

Pantheon Report

Generated at 2019-01-02 22:28:58 (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:

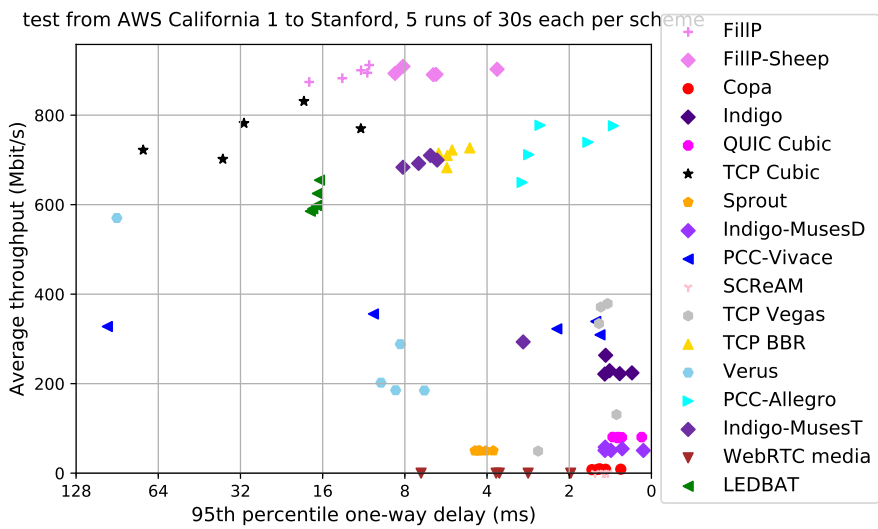
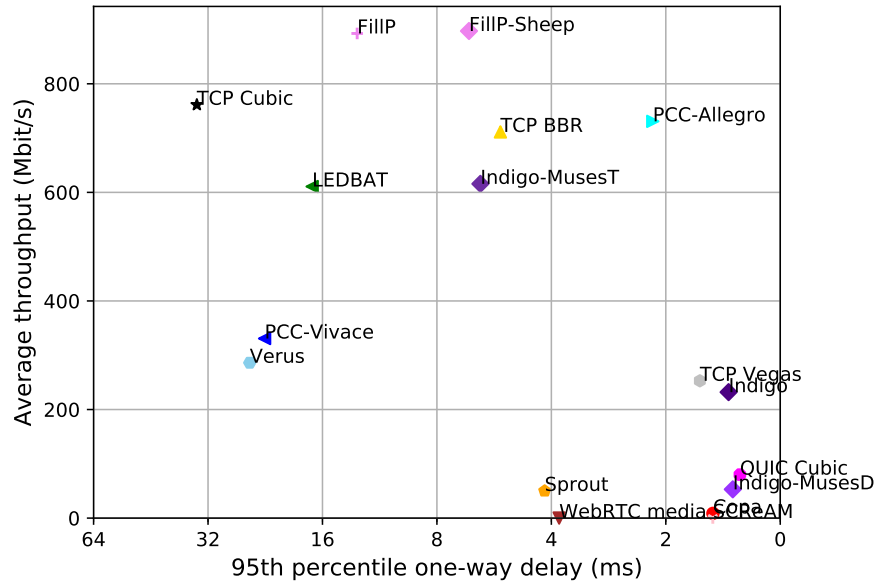
```
Linux 4.15.0-1029-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

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	711.35	5.45	0.01
Copa	5	8.66	1.18	45.42
TCP Cubic	5	761.30	34.24	0.11
FillP	5	892.73	12.97	2.82
FillP-Sheep	5	897.25	6.59	2.33
Indigo	5	232.03	0.90	0.00
Indigo-MusesD	5	52.97	0.83	0.00
Indigo-MusesT	5	615.72	6.15	0.04
LEDBAT	5	610.80	17.03	0.04
PCC-Allegro	5	730.83	2.16	0.05
PCC-Expr	0	N/A	N/A	N/A
QUIC Cubic	5	80.10	0.71	0.00
SCReAM	5	0.22	1.18	0.00
Sprout	5	50.10	4.17	0.00
TaoVA-100x	0	N/A	N/A	N/A
TCP Vegas	5	252.91	1.40	0.00
Verus	5	286.16	24.86	0.76
PCC-Vivace	5	330.79	22.72	0.03
WebRTC media	5	0.05	3.82	0.00

Run 1: Statistics of TCP BBR

Start at: 2019-01-02 19:24:58

End at: 2019-01-02 19:25:28

Local clock offset: 6.494 ms

Remote clock offset: -5.567 ms

Below is generated by plot.py at 2019-01-02 21:49:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 726.87 Mbit/s

95th percentile per-packet one-way delay: 4.628 ms

Loss rate: 0.01%

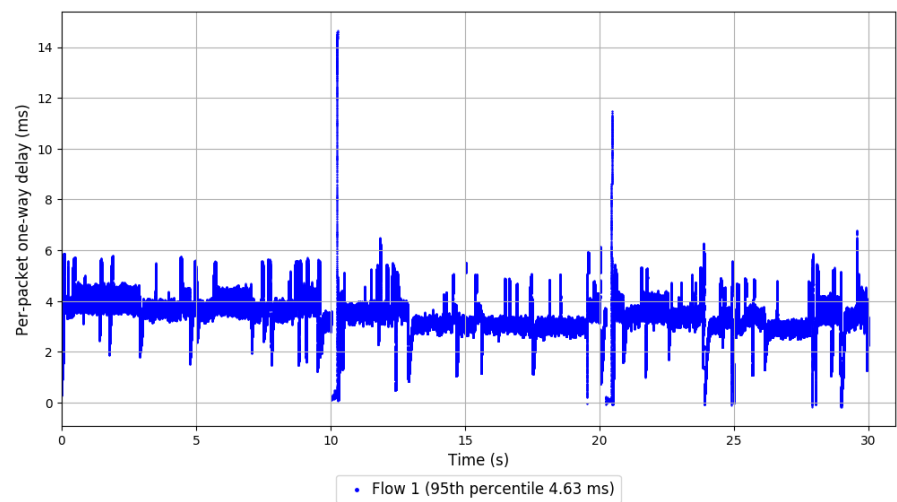
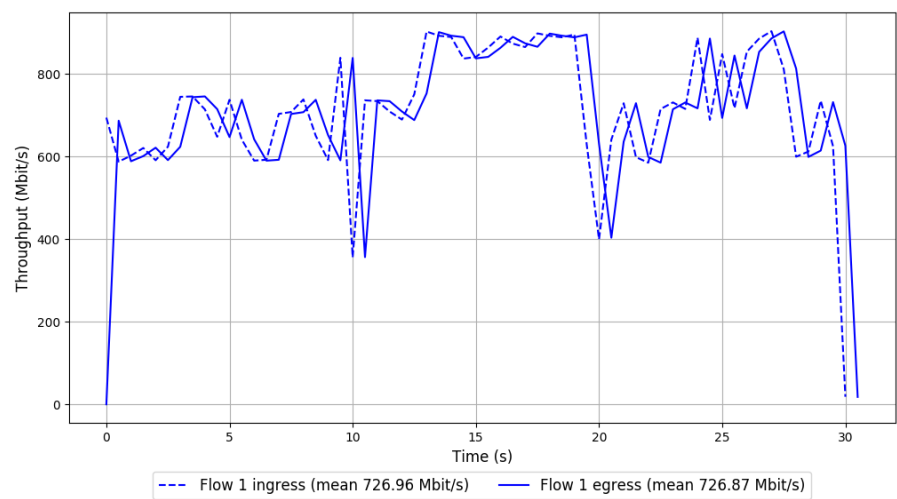
-- Flow 1:

Average throughput: 726.87 Mbit/s

95th percentile per-packet one-way delay: 4.628 ms

Loss rate: 0.01%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2019-01-02 19:51:30

End at: 2019-01-02 19:52:00

Local clock offset: -0.137 ms

Remote clock offset: 0.779 ms

Below is generated by plot.py at 2019-01-02 21:49:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 682.66 Mbit/s

95th percentile per-packet one-way delay: 5.614 ms

Loss rate: 0.02%

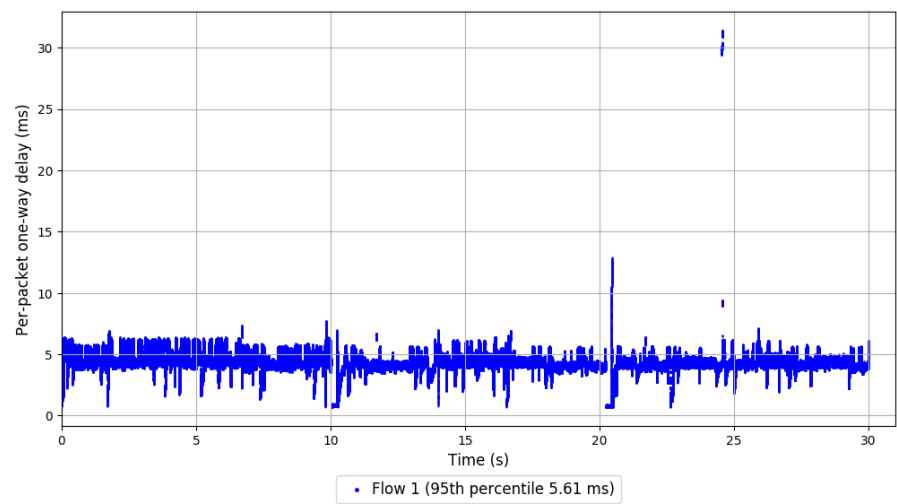
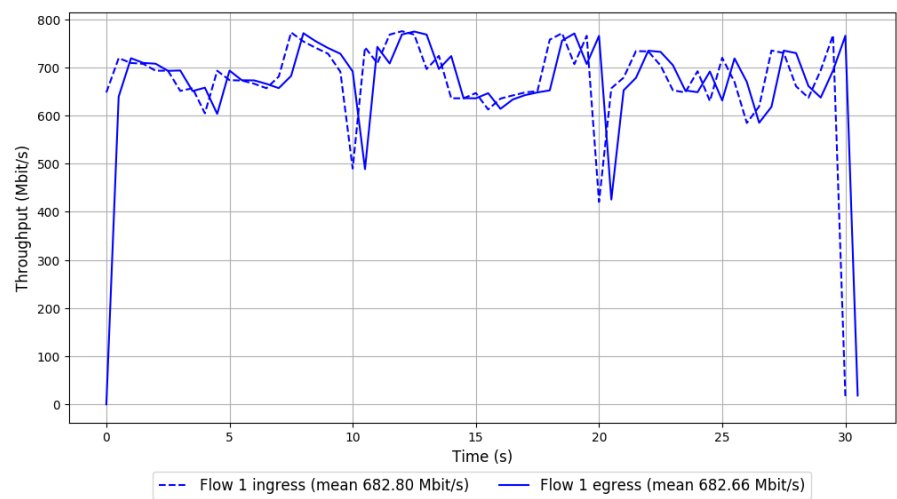
-- Flow 1:

Average throughput: 682.66 Mbit/s

95th percentile per-packet one-way delay: 5.614 ms

Loss rate: 0.02%

Run 2: Report of TCP BBR — Data Link

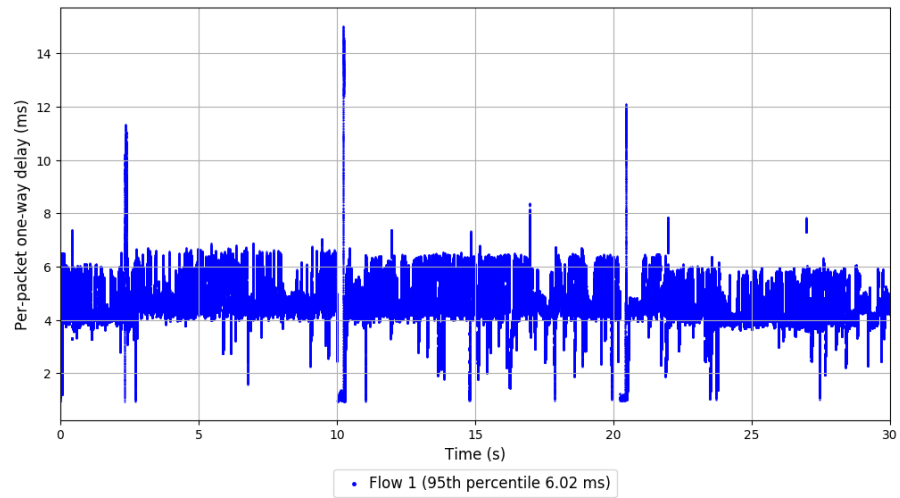
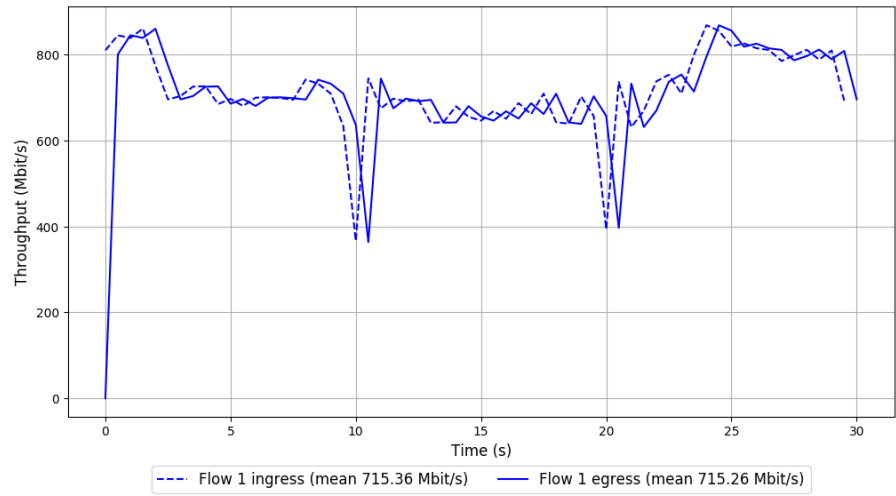


Run 3: Statistics of TCP BBR

Start at: 2019-01-02 20:17:59
End at: 2019-01-02 20:18:29
Local clock offset: 2.349 ms
Remote clock offset: -2.016 ms

Below is generated by plot.py at 2019-01-02 21:49:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 715.26 Mbit/s
95th percentile per-packet one-way delay: 6.020 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 715.26 Mbit/s
95th percentile per-packet one-way delay: 6.020 ms
Loss rate: 0.01%

Run 3: Report of TCP BBR — Data Link

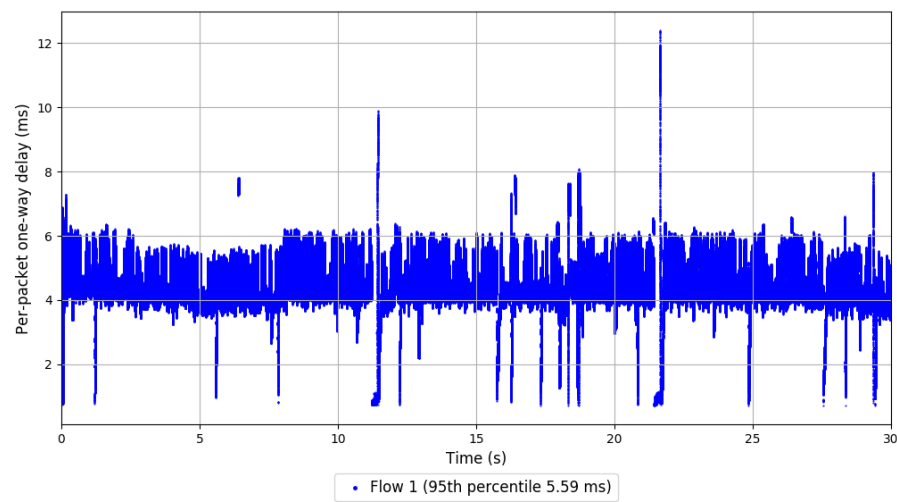
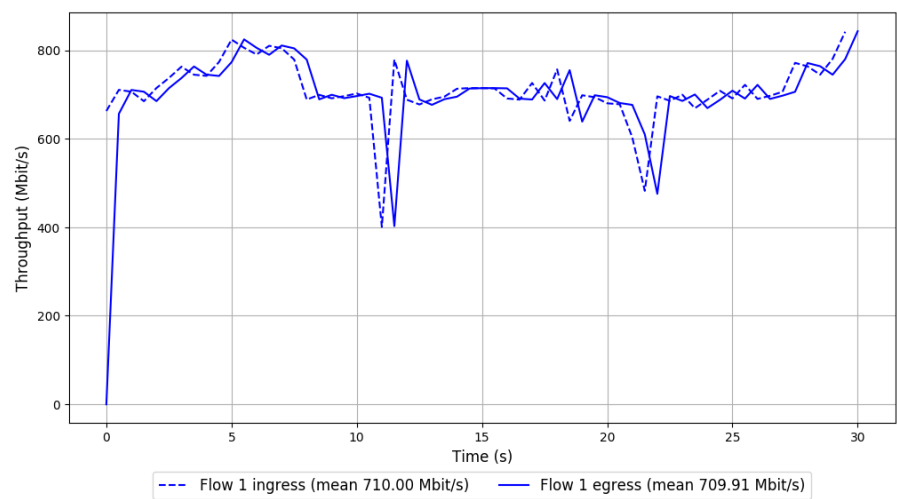


Run 4: Statistics of TCP BBR

Start at: 2019-01-02 20:44:35
End at: 2019-01-02 20:45:05
Local clock offset: 4.884 ms
Remote clock offset: -1.781 ms

Below is generated by plot.py at 2019-01-02 21:49:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 709.91 Mbit/s
95th percentile per-packet one-way delay: 5.595 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 709.91 Mbit/s
95th percentile per-packet one-way delay: 5.595 ms
Loss rate: 0.01%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2019-01-02 21:11:10

End at: 2019-01-02 21:11:40

Local clock offset: -1.927 ms

Remote clock offset: 1.22 ms

Below is generated by plot.py at 2019-01-02 21:49:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 722.04 Mbit/s

95th percentile per-packet one-way delay: 5.372 ms

Loss rate: 0.02%

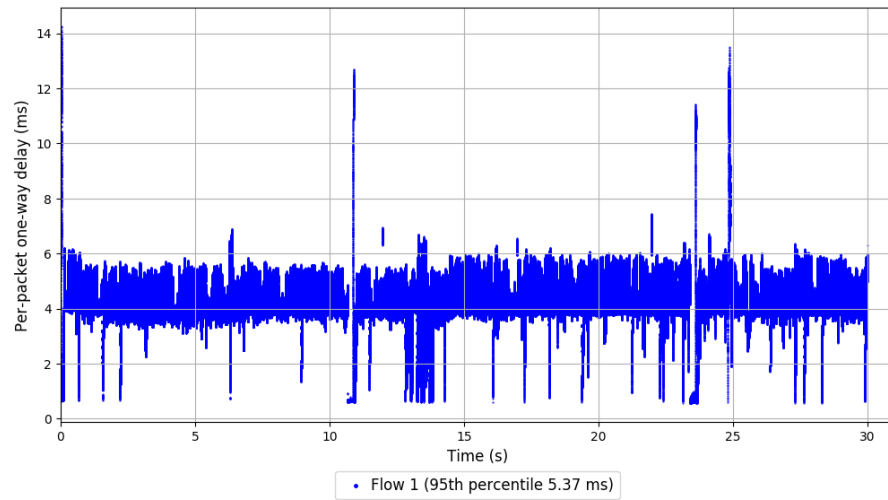
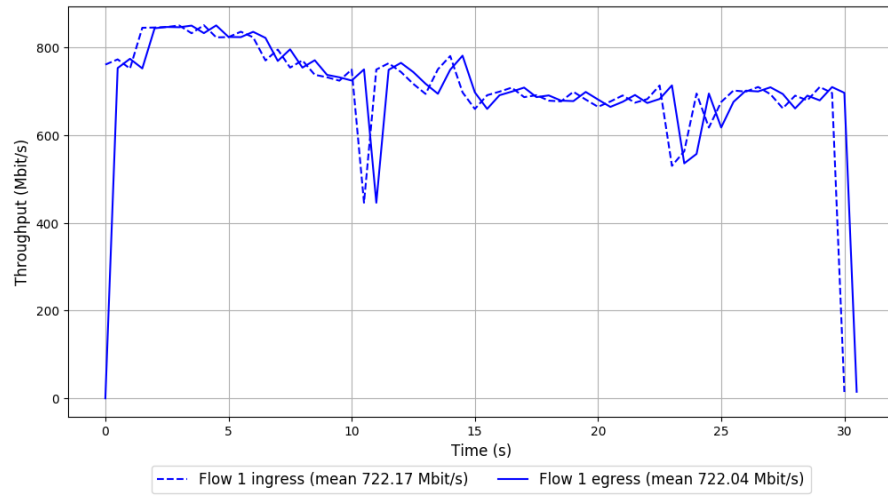
-- Flow 1:

Average throughput: 722.04 Mbit/s

95th percentile per-packet one-way delay: 5.372 ms

Loss rate: 0.02%

Run 5: Report of TCP BBR — Data Link

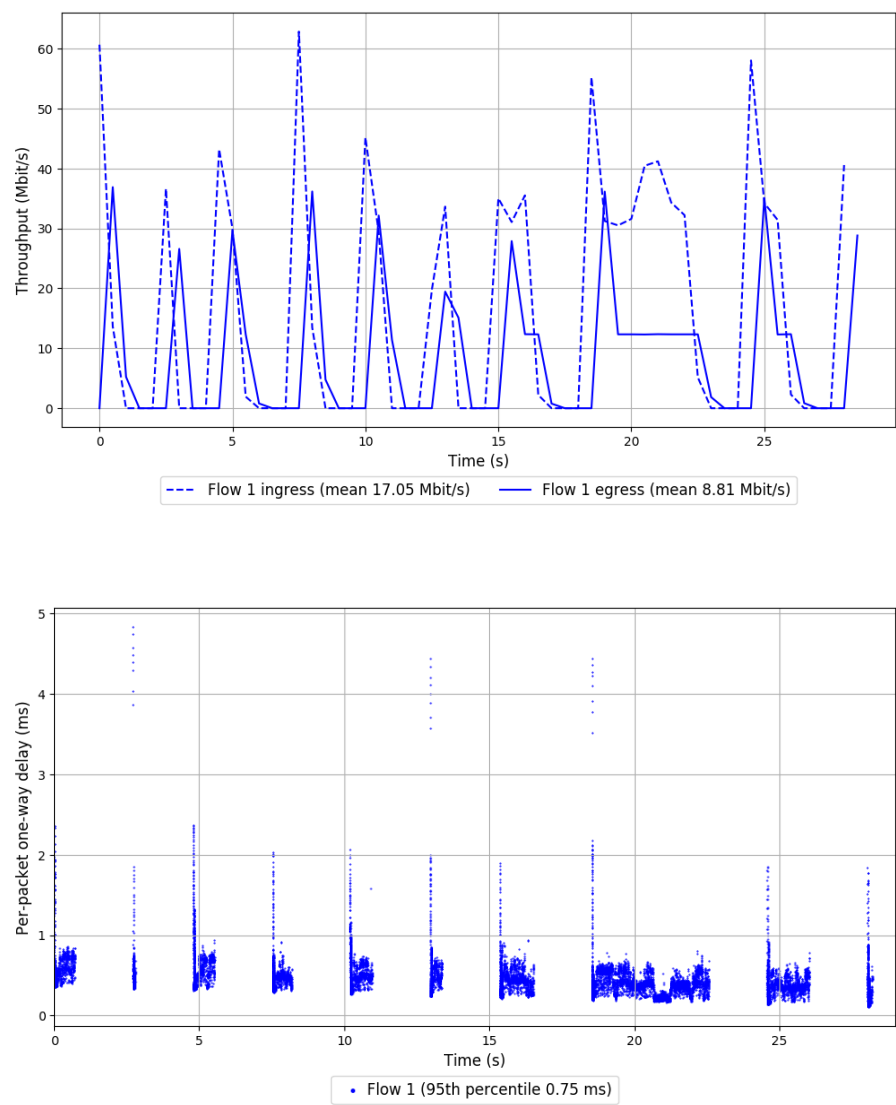


Run 1: Statistics of Copa

Start at: 2019-01-02 19:29:02
End at: 2019-01-02 19:29:32
Local clock offset: 3.379 ms
Remote clock offset: -5.681 ms

Below is generated by plot.py at 2019-01-02 21:49:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 8.81 Mbit/s
95th percentile per-packet one-way delay: 0.746 ms
Loss rate: 48.31%
-- Flow 1:
Average throughput: 8.81 Mbit/s
95th percentile per-packet one-way delay: 0.746 ms
Loss rate: 48.31%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2019-01-02 19:55:33

End at: 2019-01-02 19:56:03

Local clock offset: 0.079 ms

Remote clock offset: 1.227 ms

Below is generated by plot.py at 2019-01-02 21:49:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 8.40 Mbit/s

95th percentile per-packet one-way delay: 1.311 ms

Loss rate: 45.10%

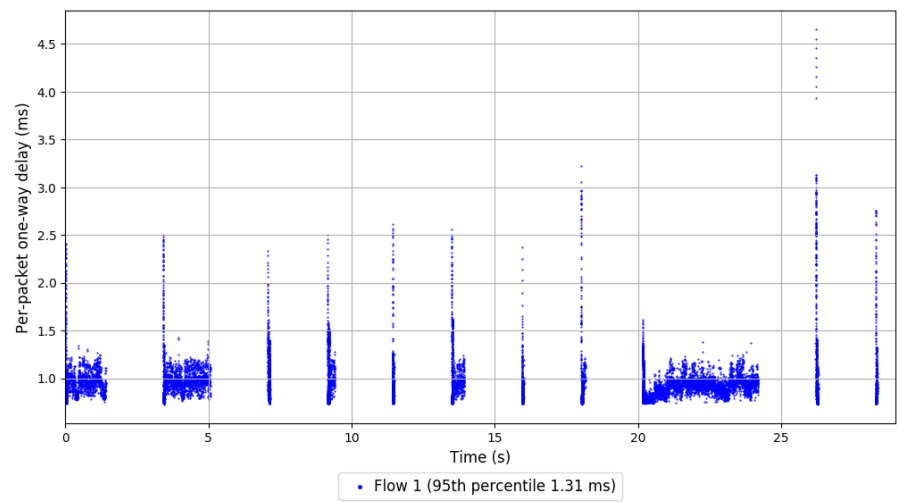
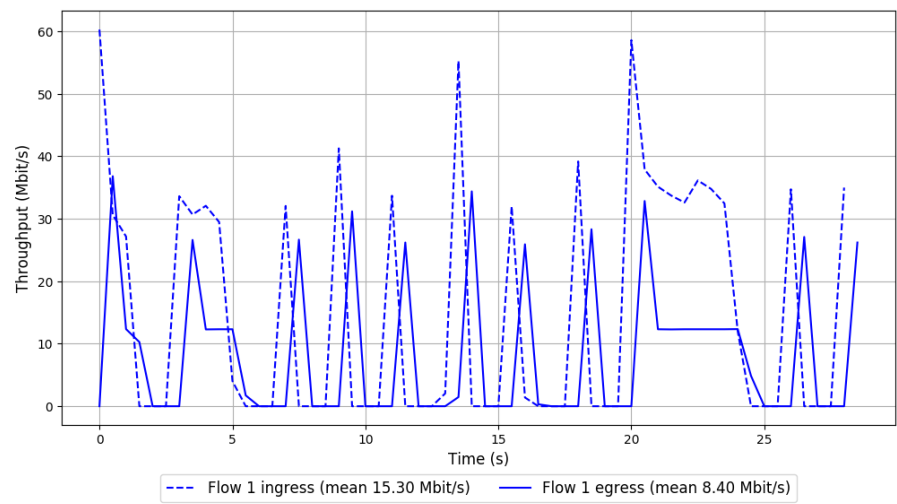
-- Flow 1:

Average throughput: 8.40 Mbit/s

95th percentile per-packet one-way delay: 1.311 ms

Loss rate: 45.10%

Run 2: Report of Copa — Data Link

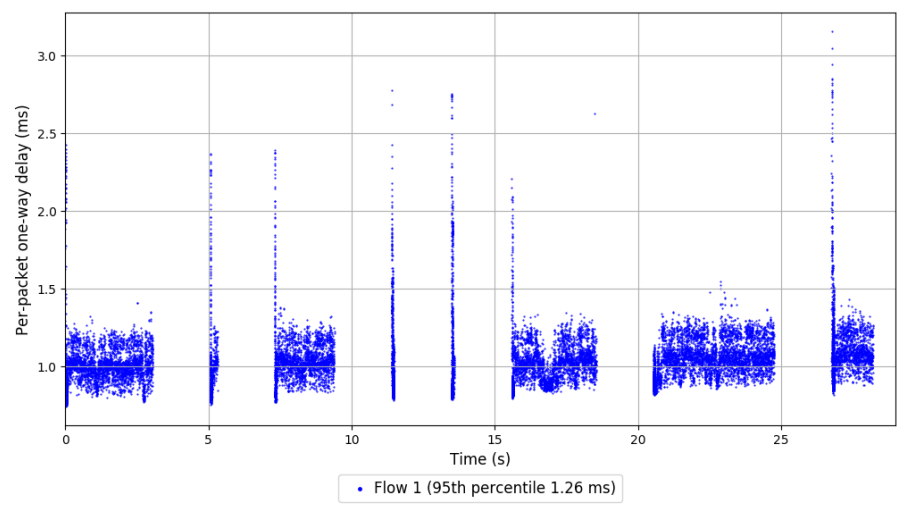
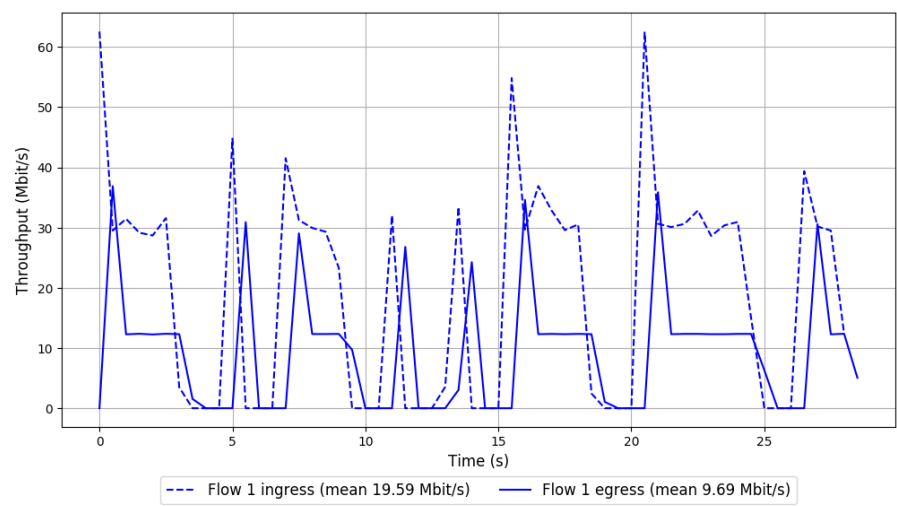


Run 3: Statistics of Copa

Start at: 2019-01-02 20:22:02
End at: 2019-01-02 20:22:32
Local clock offset: 2.734 ms
Remote clock offset: -2.62 ms

Below is generated by plot.py at 2019-01-02 21:49:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 9.69 Mbit/s
95th percentile per-packet one-way delay: 1.261 ms
Loss rate: 50.54%
-- Flow 1:
Average throughput: 9.69 Mbit/s
95th percentile per-packet one-way delay: 1.261 ms
Loss rate: 50.54%

Run 3: Report of Copa — Data Link

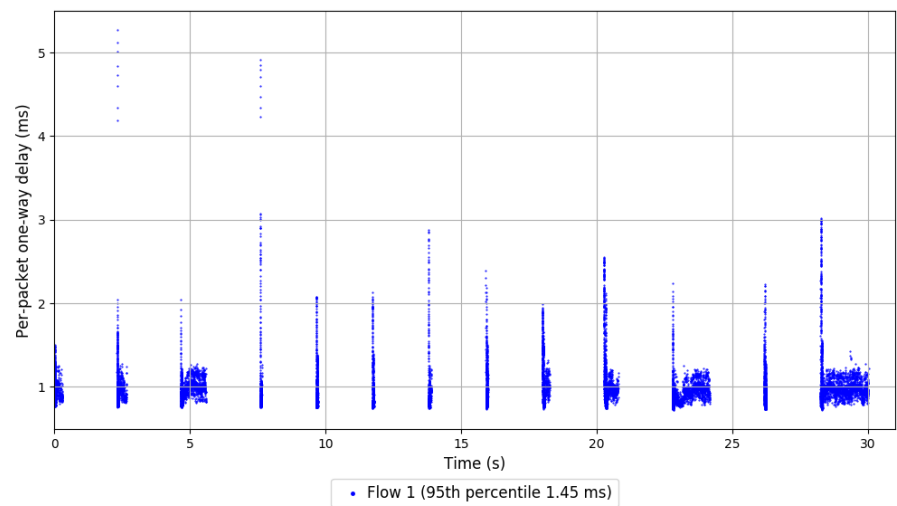
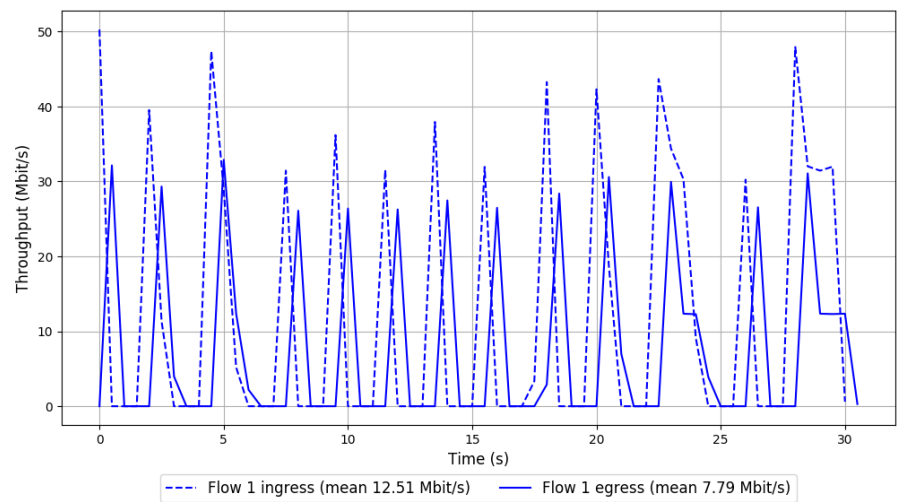


Run 4: Statistics of Copa

Start at: 2019-01-02 20:48:38
End at: 2019-01-02 20:49:08
Local clock offset: 5.221 ms
Remote clock offset: -0.943 ms

Below is generated by plot.py at 2019-01-02 21:49:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 7.79 Mbit/s
95th percentile per-packet one-way delay: 1.448 ms
Loss rate: 37.70%
-- Flow 1:
Average throughput: 7.79 Mbit/s
95th percentile per-packet one-way delay: 1.448 ms
Loss rate: 37.70%

Run 4: Report of Copa — Data Link

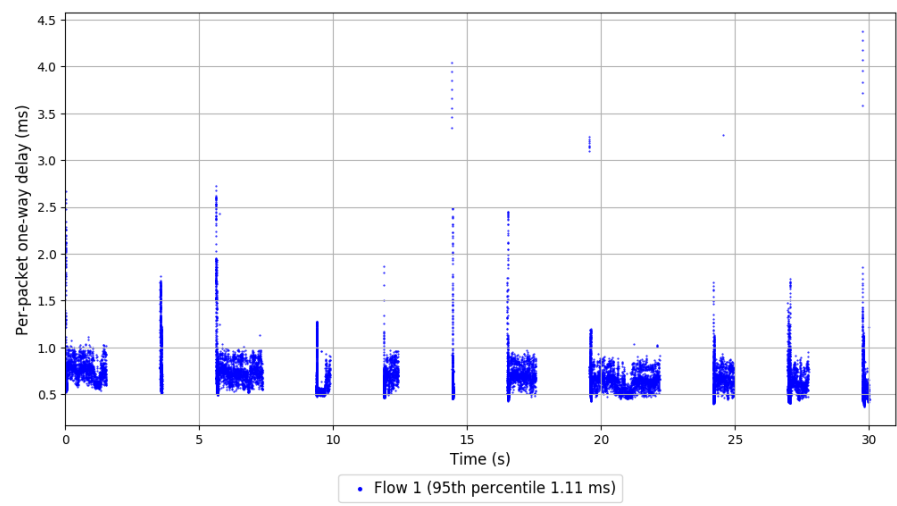
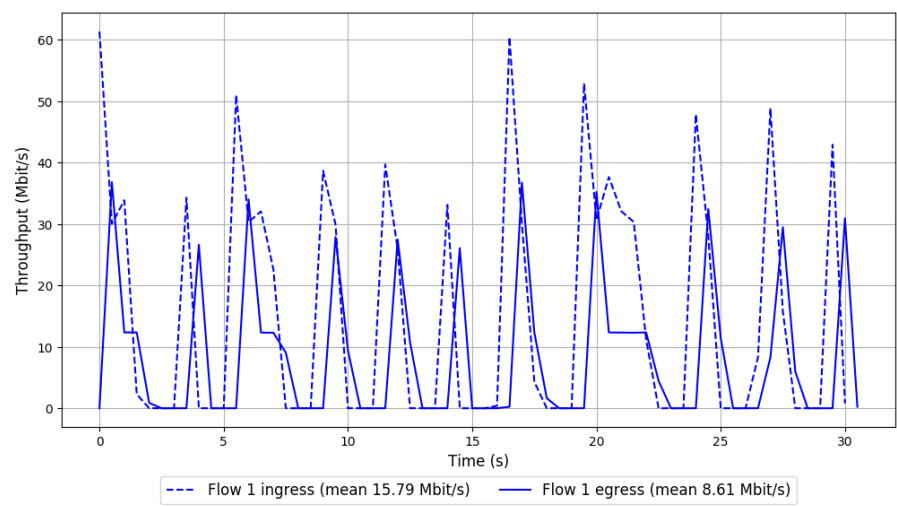


Run 5: Statistics of Copa

Start at: 2019-01-02 21:15:13
End at: 2019-01-02 21:15:43
Local clock offset: -2.507 ms
Remote clock offset: 1.559 ms

Below is generated by plot.py at 2019-01-02 21:49:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 8.61 Mbit/s
95th percentile per-packet one-way delay: 1.115 ms
Loss rate: 45.45%
-- Flow 1:
Average throughput: 8.61 Mbit/s
95th percentile per-packet one-way delay: 1.115 ms
Loss rate: 45.45%

Run 5: Report of Copa — Data Link

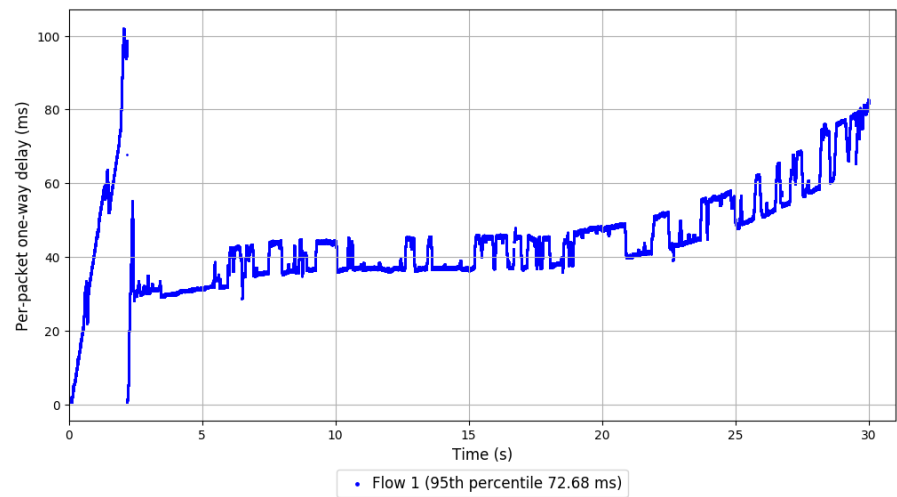
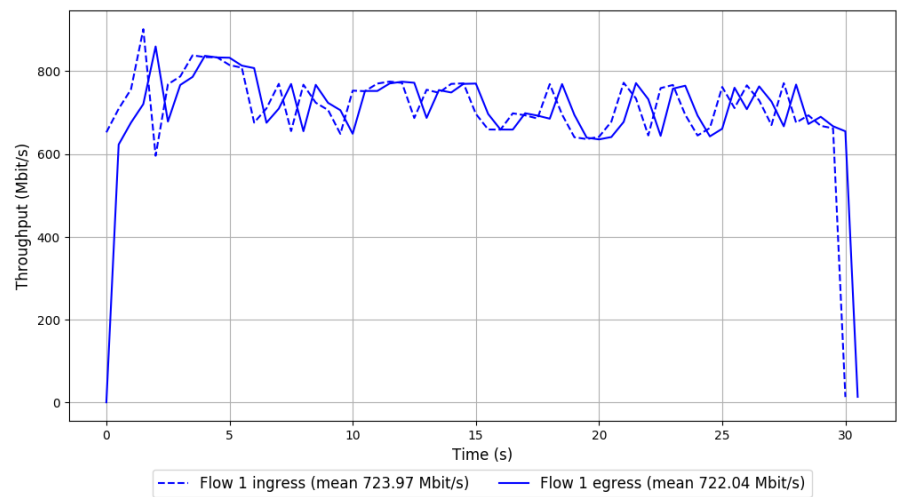


Run 1: Statistics of TCP Cubic

Start at: 2019-01-02 19:41:20
End at: 2019-01-02 19:41:50
Local clock offset: -0.026 ms
Remote clock offset: -1.148 ms

Below is generated by plot.py at 2019-01-02 21:49:37
Datalink statistics
-- Total of 1 flow:
Average throughput: 722.04 Mbit/s
95th percentile per-packet one-way delay: 72.683 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 722.04 Mbit/s
95th percentile per-packet one-way delay: 72.683 ms
Loss rate: 0.27%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2019-01-02 20:07:47

End at: 2019-01-02 20:08:17

Local clock offset: 1.383 ms

Remote clock offset: 0.869 ms

Below is generated by plot.py at 2019-01-02 21:50:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 781.86 Mbit/s

95th percentile per-packet one-way delay: 31.069 ms

Loss rate: 0.10%

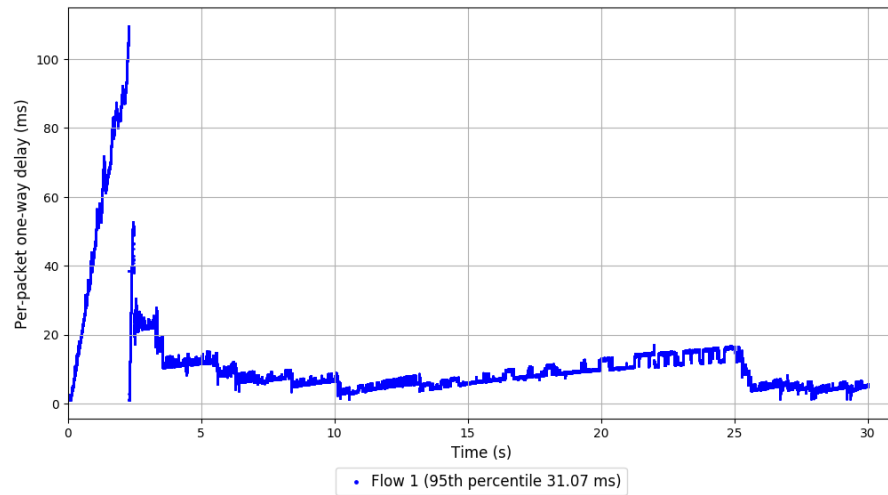
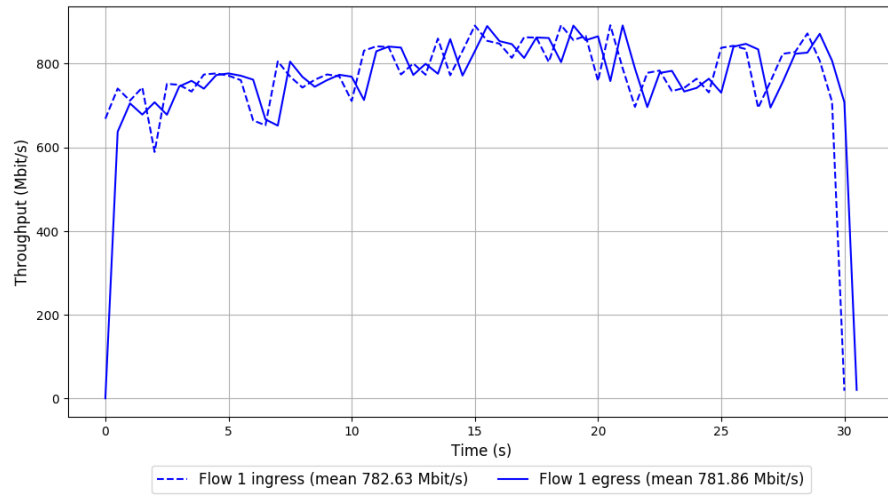
-- Flow 1:

Average throughput: 781.86 Mbit/s

95th percentile per-packet one-way delay: 31.069 ms

Loss rate: 0.10%

Run 2: Report of TCP Cubic — Data Link

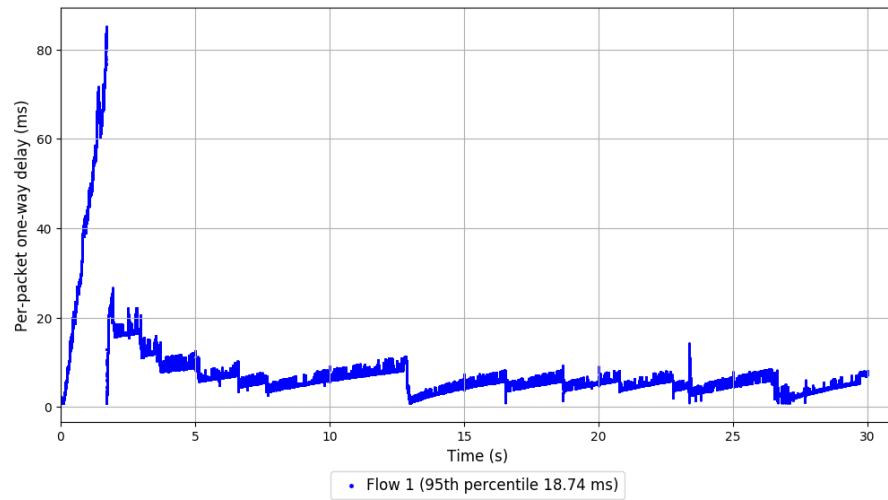
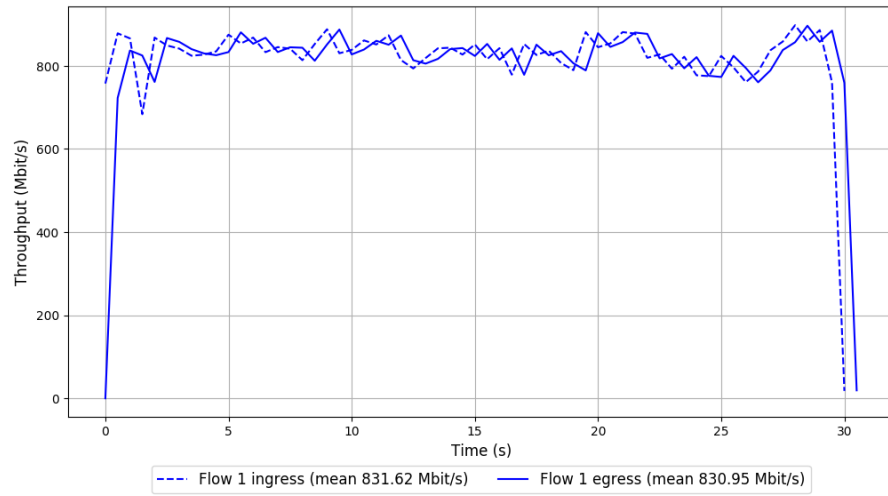


Run 3: Statistics of TCP Cubic

Start at: 2019-01-02 20:34:26
End at: 2019-01-02 20:34:56
Local clock offset: 3.876 ms
Remote clock offset: -3.321 ms

Below is generated by plot.py at 2019-01-02 21:50:42
Datalink statistics
-- Total of 1 flow:
Average throughput: 830.95 Mbit/s
95th percentile per-packet one-way delay: 18.739 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 830.95 Mbit/s
95th percentile per-packet one-way delay: 18.739 ms
Loss rate: 0.08%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2019-01-02 21:00:59

End at: 2019-01-02 21:01:29

Local clock offset: 1.079 ms

Remote clock offset: 0.463 ms

Below is generated by plot.py at 2019-01-02 21:55:42

Datalink statistics

-- Total of 1 flow:

Average throughput: 769.92 Mbit/s

95th percentile per-packet one-way delay: 11.596 ms

Loss rate: 0.06%

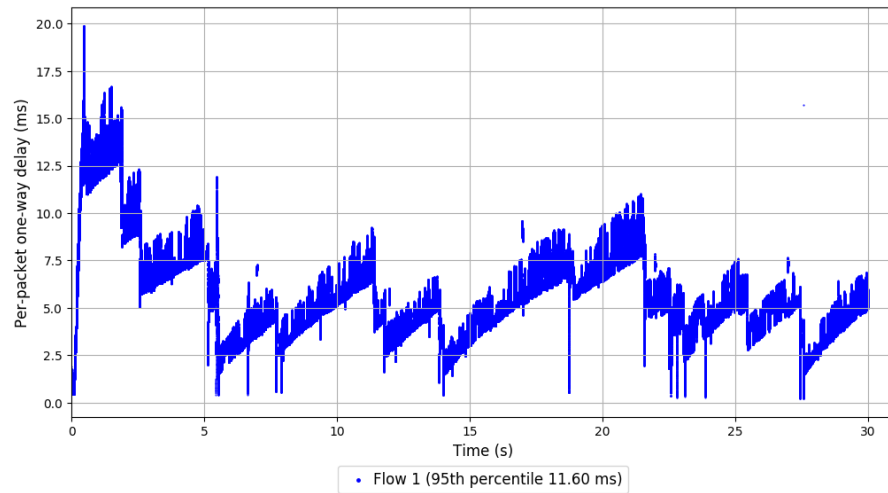
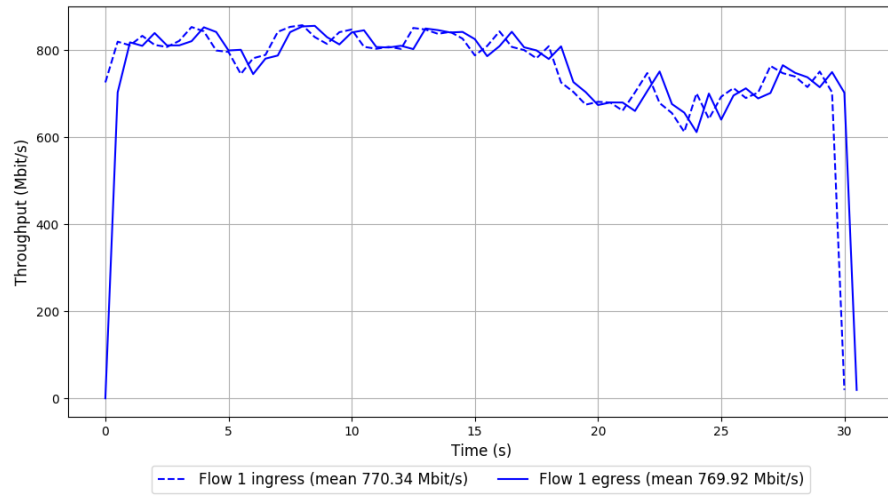
-- Flow 1:

Average throughput: 769.92 Mbit/s

95th percentile per-packet one-way delay: 11.596 ms

Loss rate: 0.06%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2019-01-02 21:27:37

End at: 2019-01-02 21:28:07

Local clock offset: -3.143 ms

Remote clock offset: 3.186 ms

Below is generated by plot.py at 2019-01-02 21:55:42

Datalink statistics

-- Total of 1 flow:

Average throughput: 701.75 Mbit/s

