

Pantheon Report

Generated at 2018-09-06 06:35:27 (UTC).

Data path: AWS Korea on `ens5` (*local*) → China on `eno1` (*remote*).

Repeated the test of 18 congestion control schemes 5 times.

Each test lasted for 30 seconds running 1 flow.

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

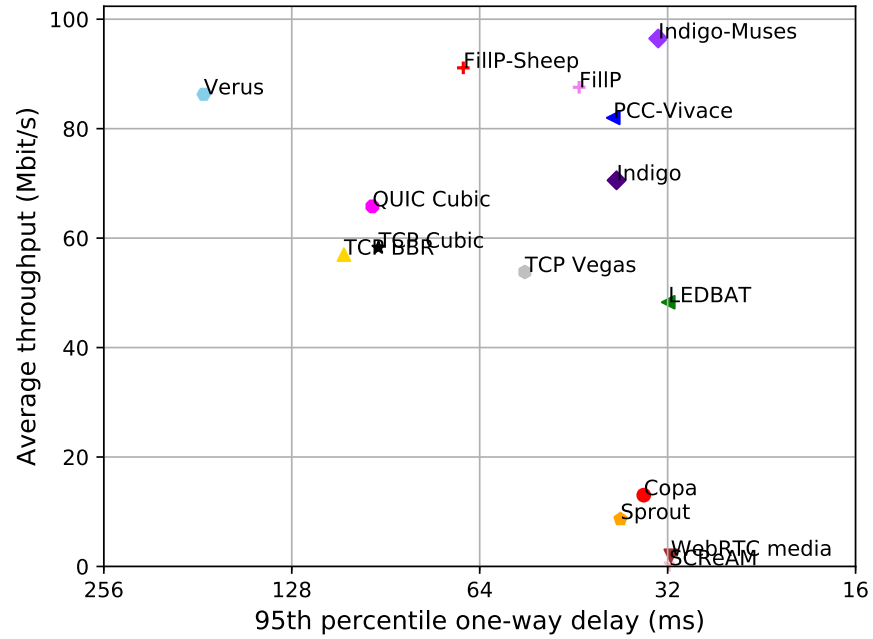
System info:

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

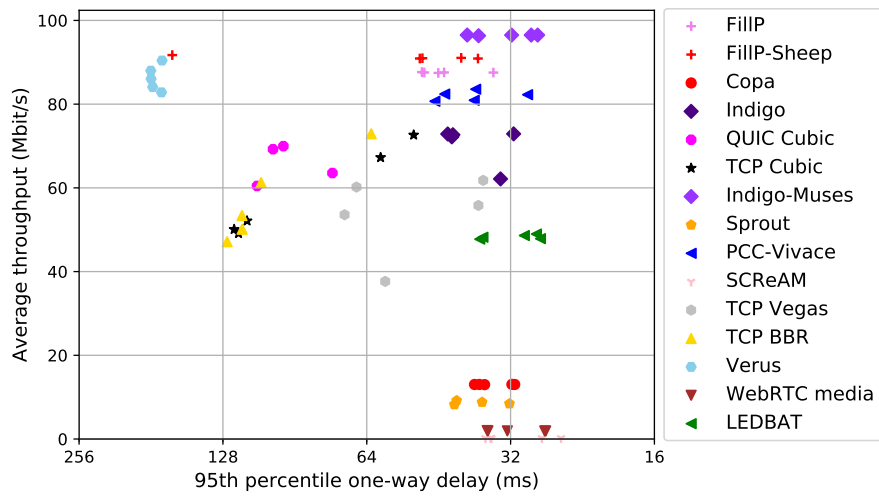
Git summary:

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

test from AWS Korea to China, 5 runs of 30s each per scheme
(mean of all runs by scheme)



test from AWS Korea to China, 5 runs of 30s each per scheme



scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	56.97	105.60	7.44
Copa	5	13.03	34.95	60.65
TCP Cubic	5	58.25	92.97	0.77
FillP	5	87.56	44.35	7.09
FillP-Sheep	5	91.11	67.99	0.75
Indigo	5	70.56	38.64	7.09
LEDBAT	5	48.28	31.93	0.00
Indigo-Muses	5	96.47	33.14	0.01
PCC-Allegro	0	N/A	N/A	N/A
PCC-Expr	0	N/A	N/A	N/A
QUIC Cubic	4	65.80	95.08	0.08
SCReAM	5	0.22	31.82	0.00
Sprout	4	8.66	38.08	0.00
TaoVA-100x	0	N/A	N/A	N/A
TCP Vegas	5	53.81	54.18	0.92
Verus	5	86.27	177.08	13.73
PCC-Vivace	5	81.97	39.11	0.00
WebRTC media	5	1.95	31.64	0.00

Run 1: Statistics of TCP BBR

Start at: 2018-09-06 05:00:33

End at: 2018-09-06 05:01:03

Local clock offset: 8.618 ms

Remote clock offset: 35.373 ms

Below is generated by plot.py at 2018-09-06 06:29:12

Datalink statistics

-- Total of 1 flow:

Average throughput: 61.27 Mbit/s

95th percentile per-packet one-way delay: 106.480 ms

Loss rate: 6.03%

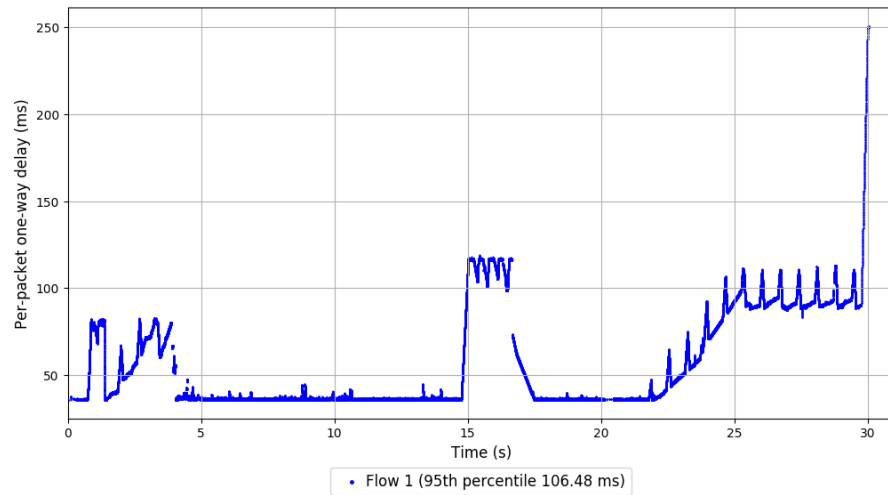
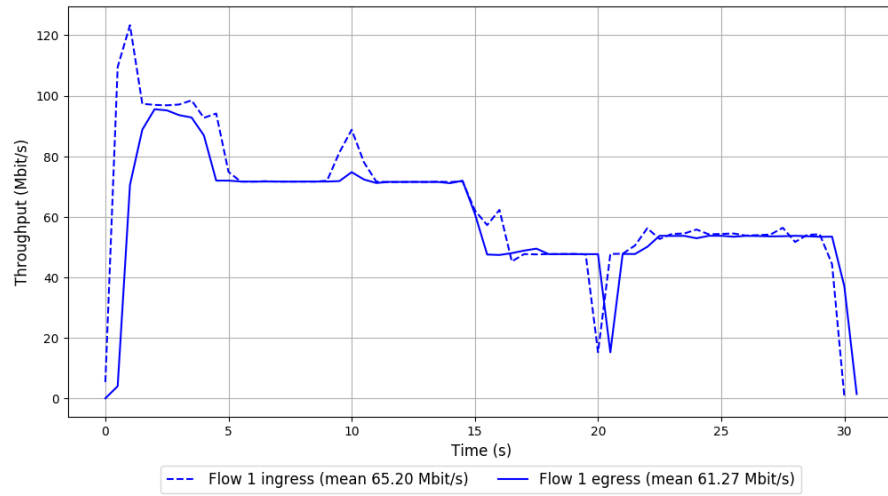
-- Flow 1:

Average throughput: 61.27 Mbit/s

95th percentile per-packet one-way delay: 106.480 ms

Loss rate: 6.03%

Run 1: Report of TCP BBR — Data Link

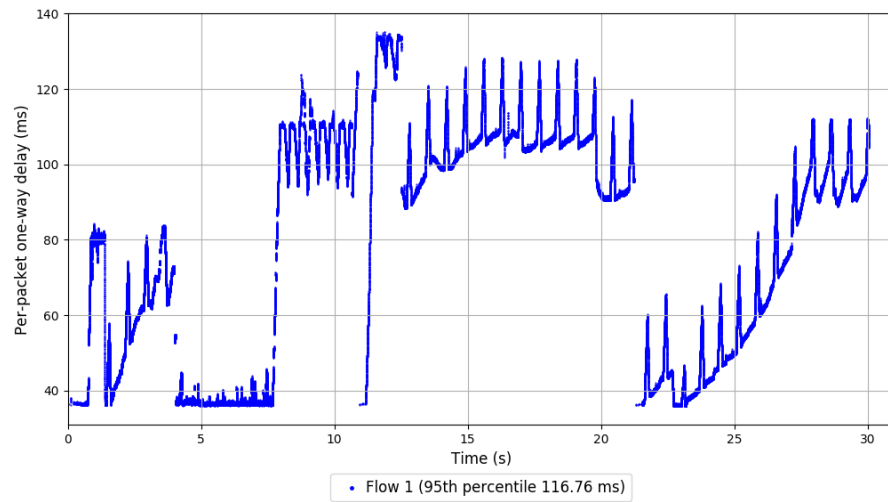
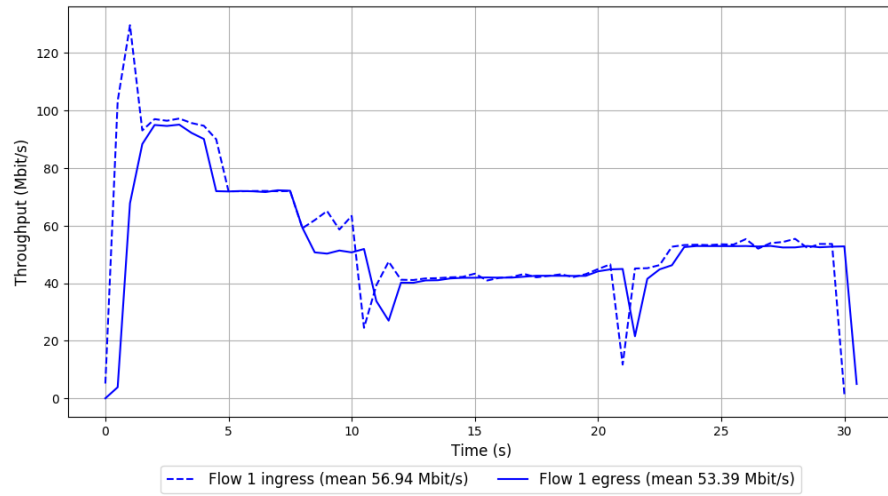


Run 2: Statistics of TCP BBR

Start at: 2018-09-06 05:22:10
End at: 2018-09-06 05:22:40
Local clock offset: 6.793 ms
Remote clock offset: 35.037 ms

Below is generated by plot.py at 2018-09-06 06:29:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 53.39 Mbit/s
95th percentile per-packet one-way delay: 116.757 ms
Loss rate: 6.23%
-- Flow 1:
Average throughput: 53.39 Mbit/s
95th percentile per-packet one-way delay: 116.757 ms
Loss rate: 6.23%

Run 2: Report of TCP BBR — Data Link

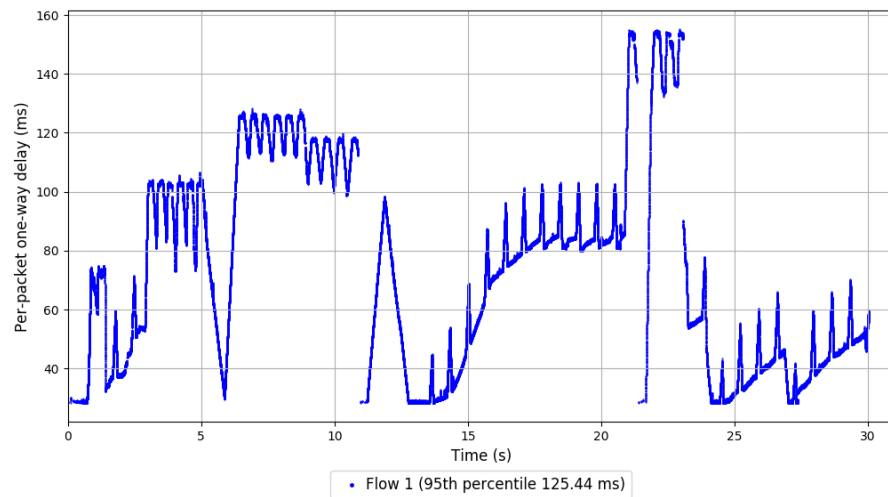
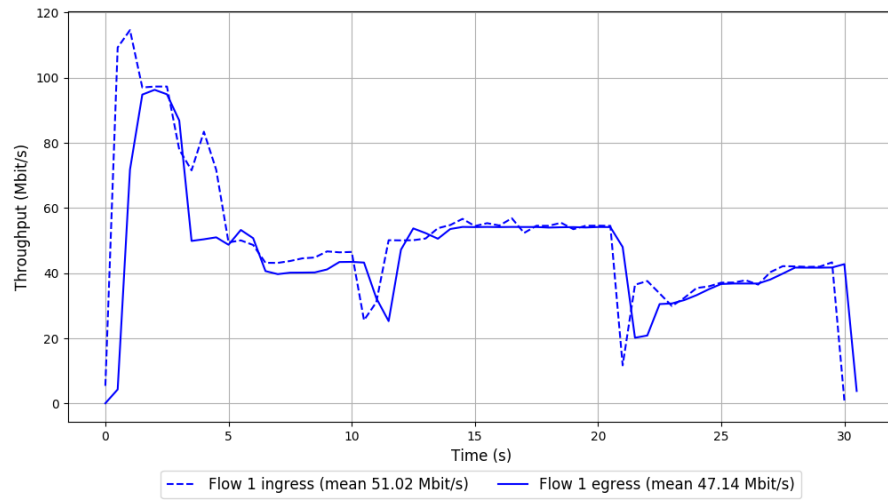


Run 3: Statistics of TCP BBR

Start at: 2018-09-06 05:43:36
End at: 2018-09-06 05:44:06
Local clock offset: 4.172 ms
Remote clock offset: 26.665 ms

Below is generated by plot.py at 2018-09-06 06:29:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 47.14 Mbit/s
95th percentile per-packet one-way delay: 125.437 ms
Loss rate: 7.60%
-- Flow 1:
Average throughput: 47.14 Mbit/s
95th percentile per-packet one-way delay: 125.437 ms
Loss rate: 7.60%

Run 3: Report of TCP BBR — Data Link

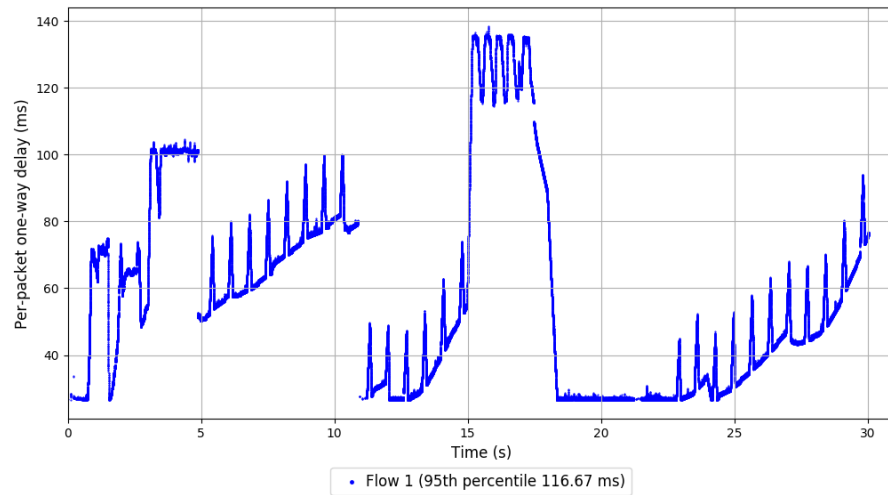
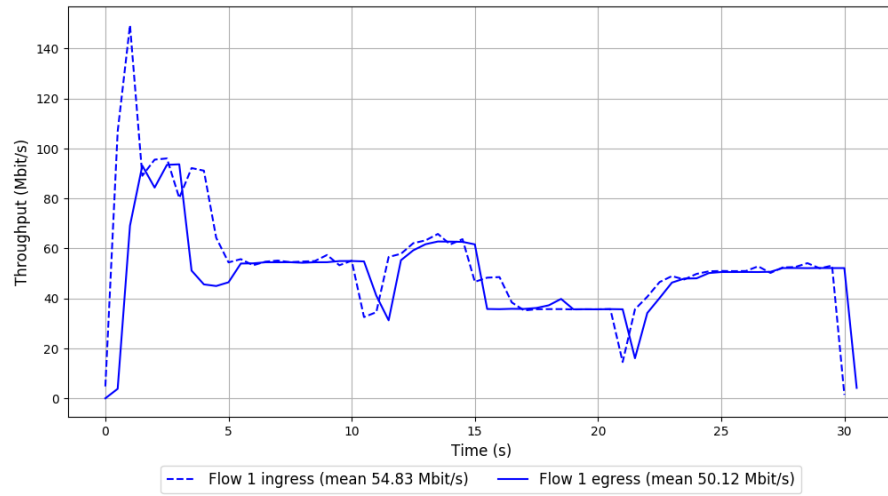


Run 4: Statistics of TCP BBR

Start at: 2018-09-06 06:05:12
End at: 2018-09-06 06:05:42
Local clock offset: -1.251 ms
Remote clock offset: 23.962 ms

Below is generated by plot.py at 2018-09-06 06:29:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 50.12 Mbit/s
95th percentile per-packet one-way delay: 116.668 ms
Loss rate: 8.58%
-- Flow 1:
Average throughput: 50.12 Mbit/s
95th percentile per-packet one-way delay: 116.668 ms
Loss rate: 8.58%

Run 4: Report of TCP BBR — Data Link

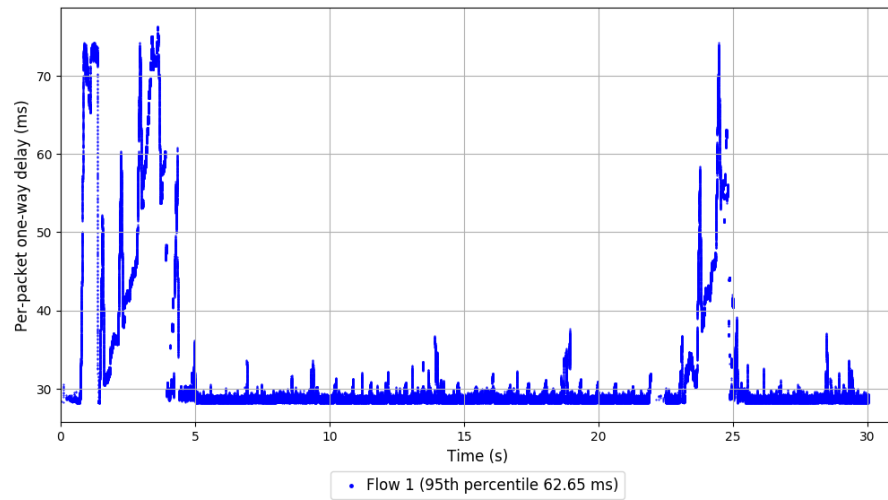
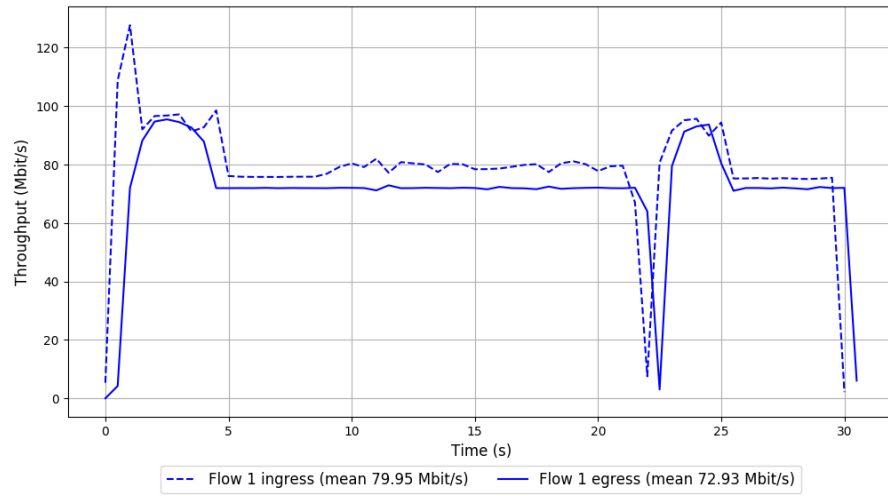


Run 5: Statistics of TCP BBR

Start at: 2018-09-06 06:26:43
End at: 2018-09-06 06:27:13
Local clock offset: -2.706 ms
Remote clock offset: 24.285 ms

Below is generated by plot.py at 2018-09-06 06:29:20
Datalink statistics
-- Total of 1 flow:
Average throughput: 72.93 Mbit/s
95th percentile per-packet one-way delay: 62.647 ms
Loss rate: 8.78%
-- Flow 1:
Average throughput: 72.93 Mbit/s
95th percentile per-packet one-way delay: 62.647 ms
Loss rate: 8.78%

Run 5: Report of TCP BBR — Data Link

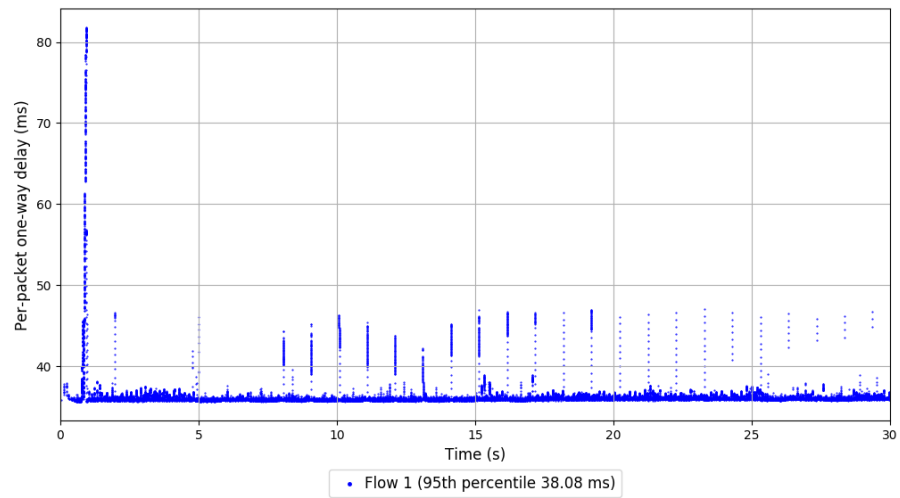
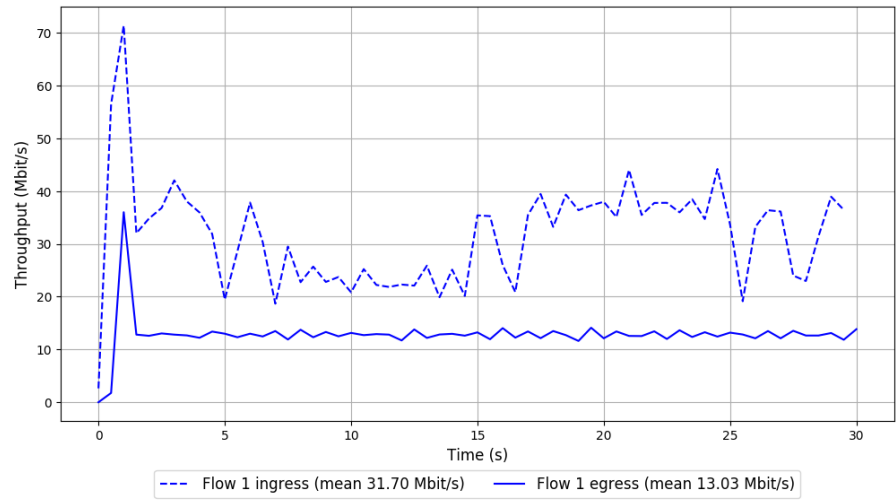


Run 1: Statistics of Copa

Start at: 2018-09-06 04:51:03
End at: 2018-09-06 04:51:33
Local clock offset: 8.061 ms
Remote clock offset: 37.137 ms

Below is generated by plot.py at 2018-09-06 06:29:20
Datalink statistics
-- Total of 1 flow:
Average throughput: 13.03 Mbit/s
95th percentile per-packet one-way delay: 38.075 ms
Loss rate: 58.89%
-- Flow 1:
Average throughput: 13.03 Mbit/s
95th percentile per-packet one-way delay: 38.075 ms
Loss rate: 58.89%

Run 1: Report of Copa — Data Link

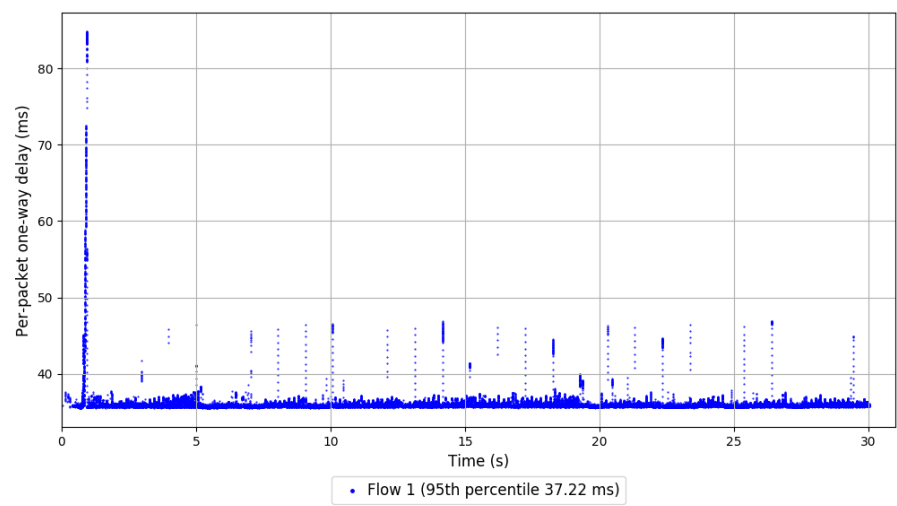
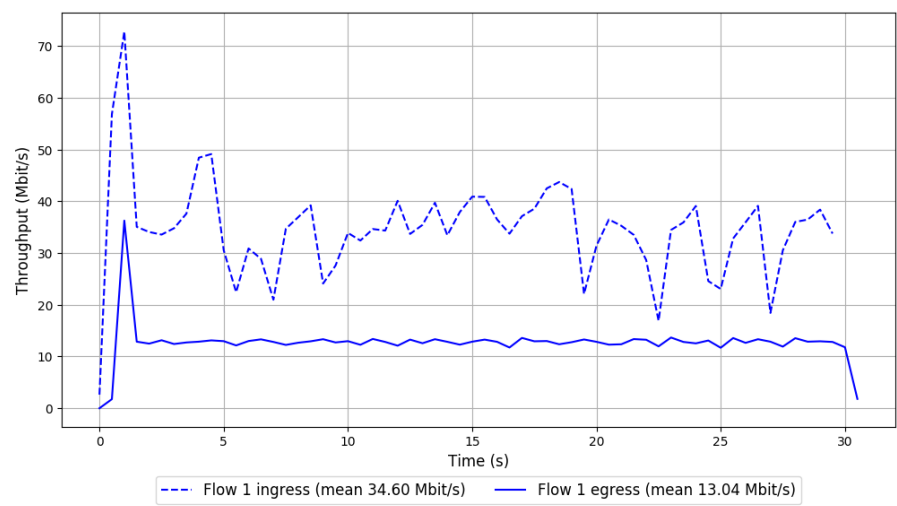


Run 2: Statistics of Copa

Start at: 2018-09-06 05:12:33
End at: 2018-09-06 05:13:03
Local clock offset: 9.963 ms
Remote clock offset: 34.362 ms

Below is generated by plot.py at 2018-09-06 06:29:20
Datalink statistics
-- Total of 1 flow:
Average throughput: 13.04 Mbit/s
95th percentile per-packet one-way delay: 37.215 ms
Loss rate: 62.32%
-- Flow 1:
Average throughput: 13.04 Mbit/s
95th percentile per-packet one-way delay: 37.215 ms
Loss rate: 62.32%

Run 2: Report of Copa — Data Link

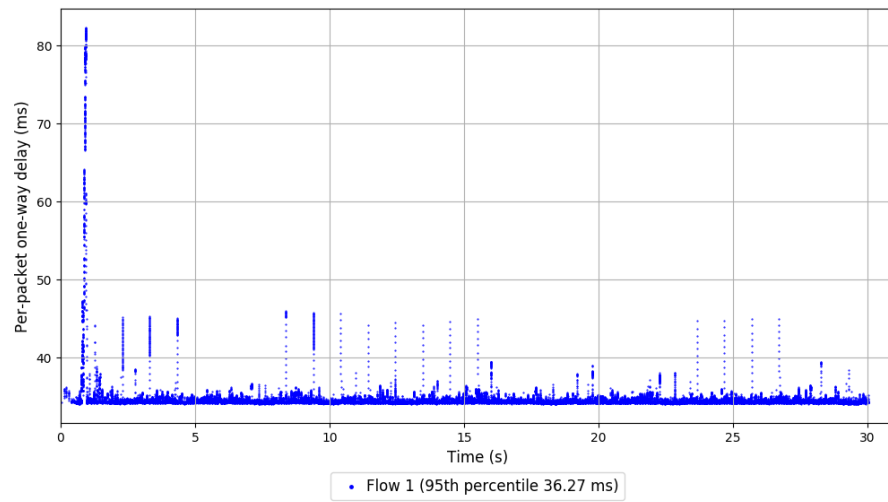
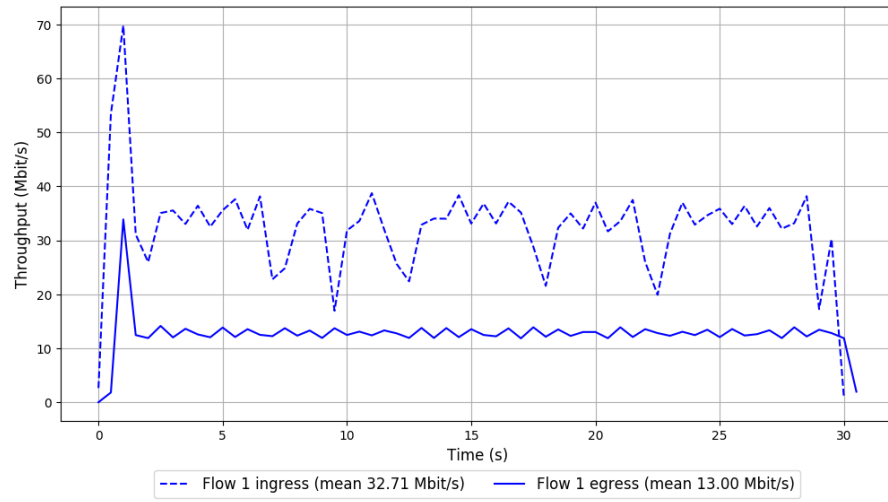


Run 3: Statistics of Copa

Start at: 2018-09-06 05:34:00
End at: 2018-09-06 05:34:31
Local clock offset: 4.604 ms
Remote clock offset: 33.094 ms

Below is generated by plot.py at 2018-09-06 06:29:20
Datalink statistics
-- Total of 1 flow:
Average throughput: 13.00 Mbit/s
95th percentile per-packet one-way delay: 36.273 ms
Loss rate: 60.27%
-- Flow 1:
Average throughput: 13.00 Mbit/s
95th percentile per-packet one-way delay: 36.273 ms
Loss rate: 60.27%

Run 3: Report of Copa — Data Link

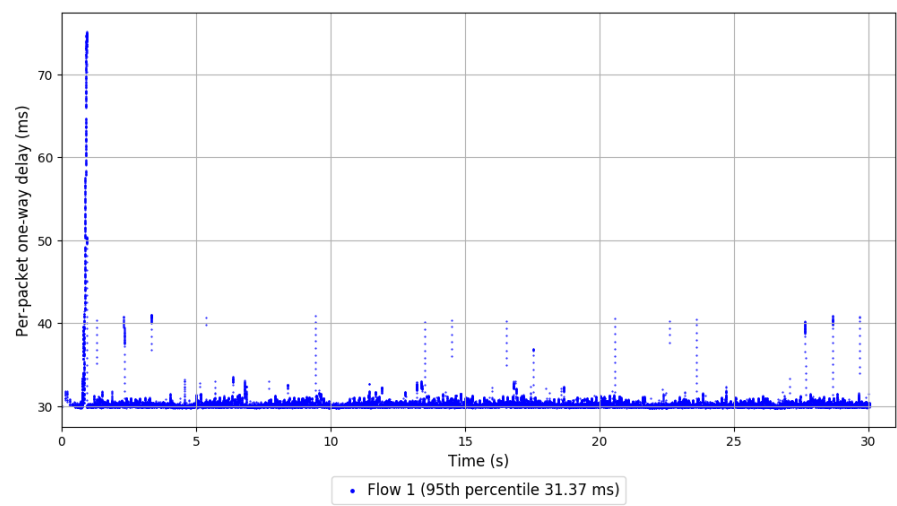
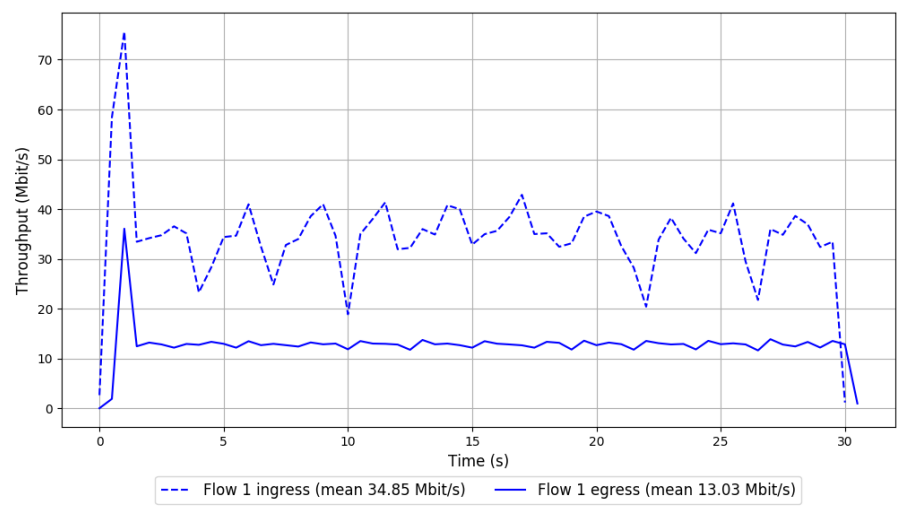


Run 4: Statistics of Copa

Start at: 2018-09-06 05:55:33
End at: 2018-09-06 05:56:04
Local clock offset: 0.374 ms
Remote clock offset: 28.285 ms

Below is generated by plot.py at 2018-09-06 06:29:20
Datalink statistics
-- Total of 1 flow:
Average throughput: 13.03 Mbit/s
95th percentile per-packet one-way delay: 31.374 ms
Loss rate: 62.61%
-- Flow 1:
Average throughput: 13.03 Mbit/s
95th percentile per-packet one-way delay: 31.374 ms
Loss rate: 62.61%

Run 4: Report of Copa — Data Link

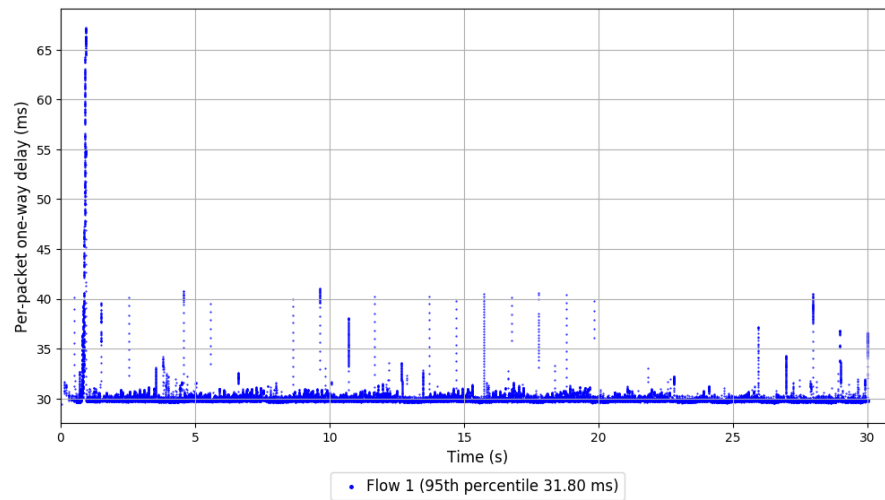
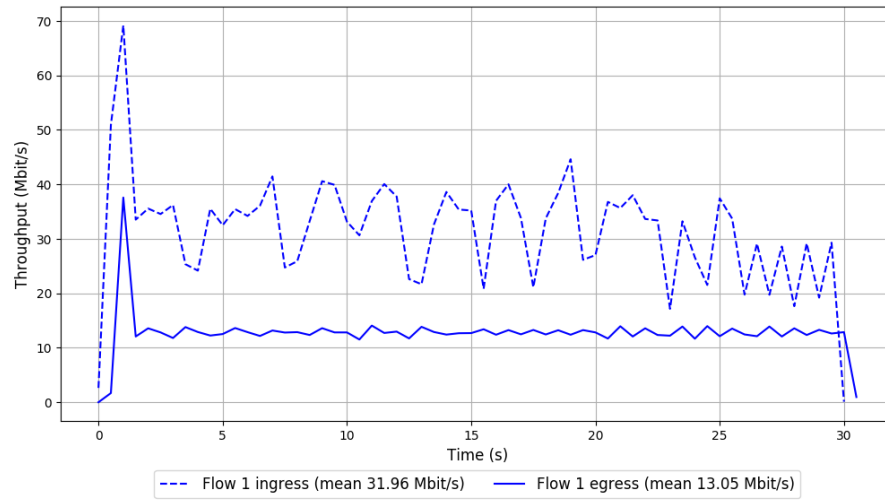


