

# A Survey on Digital Signature with RSA encryption algorithm to enhance the Data security of cloud in cloud computing

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**Abstract** - Nowadays cloud computing has been used by many organization, by cause of its benefits like total cost decrease and ease of access of data. Data security is very useful concern of cloud computing. There are several advantages by using cloud computing. A cloud is forthcoming generation platform which provide reliability, availability, scalability. By using digital signature public key cryptography is considered as very important and useful tool to achieve data security. Cryptography is knowledge of protecting the data or information for providing encryption techniques.

**Index Terms** - Cloud computing, digital signature, RSA.

## I. Introduction

Cloud computing is network of remote servers hosted on internet to storing, managing and processing information or data instead of local server or pc. Cloud computing has been used by many organizations because its benefits like reducing cost, etc. Cloud computing gather all the computing resources and handle them automatically through software. In the process of data analysis, it integrates the history data and present data to make the gathered information more accurate and provide more intelligent service for users and enterprises [2]. Cloud computing is collection of scalable resources and computing which provides services to the users with the ‘‘pay only for use’’ strategy [3].

Cloud computing provides advantages like ease of use, rapid elasticity, resource pooling and pay per use. Data security is one of the most important concerns in the real world as well as online systems.

There are many benefits by using cloud computing the security breaches make some of the users to move out of using it, as they share confidential data with cloud storage providers but they may be untrusted. The evolution of network and communication technology brings huge benefits for society. Cloud computing makes user to get service anywhere, through any kind of terminal. You can complete all you want through net service using a notebook PC or a mobile phone [6].

## II. Literature Survey

Security is one of the emerging concerns in the real world as well as online systems. Human identification and authentication is an important aspect for the surveillance systems as well as online security systems. The identification of a person can be defined by the uniqueness of the person; to measure the uniqueness digital signature used Within the cloud computing world, the virtual environment lets user access computing power that exceeds that contained within their own physical worlds In Cloud computing, we have problem like security of data, files system, backups, network traffic, host security. Here we are proposing a concept of digital signature with RSA algorithm, to encrypting the data while we are transferring it over the network [2].

By referring this paper concludes that cloud computing provides easy and scalable environment.

This Most of the security schemes in cloud environment had not addressed the privacy preserving between third party auditor and the data in the cloud the basic level in achieving a secure system is to provide user authentication, many techniques are implemented for providing such authentication for achieving authentication of user’s cryptographic techniques and protocols are used cloud servers are ready for various types of attacks that can cause data loss or leakage [3].

In paper [3] there will be one drawback is more than 100mb file cannot be uploaded at particular time.

Integrity, in terms of data security, is nothing but the guarantee that data can only be accessed or modified by those authorized to do so, in simple word it is process of verifying data. Data Integrity is very important among the other cloud challenges. Cloud computing is a system for empowering ubiquitous, convenient, on-demand network access to shared & configurable computing resources that can be swiftly provisioned and freed with marginal management effort or service provider interface One of the important concerns in the cloud computing that need to be addressed is to assure the customer of the integrity [4].

Much of the data stored in clouds is highly sensitive, for example, medical records and social networks. Achieving privacy and security on the data is very important, for that authentication and access control techniques are used. Security and storage issues are addressed simultaneously based on some criteria like type of architecture, access control methods and the authentication techniques. The key distribution is done in distributed way by implementing multiple KDC structure. For ensuring data security the data needs to be encrypted for which strong cryptographic algorithm should be implemented. The cloud service provider must confirm that data are secure from other users, attackers and customers [5].

Cloud computing is the Concept Implemented to decipher the Daily Computing Problems, likes of Hardware Software and Resource Availability. The cloud provides platform that provides effective resource pools, virtualization, and high availability. Among the many IT giants driven by trends in cloud computing has not doubtful. For enterprises, cloud computing is worthy of consideration and try to build business systems as a way for businesses in this way can undoubtedly bring about lower costs, higher profits and more choice; for large scale industry A highly scalable, pluggable and faster cloud based online signature recognition system which is

capable of operating on enormous amounts of data, which, in turn, induces the need for sufficient storage capacity and significant processing power. The clouds will grow in size as soon as available bandwidth and the corresponding service model mature enough, cloud computing will bring a revolutionary change in the Internet [6].

A paper [6] describes how signature will be obtained via digitizing tablet, and how they will be stored in blob storage on cloud.

### III. Conclusion

In cloud computing, data security is most important and challenging concerns and illuminates security issues. By studying papers, recently many security algorithms are used such as RSA, AES, DES, and Blowfish to solve computational problems. By studying this papers realize that security of data in cloud computing is very essential for protecting information or data.

### IV. References

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