Abstract

The selection of resources that best fitting tasks in grid environments is an essential and critical factor to system performance. Current resource selection methods apply traditional mechanisms for the process of task allocation to resources, which cause performance problems. This paper proposes a resource selection algorithm in bidding based grid
environment to minimize the total time for task completion in effective and efficient way. To avoid unexpected completion time arises when using non-reserved bidding process due to the competition between grid clients on resources; our algorithm proposes the single reservation mechanism to reserve the best resource for the task as a commitment and hence guarantees the task completion time will be as expected. This algorithm uses single reservation mechanism to reserve the best resource for the task. Unlike traditional reserved algorithms this algorithm reserves only the best resource and hence it allows other resources to participate in other bidding processes. We believe the proposed algorithm can select the most fitting resources for tasks execution and achieve a good performance in terms of effectiveness and efficiency.

Reference

- Khanli, L.M. and M. Analoui, An approach to grid resource selection and fault

**Index Terms**

Computer Science

Distributed Computing

**Key words**

Grid computing

Resource selection

Resource broker

locking

Bidding