

Pantheon Report

Generated at 2018-06-05 04:05:20 (UTC).

Data path: AWS India 1 Ethernet (*local*) → India ppp0 ppp0 (*remote*).

Repeated the test of 16 congestion control schemes 3 times.

Each test lasted for 30 seconds running 1 flow.

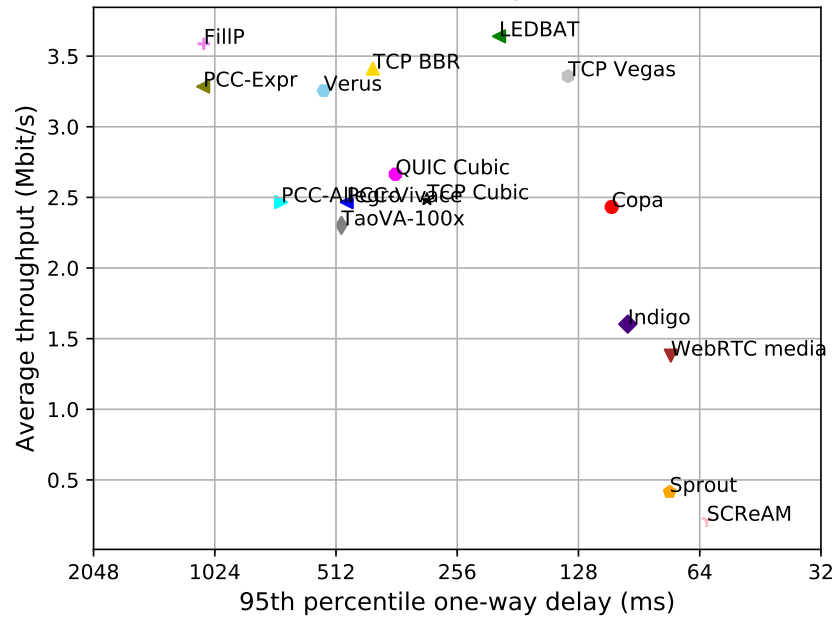
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

NTP offsets were measured against nets.org.sg and have been applied to correct the timestamps in logs.