Run 5: Statistics of Copa

Start at: 2018-09-06 06:17:08
End at: 2018-09-06 06:17:38
Local clock offset: -2.083 ms
Remote clock offset: 25.888 ms

Below is generated by plot.py at 2018-09-06 06:29:20
Datalink statistics
-- Total of 1 flow:
Average throughput: 13.05 Mbit/s
95th percentile per-packet one-way delay: 31.801 ms
Loss rate: 59.16%
-- Flow 1:
Average throughput: 13.05 Mbit/s
95th percentile per-packet one-way delay: 31.801 ms
Loss rate: 59.16%

Run 5: Report of Copa — Data Link

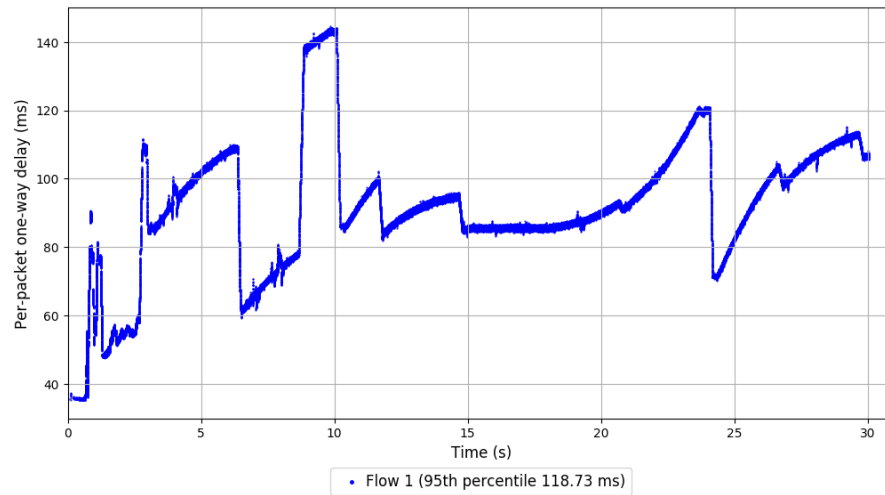
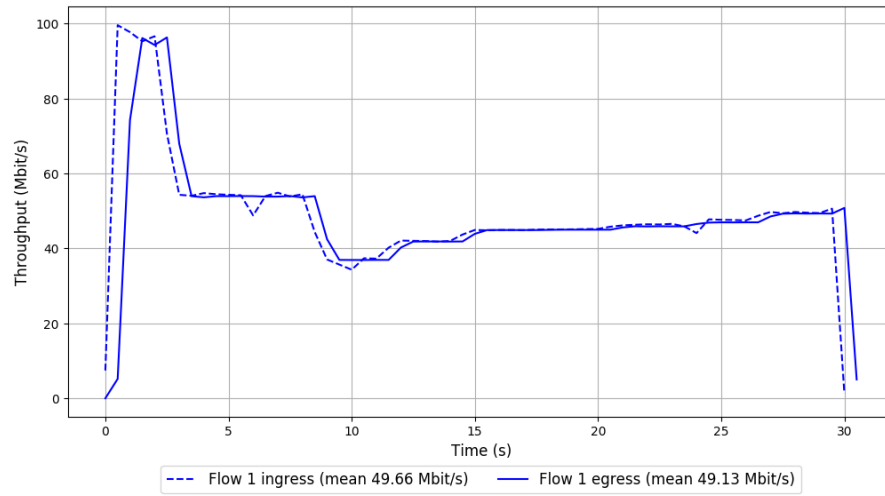


Run 1: Statistics of TCP Cubic

Start at: 2018-09-06 04:58:09
End at: 2018-09-06 04:58:39
Local clock offset: 8.637 ms
Remote clock offset: 35.509 ms

Below is generated by plot.py at 2018-09-06 06:29:20
Datalink statistics
-- Total of 1 flow:
Average throughput: 49.13 Mbit/s
95th percentile per-packet one-way delay: 118.735 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 49.13 Mbit/s
95th percentile per-packet one-way delay: 118.735 ms
Loss rate: 1.07%

Run 1: Report of TCP Cubic — Data Link

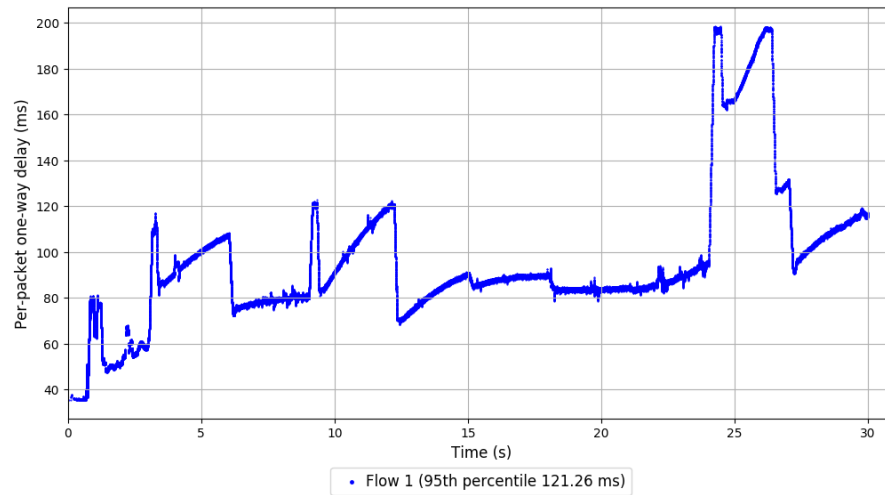
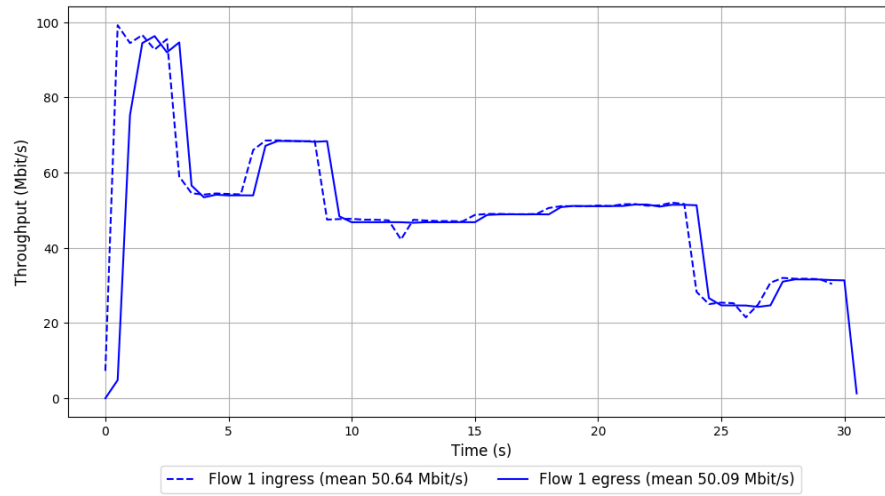


Run 2: Statistics of TCP Cubic

Start at: 2018-09-06 05:19:48
End at: 2018-09-06 05:20:18
Local clock offset: 7.663 ms
Remote clock offset: 34.553 ms

Below is generated by plot.py at 2018-09-06 06:29:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 50.09 Mbit/s
95th percentile per-packet one-way delay: 121.257 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 50.09 Mbit/s
95th percentile per-packet one-way delay: 121.257 ms
Loss rate: 1.09%

Run 2: Report of TCP Cubic — Data Link

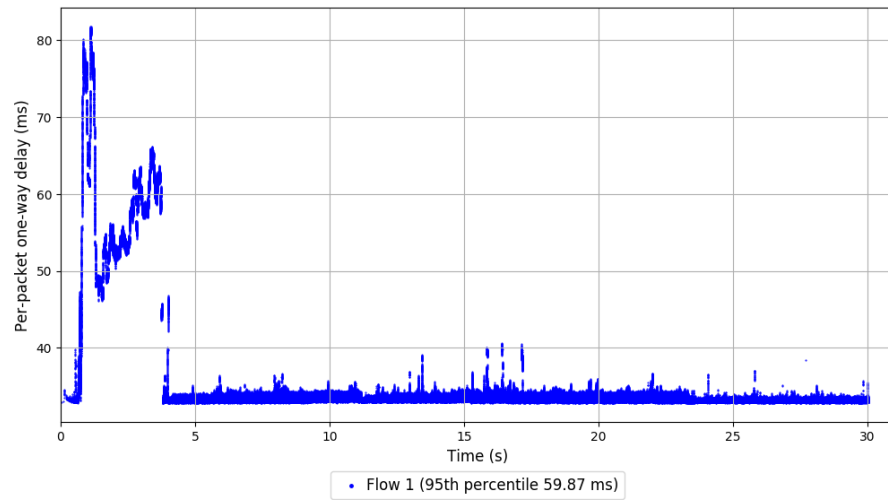
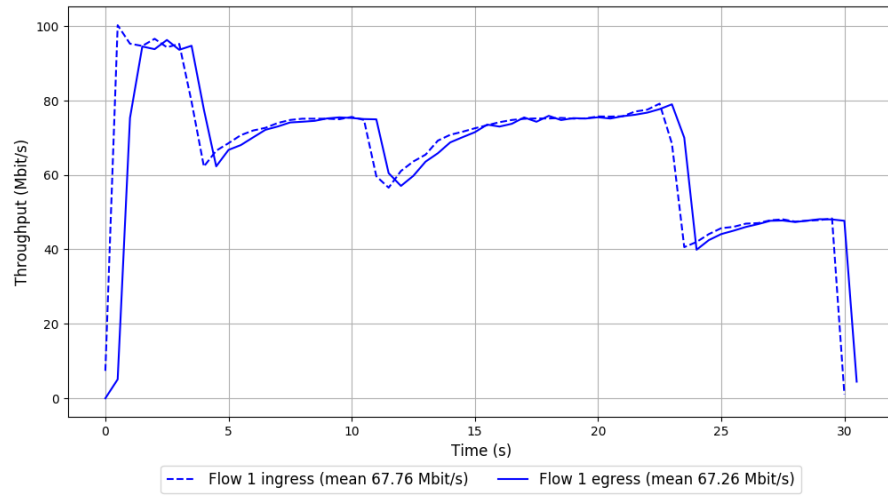


Run 3: Statistics of TCP Cubic

Start at: 2018-09-06 05:41:10
End at: 2018-09-06 05:41:40
Local clock offset: 4.345 ms
Remote clock offset: 31.634 ms

Below is generated by plot.py at 2018-09-06 06:29:40
Datalink statistics
-- Total of 1 flow:
Average throughput: 67.26 Mbit/s
95th percentile per-packet one-way delay: 59.867 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 67.26 Mbit/s
95th percentile per-packet one-way delay: 59.867 ms
Loss rate: 0.73%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-09-06 06:02:48

End at: 2018-09-06 06:03:18

Local clock offset: -0.892 ms

Remote clock offset: 22.71 ms

Below is generated by plot.py at 2018-09-06 06:29:40

Datalink statistics

-- Total of 1 flow:

Average throughput: 52.12 Mbit/s

95th percentile per-packet one-way delay: 113.937 ms

Loss rate: 0.30%

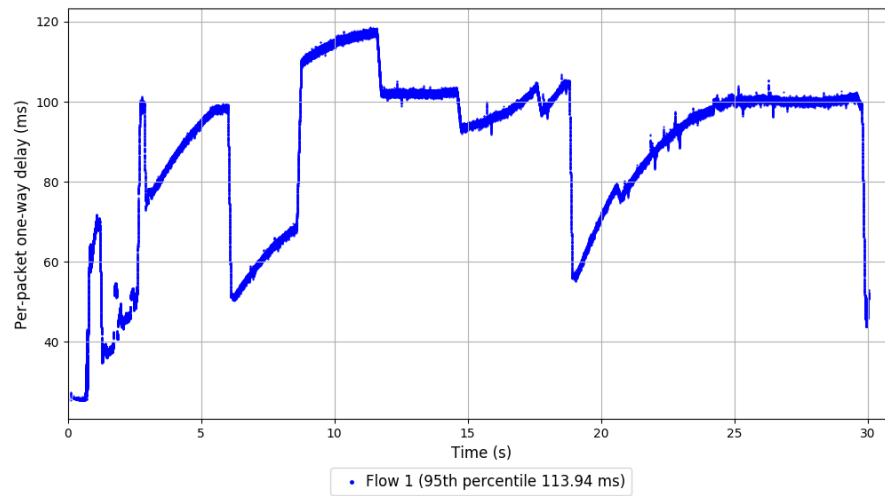
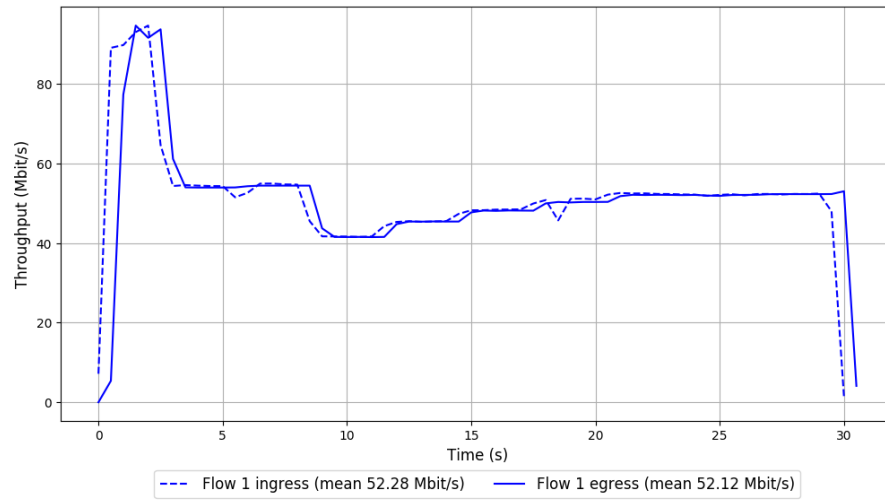
-- Flow 1:

Average throughput: 52.12 Mbit/s

95th percentile per-packet one-way delay: 113.937 ms

Loss rate: 0.30%

Run 4: Report of TCP Cubic — Data Link

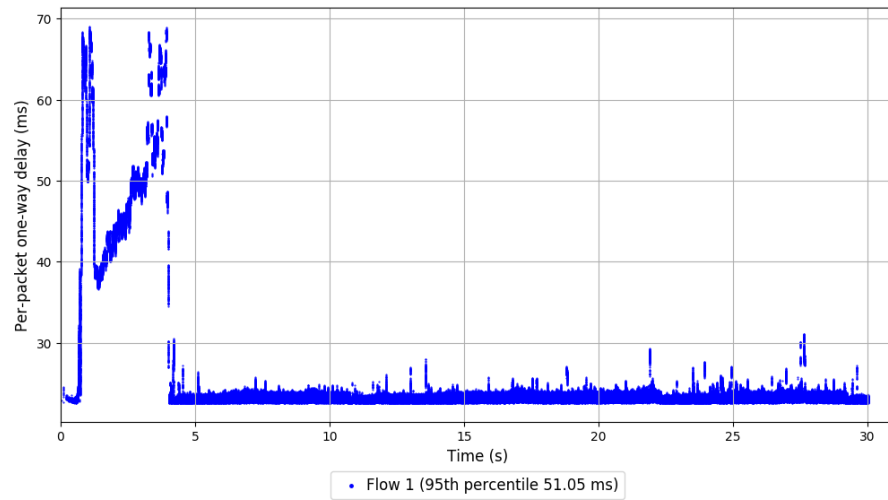
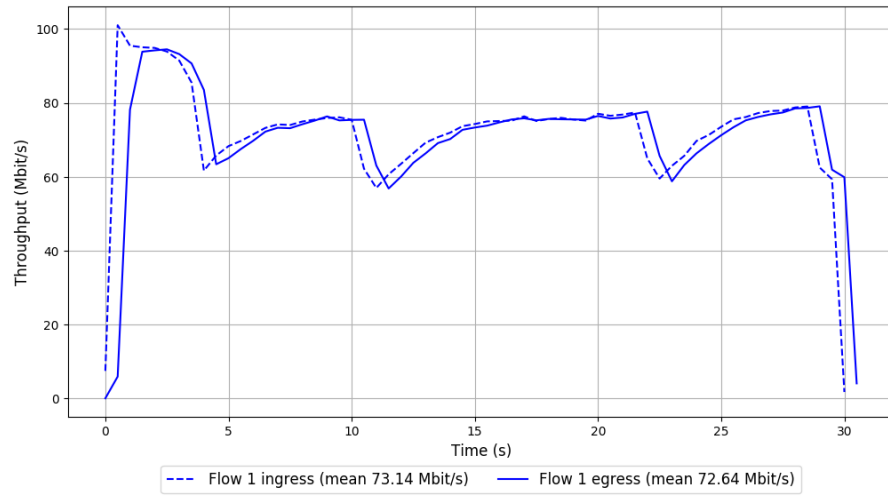


Run 5: Statistics of TCP Cubic

Start at: 2018-09-06 06:24:19
End at: 2018-09-06 06:24:49
Local clock offset: -2.452 ms
Remote clock offset: 19.147 ms

Below is generated by plot.py at 2018-09-06 06:29:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 72.64 Mbit/s
95th percentile per-packet one-way delay: 51.053 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 72.64 Mbit/s
95th percentile per-packet one-way delay: 51.053 ms
Loss rate: 0.68%

Run 5: Report of TCP Cubic — Data Link

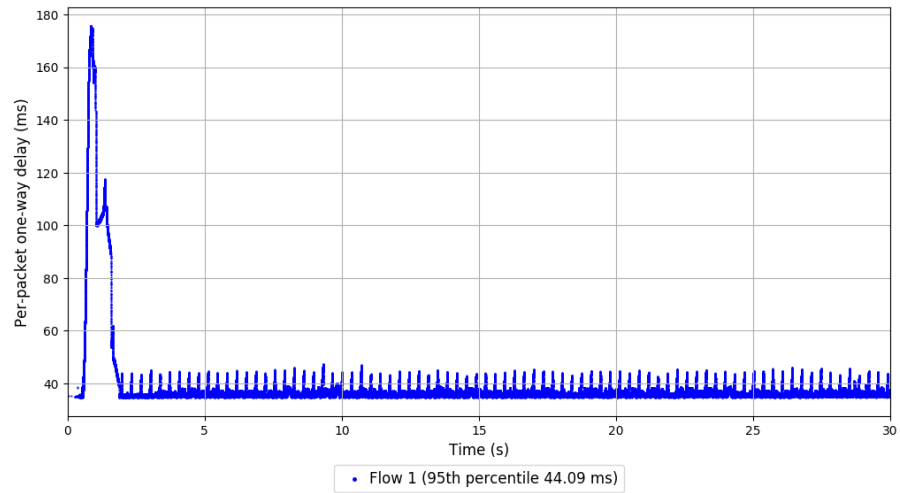
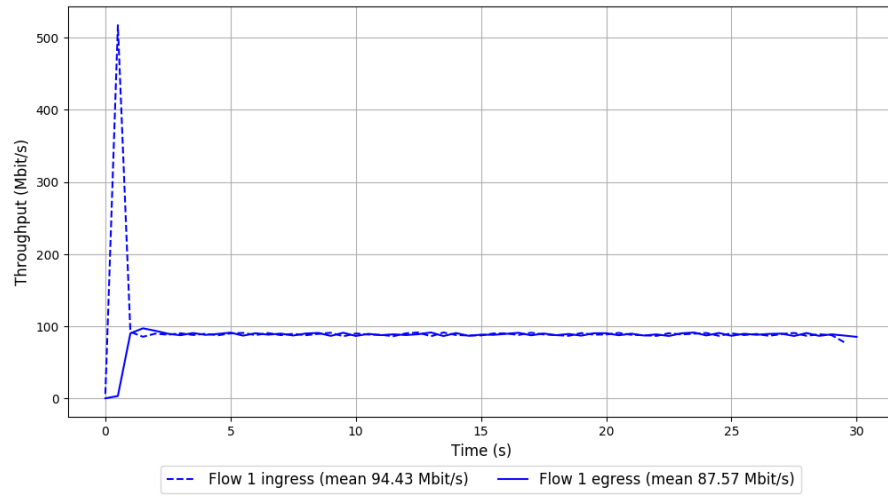


Run 1: Statistics of FillP

Start at: 2018-09-06 04:47:25
End at: 2018-09-06 04:47:55
Local clock offset: 8.104 ms
Remote clock offset: 38.076 ms

Below is generated by plot.py at 2018-09-06 06:30:20
Datalink statistics
-- Total of 1 flow:
Average throughput: 87.57 Mbit/s
95th percentile per-packet one-way delay: 44.094 ms
Loss rate: 7.26%
-- Flow 1:
Average throughput: 87.57 Mbit/s
95th percentile per-packet one-way delay: 44.094 ms
Loss rate: 7.26%

Run 1: Report of FillP — Data Link

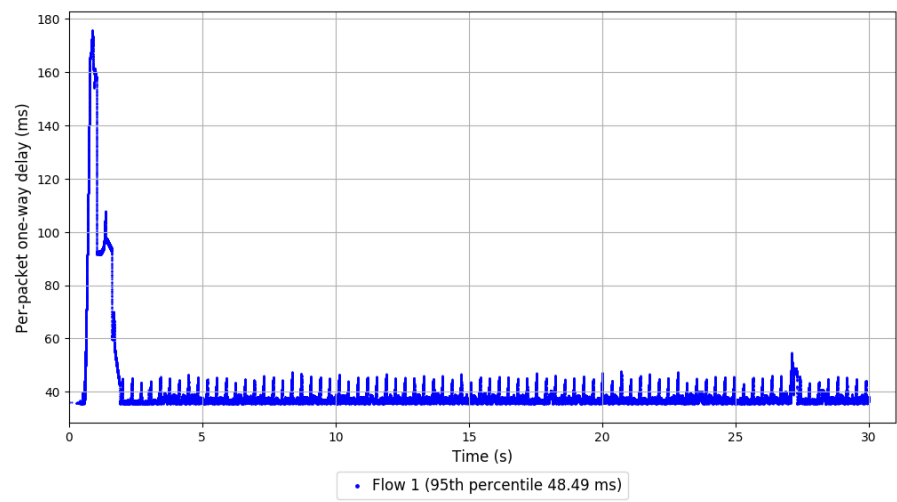
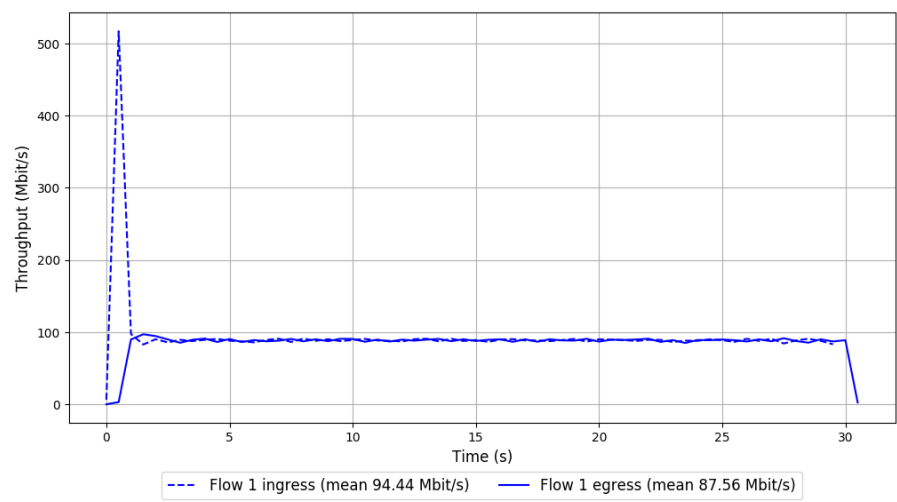


Run 2: Statistics of FillP

Start at: 2018-09-06 05:08:55
End at: 2018-09-06 05:09:25
Local clock offset: 9.663 ms
Remote clock offset: 34.941 ms

Below is generated by plot.py at 2018-09-06 06:30:27
Datalink statistics
-- Total of 1 flow:
Average throughput: 87.56 Mbit/s
95th percentile per-packet one-way delay: 48.495 ms
Loss rate: 7.28%
-- Flow 1:
Average throughput: 87.56 Mbit/s
95th percentile per-packet one-way delay: 48.495 ms
Loss rate: 7.28%

Run 2: Report of FillP — Data Link

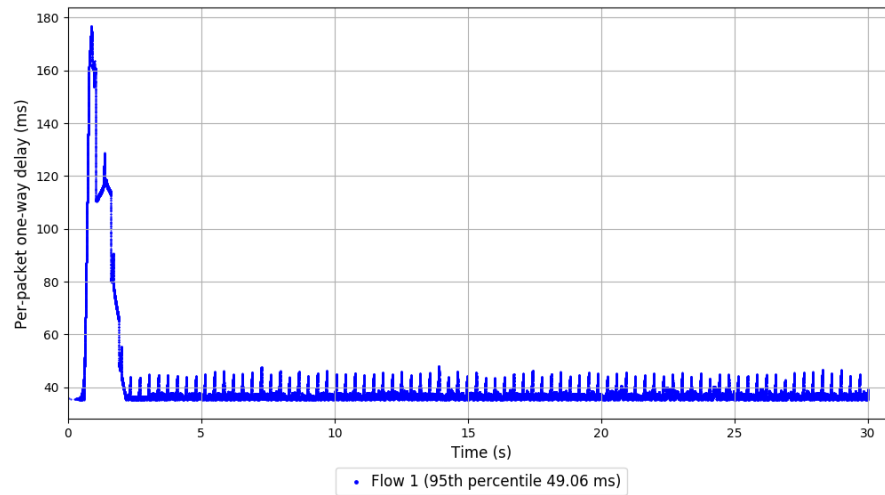
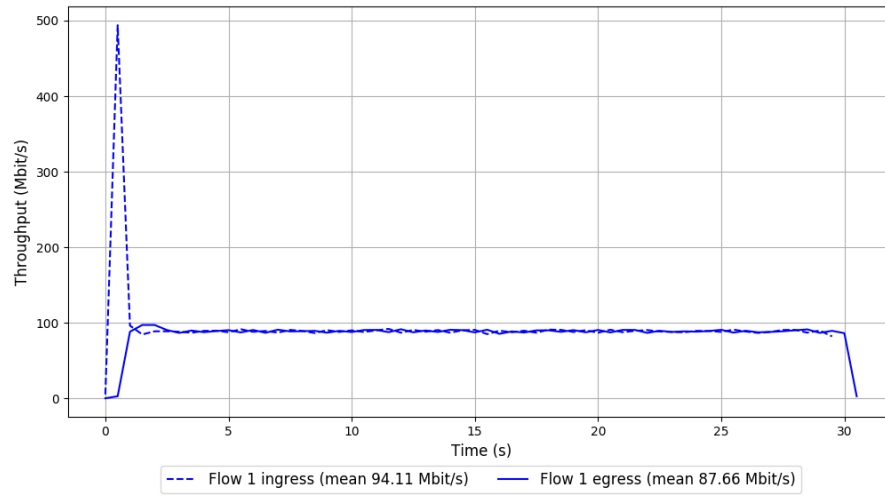


Run 3: Statistics of FillP

Start at: 2018-09-06 05:30:24
End at: 2018-09-06 05:30:54
Local clock offset: 4.922 ms
Remote clock offset: 34.613 ms

Below is generated by plot.py at 2018-09-06 06:30:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 87.66 Mbit/s
95th percentile per-packet one-way delay: 49.064 ms
Loss rate: 6.84%
-- Flow 1:
Average throughput: 87.66 Mbit/s
95th percentile per-packet one-way delay: 49.064 ms
Loss rate: 6.84%

Run 3: Report of FillP — Data Link

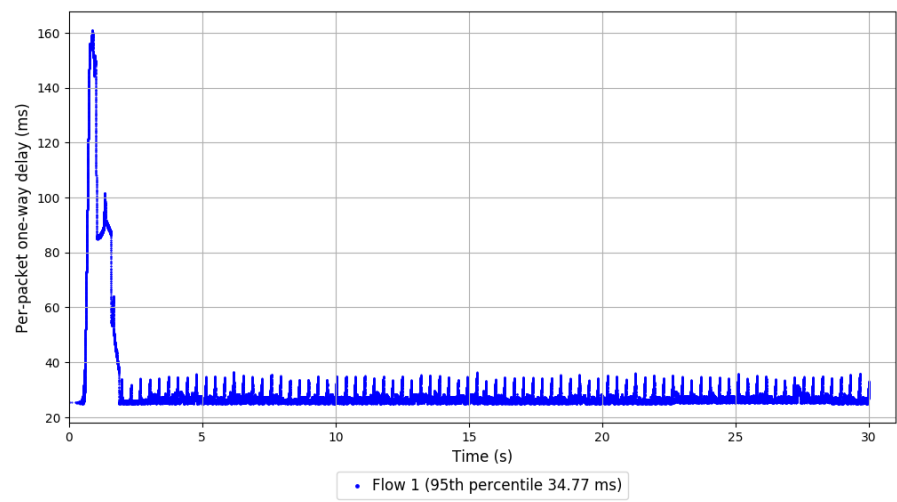
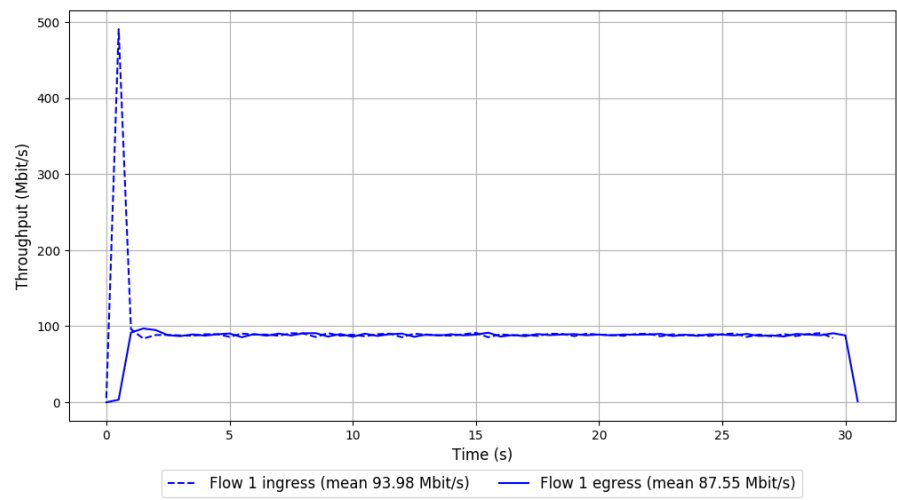


Run 4: Statistics of FillP

Start at: 2018-09-06 05:51:57
End at: 2018-09-06 05:52:27
Local clock offset: 1.438 ms
Remote clock offset: 24.377 ms

Below is generated by plot.py at 2018-09-06 06:30:36
Datalink statistics
-- Total of 1 flow:
Average throughput: 87.55 Mbit/s
95th percentile per-packet one-way delay: 34.767 ms
Loss rate: 6.82%
-- Flow 1:
Average throughput: 87.55 Mbit/s
95th percentile per-packet one-way delay: 34.767 ms
Loss rate: 6.82%

Run 4: Report of FillP — Data Link

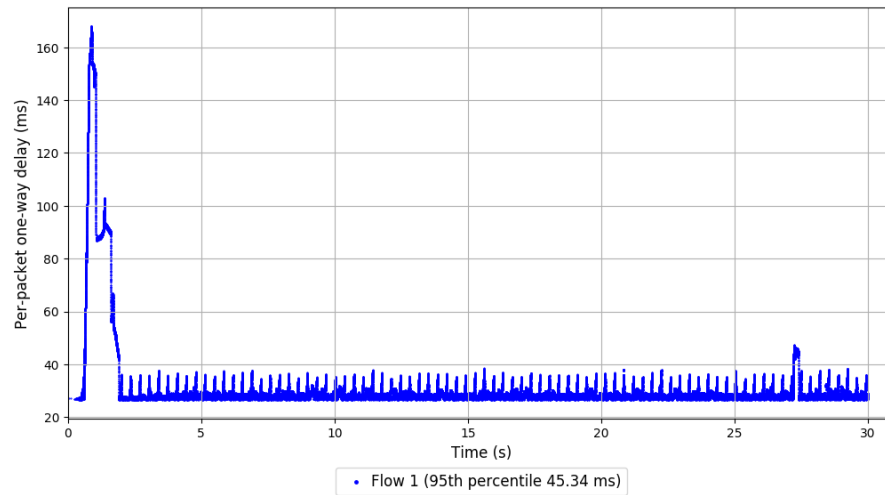
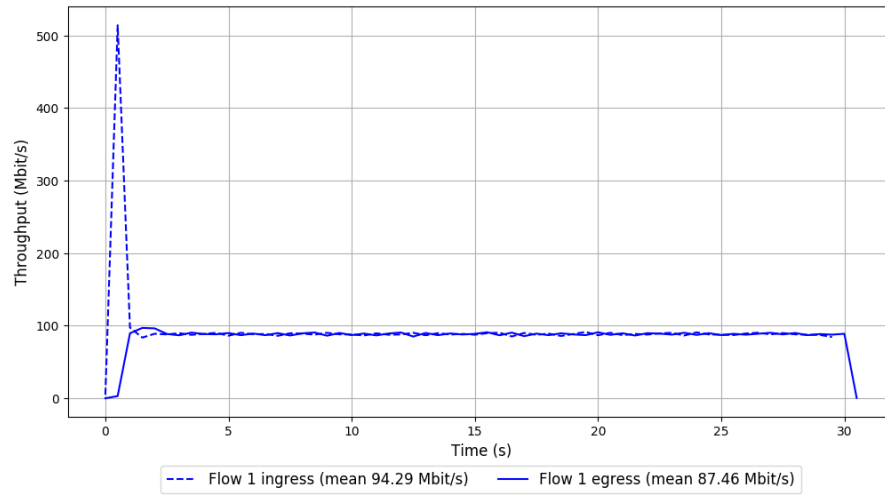


Run 5: Statistics of FillP

Start at: 2018-09-06 06:13:31
End at: 2018-09-06 06:14:01
Local clock offset: -1.959 ms
Remote clock offset: 23.624 ms

Below is generated by plot.py at 2018-09-06 06:30:45
Datalink statistics
-- Total of 1 flow:
Average throughput: 87.46 Mbit/s
95th percentile per-packet one-way delay: 45.336 ms
Loss rate: 7.24%
-- Flow 1:
Average throughput: 87.46 Mbit/s
95th percentile per-packet one-way delay: 45.336 ms
Loss rate: 7.24%

Run 5: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2018-09-06 04:49:48

End at: 2018-09-06 04:50:19

Local clock offset: 8.176 ms

Remote clock offset: 37.798 ms

Below is generated by plot.py at 2018-09-06 06:30:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 90.90 Mbit/s

95th percentile per-packet one-way delay: 49.569 ms

Loss rate: 0.76%

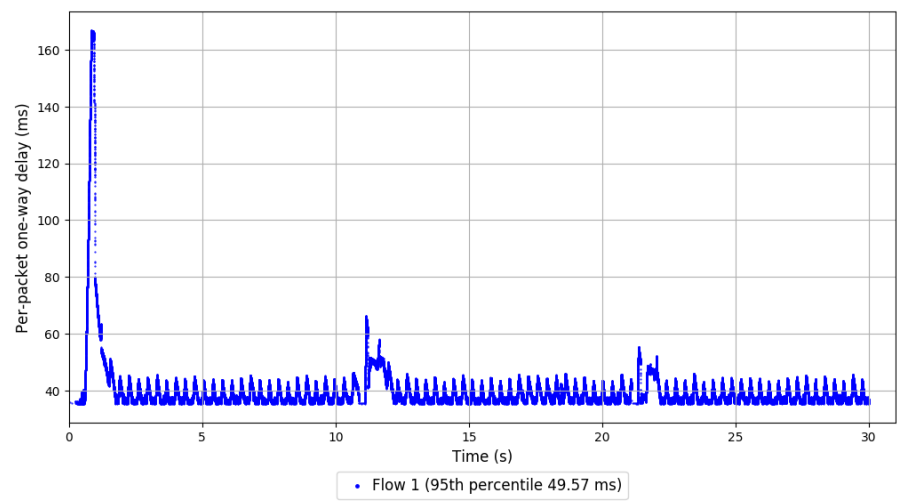
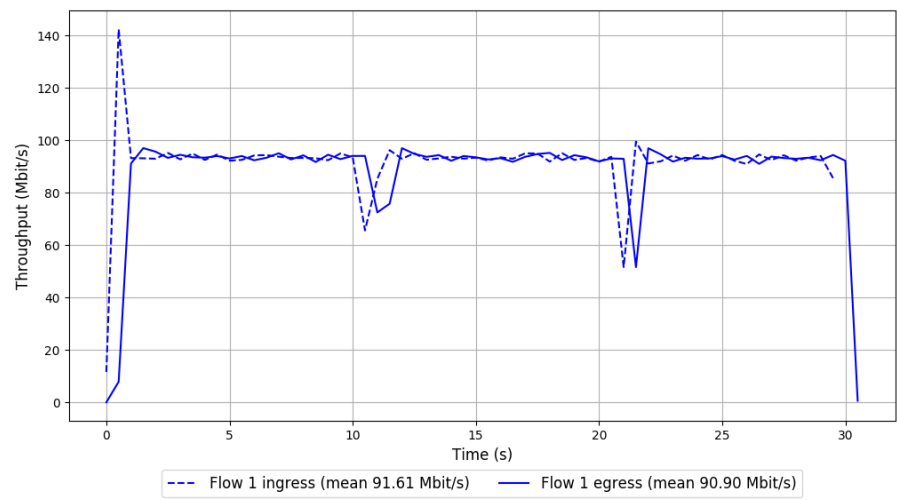
-- Flow 1:

