A Light Weight Single Parametric Approach Based Secure Computing For Dynamic Data Management In Multi Clouds With Public Auditing

V Joseph Michael Jerard
Research scholar, Karpagam University, Coimbatore, Tamil Nadu, India.
Dr. Nedunchezhian M.E. Ph.D.,
Principal, Sri Ranganathar Institute of Engineering and Technology, Athipalayam, Coimbatore, Tamil Nadu, India

Abstract

The loosely coupled nature of cloud environment is more prone for various threats while providing dynamic access to many users. The cloud users are able to access the data available in the cloud through set of services and the data modified has to be reflected to the others at the next visit. The cloud has to provide a view that everyone views the same copy of information called public auditablity. There are many approaches has been discussed earlier to provide dynamic data management and to maintain the public auditability, but suffers with the problem of verification overhead and time complexity. To overcome the above said problem, we propose a novel light weight single parametric approach to perform secure computing in cloud environment. The cloud server generates a group key and private key for the client using a single parametric hashing function which is given to the user. The user will be allowed to perform modification based on private key and group key. Unlike block based or attribute based encryption the proposed method verifies the user identity using a light weight hashing function. We introduce a dynamic paging technique which performs data management. The proposed approach reduces the overhead of verification and reduces the time complexity also.

Key Words: Public Auditability, Data Management, Secure Computing, Multi Cloud, Dynamic Paging.

Introduction

The growth of information needs more space, which cost more and which is not feasible for the small scale organizations and individual users. The entry of cloud environment has provided the way for them to store and retrieve their information with little payment. The cloud service provider provides set of services for the users