Abstract

Grid computing is an infrastructure for supporting complex computing. That is organized with the different scale of computational and network resources. In addition of that it is capable to process the request of multiple users. In this context the effective scheduling of resources according to the submitted tasks are required for efficient computational outcome. This paper provides an experimental study for the three popular load balancing techniques i.e. space shared, distributed and Hierarchical. The experiments are performed using GridSim technology and with help of JAVA based implemented scripts. The two kinds of experiments are reported in this work first with the increasing workload and secondly with the varying number of resources i.e. number of machines and number of processing elements. The different experiments show that the space shared is a promising algorithm for load balancing but the hierarchical load balancing algorithm comparatively enhances the performance of grid. Finally, the distributed load balancing algorithm demonstrates its superiority among all of them.
2. B. Jacob, Brown, M., Fukui, K., & Trivedi, N. (2005), Introduction to grid computing. IBM redb, 2005
A Comparative Study of Grid Load Balancing


Index Terms

Computer Science Information Sciences

Keywords