Average throughput: 90.90 Mbit/s

95th percentile per-packet one-way delay: 49.569 ms

Loss rate: 0.76%

Run 1: Report of FillP-Sheep — Data Link

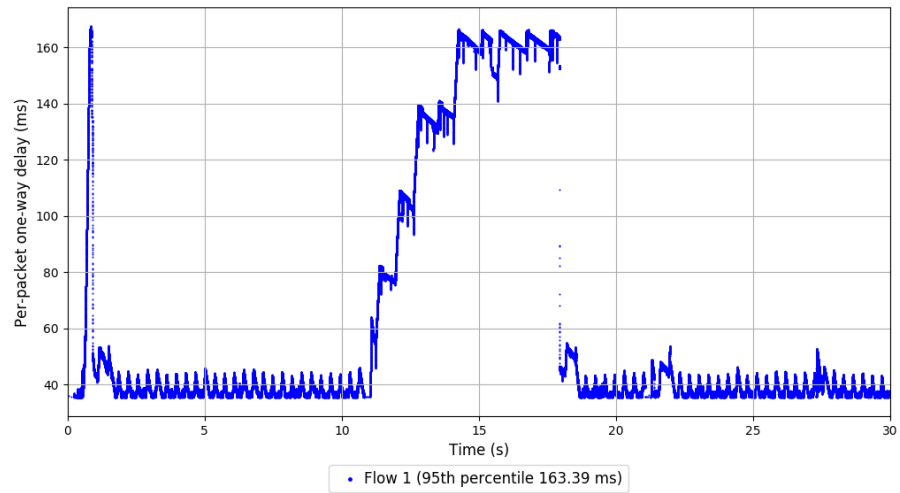
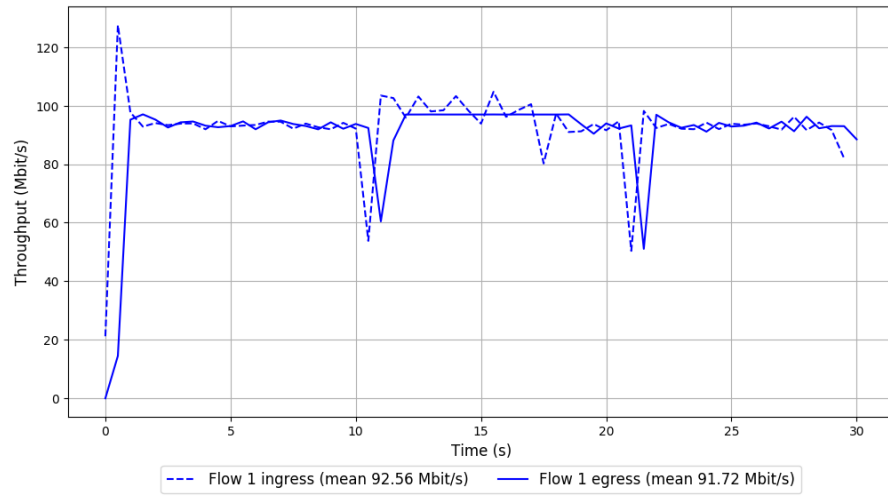


Run 2: Statistics of FillP-Sheep

Start at: 2018-09-06 05:11:18
End at: 2018-09-06 05:11:48
Local clock offset: 9.729 ms
Remote clock offset: 34.498 ms

Below is generated by plot.py at 2018-09-06 06:30:59
Datalink statistics
-- Total of 1 flow:
Average throughput: 91.72 Mbit/s
95th percentile per-packet one-way delay: 163.393 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 91.72 Mbit/s
95th percentile per-packet one-way delay: 163.393 ms
Loss rate: 0.91%

Run 2: Report of FillP-Sheep — Data Link

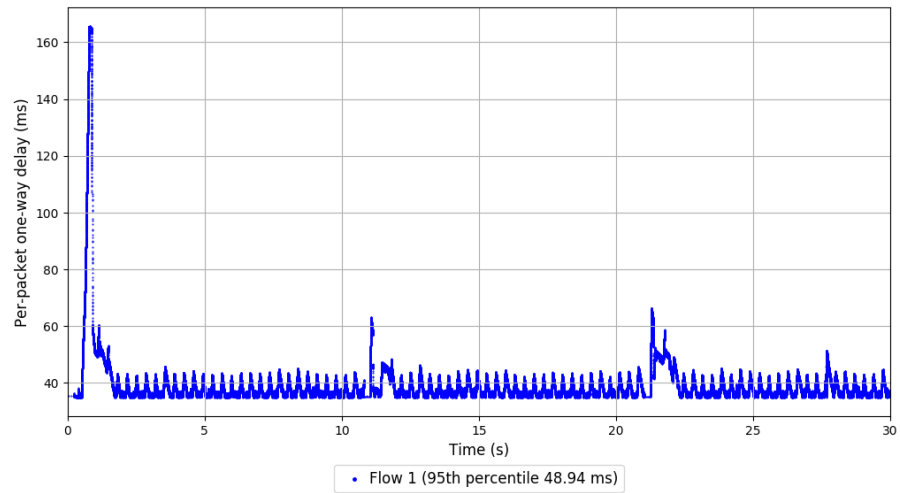
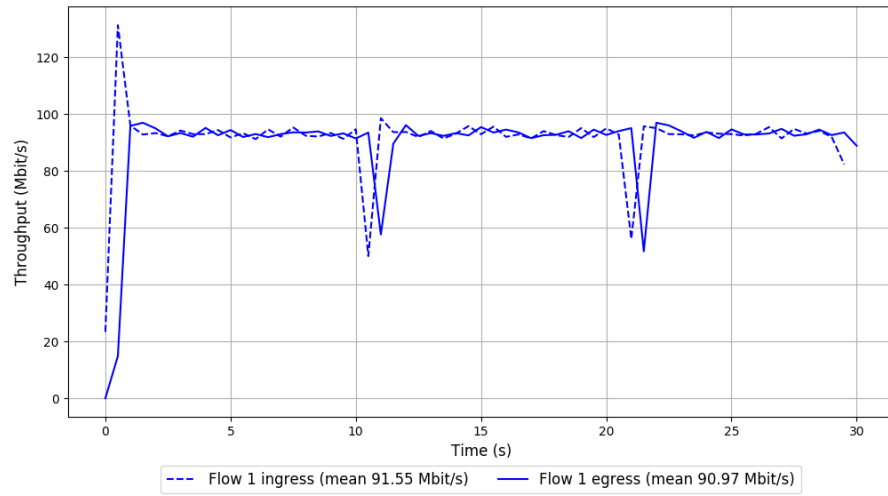


Run 3: Statistics of FillP-Sheep

Start at: 2018-09-06 05:32:46
End at: 2018-09-06 05:33:16
Local clock offset: 4.679 ms
Remote clock offset: 34.457 ms

Below is generated by plot.py at 2018-09-06 06:31:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 90.97 Mbit/s
95th percentile per-packet one-way delay: 48.938 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 90.97 Mbit/s
95th percentile per-packet one-way delay: 48.938 ms
Loss rate: 0.63%

Run 3: Report of FillP-Sheep — Data Link

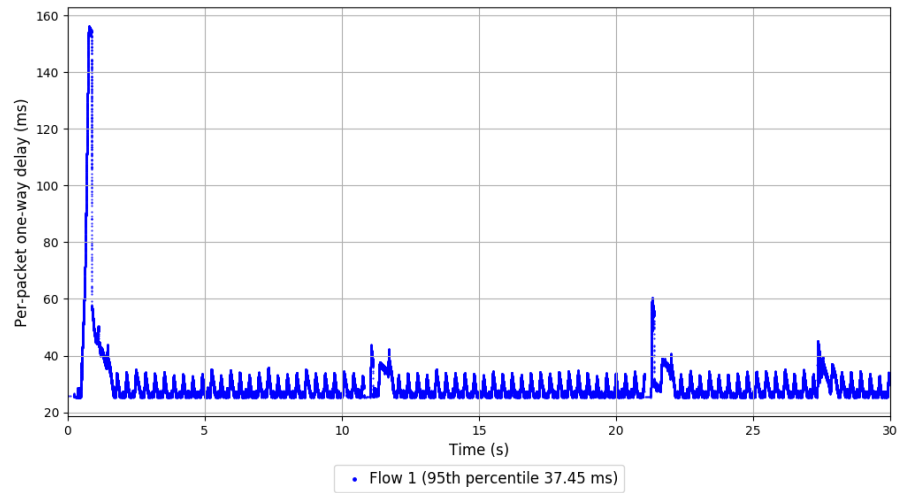
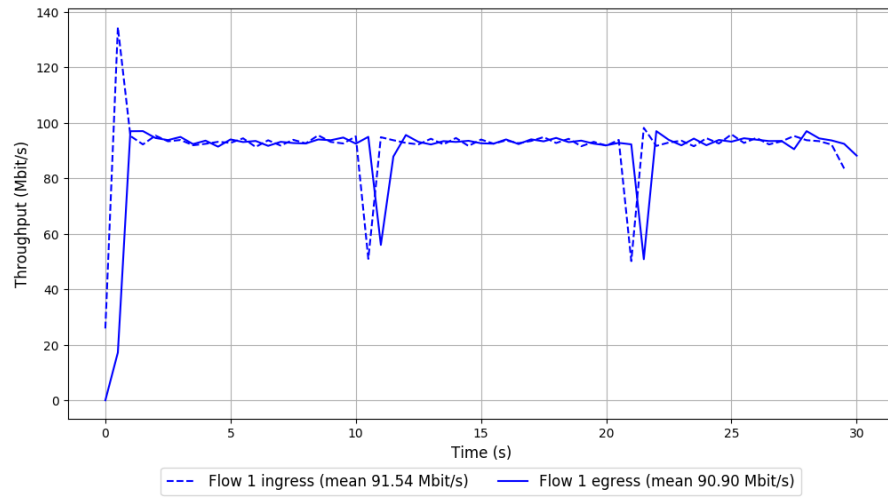


Run 4: Statistics of FillP-Sheep

Start at: 2018-09-06 05:54:19
End at: 2018-09-06 05:54:49
Local clock offset: 0.635 ms
Remote clock offset: 24.631 ms

Below is generated by plot.py at 2018-09-06 06:31:44
Datalink statistics
-- Total of 1 flow:
Average throughput: 90.90 Mbit/s
95th percentile per-packet one-way delay: 37.449 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 90.90 Mbit/s
95th percentile per-packet one-way delay: 37.449 ms
Loss rate: 0.68%

Run 4: Report of FillP-Sheep — Data Link



Run 5: Statistics of FillP-Sheep

Start at: 2018-09-06 06:15:53

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

Local clock offset: -2.268 ms

Remote clock offset: 23.071 ms

Below is generated by plot.py at 2018-09-06 06:31:48

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.05 Mbit/s

95th percentile per-packet one-way delay: 40.598 ms

Loss rate: 0.76%

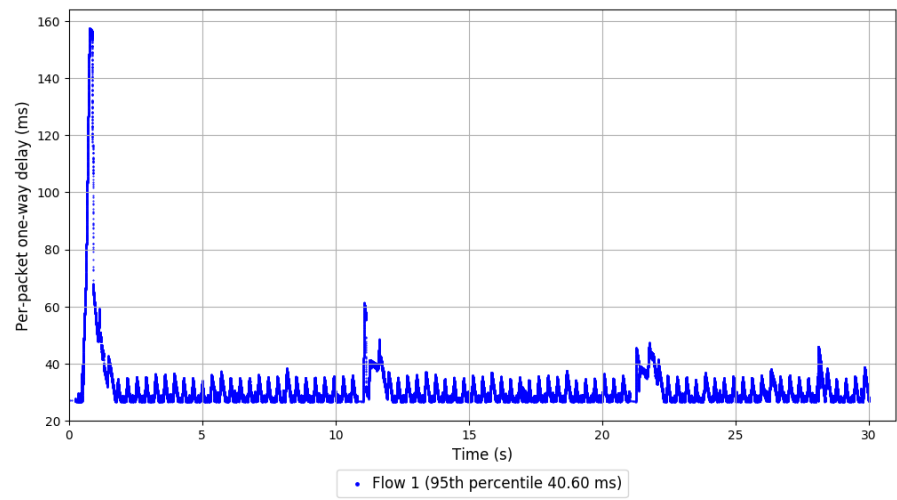
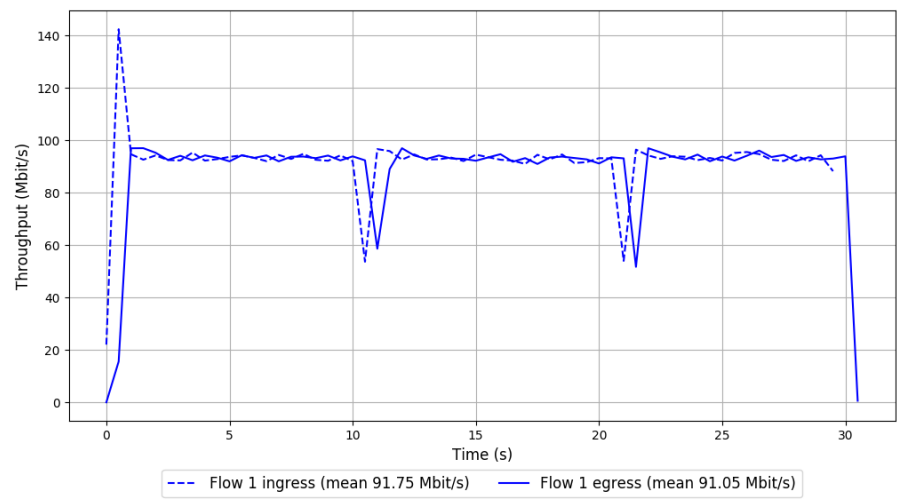
-- Flow 1:

Average throughput: 91.05 Mbit/s

95th percentile per-packet one-way delay: 40.598 ms

Loss rate: 0.76%

Run 5: Report of FillP-Sheep — Data Link

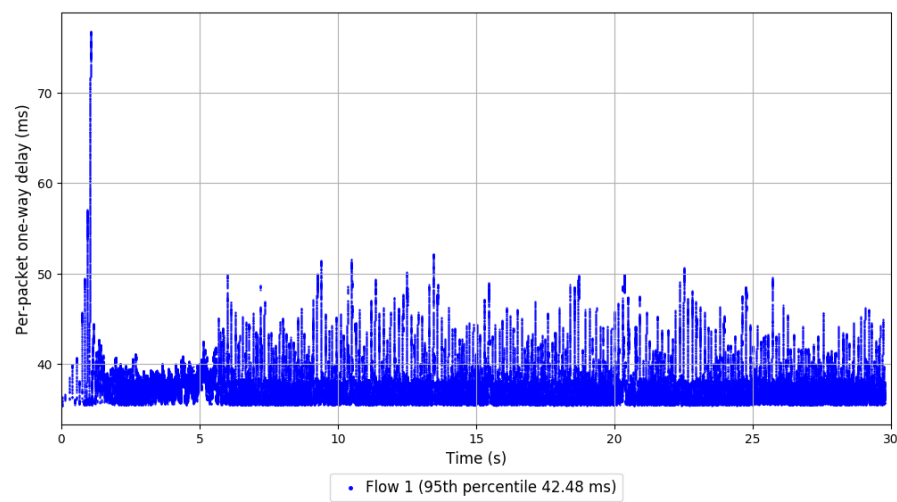
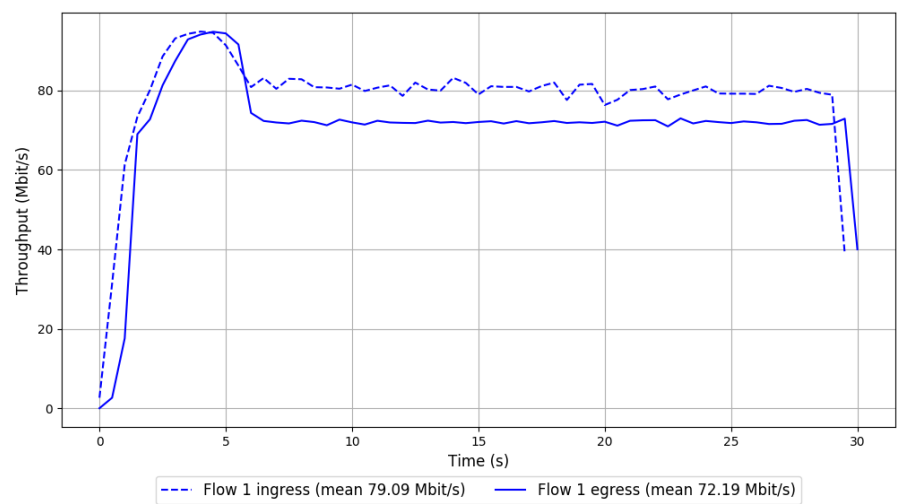


```
Run 1: Statistics of Indigo

Start at: 2018-09-06 04:45:00
End at: 2018-09-06 04:45:30
Local clock offset: 8.072 ms
Remote clock offset: 39.432 ms

# Below is generated by plot.py at 2018-09-06 06:31:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 72.19 Mbit/s
95th percentile per-packet one-way delay: 42.476 ms
Loss rate: 8.72%
-- Flow 1:
Average throughput: 72.19 Mbit/s
95th percentile per-packet one-way delay: 42.476 ms
Loss rate: 8.72%
```

Run 1: Report of Indigo — Data Link

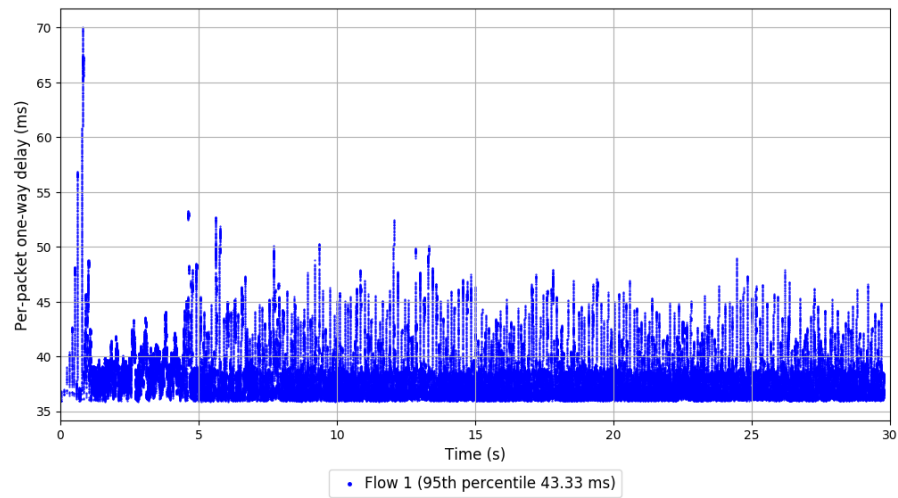
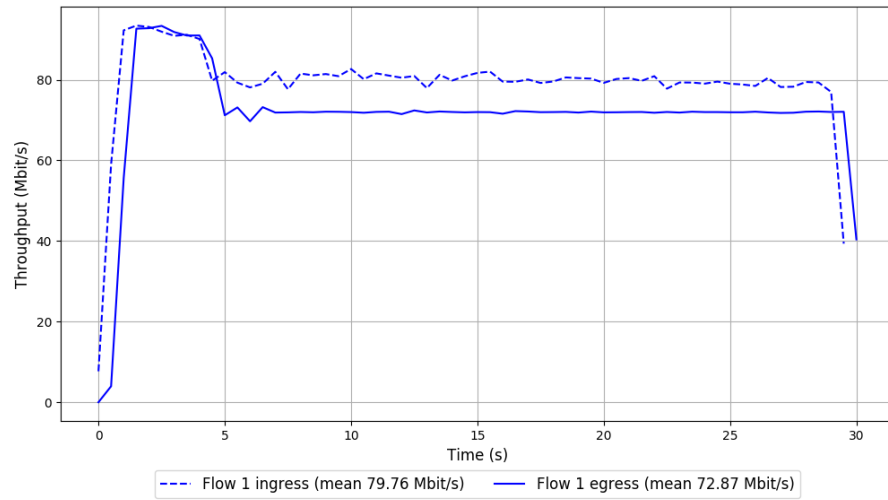


Run 2: Statistics of Indigo

Start at: 2018-09-06 05:06:33
End at: 2018-09-06 05:07:03
Local clock offset: 9.465 ms
Remote clock offset: 35.092 ms

Below is generated by plot.py at 2018-09-06 06:31:48
Datalink statistics
-- Total of 1 flow:
Average throughput: 72.87 Mbit/s
95th percentile per-packet one-way delay: 43.325 ms
Loss rate: 8.63%
-- Flow 1:
Average throughput: 72.87 Mbit/s
95th percentile per-packet one-way delay: 43.325 ms
Loss rate: 8.63%

Run 2: Report of Indigo — Data Link

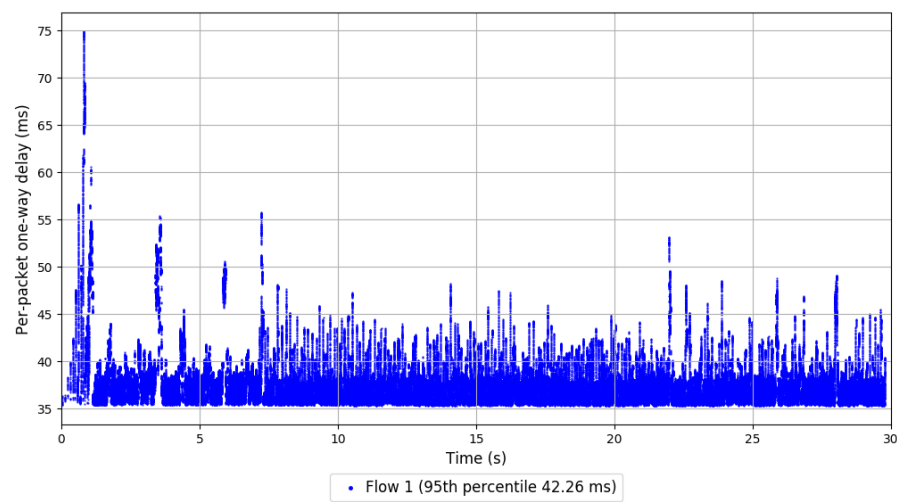
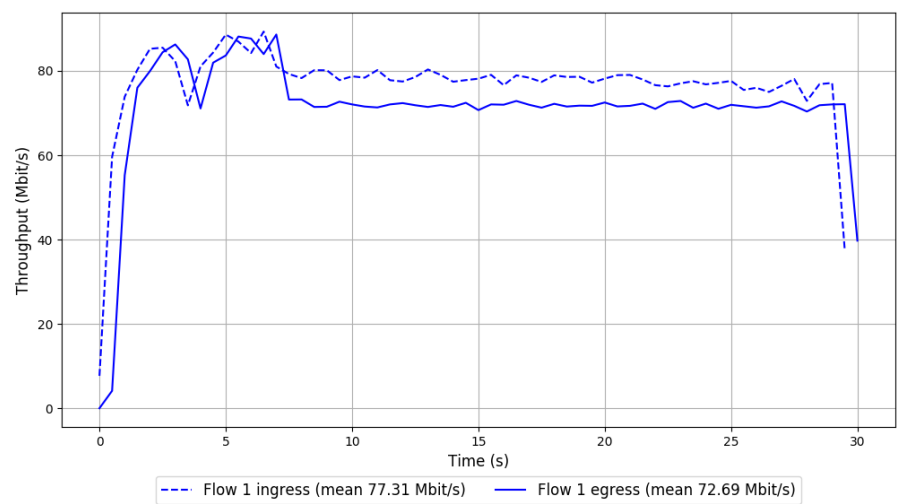


Run 3: Statistics of Indigo

Start at: 2018-09-06 05:28:04
End at: 2018-09-06 05:28:34
Local clock offset: 5.212 ms
Remote clock offset: 34.124 ms

Below is generated by plot.py at 2018-09-06 06:31:48
Datalink statistics
-- Total of 1 flow:
Average throughput: 72.69 Mbit/s
95th percentile per-packet one-way delay: 42.258 ms
Loss rate: 5.98%
-- Flow 1:
Average throughput: 72.69 Mbit/s
95th percentile per-packet one-way delay: 42.258 ms
Loss rate: 5.98%

Run 3: Report of Indigo — Data Link

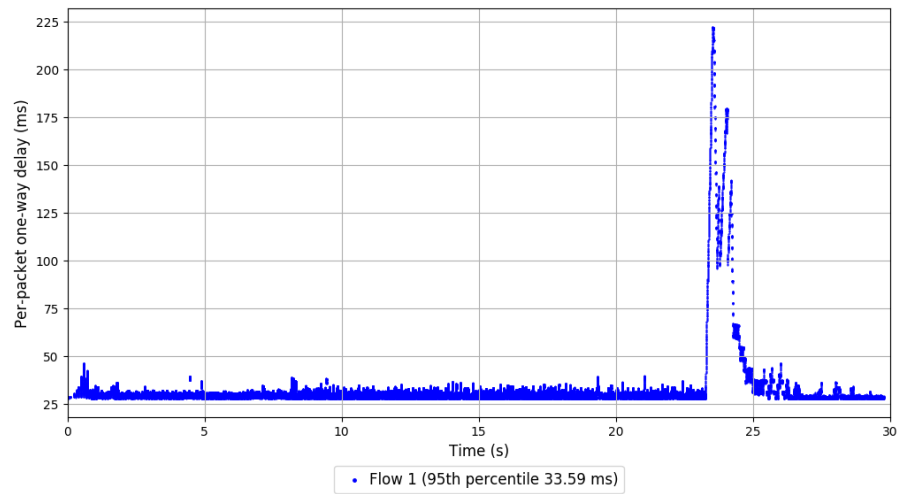
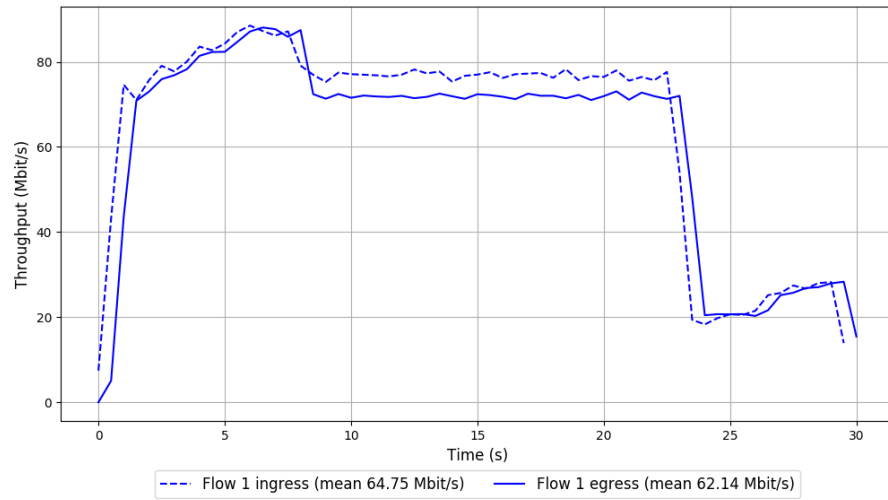


Run 4: Statistics of Indigo

Start at: 2018-09-06 05:49:36
End at: 2018-09-06 05:50:06
Local clock offset: 2.433 ms
Remote clock offset: 26.904 ms

Below is generated by plot.py at 2018-09-06 06:31:48
Datalink statistics
-- Total of 1 flow:
Average throughput: 62.14 Mbit/s
95th percentile per-packet one-way delay: 33.590 ms
Loss rate: 4.04%
-- Flow 1:
Average throughput: 62.14 Mbit/s
95th percentile per-packet one-way delay: 33.590 ms
Loss rate: 4.04%

Run 4: Report of Indigo — Data Link

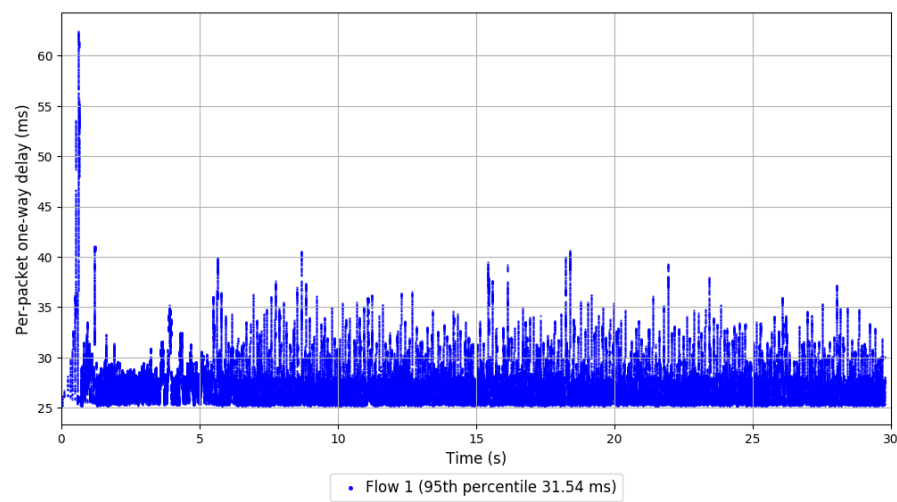
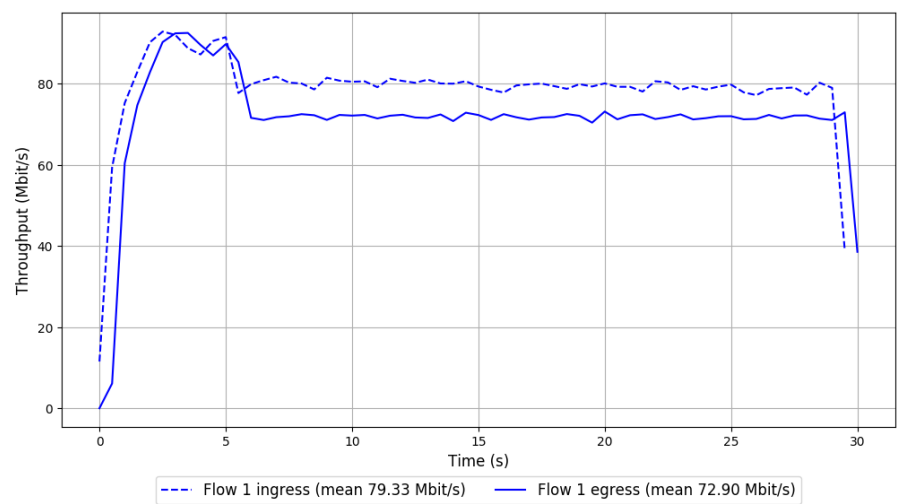


Run 5: Statistics of Indigo

Start at: 2018-09-06 06:11:09
End at: 2018-09-06 06:11:39
Local clock offset: -1.671 ms
Remote clock offset: 22.232 ms

Below is generated by plot.py at 2018-09-06 06:31:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 72.90 Mbit/s
95th percentile per-packet one-way delay: 31.535 ms
Loss rate: 8.10%
-- Flow 1:
Average throughput: 72.90 Mbit/s
95th percentile per-packet one-way delay: 31.535 ms
Loss rate: 8.10%

Run 5: Report of Indigo — Data Link

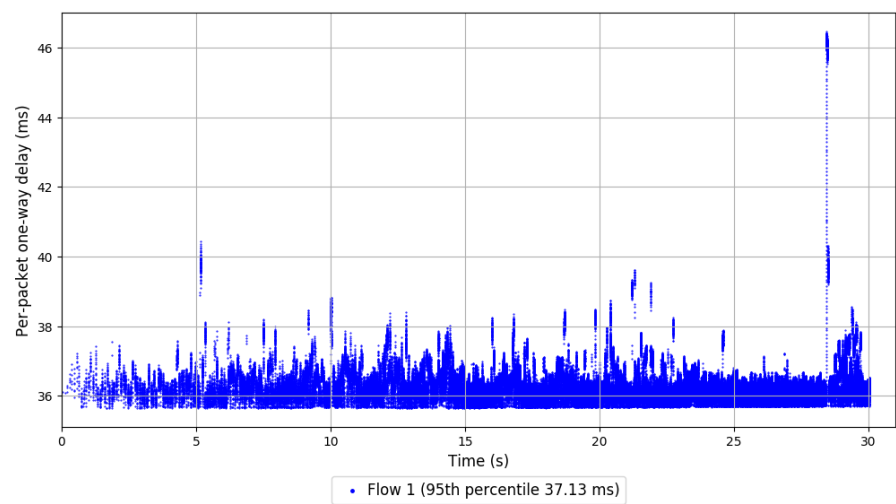
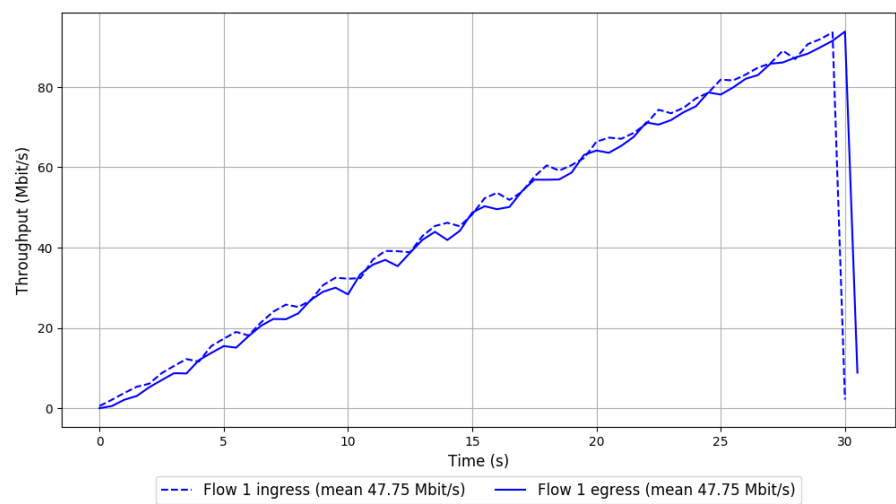


```
Run 1: Statistics of LEDBAT

Start at: 2018-09-06 04:59:20
End at: 2018-09-06 04:59:50
Local clock offset: 8.652 ms
Remote clock offset: 35.585 ms

# Below is generated by plot.py at 2018-09-06 06:31:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 47.75 Mbit/s
95th percentile per-packet one-way delay: 37.132 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 47.75 Mbit/s
95th percentile per-packet one-way delay: 37.132 ms
Loss rate: 0.00%
```


Run 1: Report of LEDBAT — Data Link

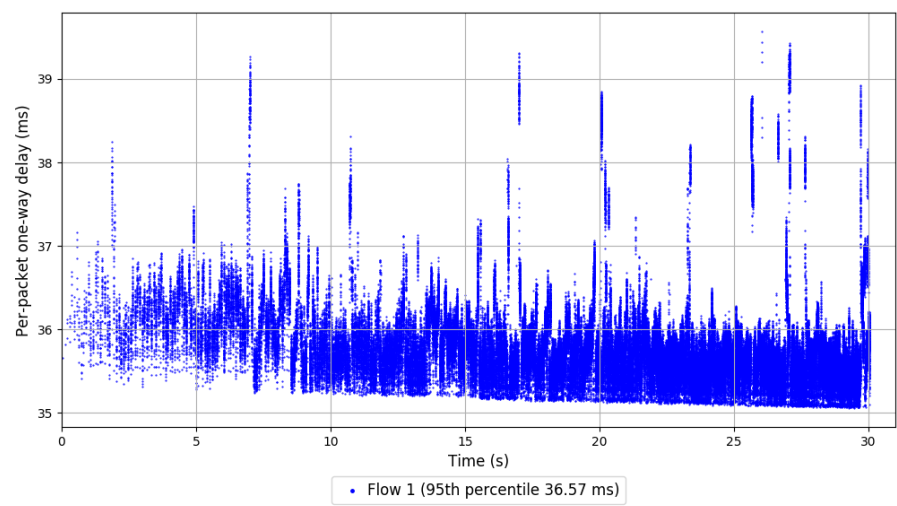
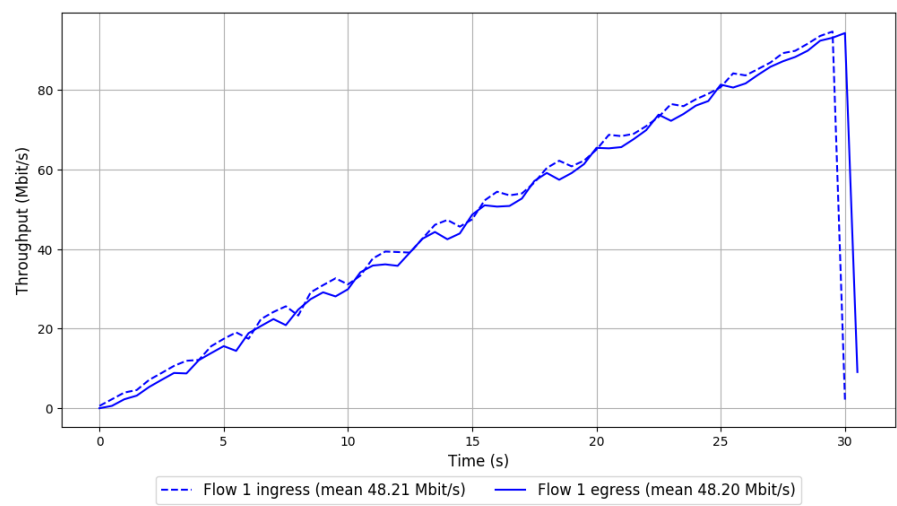


