# **Grimoire Kelompok D28**

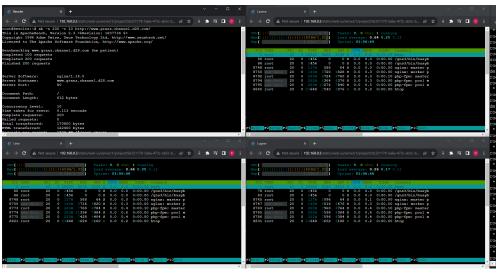
# Anggota:

- 5025211113 Revanantyo Dwigantara
- 5025211082 Charles

### 1. Hasil Testing

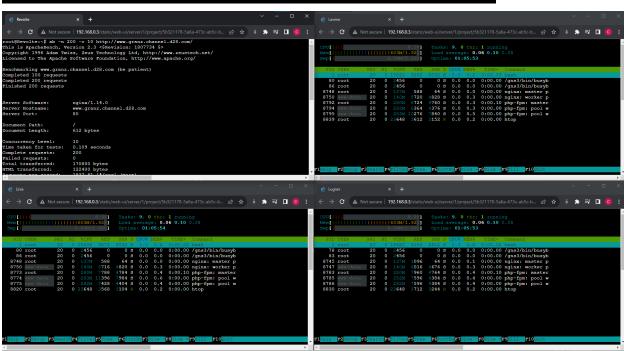
### A. ROUND ROBIN

```
root@Revolte:~‡ ab -n 200 -c 10 http://www.granz.channel.d28.com/
This is ApacheBench, Version 2.3 <$Revision: 1807734 $>
Copyright 1996 Adam Twiss, Zeus Technology Ltd, http://www.zeustech.net/
Licensed to The Apache Software Foundation, http://www.apache.org/
Benchmarking www.granz.channel.d28.com (be patient)
Completed 100 requests
Completed 200 requests
Finished 200 requests
Server Software:
                               nginx/1.14.0
                               www.granz.channel.d28.com
Server Hostname:
Server Port:
Document Path:
                               612 bytes
Document Length:
Concurrency Level:
Time taken for tests:
                               10
                               0.113 seconds
Complete requests:
                               200
Failed requests:
                              0
170800 bytes
122400 bytes
1774.99 [#/sec] (mean)
5.634 [ms] (mean)
0.563 [ms] (mean, across all concurrent requests)
1480.31 [Kbytes/sec] received
Total transferred:
HTML transferred:
Requests per second:
Time per request:
Time per request:
Transfer rate:
Connection Times (ms)
                 min mean[+/-sd] median
                                                    max
                             0.7
Connect:
Processing:
Waiting:
                                1.2
Total:
 Percentage of the requests served within a certain time (ms)
  66%
  75%
  80%
  90%
  95%
  98%
  99%
             10 (longest request)
 100%
 :oot@Revolte:~#
```



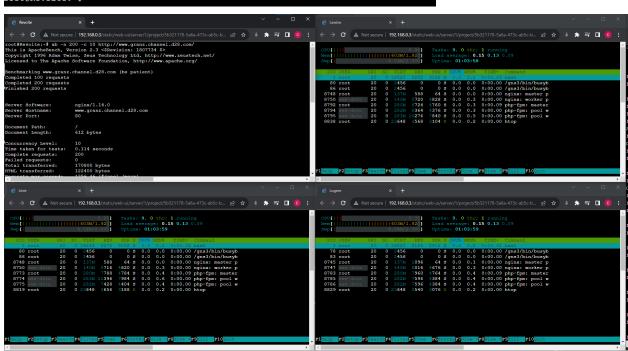
### **B. WEIGHTED ROUND ROBIN**

```
root@Revolte:~‡ ab -n 200 -c 10 http://www.granz.channel.d28.com/
This is ApacheBench, Version 2.3 <$Revision: 1807734 $>
Copyright 1996 Adam Twiss, Zeus Technology Ltd, http://www.zeustech.net/
Licensed to The Apache Software Foundation, http://www.apache.org/
Benchmarking www.granz.channel.d28.com (be patient)
Completed 100 requests
Completed 200 requests
Finished 200 requests
Server Software:
                               nginx/1.14.0
                               www.granz.channel.d28.com
Server Hostname:
Server Port:
Document Path:
Document Length:
                                612 bytes
Concurrency Level:
Time taken for tests:
                                0.109 seconds
 omplete requests:
                                200
Failed requests:
                               0
170800 bytes
122400 bytes
1837.81 [#/sec] (mean)
5.441 [ms] (mean)
0.544 [ms] (mean, across all concurrent requests)
1532.71 [Kbytes/sec] received
Total transferred:
HTML transferred:
Requests per second:
Time per request:
Time per request:
Transfer rate:
Connection Times (ms)
min mean[+/-sd] median
                    1 3 0.9
2 3 0.9
2 3 0.9
3 5 1.5
Processing:
Waiting:
Total:
 VARNING: The median and mean for the initial connection time are not within a normal deviation
          These results are probably not that reliable.
 Percentage of the requests served within a certain time (ms)
  50<del>%</del>
  66%
  75%
80%
              5
  90%
  95%
  98%
  99%
             11 (longest request)
 100%
 oot@Revolte:~#
```



