ABSTRACT

PERFORMANCE ANALYSIS OF LOAD BALANCING LEARNING MANAGEMENT SYSTEM MOODLE ON DOCKER CONTAINER

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Excessive requests on the web server cause the server to be unable to serve requests, resulting in overload and causing the server to go down. Load balancing can be a solution, with the ability to distribute workload evenly to multiple servers. Load balancing methods can be applied to container technology. Docker is one of the container technologies that functions to run applications quickly and isolated within a container. This research aims to measure the performance of the load balancing learning management system with two algorithms, least connection and round robin, applied in a Docker container. The testing was performed by sending requests to the server with three variations, 1000, 2000, and 4000 requests. The test results showed that the least connection algorithm produced better results in tests with 1000 and 2000 requests, with the highest throughput being 4.08333 Mbps. Then, the response time of the least connection algorithm was superior in tests with 1000 and 2000 requests, while round robin was superior in tests with 4000 requests with a value of 4985.31 ms. In testing, the error rate of the least connection algorithm had a lower error rate in all testing schemes and in CPU usage.

Kata Kunci: *Container,Docker, load balancing, least connection, round robin.*