Run 2: Statistics of LEDBAT

Start at: 2018-09-06 05:20:59
End at: 2018-09-06 05:21:29
Local clock offset: 7.338 ms
Remote clock offset: 34.301 ms

Below is generated by plot.py at 2018-09-06 06:32:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 48.20 Mbit/s
95th percentile per-packet one-way delay: 36.566 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 48.20 Mbit/s
95th percentile per-packet one-way delay: 36.566 ms
Loss rate: 0.00%

Run 2: Report of LEDBAT — Data Link

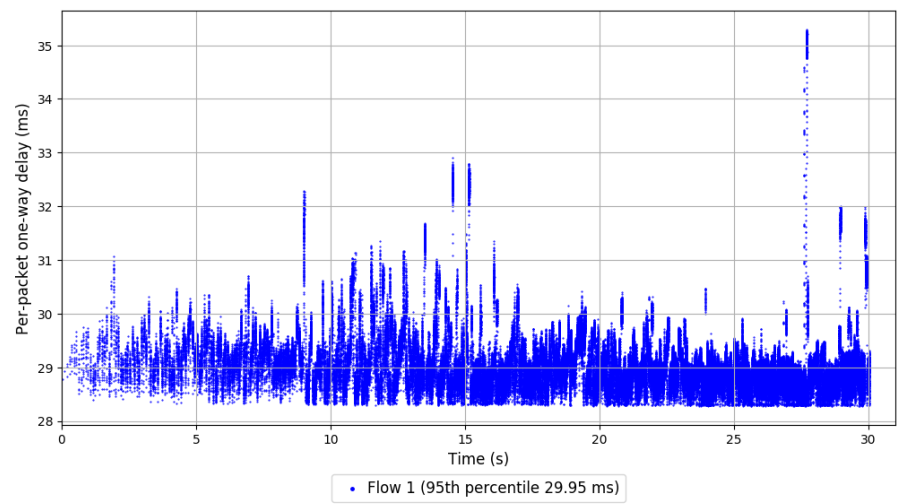
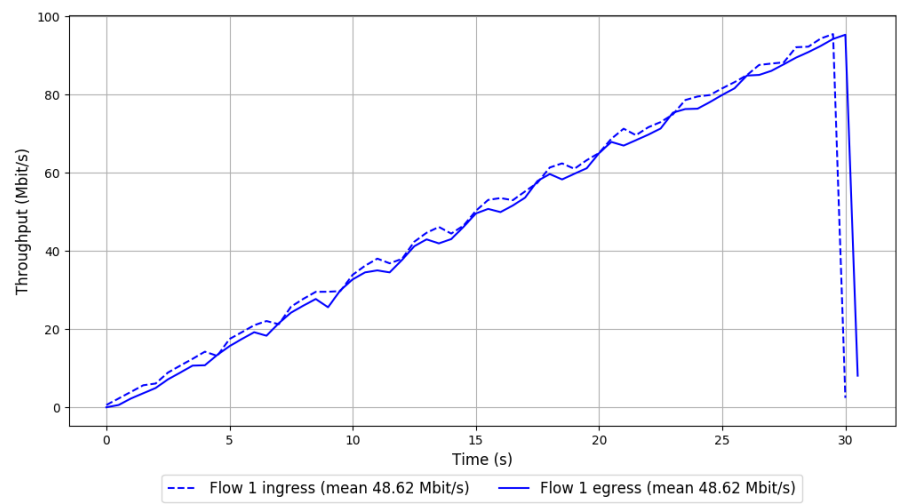


Run 3: Statistics of LEDBAT

Start at: 2018-09-06 05:42:23
End at: 2018-09-06 05:42:53
Local clock offset: 4.114 ms
Remote clock offset: 27.608 ms

Below is generated by plot.py at 2018-09-06 06:32:06
Datalink statistics
-- Total of 1 flow:
Average throughput: 48.62 Mbit/s
95th percentile per-packet one-way delay: 29.953 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 48.62 Mbit/s
95th percentile per-packet one-way delay: 29.953 ms
Loss rate: 0.00%

Run 3: Report of LEDBAT — Data Link

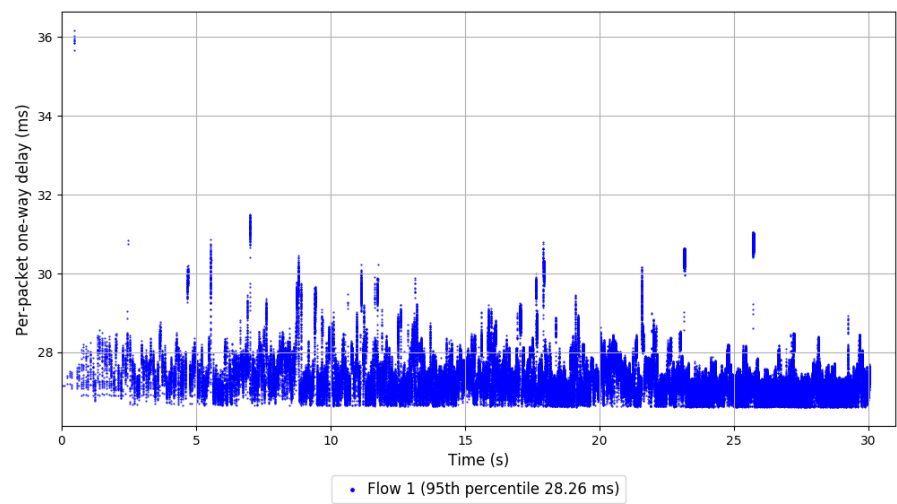
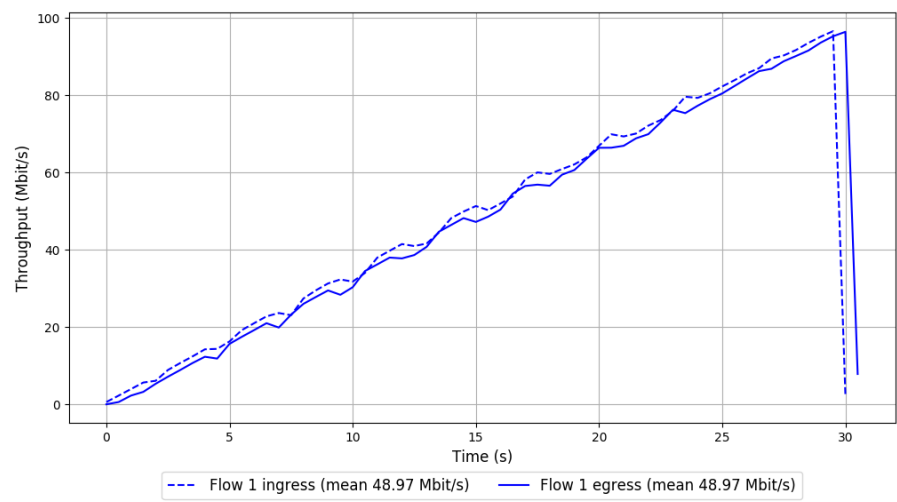


Run 4: Statistics of LEDBAT

Start at: 2018-09-06 06:03:59
End at: 2018-09-06 06:04:29
Local clock offset: -1.011 ms
Remote clock offset: 24.348 ms

Below is generated by plot.py at 2018-09-06 06:32:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 48.97 Mbit/s
95th percentile per-packet one-way delay: 28.256 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 48.97 Mbit/s
95th percentile per-packet one-way delay: 28.256 ms
Loss rate: 0.00%

Run 4: Report of LEDBAT — Data Link

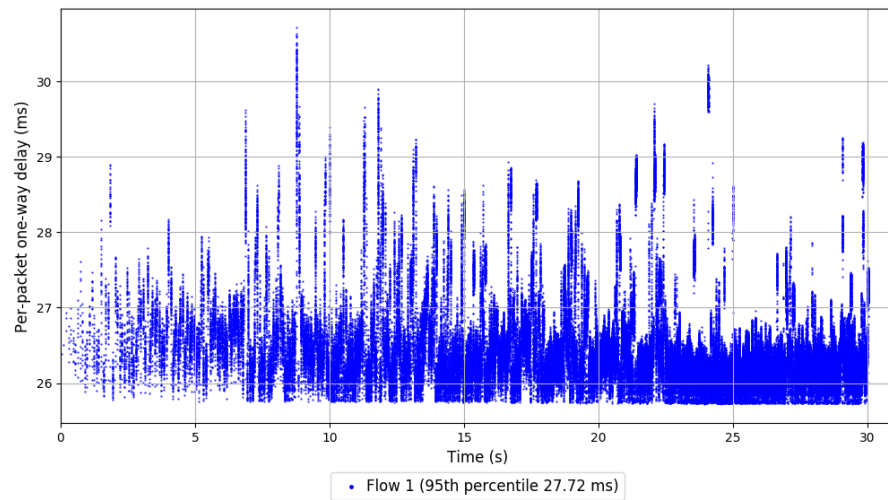
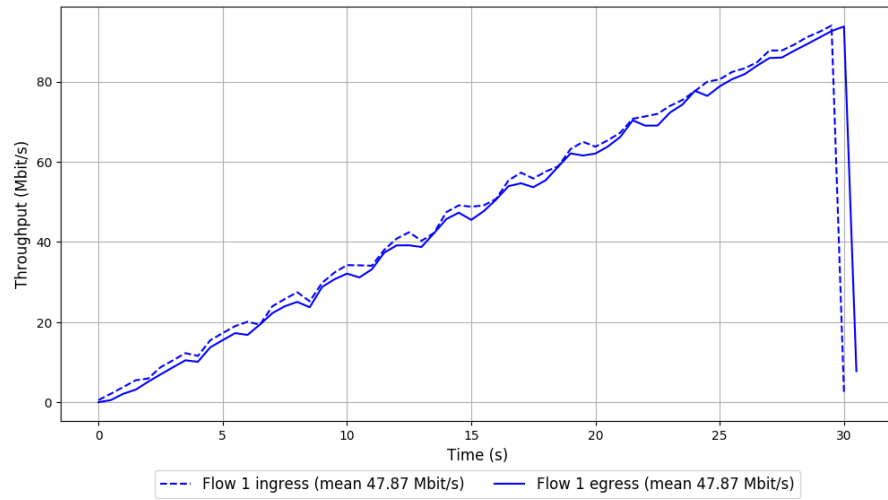


Run 5: Statistics of LEDBAT

Start at: 2018-09-06 06:25:31
End at: 2018-09-06 06:26:01
Local clock offset: -2.633 ms
Remote clock offset: 22.106 ms

Below is generated by plot.py at 2018-09-06 06:32:16
Datalink statistics
-- Total of 1 flow:
Average throughput: 47.87 Mbit/s
95th percentile per-packet one-way delay: 27.718 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 47.87 Mbit/s
95th percentile per-packet one-way delay: 27.718 ms
Loss rate: 0.00%

Run 5: Report of LEDBAT — Data Link



Run 1: Statistics of Indigo-Muses

Start at: 2018-09-06 04:55:47

End at: 2018-09-06 04:56:17

Local clock offset: 8.25 ms

Remote clock offset: 36.372 ms

Below is generated by plot.py at 2018-09-06 06:33:02

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.52 Mbit/s

95th percentile per-packet one-way delay: 39.440 ms

Loss rate: 0.03%

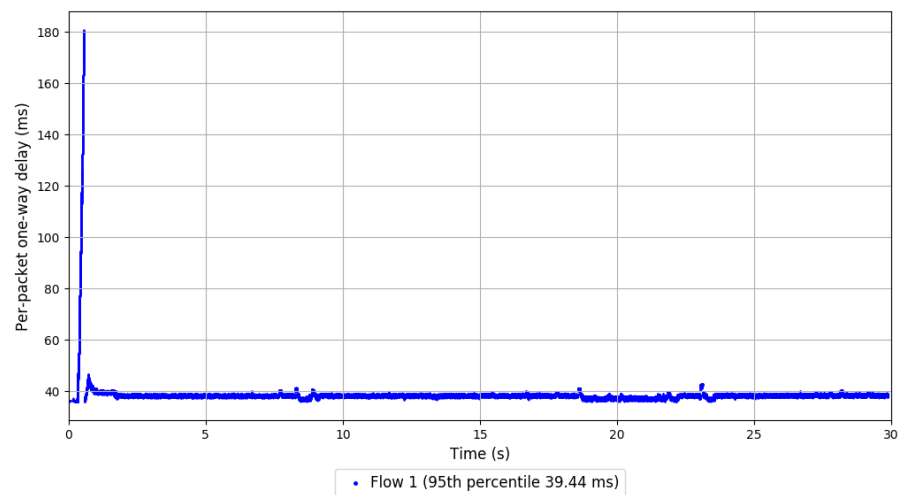
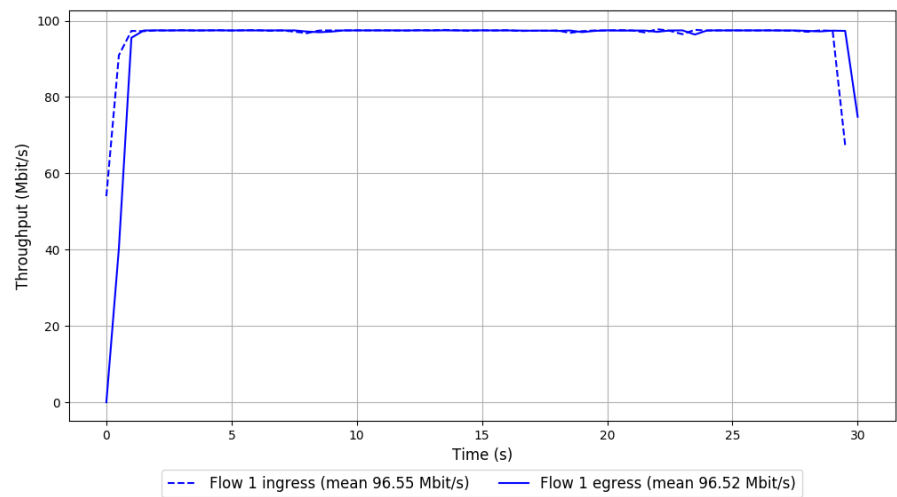
-- Flow 1:

Average throughput: 96.52 Mbit/s

95th percentile per-packet one-way delay: 39.440 ms

Loss rate: 0.03%

Run 1: Report of Indigo-Muses — Data Link

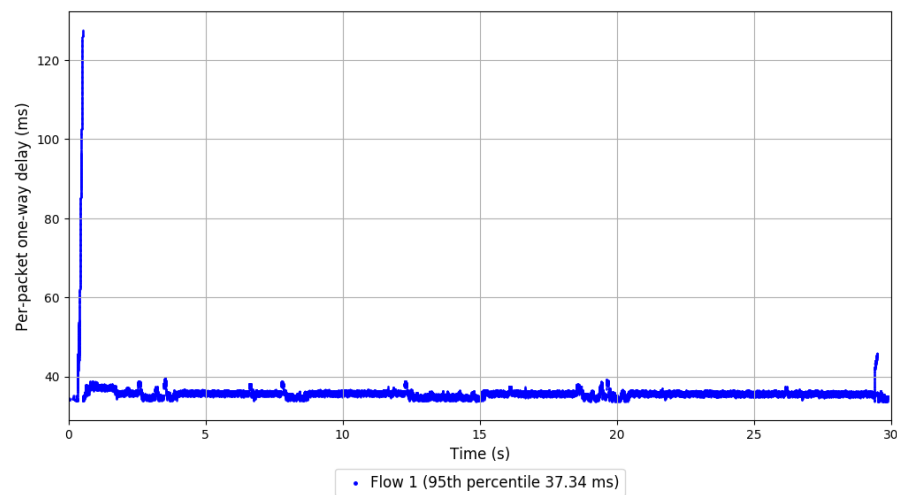
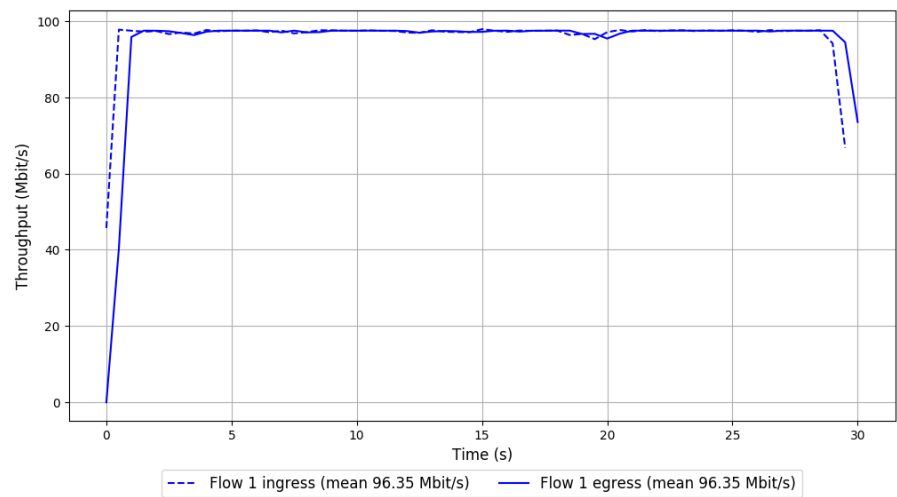


Run 2: Statistics of Indigo-Muses

Start at: 2018-09-06 05:17:21
End at: 2018-09-06 05:17:51
Local clock offset: 9.068 ms
Remote clock offset: 32.987 ms

Below is generated by plot.py at 2018-09-06 06:33:05
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.35 Mbit/s
95th percentile per-packet one-way delay: 37.341 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 96.35 Mbit/s
95th percentile per-packet one-way delay: 37.341 ms
Loss rate: 0.00%

Run 2: Report of Indigo-Muses — Data Link

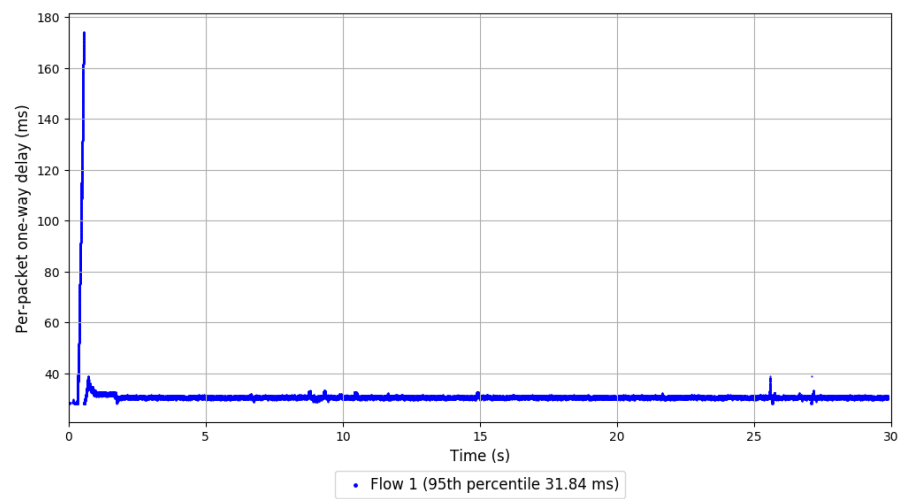
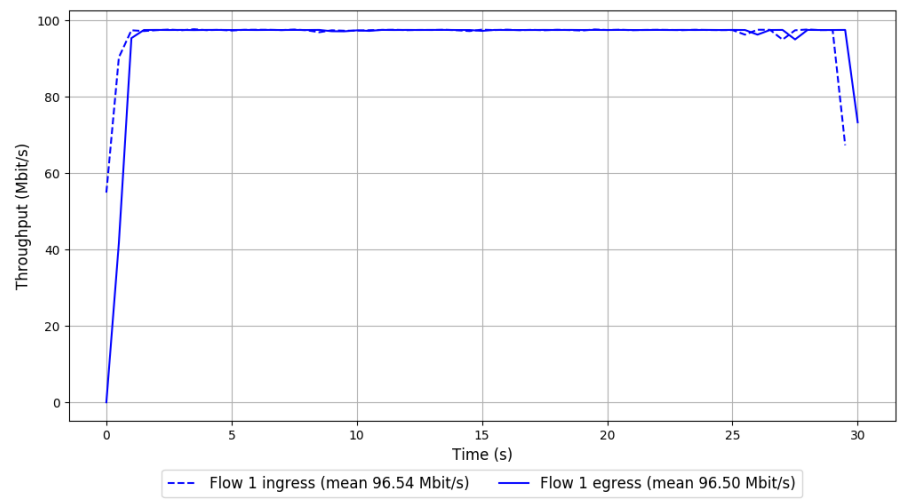


Run 3: Statistics of Indigo-Muses

Start at: 2018-09-06 05:38:47
End at: 2018-09-06 05:39:17
Local clock offset: 4.428 ms
Remote clock offset: 27.321 ms

Below is generated by plot.py at 2018-09-06 06:33:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.50 Mbit/s
95th percentile per-packet one-way delay: 31.838 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 96.50 Mbit/s
95th percentile per-packet one-way delay: 31.838 ms
Loss rate: 0.03%

Run 3: Report of Indigo-Muses — Data Link

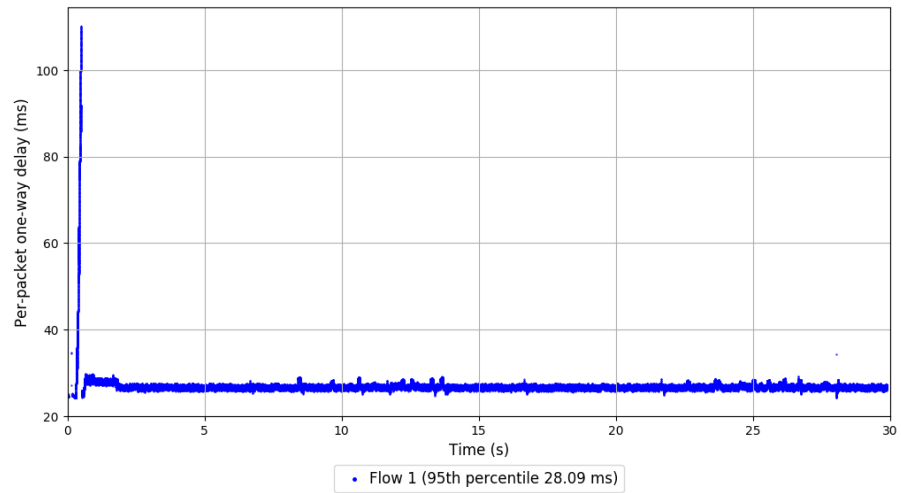
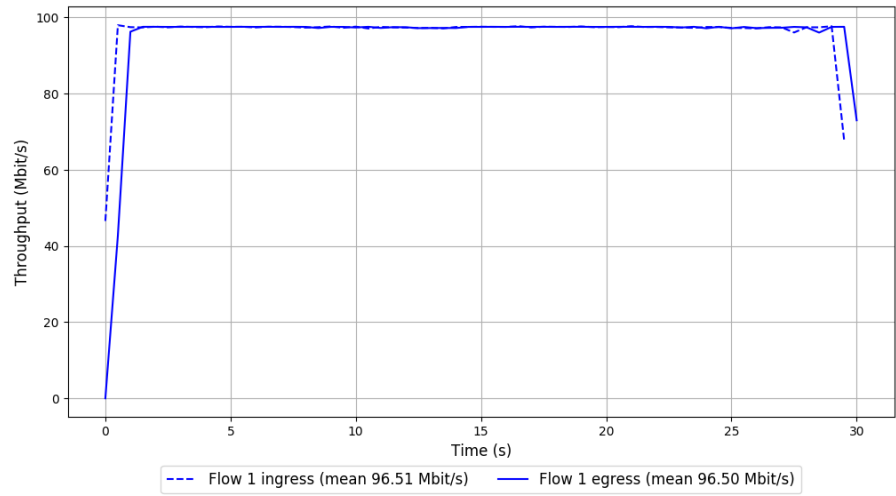


Run 4: Statistics of Indigo-Muses

Start at: 2018-09-06 06:00:21
End at: 2018-09-06 06:00:51
Local clock offset: -0.597 ms
Remote clock offset: 22.608 ms

Below is generated by plot.py at 2018-09-06 06:33:16
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.50 Mbit/s
95th percentile per-packet one-way delay: 28.086 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 96.50 Mbit/s
95th percentile per-packet one-way delay: 28.086 ms
Loss rate: 0.00%

Run 4: Report of Indigo-Muses — Data Link



Run 5: Statistics of Indigo-Muses

Start at: 2018-09-06 06:21:56

End at: 2018-09-06 06:22:26

Local clock offset: -2.297 ms

Remote clock offset: 22.29 ms

Below is generated by plot.py at 2018-09-06 06:33:27

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.50 Mbit/s

95th percentile per-packet one-way delay: 28.972 ms

Loss rate: 0.00%

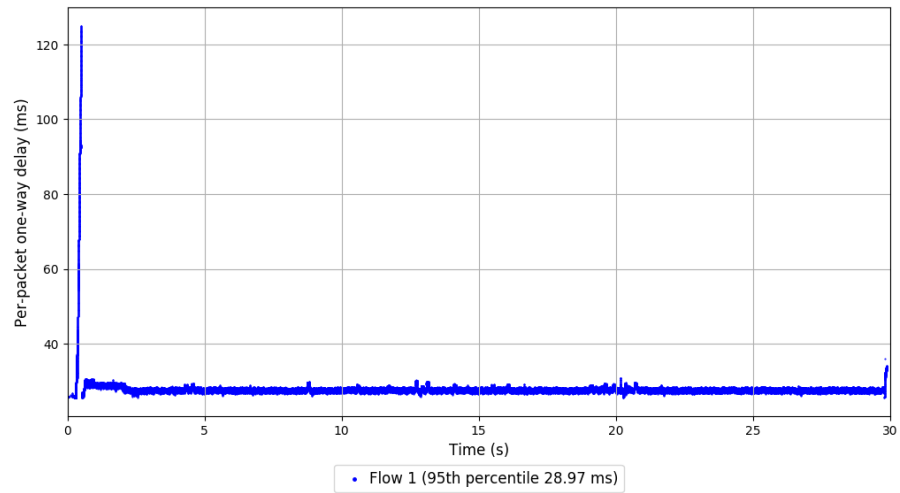
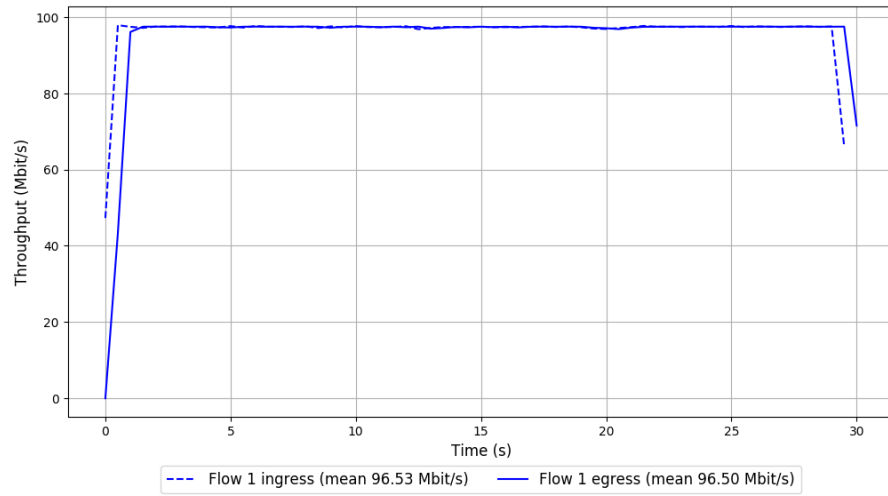
-- Flow 1:

Average throughput: 96.50 Mbit/s

95th percentile per-packet one-way delay: 28.972 ms

Loss rate: 0.00%

Run 5: Report of Indigo-Muses — Data Link



Run 1: Statistics of PCC-Allegro

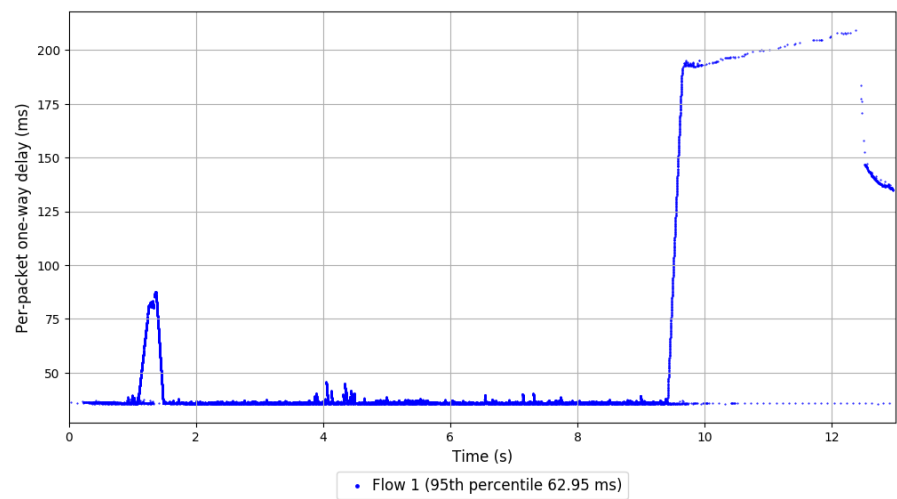
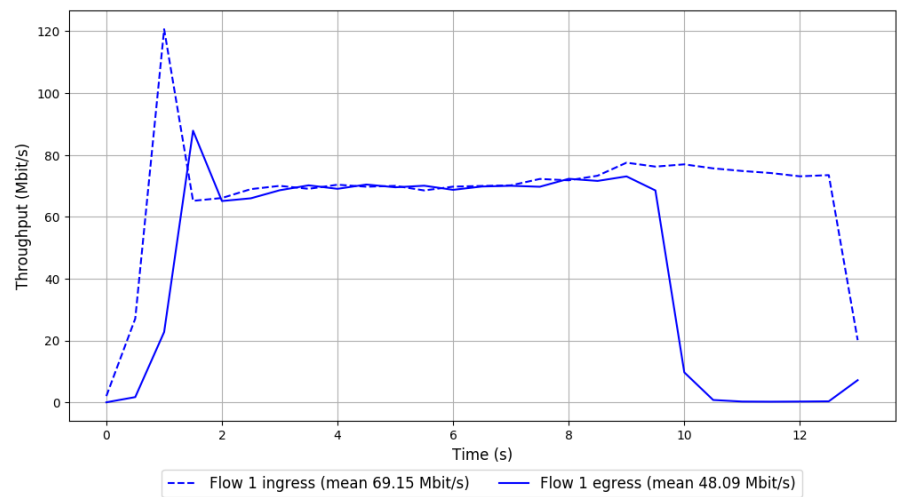
Start at: 2018-09-06 04:54:38

End at: 2018-09-06 04:55:08

Local clock offset: 8.174 ms

Remote clock offset: 36.282 ms

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

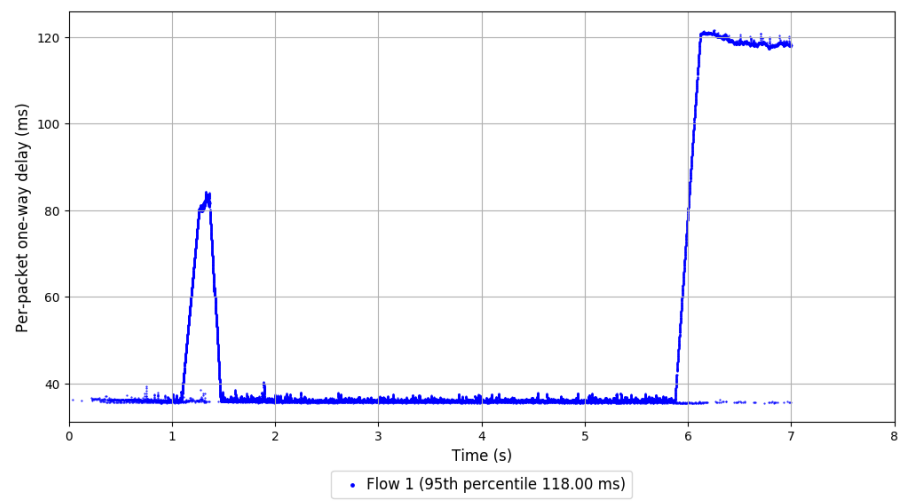
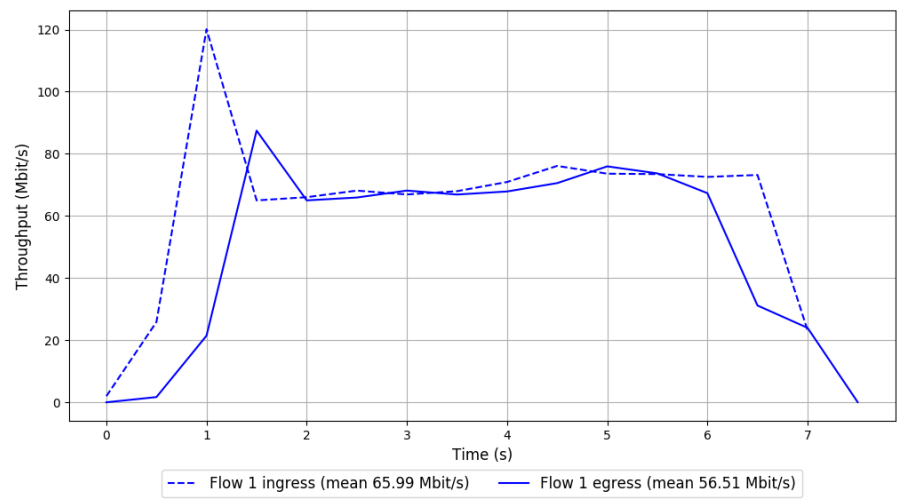
Start at: 2018-09-06 05:16:12

End at: 2018-09-06 05:16:42

Local clock offset: 9.815 ms

Remote clock offset: 34.776 ms

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

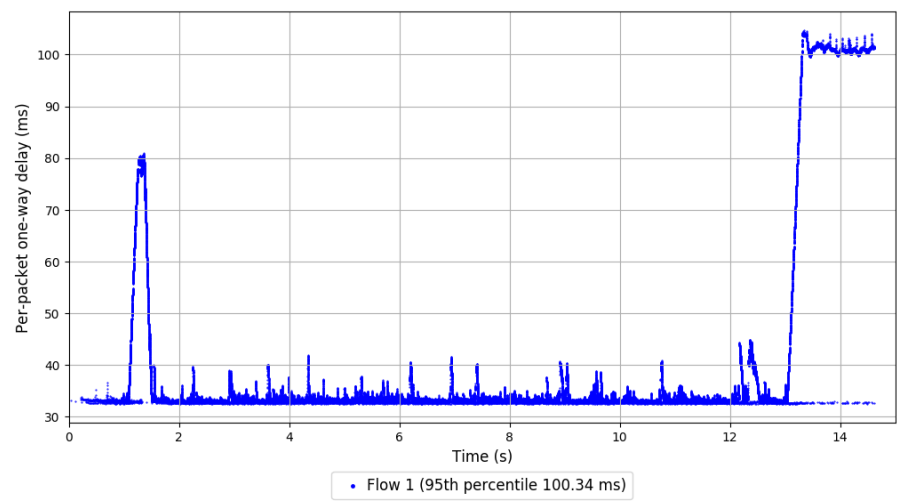
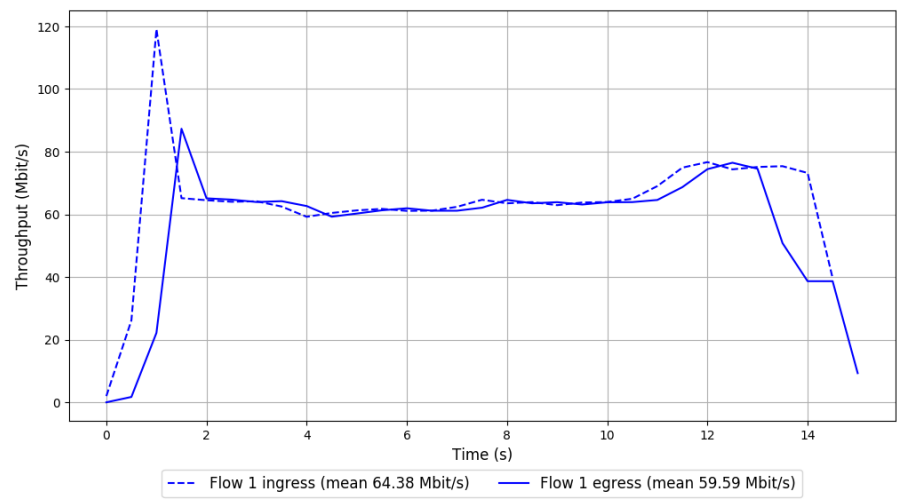
Start at: 2018-09-06 05:37:38

