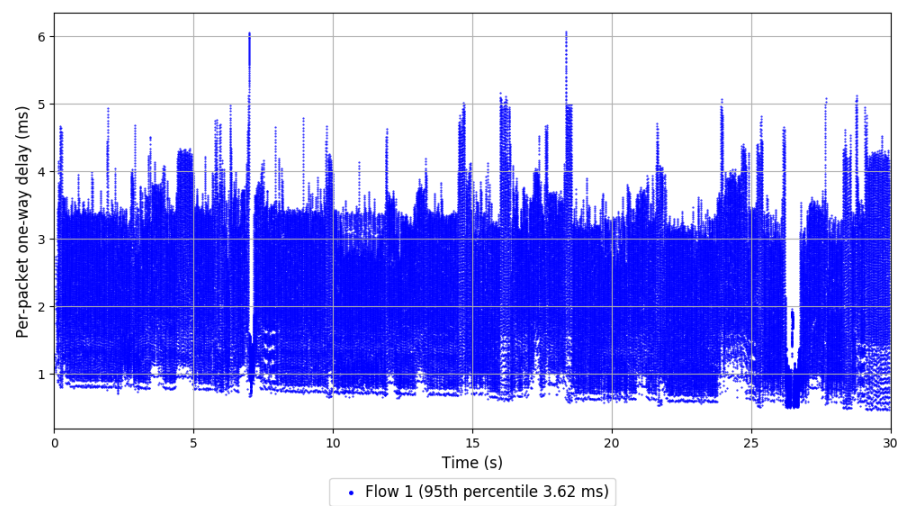
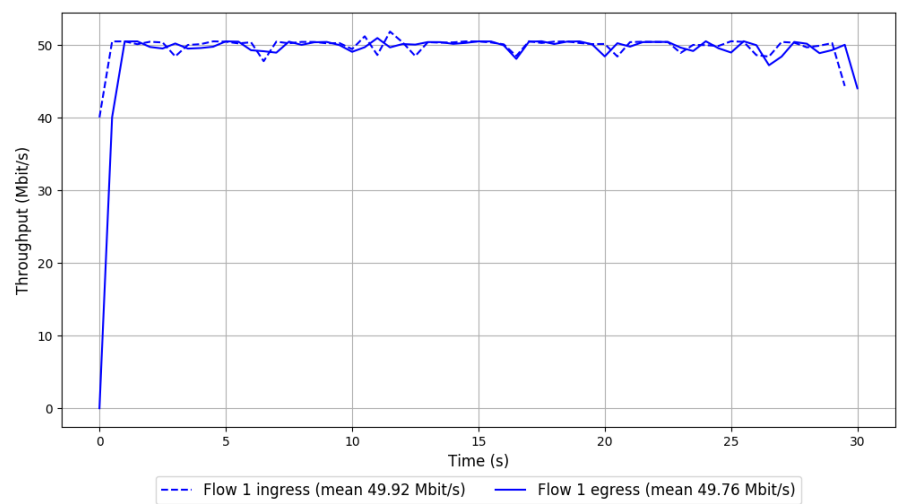


Run 2: Statistics of Sprout

Start at: 2018-12-19 23:14:18
End at: 2018-12-19 23:14:48
Local clock offset: 1.625 ms
Remote clock offset: -2.941 ms

Below is generated by plot.py at 2018-12-20 01:31:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 49.76 Mbit/s
95th percentile per-packet one-way delay: 3.620 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 49.76 Mbit/s
95th percentile per-packet one-way delay: 3.620 ms
Loss rate: 0.32%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-12-19 23:39:59

End at: 2018-12-19 23:40:29

Local clock offset: 0.034 ms

Remote clock offset: 0.607 ms

Below is generated by plot.py at 2018-12-20 01:31:25

Datalink statistics

-- Total of 1 flow:

Average throughput: 49.57 Mbit/s

95th percentile per-packet one-way delay: 4.191 ms

Loss rate: 0.51%

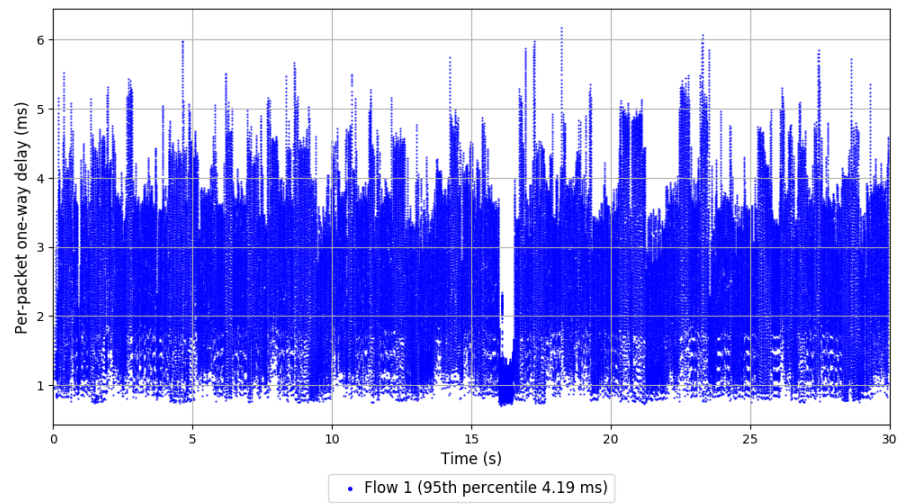
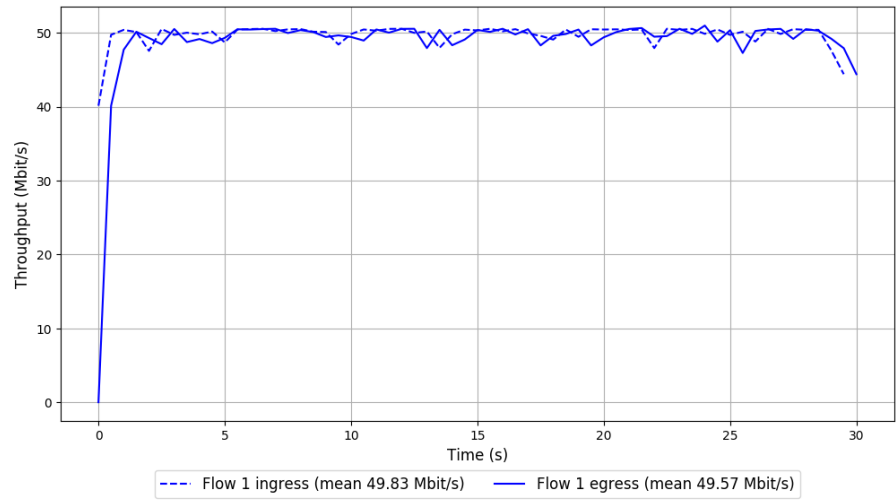
-- Flow 1:

Average throughput: 49.57 Mbit/s

95th percentile per-packet one-way delay: 4.191 ms

Loss rate: 0.51%

Run 3: Report of Sprout — Data Link

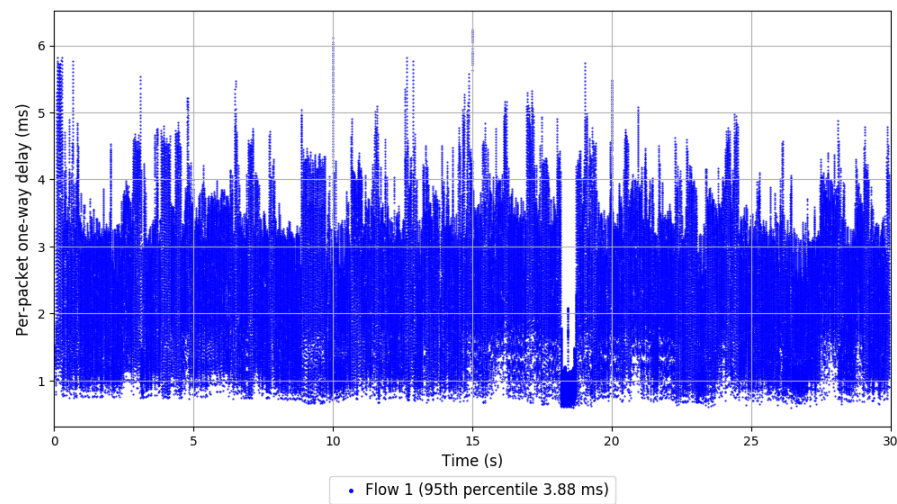
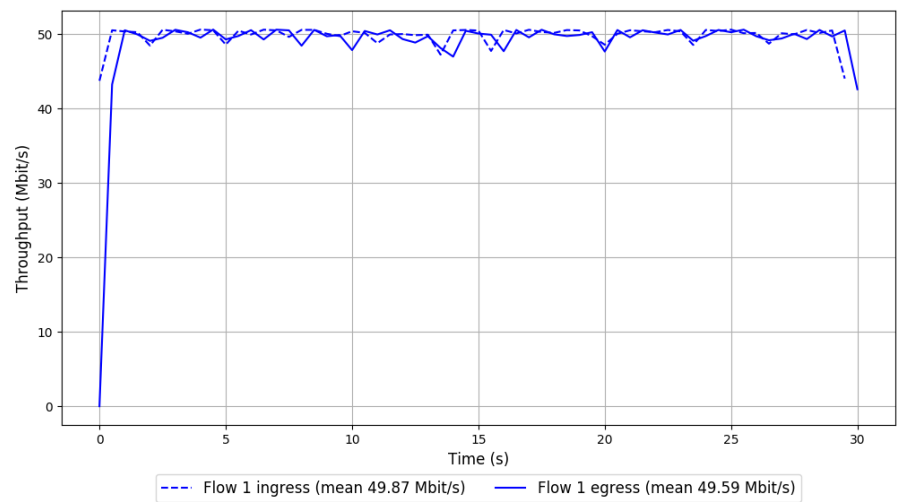


Run 4: Statistics of Sprout

Start at: 2018-12-20 00:05:56
End at: 2018-12-20 00:06:26
Local clock offset: -0.051 ms
Remote clock offset: -2.027 ms

Below is generated by plot.py at 2018-12-20 01:31:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 49.59 Mbit/s
95th percentile per-packet one-way delay: 3.882 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 49.59 Mbit/s
95th percentile per-packet one-way delay: 3.882 ms
Loss rate: 0.56%

Run 4: Report of Sprout — Data Link

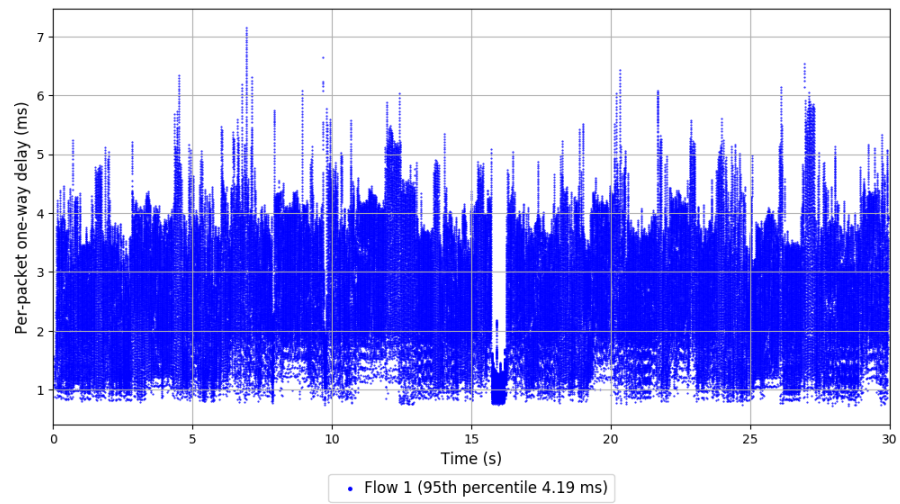
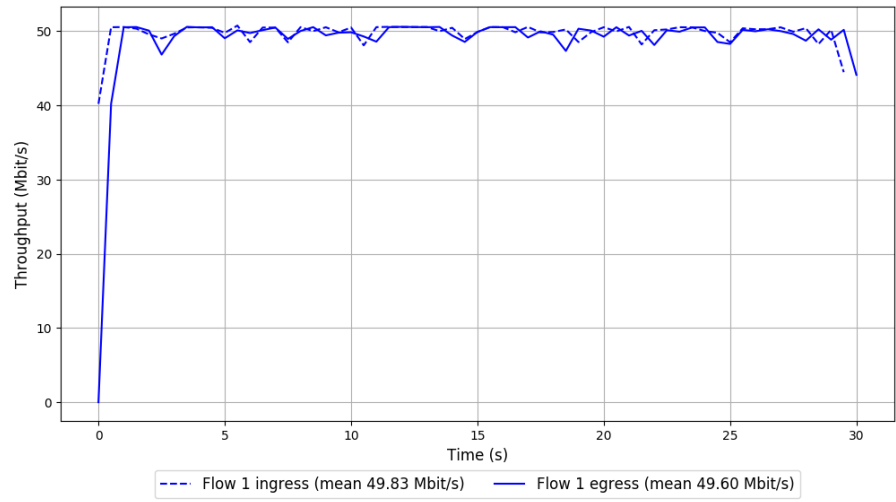


