

## **Formulating a security layer of cloud data storage framework based on multi agent system architecture.**

### **ABSTRACT**

The tremendous growth of the cloud computing environments requires new architecture for security services. In addition, these computing environments are open, and users may be connected or disconnected at any time. Cloud Data Storage, like any other emerging technology, is experiencing growing pains. It is immature, it is fragmented and it lacks standardization. To verify the correctness, integrity, confidentiality and availability of users' data in the cloud, we propose a security framework. This security framework consists of two main layers as agent layer and cloud data storage layer. The propose MAS architecture includes five types of agents: UserInterface Agent (UIA), User Agent (UA), DER Agent (DERA), Data Retrieval Agent (DRA) and Data Distribution Preparation Agent (DDPA). The main goal of this paper is to formulate our secure framework and its architecture.

**Keyword:** Cloud computing; Multi-agent system; Cloud data storage; Security framework; Cloud service provider.