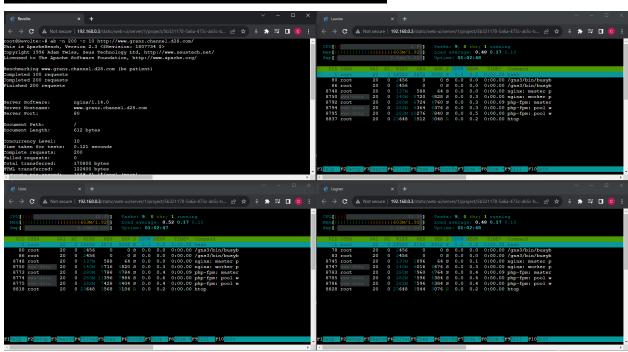
#### C. LEAST CONNECTION

```
root@Revolte:~ ab -n 200 -c 10 http://www.granz.channel.d28.com/
This is ApacheBench, Version 2.3 <$Revision: 1807734 $>
Copyright 1996 Adam Twiss, Zeus Technology Ltd, http://www.zeustech.net/
Licensed to The Apache Software Foundation, http://www.apache.org/
Benchmarking www.granz.channel.d28.com (be patient)
 ompleted 100 requests
 ompleted 200 requests
Finished 200 requests
Server Software:
                              nginx/1.14.0
Server Hostname:
                              www.granz.channel.d28.com
Server Port:
                              80
Document Path:
 ocument Length:
                              612 bytes
Concurrency Level:
                              0.114 seconds
Time taken for tests:
 omplete requests:
                              200
Failed requests:
                              170800 bytes
Total transferred:
                              122400 bytes
HTML transferred:
 Requests per second:
                              1756.36 [#/sec] (mean)
                              5.694 [ms] (mean)
0.569 [ms] (mean, across all concurrent requests)
1464.78 [Kbytes/sec] received
Time per request:
Time per request:
Transfer rate:
Connection Times (ms)
                min mean[+/-sd] median
                       3 0.7
3 0.5
3 0.5
Processing:
                                                     6
Waiting:
                                                   10
Total:
                               1.0
WARNING: The median and mean for the total time are not within a normal deviation
          These results are probably not that reliable.
 ercentage of the requests served within a certain time (ms)
  50%
  66%
  75%
  80%
  90%
  95%
  98%
             8
  99%
            10
 100%
            10 (longest request)
 oot@Revolte:~#
```