Run 5: Statistics of Sprout

Start at: 2018-12-20 00:31:59
End at: 2018-12-20 00:32:29
Local clock offset: -3.402 ms
Remote clock offset: -2.701 ms

Below is generated by plot.py at 2018-12-20 01:31:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 49.60 Mbit/s
95th percentile per-packet one-way delay: 4.193 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 49.60 Mbit/s
95th percentile per-packet one-way delay: 4.193 ms
Loss rate: 0.46%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2018-12-19 22:52:15

End at: 2018-12-19 22:52:45

Local clock offset: 3.263 ms

Remote clock offset: -2.883 ms

Below is generated by plot.py at 2018-12-20 01:31:25

Datalink statistics

-- Total of 1 flow:

Average throughput: 12.73 Mbit/s

95th percentile per-packet one-way delay: 1.177 ms

Loss rate: 77.20%

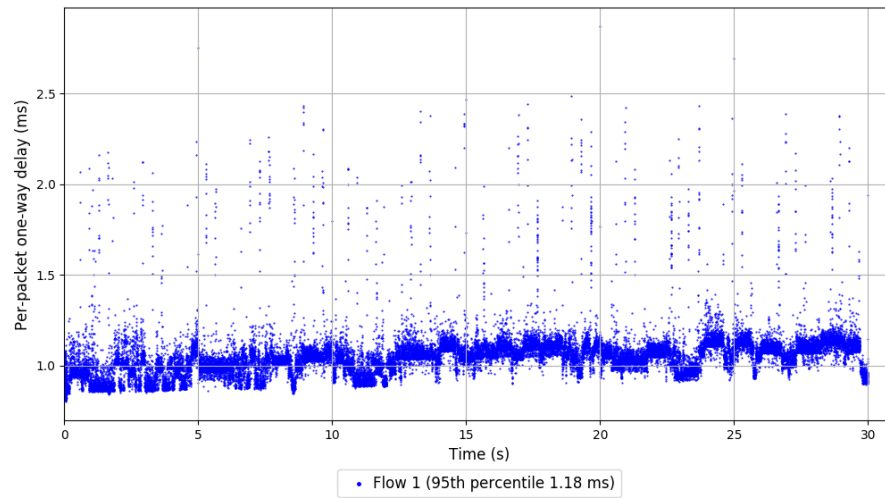
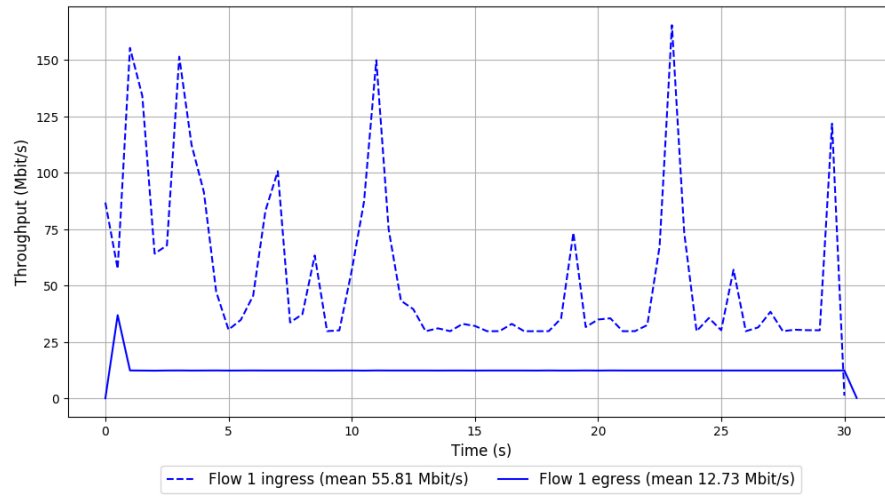
-- Flow 1:

Average throughput: 12.73 Mbit/s

95th percentile per-packet one-way delay: 1.177 ms

Loss rate: 77.20%

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



Run 2: Statistics of TaoVA-100x

Start at: 2018-12-19 23:18:00

End at: 2018-12-19 23:18:30

Local clock offset: 1.079 ms

Remote clock offset: -1.797 ms

Below is generated by plot.py at 2018-12-20 01:31:25

Datalink statistics

-- Total of 1 flow:

Average throughput: 5.97 Mbit/s

95th percentile per-packet one-way delay: 1.123 ms

Loss rate: 54.40%

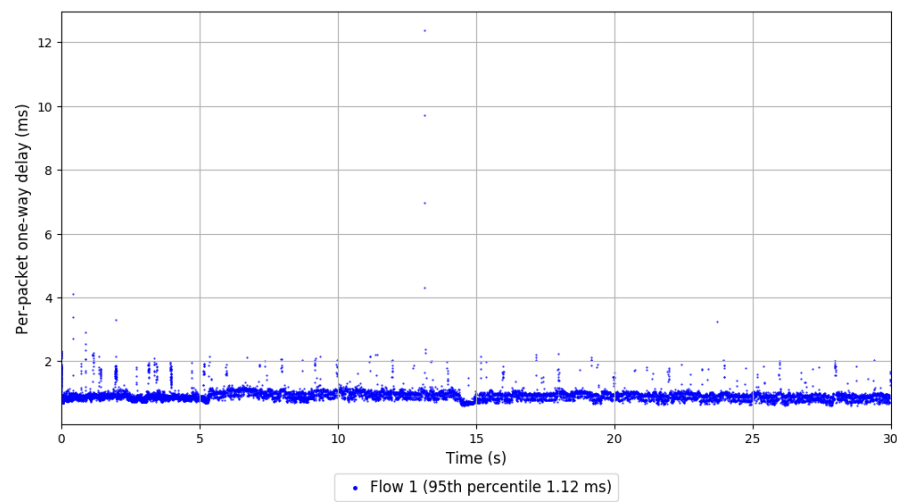
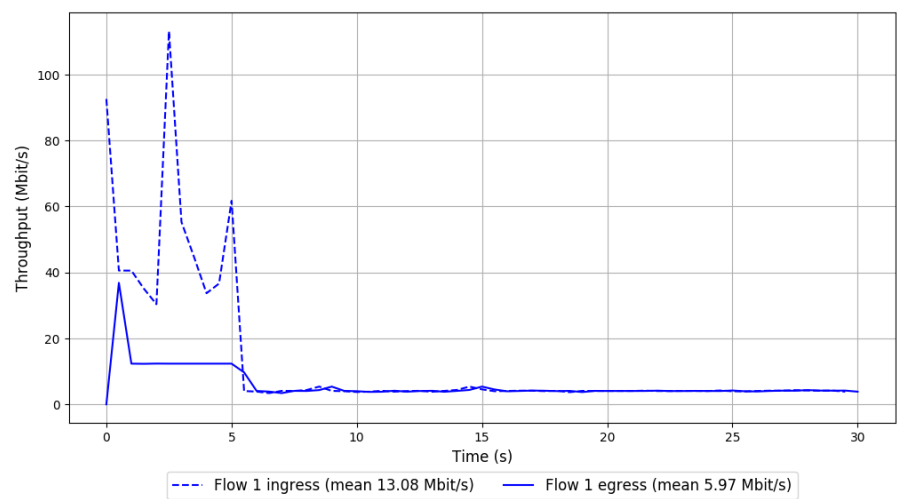
-- Flow 1:

Average throughput: 5.97 Mbit/s

95th percentile per-packet one-way delay: 1.123 ms

Loss rate: 54.40%

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-12-19 23:43:40

End at: 2018-12-19 23:44:10

Local clock offset: 0.1 ms

Remote clock offset: 0.756 ms

Below is generated by plot.py at 2018-12-20 01:31:25

Datalink statistics

-- Total of 1 flow:

Average throughput: 4.97 Mbit/s

95th percentile per-packet one-way delay: 1.225 ms

Loss rate: 0.02%

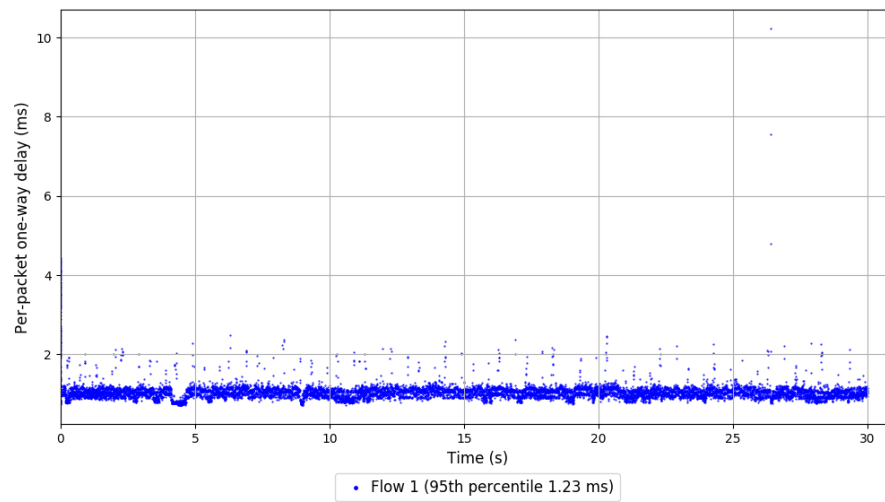
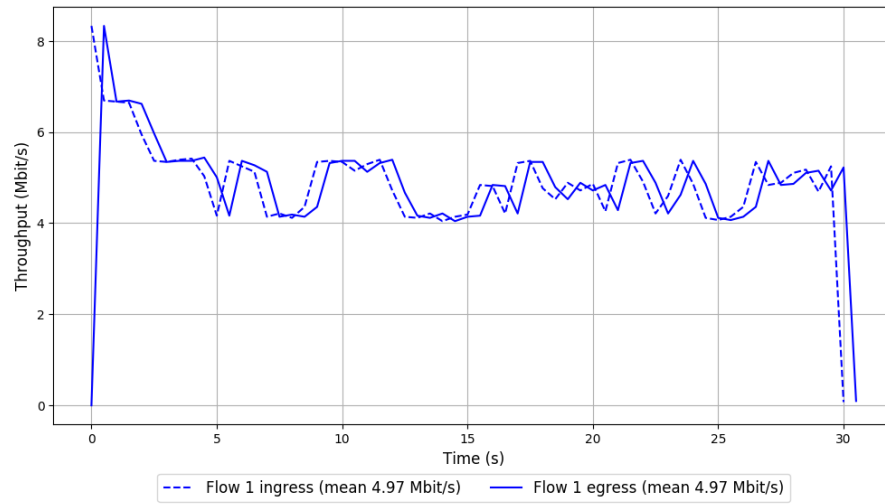
-- Flow 1:

