Efficiently-managed Cloudly-Secured Mobile User Data Sharing Code Implementation

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Abstract:

Increasing Mobile Device on Cloud Technology will dominate the various industries. Cloud has different data storage and data protecting techniques that based on Data User (DU) and industry's needs. In this paper, an efficient way of managing user data sharing via Mobile Agent (MA) also called Mobile Proxy (MP) is proposed. The role of Mobile Agent Authorize User to collect the data from Cloud like Proxy and supply data to another Client due to this missing of cloud data is not possible. Instead of access data for all clients, the proxy hold required data and share the customer because of this network reliability, Network Bandwidth, User Congestion, Data Security. Also, this proposed scheme have more functionality like Cloud Authentication, Data Owner (DO) Sending files to Cloud, Sending password, Send Mail and Send SMS. Suppose Data Users need to communicate and share information on Cloud with the help of Mobile Agent only. So, Data Users may be assured that whatever resource required in the cloud with the documents on their Mobile Agent in the office

Keywords: Data Owner, Data User, Mobile Agent, Proxy

Introduction:

The internet provides cloud computing as the most interesting services to mobile users. Cloud computing distributes the resources to the mobile users [1, 2]. One of these resources is Cloud storage that unshackles organizations from establishing in-house data storage systems [3]. Furthermore, cloud computing offers data or file security to end-user[4, 5].

Thus the cloud computing services may be affected by network traffic. One small solution is a mobile agent, to consider how to increase reliability and flexibility, decrease network traffic and delay [6]. Consequently, Mobile Cloud Computing has been emerged as a future technology for mobile applications [7-14].

Mobile Cloud Computing consists of network coding for the wireless network environments storage and transmission. That leads to dynamic the heterogeneous topology of network. This paper investigates how the network coding decrease the delay. Different involving approaches among sources, caching node and ending users will be investigated. The main advantage is reducing traffic network, load shares among machines, infrequent connection to the network.

Proposed Architecture

Initially, the data owner will upload the files in the cloud. The Mobile Agent will register through our app to the server. And in turn the server will authenticate the user by sending the password to the cloud and also the password will be forwarded to the agent using the email or through the SMS by the details provided by him during registration. Again after receiving the password the user will login to the account and download the files from the list and send it to the receiver. For that, the mobile agent has to be in the same wireless connection, and to mention the IP of the server which is displayed in the server application to receive the content. Thus the mobile to mobile data sharing is well explained through our application.

The proposed architecture is shown in Figure-1.

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9++++++++++6The cloud liaisons the data owner's uploading files and Date user

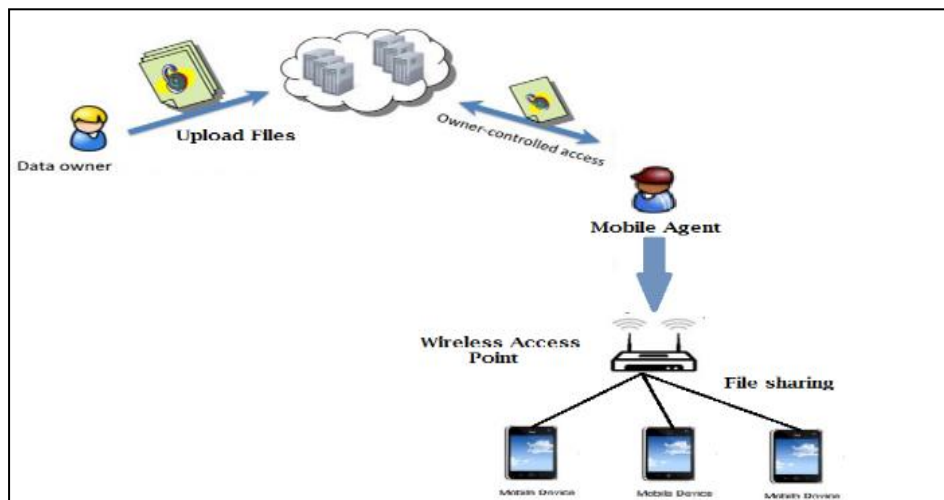**Figure 1-**Main Architecture a user.

