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Improving Android Remote File Access Using Cloud Architecture

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Abstract - Now a days we are dependent on android phones, if we forget the phone at home it seems we have lost a limb. That time we think that it would be good to access our mobile remotely, like the web browser from our PC. With the help of this we can access our data which is present in our phone from the remote place with the help of Cloud Architecture. In this application we have to establish connection with the web server and we can retrieve all the storage data and files present in internal memory and mounted SD card of the cell. We can upload files on the server as well as we can download file from the server in our mobile phone.

***Keywords* - Cloud, Web Browser, PC, Android.**

1. Introduction

The Mobile application into the web application. The basic idea is to design and develop a Backup Application which allows the user to browse through Mobile data. Now a days we are dependent on our mobile phones, if we forget the phone at home it seems we have lost a limb. That time we think that it would be good to access our mobile remotely, like from the web browser through desktop (PC). If our mobile phone is at our home and we are in office or anywhere outside the home and we need the information stored in the mobile phone then it is not possible to access it remotely. But by using this application we can access the mobile phone remotely via the internet. The mobile phone is situated at home or other place and we can access it through the web application. The mobile phone data like files stored in the phone can be accessed via this web application. In installation of the application on phone the IP address of web application system is entered for connection to the server. The server gives the access through the web to access the phones' data remotely via web. Helps when he/she forgets his/her cell phone somewhere and requires the data present in cell phone Gives the remote access to cell phone. Allows to access the data from anywhere through web application.

Android is a mobile operating system (OS) currently developed by Google, based on the Linux kernel and designed primarily for touchscreen mobile devices such as smartphones and tablets. Android's user interface is mainly based on direct manipulation, using touch gestures that loosely correspond to real-world actions, such as swiping, tapping and pinching, to manipulate on-screen objects, along with a virtual keyboard for text input. In addition to touchscreen devices, Google has further developed Android TV for televisions, Android Auto for cars, and Android Wear for wrist watches, each with a specialized user interface. Variants of Android are also used on notebooks, game consoles, digital cameras, and other electronics.

Cloud computing, also on-demand computing, is a kind of Internet-based computing that provides shared processing resources and data to computers and other devices on demand. It is a model for enabling ubiquitous, on-demand access to a shared pool of configurable computing resources. Cloud computing and storage solutions provide users and enterprises with various capabilities to store and process their data in third-party data centers. It relies on sharing of resources to achieve coherence and economies of scale, similar to a utility (like the electricity grid) over a network. At the foundation of cloud computing is the broader concept of converged infrastructure and shared services. Cloud computing is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications and services) that can be rapidly provisioned and released with minimal management effort. The present availability of high-capacity networks, low-cost computers and storage devices as well as the widespread adoption of hardware

virtualization, service-oriented architecture, and autonomic and utility computing have led to a growth in cloud computing. Companies can scale up as computing needs increase and then scale down again as demands decrease. Cloud computing has become a highly demanded service or utility due to the advantages of high computing power, cheap cost of services, high performance, scalability, accessibility as well as availability. Some cloud vendors are experiencing growth rates of 50% per annum, but due to being in a stage of infancy, it still has pitfalls that need proper attention to make cloud computing services more reliable and user friendly.

2. Literature Survey

Performance upgrades for mobile devices took place due to jumping development of technology, so high performance terminals that anyone can directly search and amend desired information anywhere and anytime, namely, mobile communication terminals called Smartphone were released to the market. Such terminals can store information that an individual saved, for example, transmit/receive photographs and videos, etc., but there are worries on surreptitious use of other people due to leaking of personal information through loss or theft of these terminals, so our project aims to realize a system that remotely controls information inside the terminals in this case. The proposed system consists of four functional units: a website provision unit playing a role of interface so that users can remotely control a terminal, a user confirmation unit that performs joiner confirmation information from a system of a mobile communication company joined after a user confirmed. an access management unit that sets access by transmitting an access code for initiating a remote control program if a person is confirmed as a real owner of the terminal, and finally a service execution unit that transmits a remote control service code and an environment setting value for remotely controlling a terminal to the terminal and receives a service completion code from the terminal.

3. Proposed System

3.1 Proposed Approach

In this paper, we have described the remote control method and architecture for mobile communication terminals. In detail, the remote control system is proposed for the lost handset and the system design is verified through the realization, for protecting the personal information/data. We have designed the remote control system for the mobile devices step by step, the terminal locking function, the main data transfer capabilities, the deletion and initialization features of personal information, and then applied to the actual realization. Designing an interactive mobile system that can track a remotely Android mobile and can transfer the data between the whenever you needed from android mobile, you can transfer the data in website or cloud server with an add-on feature. The user can also upload through his current system to his target mobile.

The interactive system facilitates user to have a access to his all storage of his android device from any place with the help of Internet Access.

1. User can Download/Install the application.
2. Application provides following facilities:

    i. Read Contents from the mobile storage memory.
    ii. Download Storage Data.
    iii. Upload Data to Storage.
    iv. Access the Android mobile data through web.

3.2 Proposed Architecture

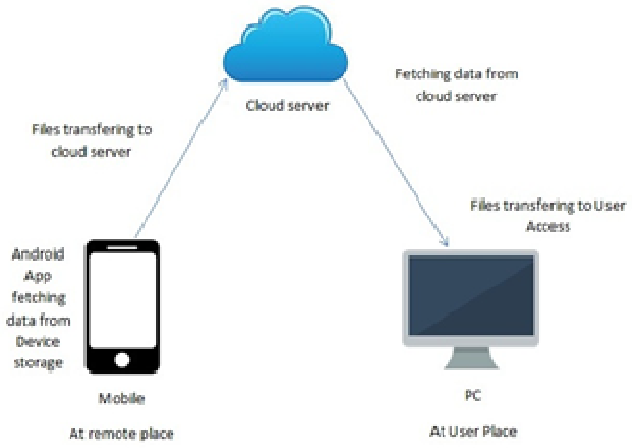

Fig. 1 System Architecture

Figure 1 shows system architecture which consist of the android device consisting of android app installed and running in background. The App will fetch the data present in the storage memory of device and transfer it to cloud server. The data will be also visible on the web application. The user can access the data and apply operations like download files as well as upload files.