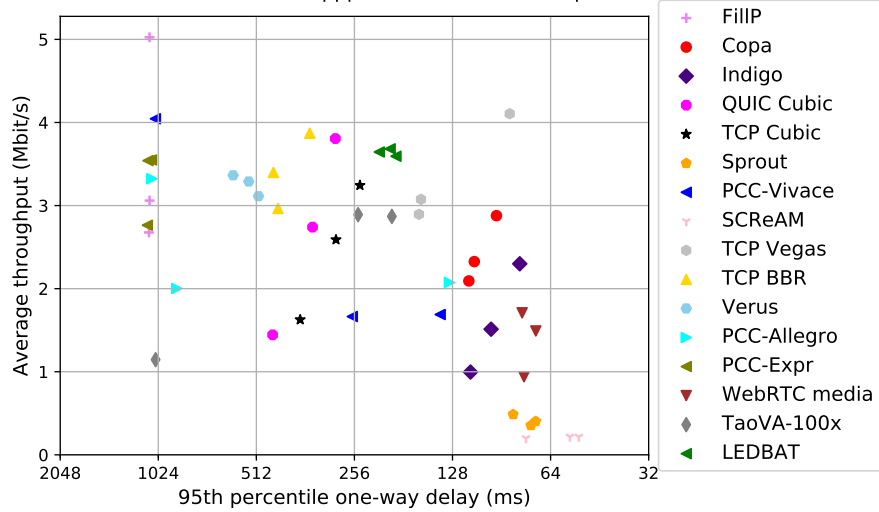
Git summary:

```
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-quirk @ 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 India 1 to India ppp0, 3 runs of 30s each per scheme
(mean of all runs by scheme)



test from AWS India 1 to India 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	3.41	414.77	1.14
Copa	3	2.43	105.87	0.12
TCP Cubic	3	2.49	304.50	0.69
FillP	3	3.59	1090.65	43.43
Indigo	3	1.60	96.59	0.20
LEDBAT	3	3.64	201.57	0.33
PCC-Allegro	3	2.46	700.60	8.04
PCC-Expr	3	3.28	1094.21	33.35
QUIC Cubic	3	2.66	364.49	1.04
SCReAM	3	0.21	61.47	0.17
Sprout	3	0.41	76.01	0.18
TaoVA-100x	3	2.30	496.51	2.07
TCP Vegas	3	3.36	135.87	0.12
Verus	3	3.25	549.31	1.76
PCC-Vivace	3	2.46	481.67	3.33
WebRTC media	3	1.38	75.50	0.20

Run 1: Statistics of TCP BBR

Start at: 2018-06-05 03:21:52

End at: 2018-06-05 03:22:23

Local clock offset: 0.306 ms

Remote clock offset: -4.319 ms

Below is generated by plot.py at 2018-06-05 04:04:44

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.40 Mbit/s

95th percentile per-packet one-way delay: 453.906 ms

Loss rate: 1.61%

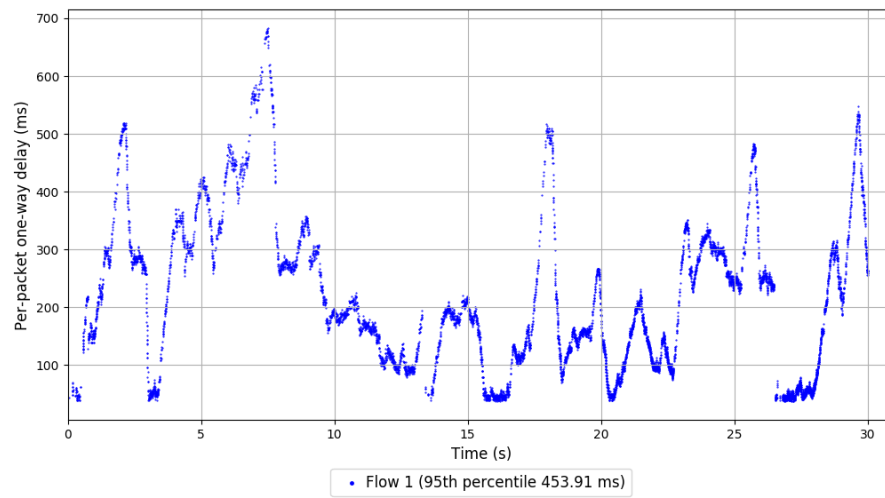
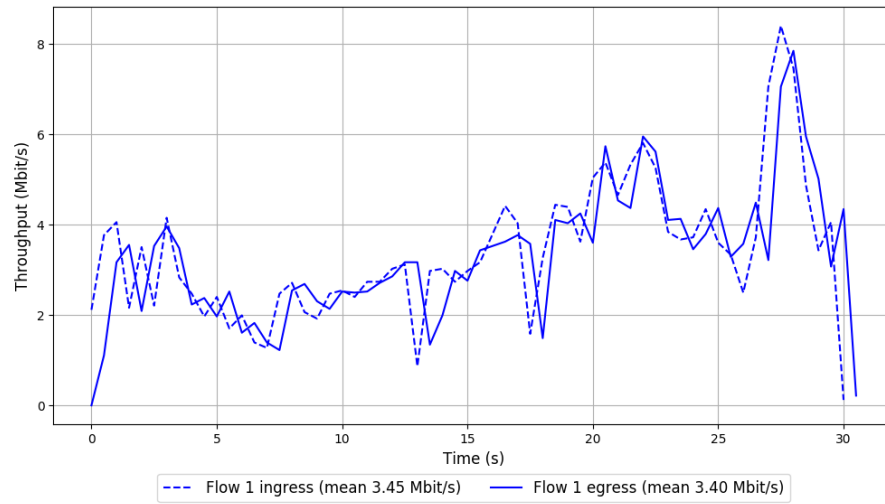
-- Flow 1:

Average throughput: 3.40 Mbit/s

95th percentile per-packet one-way delay: 453.906 ms

Loss rate: 1.61%

Run 1: Report of TCP BBR — Data Link

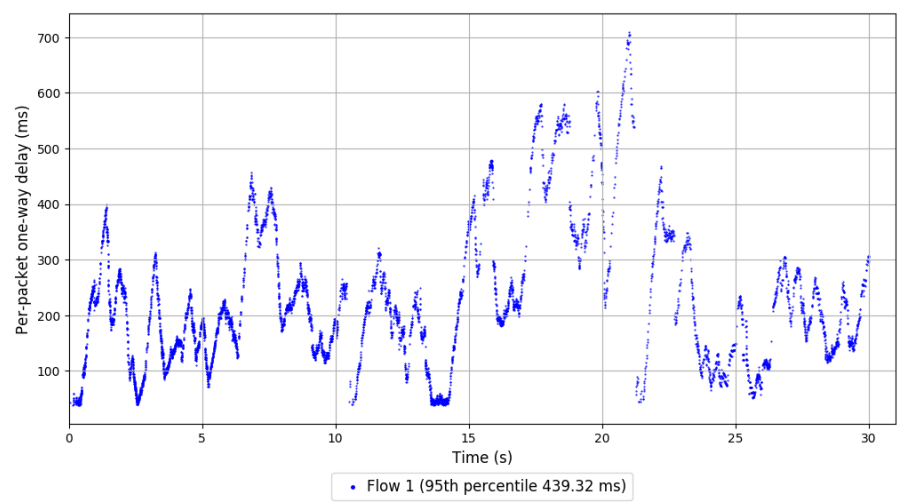
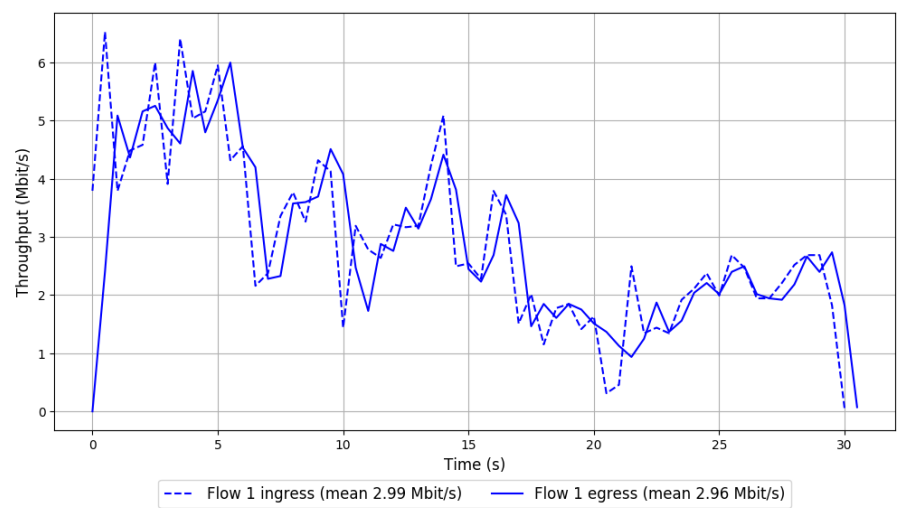


Run 2: Statistics of TCP BBR

Start at: 2018-06-05 03:39:06
End at: 2018-06-05 03:39:36
Local clock offset: -0.973 ms
Remote clock offset: -4.802 ms

Below is generated by plot.py at 2018-06-05 04:04:44
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.96 Mbit/s
95th percentile per-packet one-way delay: 439.325 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 2.96 Mbit/s
95th percentile per-packet one-way delay: 439.325 ms
Loss rate: 1.02%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-06-05 03:56:22

End at: 2018-06-05 03:56:52

Local clock offset: 0.563 ms

Remote clock offset: -2.548 ms

Below is generated by plot.py at 2018-06-05 04:04:45

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.87 Mbit/s

95th percentile per-packet one-way delay: 351.078 ms

Loss rate: 0.79%

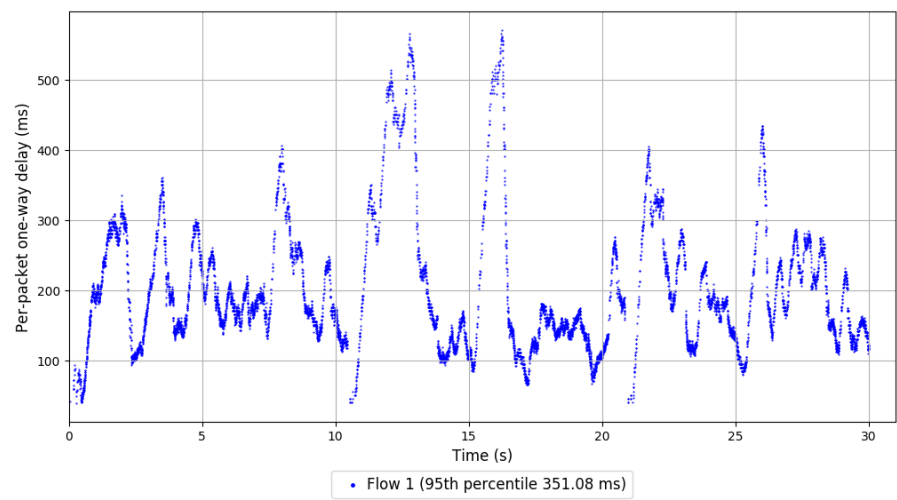
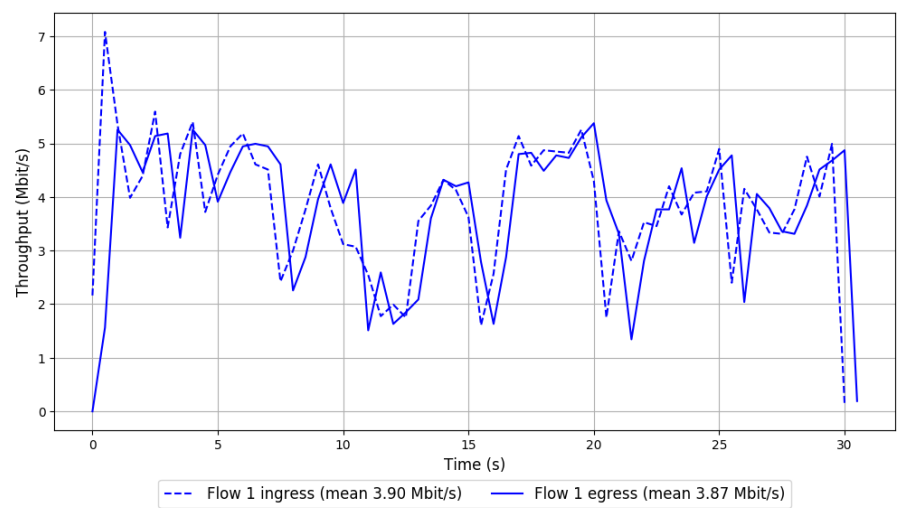
-- Flow 1:

Average throughput: 3.87 Mbit/s

95th percentile per-packet one-way delay: 351.078 ms

Loss rate: 0.79%

Run 3: Report of TCP BBR — Data Link

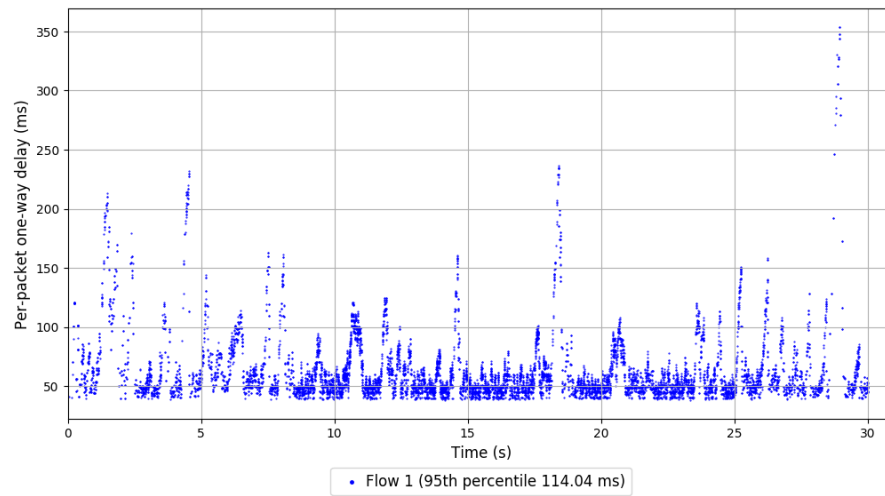
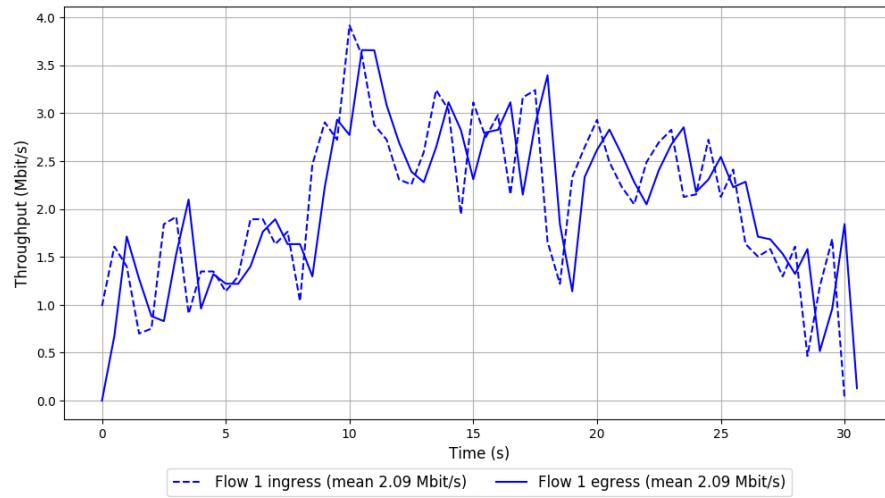


Run 1: Statistics of Copa

Start at: 2018-06-05 03:25:06
End at: 2018-06-05 03:25:36
Local clock offset: 0.058 ms
Remote clock offset: -4.169 ms

Below is generated by plot.py at 2018-06-05 04:04:45
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.09 Mbit/s
95th percentile per-packet one-way delay: 114.039 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 2.09 Mbit/s
95th percentile per-packet one-way delay: 114.039 ms
Loss rate: 0.04%

Run 1: Report of Copa — Data Link

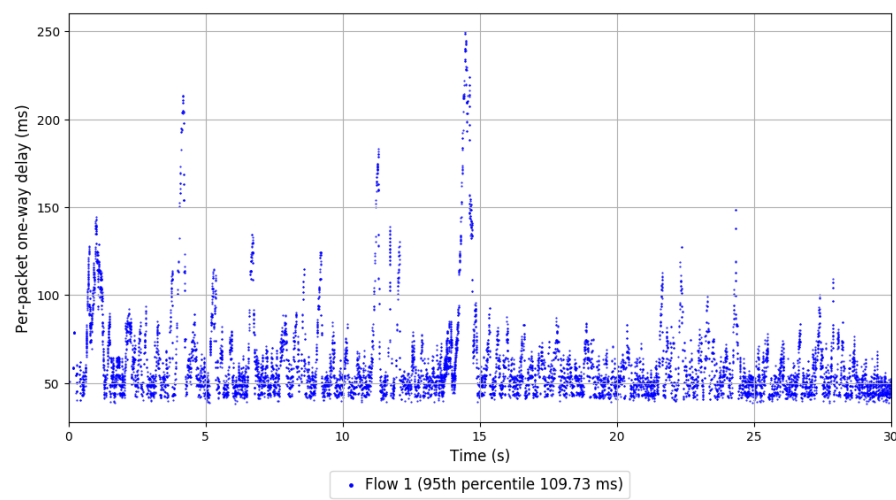
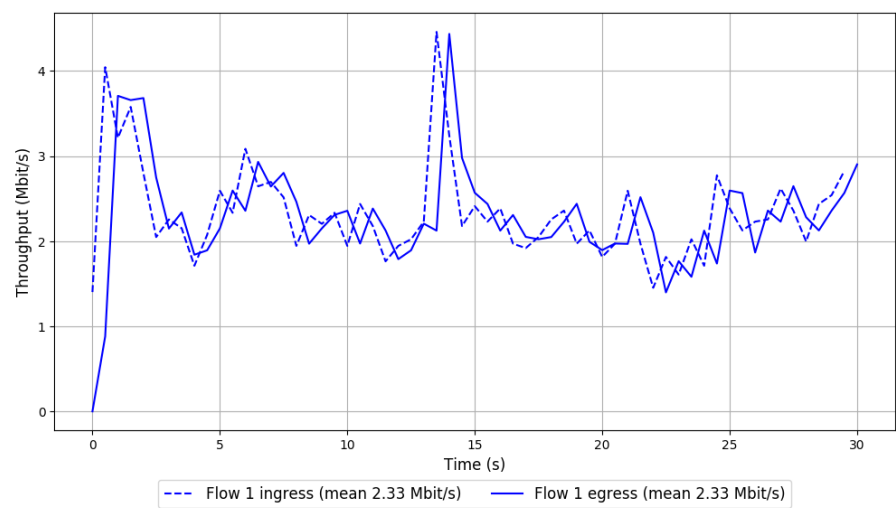


Run 2: Statistics of Copa

Start at: 2018-06-05 03:42:20
End at: 2018-06-05 03:42:50
Local clock offset: -0.365 ms
Remote clock offset: -4.295 ms

Below is generated by plot.py at 2018-06-05 04:04:46
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.33 Mbit/s
95th percentile per-packet one-way delay: 109.726 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 2.33 Mbit/s
95th percentile per-packet one-way delay: 109.726 ms
Loss rate: 0.15%

Run 2: Report of Copa — Data Link

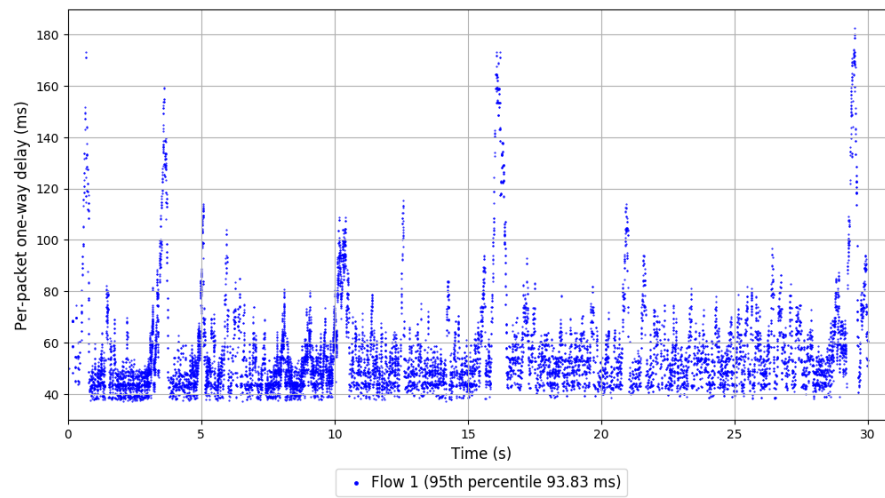
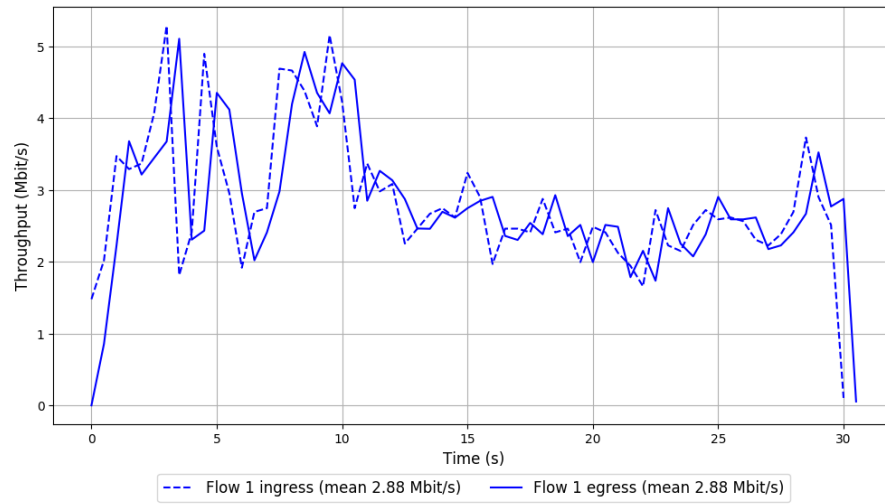


Run 3: Statistics of Copa

Start at: 2018-06-05 03:59:35
End at: 2018-06-05 04:00:05
Local clock offset: 1.256 ms
Remote clock offset: -2.553 ms

Below is generated by plot.py at 2018-06-05 04:04:48
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.88 Mbit/s
95th percentile per-packet one-way delay: 93.833 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 2.88 Mbit/s
95th percentile per-packet one-way delay: 93.833 ms
Loss rate: 0.18%

Run 3: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-06-05 03:28:20

End at: 2018-06-05 03:28:50

Local clock offset: 1.208 ms

Remote clock offset: -3.46 ms

Below is generated by plot.py at 2018-06-05 04:04:48

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.24 Mbit/s

95th percentile per-packet one-way delay: 246.269 ms

Loss rate: 0.43%

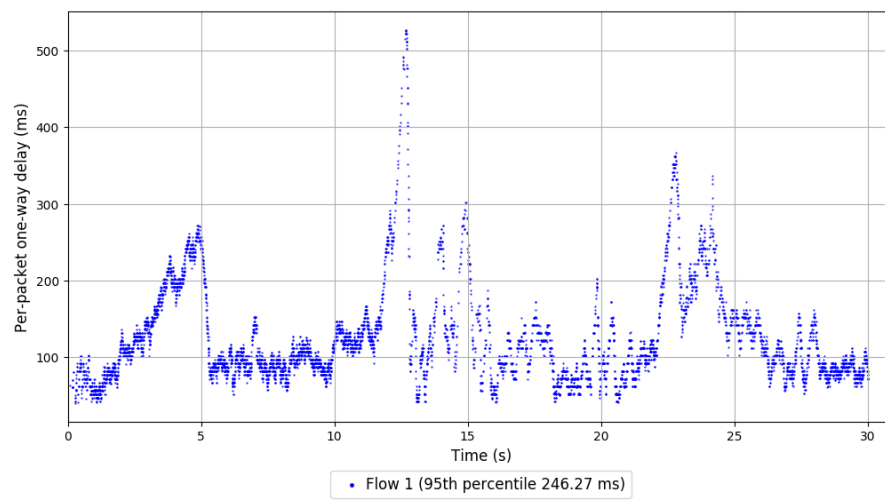
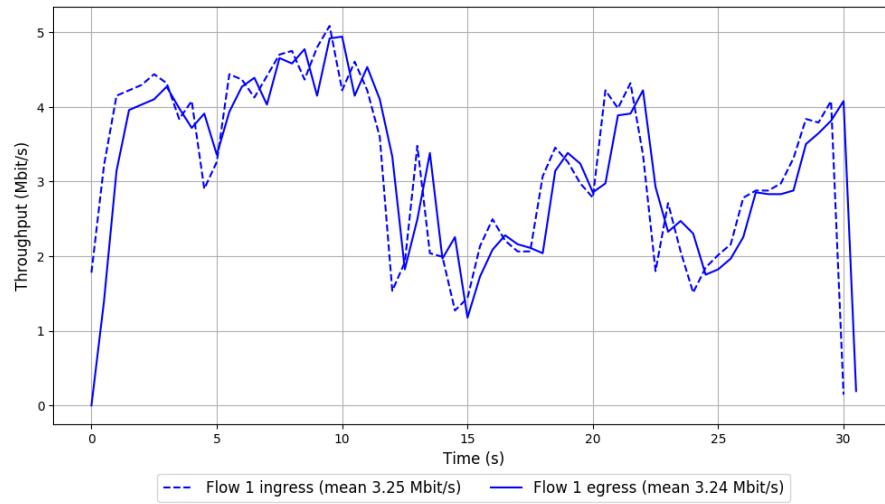
-- Flow 1:

Average throughput: 3.24 Mbit/s

95th percentile per-packet one-way delay: 246.269 ms

Loss rate: 0.43%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-06-05 03:45:35

End at: 2018-06-05 03:46:05

Local clock offset: -0.096 ms

Remote clock offset: -4.8 ms

Below is generated by plot.py at 2018-06-05 04:04:48

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.59 Mbit/s

95th percentile per-packet one-way delay: 291.628 ms

Loss rate: 0.58%

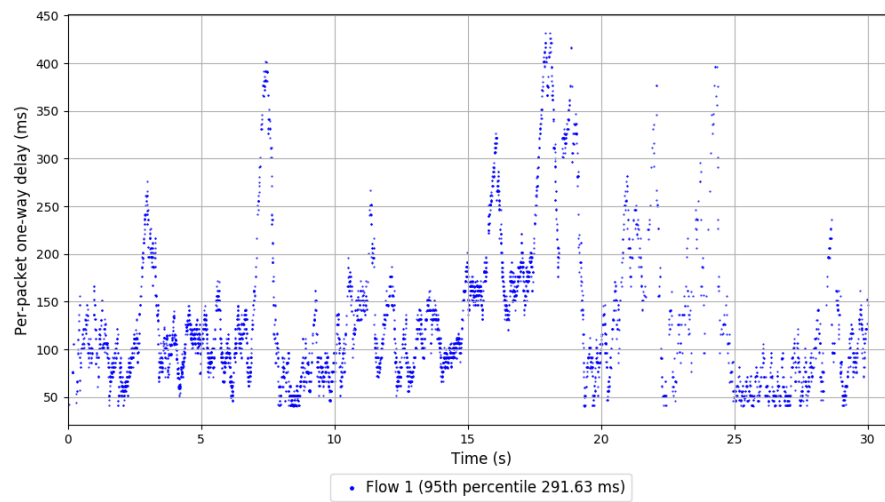
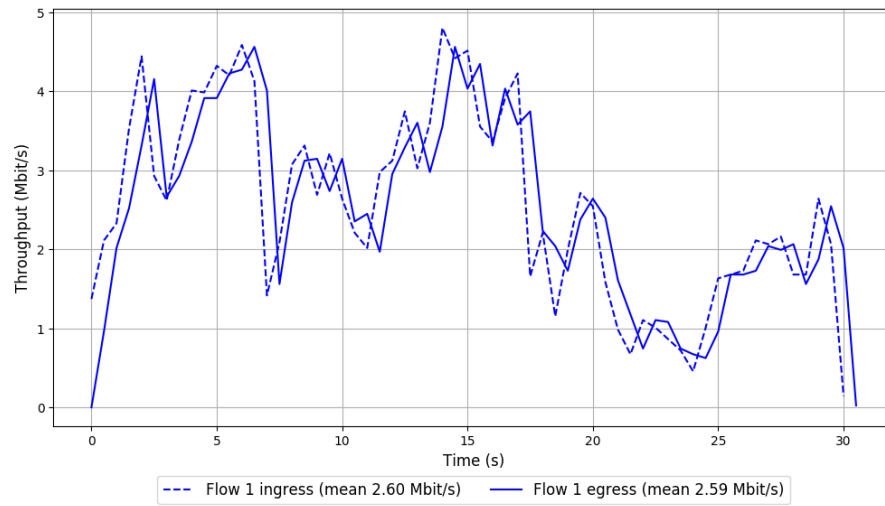
-- Flow 1:

Average throughput: 2.59 Mbit/s

95th percentile per-packet one-way delay: 291.628 ms

Loss rate: 0.58%

Run 2: Report of TCP Cubic — Data Link

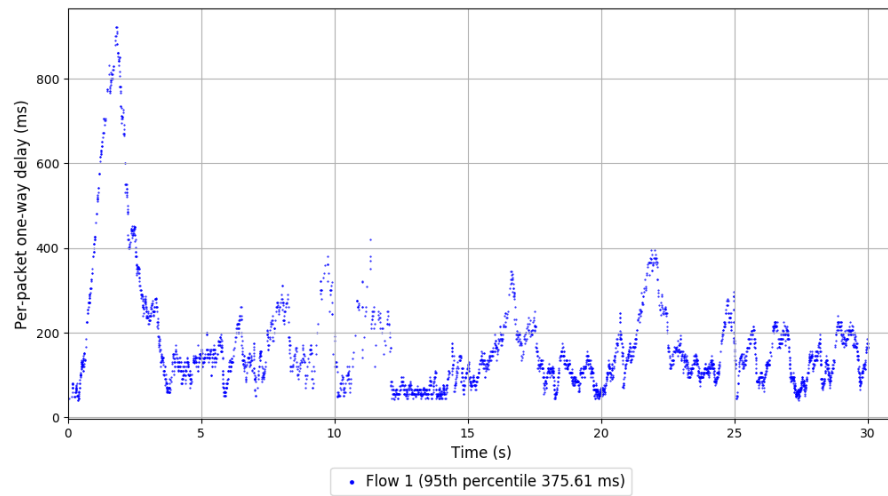
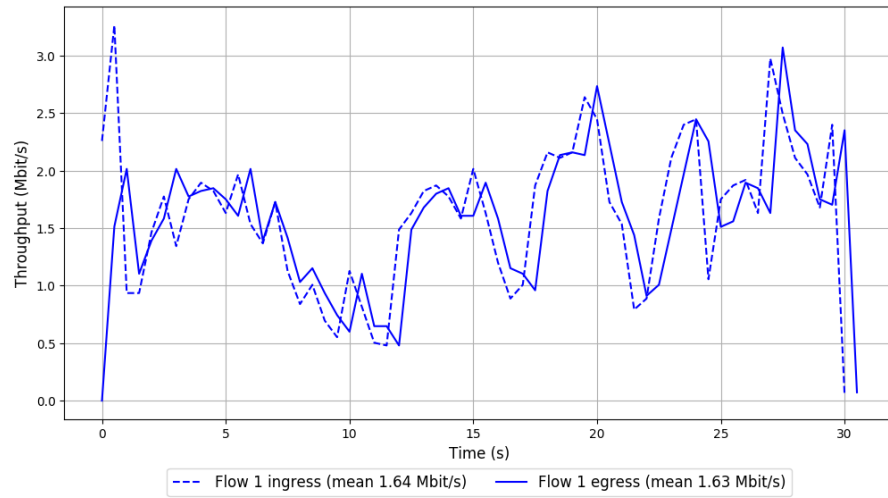


Run 3: Statistics of TCP Cubic

Start at: 2018-06-05 04:02:51
End at: 2018-06-05 04:03:21
Local clock offset: -1.46 ms
Remote clock offset: -1.645 ms

Below is generated by plot.py at 2018-06-05 04:04:48
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.63 Mbit/s
95th percentile per-packet one-way delay: 375.611 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 1.63 Mbit/s
95th percentile per-packet one-way delay: 375.611 ms
Loss rate: 1.05%

Run 3: Report of TCP Cubic — Data Link

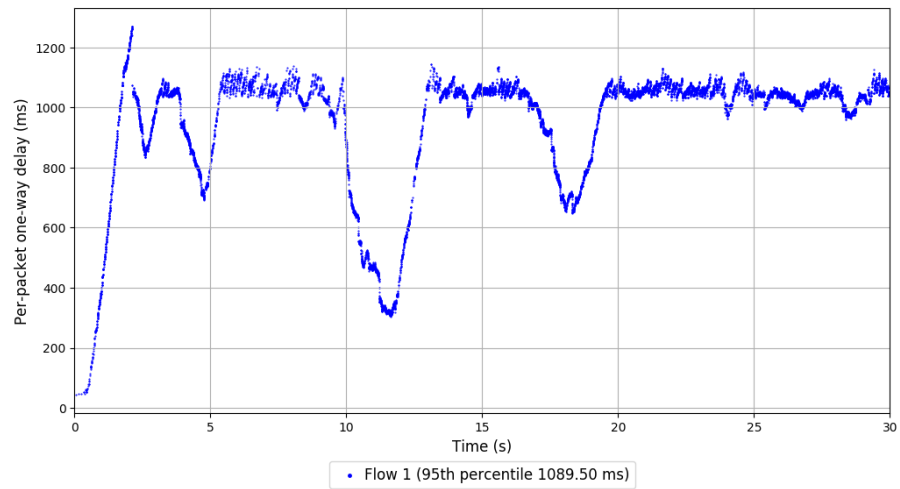
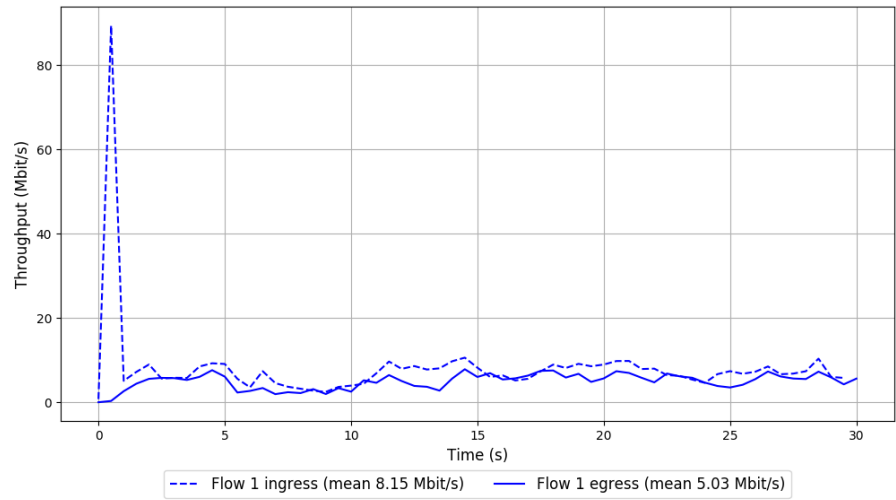


Run 1: Statistics of FillP

Start at: 2018-06-05 03:15:25
End at: 2018-06-05 03:15:55
Local clock offset: 2.17 ms
Remote clock offset: -4.373 ms

Below is generated by plot.py at 2018-06-05 04:04:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 5.03 Mbit/s
95th percentile per-packet one-way delay: 1089.497 ms
Loss rate: 38.44%
-- Flow 1:
Average throughput: 5.03 Mbit/s
95th percentile per-packet one-way delay: 1089.497 ms
Loss rate: 38.44%

Run 1: Report of FillP — Data Link

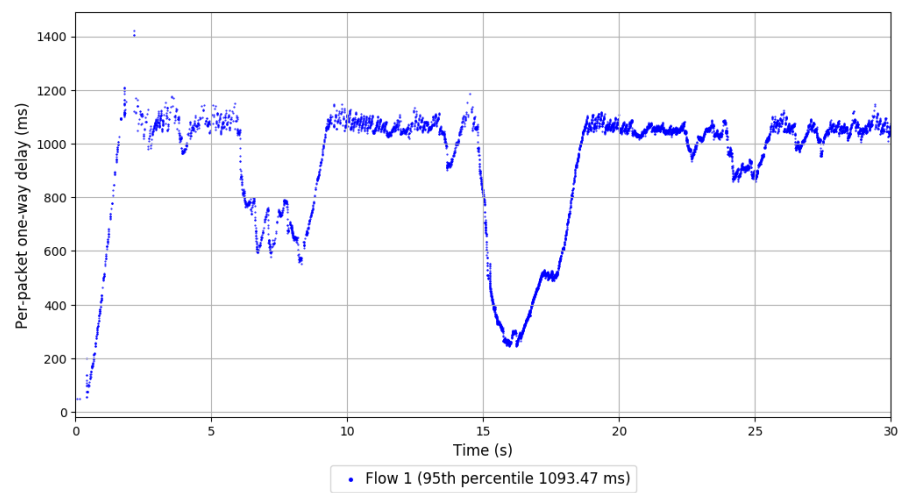
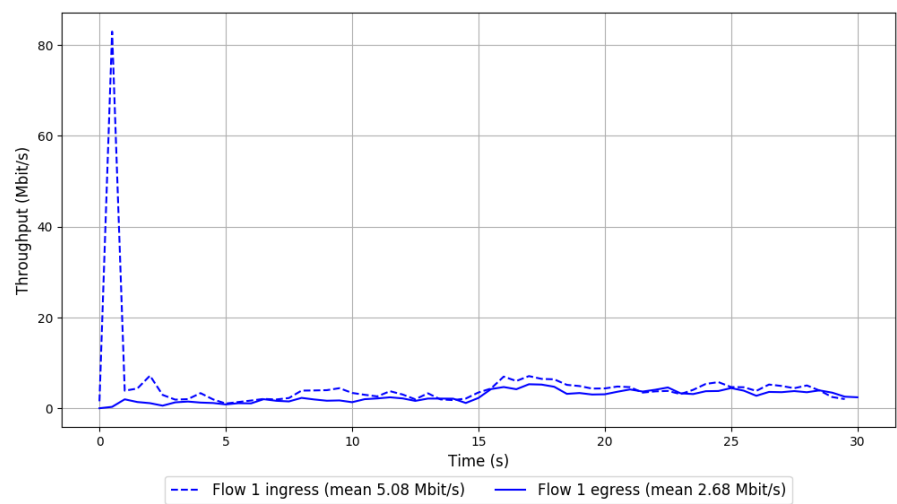


Run 2: Statistics of FillP

Start at: 2018-06-05 03:32:38
End at: 2018-06-05 03:33:08
Local clock offset: -2.914 ms
Remote clock offset: -4.041 ms

Below is generated by plot.py at 2018-06-05 04:04:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.68 Mbit/s
95th percentile per-packet one-way delay: 1093.473 ms
Loss rate: 47.32%
-- Flow 1:
Average throughput: 2.68 Mbit/s
95th percentile per-packet one-way delay: 1093.473 ms
Loss rate: 47.32%

Run 2: Report of FillP — Data Link

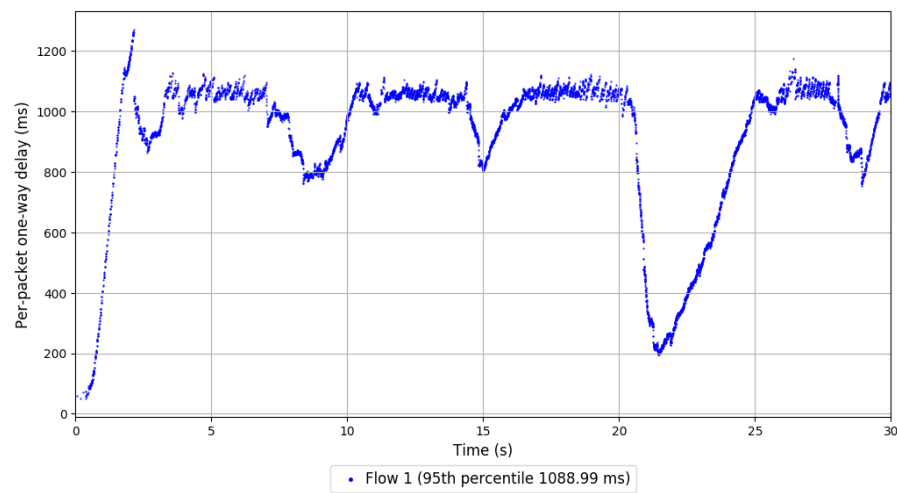
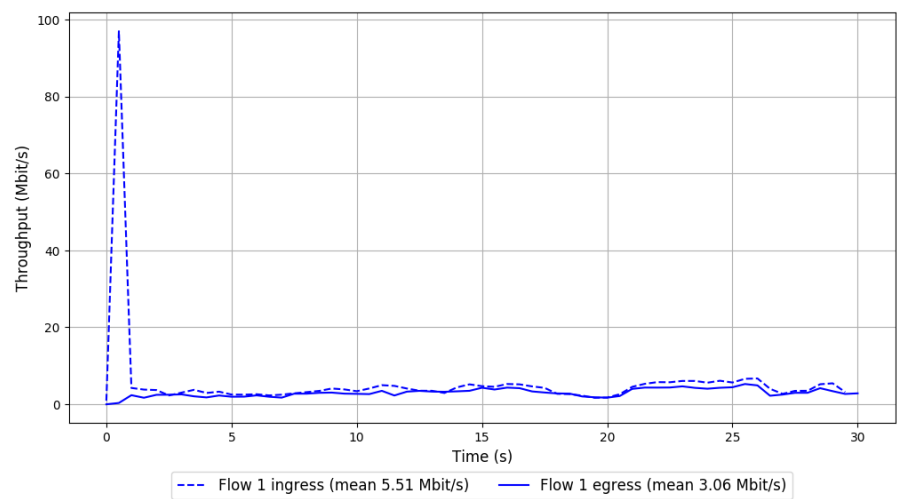


Run 3: Statistics of FillP

Start at: 2018-06-05 03:49:53
End at: 2018-06-05 03:50:23
Local clock offset: -2.781 ms
Remote clock offset: -3.066 ms

Below is generated by plot.py at 2018-06-05 04:04:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.06 Mbit/s
95th percentile per-packet one-way delay: 1088.988 ms
Loss rate: 44.52%
-- Flow 1:
Average throughput: 3.06 Mbit/s
95th percentile per-packet one-way delay: 1088.988 ms
Loss rate: 44.52%

Run 3: Report of FillP — Data Link

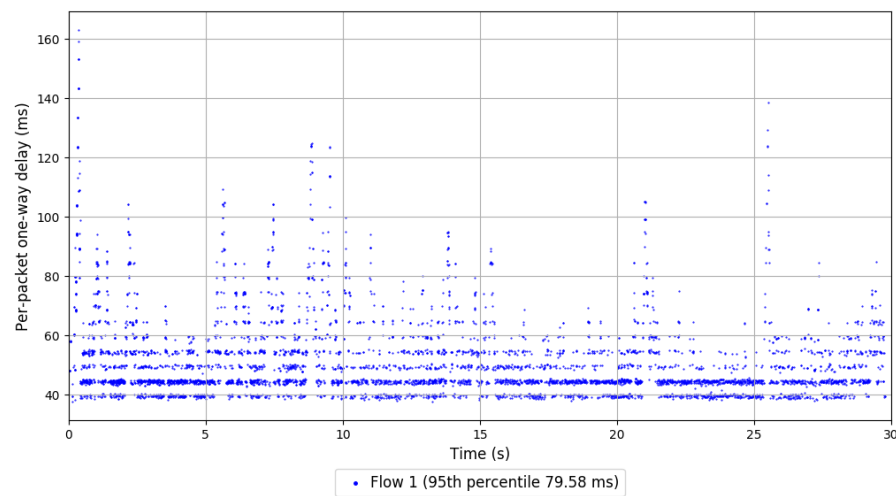
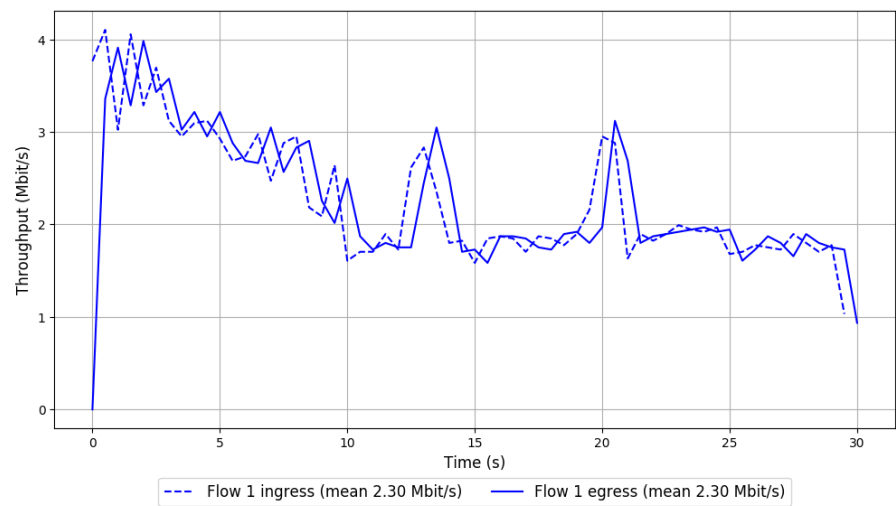


