# Stack Overflow | Google Group | Gitter Chat | Subreddit | Youtube Channel | Documentation | Contribution Guide |

Framework	Language	Max Throughput	Avg Latency	Transfer
Go FastHttp	Go	1,396,685.83	99.98ms	167.83MB
Light-4j	Java	1,344,512.65	2.36ms	169.25MB
ActFramework	Java	945,429.13	2.22ms	136.15MB
Go Iris	Go	828,035.66	5.77ms	112.92MB
Vertx	Java	803,311.31	2.37ms	98.06MB
Node-uws	Node/C++	589,924.44	7.22ms	28.69MB
Dotnet	.Net	486,216.93	2.93ms	57.03MB
Jooby/Undertow	Java	362,018.07	3.95ms	47.99MB
SeedStack-Filter	Java	343,416.33	4.41ms	51.42MB
Spring Boot Reactor	Java	243,240.17	7.44ms	17.86MB
Pippo-Undertow	Java	216,254.56	9.80ms	31.35MB
Spark	Java	194,553.83	13.85ms	32.47MB
Pippo-Jetty	Java	178,055.45	15.66ms	26.83MB
Play-Java	Java	177,202.75	12.15ms	21.80MB
Go HttpRouter	Go	171,852.31	14.12ms	21.14MB
Go Http	Go	170,313.02	15.01ms	20.95MB
JFinal	Java	139,467.87	11.89ms	29.79MB
Akka-Http	Java	132,157.96	12.21ms	19.54MB
RatPack	Java	124,700.70	13.45ms	10.82MB
Pippo-Tomcat	Java	103,948.18	23.50ms	15.29MB
Bootique + Jetty/Jersey	Java	65,072.20	39.08ms	11.17MB
SeedStack-Jersey2	Java	52,310.11	26.88ms	11.87MB
Baseio	Java	50,361.98	22.20ms	6.39MB
NinjaFramework	Java	47,956.43	55.76ms	13.67MB
Play 1	Java	44,491.87	10.73ms	18.75MB
Spring Boot Undertow	Java	44,260.61	38.94ms	6.42MB
Nodejs Express	Node	42,443.34	22.30ms	9.31MB
Dropwizard	Java	33,819.90	98.78ms	3.23MB
		1 / 17		

Framework	Language	Max Throughput	Avg Latency	Transfer
Spring Boot Tomcat	Java	33,086.22	82.93ms	3.98MB
Node-Loopback	Node	32,091.95	34.42ms	11.51MB
Payra Micro	Java	24,768.69	118.86ms	3.50MB
WildFly Swarm	Java	21,541.07	59.77ms	2.83MB

We are using pipeline.lua to generate more requests per second and the pipeline.lua is located at microservices-framework-benchmark/pipeline.lua.

Here is the light-java server performance with the same command line with other frameworks.

```
wrk -t4 -c128 -d30s http://localhost:8080 -s pipeline.lua --latency -- / 16
Running 30s test @ http://localhost:8080
 4 threads and 128 connections
 Thread Stats Avg Stdev
                               Max +/- Stdev
   Latency 774.30us 1.77ms 40.31ms 91.51%
   Req/Sec 0.93M 81.46k 1.06M 87.83%
 Latency Distribution
    50% 286.00us
    75% 529.00us
    90%
        1.92ms
    99% 0.00us
 110603088 requests in 30.01s, 12.88GB read
Requests/sec: 3685234.33
Transfer/sec: 439.31MB
```

Here is another test with for light-java to push more requests but some other frameworks get server errors.

```
steve@joy:~/tool/wrk$ wrk -t4 -c128 -d30s http://localhost:8080 -s pipeline.lua --
latency -- / 50
Running 30s test @ http://localhost:8080
 4 threads and 128 connections
 Thread Stats Avg Stdev Max +/- Stdev
   Latency 2.35ms
                      2.80ms 54.23ms 89.24%
   Req/Sec 550.10k 64.34k 1.22M 74.54%
 Latency Distribution
    50% 1.56ms
    75%
         2.87ms
    90%
         5.41ms
    99% 22.17ms
 65803650 requests in 30.10s, 6.50GB read
Requests/sec: 2186203.44
Transfer/sec: 221.00MB
```

