

Lab 3 Benchmarking Results

CSC326 – Group 24

Lab 2 Benchmarking Results:

Maximum number of connections that can be handled by the server before any connection drops: 1000

Maximum number of requests per second (RPS) that can be sustained by the server when operating with maximum number of connections: 213.34 requests/sec

Average and 99 percentile of response time or latency per request: 204 ms (average) and 350 ms (99 percentile)

Lab 3 Benchmarking Results:

Maximum number of connections that can be handled by the server before any connection drops: 1000

Maximum number of requests per second (RPS) that can be sustained by the server when operating with maximum number of connections: 384.02 requests/sec

Average and 99 percentile of response time or latency per request: 83 ms (average) and 312 ms (99 percentile)

Explanation:

The lab 3 benchmarking results are better than the lab 2 benchmarking results because the maximum number of requests per second (RPS) that can be sustained by the server when operating with maximum number of connections has increased to 384.02 requests/sec and the average and 99 percentile of response time decreased to 83 ms and 312 ms, respectively. This means that the search engine performance has improved and that it is faster than it was in lab 2. This could have happened because static pagination was used in lab 3. Static pagination reduces excessive processing time to display the first result page because only a limited number of results are displayed on each page.

Command:

```
ab -n 1000 -c 50 http://54.161.255.192:80/?keywords=csc326+ece
```

Output:

This is ApacheBench, Version 2.3 <\$Revision: 1826891 \$>
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Benchmarking 54.161.255.192 (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: WSGIServer/0.1
Server Hostname: 54.161.255.192
Server Port: 80

Document Path: /?keywords=csc326+ece
Document Length: 1613 bytes

Concurrency Level: 50
Time taken for tests: 2.604 seconds
Complete requests: 1000
Failed requests: 0
Total transferred: 1768000 bytes
HTML transferred: 1613000 bytes
Requests per second: 384.02 [#/sec] (mean)
Time per request: 130.202 [ms] (mean)
Time per request: 2.604 [ms] (mean, across all concurrent requests)
Transfer rate: 663.03 [Kbytes/sec] received

Connection Times (ms)

	min	mean[+/-sd]	median	max
Connect:	35	50 104.7	40	1298
Processing:	36	53 44.0	43	275
Waiting:	36	52 43.9	42	273

Total: 72 103 114.9 83 1407

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

50% 83

66% 86

75% 87

80% 89

90% 93

95% 257

98% 304

99% 312

100% 1407 (longest request)