

Pantheon Report

Generated at 2018-09-06 07:32:28 (UTC).

Data path: AWS California 1 on **ens5** (*local*) → Stanford on **eno1** (*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 **time.stanford.edu** and have been applied to correct the timestamps in logs.

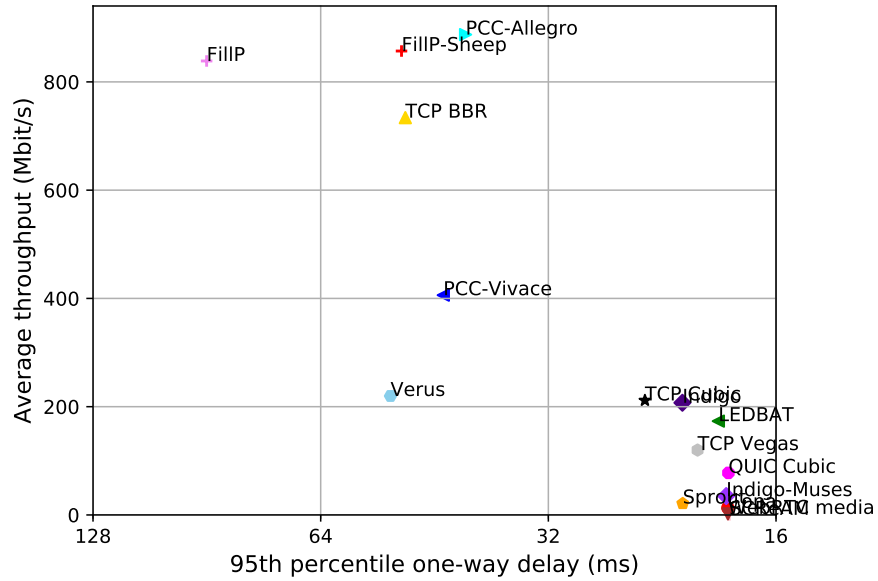
System info:

```
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 = 536870912 536870912 536870912
```

