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Abstract

Computational grid is a potential technology mainly used for distributed environment. The major issues related with Grid are resource discovery, heterogeneity, fault tolerance and task scheduling. Grid task scheduling is an integrated component of computing which effectively utilizes the idle time of resources. Efficient scheduling algorithm is needed to utilize the resources effectively and reduce the overall completion time. This paper analyzes the performance of scheduling algorithms from different point of view such as makespan, execution time, completion time and load balancing. First, the general view of World Wide Web grid computing environment and its functions are discussed. Then this paper examines the performance of four scheduling algorithms such as Min-Min, Max-Min, Minimum Completion Time and Minimum Execution Time. Based on the comparative study of various algorithms, some common issues are proposed. The conventional Max-Min grid task scheduling algorithm effectively utilizes the resources and minimizes the makespan than other scheduling algorithms. This survey shows that Max-Min grid task scheduling algorithm outperforms the other algorithms in both task and resource heterogeneous environment.

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Index Terms

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Keywords

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