

A cloud computing security solution based on fully homomorphic encryption

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Abstract— With the rapid development of Cloud computing, more and more users deposit their data and application on the cloud. But the development of Cloud computing is hindered by many Cloud security problem. Cloud computing has many characteristics, e.g. multi-user, virtualization, scalability and so on. Because of these new characteristics, traditional security technologies can't make Cloud computing fully safe. Therefore, Cloud computing security becomes the current research focus and is also this paper's research direction^[1].

In order to solve the problem of data security in cloud computing system, by introducing fully homomorphism encryption algorithm in the cloud computing data security, a new kind of data security solution to the insecurity of the cloud computing is proposed and the scenarios of this application is hereafter constructed. This new security solution is fully fit for the processing and retrieval of the encrypted data, and effectively leading to the broad applicable prospect, the security of data transmission and the storage of the cloud computing^[2].

Key words— Distributed implementation、Cloud service、Cloud security、Fully homomorphic encryption;



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