Abstract

In Cluster Computing Environment the data latency time has significant impact on the performance when the data is accessed across clusters. In this case, streamlining data access through the usage of the memory management technique with a proper scheduling mechanism will improve the performance of the entire operation. Memory management becomes a prerequisite criterion while handling applications that require large volume of data in various scientific applications. If memory management is not properly handled the performance will have a proportional degradation, even if the other factors perform to the maximum possible levels. Hence it is critical to have a fine memory management technique. The existing scheduling algorithms consider only data availability as the sole criterion in allotting an incoming job to a node in a cluster. But this process would not yield optimum performance because bandwidth is also a major factor in determining the performance level. So to overcome this problem a new scheduling algorithm is what required. Load balancing is a key technique used to improve the performance of cluster application by utilizing machines to the full extent without any idle or underutilized resources. We have tested our CWA load balancing algorithm for face recognition system and results are encouraging.
References

- Christine Morin, "Global and Integrated Processor, Memory and Disk Management in a Cluster of SMPs," in IRISA/INRIA Campus universitaire de Beaulieu, 35042 Rennes cedex (FRANCE) 1999.

Index Terms
**Keywords**

High Performance Cluster Computing  
Job Scheduling  
Global Memory Management  
Local Memory Management  
Distributed Shared Memory  
Load balancing