

Pantheon Report

Generated at 2018-05-30 08:13:21 (UTC).

Data path: AWS Brazil 2 Ethernet (*local*) → Colombia ppp0 ppp0 (*remote*).

Repeated the test of 16 congestion control schemes 3 times.

Each test lasted for 30 seconds running 1 flow.

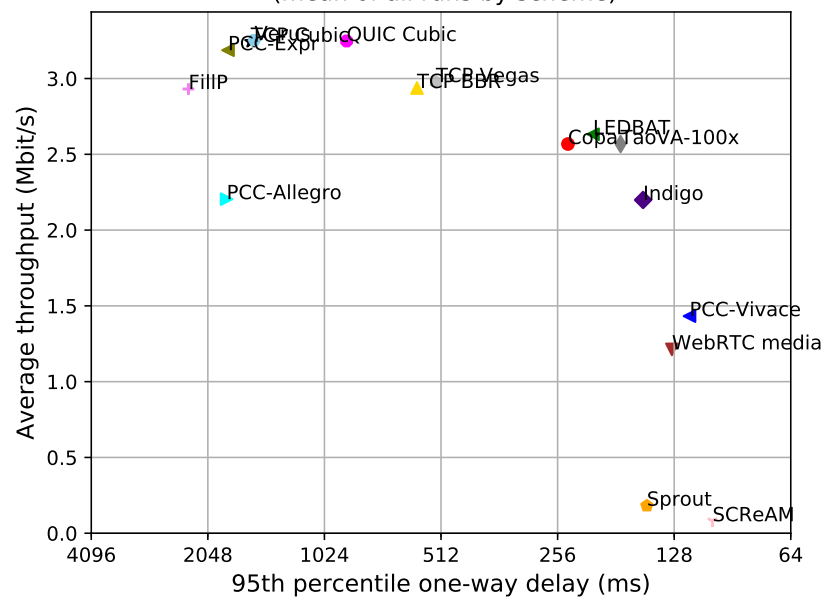
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

NTP offsets were measured against `gps.ntp.br` and have been applied to correct the timestamps in logs.

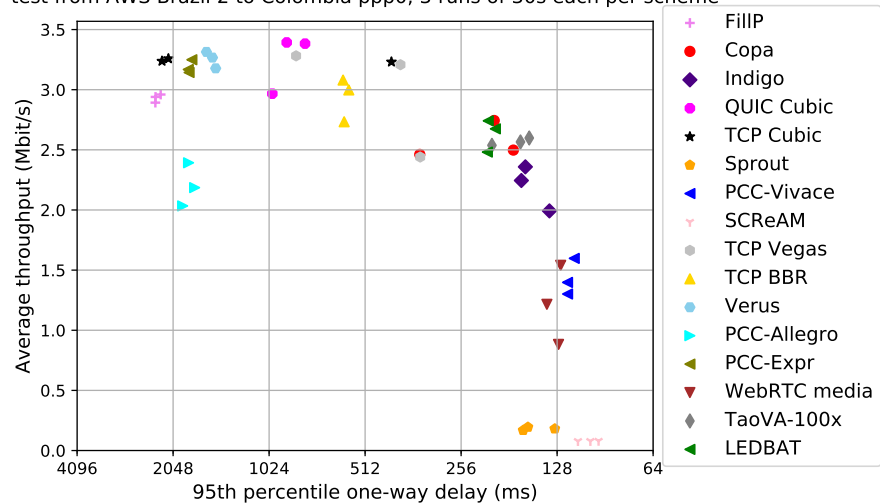
Git summary:

```
branch: master @ 227fdf9a3757f17b88537cceed5743a33037a3d2
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/genericCC @ c7966e494a929986eaa5a9c169a7f381fe1bbbe5
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ 6f038ed31259d366f9840f65b82cbe8f464b1b39
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-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ c838669682f0c19f6baf92afc9a596a406d48c1f
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 Brazil 2 to Colombia ppp0, 3 runs of 30s each per scheme
(mean of all runs by scheme)



test from AWS Brazil 2 to Colombia ppp0, 3 runs of 30s each per scheme



scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	3	2.94	590.66	1.17
Copa	3	2.57	240.73	0.12
TCP Cubic	3	3.24	1587.04	5.91
FillP	3	2.93	2297.76	68.82
Indigo	3	2.20	153.99	0.10
LEDBAT	3	2.63	207.44	0.36
PCC-Allegro	3	2.20	1831.73	38.11
PCC-Expr	3	3.19	1816.80	45.44
QUIC Cubic	3	3.25	897.42	2.96
SCReAM	3	0.08	101.90	0.09
Sprout	3	0.18	150.60	0.01
TaoVA-100x	3	2.57	176.07	0.14
TCP Vegas	3	2.98	527.85	0.78
Verus	3	3.25	1552.33	2.45
PCC-Vivace	3	1.43	116.86	0.93
WebRTC media	3	1.21	129.76	0.16

Run 1: Statistics of TCP BBR

Start at: 2018-05-30 07:30:14

End at: 2018-05-30 07:30:44

Local clock offset: 3.099 ms

Remote clock offset: 3.784 ms

Below is generated by plot.py at 2018-05-30 08:12:43

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.73 Mbit/s

95th percentile per-packet one-way delay: 595.629 ms

Loss rate: 1.21%

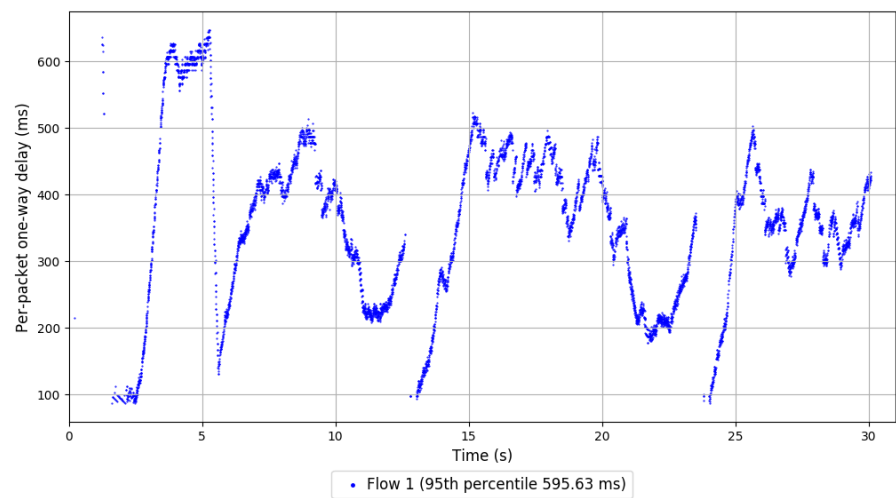
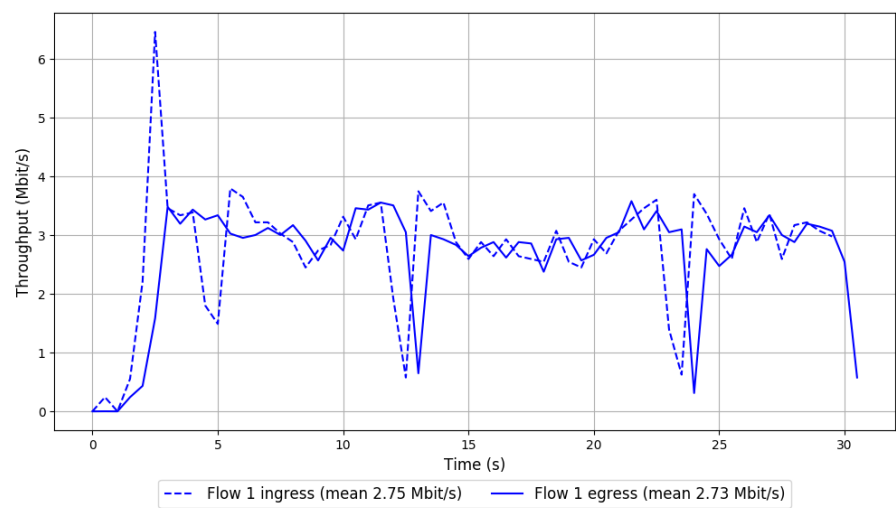
-- Flow 1:

Average throughput: 2.73 Mbit/s

95th percentile per-packet one-way delay: 595.629 ms

Loss rate: 1.21%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-05-30 07:48:16

End at: 2018-05-30 07:48:46

Local clock offset: -3.468 ms

Remote clock offset: 8.796 ms

Below is generated by plot.py at 2018-05-30 08:12:45

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.08 Mbit/s

95th percentile per-packet one-way delay: 600.326 ms

Loss rate: 1.11%

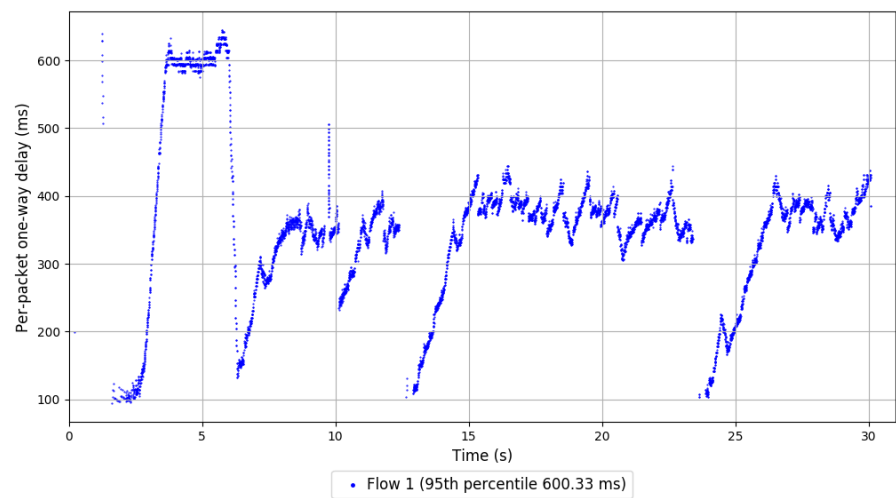
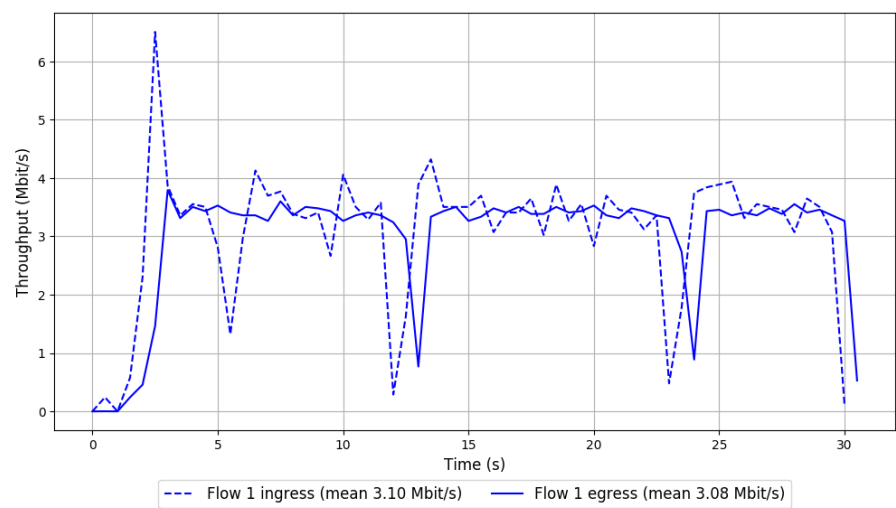
-- Flow 1:

Average throughput: 3.08 Mbit/s

95th percentile per-packet one-way delay: 600.326 ms

Loss rate: 1.11%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-05-30 08:06:18

End at: 2018-05-30 08:06:48

Local clock offset: -3.991 ms

Remote clock offset: 3.782 ms

Below is generated by plot.py at 2018-05-30 08:12:45

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.00 Mbit/s

95th percentile per-packet one-way delay: 576.022 ms

Loss rate: 1.18%

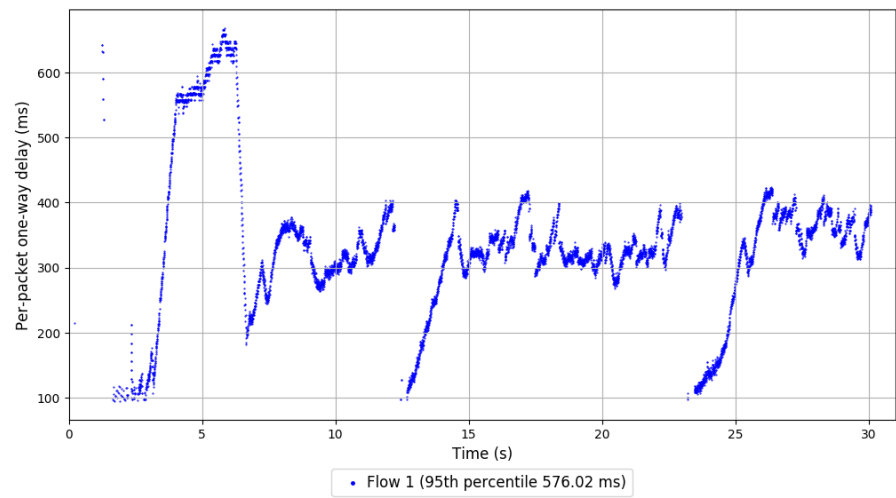
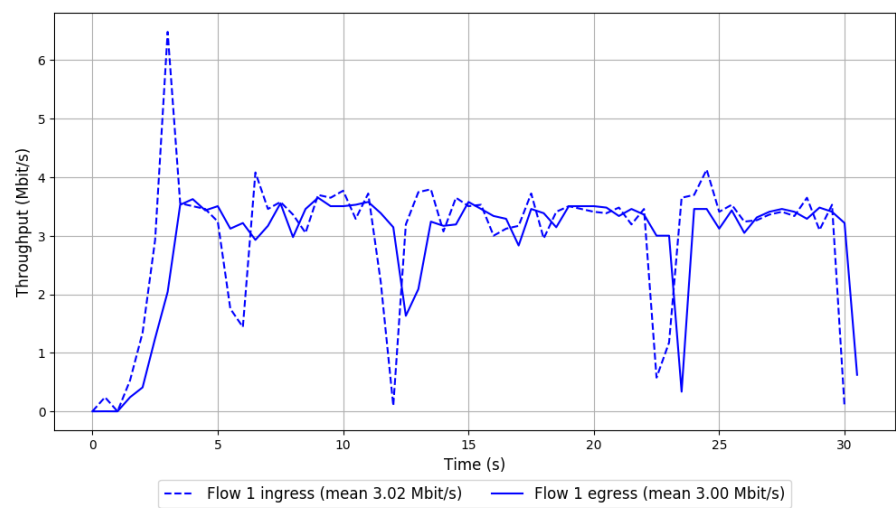
-- Flow 1:

Average throughput: 3.00 Mbit/s

95th percentile per-packet one-way delay: 576.022 ms

Loss rate: 1.18%

Run 3: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2018-05-30 07:24:37

End at: 2018-05-30 07:25:07

Local clock offset: 3.403 ms

Remote clock offset: 8.708 ms

Below is generated by plot.py at 2018-05-30 08:12:48

