



**RESEARCH ARTICLE**

# A SECURE CLOUD WITH ADDITIONAL LAYER OF PROTECTION AND USER AUTHENTICATION

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*Abstract— Cloud storage is a model of networked online storage where data is stored in virtualized pools of storage which are generally hosted by third parties. Security is considered to be one of the most critical aspects in a cloud computing environment due to the sensitive and important information stored in the cloud for users. In order to protect data in cloud we use a secured system which is an extension of FADE (File Assured Deletion) system proposed earlier. In FADE system we associates policy to each file whenever it is stored into the cloud and assured deletion makes the file completely unrecoverable upon the revocation of the policy associated with the file. All keys related to the file encryption and decryption operations are self-maintained by a quorum of key managers that are independent of third-party clouds, with this we also encrypt the file with long term secret key in order to provide an additional layer of protection for the file and also we authenticate every user who request for the access to file. We implement this new FADE version and conduct evaluation atop windows azure cloud to demonstrate that FADE provides security protection for outsourced data.*

*In this paper, we would like to overcome weaker areas of FADE and design an even more security and also provide solution for reducing the overhead in FADE.*

**Key Terms:** - Access control; Policy-based File Assured Deletion; cloud storage

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