ABSTRACT

Increased activity in the internet world resulted in increased visitors on the web. This results in an overload on the server which can cause the web response to take longer or the server to crash. To overcome the overload on the server, you can implement a load balance on the server. The use of algorithms on load balance can distribute the workload on multiple servers. However, not all agencies use a web server with the same specifications. This study aims to analyze the load balance with the weighted Round Robin algorithm on FortiGate. FortiGate is a network security device and can function as a router that can be used as a device to manage load balance. The weighted Round Robin algorithm can distribute the load on servers with different specifications. Testing is done by giving 1000, 3000, and 6000 requests. Testing uses two servers with different specifications. The test results show that the weight 1:3 has the highest throughput value on the 1000 and 3000 request tests, while on the 6000 request test the highest throughput is on the weight 1:2. The highest throughput value is 70.91 Mbps. At packet loss weight 1:3 get the smallest packet loss value in all tests. The delay weight 1:3 has the smallest value on the 1000 and 3000 request tests, while the 6000 request delay has the smallest value on the 1:2 weight. The use of CPU weight 1: 2 has a balanced cpu ratio between server 1 and server 2 with a CPU difference between 0.46% -3%.

Keyword: *load balance, web server, FortiGate, Weighted Round Robin*