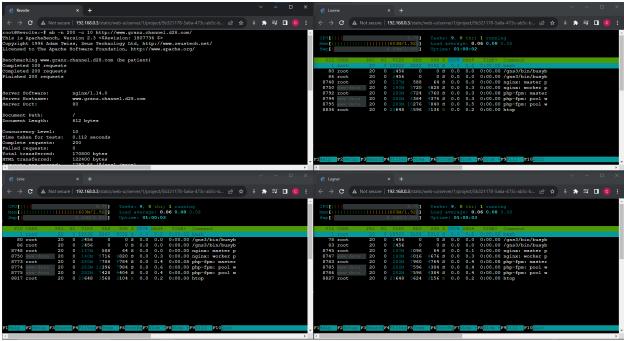
### D. IP HASH

```
root@Revolte:~‡ ab -n 200 -c 10 http://www.granz.channel.d28.com/
This is ApacheBench, Version 2.3 <$Revision: 1807734 $>
Copyright 1996 Adam Twiss, Zeus Technology Ltd, http://www.zeustech.net/
Licensed to The Apache Software Foundation, http://www.apache.org/
Benchmarking www.granz.channel.d28.com (be patient)
 Completed 100 requests
Completed 200 requests
Finished 200 requests
Server Software:
                                    nginx/1.14.0
                                   www.granz.channel.d28.com
Server Hostname:
Server Port:
Document Path:
 ocument Length:
                                    612 bytes
Concurrency Level:
Time taken for tests:
                                    10
                                    0.121 seconds
 omplete requests:
                                    200
                                   0
170800 bytes
 ailed requests:
 otal transferred:
                                    122400 bytes
1649.31 [#/sec] (mean)
HTML transferred:
Requests per second:
Time per request:
                                   6.063 [ms] (mean)
0.606 [ms] (mean, across all concurrent requests)
1375.50 [Kbytes/sec] received
Time per request:
Transfer rate:
 onnection Times (ms)
                  min mean[+/-sd] median
                             3 0.8
3 0.9
3 0.9
6 1.3
Connect:
Processing:
Waiting:
Total:
 Percentage of the requests served within a certain time (ms)
  50%
  66%
   75%
   80<del>%</del>
  90%
95%
  98%
  99%
 100%
              10 (longest request)
  oot@Revolte:~#
```

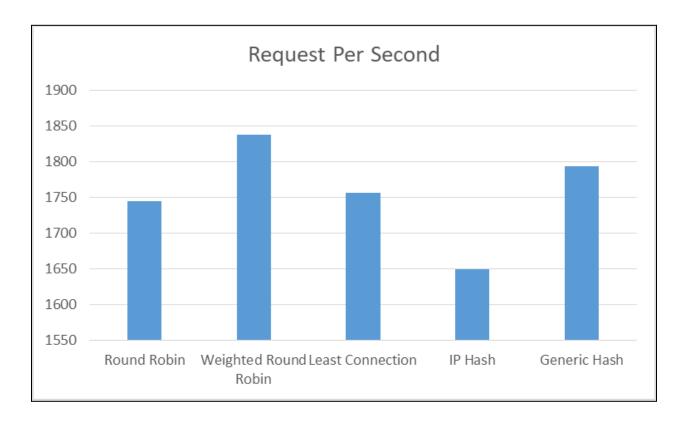


### E. GENERIC HASH

```
root@Revolte:~ ab -n 200 -c 10 http://www.granz.channel.d28.com/
This is ApacheBench, Version 2.3 <$Revision: 1807734 $>
Copyright 1996 Adam Twiss, Zeus Technology Ltd, http://www.zeustech.net/
Licensed to The Apache Software Foundation, http://www.apache.org/
Benchmarking www.granz.channel.d28.com (be patient)
Completed 100 requests
 ompleted 200 requests
Finished 200 requests
                             nginx/1.14.0
Server Software:
Server Hostname:
                             www.granz.channel.d28.com
Server Port:
Document Path:
Document Length:
                             612 bytes
Concurrency Level:
                             0.112 seconds
Time taken for tests:
                             200
Complete requests:
Failed requests:
                             170800 bytes
Total transferred:
                             122400 bytes
1792.66 [#/sec] (mean)
HTML transferred:
Requests per second:
Time per request:
                             5.578 [ms] (mean)
0.558 [ms] (mean, across all concurrent requests)
Time per request:
Transfer rate:
                             1495.05 [Kbytes/sec] received
Connection Times (ms)
                min mean[+/-sd] median
                                                max
                             0.6
Connect:
                              0.8
Processing:
Waiting:
                              0.8
                              1.2
Total:
 Percentage of the requests served within a certain time (ms)
  50%
  66%
  75%
  80%
  90%
  95%
  98%
            10 (longest request)
 oot@Revolte:~#
```



#### 2. Grafik



#### 3. Analisis

Dari grafik bisa dilihat algoritma yang paling bagus adalah algoritma IP Hash.

