عنوان مقاله:

Distributed Resource Discovery in Grid with Efficient Range Query

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خلاصه مقاله:

Grid is an environment that makes it possible to share resources that are managed by diverse, independent and dministrative geographically distributed organizations. The main objective of grid is to enable users to solve problems using the available geographically distributed resources. Grid resource discovery is a challenging issue because characteristics of resources are heterogeneous, dynamic, various and autonomous. In this paper we propose a mobile agent approach based on peer to peer model for the resource discovery problem that presents essential characteristics for efficient, self-configuring and fault-tolerant resource discovery and is able to handle range queries. For this reason, we encode resources' range attributes to bitmap index and compare with query attributes in order to know whether resource satisfies query or not. Moreover, we employ a Distributed Ant Colony System (ACS) algorithm to route requests into Grid and locate the required resources. The innovation in this paper is to support range queries and to eliminate centralized control and provide node autonomy.

کلمات کلیدی:
Resource Discovery; Grid; Range Query; Ant Colony System

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