Multi-Level Priority Based Task Scheduling Algorithm for Workflows in Cloud Environment

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Abstract : Task scheduling is the key concern for the execution of performance-driven workflow applications. As efficient scheduling can have major impact on the performance of the system, task scheduling is often chosen for assigning the request to resources in an efficient way based on cloud resource characteristics. In this paper, priority based task scheduling algorithm has been proposed that prioritizes the tasks based on the length of the instructions. The proposed scheduling approach prioritize the tasks of Cloud applications according to the limits set by six sigma control charts based on dynamic threshold values. Further, the proposed algorithm has been validated through the CloudSim toolkit. The experimental results demonstrate that the proposed algorithm is effective for handling multiple task lists from workflows and in considerably reducing Makespan and Execution time.

Keywords : cloud computing, priority based scheduling, task scheduling, VM allocation
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