

# Cloud enabled file synchronizer

Prof. Vijaya Sagvekar-Bijoor

Assistant Professor

Padmabhushan Vasantdada Patil College of Engineering

Sion, Mumbai.

vijayabijoor@pvppcoe.ac.in

**Abstract:** The power of internet, distributed files system and information of personal data gain a supreme-importance in current era in result of which the number of user managed devices continues to increase and the need for synchronizing multiple file hierarchies distributed over devices with ad hoc connectivity is becoming a significant important issue. In thi paper presenting a built with efficient cloud based synchronization of any arbitrary number of distributed file system across the mobile devices. The different types of files can be effectively upload and sync with no human intervention efforts. This Topic concern with many issues with distributed mobile based connecting file devices.

**IndexTerms—** Cloud computing, Microsoft azure

## I. INTRODUCTION

In today's world users increasingly depend on electronic information that is processed and stored in a multitude of computers and storage devices connected in multiple different architectural networks. With demandable up-gradation of technology interconnected network and computer handling devices attract the smart device users to maintained it precious data with ad-hoc bases ,but the need of getting easy way to share files across smart phones ,tablets, and desktop concern with significant issues like many of these devices have limited storage capacities and exhibit a adhoc network connectivity , such as frequent offline operation and/or movement through different networks, introduce many challenges in managing user data distributed over multiple devices and many locations.

## II. LITERATURE SURVEY

In this paper, reviewed the main cloud computing architecture patterns and identify the main issues related to security ,privacy, trust and availability .In order to address such issues presents a high level architecture for trust models in cloud computing environment. Proposed a product Cloud Enable File Synchronizer which provides a single solution that securely stores all once business files, personal data with effortless file sharing with co-workers, clients and group friends in organizational or business environment .It backup files for you. For a business concerns it eliminates the need to purchase and maintain servers, virtual private networks (VPN) and point-products such as FTP, with a unique hybrid approach to online storage. It enables you to access, edit and store files locally (in your office) or online (in the Internet cloud), thereby providing the advantages of both traditional servers and cloud-based solutions but without the associated high costs and overhead.

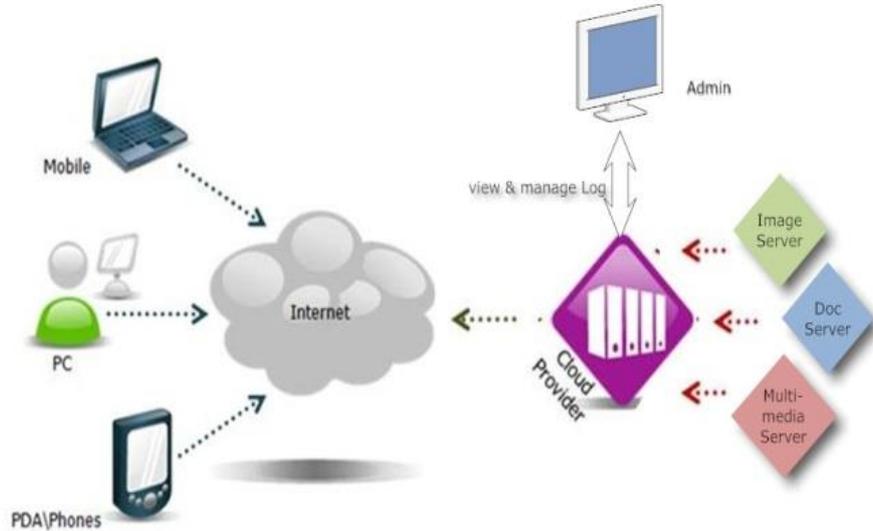
Dealing with second approach cloud master-replica synchronization which solves some of these issues by employing cloud services to automate synchronization and deal with the small mobile devices with ad hoc connectivity. In the approach followed by many cloud-based synchronization and backup services (e.g. [6], [7], [8], [9]), a master replica with all data to be synchronized is maintained as a central copy in the cloud, while all the user's file systems synchronize and transfer updates to this central copy. This approach with one-way synchronization to the master replica in the cloud, offers increased availability and reliability in case of device failure(s), automates synchronization management and does not require technical skills.