Proses algoritma IP Hash dimulai ketika paket data tiba di jaringan. Algoritma hashing mengekstrak alamat IP sumber dan tujuan dari paket dan menggunakannya sebagai masukan. Ini kemudian menghasilkan nilai hash unik berdasarkan alamat IP ini. Nilai hash ini berfungsi sebagai pengenal kunci yang menentukan server mana dalam sekelompok server yang akan menangani paket tersebut. Keunggulan IP Hash terletak pada kemampuannya mendistribusikan beban jaringan secara merata secara konsisten. Dengan menetapkan setiap paket ke server berdasarkan nilai hash, hal ini memastikan bahwa tidak ada satu server pun yang kewalahan dengan lalu lintas. Hal ini sangat bermanfaat dalam lingkungan jaringan dengan lalu lintas tinggi di mana menjaga keseimbangan dan mencegah kelebihan beban server sangatlah penting.

### **ROUND ROBIN 3 Worker**

```
root@Revolte:~# ab -n 100 -c 10 http://www.granz.channel.d28.com/
This is ApacheBench, Version 2.3 <$Revision: 1807734 $>
Copyright 1996 Adam Twiss, Zeus Technology Ltd, http://www.zeustech.net/
Licensed to The Apache Software Foundation, http://www.apache.org/
Benchmarking www.granz.channel.d28.com (be patient).....done
                                 nginx/1.14.0
Server Software:
Server Hostname:
                                 www.granz.channel.d28.com
Server Port:
                                 80
Document Path:
                                 612 bytes
Document Length:
Concurrency Level:
Time taken for tests:
                                 10
                                 0.066 seconds
Complete requests:
                                 100
Failed requests:
                                 85400 bytes
Total transferred:
                                 61200 bytes
1524.90 [#/sec] (mean)
HTML transferred:
Requests per second:
                                 6.558 [ms] (mean)
0.656 [ms] (mean, across all concurrent requests)
Time per request:
Time per request:
Transfer rate:
                                 1271.74 [Kbytes/sec] received
Connection Times (ms)
                  min mean[+/-sd] median
1 3 1.2 3
2 4 2.1 3
                                                       max
Connect:
Processing:
Waiting:
Total:
                                  2.1
                                  2.5
                                                        14
Percentage of the requests served within a certain time (ms)
  50%
               6
   66<del>8</del>
   75%
   80%
   90%
  95%
              13
  98%
              14
  99%
              14
             14 (longest request)
 100%
 coot@Revolte:~#
```

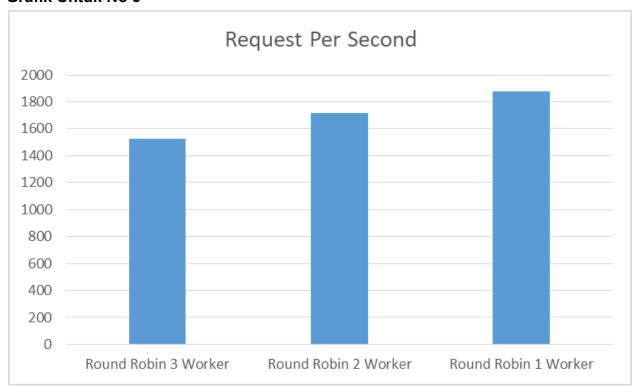
#### **Round Robin 2 Worker**

```
root@Revolte:~ ab -n 100 -c 10 http://www.granz.channel.d28.com/
This is ApacheBench, Version 2.3 <$Revision: 1807734 $>
Copyright 1996 Adam Twiss, Zeus Technology Ltd, http://www.zeustech.net/
Licensed to The Apache Software Foundation, http://www.apache.org/
Benchmarking www.granz.channel.d28.com (be patient).....done
                               nginx/1.14.0
Server Software:
                               www.granz.channel.d28.com
Server Hostname:
Server Port:
Document Path:
                               612 bytes
Document Length:
Concurrency Level:
Time taken for tests:
                               10
                               0.058 seconds
Complete requests:
Failed requests:
Total transferred:
                               85400 bytes
HTML transferred:
                               61200 bytes
Requests per second:
                               1714.03 [#/sec] (mean)
                              5.834 [ms] (mean)
0.583 [ms] (mean, across all concurrent requests)
1429.48 [Kbytes/sec] received
Time per request:
Time per request:
Transfer rate:
Connection Times (ms)
                 min mean[+/-sd] median
                                                   max
                        2 0.7
3 1.2
Connect:
                    2
Processing:
                    2
                                1.2
Waiting:
                               1.7
Total:
WARNING: The median and mean for the initial connection time are not within a normal deviation
          These results are probably not that reliable.
Percentage of the requests served within a certain time (ms)
  66%
             6
7
9
  75%
  808
  90%
  95%
             10
  98%
  99%
             10
 100% 10 (longest request)
```

