

Pantheon Report

Generated at 2018-06-05 18:58:05 (UTC).

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

Repeated the test of 16 congestion control schemes 3 times.

Each test lasted for 30 seconds running 1 flow.

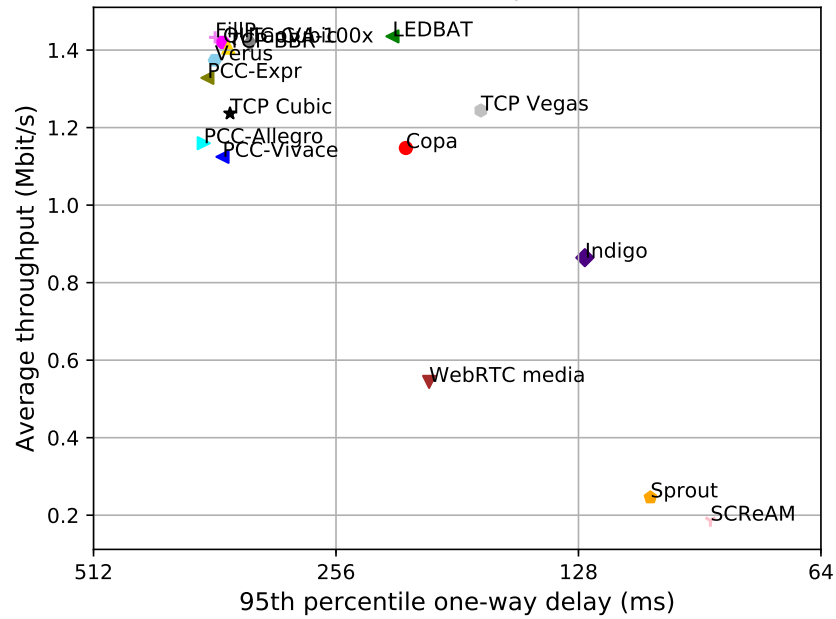
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

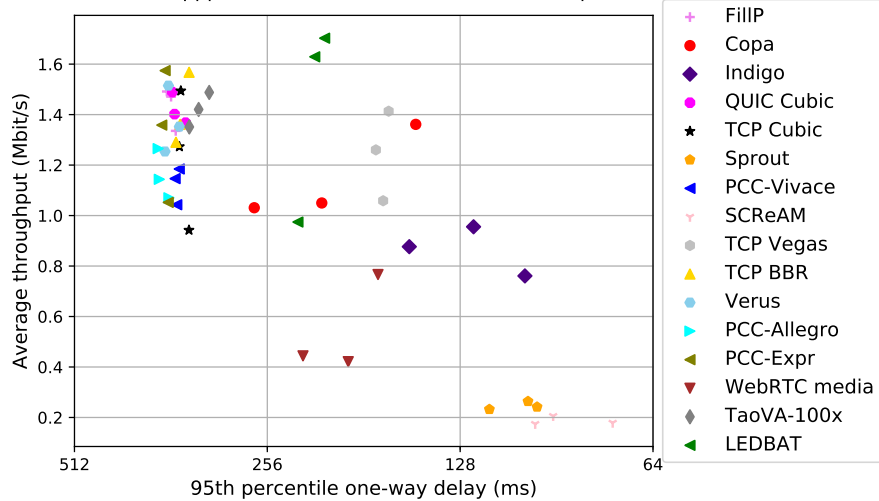
Git summary:

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



test from India ppp0 to AWS India 1, 3 runs of 30s each per scheme



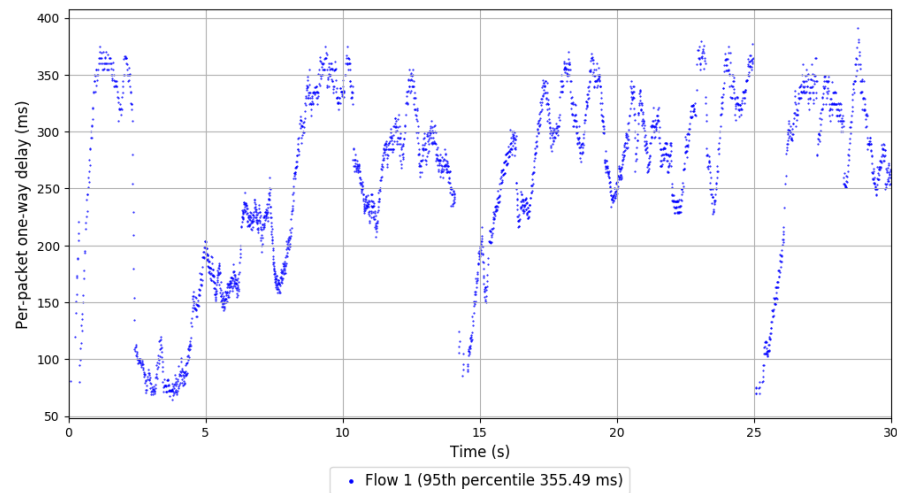
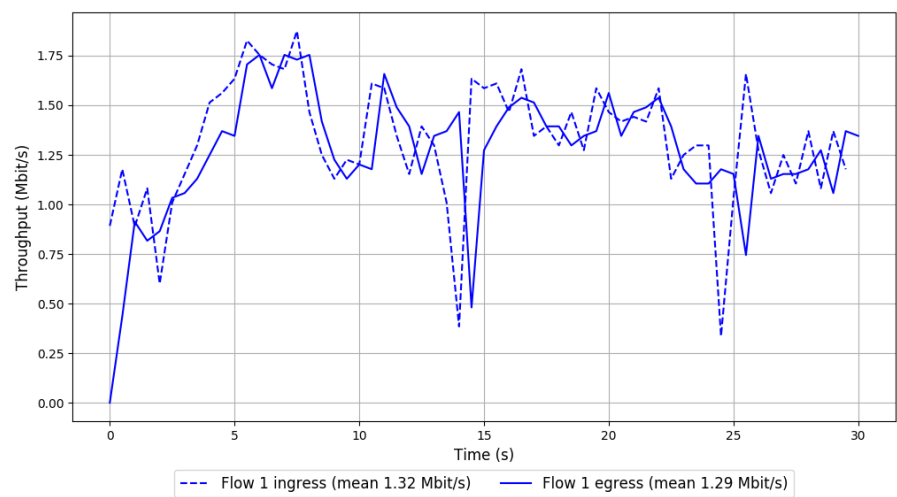
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	3	1.41	348.25	2.23
Copa	3	1.15	209.64	0.33
TCP Cubic	3	1.23	346.59	2.97
FillP	3	1.43	361.65	43.01
Indigo	3	0.87	125.69	0.93
LEDBAT	3	1.43	217.86	0.65
PCC-Allegro	3	1.16	373.65	63.18
PCC-Expr	3	1.33	369.77	82.42
QUIC Cubic	3	1.42	353.63	4.96
SCReAM	3	0.19	87.79	0.22
Sprout	3	0.24	104.21	0.06
TaoVA-100x	3	1.42	327.31	3.44
TCP Vegas	3	1.24	169.21	0.63
Verus	3	1.37	362.06	18.50
PCC-Vivace	3	1.12	354.15	11.44
WebRTC media	3	0.54	196.17	1.05

Run 1: Statistics of TCP BBR

Start at: 2018-06-05 18:08:11
End at: 2018-06-05 18:08:41
Local clock offset: 2.409 ms
Remote clock offset: -3.747 ms

Below is generated by plot.py at 2018-06-05 18:57:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.29 Mbit/s
95th percentile per-packet one-way delay: 355.488 ms
Loss rate: 2.25%
-- Flow 1:
Average throughput: 1.29 Mbit/s
95th percentile per-packet one-way delay: 355.488 ms
Loss rate: 2.25%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-06-05 18:25:30

End at: 2018-06-05 18:26:00

Local clock offset: 1.318 ms

Remote clock offset: -4.47 ms

Below is generated by plot.py at 2018-06-05 18:57:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.57 Mbit/s

95th percentile per-packet one-way delay: 339.083 ms

Loss rate: 1.44%

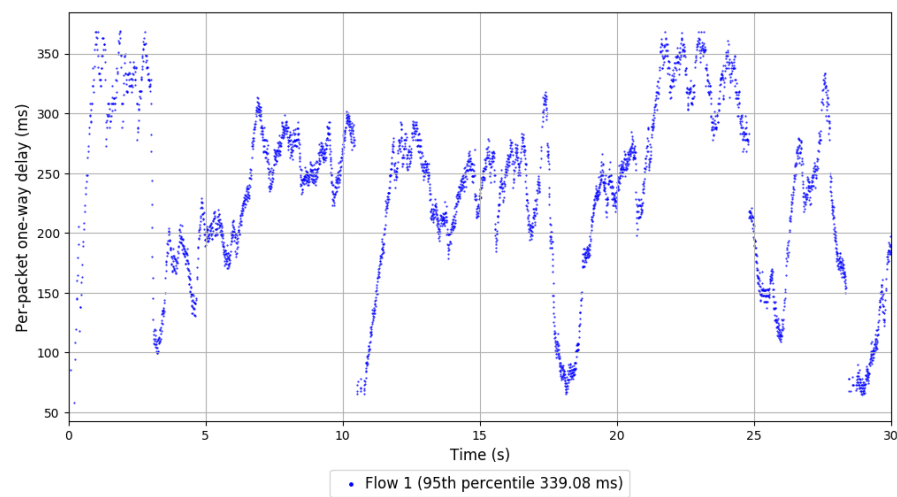
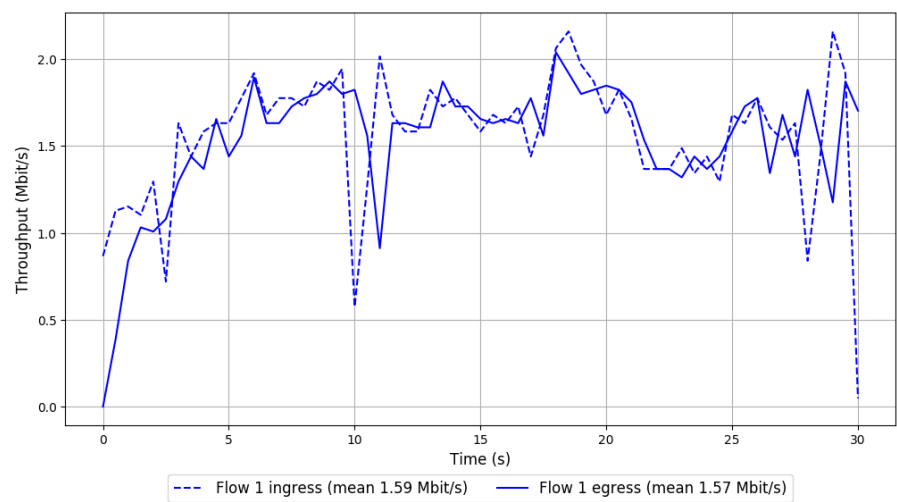
-- Flow 1:

Average throughput: 1.57 Mbit/s

95th percentile per-packet one-way delay: 339.083 ms

Loss rate: 1.44%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-06-05 18:42:49

End at: 2018-06-05 18:43:19

Local clock offset: 0.877 ms

Remote clock offset: -3.285 ms

Below is generated by plot.py at 2018-06-05 18:57:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.36 Mbit/s

95th percentile per-packet one-way delay: 350.178 ms

Loss rate: 3.01%

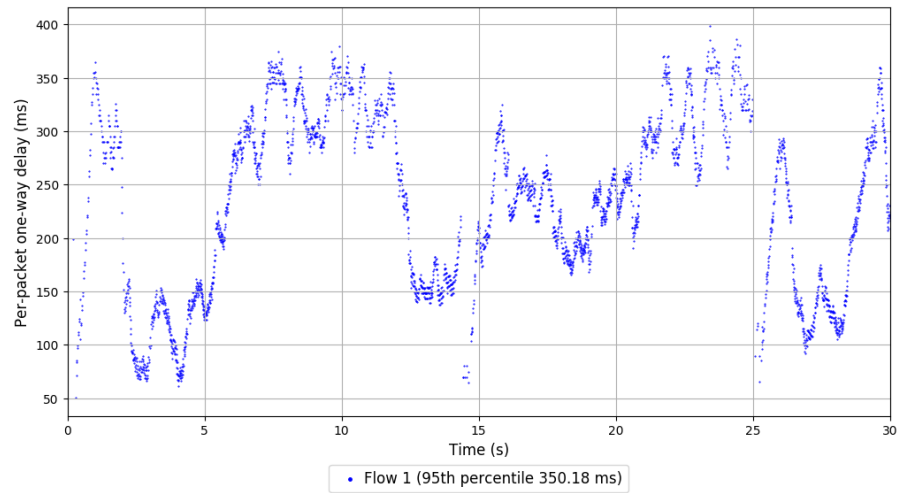
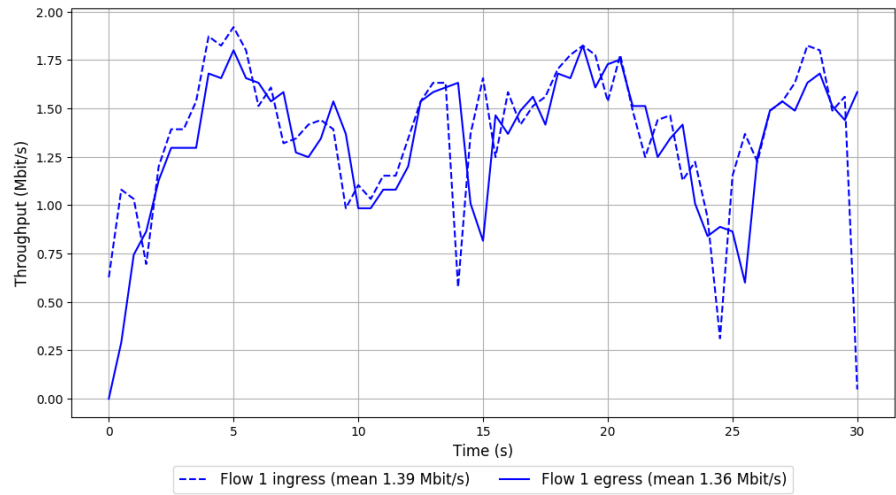
-- Flow 1:

Average throughput: 1.36 Mbit/s

95th percentile per-packet one-way delay: 350.178 ms

Loss rate: 3.01%

Run 3: Report of TCP BBR — Data Link

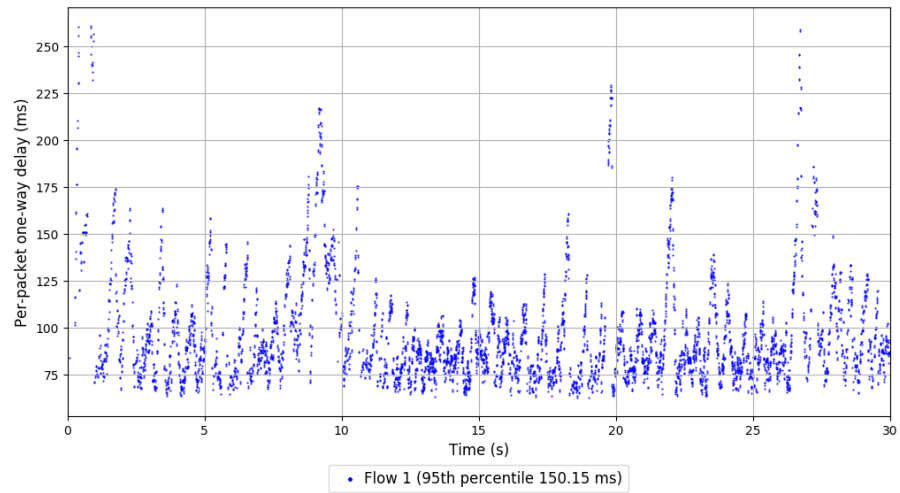
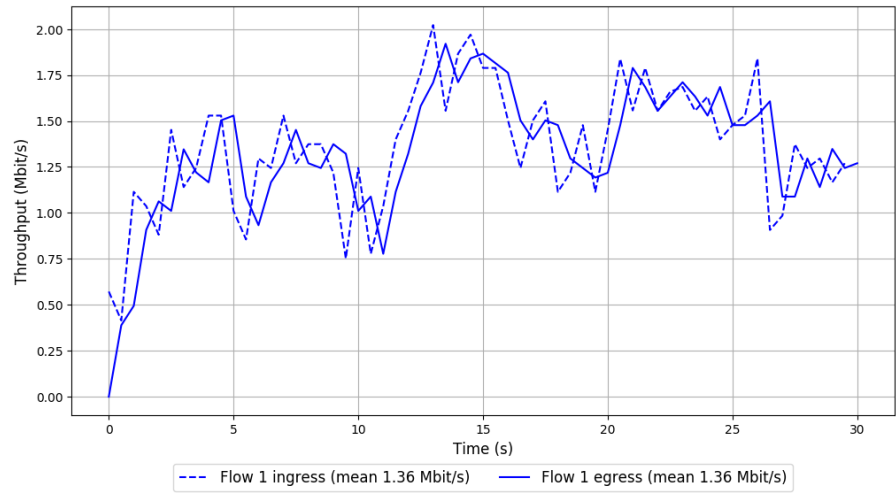


Run 1: Statistics of Copa

Start at: 2018-06-05 18:20:05
End at: 2018-06-05 18:20:35
Local clock offset: -1.267 ms
Remote clock offset: -4.341 ms

Below is generated by plot.py at 2018-06-05 18:57:36
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 150.153 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 150.153 ms
Loss rate: 0.29%

Run 1: Report of Copa — Data Link

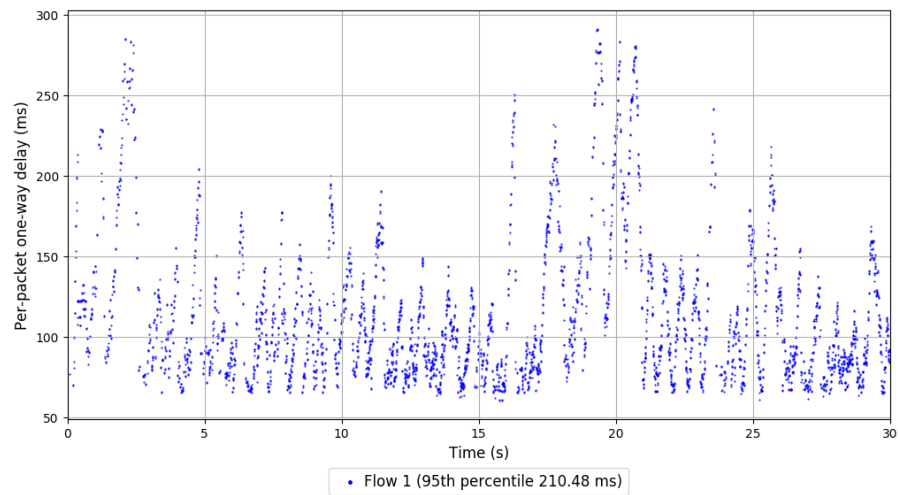
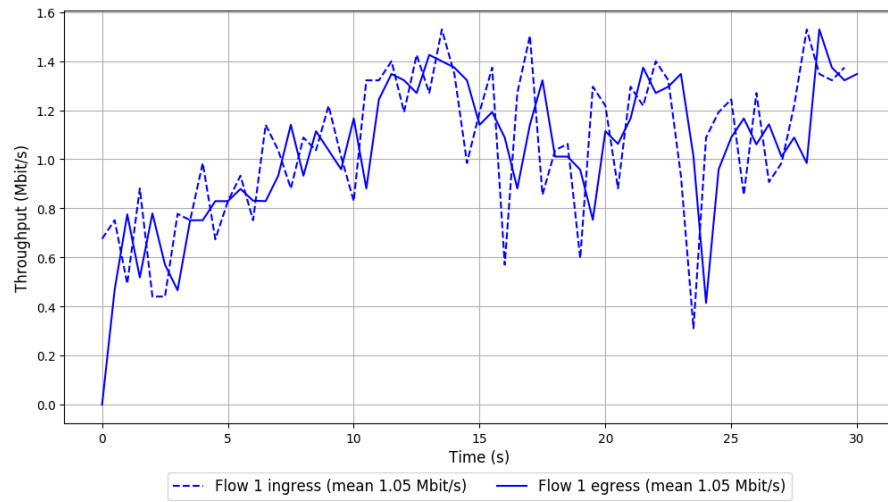


