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研究论文

一种由智能终端控制的数据同步算法

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摘要：

提出了基于HASH指纹信息的数据同步算法，将数据严格一致同步和弱一致同步策略整合在一个算法中．数据同步的计算由智能终端控制，将HASH指纹信息映射至HASH指纹信息文件，与同步数据独立．计算完文件名和文件内容的哈希码后，先匹配文件名再匹配文件内容的哈希码，降低了对哈希算法的要求．仿真实验使用改进的BKDR哈希算法，实现了20000数量级的文件重复性检测，验证了该数据同步算法可以由智能终端独立实施，而不依赖服务器，可以整合不同厂商的云存储服务．

关键词： 智能终端 数据同步 哈希指纹信息 整合 云存储

Data synchronization algorithm controlled by the intelligent terminal

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Abstract:

To integrate different vendors' cloud storage services, we put forward a data synchronization algorithm based on HASH fingerprint information, which combines strictly consistent data synchronization and weak consistent data synchronization. Intelligent terminal controled data synchronization calculation maps HASH fingerprint information into HASH fingerprint information file which is independent of the needed synchronous data. The algorithm is used to calculate the hash code for filename and file content. First we match the filename's hash code and then the file content, which strategy can reduce the requirement for the hash algorithm. The simulation experiment uses the improved BKDR hash algorithm, the results achieve 20000 order-of-magnitude file repeatability test and verify that the data synchronization algorithm can be implemented independently by the intelligent terminal, instead of relying on the server, and can integrate different vendors' cloud storage services.

Keywords: intelligent terminal data synchronization hash fingerprint information integration cloud storage

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