*International Journal of Research Studies in Computer Science and Engineering (IJRSCSE)*
*Volume 2, Issue 3, March 2015, PP 38-40*
*ISSN 2349-4840 (Print) & ISSN 2349-4859 (Online)*
*www.arcjournals.org*

# Reducing the Complexities of Cloud Storage Services

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**Abstract:** *Cloud Computing is becoming an adoptable IT approach with dynamic scalability and virtualized services which can be shared by users through Internet. Since the beginning of the Cloud Computing, service providers come up with different types of services to the customers. The service providers provide the services to the users on payment basis. Cloud has several services among three are main services of SaaS, PaaS and IaaS. Here SaaS provides software services, PaaS provides different platform services, where as IaaS provides processing, computing, storage and network services. In cloud computing we had complexities of services like storage of data, processing of data, security of data etc. In this paper, we are trying to reduce the complexities of the Storage Services.*

**Keywords:** *Cloud Computing, Redundancy, Storage Services.*

## 1. INTRODUCTION

Cloud Computing is a new technology from the year 1990 as on-demand infrastructure. From the 1995, it was known as shared web hosting and had a limited futures like multi-tenant, automated provisioning, easy to use interface. One of the milestone for cloud computing was arrival of salesforce in 1999, the concept of delivering enterprise applications via simple website. The next development was Amazon web services providing storage, computation in 2002. In 2006 Amazon launched Elastic Compute cloud (EC2) as a commercial web service that allows small organizations and individuals to rent computers to run their own computer applications. Another big milestone was Google started to browser based enterprise applications through Google Apps in 2009. From 2012 onwards Cloud Computing

## 2. BACKGROUND OF CLOUD COMPUTING

Cloud Computing is a model for enabling convenient, on demand resource network access to a shared resources that can rapidly provisioned and released.

NIST (National Institute of Standard Technology) defines five essential characteristics of on-demand self service, Broad network access, Resource pooling, Rapid elasticity, Measured Service. It has three service models of Software as a Service (SaaS), Platform as a Service (PaaS) and Infrastructure as a Service (IaaS). Cloud has four deployment models of Public cloud, Private cloud, Community cloud, Hybrid cloud.

## 3. RELATED WORK OF CLOUD STORAGE

Now-a-days, there are many cloud services available among the various services, Cloud Storage service such as Google Drive, Drop box and Sky Drive are the most popluar.

The cloud storage service is a technology which provides the flexible online data storage services for the data owners. In a basic level, for cloud storage system needs one data server connected to internet. Client must be subscribing for cloud services. The client can access particular service and store the data into the cloud. Fig.1 depicts the Cloud Storage System Architecture.

There are hundreds of systems are there in the cloud storage systems. Here some are focusing to store web email and digital pictures. And others are form to store all forms of digital data. In that some clouds systems are perform small operations and others are so large physical equipments that can fill up entire warehouse data. These systems combine together are called as “data centers”. For maintaining of these systems a service provider is available to observe the cloud systems.

These cloud storage systems generally having the hundreds of systems. Because systems are occasionally require maintenance or repair. Here the clients store important same information in the systems. This process is known as redundancy, without redundant the cloud systems doesn’t ensure. Most of the systems store redundant data of the client that could access their information at any given time. Most of the systems store the same data on servers that use different power supply. So that, the client can access data even at one power supply fails. The clients can not worry about running out of storage space. They use cloud storage is a backup of the data.

If something happens to the clients system, they couldn't worry about the data, it can be available at cloud and it can be access at anytime from anywhere in the world, just the client can have a system with internet connection for retrieving their data.