Run 2: Statistics of Copa

Start at: 2018-06-05 18:37:25
End at: 2018-06-05 18:37:55
Local clock offset: 1.476 ms
Remote clock offset: -3.366 ms

Below is generated by plot.py at 2018-06-05 18:57:36
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.05 Mbit/s
95th percentile per-packet one-way delay: 210.476 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 1.05 Mbit/s
95th percentile per-packet one-way delay: 210.476 ms
Loss rate: 0.49%

Run 2: Report of Copa — Data Link

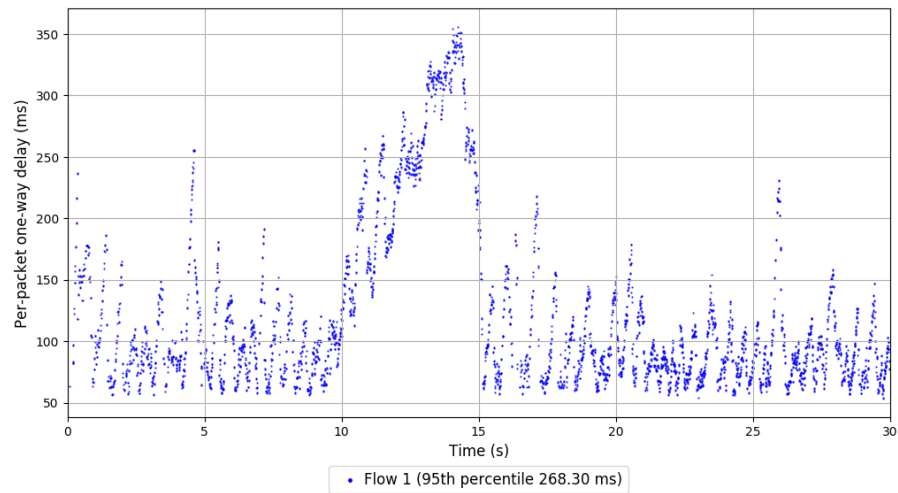
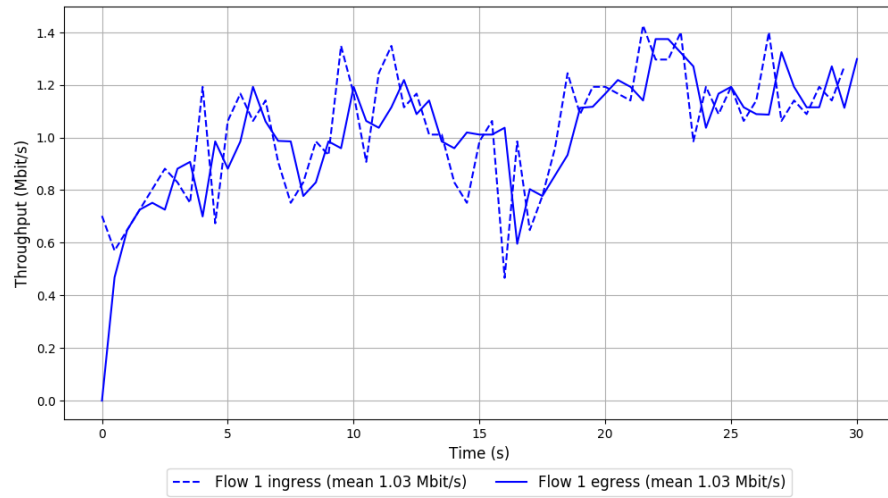


Run 3: Statistics of Copa

Start at: 2018-06-05 18:54:38
End at: 2018-06-05 18:55:08
Local clock offset: 1.925 ms
Remote clock offset: -4.719 ms

Below is generated by plot.py at 2018-06-05 18:57:36
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.03 Mbit/s
95th percentile per-packet one-way delay: 268.297 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 1.03 Mbit/s
95th percentile per-packet one-way delay: 268.297 ms
Loss rate: 0.20%

Run 3: Report of Copa — Data Link

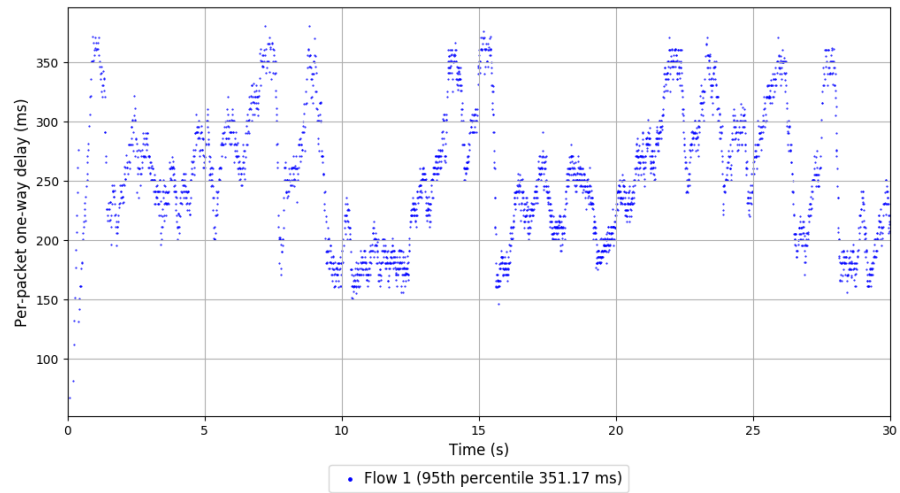
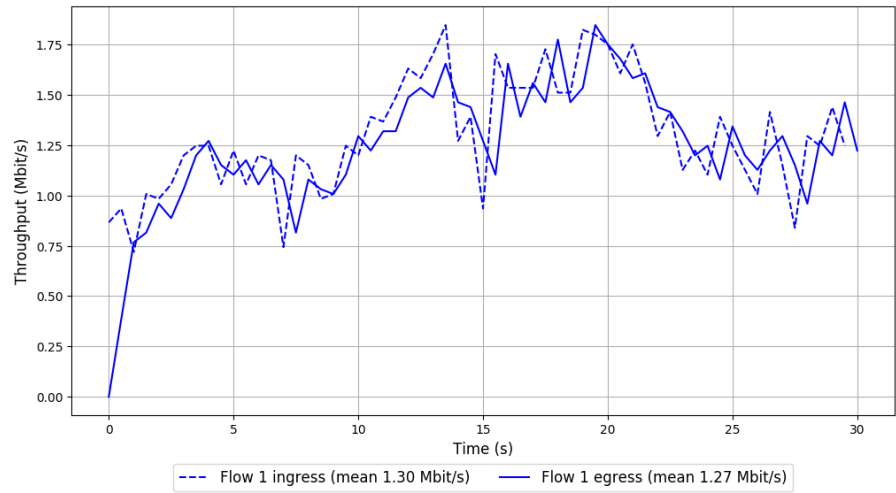


Run 1: Statistics of TCP Cubic

Start at: 2018-06-05 18:12:34
End at: 2018-06-05 18:13:04
Local clock offset: 0.314 ms
Remote clock offset: -3.895 ms

Below is generated by plot.py at 2018-06-05 18:57:36
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.27 Mbit/s
95th percentile per-packet one-way delay: 351.171 ms
Loss rate: 2.43%
-- Flow 1:
Average throughput: 1.27 Mbit/s
95th percentile per-packet one-way delay: 351.171 ms
Loss rate: 2.43%

Run 1: Report of TCP Cubic — Data Link

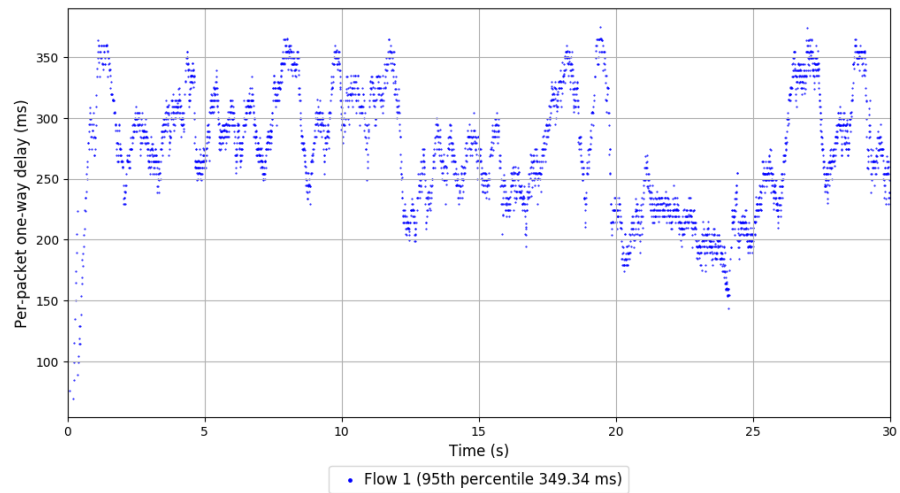
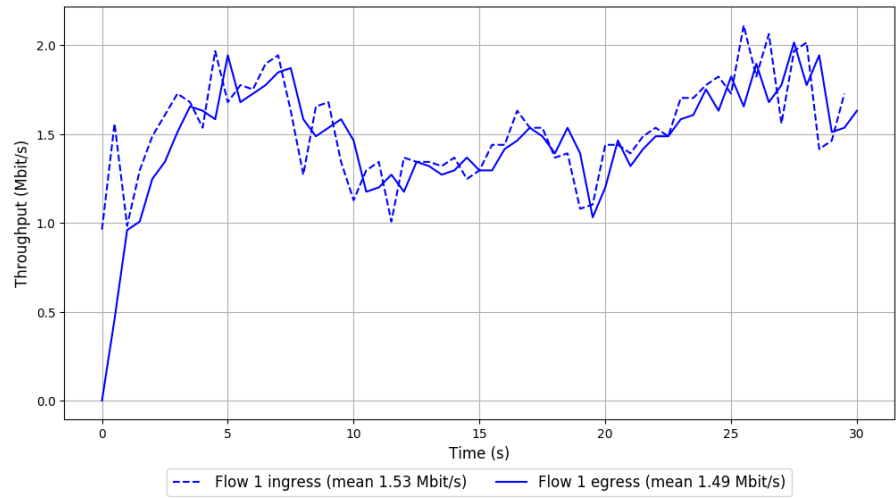


Run 2: Statistics of TCP Cubic

Start at: 2018-06-05 18:29:48
End at: 2018-06-05 18:30:18
Local clock offset: -0.812 ms
Remote clock offset: -4.484 ms

Below is generated by plot.py at 2018-06-05 18:57:36
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.49 Mbit/s
95th percentile per-packet one-way delay: 349.343 ms
Loss rate: 2.54%
-- Flow 1:
Average throughput: 1.49 Mbit/s
95th percentile per-packet one-way delay: 349.343 ms
Loss rate: 2.54%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-06-05 18:47:07

End at: 2018-06-05 18:47:37

Local clock offset: 1.143 ms

Remote clock offset: -4.39 ms

Below is generated by plot.py at 2018-06-05 18:57:37

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.94 Mbit/s

95th percentile per-packet one-way delay: 339.258 ms

Loss rate: 3.93%

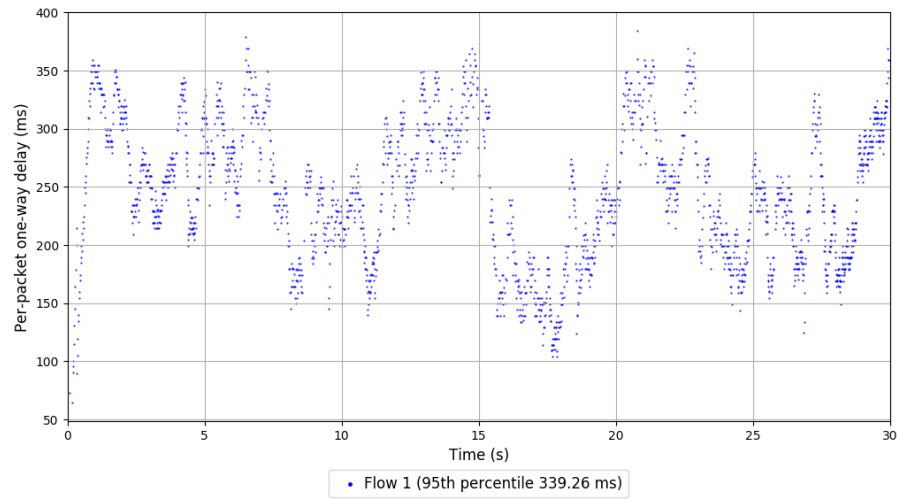
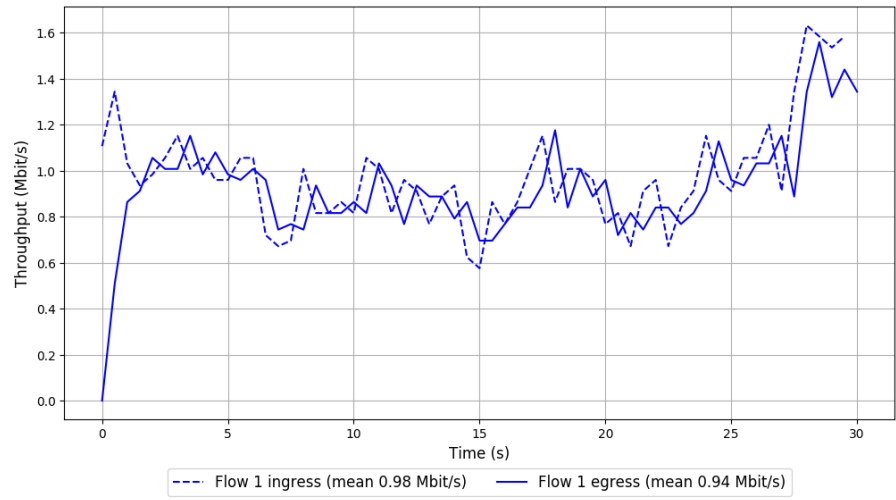
-- Flow 1:

Average throughput: 0.94 Mbit/s

95th percentile per-packet one-way delay: 339.258 ms

Loss rate: 3.93%

Run 3: Report of TCP Cubic — Data Link

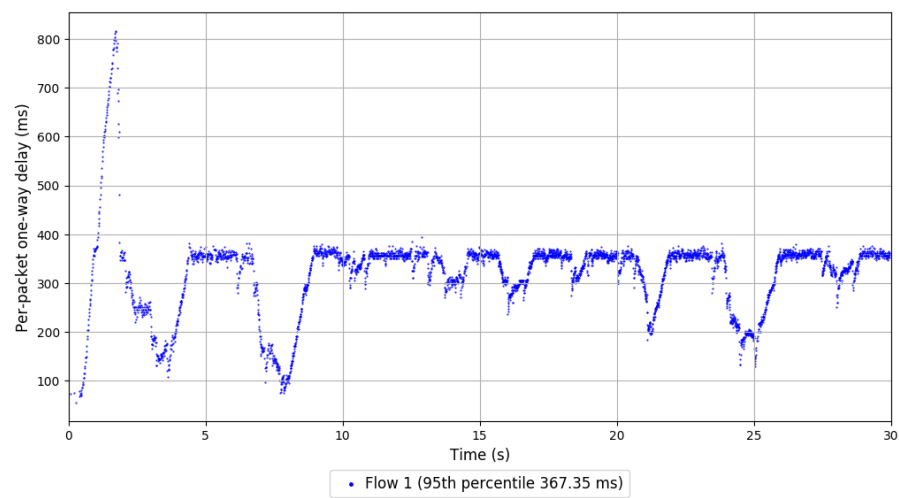
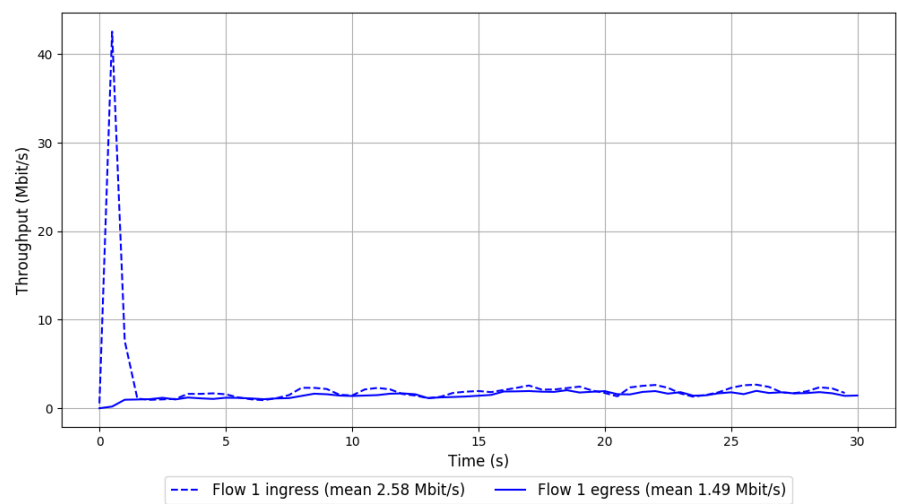


Run 1: Statistics of FillP

Start at: 2018-06-05 18:16:51
End at: 2018-06-05 18:17:21
Local clock offset: -0.986 ms
Remote clock offset: -3.887 ms

Below is generated by plot.py at 2018-06-05 18:57:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.49 Mbit/s
95th percentile per-packet one-way delay: 367.348 ms
Loss rate: 42.43%
-- Flow 1:
Average throughput: 1.49 Mbit/s
95th percentile per-packet one-way delay: 367.348 ms
Loss rate: 42.43%

Run 1: Report of FillP — Data Link

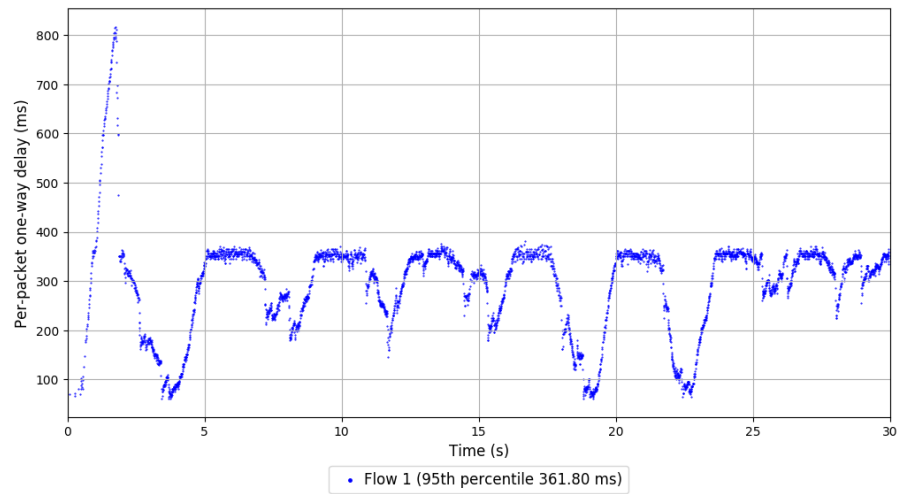
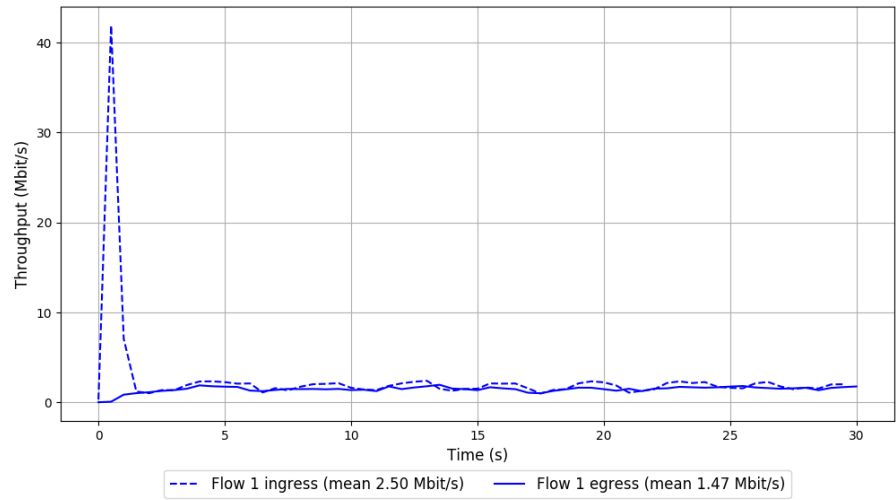


