

Performance Evaluation of Task Scheduling Algorithm on LCQ Network

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Abstract : The Scheduling and mapping of tasks on a set of processors is considered as a critical problem in parallel and distributed computing system. This paper deals with the problem of dynamic scheduling on a special type of multiprocessor architecture known as Linear Crossed Cube (LCQ) network. This proposed multiprocessor is a hybrid network which combines the features of both linear type of architectures as well as cube based architectures. Two standard dynamic scheduling schemes namely Minimum Distance Scheduling (MDS) and Two Round Scheduling (TRS) schemes are implemented on the LCQ network. Parallel tasks are mapped and the imbalance of load is evaluated on different set of processors in LCQ network. The simulations results are evaluated and effort is made by means of through analysis of the results to obtain the best solution for the given network in term of load imbalance left and execution time. The other performance matrices like speedup and efficiency are also evaluated with the given dynamic algorithms.

Keywords : dynamic algorithm, load imbalance, mapping, task scheduling

Conference Title : ICPP 2015 : International Conference on Parallel Processing

Conference Location : Paris, France

Conference Dates : March 30-31, 2015