

Pantheon Report

Generated at 2019-01-17 10:01:13 (UTC).

Data path: AWS India 2 on **ens5** (*local*) → Saudi Arabia on **enp2s0** (*remote*).

Repeated the test of 21 congestion control schemes 5 times.

Each test lasted for 30 seconds running 1 flow.

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

System info:

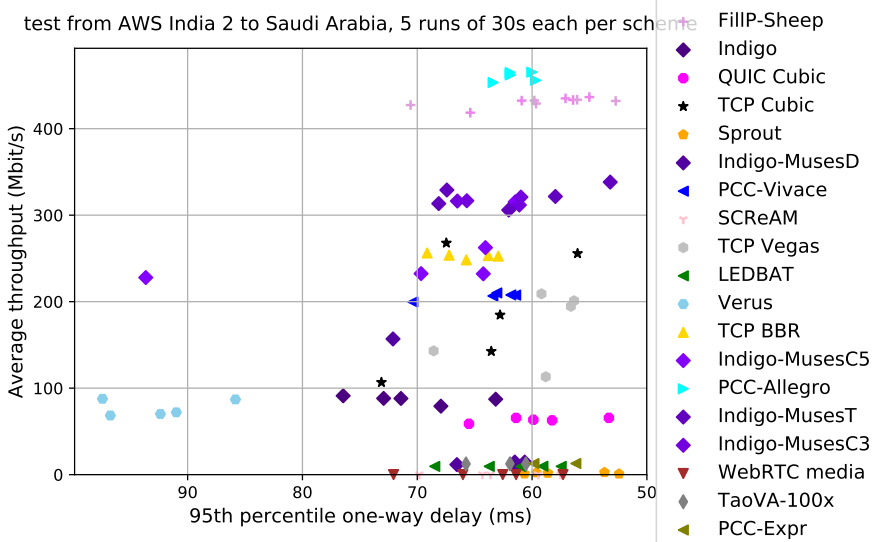
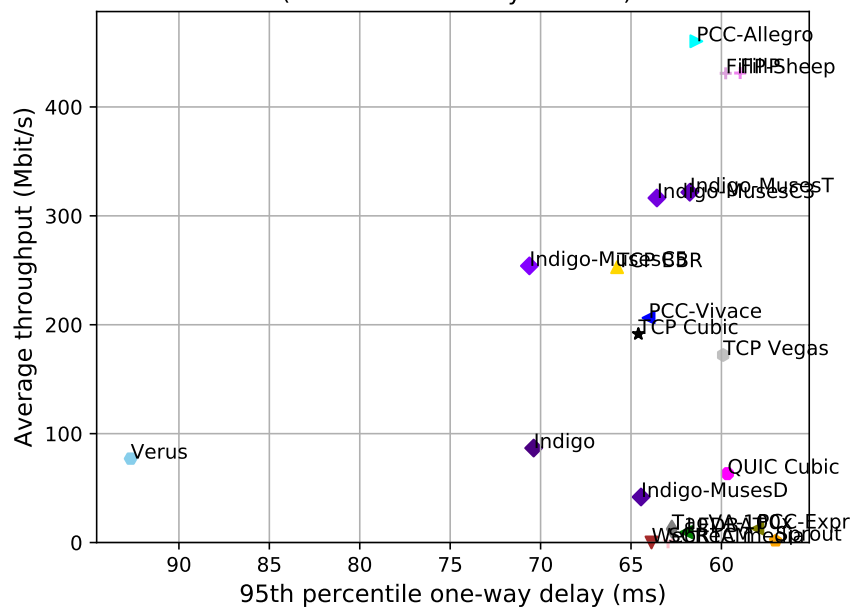
```
Linux 4.15.0-1031-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

```
branch: muses @ c80a283586bf7b0cc1fe08c69c8f60d56498f81c
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ c3eee875824760ec5b2fd207fefe166e1afe2170
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
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 India 2 to Saudi Arabia, 5 runs of 30s each per scheme
(mean of all runs by scheme)



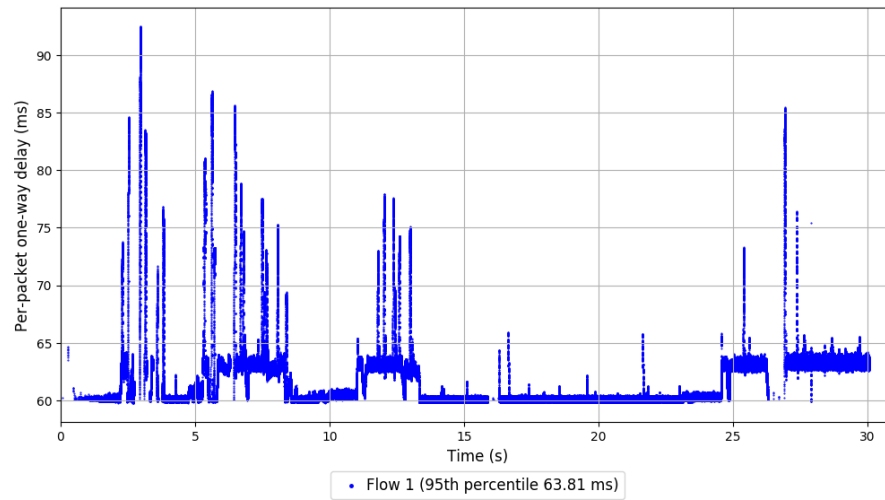
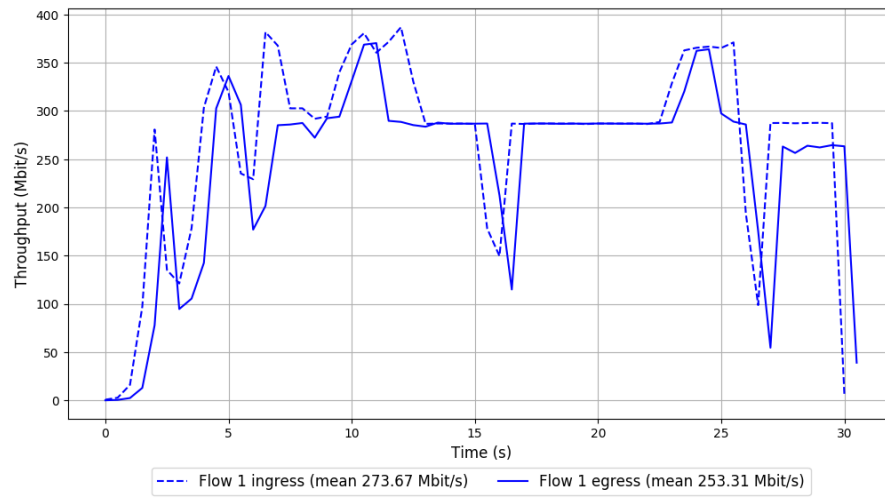
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	252.88	65.77	6.70
Copa	0	N/A	N/A	N/A
TCP Cubic	5	191.50	64.59	1.03
FillP	5	431.13	58.96	5.69
FillP-Sheep	5	430.88	59.76	4.74
Indigo	5	86.76	70.38	0.04
Indigo-MusesC3	4	316.41	63.57	16.70
Indigo-MusesC5	5	254.05	70.62	21.71
Indigo-MusesD	5	41.83	64.45	2.16
Indigo-MusesT	5	321.65	61.75	12.22
LEDBAT	5	9.55	61.95	0.00
PCC-Allegro	5	460.30	61.39	3.60
PCC-Expr	2	12.86	58.01	31.07
QUIC Cubic	5	63.27	59.67	0.12
SCReAM	5	0.22	62.95	0.00
Sprout	5	1.72	57.01	0.00
TaoVA-100x	3	12.44	62.74	18.20
TCP Vegas	5	172.19	59.91	0.55
Verus	5	77.05	92.67	57.02
PCC-Vivace	5	206.32	64.03	0.89
WebRTC media	5	0.05	63.87	0.00

Run 1: Statistics of TCP BBR

Start at: 2019-01-17 07:09:04
End at: 2019-01-17 07:09:34
Local clock offset: 2.295 ms
Remote clock offset: -38.774 ms

Below is generated by plot.py at 2019-01-17 09:39:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 253.31 Mbit/s
95th percentile per-packet one-way delay: 63.813 ms
Loss rate: 7.43%
-- Flow 1:
Average throughput: 253.31 Mbit/s
95th percentile per-packet one-way delay: 63.813 ms
Loss rate: 7.43%

Run 1: Report of TCP BBR — Data Link

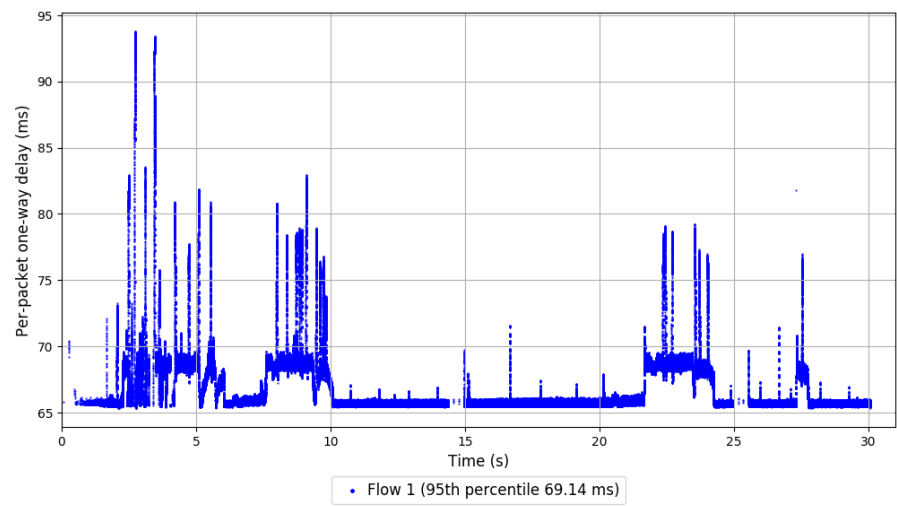
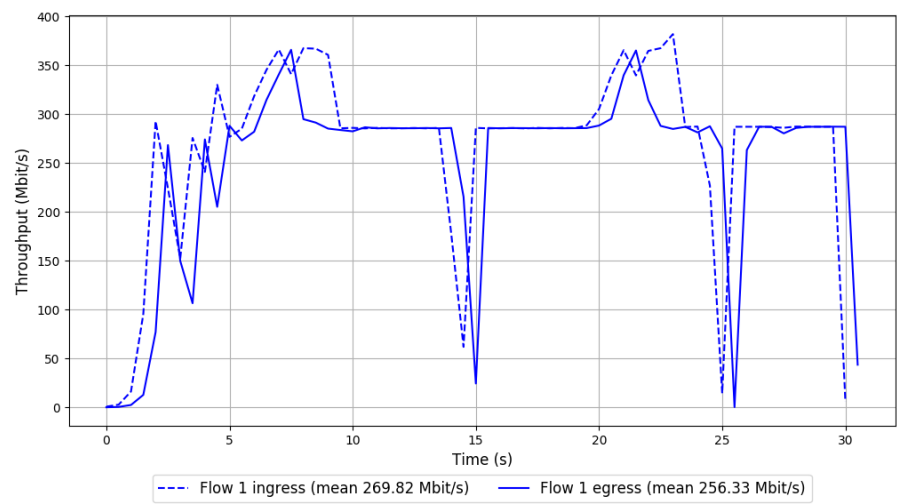


Run 2: Statistics of TCP BBR

Start at: 2019-01-17 07:36:15
End at: 2019-01-17 07:36:45
Local clock offset: 0.816 ms
Remote clock offset: -34.222 ms

Below is generated by plot.py at 2019-01-17 09:39:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 256.33 Mbit/s
95th percentile per-packet one-way delay: 69.139 ms
Loss rate: 5.00%
-- Flow 1:
Average throughput: 256.33 Mbit/s
95th percentile per-packet one-way delay: 69.139 ms
Loss rate: 5.00%

Run 2: Report of TCP BBR — Data Link

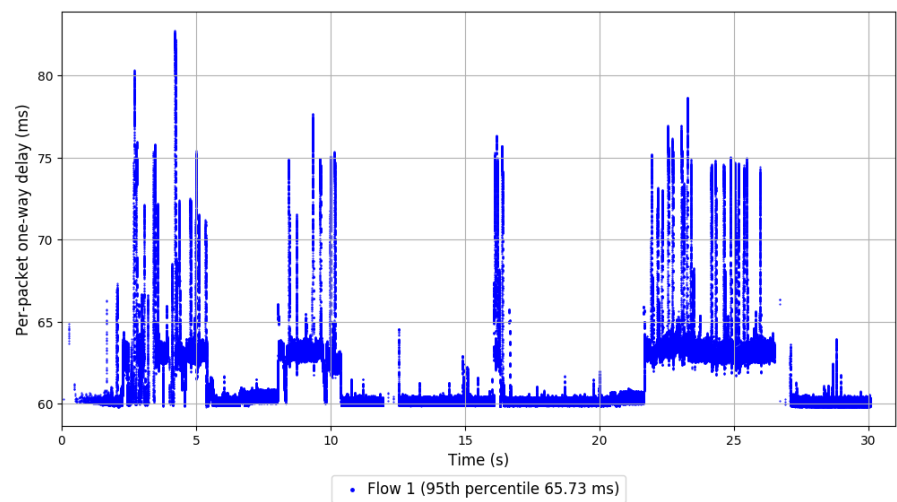
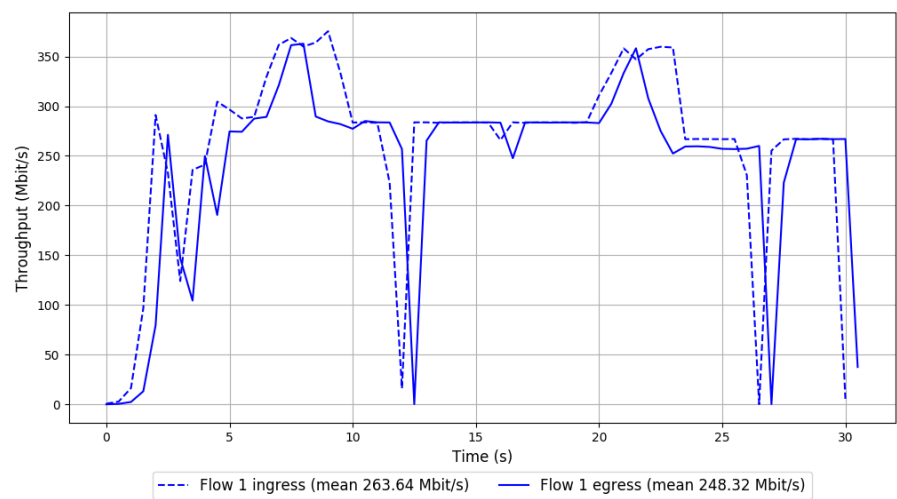


Run 3: Statistics of TCP BBR

Start at: 2019-01-17 08:08:51
End at: 2019-01-17 08:09:21
Local clock offset: -1.293 ms
Remote clock offset: -38.932 ms

Below is generated by plot.py at 2019-01-17 09:39:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 248.32 Mbit/s
95th percentile per-packet one-way delay: 65.730 ms
Loss rate: 5.81%
-- Flow 1:
Average throughput: 248.32 Mbit/s
95th percentile per-packet one-way delay: 65.730 ms
Loss rate: 5.81%

Run 3: Report of TCP BBR — Data Link

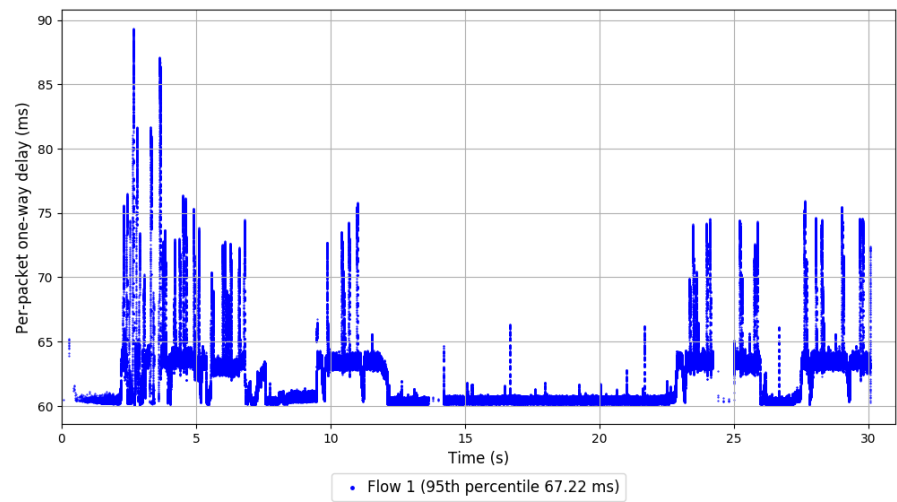
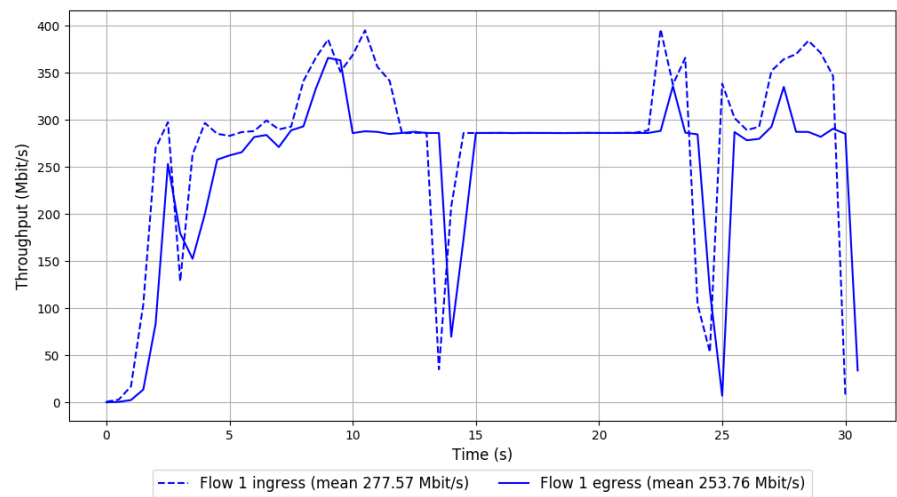


Run 4: Statistics of TCP BBR

Start at: 2019-01-17 08:47:17
End at: 2019-01-17 08:47:47
Local clock offset: 1.791 ms
Remote clock offset: -39.038 ms

Below is generated by plot.py at 2019-01-17 09:39:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 253.76 Mbit/s
95th percentile per-packet one-way delay: 67.225 ms
Loss rate: 8.58%
-- Flow 1:
Average throughput: 253.76 Mbit/s
95th percentile per-packet one-way delay: 67.225 ms
Loss rate: 8.58%

Run 4: Report of TCP BBR — Data Link

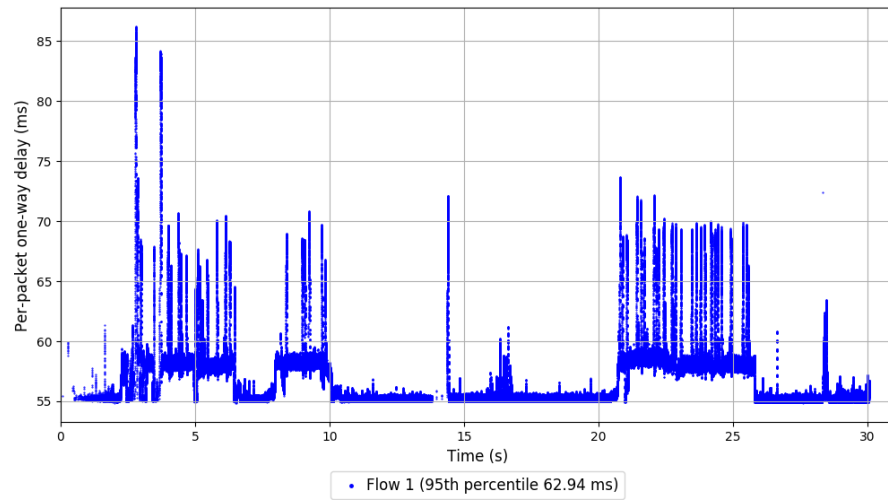
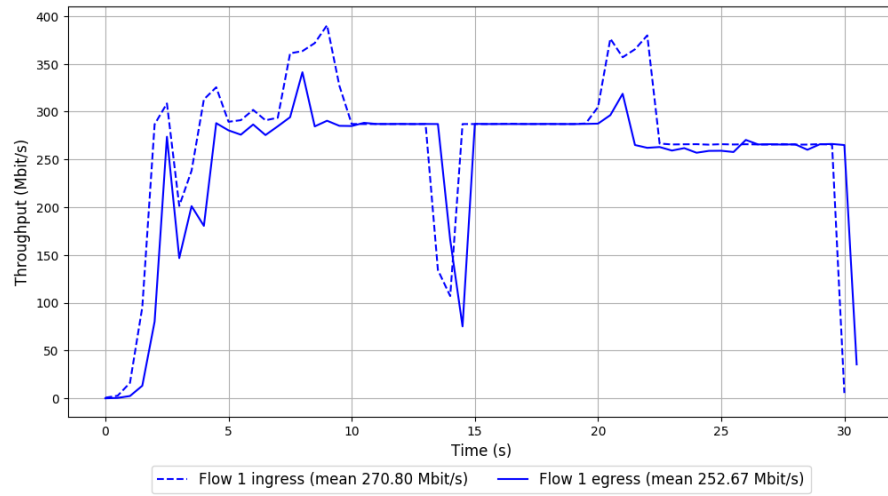


Run 5: Statistics of TCP BBR

Start at: 2019-01-17 09:29:45
End at: 2019-01-17 09:30:15
Local clock offset: -0.121 ms
Remote clock offset: -45.74 ms

Below is generated by plot.py at 2019-01-17 09:39:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 252.67 Mbit/s
95th percentile per-packet one-way delay: 62.940 ms
Loss rate: 6.70%
-- Flow 1:
Average throughput: 252.67 Mbit/s
95th percentile per-packet one-way delay: 62.940 ms
Loss rate: 6.70%

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

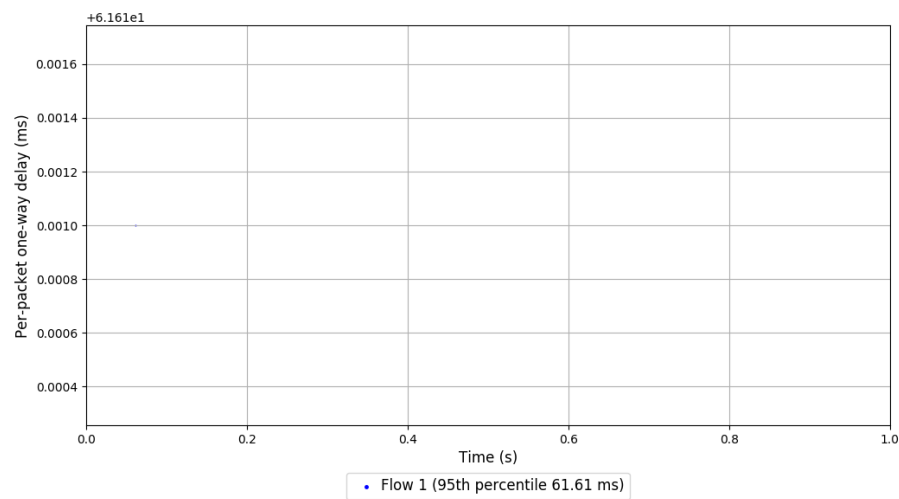
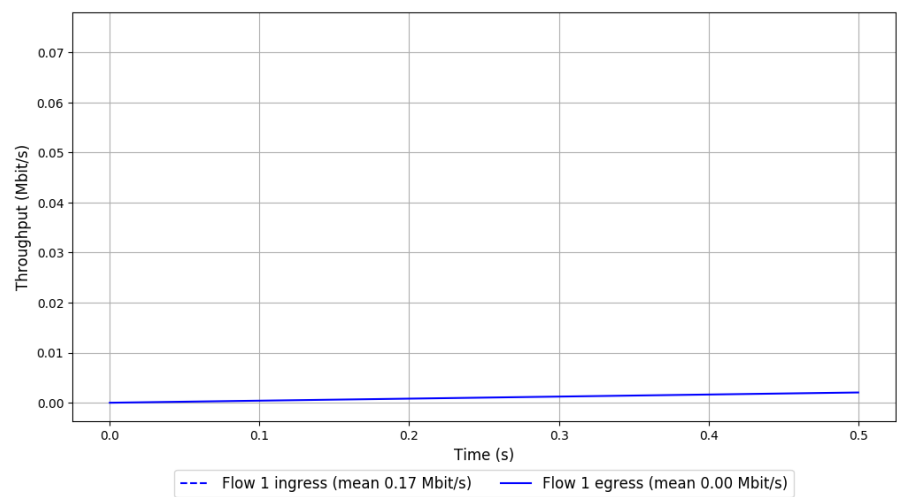
Start at: 2019-01-17 06:48:18

End at: 2019-01-17 06:48:48

Local clock offset: -1.485 ms

Remote clock offset: -41.587 ms

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

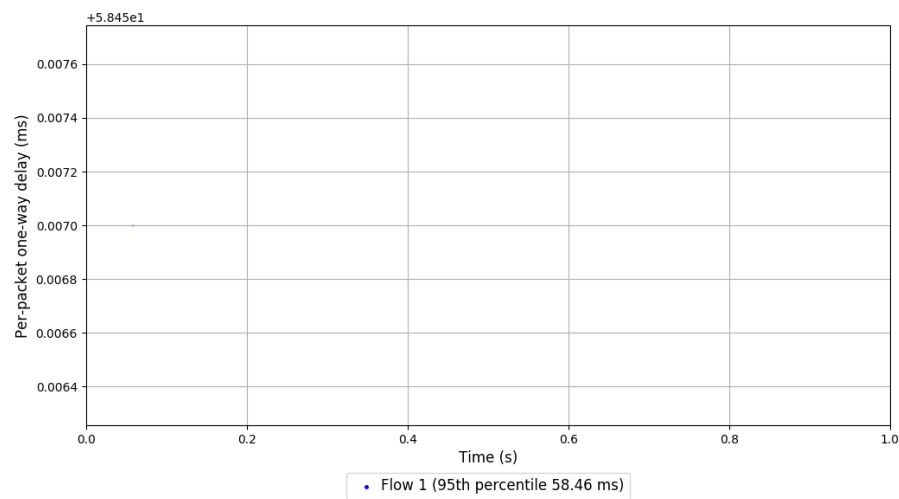
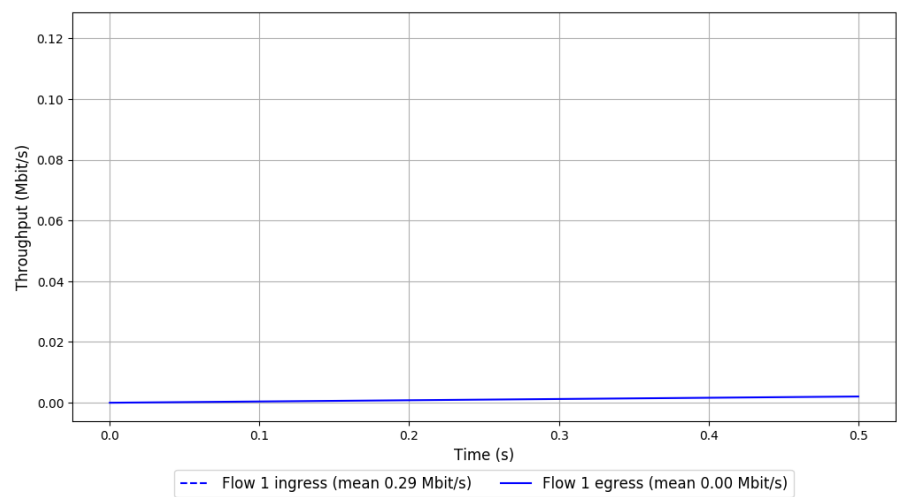
Start at: 2019-01-17 07:21:06

End at: 2019-01-17 07:21:36

Local clock offset: -0.17 ms

Remote clock offset: -42.839 ms

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

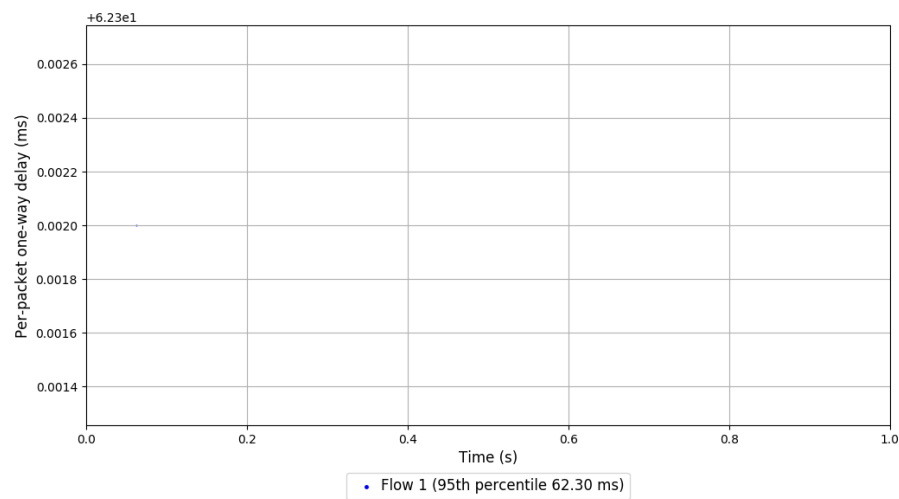
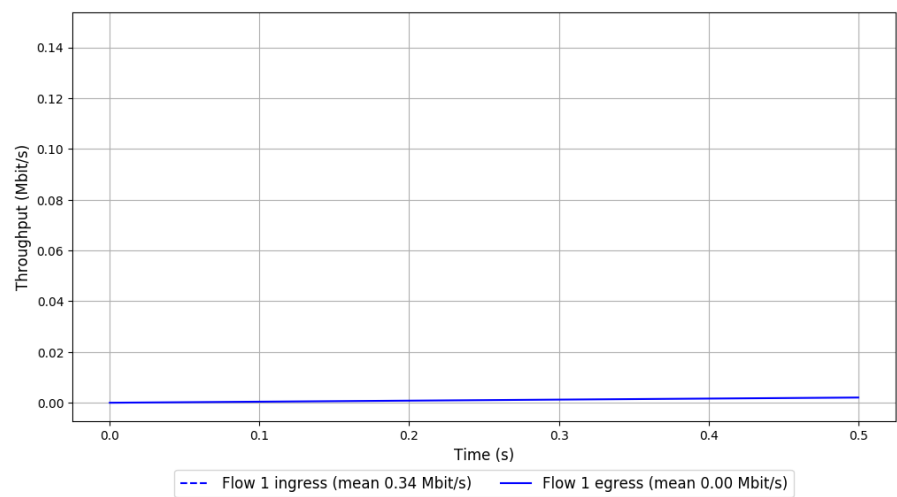
Start at: 2019-01-17 07:48:09

End at: 2019-01-17 07:48:40

Local clock offset: -0.701 ms

Remote clock offset: -39.198 ms

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

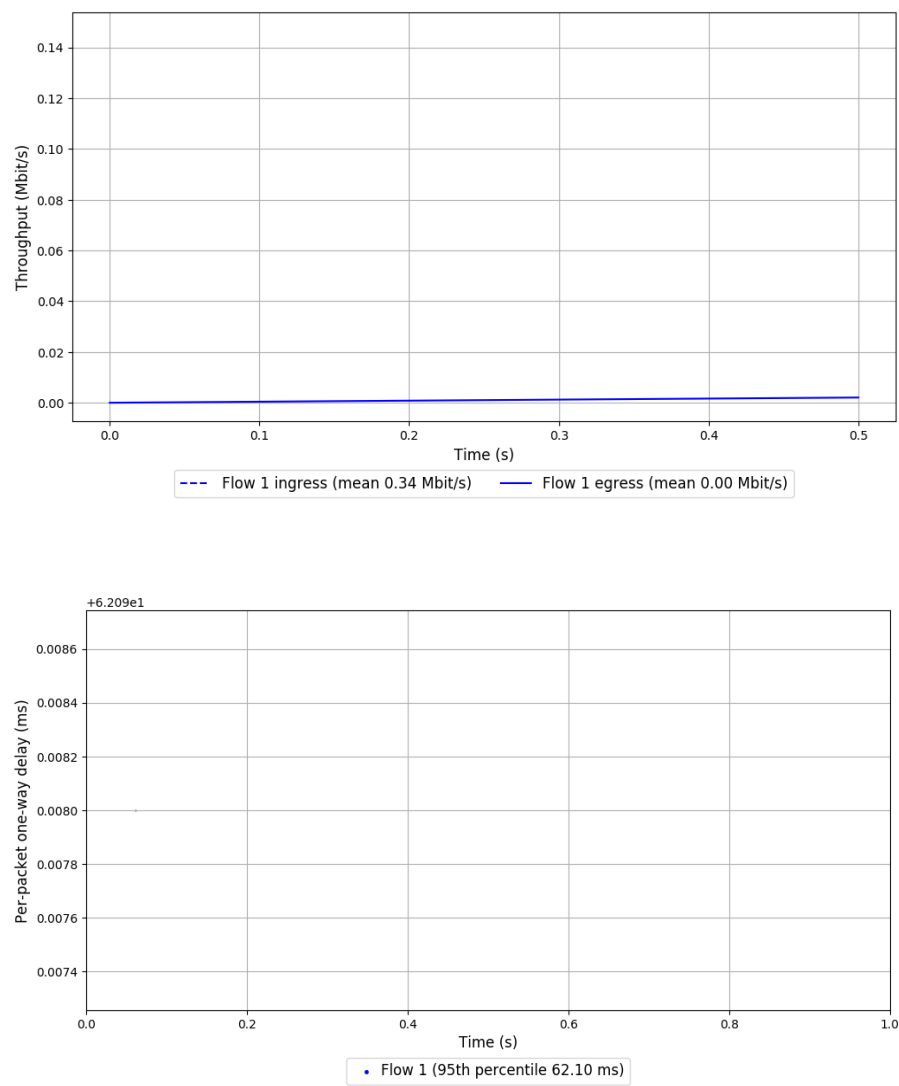
Start at: 2019-01-17 08:20:46

End at: 2019-01-17 08:21:16

Local clock offset: -3.039 ms

Remote clock offset: -39.929 ms

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

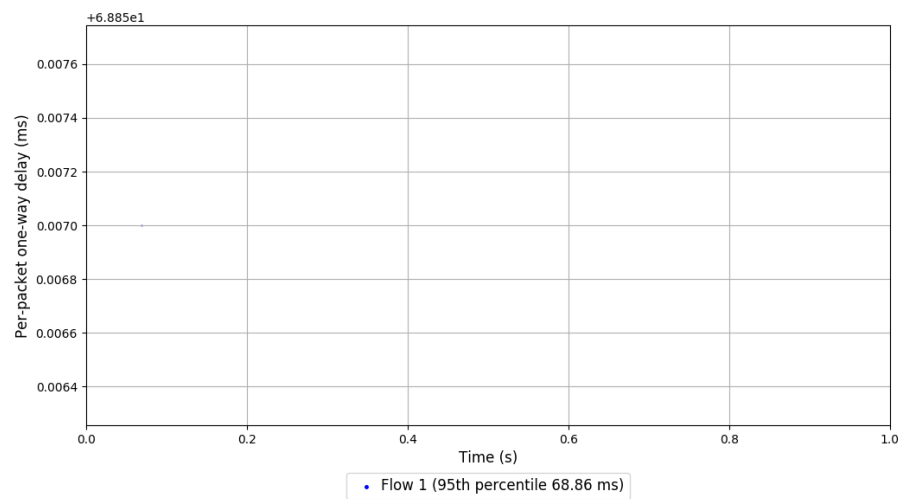
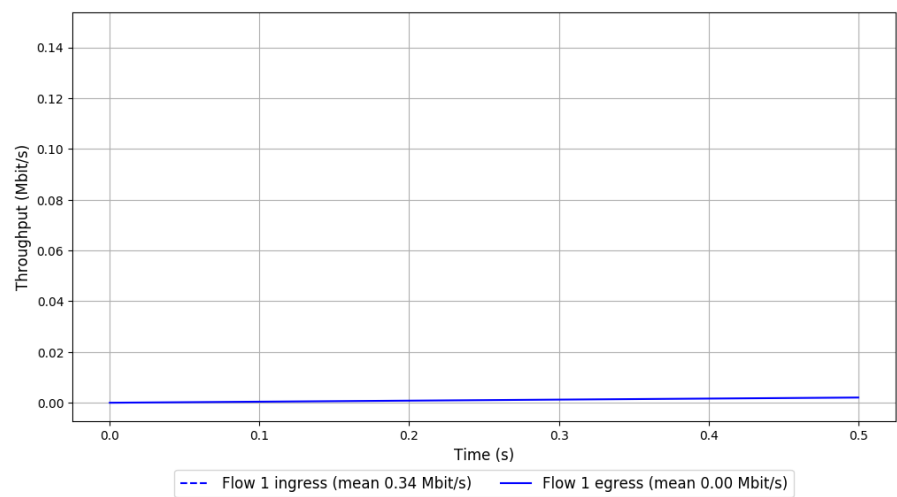
Start at: 2019-01-17 09:14:34

End at: 2019-01-17 09:15:04

Local clock offset: -0.21 ms

Remote clock offset: -32.318 ms

Run 5: Report of Copa — Data Link

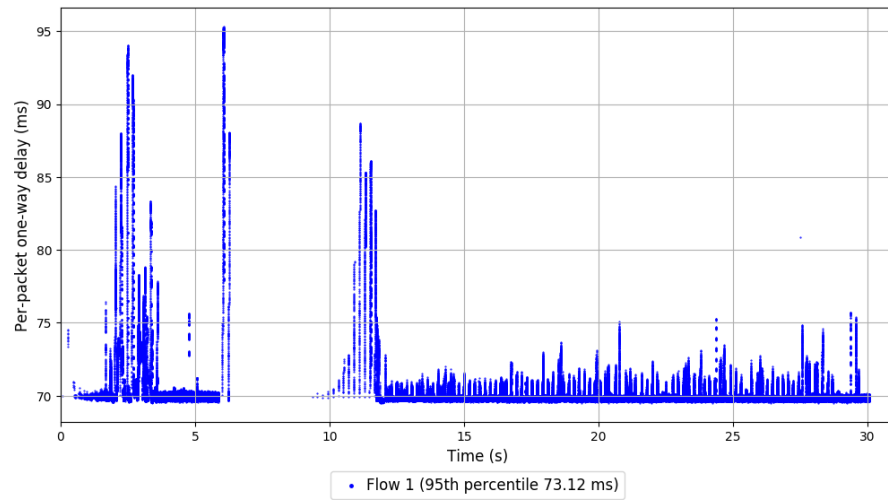
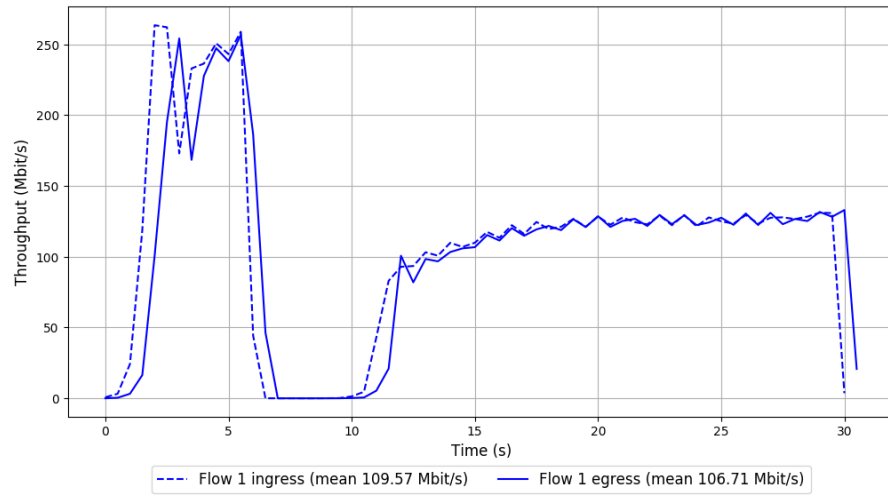


Run 1: Statistics of TCP Cubic

Start at: 2019-01-17 06:57:31
End at: 2019-01-17 06:58:01
Local clock offset: -1.646 ms
Remote clock offset: -33.081 ms

Below is generated by plot.py at 2019-01-17 09:39:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 106.71 Mbit/s
95th percentile per-packet one-way delay: 73.120 ms
Loss rate: 2.61%
-- Flow 1:
Average throughput: 106.71 Mbit/s
95th percentile per-packet one-way delay: 73.120 ms
Loss rate: 2.61%

Run 1: Report of TCP Cubic — Data Link

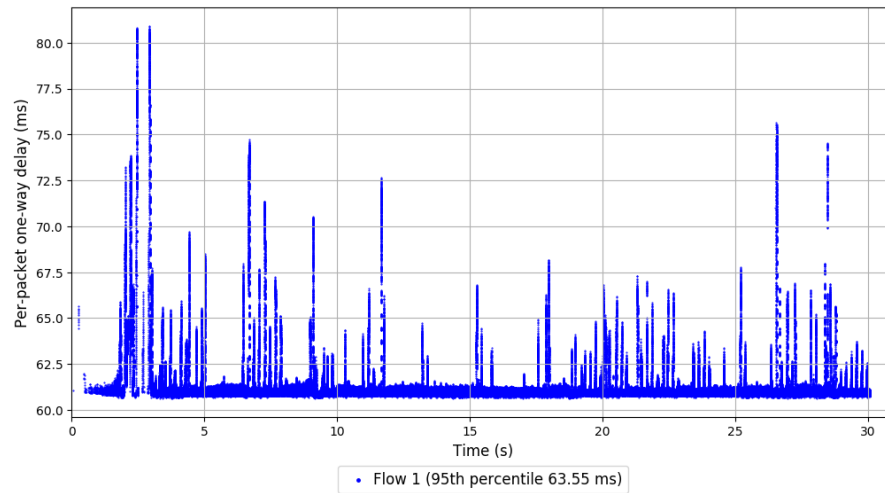
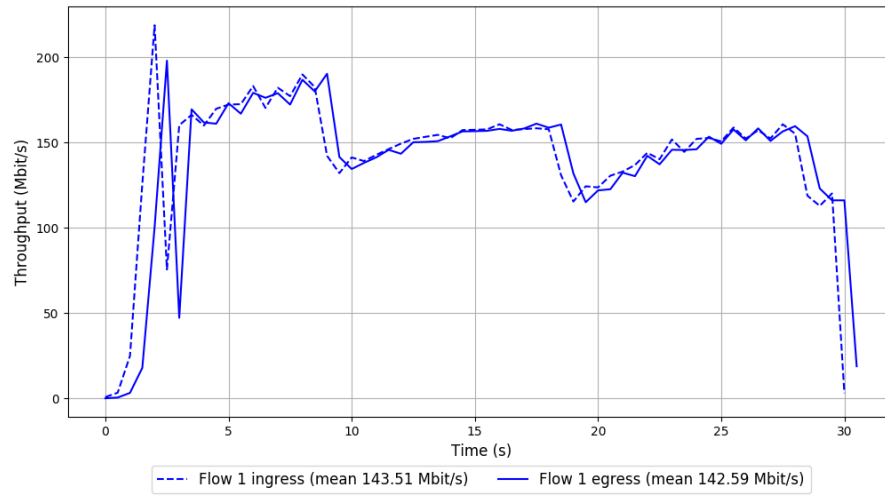


Run 2: Statistics of TCP Cubic

Start at: 2019-01-17 07:24:40
End at: 2019-01-17 07:25:10
Local clock offset: 0.405 ms
Remote clock offset: -39.031 ms

