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# An Analysis of Several Keyword-Based Search Methods for Encrypted Data

**Dr. M. Mohamed Ismail1 and Dr. P. Rizwan Ahmed[2]**
Associate Professor, Department of Computer Science[1]
Asst. Professor & Head, Department of Computer Applications[2]
Mazharul Uloom College, Ambur, Tamil Nadu, India

**Abstract:** *Cloud computing provides several attractive benefits for users like on-demand computing, pay as per use. It brings great convenience to consumers; where shared resources, data and information are provided to computers on-demand and consumer has to pay as per use. Ideally for these services, consumers should be in a position to verify the charges billed to them. Cloud computing and storage solutions provide users and enterprises with various capabilities to store and process their data. But on other hand consumers are facing serious difficulties that how to search the most suitable services from cloud. It is desirable to store data on data storage servers such as mail servers and file servers in encrypted form to reduce security and privacy risks. Encryption is the process of encoding messages or information in such a way that only authorized parties can read it. Multiple encryption techniques are invented to encrypt the data. That way encrypted search has become an important problem in security. This is due to a combination of three things: (1) search is now the primary way we access our data; (2) we are outsourcing more and more of our data to third parties; and (3) we trust these third parties less and less. Because of this, the problem of encrypted search is now of interest to many sub-fields in computer science (e.g., databases, security, cryptography, privacy). Some existing methods are more practical than others, some are more secure than others and some are more functional or flexible. These schemes do not support verifiability of search result. To save computation cost or download bandwidth it is viewed as, selfish cloud server only conducts a fraction of search operation or semi-honest-but-curious server return a part of result. To tackle such challenges, multiple search scheme are invented.*

**Keywords:** Consumer-centric cloud computing; privacy preserving; verifiable search; Encryption; Decryption

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