

Pantheon Report

Generated at 2018-07-03 10:09:47 (UTC).

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

Repeated the test of 17 congestion control schemes 3 times.

Each test lasted for 30 seconds running 1 flow.

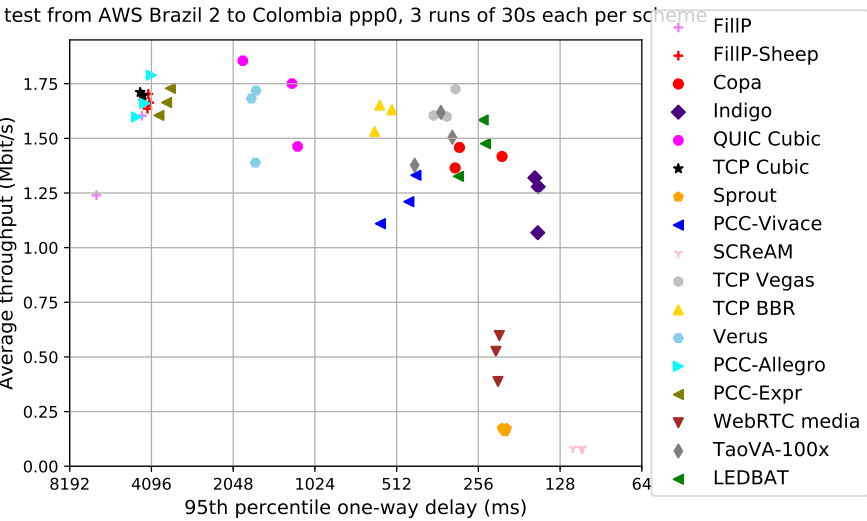
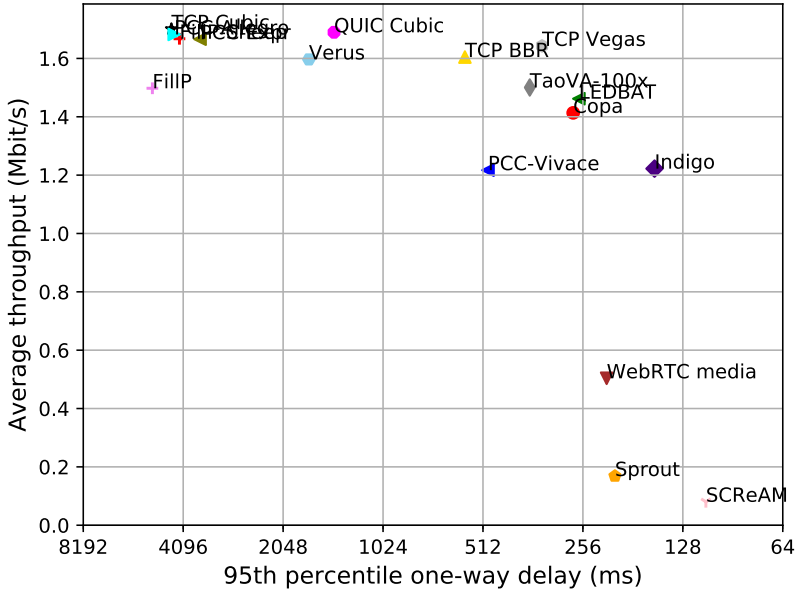
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

Git summary:

```
branch: master @ 9250dbeec7fb57193cdff1ba8c440b4e16ab30f0
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ 37162fe9af85249aeccac061c93e75640ef710b5
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf5e58e562f4
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 @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
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)



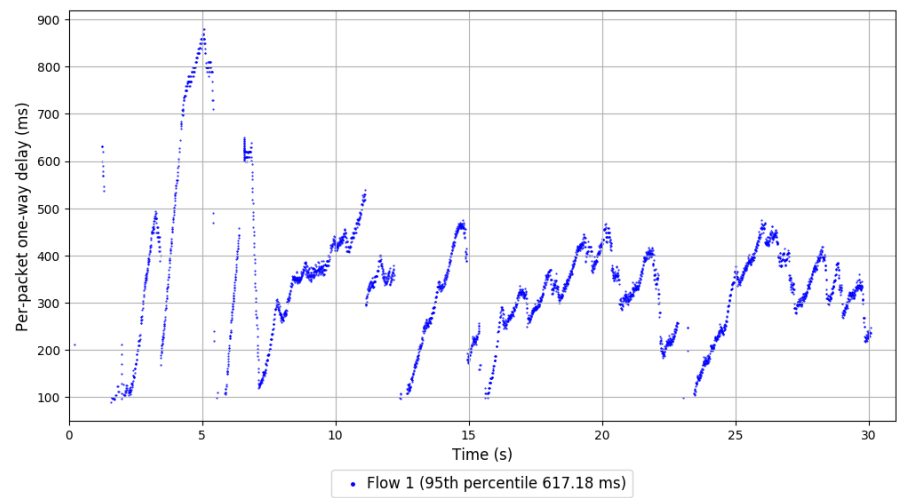
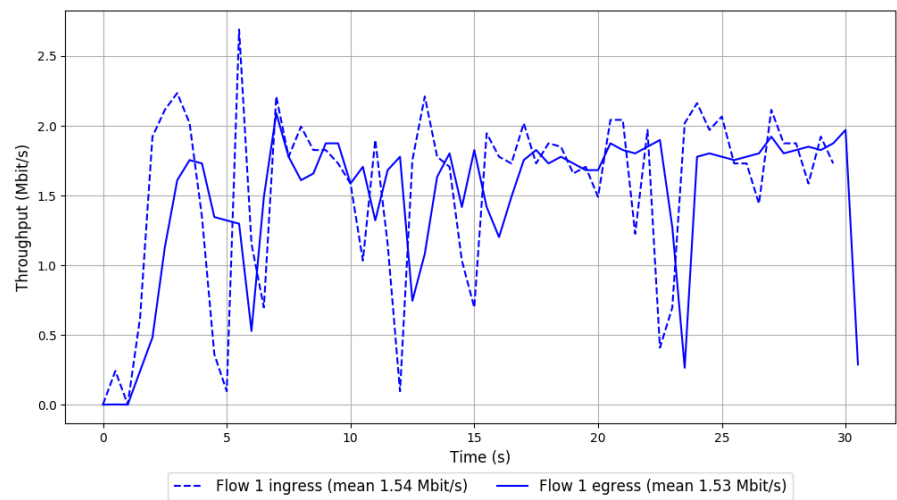
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	3	1.60	580.38	1.09
Copa	3	1.41	273.87	0.26
TCP Cubic	3	1.70	4444.61	19.35
FillP	3	1.50	5071.48	90.74
FillP-Sheep	3	1.67	4203.62	12.52
Indigo	3	1.22	155.77	0.10
LEDBAT	3	1.46	263.32	0.41
PCC-Allegro	3	1.68	4358.95	62.83
PCC-Expr	3	1.66	3644.78	71.54
QUIC Cubic	3	1.69	1438.75	4.90
SCReAM	3	0.08	109.10	0.13
Sprout	3	0.17	205.03	0.14
TaoVA-100x	3	1.50	370.13	0.49
TCP Vegas	3	1.64	339.88	0.17
Verus	3	1.60	1713.08	3.70
PCC-Vivace	3	1.22	494.64	1.09
WebRTC media	3	0.51	217.15	0.10

Run 1: Statistics of TCP BBR

Start at: 2018-07-03 09:20:11
End at: 2018-07-03 09:20:41
Local clock offset: -3.784 ms
Remote clock offset: 13.954 ms

Below is generated by plot.py at 2018-07-03 10:09:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.53 Mbit/s
95th percentile per-packet one-way delay: 617.176 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 1.53 Mbit/s
95th percentile per-packet one-way delay: 617.176 ms
Loss rate: 0.73%

Run 1: Report of TCP BBR — Data Link

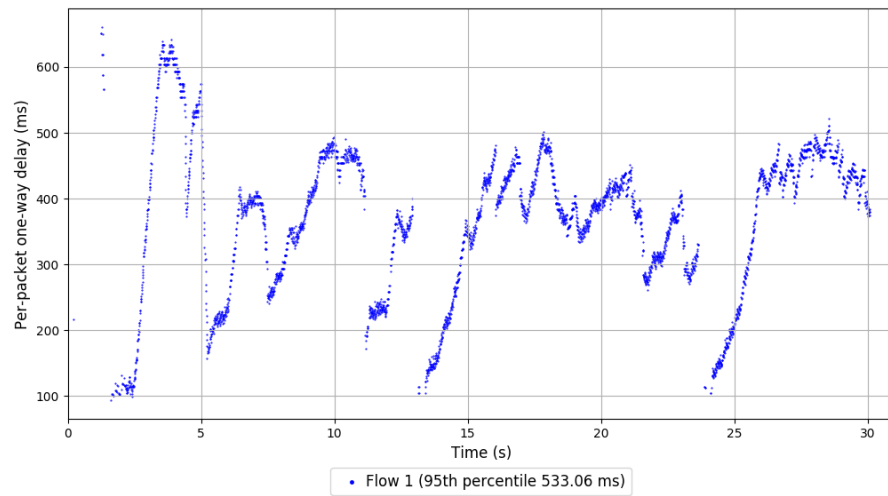
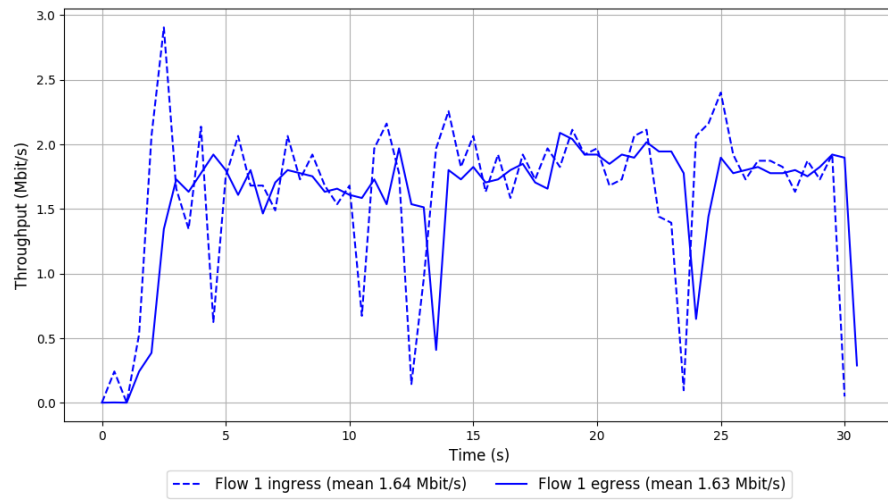


Run 2: Statistics of TCP BBR

Start at: 2018-07-03 09:39:18
End at: 2018-07-03 09:39:48
Local clock offset: -2.326 ms
Remote clock offset: 17.003 ms

Below is generated by plot.py at 2018-07-03 10:09:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.63 Mbit/s
95th percentile per-packet one-way delay: 533.061 ms
Loss rate: 1.29%
-- Flow 1:
Average throughput: 1.63 Mbit/s
95th percentile per-packet one-way delay: 533.061 ms
Loss rate: 1.29%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-07-03 09:58:25

End at: 2018-07-03 09:58:55

Local clock offset: -1.867 ms

Remote clock offset: 12.301 ms

Below is generated by plot.py at 2018-07-03 10:09:12

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.65 Mbit/s

95th percentile per-packet one-way delay: 590.899 ms

Loss rate: 1.25%

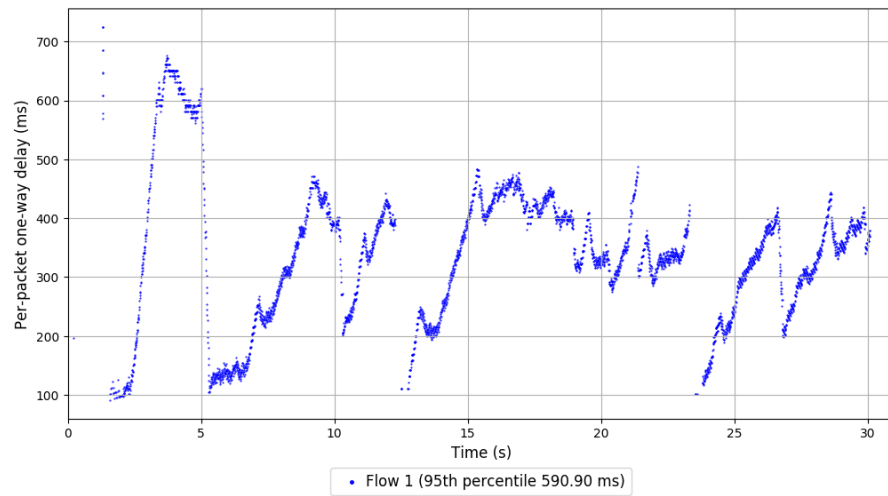
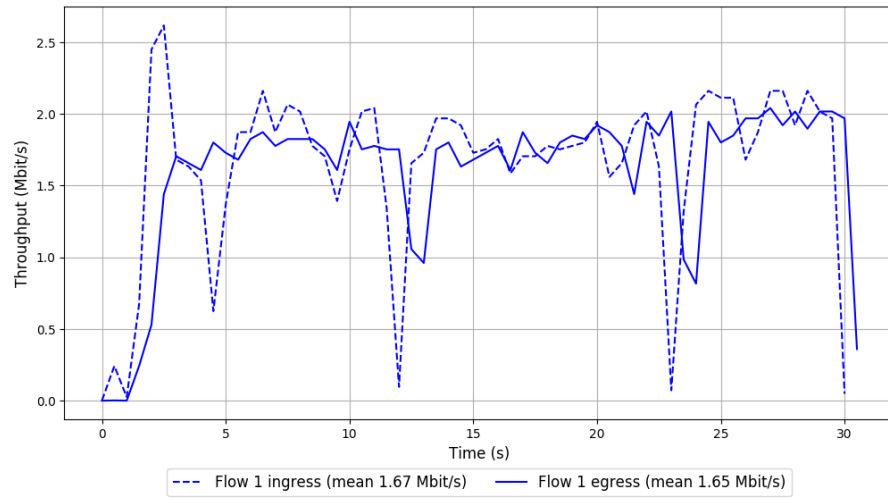
-- Flow 1:

Average throughput: 1.65 Mbit/s

95th percentile per-packet one-way delay: 590.899 ms

Loss rate: 1.25%

Run 3: Report of TCP BBR — Data Link

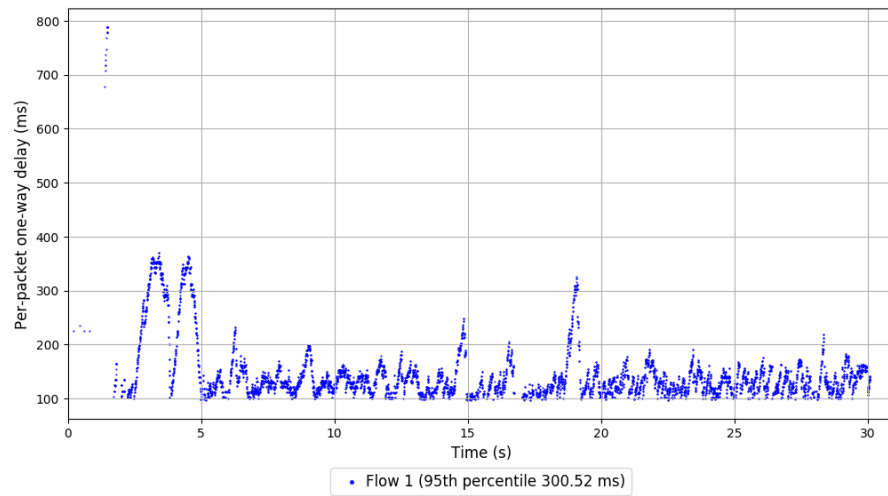
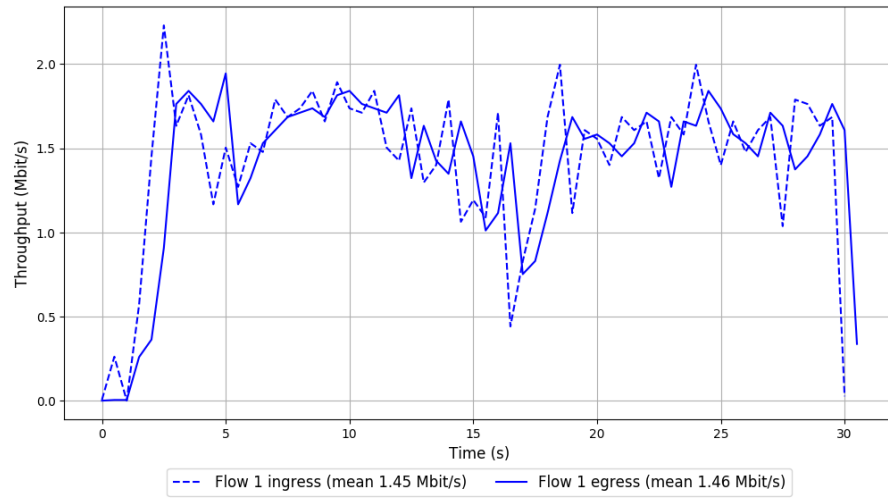


Run 1: Statistics of Copa

Start at: 2018-07-03 09:19:03
End at: 2018-07-03 09:19:33
Local clock offset: -1.815 ms
Remote clock offset: 18.823 ms

Below is generated by plot.py at 2018-07-03 10:09:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.46 Mbit/s
95th percentile per-packet one-way delay: 300.518 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 1.46 Mbit/s
95th percentile per-packet one-way delay: 300.518 ms
Loss rate: 0.24%

Run 1: Report of Copa — Data Link

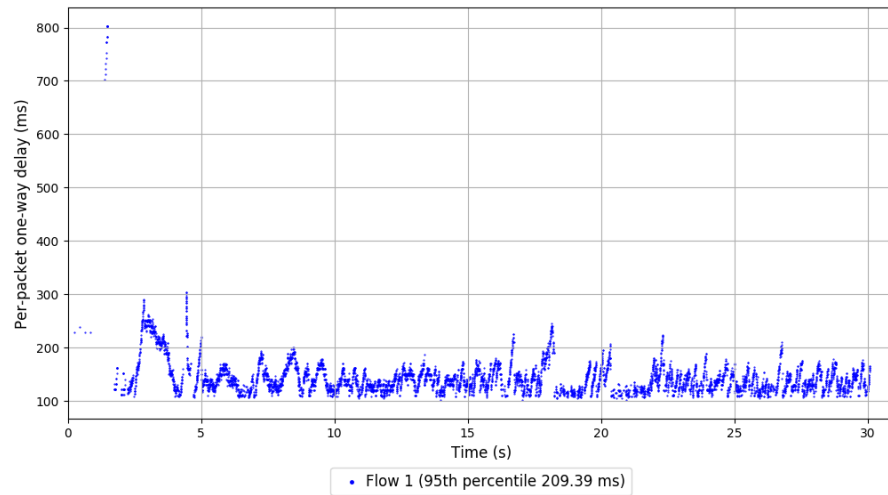
