

Use of Cryptography in Cloud Computing

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Abstract—Cloud computing is a platform for expanding capabilities and developing potentialities dynamically without employing new infrastructure, personnel, or software systems. In Addition, cloud computing originated from a commercial enterprise concept, and developed into a flourishing IT invention. However, given that considerable information on individuals and companies are identified in the cloud, concerns have been raised regarding the safety of the cloud environment. Despite the hype surrounding cloud computing, customers remain reluctant to deploy their commercial enterprise into the cloud. Nevertheless, lack of protection is the only major concern that hinders increased use of cloud computing. Furthermore, the complexity with which cloud computing manages data secrecy, and information security makes the market hesitant about cloud computing. The architecture of cloud models threatens the security of existing technologies when deployed in a cloud environment. Thus, users of cloud services should know the dangers of uploading data into this new environment. Therefore, in this paper different cryptography aspects that pose a threat to cloud computing are reviewed. This paper is a survey of specific security issues brought by the use of cryptography in a cloud computing system.

Index Terms— Cloud encryption, cryptographic algorithms, cloud security infrastructure.

Fig. 1. Cloud computing