

107. DELEGATION AND REVOCATION SCHEME FOR DEALING WITH EMERGENCY HEALTH-RELATED SERVICES IN DISTRIBUTED MHEALTHCARE CLOUD COMPUTING SYSTEM

Sangeetha.J*1, Aditya.P*2, Dr.R.Lalitha*3,

*Department of Computer Science, Rajalakshmi Institute of Technology

Chennai, Tamil Nadu, India

1sangeetha.j.2011.cse@ritchennai.edu.in

2aditya.p.2011.cse@ritchennai.edu.in

3lalitha.r@ritchennai.edu.in

Cloud computing, an emerging IT model has changed the entire computer industry with its online services. With technological developments in cloud computing, healthcare services have become systematic and suitable to patients. In a Distributed m-Healthcare Cloud Computing System, the entire patient's health-related information is stored in cloud server and is available to other healthcare centres. However, it encounters challenges of data confidentiality and privacy, especially during emergency situations. In this paper, an authorized accessible privacy model and a Patient Self-controllable and Multi-level Privacy-preserving Cooperative Authentication System are considered to develop a delegation and revocation scheme for emergency purposes. During emergency situations, this scheme can help physicians to delegate access without the need of patient to guarantee access. After the emergency case, the physician can be revoked from the access provided. This maintains data confidentiality and privacy of patient's health records. Also, this system identifies three different levels of security and privacy such as directly authorized physicians, indirectly authorized physicians and unauthorized physicians. Finally, this system can resist various kinds of attacks and outperforms previous schemes in Distributed m-Healthcare Cloud Computing System.

Index Terms - Access; Authorized; delegation; distributed cloud computing; m-healthcare system; privacy-preserving; revocation.