

Secure Big Data Storage and Sharing Scheme for Cloud Tenants

Objective:

The objective of this system is to store and process Big data for its tenants and classical security mechanisms using encryption are neither sufficiently efficient nor suited to the task of protecting big data in the Cloud.

ABSTRACT:

The Cloud is increasingly being used to store and process big data for its tenants and classical security mechanisms using encryption are neither sufficiently efficient nor suited to the task of protecting big data in the Cloud. In this paper, we present an alternative approach which divides big data into sequenced parts and stores them among multiple Cloud storage service providers. Instead of protecting the big data itself, the proposed scheme protects the mapping of the various data elements to each provider using a trapdoor function.

INTRODUCTION:

In modern information technology, big data is a term applied to data sets whose size is beyond the ability of commonly used software systems to store, manage, and process within a tolerable elapsed time. Big data sizes are a constantly moving target, currently ranging from a few dozen terabytes to many petabytes of data in a data center. A data center mainly focuses on the storing and processing of big data sets, real-time data mining, and streaming media delivery etc. Data-intensive applications and research will be integral to many future scientific endeavors, but will demand specialized security mechanisms to make data centers efficient and secure. In addition, the research community now has the option of accessing storage and computing resources on demand, and the IT industry is currently building multiple big data centers for social networks

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and applications. Consequently, large amounts of clients' private and secret data (including meta-data) will be stored in data centers, and will need protection during processing and transmission. Thus, data centers should be able to provide efficient security, access, and update mechanisms to not only huge files running into petabytes, but also to small files that are only a few hundred bytes. In all the above cases, determining how to design a secure and efficient scheme for tenants to access their data on the data center storage is crucial.

TECHNOFIST