Pantheon Report

Generated at 2018-03-20 18:33:12 (UTC).

Data path: AWS Brazil 1 Ethernet (*local*) →Brazil Ethernet (*remote*).

Repeated the test of 17 congestion control schemes 10 times.

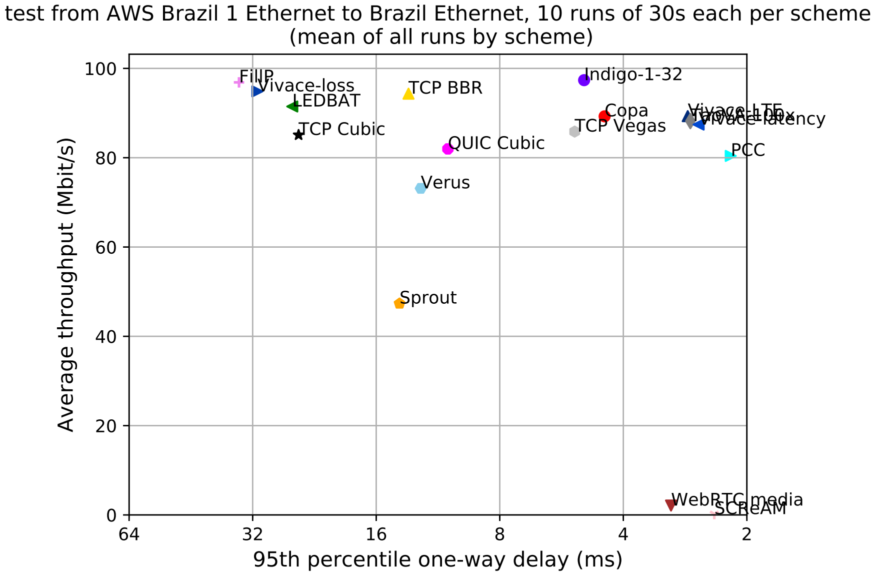
Each test lasted for 30 seconds running 1 flow.

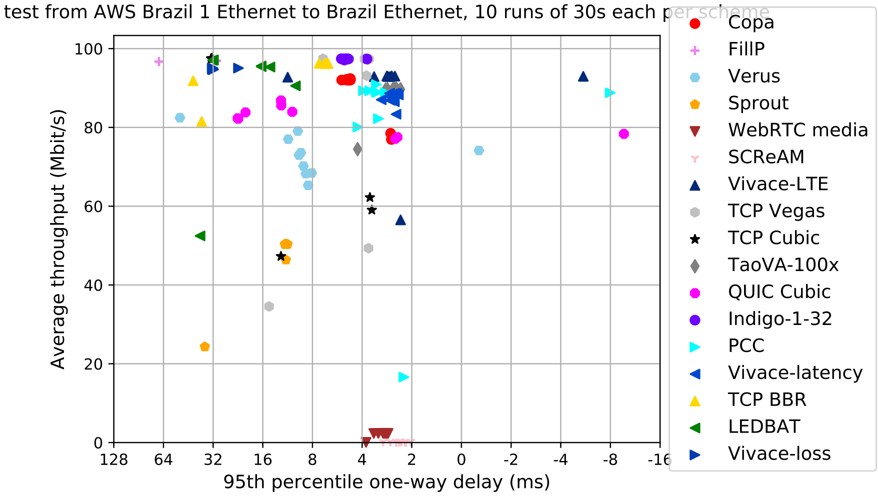
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

Tested BBR with qdisc of Fair Queuing (`fq`), and other schemes with the default Linux qdisc (`pfifo_fast`).

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

```
Git summary:
branch: master @ f12c42a2c63fdd9a862eefa0468859bf379b6623
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
 M datagrump/sender.cc
third_party/fillp @ 828bbf95fd4941149b5cec90f281d1c69ae1a5c6
third_party/genericCC @ 9249eea3238475c4d8cca1443d28df70bff6c4a2
third_party/indigo @ a9b2060d39e4da2e8987e893e3eca2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ce8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd3505939528e2a5f
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
 M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
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/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaeeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
 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 @ 7a4ba531e75b4a6f66f5c4580192120401784ce3
third_party/webrtc @ a488197ddd041ace68a42849b2540ad834825f42
```

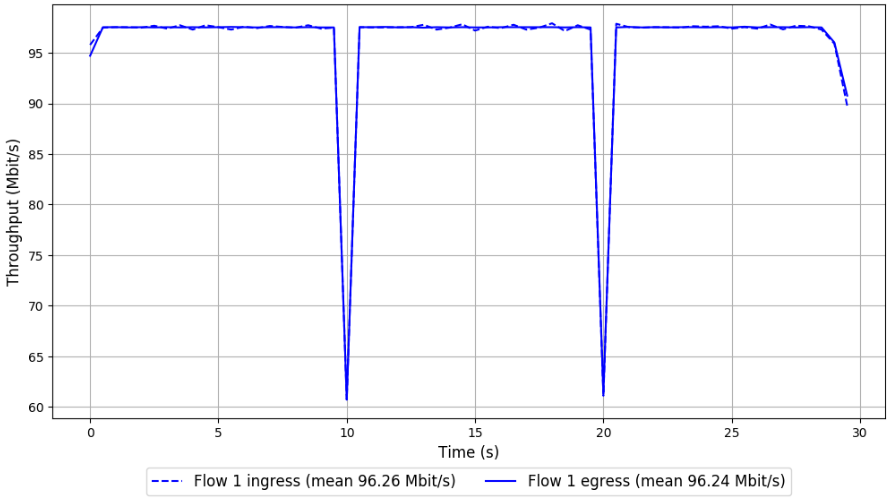

test from AWS Brazil 1 Ethernet to Brazil Ethernet, 10 runs of 30s each per scheme
(mean of all runs by scheme)
Average throughput (Mbit/s)
95th percentile one-way delay (ms)
100
80
60
40
20
0
64
32
16
8
4
2
FillP
Vivace-loss
LEDBAT
TCP Cubic
TCP BBR
QUIC Cubic
Verus
Sprout
Indigo-1-32
Copa
TCP Vegas
Vivace-LTE
TaoVA-100x
Vivace-latency
PCC
WebRTC media
SCReAM

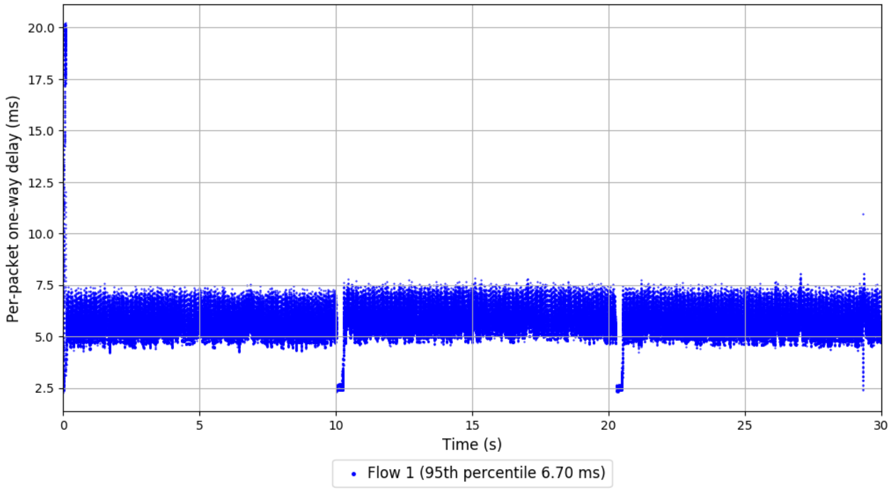

test from AWS Brazil 1 Ethernet to Brazil Ethernet, 10 runs of 30s each per scheme
Average throughput (Mbit/s)
95th percentile one-way delay (ms)
100
80
60
40
20
0
128
64
32
16
8
4
2
0
-2
-4
-8
-16
Copa
FillP
Verus
Sprout
WebRTC media
SCReAM
Vivace-LTE
TCP Vegas
TCP Cubic
TaoVA-100x
QUIC Cubic
Indigo-1-32
PCC
Vivace-latency
TCP BBR
LEDBAT
Vivace-loss

scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	10	94.34	13.35	0.60
TCP Cubic	10	85.09	24.73	0.05
LEDBAT	10	91.47	25.63	0.05
PCC	10	80.41	2.19	0.48
QUIC Cubic	9	81.97	10.70	0.04
SCReAM	10	0.19	2.40	0.55
WebRTC media	10	2.10	3.06	0.33
Sprout	10	47.34	14.04	0.50
TaoVA-100x	10	88.20	2.75	0.00
TCP Vegas	10	85.85	5.26	0.00
Verus	10	73.13	12.46	2.12
Copa	10	89.26	4.44	0.91
FillP	10	96.87	34.55	11.91
Indigo-1-32	10	97.37	4.98	0.43
Vivace-latency	10	87.42	2.62	0.02
Vivace-loss	10	94.86	31.16	3.31
Vivace-LTE	10	89.31	2.79	0.48

```
Run 1: Statistics of TCP BBR

Start at: 2018-03-20 14:14:45
End at: 2018-03-20 14:15:15
Local clock offset: -6.608 ms
Remote clock offset: -6.674 ms

# Below is generated by plot.py at 2018-03-20 18:06:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.24 Mbit/s
95th percentile per-packet one-way delay: 6.696 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 96.24 Mbit/s
95th percentile per-packet one-way delay: 6.696 ms
Loss rate: 0.00%
```

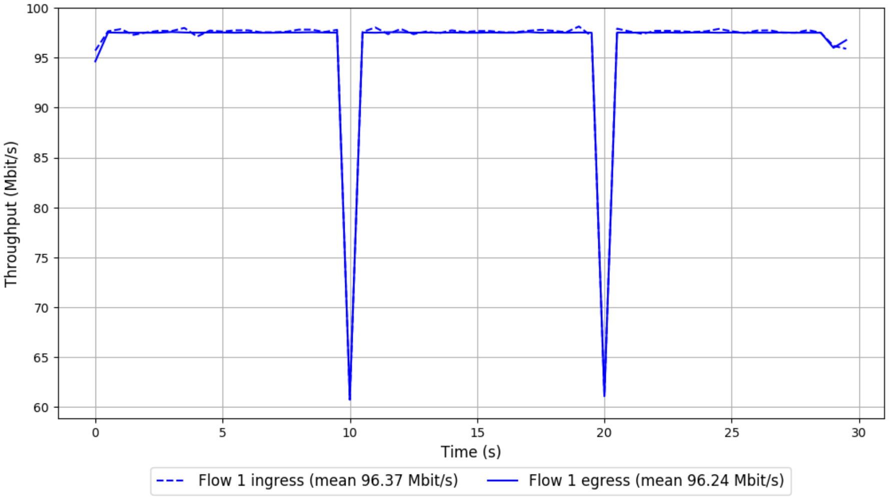
Run 1: Report of TCP BBR — Data Link

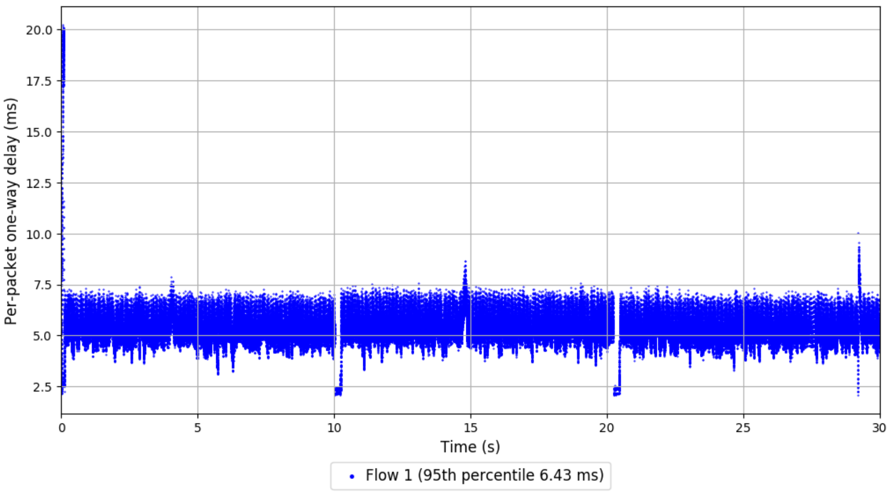




```
Run 2: Statistics of TCP BBR

Start at: 2018-03-20 14:35:09
End at: 2018-03-20 14:35:39
Local clock offset: -15.704 ms
Remote clock offset: -6.792 ms

# Below is generated by plot.py at 2018-03-20 18:06:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.24 Mbit/s
95th percentile per-packet one-way delay: 6.434 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 96.24 Mbit/s
95th percentile per-packet one-way delay: 6.434 ms
Loss rate: 0.12%
```

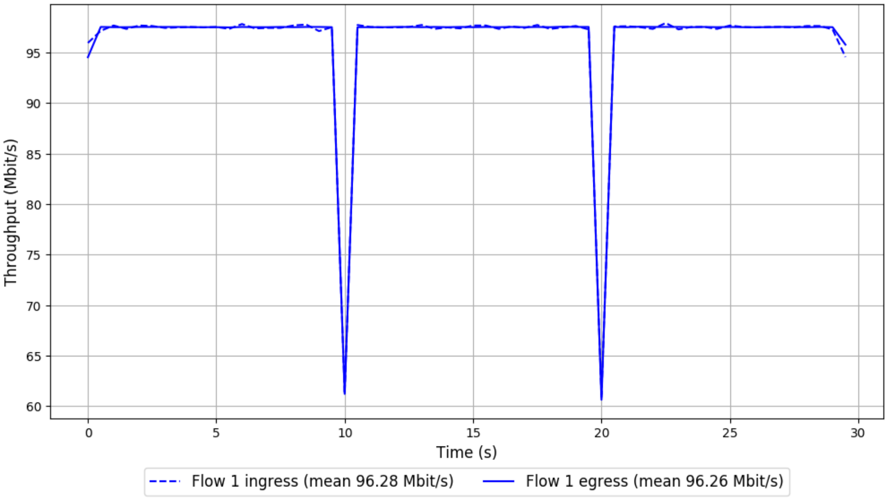
Run 2: Report of TCP BBR — Data Link

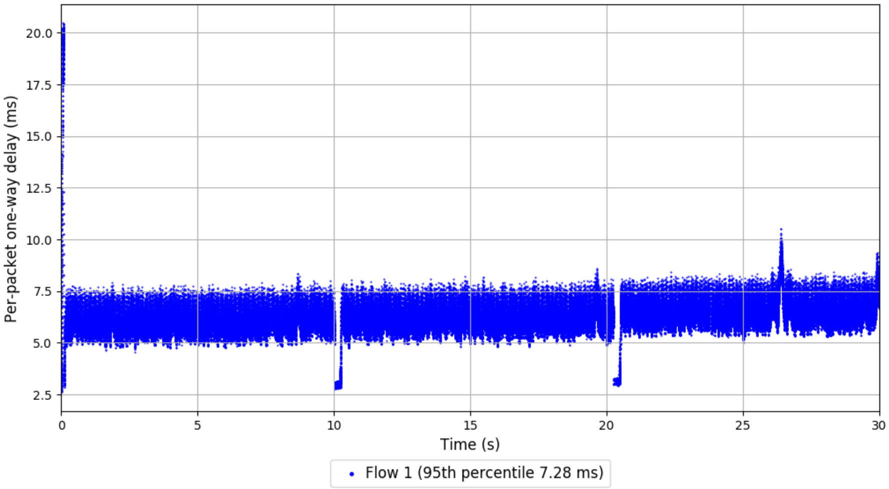




```
Run 3: Statistics of TCP BBR

Start at: 2018-03-20 14:55:38
End at: 2018-03-20 14:56:08
Local clock offset: -14.694 ms
Remote clock offset: -13.552 ms

# Below is generated by plot.py at 2018-03-20 18:06:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.26 Mbit/s
95th percentile per-packet one-way delay: 7.283 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 96.26 Mbit/s
95th percentile per-packet one-way delay: 7.283 ms
Loss rate: 0.00%
```

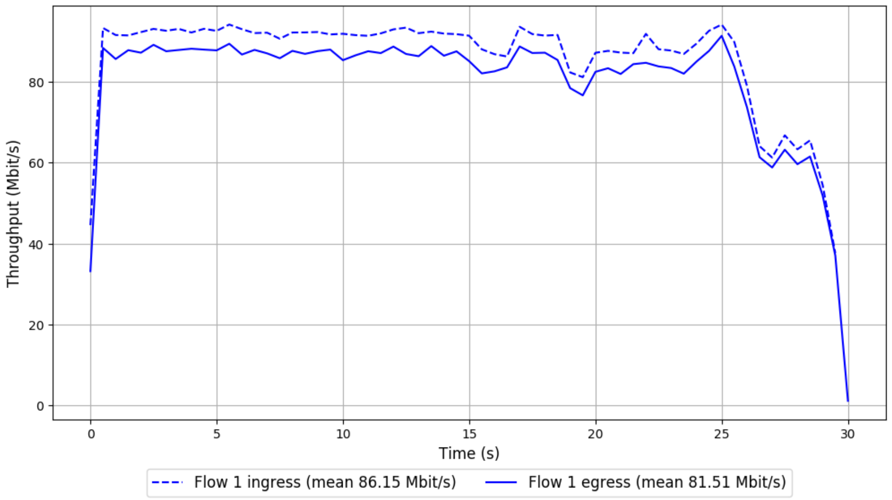
Run 3: Report of TCP BBR — Data Link

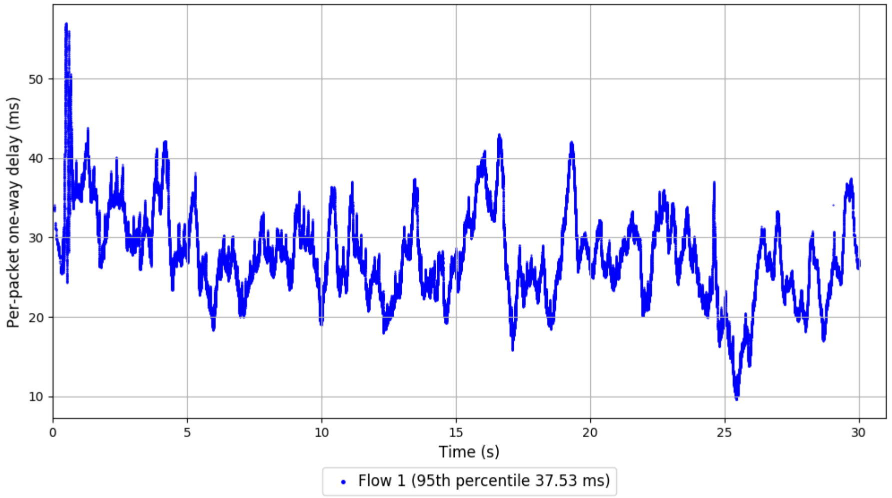




```
Run 4: Statistics of TCP BBR

Start at: 2018-03-20 15:16:07
End at: 2018-03-20 15:16:38
Local clock offset: -11.691 ms
Remote clock offset: -18.598 ms

# Below is generated by plot.py at 2018-03-20 18:06:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 81.51 Mbit/s
95th percentile per-packet one-way delay: 37.531 ms
Loss rate: 5.41%
-- Flow 1:
Average throughput: 81.51 Mbit/s
95th percentile per-packet one-way delay: 37.531 ms
Loss rate: 5.41%
```

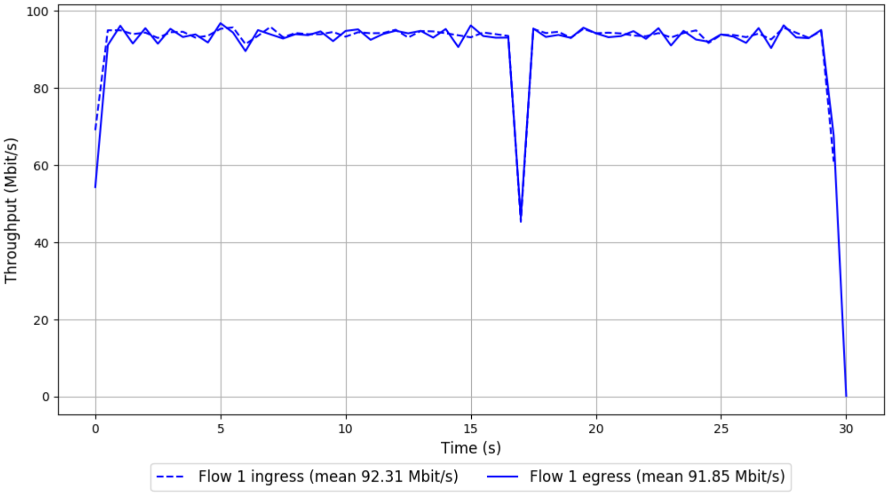
Run 4: Report of TCP BBR — Data Link

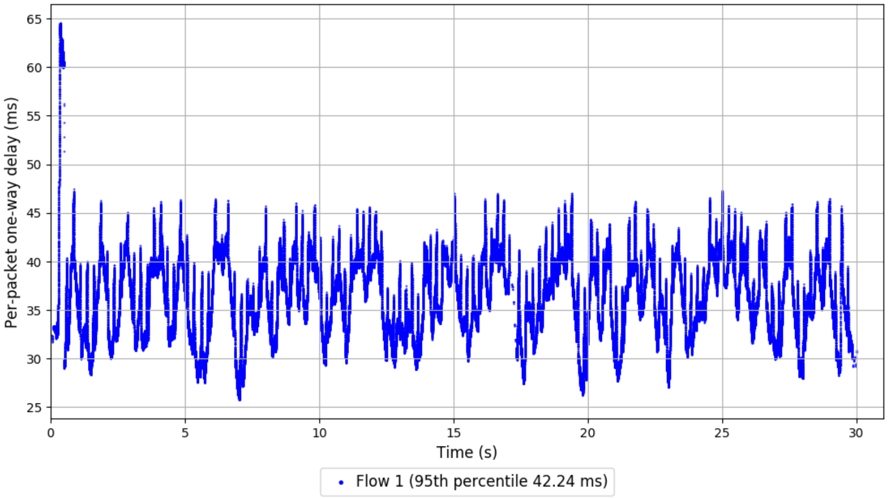




```
Run 5: Statistics of TCP BBR

Start at: 2018-03-20 15:36:42
End at: 2018-03-20 15:37:12
Local clock offset: -13.333 ms
Remote clock offset: -15.906 ms

# Below is generated by plot.py at 2018-03-20 18:06:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.85 Mbit/s
95th percentile per-packet one-way delay: 42.245 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 91.85 Mbit/s
95th percentile per-packet one-way delay: 42.245 ms
Loss rate: 0.51%
```

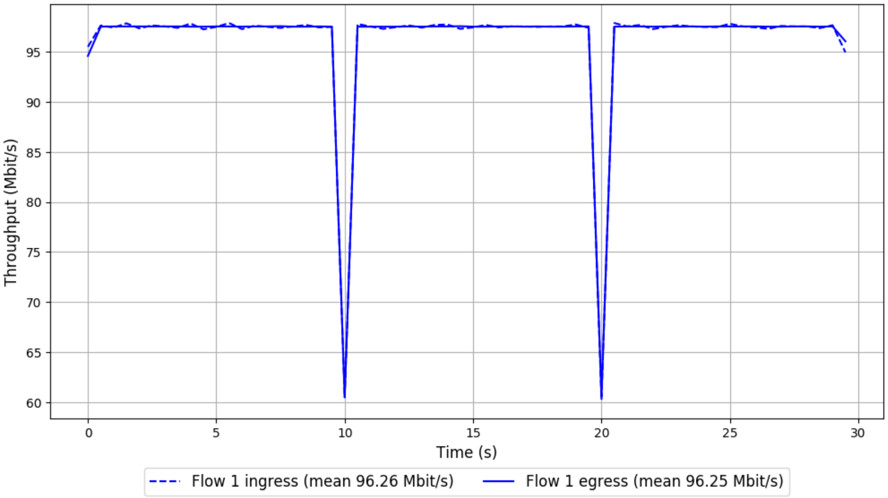
Run 5: Report of TCP BBR — Data Link

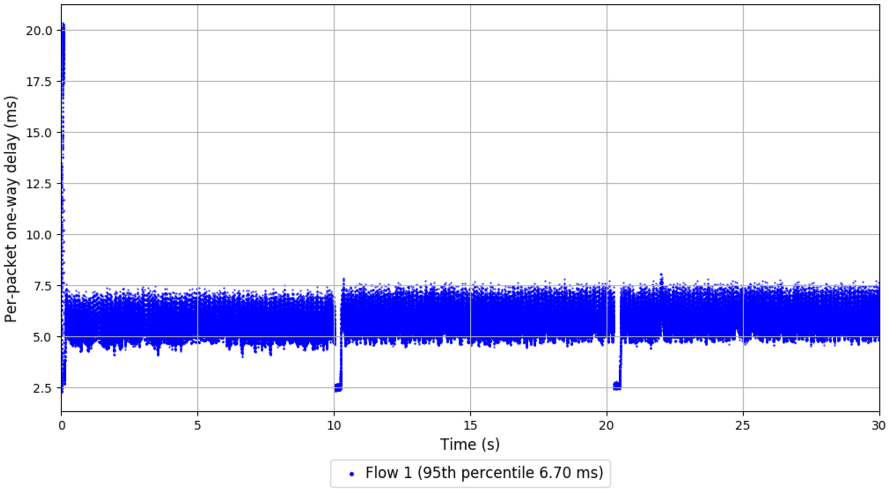




```
Run 6: Statistics of TCP BBR

Start at: 2018-03-20 15:57:22
End at: 2018-03-20 15:57:52
Local clock offset: -14.77 ms
Remote clock offset: -15.966 ms

# Below is generated by plot.py at 2018-03-20 18:06:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.25 Mbit/s
95th percentile per-packet one-way delay: 6.697 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 96.25 Mbit/s
95th percentile per-packet one-way delay: 6.697 ms
Loss rate: 0.00%
```

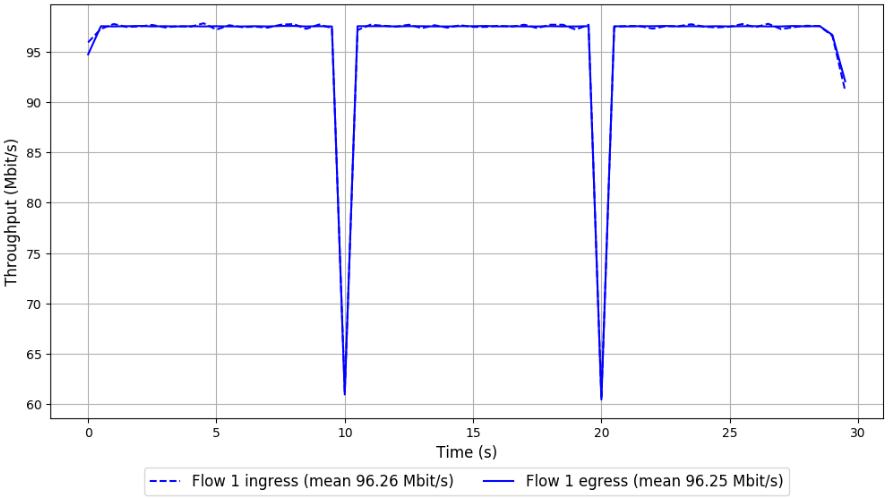
Run 6: Report of TCP BBR — Data Link

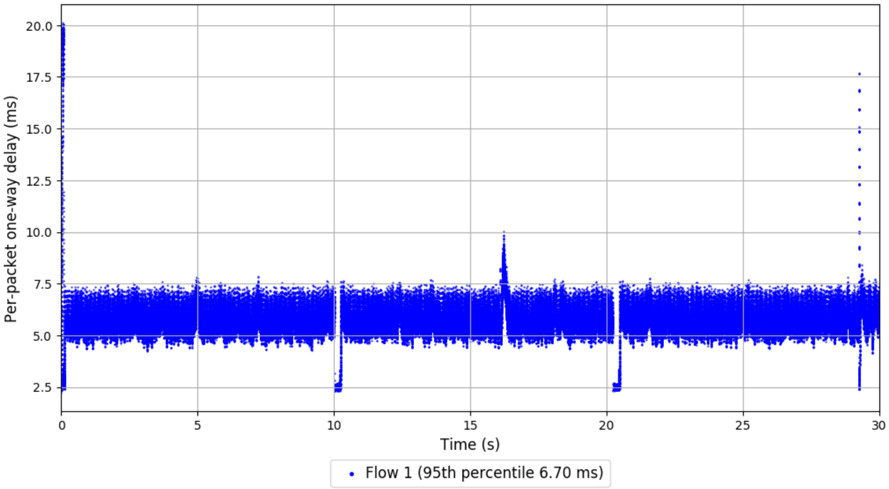




```
Run 7: Statistics of TCP BBR

Start at: 2018-03-20 16:17:57
End at: 2018-03-20 16:18:27
Local clock offset: -11.925 ms
Remote clock offset: -16.281 ms

# Below is generated by plot.py at 2018-03-20 18:06:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.25 Mbit/s
95th percentile per-packet one-way delay: 6.703 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 96.25 Mbit/s
95th percentile per-packet one-way delay: 6.703 ms
Loss rate: 0.00%
```

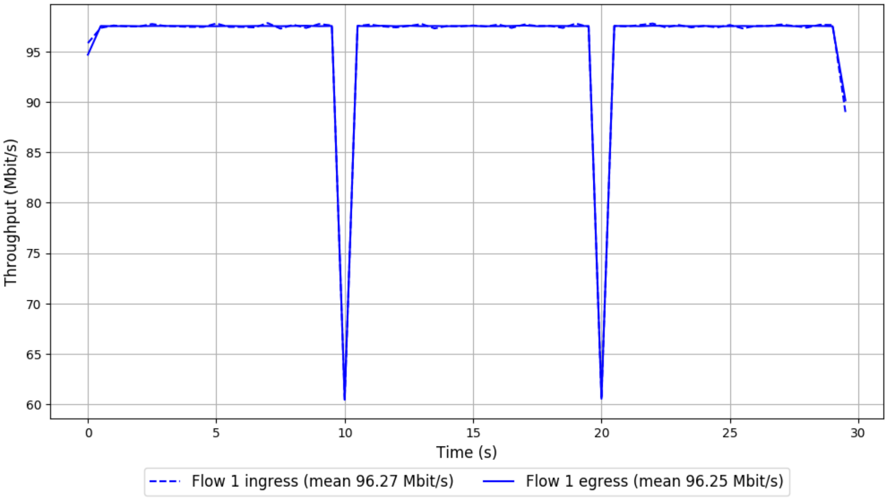
Run 7: Report of TCP BBR — Data Link

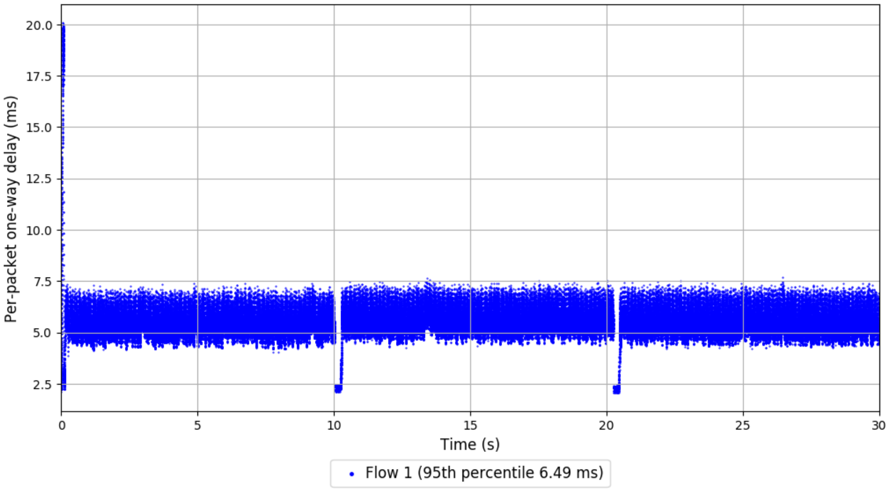




```
Run 8: Statistics of TCP BBR

Start at: 2018-03-20 16:38:32
End at: 2018-03-20 16:39:02
Local clock offset: -13.656 ms
Remote clock offset: -14.743 ms

# Below is generated by plot.py at 2018-03-20 18:06:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.25 Mbit/s
95th percentile per-packet one-way delay: 6.488 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 96.25 Mbit/s
95th percentile per-packet one-way delay: 6.488 ms
Loss rate: 0.00%
```

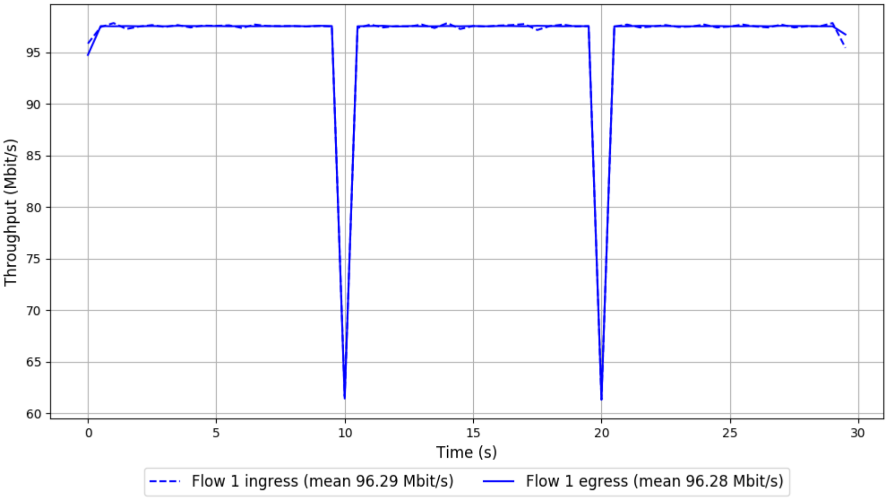
Run 8: Report of TCP BBR — Data Link

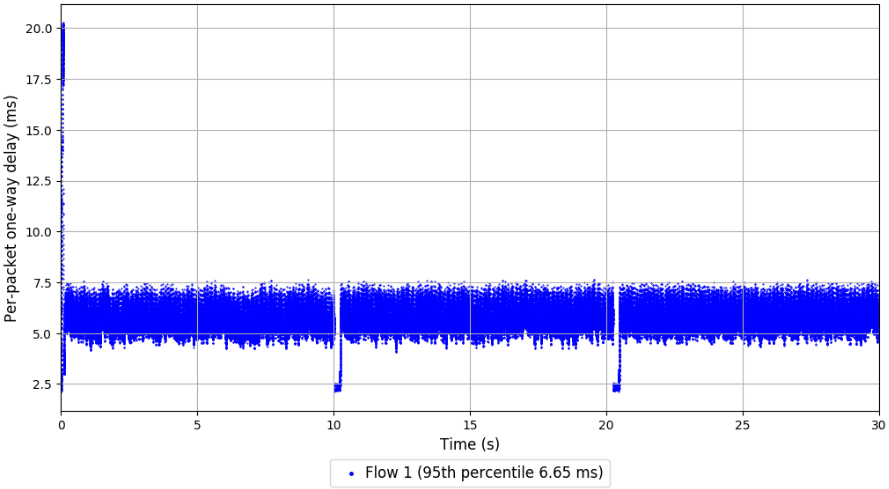




```
Run 9: Statistics of TCP BBR

Start at: 2018-03-20 16:59:07
End at: 2018-03-20 16:59:37
Local clock offset: -16.155 ms
Remote clock offset: -14.124 ms

# Below is generated by plot.py at 2018-03-20 18:08:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.28 Mbit/s
95th percentile per-packet one-way delay: 6.649 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 96.28 Mbit/s
95th percentile per-packet one-way delay: 6.649 ms
Loss rate: 0.00%
```

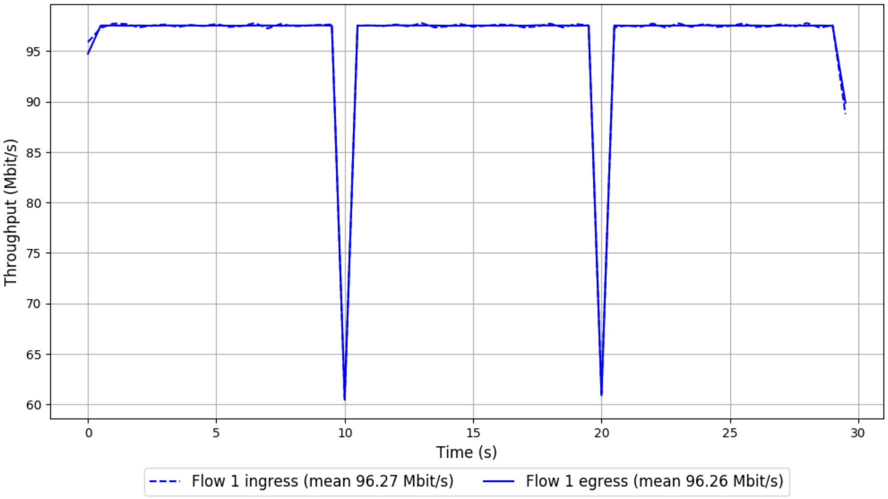
Run 9: Report of TCP BBR — Data Link

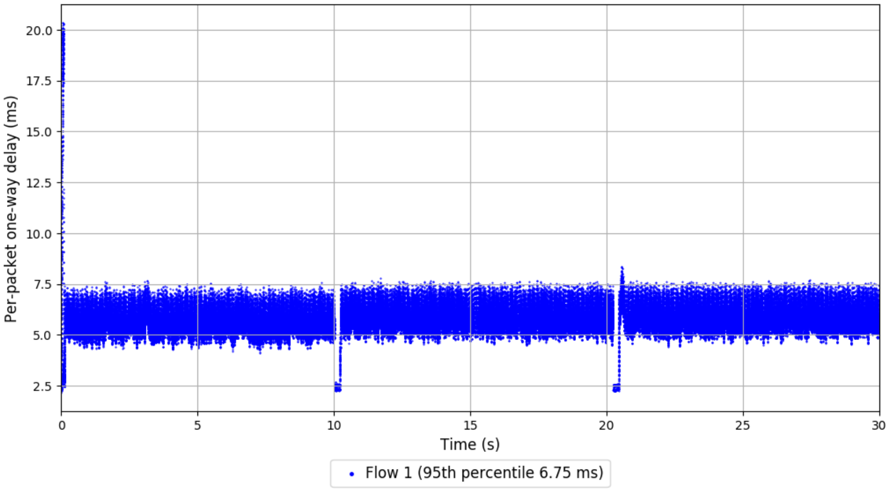




```
Run 10: Statistics of TCP BBR

Start at: 2018-03-20 17:19:40
End at: 2018-03-20 17:20:10
Local clock offset: -14.28 ms
Remote clock offset: -14.017 ms

# Below is generated by plot.py at 2018-03-20 18:08:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.26 Mbit/s
95th percentile per-packet one-way delay: 6.749 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 96.26 Mbit/s
95th percentile per-packet one-way delay: 6.749 ms
Loss rate: 0.00%
```

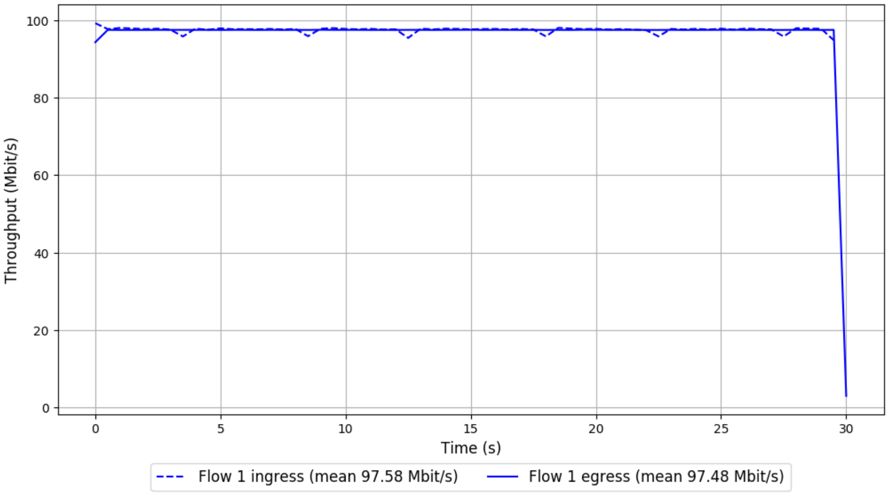
Run 10: Report of TCP BBR — Data Link

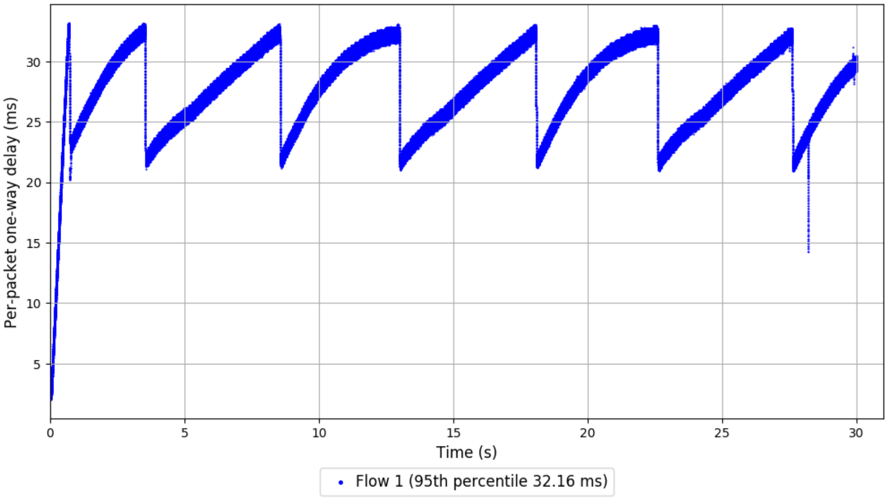




```
Run 1: Statistics of TCP Cubic

Start at: 2018-03-20 14:21:26
End at: 2018-03-20 14:21:56
Local clock offset: -10.811 ms
Remote clock offset: -6.724 ms

# Below is generated by plot.py at 2018-03-20 18:08:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.48 Mbit/s
95th percentile per-packet one-way delay: 32.156 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.48 Mbit/s
95th percentile per-packet one-way delay: 32.156 ms
Loss rate: 0.01%
```

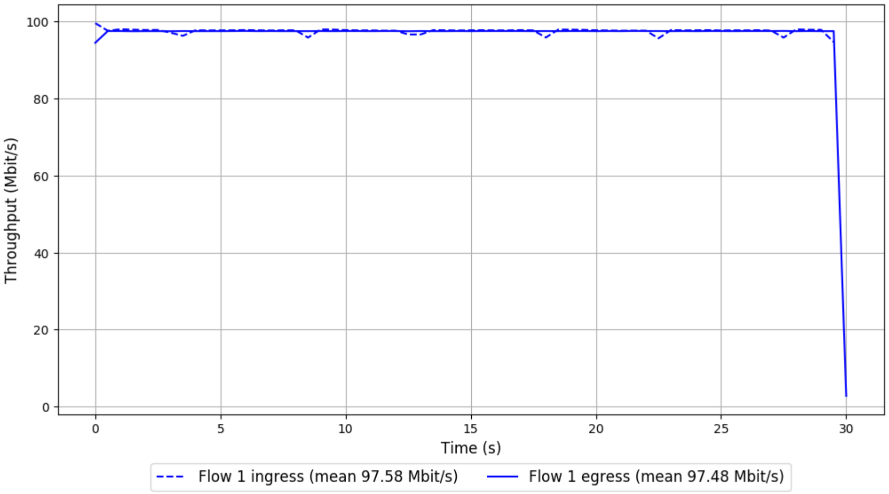
Run 1: Report of TCP Cubic — Data Link

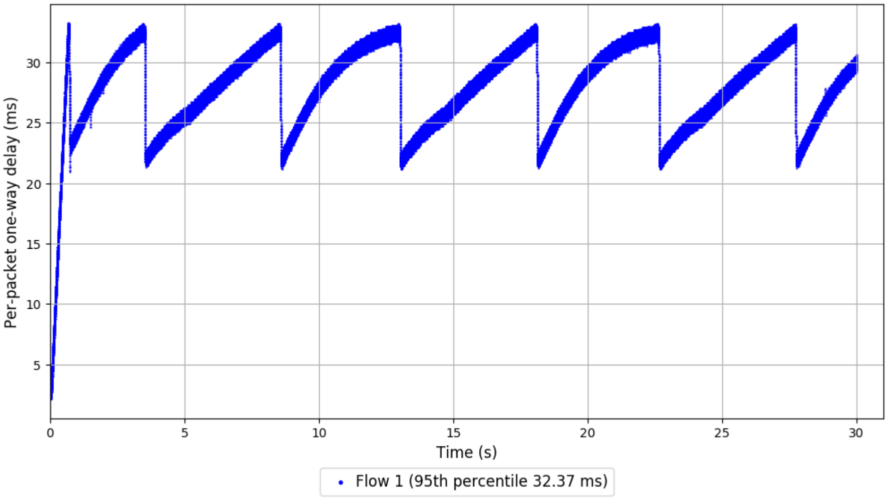




```
Run 2: Statistics of TCP Cubic

Start at: 2018-03-20 14:41:52
End at: 2018-03-20 14:42:22
Local clock offset: -17.212 ms
Remote clock offset: -6.922 ms

# Below is generated by plot.py at 2018-03-20 18:08:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.48 Mbit/s
95th percentile per-packet one-way delay: 32.366 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.48 Mbit/s
95th percentile per-packet one-way delay: 32.366 ms
Loss rate: 0.01%
```

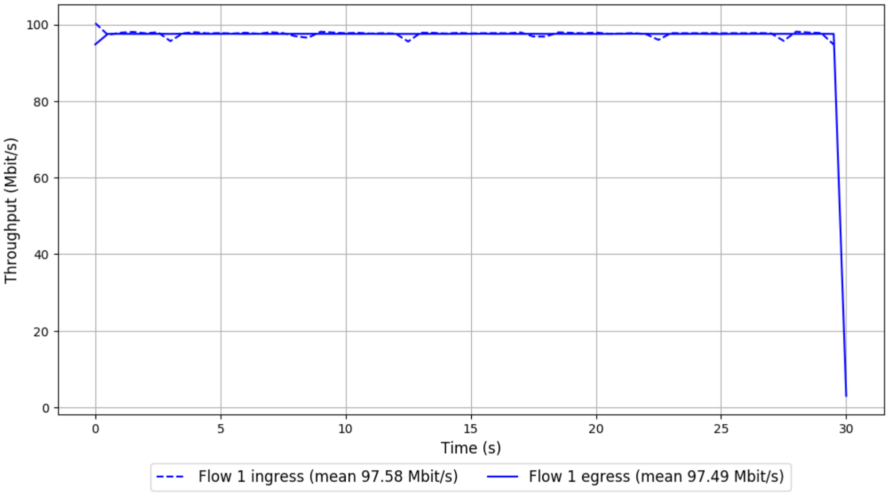
Run 2: Report of TCP Cubic — Data Link

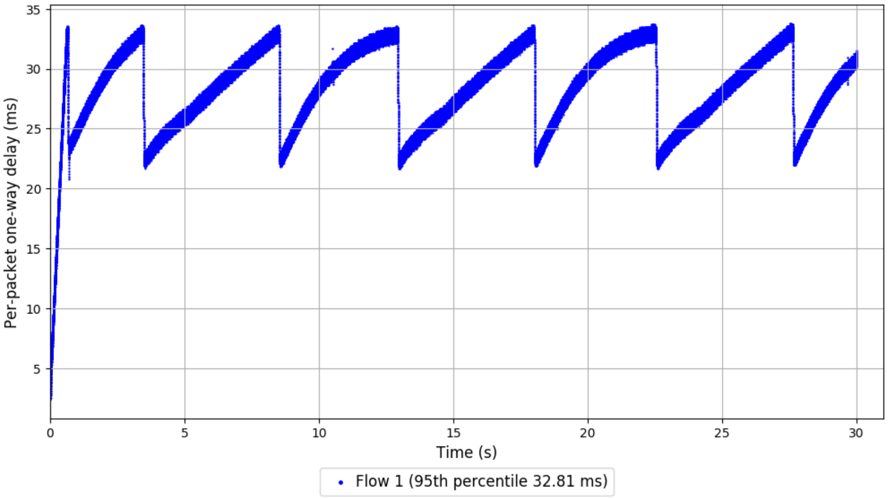




```
Run 3: Statistics of TCP Cubic

Start at: 2018-03-20 15:02:22
End at: 2018-03-20 15:02:52
Local clock offset: -12.681 ms
Remote clock offset: -15.805 ms

# Below is generated by plot.py at 2018-03-20 18:08:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.49 Mbit/s
95th percentile per-packet one-way delay: 32.814 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.49 Mbit/s
95th percentile per-packet one-way delay: 32.814 ms
Loss rate: 0.01%
```

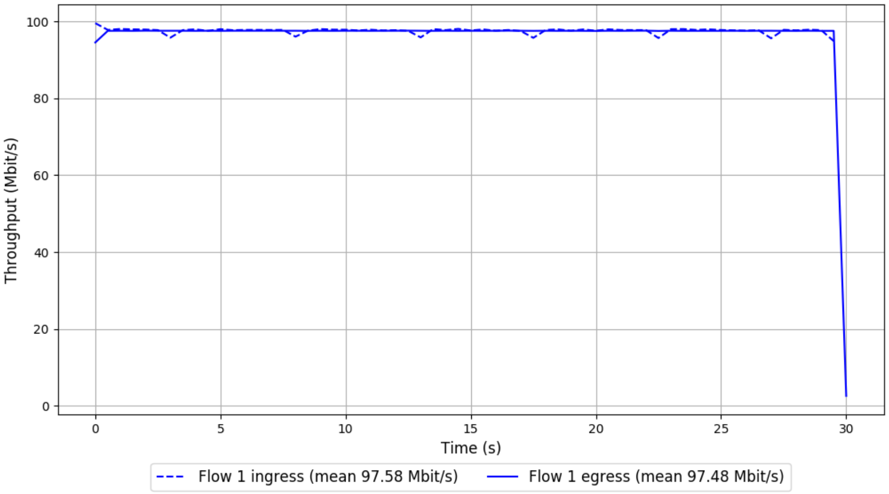
Run 3: Report of TCP Cubic — Data Link

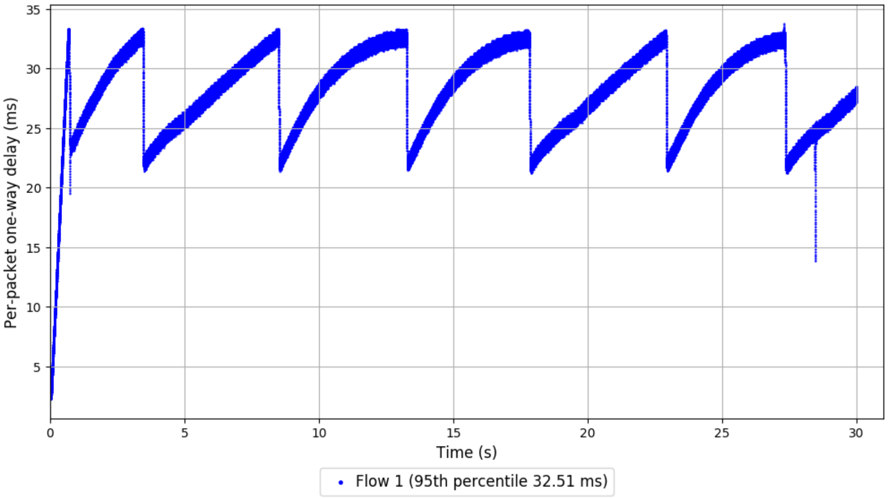




```
Run 4: Statistics of TCP Cubic

Start at: 2018-03-20 15:22:53
End at: 2018-03-20 15:23:23
Local clock offset: -11.784 ms
Remote clock offset: -17.721 ms

# Below is generated by plot.py at 2018-03-20 18:08:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.48 Mbit/s
95th percentile per-packet one-way delay: 32.505 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.48 Mbit/s
95th percentile per-packet one-way delay: 32.505 ms
Loss rate: 0.01%
```

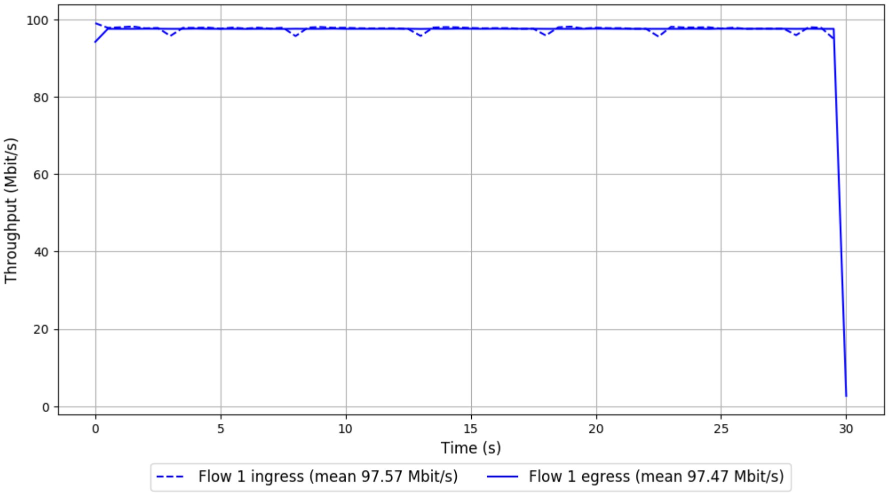
Run 4: Report of TCP Cubic — Data Link

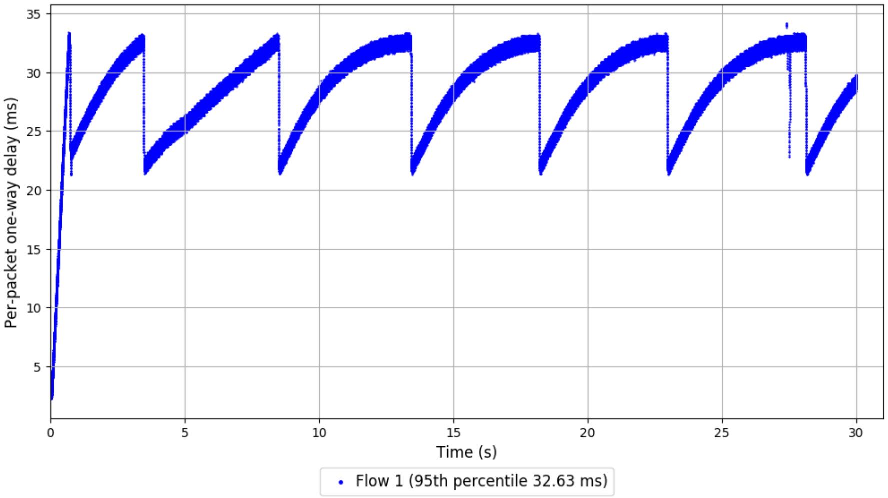




```
Run 5: Statistics of TCP Cubic

Start at: 2018-03-20 15:43:31
End at: 2018-03-20 15:44:01
Local clock offset: -13.836 ms
Remote clock offset: -15.843 ms

# Below is generated by plot.py at 2018-03-20 18:08:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.47 Mbit/s
95th percentile per-packet one-way delay: 32.634 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.47 Mbit/s
95th percentile per-packet one-way delay: 32.634 ms
Loss rate: 0.01%
```

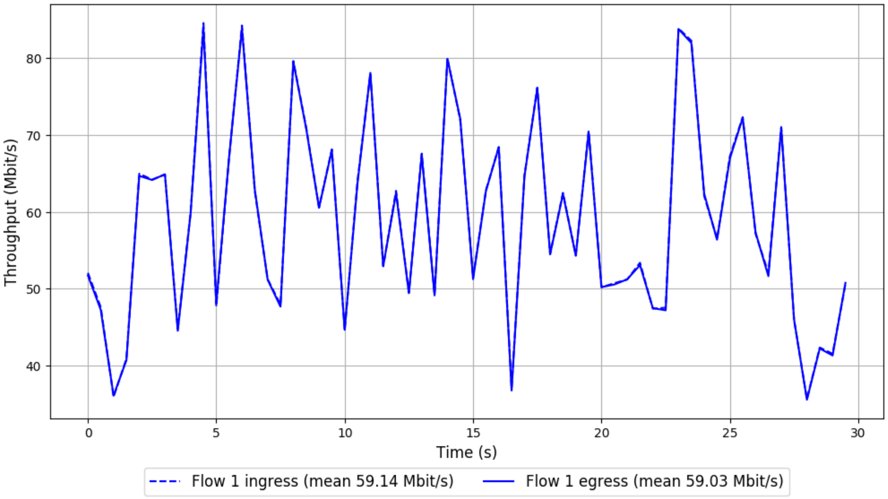
Run 5: Report of TCP Cubic — Data Link

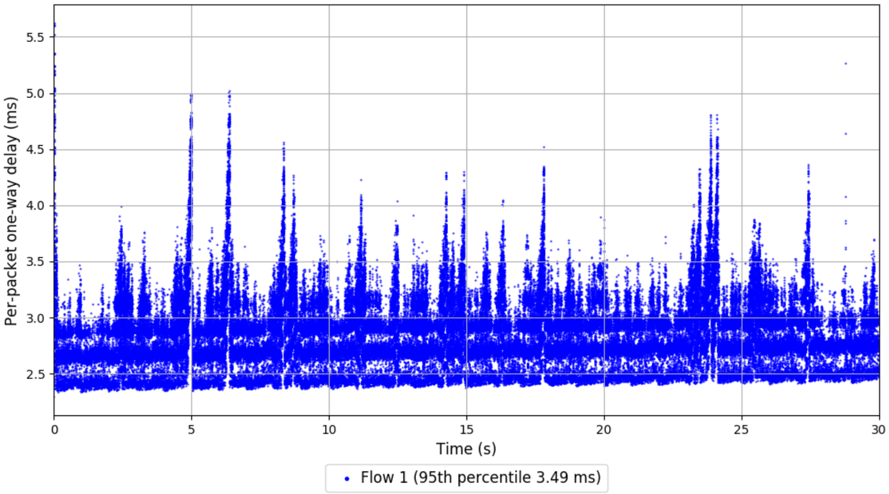




```
Run 6: Statistics of TCP Cubic

Start at: 2018-03-20 16:04:10
End at: 2018-03-20 16:04:40
Local clock offset: -13.104 ms
Remote clock offset: -15.99 ms

# Below is generated by plot.py at 2018-03-20 18:08:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 59.03 Mbit/s
95th percentile per-packet one-way delay: 3.492 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 59.03 Mbit/s
95th percentile per-packet one-way delay: 3.492 ms
Loss rate: 0.18%
```

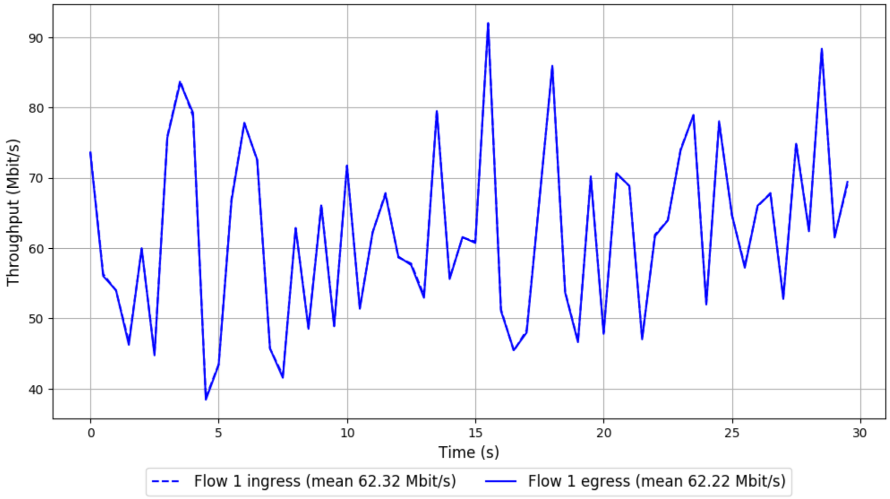
Run 6: Report of TCP Cubic — Data Link

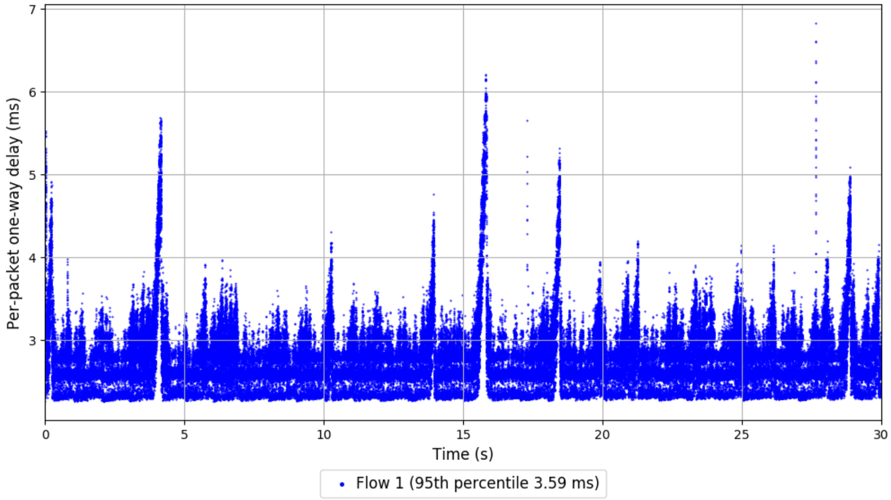




```
Run 7: Statistics of TCP Cubic

Start at: 2018-03-20 16:24:45
End at: 2018-03-20 16:25:15
Local clock offset: -11.842 ms
Remote clock offset: -16.484 ms

# Below is generated by plot.py at 2018-03-20 18:08:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 62.22 Mbit/s
95th percentile per-packet one-way delay: 3.588 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 62.22 Mbit/s
95th percentile per-packet one-way delay: 3.588 ms
Loss rate: 0.15%
```

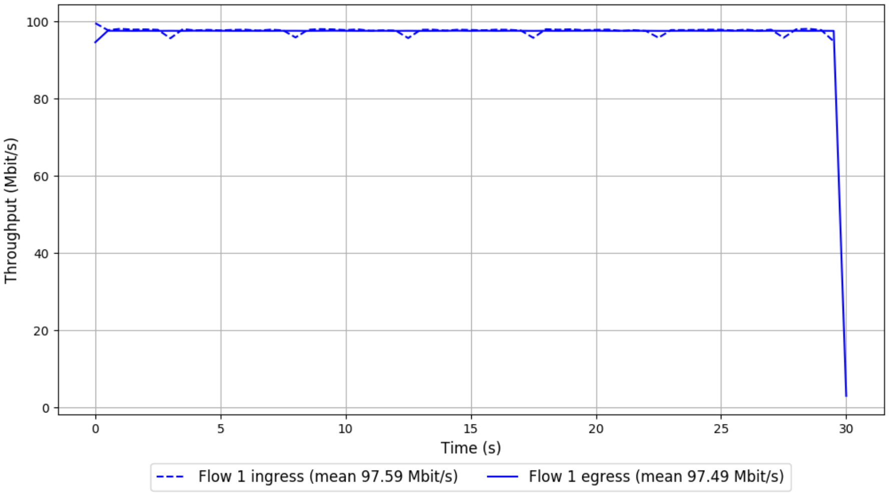
Run 7: Report of TCP Cubic — Data Link

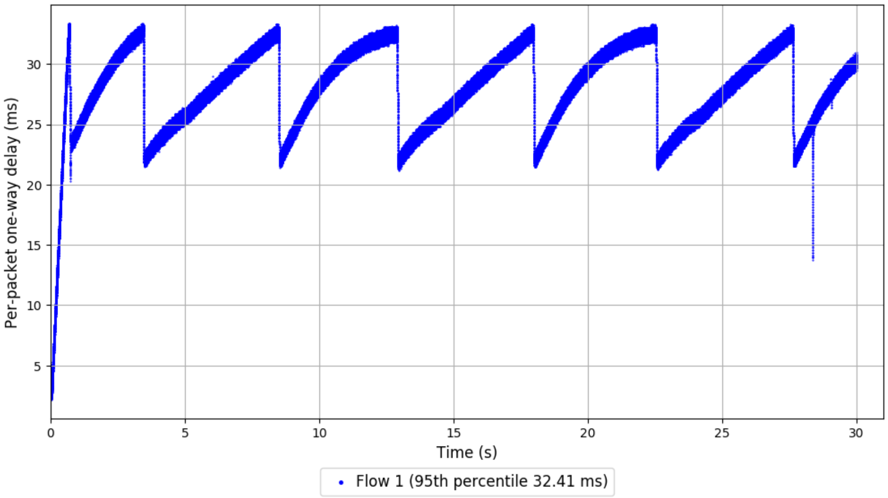




```
Run 8: Statistics of TCP Cubic

Start at: 2018-03-20 16:45:19
End at: 2018-03-20 16:45:49
Local clock offset: -14.77 ms
Remote clock offset: -14.341 ms

# Below is generated by plot.py at 2018-03-20 18:09:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.49 Mbit/s
95th percentile per-packet one-way delay: 32.413 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.49 Mbit/s
95th percentile per-packet one-way delay: 32.413 ms
Loss rate: 0.01%
```

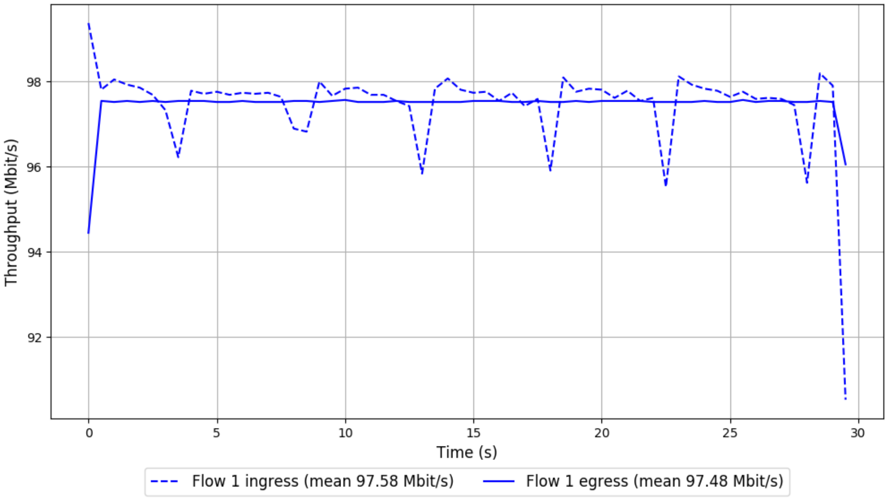
Run 8: Report of TCP Cubic — Data Link

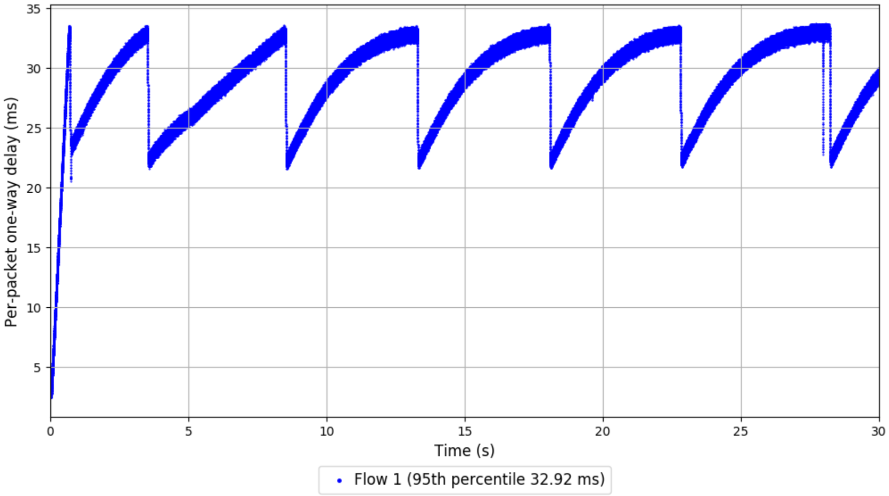




```
Run 9: Statistics of TCP Cubic

Start at: 2018-03-20 17:05:54
End at: 2018-03-20 17:06:24
Local clock offset: -16.751 ms
Remote clock offset: -14.015 ms

# Below is generated by plot.py at 2018-03-20 18:09:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.48 Mbit/s
95th percentile per-packet one-way delay: 32.922 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.48 Mbit/s
95th percentile per-packet one-way delay: 32.922 ms
Loss rate: 0.01%
```

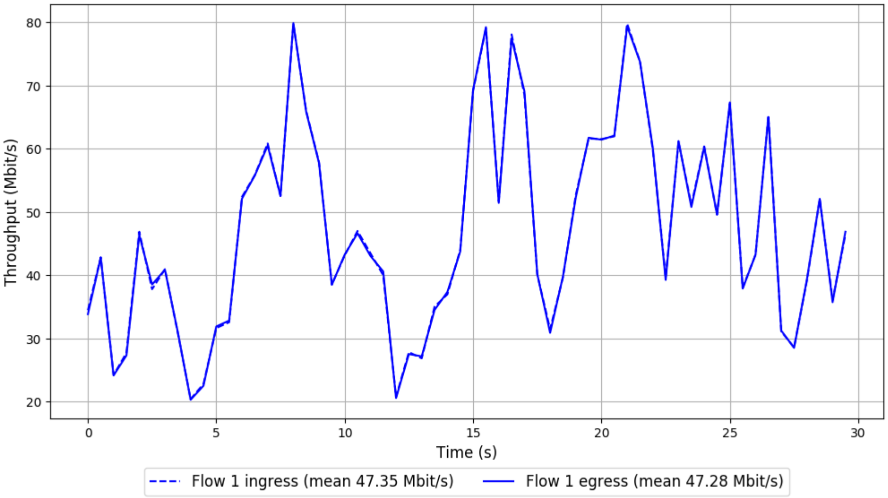
Run 9: Report of TCP Cubic — Data Link

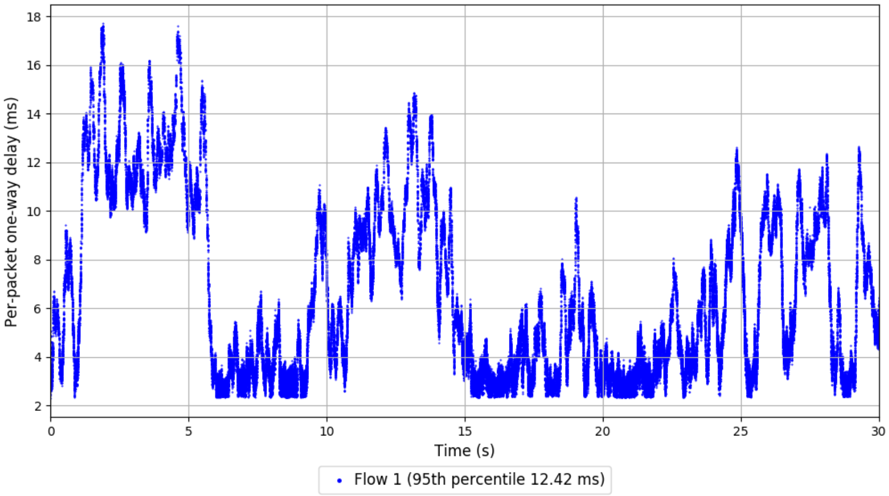




```
Run 10: Statistics of TCP Cubic

Start at: 2018-03-20 17:26:24
End at: 2018-03-20 17:26:54
Local clock offset: -14.086 ms
Remote clock offset: -13.897 ms

# Below is generated by plot.py at 2018-03-20 18:09:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 47.28 Mbit/s
95th percentile per-packet one-way delay: 12.416 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 47.28 Mbit/s
95th percentile per-packet one-way delay: 12.416 ms
Loss rate: 0.12%
```