```
Run 1: Statistics of Indigo

Start at: 2018-06-05 03:24:02
End at: 2018-06-05 03:24:32
Local clock offset: 0.012 ms
Remote clock offset: -4.471 ms

# Below is generated by plot.py at 2018-06-05 04:04:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.30 Mbit/s
95th percentile per-packet one-way delay: 79.583 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 2.30 Mbit/s
95th percentile per-packet one-way delay: 79.583 ms
Loss rate: 0.19%
```

Run 1: Report of Indigo — Data Link

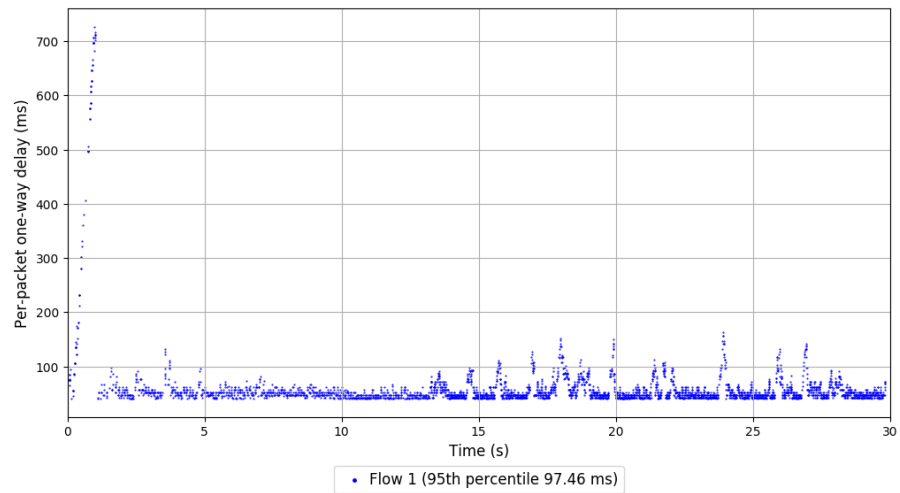
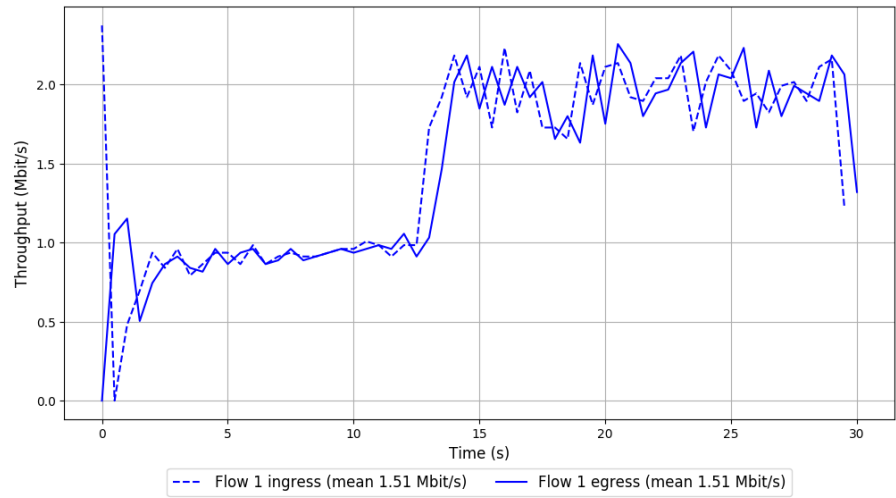


Run 2: Statistics of Indigo

Start at: 2018-06-05 03:41:16
End at: 2018-06-05 03:41:46
Local clock offset: -2.246 ms
Remote clock offset: -4.646 ms

Below is generated by plot.py at 2018-06-05 04:04:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.51 Mbit/s
95th percentile per-packet one-way delay: 97.456 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 1.51 Mbit/s
95th percentile per-packet one-way delay: 97.456 ms
Loss rate: 0.24%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2018-06-05 03:58:31

End at: 2018-06-05 03:59:01

Local clock offset: -1.759 ms

Remote clock offset: -3.12 ms

Below is generated by plot.py at 2018-06-05 04:04:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.00 Mbit/s

95th percentile per-packet one-way delay: 112.719 ms

Loss rate: 0.16%

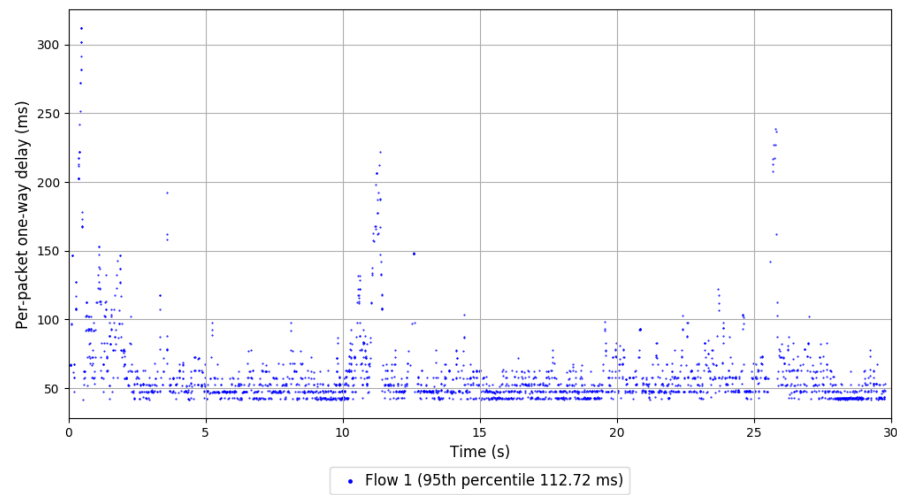
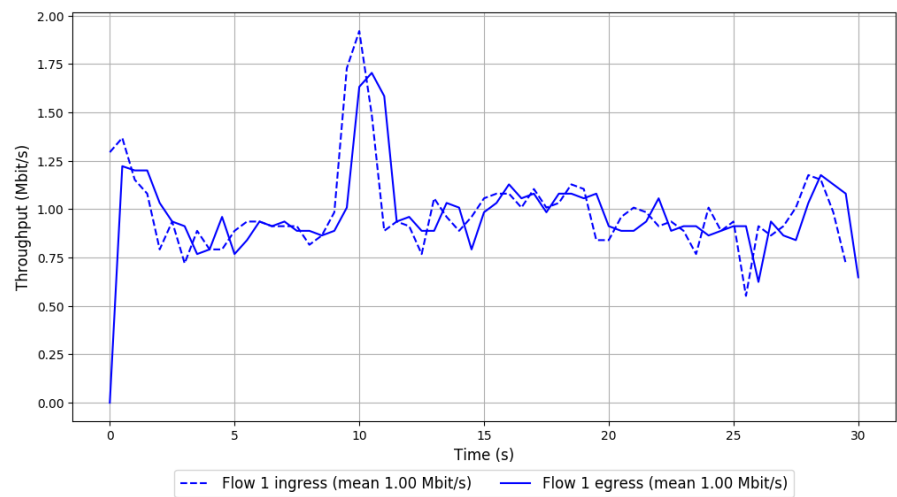
-- Flow 1:

Average throughput: 1.00 Mbit/s

95th percentile per-packet one-way delay: 112.719 ms

Loss rate: 0.16%

Run 3: Report of Indigo — Data Link

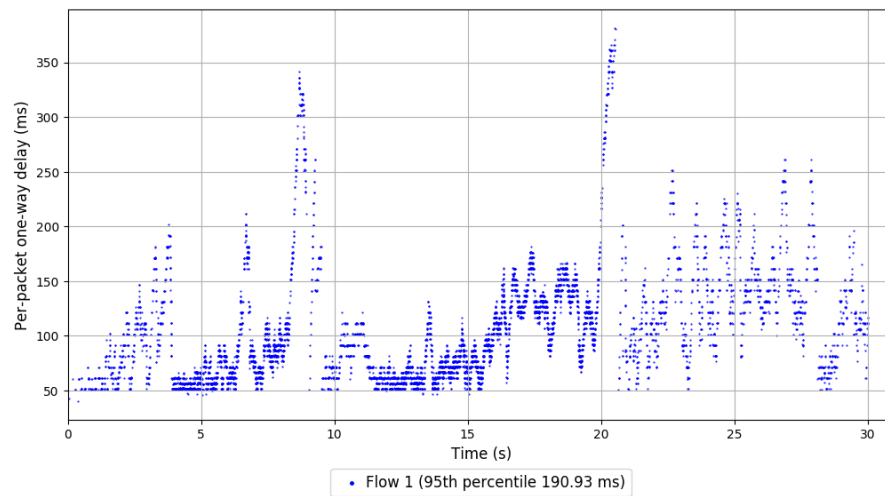
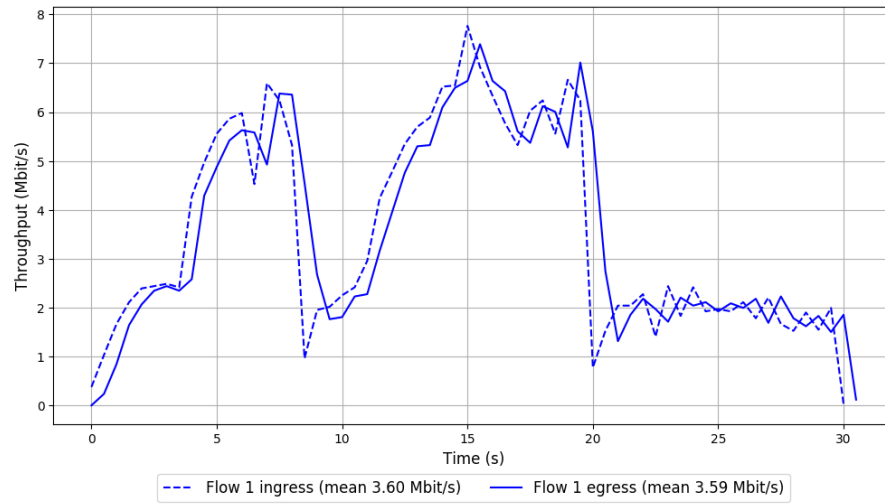


```
Run 1: Statistics of LEDBAT

Start at: 2018-06-05 03:19:43
End at: 2018-06-05 03:20:13
Local clock offset: 1.613 ms
Remote clock offset: -4.354 ms

