عنوان مقاله:

A new method for Resource Management System (RMS) Fault Tolerance in Grid Computing

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خلاصه مقاله:

Since the grid system is implemented on a network framework with heterogeneous remote resources, it is a hazardous environment which fault and failure are familiar events. Users expect that their jobs executed reliable and fast in the grid. Thus, reliability and fault tolerance are important challenges in grid researches. The grid service reliability and fault tolerance are discussed in this paper. Resource management system is the brain of a grid and responsible for the management and execution of tasks. In this paper, we propose a new method for grid Resource Management Systems (RMS) fault-tolerance. In this method, we add a new layer tops of the RMSs site for support them when one or more RMSs are failed. This layer is composed of components that called RMSS (Resource Management System Supporter). Our goal is reliability improvement and consequently decreasing penalties that paid to the users. This method does not need redundant RMSs, which leads to decrease hardware redundancy and implementation costs. MATLAB software is used for analysis of our proposed method. Analysis of results shows that the reliability factor is improved and consequently the penalties are decreased.

کلمات کلیدی:

Grid computing; Service reliability; Fault tolerance; Redundancy; RMS; RMSS