

عنوان مقاله:

GASA: Presentation of an Initiative Method Based on Genetic Algorithm for Task Scheduling in the Cloud Environment

محل انتشار:

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خلاصه مقاله:

The need for calculating actions has been emerged everywhere and in any time, by advancing of information technology. Cloud computing is the latest response to such needs. Prominent popularity has recently been created for Cloud computing systems. Increasing cloud efficiency is an important subject of consideration. Heterogeneity and diversity among different resources and requests of users in the Cloud computing environment creates complexities and problems in task scheduling in the cloud environment. Scheduling consists of selecting the most appropriate resource with the aim to distribute load in resources, and maximum productivity from them, while it should minimize the response time and the time of completion of each task, as well as minimizing the service costs. In addition to analyzing the Cloud computing system and scheduling aspects in it, it has been tried in this article to provide a combined algorithm for appropriate mapping of tasks to the existing virtual machines for reducing the completing times and increasing the productivity of virtual machines. According to the scheduling parameters, the presented method improves the load balancing according to the Sufferage and genetic algorithm as compared to previous algorithms, while it also reduces the total time of requests. The results of simulating the proposed algorithm in CloudSim environment and comparing it with the studied methods show that the proposed algorithm has reached a more optimized response, both for the load balancing and also for the total completion time.

کلمات کلیدی:

cloud computing, Task Scheduling, Genetic, Sufferage

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