

混合云环境下数据流关联规则挖掘算法

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摘要: 在混合云环境下数据流具有扰动性, 对关联数据的挖掘的误差较大. 针对散乱点云自适应压缩挖掘算法的抗干扰性不好的问题, 提出一种基于数据信息流相空间重构和关联规则特征提取的混合云环境下数据流挖掘算法. 首先构建混合云环境下大数据信息流时间序列分析模型, 进行数据结构分析, 然后对混合云环境下数据信息流进行高维相空间重构, 在重构的相空间中进行关联规则特征提取, 以提取的特征作为信息素引导数据定位挖掘, 实现数据挖掘算法改进. 最后通过仿真实验进行性能测试, 结果表明, 采用该算法进行混合云环境下数据挖掘的特征提取聚敛性较好, 数据挖掘的准确概率较高, 抗干扰性能较强, 优于传统方法.

关键词: 混合云环境; 数据挖掘; 关联规则; 特征提取; 相空间重构

Data Stream Association Rule Mining Algorithm in Hybrid Cloud Environment

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Abstract: In a hybrid cloud environment, data flow has disturbance, the anti jamming problem of adaptive compression mining algorithm for scattered point cloud is not good, a hybrid cloud environment for extracting data information flow is proposed based on phase space reconstruction and association rule mining algorithm under the characteristics of data stream. First, to construct a hybrid cloud environment information data flow time series analysis model for data structure analysis, and then the hybrid cloud environment data flow information flow for high dimensional phase space reconstruction of association rules in the feature extraction phase space reconstruction, with the extracted features as pheromone positioning guide data mining, data mining algorithm is improved. Finally through the simulation experiment of performance test, the results show that, by using the algorithm in hybrid cloud data mining features extraction has better convergent, higher accurate probability of data mining, anti-interference performance is better than traditional methods.

Key words: hybrid cloud environment; data mining; association rule; feature extraction; phase space reconstruction

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