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.74 Mbit/s

95th percentile per-packet one-way delay: 201.580 ms

Loss rate: 0.14%

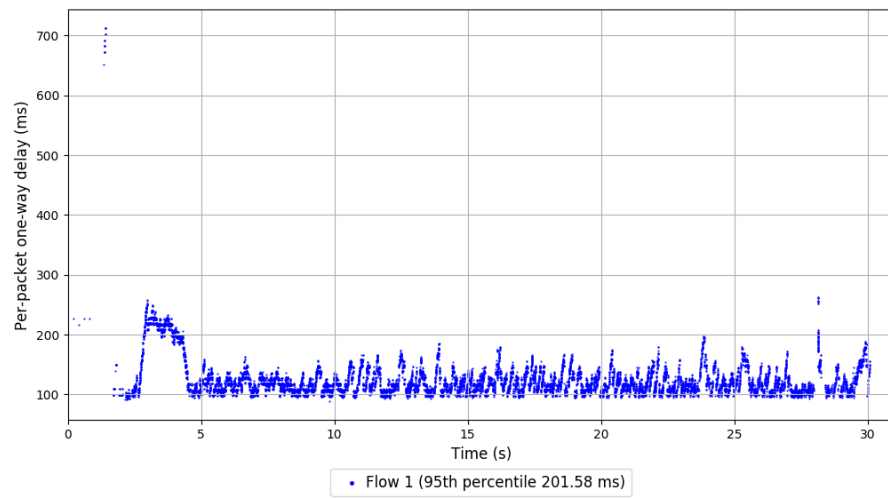
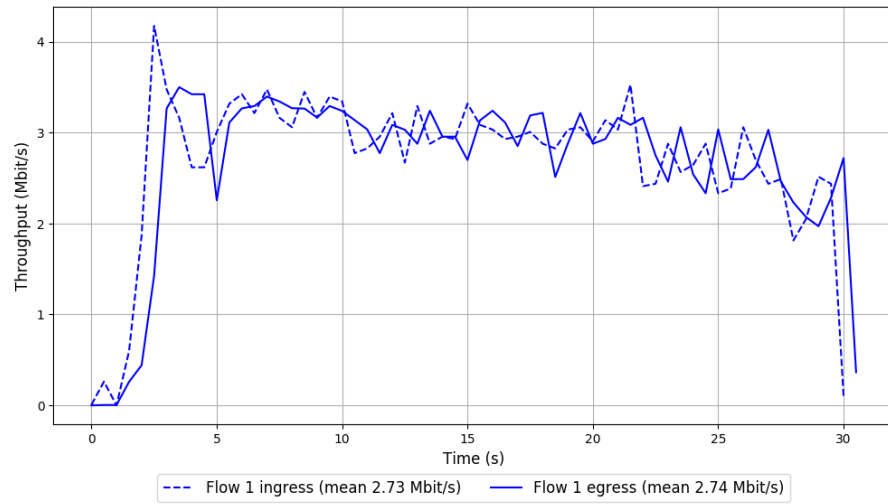
-- Flow 1:

Average throughput: 2.74 Mbit/s

95th percentile per-packet one-way delay: 201.580 ms

Loss rate: 0.14%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-05-30 07:42:39

End at: 2018-05-30 07:43:09

Local clock offset: -1.258 ms

Remote clock offset: 8.701 ms

Below is generated by plot.py at 2018-05-30 08:12:48

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.46 Mbit/s

95th percentile per-packet one-way delay: 345.070 ms

Loss rate: 0.23%

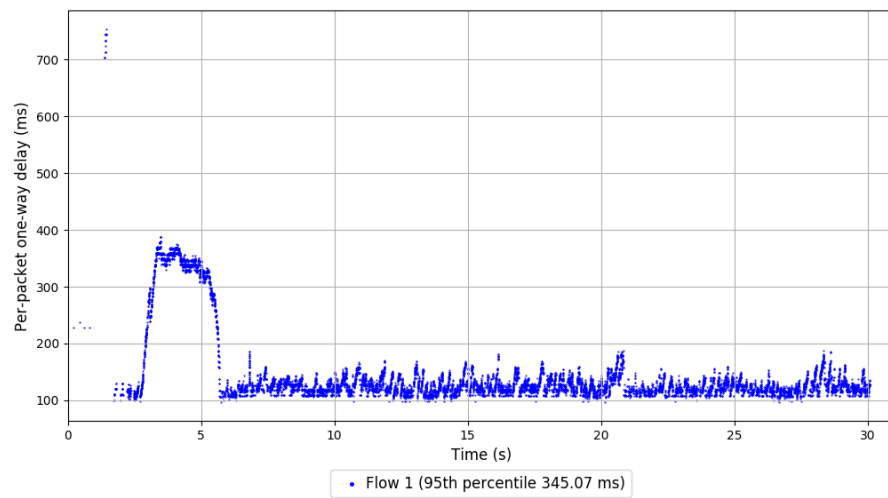
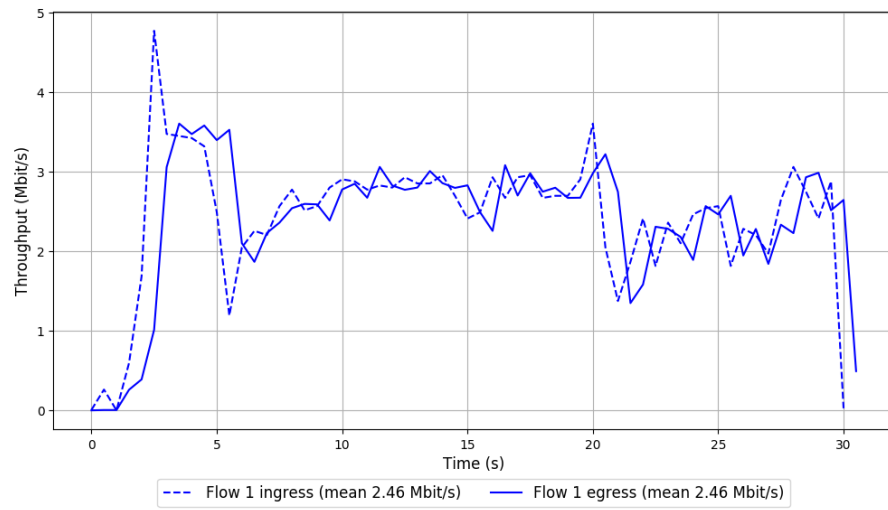
-- Flow 1:

Average throughput: 2.46 Mbit/s

95th percentile per-packet one-way delay: 345.070 ms

Loss rate: 0.23%

Run 2: Report of Copa — Data Link

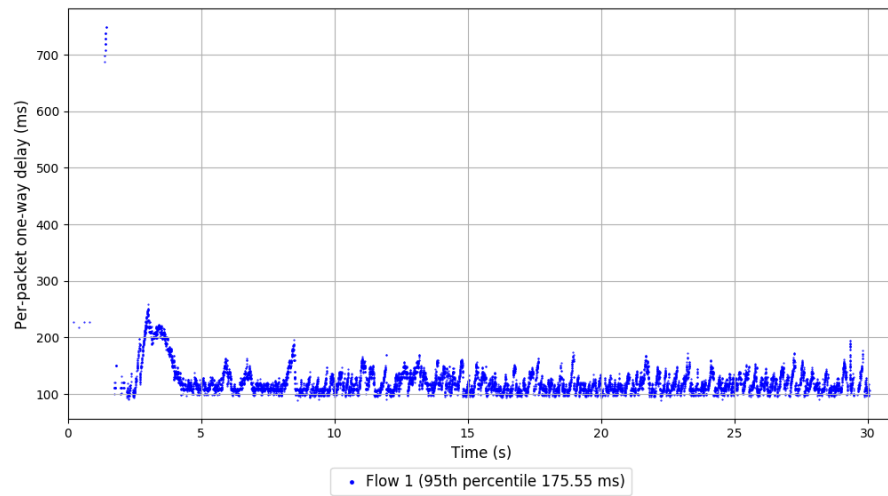
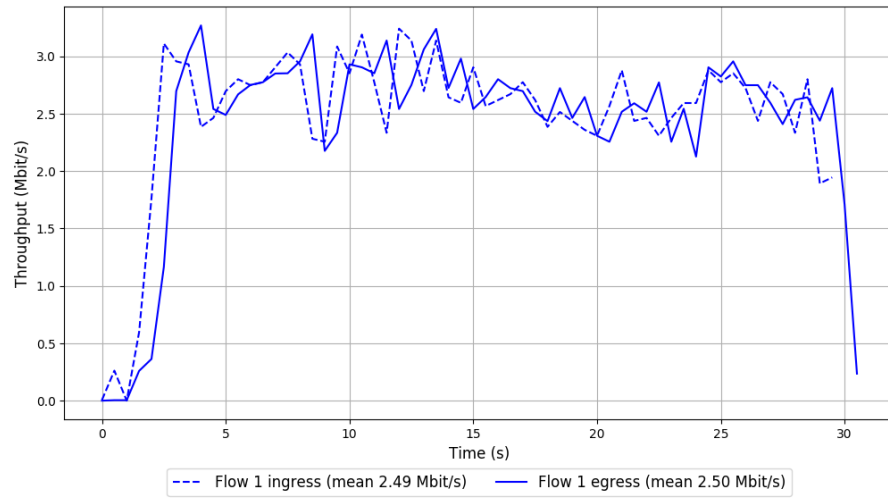


Run 3: Statistics of Copa

Start at: 2018-05-30 08:00:40
End at: 2018-05-30 08:01:10
Local clock offset: -4.708 ms
Remote clock offset: 8.612 ms

Below is generated by plot.py at 2018-05-30 08:12:48
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.50 Mbit/s
95th percentile per-packet one-way delay: 175.552 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.50 Mbit/s
95th percentile per-packet one-way delay: 175.552 ms
Loss rate: 0.00%

Run 3: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-05-30 07:21:14

End at: 2018-05-30 07:21:44

Local clock offset: 3.474 ms

Remote clock offset: 3.699 ms

Below is generated by plot.py at 2018-05-30 08:12:48

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.26 Mbit/s

95th percentile per-packet one-way delay: 2118.458 ms

Loss rate: 6.18%

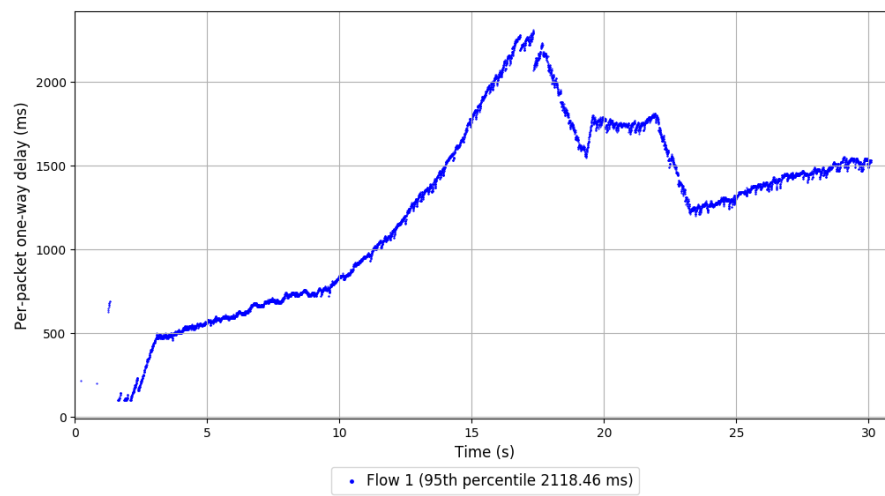
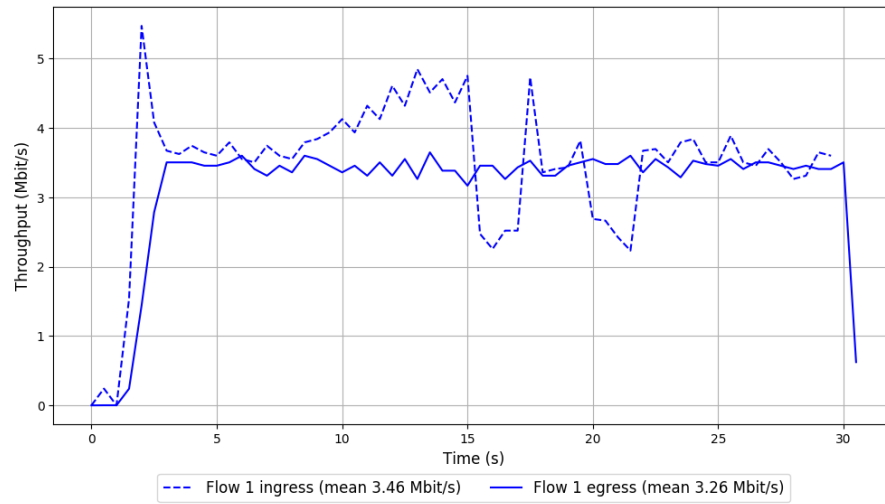
-- Flow 1:

Average throughput: 3.26 Mbit/s

95th percentile per-packet one-way delay: 2118.458 ms

Loss rate: 6.18%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-05-30 07:39:16

End at: 2018-05-30 07:39:46

Local clock offset: 1.103 ms

Remote clock offset: 8.714 ms

Below is generated by plot.py at 2018-05-30 08:12:48

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.24 Mbit/s

95th percentile per-packet one-way delay: 2219.293 ms

Loss rate: 10.20%

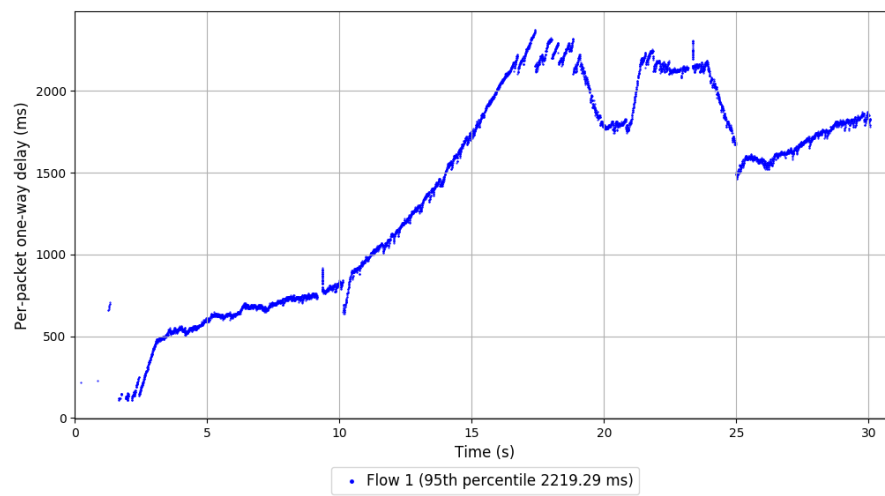
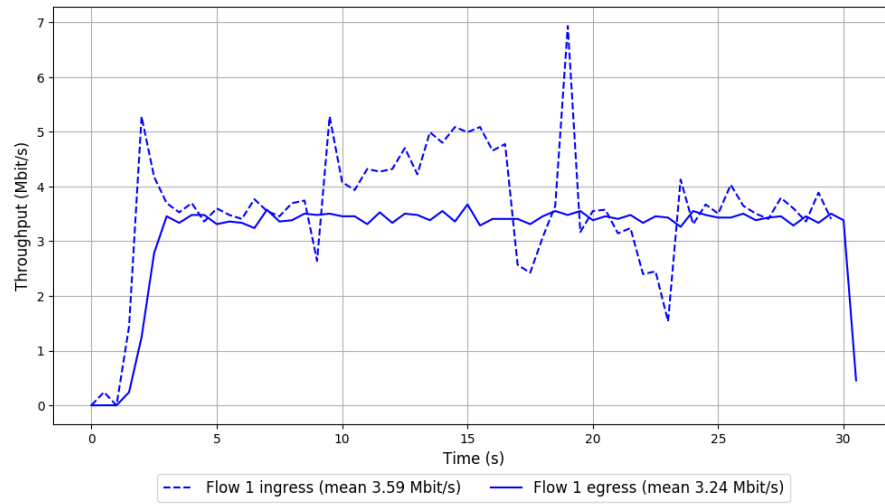
-- Flow 1:

Average throughput: 3.24 Mbit/s

95th percentile per-packet one-way delay: 2219.293 ms

Loss rate: 10.20%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-05-30 07:57:17

End at: 2018-05-30 07:57:47

Local clock offset: -3.841 ms

Remote clock offset: 8.823 ms

Below is generated by plot.py at 2018-05-30 08:12:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.23 Mbit/s

95th percentile per-packet one-way delay: 423.359 ms

Loss rate: 1.34%

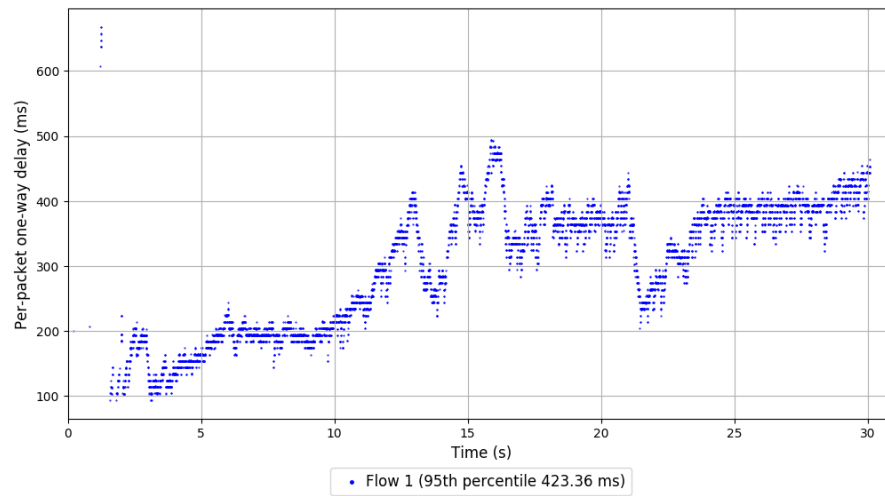
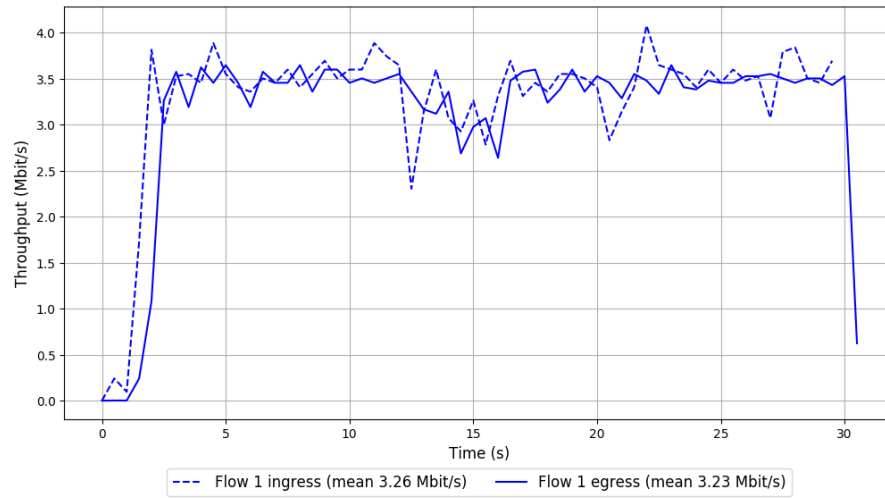
-- Flow 1:

Average throughput: 3.23 Mbit/s

95th percentile per-packet one-way delay: 423.359 ms

Loss rate: 1.34%

Run 3: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2018-05-30 07:23:29

End at: 2018-05-30 07:23:59

Local clock offset: 2.538 ms

Remote clock offset: 8.797 ms

Below is generated by plot.py at 2018-05-30 08:12:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.94 Mbit/s

95th percentile per-packet one-way delay: 2325.205 ms

Loss rate: 72.40%

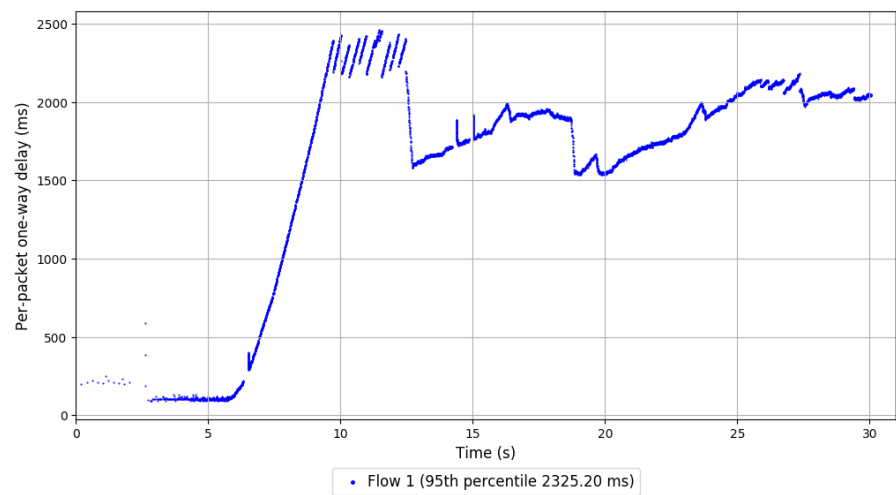
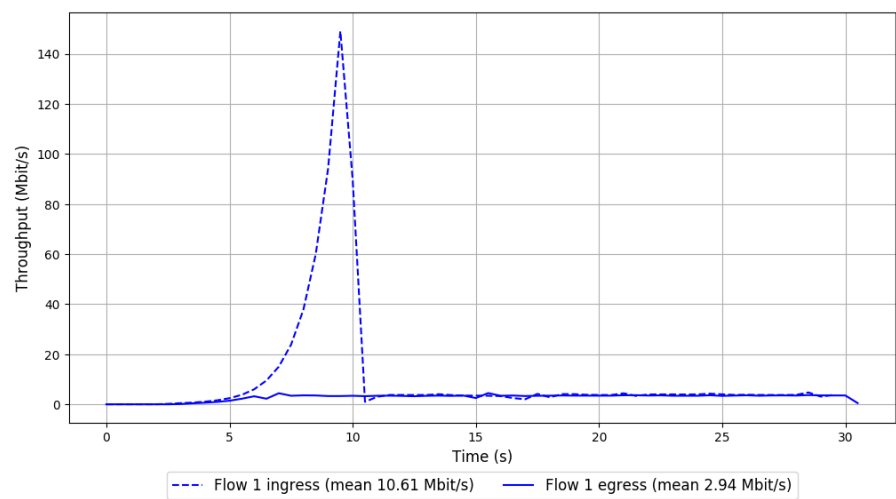
