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A Survey of Cloud Based Mobile Secure Data Storage Application

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***Abstract*- Smartphones have become so necessary nowadays because of their services and features. They are similar to laptops and PCs; for that reason they faced security problems like virus, computation, storage and so on [7]. Due to the resource restrictions of smartphone, cloud services are almost solving these problems. Cloud computing is internet based development and it is increase the capacity of client devices. Cloud services provides on demand, pay-as-you-go and utility computing. This paper discuss about cloud computing and security issues [6].**

***Keywords* - : smartphone, Cloud computing, Security;**

I. INTRODUCTION

Mobile devices or smart phone are important role of our life. Smartphones have been spread everywhere because of their services, advanced technology and their functionality compared to regular phones Use of this facility we easily remotely access and communicate to each other anywhere and anytime.

Now smartphone provide app store, use of this application allowing the analysis and collection of data far beyond the scale of what was previously possible[1].

Although the different types of Smartphone use different operating systems such as Symbian OS, Microsoft Window Mobile, Palm OS and embedded Linux (Android) where design, functionality vary, they all have the almost same following features:

1) They all support different cellular standards such as GSM/CDMA and UMTS to access cellular networks.
2) They can access the Internet through different network interfaces.
3) They can be synchronized with desktop PCs.
4) They are able to multitasking and run multiple applications at a time

However, the Smartphone are facing many challenges in their resources like battery life, storage, and bandwidth etc. and communications. Cloud computing has been mostly use of computing infrastructure. Cloud computing have many advantages by allowing user to use infrastructure like servers, storages, and network Platforms like, middleware services and operating systems, and software's (e.g., application programs) provided by cloud providers at cheap cost. In addition, Could computing enables users to elastically utilize resources in an on-demand fashion [2].

In smart phones have various limitation security issues like

1) Smartphones have restricted resources in terms of storage, battery power and computation which results in poor protection against various security threats.
2) There are various attacks in smartphone like:
   - Identity theft and spoof
   - Phone blocking
   - Physical attacks
   - Remote wiretapping
   - SMS spamming [1]

II. BACKGROUND

Infections from the Internet

Smartphone can be infected from the Internet. Smartphones are capable to be Internet endpoints by using web browsers and other applications, they can be infected by various viruses, worms and in the same way as PCs. Due to poor security in web browsers like other software are vulnerable to various attacks. smartphones can be infected by downloading any electronic material such as attachments and phone applications from the internet.

Peer smartphone attacks

Smartphones are wireless mobile devices and they can move between locations easily. So attackers can misuse this ability and infect other peer smartphones.

Bluetooth attacks in smartphones

Bluetooth technology has been introduced to smartphones in order to create a personal area network and also data exchange among them. It uses the small range wireless connectivity and the mobility of the mobile users to infect nearby Bluetooth directly.

Theft or physical damage

The small size, high value, and the incredible amount of valuable data that a smartphone may carry make smartphones increasingly to thieves. If the smartphone is used for corporate or government use chances to loss information, so they can affect their employer. (See for example, the news article which shows the increase in the number of laptops and mobile phones mislaid and the risks posed by them) [1].

III. RELATED WORK

Smartphones were used not just for only communication but also used for multimedia applications such as listening music, watching videos, and playing the games; connect with social media like facebook. Thus the storage spaces are not enough to store multimedia files. If required addition extra storage space is either by internal storage space by manufacturers or memory card, but they are not permanent solution. Cloud computing is one of the solution. It provides unlimited storage of a cloud and also provide backup. Mobile Device Client app is an ANDROID app be providing the Mobile Device users with the facility to open, read, edit and save the Cloud files from a Mobile Devices such as android [3].

According to Muhammad Shiraz et al, is to issues to existing Distributed Application Processing Frameworks (DAPFs) in establishing, implementing, and executing computational intensive mobile applications within mobile cloud computing domain. Proposes thematic taxonomy of current DAPFs, reviews current offloading frameworks, analyzes the implications and also research commonalities and deviations in such frameworks on the basis significant parameters [4].

Cloud computing is provides shared software, resources, and information to computers and other devices. We can store, modify and retrieve the data and also maintain the data securely in distributed environment with Token Generation algorithm for data files checking cloud storage service. In this method encrypt the data the user specified key and encrypted blocks store into cloud and perform token checking which gives more security to data. The proposed scheme is efficient attacks like malicious data modification attack, Byzantine server failures.[5]

Nicholas D. Lane et al. [1] have discussed about the current state of the art and open challenges in the emerging field of mobile phone sensing. The main problem is not a deficiency of infrastructure, rather, the technical obstacle are related to performing resource-sensitive reasoning with noisy data and noisy labels, privacy-sensitive and providing useful feedback to users. In this article survey on mobile phone sensing systems and emerging sensing paradigms.

Chien-An Chen et al. [8] have shown the challenges of reliability and energy efficiency remain largely unaddressed. In the proposed work mobile devices successfully process or retrieve data, in the most energy-efficient way. It assigns data fragments to nodes such that other nodes retrieve data reliably with minimal energy consumption.

According to Lifei Wei a, et al [9], in this paper, SecCloud, to attain data storage security and secure-computation auditing security as well as privacy cheating discouragement and communication efficiency improvement through batch verification. Data storage and computation audit security both of combine in the cloud.

IV. PROPOSED CONCEPT

In existing storage system cannot access the data in computer and mobile simultaneously. In mobile, there is not proper facility to save data and less data security. Some method to overcome this limitation like use cloud. Cloud based storage system designed is for purpose of store and retrieve mobile data. In case user will loss or damage mobile, it provide backup of all data. Another benefit is database for storing data and providing connectivity with the website, so data very secure for retrieving and accessing it in cloud even though their mobile was missed. The authentication user can access data which they stored in the cloud from webpage or from mobile itself [3]. Security of the cloud is strong but transmission of among two secure networks is performed over untrusted network. We are also use of encryption algorithm to secure data when data are transmitted.

V. CONCLUSION

In this paper we have study about smart phone and cloud computing. We discuss the how important use of cloud computing in a smart phone. Many limitation of smart phone like battery, computation, storage, security issues and so on and how we overcome these problems. We also discuss about security of cloud when data are transmitted in public network.

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