Average throughput: 4.97 Mbit/s

95th percentile per-packet one-way delay: 1.225 ms

Loss rate: 0.02%

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

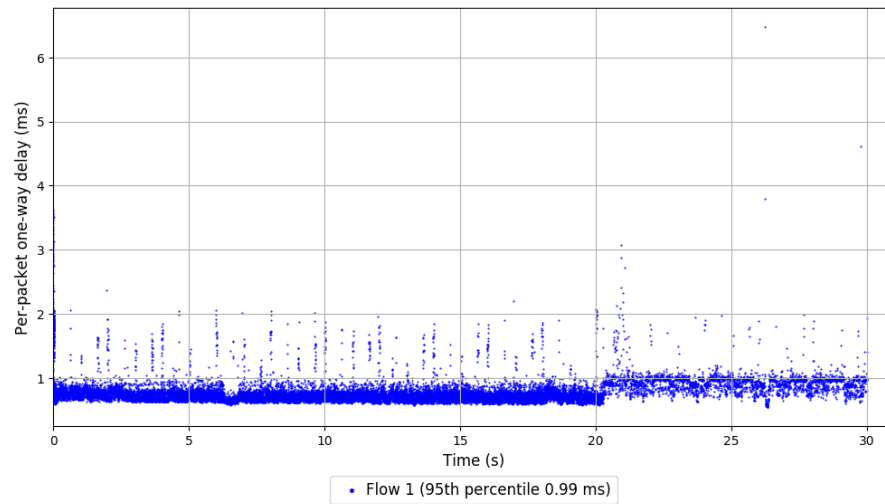
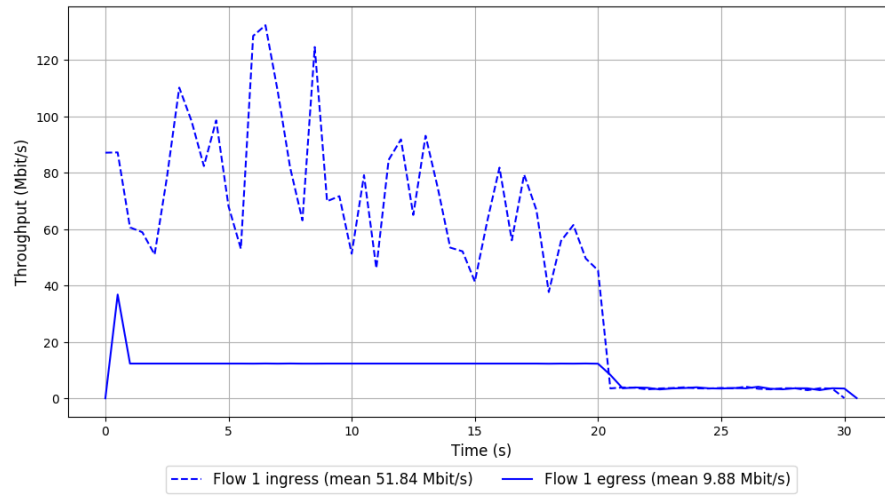


Run 4: Statistics of TaoVA-100x

Start at: 2018-12-20 00:09:38
End at: 2018-12-20 00:10:08
Local clock offset: -0.999 ms
Remote clock offset: -2.319 ms

Below is generated by plot.py at 2018-12-20 01:31:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 9.88 Mbit/s
95th percentile per-packet one-way delay: 0.994 ms
Loss rate: 80.95%
-- Flow 1:
Average throughput: 9.88 Mbit/s
95th percentile per-packet one-way delay: 0.994 ms
Loss rate: 80.95%

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

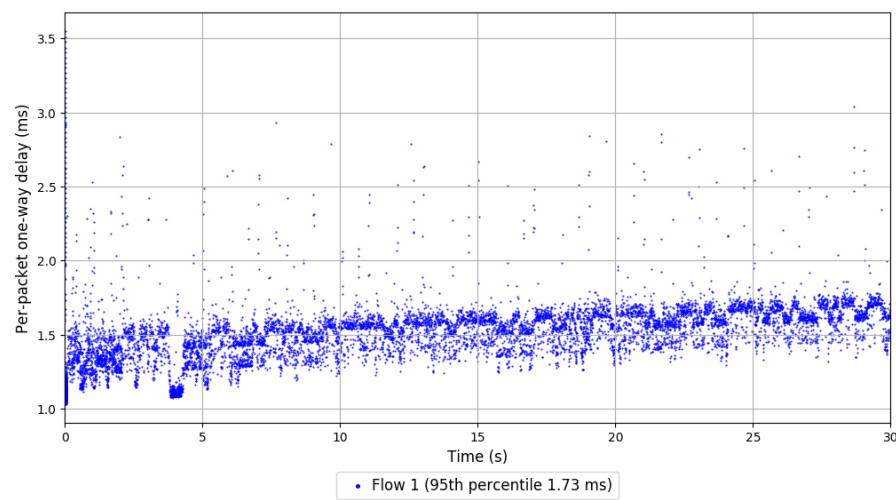
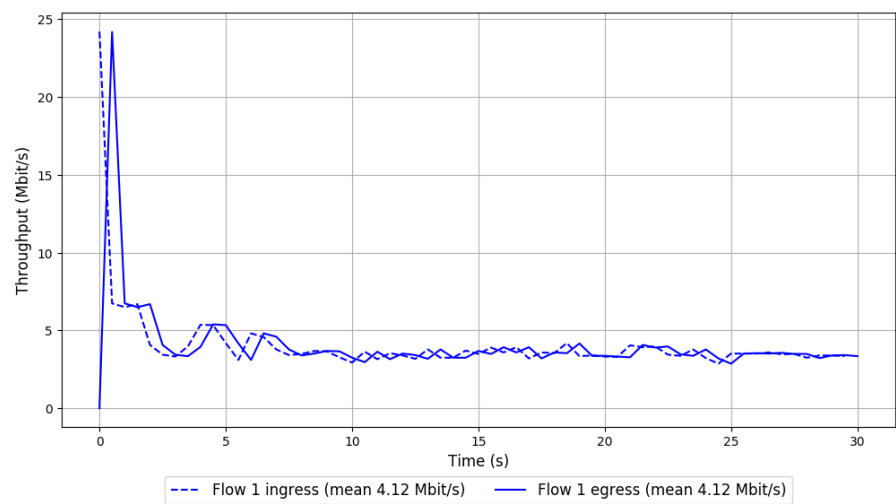


Run 5: Statistics of TaoVA-100x

Start at: 2018-12-20 00:35:41
End at: 2018-12-20 00:36:11
Local clock offset: -3.614 ms
Remote clock offset: -2.741 ms

Below is generated by plot.py at 2018-12-20 01:31:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 4.12 Mbit/s
95th percentile per-packet one-way delay: 1.730 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 4.12 Mbit/s
95th percentile per-packet one-way delay: 1.730 ms
Loss rate: 0.01%

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

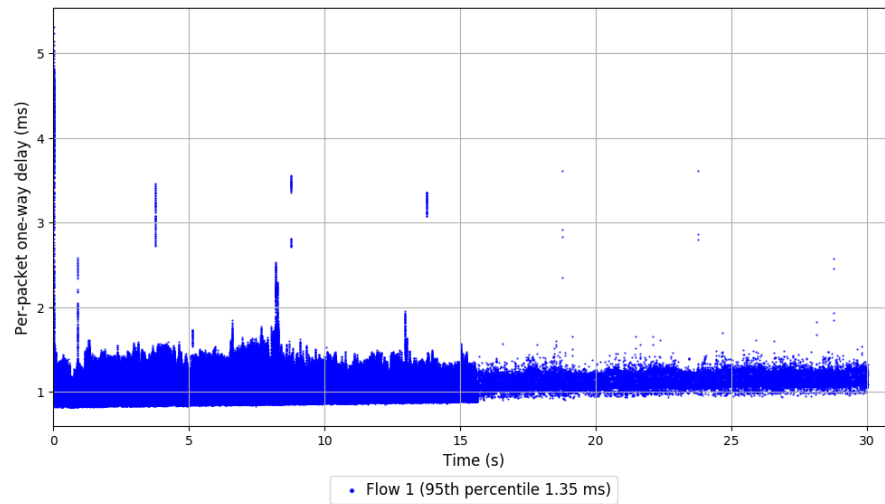
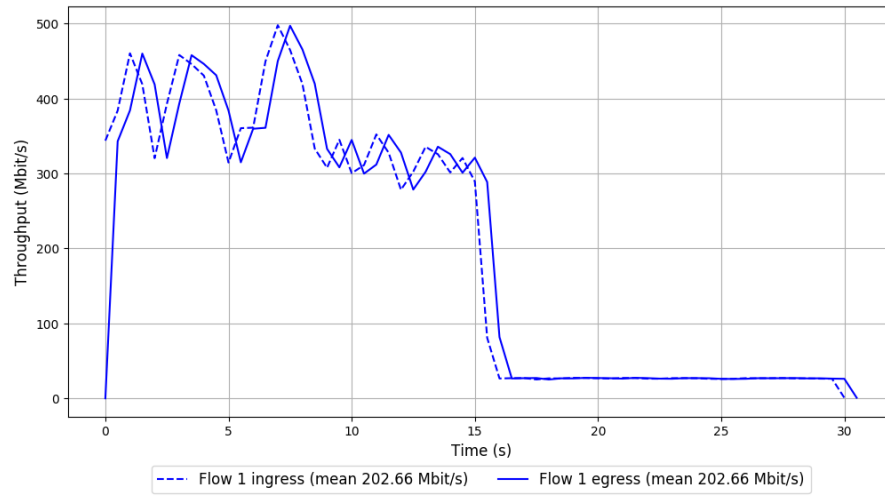


Run 1: Statistics of TCP Vegas

Start at: 2018-12-19 22:47:14
End at: 2018-12-19 22:47:44
Local clock offset: 2.711 ms
Remote clock offset: -2.396 ms

Below is generated by plot.py at 2018-12-20 01:31:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 202.66 Mbit/s
95th percentile per-packet one-way delay: 1.352 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 202.66 Mbit/s
95th percentile per-packet one-way delay: 1.352 ms
Loss rate: 0.00%

Run 1: Report of TCP Vegas — Data Link

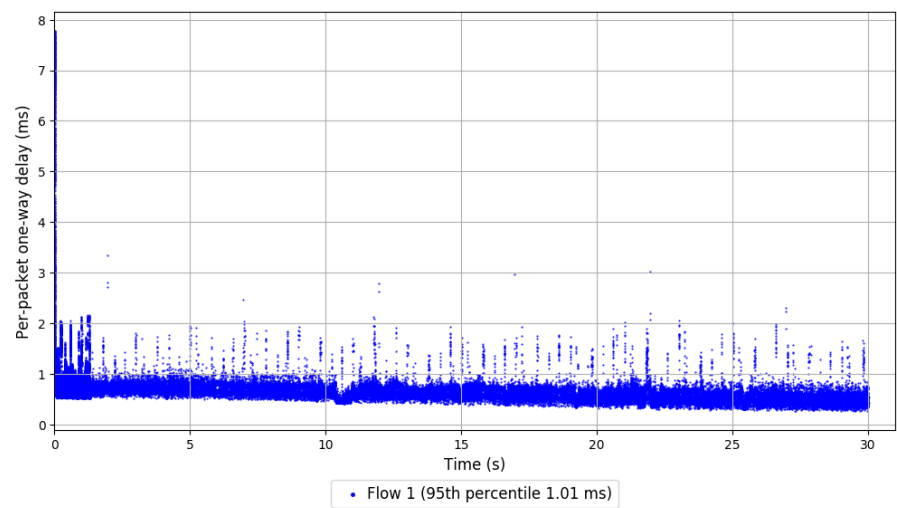
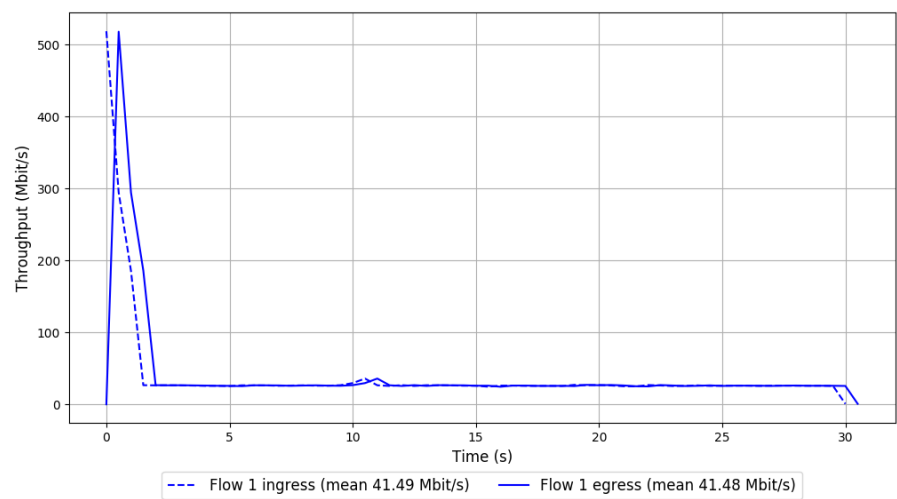