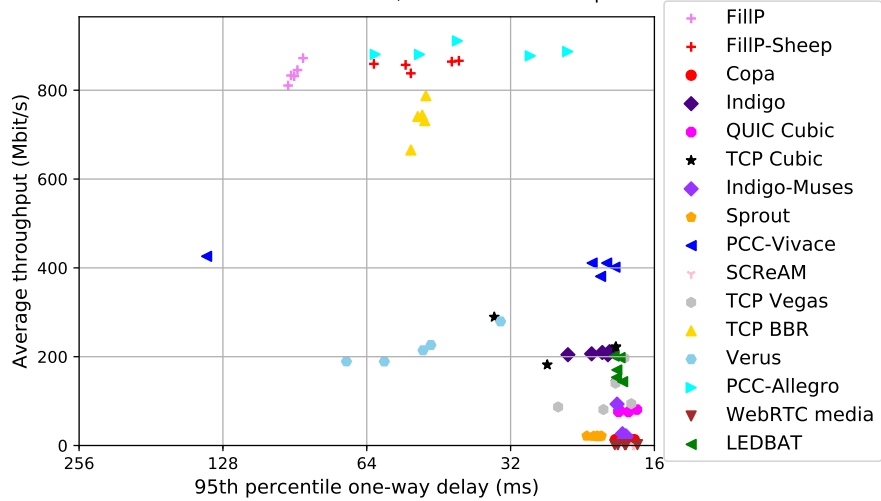
Git summary:

```
branch: muses @ f392ce15d580343f4432c3d7e068b3290f03eb4a
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ a28d20fb82a95a965a3da65fd1eb71b8994e9b84
third_party/pantheon-tunnel @ cbfce6db5ff5740d4fe1771f813cd646339e1952
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

test from AWS California 1 to Stanford, 5 runs of 30s each per scheme
(mean of all runs by scheme)



test from AWS California 1 to Stanford, 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	733.95	49.46	0.41
Copa	5	13.22	18.53	65.22
TCP Cubic	5	211.55	23.85	0.03
FillP	5	838.65	90.57	3.97
FillP-Sheep	5	857.03	50.04	5.22
Indigo	5	207.25	21.28	0.02
LEDBAT	5	173.31	19.07	0.01
Indigo-Muses	5	34.91	18.62	0.02
PCC-Allegro	5	887.37	41.17	0.63
PCC-Expr	0	N/A	N/A	N/A
QUIC Cubic	5	77.72	18.50	0.01
SCReAM	5	0.20	18.45	0.05
Sprout	5	21.15	21.26	0.05
TaoVA-100x	0	N/A	N/A	N/A
TCP Vegas	5	119.85	20.32	0.28
Verus	5	219.77	51.75	18.44
PCC-Vivace	5	406.02	44.07	0.30
WebRTC media	5	1.94	18.52	0.01

Run 1: Statistics of TCP BBR

Start at: 2018-09-06 04:52:03

End at: 2018-09-06 04:52:33

Local clock offset: 3.919 ms

Remote clock offset: 0.164 ms

Below is generated by plot.py at 2018-09-06 07:01:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 665.45 Mbit/s

95th percentile per-packet one-way delay: 51.740 ms

Loss rate: 0.25%

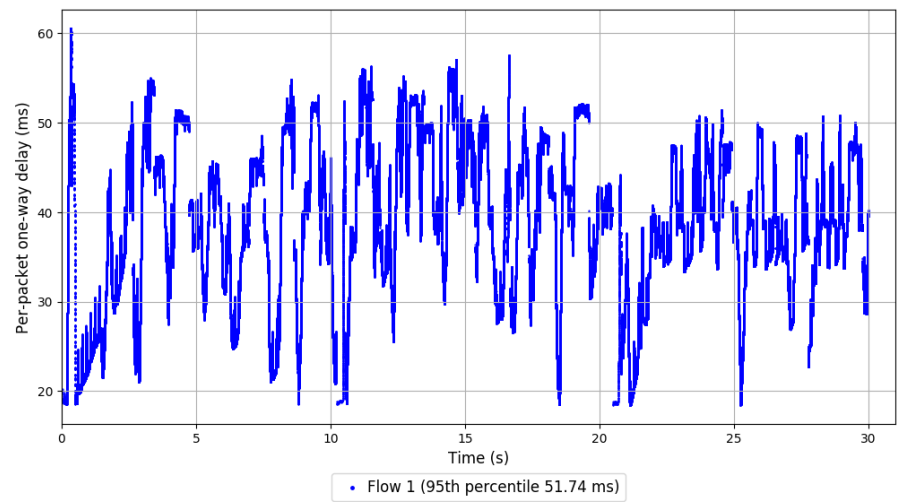
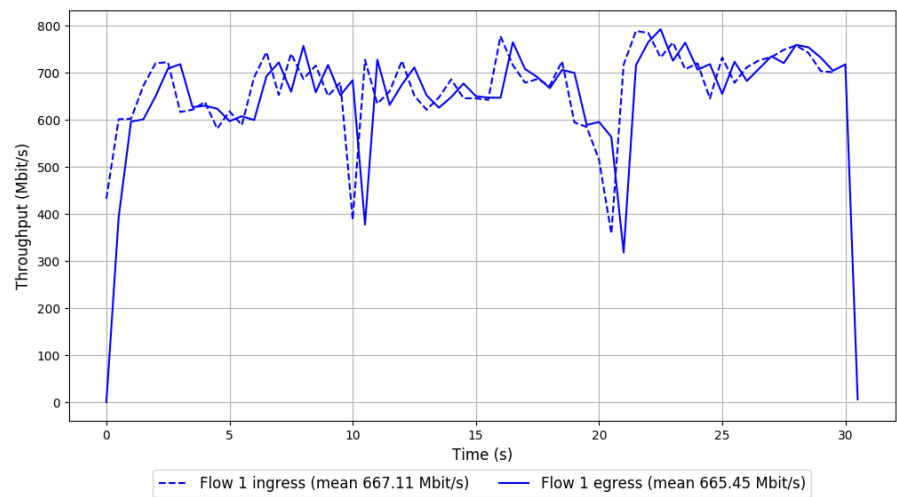
-- Flow 1:

Average throughput: 665.45 Mbit/s

95th percentile per-packet one-way delay: 51.740 ms

Loss rate: 0.25%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-09-06 05:18:08

End at: 2018-09-06 05:18:38

Local clock offset: 3.474 ms

Remote clock offset: 4.356 ms

Below is generated by plot.py at 2018-09-06 07:02:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 743.90 Mbit/s

95th percentile per-packet one-way delay: 48.977 ms

Loss rate: 0.44%

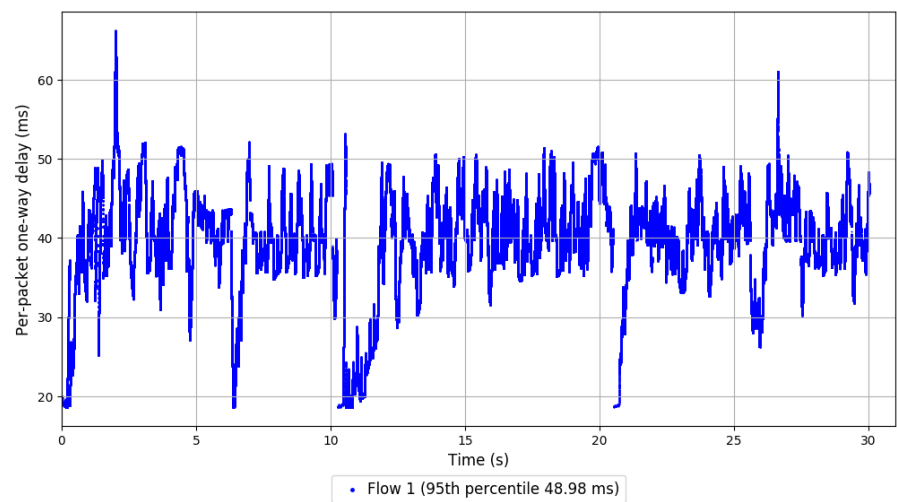
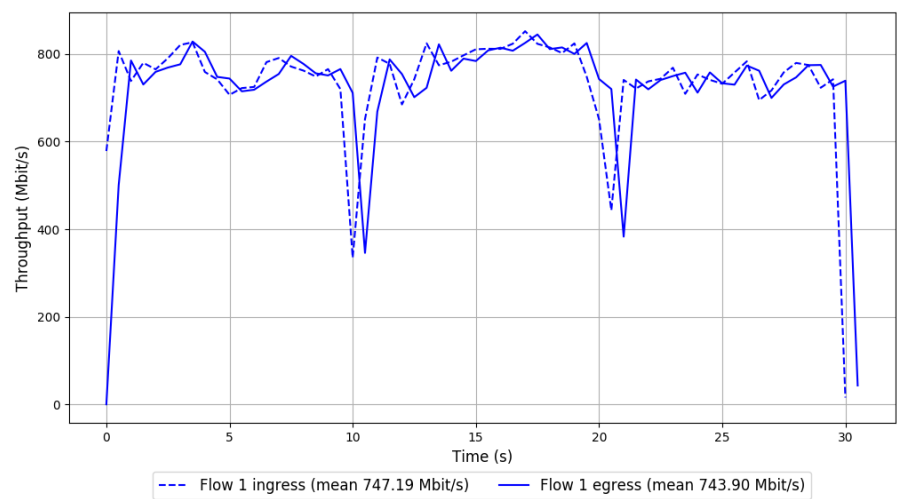
-- Flow 1:

Average throughput: 743.90 Mbit/s

95th percentile per-packet one-way delay: 48.977 ms

Loss rate: 0.44%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-09-06 05:44:11

End at: 2018-09-06 05:44:41

Local clock offset: 3.031 ms

Remote clock offset: 0.184 ms

Below is generated by plot.py at 2018-09-06 07:02:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 740.90 Mbit/s

95th percentile per-packet one-way delay: 50.050 ms

Loss rate: 0.60%

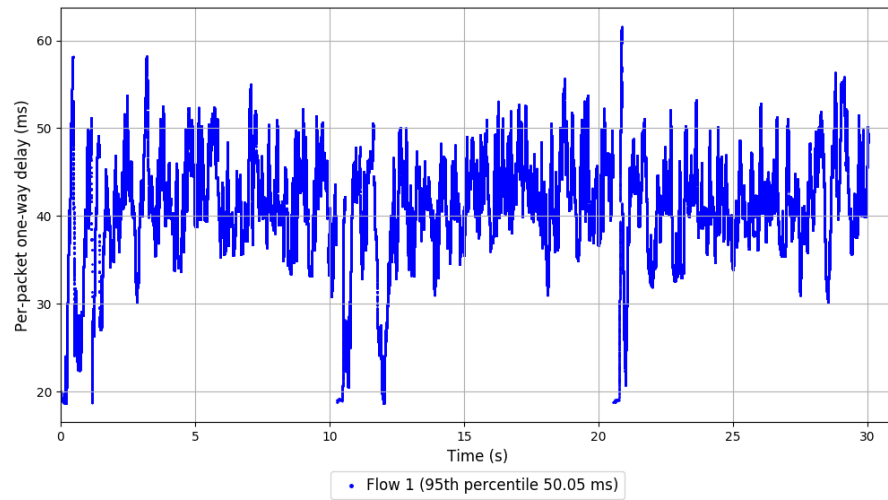
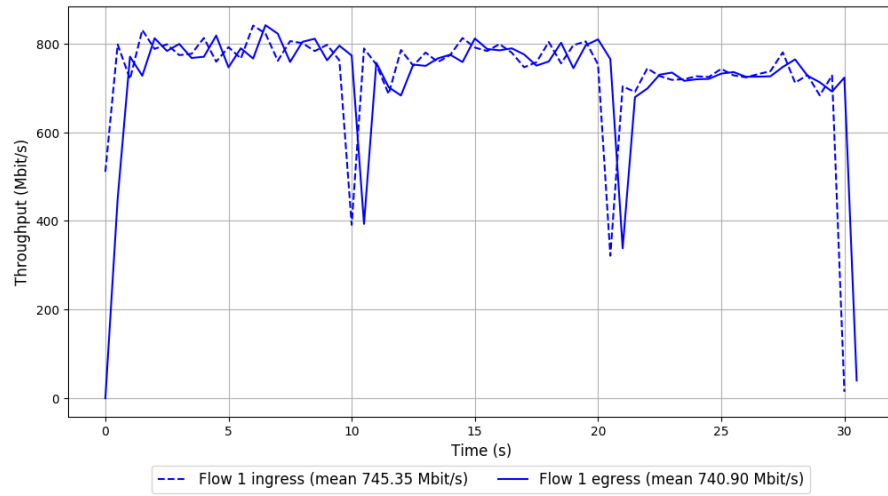
-- Flow 1:

Average throughput: 740.90 Mbit/s

95th percentile per-packet one-way delay: 50.050 ms

Loss rate: 0.60%

Run 3: Report of TCP BBR — Data Link

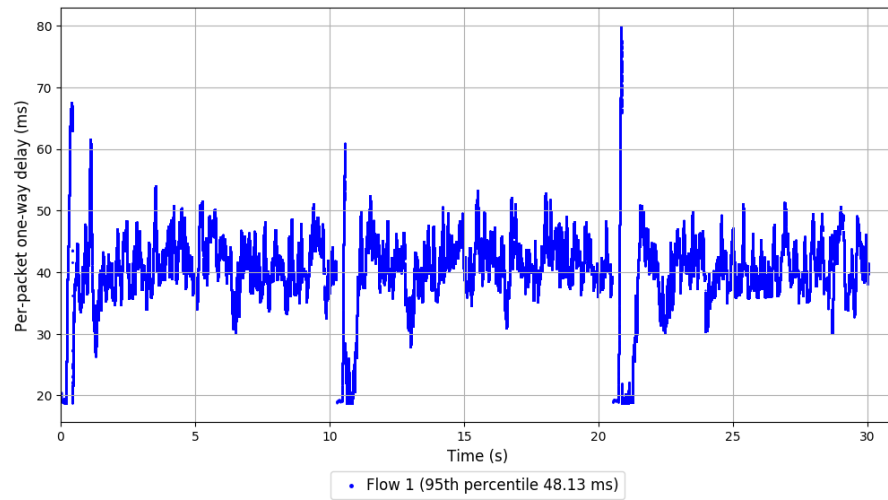
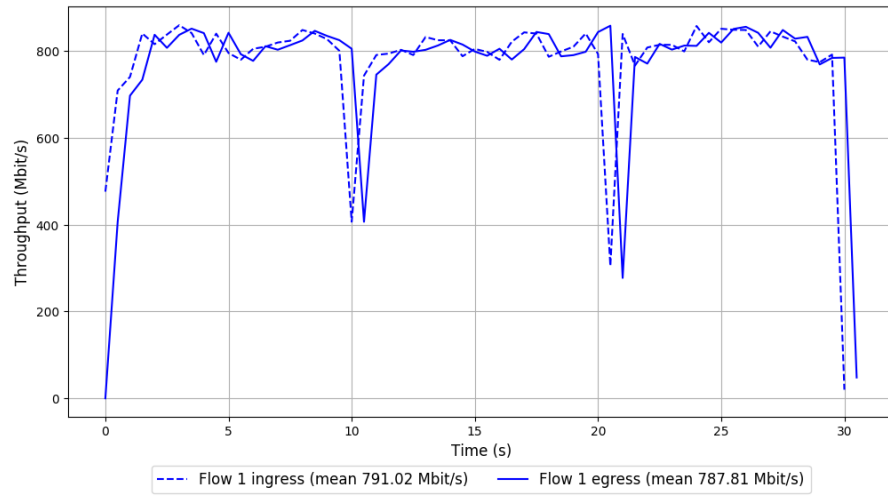


Run 4: Statistics of TCP BBR

Start at: 2018-09-06 06:10:17
End at: 2018-09-06 06:10:47
Local clock offset: 3.044 ms
Remote clock offset: -0.285 ms

Below is generated by plot.py at 2018-09-06 07:02:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 787.81 Mbit/s
95th percentile per-packet one-way delay: 48.131 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 787.81 Mbit/s
95th percentile per-packet one-way delay: 48.131 ms
Loss rate: 0.41%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-09-06 06:36:18

End at: 2018-09-06 06:36:48

Local clock offset: 4.177 ms

Remote clock offset: -0.343 ms

Below is generated by plot.py at 2018-09-06 07:02:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 731.67 Mbit/s

95th percentile per-packet one-way delay: 48.397 ms

Loss rate: 0.34%

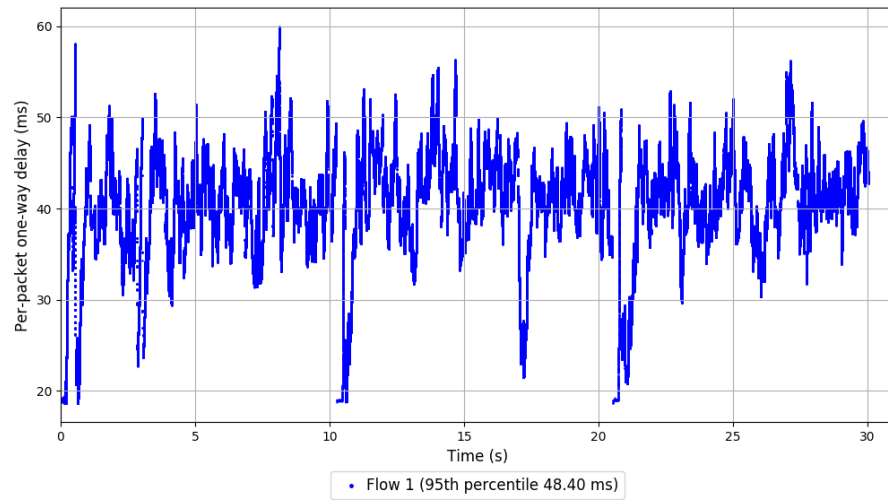
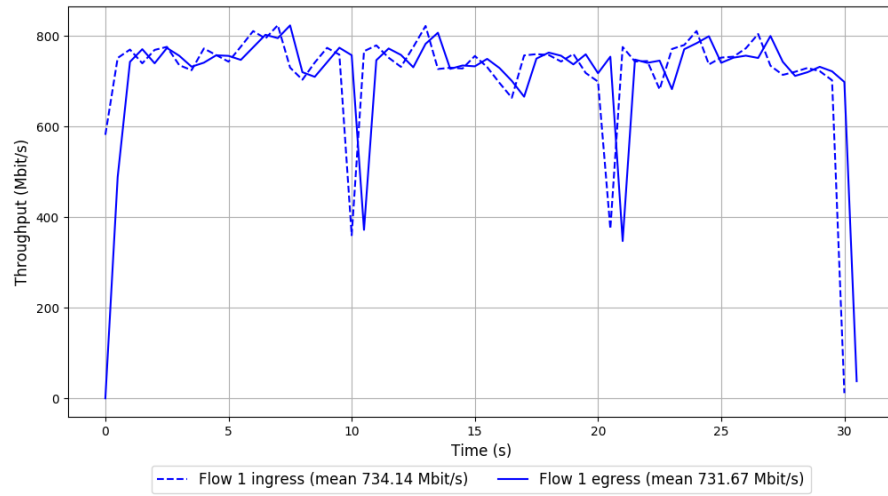
-- Flow 1:

Average throughput: 731.67 Mbit/s

95th percentile per-packet one-way delay: 48.397 ms

Loss rate: 0.34%

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2018-09-06 05:05:01

End at: 2018-09-06 05:05:31

Local clock offset: 3.567 ms

Remote clock offset: 3.01 ms

Below is generated by plot.py at 2018-09-06 07:02:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 13.22 Mbit/s

95th percentile per-packet one-way delay: 17.626 ms

Loss rate: 67.61%

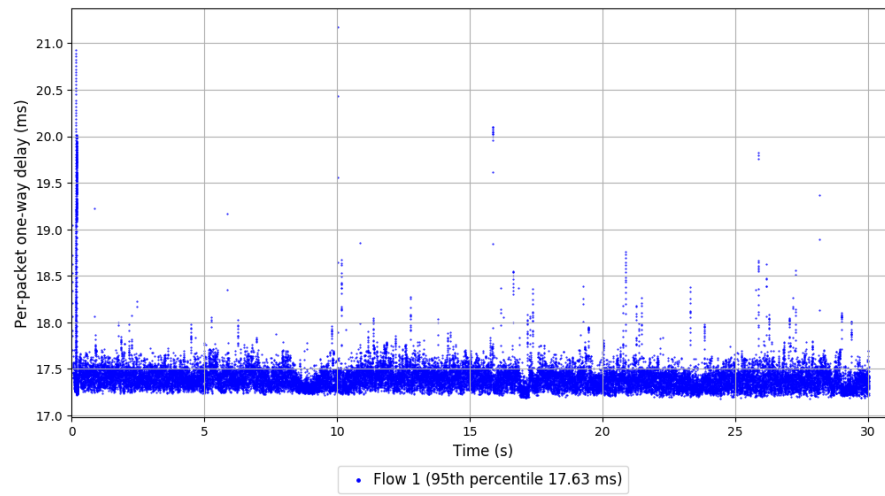
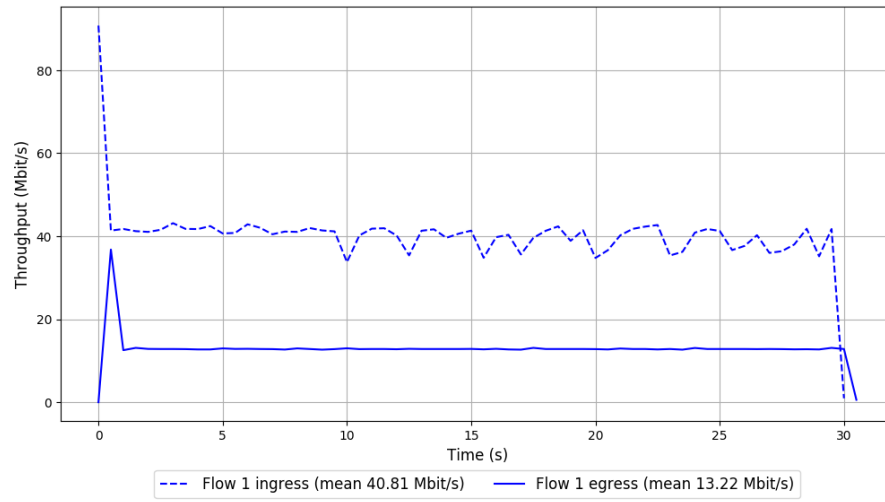
-- Flow 1:

Average throughput: 13.22 Mbit/s

95th percentile per-packet one-way delay: 17.626 ms

Loss rate: 67.61%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-09-06 05:31:10

End at: 2018-09-06 05:31:40

Local clock offset: 3.236 ms

Remote clock offset: 2.335 ms

Below is generated by plot.py at 2018-09-06 07:02:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 13.22 Mbit/s

95th percentile per-packet one-way delay: 18.587 ms

Loss rate: 65.06%

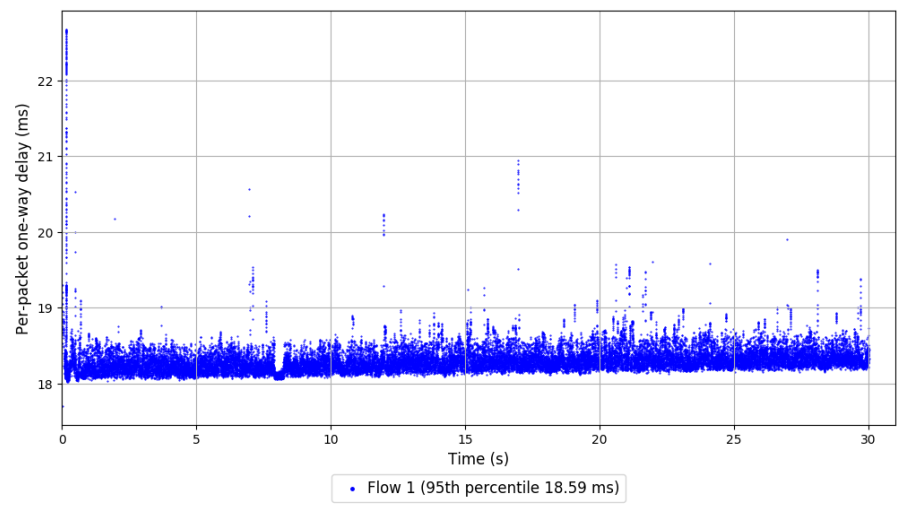
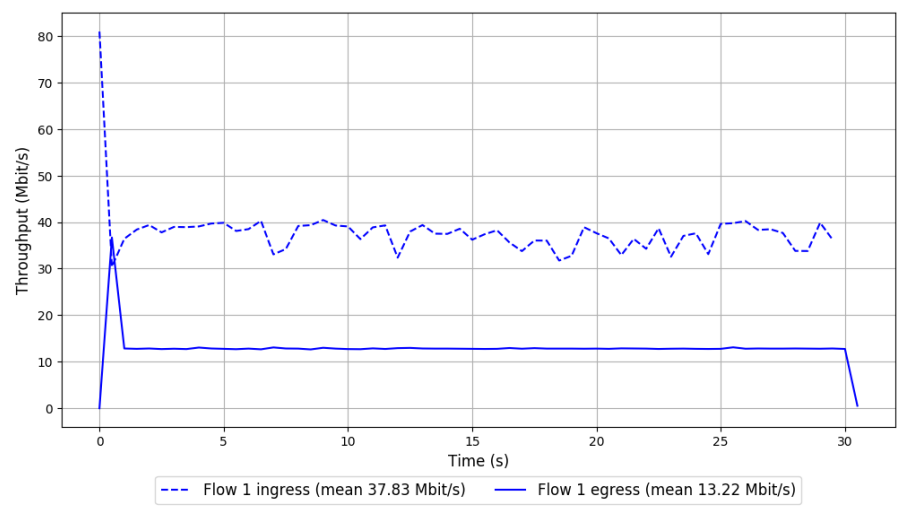
-- Flow 1:

Average throughput: 13.22 Mbit/s

95th percentile per-packet one-way delay: 18.587 ms

Loss rate: 65.06%

Run 2: Report of Copa — Data Link

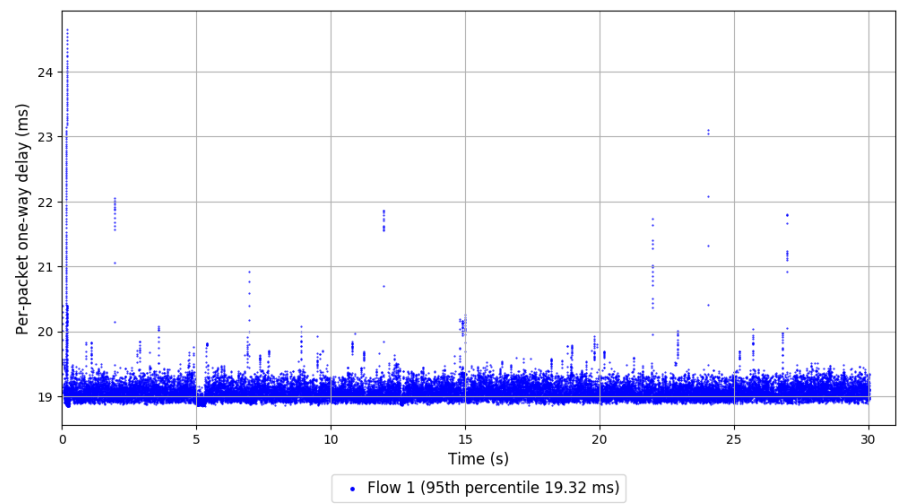
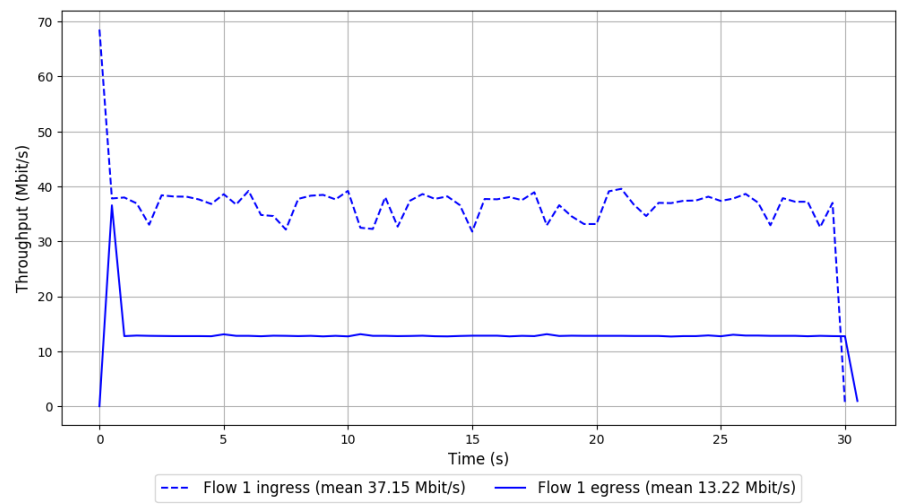


Run 3: Statistics of Copa

Start at: 2018-09-06 05:57:13
End at: 2018-09-06 05:57:43
Local clock offset: 3.163 ms
Remote clock offset: -0.284 ms

Below is generated by plot.py at 2018-09-06 07:02:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 13.22 Mbit/s
95th percentile per-packet one-way delay: 19.316 ms
Loss rate: 64.43%
-- Flow 1:
Average throughput: 13.22 Mbit/s
95th percentile per-packet one-way delay: 19.316 ms
Loss rate: 64.43%

Run 3: Report of Copa — Data Link

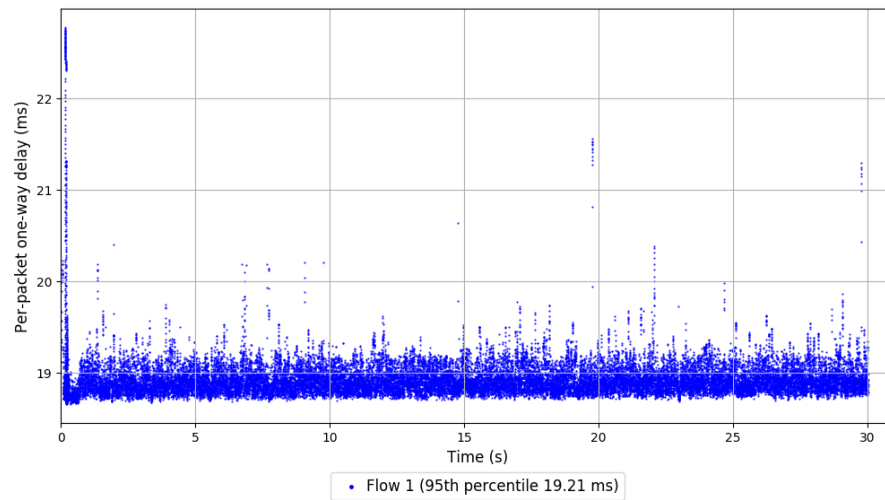
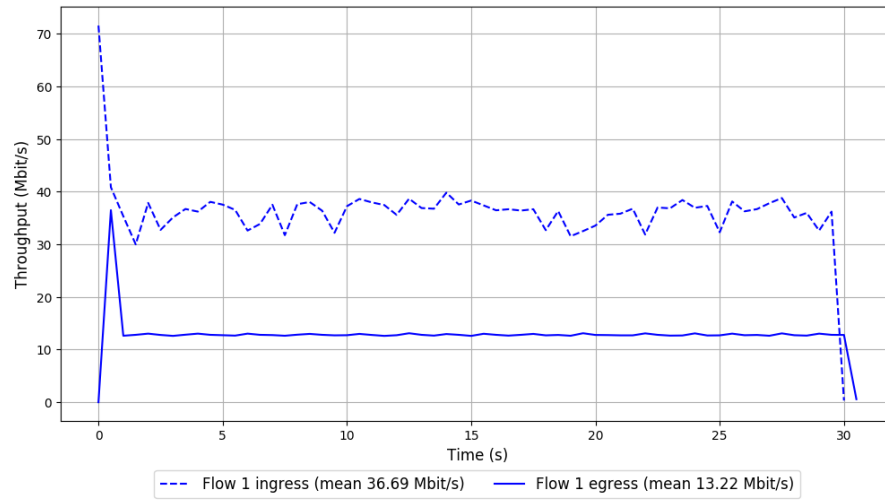


Run 4: Statistics of Copa

Start at: 2018-09-06 06:23:17
End at: 2018-09-06 06:23:47
Local clock offset: 3.721 ms
Remote clock offset: -0.409 ms

Below is generated by plot.py at 2018-09-06 07:02:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 13.22 Mbit/s
95th percentile per-packet one-way delay: 19.214 ms
Loss rate: 63.98%
-- Flow 1:
Average throughput: 13.22 Mbit/s
95th percentile per-packet one-way delay: 19.214 ms
Loss rate: 63.98%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-09-06 06:49:13

End at: 2018-09-06 06:49:43

Local clock offset: 4.468 ms

Remote clock offset: 0.035 ms

Below is generated by plot.py at 2018-09-06 07:02:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 13.22 Mbit/s

95th percentile per-packet one-way delay: 17.898 ms

Loss rate: 65.01%

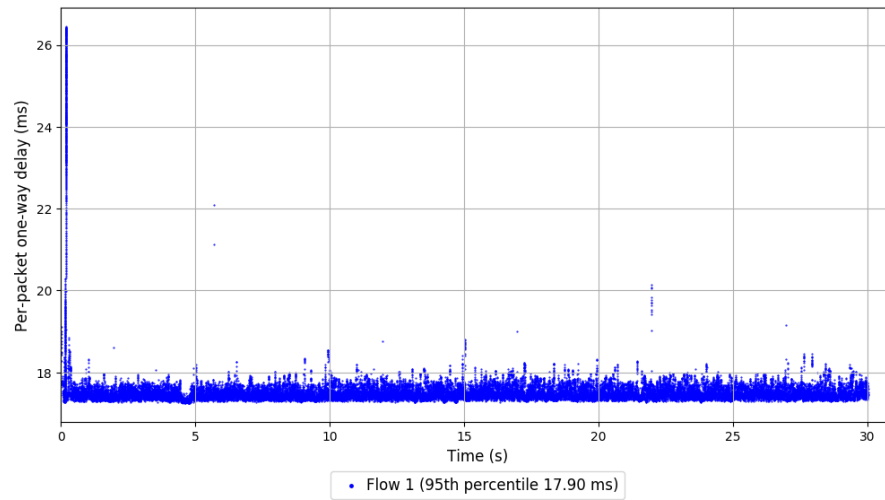
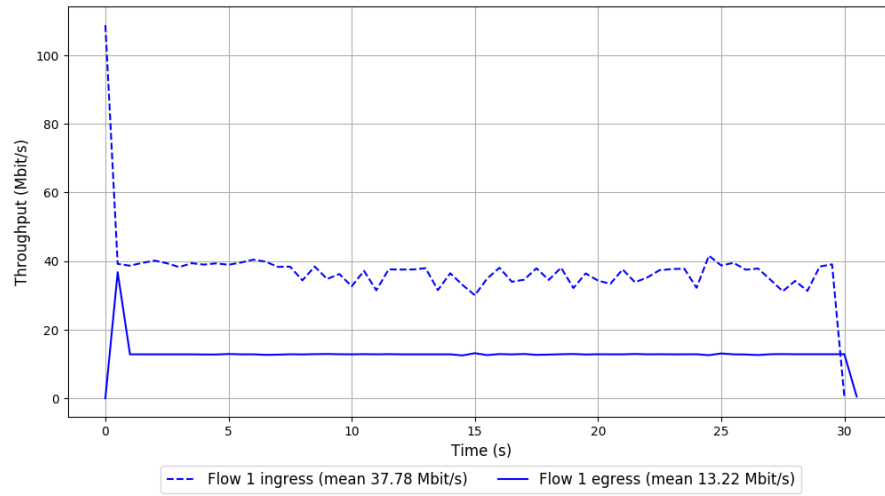
-- Flow 1:

Average throughput: 13.22 Mbit/s

95th percentile per-packet one-way delay: 17.898 ms

Loss rate: 65.01%

Run 5: Report of Copa — Data Link

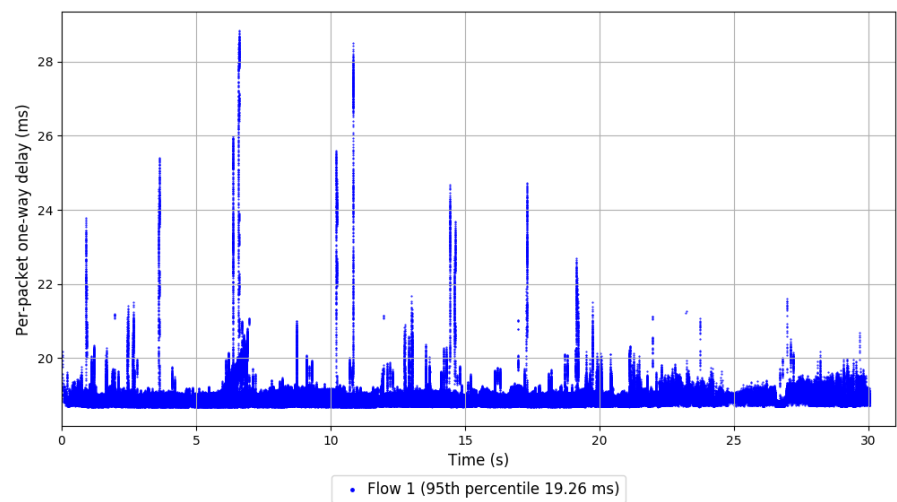
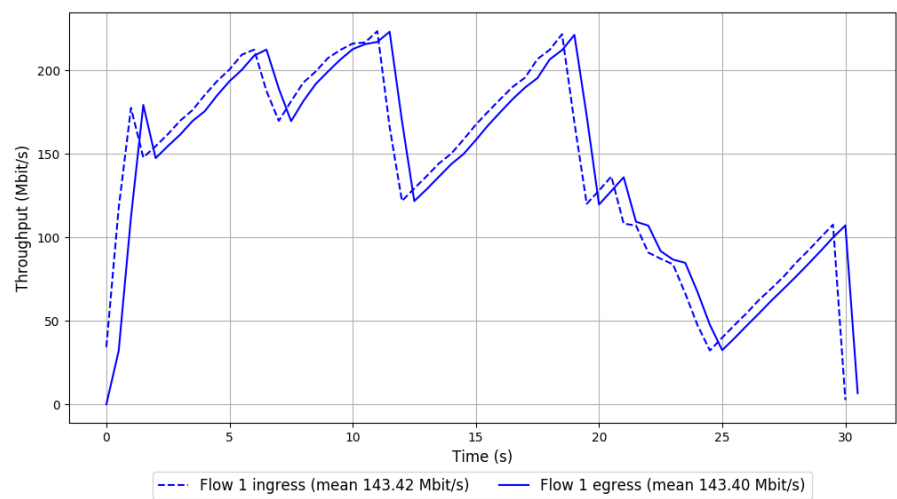


Run 1: Statistics of TCP Cubic

Start at: 2018-09-06 04:41:51
End at: 2018-09-06 04:42:21
Local clock offset: 4.43 ms
Remote clock offset: -0.141 ms

Below is generated by plot.py at 2018-09-06 07:02:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 143.40 Mbit/s
95th percentile per-packet one-way delay: 19.261 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 143.40 Mbit/s
95th percentile per-packet one-way delay: 19.261 ms
Loss rate: 0.01%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-09-06 05:07:47

End at: 2018-09-06 05:08:17

Local clock offset: 3.655 ms

Remote clock offset: 3.329 ms

Below is generated by plot.py at 2018-09-06 07:02:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 222.57 Mbit/s

95th percentile per-packet one-way delay: 19.262 ms

Loss rate: 0.06%

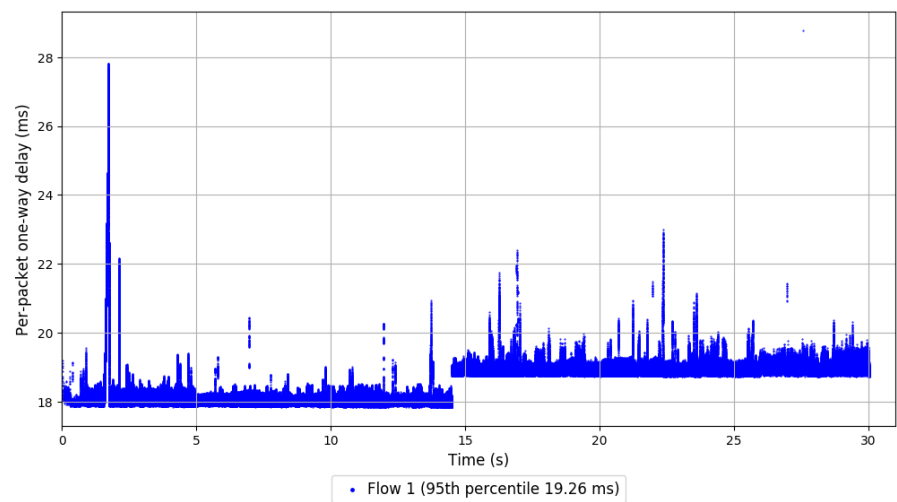
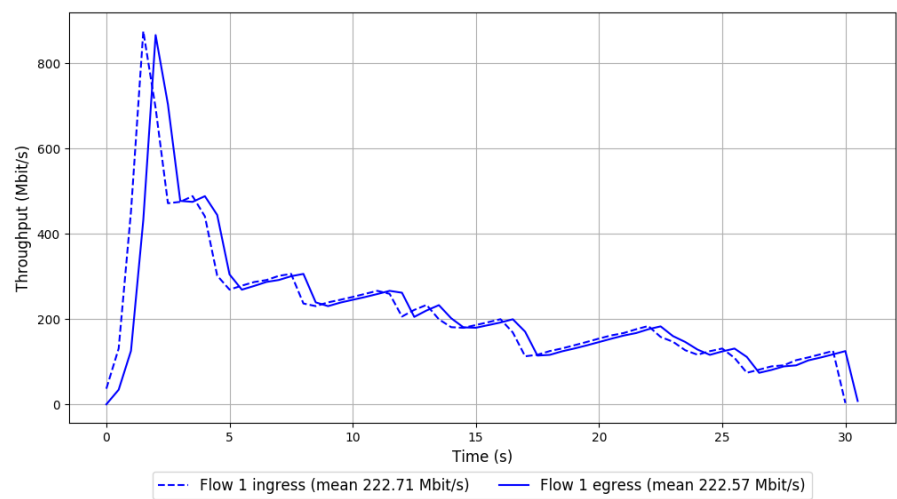
-- Flow 1:

Average throughput: 222.57 Mbit/s

95th percentile per-packet one-way delay: 19.262 ms

Loss rate: 0.06%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-09-06 05:33:56

End at: 2018-09-06 05:34:26

Local clock offset: 3.199 ms

Remote clock offset: 1.665 ms

Below is generated by plot.py at 2018-09-06 07:02:50

Datalink statistics

-- Total of 1 flow:

Average throughput: 289.27 Mbit/s

95th percentile per-packet one-way delay: 34.610 ms

Loss rate: 0.07%

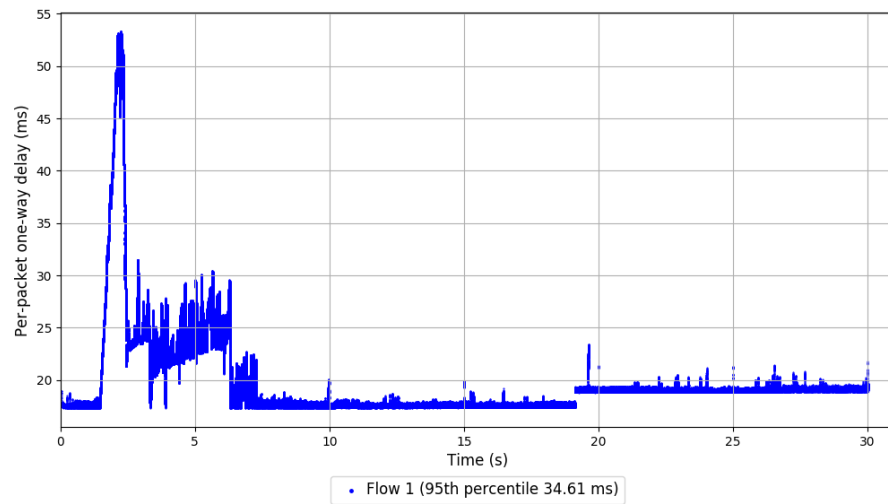
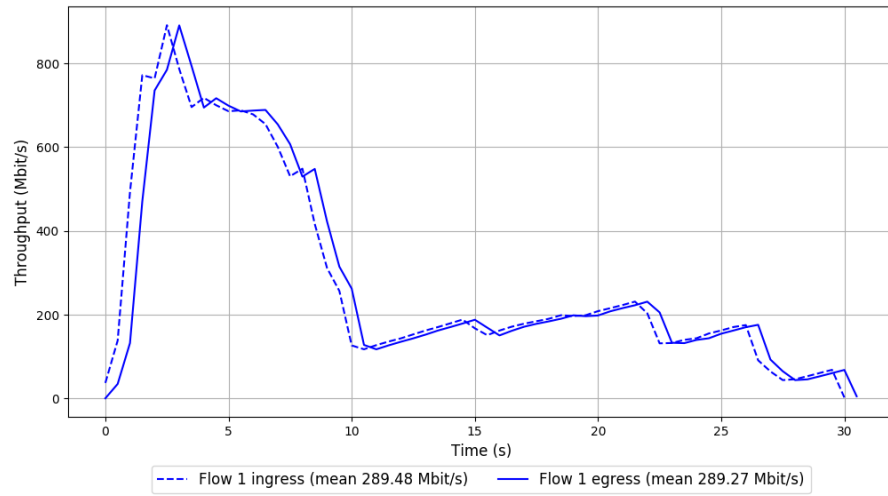
-- Flow 1:

Average throughput: 289.27 Mbit/s

95th percentile per-packet one-way delay: 34.610 ms

Loss rate: 0.07%

Run 3: Report of TCP Cubic — Data Link

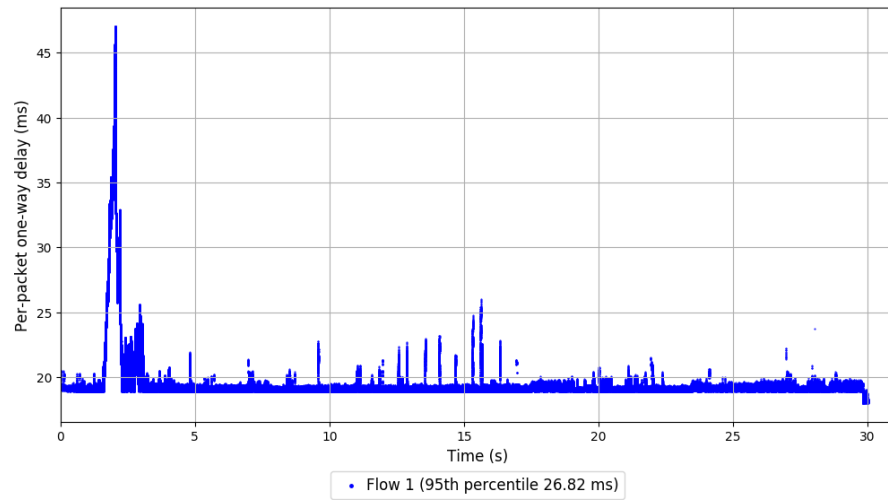
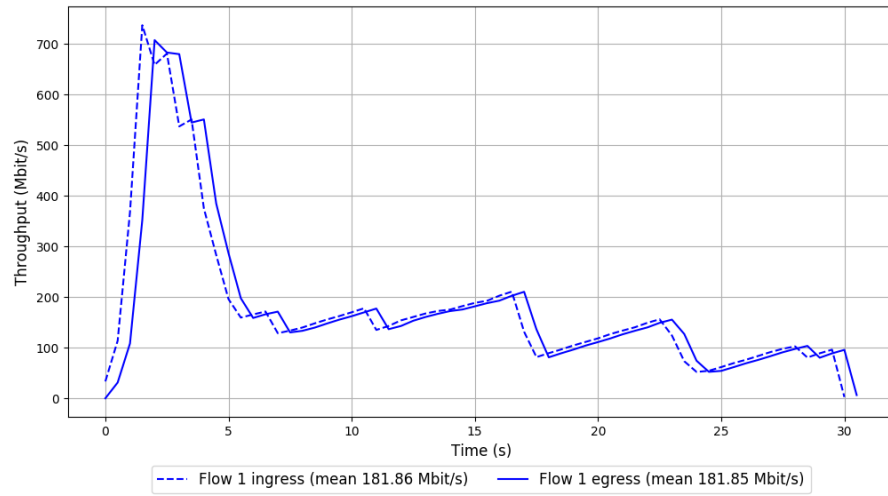


Run 4: Statistics of TCP Cubic

Start at: 2018-09-06 05:59:59
End at: 2018-09-06 06:00:29
Local clock offset: 3.046 ms
Remote clock offset: -0.378 ms

Below is generated by plot.py at 2018-09-06 07:02:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 181.85 Mbit/s
95th percentile per-packet one-way delay: 26.816 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 181.85 Mbit/s
95th percentile per-packet one-way delay: 26.816 ms
Loss rate: 0.01%

Run 4: Report of TCP Cubic — Data Link

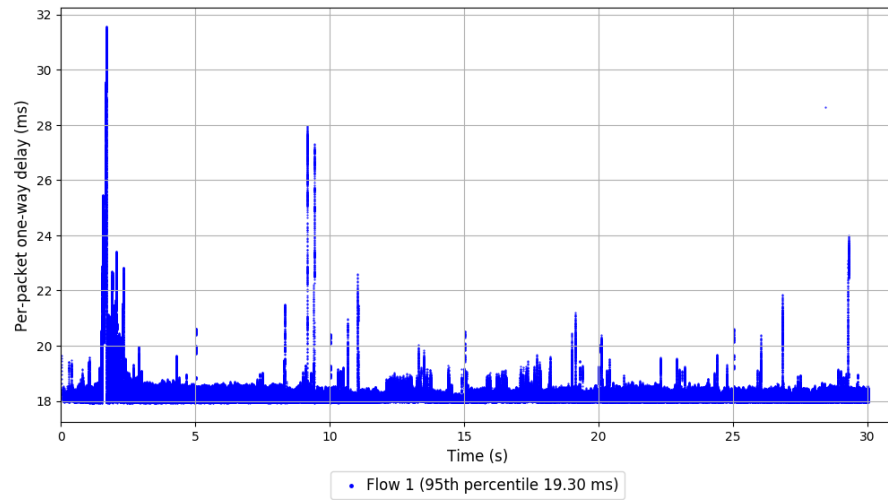
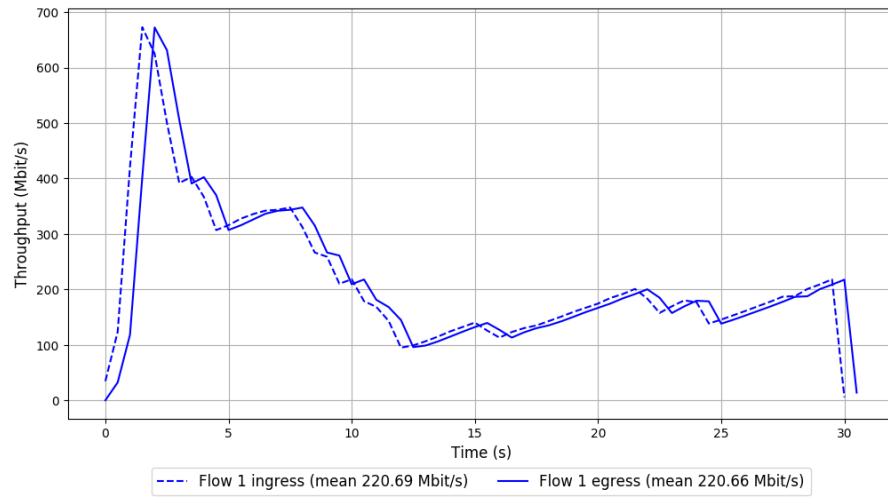


Run 5: Statistics of TCP Cubic

Start at: 2018-09-06 06:26:03
