Abstract

The cloud computing paradigm enables consumers to run their applications in remote data centers. Many of these applications may be complex which requires parallel processing capabilities. Parallel job scheduling techniques mainly focus on improving responsiveness and utilization. For a data center that deals with parallel jobs, it is important to devise an optimal schedule which results in maximal utilization of available node capacity. For that, this paper proposes a parallel job scheduling technique which uses the key concepts such as workload consolidation through virtualization technologies and backfilling with lookahead mechanism. The proposed method is compared to scheduling using backfilling technique with workload consolidation. The results show that the proposed method with lookahead mechanism has shown better performance.

References

- D. Feitelson, L. Rudolph, U. Schwiegelshohn, K. Sevcik, and P. Wong, "Theory
Parallel Job Scheduling in Cloud with Lookahead and Workload Consolidation


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Computer Science
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Workload Consolidation Backfilling with workload consolidation Backfill with Lookahead.