Run 2: Statistics of TCP Vegas

Start at: 2018-12-19 23:13:04
End at: 2018-12-19 23:13:34
Local clock offset: 1.842 ms
Remote clock offset: -3.644 ms

Below is generated by plot.py at 2018-12-20 01:31:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 41.48 Mbit/s
95th percentile per-packet one-way delay: 1.012 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 41.48 Mbit/s
95th percentile per-packet one-way delay: 1.012 ms
Loss rate: 0.02%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-12-19 23:38:45

End at: 2018-12-19 23:39:15

Local clock offset: -0.02 ms

Remote clock offset: 0.566 ms

Below is generated by plot.py at 2018-12-20 01:31:25

Datalink statistics

-- Total of 1 flow:

Average throughput: 36.18 Mbit/s

95th percentile per-packet one-way delay: 1.304 ms

Loss rate: 0.06%

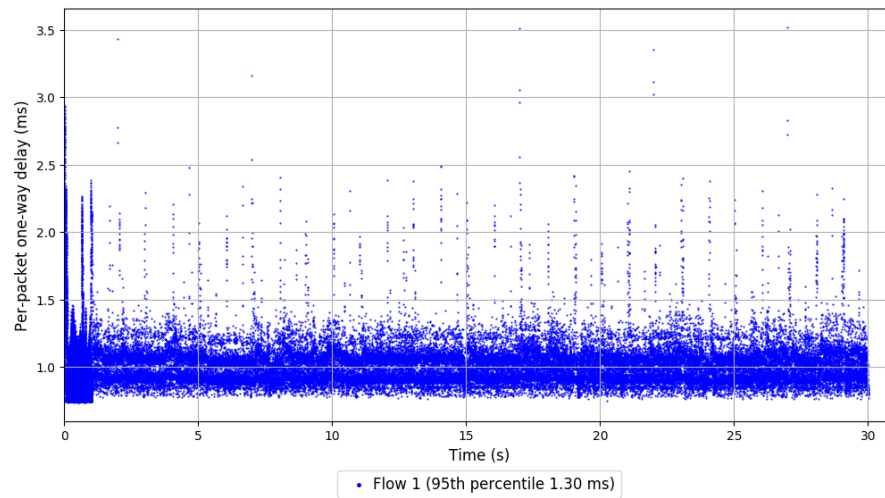
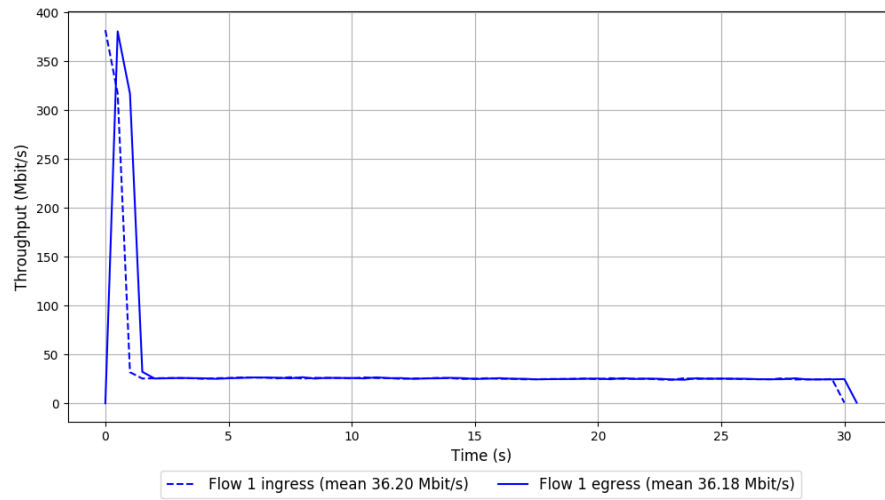
-- Flow 1:

Average throughput: 36.18 Mbit/s

95th percentile per-packet one-way delay: 1.304 ms

Loss rate: 0.06%

Run 3: Report of TCP Vegas — Data Link

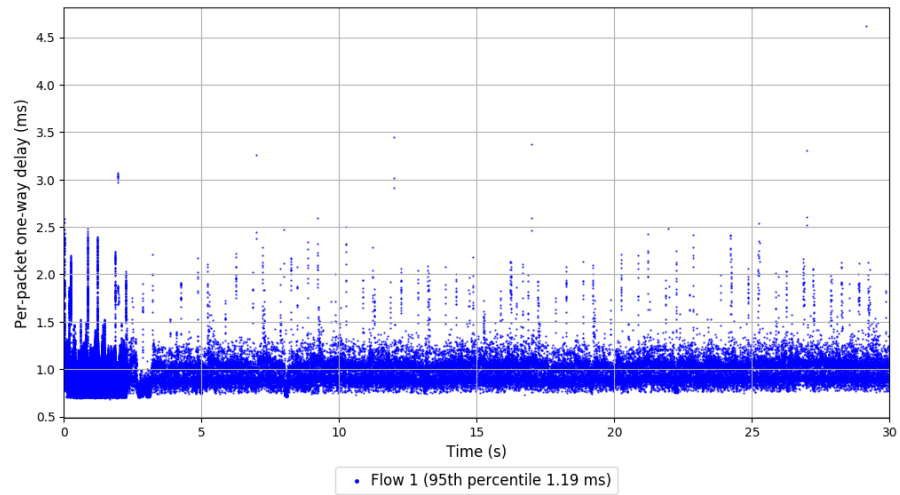
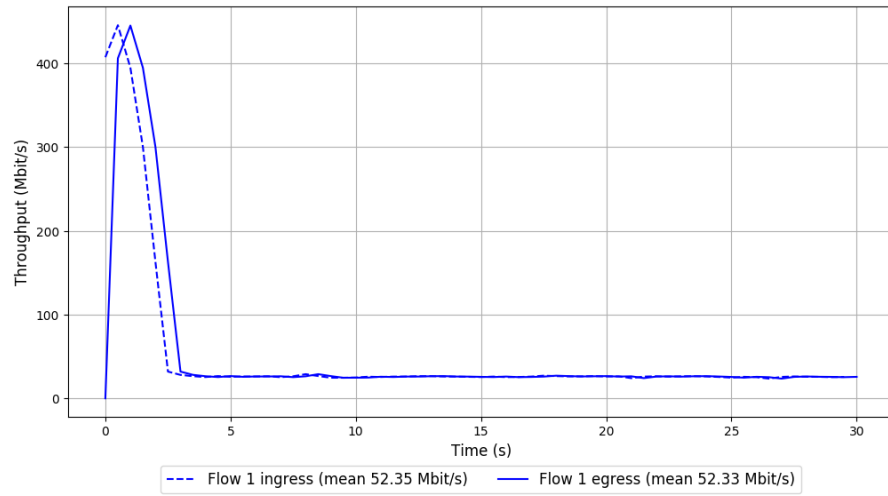


Run 4: Statistics of TCP Vegas

Start at: 2018-12-20 00:04:42
End at: 2018-12-20 00:05:12
Local clock offset: 0.051 ms
Remote clock offset: -2.048 ms

Below is generated by plot.py at 2018-12-20 01:31:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 52.33 Mbit/s
95th percentile per-packet one-way delay: 1.191 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 52.33 Mbit/s
95th percentile per-packet one-way delay: 1.191 ms
Loss rate: 0.05%

Run 4: Report of TCP Vegas — Data Link

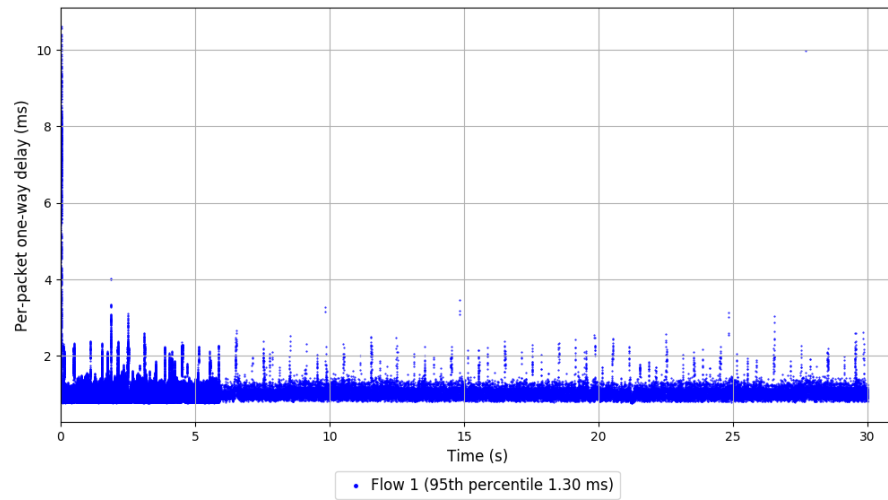
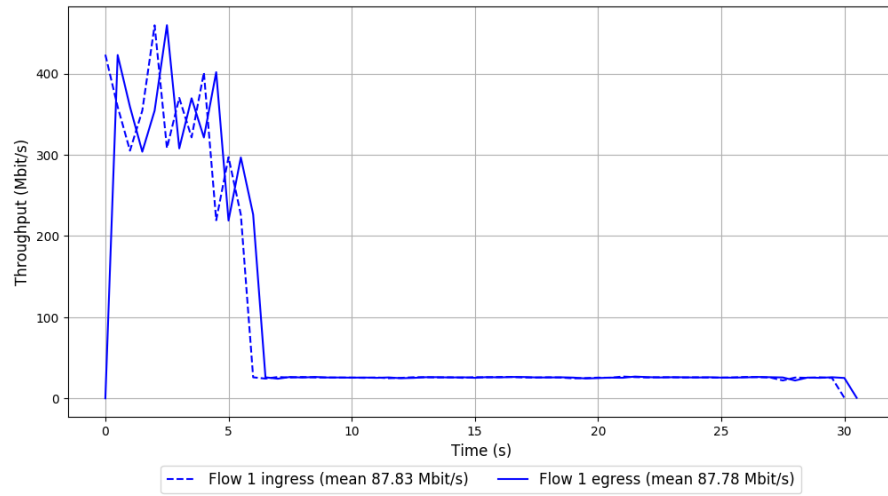


Run 5: Statistics of TCP Vegas

Start at: 2018-12-20 00:30:43
End at: 2018-12-20 00:31:13
Local clock offset: -3.333 ms
Remote clock offset: -2.645 ms

Below is generated by plot.py at 2018-12-20 01:31:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 87.78 Mbit/s
95th percentile per-packet one-way delay: 1.301 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 87.78 Mbit/s
95th percentile per-packet one-way delay: 1.301 ms
Loss rate: 0.06%

