ABSTRACT

The development of website applications is growing rapidly. This makes the need for access to a website increases. With the increasing need for the use of a website then create more server workload on a web server service, the server becomes not maximal when the demand from users increases, the server will be burdened because it must serve the request.

A method that can divide traffic to multiple servers so that no load buildup occurs on a server called Load Balancing. The design of Load Balancing in this study aims to improve performance on the system and distribute the load available on the server. Load sharing considerations can be done by using device information on a server consisting of CPU, memory and disk. In this study using the Dynamic Ratio algorithm and as a comparison using the Round Robin algorithm. Testing of Load Balancing uses software called Httperf. Httperf can display the required parameter values such as Throughput, Response Time, Error and CPU Utilization.

From the test results show that using 3 servers does not overload the server when testing the Dynamic Ratio and Round Robin algorithms. the average value of the Dynamic Ratio algorithm is 57.83 KB / s and Round Robin is 55.27 KB / s, the Response Time average value of the Dynamic Ratio algorithm is 2.64 seconds and Round Robin is 2.67 seconds, the value of Error in the Dynamic Ratio is 0.0% and Round Robin is 0.9% while the CPU Utilization value in the Dynamic Ratio algorithm is 93.5% and the Round Robin algorithm is 93.0%. The Fairness Index value in the Dynamic Ratio algorithm does not reach number 1 while in the Round Robin algorithm it can reach number 1.

Keywords: *Load Balancing, Dynamic Ratio, Round Robin.*