

ABSTRACT

Due to the large amount of traffic on the web server, the performance of the server has increased. Servers can experience downtime when they get an excessive amount of traffic (overload), the use of a single server is considered less effective. The application of the Load Balancing technique can be the answer by distributing the traffic load to several servers. This study aims to determine the performance of the Load Balancing web server using the Least Connection and Round Robin algorithms which are applied to the Hybrid SDN environment. Measurement of network quality is done by sending traffic requests in the form of data. in several scenarios of load sharing algorithms, each algorithm is given a load of 1000, 3000, and 5000 connection requests. The analysis process is carried out by measuring the value of the TIPHON standard Quality of Service (QoS) parameters such as delay, packet loss, and throughput. The results of this study indicate that the Load Balancing system can be implemented well with Hybrid SDN. Shown by the results of the average Least Connection delay data is 0.641 ms, packet loss is 0%, and throughput is 4.950 Kbit/s. The average Round Robin data results in delay is 0.599 Kbit/s, packet loss is 0%, and throughput is 5.093. Based on the QoS test results of the least connection algorithm and the round robin algorithm, it is stated that the round robin algorithm is superior to the least connection algorithm in terms of the effectiveness of the number of connectivity to the server.

Keywords: *Load Balancing, Round Robin, Least Connection, Hybrid SDN.*