BVRIT HYDERABAD
College of Engineering for Women
Department of Information Technology
Major Project - Academic Year 2019-20

TEAM 7

SEMANTIC AWARE SEARCHING OVER ENCRYPTED DATA FOR CLOUD COMPUTING

Abstract

With the increasing adoption of cloud computing, a growing number of users outsource their datasets to cloud. To preserve the privacy, the datasets are usually encrypted before outsourcing. However, the common practice of encryption makes the effective utilization of the data difficult. For example, it is difficult to search the given keywords in encrypted datasets. Many schemes are proposed to make encrypted data searchable based on keywords. However, keyword-based search schemes ignore the semantic representation information of users retrieval, and cannot completely meet with users search intention. Therefore, how to design a content-based search scheme and make semantic search more effective and context-aware is a difficult challenge. To further improve the search efficiency, we utilize a tree-based index structure to organize all the document index vectors.

Modules

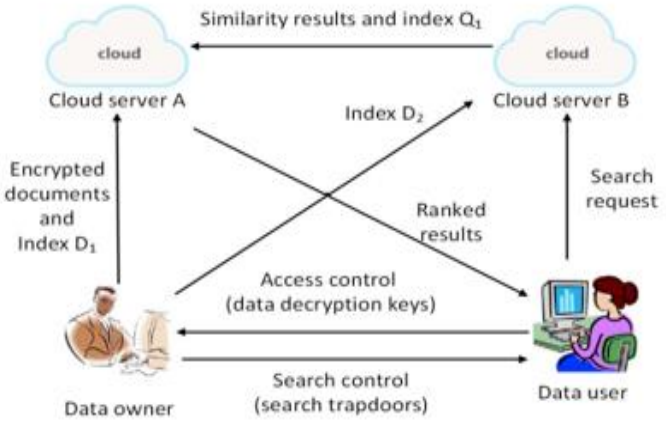
Data Owner

Data User

Cloud A

Cloud B

Architecture



Tools and Technologies

- **Java**
- **MySQL**
- **NetBeans7.2.1**
- **SQLyog**
- **AWS**

Conclusion and Future Scope

Our solutions use two cloud servers for encrypted retrieval and make contributions both on search accuracy and efficiency. To improve accuracy, we extend the concept hierarchy to expand the search conditions.In addition, a tree-based index structure is constructed to organize all the document index vectors, which are built based on the concept hierarchy for the aspect of search efficiency. The future scope of the project is that, as the difficulty to search the given keywords in encrypted data sets is solved here. We aim to implement a search scheme which is more accurate and efficient in a homomorphically encrypted cloud environment.

Guide

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