Here is the spring-boot-tomcat (tomcat embedded) performance.

```
steve@joy:~/tool/wrk$ wrk -t4 -c128 -d30s http://localhost:8080 -s pipeline.lua -
-latency -- / 16
Running 30s test @ http://localhost:8080
 4 threads and 128 connections
 Thread Stats Avg Stdev Max +/- Stdev
   Latency 82.93ms 108.77ms 1.58s 89.45%
             8.40k 3.68k 22.19k 68.54%
   Req/Sec
 Latency Distribution
    50% 45.66ms
    75% 101.59ms
    90% 197.72ms
    99% 542.87ms
 995431 requests in 30.09s, 119.79MB read
Requests/sec: 33086.22
Transfer/sec: 3.98MB
```

Here is the spring-boot-undertow (undertow embedded) performance.

```
steve@joy:~/tool/wrk$ wrk -t4 -c128 -d30s http://localhost:8080 -s pipeline.lua --
latency -- / 16
Running 30s test @ http://localhost:8080
 4 threads and 128 connections
 Thread Stats Avg Stdev
                               Max +/- Stdev
   Latency 38.94ms 39.29ms 456.82ms 89.28%
   Reg/Sec 11.21k 4.97k 28.16k 68.14%
 Latency Distribution
    50%
        27.58ms
    75% 49.62ms
    90% 80.73ms
    99% 201.87ms
 1331312 requests in 30.08s, 192.98MB read
Requests/sec: 44260.61
Transfer/sec: 6.42MB
```

Basically, light-4j is 44 times faster than spring-boot with tomcat embedded just for the raw performance to serve Hello World!

In order to have a closer comparison, I have created another project spring-boot-undertow with embedded undertow servlet container (light-java is using undertow core only) and the performance is getting a little better. Light-Java is about 33 times faster than spring-boot with undertow embedded.

Upon requests from the community, I have added nodejs and golang examples and here are the testing result.

Node express framework. To start the server

```
cd node-express
npm install
node server.js
```

#### The test result.

```
steve@joy:~/tool/wrk$ wrk -t4 -c128 -d30s http://localhost:8080 -s pipeline.lua --
latency -- / 16
Running 30s test @ http://localhost:8080
 4 threads and 128 connections
 Thread Stats Avg
                       Stdev
                                Max +/- Stdev
                                        49.18%
   Latency
              22.30ms
                       24.35ms 592.24ms
   Req/Sec
             10.70k
                       0.87k 11.95k
                                         94.82%
 Latency Distribution
    50% 47.94ms
    75%
          0.00us
    90%
         0.00us
    99%
          0.00us
 1274289 requests in 30.02s, 279.51MB read
Requests/sec: 42443.34
Transfer/sec:
                9.31MB
```

## Go Standard Http

#### To start the server

```
cd go-http
go run server.go -prefork
```

## The testing result.

```
steve@joy:~/tool/wrk$ wrk -t4 -c128 -d30s http://localhost:8080 -s pipeline.lua --
latency -- / 16
Running 30s test @ http://localhost:8080
 4 threads and 128 connections
 Thread Stats Avg
                       Stdev
                                 Max +/- Stdev
   Latency
            15.01ms 15.35ms 180.11ms 87.10%
   Req/Sec
             42.80k
                       5.46k 62.49k 70.58%
 Latency Distribution
    50% 10.03ms
    75% 19.96ms
    90%
        34.55ms
    99%
        72.99ms
 5123194 requests in 30.08s, 630.28MB read
```

```
Requests/sec: 170313.02
Transfer/sec: 20.95MB
```