End at: 2018-09-06 06:26:33
Local clock offset: 3.85 ms
Remote clock offset: -0.471 ms

Below is generated by plot.py at 2018-09-06 07:02:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 220.66 Mbit/s
95th percentile per-packet one-way delay: 19.296 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 220.66 Mbit/s
95th percentile per-packet one-way delay: 19.296 ms
Loss rate: 0.01%

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2018-09-06 04:57:58

End at: 2018-09-06 04:58:28

Local clock offset: 3.792 ms

Remote clock offset: 1.847 ms

Below is generated by plot.py at 2018-09-06 07:09:07

Datalink statistics

-- Total of 1 flow:

Average throughput: 845.49 Mbit/s

95th percentile per-packet one-way delay: 89.386 ms

Loss rate: 4.75%

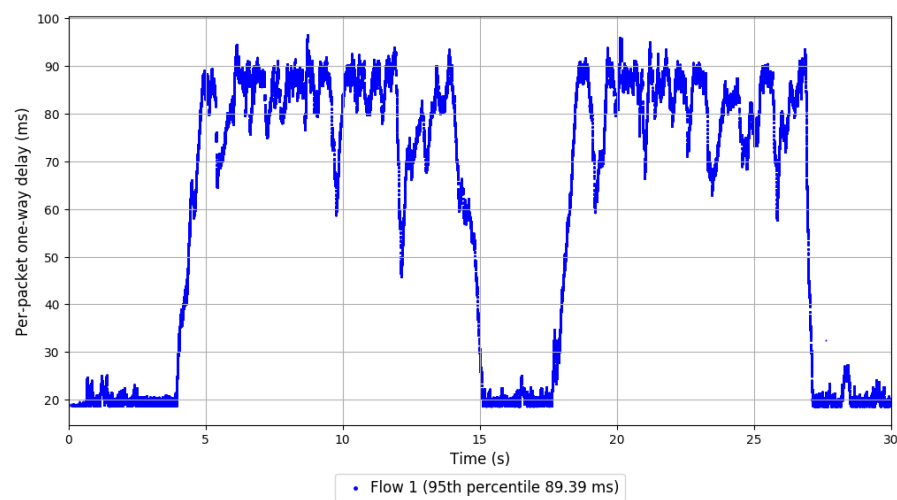
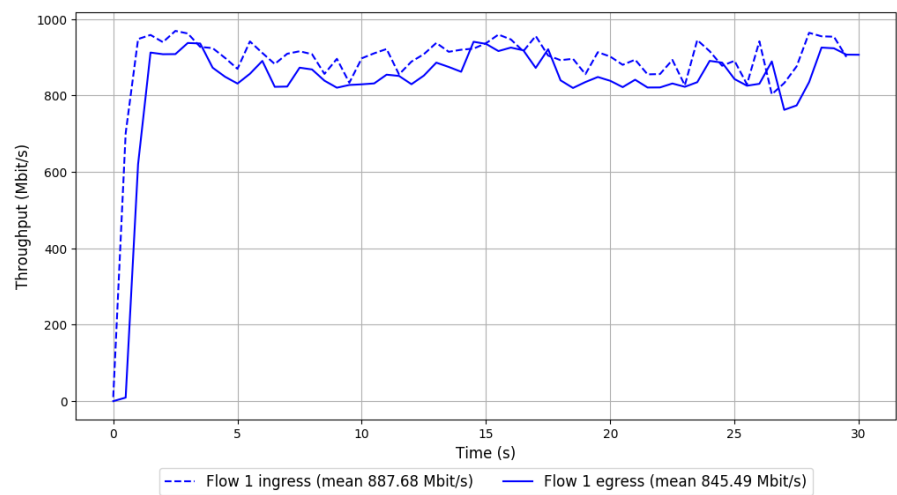
-- Flow 1:

Average throughput: 845.49 Mbit/s

95th percentile per-packet one-way delay: 89.386 ms

Loss rate: 4.75%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-09-06 05:24:05

End at: 2018-09-06 05:24:35

Local clock offset: 3.307 ms

Remote clock offset: 4.721 ms

Below is generated by plot.py at 2018-09-06 07:09:07

Datalink statistics

-- Total of 1 flow:

Average throughput: 831.65 Mbit/s

95th percentile per-packet one-way delay: 90.789 ms

Loss rate: 3.99%

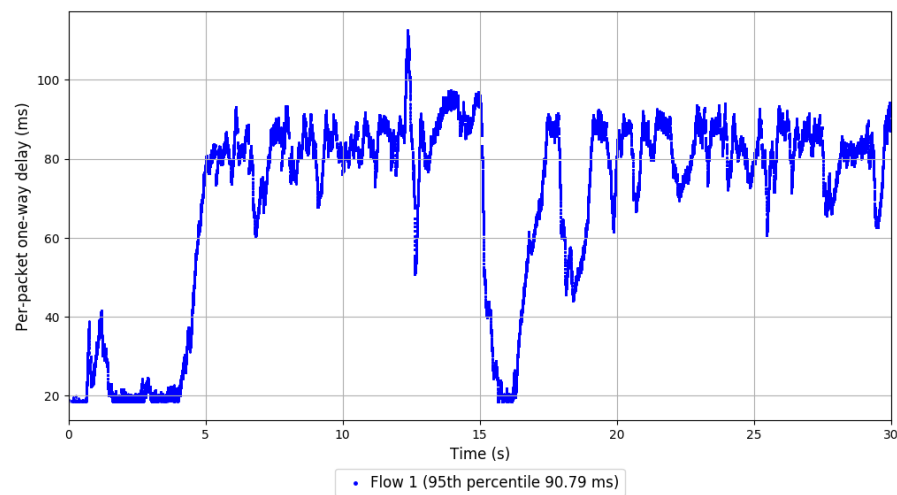
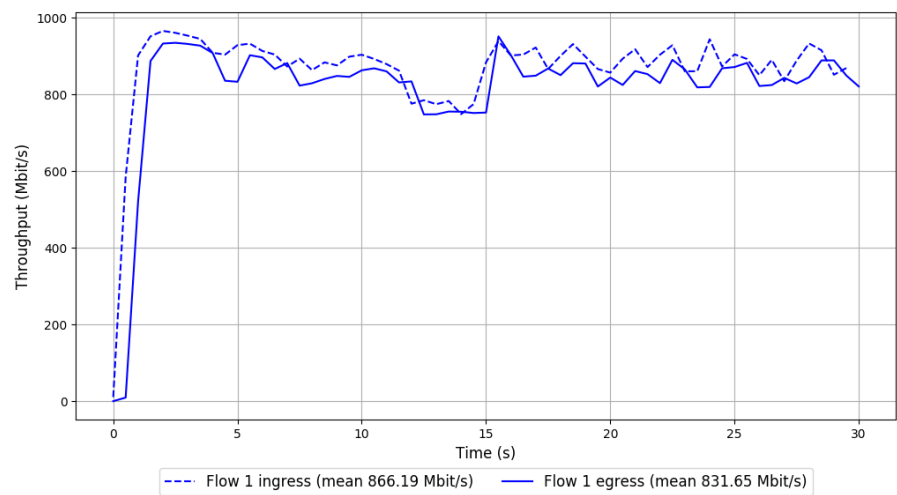
-- Flow 1:

Average throughput: 831.65 Mbit/s

95th percentile per-packet one-way delay: 90.789 ms

Loss rate: 3.99%

Run 2: Report of FillP — Data Link

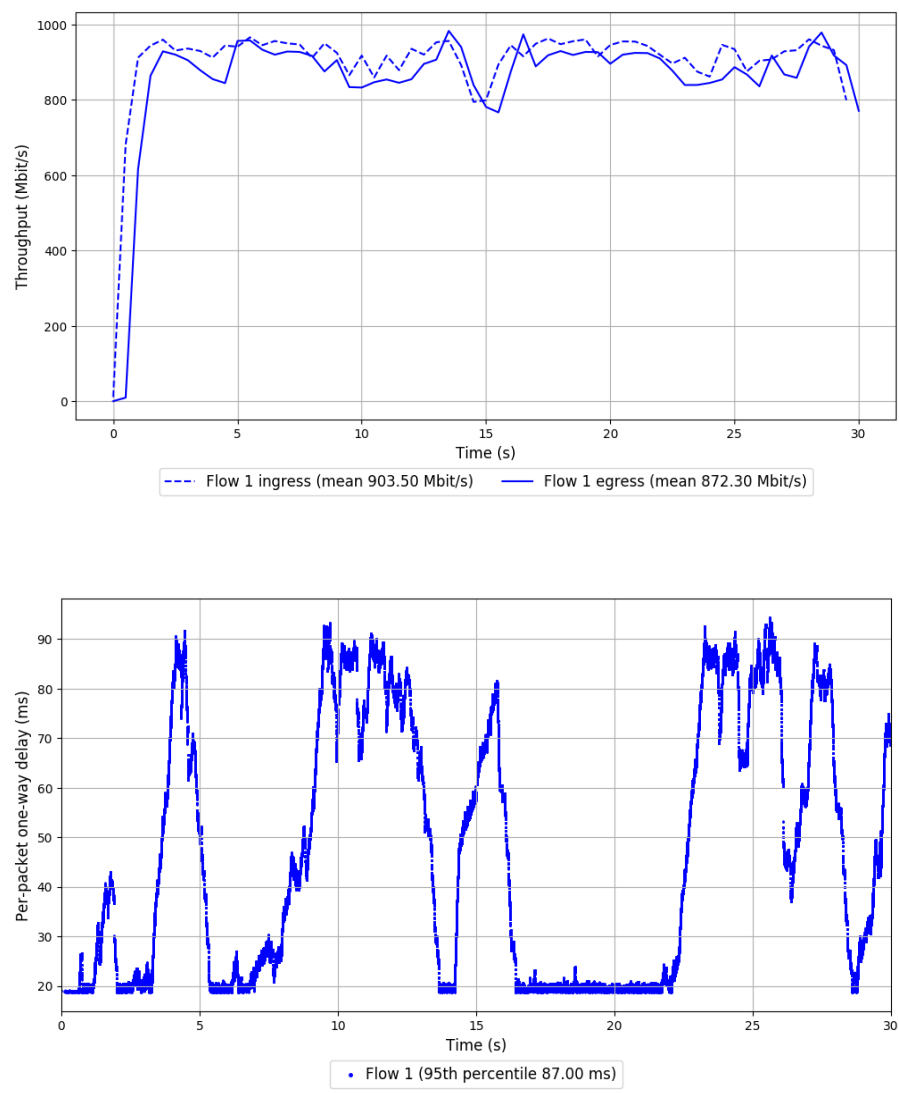


Run 3: Statistics of FillP

Start at: 2018-09-06 05:50:09
End at: 2018-09-06 05:50:39
Local clock offset: 3.057 ms
Remote clock offset: -0.088 ms

Below is generated by plot.py at 2018-09-06 07:12:37
Datalink statistics
-- Total of 1 flow:
Average throughput: 872.30 Mbit/s
95th percentile per-packet one-way delay: 86.999 ms
Loss rate: 3.45%
-- Flow 1:
Average throughput: 872.30 Mbit/s
95th percentile per-packet one-way delay: 86.999 ms
Loss rate: 3.45%

Run 3: Report of FillP — Data Link

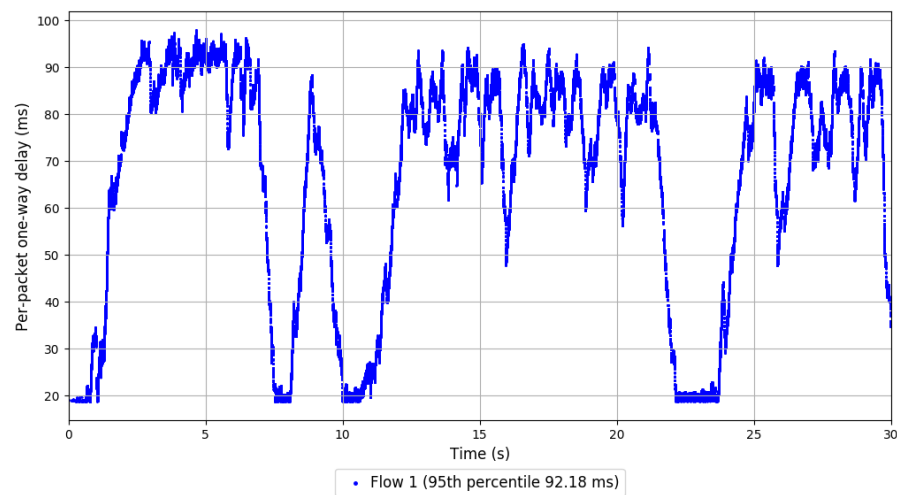
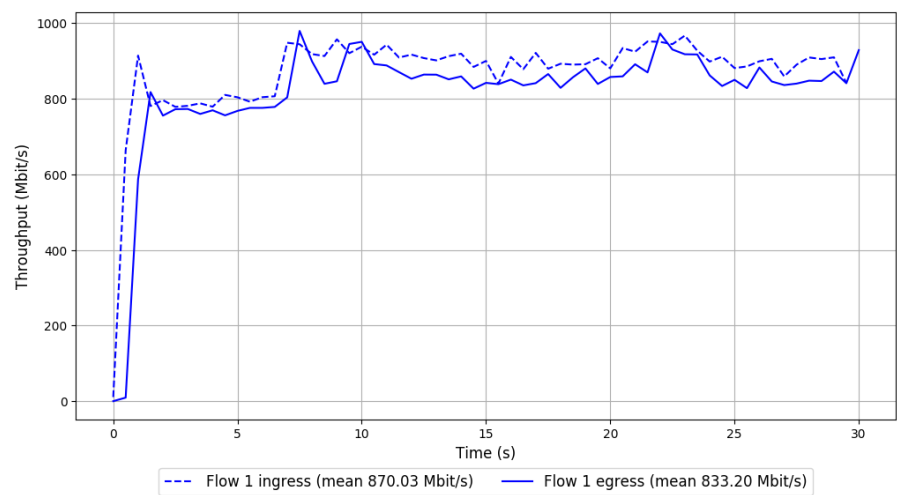


Run 4: Statistics of FillP

Start at: 2018-09-06 06:16:15
End at: 2018-09-06 06:16:45
Local clock offset: 3.205 ms
Remote clock offset: -0.369 ms

Below is generated by plot.py at 2018-09-06 07:13:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 833.20 Mbit/s
95th percentile per-packet one-way delay: 92.182 ms
Loss rate: 4.23%
-- Flow 1:
Average throughput: 833.20 Mbit/s
95th percentile per-packet one-way delay: 92.182 ms
Loss rate: 4.23%

Run 4: Report of FillP — Data Link

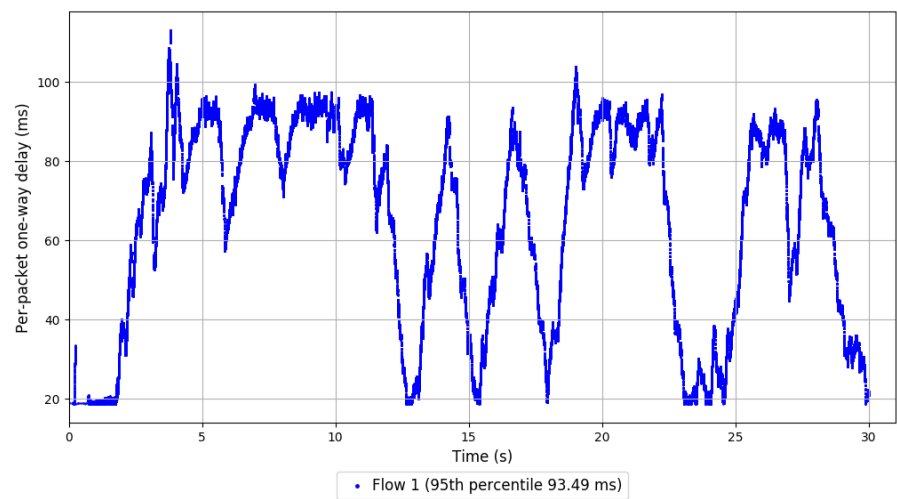
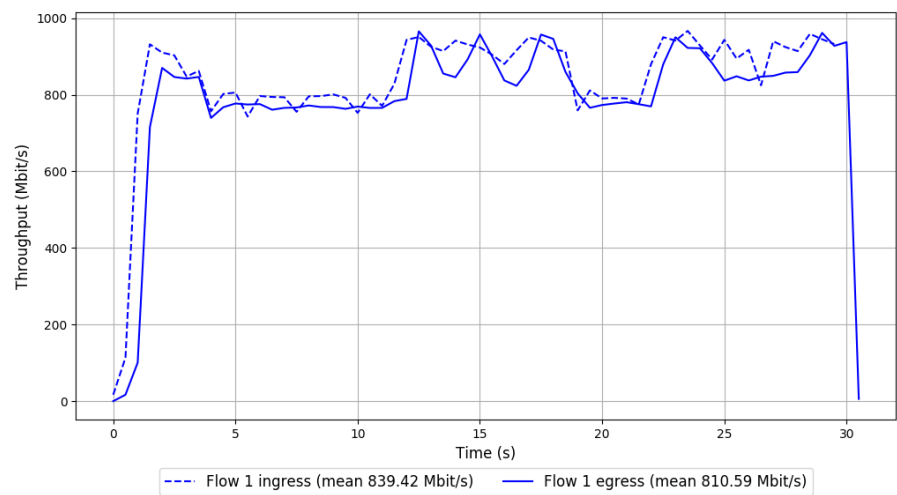


Run 5: Statistics of FillP

Start at: 2018-09-06 06:42:14
End at: 2018-09-06 06:42:44
Local clock offset: 4.323 ms
Remote clock offset: -0.157 ms

Below is generated by plot.py at 2018-09-06 07:13:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 810.59 Mbit/s
95th percentile per-packet one-way delay: 93.489 ms
Loss rate: 3.43%
-- Flow 1:
Average throughput: 810.59 Mbit/s
95th percentile per-packet one-way delay: 93.489 ms
Loss rate: 3.43%

Run 5: Report of FillP — Data Link

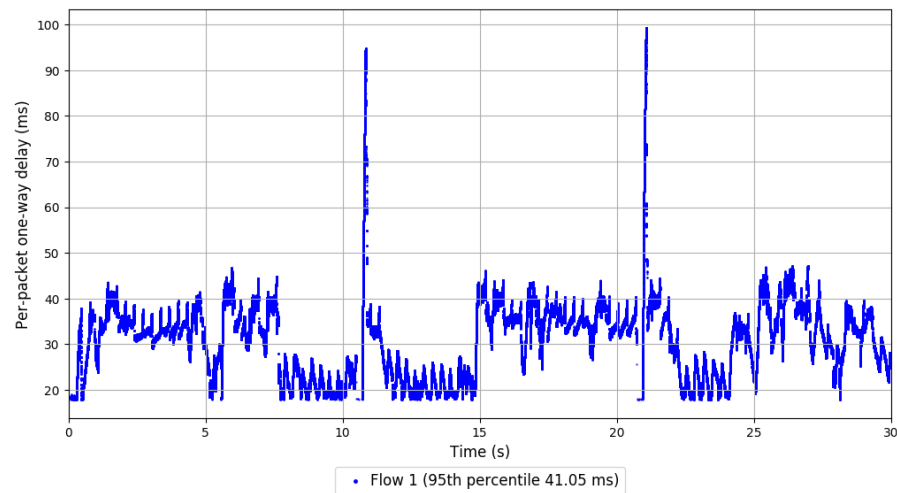
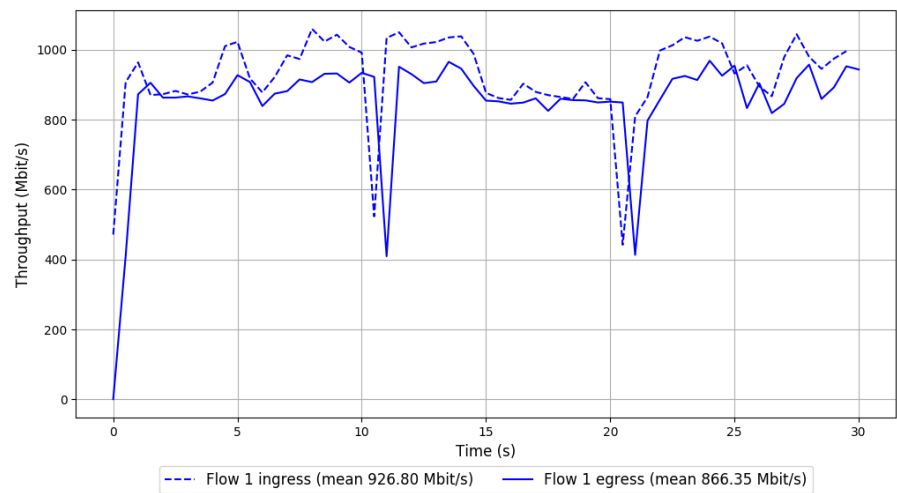


Run 1: Statistics of FillP-Sheep

Start at: 2018-09-06 04:47:40
End at: 2018-09-06 04:48:10
Local clock offset: 4.233 ms
Remote clock offset: -0.176 ms

Below is generated by plot.py at 2018-09-06 07:14:39
Datalink statistics
-- Total of 1 flow:
Average throughput: 866.35 Mbit/s
95th percentile per-packet one-way delay: 41.053 ms
Loss rate: 6.52%
-- Flow 1:
Average throughput: 866.35 Mbit/s
95th percentile per-packet one-way delay: 41.053 ms
Loss rate: 6.52%

Run 1: Report of FillP-Sheep — Data Link



Run 2: Statistics of FillP-Sheep

Start at: 2018-09-06 05:13:44

End at: 2018-09-06 05:14:14

Local clock offset: 3.592 ms

Remote clock offset: 3.924 ms

Below is generated by plot.py at 2018-09-06 07:14:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 864.40 Mbit/s

95th percentile per-packet one-way delay: 42.478 ms

Loss rate: 6.11%

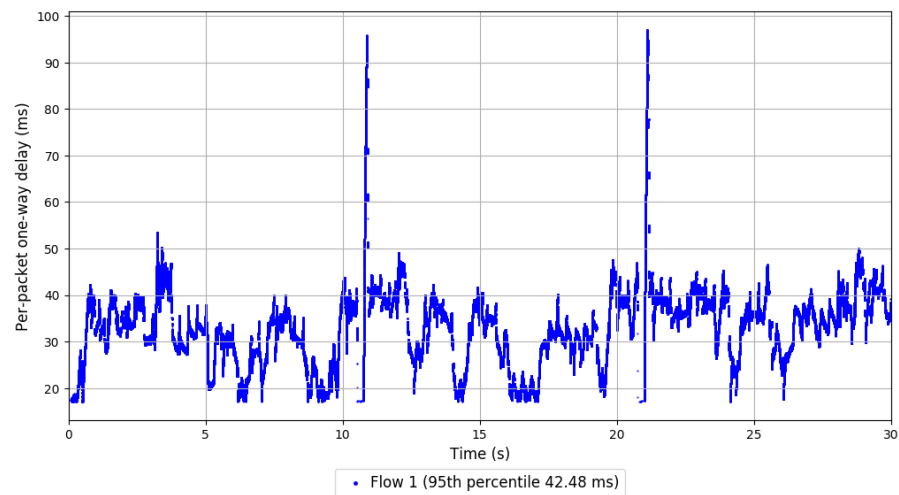
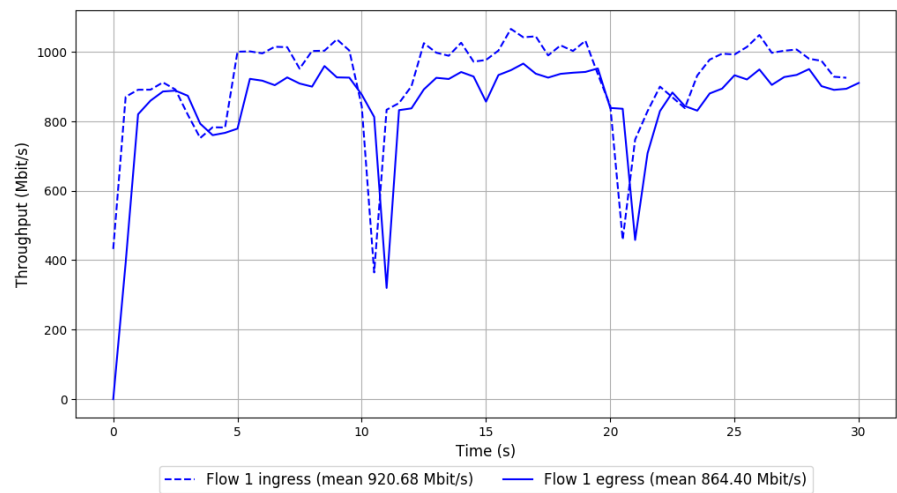
-- Flow 1:

Average throughput: 864.40 Mbit/s

95th percentile per-packet one-way delay: 42.478 ms

Loss rate: 6.11%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2018-09-06 05:39:49

End at: 2018-09-06 05:40:19

Local clock offset: 3.159 ms

Remote clock offset: 0.585 ms

Below is generated by plot.py at 2018-09-06 07:14:44

Datalink statistics

-- Total of 1 flow:

Average throughput: 838.07 Mbit/s

95th percentile per-packet one-way delay: 51.754 ms

Loss rate: 4.49%

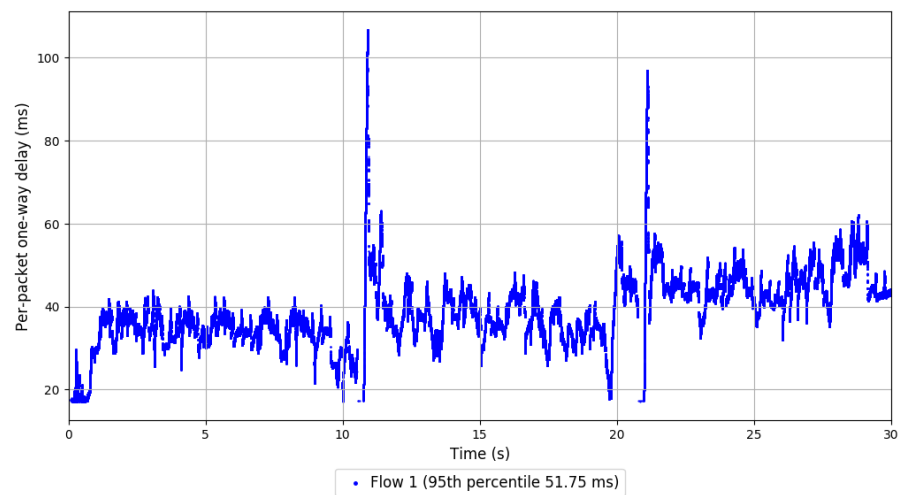
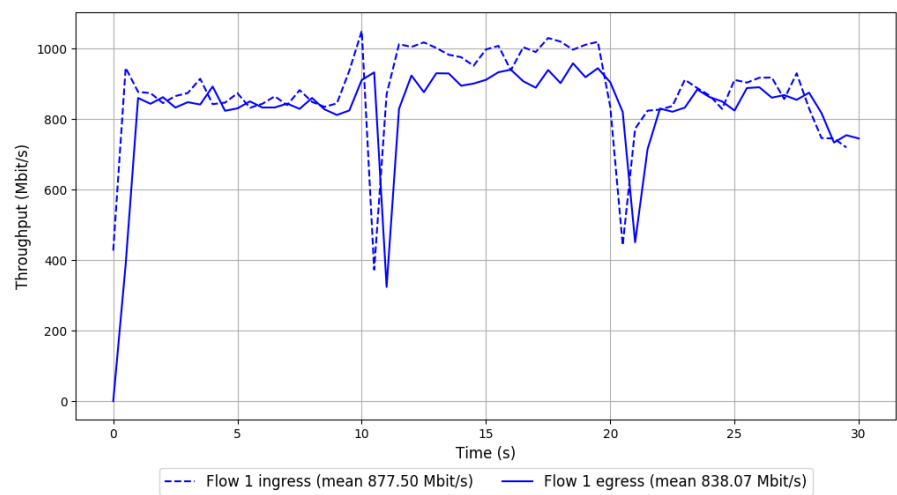
-- Flow 1:

Average throughput: 838.07 Mbit/s

95th percentile per-packet one-way delay: 51.754 ms

Loss rate: 4.49%

Run 3: Report of FillP-Sheep — Data Link

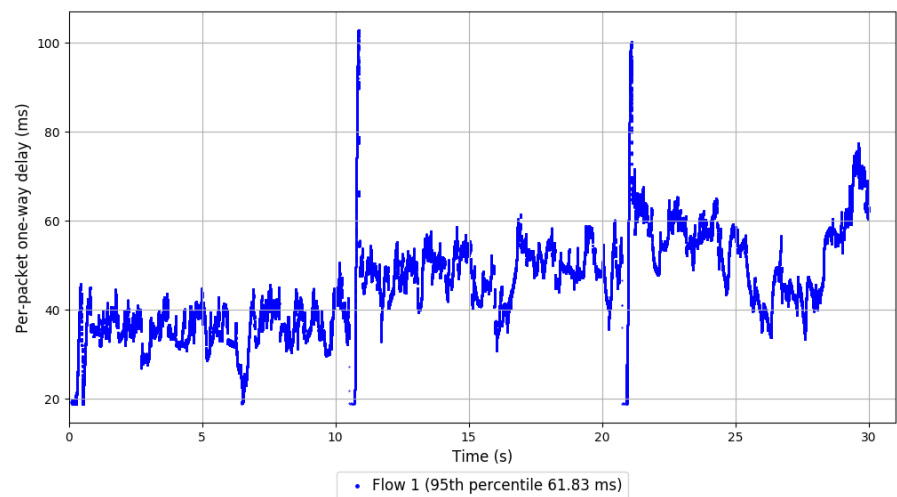
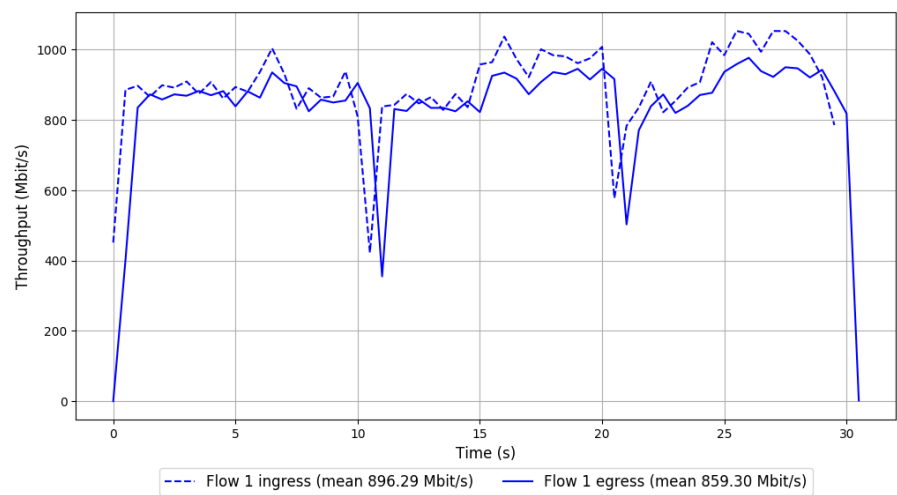


Run 4: Statistics of FillP-Sheep

Start at: 2018-09-06 06:05:51
End at: 2018-09-06 06:06:21
Local clock offset: 3.152 ms
Remote clock offset: -0.277 ms

Below is generated by plot.py at 2018-09-06 07:21:47
Datalink statistics
-- Total of 1 flow:
Average throughput: 859.30 Mbit/s
95th percentile per-packet one-way delay: 61.832 ms
Loss rate: 4.13%
-- Flow 1:
Average throughput: 859.30 Mbit/s
95th percentile per-packet one-way delay: 61.832 ms
Loss rate: 4.13%

Run 4: Report of FillP-Sheep — Data Link

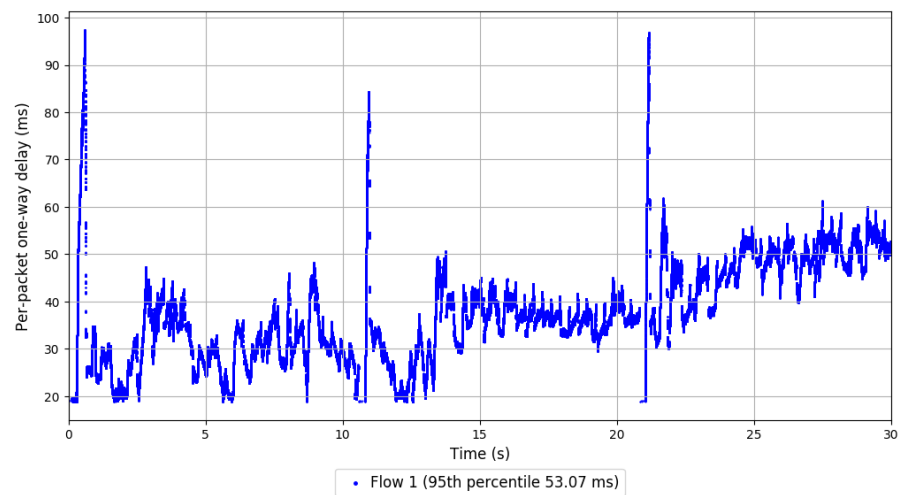
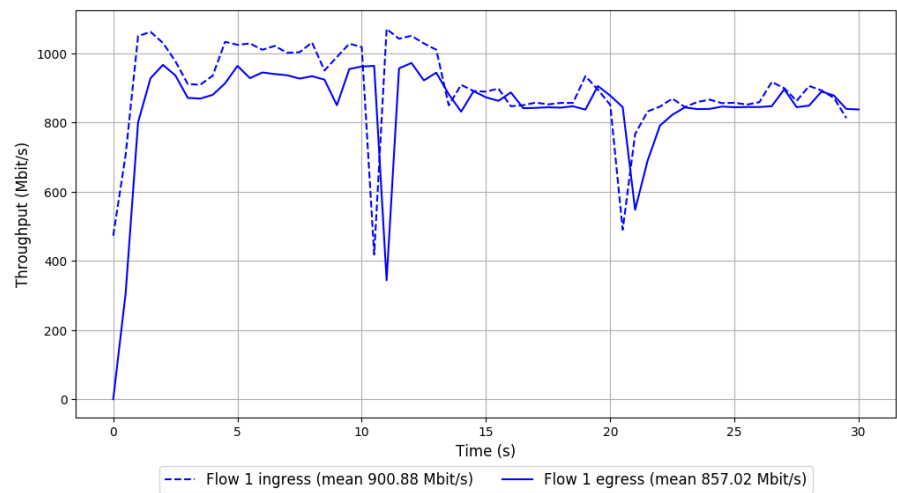


Run 5: Statistics of FillP-Sheep

Start at: 2018-09-06 06:31:56
End at: 2018-09-06 06:32:26
Local clock offset: 4.065 ms
Remote clock offset: -0.505 ms

Below is generated by plot.py at 2018-09-06 07:22:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 857.02 Mbit/s
95th percentile per-packet one-way delay: 53.070 ms
Loss rate: 4.87%
-- Flow 1:
Average throughput: 857.02 Mbit/s
95th percentile per-packet one-way delay: 53.070 ms
Loss rate: 4.87%

Run 5: Report of FillP-Sheep — Data Link



Run 1: Statistics of Indigo

Start at: 2018-09-06 04:40:24

End at: 2018-09-06 04:40:54

Local clock offset: 4.398 ms

Remote clock offset: -0.207 ms

Below is generated by plot.py at 2018-09-06 07:22:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 204.49 Mbit/s

95th percentile per-packet one-way delay: 24.277 ms

Loss rate: 0.00%

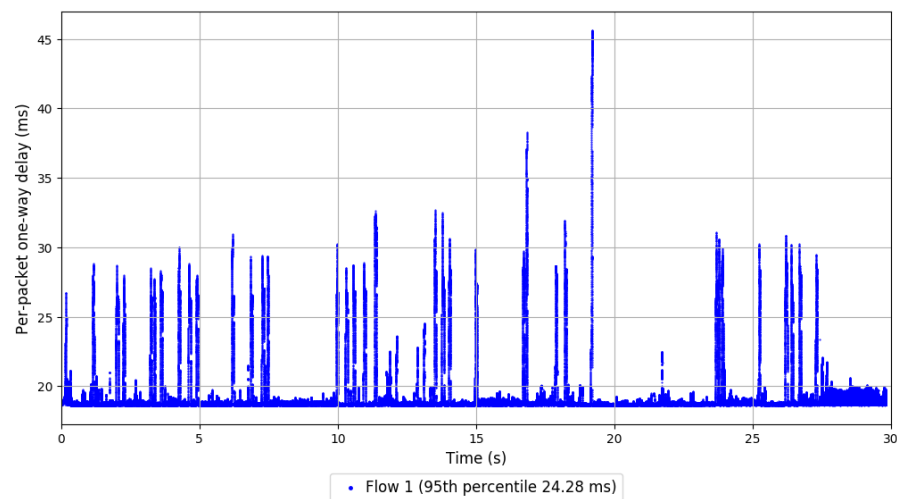
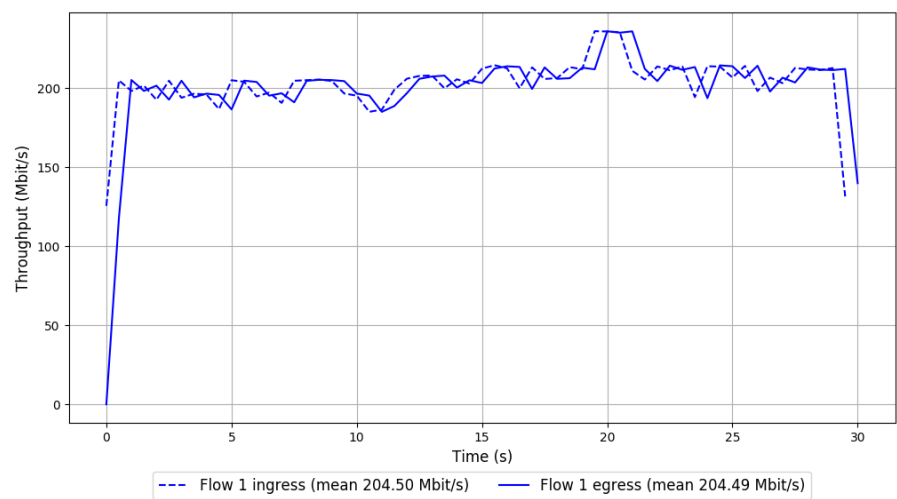
-- Flow 1:

Average throughput: 204.49 Mbit/s

95th percentile per-packet one-way delay: 24.277 ms

Loss rate: 0.00%

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2018-09-06 05:06:20

End at: 2018-09-06 05:06:50

Local clock offset: 3.656 ms

Remote clock offset: 3.213 ms

Below is generated by plot.py at 2018-09-06 07:22:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 206.52 Mbit/s

95th percentile per-packet one-way delay: 21.654 ms

Loss rate: 0.03%

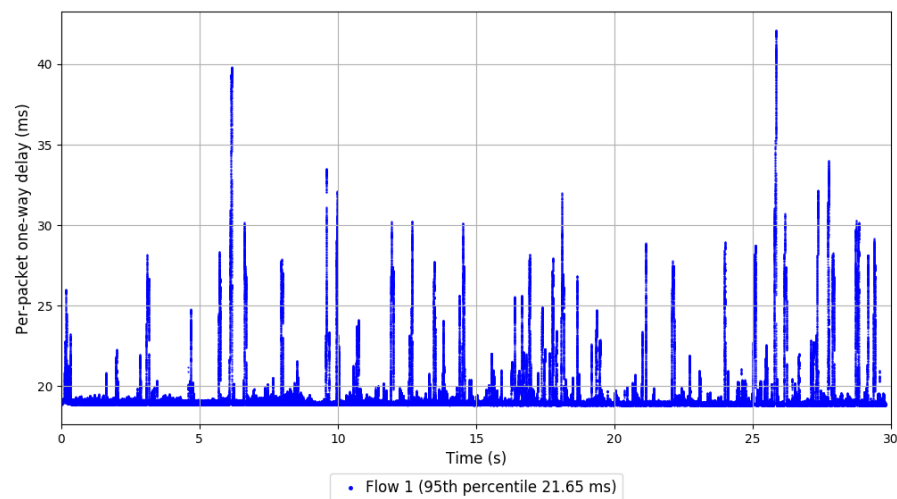
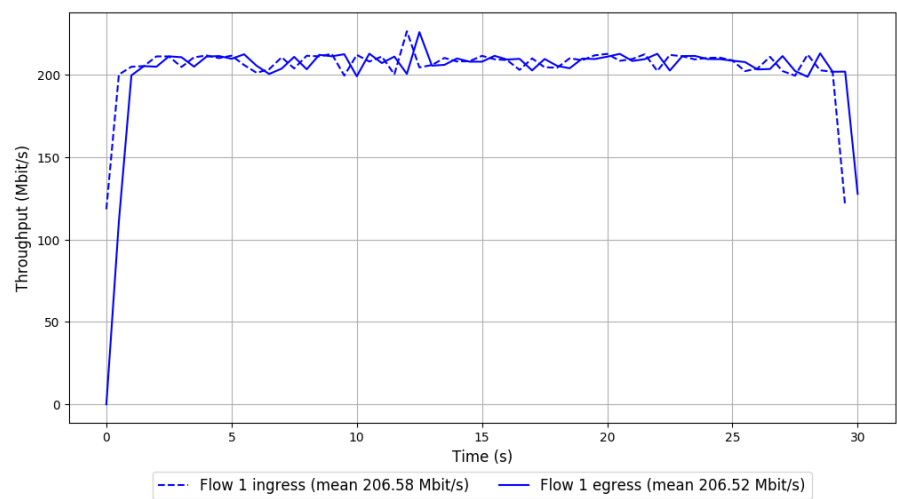
-- Flow 1:

Average throughput: 206.52 Mbit/s

95th percentile per-packet one-way delay: 21.654 ms

Loss rate: 0.03%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2018-09-06 05:32:29

End at: 2018-09-06 05:32:59

Local clock offset: 3.219 ms

Remote clock offset: 1.948 ms

Below is generated by plot.py at 2018-09-06 07:22:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 209.46 Mbit/s

95th percentile per-packet one-way delay: 20.570 ms

Loss rate: 0.02%

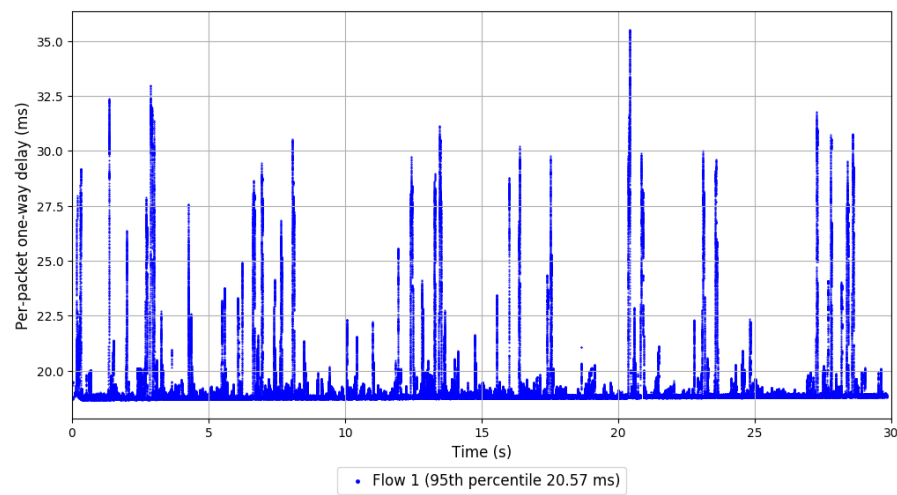
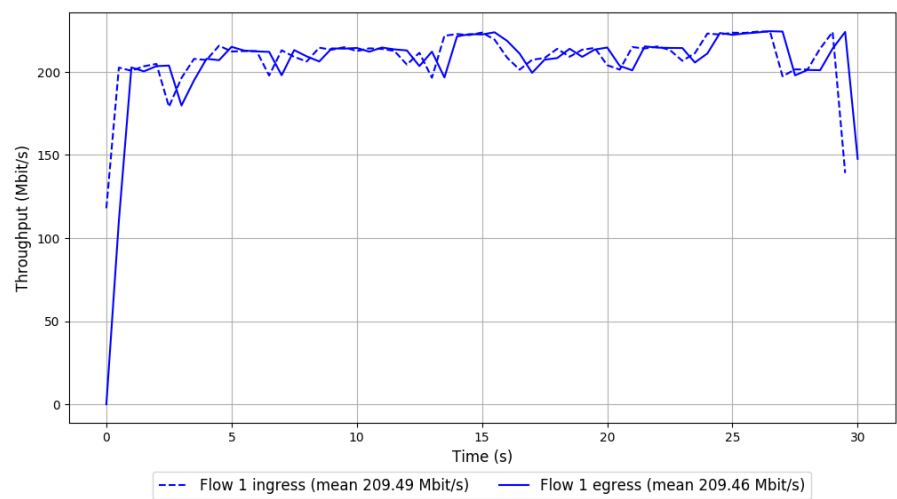
-- Flow 1:

Average throughput: 209.46 Mbit/s

95th percentile per-packet one-way delay: 20.570 ms

Loss rate: 0.02%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2018-09-06 05:58:32

End at: 2018-09-06 05:59:02

Local clock offset: 3.132 ms

Remote clock offset: -0.28 ms

Below is generated by plot.py at 2018-09-06 07:22:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 204.45 Mbit/s

95th percentile per-packet one-way delay: 20.019 ms

Loss rate: 0.01%

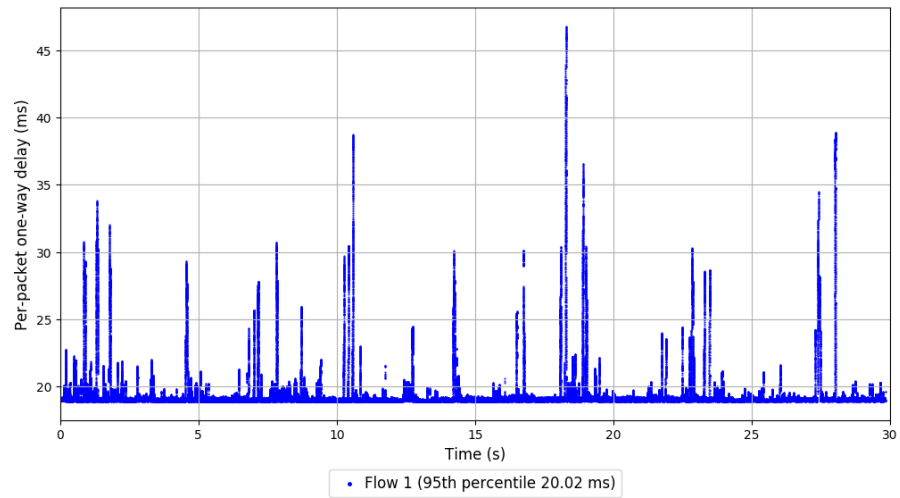
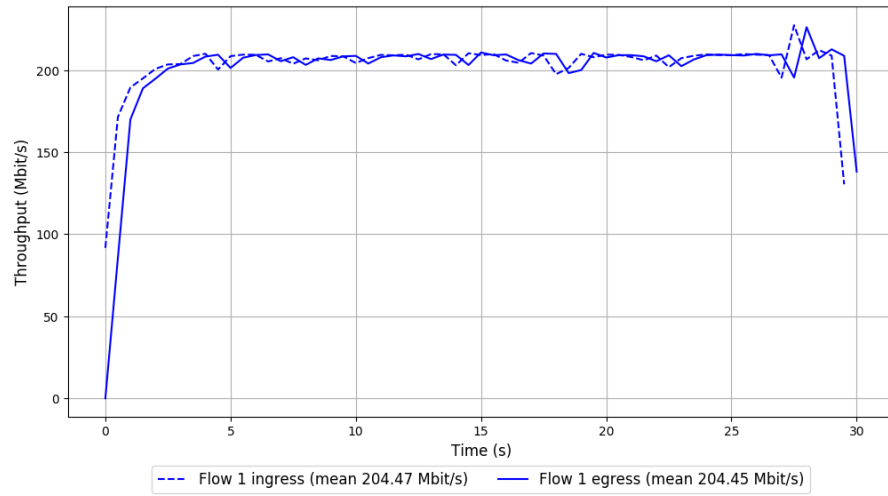
-- Flow 1:

Average throughput: 204.45 Mbit/s

95th percentile per-packet one-way delay: 20.019 ms

Loss rate: 0.01%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2018-09-06 06:24:36

End at: 2018-09-06 06:25:06

Local clock offset: 3.8 ms

Remote clock offset: -0.359 ms

Below is generated by plot.py at 2018-09-06 07:22:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 211.33 Mbit/s

95th percentile per-packet one-way delay: 19.865 ms

Loss rate: 0.03%

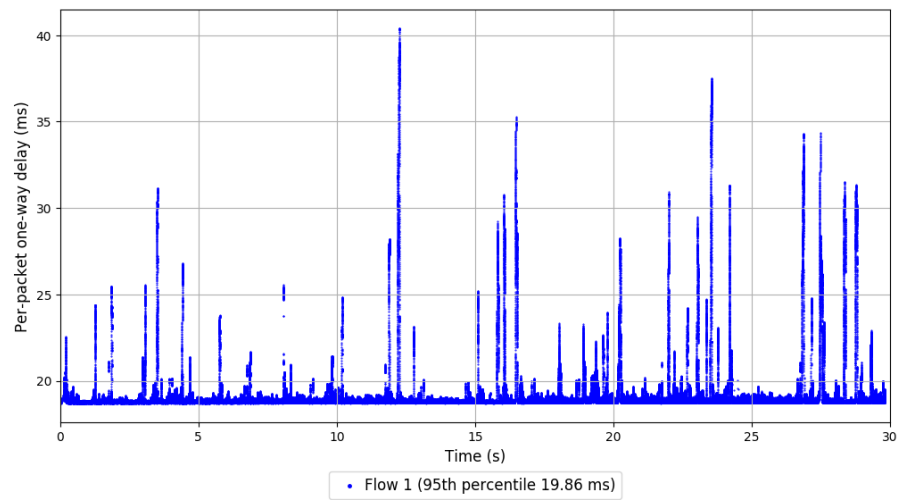
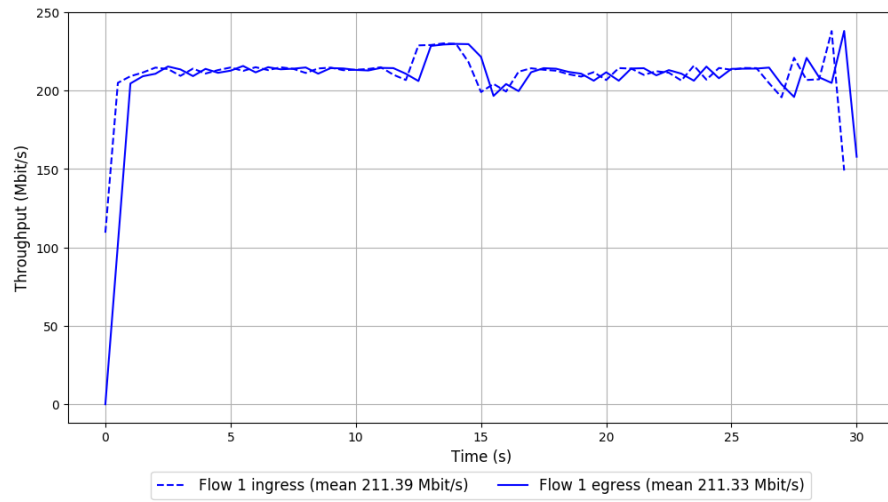
-- Flow 1:

Average throughput: 211.33 Mbit/s

95th percentile per-packet one-way delay: 19.865 ms

Loss rate: 0.03%

Run 5: Report of Indigo — Data Link

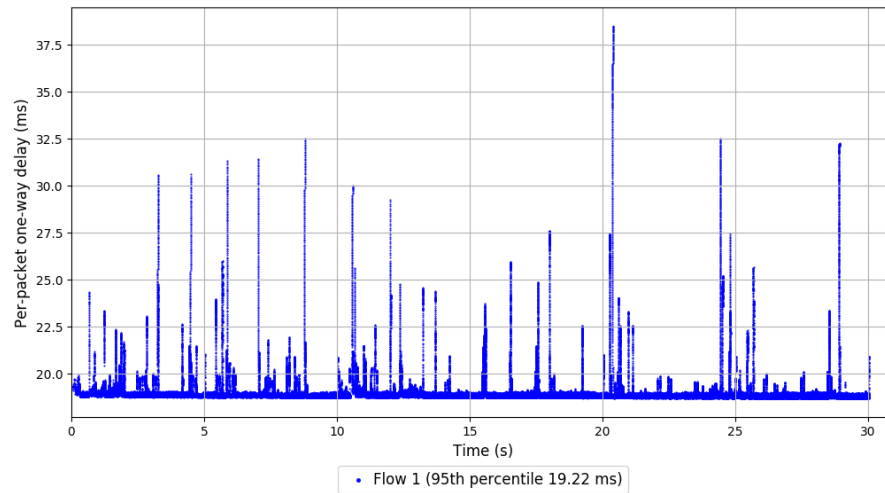
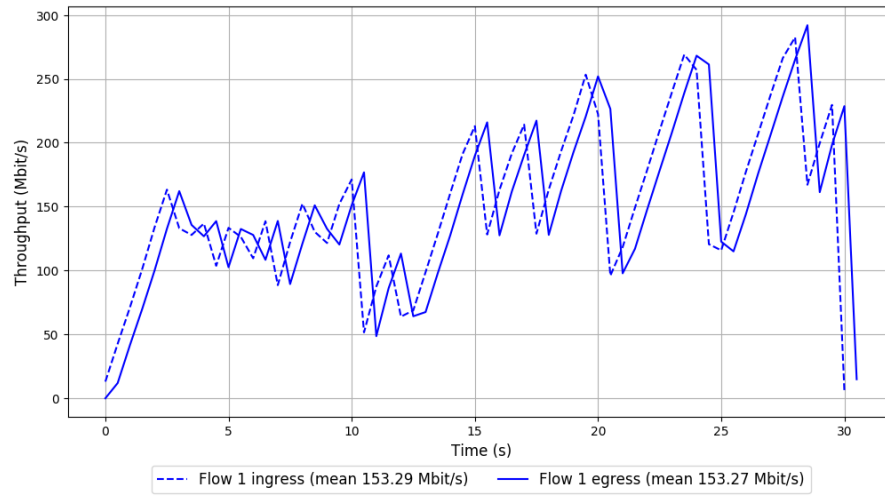