-- Flow 1:

Average throughput: 2.94 Mbit/s

95th percentile per-packet one-way delay: 2325.205 ms

Loss rate: 72.40%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-05-30 07:41:31

End at: 2018-05-30 07:42:01

Local clock offset: -0.455 ms

Remote clock offset: 8.764 ms

Below is generated by plot.py at 2018-05-30 08:12:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.96 Mbit/s

95th percentile per-packet one-way delay: 2240.095 ms

Loss rate: 64.36%

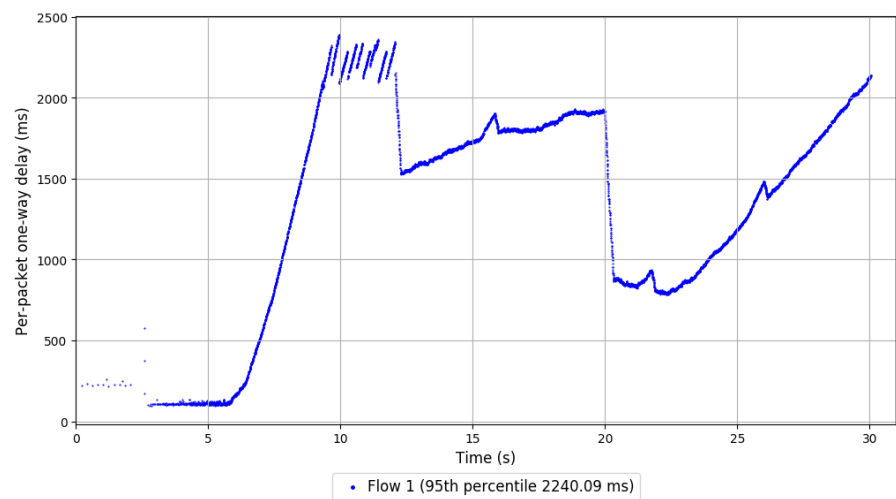
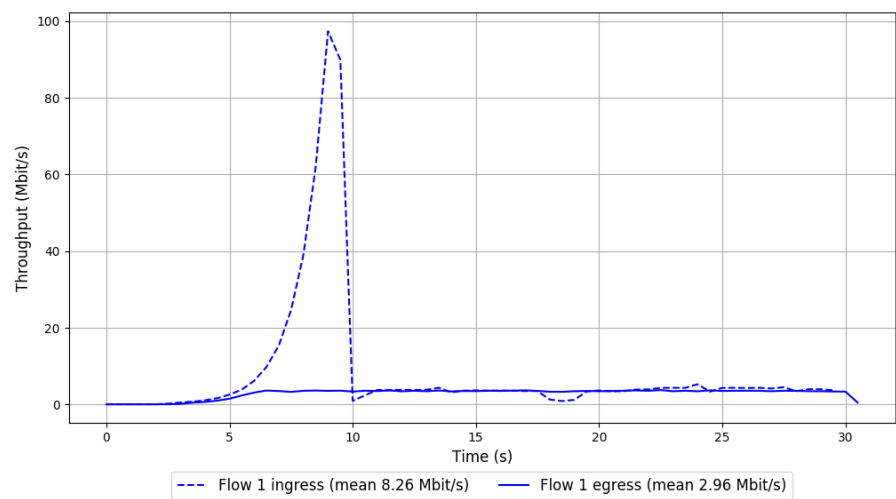
-- Flow 1:

Average throughput: 2.96 Mbit/s

95th percentile per-packet one-way delay: 2240.095 ms

Loss rate: 64.36%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-05-30 07:59:32

End at: 2018-05-30 08:00:02

Local clock offset: -5.526 ms

Remote clock offset: 3.827 ms

Below is generated by plot.py at 2018-05-30 08:12:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.89 Mbit/s

95th percentile per-packet one-way delay: 2327.974 ms

Loss rate: 69.71%

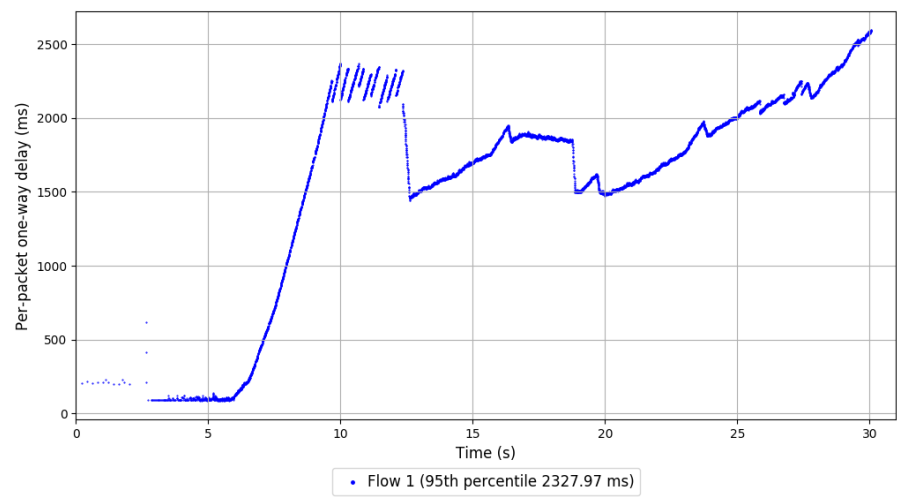
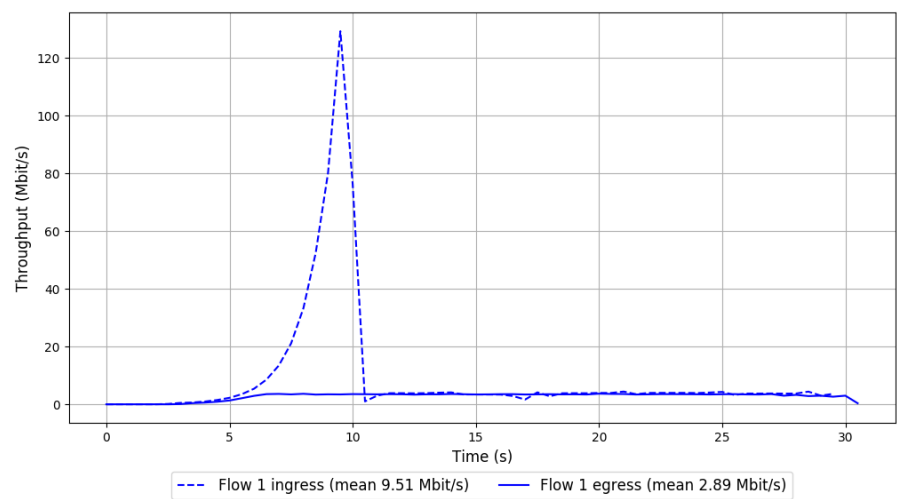
-- Flow 1:

Average throughput: 2.89 Mbit/s

95th percentile per-packet one-way delay: 2327.974 ms

Loss rate: 69.71%

Run 3: Report of FillP — Data Link



Run 1: Statistics of Indigo

Start at: 2018-05-30 07:20:06

End at: 2018-05-30 07:20:36

Local clock offset: 2.728 ms

Remote clock offset: 8.686 ms

Below is generated by plot.py at 2018-05-30 08:12:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.25 Mbit/s

95th percentile per-packet one-way delay: 165.698 ms

Loss rate: 0.00%

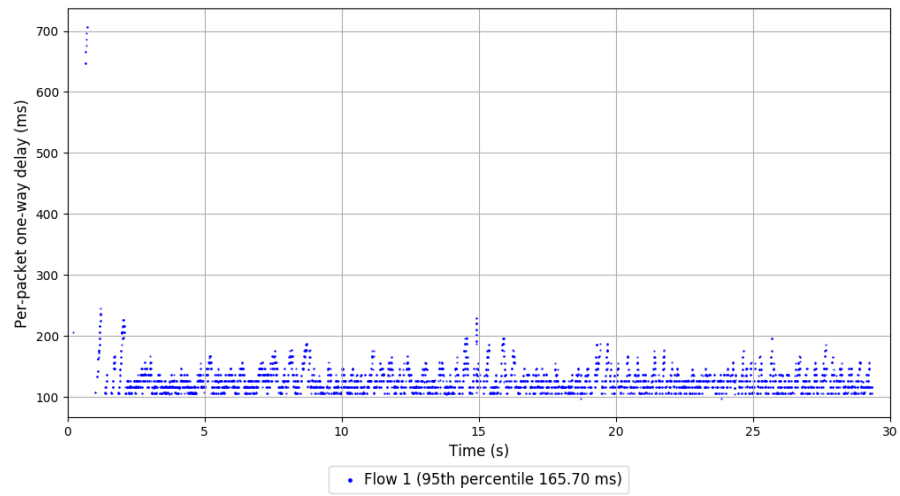
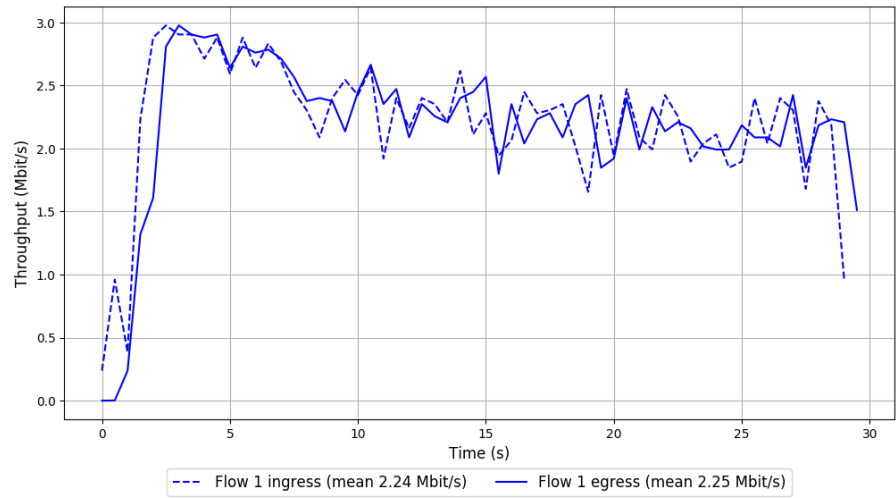
-- Flow 1:

Average throughput: 2.25 Mbit/s

95th percentile per-packet one-way delay: 165.698 ms

Loss rate: 0.00%

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2018-05-30 07:38:08

End at: 2018-05-30 07:38:38

Local clock offset: 1.35 ms

Remote clock offset: 3.793 ms

Below is generated by plot.py at 2018-05-30 08:12:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.36 Mbit/s

95th percentile per-packet one-way delay: 160.982 ms

Loss rate: 0.14%

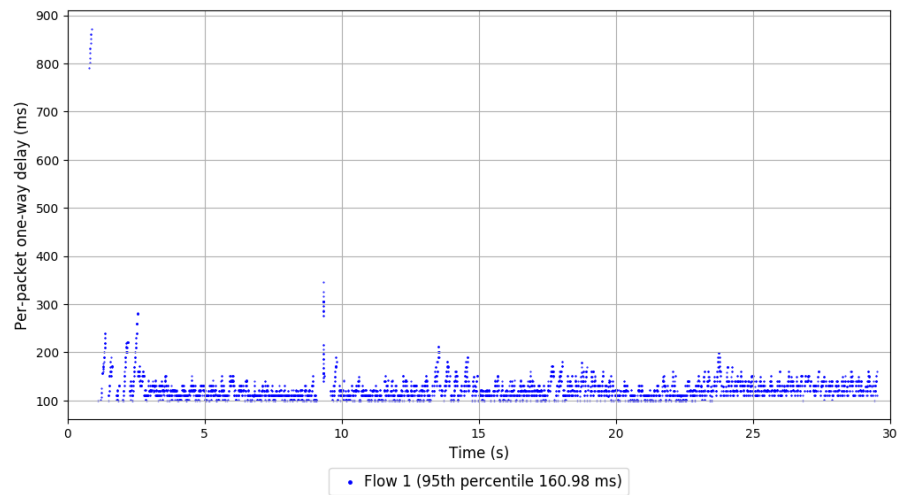
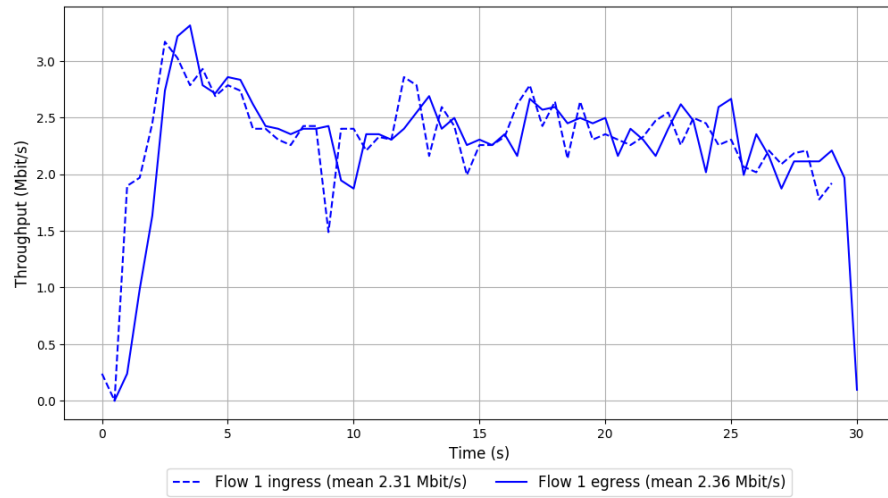
-- Flow 1:

Average throughput: 2.36 Mbit/s

95th percentile per-packet one-way delay: 160.982 ms

Loss rate: 0.14%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2018-05-30 07:56:10

End at: 2018-05-30 07:56:40

Local clock offset: -3.777 ms

Remote clock offset: 3.656 ms

Below is generated by plot.py at 2018-05-30 08:12:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.99 Mbit/s

95th percentile per-packet one-way delay: 135.302 ms

Loss rate: 0.16%

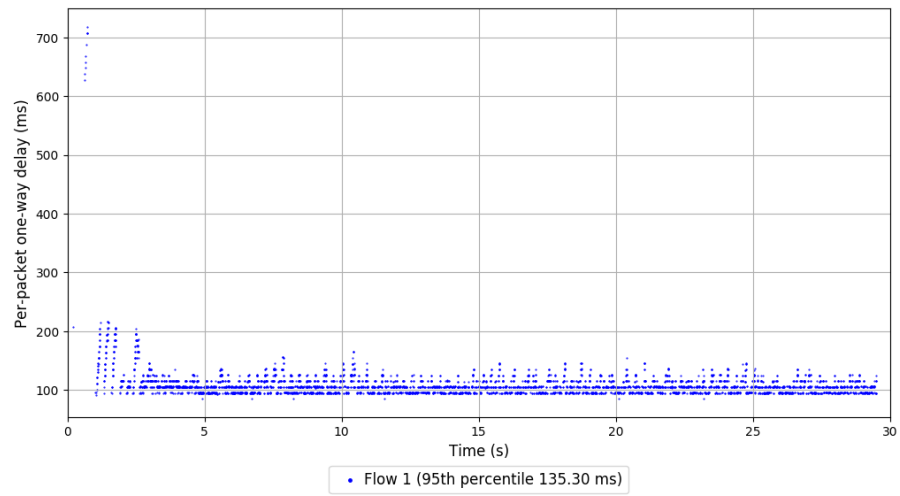
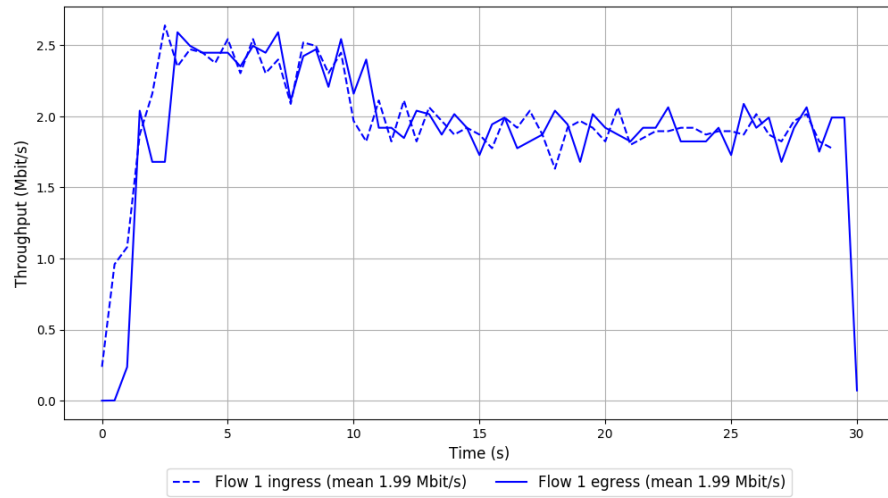
-- Flow 1:

Average throughput: 1.99 Mbit/s

95th percentile per-packet one-way delay: 135.302 ms

Loss rate: 0.16%

Run 3: Report of Indigo — Data Link

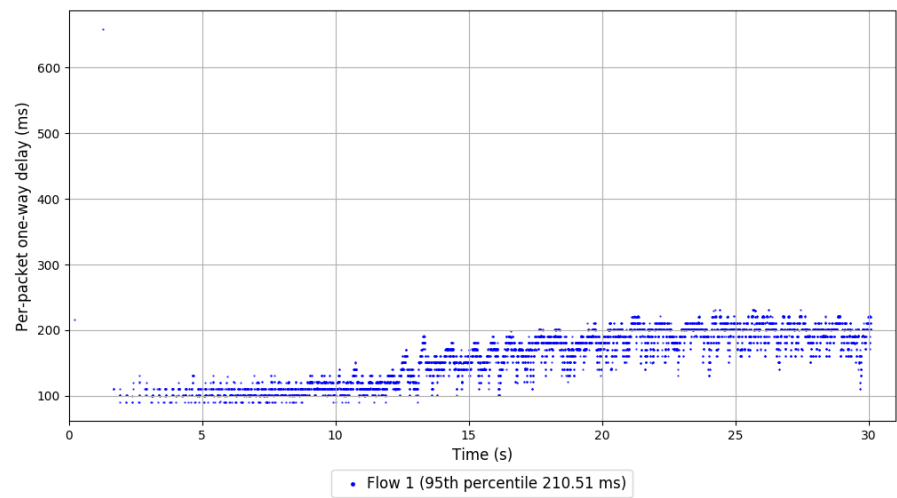
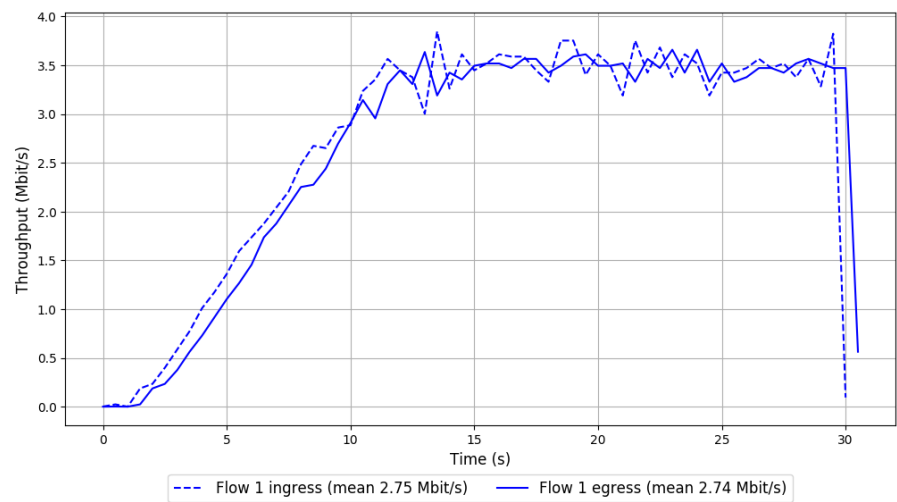


```
Run 1: Statistics of LEDBAT

Start at: 2018-05-30 07:29:07
End at: 2018-05-30 07:29:37
Local clock offset: 2.885 ms
Remote clock offset: 3.712 ms

# Below is generated by plot.py at 2018-05-30 08:12:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.74 Mbit/s
95th percentile per-packet one-way delay: 210.515 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 2.74 Mbit/s
95th percentile per-packet one-way delay: 210.515 ms
Loss rate: 0.61%
```