Run 5: Report of TCP Vegas — Data Link

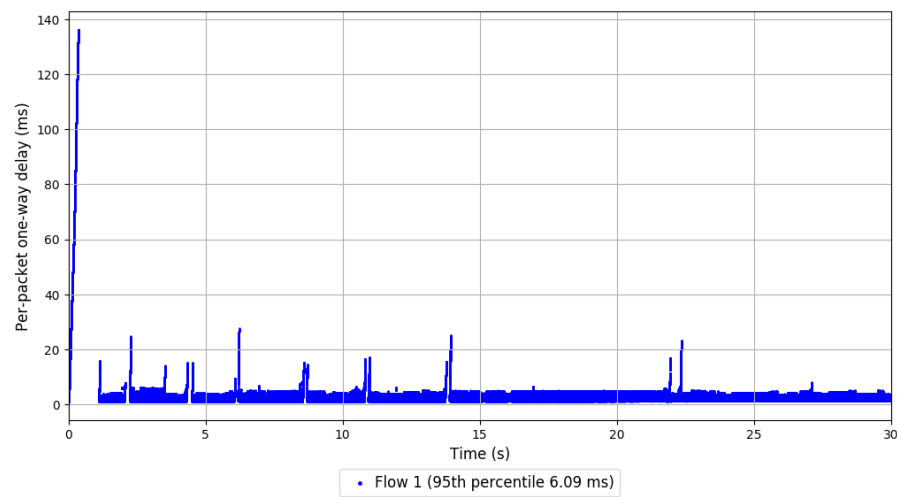
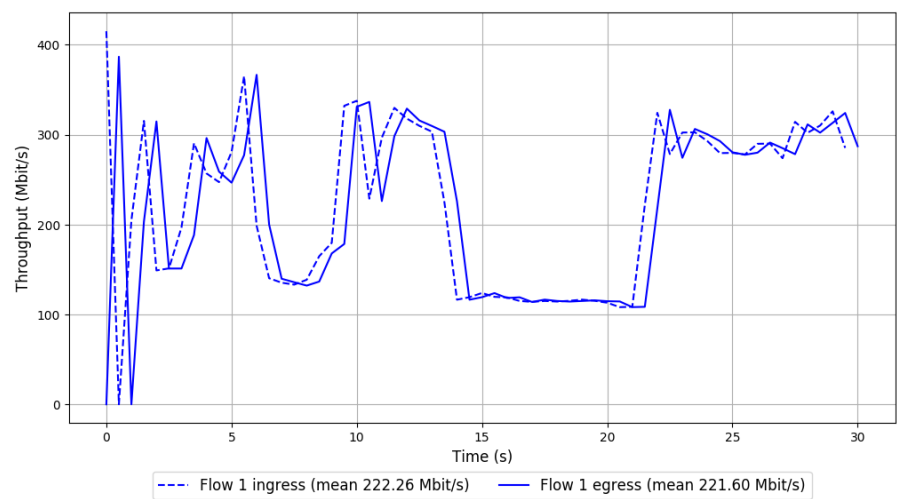


Run 1: Statistics of Verus

Start at: 2018-12-19 22:38:35
End at: 2018-12-19 22:39:05
Local clock offset: 0.944 ms
Remote clock offset: -0.788 ms

Below is generated by plot.py at 2018-12-20 01:31:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 221.60 Mbit/s
95th percentile per-packet one-way delay: 6.088 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 221.60 Mbit/s
95th percentile per-packet one-way delay: 6.088 ms
Loss rate: 0.29%

Run 1: Report of Verus — Data Link

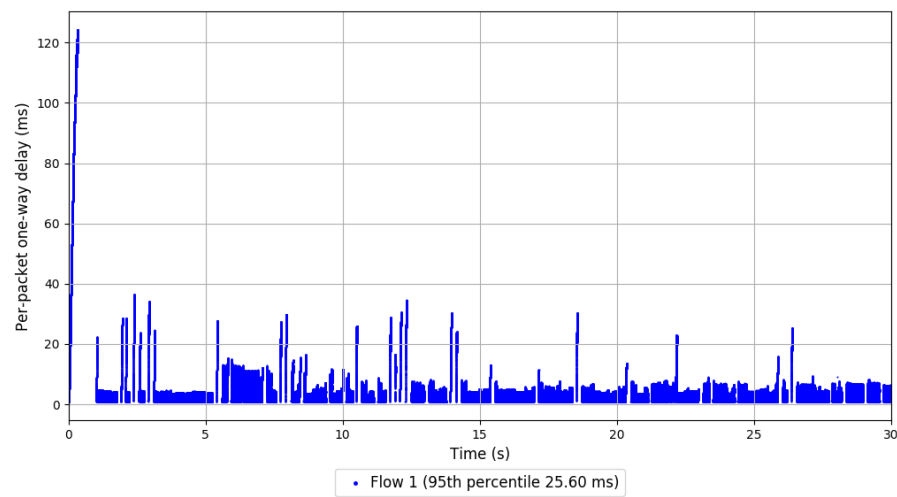
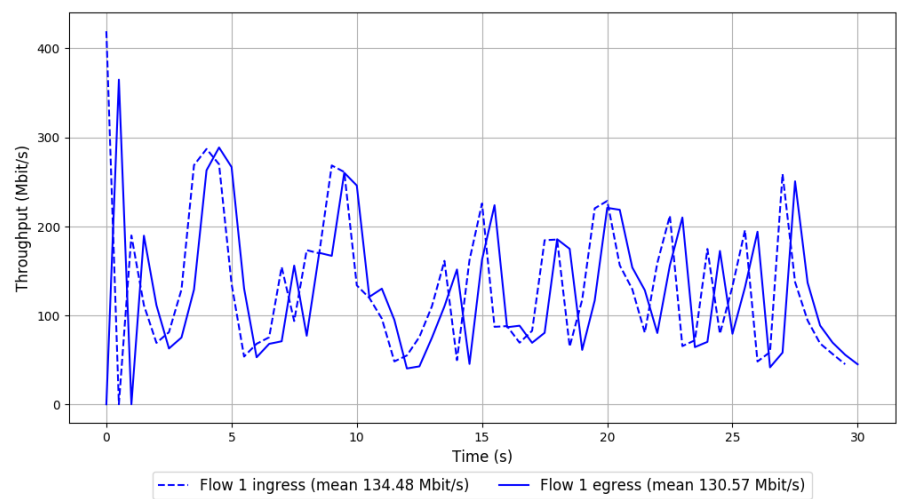


Run 2: Statistics of Verus

Start at: 2018-12-19 23:04:40
End at: 2018-12-19 23:05:10
Local clock offset: 4.13 ms
Remote clock offset: -3.507 ms

Below is generated by plot.py at 2018-12-20 01:31:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 130.57 Mbit/s
95th percentile per-packet one-way delay: 25.596 ms
Loss rate: 2.90%
-- Flow 1:
Average throughput: 130.57 Mbit/s
95th percentile per-packet one-way delay: 25.596 ms
Loss rate: 2.90%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-12-19 23:30:26

End at: 2018-12-19 23:30:56

Local clock offset: 0.114 ms

Remote clock offset: 0.12 ms

Below is generated by plot.py at 2018-12-20 01:31:25

Datalink statistics

-- Total of 1 flow:

Average throughput: 109.29 Mbit/s

95th percentile per-packet one-way delay: 12.311 ms

Loss rate: 2.17%

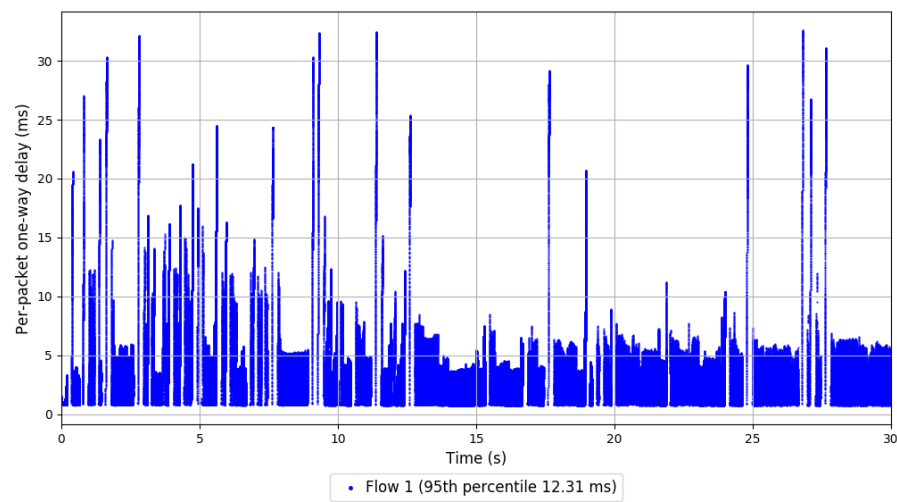
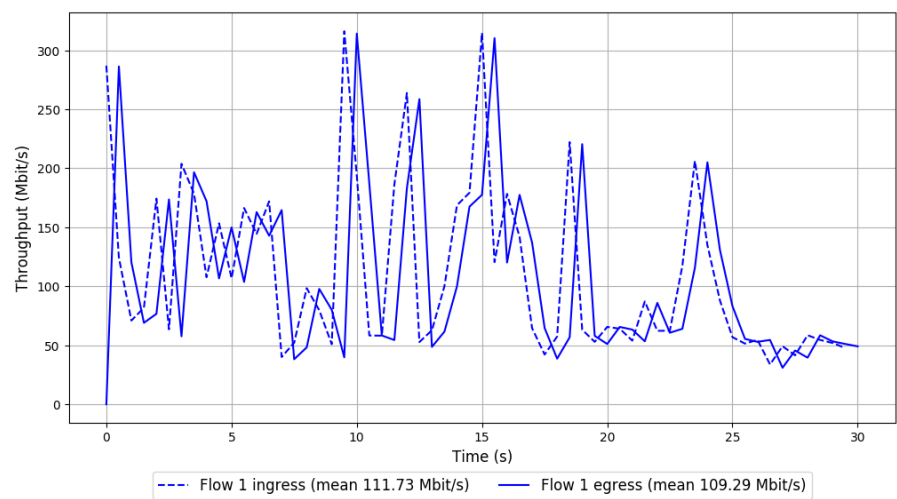
-- Flow 1:

Average throughput: 109.29 Mbit/s

95th percentile per-packet one-way delay: 12.311 ms

Loss rate: 2.17%

Run 3: Report of Verus — Data Link

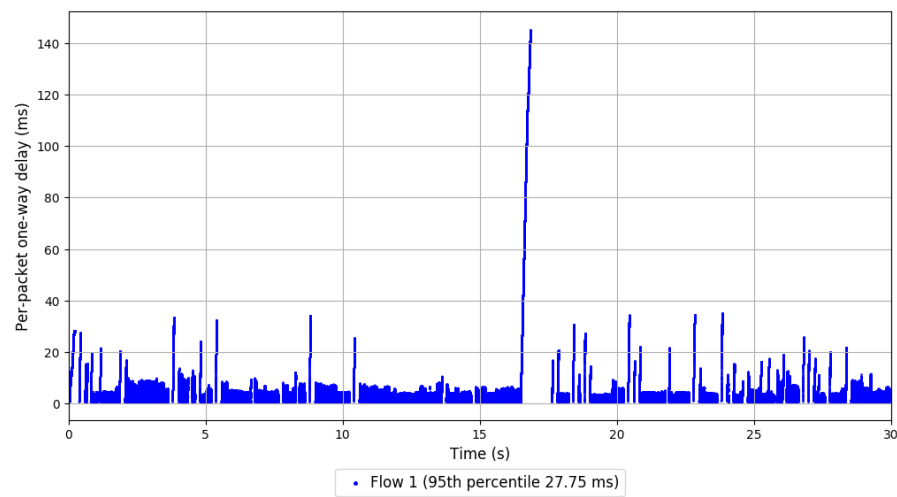
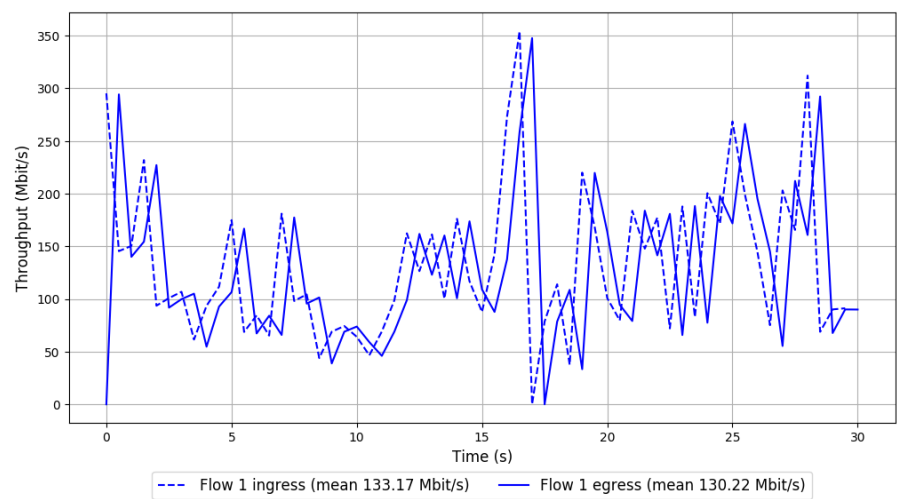