End at: 2018-09-06 05:38:08

Local clock offset: 4.518 ms

Remote clock offset: 31.715 ms

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

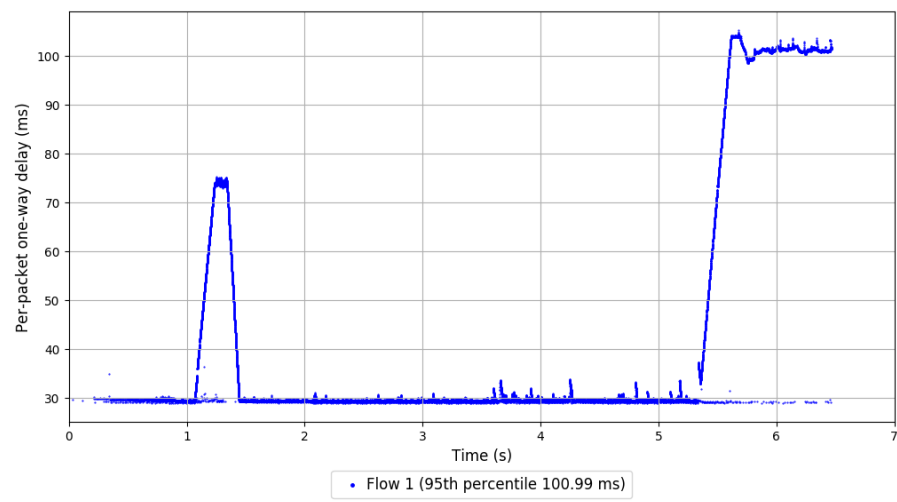
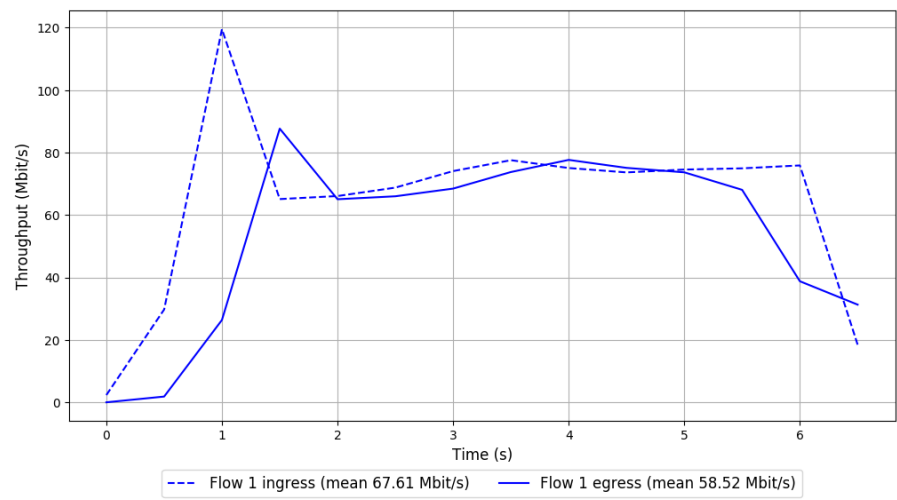
Start at: 2018-09-06 05:59:12

End at: 2018-09-06 05:59:42

Local clock offset: -0.103 ms

Remote clock offset: 27.695 ms

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

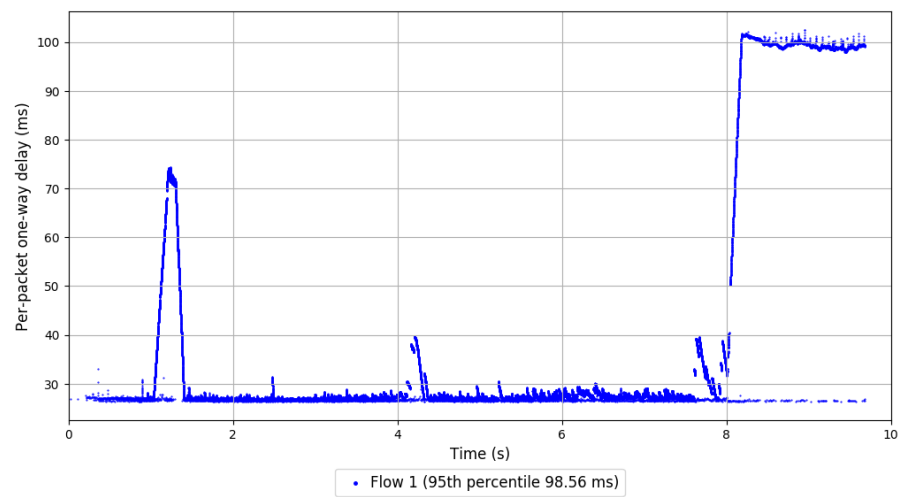
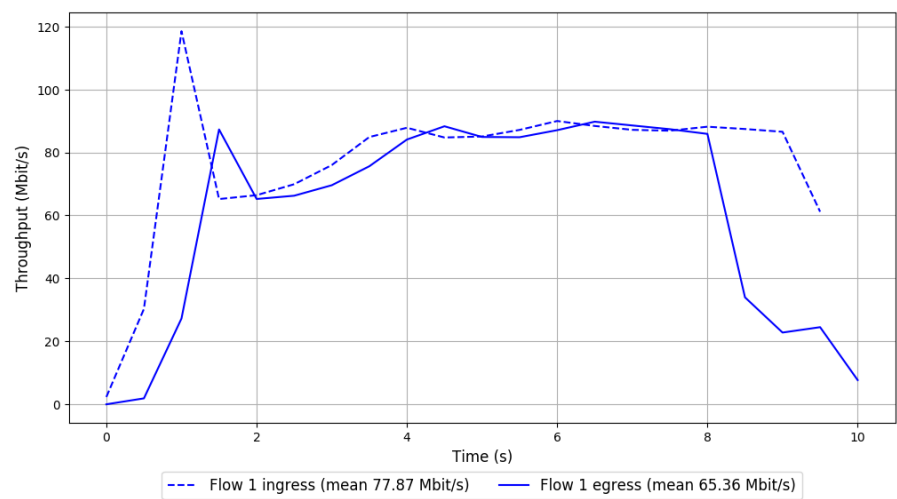
Start at: 2018-09-06 06:20:46

End at: 2018-09-06 06:21:16

Local clock offset: -2.322 ms

Remote clock offset: 23.287 ms

Run 5: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

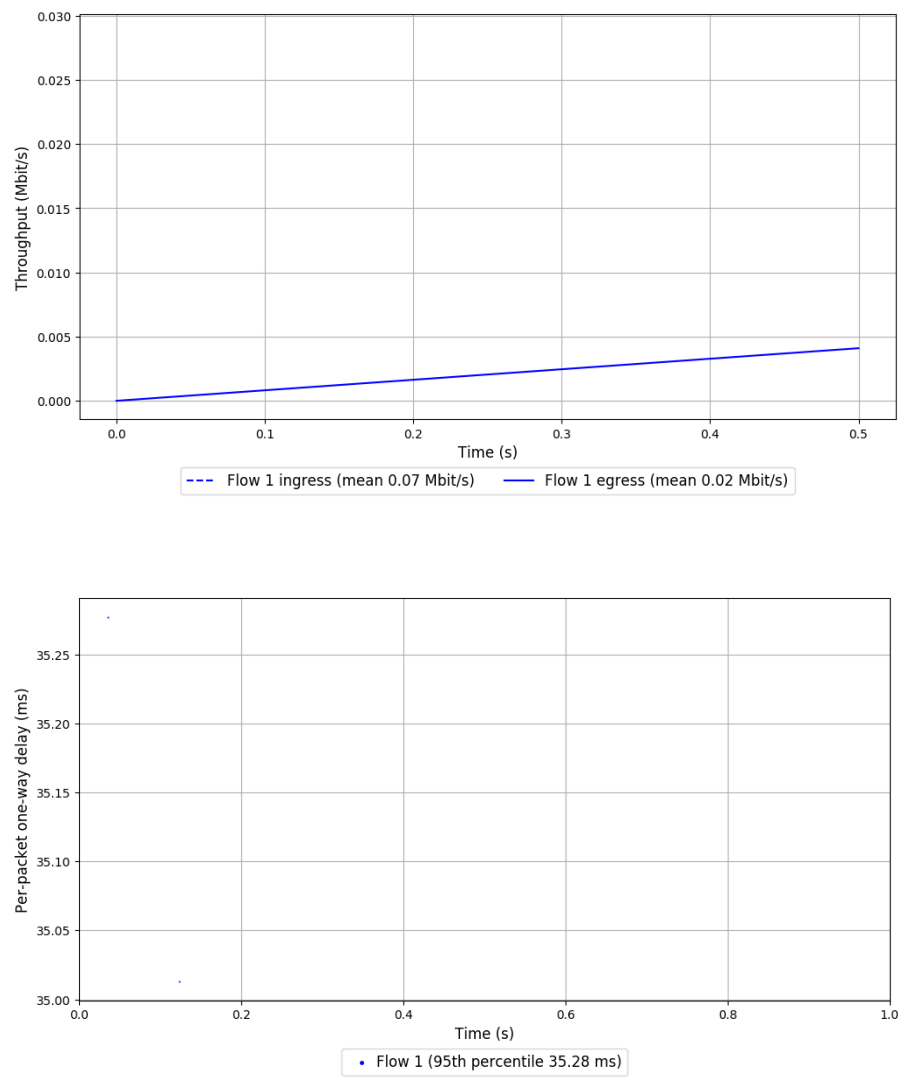
Start at: 2018-09-06 04:46:17

End at: 2018-09-06 04:46:47

Local clock offset: 8.198 ms

Remote clock offset: 38.648 ms

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

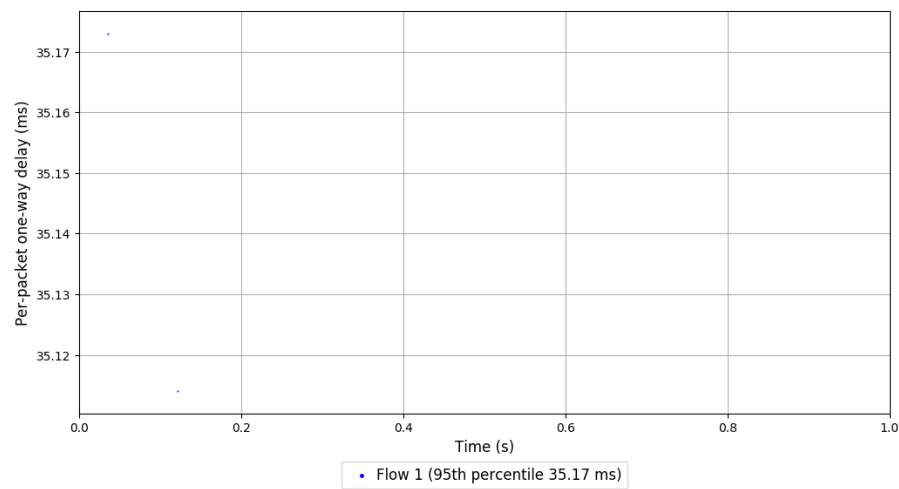
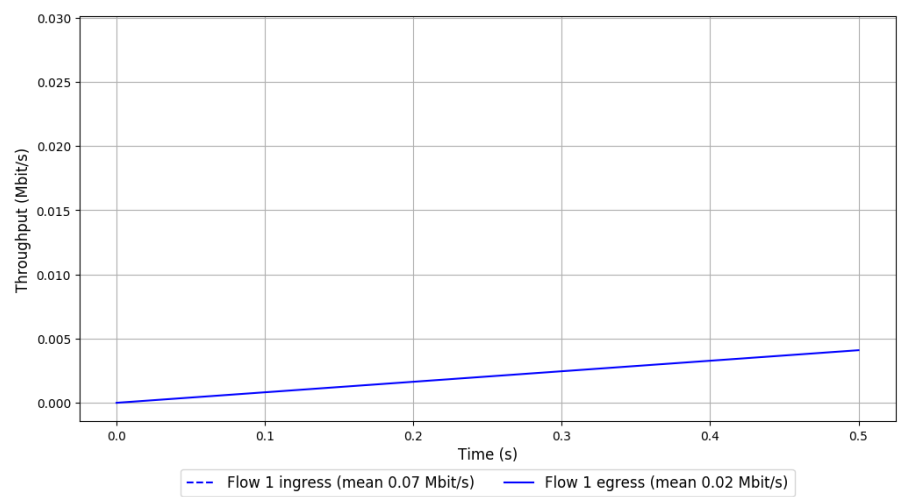
Start at: 2018-09-06 05:07:48

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

Local clock offset: 9.345 ms

Remote clock offset: 34.091 ms

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

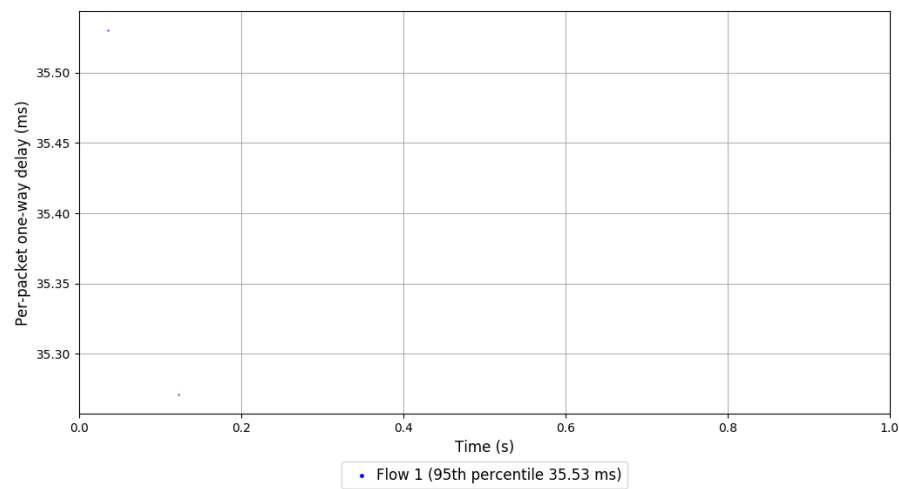
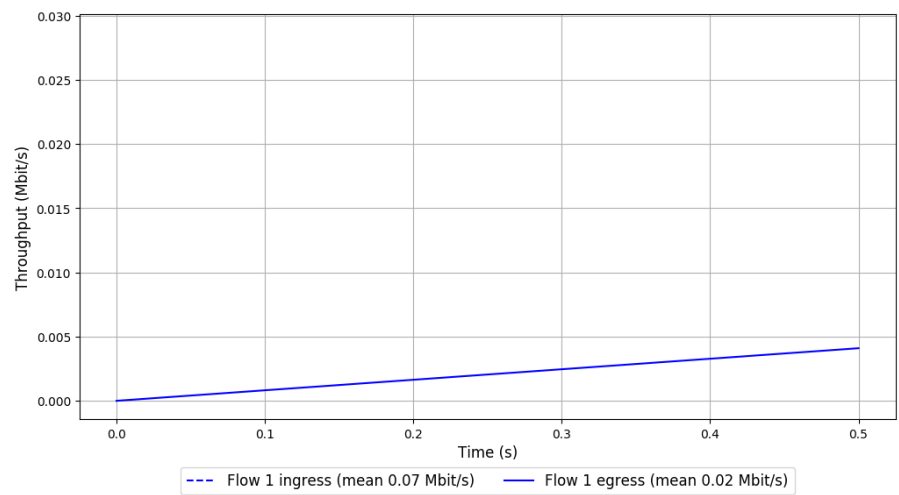
Start at: 2018-09-06 05:29:16

End at: 2018-09-06 05:29:46

Local clock offset: 5.171 ms

Remote clock offset: 34.108 ms

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

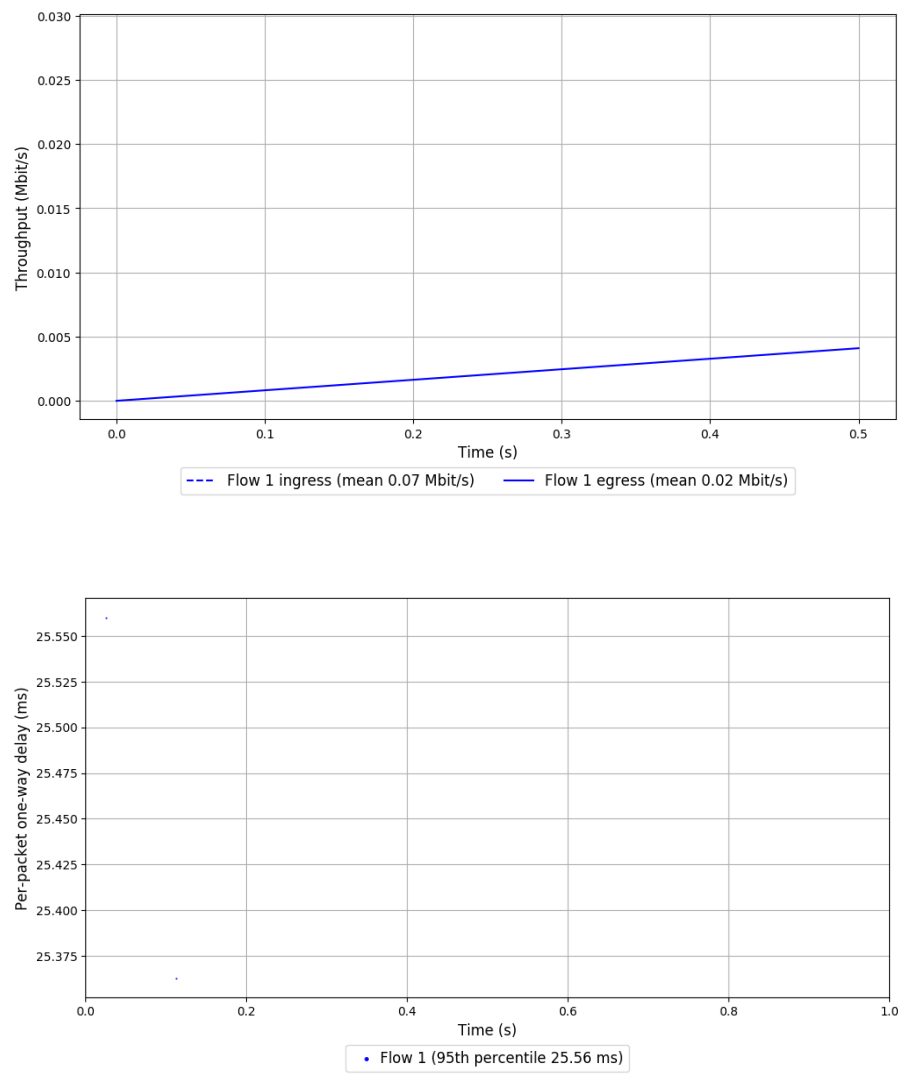
Start at: 2018-09-06 05:50:49

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

Local clock offset: 1.94 ms

Remote clock offset: 24.198 ms

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

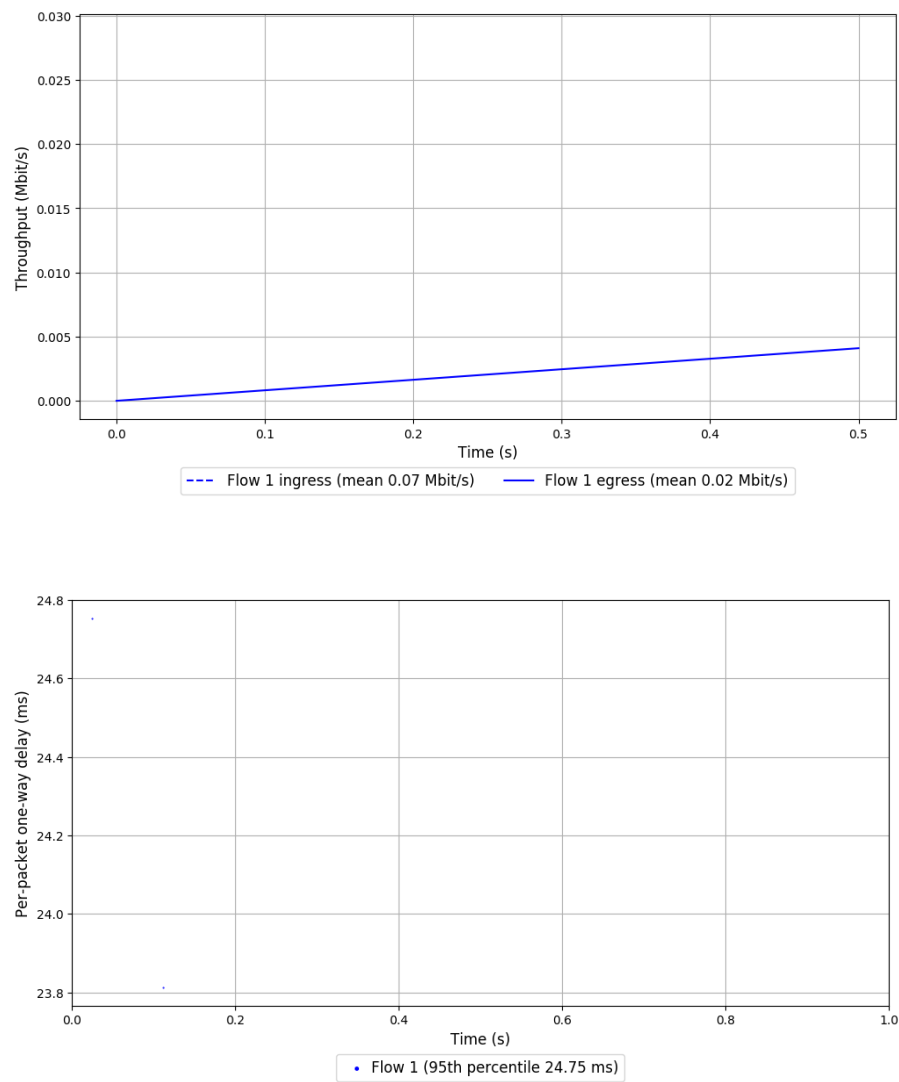
Start at: 2018-09-06 06:12:23

End at: 2018-09-06 06:12:53

Local clock offset: -1.742 ms

Remote clock offset: 20.805 ms

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

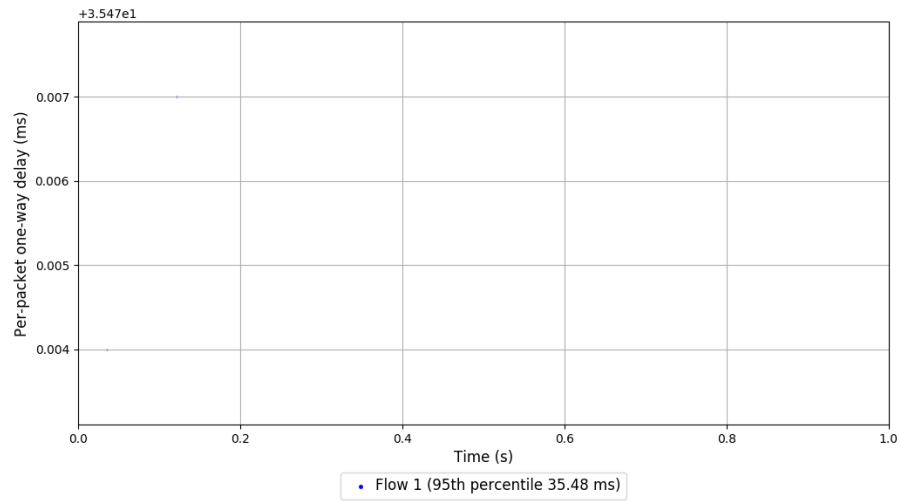
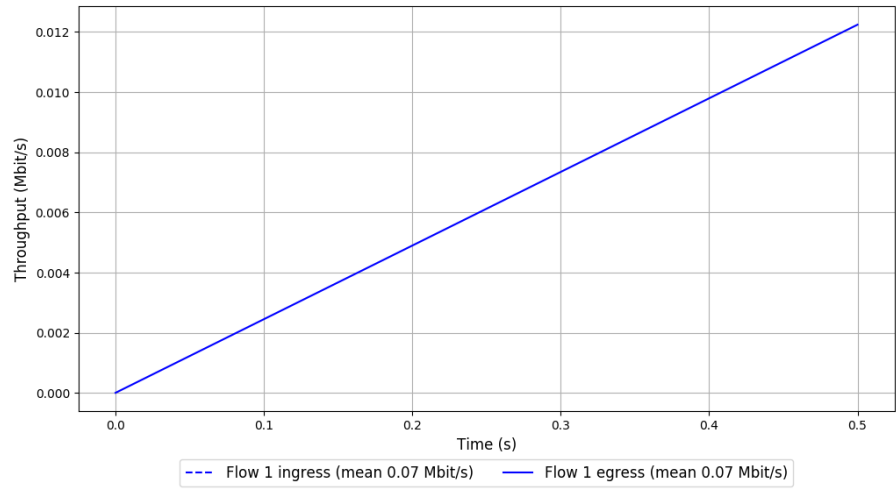
Start at: 2018-09-06 04:40:22

End at: 2018-09-06 04:40:52

Local clock offset: 7.72 ms

Remote clock offset: 38.847 ms

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-09-06 05:01:46

End at: 2018-09-06 05:02:16

Local clock offset: 8.744 ms

Remote clock offset: 35.186 ms

Below is generated by plot.py at 2018-09-06 06:33:38

Datalink statistics

-- Total of 1 flow:

Average throughput: 60.46 Mbit/s

95th percentile per-packet one-way delay: 108.607 ms

Loss rate: 0.09%

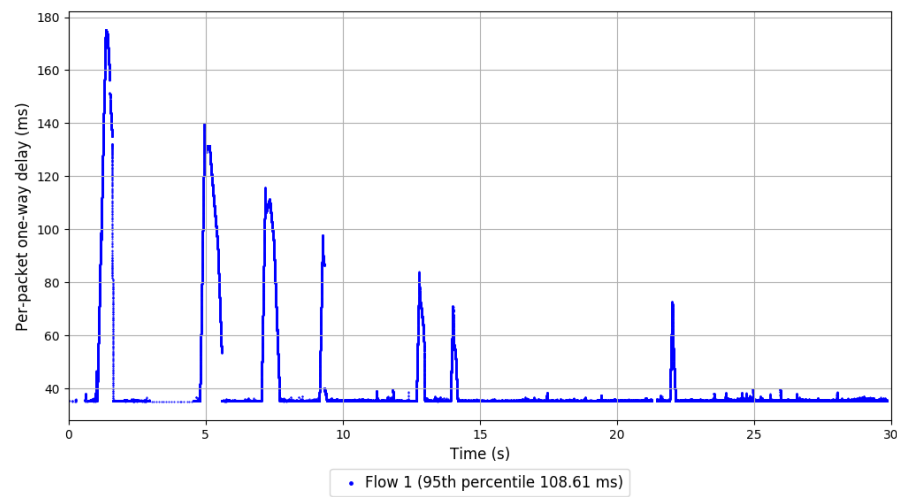
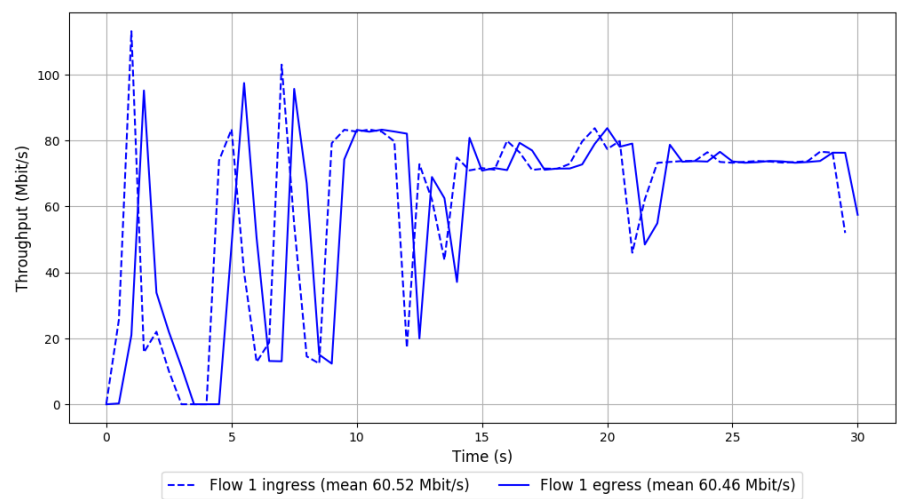
-- Flow 1:

Average throughput: 60.46 Mbit/s

95th percentile per-packet one-way delay: 108.607 ms

Loss rate: 0.09%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-09-06 05:23:21

End at: 2018-09-06 05:23:51

Local clock offset: 6.334 ms

Remote clock offset: 34.416 ms

Below is generated by plot.py at 2018-09-06 06:33:42

Datalink statistics

-- Total of 1 flow:

Average throughput: 63.54 Mbit/s

95th percentile per-packet one-way delay: 75.510 ms

Loss rate: 0.02%

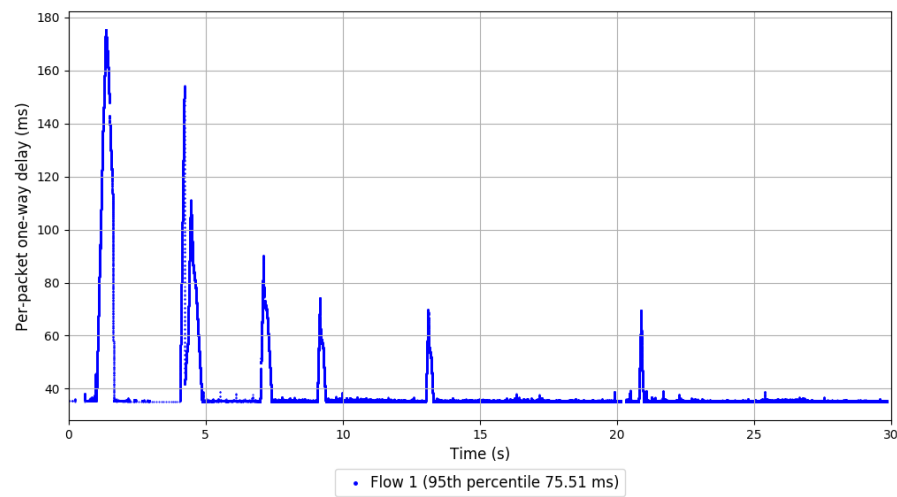
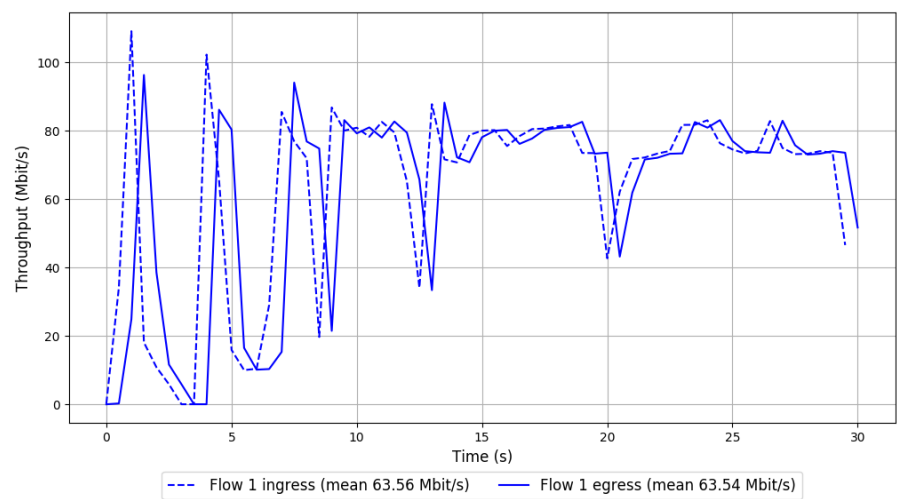
-- Flow 1:

Average throughput: 63.54 Mbit/s

95th percentile per-packet one-way delay: 75.510 ms

Loss rate: 0.02%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-09-06 05:44:48

End at: 2018-09-06 05:45:18

Local clock offset: 4.073 ms

Remote clock offset: 25.395 ms

Below is generated by plot.py at 2018-09-06 06:33:51

Datalink statistics

-- Total of 1 flow:

Average throughput: 69.97 Mbit/s

95th percentile per-packet one-way delay: 95.651 ms

Loss rate: 0.11%

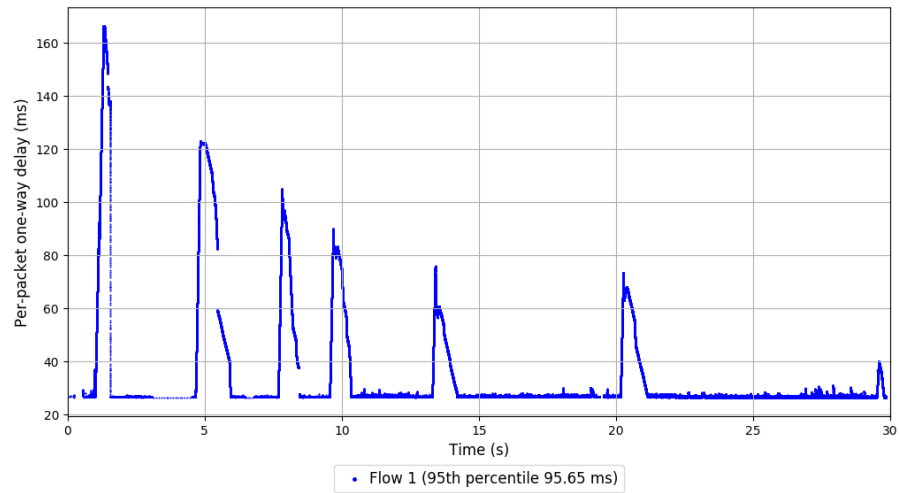
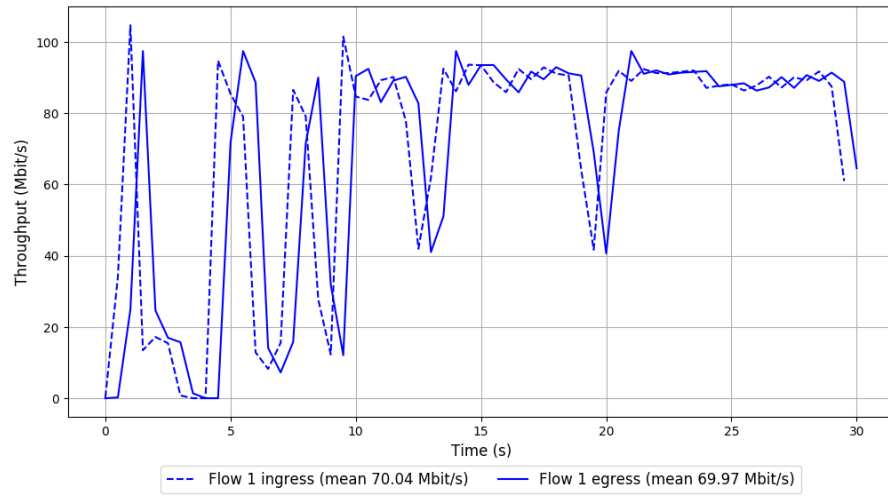
-- Flow 1:

Average throughput: 69.97 Mbit/s

95th percentile per-packet one-way delay: 95.651 ms

Loss rate: 0.11%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

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

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

Local clock offset: -1.097 ms

Remote clock offset: 24.75 ms

Below is generated by plot.py at 2018-09-06 06:34:03

Datalink statistics

-- Total of 1 flow:

Average throughput: 69.24 Mbit/s

95th percentile per-packet one-way delay: 100.557 ms

Loss rate: 0.12%

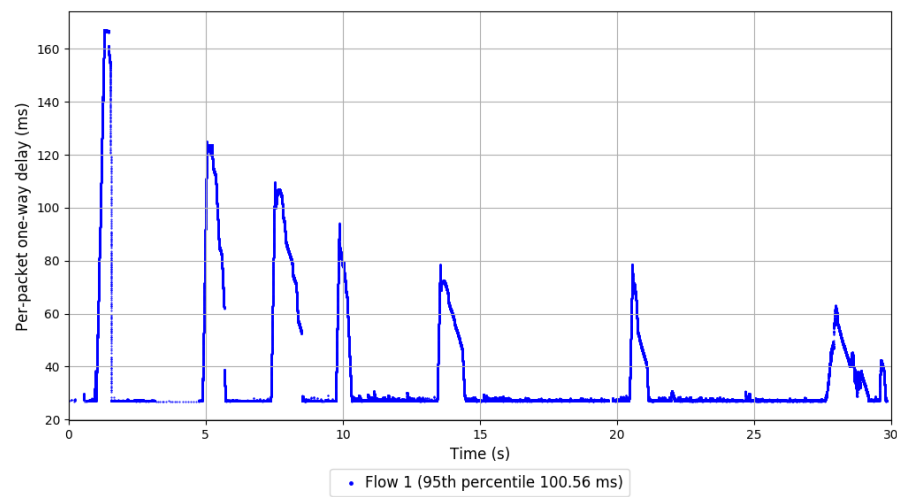
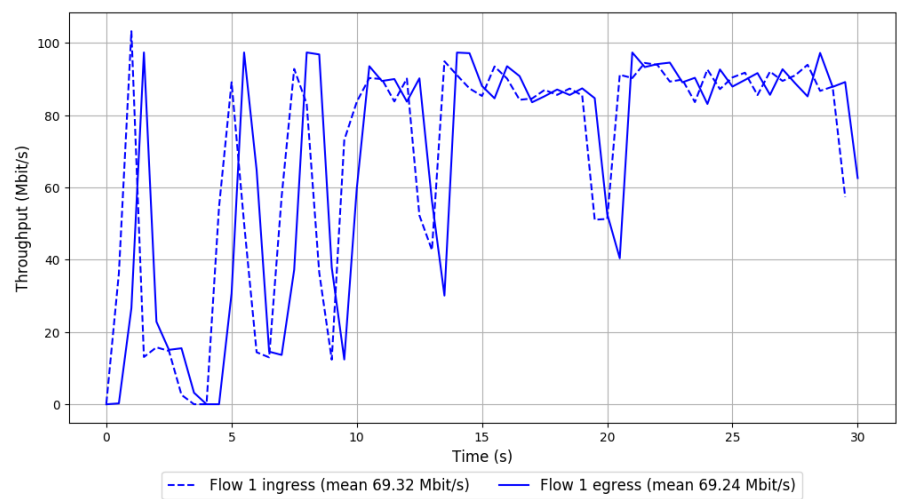
-- Flow 1:

Average throughput: 69.24 Mbit/s

95th percentile per-packet one-way delay: 100.557 ms

Loss rate: 0.12%

Run 5: Report of QUIC Cubic — Data Link

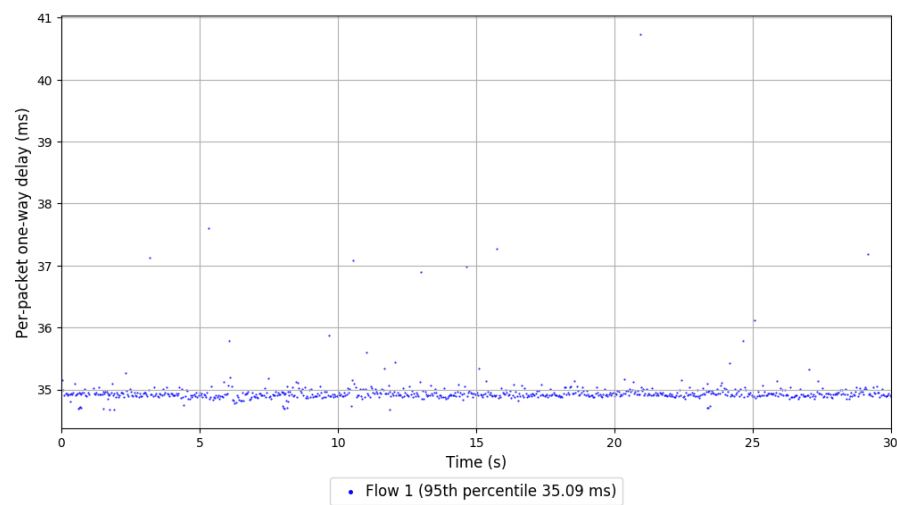
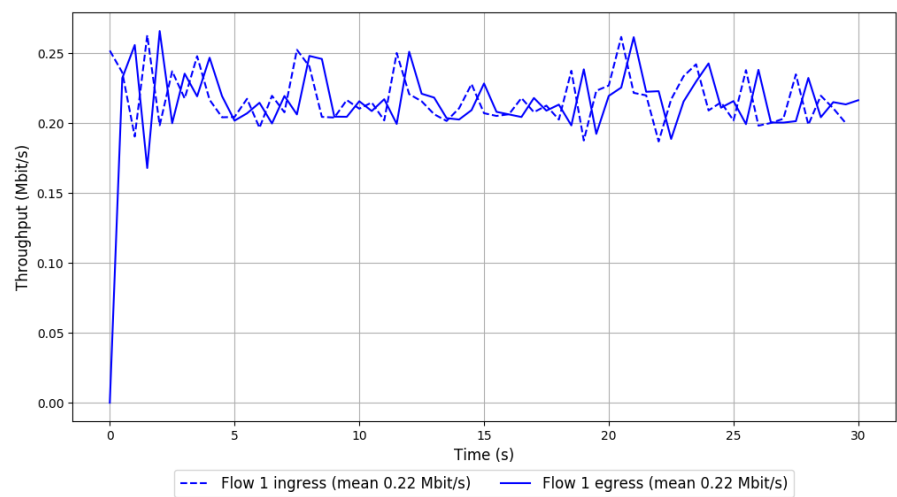


```
Run 1: Statistics of SCReAM

Start at: 2018-09-06 04:43:53
End at: 2018-09-06 04:44:23
Local clock offset: 8.205 ms
Remote clock offset: 38.694 ms

# Below is generated by plot.py at 2018-09-06 06:34:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 35.089 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 35.089 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link

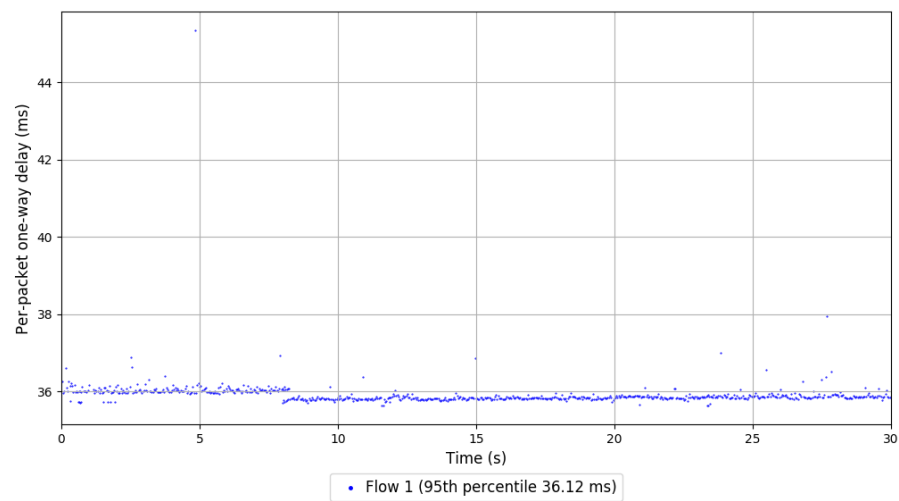
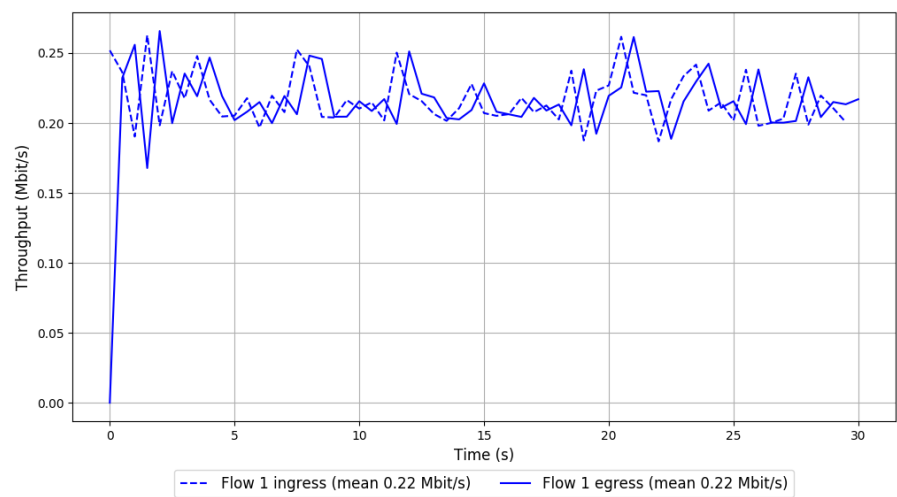


```
Run 2: Statistics of SCReAM

Start at: 2018-09-06 05:05:25
End at: 2018-09-06 05:05:55
Local clock offset: 9.333 ms
Remote clock offset: 35.301 ms

