Abstract

Clusters of computers have emerged as mainstream parallel and distributed platforms for high performance, high throughput, and high availability computing. To enable effective load balancing in distributed systems, numerous schedulers have been designed. Migration of the job from an overloaded node to the idle node, involves matching the possessions of the idle computer with the job requirements. Both code and data are to be transferred to the idle node from overloaded node. The job is executed at the idle node. The results are transferred back to the host node. These consume a lot of bandwidth, processor time, and memory. A good selection of job results in less execution time, efficient usage of resources and overall increase in the throughput of the system with the minimum cost. The selection of the job and its subsequent execution is an interesting area of research. The proposed criteria based method assigns a weight for each criterion of each job of several predefined criteria. Then the total weights of all the jobs are found out. The job with the highest weight will be considered for submission.

References

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Index Terms

Computer Science
Parallel Computing
Keywords
Distributed system  load balance  Idle  overloaded  criteria  weight