# Below is generated by plot.py at 2018-06-05 04:04:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 3.59 Mbit/s
95th percentile per-packet one-way delay: 190.931 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 3.59 Mbit/s
95th percentile per-packet one-way delay: 190.931 ms
Loss rate: 0.27%
```

Run 1: Report of LEDBAT — Data Link

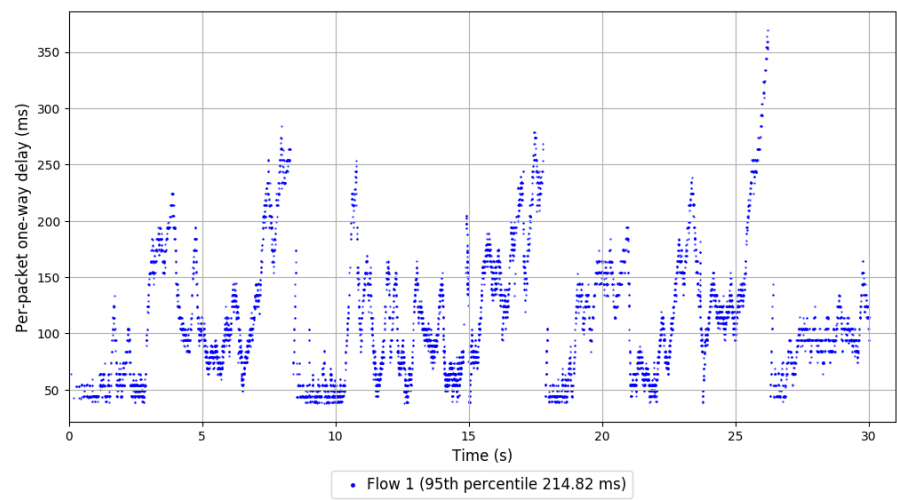
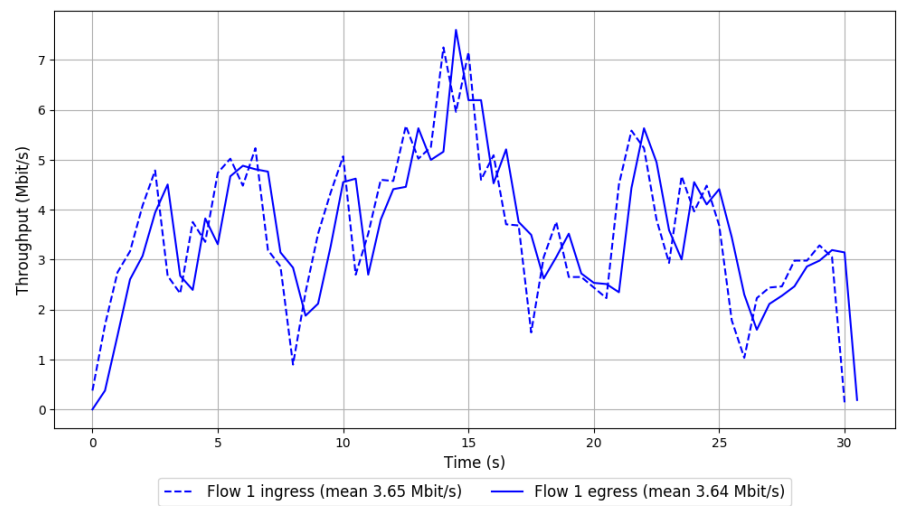


Run 2: Statistics of LEDBAT

Start at: 2018-06-05 03:36:57
End at: 2018-06-05 03:37:27
Local clock offset: -0.631 ms
Remote clock offset: -4.509 ms

Below is generated by plot.py at 2018-06-05 04:04:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.64 Mbit/s
95th percentile per-packet one-way delay: 214.821 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 3.64 Mbit/s
95th percentile per-packet one-way delay: 214.821 ms
Loss rate: 0.28%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-06-05 03:54:12

End at: 2018-06-05 03:54:42

Local clock offset: 0.375 ms

Remote clock offset: -3.12 ms

Below is generated by plot.py at 2018-06-05 04:04:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.68 Mbit/s

95th percentile per-packet one-way delay: 198.952 ms

Loss rate: 0.43%

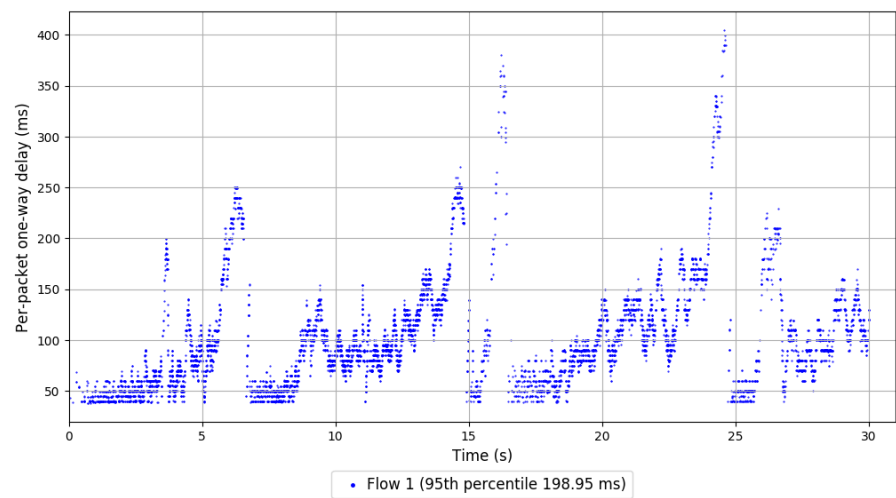
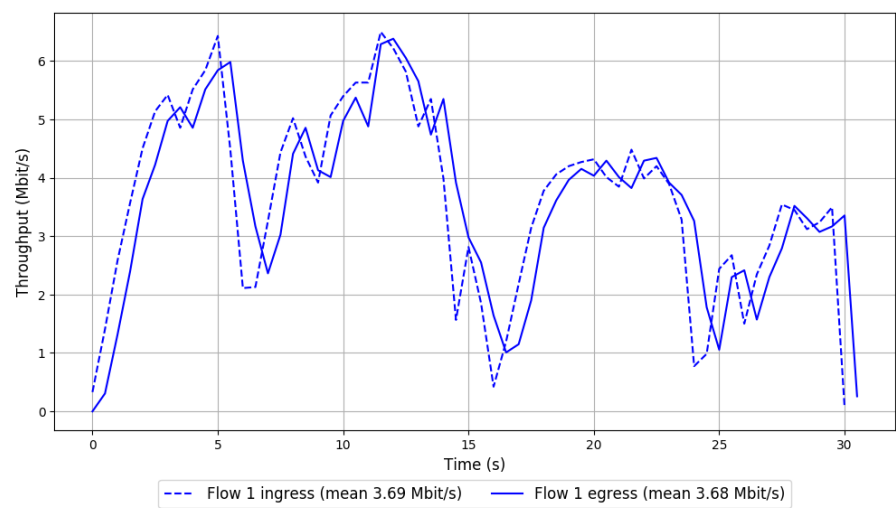
-- Flow 1:

Average throughput: 3.68 Mbit/s

95th percentile per-packet one-way delay: 198.952 ms

Loss rate: 0.43%

Run 3: Report of LEDBAT — Data Link

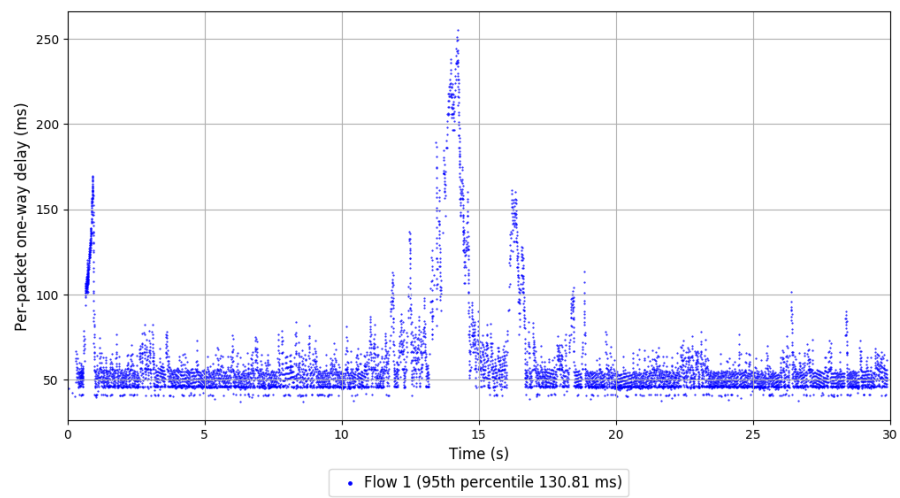
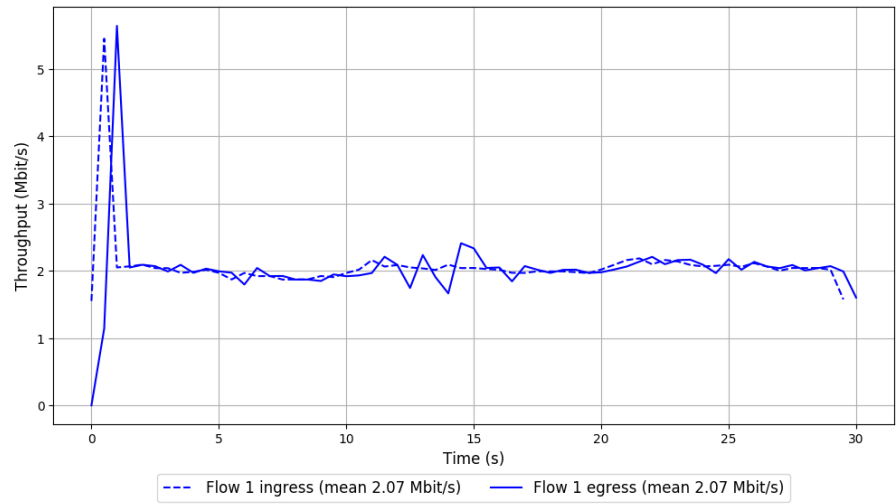


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-06-05 03:17:34
End at: 2018-06-05 03:18:04
Local clock offset: 2.035 ms
Remote clock offset: -4.443 ms

# Below is generated by plot.py at 2018-06-05 04:04:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.07 Mbit/s
95th percentile per-packet one-way delay: 130.809 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 2.07 Mbit/s
95th percentile per-packet one-way delay: 130.809 ms
Loss rate: 0.16%
```

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-06-05 03:34:47

End at: 2018-06-05 03:35:17

Local clock offset: 0.225 ms

Remote clock offset: -4.473 ms

Below is generated by plot.py at 2018-06-05 04:04:57

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.32 Mbit/s

95th percentile per-packet one-way delay: 1071.661 ms

Loss rate: 18.62%

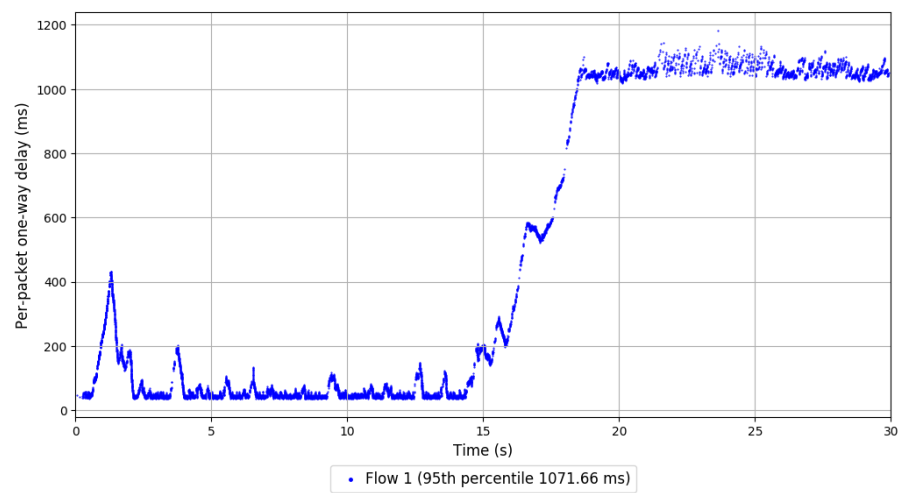
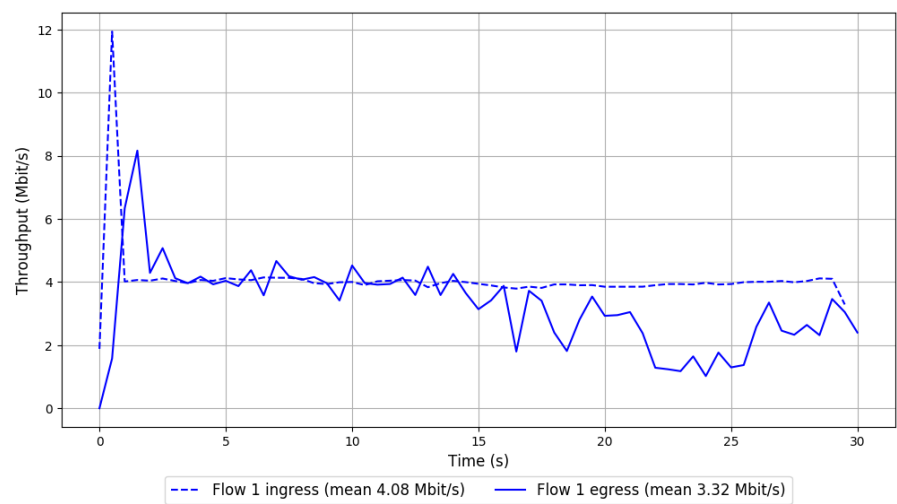
-- Flow 1:

Average throughput: 3.32 Mbit/s

95th percentile per-packet one-way delay: 1071.661 ms

Loss rate: 18.62%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-06-05 03:52:03

End at: 2018-06-05 03:52:33

Local clock offset: -2.55 ms

Remote clock offset: -2.646 ms

Below is generated by plot.py at 2018-06-05 04:04:57

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.00 Mbit/s

95th percentile per-packet one-way delay: 899.328 ms

Loss rate: 5.33%

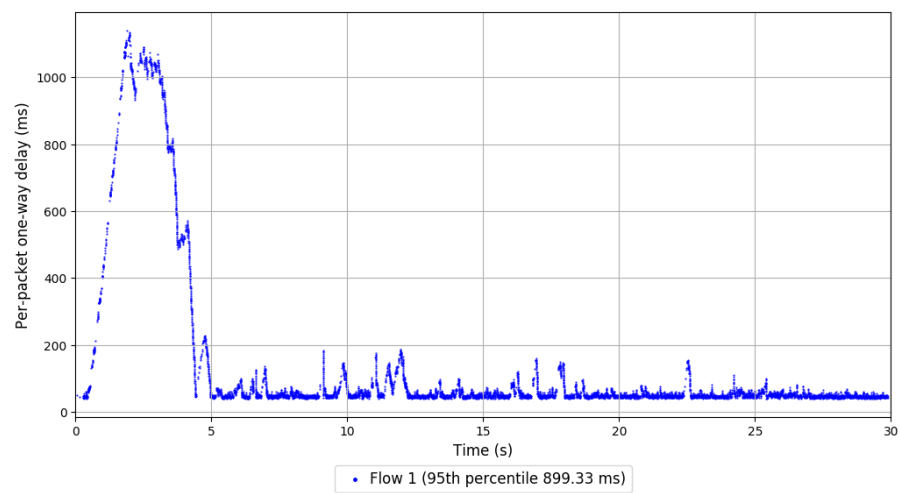
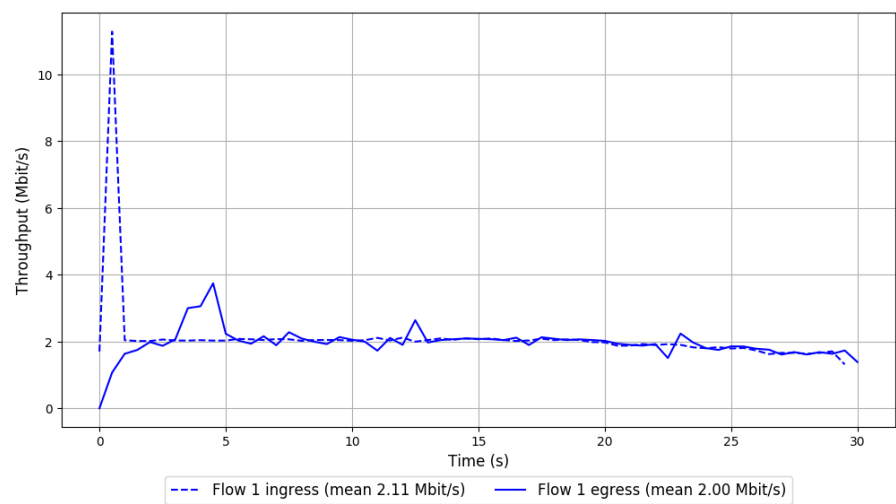
-- Flow 1:

Average throughput: 2.00 Mbit/s

95th percentile per-packet one-way delay: 899.328 ms

Loss rate: 5.33%

Run 3: Report of PCC-Allegro — Data Link

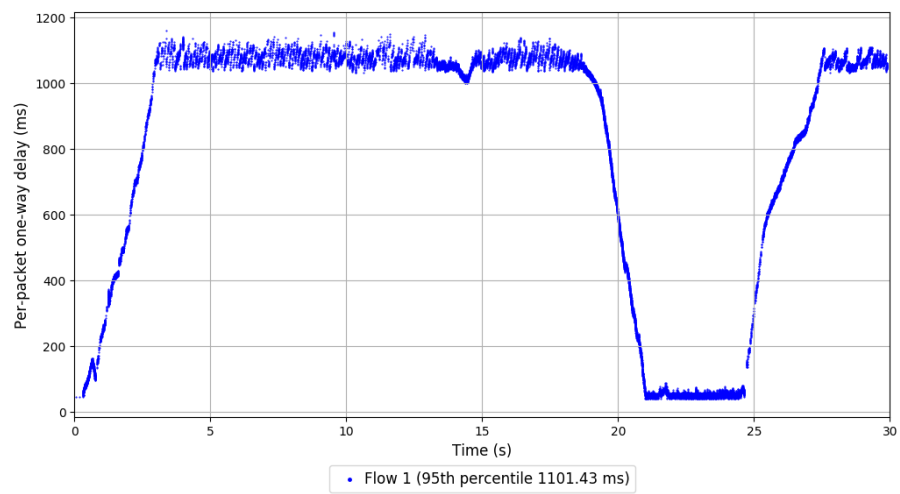
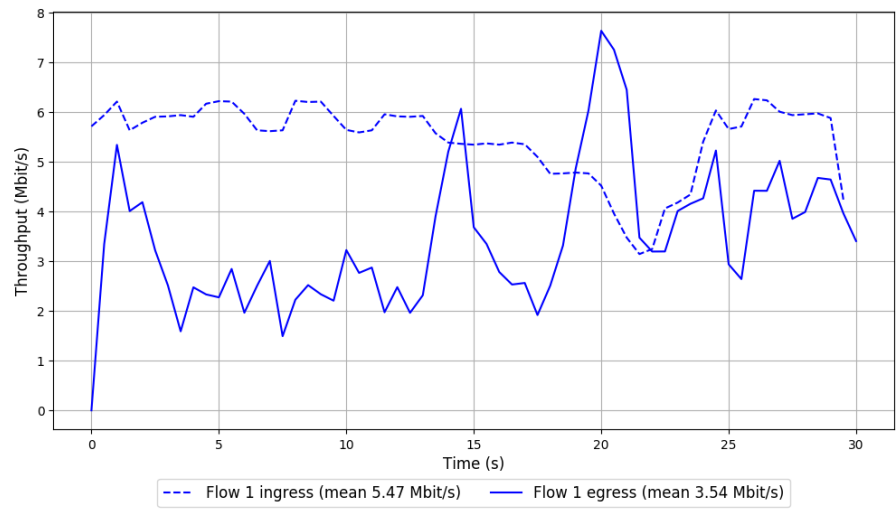


```
Run 1: Statistics of PCC-Expr

Start at: 2018-06-05 03:18:39
End at: 2018-06-05 03:19:09
Local clock offset: -1.656 ms
Remote clock offset: -4.671 ms

# Below is generated by plot.py at 2018-06-05 04:05:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 3.54 Mbit/s
95th percentile per-packet one-way delay: 1101.432 ms
Loss rate: 35.32%
-- Flow 1:
Average throughput: 3.54 Mbit/s
95th percentile per-packet one-way delay: 1101.432 ms
Loss rate: 35.32%
```

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2018-06-05 03:35:52

End at: 2018-06-05 03:36:22

Local clock offset: -2.226 ms

Remote clock offset: -3.879 ms

Below is generated by plot.py at 2018-06-05 04:05:07

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.76 Mbit/s

95th percentile per-packet one-way delay: 1106.553 ms

Loss rate: 50.79%

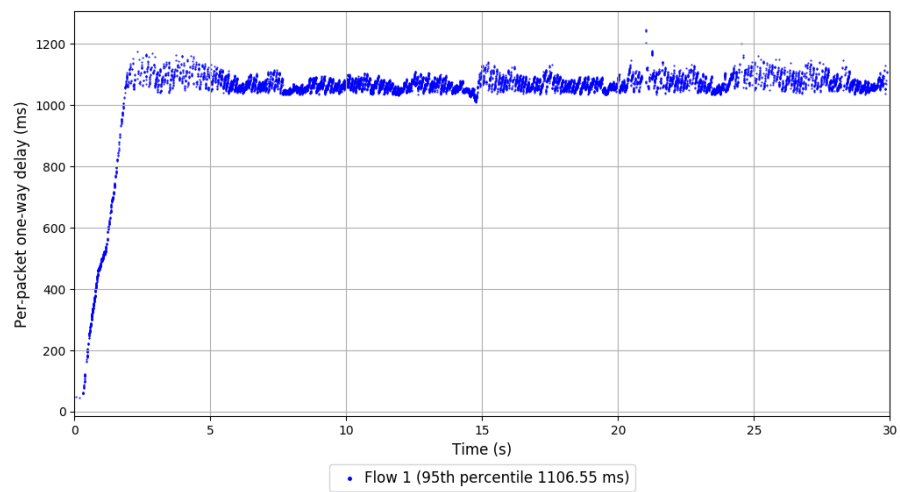
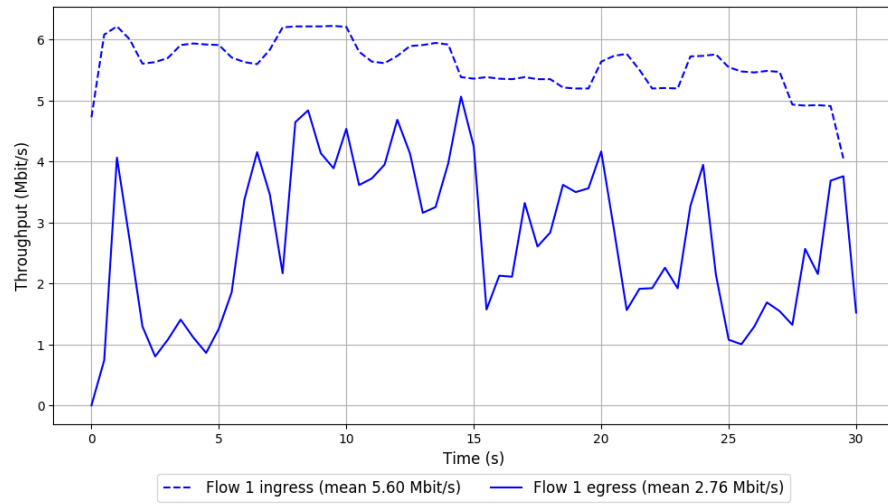
-- Flow 1:

