Abstract

This paper presents a Dynamic load balancing with a centralized monitoring capability. The purpose of using a centralized monitoring feature was based on the idea that the computation in an environment may be distributed, but the status of each task or job must be available at a central location for monitoring and better scheduling. This also allows better management of the jobs. The framework also addresses the inherent need for uniform load distribution by allowing the dispatcher to check against the status of the processors before a job is dispatched for processing. This eliminates the need for processors to be burdened with the task of re-routing the job when they discover that they cannot process the received job. The basic requirement of assigning a priority and processing as per priority is built into the framework. As a proof of concept, we simulate the framework with a Java and JMS compliant OpenMQ based monitor, dispatchers, processors and a centralized database. The framework will have the capability to scale horizontally as well as vertically.
- Ambika Prasad Mohanty (Senior Consultant, Infotech Enterprises Ltd.), P Srinivasa Rao (Professor in CSC, Principal, YPR College of Engineering & Technology), Dr A Govardhan (Professor in CSC, Principal, JNTUH College of Engineering), Dr P C Rao (Professor in CSC, Principal, Holy Mary Institute of Technology & Science), Framework for a Scalable Distributed Job Processing System.
- David P. Bunde1, and Vitus J. Leung, Scheduling restart able jobs with short test runs, Ojaswirajanya Thebe1, 14th Workshop on Job Scheduling Strategies for Parallel Processing held in conjunction with IPDPS 2009, Rome, Italy, May 29, 2009
- Norman Bobroff, Richard Coppinger, Liana Fong, Seetharami Seelam, and Jing Xu, Scalability analysis of job scheduling using virtual nodes, 14th Workshop on Job Scheduling Strategies for Parallel Processing held in conjunction with IPDPS 2009, Rome, Italy, May 29, 2009

**Index Terms**

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