# Below is generated by plot.py at 2018-09-06 06:34:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 36.120 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 36.120 ms
Loss rate: 0.00%
```

Run 2: Report of SReAM — Data Link

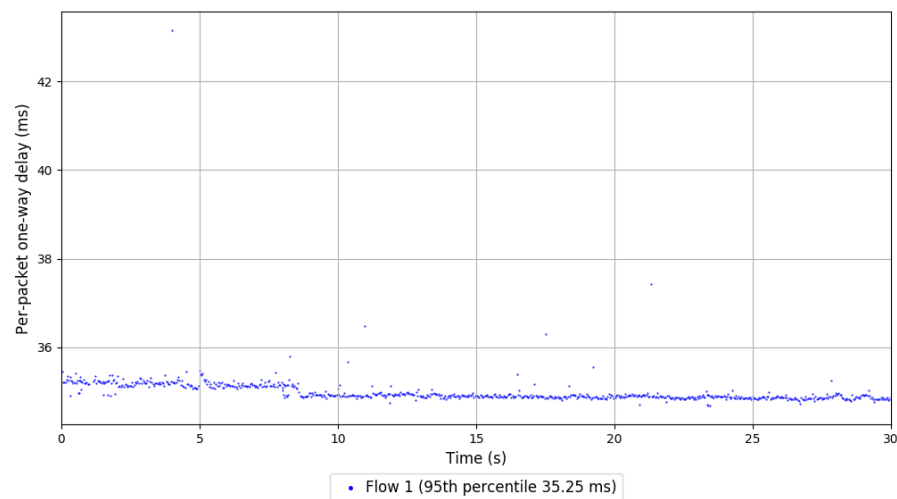
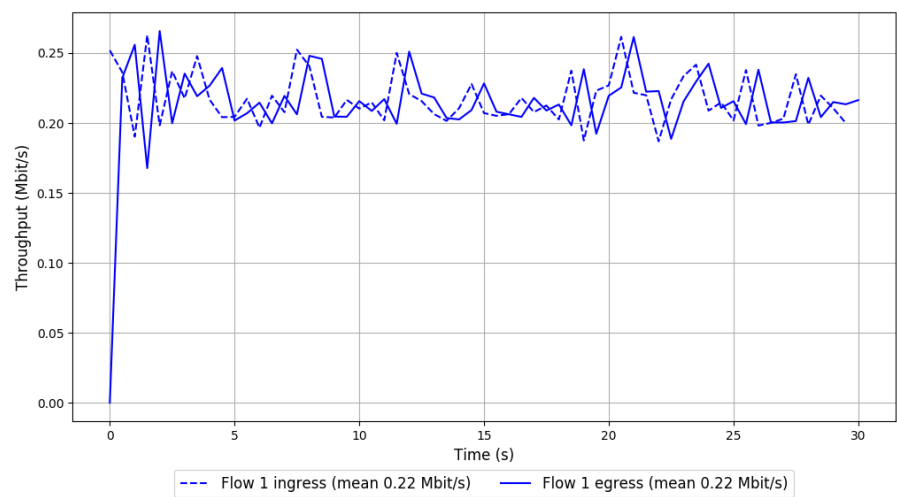


Run 3: Statistics of SCReAM

Start at: 2018-09-06 05:26:56
End at: 2018-09-06 05:27:26
Local clock offset: 5.525 ms
Remote clock offset: 34.163 ms

Below is generated by plot.py at 2018-09-06 06:34:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 35.251 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 35.251 ms
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link

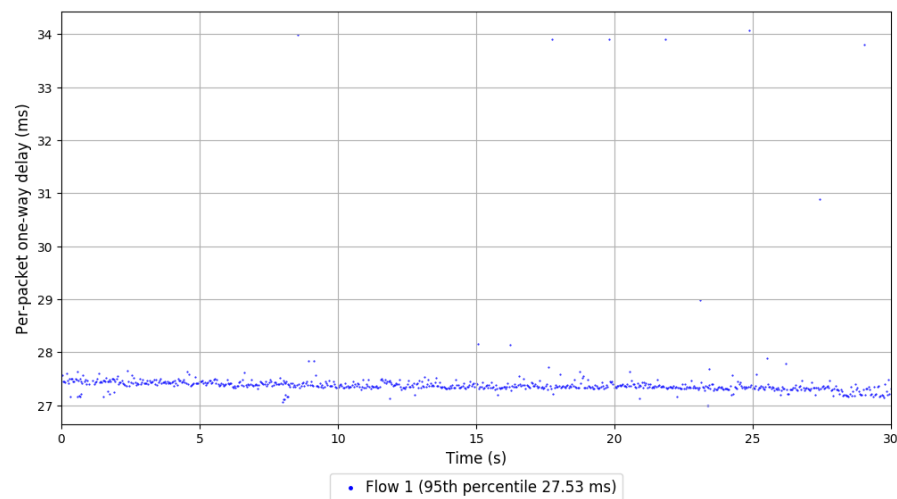
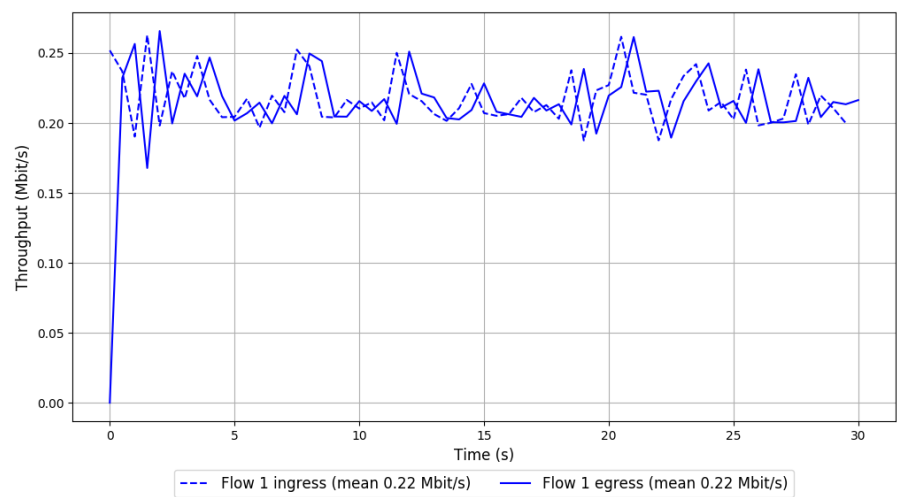


Run 4: Statistics of SCReAM

Start at: 2018-09-06 05:48:29
End at: 2018-09-06 05:48:59
Local clock offset: 2.801 ms
Remote clock offset: 26.386 ms

Below is generated by plot.py at 2018-09-06 06:34:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 27.526 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 27.526 ms
Loss rate: 0.00%

Run 4: Report of SReAM — Data Link

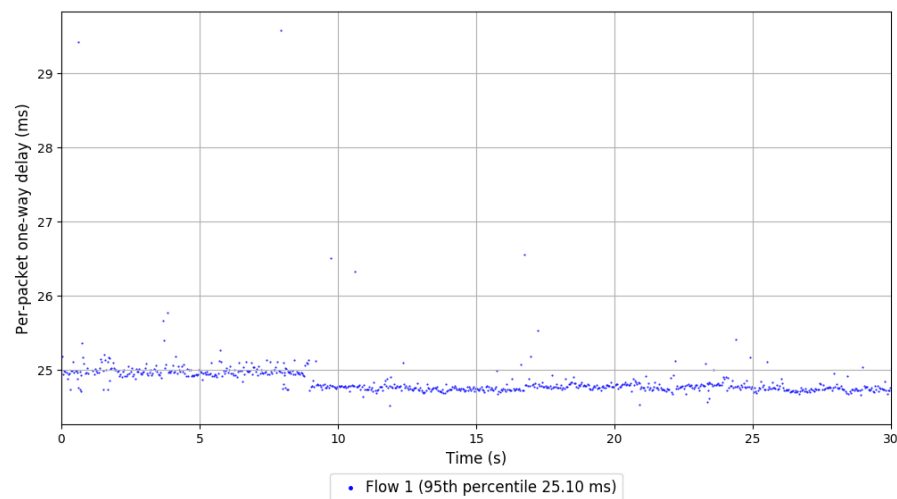
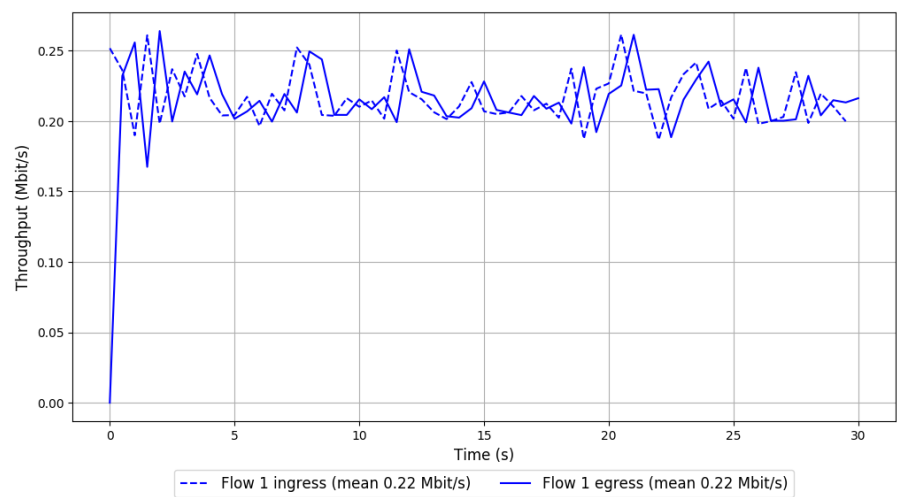


Run 5: Statistics of SCReAM

Start at: 2018-09-06 06:10:02
End at: 2018-09-06 06:10:32
Local clock offset: -1.596 ms
Remote clock offset: 21.483 ms

Below is generated by plot.py at 2018-09-06 06:34:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 25.098 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 25.098 ms
Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 1: Statistics of Sprout

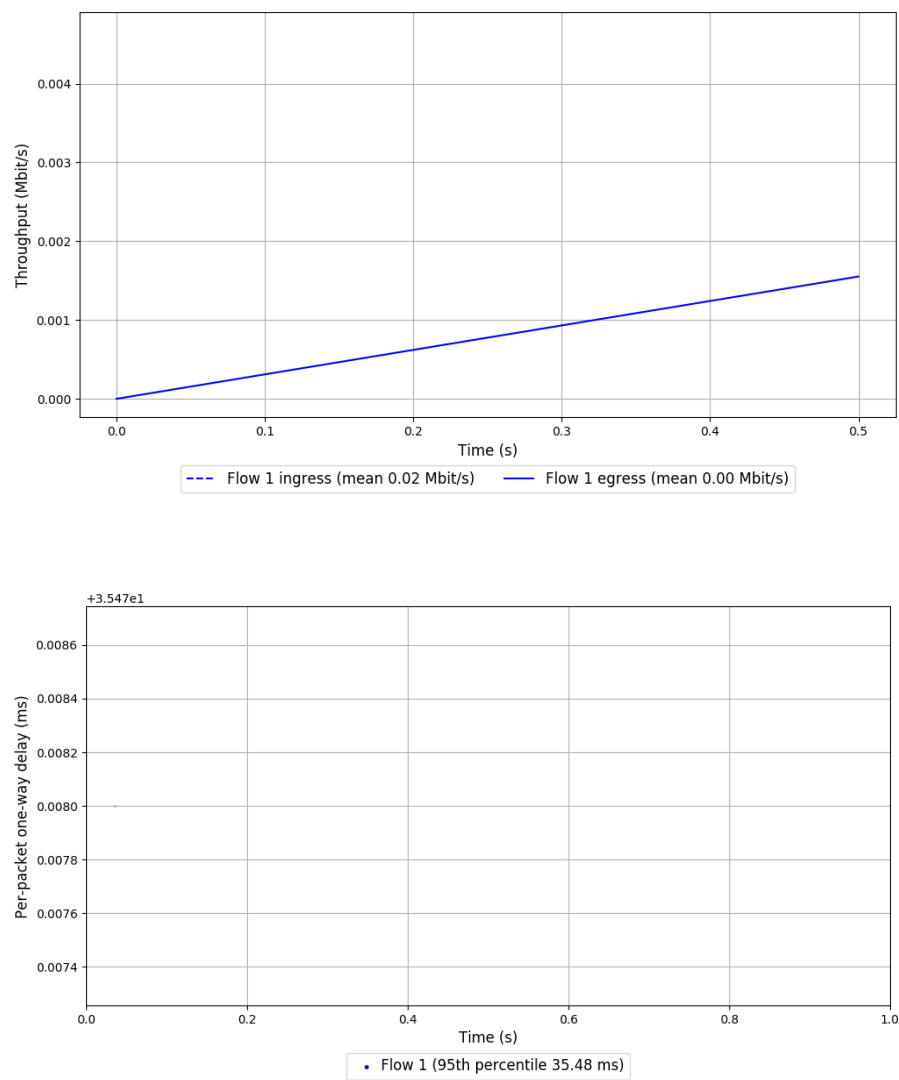
Start at: 2018-09-06 04:41:30

End at: 2018-09-06 04:42:00

Local clock offset: 7.694 ms

Remote clock offset: 38.469 ms

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

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

End at: 2018-09-06 05:03:29

Local clock offset: 8.977 ms

Remote clock offset: 35.2 ms

Below is generated by plot.py at 2018-09-06 06:34:03

Datalink statistics

-- Total of 1 flow:

Average throughput: 8.22 Mbit/s

95th percentile per-packet one-way delay: 41.951 ms

Loss rate: 0.00%

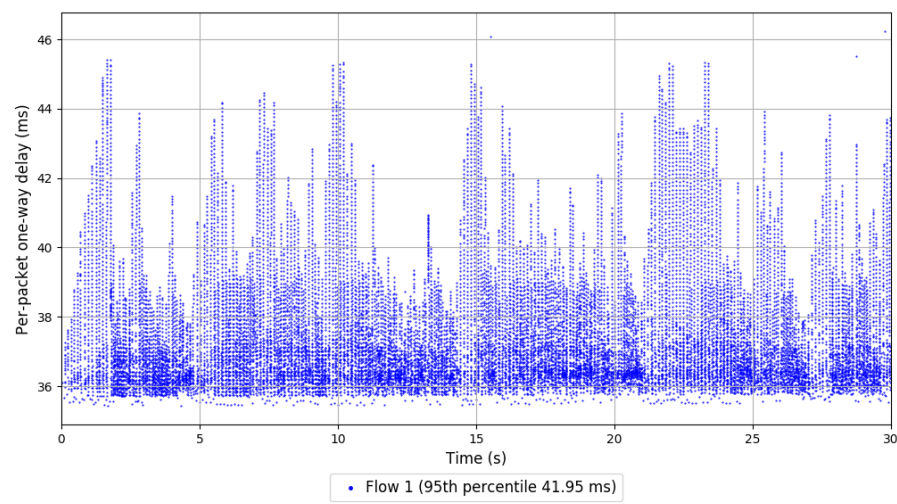
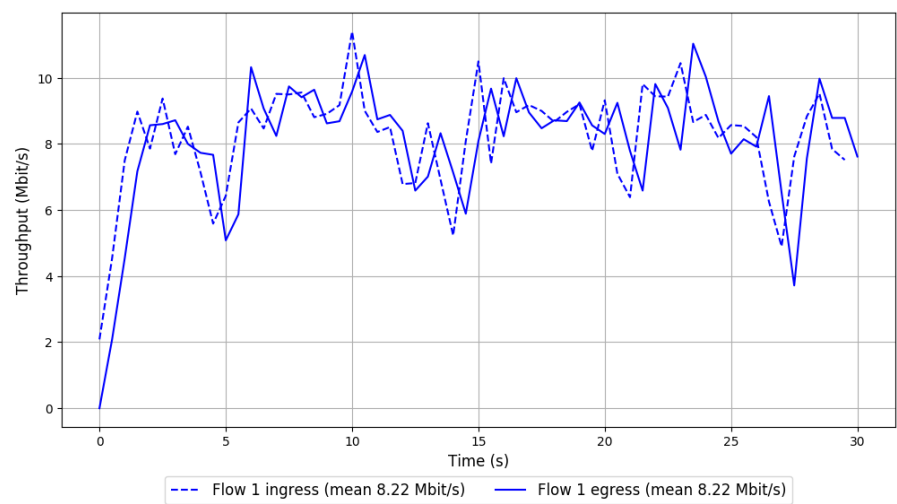
-- Flow 1:

Average throughput: 8.22 Mbit/s

95th percentile per-packet one-way delay: 41.951 ms

Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

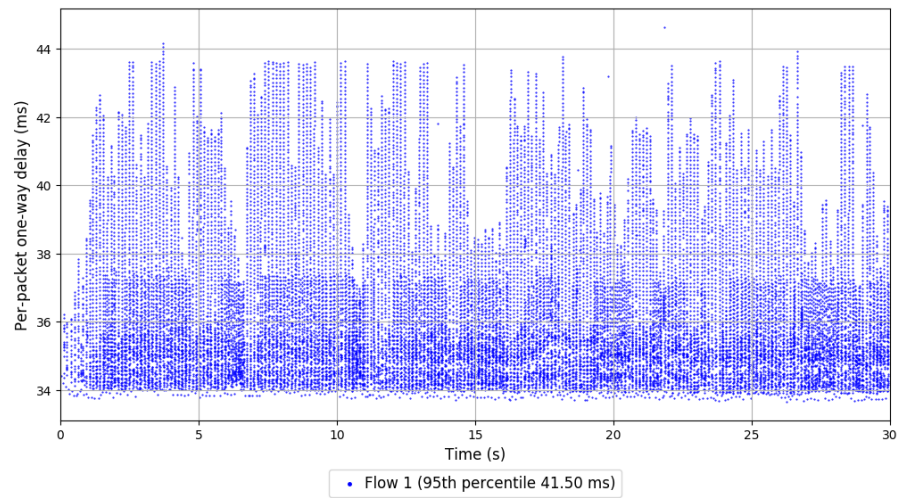
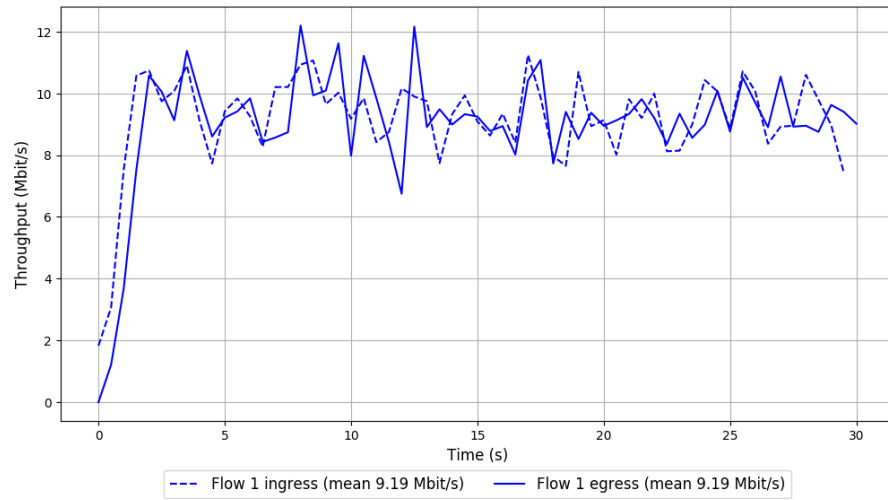


Run 3: Statistics of Sprout

Start at: 2018-09-06 05:24:33
End at: 2018-09-06 05:25:03
Local clock offset: 6.097 ms
Remote clock offset: 33.085 ms

Below is generated by plot.py at 2018-09-06 06:34:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 9.19 Mbit/s
95th percentile per-packet one-way delay: 41.500 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.19 Mbit/s
95th percentile per-packet one-way delay: 41.500 ms
Loss rate: 0.00%

Run 3: Report of Sprout — Data Link

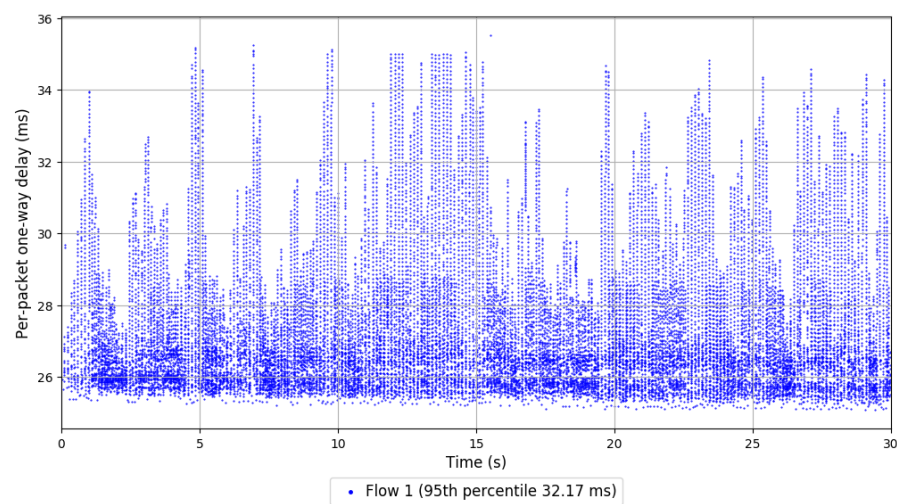
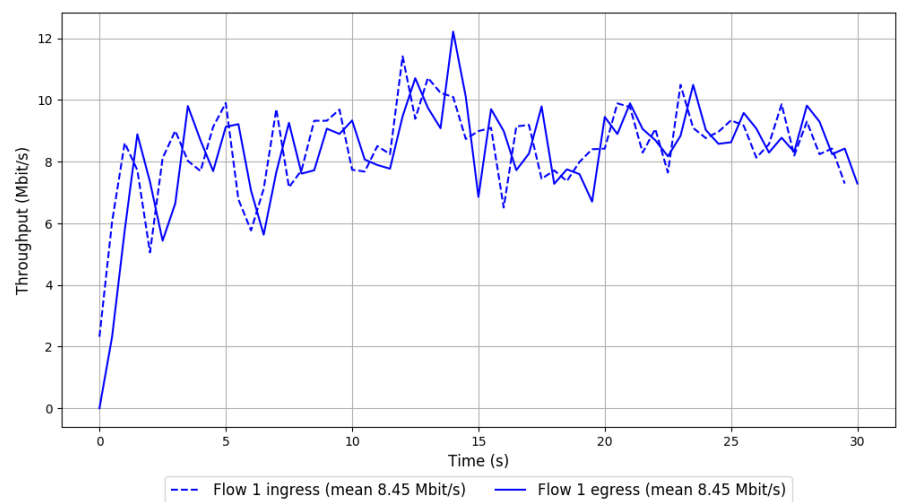


Run 4: Statistics of Sprout

Start at: 2018-09-06 05:46:02
End at: 2018-09-06 05:46:32
Local clock offset: 4.114 ms
Remote clock offset: 24.817 ms

Below is generated by plot.py at 2018-09-06 06:34:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 8.45 Mbit/s
95th percentile per-packet one-way delay: 32.174 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 8.45 Mbit/s
95th percentile per-packet one-way delay: 32.174 ms
Loss rate: 0.00%

Run 4: Report of Sprout — Data Link

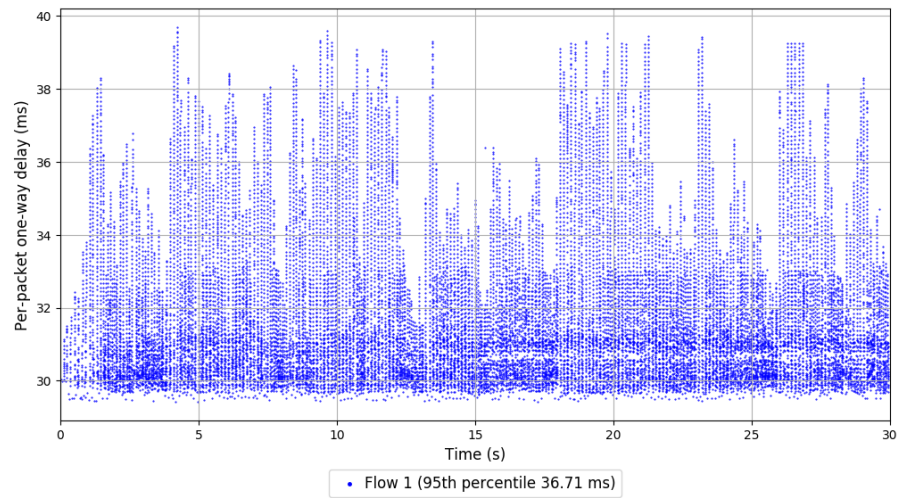
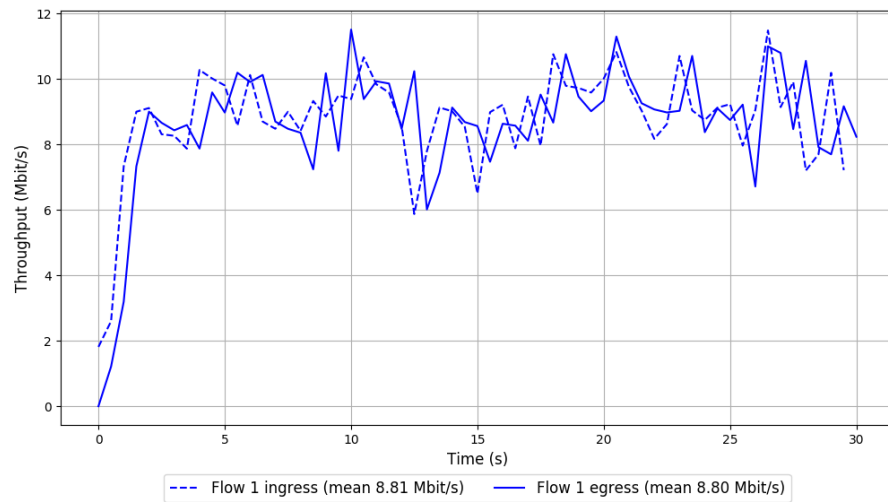


Run 5: Statistics of Sprout

Start at: 2018-09-06 06:07:37
End at: 2018-09-06 06:08:07
Local clock offset: -1.392 ms
Remote clock offset: 27.131 ms

Below is generated by plot.py at 2018-09-06 06:34:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 8.80 Mbit/s
95th percentile per-packet one-way delay: 36.711 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 8.80 Mbit/s
95th percentile per-packet one-way delay: 36.711 ms
Loss rate: 0.00%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

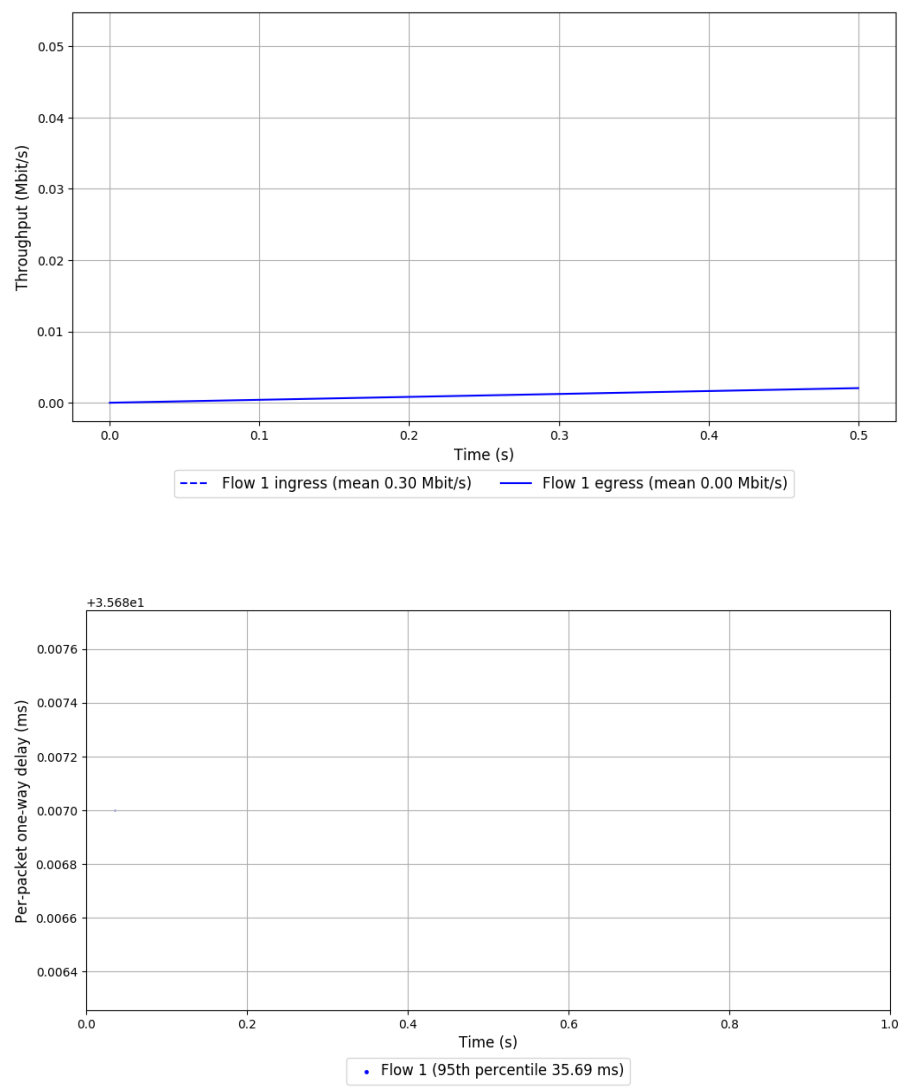
Start at: 2018-09-06 04:57:02

End at: 2018-09-06 04:57:32

Local clock offset: 8.542 ms

Remote clock offset: 35.901 ms

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



Run 2: Statistics of TaoVA-100x

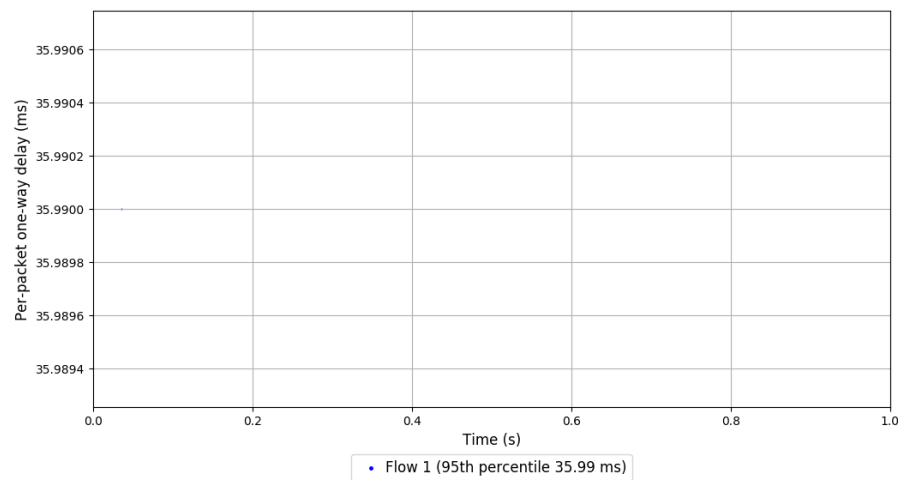
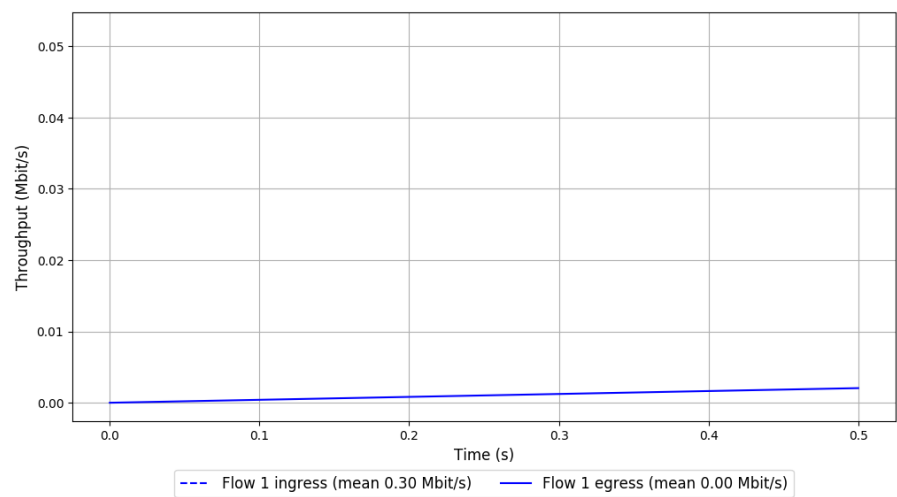
Start at: 2018-09-06 05:18:40

End at: 2018-09-06 05:19:10

Local clock offset: 8.408 ms

Remote clock offset: 34.415 ms

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



Run 3: Statistics of TaoVA-100x

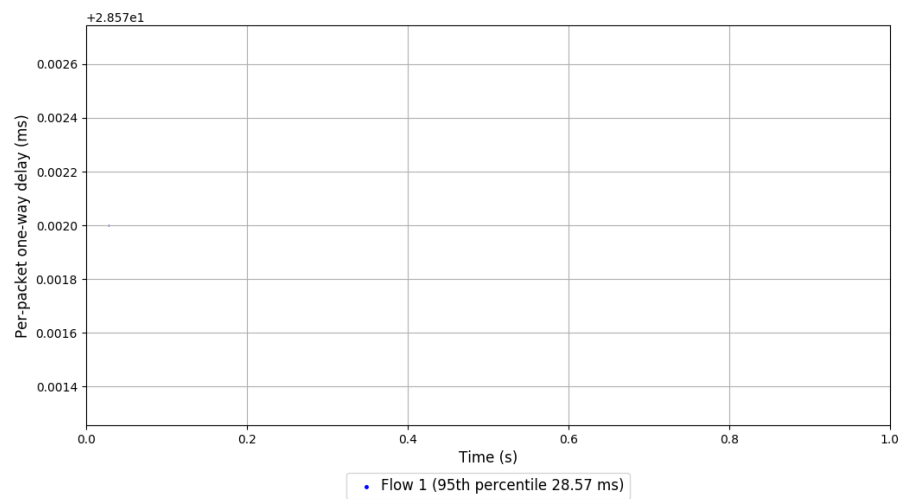
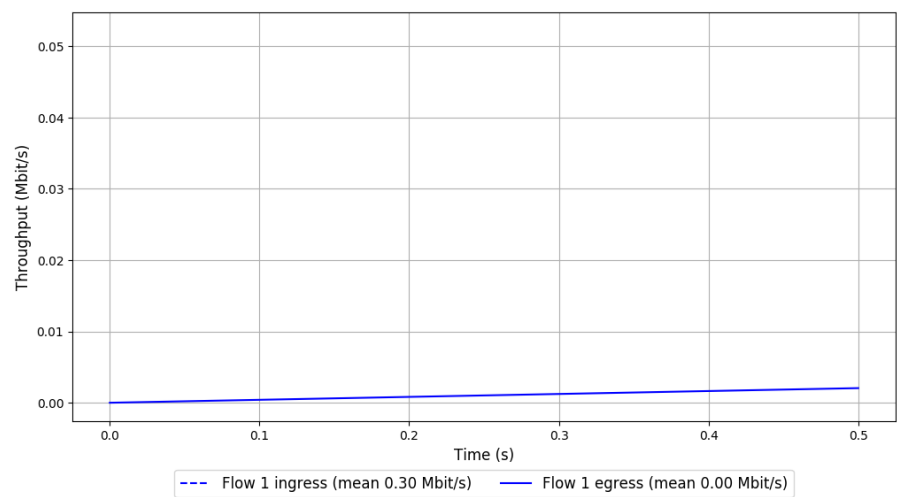
Start at: 2018-09-06 05:40:03

End at: 2018-09-06 05:40:33

Local clock offset: 4.484 ms

Remote clock offset: 27.679 ms

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



Run 4: Statistics of TaoVA-100x

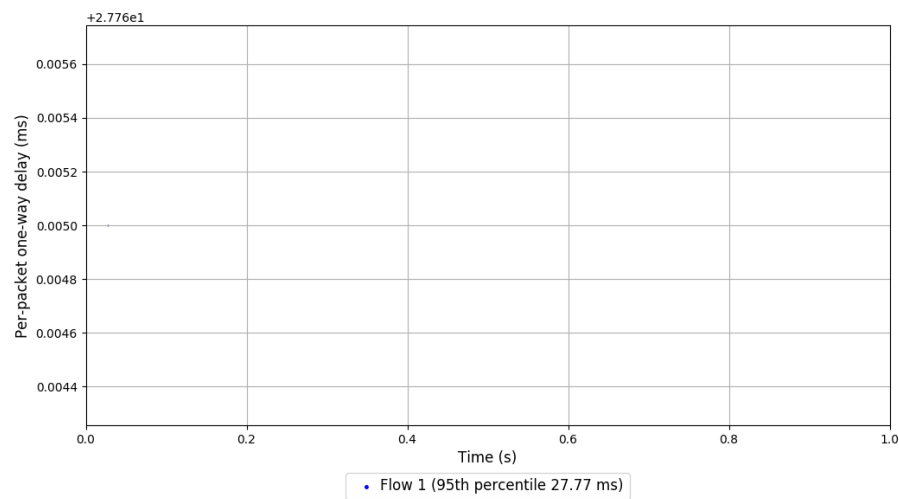
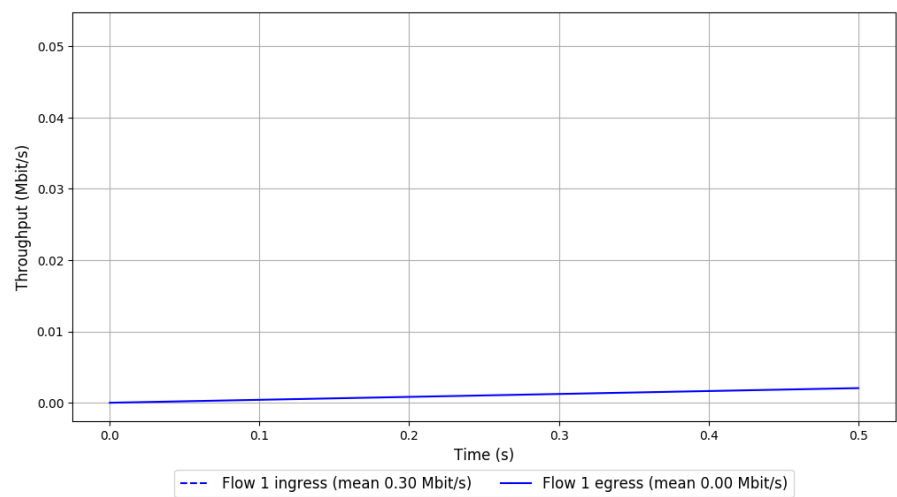
Start at: 2018-09-06 06:01:41

End at: 2018-09-06 06:02:11

Local clock offset: -0.824 ms

Remote clock offset: 25.04 ms

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



Run 5: Statistics of TaoVA-100x

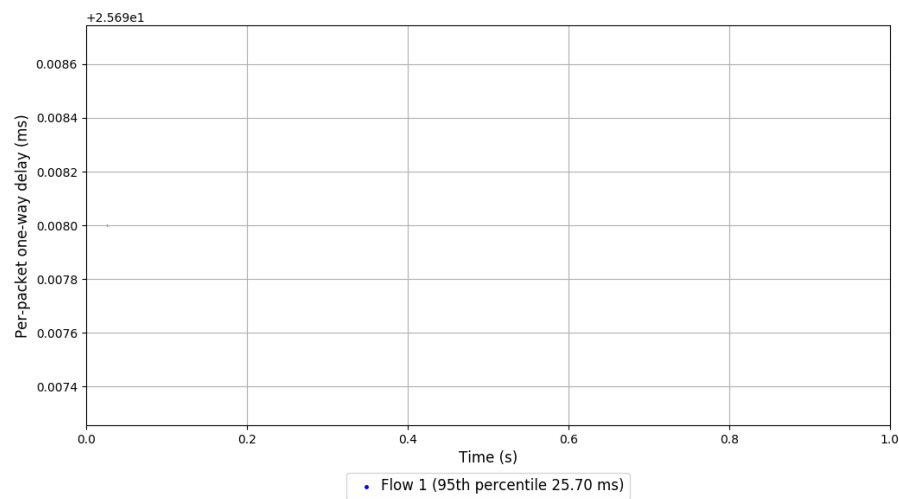
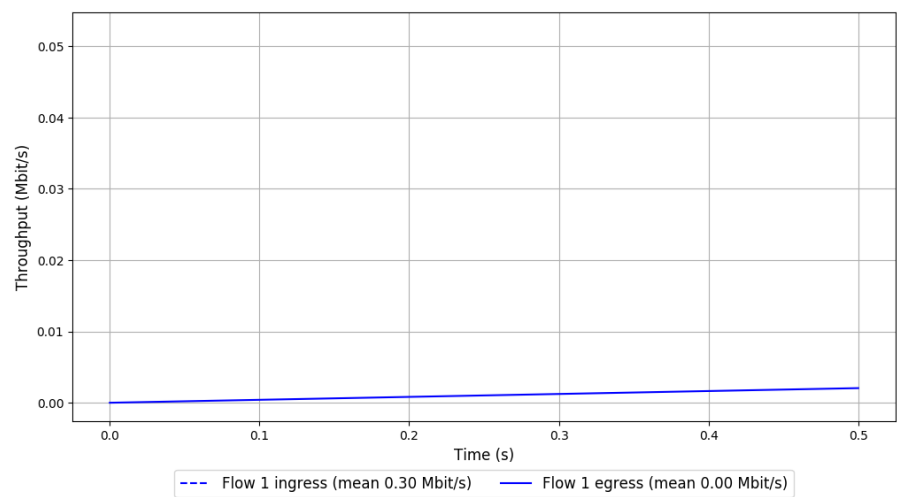
Start at: 2018-09-06 06:23:11

End at: 2018-09-06 06:23:41

Local clock offset: -2.334 ms

Remote clock offset: 21.62 ms

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

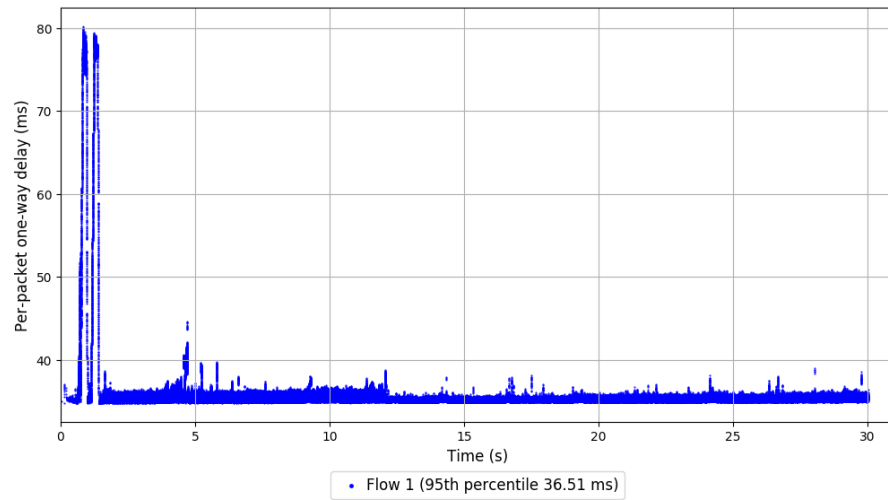
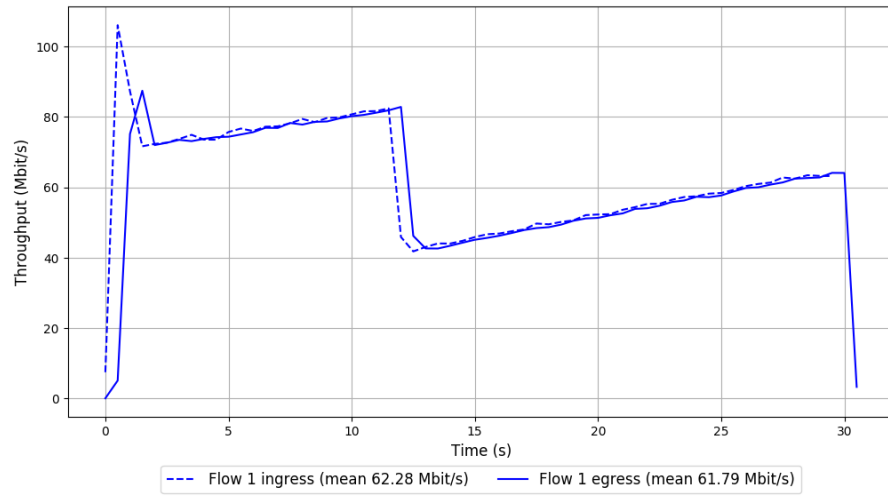


Run 1: Statistics of TCP Vegas

Start at: 2018-09-06 04:52:12
End at: 2018-09-06 04:52:42
Local clock offset: 8.213 ms
Remote clock offset: 36.573 ms

Below is generated by plot.py at 2018-09-06 06:34:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 61.79 Mbit/s
95th percentile per-packet one-way delay: 36.512 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 61.79 Mbit/s
95th percentile per-packet one-way delay: 36.512 ms
Loss rate: 0.78%

Run 1: Report of TCP Vegas — Data Link

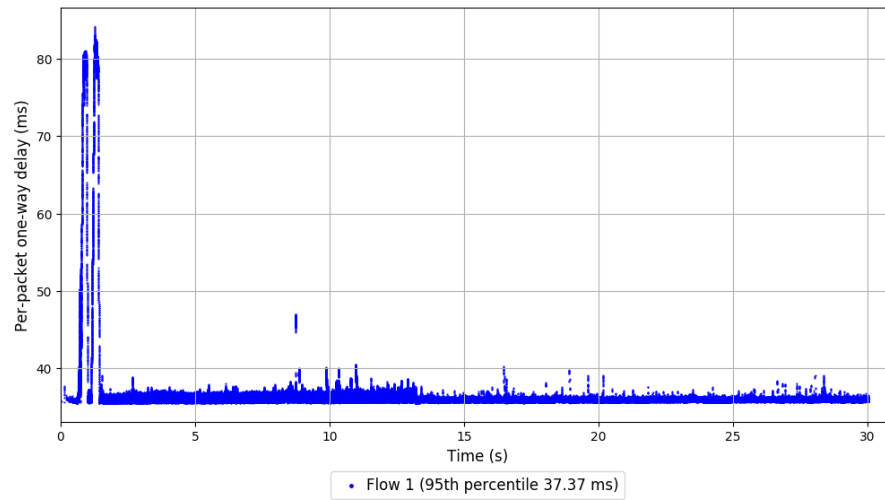
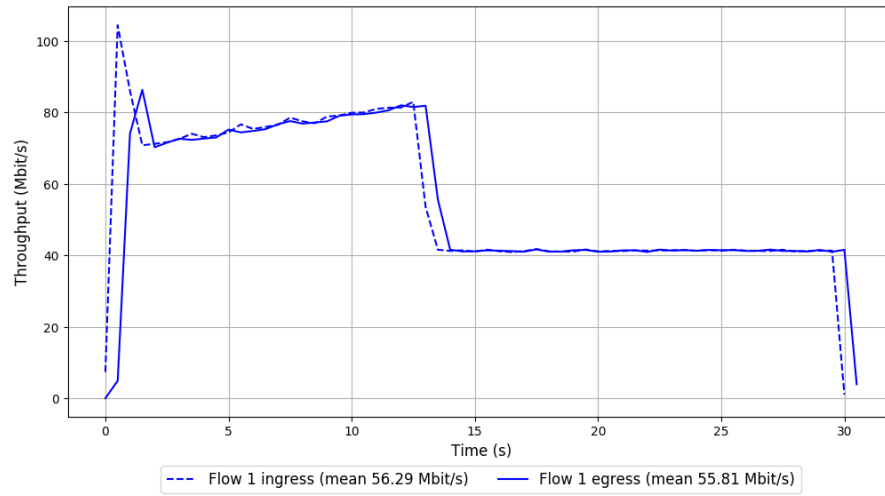


Run 2: Statistics of TCP Vegas

Start at: 2018-09-06 05:13:42
End at: 2018-09-06 05:14:12
Local clock offset: 10.106 ms
Remote clock offset: 34.144 ms

Below is generated by plot.py at 2018-09-06 06:34:10
Datalink statistics
-- Total of 1 flow:
Average throughput: 55.81 Mbit/s
95th percentile per-packet one-way delay: 37.367 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 55.81 Mbit/s
95th percentile per-packet one-way delay: 37.367 ms
Loss rate: 0.86%

Run 2: Report of TCP Vegas — Data Link

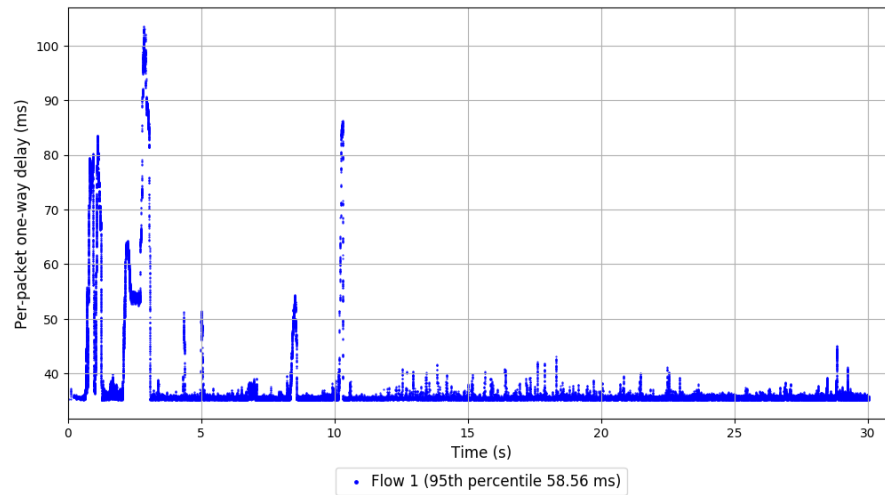
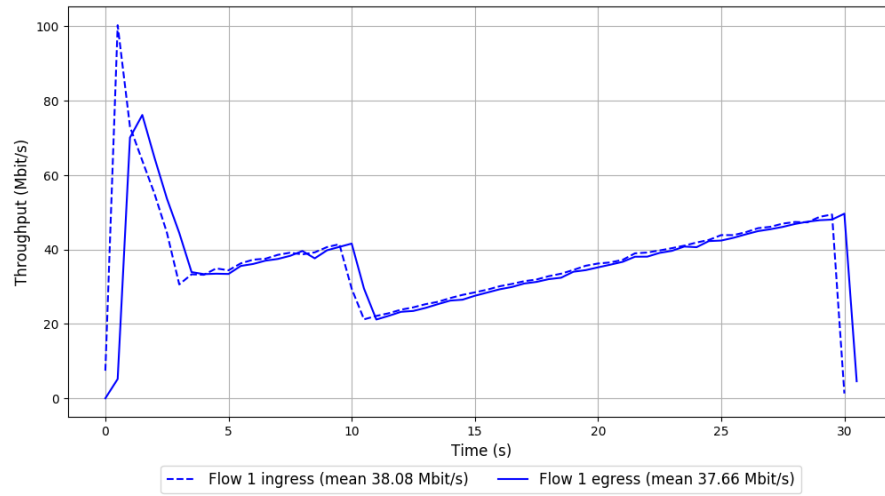


Run 3: Statistics of TCP Vegas

Start at: 2018-09-06 05:35:10
End at: 2018-09-06 05:35:40
Local clock offset: 4.561 ms
Remote clock offset: 34.553 ms

Below is generated by plot.py at 2018-09-06 06:34:10
Datalink statistics
-- Total of 1 flow:
Average throughput: 37.66 Mbit/s
95th percentile per-packet one-way delay: 58.560 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 37.66 Mbit/s
95th percentile per-packet one-way delay: 58.560 ms
Loss rate: 1.11%

Run 3: Report of TCP Vegas — Data Link

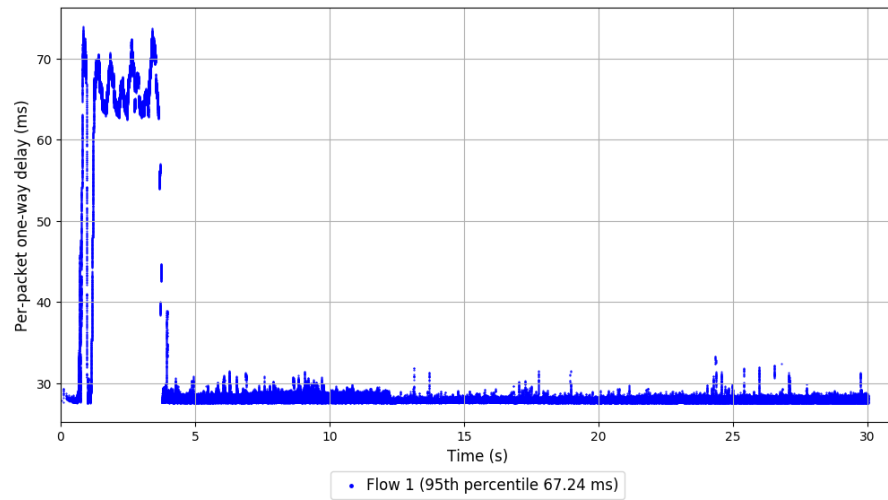
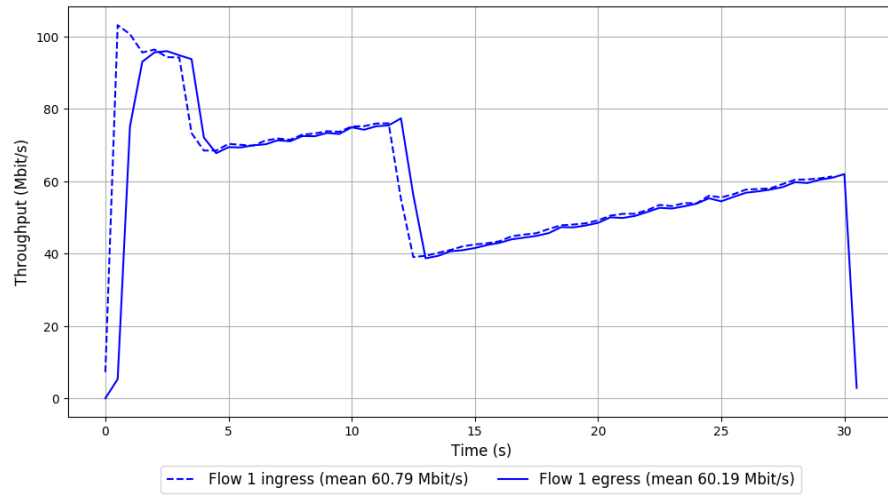


Run 4: Statistics of TCP Vegas

Start at: 2018-09-06 05:56:43
End at: 2018-09-06 05:57:13
Local clock offset: 0.161 ms
Remote clock offset: 25.941 ms

Below is generated by plot.py at 2018-09-06 06:34:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 60.19 Mbit/s
95th percentile per-packet one-way delay: 67.240 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 60.19 Mbit/s
95th percentile per-packet one-way delay: 67.240 ms
Loss rate: 0.99%

Run 4: Report of TCP Vegas — Data Link

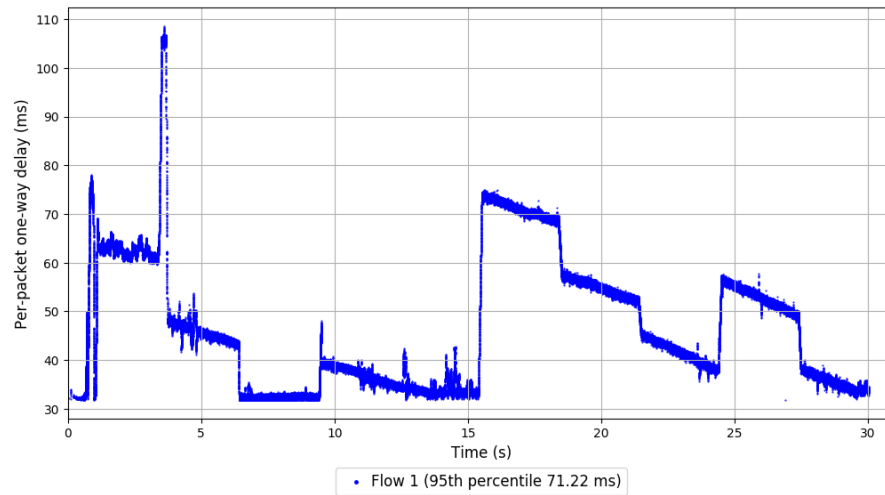
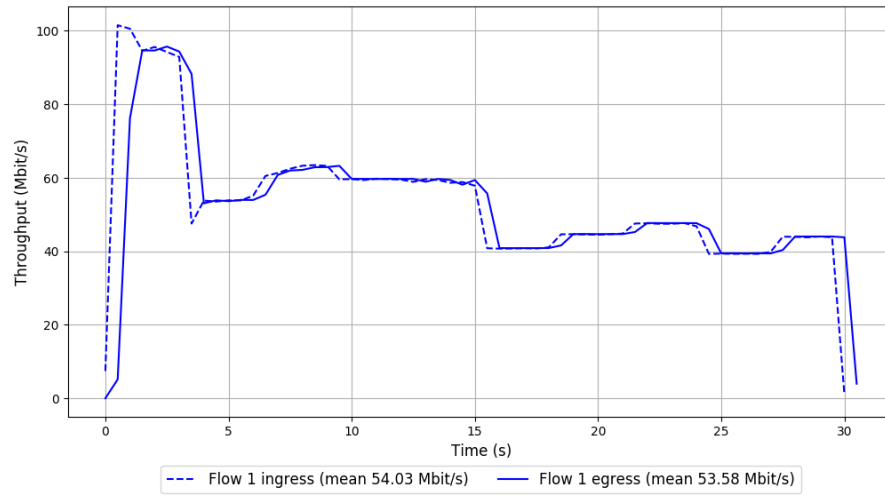


Run 5: Statistics of TCP Vegas

Start at: 2018-09-06 06:18:17
End at: 2018-09-06 06:18:47
Local clock offset: -2.212 ms
Remote clock offset: 28.512 ms

Below is generated by plot.py at 2018-09-06 06:34:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 53.58 Mbit/s
95th percentile per-packet one-way delay: 71.218 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 53.58 Mbit/s
95th percentile per-packet one-way delay: 71.218 ms
Loss rate: 0.84%

Run 5: Report of TCP Vegas — Data Link

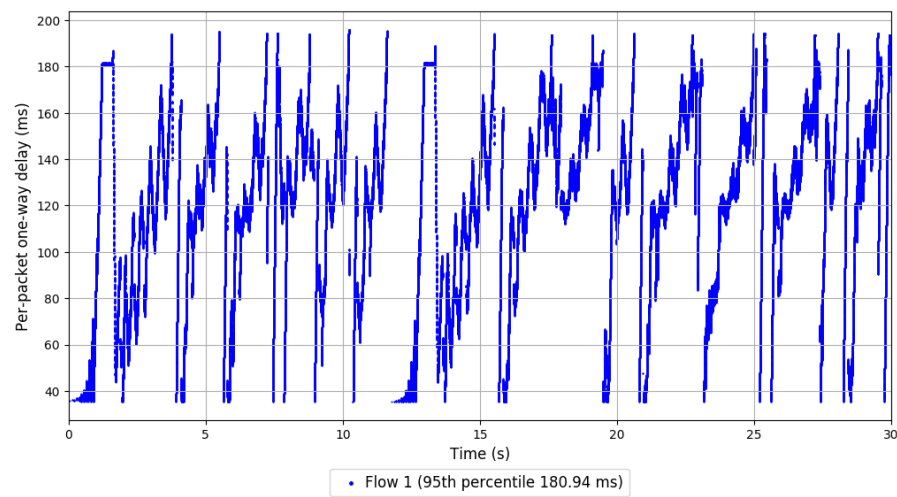
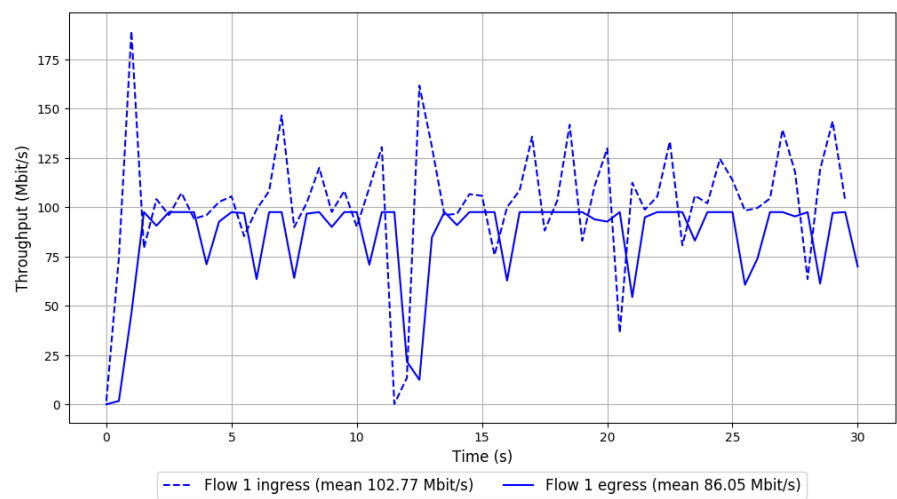


Run 1: Statistics of Verus

Start at: 2018-09-06 04:42:38
End at: 2018-09-06 04:43:08
Local clock offset: 7.862 ms
Remote clock offset: 39.252 ms

Below is generated by plot.py at 2018-09-06 06:34:45
Datalink statistics
-- Total of 1 flow:
Average throughput: 86.05 Mbit/s
95th percentile per-packet one-way delay: 180.943 ms
Loss rate: 15.92%
-- Flow 1:
Average throughput: 86.05 Mbit/s
95th percentile per-packet one-way delay: 180.943 ms
Loss rate: 15.92%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-09-06 05:04:08

End at: 2018-09-06 05:04:38

Local clock offset: 8.964 ms

Remote clock offset: 35.02 ms

Below is generated by plot.py at 2018-09-06 06:34:57

Datalink statistics

-- Total of 1 flow:

Average throughput: 87.99 Mbit/s

95th percentile per-packet one-way delay: 181.192 ms

Loss rate: 9.81%

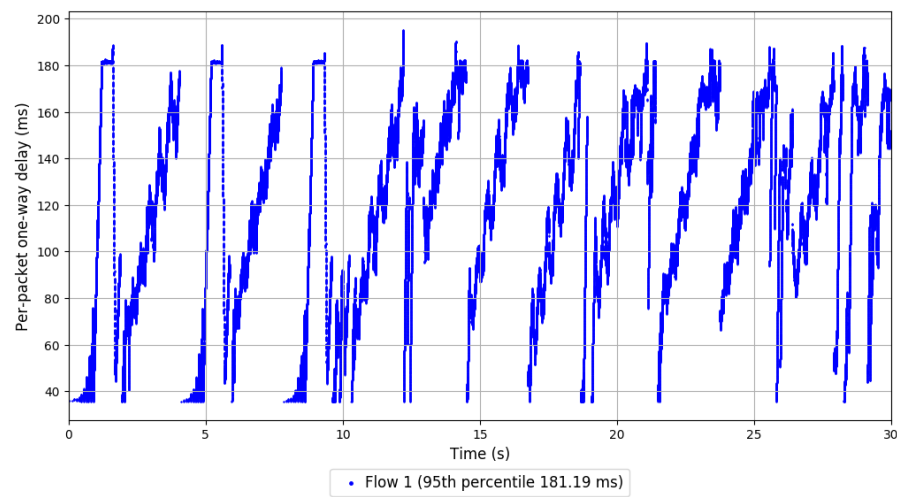
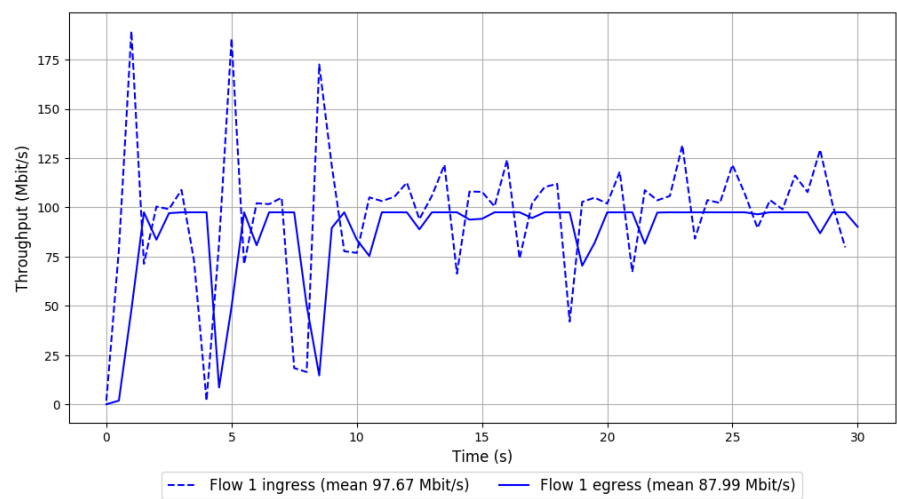
-- Flow 1:

Average throughput: 87.99 Mbit/s

95th percentile per-packet one-way delay: 181.192 ms

Loss rate: 9.81%

Run 2: Report of Verus — Data Link

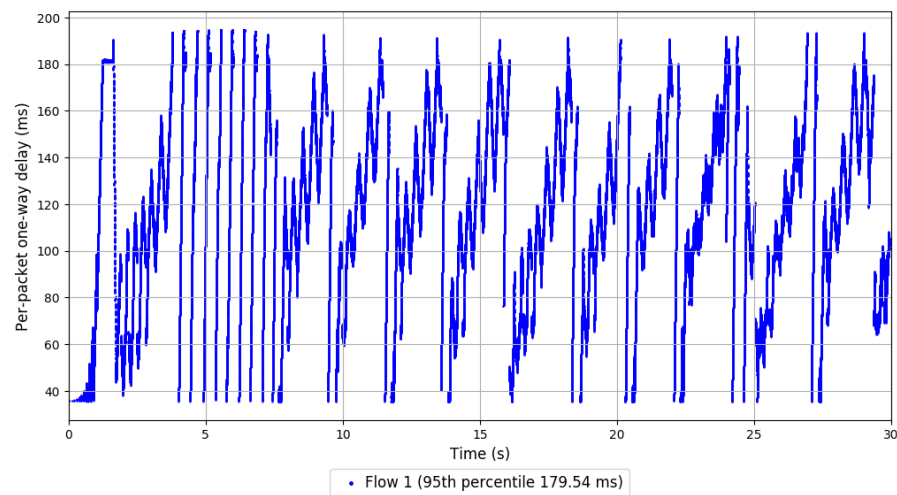
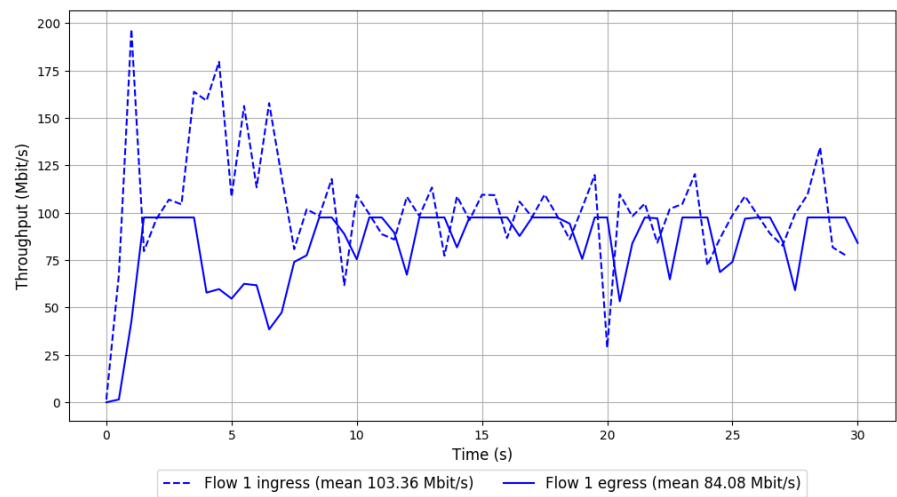


Run 3: Statistics of Verus

Start at: 2018-09-06 05:25:41
End at: 2018-09-06 05:26:11
Local clock offset: 5.86 ms
Remote clock offset: 34.806 ms

Below is generated by plot.py at 2018-09-06 06:35:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 84.08 Mbit/s
95th percentile per-packet one-way delay: 179.538 ms
Loss rate: 18.57%
-- Flow 1:
Average throughput: 84.08 Mbit/s
95th percentile per-packet one-way delay: 179.538 ms
Loss rate: 18.57%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-09-06 05:47:11

End at: 2018-09-06 05:47:41

Local clock offset: 3.459 ms

Remote clock offset: 27.51 ms

Below is generated by plot.py at 2018-09-06 06:35:13

Datalink statistics

-- Total of 1 flow:

Average throughput: 90.42 Mbit/s

95th percentile per-packet one-way delay: 171.637 ms

Loss rate: 11.97%

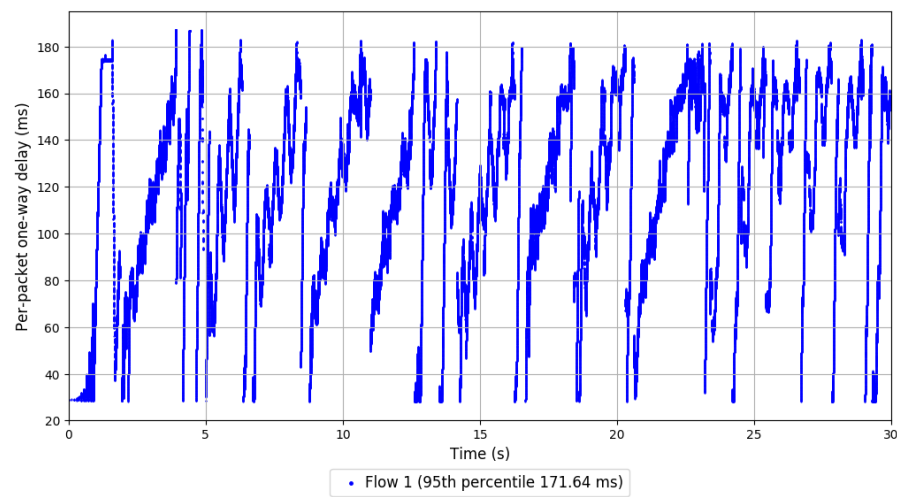
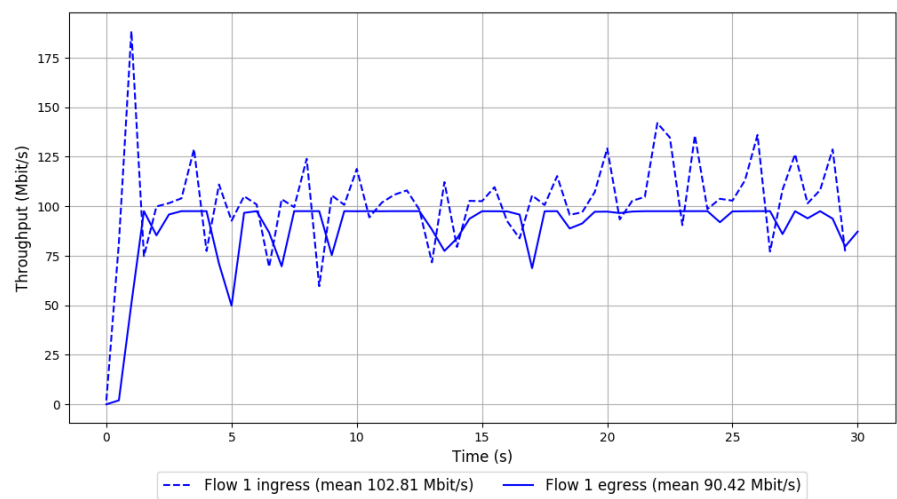
-- Flow 1:

Average throughput: 90.42 Mbit/s

95th percentile per-packet one-way delay: 171.637 ms

Loss rate: 11.97%

Run 4: Report of Verus — Data Link

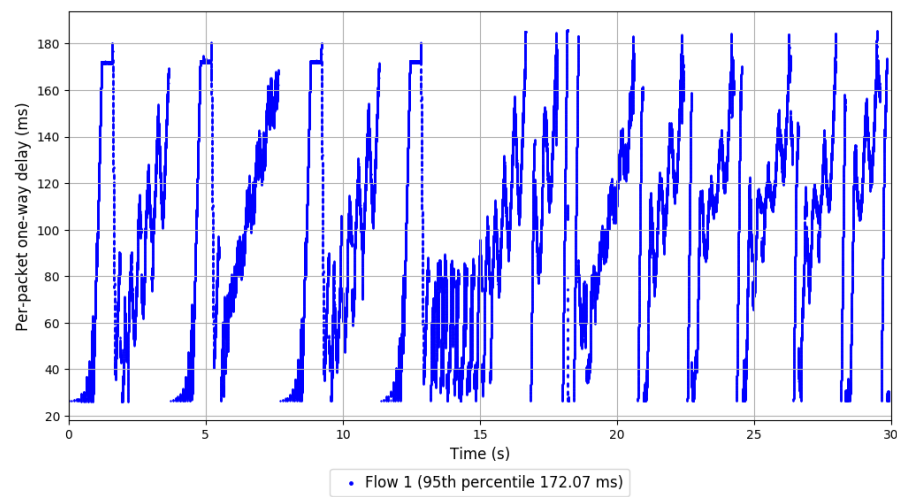
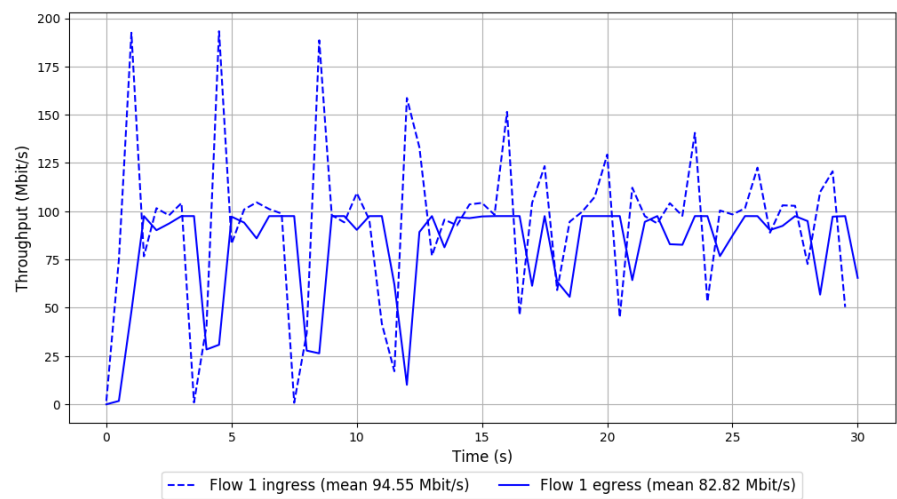


Run 5: Statistics of Verus

Start at: 2018-09-06 06:08:46
End at: 2018-09-06 06:09:16
Local clock offset: -1.485 ms
Remote clock offset: 23.713 ms

Below is generated by plot.py at 2018-09-06 06:35:14
Datalink statistics
-- Total of 1 flow:
Average throughput: 82.82 Mbit/s
95th percentile per-packet one-way delay: 172.071 ms
Loss rate: 12.40%
-- Flow 1:
Average throughput: 82.82 Mbit/s
95th percentile per-packet one-way delay: 172.071 ms
Loss rate: 12.40%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2018-09-06 04:53:23

End at: 2018-09-06 04:53:53

Local clock offset: 8.164 ms

Remote clock offset: 36.52 ms

Below is generated by plot.py at 2018-09-06 06:35:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 80.69 Mbit/s

95th percentile per-packet one-way delay: 46.092 ms

Loss rate: 0.00%

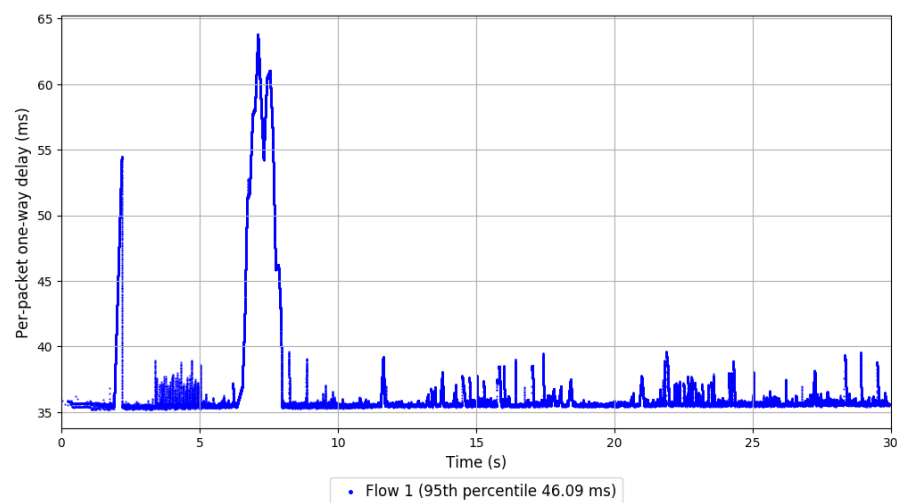
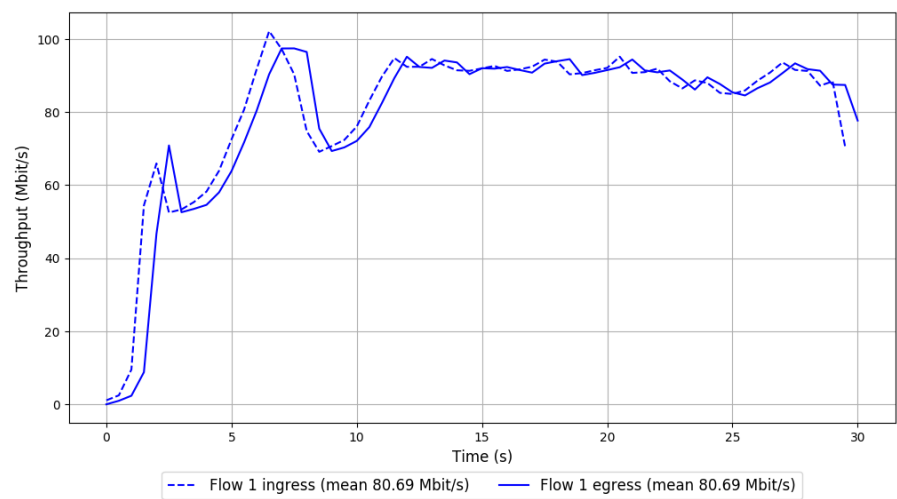
-- Flow 1:

Average throughput: 80.69 Mbit/s

95th percentile per-packet one-way delay: 46.092 ms

Loss rate: 0.00%

Run 1: Report of PCC-Vivace — Data Link

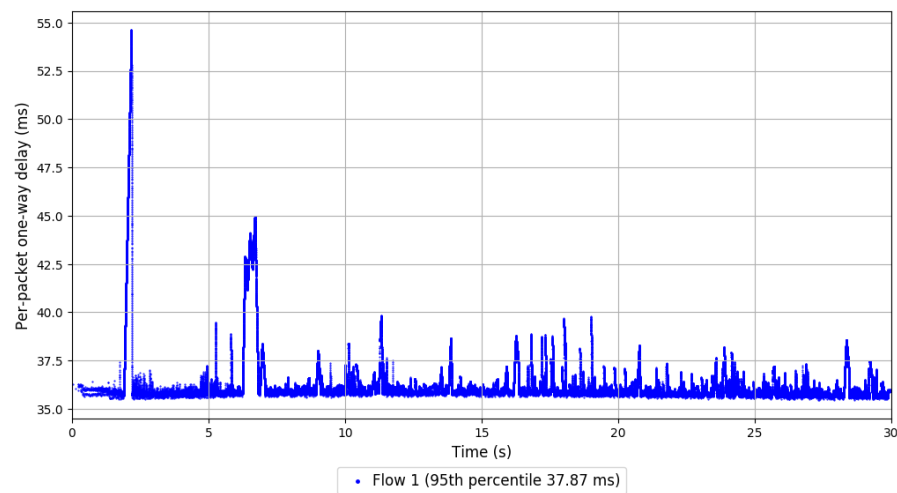
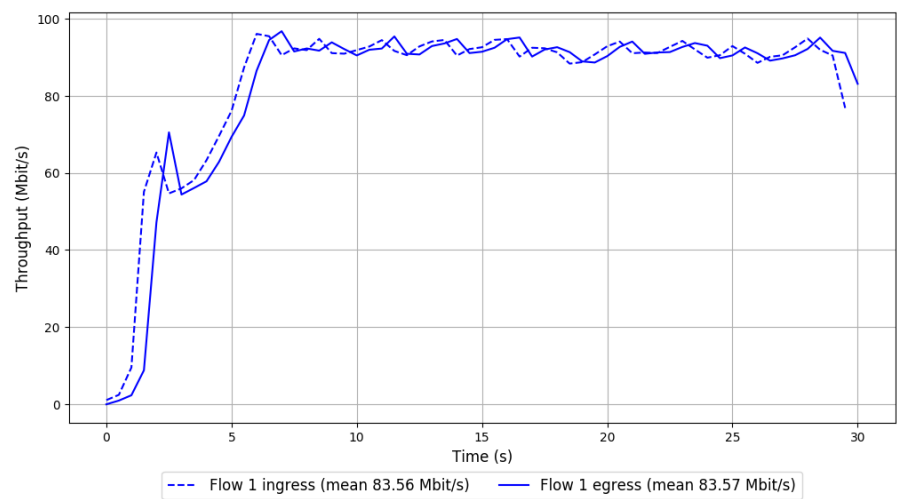


Run 2: Statistics of PCC-Vivace

Start at: 2018-09-06 05:14:55
End at: 2018-09-06 05:15:25
Local clock offset: 10.08 ms
Remote clock offset: 34.639 ms

Below is generated by plot.py at 2018-09-06 06:35:17
Datalink statistics
-- Total of 1 flow:
Average throughput: 83.57 Mbit/s
95th percentile per-packet one-way delay: 37.867 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 83.57 Mbit/s
95th percentile per-packet one-way delay: 37.867 ms
Loss rate: 0.00%

Run 2: Report of PCC-Vivace — Data Link

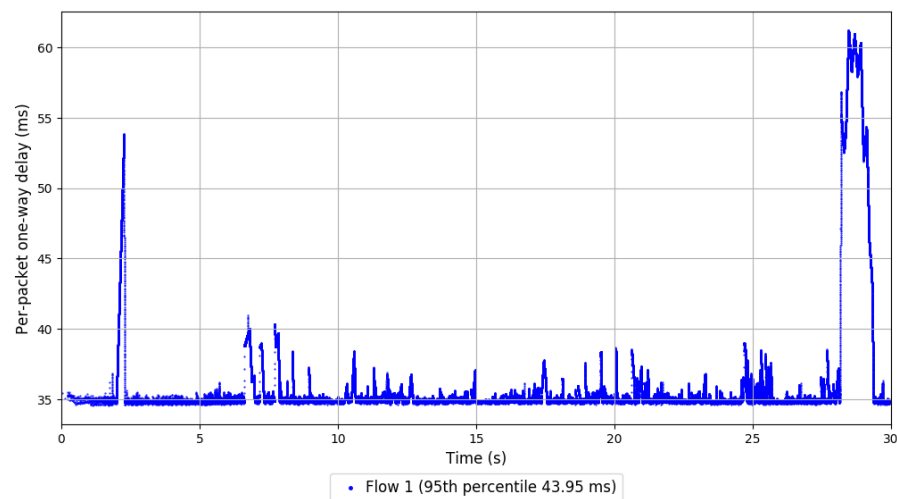
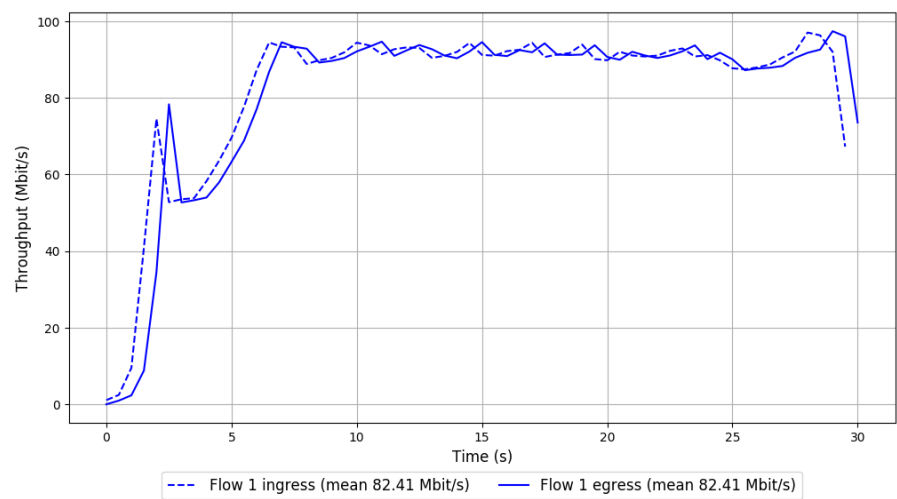


Run 3: Statistics of PCC-Vivace

Start at: 2018-09-06 05:36:20
End at: 2018-09-06 05:36:50
Local clock offset: 4.574 ms
Remote clock offset: 34.175 ms

Below is generated by plot.py at 2018-09-06 06:35:18
Datalink statistics
-- Total of 1 flow:
Average throughput: 82.41 Mbit/s
95th percentile per-packet one-way delay: 43.954 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 82.41 Mbit/s
95th percentile per-packet one-way delay: 43.954 ms
Loss rate: 0.00%

Run 3: Report of PCC-Vivace — Data Link

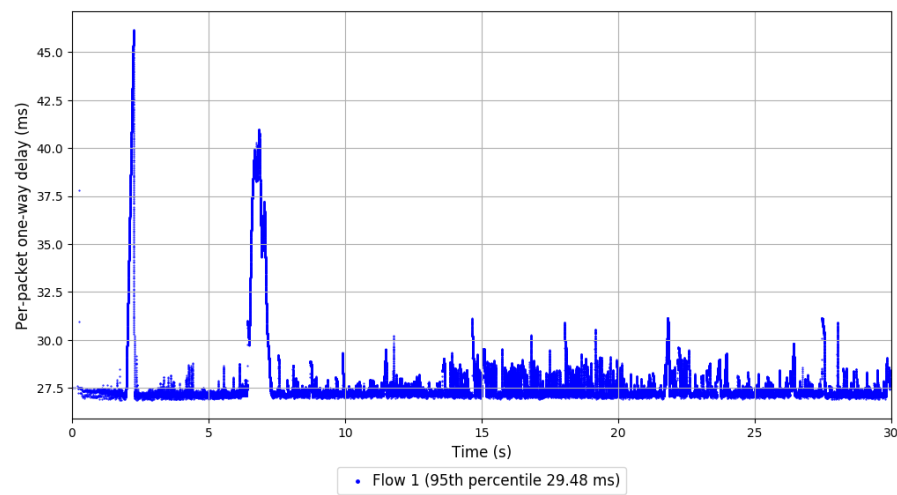
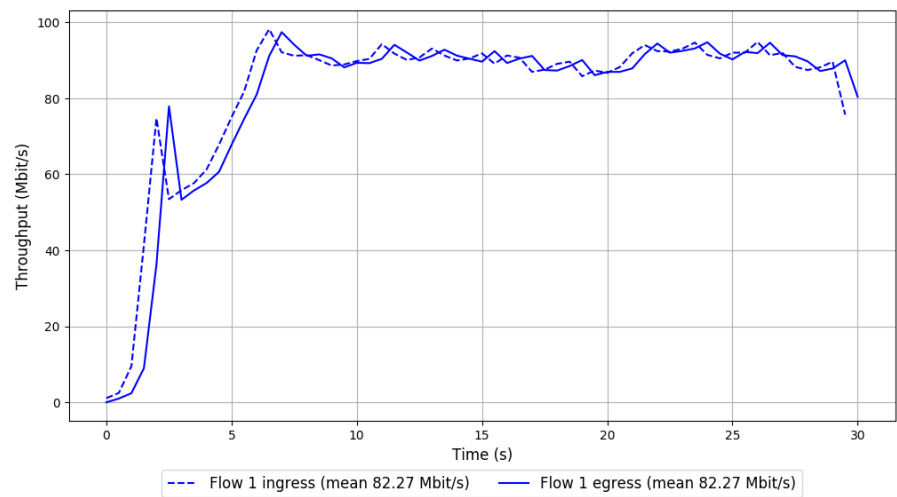


Run 4: Statistics of PCC-Vivace

Start at: 2018-09-06 05:57:55
End at: 2018-09-06 05:58:25
Local clock offset: -0.183 ms
Remote clock offset: 25.747 ms

Below is generated by plot.py at 2018-09-06 06:35:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 82.27 Mbit/s
95th percentile per-packet one-way delay: 29.484 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 82.27 Mbit/s
95th percentile per-packet one-way delay: 29.484 ms
Loss rate: 0.00%

Run 4: Report of PCC-Vivace — Data Link

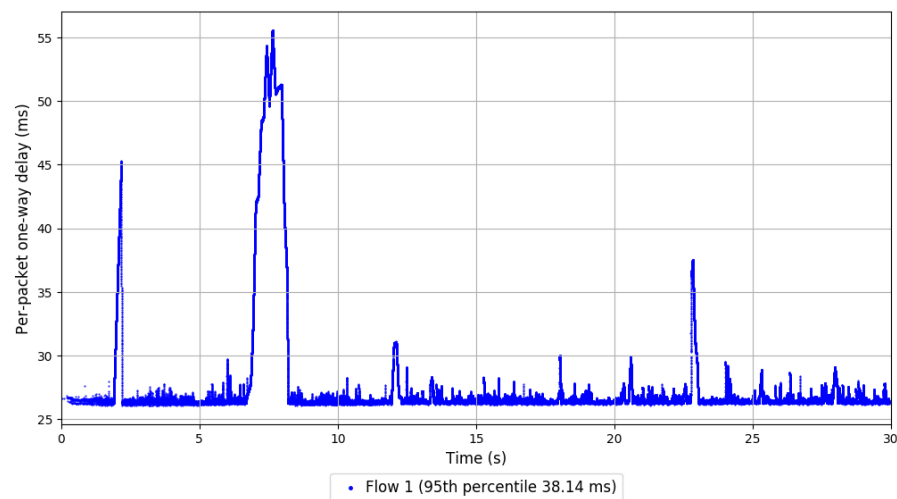
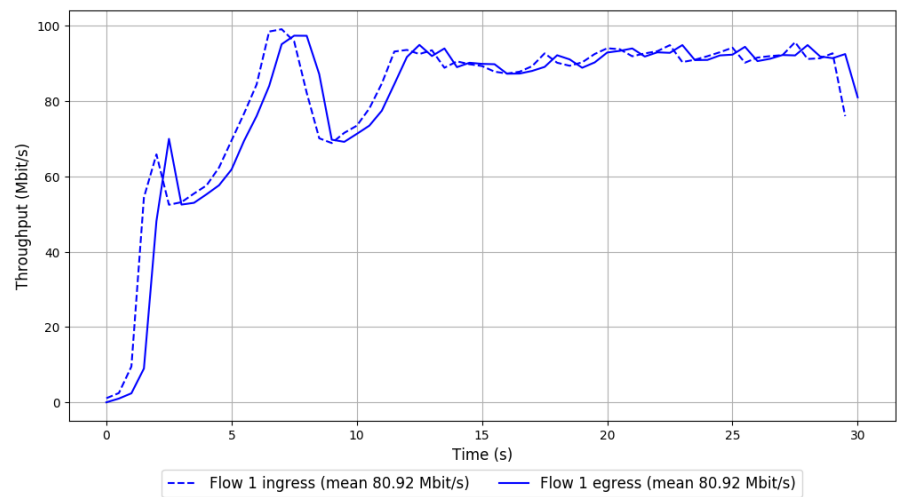


Run 5: Statistics of PCC-Vivace

Start at: 2018-09-06 06:19:29
End at: 2018-09-06 06:19:59
Local clock offset: -2.311 ms
Remote clock offset: 22.701 ms

Below is generated by plot.py at 2018-09-06 06:35:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 80.92 Mbit/s
95th percentile per-packet one-way delay: 38.139 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 80.92 Mbit/s
95th percentile per-packet one-way delay: 38.139 ms
Loss rate: 0.00%

Run 5: Report of PCC-Vivace — Data Link

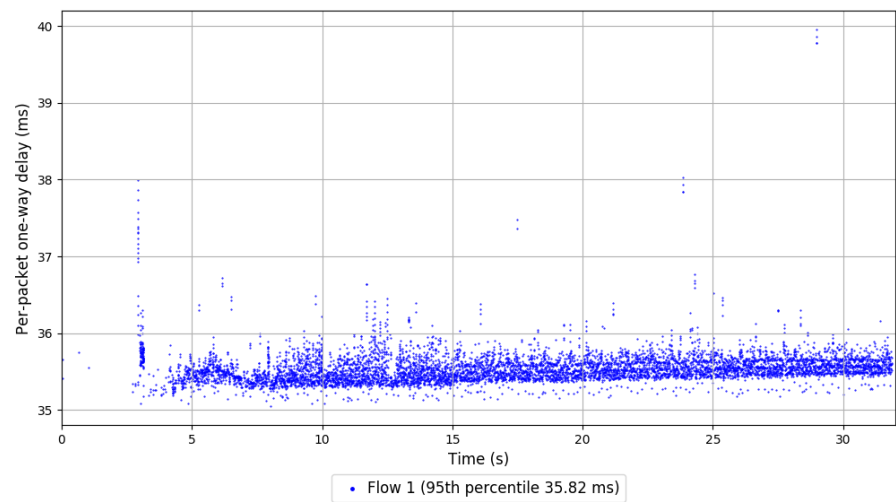
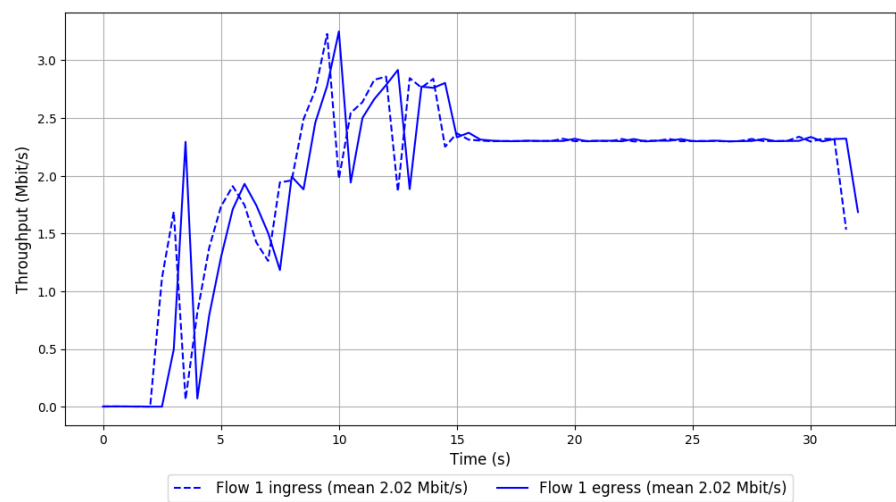


