ABSTRACT

The development of server performance technology is greatly influenced by server resources. One of them is the number of requests or transactions to the web server that cannot be handled by the server. This research develops a load balancing method on Software Defined Network (SDN) architecture using Round robin and Least connection algorithms. The round robin algorithm works by creating a list of processes that will be executed on each process in that list within a specified time. Meanwhile, Least connection is a load balancing algorithm used in network systems to determine which server will handle requests from clients. Both of these algorithms are used to allocate client requests to available web servers. This study aims to obtain the best value of the test parameters, namely Troughput, Respon*se time, CPU Usage, and Packet loss, using the load balancing method using the Round robin and Least connection algorithms. Testing is conducted by sending requests in numbers varying from 200 to 16000 requests with varying numbers of requests per second namely 25, 50, 75, and 100. Based on the test results, it can be concluded that the Least connection algorithm is superior in Troughput testing and* Respon*se time in web server testing using the Floodlight controller. However, in the CPU Usage test, the Round robin Algorithm is superior where the CPU usage is lower than the Least connection Algorithm.*

Keywords** : **Web server, Round robin, Least connection, and Software Defined Network