Figure 2-Data Sharing on Cloud

A.   Mobile User

The mobile user process describes the file sharing among the agent and user. When the user views the agent files, a request is sending to the port address. Then the mobile agent will be transferring the files by using an IP address and port address. The mobile user can receive the files. As shown in Figure-2 and Figure-3
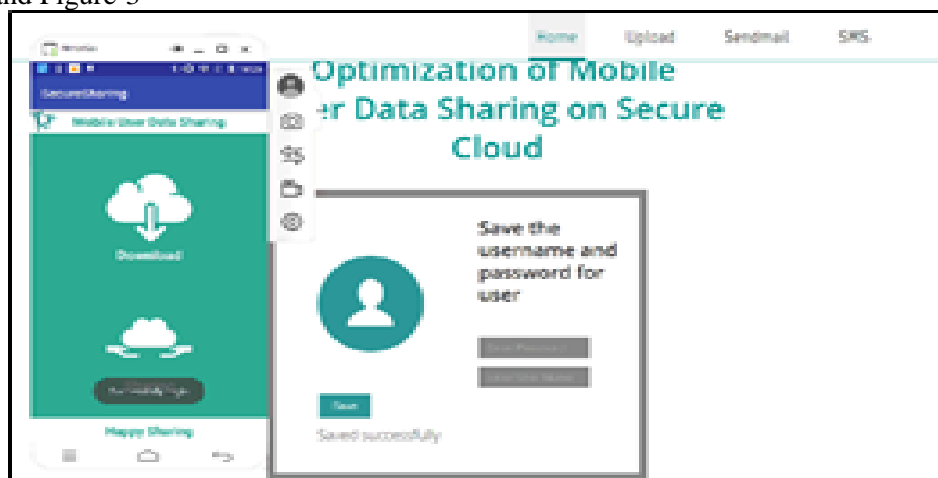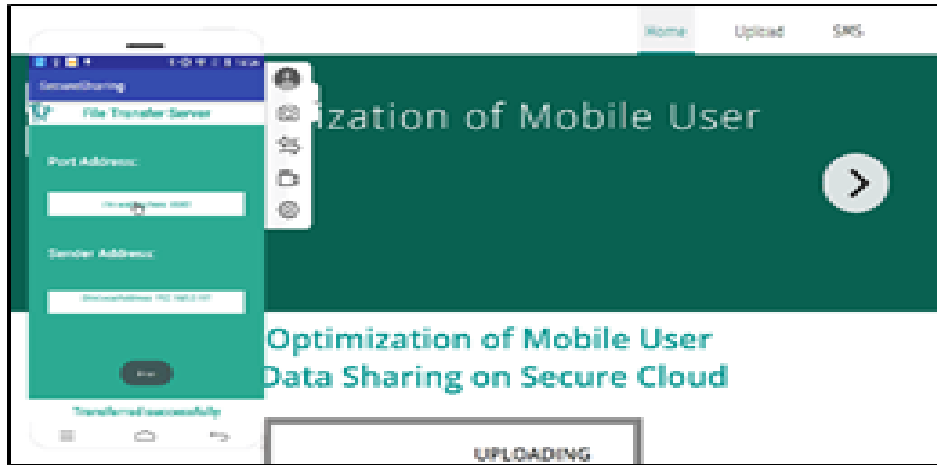