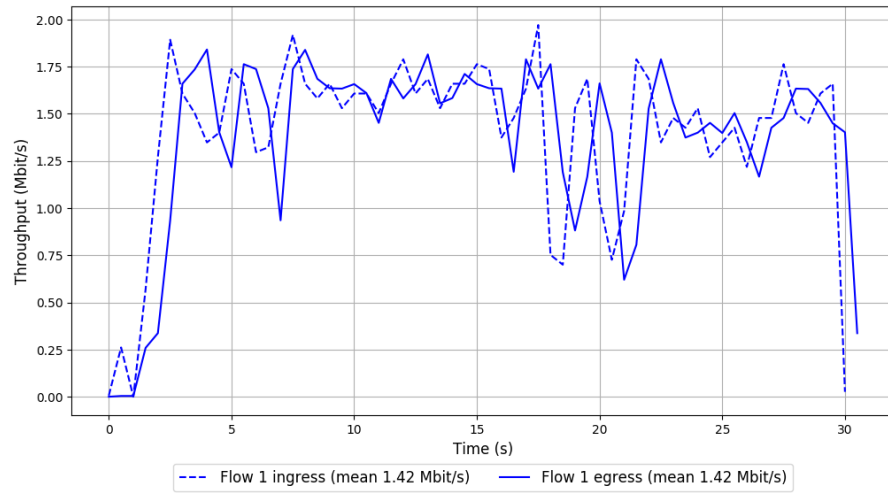


Run 2: Statistics of Copa

Start at: 2018-07-03 09:38:10
End at: 2018-07-03 09:38:40
Local clock offset: -2.476 ms
Remote clock offset: 20.801 ms

Below is generated by plot.py at 2018-07-03 10:09:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.42 Mbit/s
95th percentile per-packet one-way delay: 209.386 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 1.42 Mbit/s
95th percentile per-packet one-way delay: 209.386 ms
Loss rate: 0.46%

Run 2: Report of Copa — Data Link

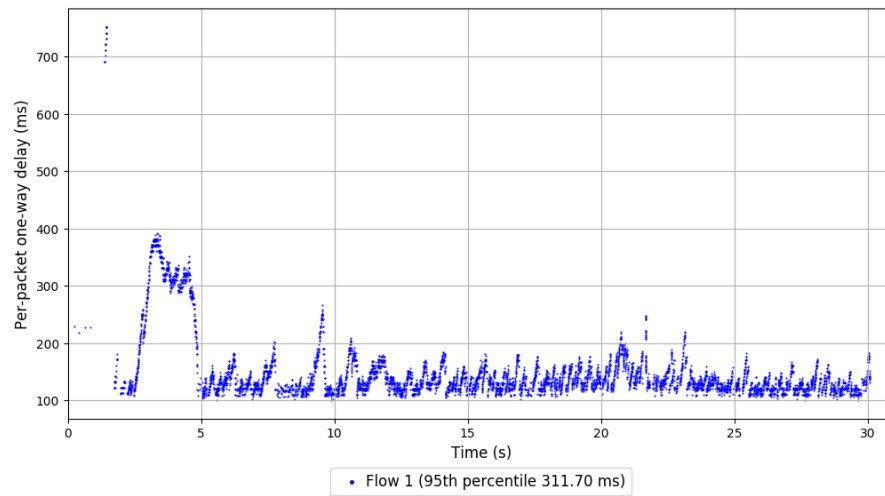
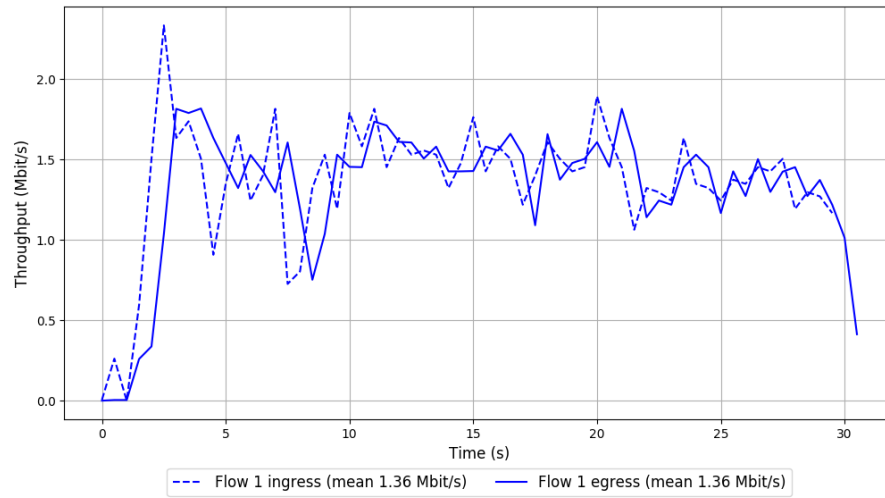


Run 3: Statistics of Copa

Start at: 2018-07-03 09:57:17
End at: 2018-07-03 09:57:47
Local clock offset: -1.888 ms
Remote clock offset: 16.461 ms

Below is generated by plot.py at 2018-07-03 10:09:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 311.699 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 311.699 ms
Loss rate: 0.07%

Run 3: Report of Copa — Data Link

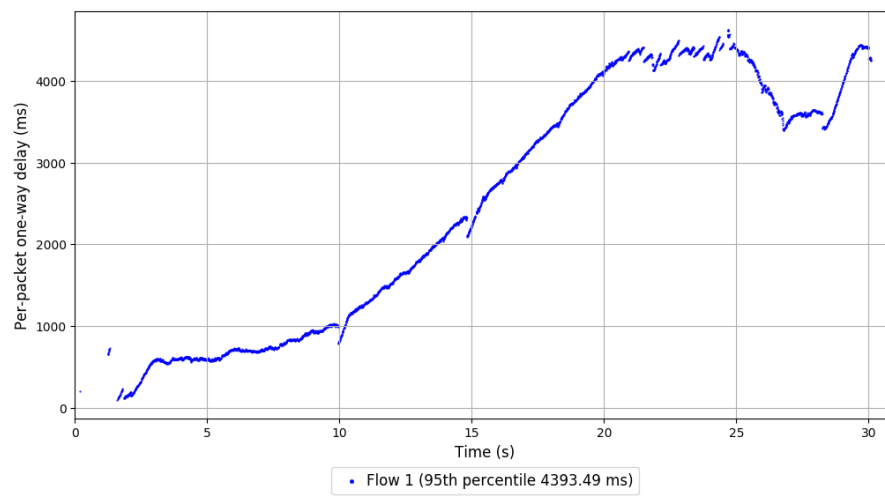
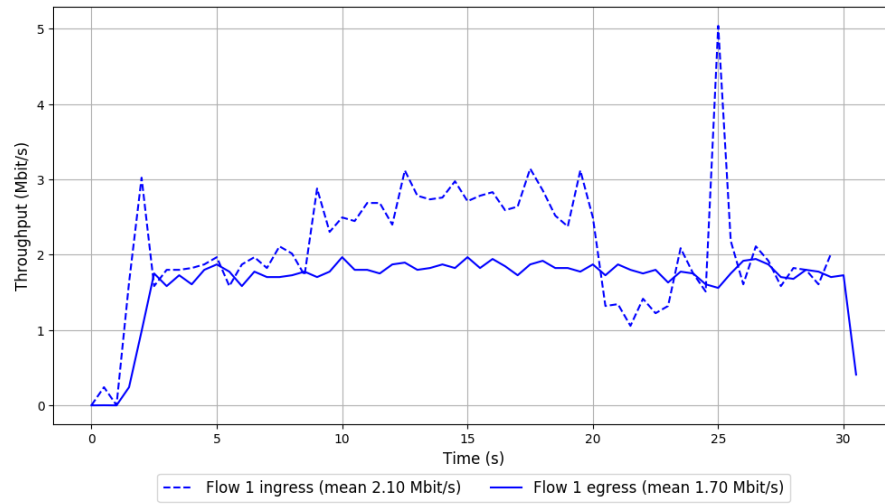


Run 1: Statistics of TCP Cubic

Start at: 2018-07-03 09:23:33
End at: 2018-07-03 09:24:03
Local clock offset: -6.747 ms
Remote clock offset: 19.177 ms

Below is generated by plot.py at 2018-07-03 10:09:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.70 Mbit/s
95th percentile per-packet one-way delay: 4393.486 ms
Loss rate: 19.42%
-- Flow 1:
Average throughput: 1.70 Mbit/s
95th percentile per-packet one-way delay: 4393.486 ms
Loss rate: 19.42%

Run 1: Report of TCP Cubic — Data Link

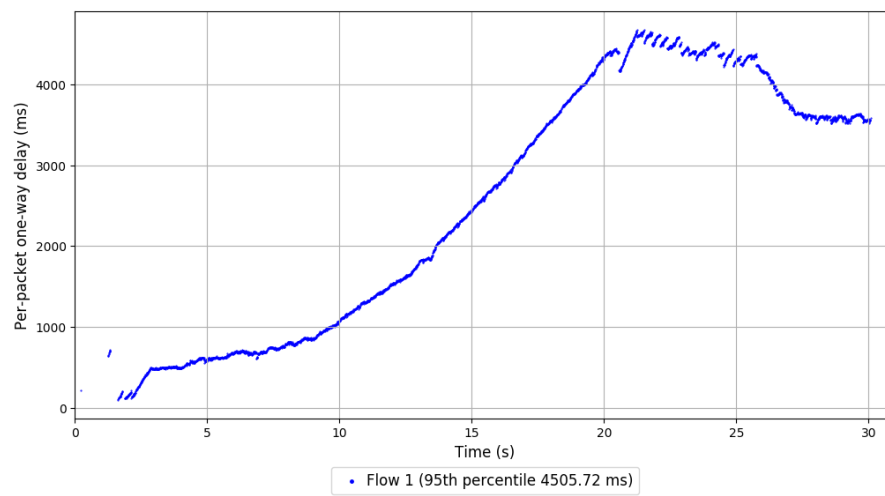
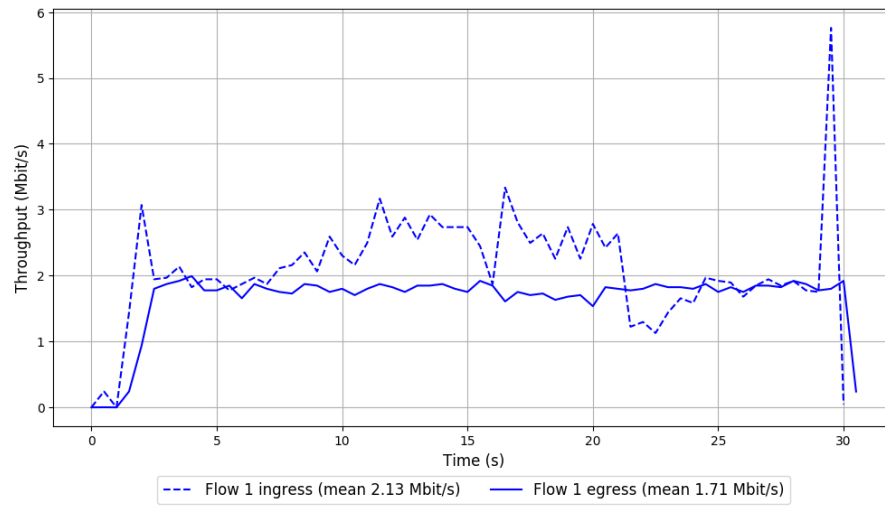


Run 2: Statistics of TCP Cubic

Start at: 2018-07-03 09:42:40
End at: 2018-07-03 09:43:10
Local clock offset: -2.236 ms
Remote clock offset: 16.271 ms

Below is generated by plot.py at 2018-07-03 10:09:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 4505.717 ms
Loss rate: 20.13%
-- Flow 1:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 4505.717 ms
Loss rate: 20.13%

Run 2: Report of TCP Cubic — Data Link

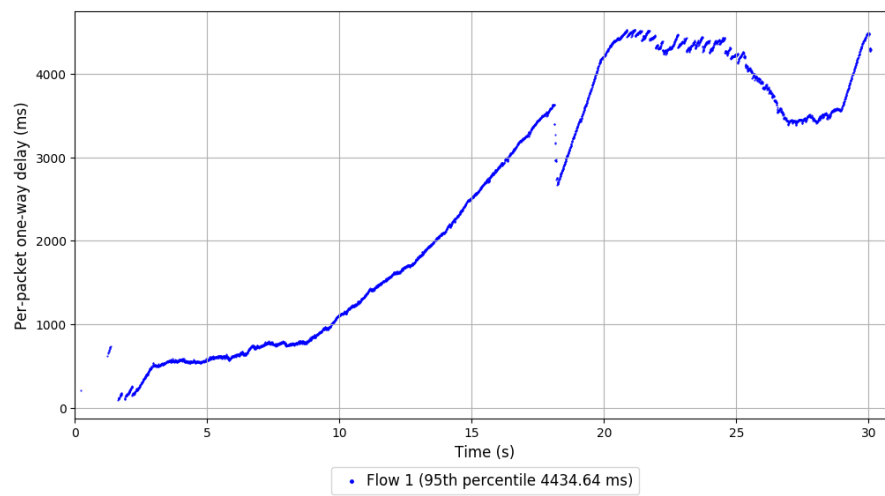
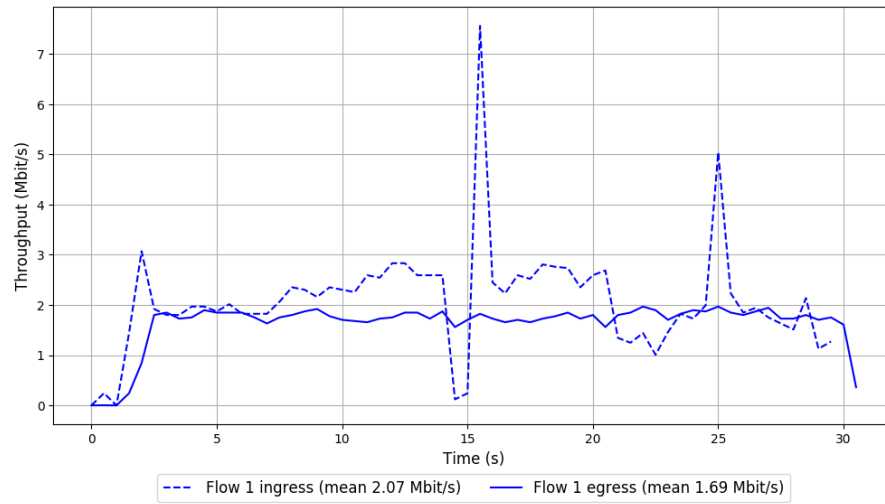


Run 3: Statistics of TCP Cubic

Start at: 2018-07-03 10:01:47
End at: 2018-07-03 10:02:17
Local clock offset: -1.812 ms
Remote clock offset: 11.915 ms

Below is generated by plot.py at 2018-07-03 10:09:16
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 4434.638 ms
Loss rate: 18.50%
-- Flow 1:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 4434.638 ms
Loss rate: 18.50%

Run 3: Report of TCP Cubic — Data Link

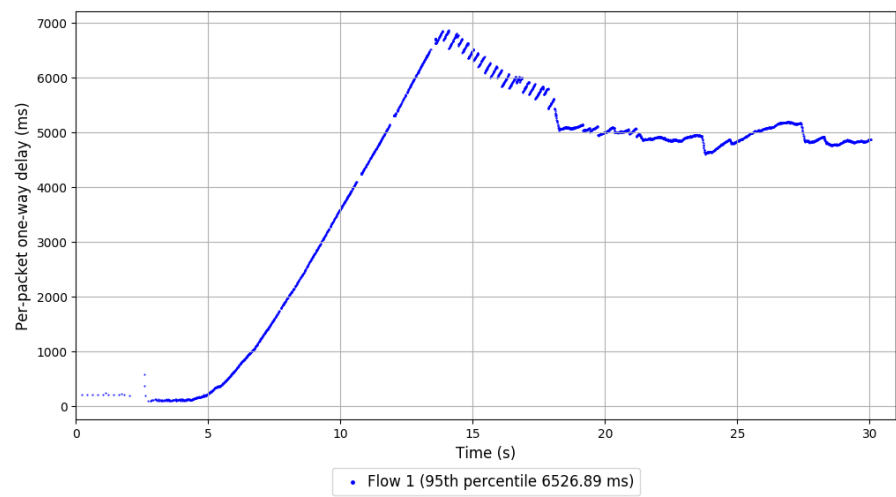
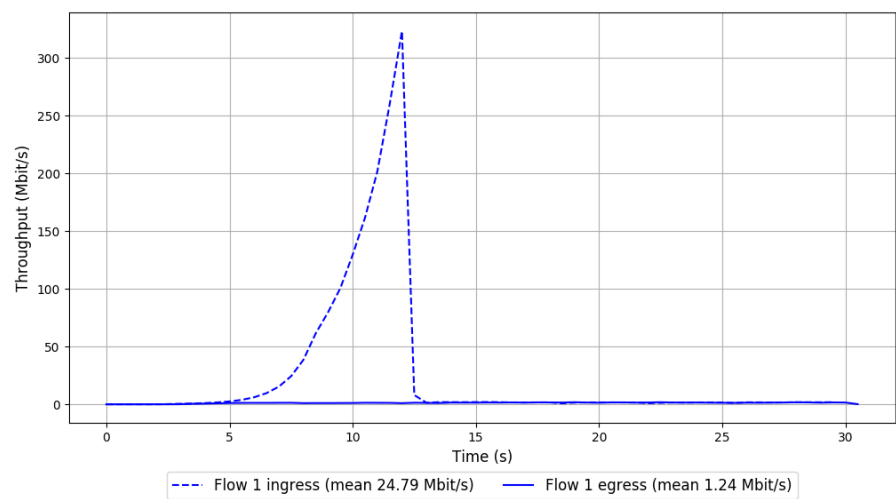


Run 1: Statistics of FillP

Start at: 2018-07-03 09:30:18
End at: 2018-07-03 09:30:48
Local clock offset: -5.248 ms
Remote clock offset: 14.949 ms

Below is generated by plot.py at 2018-07-03 10:09:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 6526.885 ms
Loss rate: 95.02%
-- Flow 1:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 6526.885 ms
Loss rate: 95.02%

Run 1: Report of FillP — Data Link

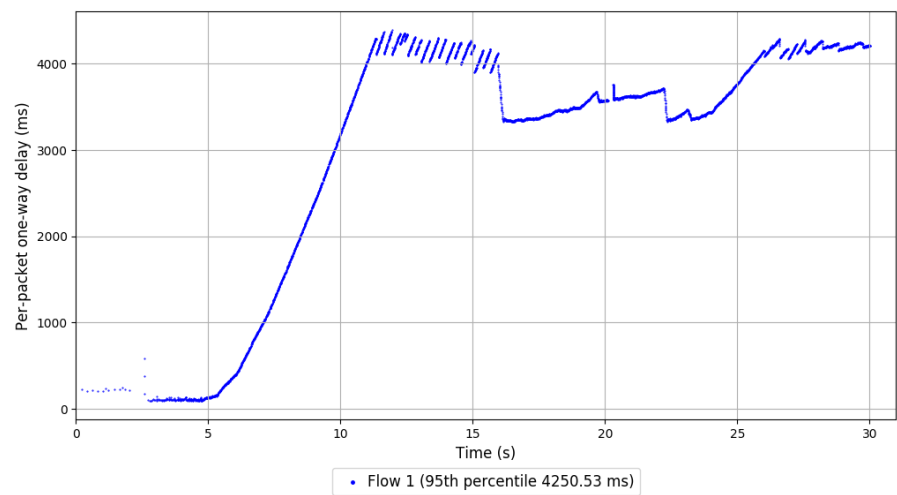
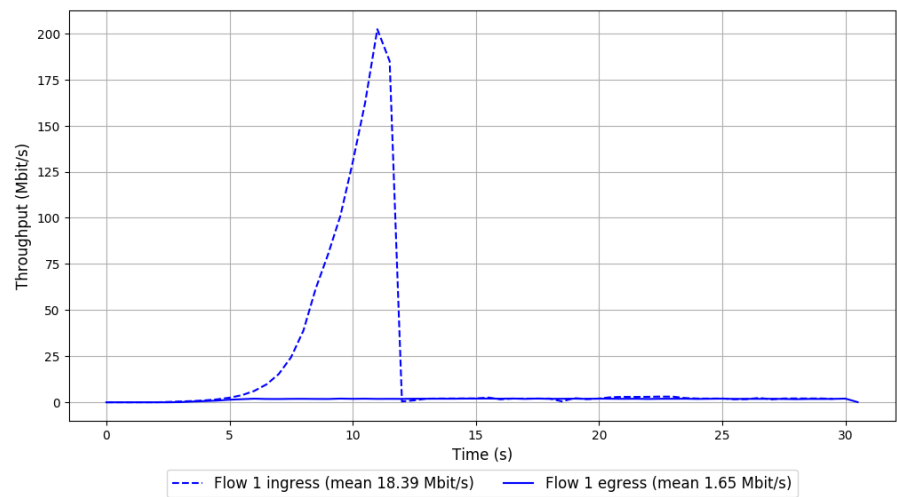


Run 2: Statistics of FillP

Start at: 2018-07-03 09:49:25
End at: 2018-07-03 09:49:55
Local clock offset: -2.015 ms
Remote clock offset: 14.849 ms

Below is generated by plot.py at 2018-07-03 10:09:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.65 Mbit/s
95th percentile per-packet one-way delay: 4250.531 ms
Loss rate: 91.07%
-- Flow 1:
Average throughput: 1.65 Mbit/s
95th percentile per-packet one-way delay: 4250.531 ms
Loss rate: 91.07%

Run 2: Report of FillP — Data Link