### **Round Robin 1 Worker**

```
root@Revolte:~ # ab -n 100 -c 10 http://www.granz.channel.d28.com/
This is ApacheBench, Version 2.3 <$Revision: 1807734 $>
Copyright 1996 Adam Twiss, Zeus Technology Ltd, http://www.zeustech.net/
Licensed to The Apache Software Foundation, http://www.apache.org/
Benchmarking www.granz.channel.d28.com (be patient).....done
                       nginx/1.14.0
Server Software:
Server Hostname:
                        www.granz.channel.d28.com
Server Port:
                        80
Document Path:
Document Length:
                        612 bytes
Concurrency Level:
                        10
Time taken for tests: 0.053 seconds
Complete requests:
                        100
Failed requests:
                        0
                        85400 bytes
Total transferred:
HTML transferred:
                        61200 bytes
                        1879.45 [#/sec] (mean)
Requests per second:
                       5.321 [ms] (mean)
0.532 [ms] (mean, across all concurrent requests)
Time per request:
Time per request:
Transfer rate:
                       1567.43 [Kbytes/sec] received
Connection Times (ms)
              min mean[+/-sd] median
                                        max
               1 2 0.6
Connect:
                                  2
                                          3
                     3
Processing:
                         0.8
                                  3
                                          6
Waiting:
                1
                     3
                                  3
                         0.8
                                          6
                         0.9
Total:
                3
                     5
                                  5
                                          8
Percentage of the requests served within a certain time (ms)
           5
  66%
           5
  75%
           6
  80%
           6
  90%
  95%
  98%
  99%
           8
 100%
           8 (longest request)
root@Revolte:~#
```

# **Grafik Untuk No 9**



# No 15 POST /auth/register

## Hasil Response Register:

```
nt-Type: application/json' -T register.json.4.1:8004/api/auth/register -H 'Conten ^[[3~{"username":["The username has already been taken."]}root@Revolte:~#
```

# Hasil Benchmark Register:

```
205.4.1:8004/api/auth/register0 -p register.json -T application/json http://192.2
This is ApacheBench, Version 2.3 <$Revision: 1843412 $>
Copyright 1996 Adam Twiss, Zeus Technology Ltd, http://www.zeustech.net/
Licensed to The Apache Software Foundation, http://www.apache.org/
Benchmarking 192.205.4.1 (be patient).....done
                          nginx/1.14.2
Server Software:
Server Hostname:
                          192.205.4.1
Server Port:
Document Path:
                          /api/auth/register
                          468 bytes
Document Length:
Concurrency Level:
Time taken for tests:
                          1.303 seconds
Complete requests:
                          100
Failed requests:
                          99
 (Connect: 0, Receive: 0, Length: 99, Exceptions: 0)
Non-2xx responses: 99
Total transferred: 299701 bytes
Total body sent:
                          22000
                          268355 bytes
HTML transferred:
                          76.76 [#/sec] (mean)
Requests per second:
Time per request:
                          130.284 [ms] (mean)
                          13.028 [ms] (mean, across all concurrent requests) 224.65 [Kbytes/sec] received
Time per request:
Transfer rate:
                          16.49 kb/s sent
                          241.14 kb/s total
Connection Times (ms)
               min mean[+/-sd] median
                                            max
                     0 0.3
Connect:
                0
                                    0
                                             2
                                   118
Processing:
                23 110 26.8
                                            189
                22 108 28.2
24 110 26.7
                                   118
                                            186
Waiting:
Total:
                                   119
                                            190
Percentage of the requests served within a certain time (ms)
         119
 50%
  66%
          123
  75<del>%</del>
          127
          131
  80%
  90%
          138
  95%
          146
  98%
          166
  99%
          190
         190 (longest request)
 100%
root@Revolte:~#
```