```
Run 1: Statistics of LEDBAT

Start at: 2018-09-06 05:02:17
End at: 2018-09-06 05:02:47
Local clock offset: 3.72 ms
Remote clock offset: 2.657 ms

# Below is generated by plot.py at 2018-09-06 07:22:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 153.27 Mbit/s
95th percentile per-packet one-way delay: 19.216 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 153.27 Mbit/s
95th percentile per-packet one-way delay: 19.216 ms
Loss rate: 0.02%
```


Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2018-09-06 05:28:25

End at: 2018-09-06 05:28:55

Local clock offset: 3.161 ms

Remote clock offset: 3.184 ms

Below is generated by plot.py at 2018-09-06 07:22:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 201.18 Mbit/s

95th percentile per-packet one-way delay: 19.428 ms

Loss rate: 0.01%

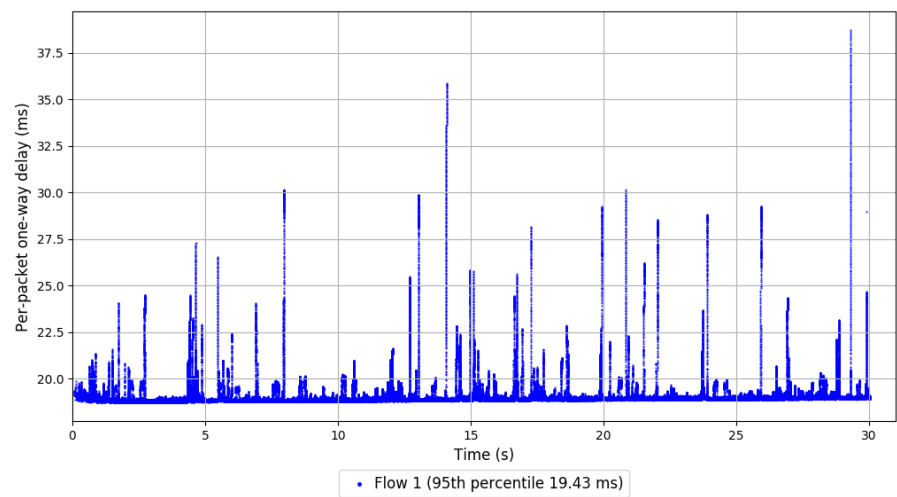
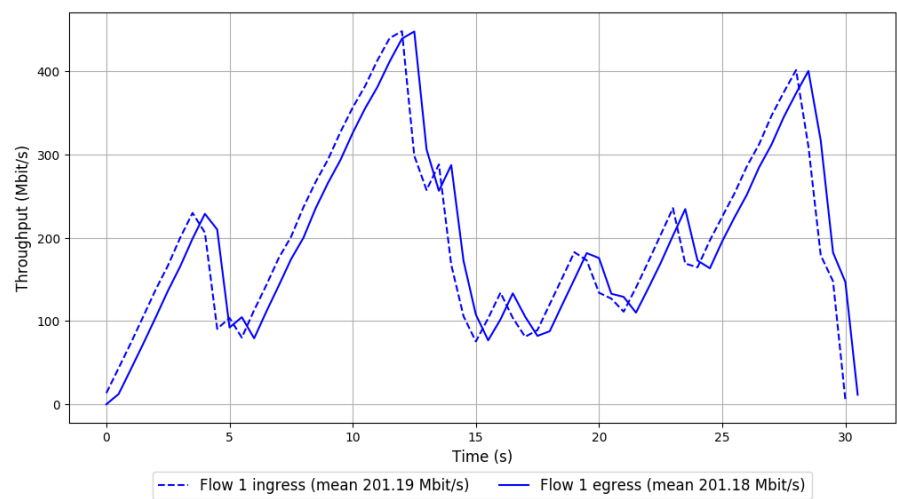
-- Flow 1:

Average throughput: 201.18 Mbit/s

95th percentile per-packet one-way delay: 19.428 ms

Loss rate: 0.01%

Run 2: Report of LEDBAT — Data Link

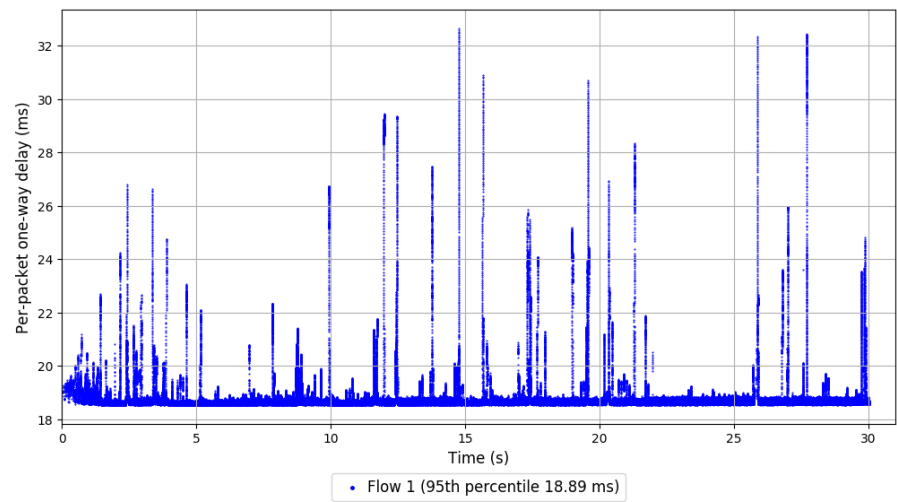
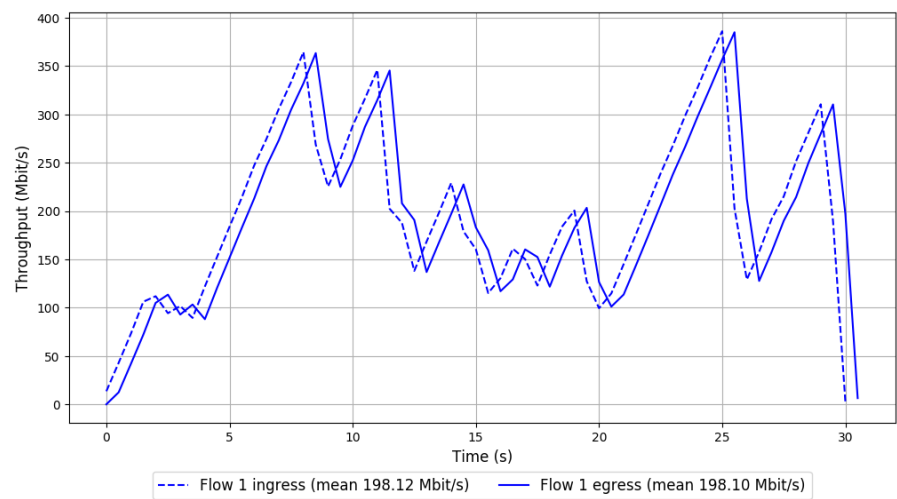


Run 3: Statistics of LEDBAT

Start at: 2018-09-06 05:54:28
End at: 2018-09-06 05:54:58
Local clock offset: 3.171 ms
Remote clock offset: -0.296 ms

Below is generated by plot.py at 2018-09-06 07:22:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 198.10 Mbit/s
95th percentile per-packet one-way delay: 18.889 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 198.10 Mbit/s
95th percentile per-packet one-way delay: 18.889 ms
Loss rate: 0.01%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-09-06 06:20:33

End at: 2018-09-06 06:21:03

Local clock offset: 3.548 ms

Remote clock offset: -0.41 ms

Below is generated by plot.py at 2018-09-06 07:22:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 170.16 Mbit/s

95th percentile per-packet one-way delay: 19.180 ms

Loss rate: 0.01%

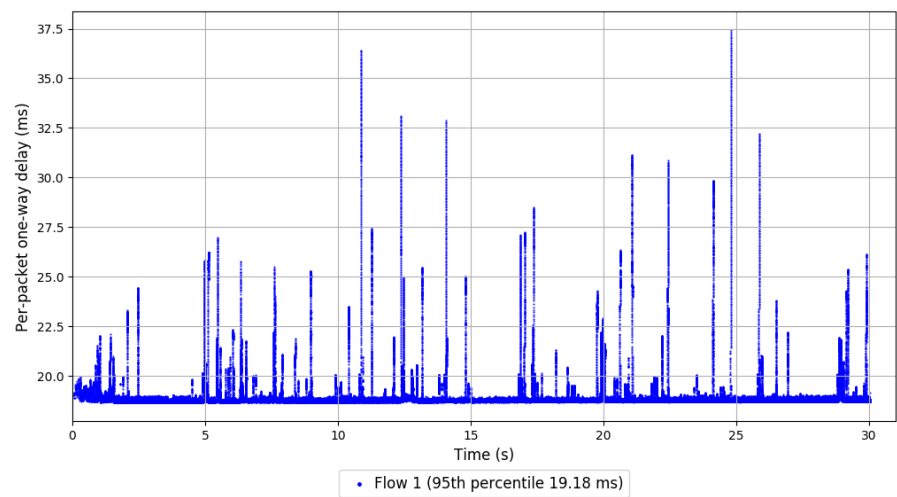
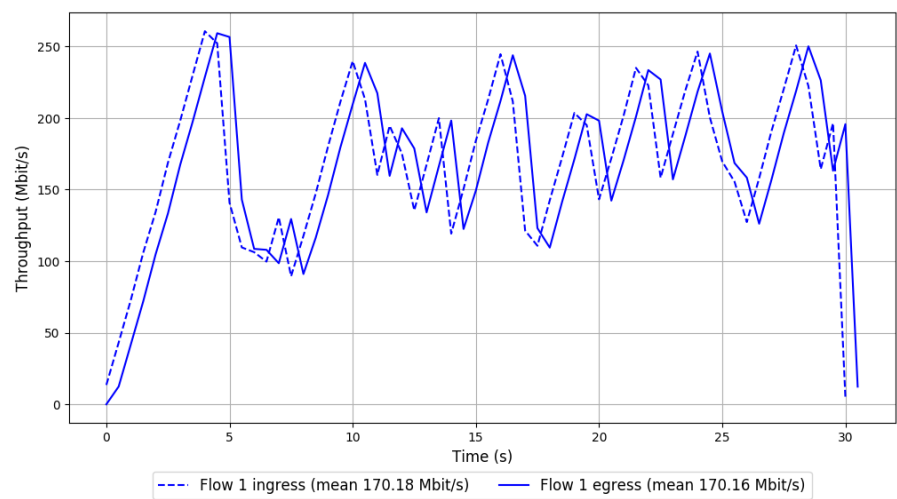
-- Flow 1:

Average throughput: 170.16 Mbit/s

95th percentile per-packet one-way delay: 19.180 ms

Loss rate: 0.01%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-09-06 06:46:31

End at: 2018-09-06 06:47:01

Local clock offset: 4.423 ms

Remote clock offset: 0.001 ms

Below is generated by plot.py at 2018-09-06 07:22:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 143.85 Mbit/s

95th percentile per-packet one-way delay: 18.649 ms

Loss rate: 0.02%

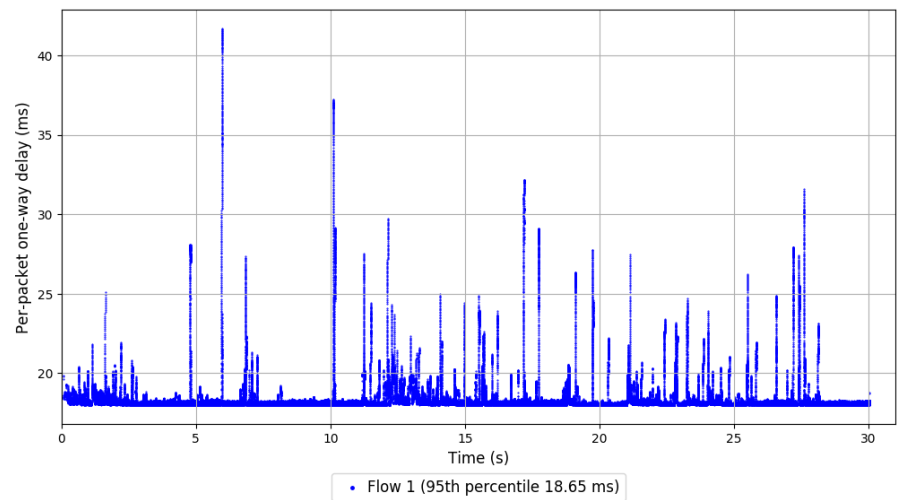
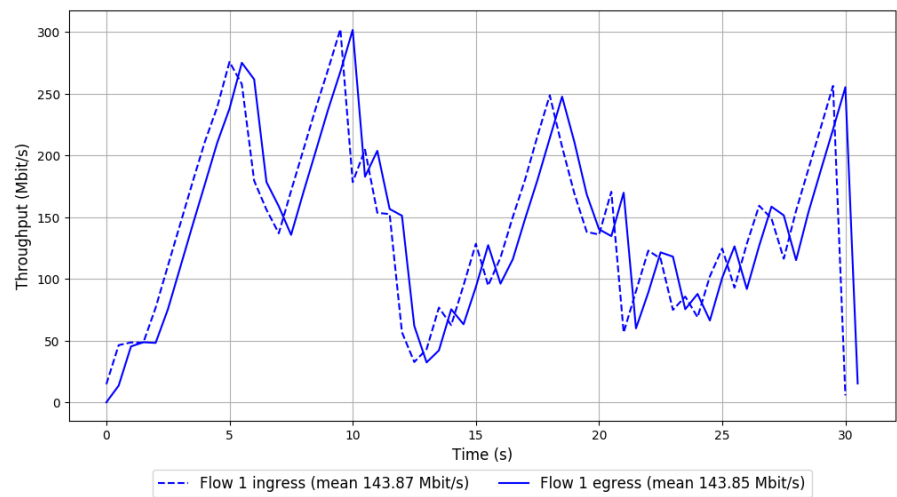
-- Flow 1:

Average throughput: 143.85 Mbit/s

95th percentile per-packet one-way delay: 18.649 ms

Loss rate: 0.02%

Run 5: Report of LEDBAT — Data Link



Run 1: Statistics of Indigo-Muses

Start at: 2018-09-06 04:59:40

End at: 2018-09-06 05:00:10

Local clock offset: 3.671 ms

Remote clock offset: 2.189 ms

Below is generated by plot.py at 2018-09-06 07:22:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 21.74 Mbit/s

95th percentile per-packet one-way delay: 18.353 ms

Loss rate: 0.04%

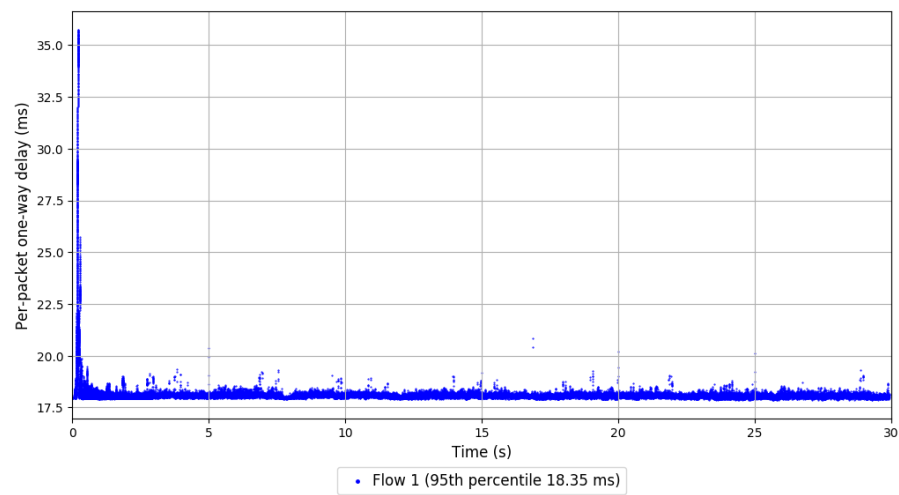
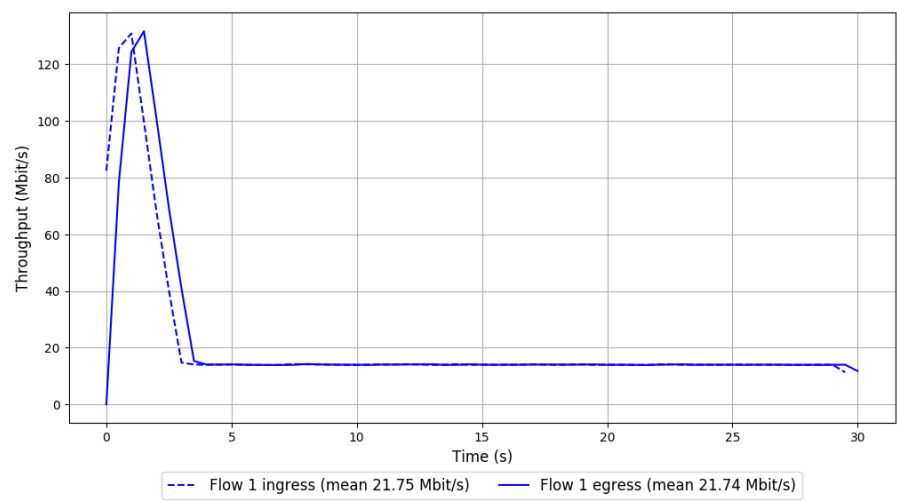
-- Flow 1:

Average throughput: 21.74 Mbit/s

95th percentile per-packet one-way delay: 18.353 ms

Loss rate: 0.04%

Run 1: Report of Indigo-Muses — Data Link



Run 2: Statistics of Indigo-Muses

Start at: 2018-09-06 05:25:46

End at: 2018-09-06 05:26:16

Local clock offset: 3.261 ms

Remote clock offset: 4.465 ms

Below is generated by plot.py at 2018-09-06 07:22:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 93.26 Mbit/s

95th percentile per-packet one-way delay: 19.155 ms

Loss rate: 0.04%

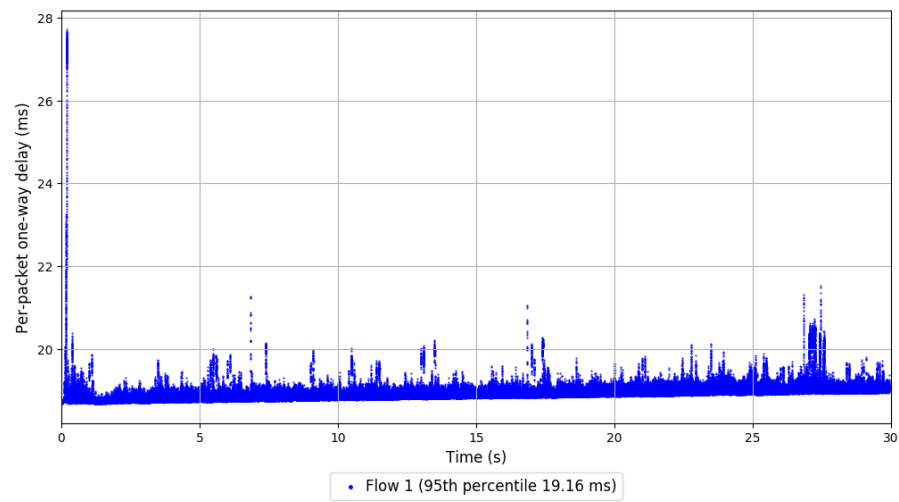
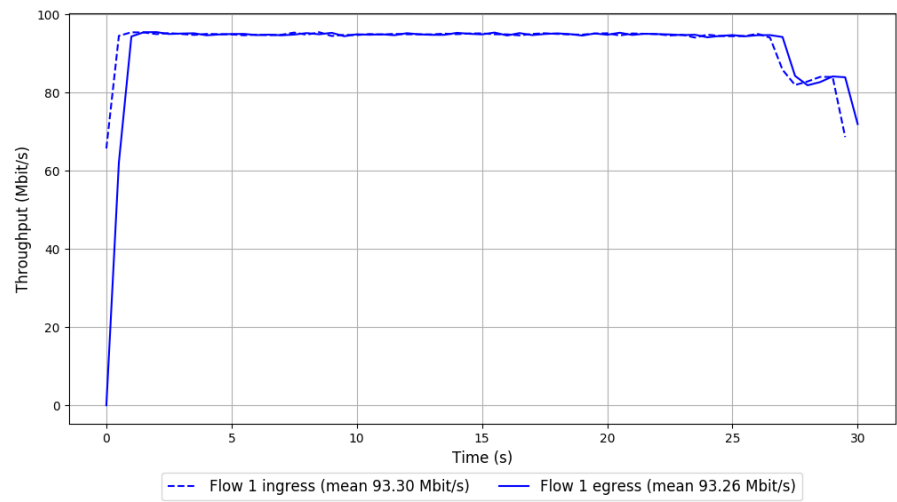
-- Flow 1:

Average throughput: 93.26 Mbit/s

95th percentile per-packet one-way delay: 19.155 ms

Loss rate: 0.04%

Run 2: Report of Indigo-Muses — Data Link

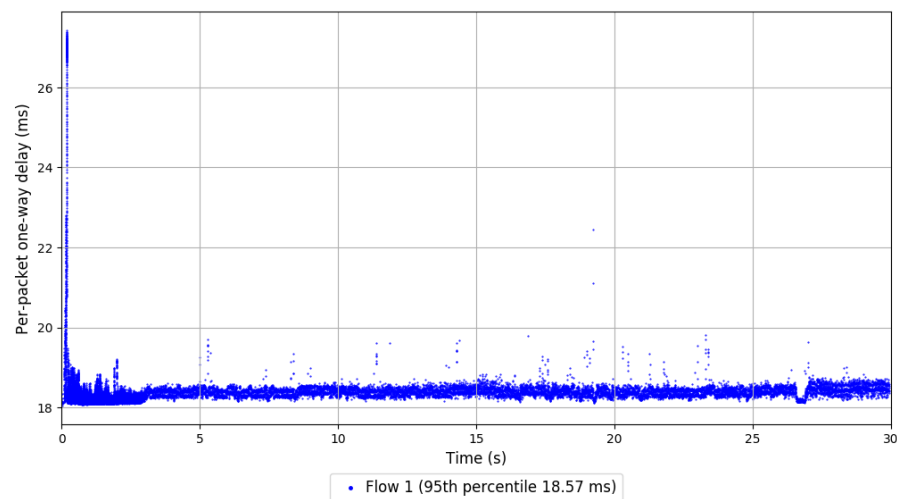
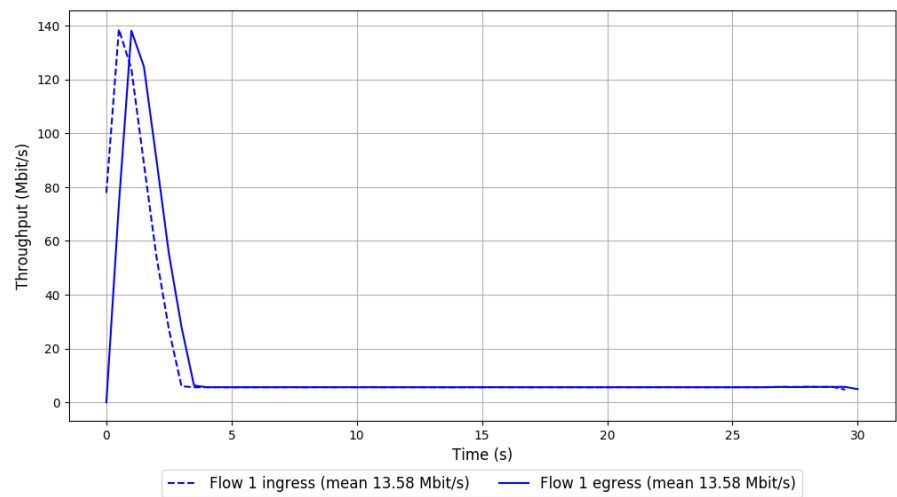


Run 3: Statistics of Indigo-Muses

Start at: 2018-09-06 05:51:51
End at: 2018-09-06 05:52:21
Local clock offset: 3.052 ms
Remote clock offset: -0.108 ms

Below is generated by plot.py at 2018-09-06 07:22:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 13.58 Mbit/s
95th percentile per-packet one-way delay: 18.571 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 13.58 Mbit/s
95th percentile per-packet one-way delay: 18.571 ms
Loss rate: 0.00%

Run 3: Report of Indigo-Muses — Data Link

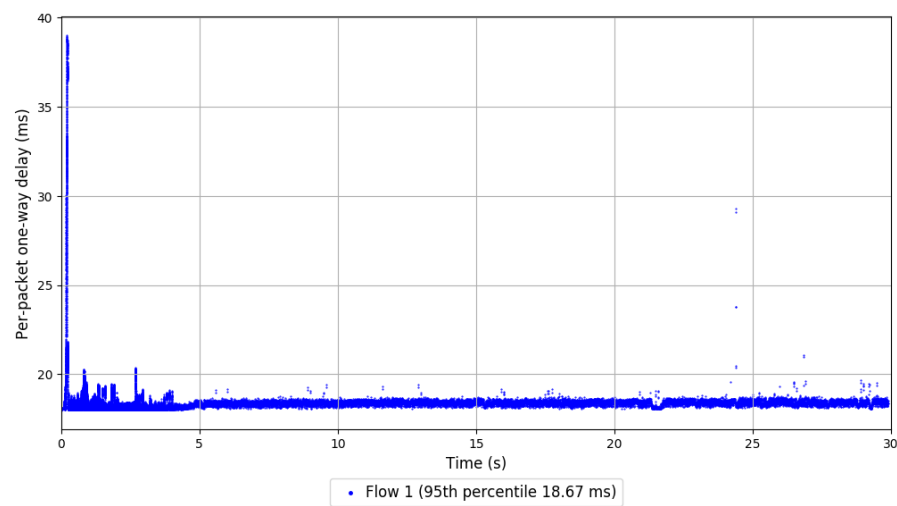
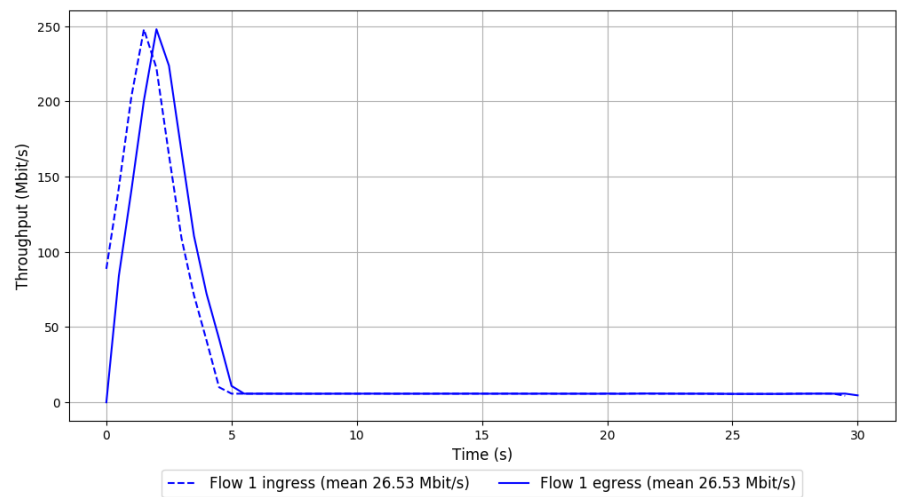


Run 4: Statistics of Indigo-Muses

Start at: 2018-09-06 06:17:56
End at: 2018-09-06 06:18:26
Local clock offset: 3.358 ms
Remote clock offset: -0.315 ms

Below is generated by plot.py at 2018-09-06 07:22:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 26.53 Mbit/s
95th percentile per-packet one-way delay: 18.667 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 26.53 Mbit/s
95th percentile per-packet one-way delay: 18.667 ms
Loss rate: 0.02%

Run 4: Report of Indigo-Muses — Data Link



Run 5: Statistics of Indigo-Muses

Start at: 2018-09-06 06:43:54

End at: 2018-09-06 06:44:24

Local clock offset: 4.352 ms

Remote clock offset: -0.161 ms

Below is generated by plot.py at 2018-09-06 07:22:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 19.46 Mbit/s

95th percentile per-packet one-way delay: 18.359 ms

Loss rate: 0.00%

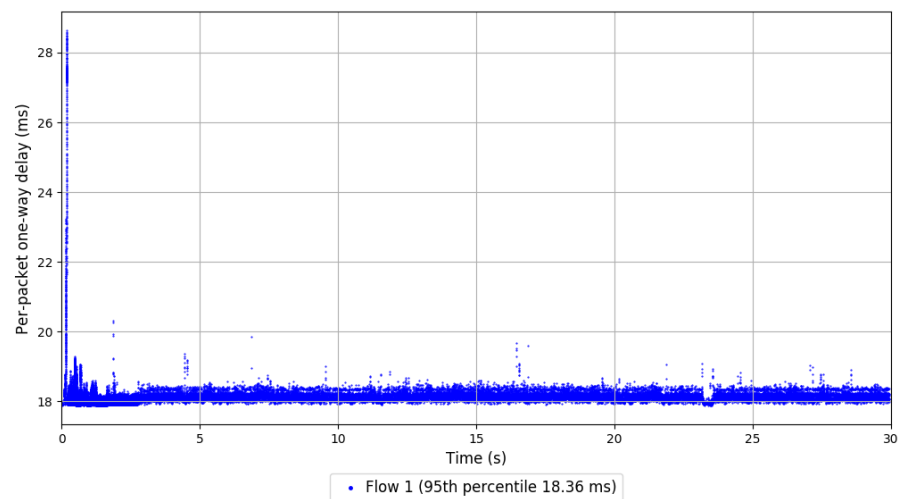
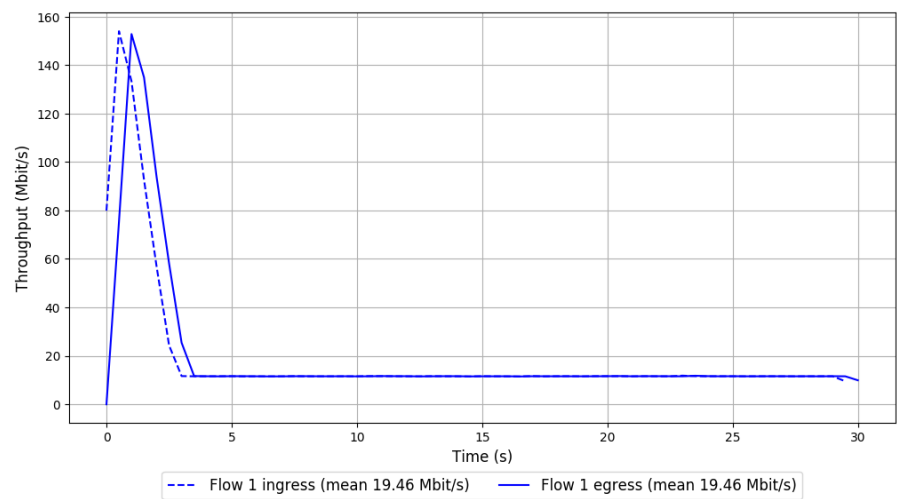
-- Flow 1:

Average throughput: 19.46 Mbit/s

95th percentile per-packet one-way delay: 18.359 ms

Loss rate: 0.00%

Run 5: Report of Indigo-Muses — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2018-09-06 04:43:14

End at: 2018-09-06 04:43:44

Local clock offset: 4.458 ms

Remote clock offset: -0.229 ms

Below is generated by plot.py at 2018-09-06 07:28:19

Datalink statistics

-- Total of 1 flow:

Average throughput: 880.63 Mbit/s

95th percentile per-packet one-way delay: 61.456 ms

Loss rate: 0.82%

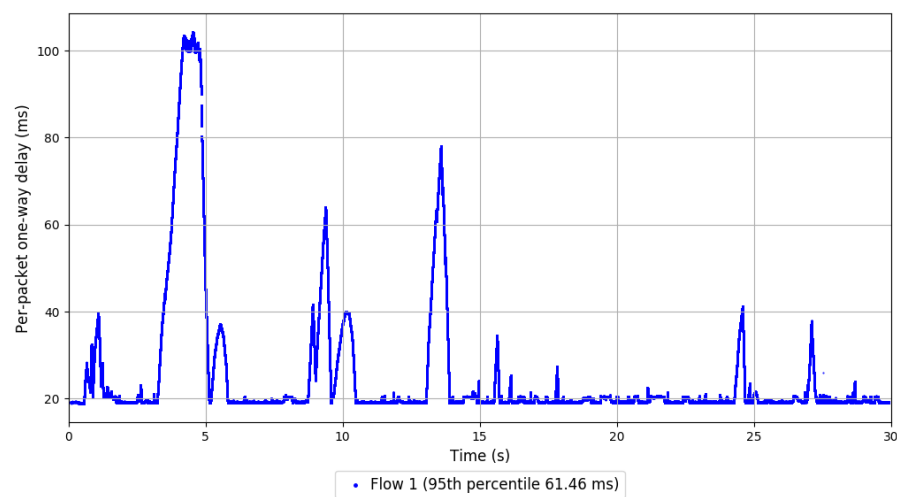
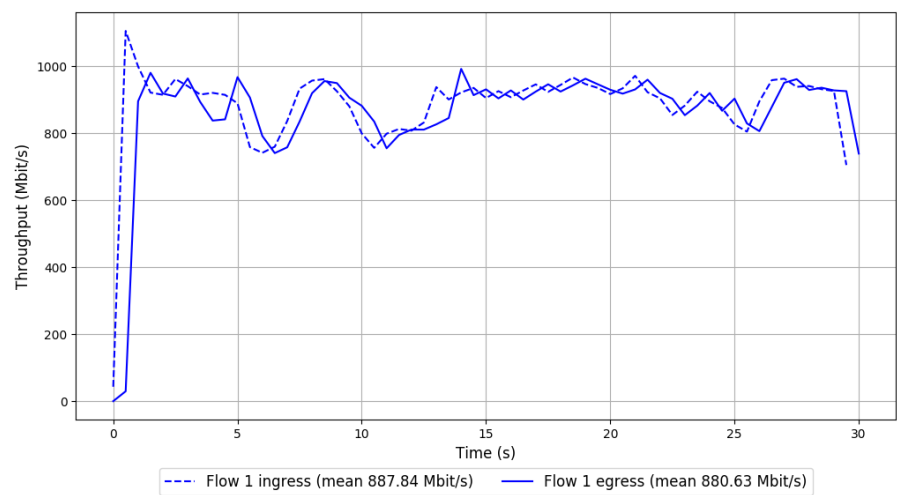
-- Flow 1:

Average throughput: 880.63 Mbit/s

95th percentile per-packet one-way delay: 61.456 ms

Loss rate: 0.82%

