

Pantheon Report

Generated at 2018-09-11 00:26:08 (UTC).

Data path: AWS Brazil 2 on **ens5** (*local*) → Colombia on **p4p1** (*remote*).

Repeated the test of 18 congestion control schemes 5 times.

Each test lasted for 30 seconds running 1 flow.

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

System info:

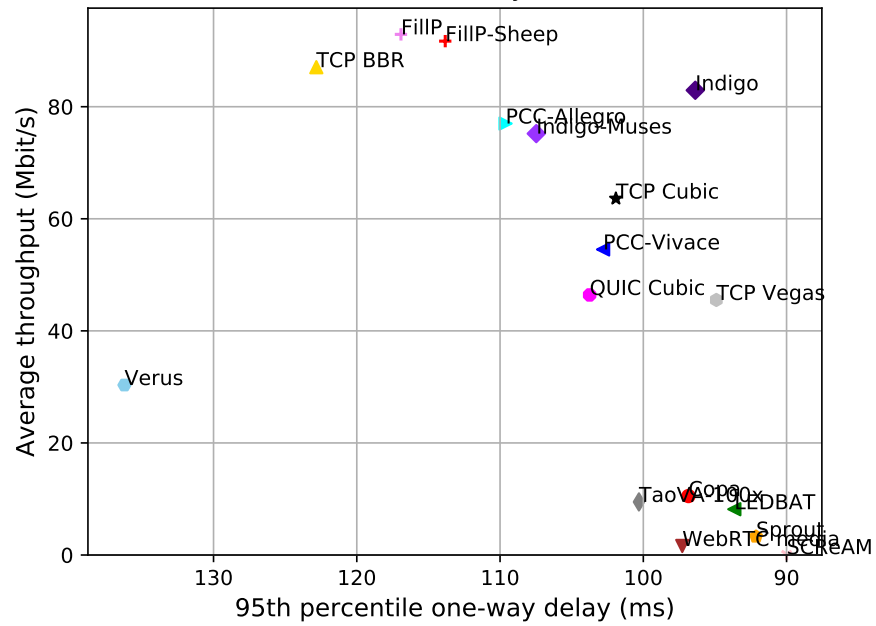
```
Linux 4.15.0-1020-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
net.ipv4.tcp_mem = 184101 245469 368202
```

Git summary:

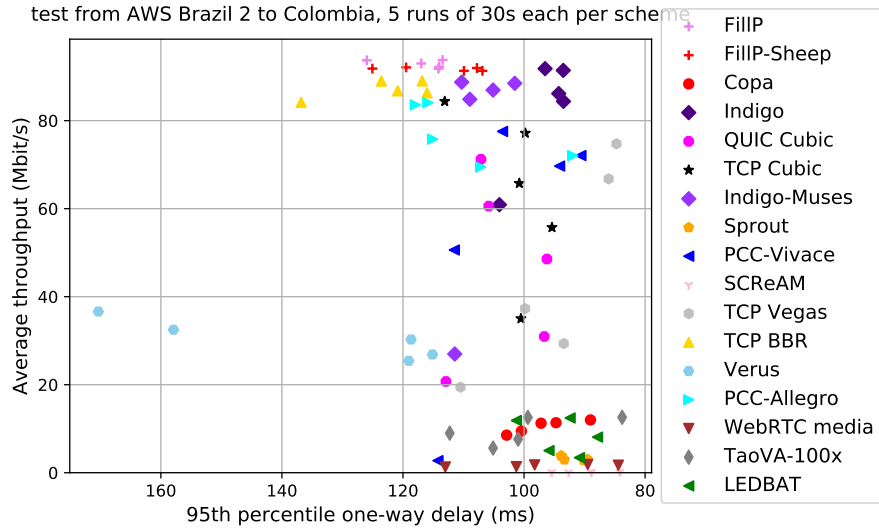
```
branch: muses @ f30bceca2aec2ef14a3cf71e25642f4a30905a03
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a
third_party/pantheon-tunnel @ cbfce6db5ff5740dafa1771f813cd646339e1952
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
```

third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851

test from AWS Brazil 2 to Colombia, 5 runs of 30s each per scheme
(mean of all runs by scheme)



test from AWS Brazil 2 to Colombia, 5 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	5	87.05	122.82	4.14
Copa	5	10.52	96.85	21.03
TCP Cubic	5	63.61	101.91	0.74
FillP	5	92.91	116.92	10.97
FillP-Sheep	5	91.70	113.83	3.91
Indigo	5	82.93	96.37	1.42
LEDBAT	5	8.17	93.65	0.29
Indigo-Muses	5	75.20	107.47	2.86
PCC-Allegro	5	77.00	109.61	2.98
PCC-Expr	0	N/A	N/A	N/A
QUIC Cubic	5	46.41	103.75	0.76
SCReAM	5	0.17	90.00	0.61
Sprout	5	3.29	92.13	0.36
TaoVA-100x	5	9.47	100.31	22.84
TCP Vegas	5	45.52	94.90	1.77
Verus	5	30.33	136.22	36.10
PCC-Vivace	5	54.53	102.81	0.26
WebRTC media	5	1.61	97.28	0.54

Run 1: Statistics of TCP BBR

Start at: 2018-09-10 22:48:26

End at: 2018-09-10 22:48:56

Local clock offset: -9.256 ms

Remote clock offset: 7.118 ms

Below is generated by plot.py at 2018-09-11 00:20:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 89.03 Mbit/s

95th percentile per-packet one-way delay: 116.825 ms

Loss rate: 3.37%

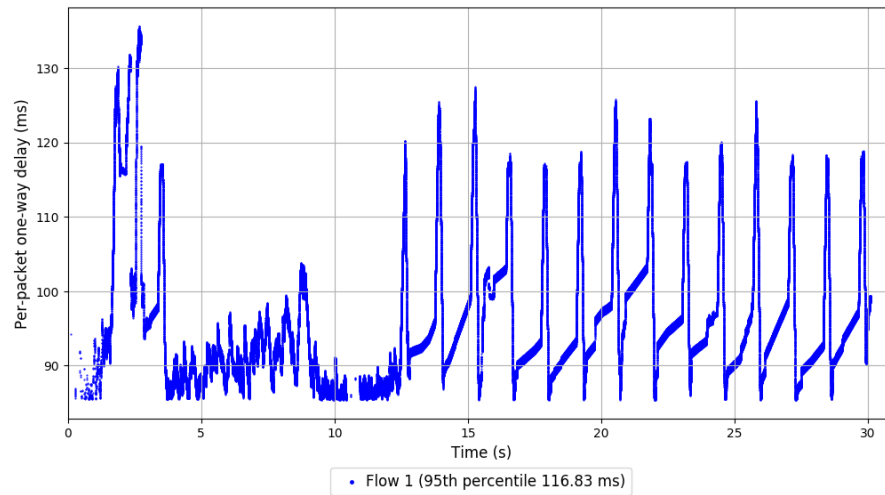
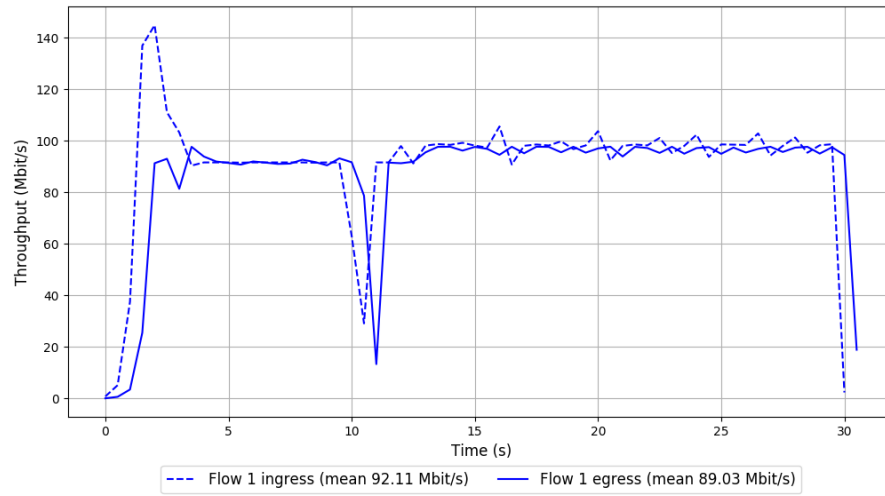
-- Flow 1:

Average throughput: 89.03 Mbit/s

95th percentile per-packet one-way delay: 116.825 ms

Loss rate: 3.37%

Run 1: Report of TCP BBR — Data Link

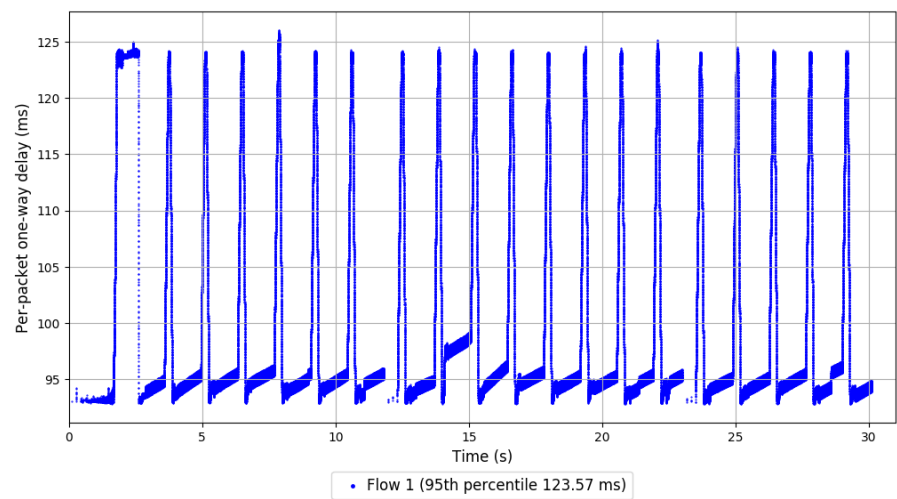
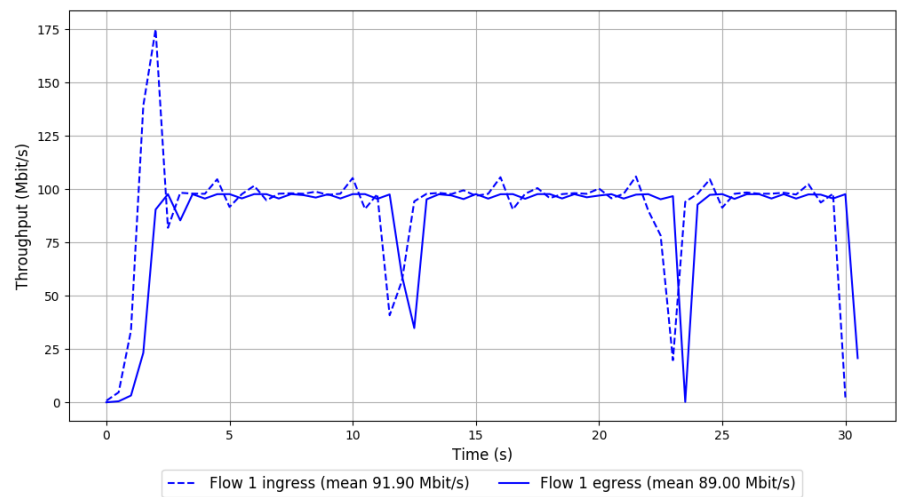


Run 2: Statistics of TCP BBR

Start at: 2018-09-10 23:09:37
End at: 2018-09-10 23:10:07
Local clock offset: -11.908 ms
Remote clock offset: 7.38 ms

Below is generated by plot.py at 2018-09-11 00:20:20
Datalink statistics
-- Total of 1 flow:
Average throughput: 89.00 Mbit/s
95th percentile per-packet one-way delay: 123.570 ms
Loss rate: 3.15%
-- Flow 1:
Average throughput: 89.00 Mbit/s
95th percentile per-packet one-way delay: 123.570 ms
Loss rate: 3.15%

Run 2: Report of TCP BBR — Data Link

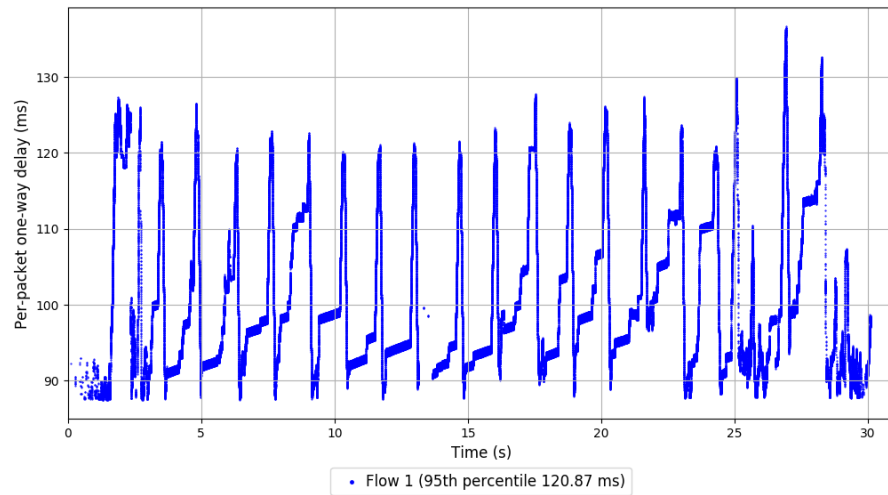
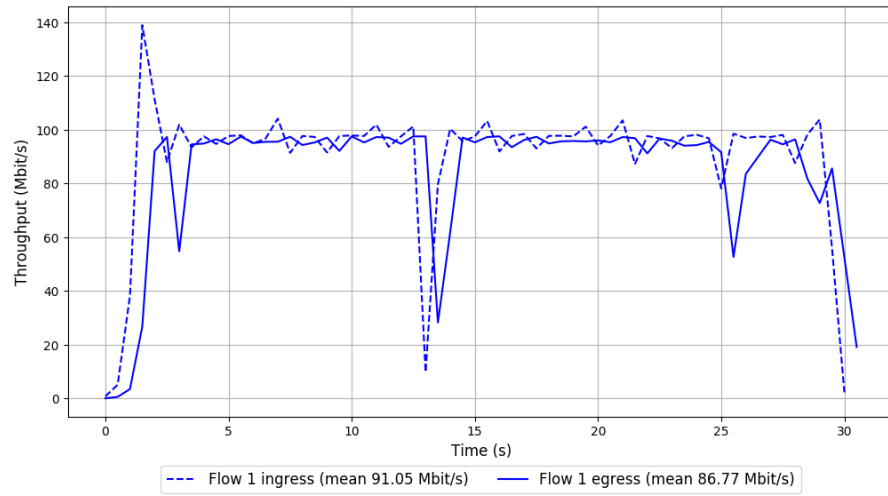


Run 3: Statistics of TCP BBR

Start at: 2018-09-10 23:30:42
End at: 2018-09-10 23:31:12
Local clock offset: -13.818 ms
Remote clock offset: 6.598 ms

Below is generated by plot.py at 2018-09-11 00:20:20
Datalink statistics
-- Total of 1 flow:
Average throughput: 86.77 Mbit/s
95th percentile per-packet one-way delay: 120.873 ms
Loss rate: 4.70%
-- Flow 1:
Average throughput: 86.77 Mbit/s
95th percentile per-packet one-way delay: 120.873 ms
Loss rate: 4.70%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-09-10 23:52:01

End at: 2018-09-10 23:52:31

Local clock offset: -9.572 ms

Remote clock offset: 5.759 ms

Below is generated by plot.py at 2018-09-11 00:20:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 84.16 Mbit/s

95th percentile per-packet one-way delay: 136.830 ms

Loss rate: 5.01%

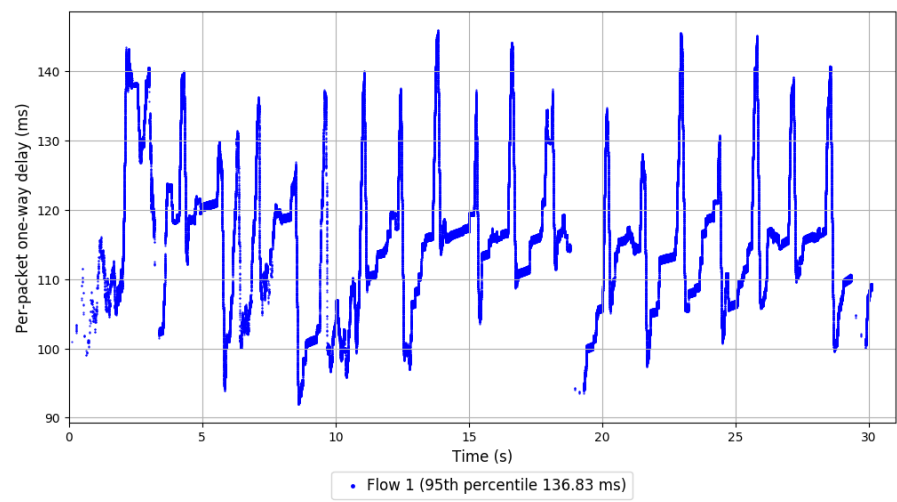
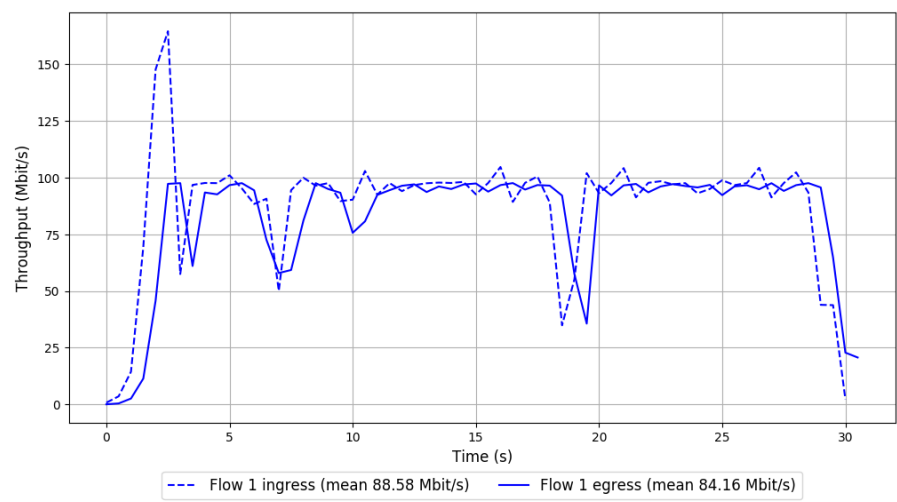
-- Flow 1:

Average throughput: 84.16 Mbit/s

95th percentile per-packet one-way delay: 136.830 ms

Loss rate: 5.01%

Run 4: Report of TCP BBR — Data Link

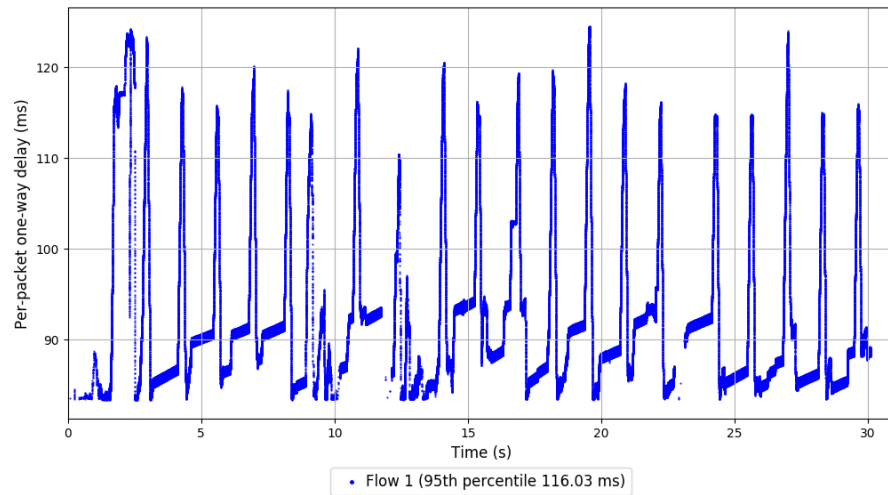
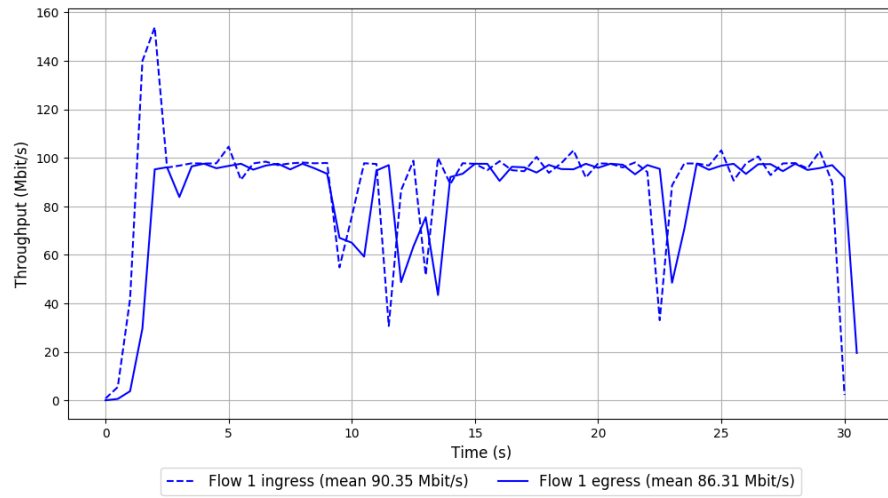


Run 5: Statistics of TCP BBR

Start at: 2018-09-11 00:12:58
End at: 2018-09-11 00:13:28
Local clock offset: -6.985 ms
Remote clock offset: -0.189 ms

Below is generated by plot.py at 2018-09-11 00:20:20
Datalink statistics
-- Total of 1 flow:
Average throughput: 86.31 Mbit/s
95th percentile per-packet one-way delay: 116.025 ms
Loss rate: 4.45%
-- Flow 1:
Average throughput: 86.31 Mbit/s
95th percentile per-packet one-way delay: 116.025 ms
Loss rate: 4.45%

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2018-09-10 22:53:09

End at: 2018-09-10 22:53:39

Local clock offset: -9.586 ms

Remote clock offset: 6.898 ms

Below is generated by plot.py at 2018-09-11 00:20:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 11.25 Mbit/s

95th percentile per-packet one-way delay: 97.188 ms

Loss rate: 35.28%

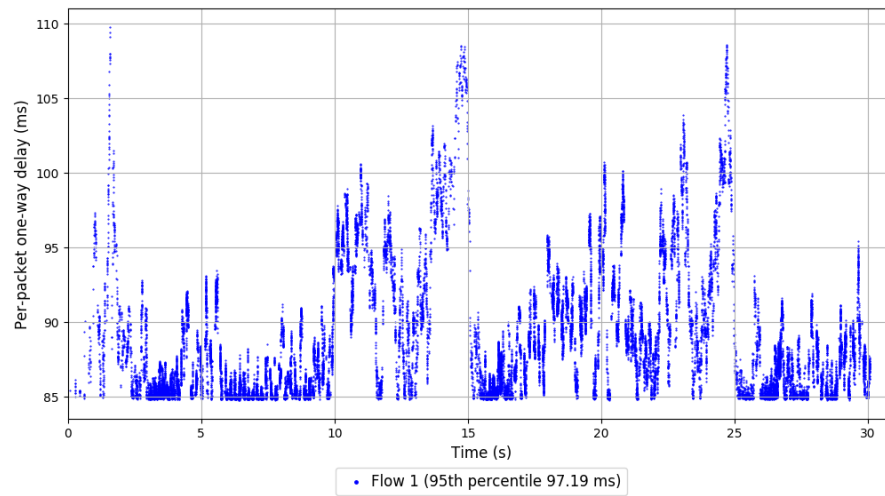
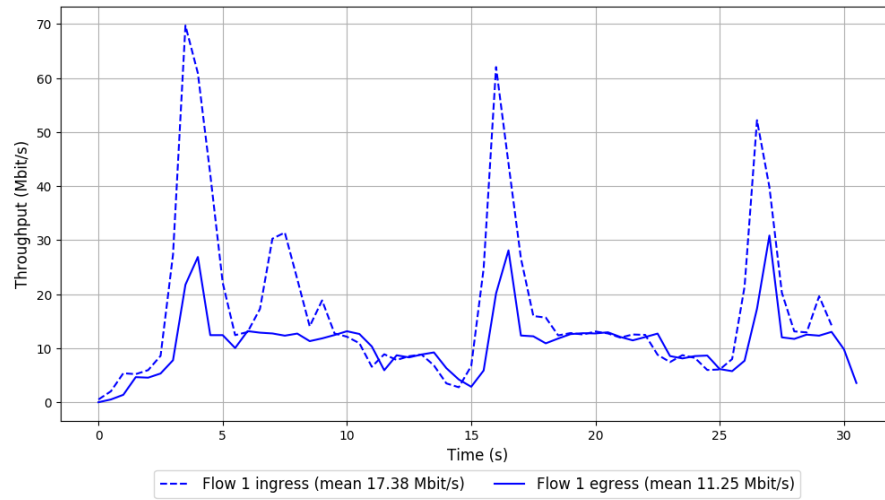
-- Flow 1:

Average throughput: 11.25 Mbit/s

95th percentile per-packet one-way delay: 97.188 ms

Loss rate: 35.28%

Run 1: Report of Copa — Data Link

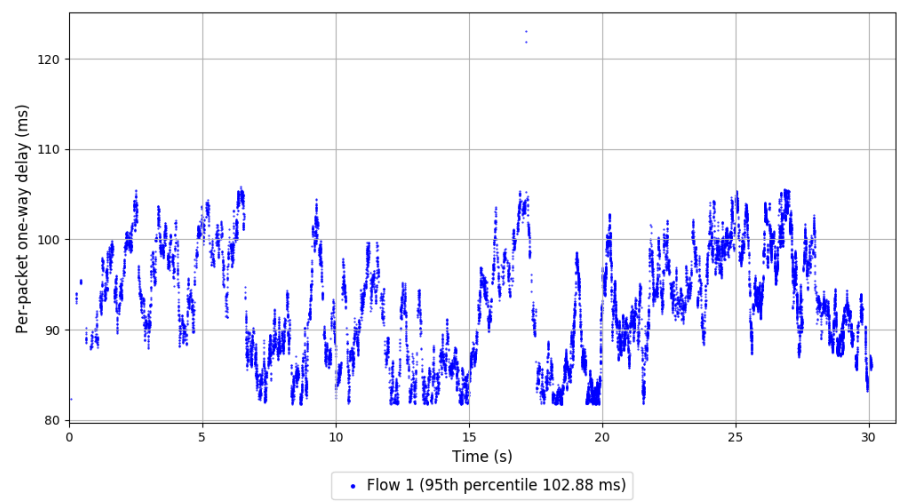
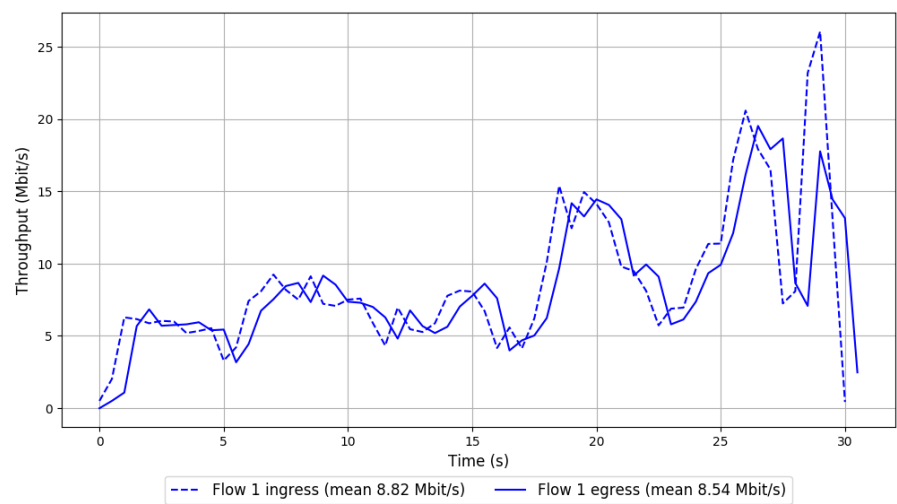


Run 2: Statistics of Copa

Start at: 2018-09-10 23:14:25
End at: 2018-09-10 23:14:55
Local clock offset: -13.375 ms
Remote clock offset: 3.232 ms

Below is generated by plot.py at 2018-09-11 00:20:20
Datalink statistics
-- Total of 1 flow:
Average throughput: 8.54 Mbit/s
95th percentile per-packet one-way delay: 102.879 ms
Loss rate: 3.19%
-- Flow 1:
Average throughput: 8.54 Mbit/s
95th percentile per-packet one-way delay: 102.879 ms
Loss rate: 3.19%

Run 2: Report of Copa — Data Link

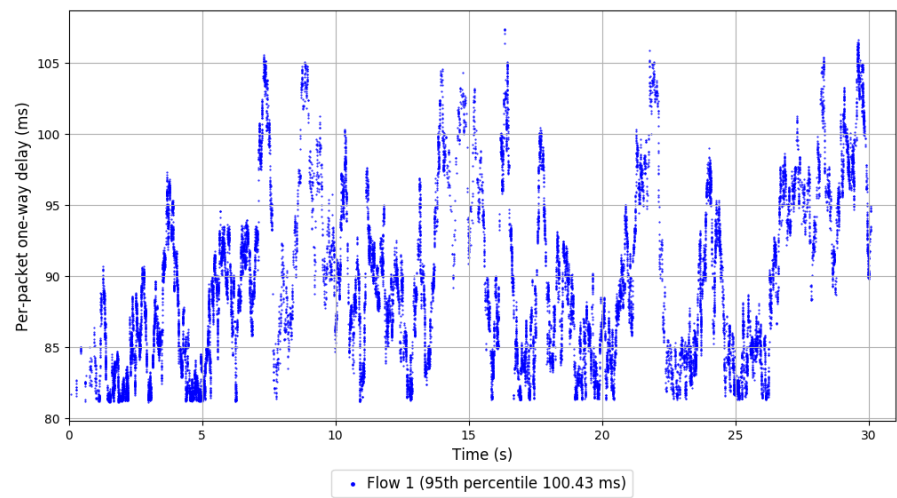
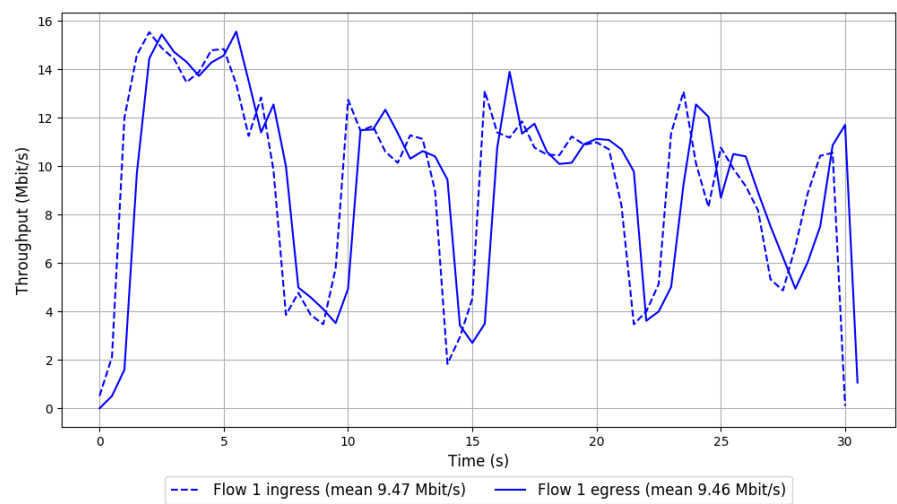


Run 3: Statistics of Copa

Start at: 2018-09-10 23:35:35
End at: 2018-09-10 23:36:05
Local clock offset: -10.779 ms
Remote clock offset: 2.908 ms

Below is generated by plot.py at 2018-09-11 00:20:20
Datalink statistics
-- Total of 1 flow:
Average throughput: 9.46 Mbit/s
95th percentile per-packet one-way delay: 100.434 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 9.46 Mbit/s
95th percentile per-packet one-way delay: 100.434 ms
Loss rate: 0.09%

Run 3: Report of Copa — Data Link

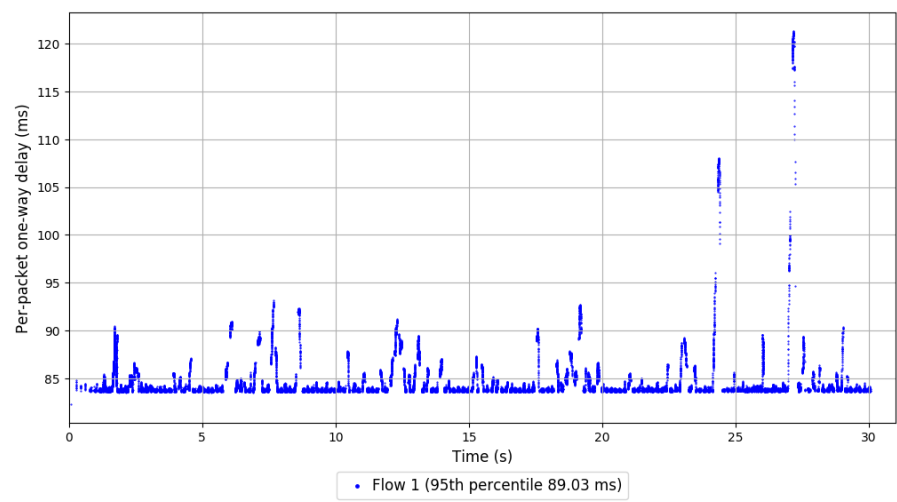
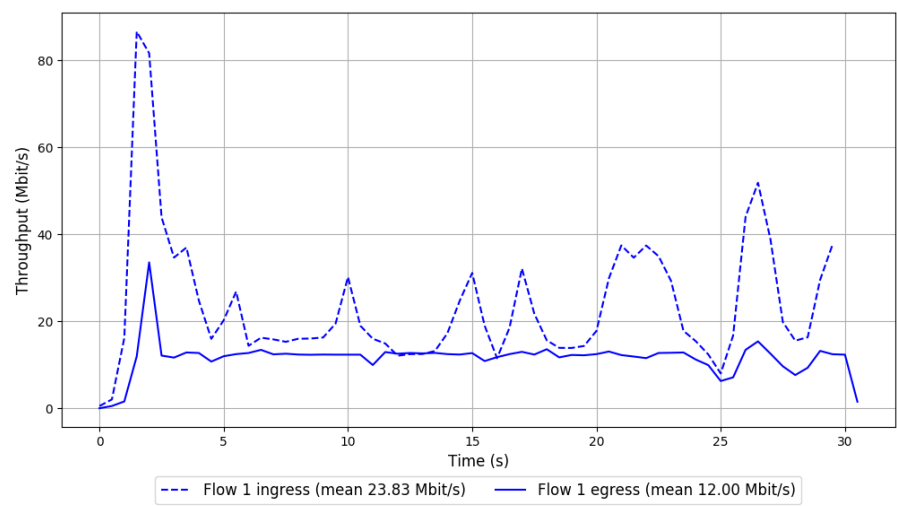


Run 4: Statistics of Copa

Start at: 2018-09-10 23:56:44
End at: 2018-09-10 23:57:14
Local clock offset: -9.558 ms
Remote clock offset: 1.417 ms

Below is generated by plot.py at 2018-09-11 00:20:20
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.00 Mbit/s
95th percentile per-packet one-way delay: 89.027 ms
Loss rate: 49.67%
-- Flow 1:
Average throughput: 12.00 Mbit/s
95th percentile per-packet one-way delay: 89.027 ms
Loss rate: 49.67%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-09-11 00:17:42

End at: 2018-09-11 00:18:12

Local clock offset: -5.915 ms

Remote clock offset: 3.299 ms

Below is generated by plot.py at 2018-09-11 00:20:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 11.36 Mbit/s

95th percentile per-packet one-way delay: 94.717 ms

Loss rate: 16.91%

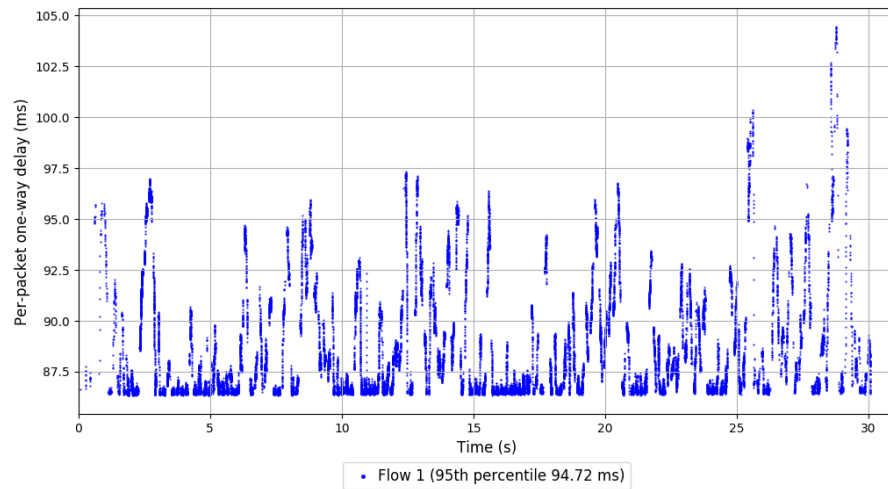
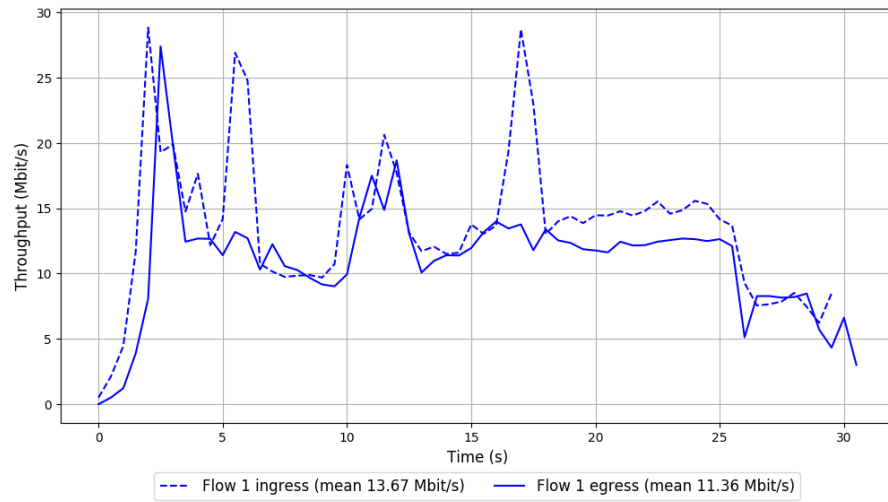
-- Flow 1:

