**P-MOD: Secure Privilege-Based Multilevel Organizational Data-Sharing in Cloud Computing**

**Abstract:**

Cloud computing has changed the way enterprises store, access and share data. Big data sets are constantly being uploaded to the cloud and shared within a hierarchy of many different individuals with different access privileges. With more data storage needs turning over to the cloud, ﬁnding a secure and efﬁcient data access structure has become a major research issue. In this paper, a Privilege-based Multilevel Organizational Data-sharing scheme (P-MOD) is proposed that incorporates a privilege-based access structure into an attribute based encryption mechanism to handle the management and sharing of big data sets. Our proposed privilege-based access structure helps reduce the complexity of deﬁning hierarchies as the number of users grows, which makes managing healthcare records using mobile healthcare devices feasible. It can also facilitate organizations in applying big data analytics to understand population sin aholistic way.Security analysis shows that P-MOD is secure against adaptively chosen plaintext attack assuming the DBDH assumption holds. The comprehensive performance and simulation analyses using the real U.S. Census Income data set demonstrate that P-MOD is more efﬁcient in computational complexity and storage space than the existing schemes.

**SYSTEM REQUIREMENTS:**

**HARDWARE REQUIREMENTS:**

* System : Pentium Dual Core.
* Hard Disk : 120 GB.
* Monitor : 15’’ LED
* Input Devices : Keyboard, Mouse
* Ram : 1 GB

**SOFTWARE REQUIREMENTS:**

* Operating system : Windows XP/UBUNTU.
* Implementation : NS2
* NS2 Version : 2.28
* Front End : OTCL (Object Oriented Tool Command  Language)
* Tool : Cygwin (To simulate in Windows OS)