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ACCEPTED MANUSCRIPT

A General Framework for Secure Sharing of Personal Health Records in Cloud System

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Abstract

Personal Health Record (PHR) has been developed as a promising solution that allows patient-doctors interactions in a very effective way. Cloud technology has been seen as the prominent candidate to store the sensitive medical record in PHR, but to date, the security protection provided is yet inadequate without impacting the practicality of the system. In this paper, we provide an affirmative answer to this problem by proposing a general framework for secure sharing of PHRs. Our system enables patients to securely store and share their PHR in the cloud server (for example, to their carers), and furthermore the treating doctors can refer the patients' medical record to specialists for research purposes, whenever they are required, while ensuring that the patients' information remain private. Our system also supports cross domain operations (e.g., with different countries regulations).

Keywords: Personal Health Record, Sharing, Cloud computing

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