

No 8.

## A. Nama Algoritma Load Balancer

### 1. Round-Robin

```
echo ' upstream worker {  
    server 192.245.1.1;  
    server 192.245.1.2;  
    server 192.245.1.3;  
}
```

```
root@Paul:~# ab -n 500 -c 50 http://www.harkonen.it24.com/  
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 www.harkonen.it24.com (be patient)  
Completed 100 requests  
Completed 200 requests  
Completed 300 requests  
Completed 400 requests  
Completed 500 requests  
Finished 500 requests  
  
Server Software:      BigIP  
Server Hostname:      www.harkonen.it24.com  
Server Port:          80  
  
Document Path:        /  
Document Length:      0 bytes  
  
Concurrency Level:    50  
Time taken for tests:  1.842 seconds  
Complete requests:    500  
Failed requests:       0  
Non-2xx responses:    500  
Total transferred:    88000 bytes  
HTML transferred:     0 bytes  
Requests per second:  271.37 [#/sec] (mean)
```

```

Concurrency Level:      50
Time taken for tests:   1.842 seconds
Complete requests:      500
Failed requests:        0
Non-2xx responses:      500
Total transferred:      88000 bytes
HTML transferred:       0 bytes
Requests per second:    271.37 [#/sec] (mean)
Time per request:       184.248 [ms] (mean)
Time per request:       3.685 [ms] (mean, across all concurrent requests)
Transfer rate:          46.64 [Kbytes/sec] received

Connection Times (ms)
              min    mean[+/-sd] median    max
Connect:     32     71   11.1      72     96
Processing:   47     88   15.8      89    176
Waiting:      47     88   15.8      89    176
Total:       100    159   18.1     160    225

Percentage of the requests served within a certain time (ms)
 50%    160
 66%    167
 75%    170
 80%    172
 90%    176
 95%    181
 98%    189
 99%    221
100%    225 (longest request)
root@Paul:~#

```

```

CPU[|          0.7%]   Tasks:  5, 0 thr; 1 running
Mem[|||||||||558M/1.92G] Load average: 0.45 0.22 0.18
Swp[          0K/2.00G] Uptime: 01:20:03

  PID USER      PRI  NI  VIRT   RES   SHR S CPU% MEM%   TIME+  Command
 625 root        20    0  4788   3204  2784 R   0.0   0.2   0:00.01 htop
   1 root        20    0   3868   3248  2768 S   0.0   0.2   0:00.01 bash
  57 root        20    0   2456     4     0 S   0.0   0.0   0:00.00 /gns3/bin/busyb
  62 root        20    0   2456     4     0 S   0.0   0.0   0:00.00 /gns3/bin/busyb
  78 root        20    0   2456    136    80 S   0.0   0.0   0:00.00 /tmp/gns3/bin/u

F1Help F2Setup F3Search F4Filter F5Tree F6SortBy F7Nice F8Nice F9Kill F10Quit

```

## 2. Generic Hash

```
echo ' upstream worker {  
    hash $request_uri consistent;  
    server 192.245.1.1;  
    server 192.245.1.2;  
    server 192.245.1.3;  
}
```

```
root@Paul:~# ab -n 500 -c 50 http://www.harkonen.it24.com/  
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 www.harkonen.it24.com (be patient)  
Completed 100 requests  
Completed 200 requests  
Completed 300 requests  
Completed 400 requests  
Completed 500 requests  
Finished 500 requests  
  
Server Software:      BigIP  
Server Hostname:     www.harkonen.it24.com  
Server Port:         80  
  
Document Path:       /  
Document Length:     0 bytes  
  
Concurrency Level:    50  
Time taken for tests:  1.848 seconds  
Complete requests:    500  
Failed requests:      0  
Non-2xx responses:    500  
Total transferred:    88000 bytes  
HTML transferred:     0 bytes  
Requests per second:  270.51 [#/sec] (mean)  
Time per request:     184.834 [ms] (mean)
```

```

Concurrency Level:      50
Time taken for tests:    1.848 seconds
Complete requests:      500
Failed requests:        0
Non-2xx responses:      500
Total transferred:      88000 bytes
HTML transferred:       0 bytes
Requests per second:    270.51 [#/sec] (mean)
Time per request:       184.834 [ms] (mean)
Time per request:       3.697 [ms] (mean, across all concurrent requests)
Transfer rate:          46.49 [Kbytes/sec] received