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2018-05-30 07:47:09

End at: 2018-05-30 07:47:39

Local clock offset: -2.317 ms

Remote clock offset: 8.873 ms

Below is generated by plot.py at 2018-05-30 08:12:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.48 Mbit/s

95th percentile per-packet one-way delay: 211.860 ms

Loss rate: 0.14%

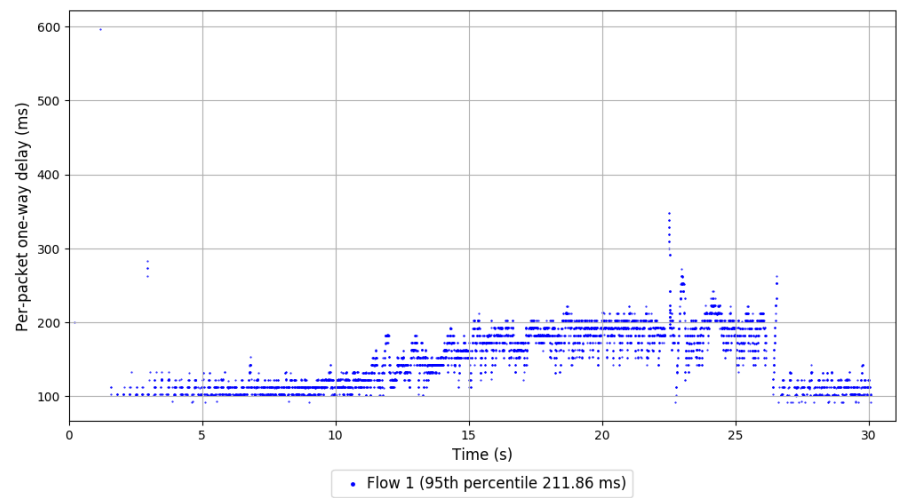
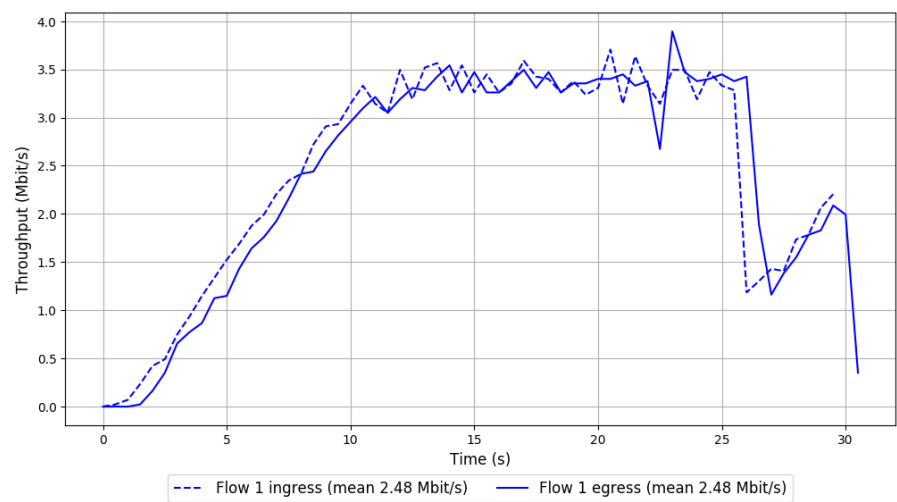
-- Flow 1:

Average throughput: 2.48 Mbit/s

95th percentile per-packet one-way delay: 211.860 ms

Loss rate: 0.14%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-05-30 08:05:10

End at: 2018-05-30 08:05:40

Local clock offset: -3.938 ms

Remote clock offset: 8.683 ms

Below is generated by plot.py at 2018-05-30 08:12:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.67 Mbit/s

95th percentile per-packet one-way delay: 199.943 ms

Loss rate: 0.34%

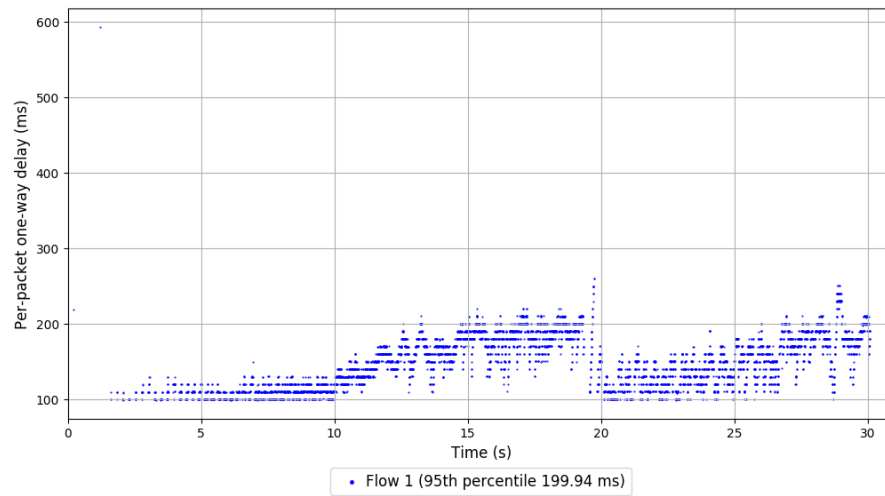
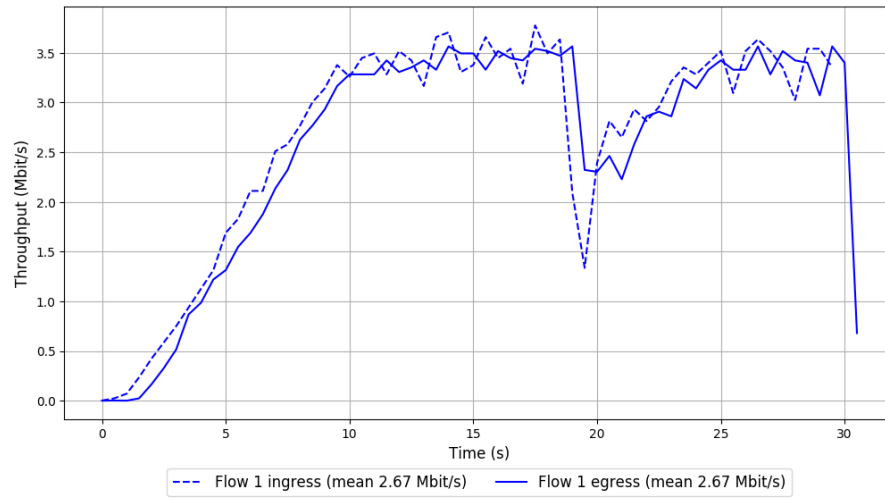
-- Flow 1:

Average throughput: 2.67 Mbit/s

95th percentile per-packet one-way delay: 199.943 ms

Loss rate: 0.34%

Run 3: Report of LEDBAT — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2018-05-30 07:22:21

End at: 2018-05-30 07:22:51

Local clock offset: 3.402 ms

Remote clock offset: 8.752 ms

Below is generated by plot.py at 2018-05-30 08:12:57

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.19 Mbit/s

95th percentile per-packet one-way delay: 1752.754 ms

Loss rate: 32.18%

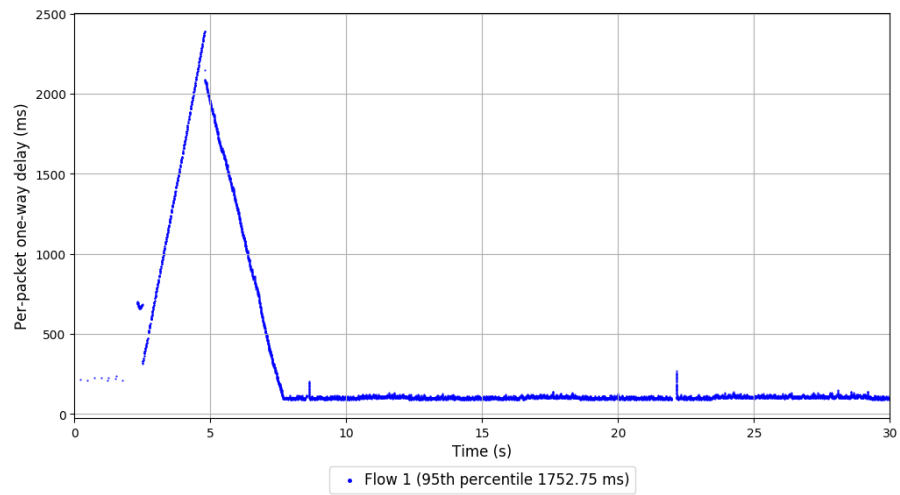
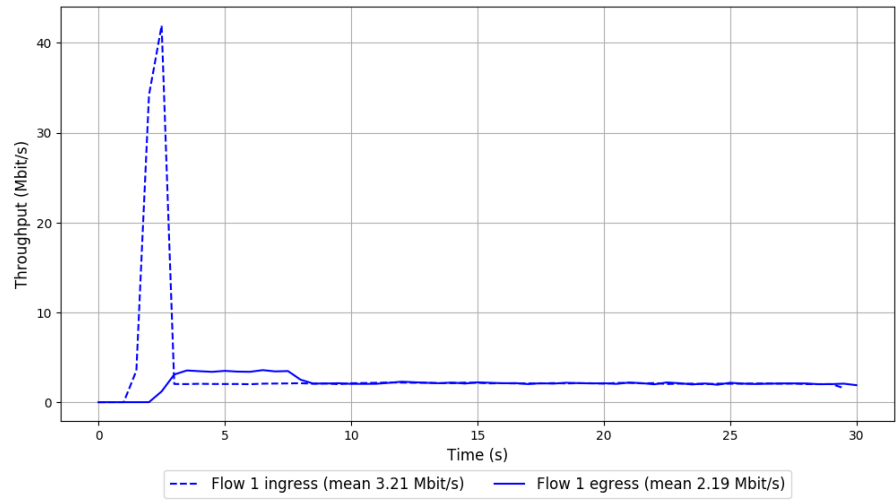
-- Flow 1:

Average throughput: 2.19 Mbit/s

95th percentile per-packet one-way delay: 1752.754 ms

Loss rate: 32.18%

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-05-30 07:40:24

End at: 2018-05-30 07:40:54

Local clock offset: 0.921 ms

Remote clock offset: 8.666 ms

Below is generated by plot.py at 2018-05-30 08:12:57

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.03 Mbit/s

95th percentile per-packet one-way delay: 1911.041 ms

Loss rate: 52.58%

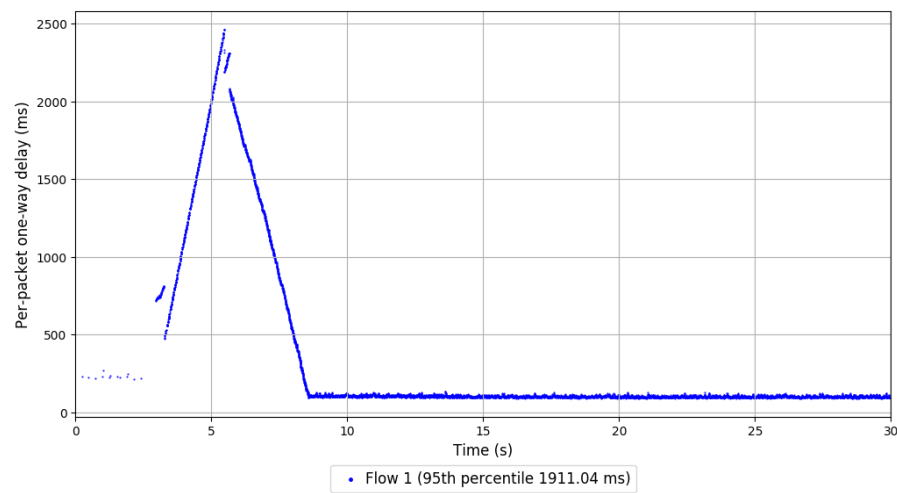
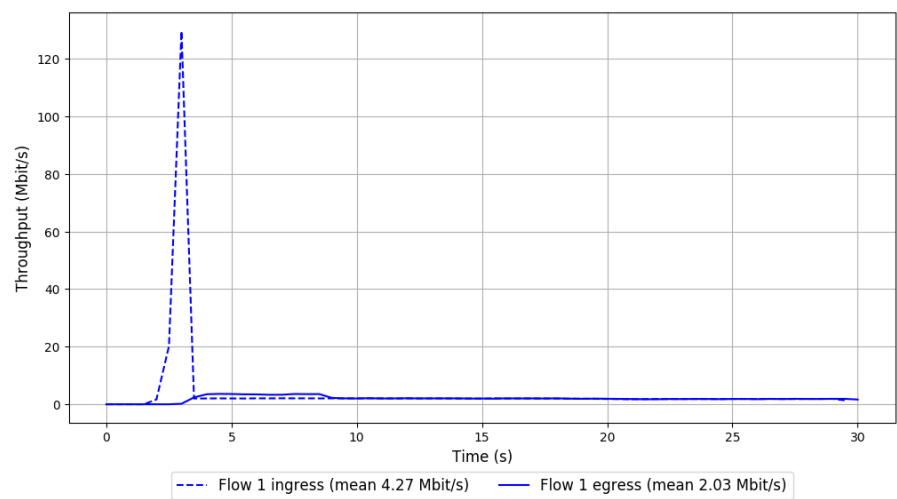
-- Flow 1:

Average throughput: 2.03 Mbit/s

95th percentile per-packet one-way delay: 1911.041 ms

Loss rate: 52.58%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-05-30 07:58:25

End at: 2018-05-30 07:58:55

Local clock offset: -3.882 ms

Remote clock offset: 8.585 ms

Below is generated by plot.py at 2018-05-30 08:13:01

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.39 Mbit/s

95th percentile per-packet one-way delay: 1831.388 ms

Loss rate: 29.56%

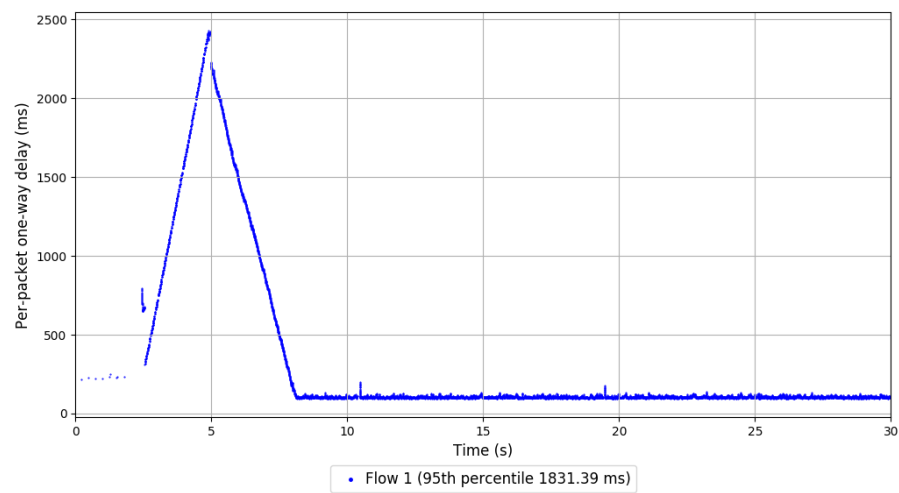
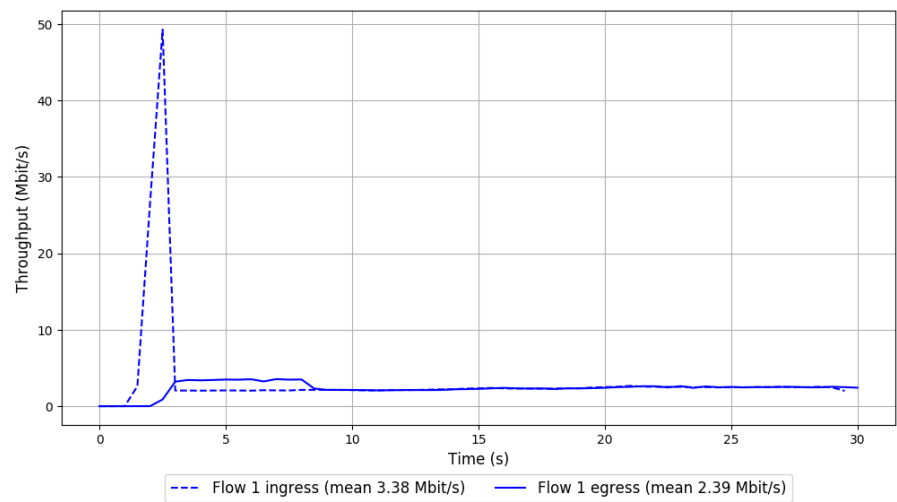
-- Flow 1:

Average throughput: 2.39 Mbit/s

95th percentile per-packet one-way delay: 1831.388 ms

Loss rate: 29.56%

Run 3: Report of PCC-Allegro — Data Link

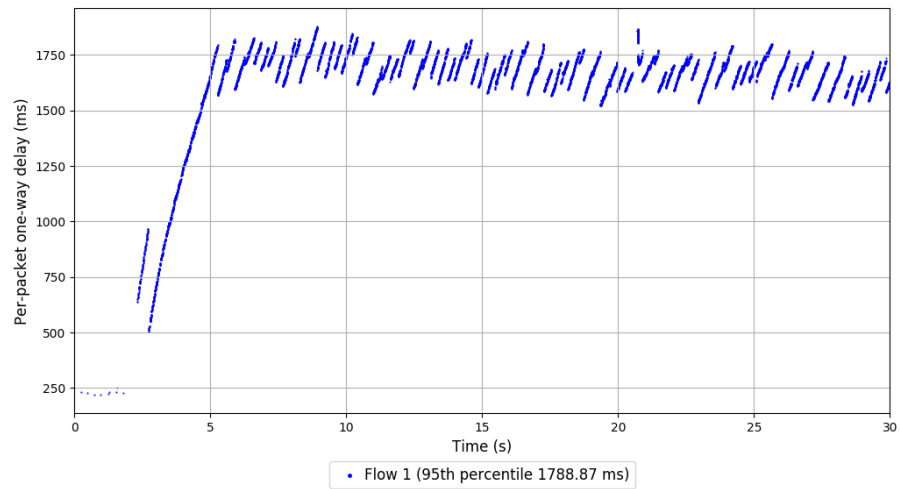
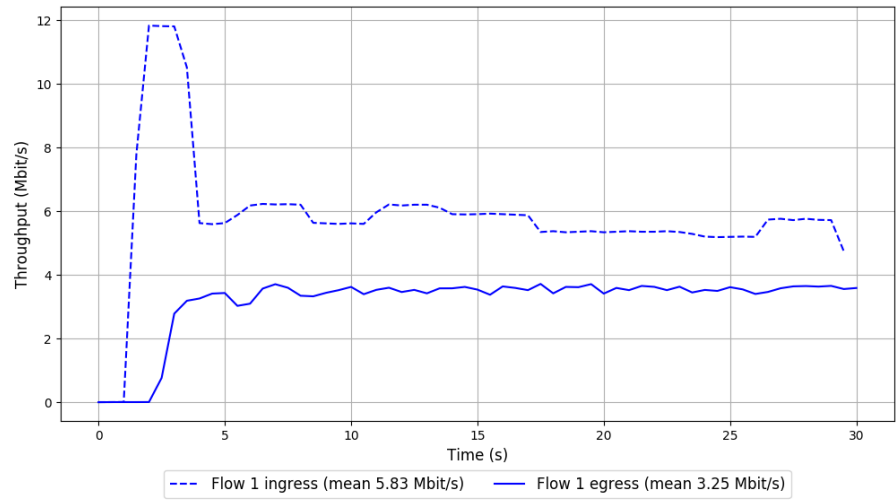


```
Run 1: Statistics of PCC-Expr

Start at: 2018-05-30 07:31:22
End at: 2018-05-30 07:31:52
Local clock offset: 3.993 ms
Remote clock offset: 8.709 ms

# Below is generated by plot.py at 2018-05-30 08:13:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 3.25 Mbit/s
95th percentile per-packet one-way delay: 1788.865 ms
Loss rate: 44.54%
-- Flow 1:
Average throughput: 3.25 Mbit/s
95th percentile per-packet one-way delay: 1788.865 ms
Loss rate: 44.54%
```

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2018-05-30 07:49:24

End at: 2018-05-30 07:49:54

Local clock offset: -4.406 ms

Remote clock offset: 8.761 ms