## Go FastHttp

To start the server

```
cd go-fasthttp
go run server.go -prefork
```

#### The testing result.

```
steve@joy:~/tool/wrk$ wrk -t4 -c128 -d30s http://localhost:8080 -s pipeline.lua --
latency -- / 16
Running 30s test @ http://localhost:8080
 4 threads and 128 connections
                     Stdev
 Thread Stats Avg
                                 Max +/- Stdev
   Latency
            99.98ms 127.12ms 653.72ms 82.12%
            351.24k 46.23k 525.74k 77.09%
   Req/Sec
 Latency Distribution
    50%
        30.76ms
    75% 175.44ms
    90% 299.14ms
    99% 476.20ms
 41989168 requests in 30.06s, 4.93GB read
Requests/sec: 1396685.83
Transfer/sec: 167.83MB
```

After I post this online, one of spring developers recommended to test against Spring Boot with Reactor which is Netty based without servlet container. I am very new to this and might miss something and everyone is welcomed to submit pull request to enhance this project.

Here is the test result.

```
steve@joy:~/tool/wrk$ wrk -t4 -c128 -d30s http://localhost:3000 -s pipeline.lua --
latency -- / 16
Running 30s test @ http://localhost:3000
4 threads and 128 connections
Thread Stats Avg Stdev Max +/- Stdev
   Latency 7.44ms 12.88ms 285.71ms 94.23%
   Req/Sec 61.44k 12.25k 88.29k 79.23%
Latency Distribution
   50% 4.62ms
   75% 8.11ms
```

```
90% 15.03ms
99% 42.60ms
7305649 requests in 30.03s, 536.48MB read
Requests/sec: 243240.17
Transfer/sec: 17.86MB
```

Add Spark test case and here is the result. It is much better than most frameworks with servlet containers.

```
steve@joy:~/tool/wrk$ wrk -t4 -c128 -d30s http://localhost:4567 -s pipeline.lua --
latency -- / 16
Running 30s test @ http://localhost:4567
 4 threads and 128 connections
 Thread Stats Avg Stdev Max +/- Stdev
   Latency 13.85ms 30.58ms 687.89ms 96.29%
   Req/Sec 49.10k 16.55k 107.63k 73.41%
 Latency Distribution
    50%
         7.28ms
    75% 13.96ms
    90% 24.71ms
    99% 158.21ms
 5855187 requests in 30.10s, 0.95GB read
Requests/sec: 194553.83
Transfer/sec: 32.47MB
```

Add Jooby test case and here is the result. It is better than Spring Boot as it is using Netty directly.

```
steve@joy:~/tool/wrk$ wrk -t4 -c128 -d30s http://localhost:8080 -s pipeline.lua --
latency -- / 16
Running 30s test @ http://localhost:8080
 4 threads and 128 connections
 Thread Stats Avg Stdev Max +/- Stdev
   Latency 15.57ms 25.97ms 431.00ms 94.64%
            30.50k 8.66k 77.57k 75.68%
   Req/Sec
 Latency Distribution
    50% 9.93ms
    75% 16.49ms
    90% 27.27ms
    99% 123.80ms
 3613008 requests in 30.05s, 392.80MB read
Requests/sec: 120232.86
Transfer/sec: 13.07MB
```

@jknack submitted a pull request for Jooby to switch to Undertow instead of Netty and here is the updated result.

```
steve@joy:~/tool/wrk$ wrk -t4 -c128 -d30s http://localhost:8080 -s pipeline.lua --
latency -- / 16
Running 30s test @ http://localhost:8080
 4 threads and 128 connections
 Thread Stats Avg
                      Stdev
                                 Max +/- Stdev
   Latency 13.22ms 20.07ms 439.26ms 94.77%
   Req/Sec
             32.96k
                      7.71k 52.00k 78.38%
 Latency Distribution
    50%
          9.06ms
    75% 14.98ms
    90% 23.88ms
    99% 89.30ms
 3926256 requests in 30.10s, 565.40MB read
Requests/sec: 130458.14
Transfer/sec: 18.79MB
```