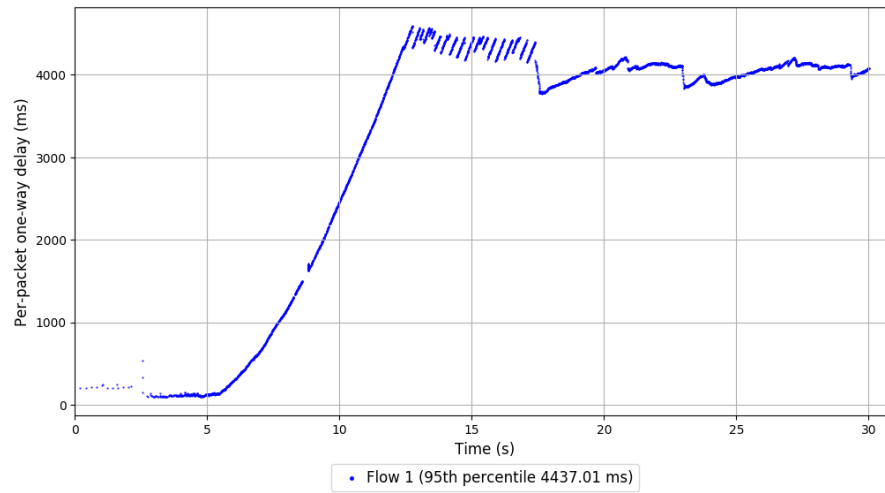
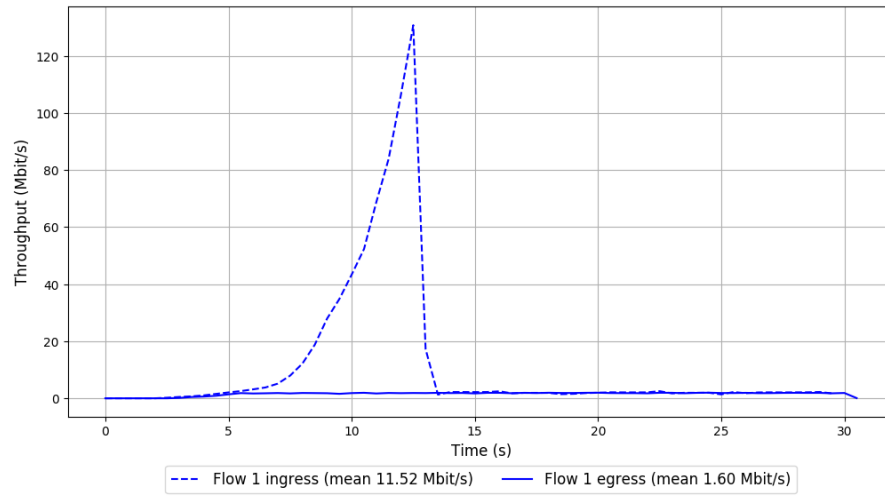


Run 3: Statistics of FillP

Start at: 2018-07-03 10:08:31
End at: 2018-07-03 10:09:01
Local clock offset: -1.69 ms
Remote clock offset: 11.259 ms

Below is generated by plot.py at 2018-07-03 10:09:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.60 Mbit/s
95th percentile per-packet one-way delay: 4437.013 ms
Loss rate: 86.14%
-- Flow 1:
Average throughput: 1.60 Mbit/s
95th percentile per-packet one-way delay: 4437.013 ms
Loss rate: 86.14%

Run 3: Report of FillP — Data Link

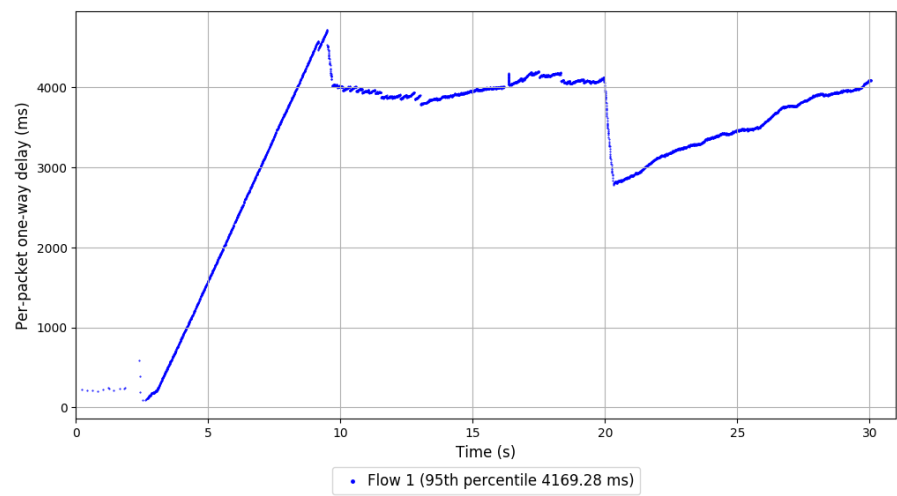
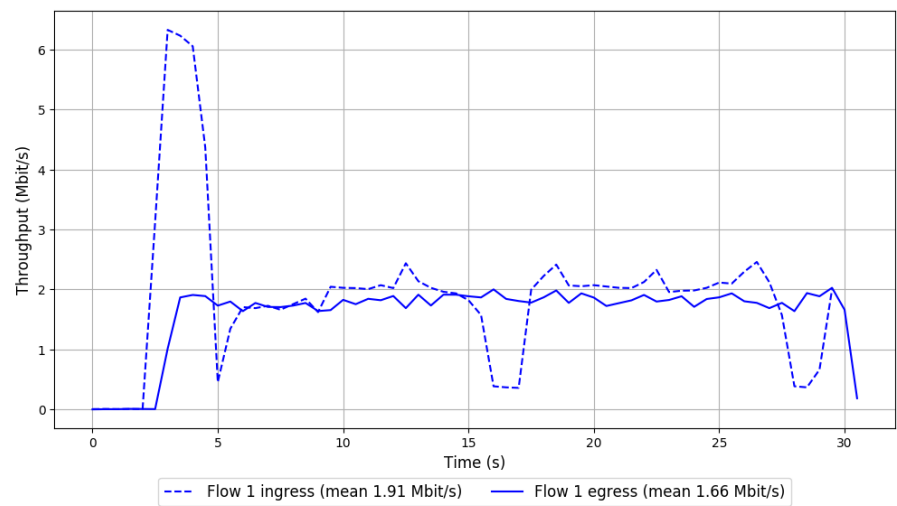


Run 1: Statistics of FillP-Sheep

Start at: 2018-07-03 09:17:55
End at: 2018-07-03 09:18:25
Local clock offset: -2.184 ms
Remote clock offset: 14.747 ms

Below is generated by plot.py at 2018-07-03 10:09:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.66 Mbit/s
95th percentile per-packet one-way delay: 4169.276 ms
Loss rate: 13.37%
-- Flow 1:
Average throughput: 1.66 Mbit/s
95th percentile per-packet one-way delay: 4169.276 ms
Loss rate: 13.37%

Run 1: Report of FillP-Sheep — Data Link

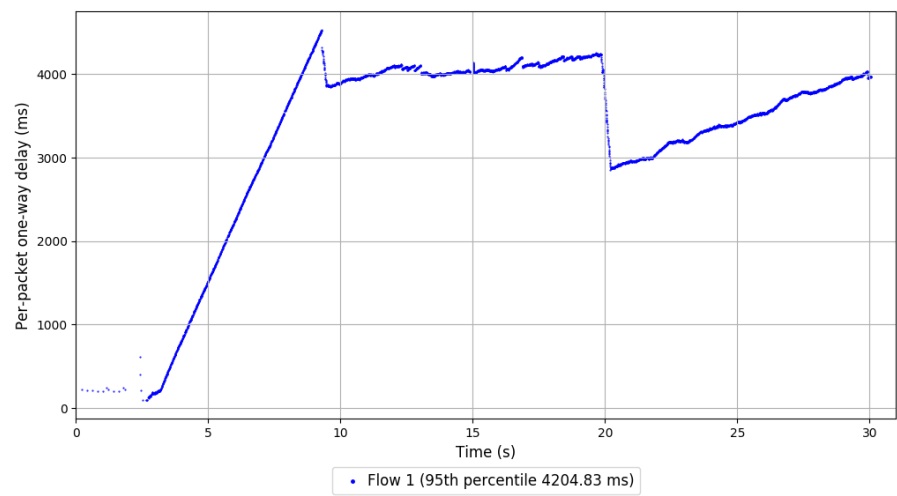
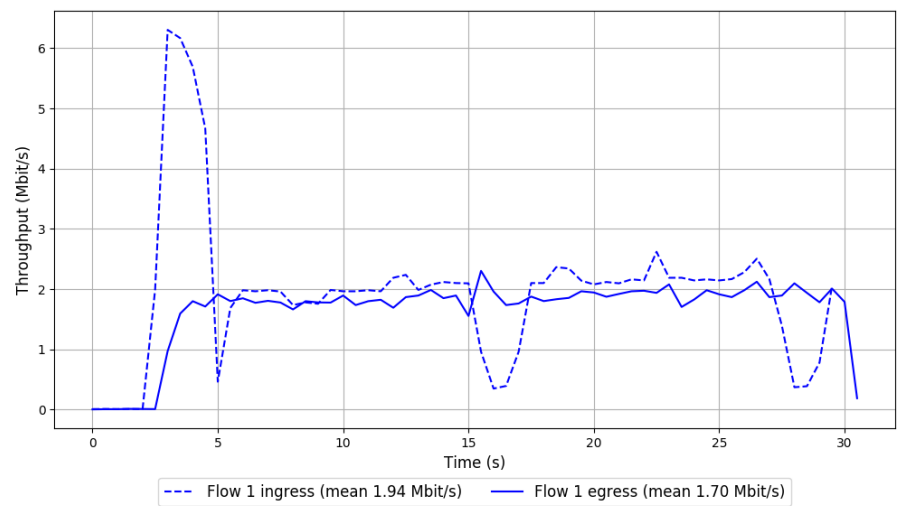


Run 2: Statistics of FillP-Sheep

Start at: 2018-07-03 09:37:03
End at: 2018-07-03 09:37:33
Local clock offset: -2.61 ms
Remote clock offset: 16.724 ms

Below is generated by plot.py at 2018-07-03 10:09:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.70 Mbit/s
95th percentile per-packet one-way delay: 4204.833 ms
Loss rate: 12.81%
-- Flow 1:
Average throughput: 1.70 Mbit/s
95th percentile per-packet one-way delay: 4204.833 ms
Loss rate: 12.81%

Run 2: Report of FillP-Sheep — Data Link

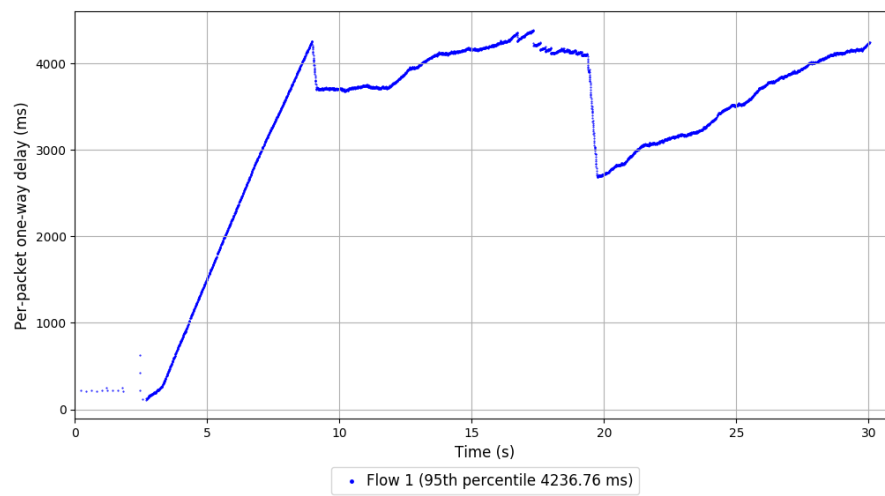
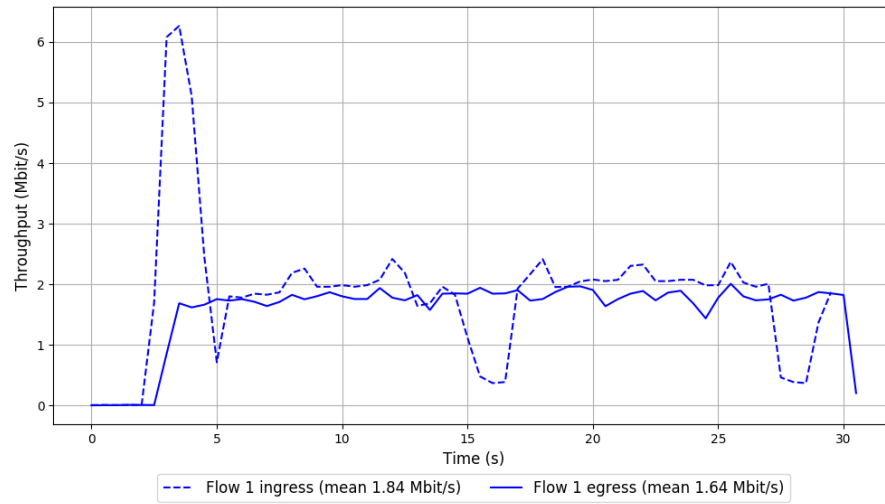


Run 3: Statistics of FillP-Sheep

Start at: 2018-07-03 09:56:10
End at: 2018-07-03 09:56:40
Local clock offset: -1.912 ms
Remote clock offset: 16.635 ms

Below is generated by plot.py at 2018-07-03 10:09:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.64 Mbit/s
95th percentile per-packet one-way delay: 4236.762 ms
Loss rate: 11.37%
-- Flow 1:
Average throughput: 1.64 Mbit/s
95th percentile per-packet one-way delay: 4236.762 ms
Loss rate: 11.37%

Run 3: Report of FillP-Sheep — Data Link

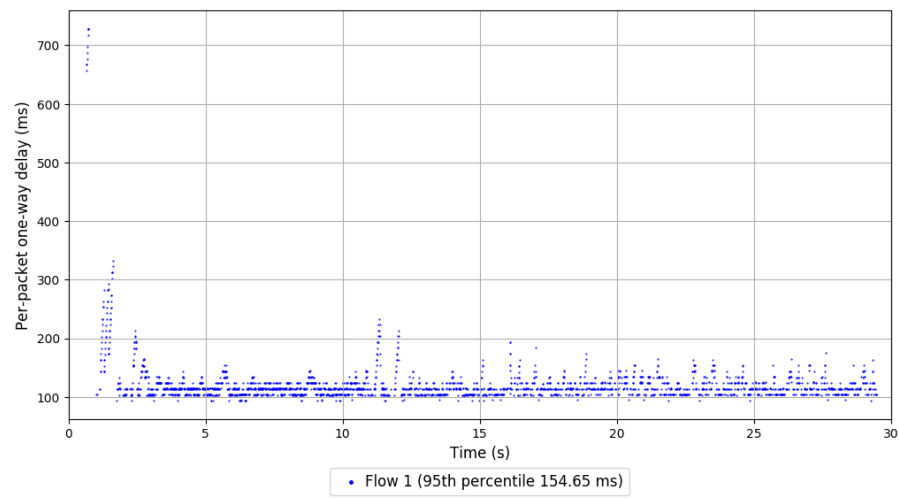
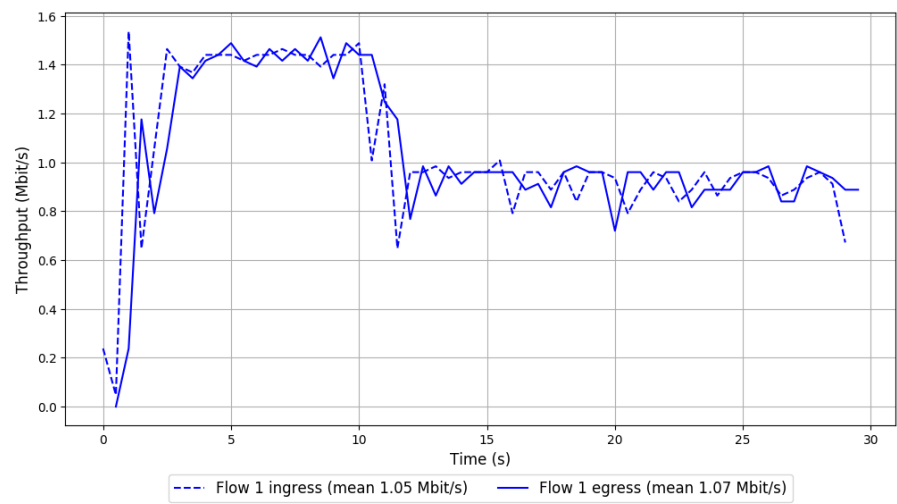


Run 1: Statistics of Indigo

Start at: 2018-07-03 09:29:10
End at: 2018-07-03 09:29:40
Local clock offset: -6.229 ms
Remote clock offset: 15.793 ms

Below is generated by plot.py at 2018-07-03 10:09:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.07 Mbit/s
95th percentile per-packet one-way delay: 154.654 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 1.07 Mbit/s
95th percentile per-packet one-way delay: 154.654 ms
Loss rate: 0.04%

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2018-07-03 09:48:17

End at: 2018-07-03 09:48:47

Local clock offset: -2.038 ms

Remote clock offset: 18.14 ms

Below is generated by plot.py at 2018-07-03 10:09:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.28 Mbit/s

95th percentile per-packet one-way delay: 154.112 ms

Loss rate: 0.16%

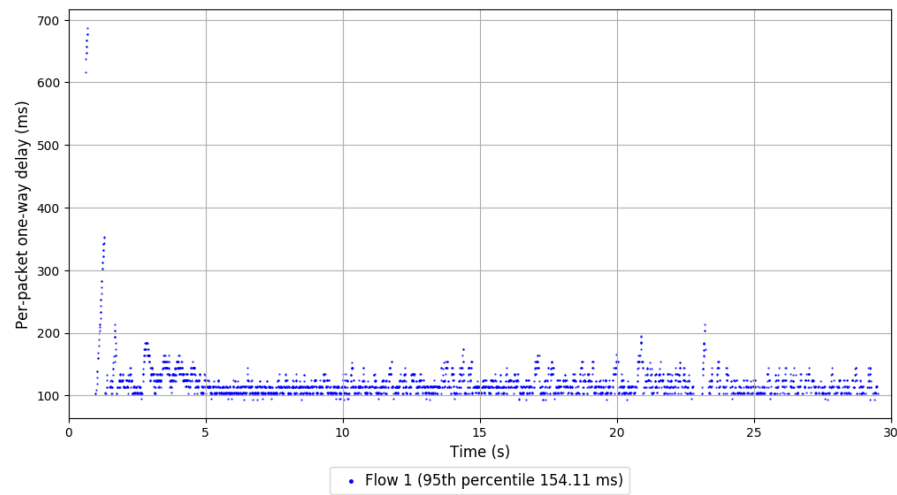
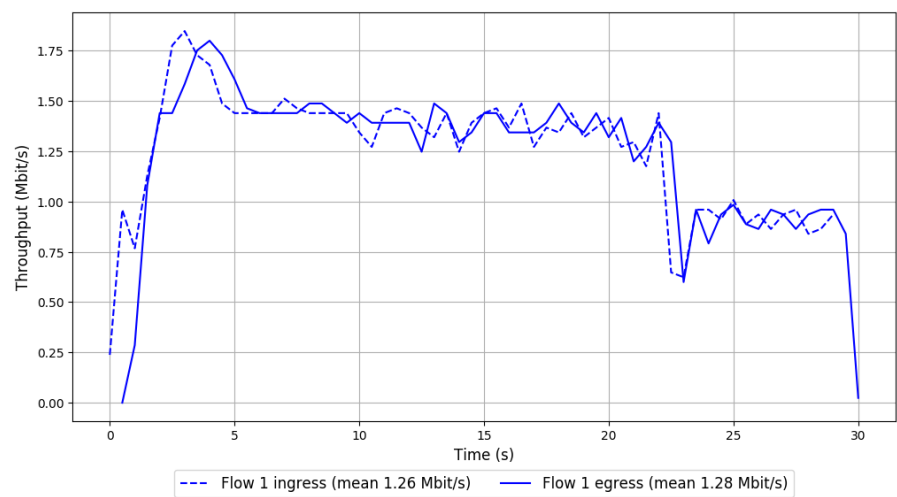
-- Flow 1:

Average throughput: 1.28 Mbit/s

95th percentile per-packet one-way delay: 154.112 ms

Loss rate: 0.16%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2018-07-03 10:07:24

End at: 2018-07-03 10:07:54

Local clock offset: -1.74 ms

Remote clock offset: 10.35 ms