Below is generated by plot.py at 2018-05-30 08:13:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.17 Mbit/s

95th percentile per-packet one-way delay: 1836.282 ms

Loss rate: 44.92%

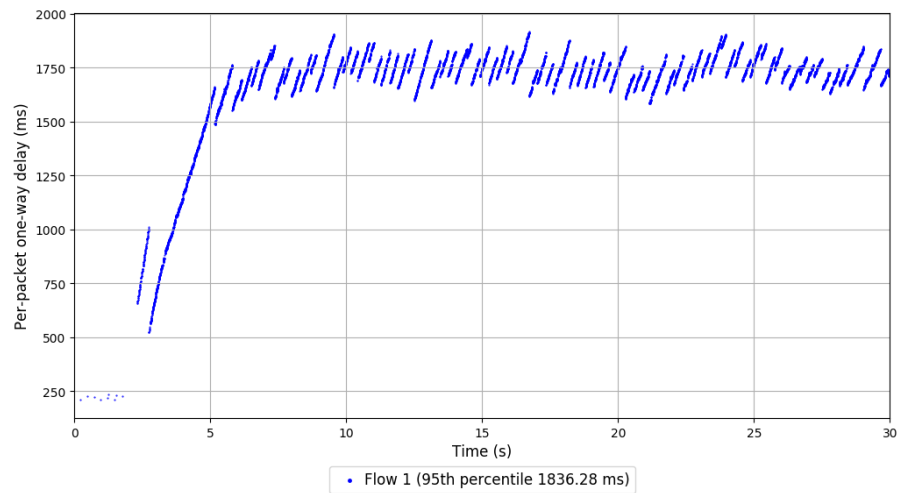
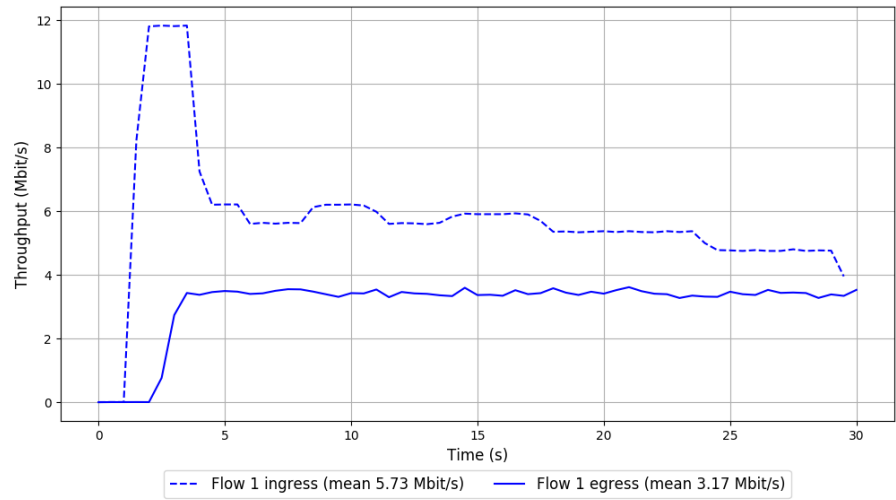
-- Flow 1:

Average throughput: 3.17 Mbit/s

95th percentile per-packet one-way delay: 1836.282 ms

Loss rate: 44.92%

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2018-05-30 08:07:25

End at: 2018-05-30 08:07:55

Local clock offset: -3.661 ms

Remote clock offset: 3.652 ms

Below is generated by plot.py at 2018-05-30 08:13:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.14 Mbit/s

95th percentile per-packet one-way delay: 1825.261 ms

Loss rate: 46.87%

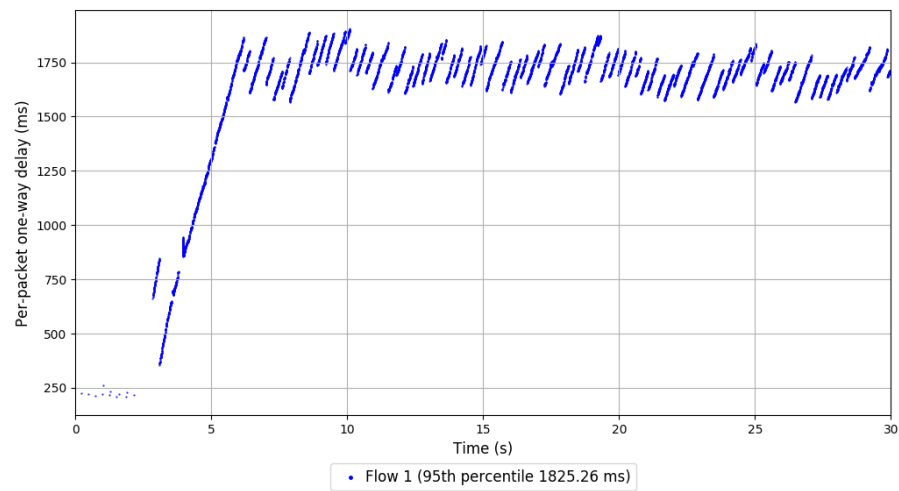
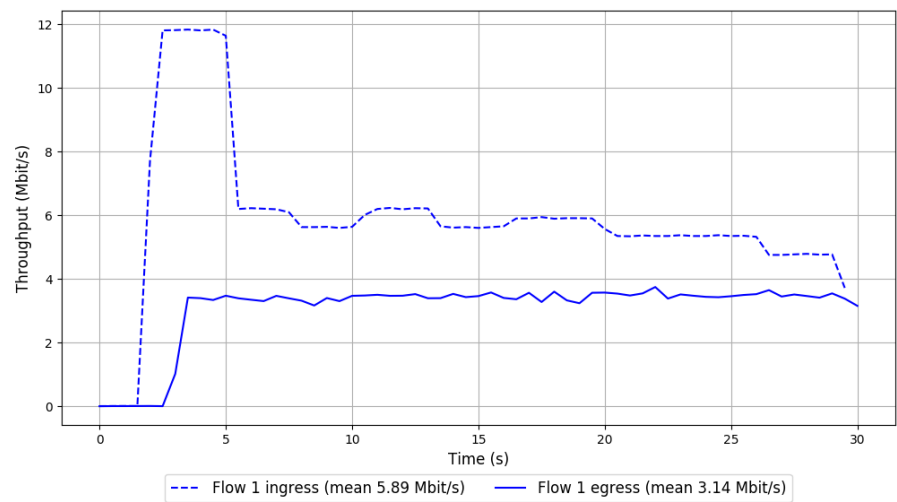
-- Flow 1:

Average throughput: 3.14 Mbit/s

95th percentile per-packet one-way delay: 1825.261 ms

Loss rate: 46.87%

Run 3: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2018-05-30 07:26:52

End at: 2018-05-30 07:27:22

Local clock offset: 2.7 ms

Remote clock offset: 8.701 ms

Below is generated by plot.py at 2018-05-30 08:13:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.38 Mbit/s

95th percentile per-packet one-way delay: 789.955 ms

Loss rate: 2.32%

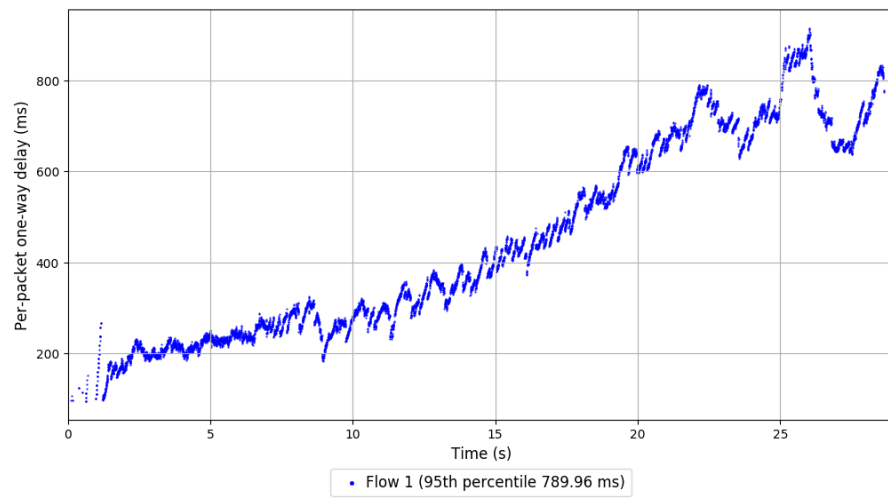
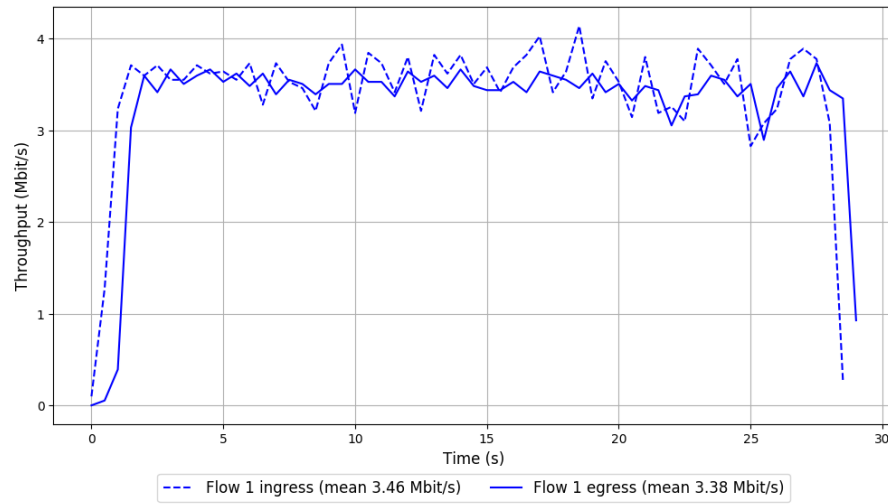
-- Flow 1:

Average throughput: 3.38 Mbit/s

95th percentile per-packet one-way delay: 789.955 ms

Loss rate: 2.32%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-05-30 07:44:54

End at: 2018-05-30 07:45:24

Local clock offset: -1.5 ms

Remote clock offset: 3.767 ms

Below is generated by plot.py at 2018-05-30 08:13:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.97 Mbit/s

95th percentile per-packet one-way delay: 1000.497 ms

Loss rate: 3.32%

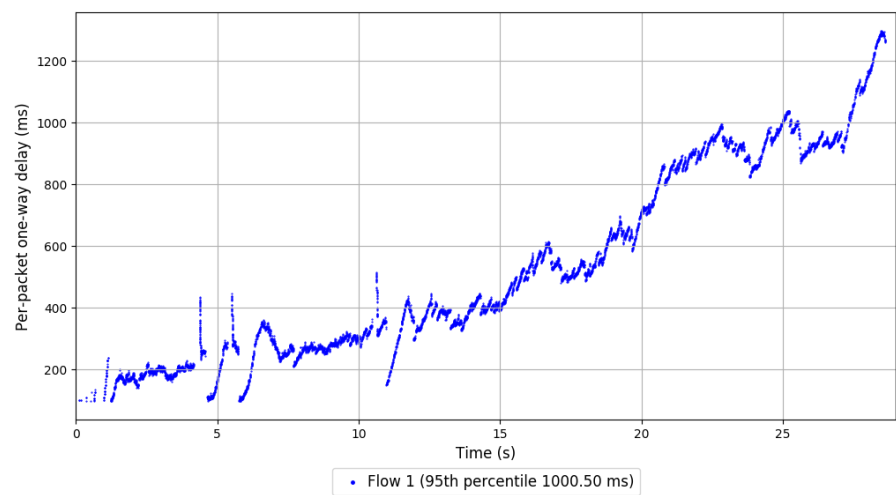
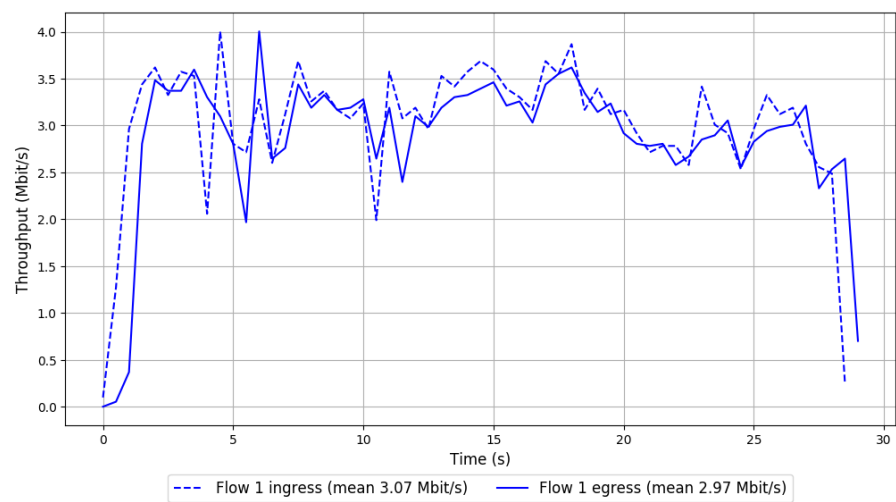
-- Flow 1:

Average throughput: 2.97 Mbit/s

95th percentile per-packet one-way delay: 1000.497 ms

Loss rate: 3.32%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-05-30 08:02:55

End at: 2018-05-30 08:03:25

Local clock offset: -4.723 ms

Remote clock offset: 3.825 ms

Below is generated by plot.py at 2018-05-30 08:13:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.39 Mbit/s

95th percentile per-packet one-way delay: 901.809 ms

Loss rate: 3.24%

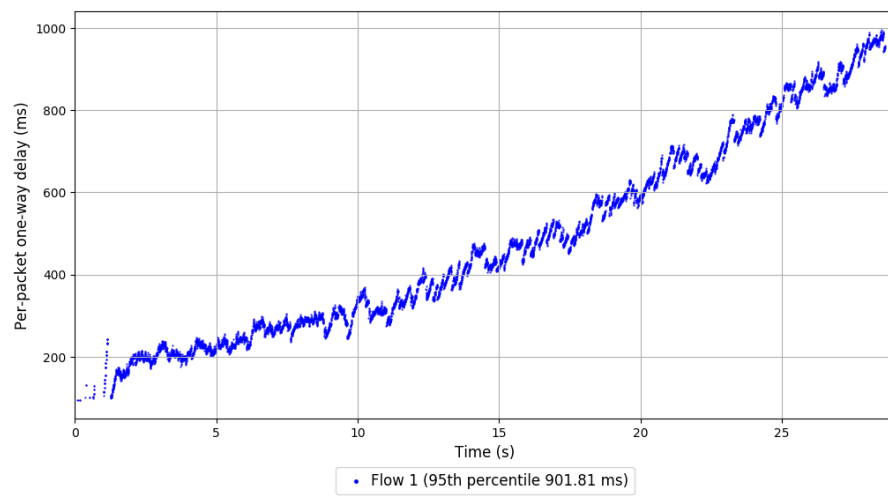
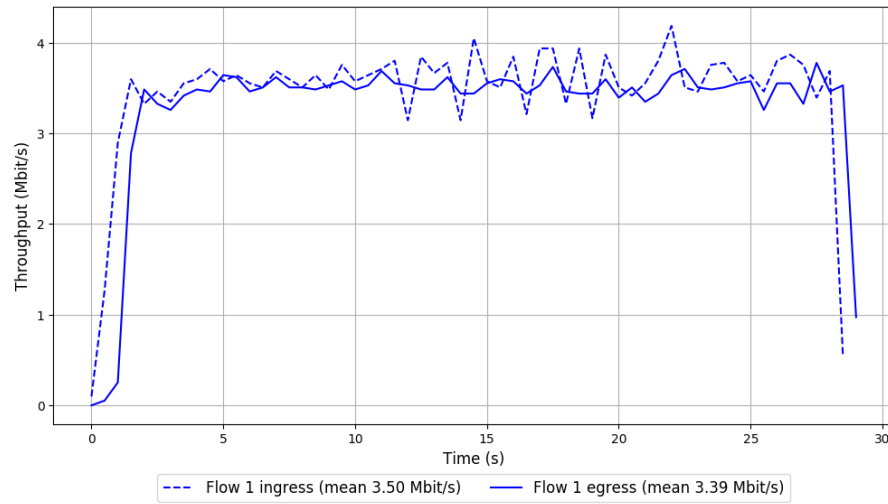
-- Flow 1:

Average throughput: 3.39 Mbit/s

95th percentile per-packet one-way delay: 901.809 ms

Loss rate: 3.24%

Run 3: Report of QUIC Cubic — Data Link



Run 1: Statistics of SCReAM

Start at: 2018-05-30 07:28:00

End at: 2018-05-30 07:28:30

Local clock offset: 2.089 ms

Remote clock offset: 8.701 ms

Below is generated by plot.py at 2018-05-30 08:13:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.08 Mbit/s

95th percentile per-packet one-way delay: 100.687 ms

Loss rate: 0.00%

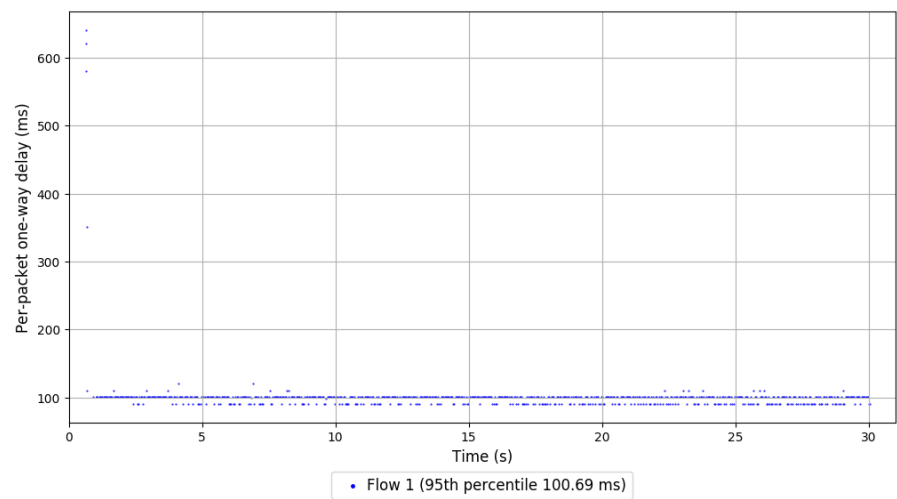
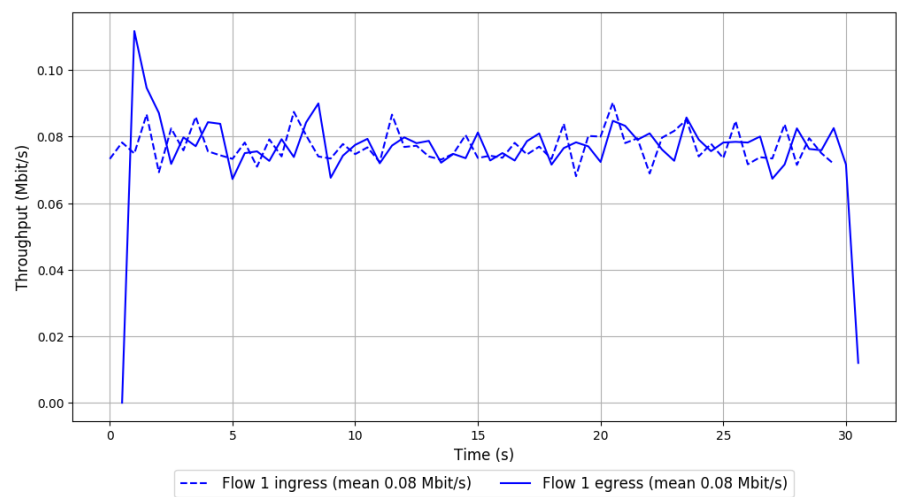
-- Flow 1:

Average throughput: 0.08 Mbit/s

95th percentile per-packet one-way delay: 100.687 ms

Loss rate: 0.00%

Run 1: Report of SReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2018-05-30 07:46:01

End at: 2018-05-30 07:46:31

Local clock offset: -3.554 ms

Remote clock offset: 8.746 ms

Below is generated by plot.py at 2018-05-30 08:13:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.08 Mbit/s

95th percentile per-packet one-way delay: 110.122 ms