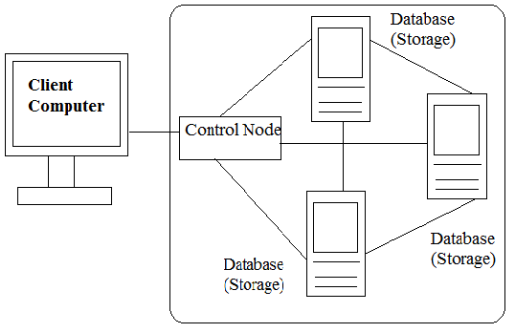


**Fig1.** *Cloud Storage System Architecture*

## 4. Concern about Cloud Storage

Two biggest concerns about cloud storage are reliability and security. To secure data most of the systems use a combination of techniques includes like Encryption and Decryption. Encryption which means they use complex algorithm to encode information. To decode the encrypted files, a user needs encryption key. After processing data we can decrypted before giving to the user.

Authentication is a process to create username and password. Authorization practices the client lists the people who are authorized to access information stored on the cloud system. Many of the corporations have multiple levels of authorization.

Even with these security measures clients are worry about the data saved in the remote cloud storage. There is a possibility that hackers may attempt to access the data from the Cloud Storage Systems. Hackers may also try to attempt steal the data from physical systems which stored data in the cloud systems.

There are hundreds of companies providing the cloud storage services on the web and their number are increasing every day. Each company offers to clients in storage capacity growing regularly. Here is a few of the well known companies offer cloud storage.

- Google Docs allow users to upload documents, spread sheets and presentations.
- Web E-mail provides like Gmail, Yahoo Mail and Hotmail uses to store e-mail messages on their own servers.
- YouTube hosts millions of users uploaded video files.

## 5. Reducing Complexities of Cloud Storage

1. **Assigning strong Passwords:** Passwords are degined to keep our information safe from others eyes. It is just like a lock. A haker may force break the lock, but most of the time a strong password locks the people out. The complicated password is the safe our data at cloud. Some times it is painful to remember those passwords. Fig.2 shows the login of Username and Password.

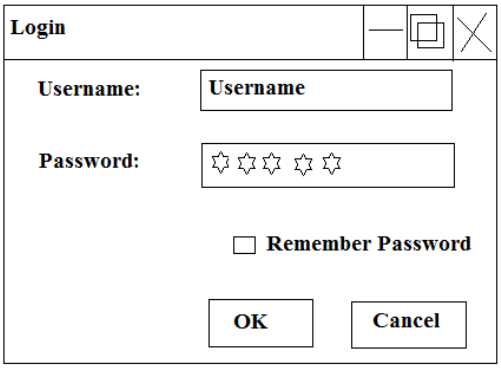


**Fig2.** *Assigning Username and Password*

The best password is combination of the letters, numbers and symbols.

2. **Don't reuse or share passwords:** Here clients are using the simple passwords and reusing again and again the same passwords. It is very easy to hack those passwords for the hackers and to steal important data from the cloud storage. So the clients don't use the same passwords to all accounts. After that client don't share these passwords to others.
3. **Managing the Passwords with LastPass:** LastPass is a password management utility that all of our unique passwords can be put behind one master password. That means we can create separate logins for e-mail, Facebook, Twitter and cloud storage and everything we do use on online, but still access those accounts by memorizing one single password. Web browsers will also remember our passwords. LastPass will even help to create randomized passwords that no one hack the client account.


**Fig3.** *One password for all cloud computing needs, a password management tool LastPass can help.*

4. **Back Up of Data:** Back up of our data is also a good idea, because a power surge, fault in hard drive or unexpected system failure then we lost our data and can't be back up again. So for all

these issues Cloud Storage gives a solution in all shapes. Dropbox offers only gigabytes of free storage, but its interface is incredible simple to use. It creates a folder on our hard drive that is linked to web. All of our upload files drag them into the folder.

## 6. CONCLUSIONS AND FUTURE WORK

In this paper, we discussed how data can be stored in a Cloud Storage System. We also discussed various issues raised w.r.t to data storage and w.r.t minimizing the issues for securing data. Our future work will look into the data stored issues in the Cloud Servers Systems.

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