Abstract

Computational grid is a hardware and software infrastructure that provides dependable, inclusive and credible to other computing capabilities. Grid computing intercommunicated with a set of computational resources on a large scale. Scheduling independent jobs is an important issues in such areas as computational grid. Scheduling is the process of assigning jobs to resources in order to achieve different goals. The grid schedule, find the optimal resource allocation to it over heterogeneous resources and maximize overall system performance. As yet evolutionary methods such as Genetic, Simulated Annealing (SA), Particle Swarm Optimization (PSO) and Ant Colony Optimization (ACO) to solve the problem in the grid schedule has been adopted. The disadvantage of these techniques premature convergence and trapping in local optimum in large-scale problems. In this paper, a method by Cuckoo Optimization Algorithm (COA) to solve job scheduling in grids computational design, implementation and results are presented. The results show our proposed schedule have more efficient and better performing compared with Genetic and Particle Swarm Optimization.
Computer Science

Index Terms
Algorithms

Keywords
Grid computing  job scheduling  Cuckoo Optimization  Genetic algorithm  Particle Swarm Optimization