

Improved genetic algorithm for scheduling divisible data grid application

ABSTRACT

Data Grid technology promises geographically distributed scientists to access and share physically distributed resources such as computing resources, networks, storages, and most importantly data collections for large scale data intensive problems. In many Data Grid applications, Data can be decomposed into multiple independent sub datasets and distributed for parallel execution and analysis. In this paper, we exploit this property and propose an Improved Genetic Algorithm (IGA) for scheduling divisible data grid applications. A good heuristic approach used to generate the initial population. Experimental results show that the proposed IGA gives better performance compared to the Genetic Algorithm (GA).

Keyword: Data grid; Genetic algorithm; Scheduling