Below is generated by plot.py at 2019-01-17 09:39:32
Datalink statistics
-- Total of 1 flow:
Average throughput: 142.59 Mbit/s
95th percentile per-packet one-way delay: 63.553 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 142.59 Mbit/s
95th percentile per-packet one-way delay: 63.553 ms
Loss rate: 0.64%

Run 2: Report of TCP Cubic — Data Link

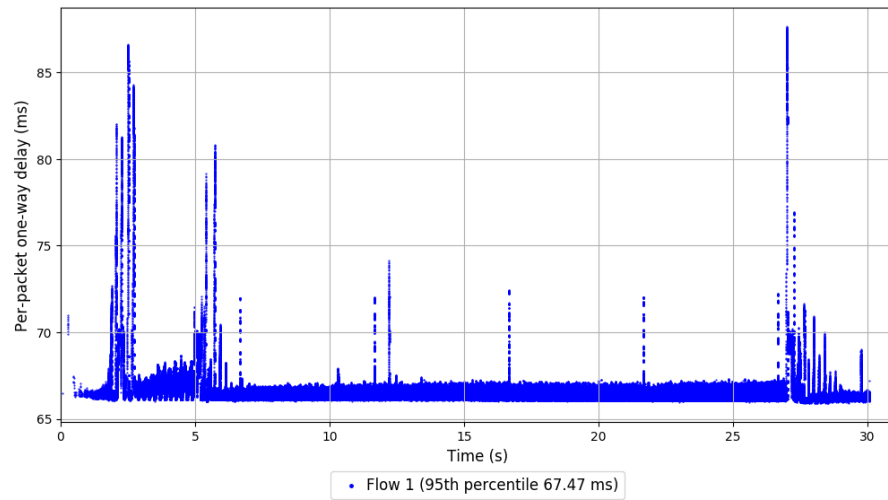
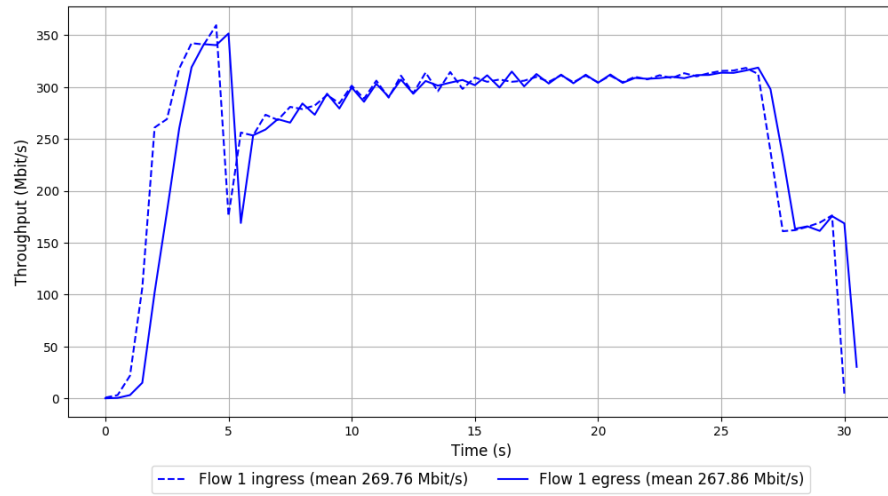


Run 3: Statistics of TCP Cubic

Start at: 2019-01-17 07:51:44
End at: 2019-01-17 07:52:14
Local clock offset: -2.758 ms
Remote clock offset: -38.598 ms

Below is generated by plot.py at 2019-01-17 09:39:36
Datalink statistics
-- Total of 1 flow:
Average throughput: 267.86 Mbit/s
95th percentile per-packet one-way delay: 67.466 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 267.86 Mbit/s
95th percentile per-packet one-way delay: 67.466 ms
Loss rate: 0.71%

Run 3: Report of TCP Cubic — Data Link

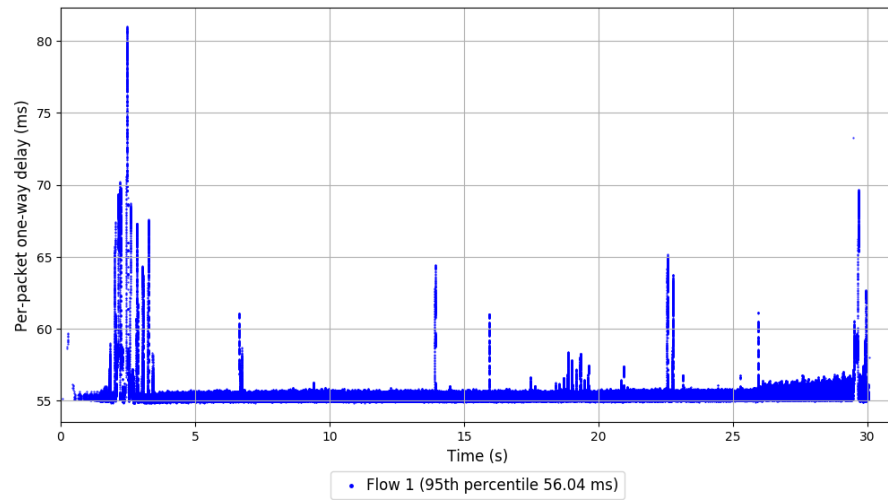
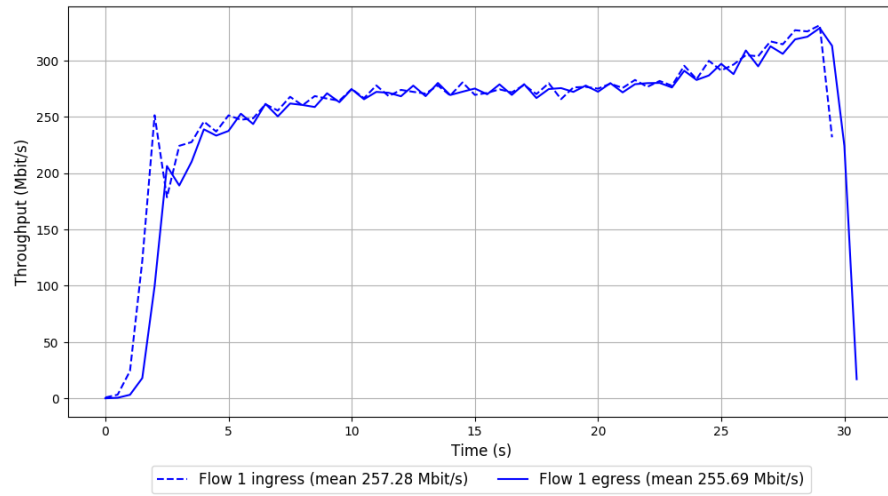


Run 4: Statistics of TCP Cubic

Start at: 2019-01-17 08:24:21
End at: 2019-01-17 08:24:51
Local clock offset: -1.312 ms
Remote clock offset: -45.655 ms

Below is generated by plot.py at 2019-01-17 09:40:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 255.69 Mbit/s
95th percentile per-packet one-way delay: 56.039 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 255.69 Mbit/s
95th percentile per-packet one-way delay: 56.039 ms
Loss rate: 0.61%

Run 4: Report of TCP Cubic — Data Link

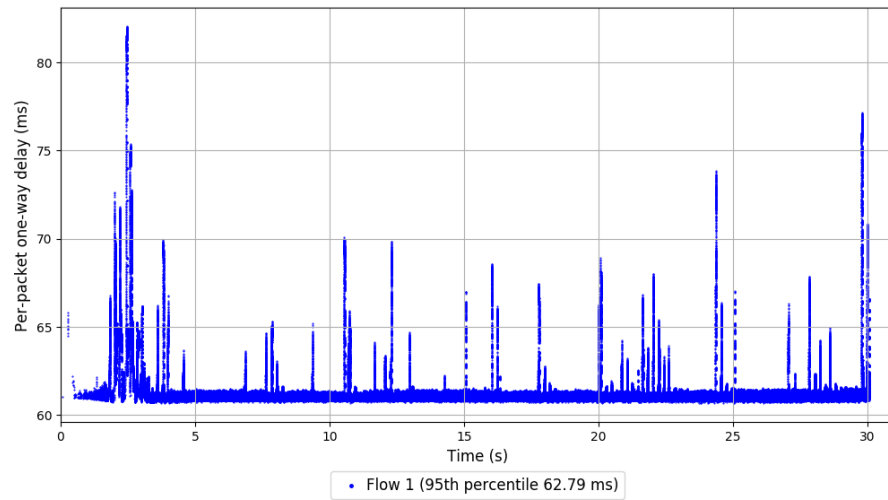
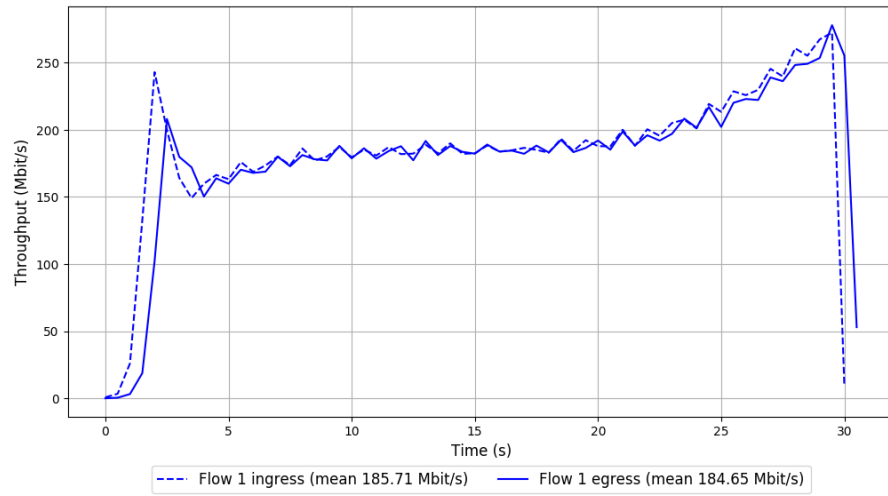


Run 5: Statistics of TCP Cubic

Start at: 2019-01-17 09:18:08
End at: 2019-01-17 09:18:38
Local clock offset: -0.579 ms
Remote clock offset: -40.343 ms

Below is generated by plot.py at 2019-01-17 09:40:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 184.65 Mbit/s
95th percentile per-packet one-way delay: 62.786 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 184.65 Mbit/s
95th percentile per-packet one-way delay: 62.786 ms
Loss rate: 0.57%

Run 5: Report of TCP Cubic — Data Link

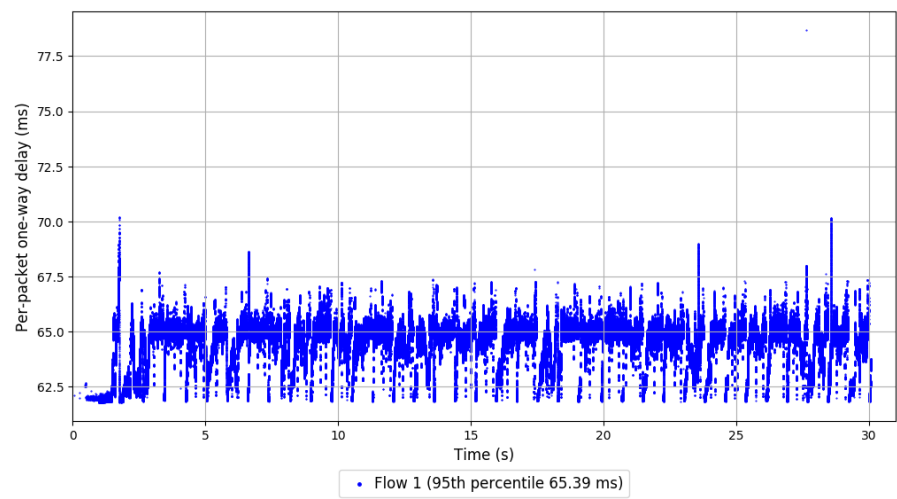
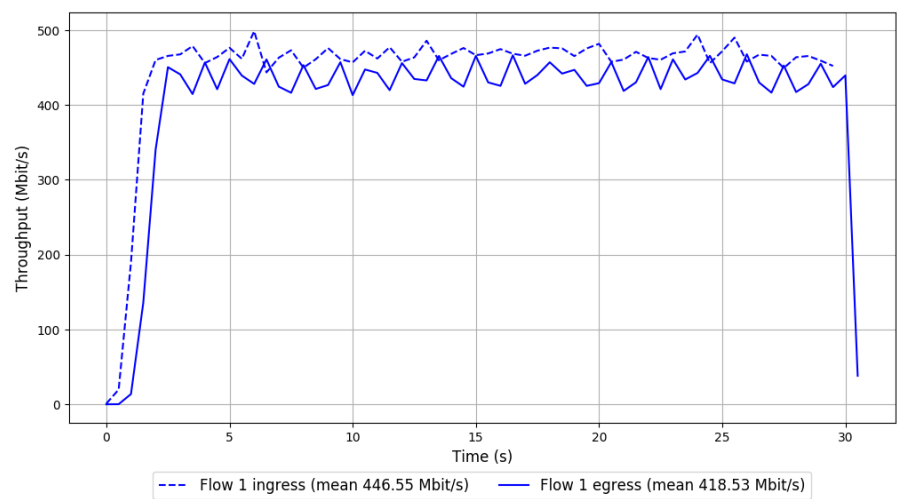


Run 1: Statistics of FillP

Start at: 2019-01-17 07:07:37
End at: 2019-01-17 07:08:07
Local clock offset: -1.244 ms
Remote clock offset: -39.892 ms

Below is generated by plot.py at 2019-01-17 09:45:10
Datalink statistics
-- Total of 1 flow:
Average throughput: 418.53 Mbit/s
95th percentile per-packet one-way delay: 65.385 ms
Loss rate: 6.27%
-- Flow 1:
Average throughput: 418.53 Mbit/s
95th percentile per-packet one-way delay: 65.385 ms
Loss rate: 6.27%

Run 1: Report of FillP — Data Link

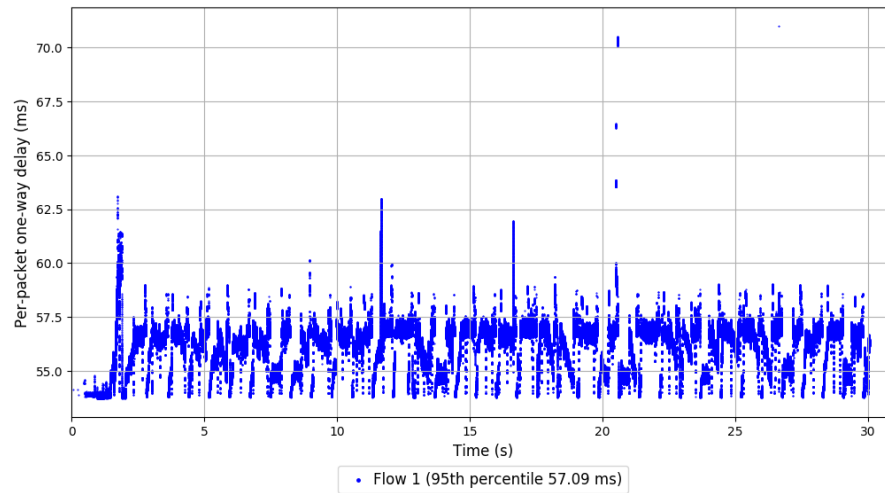
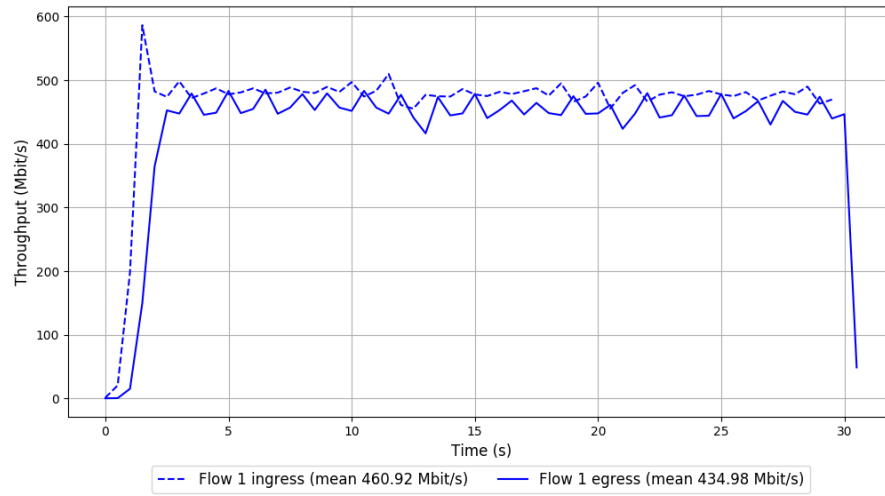


Run 2: Statistics of FillP

Start at: 2019-01-17 07:34:48
End at: 2019-01-17 07:35:18
Local clock offset: 1.021 ms
Remote clock offset: -45.442 ms

Below is generated by plot.py at 2019-01-17 09:45:21
Datalink statistics
-- Total of 1 flow:
Average throughput: 434.98 Mbit/s
95th percentile per-packet one-way delay: 57.087 ms
Loss rate: 5.62%
-- Flow 1:
Average throughput: 434.98 Mbit/s
95th percentile per-packet one-way delay: 57.087 ms
Loss rate: 5.62%

Run 2: Report of FillP — Data Link

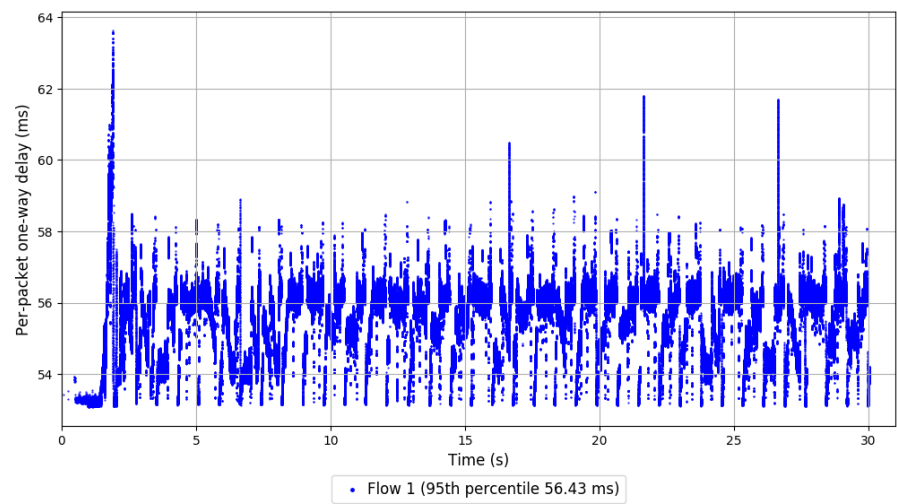
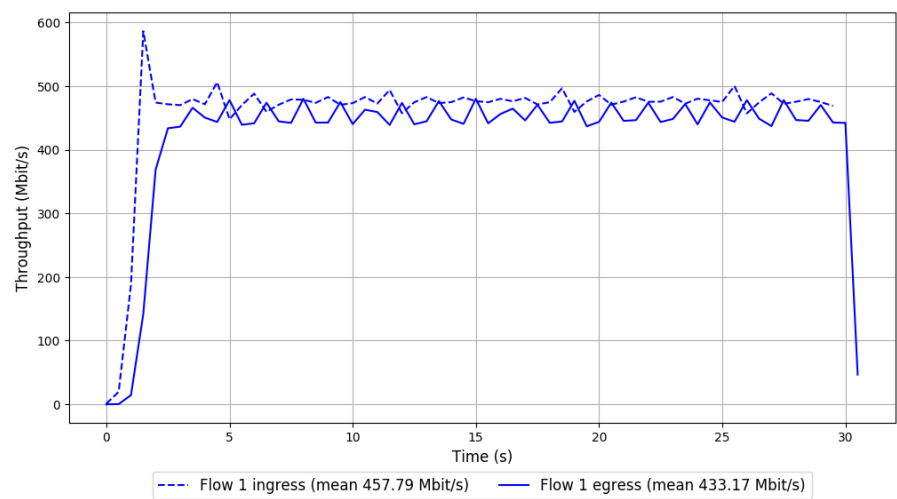


Run 3: Statistics of FillP

Start at: 2019-01-17 08:07:24
End at: 2019-01-17 08:07:54
Local clock offset: -0.422 ms
Remote clock offset: -44.951 ms

Below is generated by plot.py at 2019-01-17 09:45:21
Datalink statistics
-- Total of 1 flow:
Average throughput: 433.17 Mbit/s
95th percentile per-packet one-way delay: 56.431 ms
Loss rate: 5.38%
-- Flow 1:
Average throughput: 433.17 Mbit/s
95th percentile per-packet one-way delay: 56.431 ms
Loss rate: 5.38%

Run 3: Report of FillP — Data Link

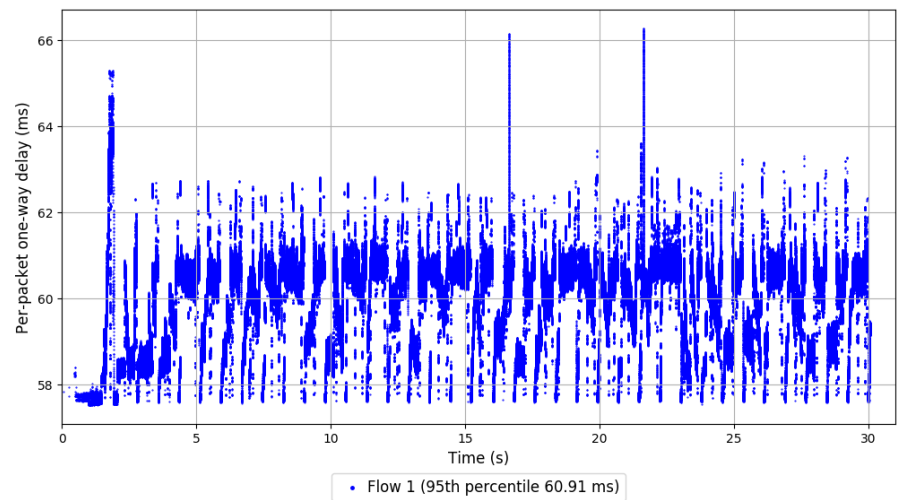
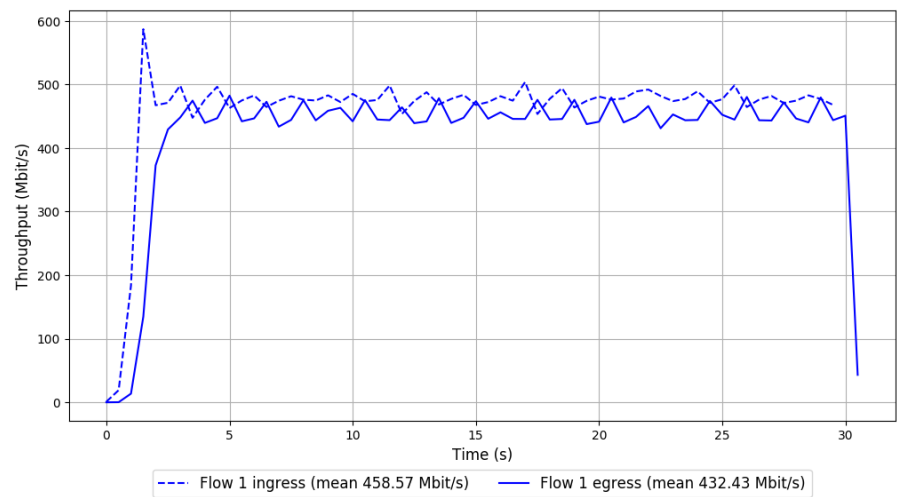


Run 4: Statistics of FillP

Start at: 2019-01-17 08:45:41
End at: 2019-01-17 08:46:11
Local clock offset: -1.018 ms
Remote clock offset: -44.24 ms

Below is generated by plot.py at 2019-01-17 09:45:21
Datalink statistics
-- Total of 1 flow:
Average throughput: 432.43 Mbit/s
95th percentile per-packet one-way delay: 60.906 ms
Loss rate: 5.70%
-- Flow 1:
Average throughput: 432.43 Mbit/s
95th percentile per-packet one-way delay: 60.906 ms
Loss rate: 5.70%

Run 4: Report of FillP — Data Link

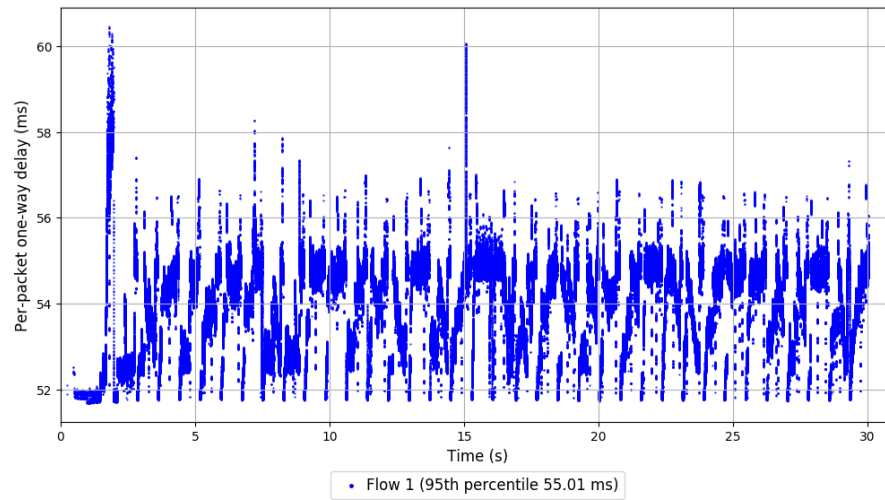
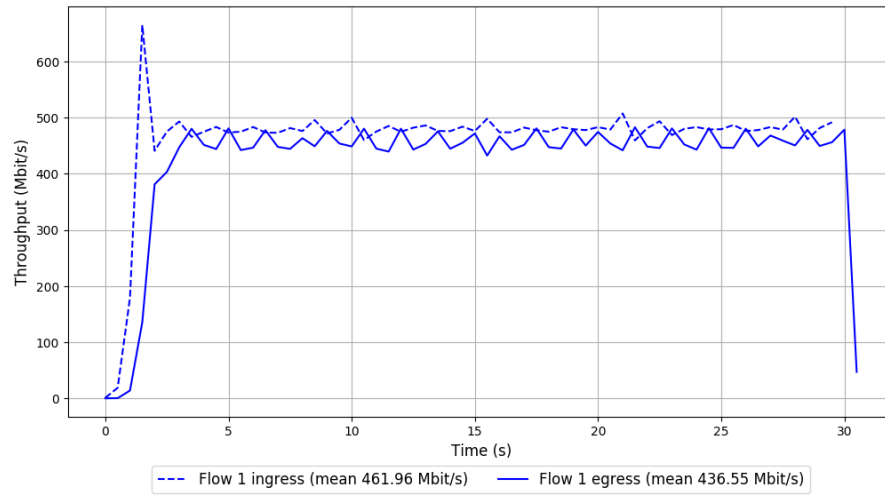


Run 5: Statistics of FillP

Start at: 2019-01-17 09:28:17
End at: 2019-01-17 09:28:48
Local clock offset: -0.326 ms
Remote clock offset: -49.141 ms

Below is generated by plot.py at 2019-01-17 09:45:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 436.55 Mbit/s
95th percentile per-packet one-way delay: 55.010 ms
Loss rate: 5.49%
-- Flow 1:
Average throughput: 436.55 Mbit/s
95th percentile per-packet one-way delay: 55.010 ms
Loss rate: 5.49%

Run 5: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2019-01-17 07:05:01

End at: 2019-01-17 07:05:31

Local clock offset: 0.718 ms

Remote clock offset: -45.877 ms

Below is generated by plot.py at 2019-01-17 09:45:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 432.53 Mbit/s

95th percentile per-packet one-way delay: 59.801 ms

Loss rate: 4.14%

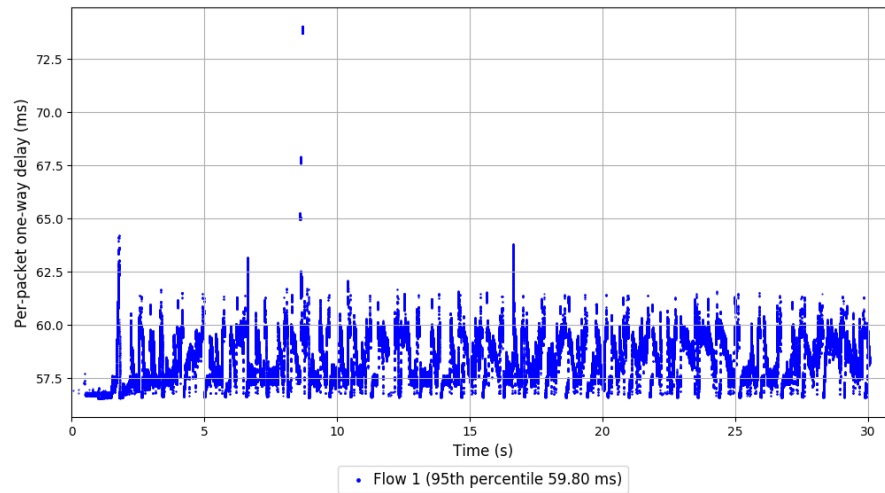
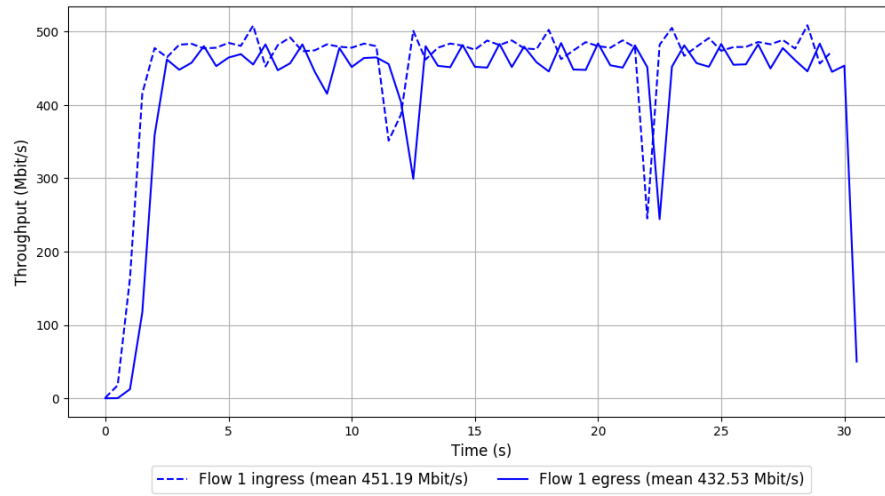
-- Flow 1:

Average throughput: 432.53 Mbit/s

95th percentile per-packet one-way delay: 59.801 ms

Loss rate: 4.14%

Run 1: Report of FillP-Sheep — Data Link

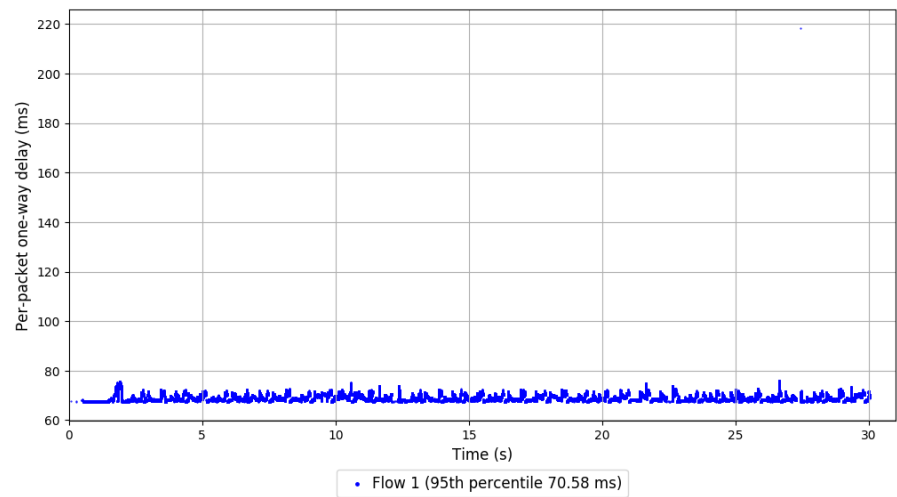
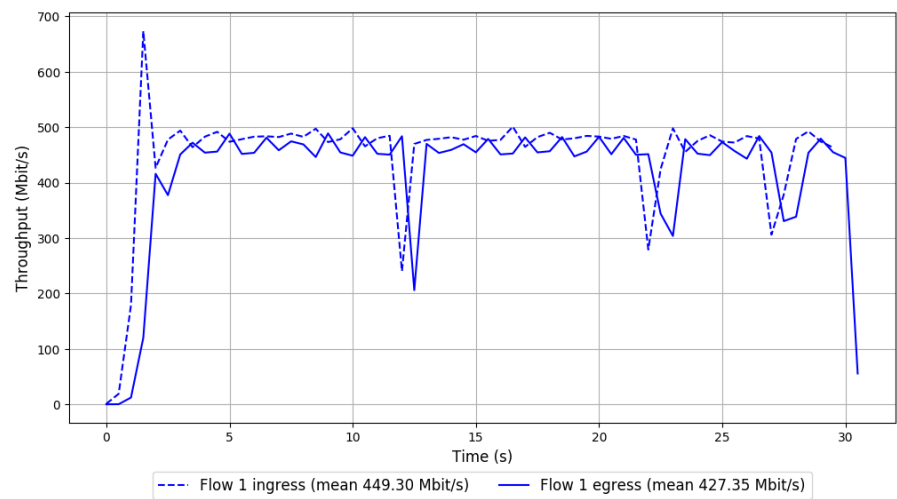


Run 2: Statistics of FillP-Sheep

Start at: 2019-01-17 07:32:12
End at: 2019-01-17 07:32:42
Local clock offset: 1.527 ms
Remote clock offset: -34.293 ms

Below is generated by plot.py at 2019-01-17 09:46:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 427.35 Mbit/s
95th percentile per-packet one-way delay: 70.581 ms
Loss rate: 4.89%
-- Flow 1:
Average throughput: 427.35 Mbit/s
95th percentile per-packet one-way delay: 70.581 ms
Loss rate: 4.89%

Run 2: Report of FillP-Sheep — Data Link

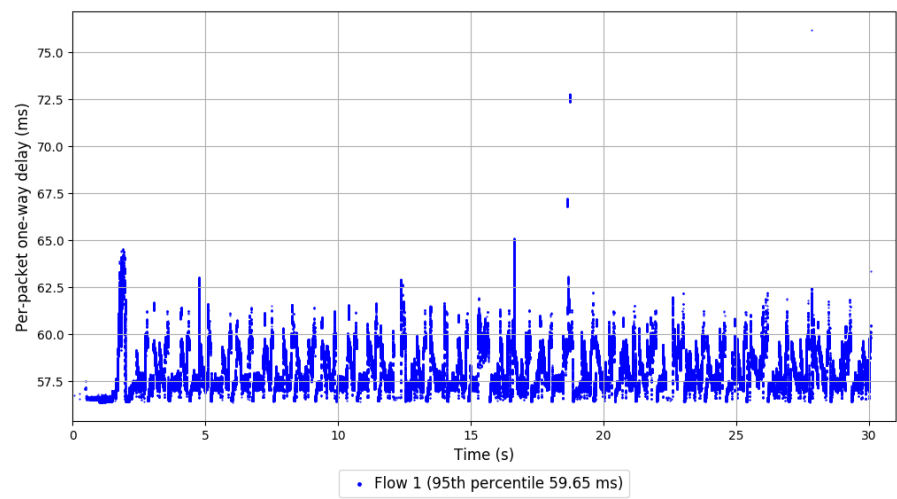
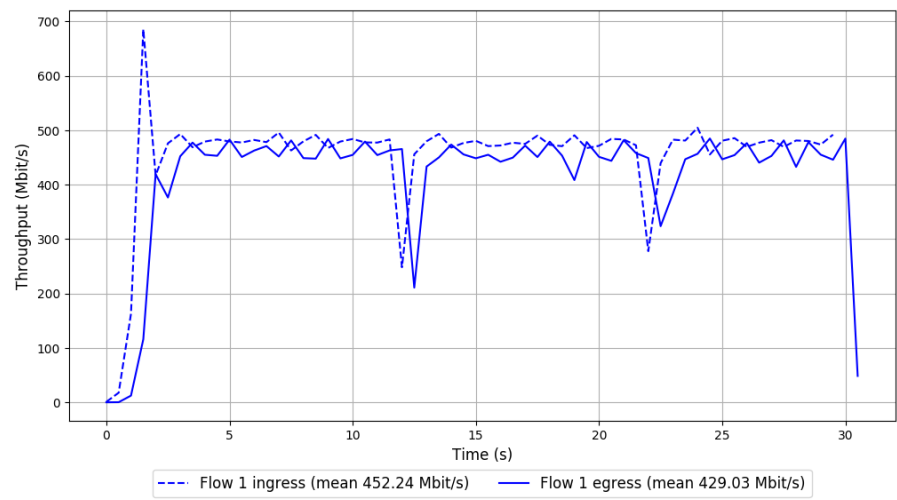


Run 3: Statistics of FillP-Sheep

Start at: 2019-01-17 08:04:48
End at: 2019-01-17 08:05:18
Local clock offset: -0.816 ms
Remote clock offset: -44.936 ms

Below is generated by plot.py at 2019-01-17 09:46:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 429.03 Mbit/s
95th percentile per-packet one-way delay: 59.654 ms
Loss rate: 5.12%
-- Flow 1:
Average throughput: 429.03 Mbit/s
95th percentile per-packet one-way delay: 59.654 ms
Loss rate: 5.12%

Run 3: Report of FillP-Sheep — Data Link

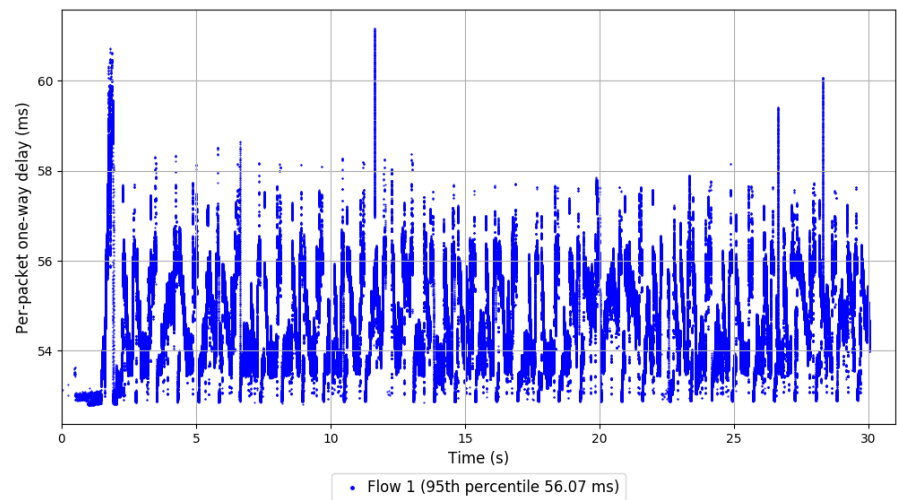
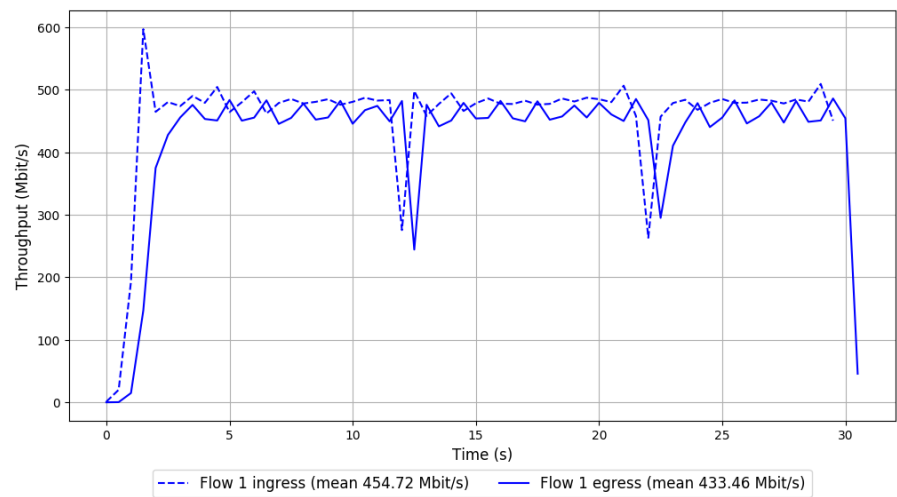


Run 4: Statistics of FillP-Sheep

Start at: 2019-01-17 08:37:38
End at: 2019-01-17 08:38:08
Local clock offset: 1.719 ms
Remote clock offset: -45.737 ms

Below is generated by plot.py at 2019-01-17 09:50:44
Datalink statistics
-- Total of 1 flow:
Average throughput: 433.46 Mbit/s
95th percentile per-packet one-way delay: 56.067 ms
Loss rate: 4.67%
-- Flow 1:
Average throughput: 433.46 Mbit/s
95th percentile per-packet one-way delay: 56.067 ms
Loss rate: 4.67%

Run 4: Report of FillP-Sheep — Data Link



Run 5: Statistics of FillP-Sheep

Start at: 2019-01-17 09:25:41

End at: 2019-01-17 09:26:12

Local clock offset: 1.182 ms

Remote clock offset: -49.682 ms

Below is generated by plot.py at 2019-01-17 09:50:52

Datalink statistics

-- Total of 1 flow:

Average throughput: 432.05 Mbit/s

95th percentile per-packet one-way delay: 52.716 ms

Loss rate: 4.86%

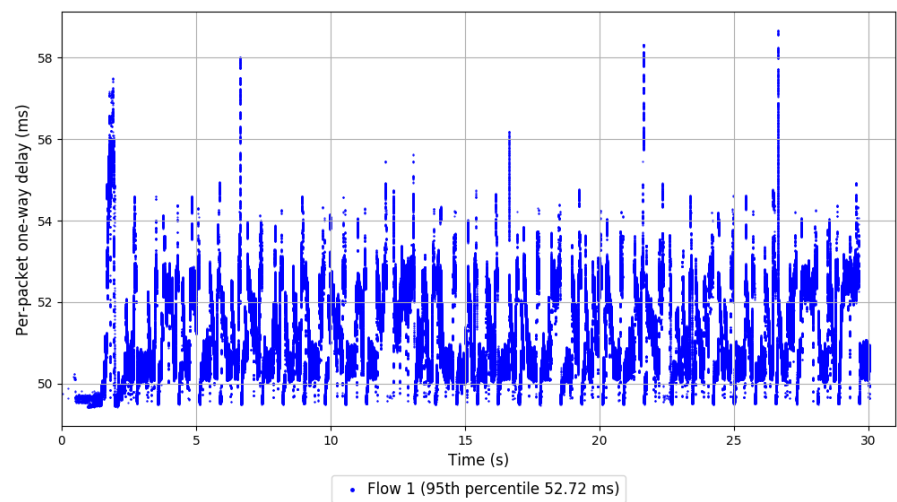
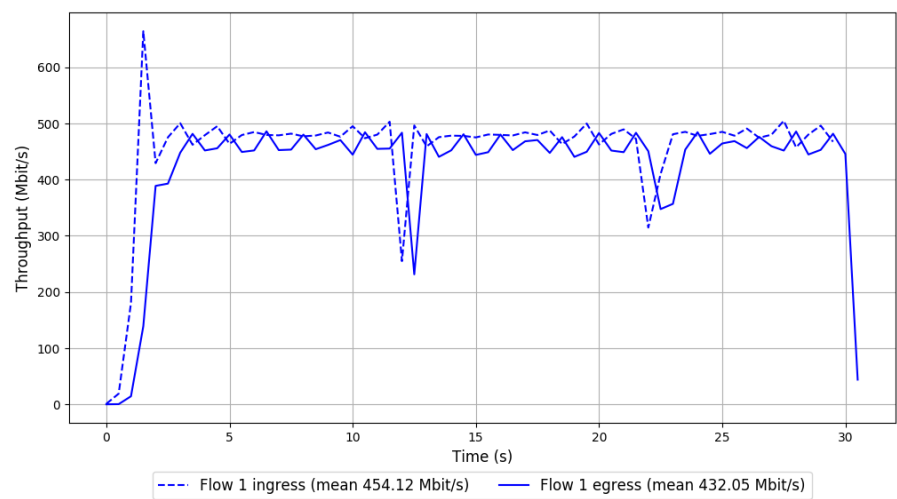
-- Flow 1:

Average throughput: 432.05 Mbit/s

95th percentile per-packet one-way delay: 52.716 ms

Loss rate: 4.86%

Run 5: Report of FillP-Sheep — Data Link

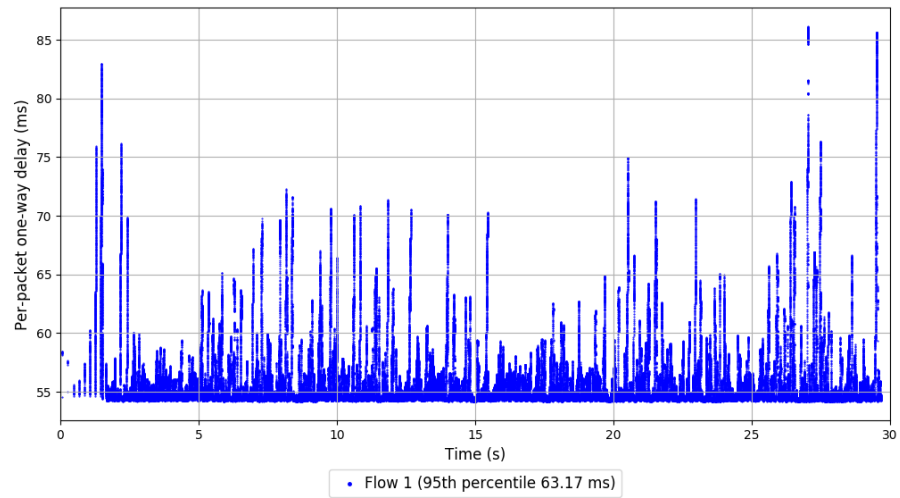
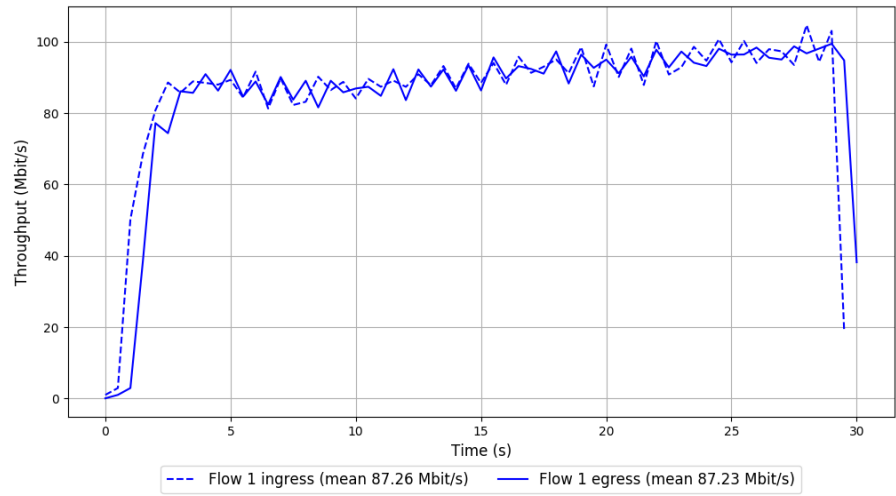


```
Run 1: Statistics of Indigo

Start at: 2019-01-17 07:01:22
End at: 2019-01-17 07:01:53
Local clock offset: 1.091 ms
Remote clock offset: -45.534 ms

# Below is generated by plot.py at 2019-01-17 09:50:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.23 Mbit/s
95th percentile per-packet one-way delay: 63.170 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 87.23 Mbit/s
95th percentile per-packet one-way delay: 63.170 ms
Loss rate: 0.03%
```

Run 1: Report of Indigo — Data Link

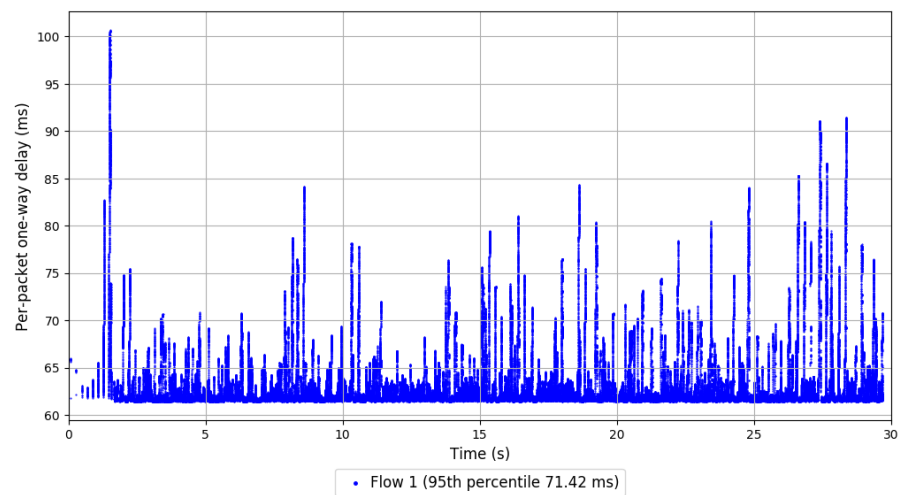
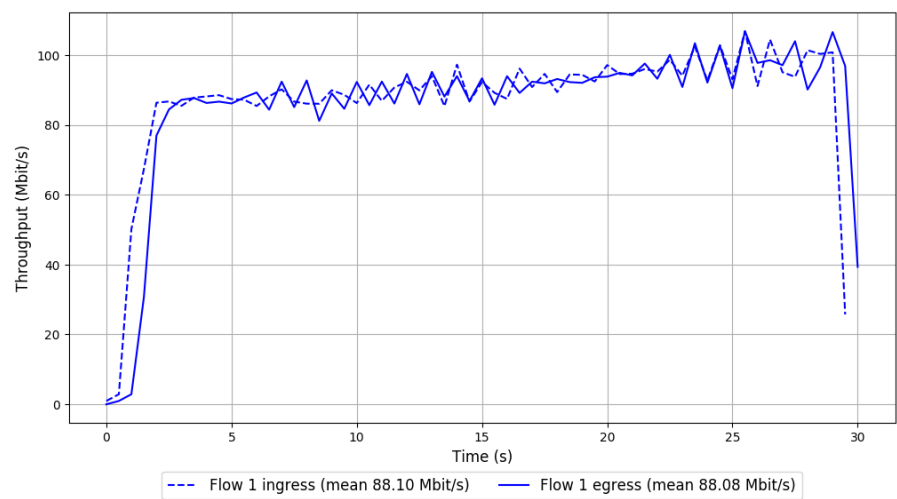


Run 2: Statistics of Indigo

Start at: 2019-01-17 07:28:35
End at: 2019-01-17 07:29:05
Local clock offset: -0.128 ms
Remote clock offset: -39.381 ms

Below is generated by plot.py at 2019-01-17 09:50:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 88.08 Mbit/s
95th percentile per-packet one-way delay: 71.422 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 88.08 Mbit/s
95th percentile per-packet one-way delay: 71.422 ms
Loss rate: 0.02%

Run 2: Report of Indigo — Data Link

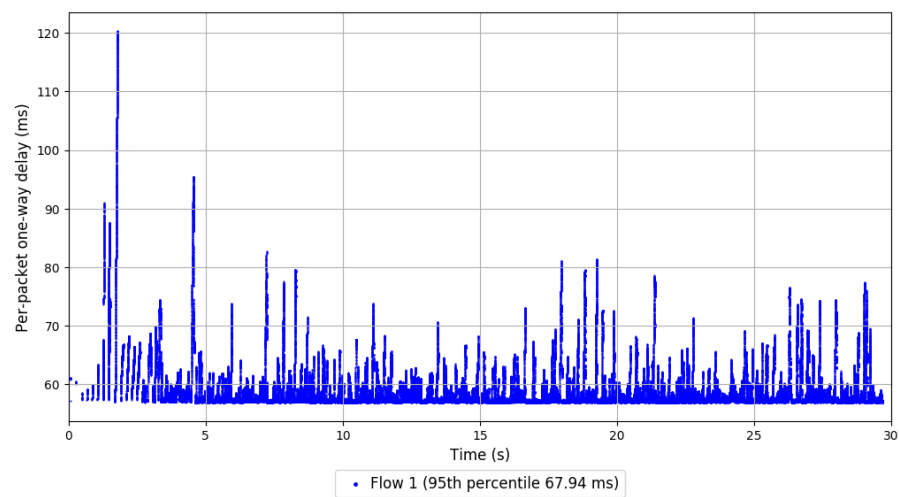
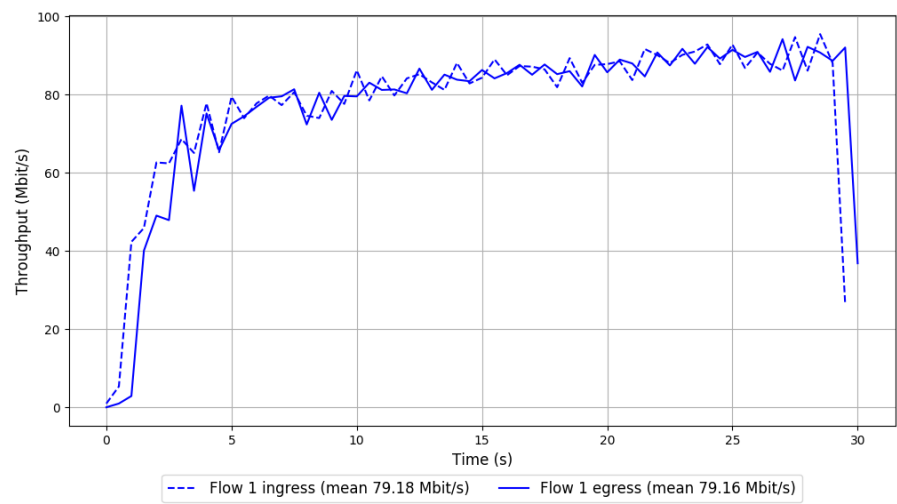


Run 3: Statistics of Indigo

Start at: 2019-01-17 08:01:10
End at: 2019-01-17 08:01:40
Local clock offset: 0.279 ms
Remote clock offset: -40.894 ms

Below is generated by plot.py at 2019-01-17 09:50:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 79.16 Mbit/s
95th percentile per-packet one-way delay: 67.941 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 79.16 Mbit/s
95th percentile per-packet one-way delay: 67.941 ms
Loss rate: 0.03%

Run 3: Report of Indigo — Data Link

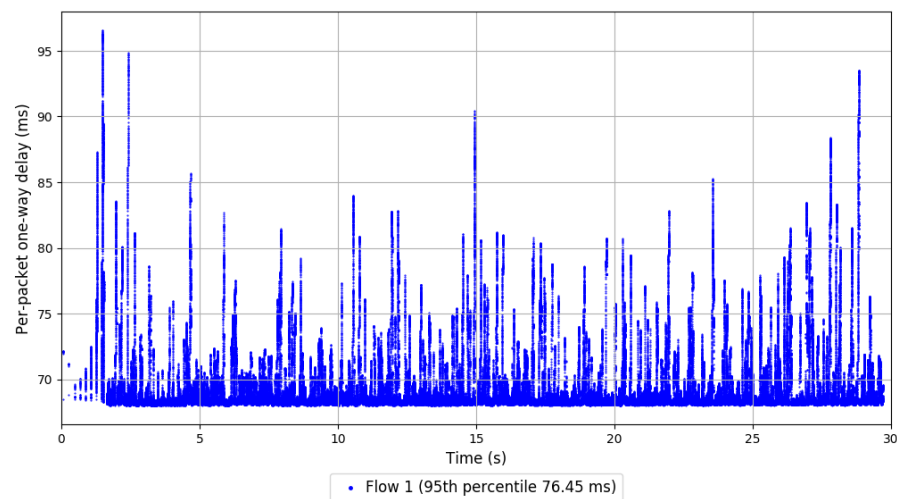
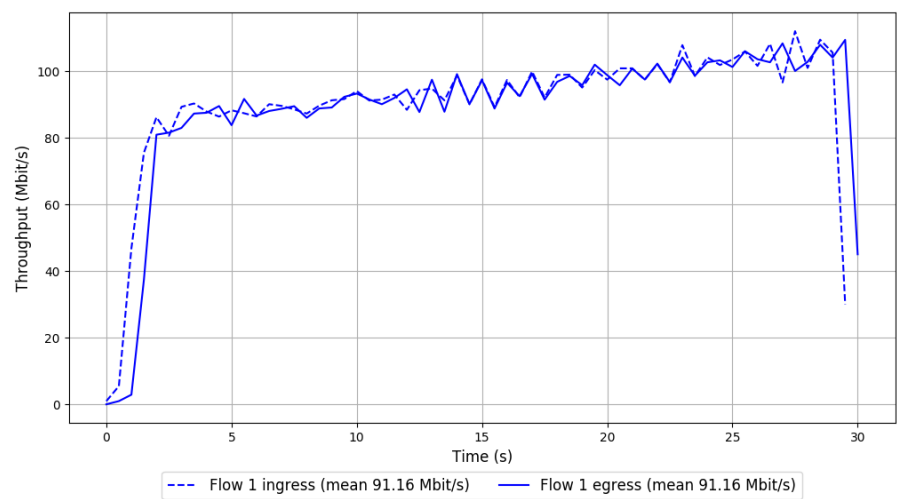


Run 4: Statistics of Indigo

Start at: 2019-01-17 08:28:20
End at: 2019-01-17 08:28:50
Local clock offset: -1.44 ms
Remote clock offset: -32.915 ms

Below is generated by plot.py at 2019-01-17 09:50:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 91.16 Mbit/s
95th percentile per-packet one-way delay: 76.454 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 91.16 Mbit/s
95th percentile per-packet one-way delay: 76.454 ms
Loss rate: 0.00%

Run 4: Report of Indigo — Data Link

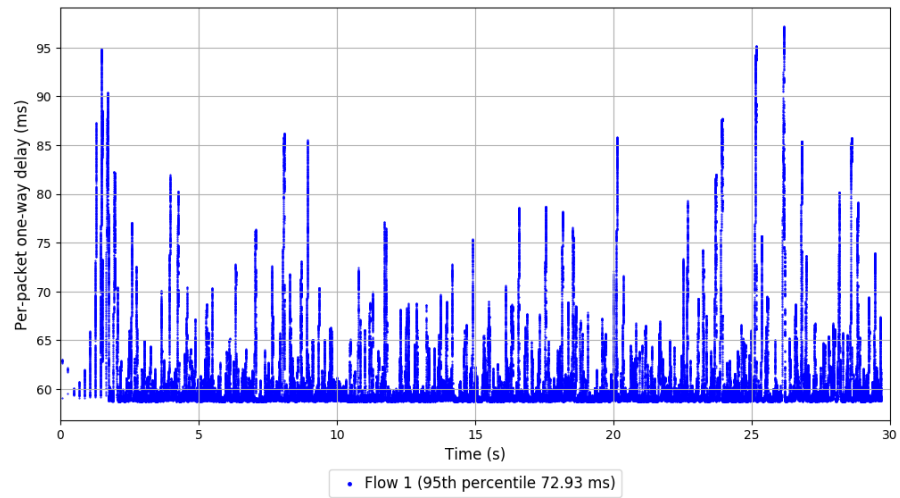
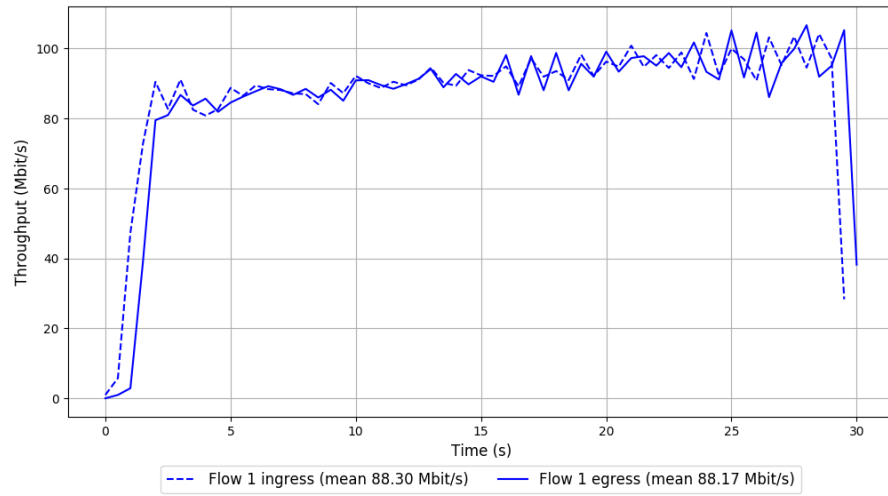


Run 5: Statistics of Indigo

Start at: 2019-01-17 09:22:05
End at: 2019-01-17 09:22:35
Local clock offset: 1.784 ms
Remote clock offset: -40.224 ms

Below is generated by plot.py at 2019-01-17 09:50:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 88.17 Mbit/s
95th percentile per-packet one-way delay: 72.929 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 88.17 Mbit/s
95th percentile per-packet one-way delay: 72.929 ms
Loss rate: 0.14%

Run 5: Report of Indigo — Data Link

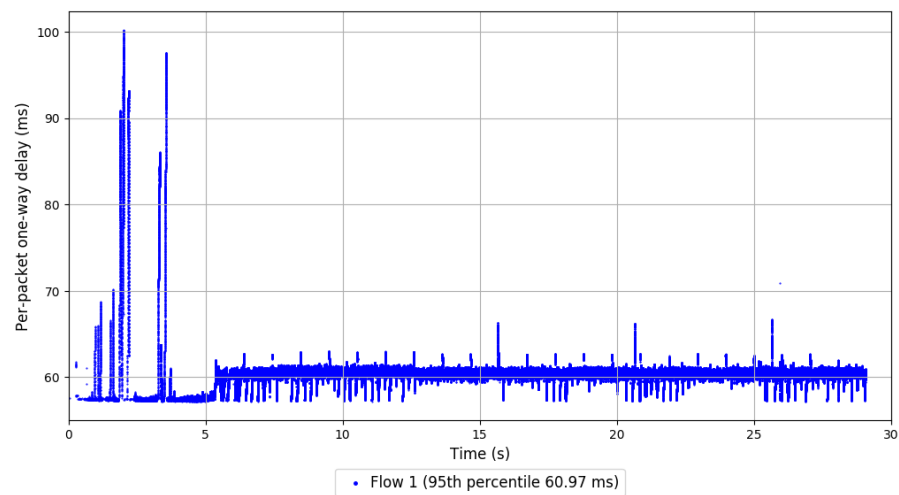
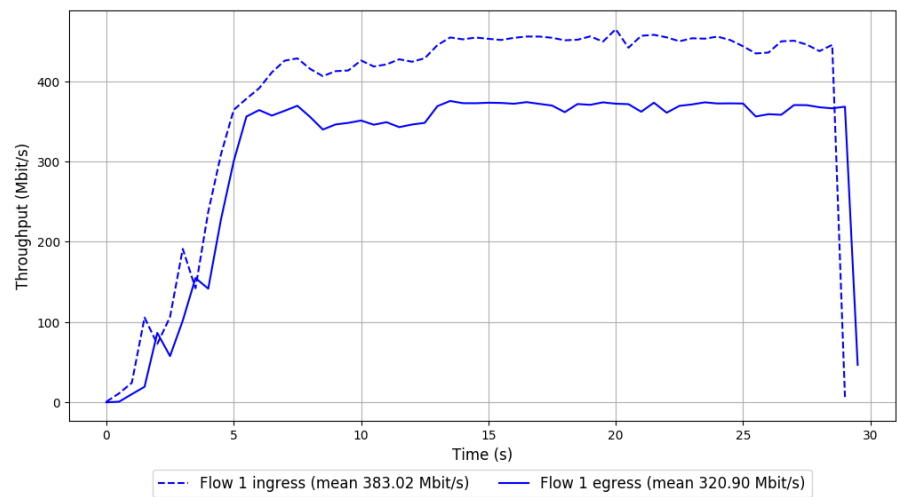


Run 1: Statistics of Indigo-MusesC3

Start at: 2019-01-17 07:10:27
End at: 2019-01-17 07:10:57
Local clock offset: 1.283 ms
Remote clock offset: -41.942 ms

Below is generated by plot.py at 2019-01-17 09:50:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 320.90 Mbit/s
95th percentile per-packet one-way delay: 60.973 ms
Loss rate: 16.21%
-- Flow 1:
Average throughput: 320.90 Mbit/s
95th percentile per-packet one-way delay: 60.973 ms
Loss rate: 16.21%

Run 1: Report of Indigo-MusesC3 — Data Link

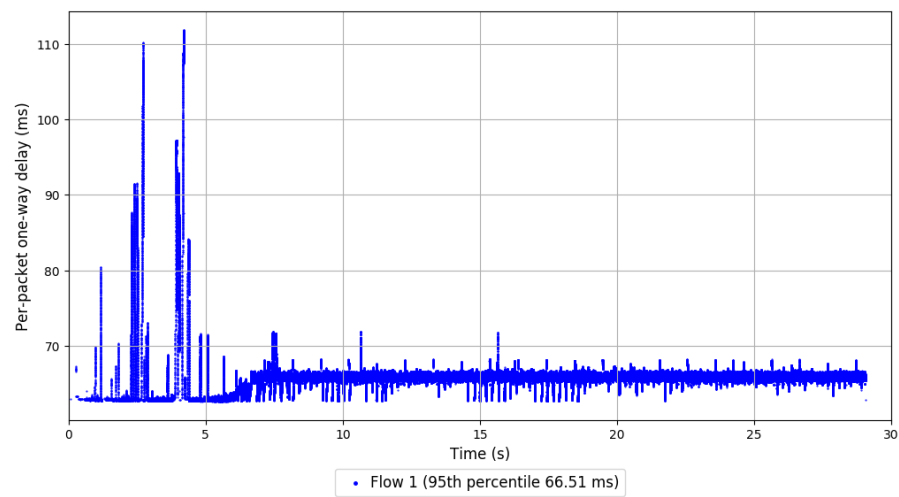
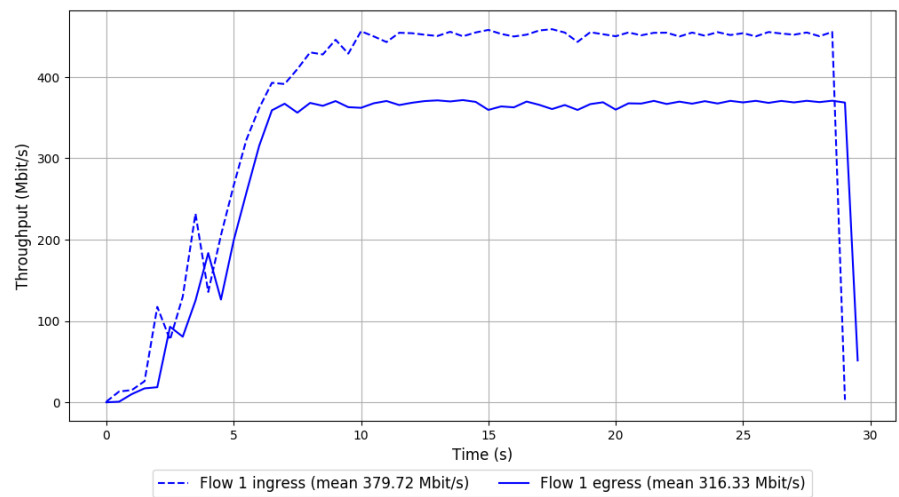


Run 2: Statistics of Indigo-MusesC3

Start at: 2019-01-17 07:37:38
End at: 2019-01-17 07:38:08
Local clock offset: 3.523 ms
Remote clock offset: -34.293 ms

Below is generated by plot.py at 2019-01-17 09:50:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 316.33 Mbit/s
95th percentile per-packet one-way delay: 66.508 ms
Loss rate: 16.69%
-- Flow 1:
Average throughput: 316.33 Mbit/s
95th percentile per-packet one-way delay: 66.508 ms
Loss rate: 16.69%

Run 2: Report of Indigo-MusesC3 — Data Link

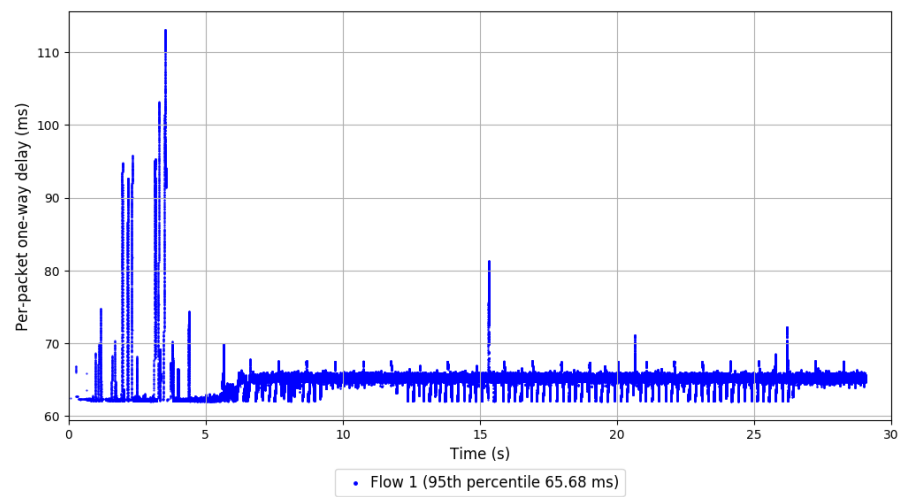
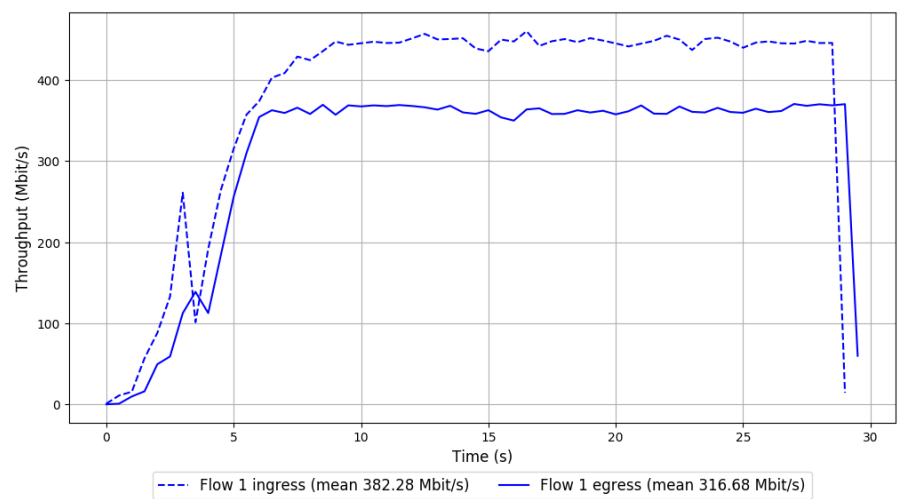


Run 3: Statistics of Indigo-MusesC3

Start at: 2019-01-17 08:10:14
End at: 2019-01-17 08:10:44
Local clock offset: -3.646 ms
Remote clock offset: -42.177 ms

Below is generated by plot.py at 2019-01-17 09:50:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 316.68 Mbit/s
95th percentile per-packet one-way delay: 65.684 ms
Loss rate: 17.15%
-- Flow 1:
Average throughput: 316.68 Mbit/s
95th percentile per-packet one-way delay: 65.684 ms
Loss rate: 17.15%

Run 3: Report of Indigo-MusesC3 — Data Link



Run 4: Statistics of Indigo-MusesC3

Start at: 2019-01-17 08:48:41

End at: 2019-01-17 08:49:11

Local clock offset: 2.916 ms

Remote clock offset: -45.904 ms

Run 4: Report of Indigo-MusesC3 — Data Link

Figure is missing

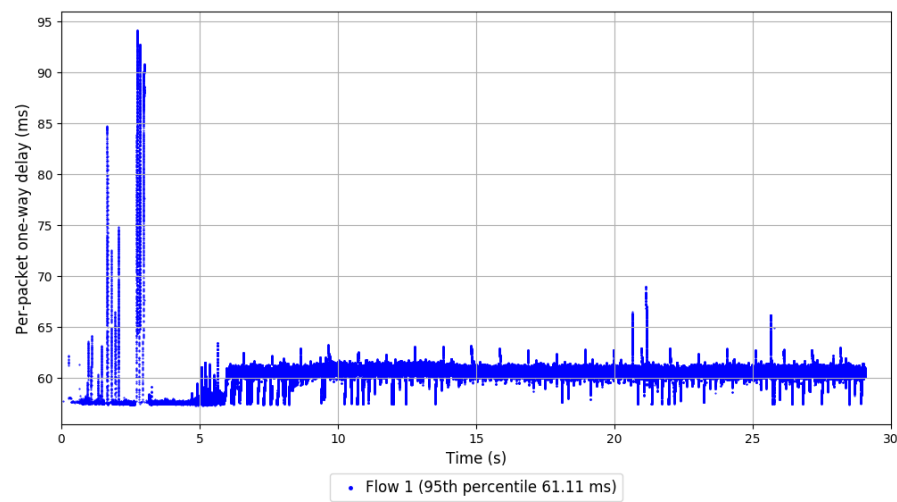
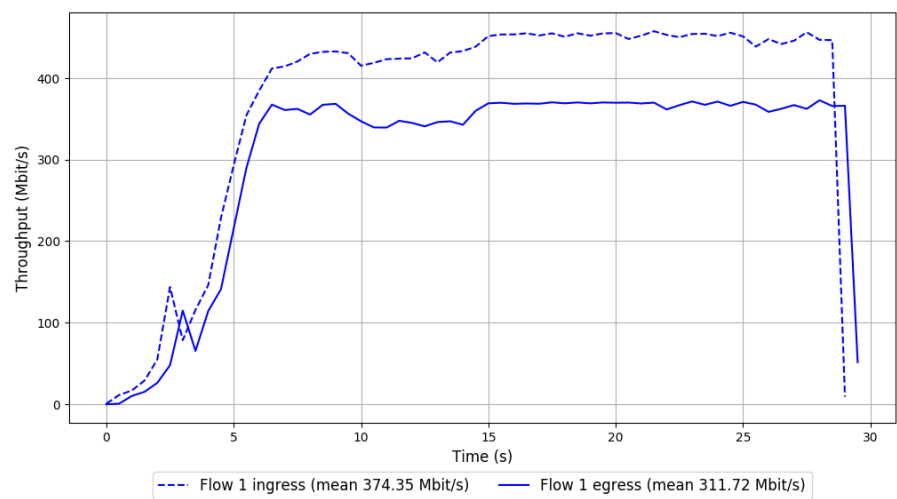
Figure is missing

Run 5: Statistics of Indigo-MusesC3

Start at: 2019-01-17 09:31:09
End at: 2019-01-17 09:31:39
Local clock offset: 1.547 ms
Remote clock offset: -41.672 ms

Below is generated by plot.py at 2019-01-17 09:50:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 311.72 Mbit/s
95th percentile per-packet one-way delay: 61.109 ms
Loss rate: 16.73%
-- Flow 1:
Average throughput: 311.72 Mbit/s
95th percentile per-packet one-way delay: 61.109 ms
Loss rate: 16.73%

Run 5: Report of Indigo-MusesC3 — Data Link

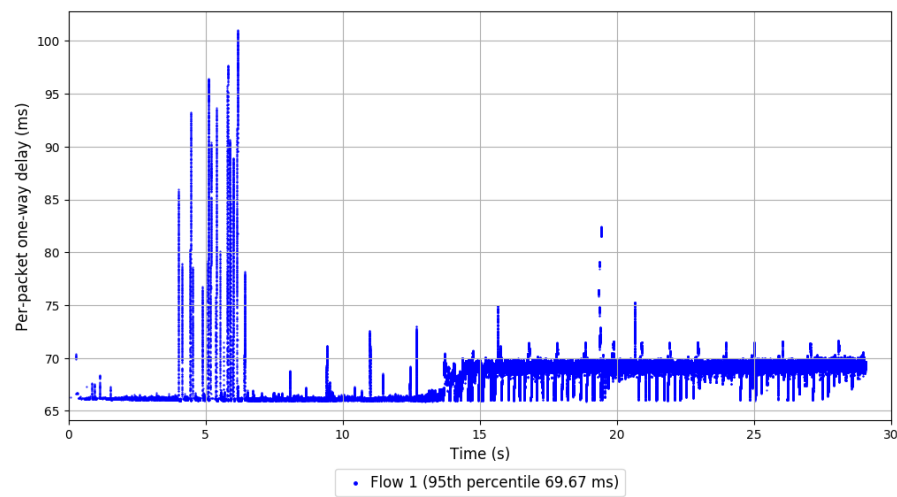
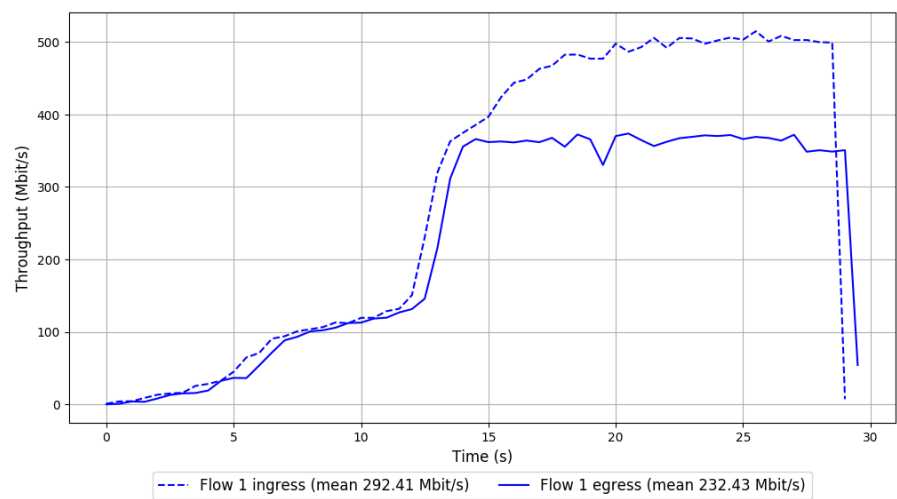


Run 1: Statistics of Indigo-MusesC5

Start at: 2019-01-17 06:34:51
End at: 2019-01-17 06:35:21
Local clock offset: -0.995 ms
Remote clock offset: -35.558 ms

Below is generated by plot.py at 2019-01-17 09:50:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 232.43 Mbit/s
95th percentile per-packet one-way delay: 69.668 ms
Loss rate: 20.50%
-- Flow 1:
Average throughput: 232.43 Mbit/s
95th percentile per-packet one-way delay: 69.668 ms
Loss rate: 20.50%

Run 1: Report of Indigo-MusesC5 — Data Link

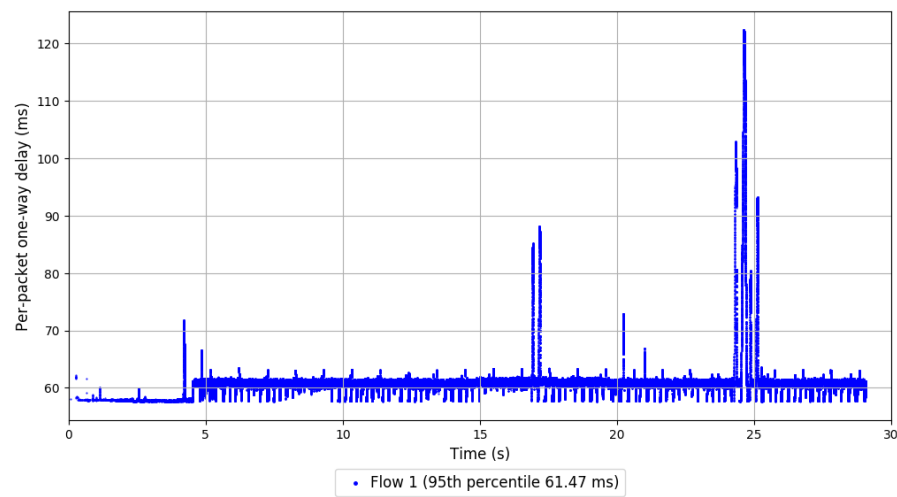
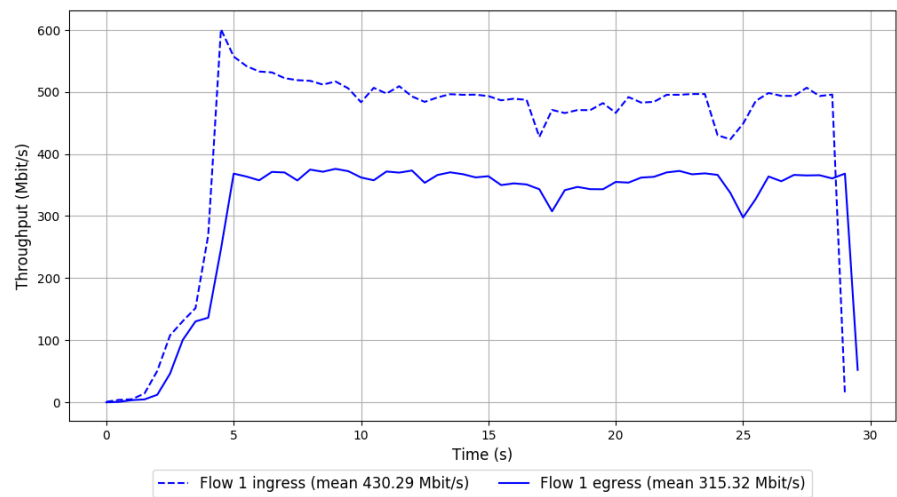


Run 2: Statistics of Indigo-MusesC5

Start at: 2019-01-17 07:13:08
End at: 2019-01-17 07:13:38
Local clock offset: -1.026 ms
Remote clock offset: -46.532 ms

Below is generated by plot.py at 2019-01-17 09:50:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 315.32 Mbit/s
95th percentile per-packet one-way delay: 61.472 ms
Loss rate: 26.71%
-- Flow 1:
Average throughput: 315.32 Mbit/s
95th percentile per-packet one-way delay: 61.472 ms
Loss rate: 26.71%

Run 2: Report of Indigo-MusesC5 — Data Link

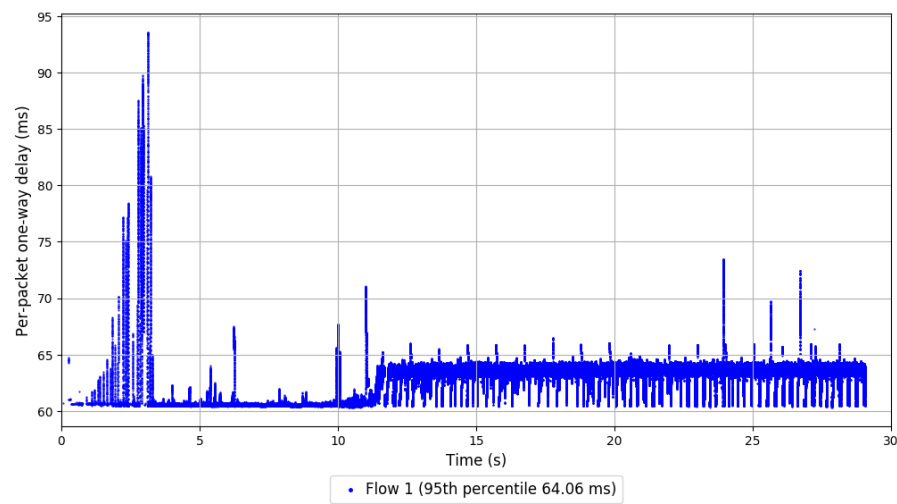
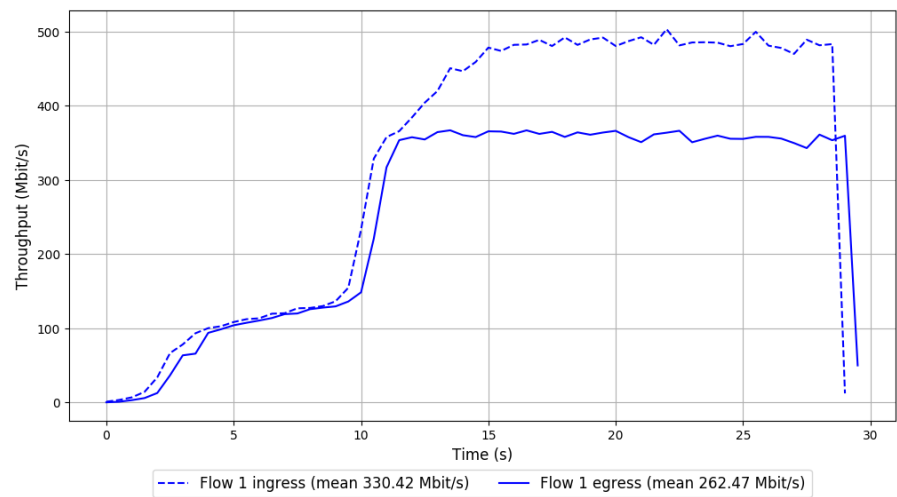


Run 3: Statistics of Indigo-MusesC5

Start at: 2019-01-17 07:40:20
End at: 2019-01-17 07:40:50
Local clock offset: 0.869 ms
Remote clock offset: -39.108 ms

Below is generated by plot.py at 2019-01-17 09:52:06
Datalink statistics
-- Total of 1 flow:
Average throughput: 262.47 Mbit/s
95th percentile per-packet one-way delay: 64.064 ms
Loss rate: 20.55%
-- Flow 1:
Average throughput: 262.47 Mbit/s
95th percentile per-packet one-way delay: 64.064 ms
Loss rate: 20.55%

Run 3: Report of Indigo-MusesC5 — Data Link

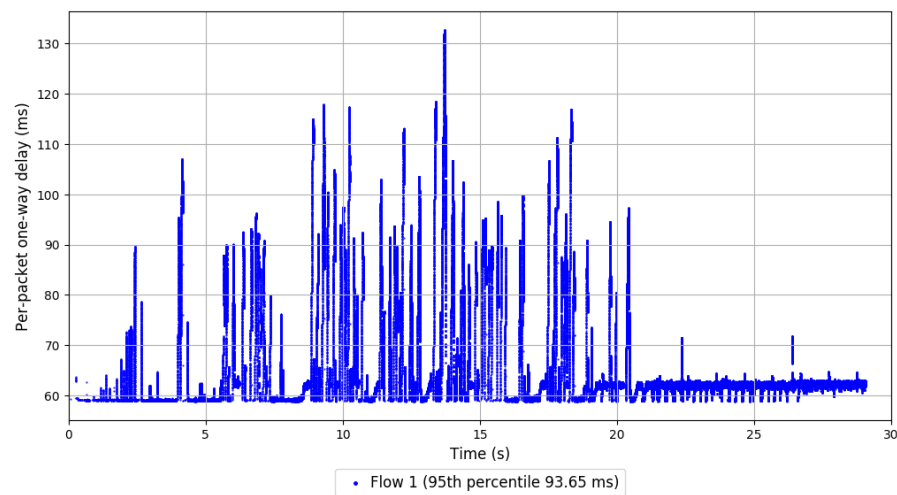
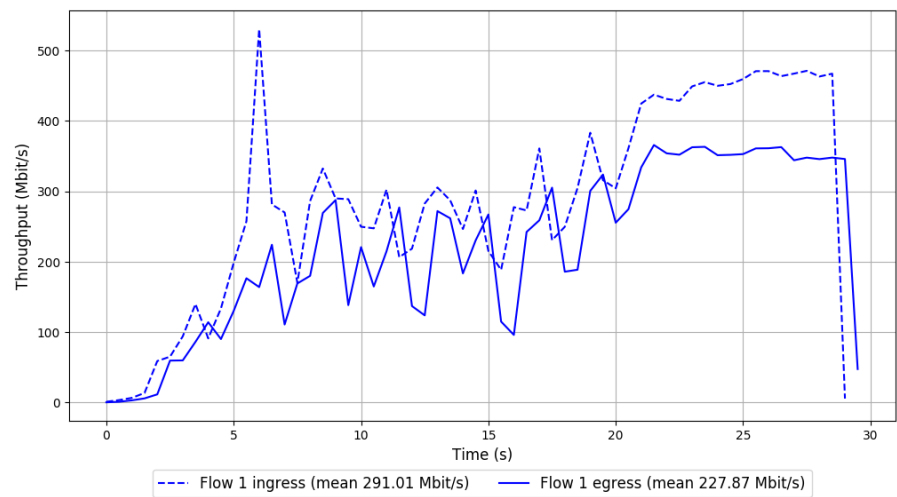