95th percentile per-packet one-way delay: 37.137 ms

Loss rate: 0.04%

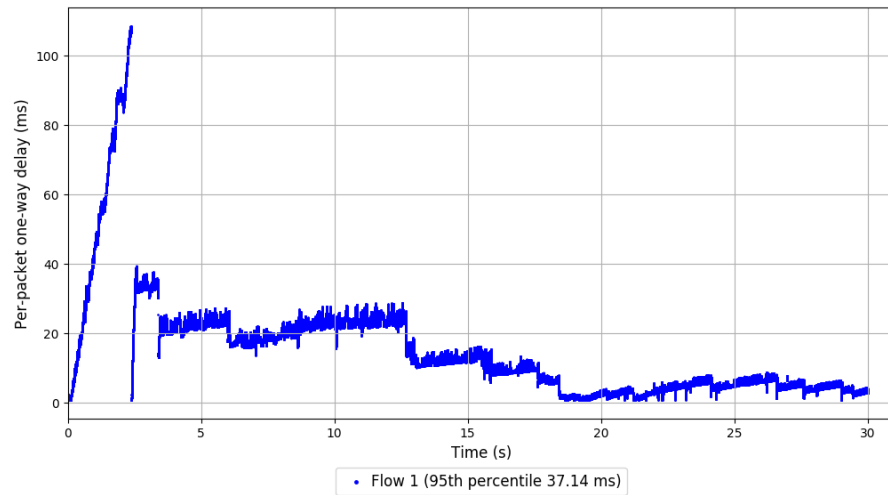
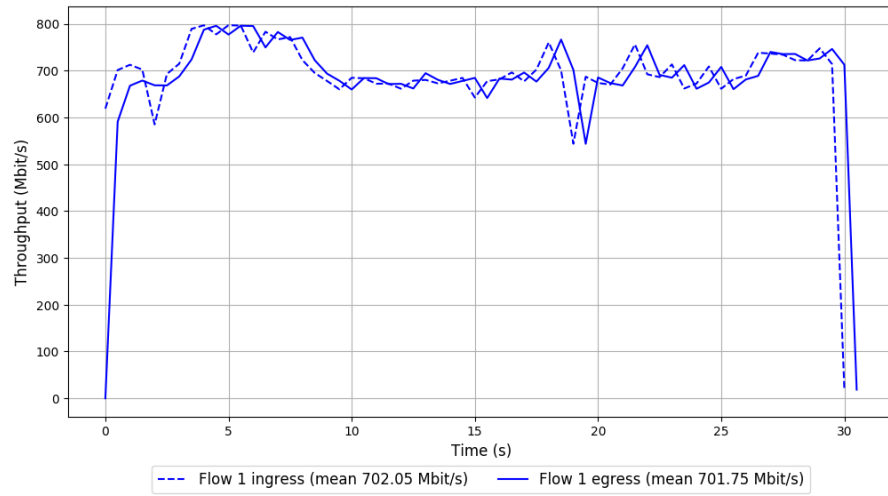
-- Flow 1:

Average throughput: 701.75 Mbit/s

95th percentile per-packet one-way delay: 37.137 ms

Loss rate: 0.04%

Run 5: Report of TCP Cubic — Data Link

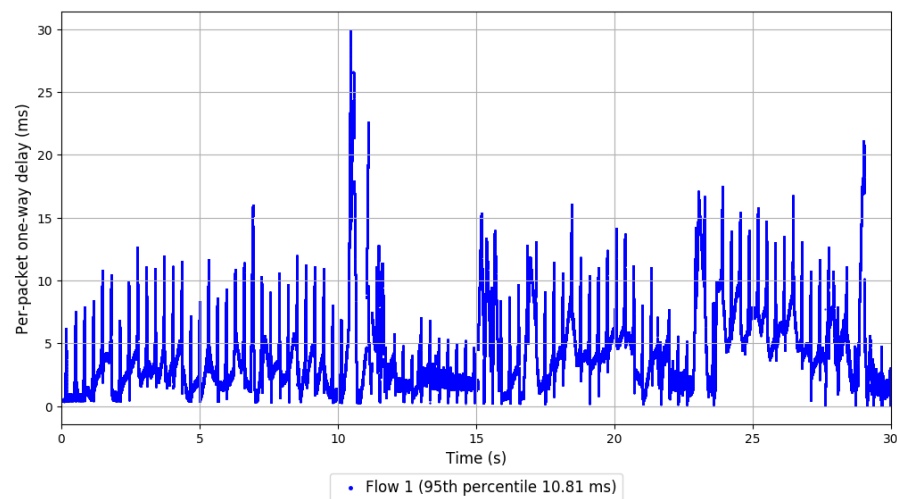
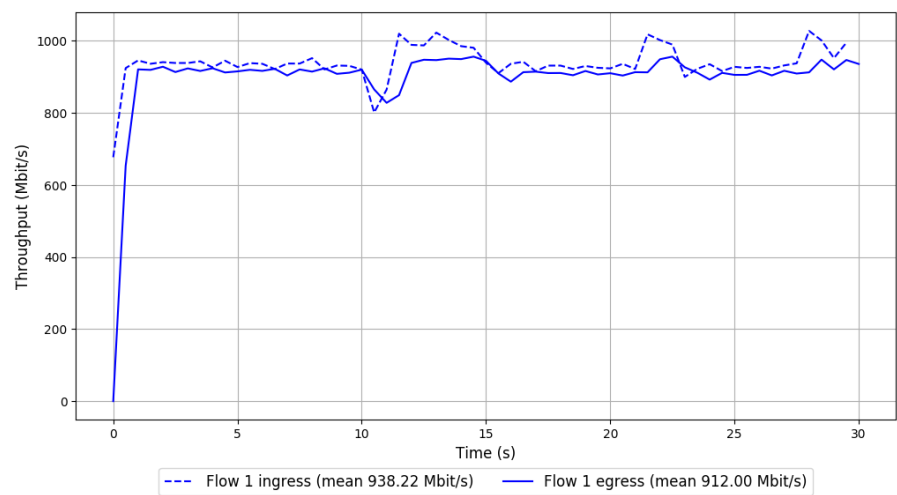


Run 1: Statistics of FillP

Start at: 2019-01-02 19:34:12
End at: 2019-01-02 19:34:42
Local clock offset: 1.109 ms
Remote clock offset: -3.908 ms

Below is generated by plot.py at 2019-01-02 22:01:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 912.00 Mbit/s
95th percentile per-packet one-way delay: 10.810 ms
Loss rate: 2.79%
-- Flow 1:
Average throughput: 912.00 Mbit/s
95th percentile per-packet one-way delay: 10.810 ms
Loss rate: 2.79%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2019-01-02 20:00:42

End at: 2019-01-02 20:01:12

Local clock offset: 0.599 ms

Remote clock offset: 1.767 ms

Below is generated by plot.py at 2019-01-02 22:01:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 874.13 Mbit/s

95th percentile per-packet one-way delay: 17.917 ms

Loss rate: 2.68%

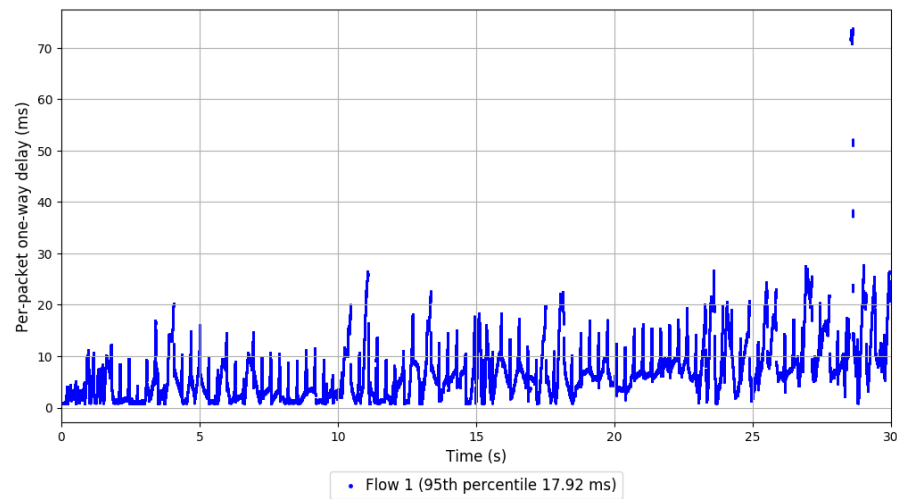
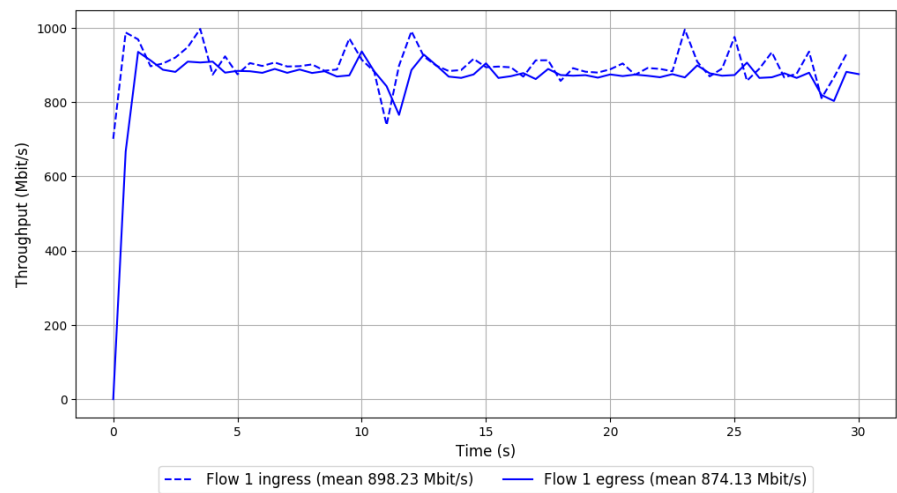
-- Flow 1:

Average throughput: 874.13 Mbit/s

95th percentile per-packet one-way delay: 17.917 ms

Loss rate: 2.68%

Run 2: Report of FillP — Data Link

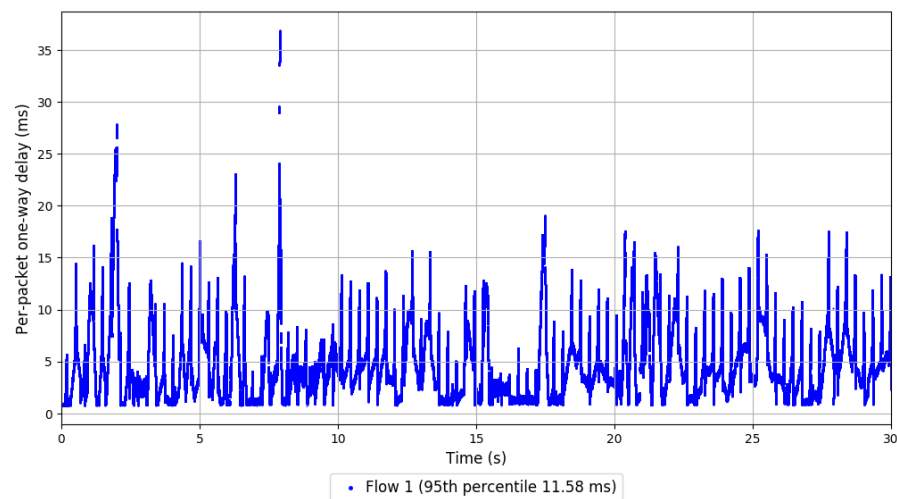
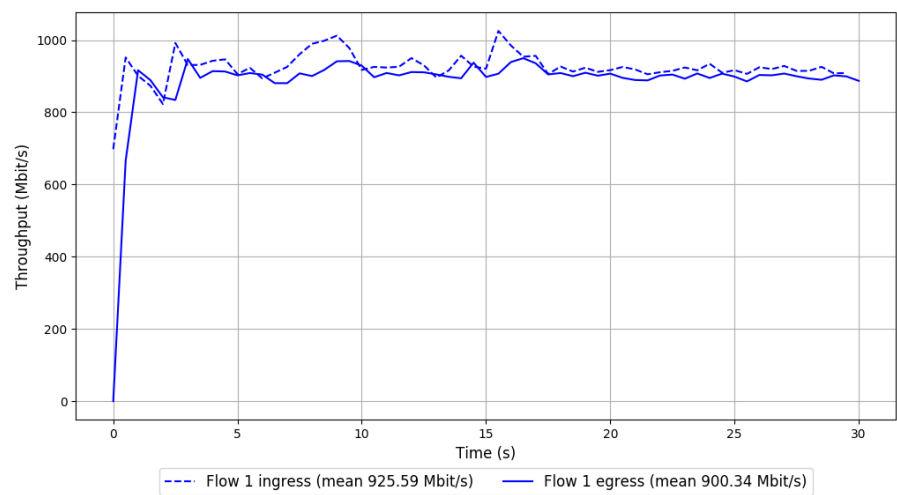


Run 3: Statistics of FillP

Start at: 2019-01-02 20:27:21
End at: 2019-01-02 20:27:51
Local clock offset: 3.223 ms
Remote clock offset: -3.029 ms

Below is generated by plot.py at 2019-01-02 22:01:10
Datalink statistics
-- Total of 1 flow:
Average throughput: 900.34 Mbit/s
95th percentile per-packet one-way delay: 11.576 ms
Loss rate: 2.73%
-- Flow 1:
Average throughput: 900.34 Mbit/s
95th percentile per-packet one-way delay: 11.576 ms
Loss rate: 2.73%

Run 3: Report of FillP — Data Link

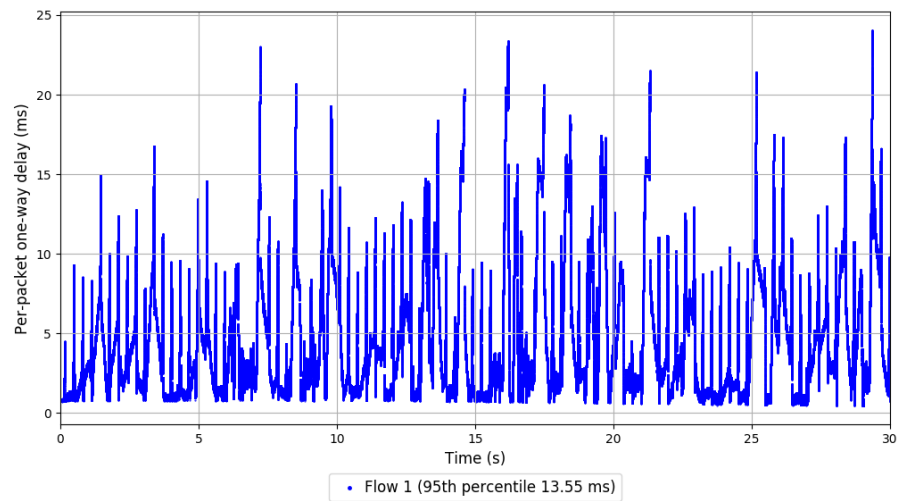
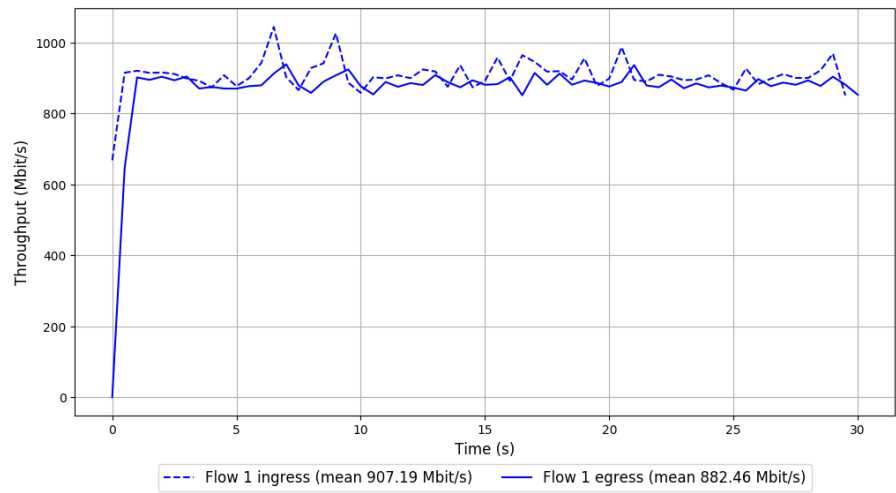


Run 4: Statistics of FillP

Start at: 2019-01-02 20:53:55
End at: 2019-01-02 20:54:25
Local clock offset: 5.65 ms
Remote clock offset: -0.186 ms

Below is generated by plot.py at 2019-01-02 22:01:10
Datalink statistics
-- Total of 1 flow:
Average throughput: 882.46 Mbit/s
95th percentile per-packet one-way delay: 13.555 ms
Loss rate: 2.73%
-- Flow 1:
Average throughput: 882.46 Mbit/s
95th percentile per-packet one-way delay: 13.555 ms
Loss rate: 2.73%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2019-01-02 21:20:31

End at: 2019-01-02 21:21:01

Local clock offset: -3.055 ms

Remote clock offset: 2.413 ms

Below is generated by plot.py at 2019-01-02 22:01:52

Datalink statistics

-- Total of 1 flow:

Average throughput: 894.71 Mbit/s

95th percentile per-packet one-way delay: 10.977 ms

Loss rate: 3.18%

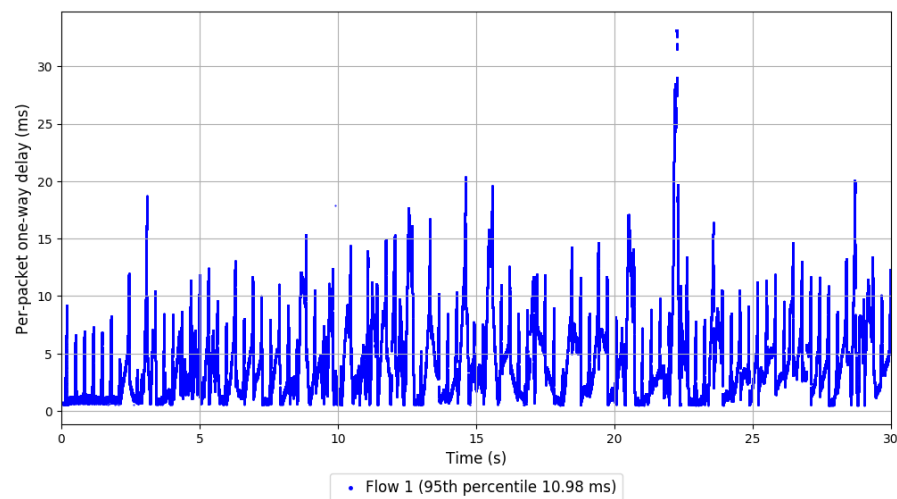
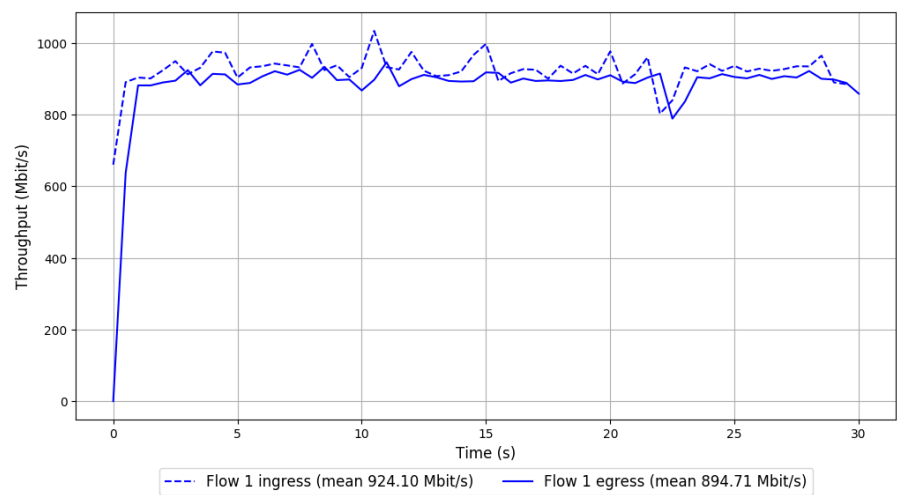
-- Flow 1:

Average throughput: 894.71 Mbit/s

95th percentile per-packet one-way delay: 10.977 ms

Loss rate: 3.18%

Run 5: Report of FillP — Data Link

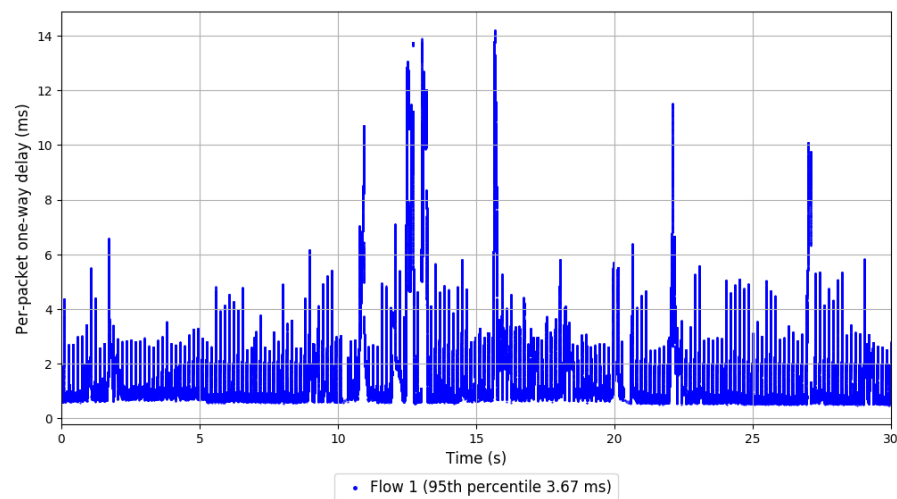
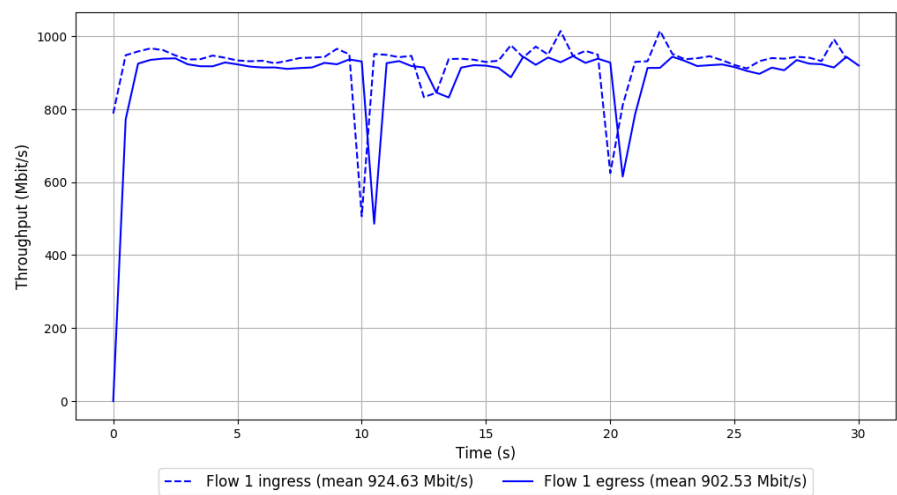


Run 1: Statistics of FillP-Sheep

Start at: 2019-01-02 19:44:10
End at: 2019-01-02 19:44:40
Local clock offset: -0.139 ms
Remote clock offset: -0.464 ms

Below is generated by plot.py at 2019-01-02 22:02:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 902.53 Mbit/s
95th percentile per-packet one-way delay: 3.675 ms
Loss rate: 2.39%
-- Flow 1:
Average throughput: 902.53 Mbit/s
95th percentile per-packet one-way delay: 3.675 ms
Loss rate: 2.39%

Run 1: Report of FillP-Sheep — Data Link

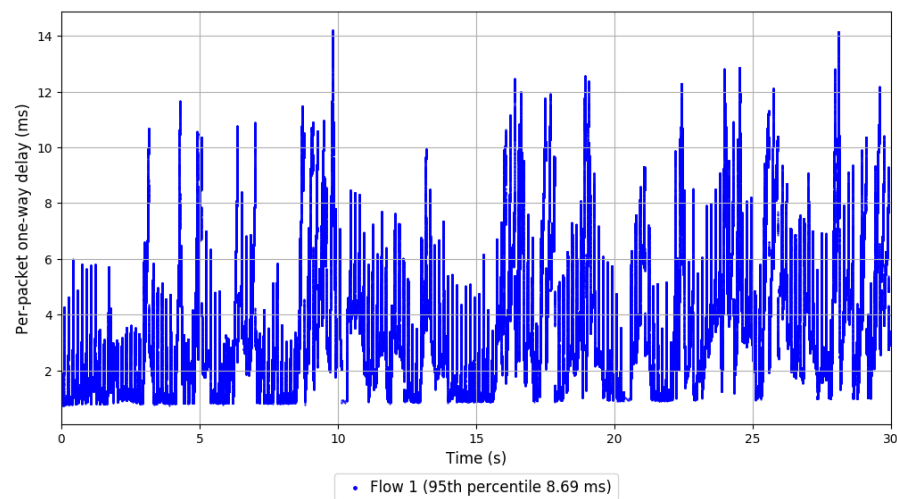
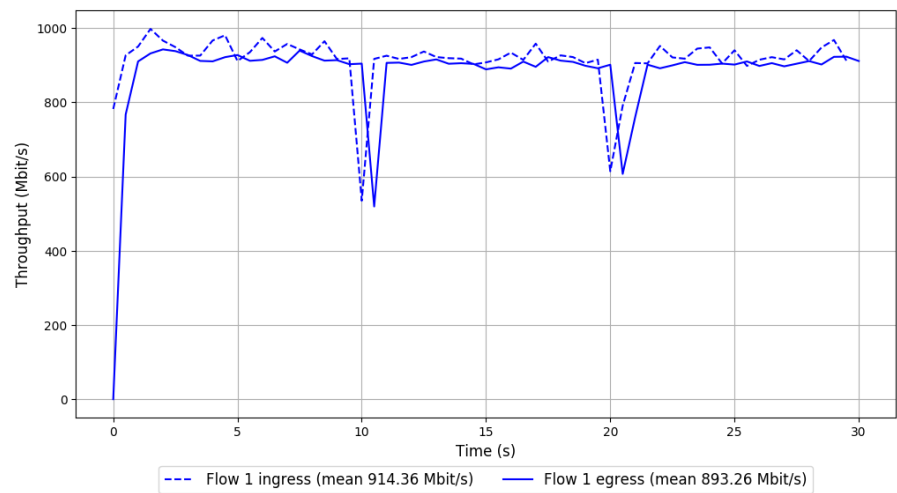


Run 2: Statistics of FillP-Sheep

Start at: 2019-01-02 20:10:43
End at: 2019-01-02 20:11:13
Local clock offset: 1.716 ms
Remote clock offset: -0.461 ms

Below is generated by plot.py at 2019-01-02 22:07:58
Datalink statistics
-- Total of 1 flow:
Average throughput: 893.26 Mbit/s
95th percentile per-packet one-way delay: 8.690 ms
Loss rate: 2.30%
-- Flow 1:
Average throughput: 893.26 Mbit/s
95th percentile per-packet one-way delay: 8.690 ms
Loss rate: 2.30%

Run 2: Report of FillP-Sheep — Data Link

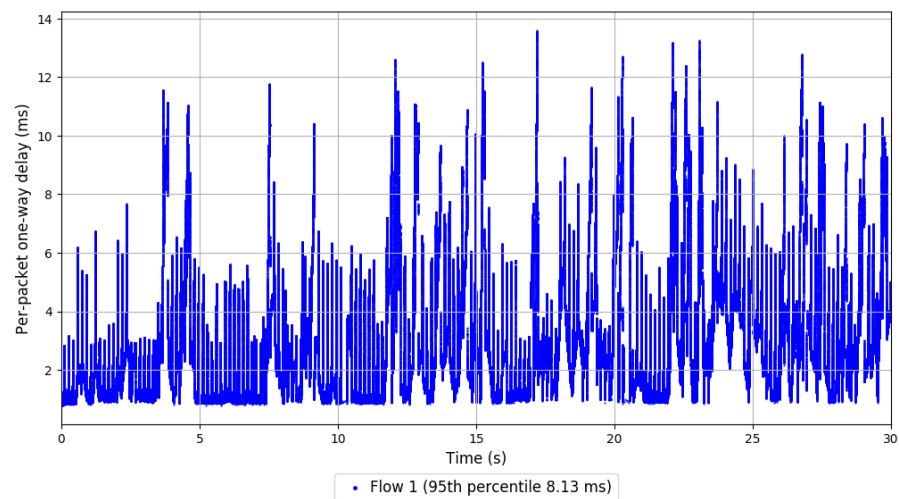
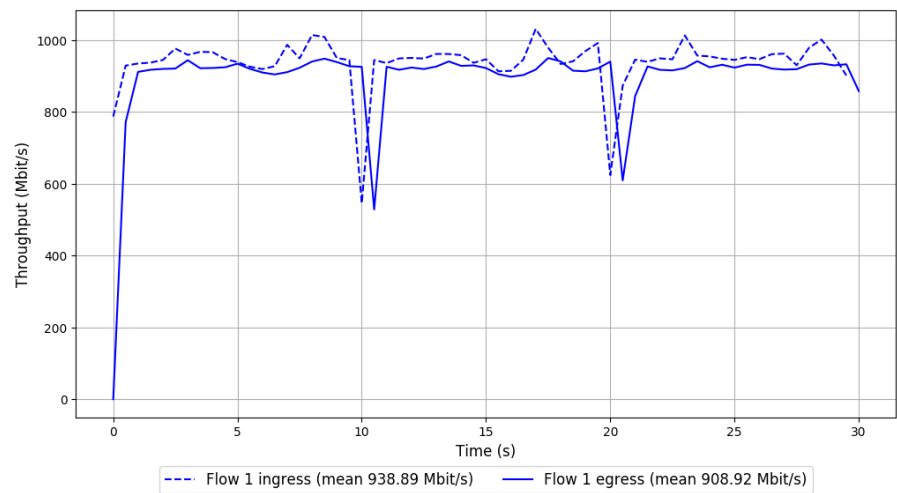


Run 3: Statistics of FillP-Sheep

Start at: 2019-01-02 20:37:19
End at: 2019-01-02 20:37:49
Local clock offset: 4.135 ms
Remote clock offset: -3.464 ms

Below is generated by plot.py at 2019-01-02 22:08:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 908.92 Mbit/s
95th percentile per-packet one-way delay: 8.128 ms
Loss rate: 3.19%
-- Flow 1:
Average throughput: 908.92 Mbit/s
95th percentile per-packet one-way delay: 8.128 ms
Loss rate: 3.19%

Run 3: Report of FillP-Sheep — Data Link



Run 4: Statistics of FillP-Sheep

Start at: 2019-01-02 21:03:50

End at: 2019-01-02 21:04:20

Local clock offset: -0.138 ms

Remote clock offset: 0.717 ms

Below is generated by plot.py at 2019-01-02 22:12:18

Datalink statistics

-- Total of 1 flow:

Average throughput: 891.02 Mbit/s

95th percentile per-packet one-way delay: 6.152 ms

Loss rate: 1.67%

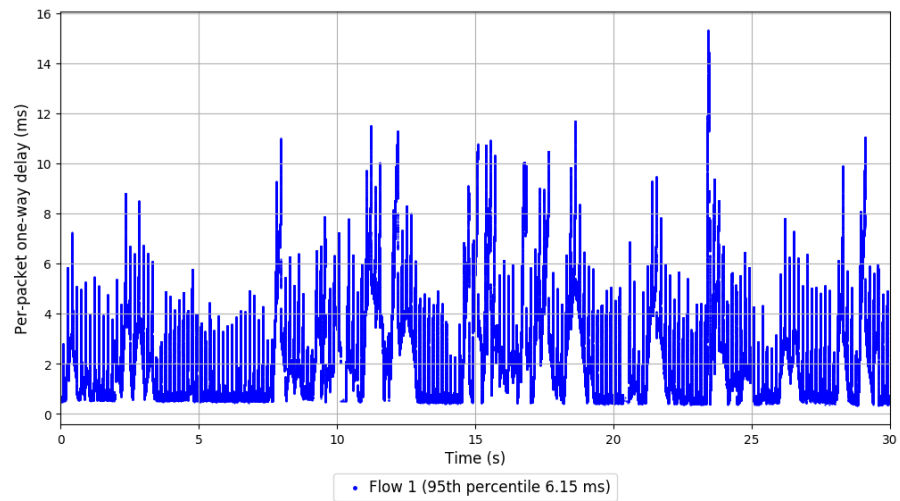
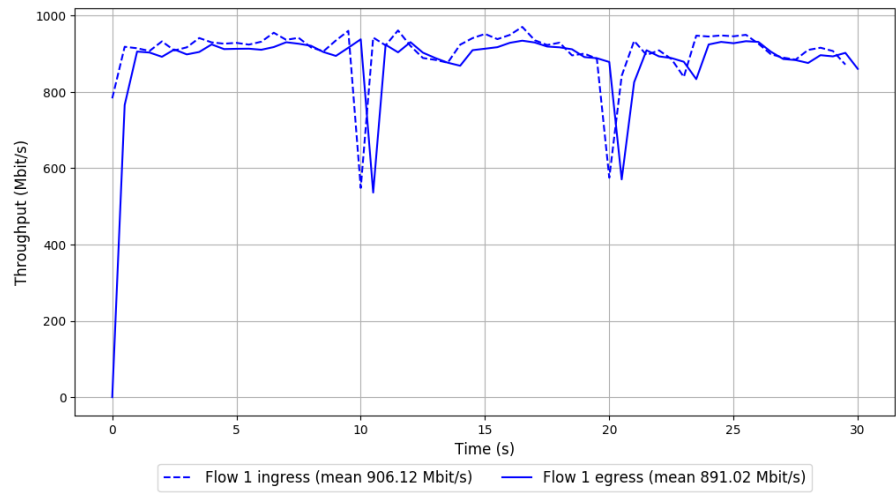
-- Flow 1:

Average throughput: 891.02 Mbit/s

95th percentile per-packet one-way delay: 6.152 ms

Loss rate: 1.67%

Run 4: Report of FillP-Sheep — Data Link



Run 5: Statistics of FillP-Sheep

Start at: 2019-01-02 21:30:26

End at: 2019-01-02 21:30:57

Local clock offset: -3.008 ms

Remote clock offset: 3.502 ms

Below is generated by plot.py at 2019-01-02 22:12:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 890.50 Mbit/s

95th percentile per-packet one-way delay: 6.294 ms

Loss rate: 2.09%

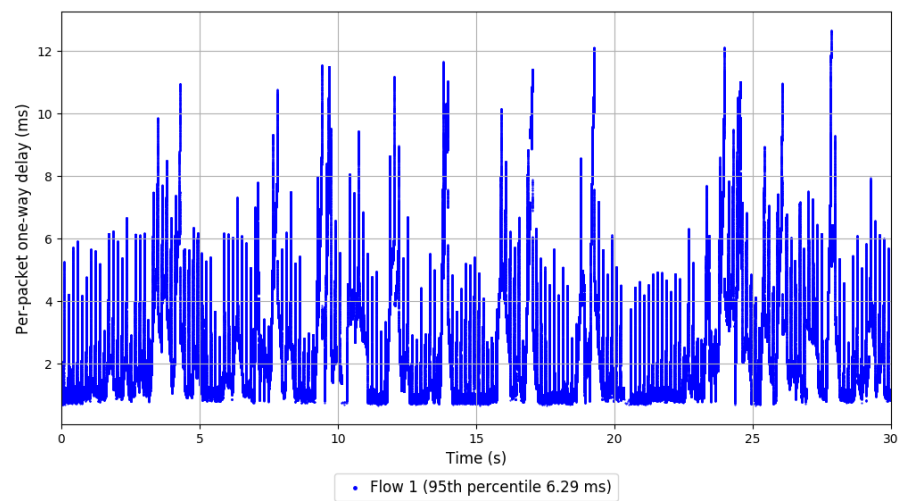
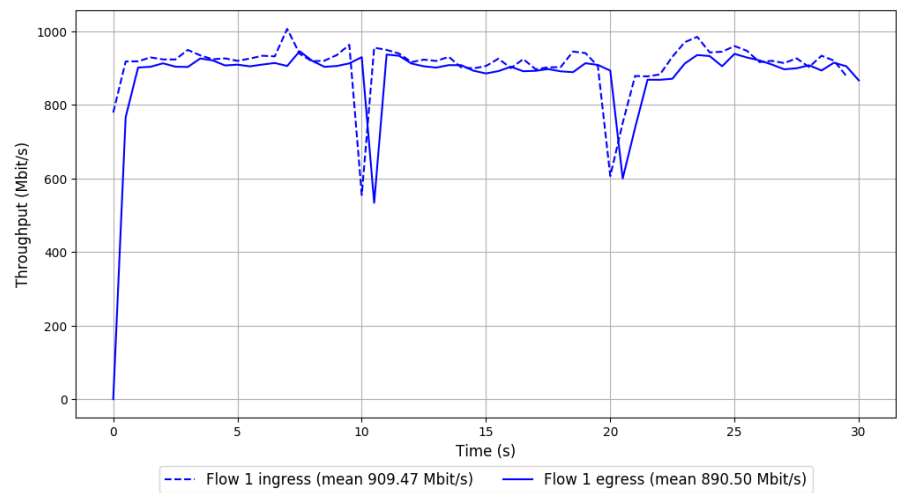
-- Flow 1:

Average throughput: 890.50 Mbit/s

95th percentile per-packet one-way delay: 6.294 ms

Loss rate: 2.09%

Run 5: Report of FillP-Sheep — Data Link



Run 1: Statistics of Indigo

Start at: 2019-01-02 19:37:04

End at: 2019-01-02 19:37:34

Local clock offset: 0.448 ms

Remote clock offset: -2.566 ms

Below is generated by plot.py at 2019-01-02 22:12:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 222.31 Mbit/s

95th percentile per-packet one-way delay: 0.772 ms

Loss rate: 0.00%

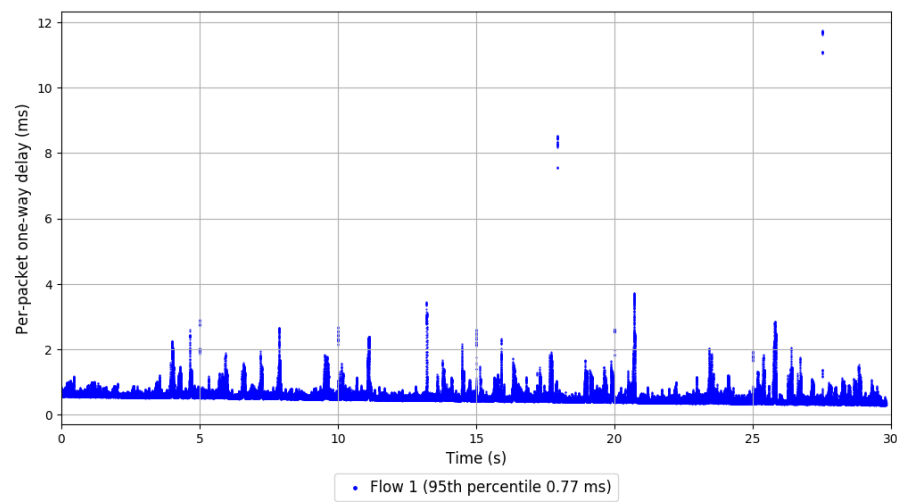
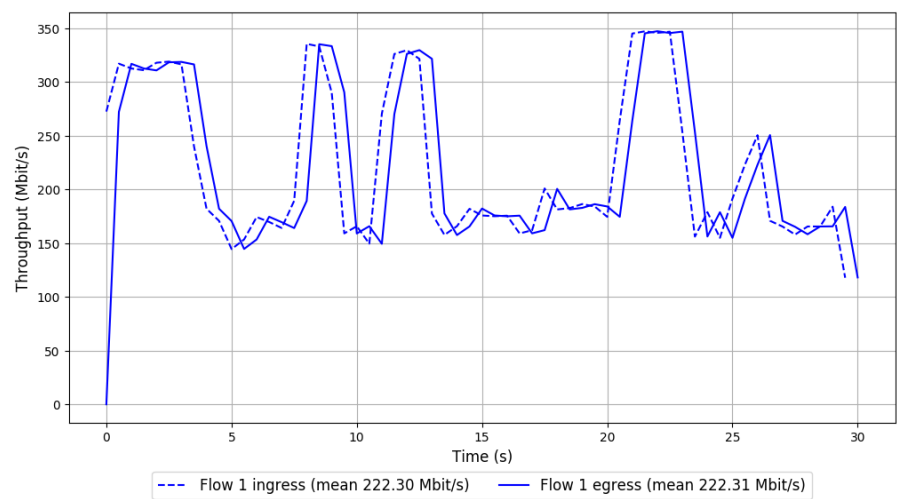
-- Flow 1:

Average throughput: 222.31 Mbit/s

95th percentile per-packet one-way delay: 0.772 ms

Loss rate: 0.00%

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2019-01-02 20:03:33

End at: 2019-01-02 20:04:03

Local clock offset: 0.933 ms

Remote clock offset: 1.883 ms

Below is generated by plot.py at 2019-01-02 22:12:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 263.41 Mbit/s

95th percentile per-packet one-way delay: 1.114 ms

Loss rate: 0.00%

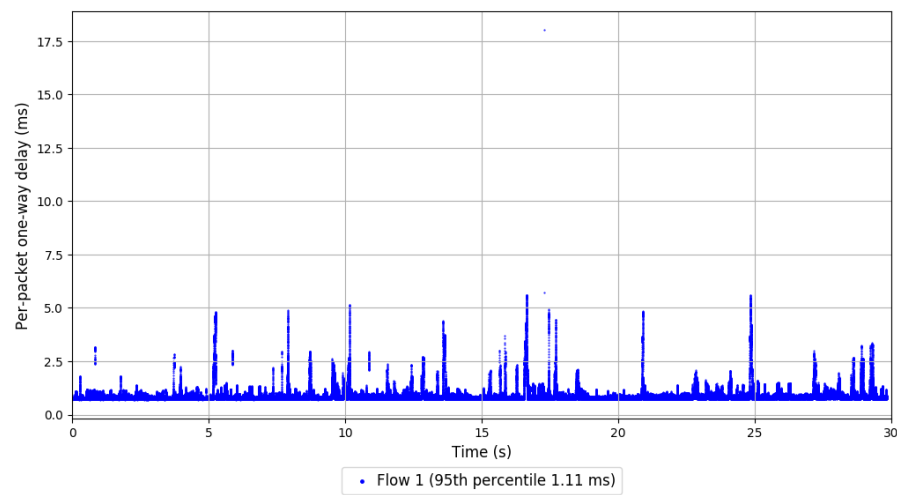
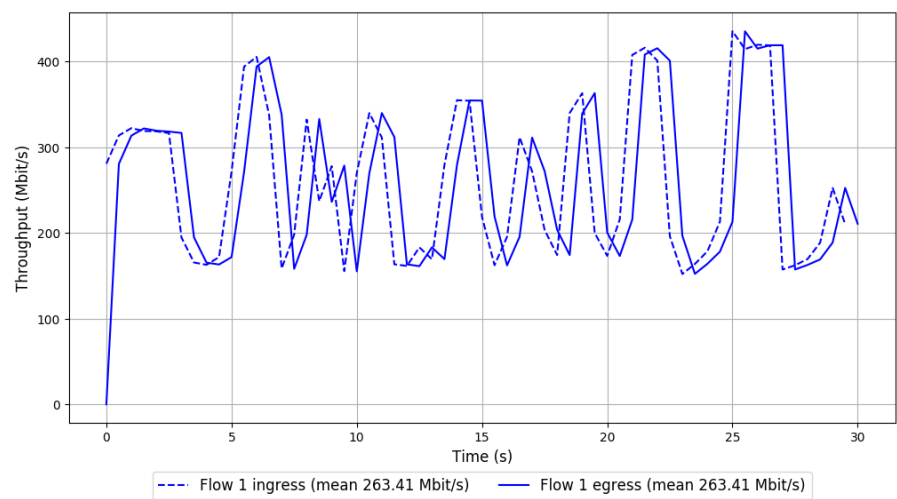
-- Flow 1:

Average throughput: 263.41 Mbit/s

95th percentile per-packet one-way delay: 1.114 ms

Loss rate: 0.00%

Run 2: Report of Indigo — Data Link

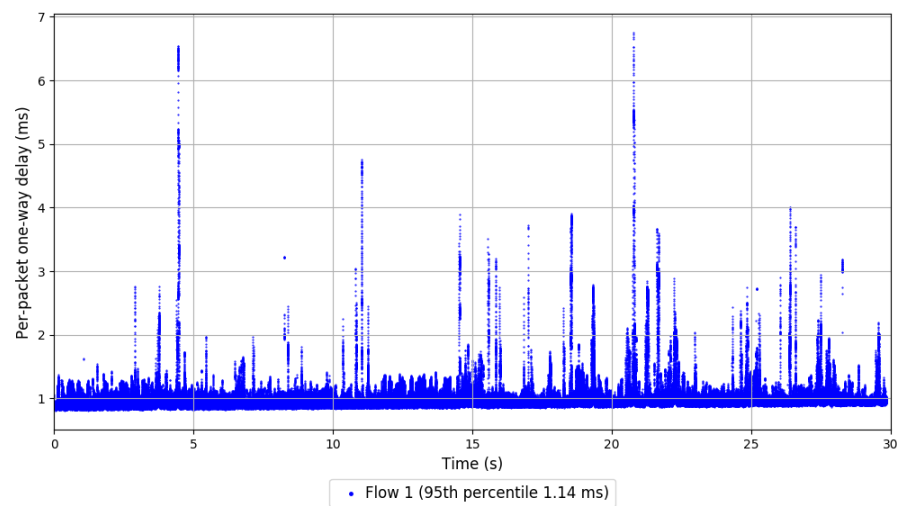
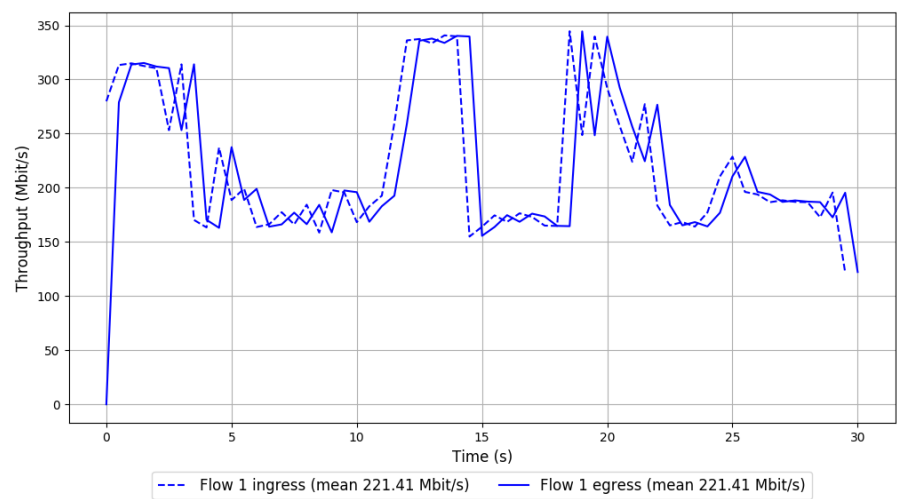


Run 3: Statistics of Indigo

Start at: 2019-01-02 20:30:13
End at: 2019-01-02 20:30:43
Local clock offset: 3.468 ms
Remote clock offset: -3.169 ms

Below is generated by plot.py at 2019-01-02 22:12:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 221.41 Mbit/s
95th percentile per-packet one-way delay: 1.135 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 221.41 Mbit/s
95th percentile per-packet one-way delay: 1.135 ms
Loss rate: 0.00%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2019-01-02 20:56:46

End at: 2019-01-02 20:57:16

Local clock offset: 3.771 ms

Remote clock offset: 0.159 ms

Below is generated by plot.py at 2019-01-02 22:12:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 224.12 Mbit/s

95th percentile per-packet one-way delay: 0.474 ms

Loss rate: 0.00%

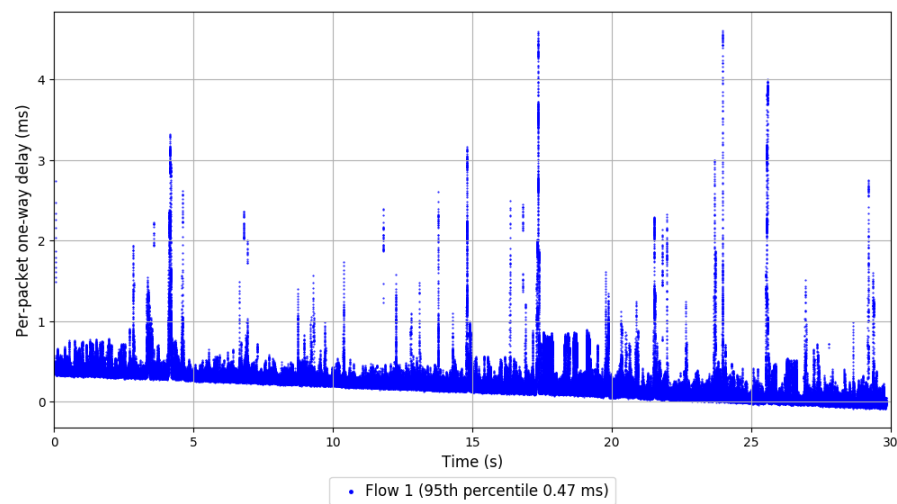
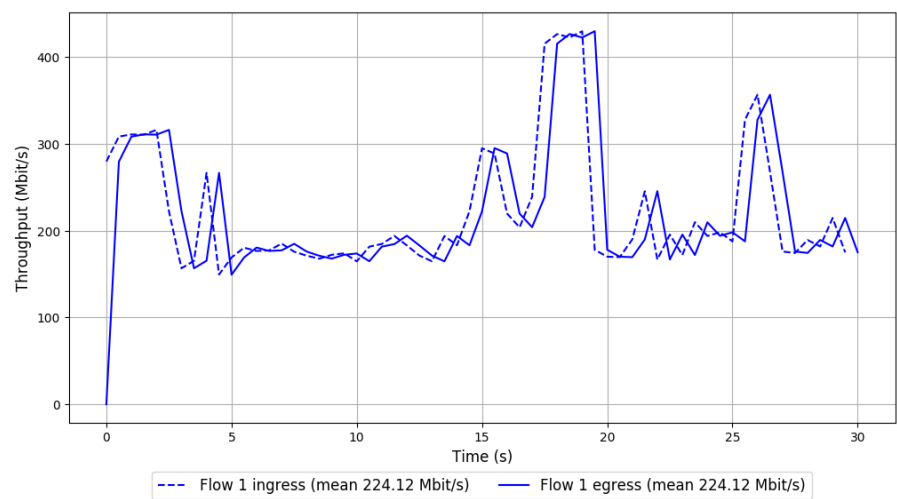
-- Flow 1:

Average throughput: 224.12 Mbit/s

95th percentile per-packet one-way delay: 0.474 ms

Loss rate: 0.00%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2019-01-02 21:23:23

End at: 2019-01-02 21:23:53

Local clock offset: -3.27 ms

Remote clock offset: 2.783 ms

Below is generated by plot.py at 2019-01-02 22:12:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 228.91 Mbit/s

95th percentile per-packet one-way delay: 1.018 ms

Loss rate: 0.00%

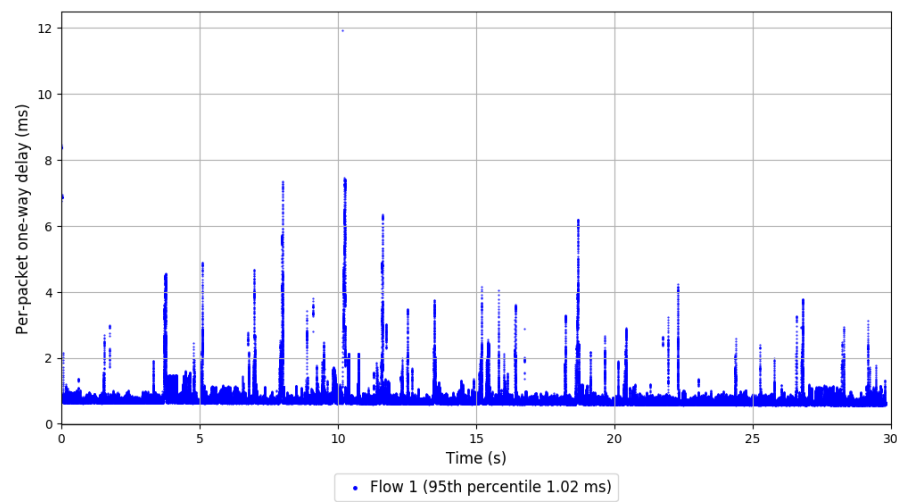
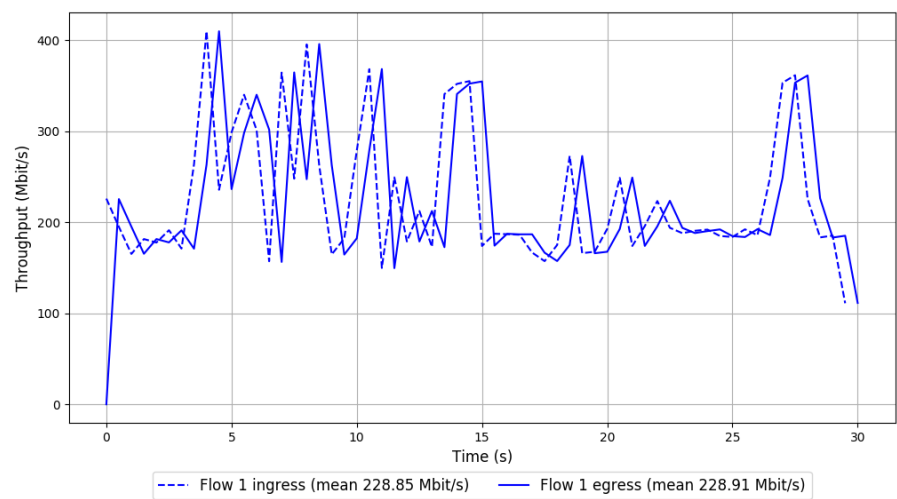
-- Flow 1:

Average throughput: 228.91 Mbit/s

95th percentile per-packet one-way delay: 1.018 ms

Loss rate: 0.00%

Run 5: Report of Indigo — Data Link

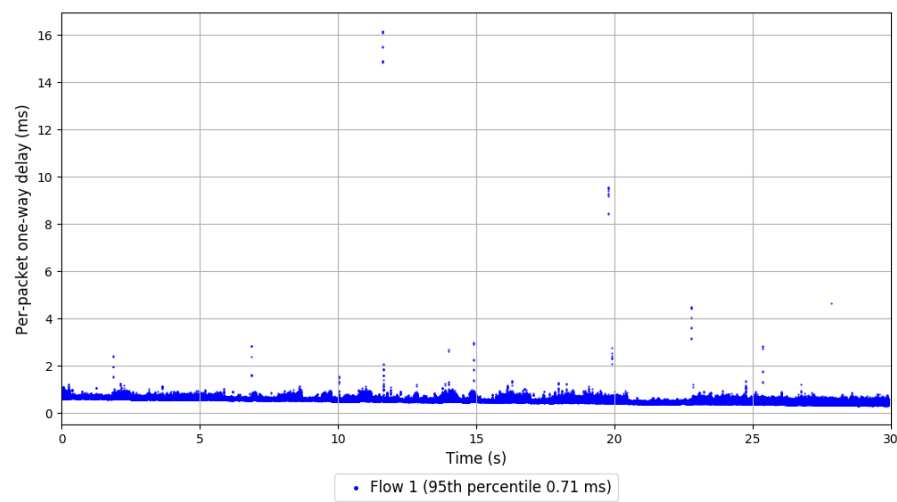
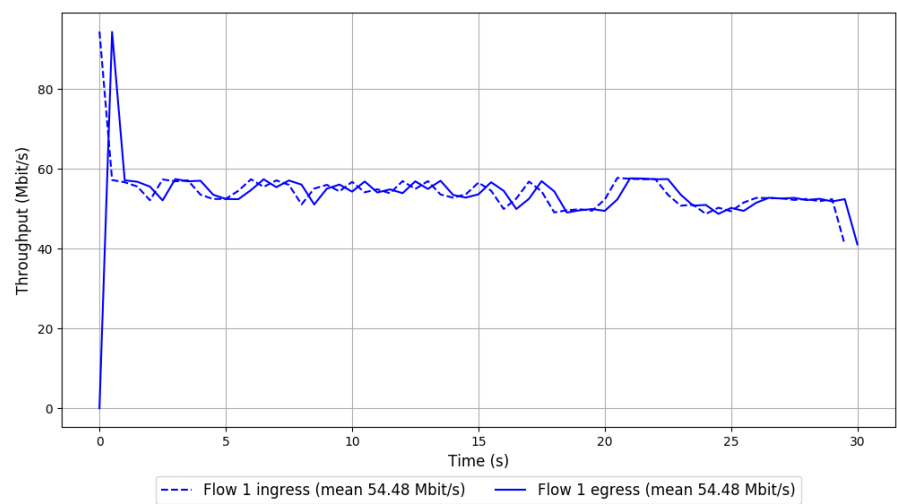


