

## Secured Scheme for Preserved Data on Cloud Storage Using Computational Intelligence in Fog Computing

D. Gajalakshmi<sup>1</sup>, G. Keerthana<sup>1</sup>, Dr. A. Velmurugan,<sup>2</sup>

<sup>1</sup>(UG student, final year CSE department, Dhanalakshmi Srinivasan college of engineering and technology)

<sup>2</sup>(Professor, Department of computer science and engineering  
Dhanalakshmi Srinivasan college of engineering and technology)

---

**Abstract:** The grounds which has been owned by their respective owners in the better and suitable place to enroll all subtleties in paper it self. When enlisting in paper a portion of people can fabricate that documentation as equivalent unique report they do archive in off chance additionally get an opportunity to have same like it. In order to overcome the down time we will actualize in proposed framework that the land how to be enlisted by utilizing scope and longitudinal. When client logged in they need to choose the record to enlist by utilizing of guide in the document to check the scope and longitudes to take. The client need to transfer every one of the subtleties while transfer time in administrator information base. If the client enrolled in that equivalent they can send a demand while sending time on the off chance that the land proprietor acknowledge asked for they can get the document as a client in the event that they need to get the document.

---

### I. Introduction

#### GENERAL:

Concrete made with Portland cement has certain characteristics. It is relatively strong in compression but weak in tension and tends to be brittle. These two weaknesses have limited its use. Another fundamental weakness of concrete is that cracks start to form as soon as concrete is placed and before it has properly hardened. These cracks are major cause of weakness in concrete particularly in large onsite applications leading to subsequent fracture and failure and general lack of durability. The weakness in tension can be overcome by the use of conventional rod reinforcement and to some extent by the inclusion of a sufficient volume of certain fib res.

#### OBJECTIVE:

In order to solve this problem, we propose a three-layer storage framework based on fog computing. The proposed framework can both take full advantage of cloud storage and protect the privacy of data. Besides, Hash-Solomon code algorithm is designed to divide data into different parts. Then, we can put a small part of data in local machine and fog server in order to protect the privacy. Moreover, based on computational intelligence, this algorithm can compute the distribution proportion stored in cloud, fog, and local machine, respectively. Through the theoretical safety analysis and experimental evaluation, the feasibility of our scheme has been validated, which is really a powerful supplement to existing cloud storage scheme.

#### 3DOMAIN OVERVIEW CLOUD COMPUTING:

Cloud computing is a computing paradigm, where a large pool of systems is connected in private or public networks, to provide dynamically scalable infrastructure for application, data and file storage. With the advent of this technology, the cost of computation, application hosting, content storage and delivery is reduced significantly. cloud computing is a practical approach to experience direct cost benefits and it has the potential to transform a data center from a capital-intensive set up to a variable priced environment. The idea of cloud computing is based on a very fundamental principal of reusability of IT capabilities. The difference that cloud computing brings compared to traditional concepts of grid computing, distributed computing, utility computing, or autonomic computing is to broaden horizons across organizational boundaries. Forrester defines cloud computing as a pool of abstracted, highly scalable, and managed compute infrastructure capable of hosting end customer applications and billed by consumption.

#### ORIGIN OF THE TERM

The origin of the term cloud computing is unclear. The expression cloud is commonly used in science to describe a large agglomeration of objects that visually appear from a distance as a cloud and describes any set of things whose details are not inspected further in a given context. Another explanation is that the old programs to draw network schematics surrounded the icons for servers with a circle, and a cluster of servers in a network

diagram had several overlapping circles, which resembled a cloud. In analogy to above usage the word cloud was used as a metaphor for the internet and a standardized cloud like shape was used to denote a network on telephony schematics and later to depict the internet in computer network diagrams. With this simplification, the implication is that the specifics of how the end points of a network are connected are not relevant for the purpose of understanding the diagram. The cloud symbol was used to represent the internet as early as 1994, in which servers were then shown connected to, but external to the cloud. References to cloud computing in its modern sense appeared early as 1996, with the earliest known mention in a Compaq internal document. The popularization of the term can be traced to 2006 when amazon.com introduced the elastic compute cloud.

#### **CLOUD COMPUTING MODELS:**

Cloud Providers offer services that can be grouped into three categories.

#### **SOFTWARE AS A SERVICE (SaaS):**

In this model, a complete application is offered to the customer, as a service on demand. A single instance of the service runs on the cloud & multiple end users are serviced. On the customer's side, there is no need for upfront investment in servers or software licenses, while for the provider, the costs are lowered, since only a single application needs to be hosted & maintained. Today SaaS is offered by companies such as Google, Sales force, Microsoft, Zoho, etc.