Average throughput: 2.76 Mbit/s

95th percentile per-packet one-way delay: 1106.553 ms

Loss rate: 50.79%

Run 2: Report of PCC-Expr — Data Link

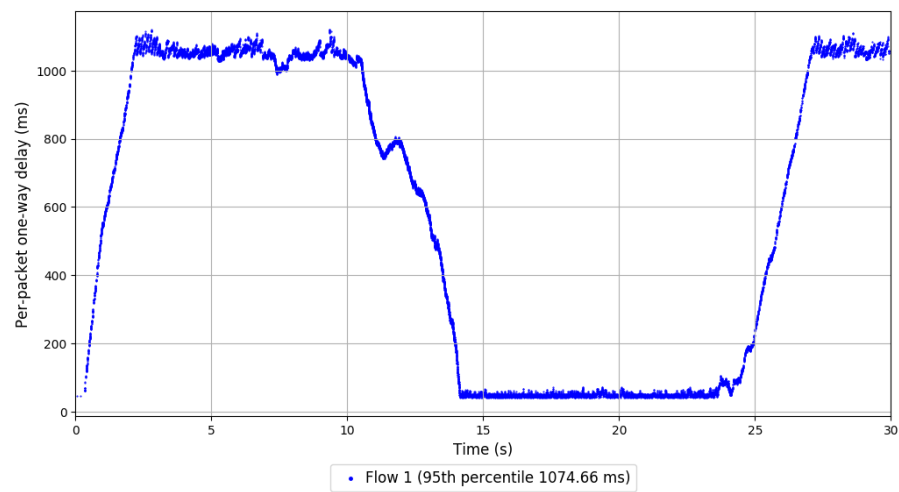
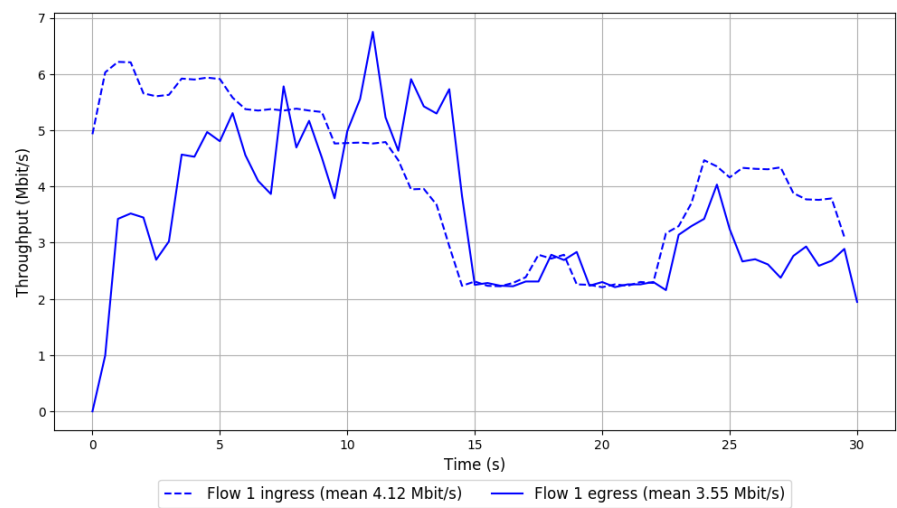


Run 3: Statistics of PCC-Expr

Start at: 2018-06-05 03:53:07
End at: 2018-06-05 03:53:37
Local clock offset: -3.358 ms
Remote clock offset: -2.917 ms

Below is generated by plot.py at 2018-06-05 04:05:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.55 Mbit/s
95th percentile per-packet one-way delay: 1074.657 ms
Loss rate: 13.94%
-- Flow 1:
Average throughput: 3.55 Mbit/s
95th percentile per-packet one-way delay: 1074.657 ms
Loss rate: 13.94%

Run 3: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2018-06-05 03:22:57

End at: 2018-06-05 03:23:27

Local clock offset: 1.177 ms

Remote clock offset: -5.015 ms

Below is generated by plot.py at 2018-06-05 04:05:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.81 Mbit/s

95th percentile per-packet one-way delay: 292.930 ms

Loss rate: 0.93%

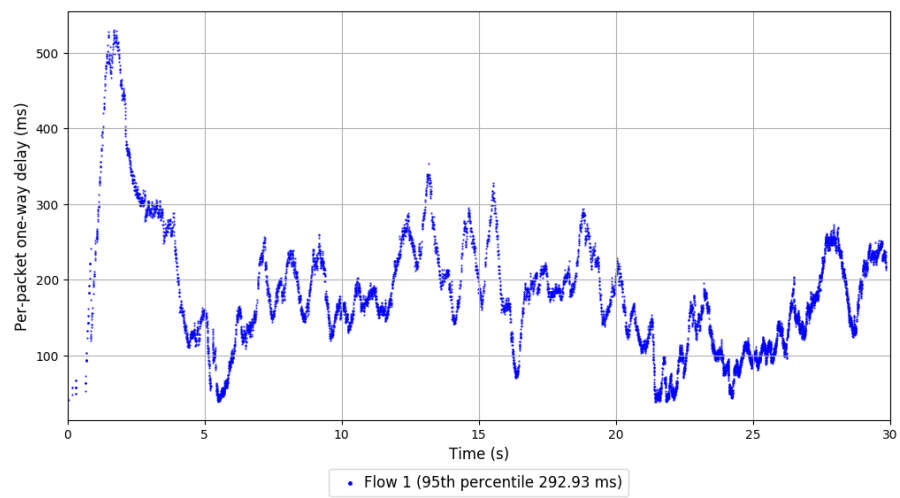
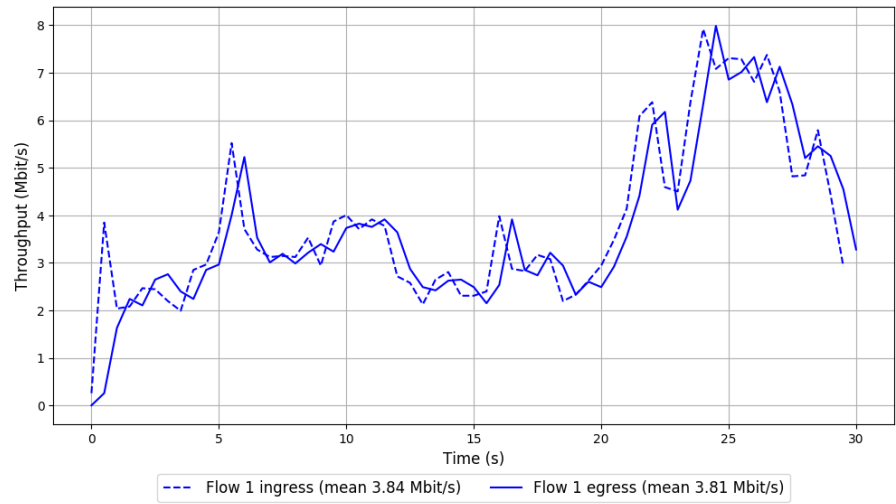
-- Flow 1:

Average throughput: 3.81 Mbit/s

95th percentile per-packet one-way delay: 292.930 ms

Loss rate: 0.93%

Run 1: Report of QUIC Cubic — Data Link

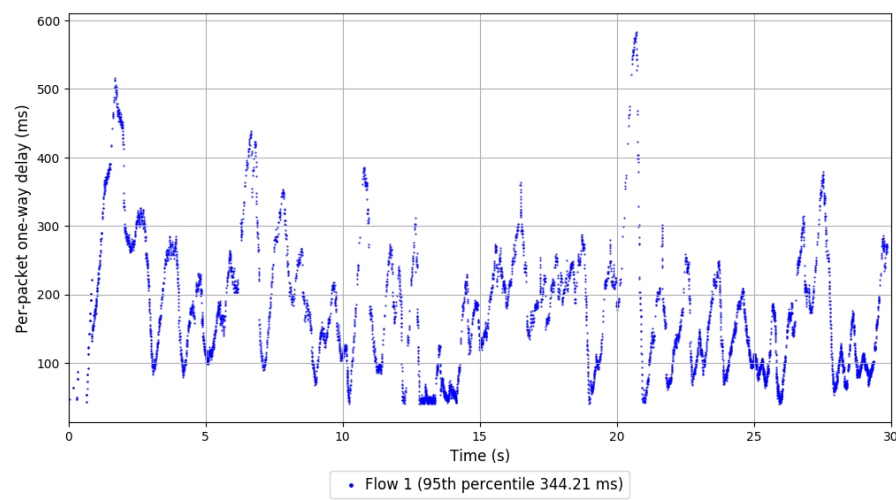
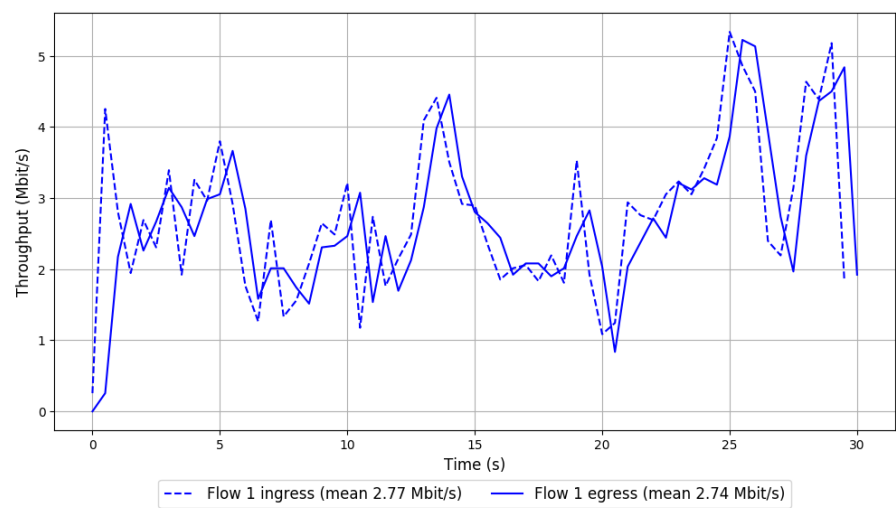


Run 2: Statistics of QUIC Cubic

Start at: 2018-06-05 03:40:11
End at: 2018-06-05 03:40:41
Local clock offset: 0.691 ms
Remote clock offset: -4.314 ms

Below is generated by plot.py at 2018-06-05 04:05:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.74 Mbit/s
95th percentile per-packet one-way delay: 344.212 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 2.74 Mbit/s
95th percentile per-packet one-way delay: 344.212 ms
Loss rate: 1.06%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-06-05 03:57:26

End at: 2018-06-05 03:57:56

Local clock offset: -2.279 ms

Remote clock offset: -2.92 ms

Below is generated by plot.py at 2018-06-05 04:05:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.44 Mbit/s

95th percentile per-packet one-way delay: 456.337 ms

Loss rate: 1.14%

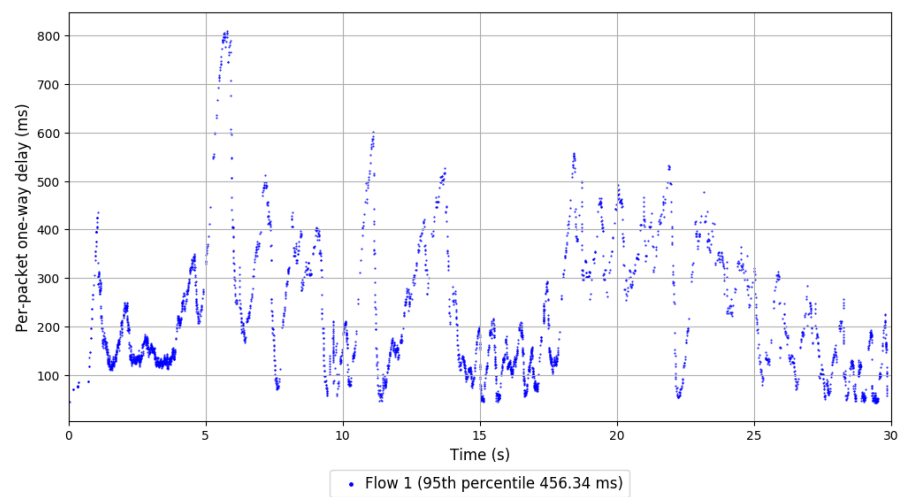
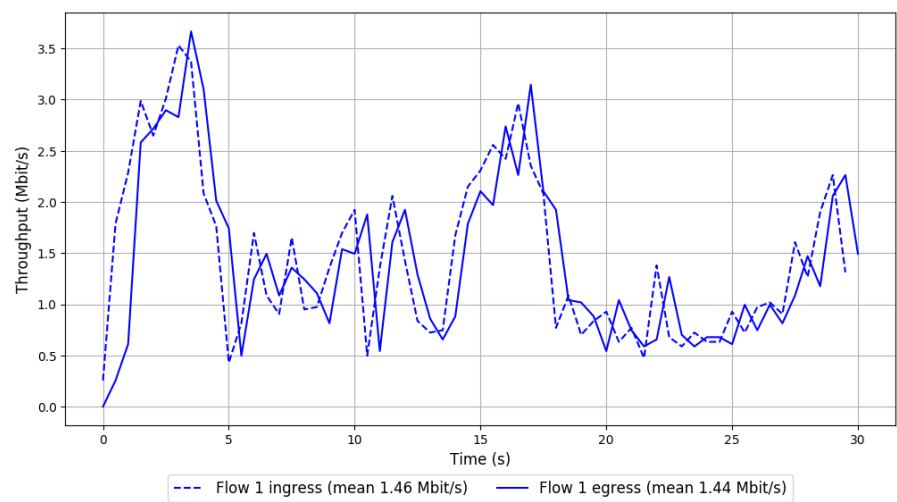
-- Flow 1:

Average throughput: 1.44 Mbit/s

95th percentile per-packet one-way delay: 456.337 ms

Loss rate: 1.14%

Run 3: Report of QUIC Cubic — Data Link

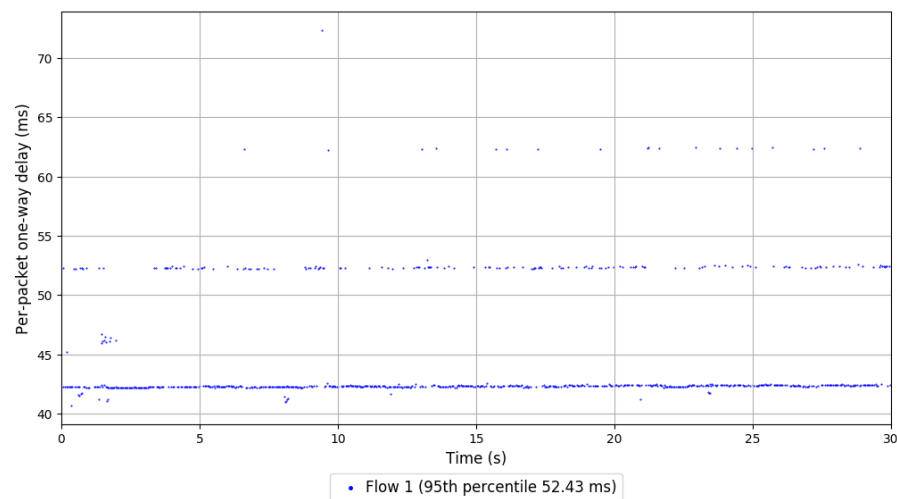
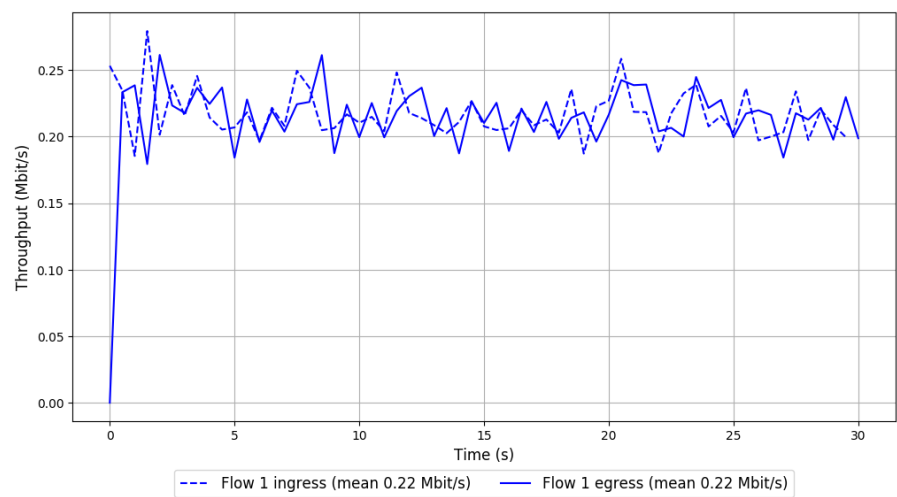


Run 1: Statistics of SCReAM

Start at: 2018-06-05 03:14:21
End at: 2018-06-05 03:14:51
Local clock offset: 0.994 ms
Remote clock offset: -3.968 ms

Below is generated by plot.py at 2018-06-05 04:05:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 52.431 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 52.431 ms
Loss rate: 0.13%

Run 1: Report of SReAM — Data Link

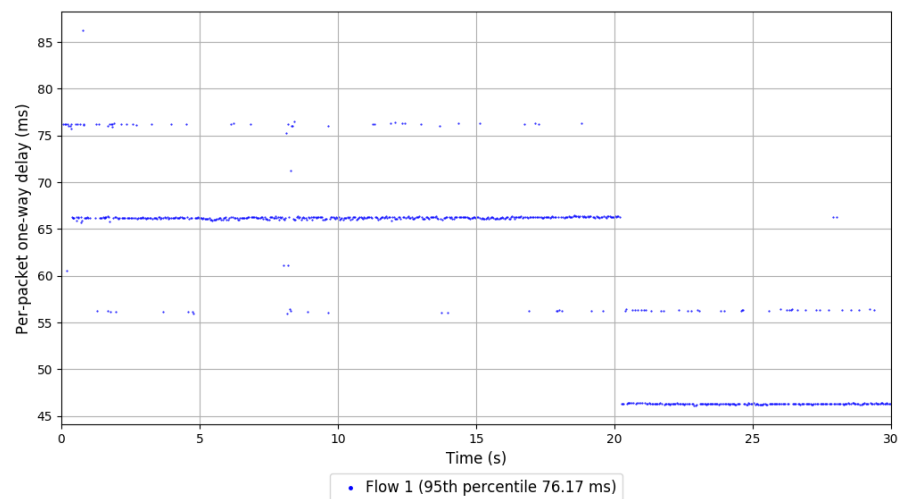
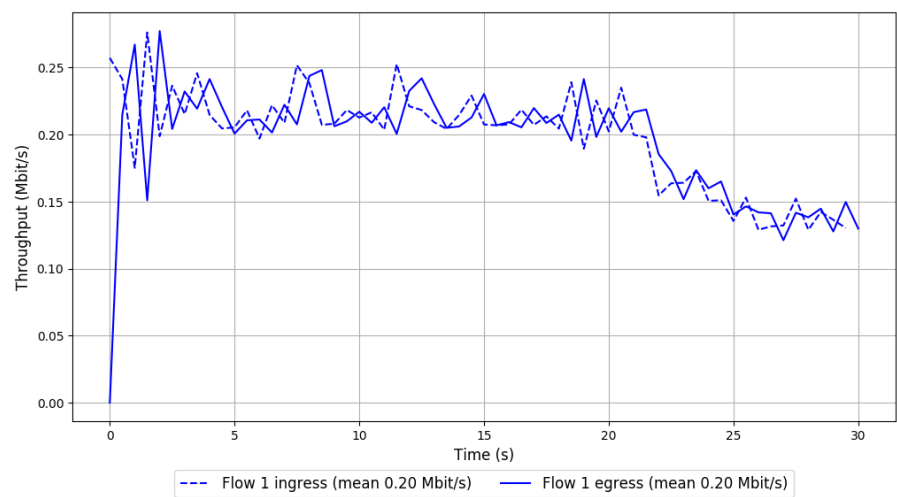


