ABSTRACT

Server that handle many jobs would be better if it made in a cluster so each server can do the spesific jobs. But, the problem that can occur is one or more servers fail. It can interfere network or client that has been made, also it can make a failure on a virtual machine that has been created on specific host or server.Therefore, it is necessary to have redundant system as a redundant process on the server or host, so if failover occur on one server it can be overcome by another server.

This final project, I made an Infrastructure as a service (IaaS) as one of the services of cloud computing by using a hypervisor type 1 VMWare ESXi and use the OpenStack platform. Management Server requires vCenter Server that has many features, one of them is called high avaibility as a redudant system that can prevent virtual machine from fail and take it to failover process and change to redudant server.

From the test result, the realization of the redundancy system andperformance monitoring got a good availability scores for each scenario. Linux Ubuntu 13.10 as a virtual machine has an average availability for all host servers equals to 94.88037823%, while Windows XP have better availability average score about 96.36959032%. A high level of availability shows that the infrastructure is already well made. CPU usage increase significantly to the load level that given show condition of each host server works normally.

Keyword : Redundancy, *Failover, Virtual Machine, Availability, Server*