Abstract

Distributed Real Time System (DRTS) provides enormous platform for parallel applications. It is an alternative for highly expensive parallel machines. Task allocation for parallel applications over it, is a crucial phase where strategy for task allocation should be chosen to maximize the throughput and enhance the overall processor utilization. Task allocation is NP-hard or NP-complete problem. A new heuristic for this problem has been suggested and implemented in this paper. To achieve this goal, tasks should be clustered in such a way that it can minimize the inter-task communication cost as well as it must also be taken care that the execution cost of tasks must also be minimum over the processor where the tasks are going to get assigned. Here k-mean clustering has been used to cluster the tasks in the required number of clusters. The proposed model has been simulated in matlab.

References


Index Terms

Computer Science Networks
Keywords

DRTS  parallel application  throughput  processor utilization  NP-complete