Run 2: Statistics of SCReAM

Start at: 2018-06-05 03:31:34
End at: 2018-06-05 03:32:04
Local clock offset: -2.767 ms
Remote clock offset: -3.734 ms

Below is generated by plot.py at 2018-06-05 04:05:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 76.166 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 76.166 ms
Loss rate: 0.24%

Run 2: Report of SReAM — Data Link

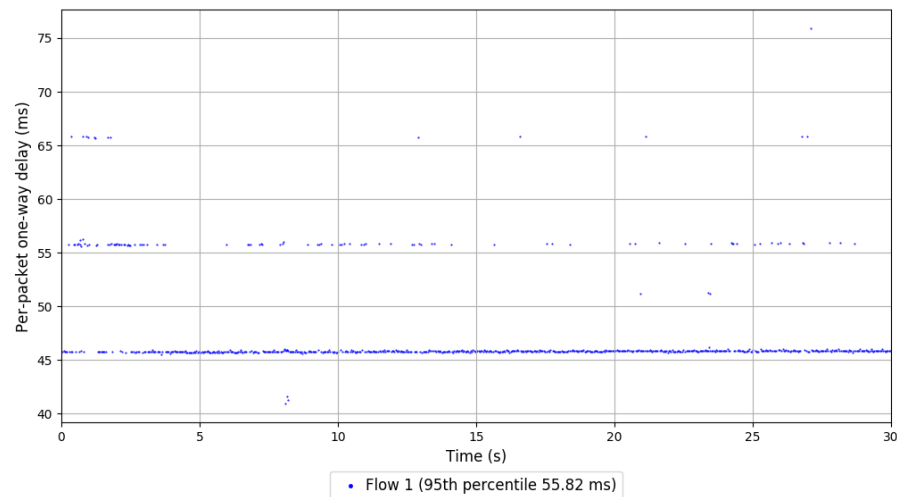
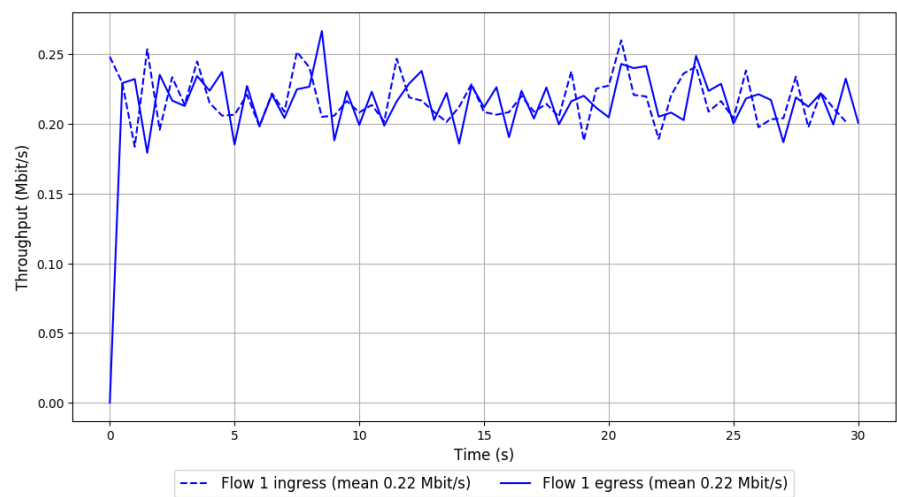


Run 3: Statistics of SCReAM

Start at: 2018-06-05 03:48:49
End at: 2018-06-05 03:49:19
Local clock offset: -3.792 ms
Remote clock offset: -4.181 ms

Below is generated by plot.py at 2018-06-05 04:05:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 55.822 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 55.822 ms
Loss rate: 0.13%

Run 3: Report of SReAM — Data Link

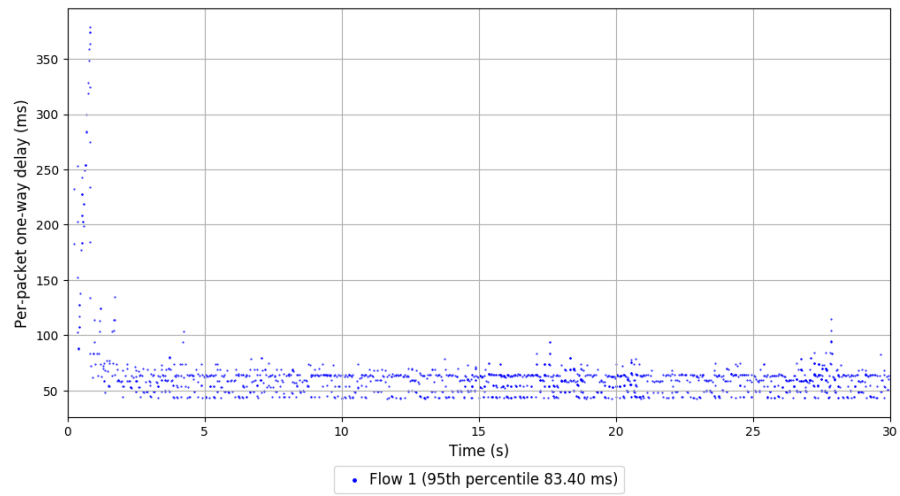
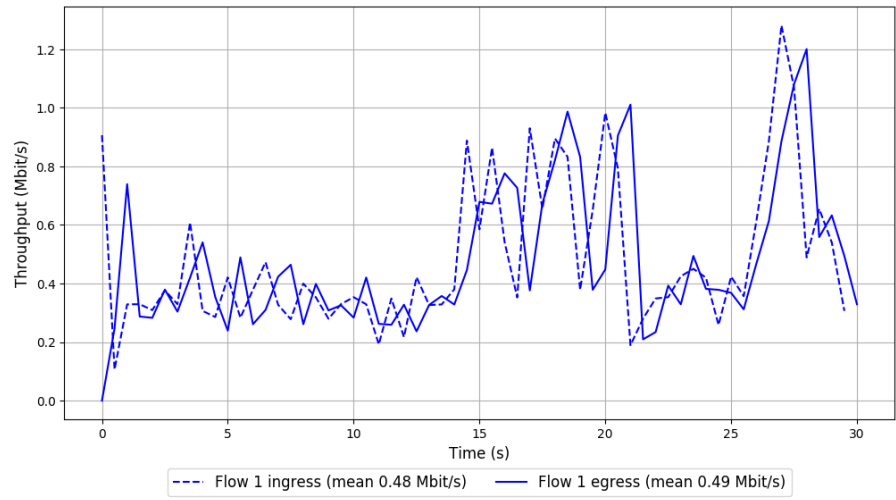


Run 1: Statistics of Sprout

Start at: 2018-06-05 03:29:25
End at: 2018-06-05 03:29:55
Local clock offset: -3.471 ms
Remote clock offset: -4.187 ms

Below is generated by plot.py at 2018-06-05 04:05:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 83.398 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 83.398 ms
Loss rate: 0.25%

Run 1: Report of Sprout — Data Link

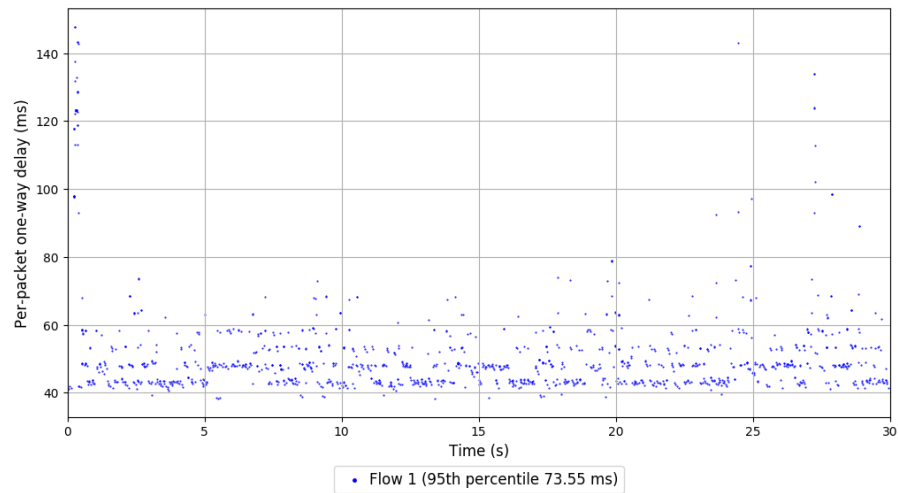
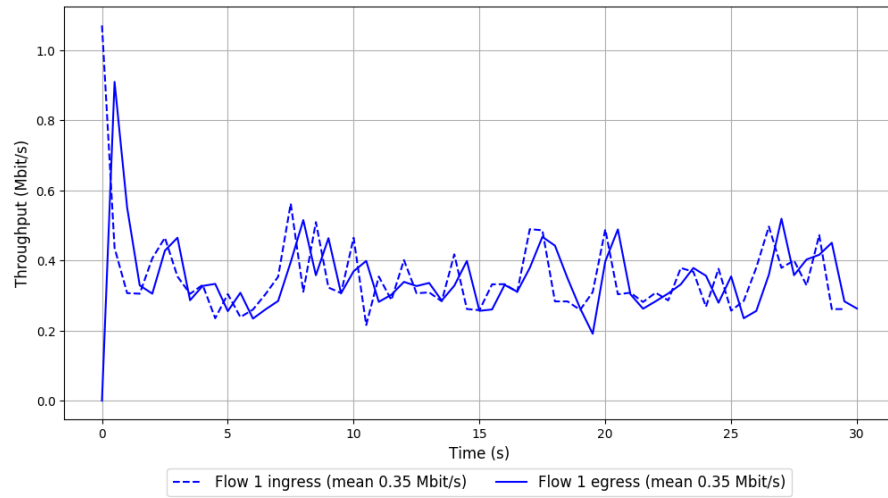


Run 2: Statistics of Sprout

Start at: 2018-06-05 03:46:40
End at: 2018-06-05 03:47:10
Local clock offset: -2.293 ms
Remote clock offset: -3.245 ms

Below is generated by plot.py at 2018-06-05 04:05:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 73.546 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 73.546 ms
Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

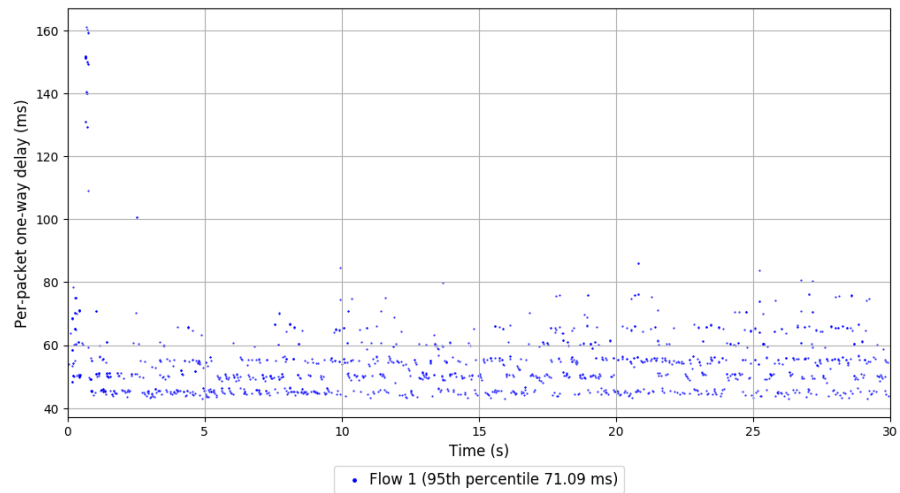
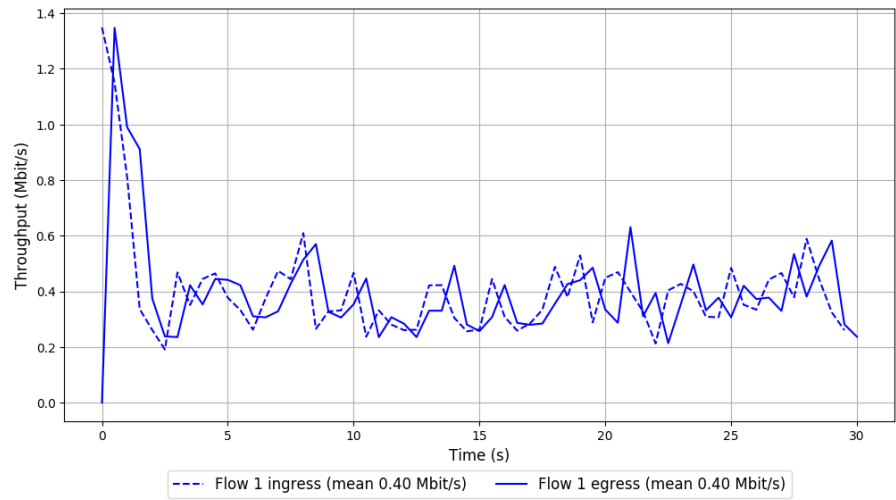


Run 3: Statistics of Sprout

Start at: 2018-06-05 04:03:55
End at: 2018-06-05 04:04:25
Local clock offset: -4.095 ms
Remote clock offset: -2.596 ms

Below is generated by plot.py at 2018-06-05 04:05:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 71.091 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 71.091 ms
Loss rate: 0.28%

Run 3: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2018-06-05 03:26:11

End at: 2018-06-05 03:26:41

Local clock offset: -1.646 ms

Remote clock offset: -4.159 ms

Below is generated by plot.py at 2018-06-05 04:05:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.15 Mbit/s

95th percentile per-packet one-way delay: 1043.581 ms

Loss rate: 5.77%

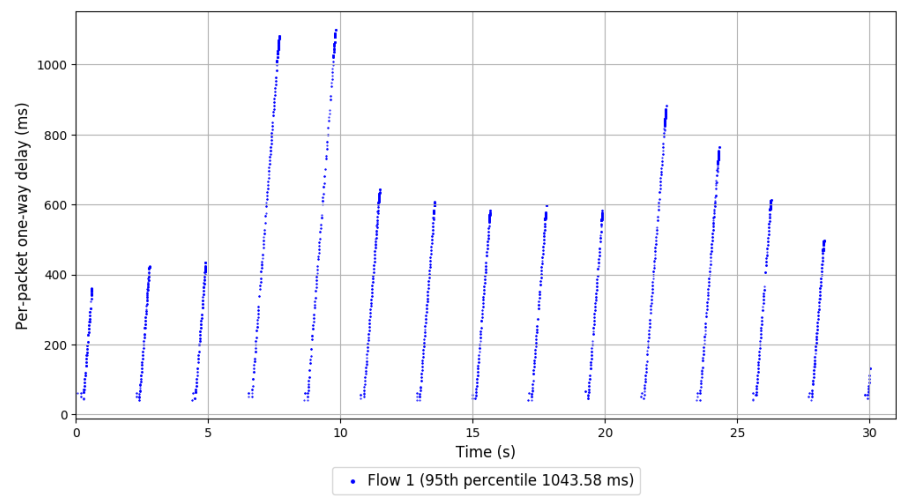
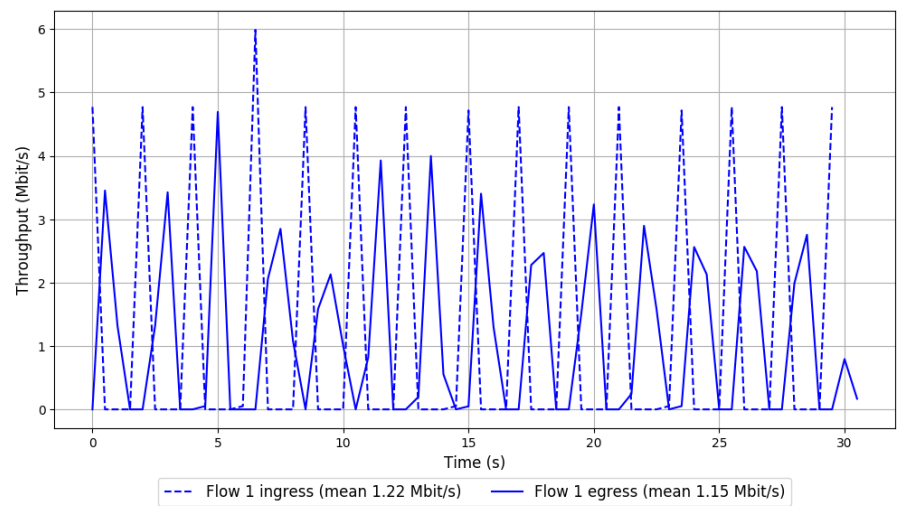
-- Flow 1:

Average throughput: 1.15 Mbit/s

95th percentile per-packet one-way delay: 1043.581 ms

Loss rate: 5.77%

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



Run 2: Statistics of TaoVA-100x

Start at: 2018-06-05 03:43:25

End at: 2018-06-05 03:43:55

Local clock offset: 0.056 ms

Remote clock offset: -4.837 ms

Below is generated by plot.py at 2018-06-05 04:05:12

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.89 Mbit/s

95th percentile per-packet one-way delay: 249.452 ms

Loss rate: 0.40%

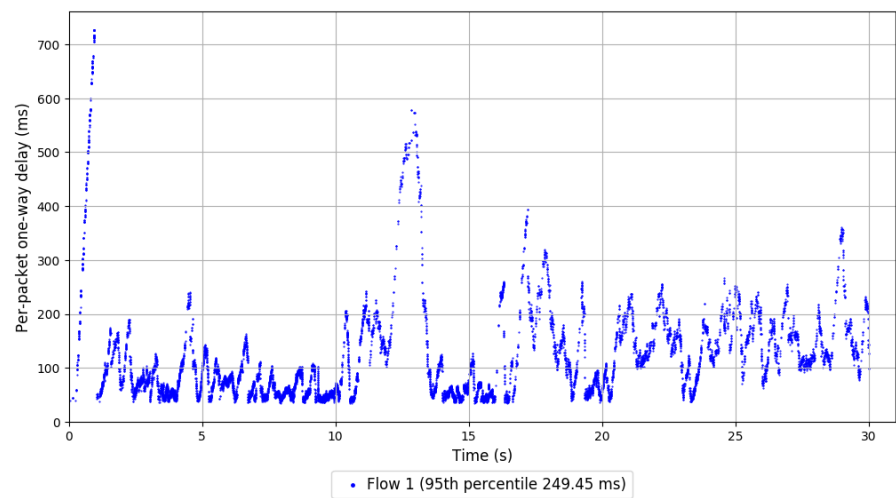
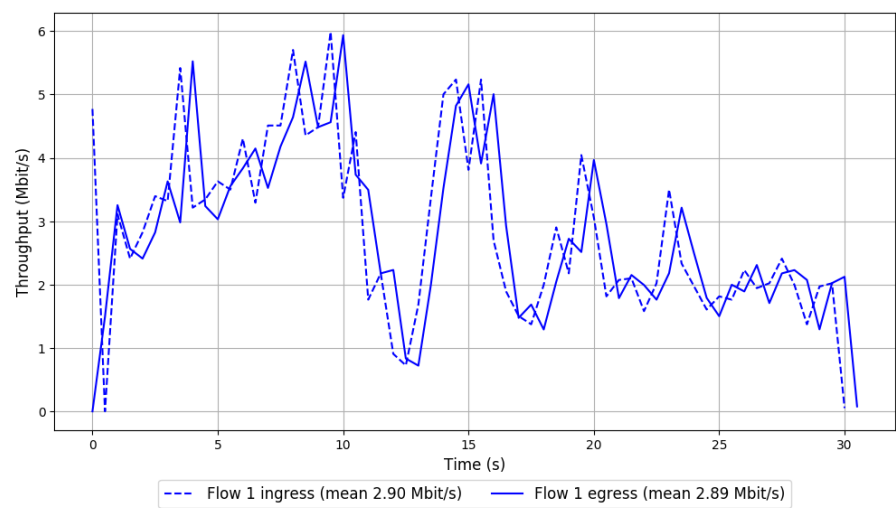
-- Flow 1:

Average throughput: 2.89 Mbit/s

95th percentile per-packet one-way delay: 249.452 ms

Loss rate: 0.40%

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

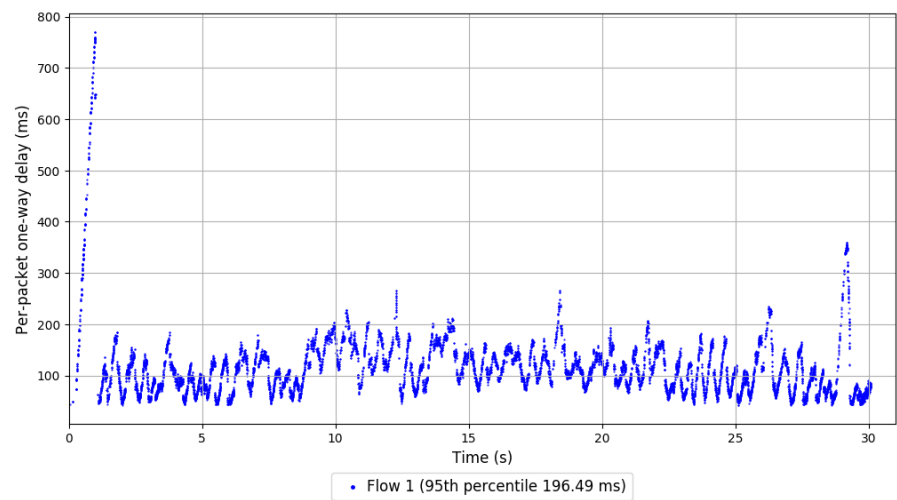
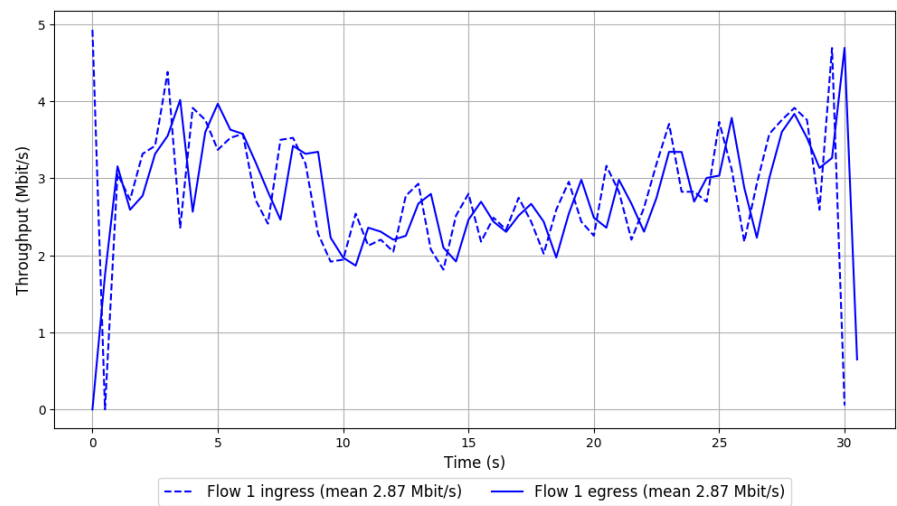


Run 3: Statistics of TaoVA-100x

Start at: 2018-06-05 04:00:41
End at: 2018-06-05 04:01:11
Local clock offset: -2.742 ms
Remote clock offset: -2.484 ms

Below is generated by plot.py at 2018-06-05 04:05:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.87 Mbit/s
95th percentile per-packet one-way delay: 196.489 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 2.87 Mbit/s
95th percentile per-packet one-way delay: 196.489 ms
Loss rate: 0.05%

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

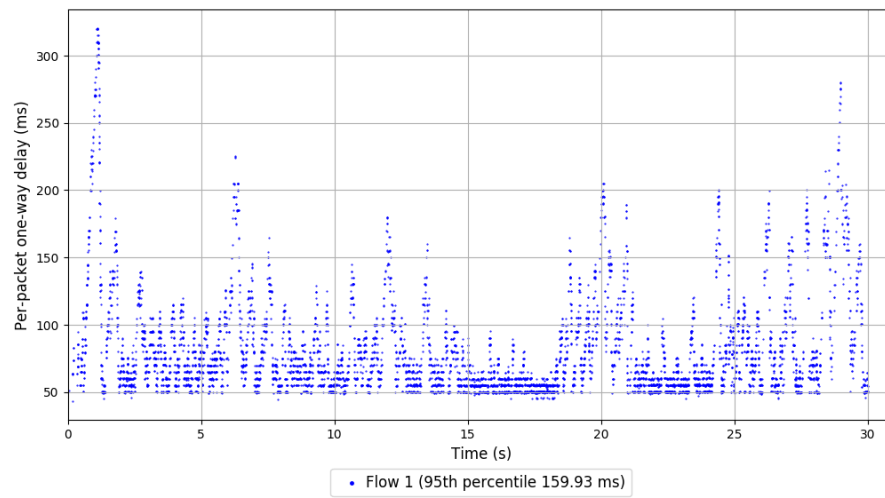
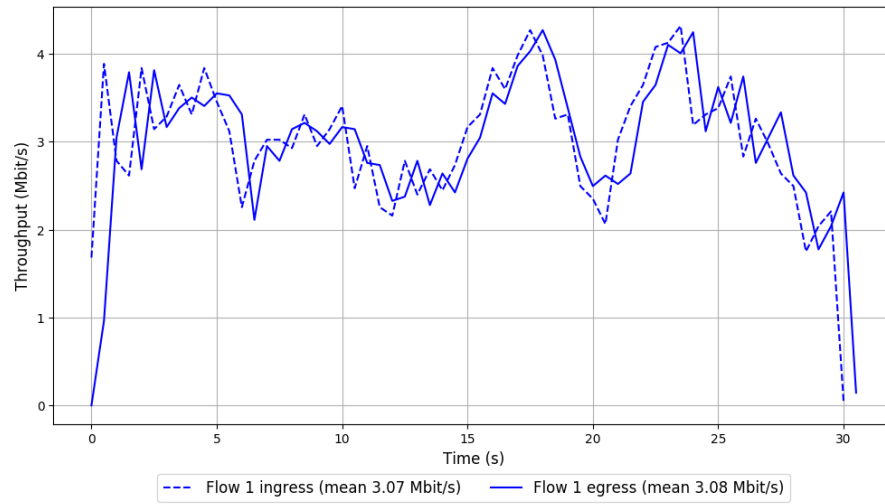


Run 1: Statistics of TCP Vegas

Start at: 2018-06-05 03:16:30
End at: 2018-06-05 03:17:00
Local clock offset: 1.422 ms
Remote clock offset: -4.904 ms

Below is generated by plot.py at 2018-06-05 04:05:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.08 Mbit/s
95th percentile per-packet one-way delay: 159.934 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 3.08 Mbit/s
95th percentile per-packet one-way delay: 159.934 ms
Loss rate: 0.12%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-06-05 03:33:43

End at: 2018-06-05 03:34:13

Local clock offset: 1.377 ms

Remote clock offset: -4.901 ms

Below is generated by plot.py at 2018-06-05 04:05:13

Datalink statistics

-- Total of 1 flow:

Average throughput: 4.10 Mbit/s

95th percentile per-packet one-way delay: 85.431 ms

Loss rate: 0.11%

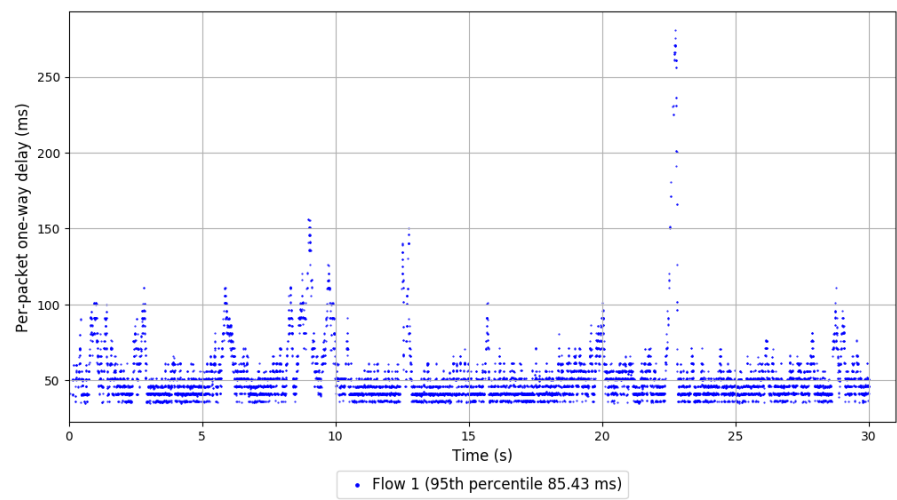
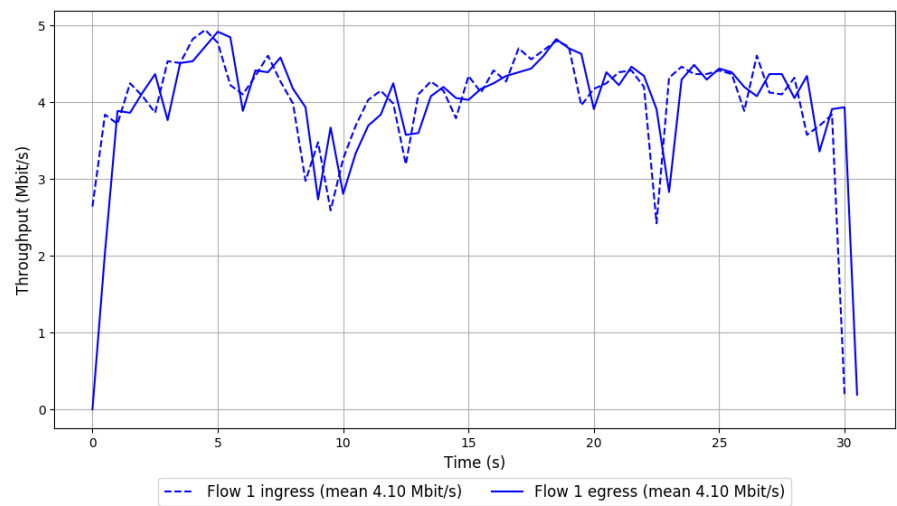
-- Flow 1:

Average throughput: 4.10 Mbit/s

95th percentile per-packet one-way delay: 85.431 ms

Loss rate: 0.11%

Run 2: Report of TCP Vegas — Data Link

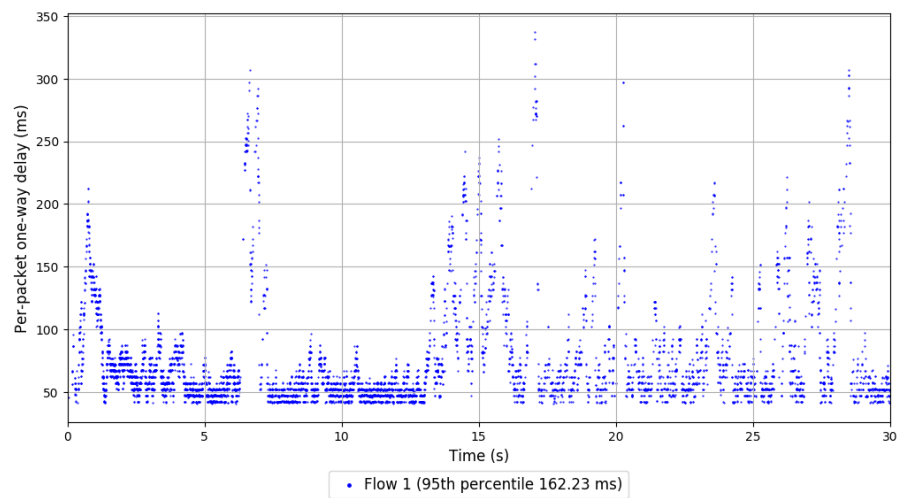
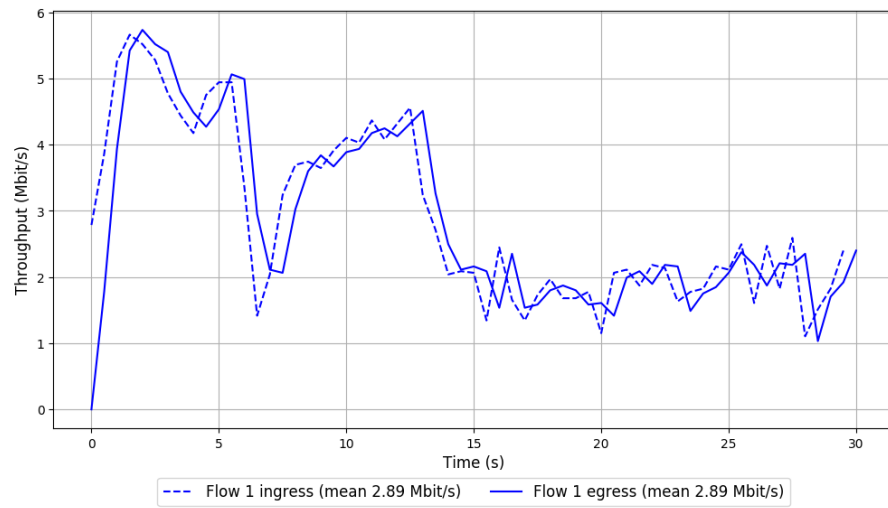


Run 3: Statistics of TCP Vegas

Start at: 2018-06-05 03:50:58
End at: 2018-06-05 03:51:28
Local clock offset: -2.356 ms
Remote clock offset: -2.753 ms

Below is generated by plot.py at 2018-06-05 04:05:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.89 Mbit/s
95th percentile per-packet one-way delay: 162.234 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 2.89 Mbit/s
95th percentile per-packet one-way delay: 162.234 ms
Loss rate: 0.12%

Run 3: Report of TCP Vegas — Data Link

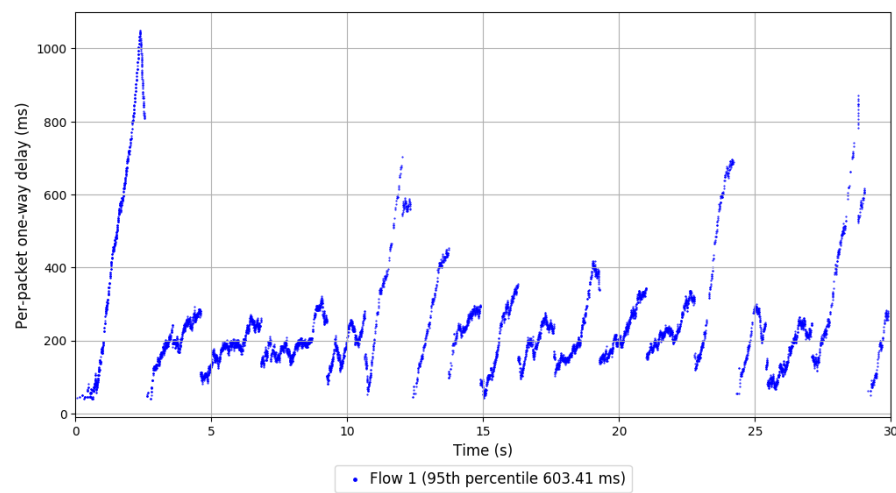
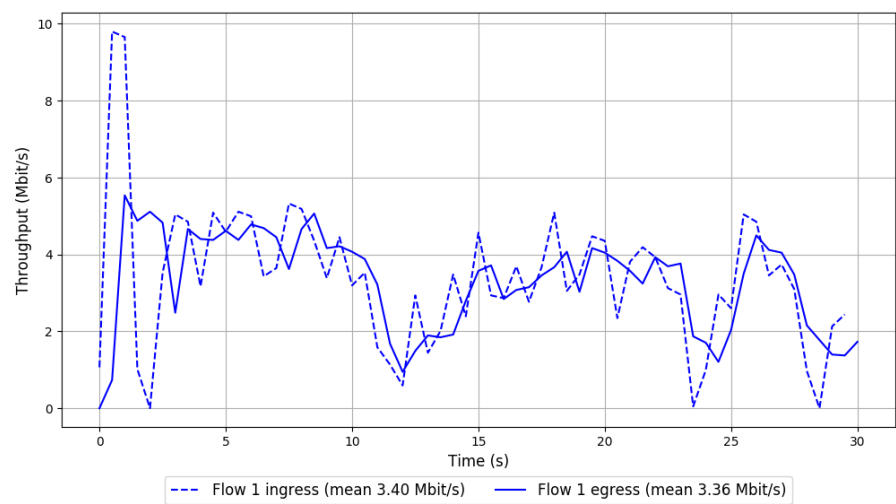


Run 1: Statistics of Verus

Start at: 2018-06-05 03:27:15
End at: 2018-06-05 03:27:45
Local clock offset: -0.491 ms
Remote clock offset: -4.418 ms

Below is generated by plot.py at 2018-06-05 04:05:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.36 Mbit/s
95th percentile per-packet one-way delay: 603.410 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 3.36 Mbit/s
95th percentile per-packet one-way delay: 603.410 ms
Loss rate: 1.23%

Run 1: Report of Verus — Data Link

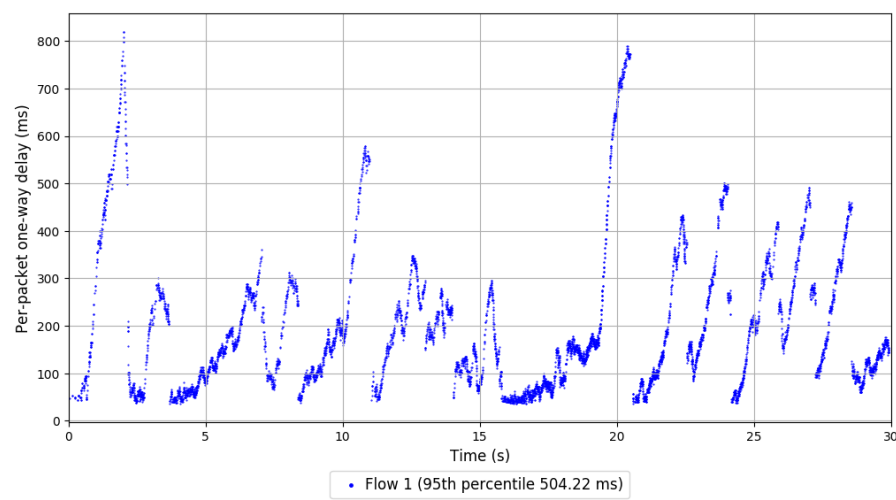
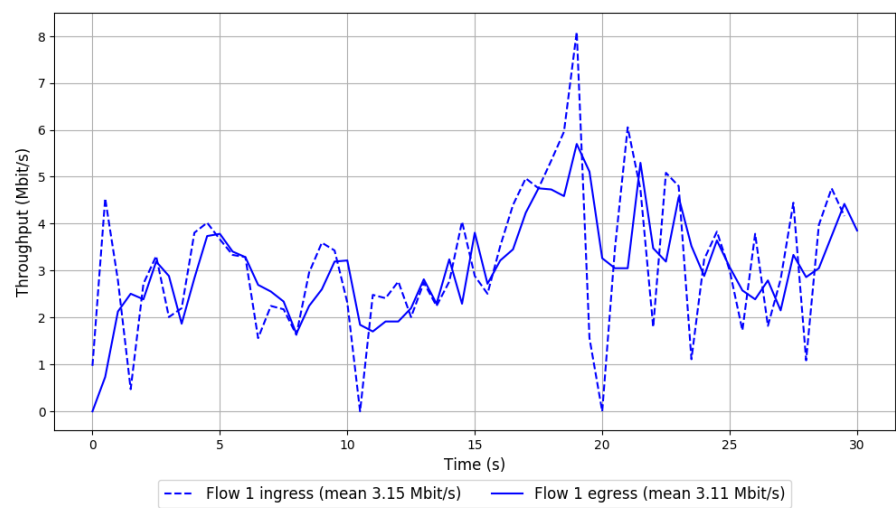


Run 2: Statistics of Verus

Start at: 2018-06-05 03:44:31
End at: 2018-06-05 03:45:01
Local clock offset: 0.802 ms
Remote clock offset: -4.087 ms

Below is generated by plot.py at 2018-06-05 04:05:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.11 Mbit/s
95th percentile per-packet one-way delay: 504.222 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 3.11 Mbit/s
95th percentile per-packet one-way delay: 504.222 ms
Loss rate: 1.18%