```

#### Connection Times (ms)

	min	mean[+/-sd]	median	max
Connect:	31	72 21.7	68	164
Processing:	49	91 21.2	89	163
Waiting:	49	90 20.9	88	162
Total:	91	163 31.8	157	259

#### Percentage of the requests served within a certain time (ms)

50%	157
66%	167
75%	173
80%	180
90%	215
95%	232
98%	251
99%	253
100%	259 (longest request)

root@Paul:~#

```

CPU[|          0.7%]   Tasks:  5, 0 thr; 1 running
Mem[|||||||||558M/1.92G] Load average: 0.03 0.29 0.26
Swp[          0K/2.00G] Uptime: 01:27:58

```

PID	USER	PRI	NI	VIRT	RES	SHR	S	CPU%	MEM%	TIME+	Command
627	root	20	0	4788	3216	2792	R	0.0	0.2	0:00.01	htop
1	root	20	0	3868	3248	2768	S	0.0	0.2	0:00.01	bash
57	root	20	0	2456	4	0	S	0.0	0.0	0:00.00	/gns3/bin/busybb
62	root	20	0	2456	4	0	S	0.0	0.0	0:00.00	/gns3/bin/busybb
78	root	20	0	2456	136	80	S	0.0	0.0	0:00.00	/tmp/gns3/bin/u

F1Help F2Setup F3Search F4Filter F5Tree F6SortBy F7Nice -F8Nice +F9Kill F10Quit

### 3. Least Connection

```
echo ' upstream worker {  
    least_conn;  
    server 192.245.1.1;  
    server 192.245.1.2;  
    server 192.245.1.3;  
}
```

```
root@Paul:~# ab -n 500 -c 50 http://www.harkonen.it24.com/  
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 www.harkonen.it24.com (be patient)
```

```
Completed 100 requests  
Completed 200 requests  
Completed 300 requests  
Completed 400 requests  
Completed 500 requests  
Finished 500 requests
```

```
Server Software:      BigIP  
Server Hostname:      www.harkonen.it24.com  
Server Port:          80
```

```
Document Path:        /  
Document Length:      0 bytes
```

```
Concurrency Level:    50  
Time taken for tests:  2.557 seconds  
Complete requests:    500  
Failed requests:      0  
Non-2xx responses:    500  
Total transferred:    88000 bytes  
HTML transferred:     0 bytes  
Requests per second:  195.56 [#/sec] (mean)  
Time per request:     255.675 [ms] (mean)
```

```
Concurrency Level:      50
Time taken for tests:    2.557 seconds
Complete requests:      500
Failed requests:        0
Non-2xx responses:      500
Total transferred:      88000 bytes
HTML transferred:       0 bytes
Requests per second:    195.56 [#/sec] (mean)
Time per request:       255.675 [ms] (mean)
Time per request:       5.114 [ms] (mean, across all concurrent requests)
Transfer rate:          33.61 [Kbytes/sec] received
```

#### Connection Times (ms)

	min	mean[+/-sd]	median	max
Connect:	35	95 33.8	85	214
Processing:	58	127 44.5	119	238
Waiting:	58	127 44.5	119	238
Total:	138	222 54.6	215	365

#### Percentage of the requests served within a certain time (ms)

50%	215
66%	237
75%	263
80%	272
90%	307
95%	324
98%	339
99%	342
100%	365 (longest request)

```
CPU[|||||] 3.7% Tasks: 5, 0 thr; 1 running
Mem[|||||] 558M/1.92G Load average: 0.06 0.14 0.15
Swp[ ] 0K/2.00G Uptime: 01:52:46
```