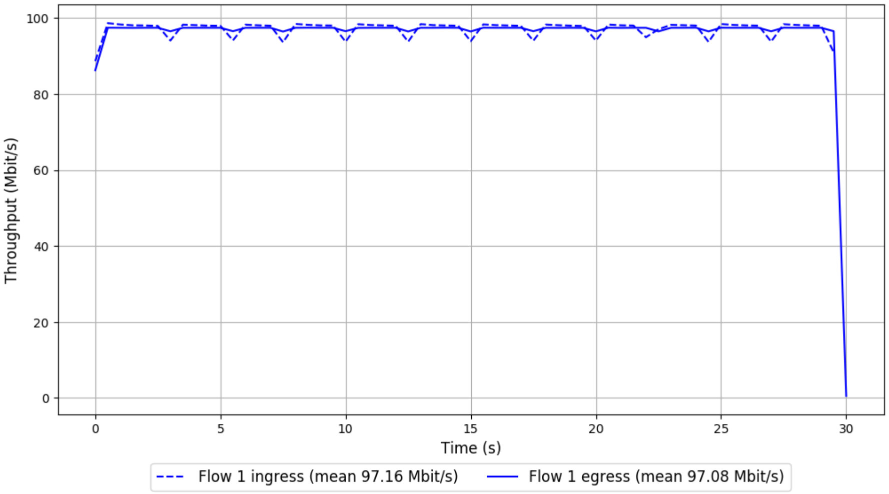
Run 10: Report of TCP Cubic — Data Link

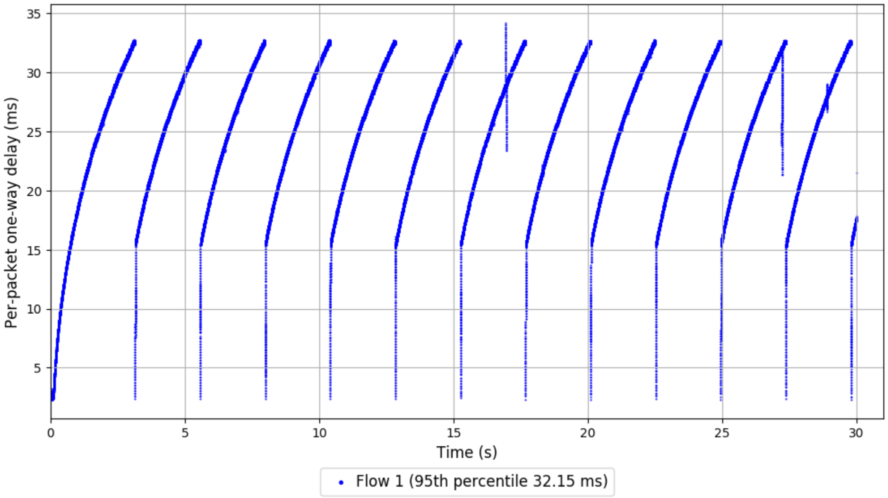




```
Run 1: Statistics of LEDBAT

Start at: 2018-03-20 14:09:10
End at: 2018-03-20 14:09:40
Local clock offset: -6.53 ms
Remote clock offset: -6.703 ms

# Below is generated by plot.py at 2018-03-20 18:09:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.08 Mbit/s
95th percentile per-packet one-way delay: 32.149 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.08 Mbit/s
95th percentile per-packet one-way delay: 32.149 ms
Loss rate: 0.01%
```

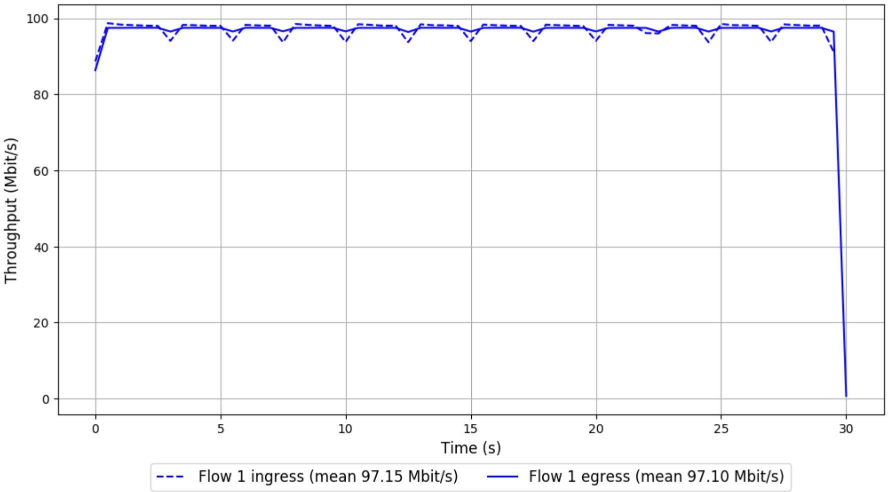
Run 1: Report of LEDBAT — Data Link

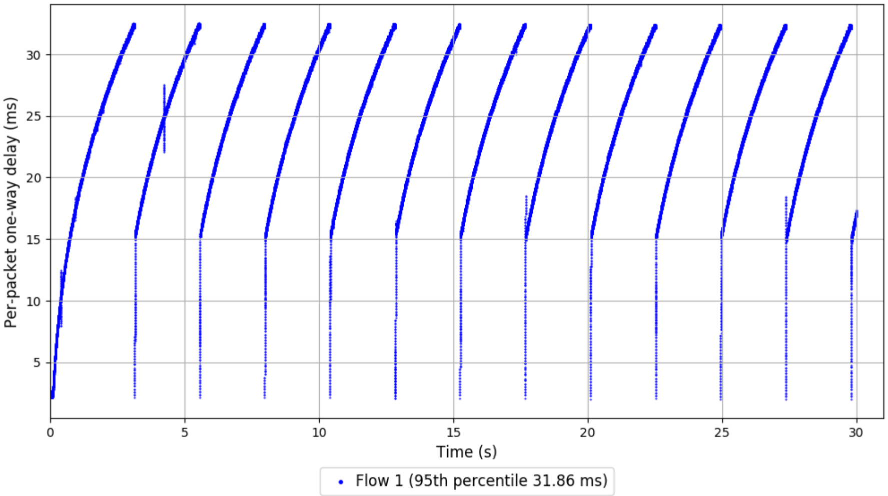




```
Run 2: Statistics of LEDBAT

Start at: 2018-03-20 14:29:30
End at: 2018-03-20 14:30:00
Local clock offset: -14.207 ms
Remote clock offset: -6.835 ms

# Below is generated by plot.py at 2018-03-20 18:09:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.10 Mbit/s
95th percentile per-packet one-way delay: 31.863 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.10 Mbit/s
95th percentile per-packet one-way delay: 31.863 ms
Loss rate: 0.01%
```

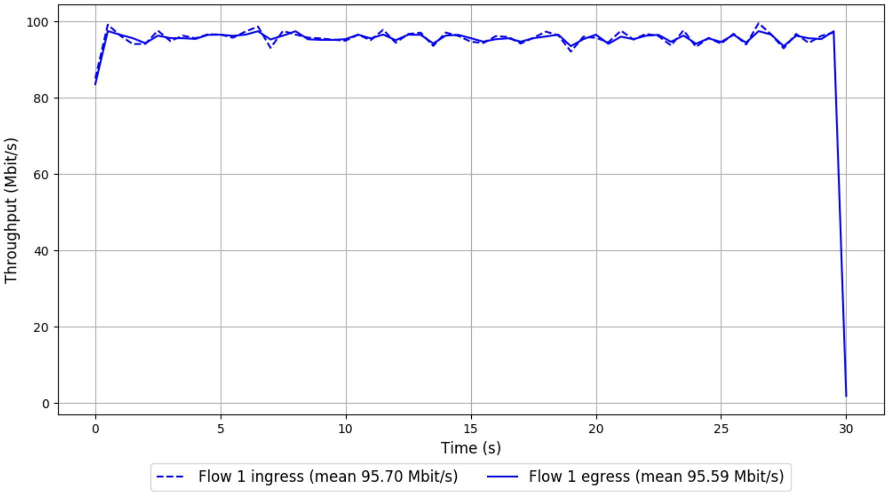
Run 2: Report of LEDBAT — Data Link

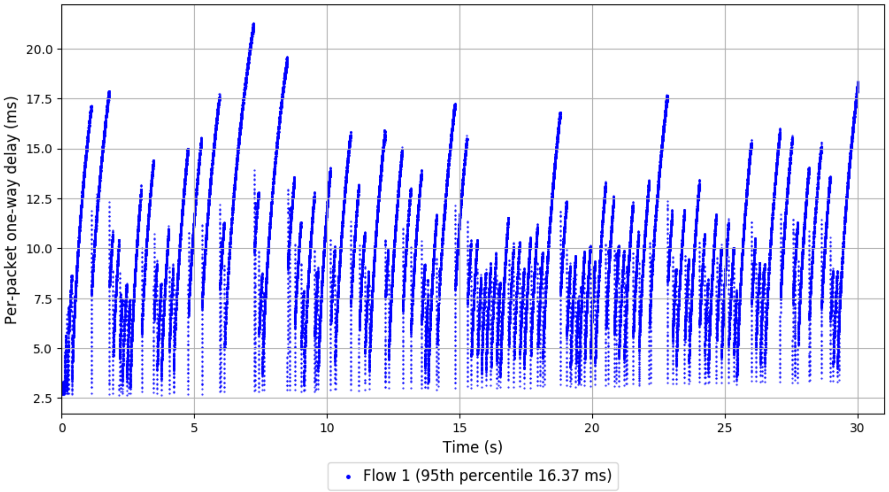




```
Run 3: Statistics of LEDBAT

Start at: 2018-03-20 14:49:57
End at: 2018-03-20 14:50:27
Local clock offset: -18.446 ms
Remote clock offset: -10.864 ms

# Below is generated by plot.py at 2018-03-20 18:09:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.59 Mbit/s
95th percentile per-packet one-way delay: 16.373 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 95.59 Mbit/s
95th percentile per-packet one-way delay: 16.373 ms
Loss rate: 0.06%
```

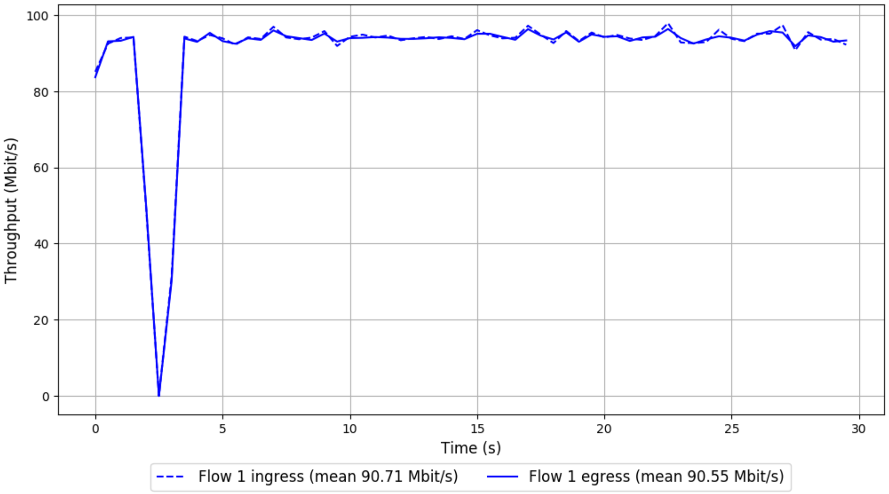
Run 3: Report of LEDBAT — Data Link

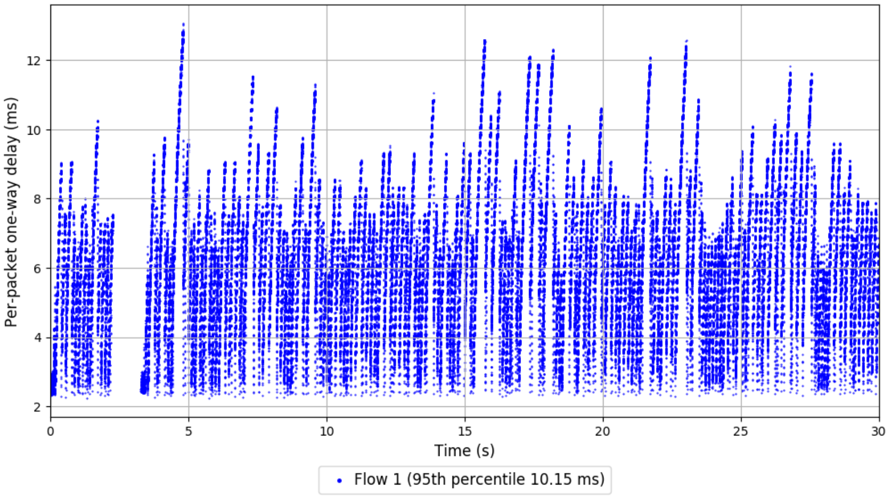




```
Run 4: Statistics of LEDBAT

Start at: 2018-03-20 15:10:27
End at: 2018-03-20 15:10:58
Local clock offset: -11.86 ms
Remote clock offset: -17.584 ms

# Below is generated by plot.py at 2018-03-20 18:09:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.55 Mbit/s
95th percentile per-packet one-way delay: 10.153 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 90.55 Mbit/s
95th percentile per-packet one-way delay: 10.153 ms
Loss rate: 0.16%
```

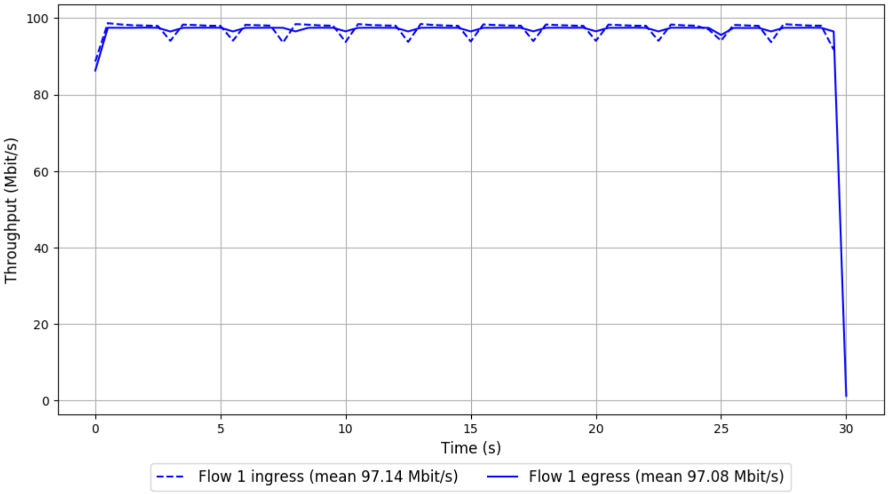
Run 4: Report of LEDBAT — Data Link

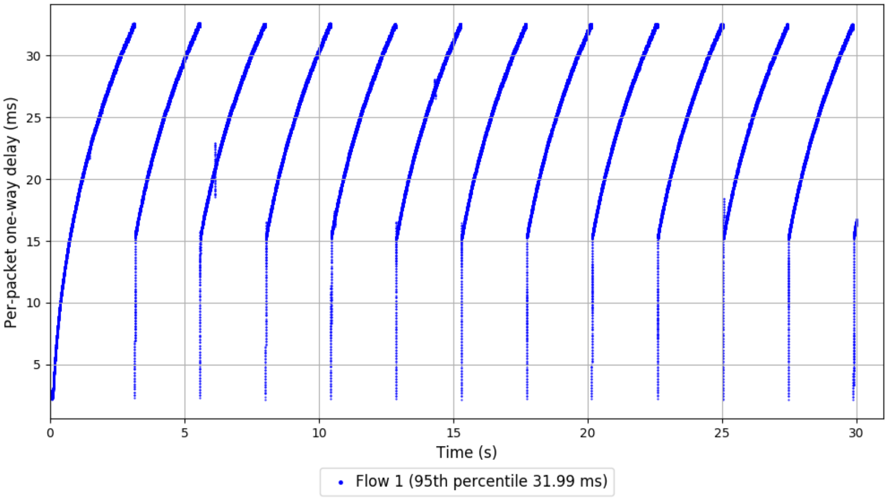




```
Run 5: Statistics of LEDBAT

Start at: 2018-03-20 15:30:57
End at: 2018-03-20 15:31:27
Local clock offset: -12.765 ms
Remote clock offset: -16.244 ms

# Below is generated by plot.py at 2018-03-20 18:10:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.08 Mbit/s
95th percentile per-packet one-way delay: 31.986 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.08 Mbit/s
95th percentile per-packet one-way delay: 31.986 ms
Loss rate: 0.01%
```

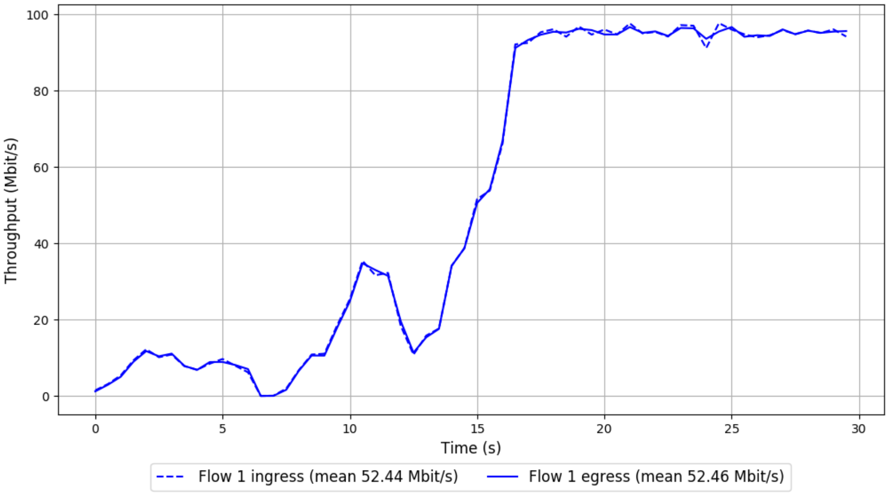
Run 5: Report of LEDBAT — Data Link

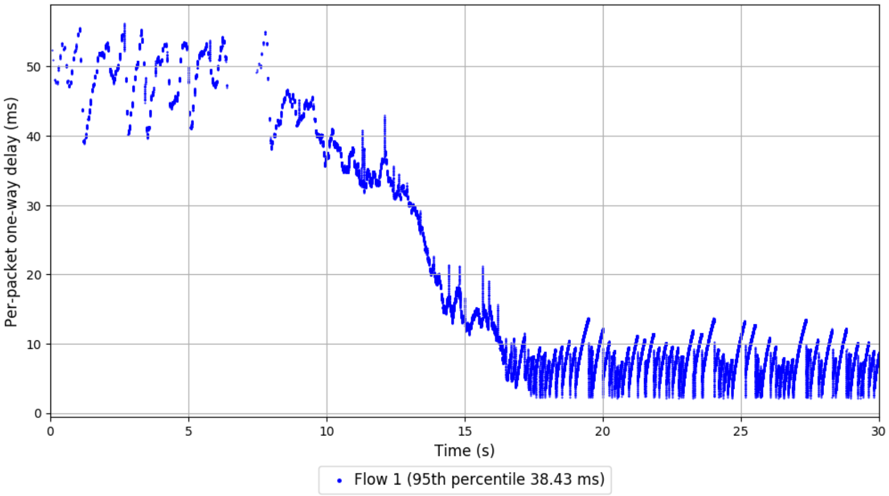




```
Run 6: Statistics of LEDBAT

Start at: 2018-03-20 15:51:41
End at: 2018-03-20 15:52:11
Local clock offset: -14.428 ms
Remote clock offset: -16.014 ms

# Below is generated by plot.py at 2018-03-20 18:10:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 52.46 Mbit/s
95th percentile per-packet one-way delay: 38.428 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 52.46 Mbit/s
95th percentile per-packet one-way delay: 38.428 ms
Loss rate: 0.10%
```

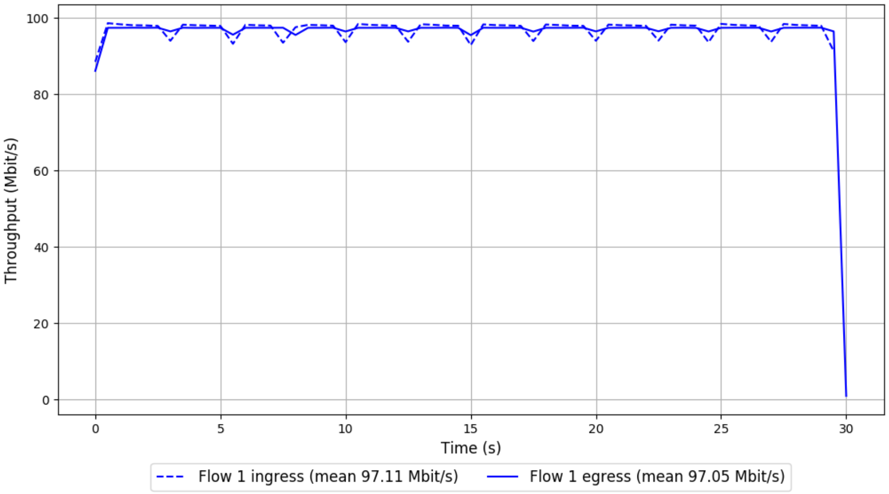
Run 6: Report of LEDBAT — Data Link

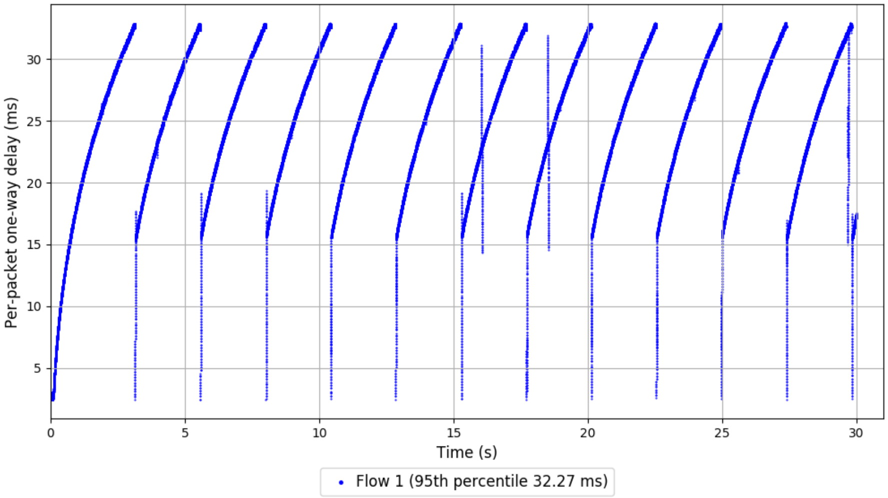




```
Run 7: Statistics of LEDBAT

Start at: 2018-03-20 16:12:15
End at: 2018-03-20 16:12:45
Local clock offset: -12.284 ms
Remote clock offset: -16.141 ms

# Below is generated by plot.py at 2018-03-20 18:11:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.05 Mbit/s
95th percentile per-packet one-way delay: 32.274 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.05 Mbit/s
95th percentile per-packet one-way delay: 32.274 ms
Loss rate: 0.01%
```

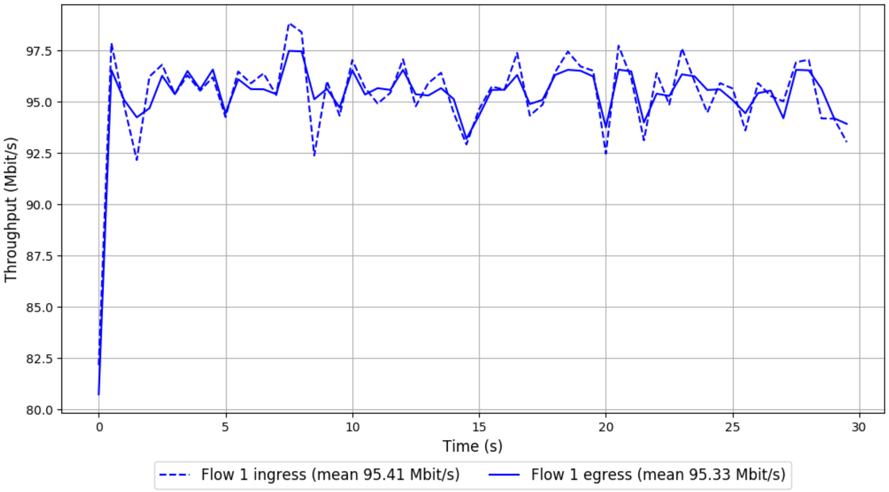
Run 7: Report of LEDBAT — Data Link

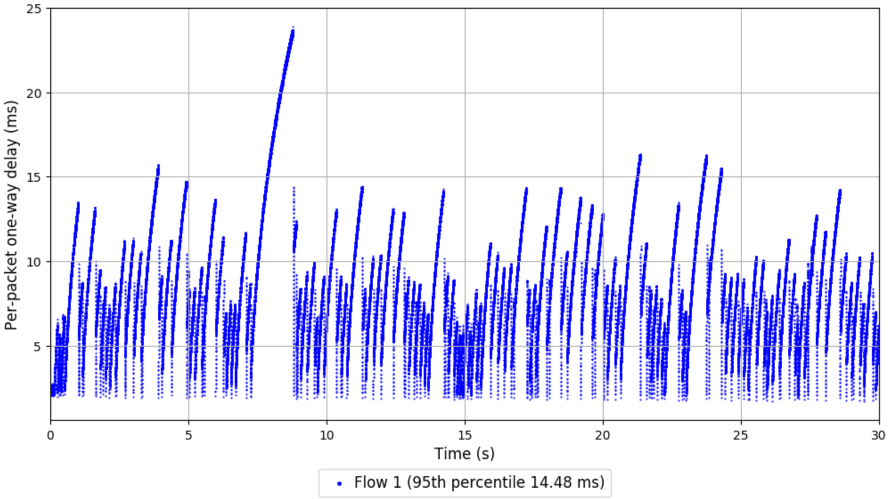




```
Run 8: Statistics of LEDBAT

Start at: 2018-03-20 16:32:52
End at: 2018-03-20 16:33:22
Local clock offset: -12.054 ms
Remote clock offset: -15.41 ms

# Below is generated by plot.py at 2018-03-20 18:11:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.33 Mbit/s
95th percentile per-packet one-way delay: 14.482 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 95.33 Mbit/s
95th percentile per-packet one-way delay: 14.482 ms
Loss rate: 0.07%
```

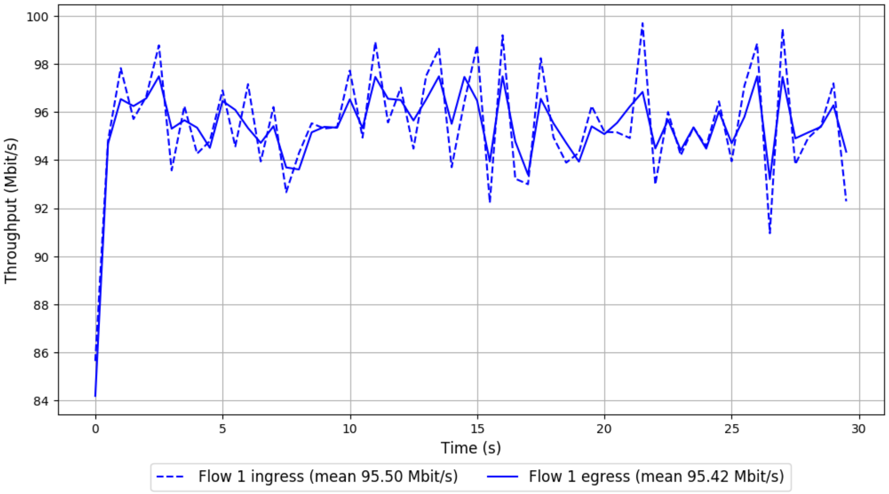
Run 8: Report of LEDBAT — Data Link

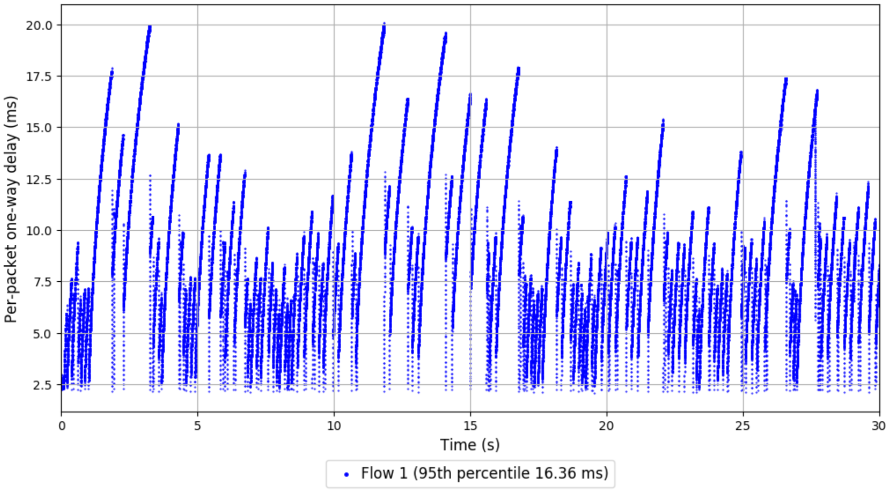




```
Run 9: Statistics of LEDBAT

Start at: 2018-03-20 16:53:27
End at: 2018-03-20 16:53:57
Local clock offset: -15.698 ms
Remote clock offset: -14.118 ms

# Below is generated by plot.py at 2018-03-20 18:11:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.42 Mbit/s
95th percentile per-packet one-way delay: 16.356 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 95.42 Mbit/s
95th percentile per-packet one-way delay: 16.356 ms
Loss rate: 0.07%
```

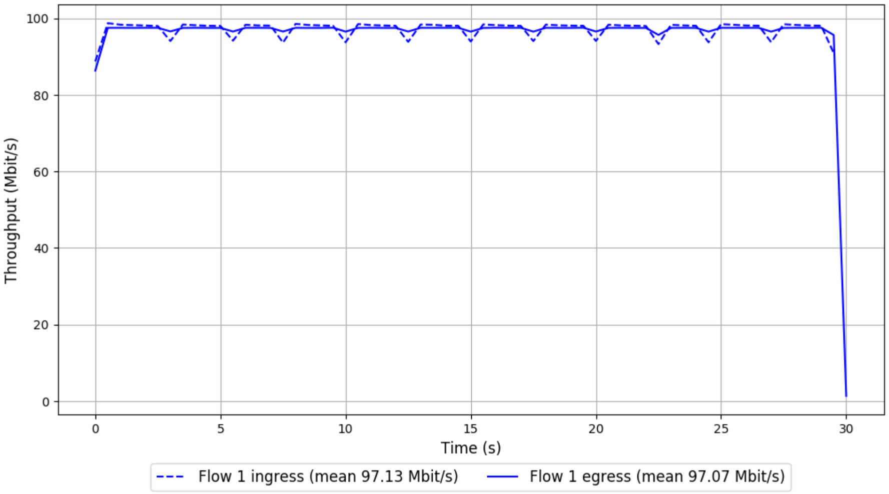
Run 9: Report of LEDBAT — Data Link

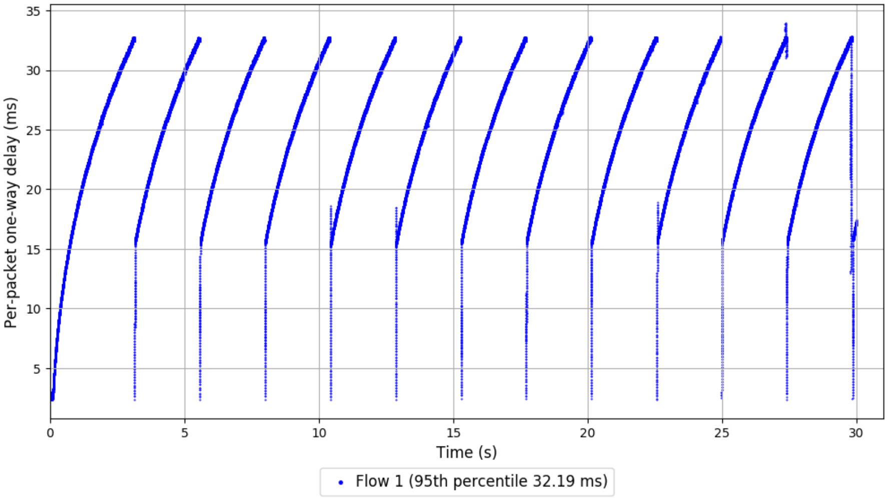




```
Run 10: Statistics of LEDBAT

Start at: 2018-03-20 17:13:59
End at: 2018-03-20 17:14:29
Local clock offset: -14.894 ms
Remote clock offset: -14.033 ms

# Below is generated by plot.py at 2018-03-20 18:11:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.07 Mbit/s
95th percentile per-packet one-way delay: 32.194 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.07 Mbit/s
95th percentile per-packet one-way delay: 32.194 ms
Loss rate: 0.01%
```

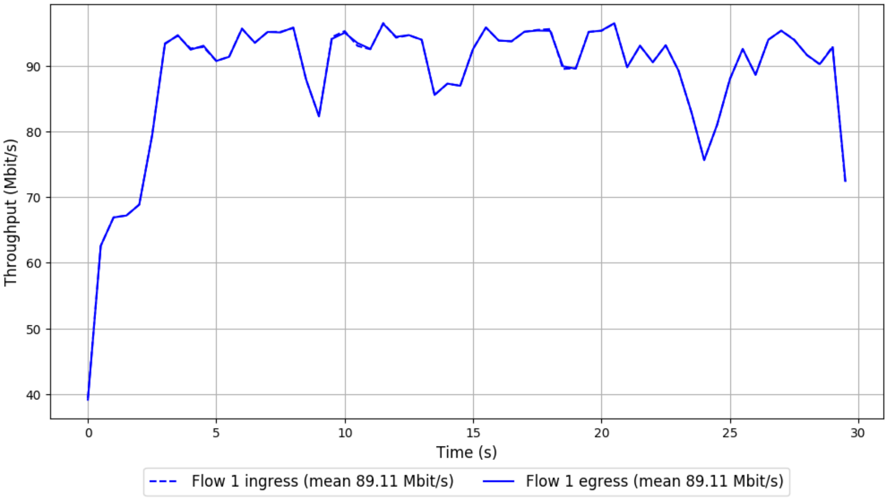
Run 10: Report of LEDBAT — Data Link

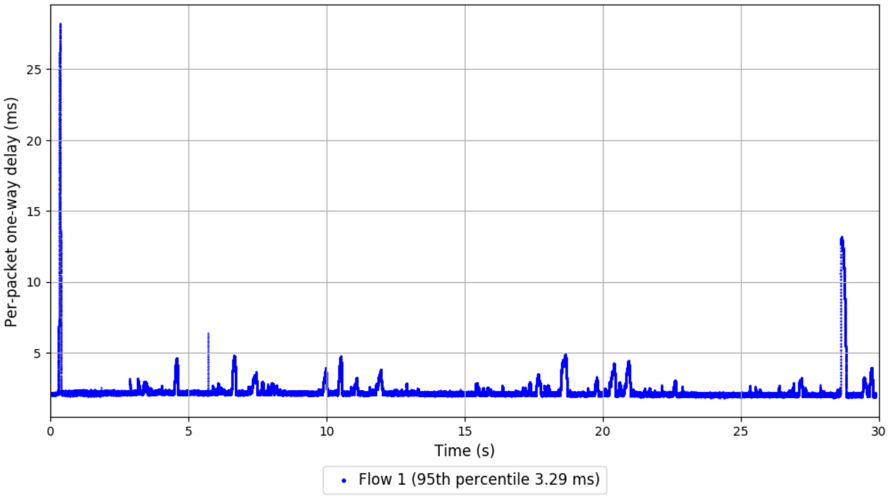




```
Run 1: Statistics of PCC

Start at: 2018-03-20 14:23:44
End at: 2018-03-20 14:24:14
Local clock offset: -11.926 ms
Remote clock offset: -6.726 ms

# Below is generated by plot.py at 2018-03-20 18:11:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.11 Mbit/s
95th percentile per-packet one-way delay: 3.292 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 89.11 Mbit/s
95th percentile per-packet one-way delay: 3.292 ms
Loss rate: 0.00%
```

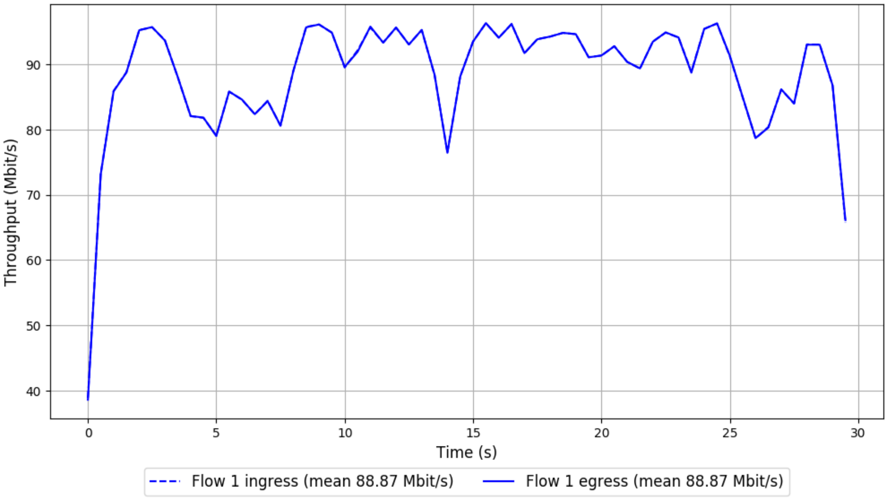
Run 1: Report of PCC — Data Link

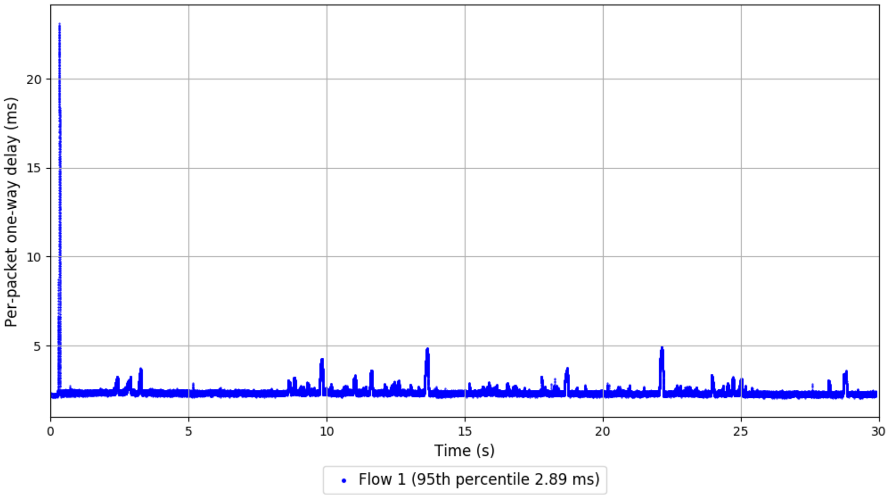




```
Run 2: Statistics of PCC

Start at: 2018-03-20 14:44:10
End at: 2018-03-20 14:44:40
Local clock offset: -17.695 ms
Remote clock offset: -6.858 ms

# Below is generated by plot.py at 2018-03-20 18:11:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.87 Mbit/s
95th percentile per-packet one-way delay: 2.888 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 88.87 Mbit/s
95th percentile per-packet one-way delay: 2.888 ms
Loss rate: 0.00%
```

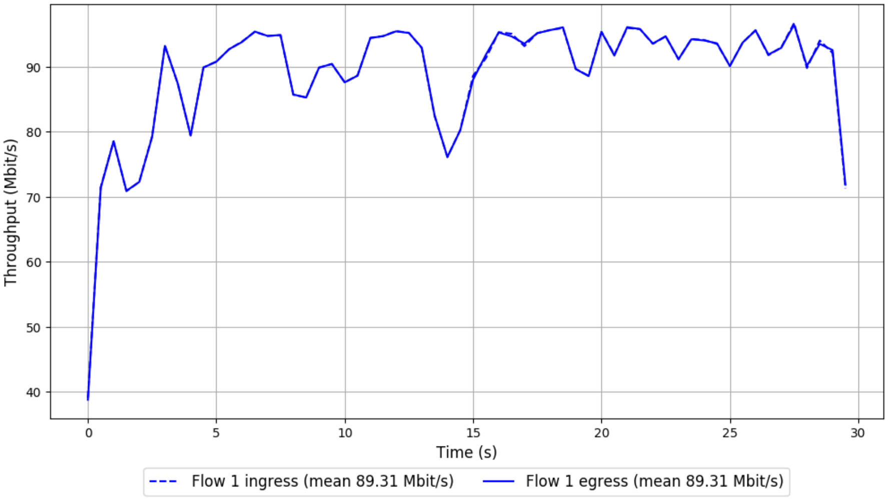
Run 2: Report of PCC — Data Link

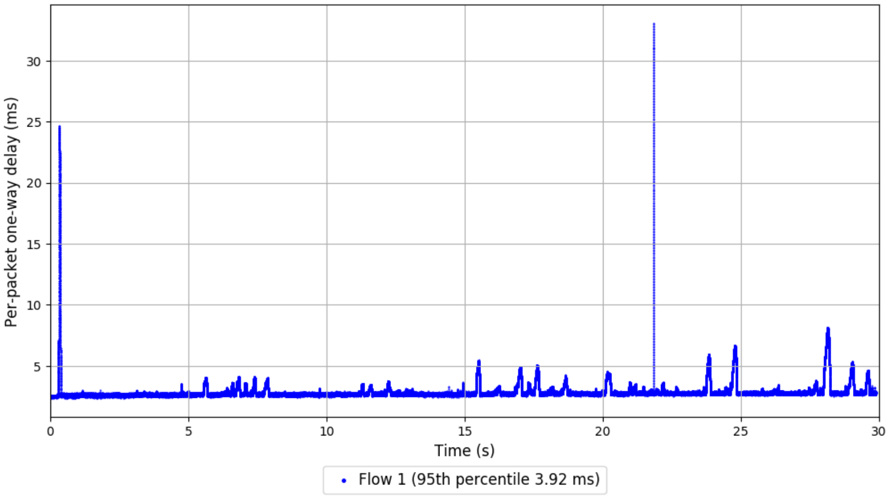




```
Run 3: Statistics of PCC

Start at: 2018-03-20 15:04:40
End at: 2018-03-20 15:05:10
Local clock offset: -12.31 ms
Remote clock offset: -16.301 ms

# Below is generated by plot.py at 2018-03-20 18:11:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.31 Mbit/s
95th percentile per-packet one-way delay: 3.924 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 89.31 Mbit/s
95th percentile per-packet one-way delay: 3.924 ms
Loss rate: 0.00%
```

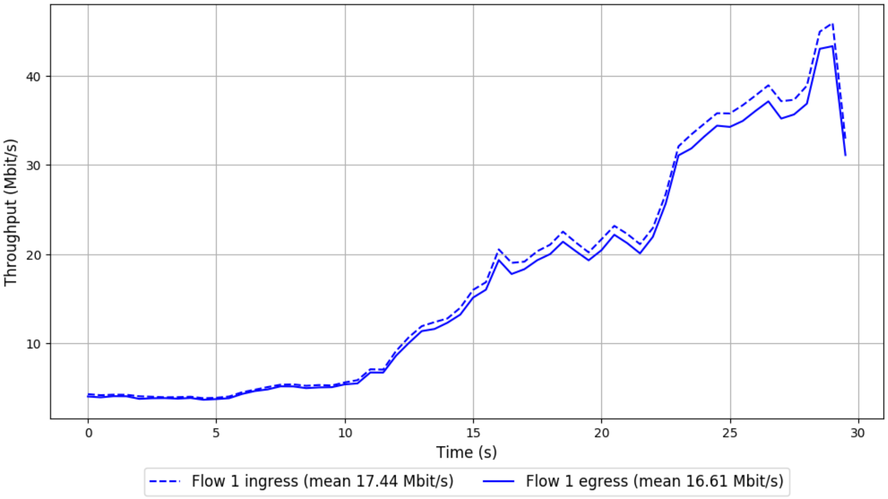
Run 3: Report of PCC — Data Link

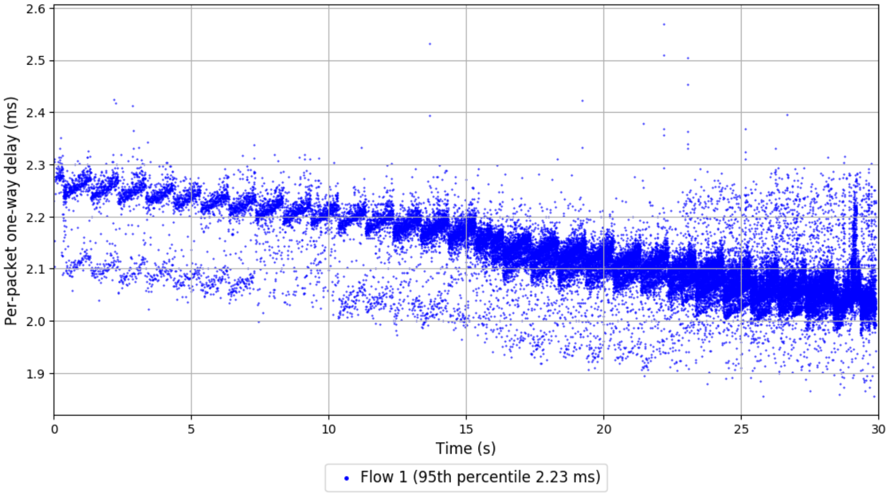




```
Run 4: Statistics of PCC

Start at: 2018-03-20 15:25:12
End at: 2018-03-20 15:25:42
Local clock offset: -12.038 ms
Remote clock offset: -17.101 ms

# Below is generated by plot.py at 2018-03-20 18:11:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 16.61 Mbit/s
95th percentile per-packet one-way delay: 2.232 ms
Loss rate: 4.74%
-- Flow 1:
Average throughput: 16.61 Mbit/s
95th percentile per-packet one-way delay: 2.232 ms
Loss rate: 4.74%
```

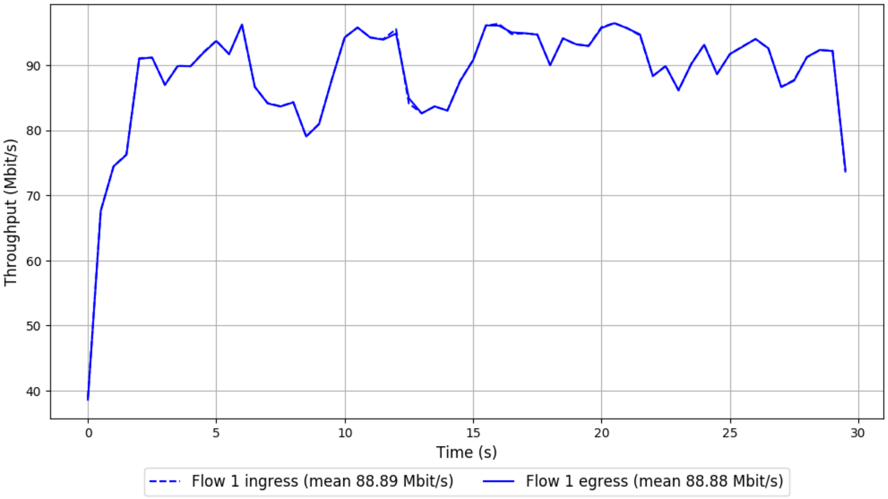
Run 4: Report of PCC — Data Link

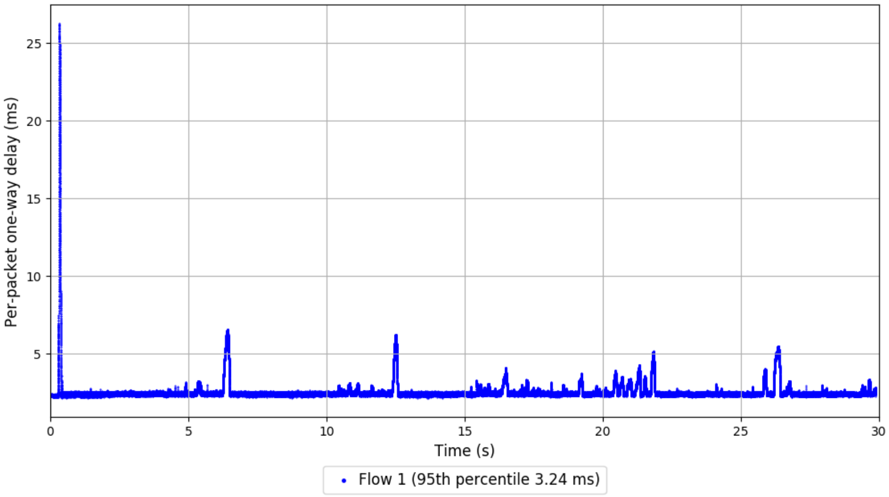




```
Run 5: Statistics of PCC

Start at: 2018-03-20 15:45:50
End at: 2018-03-20 15:46:21
Local clock offset: -14.025 ms
Remote clock offset: -15.884 ms

# Below is generated by plot.py at 2018-03-20 18:11:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.88 Mbit/s
95th percentile per-packet one-way delay: 3.242 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 88.88 Mbit/s
95th percentile per-packet one-way delay: 3.242 ms
Loss rate: 0.01%
```

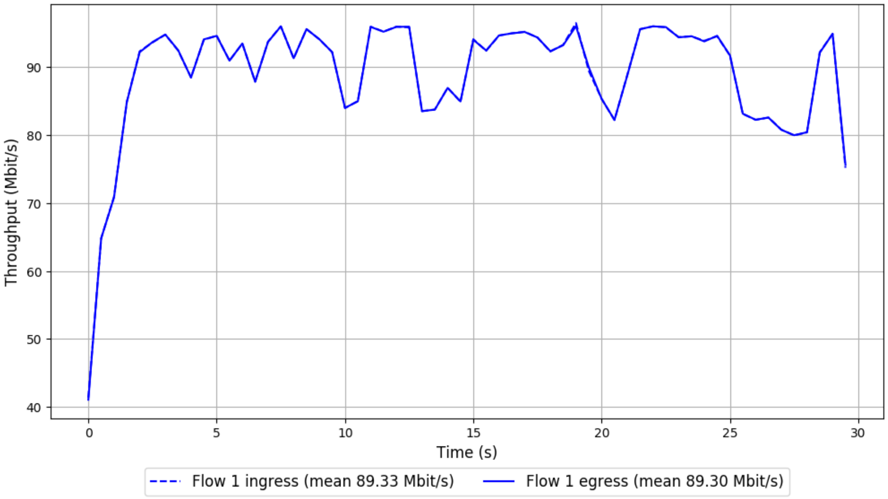
Run 5: Report of PCC — Data Link

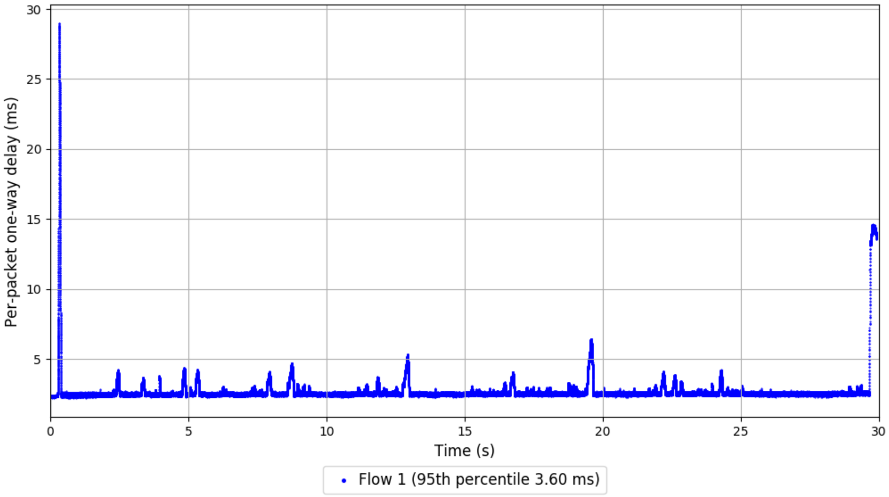




```
Run 6: Statistics of PCC

Start at: 2018-03-20 16:06:27
End at: 2018-03-20 16:06:57
Local clock offset: -12.72 ms
Remote clock offset: -16.024 ms

# Below is generated by plot.py at 2018-03-20 18:12:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.30 Mbit/s
95th percentile per-packet one-way delay: 3.597 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 89.30 Mbit/s
95th percentile per-packet one-way delay: 3.597 ms
Loss rate: 0.00%
```

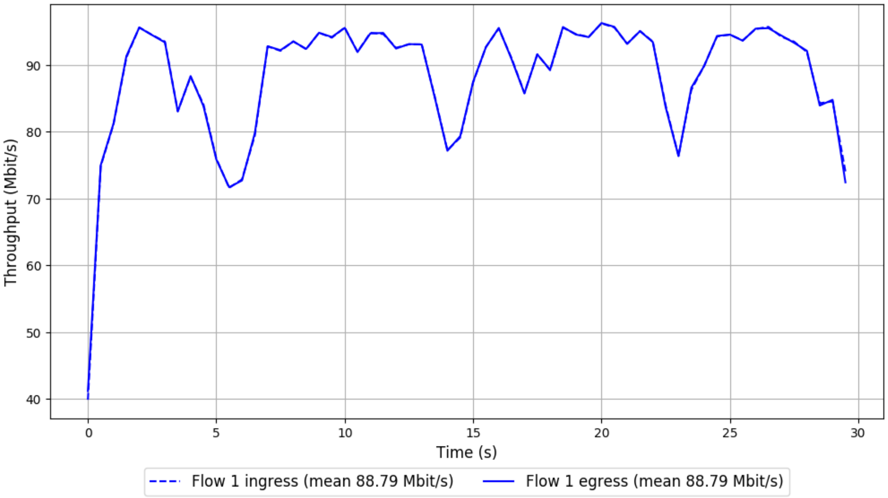
Run 6: Report of PCC — Data Link

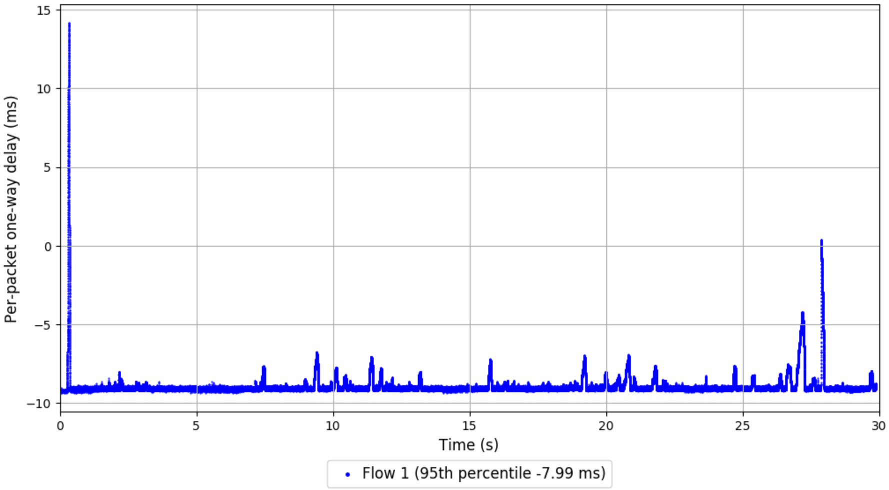




```
Run 7: Statistics of PCC

Start at: 2018-03-20 16:27:03
End at: 2018-03-20 16:27:33
Local clock offset: -11.835 ms
Remote clock offset: -28.108 ms

# Below is generated by plot.py at 2018-03-20 18:12:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.79 Mbit/s
95th percentile per-packet one-way delay: -7.987 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 88.79 Mbit/s
95th percentile per-packet one-way delay: -7.987 ms
Loss rate: 0.00%
```

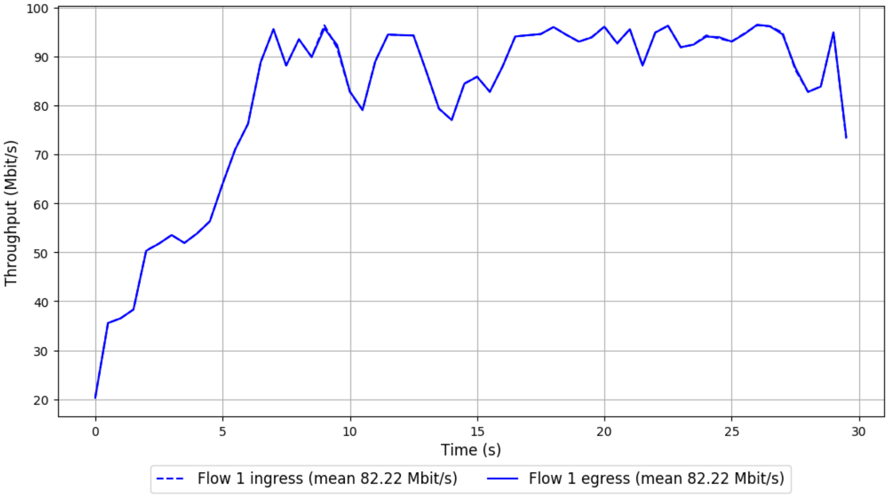
Run 7: Report of PCC — Data Link

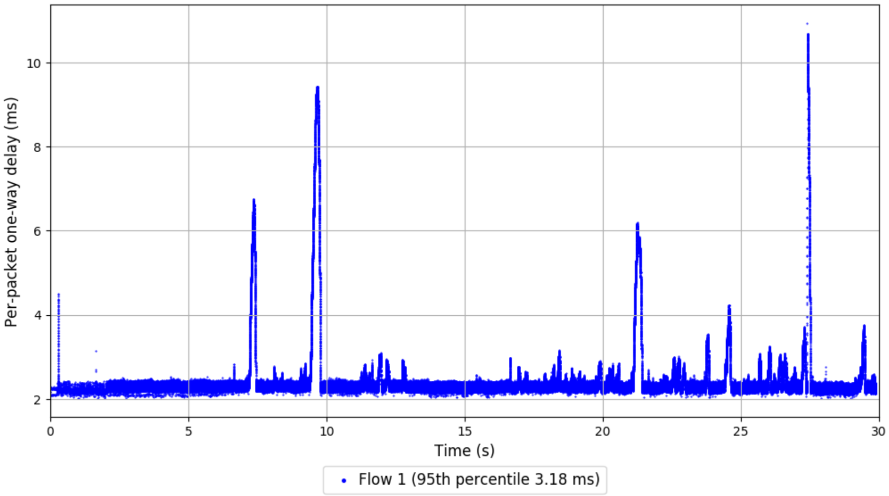




```
Run 8: Statistics of PCC

Start at: 2018-03-20 16:47:38
End at: 2018-03-20 16:48:08
Local clock offset: -15.097 ms
Remote clock offset: -14.34 ms

# Below is generated by plot.py at 2018-03-20 18:12:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 82.22 Mbit/s
95th percentile per-packet one-way delay: 3.184 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 82.22 Mbit/s
95th percentile per-packet one-way delay: 3.184 ms
Loss rate: 0.00%
```

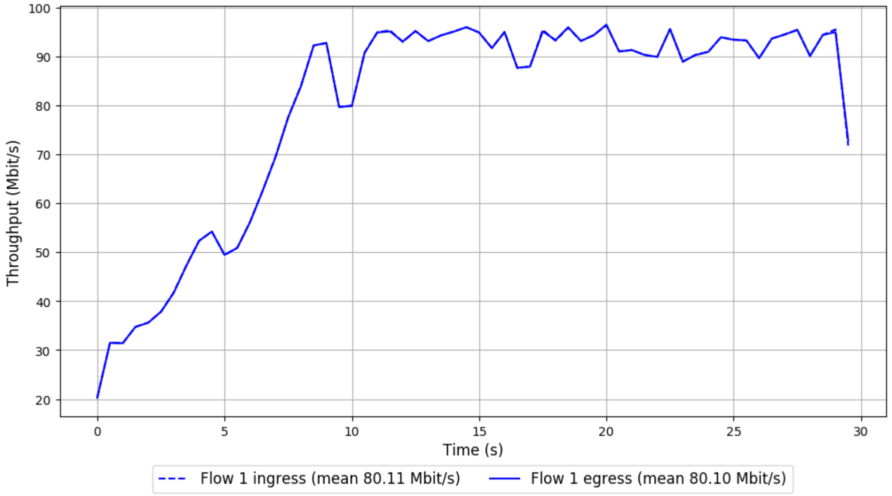
Run 8: Report of PCC — Data Link

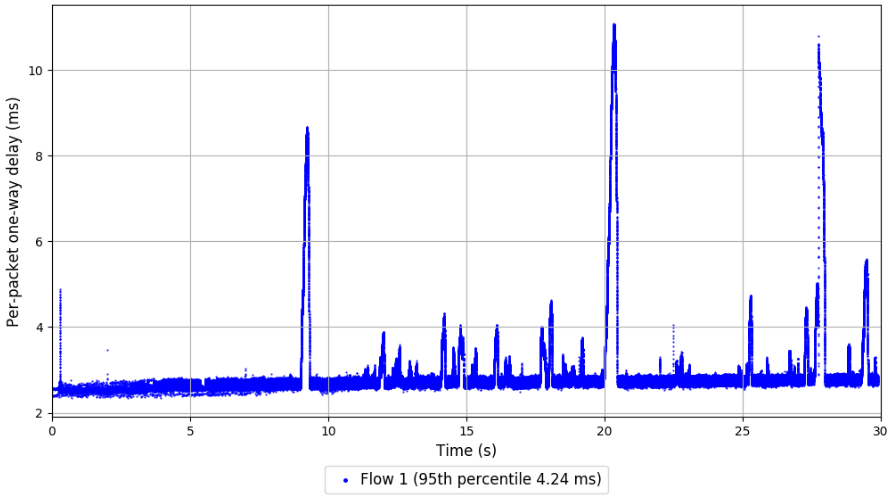




```
Run 9: Statistics of PCC

Start at: 2018-03-20 17:08:12
End at: 2018-03-20 17:08:42
Local clock offset: -16.091 ms
Remote clock offset: -13.981 ms

# Below is generated by plot.py at 2018-03-20 18:12:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 80.10 Mbit/s
95th percentile per-packet one-way delay: 4.241 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 80.10 Mbit/s
95th percentile per-packet one-way delay: 4.241 ms
Loss rate: 0.02%
```

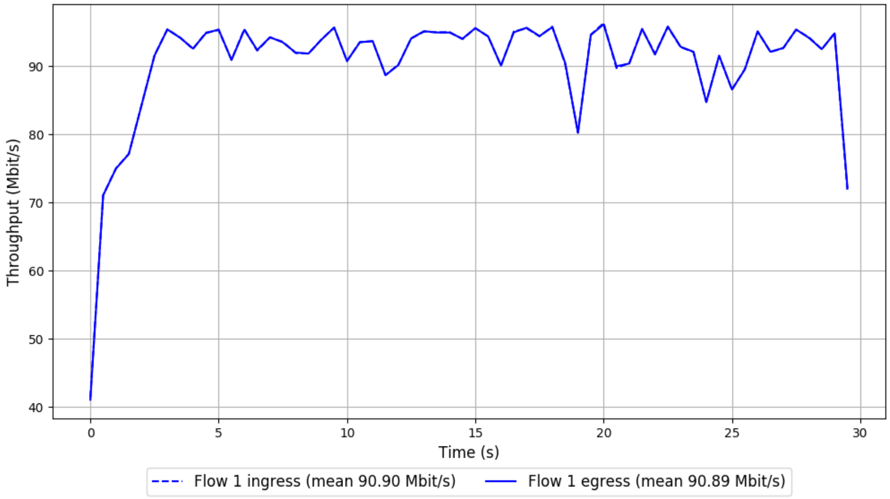
Run 9: Report of PCC — Data Link

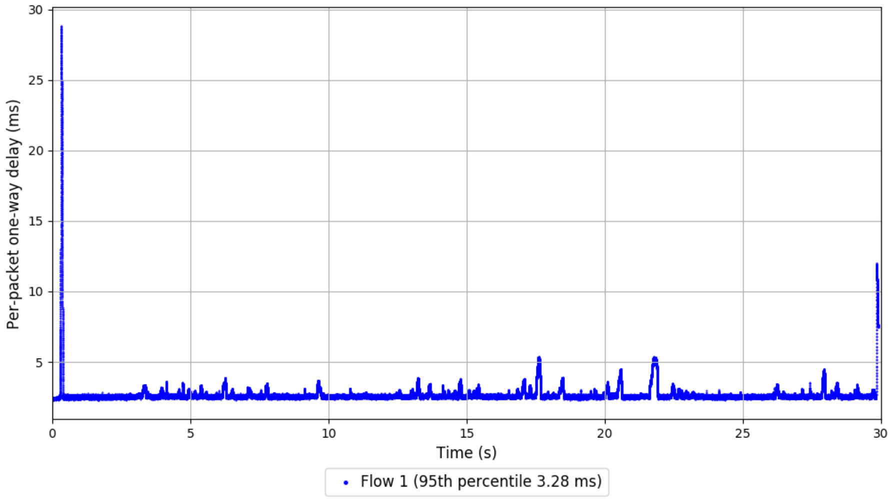




```
Run 10: Statistics of PCC

Start at: 2018-03-20 17:28:39
End at: 2018-03-20 17:29:09
Local clock offset: -14.098 ms
Remote clock offset: -13.901 ms

# Below is generated by plot.py at 2018-03-20 18:12:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.89 Mbit/s
95th percentile per-packet one-way delay: 3.279 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 90.89 Mbit/s
95th percentile per-packet one-way delay: 3.279 ms
Loss rate: 0.00%
```

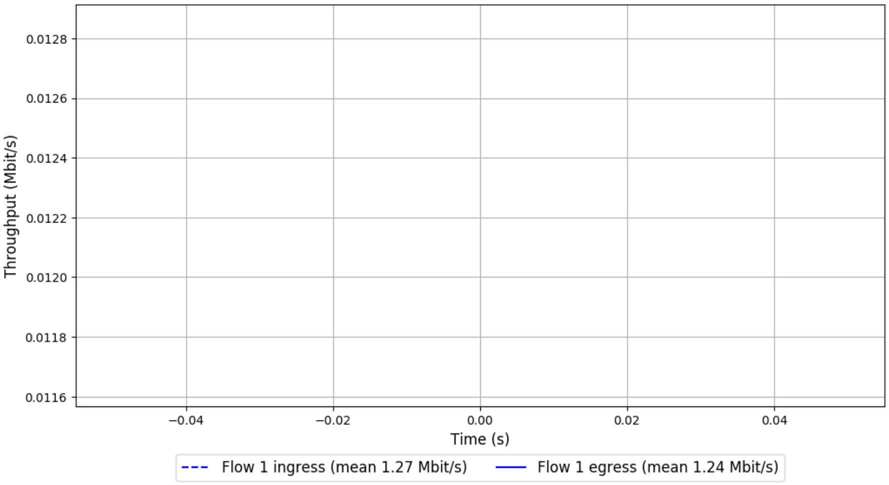
Run 10: Report of PCC — Data Link

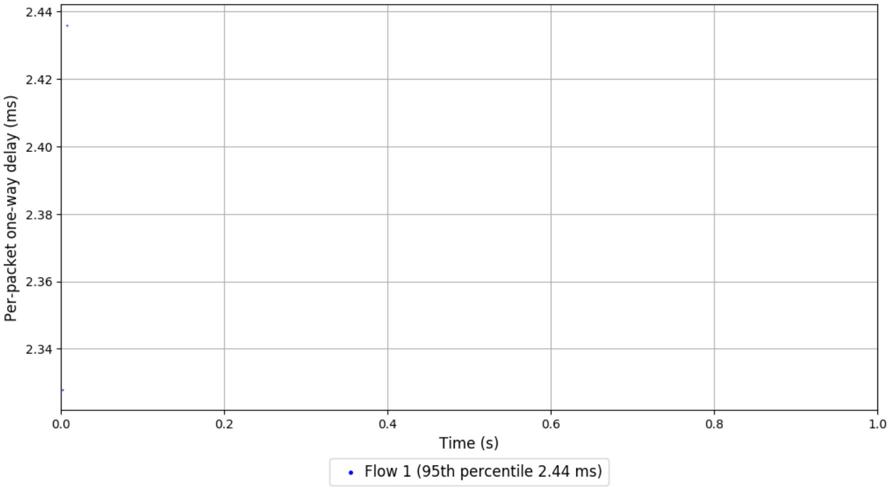




```
Run 1: Statistics of QUIC Cubic

Start at: 2018-03-20 14:11:27
End at: 2018-03-20 14:11:57
Local clock offset: -6.523 ms
Remote clock offset: -6.658 ms
```