Average throughput: 11.36 Mbit/s

95th percentile per-packet one-way delay: 94.717 ms

Loss rate: 16.91%

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-09-10 22:51:59

End at: 2018-09-10 22:52:29

Local clock offset: -10.3 ms

Remote clock offset: 2.8 ms

Below is generated by plot.py at 2018-09-11 00:20:20

Datalink statistics

-- Total of 1 flow:

Average throughput: 55.72 Mbit/s

95th percentile per-packet one-way delay: 95.385 ms

Loss rate: 0.81%

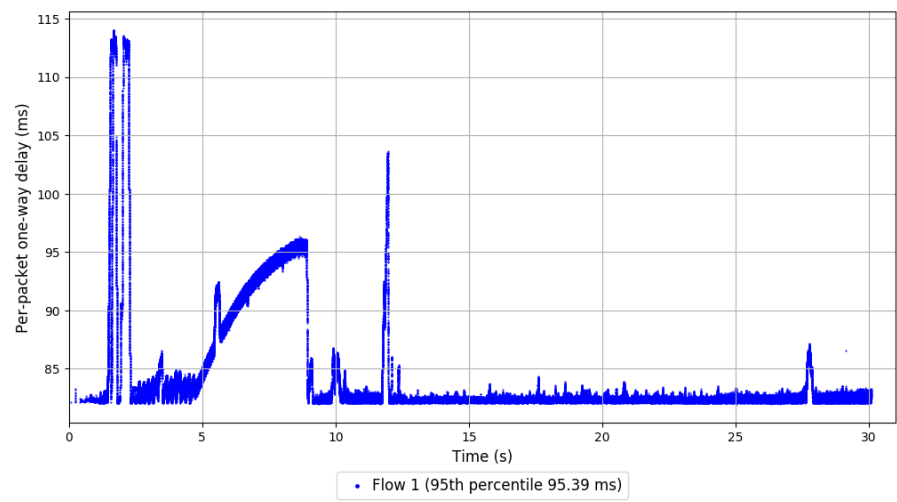
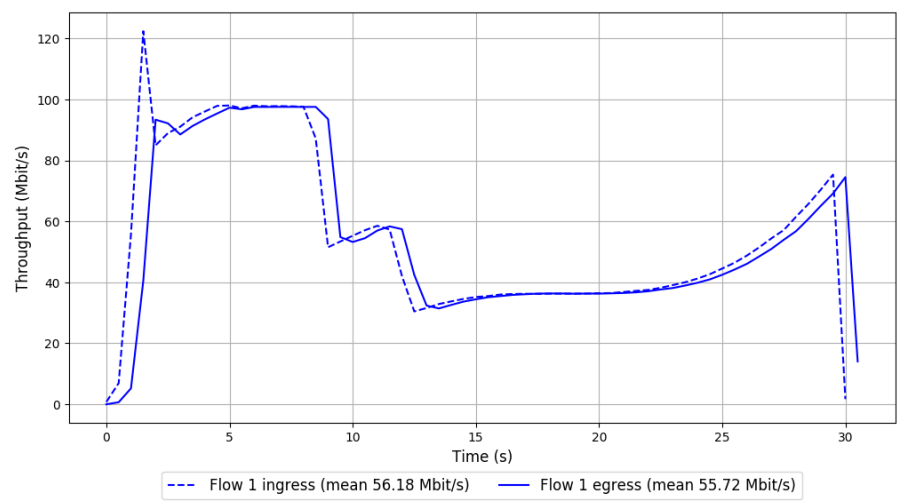
-- Flow 1:

Average throughput: 55.72 Mbit/s

95th percentile per-packet one-way delay: 95.385 ms

Loss rate: 0.81%

Run 1: Report of TCP Cubic — Data Link

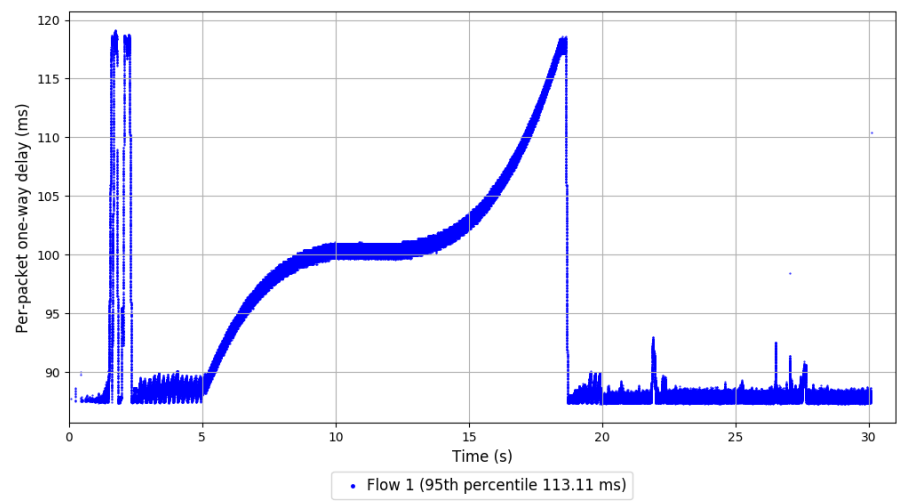
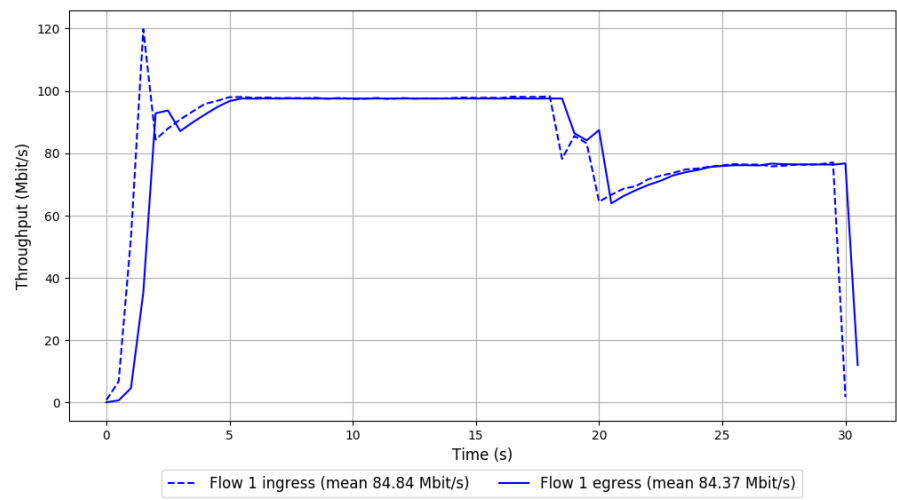


Run 2: Statistics of TCP Cubic

Start at: 2018-09-10 23:13:11
End at: 2018-09-10 23:13:41
Local clock offset: -13.231 ms
Remote clock offset: 6.945 ms

Below is generated by plot.py at 2018-09-11 00:20:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 84.37 Mbit/s
95th percentile per-packet one-way delay: 113.108 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 84.37 Mbit/s
95th percentile per-packet one-way delay: 113.108 ms
Loss rate: 0.52%

Run 2: Report of TCP Cubic — Data Link

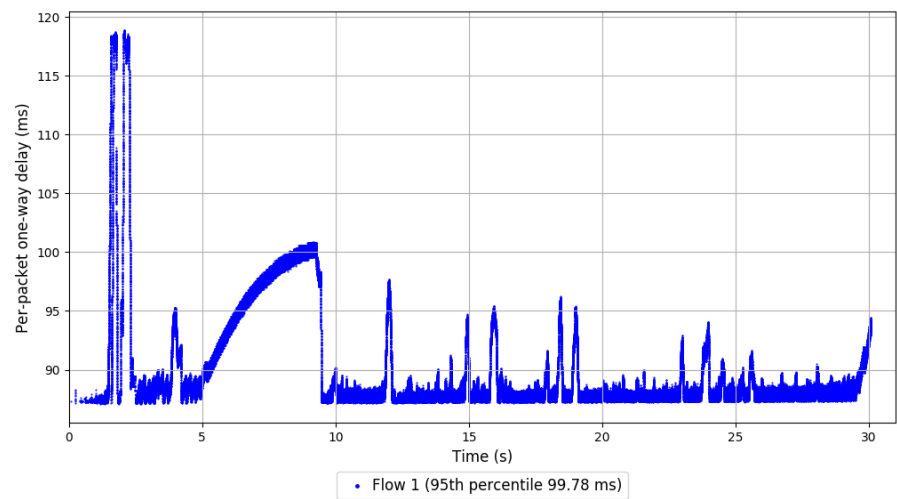
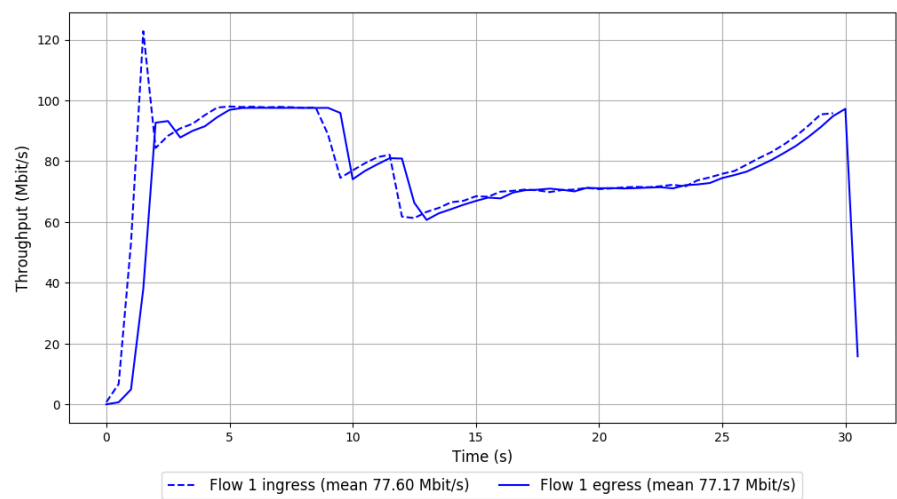


Run 3: Statistics of TCP Cubic

Start at: 2018-09-10 23:34:15
End at: 2018-09-10 23:34:45
Local clock offset: -11.314 ms
Remote clock offset: 6.928 ms

Below is generated by plot.py at 2018-09-11 00:20:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 77.17 Mbit/s
95th percentile per-packet one-way delay: 99.784 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 77.17 Mbit/s
95th percentile per-packet one-way delay: 99.784 ms
Loss rate: 0.53%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-09-10 23:55:34

End at: 2018-09-10 23:56:04

Local clock offset: -9.605 ms

Remote clock offset: 5.841 ms

Below is generated by plot.py at 2018-09-11 00:20:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 35.02 Mbit/s

95th percentile per-packet one-way delay: 100.514 ms

Loss rate: 1.15%

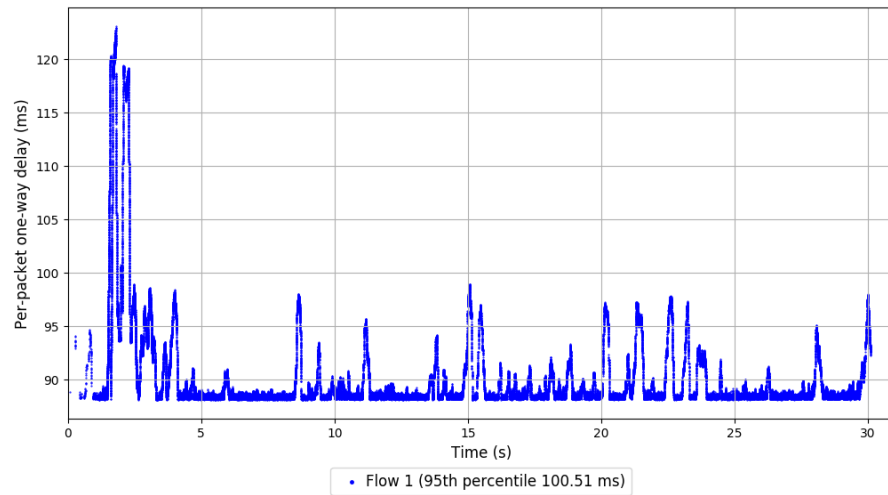
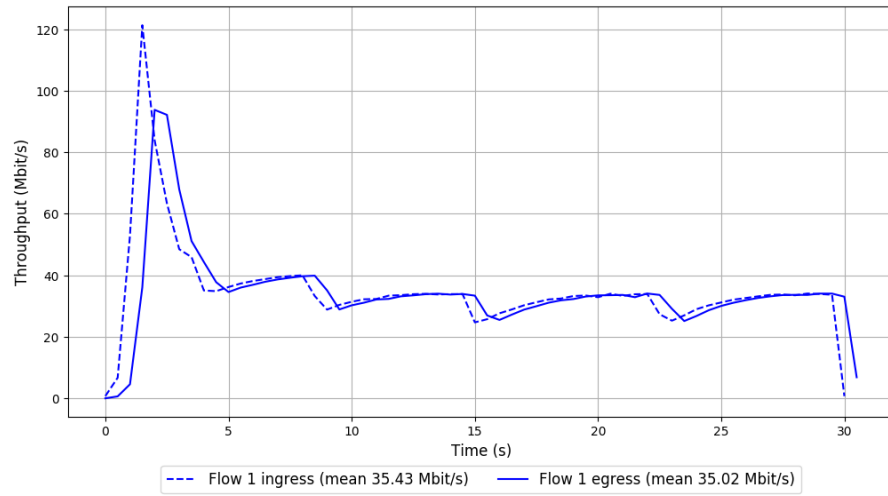
-- Flow 1:

Average throughput: 35.02 Mbit/s

95th percentile per-packet one-way delay: 100.514 ms

Loss rate: 1.15%

Run 4: Report of TCP Cubic — Data Link

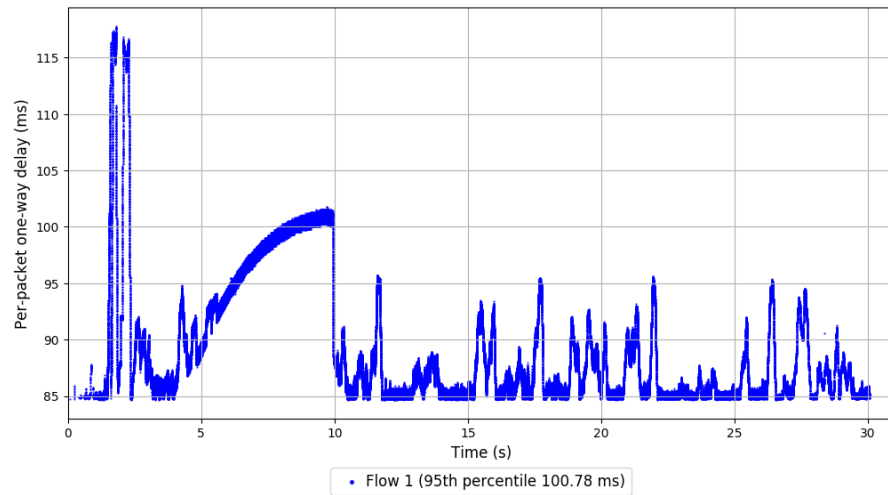
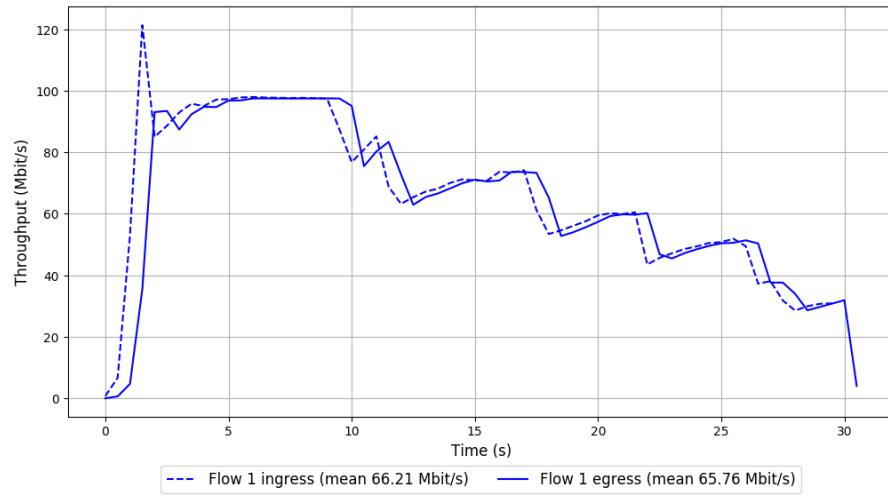


Run 5: Statistics of TCP Cubic

Start at: 2018-09-11 00:16:31
End at: 2018-09-11 00:17:01
Local clock offset: -5.973 ms
Remote clock offset: -0.009 ms

Below is generated by plot.py at 2018-09-11 00:20:55
Datalink statistics
-- Total of 1 flow:
Average throughput: 65.76 Mbit/s
95th percentile per-packet one-way delay: 100.783 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 65.76 Mbit/s
95th percentile per-packet one-way delay: 100.783 ms
Loss rate: 0.69%

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2018-09-10 22:36:50

End at: 2018-09-10 22:37:20

Local clock offset: -9.891 ms

Remote clock offset: 2.733 ms

Below is generated by plot.py at 2018-09-11 00:21:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 93.00 Mbit/s

95th percentile per-packet one-way delay: 116.979 ms

Loss rate: 8.14%

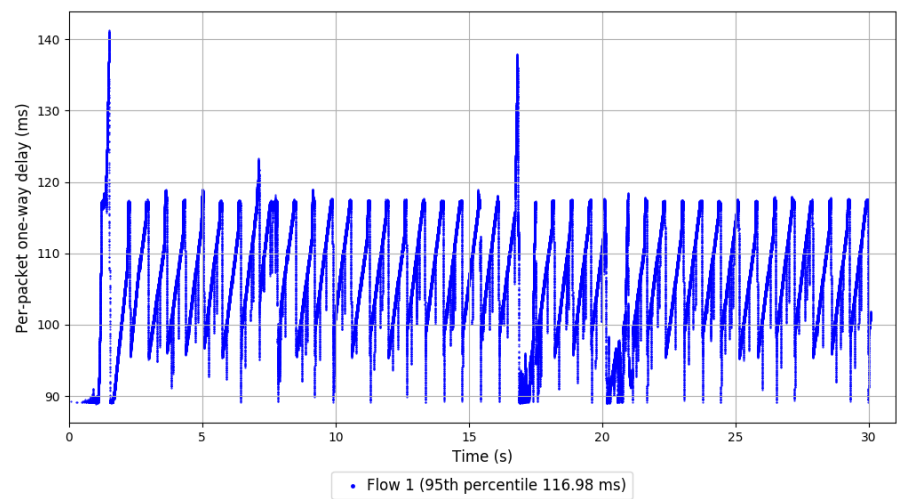
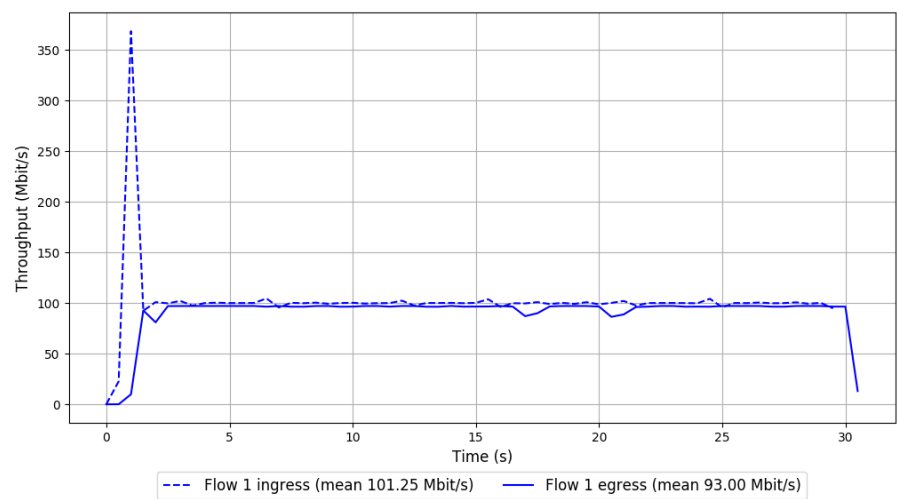
-- Flow 1:

Average throughput: 93.00 Mbit/s

95th percentile per-packet one-way delay: 116.979 ms

Loss rate: 8.14%

Run 1: Report of FillP — Data Link

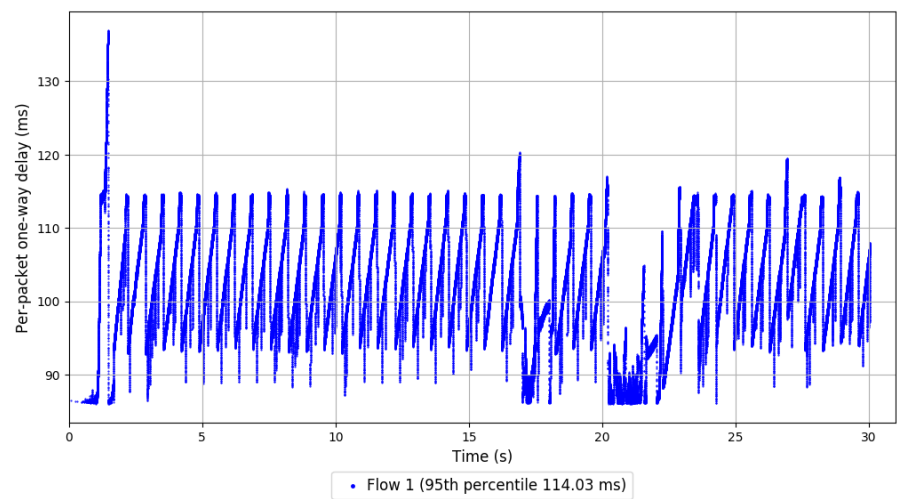
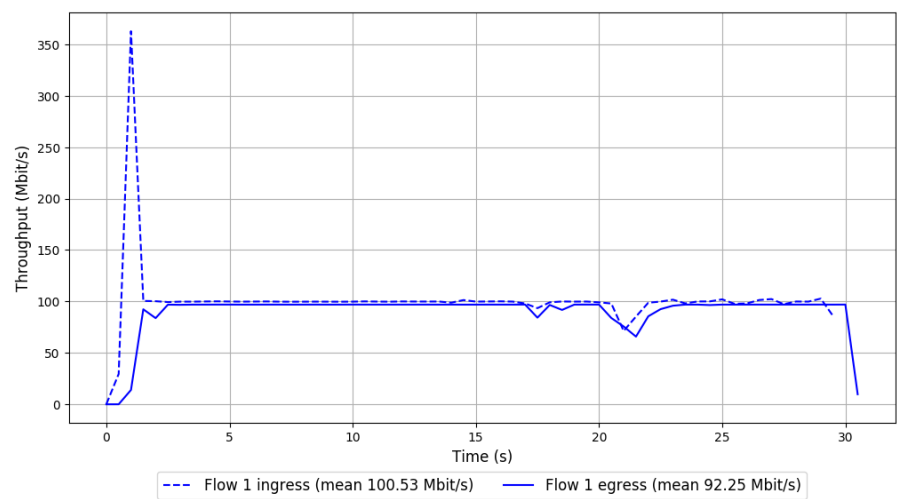


Run 2: Statistics of FillP

Start at: 2018-09-10 22:57:50
End at: 2018-09-10 22:58:20
Local clock offset: -10.137 ms
Remote clock offset: 6.744 ms

Below is generated by plot.py at 2018-09-11 00:21:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 92.25 Mbit/s
95th percentile per-packet one-way delay: 114.027 ms
Loss rate: 8.17%
-- Flow 1:
Average throughput: 92.25 Mbit/s
95th percentile per-packet one-way delay: 114.027 ms
Loss rate: 8.17%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-09-10 23:19:07

End at: 2018-09-10 23:19:37

Local clock offset: -13.27 ms

Remote clock offset: 6.72 ms

Below is generated by plot.py at 2018-09-11 00:21:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.81 Mbit/s

95th percentile per-packet one-way delay: 114.145 ms

Loss rate: 21.30%

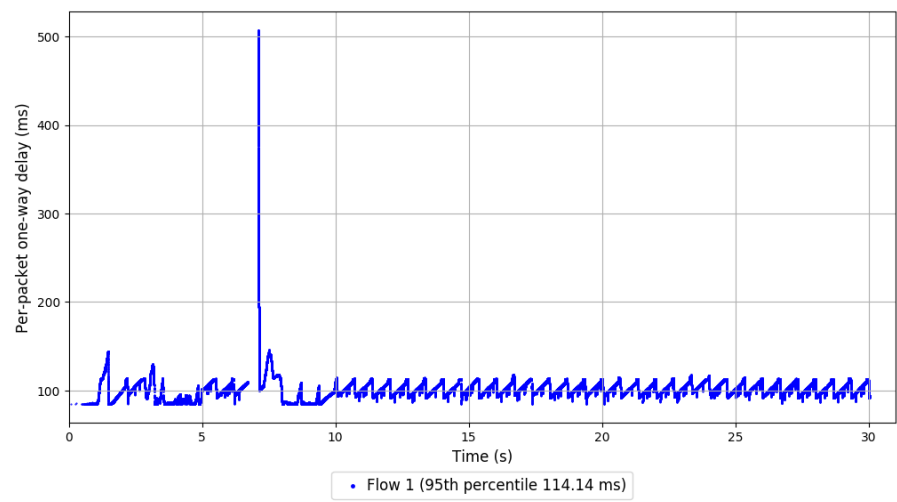
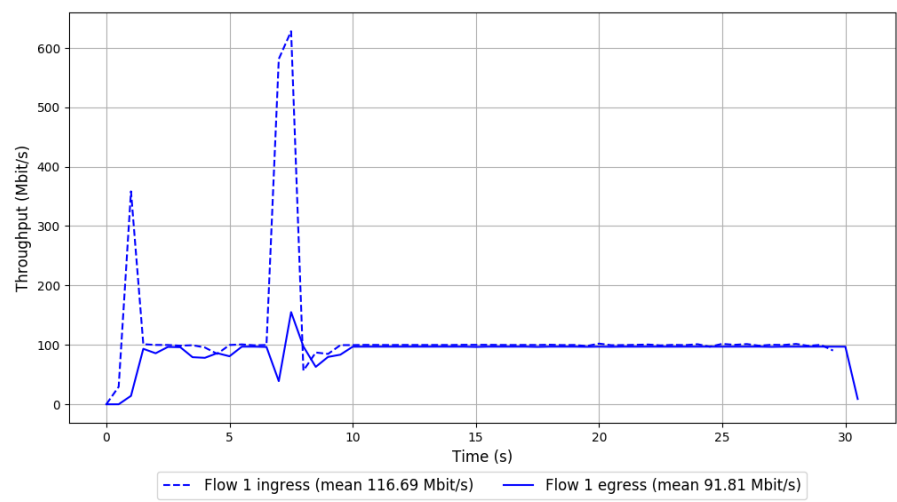
-- Flow 1:

Average throughput: 91.81 Mbit/s

95th percentile per-packet one-way delay: 114.145 ms

Loss rate: 21.30%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-09-10 23:40:20

End at: 2018-09-10 23:40:50

Local clock offset: -9.674 ms

Remote clock offset: 6.564 ms

Below is generated by plot.py at 2018-09-11 00:21:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 93.71 Mbit/s

95th percentile per-packet one-way delay: 125.973 ms

Loss rate: 8.47%

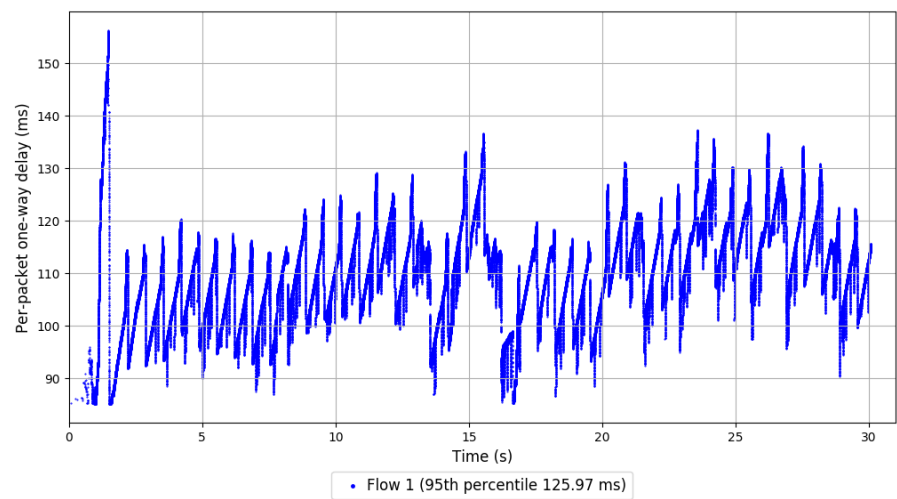
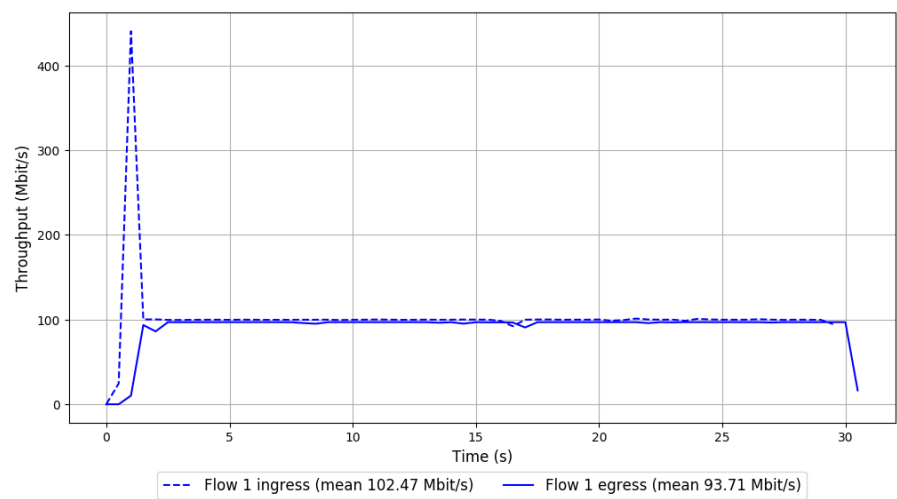
-- Flow 1:

Average throughput: 93.71 Mbit/s

95th percentile per-packet one-way delay: 125.973 ms

Loss rate: 8.47%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-09-11 00:01:22

End at: 2018-09-11 00:01:52

Local clock offset: -8.633 ms

Remote clock offset: 0.756 ms

Below is generated by plot.py at 2018-09-11 00:21:52

Datalink statistics

-- Total of 1 flow:

Average throughput: 93.78 Mbit/s

95th percentile per-packet one-way delay: 113.458 ms

Loss rate: 8.78%

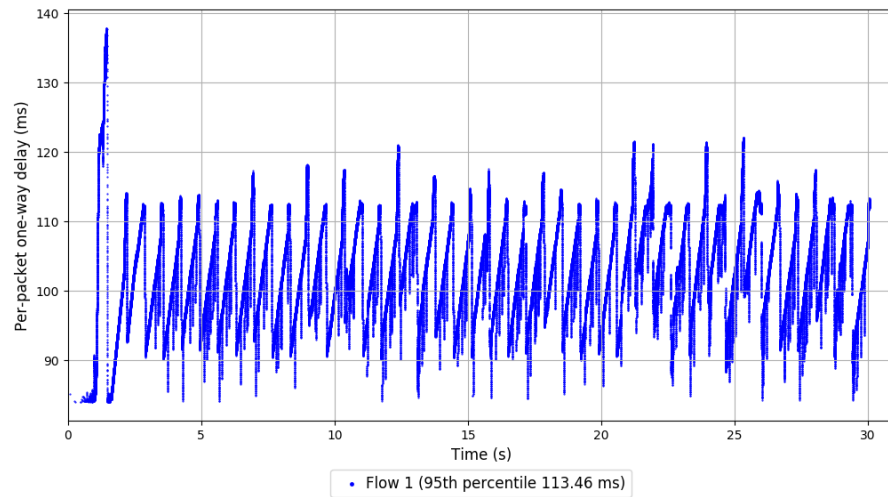
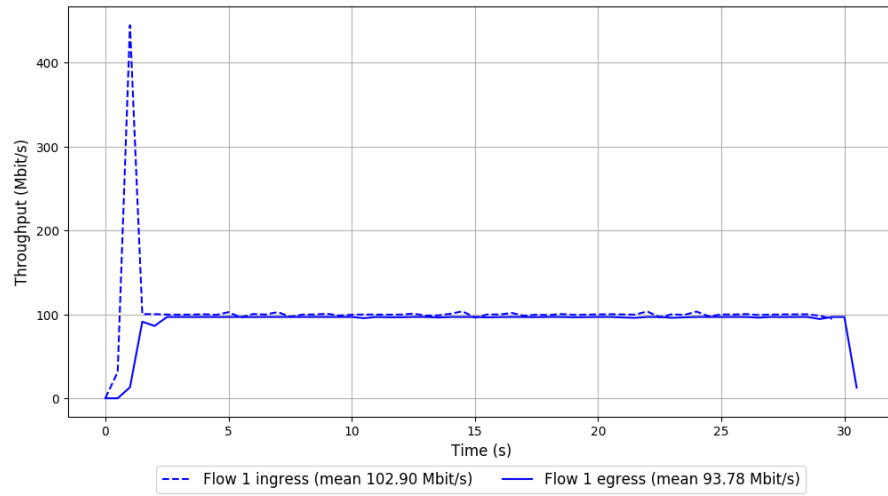
-- Flow 1:

Average throughput: 93.78 Mbit/s

95th percentile per-packet one-way delay: 113.458 ms

Loss rate: 8.78%

Run 5: Report of FillP — Data Link

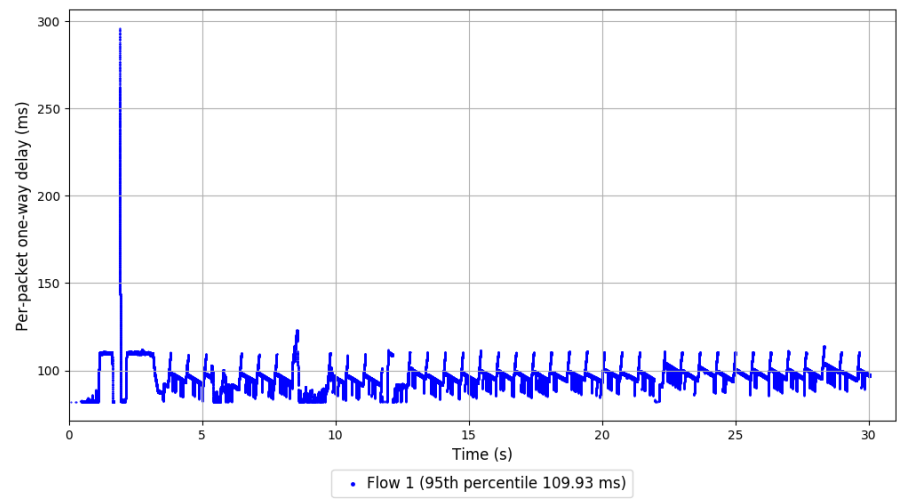
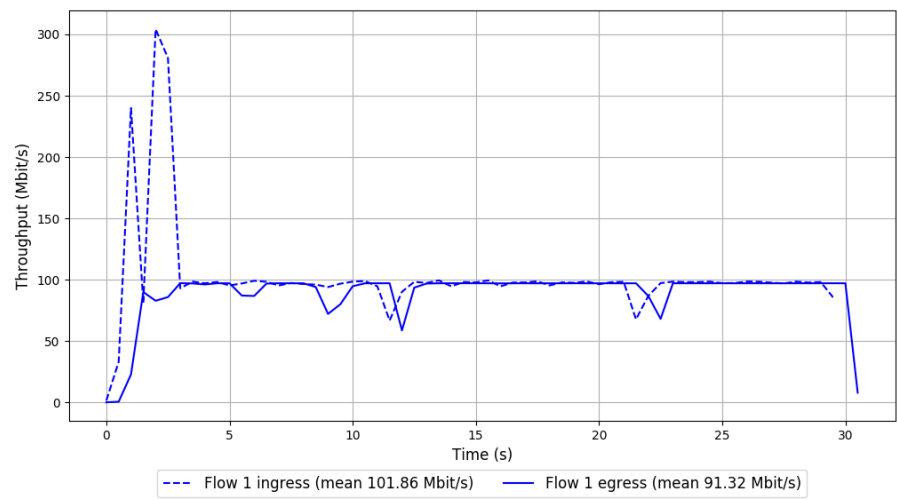


```
Run 1: Statistics of FillP-Sheep

Start at: 2018-09-10 22:38:02
End at: 2018-09-10 22:38:32
Local clock offset: -9.769 ms
Remote clock offset: 2.853 ms

# Below is generated by plot.py at 2018-09-11 00:21:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.32 Mbit/s
95th percentile per-packet one-way delay: 109.929 ms
Loss rate: 10.30%
-- Flow 1:
Average throughput: 91.32 Mbit/s
95th percentile per-packet one-way delay: 109.929 ms
Loss rate: 10.30%
```