@windbender submitted a pull request for Dropwizard and here is the result.

```
steve@joy:~/tool/wrk$ wrk -t4 -c128 -d30s http://localhost:8080 -s pipeline.lua --
latency -- / 16
Running 30s test @ http://localhost:8080
 4 threads and 128 connections
 Thread Stats Avg Stdev Max +/- Stdev
   Latency 98.78ms 167.67ms 1.92s 92.91%
                      4.26k 24.02k 66.49%
             8.58k
   Req/Sec
 Latency Distribution
    50% 47.95ms
    75% 103.68ms
    90% 211.24ms
    99% 958.22ms
 1017904 requests in 30.10s, 97.07MB read
Requests/sec: 33819.90
Transfer/sec:
               3.23MB
```

@IRus submitted a pull request for Bootique + Jetty/Jersey and here is the result.

```
steve@joy:~/tool/wrk$ wrk -t4 -c128 -d30s http://localhost:8080 -s pipeline.lua --
latency -- / 16
Running 30s test @ http://localhost:8080
 4 threads and 128 connections
 Thread Stats Avg Stdev
                               Max +/- Stdev
             39.08ms
                      43.35ms 462.13ms 87.33%
   Latency
   Req/Sec
            16.46k
                      3.79k 31.04k 70.42%
 Latency Distribution
    50% 23.94ms
    75% 49.95ms
    90% 94.78ms
```

```
99% 204.74ms
1956621 requests in 30.07s, 335.88MB read
Requests/sec: 65072.20
Transfer/sec: 11.17MB
```

@hydra1983 submitted a pull request for RatPack and here is the result.

```
steve@joy:~/tool/wrk$ wrk -t4 -c128 -d30s http://localhost:5050 -s pipeline.lua --
latency -- / 16
Running 30s test @ http://localhost:5050
 4 threads and 128 connections
 Thread Stats Avg Stdev
                               Max +/- Stdev
   Latency 13.45ms 17.27ms 366.84ms 94.60%
            31.44k 6.39k 48.42k 83.28%
   Req/Sec
 Latency Distribution
    50% 10.04ms
    75% 16.67ms
    90% 24.47ms
    99% 82.36ms
 3747731 requests in 30.05s, 325.24MB read
Requests/sec: 124700.70
Transfer/sec: 10.82MB
```

@IRus submitted a pull request for WildFly Swarm and here is the result.

```
steve@joy:~/tool/wrk$ wrk -t4 -c128 -d30s http://localhost:8080 -s pipeline.lua --
latency -- / 16
Running 30s test @ http://localhost:8080
 4 threads and 128 connections
 Thread Stats Avg
                               Max +/- Stdev
                      Stdev
   Latency 59.77ms 44.97ms 526.38ms 64.92%
   Reg/Sec 5.41k
                      1.43k 9.53k 74.58%
 Latency Distribution
    50% 74.16ms
    75% 162.88ms
        0.00us
    90%
    99%
        0.00us
 648138 requests in 30.09s, 85.30MB read
Requests/sec: 21541.07
Transfer/sec: 2.83MB
```

@IRus submitted a pull request for Payra-Micro and here is the result.

```
steve@joy:~/tool/wrk$ wrk -t4 -c128 -d30s http://localhost:8080 -s pipeline.lua --
latency -- / 16
Running 30s test @ http://localhost:8080
```

```
4 threads and 128 connections
 Thread Stats Avg
                       Stdev
                               Max
                                     +/- Stdev
   Latency 118.86ms 144.34ms 1.77s 88.56%
   Req/Sec
             6.29k
                      2.75k 15.40k
                                        63.00%
 Latency Distribution
        69.49ms
    50%
    75% 155.56ms
    90% 282.09ms
    99% 696.93ms
 745507 requests in 30.10s, 105.28MB read
 Socket errors: connect 0, read 0, write 0, timeout 1
Requests/sec: 24768.69
Transfer/sec: 3.50MB
```

@hydra1983 submitted a pull request for akka-http and here is the result.