```
Run 1: Statistics of WebRTC media

Start at: 2018-09-06 04:48:41
End at: 2018-09-06 04:49:11
Local clock offset: 8.158 ms
Remote clock offset: 37.668 ms

# Below is generated by plot.py at 2018-09-06 06:35:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.02 Mbit/s
95th percentile per-packet one-way delay: 35.816 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.02 Mbit/s
95th percentile per-packet one-way delay: 35.816 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

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

End at: 2018-09-06 05:10:40

Local clock offset: 9.843 ms

Remote clock offset: 34.43 ms

Below is generated by plot.py at 2018-09-06 06:35:26

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 35.696 ms

Loss rate: 0.00%

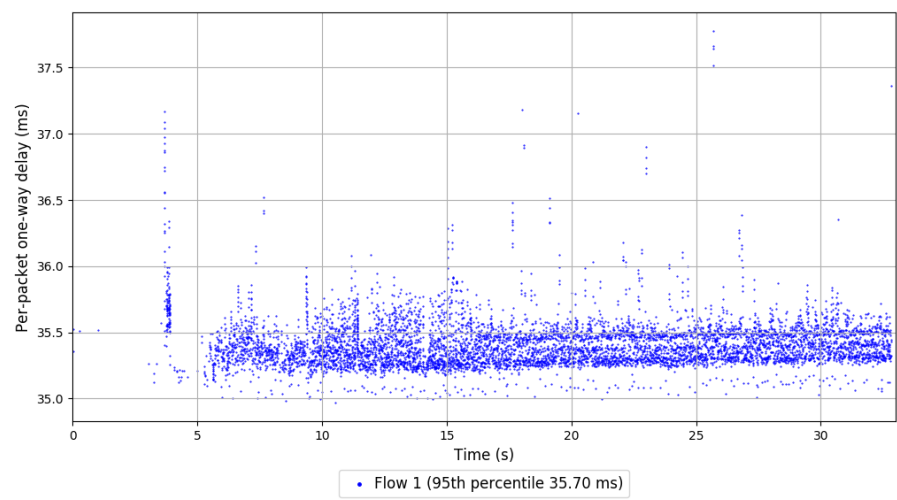
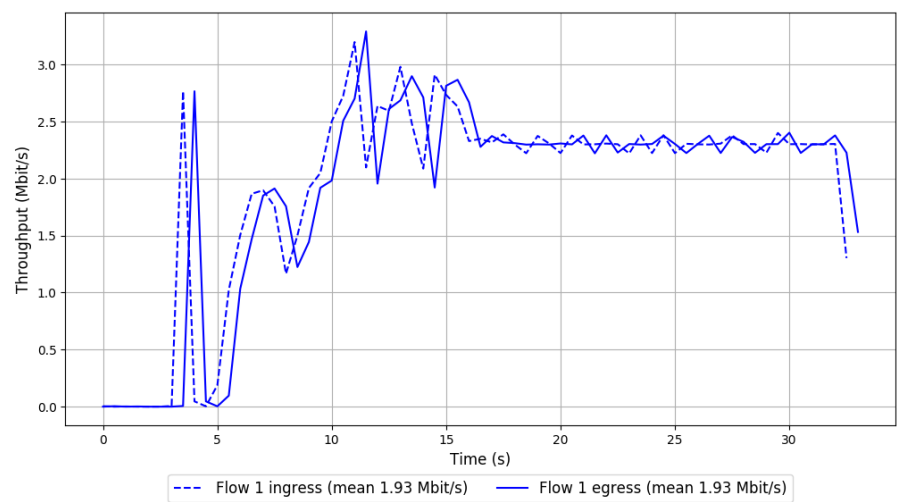
-- Flow 1:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 35.696 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link

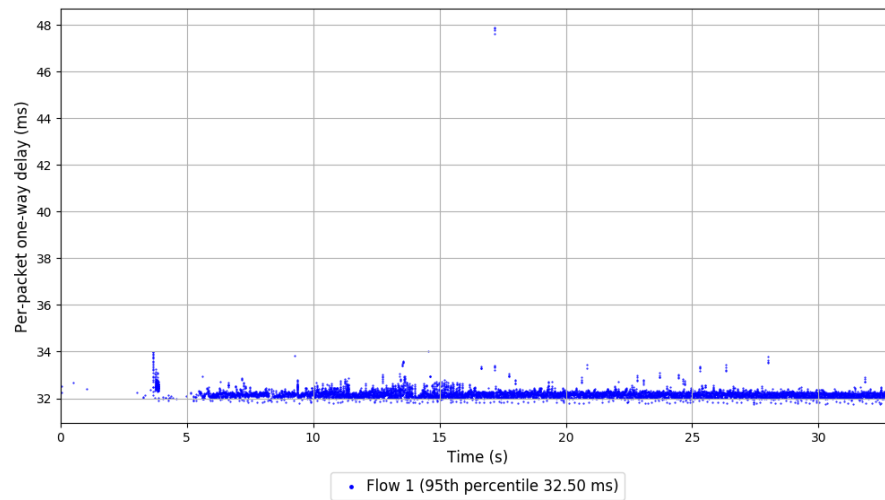
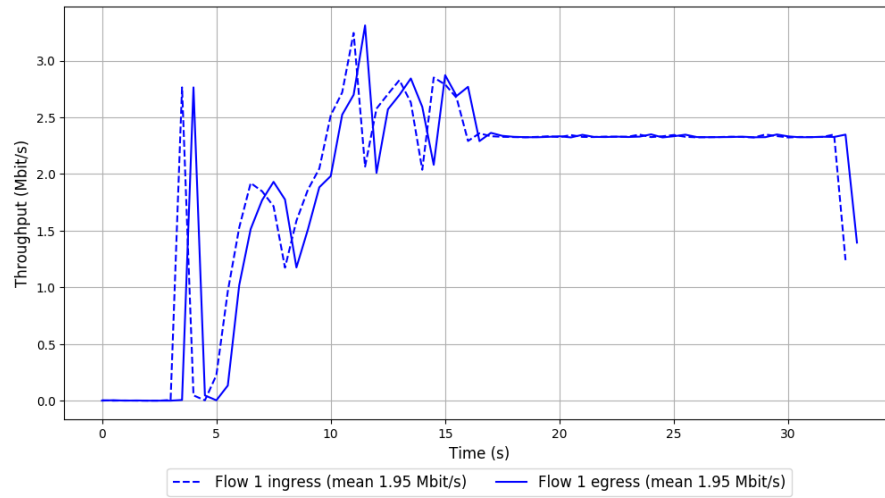


Run 3: Statistics of WebRTC media

Start at: 2018-09-06 05:31:38
End at: 2018-09-06 05:32:08
Local clock offset: 4.826 ms
Remote clock offset: 31.359 ms

Below is generated by plot.py at 2018-09-06 06:35:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.95 Mbit/s
95th percentile per-packet one-way delay: 32.501 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.95 Mbit/s
95th percentile per-packet one-way delay: 32.501 ms
Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

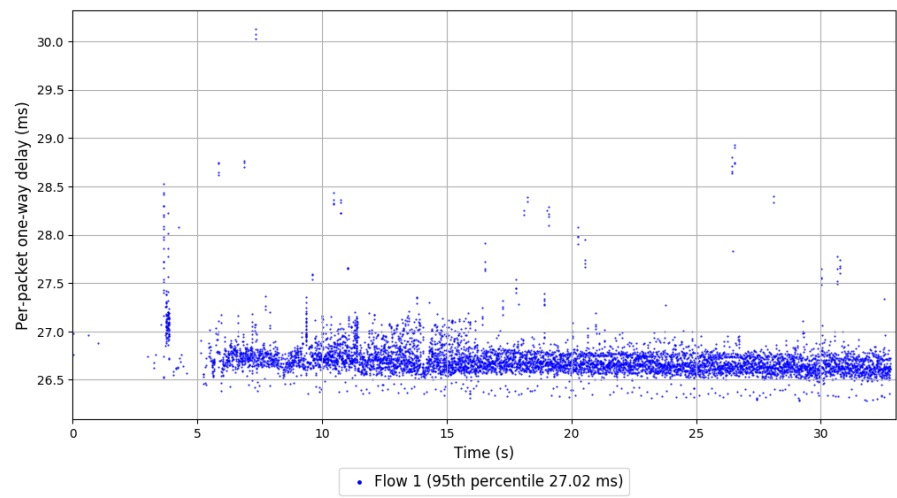
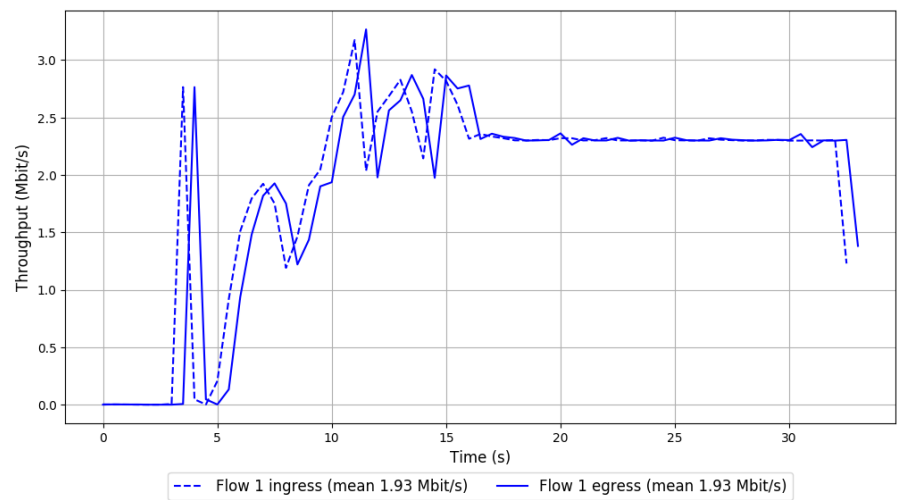


Run 4: Statistics of WebRTC media

Start at: 2018-09-06 05:53:11
End at: 2018-09-06 05:53:41
Local clock offset: 0.91 ms
Remote clock offset: 25.631 ms

Below is generated by plot.py at 2018-09-06 06:35:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 27.017 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 27.017 ms
Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-09-06 06:14:45
End at: 2018-09-06 06:15:15
Local clock offset: -2.207 ms
Remote clock offset: 23.227 ms

Below is generated by plot.py at 2018-09-06 06:35:26
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 27.146 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 27.146 ms
Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