Run 1: Report of FillP-Sheep — Data Link

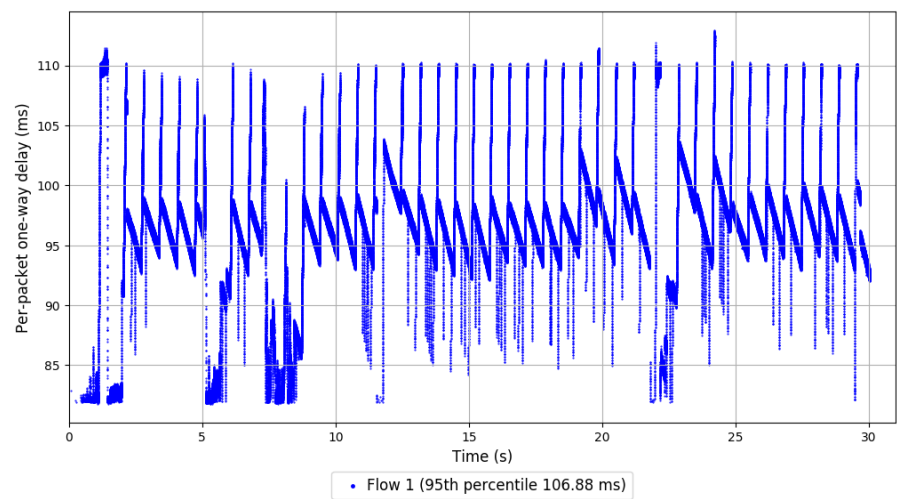
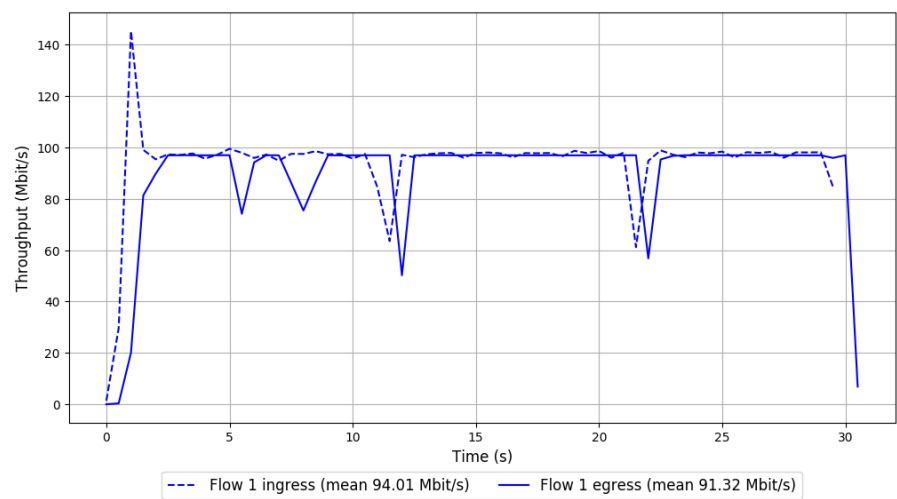


Run 2: Statistics of FillP-Sheep

Start at: 2018-09-10 22:59:03
End at: 2018-09-10 22:59:33
Local clock offset: -11.051 ms
Remote clock offset: 2.889 ms

Below is generated by plot.py at 2018-09-11 00:21:53
Datalink statistics
-- Total of 1 flow:
Average throughput: 91.32 Mbit/s
95th percentile per-packet one-way delay: 106.875 ms
Loss rate: 2.83%
-- Flow 1:
Average throughput: 91.32 Mbit/s
95th percentile per-packet one-way delay: 106.875 ms
Loss rate: 2.83%

Run 2: Report of FillP-Sheep — Data Link

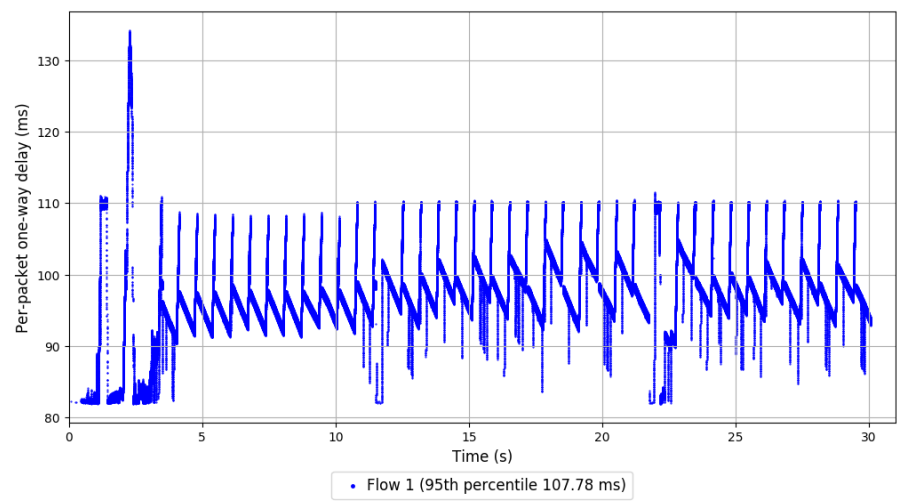
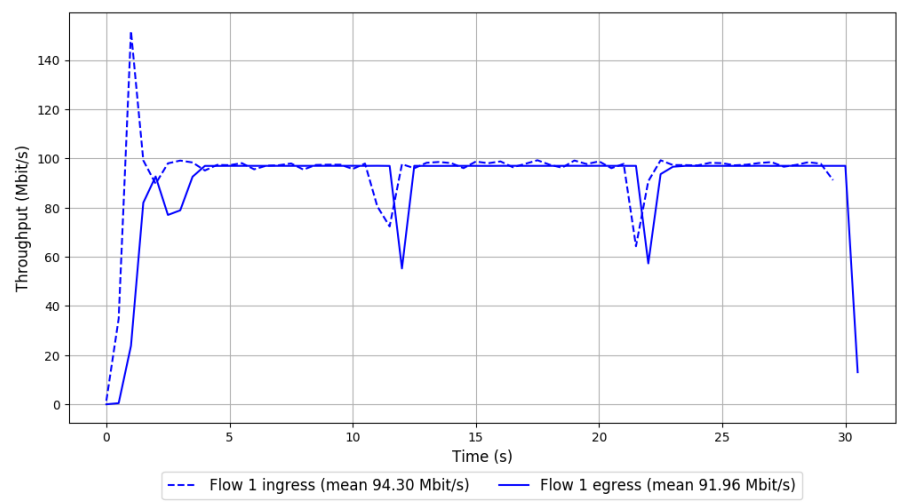


Run 3: Statistics of FillP-Sheep

Start at: 2018-09-10 23:20:20
End at: 2018-09-10 23:20:50
Local clock offset: -14.238 ms
Remote clock offset: 3.26 ms

Below is generated by plot.py at 2018-09-11 00:22:19
Datalink statistics
-- Total of 1 flow:
Average throughput: 91.96 Mbit/s
95th percentile per-packet one-way delay: 107.784 ms
Loss rate: 2.45%
-- Flow 1:
Average throughput: 91.96 Mbit/s
95th percentile per-packet one-way delay: 107.784 ms
Loss rate: 2.45%

Run 3: Report of FillP-Sheep — Data Link



Run 4: Statistics of FillP-Sheep

Start at: 2018-09-10 23:41:34

End at: 2018-09-10 23:42:04

Local clock offset: -9.472 ms

Remote clock offset: 2.67 ms

Below is generated by plot.py at 2018-09-11 00:23:06

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.82 Mbit/s

95th percentile per-packet one-way delay: 125.059 ms

Loss rate: 1.94%

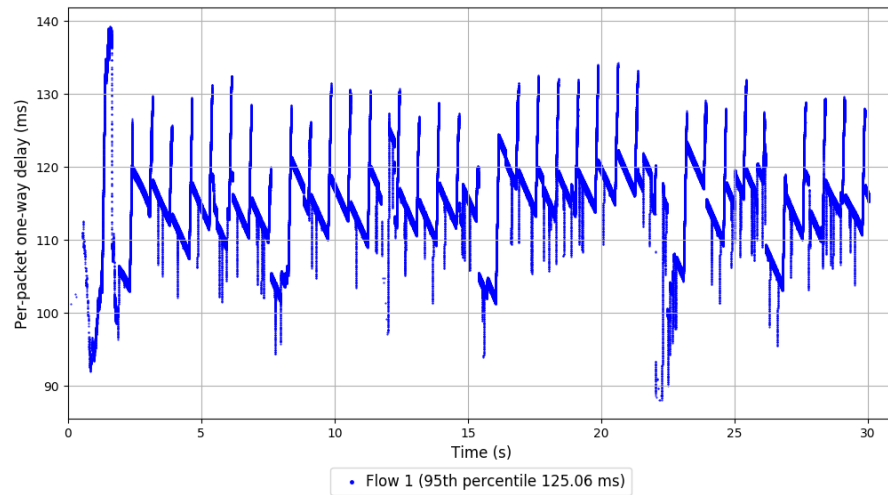
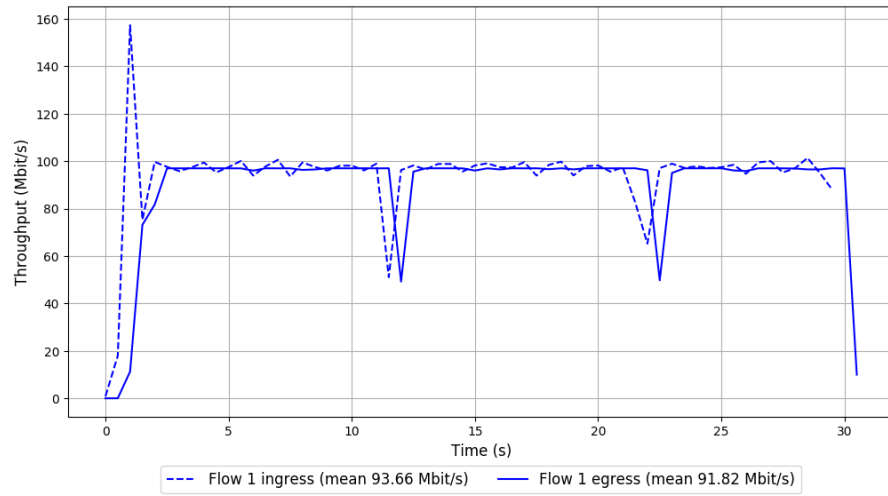
-- Flow 1:

Average throughput: 91.82 Mbit/s

95th percentile per-packet one-way delay: 125.059 ms

Loss rate: 1.94%

Run 4: Report of FillP-Sheep — Data Link



Run 5: Statistics of FillP-Sheep

Start at: 2018-09-11 00:02:34

End at: 2018-09-11 00:03:04

Local clock offset: -8.378 ms

Remote clock offset: 1.013 ms

Below is generated by plot.py at 2018-09-11 00:23:06

Datalink statistics

-- Total of 1 flow:

Average throughput: 92.10 Mbit/s

95th percentile per-packet one-way delay: 119.482 ms

Loss rate: 2.04%

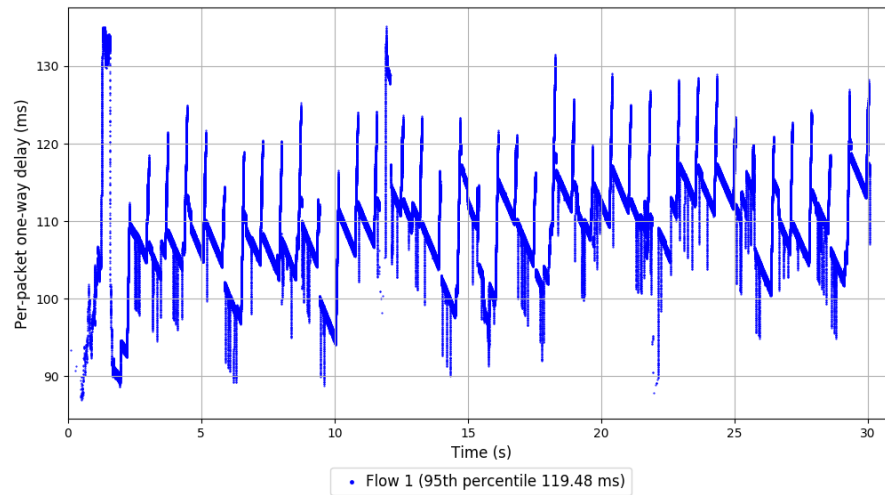
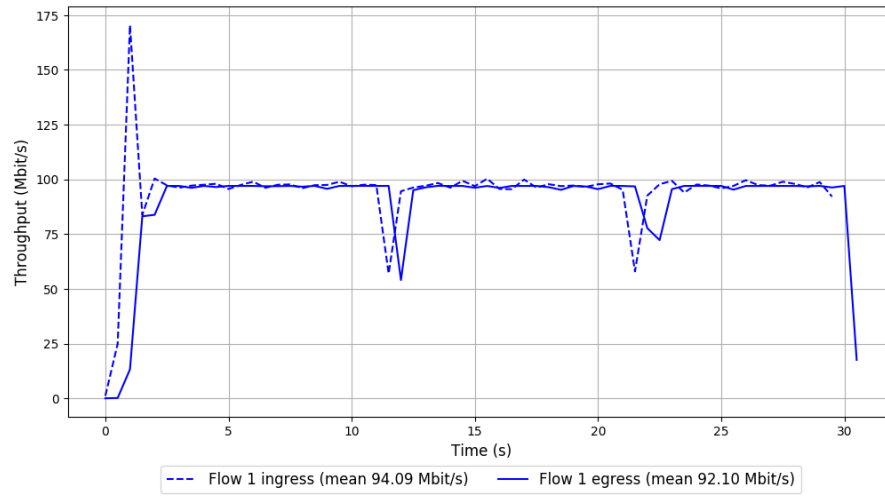
-- Flow 1:

Average throughput: 92.10 Mbit/s

95th percentile per-packet one-way delay: 119.482 ms

Loss rate: 2.04%

Run 5: Report of FillP-Sheep — Data Link

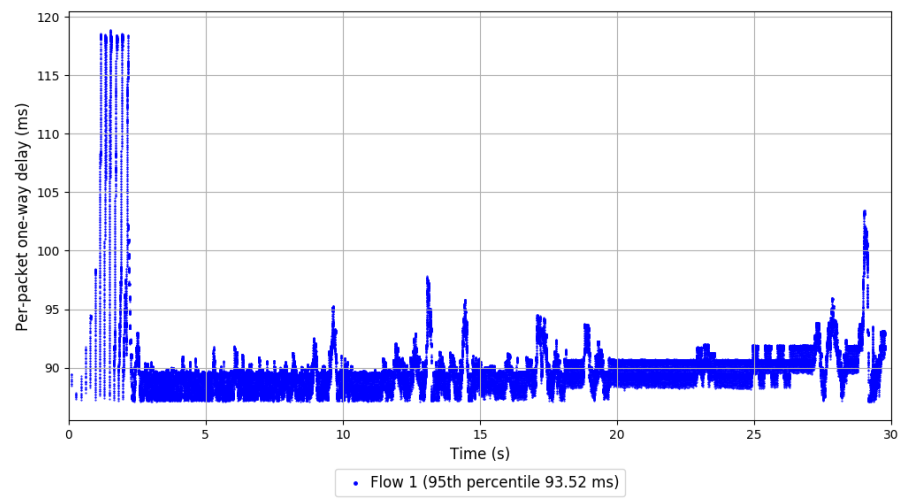
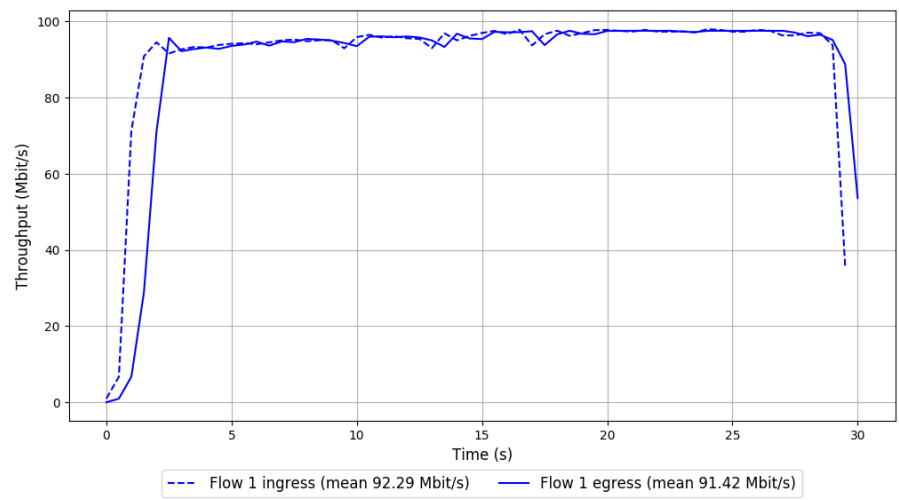


```
Run 1: Statistics of Indigo

Start at: 2018-09-10 22:49:38
End at: 2018-09-10 22:50:08
Local clock offset: -10.071 ms
Remote clock offset: 6.685 ms

# Below is generated by plot.py at 2018-09-11 00:23:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.42 Mbit/s
95th percentile per-packet one-way delay: 93.518 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 91.42 Mbit/s
95th percentile per-packet one-way delay: 93.518 ms
Loss rate: 0.93%
```

Run 1: Report of Indigo — Data Link

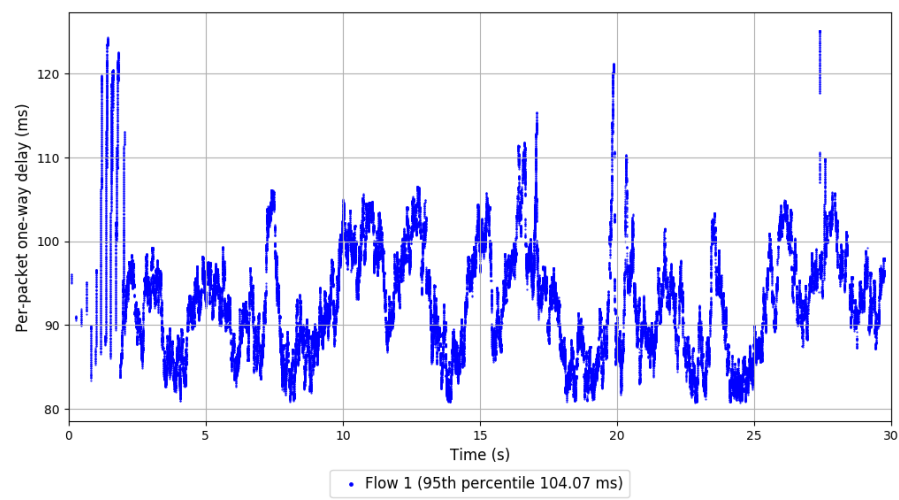
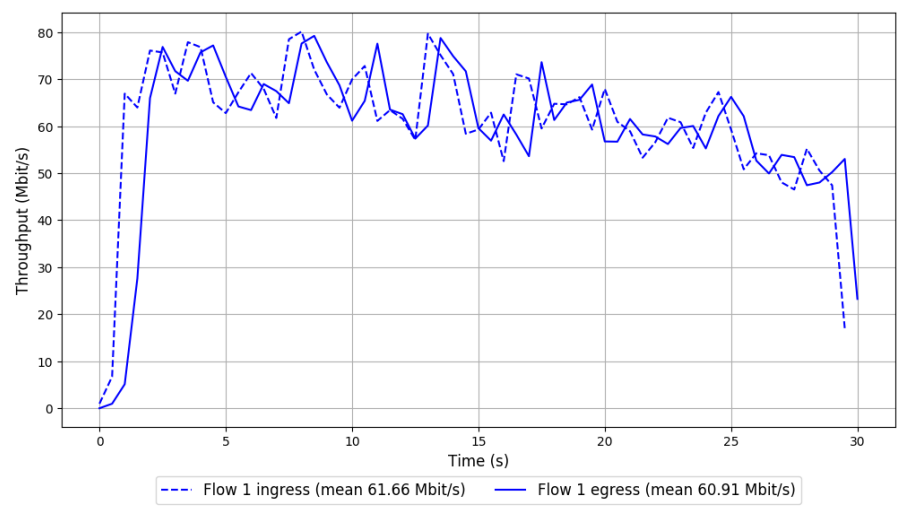


Run 2: Statistics of Indigo

Start at: 2018-09-10 23:10:50
End at: 2018-09-10 23:11:20
Local clock offset: -12.096 ms
Remote clock offset: 3.101 ms

Below is generated by plot.py at 2018-09-11 00:23:06
Datalink statistics
-- Total of 1 flow:
Average throughput: 60.91 Mbit/s
95th percentile per-packet one-way delay: 104.067 ms
Loss rate: 1.27%
-- Flow 1:
Average throughput: 60.91 Mbit/s
95th percentile per-packet one-way delay: 104.067 ms
Loss rate: 1.27%

Run 2: Report of Indigo — Data Link

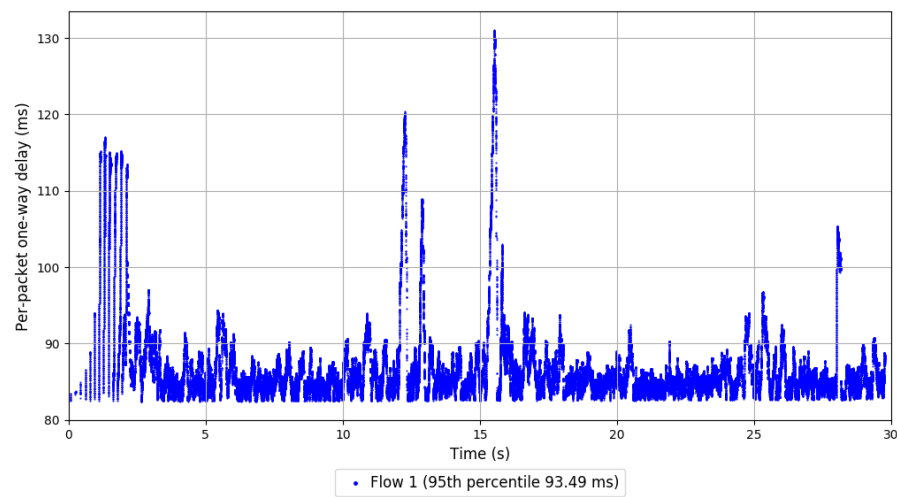
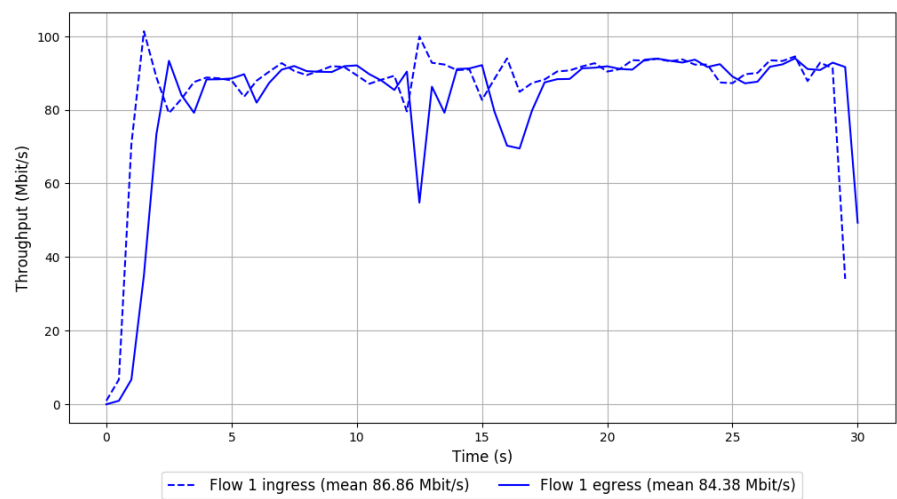


Run 3: Statistics of Indigo

Start at: 2018-09-10 23:31:55
End at: 2018-09-10 23:32:25
Local clock offset: -13.078 ms
Remote clock offset: 3.138 ms

Below is generated by plot.py at 2018-09-11 00:23:06
Datalink statistics
-- Total of 1 flow:
Average throughput: 84.38 Mbit/s
95th percentile per-packet one-way delay: 93.488 ms
Loss rate: 2.85%
-- Flow 1:
Average throughput: 84.38 Mbit/s
95th percentile per-packet one-way delay: 93.488 ms
Loss rate: 2.85%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2018-09-10 23:53:13

End at: 2018-09-10 23:53:44

Local clock offset: -9.548 ms

Remote clock offset: 5.786 ms

Below is generated by plot.py at 2018-09-11 00:23:06

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.81 Mbit/s

95th percentile per-packet one-way delay: 96.523 ms

Loss rate: 0.67%

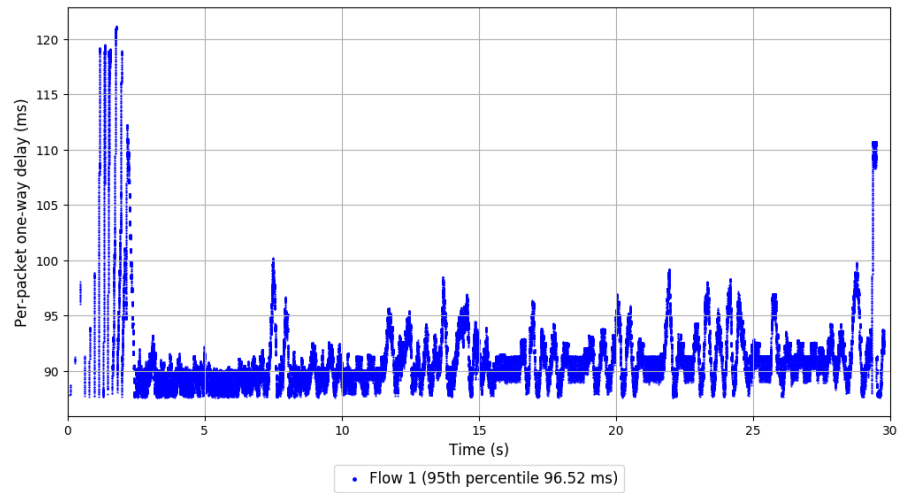
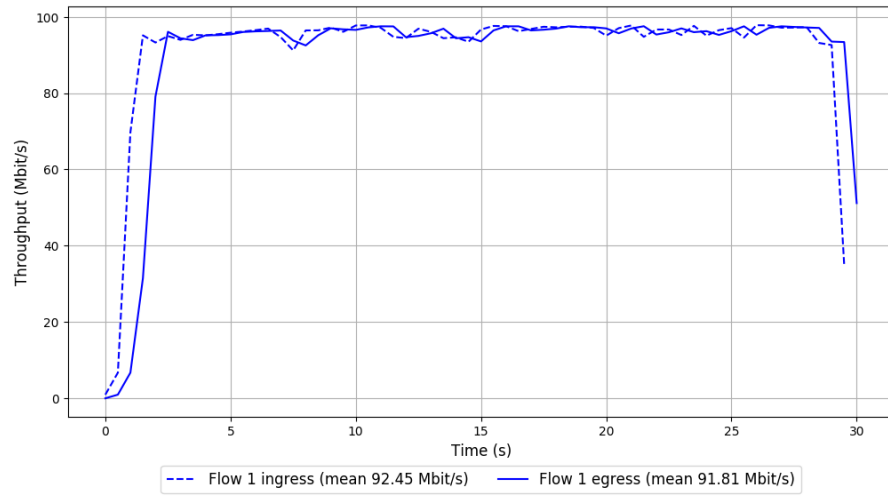
-- Flow 1:

Average throughput: 91.81 Mbit/s

95th percentile per-packet one-way delay: 96.523 ms

Loss rate: 0.67%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2018-09-11 00:14:11

End at: 2018-09-11 00:14:41

Local clock offset: -6.888 ms

Remote clock offset: 0.21 ms

Below is generated by plot.py at 2018-09-11 00:23:06

Datalink statistics

-- Total of 1 flow:

Average throughput: 86.15 Mbit/s

95th percentile per-packet one-way delay: 94.269 ms

Loss rate: 1.37%

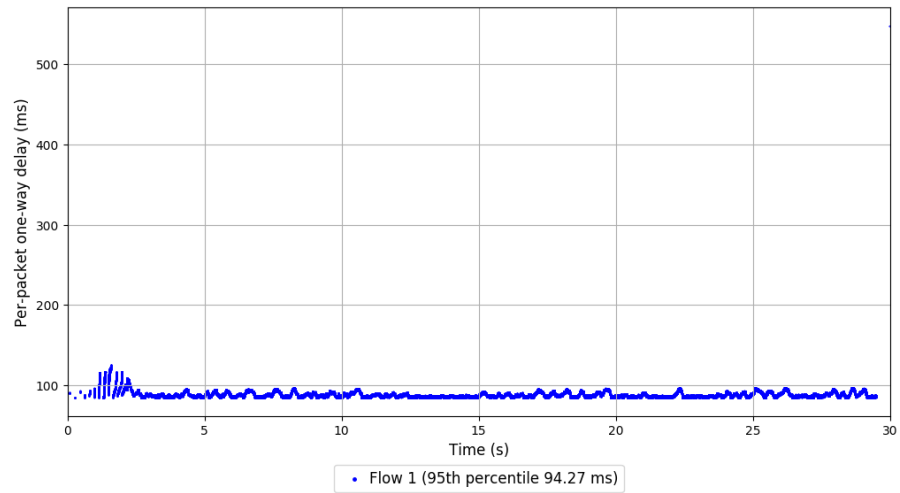
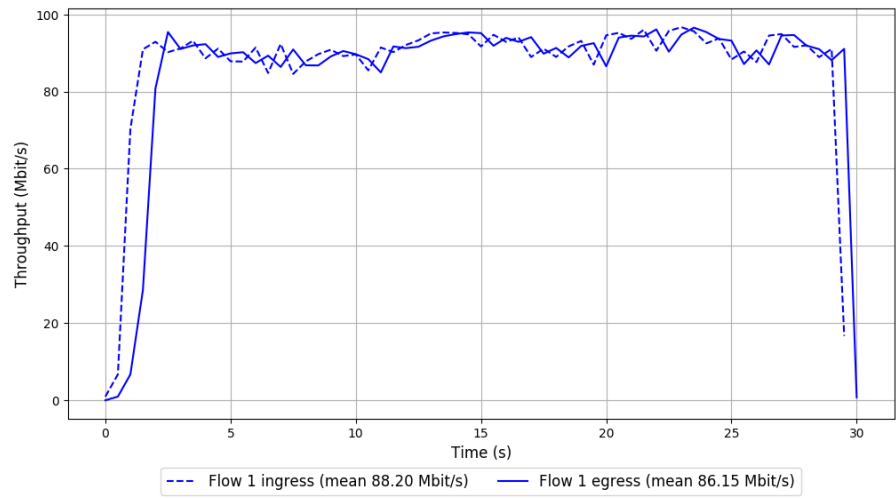
-- Flow 1:

