Abstract

Cloud computing has made the dream of scalability of resources on demand come true. As the usage of the resources on the cloud involves cost, their optimal utilization is vital. Various scheduling algorithms are being designed and implemented seamlessly to achieve this goal. One of the factors that have a high impact on the scheduling algorithm design is the dependency of the tasks. Dependency implies that the tasks are executed in some precedence order. This survey provides a review of the various scheduling algorithms in cloud mainly from the perspective of task dependency. The broad categorization, advantages and the disadvantages of the various scheduling algorithms available for both dependent and independent tasks are discussed. Based on a comprehensive understanding of the challenges and the current research trends, some open issues worthy of further exploration are proposed.
- Salesforce.com
- Google App Engine: http://www.google.com/apps
- Amazon EC2: http://aws.amazon.com/ec2
- Eucalyptus http://eucalyptus.com
A Taxonomy and Survey of Scheduling Algorithms in Cloud: Based on task dependency

- M. Iverson and F. Ozguner, Dynamic, Competitive Scheduling of Multiple DAGs in a Distributed Heterogeneous Environment, in Proc. of Seventh Heterogeneous Computing
Workshop, pp. 70-78, Orlando, Florida USA, March 1998.

Index Terms
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Resource scheduling, Scheduling algorithms, Hybrid cloud, Task dependency, IaaS