@cortwave submitted a pull request to upgrade to version 2.4.11. Here is the latest result.

```
steve@joy:~/tool/wrk$ wrk -t4 -c128 -d30s http://localhost:8080 -s pipeline.lua --
latency -- / 16
Running 30s test @ http://localhost:8080
 4 threads and 128 connections
 Thread Stats Avg
                       Stdev
                                 Max +/- Stdev
   Latency
            12.21ms
                       30.77ms 712.06ms
                                        98.78%
   Reg/Sec
             33.52k
                       3.99k 68.36k
                                         86.96%
 Latency Distribution
    50%
          8.57ms
    75%
          13.30ms
    90% 18.62ms
    99%
          52.13ms
 3972310 requests in 30.06s, 587.18MB read
Requests/sec: 132157.96
Transfer/sec:
               19.54MB
```

@dpapworth submitted a pull request to add play-java and here is the result.

```
steve@joy:~/tool/wrk$ wrk -t4 -c128 -d30s http://localhost:8080 -s pipeline.lua -
-latency -- / 16
Running 30s test @ http://localhost:8080
  4 threads and 128 connections
  Thread Stats Avg
                                Max +/- Stdev
                       Stdev
              12.15ms 14.27ms 375.72ms 89.98%
    Latency
                                        73.83%
    Req/Sec
              44.60k
                       7.32k 86.18k
  Latency Distribution
     50%
          8.20ms
     75% 15.65ms
     90% 26.44ms
```

```
99% 60.57ms
5325273 requests in 30.05s, 655.14MB read
Requests/sec: 177202.75
Transfer/sec: 21.80MB
```

Add iris which is a go web framework based on fasthttp and here is the result.

```
steve@joy:~/tool/wrk$ wrk -t4 -c128 -d30s http://localhost:8080 -s pipeline.lua --
latency -- / 16
Running 30s test @ http://localhost:8080
 4 threads and 128 connections
 Thread Stats Avg Stdev
                               Max +/- Stdev
   Latency 5.77ms 11.26ms 181.19ms 90.98%
   Reg/Sec 208.26k 36.36k 347.64k 74.83%
 Latency Distribution
    50%
         2.06ms
    75%
         4.54ms
    90% 15.21ms
    99% 57.44ms
 24886288 requests in 30.05s, 3.31GB read
Requests/sec: 828035.66
Transfer/sec: 112.92MB
```

@greenlaw110 submitted a pull request to add actframework and here is the result.

```
steve@joy:~/tool/wrk$ wrk -t4 -c128 -d30s http://localhost:8080 -s pipeline.lua --
latency -- / 16
Running 30s test @ http://localhost:8080
 4 threads and 128 connections
 Thread Stats Avg Stdev
                                 Max +/- Stdev
   Latency 2.22ms 6.58ms 219.99ms 97.98%
   Reg/Sec 241.95k 59.46k 420.20k
                                        73.85%
 Latency Distribution
    50%
         1.45ms
    75%
          2.24ms
    90%
          3.65ms
    99%
        11.87ms
 28389984 requests in 30.03s, 3.99GB read
Requests/sec: 945429.13
Transfer/sec: 136.15MB
```

@greenlaw110 submitted a pull request to add JFinal and here is the result.

```
steve@joy:~/tool/wrk$ wrk -t4 -c128 -d30s http://localhost:8080 -s pipeline.lua -
-latency -- / 16
Running 30s test @ http://localhost:8080
```

```
4 threads and 128 connections
 Thread Stats Avg Stdev
                                Max +/- Stdev
   Latency
            11.89ms 13.66ms 308.54ms
                                        91.36%
   Req/Sec
             35.82k
                      9.34k 69.40k
                                        70.64%
 Latency Distribution
    50%
          8.55ms
    75%
         14.81ms
    90% 23.92ms
    99%
         59.50ms
 4195471 requests in 30.08s, 0.88GB read
Requests/sec: 139467.87
Transfer/sec: 29.79MB
```

