

## **ABSTRACT**

One of Cloud computing services is Infrastructure as a Service (IaaS) where this services provide a computer resource such as Processor, Memory, Storage, and Network . In this local network this service is called a Private Cloud. Development Cloud Infrastructure for fulfil IT need of an organization company such as virtual servers (virtual machines) that have scalability and and flexible. Performance from IaaS services is affected by Hypervisor and Cloud Platform that been used. vSphere ESXi is a propriety hypervisor from VMWare which have a good performa for virtualization in making a vitual machines from a physical server. And the used of Cloud Platform Openstack which opensource based will be integrated with vSphere environment for establish a Private Cloud services.

Compared to physical machines, virtualization impose new performance issues such as how much Hypervisor overhead cost, Performance variation from a different configuration and mutual influences among instances virtual machines which deploy in one physical server. So therefore we do the examination and research for knowing characteristic from a virtual machines that will be develop in this Private Cloud infrastructure.

Based on Examinaton and analysis from this final project we can pull the conclusion that overhead cost at CPU and memory decreased along with additional resources allocations for virtual machines that generate value 4% , 2.4%, 1.9% and 4.77%, 3.39%, 2.7%. And when 1 virtual machines given a workload other virtual machines in same Host server will get affected.

Keyword : Private Cloud, ESXi, OpenStack, Virtual Machines