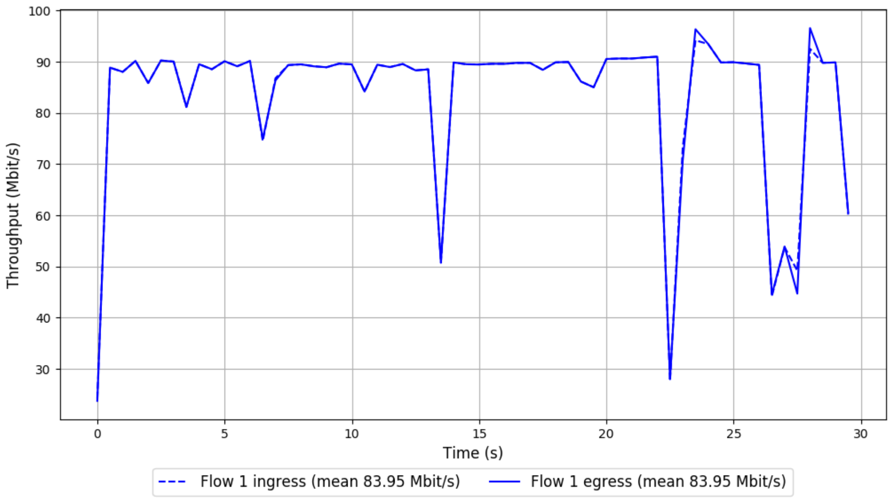
Run 1: Report of QUIC Cubic — Data Link

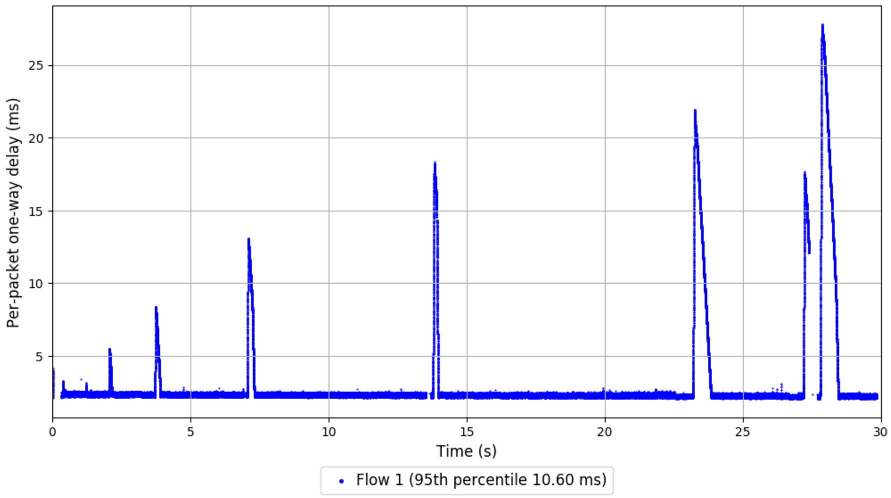




```
Run 2: Statistics of QUIC Cubic

Start at: 2018-03-20 14:31:47
End at: 2018-03-20 14:32:17
Local clock offset: -14.897 ms
Remote clock offset: -6.784 ms

# Below is generated by plot.py at 2018-03-20 18:12:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 83.95 Mbit/s
95th percentile per-packet one-way delay: 10.602 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 83.95 Mbit/s
95th percentile per-packet one-way delay: 10.602 ms
Loss rate: 0.00%
```

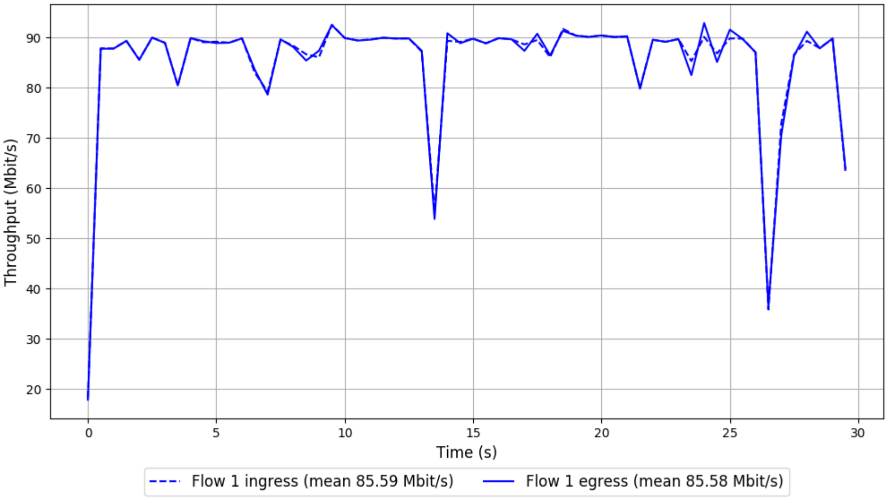
Run 2: Report of QUIC Cubic — Data Link

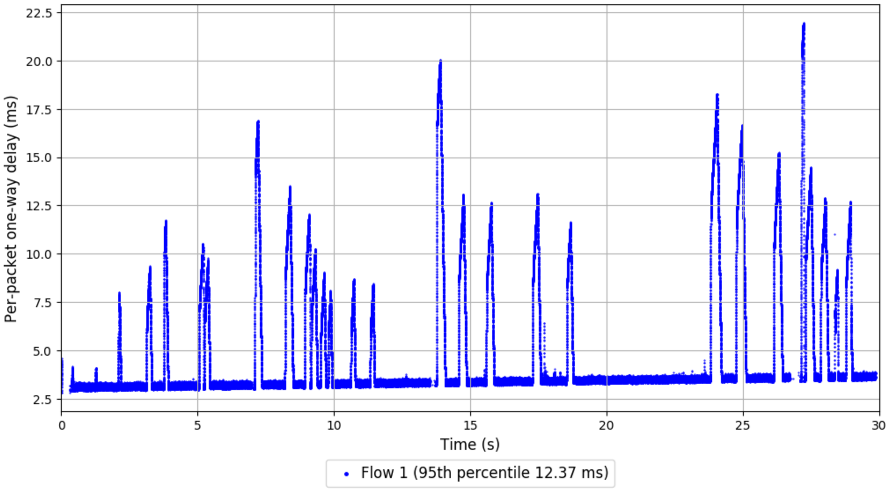




```
Run 3: Statistics of QUIC Cubic

Start at: 2018-03-20 14:52:14
End at: 2018-03-20 14:52:44
Local clock offset: -16.719 ms
Remote clock offset: -11.975 ms

# Below is generated by plot.py at 2018-03-20 18:12:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 85.58 Mbit/s
95th percentile per-packet one-way delay: 12.367 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 85.58 Mbit/s
95th percentile per-packet one-way delay: 12.367 ms
Loss rate: 0.01%
```

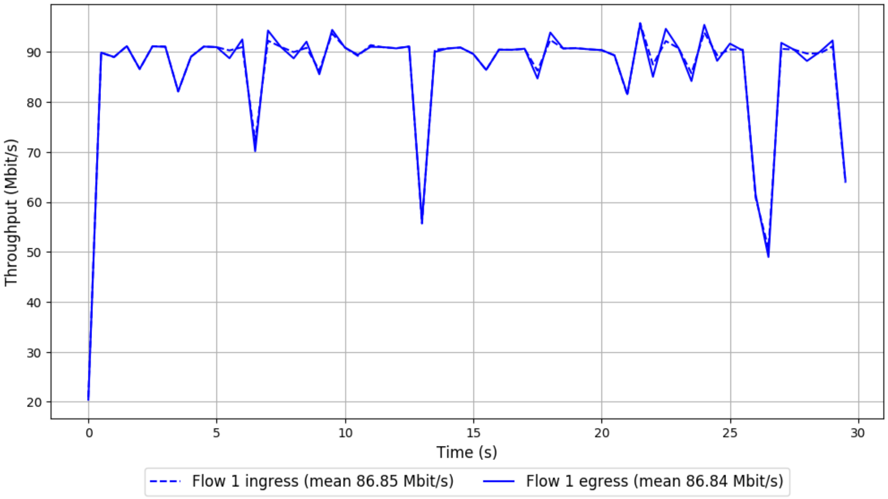
Run 3: Report of QUIC Cubic — Data Link

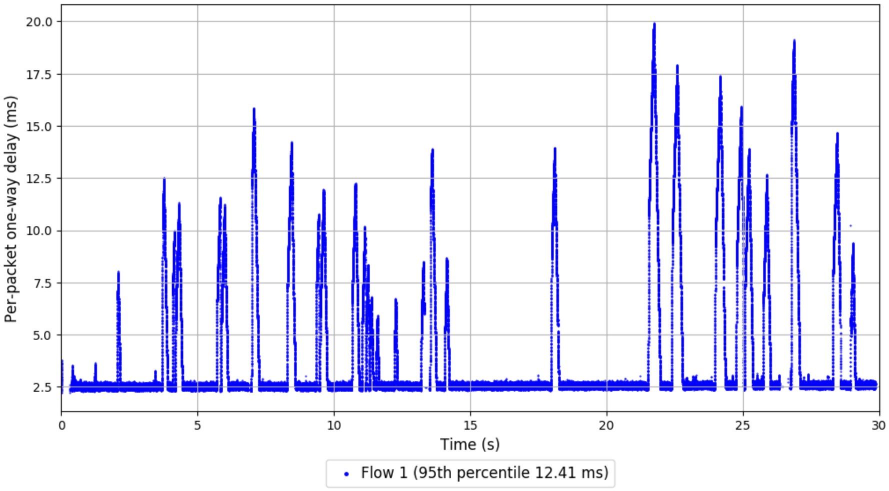




```
Run 4: Statistics of QUIC Cubic

Start at: 2018-03-20 15:12:43
End at: 2018-03-20 15:13:13
Local clock offset: -11.729 ms
Remote clock offset: -17.974 ms

# Below is generated by plot.py at 2018-03-20 18:13:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.84 Mbit/s
95th percentile per-packet one-way delay: 12.409 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 86.84 Mbit/s
95th percentile per-packet one-way delay: 12.409 ms
Loss rate: 0.01%
```

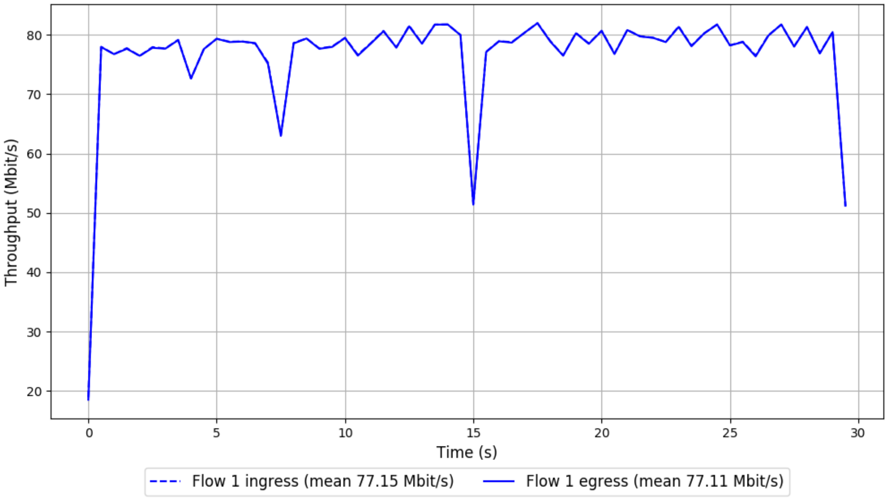
Run 4: Report of QUIC Cubic — Data Link

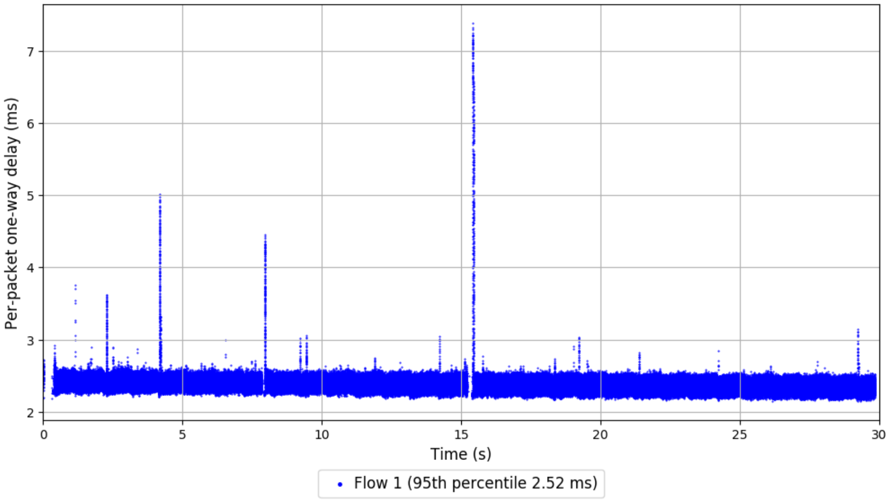




```
Run 5: Statistics of QUIC Cubic

Start at: 2018-03-20 15:33:16
End at: 2018-03-20 15:33:46
Local clock offset: -13.06 ms
Remote clock offset: -16.053 ms

# Below is generated by plot.py at 2018-03-20 18:13:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 77.11 Mbit/s
95th percentile per-packet one-way delay: 2.516 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 77.11 Mbit/s
95th percentile per-packet one-way delay: 2.516 ms
Loss rate: 0.06%
```

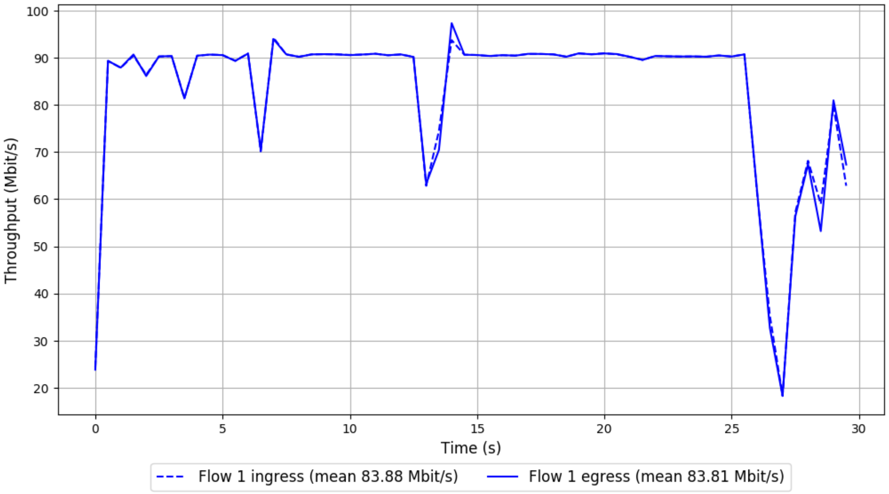
Run 5: Report of QUIC Cubic — Data Link

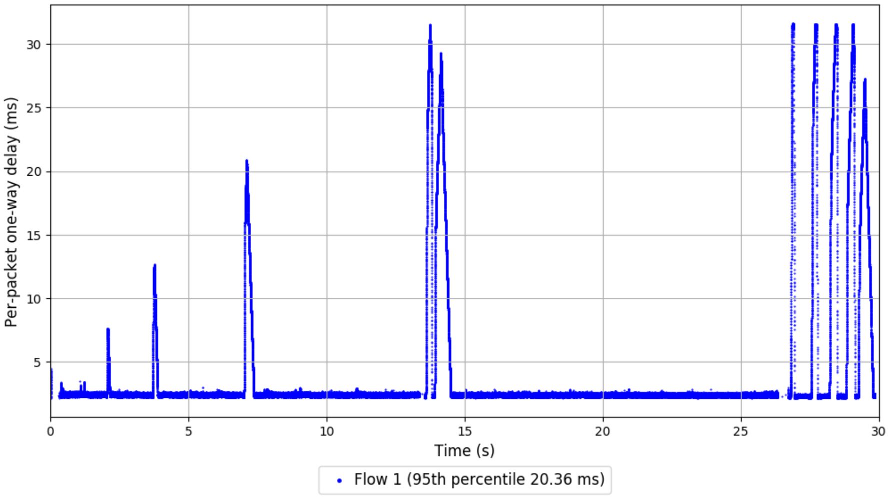




```
Run 6: Statistics of QUIC Cubic

Start at: 2018-03-20 15:53:57
End at: 2018-03-20 15:54:27
Local clock offset: -14.551 ms
Remote clock offset: -16.093 ms

# Below is generated by plot.py at 2018-03-20 18:14:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 83.81 Mbit/s
95th percentile per-packet one-way delay: 20.362 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 83.81 Mbit/s
95th percentile per-packet one-way delay: 20.362 ms
Loss rate: 0.09%
```

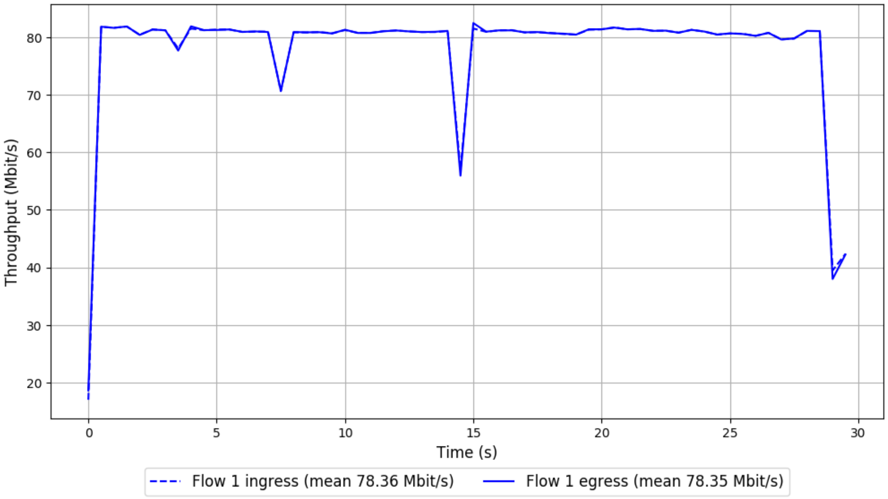
Run 6: Report of QUIC Cubic — Data Link

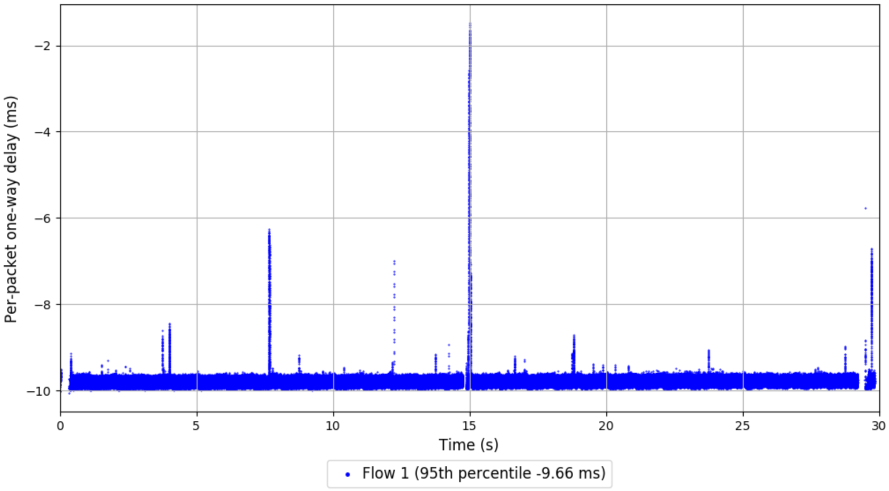




```
Run 7: Statistics of QUIC Cubic

Start at: 2018-03-20 16:14:34
End at: 2018-03-20 16:15:04
Local clock offset: -12.151 ms
Remote clock offset: -28.559 ms

# Below is generated by plot.py at 2018-03-20 18:14:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.35 Mbit/s
95th percentile per-packet one-way delay: -9.657 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 78.35 Mbit/s
95th percentile per-packet one-way delay: -9.657 ms
Loss rate: 0.00%
```

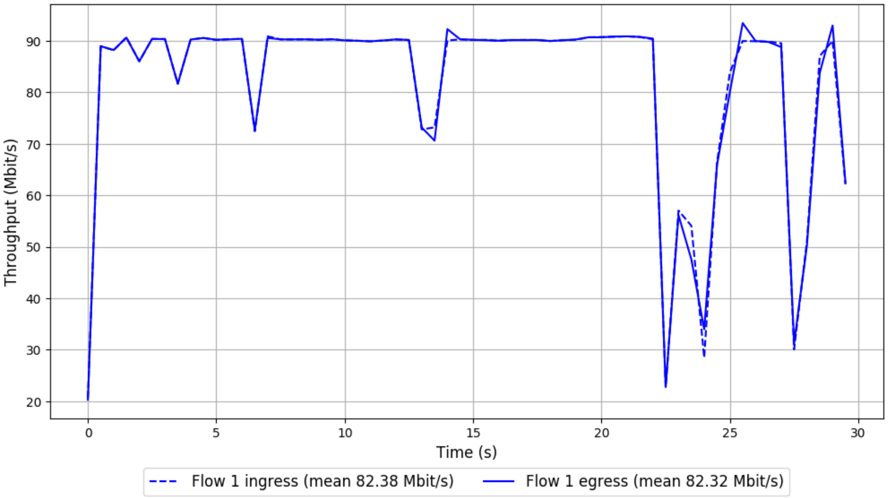
Run 7: Report of QUIC Cubic — Data Link

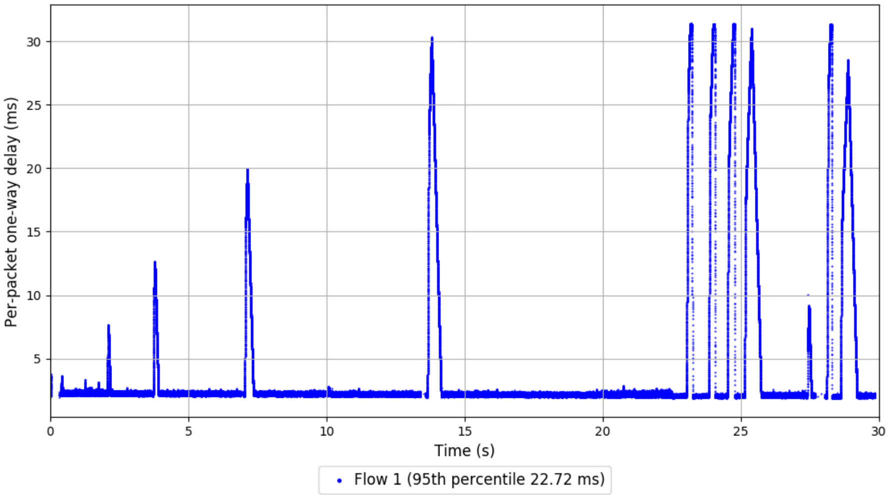




```
Run 8: Statistics of QUIC Cubic

Start at: 2018-03-20 16:35:11
End at: 2018-03-20 16:35:41
Local clock offset: -12.799 ms
Remote clock offset: -15.101 ms

# Below is generated by plot.py at 2018-03-20 18:14:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 82.32 Mbit/s
95th percentile per-packet one-way delay: 22.721 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 82.32 Mbit/s
95th percentile per-packet one-way delay: 22.721 ms
Loss rate: 0.06%
```

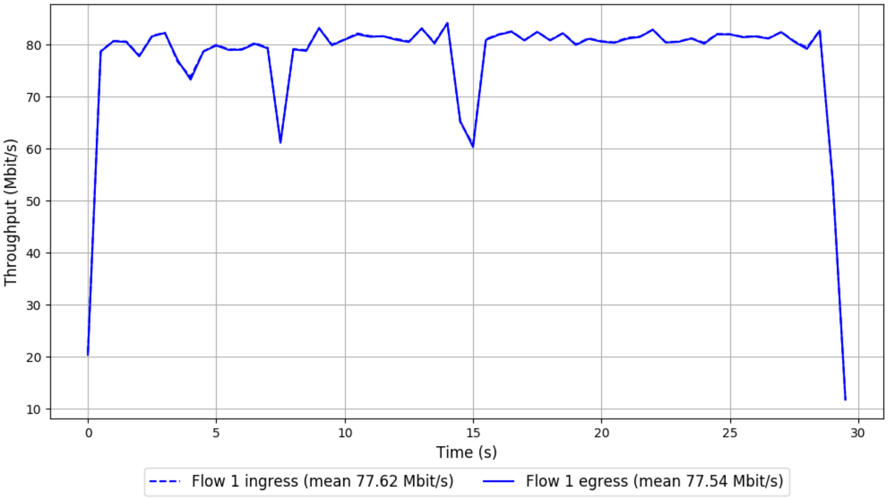
Run 8: Report of QUIC Cubic — Data Link

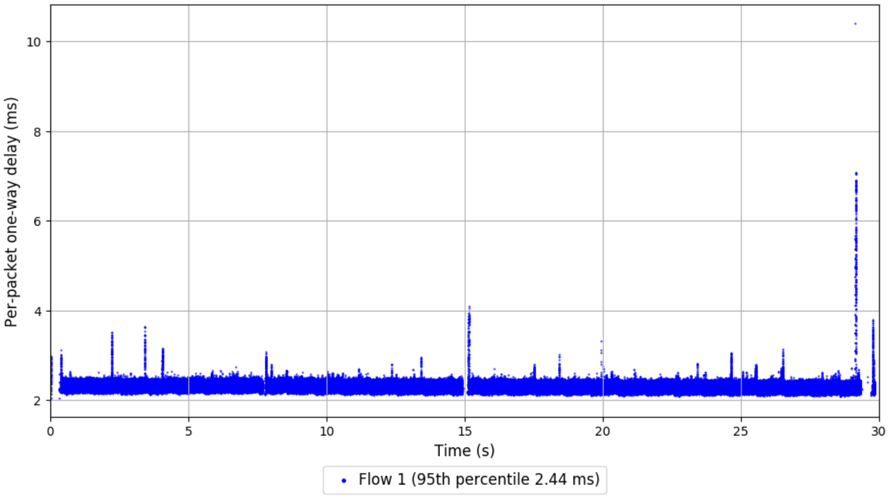




```
Run 9: Statistics of QUIC Cubic

Start at: 2018-03-20 16:55:43
End at: 2018-03-20 16:56:13
Local clock offset: -15.866 ms
Remote clock offset: -14.143 ms

# Below is generated by plot.py at 2018-03-20 18:14:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 77.54 Mbit/s
95th percentile per-packet one-way delay: 2.444 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 77.54 Mbit/s
95th percentile per-packet one-way delay: 2.444 ms
Loss rate: 0.11%
```

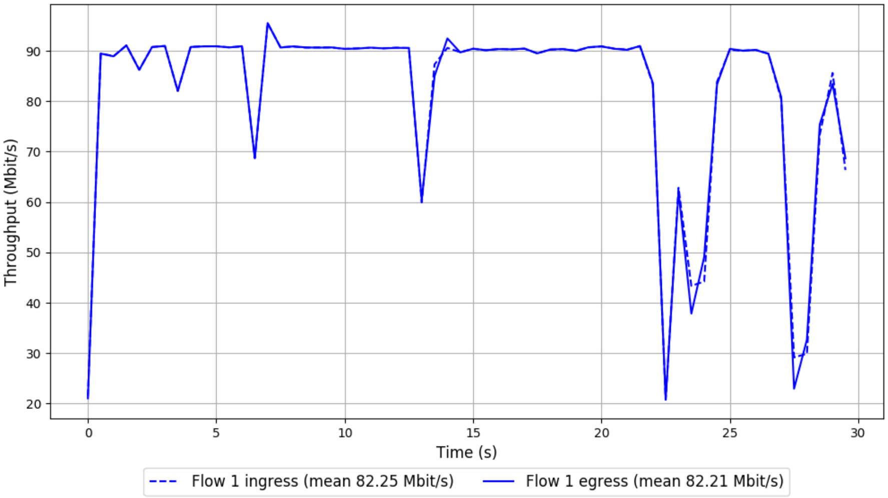
Run 9: Report of QUIC Cubic — Data Link

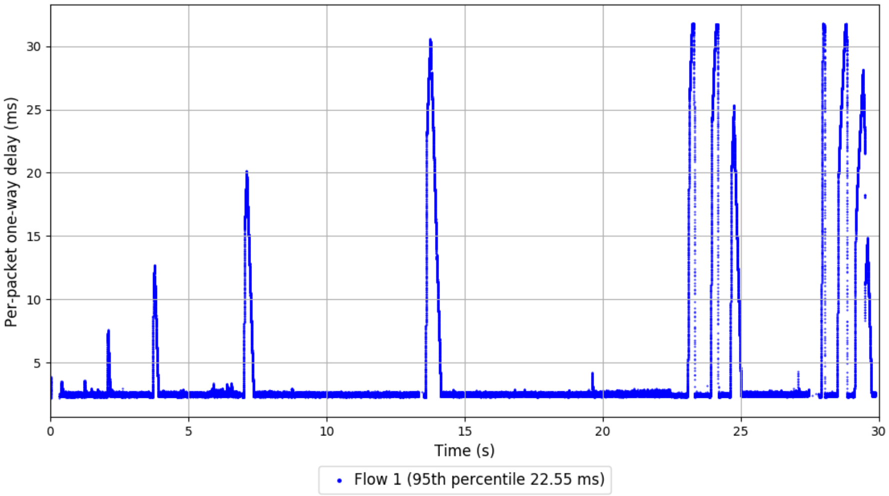




```
Run 10: Statistics of QUIC Cubic

Start at: 2018-03-20 17:16:17
End at: 2018-03-20 17:16:47
Local clock offset: -14.581 ms
Remote clock offset: -14.006 ms

# Below is generated by plot.py at 2018-03-20 18:14:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 82.21 Mbit/s
95th percentile per-packet one-way delay: 22.553 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 82.21 Mbit/s
95th percentile per-packet one-way delay: 22.553 ms
Loss rate: 0.05%
```

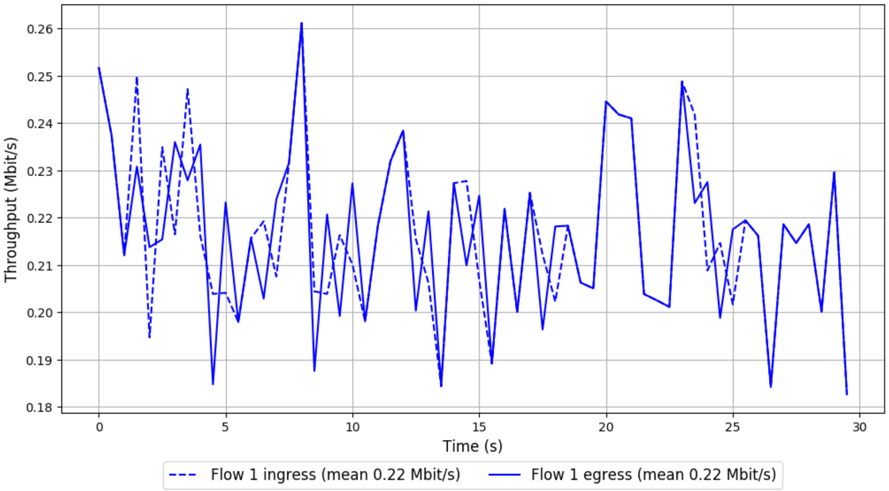
Run 10: Report of QUIC Cubic — Data Link

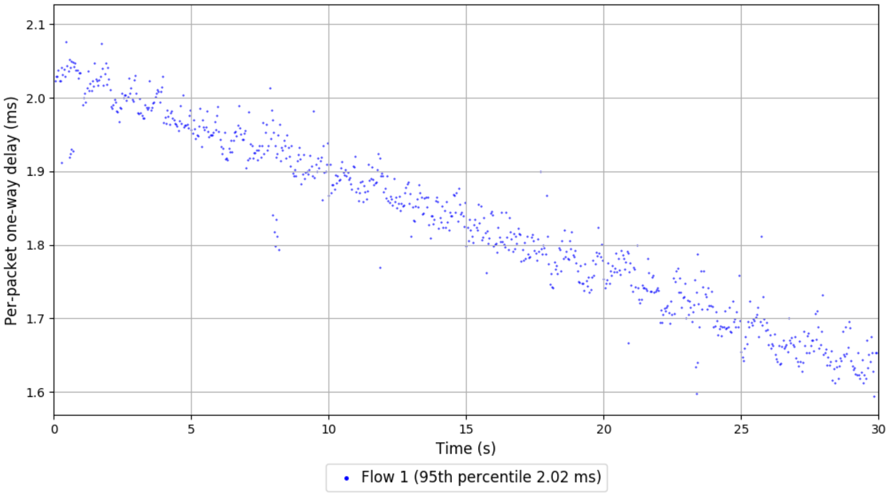




```
Run 1: Statistics of SCReAM

Start at: 2018-03-20 14:15:53
End at: 2018-03-20 14:16:23
Local clock offset: -7.01 ms
Remote clock offset: -6.69 ms

# Below is generated by plot.py at 2018-03-20 18:14:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.023 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.023 ms
Loss rate: 0.00%
```

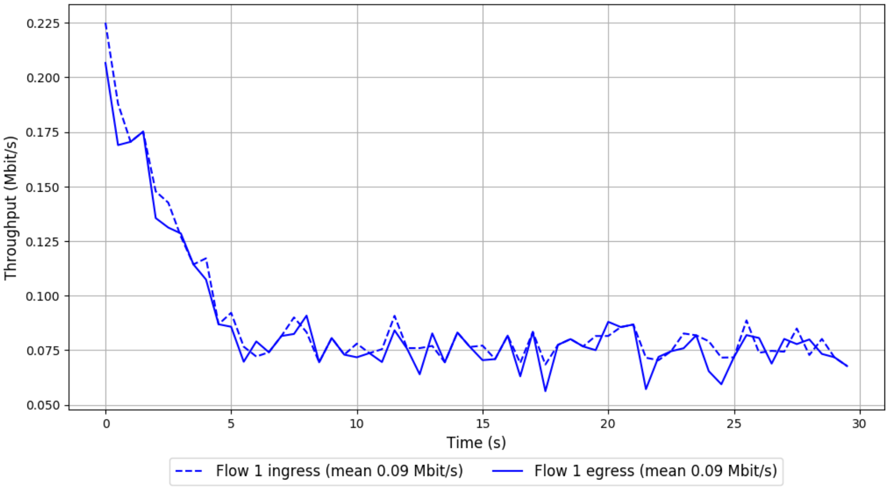
Run 1: Report of SCReAM — Data Link

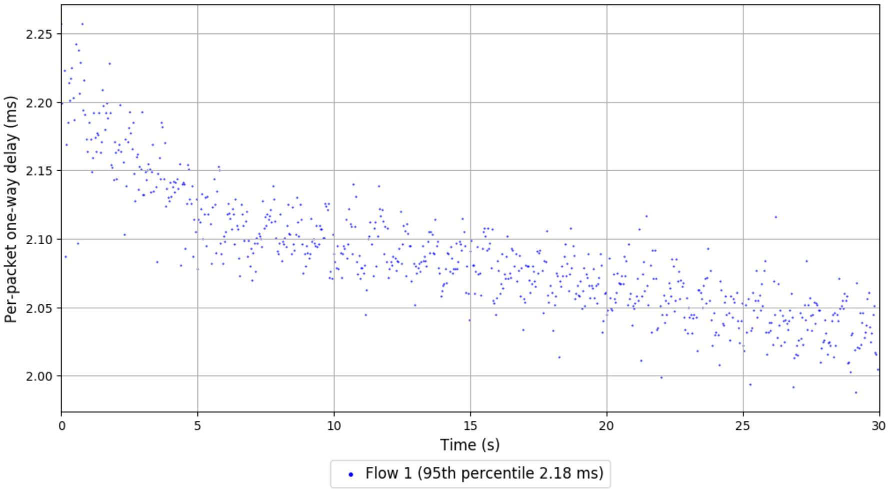




```
Run 2: Statistics of SCReAM

Start at: 2018-03-20 14:36:17
End at: 2018-03-20 14:36:48
Local clock offset: -16.046 ms
Remote clock offset: -6.869 ms

# Below is generated by plot.py at 2018-03-20 18:14:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 2.177 ms
Loss rate: 3.32%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 2.177 ms
Loss rate: 3.32%
```

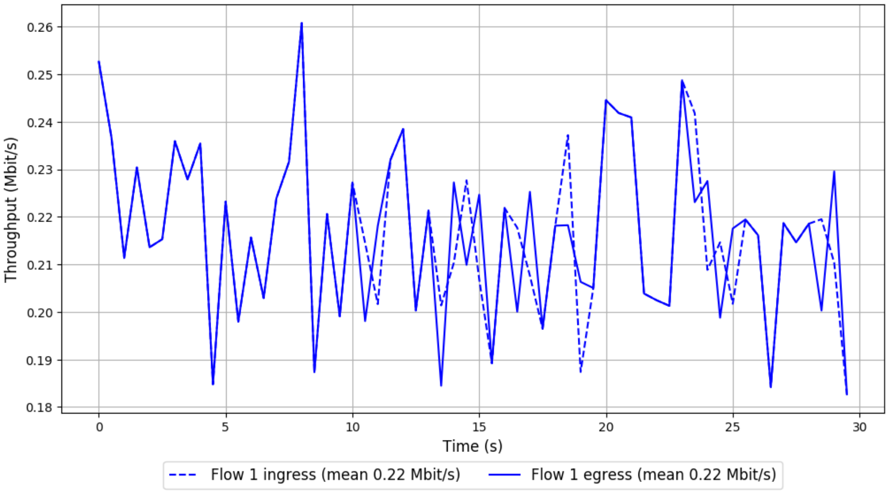
Run 2: Report of SCReAM — Data Link

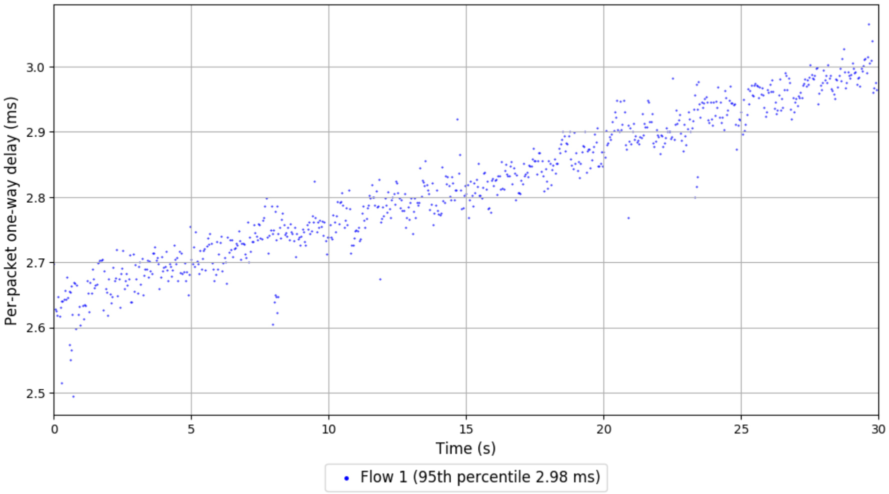




```
Run 3: Statistics of SCReAM

Start at: 2018-03-20 14:56:46
End at: 2018-03-20 14:57:16
Local clock offset: -14.212 ms
Remote clock offset: -14.013 ms

# Below is generated by plot.py at 2018-03-20 18:14:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.983 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.983 ms
Loss rate: 0.00%
```

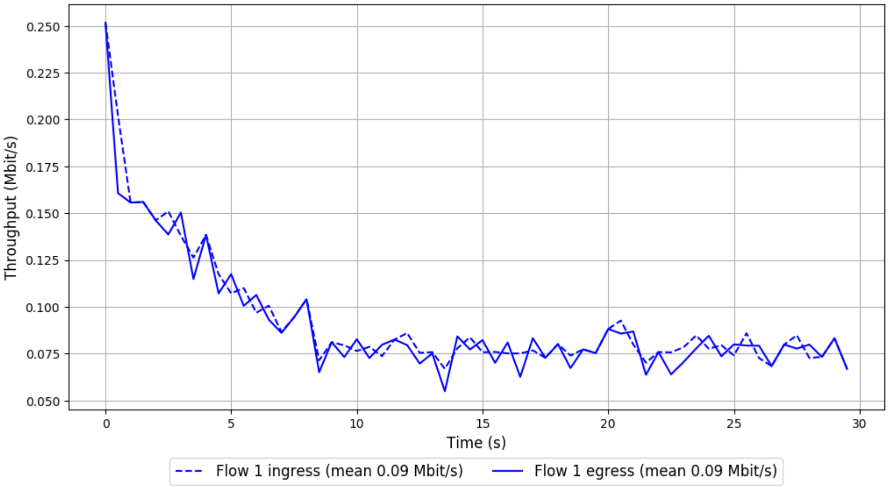
Run 3: Report of SCReAM — Data Link

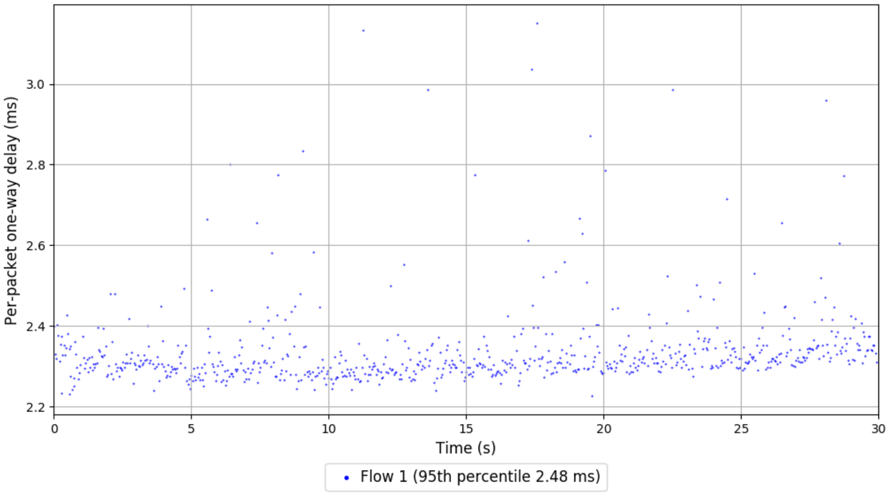




```
Run 4: Statistics of SCReAM

Start at: 2018-03-20 15:17:17
End at: 2018-03-20 15:17:47
Local clock offset: -11.667 ms
Remote clock offset: -18.744 ms

# Below is generated by plot.py at 2018-03-20 18:14:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 2.480 ms
Loss rate: 2.21%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 2.480 ms
Loss rate: 2.21%
```

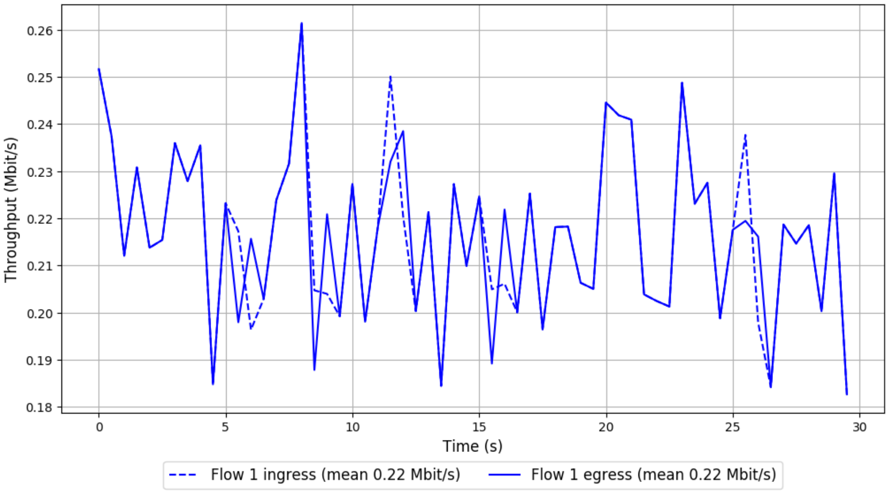
Run 4: Report of SCReAM — Data Link

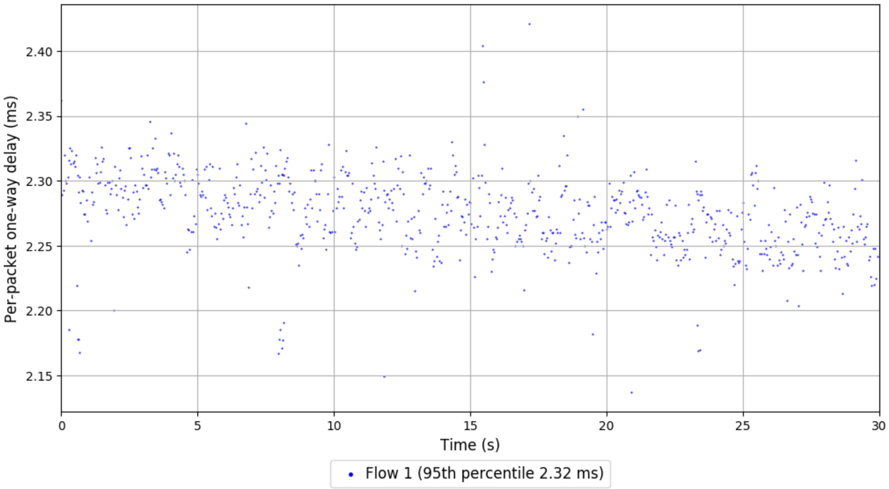




```
Run 5: Statistics of SCReAM

Start at: 2018-03-20 15:37:51
End at: 2018-03-20 15:38:21
Local clock offset: -13.44 ms
Remote clock offset: -15.874 ms

# Below is generated by plot.py at 2018-03-20 18:14:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.318 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.318 ms
Loss rate: 0.00%
```

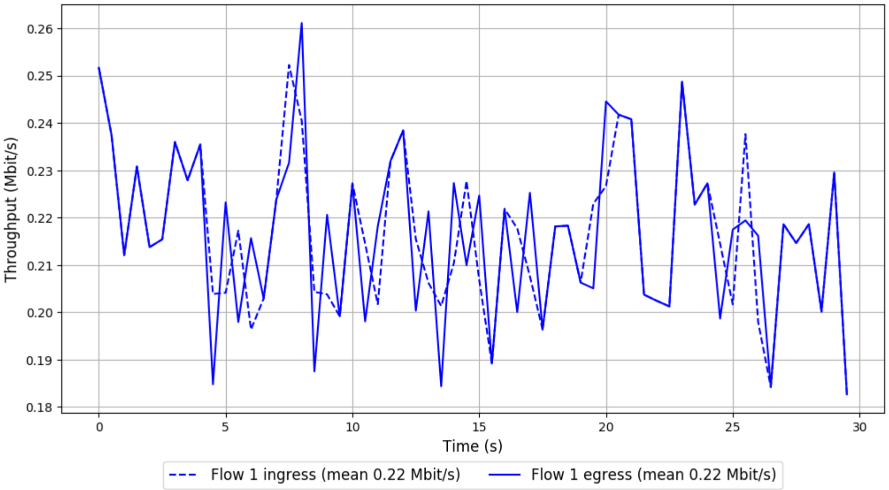
Run 5: Report of SCReAM — Data Link

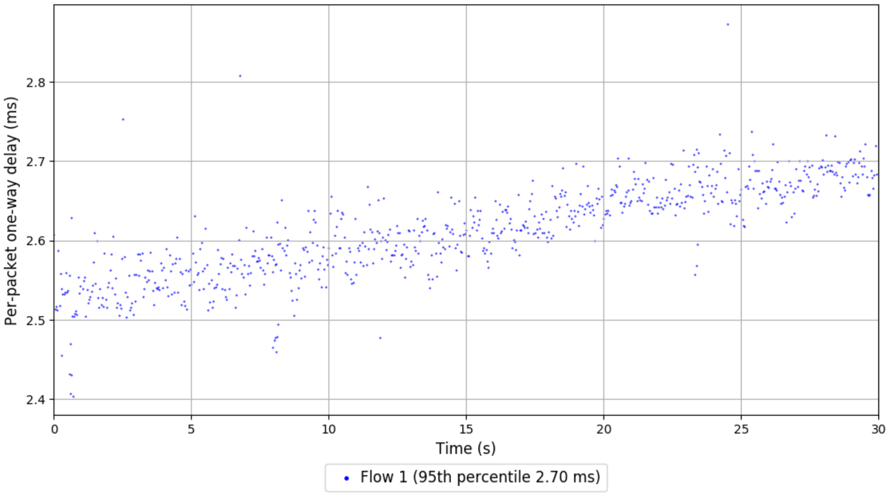




```
Run 6: Statistics of SCReAM

Start at: 2018-03-20 15:58:31
End at: 2018-03-20 15:59:01
Local clock offset: -14.596 ms
Remote clock offset: -15.963 ms

# Below is generated by plot.py at 2018-03-20 18:14:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.697 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.697 ms
Loss rate: 0.00%
```

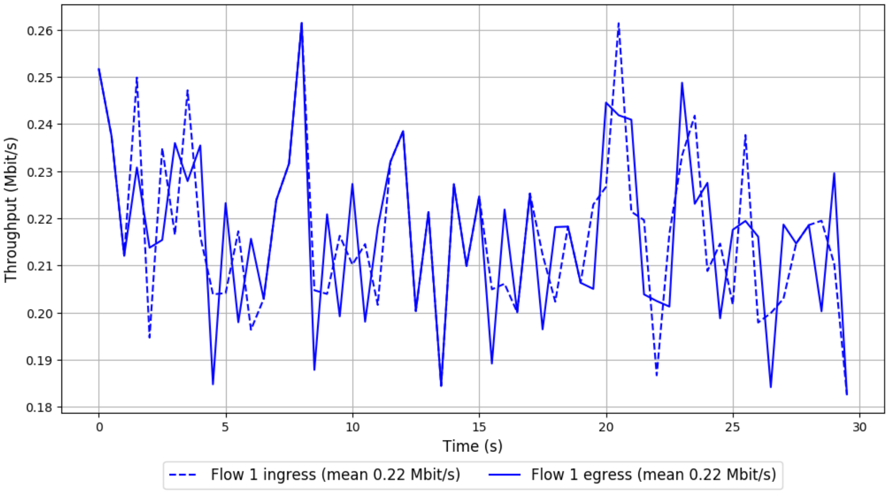
Run 6: Report of SCReAM — Data Link

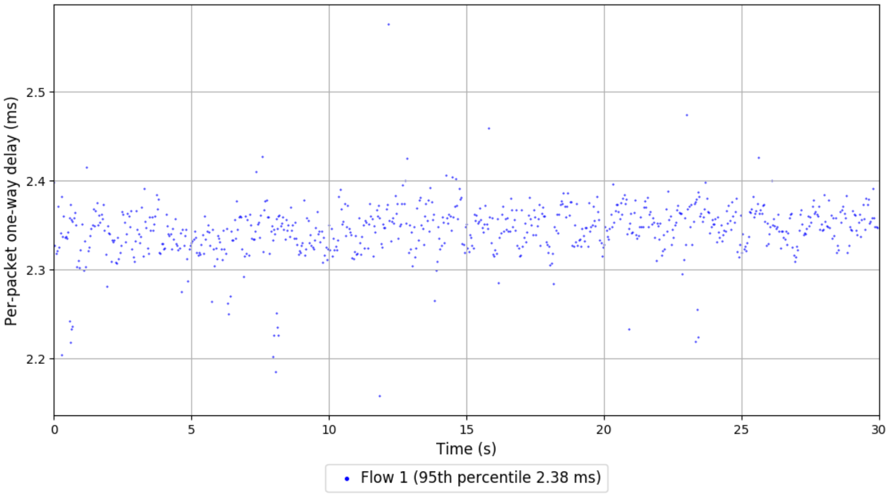




```
Run 7: Statistics of SCReAM

Start at: 2018-03-20 16:19:06
End at: 2018-03-20 16:19:36
Local clock offset: -11.887 ms
Remote clock offset: -16.31 ms

# Below is generated by plot.py at 2018-03-20 18:14:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.381 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.381 ms
Loss rate: 0.00%
```

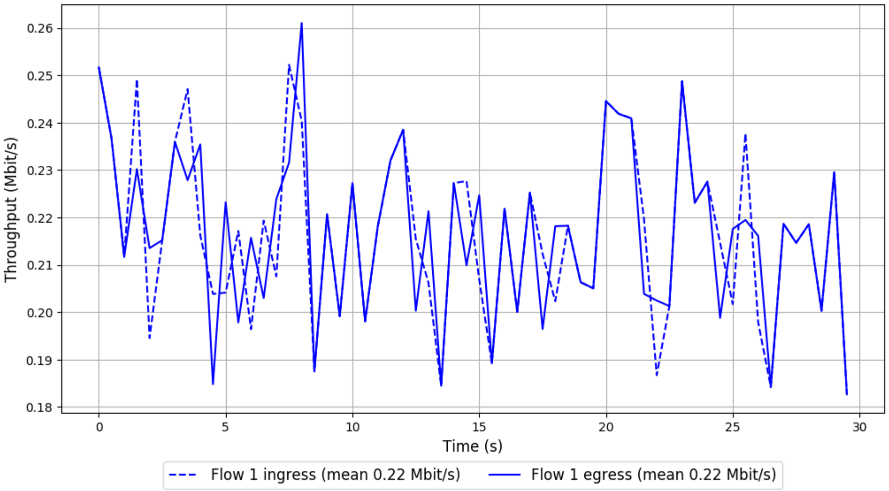
Run 7: Report of SCReAM — Data Link

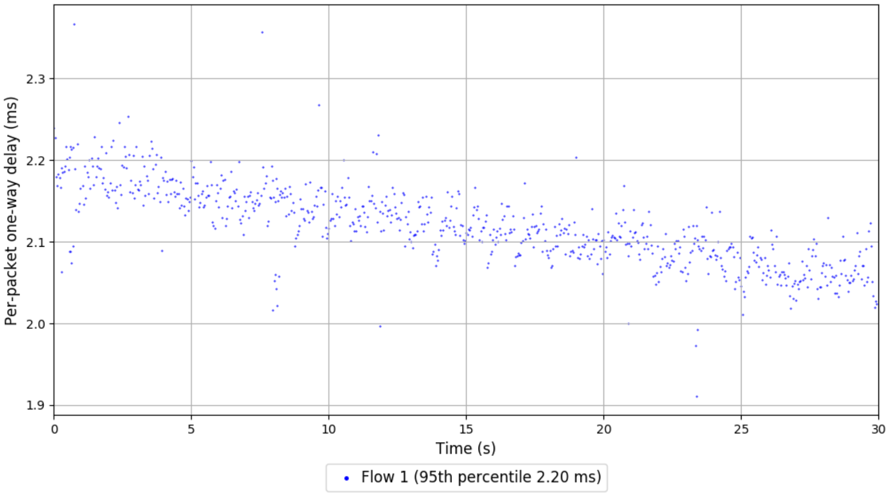




```
Run 8: Statistics of SCReAM

Start at: 2018-03-20 16:39:40
End at: 2018-03-20 16:40:10
Local clock offset: -13.89 ms
Remote clock offset: -14.716 ms

# Below is generated by plot.py at 2018-03-20 18:14:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.199 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.199 ms
Loss rate: 0.00%
```

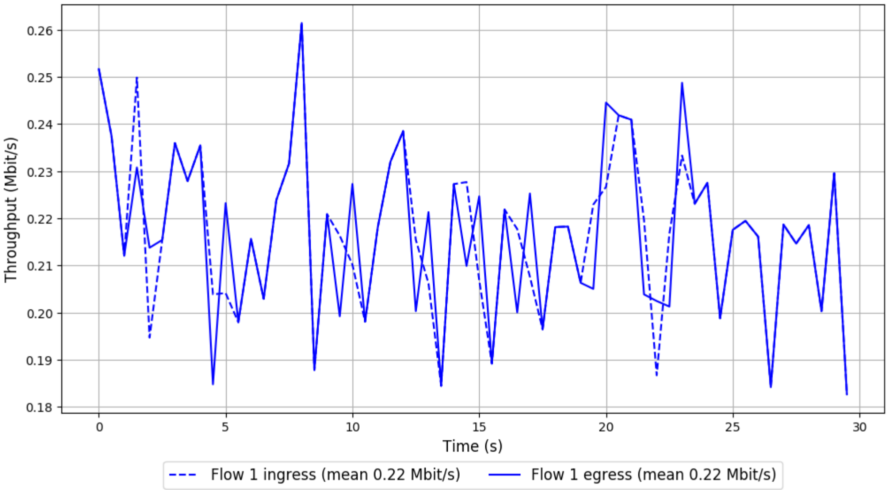
Run 8: Report of SCReAM — Data Link

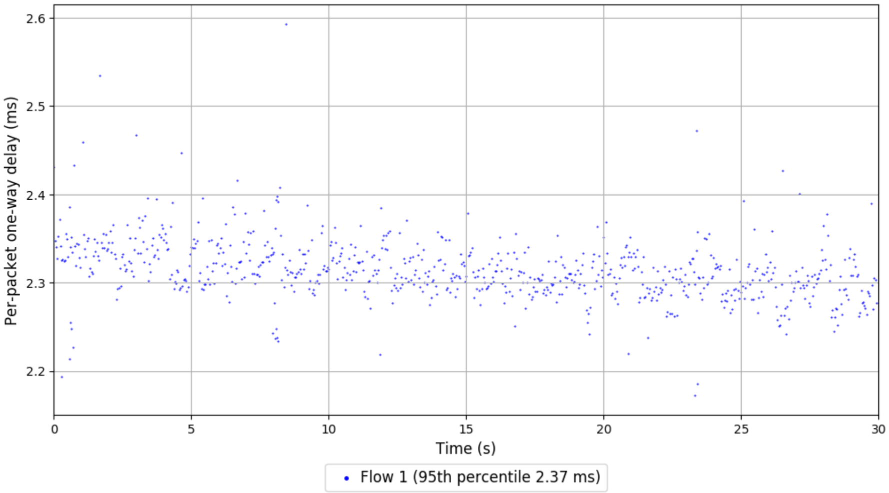




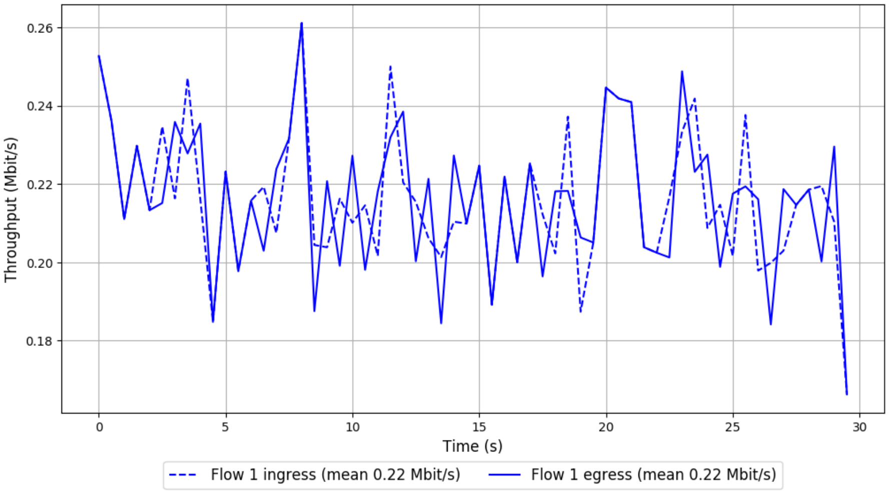
```
Run 9: Statistics of SCReAM

Start at: 2018-03-20 17:00:16
End at: 2018-03-20 17:00:46
Local clock offset: -16.291 ms
Remote clock offset: -14.035 ms

# Below is generated by plot.py at 2018-03-20 18:14:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.366 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.366 ms
Loss rate: 0.00%
```

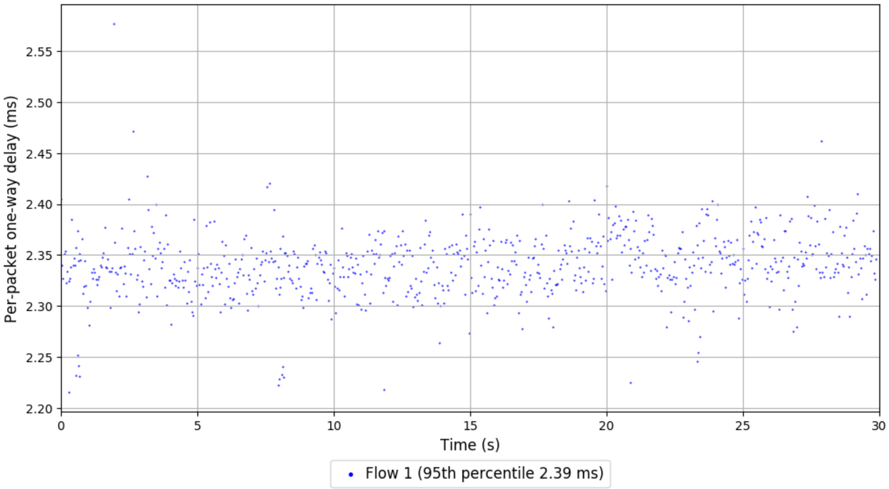
Run 9: Report of SCReAM — Data Link





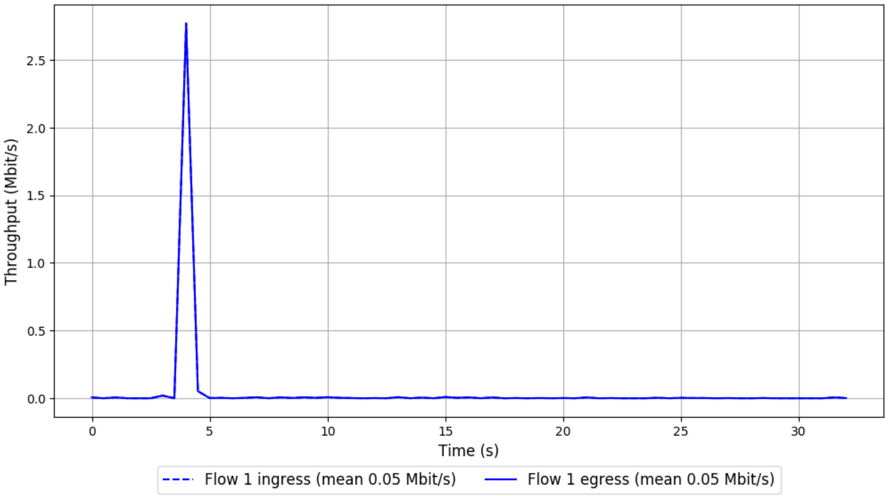
```
Run 10: Statistics of SCReAM

Start at: 2018-03-20 17:20:48
End at: 2018-03-20 17:21:18
Local clock offset: -14.224 ms
Remote clock offset: -13.951 ms

# Below is generated by plot.py at 2018-03-20 18:14:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.387 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.387 ms
Loss rate: 0.00%
```

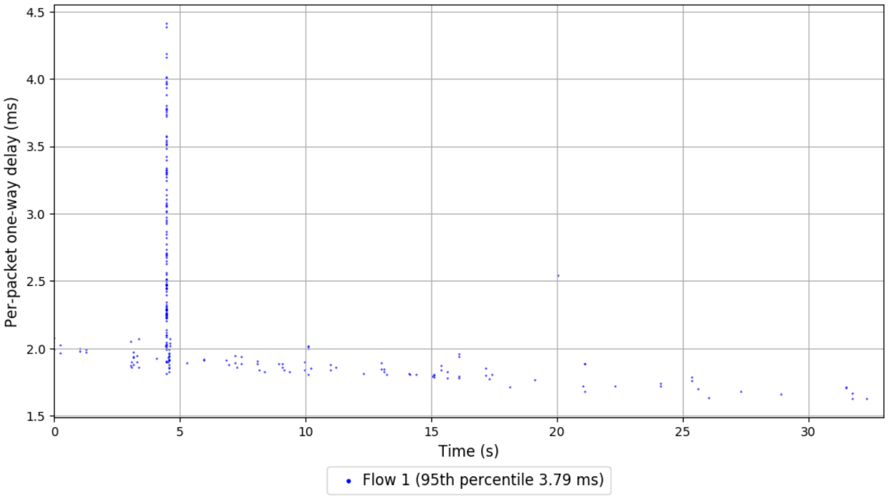

0.26
0.24
0.22
0.20
0.18
Throughput (Mbit/s)
0
5
10
15
20
25
30
Time (s)
Flow 1 ingress (mean 0.22 Mbit/s)
Flow 1 egress (mean 0.22 Mbit/s)


2.55
2.50
2.45
2.40
2.35
2.30
2.25
2.20
Per-packet one-way delay (ms)
0
5
10
15
20
25
30
Time (s)
Flow 1 (95th percentile 2.39 ms)

```
Run 1: Statistics of WebRTC media

Start at: 2018-03-20 14:19:14
End at: 2018-03-20 14:19:44
Local clock offset: -9.473 ms
Remote clock offset: -6.703 ms

# Below is generated by plot.py at 2018-03-20 18:14:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 3.785 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 3.785 ms
Loss rate: 0.00%
```

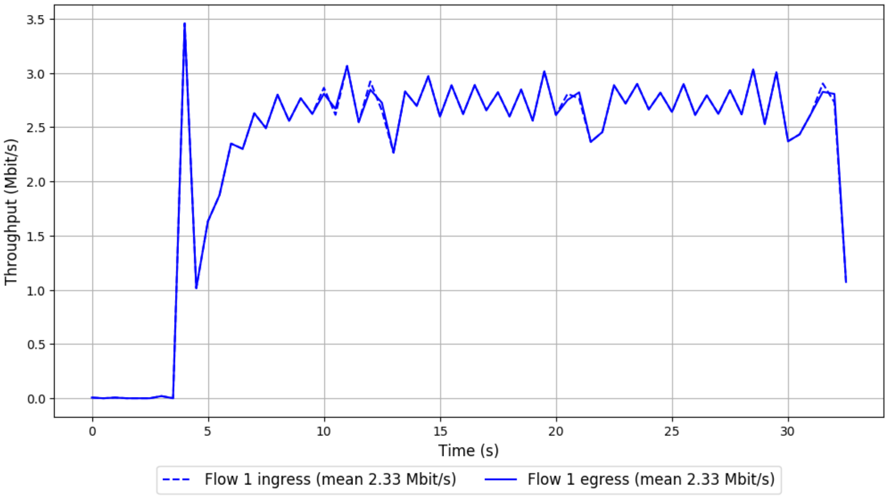
Run 1: Report of WebRTC media — Data Link

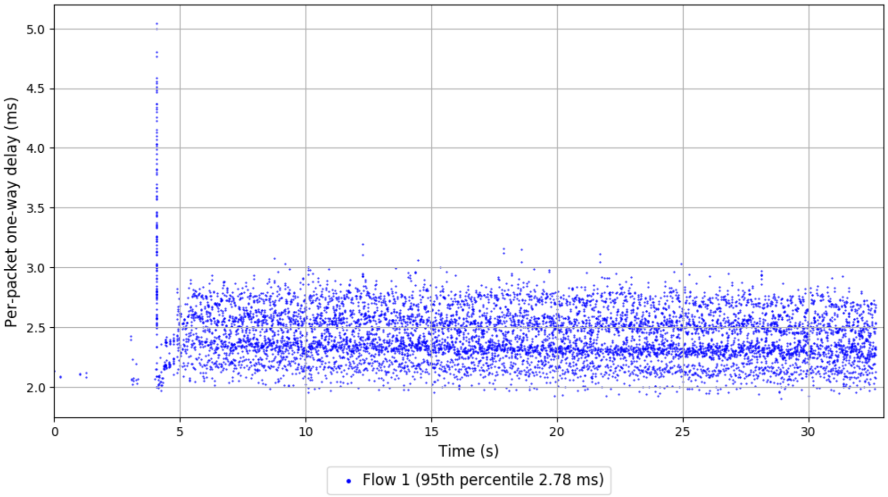




```
Run 2: Statistics of WebRTC media

Start at: 2018-03-20 14:39:40
End at: 2018-03-20 14:40:10
Local clock offset: -16.746 ms
Remote clock offset: -6.886 ms

# Below is generated by plot.py at 2018-03-20 18:14:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.33 Mbit/s
95th percentile per-packet one-way delay: 2.784 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.33 Mbit/s
95th percentile per-packet one-way delay: 2.784 ms
Loss rate: 0.00%
```

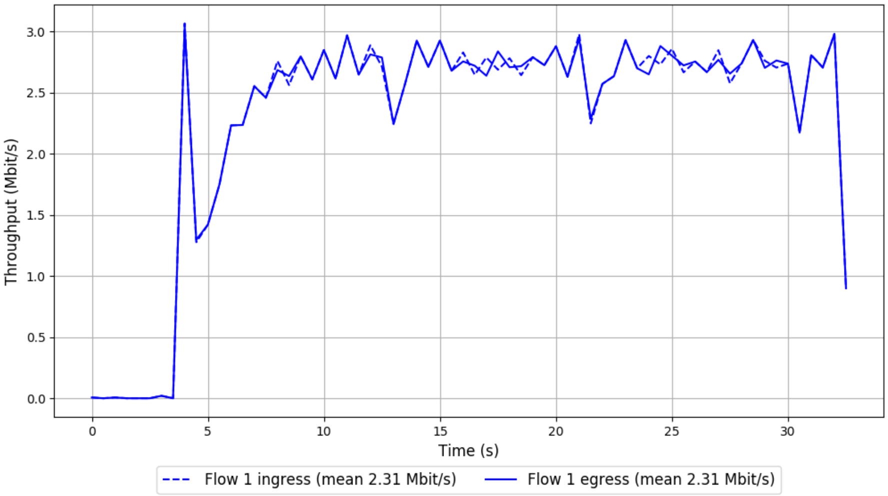
Run 2: Report of WebRTC media — Data Link

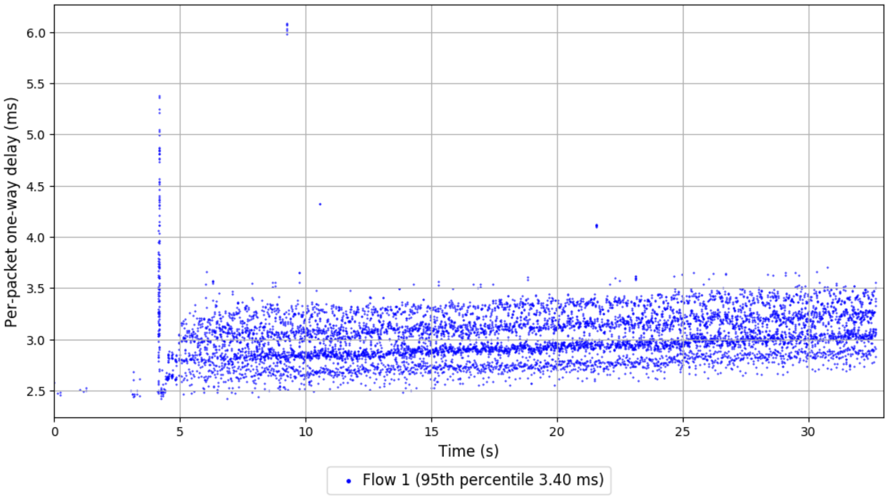




```
Run 3: Statistics of WebRTC media

Start at: 2018-03-20 15:00:09
End at: 2018-03-20 15:00:39
Local clock offset: -13.179 ms
Remote clock offset: -15.14 ms

# Below is generated by plot.py at 2018-03-20 18:14:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.31 Mbit/s
95th percentile per-packet one-way delay: 3.399 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.31 Mbit/s
95th percentile per-packet one-way delay: 3.399 ms
Loss rate: 0.00%
```

