Abstract

One of the important challenges in Mobile Cloud Computing (MCC) is related to the authentication of users. There is increasing demand for suitable authentication method for accessing to the shared information via the Internet through Cloud Service Provider (CSP). Personal identification number is the most common mechanism for authentication in mobile devices; however it is not secure way for authenticating users. This work presents a method of authentication which able to identify users based on Keystroke Dynamic Authentication (KDA). Furthermore, keystrokes duration is considered as an attribute for measuring keystrokes of mobile's users. This paper proposed strong method of authentication in the password authentication scheme by combining it with keystroke authentication, which is a type of behavioral biometric mechanism. Experimental results show, the proposed method can work 97.014% correctly, due to the keystroke duration of each user depends on their behavioral characteristic and it can be measured up to milliseconds. On the other hand, if unauthorized person knows the username and password of legal user can not gain access rights because of difference between their keystroke duration. Therefore, it is hard for an attacker to pretend as an owner, and this method enhances the security of authentication in MCC.
Keystroke Dynamic Authentication in Mobile Cloud Computing

References

- Kochetkov, A. 2013. Cloud-based biometric services: just a matter of time. &quot;
Biometric Technology Today 2013, no. 5: 8-11.
- Bhatt, Sh., and Santhanam, T. 2013. Keystroke dynamics for biometric authentication—a survey. In Pattern Recognition, Informatics and Medical Engineering (PRIME), International Conference on, pp. 17-23. IEEE.

Index Terms

Computer Science
Distributed Systems

Keywords
Keystroke authentication Mobile cloud computing Biometric authentication Security and privacy