Abstract

Grid computing is a kind of distributed computing that involve the integrated and collaborative use of distributed resources. It involves huge amounts of computational task which require reliable resource sharing across computing domains. Load balancing in grid is a technique which distributes the workloads across multiple computing nodes to get optimal resource utilization, minimum time delay, maximize throughput and avoid overload. It is a challenging problem that has been studied extensively in the past several years. This paper attempts to provide a comprehensive overview of load balancing in grid computing environment and also analyses the job distribution and system behavior. Furthermore, this survey various load balancing algorithms for the grid computing environment, identify several comparison metrics for the load balancing algorithms and carry out the comparison based on these identified metrics between them. It also reviews the latest research activities in the area of grid computing, including characteristics, capabilities, architecture, applications, design constraints, scheduling and load balancing and presents a set of challenges and problems.
Load Balancing Approaches in Grid Computing Environment

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Index Terms

Computer Science Grid Computing

Keywords

Survey Grid Computing Load Balancing Scheduling Job distribution Performance evaluation