Chapter 15
A Security Model for Integration of Mobile Cloud Computing and Internet of Things

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ABSTRACT

As new technology developments, the usage of cloud computing and mobile have hastily increased. In alternative words, mobile and cloud computing are most important in our future lives. It's an advanced technology that will provide data storage, infrastructure, and processing the data in cloud server. Internet of things (IoT) is a recent technology, it's developing quickly in the field of wireless communications. The target of the collaboration between IoT and mobile cloud computing (MCC) is to collect data using IoT and stored within the cloud. The authentication of data is very important to the integration of this technology. Hence, the authors introduced integrating of MCC and IoT, focused on the security problems. The extant the role of MCC to the IoT concludes this chapter. It shows the MCC technology increase and the functionality of the IoT. Finally, the authors propose a new secure model for mobile cloud and IoT integration.

INTRODUCTION

In recent years, security is a fundamental requirement for the fashionable society. Particularly, securely collect the data using IoT and stored in cloud then access the data form mobile devices. Mobile and computing which is becoming emerging area on today. To access different multimedia systems, get services may be a serious issue. Still, it's to achieve, as technology is varying rapidity and our system's changing into more complex challenges. These focus of current problem and security solutions are designed to detect and stop attacks on mobile and cloud computing. Precisely, this special publication explains the various security features of IoT data in cloud computing, simulations, representations, ap-

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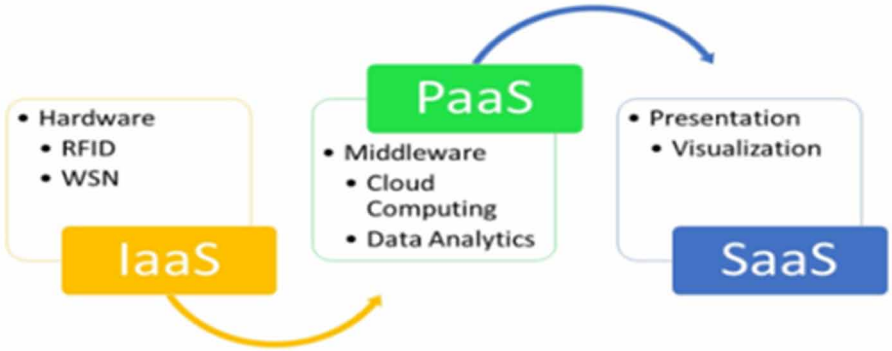
plications, analysis of mobile and cloud networks and mainly computer technologies and related areas of mobile and cloud networks.

IoT can connect to the Internet. Use data from devices to increase performance. Connecting things to the internet is achievable as there are different connection options. IoT technology is the most important step in the latest technology industry, but it has undergone massive changes in business performance with good distinction. Stergiou (2016).

IoT strength is the greatest impact it can have on many aspects of a potential consumer's lifestyle and behaviour. The primary understandable effects of IoT, perceived by an individual user, are visible in all fields. Melanie Swan (2012)

IoT has three main components: that is software, Hardware and Middleware. The components are shown in Figure 1.

Figure 1. IoT Components



IoT applications are used in a wide variety of applications such as office, automobiles, smart home, clinic, healthcare industrial. Roy (2015), Rahimi (2014), Mohammad (2017). Furthermore, Another modern technology called MCC has been developed over the years. The new generation service will be processed in the data cloud. Mobile can Access data (Keskin, 2014; Hassan Takabi, 2010).

Cloud can offerings three service that are

- Software as a Service (SaaS) -sample Facebook, WhatsApp, etc.
- Platform as a Service (PaaS) -Example Microsoft Azure and Amazon Web Services
- Infrastructure as a Service (IaaS) -This offers storage facilities and computation like S3, Amazon EC2

MCC has the technology to utilize cloud resources through mobile applications. The main purpose of MCC is to provide a better experience for mobile users as they have less resources but can calculate, save and conserve battery. Kryftis (2016). Mobile apps are a part of the community in many areas such as transportation, education, business, health. There are many benefits to integrating IoT and MCC, but it also increases the security issue. Here I suggested a security mechanism for this problem.