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-09-06 05:09:13

End at: 2018-09-06 05:09:43

Local clock offset: 3.631 ms

Remote clock offset: 3.475 ms

Below is generated by plot.py at 2018-09-06 07:28:19

Datalink statistics

-- Total of 1 flow:

Average throughput: 877.51 Mbit/s

95th percentile per-packet one-way delay: 29.109 ms

Loss rate: 0.81%

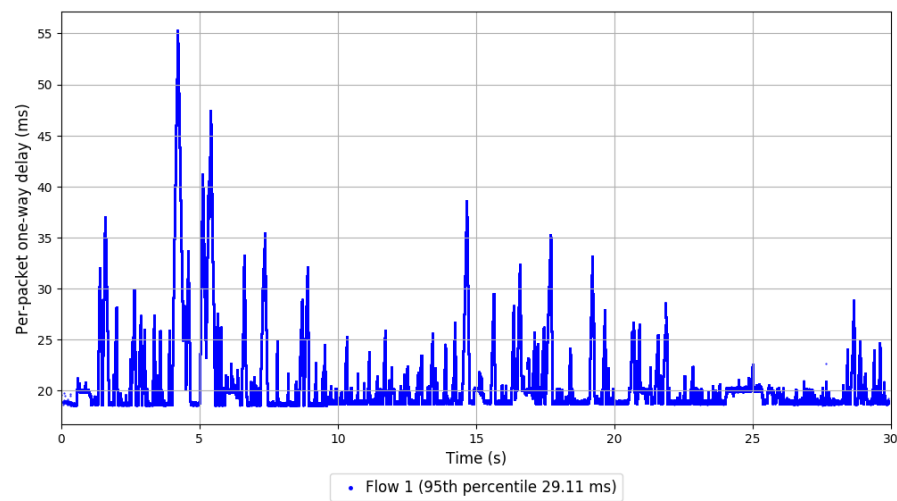
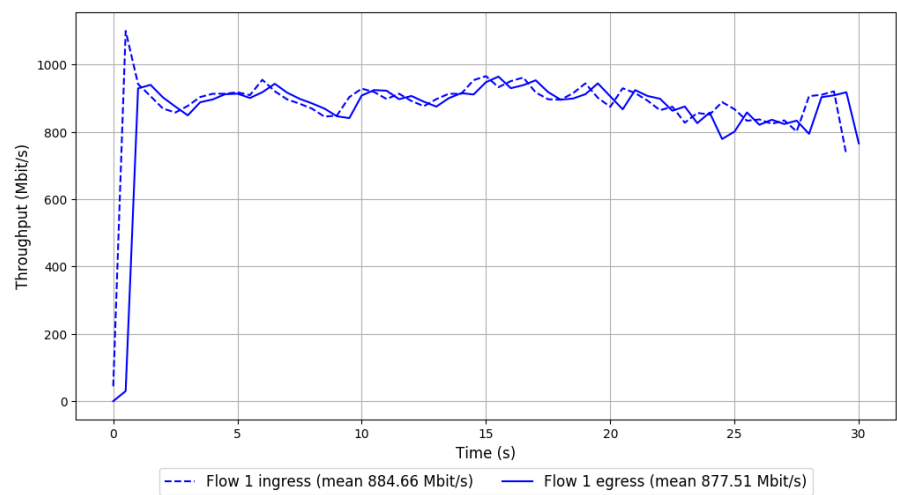
-- Flow 1:

Average throughput: 877.51 Mbit/s

95th percentile per-packet one-way delay: 29.109 ms

Loss rate: 0.81%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-09-06 05:35:23

End at: 2018-09-06 05:35:53

Local clock offset: 3.188 ms

Remote clock offset: 1.298 ms

Below is generated by plot.py at 2018-09-06 07:28:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 880.50 Mbit/s

95th percentile per-packet one-way delay: 49.639 ms

Loss rate: 0.48%

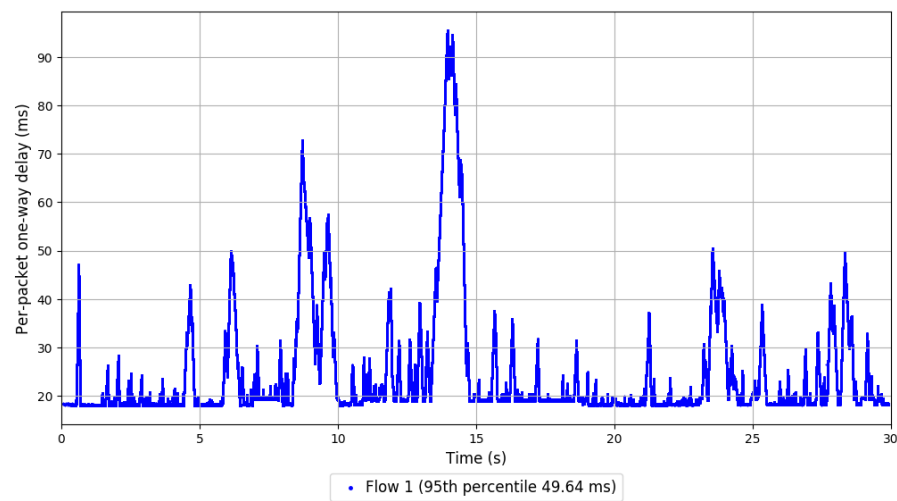
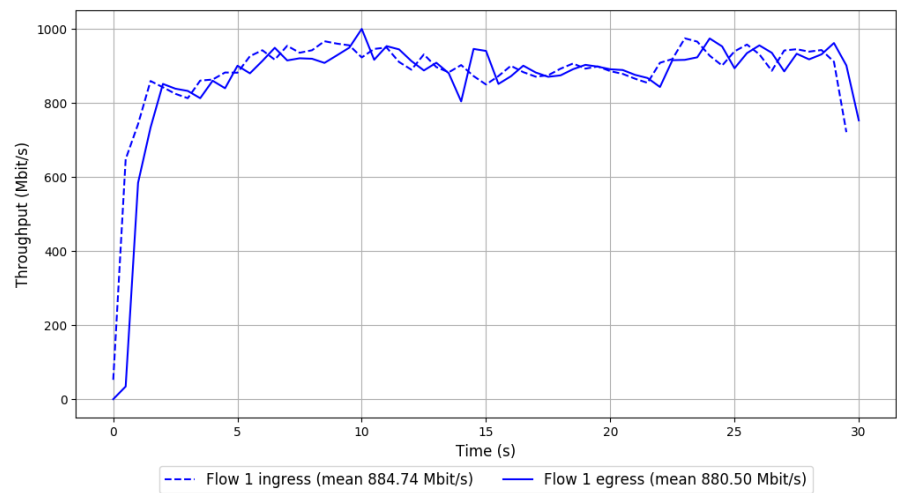
-- Flow 1:

Average throughput: 880.50 Mbit/s

95th percentile per-packet one-way delay: 49.639 ms

Loss rate: 0.48%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-09-06 06:01:23

End at: 2018-09-06 06:01:53

Local clock offset: 3.151 ms

Remote clock offset: -0.318 ms

Below is generated by plot.py at 2018-09-06 07:28:53

Datalink statistics

-- Total of 1 flow:

Average throughput: 887.10 Mbit/s

95th percentile per-packet one-way delay: 24.300 ms

Loss rate: 0.45%

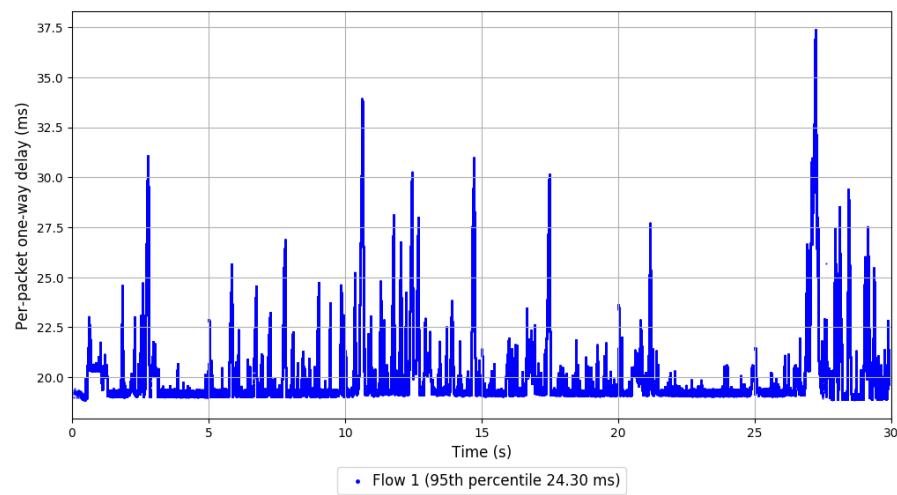
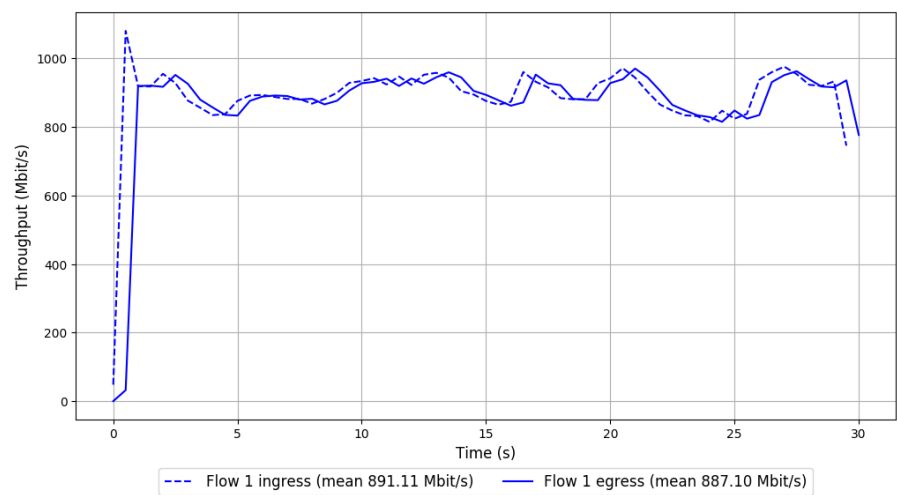
-- Flow 1:

Average throughput: 887.10 Mbit/s

95th percentile per-packet one-way delay: 24.300 ms

Loss rate: 0.45%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-09-06 06:27:28

End at: 2018-09-06 06:27:58

Local clock offset: 3.91 ms

Remote clock offset: -0.448 ms

Below is generated by plot.py at 2018-09-06 07:29:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 911.12 Mbit/s

95th percentile per-packet one-way delay: 41.344 ms

Loss rate: 0.58%

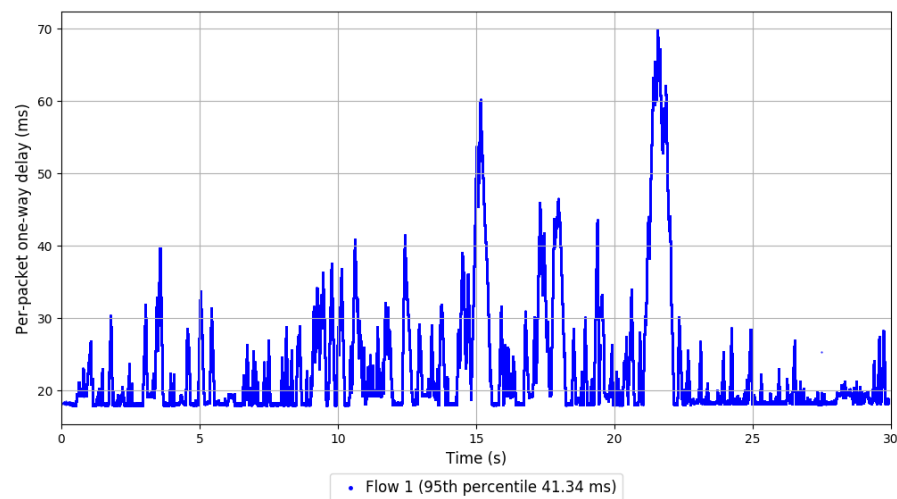
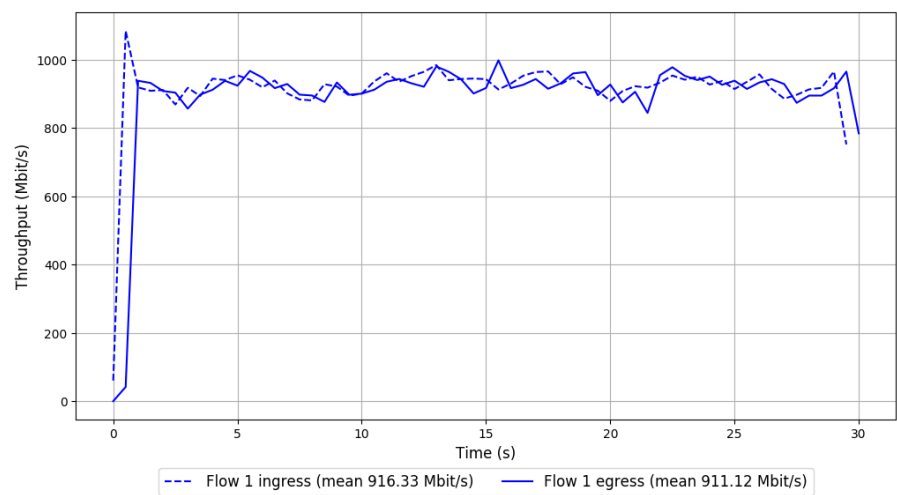
-- Flow 1:

Average throughput: 911.12 Mbit/s

95th percentile per-packet one-way delay: 41.344 ms

Loss rate: 0.58%

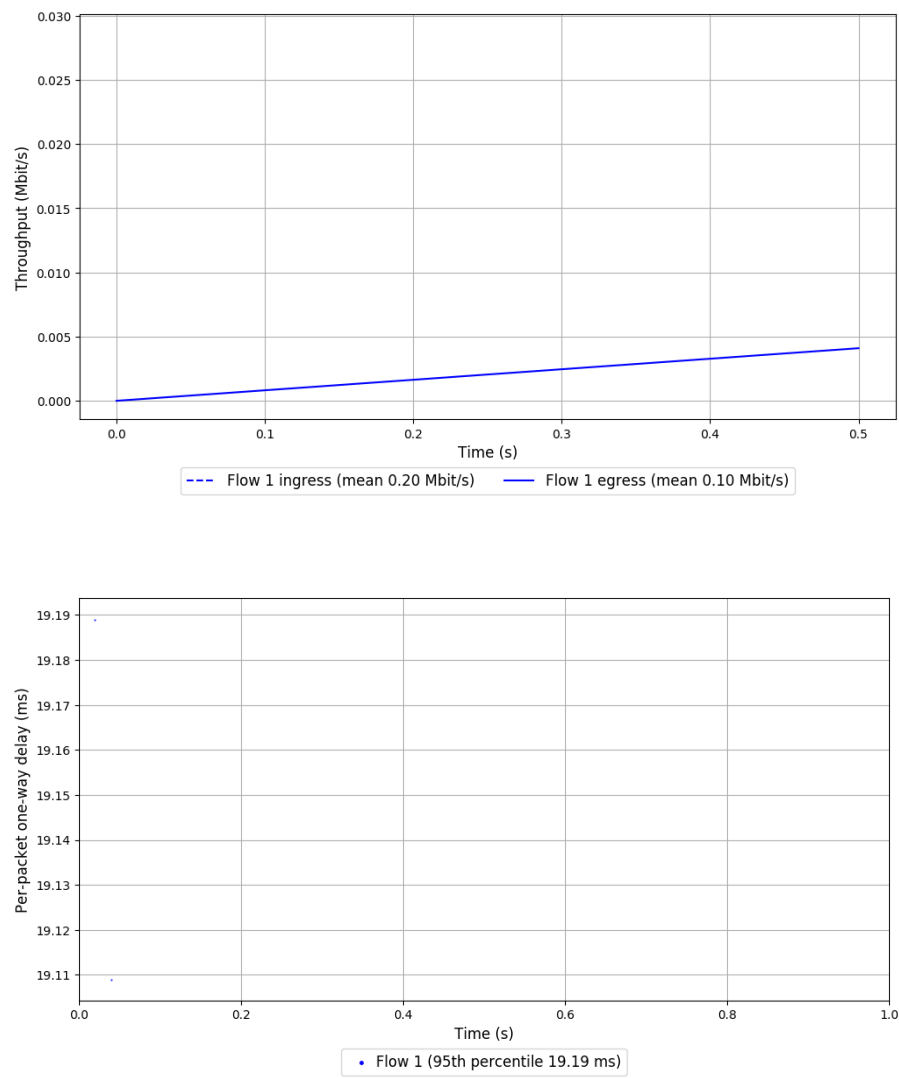
Run 5: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

Start at: 2018-09-06 04:50:45
End at: 2018-09-06 04:51:15
Local clock offset: 4.086 ms
Remote clock offset: -0.133 ms

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

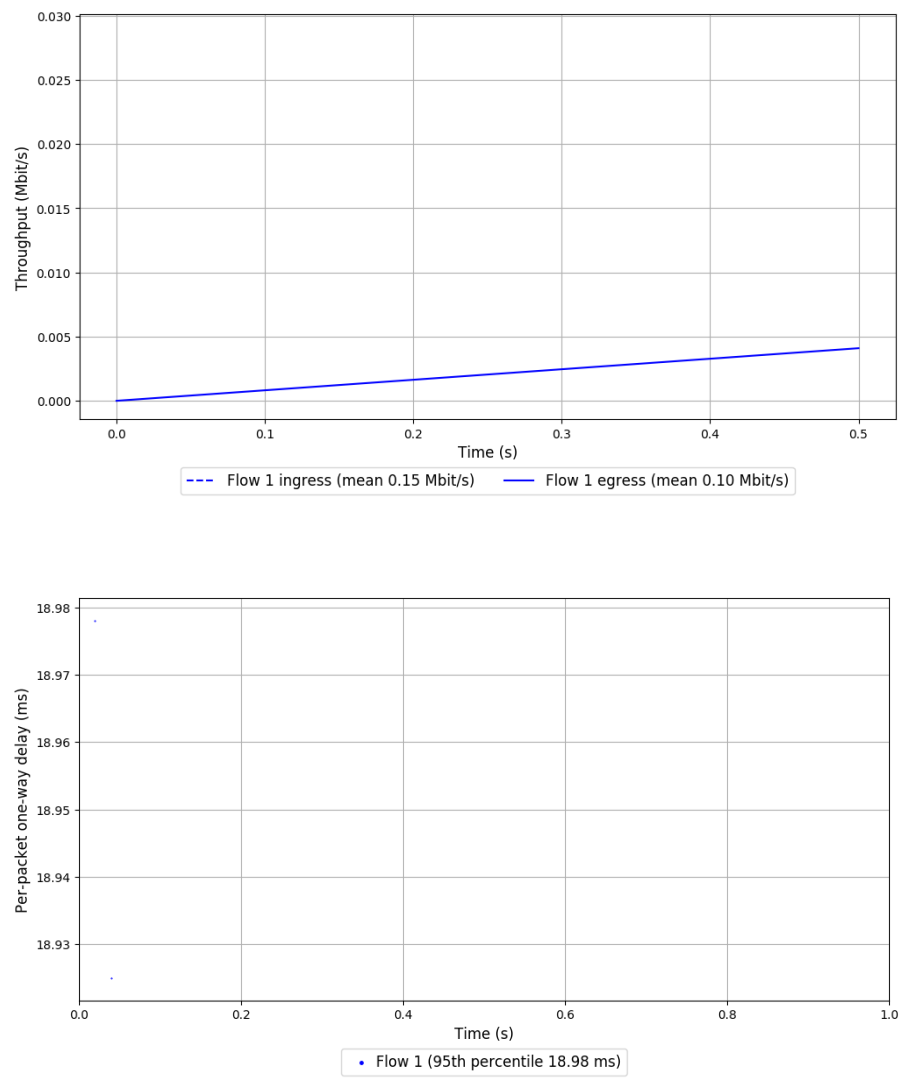
Start at: 2018-09-06 05:16:50

End at: 2018-09-06 05:17:20

Local clock offset: 3.527 ms

Remote clock offset: 4.207 ms

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

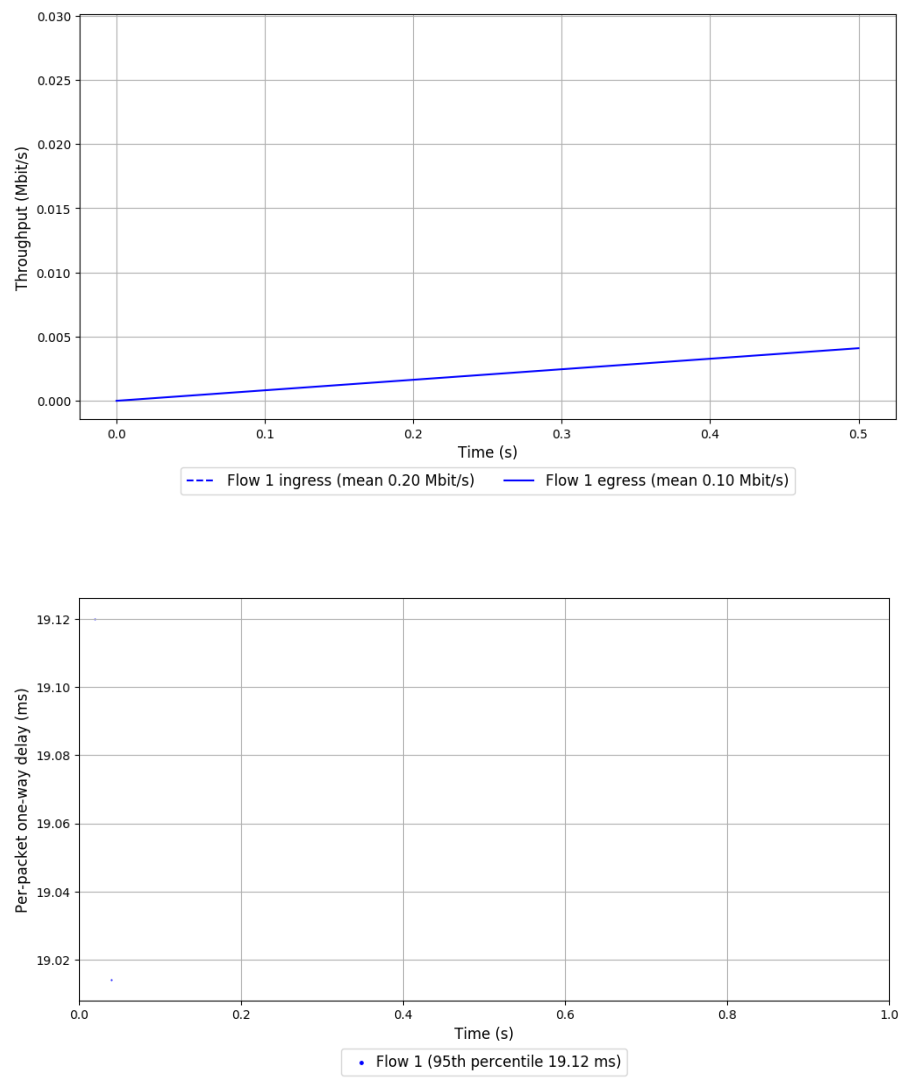
Start at: 2018-09-06 05:42:53

End at: 2018-09-06 05:43:23

Local clock offset: 3.135 ms

Remote clock offset: 0.383 ms

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

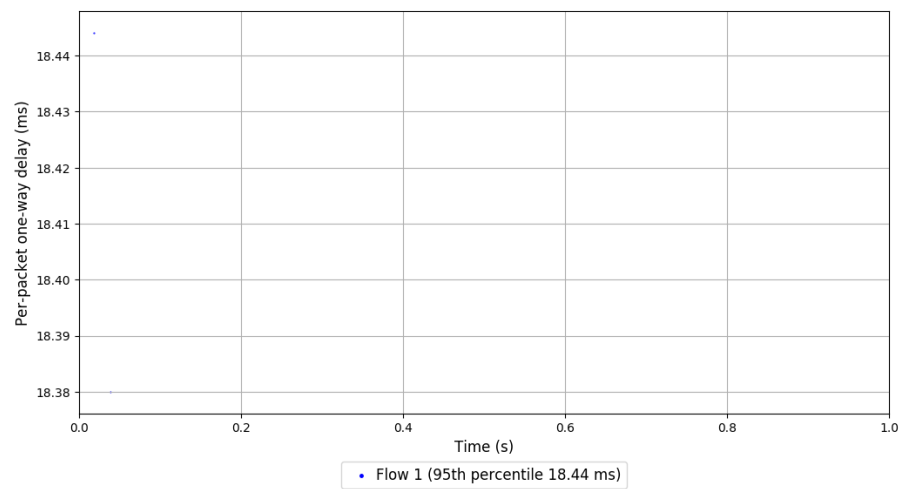
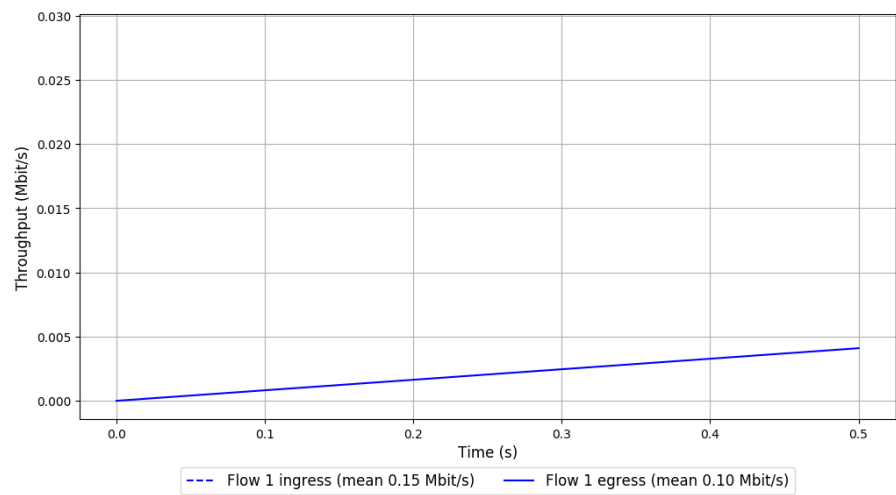
Start at: 2018-09-06 06:08:58

End at: 2018-09-06 06:09:28

Local clock offset: 3.039 ms

Remote clock offset: -0.361 ms

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

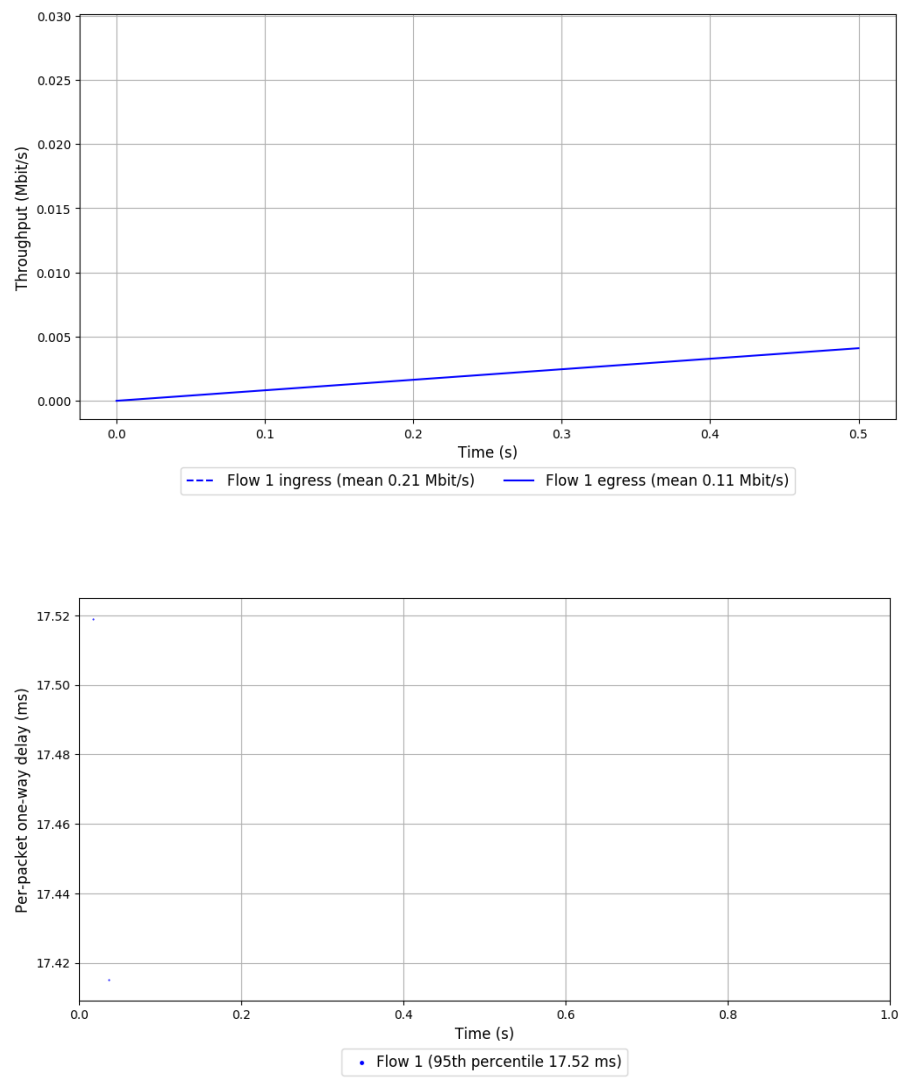
Start at: 2018-09-06 06:35:00

End at: 2018-09-06 06:35:30

Local clock offset: 4.064 ms

Remote clock offset: -0.397 ms

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2018-09-06 04:44:53

End at: 2018-09-06 04:45:23

Local clock offset: 4.489 ms

Remote clock offset: -0.134 ms

Below is generated by plot.py at 2018-09-06 07:29:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 75.64 Mbit/s

95th percentile per-packet one-way delay: 18.131 ms

Loss rate: 0.00%

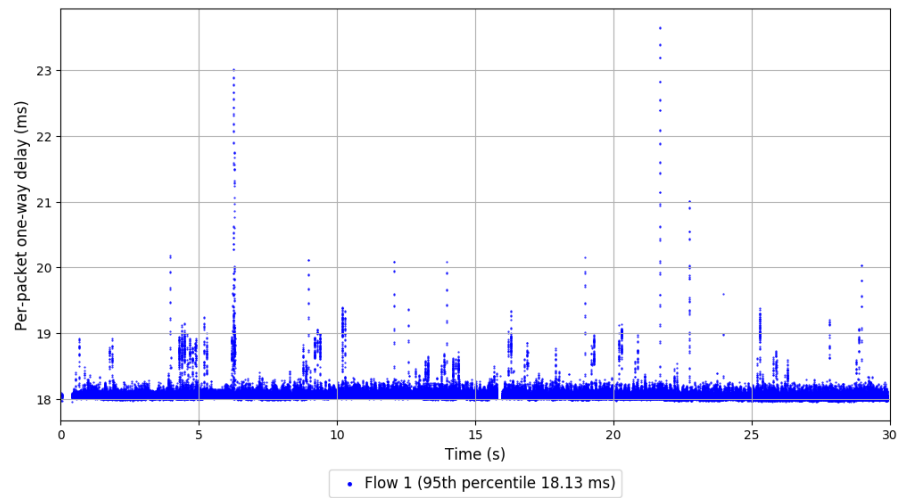
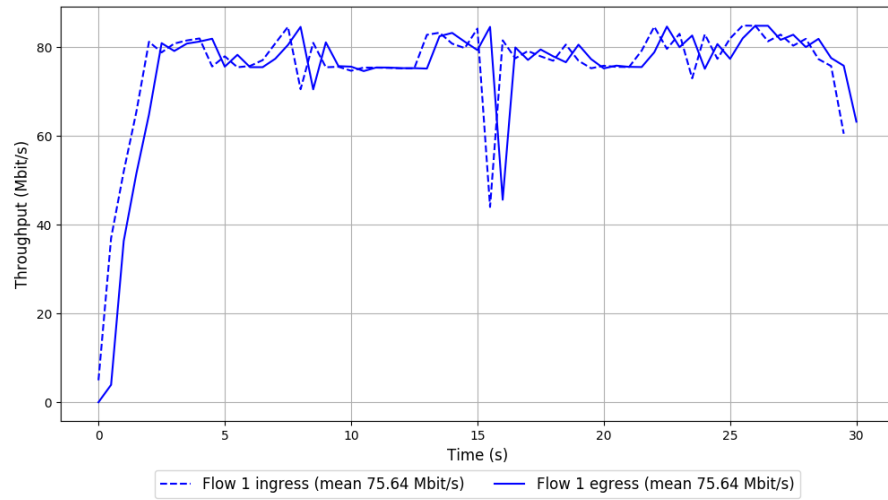
-- Flow 1:

Average throughput: 75.64 Mbit/s

95th percentile per-packet one-way delay: 18.131 ms

Loss rate: 0.00%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-09-06 05:10:52

End at: 2018-09-06 05:11:22

Local clock offset: 3.606 ms

Remote clock offset: 3.707 ms

Below is generated by plot.py at 2018-09-06 07:29:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 76.87 Mbit/s

95th percentile per-packet one-way delay: 19.030 ms

Loss rate: 0.01%

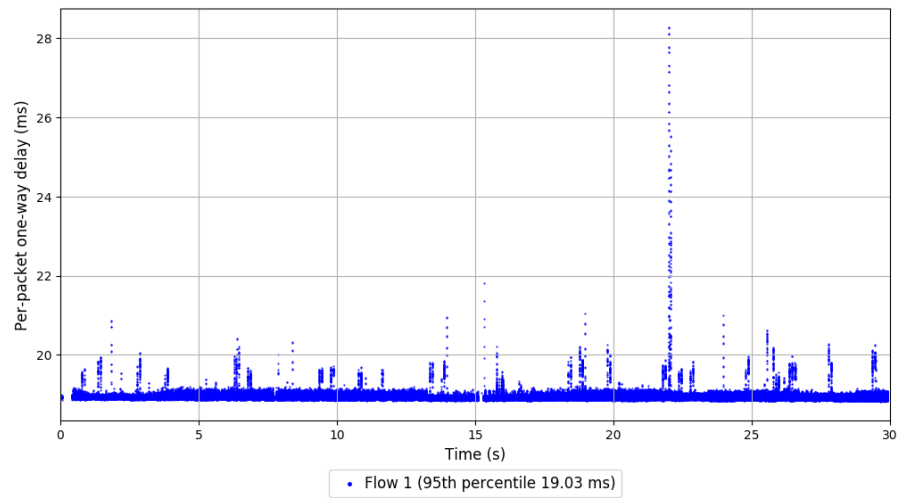
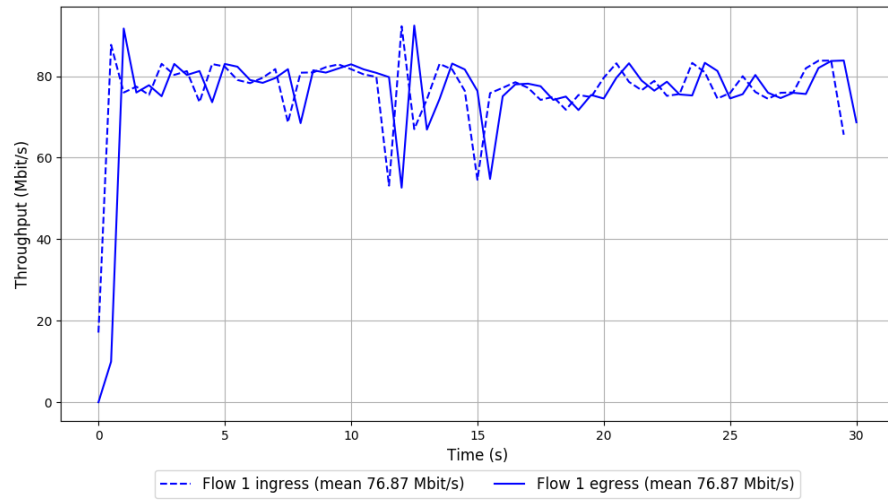
-- Flow 1:

Average throughput: 76.87 Mbit/s

95th percentile per-packet one-way delay: 19.030 ms

Loss rate: 0.01%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-09-06 05:37:02

End at: 2018-09-06 05:37:32

Local clock offset: 3.17 ms

Remote clock offset: 0.995 ms

Below is generated by plot.py at 2018-09-06 07:29:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 80.91 Mbit/s

95th percentile per-packet one-way delay: 17.414 ms

Loss rate: 0.01%

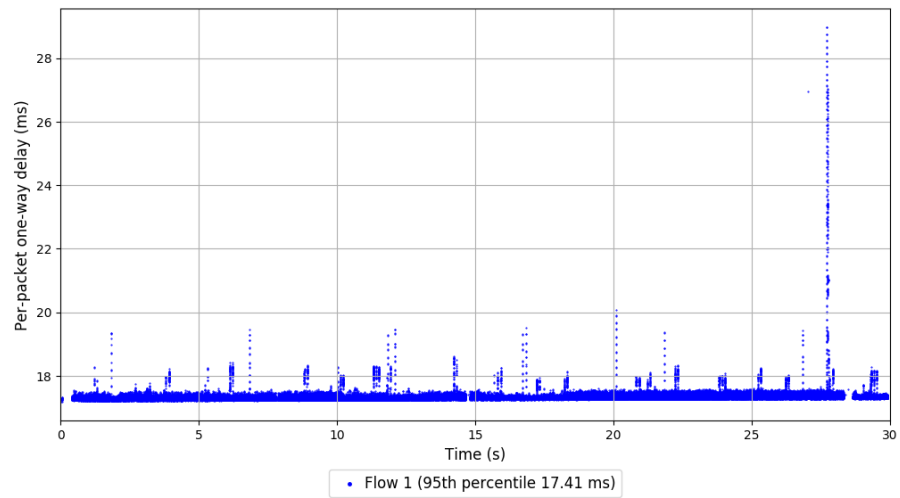
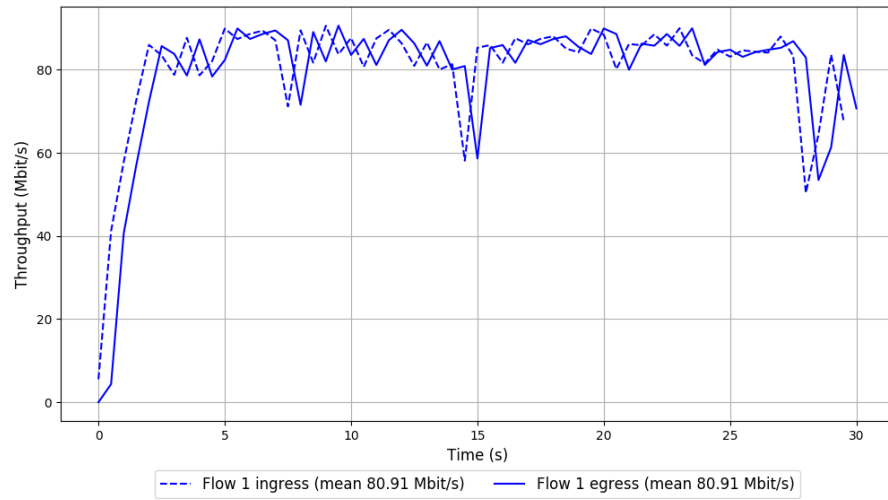
-- Flow 1:

Average throughput: 80.91 Mbit/s

95th percentile per-packet one-way delay: 17.414 ms

Loss rate: 0.01%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-09-06 06:03:02

End at: 2018-09-06 06:03:32

Local clock offset: 3.142 ms

Remote clock offset: -0.324 ms

Below is generated by plot.py at 2018-09-06 07:29:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 75.90 Mbit/s

95th percentile per-packet one-way delay: 19.001 ms

Loss rate: 0.01%

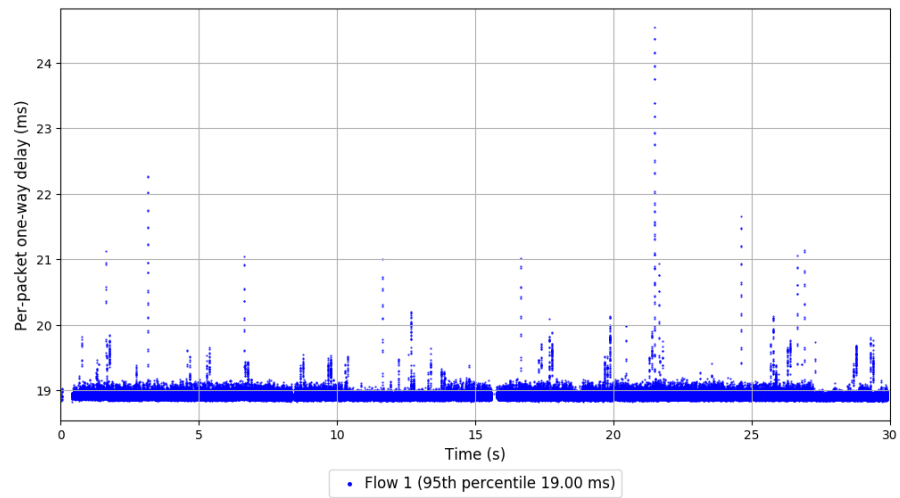
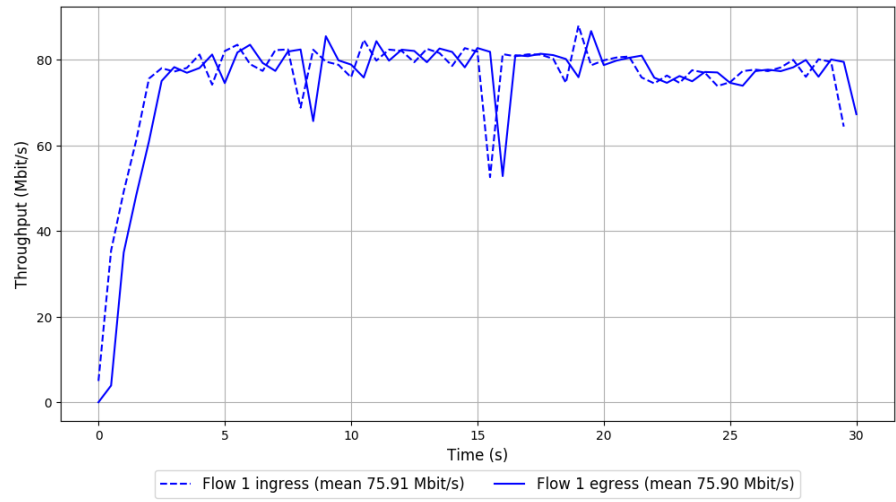
-- Flow 1:

Average throughput: 75.90 Mbit/s

95th percentile per-packet one-way delay: 19.001 ms

Loss rate: 0.01%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-09-06 06:29:08

End at: 2018-09-06 06:29:38

Local clock offset: 3.885 ms

Remote clock offset: -0.459 ms

Below is generated by plot.py at 2018-09-06 07:29:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 79.27 Mbit/s

95th percentile per-packet one-way delay: 18.904 ms

Loss rate: 0.00%

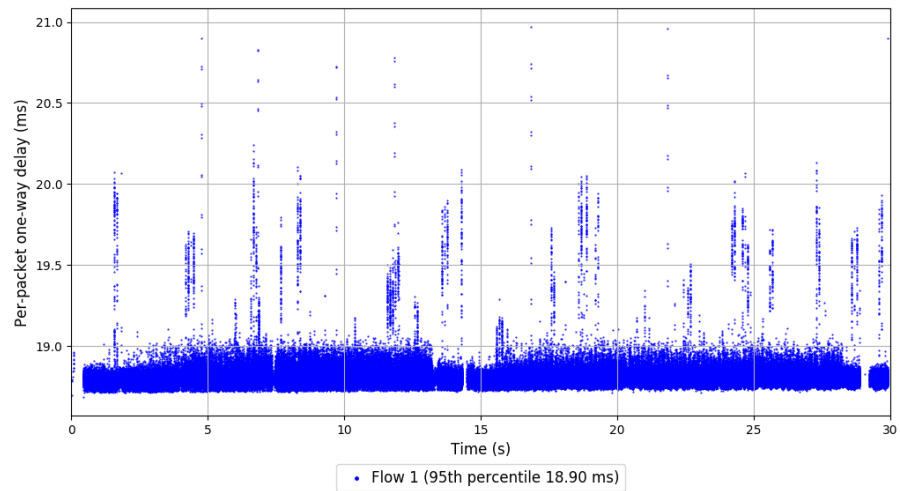
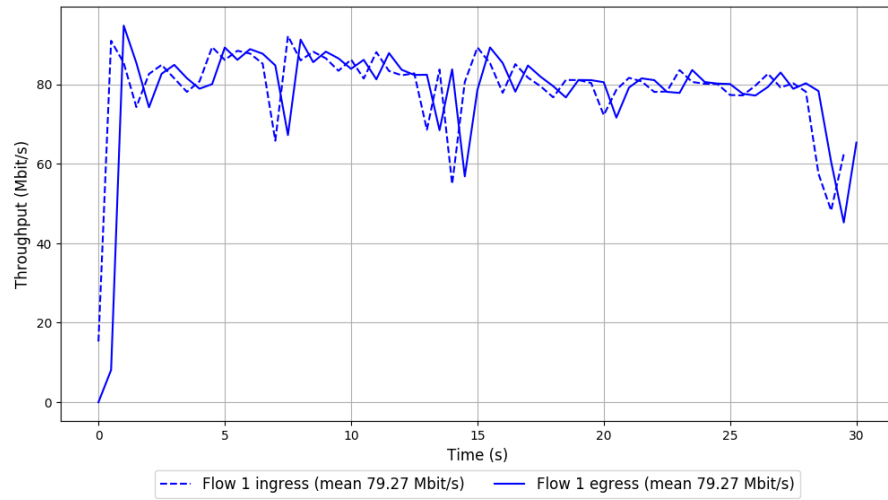
-- Flow 1:

Average throughput: 79.27 Mbit/s

95th percentile per-packet one-way delay: 18.904 ms

Loss rate: 0.00%

Run 5: Report of QUIC Cubic — Data Link

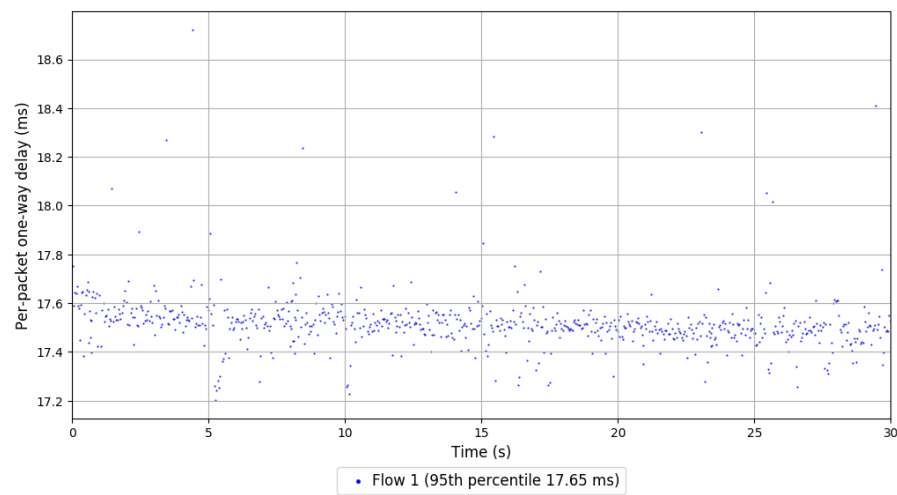
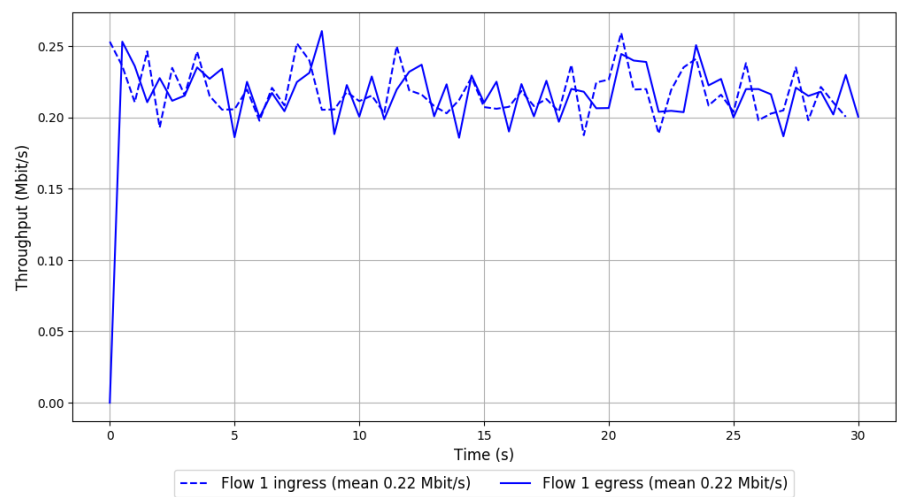