# No 16 POST /auth/login

## Hasil Login Response:

Type: application/json' -T login.json92.205.4.1:8004/api/auth/login -H 'Content-T {"token":"eyJ0eXAiOiJKV1QiLCJhbGciOiJIUZI1NiJ9.eyJpc3MiOiJodHRwOi8vMTkyLjIwNs40LjE6ODAwNC9hcGkvYXV0aC9sb2dpbiIsImlhdCI6MTcwMDM4MjE1OSwiZXhwIjoxNzAwMzg1NzU5LCJuYmYiOjE3MDAzC JzdWIiOiIxIiwicHJ2IjoiMjNiZDVjODkOOWY2MDBhZGIzOWU3MDFjNDAwODcyZGI3YTU5NzZmNyJ9.EiTwHyG7fwVa9j9C0gFPZUL2mnCrH5XzwGFCNKy1q9o"}root@Revolte:-#

# Hasil Benchmark Login:

```
.4.1:8004/api/auth/login0 -c 10 -p login.json -T application/json http://192.205. This is ApacheBench, Version 2.3 <$Revision: 1843412 $>
Copyright 1996 Adam Twiss, Zeus Technology Ltd, http://www.zeustech.net/
Licensed to The Apache Software Foundation, http://www.apache.org/
Benchmarking 192.205.4.1 (be patient).....done
                          nginx/1.14.2
Server Software:
Server Hostname:
                           192.205.4.1
Server Port:
                          8004
Document Path:
                           /api/auth/login
Document Length:
                          337 bytes
Concurrency Level:
Time taken for tests:
                          10
                          4.756 seconds
Complete requests:
                          100
                           40
Failed requests:
 (Connect: 0, Receive: 0, Length: 40, Exceptions: 0)
                          40
Non-2xx responses:
                          315787 bytes
Total transferred:
Total body sent:
                          21700
HTML transferred:
                          284980 bytes
                          21.03 [#/sec] (mean)
Requests per second:
                          475.578 [ms] (mean)
47.558 [ms] (mean, across all concurrent requests)
64.84 [Kbytes/sec] received
Time per request:
Time per request:
Transfer rate:
                           4.46 kb/s sent
                          69.30 kb/s total
Connection Times (ms)
             min mean[+/-sd] median
                     0 0.4
Connect:
                                              2
                74 465 309.2
Processing:
                                   614
                                            895
                73 463 312.1
74 466 309.1
Waiting:
                                   614
                                             895
Total:
                                             895
Percentage of the requests served within a certain time (ms)
  50%
         615
  66%
          708
  75%
          764
  80%
          782
  90%
          828
  95%
          853
  98%
          865
  99%
          895
 100%
          895 (longest request)
 oot@Revolte:~#
```

### No 17 GET/me

## Hasil GET/me Response:

```
pi/meRevolte:~# curl -H "Authorization: Bearer $token" http://192.205.4.1:8004/ap
{"id":1,"username":"kelompokd28","created_at":"2023-11-19T08:09:22.000000Z","updated_at":"2023-11-19T08:09:22.000000Z"}root@Revolte:~#
```

#### Hasil GET/me Benchmark:

```
.4.1:8004/api/meab -n 100 -c 10 -H "Authorization: Bearer $token" http://192.205.
This is ApacheBench, Version 2.3 <$Revision: 1843412 $>
Copyright 1996 Adam Twiss, Zeus Technology Ltd, http://www.zeustech.net/
Licensed to The Apache Software Foundation, http://www.apache.org/
Benchmarking 192.205.4.1 (be patient).....done
Server Software:
                                 nginx/1.14.2
Server Hostname:
                                 192.205.4.1
                                 8004
Server Port:
                                 /api/me
119 bytes
Document Path:
Document Length:
Concurrency Level:
Time taken for tests:
                                 1.547 seconds
Complete requests:
                                 100
Failed requests:
                                  40
  (Connect: 0, Receive: 0, Length: 40, Exceptions: 0)
Non-2xx responses:
                                 40
                                 302708 bytes
271900 bytes
64.65 [#/sec] (mean)
Total transferred:
HTML transferred:
Requests per second:
                                 154.678 [ms] (mean)
15.468 [ms] (mean, across all concurrent requests)
191.12 [Kbytes/sec] received
Time per request:
Time per request:
Transfer rate:
Connection Times (ms)
                 min mean[+/-sd] median
                                                       max
                   0 0 0.4
34 147 29.8
30 145 29.6
35 147
                                                          2
Processing:
                                                        208
Waiting:
                                                        207
                     35 147 29.5
Total:
                                            152
                                                        208
 Percentage of the requests served within a certain time (ms)
            152
157
  50%
   66%
   75%
            161
            164
   80%
   90%
            179
   95%
            185
   98%
            203
   99%
            208
            208 (longest request)
 100%
 root@Revolte:~#
```