Average throughput: 86.15 Mbit/s

95th percentile per-packet one-way delay: 94.269 ms

Loss rate: 1.37%

Run 5: Report of Indigo — Data Link

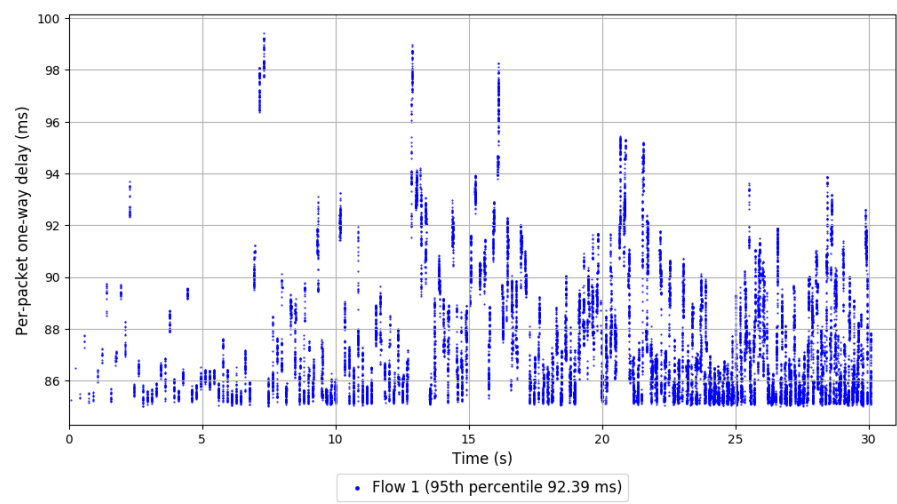
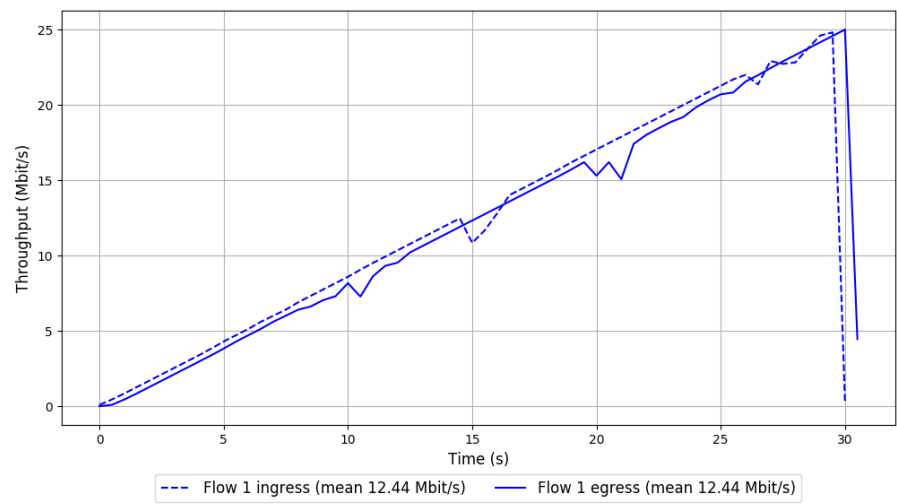


```
Run 1: Statistics of LEDBAT

Start at: 2018-09-10 22:41:32
End at: 2018-09-10 22:42:02
Local clock offset: -8.948 ms
Remote clock offset: 7.041 ms

# Below is generated by plot.py at 2018-09-11 00:23:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.44 Mbit/s
95th percentile per-packet one-way delay: 92.393 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.44 Mbit/s
95th percentile per-packet one-way delay: 92.393 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link

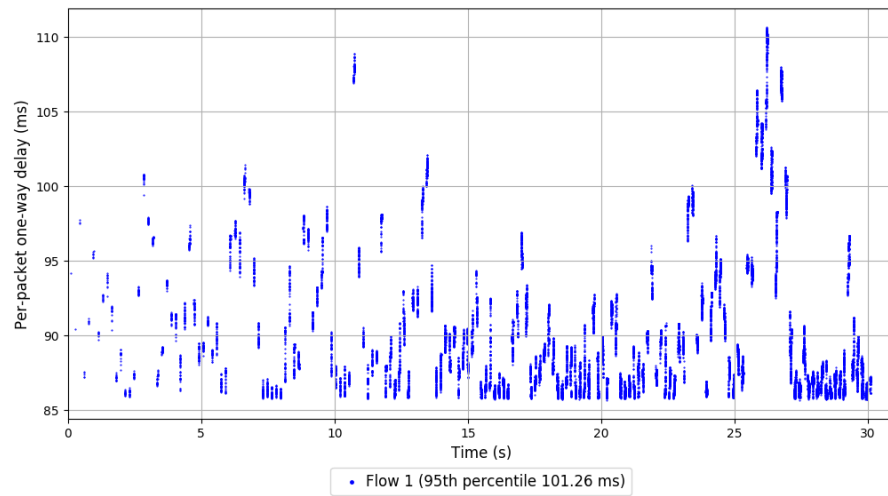
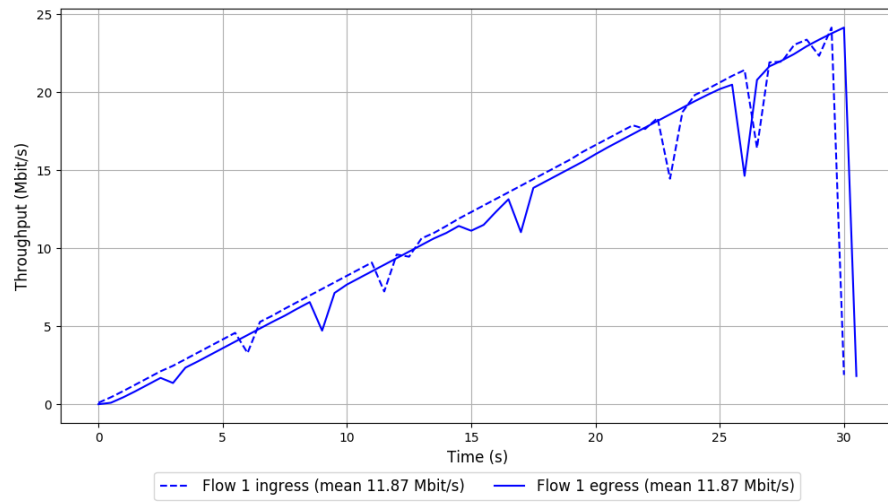


Run 2: Statistics of LEDBAT

Start at: 2018-09-10 23:02:35
End at: 2018-09-10 23:03:05
Local clock offset: -11.609 ms
Remote clock offset: 6.443 ms

Below is generated by plot.py at 2018-09-11 00:23:06
Datalink statistics
-- Total of 1 flow:
Average throughput: 11.87 Mbit/s
95th percentile per-packet one-way delay: 101.264 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 11.87 Mbit/s
95th percentile per-packet one-way delay: 101.264 ms
Loss rate: 0.01%

Run 2: Report of LEDBAT — Data Link

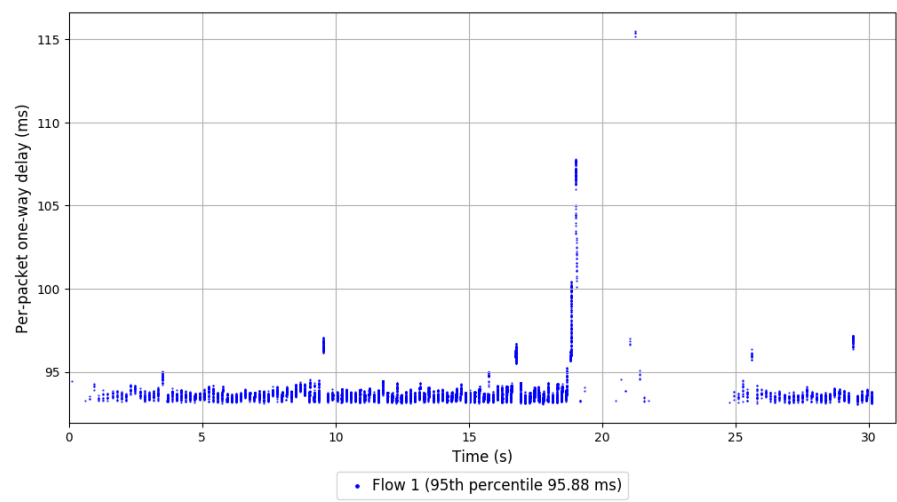
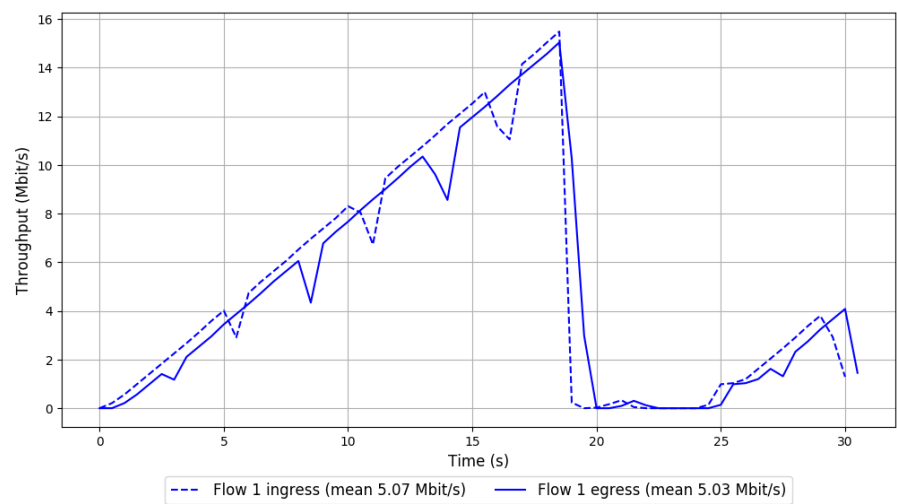


Run 3: Statistics of LEDBAT

Start at: 2018-09-10 23:23:49
End at: 2018-09-10 23:24:19
Local clock offset: -14.795 ms
Remote clock offset: 7.16 ms

Below is generated by plot.py at 2018-09-11 00:23:06
Datalink statistics
-- Total of 1 flow:
Average throughput: 5.03 Mbit/s
95th percentile per-packet one-way delay: 95.877 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 5.03 Mbit/s
95th percentile per-packet one-way delay: 95.877 ms
Loss rate: 0.82%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-09-10 23:45:06

End at: 2018-09-10 23:45:36

Local clock offset: -9.854 ms

Remote clock offset: 2.012 ms

Below is generated by plot.py at 2018-09-11 00:23:06

Datalink statistics

-- Total of 1 flow:

Average throughput: 8.09 Mbit/s

95th percentile per-packet one-way delay: 87.862 ms

Loss rate: 0.13%

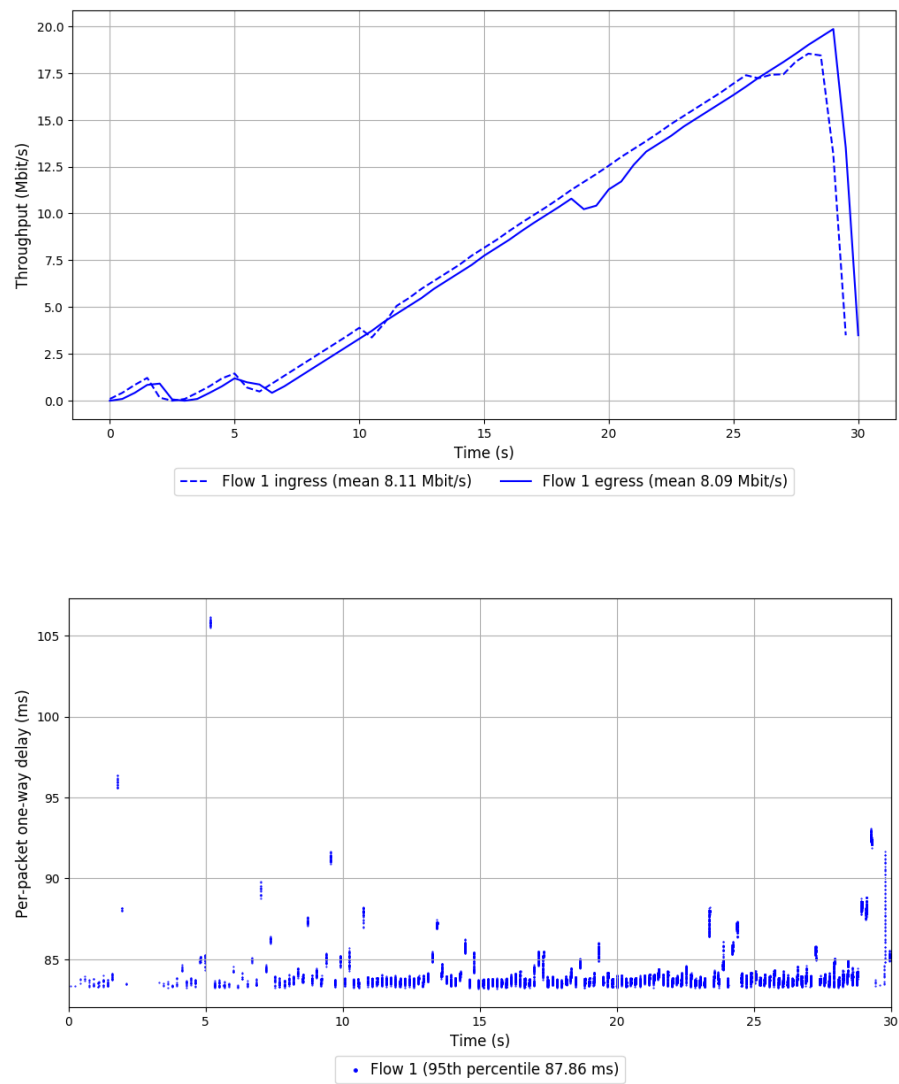
-- Flow 1:

Average throughput: 8.09 Mbit/s

95th percentile per-packet one-way delay: 87.862 ms

Loss rate: 0.13%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-09-11 00:06:04

End at: 2018-09-11 00:06:34

Local clock offset: -6.983 ms

Remote clock offset: 0.376 ms

Below is generated by plot.py at 2018-09-11 00:23:06

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.43 Mbit/s

95th percentile per-packet one-way delay: 90.845 ms

Loss rate: 0.47%

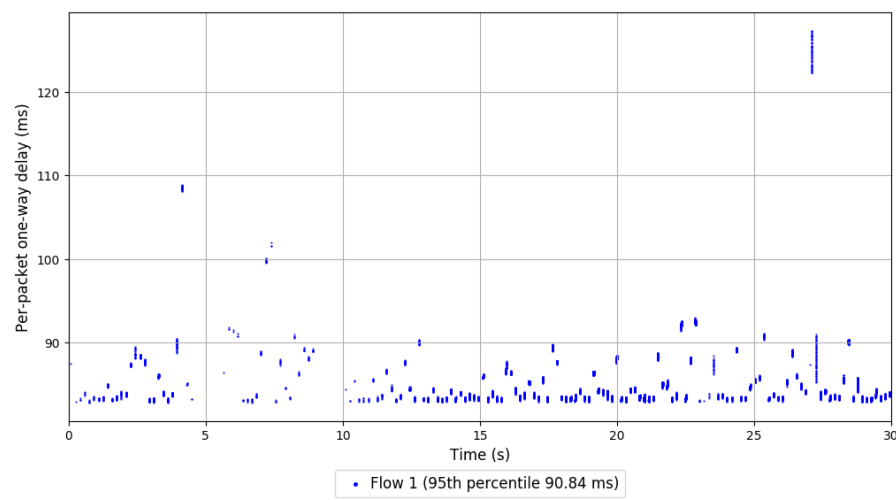
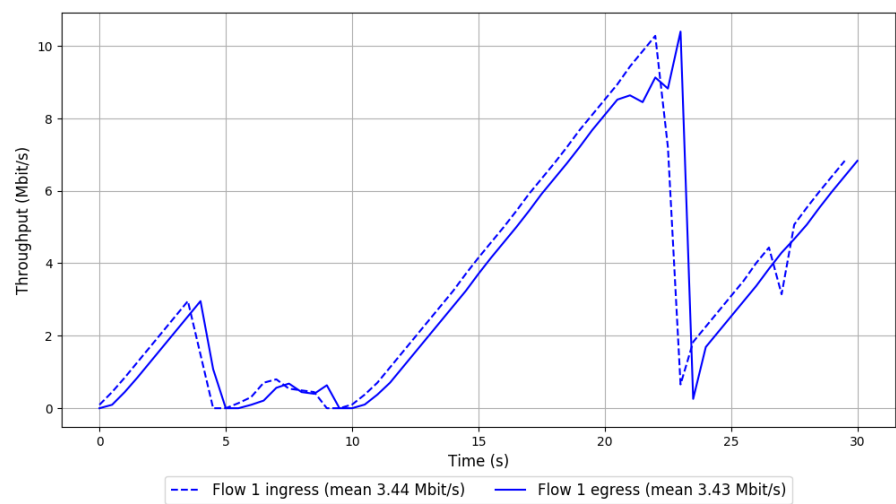
-- Flow 1:

Average throughput: 3.43 Mbit/s

95th percentile per-packet one-way delay: 90.845 ms

Loss rate: 0.47%

Run 5: Report of LEDBAT — Data Link

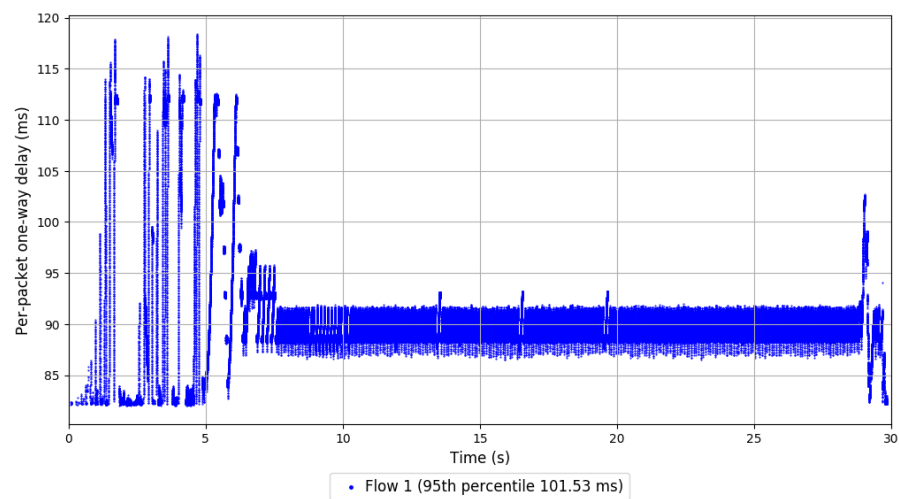
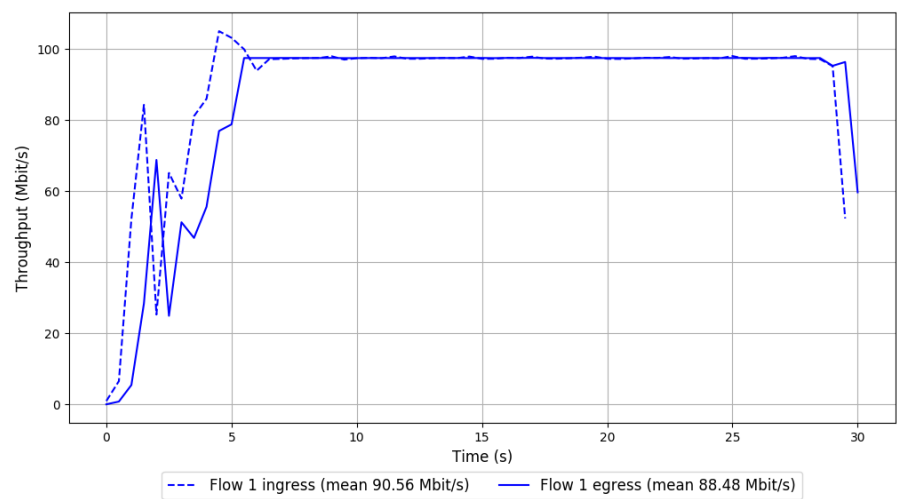


```
Run 1: Statistics of Indigo-Muses

Start at: 2018-09-10 22:34:28
End at: 2018-09-10 22:34:58
Local clock offset: -10.214 ms
Remote clock offset: 2.816 ms

# Below is generated by plot.py at 2018-09-11 00:23:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.48 Mbit/s
95th percentile per-packet one-way delay: 101.533 ms
Loss rate: 2.30%
-- Flow 1:
Average throughput: 88.48 Mbit/s
95th percentile per-packet one-way delay: 101.533 ms
Loss rate: 2.30%
```

Run 1: Report of Indigo-Muses — Data Link

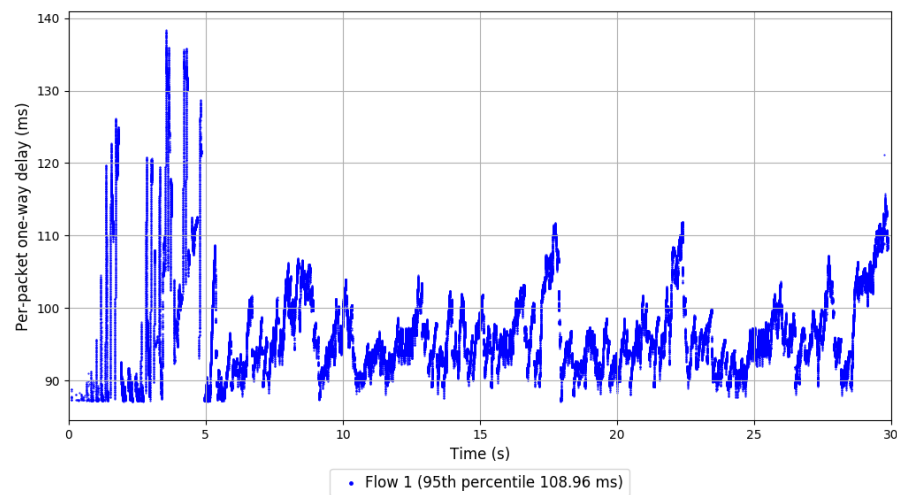
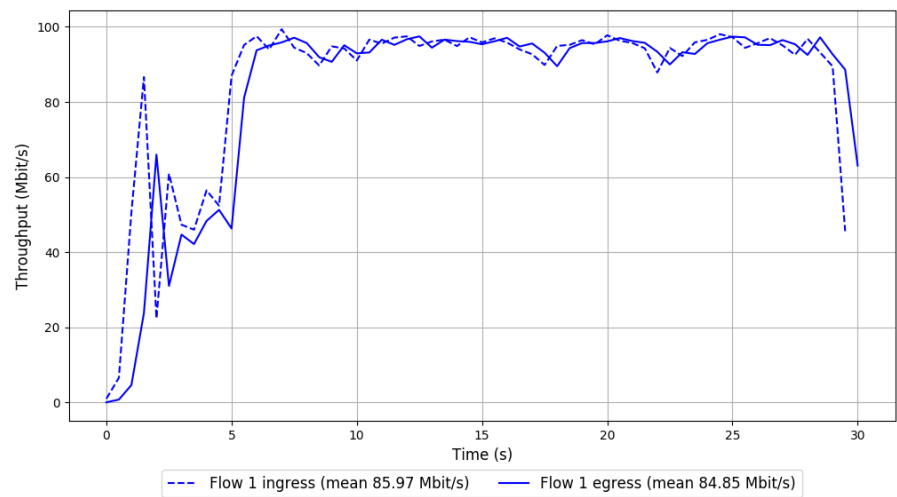


Run 2: Statistics of Indigo-Muses

Start at: 2018-09-10 22:55:28
End at: 2018-09-10 22:55:58
Local clock offset: -10.658 ms
Remote clock offset: 2.376 ms

Below is generated by plot.py at 2018-09-11 00:23:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 84.85 Mbit/s
95th percentile per-packet one-way delay: 108.959 ms
Loss rate: 1.26%
-- Flow 1:
Average throughput: 84.85 Mbit/s
95th percentile per-packet one-way delay: 108.959 ms
Loss rate: 1.26%

Run 2: Report of Indigo-Muses — Data Link

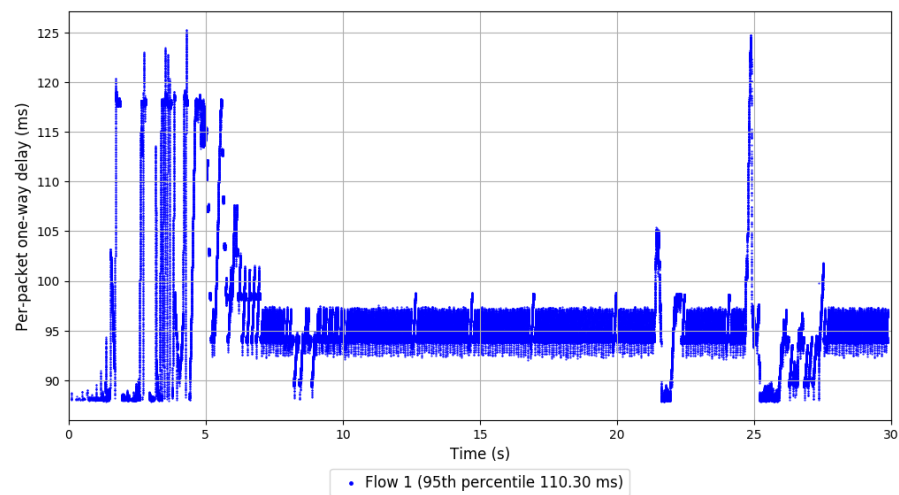
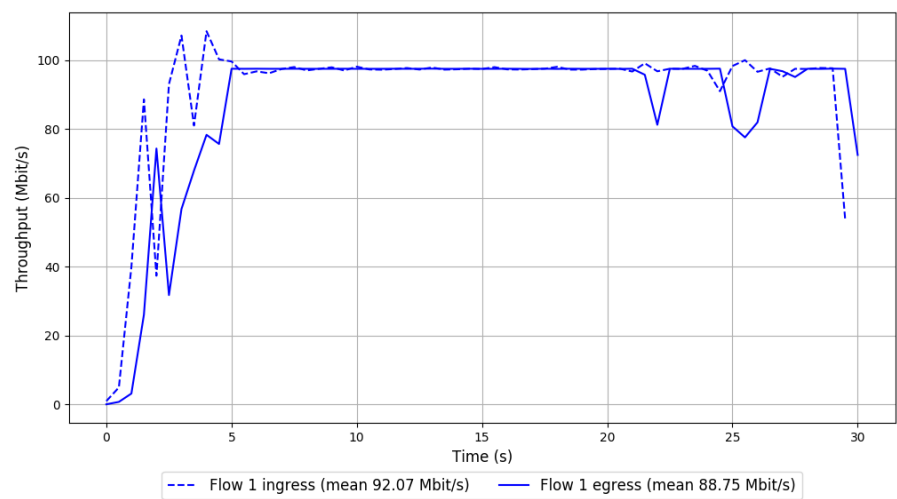


Run 3: Statistics of Indigo-Muses

Start at: 2018-09-10 23:16:45
End at: 2018-09-10 23:17:16
Local clock offset: -13.734 ms
Remote clock offset: 7.529 ms

Below is generated by plot.py at 2018-09-11 00:24:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 88.75 Mbit/s
95th percentile per-packet one-way delay: 110.302 ms
Loss rate: 3.59%
-- Flow 1:
Average throughput: 88.75 Mbit/s
95th percentile per-packet one-way delay: 110.302 ms
Loss rate: 3.59%

Run 3: Report of Indigo-Muses — Data Link

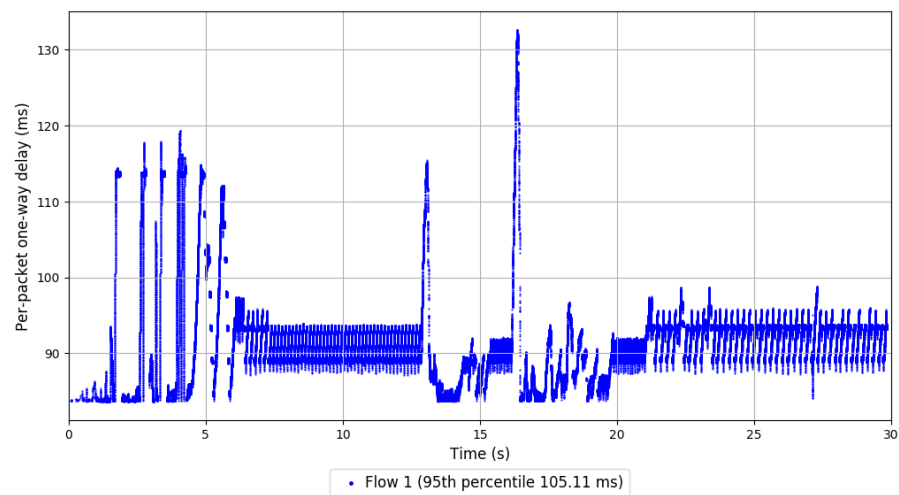
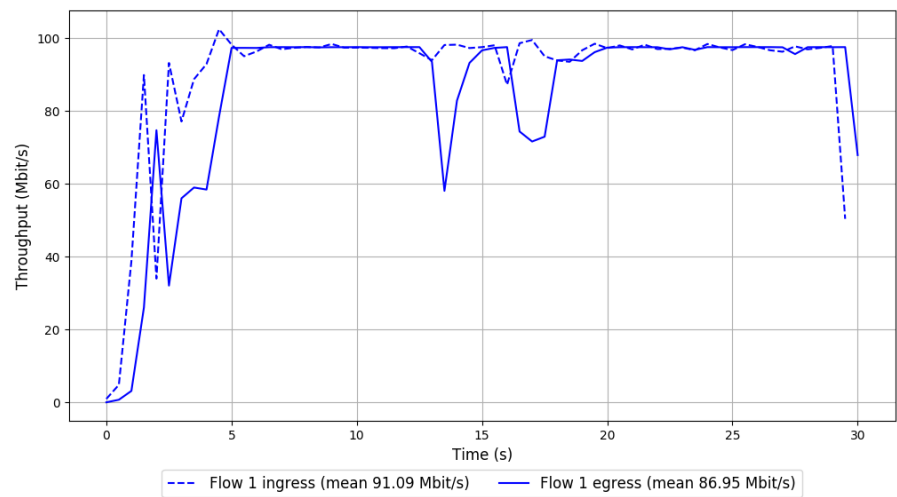


Run 4: Statistics of Indigo-Muses

Start at: 2018-09-10 23:37:54
End at: 2018-09-10 23:38:24
Local clock offset: -10.974 ms
Remote clock offset: 2.766 ms

Below is generated by plot.py at 2018-09-11 00:24:06
Datalink statistics
-- Total of 1 flow:
Average throughput: 86.95 Mbit/s
95th percentile per-packet one-way delay: 105.113 ms
Loss rate: 4.52%
-- Flow 1:
Average throughput: 86.95 Mbit/s
95th percentile per-packet one-way delay: 105.113 ms
Loss rate: 4.52%

Run 4: Report of Indigo-Muses — Data Link



Run 5: Statistics of Indigo-Muses

Start at: 2018-09-10 23:59:03

End at: 2018-09-10 23:59:34

Local clock offset: -8.528 ms

Remote clock offset: 5.191 ms

Below is generated by plot.py at 2018-09-11 00:24:06

Datalink statistics

-- Total of 1 flow:

Average throughput: 26.97 Mbit/s

95th percentile per-packet one-way delay: 111.451 ms

Loss rate: 2.62%

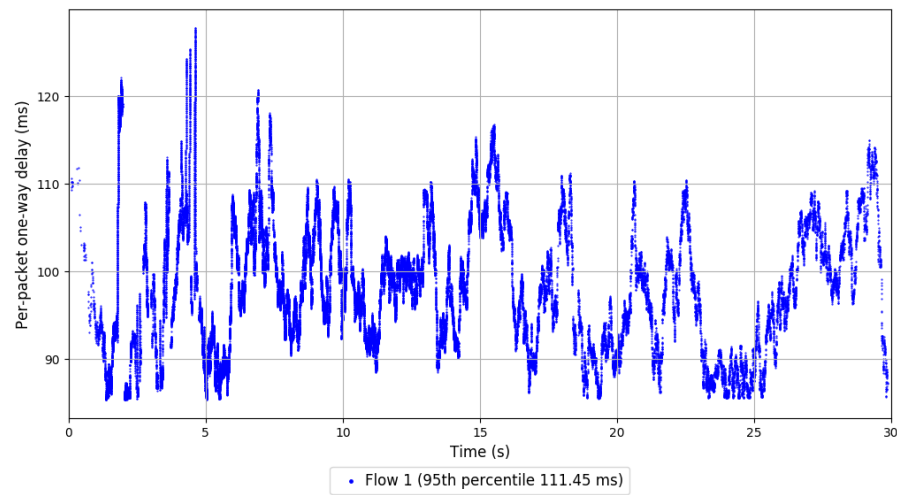
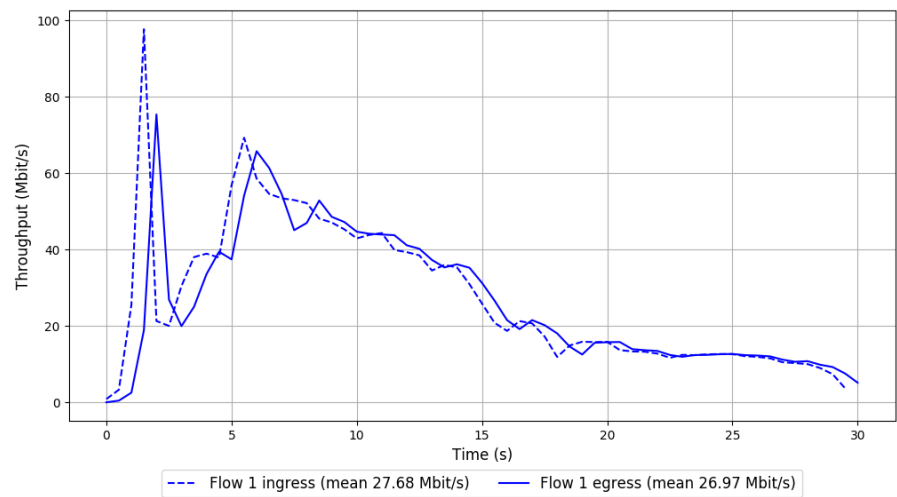
-- Flow 1:

Average throughput: 26.97 Mbit/s

95th percentile per-packet one-way delay: 111.451 ms

Loss rate: 2.62%

Run 5: Report of Indigo-Muses — Data Link

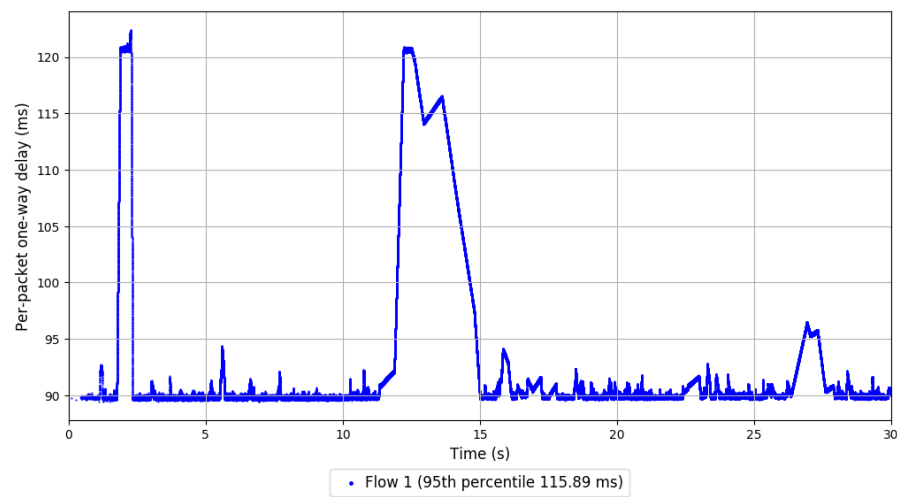
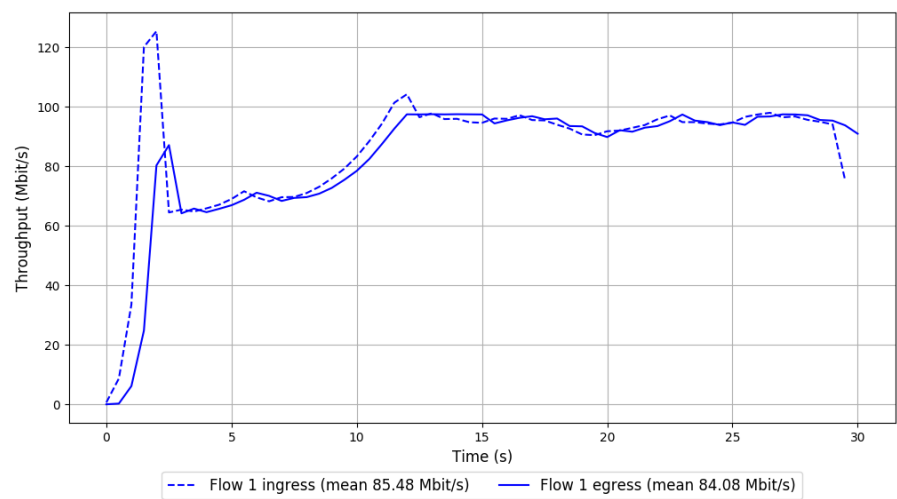


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-09-10 22:39:13
End at: 2018-09-10 22:39:44
Local clock offset: -9.693 ms
Remote clock offset: 3.194 ms

# Below is generated by plot.py at 2018-09-11 00:24:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 84.08 Mbit/s
95th percentile per-packet one-way delay: 115.891 ms
Loss rate: 1.66%
-- Flow 1:
Average throughput: 84.08 Mbit/s
95th percentile per-packet one-way delay: 115.891 ms
Loss rate: 1.66%
```

Run 1: Report of PCC-Allegro — Data Link

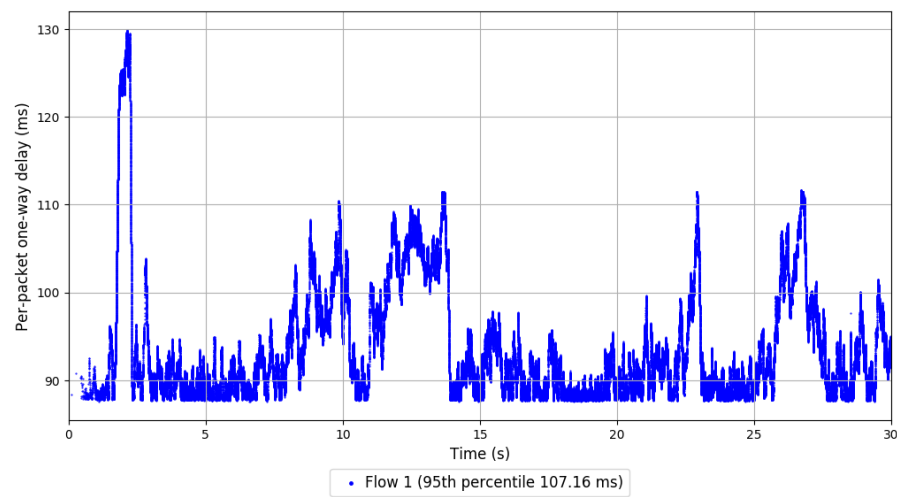
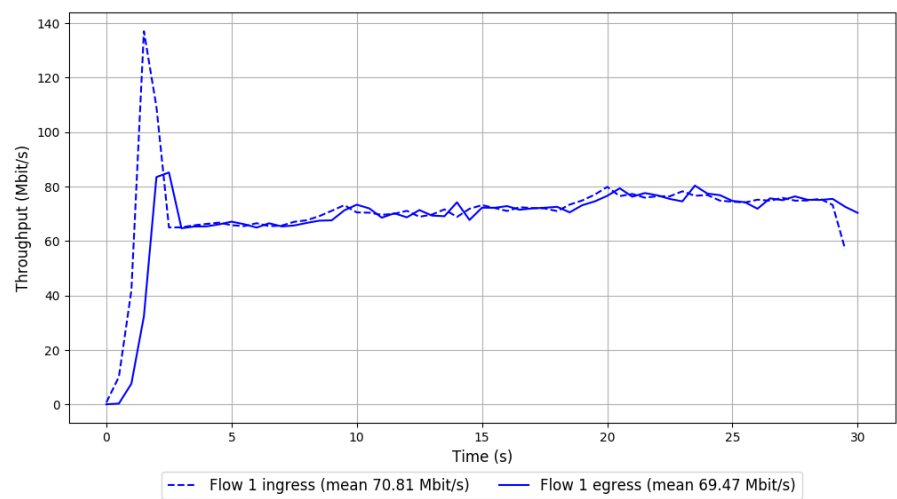


Run 2: Statistics of PCC-Allegro

Start at: 2018-09-10 23:00:16
End at: 2018-09-10 23:00:46
Local clock offset: -11.253 ms
Remote clock offset: 3.066 ms

Below is generated by plot.py at 2018-09-11 00:24:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 69.47 Mbit/s
95th percentile per-packet one-way delay: 107.161 ms
Loss rate: 1.89%
-- Flow 1:
Average throughput: 69.47 Mbit/s
95th percentile per-packet one-way delay: 107.161 ms
Loss rate: 1.89%

Run 2: Report of PCC-Allegro — Data Link

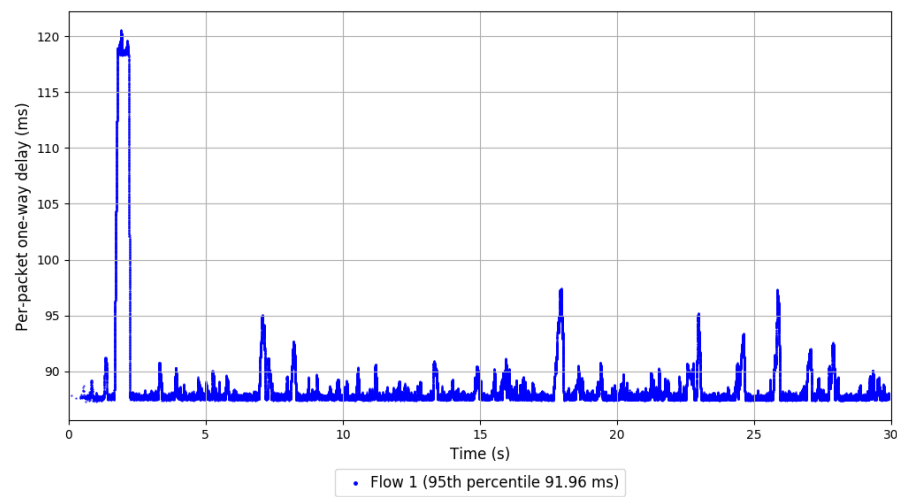
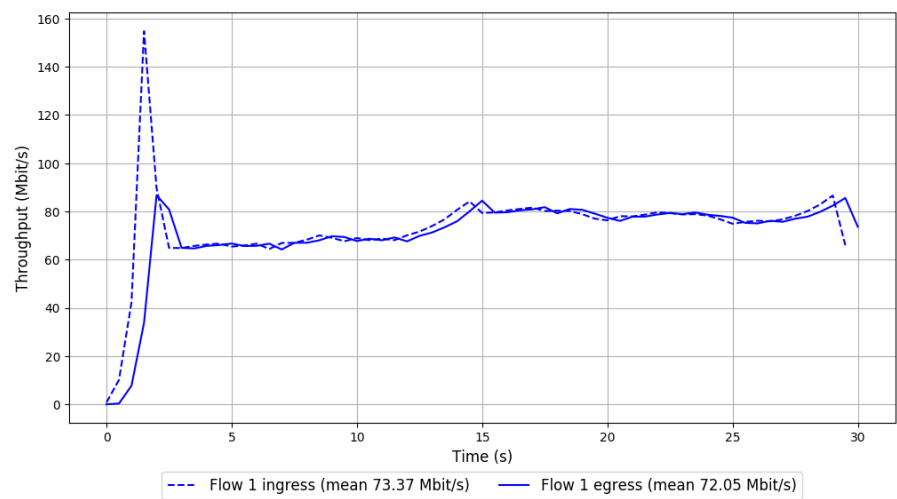


Run 3: Statistics of PCC-Allegro

Start at: 2018-09-10 23:21:31
End at: 2018-09-10 23:22:01
Local clock offset: -14.403 ms
Remote clock offset: 7.13 ms

Below is generated by plot.py at 2018-09-11 00:24:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 72.05 Mbit/s
95th percentile per-packet one-way delay: 91.956 ms
Loss rate: 1.94%
-- Flow 1:
Average throughput: 72.05 Mbit/s
95th percentile per-packet one-way delay: 91.956 ms
Loss rate: 1.94%