PID	USER	PRI	NI	VIRT	RES	SHR	S	CPU%	MEM%	TIME+	Command
651	root	20	0	4788	3224	2792	R	0.7	0.2	0:00.01	htop
1	root	20	0	3868	3248	2768	S	0.0	0.2	0:00.01	bash
57	root	20	0	2456	4	0	S	0.0	0.0	0:00.00	/gns3/bin/busyb
62	root	20	0	2456	4	0	S	0.0	0.0	0:00.00	/gns3/bin/busyb
78	root	20	0	2456	136	80	S	0.0	0.0	0:00.01	/tmp/gns3/bin/u

```
F1 Help F2 Setup F3 Search F4 Filter F5 Tree F6 SortBy F7 Nice - F8 Nice - F9 Kill F10 Quit
```

#### 4. IP Hash

```
echo ' upstream worker {  
    ip_hash;  
    server 192.245.1.1;  
    server 192.245.1.2;  
    server 192.245.1.3;  
}
```

```
root@Paul:~# ab -n 500 -c 50 http://www.harkonen.it24.com/  
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 www.harkonen.it24.com (be patient)  
Completed 100 requests  
Completed 200 requests  
Completed 300 requests  
Completed 400 requests  
Completed 500 requests  
Finished 500 requests  
  
Server Software:      BigIP  
Server Hostname:      www.harkonen.it24.com  
Server Port:          80  
  
Document Path:        /  
Document Length:      0 bytes  
  
Concurrency Level:    50  
Time taken for tests:  1.985 seconds  
Complete requests:    500  
Failed requests:       0  
Non-2xx responses:    500  
Total transferred:    88000 bytes  
HTML transferred:     0 bytes  
Requests per second:  251.89 [#/sec] (mean)  
Time per request:     198.497 [ms] (mean)  
Time per request:     3.970 [ms] (mean, across all concurrent requests)
```

```
Concurrency Level:      50
Time taken for tests:    1.985 seconds
Complete requests:      500
Failed requests:        0
Non-2xx responses:      500
Total transferred:      88000 bytes
HTML transferred:       0 bytes
Requests per second:    251.89 [#/sec] (mean)
Time per request:       198.497 [ms] (mean)
Time per request:       3.970 [ms] (mean, across all concurrent requests)
Transfer rate:          43.29 [Kbytes/sec] received
```

#### Connection Times (ms)

	min	mean[+/-sd]	median	max
Connect:	30	80 20.9	81	143
Processing:	61	94 18.9	91	160
Waiting:	60	94 18.8	90	160
Total:	103	174 31.2	173	280

#### Percentage of the requests served within a certain time (ms)

50%	173
66%	181
75%	192
80%	201
90%	216
95%	232
98%	238
99%	263
100%	280 (longest request)

```
CPU[||||| 1.6%] Tasks: 5, 0 thr; 1 running
Mem[|||||558M/1.92G] Load average: 0.15 0.20 0.17
Swp[ 0K/2.00G] Uptime: 01:57:38
```

PID	USER	PRI	NI	VIRT	RES	SHR	S	CPU%	MEM%	TIME+	Command
654	root	20	0	4788	3216	2792	R	0.0	0.2	0:00.00	htop
1	root	20	0	3868	3248	2768	S	0.0	0.2	0:00.02	bash
57	root	20	0	2456	4	0	S	0.0	0.0	0:00.00	/gns3/bin/busyb
62	root	20	0	2456	4	0	S	0.0	0.0	0:00.00	/gns3/bin/busyb
78	root	20	0	2456	136	80	S	0.0	0.0	0:00.01	/tmp/gns3/bin/u