@greenlaw110 submitted a pull request to add NijinFramework and here is the result.

```
steve@joy:~/tool/wrk$ wrk -t4 -c128 -d30s http://localhost:8080 -s pipeline.lua --
latency -- / 16
Running 30s test @ http://localhost:8080
 4 threads and 128 connections
 Thread Stats Avg
                       Stdev
                                 Max
                                       +/- Stdev
   Latency
            55.76ms 63.72ms 1.05s 90.55%
   Req/Sec
             12.11k
                       2.93k 24.49k
                                          77.75%
 Latency Distribution
    50%
          38.35ms
    75% 71.44ms
    90% 116.40ms
    99% 324.54ms
 1442613 requests in 30.08s, 411.36MB read
Requests/sec: 47956.43
Transfer/sec:
                 13.67MB
```

@greenlaw110 submitted a pull request to add Play1 and here is the result.

```
steve@joy:~/tool/wrk$ wrk -t4 -c128 -d30s http://localhost:9000 -s pipeline.lua --
latency -- / 16
Running 30s test @ http://localhost:9000
 4 threads and 128 connections
 Thread Stats Avg
                        Stdev
                                 Max +/- Stdev
                        23.78ms 397.31ms
   Latency
              10.73ms
                                          0.00%
   Req/Sec
              11.32k
                       2.41k 14.02k
                                          86.33%
 Latency Distribution
    50%
           0.00us
    75%
           0.00us
    90%
           0.00us
    99%
           0.00us
 1335580 requests in 30.02s, 562.98MB read
Requests/sec: 44491.87
```

```
Transfer/sec: 18.75MB
```

@rygel submitted a pull request to add Pippo-Jetty and here is the result.

```
steve@joy:~/tool/wrk$ wrk -t4 -c128 -d30s http://localhost:8080 -s pipeline.lua --
latency -- / 16
Running 30s test @ http://localhost:8080
 4 threads and 128 connections
                                Max +/- Stdev
 Thread Stats Avg Stdev
   Latency 15.66ms 26.96ms 464.86ms 93.37%
   Req/Sec
            45.05k 18.29k 100.74k 69.23%
 Latency Distribution
    50%
          8.11ms
    75% 16.11ms
    90% 31.43ms
    99% 149.57ms
 5356385 requests in 30.08s, 807.10MB read
Requests/sec: 178055.45
Transfer/sec: 26.83MB
```

@rygel submitted a pull request to add Pippo-Tomcat and here is the result.

```
steve@joy:~/tool/wrk$ wrk -t4 -c128 -d30s http://localhost:8080 -s pipeline.lua --
latency -- / 16
Running 30s test @ http://localhost:8080
 4 threads and 128 connections
 Thread Stats Avg Stdev Max +/- Stdev
   Latency 23.50ms 40.19ms 768.53ms 93.01%
            26.57k
                      11.43k 86.99k 70.86%
   Req/Sec
 Latency Distribution
    50%
         12.15ms
    75% 24.84ms
    90%
        49.50ms
    99% 204.89ms
 3125385 requests in 30.07s, 459.58MB read
Requests/sec: 103948.18
Transfer/sec: 15.29MB
```

@rygel submitted a pull request to add Pippo-Undertow and here is the result.

```
steve@joy:~/tool/wrk$ wrk -t4 -c128 -d30s http://localhost:8080 -s pipeline.lua --
latency -- / 16
Running 30s test @ http://localhost:8080
4 threads and 128 connections
```

```
Thread Stats Avg Stdev Max +/- Stdev
   Latency
             9.80ms
                      21.25ms 448.49ms
                                        95.90%
                      16.92k 85.44k 77.53%
   Req/Sec
             54.74k
 Latency Distribution
    50%
          5.44ms
          9.18ms
    75%
    90%
        15.85ms
    99% 109.31ms
 6500688 requests in 30.06s, 0.92GB read
Requests/sec: 216254.56
Transfer/sec:
                31.35MB
```