Figure 3-File Transfer

Figure 4-Mobile User Download File

B. Downloading

The graphical representation of the data is used to find the time efficiency of this process. Throughout this chart, we can quickly analyze the bandwidth usage and which files are frequently downloaded by the end user and mobile agent. As shown in Figure-4, 5.
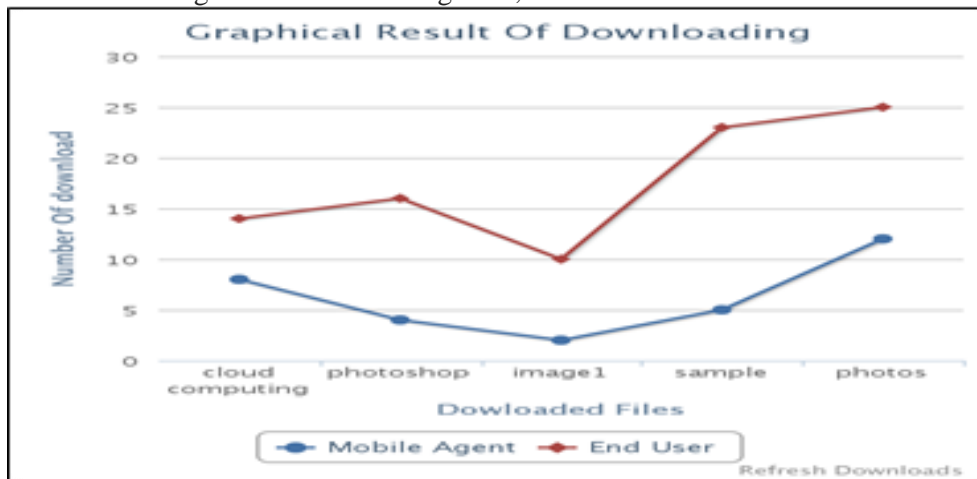

Figure 5-This Line Chart describes find the number of files downloads by end user and mobile agent

CODE IMPLEMENTATION

A.   Upload File in Cloud

```
define ("filesplace",".");
if(isset($_POST['submit'])) {
 if (is_uploaded_file($_FILES['classnotes']['tmp_name'])) {
$name = $_POST['name'];
 $result = move_uploaded_file($_FILES['classnotes']['tmp_name'], filesplace."tornado/$name.jpg");
 if ($result == 1) echo "<p>Upload done .</p>";
 else echo "<p>Sorry, Error happened while uploading . </p>";
}
}
```

B.   Mobile Agent File Sharing To Mobile User

```
"socket = new Socket(dstAddress, dstPort);
File file = new File(
Environment.getExternalStorageDirectory(),
System.currentTimeMillis()+".pdf");
 byte[] bytes = new byte[4096];
 InputStream is = socket.getInputStream();
 FileOutputStream fos = new FileOutputStream(file);
```

```
BufferedOutputStream bos = new BufferedOutputStream(fos);
int bytesRead";
while ( -1 != ( bytesRead = is.read( bytes ) ) )
{
bos.write(bytes, 0, bytesRead);
}
bos.close();
socket.close();
OneR.this.runOnUiThread(new Runnable() {
@Override
public void run() {
Toast.makeText(OneR.this,
"Finished",
Toast.LENGTH_LONG).show();
}});
```

C.   Mobile user File Download
```
"if (new CheckForSDCard().isSDCardPresent()) {
//Get Download Directory File
File apkStorage = new File(
Environment.getExternalStorageDirectory() + "/"
+ Utils.downloadDirectory);
//If file is not present then display Toast
if (!apkStorage.exists())"
Toast.makeText(JpgMessage.this, "Right now there is no directory. Please download some file first.",
Toast.LENGTH_SHORT).show();
else {
" //If directory is present Open Folder
/** Note: Directory will open only if there is a app to open directory like File Manager, etc.  **/
Intent intent = new Intent(Intent.ACTION_GET_CONTENT)";
Uri uri = Uri.parse(Environment.getExternalStorageDirectory().getPath()
+ "/" + Utils.downloadDirectory);
intent.setDataAndType(uri, "file/*");
startActivity(Intent.createChooser(intent, "Open Download Folder"));
}
} else
Toast.makeText(JpgMessage.this, "Oops!! There is no SD Card.", Toast.LENGTH_SHORT).show();
}
```

CONCLUSION

File storage and file sharing has been proposed. A greedy algorithm has been developed. A managing user data sharing technique via Mobile Agent (MA) has been efficiently implemented.

FUTURE WORK

The future enhancement of the system is by developing the security system of this work and implementing the developed system in ASIC or reconfigurable hardware [15-20]

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