Abstract

In grid computing, load balancing is a technique to distribute workload evenly across two or more computing nodes, in order to get optimal resource utilization, maximize throughput, minimize response time, and avoid overload. In Grid system, there are queues of jobs waiting for getting resources like storage space, CPU, I/O devices etc. The behaviour or state of the Grid system changes dynamically i.e. from time to time. The bandwidth of the n/w, the no. of jobs, the no. of resources etc. in the system changes dynamically. A new approach with load balancing algorithm with load conversion has been introduced here. This algorithm is applied on different scheduling algorithms using Grid Simulator (Alea 2). With different load conversion percentages in load balancing it has been found that existing scheduling algorithms can performs better if a specified percentage of Load is reallocated depending on the CPU speed of clusters.
A New QoS based Load Balancing Approach with Percentage Load Conversion in Grid Heterogeneous System

- Dalibor Klusáek and Hana Rudová, "Alea 2 - Job Scheduling Simulator." In proceedings of the 3rd International ICST Conference on Simulation Tools and Techniques (SIMUTools 2010), ICST, 2010

**Index Terms**

Computer Science  
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**Keywords**

Grid Scheduling  
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load conversion  
Grid Algorithm