Run 4: Statistics of Indigo-MusesC5

Start at: 2019-01-17 08:12:59
End at: 2019-01-17 08:13:29
Local clock offset: -1.056 ms
Remote clock offset: -39.254 ms

Below is generated by plot.py at 2019-01-17 09:52:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 227.87 Mbit/s
95th percentile per-packet one-way delay: 93.647 ms
Loss rate: 21.69%
-- Flow 1:
Average throughput: 227.87 Mbit/s
95th percentile per-packet one-way delay: 93.647 ms
Loss rate: 21.69%

Run 4: Report of Indigo-MusesC5 — Data Link

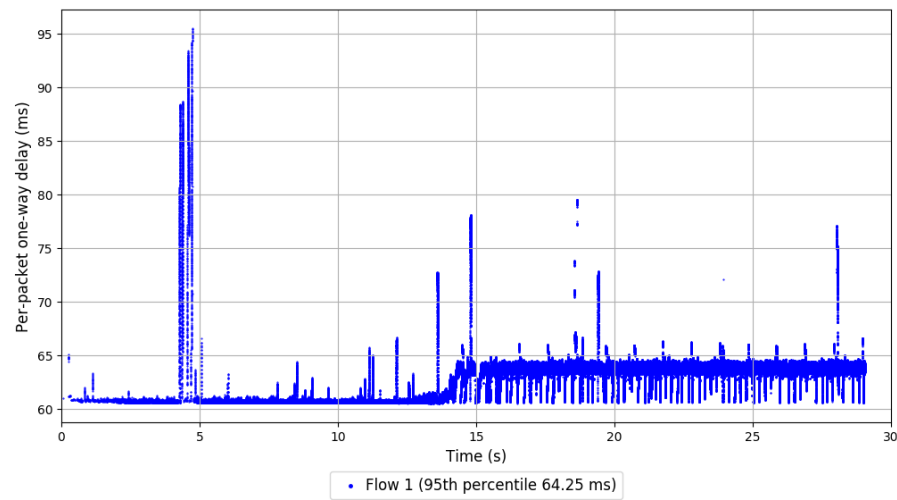
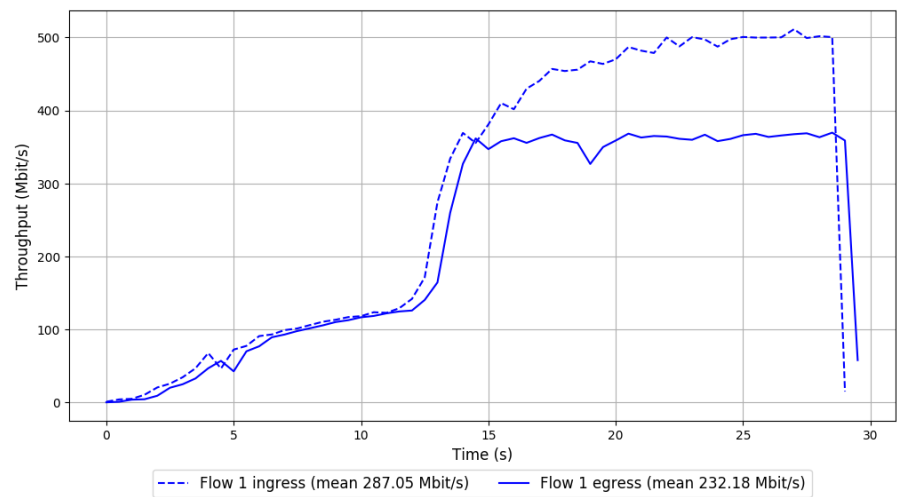


Run 5: Statistics of Indigo-MusesC5

Start at: 2019-01-17 09:06:45
End at: 2019-01-17 09:07:15
Local clock offset: -0.593 ms
Remote clock offset: -40.887 ms

Below is generated by plot.py at 2019-01-17 09:52:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 232.18 Mbit/s
95th percentile per-packet one-way delay: 64.247 ms
Loss rate: 19.11%
-- Flow 1:
Average throughput: 232.18 Mbit/s
95th percentile per-packet one-way delay: 64.247 ms
Loss rate: 19.11%

Run 5: Report of Indigo-MusesC5 — Data Link

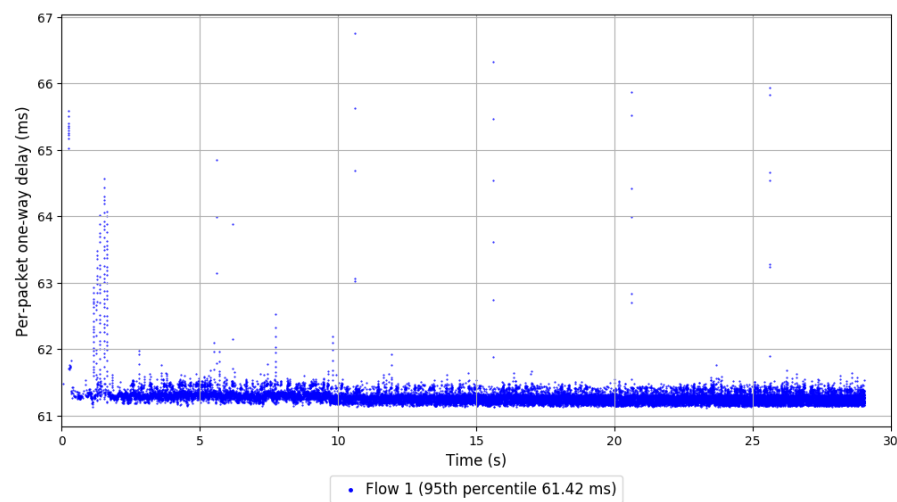
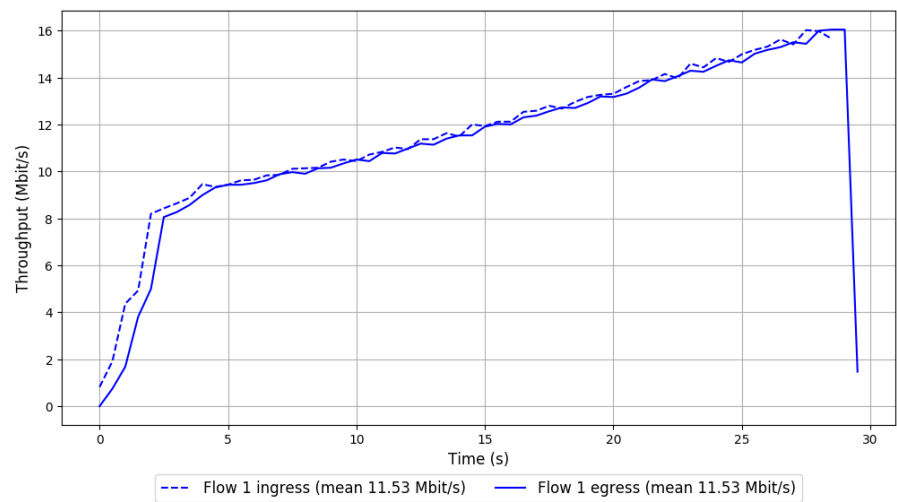



```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-01-17 06:44:29
End at: 2019-01-17 06:44:59
Local clock offset: 0.121 ms
Remote clock offset: -42.247 ms

# Below is generated by plot.py at 2019-01-17 09:52:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 11.53 Mbit/s
95th percentile per-packet one-way delay: 61.423 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 11.53 Mbit/s
95th percentile per-packet one-way delay: 61.423 ms
Loss rate: 0.01%
```

Run 1: Report of Indigo-MusesD — Data Link

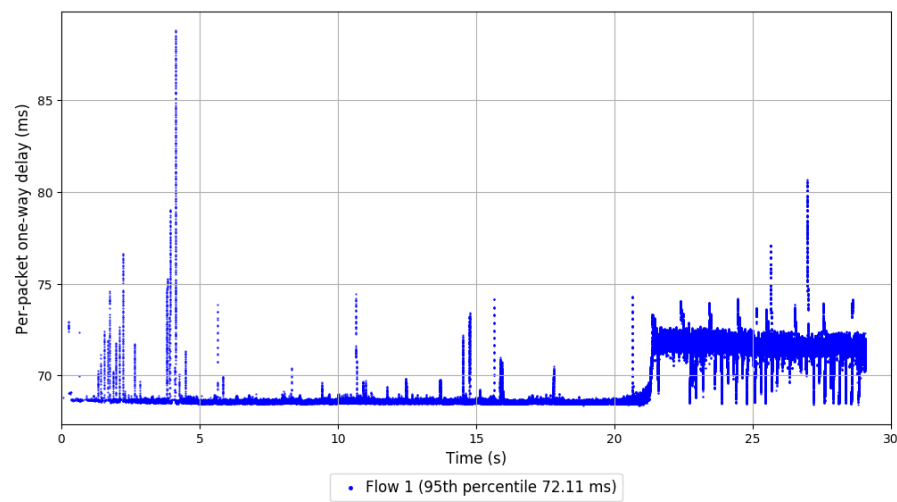
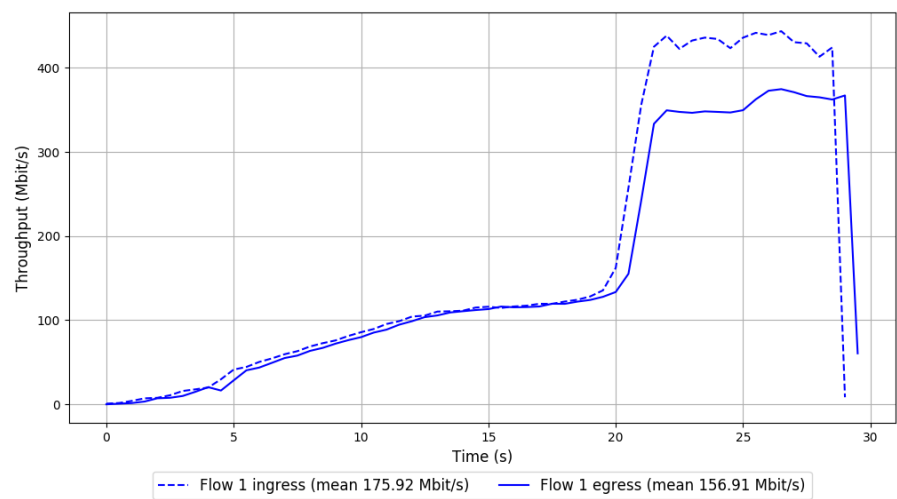


Run 2: Statistics of Indigo-MusesD

Start at: 2019-01-17 07:17:23
End at: 2019-01-17 07:17:53
Local clock offset: -2.241 ms
Remote clock offset: -34.158 ms

Below is generated by plot.py at 2019-01-17 09:52:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 156.91 Mbit/s
95th percentile per-packet one-way delay: 72.113 ms
Loss rate: 10.79%
-- Flow 1:
Average throughput: 156.91 Mbit/s
95th percentile per-packet one-way delay: 72.113 ms
Loss rate: 10.79%

Run 2: Report of Indigo-MusesD — Data Link



Run 3: Statistics of Indigo-MusesD

Start at: 2019-01-17 07:44:31

End at: 2019-01-17 07:45:01

Local clock offset: -1.653 ms

Remote clock offset: -41.817 ms

Below is generated by plot.py at 2019-01-17 09:52:13

Datalink statistics

-- Total of 1 flow:

Average throughput: 14.51 Mbit/s

95th percentile per-packet one-way delay: 60.643 ms

Loss rate: 0.00%

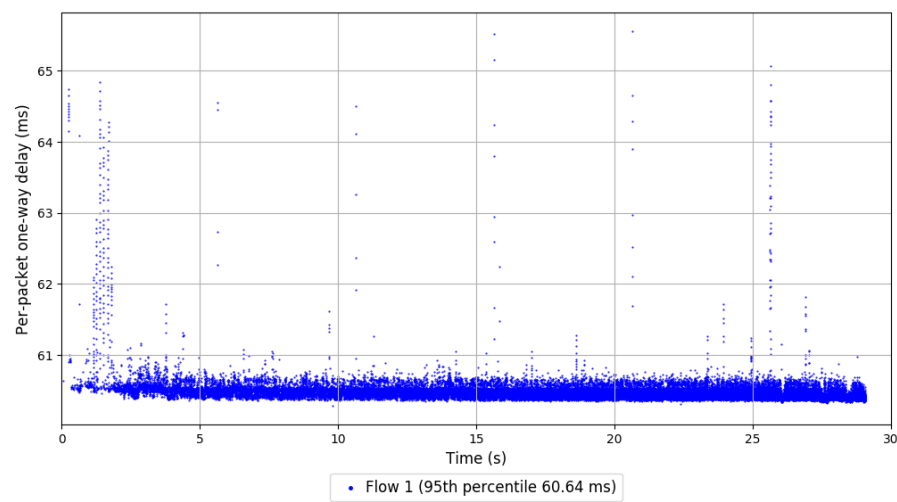
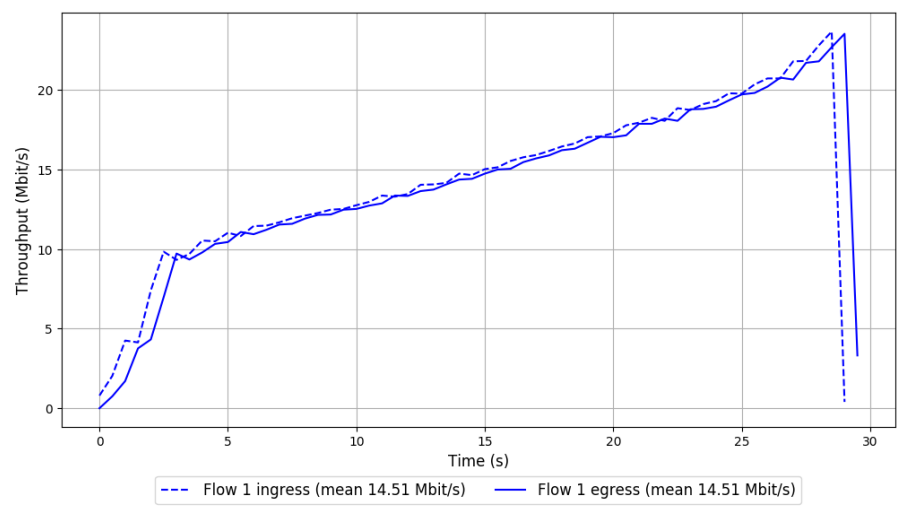
-- Flow 1:

Average throughput: 14.51 Mbit/s

95th percentile per-packet one-way delay: 60.643 ms

Loss rate: 0.00%

Run 3: Report of Indigo-MusesD — Data Link

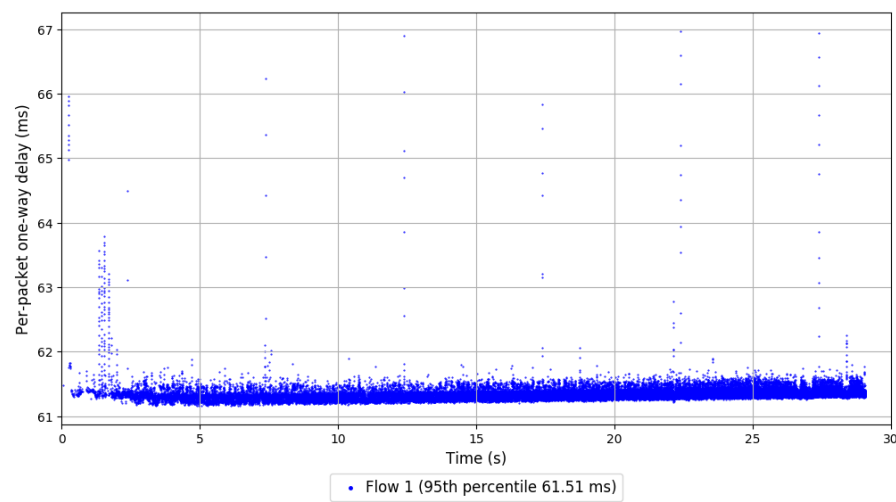
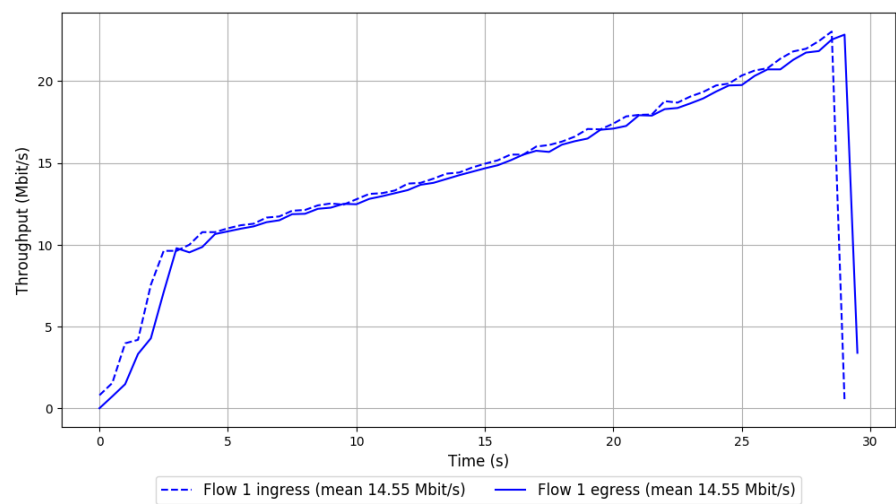


Run 4: Statistics of Indigo-MusesD

Start at: 2019-01-17 08:17:08
End at: 2019-01-17 08:17:38
Local clock offset: -3.121 ms
Remote clock offset: -39.224 ms

Below is generated by plot.py at 2019-01-17 09:52:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 14.55 Mbit/s
95th percentile per-packet one-way delay: 61.506 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 14.55 Mbit/s
95th percentile per-packet one-way delay: 61.506 ms
Loss rate: 0.00%

Run 4: Report of Indigo-MusesD — Data Link

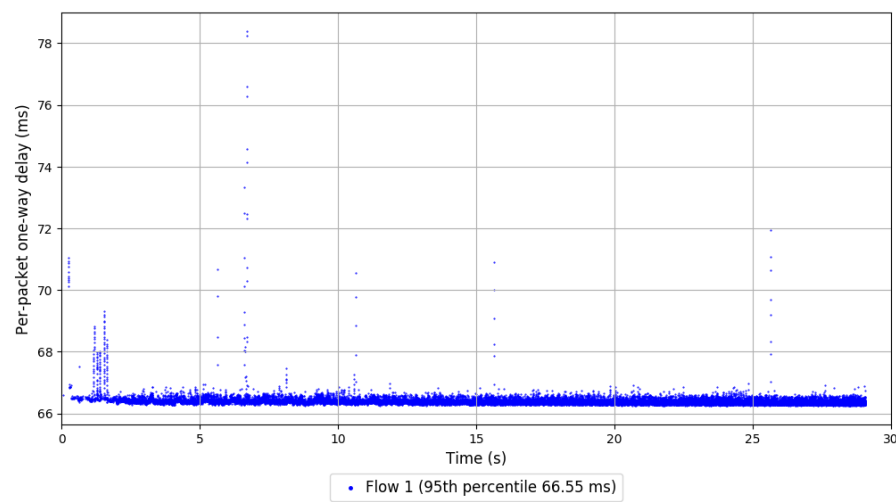
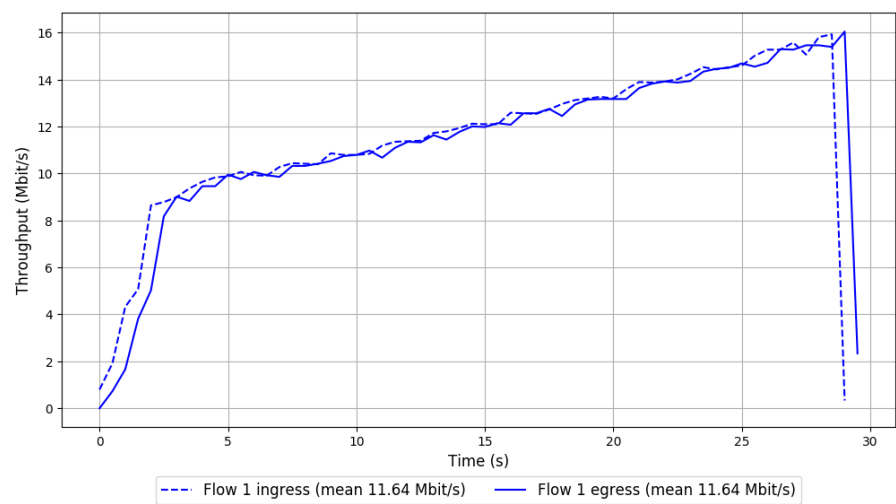


Run 5: Statistics of Indigo-MusesD

Start at: 2019-01-17 09:10:56
End at: 2019-01-17 09:11:26
Local clock offset: 2.173 ms
Remote clock offset: -35.001 ms

Below is generated by plot.py at 2019-01-17 09:52:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 11.64 Mbit/s
95th percentile per-packet one-way delay: 66.548 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 11.64 Mbit/s
95th percentile per-packet one-way delay: 66.548 ms
Loss rate: 0.02%

Run 5: Report of Indigo-MusesD — Data Link



Run 1: Statistics of Indigo-MusesT

Start at: 2019-01-17 06:37:37

End at: 2019-01-17 06:38:07

Local clock offset: -2.903 ms

Remote clock offset: -40.334 ms

Below is generated by plot.py at 2019-01-17 09:53:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 329.09 Mbit/s

95th percentile per-packet one-way delay: 67.422 ms

Loss rate: 12.08%

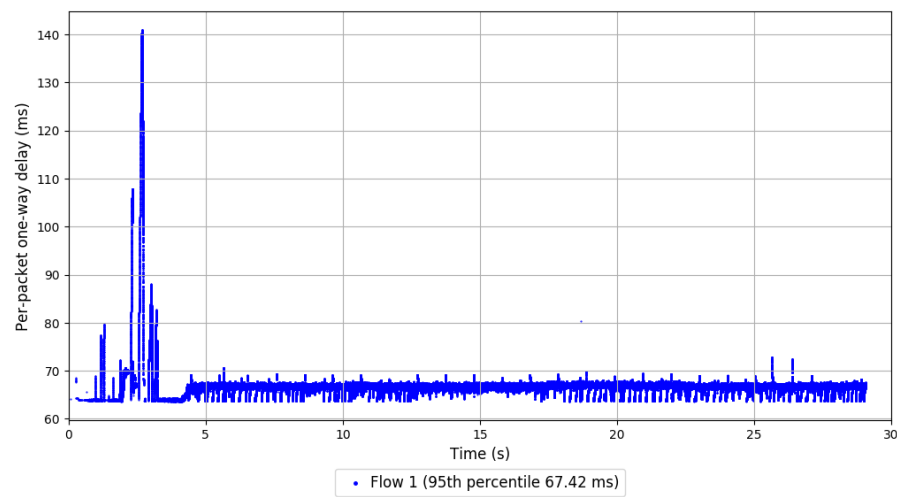
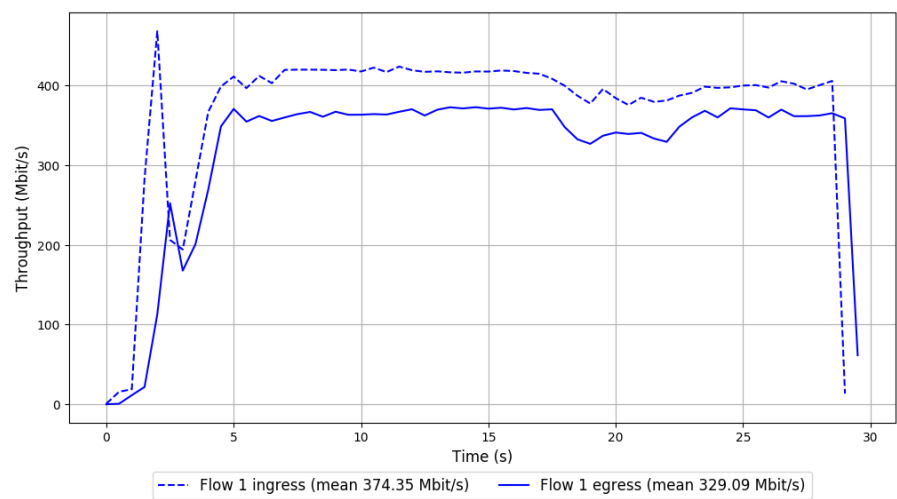
-- Flow 1:

Average throughput: 329.09 Mbit/s

95th percentile per-packet one-way delay: 67.422 ms

Loss rate: 12.08%

Run 1: Report of Indigo-MusesT — Data Link

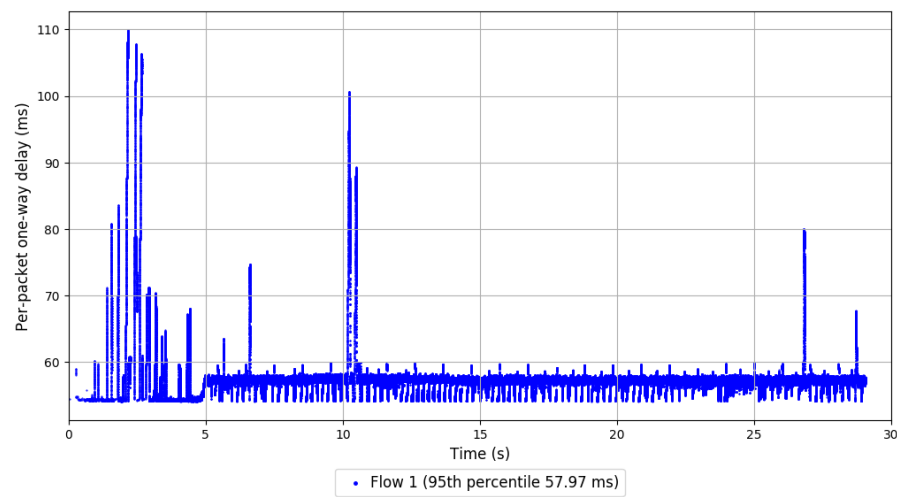
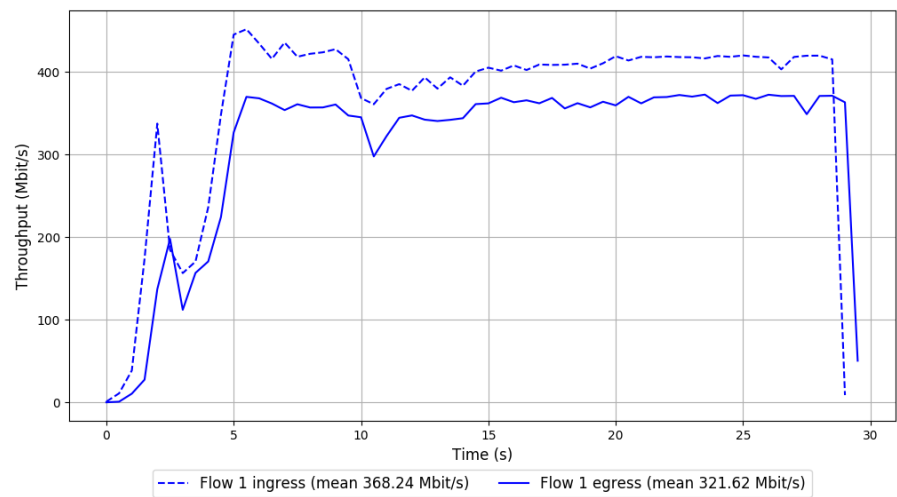


Run 2: Statistics of Indigo-MusesT

Start at: 2019-01-17 07:15:58
End at: 2019-01-17 07:16:28
Local clock offset: 0.739 ms
Remote clock offset: -45.802 ms

Below is generated by plot.py at 2019-01-17 09:54:19
Datalink statistics
-- Total of 1 flow:
Average throughput: 321.62 Mbit/s
95th percentile per-packet one-way delay: 57.970 ms
Loss rate: 12.65%
-- Flow 1:
Average throughput: 321.62 Mbit/s
95th percentile per-packet one-way delay: 57.970 ms
Loss rate: 12.65%

Run 2: Report of Indigo-MusesT — Data Link

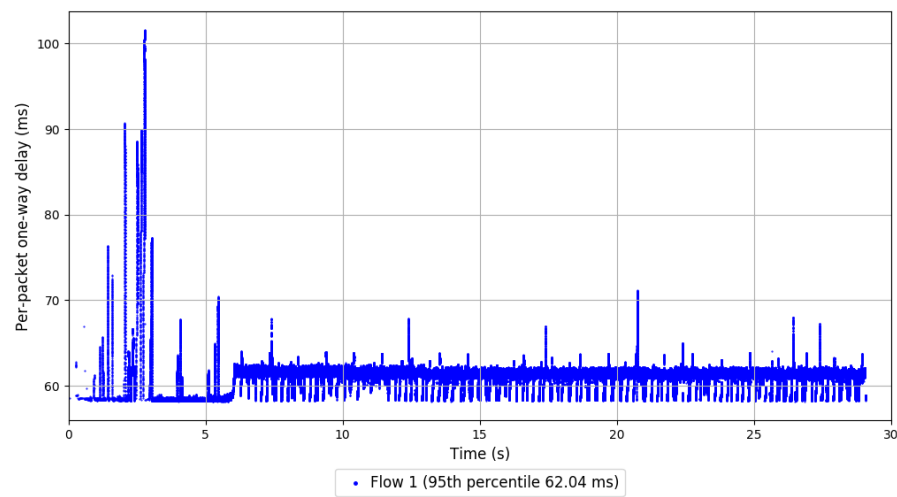
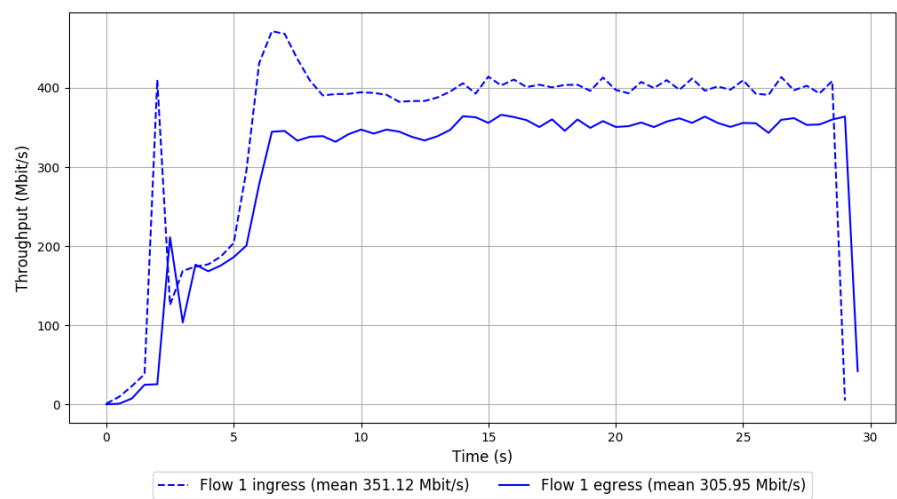


Run 3: Statistics of Indigo-MusesT

Start at: 2019-01-17 07:43:06
End at: 2019-01-17 07:43:36
Local clock offset: -0.794 ms
Remote clock offset: -45.863 ms

Below is generated by plot.py at 2019-01-17 09:54:19
Datalink statistics
-- Total of 1 flow:
Average throughput: 305.95 Mbit/s
95th percentile per-packet one-way delay: 62.036 ms
Loss rate: 12.87%
-- Flow 1:
Average throughput: 305.95 Mbit/s
95th percentile per-packet one-way delay: 62.036 ms
Loss rate: 12.87%

Run 3: Report of Indigo-MusesT — Data Link

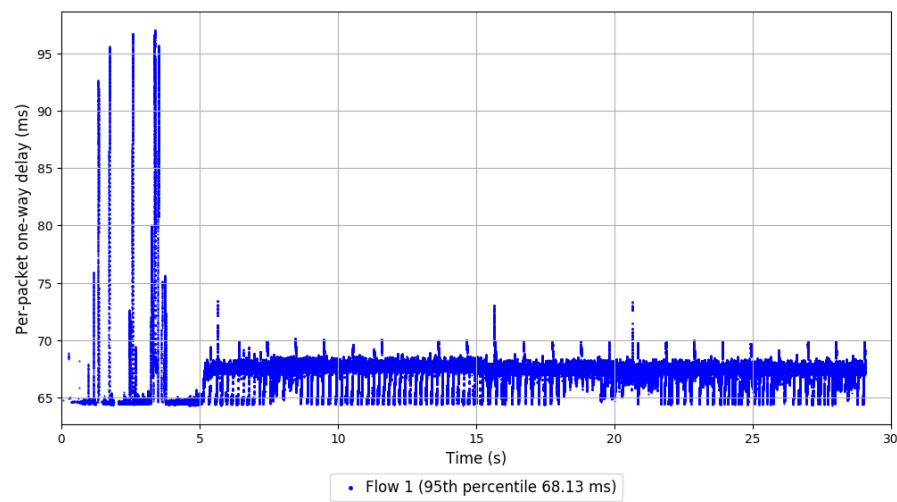
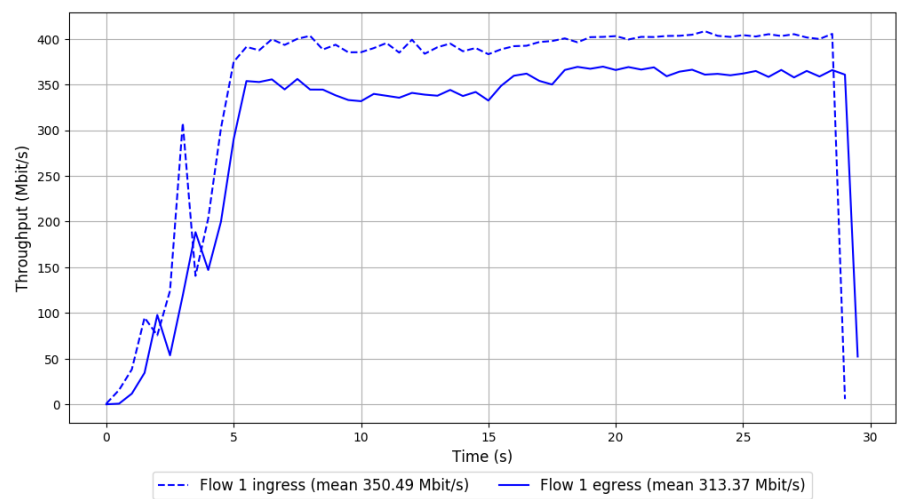


Run 4: Statistics of Indigo-MusesT

Start at: 2019-01-17 08:15:43
End at: 2019-01-17 08:16:13
Local clock offset: -1.204 ms
Remote clock offset: -34.121 ms

Below is generated by plot.py at 2019-01-17 09:54:23
Datalink statistics
-- Total of 1 flow:
Average throughput: 313.37 Mbit/s
95th percentile per-packet one-way delay: 68.129 ms
Loss rate: 10.58%
-- Flow 1:
Average throughput: 313.37 Mbit/s
95th percentile per-packet one-way delay: 68.129 ms
Loss rate: 10.58%

Run 4: Report of Indigo-MusesT — Data Link

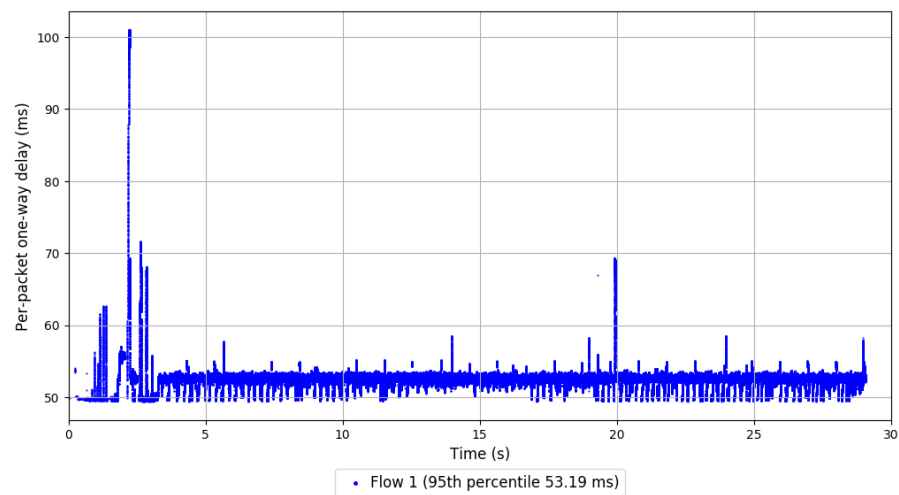
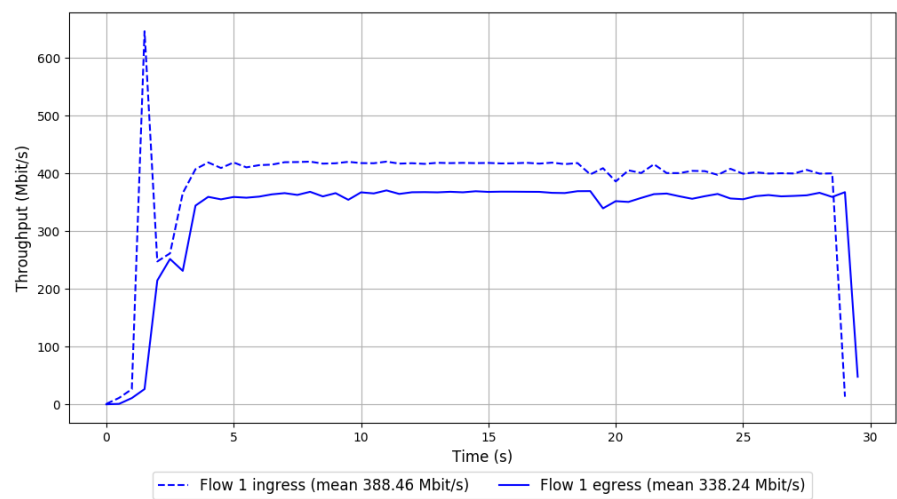


Run 5: Statistics of Indigo-MusesT

Start at: 2019-01-17 09:09:30
End at: 2019-01-17 09:10:00
Local clock offset: 2.024 ms
Remote clock offset: -49.182 ms

Below is generated by plot.py at 2019-01-17 09:55:10
Datalink statistics
-- Total of 1 flow:
Average throughput: 338.24 Mbit/s
95th percentile per-packet one-way delay: 53.194 ms
Loss rate: 12.92%
-- Flow 1:
Average throughput: 338.24 Mbit/s
95th percentile per-packet one-way delay: 53.194 ms
Loss rate: 12.92%

Run 5: Report of Indigo-MusesT — Data Link

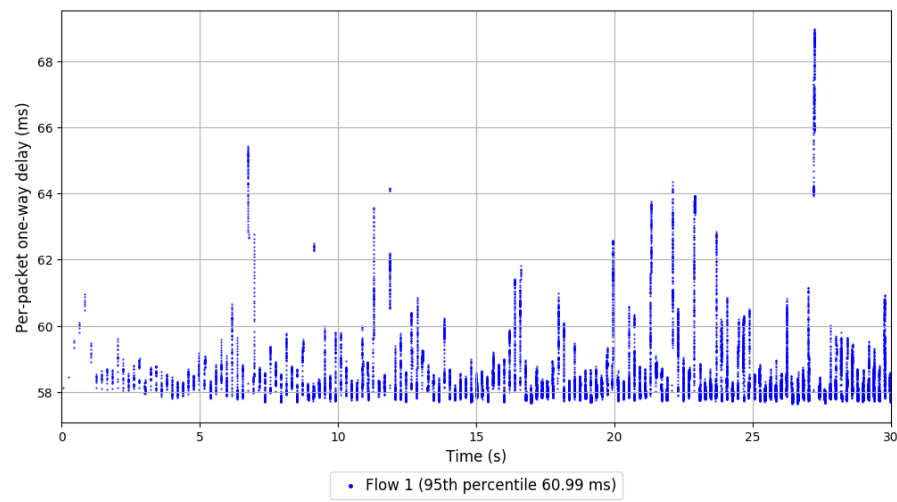
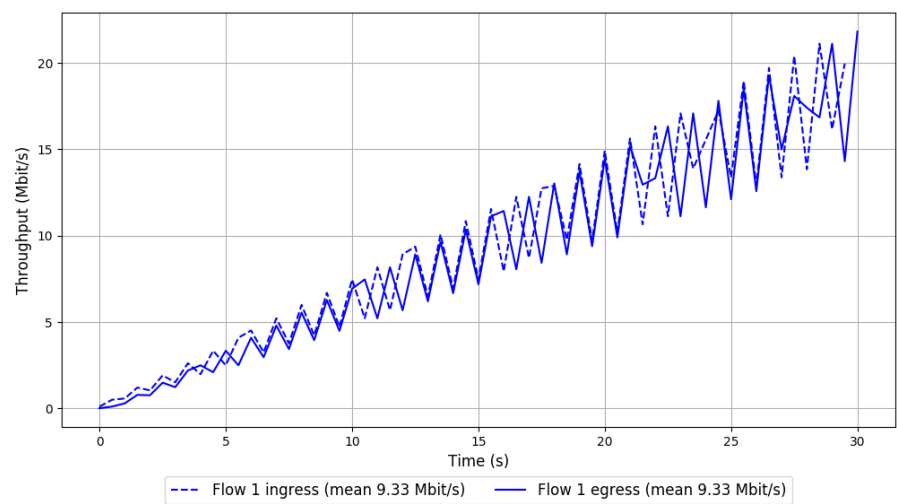


Run 1: Statistics of LEDBAT

Start at: 2019-01-17 06:54:59
End at: 2019-01-17 06:55:29
Local clock offset: -0.561 ms
Remote clock offset: -46.815 ms

Below is generated by plot.py at 2019-01-17 09:55:10
Datalink statistics
-- Total of 1 flow:
Average throughput: 9.33 Mbit/s
95th percentile per-packet one-way delay: 60.991 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.33 Mbit/s
95th percentile per-packet one-way delay: 60.991 ms
Loss rate: 0.00%

