

PERFORMANCE ANALYSIS OF TRADITIONAL WEB SERVERS, CONTAINER BASED AND DISTRIBUTED WEB SERVERS IN HANDLING CLIENT *REQUESTS*

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ABSTRACT

As time goes by, technology continues to advance rapidly, making a very significant contribution to human daily activities. Websites, as one of these technology products, enable efficient access to information and communication. Websites are the main forum on the internet, and the increasing number of internet users accessing websites can result in decreased performance. In this context, this research focuses on performance comparisons between traditional web servers, container-based web servers and distributed web servers with load sharing techniques, namely load balancing. This research will involve a series of tests where assessments are carried out on several variables, including throughput, response time, and error rate, using the Apache Jmeter application. From the results of the tests carried out it is known that traditional web servers offer a stable response time under predictable workloads, but can experience decreased performance and increased errors when the workload increases and also in this research it is also known that container-based servers tend to have slower response times. fast and higher throughput due to isolated environments and more efficient use of resources, although management complexity can increase the risk of errors if not managed properly. Meanwhile, distributed servers have the best ability to handle dynamic and large workloads, with high throughput and optimal scaling capabilities, making them an effective solution to overcome performance degradation due to the increasing number of internet users.

Keywords : *Load balancing, Container, Web Server*