Run 2: Statistics of FillP

Start at: 2018-06-05 18:34:11
End at: 2018-06-05 18:34:41
Local clock offset: -0.189 ms
Remote clock offset: -3.118 ms

Below is generated by plot.py at 2018-06-05 18:57:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.47 Mbit/s
95th percentile per-packet one-way delay: 361.797 ms
Loss rate: 41.33%
-- Flow 1:
Average throughput: 1.47 Mbit/s
95th percentile per-packet one-way delay: 361.797 ms
Loss rate: 41.33%

Run 2: Report of FillP — Data Link

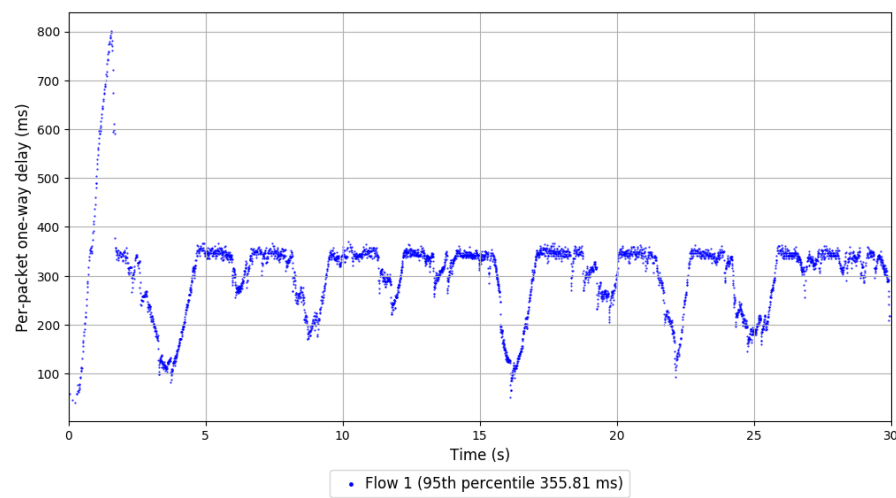
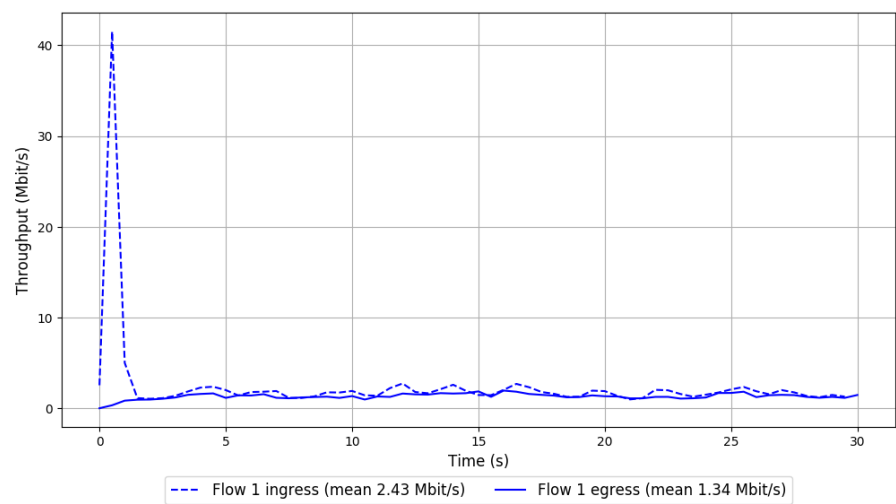


Run 3: Statistics of FillP

Start at: 2018-06-05 18:51:25
End at: 2018-06-05 18:51:55
Local clock offset: 0.581 ms
Remote clock offset: -4.789 ms

Below is generated by plot.py at 2018-06-05 18:57:42
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.34 Mbit/s
95th percentile per-packet one-way delay: 355.812 ms
Loss rate: 45.27%
-- Flow 1:
Average throughput: 1.34 Mbit/s
95th percentile per-packet one-way delay: 355.812 ms
Loss rate: 45.27%

Run 3: Report of FillP — Data Link

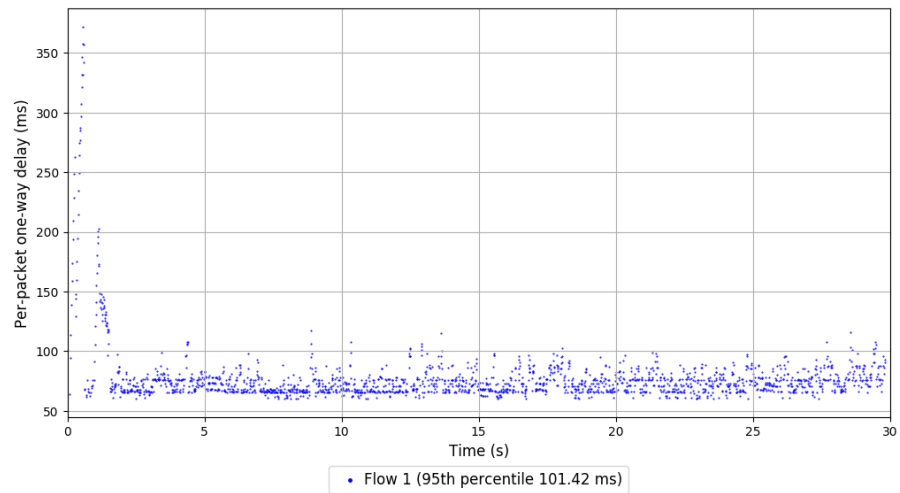
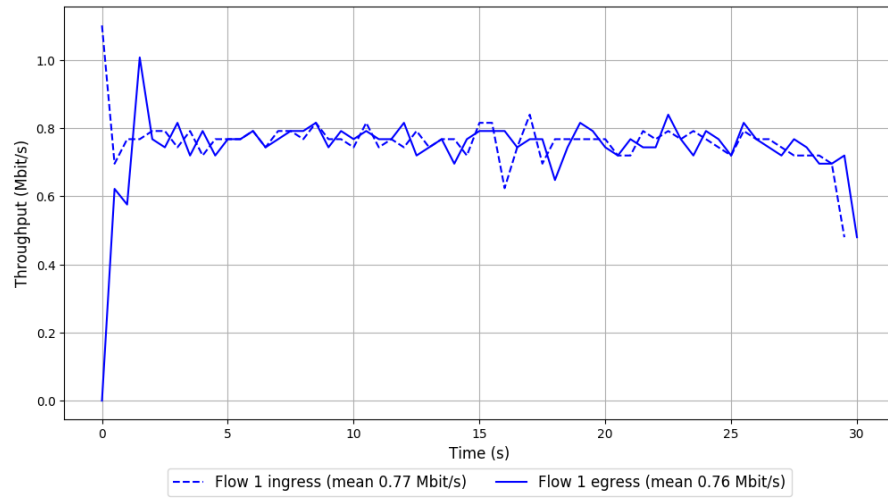


Run 1: Statistics of Indigo

Start at: 2018-06-05 18:17:56
End at: 2018-06-05 18:18:26
Local clock offset: -0.794 ms
Remote clock offset: -3.993 ms

Below is generated by plot.py at 2018-06-05 18:57:42
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.76 Mbit/s
95th percentile per-packet one-way delay: 101.419 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 0.76 Mbit/s
95th percentile per-packet one-way delay: 101.419 ms
Loss rate: 0.89%

Run 1: Report of Indigo — Data Link

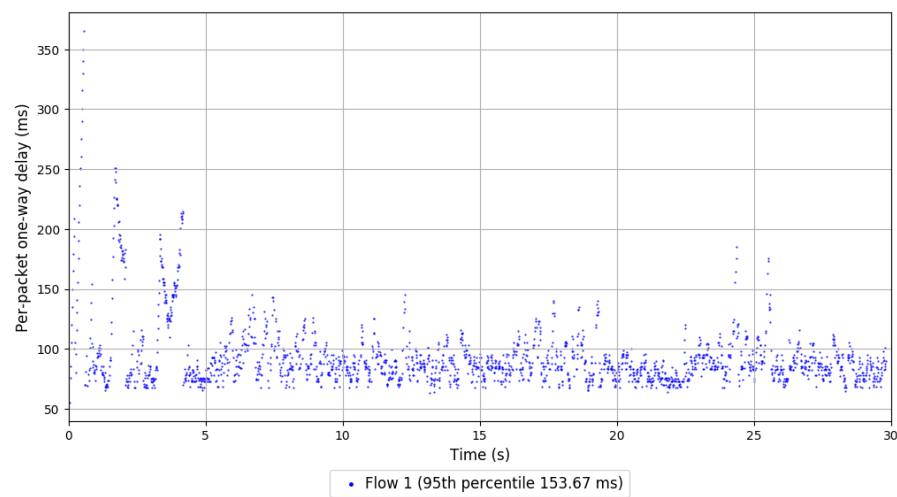
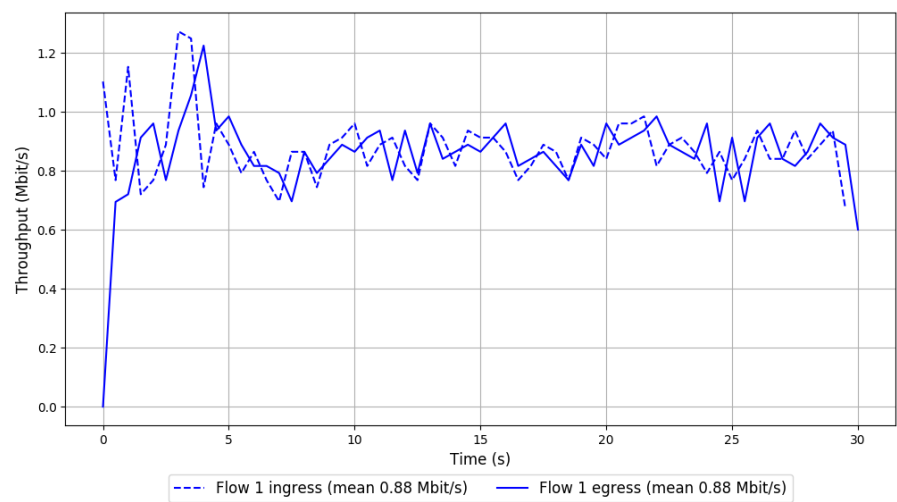


Run 2: Statistics of Indigo

Start at: 2018-06-05 18:35:16
End at: 2018-06-05 18:35:46
Local clock offset: 1.873 ms
Remote clock offset: -4.382 ms

Below is generated by plot.py at 2018-06-05 18:57:42
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.88 Mbit/s
95th percentile per-packet one-way delay: 153.671 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 0.88 Mbit/s
95th percentile per-packet one-way delay: 153.671 ms
Loss rate: 0.91%

Run 2: Report of Indigo — Data Link

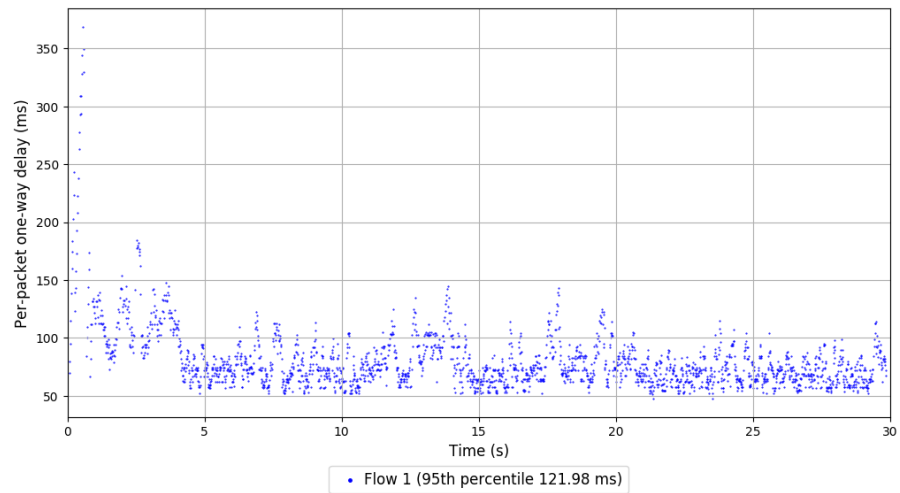
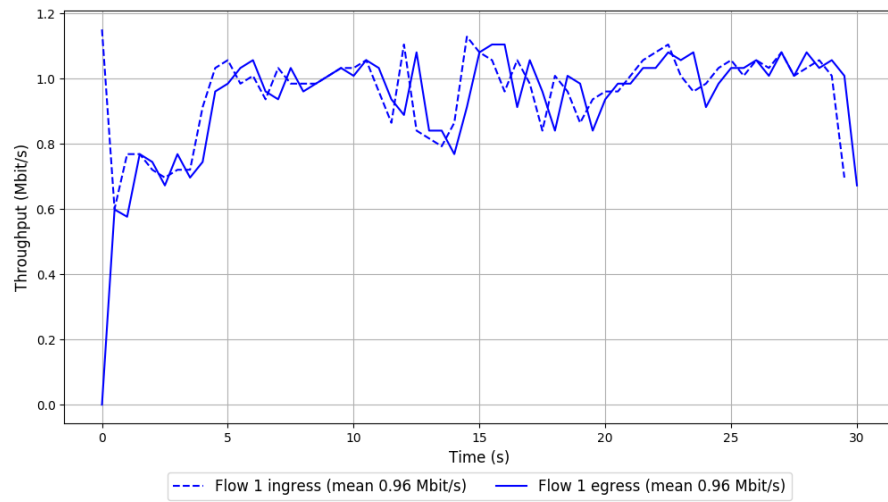


Run 3: Statistics of Indigo

Start at: 2018-06-05 18:52:30
End at: 2018-06-05 18:53:00
Local clock offset: -1.607 ms
Remote clock offset: -4.117 ms

Below is generated by plot.py at 2018-06-05 18:57:42
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.96 Mbit/s
95th percentile per-packet one-way delay: 121.982 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 0.96 Mbit/s
95th percentile per-packet one-way delay: 121.982 ms
Loss rate: 1.00%

Run 3: Report of Indigo — Data Link

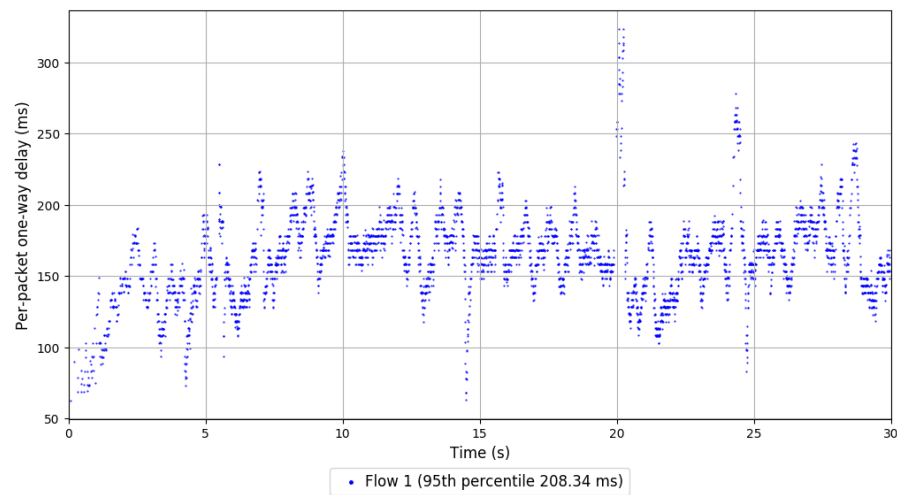
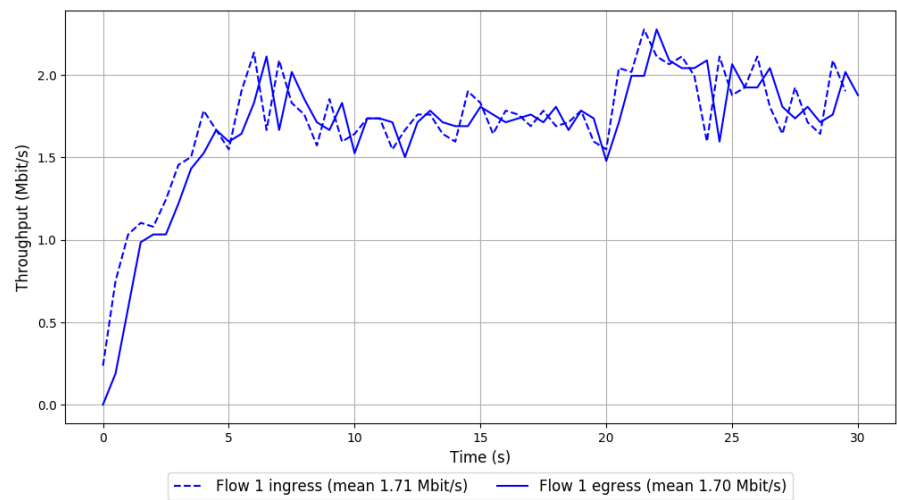


```
Run 1: Statistics of LEDBAT

Start at: 2018-06-05 18:22:16
End at: 2018-06-05 18:22:46
Local clock offset: -0.94 ms
Remote clock offset: -3.17 ms

# Below is generated by plot.py at 2018-06-05 18:57:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.70 Mbit/s
95th percentile per-packet one-way delay: 208.338 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 1.70 Mbit/s
95th percentile per-packet one-way delay: 208.338 ms
Loss rate: 0.69%
```

Run 1: Report of LEDBAT — Data Link

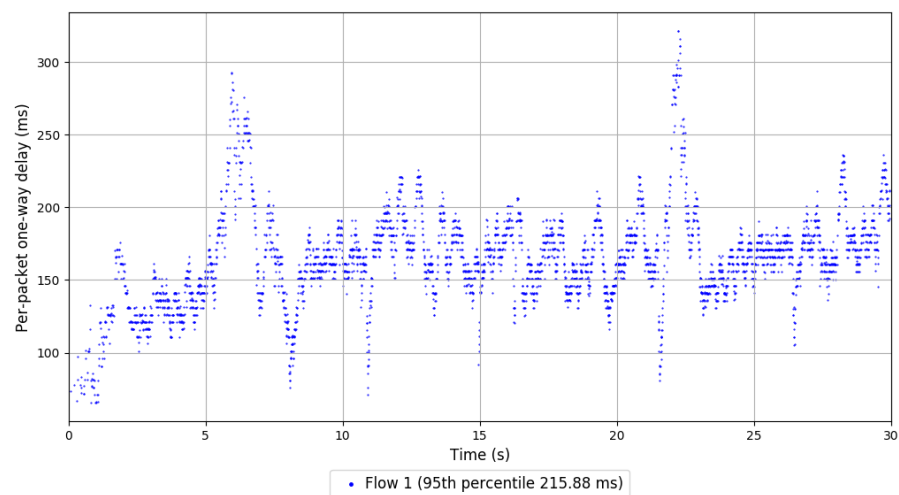
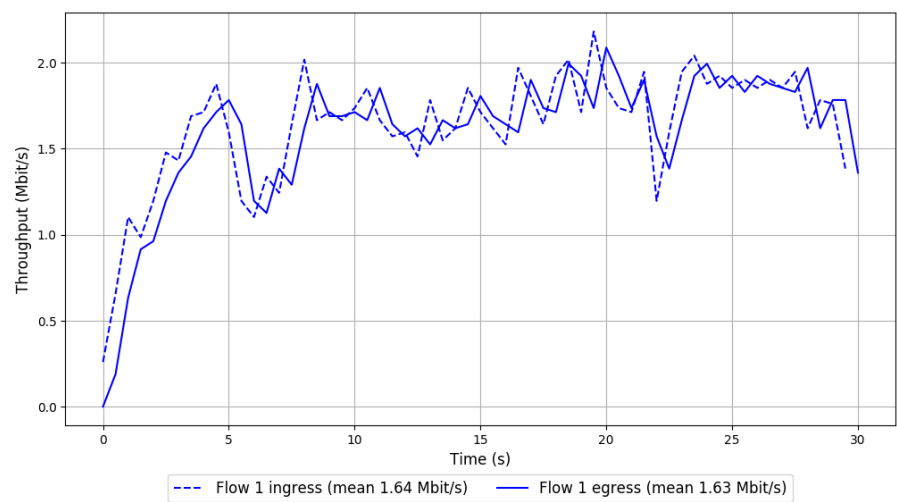


Run 2: Statistics of LEDBAT

Start at: 2018-06-05 18:39:36
End at: 2018-06-05 18:40:06
Local clock offset: 0.909 ms
Remote clock offset: -3.424 ms