@gonzalovazquez submitted a pull request to add node-uws and here is the result.

```
steve@joy:~/tool/wrk$ wrk -t4 -c128 -d30s http://localhost:8080 -s pipeline.lua --
latency -- / 16
Running 30s test @ http://localhost:8080
 4 threads and 128 connections
 Thread Stats Avg
                       Stdev
                                Max
                                       +/- Stdev
               7.22ms 69.98ms 1.64s
                                       99.15%
   Latency
   Reg/Sec 148.28k 28.41k 295.52k 93.92%
 Latency Distribution
    50%
          1.88ms
    75%
           2.73ms
    90%
          3.24ms
    99%
           6.91ms
 17706848 requests in 30.02s, 861.21MB read
 Socket errors: connect 0, read 0, write 0, timeout 4
Requests/sec: 589924.44
Transfer/sec: 28.69MB
```

@seanjburns submitted a pull request to add vertx and here is the result.

```
wrk -t4 -c128 -d30s http://localhost:8080 -s pipeline.lua --latency -- / 16
Running 30s test @ http://localhost:8080
 4 threads and 128 connections
 Thread Stats Avg
                        Stdev
                                Max +/- Stdev
              1.34ms 5.61ms 170.00ms 94.85%
   Latency
   Req/Sec
               0.95M
                      133.67k 1.23M
                                         92.76%
 Latency Distribution
    50% 278.00us
    75% 517.00us
    90%
          3.23ms
    99% 126.69ms
 113247792 requests in 30.10s, 9.70GB read
Requests/sec: 3762376.24
Transfer/sec: 330.10MB
```

@kevin-better submitted a pull request to add baseio and here is the result.

```
wrk -t4 -c128 -d30s http://localhost:8080 -s pipeline.lua --latency -- / 16
Running 30s test @ http://localhost:8080
 4 threads and 128 connections
 Thread Stats Avg
                       Stdev
                                       +/- Stdev
                                 Max
                     11.17ms 203.34ms 59.61%
   Latency 22.20ms
            12.66k
                      1.85k 15.82k 77.92%
   Reg/Sec
 Latency Distribution
    50%
         22.16ms
          32.24ms
    75%
    90% 37.42ms
    99%
         40.12ms
 1511579 requests in 30.01s, 191.73MB read
Requests/sec: 50361.98
Transfer/sec: 6.39MB
```

@jknack submitted a pull request to upgrade jooby to version 1.1 and here is the result.

```
Running 30s test @ http://localhost:8080
 4 threads and 128 connections
 Thread Stats Avg
                       Stdev
                                Max +/- Stdev
   Latency
             4.31ms
                      3.32ms 48.26ms 78.72%
   Req/Sec
             79.88k 7.98k 152.40k
                                        77.13%
 Latency Distribution
    50%
          3.61ms
    75%
          5.74ms
    90%
          8.06ms
    99%
        16.61ms
 9550240 requests in 30.09s, 1.34GB read
Requests/sec: 317385.05
Transfer/sec: 45.70MB
```

@JesHansen submitted a pull request to add dotnet core and here is the result.

```
steve@joy:~/tool/wrk$ wrk -t4 -c128 -d30s http://localhost:5000 -s pipeline.lua --
latency -- / 16
Running 30s test @ http://localhost:5000
 4 threads and 128 connections
 Thread Stats Avg
                                Max +/- Stdev
                      Stdev
   Latency
              2.93ms
                       2.51ms 45.13ms 85.78%
   Reg/Sec 122.23k 10.92k 150.99k 72.25%
 Latency Distribution
    50%
           2.35ms
    75%
           3.77ms
```

```
90% 5.51ms
99% 12.84ms
14599887 requests in 30.03s, 1.67GB read
Requests/sec: 486216.93
Transfer/sec: 57.03MB
```