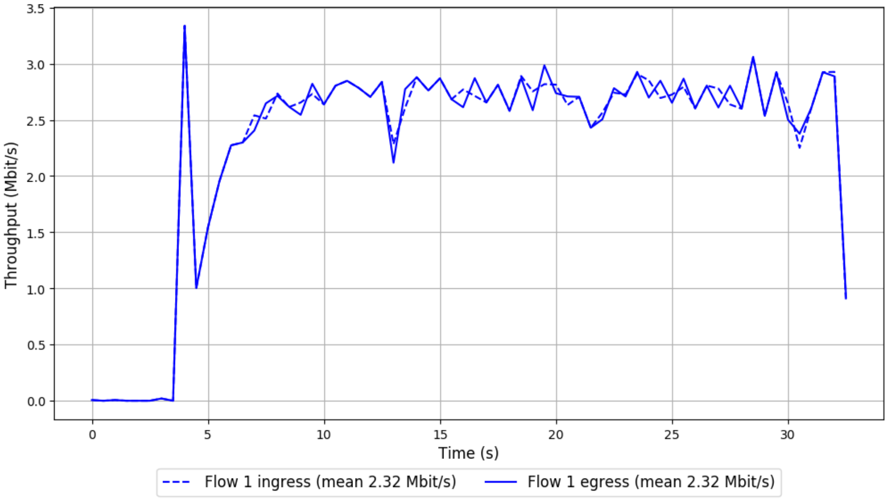
Run 3: Report of WebRTC media — Data Link

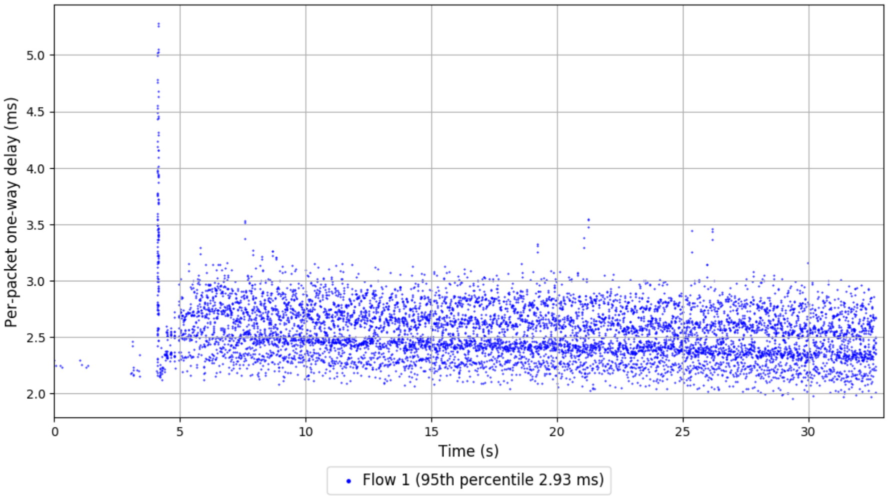




```
Run 4: Statistics of WebRTC media

Start at: 2018-03-20 15:20:40
End at: 2018-03-20 15:21:10
Local clock offset: -11.765 ms
Remote clock offset: -18.452 ms

# Below is generated by plot.py at 2018-03-20 18:14:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.32 Mbit/s
95th percentile per-packet one-way delay: 2.930 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 2.32 Mbit/s
95th percentile per-packet one-way delay: 2.930 ms
Loss rate: 0.06%
```

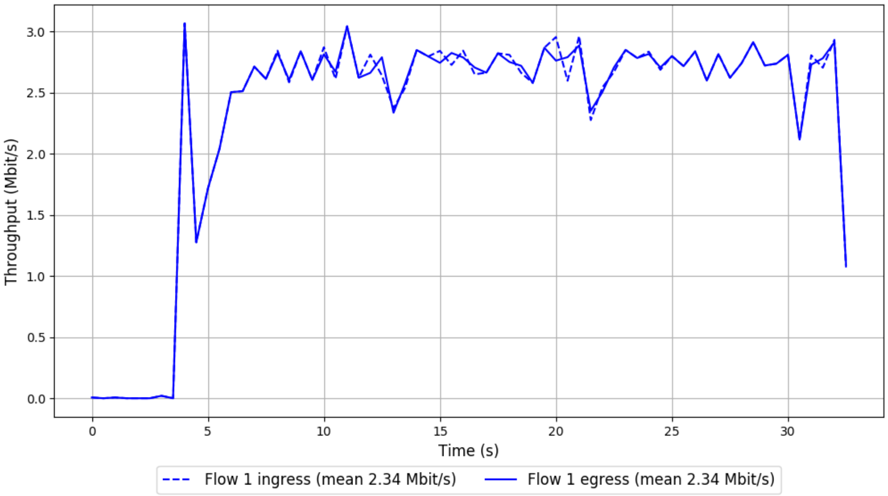
Run 4: Report of WebRTC media — Data Link

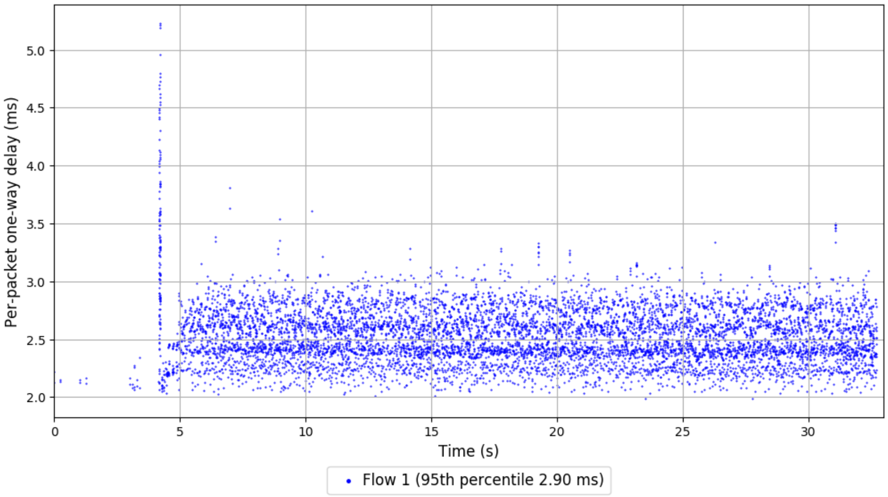




```
Run 5: Statistics of WebRTC media

Start at: 2018-03-20 15:41:17
End at: 2018-03-20 15:41:47
Local clock offset: -13.702 ms
Remote clock offset: -15.918 ms

# Below is generated by plot.py at 2018-03-20 18:14:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.34 Mbit/s
95th percentile per-packet one-way delay: 2.901 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.34 Mbit/s
95th percentile per-packet one-way delay: 2.901 ms
Loss rate: 0.00%
```

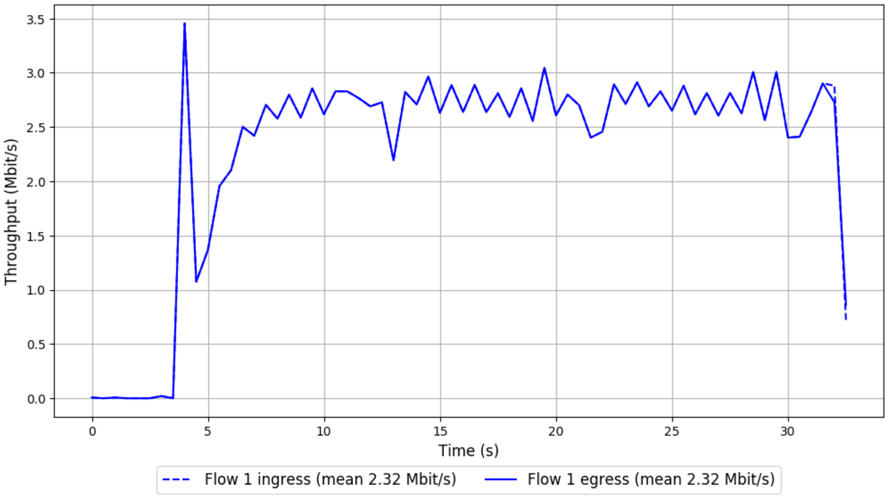
Run 5: Report of WebRTC media — Data Link

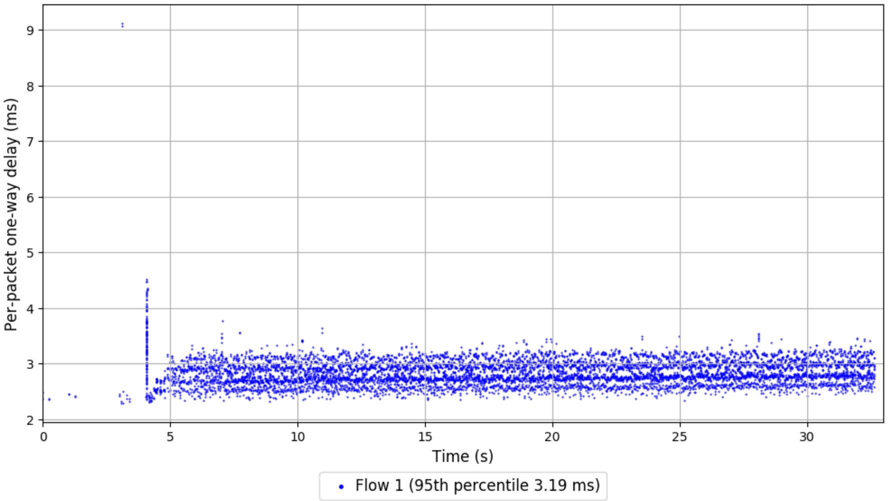




```
Run 6: Statistics of WebRTC media

Start at: 2018-03-20 16:01:56
End at: 2018-03-20 16:02:26
Local clock offset: -13.604 ms
Remote clock offset: -15.963 ms

# Below is generated by plot.py at 2018-03-20 18:14:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.32 Mbit/s
95th percentile per-packet one-way delay: 3.190 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.32 Mbit/s
95th percentile per-packet one-way delay: 3.190 ms
Loss rate: 0.00%
```

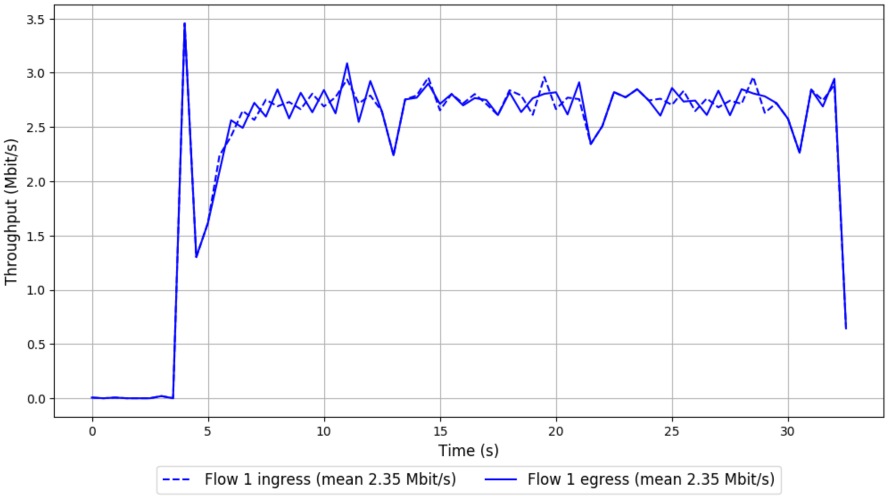
Run 6: Report of WebRTC media — Data Link

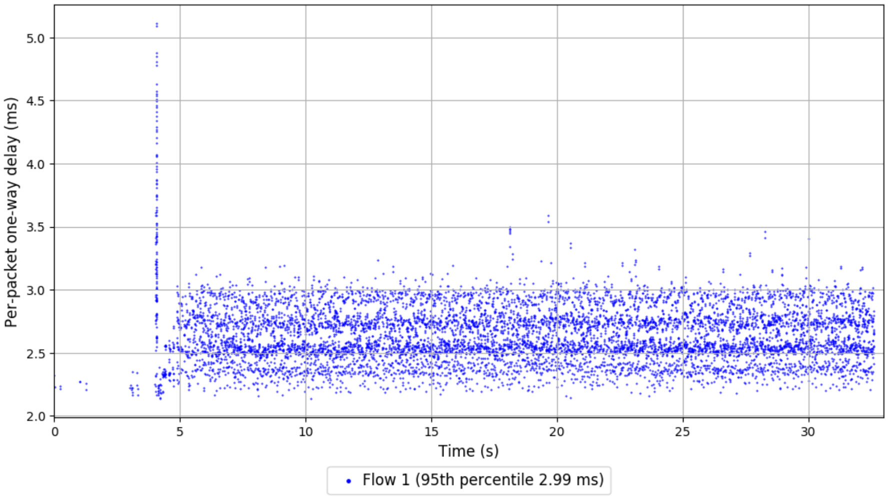




```
Run 7: Statistics of WebRTC media

Start at: 2018-03-20 16:22:31
End at: 2018-03-20 16:23:01
Local clock offset: -11.887 ms
Remote clock offset: -16.462 ms

# Below is generated by plot.py at 2018-03-20 18:14:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 2.989 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 2.989 ms
Loss rate: 0.07%
```

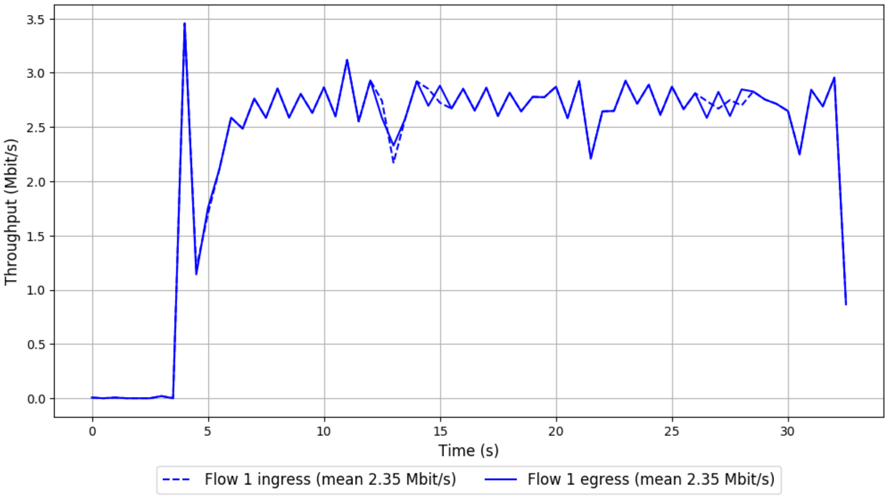
Run 7: Report of WebRTC media — Data Link

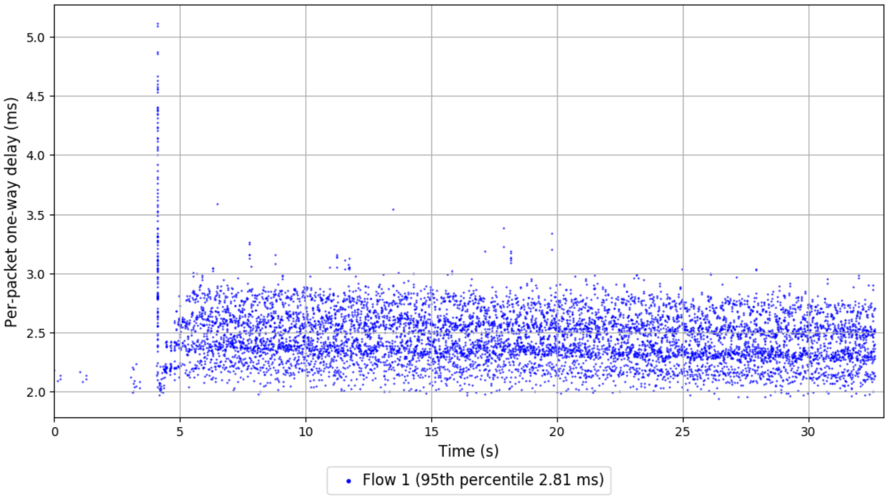




```
Run 8: Statistics of WebRTC media

Start at: 2018-03-20 16:43:05
End at: 2018-03-20 16:43:36
Local clock offset: -14.497 ms
Remote clock offset: -14.522 ms

# Below is generated by plot.py at 2018-03-20 18:14:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 2.814 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 2.814 ms
Loss rate: 0.00%
```

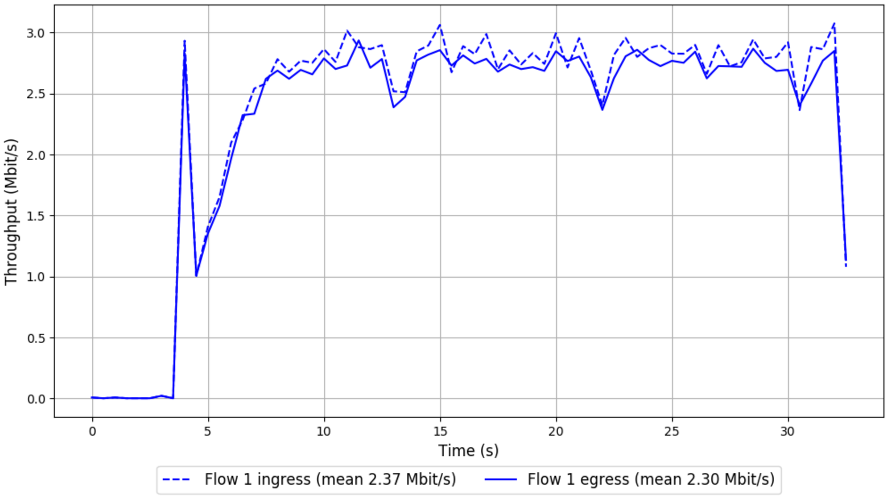
Run 8: Report of WebRTC media — Data Link

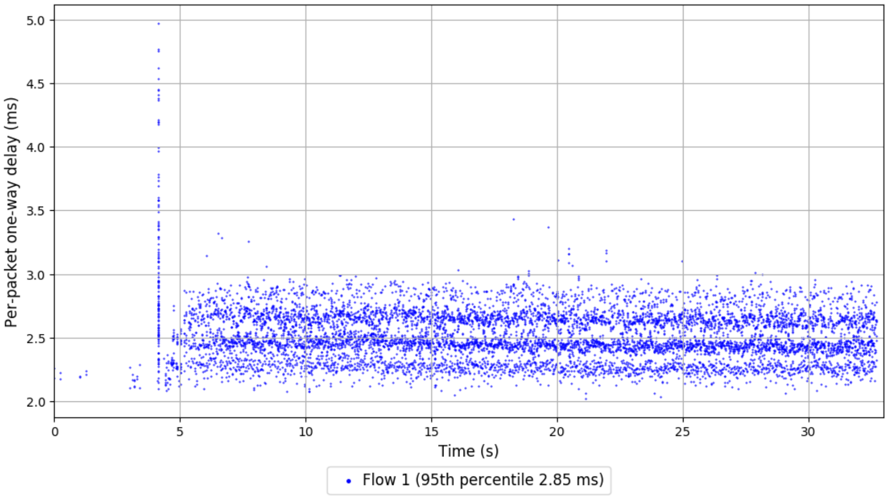




```
Run 9: Statistics of WebRTC media

Start at: 2018-03-20 17:03:41
End at: 2018-03-20 17:04:11
Local clock offset: -16.525 ms
Remote clock offset: -14.048 ms

# Below is generated by plot.py at 2018-03-20 18:14:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.30 Mbit/s
95th percentile per-packet one-way delay: 2.849 ms
Loss rate: 3.17%
-- Flow 1:
Average throughput: 2.30 Mbit/s
95th percentile per-packet one-way delay: 2.849 ms
Loss rate: 3.17%
```

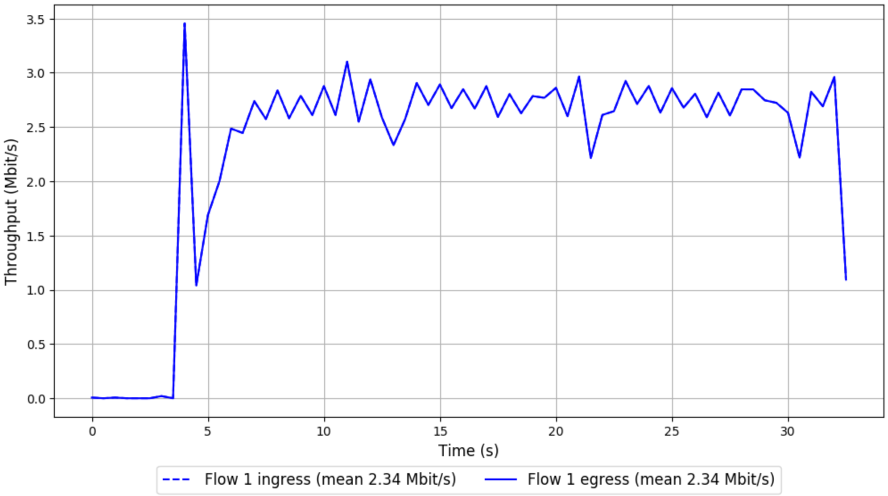
Run 9: Report of WebRTC media — Data Link

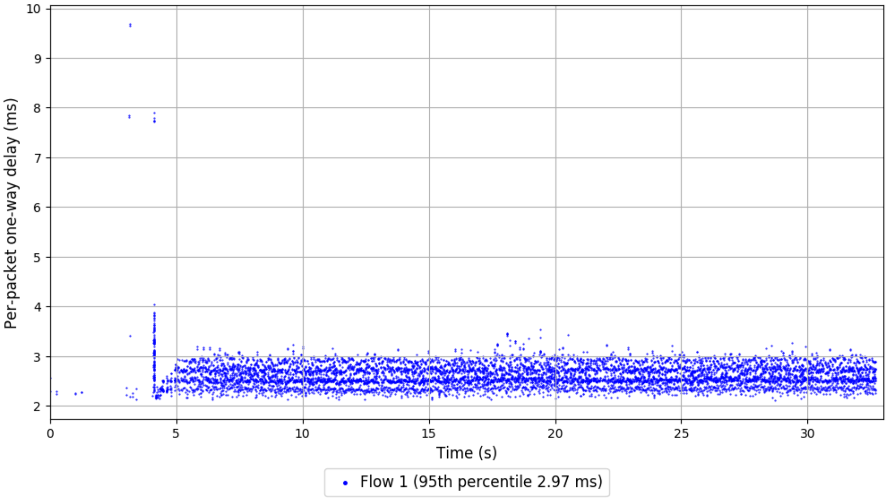




```
Run 10: Statistics of WebRTC media

Start at: 2018-03-20 17:24:11
End at: 2018-03-20 17:24:42
Local clock offset: -14.135 ms
Remote clock offset: -13.989 ms

# Below is generated by plot.py at 2018-03-20 18:14:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.34 Mbit/s
95th percentile per-packet one-way delay: 2.967 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.34 Mbit/s
95th percentile per-packet one-way delay: 2.967 ms
Loss rate: 0.00%
```

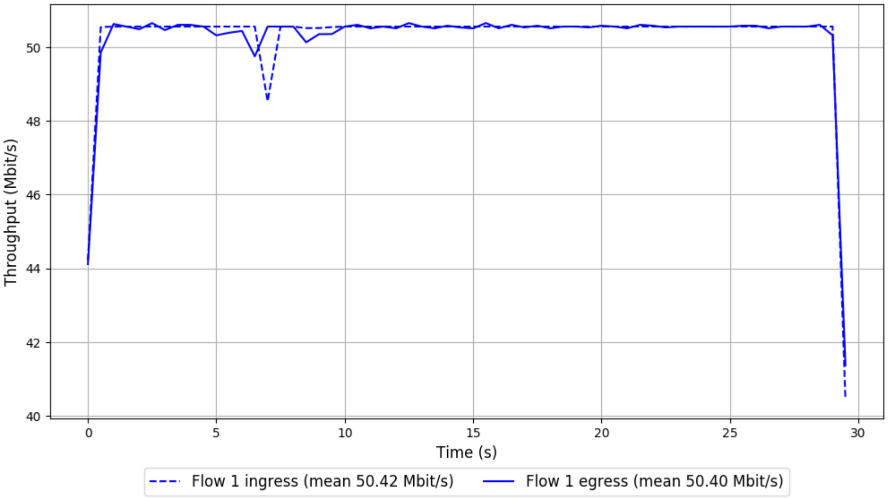
Run 10: Report of WebRTC media — Data Link

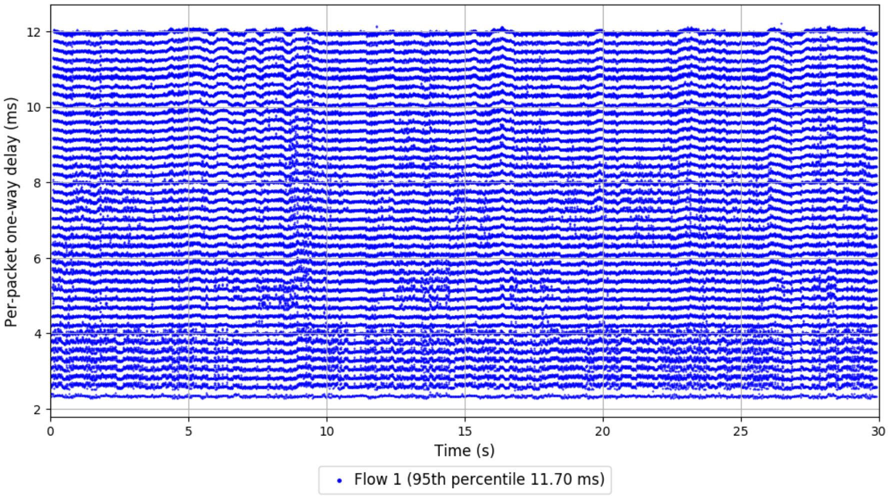




```
Run 1: Statistics of Sprout

Start at: 2018-03-20 14:12:31
End at: 2018-03-20 14:13:01
Local clock offset: -6.581 ms
Remote clock offset: -6.705 ms

# Below is generated by plot.py at 2018-03-20 18:14:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.40 Mbit/s
95th percentile per-packet one-way delay: 11.701 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.40 Mbit/s
95th percentile per-packet one-way delay: 11.701 ms
Loss rate: 0.00%
```

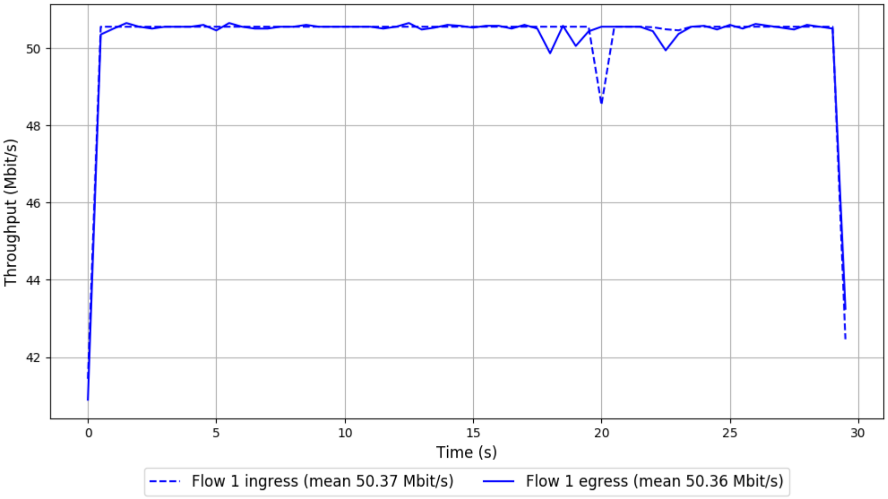
Run 1: Report of Sprout — Data Link

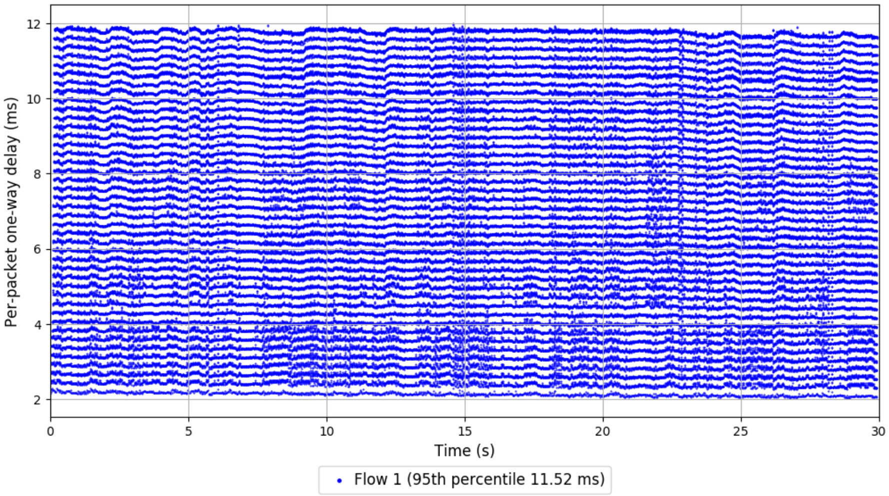




```
Run 2: Statistics of Sprout

Start at: 2018-03-20 14:32:55
End at: 2018-03-20 14:33:25
Local clock offset: -15.156 ms
Remote clock offset: -6.789 ms

# Below is generated by plot.py at 2018-03-20 18:14:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.36 Mbit/s
95th percentile per-packet one-way delay: 11.524 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.36 Mbit/s
95th percentile per-packet one-way delay: 11.524 ms
Loss rate: 0.00%
```

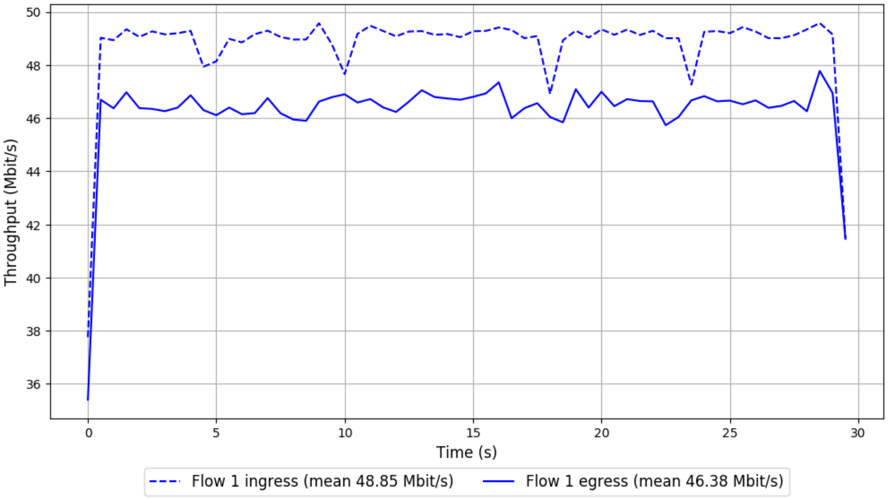
Run 2: Report of Sprout — Data Link

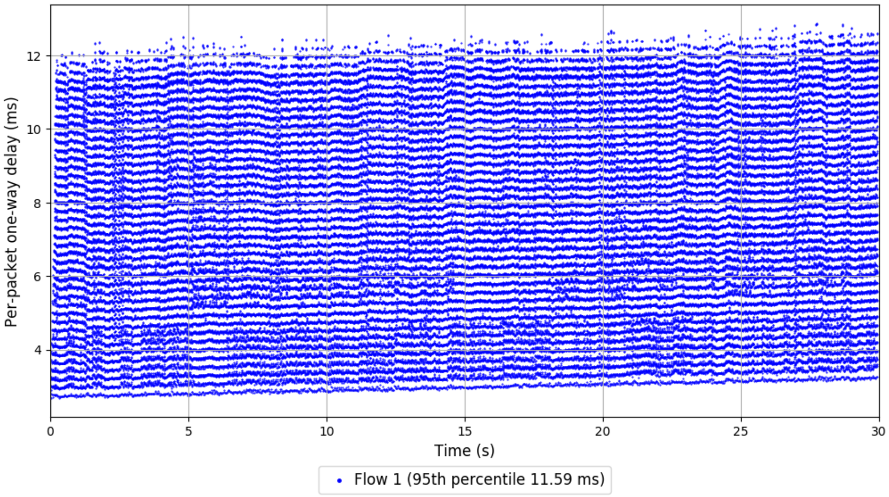




```
Run 3: Statistics of Sprout

Start at: 2018-03-20 14:53:22
End at: 2018-03-20 14:53:52
Local clock offset: -15.902 ms
Remote clock offset: -12.634 ms

# Below is generated by plot.py at 2018-03-20 18:14:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 46.38 Mbit/s
95th percentile per-packet one-way delay: 11.591 ms
Loss rate: 5.03%
-- Flow 1:
Average throughput: 46.38 Mbit/s
95th percentile per-packet one-way delay: 11.591 ms
Loss rate: 5.03%
```

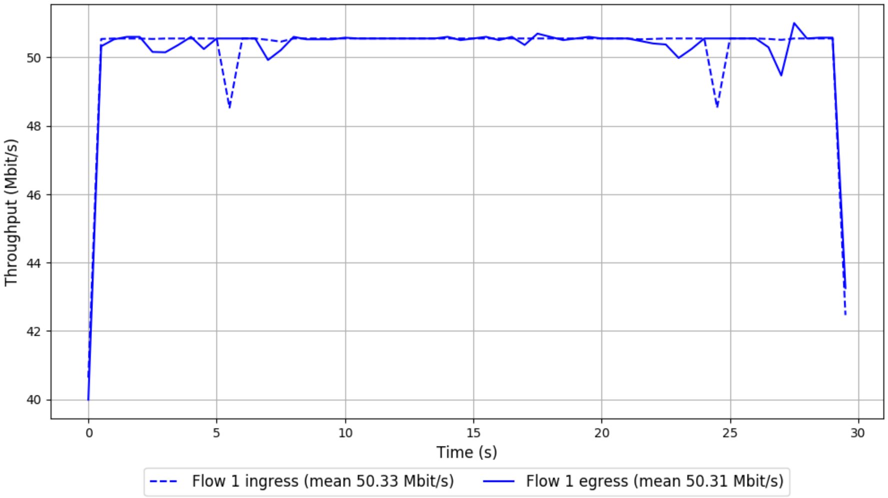
Run 3: Report of Sprout — Data Link

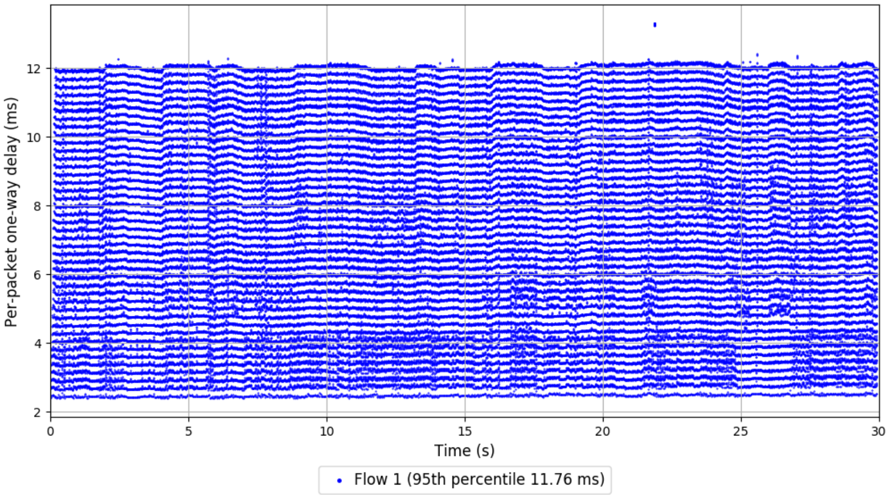




```
Run 4: Statistics of Sprout

Start at: 2018-03-20 15:13:51
End at: 2018-03-20 15:14:21
Local clock offset: -11.734 ms
Remote clock offset: -18.12 ms

# Below is generated by plot.py at 2018-03-20 18:14:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.31 Mbit/s
95th percentile per-packet one-way delay: 11.756 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.31 Mbit/s
95th percentile per-packet one-way delay: 11.756 ms
Loss rate: 0.00%
```

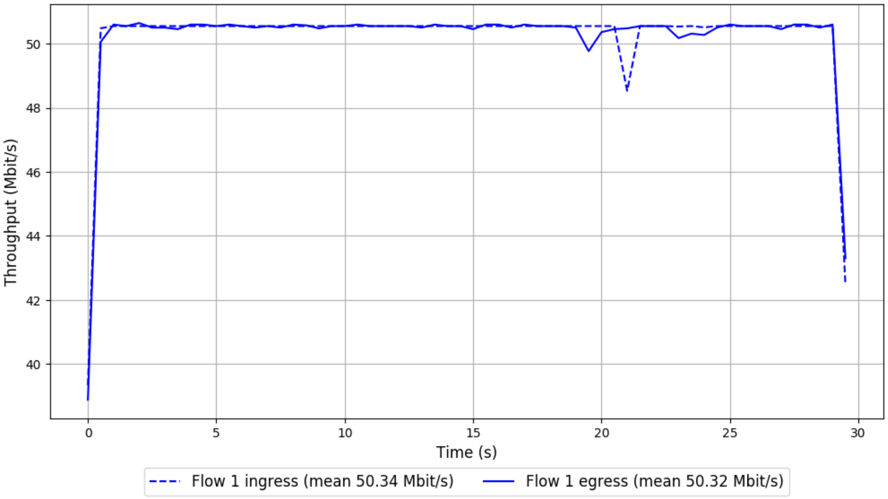
Run 4: Report of Sprout — Data Link

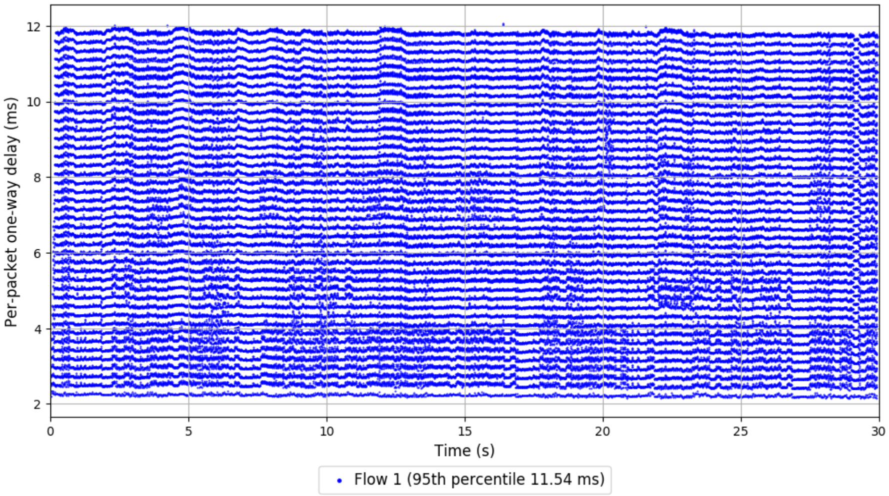




```
Run 5: Statistics of Sprout

Start at: 2018-03-20 15:34:25
End at: 2018-03-20 15:34:55
Local clock offset: -13.134 ms
Remote clock offset: -15.996 ms

# Below is generated by plot.py at 2018-03-20 18:14:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.32 Mbit/s
95th percentile per-packet one-way delay: 11.544 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.32 Mbit/s
95th percentile per-packet one-way delay: 11.544 ms
Loss rate: 0.00%
```

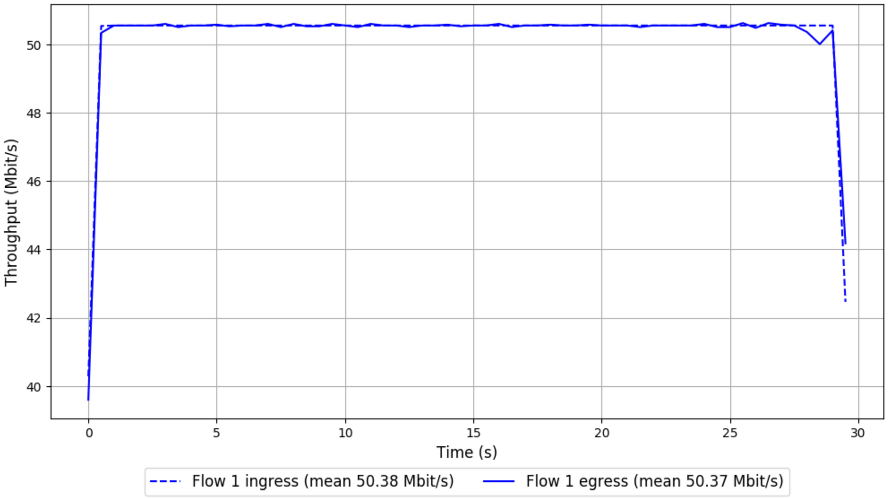
Run 5: Report of Sprout — Data Link

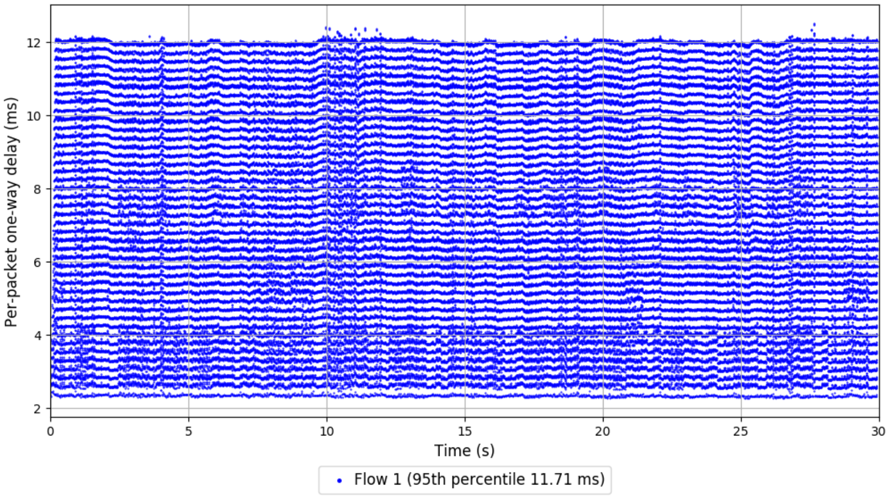




```
Run 6: Statistics of Sprout

Start at: 2018-03-20 15:55:06
End at: 2018-03-20 15:55:36
Local clock offset: -14.701 ms
Remote clock offset: -16.02 ms

# Below is generated by plot.py at 2018-03-20 18:14:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.37 Mbit/s
95th percentile per-packet one-way delay: 11.715 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.37 Mbit/s
95th percentile per-packet one-way delay: 11.715 ms
Loss rate: 0.00%
```

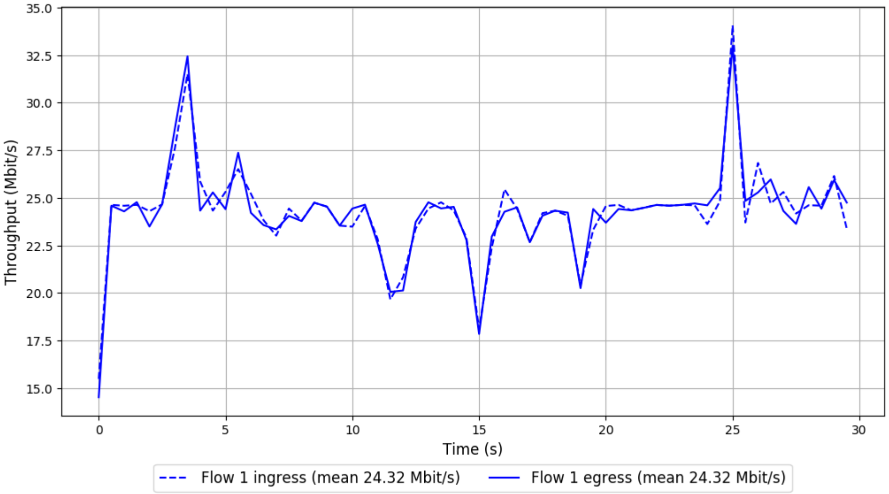
Run 6: Report of Sprout — Data Link

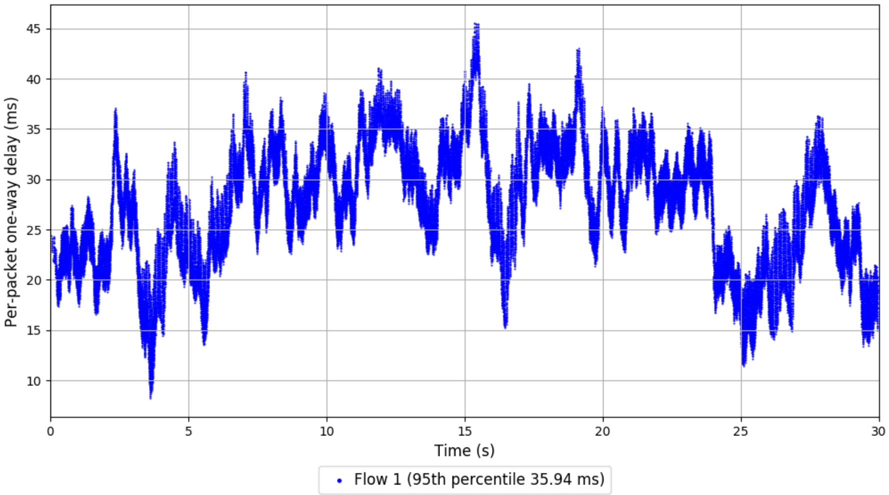




```
Run 7: Statistics of Sprout

Start at: 2018-03-20 16:15:42
End at: 2018-03-20 16:16:12
Local clock offset: -12.072 ms
Remote clock offset: -16.208 ms

# Below is generated by plot.py at 2018-03-20 18:14:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 24.32 Mbit/s
95th percentile per-packet one-way delay: 35.935 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 24.32 Mbit/s
95th percentile per-packet one-way delay: 35.935 ms
Loss rate: 0.00%
```

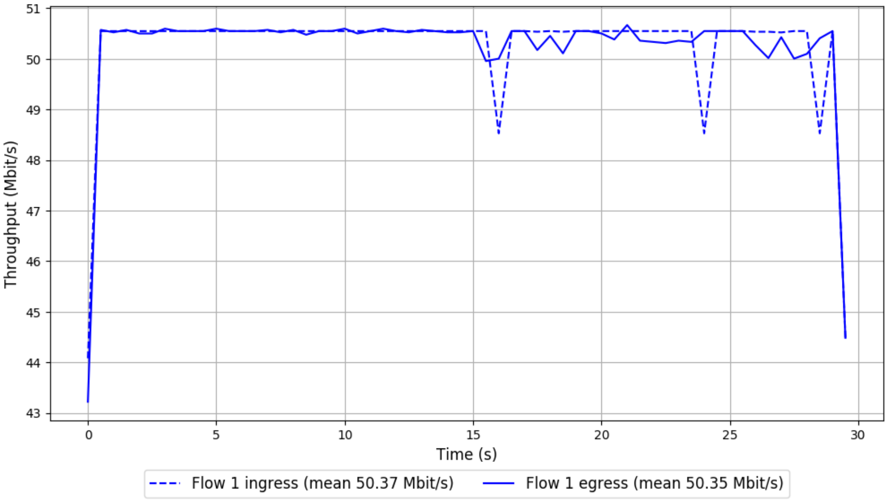
Run 7: Report of Sprout — Data Link

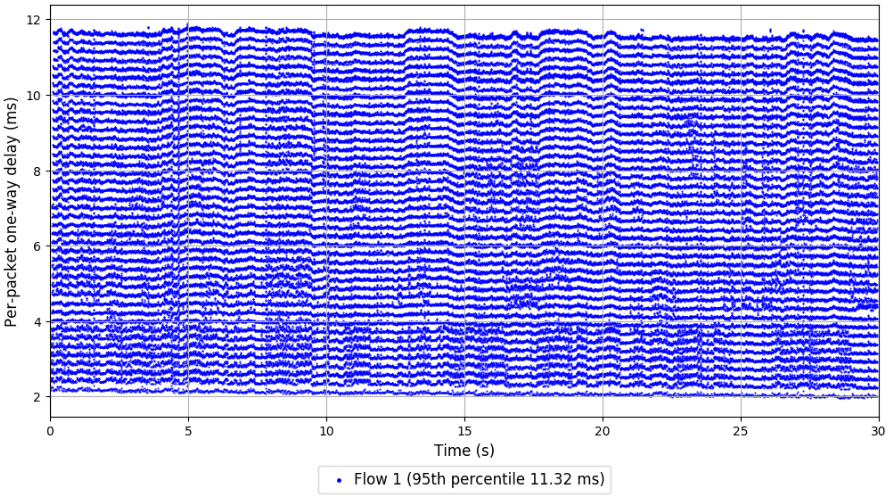




```
Run 8: Statistics of Sprout

Start at: 2018-03-20 16:36:18
End at: 2018-03-20 16:36:48
Local clock offset: -13.115 ms
Remote clock offset: -14.951 ms

# Below is generated by plot.py at 2018-03-20 18:14:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.35 Mbit/s
95th percentile per-packet one-way delay: 11.319 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.35 Mbit/s
95th percentile per-packet one-way delay: 11.319 ms
Loss rate: 0.00%
```

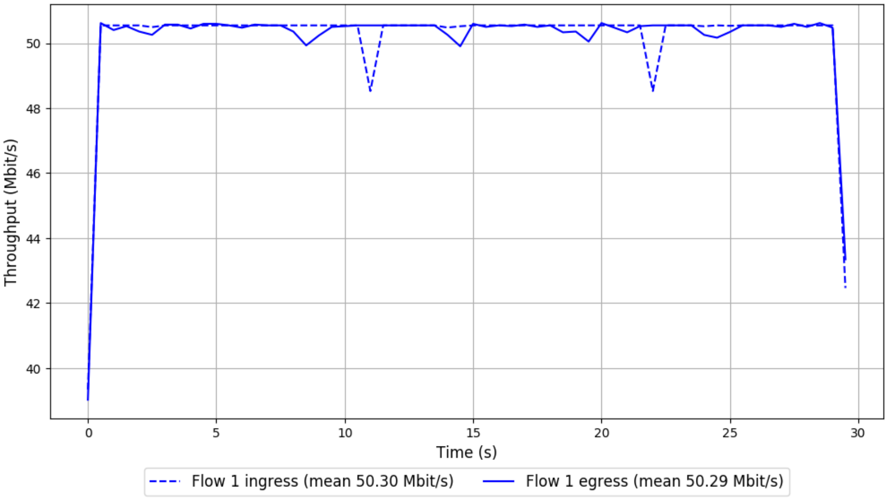
Run 8: Report of Sprout — Data Link

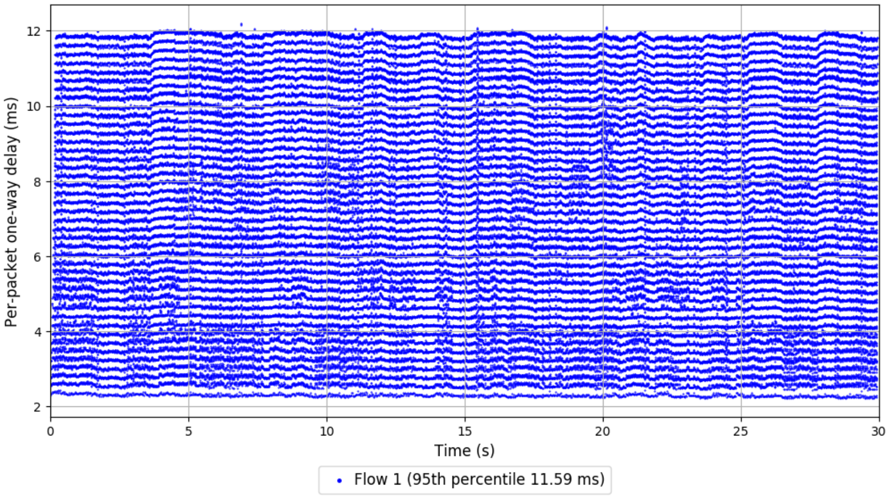




```
Run 9: Statistics of Sprout

Start at: 2018-03-20 16:56:51
End at: 2018-03-20 16:57:21
Local clock offset: -16.027 ms
Remote clock offset: -14.069 ms

# Below is generated by plot.py at 2018-03-20 18:15:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.29 Mbit/s
95th percentile per-packet one-way delay: 11.592 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.29 Mbit/s
95th percentile per-packet one-way delay: 11.592 ms
Loss rate: 0.00%
```

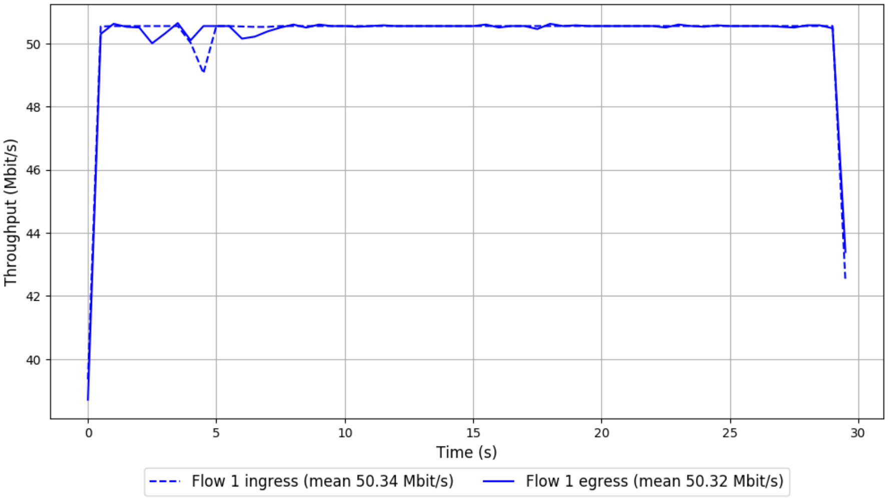
Run 9: Report of Sprout — Data Link

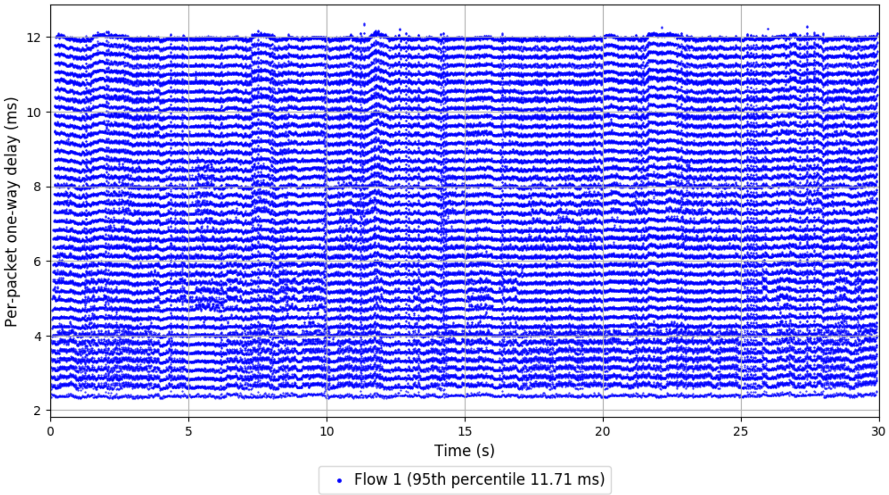




```
Run 10: Statistics of Sprout

Start at: 2018-03-20 17:17:25
End at: 2018-03-20 17:17:55
Local clock offset: -14.474 ms
Remote clock offset: -13.961 ms

# Below is generated by plot.py at 2018-03-20 18:15:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.32 Mbit/s
95th percentile per-packet one-way delay: 11.712 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.32 Mbit/s
95th percentile per-packet one-way delay: 11.712 ms
Loss rate: 0.00%
```

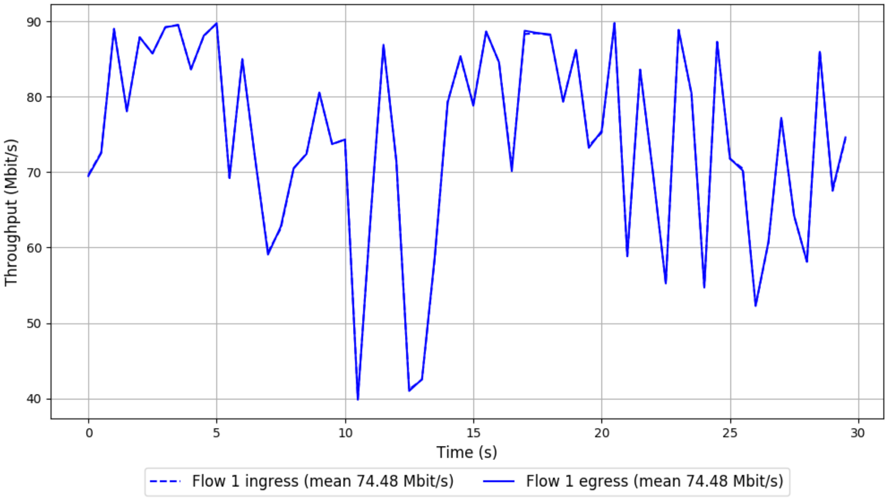
Run 10: Report of Sprout — Data Link

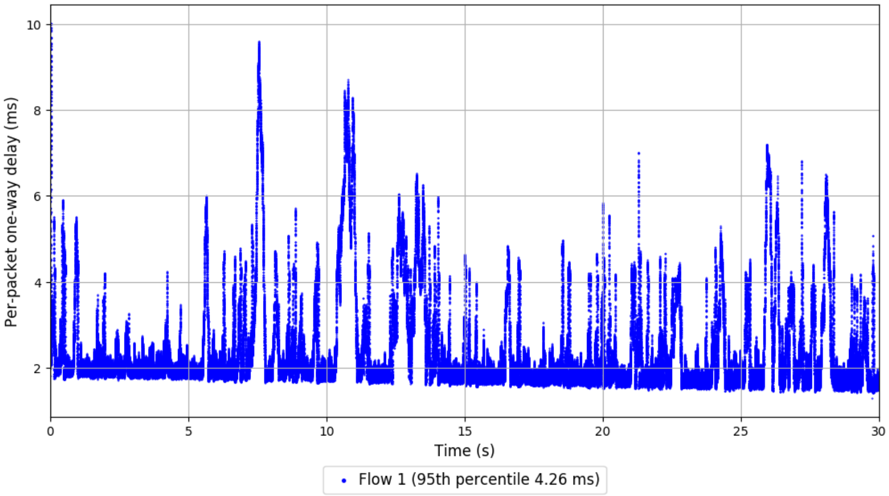




```
Run 1: Statistics of TaoVA-100x

Start at: 2018-03-20 14:18:05
End at: 2018-03-20 14:18:35
Local clock offset: -8.609 ms
Remote clock offset: -6.817 ms

# Below is generated by plot.py at 2018-03-20 18:16:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 74.48 Mbit/s
95th percentile per-packet one-way delay: 4.262 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 74.48 Mbit/s
95th percentile per-packet one-way delay: 4.262 ms
Loss rate: 0.00%
```

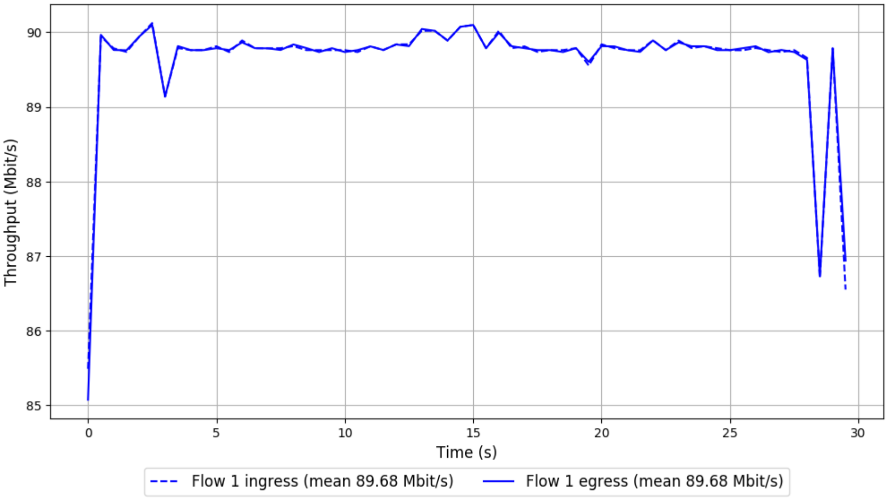
Run 1: Report of TaoVA-100x — Data Link

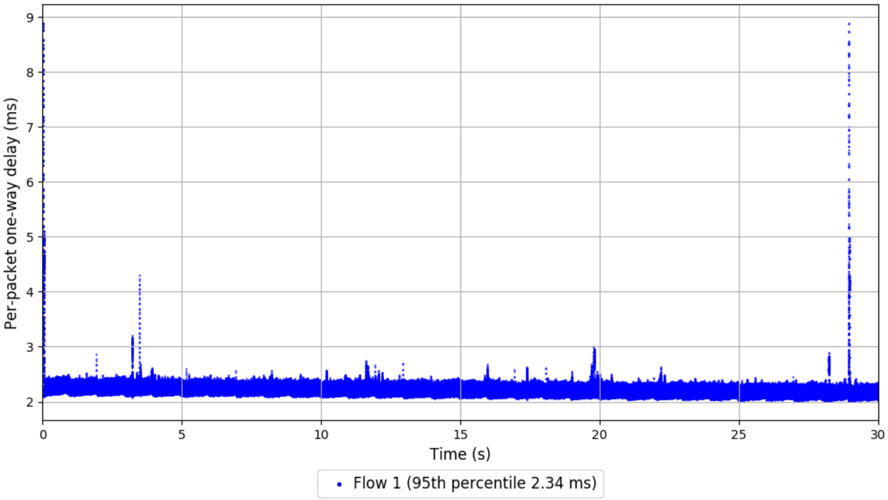




```
Run 2: Statistics of TaoVA-100x

Start at: 2018-03-20 14:38:29
End at: 2018-03-20 14:38:59
Local clock offset: -16.485 ms
Remote clock offset: -6.877 ms

# Below is generated by plot.py at 2018-03-20 18:17:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.68 Mbit/s
95th percentile per-packet one-way delay: 2.340 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 89.68 Mbit/s
95th percentile per-packet one-way delay: 2.340 ms
Loss rate: 0.00%
```

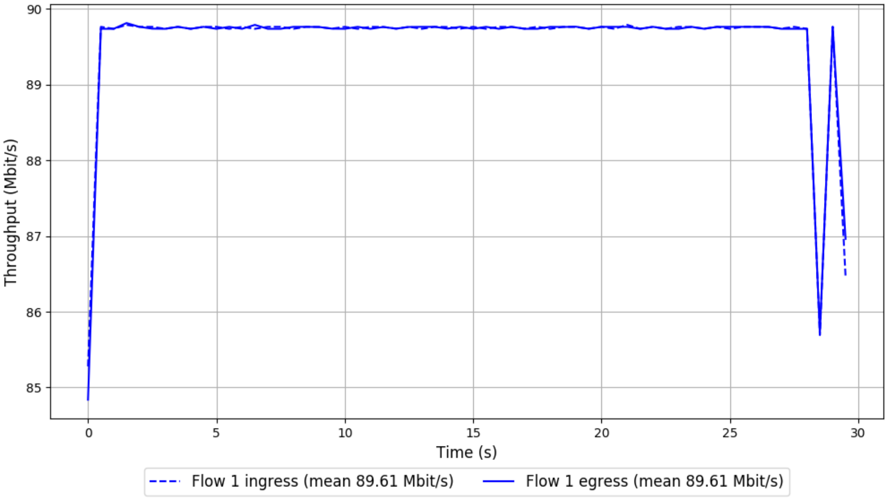
Run 2: Report of TaoVA-100x — Data Link

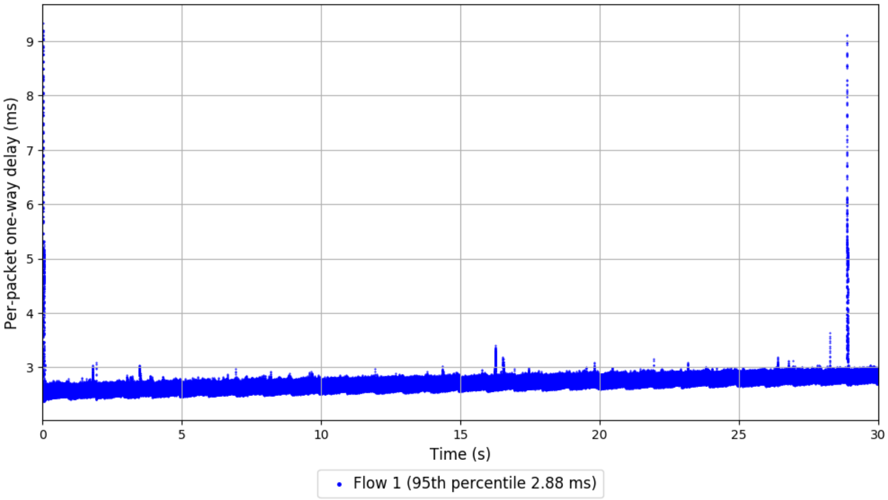




```
Run 3: Statistics of TaoVA-100x

Start at: 2018-03-20 14:58:59
End at: 2018-03-20 14:59:29
Local clock offset: -13.382 ms
Remote clock offset: -14.83 ms

# Below is generated by plot.py at 2018-03-20 18:17:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.61 Mbit/s
95th percentile per-packet one-way delay: 2.879 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 89.61 Mbit/s
95th percentile per-packet one-way delay: 2.879 ms
Loss rate: 0.00%
```

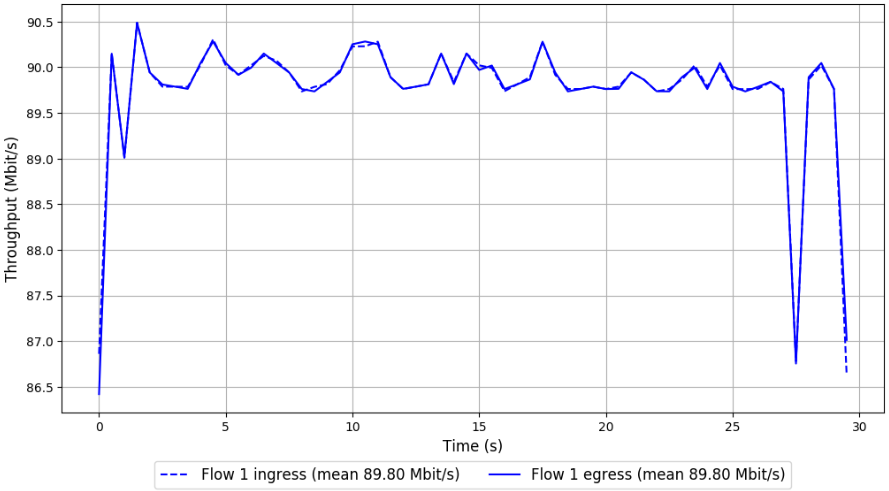
Run 3: Report of TaoVA-100x — Data Link

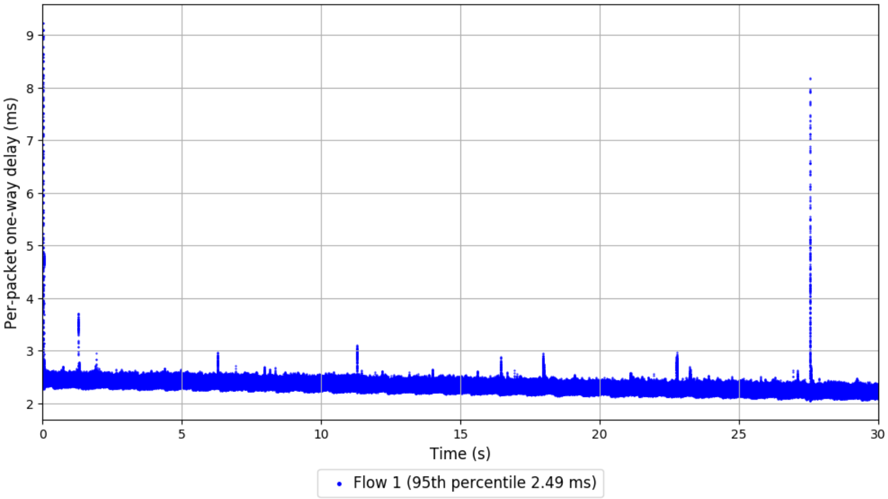




```
Run 4: Statistics of TaoVA-100x

Start at: 2018-03-20 15:19:29
End at: 2018-03-20 15:19:59
Local clock offset: -11.764 ms
Remote clock offset: -18.969 ms

# Below is generated by plot.py at 2018-03-20 18:17:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.80 Mbit/s
95th percentile per-packet one-way delay: 2.490 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 89.80 Mbit/s
95th percentile per-packet one-way delay: 2.490 ms
Loss rate: 0.00%
```

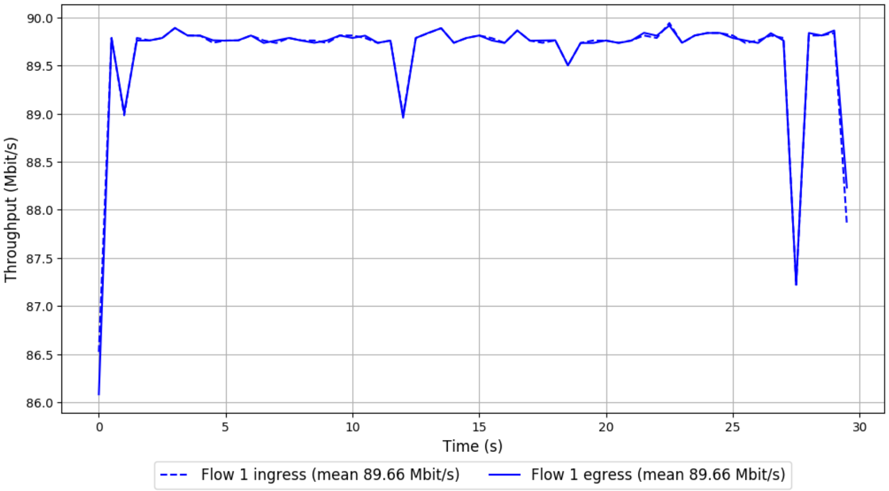
Run 4: Report of TaoVA-100x — Data Link

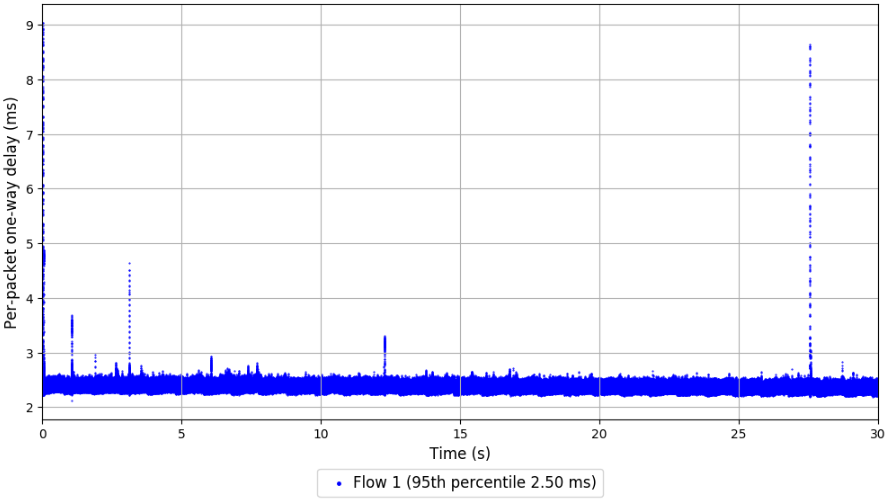




```
Run 5: Statistics of TaoVA-100x

Start at: 2018-03-20 15:40:05
End at: 2018-03-20 15:40:35
Local clock offset: -13.597 ms
Remote clock offset: -15.839 ms

# Below is generated by plot.py at 2018-03-20 18:17:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.66 Mbit/s
95th percentile per-packet one-way delay: 2.495 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 89.66 Mbit/s
95th percentile per-packet one-way delay: 2.495 ms
Loss rate: 0.00%
```