The files can be uploaded manually as well as automatically, the files are stored in the mounted sd card and they are located on server as well. After refreshing the files the manipulated data get refreshed and same changes to the server as well. The single user & multi user system architecture can be applied to this concept. It is very reliable to use.

4. Result

1. Fetching file list from storage of Device (Auto + Manual).

Fig.2: Fetching file list from storage of Device (Auto + Manual).

2. Shows 2 options Upload files from device to server or Download the files available at server.

Fig.3: Upload files from device to server or Download the files available at server.

3. Clicking on Upload files Shows, Device Files available in Micro SD card, after clicking the file get uploaded to server.

Fig.4: Device Files available in Micro SD card

4. Entering URL in browser, here the url is 127.0.0.1/android_file_transfer

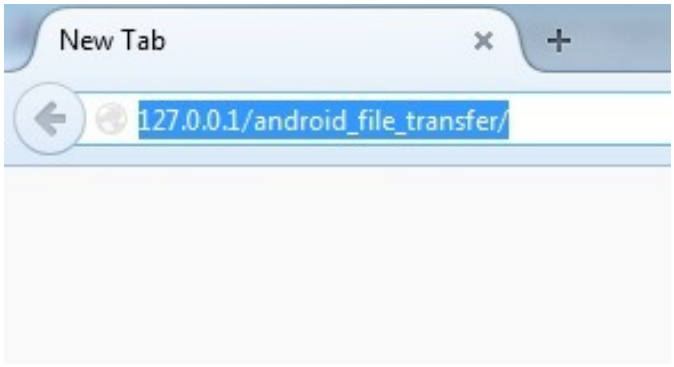

Fig. 5 : Entering URL in browser, here the url is 127.0.0.1/android_file_transfer

5. The web application is open now in browser, and the Android device data is here visible at cloud server.

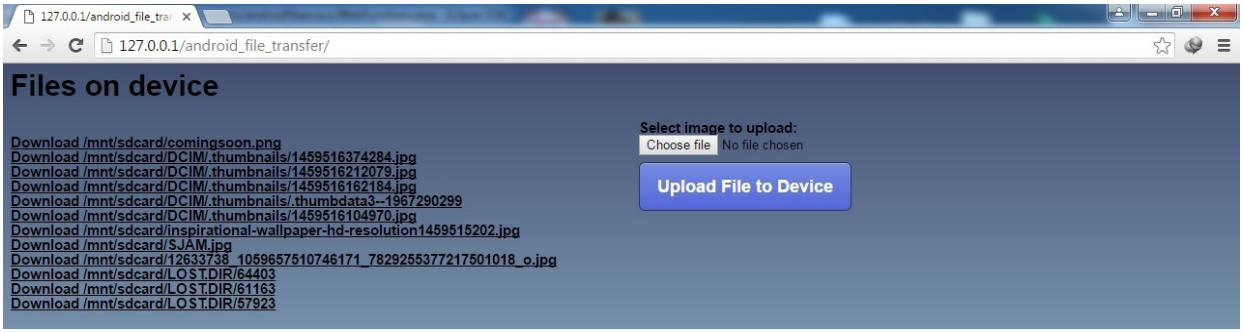

Fig. 6 : The web application is open now in browser, and the Android device data is here visible at cloud server.

6. Downloaded file can be viewed here also in Micro SD card.

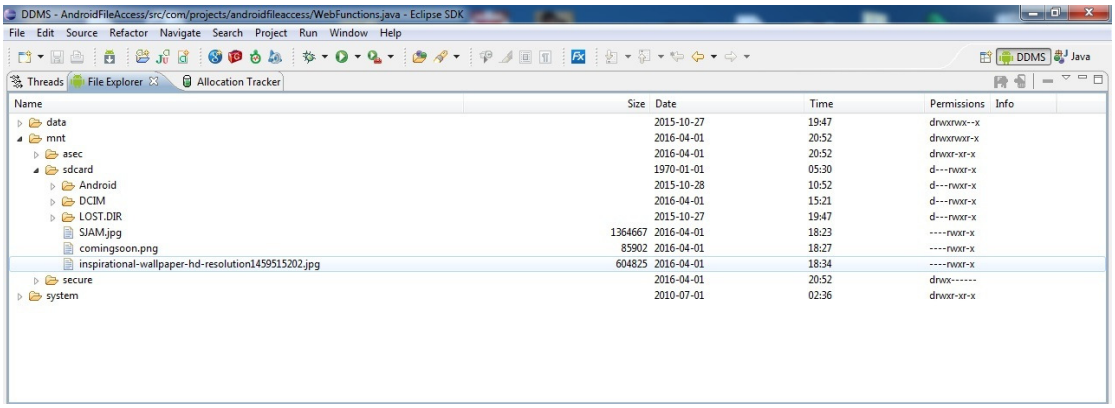

Fig.7: Downloaded file can be viewed here also in Micro SD card.

5. Conclusion

Using this approach we can access the mobile phone data on the web. That data includes data files of Mounted SD Card or Memory Storage. The mobile phone storage access is available for use or access from any remote place.

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