

Heterogeneous Data Storage Management with Deduplication in Cloud Computing

ABSTRACT

Cloud storage as one of the most important services of cloud computing helps cloud users break the bottleneck of restricted resources and expand their storage without upgrading their devices. In order to guarantee the security and privacy of cloud users, data are always outsourced in an encrypted form. However, encrypted data could incur much waste of cloud storage and complicate data sharing among authorized users. We are still facing challenges on encrypted data storage and management with deduplication. Traditional deduplication schemes always focus on specific application scenarios, in which the deduplication is completely controlled by either data owners or cloud servers. They cannot flexibly satisfy various demands of data owners according to the level of data sensitivity. In this paper, we propose a heterogeneous data storage management scheme, which flexibly offers both deduplication management and access control at the same time across multiple Cloud Service Providers (CSPs). We evaluate its performance with security analysis, comparison and implementation. The results show its security, effectiveness and efficiency towards potential practical usage.

EXISTING SYSTEM

Data storage service is one of the most widely consumed cloud services. Cloud users have greatly benefited from cloud storage since they can store huge volume of data without upgrading their devices and access them at any time and in any place. However, cloud data storage offered by Cloud Service Providers (CSPs) still incurs some problems. First of all, various data stored at the cloud may request different ways of protection due to different data sensitivity. The data stored at the cloud include sensitive personal information, publicly shared data, data shared within a group, and so on. Obviously, crucial data should be protected at the cloud to Prevent from any access of unauthorized parties. Some unimportant data, however, have no such a requirement.

DISADVANTAGES

- Encrypted data could incur much waste of cloud storage and complicate data sharing among authorized users.
- We are still facing challenges on encrypted data storage and management with deduplication.

PROPOSED SYSTEM

We motivate to save cloud storage across multiple CSPs and preserve data security and privacy by managing encrypted data storage with deduplication in various situations. We propose a heterogeneous data management scheme to support both deduplication and access control according to the demands of data owners, which can adapt to different application scenarios. Our scheme can support data sharing among eligible users in a flexible way, which can be controlled by either the data owners or other trusted parties or both of them. We justify the performance of the proposed scheme through security analysis, comparison with existing work and implementation based performance evaluation.

ADVANTAGES

- Flexible cloud data deduplication and access control.

- Our scheme is secure, advanced and efficient.

SYSTEM REQUIREMENTS

➤ **H/W System Configuration:-**

- Processor - Pentium –IV
- RAM - 4 GB (min)
- Hard Disk - 20 GB
- Key Board - Standard Windows Keyboard
- Mouse - Two or Three Button Mouse
- Monitor - SVGA

➤ **S/W System Configuration:-**

- Operating System : Windows 7 or 8 32 bit
- Application Server : Tomcat5.0/6.X
- Backend coding : Java
- Tool : Virtual Box
- Environment : Ubuntu
- Technology : Hadoop