Abstract

In this paper, we will present a scheduling algorithm for batch pipeline resources using GA. BGPS algorithms for resource allocation with variable processing power to the jobs is offered. In previous algorithms, a source could select and run one job at a time. New techniques can batch jobs and perform them in parallel. so after the first job is completed, second job is started simultaneously. The BGPS algorithm can reduce wasting time of sweeping jobs. And we can have the optimal use of existing resources. The new algorithm, in comparison to a similar algorithm with a bunch of jobs, can run them in a pipeline. It will be able to request and confirmation of job after the end of previous job, and also allocate resources to perform jobs in parallel. The system is capable to accelerate of processing tasks with different parameters in function and increase system efficiency.

References

- An ant algorithm for balanced job scheduling in grids  Ruay-Shiung Chang_, Jih-Sheng Chang, Po-Sheng Lin Department of Computer Science and Information Engineering, National Dong Hwa University, Shoufeng Hualien, 974 Taiwan, ROC
New Self-Scheduling Schemes for Internet-Based Grids of Computers Javier Díaz, Sebastián Reyes, Alfonso Niño, and Camelia Muñoz-Caro

A general model for the generation and scheduling of parameter sweep experiments in Computational Grid Environments - International Conference on Computational Science, ICCS 2010- Javier Díaz, R. Sebastián Reyes, Rosa M. Badiab, Alfonso Niñoa, Camelia Muñoz-Caro


DSQGG: An optimized genetic-based algorithm for scheduling in distributed grid Delavar, A. G.; Rahmany, M.; Halaakouie, A.; Sookhtsaraei, R.; Payam Noor Univ., Tehran, Iran 29 November 2010


Index Terms

Computer Science Algorithms

Keywords

Grid Computing Genetic Algorithm Distributed System Scheduling Batching pipelining