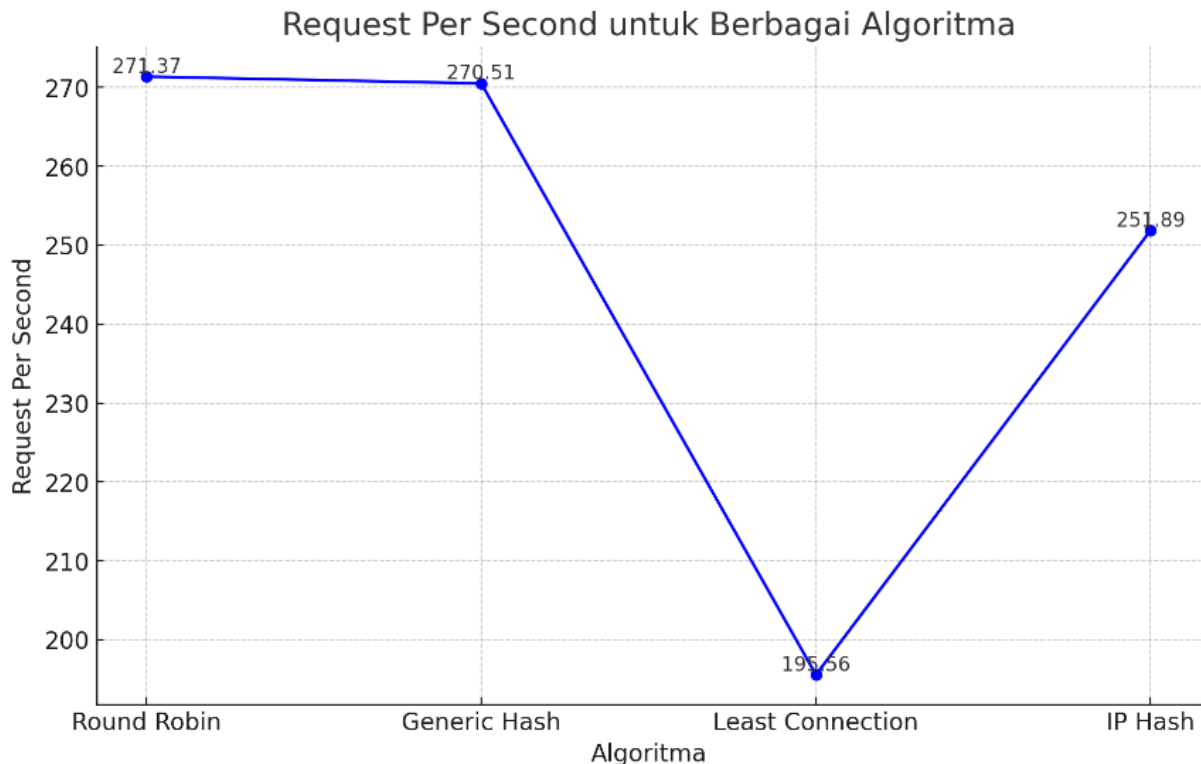
F1 Help F2 Setup F3 Search F4 Filter F5 Tree F6 Sort By F7 Nice + F8 Nice - F9 Kill F10 Quit



## B. Request Per Second:

```
"Round Robin": 271.37,  
"Generic Hash": 270.51,  
"Least Connection": 195.56,  
"IP Hash": 251.89
```

## C. Grafik



## D. Analisis

Grafik tersebut menunjukkan bahwa algoritma Round Robin memiliki performa tertinggi dengan 271.37 RPS, diikuti oleh Generic Hash dengan 270.51 RPS, dan IP Hash dengan 251.89 RPS, sementara Least Connection memiliki performa terendah dengan 195.56 RPS. Round Robin dan Generic Hash berada hampir setara dalam hal kemampuan menangani permintaan per detik, jauh di atas Least Connection yang tertinggal signifikan. IP Hash, meskipun tidak sebaik Round Robin dan Generic Hash, tetap menunjukkan performa yang cukup kuat dibandingkan Least Connection.

