ABSTRACT

The need for prompt, convenient and inexpensive of service is consciously move the research in information technology field. Virtualization is also growing rapidly. With virtualization we can regardless dependence of physical hardware. Cloud computing comes into the public section that have some benefits. Even it still new, there are some that ever knows the benefits of cloud. If we see the development of cloud in the world, it can be possible that cloud will be the daily needs of the peoples. The software that used to build the cloud in this final project is Openstack.

The method that used in this final project are do some experiment and literature study. This final project using a PC as a server, laptop as a client as the experiment object and do research in reference as a source. The parameters is Flops (Floating point per second) and Memory bandwidth.

The result of implementation in cloud server is Flops : 3,6250943 GFlops – 10,937998 GFlops, memory bandwidth : 32,03 – 32,58 Gb/s. For real computer scenario, Flops : 11,7945 GFlops, memory bandwidth 32,0789 Gb/s. The result from Openstack and Eucalyptus is compared and the result is quite similar. In the Flops parameter the performance is up constantly based on core processor, in the other hand memory bandwidth performance is stable even the core processor is changing.

Keywords : *Cloud Computing*, *IaaS,* Flops, *Memory bandwidth, OpenStack,*

Eucalyptus