Run 1: Report of LEDBAT — Data Link

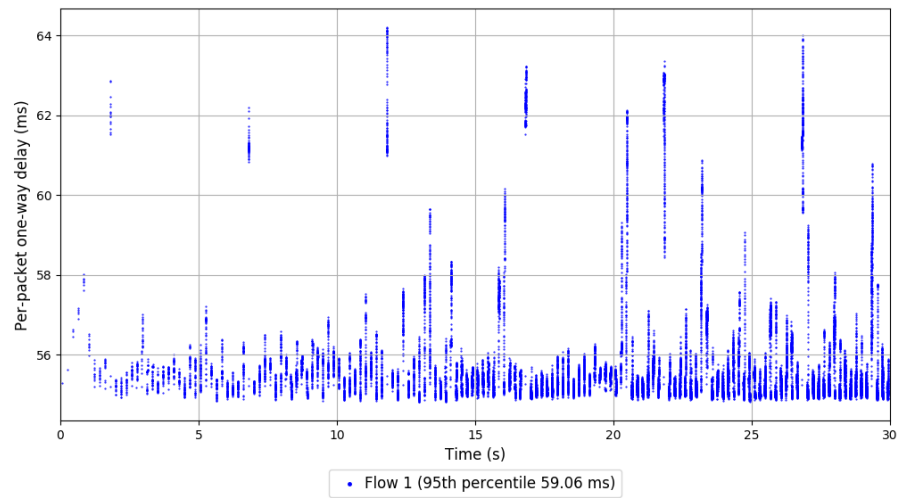
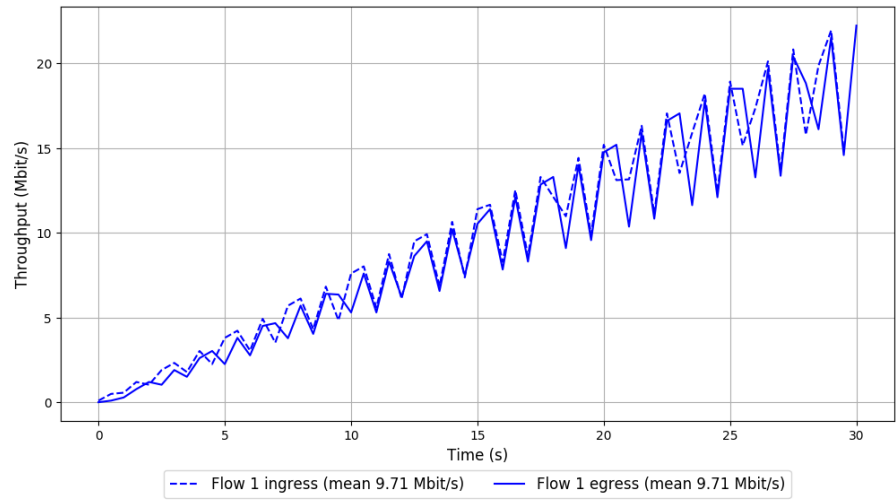


Run 2: Statistics of LEDBAT

Start at: 2019-01-17 07:22:15
End at: 2019-01-17 07:22:45
Local clock offset: -0.748 ms
Remote clock offset: -46.26 ms

Below is generated by plot.py at 2019-01-17 09:55:10
Datalink statistics
-- Total of 1 flow:
Average throughput: 9.71 Mbit/s
95th percentile per-packet one-way delay: 59.059 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.71 Mbit/s
95th percentile per-packet one-way delay: 59.059 ms
Loss rate: 0.00%

Run 2: Report of LEDBAT — Data Link

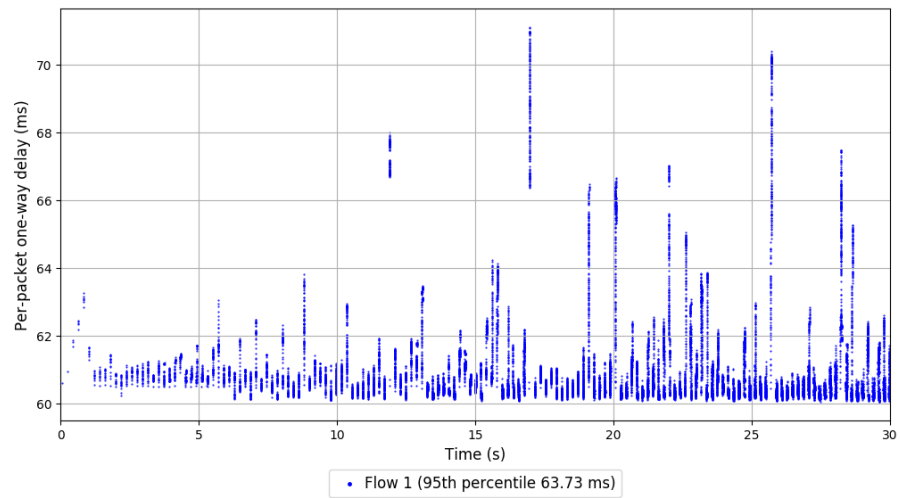
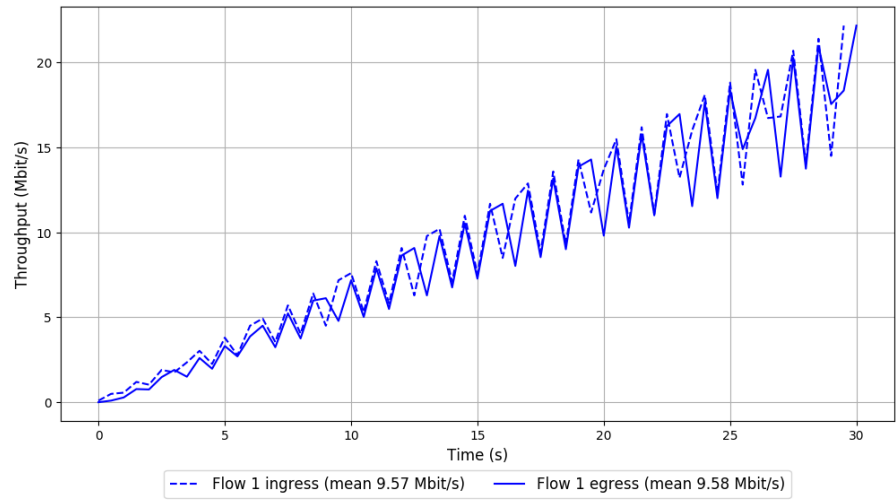


Run 3: Statistics of LEDBAT

Start at: 2019-01-17 07:49:19
End at: 2019-01-17 07:49:49
Local clock offset: 0.54 ms
Remote clock offset: -38.985 ms

Below is generated by plot.py at 2019-01-17 09:55:10
Datalink statistics
-- Total of 1 flow:
Average throughput: 9.58 Mbit/s
95th percentile per-packet one-way delay: 63.733 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.58 Mbit/s
95th percentile per-packet one-way delay: 63.733 ms
Loss rate: 0.00%

Run 3: Report of LEDBAT — Data Link

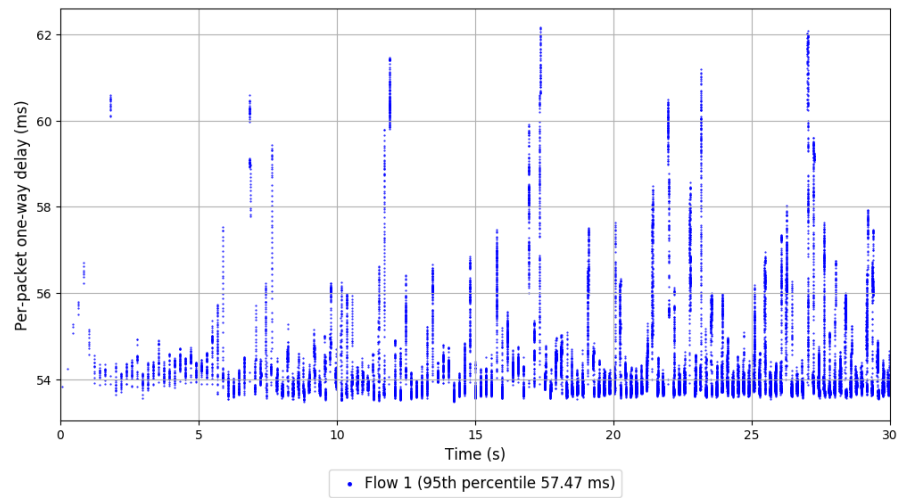
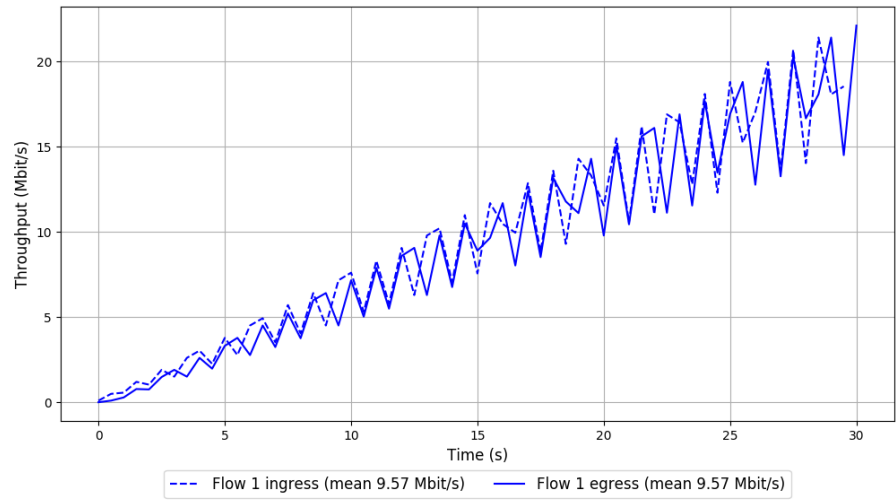


Run 4: Statistics of LEDBAT

Start at: 2019-01-17 08:21:55
End at: 2019-01-17 08:22:25
Local clock offset: -1.184 ms
Remote clock offset: -46.08 ms

Below is generated by plot.py at 2019-01-17 09:55:10
Datalink statistics
-- Total of 1 flow:
Average throughput: 9.57 Mbit/s
95th percentile per-packet one-way delay: 57.466 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.57 Mbit/s
95th percentile per-packet one-way delay: 57.466 ms
Loss rate: 0.00%

Run 4: Report of LEDBAT — Data Link

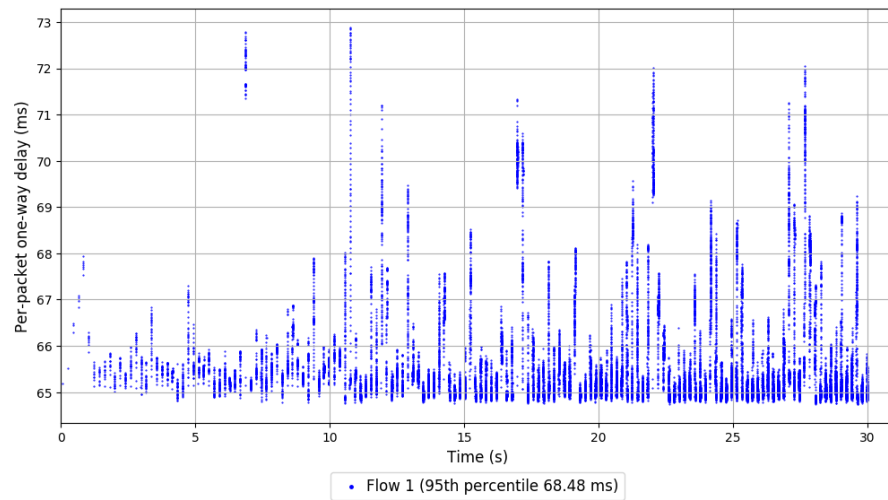
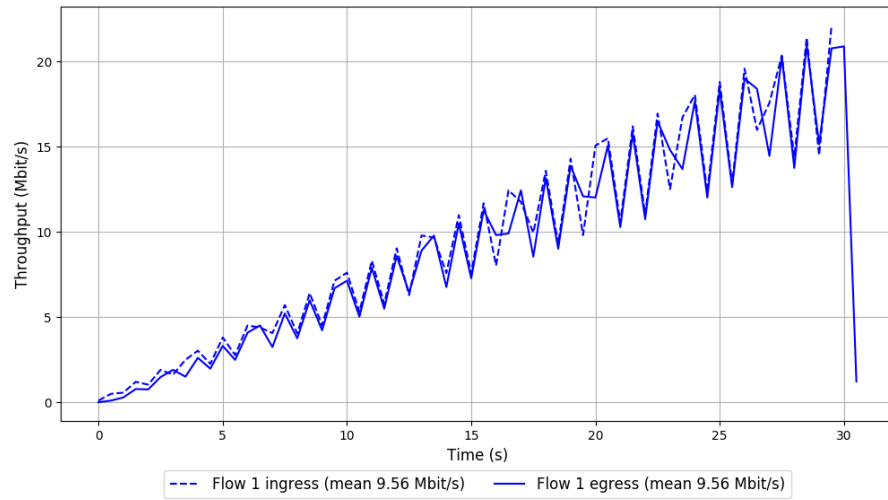


Run 5: Statistics of LEDBAT

Start at: 2019-01-17 09:15:43
End at: 2019-01-17 09:16:13
Local clock offset: -0.758 ms
Remote clock offset: -36.433 ms

Below is generated by plot.py at 2019-01-17 09:55:10
Datalink statistics
-- Total of 1 flow:
Average throughput: 9.56 Mbit/s
95th percentile per-packet one-way delay: 68.476 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.56 Mbit/s
95th percentile per-packet one-way delay: 68.476 ms
Loss rate: 0.00%

Run 5: Report of LEDBAT — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2019-01-17 06:58:47

End at: 2019-01-17 06:59:17

Local clock offset: 1.825 ms

Remote clock offset: -40.13 ms

Below is generated by plot.py at 2019-01-17 09:57:38

Datalink statistics

-- Total of 1 flow:

Average throughput: 464.95 Mbit/s

95th percentile per-packet one-way delay: 61.910 ms

Loss rate: 3.72%

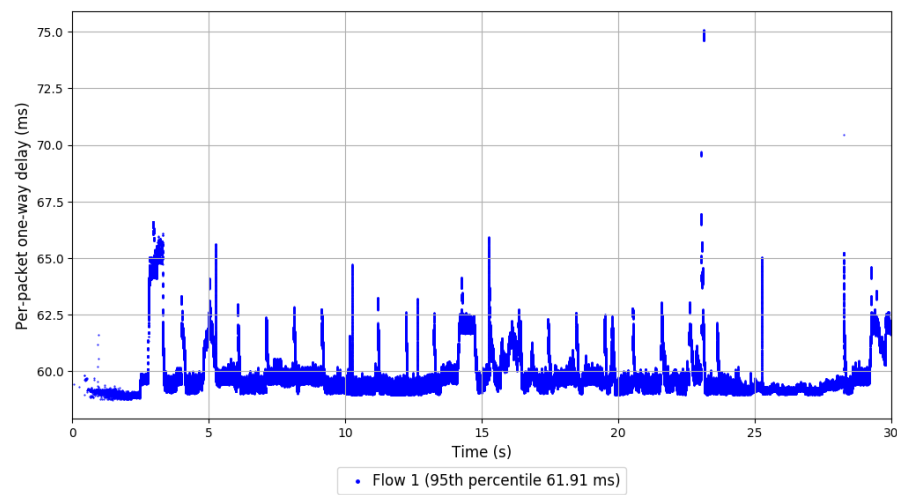
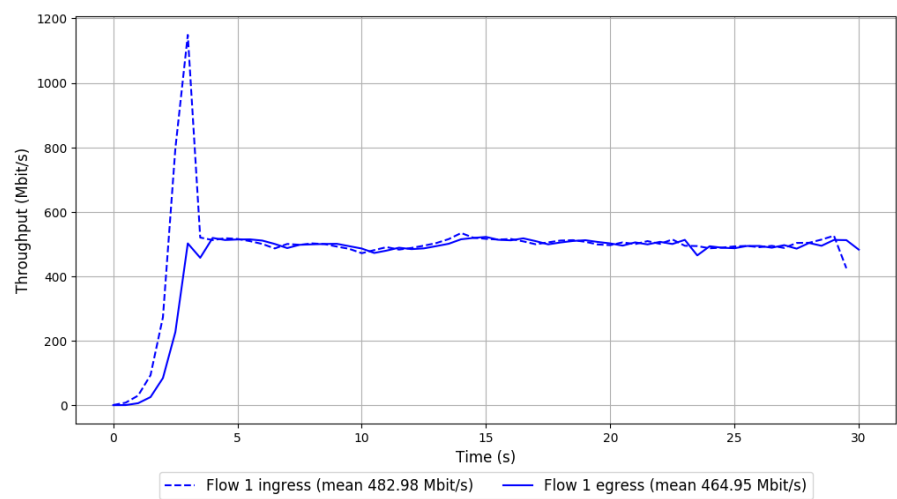
-- Flow 1:

Average throughput: 464.95 Mbit/s

95th percentile per-packet one-way delay: 61.910 ms

Loss rate: 3.72%

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2019-01-17 07:25:58

End at: 2019-01-17 07:26:28

Local clock offset: -0.989 ms

Remote clock offset: -42.15 ms

Below is generated by plot.py at 2019-01-17 09:57:38

Datalink statistics

-- Total of 1 flow:

Average throughput: 462.02 Mbit/s

95th percentile per-packet one-way delay: 61.911 ms

Loss rate: 2.83%

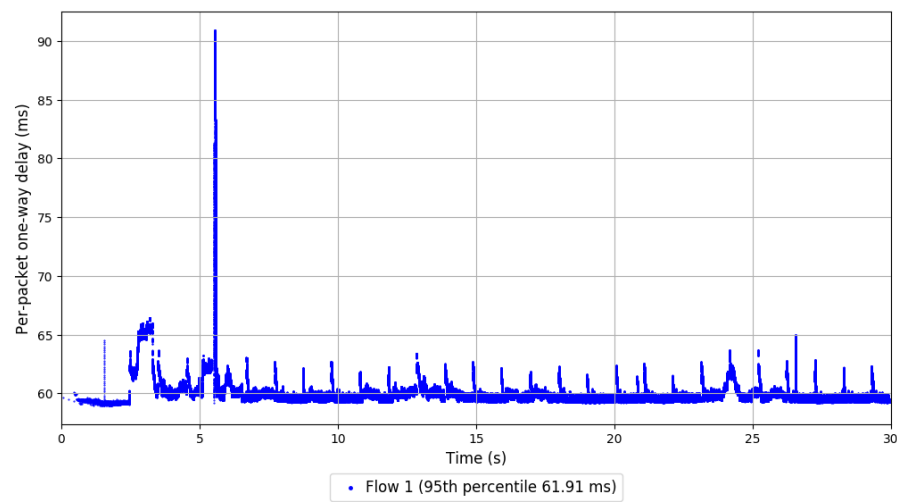
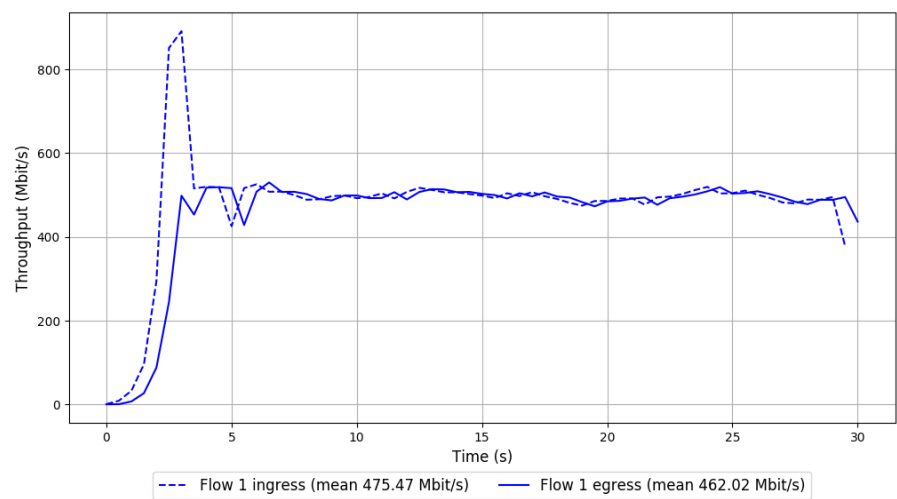
-- Flow 1:

Average throughput: 462.02 Mbit/s

95th percentile per-packet one-way delay: 61.911 ms

Loss rate: 2.83%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2019-01-17 07:53:06

End at: 2019-01-17 07:53:36

Local clock offset: 0.358 ms

Remote clock offset: -42.023 ms

Below is generated by plot.py at 2019-01-17 09:57:38

Datalink statistics

-- Total of 1 flow:

Average throughput: 455.89 Mbit/s

95th percentile per-packet one-way delay: 59.694 ms

Loss rate: 3.62%

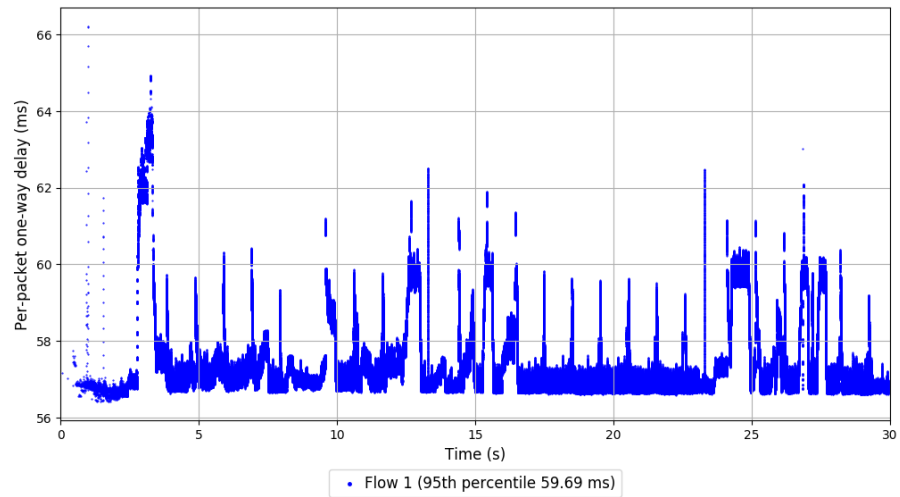
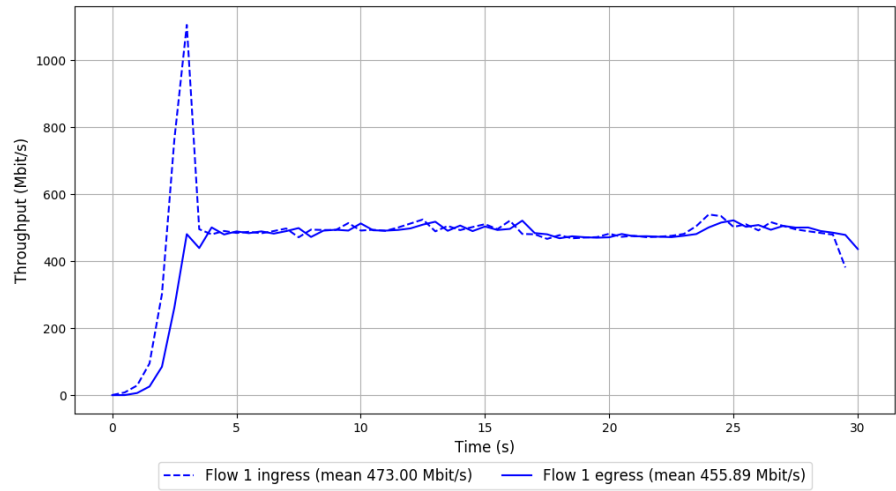
-- Flow 1:

Average throughput: 455.89 Mbit/s

95th percentile per-packet one-way delay: 59.694 ms

Loss rate: 3.62%

Run 3: Report of PCC-Allegro — Data Link

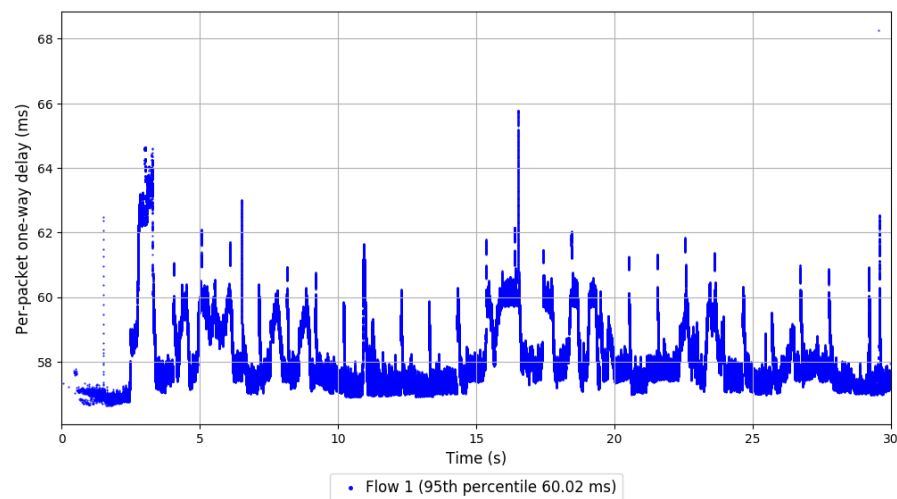
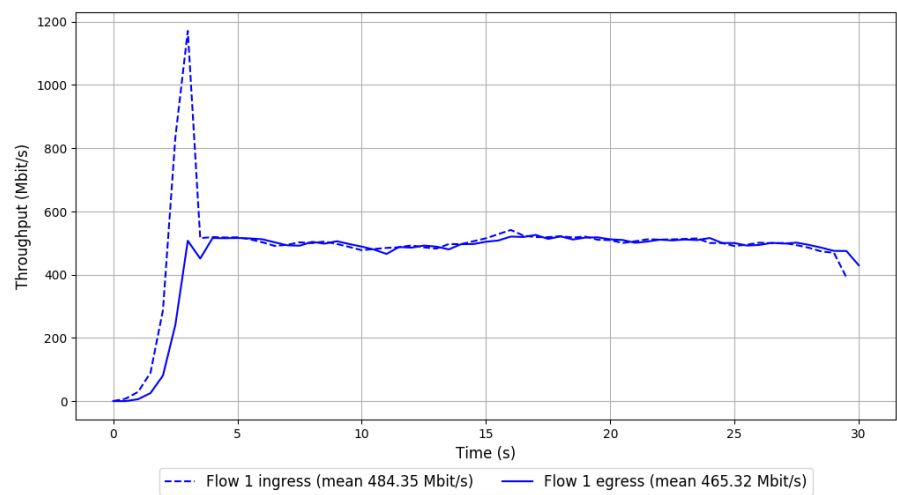


Run 4: Statistics of PCC-Allegro

Start at: 2019-01-17 08:25:43
End at: 2019-01-17 08:26:13
Local clock offset: -0.374 ms
Remote clock offset: -45.596 ms

Below is generated by plot.py at 2019-01-17 09:59:27
Datalink statistics
-- Total of 1 flow:
Average throughput: 465.32 Mbit/s
95th percentile per-packet one-way delay: 60.023 ms
Loss rate: 3.94%
-- Flow 1:
Average throughput: 465.32 Mbit/s
95th percentile per-packet one-way delay: 60.023 ms
Loss rate: 3.94%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2019-01-17 09:19:27

End at: 2019-01-17 09:19:57

Local clock offset: -0.898 ms

Remote clock offset: -41.246 ms

Below is generated by plot.py at 2019-01-17 09:59:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 453.33 Mbit/s

95th percentile per-packet one-way delay: 63.392 ms

Loss rate: 3.88%

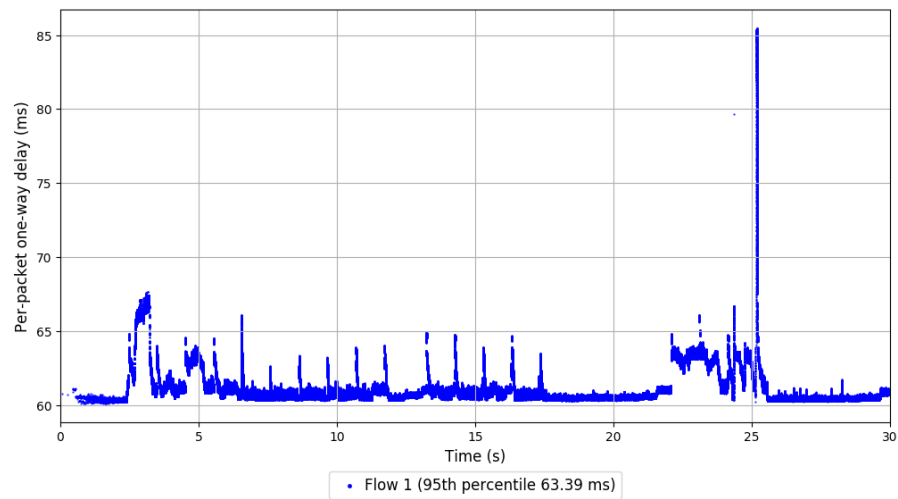
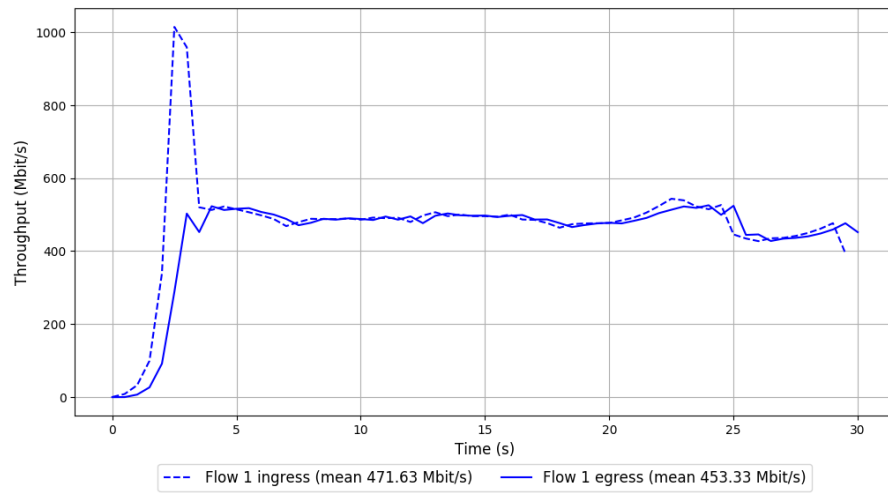
-- Flow 1:

Average throughput: 453.33 Mbit/s

95th percentile per-packet one-way delay: 63.392 ms

Loss rate: 3.88%

Run 5: Report of PCC-Allegro — Data Link

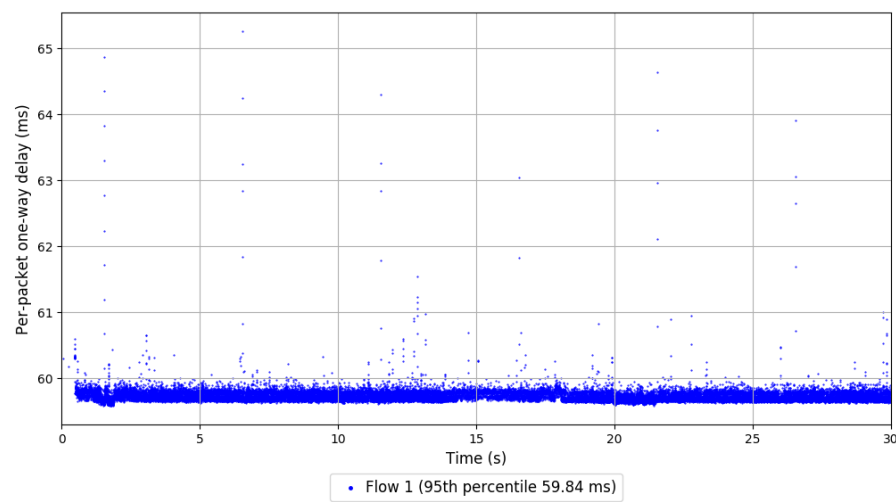
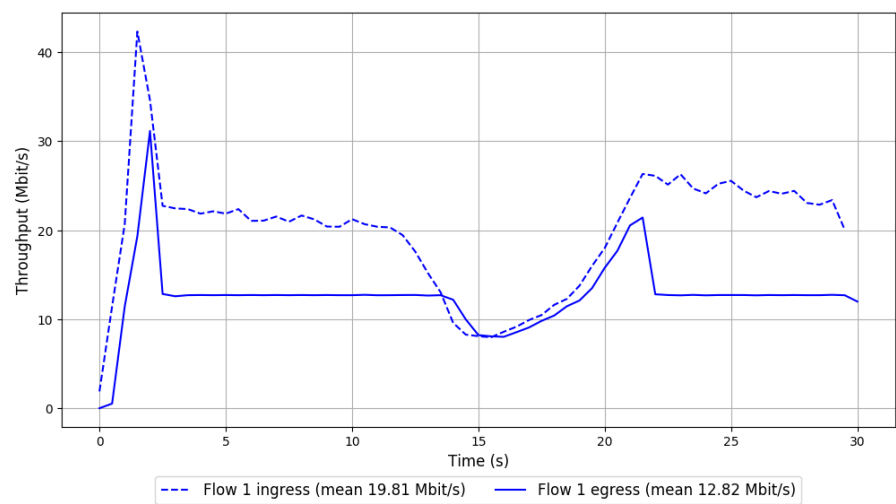


Run 1: Statistics of PCC-Expr

Start at: 2019-01-17 07:03:49
End at: 2019-01-17 07:04:19
Local clock offset: 1.048 ms
Remote clock offset: -40.14 ms

Below is generated by plot.py at 2019-01-17 09:59:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.82 Mbit/s
95th percentile per-packet one-way delay: 59.838 ms
Loss rate: 35.28%
-- Flow 1:
Average throughput: 12.82 Mbit/s
95th percentile per-packet one-way delay: 59.838 ms
Loss rate: 35.28%

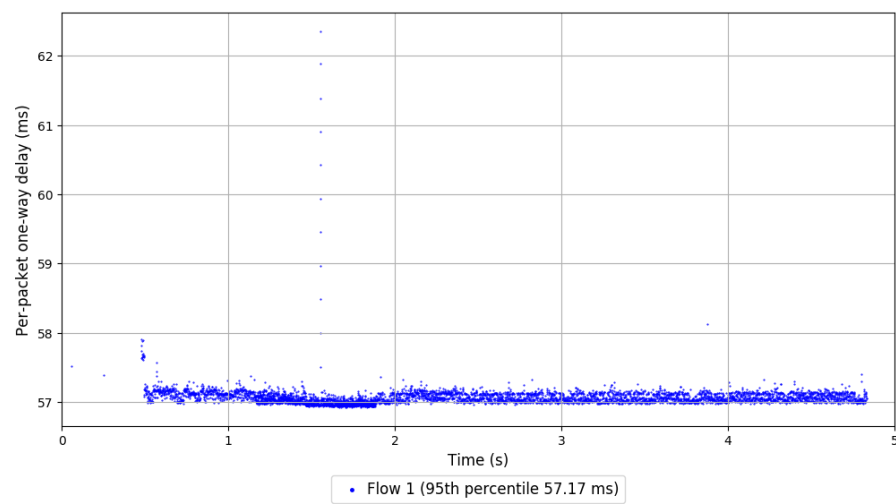
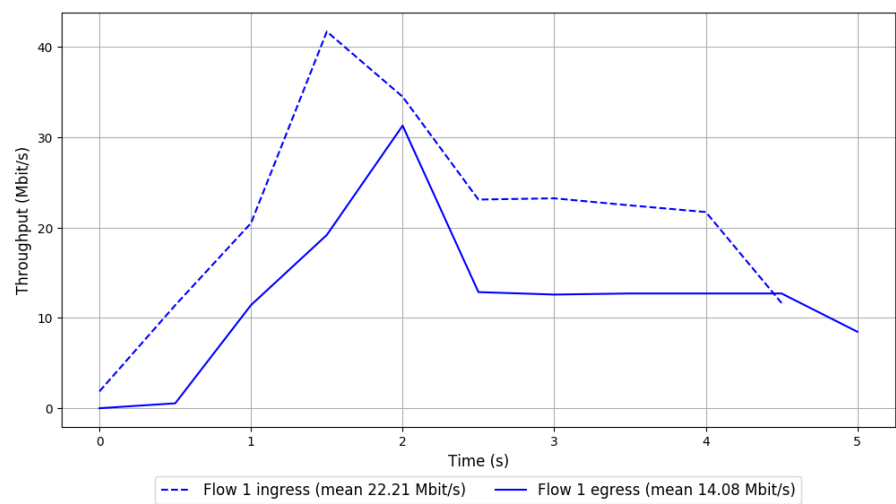
Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2019-01-17 07:31:01
End at: 2019-01-17 07:31:31
Local clock offset: -2.339 ms
Remote clock offset: -45.879 ms

Run 2: Report of PCC-Expr — Data Link

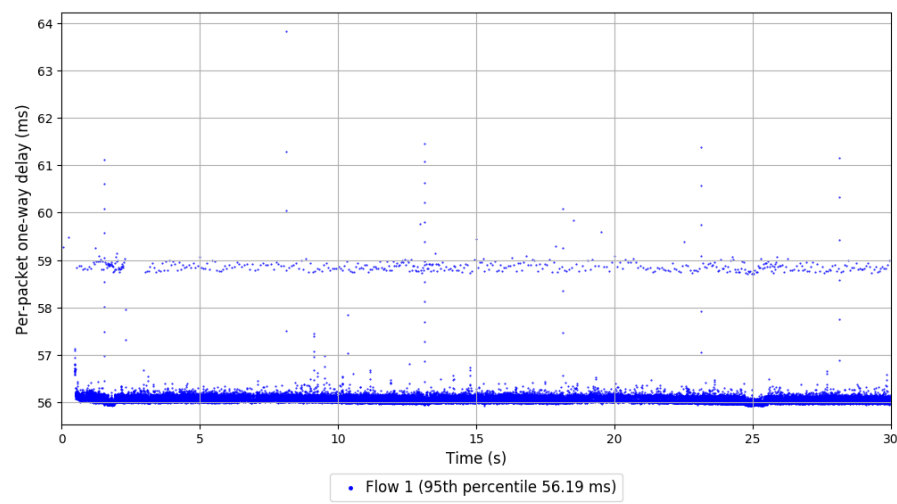
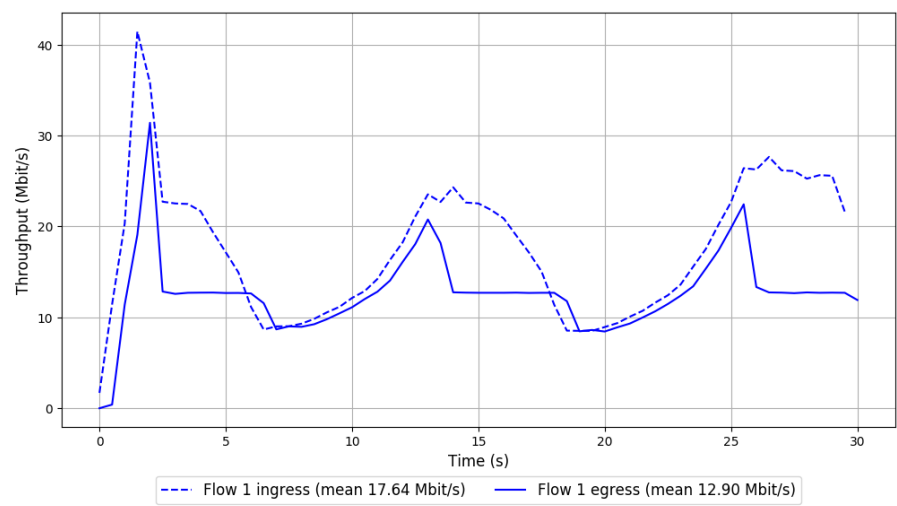


Run 3: Statistics of PCC-Expr

Start at: 2019-01-17 08:03:36
End at: 2019-01-17 08:04:06
Local clock offset: -3.205 ms
Remote clock offset: -45.125 ms

Below is generated by plot.py at 2019-01-17 09:59:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.90 Mbit/s
95th percentile per-packet one-way delay: 56.190 ms
Loss rate: 26.86%
-- Flow 1:
Average throughput: 12.90 Mbit/s
95th percentile per-packet one-way delay: 56.190 ms
Loss rate: 26.86%

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

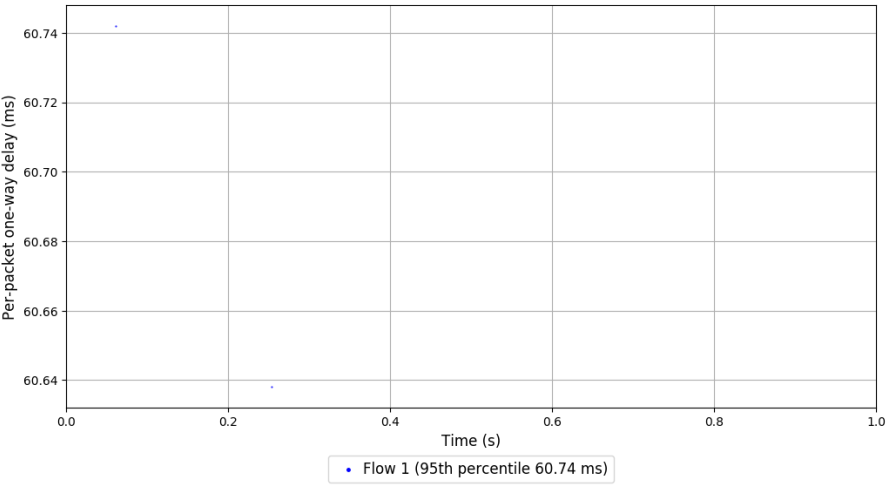
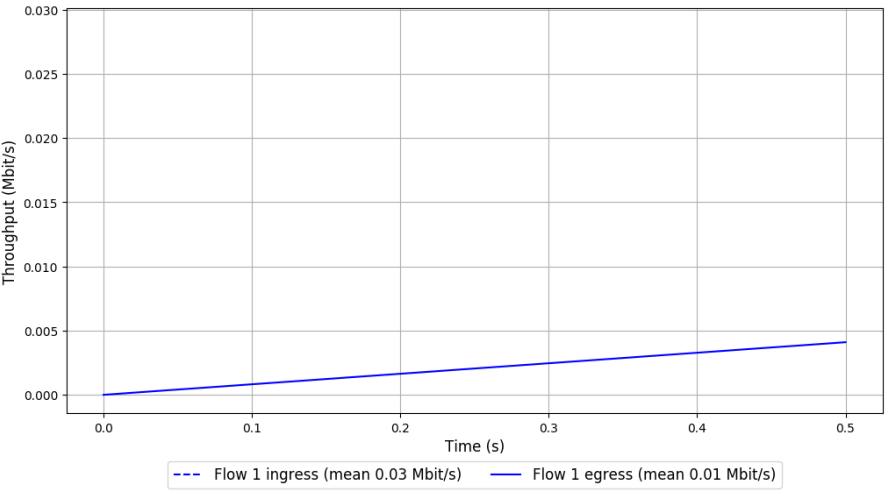
Start at: 2019-01-17 08:36:29

