Abstract

The cloud computing is an Internet-based computing emerging as a new architecture which aims to give reliable, customizable and QoS guaranteed dynamic environment for end-users. As multi-tenancy is one of the key features of cloud computing where service providers and users have scalable and economic benefits on same cloud platforms. In cloud computing environment the execution process requires resource management due to the processing capability is high to the resource ratio. The aim of the system is to handle resource management by executing scientific workflows. The locating and assigning of free resources is handled through the Cloud-based Workflow Scheduling Algorithm (CWSA) policy. The simulation results shows that the scheduling algorithm improves the performance of scientific workflows and helps in minimization of workflow completion time, tardiness, execution cost and use of idle resources of cloud using simulator Workflowsim.
7. The XML files that describe of the workflow applications are available via the Pegasus project. [Online]. https://confluence.pegasus.isi.edu/display/ pegasus/WorkflowGenerator.

Index Terms

Computer Science Distributed Computing

Keywords

Cloud Computing, Multi-Tenant Cloud Environment, Scientific Workflows, Resource
management.