

ABSTRACT

COMPARISON ANALYSIS OF WEB SERVER (NGINX) PERFORMANCE USING DOCKER AND PODMAN

Oleh

Herwin Nur Amriansyah

19102145

One of the important factors of a website in order to run well and meet the needs of the user is the presence of a web server. There are alternative web servers that can be used to run a system, including Nginx. To run a web server, you need a container. This research conducted testing of Docker and Podman containers on the Nginx web server to find the best container by performing response time and resource testing. Response time testing consists of request per second, time per request and time per demand concurrent which of its three, Docker is superior to Podman. The number of requests per second in Docker is 2000 requests, while the number of Podman requests is 1000. Average time per request Docker is lower 10-50 ms for concurrency level values 50-100-150-250 and the average time for each request is 0.447 whereas Podman has an instability of the average value of 0.645. The processing process consists of CPU utilization and RAM utilization. The average CPU utilization of Podman was 17.23 MHz while Docker consumed more CPU resources, namely 22.59 MHz.. The RAM usage on the Podman was 192 MB while the Docker used 289 MB of memory.

Keywords: *Web server, Nginx, Container, Docker, Podman, Grafana, Benchmark*