Run 3: Report of PCC-Allegro — Data Link

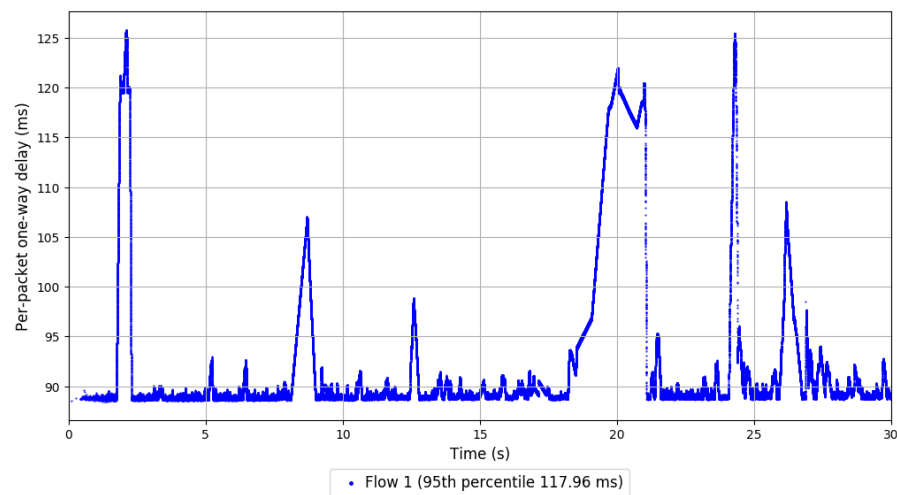
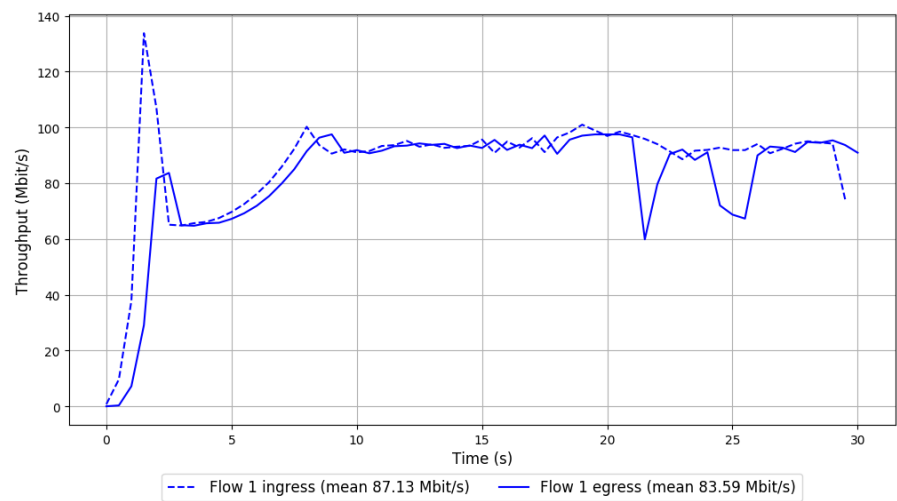


Run 4: Statistics of PCC-Allegro

Start at: 2018-09-10 23:42:46
End at: 2018-09-10 23:43:16
Local clock offset: -10.094 ms
Remote clock offset: 6.944 ms

Below is generated by plot.py at 2018-09-11 00:24:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 83.59 Mbit/s
95th percentile per-packet one-way delay: 117.956 ms
Loss rate: 4.07%
-- Flow 1:
Average throughput: 83.59 Mbit/s
95th percentile per-packet one-way delay: 117.956 ms
Loss rate: 4.07%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-09-11 00:03:45

End at: 2018-09-11 00:04:15

Local clock offset: -7.402 ms

Remote clock offset: 5.189 ms

Below is generated by plot.py at 2018-09-11 00:25:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 75.80 Mbit/s

95th percentile per-packet one-way delay: 115.106 ms

Loss rate: 5.34%

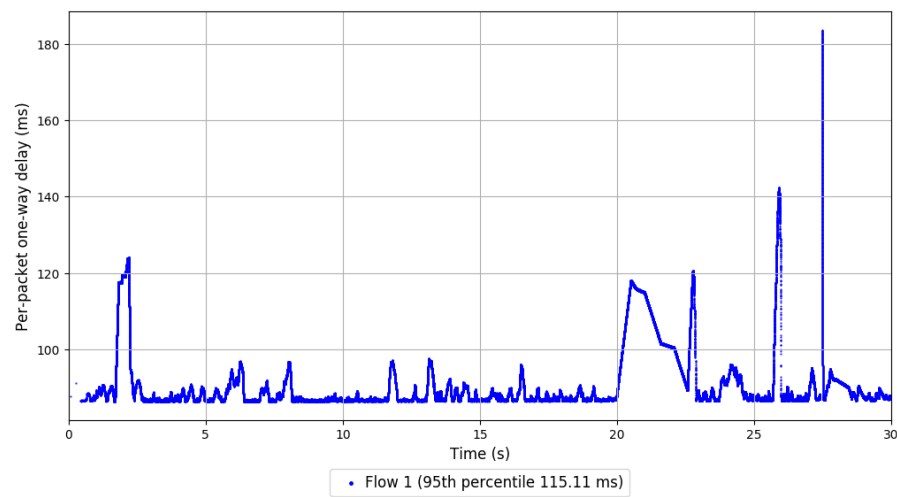
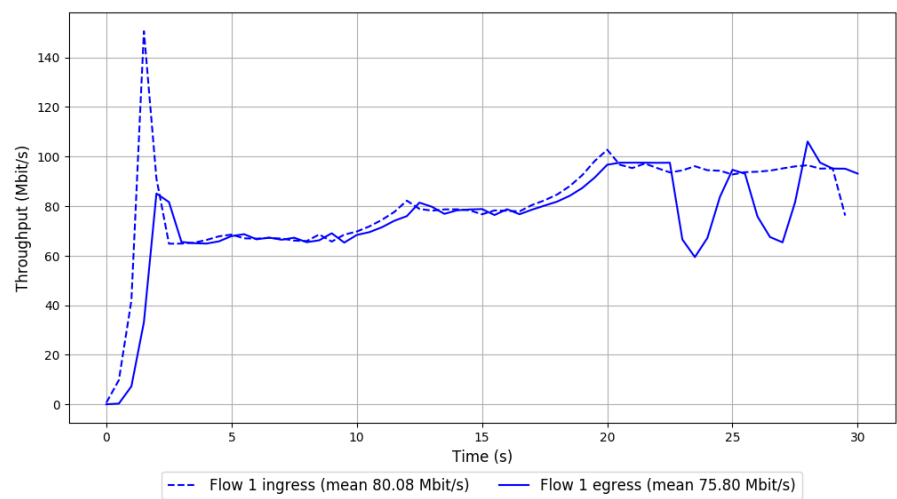
-- Flow 1:

Average throughput: 75.80 Mbit/s

95th percentile per-packet one-way delay: 115.106 ms

Loss rate: 5.34%

Run 5: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

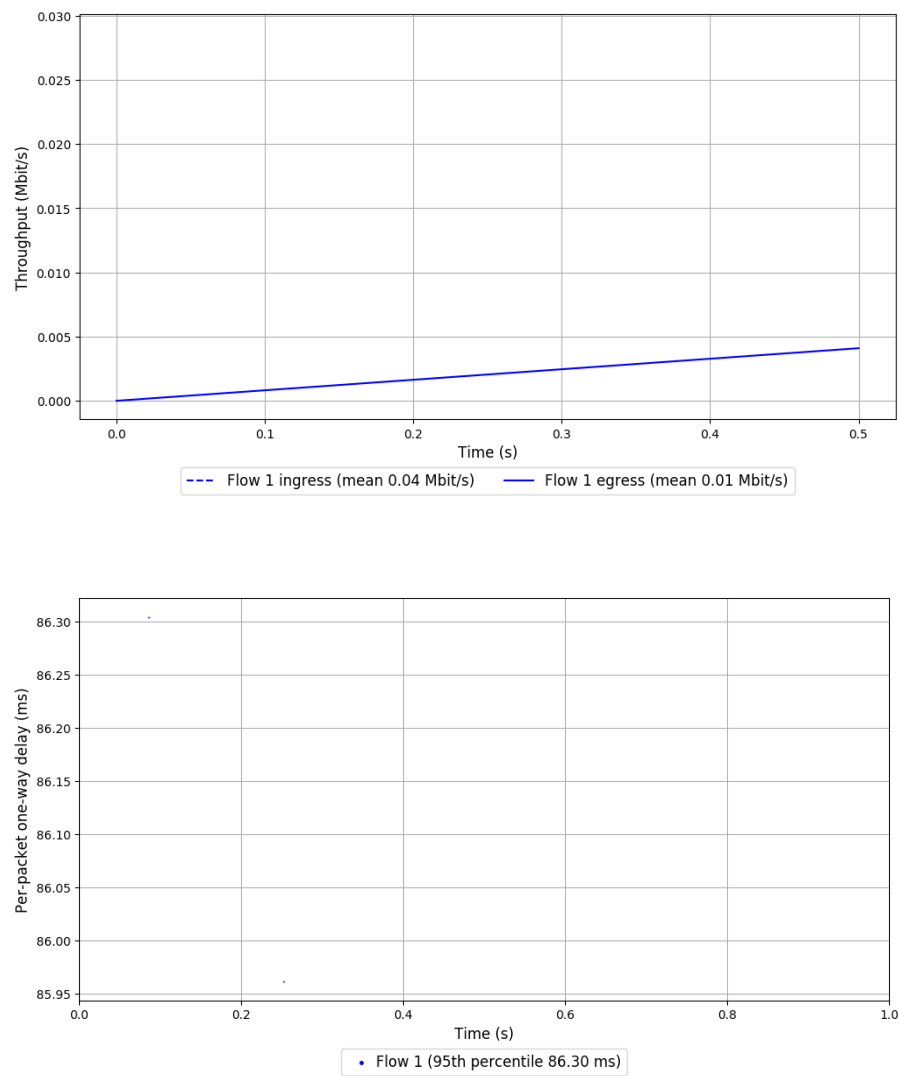
Start at: 2018-09-10 22:43:52

End at: 2018-09-10 22:44:22

Local clock offset: -9.681 ms

Remote clock offset: 6.989 ms

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

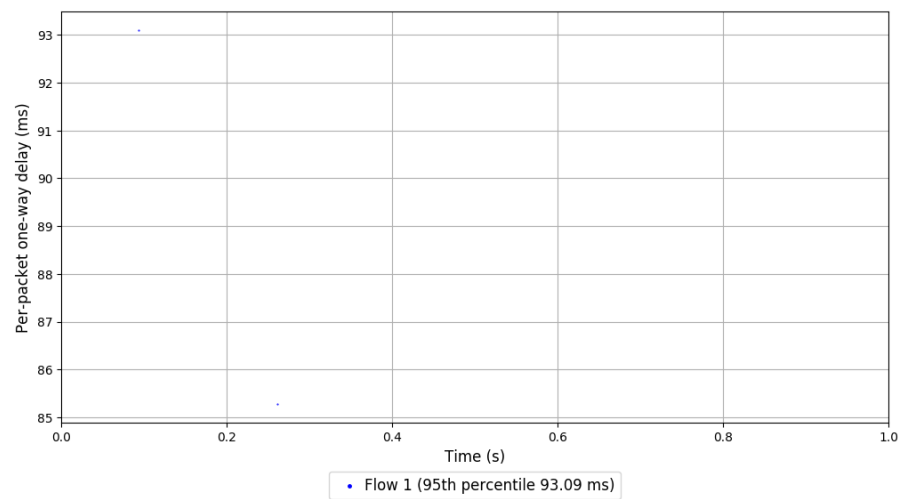
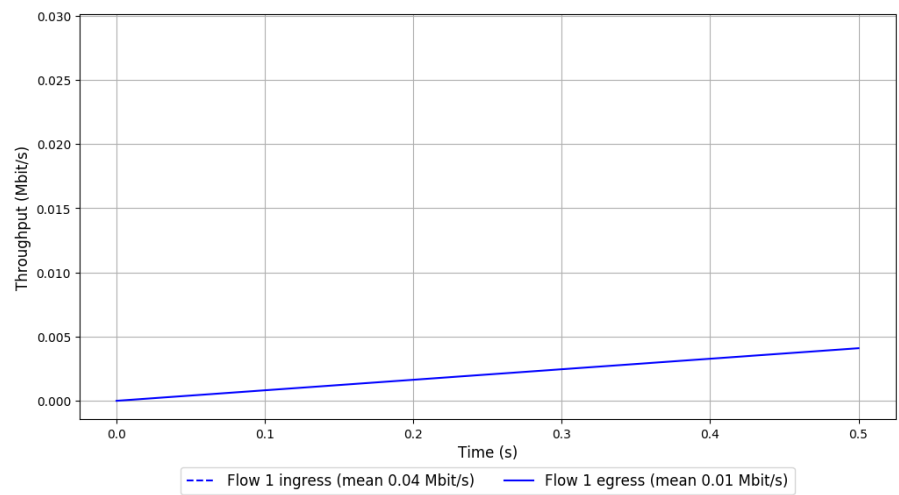
Start at: 2018-09-10 23:04:57

End at: 2018-09-10 23:05:27

Local clock offset: -12.044 ms

Remote clock offset: 3.037 ms

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

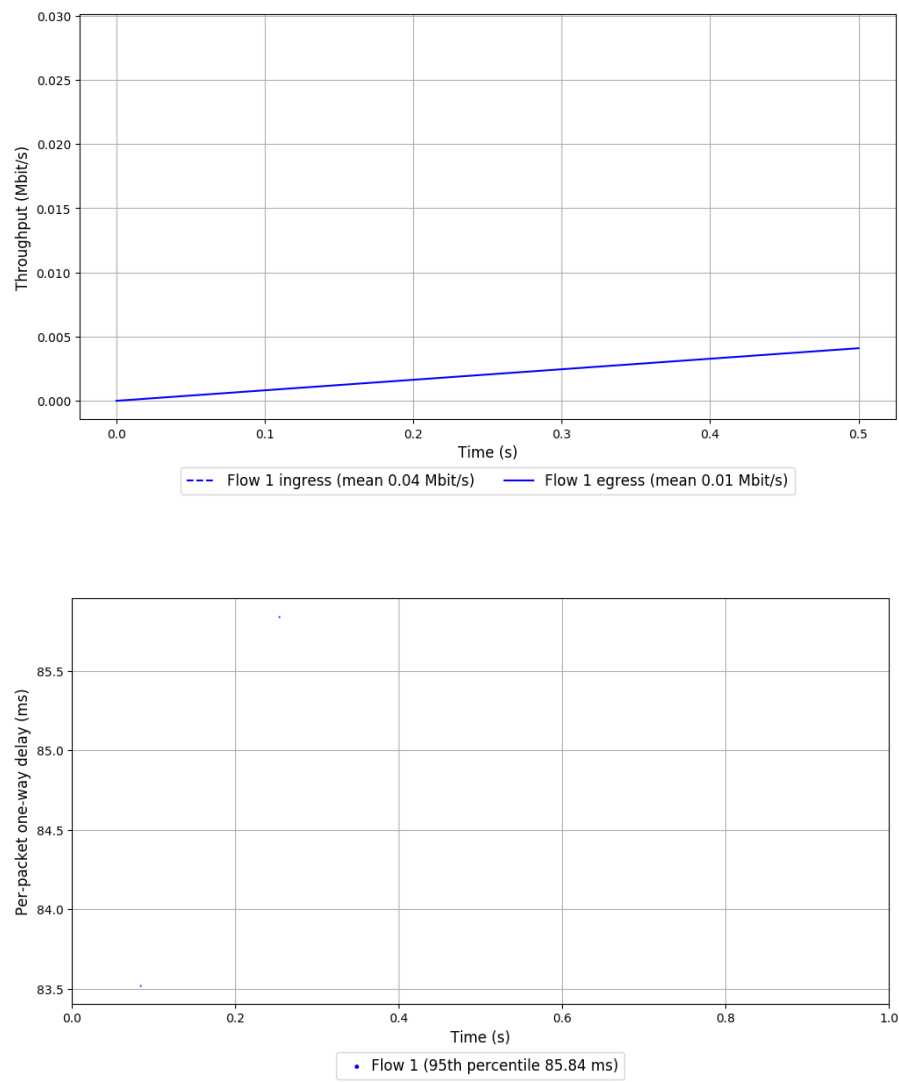
Start at: 2018-09-10 23:26:06

End at: 2018-09-10 23:26:36

Local clock offset: -15.032 ms

Remote clock offset: 2.936 ms

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

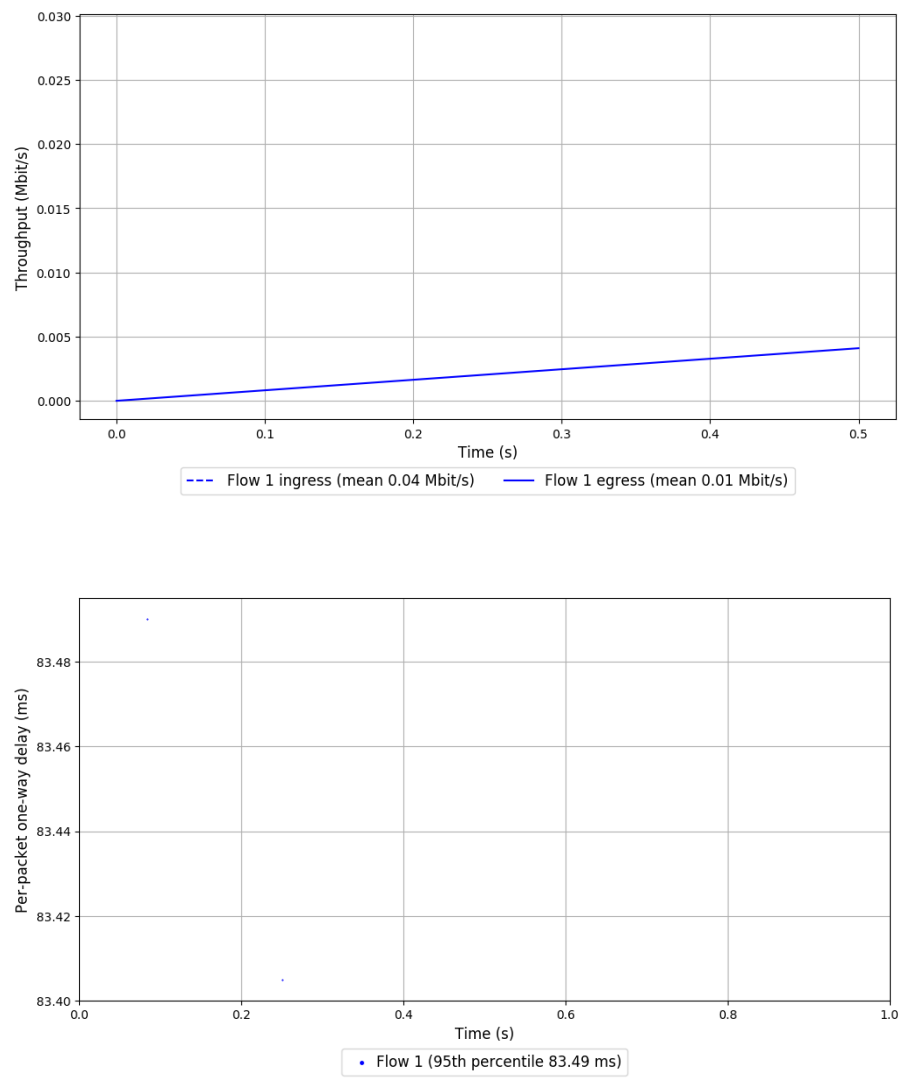
Start at: 2018-09-10 23:47:25

End at: 2018-09-10 23:47:55

Local clock offset: -8.943 ms

Remote clock offset: 2.392 ms

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

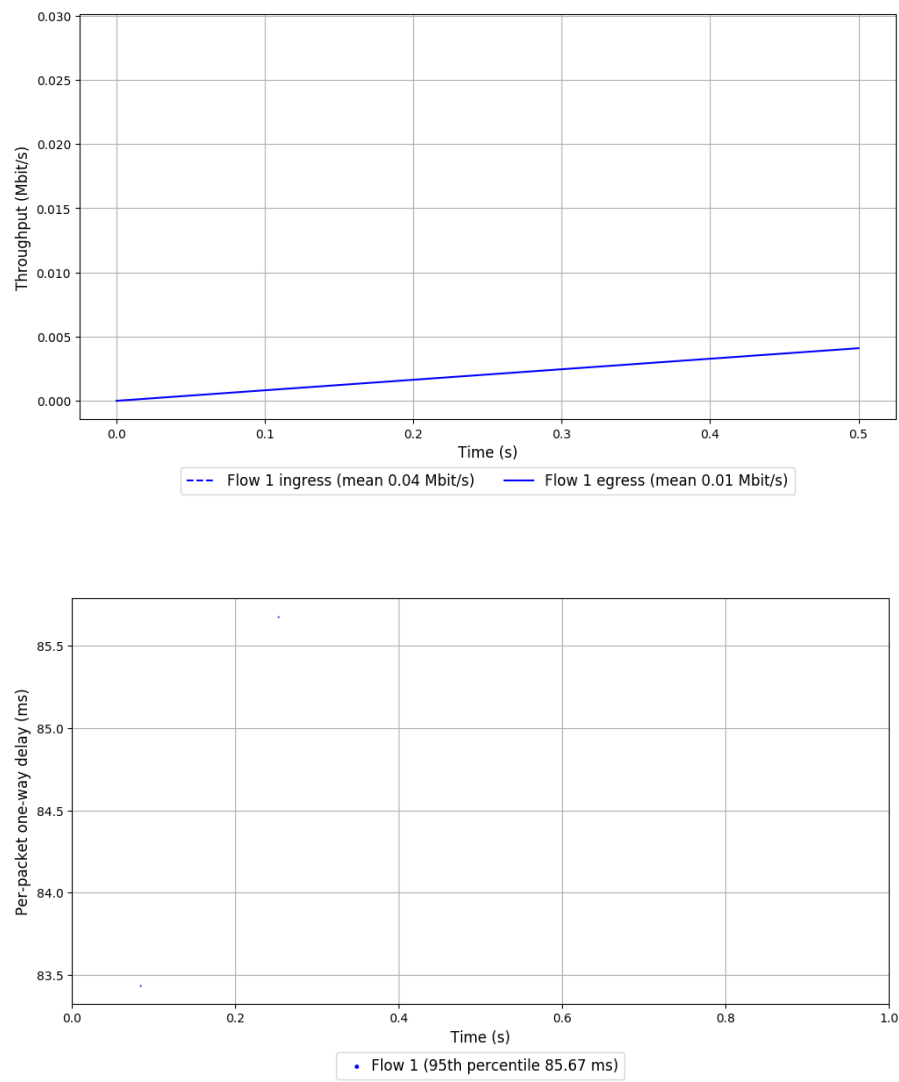
Start at: 2018-09-11 00:08:26

End at: 2018-09-11 00:08:56

Local clock offset: -6.679 ms

Remote clock offset: 0.583 ms

Run 5: Report of PCC-Expr — Data Link

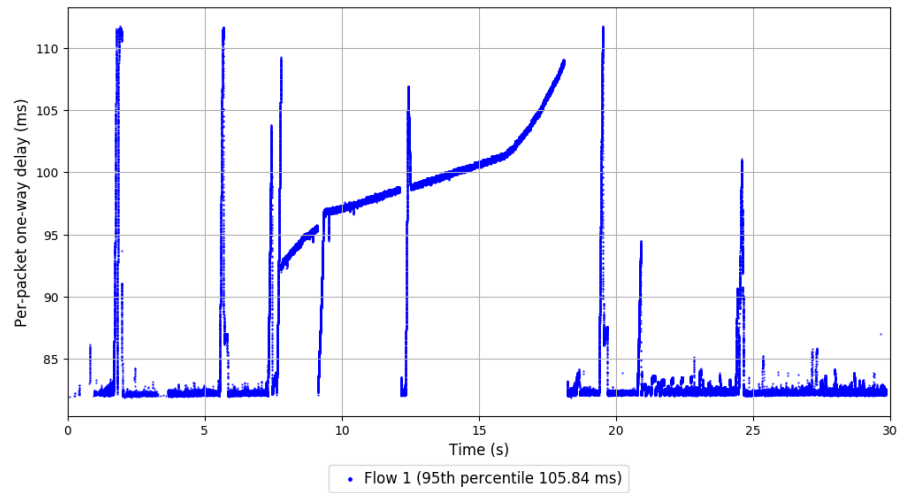
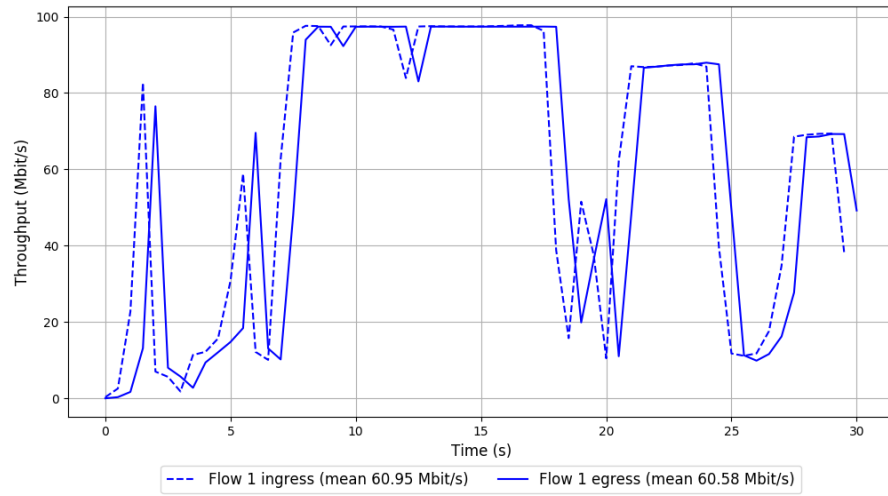


Run 1: Statistics of QUIC Cubic

Start at: 2018-09-10 22:35:40
End at: 2018-09-10 22:36:10
Local clock offset: -10.078 ms
Remote clock offset: 2.776 ms

Below is generated by plot.py at 2018-09-11 00:25:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 60.58 Mbit/s
95th percentile per-packet one-way delay: 105.836 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 60.58 Mbit/s
95th percentile per-packet one-way delay: 105.836 ms
Loss rate: 0.60%

Run 1: Report of QUIC Cubic — Data Link

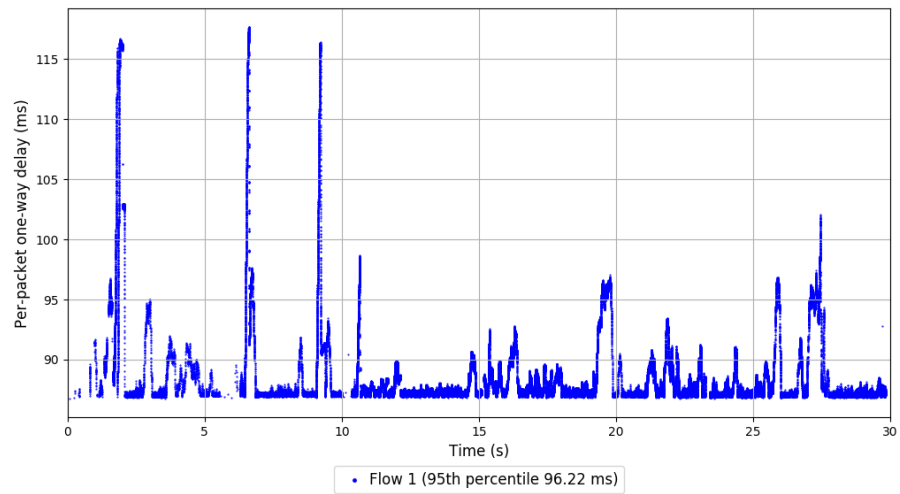
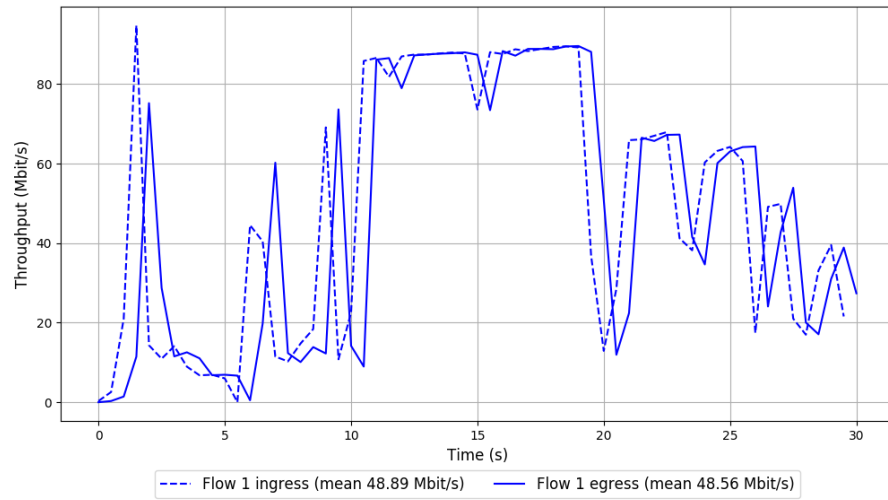


Run 2: Statistics of QUIC Cubic

Start at: 2018-09-10 22:56:39
End at: 2018-09-10 22:57:09
Local clock offset: -10.027 ms
Remote clock offset: 6.706 ms

Below is generated by plot.py at 2018-09-11 00:25:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 48.56 Mbit/s
95th percentile per-packet one-way delay: 96.218 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 48.56 Mbit/s
95th percentile per-packet one-way delay: 96.218 ms
Loss rate: 0.68%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-09-10 23:17:58

End at: 2018-09-10 23:18:28

Local clock offset: -13.11 ms

Remote clock offset: 3.194 ms

Below is generated by plot.py at 2018-09-11 00:25:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 30.95 Mbit/s

95th percentile per-packet one-way delay: 96.660 ms

Loss rate: 1.92%

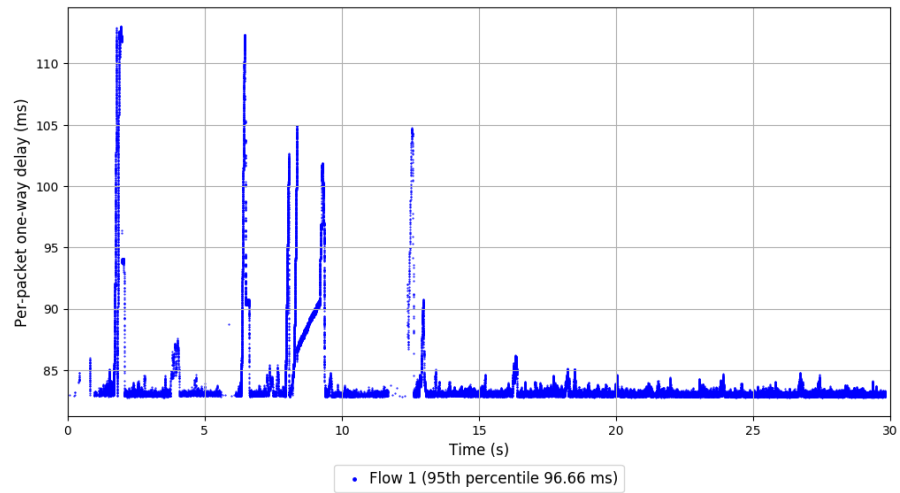
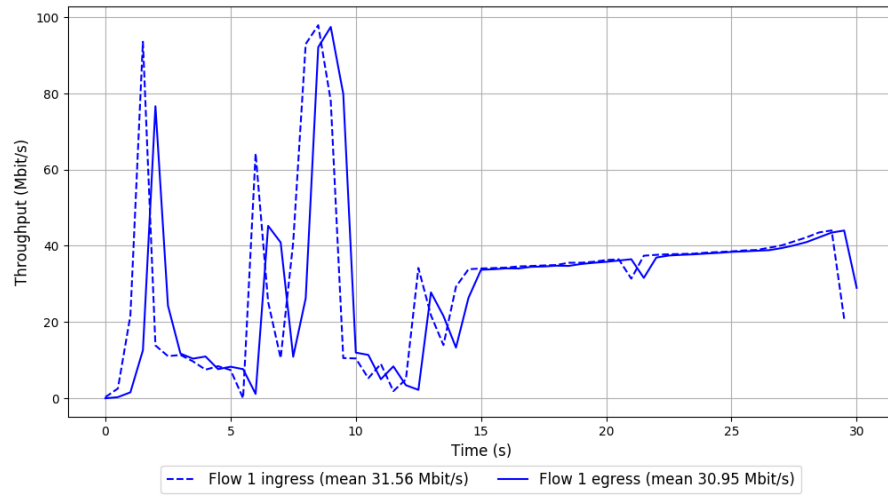
-- Flow 1:

Average throughput: 30.95 Mbit/s

95th percentile per-packet one-way delay: 96.660 ms

Loss rate: 1.92%

Run 3: Report of QUIC Cubic — Data Link

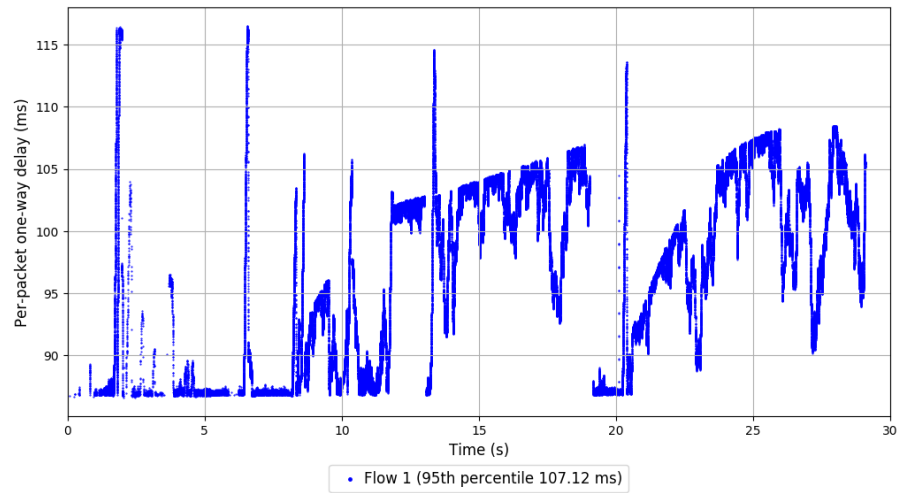
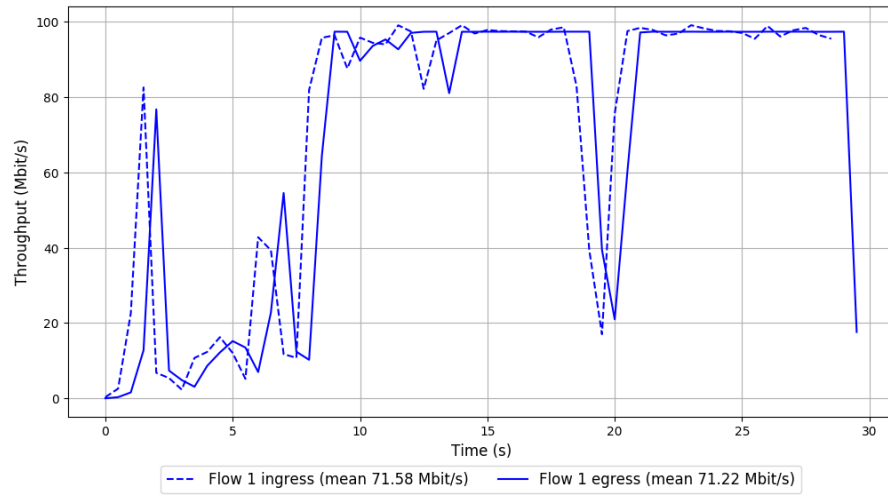


Run 4: Statistics of QUIC Cubic

Start at: 2018-09-10 23:39:07
End at: 2018-09-10 23:39:38
Local clock offset: -10.751 ms
Remote clock offset: 7.126 ms

Below is generated by plot.py at 2018-09-11 00:25:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 71.22 Mbit/s
95th percentile per-packet one-way delay: 107.117 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 71.22 Mbit/s
95th percentile per-packet one-way delay: 107.117 ms
Loss rate: 0.44%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-09-11 00:00:13

End at: 2018-09-11 00:00:43

Local clock offset: -8.166 ms

Remote clock offset: 5.575 ms

Below is generated by plot.py at 2018-09-11 00:25:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 20.74 Mbit/s

95th percentile per-packet one-way delay: 112.905 ms

Loss rate: 0.18%

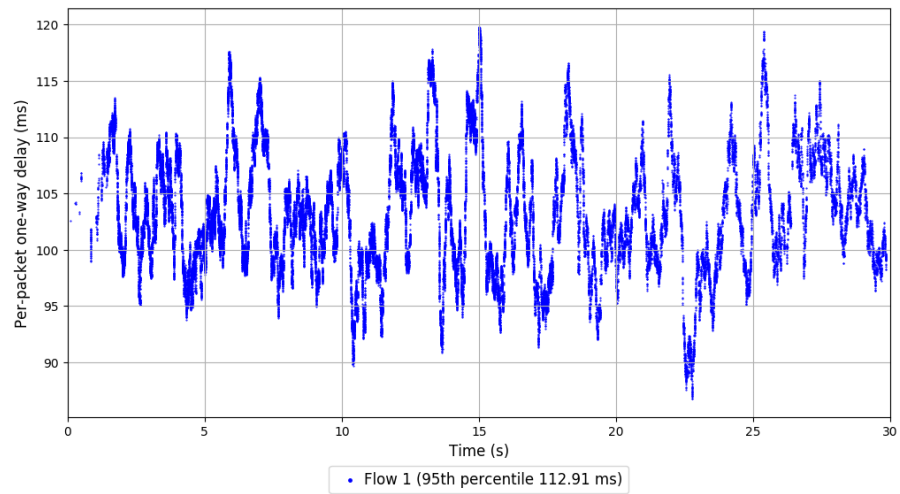
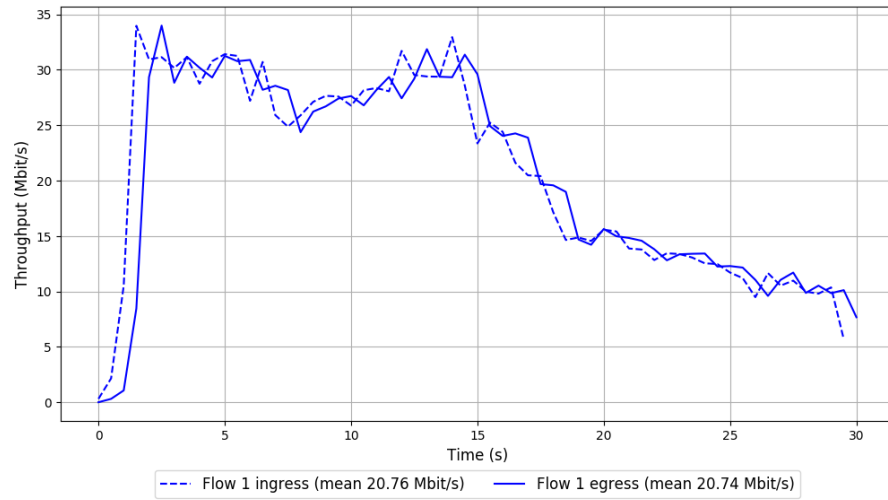
-- Flow 1:

Average throughput: 20.74 Mbit/s

95th percentile per-packet one-way delay: 112.905 ms

Loss rate: 0.18%

Run 5: Report of QUIC Cubic — Data Link

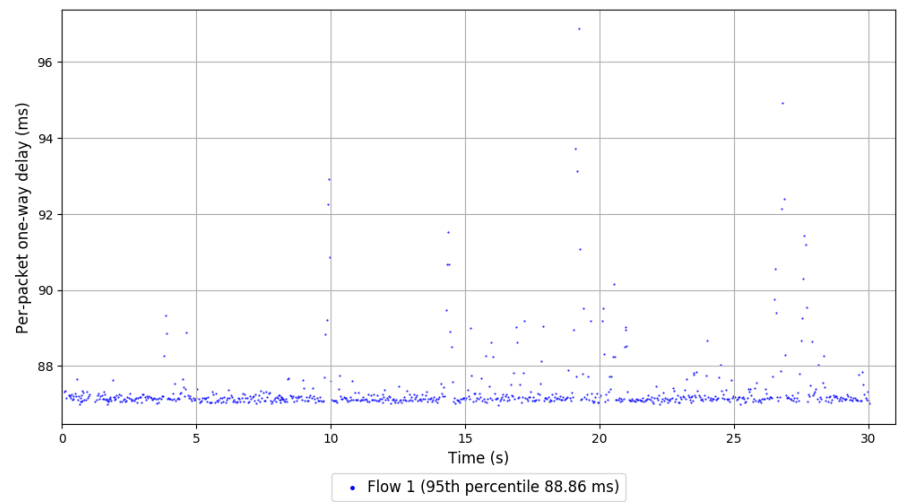
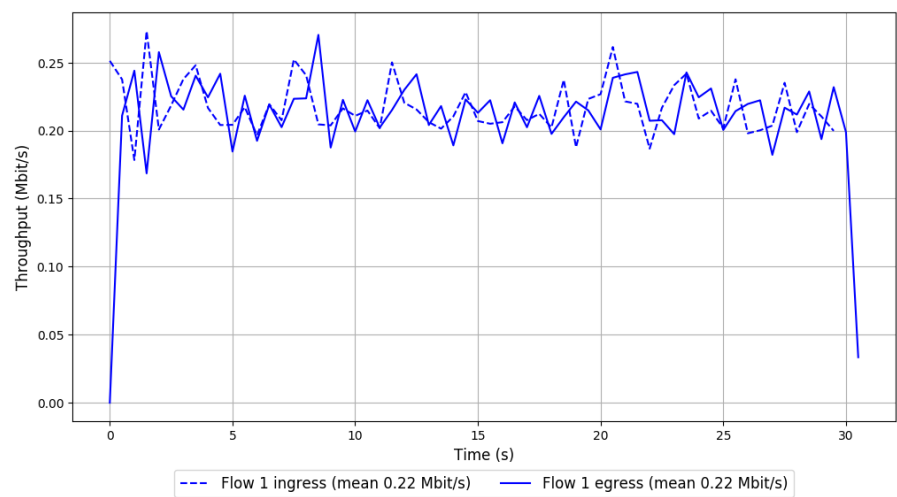


```
Run 1: Statistics of SCReAM

Start at: 2018-09-10 22:50:51
End at: 2018-09-10 22:51:21
Local clock offset: -10.129 ms
Remote clock offset: 7.058 ms

# Below is generated by plot.py at 2018-09-11 00:25:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 88.862 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 88.862 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link

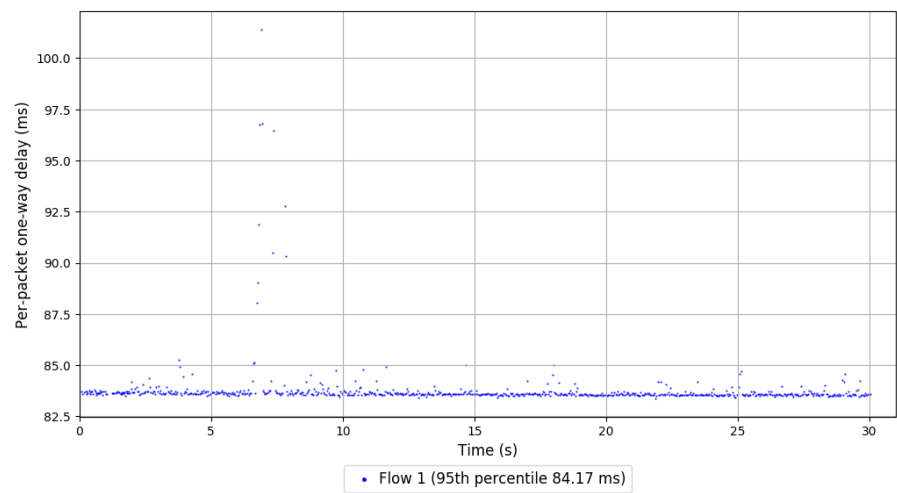
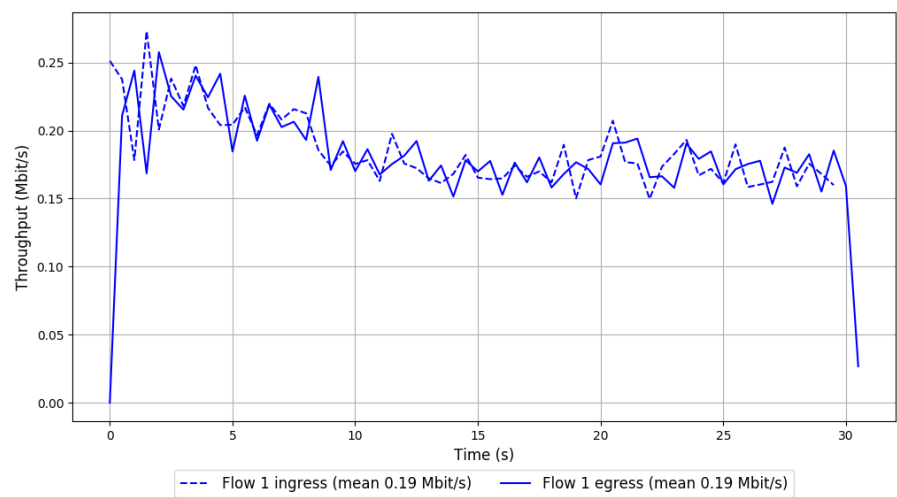


Run 2: Statistics of SReAM

Start at: 2018-09-10 23:12:04
End at: 2018-09-10 23:12:34
Local clock offset: -13.018 ms
Remote clock offset: 3.152 ms

Below is generated by plot.py at 2018-09-11 00:25:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 84.172 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 84.172 ms
Loss rate: 0.16%

Run 2: Report of SReAM — Data Link

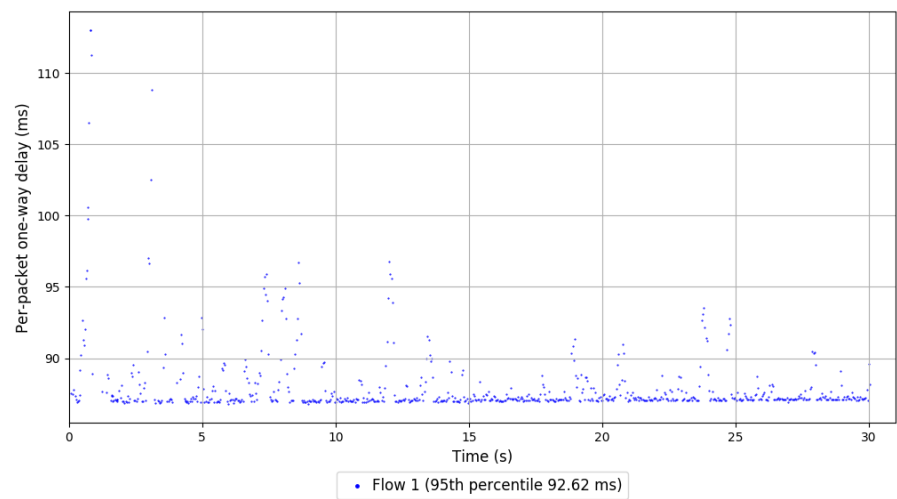
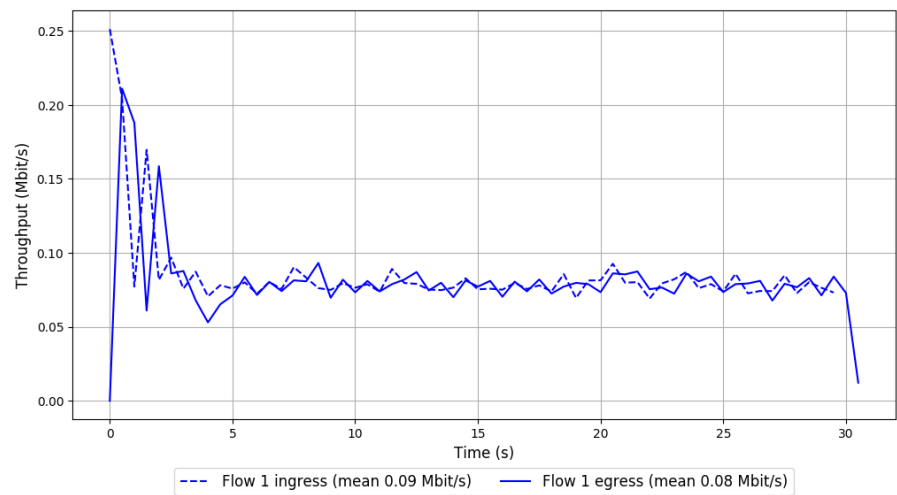


Run 3: Statistics of SCReAM

Start at: 2018-09-10 23:33:08
End at: 2018-09-10 23:33:38
Local clock offset: -11.692 ms
Remote clock offset: 6.935 ms

Below is generated by plot.py at 2018-09-11 00:25:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 92.621 ms
Loss rate: 2.41%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 92.621 ms
Loss rate: 2.41%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2018-09-10 23:54:27

End at: 2018-09-10 23:54:57

Local clock offset: -8.775 ms

Remote clock offset: 5.218 ms

Below is generated by plot.py at 2018-09-11 00:25:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 88.889 ms

Loss rate: 0.00%

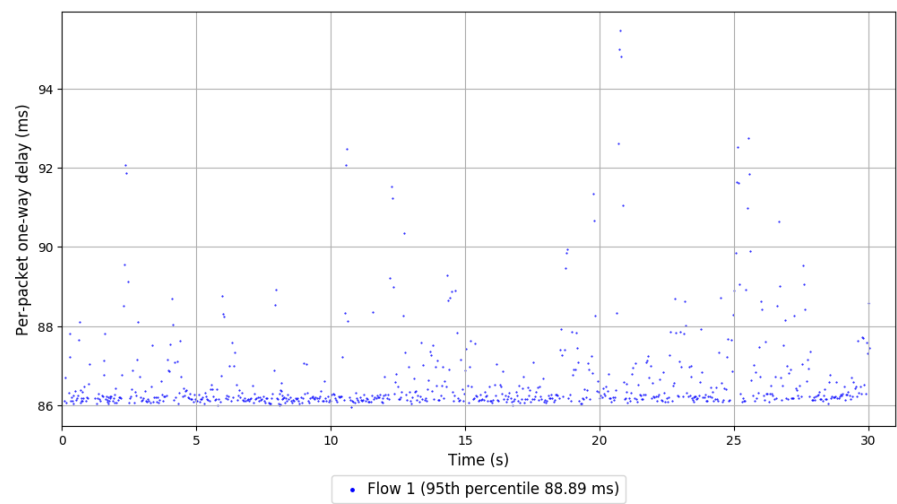
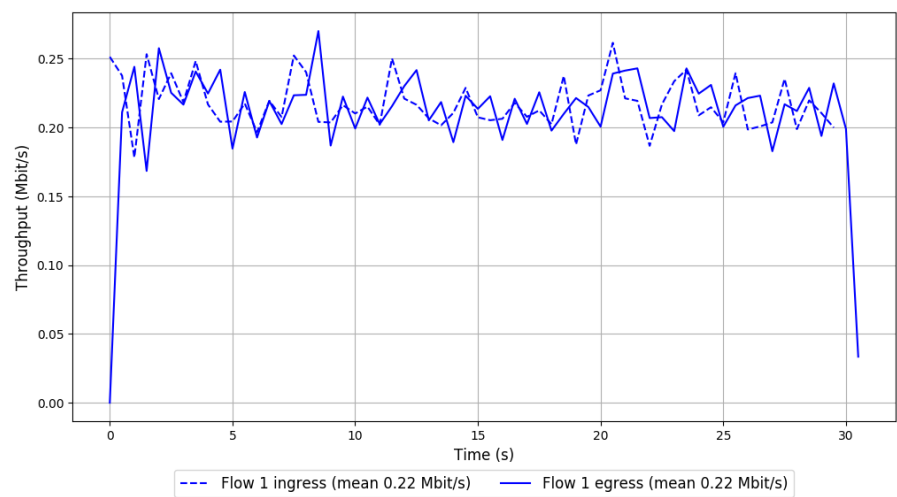
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 88.889 ms

Loss rate: 0.00%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2018-09-11 00:15:23

End at: 2018-09-11 00:15:54

Local clock offset: -6.048 ms

Remote clock offset: 4.22 ms

Below is generated by plot.py at 2018-09-11 00:25:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 95.439 ms

Loss rate: 0.47%

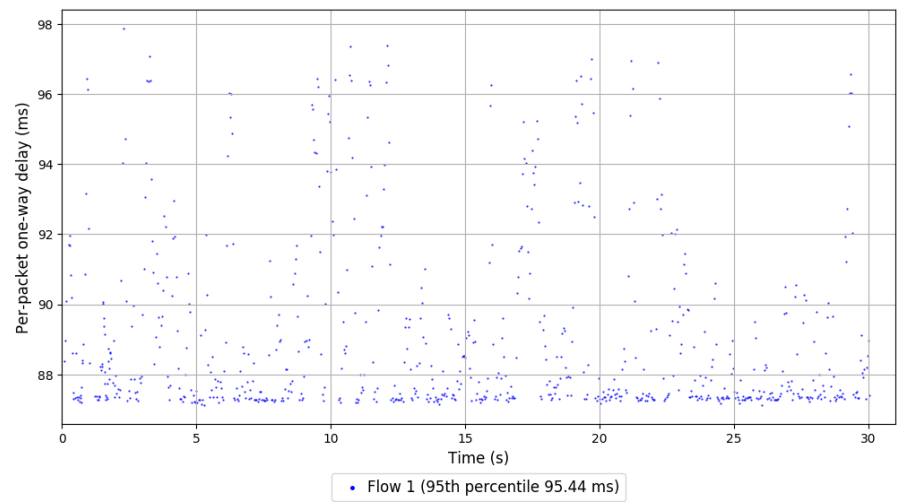
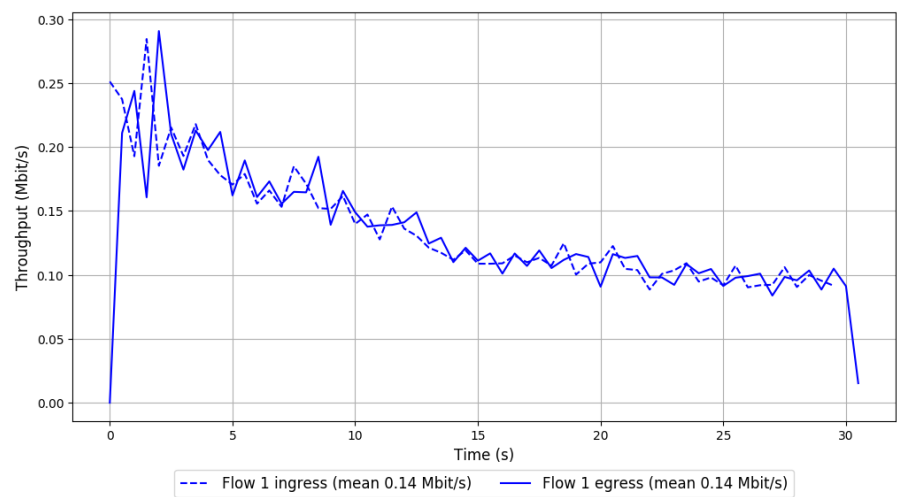
-- Flow 1:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 95.439 ms

Loss rate: 0.47%

Run 5: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2018-09-10 22:40:24

End at: 2018-09-10 22:40:54

Local clock offset: -9.73 ms

Remote clock offset: 2.738 ms

Below is generated by plot.py at 2018-09-11 00:25:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 3.04 Mbit/s

95th percentile per-packet one-way delay: 89.505 ms

Loss rate: 0.00%

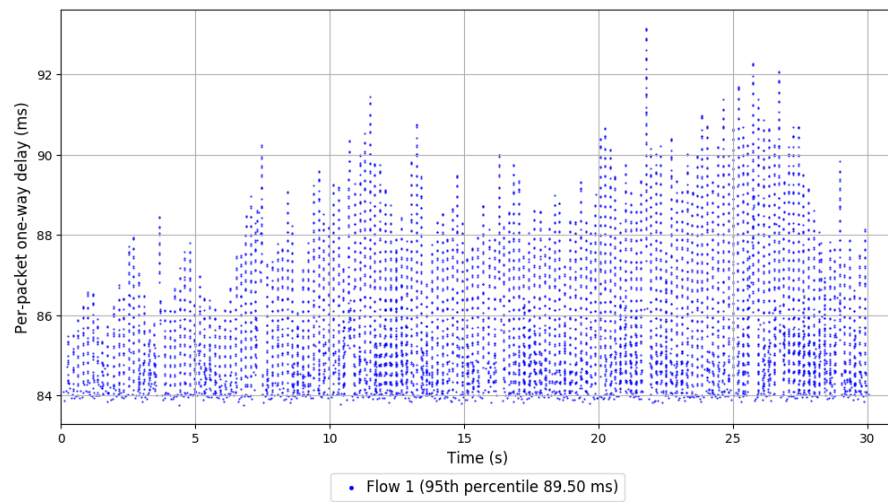
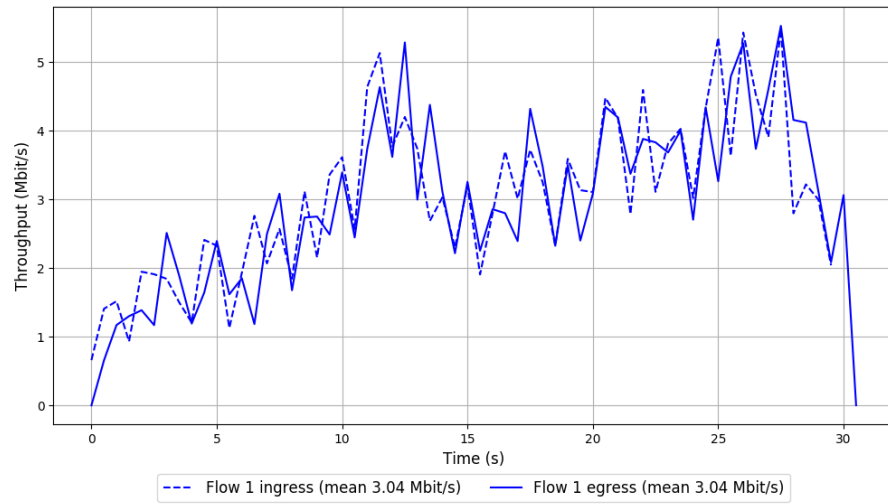
-- Flow 1:

Average throughput: 3.04 Mbit/s

95th percentile per-packet one-way delay: 89.505 ms

Loss rate: 0.00%

Run 1: Report of Sprout — Data Link

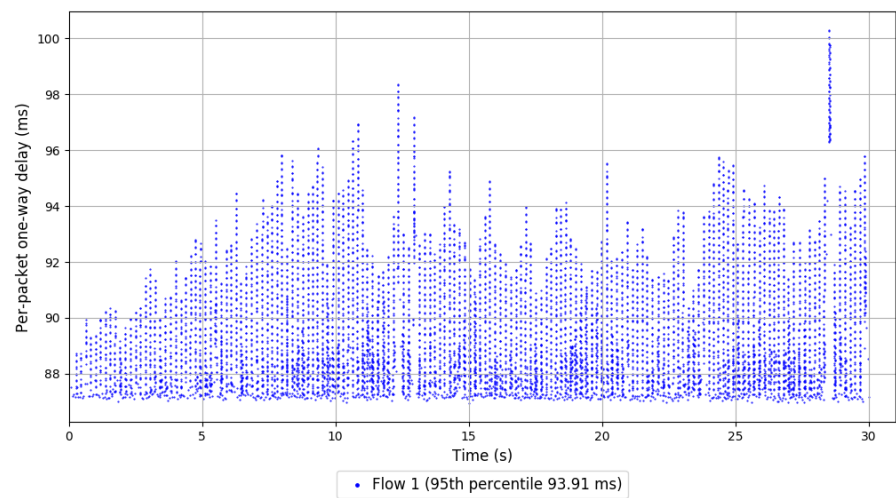
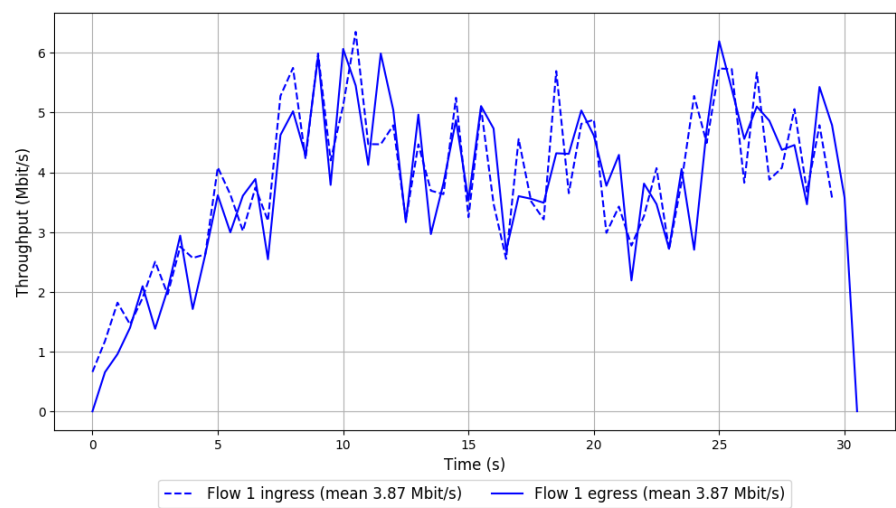


Run 2: Statistics of Sprout

Start at: 2018-09-10 23:01:27
End at: 2018-09-10 23:01:57
Local clock offset: -10.735 ms
Remote clock offset: 6.794 ms

Below is generated by plot.py at 2018-09-11 00:25:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.87 Mbit/s
95th percentile per-packet one-way delay: 93.911 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 3.87 Mbit/s
95th percentile per-packet one-way delay: 93.911 ms
Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

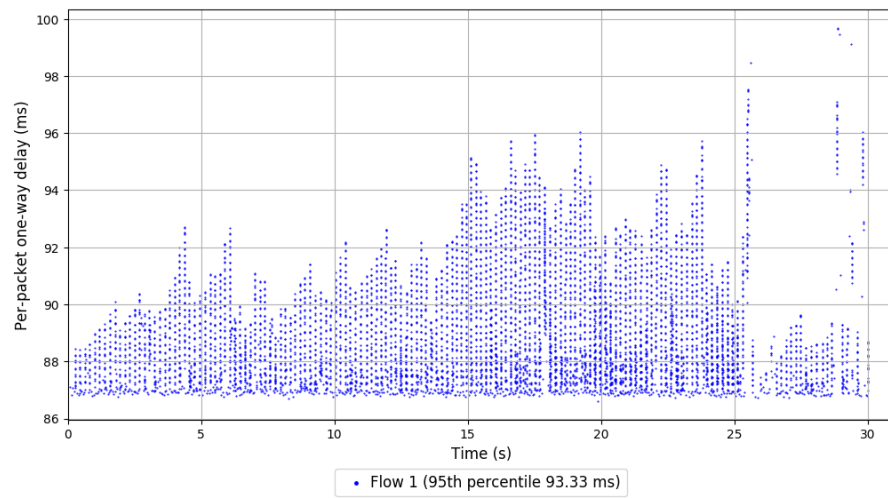
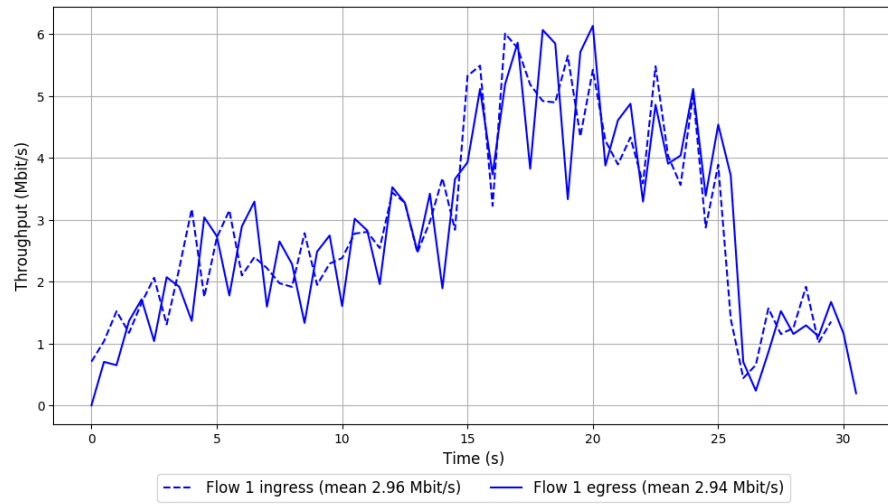


Run 3: Statistics of Sprout

Start at: 2018-09-10 23:22:42
End at: 2018-09-10 23:23:12
Local clock offset: -13.876 ms
Remote clock offset: 7.124 ms

Below is generated by plot.py at 2018-09-11 00:25:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.94 Mbit/s
95th percentile per-packet one-way delay: 93.330 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 2.94 Mbit/s
95th percentile per-packet one-way delay: 93.330 ms
Loss rate: 0.57%

Run 3: Report of Sprout — Data Link

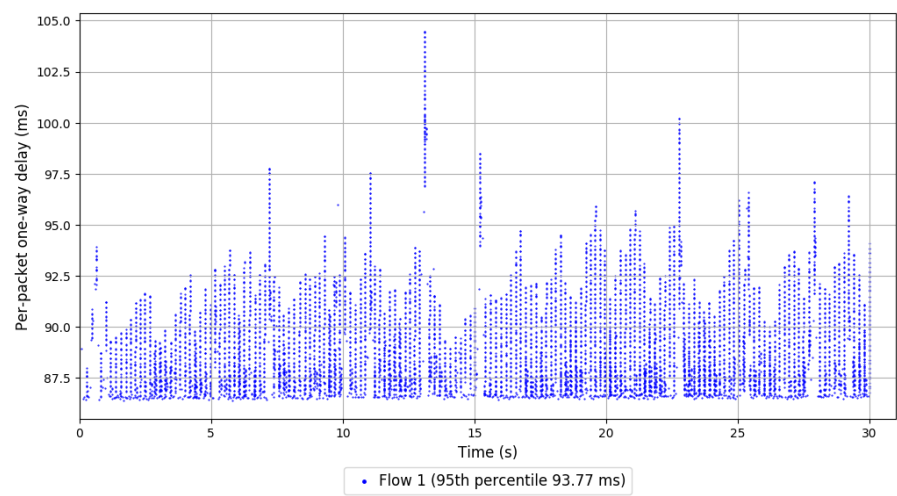
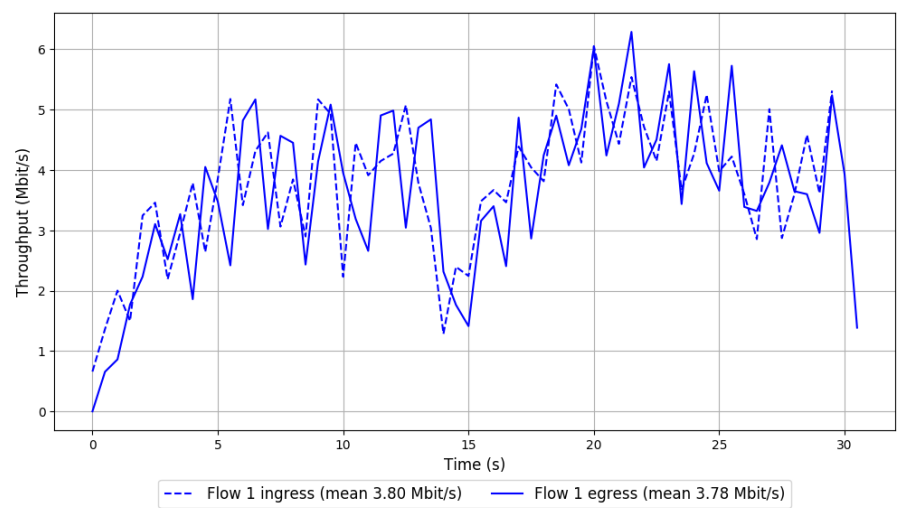


Run 4: Statistics of Sprout

Start at: 2018-09-10 23:43:58
End at: 2018-09-10 23:44:28
Local clock offset: -9.969 ms
Remote clock offset: 5.314 ms

Below is generated by plot.py at 2018-09-11 00:25:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 3.78 Mbit/s
95th percentile per-packet one-way delay: 93.772 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 3.78 Mbit/s
95th percentile per-packet one-way delay: 93.772 ms
Loss rate: 0.46%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-09-11 00:04:56

End at: 2018-09-11 00:05:26

Local clock offset: -7.102 ms

Remote clock offset: 0.518 ms

Below is generated by plot.py at 2018-09-11 00:25:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.80 Mbit/s

95th percentile per-packet one-way delay: 90.133 ms

Loss rate: 0.75%

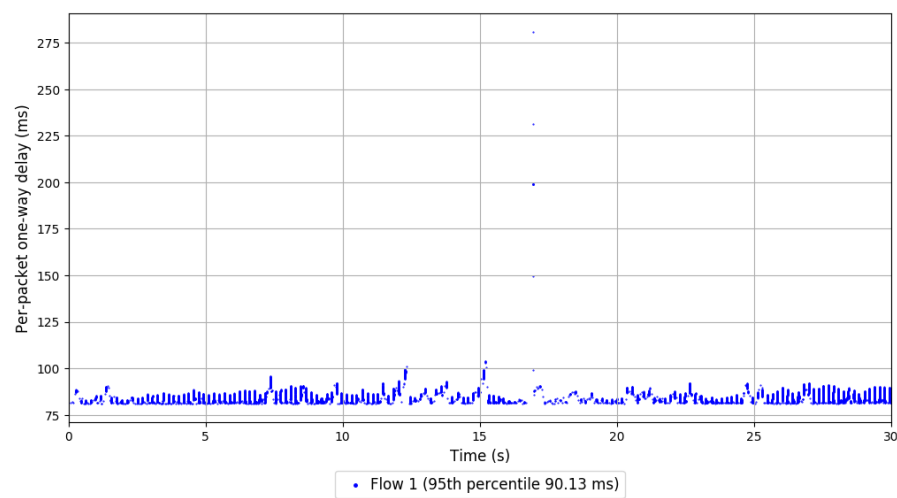
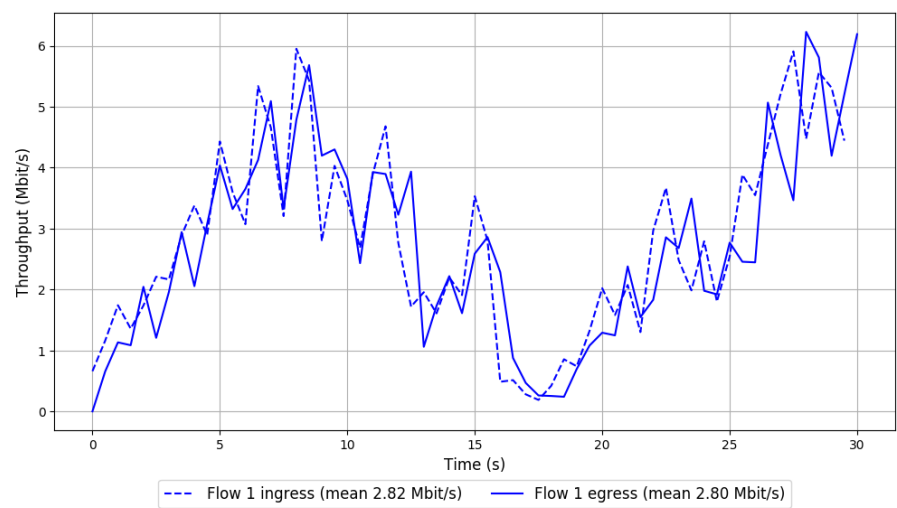
-- Flow 1:

Average throughput: 2.80 Mbit/s

95th percentile per-packet one-way delay: 90.133 ms

Loss rate: 0.75%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2018-09-10 22:47:18

End at: 2018-09-10 22:47:48

Local clock offset: -9.858 ms

Remote clock offset: 2.809 ms

Below is generated by plot.py at 2018-09-11 00:25:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 7.62 Mbit/s

95th percentile per-packet one-way delay: 100.979 ms

Loss rate: 9.07%

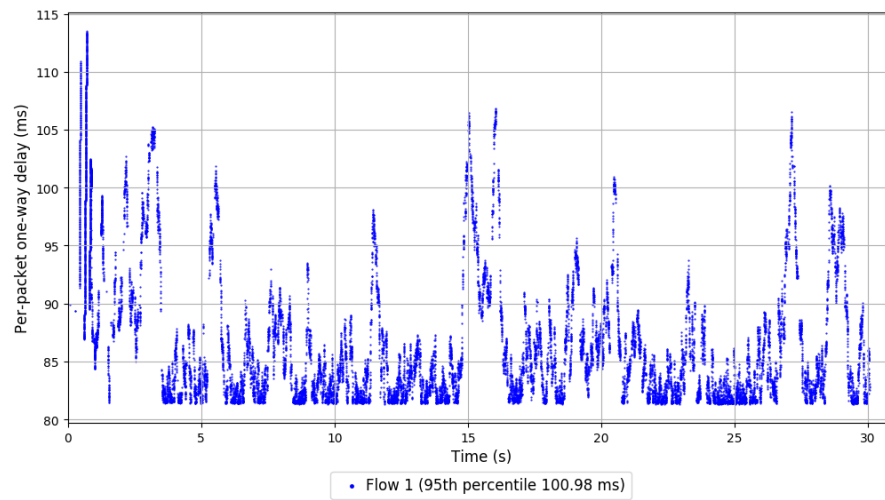
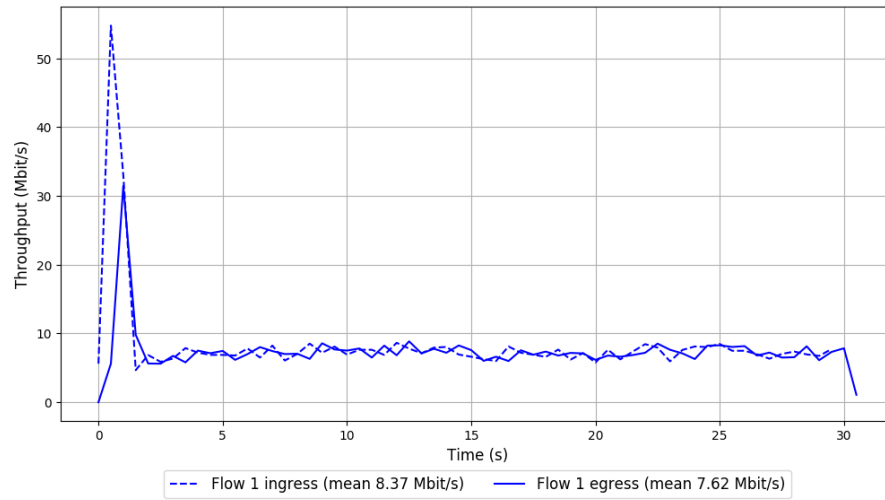
-- Flow 1:

Average throughput: 7.62 Mbit/s

95th percentile per-packet one-way delay: 100.979 ms

Loss rate: 9.07%

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

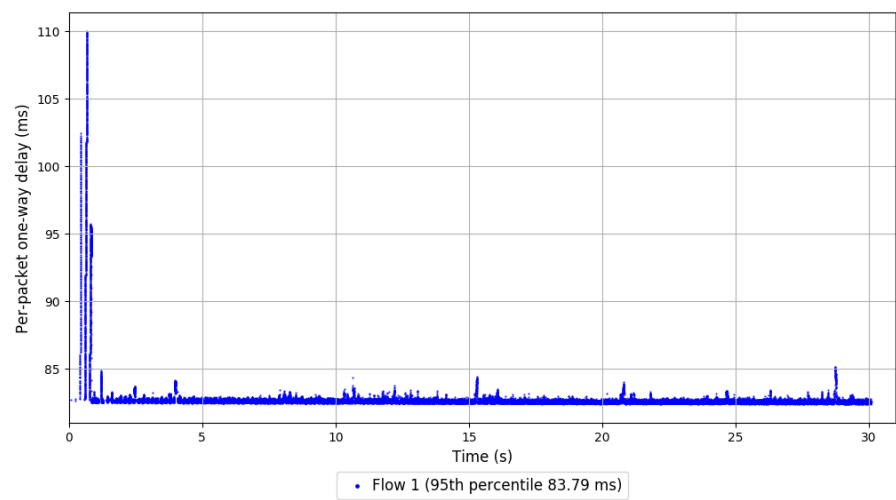
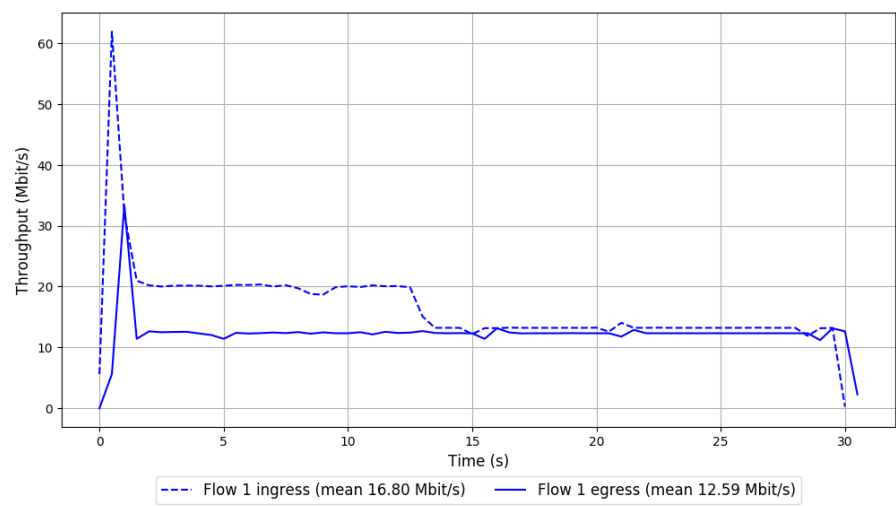


Run 2: Statistics of TaoVA-100x

Start at: 2018-09-10 23:08:28
End at: 2018-09-10 23:08:58
Local clock offset: -11.739 ms
Remote clock offset: 2.773 ms

Below is generated by plot.py at 2018-09-11 00:25:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.59 Mbit/s
95th percentile per-packet one-way delay: 83.789 ms
Loss rate: 25.05%
-- Flow 1:
Average throughput: 12.59 Mbit/s
95th percentile per-packet one-way delay: 83.789 ms
Loss rate: 25.05%

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