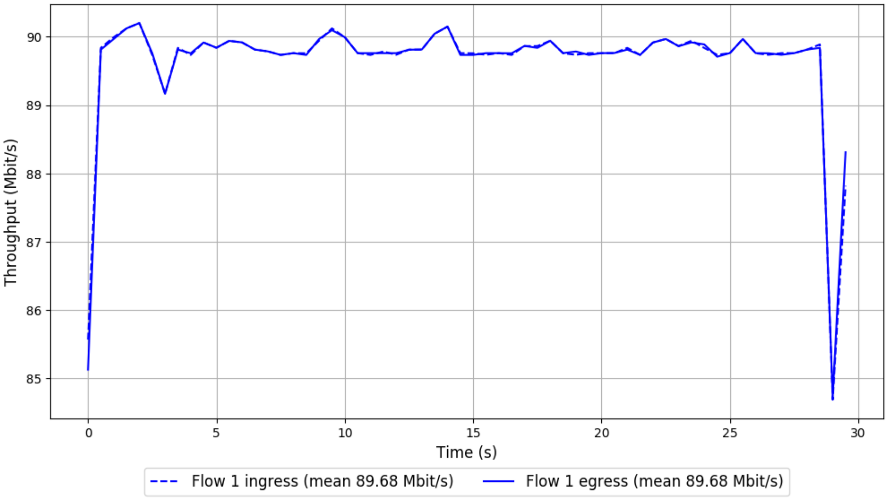
Run 5: Report of TaoVA-100x — Data Link

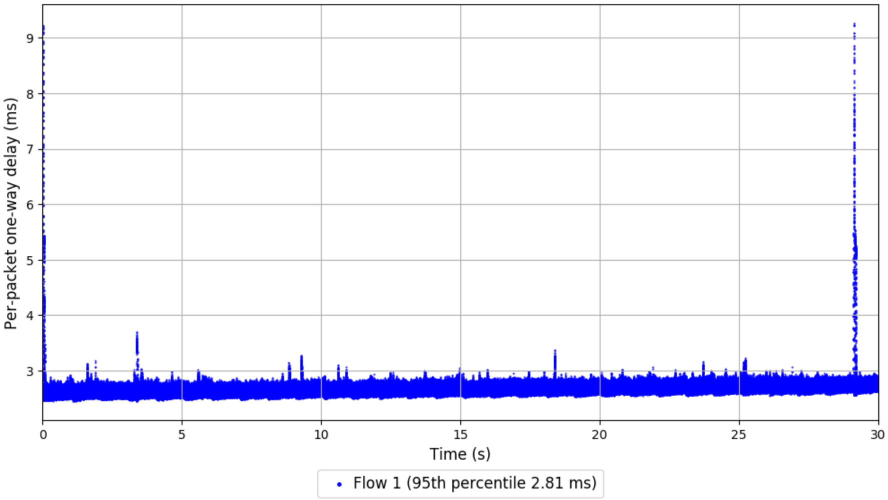




```
Run 6: Statistics of TaoVA-100x

Start at: 2018-03-20 16:00:45
End at: 2018-03-20 16:01:15
Local clock offset: -13.913 ms
Remote clock offset: -15.964 ms

# Below is generated by plot.py at 2018-03-20 18:17:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.68 Mbit/s
95th percentile per-packet one-way delay: 2.808 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 89.68 Mbit/s
95th percentile per-packet one-way delay: 2.808 ms
Loss rate: 0.00%
```

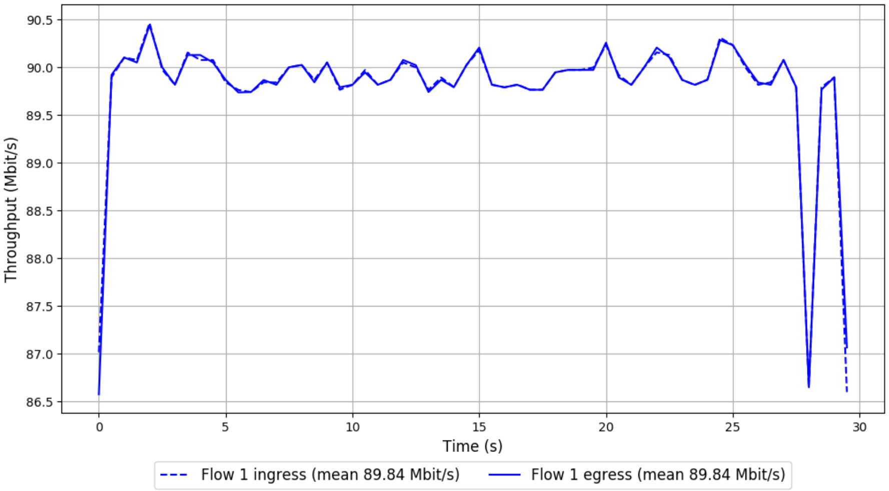
Run 6: Report of TaoVA-100x — Data Link

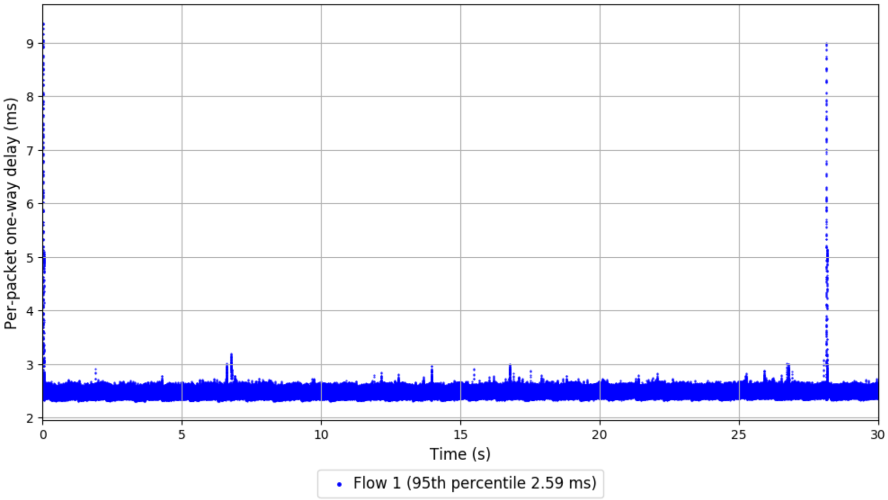




```
Run 7: Statistics of TaoVA-100x

Start at: 2018-03-20 16:21:20
End at: 2018-03-20 16:21:50
Local clock offset: -11.938 ms
Remote clock offset: -16.436 ms

# Below is generated by plot.py at 2018-03-20 18:17:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.84 Mbit/s
95th percentile per-packet one-way delay: 2.588 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 89.84 Mbit/s
95th percentile per-packet one-way delay: 2.588 ms
Loss rate: 0.00%
```

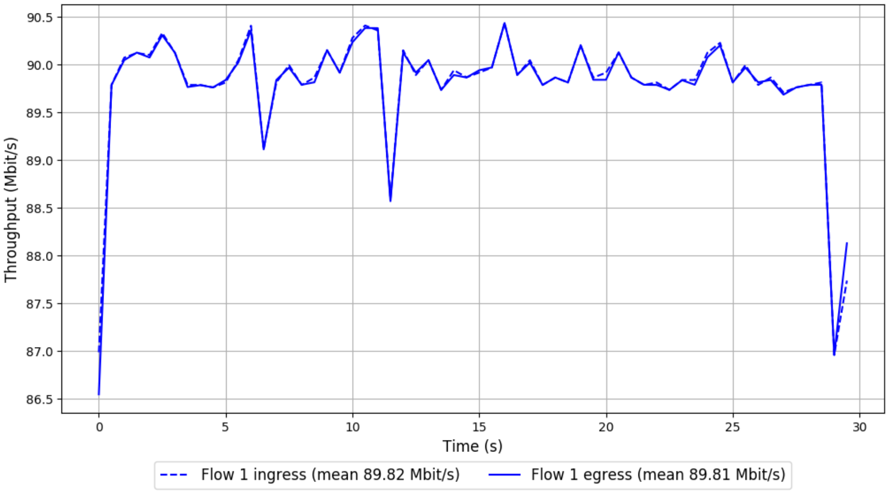
Run 7: Report of TaoVA-100x — Data Link

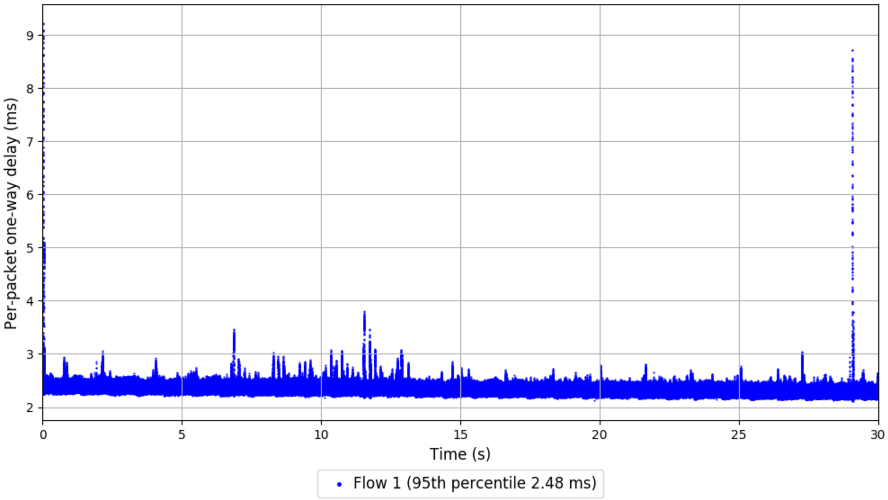




```
Run 8: Statistics of TaoVA-100x

Start at: 2018-03-20 16:41:54
End at: 2018-03-20 16:42:24
Local clock offset: -14.297 ms
Remote clock offset: -14.49 ms

# Below is generated by plot.py at 2018-03-20 18:17:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.81 Mbit/s
95th percentile per-packet one-way delay: 2.480 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 89.81 Mbit/s
95th percentile per-packet one-way delay: 2.480 ms
Loss rate: 0.01%
```

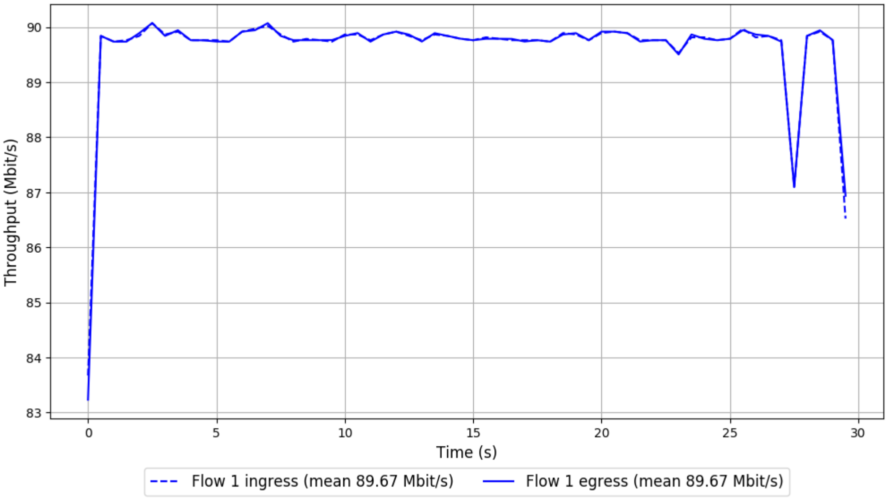
Run 8: Report of TaoVA-100x — Data Link

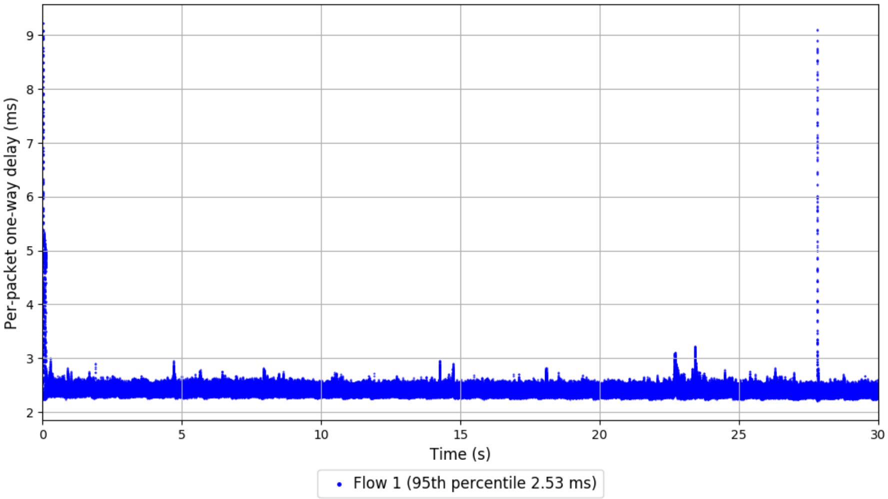




```
Run 9: Statistics of TaoVA-100x

Start at: 2018-03-20 17:02:29
End at: 2018-03-20 17:02:59
Local clock offset: -16.419 ms
Remote clock offset: -13.999 ms

# Below is generated by plot.py at 2018-03-20 18:18:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.67 Mbit/s
95th percentile per-packet one-way delay: 2.530 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 89.67 Mbit/s
95th percentile per-packet one-way delay: 2.530 ms
Loss rate: 0.00%
```

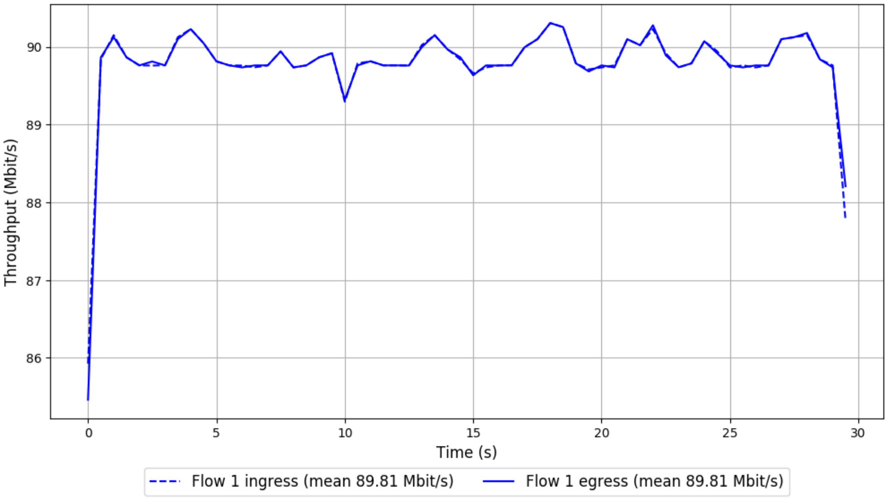
Run 9: Report of TaoVA-100x — Data Link

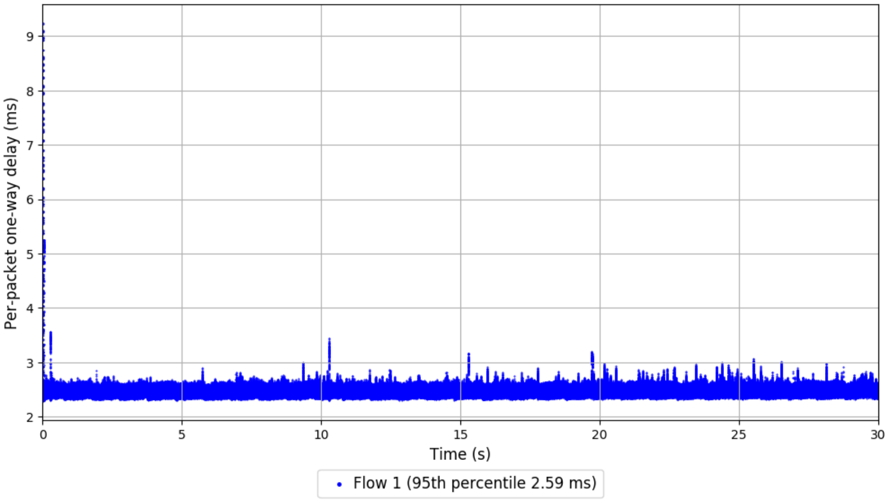




```
Run 10: Statistics of TaoVA-100x

Start at: 2018-03-20 17:23:00
End at: 2018-03-20 17:23:30
Local clock offset: -14.139 ms
Remote clock offset: -13.924 ms

# Below is generated by plot.py at 2018-03-20 18:19:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.81 Mbit/s
95th percentile per-packet one-way delay: 2.592 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 89.81 Mbit/s
95th percentile per-packet one-way delay: 2.592 ms
Loss rate: 0.00%
```

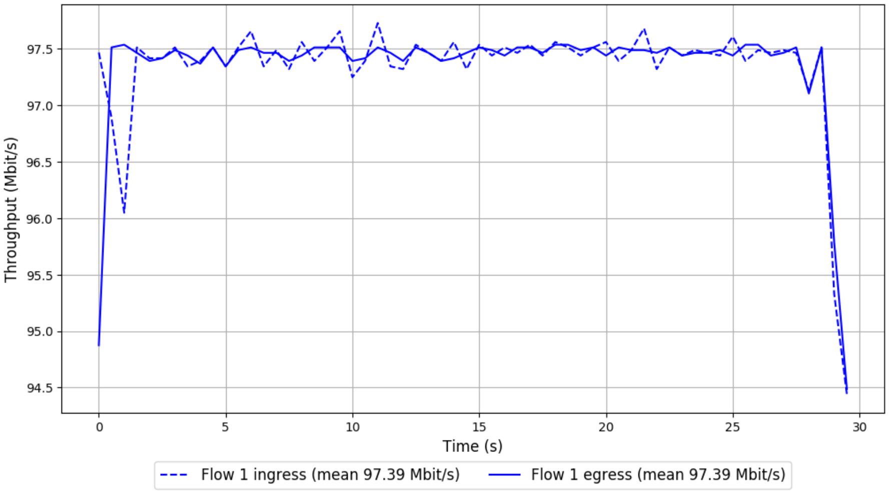
Run 10: Report of TaoVA-100x — Data Link

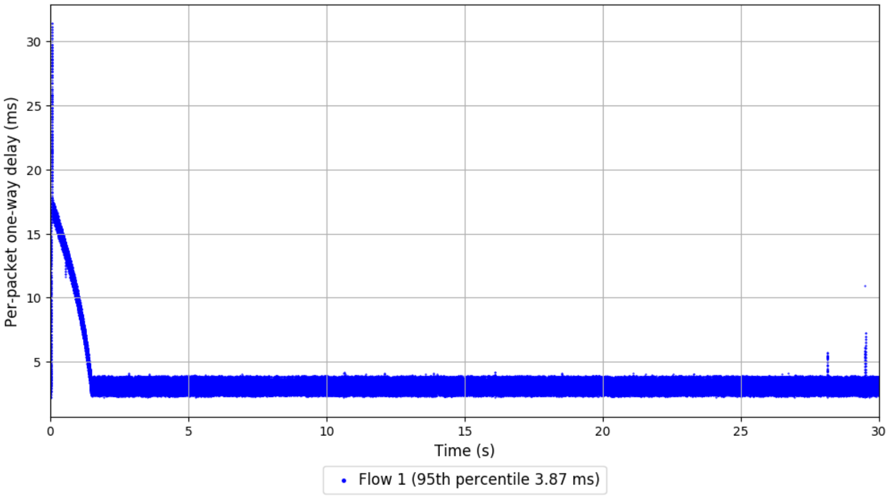




```
Run 1: Statistics of TCP Vegas

Start at: 2018-03-20 14:10:19
End at: 2018-03-20 14:10:49
Local clock offset: -6.463 ms
Remote clock offset: -6.722 ms

# Below is generated by plot.py at 2018-03-20 18:19:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.39 Mbit/s
95th percentile per-packet one-way delay: 3.868 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 97.39 Mbit/s
95th percentile per-packet one-way delay: 3.868 ms
Loss rate: 0.00%
```

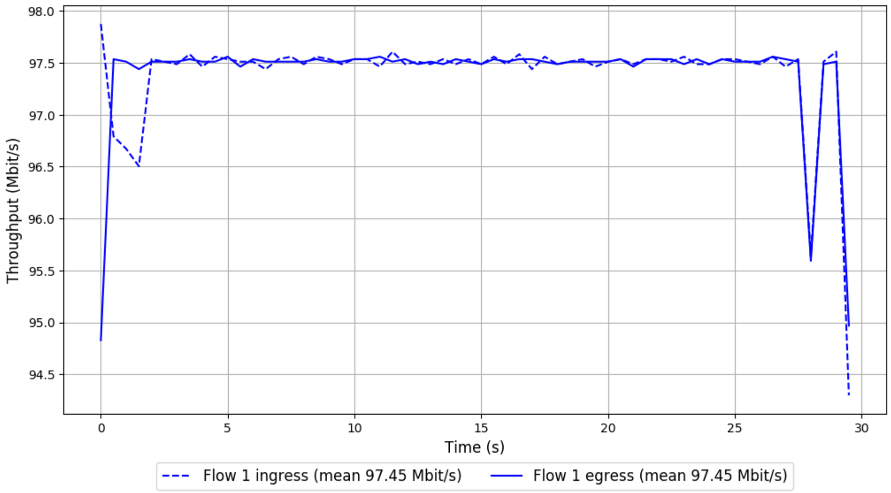
Run 1: Report of TCP Vegas — Data Link

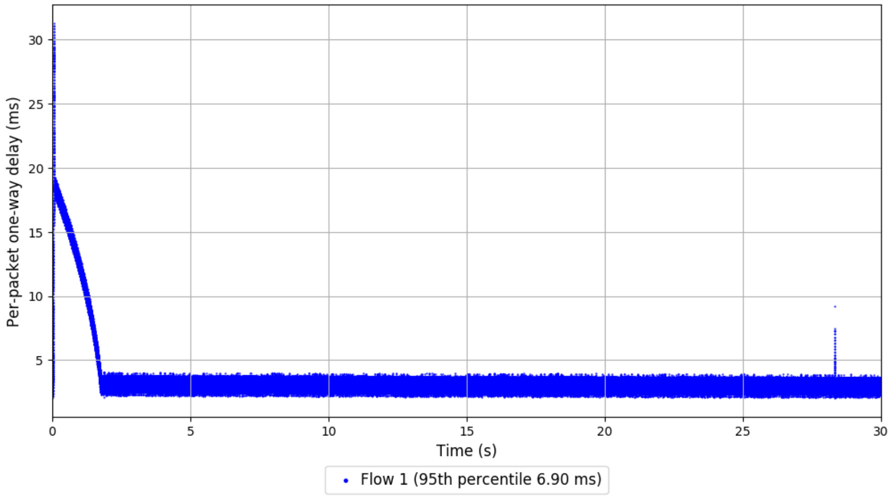




```
Run 2: Statistics of TCP Vegas

Start at: 2018-03-20 14:30:39
End at: 2018-03-20 14:31:09
Local clock offset: -14.489 ms
Remote clock offset: -6.769 ms

# Below is generated by plot.py at 2018-03-20 18:19:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.45 Mbit/s
95th percentile per-packet one-way delay: 6.904 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 97.45 Mbit/s
95th percentile per-packet one-way delay: 6.904 ms
Loss rate: 0.00%
```

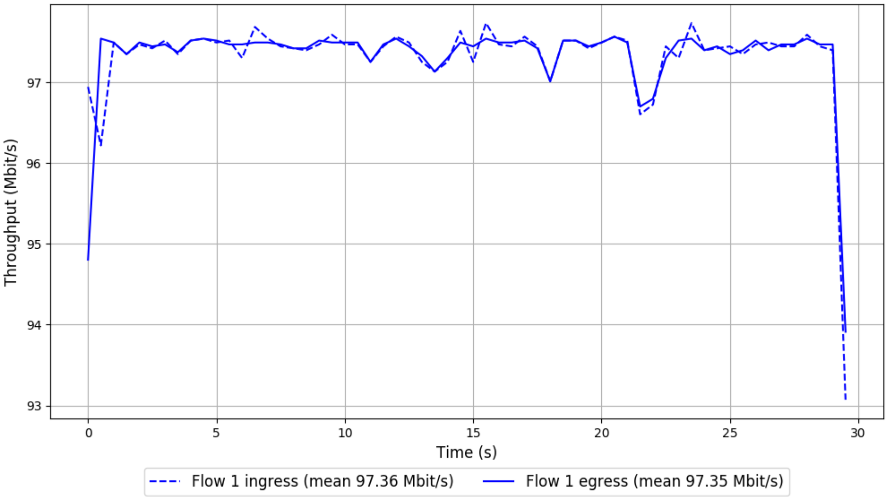
Run 2: Report of TCP Vegas — Data Link

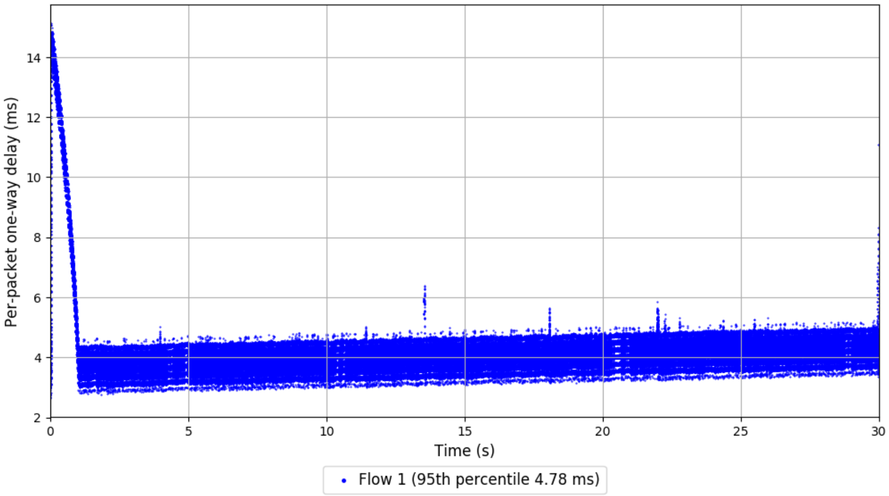




```
Run 3: Statistics of TCP Vegas

Start at: 2018-03-20 14:51:06
End at: 2018-03-20 14:51:36
Local clock offset: -17.368 ms
Remote clock offset: -11.452 ms

# Below is generated by plot.py at 2018-03-20 18:19:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.35 Mbit/s
95th percentile per-packet one-way delay: 4.775 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 97.35 Mbit/s
95th percentile per-packet one-way delay: 4.775 ms
Loss rate: 0.00%
```

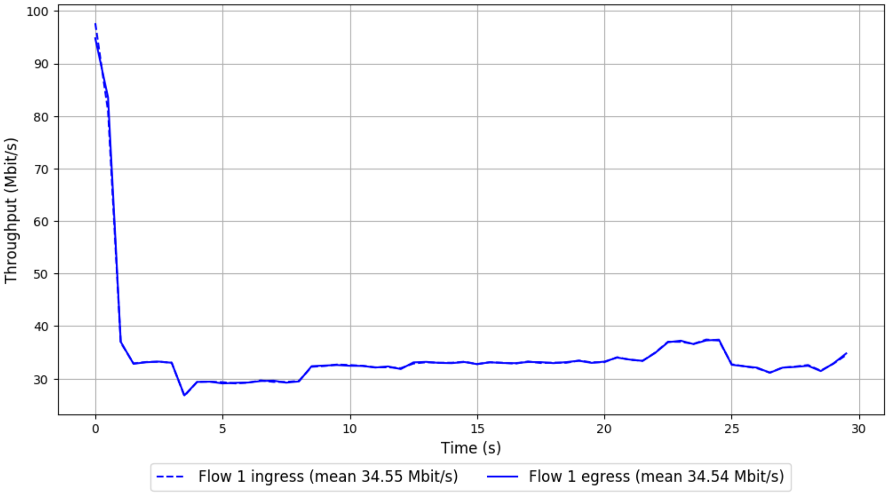
Run 3: Report of TCP Vegas — Data Link

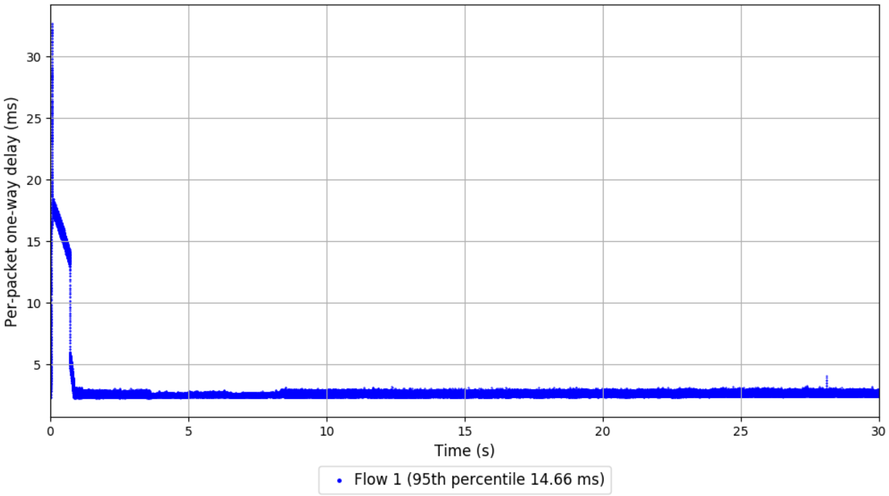




```
Run 4: Statistics of TCP Vegas

Start at: 2018-03-20 15:11:37
End at: 2018-03-20 15:12:07
Local clock offset: -11.825 ms
Remote clock offset: -17.847 ms

# Below is generated by plot.py at 2018-03-20 18:19:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 34.54 Mbit/s
95th percentile per-packet one-way delay: 14.658 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 34.54 Mbit/s
95th percentile per-packet one-way delay: 14.658 ms
Loss rate: 0.01%
```

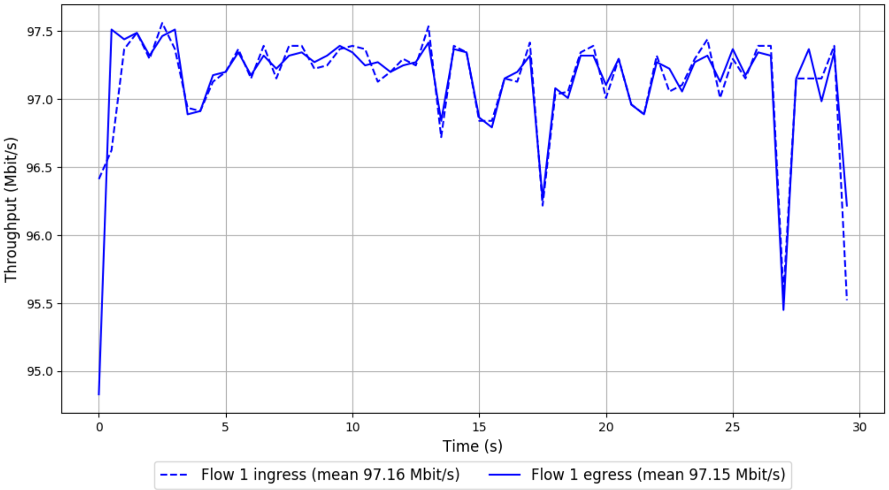
Run 4: Report of TCP Vegas — Data Link

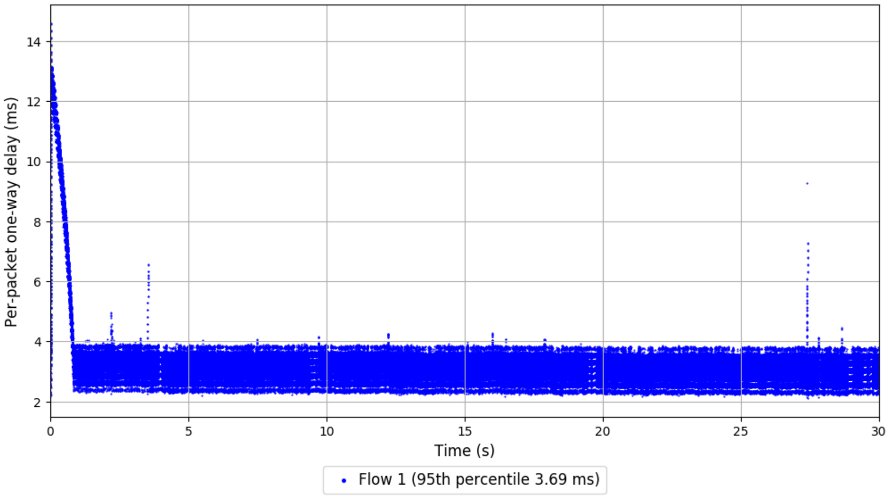




```
Run 5: Statistics of TCP Vegas

Start at: 2018-03-20 15:32:07
End at: 2018-03-20 15:32:37
Local clock offset: -12.913 ms
Remote clock offset: -16.142 ms

# Below is generated by plot.py at 2018-03-20 18:19:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.15 Mbit/s
95th percentile per-packet one-way delay: 3.692 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 97.15 Mbit/s
95th percentile per-packet one-way delay: 3.692 ms
Loss rate: 0.00%
```

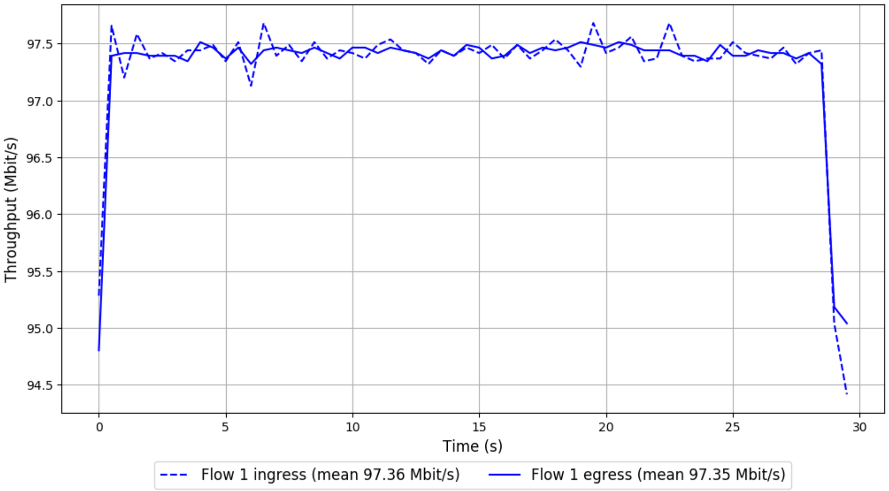
Run 5: Report of TCP Vegas — Data Link

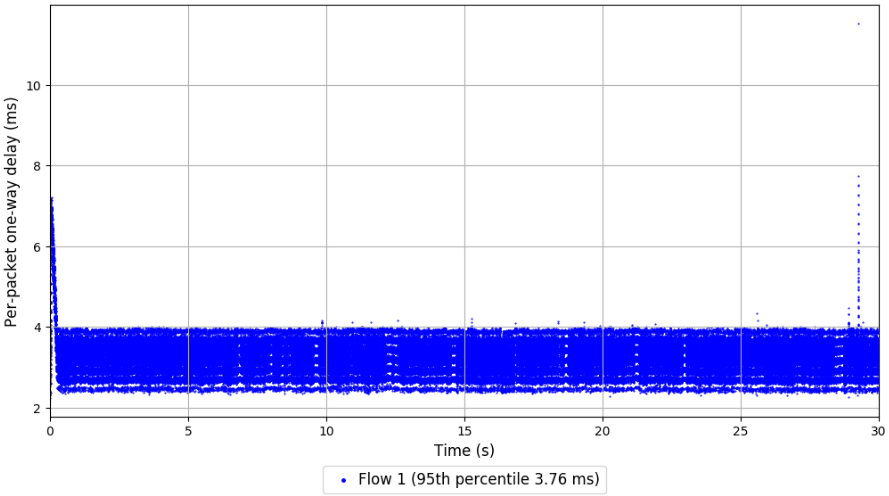




```
Run 6: Statistics of TCP Vegas

Start at: 2018-03-20 15:52:48
End at: 2018-03-20 15:53:18
Local clock offset: -14.52 ms
Remote clock offset: -16.055 ms

# Below is generated by plot.py at 2018-03-20 18:19:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.35 Mbit/s
95th percentile per-packet one-way delay: 3.762 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 97.35 Mbit/s
95th percentile per-packet one-way delay: 3.762 ms
Loss rate: 0.00%
```

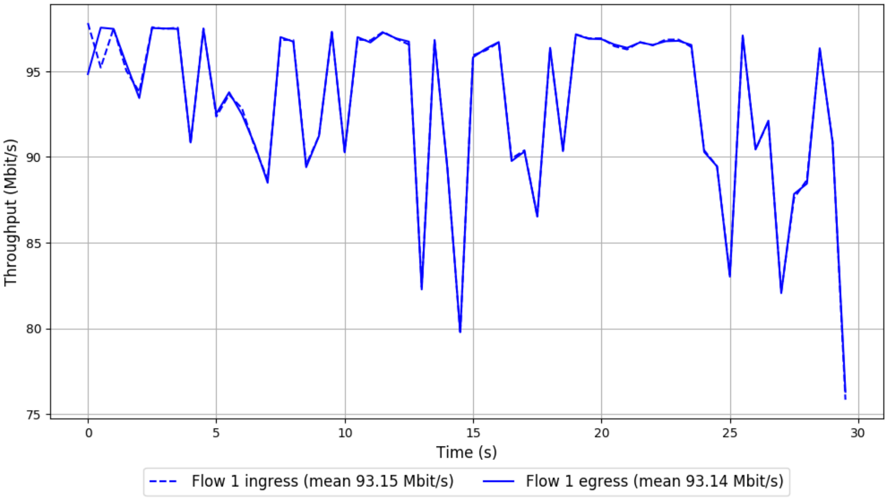
Run 6: Report of TCP Vegas — Data Link

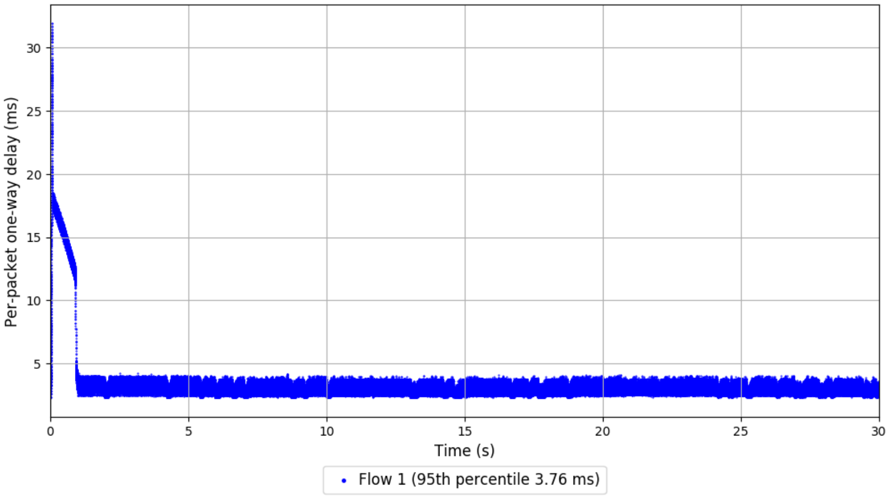




```
Run 7: Statistics of TCP Vegas

Start at: 2018-03-20 16:13:25
End at: 2018-03-20 16:13:55
Local clock offset: -12.111 ms
Remote clock offset: -16.144 ms

# Below is generated by plot.py at 2018-03-20 18:19:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.14 Mbit/s
95th percentile per-packet one-way delay: 3.762 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 93.14 Mbit/s
95th percentile per-packet one-way delay: 3.762 ms
Loss rate: 0.01%
```

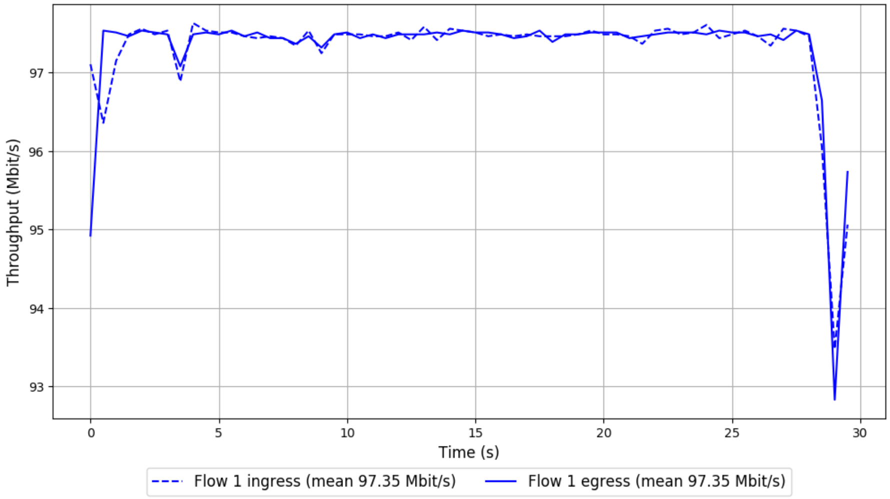
Run 7: Report of TCP Vegas — Data Link

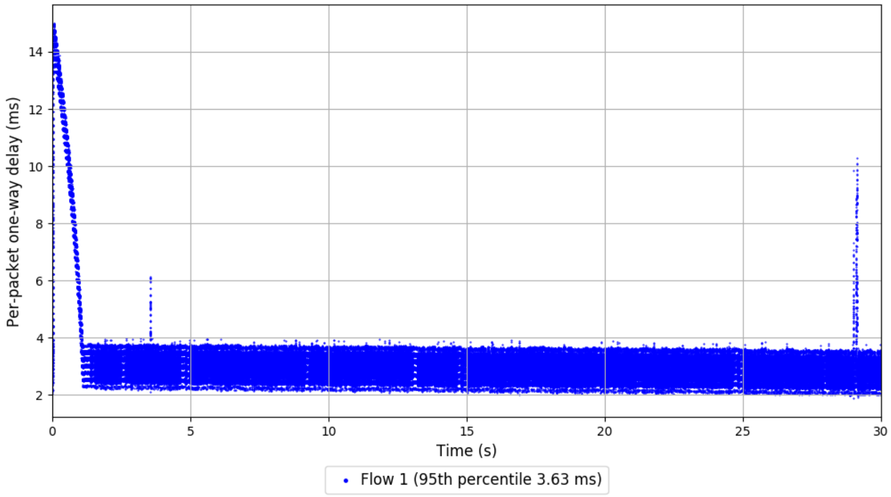




```
Run 8: Statistics of TCP Vegas

Start at: 2018-03-20 16:34:02
End at: 2018-03-20 16:34:32
Local clock offset: -12.493 ms
Remote clock offset: -15.244 ms

# Below is generated by plot.py at 2018-03-20 18:20:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.35 Mbit/s
95th percentile per-packet one-way delay: 3.633 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 97.35 Mbit/s
95th percentile per-packet one-way delay: 3.633 ms
Loss rate: 0.00%
```

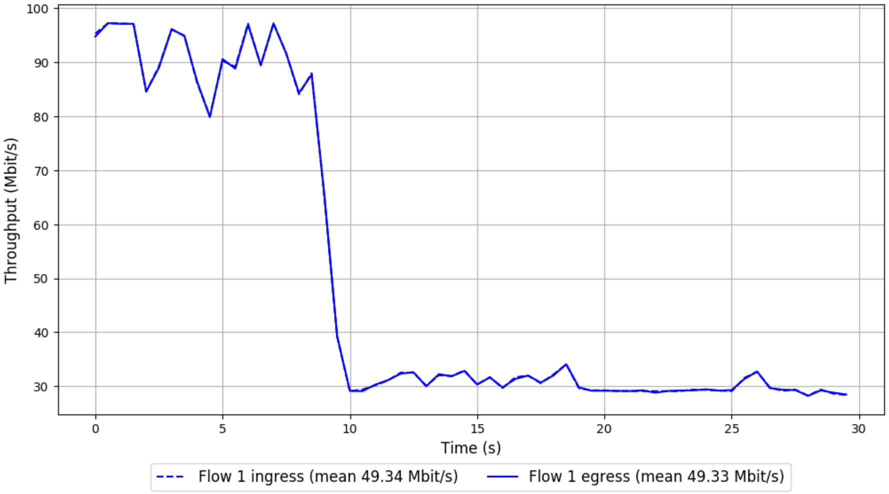
Run 8: Report of TCP Vegas — Data Link

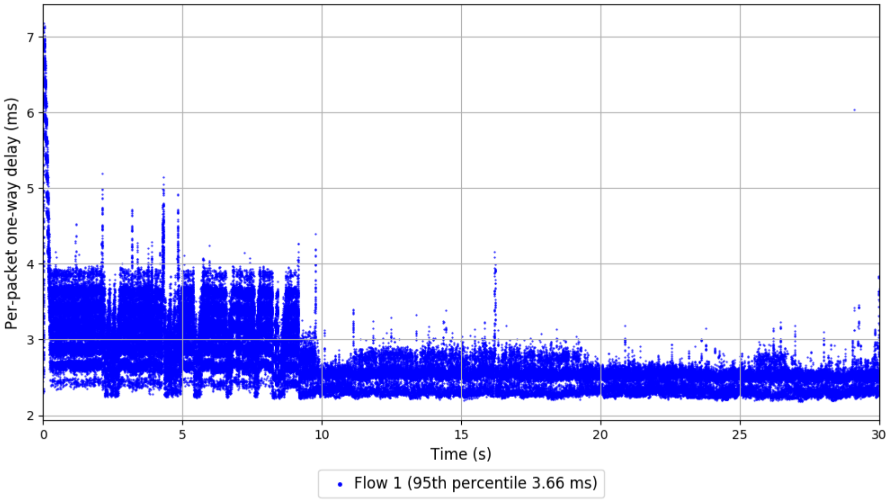




```
Run 9: Statistics of TCP Vegas

Start at: 2018-03-20 16:54:37
End at: 2018-03-20 16:55:07
Local clock offset: -15.803 ms
Remote clock offset: -14.096 ms

# Below is generated by plot.py at 2018-03-20 18:20:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 49.33 Mbit/s
95th percentile per-packet one-way delay: 3.660 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 49.33 Mbit/s
95th percentile per-packet one-way delay: 3.660 ms
Loss rate: 0.02%
```

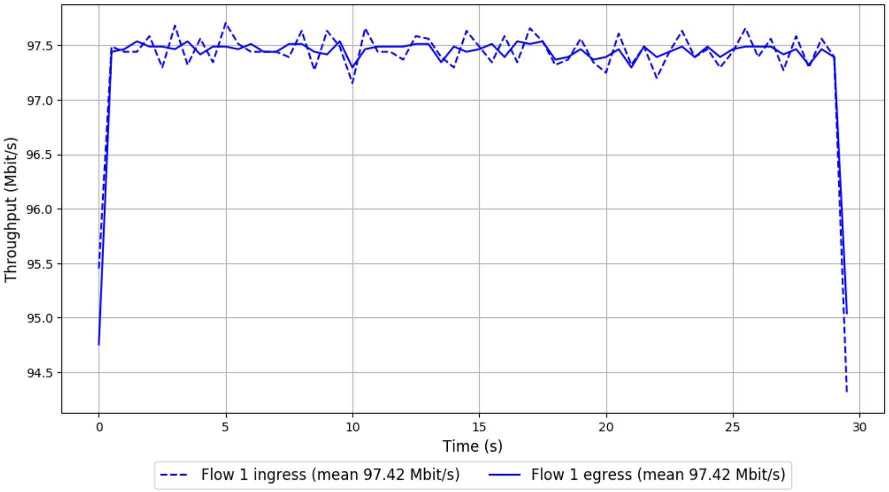
Run 9: Report of TCP Vegas — Data Link

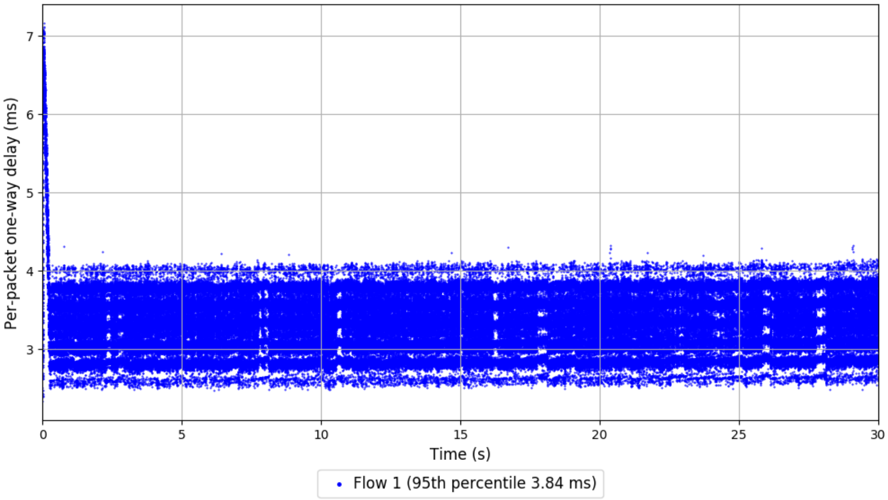




```
Run 10: Statistics of TCP Vegas

Start at: 2018-03-20 17:15:09
End at: 2018-03-20 17:15:39
Local clock offset: -14.74 ms
Remote clock offset: -13.962 ms

# Below is generated by plot.py at 2018-03-20 18:20:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.42 Mbit/s
95th percentile per-packet one-way delay: 3.840 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 97.42 Mbit/s
95th percentile per-packet one-way delay: 3.840 ms
Loss rate: 0.00%
```

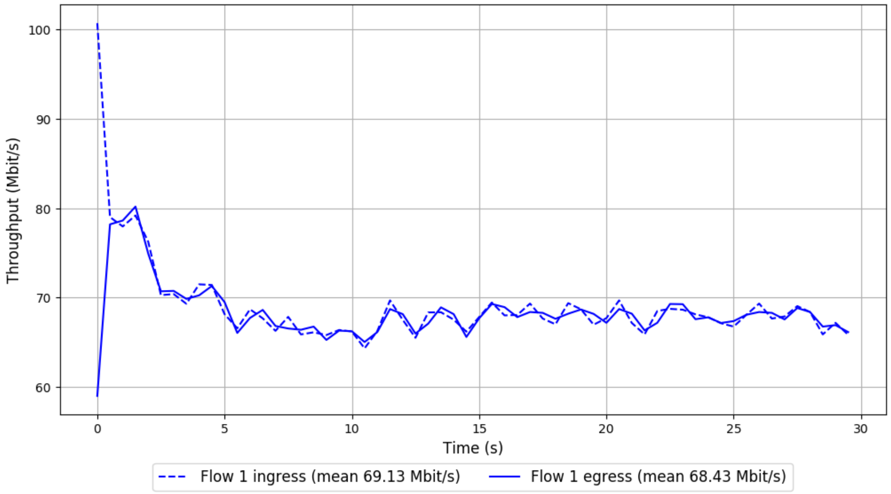
Run 10: Report of TCP Vegas — Data Link

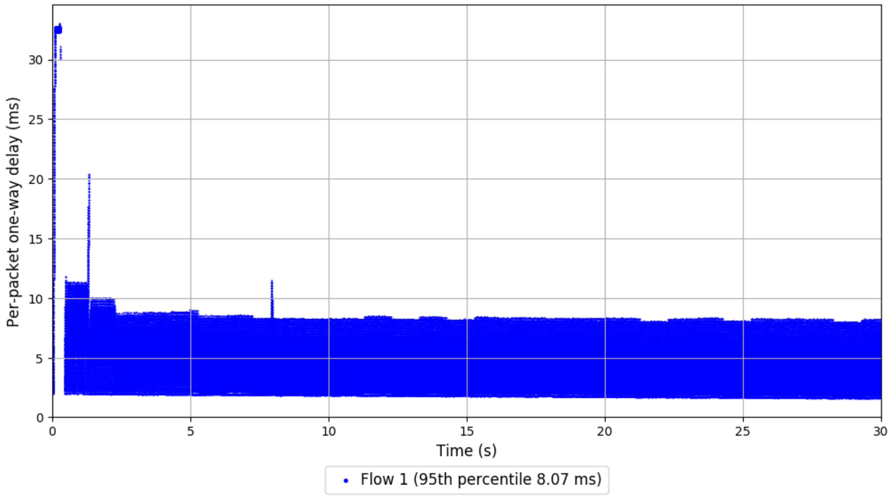




```
Run 1: Statistics of Verus

Start at: 2018-03-20 14:16:57
End at: 2018-03-20 14:17:27
Local clock offset: -7.882 ms
Remote clock offset: -6.69 ms

# Below is generated by plot.py at 2018-03-20 18:20:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 68.43 Mbit/s
95th percentile per-packet one-way delay: 8.066 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 68.43 Mbit/s
95th percentile per-packet one-way delay: 8.066 ms
Loss rate: 0.99%
```

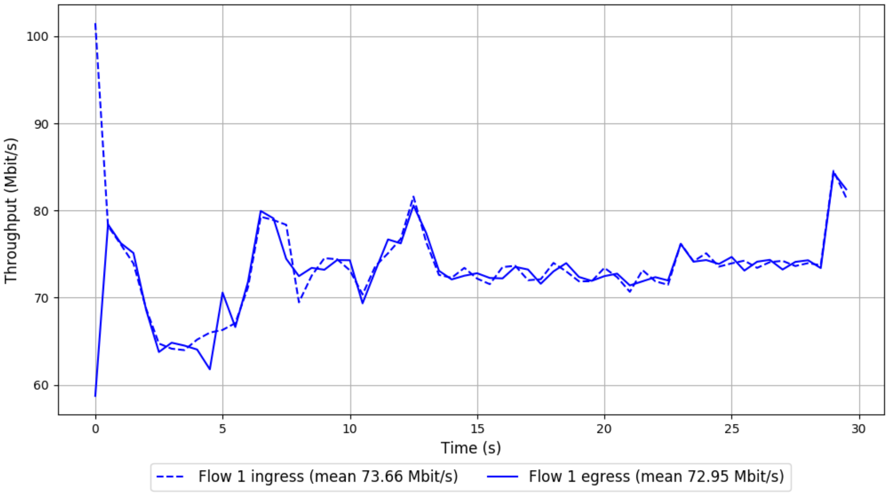
Run 1: Report of Verus — Data Link

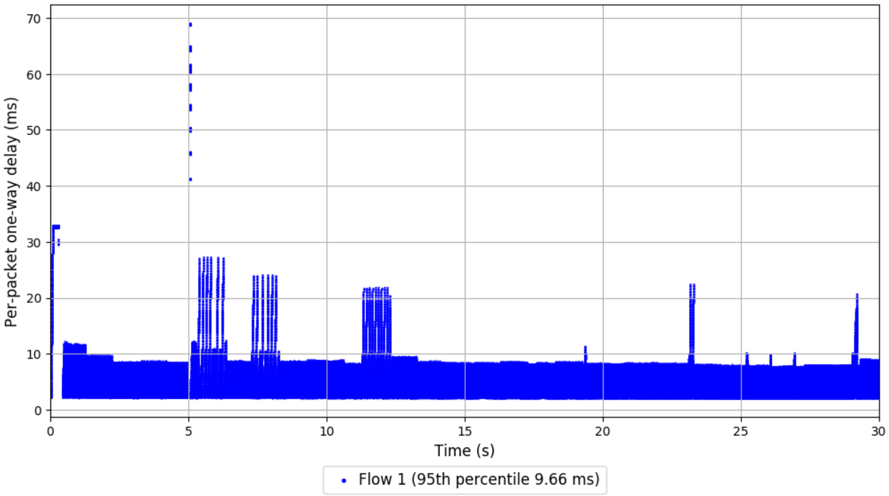




```
Run 2: Statistics of Verus

Start at: 2018-03-20 14:37:21
End at: 2018-03-20 14:37:51
Local clock offset: -16.263 ms
Remote clock offset: -6.817 ms

# Below is generated by plot.py at 2018-03-20 18:20:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 72.95 Mbit/s
95th percentile per-packet one-way delay: 9.656 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 72.95 Mbit/s
95th percentile per-packet one-way delay: 9.656 ms
Loss rate: 0.93%
```

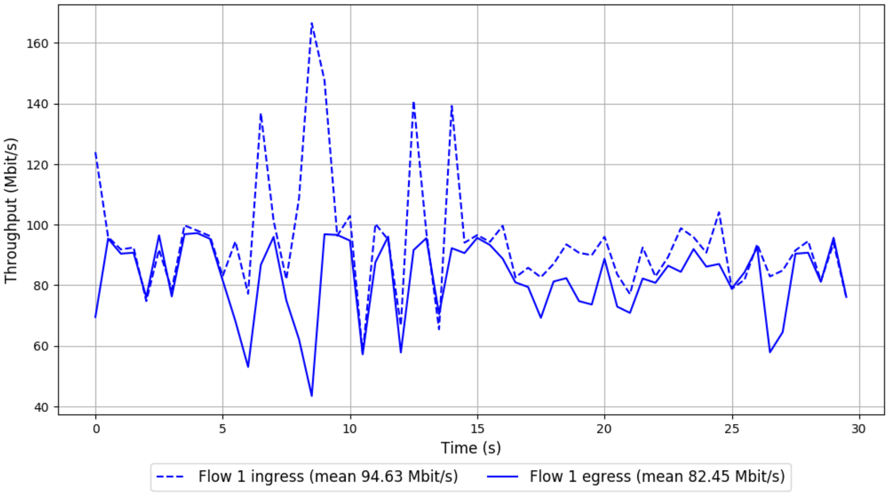
Run 2: Report of Verus — Data Link

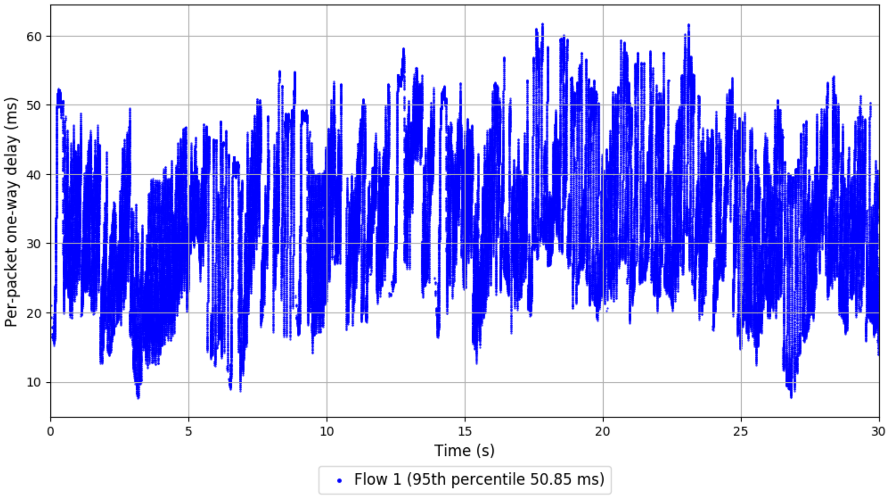




```
Run 3: Statistics of Verus

Start at: 2018-03-20 14:57:50
End at: 2018-03-20 14:58:20
Local clock offset: -13.809 ms
Remote clock offset: -14.4 ms

# Below is generated by plot.py at 2018-03-20 18:20:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 82.45 Mbit/s
95th percentile per-packet one-way delay: 50.851 ms
Loss rate: 12.85%
-- Flow 1:
Average throughput: 82.45 Mbit/s
95th percentile per-packet one-way delay: 50.851 ms
Loss rate: 12.85%
```

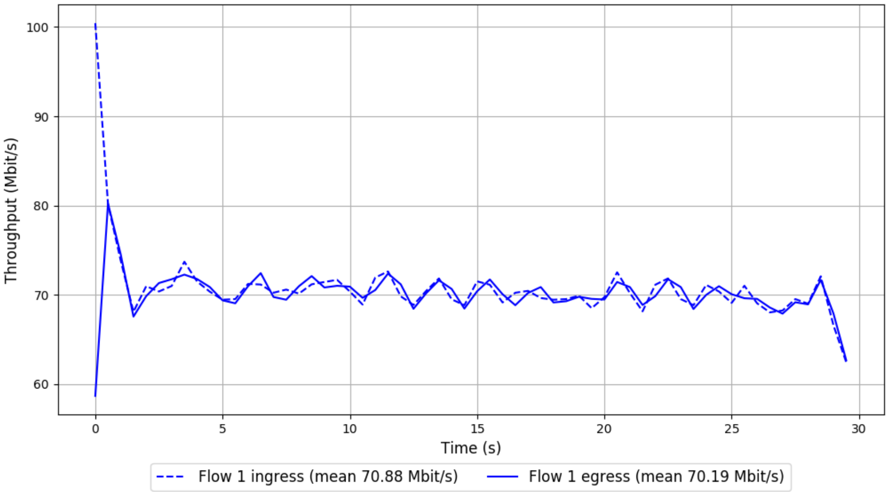
Run 3: Report of Verus — Data Link

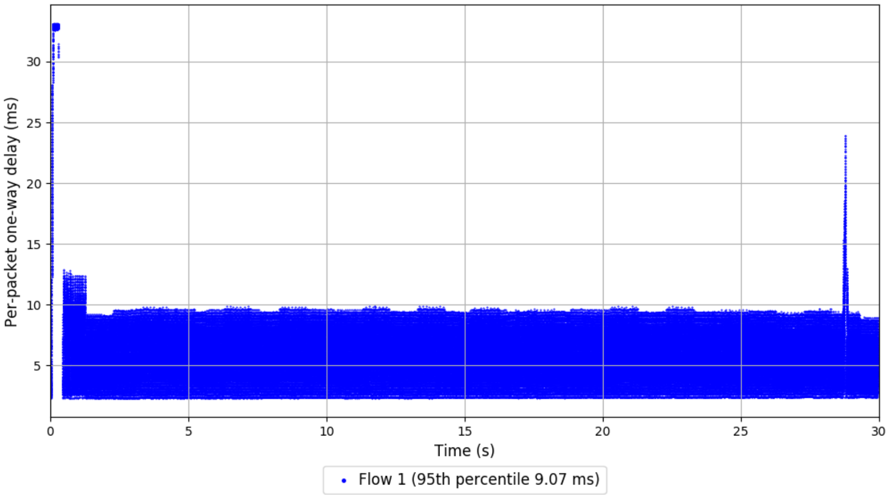




```
Run 4: Statistics of Verus

Start at: 2018-03-20 15:18:21
End at: 2018-03-20 15:18:51
Local clock offset: -11.699 ms
Remote clock offset: -18.884 ms

# Below is generated by plot.py at 2018-03-20 18:20:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 70.19 Mbit/s
95th percentile per-packet one-way delay: 9.067 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 70.19 Mbit/s
95th percentile per-packet one-way delay: 9.067 ms
Loss rate: 0.96%
```

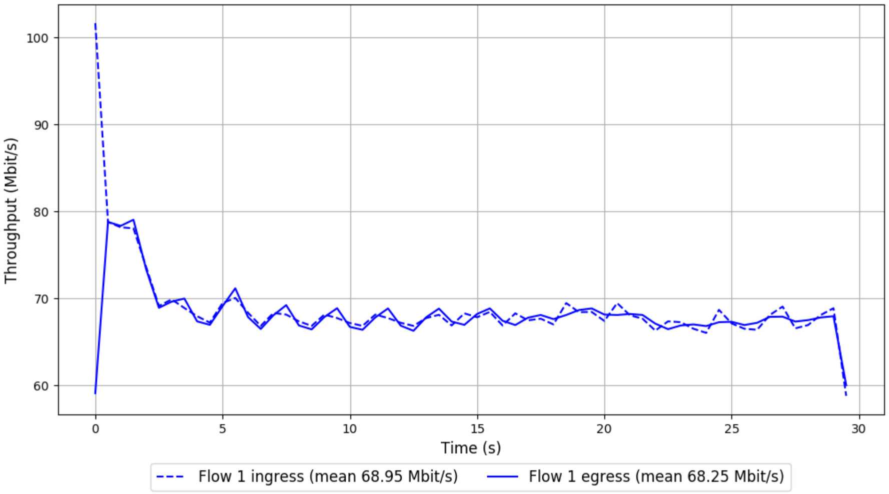
Run 4: Report of Verus — Data Link

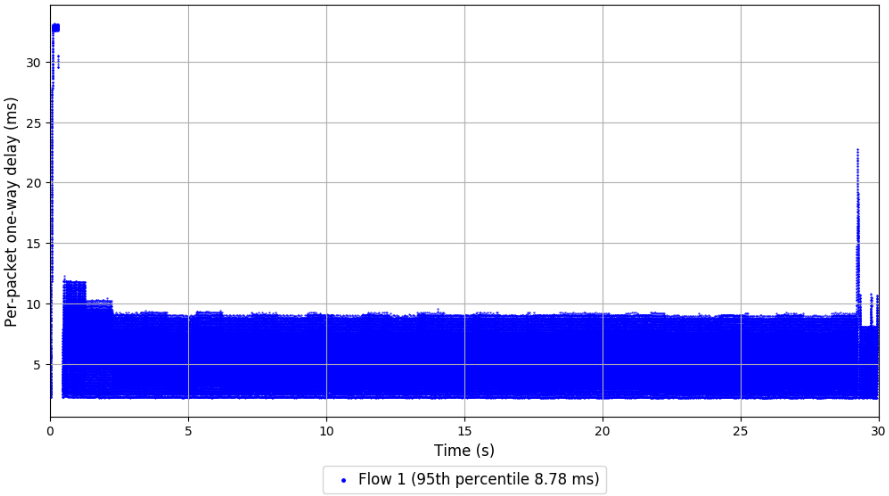




```
Run 5: Statistics of Verus

Start at: 2018-03-20 15:38:56
End at: 2018-03-20 15:39:26
Local clock offset: -13.537 ms
Remote clock offset: -15.85 ms

# Below is generated by plot.py at 2018-03-20 18:20:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 68.25 Mbit/s
95th percentile per-packet one-way delay: 8.780 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 68.25 Mbit/s
95th percentile per-packet one-way delay: 8.780 ms
Loss rate: 0.99%
```

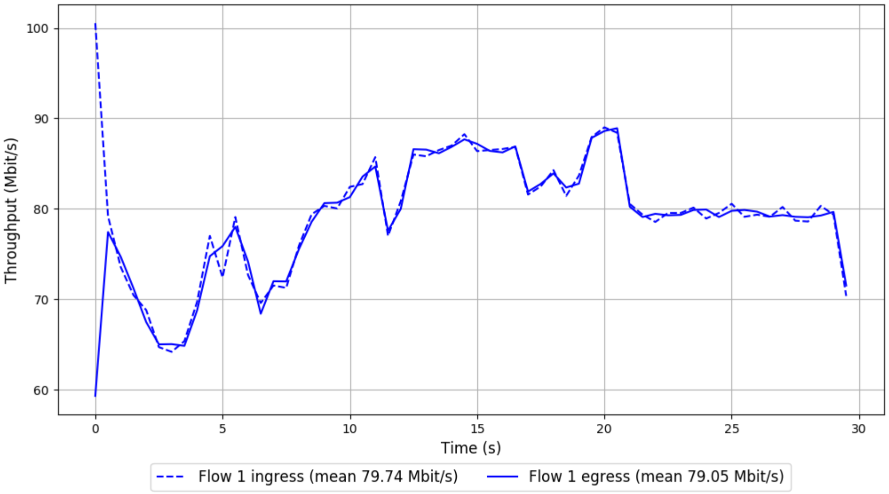
Run 5: Report of Verus — Data Link

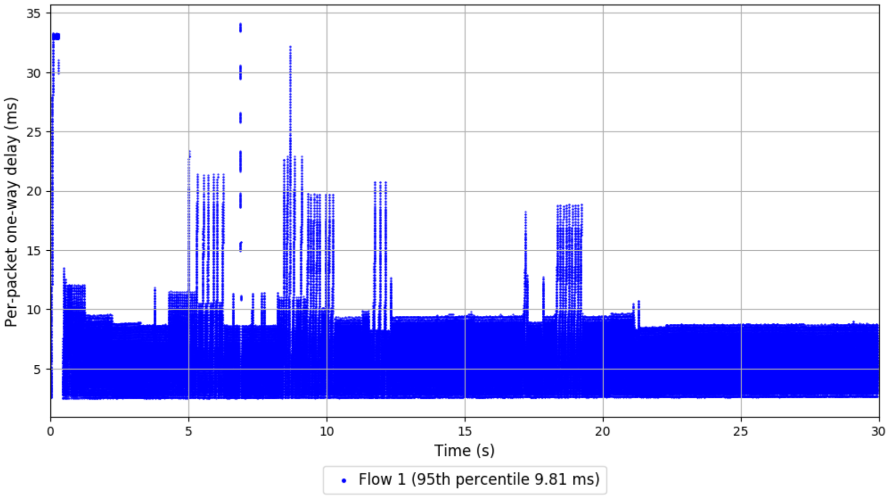




```
Run 6: Statistics of Verus

Start at: 2018-03-20 15:59:35
End at: 2018-03-20 16:00:05
Local clock offset: -14.308 ms
Remote clock offset: -15.964 ms

# Below is generated by plot.py at 2018-03-20 18:20:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 79.05 Mbit/s
95th percentile per-packet one-way delay: 9.815 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 79.05 Mbit/s
95th percentile per-packet one-way delay: 9.815 ms
Loss rate: 0.86%
```