# No 19

# Testing 1:

```
echo '
[www]
user = www-data
group = www-data
listen = /var/run/php/php8.1-fpm.sock
listen.owner = www-data
listen.group = www-data
php_admin_value[disable_functions] = exec,passthru,shell_exec,system
php_admin_flag[allow_url_fopen] = off
```

; Choose how the process manager will control the number of child processes.

```
pm = dynamic

pm.max_children = 75

pm.start_servers = 10

pm.min_spare_servers = 5

pm.max_spare_servers = 20

pm.process_idle_timeout = 10s' > /etc/php/8.1/fpm/pool.d/www.conf
```

## Hasil Benchmark Testing 1:

```
root@Revolte:~#
.4.1:8004/api/auth/login0 -c 10 -p login.json -T application/json http://192.205.
This is ApacheBench, Version 2.3 <$Revision: 1843412 $>
opyright 1996 Adam Twiss, Zeus Technology Ltd, http://www.zeustech.net/
Licensed to The Apache Software Foundation, http://www.apache.org/
Benchmarking 192.205.4.1 (be patient).....done
Server Software:
                        nginx/1.14.2
Server Hostname:
                        192.205.4.1
                        8004
Server Port:
                        /api/auth/login
Document Path:
Document Length:
                        337 bytes
Concurrency Level:
                        10
Time taken for tests:
                        4.672 seconds
Complete requests:
                        100
Failed requests:
                        40
 (Connect: 0, Receive: 0, Length: 40, Exceptions: 0)
Non-2xx responses:
                        40
                        315781 bytes
Total transferred:
Total body sent:
                        21700
                        284980 bytes
HTML transferred:
                        21.40 [#/sec] (mean)
Requests per second:
                        467.235 [ms] (mean)
Time per request:
Time per request:
                        46.724 [ms] (mean, across all concurrent requests)
Transfer rate:
                        66.00 [Kbytes/sec] received
                        4.54 kb/s sent
                        70.54 kb/s total
Connection Times (ms)
              min mean[+/-sd] median
                                        max
                    0 0.4
Connect:
               0
                                 0
Processing:
                  452 310.2
                                662
                                        810
               37
Waiting:
                  448 314.9
                                662
                                        810
Total:
               37
                  452 310.2
                                662
                                        811
Percentage of the requests served within a certain time (ms)
  66%
         692
         713
  75%
 80%
         725
  90%
         752
         785
  95%
  98%
         809
  99%
         811
100%
         811 (longest request)
 oot@Revolte:~#
```

# Testing 2:

```
echo '
[www]
user = www-data
group = www-data
listen = /var/run/php/php8.1-fpm.sock
listen.owner = www-data
listen.group = www-data
php_admin_value[disable_functions] = exec,passthru,shell_exec,system
php_admin_flag[allow_url_fopen] = off
```

; Choose how the process manager will control the number of child processes.

```
pm = dynamic

pm.max_children = 100

pm.start_servers = 10

pm.min_spare_servers = 5

pm.max_spare_servers = 20

pm.process_idle_timeout = 10s' > /etc/php/8.1/fpm/pool.d/www.conf
```