Below is generated by plot.py at 2018-06-05 18:57:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.63 Mbit/s
95th percentile per-packet one-way delay: 215.884 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 1.63 Mbit/s
95th percentile per-packet one-way delay: 215.884 ms
Loss rate: 0.67%

Run 2: Report of LEDBAT — Data Link

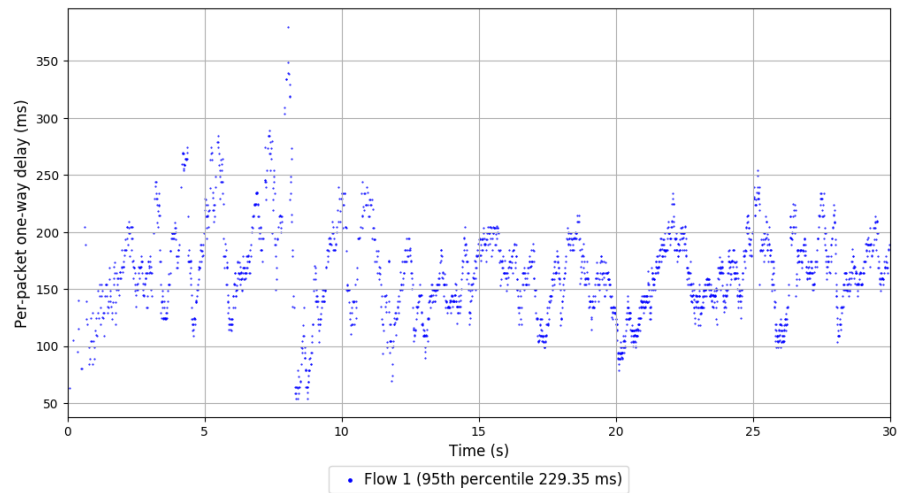
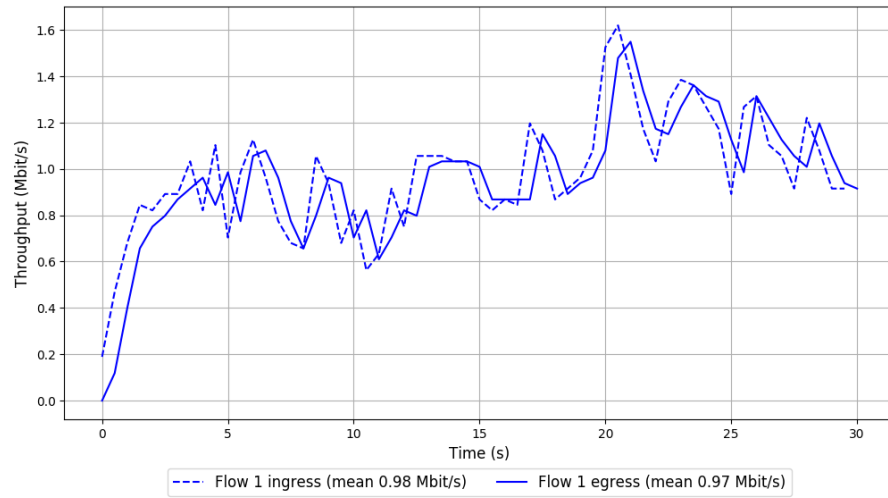


Run 3: Statistics of LEDBAT

Start at: 2018-06-05 18:56:48
End at: 2018-06-05 18:57:18
Local clock offset: -1.95 ms
Remote clock offset: -5.475 ms

Below is generated by plot.py at 2018-06-05 18:57:43
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.97 Mbit/s
95th percentile per-packet one-way delay: 229.346 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 0.97 Mbit/s
95th percentile per-packet one-way delay: 229.346 ms
Loss rate: 0.60%

Run 3: Report of LEDBAT — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2018-06-05 18:19:01

End at: 2018-06-05 18:19:31

Local clock offset: 2.076 ms

Remote clock offset: -3.521 ms

Below is generated by plot.py at 2018-06-05 18:57:44

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.27 Mbit/s

95th percentile per-packet one-way delay: 378.949 ms

Loss rate: 60.50%

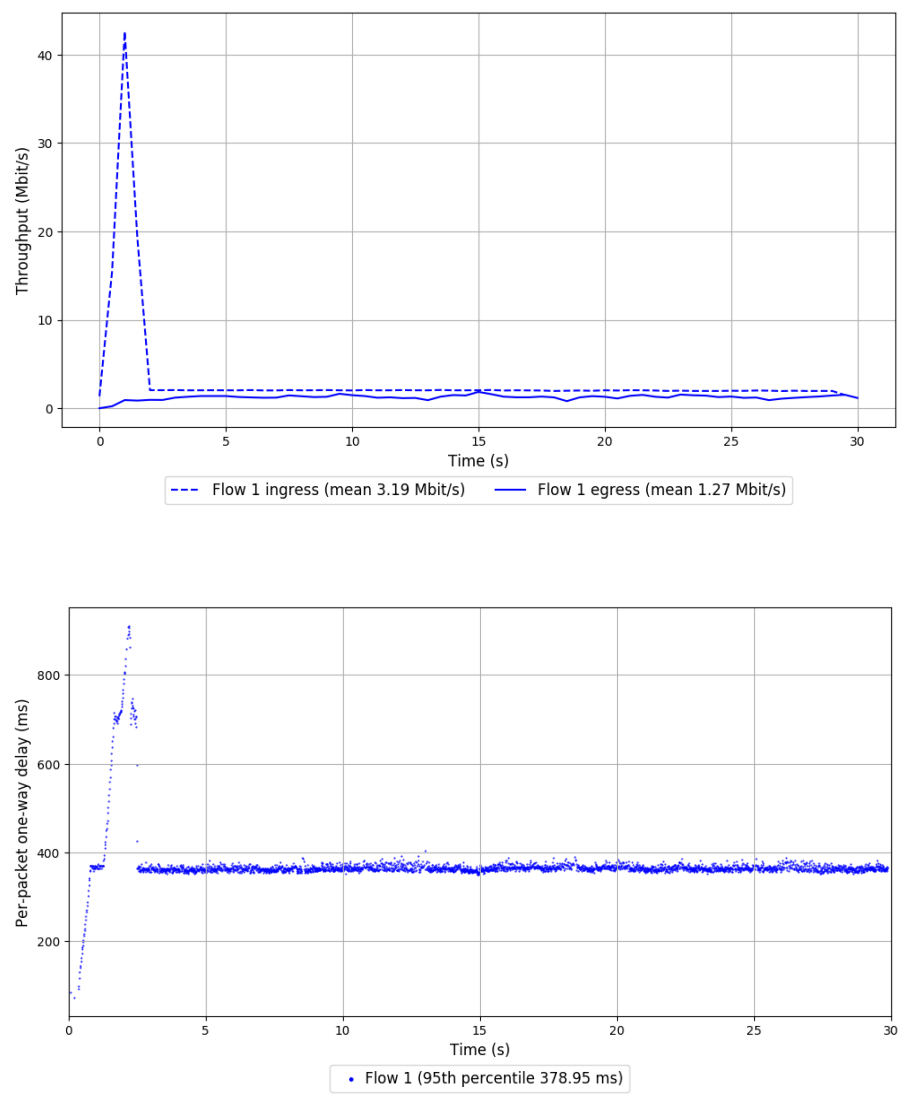
-- Flow 1:

Average throughput: 1.27 Mbit/s

95th percentile per-packet one-way delay: 378.949 ms

Loss rate: 60.50%

Run 1: Report of PCC-Allegro — Data Link

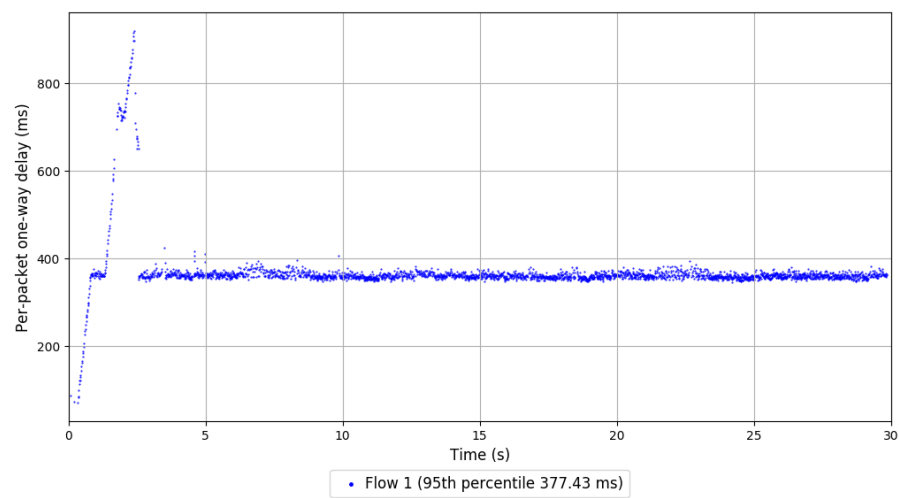
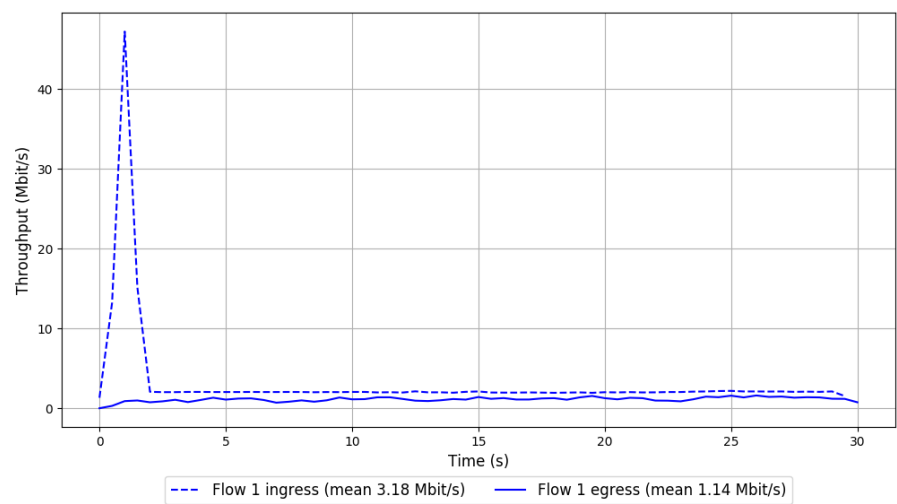


Run 2: Statistics of PCC-Allegro

Start at: 2018-06-05 18:36:21
End at: 2018-06-05 18:36:51
Local clock offset: -0.791 ms
Remote clock offset: -4.367 ms

Below is generated by plot.py at 2018-06-05 18:57:44
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.14 Mbit/s
95th percentile per-packet one-way delay: 377.428 ms
Loss rate: 64.14%
-- Flow 1:
Average throughput: 1.14 Mbit/s
95th percentile per-packet one-way delay: 377.428 ms
Loss rate: 64.14%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-06-05 18:53:34

End at: 2018-06-05 18:54:04

Local clock offset: -1.449 ms

Remote clock offset: -4.703 ms

Below is generated by plot.py at 2018-06-05 18:57:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.07 Mbit/s

95th percentile per-packet one-way delay: 364.571 ms

Loss rate: 64.89%

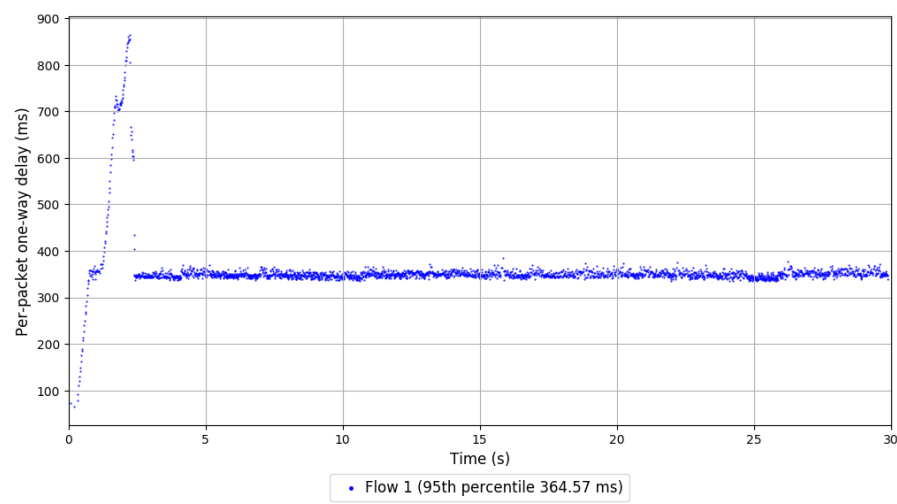
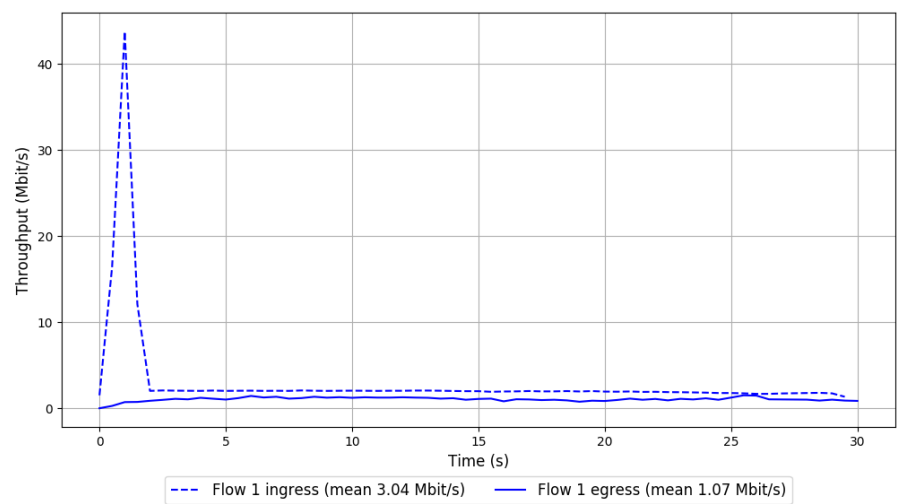
-- Flow 1:

Average throughput: 1.07 Mbit/s

95th percentile per-packet one-way delay: 364.571 ms

Loss rate: 64.89%

Run 3: Report of PCC-Allegro — Data Link

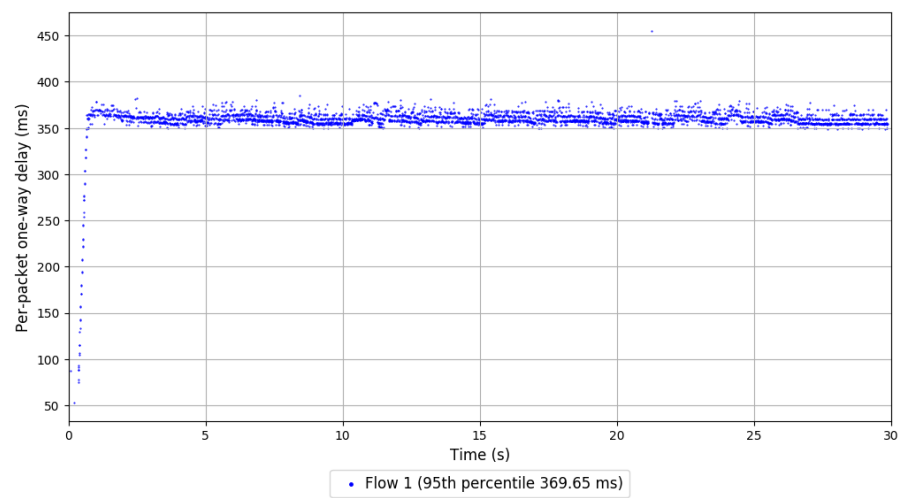
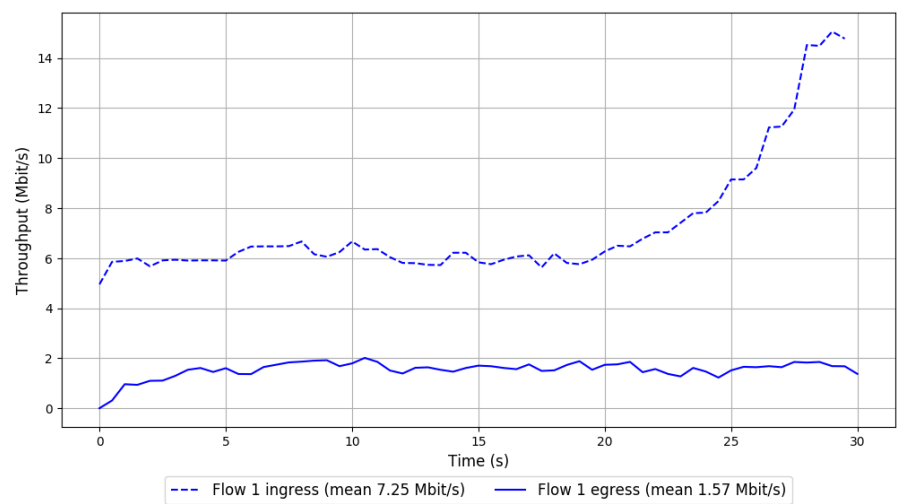


Run 1: Statistics of PCC-Expr

Start at: 2018-06-05 18:21:11
End at: 2018-06-05 18:21:41
Local clock offset: -0.426 ms
Remote clock offset: -4.224 ms

Below is generated by plot.py at 2018-06-05 18:57:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.57 Mbit/s
95th percentile per-packet one-way delay: 369.655 ms
Loss rate: 78.37%
-- Flow 1:
Average throughput: 1.57 Mbit/s
95th percentile per-packet one-way delay: 369.655 ms
Loss rate: 78.37%

Run 1: Report of PCC-Expr — Data Link

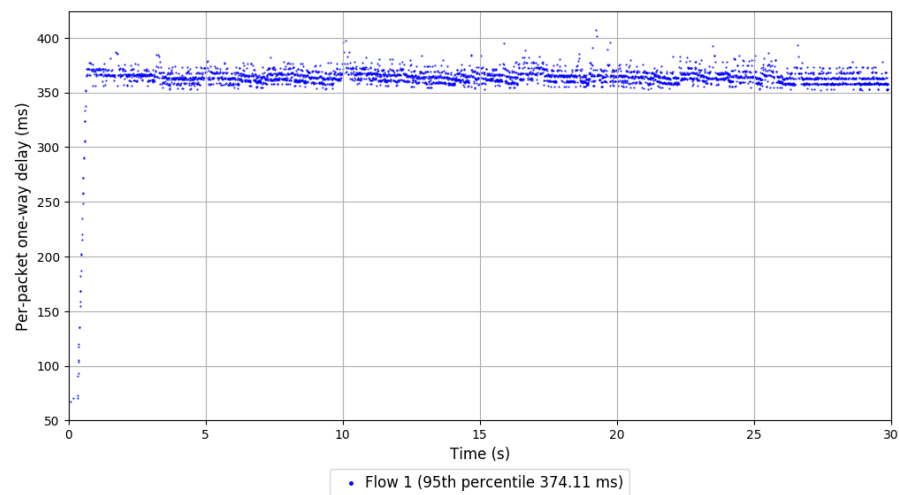
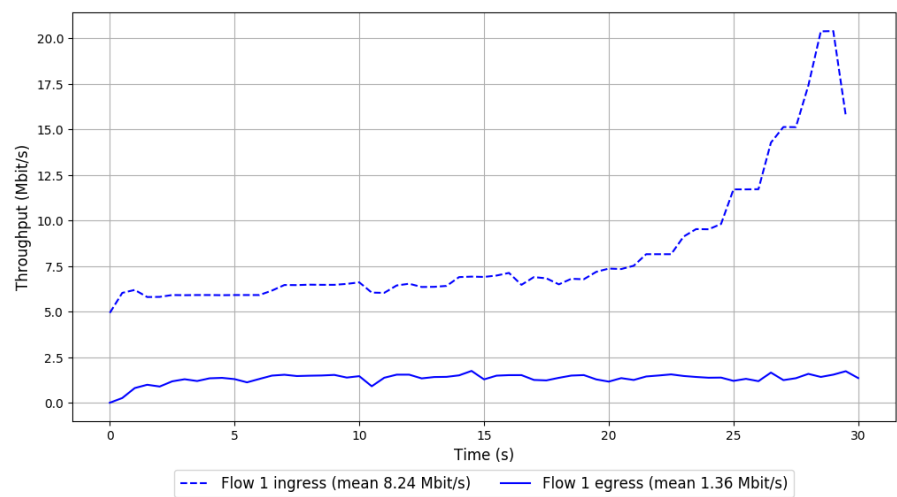