Loss rate: 0.13%

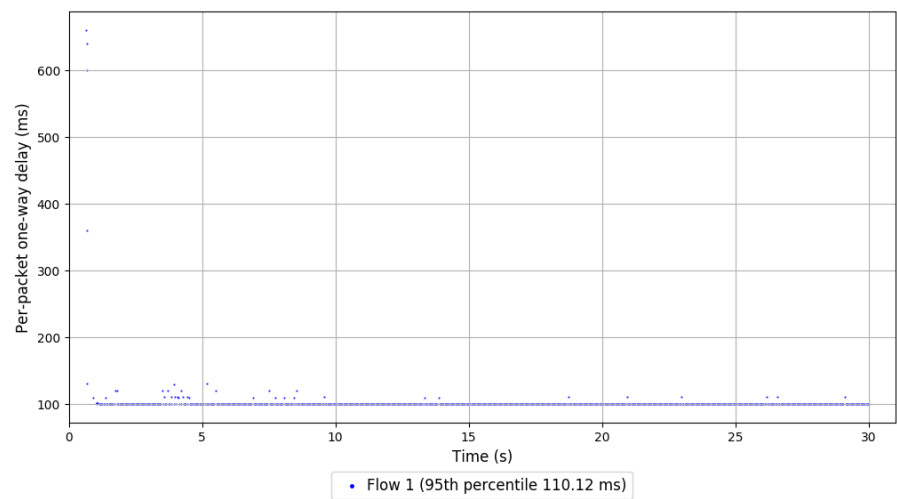
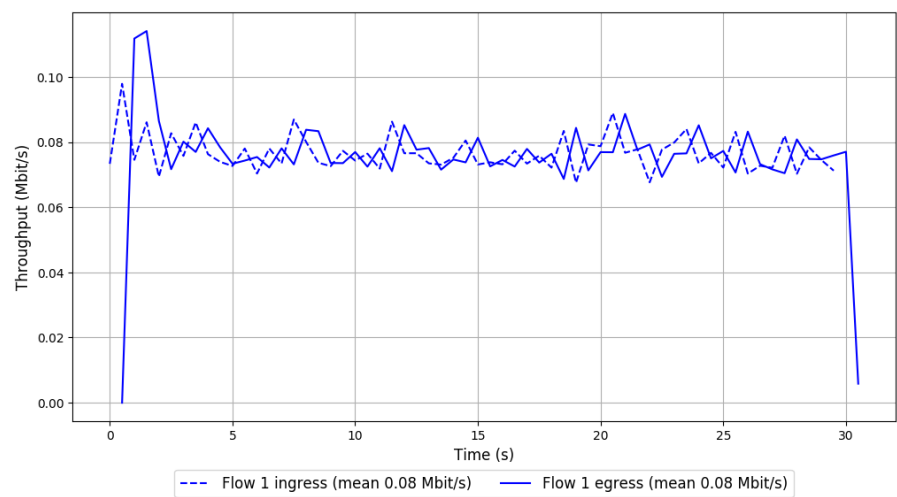
-- Flow 1:

Average throughput: 0.08 Mbit/s

95th percentile per-packet one-way delay: 110.122 ms

Loss rate: 0.13%

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2018-05-30 08:04:03

End at: 2018-05-30 08:04:33

Local clock offset: -4.781 ms

Remote clock offset: 3.77 ms

Below is generated by plot.py at 2018-05-30 08:13:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.08 Mbit/s

95th percentile per-packet one-way delay: 94.887 ms

Loss rate: 0.13%

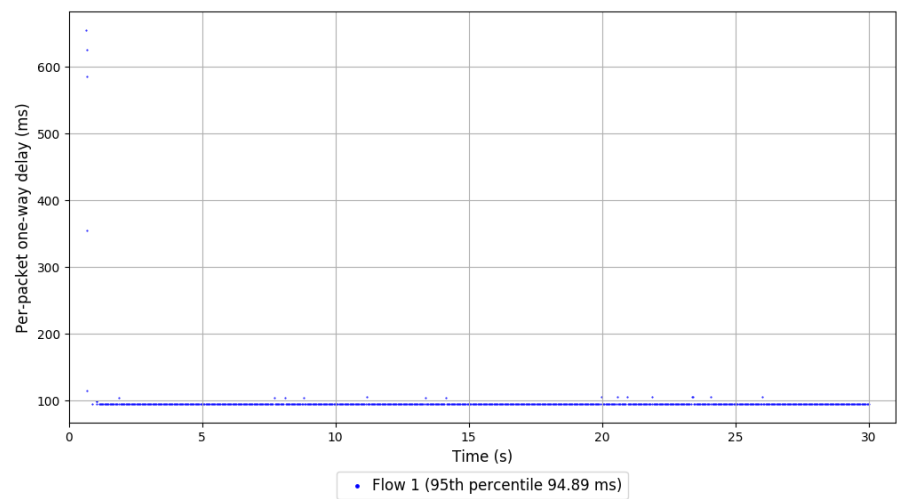
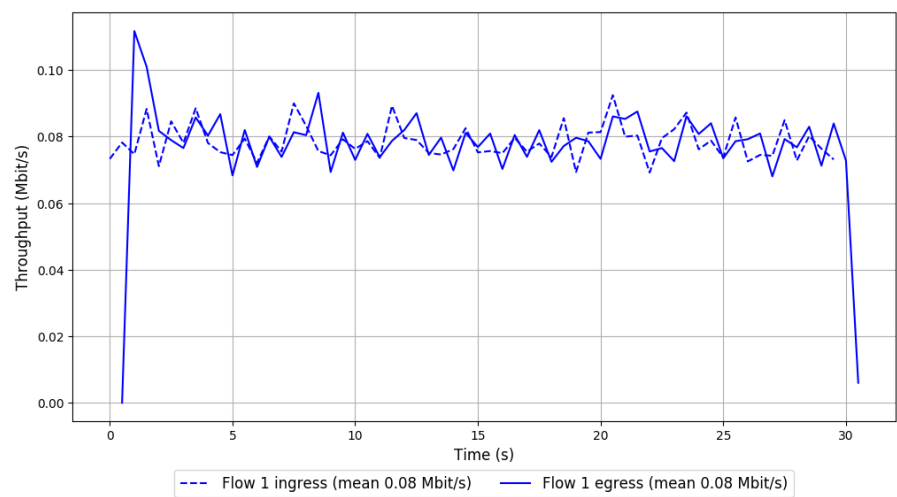
-- Flow 1:

Average throughput: 0.08 Mbit/s

95th percentile per-packet one-way delay: 94.887 ms

Loss rate: 0.13%

Run 3: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2018-05-30 07:25:45

End at: 2018-05-30 07:26:15

Local clock offset: 1.927 ms

Remote clock offset: 8.683 ms

Below is generated by plot.py at 2018-05-30 08:13:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.19 Mbit/s

95th percentile per-packet one-way delay: 158.048 ms

Loss rate: 0.00%

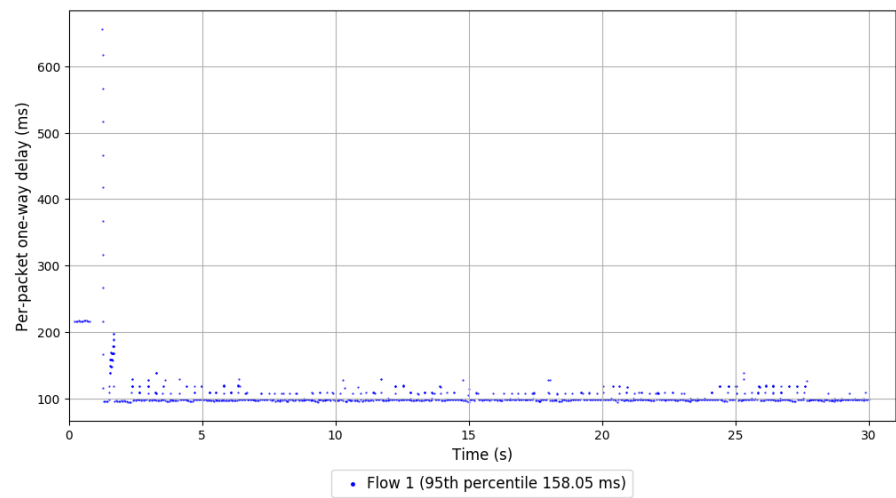
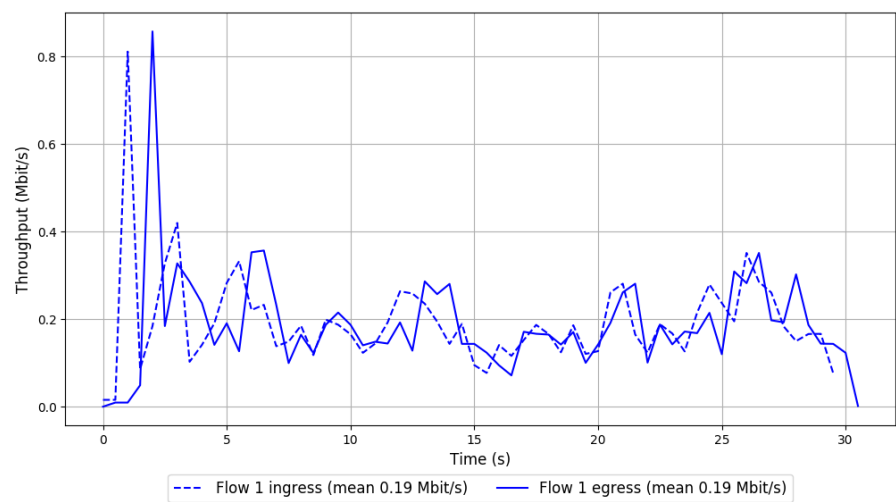
-- Flow 1:

Average throughput: 0.19 Mbit/s

95th percentile per-packet one-way delay: 158.048 ms

Loss rate: 0.00%

Run 1: Report of Sprout — Data Link

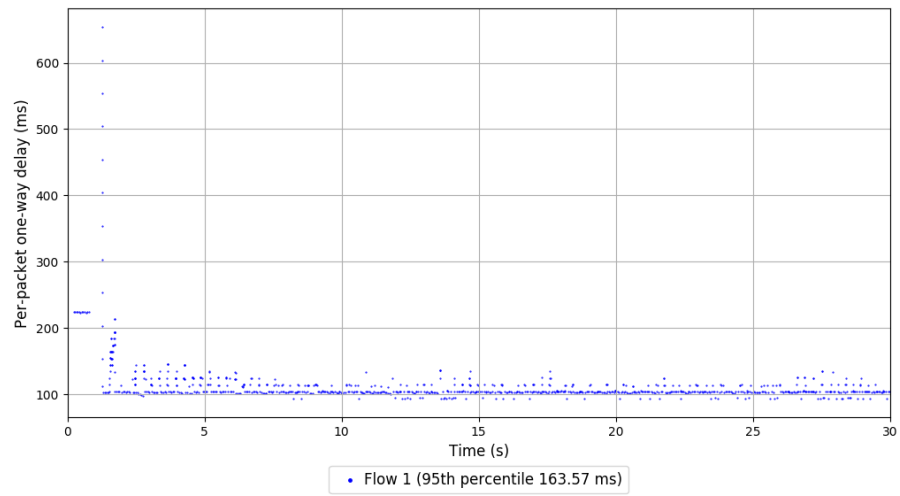
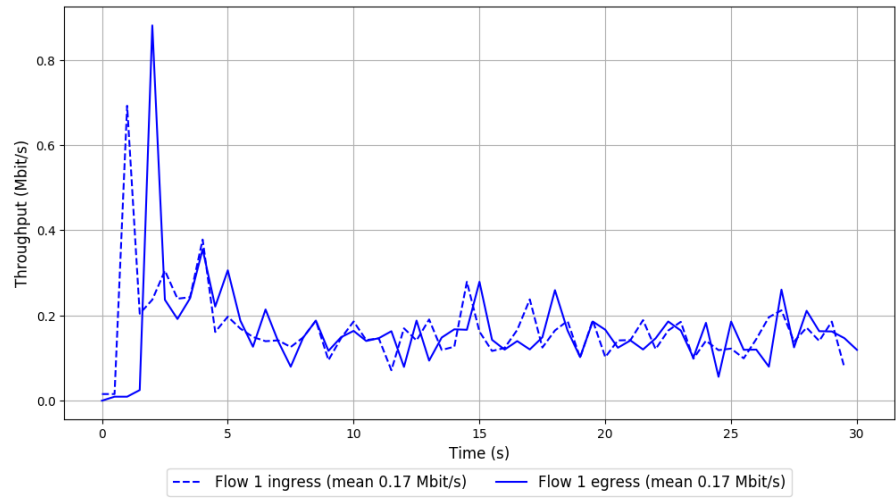


Run 2: Statistics of Sprout

Start at: 2018-05-30 07:43:47
End at: 2018-05-30 07:44:17
Local clock offset: -1.767 ms
Remote clock offset: 8.722 ms

Below is generated by plot.py at 2018-05-30 08:13:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 163.567 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 163.567 ms
Loss rate: 0.02%

Run 2: Report of Sprout — Data Link

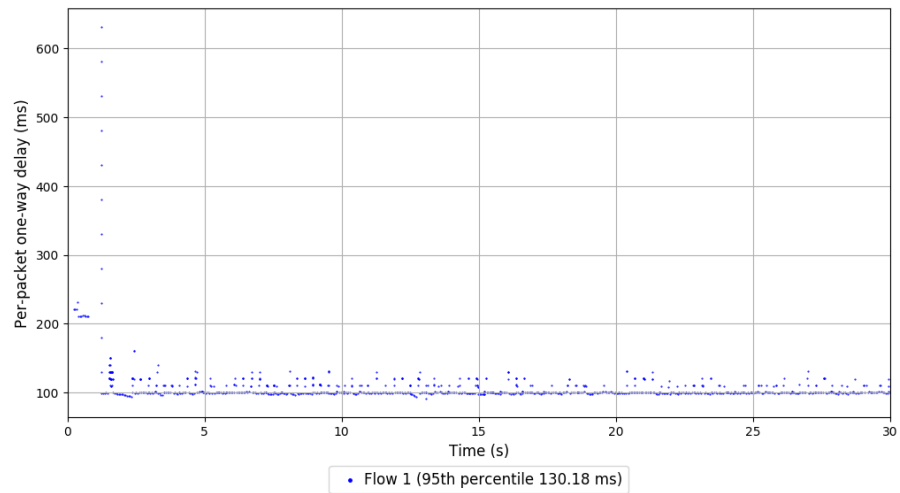
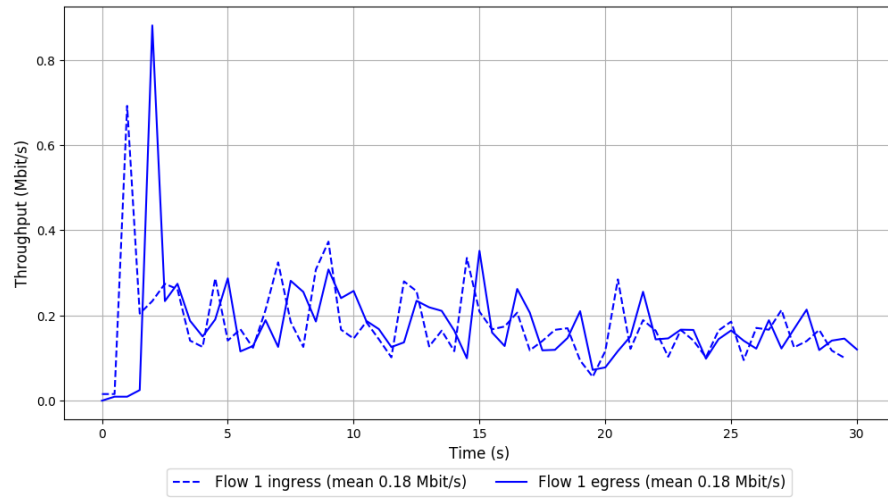


Run 3: Statistics of Sprout

Start at: 2018-05-30 08:01:48
End at: 2018-05-30 08:02:18
Local clock offset: -5.567 ms
Remote clock offset: 3.661 ms

Below is generated by plot.py at 2018-05-30 08:13:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 130.176 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 130.176 ms
Loss rate: 0.01%

Run 3: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2018-05-30 07:32:30

End at: 2018-05-30 07:33:00

Local clock offset: 4.08 ms

Remote clock offset: 8.654 ms

Below is generated by plot.py at 2018-05-30 08:13:12

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.54 Mbit/s

95th percentile per-packet one-way delay: 204.918 ms

Loss rate: 0.17%

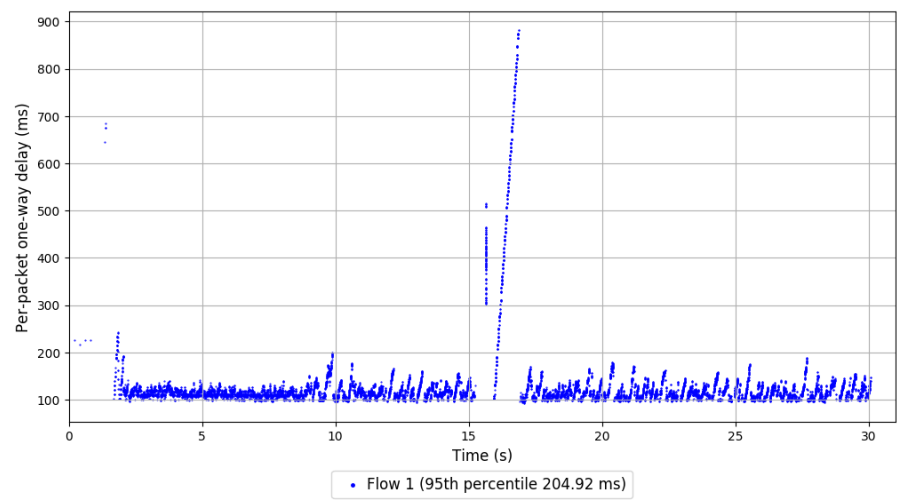
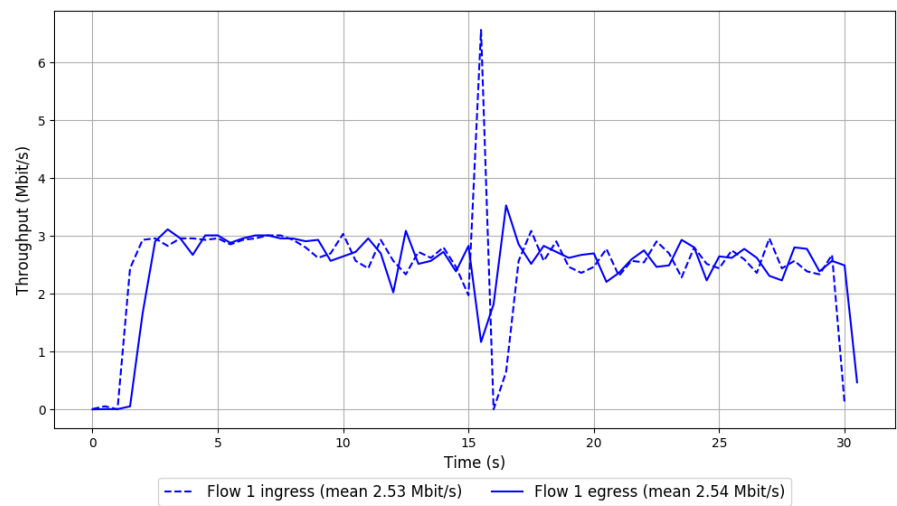
-- Flow 1:

Average throughput: 2.54 Mbit/s

95th percentile per-packet one-way delay: 204.918 ms

Loss rate: 0.17%

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



Run 2: Statistics of TaoVA-100x

Start at: 2018-05-30 07:50:32

End at: 2018-05-30 07:51:02

Local clock offset: -3.114 ms

Remote clock offset: 3.715 ms

Below is generated by plot.py at 2018-05-30 08:13:13

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.60 Mbit/s

95th percentile per-packet one-way delay: 156.521 ms

Loss rate: 0.08%

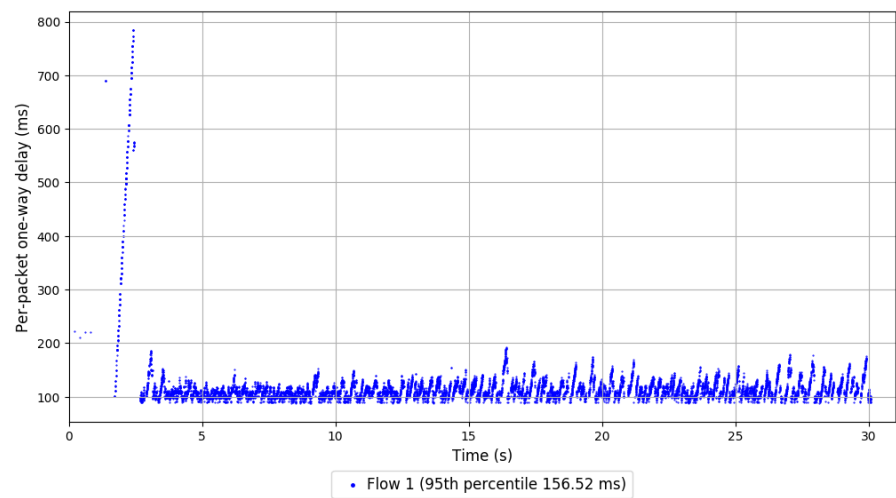
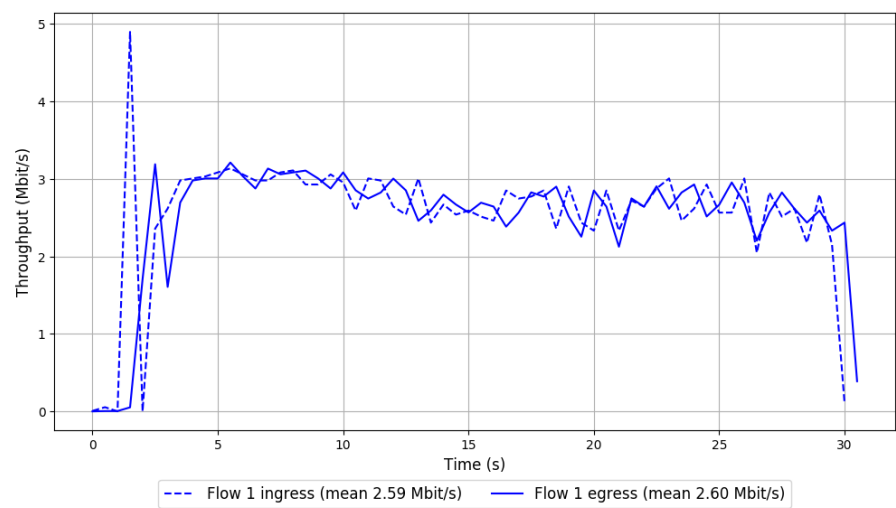
-- Flow 1:

Average throughput: 2.60 Mbit/s

95th percentile per-packet one-way delay: 156.521 ms

Loss rate: 0.08%

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-05-30 08:08:33

End at: 2018-05-30 08:09:03