Run 4: Statistics of Verus

Start at: 2018-12-19 23:56:21
End at: 2018-12-19 23:56:51
Local clock offset: 0.109 ms
Remote clock offset: -1.307 ms

Below is generated by plot.py at 2018-12-20 01:31:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 130.22 Mbit/s
95th percentile per-packet one-way delay: 27.746 ms
Loss rate: 2.21%
-- Flow 1:
Average throughput: 130.22 Mbit/s
95th percentile per-packet one-way delay: 27.746 ms
Loss rate: 2.21%

Run 4: Report of Verus — Data Link

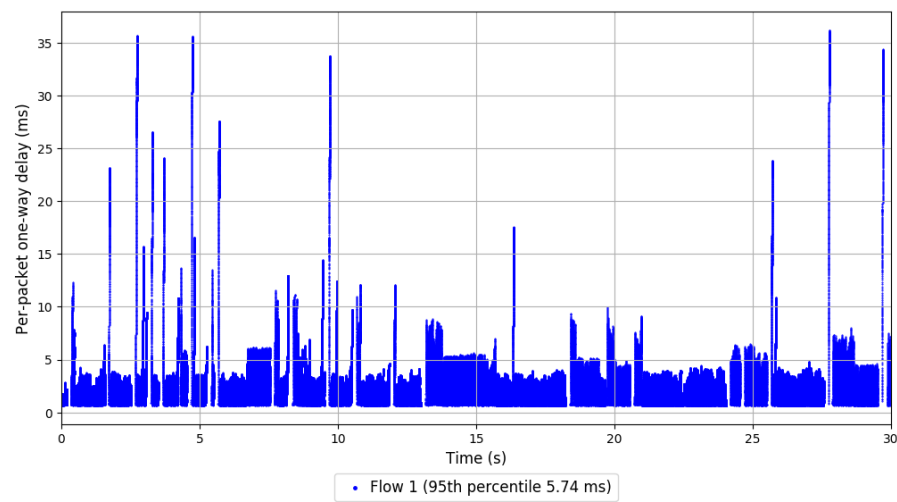
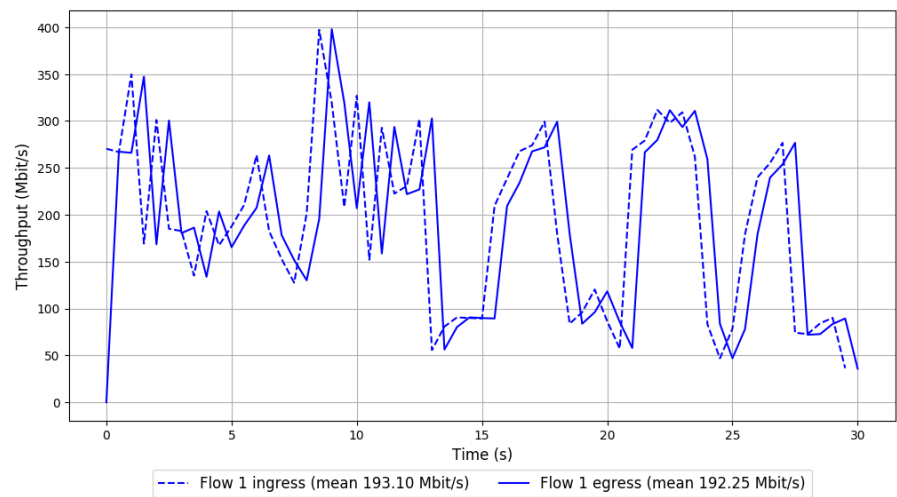


Run 5: Statistics of Verus

Start at: 2018-12-20 00:22:21
End at: 2018-12-20 00:22:51
Local clock offset: -2.742 ms
Remote clock offset: -2.644 ms

Below is generated by plot.py at 2018-12-20 01:31:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 192.25 Mbit/s
95th percentile per-packet one-way delay: 5.740 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 192.25 Mbit/s
95th percentile per-packet one-way delay: 5.740 ms
Loss rate: 0.43%

Run 5: Report of Verus — Data Link

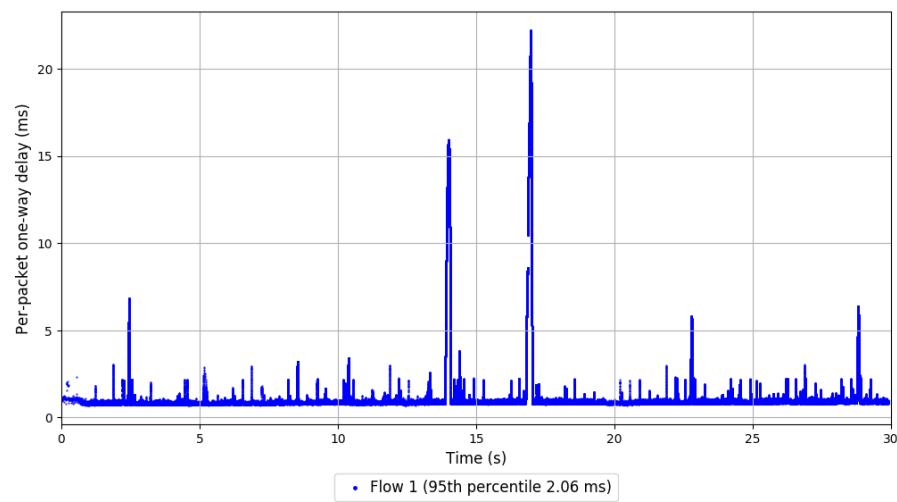
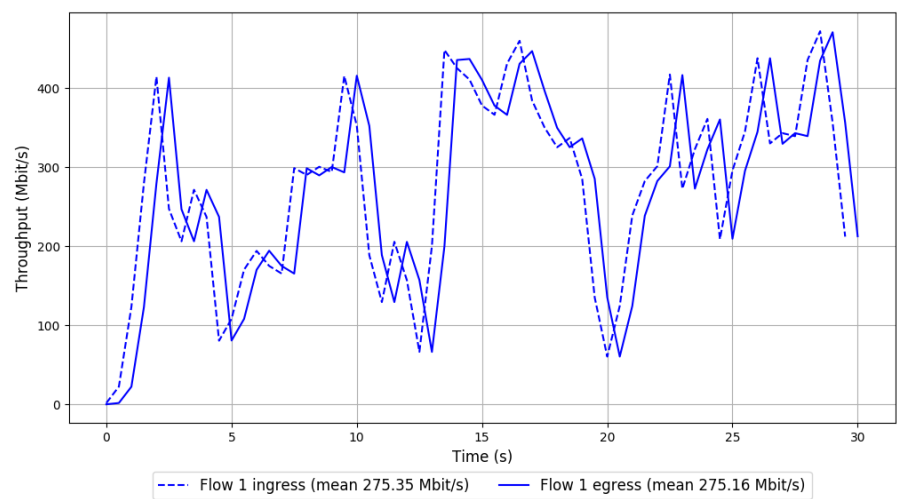


Run 1: Statistics of PCC-Vivace

Start at: 2018-12-19 22:56:29
End at: 2018-12-19 22:56:59
Local clock offset: 3.622 ms
Remote clock offset: -3.189 ms

Below is generated by plot.py at 2018-12-20 01:32:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 275.16 Mbit/s
95th percentile per-packet one-way delay: 2.062 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 275.16 Mbit/s
95th percentile per-packet one-way delay: 2.062 ms
Loss rate: 0.07%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2018-12-19 23:22:12

End at: 2018-12-19 23:22:42

Local clock offset: 0.648 ms

Remote clock offset: -0.987 ms

Below is generated by plot.py at 2018-12-20 01:32:59

Datalink statistics

-- Total of 1 flow:

Average throughput: 315.19 Mbit/s

95th percentile per-packet one-way delay: 1.821 ms

Loss rate: 0.06%

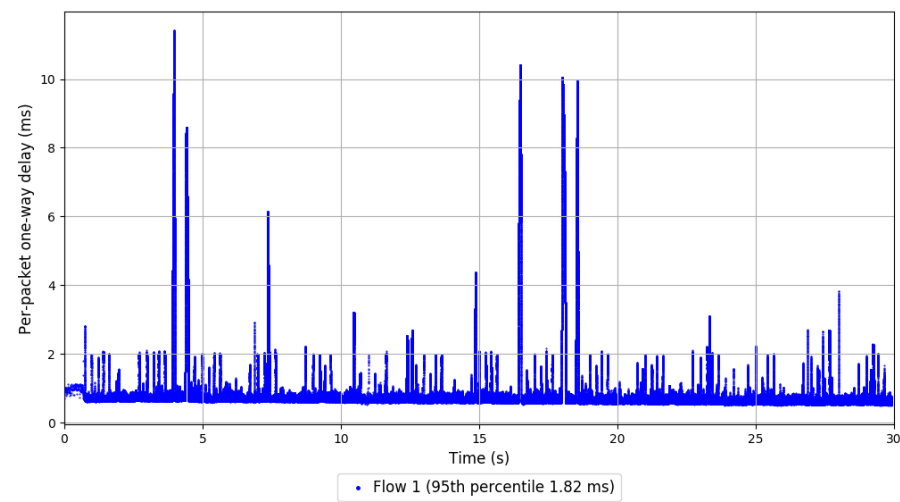
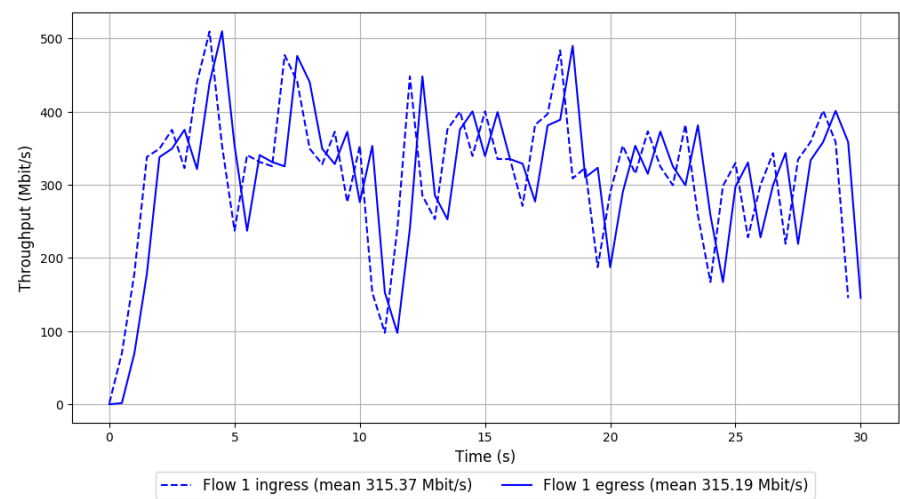
-- Flow 1:

Average throughput: 315.19 Mbit/s

95th percentile per-packet one-way delay: 1.821 ms

Loss rate: 0.06%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2018-12-19 23:47:56

End at: 2018-12-19 23:48:27

Local clock offset: 0.14 ms

Remote clock offset: 0.472 ms

Below is generated by plot.py at 2018-12-20 01:32:59

Datalink statistics

-- Total of 1 flow:

Average throughput: 244.20 Mbit/s

95th percentile per-packet one-way delay: 1.590 ms

Loss rate: 0.03%

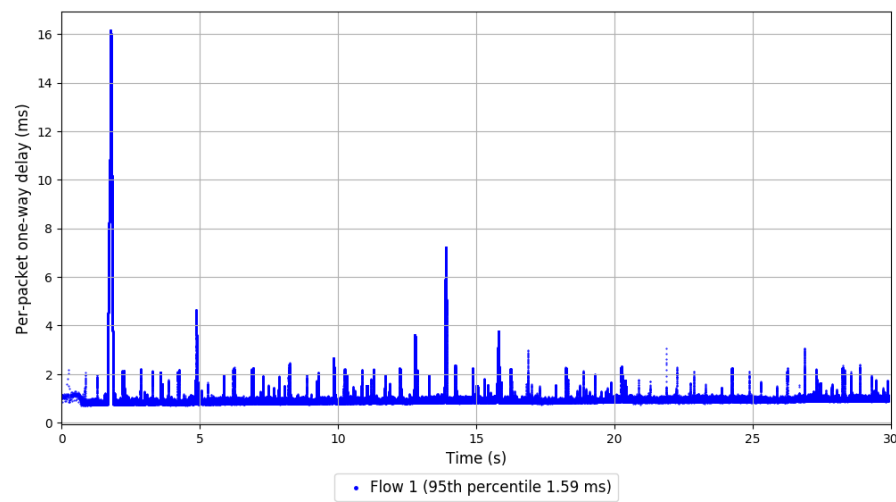
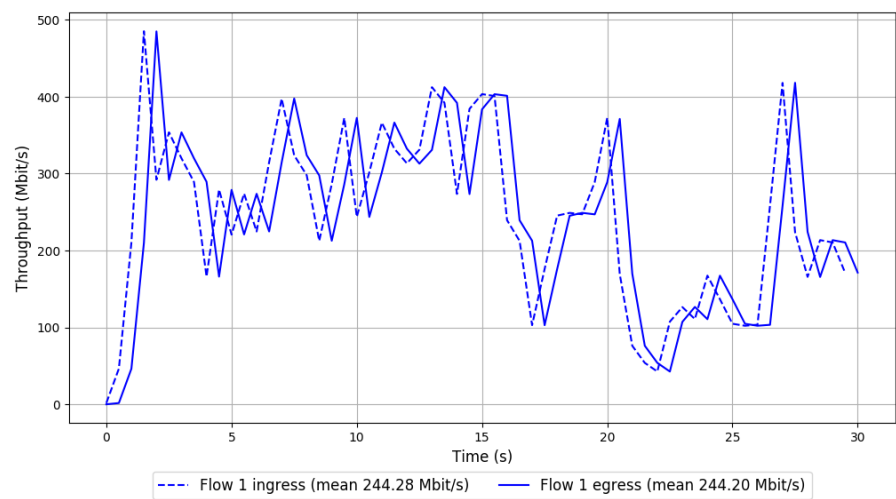
-- Flow 1:

Average throughput: 244.20 Mbit/s

95th percentile per-packet one-way delay: 1.590 ms

Loss rate: 0.03%

Run 3: Report of PCC-Vivace — Data Link

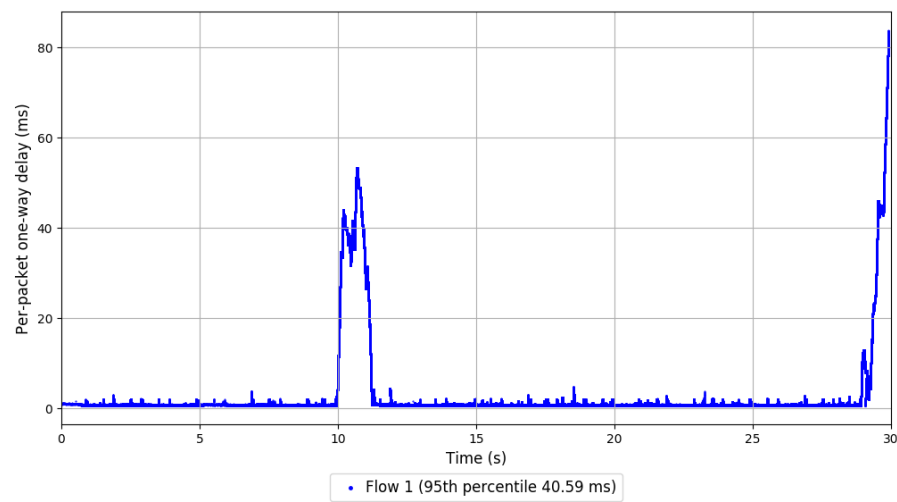
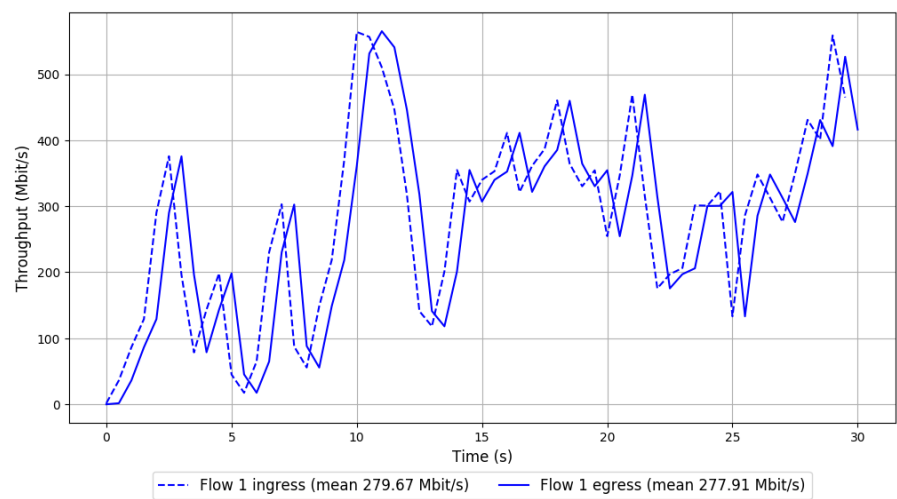


Run 4: Statistics of PCC-Vivace

Start at: 2018-12-20 00:13:53
End at: 2018-12-20 00:14:23
Local clock offset: -1.792 ms
Remote clock offset: -2.463 ms

Below is generated by plot.py at 2018-12-20 01:32:59
Datalink statistics
-- Total of 1 flow:
Average throughput: 277.91 Mbit/s
95th percentile per-packet one-way delay: 40.595 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 277.91 Mbit/s
95th percentile per-packet one-way delay: 40.595 ms
Loss rate: 0.63%

Run 4: Report of PCC-Vivace — Data Link

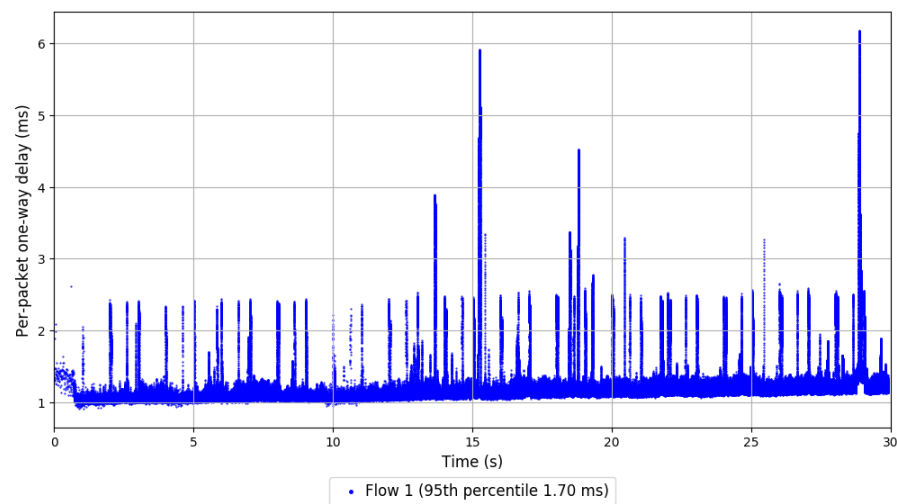
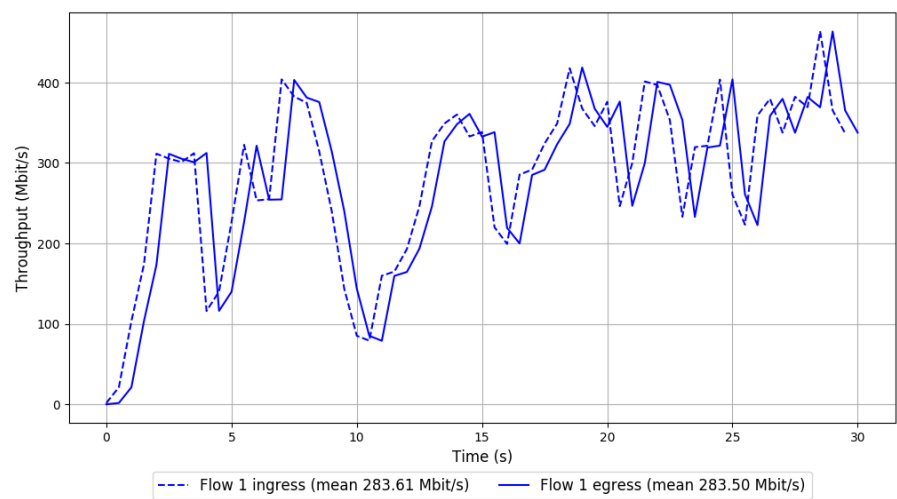


Run 5: Statistics of PCC-Vivace

Start at: 2018-12-20 00:39:58
End at: 2018-12-20 00:40:28
Local clock offset: -1.928 ms
Remote clock offset: -2.749 ms

Below is generated by plot.py at 2018-12-20 01:33:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 283.50 Mbit/s
95th percentile per-packet one-way delay: 1.703 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 283.50 Mbit/s
95th percentile per-packet one-way delay: 1.703 ms
Loss rate: 0.04%