Below is generated by plot.py at 2018-07-03 10:09:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.32 Mbit/s

95th percentile per-packet one-way delay: 158.557 ms

Loss rate: 0.09%

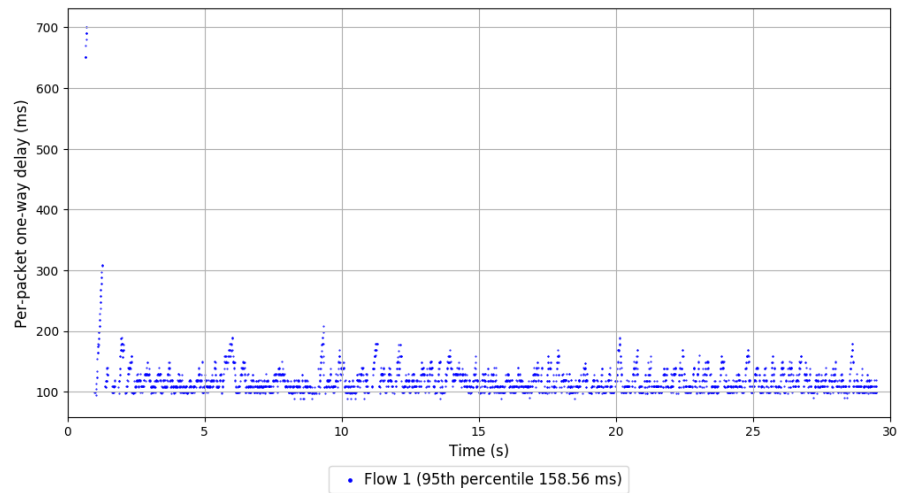
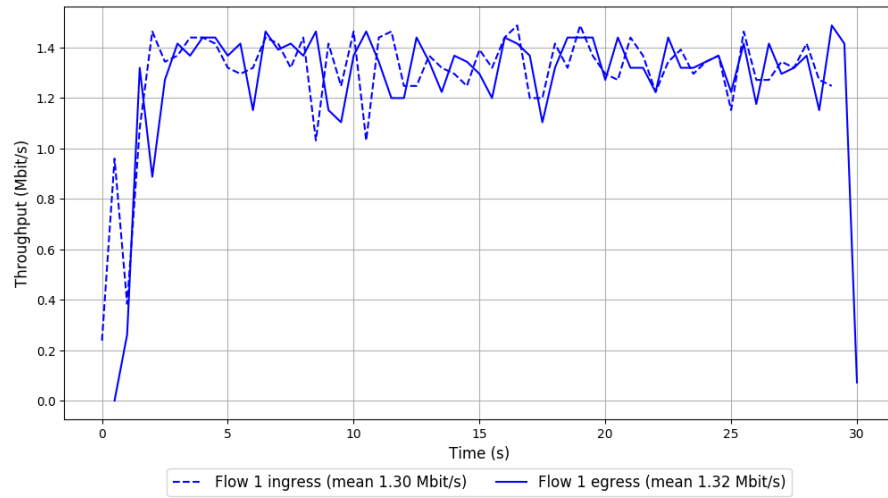
-- Flow 1:

Average throughput: 1.32 Mbit/s

95th percentile per-packet one-way delay: 158.557 ms

Loss rate: 0.09%

Run 3: Report of Indigo — Data Link

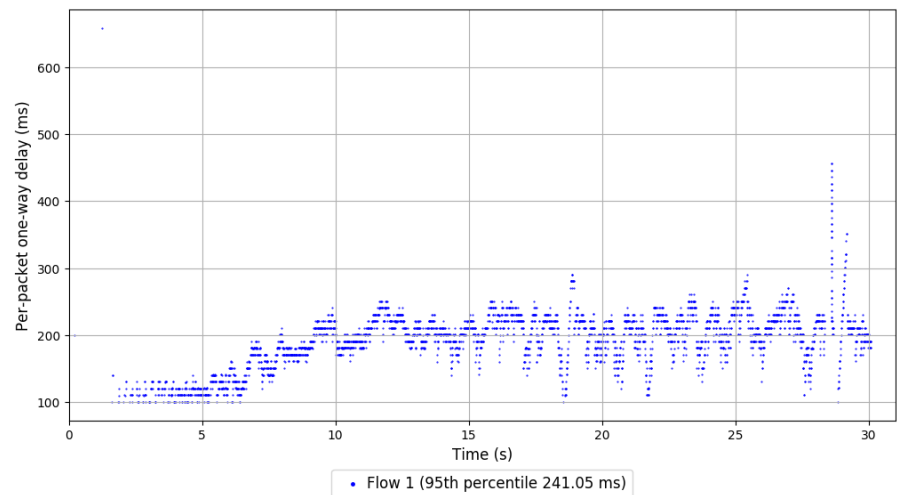
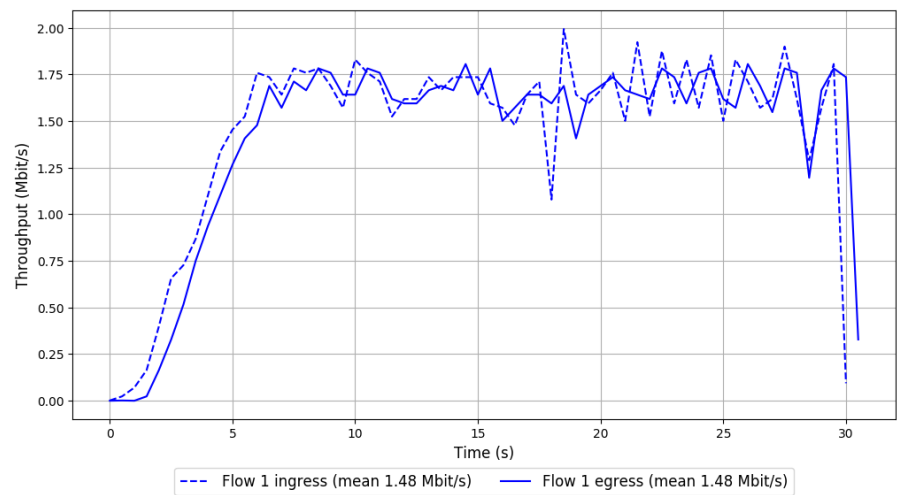


```
Run 1: Statistics of LEDBAT

Start at: 2018-07-03 09:25:48
End at: 2018-07-03 09:26:18
Local clock offset: -7.569 ms
Remote clock offset: 19.584 ms

# Below is generated by plot.py at 2018-07-03 10:09:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.48 Mbit/s
95th percentile per-packet one-way delay: 241.047 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 1.48 Mbit/s
95th percentile per-packet one-way delay: 241.047 ms
Loss rate: 0.48%
```

Run 1: Report of LEDBAT — Data Link

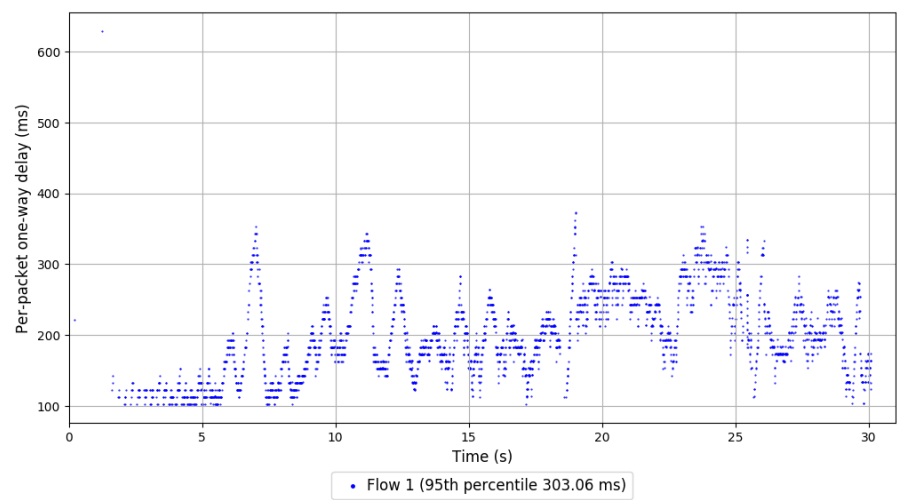
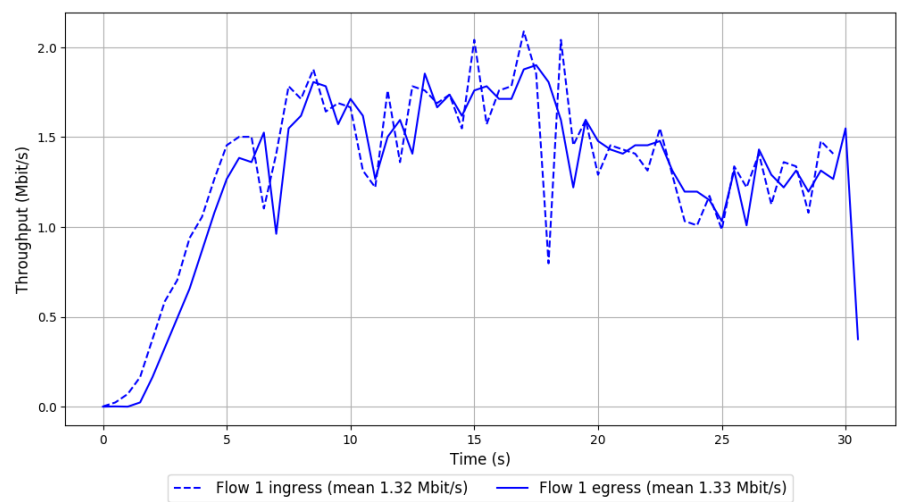


Run 2: Statistics of LEDBAT

Start at: 2018-07-03 09:44:55
End at: 2018-07-03 09:45:25
Local clock offset: -2.095 ms
Remote clock offset: 21.497 ms

Below is generated by plot.py at 2018-07-03 10:09:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 303.061 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 303.061 ms
Loss rate: 0.15%

Run 2: Report of LEDBAT — Data Link

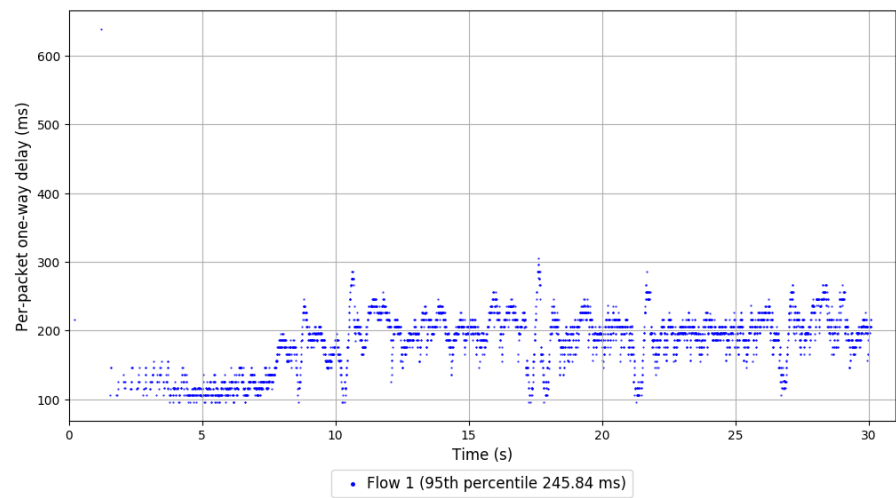
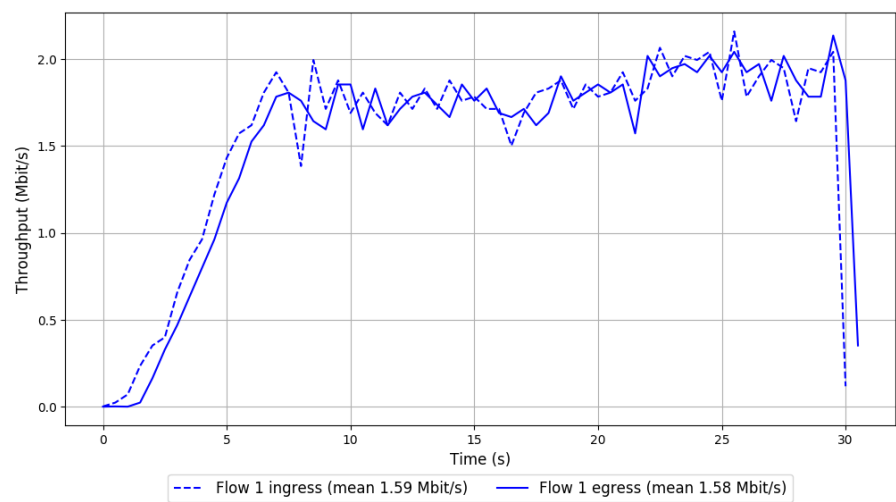


Run 3: Statistics of LEDBAT

Start at: 2018-07-03 10:04:02
End at: 2018-07-03 10:04:32
Local clock offset: -1.841 ms
Remote clock offset: 10.564 ms

Below is generated by plot.py at 2018-07-03 10:09:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.58 Mbit/s
95th percentile per-packet one-way delay: 245.839 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 1.58 Mbit/s
95th percentile per-packet one-way delay: 245.839 ms
Loss rate: 0.59%

Run 3: Report of LEDBAT — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2018-07-03 09:28:03

End at: 2018-07-03 09:28:33

Local clock offset: -7.497 ms

Remote clock offset: 15.747 ms

Below is generated by plot.py at 2018-07-03 10:09:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.60 Mbit/s

95th percentile per-packet one-way delay: 4642.520 ms

Loss rate: 67.80%

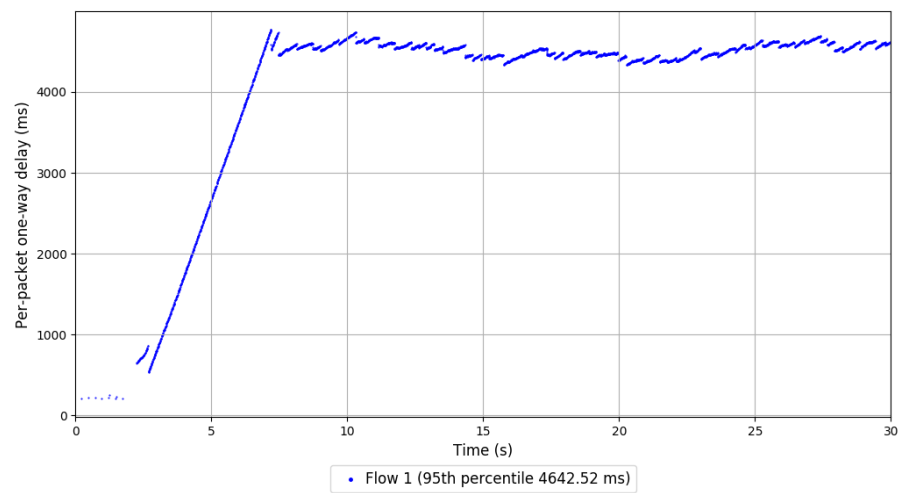
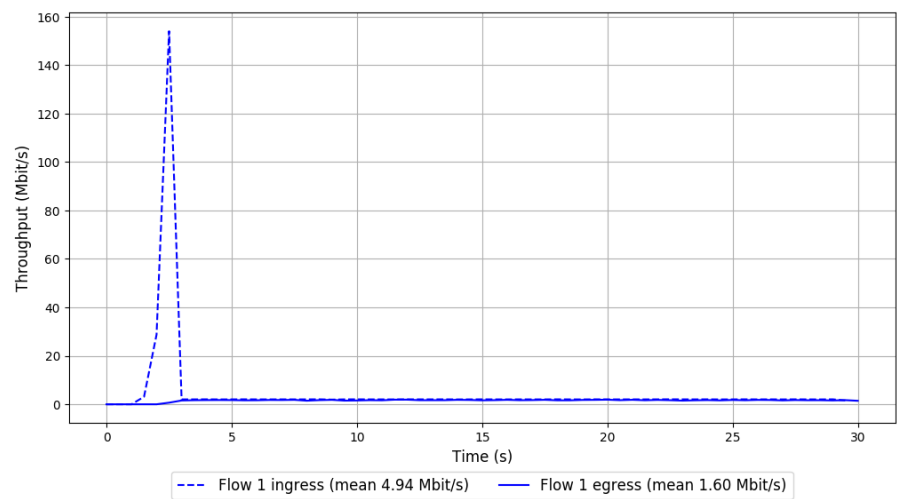
-- Flow 1:

Average throughput: 1.60 Mbit/s

95th percentile per-packet one-way delay: 4642.520 ms

Loss rate: 67.80%

Run 1: Report of PCC-Allegro — Data Link

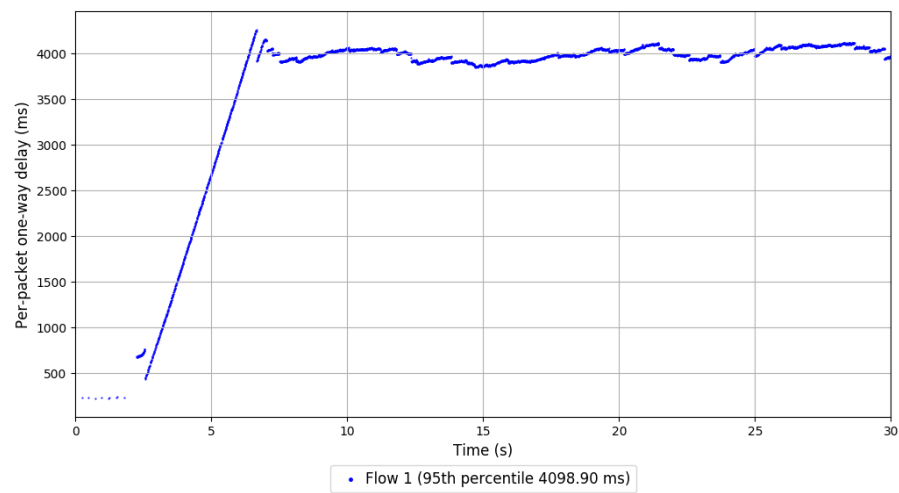
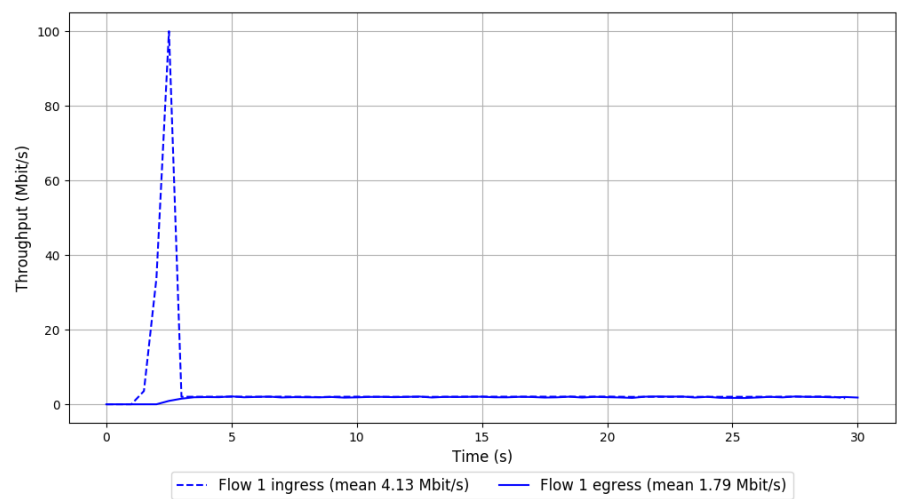


Run 2: Statistics of PCC-Allegro

Start at: 2018-07-03 09:47:10
End at: 2018-07-03 09:47:40
Local clock offset: -2.077 ms
Remote clock offset: 16.056 ms

Below is generated by plot.py at 2018-07-03 10:09:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.79 Mbit/s
95th percentile per-packet one-way delay: 4098.899 ms
Loss rate: 56.85%
-- Flow 1:
Average throughput: 1.79 Mbit/s
95th percentile per-packet one-way delay: 4098.899 ms
Loss rate: 56.85%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-07-03 10:06:17

End at: 2018-07-03 10:06:47

Local clock offset: -1.756 ms

Remote clock offset: 10.407 ms

Below is generated by plot.py at 2018-07-03 10:09:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.66 Mbit/s

95th percentile per-packet one-way delay: 4335.431 ms

Loss rate: 63.85%

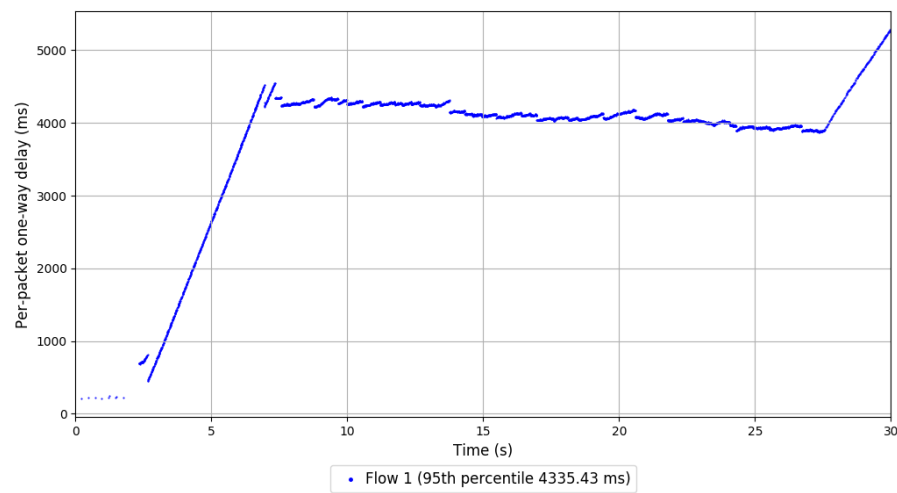
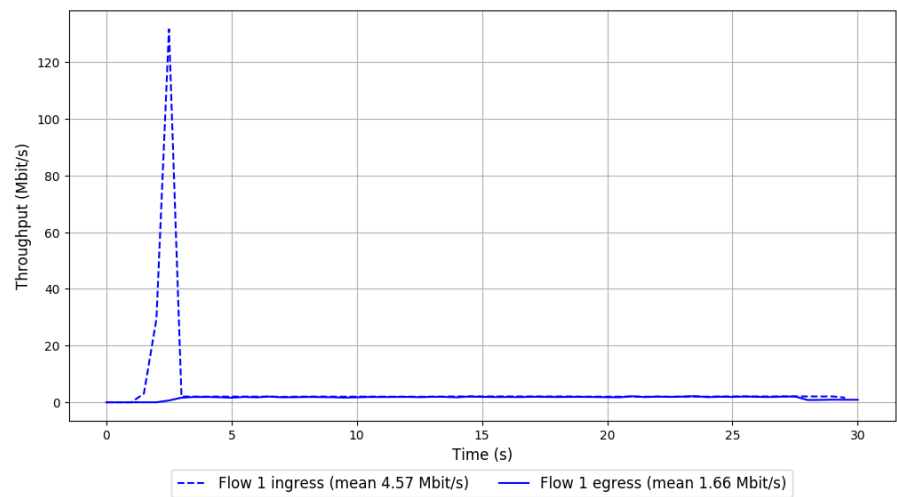
-- Flow 1:

Average throughput: 1.66 Mbit/s

