Attribute Based Secured Approach for Data Retrieval Using an Efficient Search Algorithm

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Abstract
Now a day's many people uses cloud storage not only individuals but many companies also uses cloud storage. Cloud is very easy, so because of this reason most of the people use it. The data stored in cloud should be in a safe manner. Instead of storing the data directly on the personal device drive on the electronic device to store it in the cloud for better and good security purposes. Cloud data can be accessed via internet through service provider. The most challenging task in cloud storage is the secured search on encrypted cloud data. Here to overcome some security problems each data owner utilizes the key to encrypt their data files. Many cloud data owners outsourcing their information to the cloud providers. For security purpose sensitive information in the cloud is encrypted earlier than outsource the data. Different types of searching schemes used to make sure the availability of the data. But the existing techniques do not pay more attention to the effectiveness of the users request during multiple owner situations. This paper proposed a new searching concept with attribute algorithm

1. Introduction

Cloud technology is one of the emerging technologies in this current scenario. It provides various facilities to the data owners like computing facility and storage facility. Due to that reason most of the organizations migrated from existing technology to current cloud technology. Business organizations transfer data from their local server to new cloud server. Because cloud provides large amount of storage facility based upon their users demand. Cloud storage is very easy because access, resource management and because of its low cost.

With the development of cloud storage, more data owners are inclined to outsource their data to cloud services. For example to secure the data cipher-text security is implemented. This is a technique which is used to provide security for the data.

The remaining part of the paper can be arranged as: section 2 reviews the various concepts are used elated to multikeyword search. Section three deals with the proposed architecture and fourth section demonstrate the expected outcome of the proposed system. Section 5 concludes the current article.

2. Literature Survey

Many organizations are using cloud technology to store their company information. Individuals are also using cloud technology to store their data. Due to the easiness of cloud storage large amount of people using this cloud storage facility. Cloud data contains secret information also. So, protected storage facility and secured information extraction is also required in cloud concept. Large number of searching concepts is used to search the content from the cloud storage. But they do not provide the better security. Roshni Rajendran et al., proposed a new search concept in

the event of multiple information owners. To improve the confidential level tree based raking method is used in this scheme. Here TF-IDF concept is used to construct a model and provide a better search result. DFS searching concept is also used to find the information from the cloud [1].

Due to the development of cloud concept many information owners are ready to outsource their data into the cloud storage. For security purpose sensitive data can be encoded and stored on the cloud. Many encryption methods are used to convert the data. But they are not providing more concentration about effectiveness of user's request. Tianyue Peng et al., developed a new method TBMSM in the situation of multiple owners. Here the authors used a new privacy protocol based upon bilinear association. To improve the efficiency level of the searching technique index can be created based on tree concept. The server can combine indexes with the help of DFS algorithm to search the specific data. Finally the output of the proposed method shows it is provides better performance in terms of efficiency and security level [2].

Cloud technology becomes more popular for information owners. Information owners storing their own data on the cloud and provide the rights to retrieve the data. Cloud technology provides large number of advantages like flexibility and cost saving. Due to this reason many information owners outsourcing their personal data in the cloud. But in the real situation cloud does not provide a better security policy. Vanita Gadekar et al., analyzes security scheme called PRMSM. After that they propose a new searching protocol for privacy preservation [3].

Most of the business organizations move their data into cloud server. Because cloud technology has provides various benefits such as less cost, scalability and access the information from anywhere in the world. But personal data like electronic mail, sensitive health data and Government records are decrypted prior to outsourcing. Sonam.K.Darda et al., presented a new Markle tree concept with encryption based on attributes. This proposed algorithm attained less search time and flexibility of insert and delete documents. Proposed method provides better access control and high degree security on information gathering [4].

With the fast growing of multimedia concept, large amount of multimedia information are created and transferred via internet. Using internet facility the users can easy to access the data. But this digital data can copy and modified by unknown users easily. Mr. Vaibhav Sawalkar et al., proposes a new system to develop a search protocol in secure manner. Secret keys are used to protect the data from the attackers [5].

Multi keyword searching algorithms are return better rest over encoded information. Most of the searching algorithms are constructed by using KNN concept. It contains various limitations and it is very difficult to implement on practical data. Yang Yang et al., proposes new searching scheme. It does not need an inbuilt reserved words and supported words. This new scheme achieves better privacy protection. This proposed scheme can be implemented successfully and tested with real time data. It shows the better performance in term of efficiency [6].

