

# Scheduling of Job Combination and Dispatching Strategy for Grid and Cloud System

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## Abstract

With the emergence of resource management and network techniques, the job scheduling has become an important issue in grid computing. In this paper, we present a job combination and dispatching strategy for scheduling jobs to client users which connect to data servers. Based on the job combination and dispatching strategy algorithm (JCDS), the optimization algorithm was proposed in this study; the JCDS with dynamic programming (JCDS-D). We both focus on the job allocating and the communication overheads minimizing in grid system. The significant improvement of our approach was increase the network and processors' utilization. The advantage of job combination strategy is that system throughput can be increased through job allocating to adaptive processors. To evaluate the efficiency of different techniques, we have implemented both methods and compare with the FCFS, Min-Min, and Max-Min algorithms. The experimental results show that the JCDS and JCDS-D provide obvious improvements in terms of performance.

Keyword : JCDS