DEPARTMENT OF COMPUTER SCIENCE

National Institute of Technology, Calicut

MINI PROJECT

Agent Based Dynamic Resource Allocation on Federated Clouds

ABSTRACT

Current large distributed system allows users to share and trade resources. In cloud computing, users purchase different resources like network bandwidth, computing power and storage system from one or more cloud providers for a limited period of time with a variable or fixed price. Federated cloud is a mechanism for sharing resources thereby increasing scalability.
Allocating resources in cloud is a complex procedure. We can solve the resource allocation anomaly by using a multi-agent system. In multi-agent system, providers and consumers are agents. The resources are distributed amongst several agents and these agents perform the allocation process. This method is generally known as Multi-agent Resource Allocation (MARA).

The model acts as an improvement over existing methods already being employed. In this model, three types of agents are used: namely, Consumer Agent, Resource Brokering Agent and Resource Providing Agent. The Resource Brokering agent contains all information about resources and it allocates resources to Consumer Agent from Resource Providing Agent. The main advantage of this model is that consumer need not bother about where the resources are placed and its cost. Consumer can get resources with minimum cost. We aim at implementing the protocol model and testing the system using JADE.

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