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2018-12-19 22:39:58

End at: 2018-12-19 22:40:28

Local clock offset: 1.359 ms

Remote clock offset: -1.19 ms

Below is generated by plot.py at 2018-12-20 01:33:00

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 2.088 ms

Loss rate: 0.00%

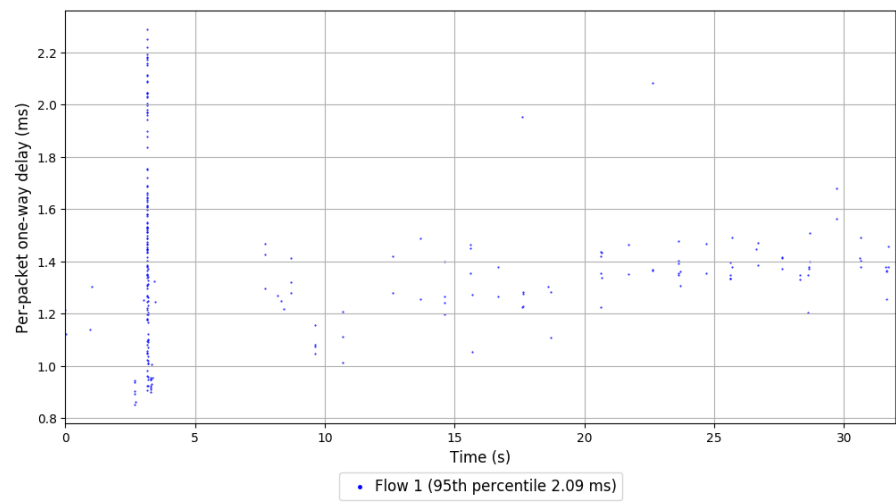
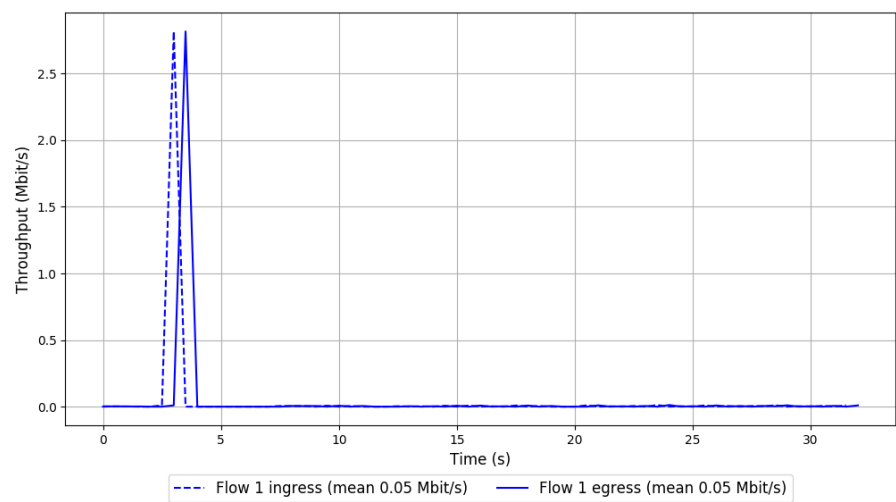
-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 2.088 ms

Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link

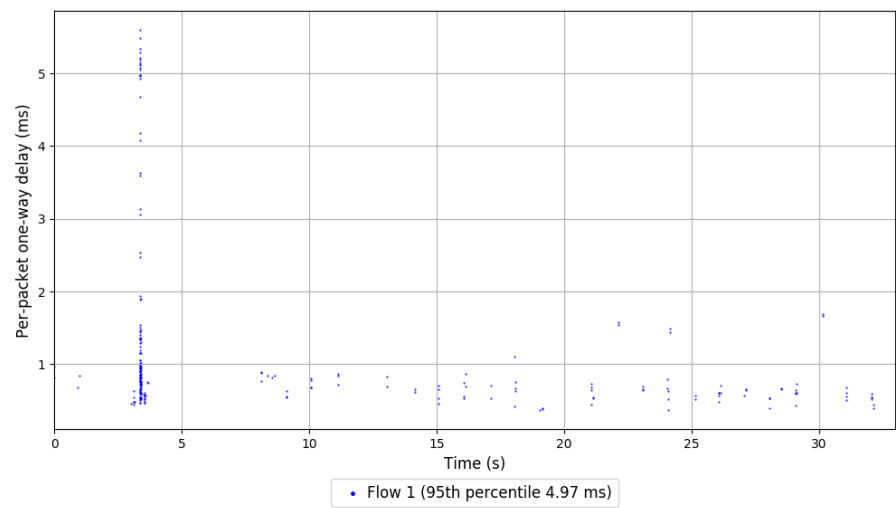
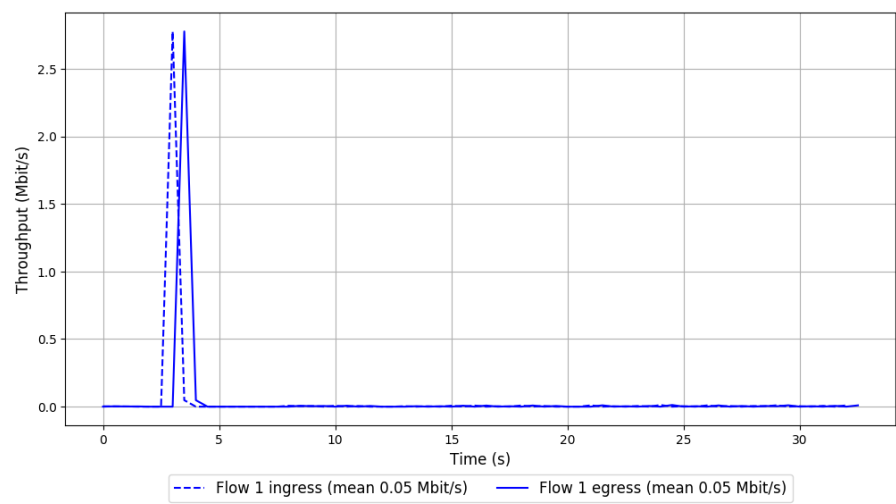


Run 2: Statistics of WebRTC media

Start at: 2018-12-19 23:05:58
End at: 2018-12-19 23:06:29
Local clock offset: 4.091 ms
Remote clock offset: -3.538 ms

Below is generated by plot.py at 2018-12-20 01:33:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 4.974 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 4.974 ms
Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-12-19 23:31:43

End at: 2018-12-19 23:32:13

Local clock offset: 0.071 ms

Remote clock offset: 0.146 ms

Below is generated by plot.py at 2018-12-20 01:33:00

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 5.458 ms

Loss rate: 0.00%

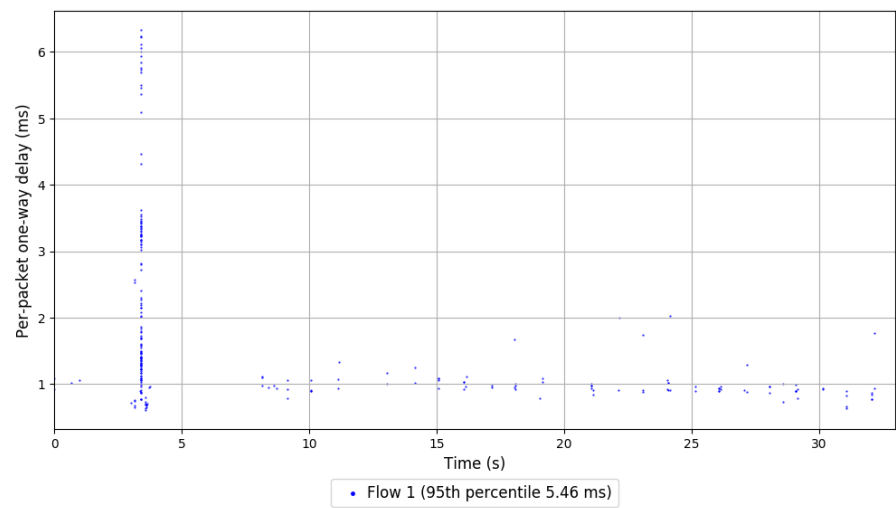
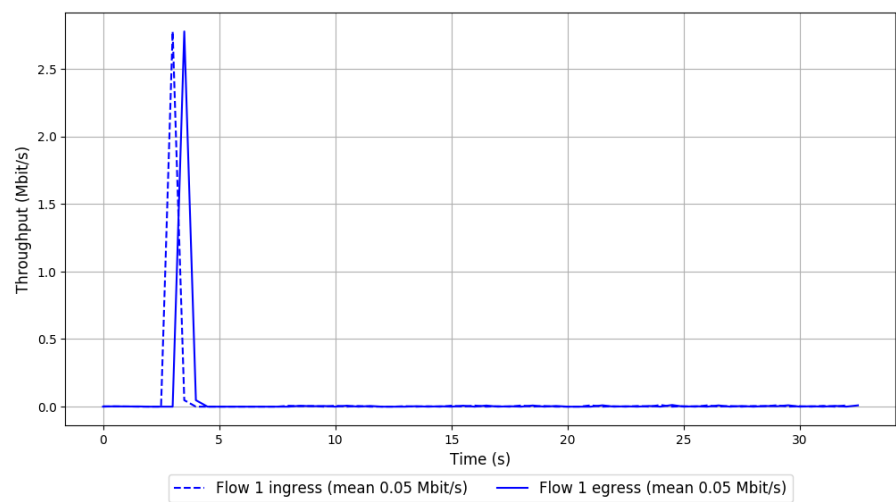
-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 5.458 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

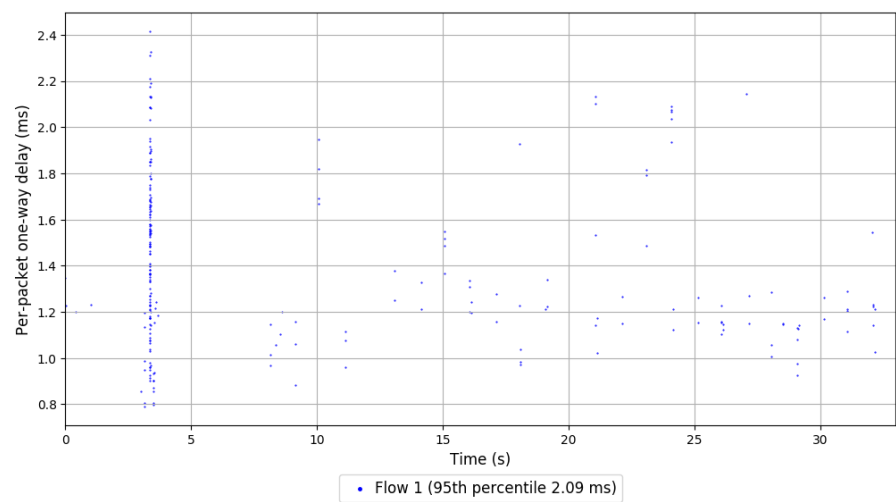
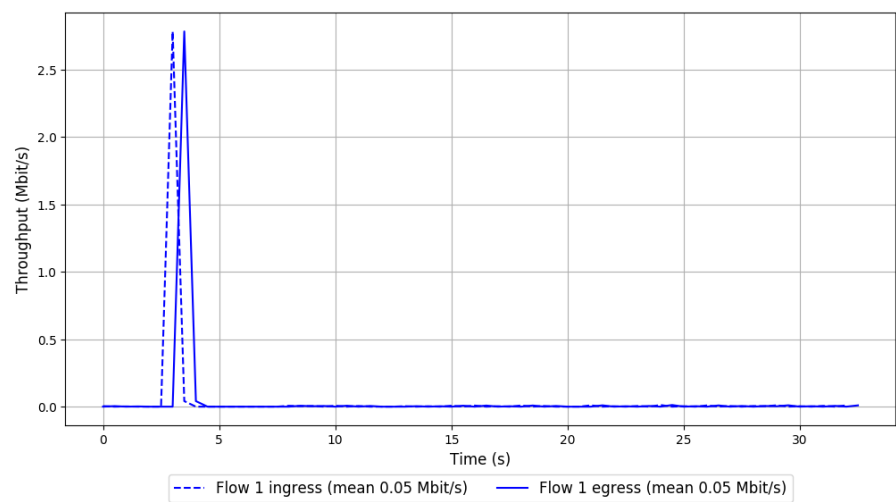


Run 4: Statistics of WebRTC media

Start at: 2018-12-19 23:57:40
End at: 2018-12-19 23:58:10
Local clock offset: 0.105 ms
Remote clock offset: -1.364 ms

Below is generated by plot.py at 2018-12-20 01:33:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 2.089 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 2.089 ms
Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-12-20 00:23:42
End at: 2018-12-20 00:24:12
Local clock offset: -2.858 ms
Remote clock offset: -2.623 ms

Below is generated by plot.py at 2018-12-20 01:33:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 3.090 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 3.090 ms
Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