#### **PLATFORM AS A SERVICE (PaaS):**

Here, a layer of software or development environment is encapsulated & offered as a service, upon which other higher levels of service can be built. The customer has the freedom to build his own applications, which run on the provider's infrastructure. To meet manageability and scalability requirements of the applications, PaaS providers offer a predefined combination of OS an Application servers, such as LAMP platform (Linux, Apache, MySQL and PHP), restricted J2EE, Ruby etc. Google's App Engine, Force.com, etc. Are some of the popular PaaS examples.

#### **INFRASTRUCTURE AS A SERVICE (IaaS):**

IaaS provides basic storage and computing capabilities as standardized services over the network. Servers, storage systems, networking equipment, data centre space etc. are pooled and made available to handle workloads. The customer would typically deploy his own software on the infrastructure. Some common examples are Amazon, Go Grid, Tera, etc.

#### **SYSTEM ANALYSIS**

In an existing data are corrupted by the unauthenticated user with the help of the employee. In a normally the data are securely handled by the organization but some employees sold their access specifiers to the hackers for money.

#### **EXISTING SYSTEM:**

##### **DRAWBACKS IN EXISTING SYSTEM:**

- The user can only sign documents on that particular computer.
- The security of the private key depends entirely on the security of the computer.

#### **PROPOSED SYSTEM:**

In this proposed method we are using Hash-Solomon Code Algorithm to encrypt the data. Then user2 want to access the file by the permission of user1 share the authenticated key.

#### **ADVANTAGES IN PROPOSED SYSTEM:**

- The hash value is fully determined by the data being hashed The hash function uses all the input data.
- The hash function "uniformly" distributes the data across the entire set of possible hash values.

#### **REQUIREMENTS SPECIFICATION**

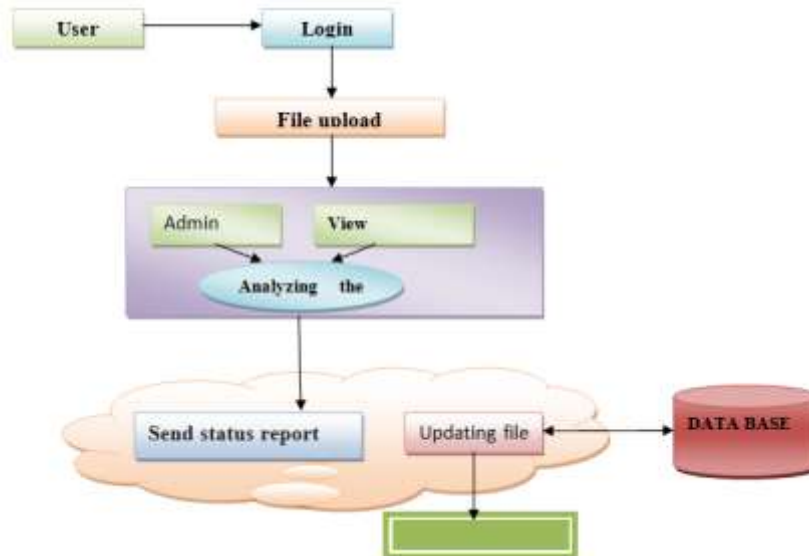
##### **SYSTEM SPECIFICATION:**

The requirements specification is a technical specification of requirements for the software products. It is the first step in the requirements analysis process it lists the requirements of a particular software system including functional, performance and security requirements. The requirements also provide usage scenarios from a user, an operational and an administrative perspective.

**HARDWARE REQUIREMENTS:**

The hardware requirements may serve as the basis for a contract for the implementation of the system and should therefore be a complete and consistent specification of the whole system. They are used by software engineers as the starting point for the system design. It shows what the system does and not how it should be implemented.

**SYSTEM ARCHITECTURE:**



**II. Conclusion**

In this paper development of cloud computing brings us a lot of benefits. Cloud storage is a convenient technology which helps users to expand their storage capacity. However, cloud storage also causes a series of secure problems. When using cloud storage, users do not actually control the physical storage of their data and it results in the separation of ownership and management of data. In order to solve the problem of privacy protection in cloud storage, we propose a TLS framework based on fog computing model and design a Hash-Solomon algorithm. Through the theoretical safety analysis, the scheme is proved to be feasible. By allocating the ratio of data blocks stored in different servers reasonably, we can ensure the privacy of data in each server. On another hand, cracking the encoding matrix is impossible theoretically. Besides, using hash transformation can protect the fragmentary information. Through the experiment test, this scheme can efficiently complete encoding and decoding without influence of the cloud storage efficiency. Furthermore, we design a reasonable comprehensive efficiency index, in order to achieve the maximum efficiency, and we also find that the Cauchy matrix is more efficient in coding process.