

Implementation of Energy Aware Parallel Task Scheduling using Power Aware List Scheduling (PALS) Algorithm using MatLab and its Performance Analysis.

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ABSTRACT:

Reducing energy consumption for computing system helps in various benefits such as reducing operational costs, increase in system reliability, and environmental respect. The objective makes a study of scheduling policies and application experience to reduce energy consumption of parallel task without any performance loss. The aim is to implement scheduling heuristics called Power Aware List Scheduling (PALS) algorithm to present application which helps to reduce energy consumption of parallel tasks in a cluster using Dynamic Voltage Frequency Scaling (DVFS) technique. The PALS algorithm is implemented using two algorithms; Earliest Task First (ETF) Scheduling algorithm and Non Critical Time Slot Frequency Scaling (NCTSFS) algorithm. The PALS algorithm makes a study of energy consumption and task execution time. The test results justify the performance of energy aware scheduling heuristics.