

Evaluation of Task Clustering Algorithm By FFT for Heterogeneous Distributed System

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Abstract— In this paper, the evaluation result of a task clustering heuristic algorithm proposed for heterogeneous distributed systems is shown. The proposed heuristic algorithm is based on our original concept, known as “Worst Schedule Length (WSL)”. It derives the lower bound of the total execution time of the cluster for each processor using WSL, then the processor which contributes to minimize WSL is chosen as an assignment target. Task clustering is then performed to get minimal response time (i.e., minimal schedule length). We show that our proposed method has advantages over existing conventional approaches through the evaluation results.

Keyword— Big Data, Distributed Processing, Fast Fourier Transform, Task Graph

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