End at: 2019-01-17 08:36:59

Local clock offset: -0.074 ms

Remote clock offset: -40.09 ms

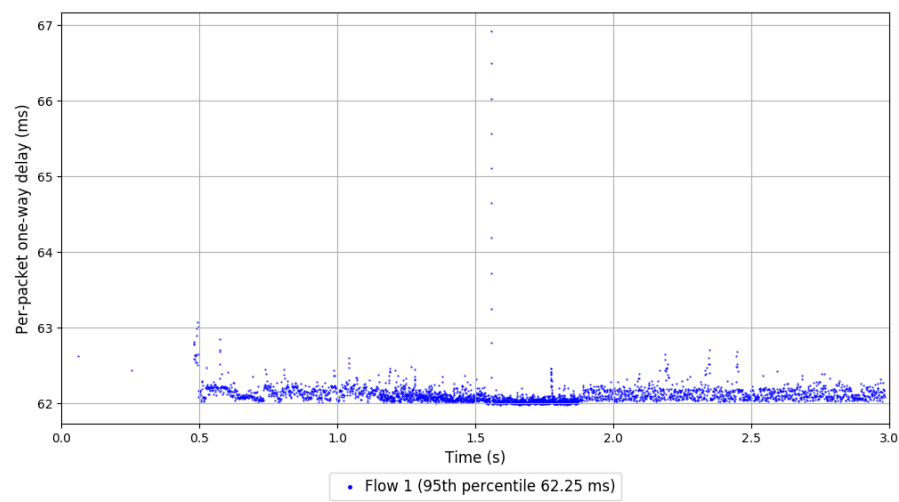
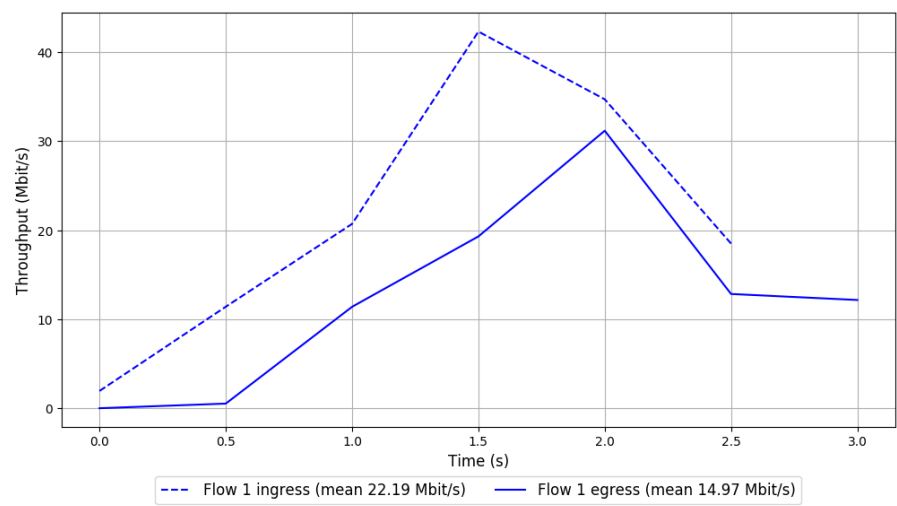
Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

Start at: 2019-01-17 09:24:31
End at: 2019-01-17 09:25:01
Local clock offset: -0.363 ms
Remote clock offset: -38.974 ms

Run 5: Report of PCC-Expr — Data Link

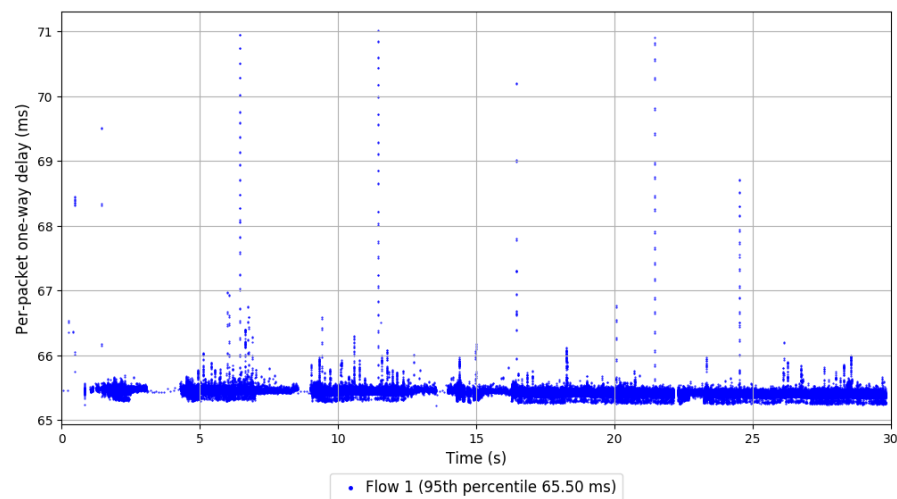
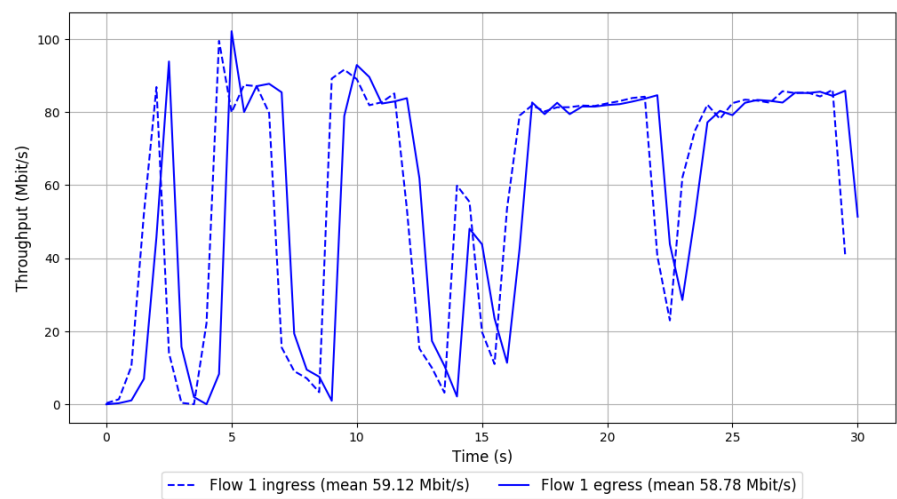


Run 1: Statistics of QUIC Cubic

Start at: 2019-01-17 06:56:15
End at: 2019-01-17 06:56:45
Local clock offset: -2.08 ms
Remote clock offset: -40.621 ms

Below is generated by plot.py at 2019-01-17 09:59:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 58.78 Mbit/s
95th percentile per-packet one-way delay: 65.498 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 58.78 Mbit/s
95th percentile per-packet one-way delay: 65.498 ms
Loss rate: 0.58%

Run 1: Report of QUIC Cubic — Data Link

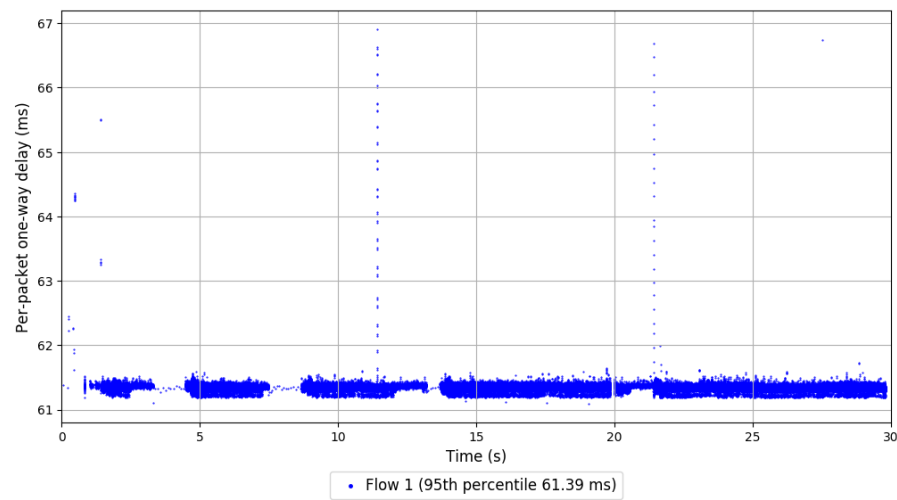
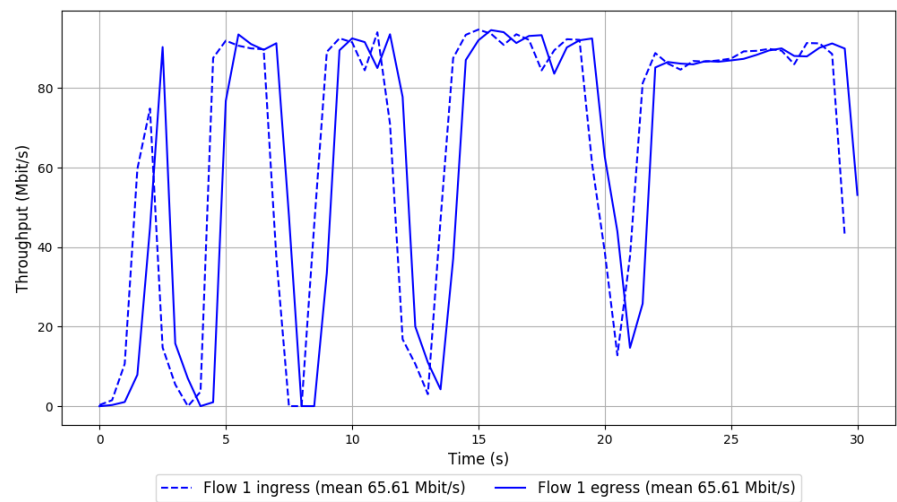


Run 2: Statistics of QUIC Cubic

Start at: 2019-01-17 07:23:27
End at: 2019-01-17 07:23:57
Local clock offset: 1.186 ms
Remote clock offset: -38.023 ms

Below is generated by plot.py at 2019-01-17 09:59:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 65.61 Mbit/s
95th percentile per-packet one-way delay: 61.394 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 65.61 Mbit/s
95th percentile per-packet one-way delay: 61.394 ms
Loss rate: 0.00%

Run 2: Report of QUIC Cubic — Data Link

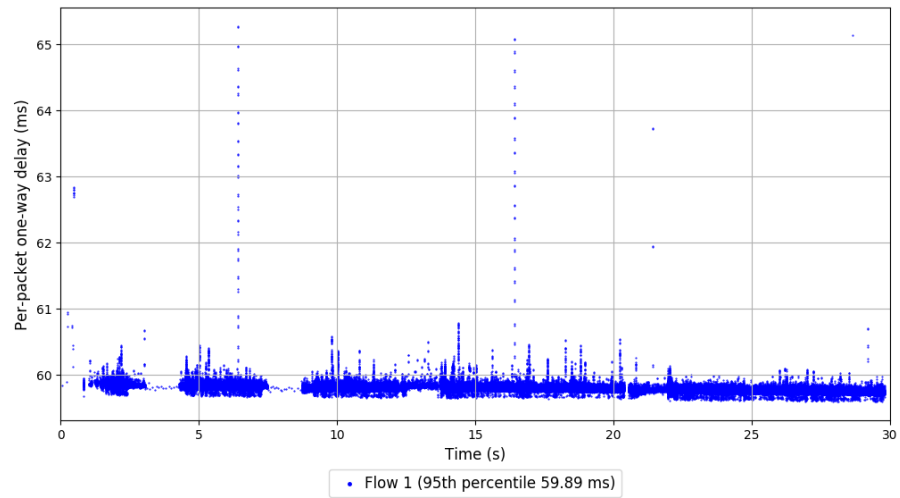
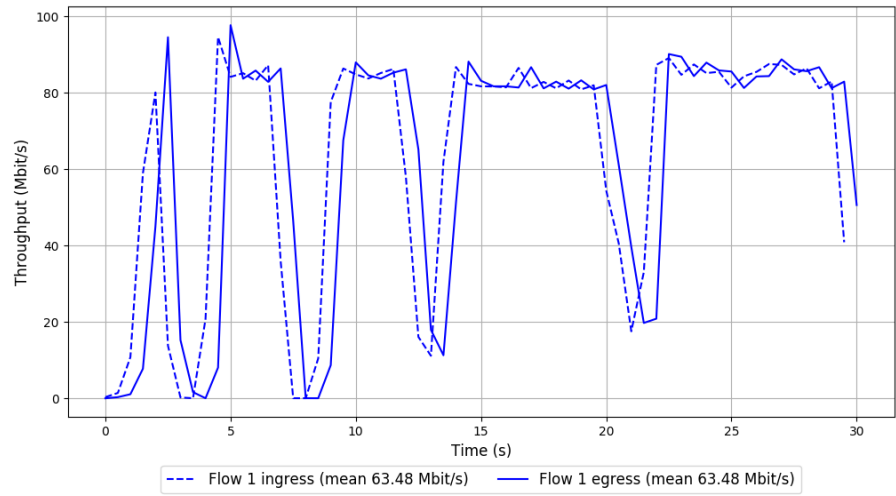


Run 3: Statistics of QUIC Cubic

Start at: 2019-01-17 07:50:31
End at: 2019-01-17 07:51:01
Local clock offset: 1.012 ms
Remote clock offset: -38.663 ms

Below is generated by plot.py at 2019-01-17 09:59:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 63.48 Mbit/s
95th percentile per-packet one-way delay: 59.890 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 63.48 Mbit/s
95th percentile per-packet one-way delay: 59.890 ms
Loss rate: 0.00%

Run 3: Report of QUIC Cubic — Data Link

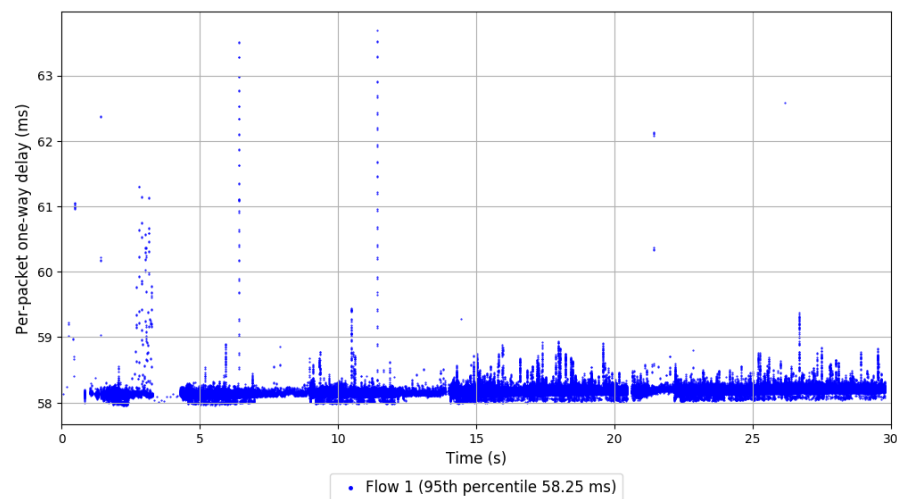
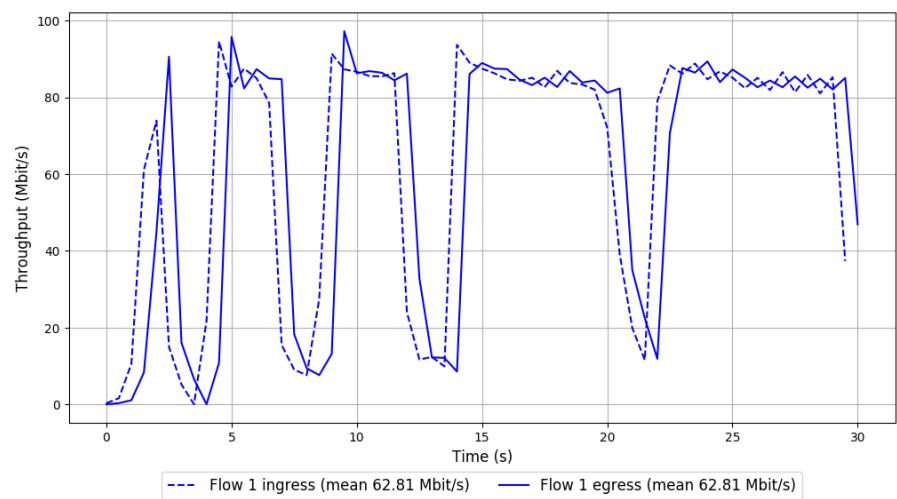


Run 4: Statistics of QUIC Cubic

Start at: 2019-01-17 08:23:07
End at: 2019-01-17 08:23:37
Local clock offset: -0.766 ms
Remote clock offset: -41.555 ms

Below is generated by plot.py at 2019-01-17 09:59:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 62.81 Mbit/s
95th percentile per-packet one-way delay: 58.254 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 62.81 Mbit/s
95th percentile per-packet one-way delay: 58.254 ms
Loss rate: 0.00%

Run 4: Report of QUIC Cubic — Data Link

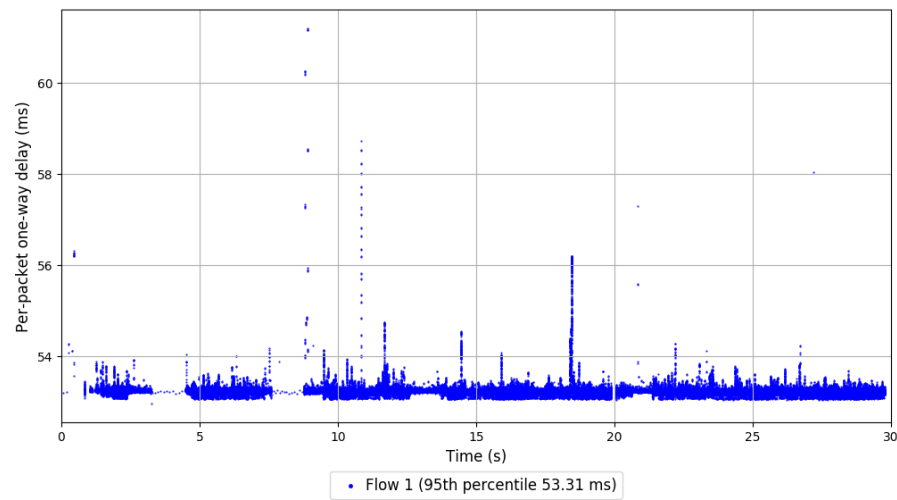
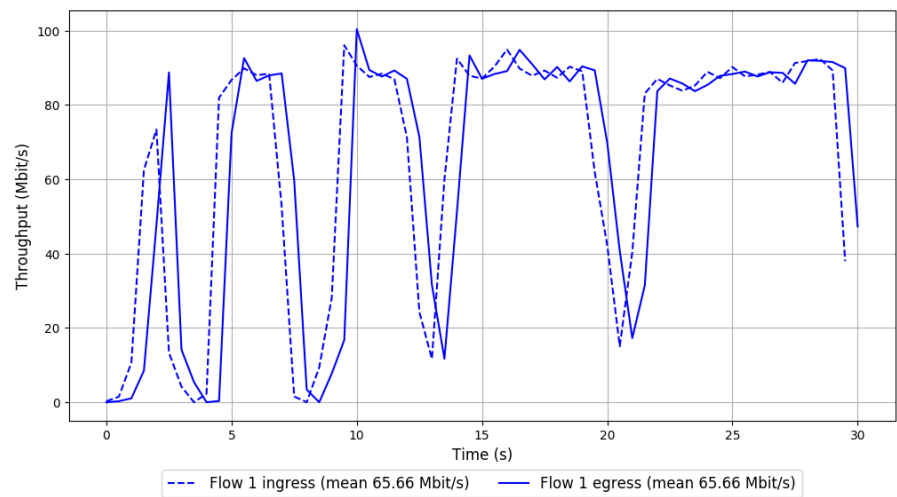


Run 5: Statistics of QUIC Cubic

Start at: 2019-01-17 09:16:55
End at: 2019-01-17 09:17:25
Local clock offset: 1.501 ms
Remote clock offset: -45.651 ms

Below is generated by plot.py at 2019-01-17 09:59:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 65.66 Mbit/s
95th percentile per-packet one-way delay: 53.310 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 65.66 Mbit/s
95th percentile per-packet one-way delay: 53.310 ms
Loss rate: 0.00%

Run 5: Report of QUIC Cubic — Data Link

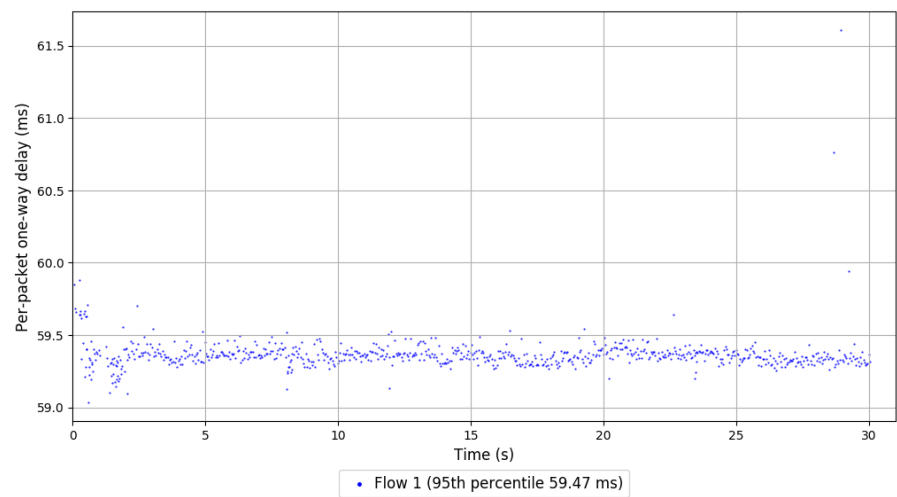
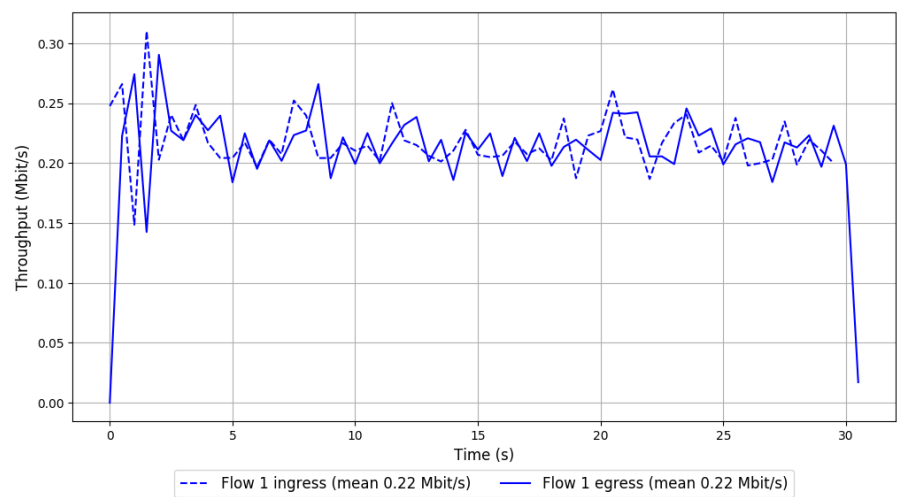


Run 1: Statistics of SCReAM

Start at: 2019-01-17 06:45:49
End at: 2019-01-17 06:46:19
Local clock offset: -1.494 ms
Remote clock offset: -43.167 ms

Below is generated by plot.py at 2019-01-17 09:59:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 59.472 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 59.472 ms
Loss rate: 0.00%

Run 1: Report of SReAM — Data Link

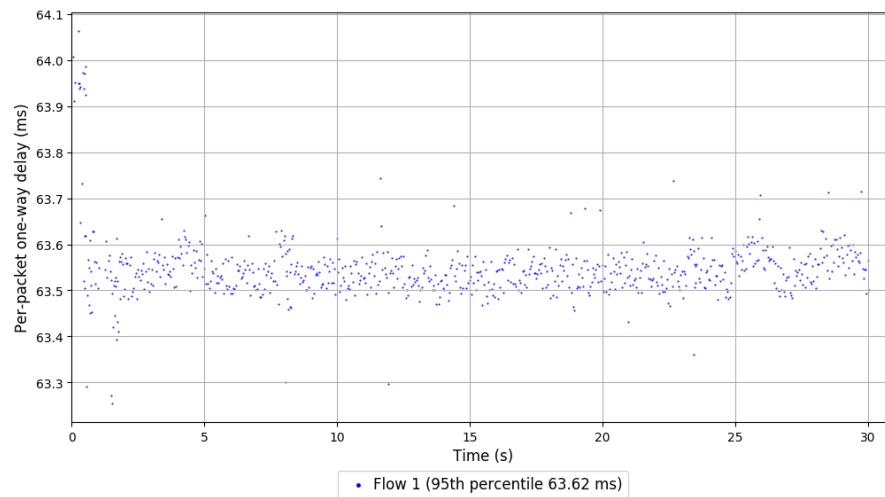
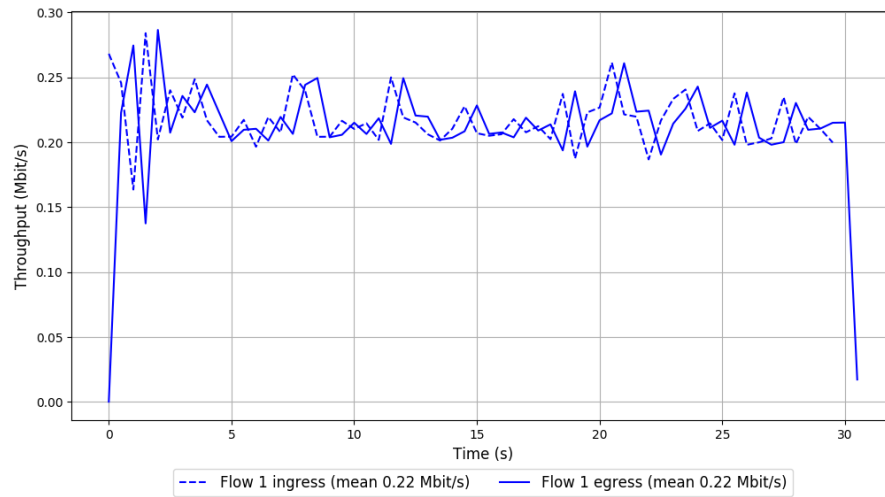


Run 2: Statistics of SCReAM

Start at: 2019-01-17 07:18:41
End at: 2019-01-17 07:19:11
Local clock offset: 2.828 ms
Remote clock offset: -34.269 ms

Below is generated by plot.py at 2019-01-17 09:59:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.618 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.618 ms
Loss rate: 0.00%

Run 2: Report of SReAM — Data Link

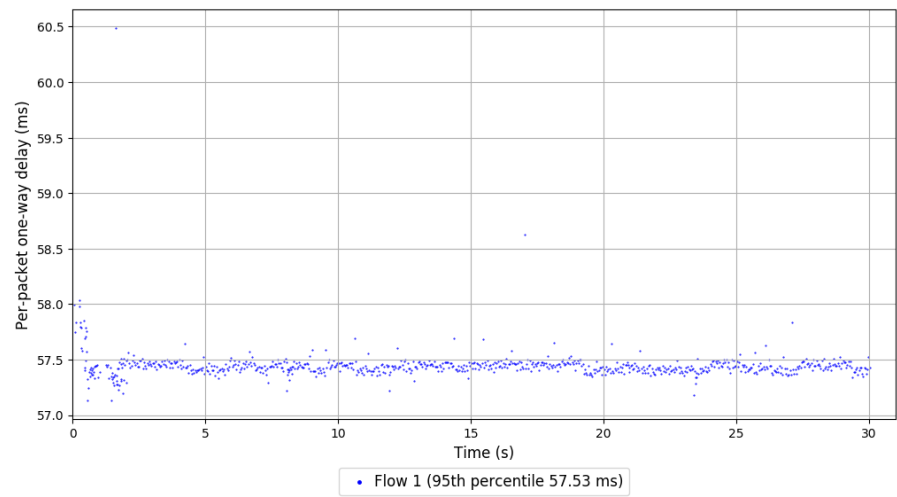
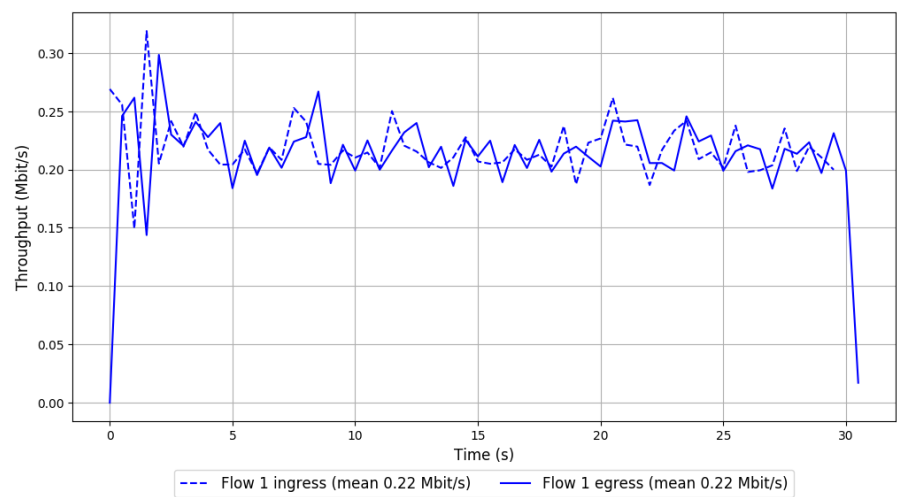


Run 3: Statistics of SCReAM

Start at: 2019-01-17 07:45:42
End at: 2019-01-17 07:46:12
Local clock offset: 0.697 ms
Remote clock offset: -45.387 ms

Below is generated by plot.py at 2019-01-17 09:59:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.529 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.529 ms
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link

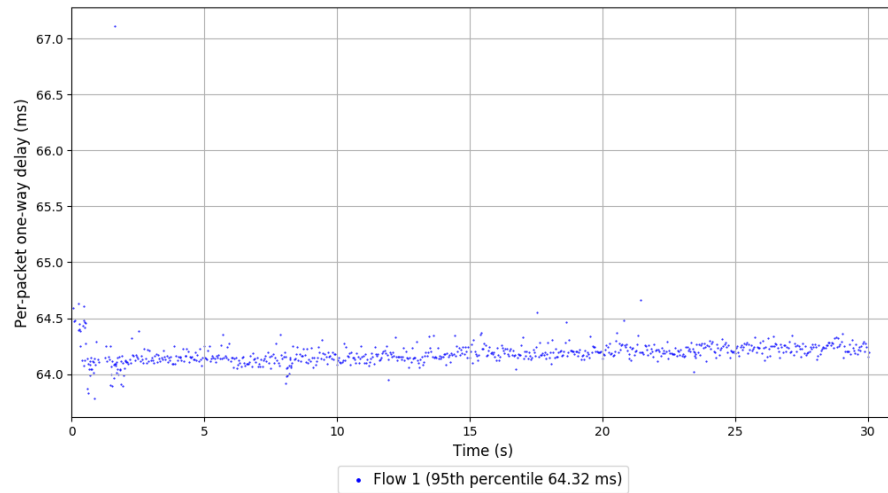
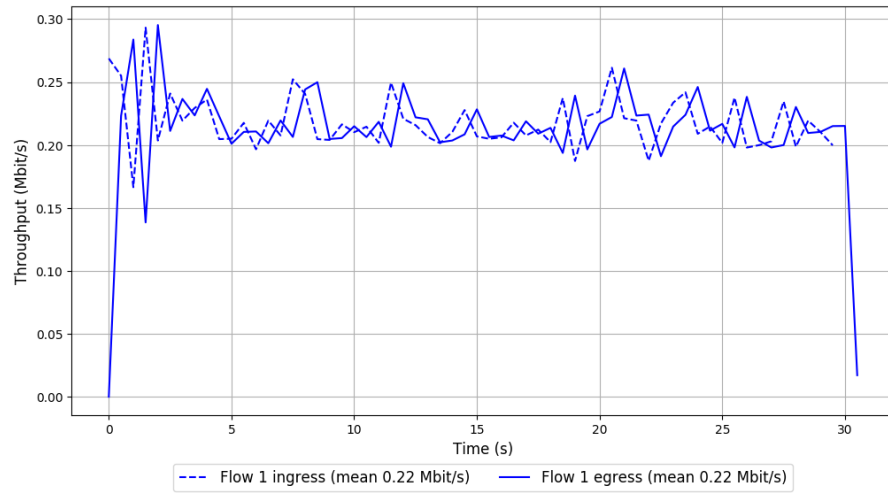


Run 4: Statistics of SCReAM

Start at: 2019-01-17 08:18:19
End at: 2019-01-17 08:18:49
Local clock offset: -2.858 ms
Remote clock offset: -39.281 ms

Below is generated by plot.py at 2019-01-17 09:59:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 64.321 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 64.321 ms
Loss rate: 0.00%

Run 4: Report of SReAM — Data Link

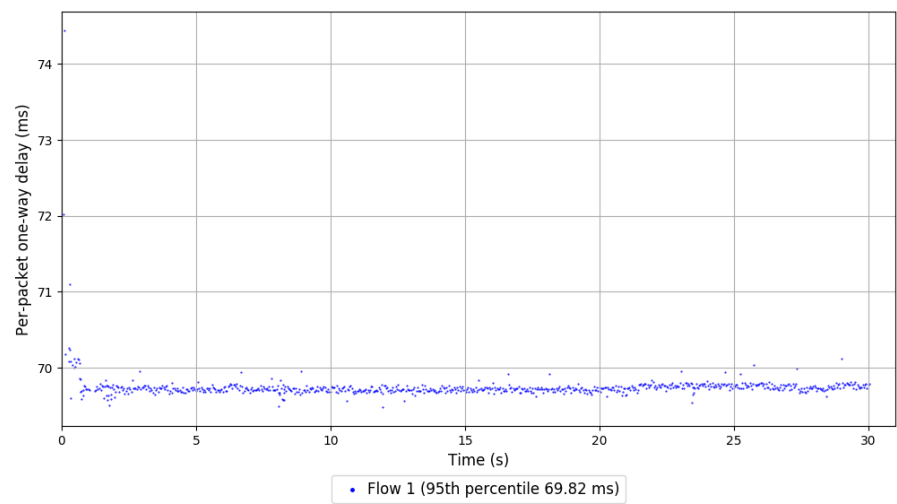
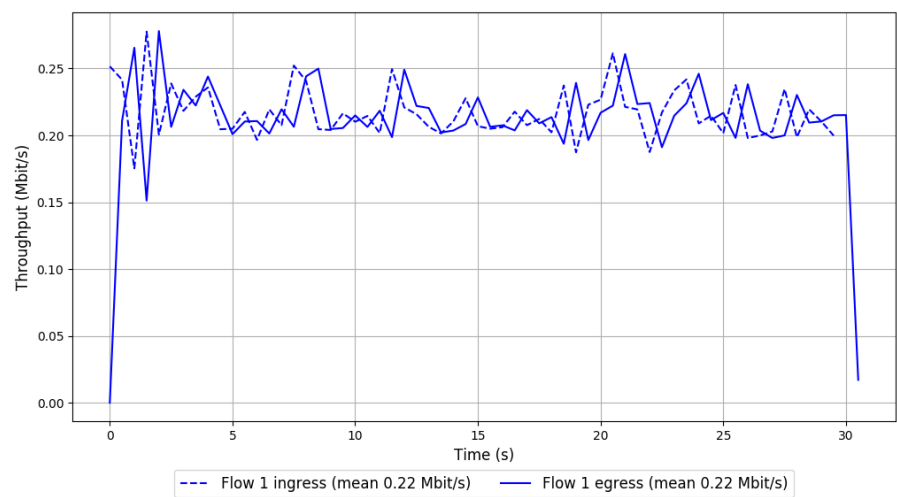


Run 5: Statistics of SCReAM

Start at: 2019-01-17 09:12:08
End at: 2019-01-17 09:12:38
Local clock offset: -0.298 ms
Remote clock offset: -34.149 ms

Below is generated by plot.py at 2019-01-17 09:59:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 69.819 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 69.819 ms
Loss rate: 0.00%

Run 5: Report of SReAM — Data Link

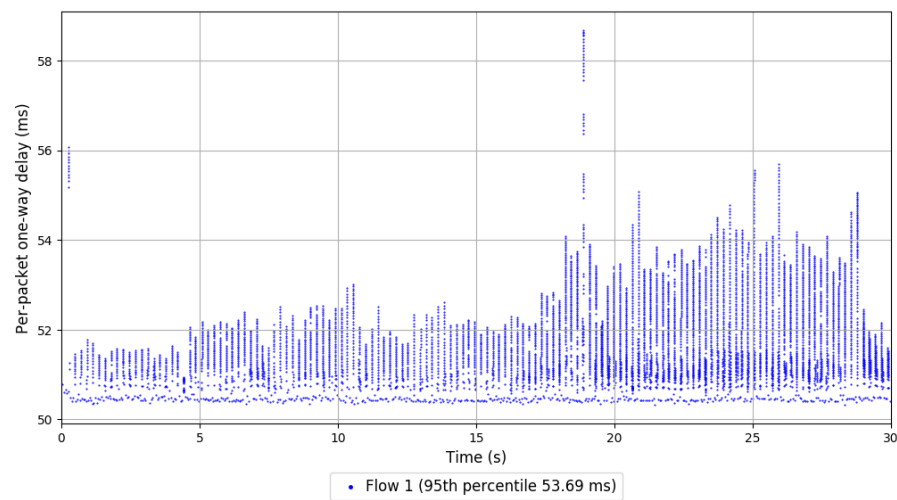
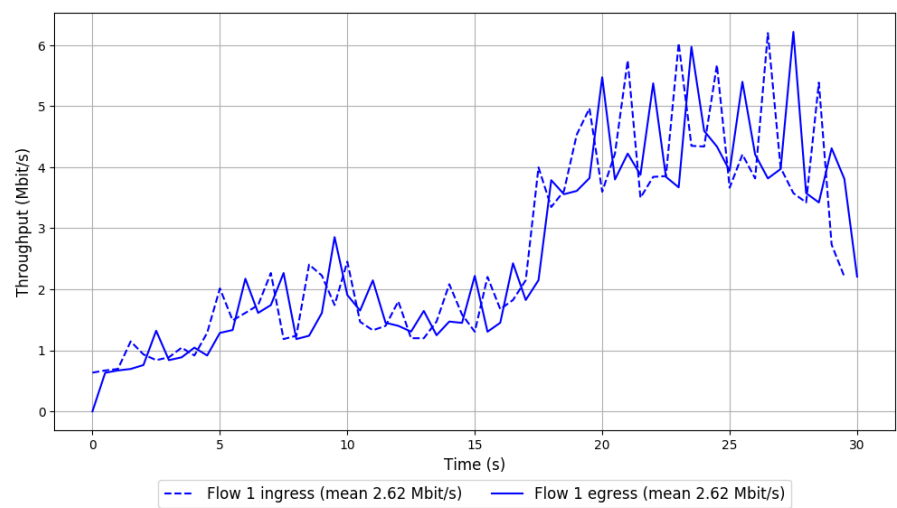


Run 1: Statistics of Sprout

Start at: 2019-01-17 07:02:39
End at: 2019-01-17 07:03:09
Local clock offset: 1.193 ms
Remote clock offset: -49.092 ms

Below is generated by plot.py at 2019-01-17 09:59:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.62 Mbit/s
95th percentile per-packet one-way delay: 53.692 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.62 Mbit/s
95th percentile per-packet one-way delay: 53.692 ms
Loss rate: 0.00%

Run 1: Report of Sprout — Data Link

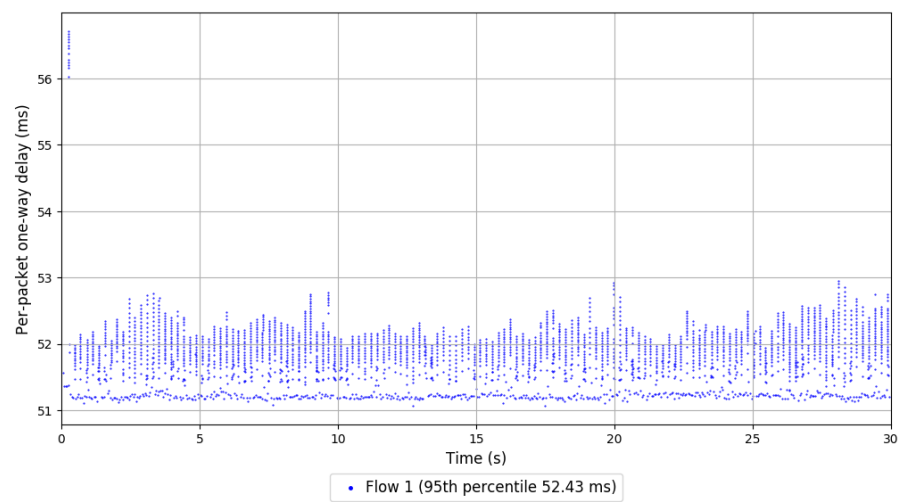
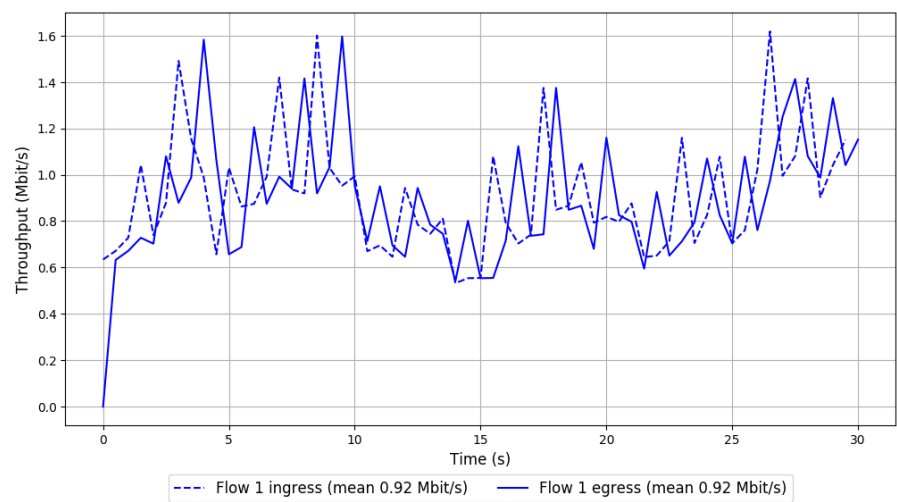


Run 2: Statistics of Sprout

Start at: 2019-01-17 07:29:51
End at: 2019-01-17 07:30:21
Local clock offset: 2.011 ms
Remote clock offset: -47.352 ms

Below is generated by plot.py at 2019-01-17 09:59:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.92 Mbit/s
95th percentile per-packet one-way delay: 52.428 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.92 Mbit/s
95th percentile per-packet one-way delay: 52.428 ms
Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

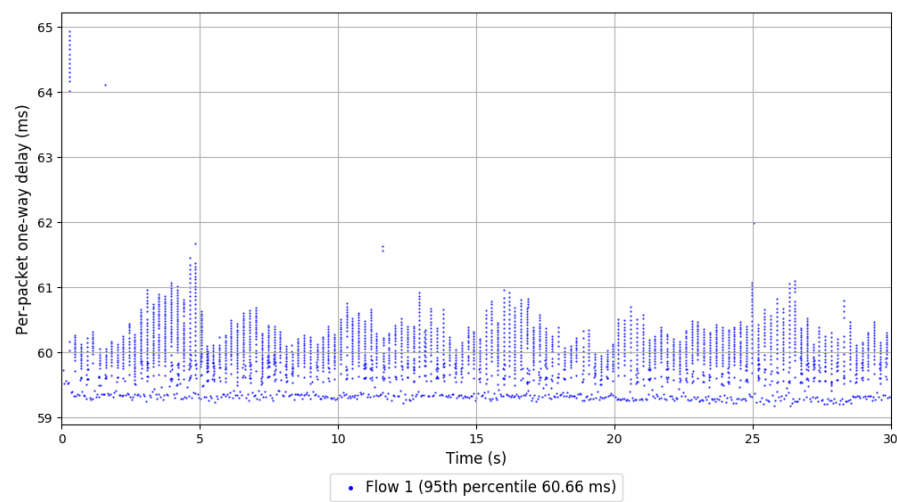
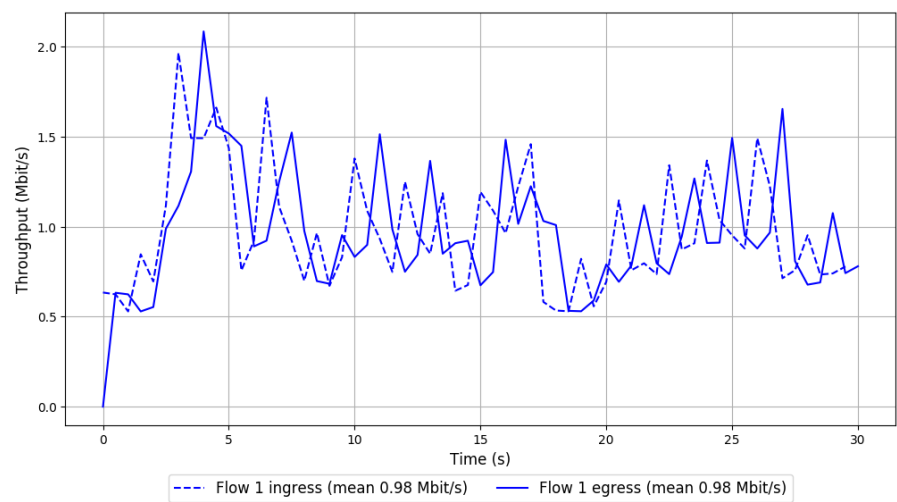