Run 2: Statistics of PCC-Expr

Start at: 2018-06-05 18:38:30
End at: 2018-06-05 18:39:00
Local clock offset: 2.241 ms
Remote clock offset: -4.759 ms

Below is generated by plot.py at 2018-06-05 18:57:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 374.106 ms
Loss rate: 83.55%
-- Flow 1:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 374.106 ms
Loss rate: 83.55%

Run 2: Report of PCC-Expr — Data Link

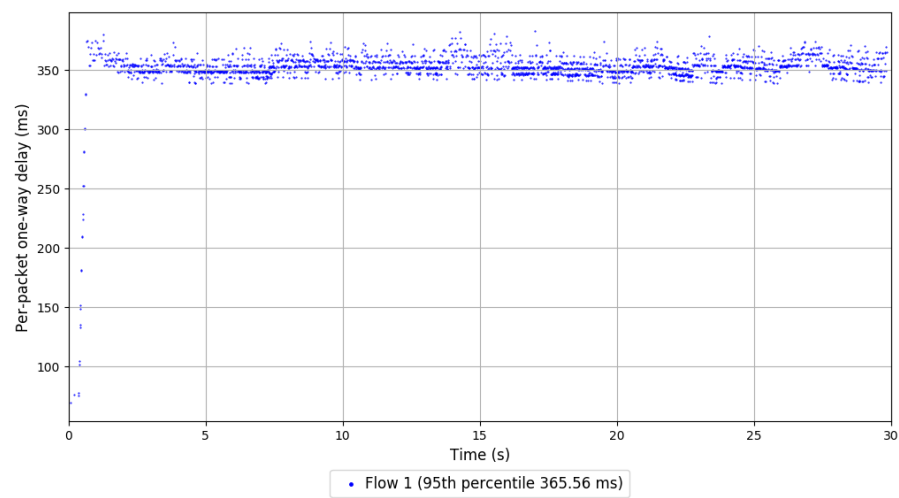
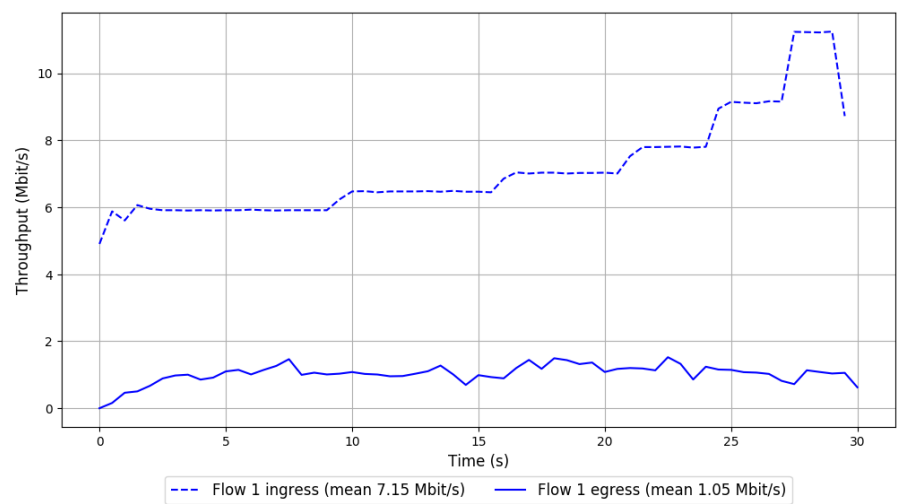


Run 3: Statistics of PCC-Expr

Start at: 2018-06-05 18:55:43
End at: 2018-06-05 18:56:13
Local clock offset: 0.882 ms
Remote clock offset: -5.495 ms

Below is generated by plot.py at 2018-06-05 18:57:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.05 Mbit/s
95th percentile per-packet one-way delay: 365.560 ms
Loss rate: 85.34%
-- Flow 1:
Average throughput: 1.05 Mbit/s
95th percentile per-packet one-way delay: 365.560 ms
Loss rate: 85.34%

Run 3: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2018-06-05 18:14:43

End at: 2018-06-05 18:15:13

Local clock offset: -0.793 ms

Remote clock offset: -3.3 ms

Below is generated by plot.py at 2018-06-05 18:57:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.49 Mbit/s

95th percentile per-packet one-way delay: 360.171 ms

Loss rate: 5.36%

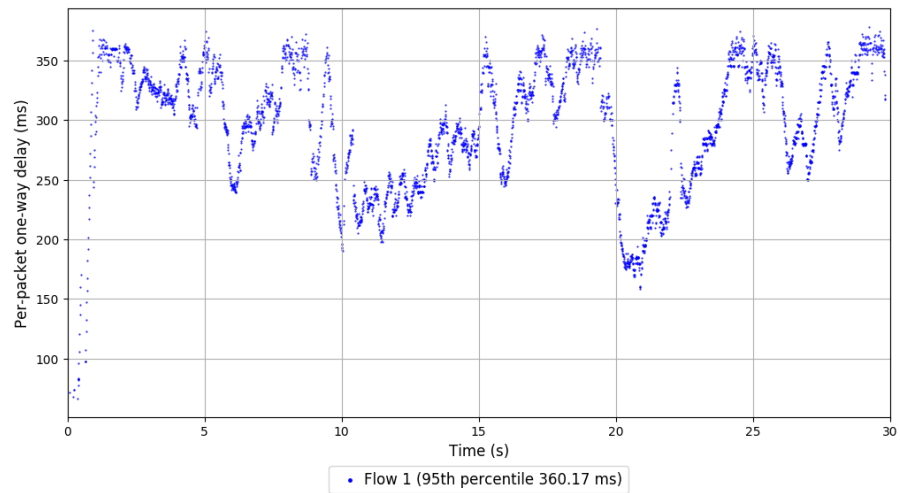
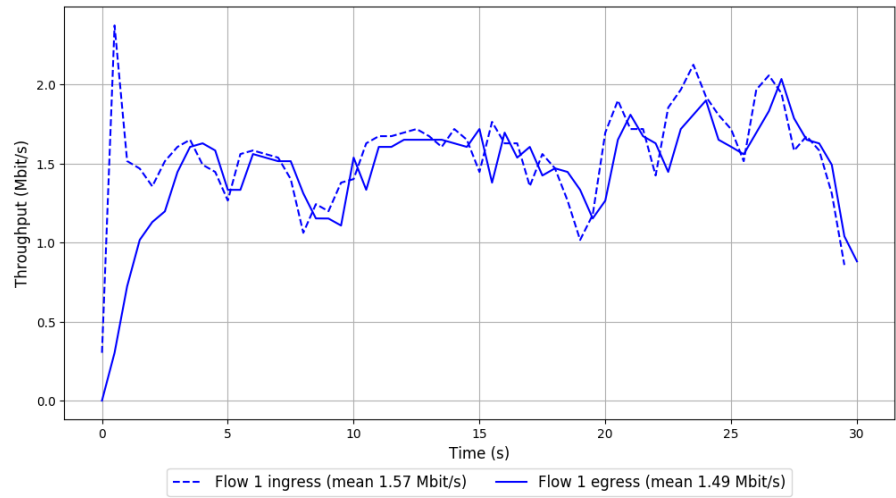
-- Flow 1:

Average throughput: 1.49 Mbit/s

95th percentile per-packet one-way delay: 360.171 ms

Loss rate: 5.36%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-06-05 18:31:57

End at: 2018-06-05 18:32:27

Local clock offset: 1.046 ms

Remote clock offset: -4.903 ms

Below is generated by plot.py at 2018-06-05 18:57:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.40 Mbit/s

95th percentile per-packet one-way delay: 357.290 ms

Loss rate: 4.43%

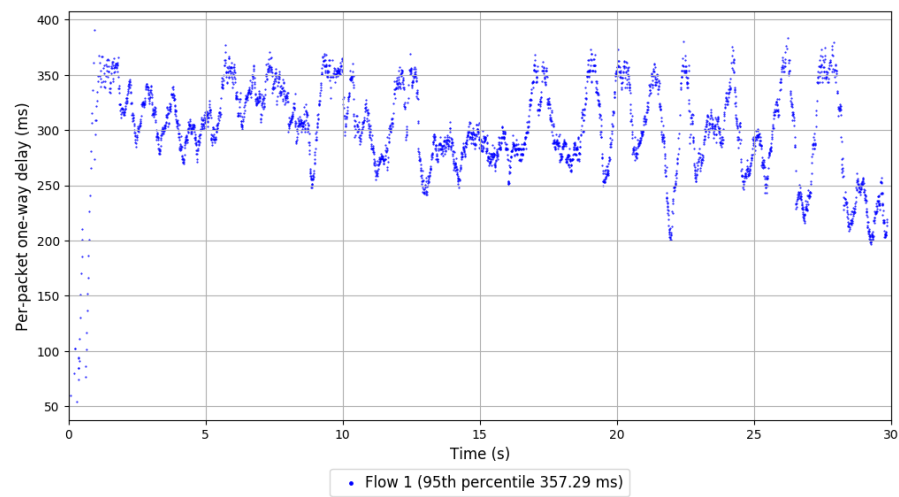
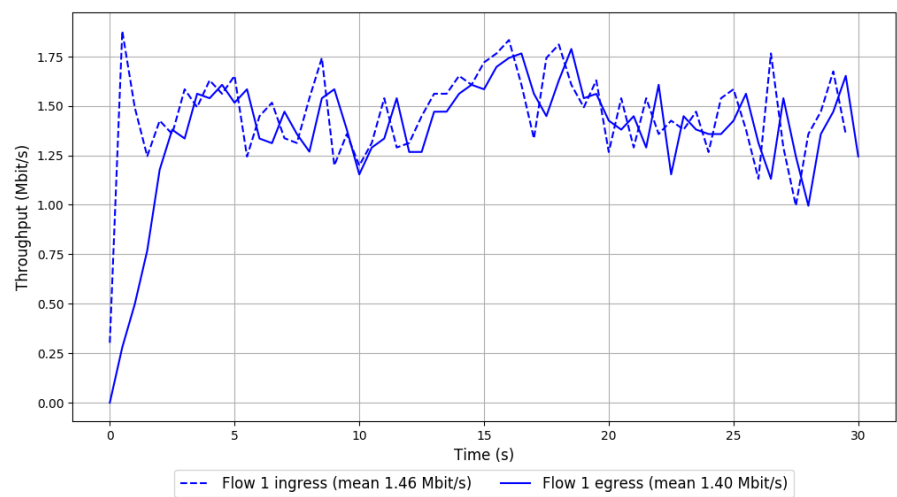
-- Flow 1:

Average throughput: 1.40 Mbit/s

95th percentile per-packet one-way delay: 357.290 ms

Loss rate: 4.43%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-06-05 18:49:16

End at: 2018-06-05 18:49:46

Local clock offset: 0.636 ms

Remote clock offset: -4.075 ms

Below is generated by plot.py at 2018-06-05 18:57:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.37 Mbit/s

95th percentile per-packet one-way delay: 343.428 ms

Loss rate: 5.08%

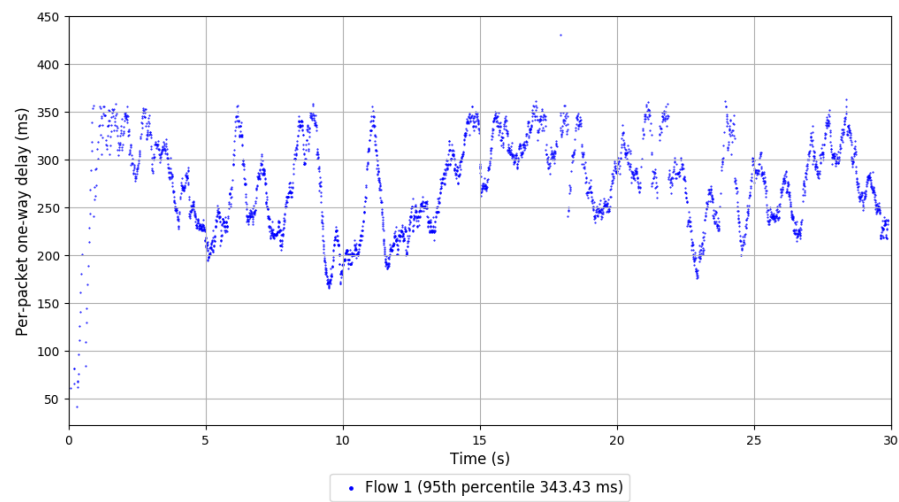
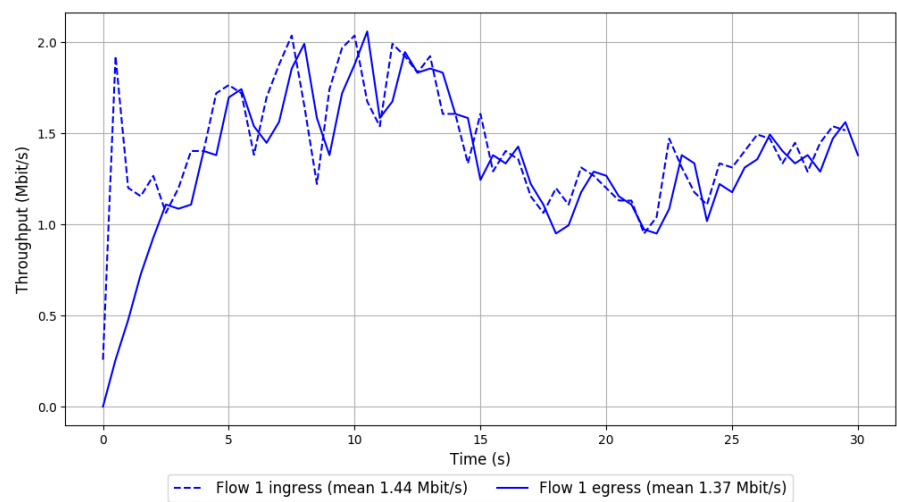
-- Flow 1:

Average throughput: 1.37 Mbit/s

95th percentile per-packet one-way delay: 343.428 ms

Loss rate: 5.08%

Run 3: Report of QUIC Cubic — Data Link

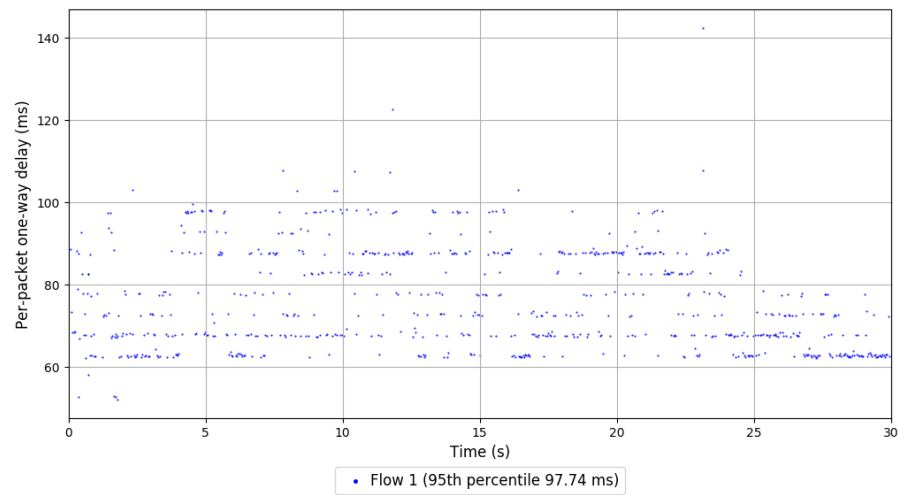
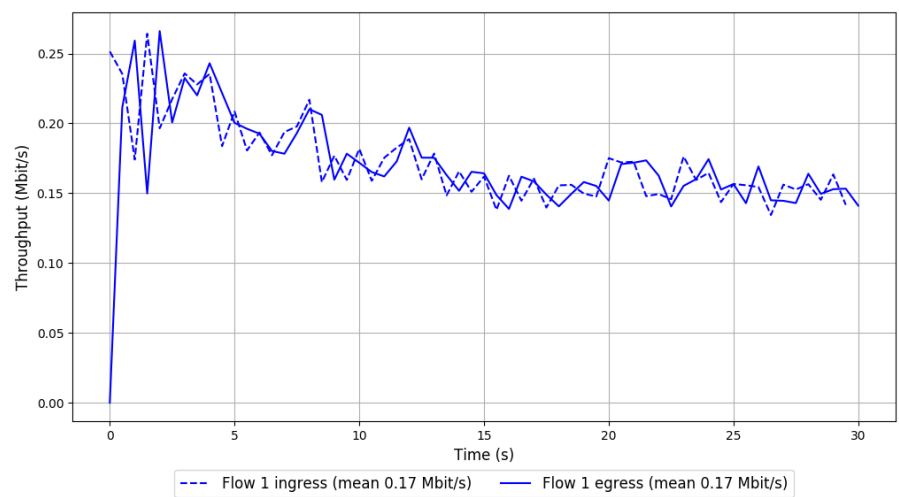


Run 1: Statistics of SCReAM

Start at: 2018-06-05 18:10:20
End at: 2018-06-05 18:10:50
Local clock offset: -0.134 ms
Remote clock offset: -2.567 ms

Below is generated by plot.py at 2018-06-05 18:57:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 97.743 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 97.743 ms
Loss rate: 0.23%

Run 1: Report of SReAM — Data Link

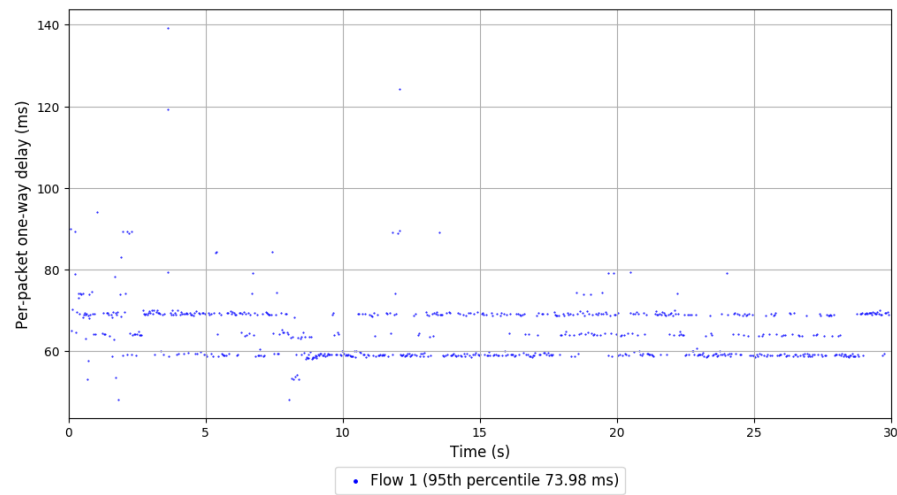
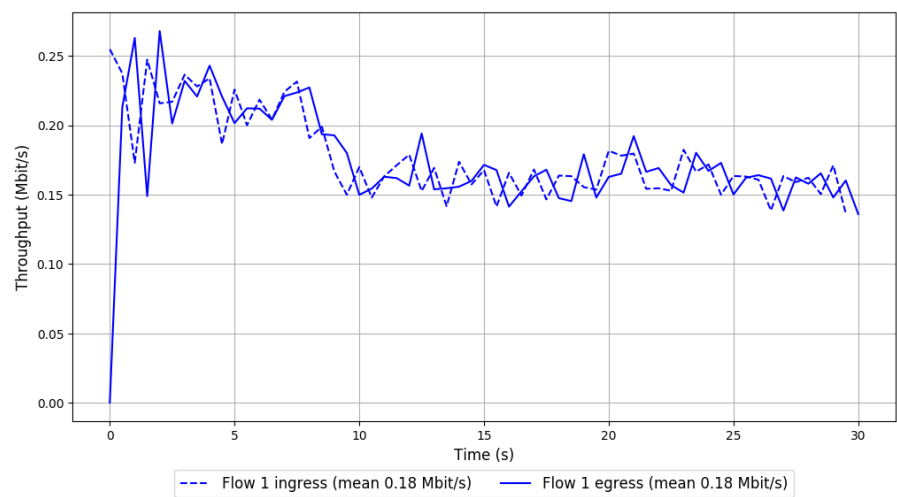