```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-01-02 19:35:50
End at: 2019-01-02 19:36:20
Local clock offset: 0.699 ms
Remote clock offset: -2.995 ms

# Below is generated by plot.py at 2019-01-02 22:12:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 54.48 Mbit/s
95th percentile per-packet one-way delay: 0.712 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 54.48 Mbit/s
95th percentile per-packet one-way delay: 0.712 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo-MusesD — Data Link



Run 2: Statistics of Indigo-MusesD

Start at: 2019-01-02 20:02:18

End at: 2019-01-02 20:02:48

Local clock offset: 0.772 ms

Remote clock offset: 1.878 ms

Below is generated by plot.py at 2019-01-02 22:12:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 50.82 Mbit/s

95th percentile per-packet one-way delay: 1.130 ms

Loss rate: 0.00%

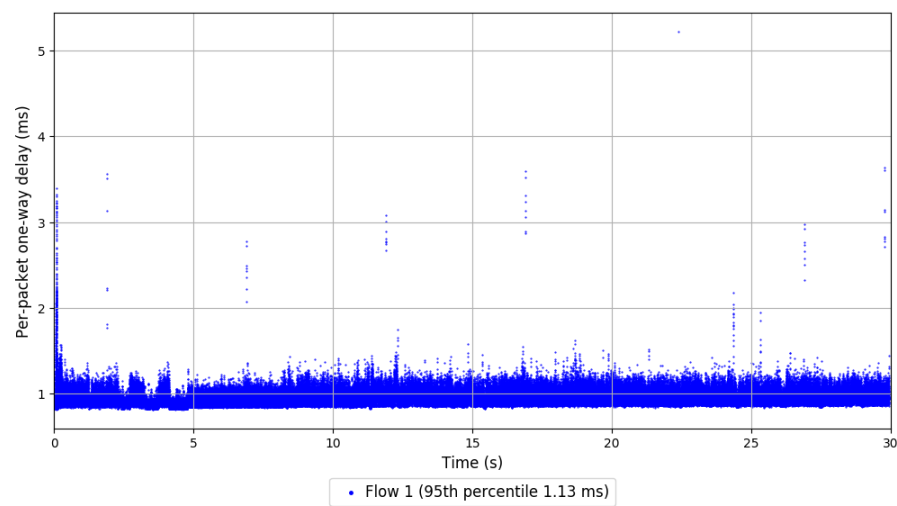
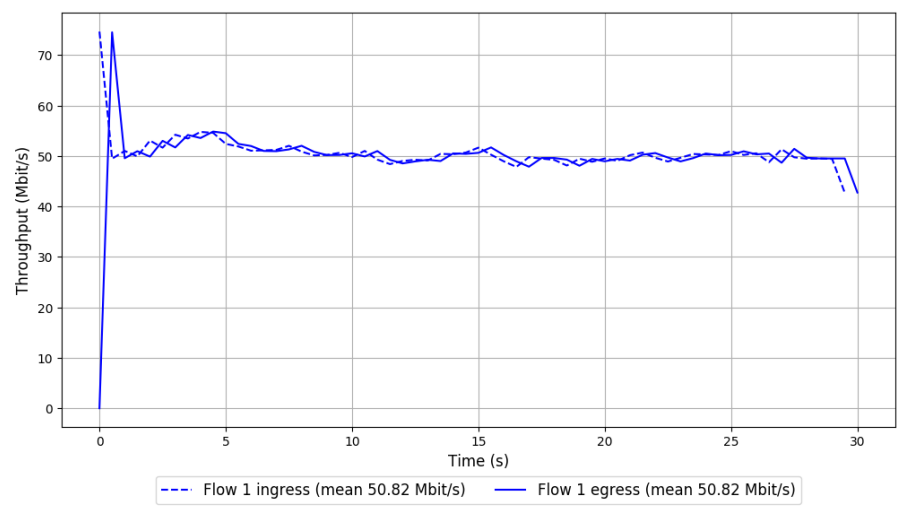
-- Flow 1:

Average throughput: 50.82 Mbit/s

95th percentile per-packet one-way delay: 1.130 ms

Loss rate: 0.00%

Run 2: Report of Indigo-MusesD — Data Link

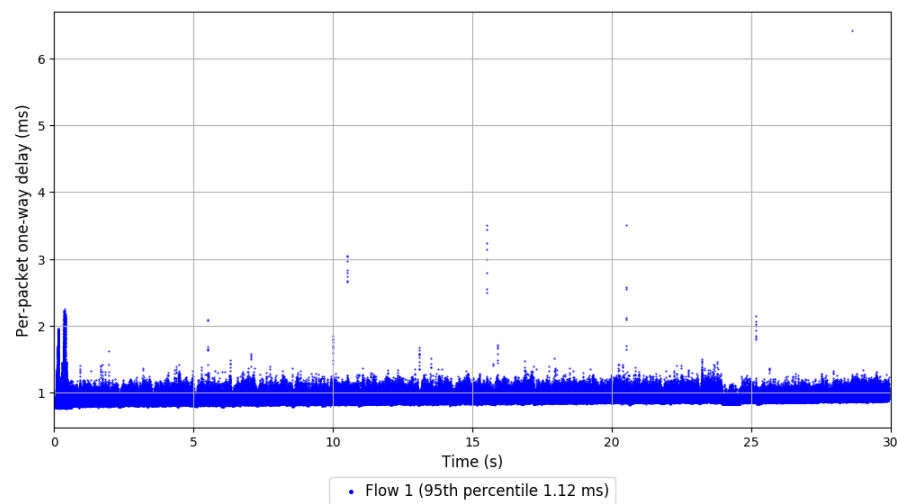
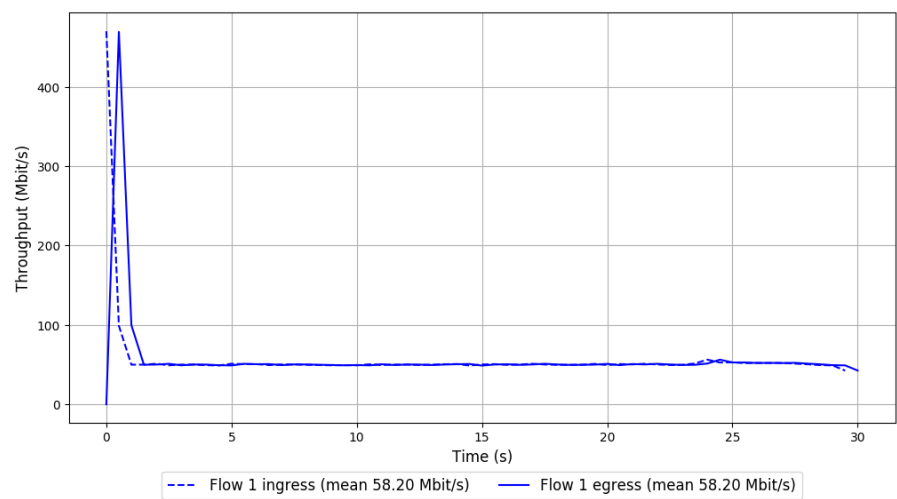


Run 3: Statistics of Indigo-MusesD

Start at: 2019-01-02 20:28:59
End at: 2019-01-02 20:29:29
Local clock offset: 3.371 ms
Remote clock offset: -3.136 ms

Below is generated by plot.py at 2019-01-02 22:12:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 58.20 Mbit/s
95th percentile per-packet one-way delay: 1.125 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 58.20 Mbit/s
95th percentile per-packet one-way delay: 1.125 ms
Loss rate: 0.00%

Run 3: Report of Indigo-MusesD — Data Link



Run 4: Statistics of Indigo-MusesD

Start at: 2019-01-02 20:55:32

End at: 2019-01-02 20:56:02

Local clock offset: 4.997 ms

Remote clock offset: -0.044 ms

Below is generated by plot.py at 2019-01-02 22:12:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 50.68 Mbit/s

95th percentile per-packet one-way delay: 0.196 ms

Loss rate: 0.00%

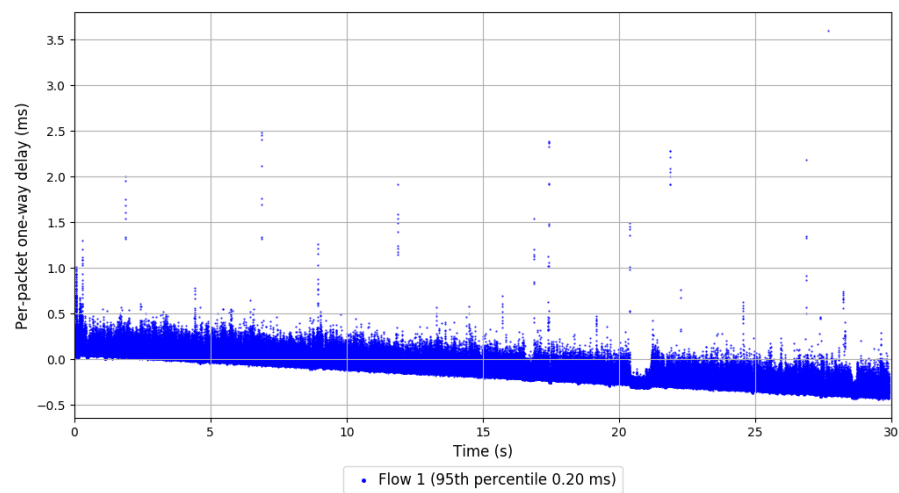
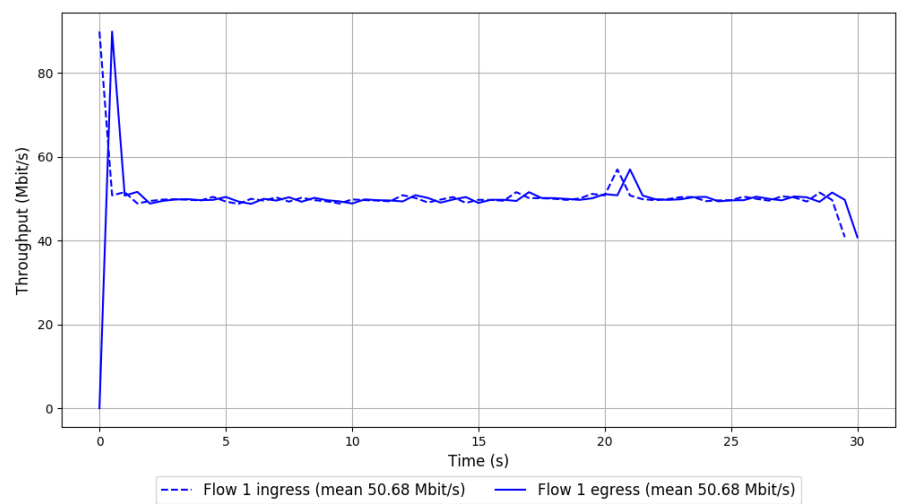
-- Flow 1:

Average throughput: 50.68 Mbit/s

95th percentile per-packet one-way delay: 0.196 ms

Loss rate: 0.00%

Run 4: Report of Indigo-MusesD — Data Link



Run 5: Statistics of Indigo-MusesD

Start at: 2019-01-02 21:22:08

End at: 2019-01-02 21:22:38

Local clock offset: -3.186 ms

Remote clock offset: 2.715 ms

Below is generated by plot.py at 2019-01-02 22:12:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 50.69 Mbit/s

95th percentile per-packet one-way delay: 0.984 ms

Loss rate: 0.00%

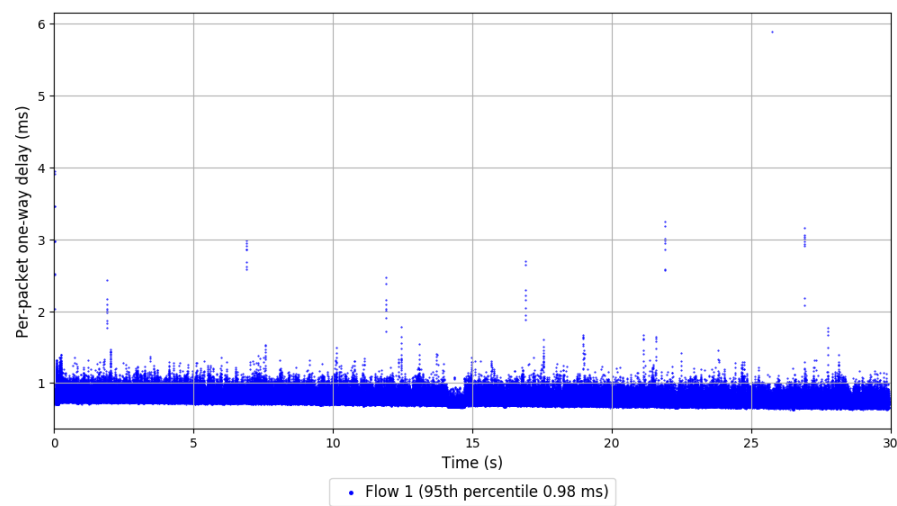
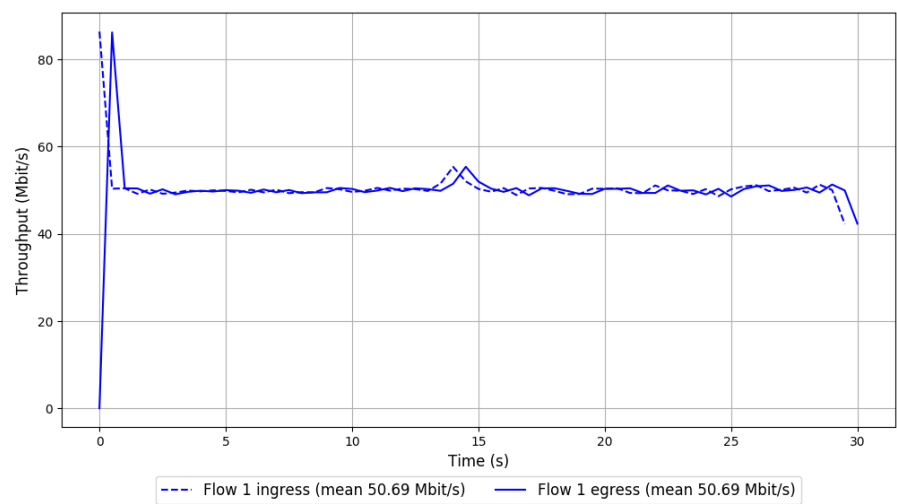
-- Flow 1:

Average throughput: 50.69 Mbit/s

95th percentile per-packet one-way delay: 0.984 ms

Loss rate: 0.00%

Run 5: Report of Indigo-MusesD — Data Link



Run 1: Statistics of Indigo-MusesT

Start at: 2019-01-02 19:47:14

End at: 2019-01-02 19:47:44

Local clock offset: -0.197 ms

Remote clock offset: 0.154 ms

Below is generated by plot.py at 2019-01-02 22:12:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 683.57 Mbit/s

95th percentile per-packet one-way delay: 8.128 ms

Loss rate: 0.04%

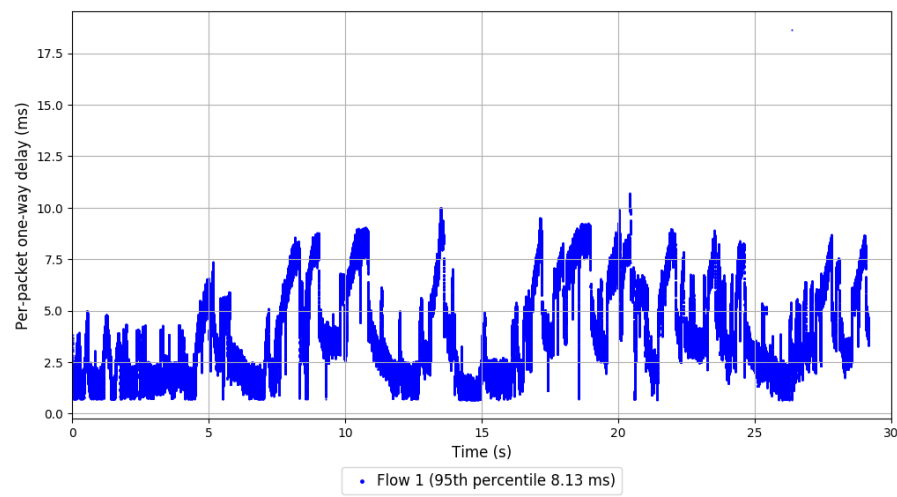
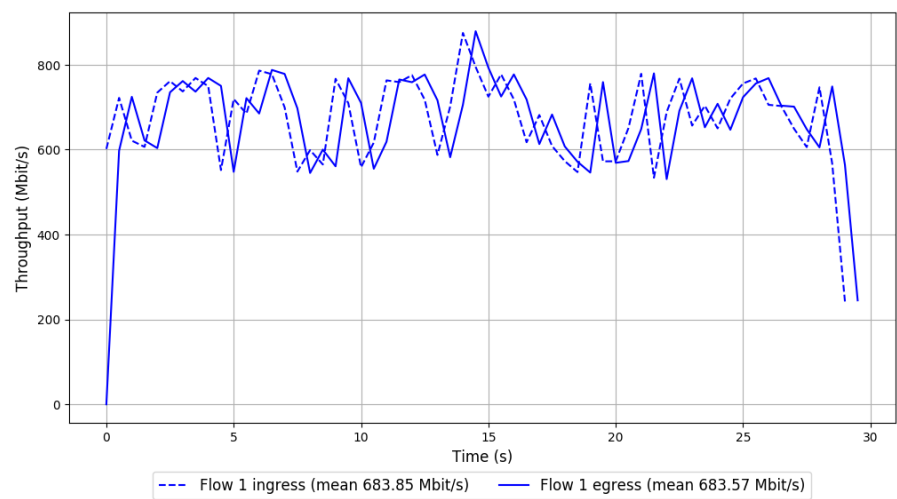
-- Flow 1:

Average throughput: 683.57 Mbit/s

95th percentile per-packet one-way delay: 8.128 ms

Loss rate: 0.04%

Run 1: Report of Indigo-MusesT — Data Link

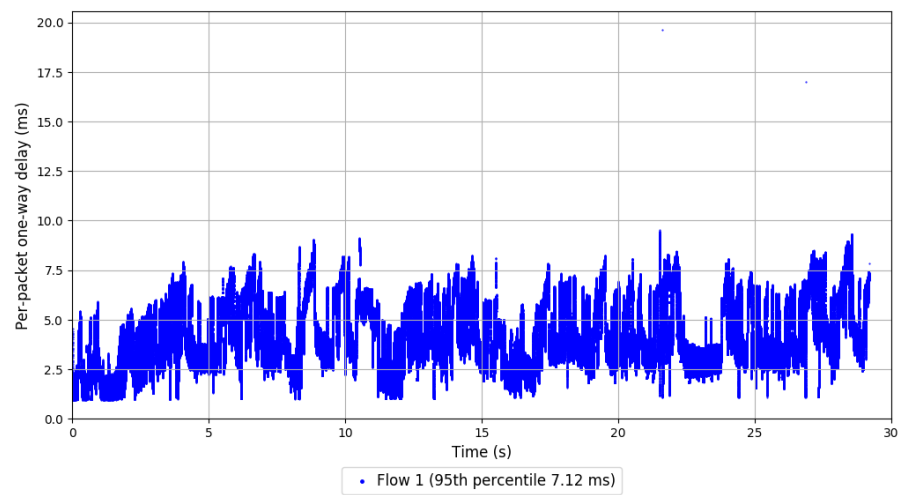
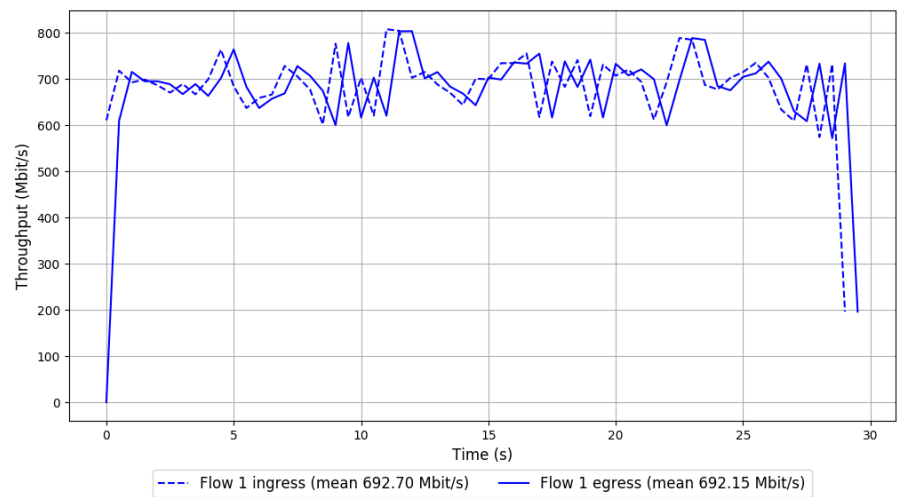


Run 2: Statistics of Indigo-MusesT

Start at: 2019-01-02 20:13:41
End at: 2019-01-02 20:14:11
Local clock offset: 1.995 ms
Remote clock offset: -1.123 ms

Below is generated by plot.py at 2019-01-02 22:12:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 692.15 Mbit/s
95th percentile per-packet one-way delay: 7.123 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 692.15 Mbit/s
95th percentile per-packet one-way delay: 7.123 ms
Loss rate: 0.08%

Run 2: Report of Indigo-MusesT — Data Link

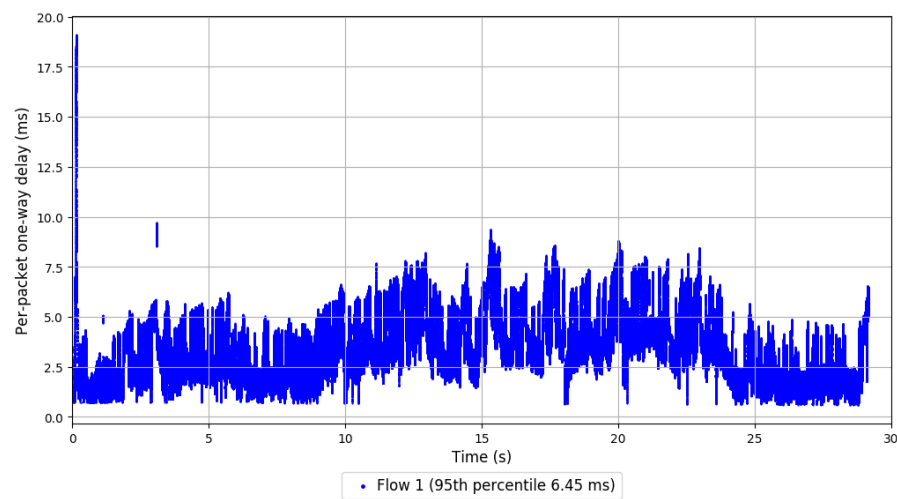
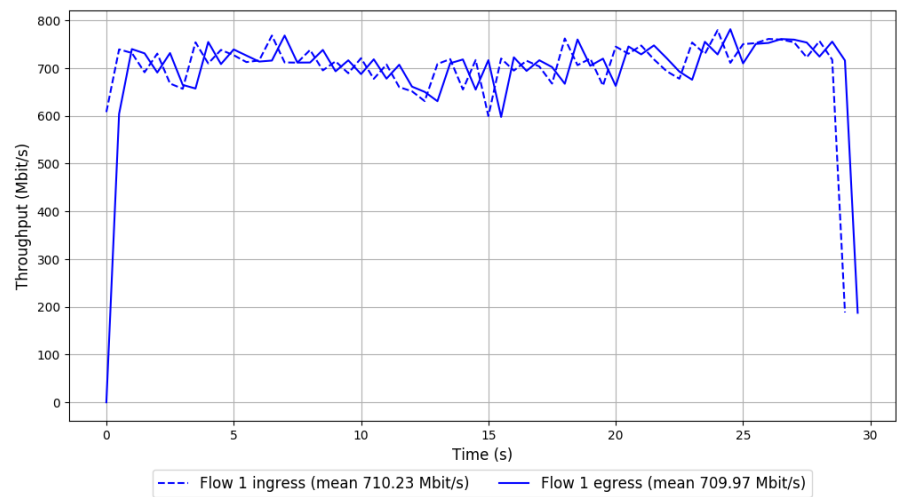


Run 3: Statistics of Indigo-MusesT

Start at: 2019-01-02 20:40:19
End at: 2019-01-02 20:40:49
Local clock offset: 4.438 ms
Remote clock offset: -3.219 ms

Below is generated by plot.py at 2019-01-02 22:13:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 709.97 Mbit/s
95th percentile per-packet one-way delay: 6.447 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 709.97 Mbit/s
95th percentile per-packet one-way delay: 6.447 ms
Loss rate: 0.04%

Run 3: Report of Indigo-MusesT — Data Link



Run 4: Statistics of Indigo-MusesT

Start at: 2019-01-02 21:07:04

End at: 2019-01-02 21:07:34

Local clock offset: -1.102 ms

Remote clock offset: 0.96 ms

Below is generated by plot.py at 2019-01-02 22:13:00

Datalink statistics

-- Total of 1 flow:

Average throughput: 293.29 Mbit/s

95th percentile per-packet one-way delay: 2.949 ms

Loss rate: 0.02%

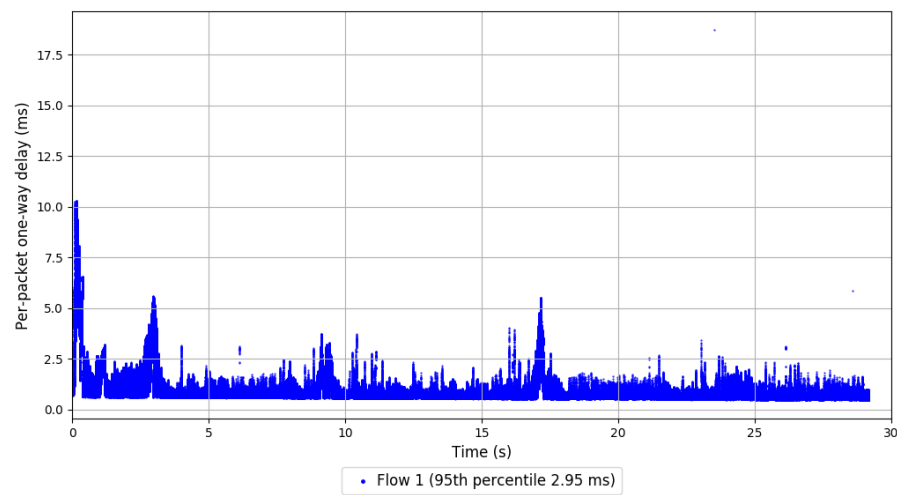
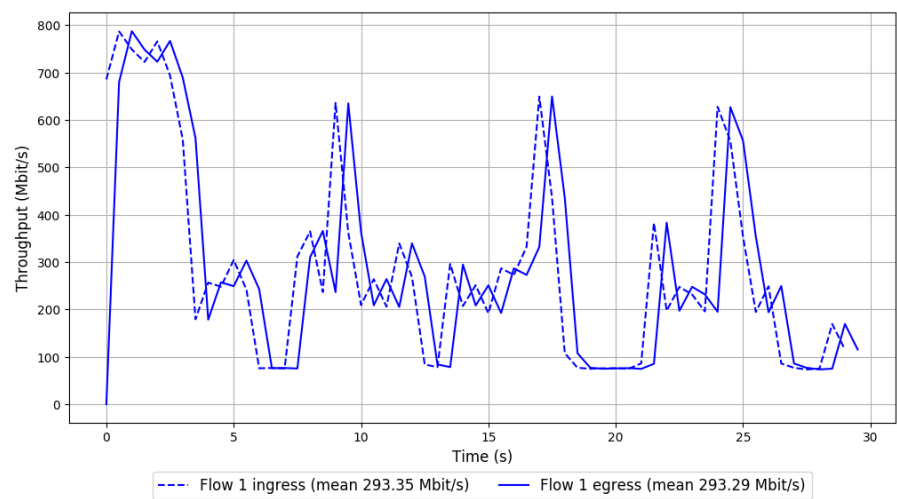
-- Flow 1:

Average throughput: 293.29 Mbit/s

95th percentile per-packet one-way delay: 2.949 ms

Loss rate: 0.02%

Run 4: Report of Indigo-MusesT — Data Link



Run 5: Statistics of Indigo-MusesT

Start at: 2019-01-02 21:33:24

End at: 2019-01-02 21:33:54

Local clock offset: -2.937 ms

Remote clock offset: 3.757 ms

Below is generated by plot.py at 2019-01-02 22:15:45

Datalink statistics

-- Total of 1 flow:

Average throughput: 699.61 Mbit/s

95th percentile per-packet one-way delay: 6.094 ms

Loss rate: 0.02%

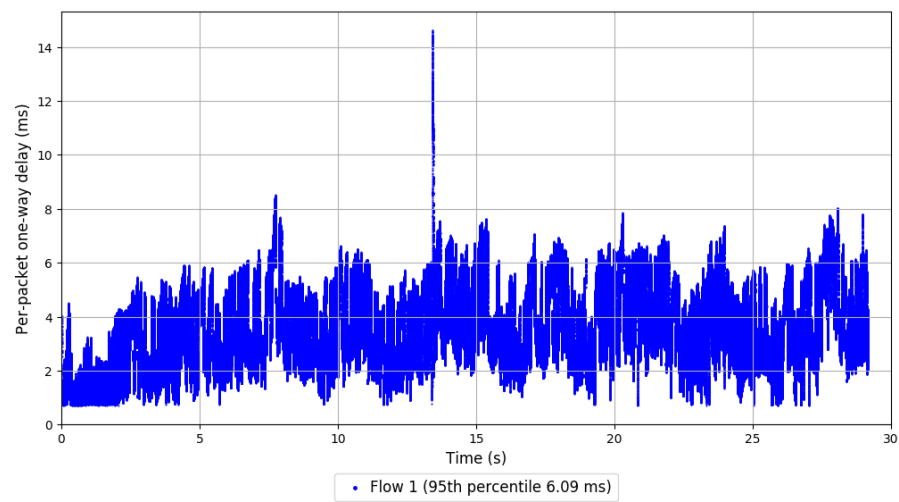
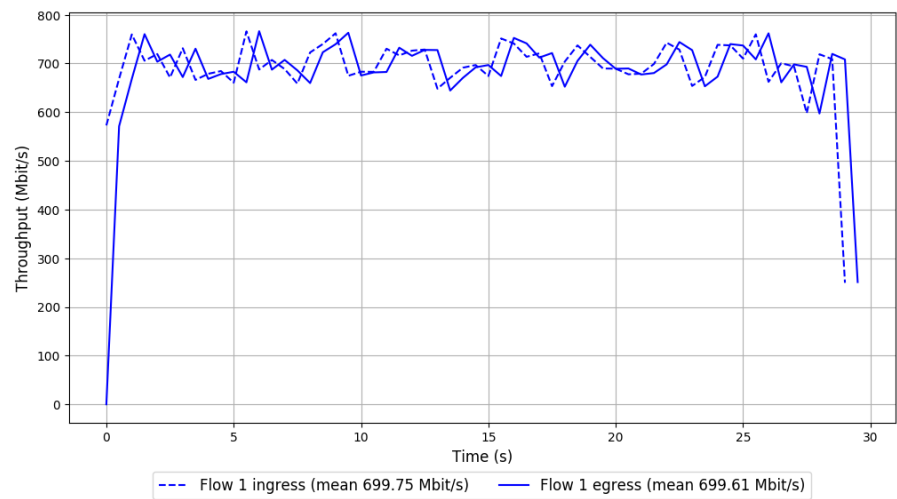
-- Flow 1:

Average throughput: 699.61 Mbit/s

95th percentile per-packet one-way delay: 6.094 ms

Loss rate: 0.02%

Run 5: Report of Indigo-MusesT — Data Link

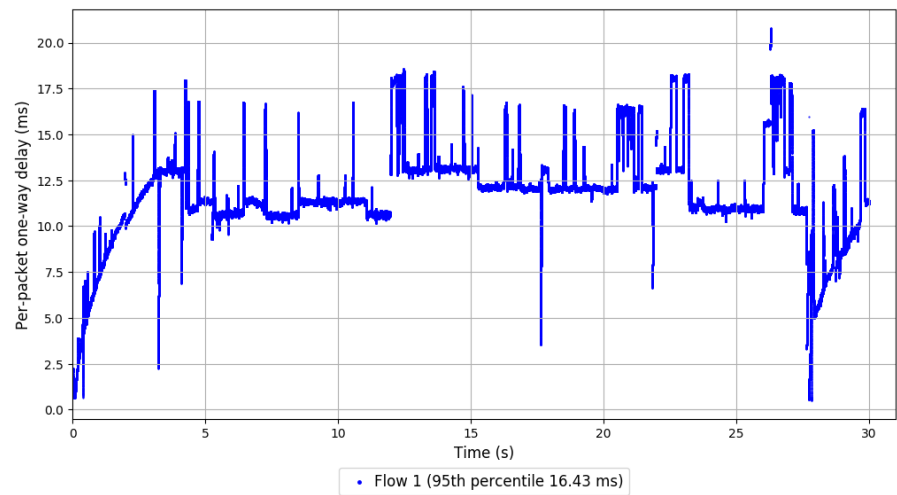
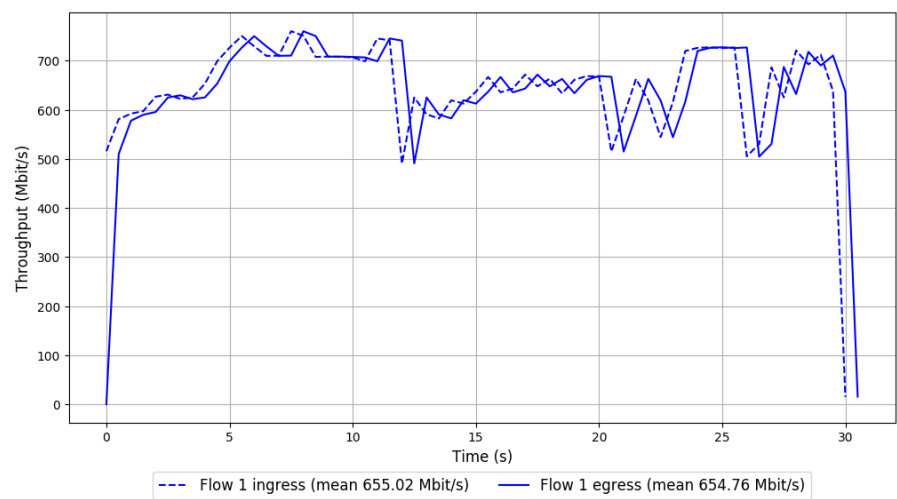


```
Run 1: Statistics of LEDBAT

Start at: 2019-01-02 19:38:27
End at: 2019-01-02 19:38:57
Local clock offset: 0.254 ms
Remote clock offset: -1.986 ms

# Below is generated by plot.py at 2019-01-02 22:15:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 654.76 Mbit/s
95th percentile per-packet one-way delay: 16.435 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 654.76 Mbit/s
95th percentile per-packet one-way delay: 16.435 ms
Loss rate: 0.04%
```

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2019-01-02 20:04:56

End at: 2019-01-02 20:05:26

Local clock offset: 1.085 ms

Remote clock offset: 1.998 ms

Below is generated by plot.py at 2019-01-02 22:15:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 598.10 Mbit/s

95th percentile per-packet one-way delay: 16.839 ms

Loss rate: 0.03%

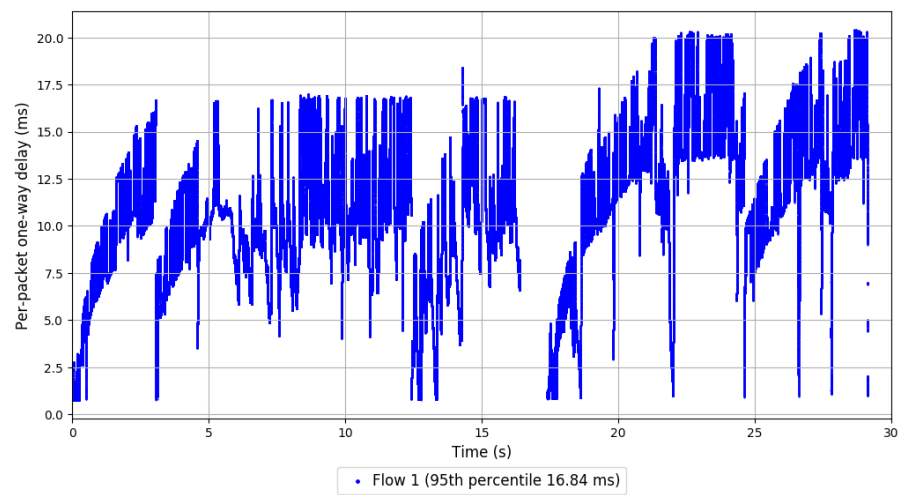
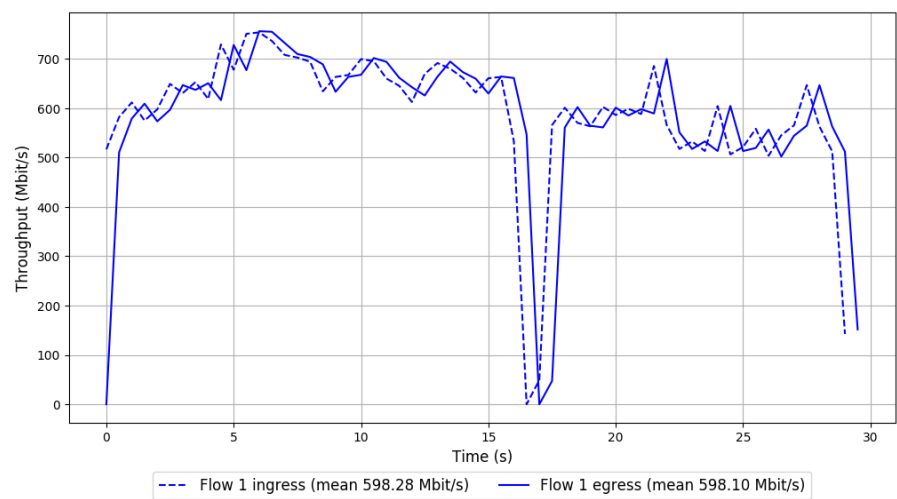
-- Flow 1:

Average throughput: 598.10 Mbit/s

95th percentile per-packet one-way delay: 16.839 ms

Loss rate: 0.03%

Run 2: Report of LEDBAT — Data Link

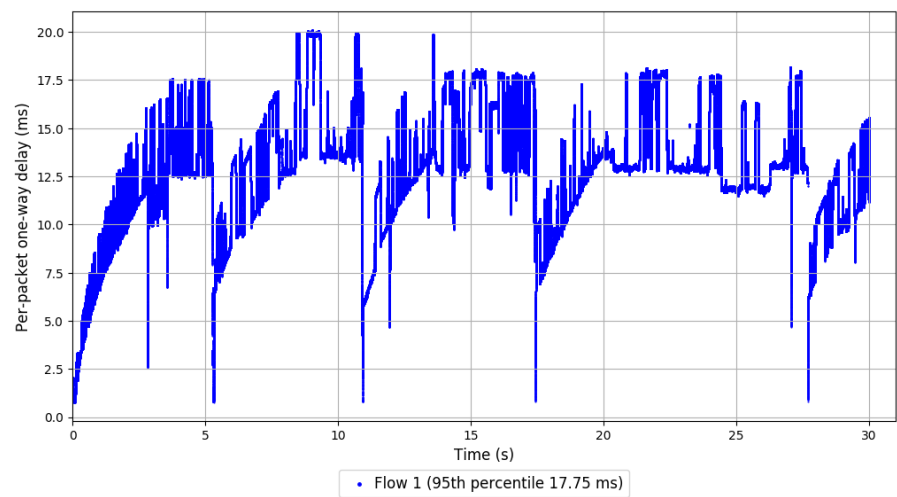
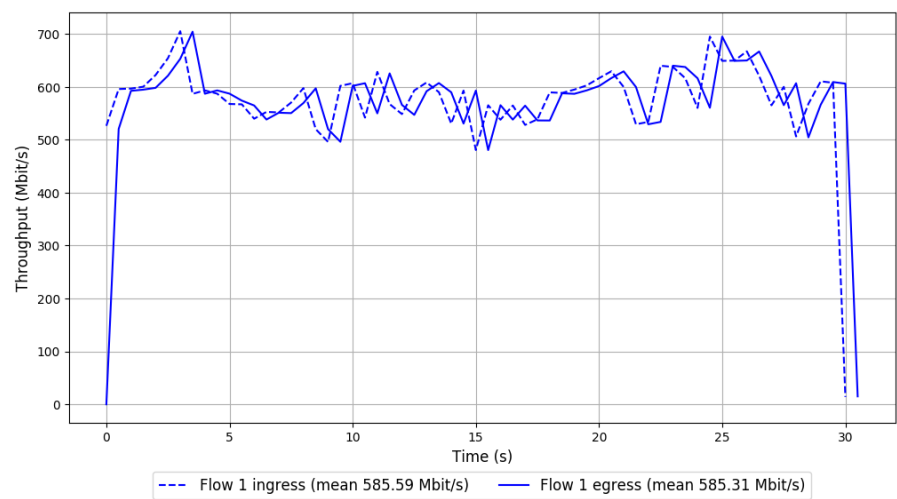


Run 3: Statistics of LEDBAT

Start at: 2019-01-02 20:31:35
End at: 2019-01-02 20:32:05
Local clock offset: 3.6 ms
Remote clock offset: -3.285 ms

Below is generated by plot.py at 2019-01-02 22:18:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 585.31 Mbit/s
95th percentile per-packet one-way delay: 17.753 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 585.31 Mbit/s
95th percentile per-packet one-way delay: 17.753 ms
Loss rate: 0.05%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2019-01-02 20:58:08

End at: 2019-01-02 20:58:39

Local clock offset: 2.797 ms

Remote clock offset: 0.254 ms

Below is generated by plot.py at 2019-01-02 22:19:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 590.88 Mbit/s

95th percentile per-packet one-way delay: 17.397 ms

Loss rate: 0.05%

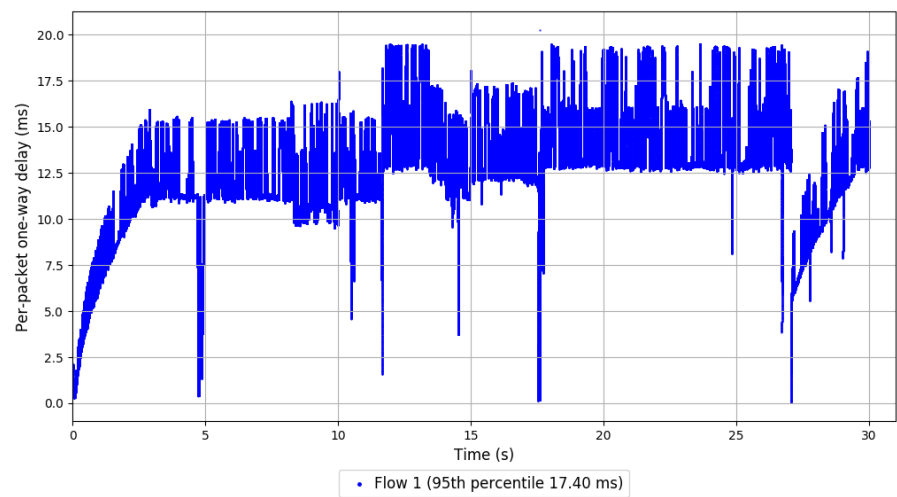
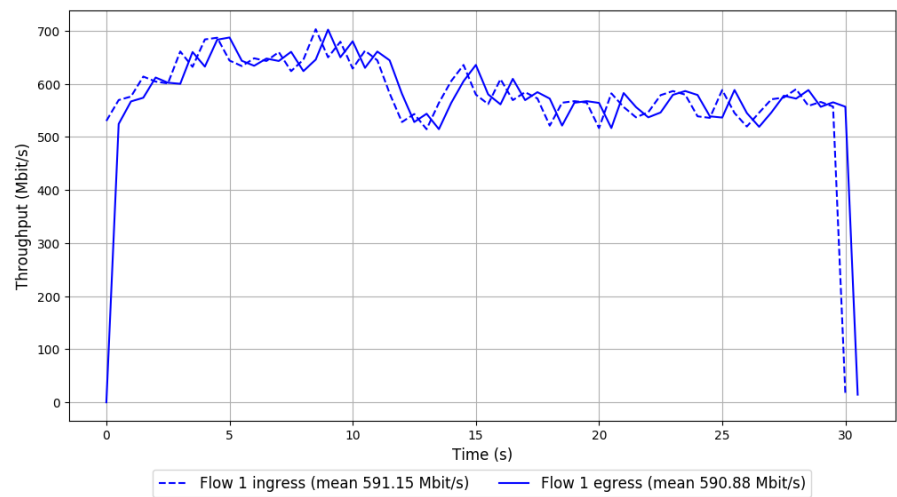
-- Flow 1:

Average throughput: 590.88 Mbit/s

95th percentile per-packet one-way delay: 17.397 ms

Loss rate: 0.05%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2019-01-02 21:24:45

End at: 2019-01-02 21:25:15

Local clock offset: -3.337 ms

Remote clock offset: 2.936 ms

Below is generated by plot.py at 2019-01-02 22:19:40

Datalink statistics

-- Total of 1 flow:

Average throughput: 624.96 Mbit/s

95th percentile per-packet one-way delay: 16.743 ms

Loss rate: 0.04%

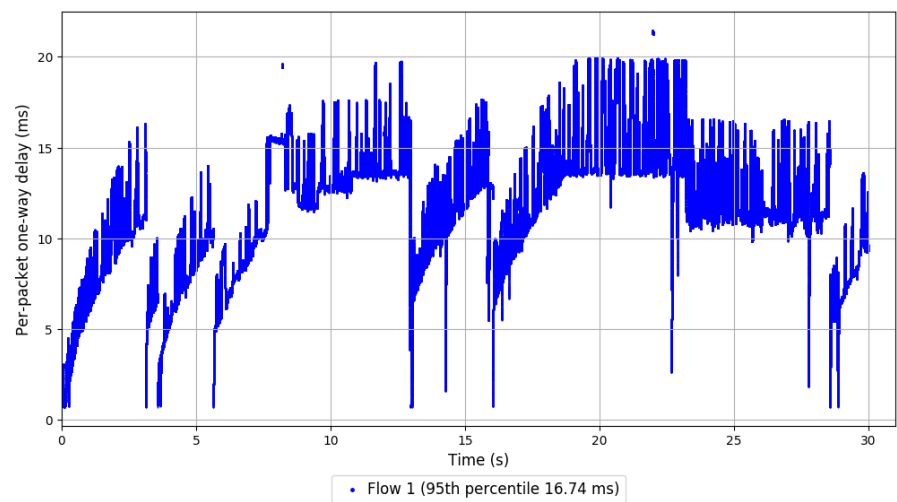
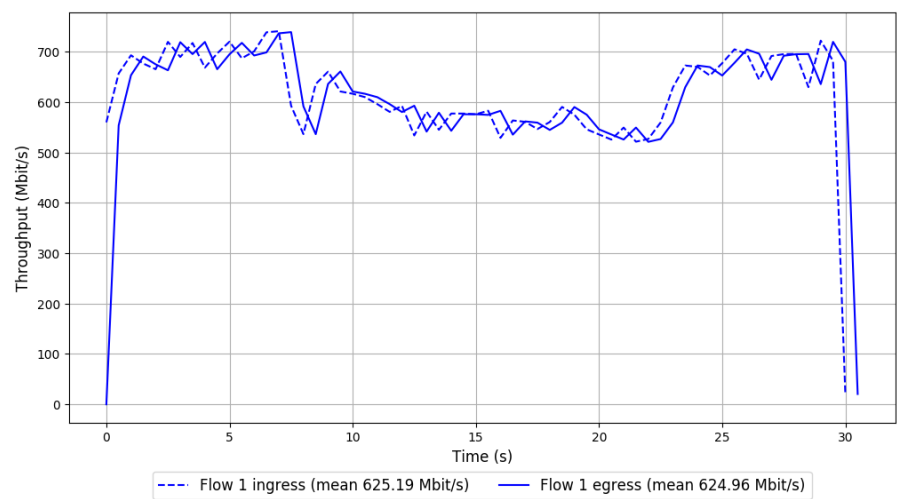
-- Flow 1:

Average throughput: 624.96 Mbit/s

95th percentile per-packet one-way delay: 16.743 ms

Loss rate: 0.04%

Run 5: Report of LEDBAT — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2019-01-02 19:23:28

End at: 2019-01-02 19:23:58

Local clock offset: 6.696 ms

Remote clock offset: -5.506 ms

Below is generated by plot.py at 2019-01-02 22:21:24

Datalink statistics

-- Total of 1 flow:

Average throughput: 739.39 Mbit/s

95th percentile per-packet one-way delay: 1.546 ms

Loss rate: 0.00%

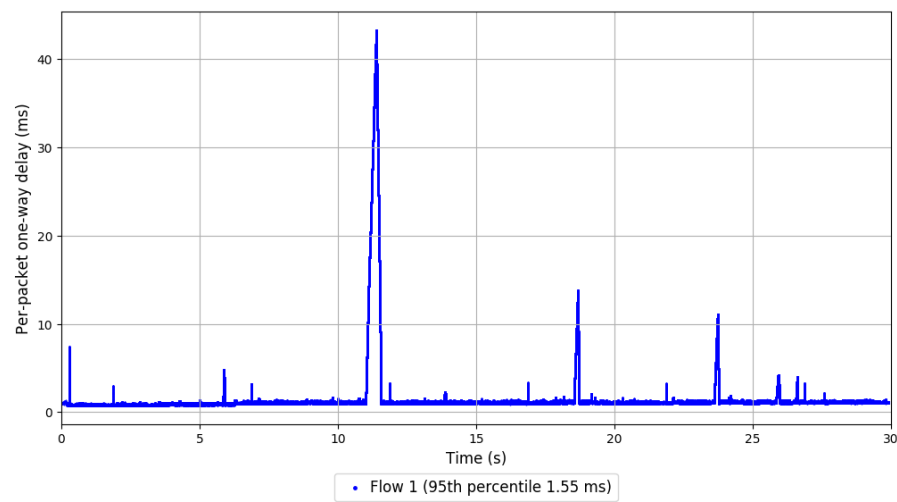
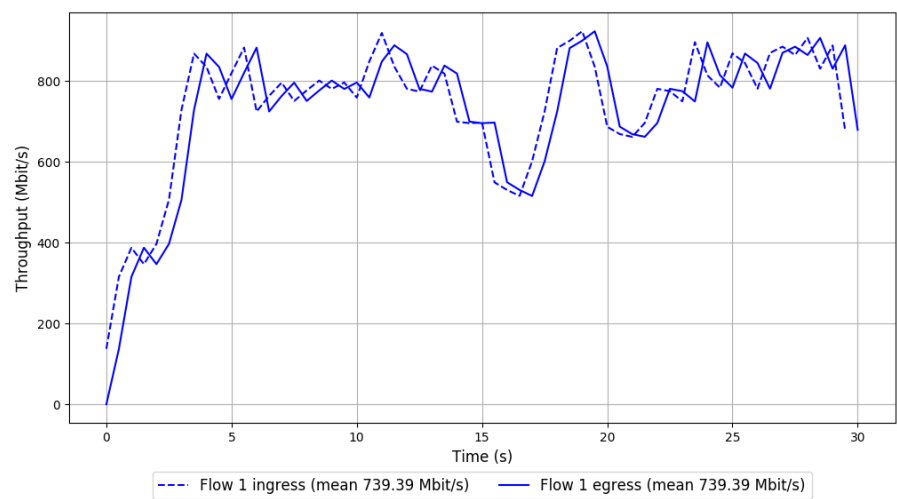
-- Flow 1:

Average throughput: 739.39 Mbit/s

95th percentile per-packet one-way delay: 1.546 ms

Loss rate: 0.00%

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2019-01-02 19:50:01

End at: 2019-01-02 19:50:31

Local clock offset: -0.157 ms

Remote clock offset: 0.533 ms

Below is generated by plot.py at 2019-01-02 22:21:24

Datalink statistics

-- Total of 1 flow:

Average throughput: 711.66 Mbit/s

95th percentile per-packet one-way delay: 2.814 ms

Loss rate: 0.01%

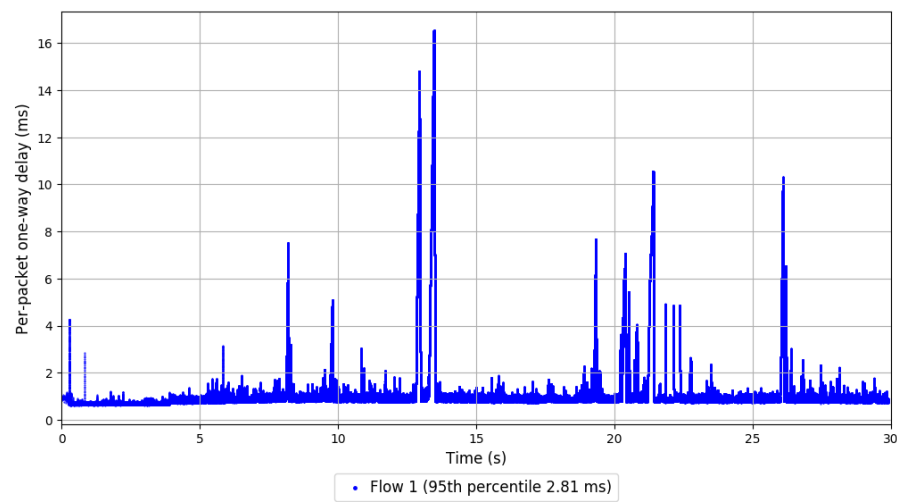
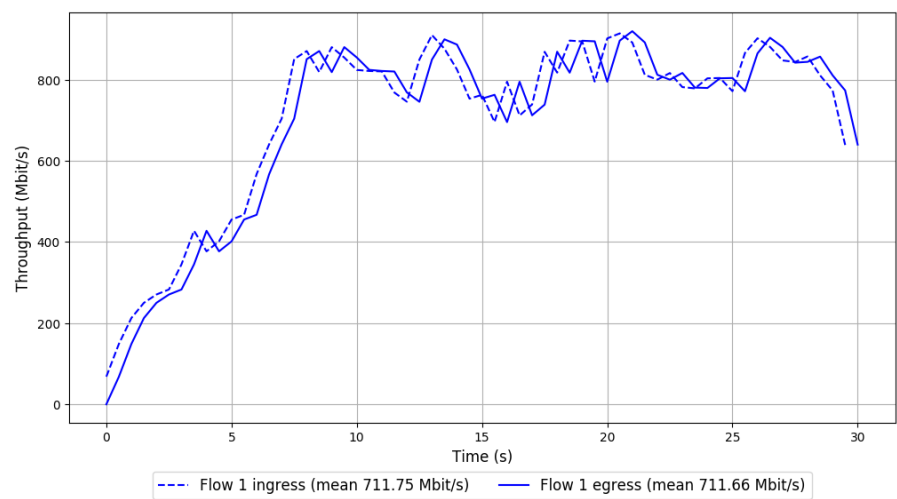
-- Flow 1:

Average throughput: 711.66 Mbit/s

95th percentile per-packet one-way delay: 2.814 ms

Loss rate: 0.01%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2019-01-02 20:16:28

End at: 2019-01-02 20:16:58

Local clock offset: 2.234 ms

Remote clock offset: -1.814 ms

Below is generated by plot.py at 2019-01-02 22:24:37

Datalink statistics

-- Total of 1 flow:

Average throughput: 777.28 Mbit/s

95th percentile per-packet one-way delay: 2.559 ms

Loss rate: 0.09%

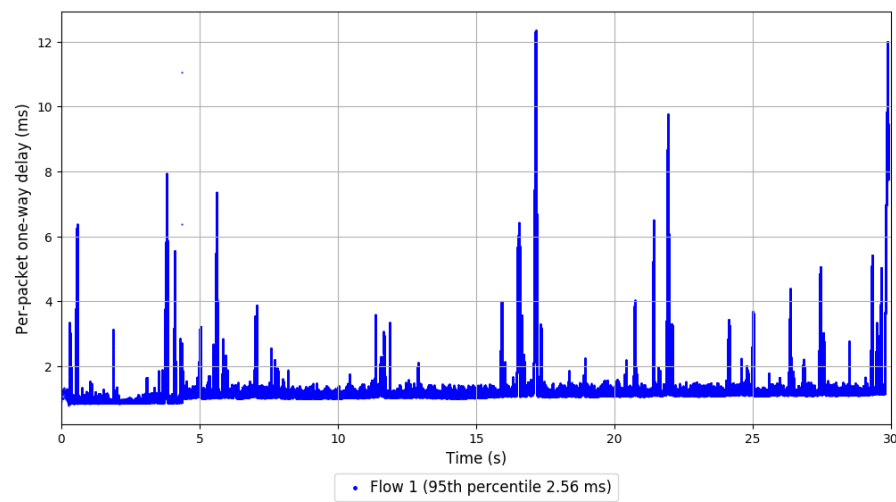
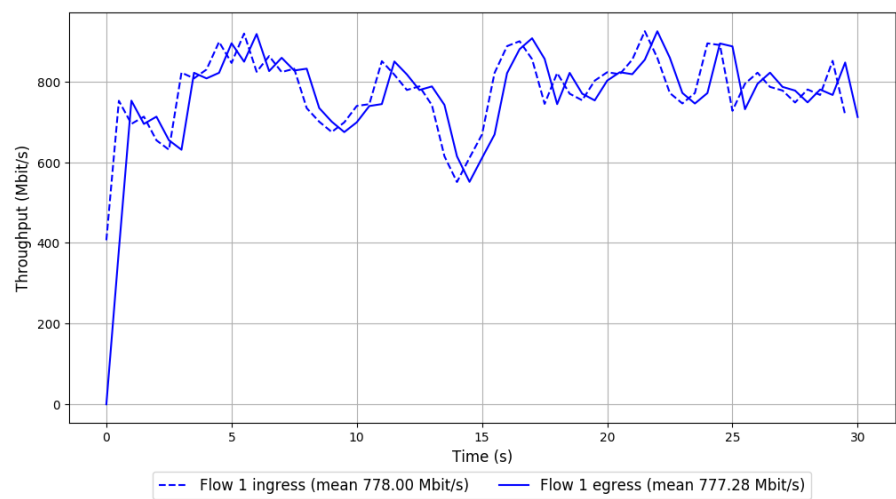
-- Flow 1:

Average throughput: 777.28 Mbit/s

95th percentile per-packet one-way delay: 2.559 ms

Loss rate: 0.09%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2019-01-02 20:43:07

End at: 2019-01-02 20:43:37

Local clock offset: 4.706 ms

Remote clock offset: -2.299 ms

Below is generated by plot.py at 2019-01-02 22:24:37

Datalink statistics

-- Total of 1 flow:

Average throughput: 649.65 Mbit/s

95th percentile per-packet one-way delay: 2.976 ms

Loss rate: 0.07%

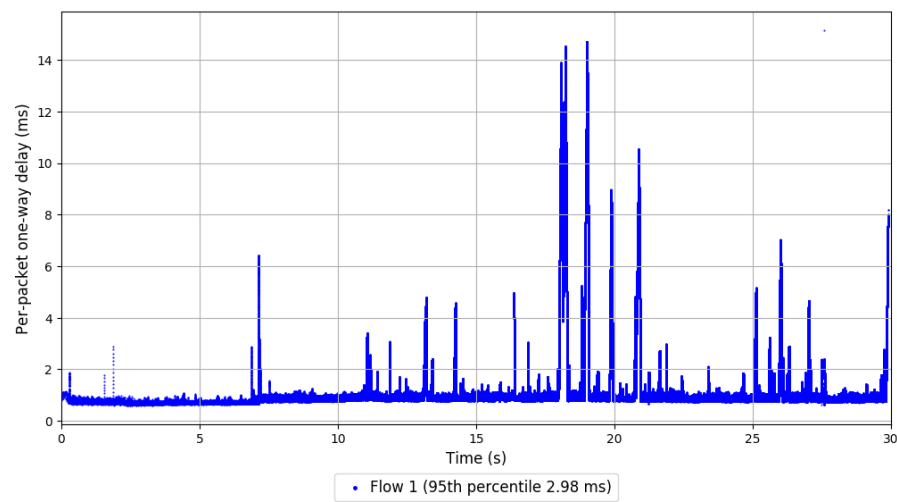
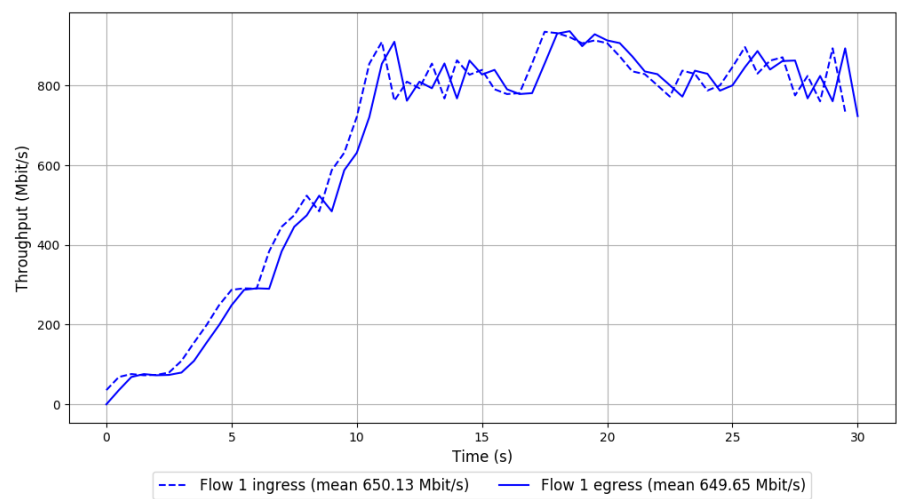
-- Flow 1:

Average throughput: 649.65 Mbit/s

95th percentile per-packet one-way delay: 2.976 ms

Loss rate: 0.07%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2019-01-02 21:09:39

End at: 2019-01-02 21:10:09

Local clock offset: -1.645 ms

Remote clock offset: 1.034 ms

Below is generated by plot.py at 2019-01-02 22:25:24

Datalink statistics

-- Total of 1 flow:

Average throughput: 776.15 Mbit/s

95th percentile per-packet one-way delay: 0.924 ms

Loss rate: 0.07%

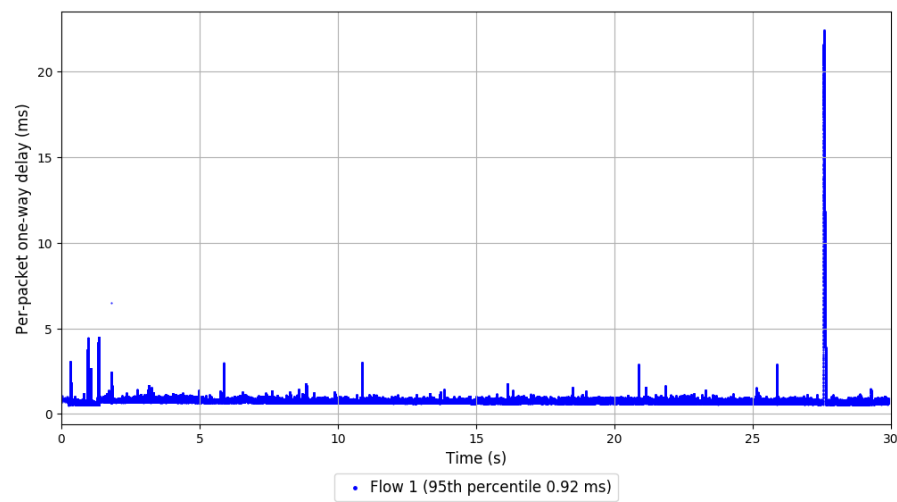
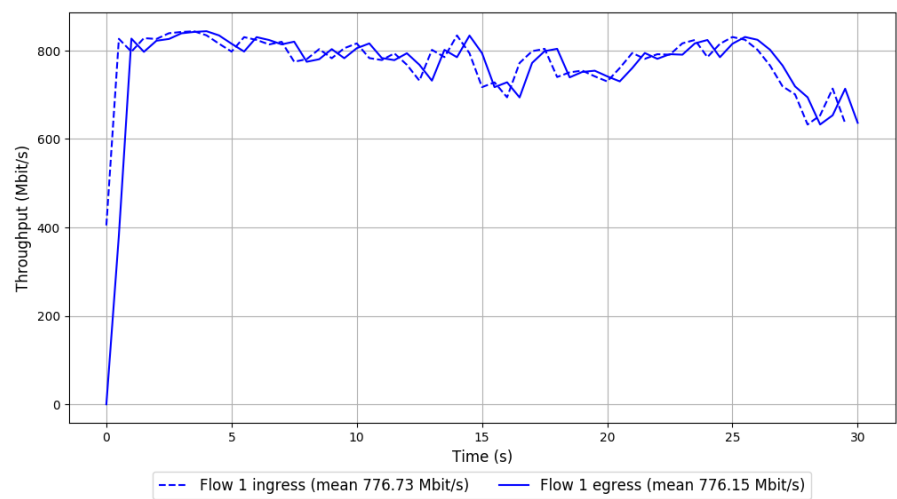
-- Flow 1:

Average throughput: 776.15 Mbit/s

95th percentile per-packet one-way delay: 0.924 ms

Loss rate: 0.07%

Run 5: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

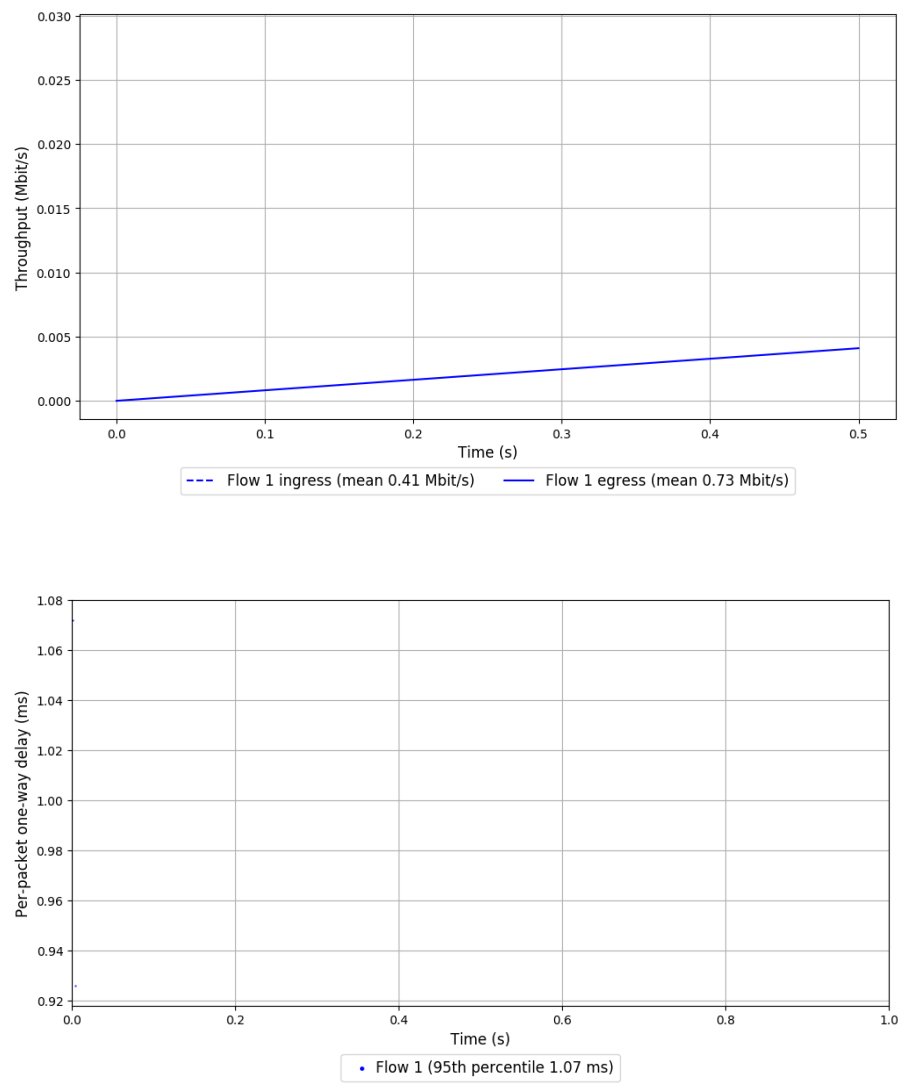
Start at: 2019-01-02 19:40:08

End at: 2019-01-02 19:40:38

Local clock offset: 0.069 ms

Remote clock offset: -1.465 ms

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

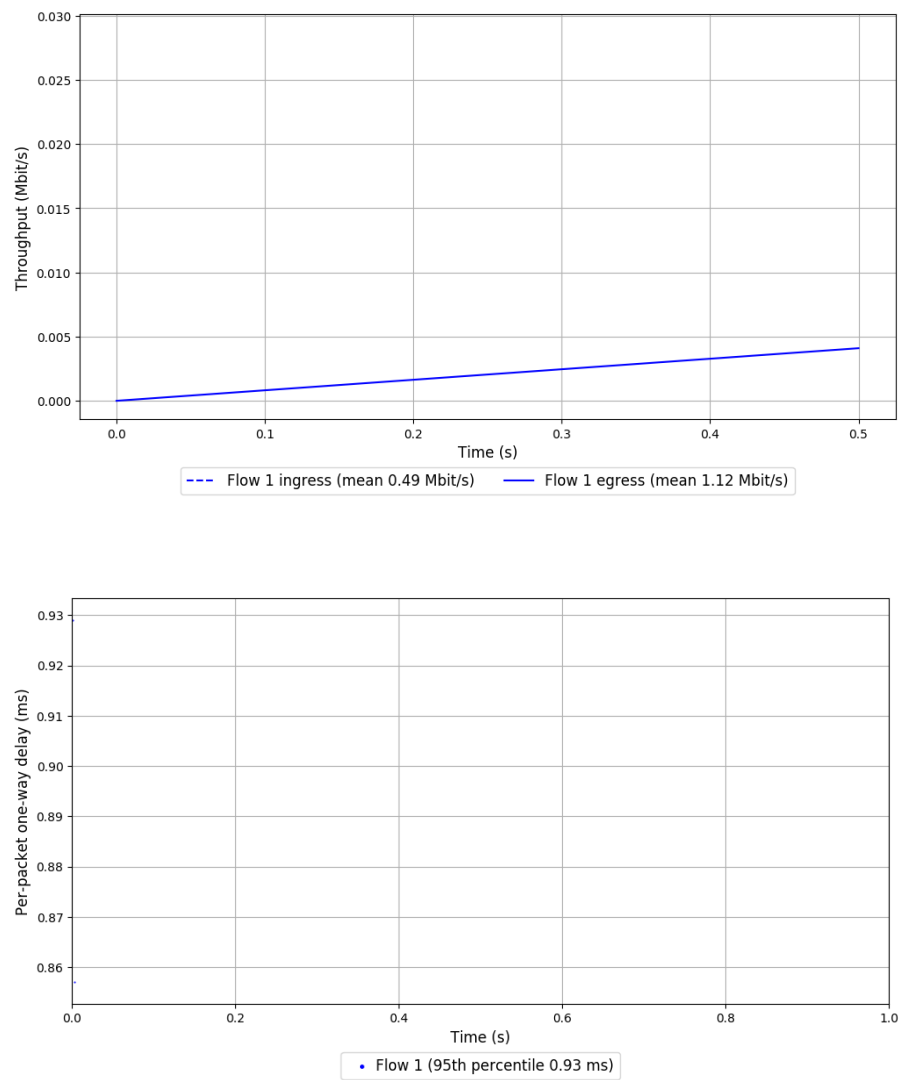
Start at: 2019-01-02 20:06:34

End at: 2019-01-02 20:07:04

Local clock offset: 1.273 ms

Remote clock offset: 1.361 ms

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

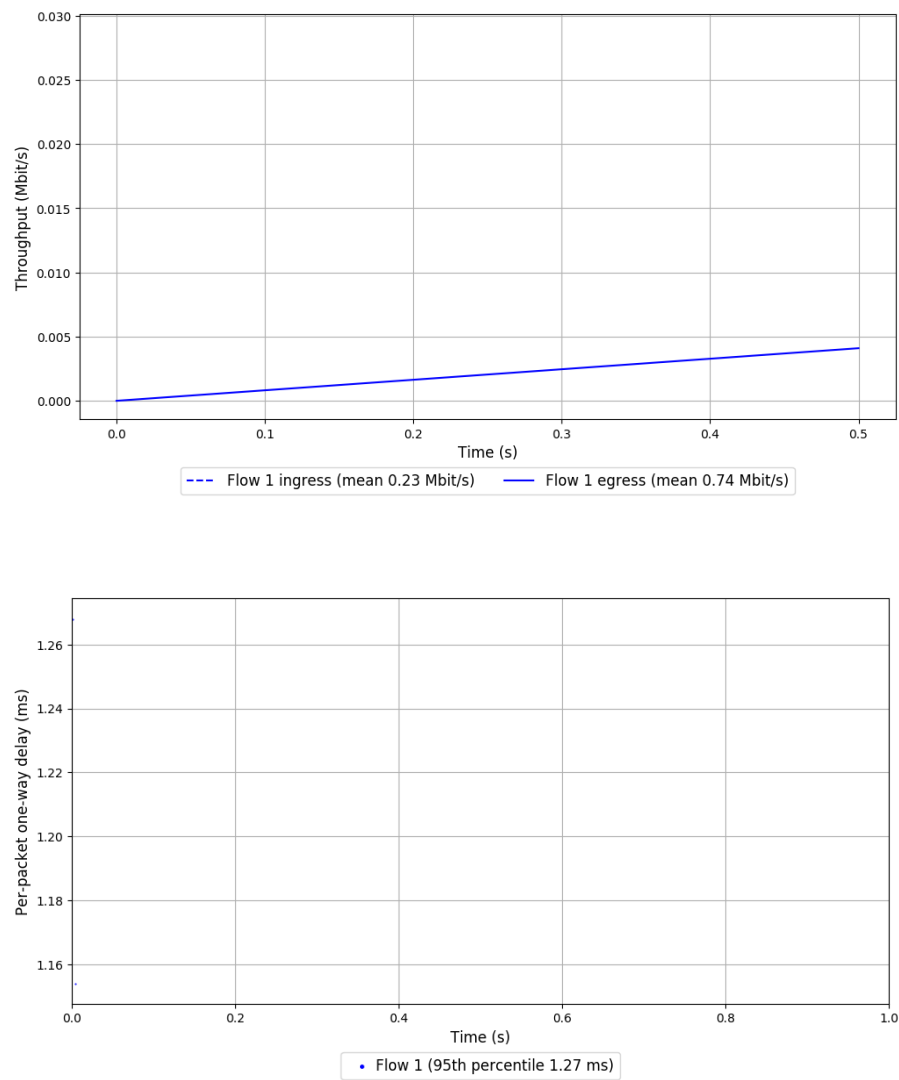
Start at: 2019-01-02 20:33:13

End at: 2019-01-02 20:33:43

Local clock offset: 3.749 ms

Remote clock offset: -3.345 ms

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

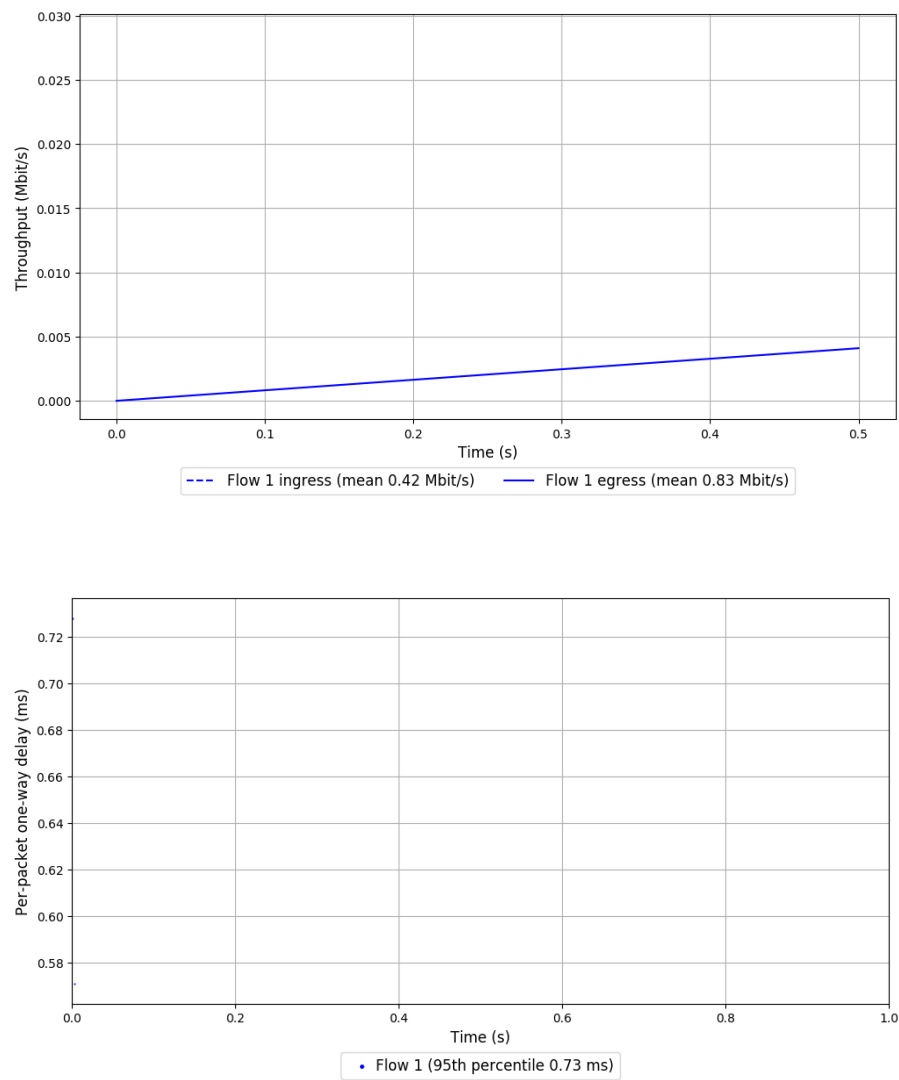
Start at: 2019-01-02 20:59:46

End at: 2019-01-02 21:00:16

Local clock offset: 1.734 ms

Remote clock offset: 0.404 ms

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

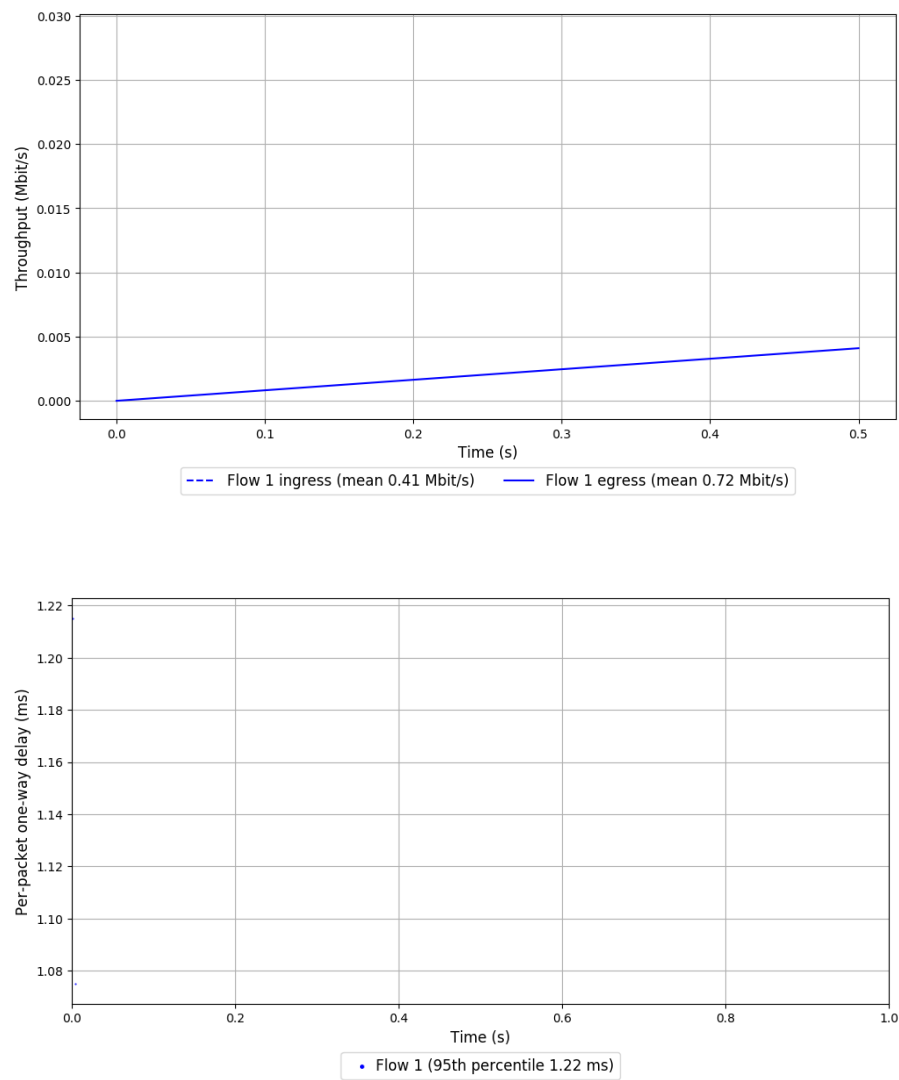
Start at: 2019-01-02 21:26:25

End at: 2019-01-02 21:26:55

Local clock offset: -3.213 ms

Remote clock offset: 3.185 ms

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2019-01-02 19:27:47

End at: 2019-01-02 19:28:17

Local clock offset: 4.279 ms

Remote clock offset: -5.649 ms

Below is generated by plot.py at 2019-01-02 22:25:24

Datalink statistics

-- Total of 1 flow:

Average throughput: 80.57 Mbit/s

95th percentile per-packet one-way delay: 0.236 ms

Loss rate: 0.00%

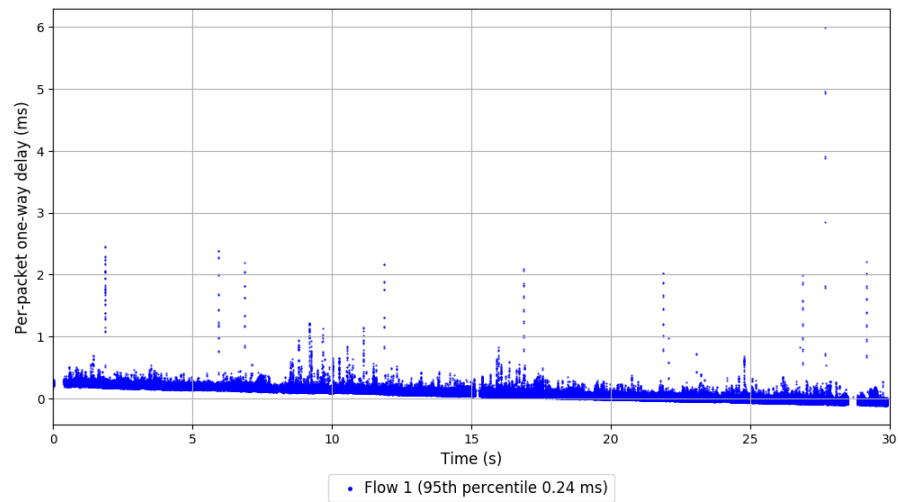
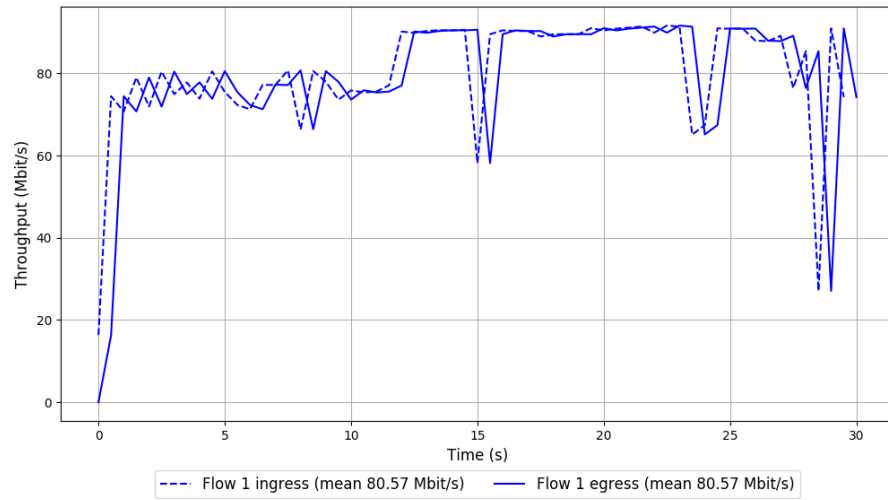
-- Flow 1:

Average throughput: 80.57 Mbit/s

95th percentile per-packet one-way delay: 0.236 ms

Loss rate: 0.00%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2019-01-02 19:54:17

End at: 2019-01-02 19:54:47

Local clock offset: -0.033 ms

Remote clock offset: 1.08 ms

Below is generated by plot.py at 2019-01-02 22:25:24

Datalink statistics

-- Total of 1 flow:

Average throughput: 78.64 Mbit/s

95th percentile per-packet one-way delay: 0.819 ms

Loss rate: 0.00%

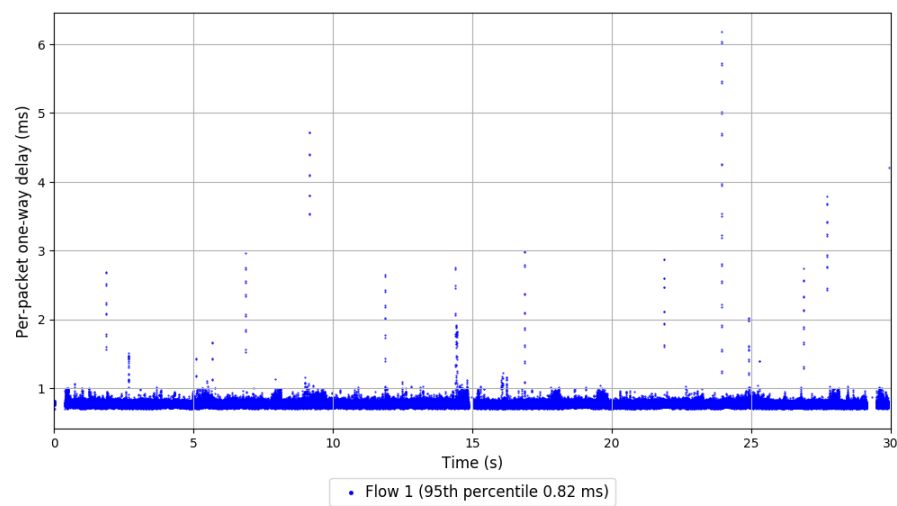
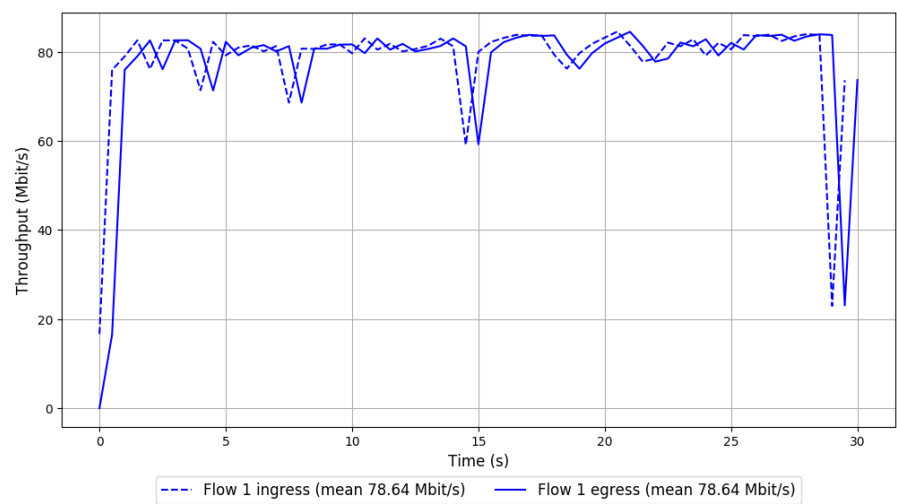
-- Flow 1:

Average throughput: 78.64 Mbit/s

95th percentile per-packet one-way delay: 0.819 ms

Loss rate: 0.00%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2019-01-02 20:20:47

End at: 2019-01-02 20:21:17

Local clock offset: 2.617 ms

Remote clock offset: -2.471 ms

Below is generated by plot.py at 2019-01-02 22:25:24

Datalink statistics

-- Total of 1 flow:

Average throughput: 80.67 Mbit/s

95th percentile per-packet one-way delay: 0.942 ms

Loss rate: 0.00%

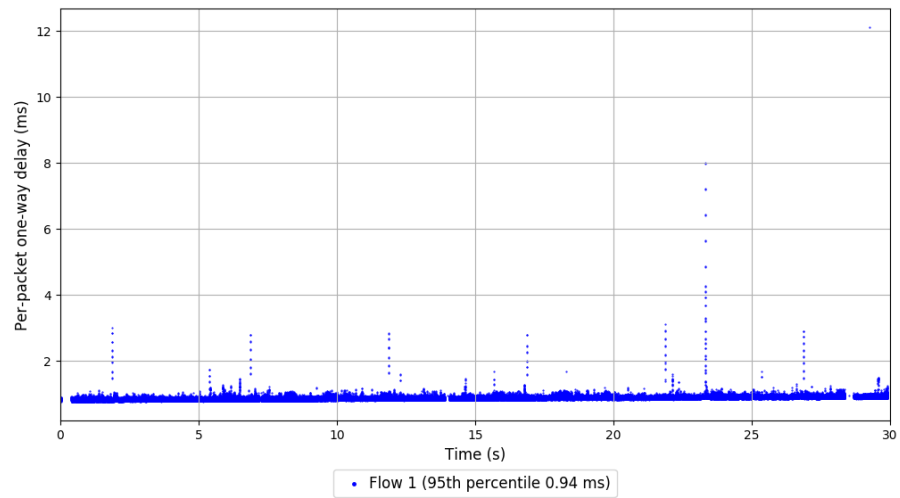
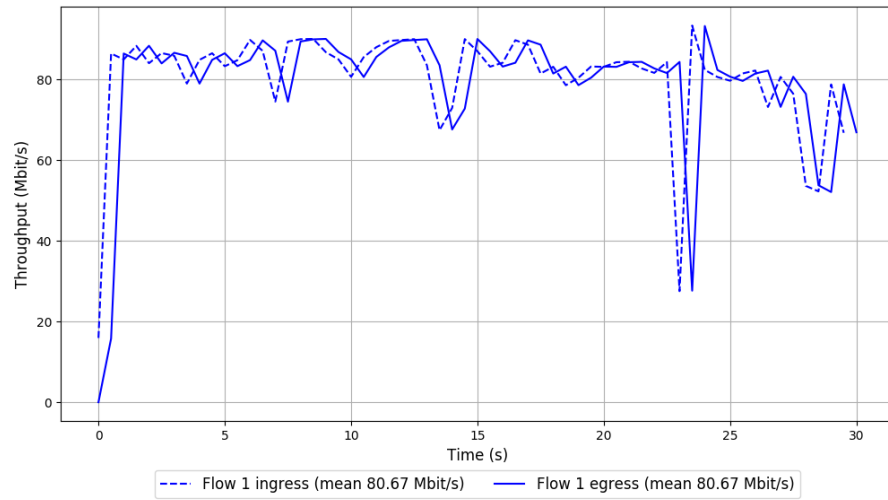
-- Flow 1:

Average throughput: 80.67 Mbit/s

95th percentile per-packet one-way delay: 0.942 ms

Loss rate: 0.00%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2019-01-02 20:47:23

End at: 2019-01-02 20:47:53

Local clock offset: 5.127 ms

Remote clock offset: -1.202 ms

Below is generated by plot.py at 2019-01-02 22:25:24

Datalink statistics

-- Total of 1 flow:

Average throughput: 80.61 Mbit/s

95th percentile per-packet one-way delay: 0.807 ms

Loss rate: 0.00%

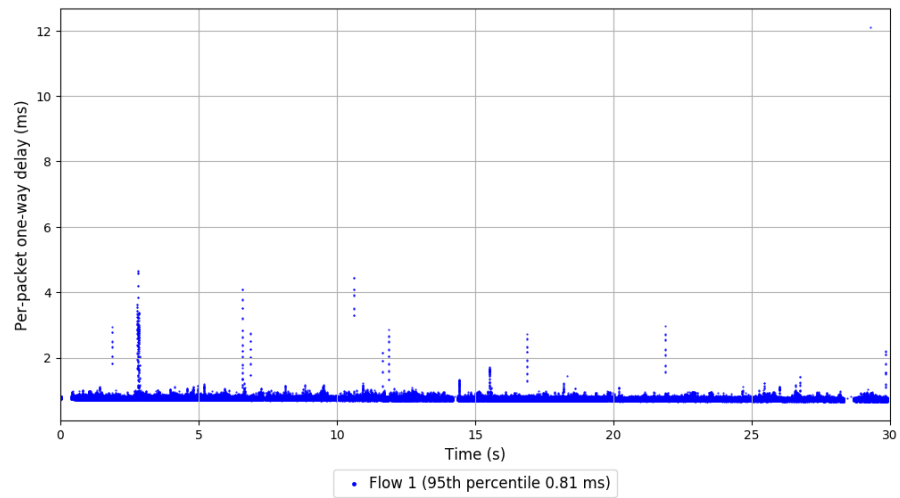
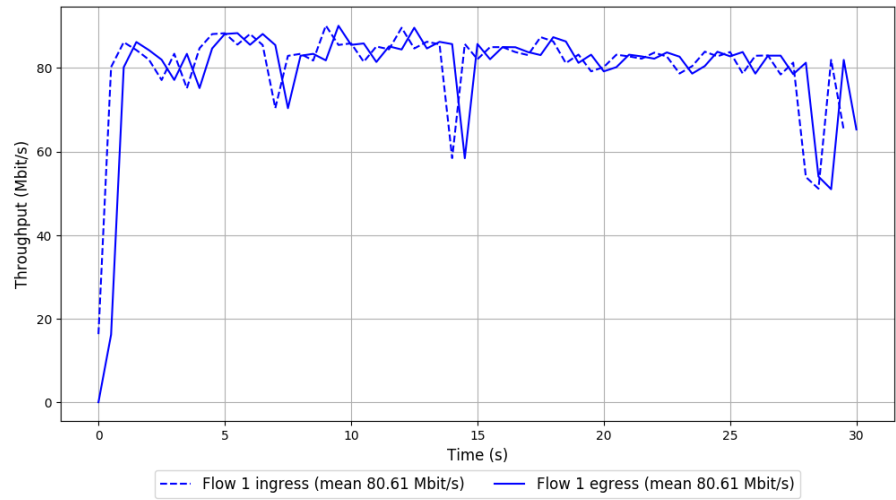
-- Flow 1:

Average throughput: 80.61 Mbit/s

95th percentile per-packet one-way delay: 0.807 ms

Loss rate: 0.00%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2019-01-02 21:13:58

End at: 2019-01-02 21:14:28

Local clock offset: -2.322 ms

Remote clock offset: 1.457 ms

Below is generated by plot.py at 2019-01-02 22:25:24

Datalink statistics

-- Total of 1 flow:

Average throughput: 80.00 Mbit/s

95th percentile per-packet one-way delay: 0.722 ms

Loss rate: 0.00%

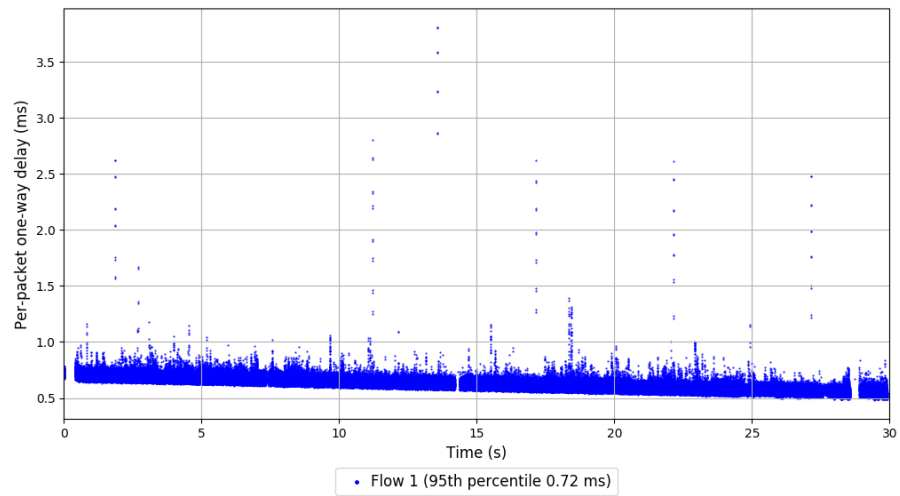
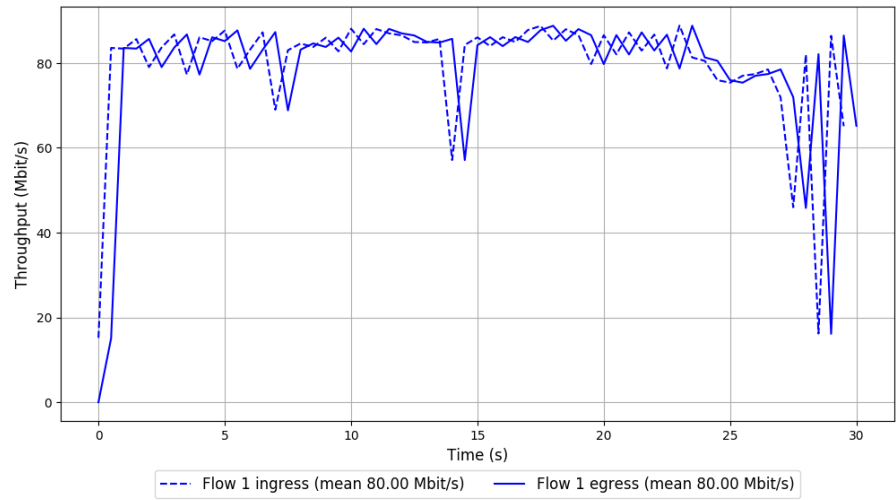
-- Flow 1:

Average throughput: 80.00 Mbit/s

95th percentile per-packet one-way delay: 0.722 ms

Loss rate: 0.00%

Run 5: Report of QUIC Cubic — Data Link



Run 1: Statistics of SCReAM

Start at: 2019-01-02 19:48:48

End at: 2019-01-02 19:49:18

Local clock offset: -0.191 ms

Remote clock offset: 0.453 ms

Below is generated by plot.py at 2019-01-02 22:25:24

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.168 ms

Loss rate: 0.00%

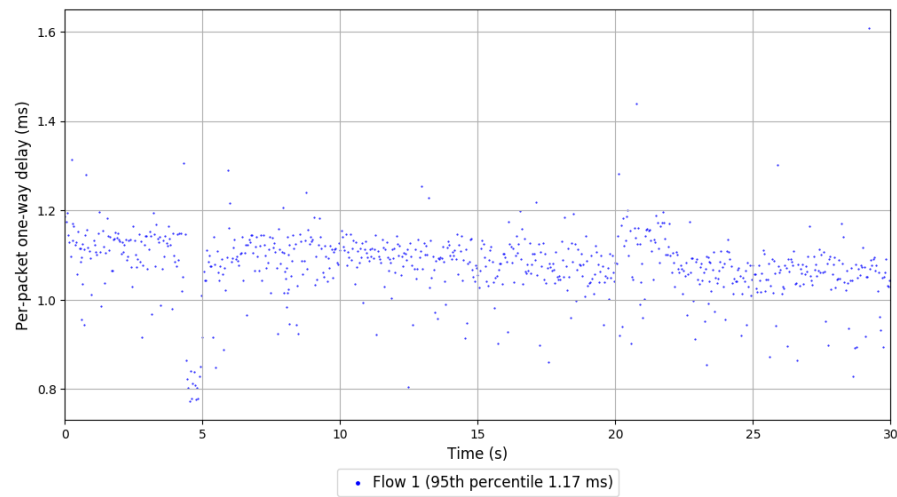
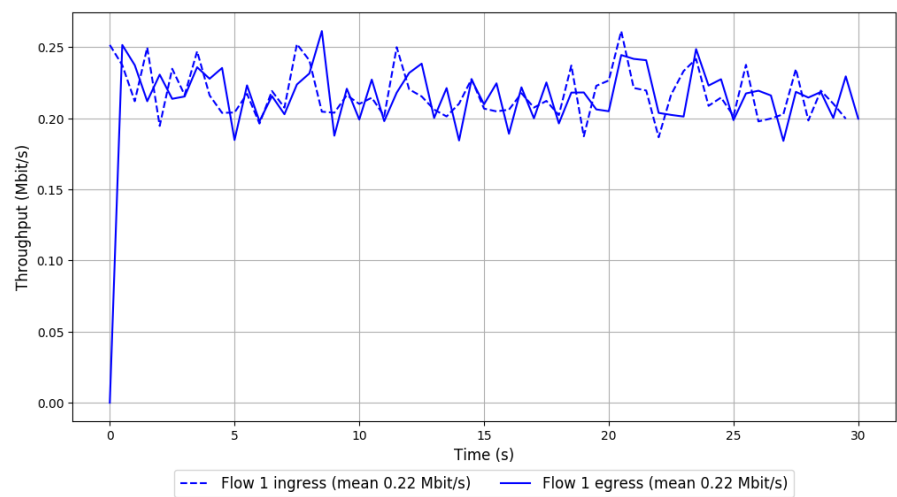
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.168 ms

Loss rate: 0.00%

Run 1: Report of SReAM — Data Link

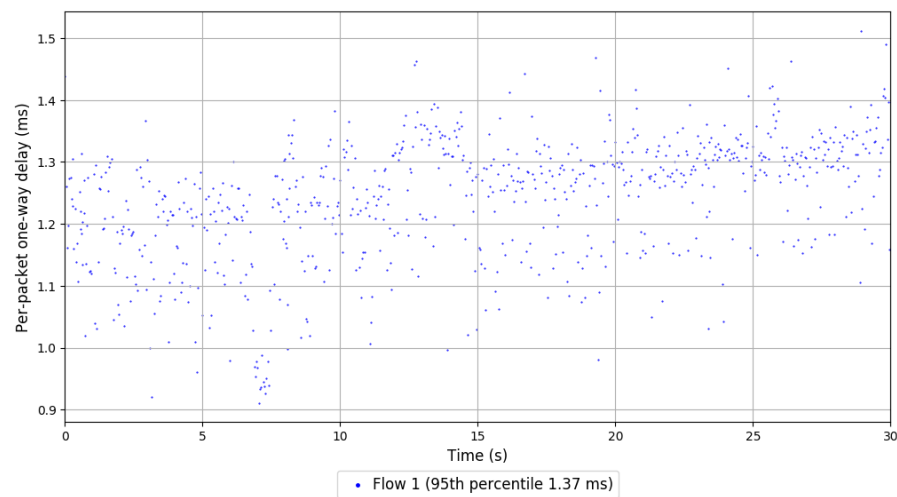
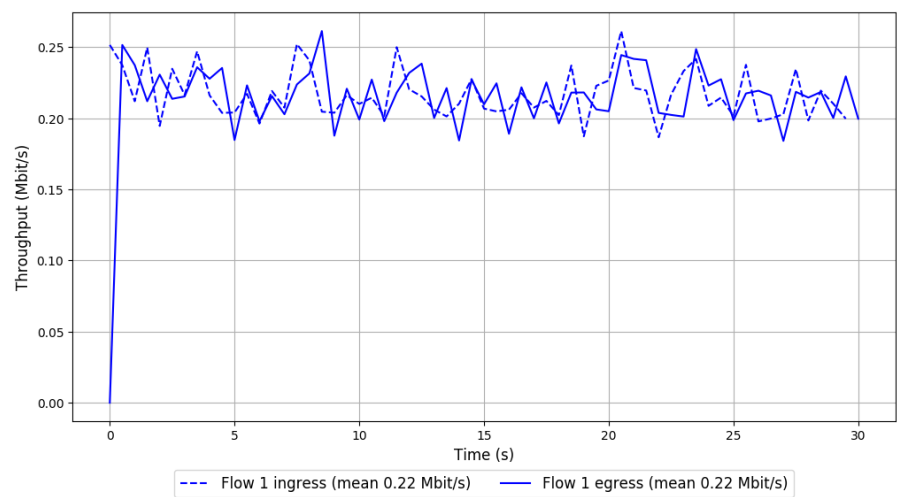


Run 2: Statistics of SCReAM

Start at: 2019-01-02 20:15:16
End at: 2019-01-02 20:15:46
Local clock offset: 2.12 ms
Remote clock offset: -1.565 ms

Below is generated by plot.py at 2019-01-02 22:25:24
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.371 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.371 ms
Loss rate: 0.00%

Run 2: Report of SReAM — Data Link

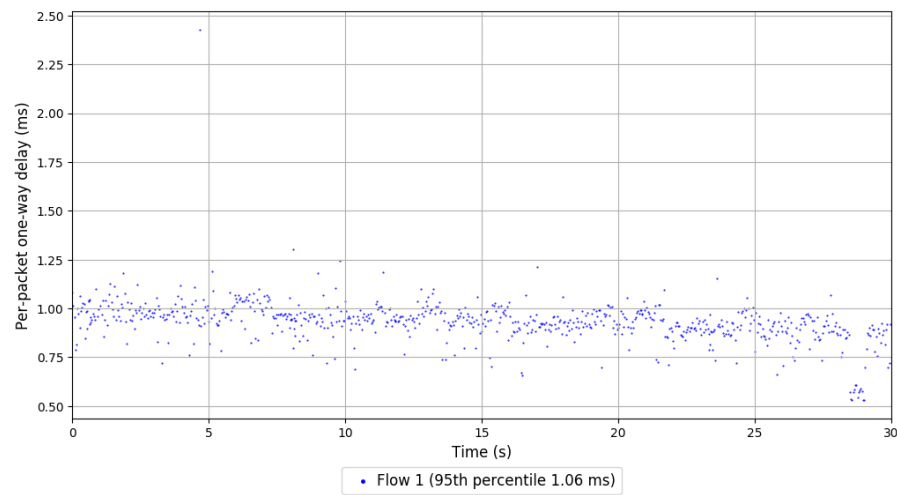
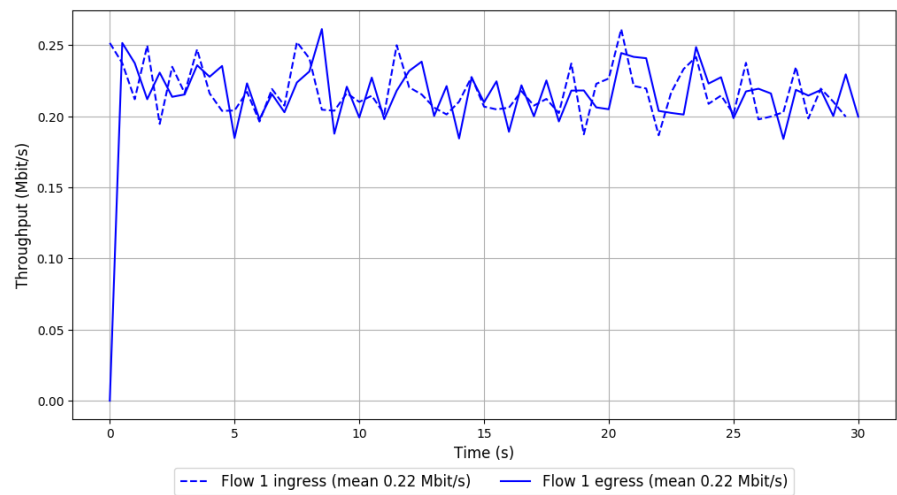


Run 3: Statistics of SCReAM

Start at: 2019-01-02 20:41:54
End at: 2019-01-02 20:42:24
Local clock offset: 4.603 ms
Remote clock offset: -2.704 ms

Below is generated by plot.py at 2019-01-02 22:25:24
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.060 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.060 ms
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2019-01-02 21:08:26

End at: 2019-01-02 21:08:56

Local clock offset: -1.409 ms

Remote clock offset: 1.102 ms

Below is generated by plot.py at 2019-01-02 22:25:25

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.128 ms

Loss rate: 0.00%

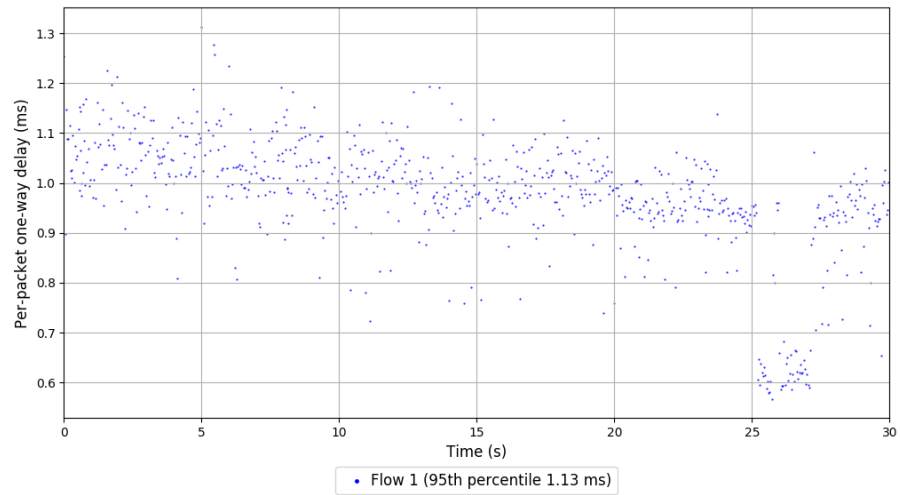
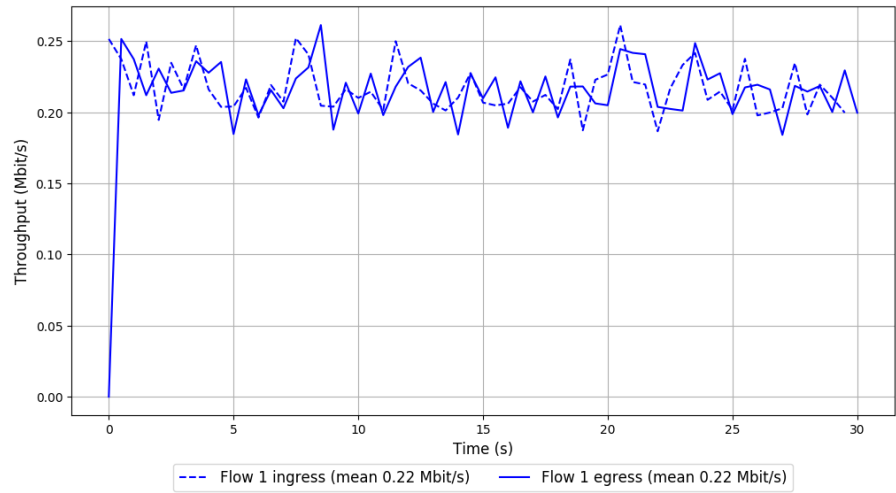
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.128 ms

Loss rate: 0.00%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2019-01-02 21:34:59

End at: 2019-01-02 21:35:29

Local clock offset: -2.905 ms

Remote clock offset: 3.878 ms

Below is generated by plot.py at 2019-01-02 22:25:25

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.165 ms

Loss rate: 0.00%

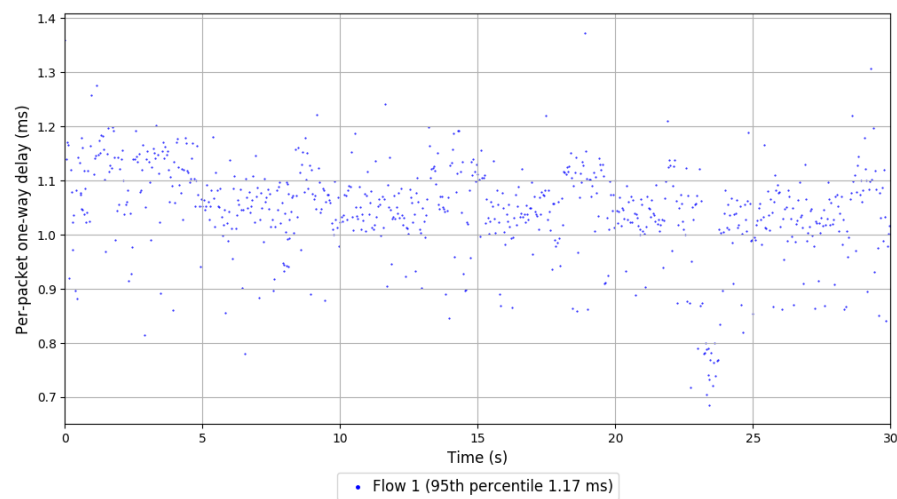
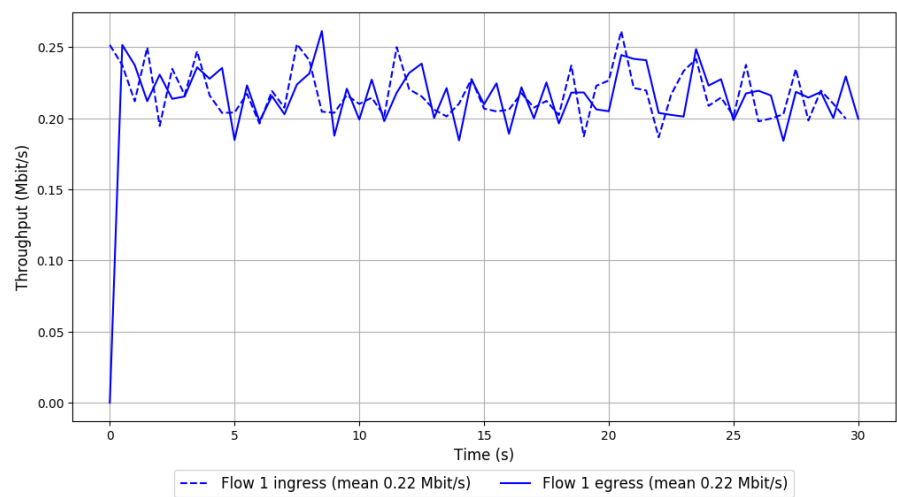
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.165 ms

Loss rate: 0.00%

Run 5: Report of SReAM — Data Link

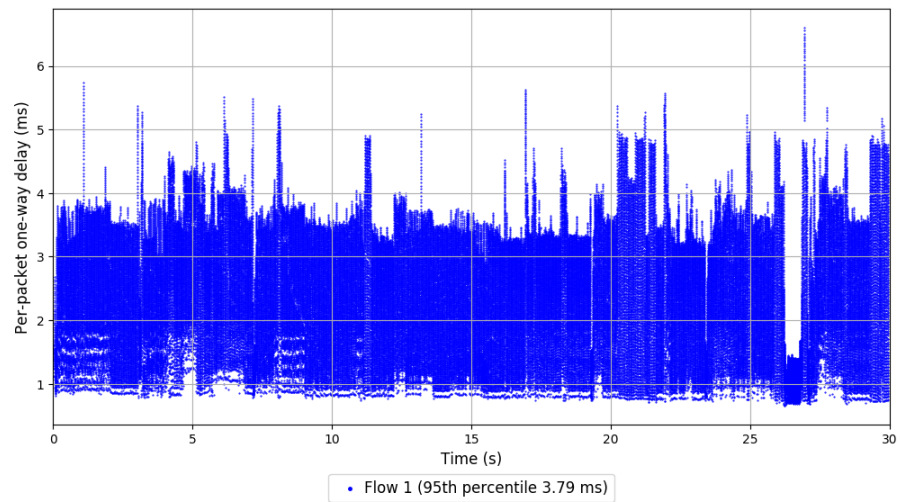
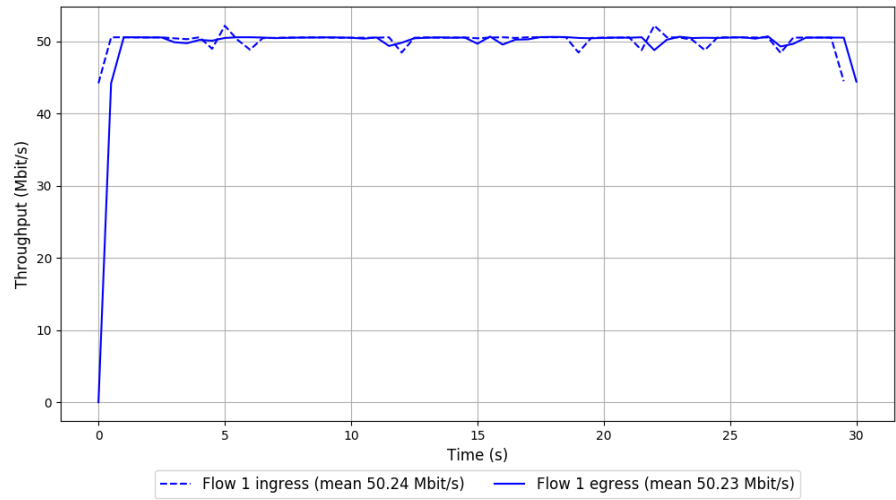


Run 1: Statistics of Sprout

Start at: 2019-01-02 19:42:56
End at: 2019-01-02 19:43:26
Local clock offset: -0.114 ms
Remote clock offset: -0.642 ms

Below is generated by plot.py at 2019-01-02 22:25:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 50.23 Mbit/s
95th percentile per-packet one-way delay: 3.794 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 50.23 Mbit/s
95th percentile per-packet one-way delay: 3.794 ms
Loss rate: 0.01%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2019-01-02 20:09:24

End at: 2019-01-02 20:09:54

Local clock offset: 1.559 ms

Remote clock offset: 0.132 ms

Below is generated by plot.py at 2019-01-02 22:25:25

Datalink statistics

-- Total of 1 flow:

Average throughput: 50.17 Mbit/s

95th percentile per-packet one-way delay: 4.249 ms

Loss rate: 0.00%

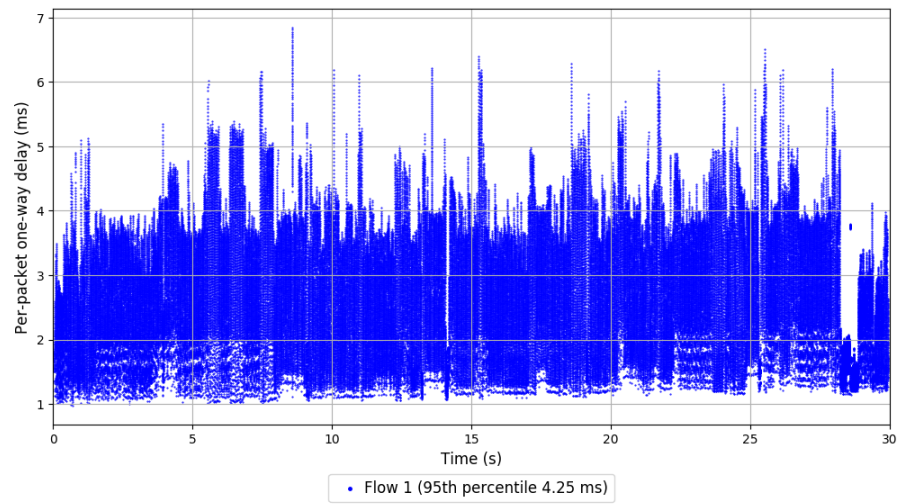
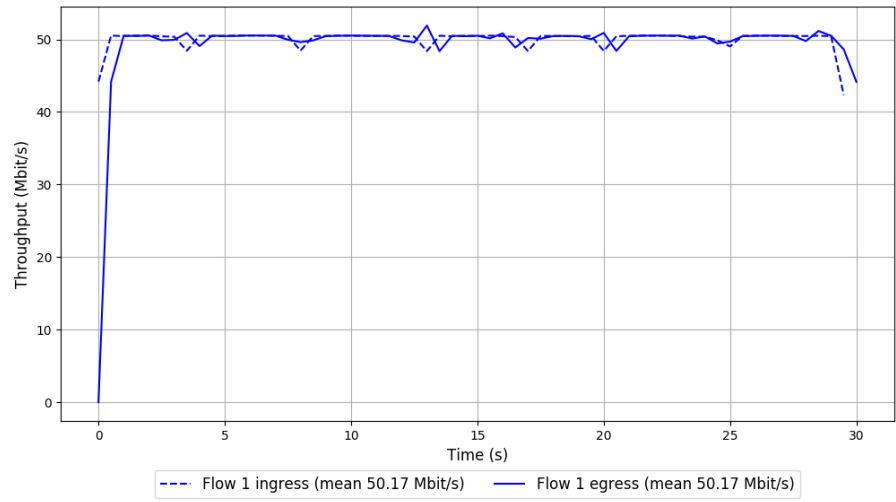
-- Flow 1:

Average throughput: 50.17 Mbit/s

95th percentile per-packet one-way delay: 4.249 ms

Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

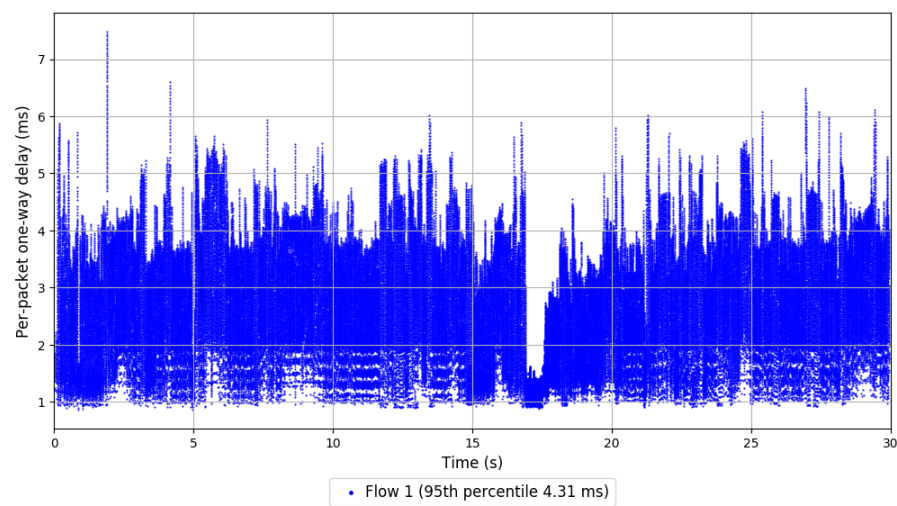
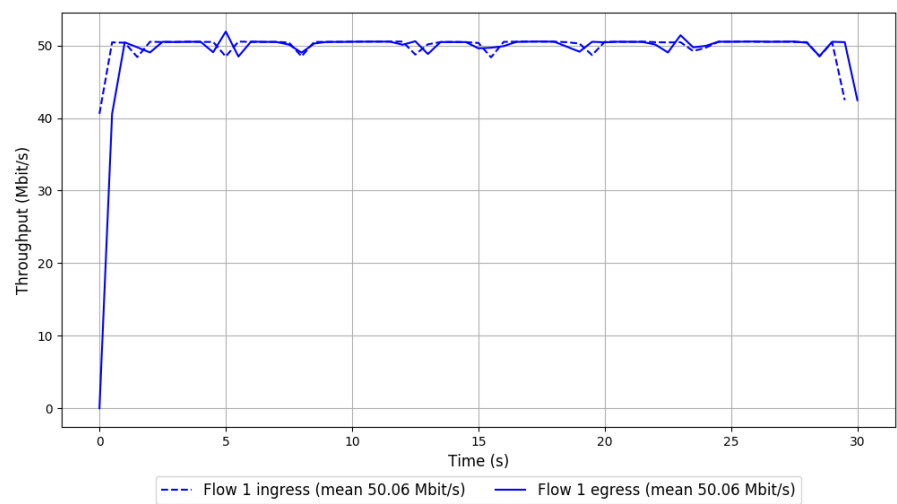


Run 3: Statistics of Sprout

Start at: 2019-01-02 20:36:06
End at: 2019-01-02 20:36:36
Local clock offset: 4.036 ms
Remote clock offset: -3.401 ms

Below is generated by plot.py at 2019-01-02 22:25:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 50.06 Mbit/s
95th percentile per-packet one-way delay: 4.311 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.06 Mbit/s
95th percentile per-packet one-way delay: 4.311 ms
Loss rate: 0.00%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2019-01-02 21:02:36

End at: 2019-01-02 21:03:06

Local clock offset: 0.324 ms

Remote clock offset: 0.713 ms

Below is generated by plot.py at 2019-01-02 22:25:25

Datalink statistics

-- Total of 1 flow:

Average throughput: 50.00 Mbit/s

95th percentile per-packet one-way delay: 4.042 ms

Loss rate: 0.00%

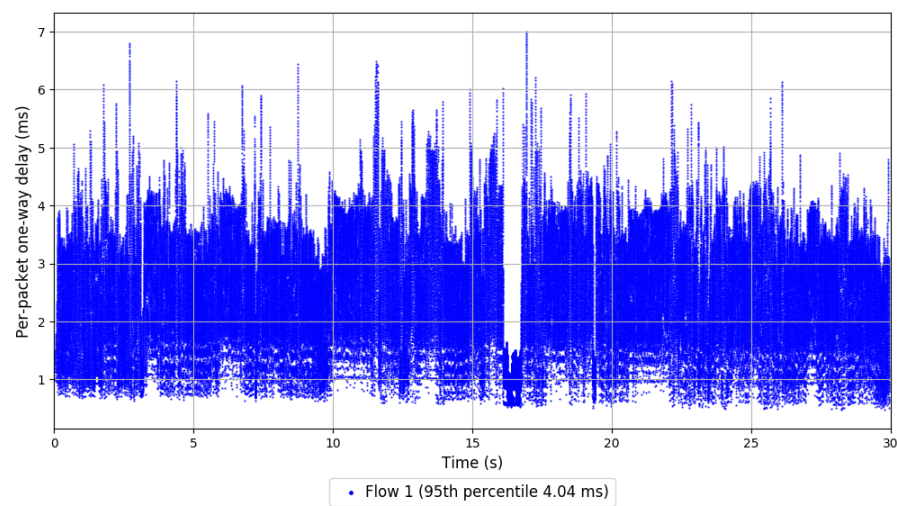
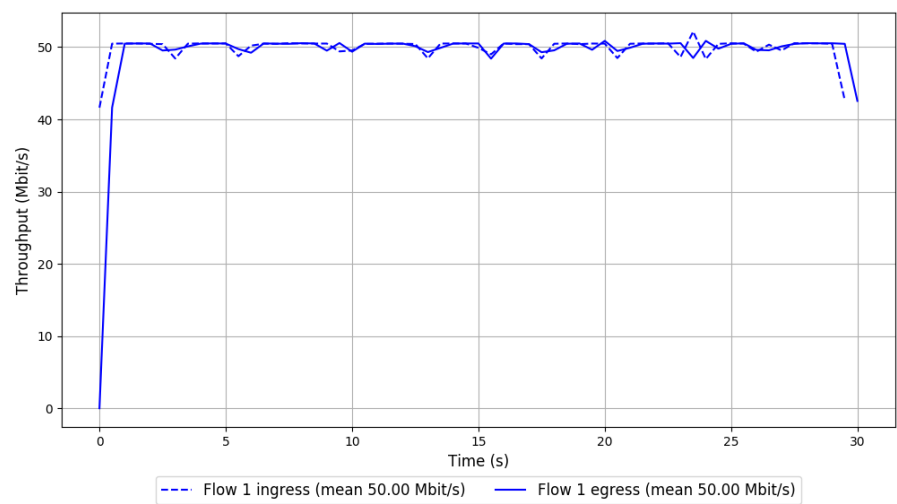
-- Flow 1:

Average throughput: 50.00 Mbit/s

95th percentile per-packet one-way delay: 4.042 ms

Loss rate: 0.00%

Run 4: Report of Sprout — Data Link

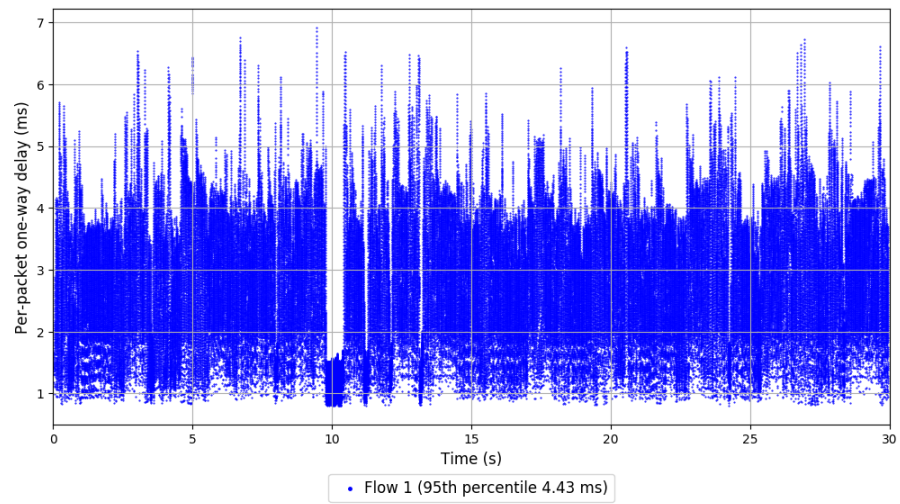
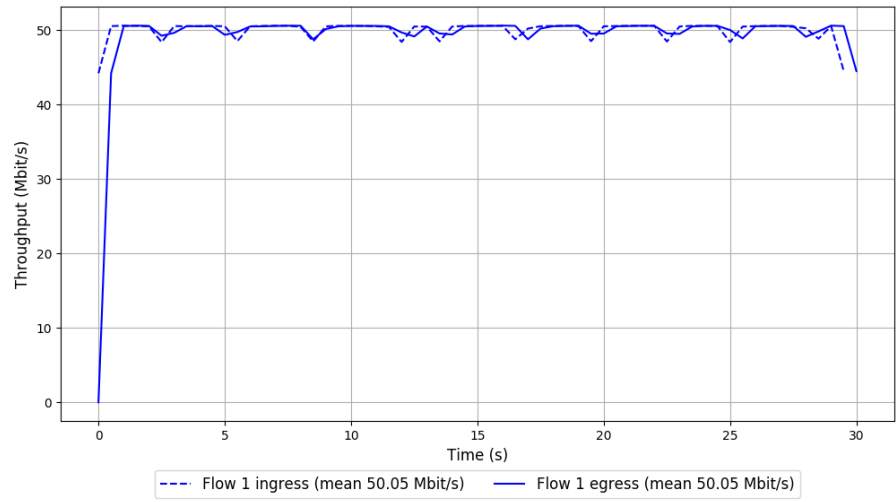