95th percentile per-packet one-way delay: 4335.431 ms

Loss rate: 63.85%

Run 3: Report of PCC-Allegro — Data Link

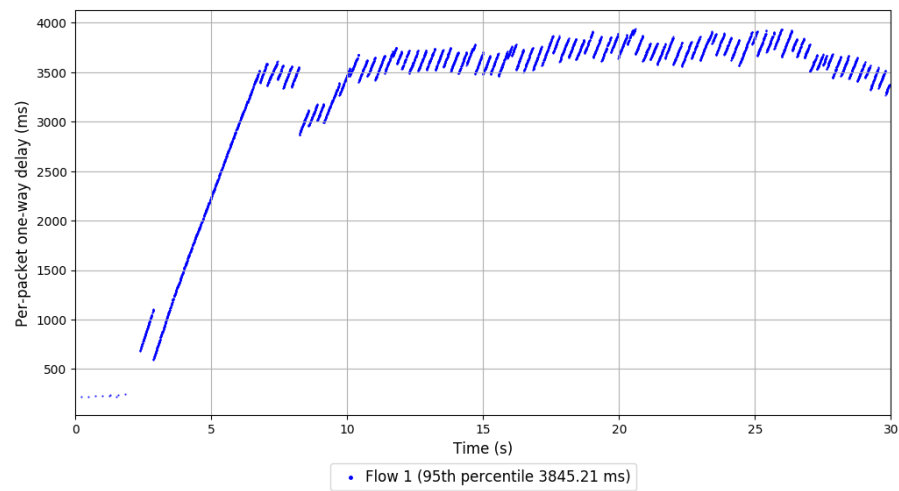
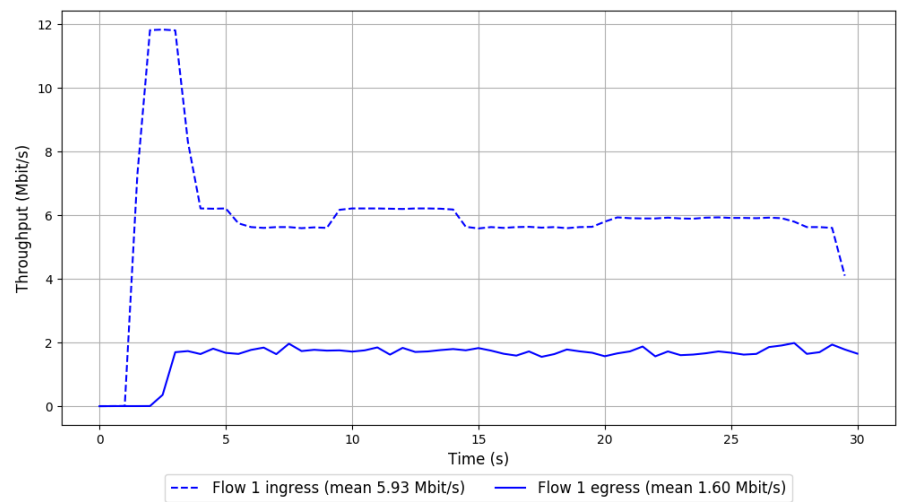


Run 1: Statistics of PCC-Expr

Start at: 2018-07-03 09:13:26
End at: 2018-07-03 09:13:56
Local clock offset: -5.657 ms
Remote clock offset: 13.205 ms

Below is generated by plot.py at 2018-07-03 10:09:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.60 Mbit/s
95th percentile per-packet one-way delay: 3845.207 ms
Loss rate: 73.05%
-- Flow 1:
Average throughput: 1.60 Mbit/s
95th percentile per-packet one-way delay: 3845.207 ms
Loss rate: 73.05%

Run 1: Report of PCC-Expr — Data Link

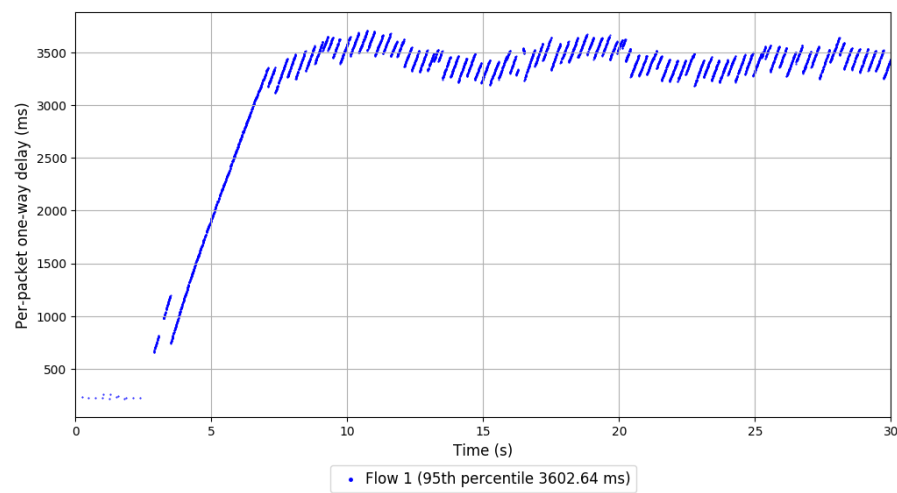
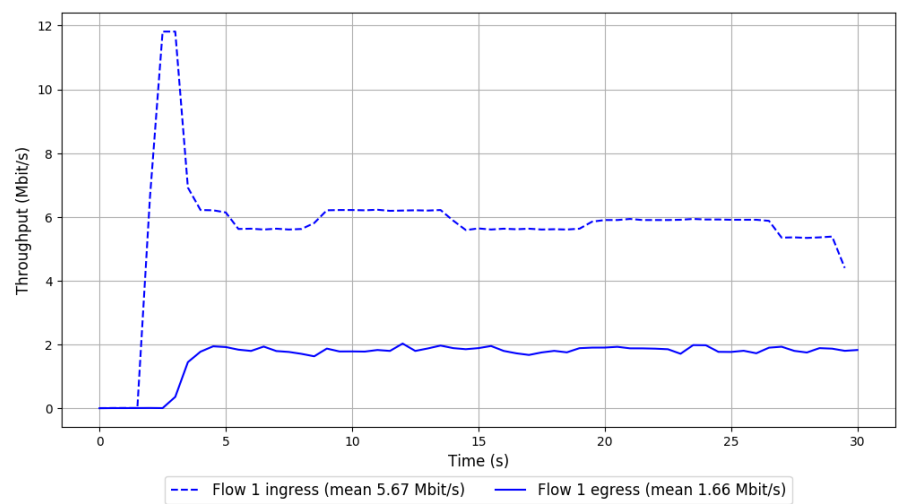


Run 2: Statistics of PCC-Expr

Start at: 2018-07-03 09:32:33
End at: 2018-07-03 09:33:03
Local clock offset: -3.945 ms
Remote clock offset: 20.247 ms

Below is generated by plot.py at 2018-07-03 10:09:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.66 Mbit/s
95th percentile per-packet one-way delay: 3602.645 ms
Loss rate: 70.80%
-- Flow 1:
Average throughput: 1.66 Mbit/s
95th percentile per-packet one-way delay: 3602.645 ms
Loss rate: 70.80%

Run 2: Report of PCC-Expr — Data Link

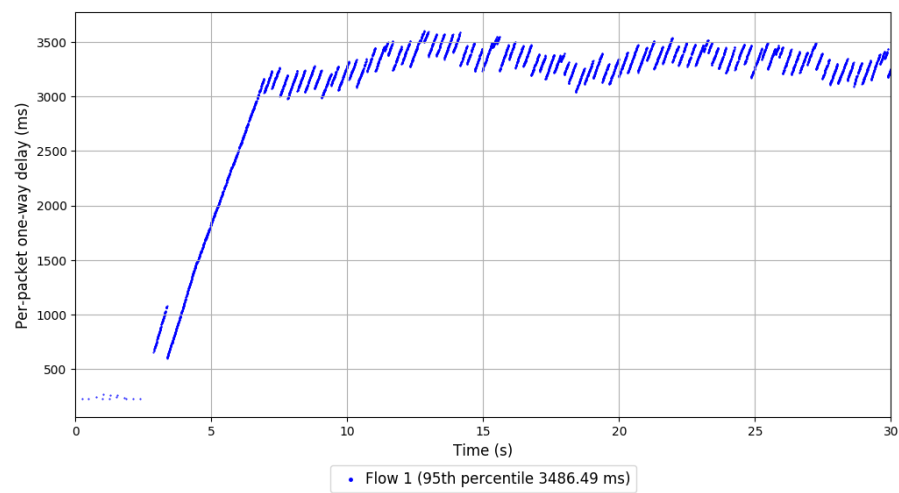
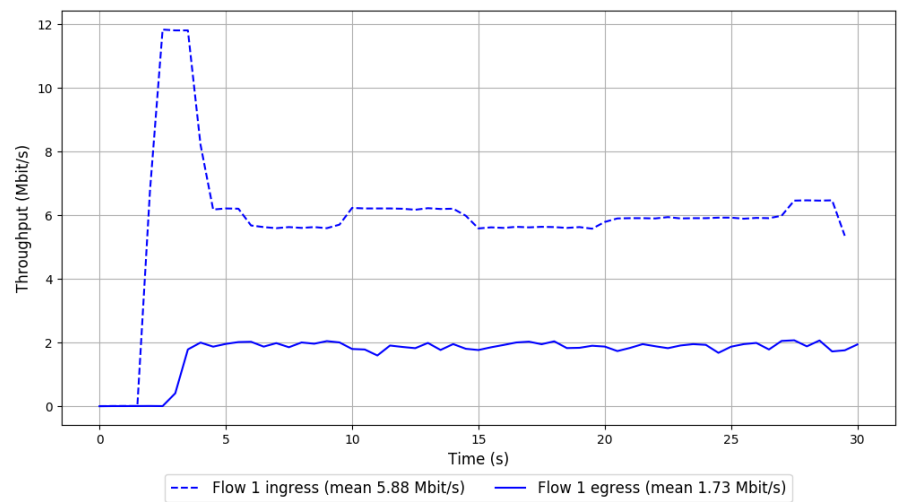


Run 3: Statistics of PCC-Expr

Start at: 2018-07-03 09:51:40
End at: 2018-07-03 09:52:10
Local clock offset: -2.02 ms
Remote clock offset: 17.859 ms

Below is generated by plot.py at 2018-07-03 10:09:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.73 Mbit/s
95th percentile per-packet one-way delay: 3486.495 ms
Loss rate: 70.77%
-- Flow 1:
Average throughput: 1.73 Mbit/s
95th percentile per-packet one-way delay: 3486.495 ms
Loss rate: 70.77%

Run 3: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2018-07-03 09:24:40

End at: 2018-07-03 09:25:11

Local clock offset: -7.286 ms

Remote clock offset: 15.412 ms

Below is generated by plot.py at 2018-07-03 10:09:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.46 Mbit/s

95th percentile per-packet one-way delay: 1186.041 ms

Loss rate: 3.77%

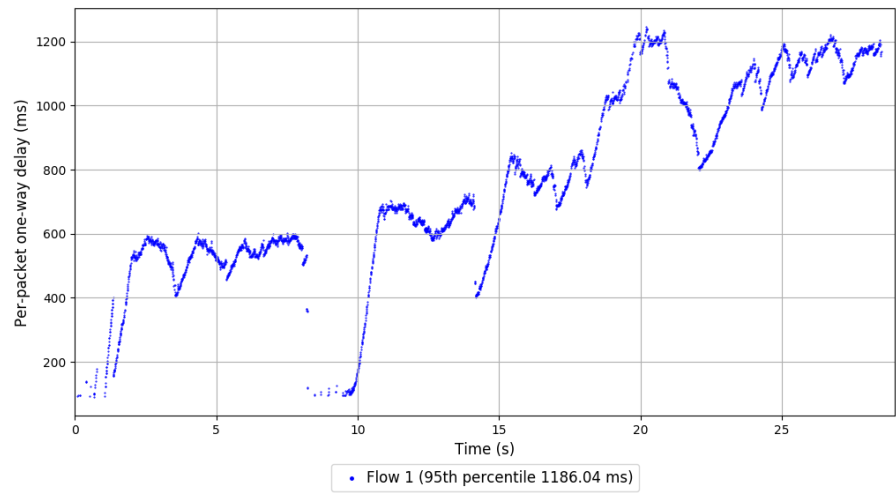
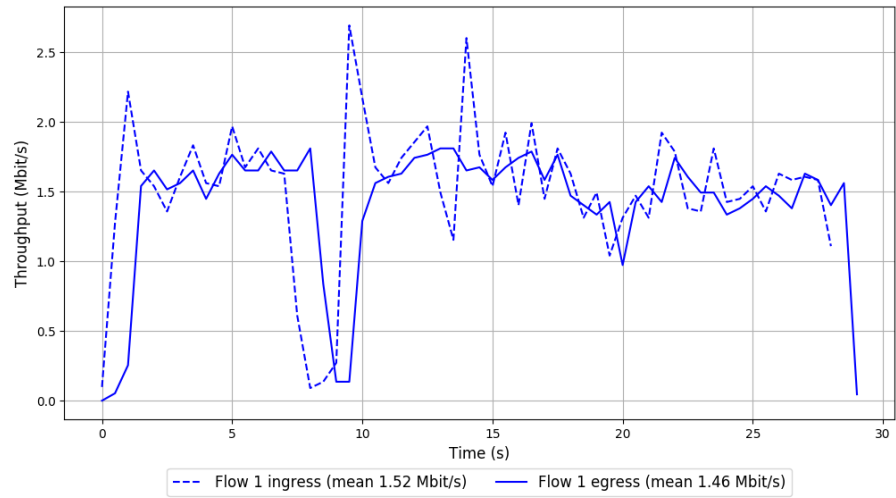
-- Flow 1:

Average throughput: 1.46 Mbit/s

95th percentile per-packet one-way delay: 1186.041 ms

Loss rate: 3.77%

Run 1: Report of QUIC Cubic — Data Link

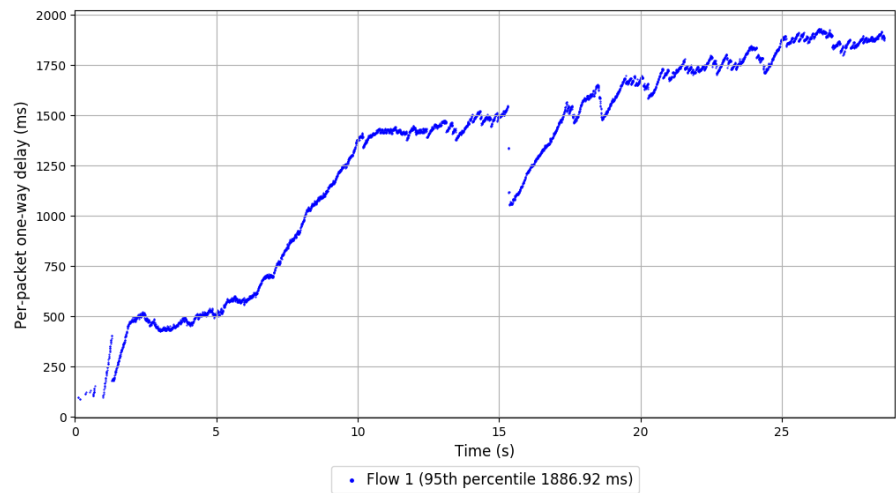
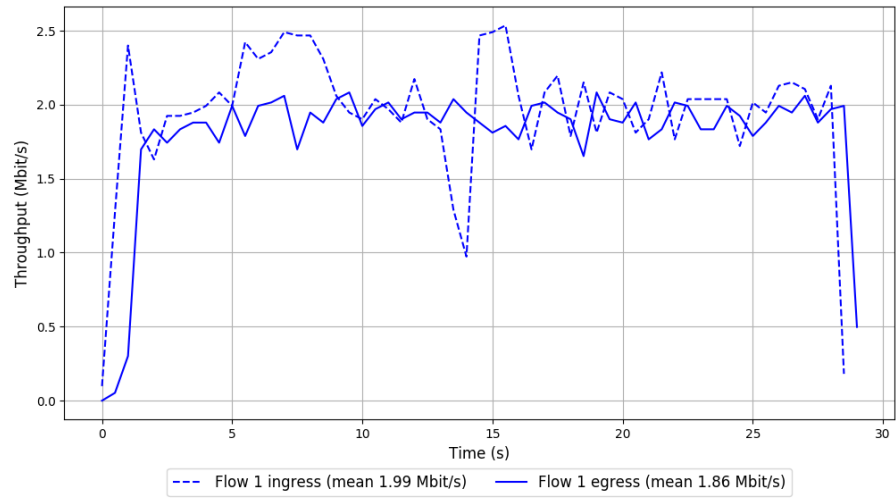


Run 2: Statistics of QUIC Cubic

Start at: 2018-07-03 09:43:47
End at: 2018-07-03 09:44:17
Local clock offset: -2.129 ms
Remote clock offset: 17.592 ms

Below is generated by plot.py at 2018-07-03 10:09:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.86 Mbit/s
95th percentile per-packet one-way delay: 1886.916 ms
Loss rate: 6.65%
-- Flow 1:
Average throughput: 1.86 Mbit/s
95th percentile per-packet one-way delay: 1886.916 ms
Loss rate: 6.65%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-07-03 10:02:54

End at: 2018-07-03 10:03:24

Local clock offset: -1.811 ms

Remote clock offset: 11.788 ms

Below is generated by plot.py at 2018-07-03 10:09:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.75 Mbit/s

95th percentile per-packet one-way delay: 1243.282 ms

Loss rate: 4.27%

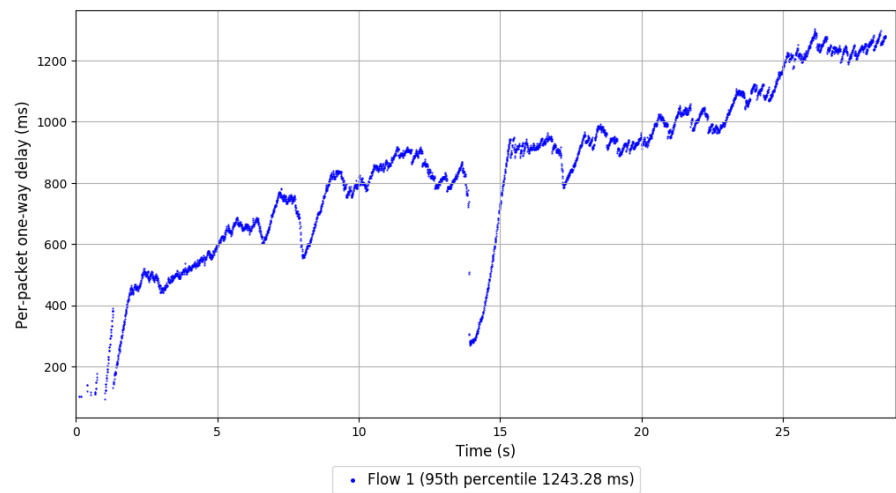
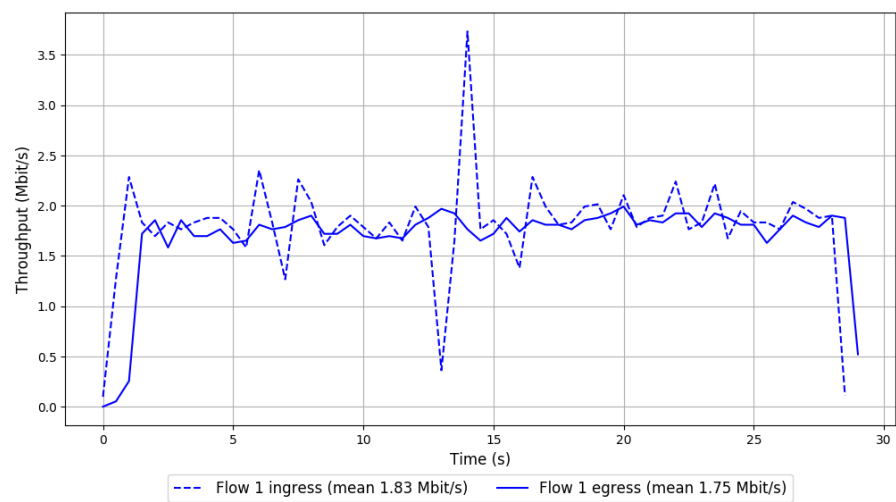
-- Flow 1:

Average throughput: 1.75 Mbit/s

95th percentile per-packet one-way delay: 1243.282 ms

Loss rate: 4.27%

Run 3: Report of QUIC Cubic — Data Link

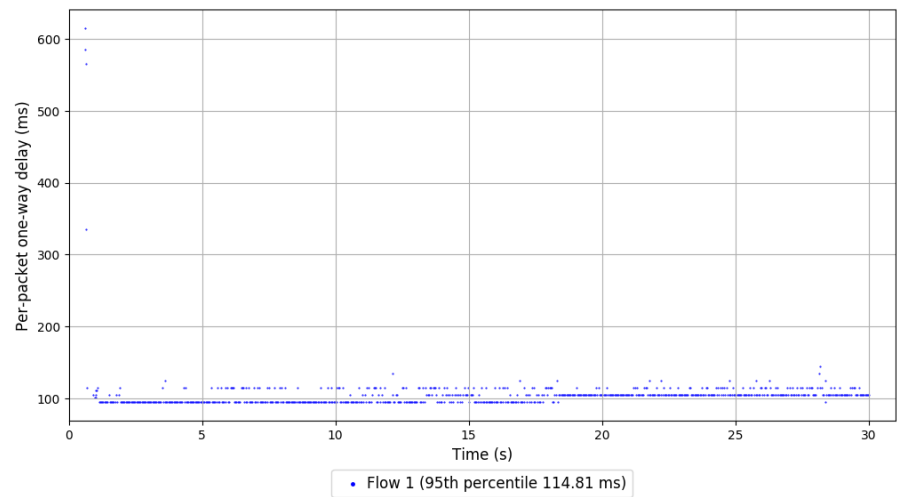
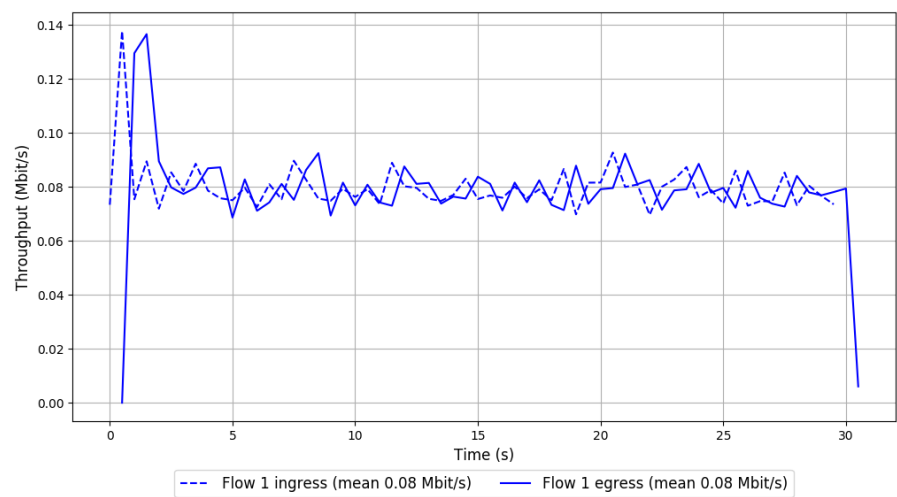


```