## No. 9

### A. Worker

#### 1. 3 worker

```
echo ' upstream worker {  
    least_conn;  
    server 192.245.1.1;  
    server 192.245.1.2;  
    server 192.245.1.3;  
}
```

```
root@Paul:~# ab -n 1000 -c 10 http://www.harkonen.it24.com/  
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 www.harkonen.it24.com (be patient)
```

```
Completed 100 requests  
Completed 200 requests  
Completed 300 requests  
Completed 400 requests  
Completed 500 requests  
Completed 600 requests  
Completed 700 requests  
Completed 800 requests  
Completed 900 requests  
Completed 1000 requests  
Finished 1000 requests
```

```
Server Software:      BigIP  
Server Hostname:      www.harkonen.it24.com  
Server Port:          80
```

```
Document Path:        /  
Document Length:       0 bytes
```

```
Concurrency Level:     10  
Time taken for tests:   14.689 seconds  
Complete requests:     1000  
Failed requests:        0
```



## 2.2 Worker

```
echo ' upstream worker {  
    least_conn;  
    server 192.245.1.1;  
    server 192.245.1.2;  
    # server 192.245.1.3;  
}
```

```
root@Paul:~# ab -n 1000 -c 10 http://www.harkonen.it24.com/  
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 www.harkonen.it24.com (be patient)
```

```
Completed 100 requests  
Completed 200 requests  
Completed 300 requests  
Completed 400 requests  
Completed 500 requests  
Completed 600 requests  
Completed 700 requests  
Completed 800 requests  
Completed 900 requests  
Completed 1000 requests  
Finished 1000 requests
```

```
Server Software:      BigIP  
Server Hostname:      www.harkonen.it24.com  
Server Port:          80
```

```
Document Path:        /  
Document Length:      0 bytes
```

```
Concurrency Level:    10  
Time taken for tests:  14.721 seconds  
Complete requests:    1000  
Failed requests:      0
```

```
Concurrency Level:      10
Time taken for tests:    14.721 seconds
Complete requests:      1000
Failed requests:        0
Non-2xx responses:      1000
Total transferred:      176000 bytes
HTML transferred:       0 bytes
Requests per second:    67.93 [#/sec] (mean)
Time per request:       147.207 [ms] (mean)
Time per request:       14.721 [ms] (mean, across all concurrent requests)
Transfer rate:          11.68 [Kbytes/sec] received
```

#### Connection Times (ms)

	min	mean[+/-sd]	median	max
Connect:	30	66 41.2	57	401
Processing:	45	79 44.8	68	461
Waiting:	43	79 44.8	68	461
Total:	85	146 66.4	127	546

#### Percentage of the requests served within a certain time (ms)

50%	127
66%	135
75%	147
80%	156
90%	207
95%	254
98%	468
99%	488
100%	546 (longest request)

root@Paul:~#

```
CPU[          0.0%]   Tasks:  5,  0 thr;  1 running
Mem[|||||||558M/1.92G] Load average:  0.12  0.20  0.17
Swp[          0K/2.00G] Uptime:  02:48:11
```

PID	USER	PRI	NI	VIRT	RES	SHR	S	CPU%	MEM%	TIME+	Command
693	root	20	0	4788	3188	2764	R	1.4	0.2	0:00.02	htop
1	root	20	0	3868	3248	2768	S	0.0	0.2	0:00.03	bash
57	root	20	0	2456	4	0	S	0.0	0.0	0:00.00	/gns3/bin/busyb
62	root	20	0	2456	4	0	S	0.0	0.0	0:00.00	/gns3/bin/busyb
78	root	20	0	2456	136	80	S	0.0	0.0	0:00.01	/tmp/gns3/bin/u

F1 Help F2 Setup F3 Search F4 Filter F5 Tree F6 SortBy F7 Nice F8 Nice F9 Kill F10 Quit

### 3.1 Worker

```
echo ' upstream worker {  
    least_conn;  
    server 192.245.1.1;  
    # server 192.245.1.2;  
    # server 192.245.1.3;  
}
```

```
root@Paul:~# ab -n 1000 -c 10 http://www.harkonen.it24.com/  
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 www.harkonen.it24.com (be patient)
```

```
Completed 100 requests  
Completed 200 requests  
Completed 300 requests  
Completed 400 requests  
Completed 500 requests  
Completed 600 requests  
Completed 700 requests  
Completed 800 requests  
Completed 900 requests  
Completed 1000 requests  
Finished 1000 requests
```

```
Server Software:      BigIP  
Server Hostname:      www.harkonen.it24.com  
Server Port:         80
```

```
Document Path:       /  
Document Length:     0 bytes
```

```
Concurrency Level:    10  
Time taken for tests:  15.547 seconds  
Complete requests:    1000  
Failed requests:      0
```

```
Concurrency Level:      10
Time taken for tests:    15.547 seconds
Complete requests:      1000
Failed requests:         0
Non-2xx responses:      1000
Total transferred:      176000 bytes
HTML transferred:       0 bytes
Requests per second:    64.32 [#/sec] (mean)
Time per request:       155.474 [ms] (mean)
Time per request:       15.547 [ms] (mean, across all concurrent requests)
Transfer rate:          11.05 [Kbytes/sec] received
```

