

ABSTRACT

Cloud computing is a technology that emerge rapidly. Many companies migrate their traditional computing toward cloud computing, some of them migrate to public cloud and the other implement their own private cloud system. There are three main service on cloud computing, Infrastructure as a Service, Platform as a Service, and Software as a Service. IaaS is the most fundamental service because it can deploy PaaS and SaaS.

There are many software to implement IaaS. One of the most notable and leading in IaaS is Cloudstack because Cloudstack offers many features. The most notable features on Cloudstack is virtual router, VPN access, live migration and high availability.

After series of tests and analysis, the result is produced. Cloudstack offers high availability to VM and VM took 172.820 seconds to be able serving network request again if the host is having a clean shut down and VM took 359.083 seconds if the host is having a dirty shut down. Load balancer feature for VM is able to serve a high availability service with 49.979 seconds of network downtime while a client download a file from that VM. Also, Cloudstack gives a live migration feature with 0.943 seconds of network downtime on virtual router and 7.617 seconds of network downtime on secondary storage while client download a file from secondary storage

Key Words : cloud computing, cloudstack, KVM, live migration, high availability