Abstract

Cloud computing is a model for enabling everywhere, well-located, on-demand network access to a shared pool of composable computing resources (e.g., servers, networks, applications, and services). Mainly users can digress the support and maintenance of IT services to cloud service providers which is expert in providing knowledge and also maintains the vast amount of IT resources. Just like a double-bladed sword, cloud computing also brings in many new security challenges to ensure the protection of confidentiality and to preserve the integrity of users’ data in the cloud. To resolve these problems, this work uses the technique of secret key based symmetric key cryptography which enables TPA to perform the auditing task without demanding the local copy of user’s stored data and thus severely reduces the computation and transmission overhead as compared to simple, straightforward data auditing approaches. Thereby integrating the encryption with hashing, this work guarantees that the TPA could not learn any knowledge about the data content that is stored in the cloud server during the auditing process.
References


Index Terms

Computer Science Distributed Systems

Keywords

Cloud computing, Cloud, TPA, Cryptography