#### Connection Times (ms)

	min	mean[+/-sd]	median	max
Connect:	32	68 20.8	62	172
Processing:	49	86 28.1	78	286
Waiting:	46	85 28.1	77	285
Total:	84	154 35.0	145	348

#### Percentage of the requests served within a certain time (ms)

50%	145
66%	158
75%	171
80%	181
90%	205
95%	225
98%	245
99%	255
100%	348 (longest request)

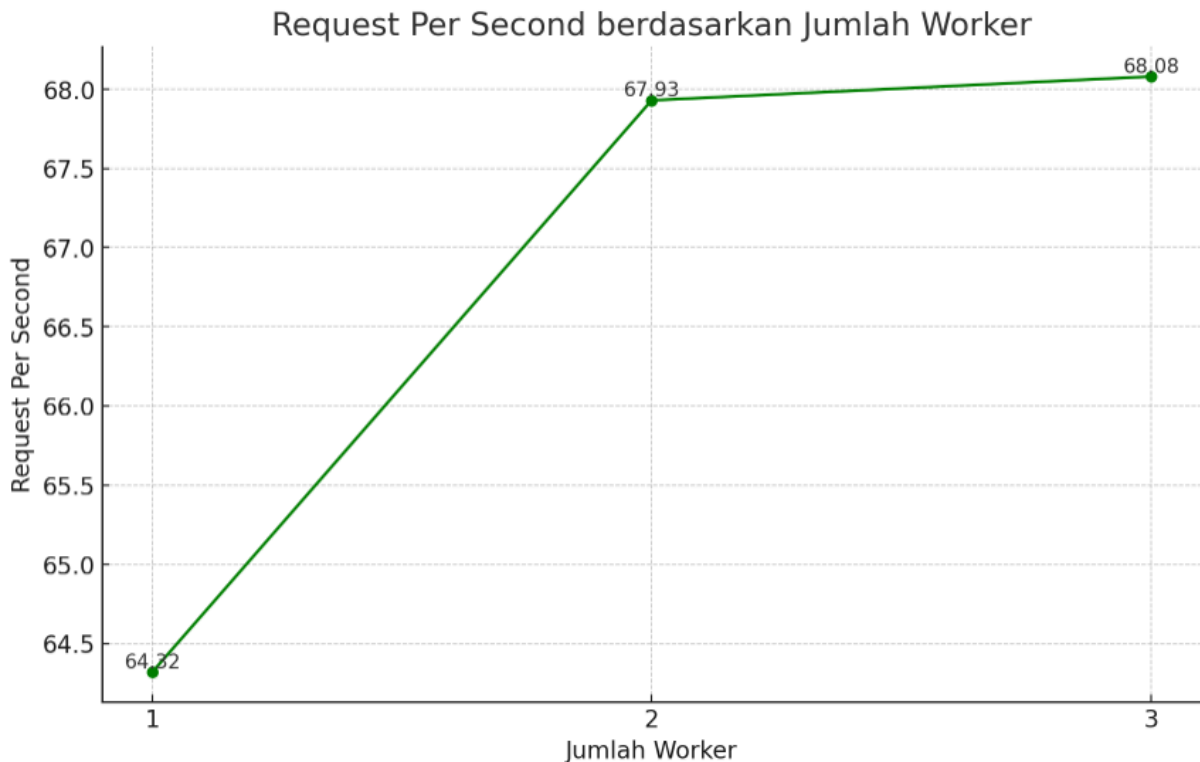
root@Paul:~#

```
CPU[| 0.7%] Tasks: 5, 0 thr; 1 running
Mem[|||||||558M/1.92G] Load average: 0.08 0.14 0.15
Swp[ 0K/2.00G] Uptime: 02:53:59
```