Cloud provides better platform to save information and delivers various services based on users demand. Due to this reason many data owners in the world save the information on the cloud. To improve the protection level of the data encryption of information may be done. Prior to outsource the data the encryption process can be applied. Kavya et al., developed a multi keyword searching concept using RSA security technique. RSA algorithm is used to key generation process. Here the authors implemented coordinate matching concept to improve the efficiency of the searching algorithm. To improve the efficiency of the proposed algorithm index can be created by using tree structure [7].

Cloud technology is important for saving personal data. In cloud the amount of information can be increased day by day. Cloud users are dumping the data on the cloud to protect the data from third party users. Normally the searching algorithm uses Boolean words to encrypt the data. Due to the large number of users the traditional methods are not able to protect the data on cloud. Shridevi Soma et al., developed a new systematic concept to search multiple word on the cloud server with encrypted data. CPABE algorithm concept is used do the encryption process of information. Final output shows the better accuracy level 95% with 1000 data size [8].

Pawar Supriya et al., introduces new searching algorithm on cloud over encrypted data. Here TF-IDF copy can be integrated with index structure and query creation. Due to the growth of the cloud technology many information owners outsource their personal and organization data move to the cloud. The data must be encoded before move to the cloud. Here the authors developed index value based on tree structure and suggest greedy DFS concept to offer multi reserved word search [9].

ith the development of information technology cloud concept is one of the major concepts accepted by many people. Most of the cloud servers serve their services to multiple owners. Wei Zhang et al., proposes a new scheme to contract with privacy multi keyword search. Here the authors propose a novel preserving method to provide the rank of search output. A new key creation concept and new protocol can be proposed here to ensure security. This method is implemented and tested with real time data. The performance can be evaluated in terms of efficiency [10].

3. Proposed Methodology

Due to the growth of communication technology cloud concept plays a important role in various fields. Many individuals and business people can move their personal and organizations data into the cloud. Because cloud provides better storage facility and computing power based on the users demand. But security is the important problem in cloud. This multi keyword searching using attribute provides more secure than existing security methods. The following figure 1 shows the block diagram of proposed system. By using this system the data owners encrypt the data before move to the cloud storage. They generate the index file also and move the index value with encrypted data into the cloud server. Cloud server stores the user's information. It also contains proposed multiple keyword ranked search for multiple owner in cloud using attribute algorithm also.
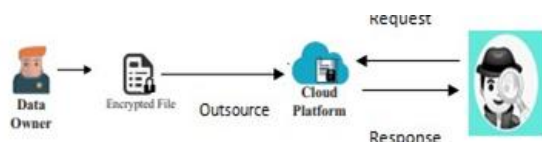

Figure 1: Block Diagram of Proposed System

The encrypted data is stored on the cloud. The user can issue the result to the cloud. The cloud server returns the appropriate data to the user.

4. Results and Discussions

Business people transfer their data from local system to cloud. As cloud concept provides large amount of storage facility and computing power. It provides the facility based on users demand. Healthcare organizations also move the patient data from hospital server to cloud server. But cloud server contains sensitive data also. Proper security policies are not available to secure the sensitive type of data in cloud. For single data, many owners are available on the cloud. This proposed method offers better security service compared with other security concepts. Before storing the data on the cloud the data can be encrypted by using security algorithms. The following screen shot 2 shows the results of the proposed scheme. Figure 1 demonstrates the login page. Using this login page the user can register by using their username and password.
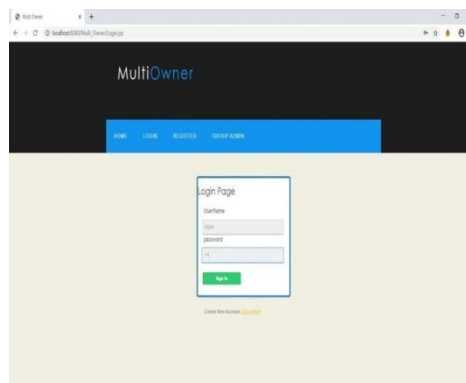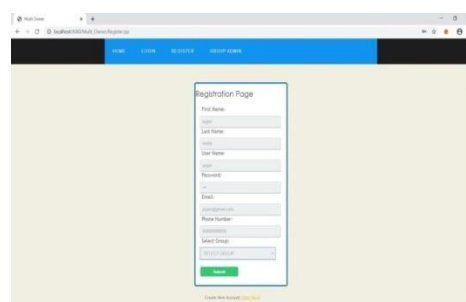