Run 2: Statistics of SCReAM

Start at: 2018-06-05 18:27:39
End at: 2018-06-05 18:28:09
Local clock offset: -0.557 ms
Remote clock offset: -4.242 ms

Below is generated by plot.py at 2018-06-05 18:57:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 73.980 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 73.980 ms
Loss rate: 0.23%

Run 2: Report of SReAM — Data Link

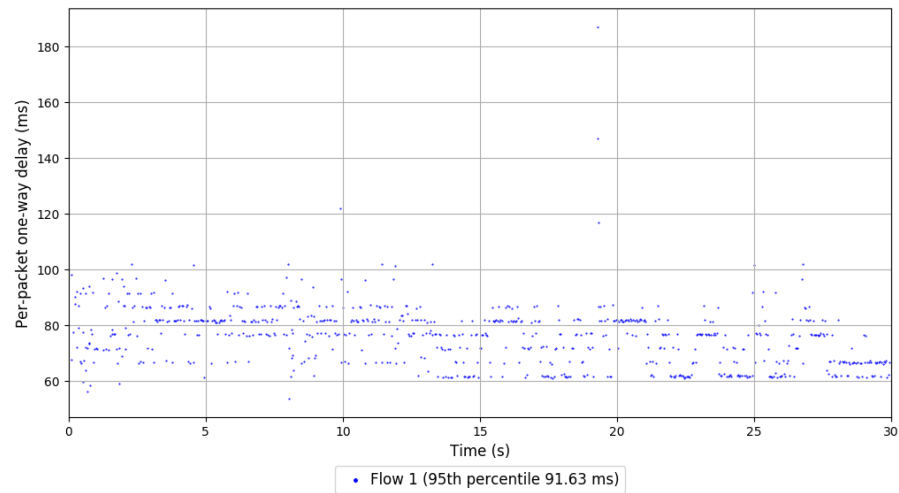
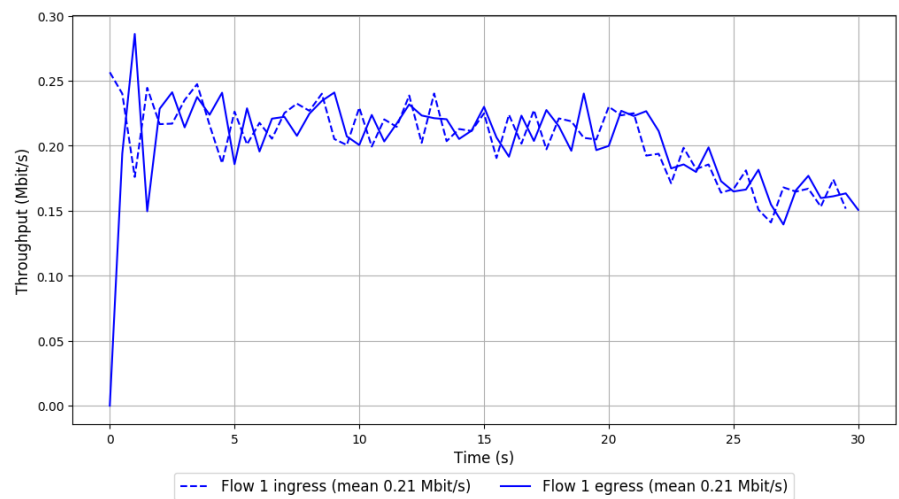


Run 3: Statistics of SCReAM

Start at: 2018-06-05 18:44:58
End at: 2018-06-05 18:45:28
Local clock offset: 0.346 ms
Remote clock offset: -3.789 ms

Below is generated by plot.py at 2018-06-05 18:57:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 91.632 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 91.632 ms
Loss rate: 0.21%

Run 3: Report of SReAM — Data Link

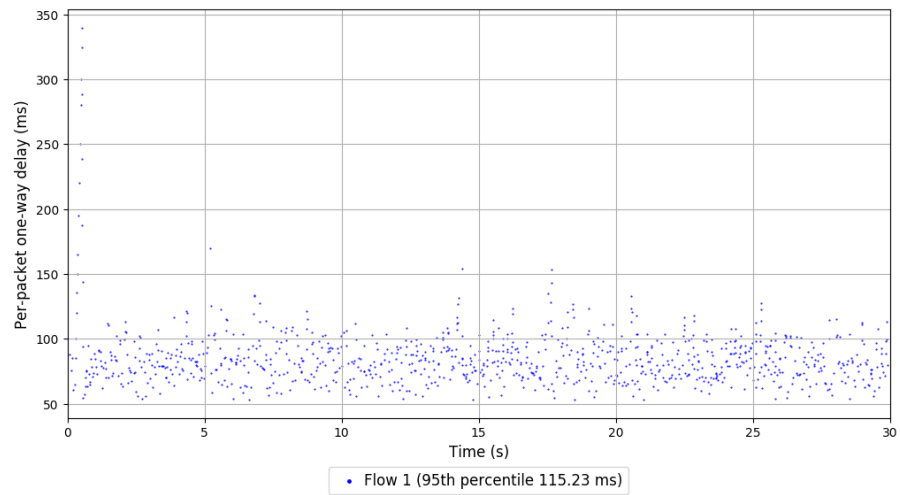
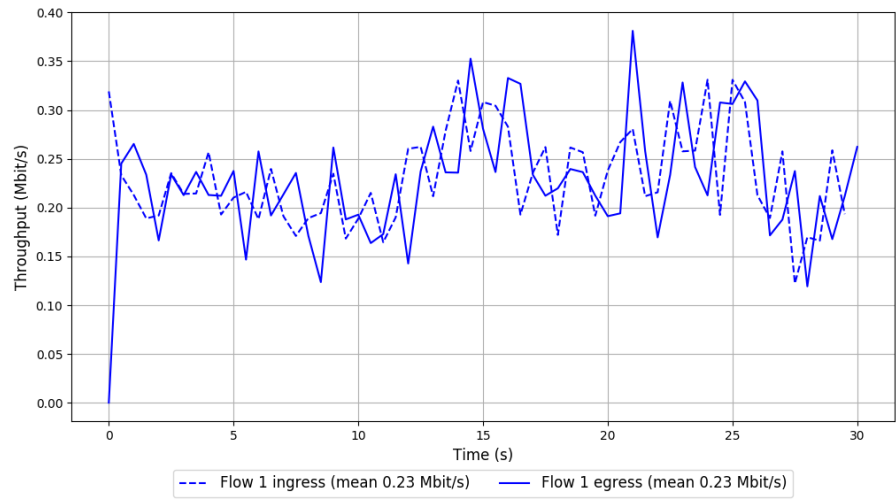


Run 1: Statistics of Sprout

Start at: 2018-06-05 18:06:01
End at: 2018-06-05 18:06:31
Local clock offset: 0.989 ms
Remote clock offset: -2.542 ms

Below is generated by plot.py at 2018-06-05 18:57:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 115.233 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 115.233 ms
Loss rate: 0.01%

Run 1: Report of Sprout — Data Link

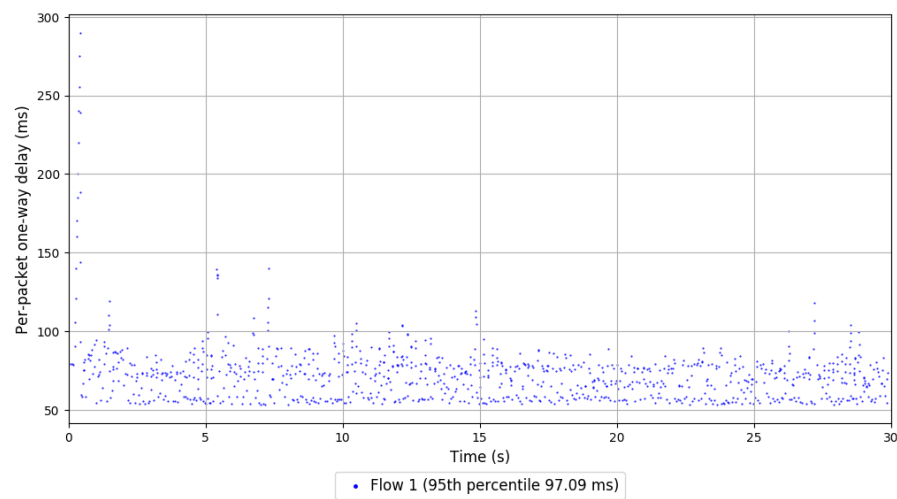
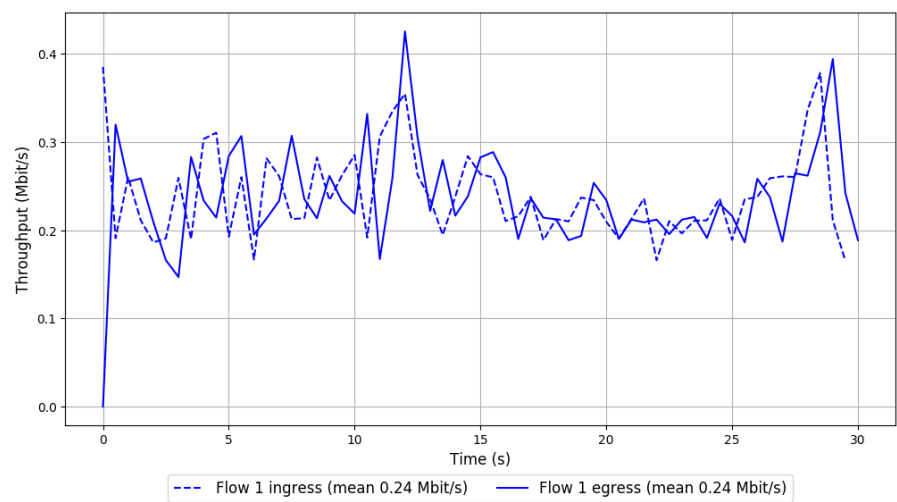


Run 2: Statistics of Sprout

Start at: 2018-06-05 18:23:21
End at: 2018-06-05 18:23:51
Local clock offset: 0.63 ms
Remote clock offset: -4.338 ms

Below is generated by plot.py at 2018-06-05 18:57:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 97.087 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 97.087 ms
Loss rate: 0.16%

Run 2: Report of Sprout — Data Link

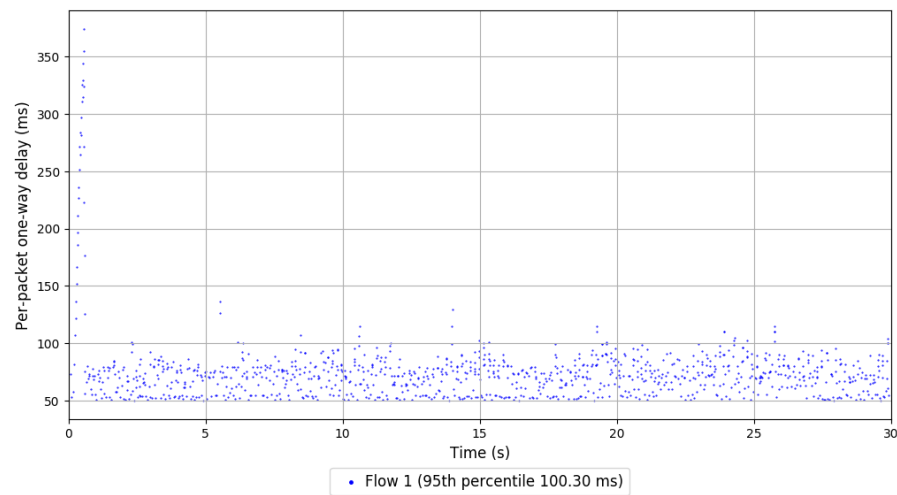
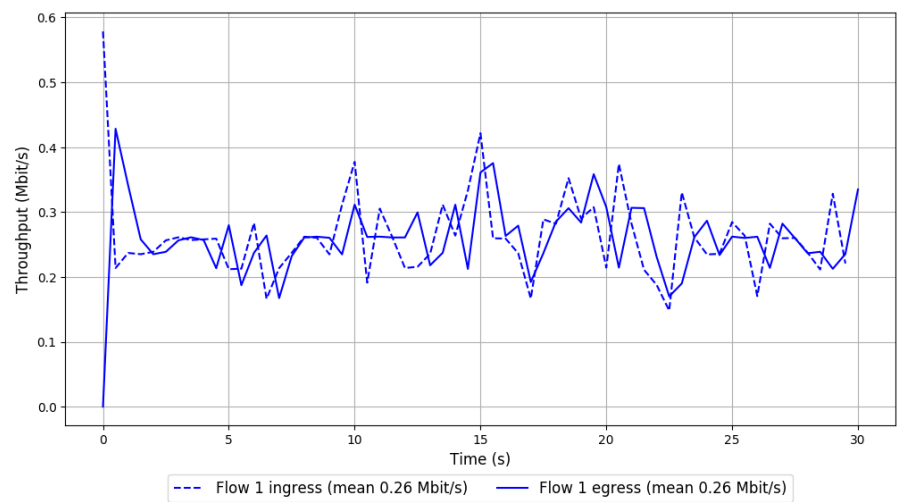


Run 3: Statistics of Sprout

Start at: 2018-06-05 18:40:40
End at: 2018-06-05 18:41:11
Local clock offset: 0.626 ms
Remote clock offset: -4.616 ms

Below is generated by plot.py at 2018-06-05 18:57:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.26 Mbit/s
95th percentile per-packet one-way delay: 100.304 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 0.26 Mbit/s
95th percentile per-packet one-way delay: 100.304 ms
Loss rate: 0.01%

Run 3: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2018-06-05 18:07:06

End at: 2018-06-05 18:07:36

Local clock offset: 1.389 ms

Remote clock offset: -2.106 ms

Below is generated by plot.py at 2018-06-05 18:57:57

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.42 Mbit/s

95th percentile per-packet one-way delay: 327.654 ms

Loss rate: 2.87%

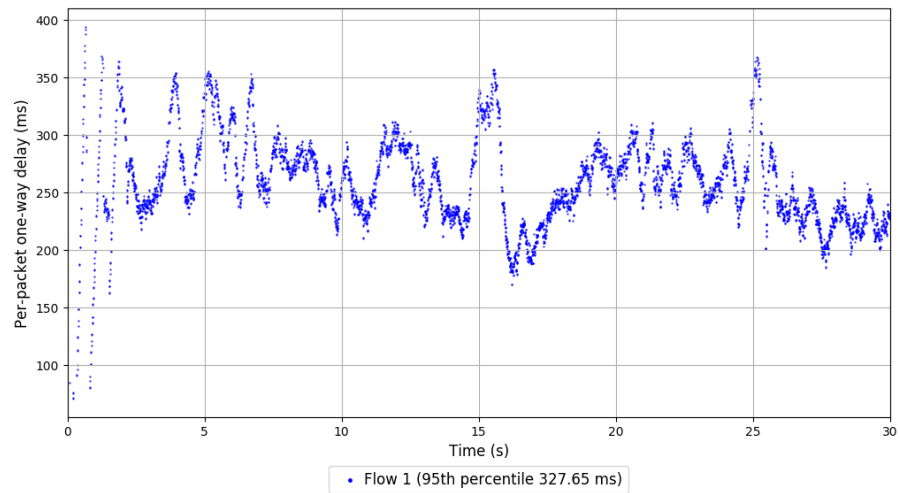
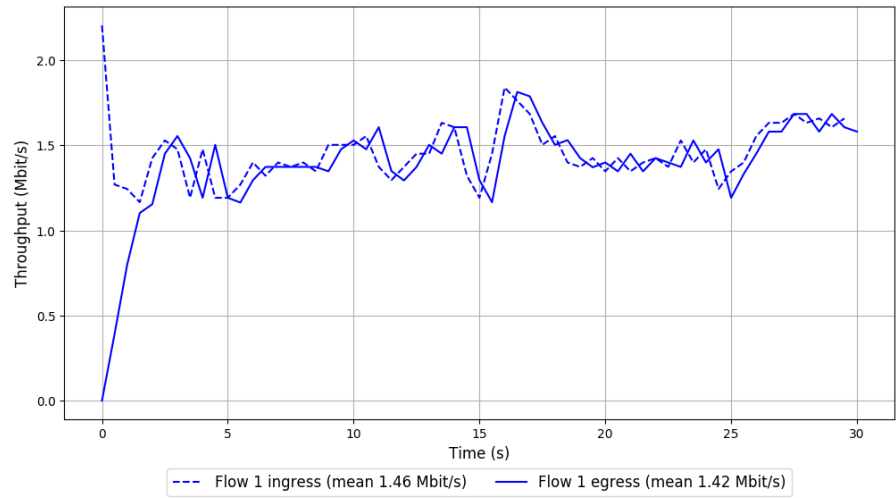
-- Flow 1:

Average throughput: 1.42 Mbit/s

95th percentile per-packet one-way delay: 327.654 ms

Loss rate: 2.87%

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



Run 2: Statistics of TaoVA-100x

Start at: 2018-06-05 18:24:25

End at: 2018-06-05 18:24:55

Local clock offset: 2.547 ms

Remote clock offset: -4.322 ms

Below is generated by plot.py at 2018-06-05 18:57:58

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.49 Mbit/s

95th percentile per-packet one-way delay: 315.451 ms

Loss rate: 3.93%

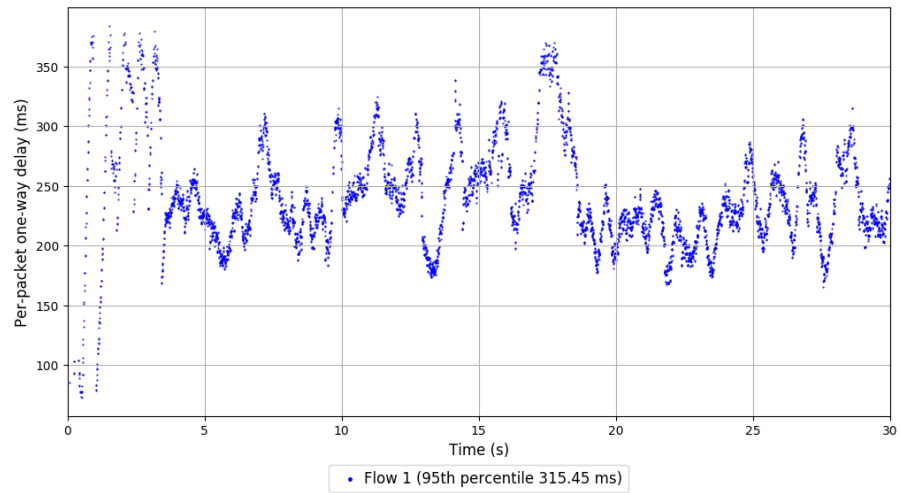
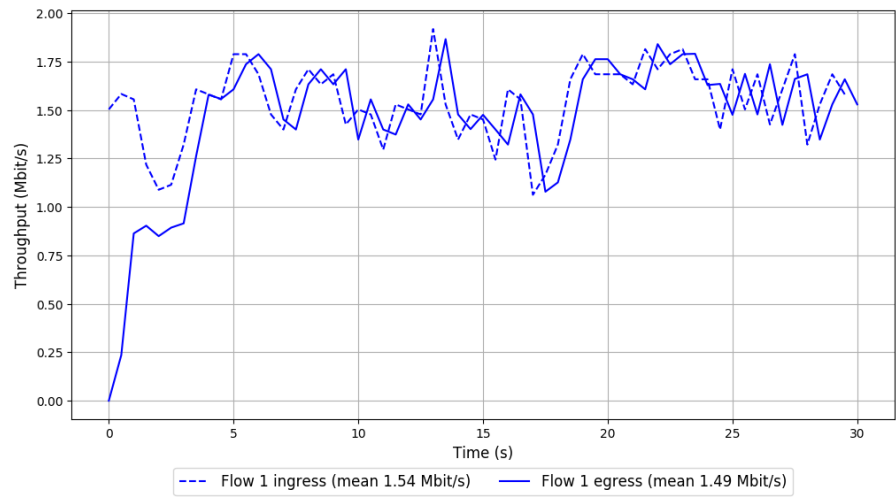
-- Flow 1:

Average throughput: 1.49 Mbit/s

95th percentile per-packet one-way delay: 315.451 ms

Loss rate: 3.93%

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-06-05 18:41:45

End at: 2018-06-05 18:42:15

Local clock offset: 1.677 ms

Remote clock offset: -4.215 ms

Below is generated by plot.py at 2018-06-05 18:57:58

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.35 Mbit/s

95th percentile per-packet one-way delay: 338.810 ms

Loss rate: 3.53%

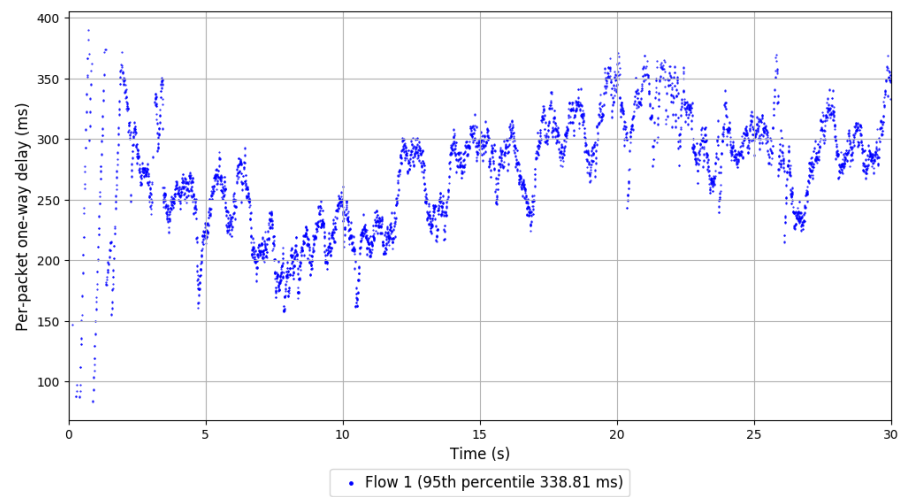
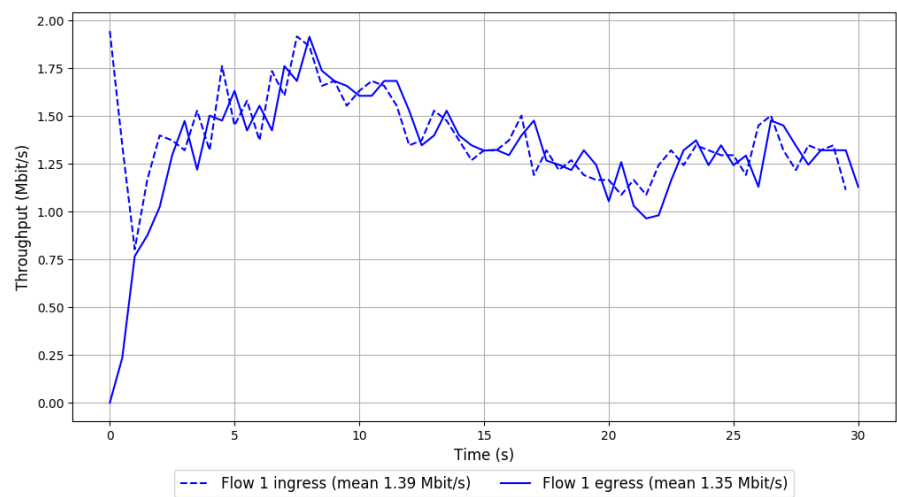
-- Flow 1:

Average throughput: 1.35 Mbit/s

95th percentile per-packet one-way delay: 338.810 ms

Loss rate: 3.53%

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

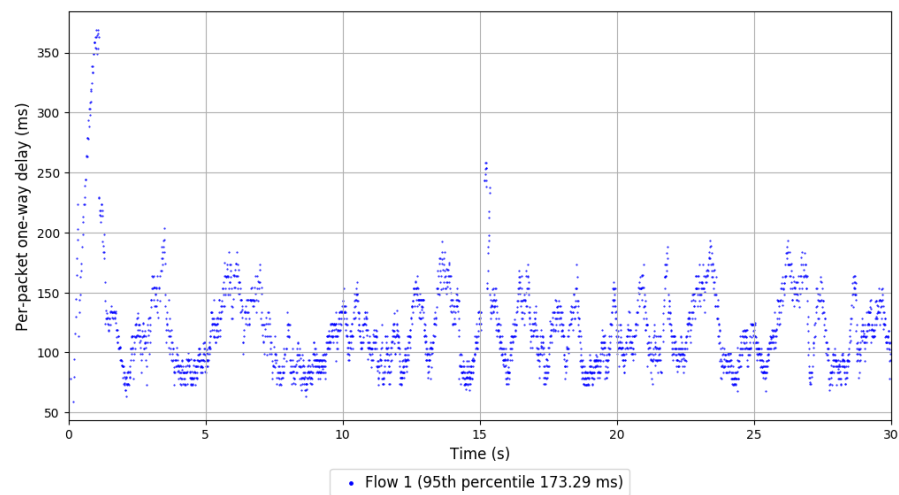
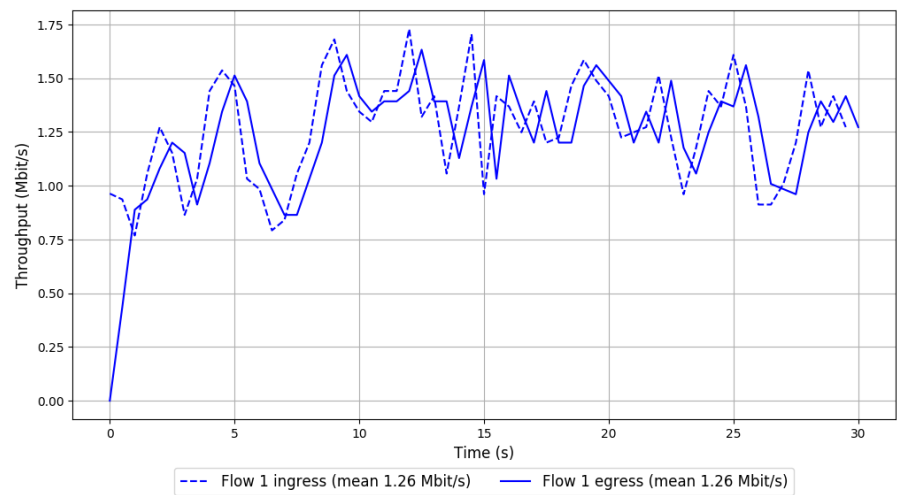


Run 1: Statistics of TCP Vegas

Start at: 2018-06-05 18:11:24
End at: 2018-06-05 18:11:54
Local clock offset: 0.09 ms
Remote clock offset: -3.321 ms

Below is generated by plot.py at 2018-06-05 18:57:58
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.26 Mbit/s
95th percentile per-packet one-way delay: 173.289 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 1.26 Mbit/s
95th percentile per-packet one-way delay: 173.289 ms
Loss rate: 0.63%

Run 1: Report of TCP Vegas — Data Link

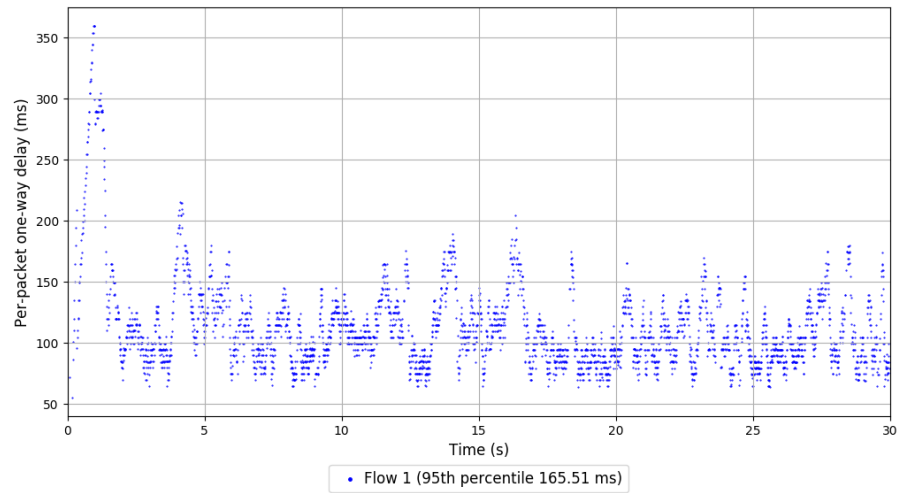
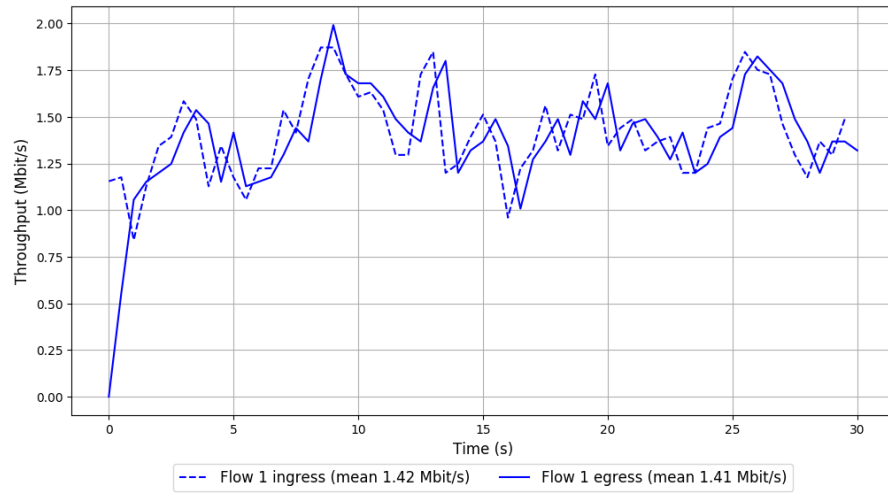


Run 2: Statistics of TCP Vegas

Start at: 2018-06-05 18:28:43
End at: 2018-06-05 18:29:13
Local clock offset: 1.335 ms
Remote clock offset: -3.198 ms

Below is generated by plot.py at 2018-06-05 18:57:58
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.41 Mbit/s
95th percentile per-packet one-way delay: 165.509 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 1.41 Mbit/s
95th percentile per-packet one-way delay: 165.509 ms
Loss rate: 0.51%

Run 2: Report of TCP Vegas — Data Link

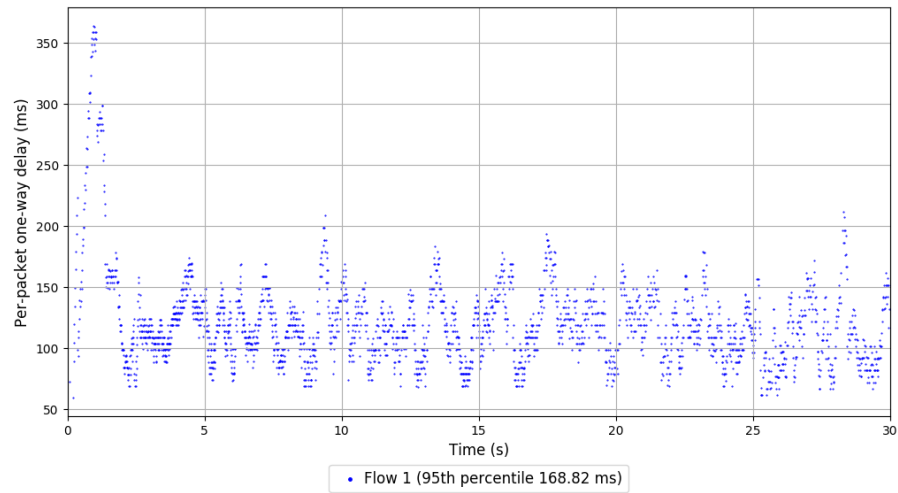
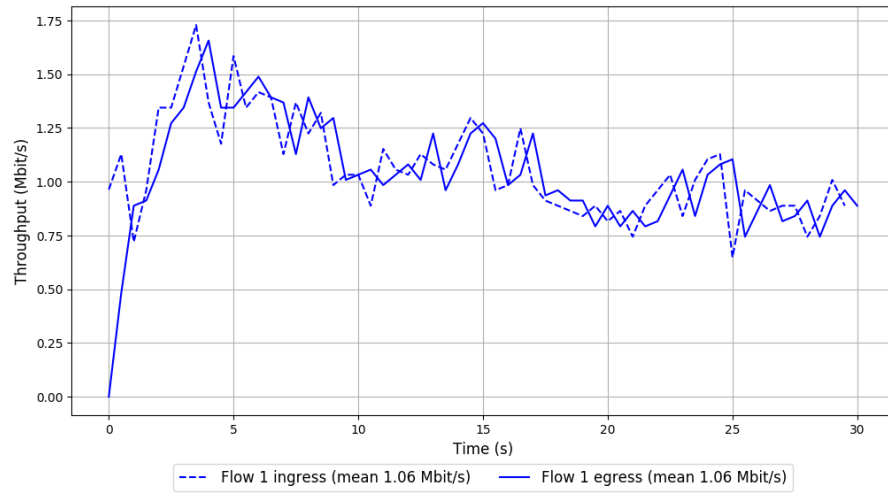


Run 3: Statistics of TCP Vegas

Start at: 2018-06-05 18:46:03
End at: 2018-06-05 18:46:33
Local clock offset: -0.695 ms
Remote clock offset: -3.27 ms

Below is generated by plot.py at 2018-06-05 18:57:58
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.06 Mbit/s
95th percentile per-packet one-way delay: 168.817 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 1.06 Mbit/s
95th percentile per-packet one-way delay: 168.817 ms
Loss rate: 0.75%

Run 3: Report of TCP Vegas — Data Link

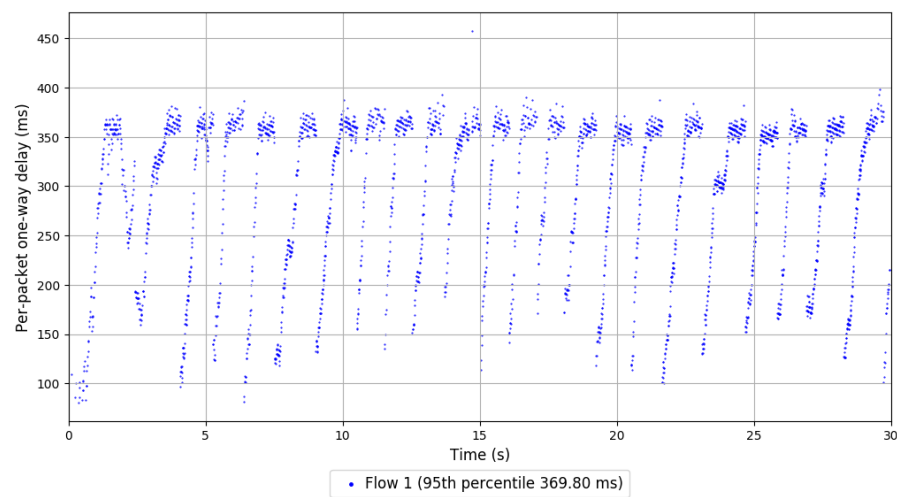
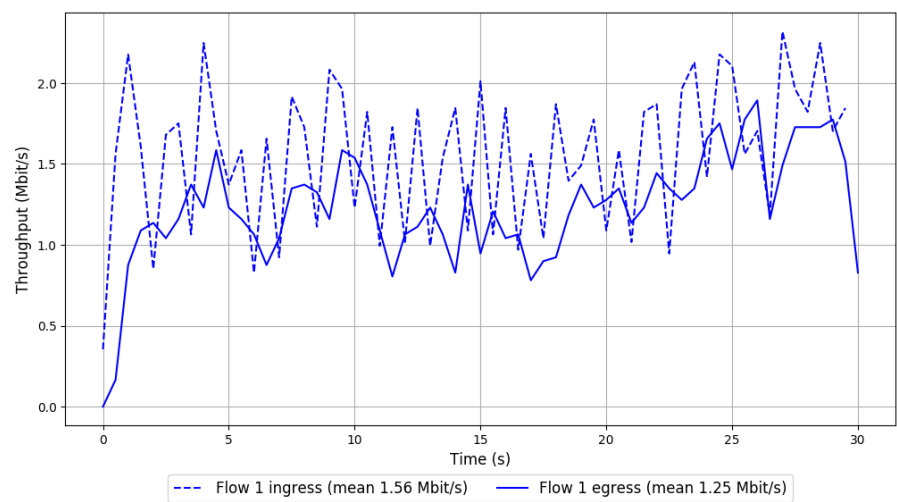


Run 1: Statistics of Verus

Start at: 2018-06-05 18:15:47
End at: 2018-06-05 18:16:17
Local clock offset: 0.418 ms
Remote clock offset: -3.443 ms

Below is generated by plot.py at 2018-06-05 18:57:58
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.25 Mbit/s
95th percentile per-packet one-way delay: 369.800 ms
Loss rate: 20.19%
-- Flow 1:
Average throughput: 1.25 Mbit/s
95th percentile per-packet one-way delay: 369.800 ms
Loss rate: 20.19%

Run 1: Report of Verus — Data Link

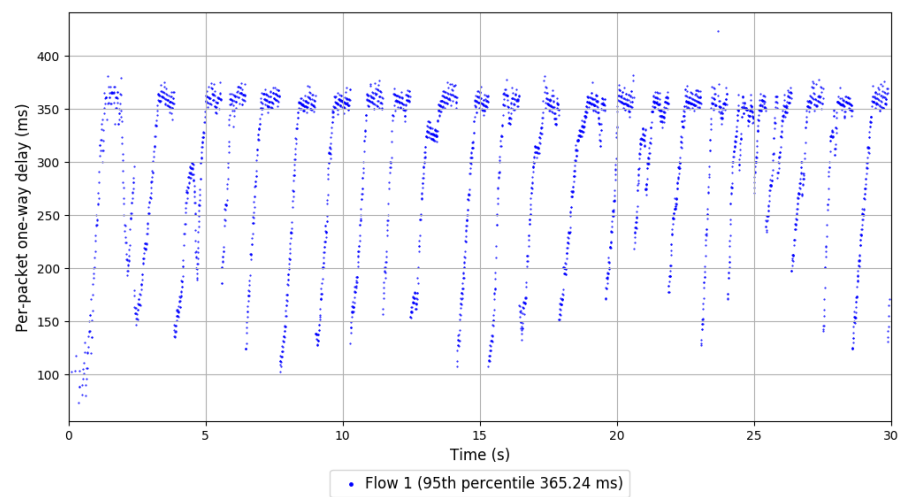
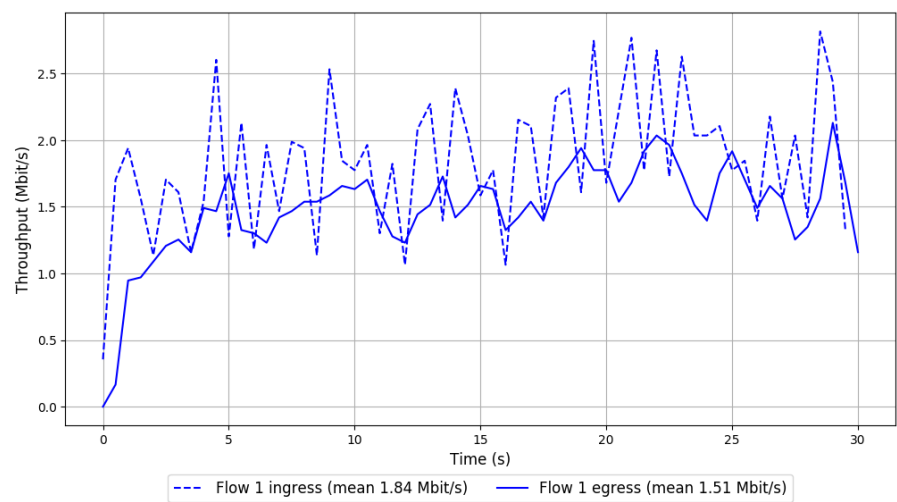


Run 2: Statistics of Verus

Start at: 2018-06-05 18:33:01
End at: 2018-06-05 18:33:31
Local clock offset: 1.396 ms
Remote clock offset: -4.578 ms

Below is generated by plot.py at 2018-06-05 18:58:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.51 Mbit/s
95th percentile per-packet one-way delay: 365.241 ms
Loss rate: 18.14%
-- Flow 1:
Average throughput: 1.51 Mbit/s
95th percentile per-packet one-way delay: 365.241 ms
Loss rate: 18.14%

