Abstract

Task allocation in a distributed environment is a fundamental problem. In such environment an application runs on a single computer can be accessible on every system/terminal present in the same network. Therefore geographical distance does not matter. If number of tasks is less than or equal to available processors in the network, we can assign these tasks without any issue. But this allocation becomes complex when numbers of tasks are greater than the numbers of processors. The problem of task allocation for processing of $m$ tasks to $n$ processors ($m>n$) in a distributed network is addressed here through a new modified tasks allocation technique. The algorithm, presented in this paper allocates the tasks to the processor of different processing capacity to increase the performance of the distributed network. The Algorithm addressed in this paper is based on the consideration of processing time of the task to the processors. Keeping this in view we have suggested a new algorithm to assign all the tasks as per the required availability of processors and their processing capacity so that none of the tasks get remains unexecuted in the distributed environment.

References


Marwa Shouman, Gamal Attiya, Ibrahim Z. Morsie, "Static Workload Distribution of Parallel Applications in Heterogeneous Distributed Computing Systems with Memory and Communication Capacity Constraints," International Journal of Computer...

**Index Terms**

- Computer Science
- Distributed Systems

**Keywords**

- Distributed Environment
- Performance
- Processing Time
- Task allocation