PID	USER	PRI	NI	VIRT	RES	SHR	S	CPU%	MEM%	TIME+	Command
702	root	20	0	4788	3200	2772	R	0.0	0.2	0:00.00	htop
1	root	20	0	3868	3248	2768	S	0.0	0.2	0:00.03	bash
57	root	20	0	2456	4	0	S	0.0	0.0	0:00.00	/gns3/bin/busy
62	root	20	0	2456	4	0	S	0.0	0.0	0:00.00	/gns3/bin/busy
78	root	20	0	2456	136	80	S	0.0	0.0	0:00.01	/tmp/gns3/bin/u

```
F1Help F2Setup F3Search F4Filter F5Tree F6SortBy F7Nice -F8Nice +F9Kill F10Quit
```

## B. Grafik



### C. Analisis

Grafik tersebut menunjukkan bahwa sistem mencapai performa tertinggi dalam menangani permintaan per detik (Req/s) ketika menggunakan 3 worker, dengan sekitar 68.08 Req/s. Grafik tersebut menunjukkan bahwa seiring dengan peningkatan jumlah worker dari 1 menjadi 3, request per second (RPS) juga meningkat. Dengan 1 worker, RPS berada di 64.32, sementara dengan 2 worker meningkat sedikit menjadi 67.93, dan dengan 3 worker mencapai 68.08. Meskipun peningkatan dari 1 ke 2 worker cukup signifikan, peningkatan dari 2 ke 3 worker hanya sedikit. Ini menunjukkan bahwa penambahan worker dari 1 ke 2 memberikan dampak yang lebih besar terhadap peningkatan RPS dibandingkan penambahan dari 2 ke 3 worker. Dari analisis ini, dapat disimpulkan bahwa konfigurasi dengan 3 worker adalah yang paling optimal untuk mencapai performa paling baik. Konfigurasi dengan 1 worker memberikan performa paling buruk. Oleh karena itu, untuk mencapai efisiensi maksimal, disarankan untuk menggunakan 3 worker.



```

Server Port:      8001

Document Path:    /api/auth/register
Document Length:  464 bytes

Concurrency Level: 10
Time taken for tests: 22.264 seconds
Complete requests: 100
Failed requests:  99
  (Connect: 0, Receive: 0, Length: 99, Exceptions: 0)
Non-2xx responses: 99
Total transferred: 266595 bytes
Total body sent:   21000
HTML transferred:  235521 bytes
Requests per second: 4.49 [#/sec] (mean)
Time per request:    2226.352 [ms] (mean)
Time per request:    222.635 [ms] (mean, across all concurrent requests)
Transfer rate:       11.69 [Kbytes/sec] received
                    0.92 kb/s sent
                    12.62 kb/s total

Connection Times (ms)
      min  mean[+/-sd] median   max
Connect:    0     1   0.6      0     3
Processing: 43 1300 3152.5    215  10277
Waiting:    43 1297 3153.2    215  10277
Total:      45 1300 3152.4    216  10278
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)
 50%    216
 66%    236
 75%    266
 80%    275
 90%   10189
 95%   10233
 98%   10260
 99%   10278
100%   10278 (longest request)
root@Dmitri:~# █

```

No. 16

```
root@Dmitri:~# bash login.json
4.1:8001/api/auth/login0 -c 10 -p login.json -T application/json http://192.173.4
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 192.173.4.1 (be patient)...^C

```
Server Software:
Server Hostname:      192.173.4.1
Server Port:          8001

Document Path:        /api/auth/login
Document Length:       0 bytes
```

```
Concurrency Level:    10
Time taken for tests:  20.175 seconds
Complete requests:     0
Failed requests:       0
Total transferred:     0 bytes
Total body sent:       0
HTML transferred:     0 bytes
```