Figure 2: a) Login Page

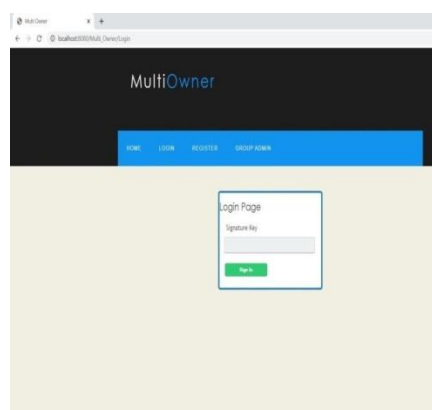Figure 2: b) Registration Page

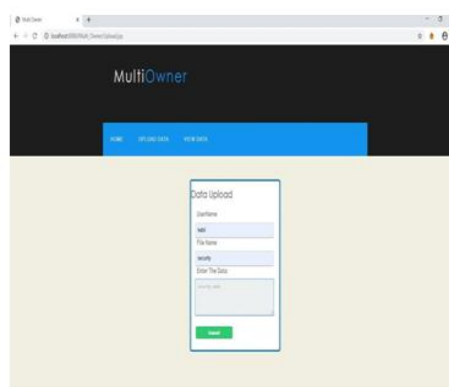Figure 2: c) Login Page with Security Key
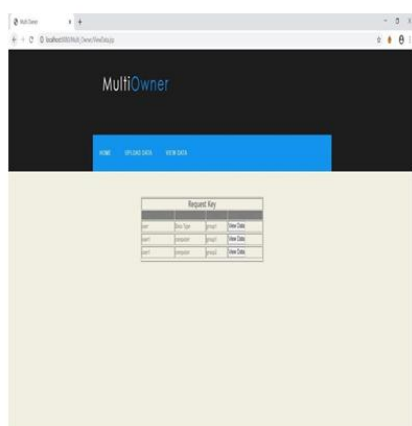

Figure 2: d) Data Upload
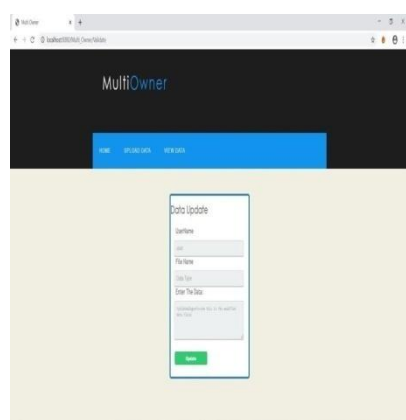
Figure 2: e) Request Key
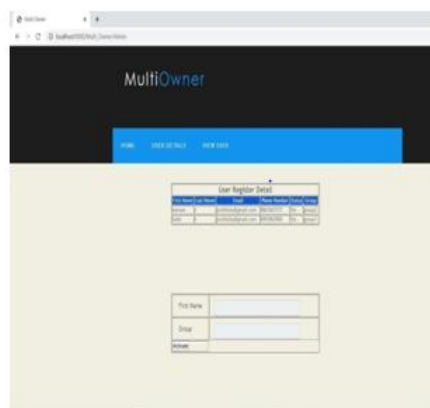

Figure 2: f) Data Update

Figure 2: g) Users Registered details

The entire system can be implemented by using java programming language. The cloud user can be registered with the fields such as user's personal information and group details. Before outsourcing data on the cloud the data can be encoded by security algorithms.

5. Conclusion

Cloud provides large amount of storage to store personal and organization information. Due to this reason various business organizations store their details on the cloud. Each data file contains more than one owner. Privacy and security is the major problem in cloud storage. Many searching algorithms are used to retrieve the data from the cloud. But the existing methods do not provide better result. Here new scheme can be introduced for security. The data owners encrypt their data before store the data on the cloud. Security algorithms are used to encrypt the data. The user can search the data from the cloud server. The cloud server generates the relevant data and sends it to the user. Compare to other searching methods this proposed method is more secured. This proposed system can be implemented by using java programming and it is tested with real time data.

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