Local clock offset: -4.139 ms

Remote clock offset: 3.757 ms

Below is generated by plot.py at 2018-05-30 08:13:13

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.57 Mbit/s

95th percentile per-packet one-way delay: 166.761 ms

Loss rate: 0.18%

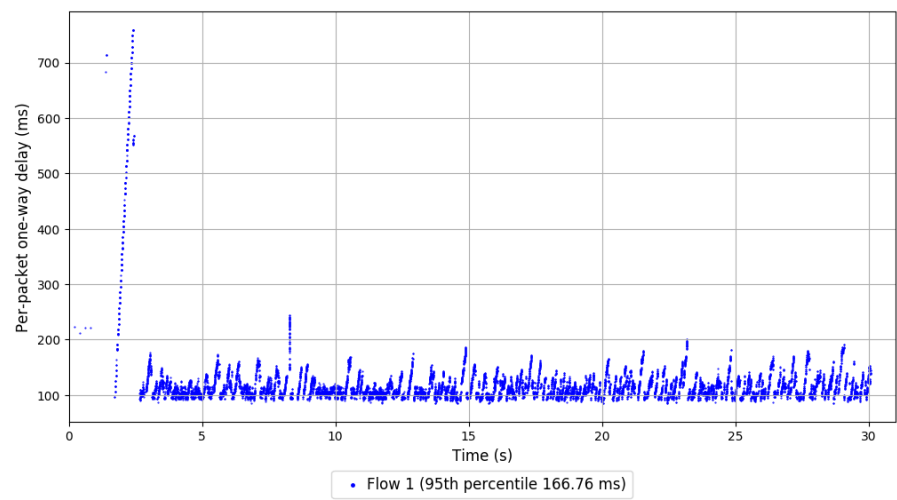
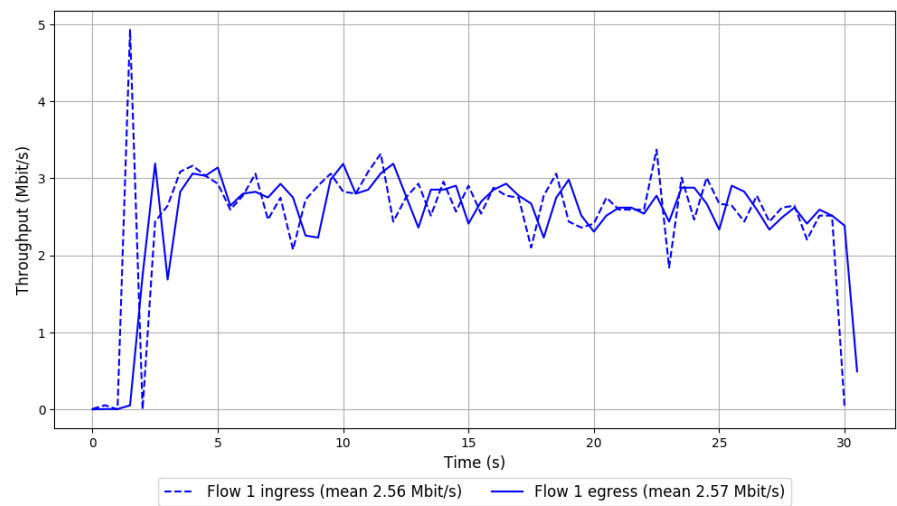
-- Flow 1:

Average throughput: 2.57 Mbit/s

95th percentile per-packet one-way delay: 166.761 ms

Loss rate: 0.18%

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



Run 1: Statistics of TCP Vegas

Start at: 2018-05-30 07:35:53

End at: 2018-05-30 07:36:23

Local clock offset: 3.911 ms

Remote clock offset: 3.774 ms

Below is generated by plot.py at 2018-05-30 08:13:13

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.21 Mbit/s

95th percentile per-packet one-way delay: 396.733 ms

Loss rate: 0.36%

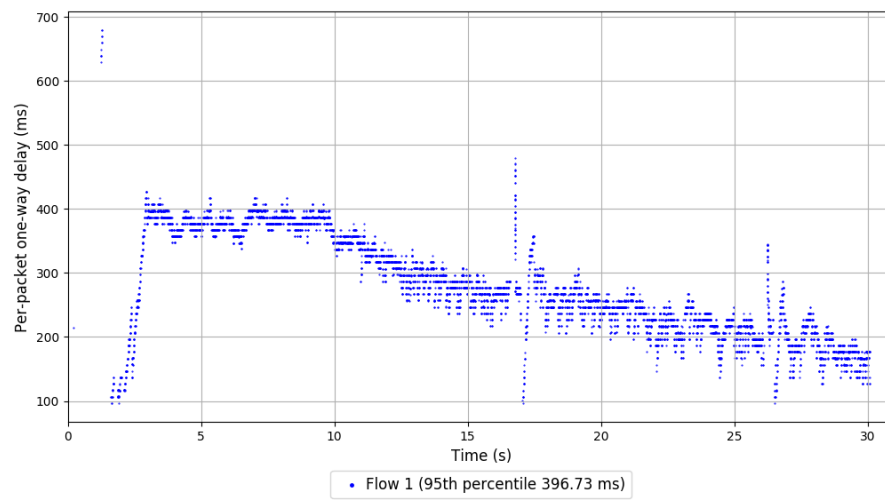
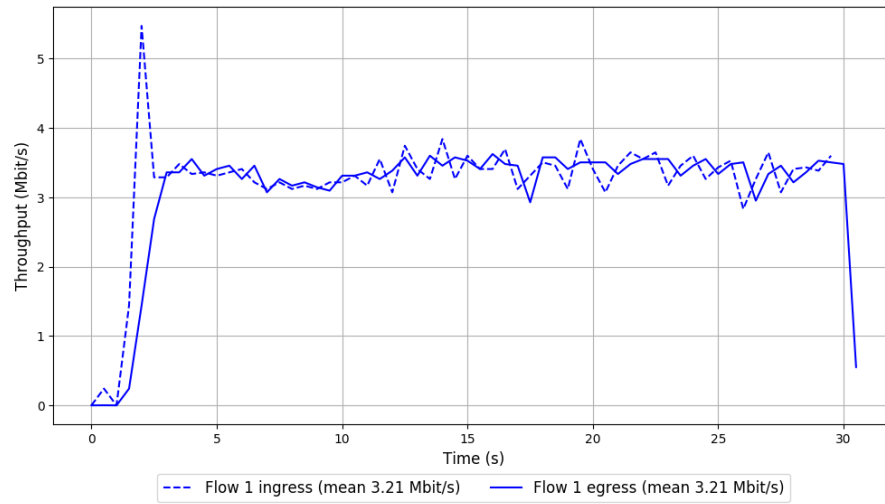
-- Flow 1:

Average throughput: 3.21 Mbit/s

95th percentile per-packet one-way delay: 396.733 ms

Loss rate: 0.36%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-05-30 07:53:55

End at: 2018-05-30 07:54:25

Local clock offset: -5.114 ms

Remote clock offset: 8.85 ms

Below is generated by plot.py at 2018-05-30 08:13:13

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.44 Mbit/s

95th percentile per-packet one-way delay: 344.031 ms

Loss rate: 0.05%

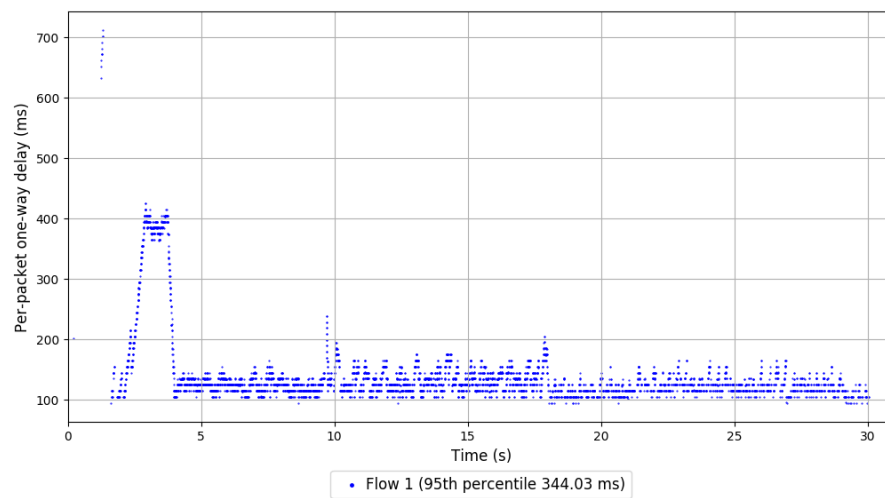
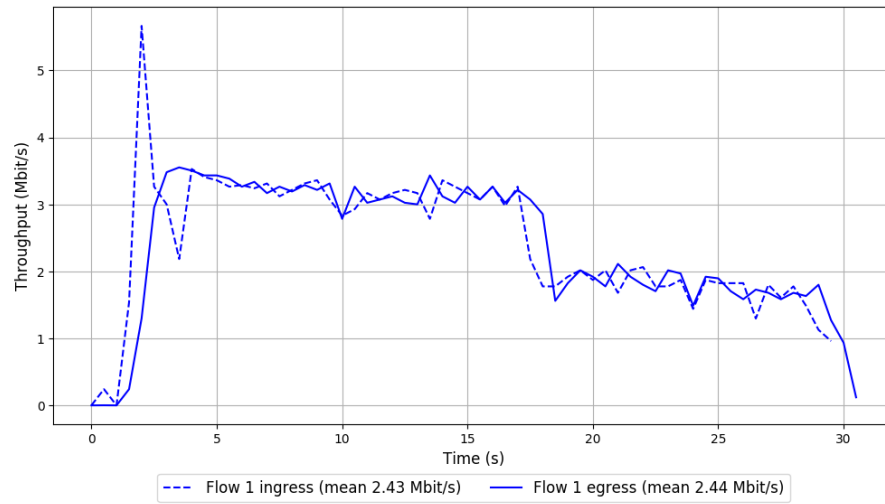
-- Flow 1:

Average throughput: 2.44 Mbit/s

95th percentile per-packet one-way delay: 344.031 ms

Loss rate: 0.05%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-05-30 08:11:56

End at: 2018-05-30 08:12:26

Local clock offset: -3.415 ms

Remote clock offset: 8.691 ms

Below is generated by plot.py at 2018-05-30 08:13:16

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.28 Mbit/s

95th percentile per-packet one-way delay: 842.774 ms

Loss rate: 1.92%

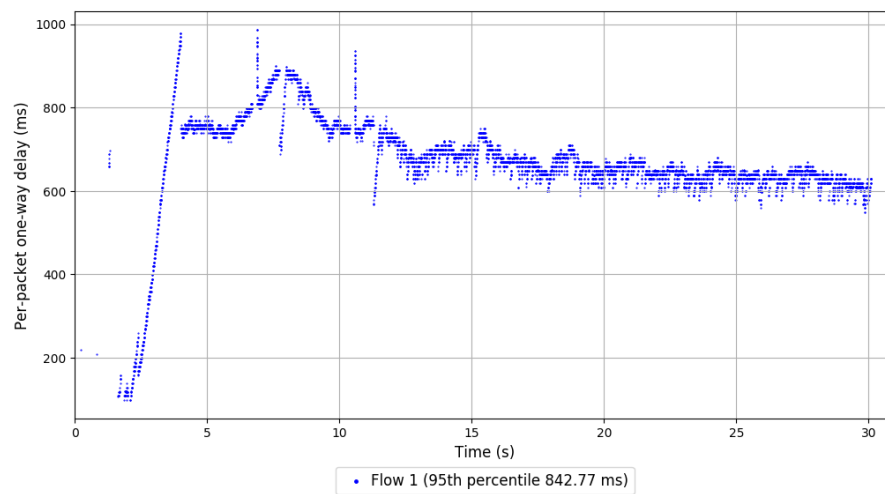
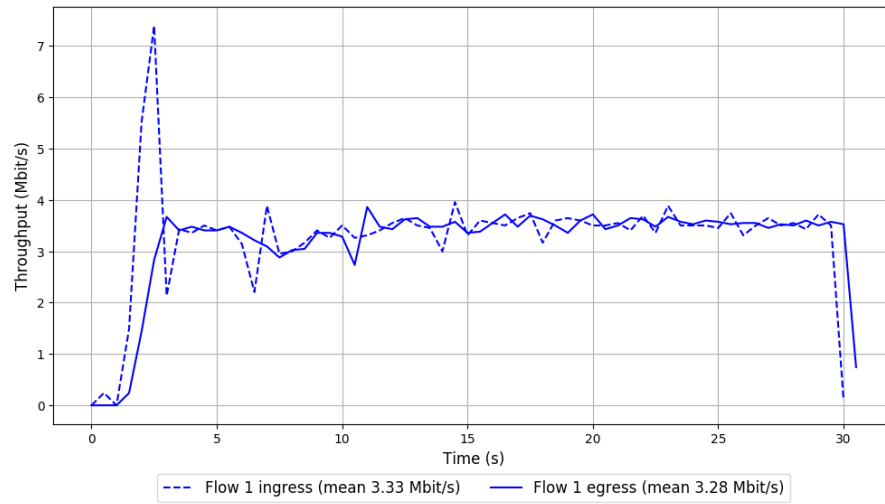
-- Flow 1:

Average throughput: 3.28 Mbit/s

95th percentile per-packet one-way delay: 842.774 ms

Loss rate: 1.92%

Run 3: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2018-05-30 07:34:45

End at: 2018-05-30 07:35:15

Local clock offset: 3.698 ms

Remote clock offset: 8.724 ms

Below is generated by plot.py at 2018-05-30 08:13:16

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.18 Mbit/s

95th percentile per-packet one-way delay: 1506.018 ms

Loss rate: 1.16%

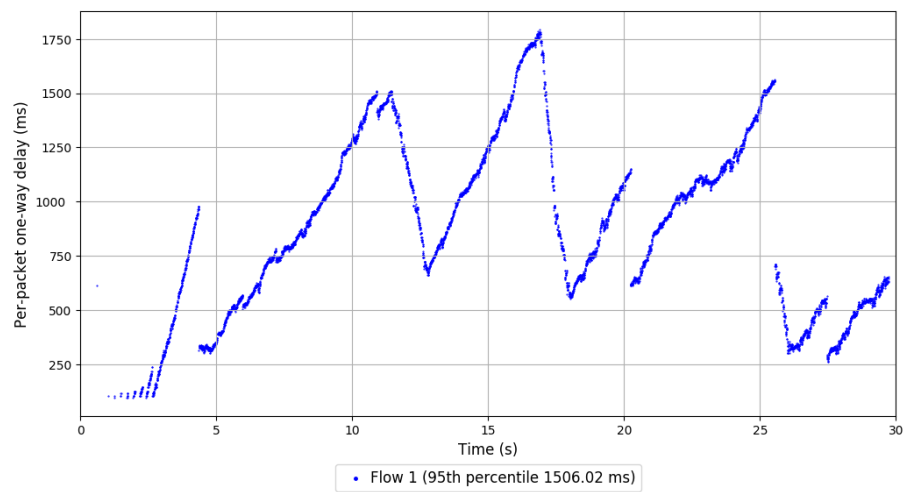
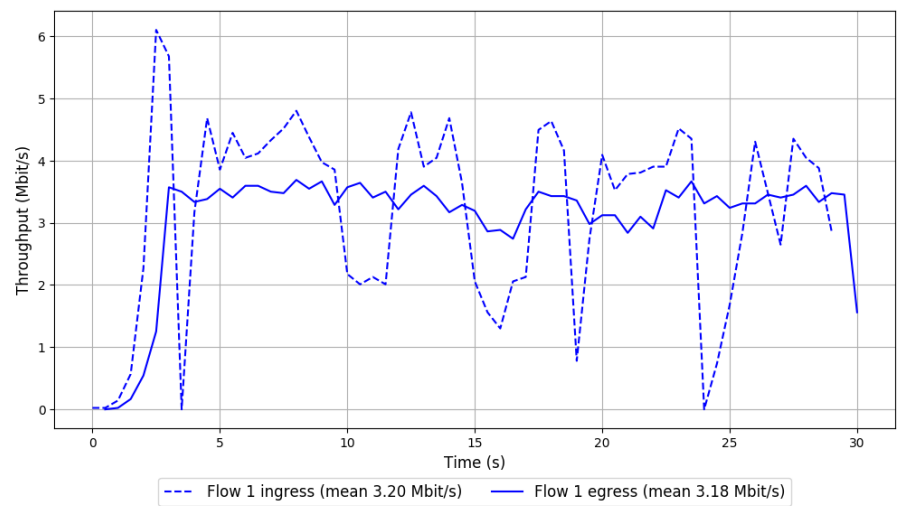
-- Flow 1:

Average throughput: 3.18 Mbit/s

95th percentile per-packet one-way delay: 1506.018 ms

Loss rate: 1.16%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-05-30 07:52:47

End at: 2018-05-30 07:53:17

Local clock offset: -3.472 ms

Remote clock offset: 3.643 ms

Below is generated by plot.py at 2018-05-30 08:13:17

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.27 Mbit/s

95th percentile per-packet one-way delay: 1541.105 ms

Loss rate: 2.96%

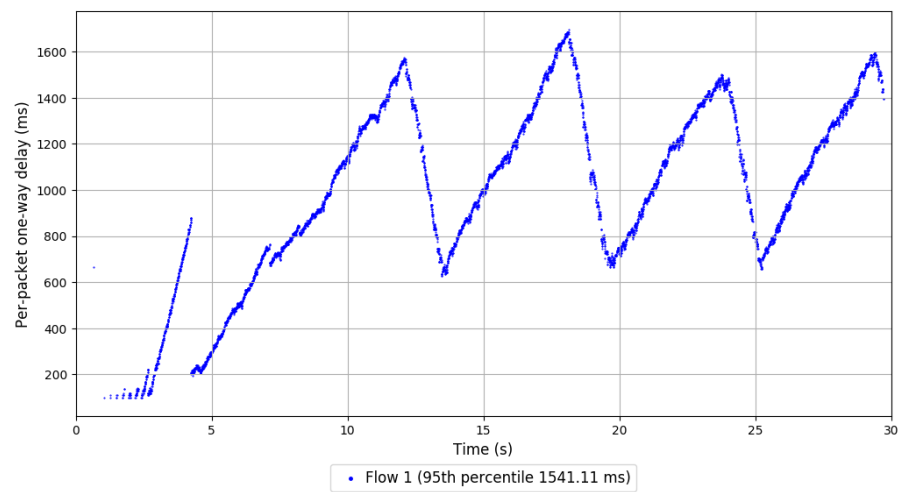
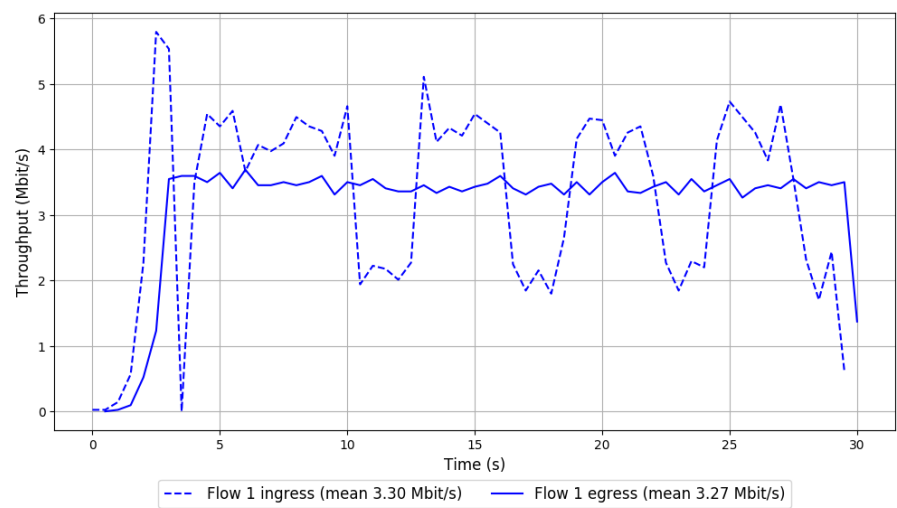
-- Flow 1:

Average throughput: 3.27 Mbit/s

95th percentile per-packet one-way delay: 1541.105 ms

Loss rate: 2.96%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-05-30 08:10:48

End at: 2018-05-30 08:11:18

Local clock offset: -2.896 ms

Remote clock offset: 8.81 ms

Below is generated by plot.py at 2018-05-30 08:13:18