Run 5: Statistics of Sprout

Start at: 2019-01-02 21:29:13
End at: 2019-01-02 21:29:43
Local clock offset: -3.071 ms
Remote clock offset: 3.47 ms

Below is generated by plot.py at 2019-01-02 22:25:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 50.05 Mbit/s
95th percentile per-packet one-way delay: 4.433 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.05 Mbit/s
95th percentile per-packet one-way delay: 4.433 ms
Loss rate: 0.00%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

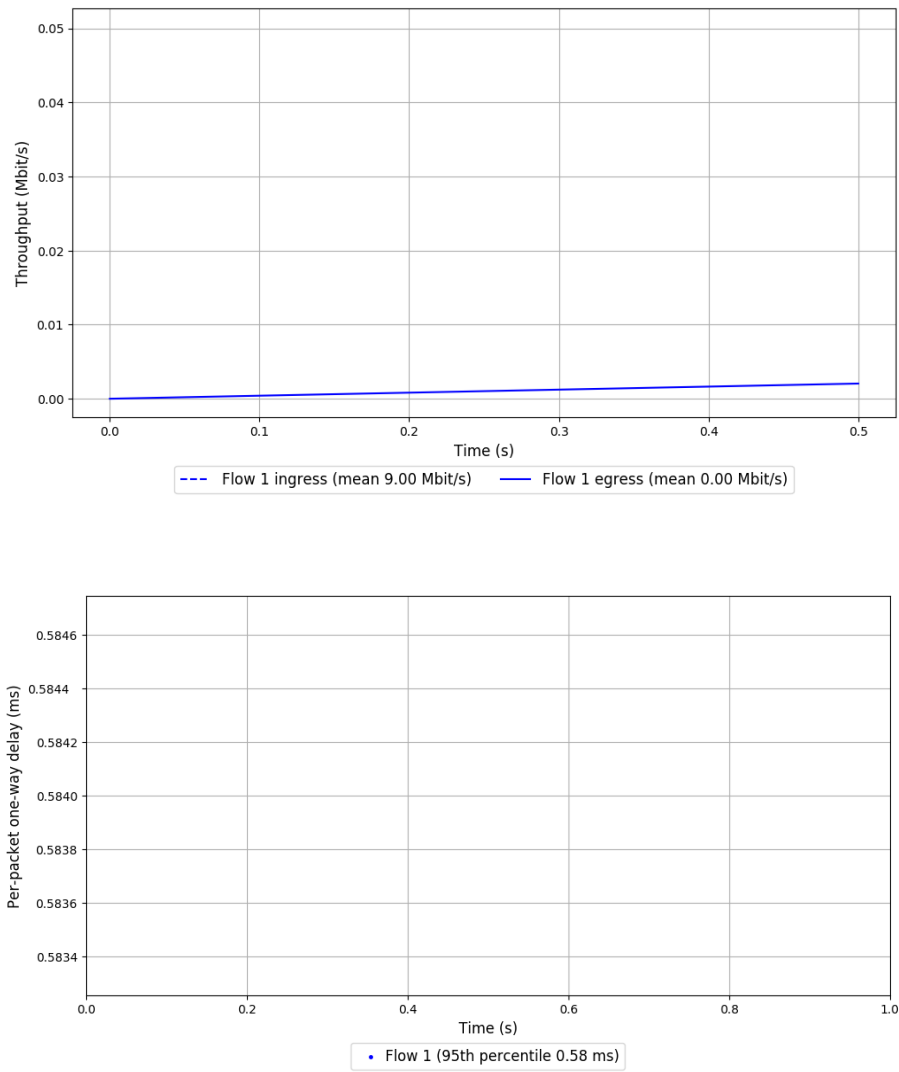
Start at: 2019-01-02 19:26:34

End at: 2019-01-02 19:27:04

Local clock offset: 5.16 ms

Remote clock offset: -5.613 ms

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



Run 2: Statistics of TaoVA-100x

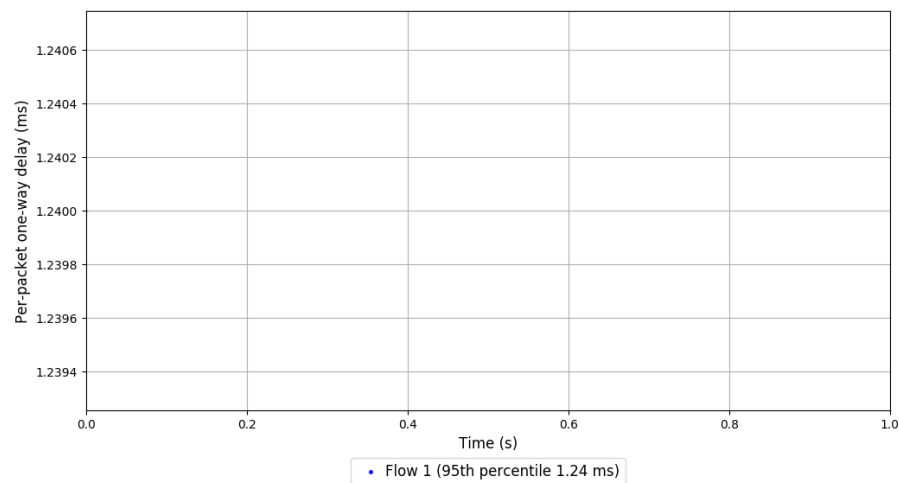
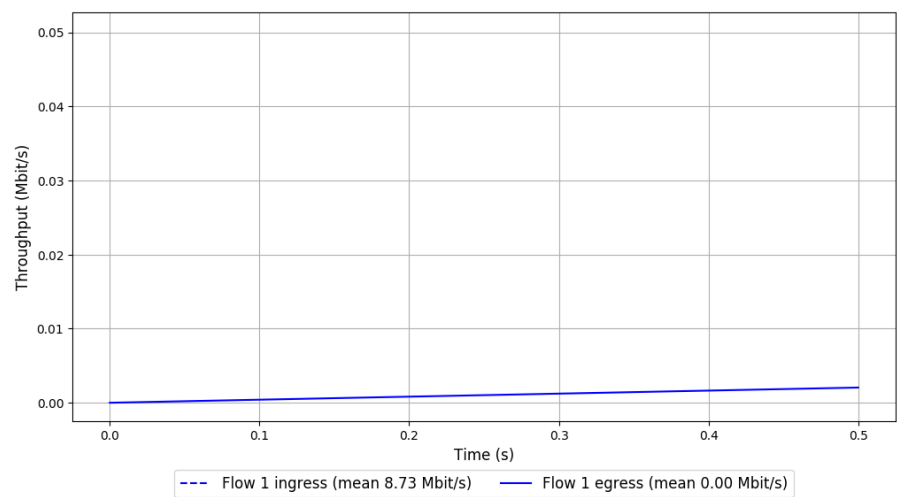
Start at: 2019-01-02 19:53:05

End at: 2019-01-02 19:53:35

Local clock offset: -0.069 ms

Remote clock offset: 1.036 ms

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



Run 3: Statistics of TaoVA-100x

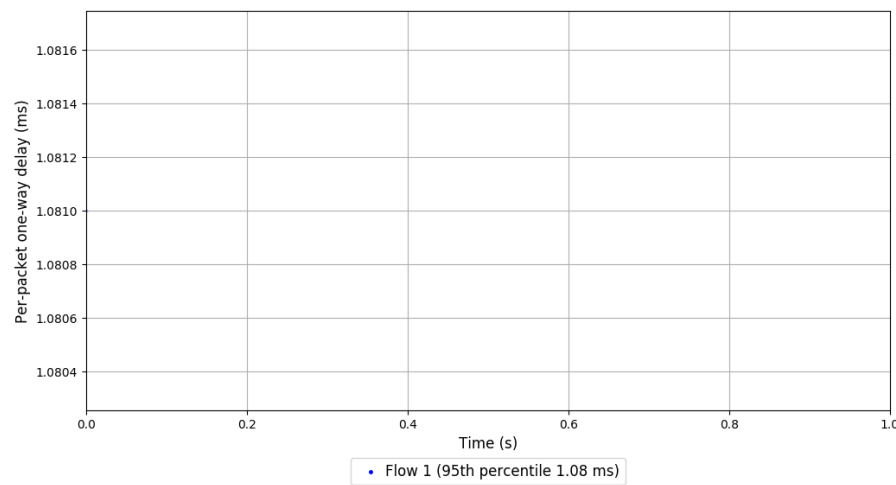
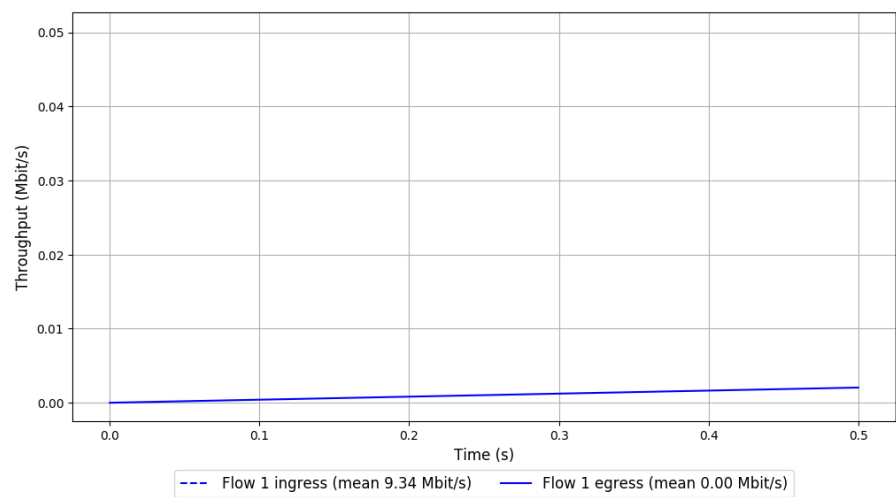
Start at: 2019-01-02 20:19:34

End at: 2019-01-02 20:20:04

Local clock offset: 2.489 ms

Remote clock offset: -2.311 ms

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



Run 4: Statistics of TaoVA-100x

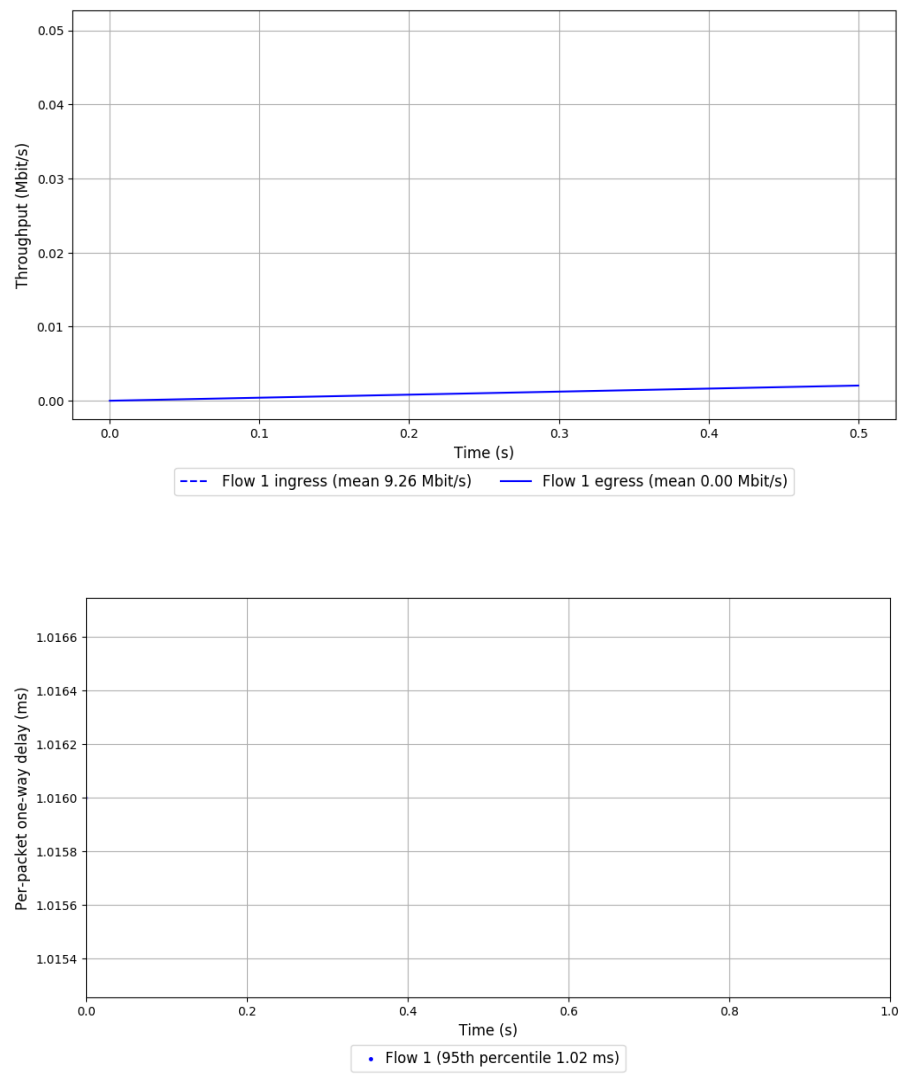
Start at: 2019-01-02 20:46:10

End at: 2019-01-02 20:46:40

Local clock offset: 5.032 ms

Remote clock offset: -1.426 ms

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



Run 5: Statistics of TaoVA-100x

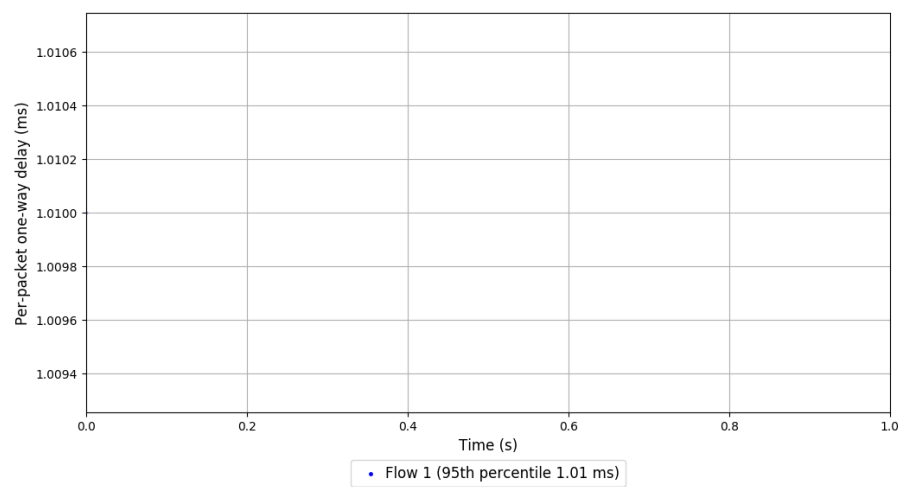
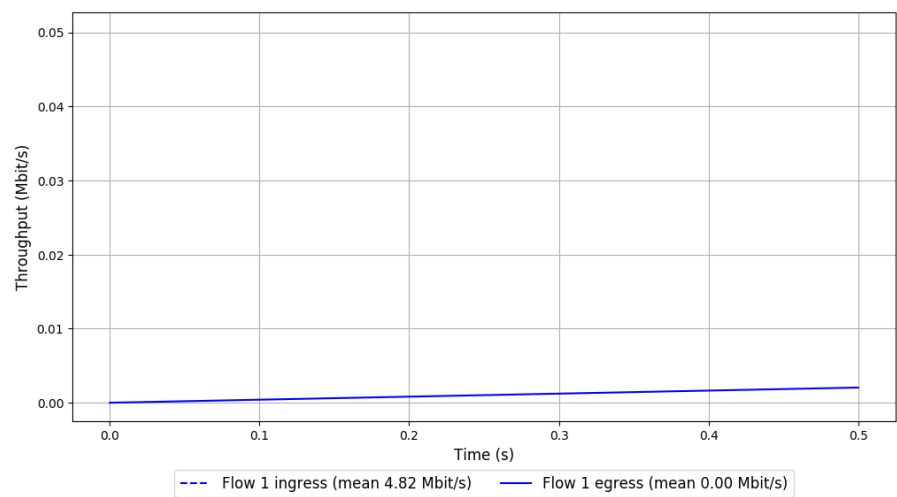
Start at: 2019-01-02 21:12:45

End at: 2019-01-02 21:13:15

Local clock offset: -2.151 ms

Remote clock offset: 1.302 ms

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

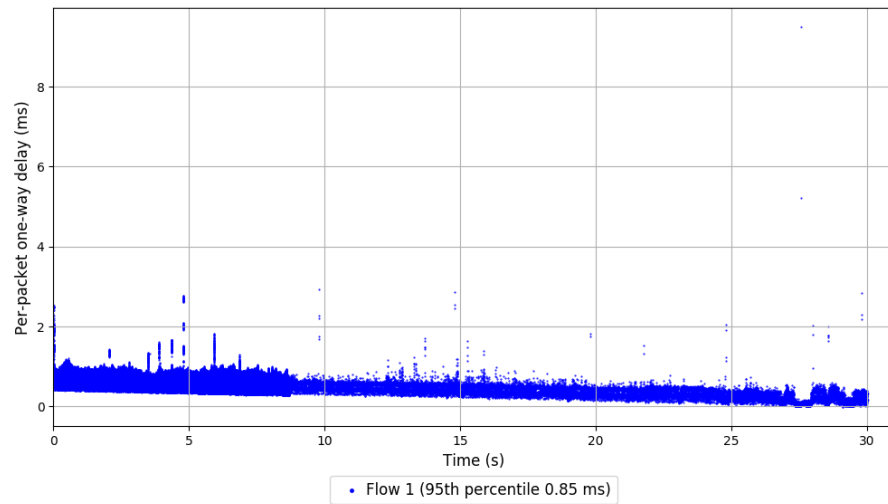
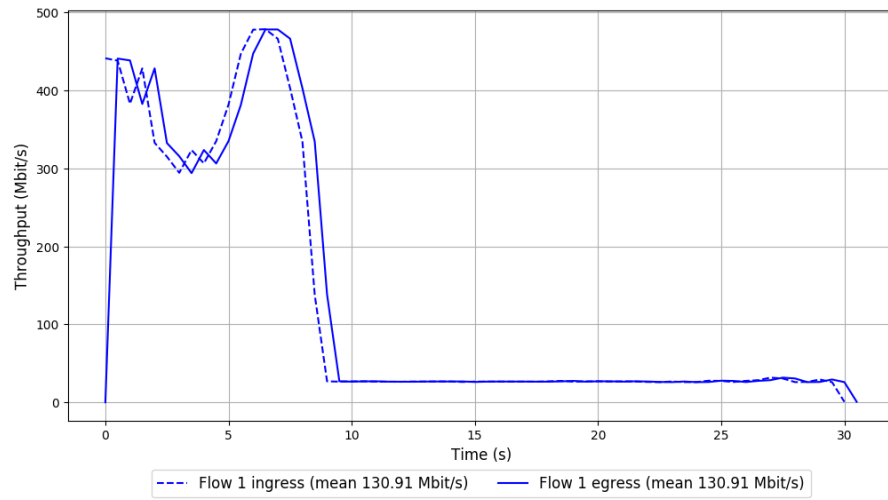


Run 1: Statistics of TCP Vegas

Start at: 2019-01-02 19:32:55
End at: 2019-01-02 19:33:25
Local clock offset: 1.551 ms
Remote clock offset: -4.584 ms

Below is generated by plot.py at 2019-01-02 22:25:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 130.91 Mbit/s
95th percentile per-packet one-way delay: 0.850 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 130.91 Mbit/s
95th percentile per-packet one-way delay: 0.850 ms
Loss rate: 0.00%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2019-01-02 19:59:27

End at: 2019-01-02 19:59:57

Local clock offset: 0.477 ms

Remote clock offset: 1.555 ms

Below is generated by plot.py at 2019-01-02 22:25:25

Datalink statistics

-- Total of 1 flow:

Average throughput: 49.32 Mbit/s

95th percentile per-packet one-way delay: 2.601 ms

Loss rate: 0.01%

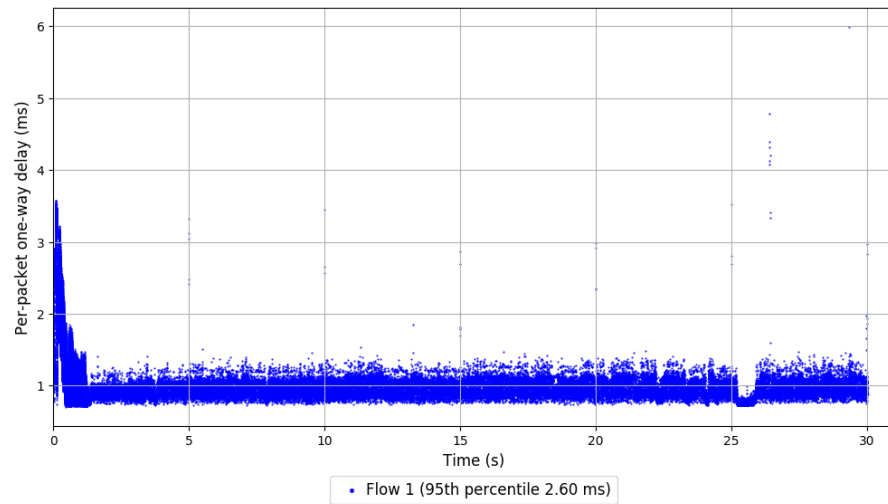
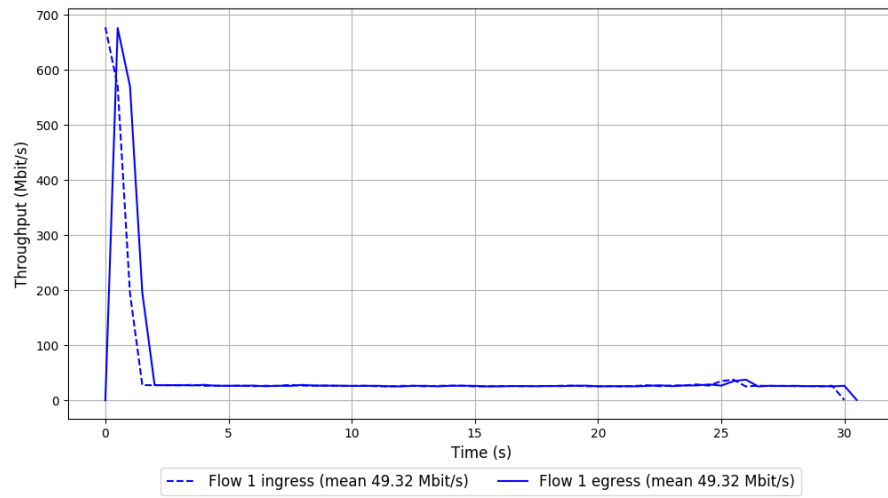
-- Flow 1:

Average throughput: 49.32 Mbit/s

95th percentile per-packet one-way delay: 2.601 ms

Loss rate: 0.01%

Run 2: Report of TCP Vegas — Data Link

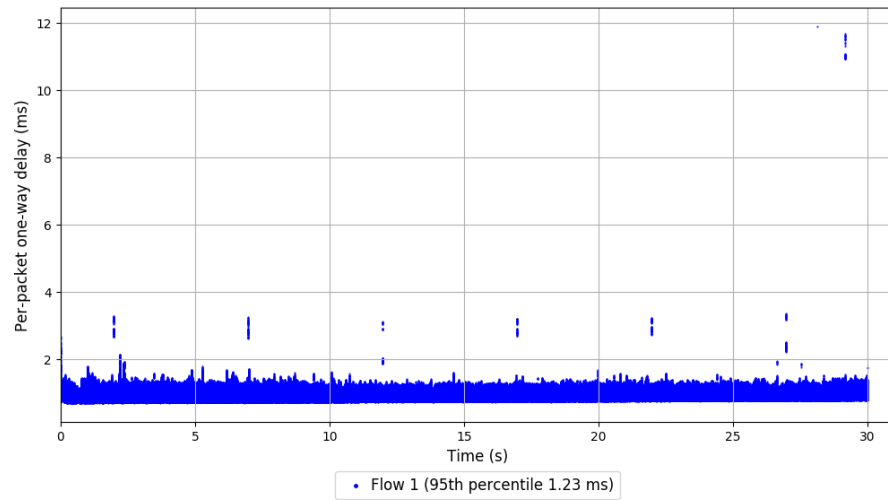
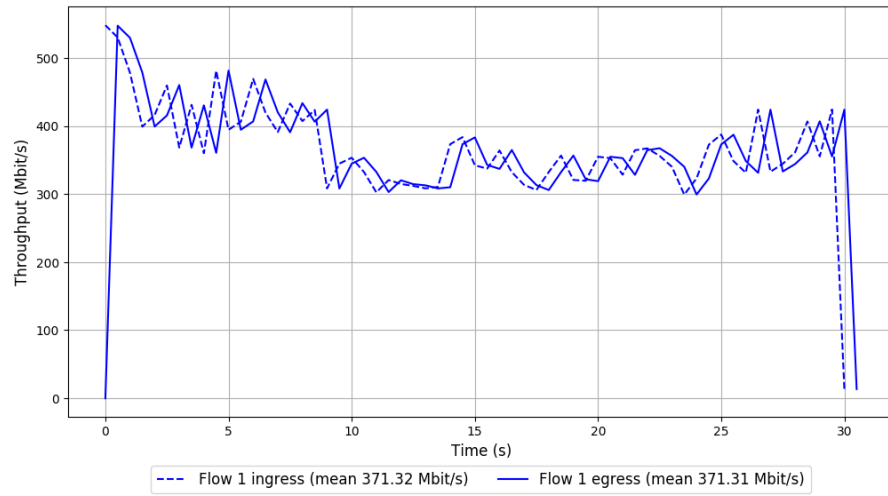


Run 3: Statistics of TCP Vegas

Start at: 2019-01-02 20:25:56
End at: 2019-01-02 20:26:26
Local clock offset: 3.072 ms
Remote clock offset: -3.023 ms

Below is generated by plot.py at 2019-01-02 22:25:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 371.31 Mbit/s
95th percentile per-packet one-way delay: 1.231 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 371.31 Mbit/s
95th percentile per-packet one-way delay: 1.231 ms
Loss rate: 0.00%

Run 3: Report of TCP Vegas — Data Link

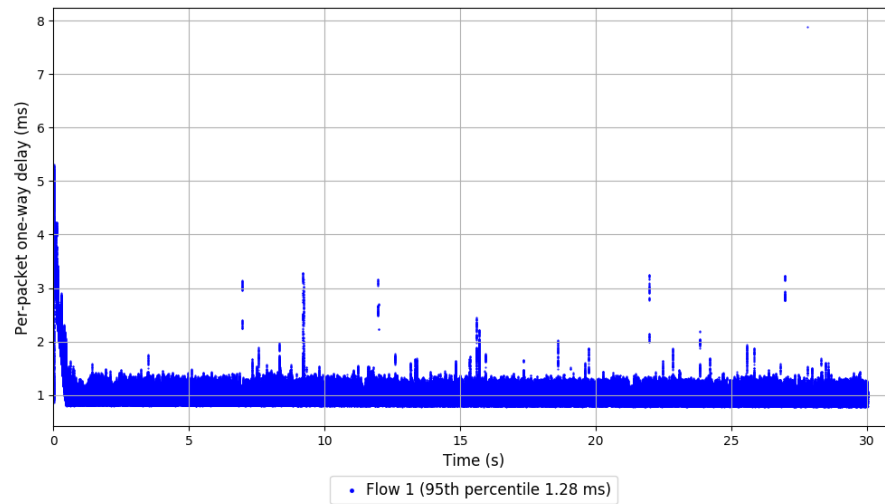
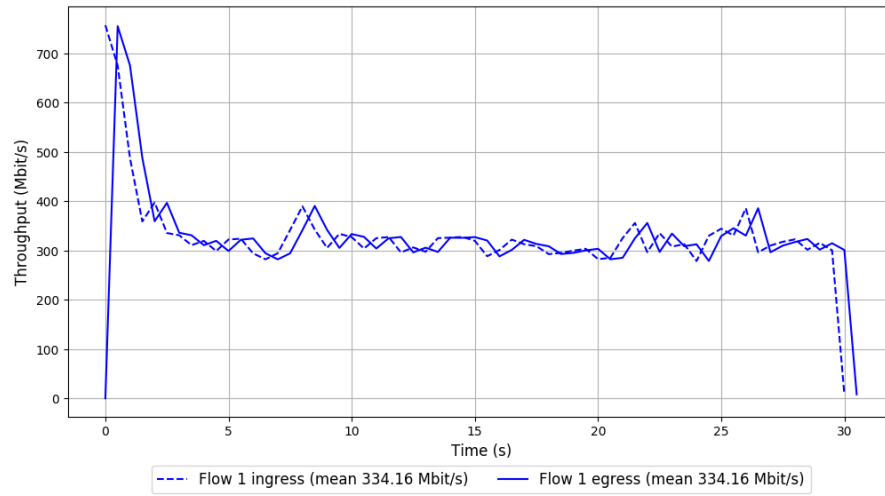


Run 4: Statistics of TCP Vegas

Start at: 2019-01-02 20:52:31
End at: 2019-01-02 20:53:01
Local clock offset: 5.546 ms
Remote clock offset: -0.299 ms

Below is generated by plot.py at 2019-01-02 22:25:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 334.16 Mbit/s
95th percentile per-packet one-way delay: 1.276 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 334.16 Mbit/s
95th percentile per-packet one-way delay: 1.276 ms
Loss rate: 0.00%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2019-01-02 21:19:06

End at: 2019-01-02 21:19:36

Local clock offset: -2.932 ms

Remote clock offset: 2.325 ms

Below is generated by plot.py at 2019-01-02 22:26:10

Datalink statistics

-- Total of 1 flow:

Average throughput: 378.84 Mbit/s

95th percentile per-packet one-way delay: 1.066 ms

Loss rate: 0.00%

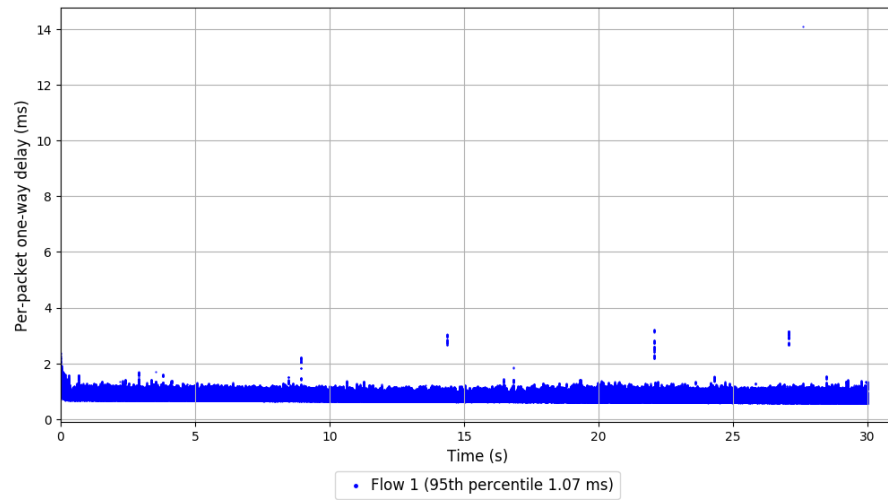
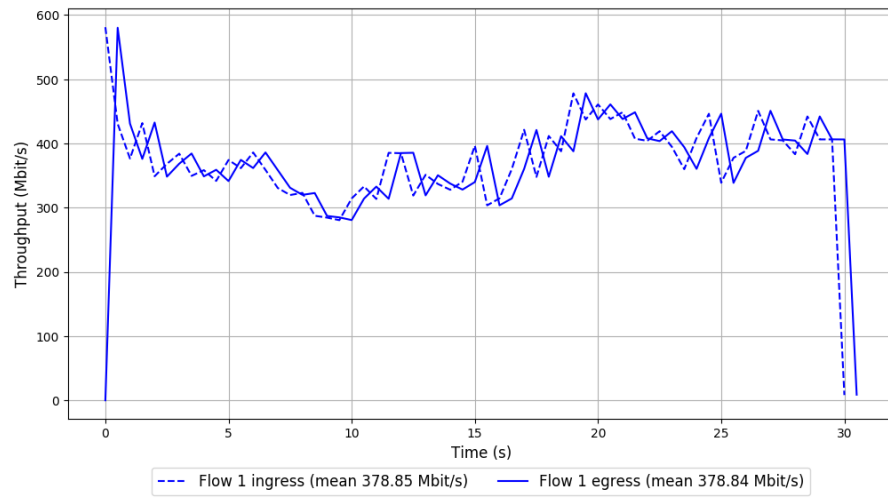
-- Flow 1:

Average throughput: 378.84 Mbit/s

95th percentile per-packet one-way delay: 1.066 ms

Loss rate: 0.00%

Run 5: Report of TCP Vegas — Data Link

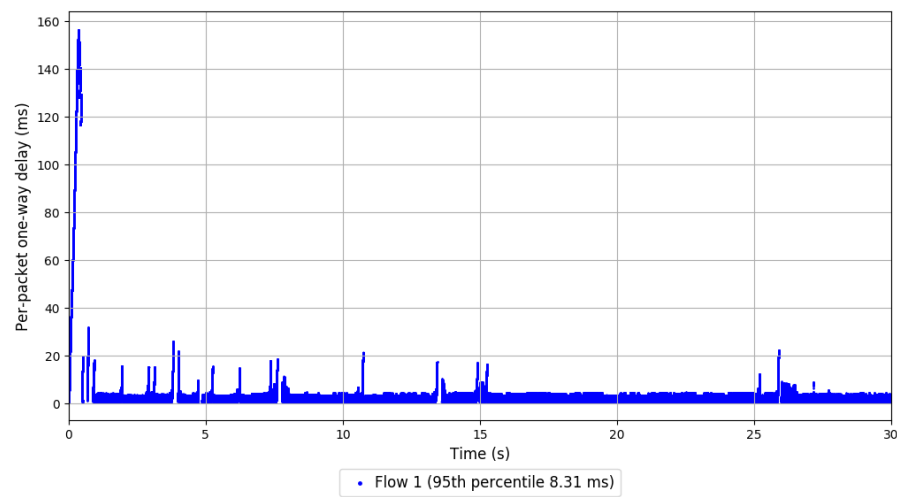
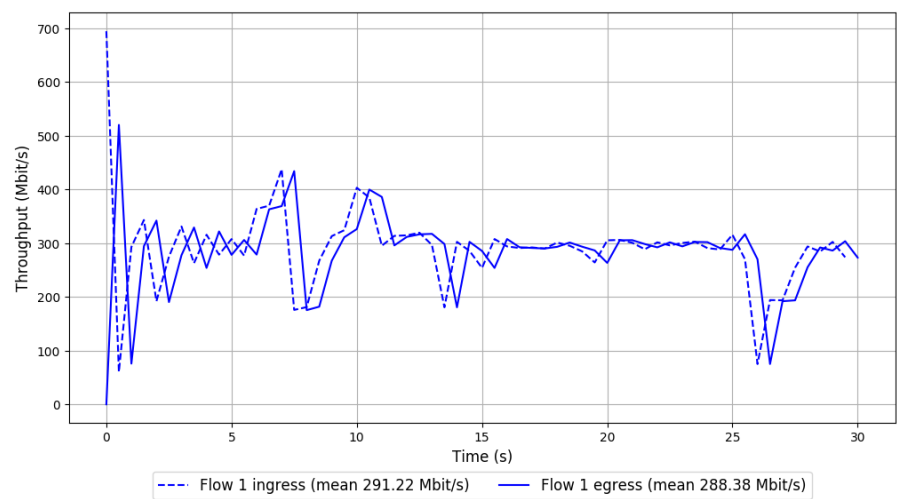


Run 1: Statistics of Verus

Start at: 2019-01-02 19:45:48
End at: 2019-01-02 19:46:18
Local clock offset: -0.178 ms
Remote clock offset: -0.128 ms

Below is generated by plot.py at 2019-01-02 22:26:10
Datalink statistics
-- Total of 1 flow:
Average throughput: 288.38 Mbit/s
95th percentile per-packet one-way delay: 8.313 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 288.38 Mbit/s
95th percentile per-packet one-way delay: 8.313 ms
Loss rate: 0.97%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2019-01-02 20:12:20

End at: 2019-01-02 20:12:50

Local clock offset: 1.863 ms

Remote clock offset: -0.9 ms

Below is generated by plot.py at 2019-01-02 22:26:10

Datalink statistics

-- Total of 1 flow:

Average throughput: 185.24 Mbit/s

95th percentile per-packet one-way delay: 8.643 ms

Loss rate: 0.32%

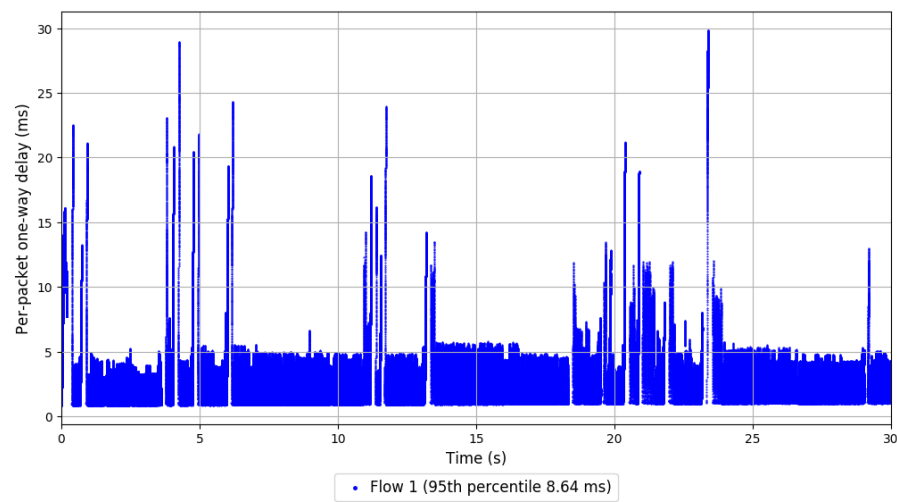
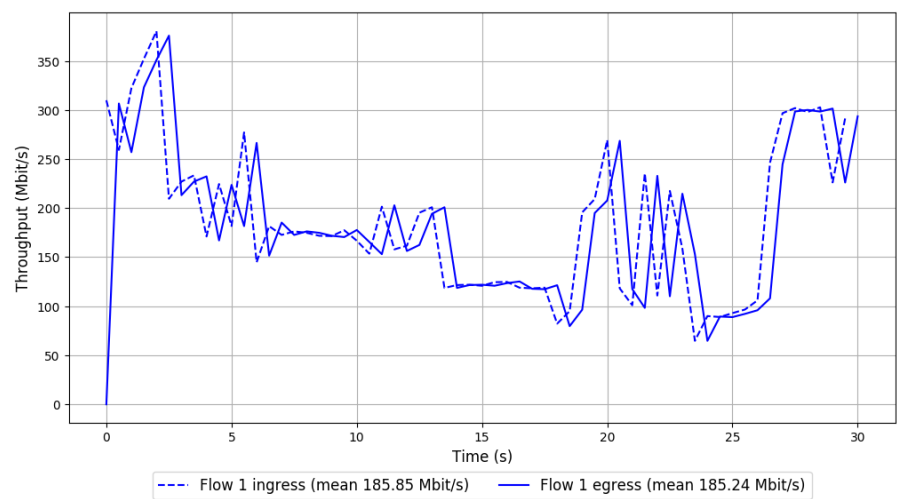
-- Flow 1:

Average throughput: 185.24 Mbit/s

95th percentile per-packet one-way delay: 8.643 ms

Loss rate: 0.32%

Run 2: Report of Verus — Data Link

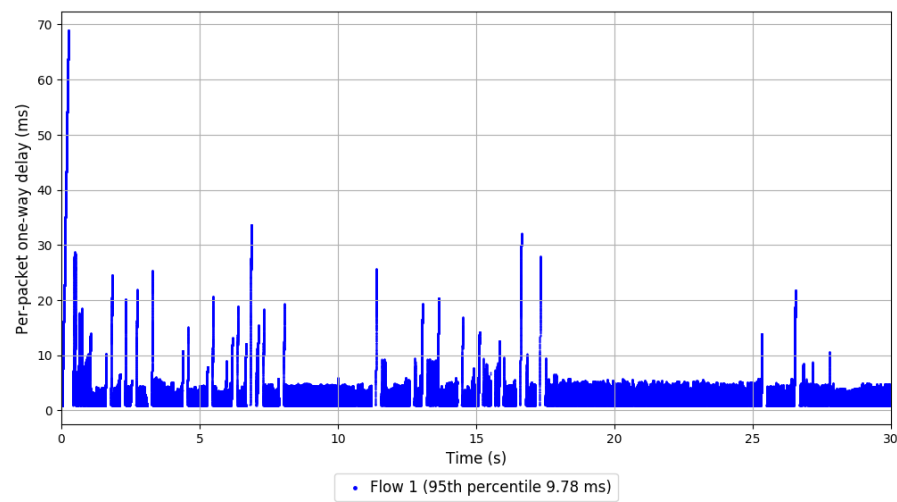
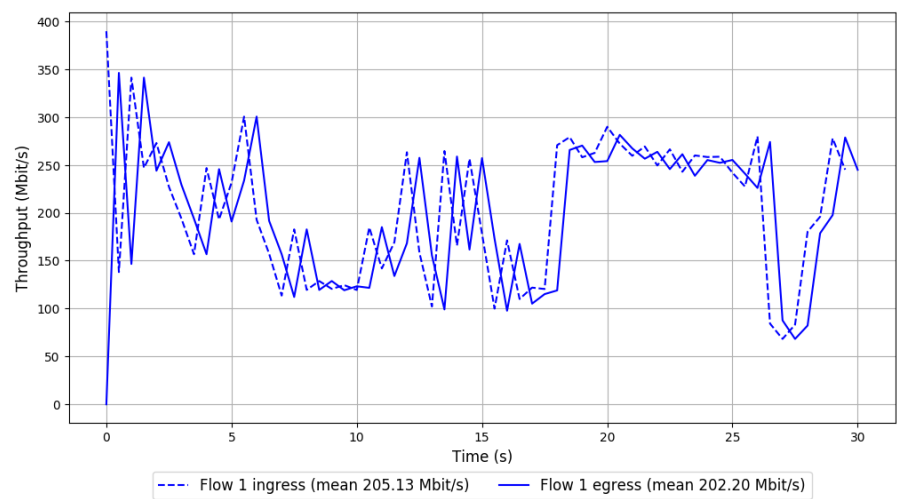


Run 3: Statistics of Verus

Start at: 2019-01-02 20:38:57
End at: 2019-01-02 20:39:27
Local clock offset: 4.302 ms
Remote clock offset: -3.522 ms

Below is generated by plot.py at 2019-01-02 22:26:10
Datalink statistics
-- Total of 1 flow:
Average throughput: 202.20 Mbit/s
95th percentile per-packet one-way delay: 9.783 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 202.20 Mbit/s
95th percentile per-packet one-way delay: 9.783 ms
Loss rate: 1.43%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2019-01-02 21:05:27

End at: 2019-01-02 21:05:57

Local clock offset: -0.617 ms

Remote clock offset: 0.905 ms

Below is generated by plot.py at 2019-01-02 22:28:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 570.23 Mbit/s

95th percentile per-packet one-way delay: 90.766 ms

Loss rate: 0.32%

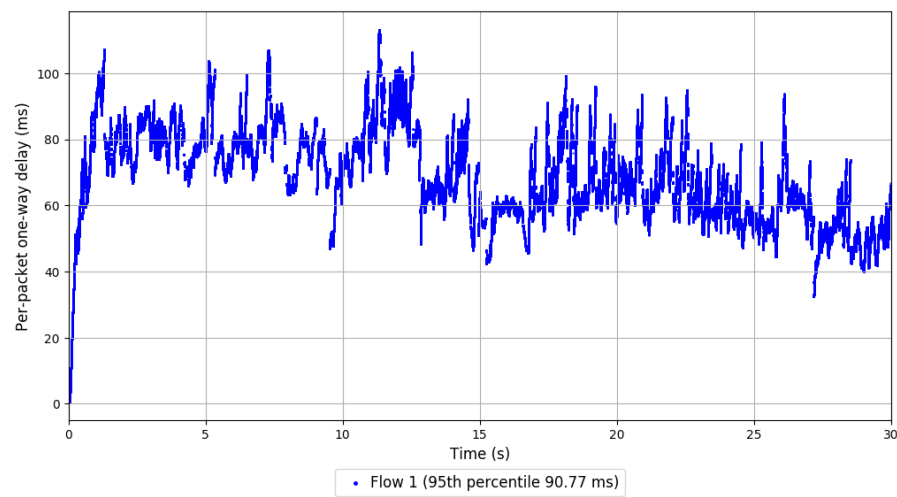
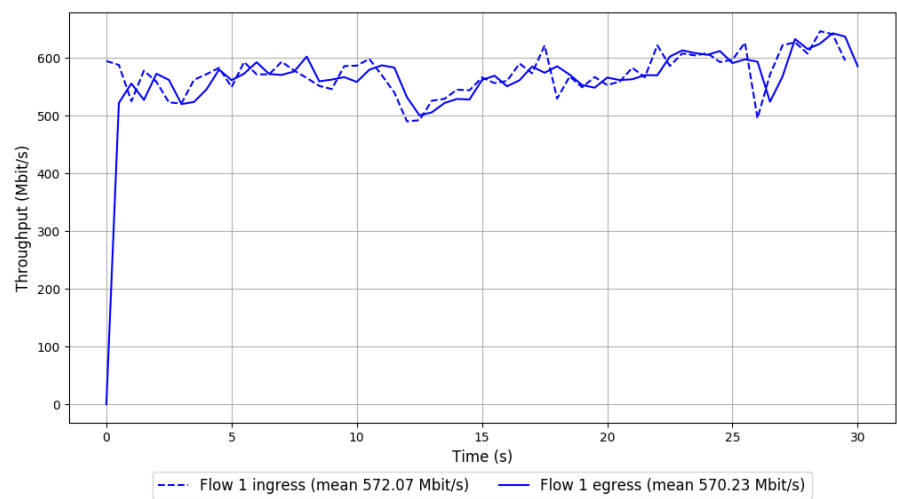
-- Flow 1:

Average throughput: 570.23 Mbit/s

95th percentile per-packet one-way delay: 90.766 ms

Loss rate: 0.32%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2019-01-02 21:32:04

End at: 2019-01-02 21:32:34

Local clock offset: -2.967 ms

Remote clock offset: 3.616 ms

Below is generated by plot.py at 2019-01-02 22:28:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 184.74 Mbit/s

95th percentile per-packet one-way delay: 6.785 ms

Loss rate: 0.76%

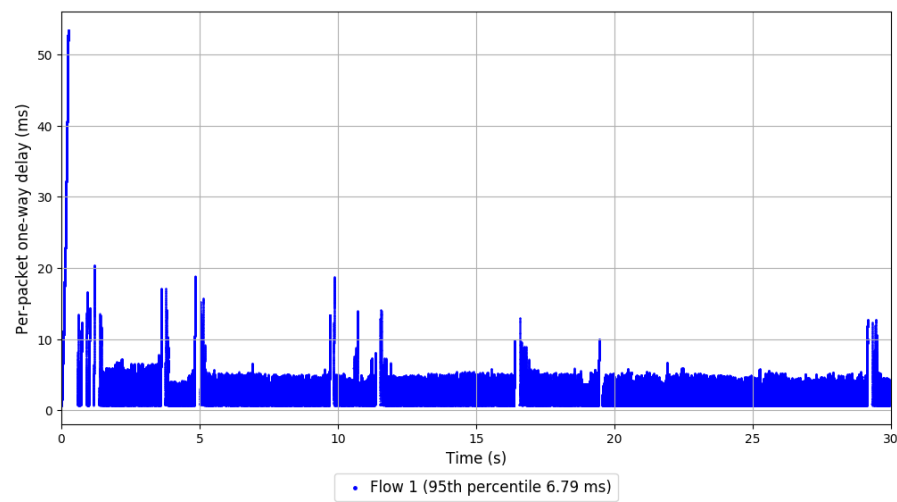
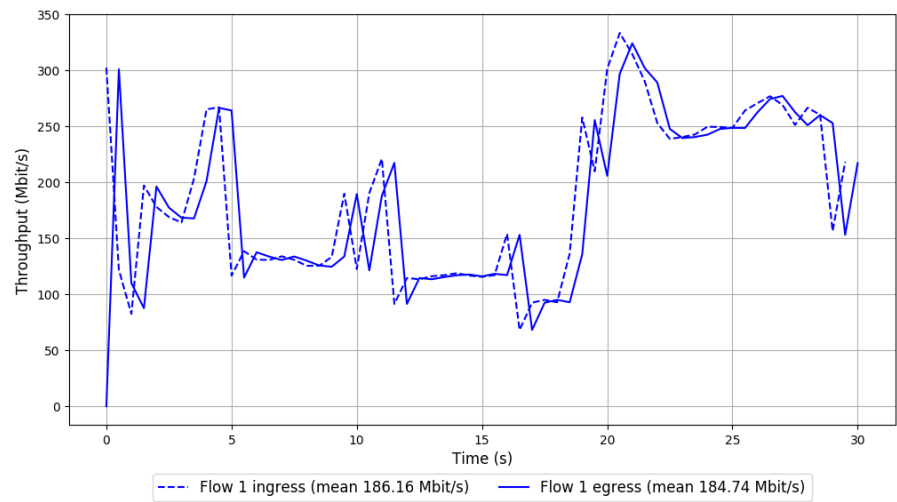
-- Flow 1:

Average throughput: 184.74 Mbit/s

95th percentile per-packet one-way delay: 6.785 ms

Loss rate: 0.76%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2019-01-02 19:31:28

End at: 2019-01-02 19:31:58

Local clock offset: 2.118 ms

Remote clock offset: -5.597 ms

Below is generated by plot.py at 2019-01-02 22:28:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 327.72 Mbit/s

95th percentile per-packet one-way delay: 98.344 ms

Loss rate: 0.14%

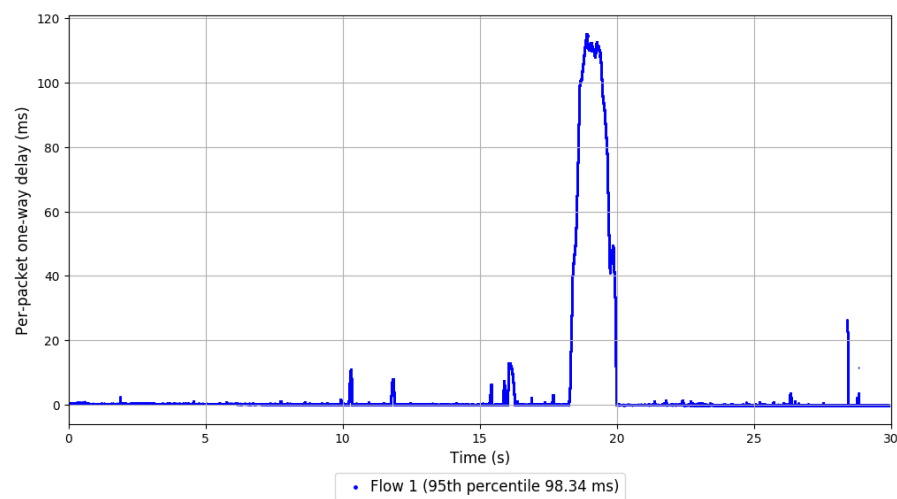
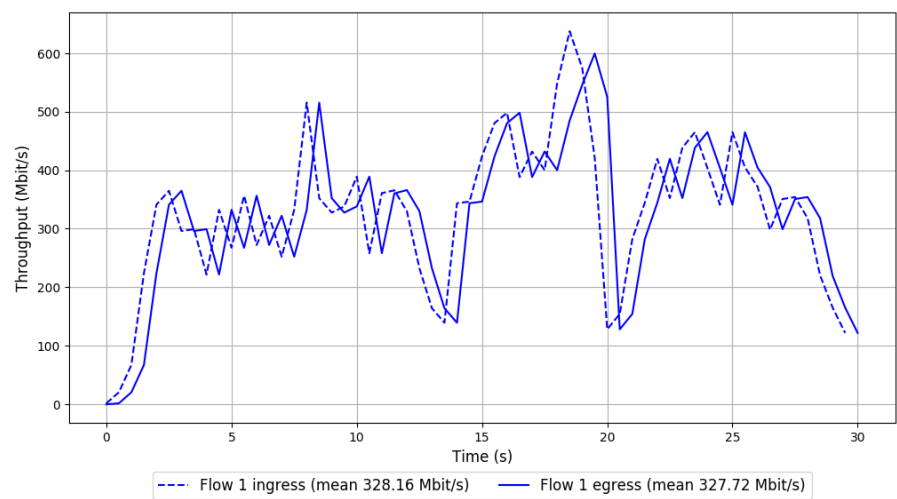
-- Flow 1:

Average throughput: 327.72 Mbit/s

95th percentile per-packet one-way delay: 98.344 ms

Loss rate: 0.14%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2019-01-02 19:57:58

End at: 2019-01-02 19:58:28

Local clock offset: 0.311 ms

Remote clock offset: 1.499 ms

Below is generated by plot.py at 2019-01-02 22:28:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 355.74 Mbit/s

95th percentile per-packet one-way delay: 10.428 ms

Loss rate: 0.00%

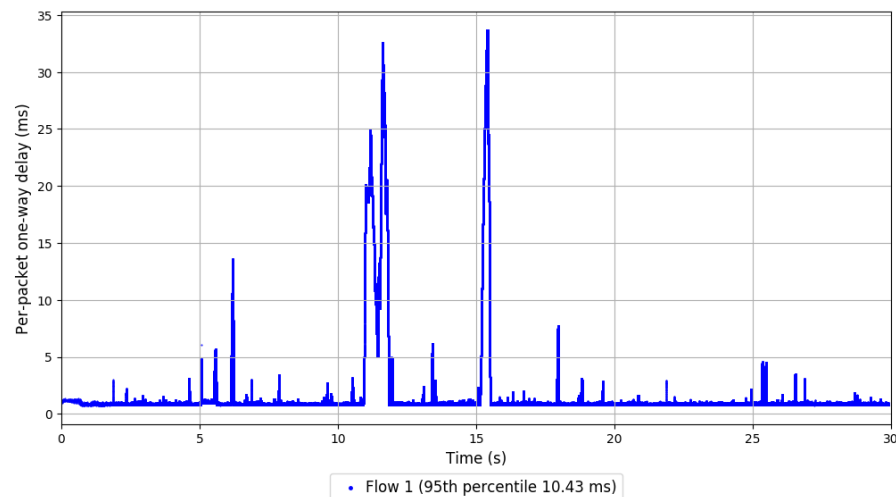
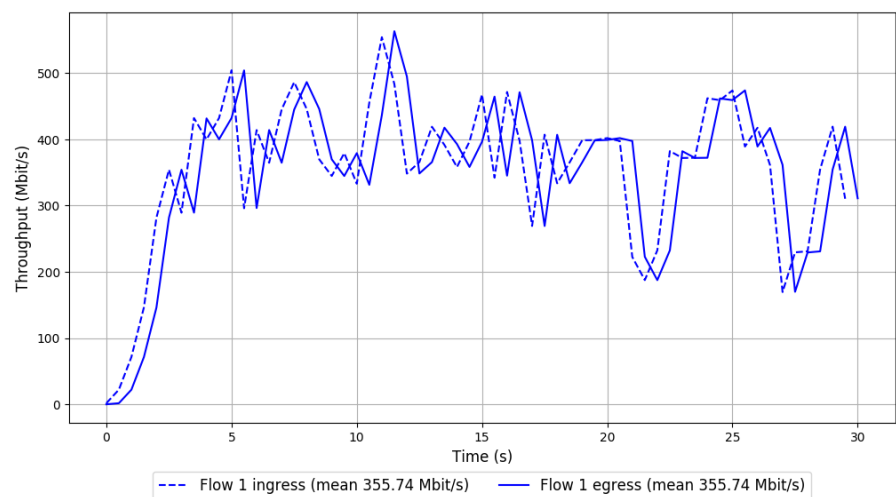
-- Flow 1:

Average throughput: 355.74 Mbit/s

95th percentile per-packet one-way delay: 10.428 ms

Loss rate: 0.00%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2019-01-02 20:24:28

End at: 2019-01-02 20:24:58

Local clock offset: 2.927 ms

Remote clock offset: -2.738 ms

Below is generated by plot.py at 2019-01-02 22:28:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 339.00 Mbit/s

95th percentile per-packet one-way delay: 1.355 ms

Loss rate: 0.01%

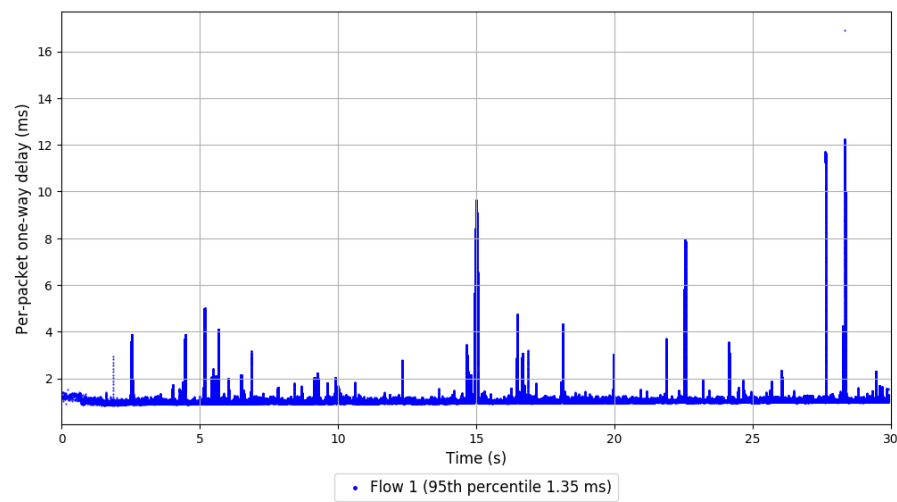
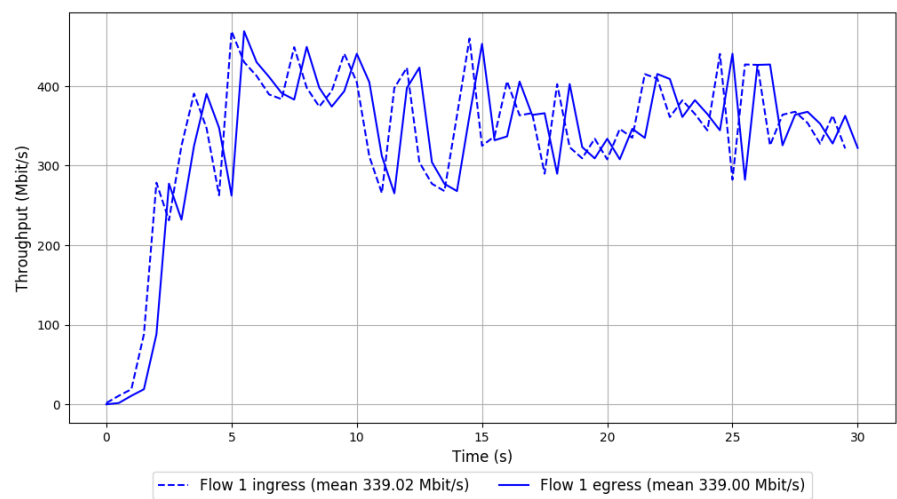
-- Flow 1:

Average throughput: 339.00 Mbit/s

95th percentile per-packet one-way delay: 1.355 ms

Loss rate: 0.01%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2019-01-02 20:51:04

End at: 2019-01-02 20:51:34

Local clock offset: 5.443 ms

Remote clock offset: -0.513 ms

Below is generated by plot.py at 2019-01-02 22:28:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 322.40 Mbit/s

95th percentile per-packet one-way delay: 2.221 ms

Loss rate: 0.00%

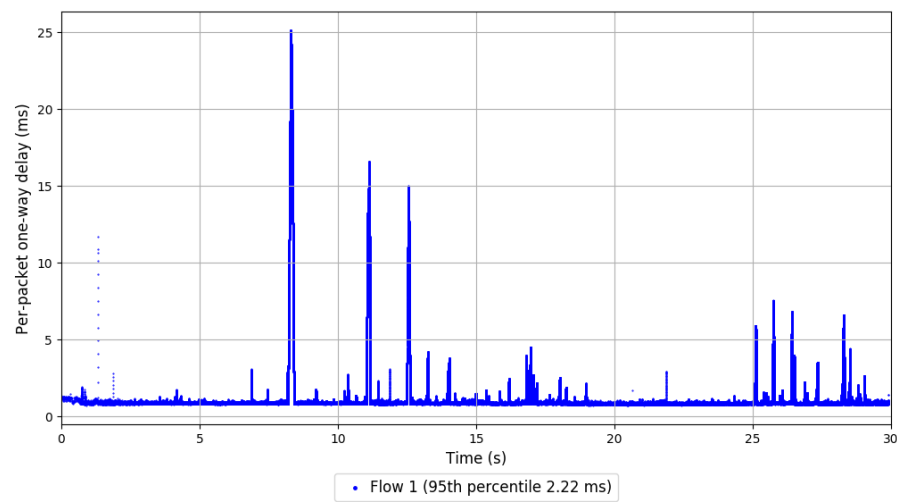
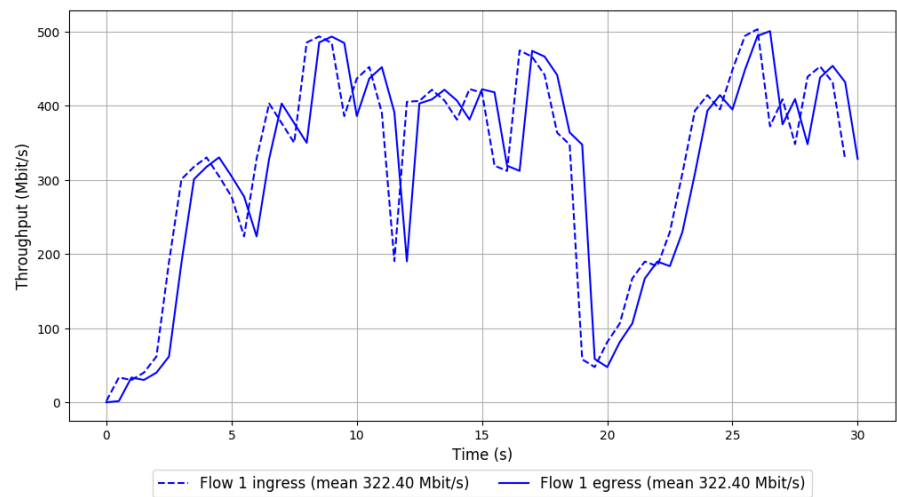
-- Flow 1:

Average throughput: 322.40 Mbit/s

95th percentile per-packet one-way delay: 2.221 ms

Loss rate: 0.00%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2019-01-02 21:17:39

End at: 2019-01-02 21:18:09

Local clock offset: -2.778 ms

Remote clock offset: 2.108 ms

Below is generated by plot.py at 2019-01-02 22:28:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 309.11 Mbit/s

95th percentile per-packet one-way delay: 1.252 ms

Loss rate: 0.00%

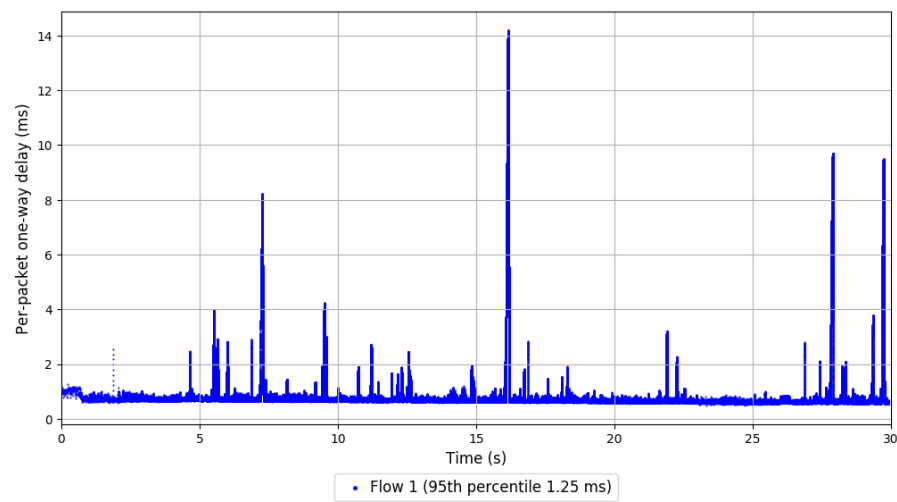
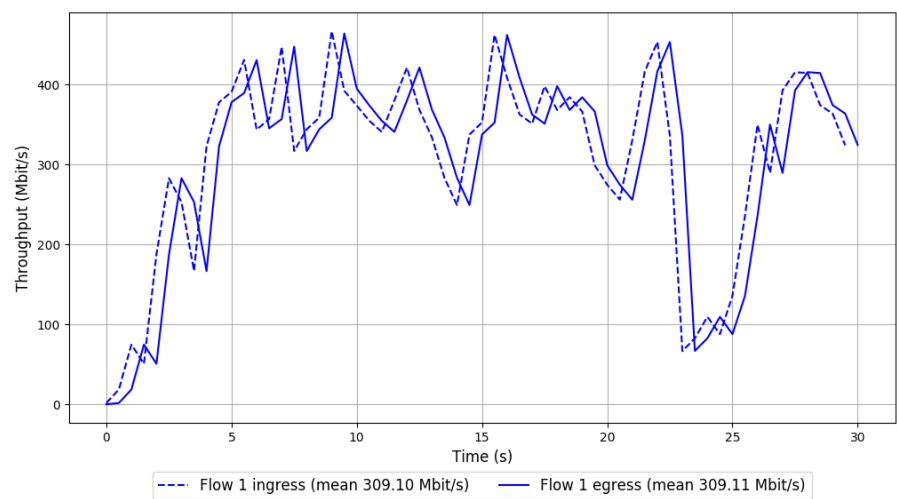
-- Flow 1:

Average throughput: 309.11 Mbit/s

95th percentile per-packet one-way delay: 1.252 ms

Loss rate: 0.00%

Run 5: Report of PCC-Vivace — Data Link

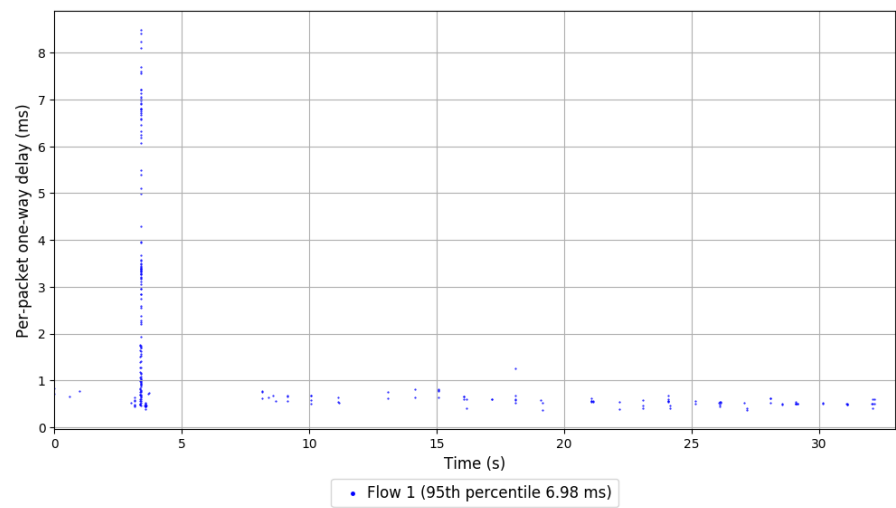
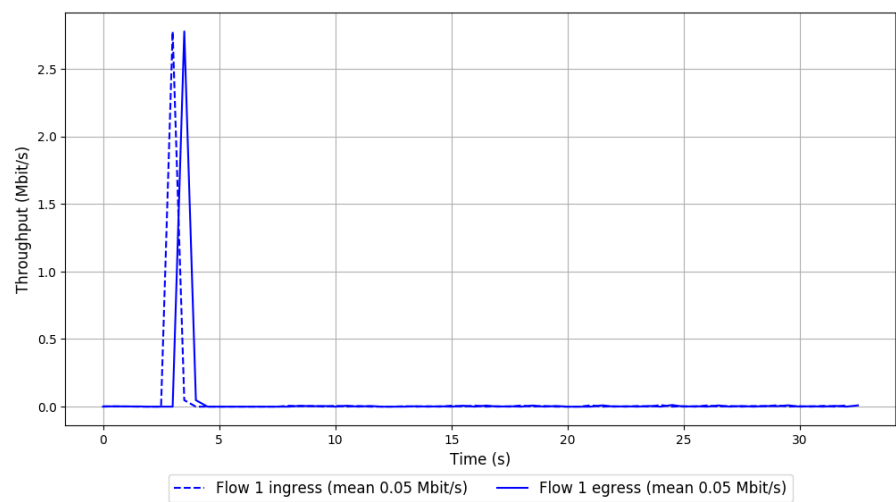


Run 1: Statistics of WebRTC media

Start at: 2019-01-02 19:30:15
End at: 2019-01-02 19:30:45
Local clock offset: 2.743 ms
Remote clock offset: -5.655 ms

Below is generated by plot.py at 2019-01-02 22:28:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 6.977 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 6.977 ms
Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2019-01-02 19:56:46

End at: 2019-01-02 19:57:16

Local clock offset: 0.197 ms

Remote clock offset: 1.386 ms

Below is generated by plot.py at 2019-01-02 22:28:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 3.703 ms

Loss rate: 0.00%

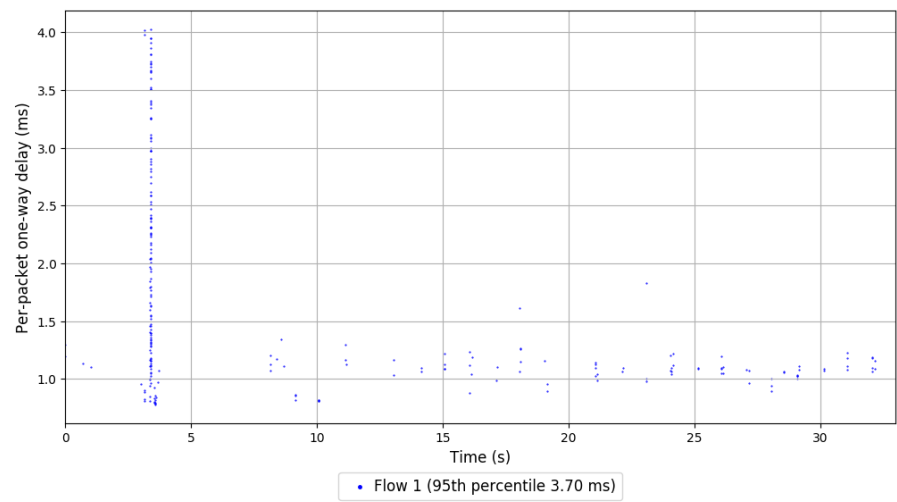
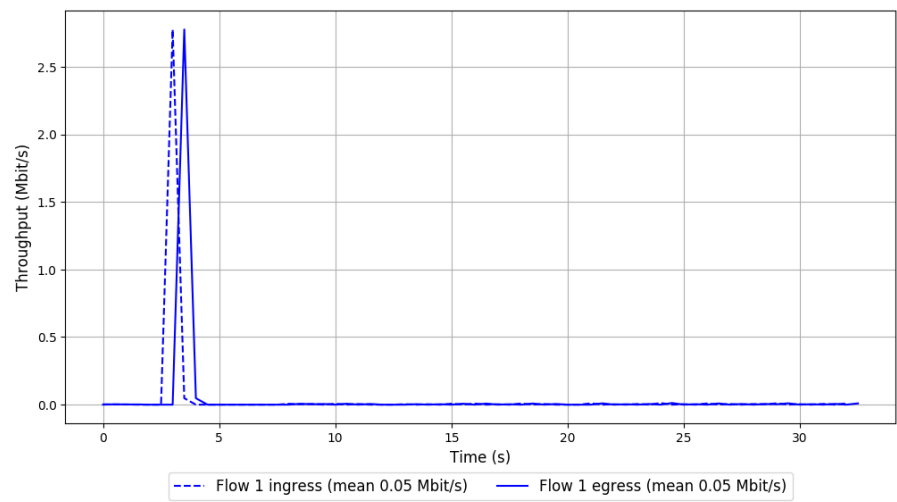
-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 3.703 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link

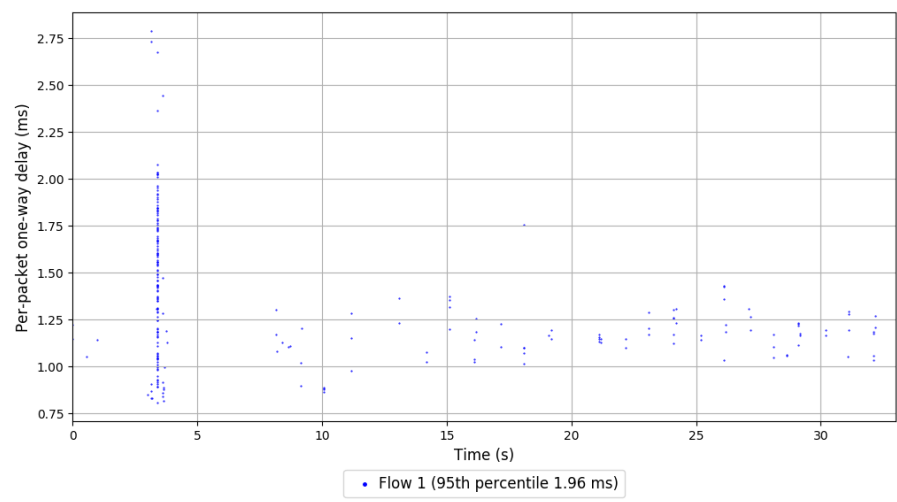
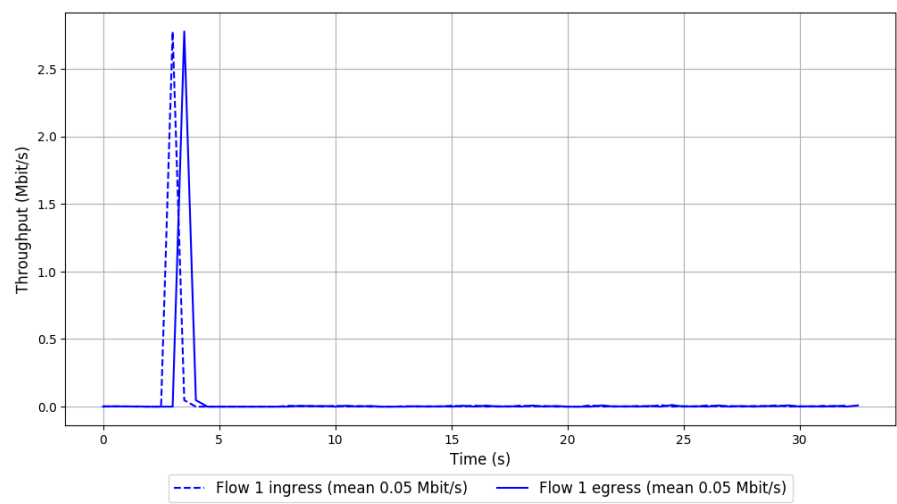


Run 3: Statistics of WebRTC media

Start at: 2019-01-02 20:23:16
End at: 2019-01-02 20:23:46
Local clock offset: 2.829 ms
Remote clock offset: -2.693 ms

Below is generated by plot.py at 2019-01-02 22:28:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.964 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.964 ms
Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

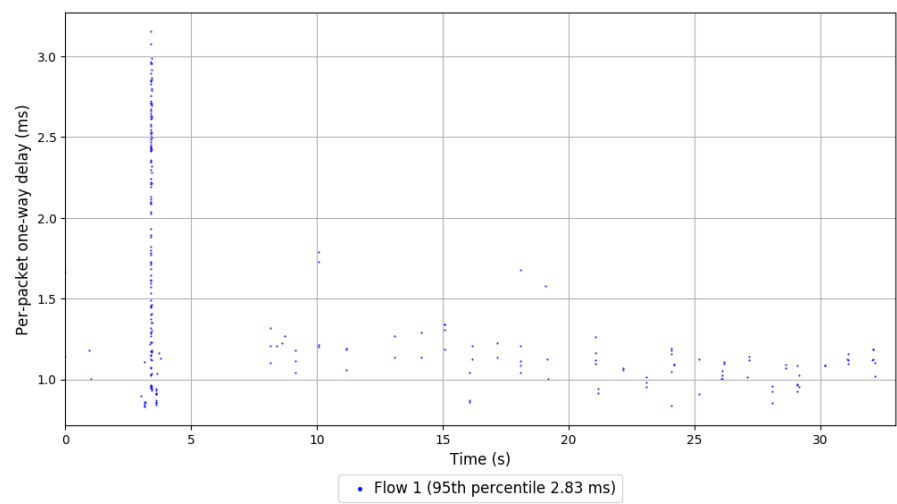
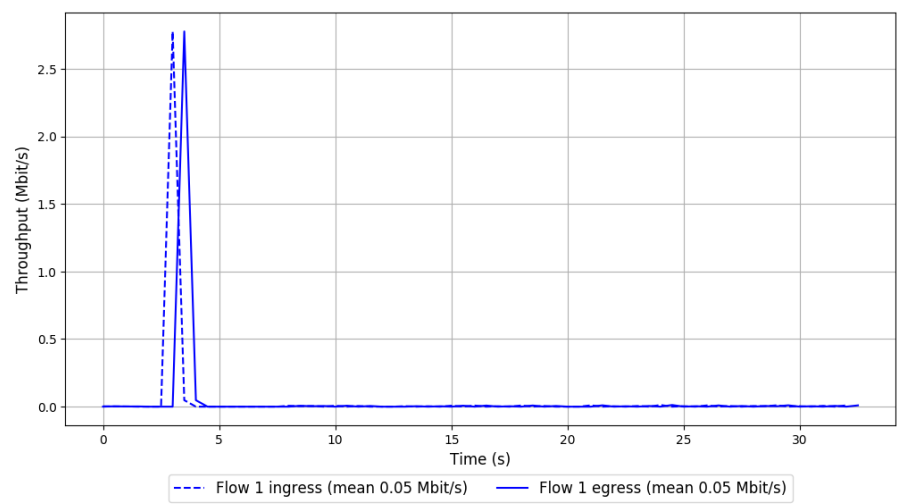


Run 4: Statistics of WebRTC media

Start at: 2019-01-02 20:49:51
End at: 2019-01-02 20:50:21
Local clock offset: 5.348 ms
Remote clock offset: -0.633 ms

Below is generated by plot.py at 2019-01-02 22:28:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 2.828 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 2.828 ms
Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2019-01-02 21:16:27

End at: 2019-01-02 21:16:57

Local clock offset: -2.651 ms

Remote clock offset: 1.925 ms

Below is generated by plot.py at 2019-01-02 22:28:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 3.607 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 3.607 ms

Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