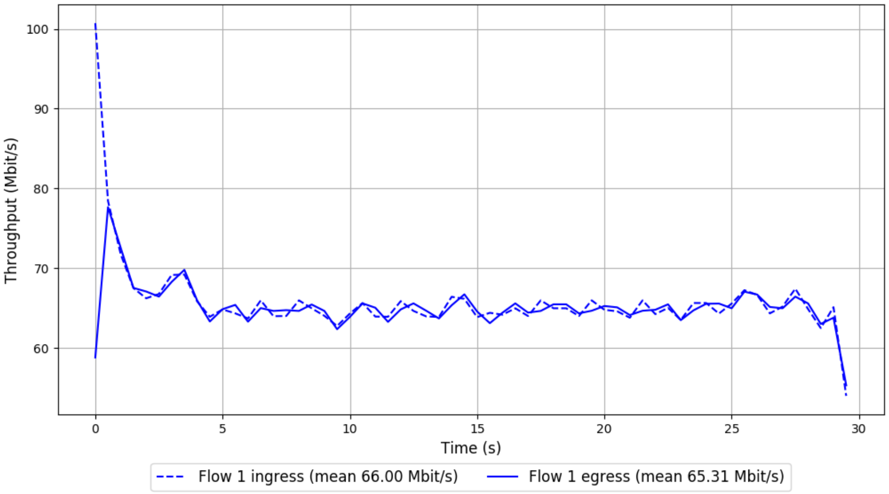
Run 6: Report of Verus — Data Link

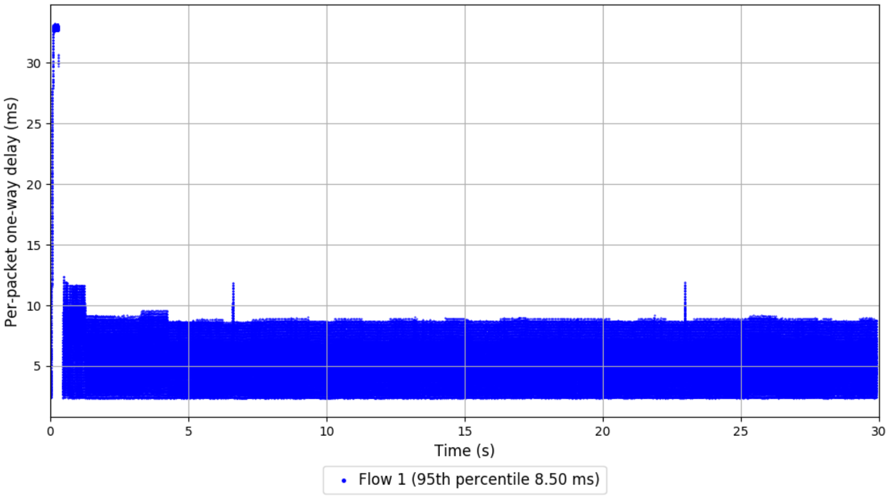




```
Run 7: Statistics of Verus

Start at: 2018-03-20 16:20:11
End at: 2018-03-20 16:20:41
Local clock offset: -11.927 ms
Remote clock offset: -16.34 ms

# Below is generated by plot.py at 2018-03-20 18:20:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 65.31 Mbit/s
95th percentile per-packet one-way delay: 8.498 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 65.31 Mbit/s
95th percentile per-packet one-way delay: 8.498 ms
Loss rate: 1.04%
```

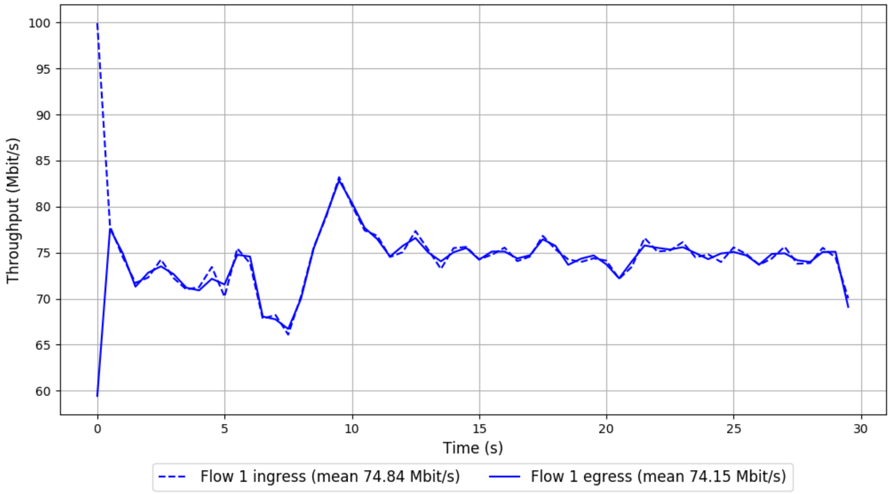
Run 7: Report of Verus — Data Link

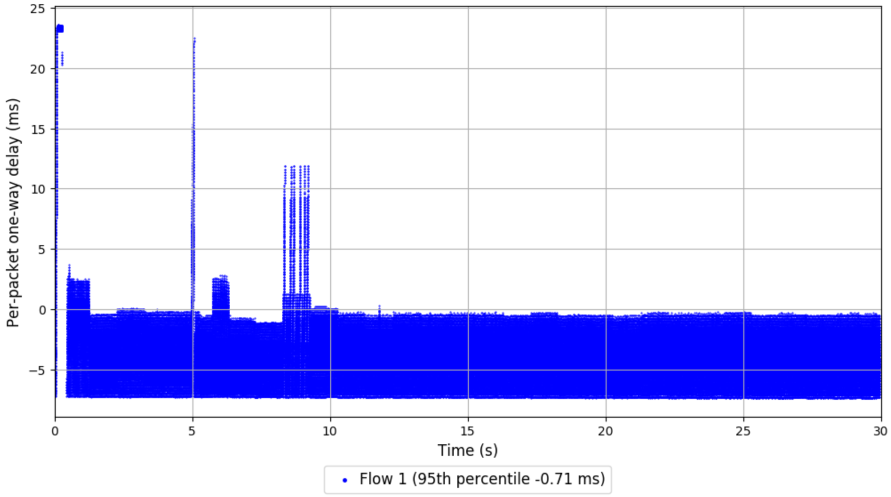




```
Run 8: Statistics of Verus

Start at: 2018-03-20 16:40:45
End at: 2018-03-20 16:41:15
Local clock offset: -14.129 ms
Remote clock offset: -24.066 ms

# Below is generated by plot.py at 2018-03-20 18:21:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 74.15 Mbit/s
95th percentile per-packet one-way delay: -0.706 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 74.15 Mbit/s
95th percentile per-packet one-way delay: -0.706 ms
Loss rate: 0.91%
```

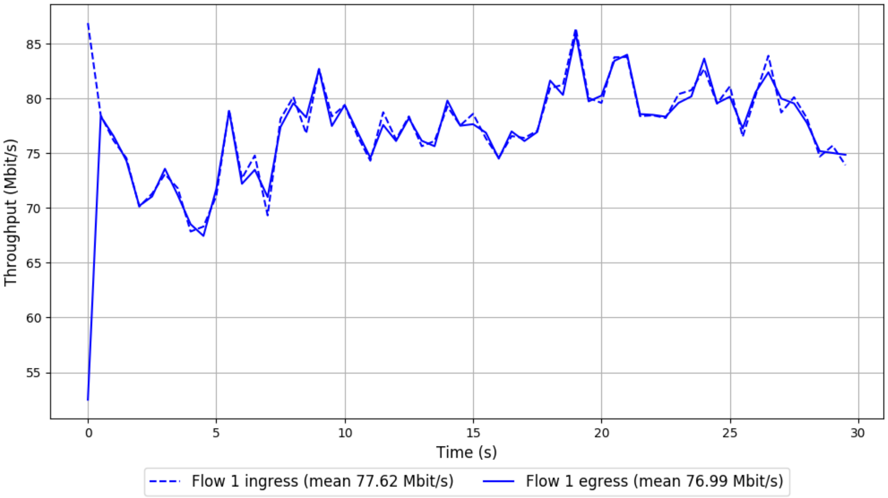
Run 8: Report of Verus — Data Link

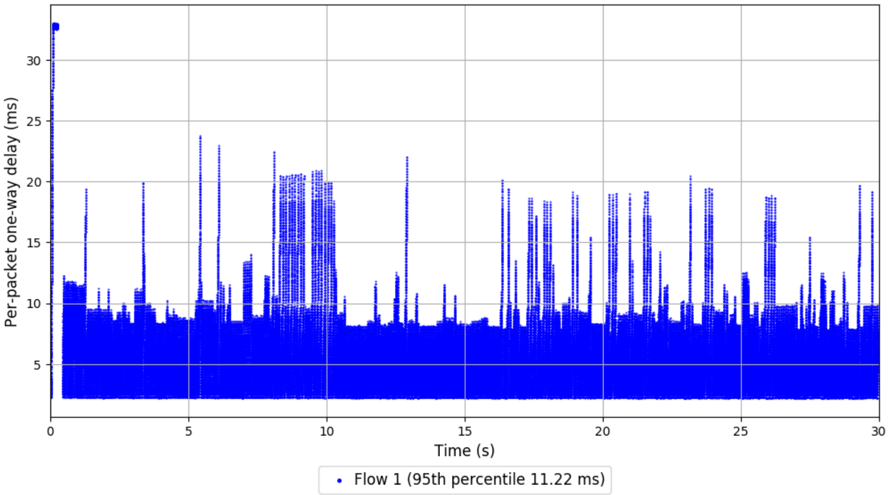




```
Run 9: Statistics of Verus

Start at: 2018-03-20 17:01:20
End at: 2018-03-20 17:01:50
Local clock offset: -16.331 ms
Remote clock offset: -14.013 ms

# Below is generated by plot.py at 2018-03-20 18:21:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 76.99 Mbit/s
95th percentile per-packet one-way delay: 11.219 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 76.99 Mbit/s
95th percentile per-packet one-way delay: 11.219 ms
Loss rate: 0.79%
```

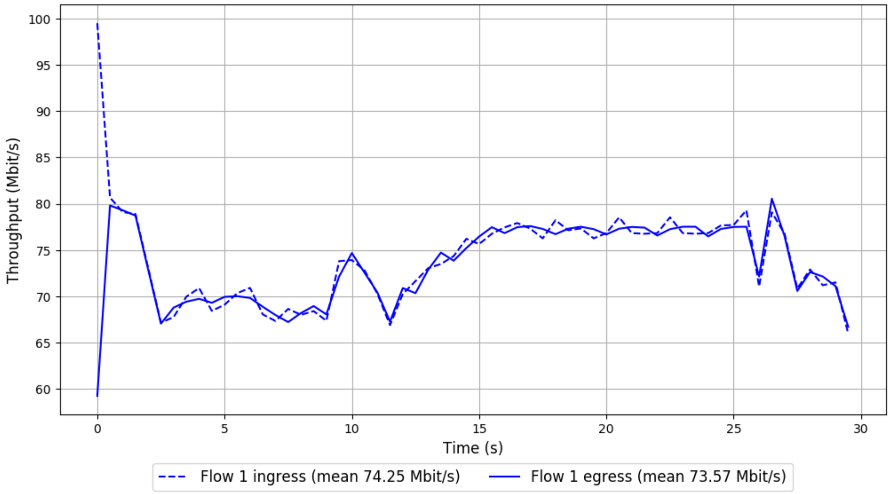
Run 9: Report of Verus — Data Link

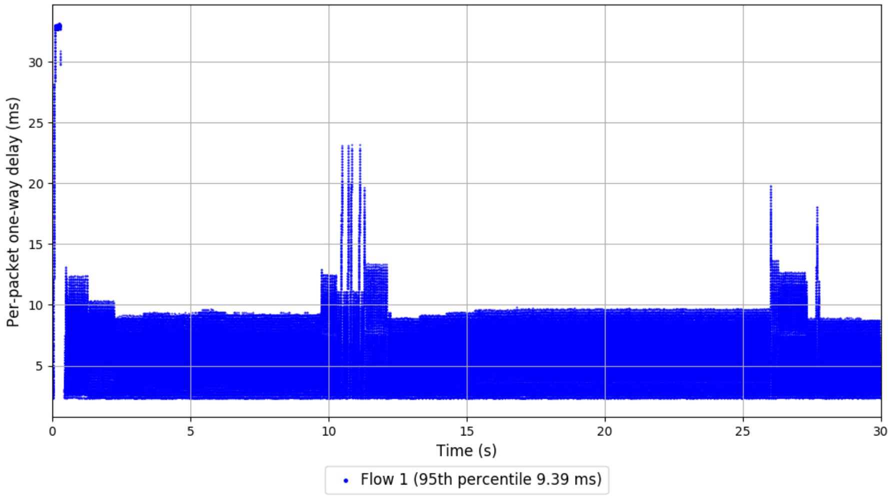




```
Run 10: Statistics of Verus

Start at: 2018-03-20 17:21:52
End at: 2018-03-20 17:22:22
Local clock offset: -14.235 ms
Remote clock offset: -13.936 ms

# Below is generated by plot.py at 2018-03-20 18:21:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 73.57 Mbit/s
95th percentile per-packet one-way delay: 9.394 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 73.57 Mbit/s
95th percentile per-packet one-way delay: 9.394 ms
Loss rate: 0.90%
```

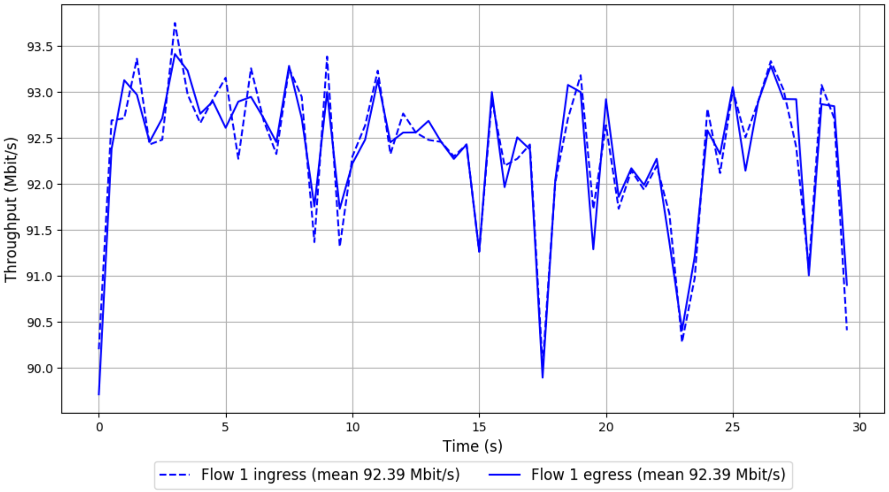
Run 10: Report of Verus — Data Link

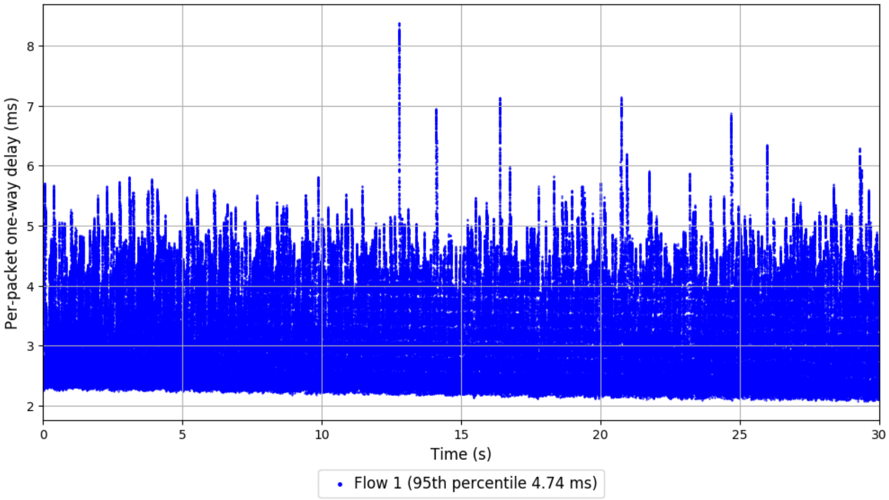




```
Run 1: Statistics of Copa

Start at: 2018-03-20 14:26:00
End at: 2018-03-20 14:26:30
Local clock offset: -13.07 ms
Remote clock offset: -6.75 ms

# Below is generated by plot.py at 2018-03-20 18:22:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.39 Mbit/s
95th percentile per-packet one-way delay: 4.737 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 92.39 Mbit/s
95th percentile per-packet one-way delay: 4.737 ms
Loss rate: 0.00%
```

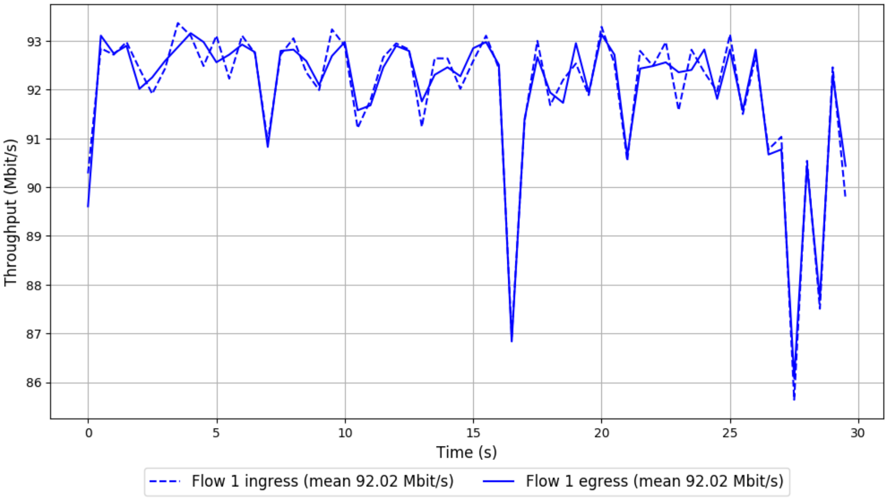
Run 1: Report of Copa — Data Link

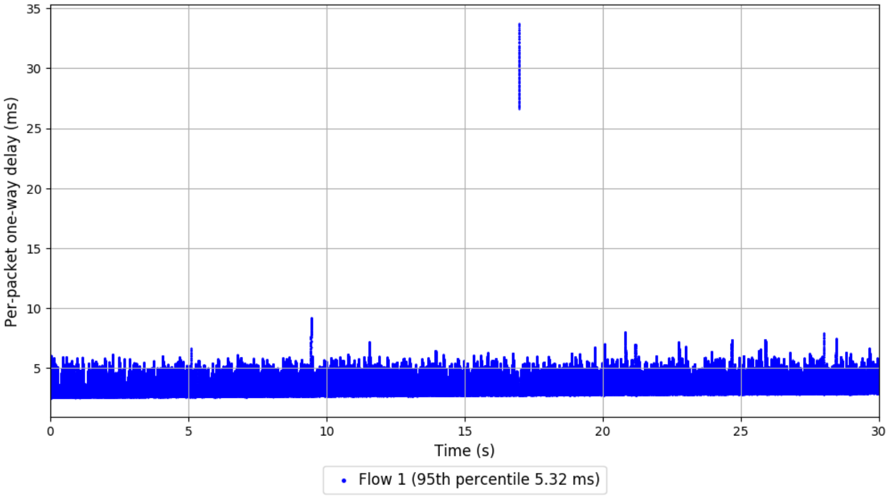




```
Run 2: Statistics of Copa

Start at: 2018-03-20 14:46:26
End at: 2018-03-20 14:46:57
Local clock offset: -18.152 ms
Remote clock offset: -7.964 ms

# Below is generated by plot.py at 2018-03-20 18:22:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.02 Mbit/s
95th percentile per-packet one-way delay: 5.320 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 92.02 Mbit/s
95th percentile per-packet one-way delay: 5.320 ms
Loss rate: 0.00%
```

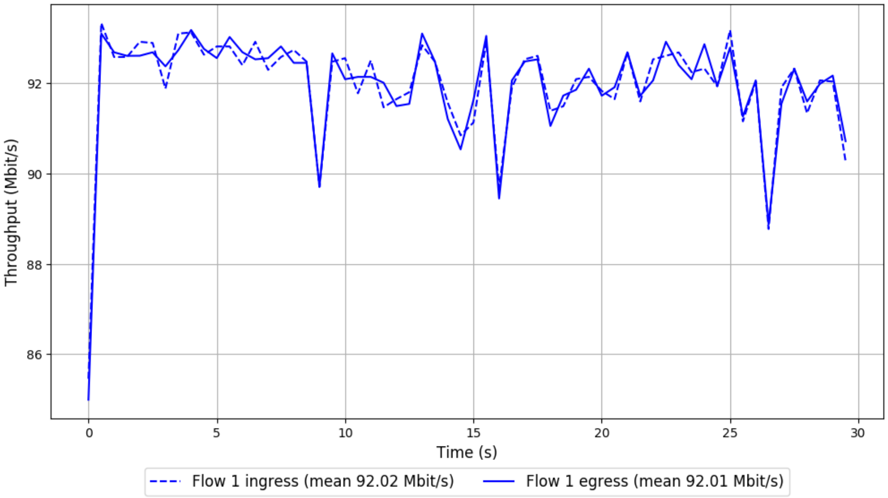
Run 2: Report of Copa — Data Link

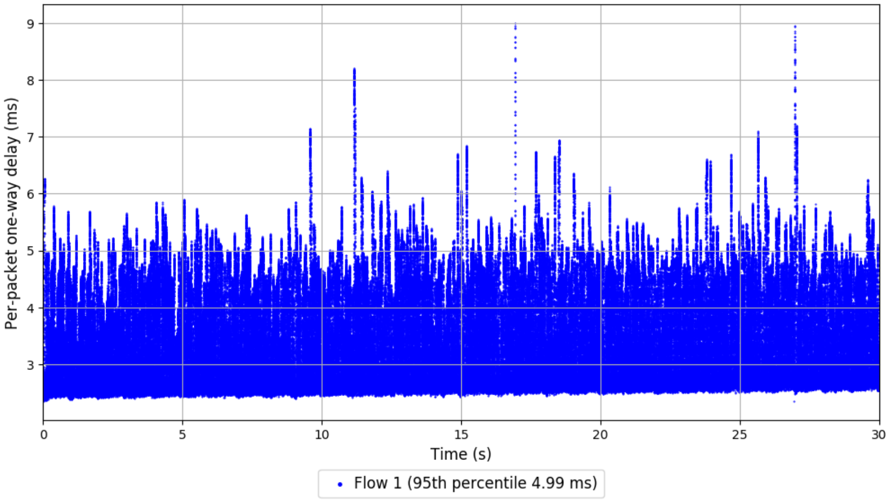




```
Run 3: Statistics of Copa

Start at: 2018-03-20 15:06:57
End at: 2018-03-20 15:07:27
Local clock offset: -12.018 ms
Remote clock offset: -16.826 ms

# Below is generated by plot.py at 2018-03-20 18:22:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.01 Mbit/s
95th percentile per-packet one-way delay: 4.986 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 92.01 Mbit/s
95th percentile per-packet one-way delay: 4.986 ms
Loss rate: 0.01%
```

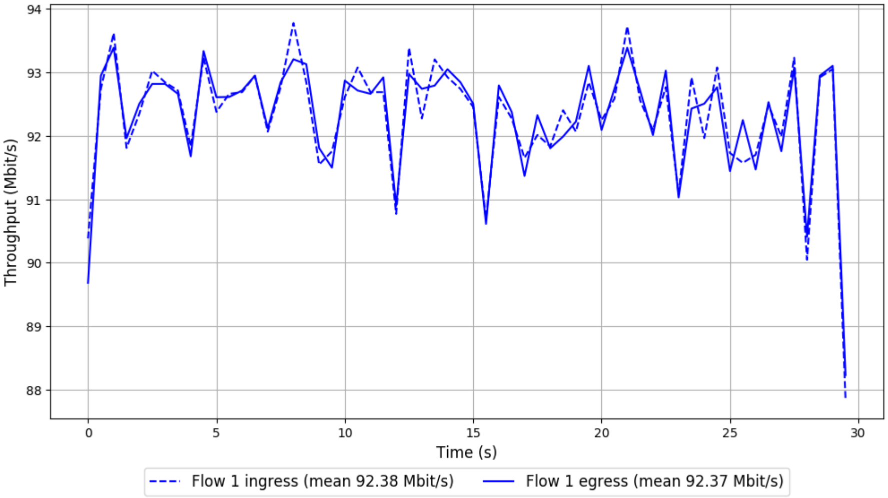
Run 3: Report of Copa — Data Link

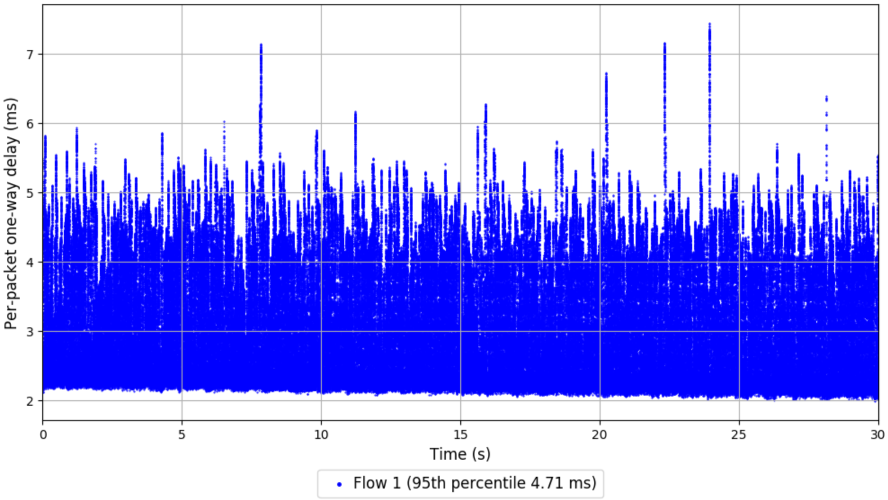




```
Run 4: Statistics of Copa

Start at: 2018-03-20 15:27:25
End at: 2018-03-20 15:27:55
Local clock offset: -12.366 ms
Remote clock offset: -16.752 ms

# Below is generated by plot.py at 2018-03-20 18:23:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.37 Mbit/s
95th percentile per-packet one-way delay: 4.712 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 92.37 Mbit/s
95th percentile per-packet one-way delay: 4.712 ms
Loss rate: 0.00%
```

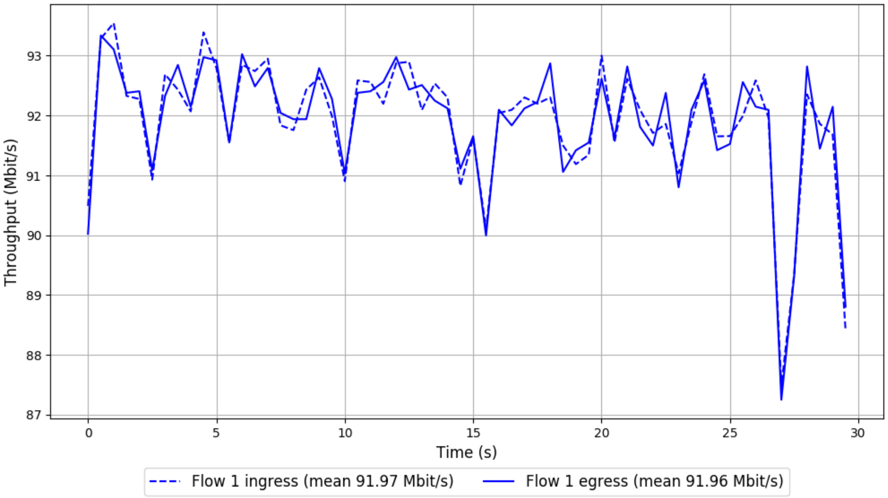
Run 4: Report of Copa — Data Link

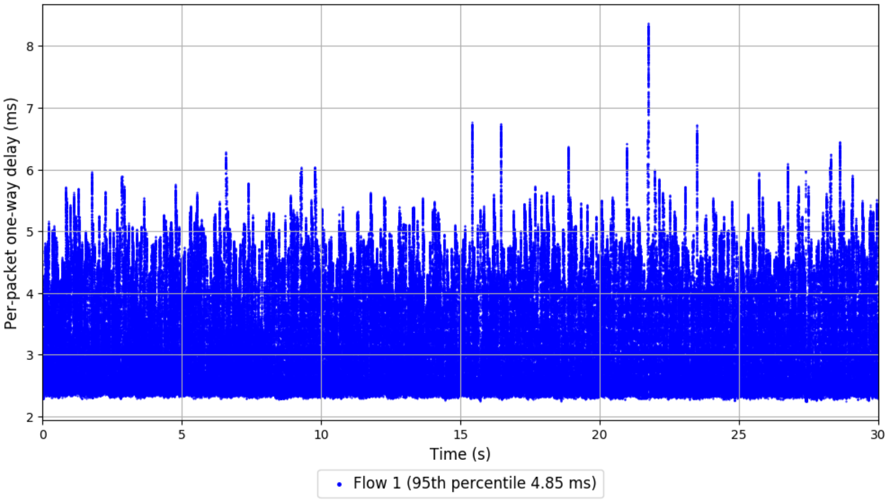




```
Run 5: Statistics of Copa

Start at: 2018-03-20 15:48:08
End at: 2018-03-20 15:48:38
Local clock offset: -14.187 ms
Remote clock offset: -15.908 ms

# Below is generated by plot.py at 2018-03-20 18:23:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.96 Mbit/s
95th percentile per-packet one-way delay: 4.852 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 91.96 Mbit/s
95th percentile per-packet one-way delay: 4.852 ms
Loss rate: 0.00%
```

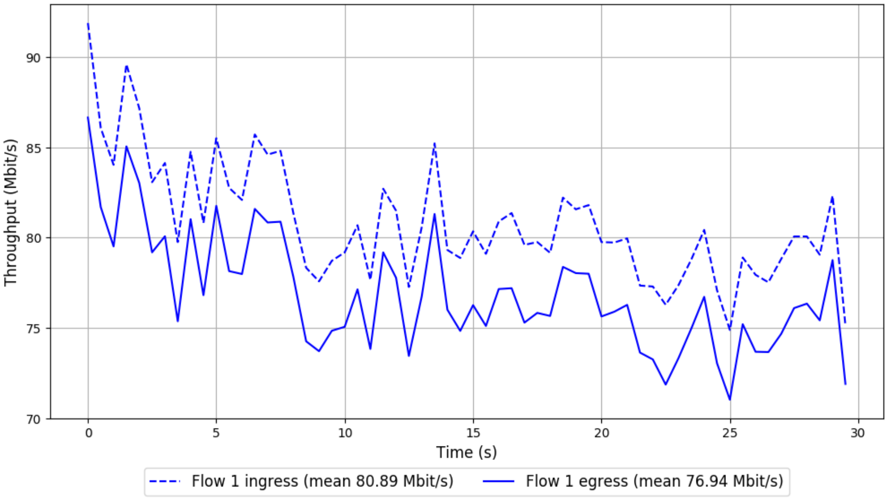
Run 5: Report of Copa — Data Link

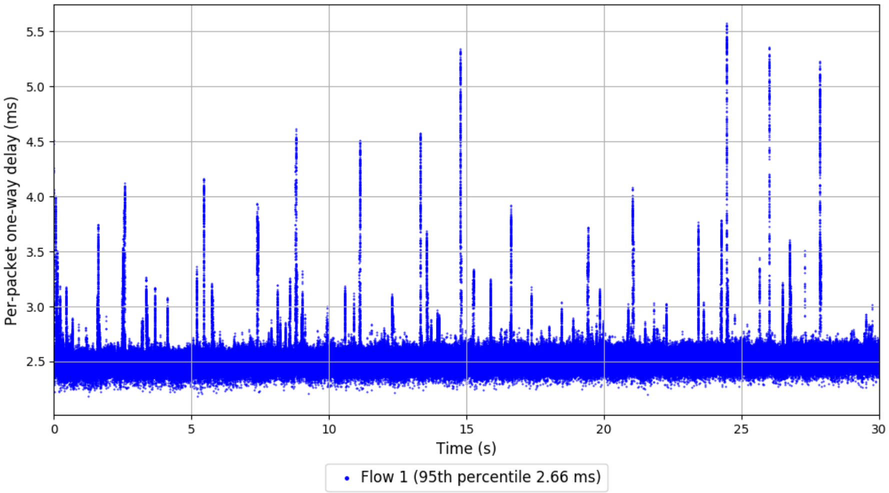




```
Run 6: Statistics of Copa

Start at: 2018-03-20 16:08:45
End at: 2018-03-20 16:09:15
Local clock offset: -12.501 ms
Remote clock offset: -16.118 ms

# Below is generated by plot.py at 2018-03-20 18:23:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 76.94 Mbit/s
95th percentile per-packet one-way delay: 2.658 ms
Loss rate: 4.88%
-- Flow 1:
Average throughput: 76.94 Mbit/s
95th percentile per-packet one-way delay: 2.658 ms
Loss rate: 4.88%
```

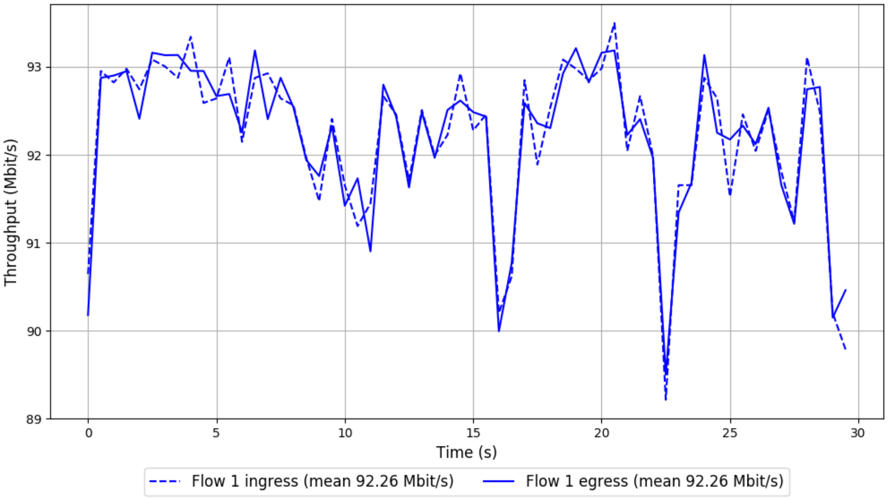
Run 6: Report of Copa — Data Link

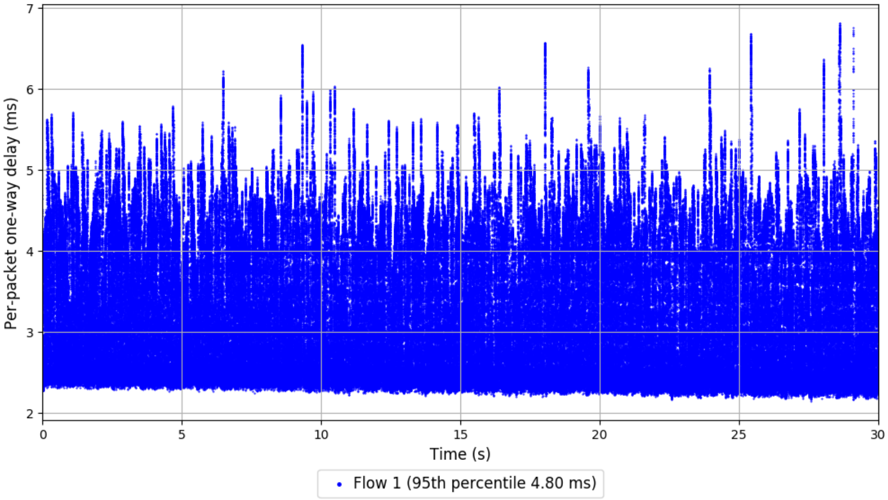




```
Run 7: Statistics of Copa

Start at: 2018-03-20 16:29:20
End at: 2018-03-20 16:29:50
Local clock offset: -11.865 ms
Remote clock offset: -16.131 ms

# Below is generated by plot.py at 2018-03-20 18:23:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.26 Mbit/s
95th percentile per-packet one-way delay: 4.798 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 92.26 Mbit/s
95th percentile per-packet one-way delay: 4.798 ms
Loss rate: 0.00%
```

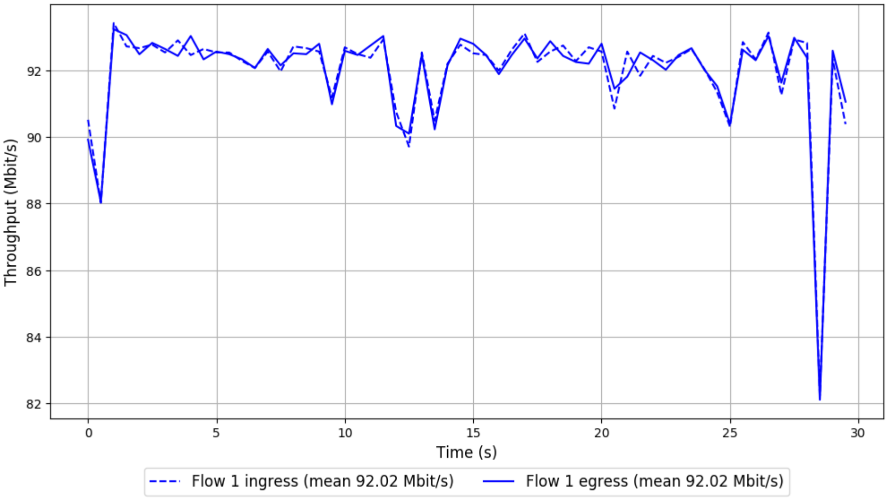
Run 7: Report of Copa — Data Link

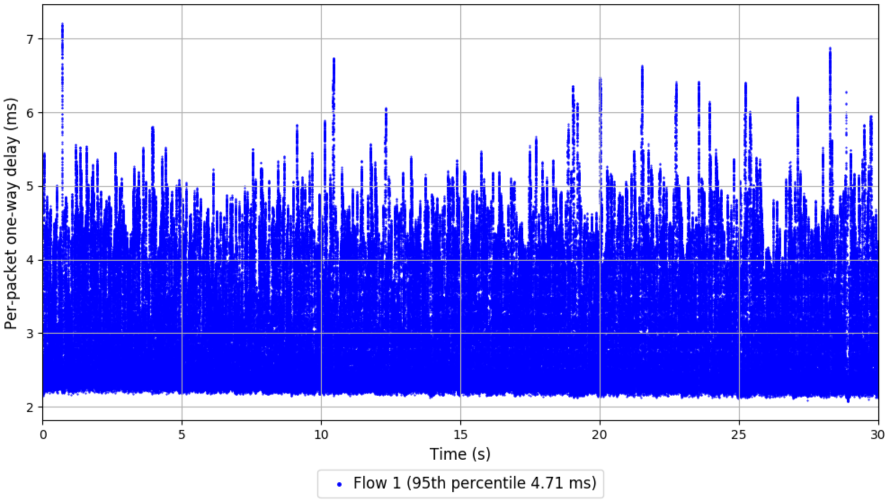




```
Run 8: Statistics of Copa

Start at: 2018-03-20 16:49:55
End at: 2018-03-20 16:50:25
Local clock offset: -15.337 ms
Remote clock offset: -14.262 ms

# Below is generated by plot.py at 2018-03-20 18:23:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.02 Mbit/s
95th percentile per-packet one-way delay: 4.709 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 92.02 Mbit/s
95th percentile per-packet one-way delay: 4.709 ms
Loss rate: 0.00%
```

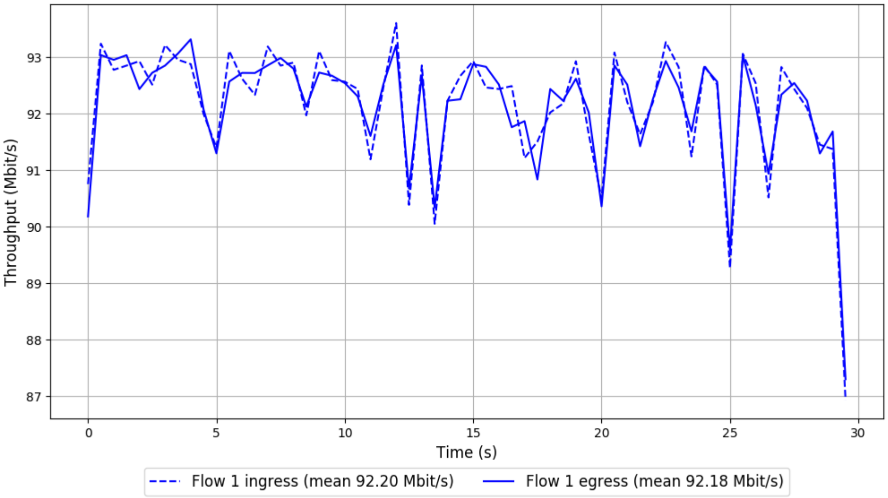
Run 8: Report of Copa — Data Link

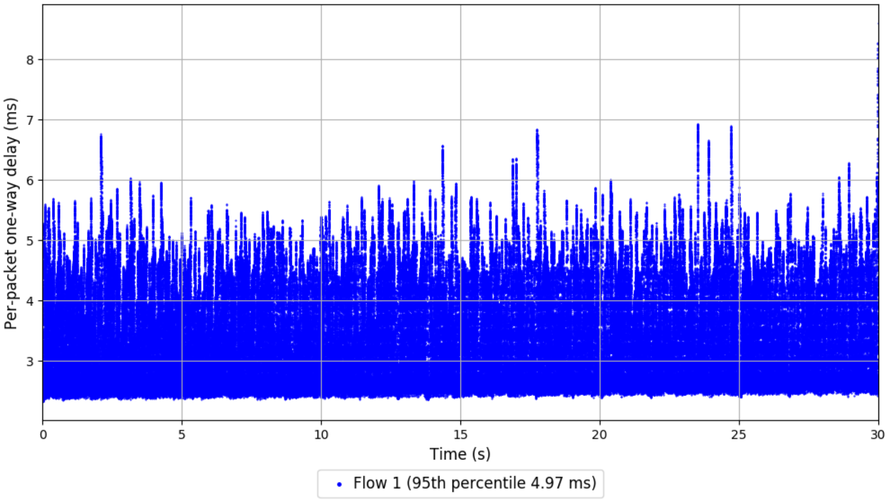




```
Run 9: Statistics of Copa

Start at: 2018-03-20 17:10:28
End at: 2018-03-20 17:10:58
Local clock offset: -15.474 ms
Remote clock offset: -14.035 ms

# Below is generated by plot.py at 2018-03-20 18:25:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.18 Mbit/s
95th percentile per-packet one-way delay: 4.968 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 92.18 Mbit/s
95th percentile per-packet one-way delay: 4.968 ms
Loss rate: 0.01%
```

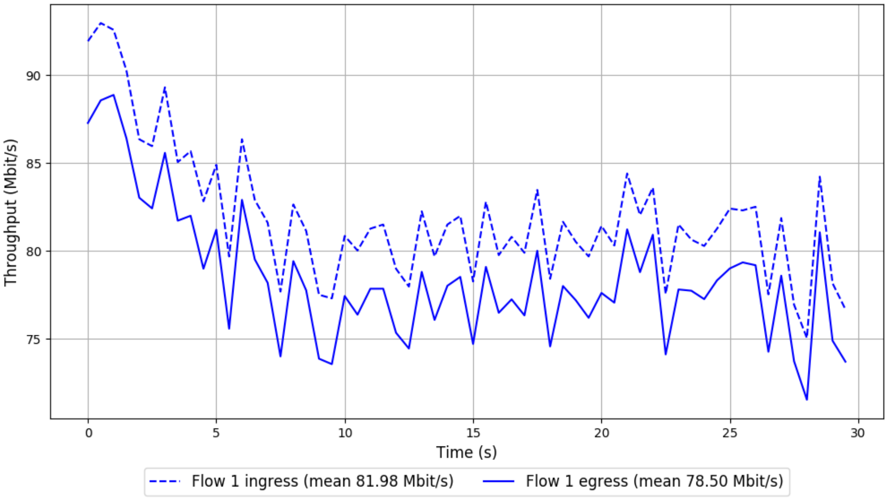
Run 9: Report of Copa — Data Link

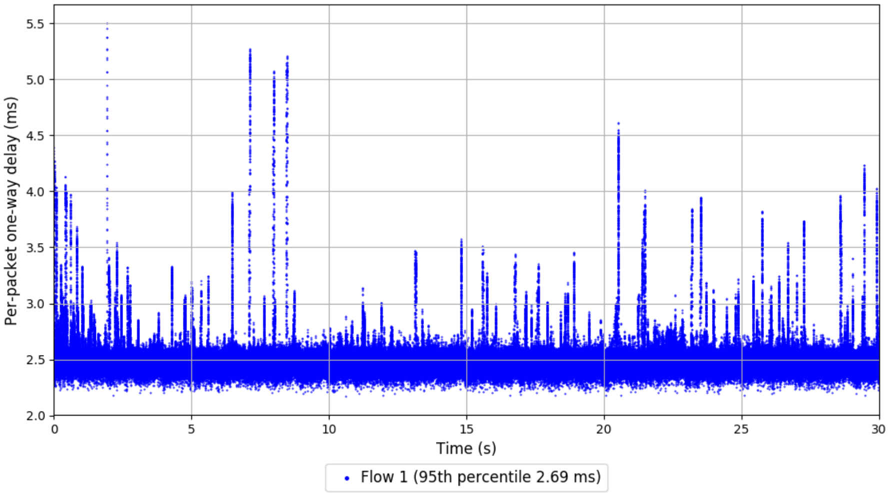




```
Run 10: Statistics of Copa

Start at: 2018-03-20 17:30:56
End at: 2018-03-20 17:31:26
Local clock offset: -14.025 ms
Remote clock offset: -13.897 ms

# Below is generated by plot.py at 2018-03-20 18:25:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.50 Mbit/s
95th percentile per-packet one-way delay: 2.687 ms
Loss rate: 4.25%
-- Flow 1:
Average throughput: 78.50 Mbit/s
95th percentile per-packet one-way delay: 2.687 ms
Loss rate: 4.25%
```

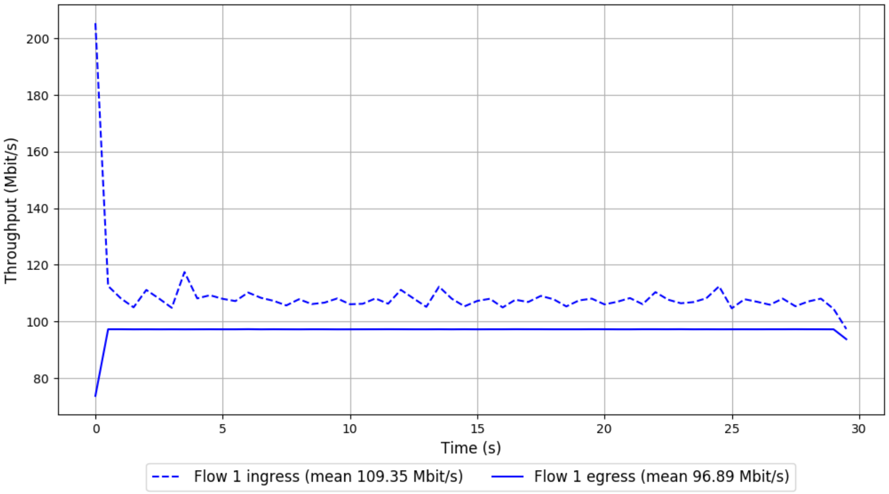
Run 10: Report of Copa — Data Link

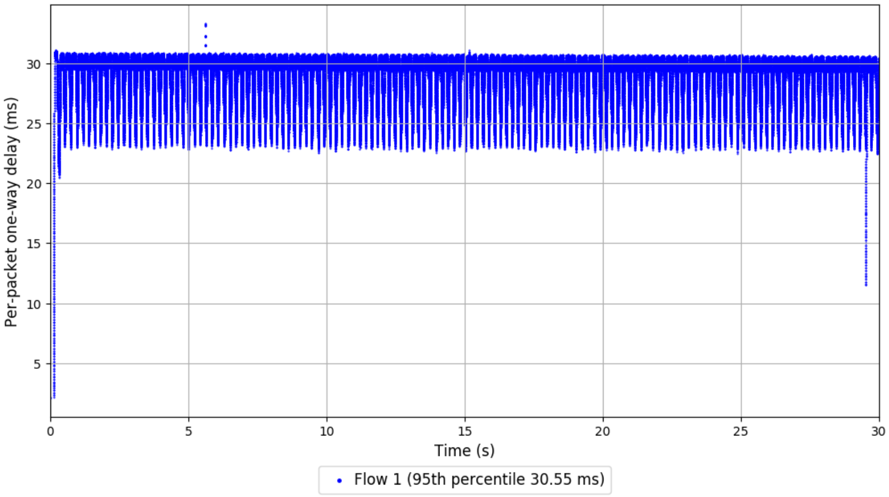




```
Run 1: Statistics of FillP

Start at: 2018-03-20 14:20:18
End at: 2018-03-20 14:20:48
Local clock offset: -10.213 ms
Remote clock offset: -6.689 ms

# Below is generated by plot.py at 2018-03-20 18:25:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.89 Mbit/s
95th percentile per-packet one-way delay: 30.547 ms
Loss rate: 11.31%
-- Flow 1:
Average throughput: 96.89 Mbit/s
95th percentile per-packet one-way delay: 30.547 ms
Loss rate: 11.31%
```

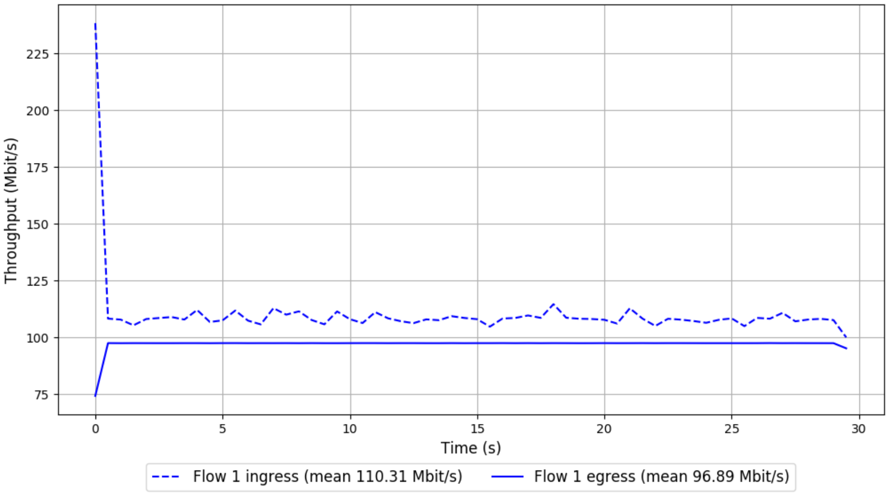
Run 1: Report of FillP — Data Link

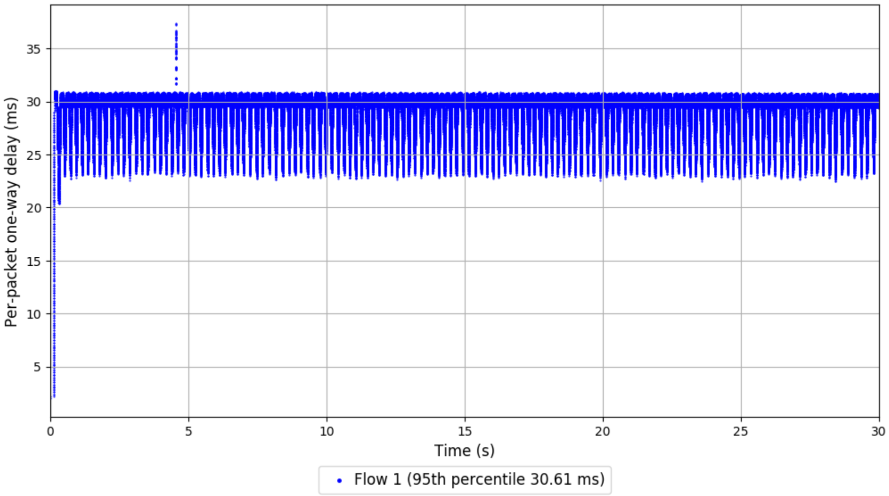




```
Run 2: Statistics of FillP

Start at: 2018-03-20 14:40:44
End at: 2018-03-20 14:41:15
Local clock offset: -16.955 ms
Remote clock offset: -6.919 ms

# Below is generated by plot.py at 2018-03-20 18:25:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.89 Mbit/s
95th percentile per-packet one-way delay: 30.613 ms
Loss rate: 12.08%
-- Flow 1:
Average throughput: 96.89 Mbit/s
95th percentile per-packet one-way delay: 30.613 ms
Loss rate: 12.08%
```

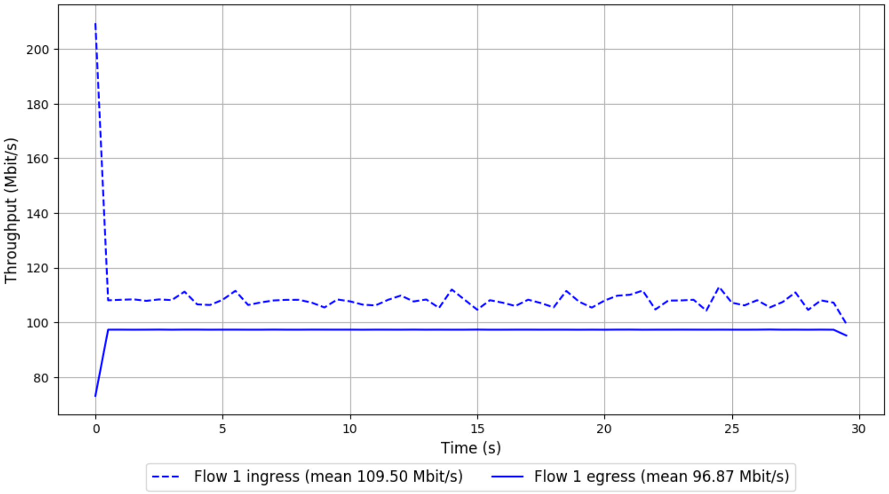
Run 2: Report of FillP — Data Link

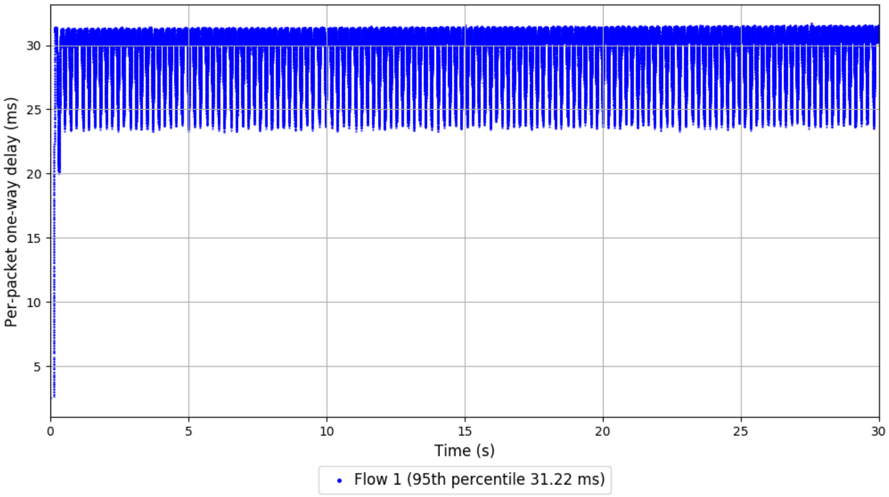




```
Run 3: Statistics of FillP

Start at: 2018-03-20 15:01:14
End at: 2018-03-20 15:01:44
Local clock offset: -12.928 ms
Remote clock offset: -15.444 ms

# Below is generated by plot.py at 2018-03-20 18:25:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.87 Mbit/s
95th percentile per-packet one-way delay: 31.224 ms
Loss rate: 11.44%
-- Flow 1:
Average throughput: 96.87 Mbit/s
95th percentile per-packet one-way delay: 31.224 ms
Loss rate: 11.44%
```

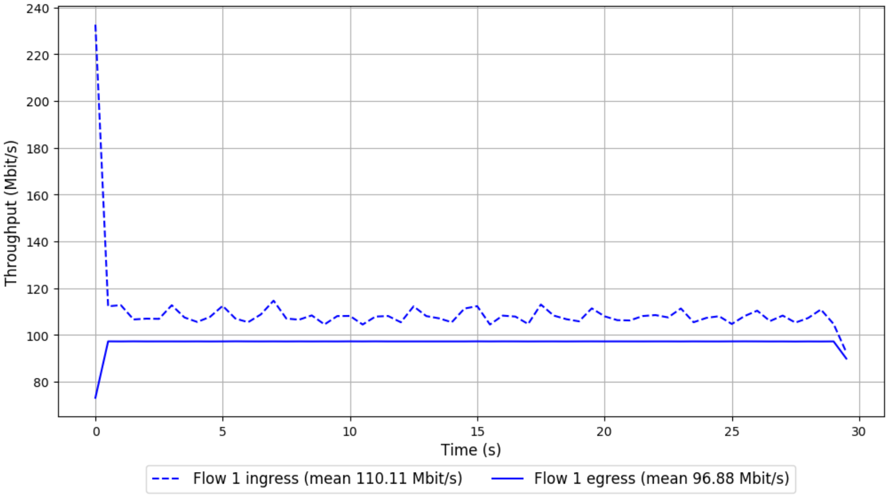
Run 3: Report of FillP — Data Link

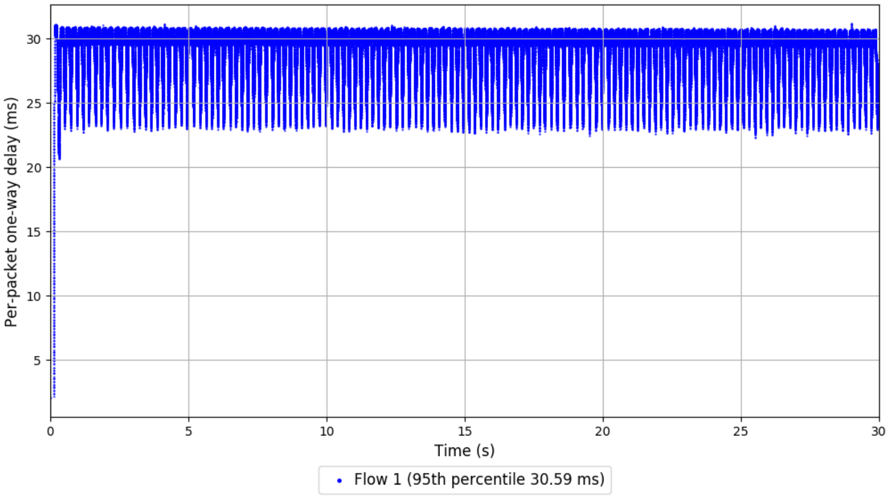




```
Run 4: Statistics of FillP

Start at: 2018-03-20 15:21:45
End at: 2018-03-20 15:22:15
Local clock offset: -11.701 ms
Remote clock offset: -18.168 ms

# Below is generated by plot.py at 2018-03-20 18:25:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.88 Mbit/s
95th percentile per-packet one-way delay: 30.585 ms
Loss rate: 11.94%
-- Flow 1:
Average throughput: 96.88 Mbit/s
95th percentile per-packet one-way delay: 30.585 ms
Loss rate: 11.94%
```

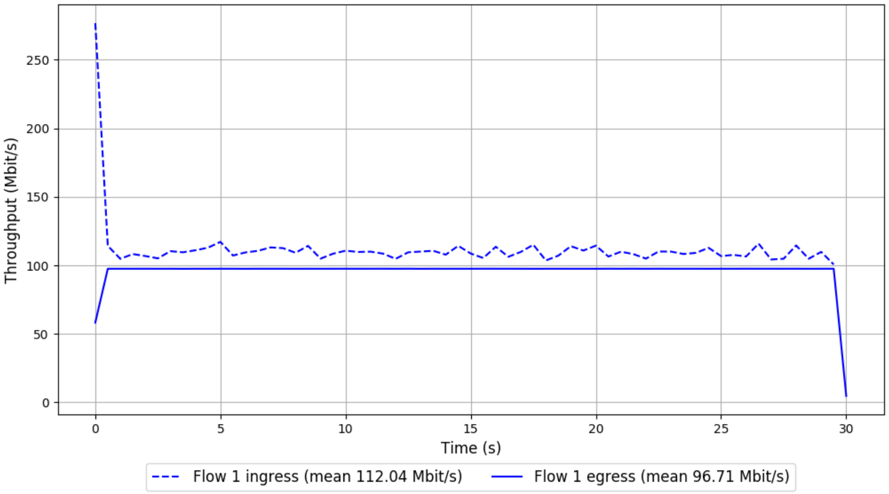
Run 4: Report of FillP — Data Link

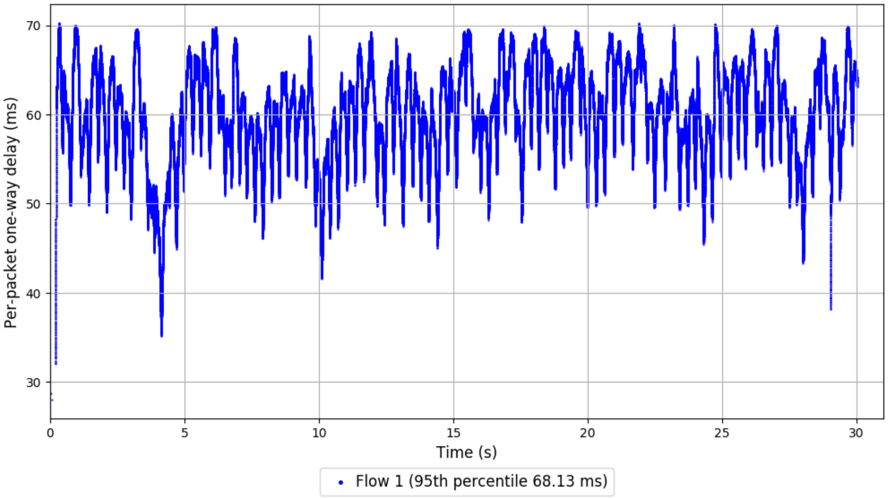




```
Run 5: Statistics of FillP

Start at: 2018-03-20 15:42:22
End at: 2018-03-20 15:42:52
Local clock offset: -13.778 ms
Remote clock offset: -15.857 ms

# Below is generated by plot.py at 2018-03-20 18:25:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.71 Mbit/s
95th percentile per-packet one-way delay: 68.126 ms
Loss rate: 13.58%
-- Flow 1:
Average throughput: 96.71 Mbit/s
95th percentile per-packet one-way delay: 68.126 ms
Loss rate: 13.58%
```

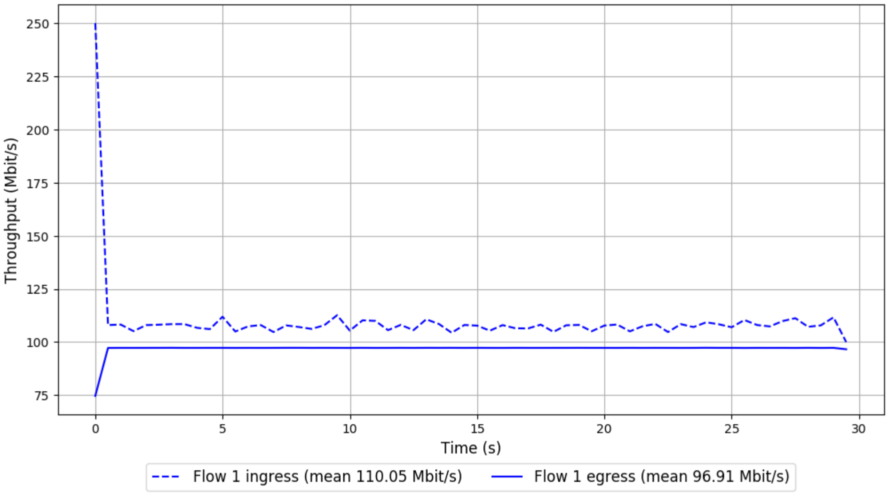
Run 5: Report of FillP — Data Link

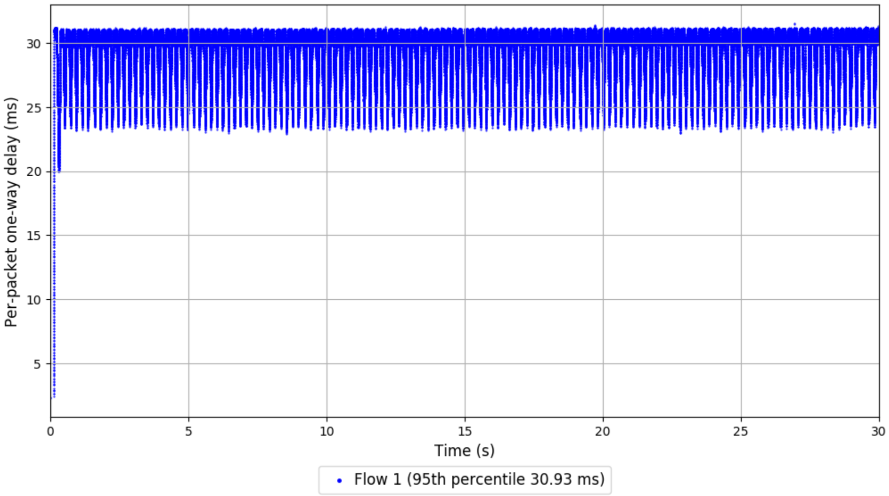




```
Run 6: Statistics of FillP

Start at: 2018-03-20 16:03:01
End at: 2018-03-20 16:03:31
Local clock offset: -13.325 ms
Remote clock offset: -16.052 ms

# Below is generated by plot.py at 2018-03-20 18:25:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.91 Mbit/s
95th percentile per-packet one-way delay: 30.935 ms
Loss rate: 11.86%
-- Flow 1:
Average throughput: 96.91 Mbit/s
95th percentile per-packet one-way delay: 30.935 ms
Loss rate: 11.86%
```

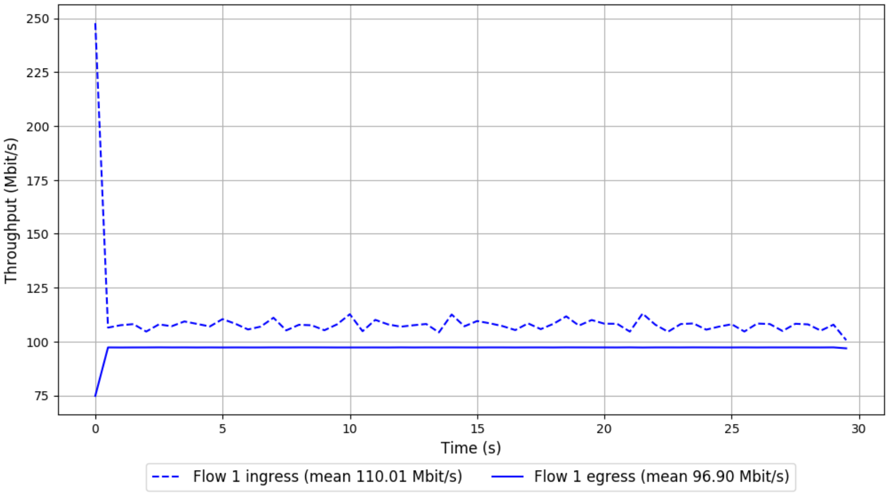
Run 6: Report of FillP — Data Link

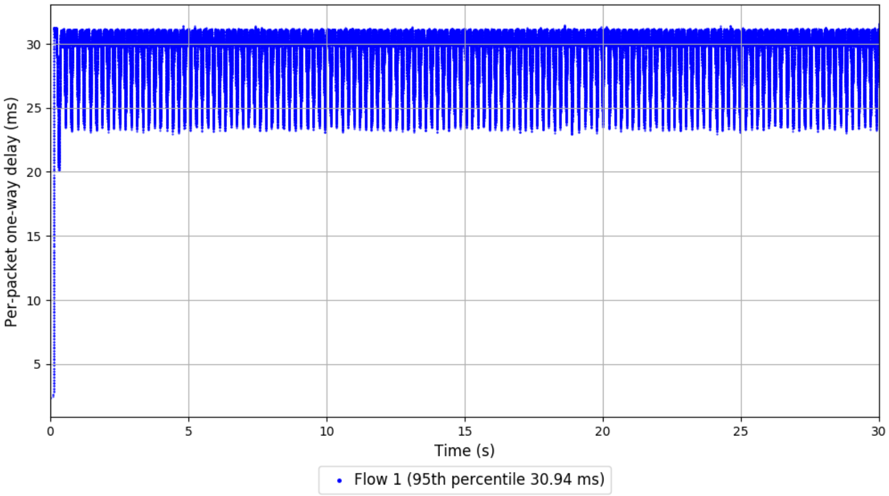




```
Run 7: Statistics of FillP

Start at: 2018-03-20 16:23:36
End at: 2018-03-20 16:24:06
Local clock offset: -11.855 ms
Remote clock offset: -16.407 ms

# Below is generated by plot.py at 2018-03-20 18:26:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.90 Mbit/s
95th percentile per-packet one-way delay: 30.937 ms
Loss rate: 11.83%
-- Flow 1:
Average throughput: 96.90 Mbit/s
95th percentile per-packet one-way delay: 30.937 ms
Loss rate: 11.83%
```

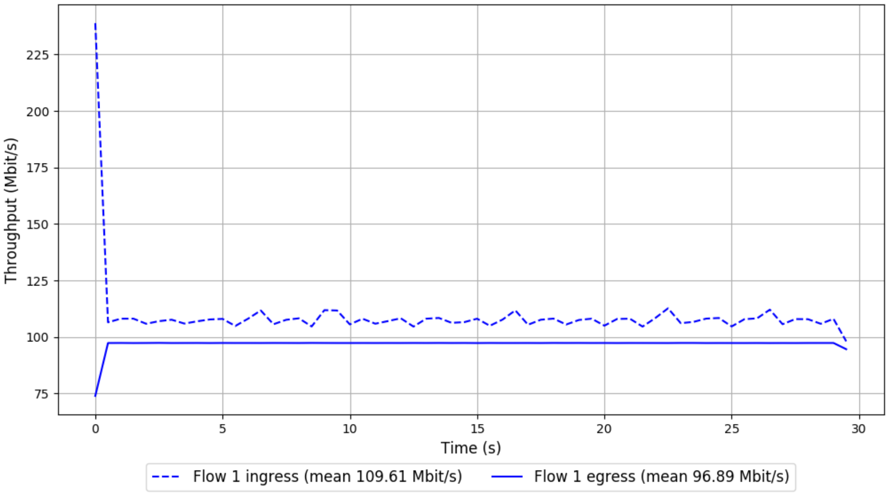
Run 7: Report of FillP — Data Link

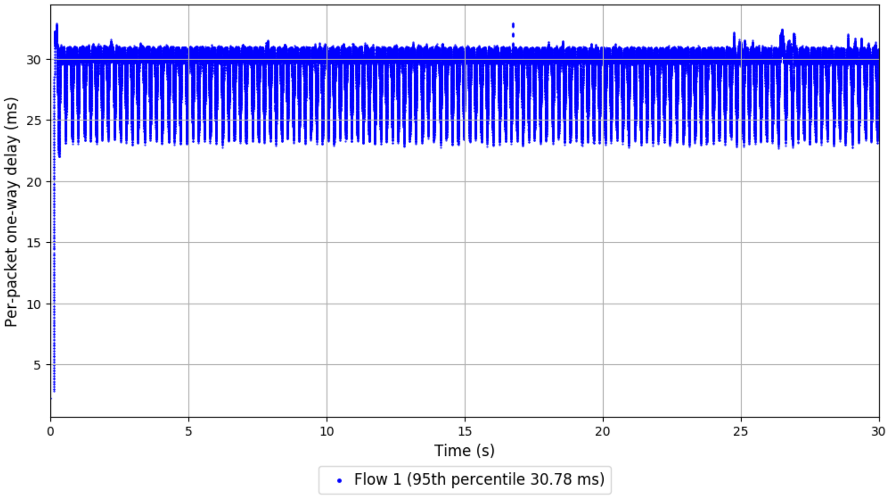




```
Run 8: Statistics of FillP

Start at: 2018-03-20 16:44:10
End at: 2018-03-20 16:44:40
Local clock offset: -14.607 ms
Remote clock offset: -14.386 ms

# Below is generated by plot.py at 2018-03-20 18:26:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.89 Mbit/s
95th percentile per-packet one-way delay: 30.780 ms
Loss rate: 11.52%
-- Flow 1:
Average throughput: 96.89 Mbit/s
95th percentile per-packet one-way delay: 30.780 ms
Loss rate: 11.52%
```

