Data Distribution Methods for Communication Localization in Multi-clusters with Heterogeneous Network

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Abstract

Grid computing integrates scattered clusters, servers, storages and networks in different geographic locations to form a virtual super-computer. Along with the development of grid computing, dealing with the data distribution requires a method which is faster and more effective for parallel applications in order to reduce data exchange between clusters. In this paper, we present two methods to reduce inter-cluster communication cost based on the consideration to different kinds of communication cost and a simple logic mapping technology. Our theoretical analyses and simulation results show the proposed methods are better than the methods without reordering processor and considering the communication cost. The performance evaluation shows that the proposed methods not only reduce communication cost successfully but also achieve a great improvement.

Keyword：Data Distribution