```
2.1:8001/api/auth/login0 -c 10 -p login.json -T application/json http://192.245.2
This is ApacheBench, Version 2.3 <$Revision: 1843412 $>
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```

Benchmarking 192.245.2.1 (be patient).....done

```
Server Software:      nginx/1.14.2
Server Hostname:      192.245.2.1
Server Port:          8001

Document Path:        /api/auth/login
Document Length:       1126874 bytes
```

```
Concurrency Level:    10
Time taken for tests:  5.347 seconds
```

```

Document Path:      /api/auth/login
Document Length:    1126874 bytes

Concurrency Level:   10
Time taken for tests: 5.347 seconds
Complete requests:   100
Failed requests:     43
    (Connect: 0, Receive: 0, Length: 43, Exceptions: 0)
Non-2xx responses:   100
Total transferred:   67909199 bytes
Total body sent:     20600
HTML transferred:    67877192 bytes
Requests per second: 18.70 [#/sec] (mean)
Time per request:    534.711 [ms] (mean)
Time per request:    53.471 [ms] (mean, across all concurrent requests)
Transfer rate:       12402.50 [Kbytes/sec] received
                    3.76 kb/s sent
                    12406.26 kb/s total

Connection Times (ms)
      min  mean[+/-sd] median   max
Connect:    0     5   4.1      4    16
Processing: 14   506 532.7    393   2102
Waiting:    9   305 418.3     95   1732
Total:     20   510 532.3    400   2103

Percentage of the requests served within a certain time (ms)
 50%    400
 66%    576
 75%    690
 80%   1092
 90%   1297
 95%   1755
 98%   1925
 99%   2103
100%   2103 (longest request)

```

17.

```
2.1:8001/api/meab -n 100 -c 10 -H "Authorization: Bearer $token" http://192.245.2
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```

Benchmarking 192.245.2.1 (be patient).....done

Server Software: nginx/1.14.2  
Server Hostname: 192.245.2.1  
Server Port: 8001

Document Path: /api/me  
Document Length: 42 bytes

Concurrency Level: 10  
Time taken for tests: 0.630 seconds  
Complete requests: 100  
Failed requests: 40

(Connect: 0, Receive: 0, Length: 40, Exceptions: 0)

Non-2xx responses: 100  
Total transferred: 298629 bytes  
HTML transferred: 267280 bytes  
Requests per second: 158.84 [#/sec] (mean)  
Time per request: 62.955 [ms] (mean)  
Time per request: 6.295 [ms] (mean, across all concurrent requests)  
Transfer rate: 463.24 [Kbytes/sec] received

#### Connection Times (ms)

	min	mean[+/-sd]	median	max
Connect:	0	0 1.1	0	10
Processing:	15	59 9.3	60	91
Waiting:	12	54 9.5	58	72
Total:	16	60 9.1	60	91

#### Percentage of the requests served within a certain time (ms)

50%	60
66%	62
75%	64

```
Server Software:      nginx/1.14.2
Server Hostname:      192.245.2.1
Server Port:          8001

Document Path:        /api/me
Document Length:      42 bytes

Concurrency Level:     10
Time taken for tests:  0.630 seconds
Complete requests:    100
Failed requests:       40
    (Connect: 0, Receive: 0, Length: 40, Exceptions: 0)
Non-2xx responses:    100
Total transferred:    298629 bytes
HTML transferred:     267280 bytes
Requests per second:   158.84 [#/sec] (mean)
Time per request:      62.955 [ms] (mean)
Time per request:      6.295 [ms] (mean, across all concurrent requests)
Transfer rate:         463.24 [Kbytes/sec] received

Connection Times (ms)
              min  mean[+/-sd] median   max
Connect:        0    0   1.1      0     10
Processing:     15   59   9.3     60     91
Waiting:        12   54   9.5     58     72
Total:          16   60   9.1     60     91

Percentage of the requests served within a certain time (ms)
 50%    60
 66%    62
 75%    64
 80%    64
 90%    68
 95%    73
 98%    75
 99%    91
100%    91 (longest request)
```