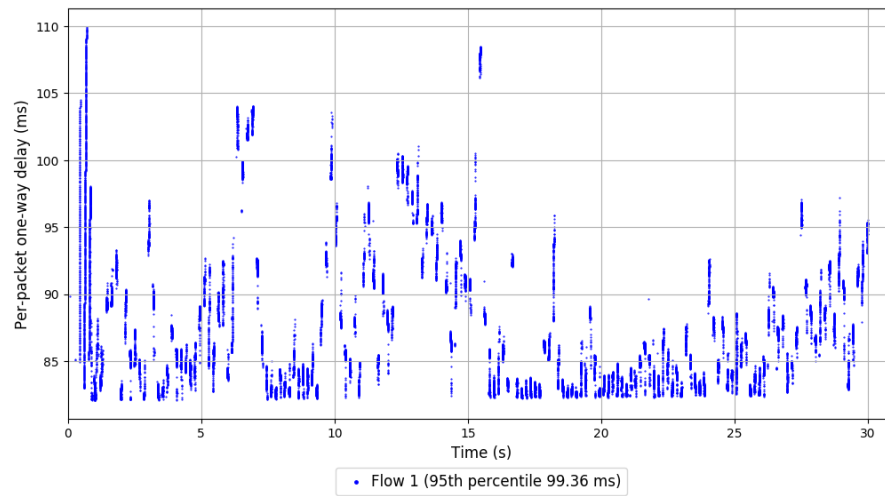
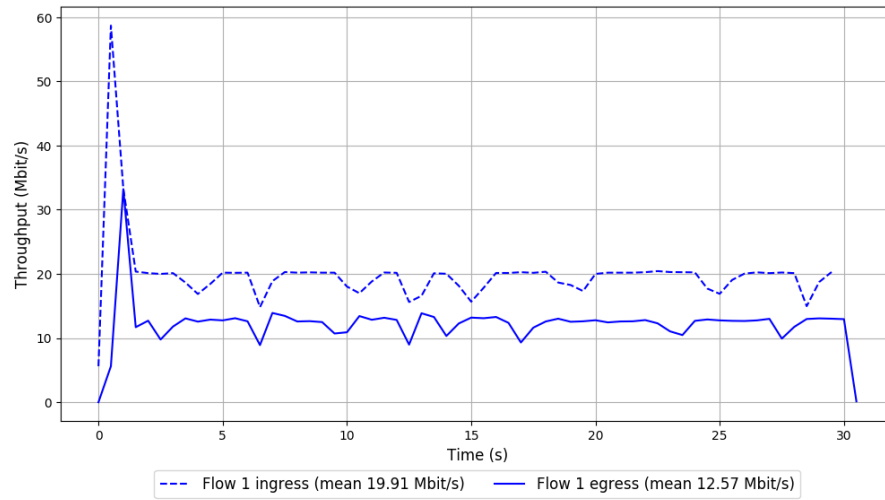


Run 3: Statistics of TaoVA-100x

Start at: 2018-09-10 23:29:33
End at: 2018-09-10 23:30:03
Local clock offset: -14.506 ms
Remote clock offset: 3.134 ms

Below is generated by plot.py at 2018-09-11 00:25:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.57 Mbit/s
95th percentile per-packet one-way delay: 99.362 ms
Loss rate: 36.86%
-- Flow 1:
Average throughput: 12.57 Mbit/s
95th percentile per-packet one-way delay: 99.362 ms
Loss rate: 36.86%

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-09-10 23:50:53

End at: 2018-09-10 23:51:23

Local clock offset: -9.665 ms

Remote clock offset: 1.694 ms

Below is generated by plot.py at 2018-09-11 00:25:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 5.60 Mbit/s

95th percentile per-packet one-way delay: 105.120 ms

Loss rate: 12.01%

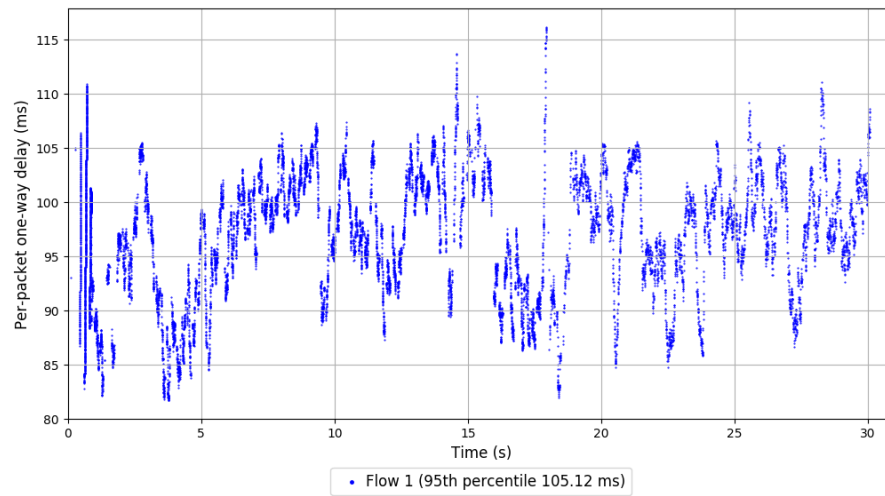
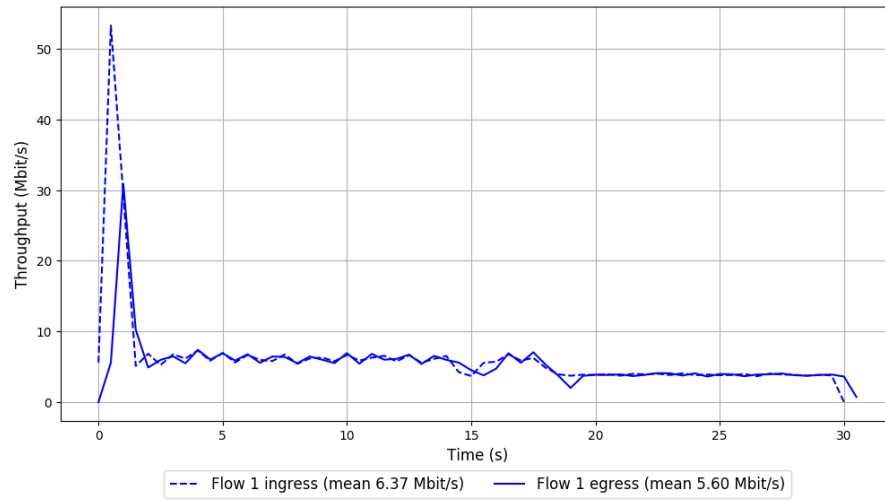
-- Flow 1:

Average throughput: 5.60 Mbit/s

95th percentile per-packet one-way delay: 105.120 ms

Loss rate: 12.01%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-09-11 00:11:49

End at: 2018-09-11 00:12:20

Local clock offset: -7.047 ms

Remote clock offset: 4.551 ms

Below is generated by plot.py at 2018-09-11 00:25:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 8.99 Mbit/s

95th percentile per-packet one-way delay: 112.277 ms

Loss rate: 31.23%

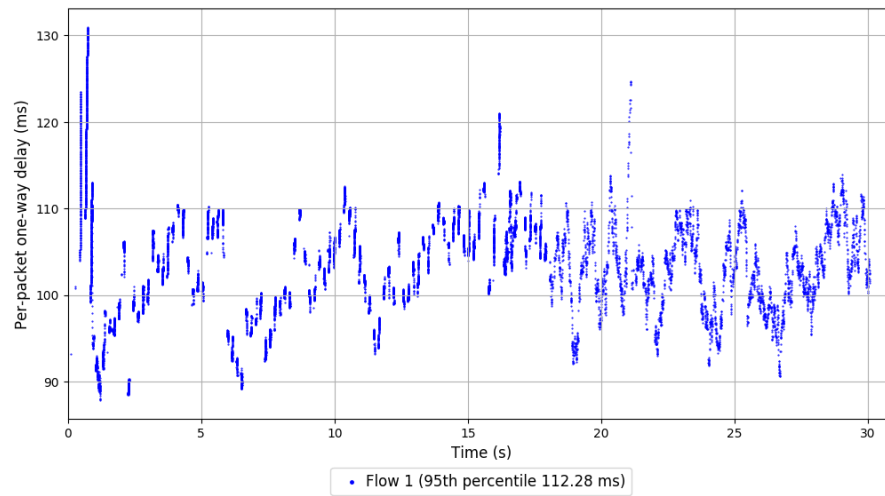
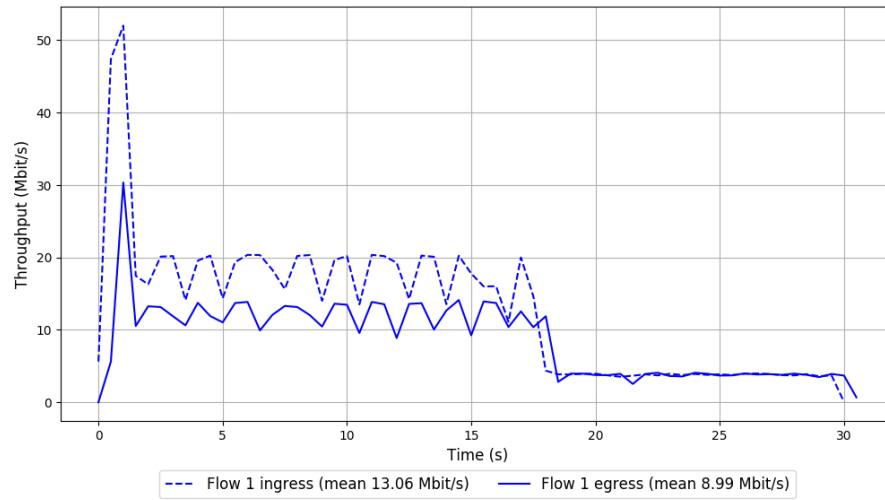
-- Flow 1:

Average throughput: 8.99 Mbit/s

95th percentile per-packet one-way delay: 112.277 ms

Loss rate: 31.23%

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



Run 1: Statistics of TCP Vegas

Start at: 2018-09-10 22:42:40

End at: 2018-09-10 22:43:10

Local clock offset: -8.952 ms

Remote clock offset: 2.745 ms

Below is generated by plot.py at 2018-09-11 00:25:39

Datalink statistics

-- Total of 1 flow:

Average throughput: 74.73 Mbit/s

95th percentile per-packet one-way delay: 84.730 ms

Loss rate: 0.53%

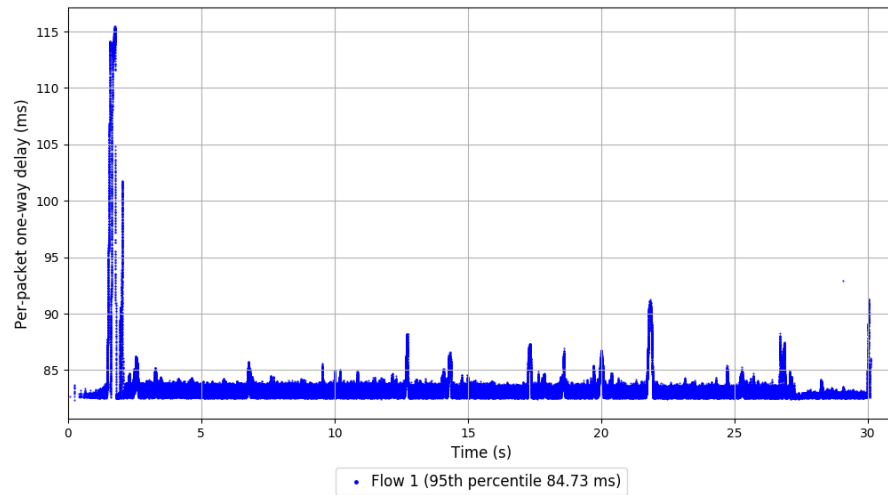
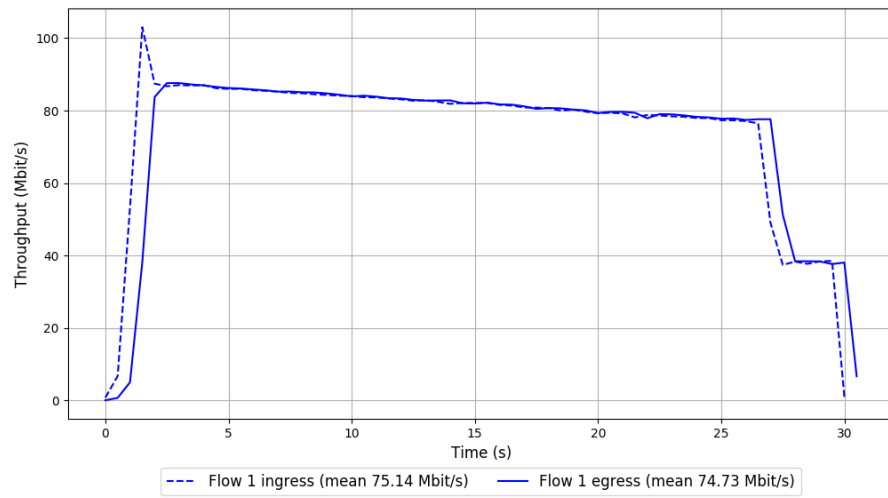
-- Flow 1:

Average throughput: 74.73 Mbit/s

95th percentile per-packet one-way delay: 84.730 ms

Loss rate: 0.53%

Run 1: Report of TCP Vegas — Data Link

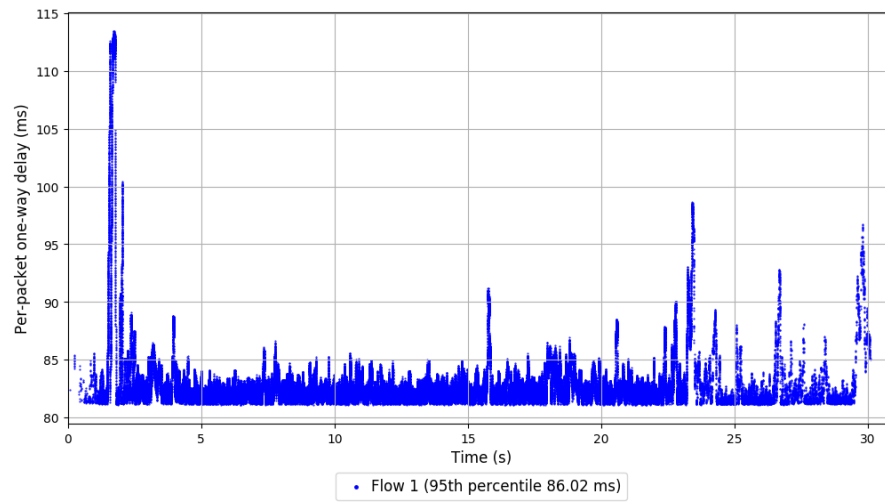
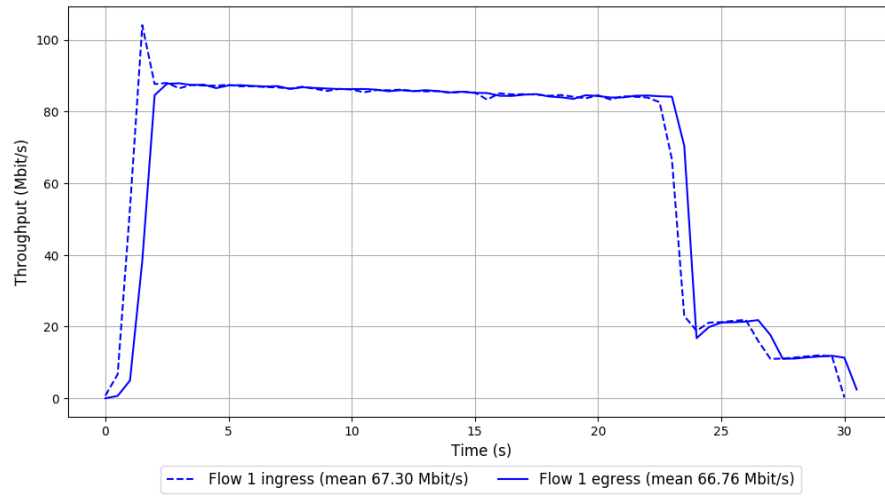


Run 2: Statistics of TCP Vegas

Start at: 2018-09-10 23:03:44
End at: 2018-09-10 23:04:14
Local clock offset: -11.012 ms
Remote clock offset: 2.707 ms

Below is generated by plot.py at 2018-09-11 00:25:39
Datalink statistics
-- Total of 1 flow:
Average throughput: 66.76 Mbit/s
95th percentile per-packet one-way delay: 86.020 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 66.76 Mbit/s
95th percentile per-packet one-way delay: 86.020 ms
Loss rate: 0.79%

Run 2: Report of TCP Vegas — Data Link

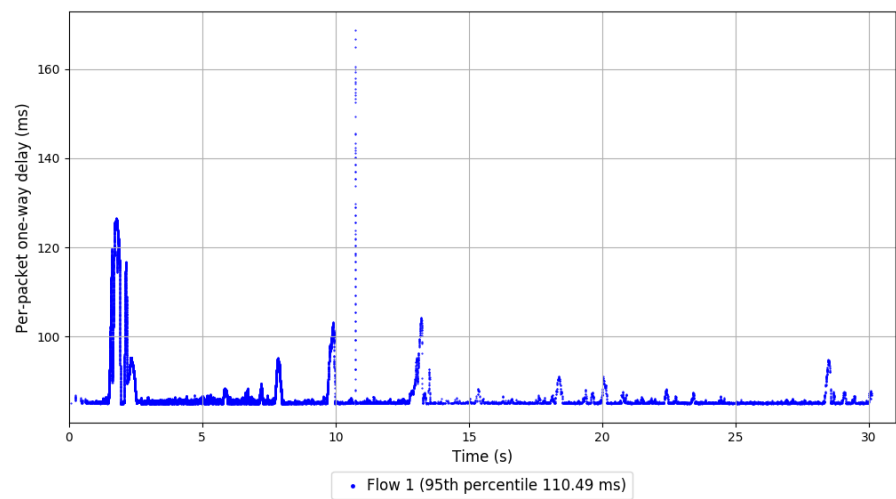
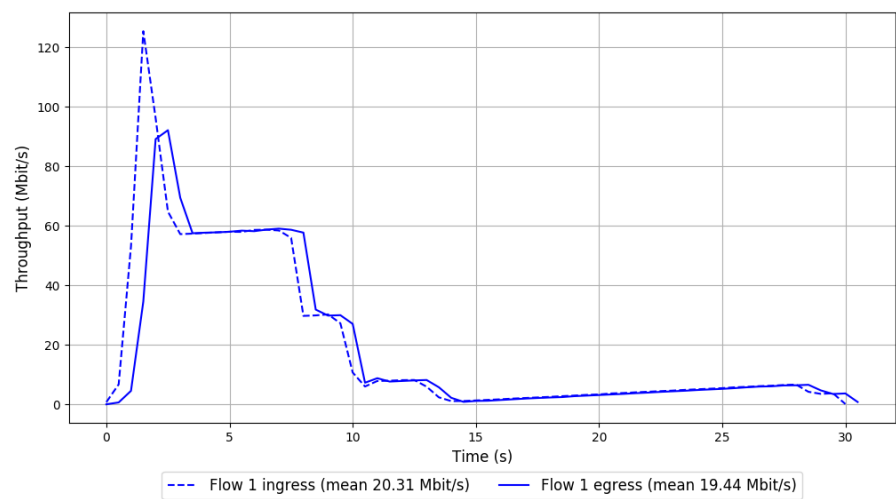


Run 3: Statistics of TCP Vegas

Start at: 2018-09-10 23:24:57
End at: 2018-09-10 23:25:27
Local clock offset: -14.167 ms
Remote clock offset: 3.349 ms

Below is generated by plot.py at 2018-09-11 00:25:39
Datalink statistics
-- Total of 1 flow:
Average throughput: 19.44 Mbit/s
95th percentile per-packet one-way delay: 110.494 ms
Loss rate: 4.28%
-- Flow 1:
Average throughput: 19.44 Mbit/s
95th percentile per-packet one-way delay: 110.494 ms
Loss rate: 4.28%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2018-09-10 23:46:15

End at: 2018-09-10 23:46:45

Local clock offset: -9.829 ms

Remote clock offset: 5.74 ms

Below is generated by plot.py at 2018-09-11 00:25:39

Datalink statistics

-- Total of 1 flow:

Average throughput: 37.30 Mbit/s

95th percentile per-packet one-way delay: 99.826 ms

Loss rate: 1.94%

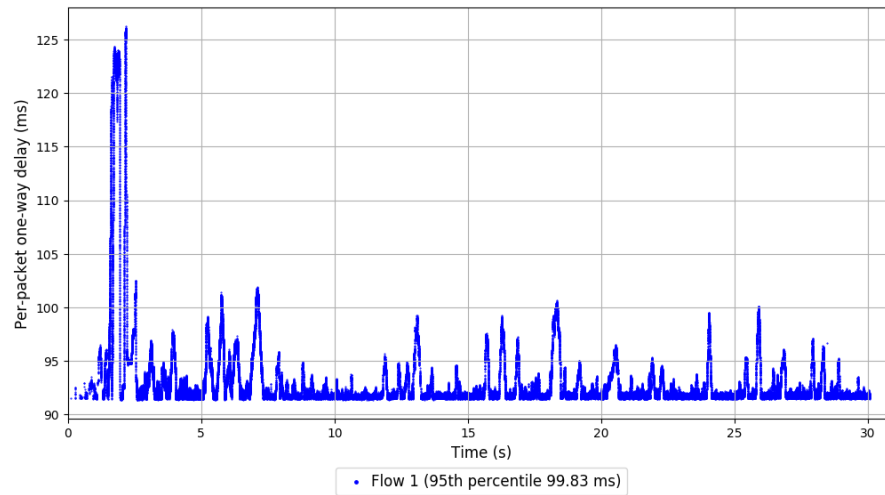
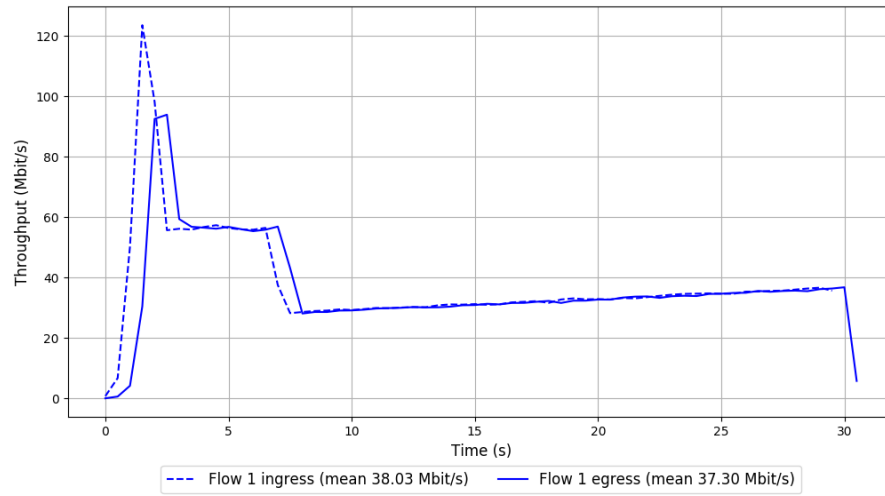
-- Flow 1:

Average throughput: 37.30 Mbit/s

95th percentile per-packet one-way delay: 99.826 ms

Loss rate: 1.94%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-09-11 00:07:17

End at: 2018-09-11 00:07:47

Local clock offset: -6.735 ms

Remote clock offset: 0.64 ms

Below is generated by plot.py at 2018-09-11 00:25:39

Datalink statistics

-- Total of 1 flow:

Average throughput: 29.35 Mbit/s

95th percentile per-packet one-way delay: 93.436 ms

Loss rate: 1.32%

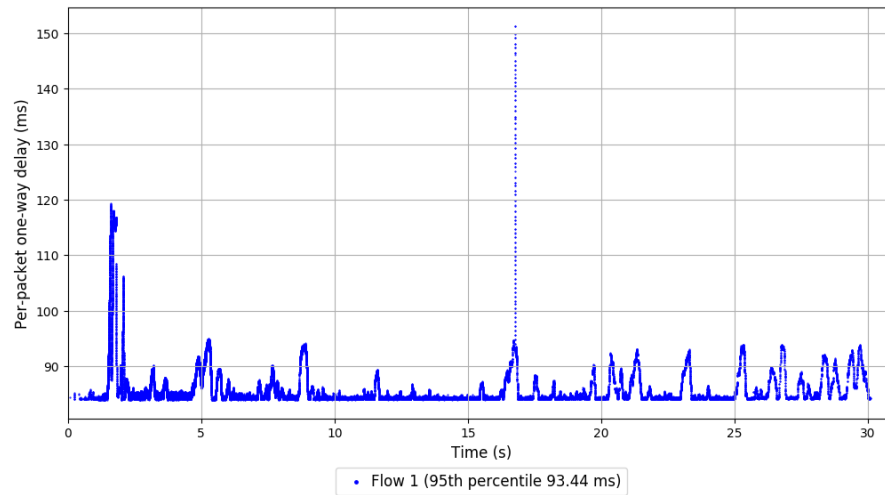
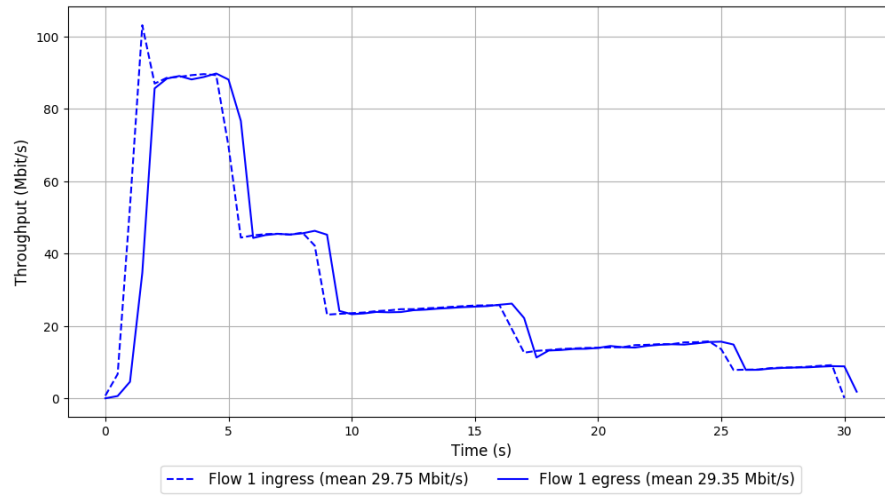
-- Flow 1:

Average throughput: 29.35 Mbit/s

95th percentile per-packet one-way delay: 93.436 ms

Loss rate: 1.32%

Run 5: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2018-09-10 22:33:18

End at: 2018-09-10 22:33:48

Local clock offset: -9.738 ms

Remote clock offset: 2.662 ms

Below is generated by plot.py at 2018-09-11 00:25:39

Datalink statistics

-- Total of 1 flow:

Average throughput: 26.87 Mbit/s

95th percentile per-packet one-way delay: 115.125 ms

Loss rate: 9.45%

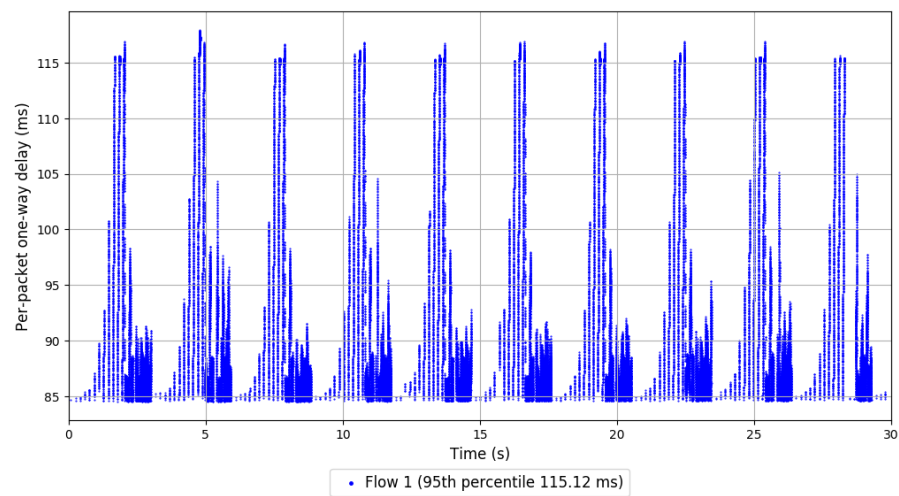
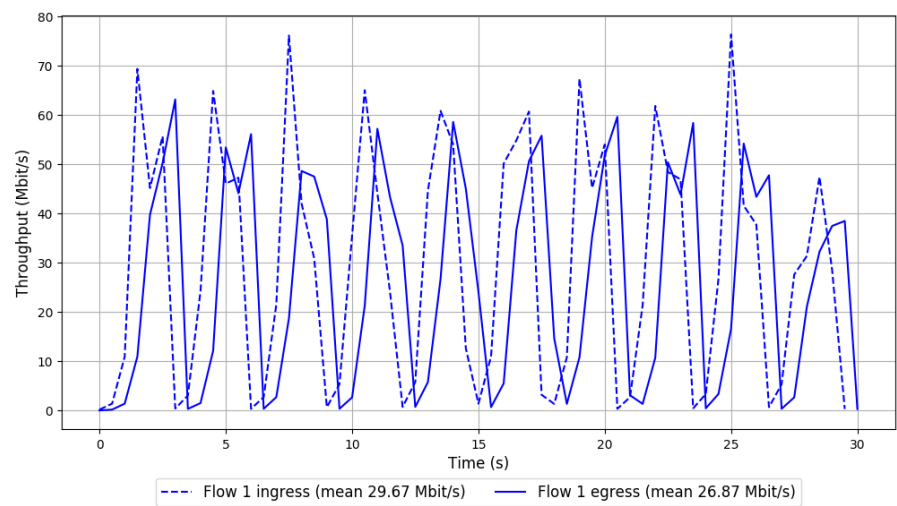
-- Flow 1:

Average throughput: 26.87 Mbit/s

95th percentile per-packet one-way delay: 115.125 ms

Loss rate: 9.45%

Run 1: Report of Verus — Data Link

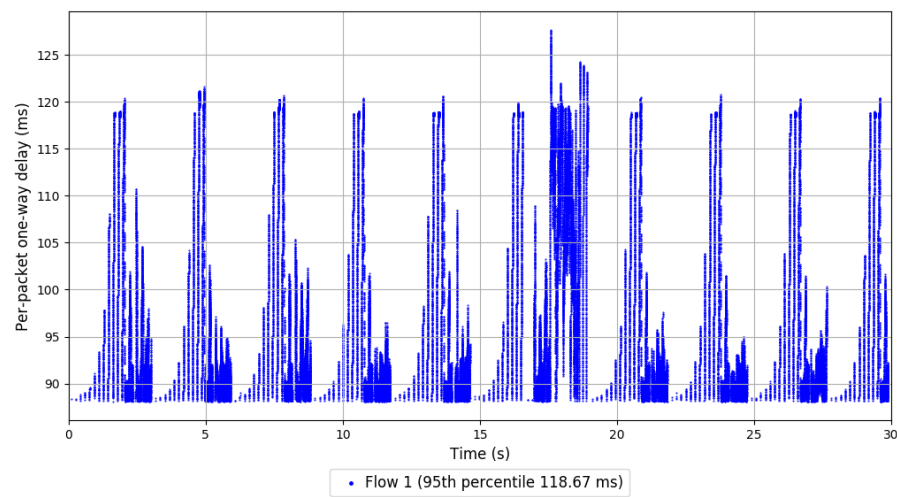
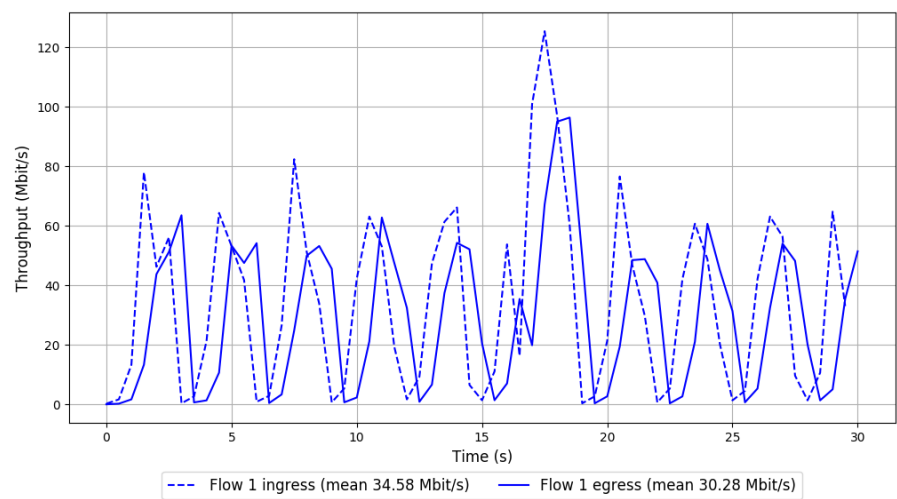


Run 2: Statistics of Verus

Start at: 2018-09-10 22:54:18
End at: 2018-09-10 22:54:48
Local clock offset: -10.478 ms
Remote clock offset: 6.328 ms

Below is generated by plot.py at 2018-09-11 00:25:39
Datalink statistics
-- Total of 1 flow:
Average throughput: 30.28 Mbit/s
95th percentile per-packet one-way delay: 118.669 ms
Loss rate: 12.43%
-- Flow 1:
Average throughput: 30.28 Mbit/s
95th percentile per-packet one-way delay: 118.669 ms
Loss rate: 12.43%

Run 2: Report of Verus — Data Link

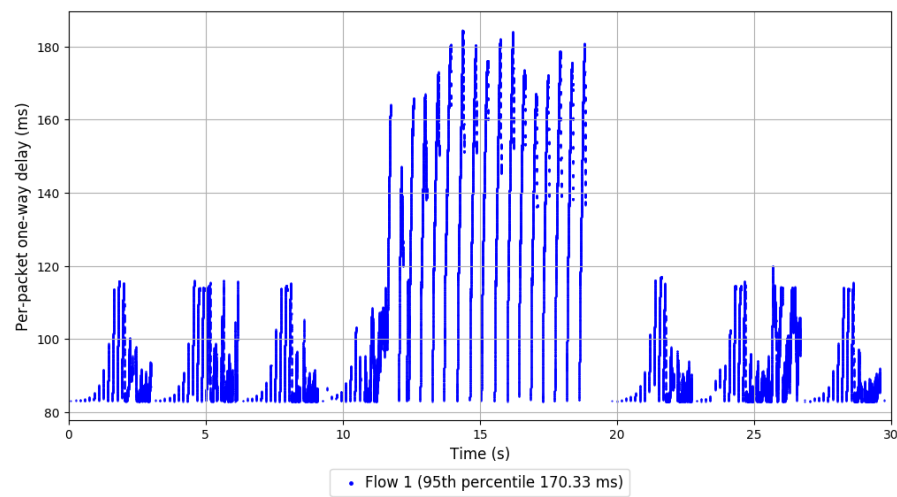
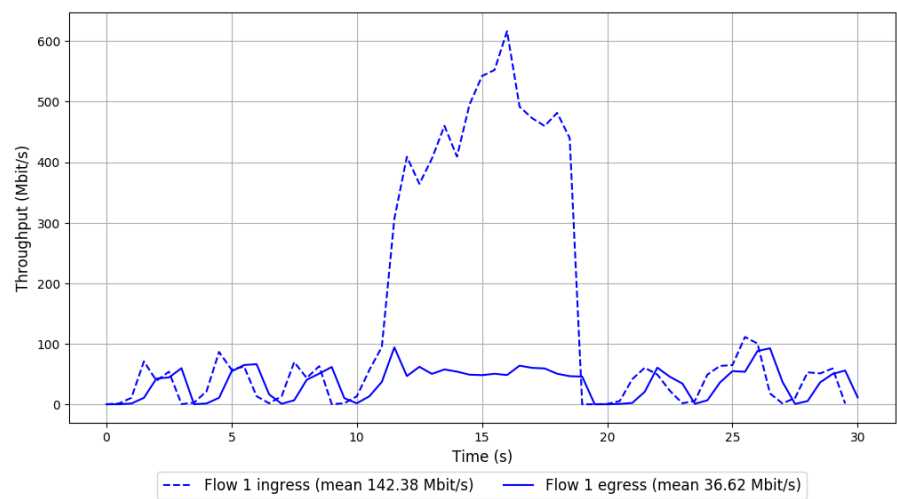


Run 3: Statistics of Verus

Start at: 2018-09-10 23:15:33
End at: 2018-09-10 23:16:03
Local clock offset: -12.792 ms
Remote clock offset: 2.855 ms

Below is generated by plot.py at 2018-09-11 00:25:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 36.62 Mbit/s
95th percentile per-packet one-way delay: 170.332 ms
Loss rate: 74.28%
-- Flow 1:
Average throughput: 36.62 Mbit/s
95th percentile per-packet one-way delay: 170.332 ms
Loss rate: 74.28%

Run 3: Report of Verus — Data Link

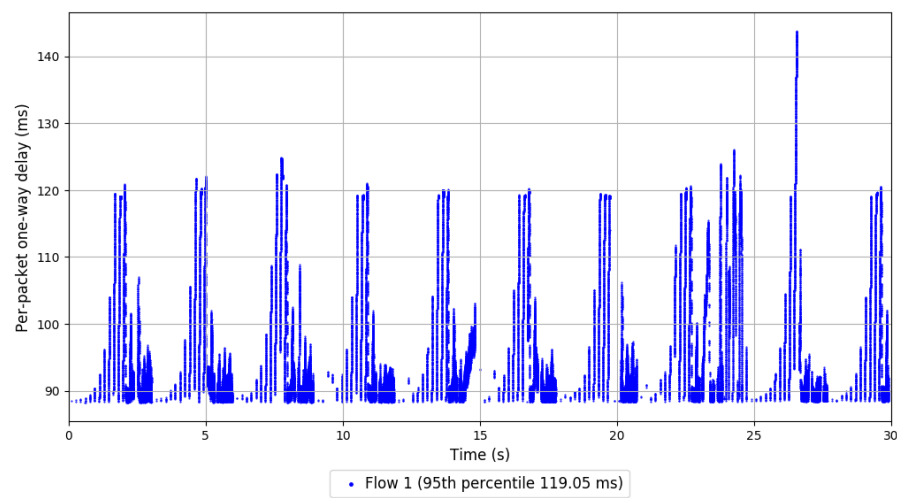
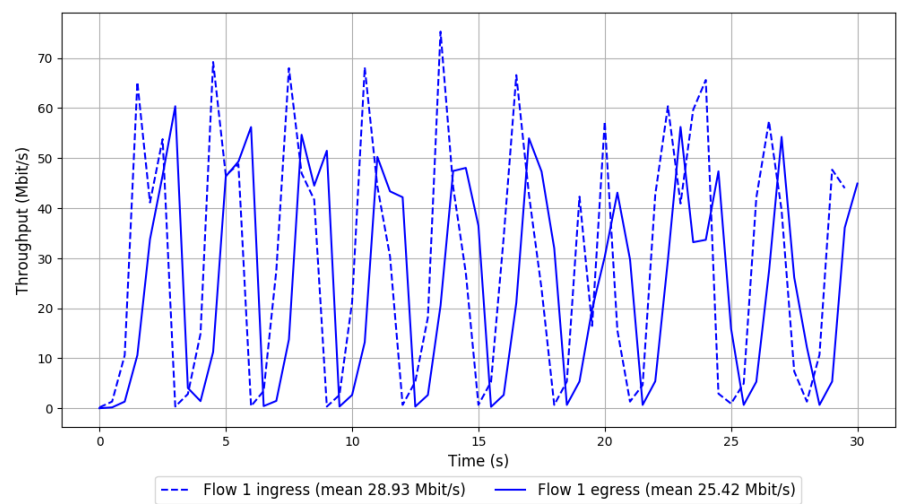


Run 4: Statistics of Verus

Start at: 2018-09-10 23:36:44
End at: 2018-09-10 23:37:14