Run 1: Statistics of SCReAM

Start at: 2018-07-03 09:14:34
End at: 2018-07-03 09:15:04
Local clock offset: -7.545 ms
Remote clock offset: 14.326 ms

# Below is generated by plot.py at 2018-07-03 10:09:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 114.815 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 114.815 ms
Loss rate: 0.13%
```

Run 1: Report of SReAM — Data Link

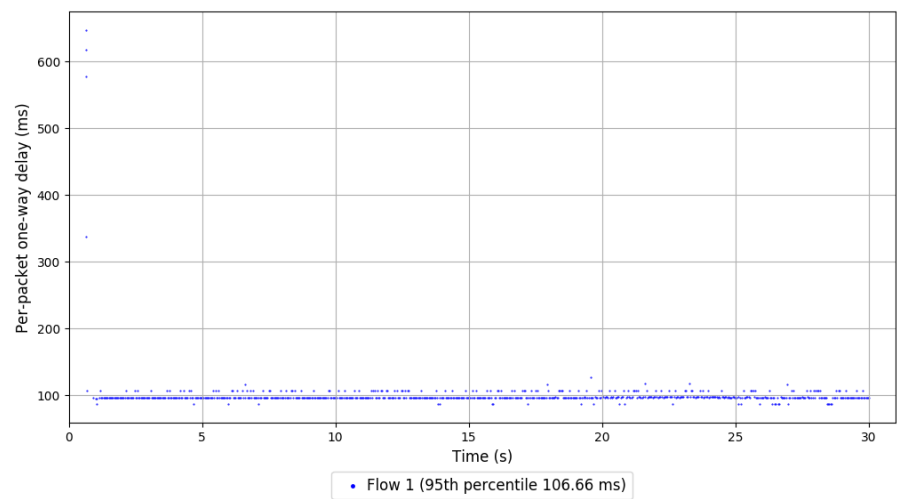
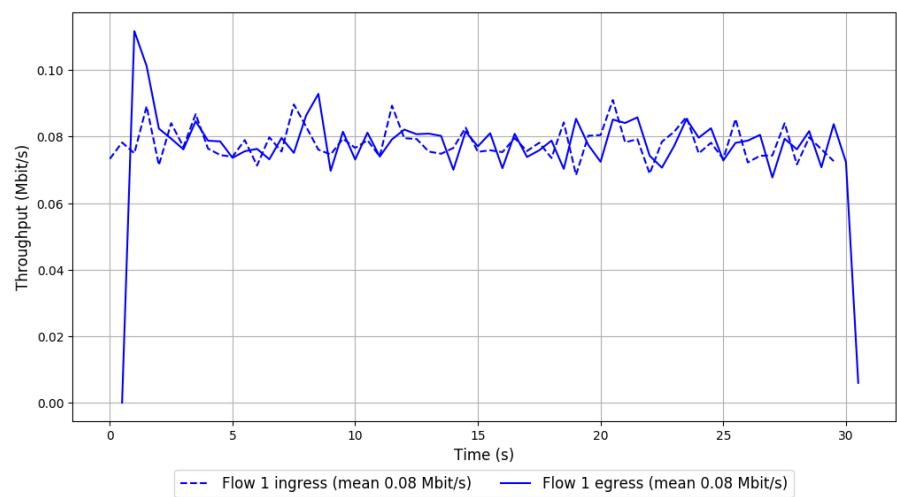


Run 2: Statistics of SCReAM

Start at: 2018-07-03 09:33:41
End at: 2018-07-03 09:34:11
Local clock offset: -3.48 ms
Remote clock offset: 16.423 ms

Below is generated by plot.py at 2018-07-03 10:09:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 106.658 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 106.658 ms
Loss rate: 0.13%

Run 2: Report of SReAM — Data Link

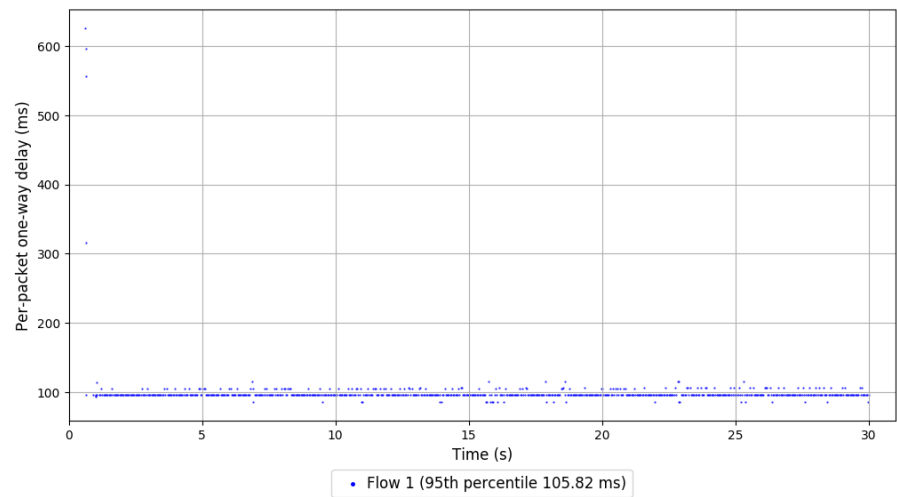
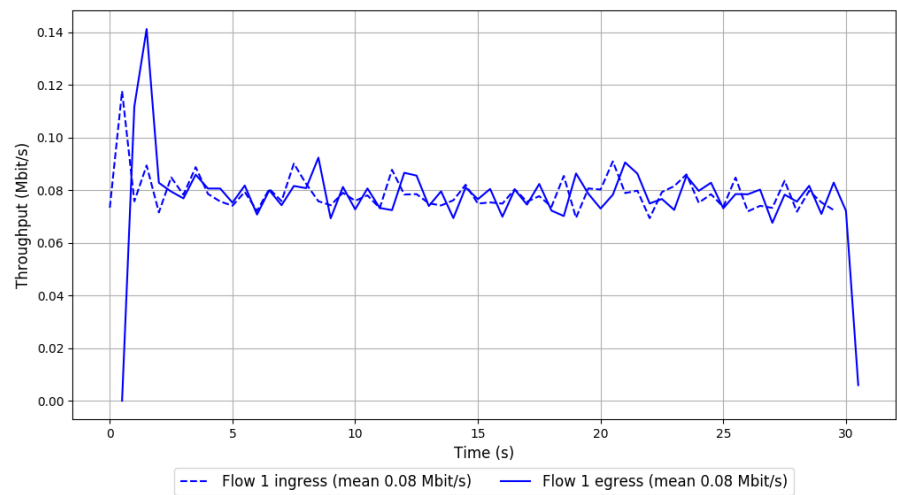


Run 3: Statistics of SCReAM

Start at: 2018-07-03 09:52:48
End at: 2018-07-03 09:53:18
Local clock offset: -2.026 ms
Remote clock offset: 12.494 ms

Below is generated by plot.py at 2018-07-03 10:09:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 105.819 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 105.819 ms
Loss rate: 0.13%

Run 3: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2018-07-03 09:16:48

End at: 2018-07-03 09:17:18

Local clock offset: -3.011 ms

Remote clock offset: 13.41 ms

Below is generated by plot.py at 2018-07-03 10:09:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.17 Mbit/s

95th percentile per-packet one-way delay: 209.302 ms

Loss rate: 0.00%

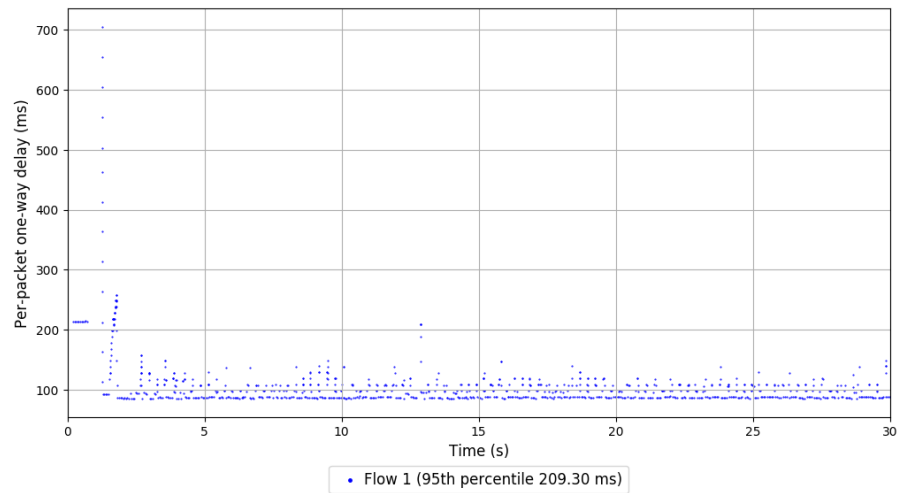
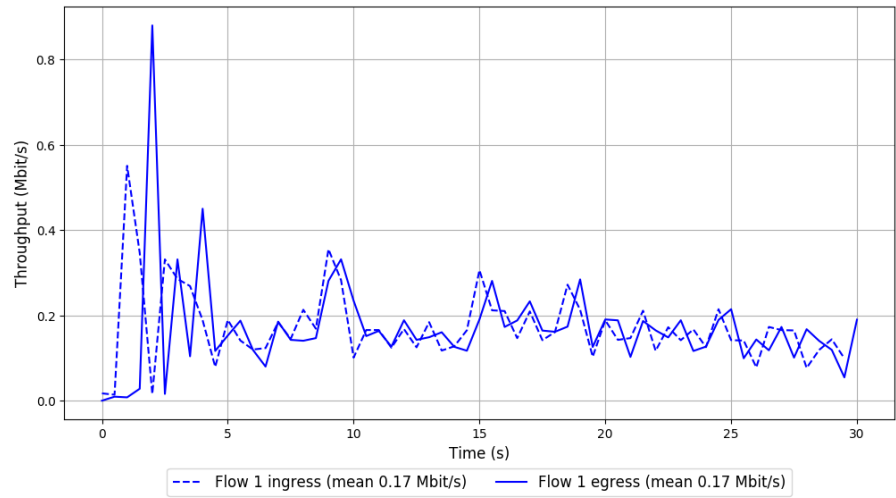
-- Flow 1:

Average throughput: 0.17 Mbit/s

95th percentile per-packet one-way delay: 209.302 ms

Loss rate: 0.00%

Run 1: Report of Sprout — Data Link

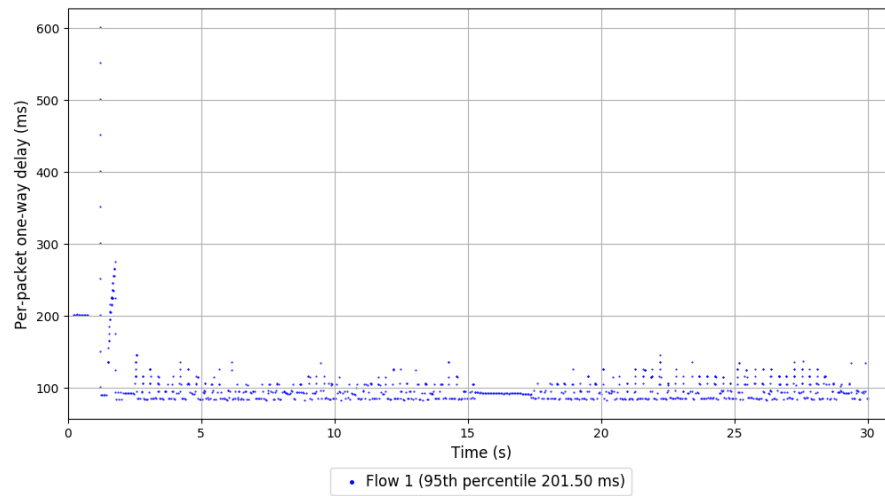
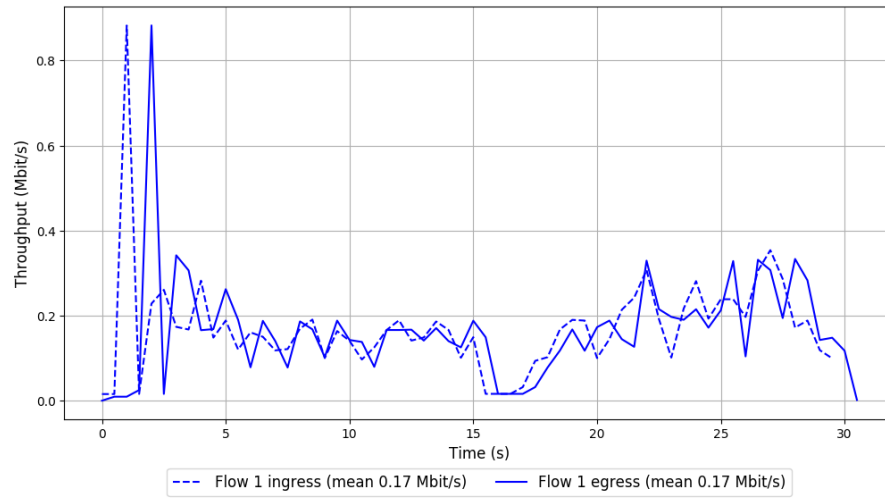


Run 2: Statistics of Sprout

Start at: 2018-07-03 09:35:55
End at: 2018-07-03 09:36:25
Local clock offset: -2.856 ms
Remote clock offset: 15.524 ms

Below is generated by plot.py at 2018-07-03 10:09:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 201.501 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 201.501 ms
Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

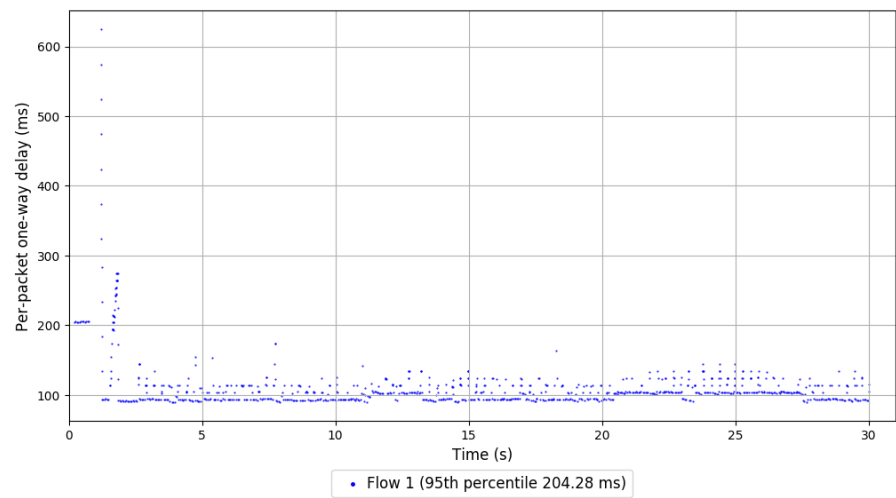
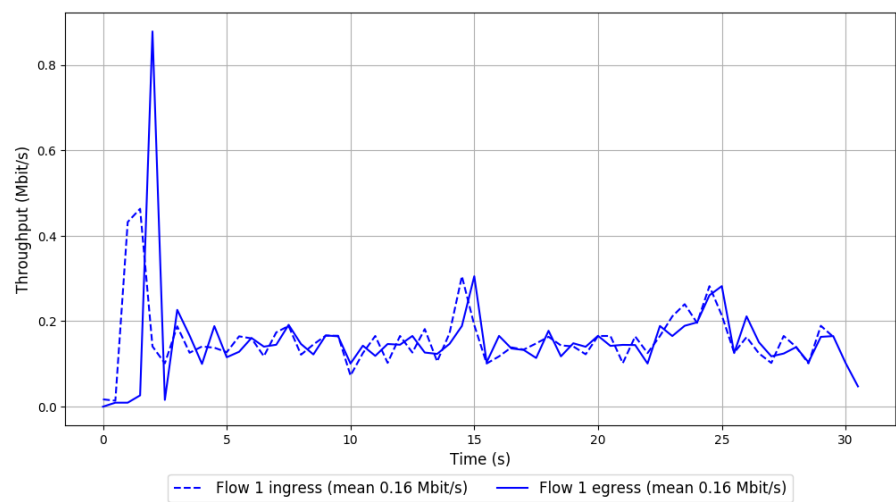


Run 3: Statistics of Sprout

Start at: 2018-07-03 09:55:02
End at: 2018-07-03 09:55:32
Local clock offset: -1.903 ms
Remote clock offset: 15.745 ms

Below is generated by plot.py at 2018-07-03 10:09:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 204.283 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 204.283 ms
Loss rate: 0.43%

Run 3: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2018-07-03 09:26:55

End at: 2018-07-03 09:27:25

Local clock offset: -7.787 ms

Remote clock offset: 14.589 ms

Below is generated by plot.py at 2018-07-03 10:09:40

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.62 Mbit/s

95th percentile per-packet one-way delay: 351.848 ms

Loss rate: 0.77%

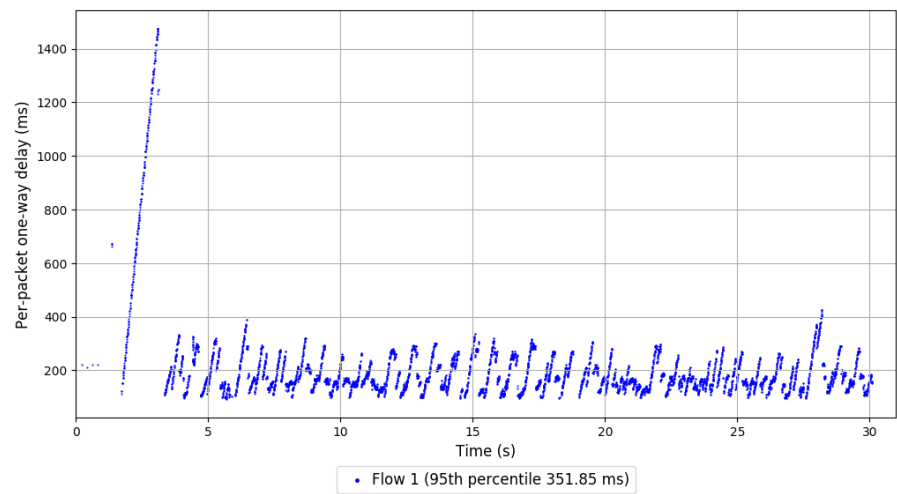
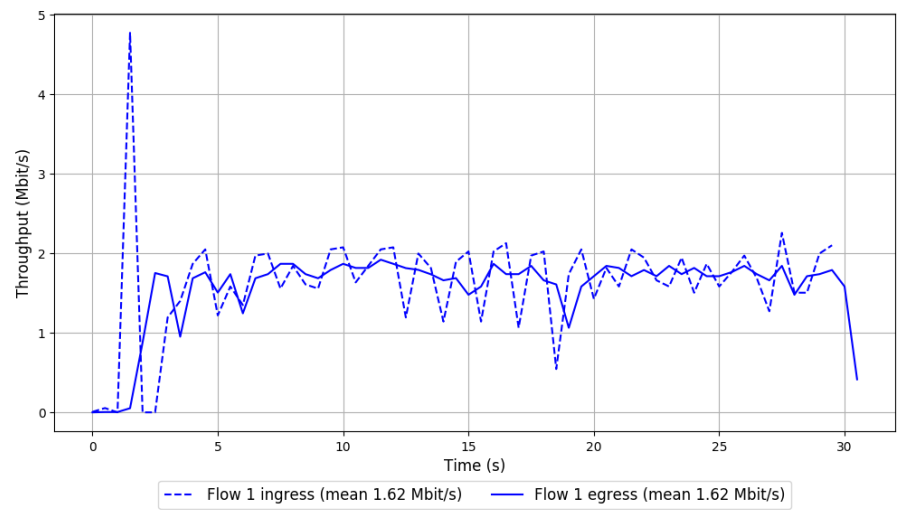
-- Flow 1:

Average throughput: 1.62 Mbit/s

95th percentile per-packet one-way delay: 351.848 ms

Loss rate: 0.77%

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



Run 2: Statistics of TaoVA-100x

Start at: 2018-07-03 09:46:02

End at: 2018-07-03 09:46:32

Local clock offset: -2.065 ms

Remote clock offset: 15.6 ms

Below is generated by plot.py at 2018-07-03 10:09:40

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.50 Mbit/s

