

ABSTRACT

Developing of processor speed in accordance with Moore's Law, nevertheless bandwidth computer networks evolve much more rapidly. The more quickly the communication line is an opportunity to combine the computing power of computing resources separate. This allows the development of distributed computing scale further enhanced geographically, across the boundaries of existing administrative domain.

Implementation of Grid Computing one of them. Grid Computing is able to perform computation on a large scale distributed and geographically separated. Grid Computing is a technology that utilizes distributed computing resources connected through a computer network independently but coordinated with a specific mechanism.

In this study, the authors build a Grid Computing infrastructure based on Linux Ubuntu on two Cluster Computer are connected in a different network. The system is also supported by the allocation of management resources (resources) using VMware vSphere with the method of application Resource Pool. These resources can be commercialized to those users who want to borrow (rent) resources on our servers. It is also in this system uses OpenStack cloud platform for building reliable cloud infrastructure.

Keywords: Grid Computing, Cluster Computing, VMware vSphere, OpenStack.