ABSTRACT

CPU USAGE ANALYSIS OF DOCKER *LIVE MIGRATION* USING *CHECKPOINT* / *RESTORE* IN USERSPACE (CRIU)

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Currently service providers or companies have used a variety of services that are used to support the company's business processes. Services are stored on the company's server. Services stored on the server have several vulnerabilities. such as system failure, natural disasters, human errors, or attacks from outside parties. To prevent this from happening, live migration is done to prevent the service from being shut down. so that services can be migrated to other servers, and can function normally and not interfere with the business processes of the company or users who use the service. In this final assignment, several scenarios are designed regarding the live migration process of the container on the docker using Checkpoint / Restore in Userspace (CRIU). By using a live migration container the service can be moved to other servers and can run as before with a short span of time compared to the virtual machine (VM) live migration. The service used is Magento 2. Magento 2 is a content management system based on PHP and MySQL that is open source. The live migration process will be run using 4 different scenarios and the number of containers used is one and three containers. The results obtained are an increase in CPU usage at checkpoint because there is a process that uses more CPU resources when checking. And at restore, increases CPU usage is caused by the addition of files that are accessed by the process so that it requires more CPU resources.

Keywords: Live migration, CRIU, Docker, *Container*