

INDEMNIFYING THE CONFIDENTIALITY CONCERN OF CLOUD COMPUTING THROUGH IMPLEMENTATION OF A CIPHER CLOUD

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ABSTRACT

The cloud computing technology has brought a new era of computing with abundant benefits and ease of operations hiding all the underlying complexities thus providing an efficient platform for all categories of users. Despite of all the assets of cloud computing, its security hinders in its widespread adoption. Among the major deployments of cloud computing i.e. public cloud deployment and private cloud deployment. Private cloud is more secure as it is maintained within the organisation that is using it but at the same time setting up a private cloud infrastructure is an expensive approach. Public cloud is reasonably cost effective due to negligible infrastructure and maintenance cost but it is more vulnerable to security violations. Users need not opt for private clouds if privacy of user data is ensured in public cloud deployment.

This paper has focused on the confidentiality issues in public cloud computing environment and to overcome the same, a secure cloud architecture is proposed that enables the user to take full control and ownership of its respective data in public cloud environment. In order to achieve this, hash embedded cryptographic standards have been used, which ensures that the data remains confidential in transit as well as at rest.

KEYWORDS: Cloud Computing Security, Cipher Cloud, Confidentiality, Cryptographic Standards