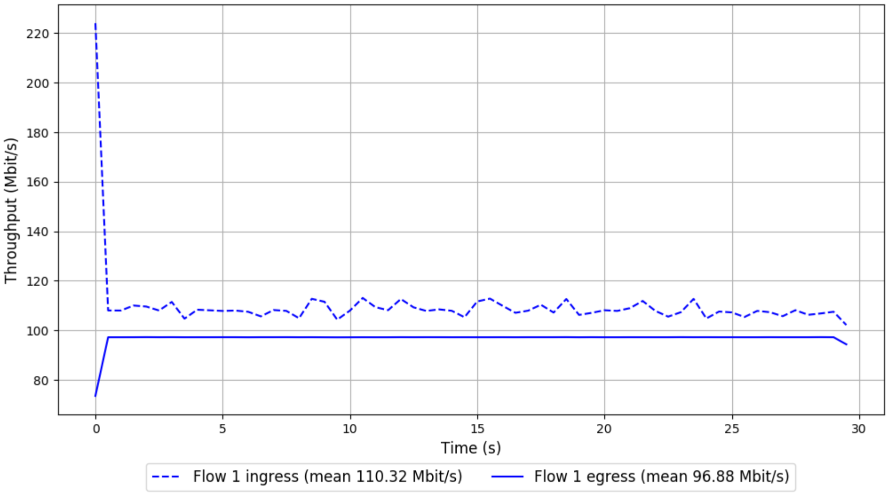
Run 8: Report of FillP — Data Link

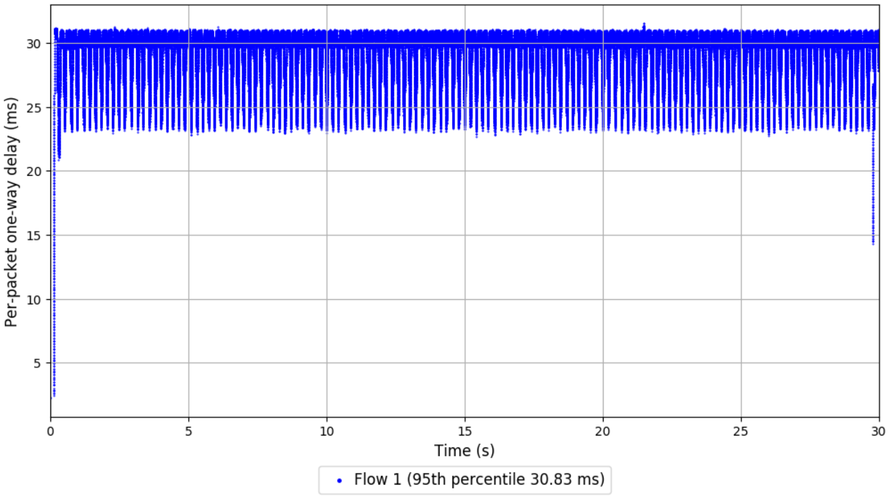




```
Run 9: Statistics of FillP

Start at: 2018-03-20 17:04:45
End at: 2018-03-20 17:05:16
Local clock offset: -16.637 ms
Remote clock offset: -14.038 ms

# Below is generated by plot.py at 2018-03-20 18:26:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.88 Mbit/s
95th percentile per-packet one-way delay: 30.826 ms
Loss rate: 12.11%
-- Flow 1:
Average throughput: 96.88 Mbit/s
95th percentile per-packet one-way delay: 30.826 ms
Loss rate: 12.11%
```

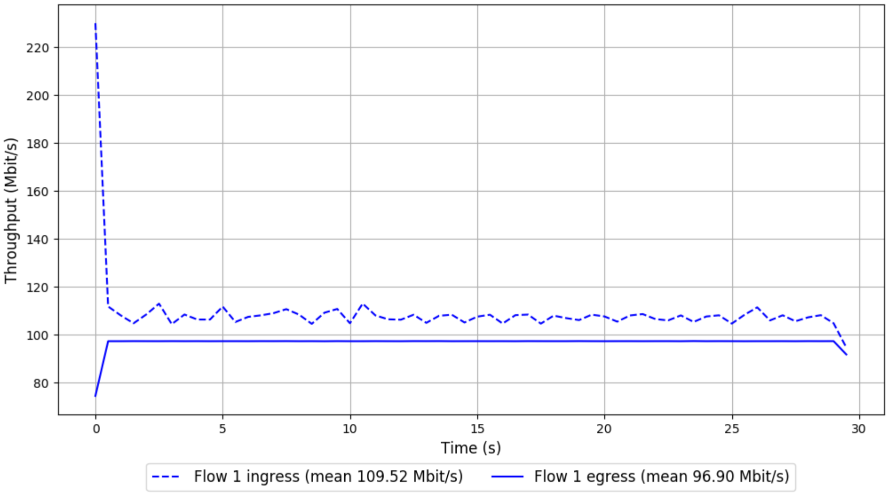
Run 9: Report of FillP — Data Link

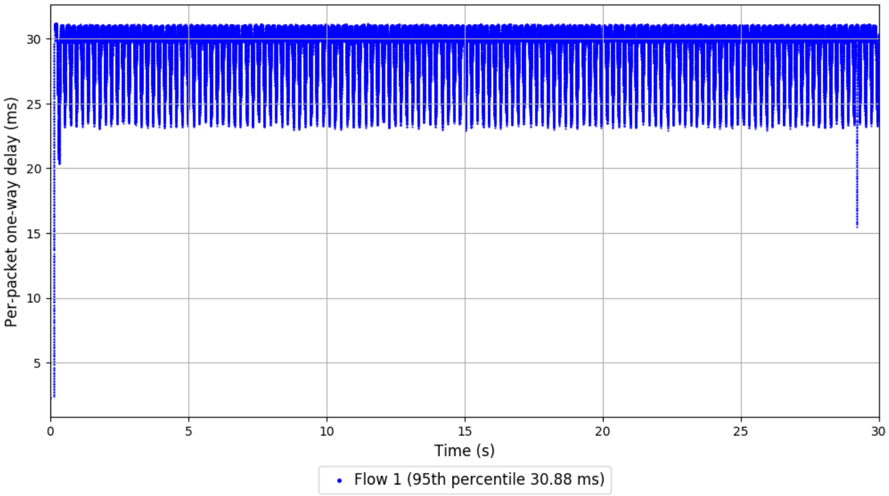




```
Run 10: Statistics of FillP

Start at: 2018-03-20 17:25:15
End at: 2018-03-20 17:25:45
Local clock offset: -14.071 ms
Remote clock offset: -13.91 ms

# Below is generated by plot.py at 2018-03-20 18:26:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.90 Mbit/s
95th percentile per-packet one-way delay: 30.879 ms
Loss rate: 11.44%
-- Flow 1:
Average throughput: 96.90 Mbit/s
95th percentile per-packet one-way delay: 30.879 ms
Loss rate: 11.44%
```

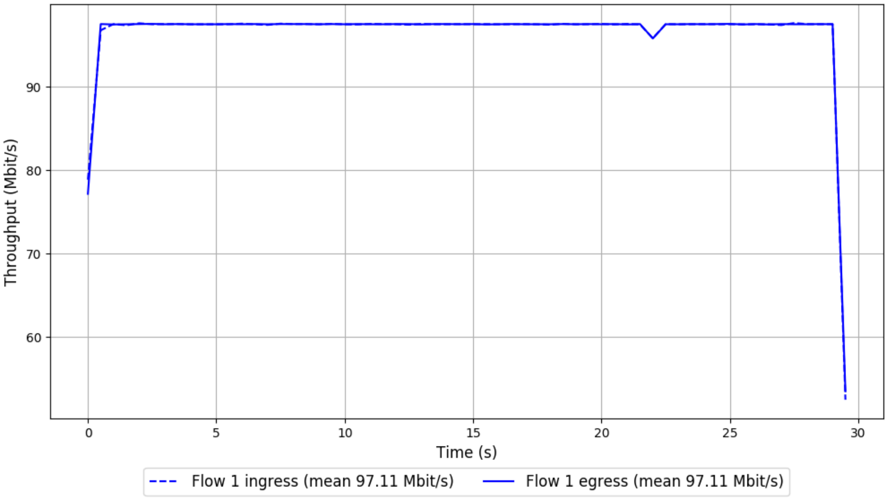
Run 10: Report of FillP — Data Link

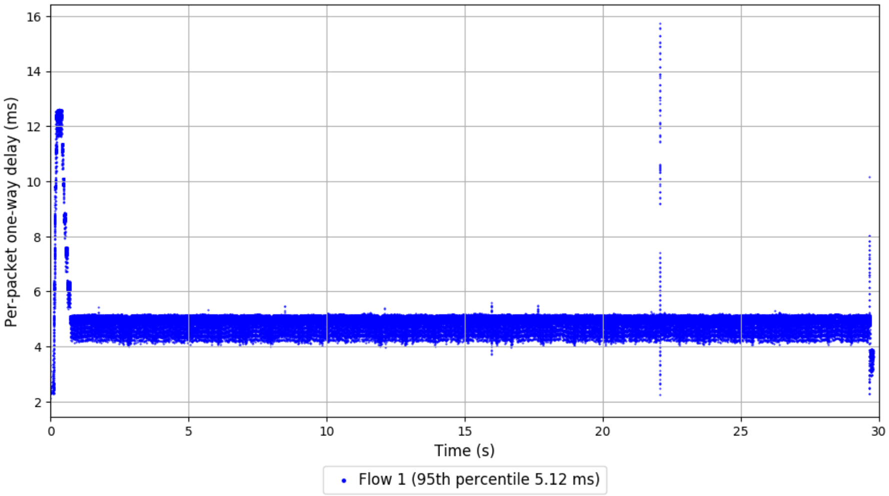




```
Run 1: Statistics of Indigo-1-32

Start at: 2018-03-20 14:08:00
End at: 2018-03-20 14:08:30
Local clock offset: -6.488 ms
Remote clock offset: -6.707 ms

# Below is generated by plot.py at 2018-03-20 18:26:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.11 Mbit/s
95th percentile per-packet one-way delay: 5.119 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 97.11 Mbit/s
95th percentile per-packet one-way delay: 5.119 ms
Loss rate: 0.00%
```

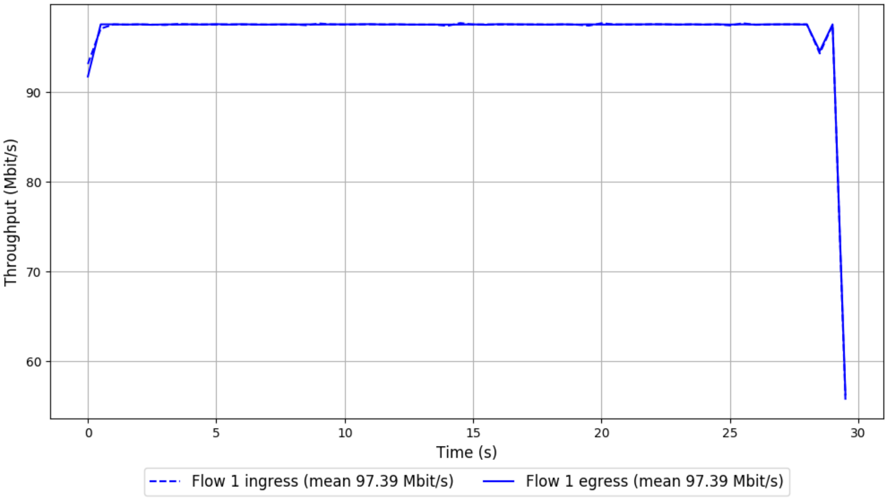
Run 1: Report of Indigo-1-32 — Data Link

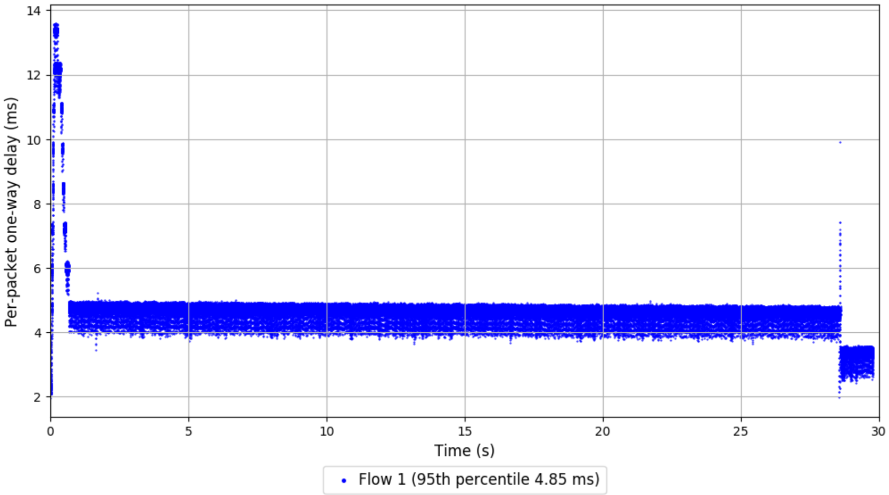




```
Run 2: Statistics of Indigo-1-32

Start at: 2018-03-20 14:28:20
End at: 2018-03-20 14:28:50
Local clock offset: -13.745 ms
Remote clock offset: -6.77 ms

# Below is generated by plot.py at 2018-03-20 18:26:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.39 Mbit/s
95th percentile per-packet one-way delay: 4.854 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 97.39 Mbit/s
95th percentile per-packet one-way delay: 4.854 ms
Loss rate: 0.00%
```

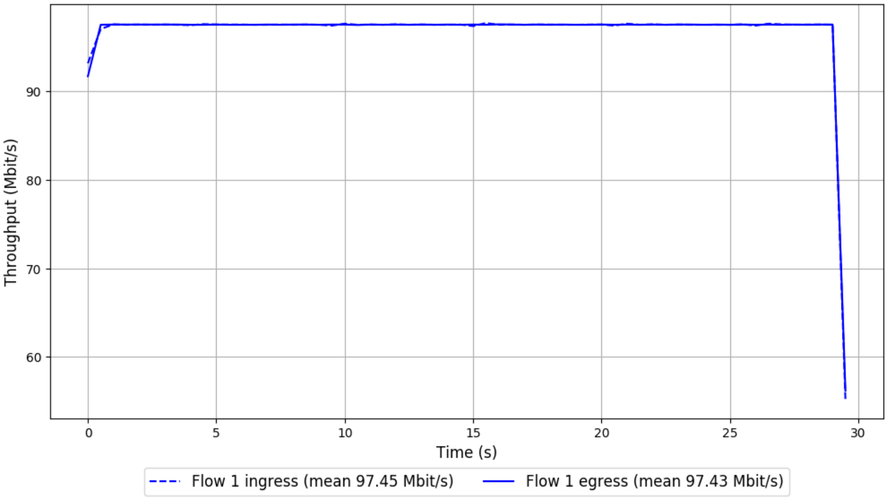
Run 2: Report of Indigo-1-32 — Data Link

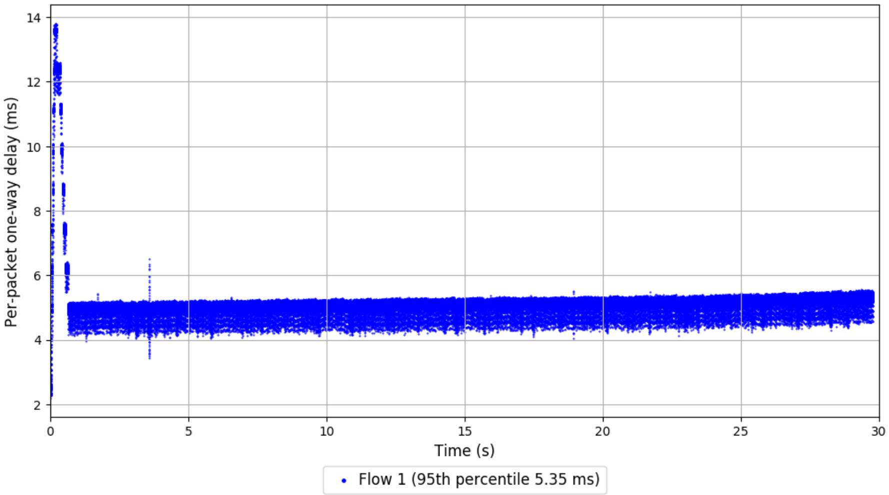




```
Run 3: Statistics of Indigo-1-32

Start at: 2018-03-20 14:48:48
End at: 2018-03-20 14:49:18
Local clock offset: -18.528 ms
Remote clock offset: -9.953 ms

# Below is generated by plot.py at 2018-03-20 18:26:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.43 Mbit/s
95th percentile per-packet one-way delay: 5.348 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 97.43 Mbit/s
95th percentile per-packet one-way delay: 5.348 ms
Loss rate: 0.00%
```

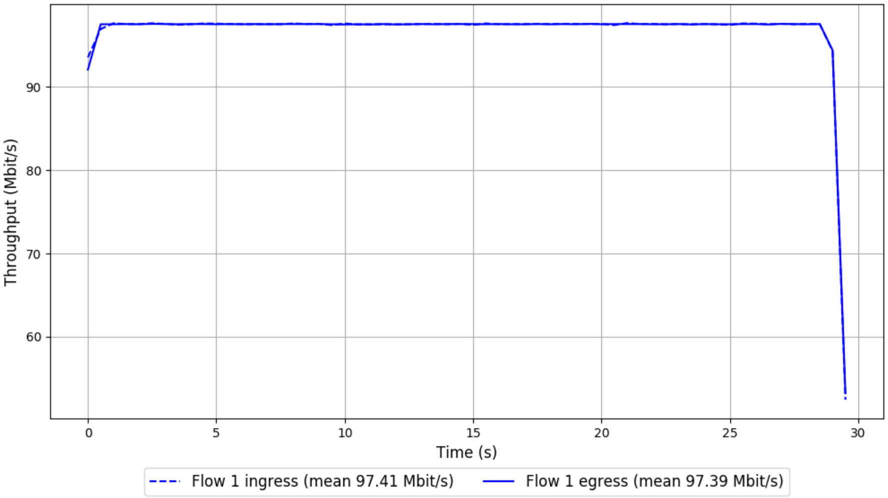
Run 3: Report of Indigo-1-32 — Data Link

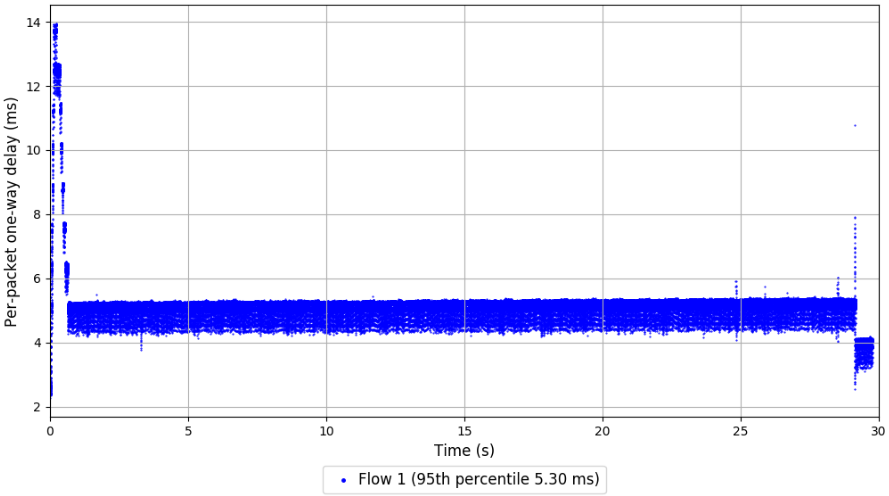




```
Run 4: Statistics of Indigo-1-32

Start at: 2018-03-20 15:09:18
End at: 2018-03-20 15:09:48
Local clock offset: -11.92 ms
Remote clock offset: -17.335 ms

# Below is generated by plot.py at 2018-03-20 18:27:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.39 Mbit/s
95th percentile per-packet one-way delay: 5.301 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.39 Mbit/s
95th percentile per-packet one-way delay: 5.301 ms
Loss rate: 0.01%
```

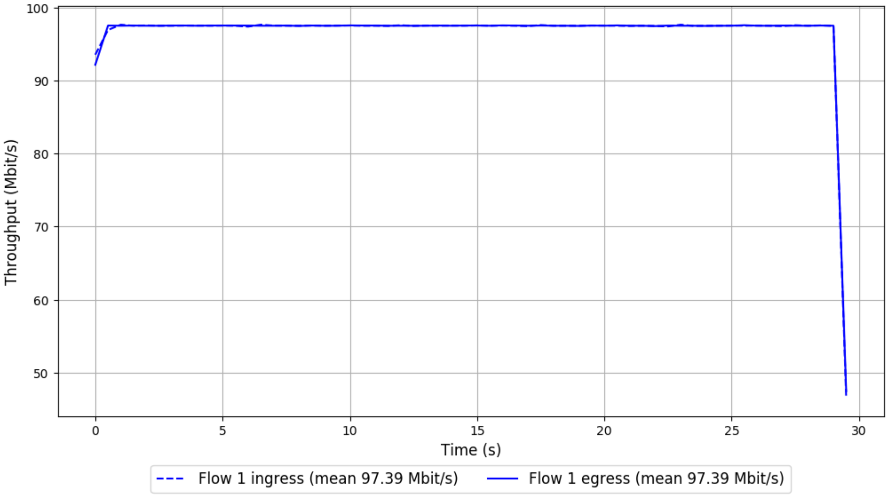
Run 4: Report of Indigo-1-32 — Data Link

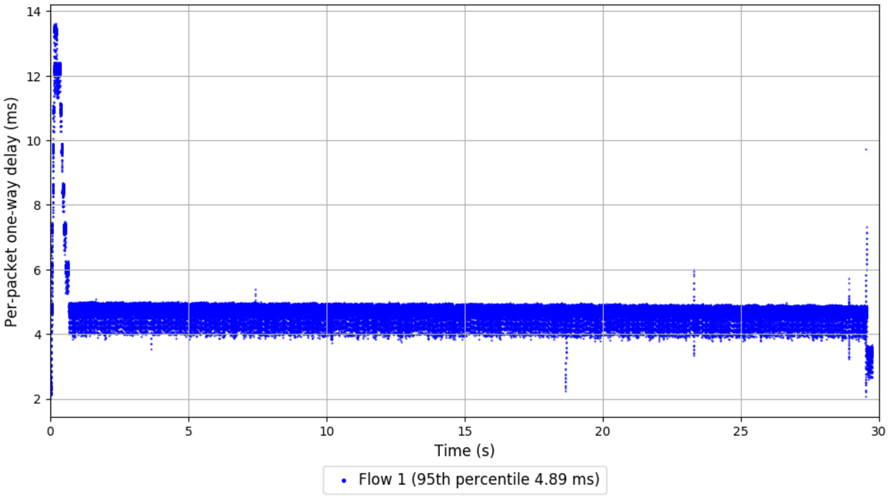




```
Run 5: Statistics of Indigo-1-32

Start at: 2018-03-20 15:29:47
End at: 2018-03-20 15:30:17
Local clock offset: -12.651 ms
Remote clock offset: -16.434 ms

# Below is generated by plot.py at 2018-03-20 18:27:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.39 Mbit/s
95th percentile per-packet one-way delay: 4.891 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 97.39 Mbit/s
95th percentile per-packet one-way delay: 4.891 ms
Loss rate: 0.00%
```

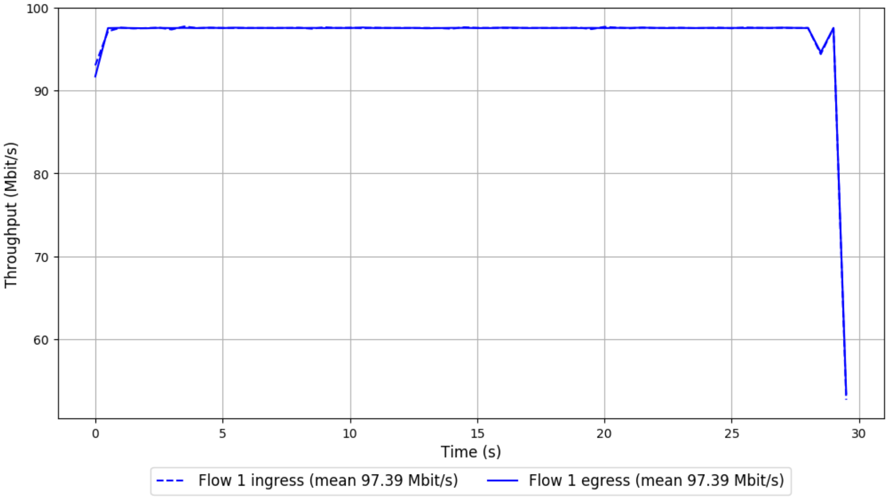
Run 5: Report of Indigo-1-32 — Data Link

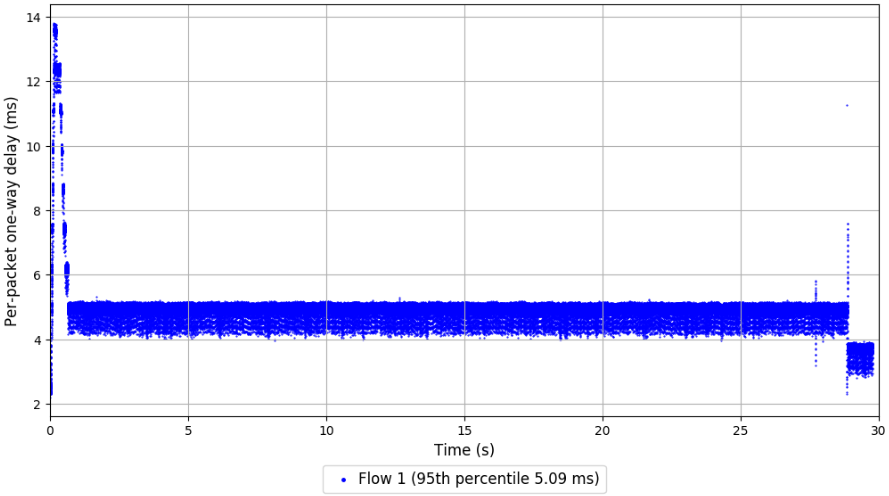




```
Run 6: Statistics of Indigo-1-32

Start at: 2018-03-20 15:50:30
End at: 2018-03-20 15:51:00
Local clock offset: -14.352 ms
Remote clock offset: -15.983 ms

# Below is generated by plot.py at 2018-03-20 18:28:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.39 Mbit/s
95th percentile per-packet one-way delay: 5.092 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 97.39 Mbit/s
95th percentile per-packet one-way delay: 5.092 ms
Loss rate: 0.00%
```

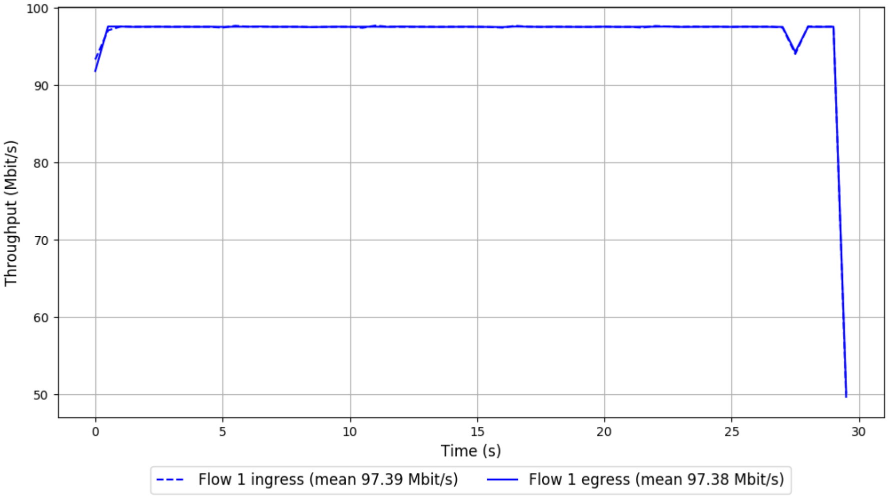
Run 6: Report of Indigo-1-32 — Data Link

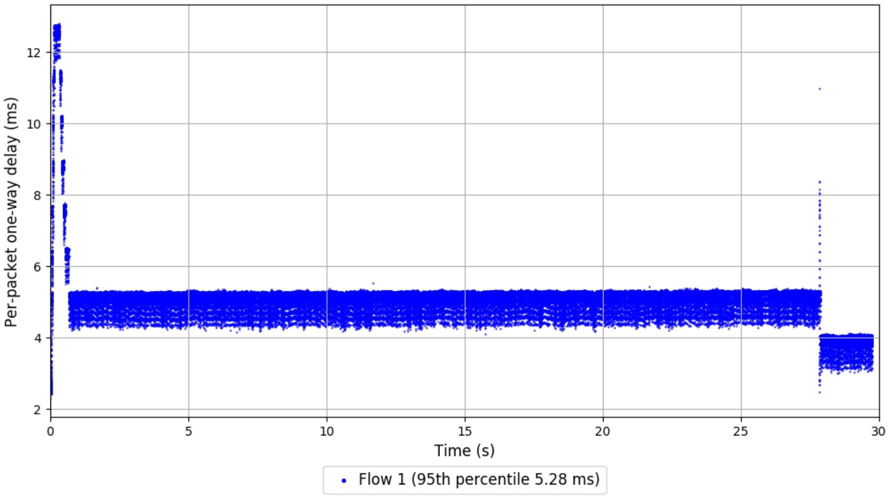




```
Run 7: Statistics of Indigo-1-32

Start at: 2018-03-20 16:11:05
End at: 2018-03-20 16:11:35
Local clock offset: -12.356 ms
Remote clock offset: -16.109 ms

# Below is generated by plot.py at 2018-03-20 18:28:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.38 Mbit/s
95th percentile per-packet one-way delay: 5.275 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 97.38 Mbit/s
95th percentile per-packet one-way delay: 5.275 ms
Loss rate: 0.00%
```

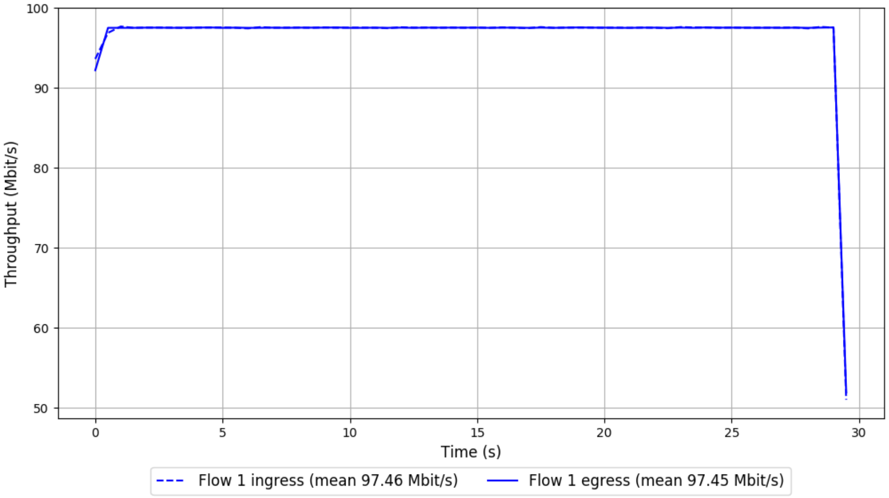
Run 7: Report of Indigo-1-32 — Data Link

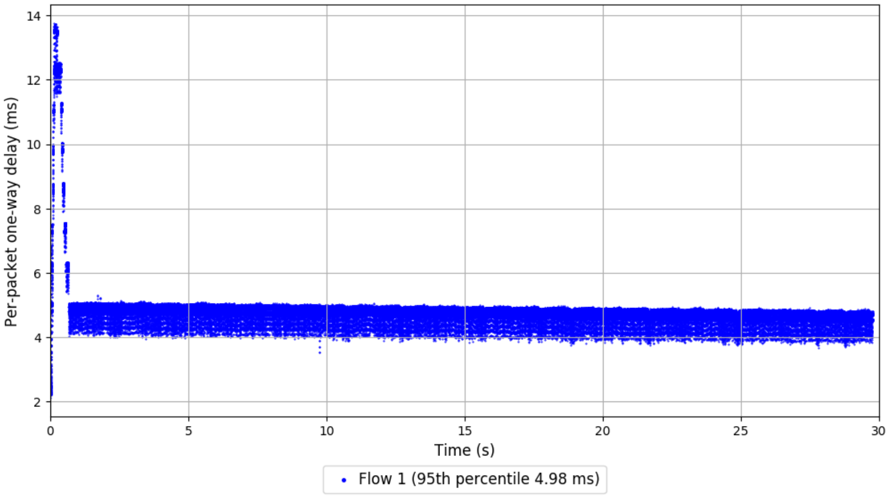




```
Run 8: Statistics of Indigo-1-32

Start at: 2018-03-20 16:31:42
End at: 2018-03-20 16:32:12
Local clock offset: -11.817 ms
Remote clock offset: -15.61 ms

# Below is generated by plot.py at 2018-03-20 18:28:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.45 Mbit/s
95th percentile per-packet one-way delay: 4.982 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 97.45 Mbit/s
95th percentile per-packet one-way delay: 4.982 ms
Loss rate: 0.00%
```

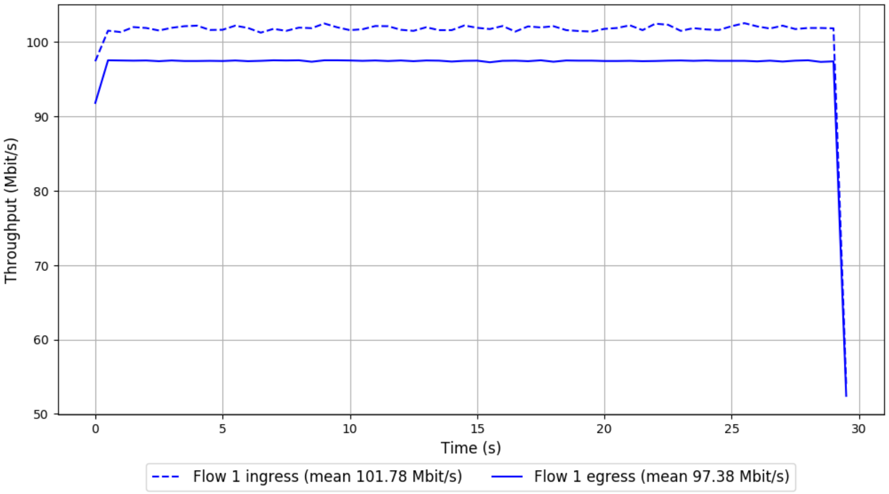
Run 8: Report of Indigo-1-32 — Data Link

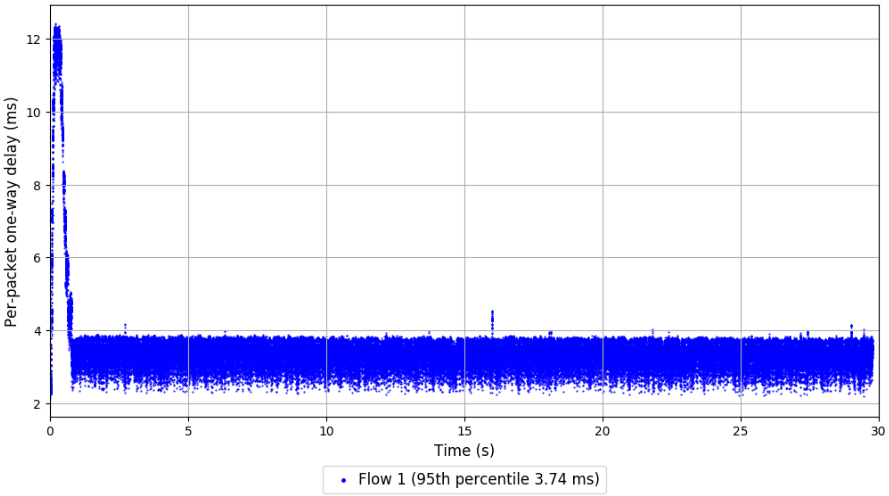




```
Run 9: Statistics of Indigo-1-32

Start at: 2018-03-20 16:52:17
End at: 2018-03-20 16:52:47
Local clock offset: -15.594 ms
Remote clock offset: -14.15 ms

# Below is generated by plot.py at 2018-03-20 18:28:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.38 Mbit/s
95th percentile per-packet one-way delay: 3.740 ms
Loss rate: 4.32%
-- Flow 1:
Average throughput: 97.38 Mbit/s
95th percentile per-packet one-way delay: 3.740 ms
Loss rate: 4.32%
```

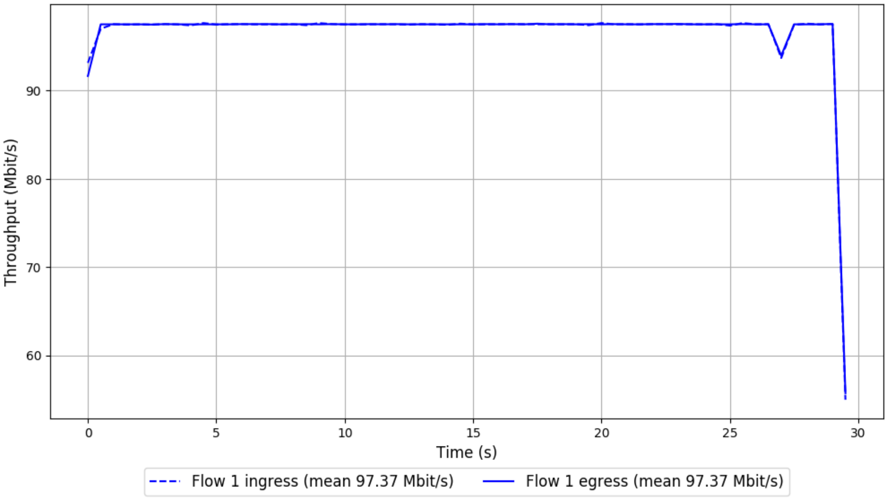
Run 9: Report of Indigo-1-32 — Data Link

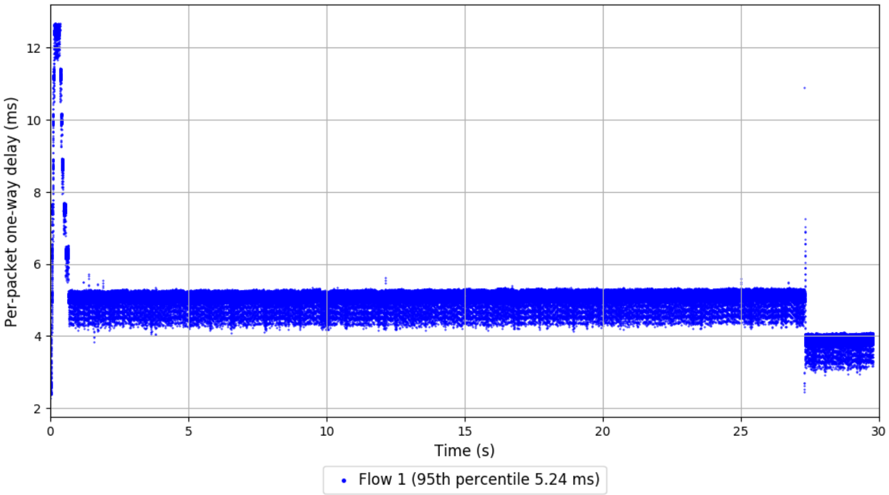




```
Run 10: Statistics of Indigo-1-32

Start at: 2018-03-20 17:12:49
End at: 2018-03-20 17:13:19
Local clock offset: -15.066 ms
Remote clock offset: -13.987 ms

# Below is generated by plot.py at 2018-03-20 18:28:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.37 Mbit/s
95th percentile per-packet one-way delay: 5.240 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 97.37 Mbit/s
95th percentile per-packet one-way delay: 5.240 ms
Loss rate: 0.00%
```

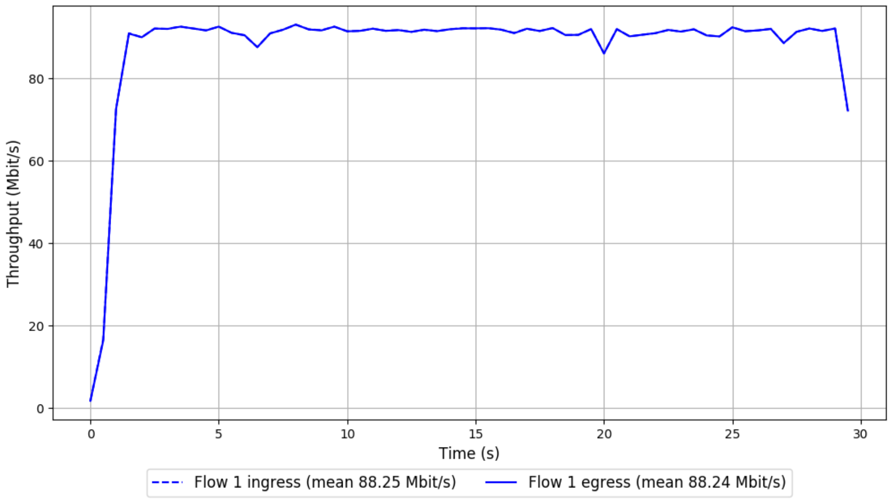
Run 10: Report of Indigo-1-32 — Data Link

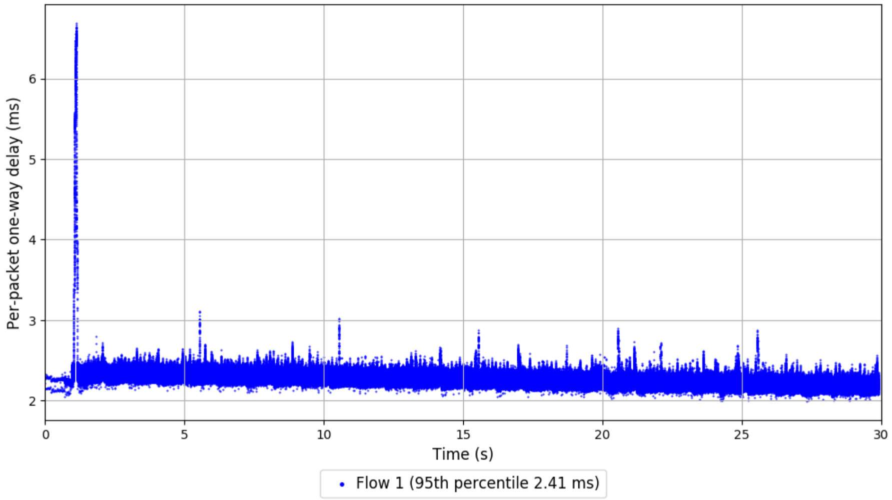




```
Run 1: Statistics of Vivace-latency

Start at: 2018-03-20 14:27:11
End at: 2018-03-20 14:27:41
Local clock offset: -13.451 ms
Remote clock offset: -6.753 ms

# Below is generated by plot.py at 2018-03-20 18:28:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.24 Mbit/s
95th percentile per-packet one-way delay: 2.412 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 88.24 Mbit/s
95th percentile per-packet one-way delay: 2.412 ms
Loss rate: 0.01%
```

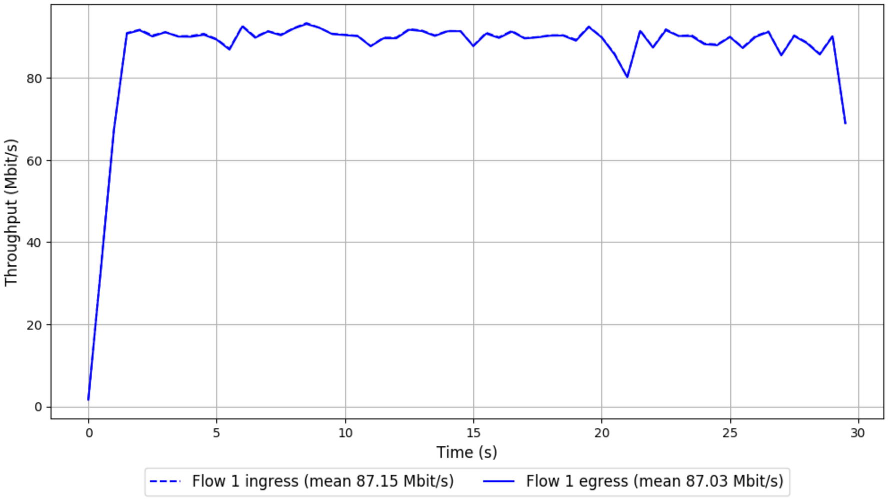
Run 1: Report of Vivace-latency — Data Link

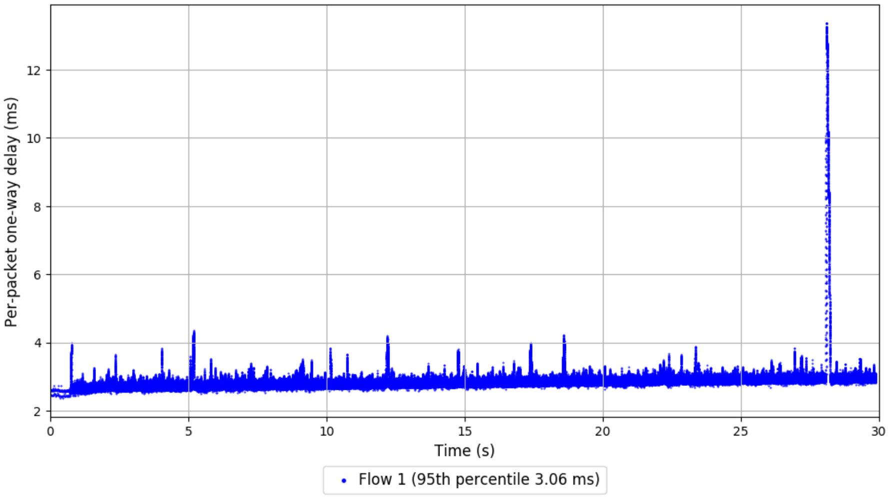




```
Run 2: Statistics of Vivace-latency

Start at: 2018-03-20 14:47:38
End at: 2018-03-20 14:48:08
Local clock offset: -18.385 ms
Remote clock offset: -8.936 ms

# Below is generated by plot.py at 2018-03-20 18:28:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.03 Mbit/s
95th percentile per-packet one-way delay: 3.064 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 87.03 Mbit/s
95th percentile per-packet one-way delay: 3.064 ms
Loss rate: 0.15%
```

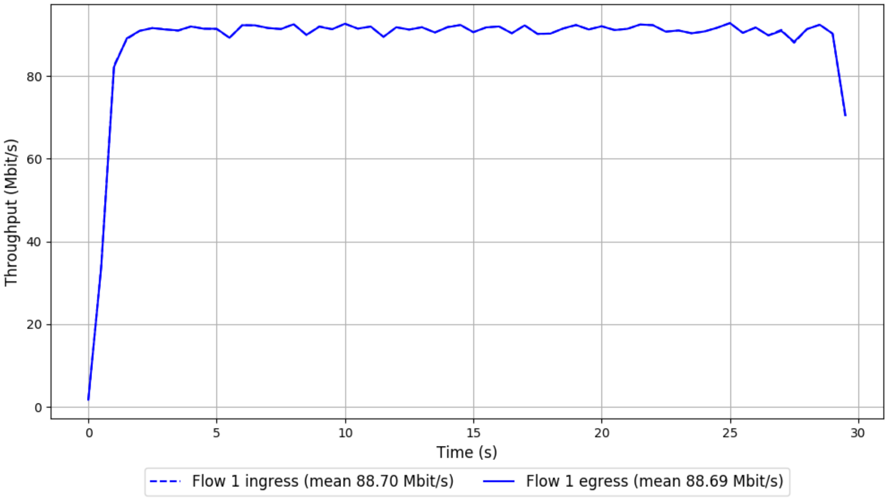
Run 2: Report of Vivace-latency — Data Link

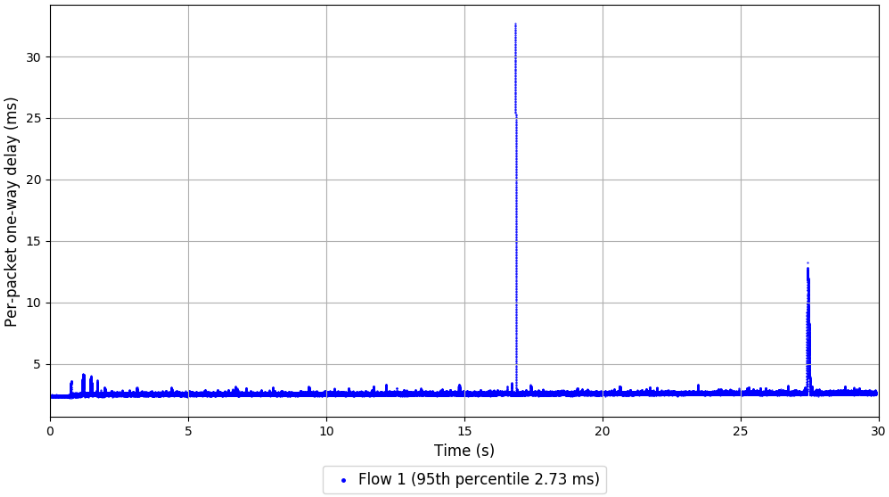




```
Run 3: Statistics of Vivace-latency

Start at: 2018-03-20 15:08:08
End at: 2018-03-20 15:08:38
Local clock offset: -11.946 ms
Remote clock offset: -17.109 ms

# Below is generated by plot.py at 2018-03-20 18:29:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.69 Mbit/s
95th percentile per-packet one-way delay: 2.727 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 88.69 Mbit/s
95th percentile per-packet one-way delay: 2.727 ms
Loss rate: 0.00%
```

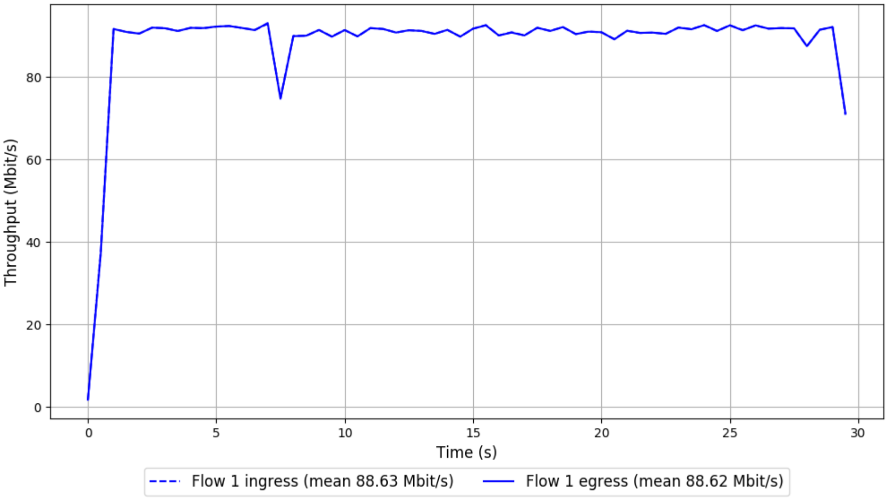
Run 3: Report of Vivace-latency — Data Link

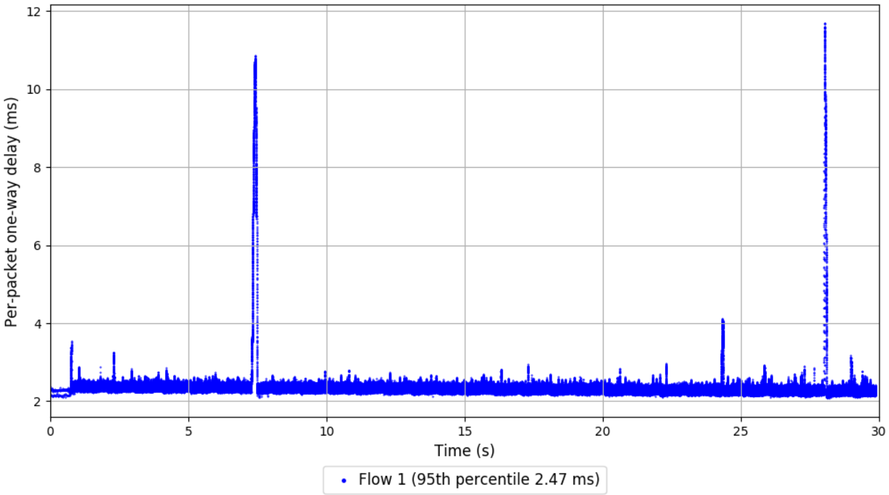




```
Run 4: Statistics of Vivace-latency

Start at: 2018-03-20 15:28:36
End at: 2018-03-20 15:29:06
Local clock offset: -12.516 ms
Remote clock offset: -16.489 ms

# Below is generated by plot.py at 2018-03-20 18:29:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.62 Mbit/s
95th percentile per-packet one-way delay: 2.471 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 88.62 Mbit/s
95th percentile per-packet one-way delay: 2.471 ms
Loss rate: 0.01%
```

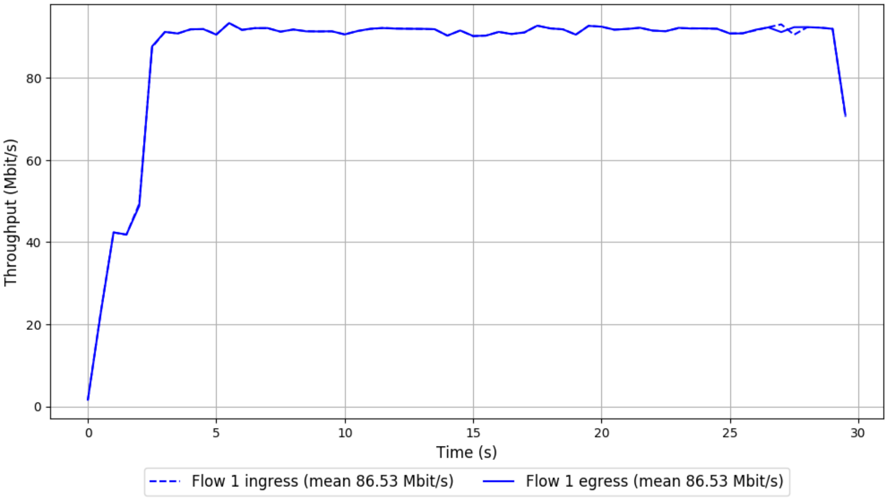
Run 4: Report of Vivace-latency — Data Link

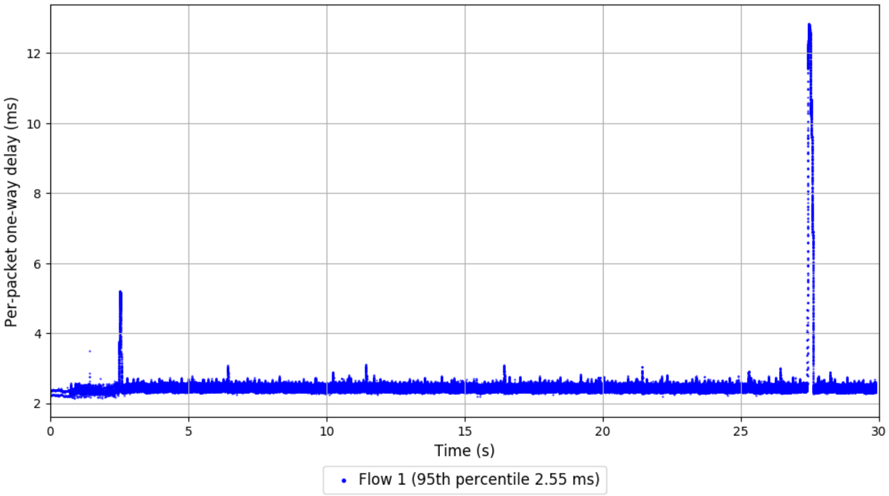




```
Run 5: Statistics of Vivace-latency

Start at: 2018-03-20 15:49:20
End at: 2018-03-20 15:49:50
Local clock offset: -14.285 ms
Remote clock offset: -15.958 ms

# Below is generated by plot.py at 2018-03-20 18:29:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.53 Mbit/s
95th percentile per-packet one-way delay: 2.550 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 86.53 Mbit/s
95th percentile per-packet one-way delay: 2.550 ms
Loss rate: 0.00%
```

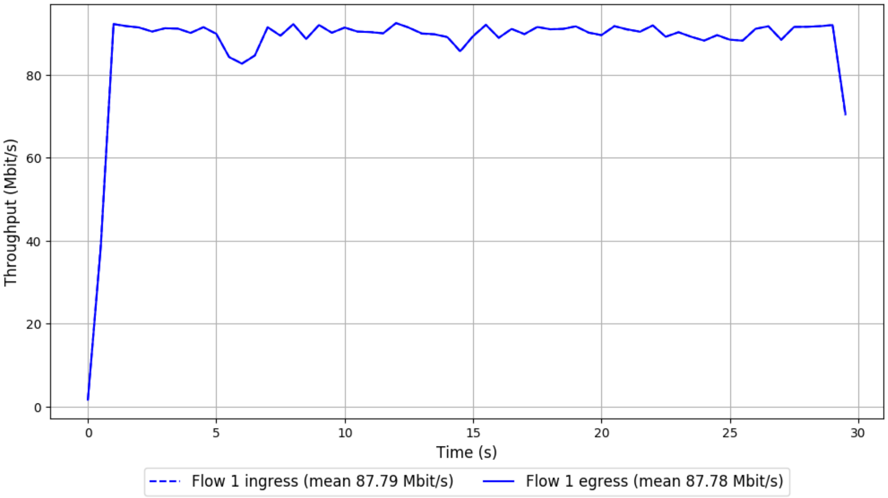
Run 5: Report of Vivace-latency — Data Link

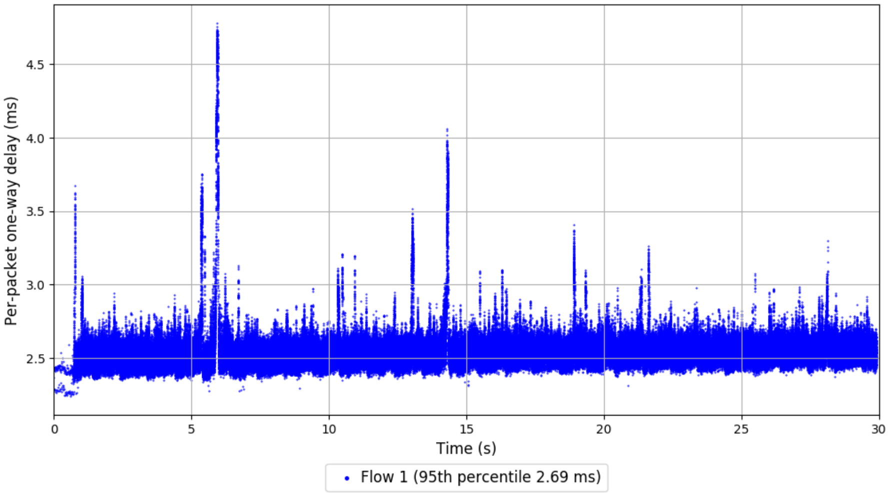




```
Run 6: Statistics of Vivace-latency

Start at: 2018-03-20 16:09:55
End at: 2018-03-20 16:10:25
Local clock offset: -12.392 ms
Remote clock offset: -16.102 ms

# Below is generated by plot.py at 2018-03-20 18:29:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.78 Mbit/s
95th percentile per-packet one-way delay: 2.687 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 87.78 Mbit/s
95th percentile per-packet one-way delay: 2.687 ms
Loss rate: 0.00%
```

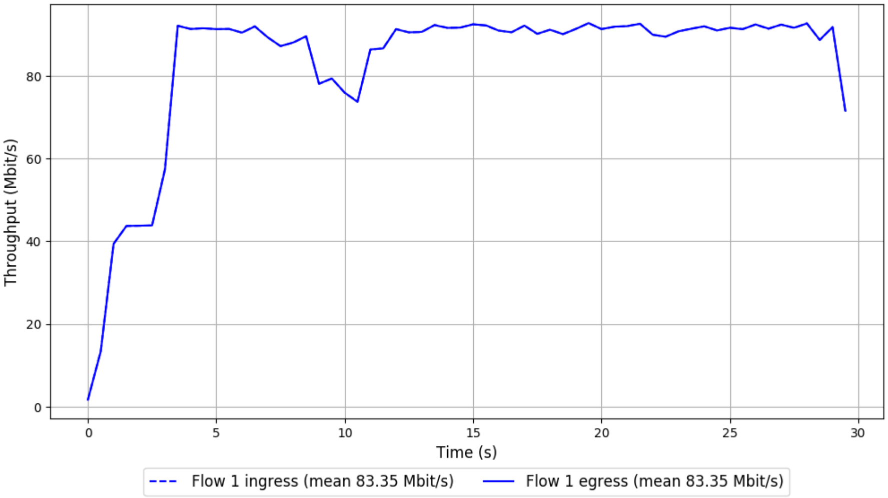
Run 6: Report of Vivace-latency — Data Link

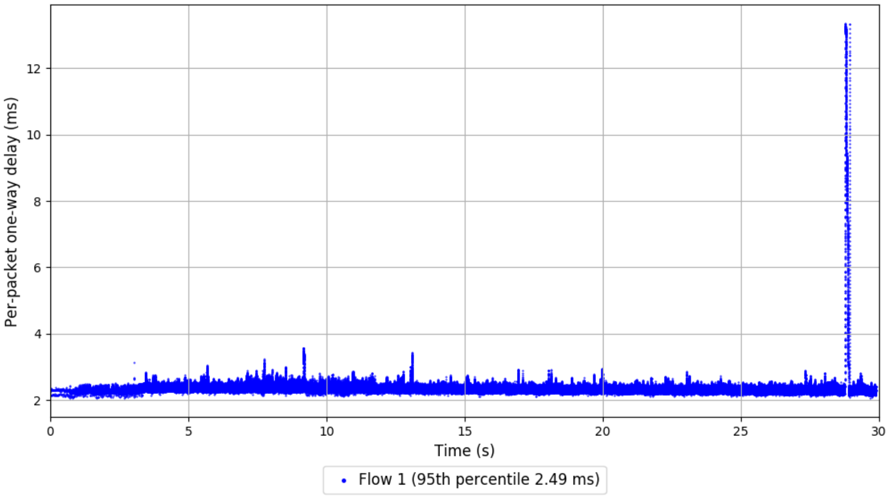




```
Run 7: Statistics of Vivace-latency

Start at: 2018-03-20 16:30:32
End at: 2018-03-20 16:31:02
Local clock offset: -11.868 ms
Remote clock offset: -15.934 ms

# Below is generated by plot.py at 2018-03-20 18:29:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 83.35 Mbit/s
95th percentile per-packet one-way delay: 2.492 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 83.35 Mbit/s
95th percentile per-packet one-way delay: 2.492 ms
Loss rate: 0.00%
```

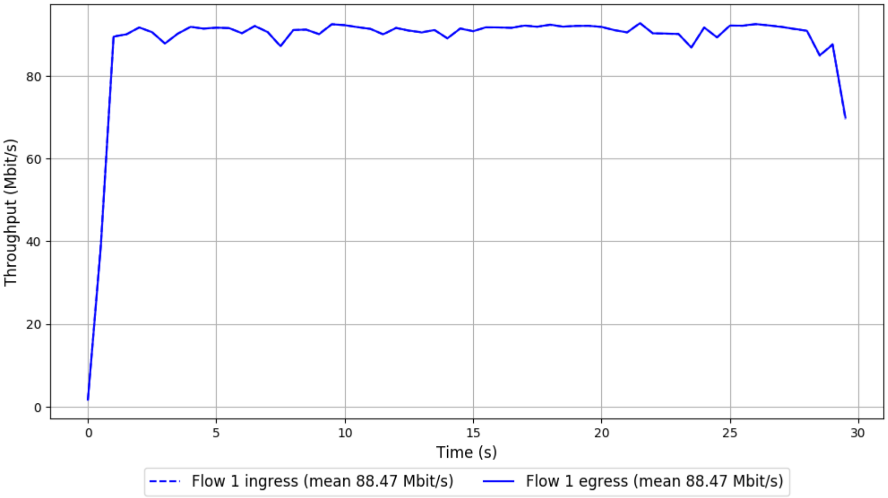
Run 7: Report of Vivace-latency — Data Link

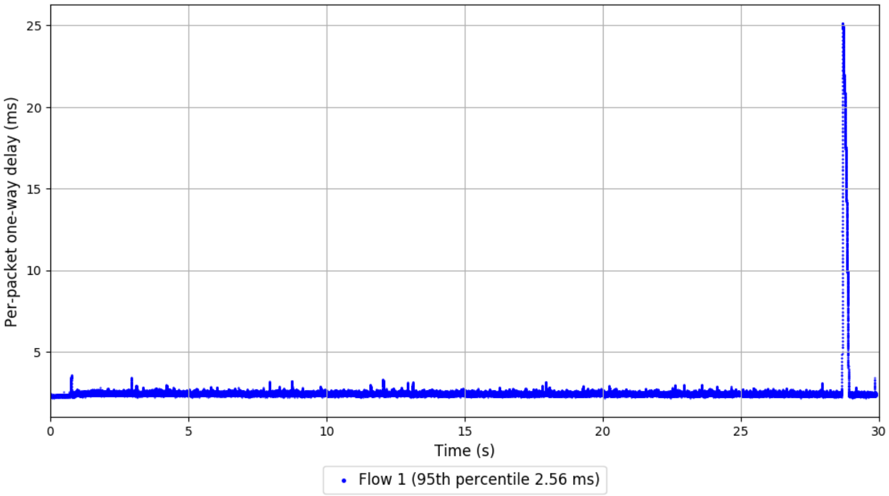




```
Run 8: Statistics of Vivace-latency

Start at: 2018-03-20 16:51:07
End at: 2018-03-20 16:51:37
Local clock offset: -15.47 ms
Remote clock offset: -14.14 ms

# Below is generated by plot.py at 2018-03-20 18:29:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.47 Mbit/s
95th percentile per-packet one-way delay: 2.562 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 88.47 Mbit/s
95th percentile per-packet one-way delay: 2.562 ms
Loss rate: 0.00%
```

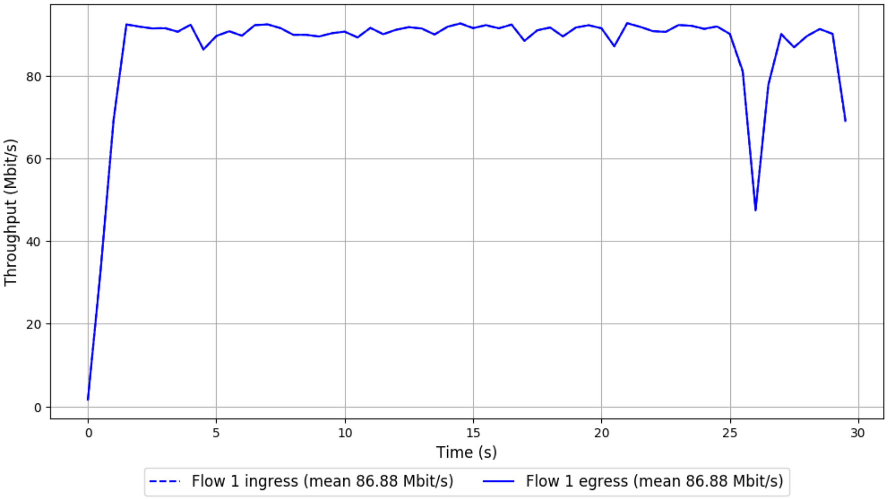
Run 8: Report of Vivace-latency — Data Link

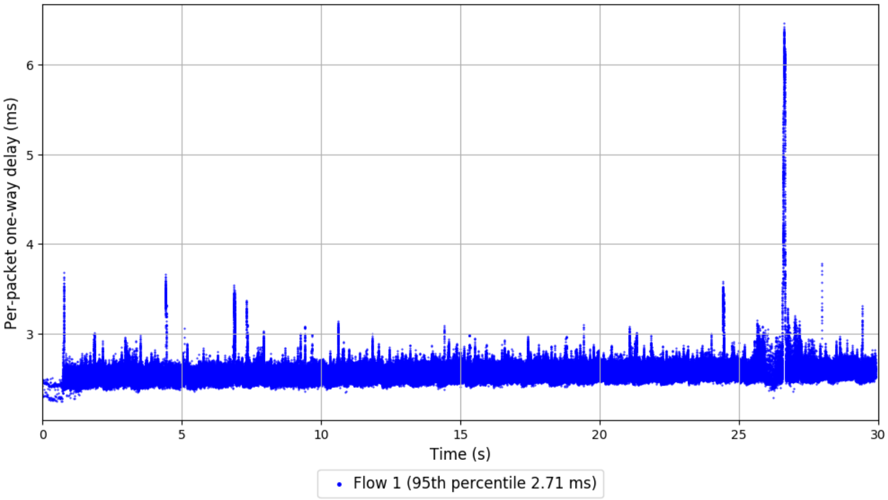




```
Run 9: Statistics of Vivace-latency

Start at: 2018-03-20 17:11:40
End at: 2018-03-20 17:12:10
Local clock offset: -15.203 ms
Remote clock offset: -13.98 ms

# Below is generated by plot.py at 2018-03-20 18:29:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.88 Mbit/s
95th percentile per-packet one-way delay: 2.709 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 86.88 Mbit/s
95th percentile per-packet one-way delay: 2.709 ms
Loss rate: 0.00%
```

