TLLB: Two-Level Load Balanced Algorithm for Static Meta-Task Scheduling in Grid Computing

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Abstract

Doing computation on the collection of computer resources from multiple locations to reach a common goal is known as grid computing. Task scheduling is a very important problem in complex grid environment. Prior, there are numerous number of algorithms were proposed to do effective task scheduling. Among them the min-min algorithm is simple and well known scheduling algorithm. Even it works efficiently, some drawbacks in this with respect of load balancing and in resource utilization. To overcome these drawbacks, a new Two Level Load Balanced (TLLB) grid scheduler algorithm is proposed. In First Level min-min algorithm is used to create ITQ and in Second Level a new Transformation technique is used to reschedule. The performance analyses show that the proposed algorithm improves the performance in both make span and effective utilization of resources.

References

- Siriluck Lorpunmanee, Mohd Noor Sap, Abdul Hanan Abdullah, and Chai


Index Terms

Computer Science Algorithms

Keywords

Grid computing  Min-min  Load balancing  resource utilization  Task Scheduling  Flow-time