```
Run 1: Statistics of SCReAM

Start at: 2018-09-06 05:03:42
End at: 2018-09-06 05:04:13
Local clock offset: 3.673 ms
Remote clock offset: 2.901 ms

# Below is generated by plot.py at 2018-09-06 07:29:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 17.649 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 17.649 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link

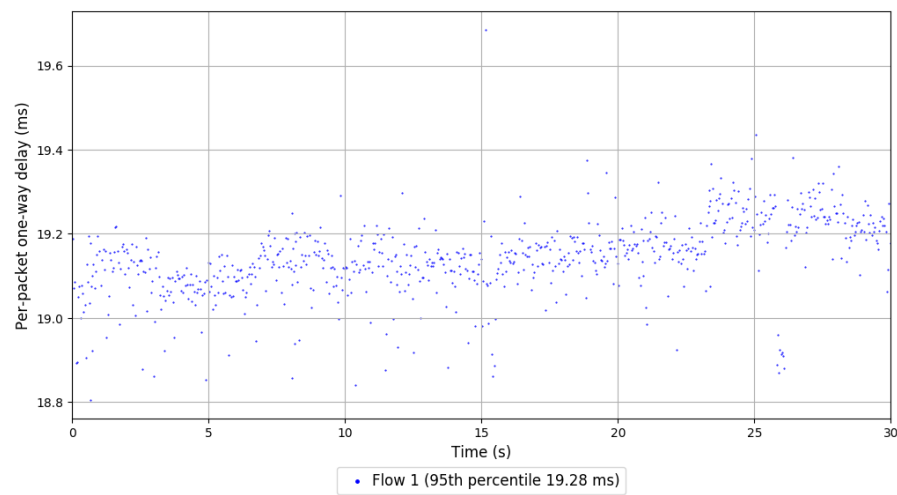
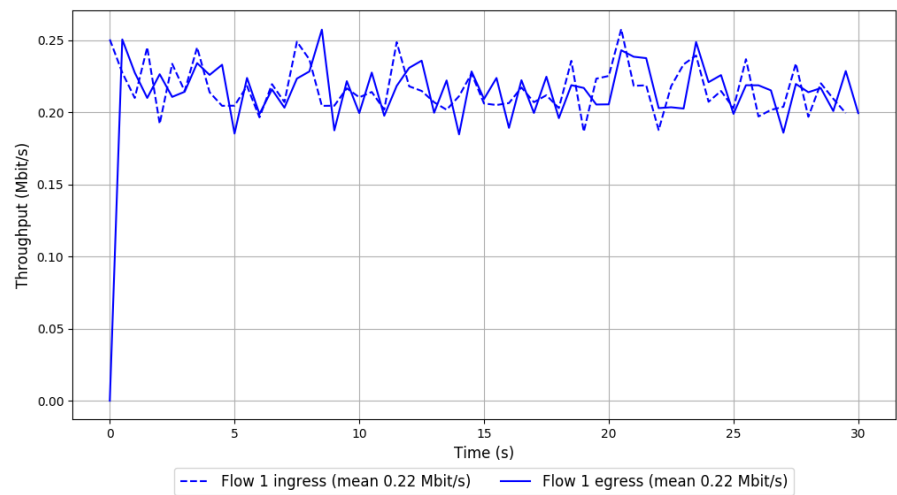


```
Run 2: Statistics of SCReAM

Start at: 2018-09-06 05:29:52
End at: 2018-09-06 05:30:22
Local clock offset: 3.156 ms
Remote clock offset: 2.658 ms

# Below is generated by plot.py at 2018-09-06 07:29:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 19.282 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 19.282 ms
Loss rate: 0.00%
```

Run 2: Report of SReAM — Data Link

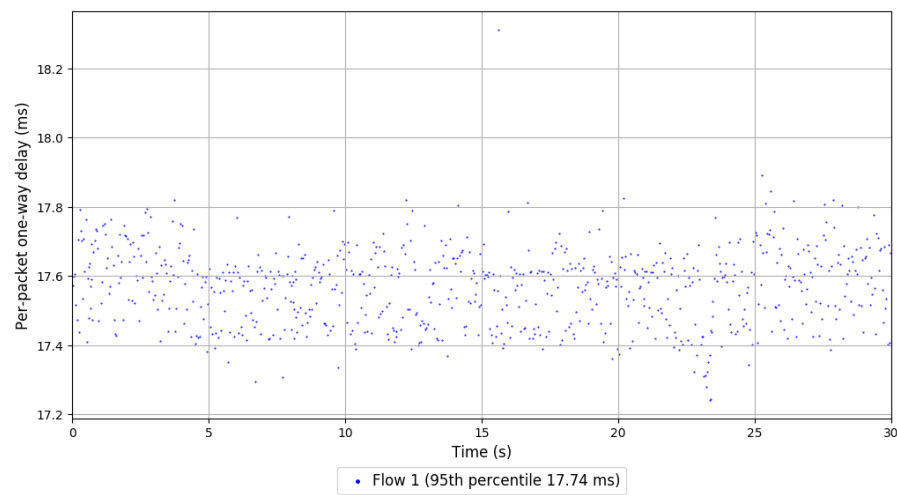
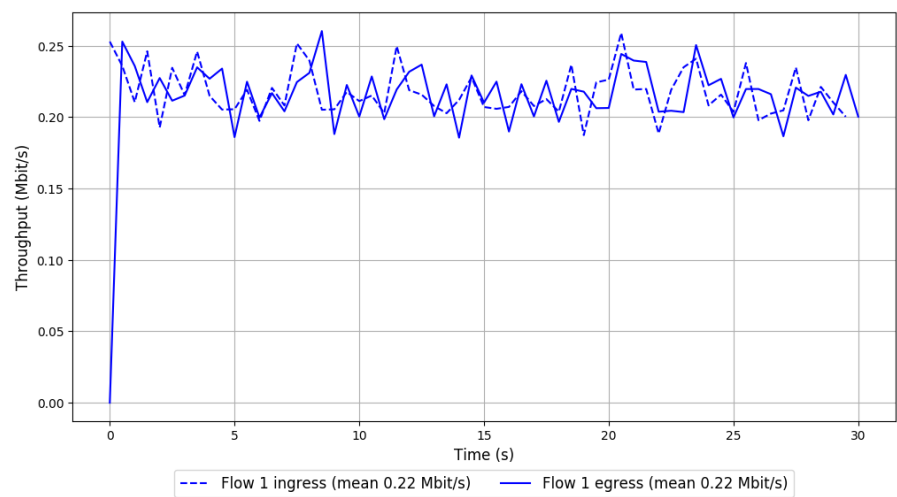


Run 3: Statistics of SCReAM

Start at: 2018-09-06 05:55:55
End at: 2018-09-06 05:56:25
Local clock offset: 3.155 ms
Remote clock offset: -0.222 ms

Below is generated by plot.py at 2018-09-06 07:29:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 17.741 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 17.741 ms
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2018-09-06 06:21:59

End at: 2018-09-06 06:22:29

Local clock offset: 3.648 ms

Remote clock offset: -0.43 ms

Below is generated by plot.py at 2018-09-06 07:29:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 18.434 ms

Loss rate: 0.23%

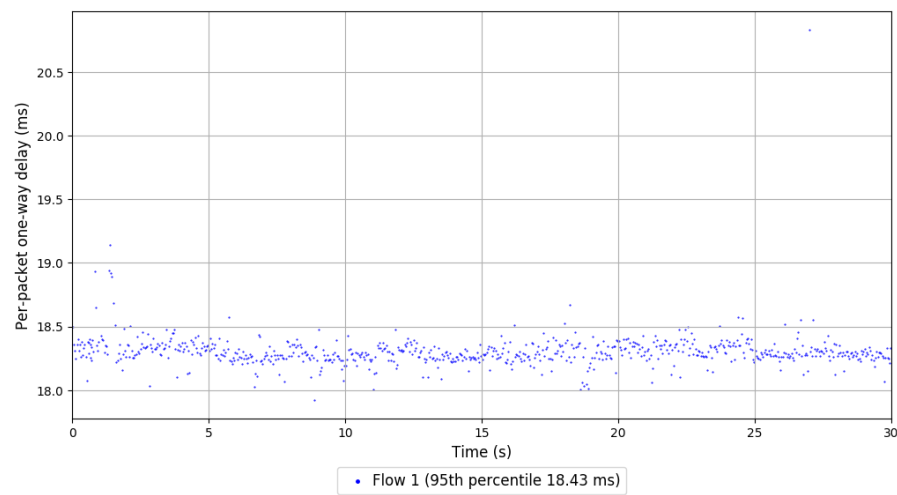
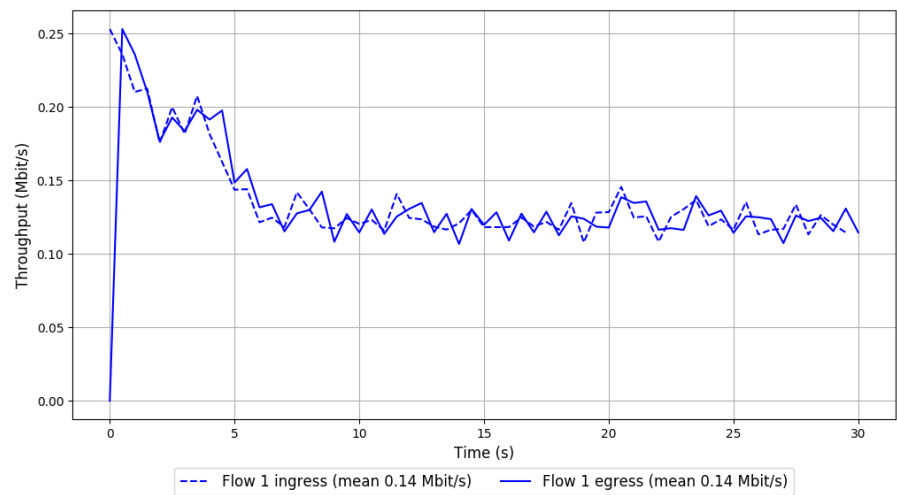
-- Flow 1:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 18.434 ms

Loss rate: 0.23%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2018-09-06 06:47:55

End at: 2018-09-06 06:48:25

Local clock offset: 4.45 ms

Remote clock offset: 0.035 ms

Below is generated by plot.py at 2018-09-06 07:29:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 19.130 ms

Loss rate: 0.00%

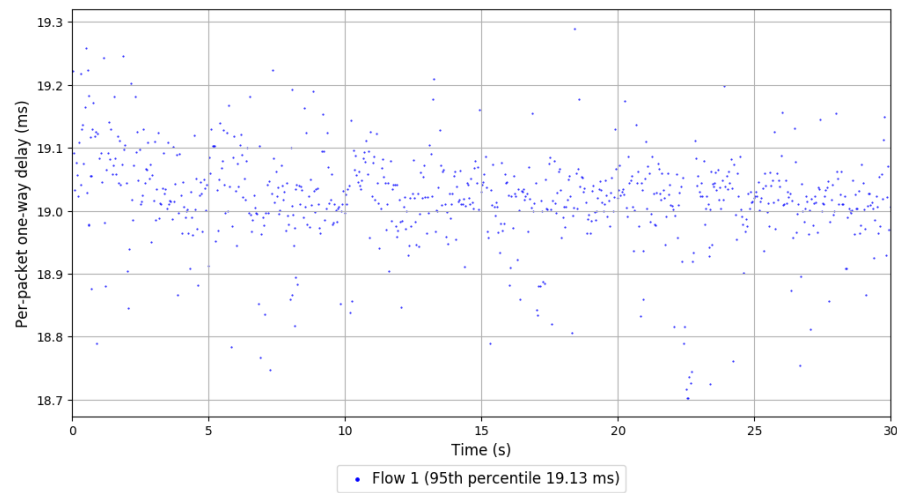
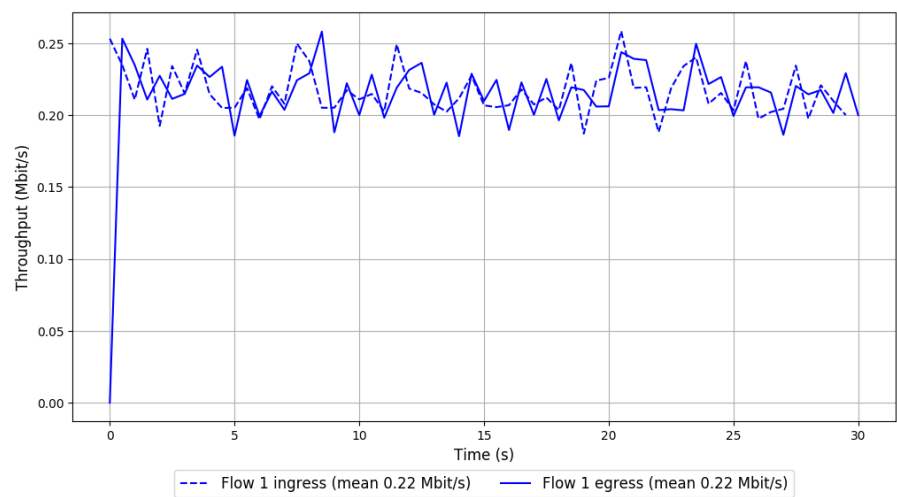
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 19.130 ms

Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2018-09-06 04:56:39

End at: 2018-09-06 04:57:09

Local clock offset: 3.827 ms

Remote clock offset: 1.632 ms

Below is generated by plot.py at 2018-09-06 07:29:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 21.07 Mbit/s

95th percentile per-packet one-way delay: 21.446 ms

Loss rate: 0.12%

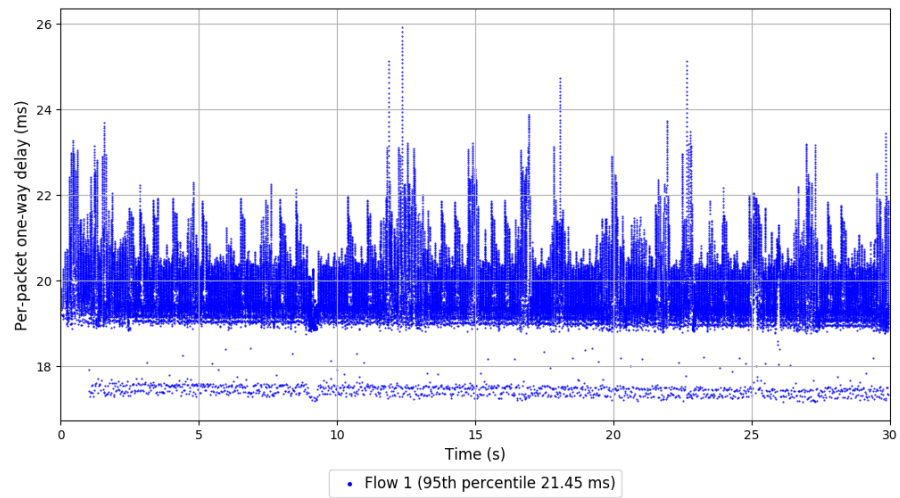
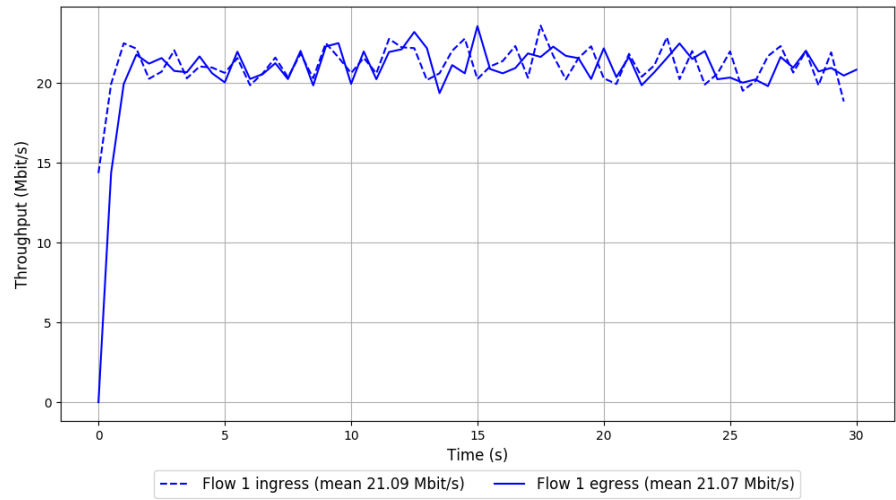
-- Flow 1:

Average throughput: 21.07 Mbit/s

95th percentile per-packet one-way delay: 21.446 ms

Loss rate: 0.12%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-09-06 05:22:46

End at: 2018-09-06 05:23:16

Local clock offset: 3.247 ms

Remote clock offset: 4.692 ms

Below is generated by plot.py at 2018-09-06 07:29:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 21.42 Mbit/s

95th percentile per-packet one-way delay: 21.086 ms

Loss rate: 0.07%

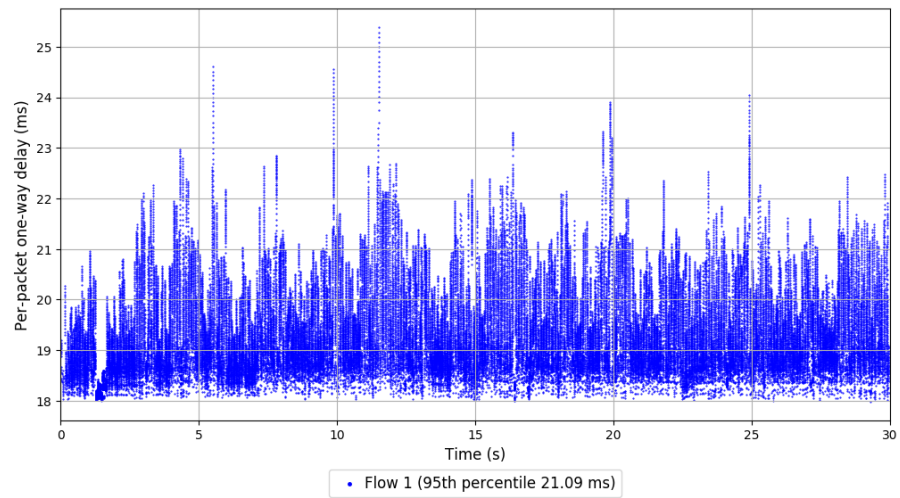
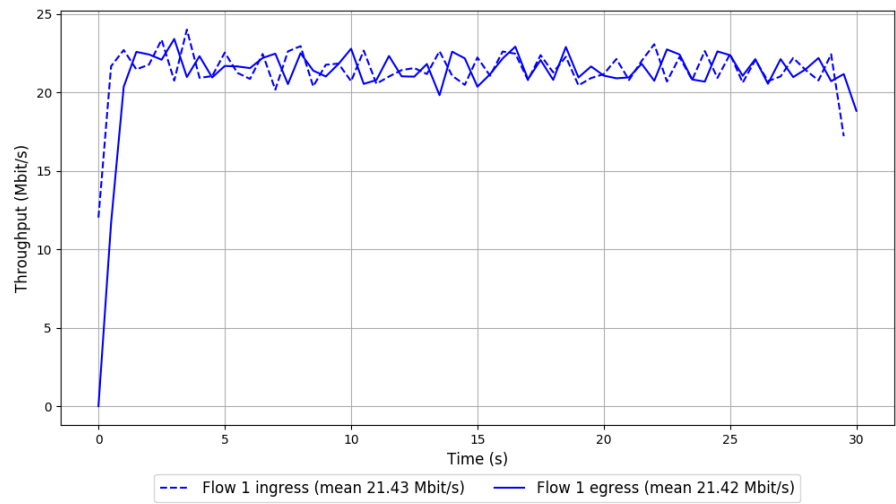
-- Flow 1:

Average throughput: 21.42 Mbit/s

95th percentile per-packet one-way delay: 21.086 ms

Loss rate: 0.07%

Run 2: Report of Sprout — Data Link

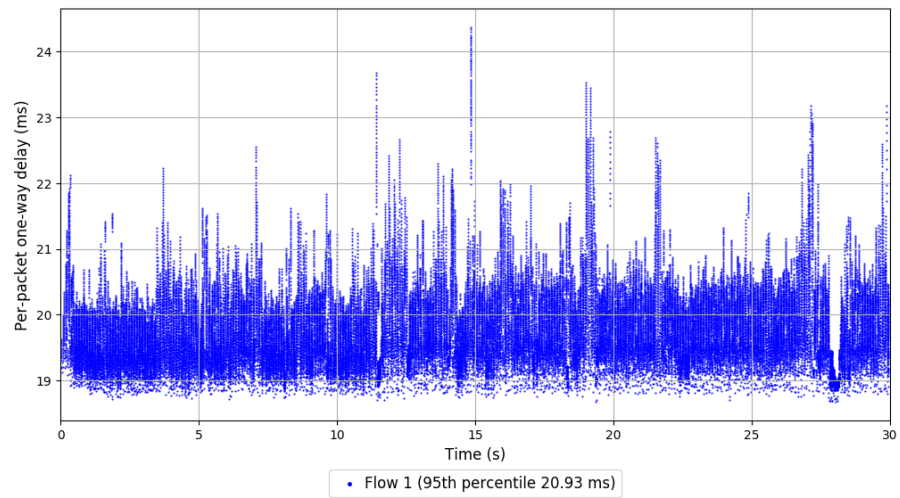
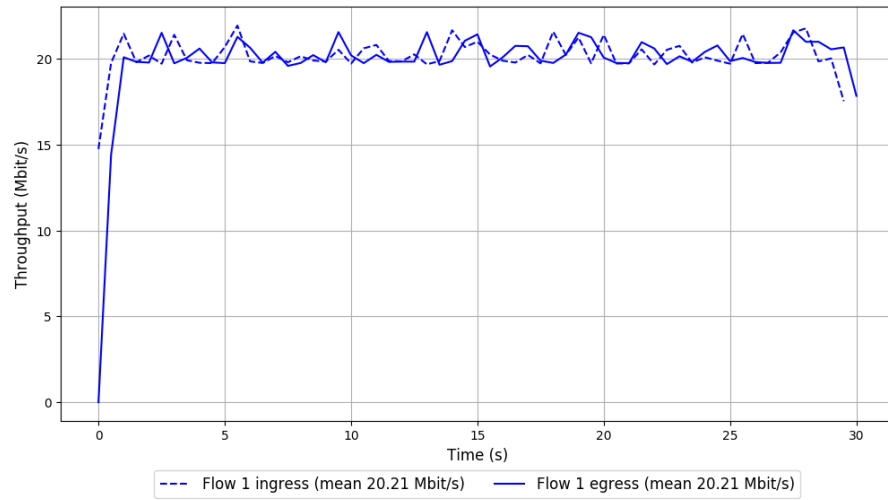


Run 3: Statistics of Sprout

Start at: 2018-09-06 05:48:50
End at: 2018-09-06 05:49:20
Local clock offset: 3.141 ms
Remote clock offset: -0.059 ms

Below is generated by plot.py at 2018-09-06 07:29:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 20.21 Mbit/s
95th percentile per-packet one-way delay: 20.925 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 20.21 Mbit/s
95th percentile per-packet one-way delay: 20.925 ms
Loss rate: 0.01%

Run 3: Report of Sprout — Data Link

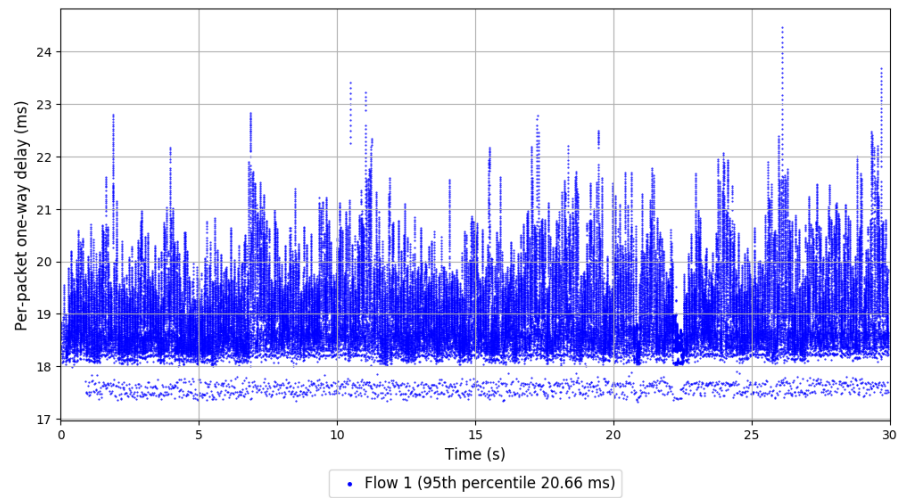
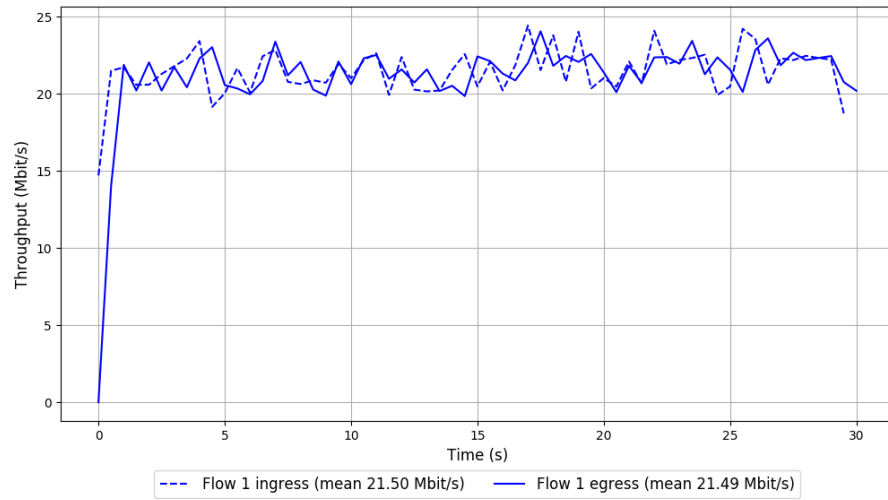


Run 4: Statistics of Sprout

Start at: 2018-09-06 06:14:55
End at: 2018-09-06 06:15:25
Local clock offset: 3.038 ms
Remote clock offset: -0.384 ms

Below is generated by plot.py at 2018-09-06 07:29:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 21.49 Mbit/s
95th percentile per-packet one-way delay: 20.657 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 21.49 Mbit/s
95th percentile per-packet one-way delay: 20.657 ms
Loss rate: 0.03%

Run 4: Report of Sprout — Data Link

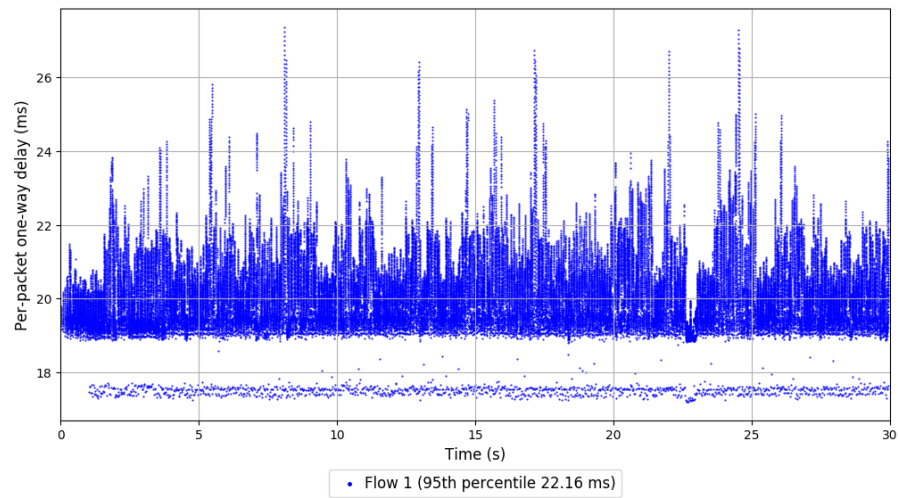
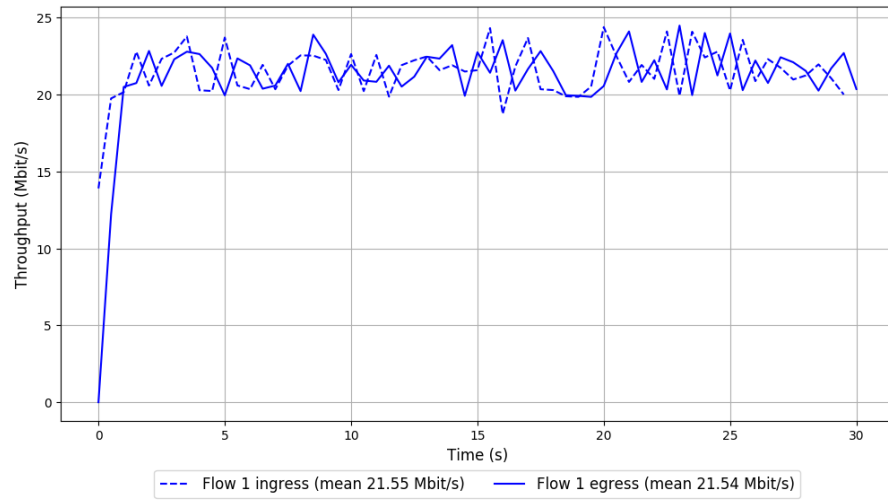


Run 5: Statistics of Sprout

Start at: 2018-09-06 06:40:55
End at: 2018-09-06 06:41:25
Local clock offset: 4.302 ms
Remote clock offset: -0.176 ms

Below is generated by plot.py at 2018-09-06 07:29:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 21.54 Mbit/s
95th percentile per-packet one-way delay: 22.162 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 21.54 Mbit/s
95th percentile per-packet one-way delay: 22.162 ms
Loss rate: 0.02%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

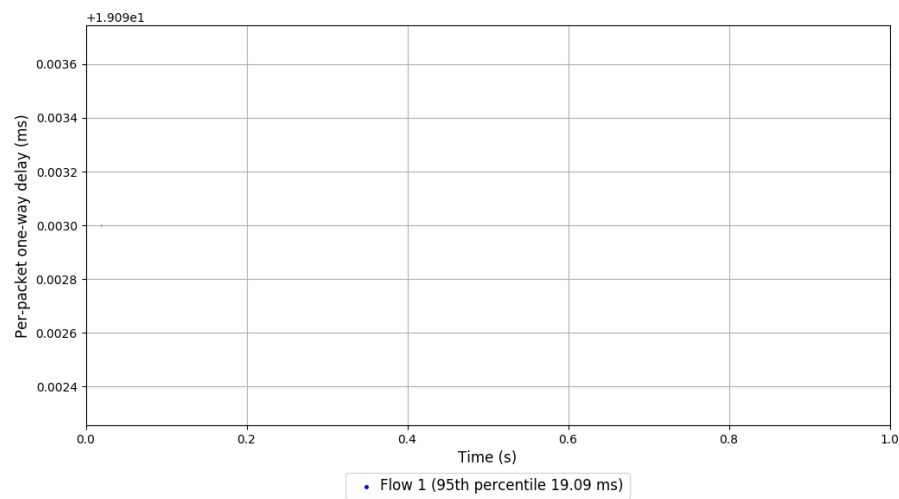
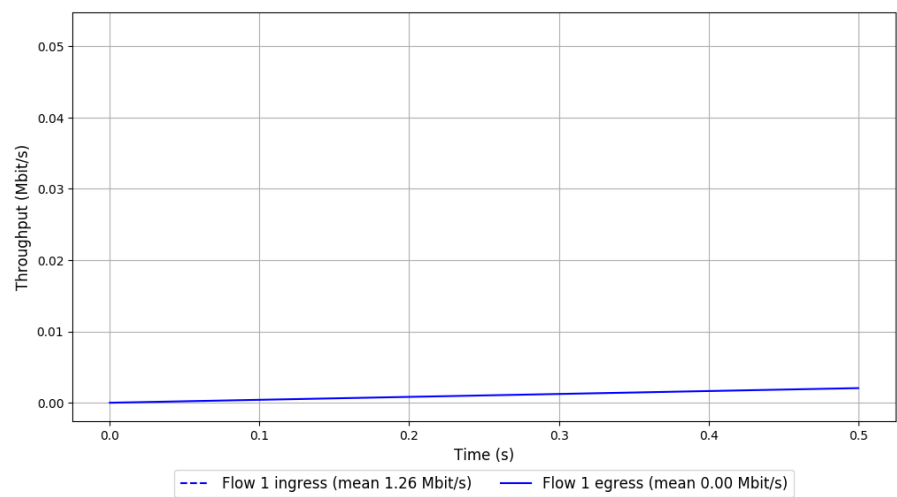
Start at: 2018-09-06 05:00:59