Run 3: Statistics of Sprout

Start at: 2019-01-17 08:02:26
End at: 2019-01-17 08:02:56
Local clock offset: -3.168 ms
Remote clock offset: -41.87 ms

Below is generated by plot.py at 2019-01-17 09:59:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.98 Mbit/s
95th percentile per-packet one-way delay: 60.657 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.98 Mbit/s
95th percentile per-packet one-way delay: 60.657 ms
Loss rate: 0.00%

Run 3: Report of Sprout — Data Link

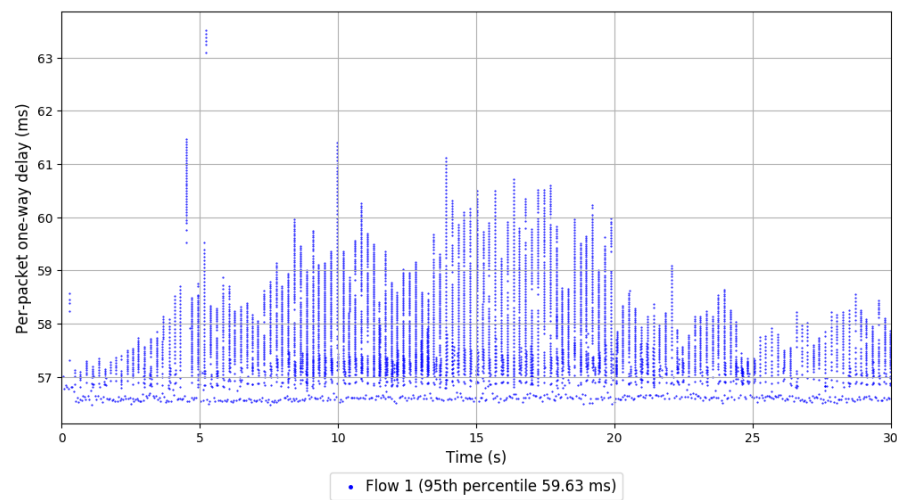
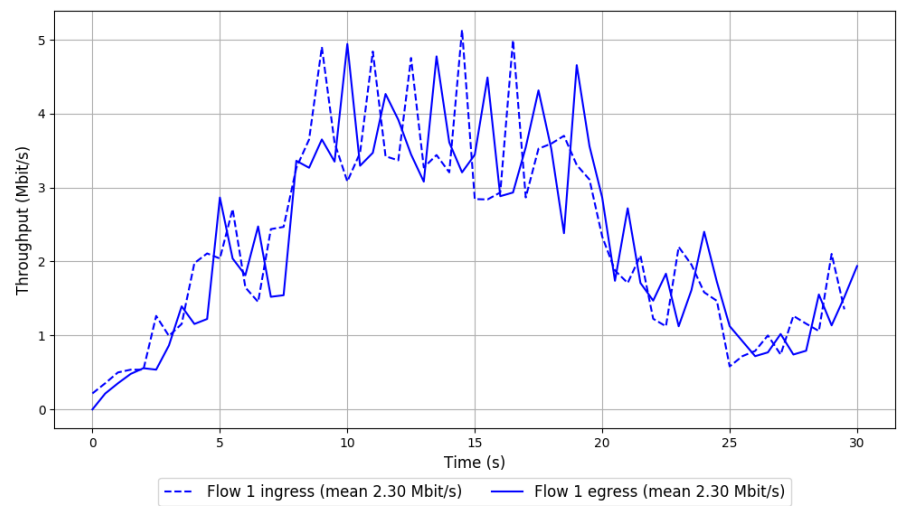


Run 4: Statistics of Sprout

Start at: 2019-01-17 08:35:17
End at: 2019-01-17 08:35:47
Local clock offset: 0.72 ms
Remote clock offset: -42.879 ms

Below is generated by plot.py at 2019-01-17 09:59:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.30 Mbit/s
95th percentile per-packet one-way delay: 59.633 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.30 Mbit/s
95th percentile per-packet one-way delay: 59.633 ms
Loss rate: 0.00%

Run 4: Report of Sprout — Data Link

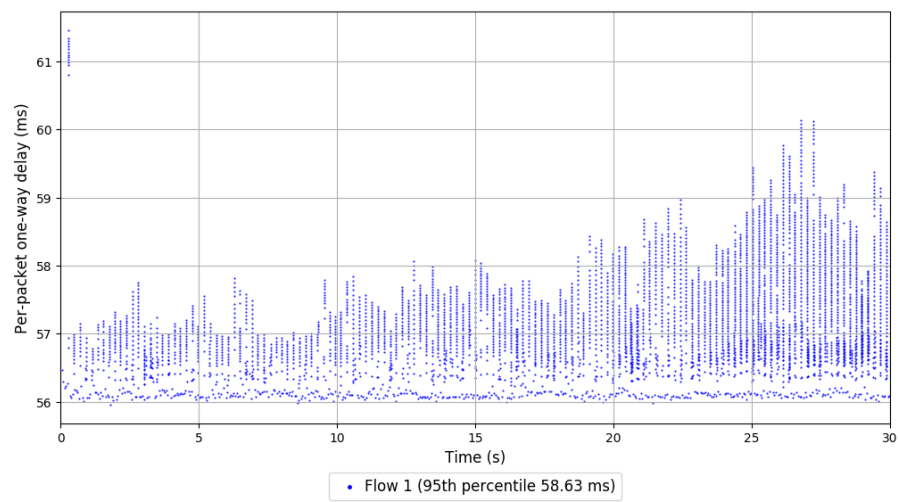
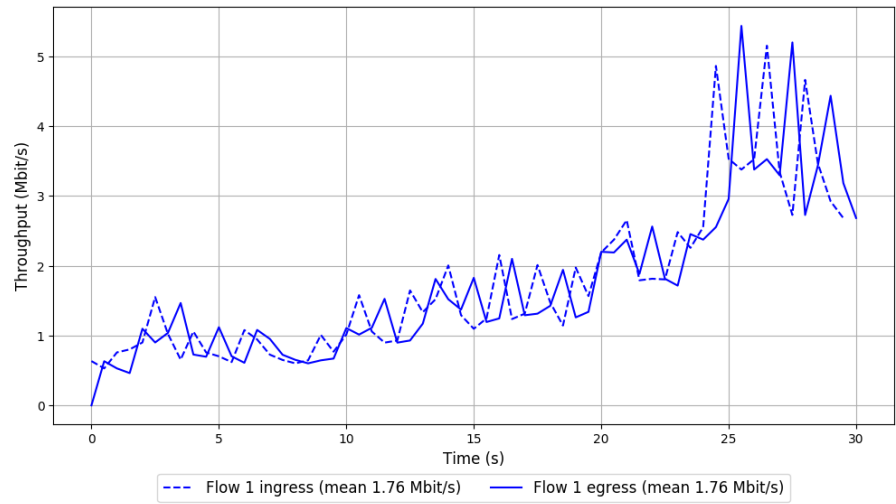


Run 5: Statistics of Sprout

Start at: 2019-01-17 09:23:21
End at: 2019-01-17 09:23:51
Local clock offset: -1.241 ms
Remote clock offset: -45.787 ms

Below is generated by plot.py at 2019-01-17 09:59:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.76 Mbit/s
95th percentile per-packet one-way delay: 58.627 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.76 Mbit/s
95th percentile per-packet one-way delay: 58.627 ms
Loss rate: 0.00%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

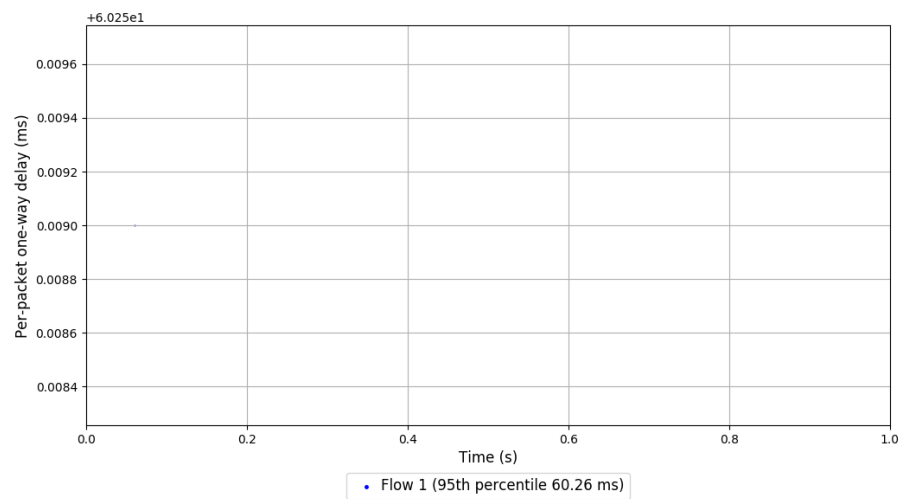
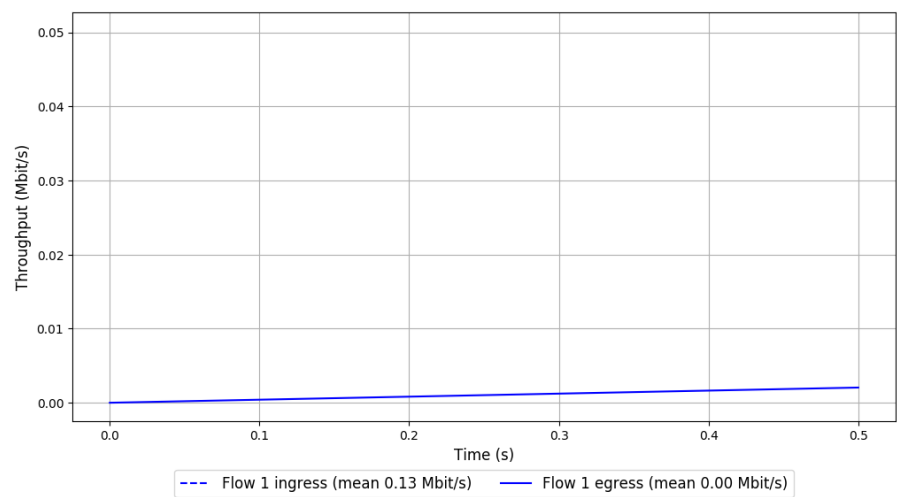
Start at: 2019-01-17 07:00:13

End at: 2019-01-17 07:00:43

Local clock offset: 1.442 ms

Remote clock offset: -39.91 ms

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

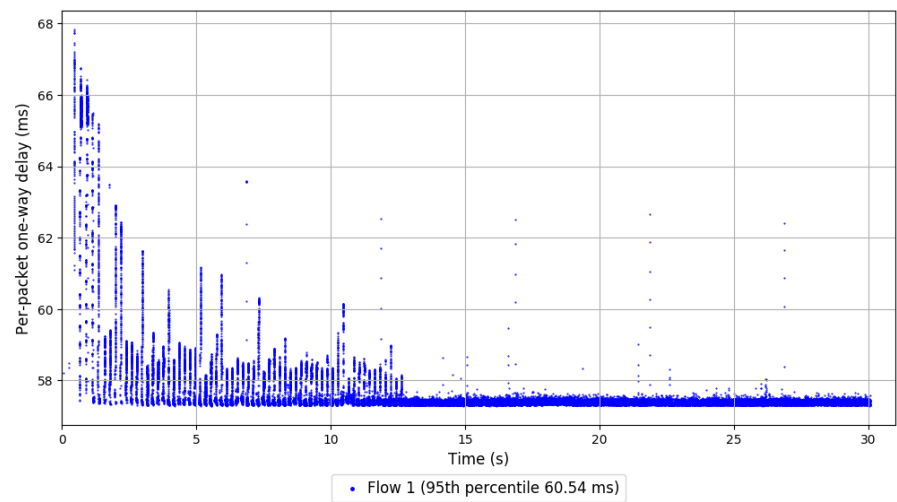
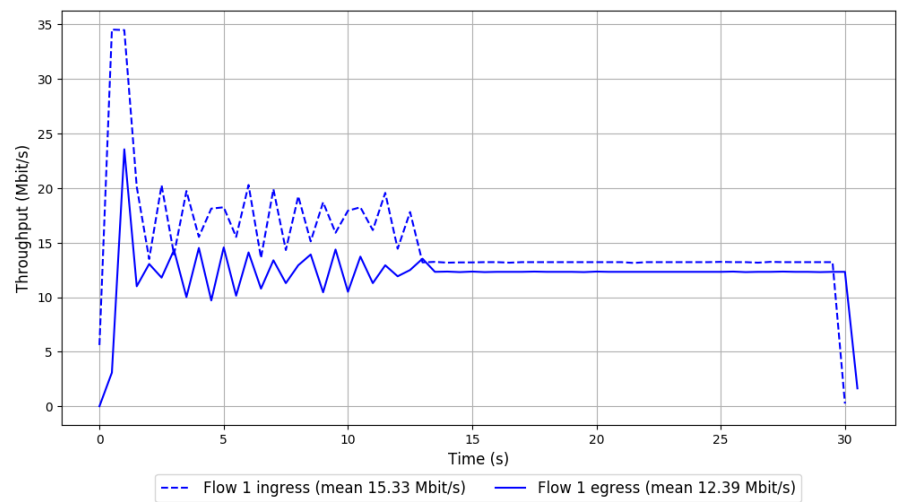


Run 2: Statistics of TaoVA-100x

Start at: 2019-01-17 07:27:23
End at: 2019-01-17 07:27:53
Local clock offset: 1.881 ms
Remote clock offset: -41.265 ms

Below is generated by plot.py at 2019-01-17 09:59:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.39 Mbit/s
95th percentile per-packet one-way delay: 60.543 ms
Loss rate: 19.15%
-- Flow 1:
Average throughput: 12.39 Mbit/s
95th percentile per-packet one-way delay: 60.543 ms
Loss rate: 19.15%

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



Run 3: Statistics of TaoVA-100x

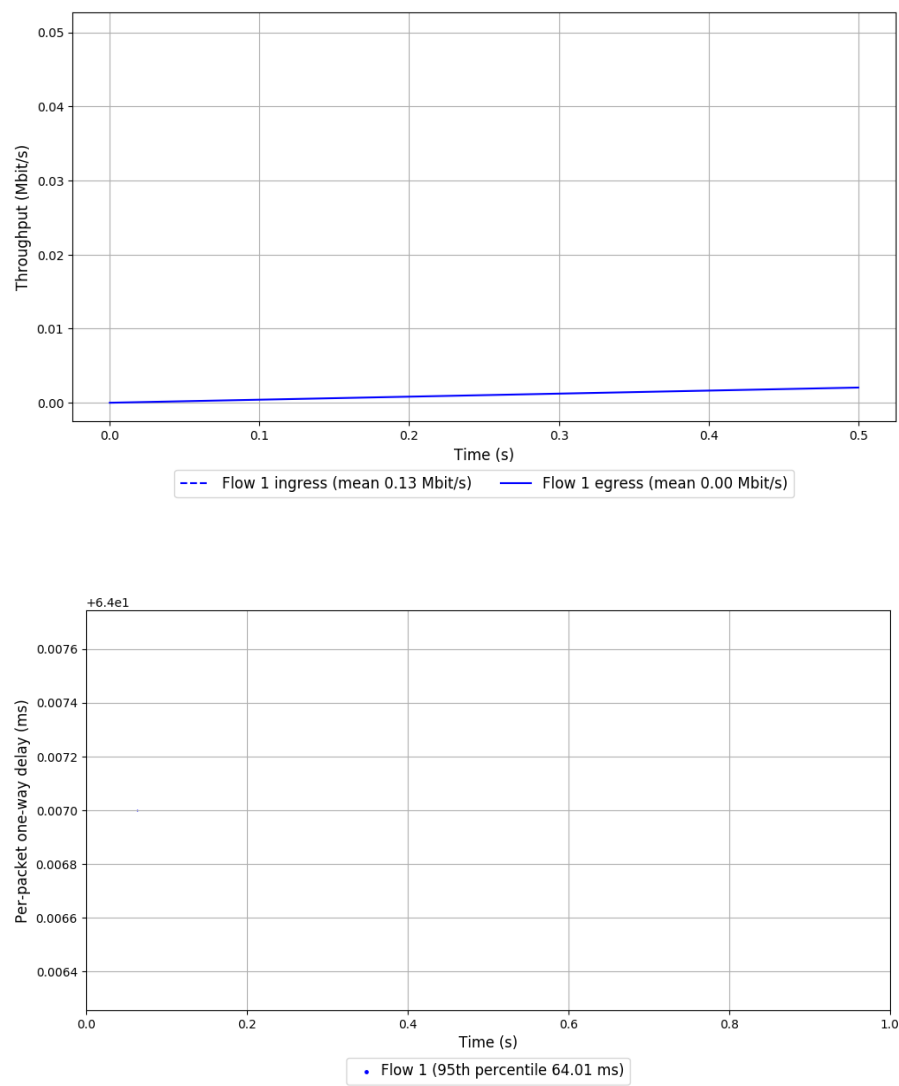
Start at: 2019-01-17 08:00:01

End at: 2019-01-17 08:00:31

Local clock offset: -3.472 ms

Remote clock offset: -38.466 ms

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

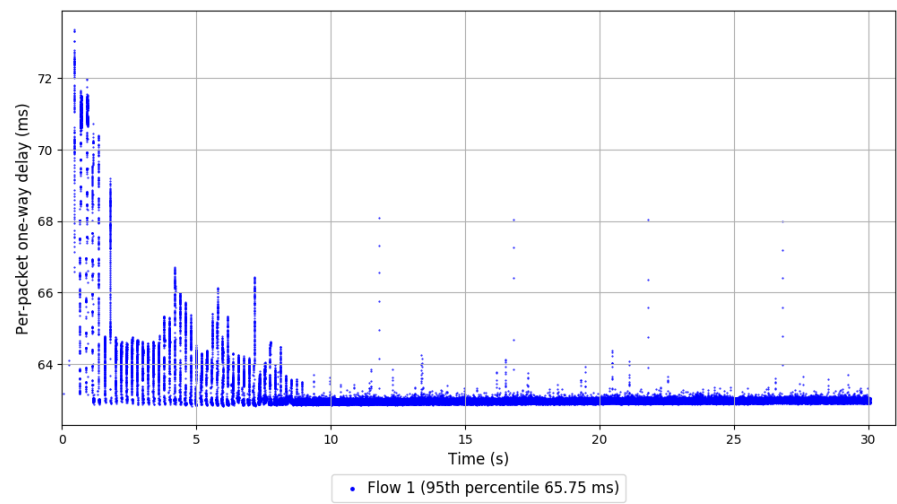
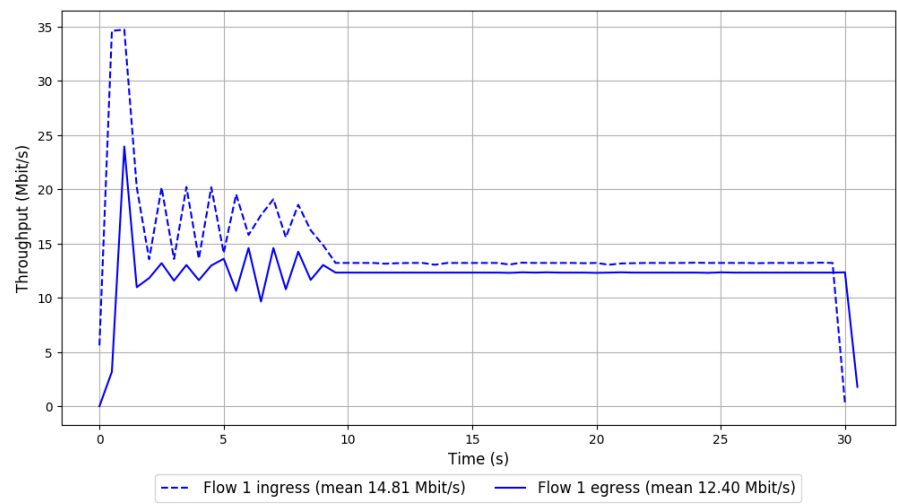


Run 4: Statistics of TaoVA-100x

Start at: 2019-01-17 08:27:08
End at: 2019-01-17 08:27:39
Local clock offset: -2.186 ms
Remote clock offset: -38.753 ms

Below is generated by plot.py at 2019-01-17 09:59:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.40 Mbit/s
95th percentile per-packet one-way delay: 65.753 ms
Loss rate: 16.28%
-- Flow 1:
Average throughput: 12.40 Mbit/s
95th percentile per-packet one-way delay: 65.753 ms
Loss rate: 16.28%

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

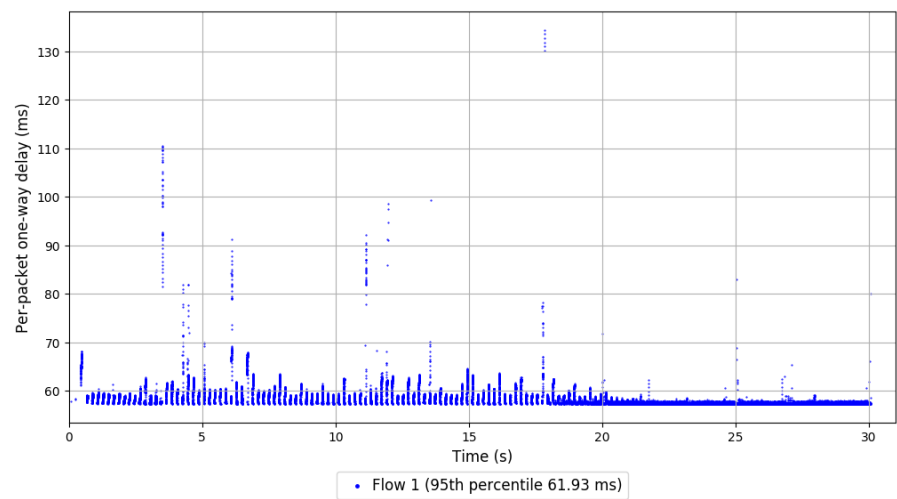
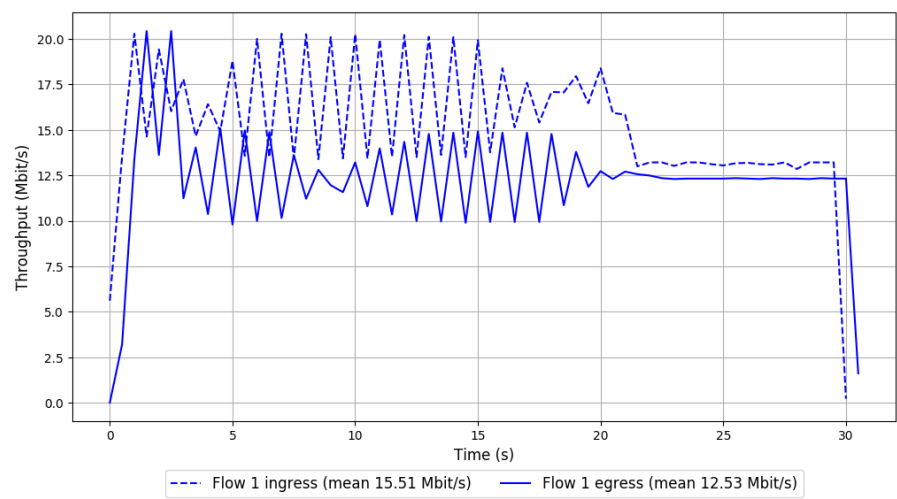


Run 5: Statistics of TaoVA-100x

Start at: 2019-01-17 09:20:53
End at: 2019-01-17 09:21:23
Local clock offset: 1.533 ms
Remote clock offset: -41.786 ms

Below is generated by plot.py at 2019-01-17 09:59:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.53 Mbit/s
95th percentile per-packet one-way delay: 61.927 ms
Loss rate: 19.17%
-- Flow 1:
Average throughput: 12.53 Mbit/s
95th percentile per-packet one-way delay: 61.927 ms
Loss rate: 19.17%

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

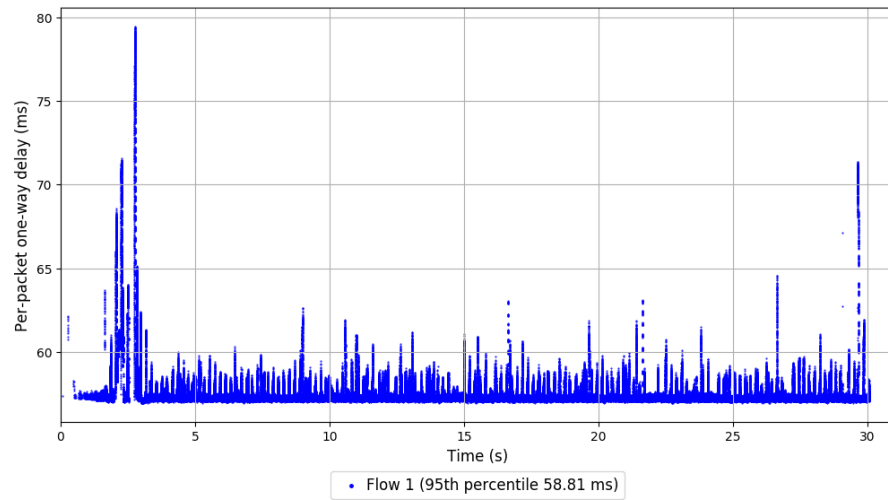
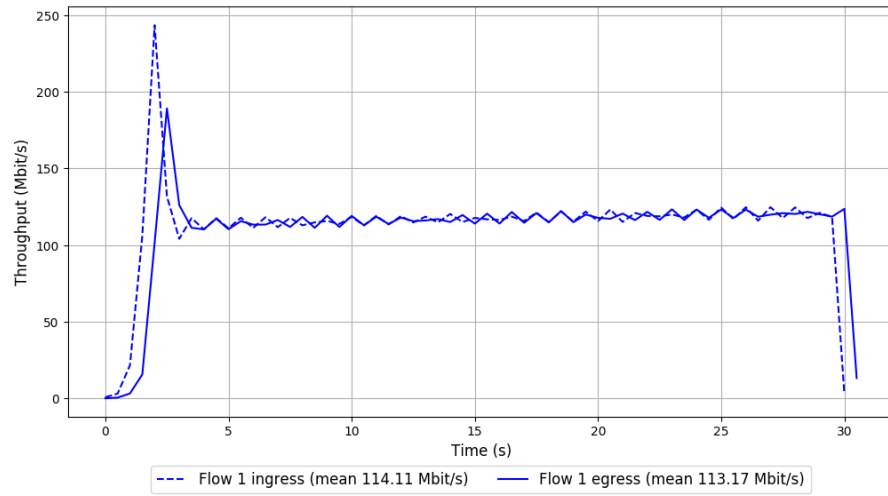


Run 1: Statistics of TCP Vegas

Start at: 2019-01-17 07:11:52
End at: 2019-01-17 07:12:22
Local clock offset: 0.844 ms
Remote clock offset: -45.48 ms

Below is generated by plot.py at 2019-01-17 09:59:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 113.17 Mbit/s
95th percentile per-packet one-way delay: 58.807 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 113.17 Mbit/s
95th percentile per-packet one-way delay: 58.807 ms
Loss rate: 0.83%

Run 1: Report of TCP Vegas — Data Link

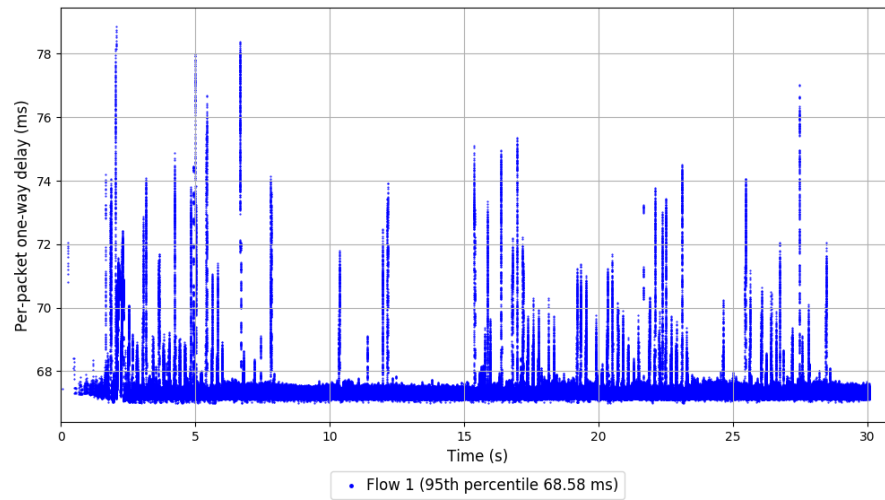
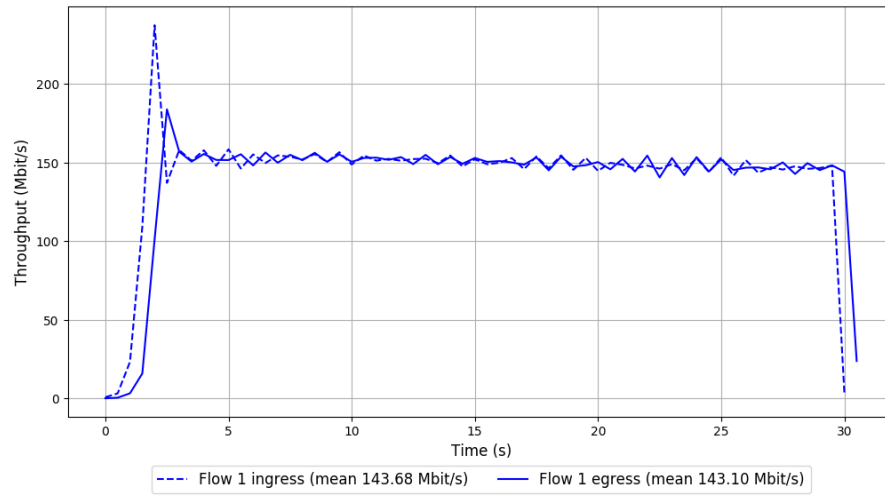


Run 2: Statistics of TCP Vegas

Start at: 2019-01-17 07:39:03
End at: 2019-01-17 07:39:33
Local clock offset: -2.034 ms
Remote clock offset: -38.337 ms

Below is generated by plot.py at 2019-01-17 09:59:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 143.10 Mbit/s
95th percentile per-packet one-way delay: 68.575 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 143.10 Mbit/s
95th percentile per-packet one-way delay: 68.575 ms
Loss rate: 0.41%

Run 2: Report of TCP Vegas — Data Link

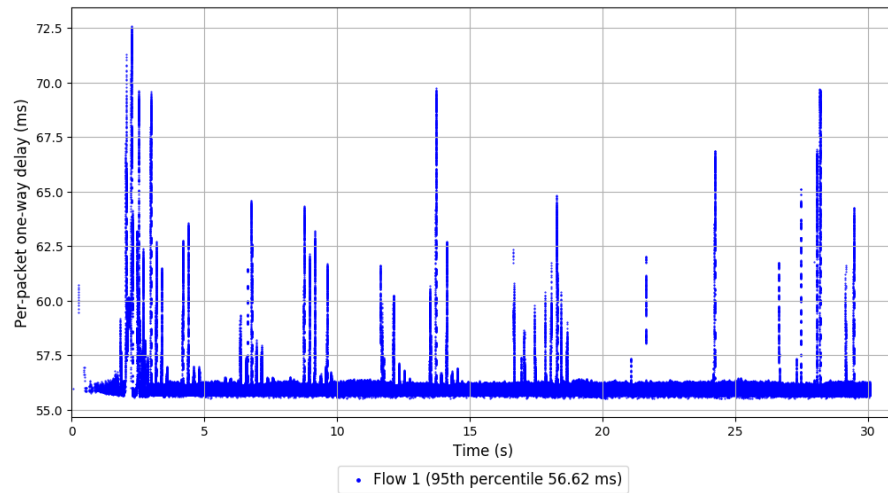
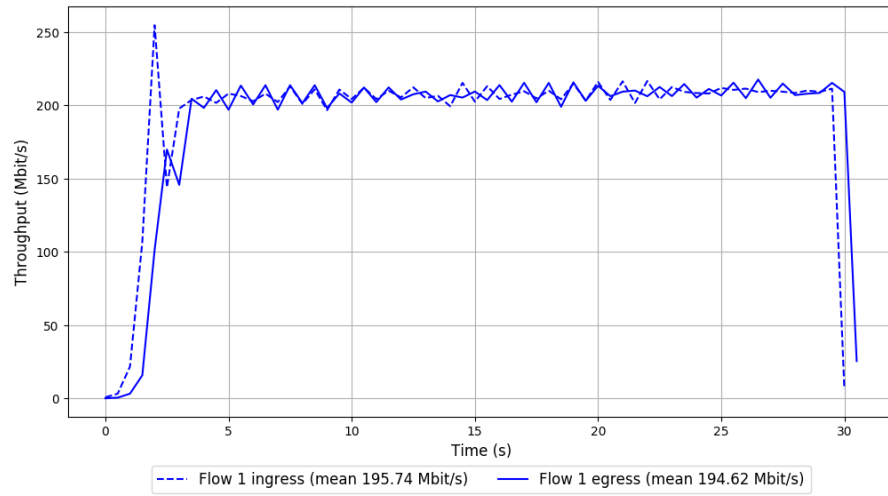


Run 3: Statistics of TCP Vegas

Start at: 2019-01-17 08:11:40
End at: 2019-01-17 08:12:10
Local clock offset: -0.535 ms
Remote clock offset: -45.068 ms

Below is generated by plot.py at 2019-01-17 09:59:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 194.62 Mbit/s
95th percentile per-packet one-way delay: 56.619 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 194.62 Mbit/s
95th percentile per-packet one-way delay: 56.619 ms
Loss rate: 0.58%

Run 3: Report of TCP Vegas — Data Link

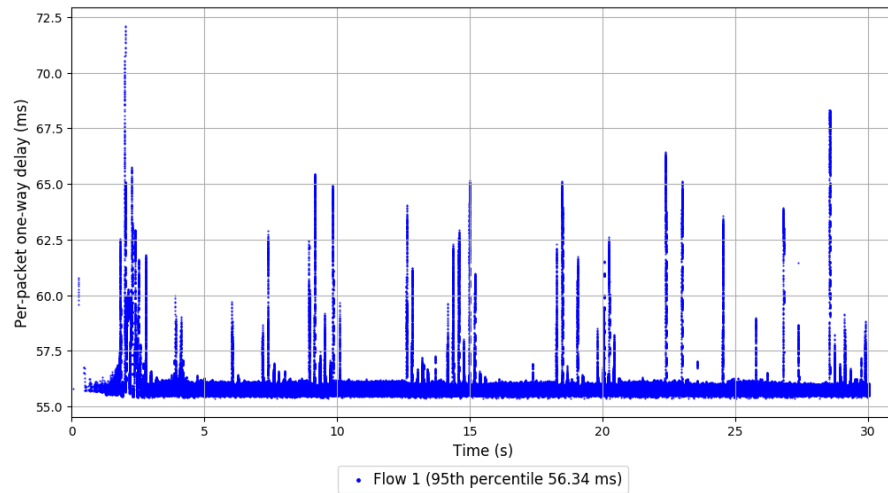
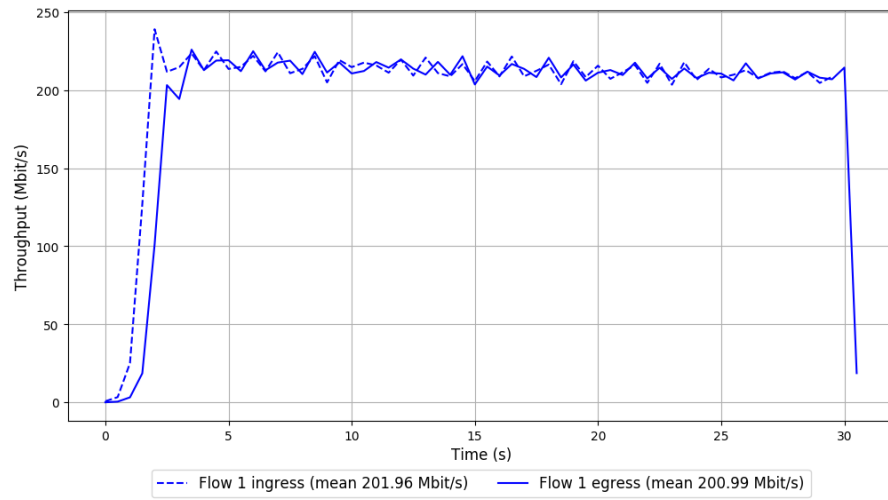


Run 4: Statistics of TCP Vegas

Start at: 2019-01-17 09:05:25
End at: 2019-01-17 09:05:55
Local clock offset: -0.035 ms
Remote clock offset: -45.284 ms

Below is generated by plot.py at 2019-01-17 09:59:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 200.99 Mbit/s
95th percentile per-packet one-way delay: 56.342 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 200.99 Mbit/s
95th percentile per-packet one-way delay: 56.342 ms
Loss rate: 0.48%

Run 4: Report of TCP Vegas — Data Link

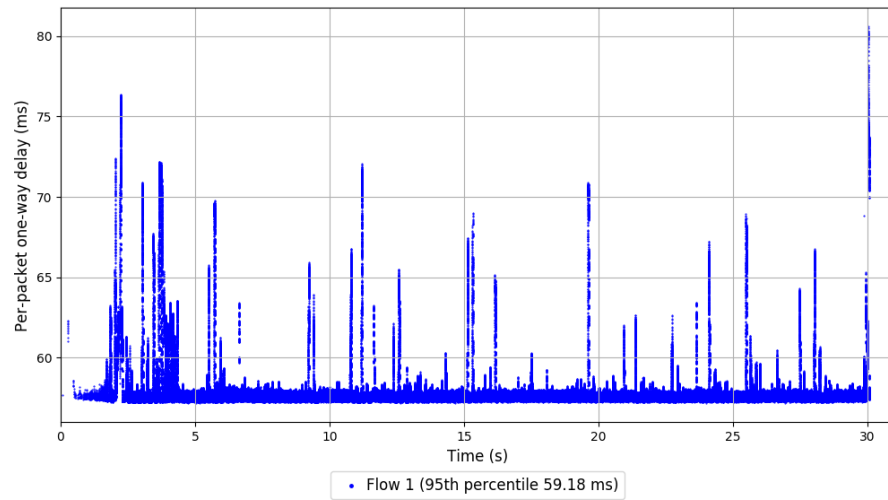
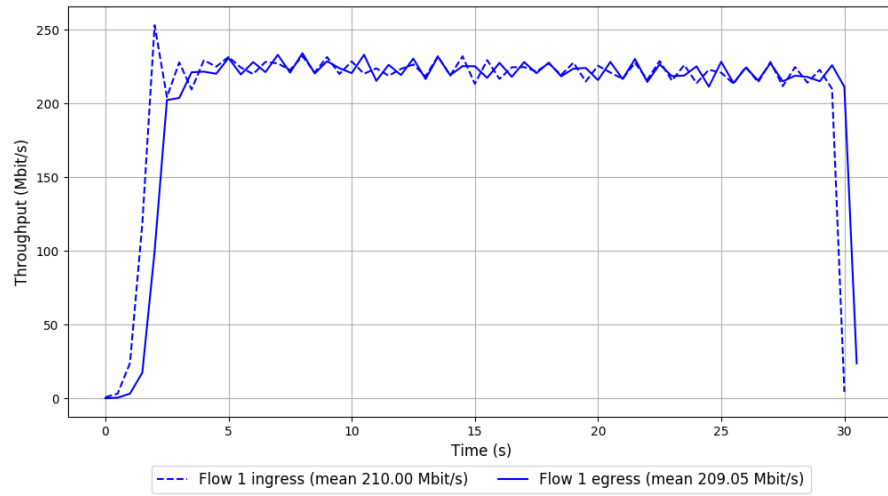


Run 5: Statistics of TCP Vegas

Start at: 2019-01-17 09:32:33
End at: 2019-01-17 09:33:03
Local clock offset: 2.309 ms
Remote clock offset: -41.324 ms

Below is generated by plot.py at 2019-01-17 10:00:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 209.05 Mbit/s
95th percentile per-packet one-way delay: 59.182 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 209.05 Mbit/s
95th percentile per-packet one-way delay: 59.182 ms
Loss rate: 0.46%

Run 5: Report of TCP Vegas — Data Link

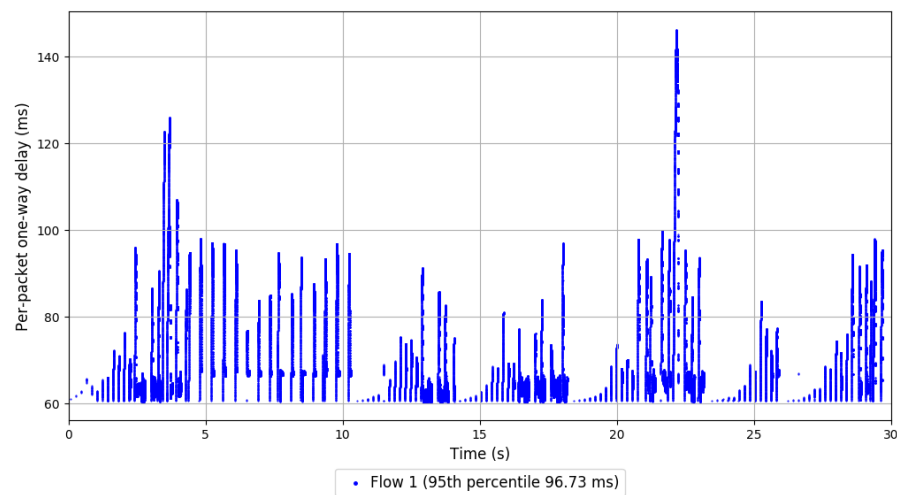
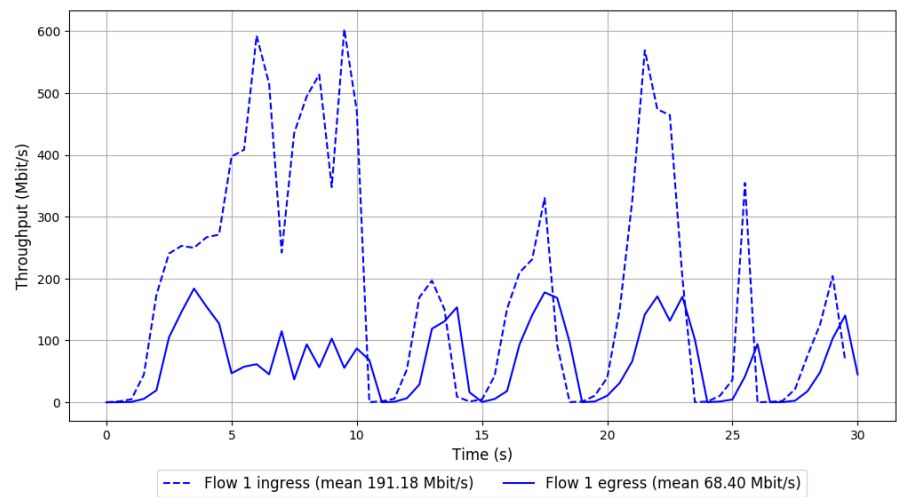


Run 1: Statistics of Verus

Start at: 2019-01-17 06:46:59
End at: 2019-01-17 06:47:29
Local clock offset: 0.682 ms
Remote clock offset: -40.006 ms