Run 2: Report of Verus — Data Link

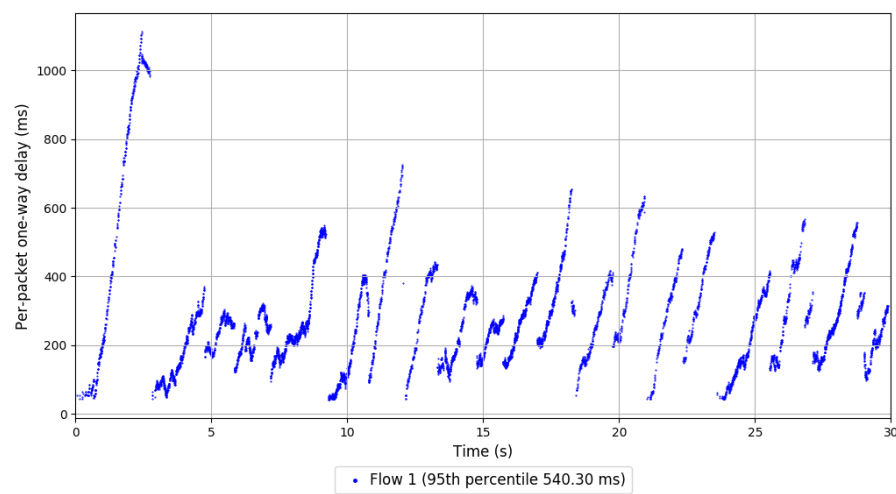
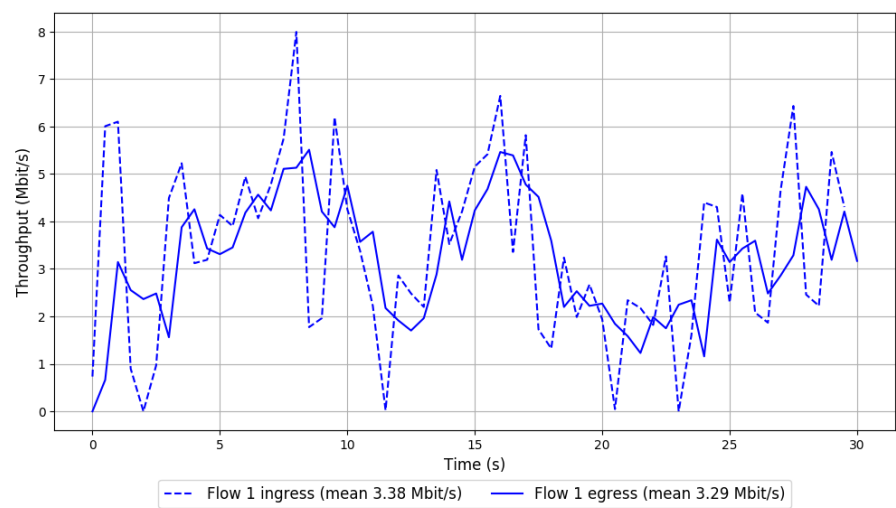


Run 3: Statistics of Verus

Start at: 2018-06-05 04:01:46
End at: 2018-06-05 04:02:16
Local clock offset: -1.679 ms
Remote clock offset: -2.123 ms

Below is generated by plot.py at 2018-06-05 04:05:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.29 Mbit/s
95th percentile per-packet one-way delay: 540.298 ms
Loss rate: 2.88%
-- Flow 1:
Average throughput: 3.29 Mbit/s
95th percentile per-packet one-way delay: 540.298 ms
Loss rate: 2.88%

Run 3: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2018-06-05 03:20:48

End at: 2018-06-05 03:21:18

Local clock offset: -0.223 ms

Remote clock offset: -4.973 ms

Below is generated by plot.py at 2018-06-05 04:05:18

Datalink statistics

-- Total of 1 flow:

Average throughput: 4.04 Mbit/s

95th percentile per-packet one-way delay: 1045.383 ms

Loss rate: 9.19%

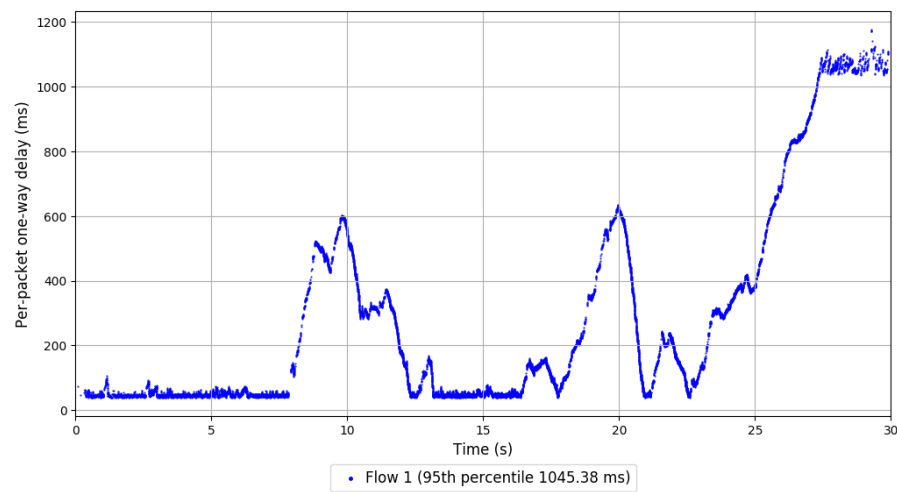
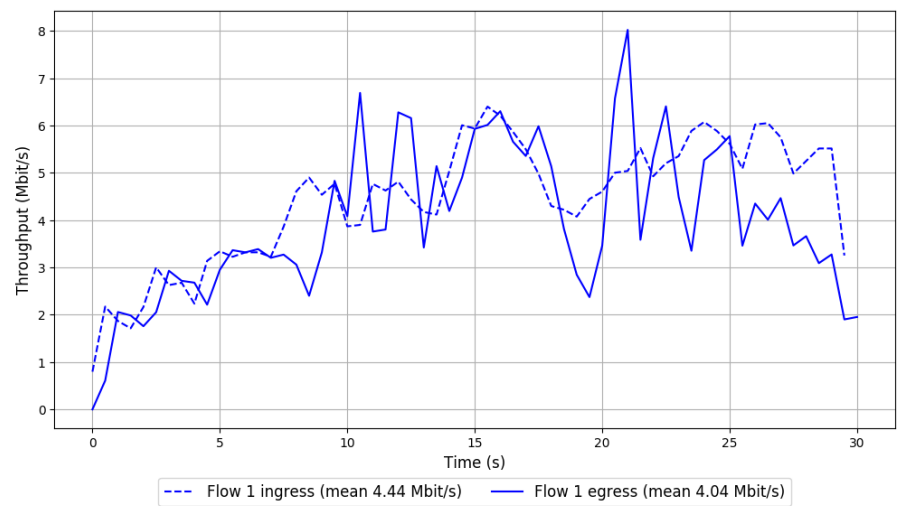
-- Flow 1:

Average throughput: 4.04 Mbit/s

95th percentile per-packet one-way delay: 1045.383 ms

Loss rate: 9.19%

Run 1: Report of PCC-Vivace — Data Link

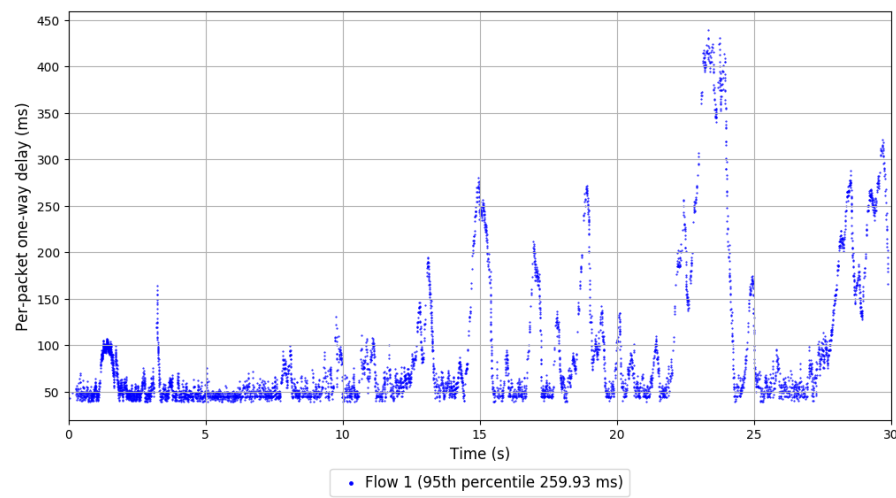
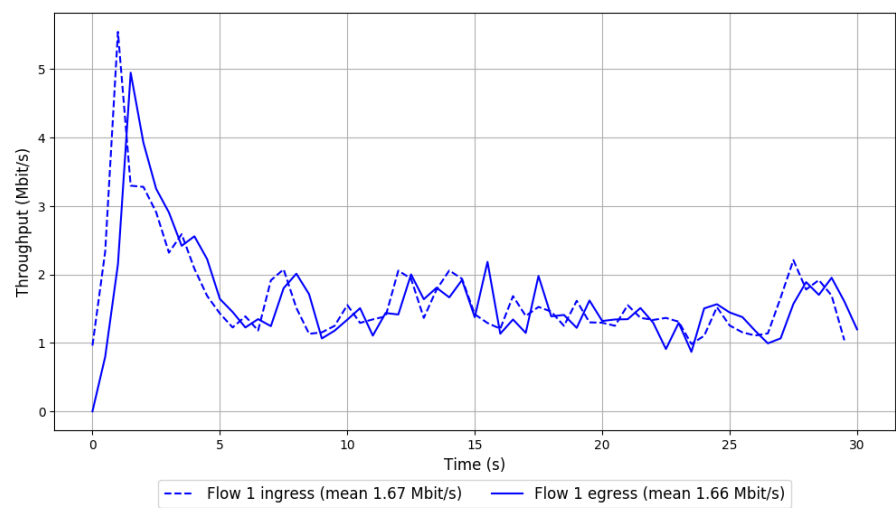


Run 2: Statistics of PCC-Vivace

Start at: 2018-06-05 03:38:01
End at: 2018-06-05 03:38:31
Local clock offset: -0.054 ms
Remote clock offset: -4.244 ms

Below is generated by plot.py at 2018-06-05 04:05:18
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.66 Mbit/s
95th percentile per-packet one-way delay: 259.926 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 1.66 Mbit/s
95th percentile per-packet one-way delay: 259.926 ms
Loss rate: 0.74%

Run 2: Report of PCC-Vivace — Data Link

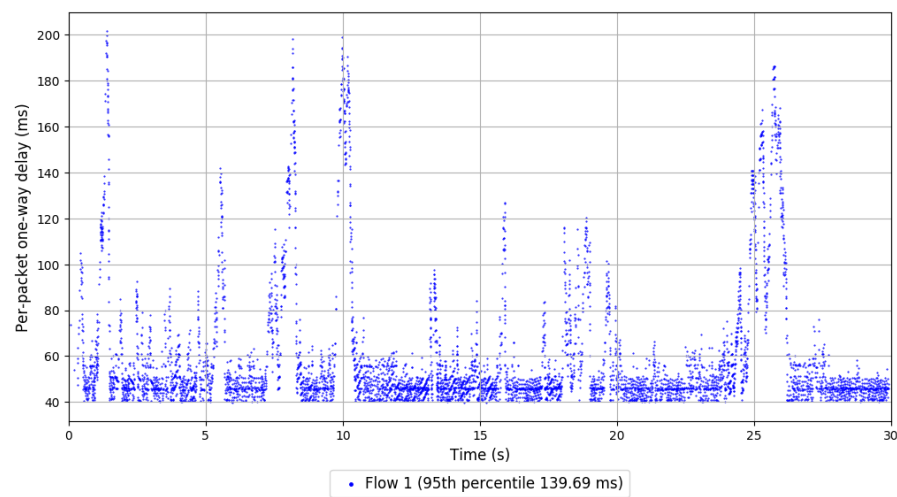
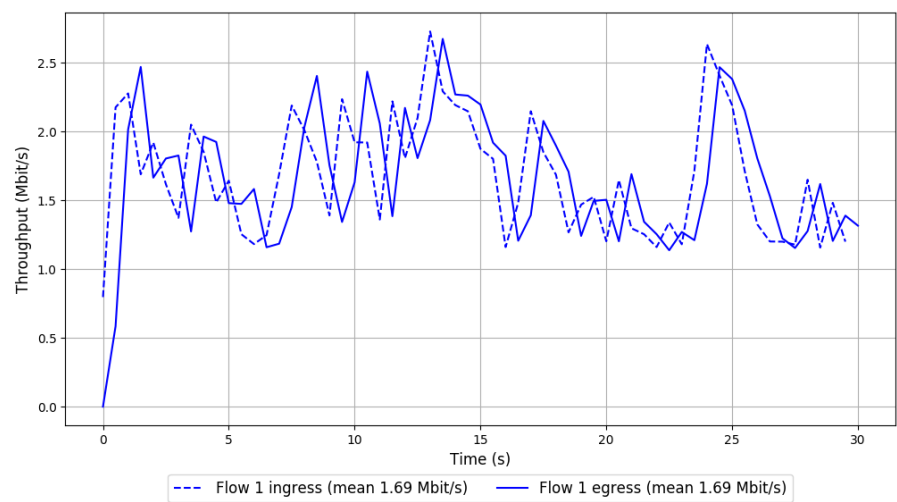


Run 3: Statistics of PCC-Vivace

Start at: 2018-06-05 03:55:17
End at: 2018-06-05 03:55:47
Local clock offset: -0.421 ms
Remote clock offset: -2.903 ms

Below is generated by plot.py at 2018-06-05 04:05:18
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 139.689 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 139.689 ms
Loss rate: 0.07%

Run 3: Report of PCC-Vivace — Data Link

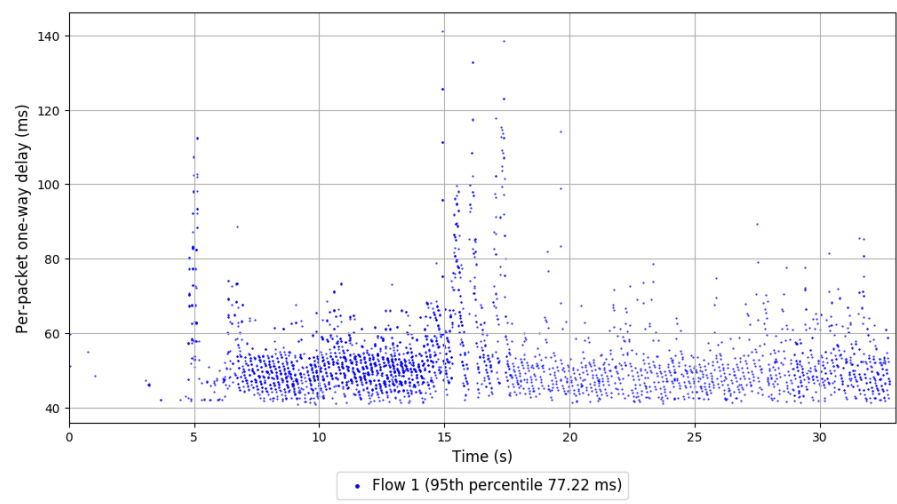
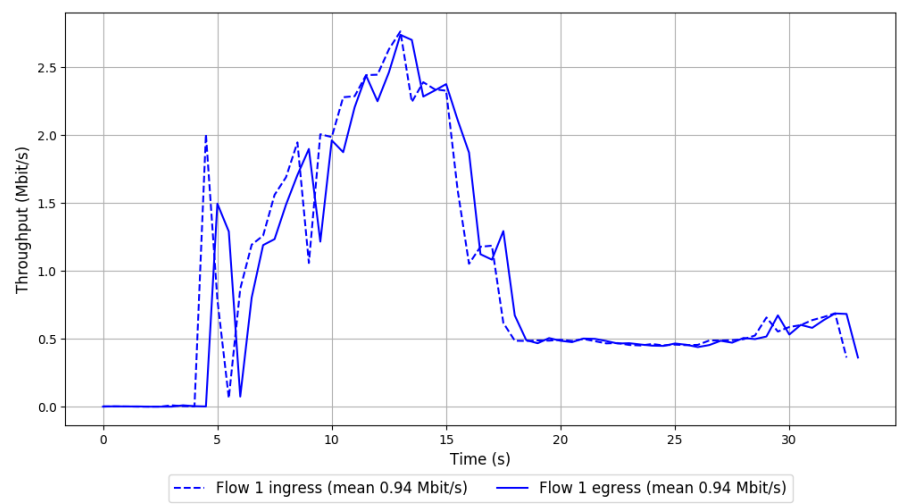


Run 1: Statistics of WebRTC media

Start at: 2018-06-05 03:13:16
End at: 2018-06-05 03:13:46
Local clock offset: -1.783 ms
Remote clock offset: -4.209 ms

Below is generated by plot.py at 2018-06-05 04:05:18
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.94 Mbit/s
95th percentile per-packet one-way delay: 77.219 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 0.94 Mbit/s
95th percentile per-packet one-way delay: 77.219 ms
Loss rate: 0.07%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-06-05 03:30:29

End at: 2018-06-05 03:30:59

Local clock offset: -0.744 ms

Remote clock offset: -4.13 ms

Below is generated by plot.py at 2018-06-05 04:05:18

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.71 Mbit/s

95th percentile per-packet one-way delay: 78.243 ms

Loss rate: 0.28%

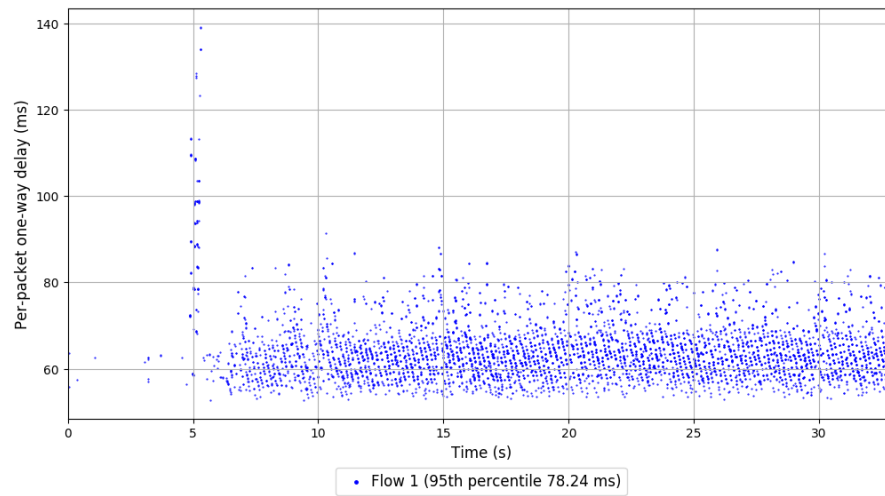
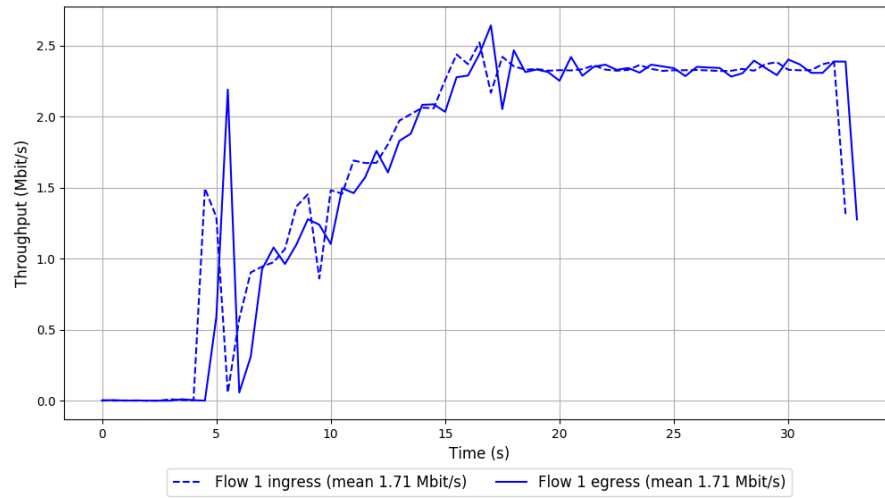
-- Flow 1:

Average throughput: 1.71 Mbit/s

95th percentile per-packet one-way delay: 78.243 ms

Loss rate: 0.28%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-06-05 03:47:44
End at: 2018-06-05 03:48:15
Local clock offset: -3.654 ms
Remote clock offset: -4.843 ms

Below is generated by plot.py at 2018-06-05 04:05:18
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.49 Mbit/s
95th percentile per-packet one-way delay: 71.051 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 1.49 Mbit/s
95th percentile per-packet one-way delay: 71.051 ms
Loss rate: 0.26%

Run 3: Report of WebRTC media — Data Link

