

Chapter 7

Security Management in Mobile Cloud Computing: Security and Privacy Issues and Solutions in Mobile Cloud Computing

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ABSTRACT

Mobile cloud computing is a technique or model in which mobile applications are built, powered and hosted using cloud computing technology. In Mobile Cloud computing we can store information regarding sender, data and receiver on cloud through mobile application. As we store more and more information on cloud by client, security issue will arise. This chapter presents a review on the mobile cloud computing concepts as well as security issues and vulnerabilities affecting Cloud Systems and the possible solutions available to such issues within the context of cloud computing. It also describes the pros and cons of the existing security strategy and also introduces the existing issues in cloud computing such as data integrity, data segregation, and security.

DOI: 10.4018/978-1-5225-0602-7.ch007

INTRODUCTION

The mobile cloud computing is a combination of three main parts; they are mobile device, cloud computing and mobile internet. With the help Mobile Cloud Computing, a mobile user gets a rich application delivered over the Internet and powered by cloud-backed infrastructure. The importance of Cloud Computing is increasing and it is receiving a growing attention in the scientific and industrial communities. A study by Gartner as per *Top 10 strategic technologies for 2011* considered Cloud Computing as the first among the top 10 most important technologies and with a better prospect in successive years by companies and organizations. Now a day's the top most popular concern for mobile user or any business is Security and protection. Major Security and protection concern are mainly for mobile computing, social networks and cloud computing. Mobile cloud computing refers to the availability of cloud computing services in a mobile environment. It incorporates the elements of mobile networks and cloud computing, thereby providing optimal services figure for mobile users.

MOBILE CLOUD COMPUTING

Mobile cloud computing at its simplest refers to an infrastructure where both the data storage and the data processing happen outside of the mobile device. Mobile cloud applications move the computing power and data storage away from mobile phones and into the cloud, bringing applications and mobile computing to not just smart-phone users but a much broader range of mobile subscribers.

Another definition given as per *Mobile Cloud Computing Solution Brief, AE-PONA* (2010) "Mobile cloud computing is a model for transparent elastic augmentation of mobile device capabilities via ubiquitous wireless access to cloud storage and computing resources, with context-aware dynamic adjusting of offloading in respect to change in operating conditions, while preserving available sensing and interactivity capabilities of mobile devices." by mobile computing, we mean that a set of users who conduct some joint computational and communication tasks based on their mobile devices.

Mobile cloud computing = mobile computing + cloud computing;

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