@adrienlauer submitted a pull request to add seedstack-filter and here is the result.

```
steve@joy:~/tool/wrk$ wrk -t4 -c128 -d30s http://localhost:8080 -s pipeline.lua --
latency -- / 16
Running 30s test @ http://localhost:8080
 4 threads and 128 connections
 Thread Stats Avg Stdev Max +/- Stdev
                      3.99ms 68.47ms 88.16%
             4.41ms
   Latency
            86.43k 10.63k 150.72k 74.27%
   Req/Sec
 Latency Distribution
    50%
         3.44ms
    75%
         5.71ms
    90% 8.79ms
    99% 18.81ms
 10336608 requests in 30.10s, 1.51GB read
Requests/sec: 343416.33
Transfer/sec: 51.42MB
```

@adrienlauer submitted a pull request to add seedstack-jersey2 and here is the result.

```
steve@joy:~/tool/wrk$ wrk -t4 -c128 -d30s http://localhost:8080 -s pipeline.lua --
latency -- / 16
Running 30s test @ http://localhost:8080
 4 threads and 128 connections
 Thread Stats Avg Stdev Max +/- Stdev
   Latency
             26.88ms 20.07ms 230.49ms 74.47%
   Req/Sec
            13.12k
                      3.14k 25.28k 75.38%
 Latency Distribution
    50% 22.35ms
    75%
         36.26ms
    90% 53.21ms
    99%
         93.83ms
 1574128 requests in 30.09s, 357.29MB read
Requests/sec: 52310.11
Transfer/sec: 11.87MB
```

@jknack submitted a pull request with upgraded Jooby and here is the result.

```
steve@joy:~/tool/wrk$ wrk -t4 -c128 -d30s http://localhost:8080 -s pipeline.lua --
latency -- / 16
Running 30s test @ http://localhost:8080
 4 threads and 128 connections
 Thread Stats Avg Stdev
                                Max +/- Stdev
             3.95ms 3.47ms 74.38ms 87.31%
   Latency
            91.09k 9.20k 146.91k 75.65%
   Req/Sec
 Latency Distribution
    50%
          3.18ms
    75%
          5.12ms
    90%
          7.52ms
    99% 16.20ms
 10896144 requests in 30.10s, 1.41GB read
Requests/sec: 362018.07
Transfer/sec: 47.99MB
```

@rpinaa submitted a pull request to add node-loopback and here is the result.

```
steve@joy:~/tool/wrk$ wrk -t4 -c128 -d30s http://localhost:8080 -s pipeline.lua --
latency -- / 16
Running 30s test @ http://localhost:8080
 4 threads and 128 connections
 Thread Stats Avg Stdev Max +/- Stdev
   Latency 34.42ms 22.01ms 535.98ms 68.62%
             8.10k 578.42 11.03k 79.28%
   Req/Sec
 Latency Distribution
    50%
        40.16ms
    75%
        59.88ms
    90%
          0.00us
           0.00us
    99%
 965939 requests in 30.10s, 346.37MB read
Requests/sec: 32091.95
Transfer/sec: 11.51MB
```

@rodrigomata submitted a pull request to add go-httprouter and here is the result.

```
steve@joy:~/tool/wrk$ wrk -t4 -c128 -d30s http://localhost:8080 -s pipeline.lua --
latency -- / 16
Running 30s test @ http://localhost:8080
 4 threads and 128 connections
 Thread Stats Avg Stdev
                               Max +/- Stdev
             14.12ms
                       14.25ms 171.89ms
                                        87.11%
   Latency
   Req/Sec
            43.19k
                       5.18k 61.08k 72.83%
 Latency Distribution
    50%
          9.58ms
    75%
          18.79ms
    90% 32.19ms
```

99% 67.61ms

5164540 requests in 30.05s, 635.36MB read

Requests/sec: 171852.31 Transfer/sec: 21.14MB