Abstract

Grid Computing is a parallel and distributed system that facilitates the virtualization of distributed computing and enables coordinating and sharing of computing and storage resources. Mechanism based on economic models is an effective approach to solve the problem of grid resources management. The essence of this problem is how to discover resources for achieving the goal of a highly efficient utilization of resources in response to current resource prices. In this paper, we present a method of resource discovery and pricing based on the learning automata, and discuss the process of resource discovery and resource pricing algorithms for discover and pricing resources to grid users in order to maximize the benefit for both grid providers and grid users. We formulate the problem as an environment that learning automata's discover best resource based on its complete time for proffered application. After discover of resource, pricing of it based on its complete time is done. Using computer simulations, it is shown that the proposed methodology have higher performance comparing to the existing ones.
Reference

- Brent Chun and David Culler, Market-based proportional resource sharing for clusters, Technical report, University of California, Berkeley, September 1999.

**Index Terms**

Computer Science Distributed Computing

**Key words**

resource pricing
learning automata
resource discovery
grid computing