95th percentile per-packet one-way delay: 319.224 ms

Loss rate: 0.23%

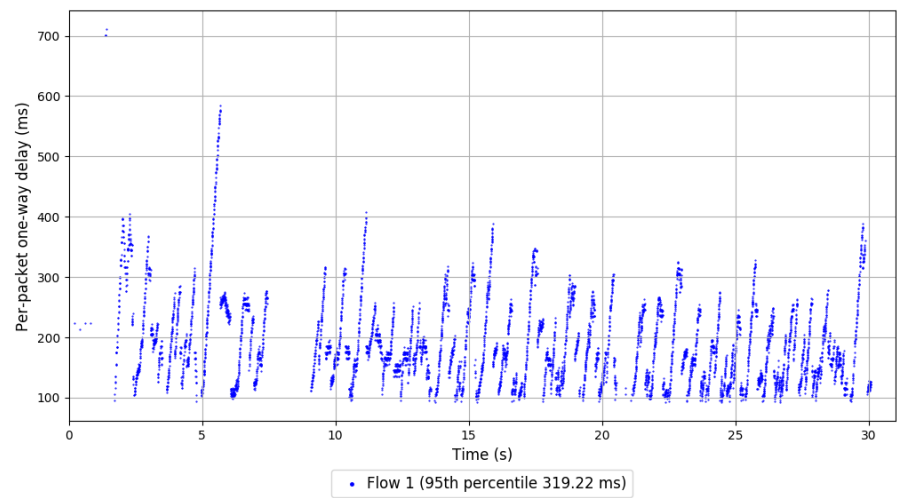
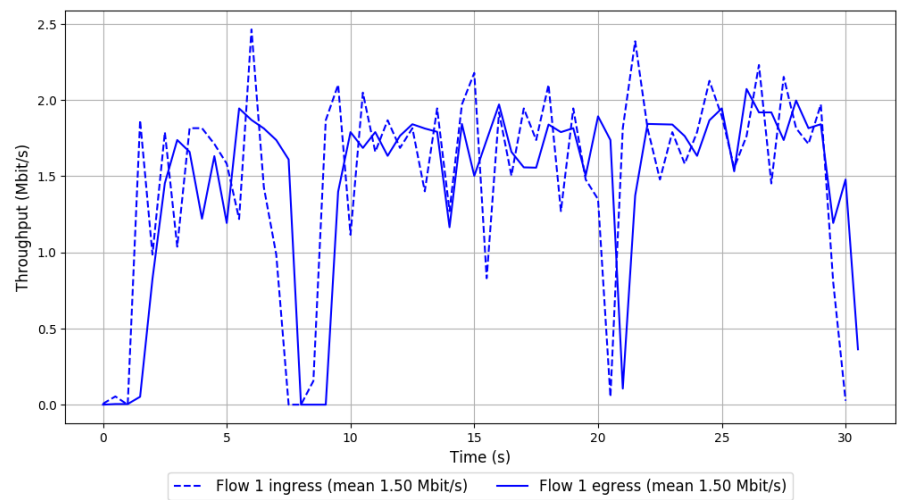
-- Flow 1:

Average throughput: 1.50 Mbit/s

95th percentile per-packet one-way delay: 319.224 ms

Loss rate: 0.23%

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

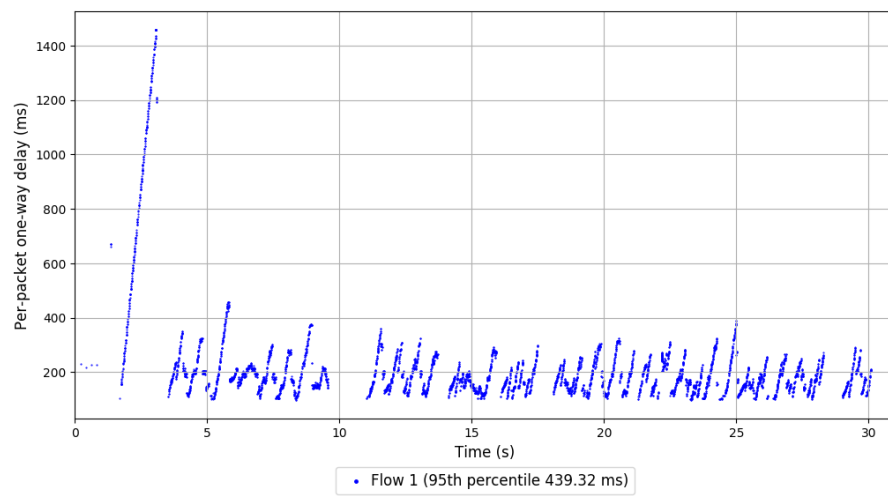
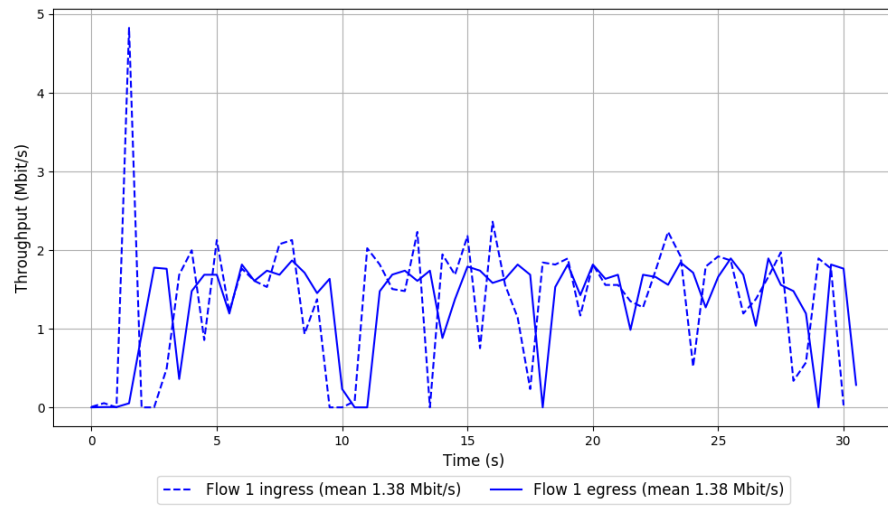


Run 3: Statistics of TaoVA-100x

Start at: 2018-07-03 10:05:09
End at: 2018-07-03 10:05:39
Local clock offset: -1.759 ms
Remote clock offset: 15.519 ms

Below is generated by plot.py at 2018-07-03 10:09:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.38 Mbit/s
95th percentile per-packet one-way delay: 439.317 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 1.38 Mbit/s
95th percentile per-packet one-way delay: 439.317 ms
Loss rate: 0.47%

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

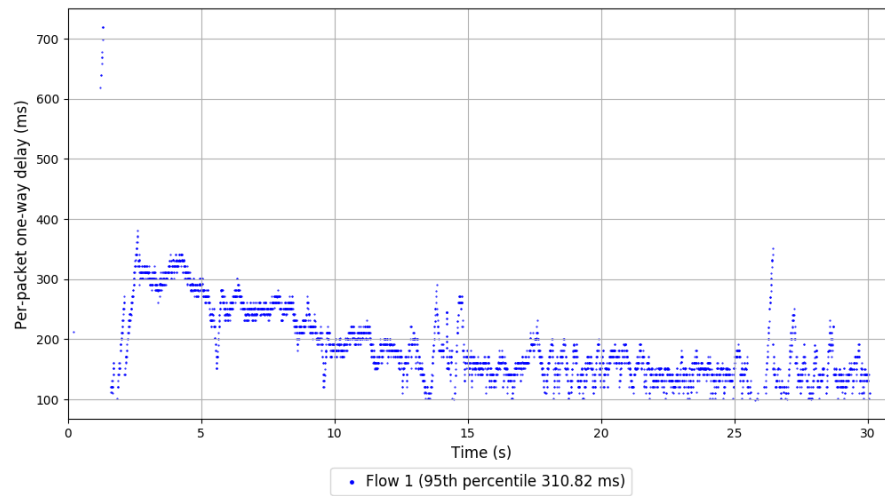
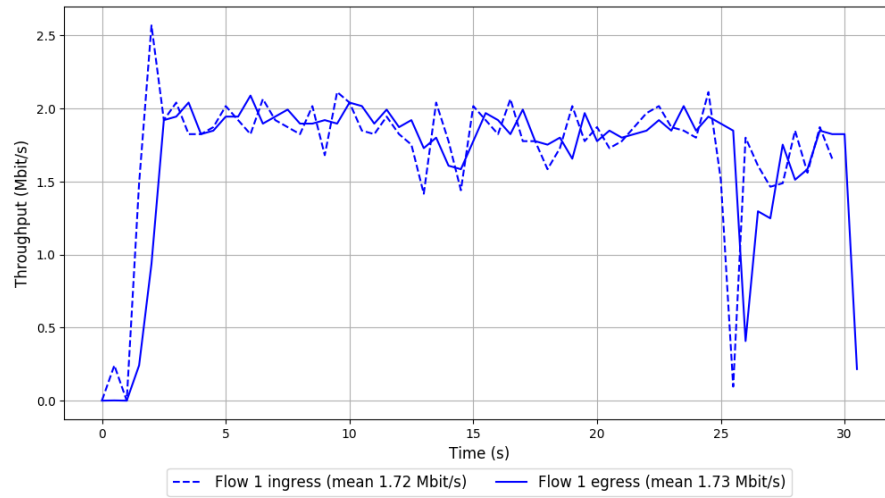


Run 1: Statistics of TCP Vegas

Start at: 2018-07-03 09:21:18
End at: 2018-07-03 09:21:48
Local clock offset: -5.223 ms
Remote clock offset: 19.006 ms

Below is generated by plot.py at 2018-07-03 10:09:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.73 Mbit/s
95th percentile per-packet one-way delay: 310.819 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 1.73 Mbit/s
95th percentile per-packet one-way delay: 310.819 ms
Loss rate: 0.19%

Run 1: Report of TCP Vegas — Data Link

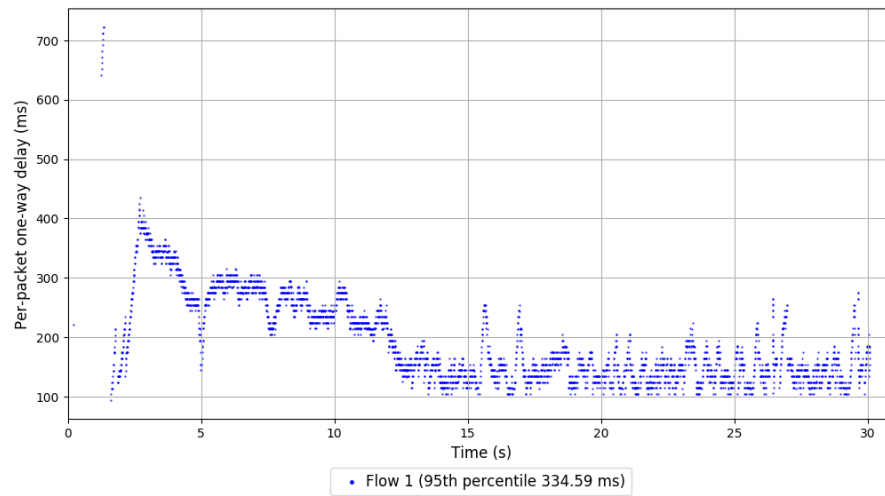
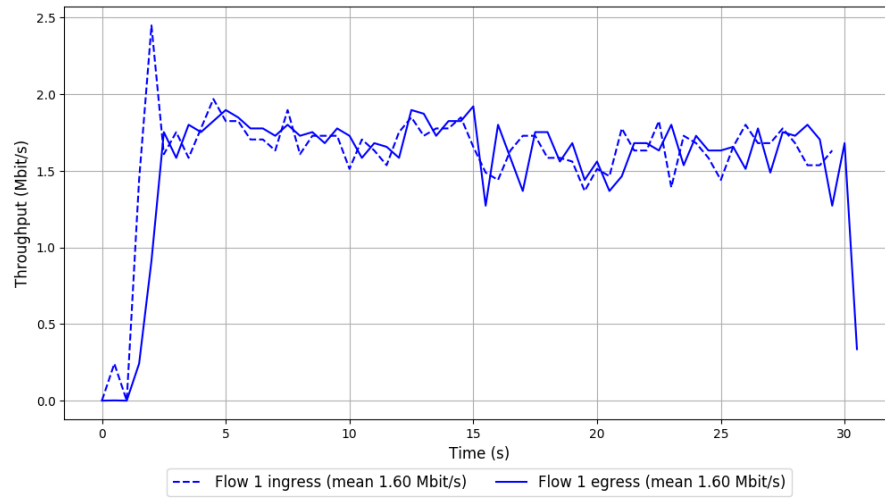


Run 2: Statistics of TCP Vegas

Start at: 2018-07-03 09:40:25
End at: 2018-07-03 09:40:55
Local clock offset: -2.228 ms
Remote clock offset: 22.241 ms

Below is generated by plot.py at 2018-07-03 10:09:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.60 Mbit/s
95th percentile per-packet one-way delay: 334.589 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 1.60 Mbit/s
95th percentile per-packet one-way delay: 334.589 ms
Loss rate: 0.18%

Run 2: Report of TCP Vegas — Data Link

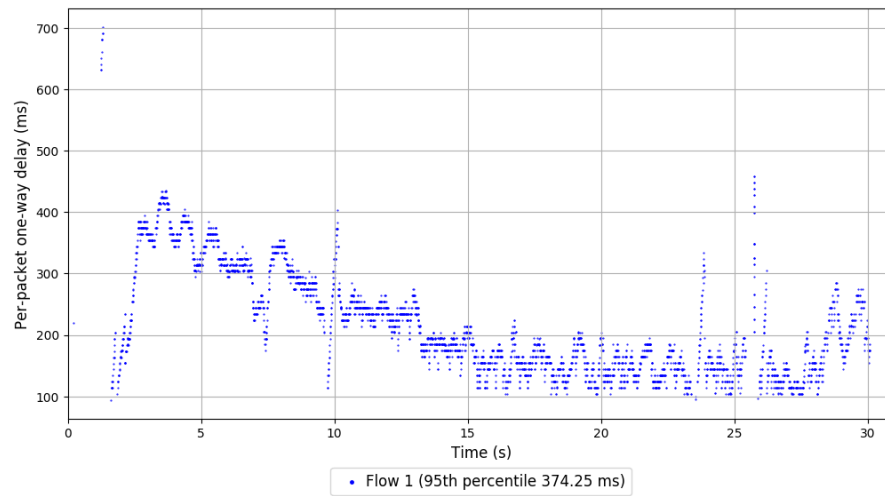
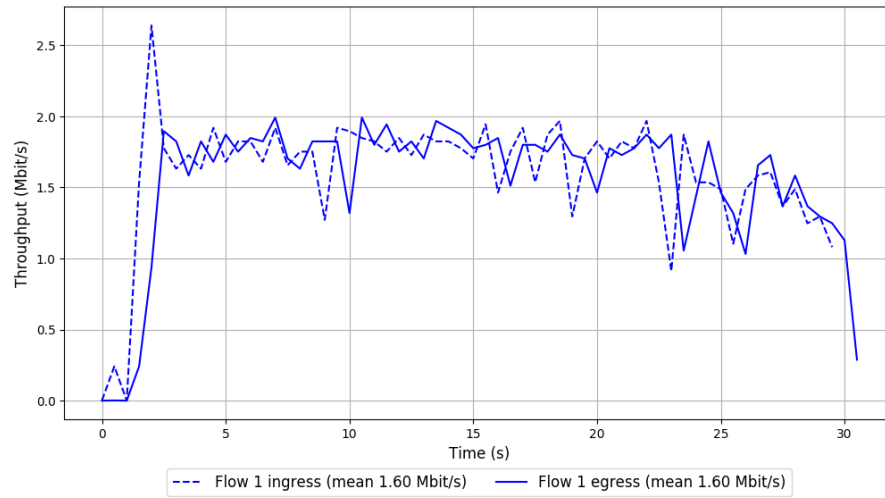


Run 3: Statistics of TCP Vegas

Start at: 2018-07-03 09:59:32
End at: 2018-07-03 10:00:02
Local clock offset: -1.854 ms
Remote clock offset: 15.057 ms

Below is generated by plot.py at 2018-07-03 10:09:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.60 Mbit/s
95th percentile per-packet one-way delay: 374.245 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 1.60 Mbit/s
95th percentile per-packet one-way delay: 374.245 ms
Loss rate: 0.15%

Run 3: Report of TCP Vegas — Data Link

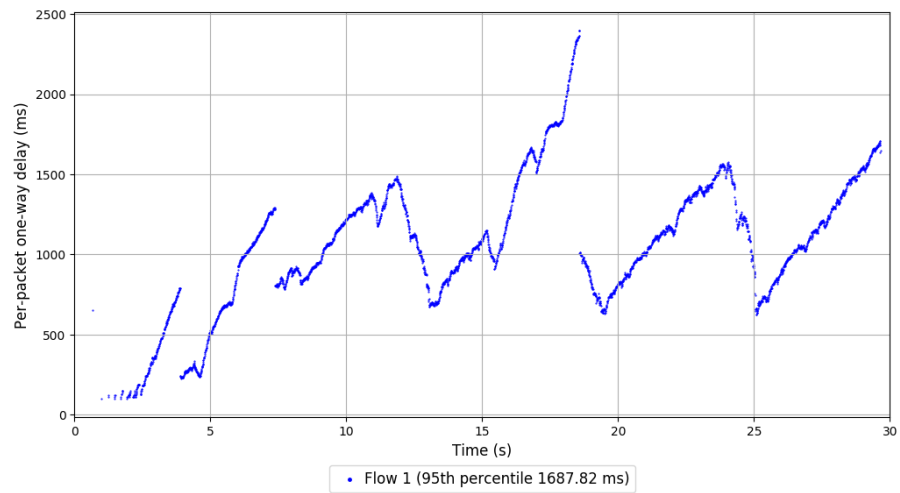
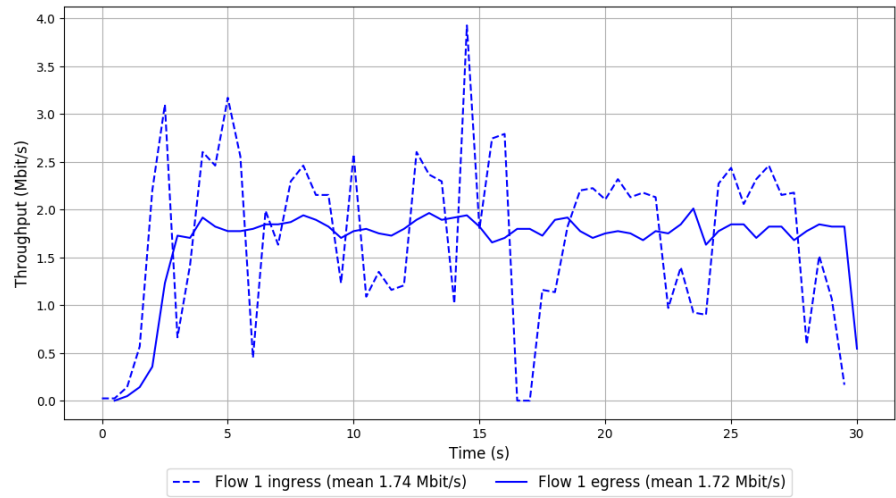


Run 1: Statistics of Verus

Start at: 2018-07-03 09:22:26
End at: 2018-07-03 09:22:56
Local clock offset: -6.172 ms
Remote clock offset: 20.336 ms

Below is generated by plot.py at 2018-07-03 10:09:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.72 Mbit/s
95th percentile per-packet one-way delay: 1687.821 ms
Loss rate: 3.19%
-- Flow 1:
Average throughput: 1.72 Mbit/s
95th percentile per-packet one-way delay: 1687.821 ms
Loss rate: 3.19%

Run 1: Report of Verus — Data Link

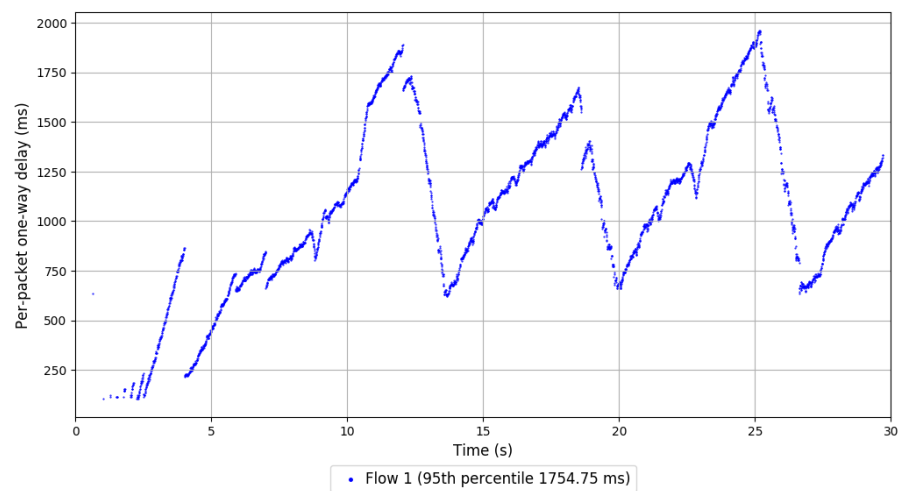
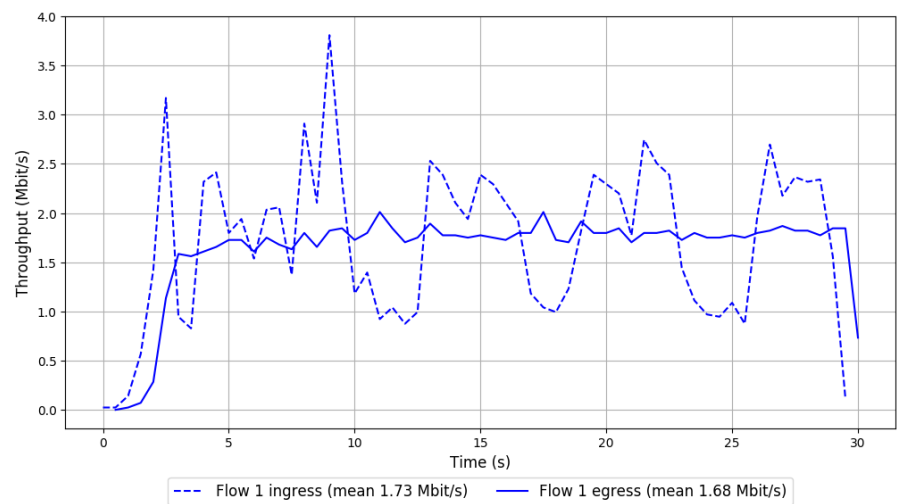


Run 2: Statistics of Verus

Start at: 2018-07-03 09:41:32
End at: 2018-07-03 09:42:02
Local clock offset: -2.249 ms
Remote clock offset: 16.182 ms

Below is generated by plot.py at 2018-07-03 10:09:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.68 Mbit/s