Below is generated by plot.py at 2019-01-17 10:00:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 68.40 Mbit/s
95th percentile per-packet one-way delay: 96.733 ms
Loss rate: 64.21%
-- Flow 1:
Average throughput: 68.40 Mbit/s
95th percentile per-packet one-way delay: 96.733 ms
Loss rate: 64.21%

Run 1: Report of Verus — Data Link

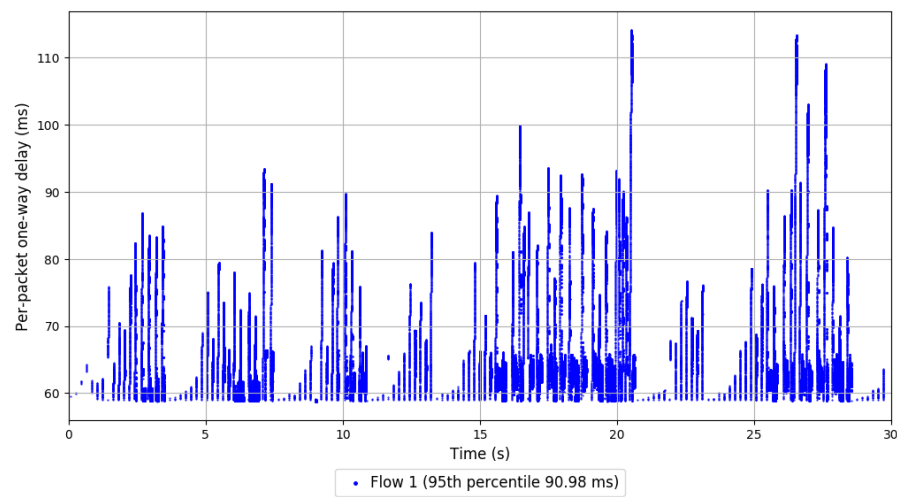
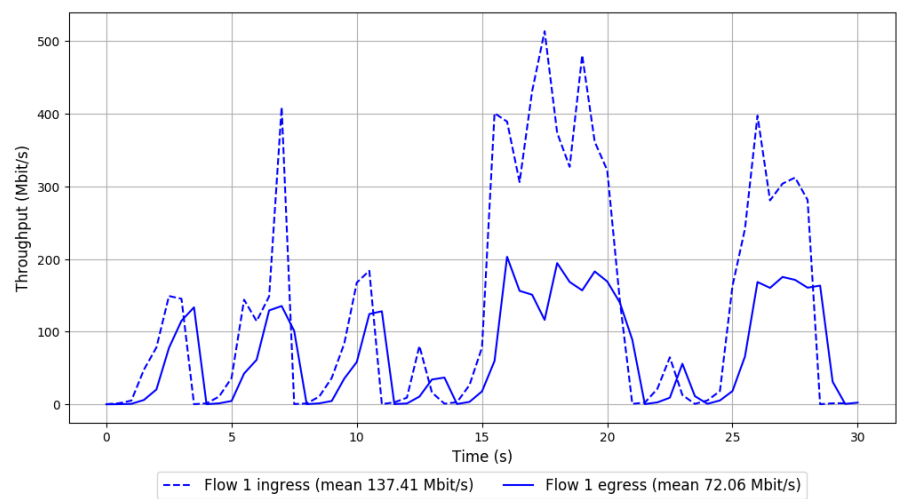


Run 2: Statistics of Verus

Start at: 2019-01-17 07:19:50
End at: 2019-01-17 07:20:20
Local clock offset: -1.078 ms
Remote clock offset: -42.808 ms

Below is generated by plot.py at 2019-01-17 10:00:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 72.06 Mbit/s
95th percentile per-packet one-way delay: 90.985 ms
Loss rate: 47.55%
-- Flow 1:
Average throughput: 72.06 Mbit/s
95th percentile per-packet one-way delay: 90.985 ms
Loss rate: 47.55%

Run 2: Report of Verus — Data Link

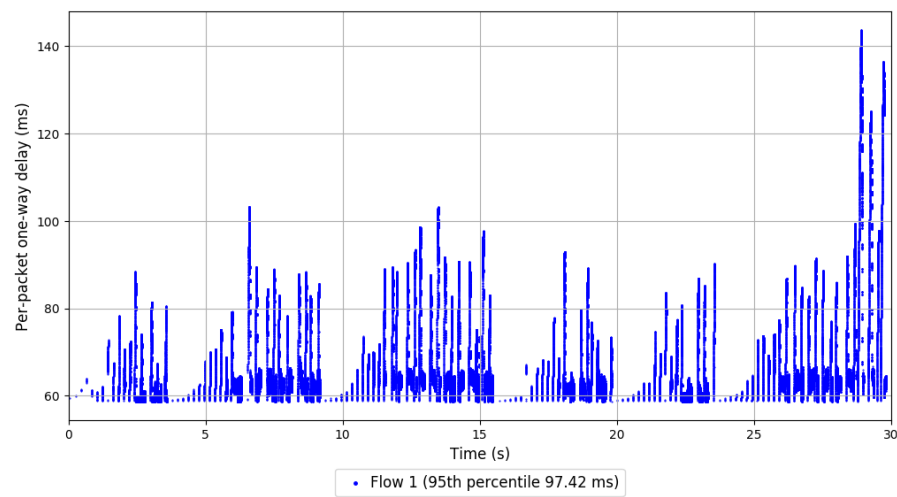
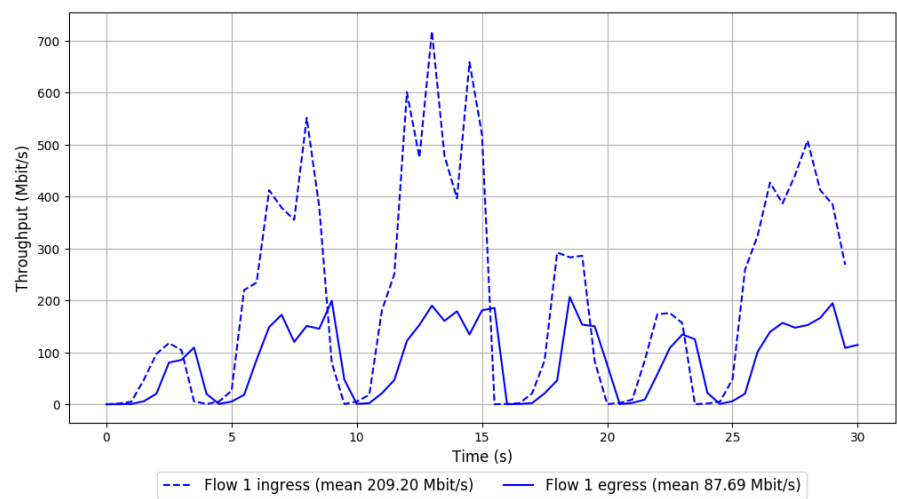


Run 3: Statistics of Verus

Start at: 2019-01-17 07:46:53
End at: 2019-01-17 07:47:23
Local clock offset: 1.634 ms
Remote clock offset: -40.024 ms

Below is generated by plot.py at 2019-01-17 10:00:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 87.69 Mbit/s
95th percentile per-packet one-way delay: 97.418 ms
Loss rate: 58.08%
-- Flow 1:
Average throughput: 87.69 Mbit/s
95th percentile per-packet one-way delay: 97.418 ms
Loss rate: 58.08%

Run 3: Report of Verus — Data Link

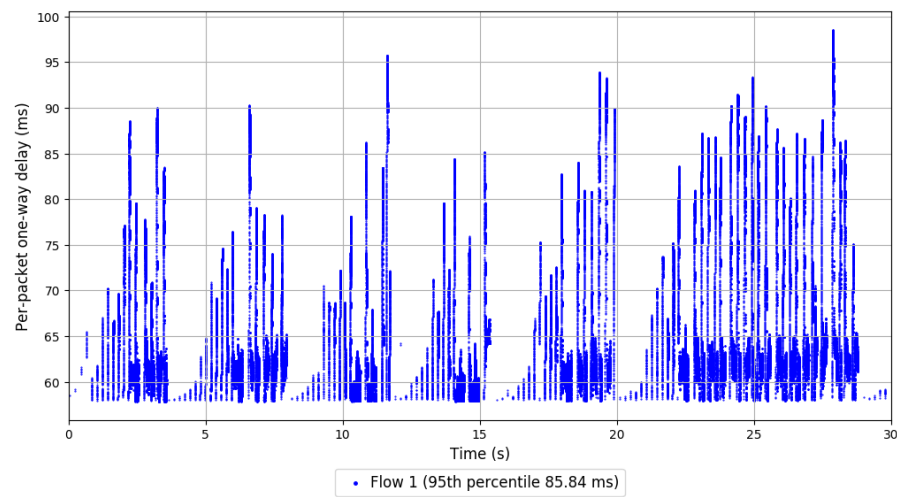
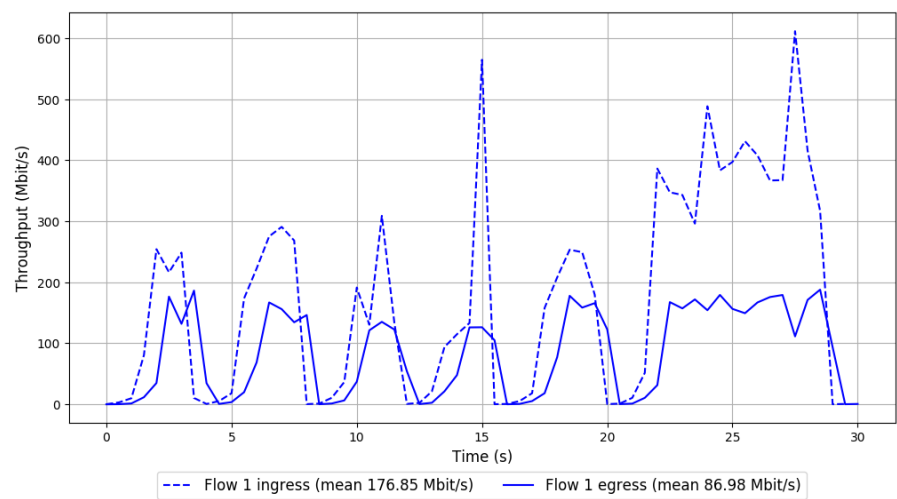


Run 4: Statistics of Verus

Start at: 2019-01-17 08:19:29
End at: 2019-01-17 08:19:59
Local clock offset: -2.482 ms
Remote clock offset: -42.689 ms

Below is generated by plot.py at 2019-01-17 10:00:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 86.98 Mbit/s
95th percentile per-packet one-way delay: 85.836 ms
Loss rate: 50.82%
-- Flow 1:
Average throughput: 86.98 Mbit/s
95th percentile per-packet one-way delay: 85.836 ms
Loss rate: 50.82%

Run 4: Report of Verus — Data Link

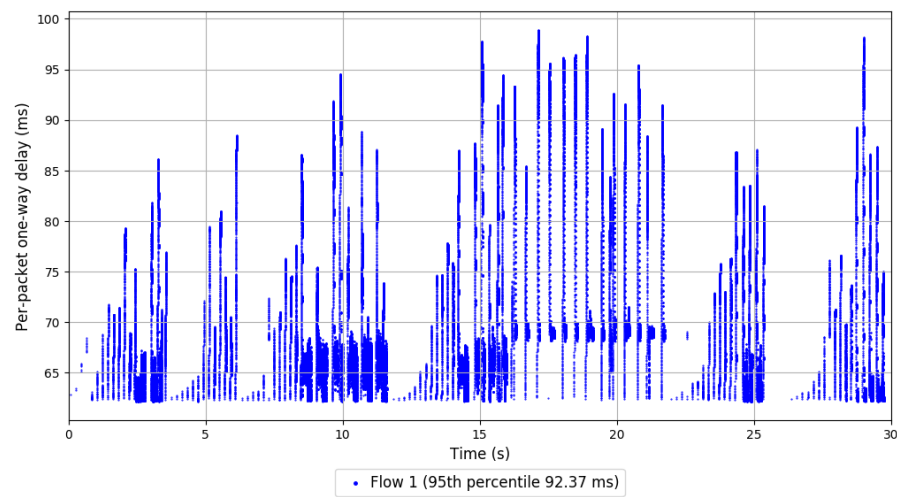
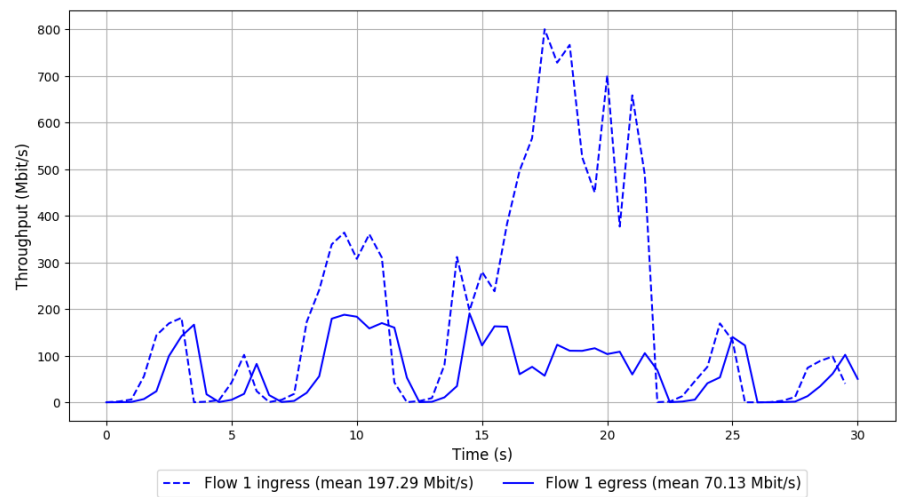


Run 5: Statistics of Verus

Start at: 2019-01-17 09:13:17
End at: 2019-01-17 09:13:47
Local clock offset: 2.457 ms
Remote clock offset: -36.548 ms

Below is generated by plot.py at 2019-01-17 10:00:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 70.13 Mbit/s
95th percentile per-packet one-way delay: 92.372 ms
Loss rate: 64.45%
-- Flow 1:
Average throughput: 70.13 Mbit/s
95th percentile per-packet one-way delay: 92.372 ms
Loss rate: 64.45%

Run 5: Report of Verus — Data Link

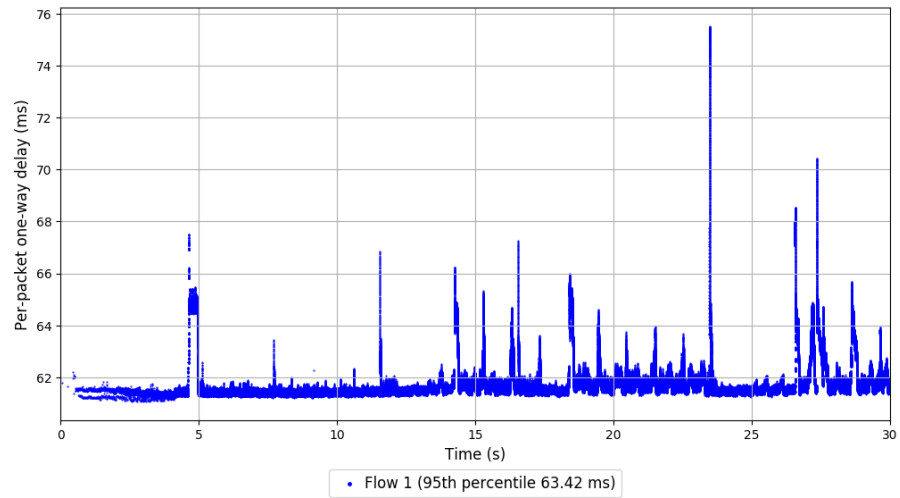
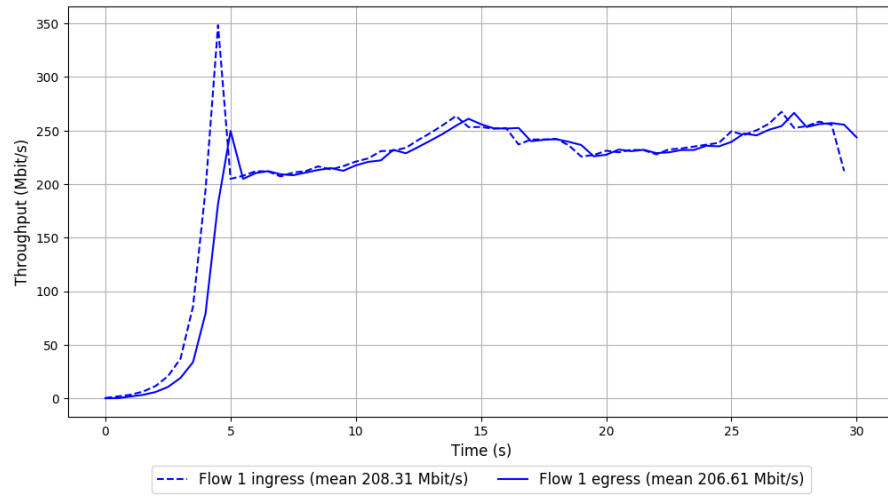


Run 1: Statistics of PCC-Vivace

Start at: 2019-01-17 06:36:13
End at: 2019-01-17 06:36:43
Local clock offset: -1.238 ms
Remote clock offset: -40.751 ms

Below is generated by plot.py at 2019-01-17 10:00:57
Datalink statistics
-- Total of 1 flow:
Average throughput: 206.61 Mbit/s
95th percentile per-packet one-way delay: 63.418 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 206.61 Mbit/s
95th percentile per-packet one-way delay: 63.418 ms
Loss rate: 0.82%

Run 1: Report of PCC-Vivace — Data Link

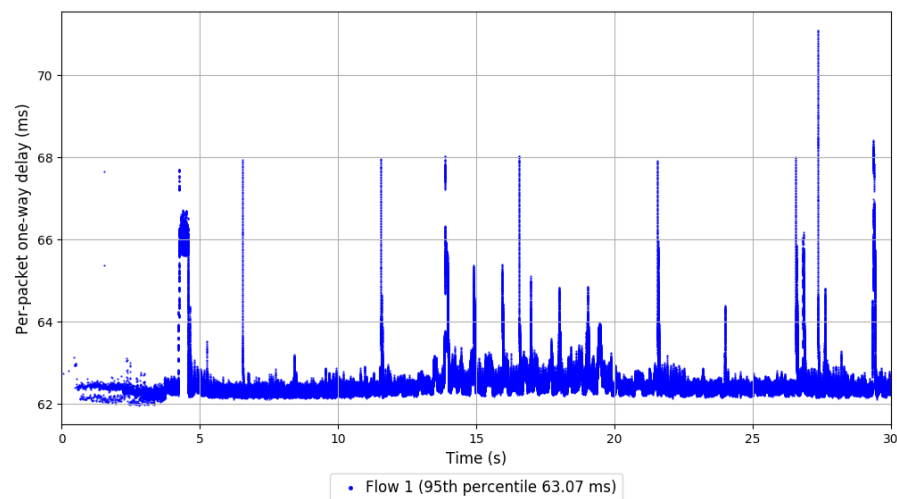
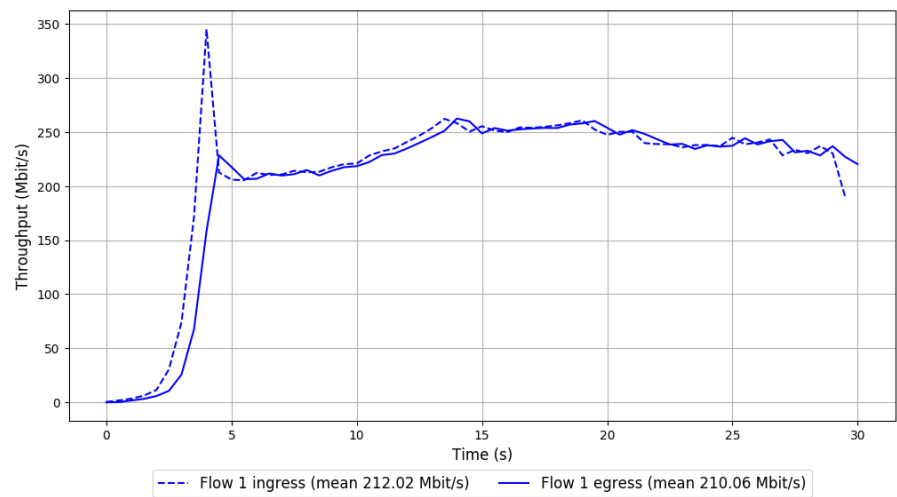


Run 2: Statistics of PCC-Vivace

Start at: 2019-01-17 07:14:34
End at: 2019-01-17 07:15:04
Local clock offset: -1.709 ms
Remote clock offset: -39.978 ms

Below is generated by plot.py at 2019-01-17 10:01:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 210.06 Mbit/s
95th percentile per-packet one-way delay: 63.074 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 210.06 Mbit/s
95th percentile per-packet one-way delay: 63.074 ms
Loss rate: 0.93%

Run 2: Report of PCC-Vivace — Data Link

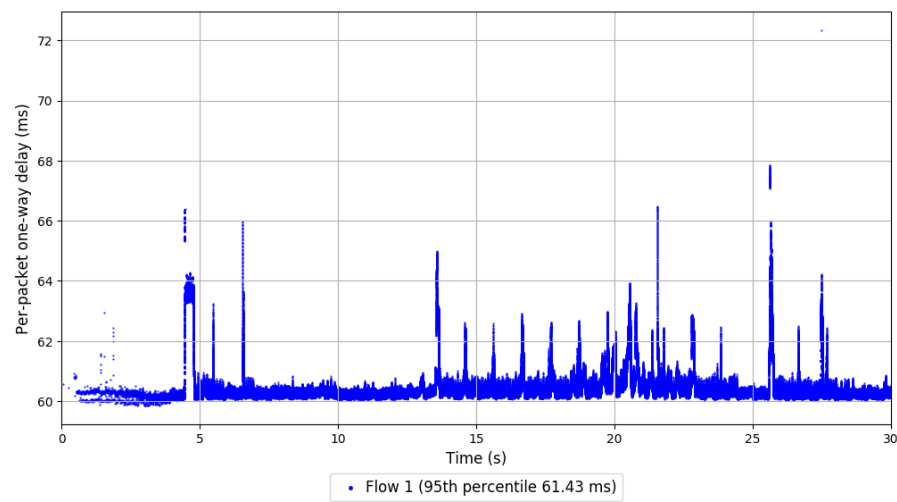
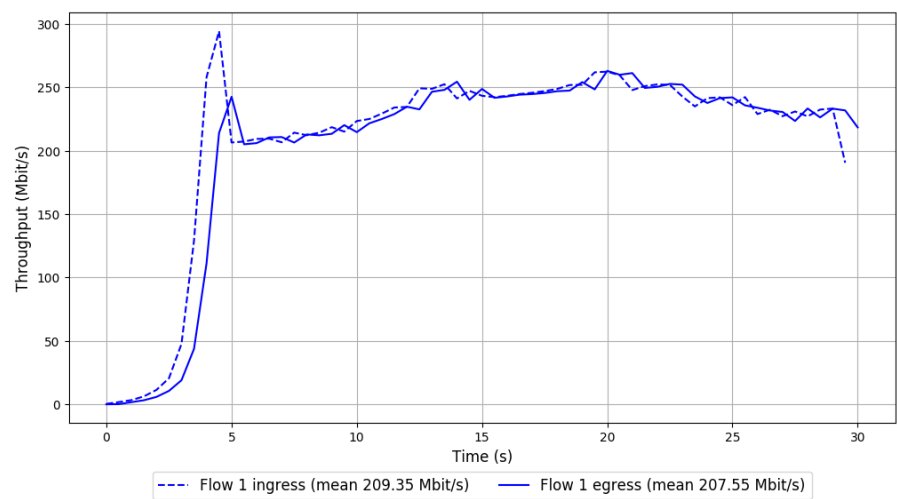


Run 3: Statistics of PCC-Vivace

Start at: 2019-01-17 07:41:43
End at: 2019-01-17 07:42:13
Local clock offset: 1.533 ms
Remote clock offset: -39.097 ms

Below is generated by plot.py at 2019-01-17 10:01:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 207.55 Mbit/s
95th percentile per-packet one-way delay: 61.432 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 207.55 Mbit/s
95th percentile per-packet one-way delay: 61.432 ms
Loss rate: 0.86%

Run 3: Report of PCC-Vivace — Data Link

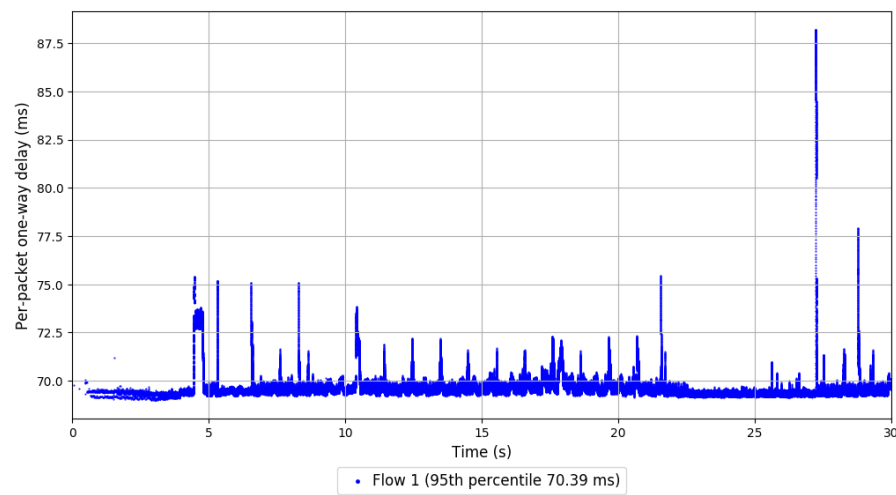
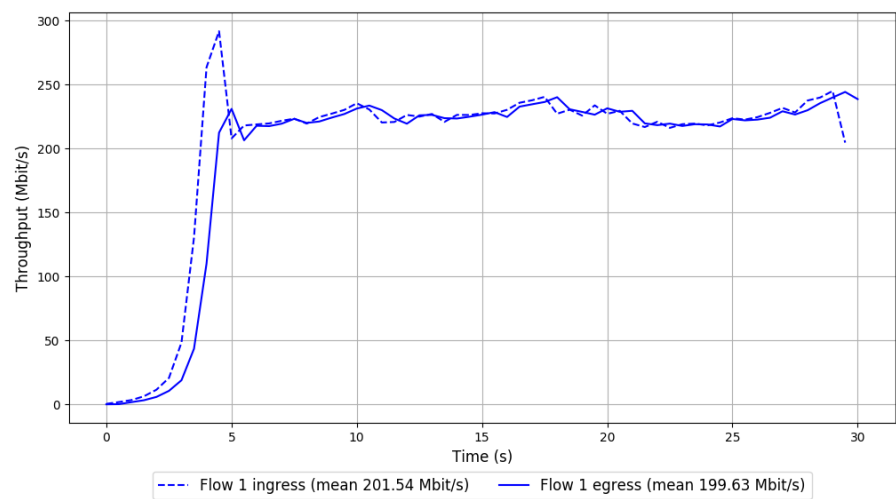


Run 4: Statistics of PCC-Vivace

Start at: 2019-01-17 08:14:20
End at: 2019-01-17 08:14:50
Local clock offset: -4.029 ms
Remote clock offset: -32.359 ms

Below is generated by plot.py at 2019-01-17 10:01:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 199.63 Mbit/s
95th percentile per-packet one-way delay: 70.387 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 199.63 Mbit/s
95th percentile per-packet one-way delay: 70.387 ms
Loss rate: 0.96%

Run 4: Report of PCC-Vivace — Data Link

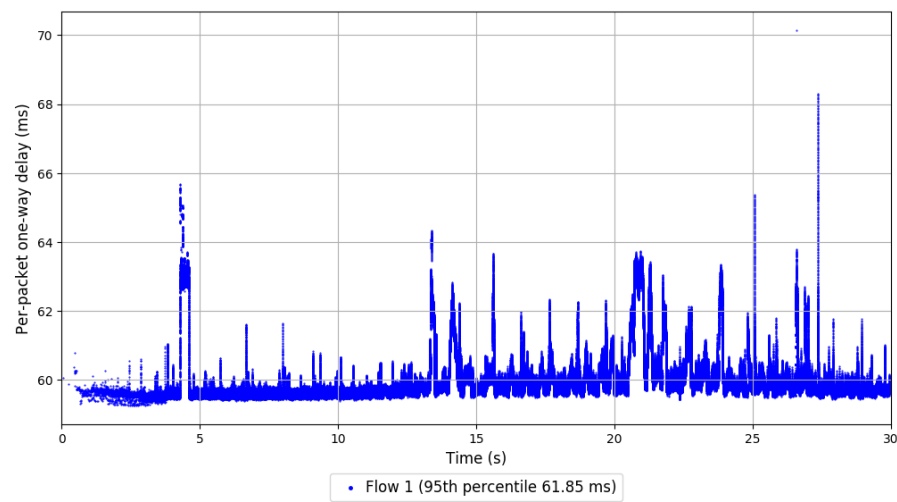
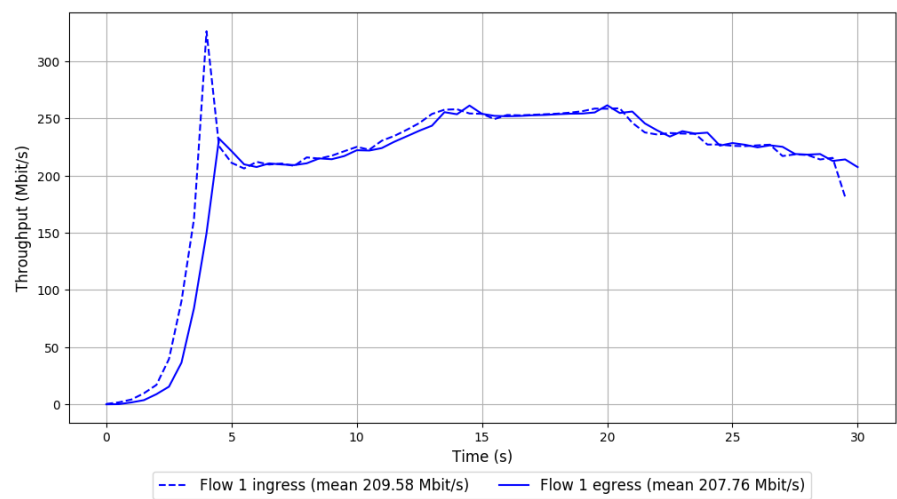


Run 5: Statistics of PCC-Vivace

Start at: 2019-01-17 09:08:06
End at: 2019-01-17 09:08:36
Local clock offset: 1.919 ms
Remote clock offset: -41.865 ms

Below is generated by plot.py at 2019-01-17 10:01:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 207.76 Mbit/s
95th percentile per-packet one-way delay: 61.850 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 207.76 Mbit/s
95th percentile per-packet one-way delay: 61.850 ms
Loss rate: 0.88%

Run 5: Report of PCC-Vivace — Data Link

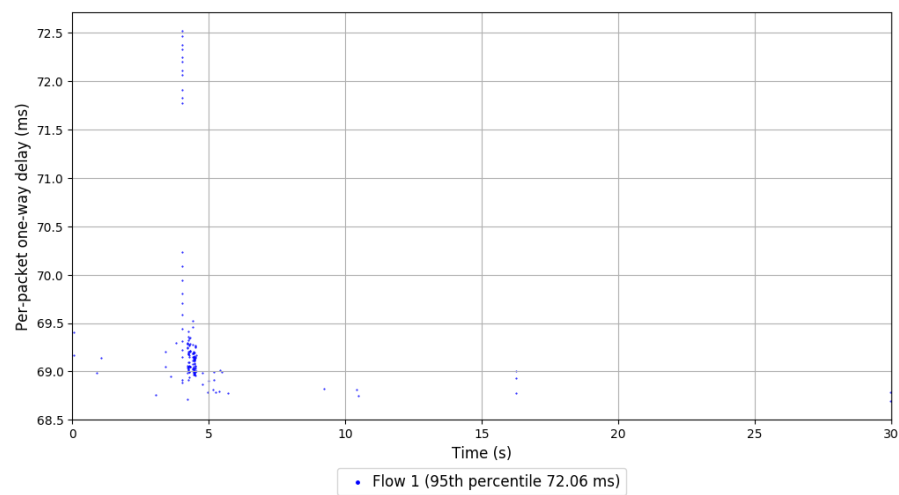
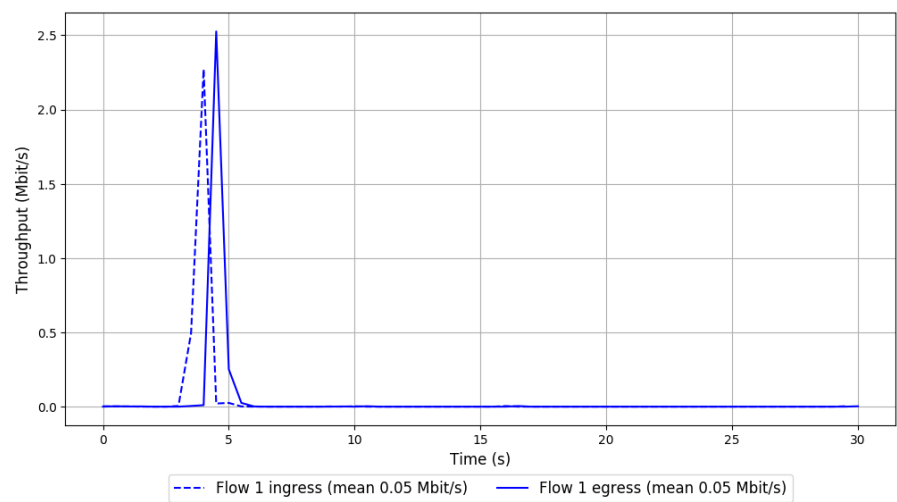


Run 1: Statistics of WebRTC media

Start at: 2019-01-17 07:06:27
End at: 2019-01-17 07:06:57
Local clock offset: -0.667 ms
Remote clock offset: -32.869 ms

Below is generated by plot.py at 2019-01-17 10:01:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 72.065 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 72.065 ms
Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link

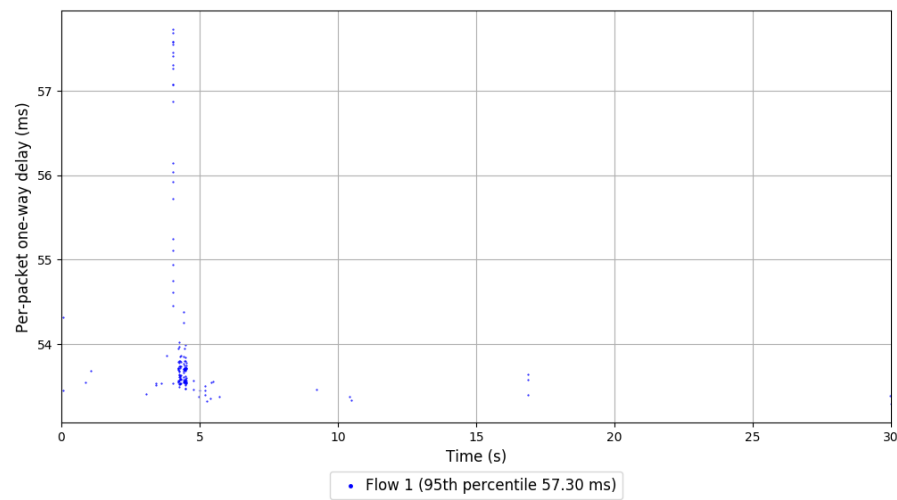
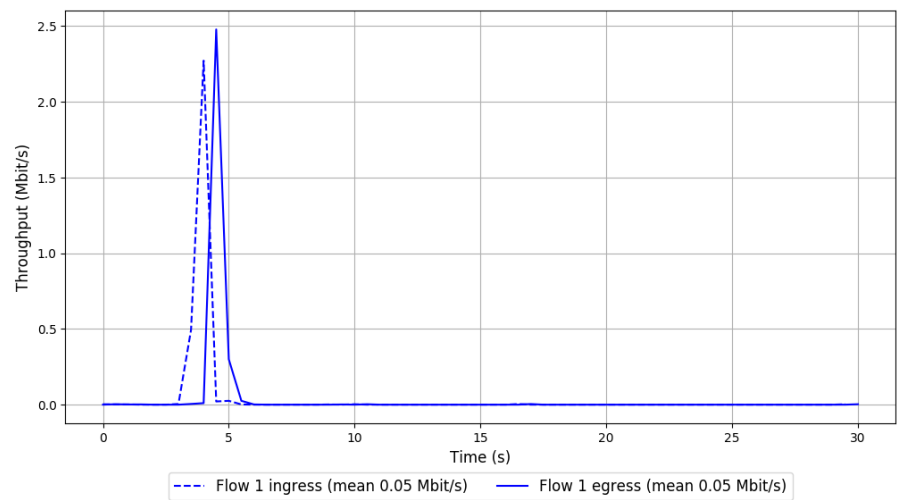


Run 2: Statistics of WebRTC media

Start at: 2019-01-17 07:33:38
End at: 2019-01-17 07:34:08
Local clock offset: 1.872 ms
Remote clock offset: -45.469 ms

Below is generated by plot.py at 2019-01-17 10:01:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.303 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.303 ms
Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link

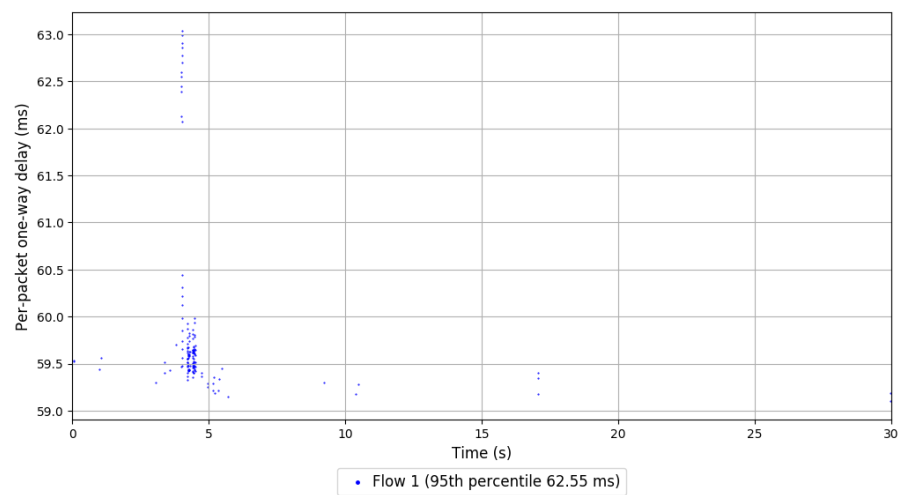
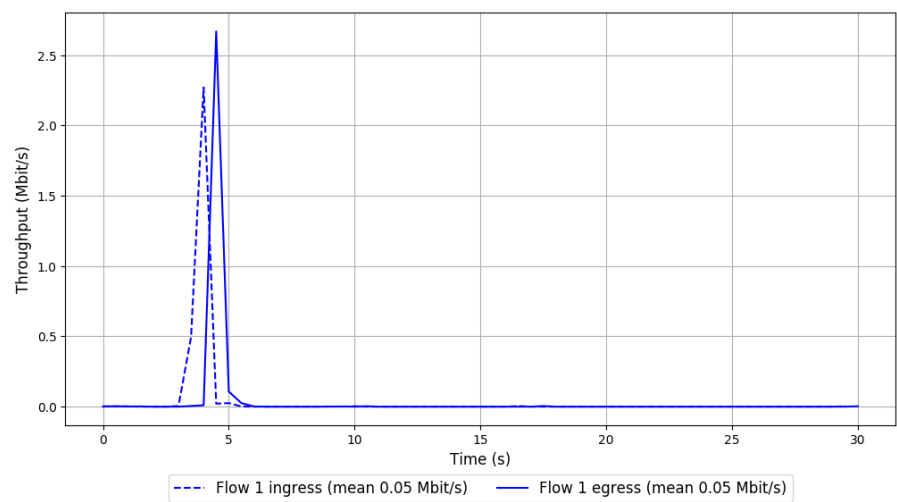


Run 3: Statistics of WebRTC media

Start at: 2019-01-17 08:06:15
End at: 2019-01-17 08:06:45
Local clock offset: -1.119 ms
Remote clock offset: -42.408 ms

Below is generated by plot.py at 2019-01-17 10:01:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 62.555 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 62.555 ms
Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

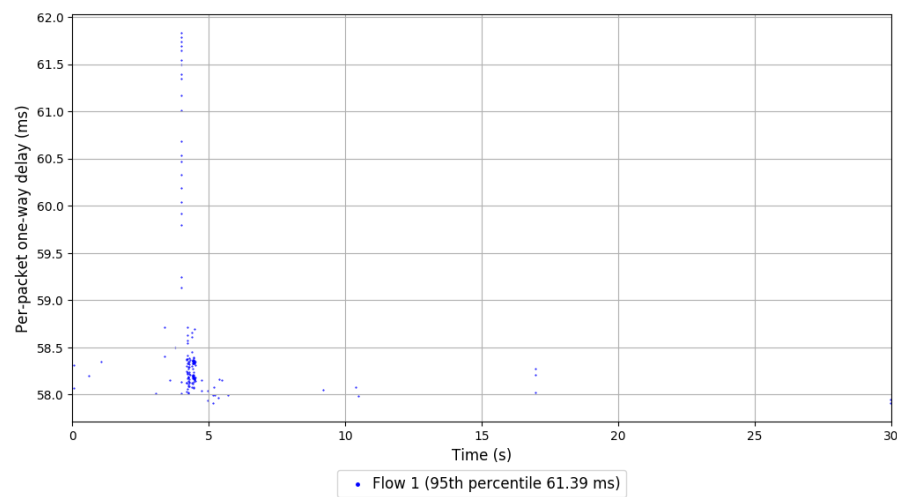
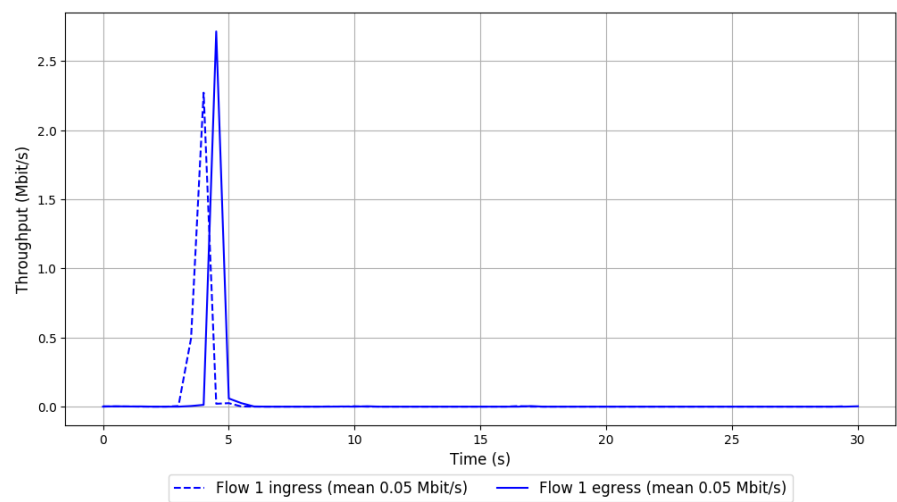


Run 4: Statistics of WebRTC media

Start at: 2019-01-17 08:44:31
End at: 2019-01-17 08:45:01
Local clock offset: -1.09 ms
Remote clock offset: -46.571 ms

Below is generated by plot.py at 2019-01-17 10:01:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 61.392 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 61.392 ms
Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2019-01-17 09:27:08
End at: 2019-01-17 09:27:38
Local clock offset: -1.626 ms
Remote clock offset: -42.394 ms

Below is generated by plot.py at 2019-01-17 10:01:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 66.025 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 66.025 ms
Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

