基于K-L特征压缩的云计算冗余数据降维算法

聂 军
(广东科技学院 计算机系,广东 东莞 523083)

摘 要:提出一种基于K-L(Karhunen-Loeve Transform)特征压缩的云计算冗余数据降维算法.在冗余数据的重构相空间中进行高维特征提取,采用K-L特征压缩方法降低云计算冗余数据的维数,设计改进的FIR滤波算法实现冗余数据滤除.仿真结果表明,采用该算法能有效实现对云计算冗余数据的特征空间降维和滤除处理,提高云计算读写速度,降低计算开销.

关键词:云计算;特征压缩;冗余数据;降维
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A Data Reduction Algorithm Based on K-L Feature Compression for Cloud Computing

NIE Jun
(Department of Computer Science, Guangdong College of Science and Technology, Dongguang 523083, China)

Abstract: A K-L (Karhunen-Loeve Transform) based algorithm for reducing the dimension of redundant data in the cloud computing is proposed. High dimensional feature extraction is performed in the reconstructed phase space of redundant data, and K-L feature compression method is adopted to reduce the dimension of redundant data in the cloud computing, and the improved FIR filtering algorithm is designed to realize the redundancy data filtering. Simulation results show that the proposed algorithm can effectively achieve the feature space dimension reduction of the redundant data in the cloud computing, and can improve the speed of cloud computing, and reduce the computational cost.

Key words: cloud computing; feature compression; redundancy data; dimension reduction

作者简介:

聂 军 男,(1976-),硕士,讲师,高级工程师.研究方向为计算机软件与应用、云计算与应用、智能计算理论及应用.
E-mail: 13739149@qq.com