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.31 Mbit/s

95th percentile per-packet one-way delay: 1609.859 ms

Loss rate: 3.24%

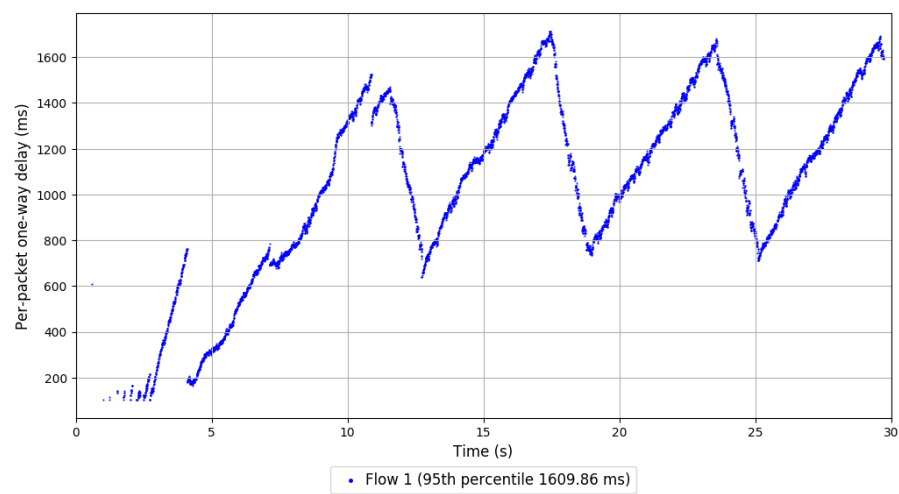
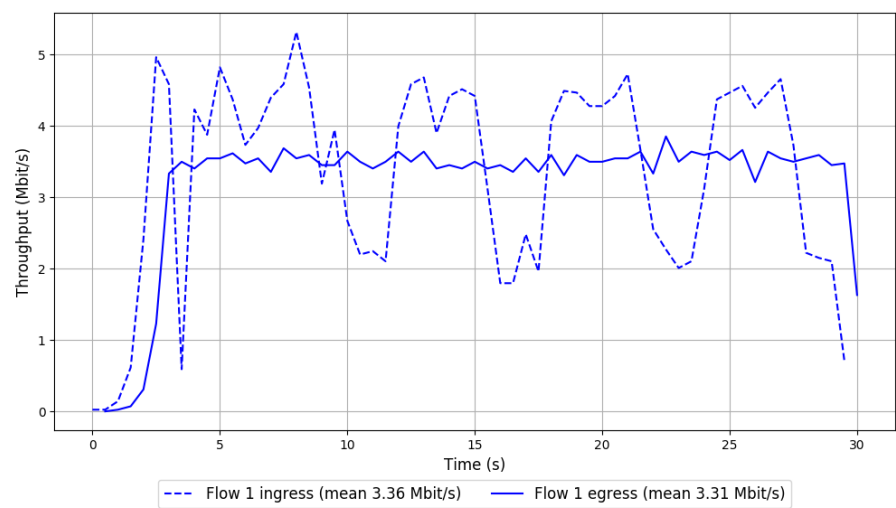
-- Flow 1:

Average throughput: 3.31 Mbit/s

95th percentile per-packet one-way delay: 1609.859 ms

Loss rate: 3.24%

Run 3: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2018-05-30 07:18:58

End at: 2018-05-30 07:19:28

Local clock offset: 2.944 ms

Remote clock offset: 3.823 ms

Below is generated by plot.py at 2018-05-30 08:13:18

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 118.710 ms

Loss rate: 1.02%

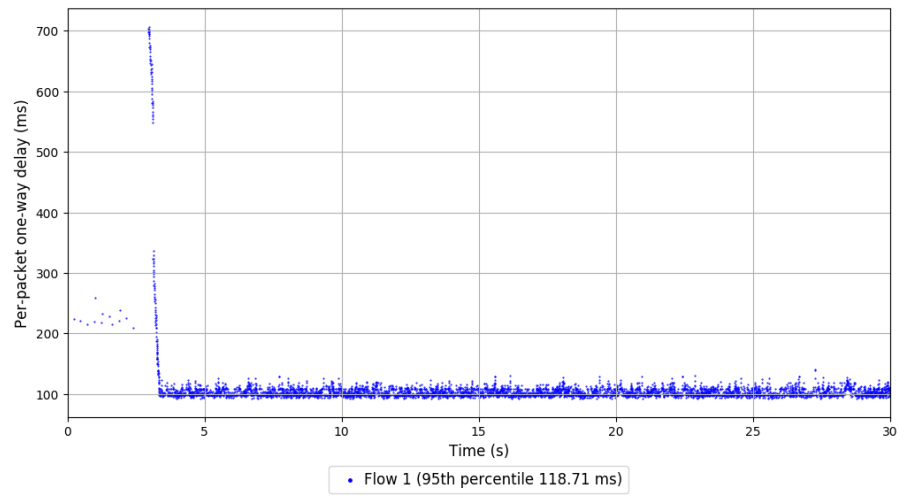
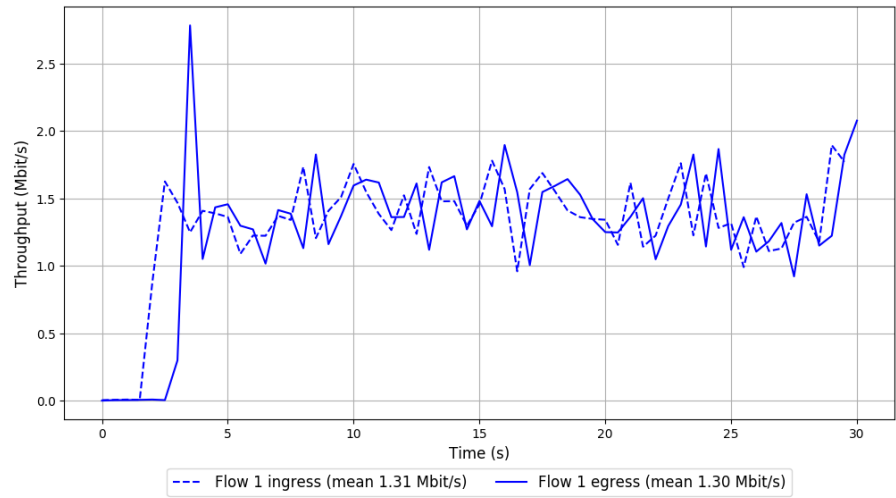
-- Flow 1:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 118.710 ms

Loss rate: 1.02%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2018-05-30 07:37:01

End at: 2018-05-30 07:37:31

Local clock offset: 2.624 ms

Remote clock offset: 3.789 ms

Below is generated by plot.py at 2018-05-30 08:13:18

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.60 Mbit/s

95th percentile per-packet one-way delay: 113.134 ms

Loss rate: 0.95%

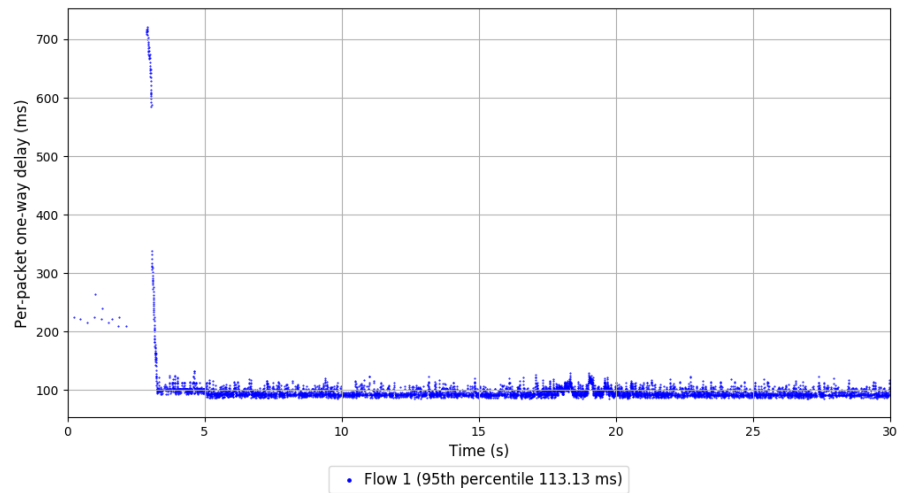
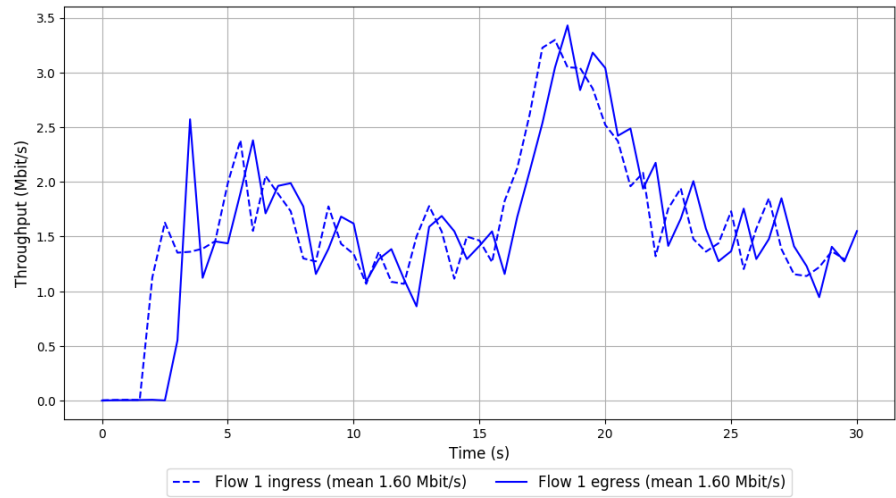
-- Flow 1:

Average throughput: 1.60 Mbit/s

95th percentile per-packet one-way delay: 113.134 ms

Loss rate: 0.95%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2018-05-30 07:55:02

End at: 2018-05-30 07:55:32

Local clock offset: -3.696 ms

Remote clock offset: 8.691 ms

Below is generated by plot.py at 2018-05-30 08:13:18

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.40 Mbit/s

95th percentile per-packet one-way delay: 118.746 ms

Loss rate: 0.82%

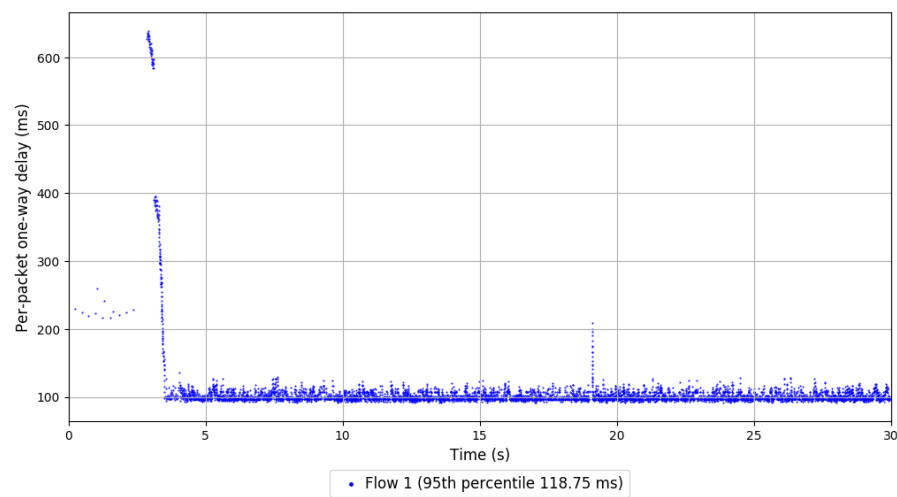
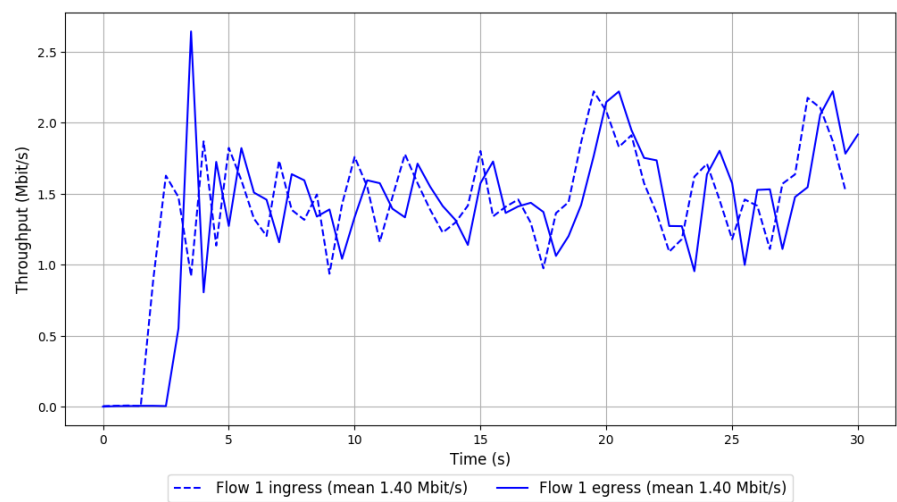
-- Flow 1:

Average throughput: 1.40 Mbit/s

95th percentile per-packet one-way delay: 118.746 ms

Loss rate: 0.82%

Run 3: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2018-05-30 07:33:38

End at: 2018-05-30 07:34:08

Local clock offset: 3.537 ms

Remote clock offset: 3.794 ms

Below is generated by plot.py at 2018-05-30 08:13:19

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.54 Mbit/s

95th percentile per-packet one-way delay: 124.760 ms

Loss rate: 0.08%

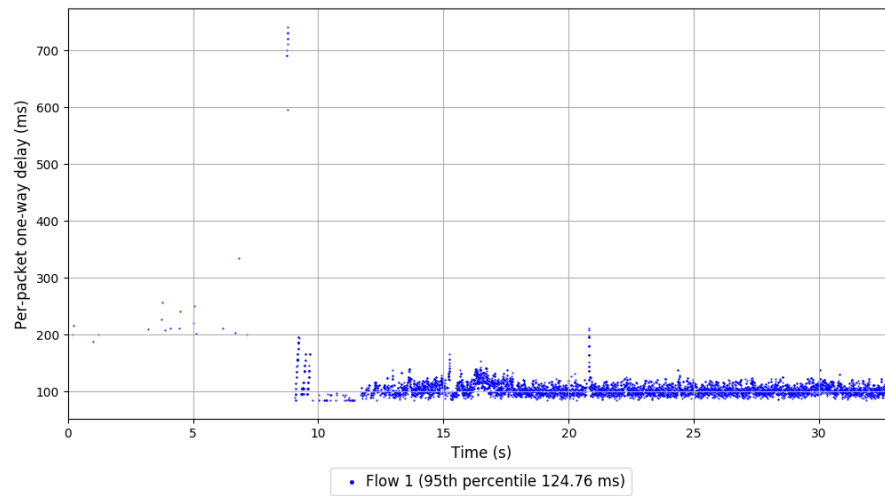
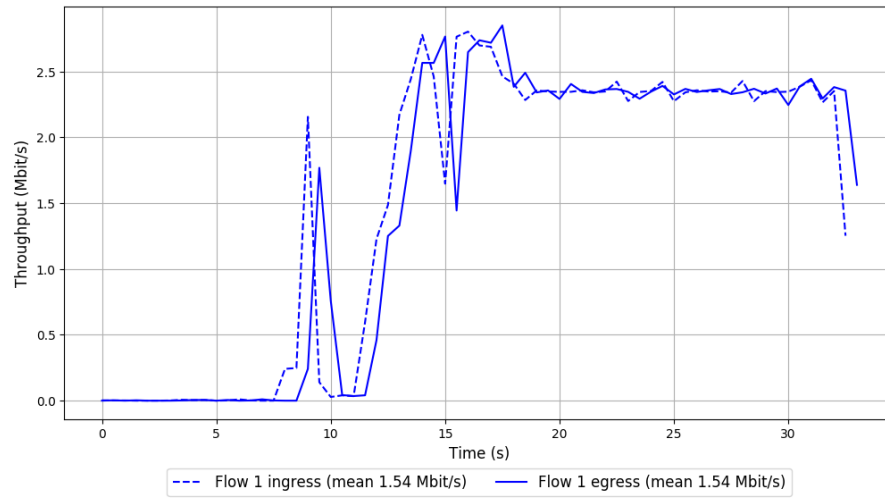
-- Flow 1:

Average throughput: 1.54 Mbit/s

95th percentile per-packet one-way delay: 124.760 ms

Loss rate: 0.08%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-05-30 07:51:40

End at: 2018-05-30 07:52:10

Local clock offset: -3.3 ms

Remote clock offset: 8.701 ms

Below is generated by plot.py at 2018-05-30 08:13:19

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.88 Mbit/s

95th percentile per-packet one-way delay: 126.708 ms

Loss rate: 0.24%

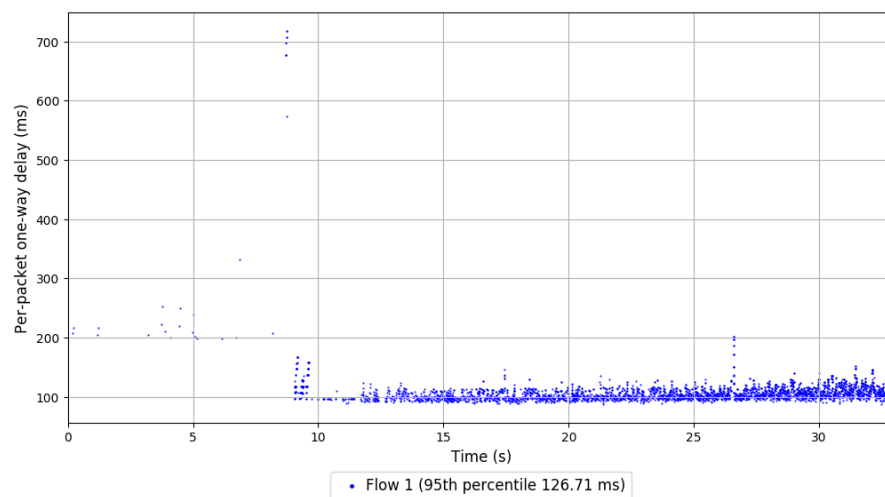
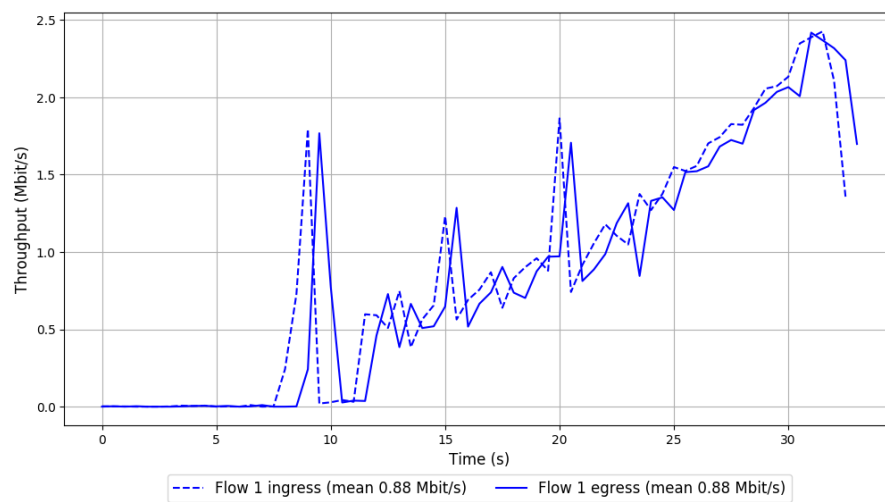
-- Flow 1:

Average throughput: 0.88 Mbit/s

95th percentile per-packet one-way delay: 126.708 ms

Loss rate: 0.24%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-05-30 08:09:41

End at: 2018-05-30 08:10:11

Local clock offset: -3.102 ms

Remote clock offset: 8.791 ms

Below is generated by plot.py at 2018-05-30 08:13:19

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.22 Mbit/s

95th percentile per-packet one-way delay: 137.803 ms

Loss rate: 0.17%

-- Flow 1:

Average throughput: 1.22 Mbit/s

95th percentile per-packet one-way delay: 137.803 ms

Loss rate: 0.17%

Run 3: Report of WebRTC media — Data Link