End at: 2018-09-06 05:01:29

Local clock offset: 3.644 ms

Remote clock offset: 2.477 ms

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



Run 2: Statistics of TaoVA-100x

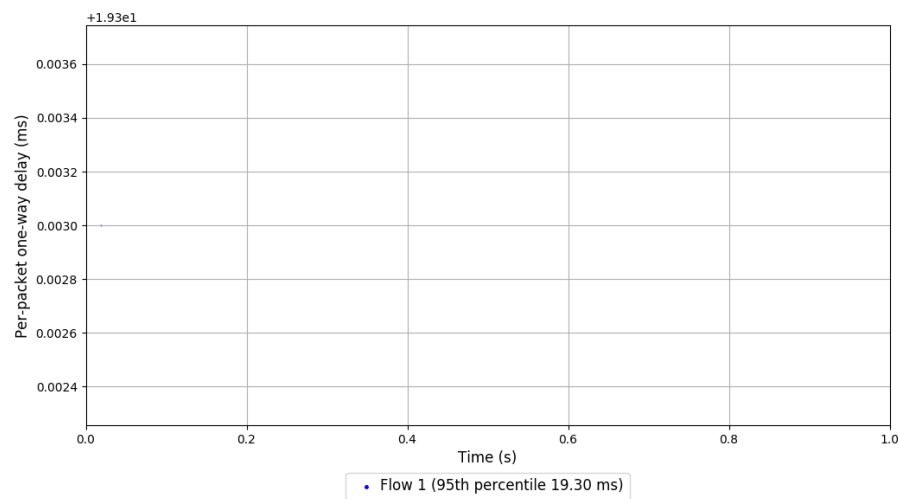
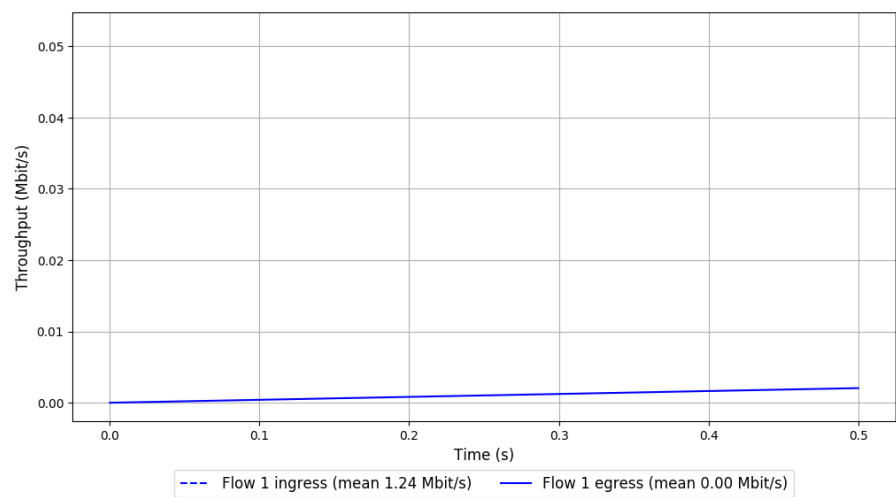
Start at: 2018-09-06 05:27:07

End at: 2018-09-06 05:27:37

Local clock offset: 3.269 ms

Remote clock offset: 3.799 ms

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



Run 3: Statistics of TaoVA-100x

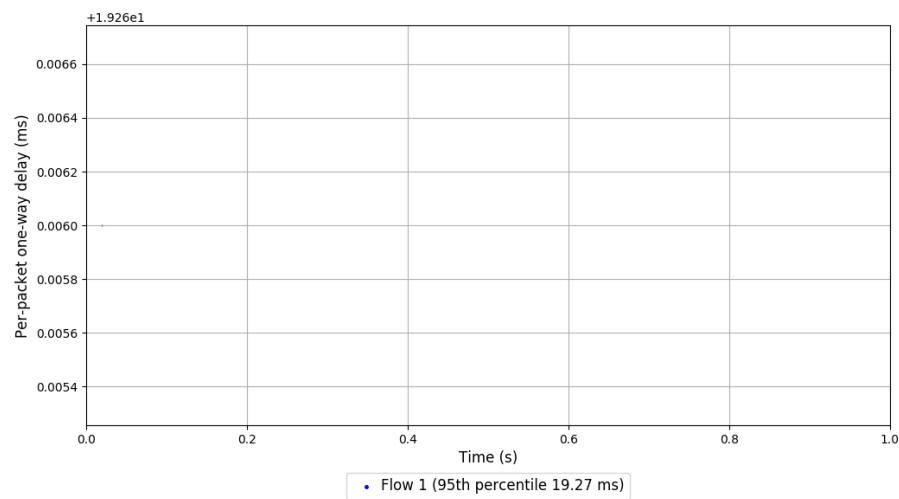
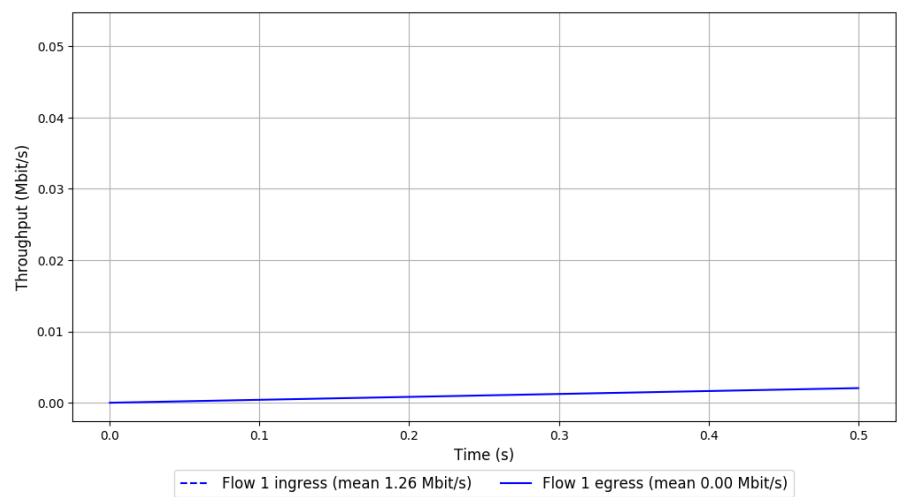
Start at: 2018-09-06 05:53:10

End at: 2018-09-06 05:53:40

Local clock offset: 3.074 ms

Remote clock offset: -0.112 ms

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



Run 4: Statistics of TaoVA-100x

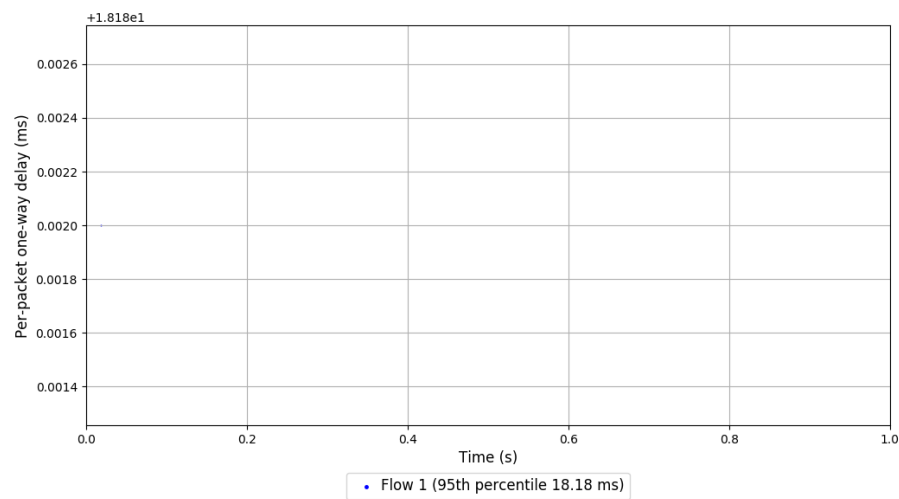
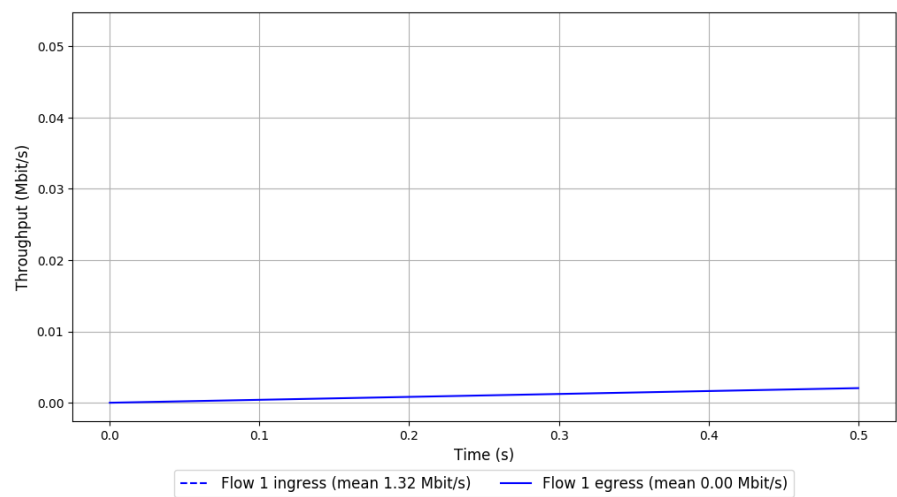
Start at: 2018-09-06 06:19:15

End at: 2018-09-06 06:19:45

Local clock offset: 3.469 ms

Remote clock offset: -0.352 ms

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



Run 5: Statistics of TaoVA-100x

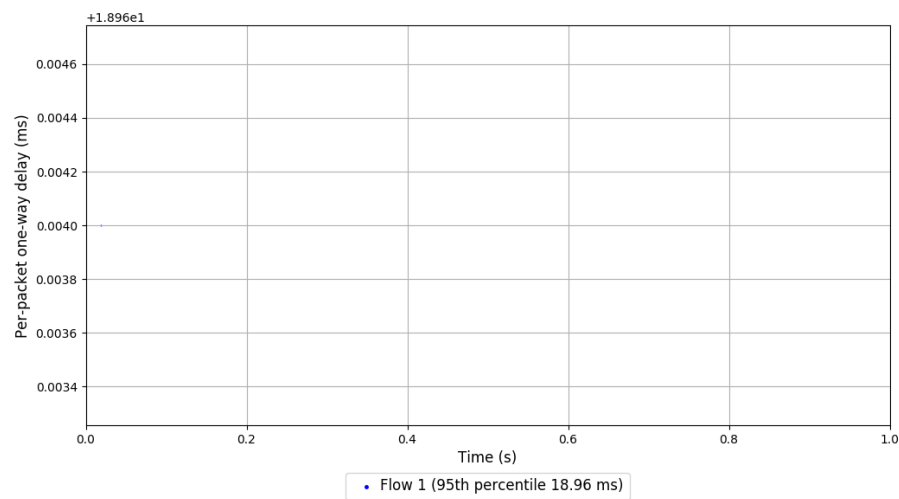
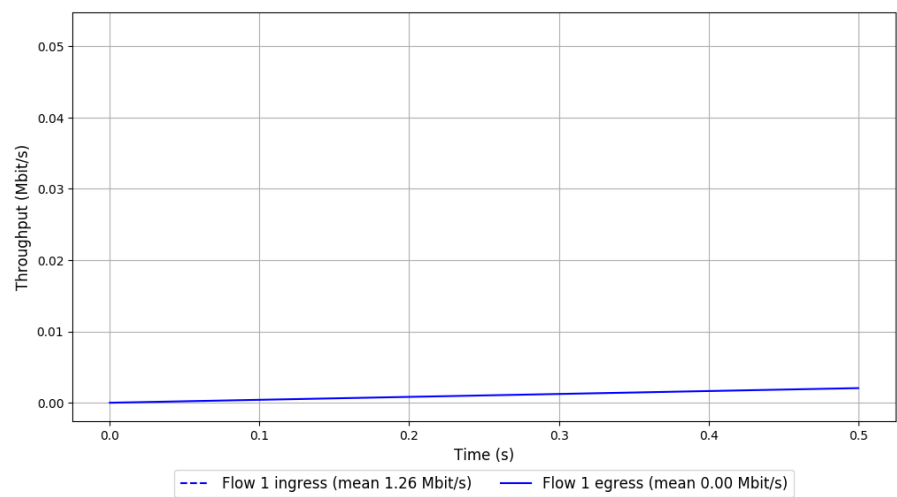
Start at: 2018-09-06 06:45:13

End at: 2018-09-06 06:45:43

Local clock offset: 4.387 ms

Remote clock offset: -0.092 ms

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

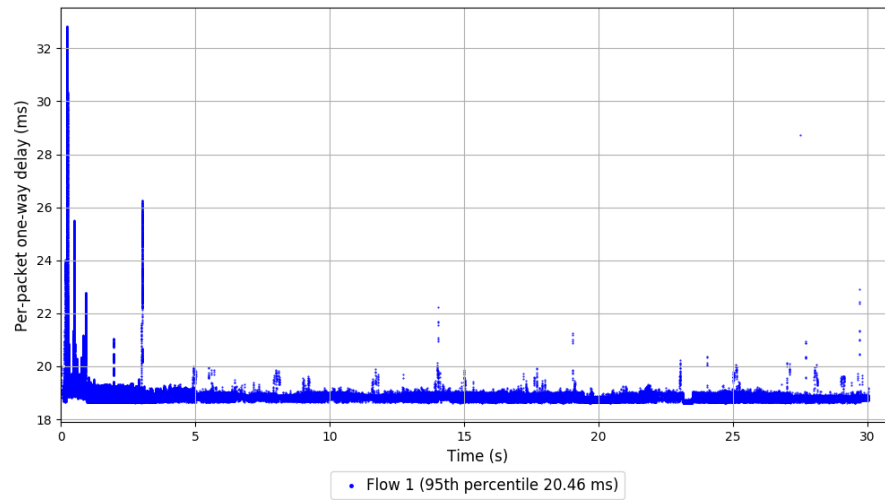
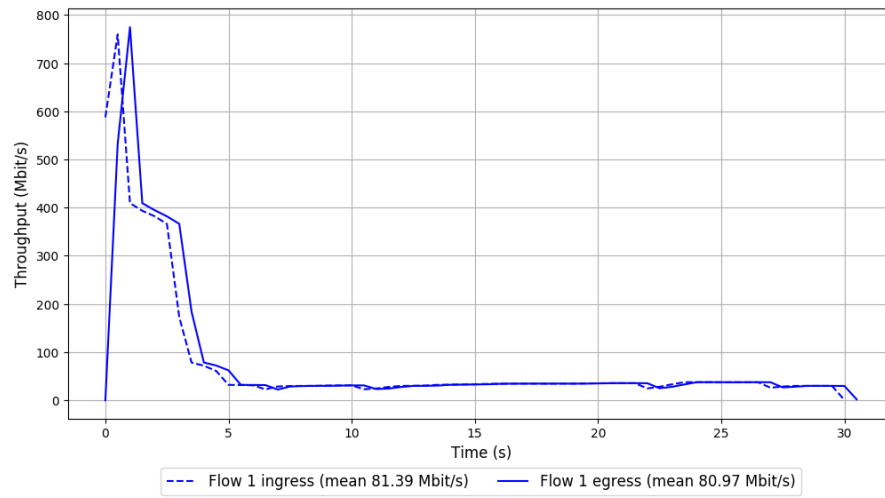


Run 1: Statistics of TCP Vegas

Start at: 2018-09-06 04:49:25
End at: 2018-09-06 04:49:55
Local clock offset: 4.175 ms
Remote clock offset: -0.126 ms

Below is generated by plot.py at 2018-09-06 07:29:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 80.97 Mbit/s
95th percentile per-packet one-way delay: 20.456 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 80.97 Mbit/s
95th percentile per-packet one-way delay: 20.456 ms
Loss rate: 0.52%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-09-06 05:15:28

End at: 2018-09-06 05:15:58

Local clock offset: 3.616 ms

Remote clock offset: 4.042 ms

Below is generated by plot.py at 2018-09-06 07:29:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 86.77 Mbit/s

95th percentile per-packet one-way delay: 25.452 ms

Loss rate: 0.49%

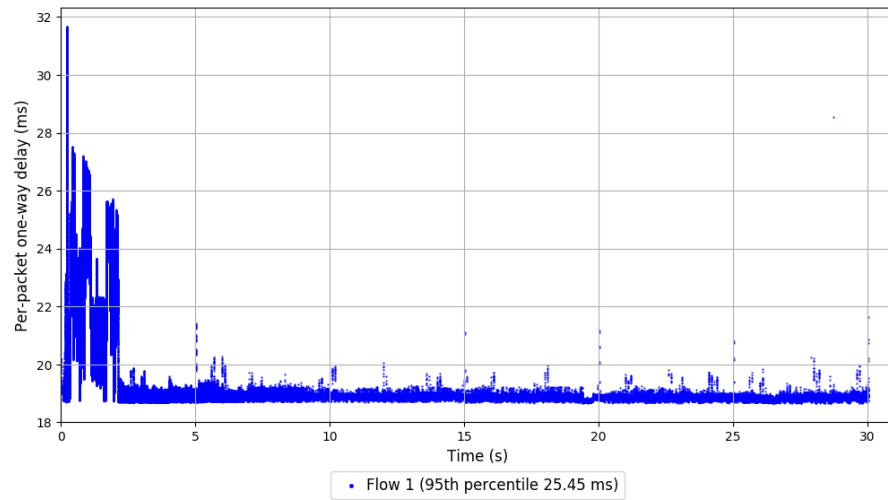
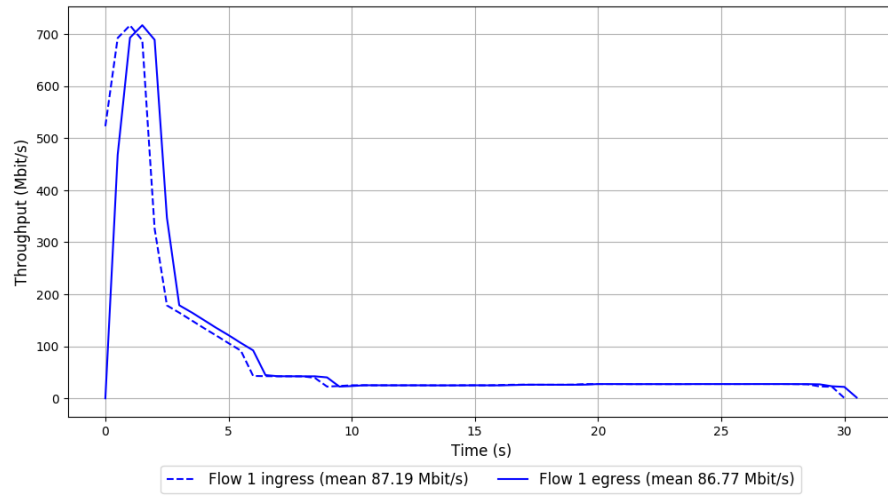
-- Flow 1:

Average throughput: 86.77 Mbit/s

95th percentile per-packet one-way delay: 25.452 ms

Loss rate: 0.49%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-09-06 05:41:31

End at: 2018-09-06 05:42:01

Local clock offset: 3.14 ms

Remote clock offset: 0.494 ms

Below is generated by plot.py at 2018-09-06 07:29:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 140.28 Mbit/s

95th percentile per-packet one-way delay: 19.300 ms

Loss rate: 0.30%

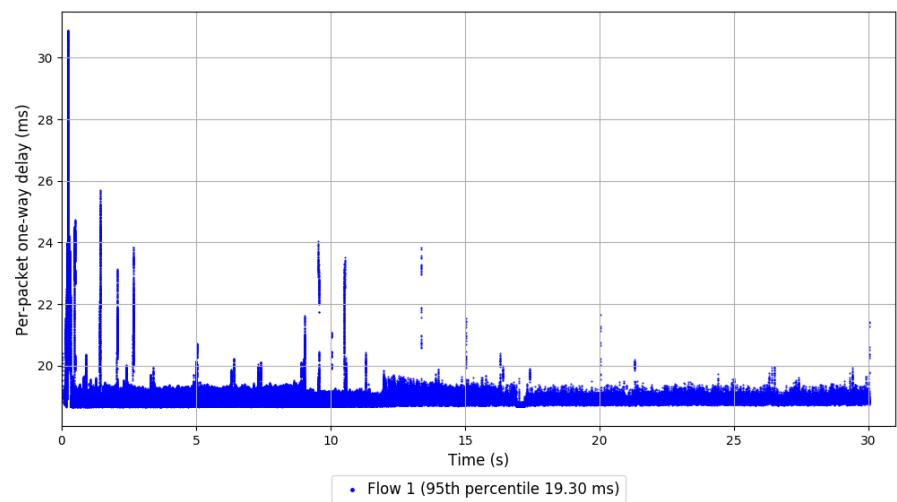
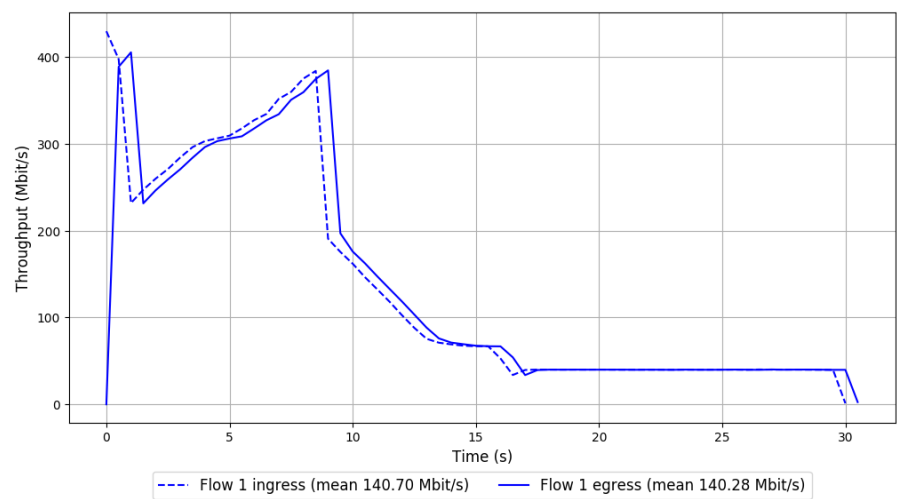
-- Flow 1:

Average throughput: 140.28 Mbit/s

95th percentile per-packet one-way delay: 19.300 ms

Loss rate: 0.30%

Run 3: Report of TCP Vegas — Data Link

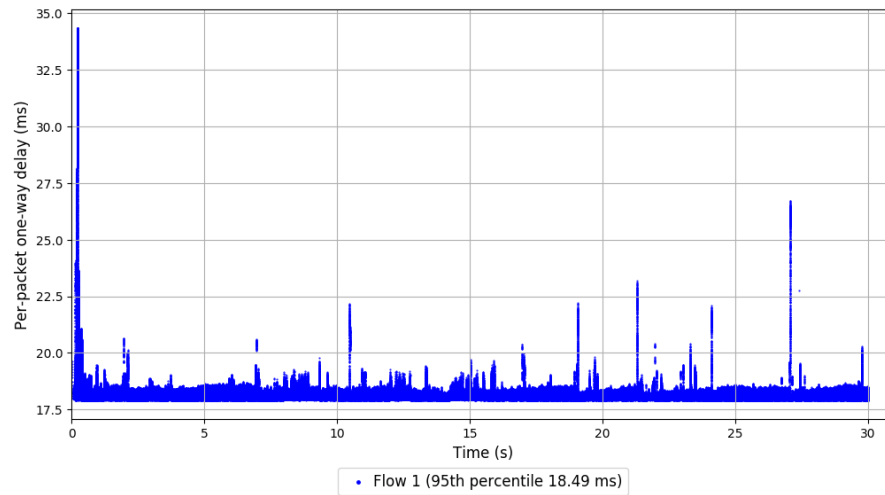
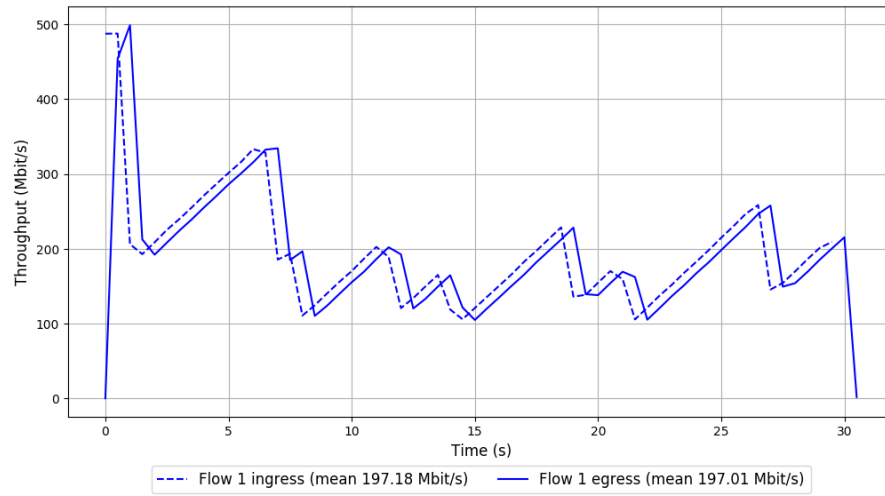


Run 4: Statistics of TCP Vegas

Start at: 2018-09-06 06:07:34
End at: 2018-09-06 06:08:04
Local clock offset: 3.139 ms
Remote clock offset: -0.381 ms

Below is generated by plot.py at 2018-09-06 07:29:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 197.01 Mbit/s
95th percentile per-packet one-way delay: 18.490 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 197.01 Mbit/s
95th percentile per-packet one-way delay: 18.490 ms
Loss rate: 0.09%

Run 4: Report of TCP Vegas — Data Link

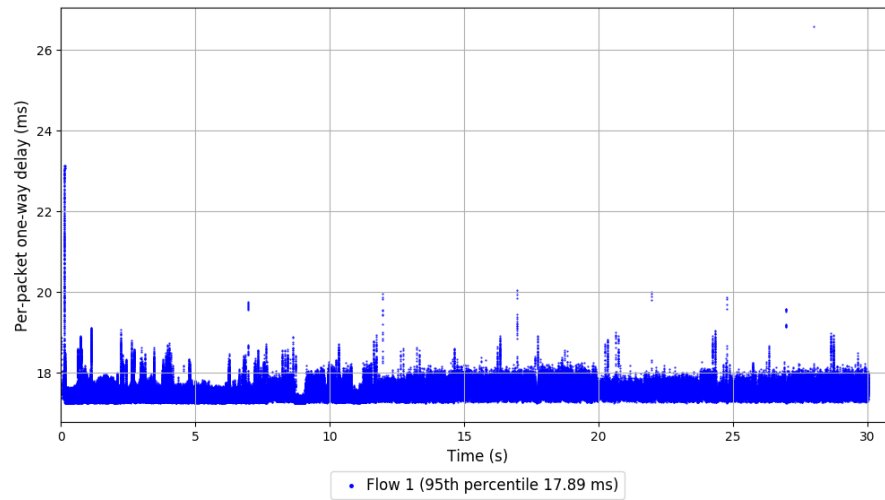
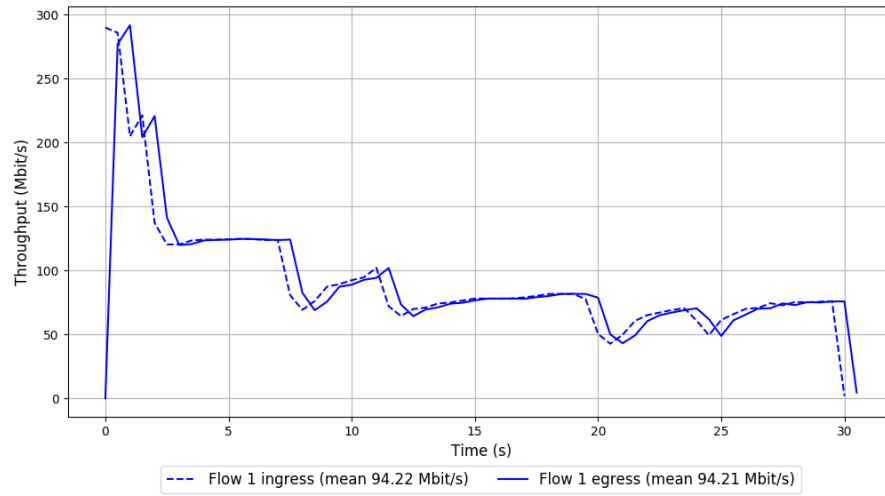


Run 5: Statistics of TCP Vegas

Start at: 2018-09-06 06:33:39
End at: 2018-09-06 06:34:09
Local clock offset: 4.105 ms
Remote clock offset: -0.447 ms

Below is generated by plot.py at 2018-09-06 07:29:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.21 Mbit/s
95th percentile per-packet one-way delay: 17.886 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 94.21 Mbit/s
95th percentile per-packet one-way delay: 17.886 ms
Loss rate: 0.01%

Run 5: Report of TCP Vegas — Data Link

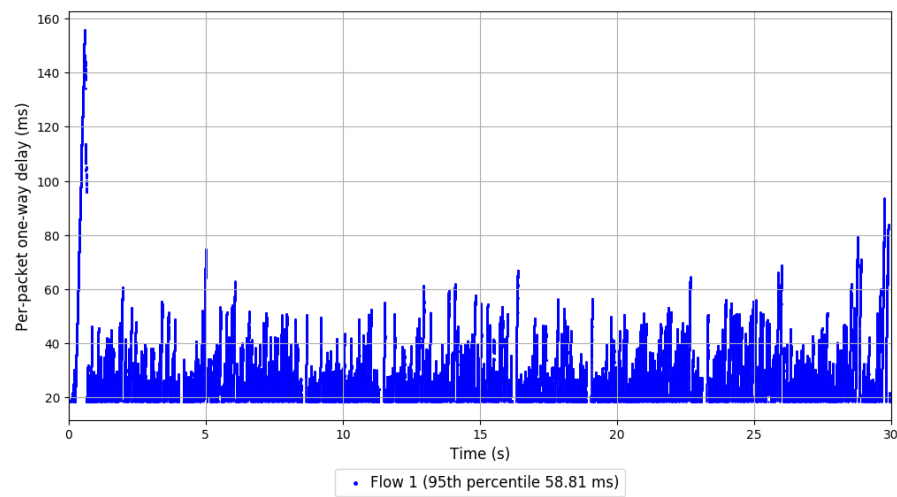
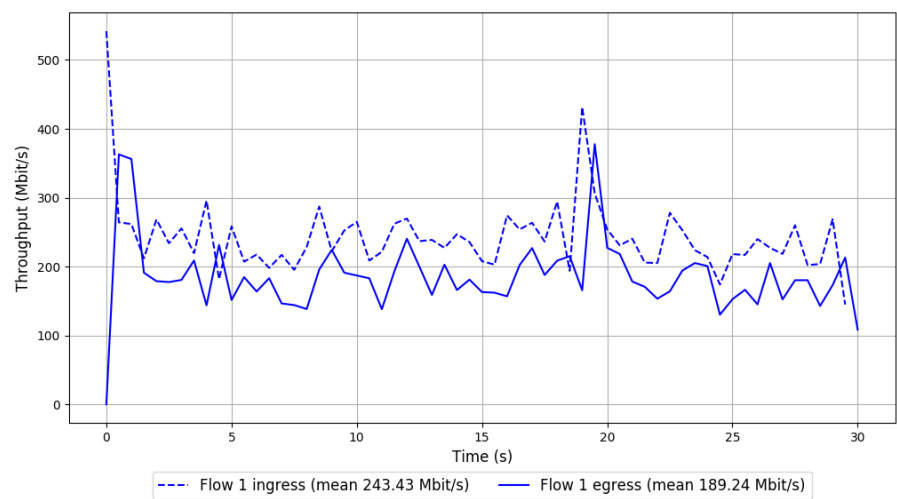


Run 1: Statistics of Verus

Start at: 2018-09-06 04:46:14
End at: 2018-09-06 04:46:44
Local clock offset: 4.457 ms
Remote clock offset: -0.237 ms

Below is generated by plot.py at 2018-09-06 07:29:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 189.24 Mbit/s
95th percentile per-packet one-way delay: 58.808 ms
Loss rate: 22.26%
-- Flow 1:
Average throughput: 189.24 Mbit/s
95th percentile per-packet one-way delay: 58.808 ms
Loss rate: 22.26%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-09-06 05:12:13

End at: 2018-09-06 05:12:43

Local clock offset: 3.612 ms

Remote clock offset: 3.856 ms

Below is generated by plot.py at 2018-09-06 07:29:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 279.43 Mbit/s

95th percentile per-packet one-way delay: 33.579 ms

Loss rate: 13.30%

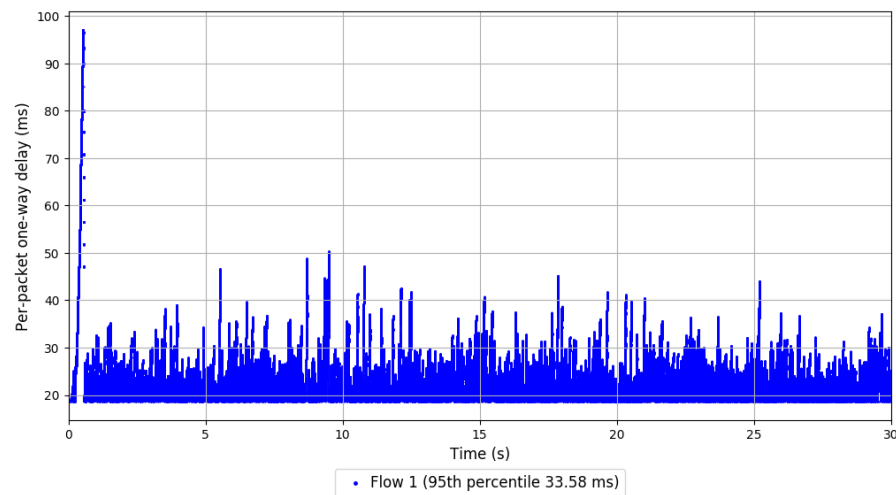
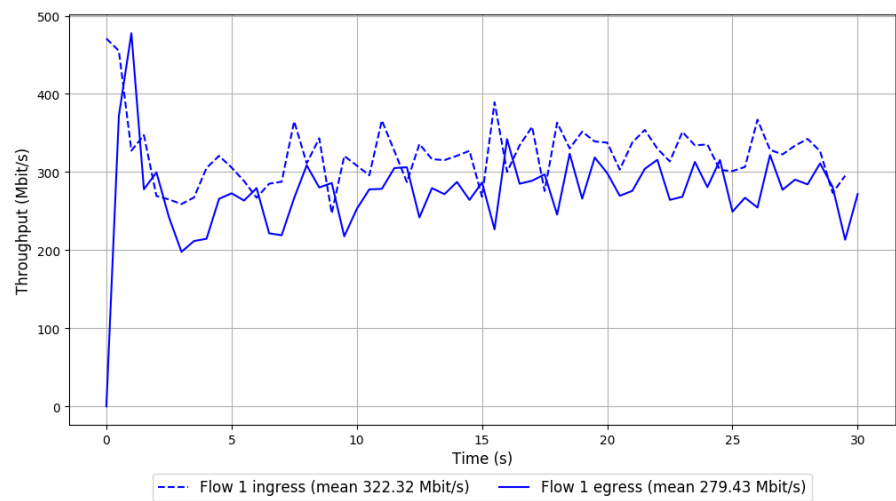
-- Flow 1:

Average throughput: 279.43 Mbit/s

95th percentile per-packet one-way delay: 33.579 ms

Loss rate: 13.30%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-09-06 05:38:22

End at: 2018-09-06 05:38:52

Local clock offset: 3.16 ms

Remote clock offset: 0.71 ms

Below is generated by plot.py at 2018-09-06 07:29:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 189.44 Mbit/s

95th percentile per-packet one-way delay: 70.579 ms

Loss rate: 19.35%

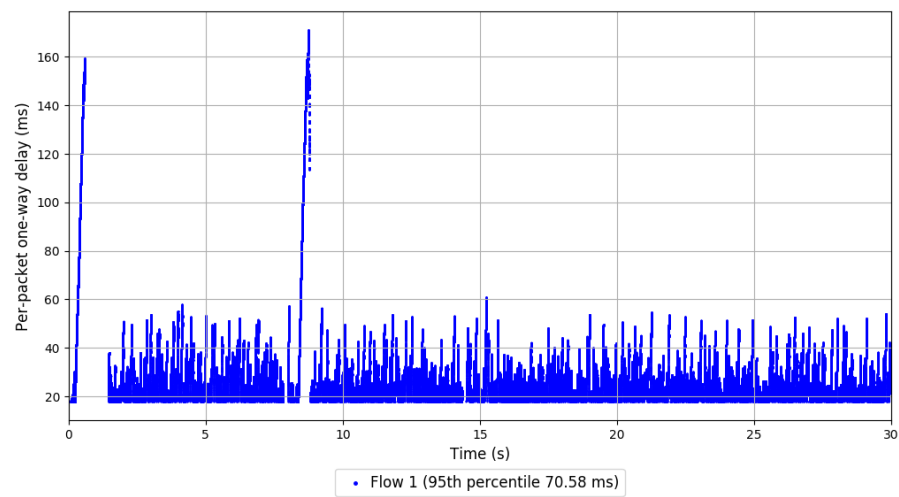
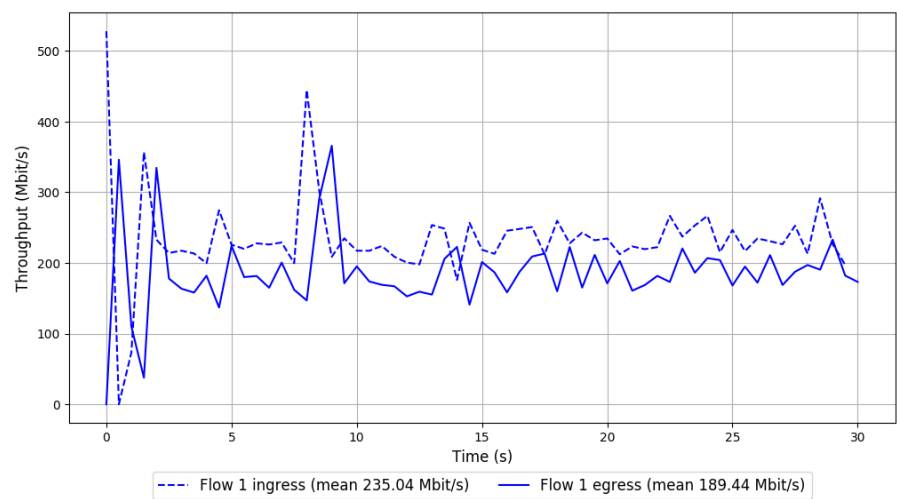
-- Flow 1:

Average throughput: 189.44 Mbit/s

95th percentile per-packet one-way delay: 70.579 ms

Loss rate: 19.35%

Run 3: Report of Verus — Data Link

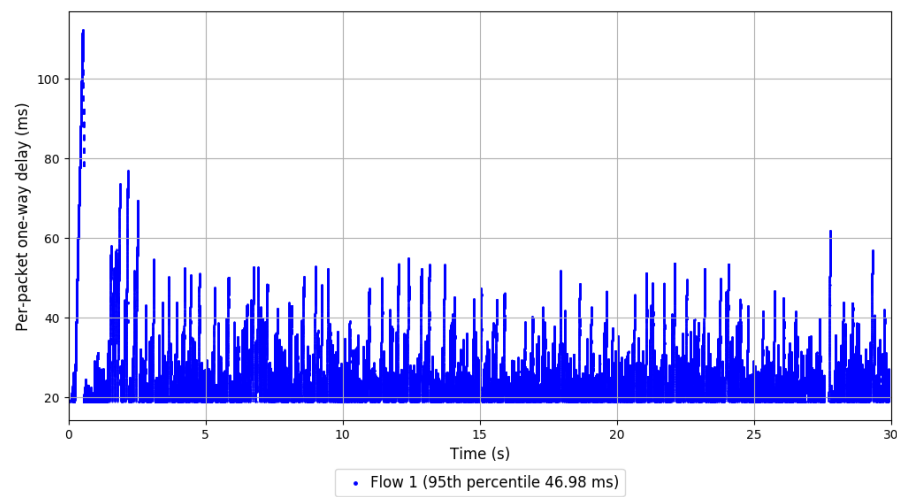
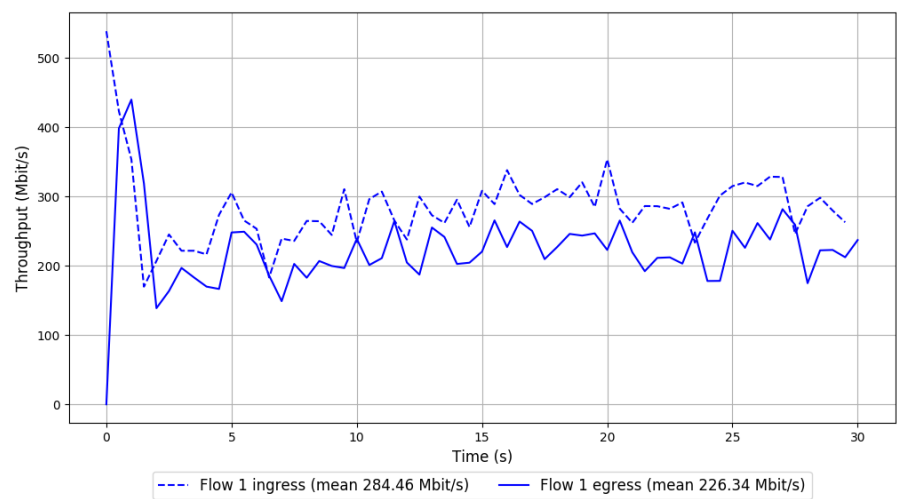


Run 4: Statistics of Verus

Start at: 2018-09-06 06:04:23
End at: 2018-09-06 06:04:53
Local clock offset: 3.049 ms
Remote clock offset: -0.301 ms

Below is generated by plot.py at 2018-09-06 07:30:06
Datalink statistics
-- Total of 1 flow:
Average throughput: 226.34 Mbit/s
95th percentile per-packet one-way delay: 46.978 ms
Loss rate: 20.41%
-- Flow 1:
Average throughput: 226.34 Mbit/s
95th percentile per-packet one-way delay: 46.978 ms
Loss rate: 20.41%

Run 4: Report of Verus — Data Link

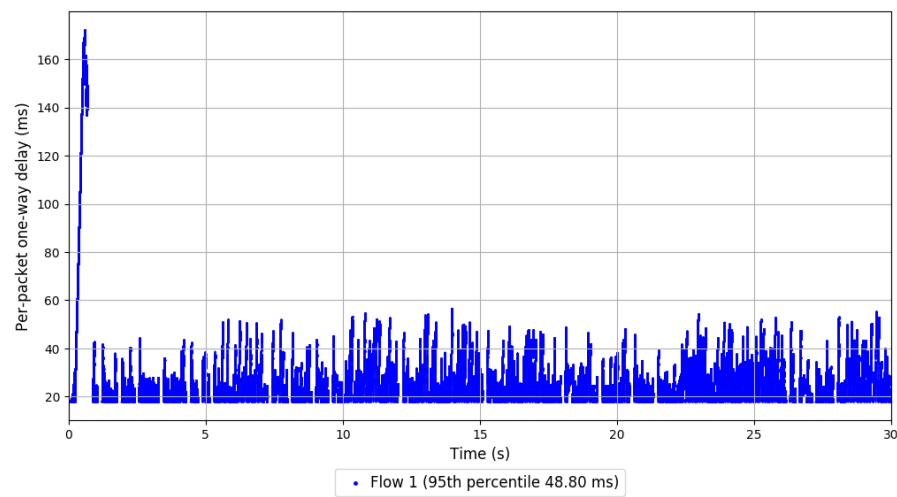
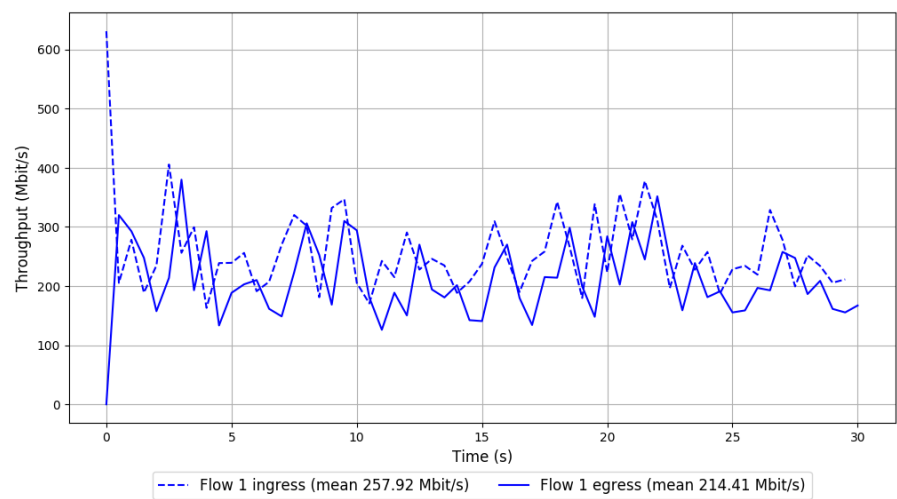


Run 5: Statistics of Verus

Start at: 2018-09-06 06:30:29
End at: 2018-09-06 06:30:59
Local clock offset: 4.02 ms
Remote clock offset: -0.506 ms

Below is generated by plot.py at 2018-09-06 07:30:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 214.41 Mbit/s
95th percentile per-packet one-way delay: 48.800 ms
Loss rate: 16.87%
-- Flow 1:
Average throughput: 214.41 Mbit/s
95th percentile per-packet one-way delay: 48.800 ms
Loss rate: 16.87%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2018-09-06 04:55:02

End at: 2018-09-06 04:55:32

Local clock offset: 3.802 ms

Remote clock offset: 1.119 ms

Below is generated by plot.py at 2018-09-06 07:32:12

Datalink statistics

-- Total of 1 flow:

Average throughput: 401.55 Mbit/s

95th percentile per-packet one-way delay: 19.351 ms

Loss rate: 0.02%

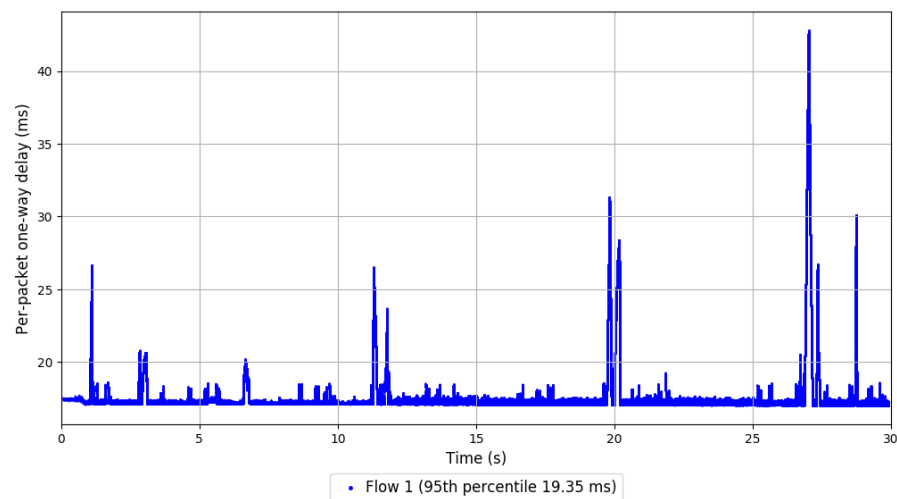
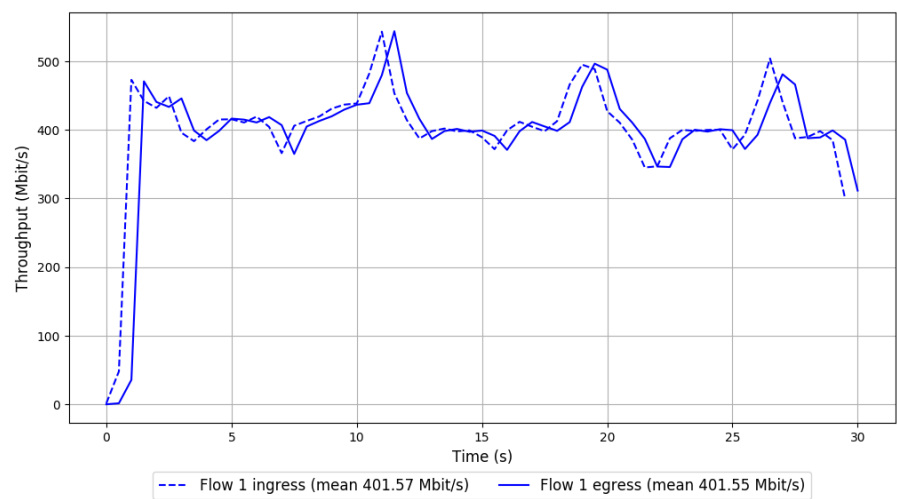
-- Flow 1:

Average throughput: 401.55 Mbit/s

95th percentile per-packet one-way delay: 19.351 ms

Loss rate: 0.02%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2018-09-06 05:21:09

End at: 2018-09-06 05:21:39

Local clock offset: 3.371 ms

Remote clock offset: 4.508 ms

Below is generated by plot.py at 2018-09-06 07:32:23

Datalink statistics

-- Total of 1 flow:

Average throughput: 410.84 Mbit/s

95th percentile per-packet one-way delay: 21.606 ms

Loss rate: 0.05%

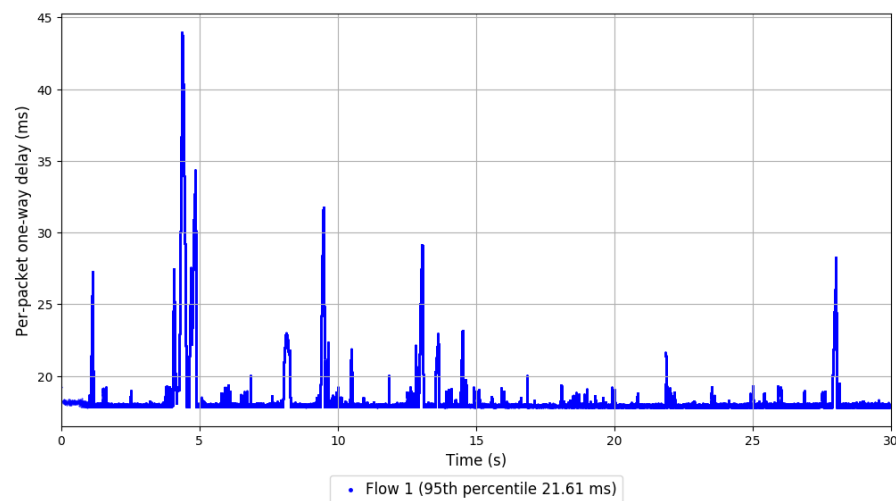
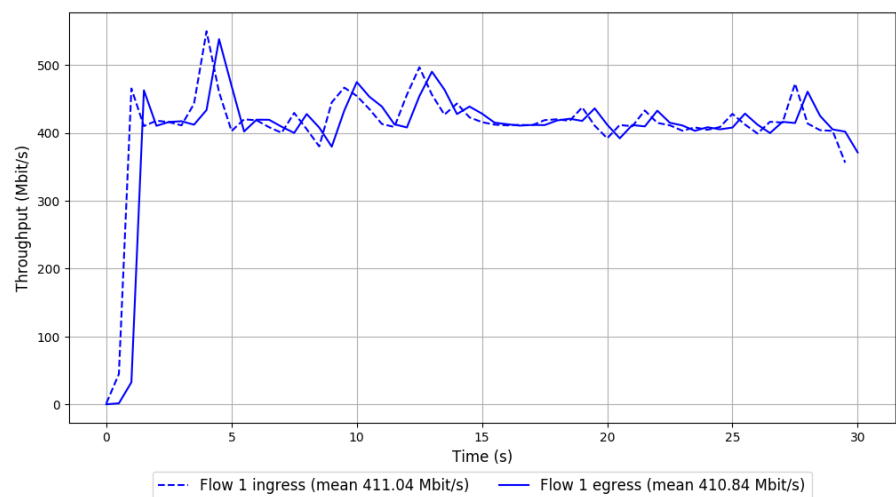
-- Flow 1:

Average throughput: 410.84 Mbit/s

95th percentile per-packet one-way delay: 21.606 ms

Loss rate: 0.05%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2018-09-06 05:47:13

End at: 2018-09-06 05:47:43

Local clock offset: 3.035 ms

Remote clock offset: 0.099 ms

Below is generated by plot.py at 2018-09-06 07:32:26

Datalink statistics

-- Total of 1 flow:

Average throughput: 426.05 Mbit/s

95th percentile per-packet one-way delay: 138.489 ms

Loss rate: 1.40%

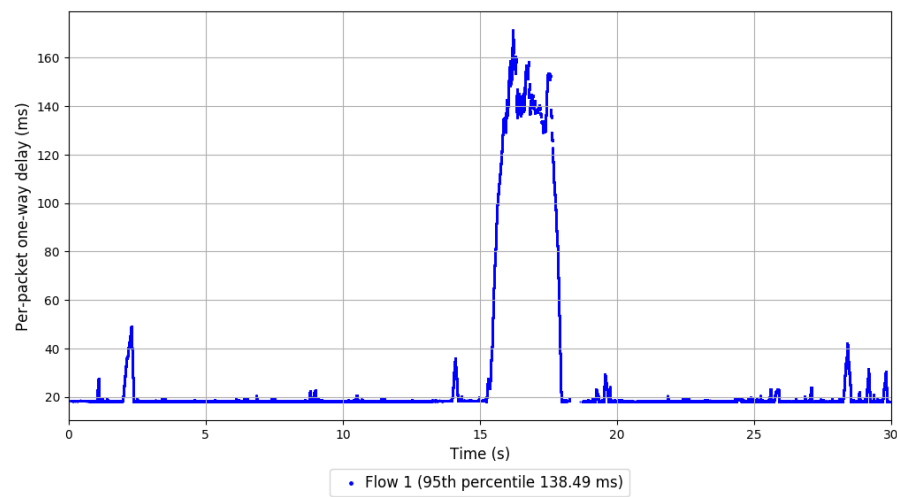
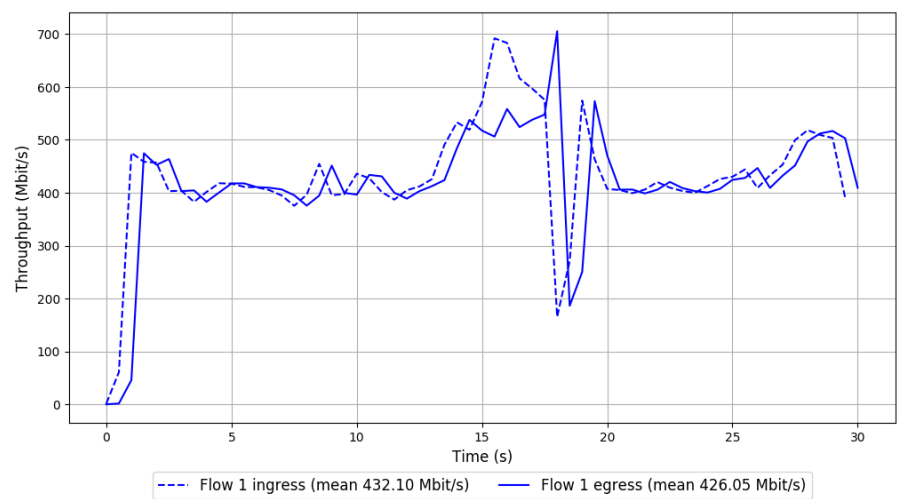
-- Flow 1:

Average throughput: 426.05 Mbit/s

95th percentile per-packet one-way delay: 138.489 ms

Loss rate: 1.40%

Run 3: Report of PCC-Vivace — Data Link

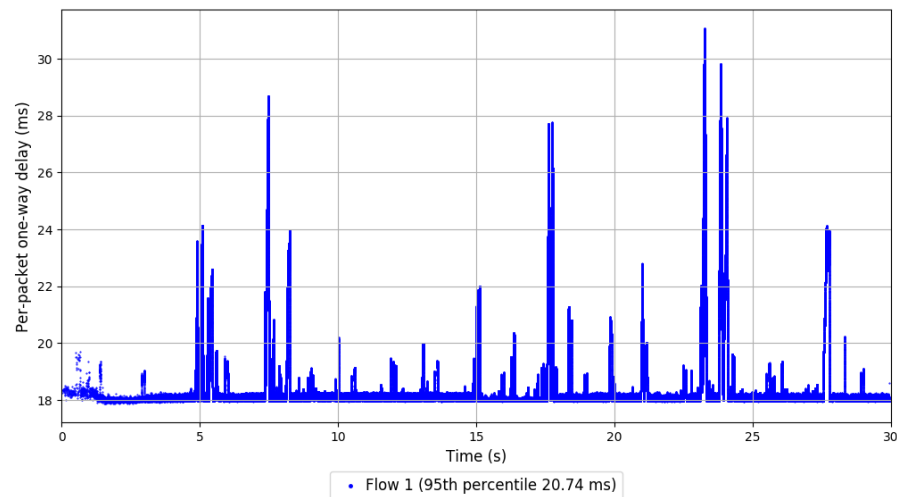
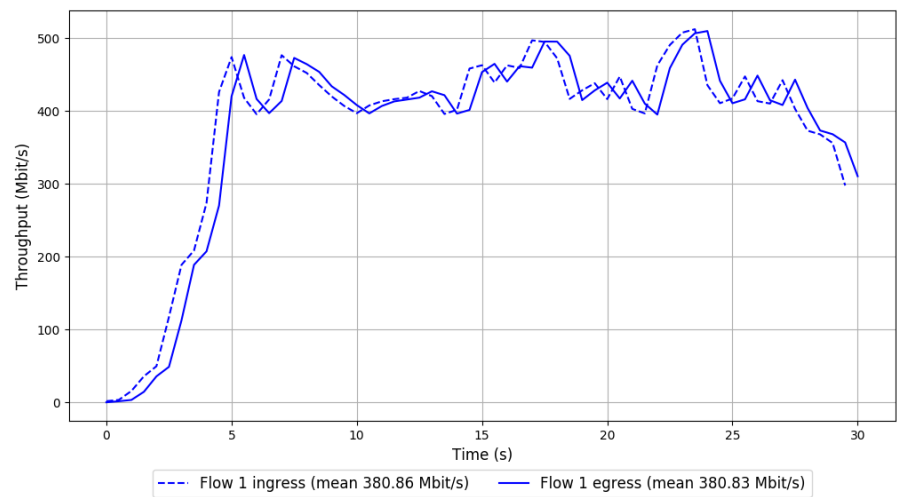


Run 4: Statistics of PCC-Vivace

Start at: 2018-09-06 06:13:20
End at: 2018-09-06 06:13:50
Local clock offset: 3.137 ms
Remote clock offset: -0.313 ms

Below is generated by plot.py at 2018-09-06 07:32:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 380.83 Mbit/s
95th percentile per-packet one-way delay: 20.741 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 380.83 Mbit/s
95th percentile per-packet one-way delay: 20.741 ms
Loss rate: 0.01%

Run 4: Report of PCC-Vivace — Data Link

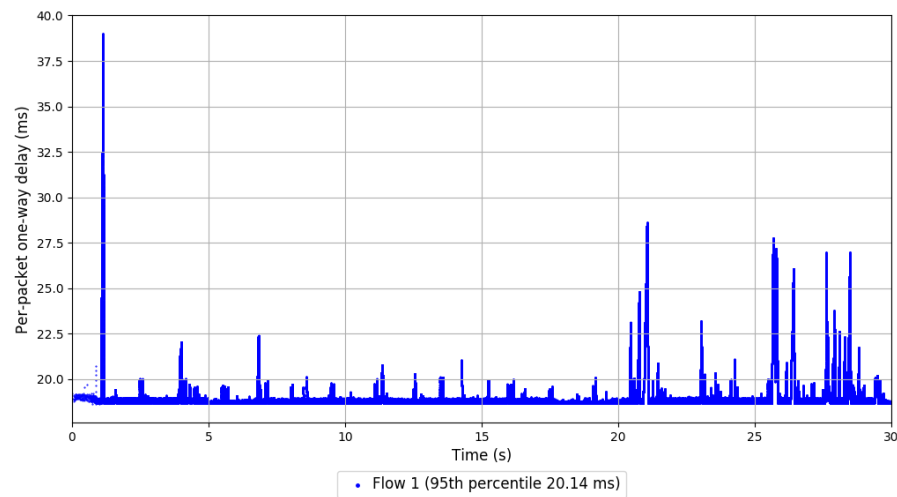
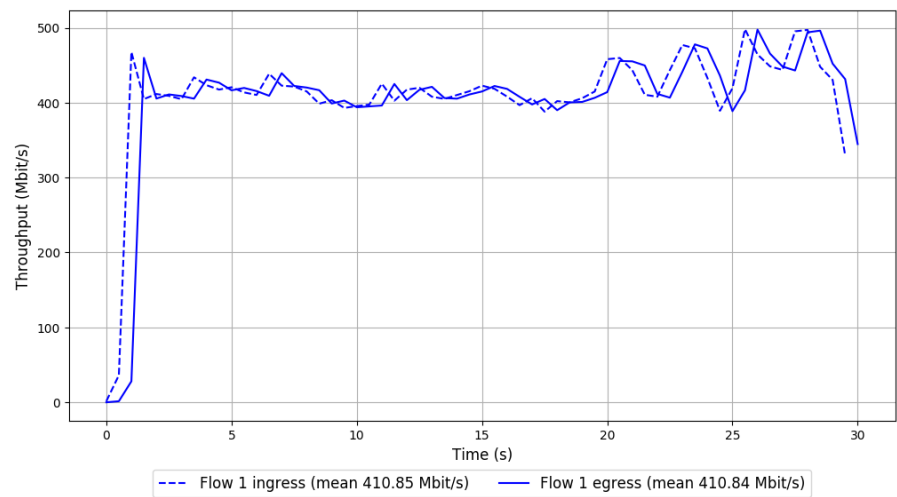


Run 5: Statistics of PCC-Vivace

Start at: 2018-09-06 06:39:18
End at: 2018-09-06 06:39:48
Local clock offset: 4.186 ms
Remote clock offset: -0.255 ms

Below is generated by plot.py at 2018-09-06 07:32:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 410.84 Mbit/s
95th percentile per-packet one-way delay: 20.143 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 410.84 Mbit/s
95th percentile per-packet one-way delay: 20.143 ms
Loss rate: 0.01%

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2018-09-06 04:53:44

End at: 2018-09-06 04:54:14

Local clock offset: 3.927 ms

Remote clock offset: 0.711 ms

Below is generated by plot.py at 2018-09-06 07:32:26

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.94 Mbit/s

95th percentile per-packet one-way delay: 17.365 ms

Loss rate: 0.02%

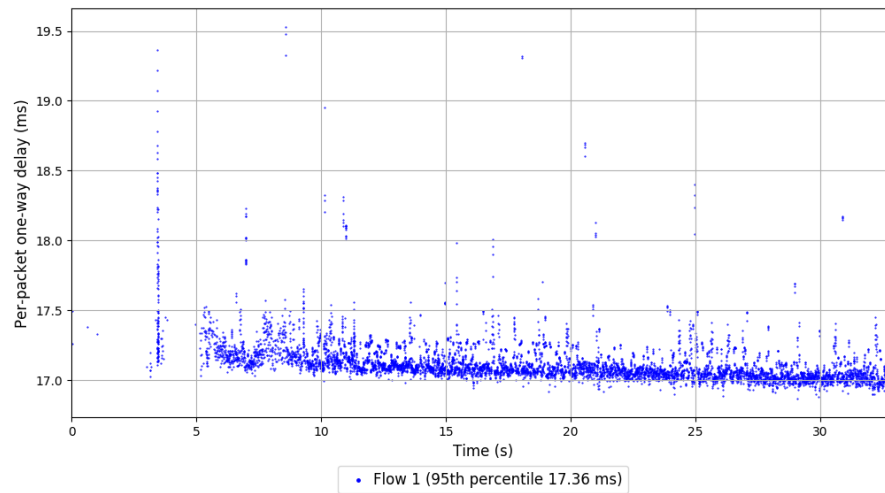
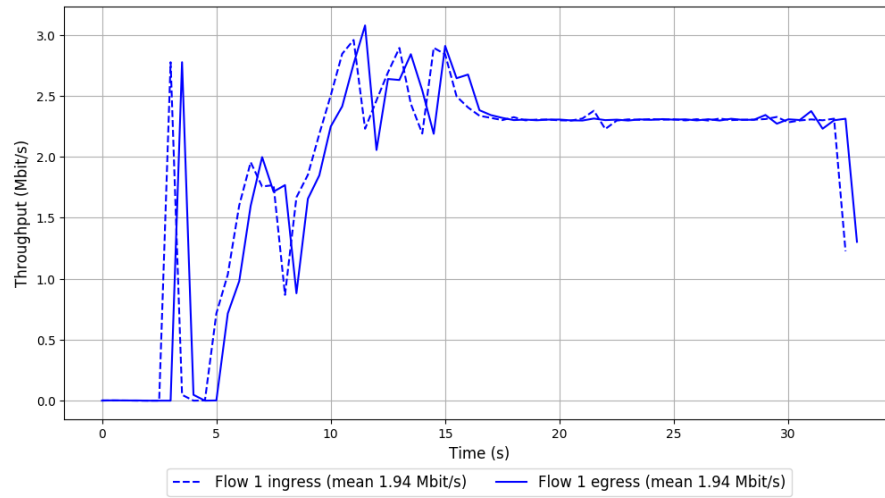
-- Flow 1:

Average throughput: 1.94 Mbit/s

95th percentile per-packet one-way delay: 17.365 ms

Loss rate: 0.02%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-09-06 05:19:51

End at: 2018-09-06 05:20:21

Local clock offset: 3.326 ms

Remote clock offset: 4.478 ms

Below is generated by plot.py at 2018-09-06 07:32:26

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.94 Mbit/s

95th percentile per-packet one-way delay: 18.364 ms

Loss rate: 0.00%

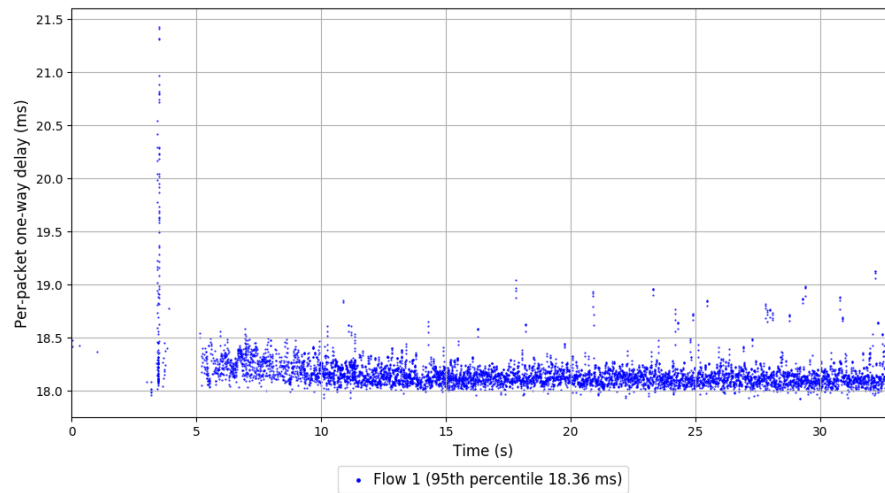
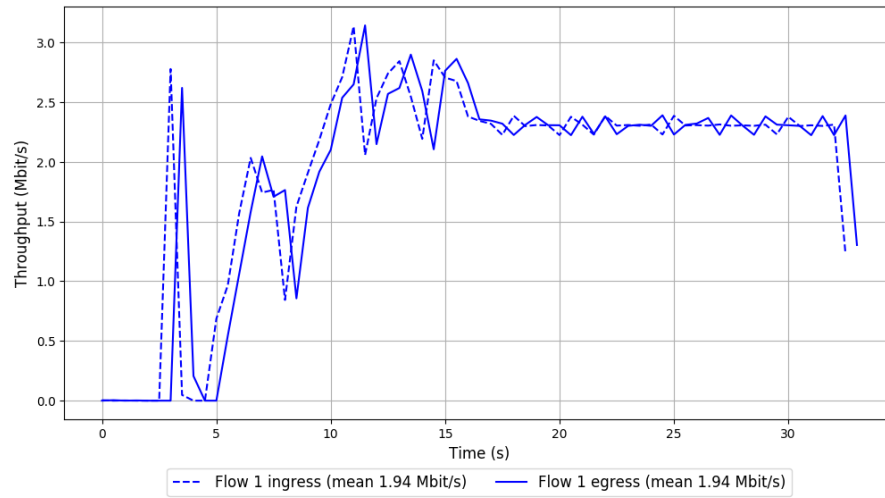
-- Flow 1:

Average throughput: 1.94 Mbit/s

95th percentile per-packet one-way delay: 18.364 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-09-06 05:45:55

End at: 2018-09-06 05:46:25

Local clock offset: 3.023 ms

Remote clock offset: 0.116 ms

Below is generated by plot.py at 2018-09-06 07:32:26

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.94 Mbit/s

95th percentile per-packet one-way delay: 19.369 ms

Loss rate: 0.00%

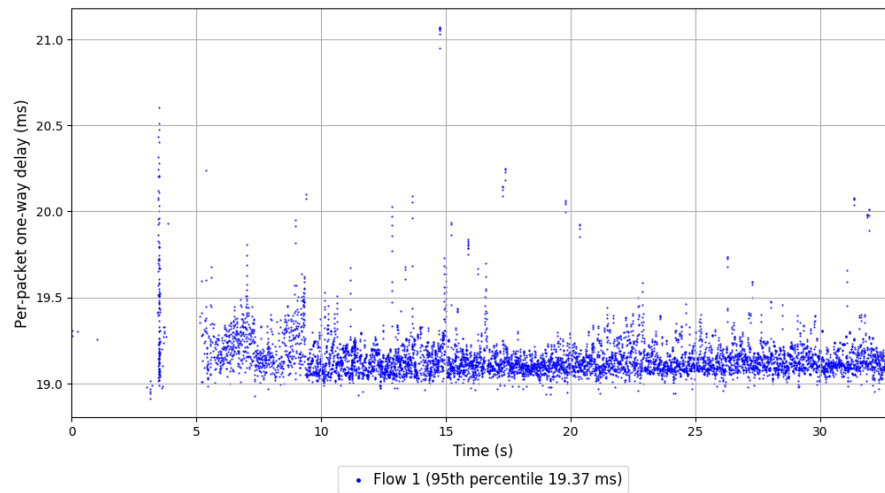
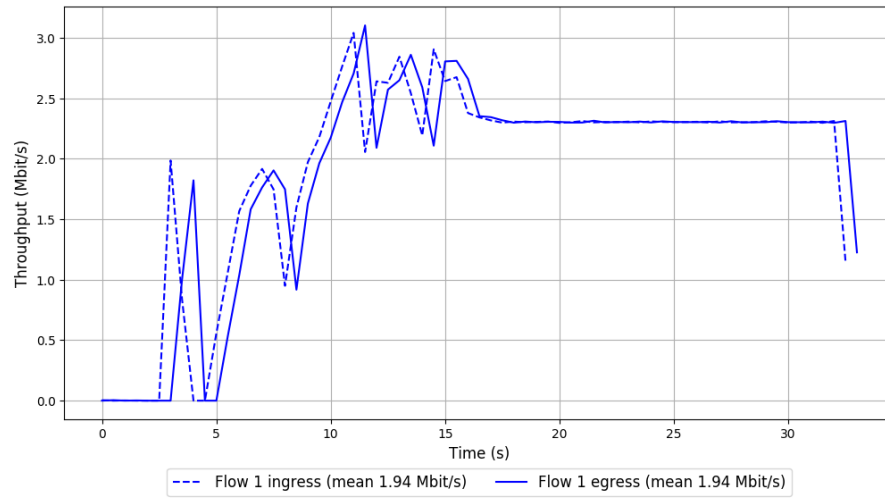
-- Flow 1:

Average throughput: 1.94 Mbit/s

95th percentile per-packet one-way delay: 19.369 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

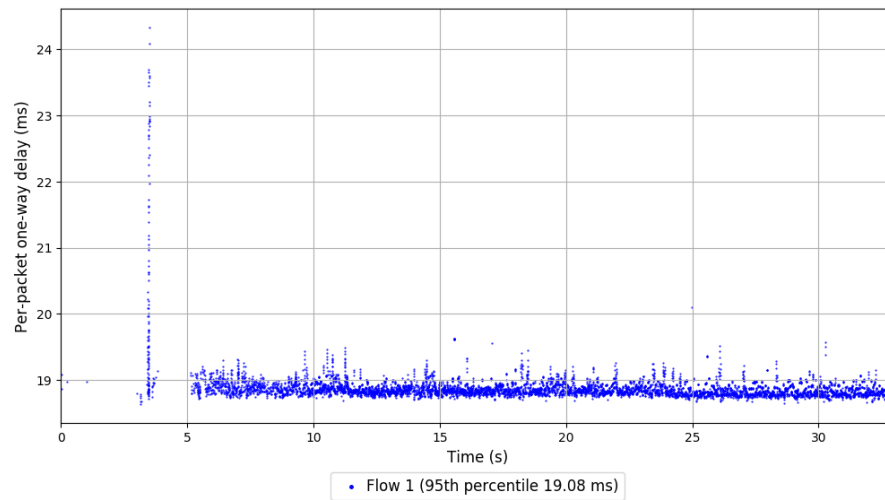
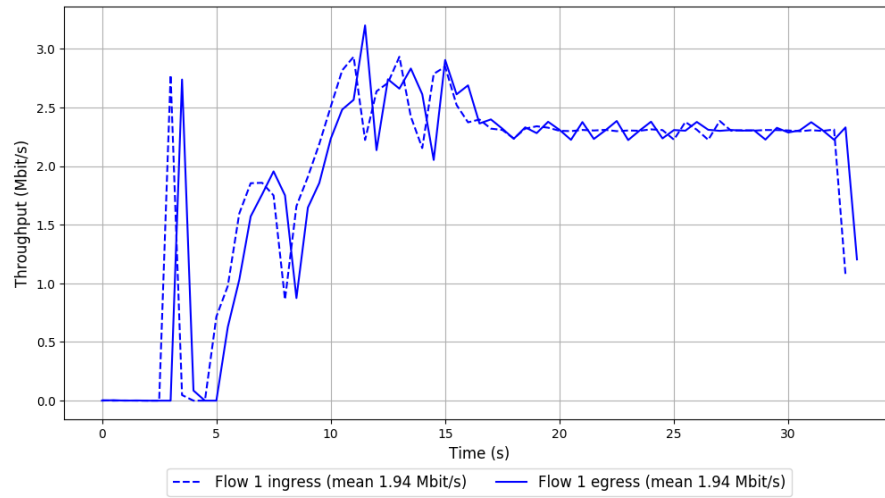


Run 4: Statistics of WebRTC media

Start at: 2018-09-06 06:12:02
End at: 2018-09-06 06:12:32
Local clock offset: 3.123 ms
Remote clock offset: -0.303 ms

Below is generated by plot.py at 2018-09-06 07:32:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 19.078 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 19.078 ms
Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-09-06 06:38:00
End at: 2018-09-06 06:38:30
Local clock offset: 4.152 ms
Remote clock offset: -0.242 ms

Below is generated by plot.py at 2018-09-06 07:32:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 18.447 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 18.447 ms
Loss rate: 0.03%

Run 5: Report of WebRTC media — Data Link