95th percentile per-packet one-way delay: 1754.747 ms
Loss rate: 4.41%
-- Flow 1:
Average throughput: 1.68 Mbit/s
95th percentile per-packet one-way delay: 1754.747 ms
Loss rate: 4.41%

Run 2: Report of Verus — Data Link

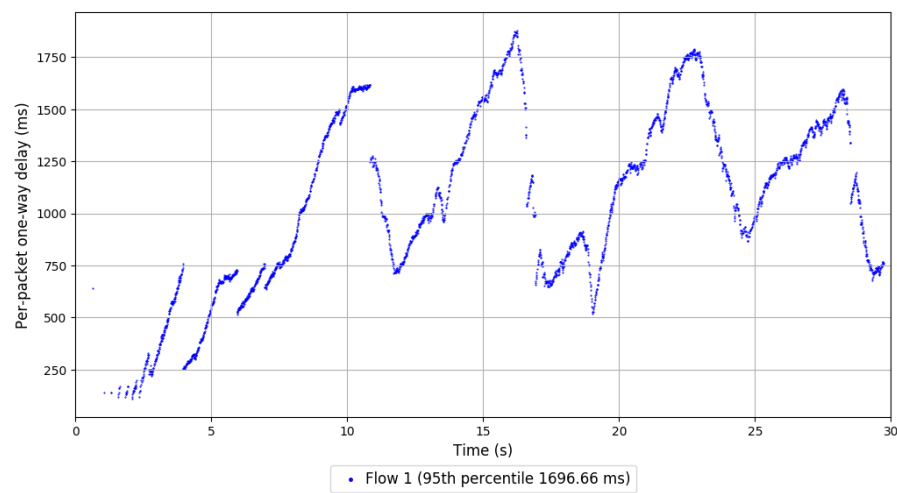
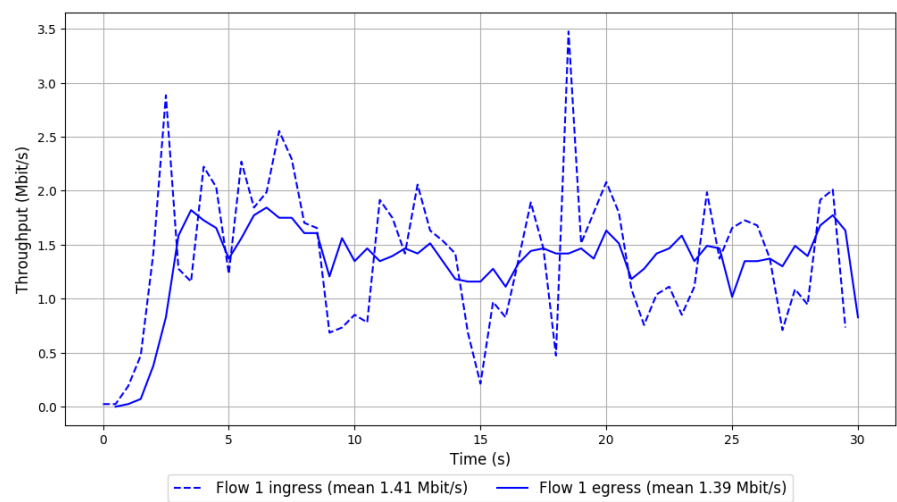


Run 3: Statistics of Verus

Start at: 2018-07-03 10:00:39
End at: 2018-07-03 10:01:09
Local clock offset: -1.831 ms
Remote clock offset: 15.925 ms

Below is generated by plot.py at 2018-07-03 10:09:44
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.39 Mbit/s
95th percentile per-packet one-way delay: 1696.664 ms
Loss rate: 3.50%
-- Flow 1:
Average throughput: 1.39 Mbit/s
95th percentile per-packet one-way delay: 1696.664 ms
Loss rate: 3.50%

Run 3: Report of Verus — Data Link

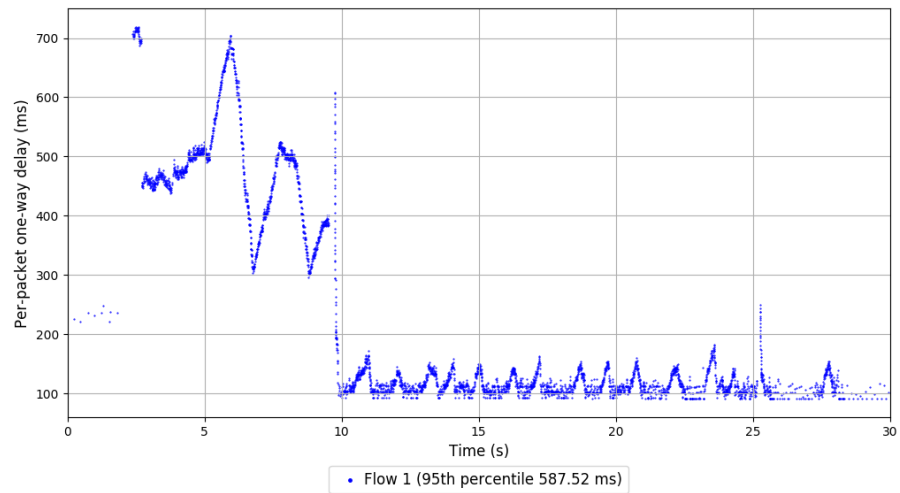
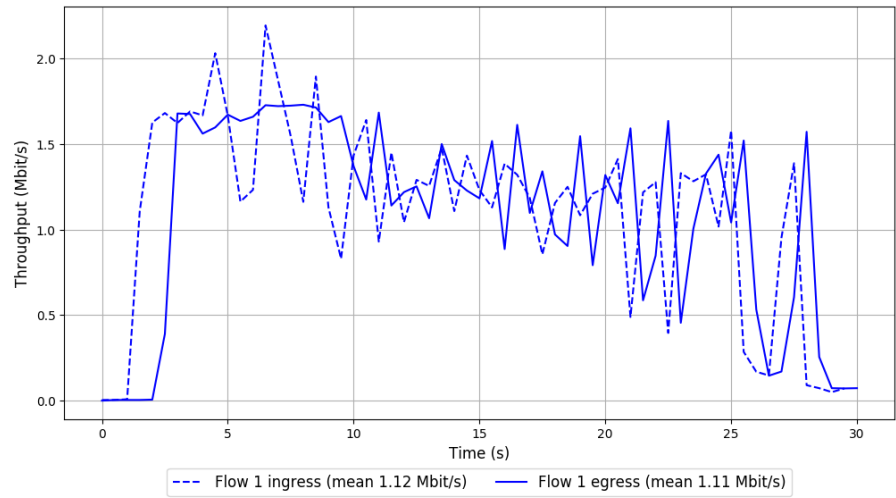


Run 1: Statistics of PCC-Vivace

Start at: 2018-07-03 09:12:18
End at: 2018-07-03 09:12:48
Local clock offset: -1.607 ms
Remote clock offset: 18.137 ms

Below is generated by plot.py at 2018-07-03 10:09:45
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 587.517 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 587.517 ms
Loss rate: 1.20%

Run 1: Report of PCC-Vivace — Data Link

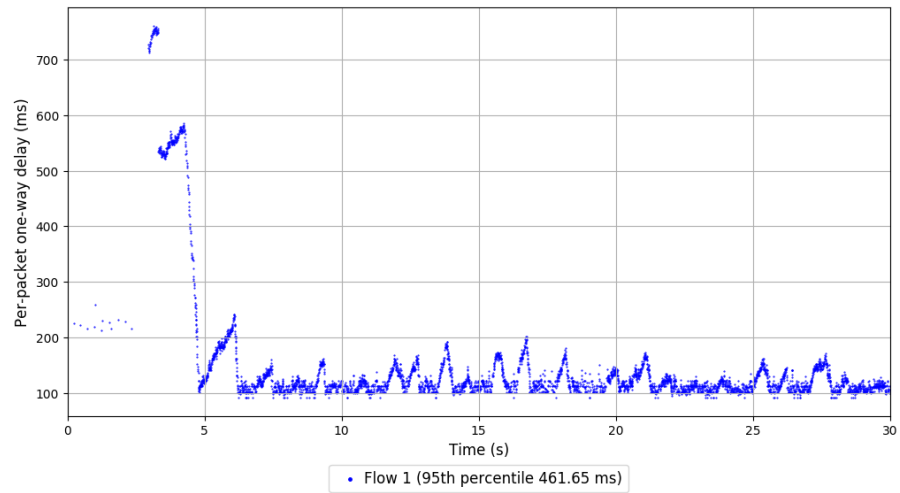
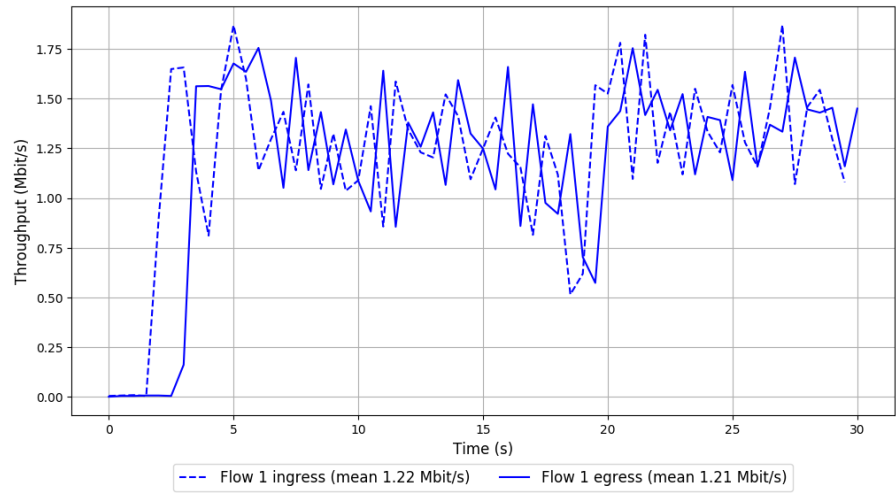


Run 2: Statistics of PCC-Vivace

Start at: 2018-07-03 09:31:25
End at: 2018-07-03 09:31:55
Local clock offset: -4.516 ms
Remote clock offset: 15.108 ms

Below is generated by plot.py at 2018-07-03 10:09:45
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.21 Mbit/s
95th percentile per-packet one-way delay: 461.646 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 1.21 Mbit/s
95th percentile per-packet one-way delay: 461.646 ms
Loss rate: 1.04%

Run 2: Report of PCC-Vivace — Data Link

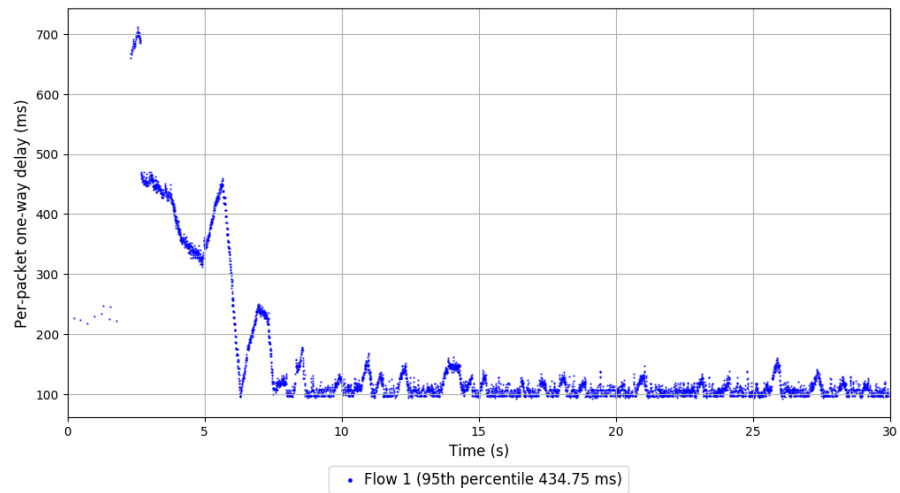
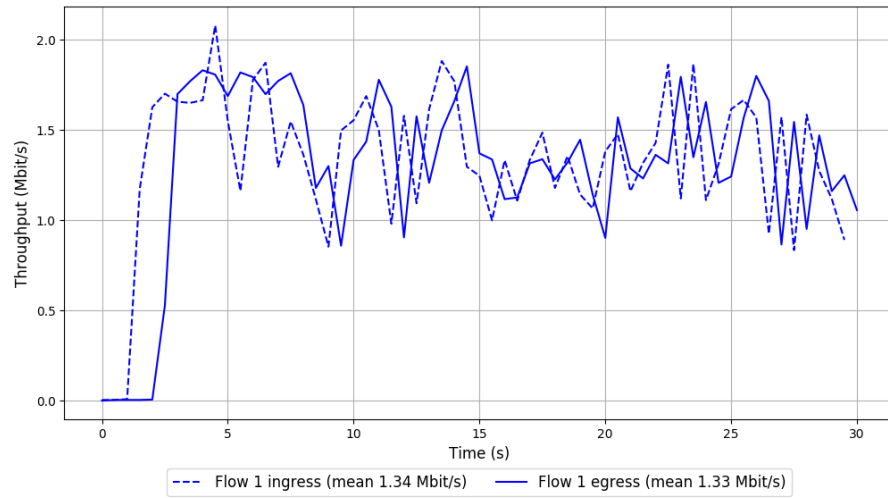


Run 3: Statistics of PCC-Vivace

Start at: 2018-07-03 09:50:33
End at: 2018-07-03 09:51:03
Local clock offset: -2.006 ms
Remote clock offset: 14.508 ms

Below is generated by plot.py at 2018-07-03 10:09:45
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 434.754 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 434.754 ms
Loss rate: 1.03%

Run 3: Report of PCC-Vivace — Data Link

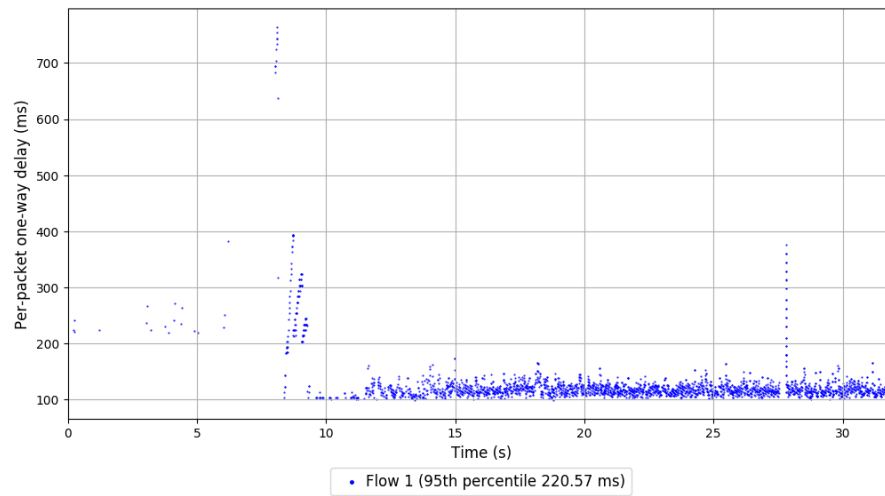
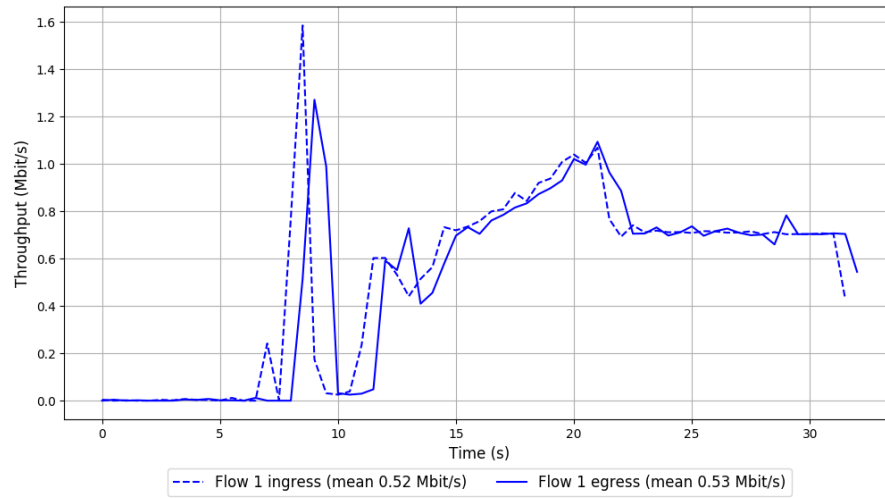


Run 1: Statistics of WebRTC media

Start at: 2018-07-03 09:15:41
End at: 2018-07-03 09:16:11
Local clock offset: -4.567 ms
Remote clock offset: 17.368 ms

Below is generated by plot.py at 2018-07-03 10:09:45
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 220.569 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 220.569 ms
Loss rate: 0.14%

Run 1: Report of WebRTC media — Data Link

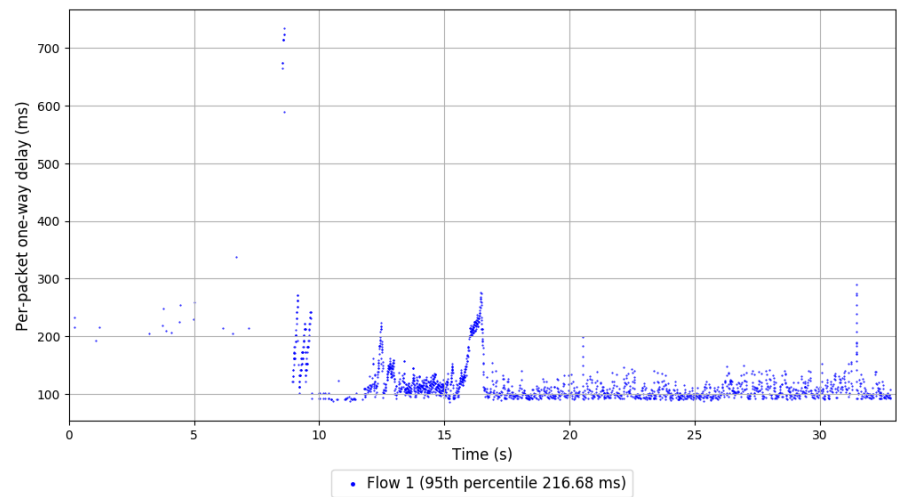
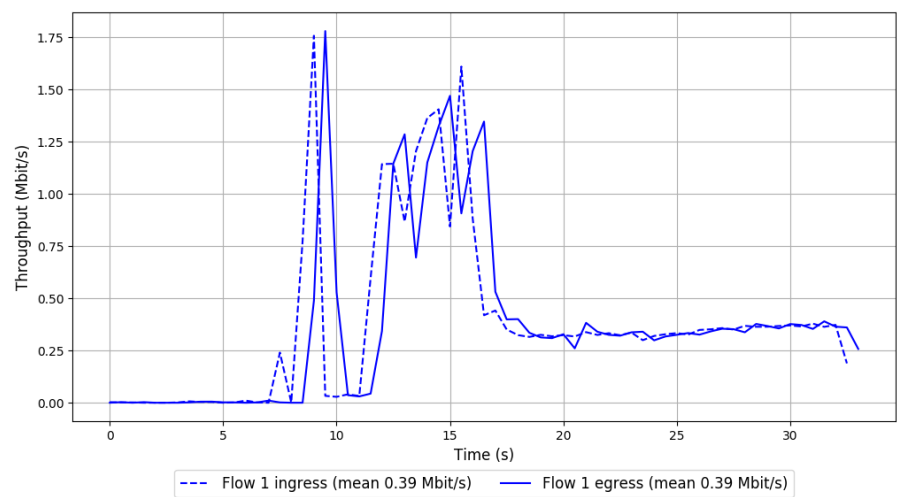


Run 2: Statistics of WebRTC media

Start at: 2018-07-03 09:34:48
End at: 2018-07-03 09:35:18
Local clock offset: -3.139 ms
Remote clock offset: 16.584 ms

Below is generated by plot.py at 2018-07-03 10:09:45
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 216.682 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 216.682 ms
Loss rate: 0.06%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-07-03 09:53:55
End at: 2018-07-03 09:54:25
Local clock offset: -1.937 ms
Remote clock offset: 16.178 ms

Below is generated by plot.py at 2018-07-03 10:09:45
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 214.207 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 214.207 ms
Loss rate: 0.11%

Run 3: Report of WebRTC media — Data Link

