The Design and Evaluation of a Strategy of Data Placement in Cloud Computing Platform

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Abstract- Cloud computing has become a new platform for personal computing. However, while designing the strategy of data placement, there still lacks the consideration of systematic diversity of distributed transaction costs. This paper proposes the use of genetic algorithms to address the data placement problem in cloud computing. This strategy has adequately considered the correlation between data slices to minimize the total cost of distributed transactions. Compared to other methods, genetic algorithms have proven to comprehensively consider the correlation between the data slices in cloud computing, therefore greatly reducing the amount and cost of distributed transactions.

Index terms: Cloud computing, data placement, distributed transaction, genetic algorithm, web service.