عنوان مقاله:

LABTS: a Learning Automata-Based Task Scheduling algorithm in cloud computing

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خلاصه مقاله:

Task scheduling is one of the main and important challenges in the cloud environment. The dynamic nature and changing conditions of the cloud generally leads to problems for the task scheduling. Hence resource management and scheduling are among the important cases to improve throughput of cloud computing. This paper presents an online, a non-preemptive scheduling solution using two learning automata for the task scheduling problem on virtual machines in the cloud environment that is called LABTS. This algorithm consists three phases: in the first one, the priority of tasks sent by a learning automaton is predicted. In the second phase, the existing virtual machines are clustered according to the predictions in the previous phase. Finally, using another learning automaton, tasks are assigned to the virtual machines in the third phase. The simulation results show that the proposed algorithm in the cloud environment reduces the value of two parameters makespan and degree of imbalance.

کلمات کلیدی:

cloud computing, learning automata, task scheduling, priorities of tasks.

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