A Virtual Cluster Manager using a Hierarchical Management Model for Cloud Infrastructure

Pongsakorn U-chupala, Kasetsart University, Thailand

Assigned Laboratory; Shimojolab Cybermedia Center, School of Engineering

FrontierLab Supervisor; Prof. SHIMOJO, Shinji

With cloud computing technology, specifically infrastructure as a service (IaaS), it is possible to conveniently deploy a virtual machine on the cloud. There are also a lot of cloud toolkits available to help administrators setup IaaS cloud. However, to deploy a set of virtual machines and configure them to work together as a virtual cluster is still a complicated and tedious task. Most cloud toolkits offer not comprehensive virtual cluster management solution but individual virtual machine management. To address this problem, we propose virtual cluster manager, a unified utility for virtual cluster management. This project describes a design and implementation of virtual cluster manager built on top of existing cloud toolkit, OpenNebula, as well as the case study of this utility through the comparison with virtual cluster deployment with traditional methods.