Local clock offset: -11.296 ms
Remote clock offset: 2.818 ms

Below is generated by plot.py at 2018-09-11 00:25:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 25.42 Mbit/s
95th percentile per-packet one-way delay: 119.045 ms
Loss rate: 12.14%
-- Flow 1:
Average throughput: 25.42 Mbit/s
95th percentile per-packet one-way delay: 119.045 ms
Loss rate: 12.14%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-09-10 23:57:53

End at: 2018-09-10 23:58:23

Local clock offset: -9.603 ms

Remote clock offset: 1.049 ms

Below is generated by plot.py at 2018-09-11 00:25:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 32.48 Mbit/s

95th percentile per-packet one-way delay: 157.917 ms

Loss rate: 72.20%

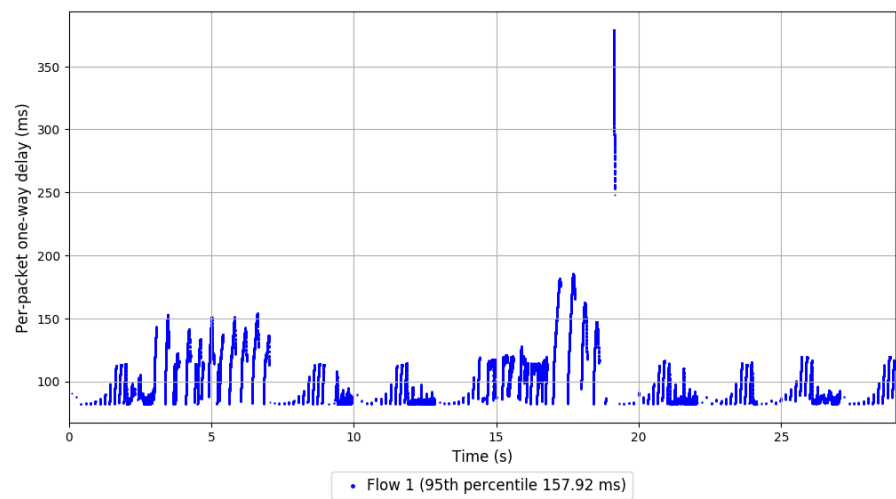
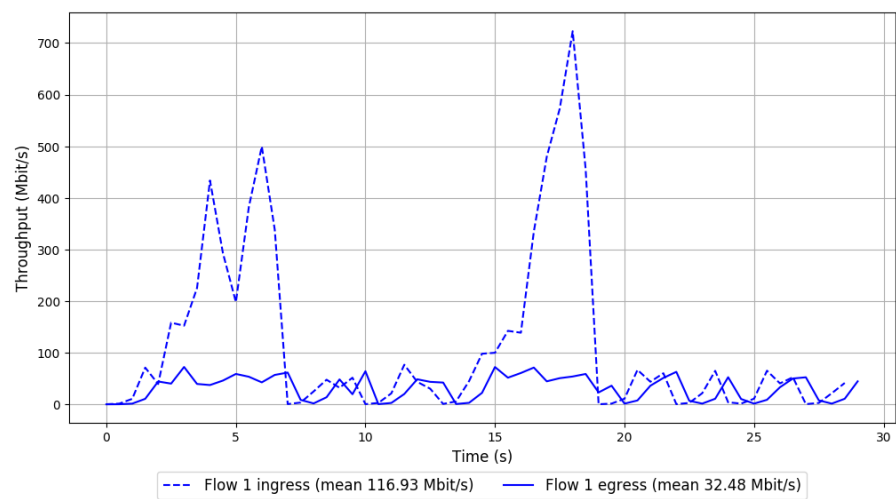
-- Flow 1:

Average throughput: 32.48 Mbit/s

95th percentile per-packet one-way delay: 157.917 ms

Loss rate: 72.20%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2018-09-10 22:44:59

End at: 2018-09-10 22:45:29

Local clock offset: -9.741 ms

Remote clock offset: 2.875 ms

Below is generated by plot.py at 2018-09-11 00:25:58

Datalink statistics

-- Total of 1 flow:

Average throughput: 50.61 Mbit/s

95th percentile per-packet one-way delay: 111.519 ms

Loss rate: 0.88%

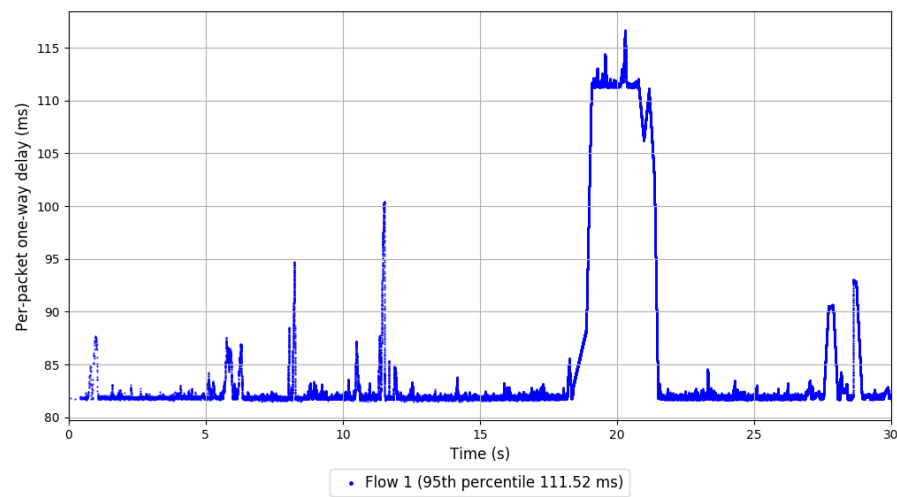
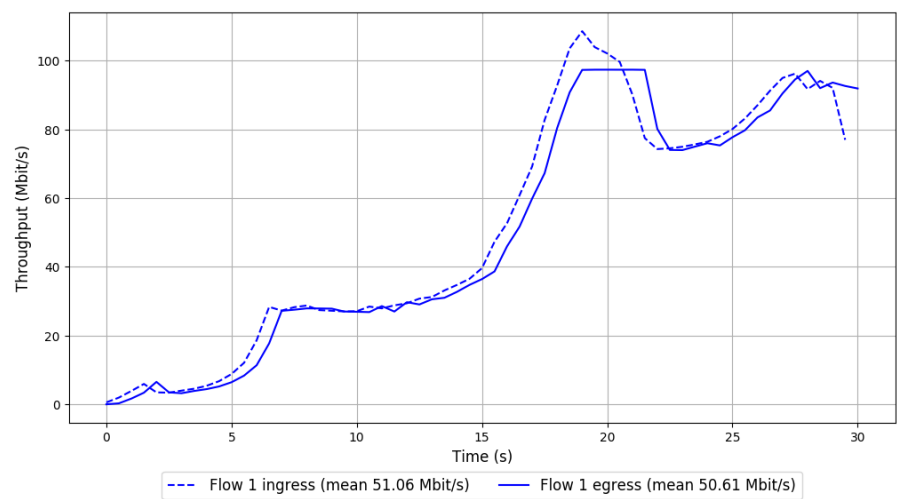
-- Flow 1:

Average throughput: 50.61 Mbit/s

95th percentile per-packet one-way delay: 111.519 ms

Loss rate: 0.88%

Run 1: Report of PCC-Vivace — Data Link

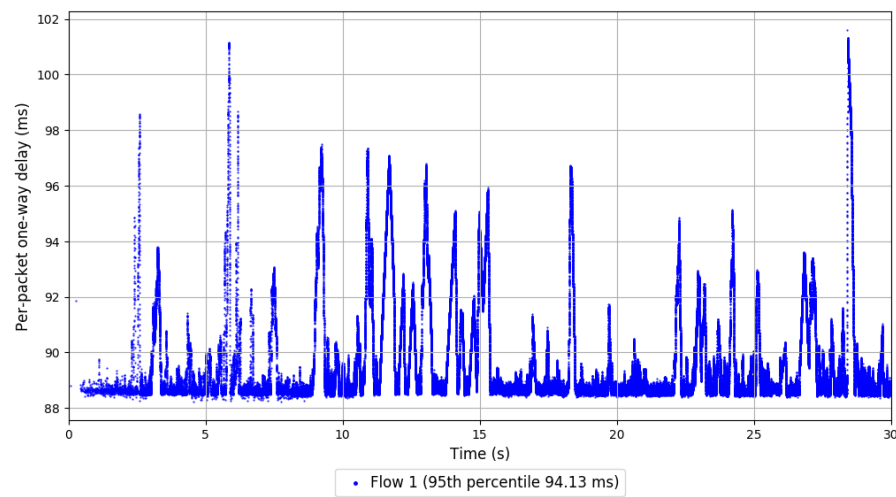
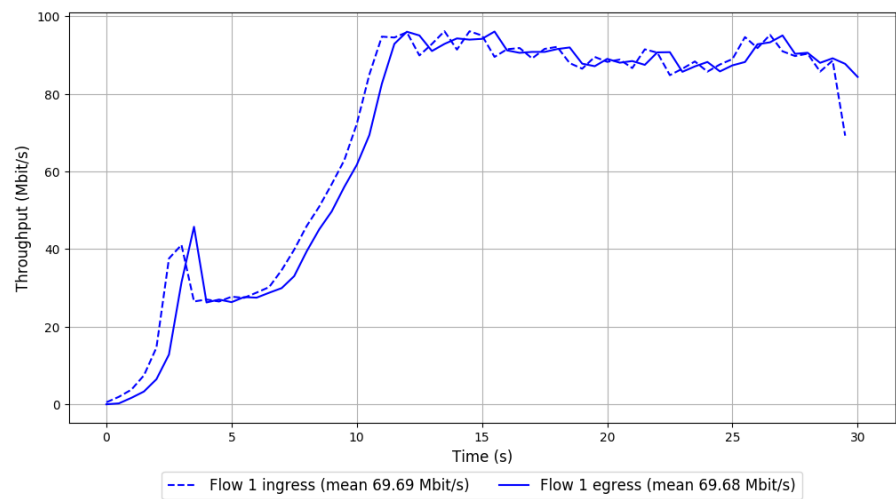


Run 2: Statistics of PCC-Vivace

Start at: 2018-09-10 23:06:05
End at: 2018-09-10 23:06:35
Local clock offset: -11.401 ms
Remote clock offset: 6.897 ms

Below is generated by plot.py at 2018-09-11 00:26:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 69.68 Mbit/s
95th percentile per-packet one-way delay: 94.128 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 69.68 Mbit/s
95th percentile per-packet one-way delay: 94.128 ms
Loss rate: 0.03%

Run 2: Report of PCC-Vivace — Data Link

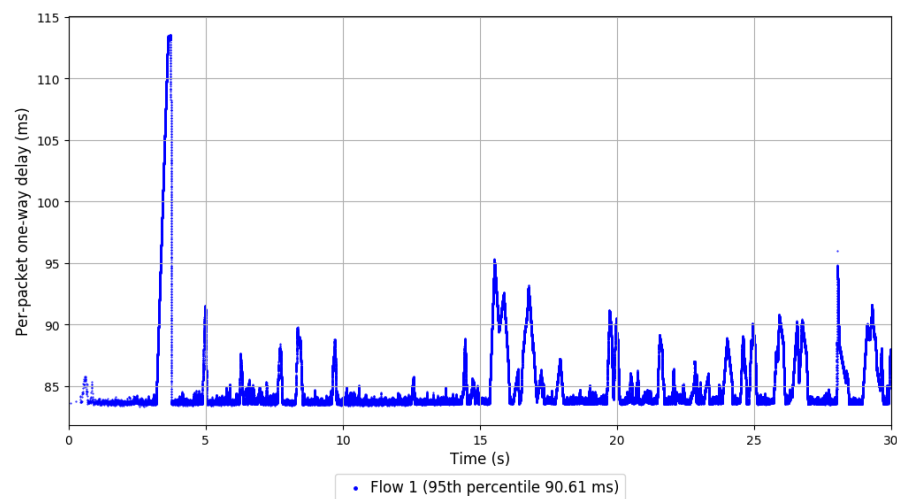
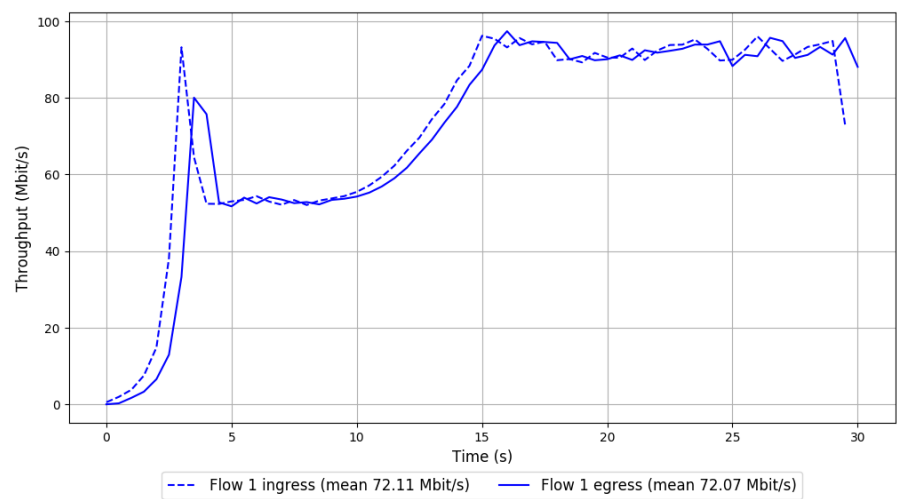


Run 3: Statistics of PCC-Vivace

Start at: 2018-09-10 23:27:13
End at: 2018-09-10 23:27:43
Local clock offset: -14.455 ms
Remote clock offset: 2.973 ms

Below is generated by plot.py at 2018-09-11 00:26:07
Datalink statistics
-- Total of 1 flow:
Average throughput: 72.07 Mbit/s
95th percentile per-packet one-way delay: 90.608 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 72.07 Mbit/s
95th percentile per-packet one-way delay: 90.608 ms
Loss rate: 0.07%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2018-09-10 23:48:32

End at: 2018-09-10 23:49:02

Local clock offset: -9.642 ms

Remote clock offset: 2.244 ms

Below is generated by plot.py at 2018-09-11 00:26:07

Datalink statistics

-- Total of 1 flow:

Average throughput: 77.55 Mbit/s

95th percentile per-packet one-way delay: 103.557 ms

Loss rate: 0.07%

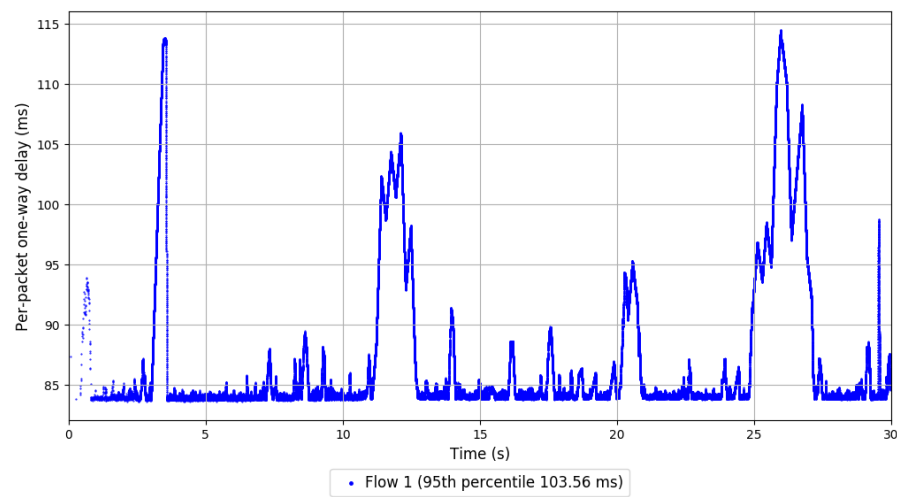
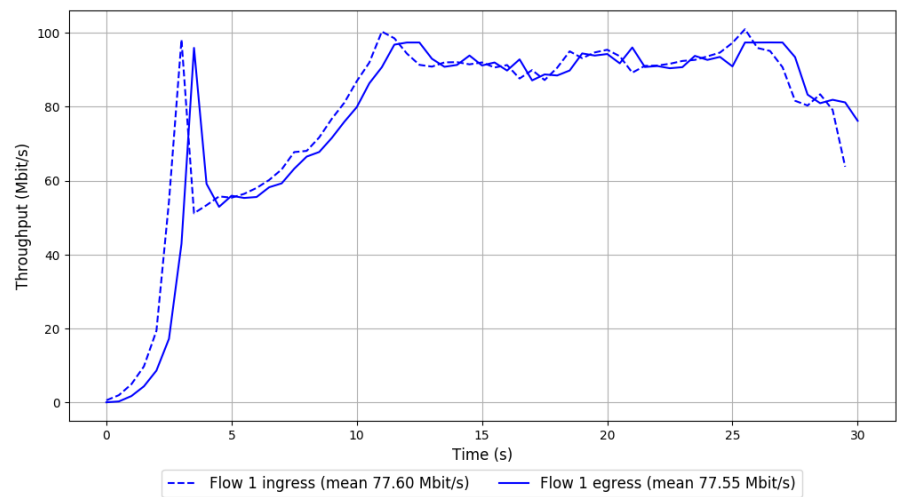
-- Flow 1:

Average throughput: 77.55 Mbit/s

95th percentile per-packet one-way delay: 103.557 ms

Loss rate: 0.07%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2018-09-11 00:09:33

End at: 2018-09-11 00:10:03

Local clock offset: -6.475 ms

Remote clock offset: 4.262 ms

Below is generated by plot.py at 2018-09-11 00:26:07

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.75 Mbit/s

95th percentile per-packet one-way delay: 114.224 ms

Loss rate: 0.23%

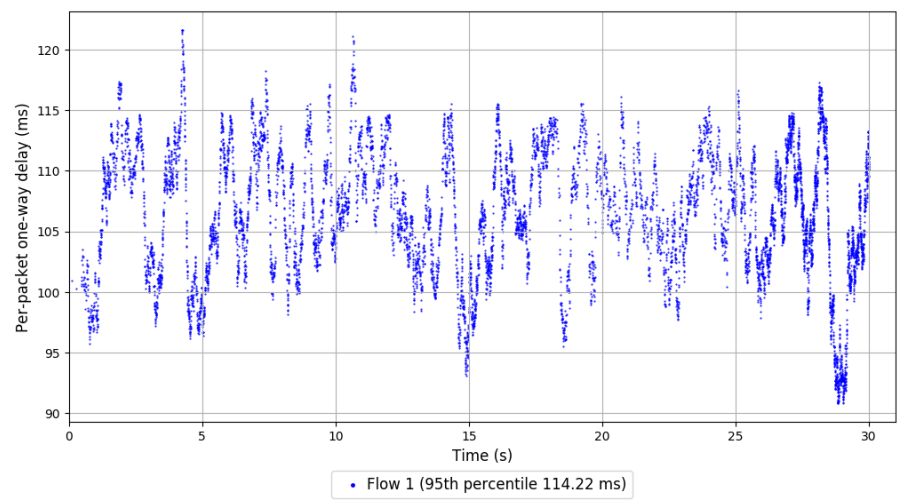
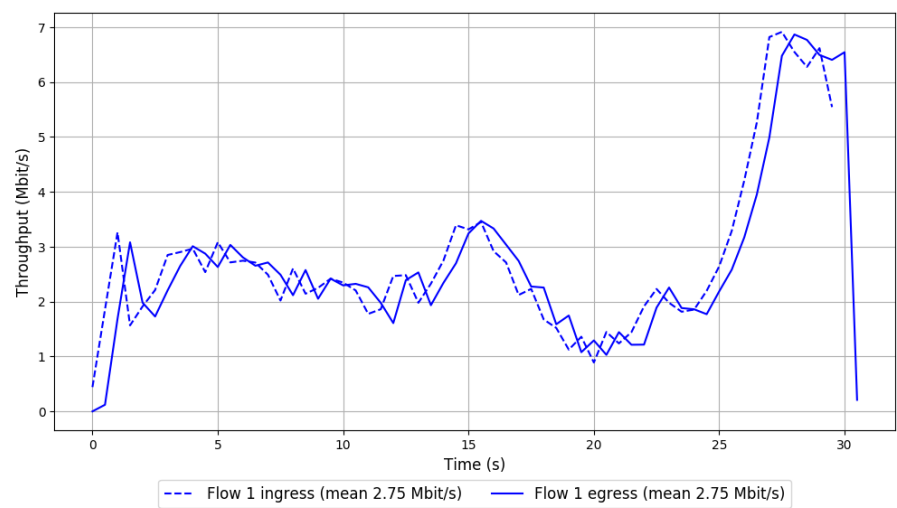
-- Flow 1:

Average throughput: 2.75 Mbit/s

95th percentile per-packet one-way delay: 114.224 ms

Loss rate: 0.23%

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2018-09-10 22:46:10

End at: 2018-09-10 22:46:40

Local clock offset: -9.788 ms

Remote clock offset: 6.918 ms

Below is generated by plot.py at 2018-09-11 00:26:07

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.38 Mbit/s

95th percentile per-packet one-way delay: 101.269 ms

Loss rate: 0.00%

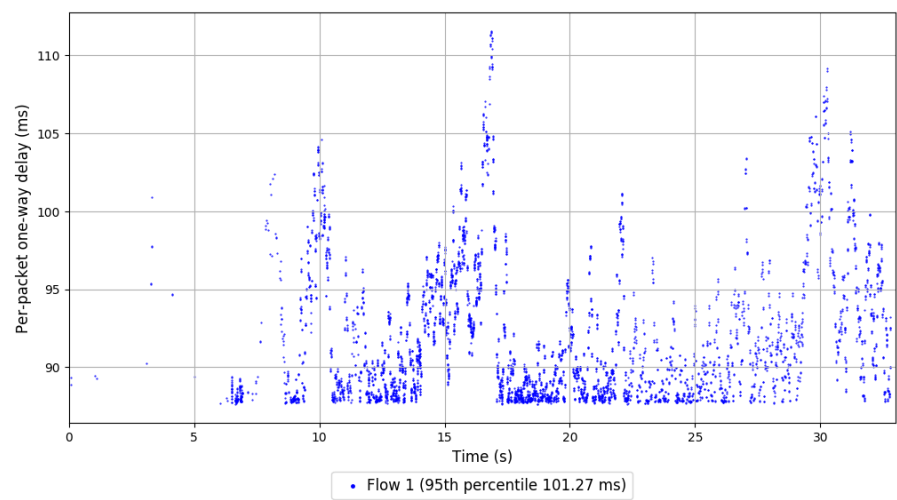
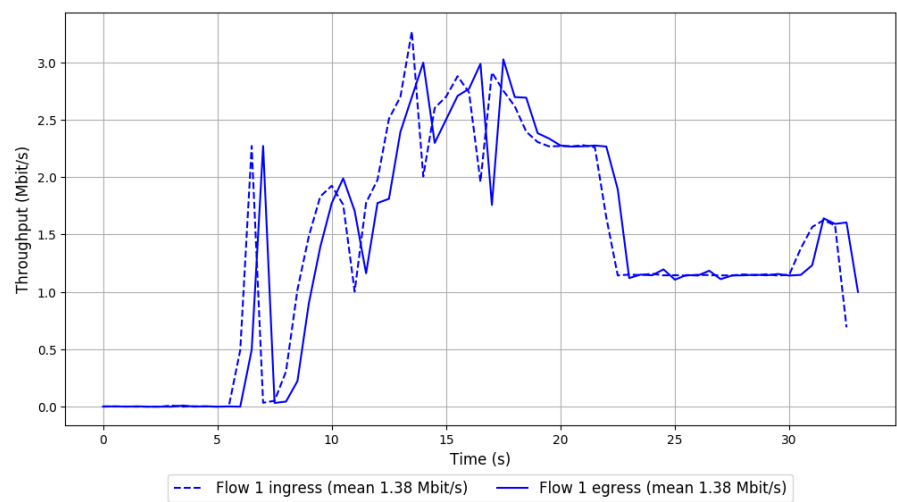
-- Flow 1:

Average throughput: 1.38 Mbit/s

95th percentile per-packet one-way delay: 101.269 ms

Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link

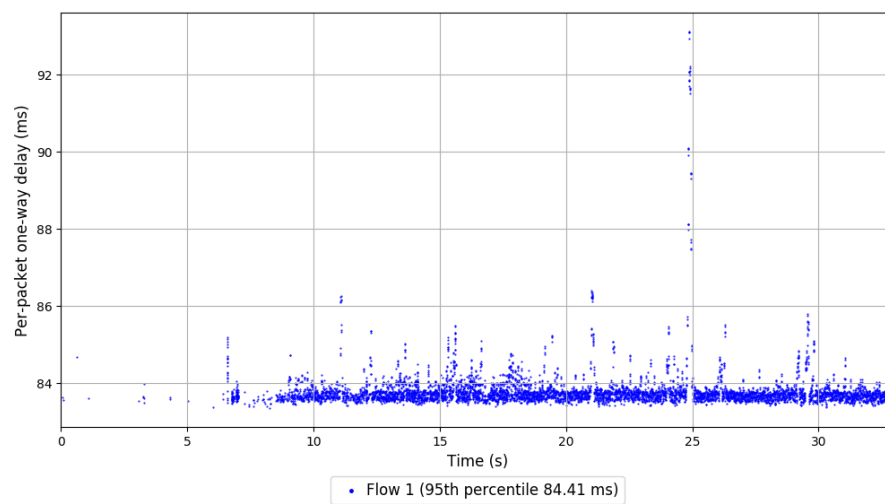
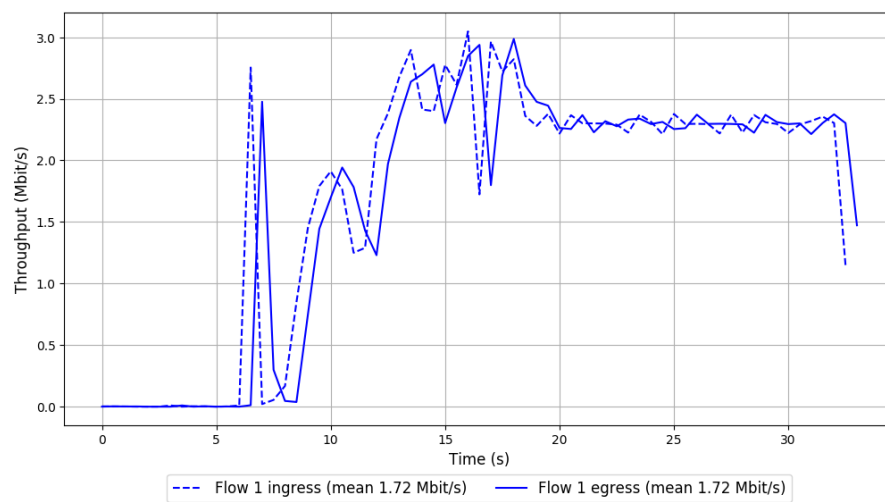


Run 2: Statistics of WebRTC media

Start at: 2018-09-10 23:07:20
End at: 2018-09-10 23:07:50
Local clock offset: -12.303 ms
Remote clock offset: 3.042 ms

Below is generated by plot.py at 2018-09-11 00:26:07
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.72 Mbit/s
95th percentile per-packet one-way delay: 84.409 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 1.72 Mbit/s
95th percentile per-packet one-way delay: 84.409 ms
Loss rate: 0.05%

Run 2: Report of WebRTC media — Data Link

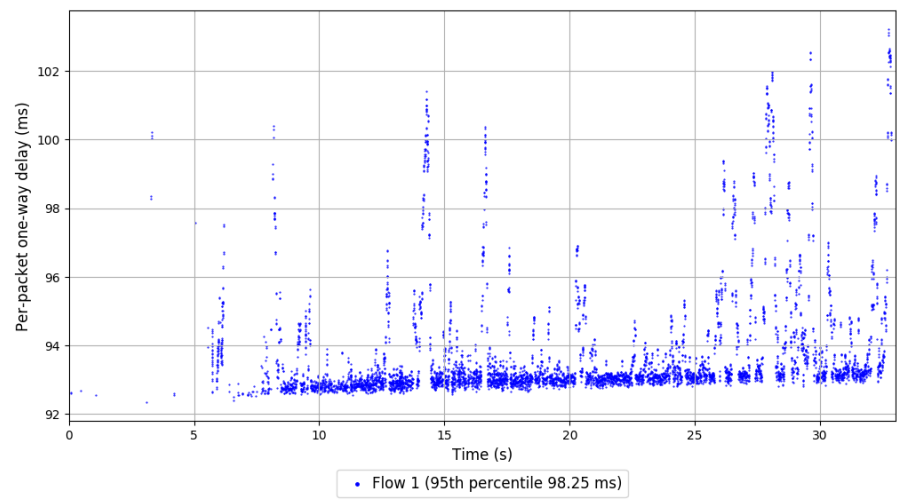
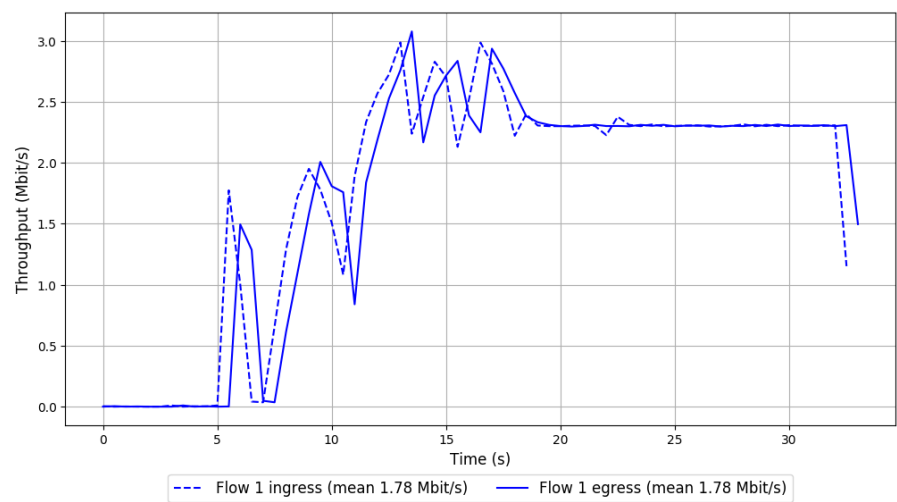


Run 3: Statistics of WebRTC media

Start at: 2018-09-10 23:28:26
End at: 2018-09-10 23:28:56
Local clock offset: -14.475 ms
Remote clock offset: 6.66 ms

Below is generated by plot.py at 2018-09-11 00:26:07
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.78 Mbit/s
95th percentile per-packet one-way delay: 98.247 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 1.78 Mbit/s
95th percentile per-packet one-way delay: 98.247 ms
Loss rate: 0.10%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-09-10 23:49:45

End at: 2018-09-10 23:50:15

Local clock offset: -8.853 ms

Remote clock offset: 5.505 ms

Below is generated by plot.py at 2018-09-11 00:26:07

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 112.999 ms

Loss rate: 1.00%

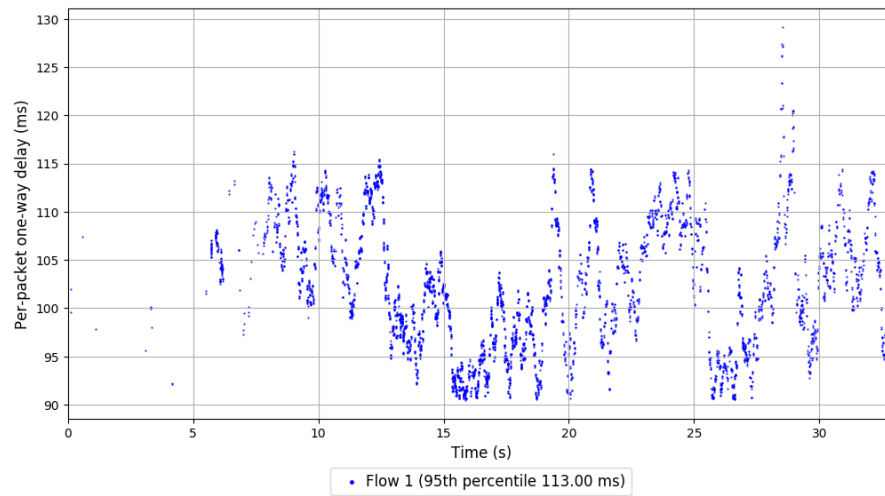
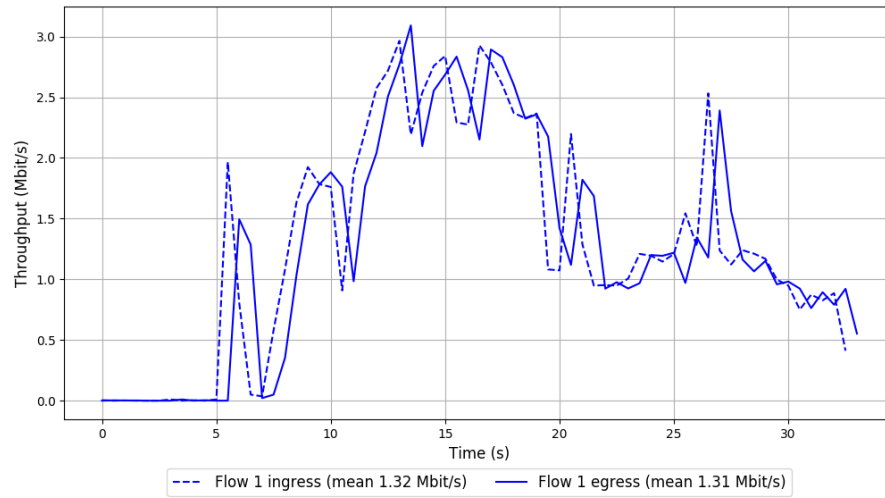
-- Flow 1:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 112.999 ms

Loss rate: 1.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-09-11 00:10:42

End at: 2018-09-11 00:11:12

Local clock offset: -7.153 ms

Remote clock offset: 0.056 ms

Below is generated by plot.py at 2018-09-11 00:26:07

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.88 Mbit/s

95th percentile per-packet one-way delay: 89.483 ms

Loss rate: 1.56%

-- Flow 1:

Average throughput: 1.88 Mbit/s

95th percentile per-packet one-way delay: 89.483 ms

Loss rate: 1.56%

Run 5: Report of WebRTC media — Data Link

