Abstract

Grid computing is an emerging trend that provides a high performance computing platform to solve larger scale applications by coordinating and sharing computational power, data storage and network resources. A grid coordinates and integrates resources and users of different administrative domains inside the same company or in different countries. Task scheduling is one of the key research areas in grid computing. The goal of scheduling is to achieve highest possible system throughput and to match the application’s need with the available computing resources. This paper primarily focuses on task scheduling process of Artificial Bee Colony (ABC) algorithm. The objective of this algorithm is to generate optimal solution dynamically. By this scheduling, complete the task in minimum time and use the available
resources in efficient manner. The best assignment of tasks produced by ABC is selected and applies Genetic Algorithm (GA) for achieving better performance and evaluation. This heuristic algorithm provides an optimal task scheduling in heterogeneous computing environments.

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Index Terms

Computer Science
Grid Computing

Keywords

Grid Computing; Resource Sharing; Task Scheduling; Heuristic Algorithms.