Abstract

Clusters have been an area of vast research in the domain of High Performance Computing and a variety of libraries are available for the cluster installation and administration. One such library named MPICH2 was selected and a selected variety of programs were run on the cluster setup and the performance of MPICH2 was tested against the prevalent cluster theories. The performance testing was done from simplest to quite heavy programs and they were tested for the execution time. The results affirmed the predicted pattern of execution time. Results also revealed the criteria for selection of number of compute nodes depending on the complexity of the problem to be solved. The results were encouraging for development of a large scale target application on the MPICH2 library, only held back by the fact that MPICH2 cannot support heterogeneous clusters.

References

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**Index Terms**

Computer Science  
Distributed System
Keywords
Cluster; Beowulf; mpiexec; task distribution; mpiexec; calculation of Pi; MPICH2; OSCAR