ABSTRACT

The more widespread use of the internet at this time resulted in web servers working harder so that the performance of web servers and database servers decreased. However, users really expect no server interruptions and expect content to always be available on the web server. Load balancing is one of the technologies to improve the distribution performance of web servers. With a load balancer the server can divide the server load with other servers to serve user requests. Load balancing can provide a server that is always available and stable through sharing server load evenly. The design of the web server in this study uses the Debian 8 operating system and uses haproxy software as a balancer, Apache2 as a web server and uses Maria DB as a database server. In load balancing there are also many algorithms that can be used, in this study testing leastconn algorithms, weighted leastconn, roundrobin and weighted roundrobin on load balancers to obtain exact numbers from web server algorithms with the use of hardware that has the same specifications. The research was done by flooding the server with a number of users and comparing the results of the response from the web server. The results of the study show that to maintain availability of a server it is recommended to use the weighted roundrobin algorithm because it has the shortest average access time and has the highest percentage reaching 97% compared to other algorithms in this study. To maintain the reliability of the web server and database server roundrobin algorithm is the main choice because it has a high success click number and has the smallest error rate compared to all the algorithms tested in this study.

Keywords: Load Balancing, Web Server, Database Server, Least Connection, Round Robin.