Improve cloud computing security using RSA encryption with Fermat's little theorem

ABSTRACT

Cloud computing (CC) is new technology for hosting and delivering services over the Internet. It moves computing and data away from desktop and portable PCs into large data centers.CC is a Internet based computing, the entire data reside over a set of networked resources, this data can be accessed through virtual machines like i phone, PC etc.CC help to reduce hardware, maintenance and installation cost. But security and privacy is the two major issues in this field and it prevent users for trusting CC. Cloud computing share distributed resources in the open environment via the network, so it makes security problems .To keep user data highly confidentially against un-trusted servers and from malicious attacks is very important. Encryption is the one of the most secured way using prevent unauthorized access. Hence we provide a new method for Cloud Computing Security by applying RSA algorithm and Fermat's theorem together. Its help to build a new trusted cloud computing environment. By using Fermat's theorem can be speed up the RSA Encryption.

Keyword: Cloud computing; Decryption; Encryption; Fermat's little theorem; RSA