Run 2: Report of Verus — Data Link

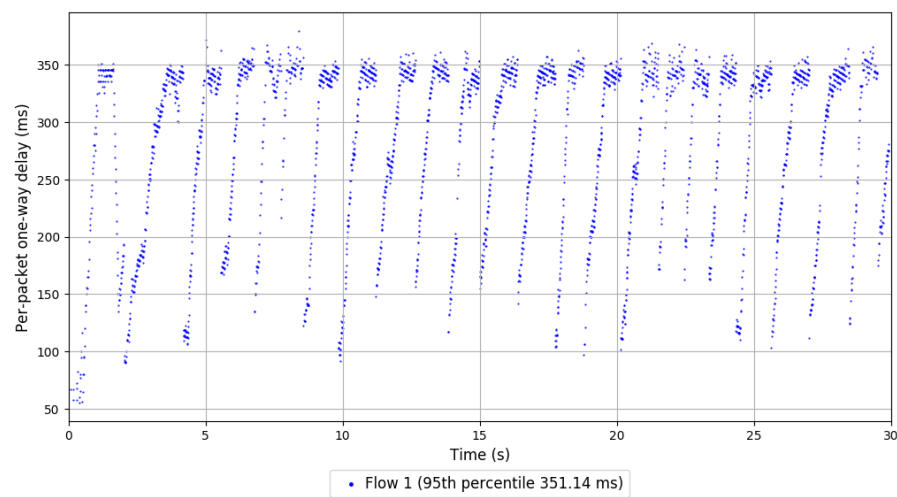
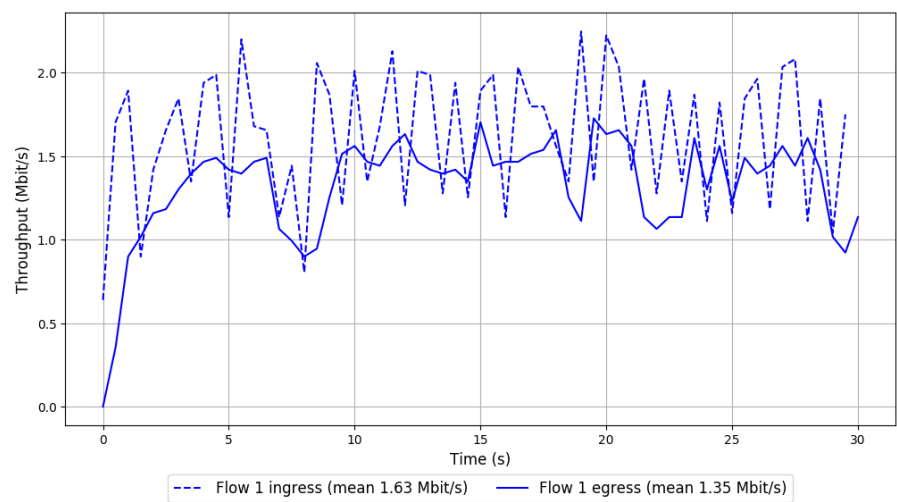


Run 3: Statistics of Verus

Start at: 2018-06-05 18:50:21
End at: 2018-06-05 18:50:51
Local clock offset: -0.859 ms
Remote clock offset: -4.325 ms

Below is generated by plot.py at 2018-06-05 18:58:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.35 Mbit/s
95th percentile per-packet one-way delay: 351.137 ms
Loss rate: 17.16%
-- Flow 1:
Average throughput: 1.35 Mbit/s
95th percentile per-packet one-way delay: 351.137 ms
Loss rate: 17.16%

Run 3: Report of Verus — Data Link

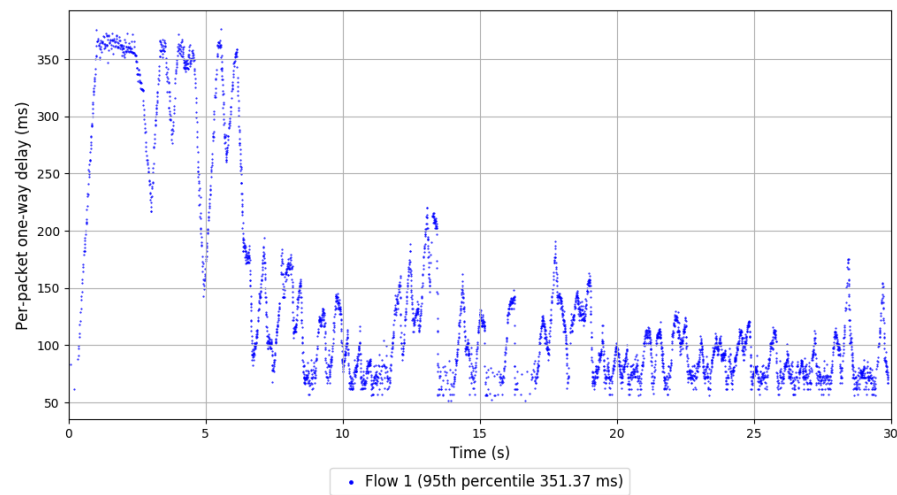
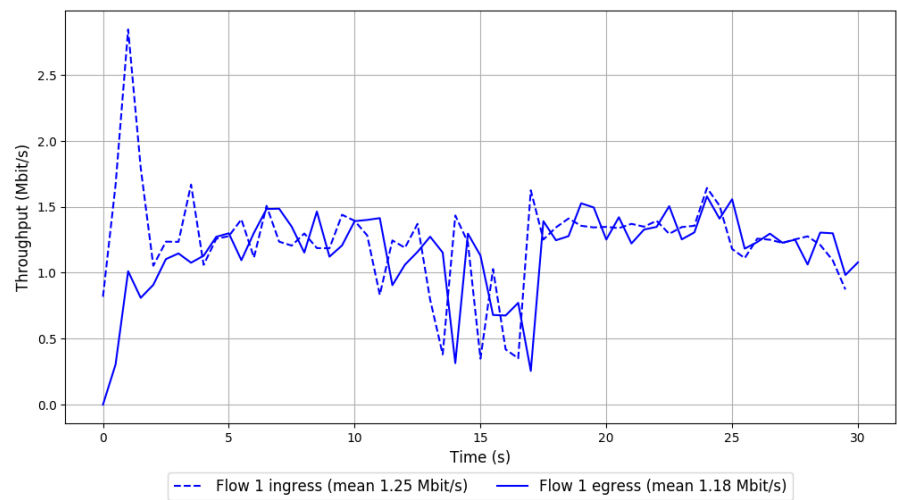


Run 1: Statistics of PCC-Vivace

Start at: 2018-06-05 18:13:38
End at: 2018-06-05 18:14:08
Local clock offset: -0.263 ms
Remote clock offset: -3.012 ms

Below is generated by plot.py at 2018-06-05 18:58:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 351.368 ms
Loss rate: 5.57%
-- Flow 1:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 351.368 ms
Loss rate: 5.57%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2018-06-05 18:30:52

End at: 2018-06-05 18:31:22

Local clock offset: 1.275 ms

Remote clock offset: -3.619 ms

Below is generated by plot.py at 2018-06-05 18:58:03

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.15 Mbit/s

95th percentile per-packet one-way delay: 356.615 ms

Loss rate: 5.90%

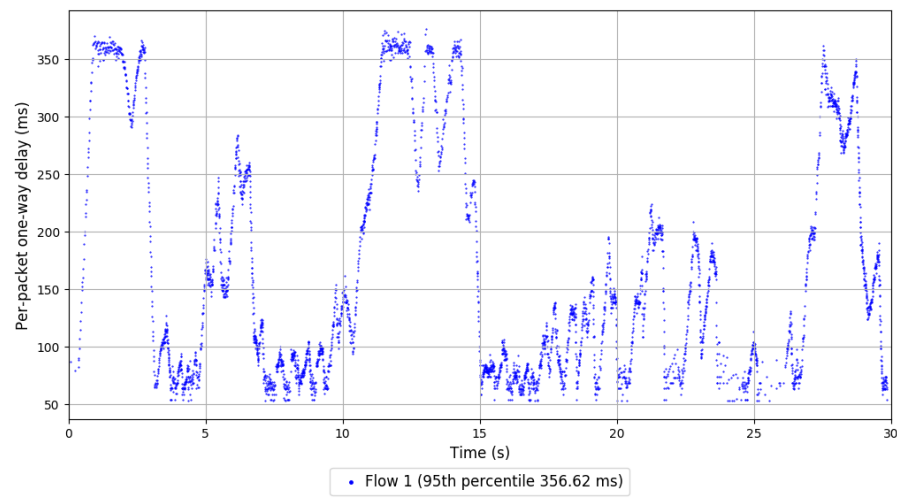
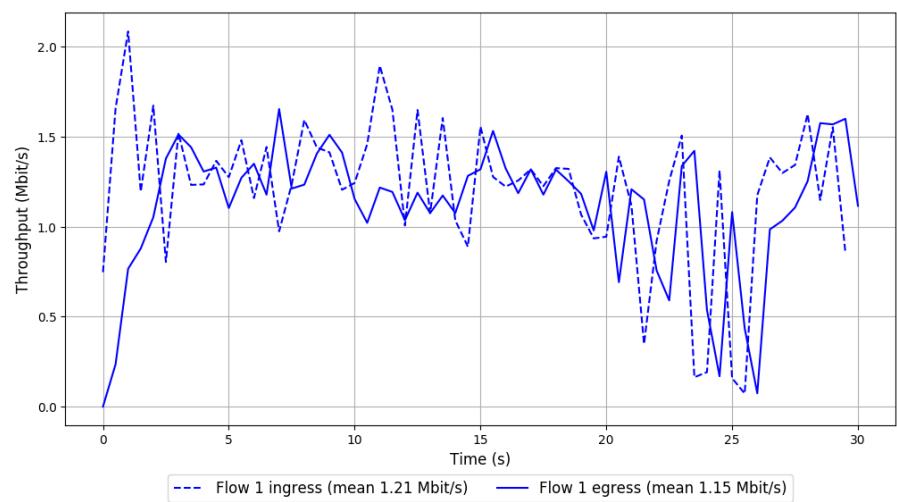
-- Flow 1:

Average throughput: 1.15 Mbit/s

95th percentile per-packet one-way delay: 356.615 ms

Loss rate: 5.90%

Run 2: Report of PCC-Vivace — Data Link

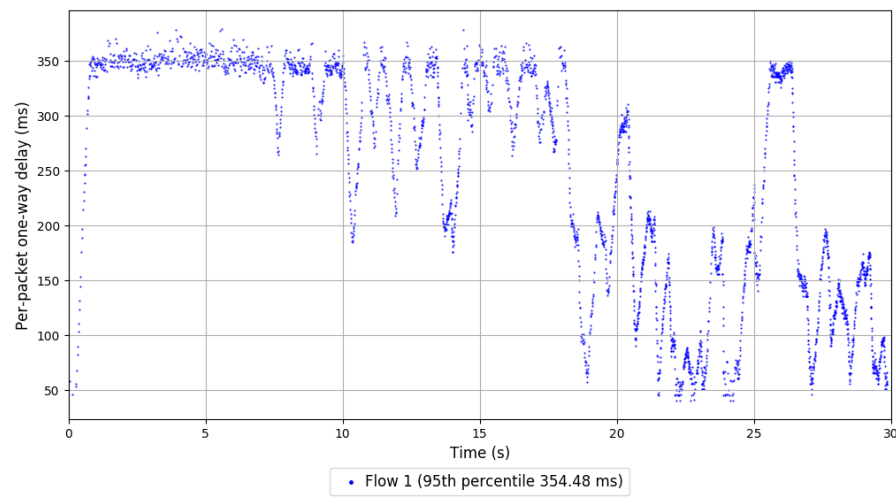
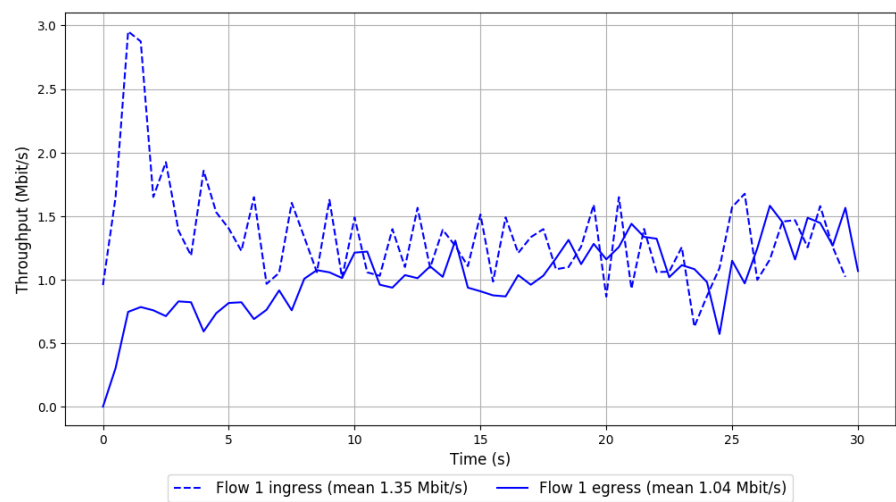


Run 3: Statistics of PCC-Vivace

Start at: 2018-06-05 18:48:12
End at: 2018-06-05 18:48:42
Local clock offset: -0.832 ms
Remote clock offset: -4.893 ms

Below is generated by plot.py at 2018-06-05 18:58:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.04 Mbit/s
95th percentile per-packet one-way delay: 354.475 ms
Loss rate: 22.86%
-- Flow 1:
Average throughput: 1.04 Mbit/s
95th percentile per-packet one-way delay: 354.475 ms
Loss rate: 22.86%

Run 3: Report of PCC-Vivace — Data Link

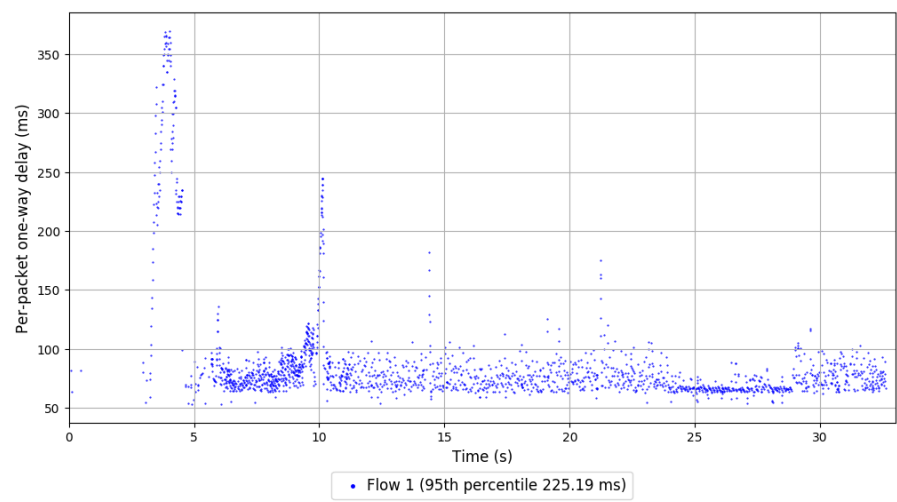
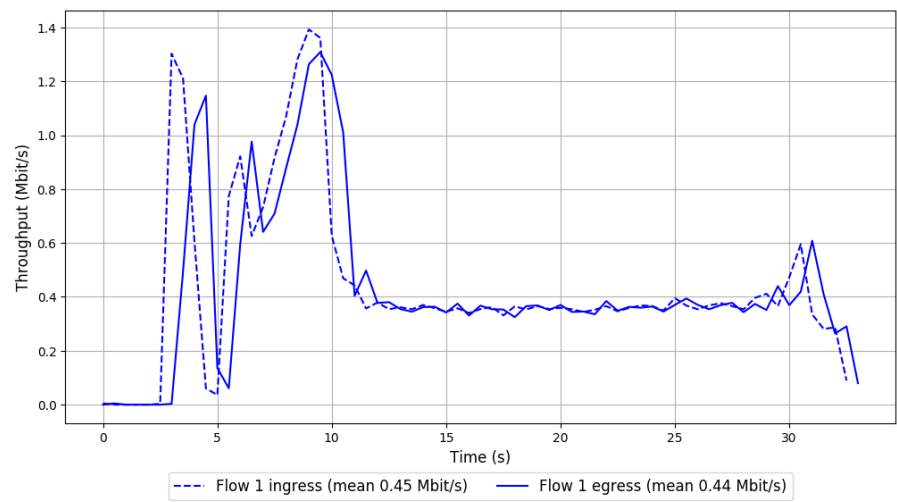


```
Run 1: Statistics of WebRTC media

Start at: 2018-06-05 18:09:15
End at: 2018-06-05 18:09:45
Local clock offset: 0.477 ms
Remote clock offset: -3.229 ms

# Below is generated by plot.py at 2018-06-05 18:58:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 225.186 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 225.186 ms
Loss rate: 1.32%
```

Run 1: Report of WebRTC media — Data Link

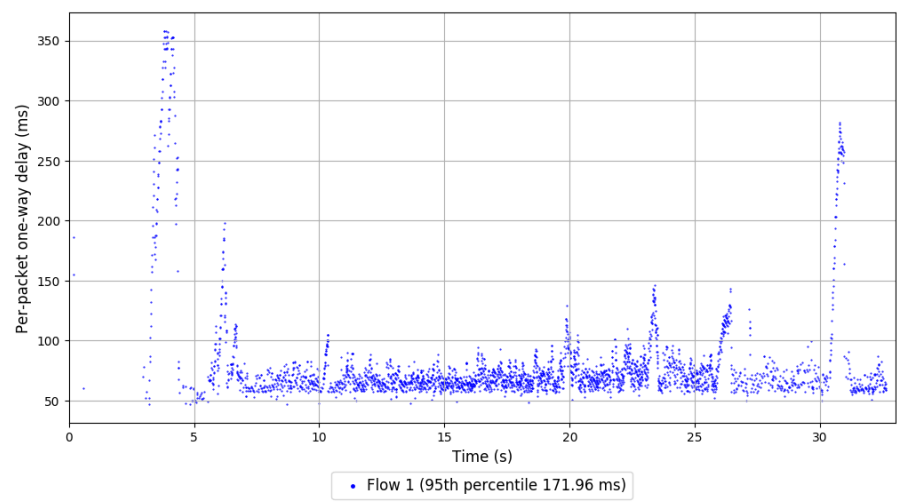
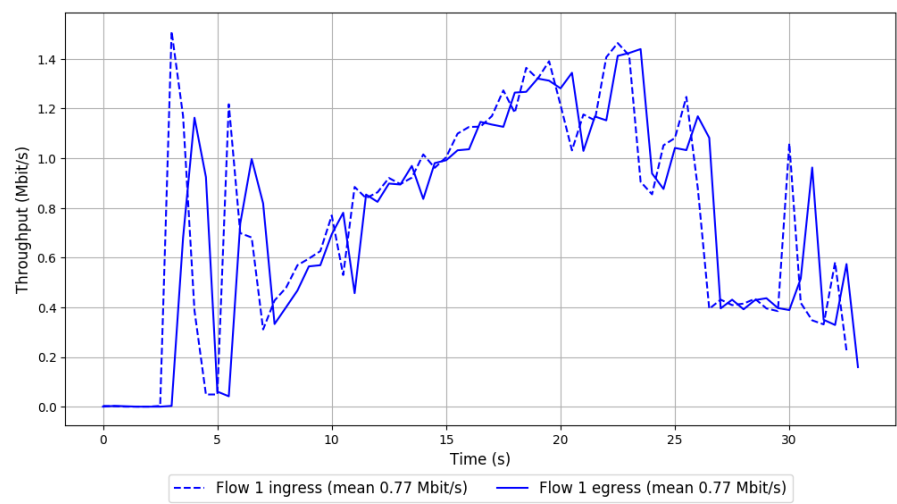


Run 2: Statistics of WebRTC media

Start at: 2018-06-05 18:26:34
End at: 2018-06-05 18:27:04
Local clock offset: -0.944 ms
Remote clock offset: -3.057 ms

Below is generated by plot.py at 2018-06-05 18:58:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.77 Mbit/s
95th percentile per-packet one-way delay: 171.961 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 0.77 Mbit/s
95th percentile per-packet one-way delay: 171.961 ms
Loss rate: 0.81%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-06-05 18:43:54
End at: 2018-06-05 18:44:24
Local clock offset: 1.013 ms
Remote clock offset: -3.673 ms

Below is generated by plot.py at 2018-06-05 18:58:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 191.371 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 191.371 ms
Loss rate: 1.02%

Run 3: Report of WebRTC media — Data Link

