

## Study on the OTP Authentication Method and Security for User Mobility in the Cloud

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**Abstract :** Since Cloud environment has appeared as the most powerful keyword in the computing industry, the growth in VDI (Virtual Desktop Infrastructure) became remarkable in domestic market. In recent years, with the trend that mobile devices such as smartphones and pads spread so rapidly, the strengths of VDI that allows people to access and perform business on the move along with companies' office needs expedite more rapid spread of VDI. However, although this enhanced accessibility and mobility can bring the enhanced productivity, it sometimes conflicts with the security, so there should be more detailed security solution, which is user authentication. In this paper, mobile OTP (One-Time Password) authentication method is proposed to secure mobile device portability through rapid and secure authentication using mobile devices such as mobile phones or pads, which does not require additional purchase or possession of OTP tokens of users. However, in order to use the service continuously and reliably in the cloud environment, both service provider and user have to prepare for security awareness and security threats, and continuously study the conflicting aspect between the improving user convenience and the security and supplement so that cloud service can provide opportunities to develop as a new growth industry in the future and create a new market in IT industry.

**Keywords :** cloud, OTP, mobility, security, authentication

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