Cloud-Based Data Security with Efficient Revocable Multi-Authority Attribute Encryption

E Ramkrishna[1] and Dr. Narender Kumar[2]

Research Scholar, Department of Computer Science and Engineering[1]

Supervisor, Department of Computer Science and Engineering[2]

NIILM University, Kaithal, Haryana, India

Abstract*: For safe data storage in clouds, we deployed a decentralized access control system that provides user identification, key creation and administration, and multi-authority data storage and retrieval. In a multi-authority system, many authorities may access the same data copy, but only under different attribute regulations. Ciphertext-Policy Attribute based Encryption (CP-ABE) is regarded as one of the finest methods for data access control in cloud storage because it gives data owners more direct control over access limits. However, due to the attribute revocation issue, directly adapting known CPABE approaches to data access control for cloud storage systems is difficult. We are largely focusing on revocable multi authority scheme with the aid of CPABE algorithm in the recommended system to construct an expressive, effective, and revocable data access control scheme for multi-authority cloud storage systems with data mirroring. We explicitly propose and employ a revocable multiauthority CP-ABE scheme as the basic techniques for developing the data access control system. Our attribute revocation method includes data mirroring, forward security, and reverse security.*

Keywords: Access Control, Multi-Authority, CP-ABE, Attribute Revocation, Cloud Storage