# Hasil Benchmark Testing 2:

```
.4.1:8004/api/auth/login0 -c 10 -p login.json -T application/json http://192.205.
This is ApacheBench, Version 2.3 <$Revision: 1843412 $>
Copyright 1996 Adam Twiss, Zeus Technology Ltd, http://www.zeustech.net/
Licensed to The Apache Software Foundation, http://www.apache.org/
Benchmarking 192.205.4.1 (be patient).....done
Server Software:
                                    nginx/1.14.2
Server Hostname:
                                     192.205.4.1
Server Port:
                                    8004
Document Path:
                                    /api/auth/login
Document Length:
                                    337 bytes
Concurrency Level:
Time taken for tests:
                                    5.005 seconds
Complete requests:
                                    100
Failed requests: 39
(Connect: 0, Receive: 0, Length: 39, Exceptions: 0)
Non-2xx responses:
                                    39
                                    309437 bytes
Total transferred:
Total body sent:
HTML transferred:
                                    21700
                                    21700
278698 bytes
19.98 [#/sec] (mean)
500.498 [ms] (mean)
50.050 [ms] (mean, across all concurrent requests)
60.38 [Kbytes/sec] received
4.23 kb/s sent
64.61 kb/s total
Requests per second:
Time per request:
Time per request:
Transfer rate:
Connection Times (ms)
                     min mean[+/-sd] median
                                                            max
                      0 0 0.3
41 466 300.7
41 462 306.4
Connect:
Processing:
                                                 663
                                                            823
Waiting:
                                                 663
                                                            823
Total:
                      41 467 300.8
                                                 664
 Percentage of the requests served within a certain time (ms)
             664
   66<del>%</del>
              687
   75%
              714
   80%
              725
   90%
              772
   95%
              781
   98%
   99%
              825
             825 (longest request)
 100%
  oot@Revolte:~#
```

```
Testing 3:
```

```
echo '
[www]
user = www-data
group = www-data
listen = /var/run/php/php8.1-fpm.sock
listen.owner = www-data
listen.group = www-data
php_admin_value[disable_functions] = exec,passthru,shell_exec,system
php_admin_flag[allow_url_fopen] = off
```

; Choose how the process manager will control the number of child processes.

```
pm = dynamic

pm.max_children = 50

pm.start_servers = 10

pm.min_spare_servers = 5

pm.max_spare_servers = 20

pm.process idle timeout = 10s' > /etc/php/8.1/fpm/pool.d/www.conf
```

## Hasil Benchmark Testing 3:

```
.4.1:8004/api/auth/login0 -c 10 -p login.json -T application/json http://192.205.
This is ApacheBench, Version 2.3 <$Revision: 1843412 $>
Copyright 1996 Adam Twiss, Zeus Technology Ltd, http://www.zeustech.net/
Licensed to The Apache Software Foundation, http://www.apache.org/
Benchmarking 192.205.4.1 (be patient).....done
Server Software:
                               nginx/1.14.2
                               192.205.4.1
Server Hostname:
Server Port:
Document Path:
                               /api/auth/login
Document Length:
                               337 bytes
Concurrency Level:
Fime taken for tests:
                               5.206 seconds
 omplete requests:
Failed requests:
  (Connect: 0, Receive: 0, Length: 33, Exceptions: 0)
Non-2xx responses:
                               271367 bytes
Total transferred:
Total body sent:
                               21700
                               241006 bytes
19.21 [#/sec] (mean)
520.619 [ms] (mean)
HTML transferred:
Requests per second:
Time per request:
                               52.062 [ms] (mean, across all concurrent requests)
50.90 [Kbytes/sec] received
Fime per request:
Transfer rate:
                               4.07 kb/s sent
54.97 kb/s total
Connection Times (ms)
                 min mean[+/-sd] median
                                                    max
                   0 0 0.4
48 488 295.1
Connect:
                                                     822
Processing:
Waiting:
                       487 297.2
                                          667
                                                     822
                       489 295.2
Cotal:
  ercentage of the requests served within a certain time (ms)
           667
  66%
            682
  75%
           698
  80%
            720
  90%
            748
  95%
            786
  98%
           807
           823
 100%
           823 (longest request)
  oot@Revolte:~#
```

# **Analisis dari 3 Testing:**

Bisa dilihat jika menggunakan testing 3 kita mendapatkan failed request paling sedikit dan request per second paling rendah sehingga konfigurasi testing 3 lah yang terbaik.