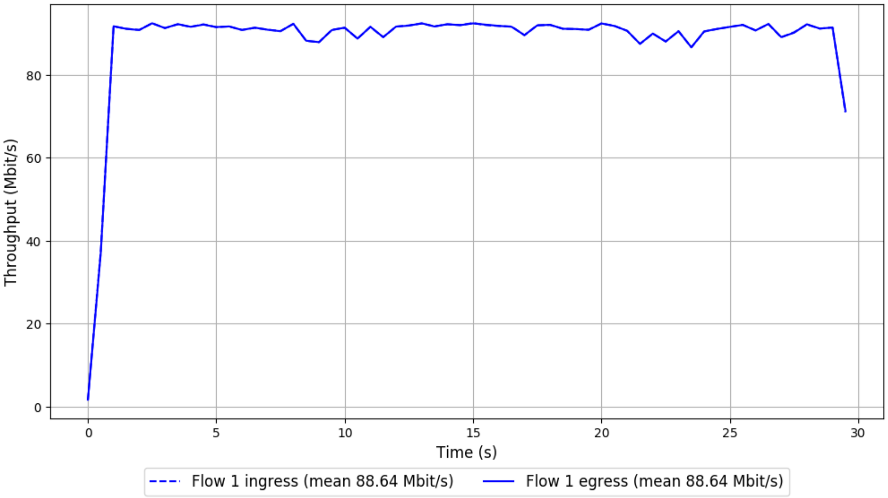
Run 9: Report of Vivace-latency — Data Link

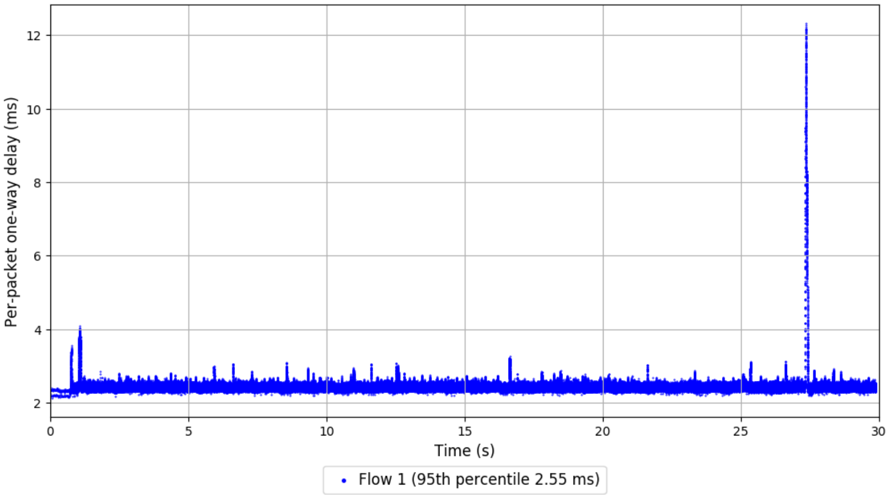




```
Run 10: Statistics of Vivace-latency

Start at: 2018-03-20 17:32:07
End at: 2018-03-20 17:32:37
Local clock offset: -14.03 ms
Remote clock offset: -13.945 ms

# Below is generated by plot.py at 2018-03-20 18:29:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.64 Mbit/s
95th percentile per-packet one-way delay: 2.549 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 88.64 Mbit/s
95th percentile per-packet one-way delay: 2.549 ms
Loss rate: 0.00%
```

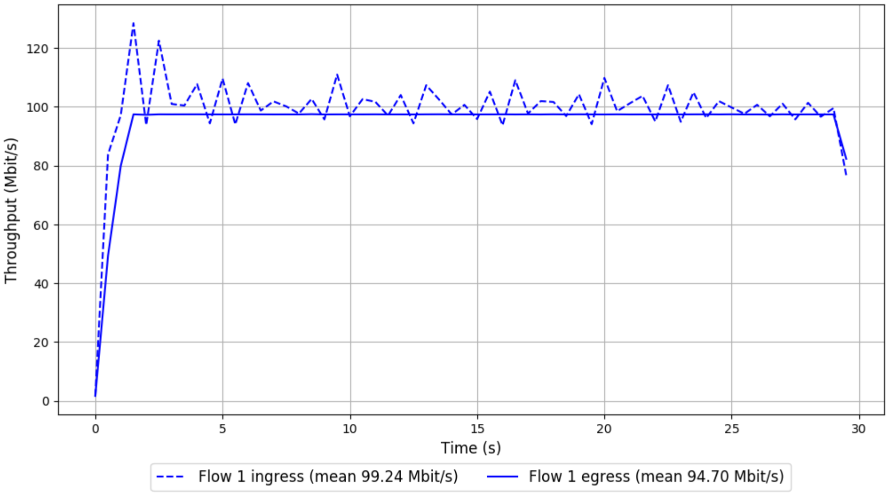
Run 10: Report of Vivace-latency — Data Link

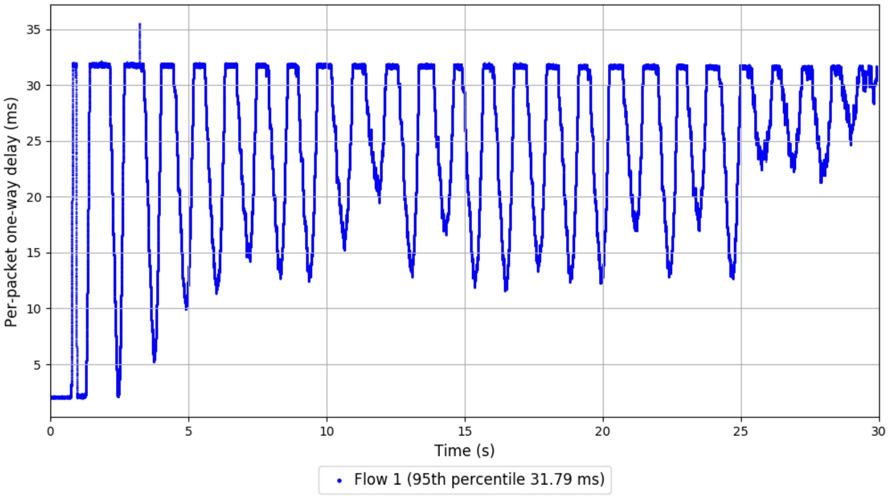




```
Run 1: Statistics of Vivace-loss

Start at: 2018-03-20 14:22:34
End at: 2018-03-20 14:23:04
Local clock offset: -11.386 ms
Remote clock offset: -6.729 ms

# Below is generated by plot.py at 2018-03-20 18:30:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.70 Mbit/s
95th percentile per-packet one-way delay: 31.792 ms
Loss rate: 4.48%
-- Flow 1:
Average throughput: 94.70 Mbit/s
95th percentile per-packet one-way delay: 31.792 ms
Loss rate: 4.48%
```

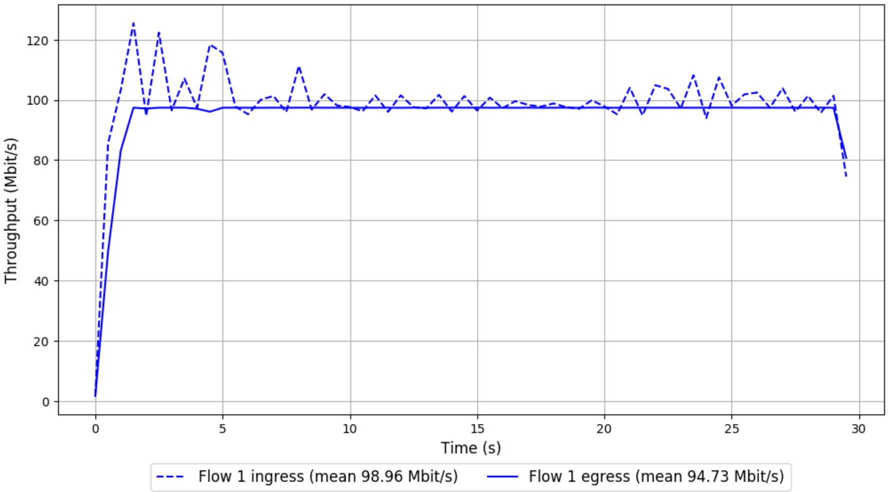
Run 1: Report of Vivace-loss — Data Link

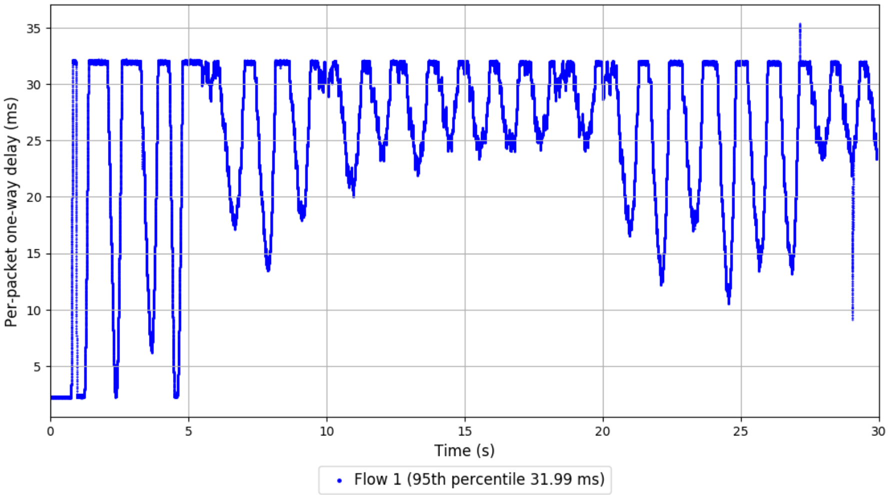




```
Run 2: Statistics of Vivace-loss

Start at: 2018-03-20 14:43:01
End at: 2018-03-20 14:43:31
Local clock offset: -17.445 ms
Remote clock offset: -6.849 ms

# Below is generated by plot.py at 2018-03-20 18:30:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.73 Mbit/s
95th percentile per-packet one-way delay: 31.993 ms
Loss rate: 4.21%
-- Flow 1:
Average throughput: 94.73 Mbit/s
95th percentile per-packet one-way delay: 31.993 ms
Loss rate: 4.21%
```

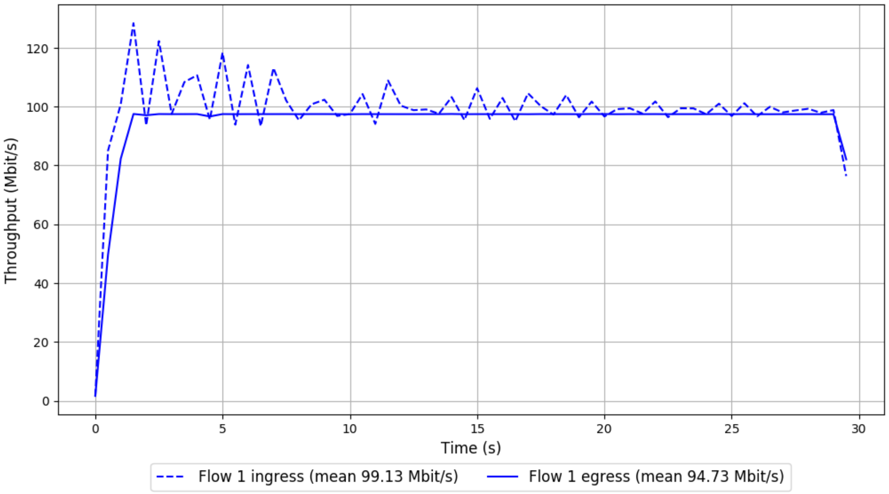
Run 2: Report of Vivace-loss — Data Link

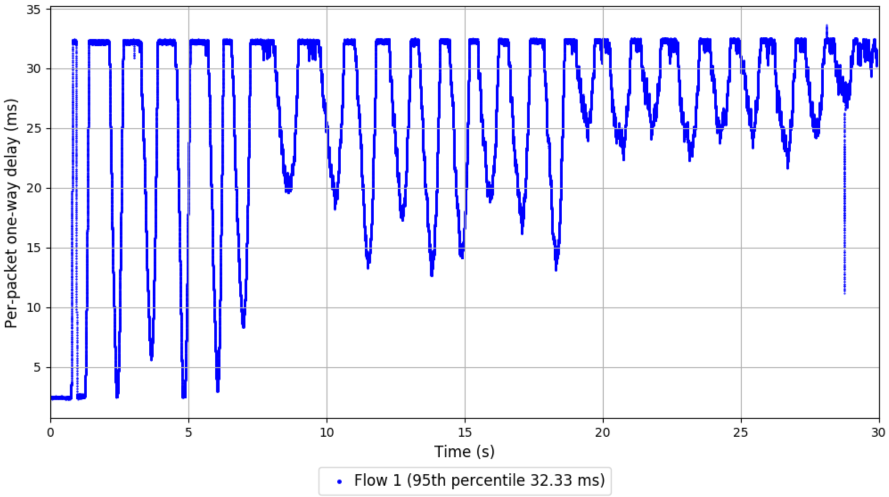




```
Run 3: Statistics of Vivace-loss

Start at: 2018-03-20 15:03:30
End at: 2018-03-20 15:04:00
Local clock offset: -12.451 ms
Remote clock offset: -16.079 ms

# Below is generated by plot.py at 2018-03-20 18:31:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.73 Mbit/s
95th percentile per-packet one-way delay: 32.327 ms
Loss rate: 4.35%
-- Flow 1:
Average throughput: 94.73 Mbit/s
95th percentile per-packet one-way delay: 32.327 ms
Loss rate: 4.35%
```

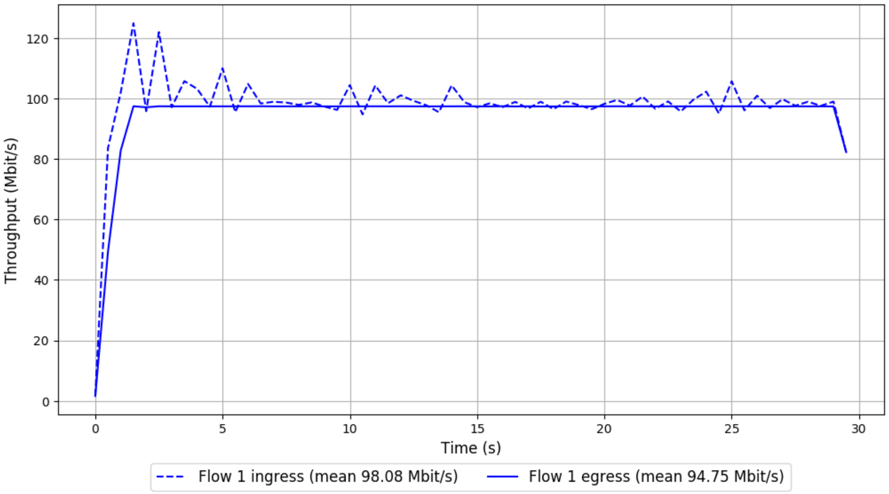
Run 3: Report of Vivace-loss — Data Link

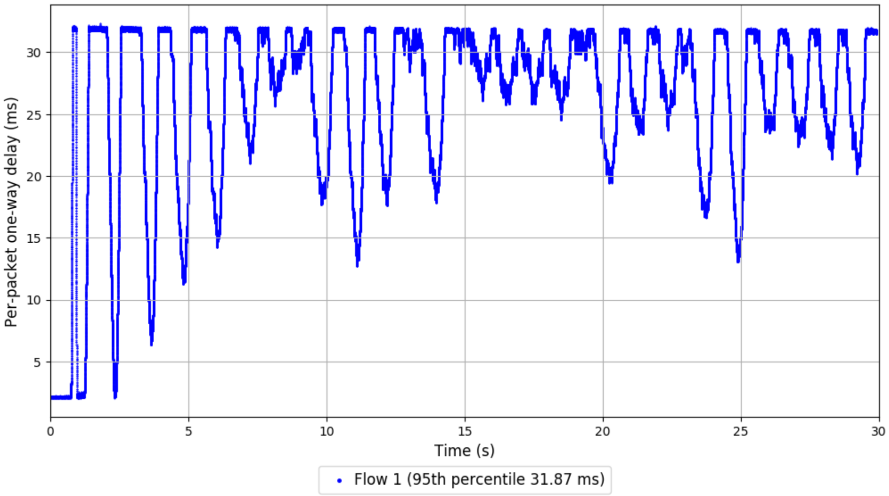




```
Run 4: Statistics of Vivace-loss

Start at: 2018-03-20 15:24:02
End at: 2018-03-20 15:24:32
Local clock offset: -11.79 ms
Remote clock offset: -17.389 ms

# Below is generated by plot.py at 2018-03-20 18:31:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.75 Mbit/s
95th percentile per-packet one-way delay: 31.869 ms
Loss rate: 3.30%
-- Flow 1:
Average throughput: 94.75 Mbit/s
95th percentile per-packet one-way delay: 31.869 ms
Loss rate: 3.30%
```

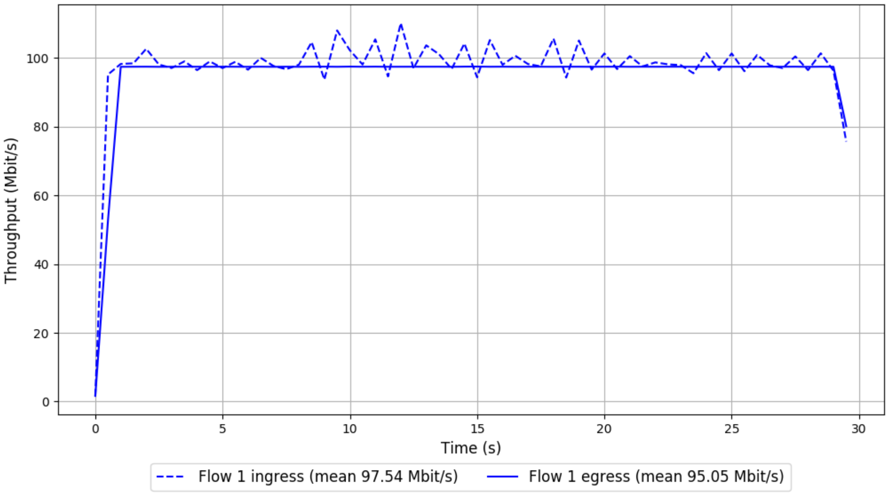
Run 4: Report of Vivace-loss — Data Link

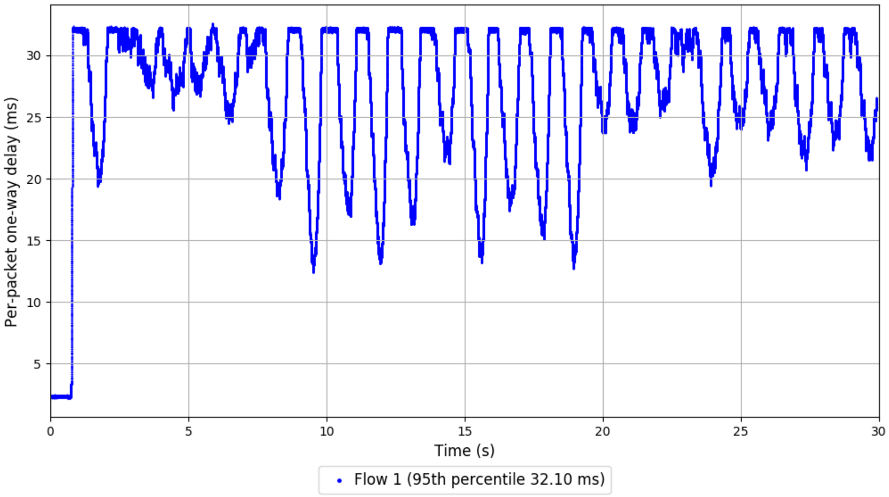




```
Run 5: Statistics of Vivace-loss

Start at: 2018-03-20 15:44:40
End at: 2018-03-20 15:45:10
Local clock offset: -13.989 ms
Remote clock offset: -15.866 ms

# Below is generated by plot.py at 2018-03-20 18:31:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.05 Mbit/s
95th percentile per-packet one-way delay: 32.104 ms
Loss rate: 2.48%
-- Flow 1:
Average throughput: 95.05 Mbit/s
95th percentile per-packet one-way delay: 32.104 ms
Loss rate: 2.48%
```

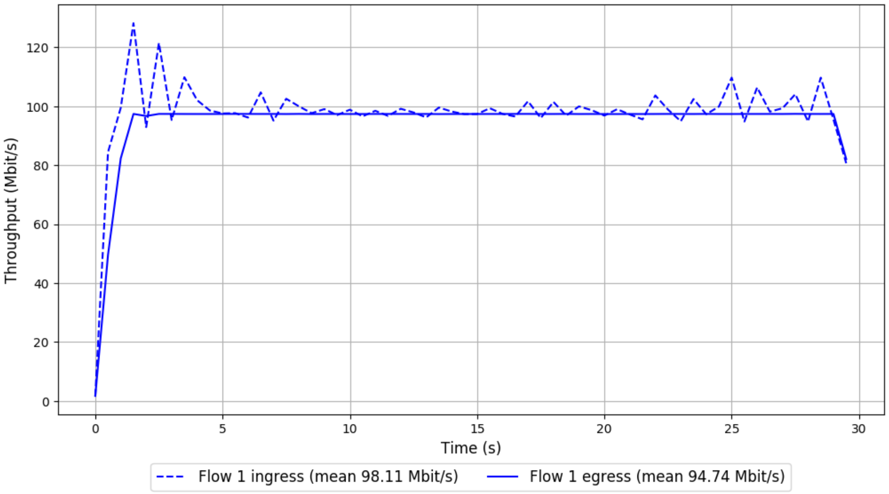
Run 5: Report of Vivace-loss — Data Link

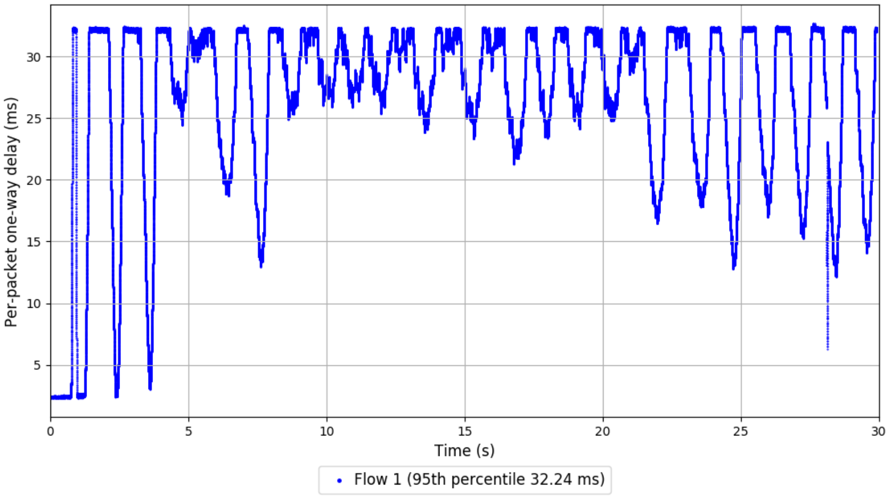




```
Run 6: Statistics of Vivace-loss

Start at: 2018-03-20 16:05:17
End at: 2018-03-20 16:05:47
Local clock offset: -12.946 ms
Remote clock offset: -16.004 ms

# Below is generated by plot.py at 2018-03-20 18:31:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.74 Mbit/s
95th percentile per-packet one-way delay: 32.242 ms
Loss rate: 3.34%
-- Flow 1:
Average throughput: 94.74 Mbit/s
95th percentile per-packet one-way delay: 32.242 ms
Loss rate: 3.34%
```

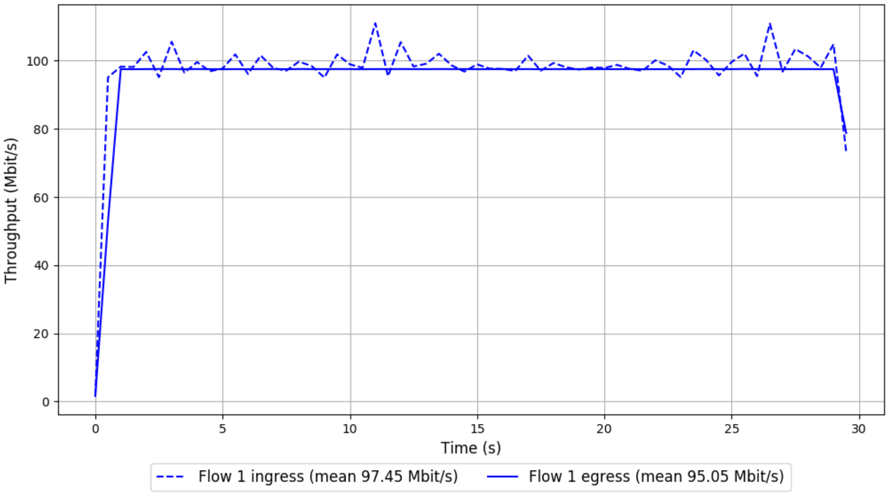
Run 6: Report of Vivace-loss — Data Link

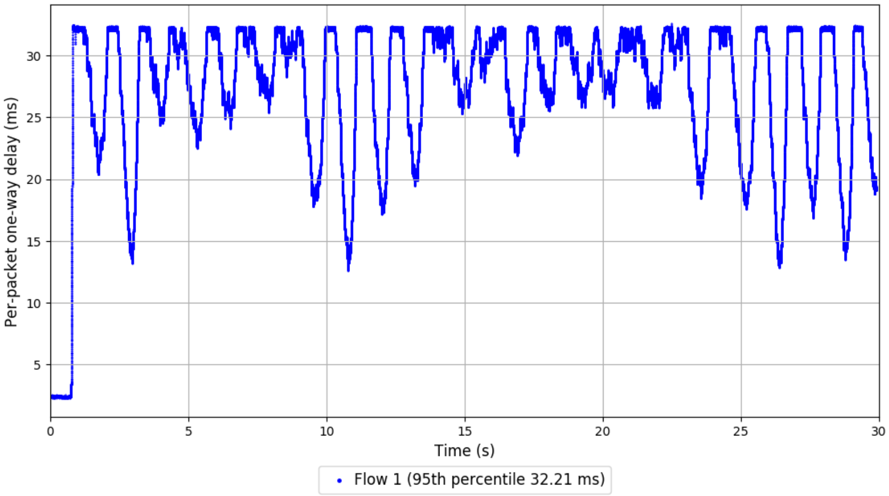




```
Run 7: Statistics of Vivace-loss

Start at: 2018-03-20 16:25:52
End at: 2018-03-20 16:26:22
Local clock offset: -11.9 ms
Remote clock offset: -16.501 ms

# Below is generated by plot.py at 2018-03-20 18:31:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.05 Mbit/s
95th percentile per-packet one-way delay: 32.213 ms
Loss rate: 2.40%
-- Flow 1:
Average throughput: 95.05 Mbit/s
95th percentile per-packet one-way delay: 32.213 ms
Loss rate: 2.40%
```

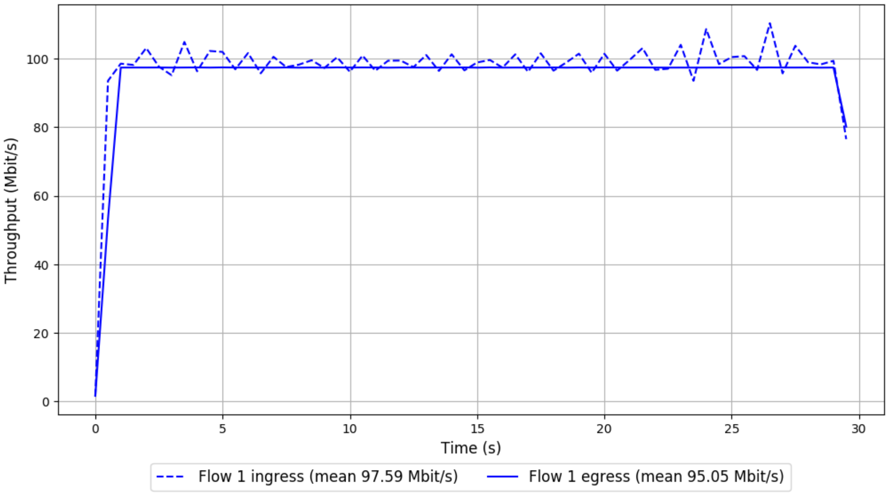
Run 7: Report of Vivace-loss — Data Link

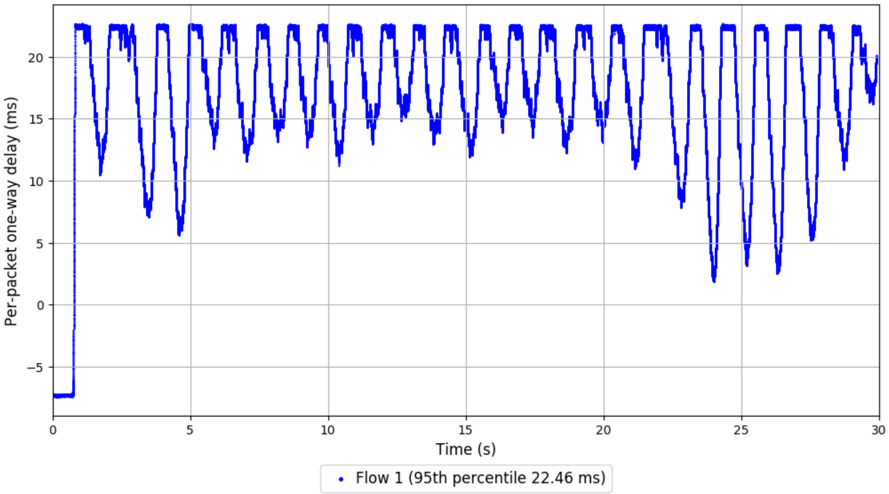




```
Run 8: Statistics of Vivace-loss

Start at: 2018-03-20 16:46:28
End at: 2018-03-20 16:46:58
Local clock offset: -14.993 ms
Remote clock offset: -23.892 ms

# Below is generated by plot.py at 2018-03-20 18:31:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.05 Mbit/s
95th percentile per-packet one-way delay: 22.462 ms
Loss rate: 2.51%
-- Flow 1:
Average throughput: 95.05 Mbit/s
95th percentile per-packet one-way delay: 22.462 ms
Loss rate: 2.51%
```

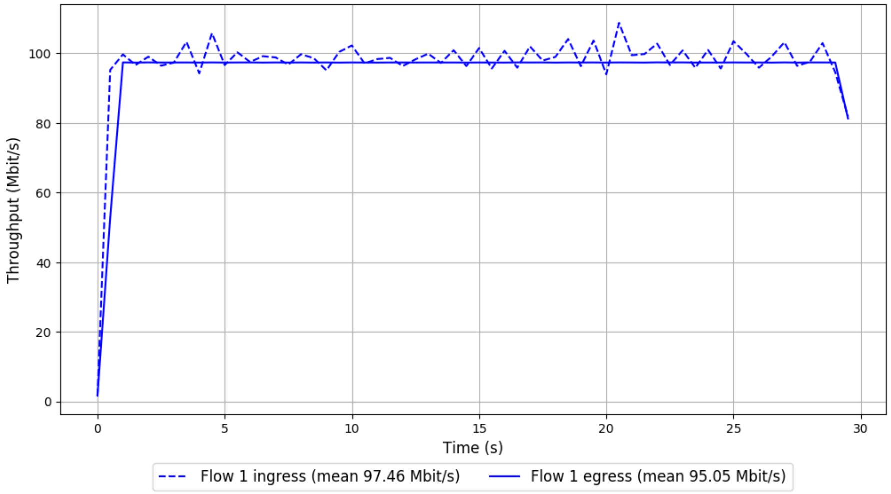
Run 8: Report of Vivace-loss — Data Link

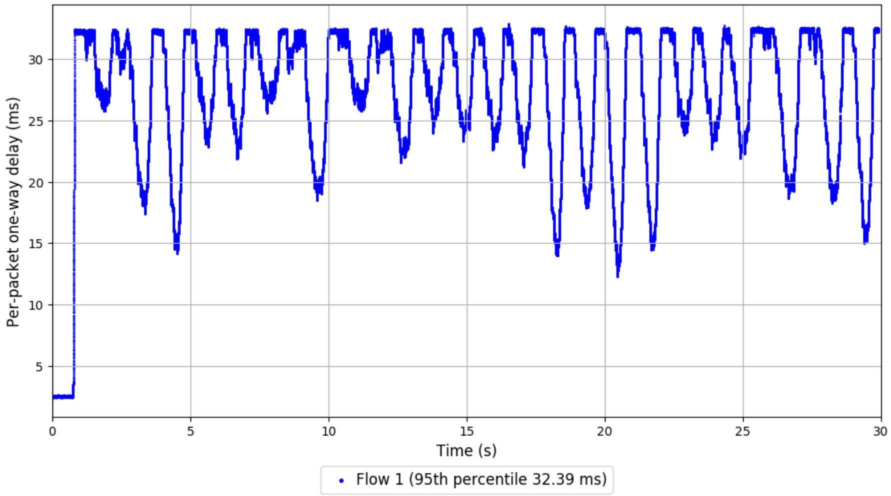




```
Run 9: Statistics of Vivace-loss

Start at: 2018-03-20 17:07:02
End at: 2018-03-20 17:07:32
Local clock offset: -16.45 ms
Remote clock offset: -14.007 ms

# Below is generated by plot.py at 2018-03-20 18:32:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.05 Mbit/s
95th percentile per-packet one-way delay: 32.391 ms
Loss rate: 2.38%
-- Flow 1:
Average throughput: 95.05 Mbit/s
95th percentile per-packet one-way delay: 32.391 ms
Loss rate: 2.38%
```

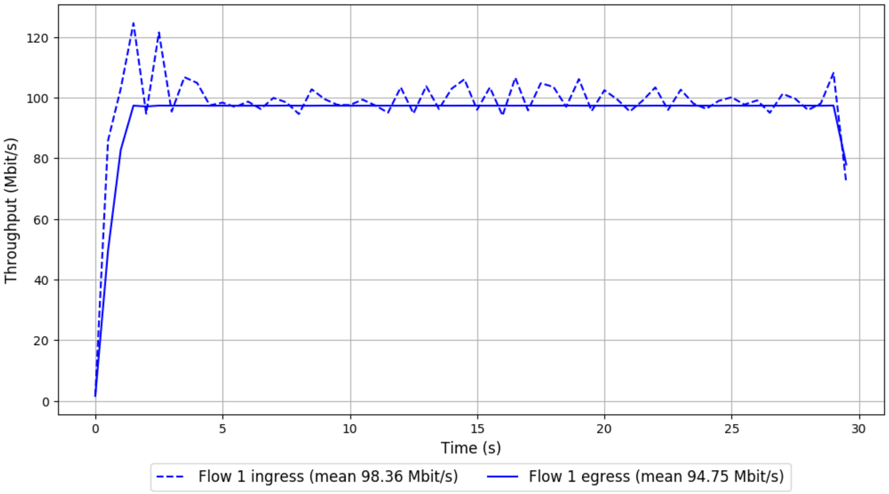
Run 9: Report of Vivace-loss — Data Link

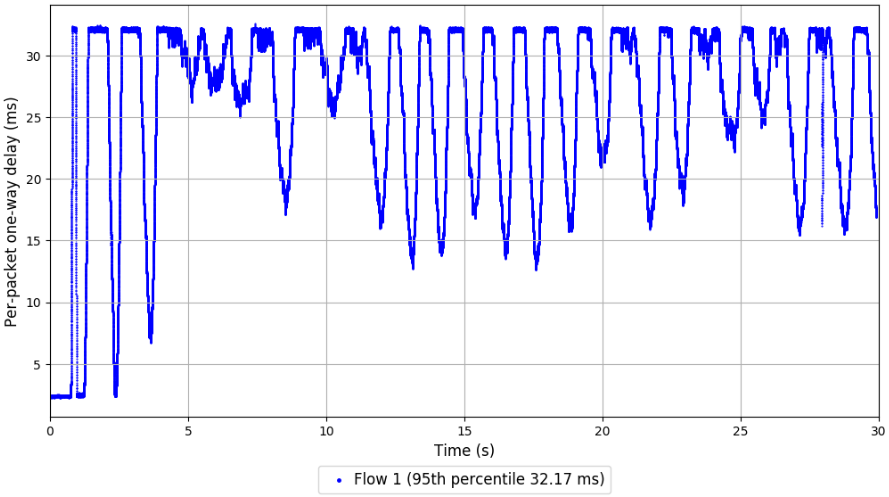




```
Run 10: Statistics of Vivace-loss

Start at: 2018-03-20 17:27:30
End at: 2018-03-20 17:28:00
Local clock offset: -14.079 ms
Remote clock offset: -13.9 ms

# Below is generated by plot.py at 2018-03-20 18:32:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.75 Mbit/s
95th percentile per-packet one-way delay: 32.171 ms
Loss rate: 3.62%
-- Flow 1:
Average throughput: 94.75 Mbit/s
95th percentile per-packet one-way delay: 32.171 ms
Loss rate: 3.62%
```

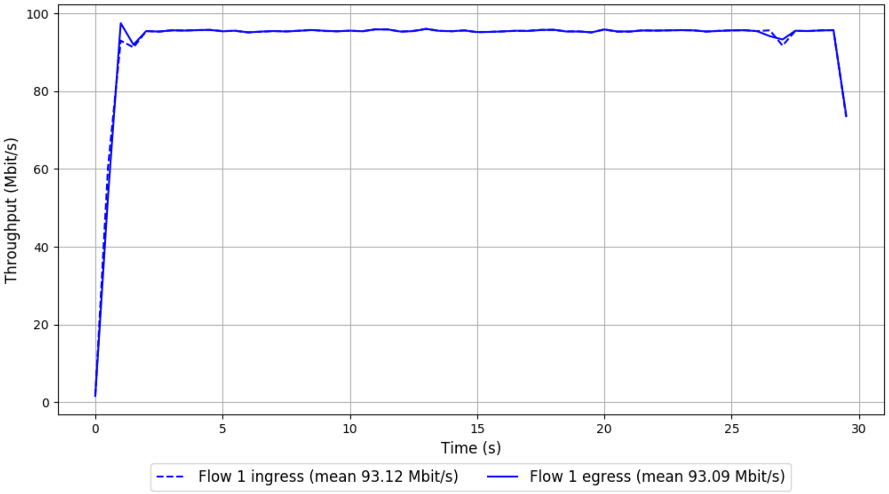
Run 10: Report of Vivace-loss — Data Link

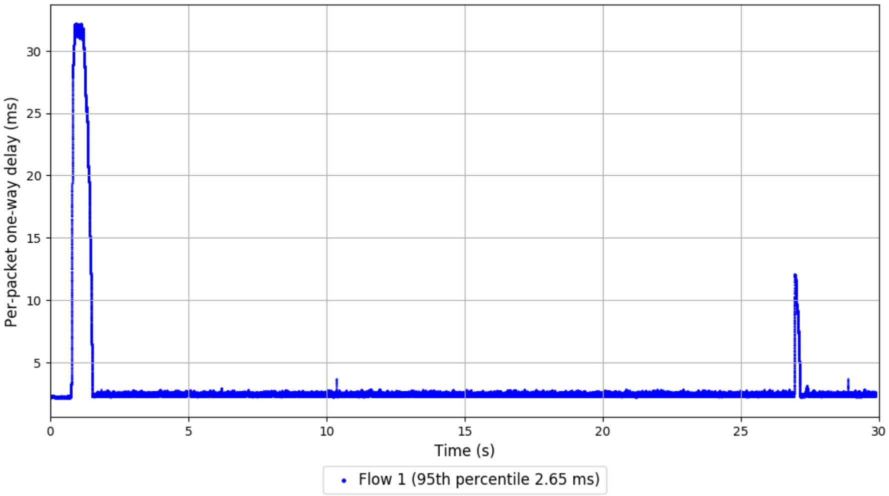




```
Run 1: Statistics of Vivace-LTE

Start at: 2018-03-20 14:13:36
End at: 2018-03-20 14:14:06
Local clock offset: -6.538 ms
Remote clock offset: -6.749 ms

# Below is generated by plot.py at 2018-03-20 18:32:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.09 Mbit/s
95th percentile per-packet one-way delay: 2.646 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 93.09 Mbit/s
95th percentile per-packet one-way delay: 2.646 ms
Loss rate: 0.03%
```

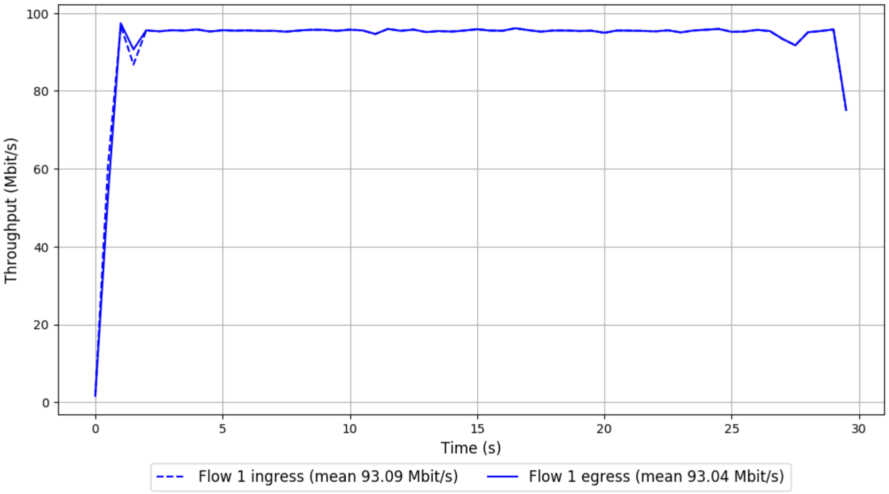
Run 1: Report of Vivace-LTE — Data Link

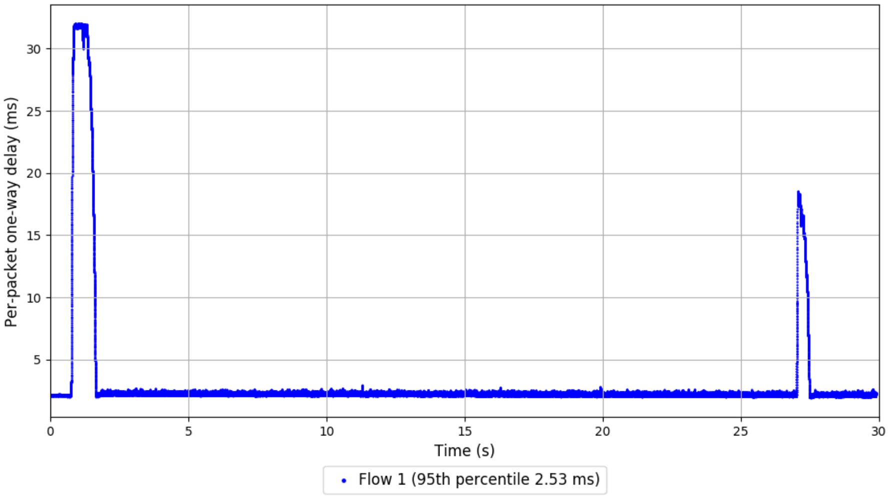




```
Run 2: Statistics of Vivace-LTE

Start at: 2018-03-20 14:34:00
End at: 2018-03-20 14:34:30
Local clock offset: -15.427 ms
Remote clock offset: -6.871 ms

# Below is generated by plot.py at 2018-03-20 18:32:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.04 Mbit/s
95th percentile per-packet one-way delay: 2.532 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 93.04 Mbit/s
95th percentile per-packet one-way delay: 2.532 ms
Loss rate: 0.05%
```

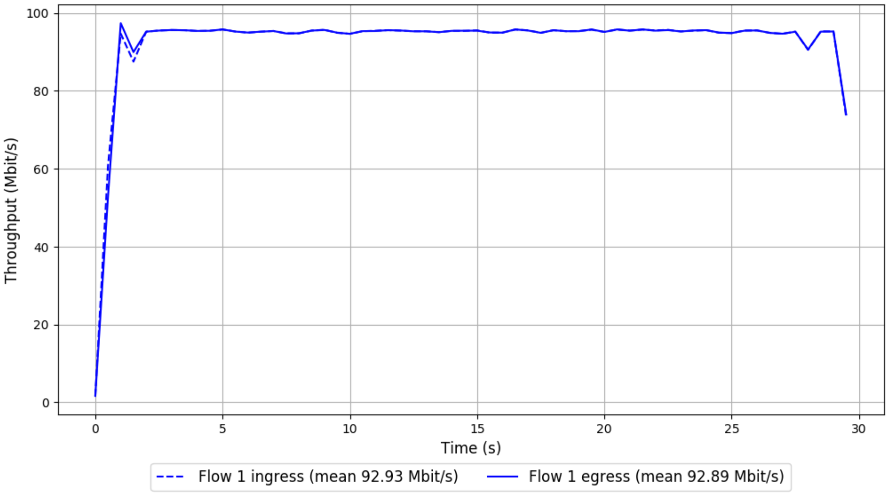
Run 2: Report of Vivace-LTE — Data Link

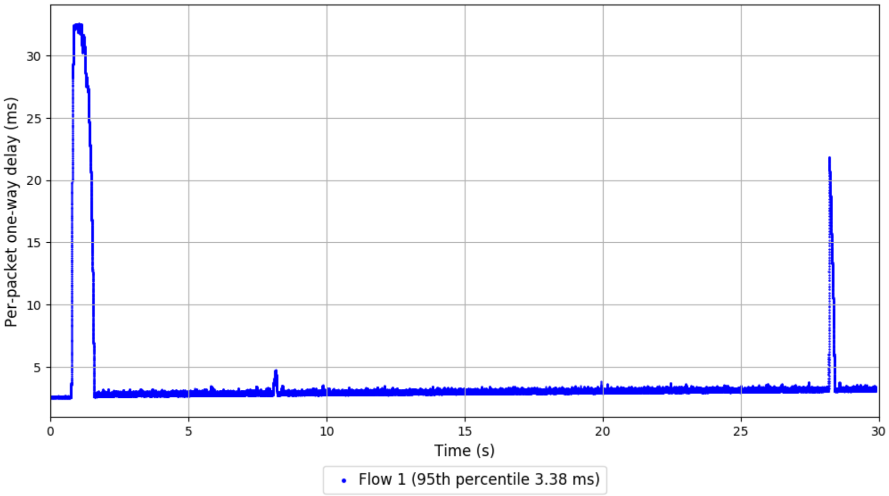




```
Run 3: Statistics of Vivace-LTE

Start at: 2018-03-20 14:54:28
End at: 2018-03-20 14:54:58
Local clock offset: -15.165 ms
Remote clock offset: -13.089 ms

# Below is generated by plot.py at 2018-03-20 18:32:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.89 Mbit/s
95th percentile per-packet one-way delay: 3.383 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 92.89 Mbit/s
95th percentile per-packet one-way delay: 3.383 ms
Loss rate: 0.04%
```

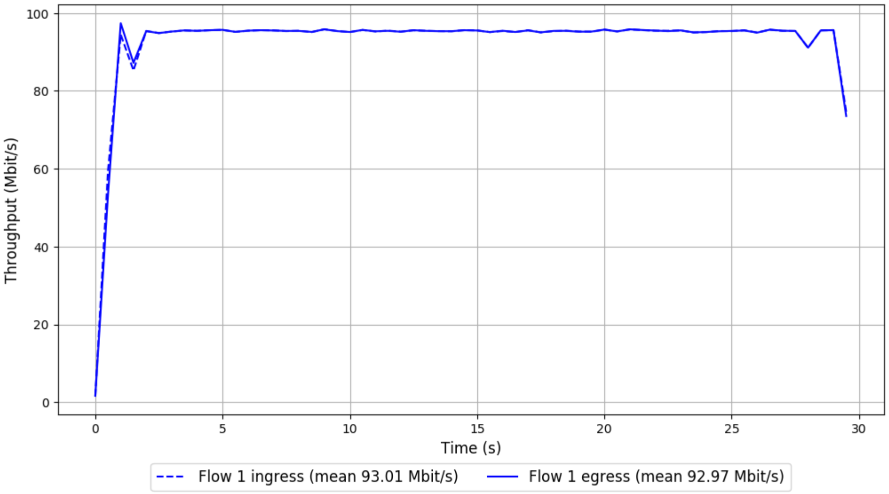
Run 3: Report of Vivace-LTE — Data Link

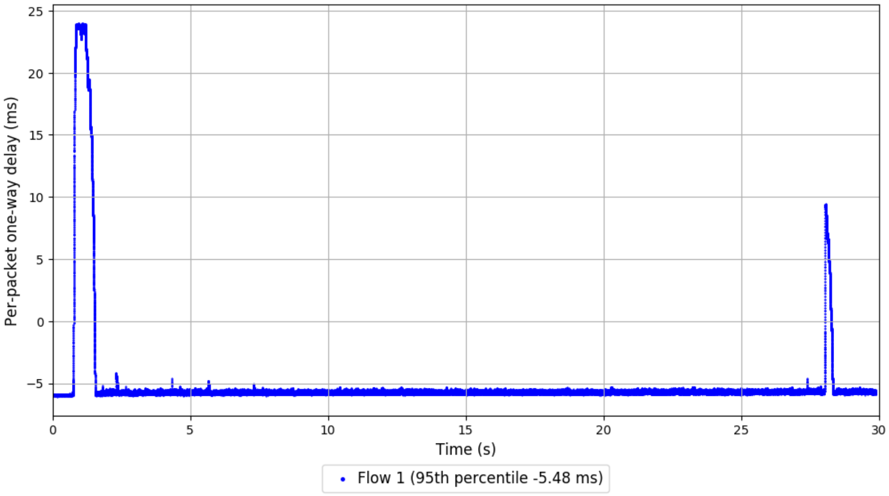




```
Run 4: Statistics of Vivace-LTE

Start at: 2018-03-20 15:14:57
End at: 2018-03-20 15:15:27
Local clock offset: -11.703 ms
Remote clock offset: -26.655 ms

# Below is generated by plot.py at 2018-03-20 18:32:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.97 Mbit/s
95th percentile per-packet one-way delay: -5.478 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 92.97 Mbit/s
95th percentile per-packet one-way delay: -5.478 ms
Loss rate: 0.04%
```

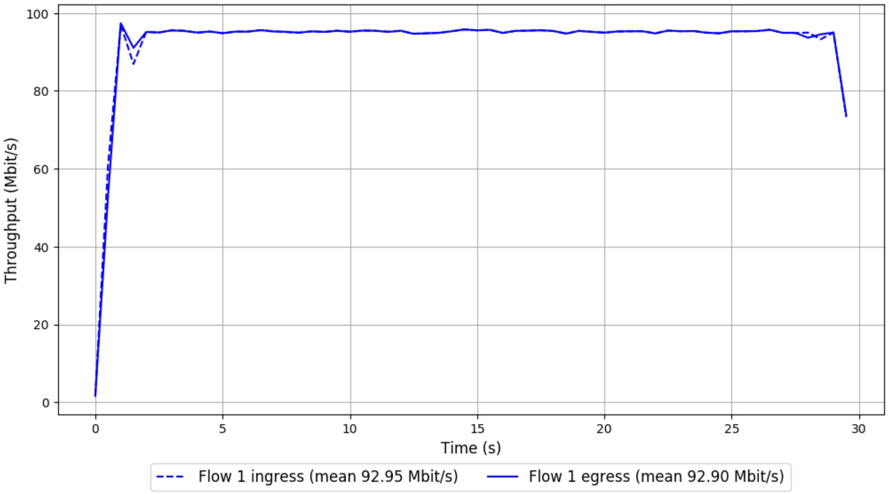
Run 4: Report of Vivace-LTE — Data Link

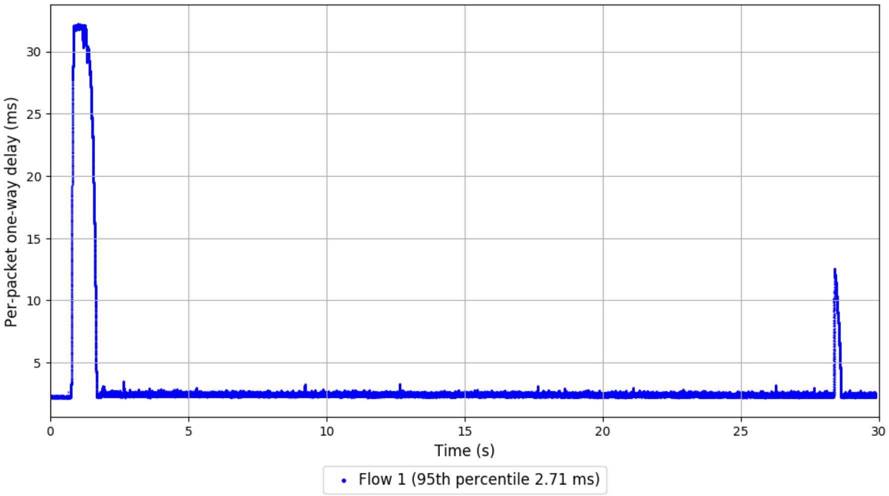




```
Run 5: Statistics of Vivace-LTE

Start at: 2018-03-20 15:35:31
End at: 2018-03-20 15:36:01
Local clock offset: -13.218 ms
Remote clock offset: -15.936 ms

# Below is generated by plot.py at 2018-03-20 18:32:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.90 Mbit/s
95th percentile per-packet one-way delay: 2.713 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 92.90 Mbit/s
95th percentile per-packet one-way delay: 2.713 ms
Loss rate: 0.05%
```

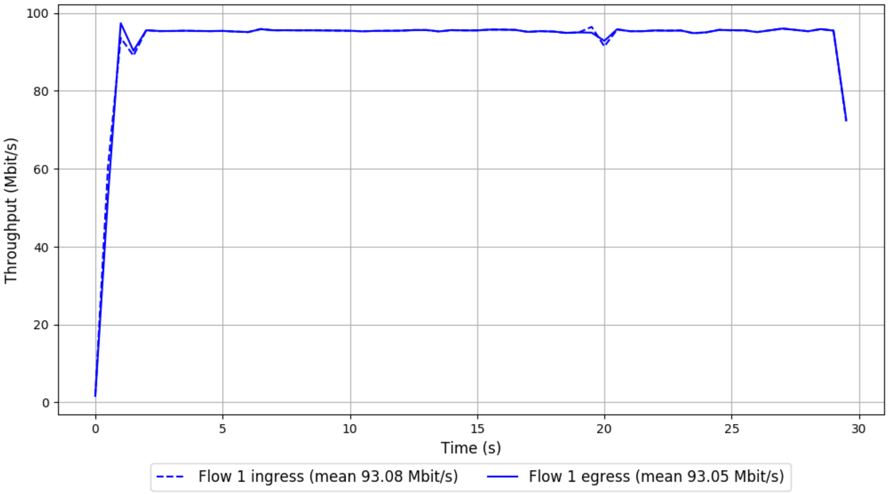
Run 5: Report of Vivace-LTE — Data Link

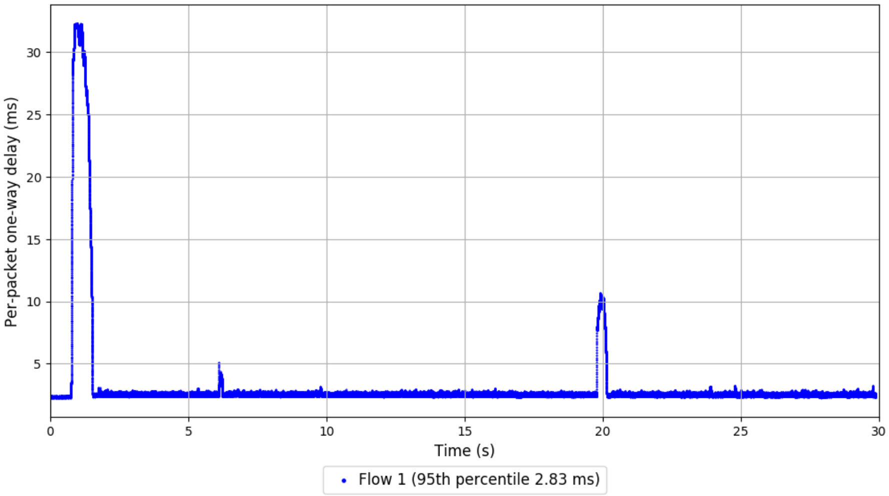




```
Run 6: Statistics of Vivace-LTE

Start at: 2018-03-20 15:56:12
End at: 2018-03-20 15:56:42
Local clock offset: -14.76 ms
Remote clock offset: -15.974 ms

# Below is generated by plot.py at 2018-03-20 18:32:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.05 Mbit/s
95th percentile per-packet one-way delay: 2.833 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 93.05 Mbit/s
95th percentile per-packet one-way delay: 2.833 ms
Loss rate: 0.04%
```

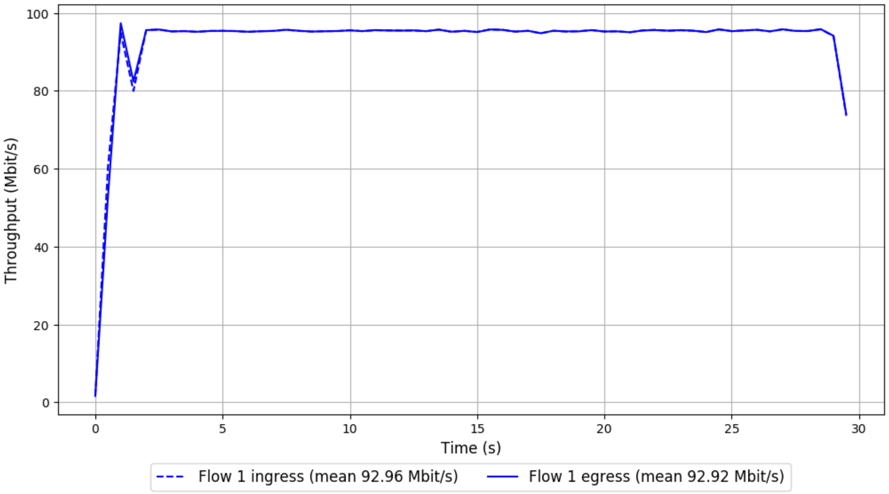
Run 6: Report of Vivace-LTE — Data Link

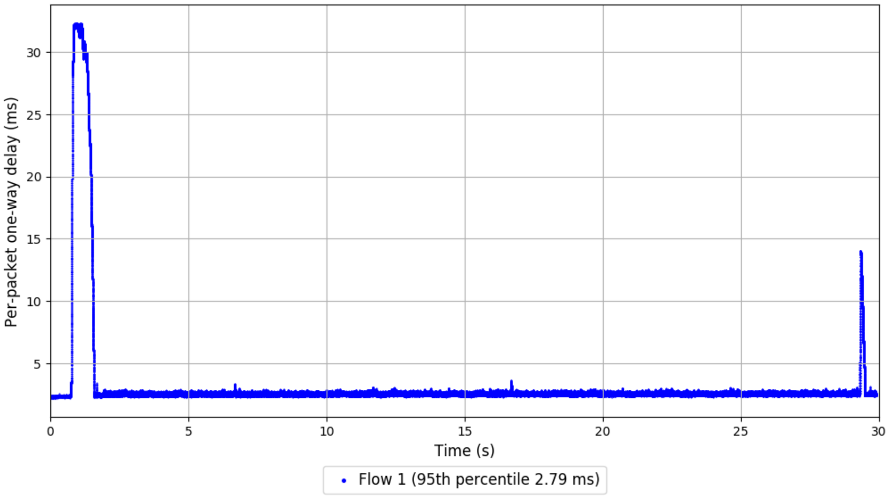




```
Run 7: Statistics of Vivace-LTE

Start at: 2018-03-20 16:16:47
End at: 2018-03-20 16:17:17
Local clock offset: -12.008 ms
Remote clock offset: -16.254 ms

# Below is generated by plot.py at 2018-03-20 18:33:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.92 Mbit/s
95th percentile per-packet one-way delay: 2.788 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 92.92 Mbit/s
95th percentile per-packet one-way delay: 2.788 ms
Loss rate: 0.04%
```

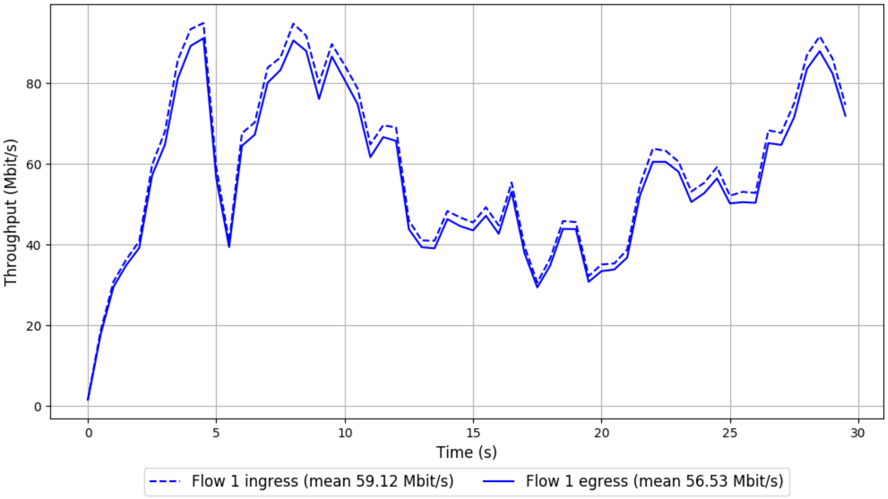
Run 7: Report of Vivace-LTE — Data Link

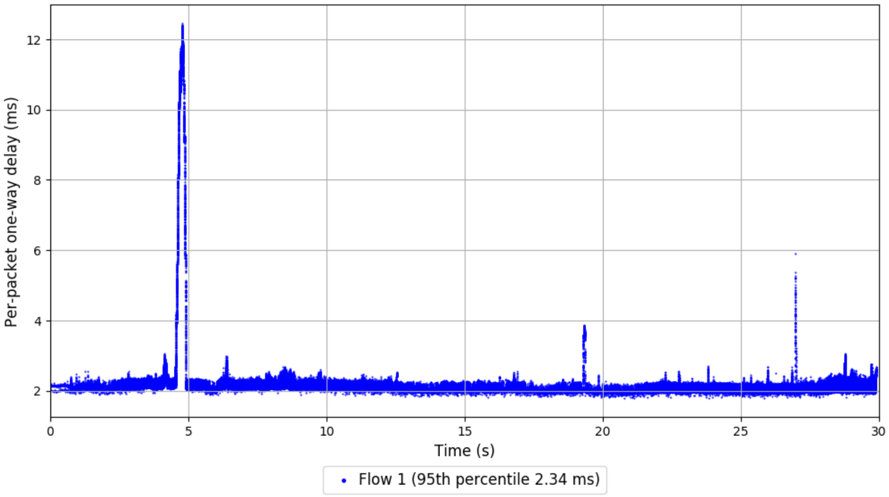




```
Run 8: Statistics of Vivace-LTE

Start at: 2018-03-20 16:37:24
End at: 2018-03-20 16:37:54
Local clock offset: -13.354 ms
Remote clock offset: -14.902 ms

# Below is generated by plot.py at 2018-03-20 18:33:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 56.53 Mbit/s
95th percentile per-packet one-way delay: 2.338 ms
Loss rate: 4.38%
-- Flow 1:
Average throughput: 56.53 Mbit/s
95th percentile per-packet one-way delay: 2.338 ms
Loss rate: 4.38%
```

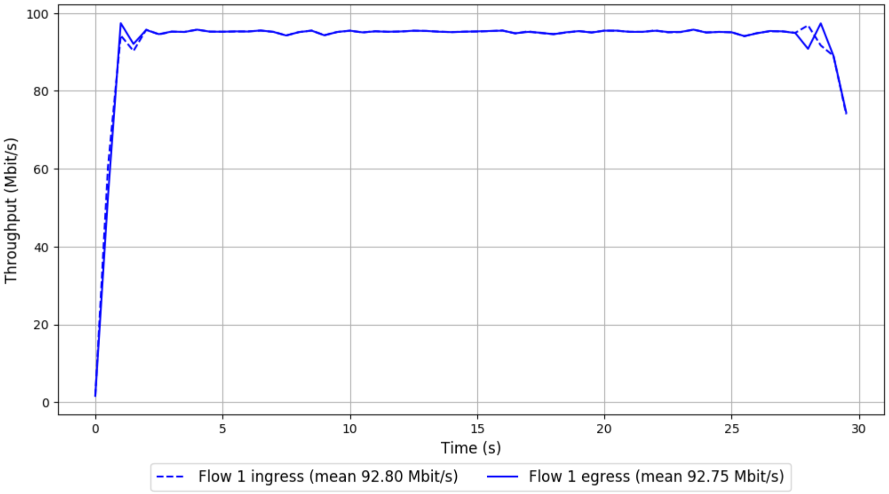
Run 8: Report of Vivace-LTE — Data Link

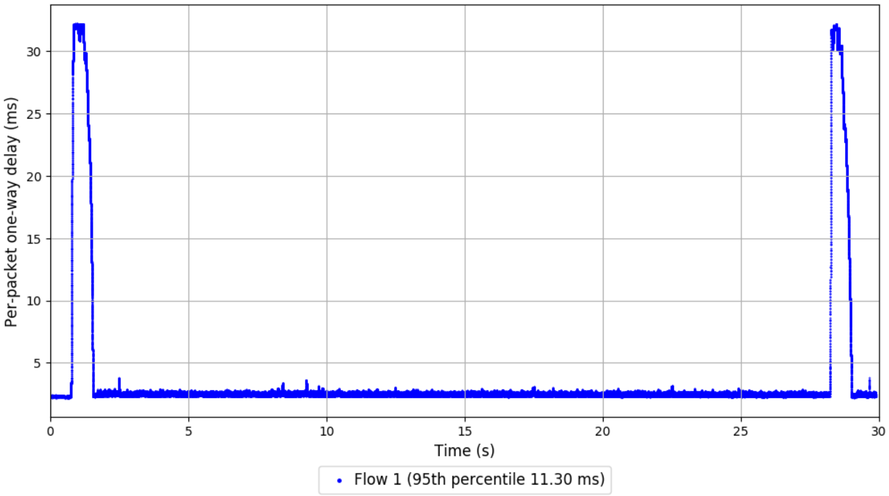




```
Run 9: Statistics of Vivace-LTE

Start at: 2018-03-20 16:57:57
End at: 2018-03-20 16:58:27
Local clock offset: -16.104 ms
Remote clock offset: -14.053 ms

# Below is generated by plot.py at 2018-03-20 18:33:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.75 Mbit/s
95th percentile per-packet one-way delay: 11.298 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 92.75 Mbit/s
95th percentile per-packet one-way delay: 11.298 ms
Loss rate: 0.05%
```

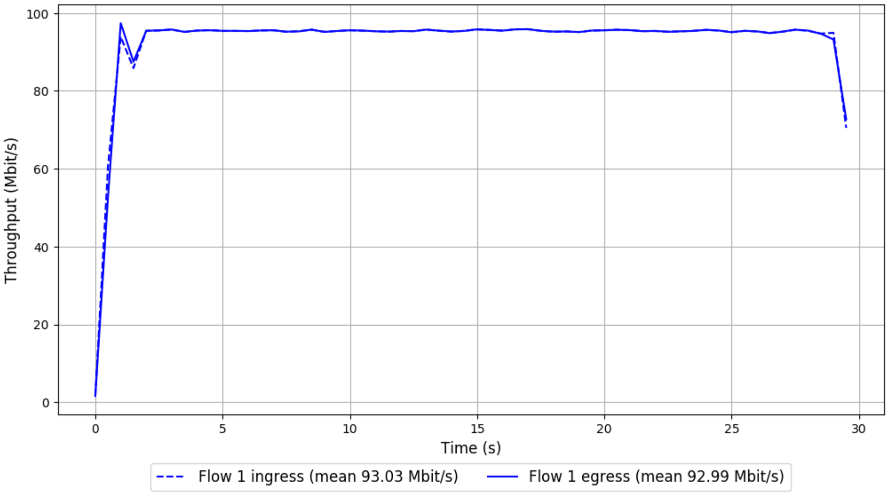
Run 9: Report of Vivace-LTE — Data Link



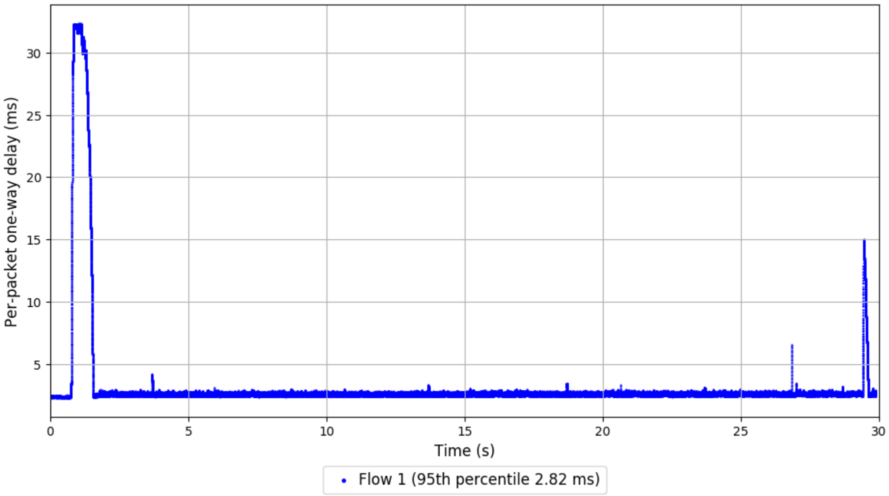


```
Run 10: Statistics of Vivace-LTE

Start at: 2018-03-20 17:18:31
End at: 2018-03-20 17:19:01
Local clock offset: -14.445 ms
Remote clock offset: -13.961 ms

# Below is generated by plot.py at 2018-03-20 18:33:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.99 Mbit/s
95th percentile per-packet one-way delay: 2.817 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 92.99 Mbit/s
95th percentile per-packet one-way delay: 2.817 ms
Loss rate: 0.04%
```

Run 10: Report of Vivace-LTE — Data Link



Throughput (Mbit/s)
0
20
40
60
80
100
0
5
10
15
20
25
30
Time (s)
Flow 1 ingress (mean 93.03 Mbit/s)
Flow 1 egress (mean 92.99 Mbit/s)



Per-packet one-way delay (ms)
5
10
15
20
25
30
0
5
10
15
20
25
30
Time (s)
Flow 1 (95th percentile 2.82 ms)