Chapter 6
Mobile Cloud Computing:
Applications Perspective

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ABSTRACT

Mobile Cloud Computing (MCC) which combines mobile computing and cloud computing, has become one of the industry ring words and a major conversation thread in the IT world with an explosive development of the mobile applications and emerging of cloud computing idea, the MCC has become a possible technology for the mobile service users. The concepts of Cloud computing are naturally meshed with mobile devices to allow on-the-go functionalities and benefits. The mobile cloud computing is emerging as one of the most important branches of cloud computing and it is expected to expand the mobile ecosystems. As more mobile devices enter the market and evolve, certainly security issues will grow as well. Also, enormous growth in the variety of devices connected to the Internet will further drive security needs. MCC provides a platform where mobile users make use of cloud services on mobile devices. The use of MCC minimizes the performance, compatibility, and lack of resources issues in mobile computing environment.

INTRODUCTION

Today's mobile phone users can execute a wide range of tasks by downloading applications to their receiver from online stores. These applications are called resident applications exact to the mobile operating system and they use the computing power and memory restricted in the device to run the application. In complicated applications which requires more dealing out power and memory is not suited

to run on these devices. Hence it poses a dispute for the mobile application developers to build different versions of the same application for multiple mobile operating systems and more complicated applications involve robust computing power and memory in the receiver. Cloud computing, a developing trend with which we can access a variety of services over the internet, can bring exceptional sophistication in mobile ecosystem. It can influence the power of handsets by executing the applications on the cloud as an alternative of locally running them on the mobile device. This give rise to the new term called mobile cloud computing. Mobile cloud applications can not only be accessed by smart phones, but they can also be accessed by low cost featured phones where the processing power and memory is restrained. Several views exist on mobile cloud computing. From one perspective, mobile cloud computing can be defined as an architecture where the data processing and storage happens outside of the mobile device. Mobile cloud applications move the computing power and data storage away from mobile phones into the cloud, bringing the apps and mobile computing to not just Smartphone users but a much broader range of mobile subscribers. On the other way round, mobile cloud computing can be thought of as a cloud where the cloud is formed by a group of mobile devices that share their computing power to run applications on them. By this way mobile cloud computing can bring tremendous benefits to the feature phone enabled users as equivalent to the smart phone users. Mobile computing can also mean using moveable devices to run stand-unaccompanied applications and/or accessing remote applications via wireless networks.

Nowadays, both hardware and software of mobile devices get better development than before, some smart phones such as iphone 4S, Android serials, Windows Mobile serials and Blackberry, are no longer just established mobile phones with conversation, SMS, Email and website browser, but are daily necessities to users. Meanwhile, those smart phones include various sensing modules like direction-finding, optics, significance, orientation, and so on which brings a suitable and intelligent mobile experience to users. In 2010, Google CEO Eric Schmidt described mobile cloud computing in a discussion that 'based on cloud computing service development, mobile phones will become more and more complicated, and evolve in the direction of a transportable super computer. In the face of a variety of mobile cloud services provided by Microsoft, Apple, Google, HTC, and so on, users may be puzzled about what mobile cloud computing exactly is, and what its features are. Mobile Cloud computing at its simplest refers to an communications where both the data storage and the data handing out happen outside of the mobile device. Mobile cloud applications move the computing power and data storage space 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.

LITERATURE SURVEY

An Anonymous End-to-End Communication Protocol for Mobile Cloud Environments

The increasing unfold of mobile cloud computing paradigm is dynamically the quality mobile communication infrastructure. Mobile cloud introduces new privacy risks, since personal information of the human action users is distributed among several parties (e.g., cellular network operator, cloud provider) throughout this paper, they tend to propose a solution implementing academic degree end-to-end anonymous communication protocol between two users inside the network that leverages properties of social tend to trust academic degree person model, where each party observant a number of the com-

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