**Fig-1 Descriptive cloud**

IT enables business users to access up-to-date enterprise content anytime, anywhere. It combines the ease of use business users want with the IT controls, security, and management that enterprises require. Files are continuously synchronized via the cloud to ensure that users have access to their content across mobile, desktop, and laptop devices. Cloud Enabled File Synchronizer is intended to play a demanding role in social network market as well as for business concerns.

The great advantage of cloud computing is “elasticity”: the ability to add capacity or applications almost at a moment’s notice. Companies buy exactly the amount of storage, computing power, security and other IT functions that they need from specialists in data-center computing. They get sophisticated data center services on demand, in only the amount they need and can pay for, at service levels set with the vendor, with capabilities that can be added or subtracted at will. Cloud Enabled file synchronizer provides flexible storage that can scale up and down as needed. The data can be synchronized to other devices using the cloud sever. It’s as easy as copying a file to a different folder and later viewing a file from a folder. It lets one collaborate by keeping all your shared files up-to-date in real time also it offers admin dashboard through which number of users can be control, monitor activity, remotely wipe data and much more. In a similar fashion, cloud computing currently offers affordable, large-scale computation for businesses and social media market. Just as the commodity PC and the Internet brought about the Information Revolution, and made information universally accessible, affordable, and useful, so too does cloud computing have the potential to bring about the Computation Revolution, in which large-scale computations become universally accessible, affordable, and useful.



**Fig-2 Synchronization of files**

Rationale for taking up the proposed project and its Interdisciplinary relevance:

The power of internet, distributed files system and information of personal data gain a supreme-importance in current era in result of which the number of user –managed devices continues to increase and the need for synchronizing multiple file hierarchies distributed over devices with ad hoc connectivity is becoming a significant important issue. In this project paper ,here presenting a built with efficient cloud based synchronization of any arbitrary number of distributed file system across the mobile devices. The different types of files can be effectively upload and sync with no human intervention efforts. This paper concern with many issues with distributed mobile based connecting file devices.

*Review of Research and Development in the field:*

In our approach assume a scenario where a user needs to synchronize a number of data files stored in the file systems of multiple devices (or nodes), each located in a different location with ad hoc connectivity. The user files are sync to the server cloud periodically and its duty of cloud need to check the update done at multiple user simultaneously accessing the same file while syncing conflict detection and classification of files is major concerns.

As proposed system allow the uploading of any valid type of files like Video, Audio, Images and Document one .The product check that only text file content can be simultaneously permissible to write and read. The Sync Algorithm is check to performed proper sync .comparing with FTP file system it allow the better sync ,replica back up and access to all over the world.

- Connecting to cloud server File metadata is define as  $M(f)=\{\text{path (directory),name, size, creation time ,last modification time, data Hash}\}$

Where,

data Hash: Hash index of content of the file

As shown in figure 2 in order to automatically sync to number of user devices we assumes that the cloud service is able to connect and communicate with device over the internet, when they able to connect ,and collect metadata of the file trees from each device .Each device periodically send and update for its file trees to the cloud service.

*Relevance to Social benefit by this R&D in the Proposed area:*

As have discuss many issues mention in reference [1] and introduce a better design as compare to it. Because if we consider syncing data with multiple devices advantages of cloud as well peer to peer network it ends with a demanding network overhead complexity and practically not possible because of reasons mention as follows

- 1) The data syncing become slower because of first finding the un updated directories and sync accordingly
- 2) If connection problem occur some precious data may get loss.
- 3) No back up facility will be available
- 4) By using cloud the overhead of cabling and connection get reduce as compare to syncing peer to peer

### III. METHODOLOGY

Emphasis on a approach of cloud Enabled file Synchronizer which will provide very effective an on demand need of distributed synchronization of files any time on any device .its cloud based approach also aims at cutting down the expenses faced by the users to buy special hardware and software. Its a flexible storage that can scale up and down as needed. A cloud application needs a constant connection that might prove to be an Achilles heel for the cloud computing movement. However as mobile internet capabilities continue to get better, it is likely that solutions to this particular problem will become apparent. New programming languages such as HTML 5 already provide a solution by enabling data caching through a mobile device, and this allows a cloud application to continue working if connection has been momentarily lost. In future the adequate security measures can be incorporated to support the low processing ability at the client-side with the feasibility of extrapolating concepts from cloud computing in the domain of large-scale computers to the realm of mobile world.Using cloud computing we can share any kind of data between a numbers of clients.

### IV. CONCLUSION

With Cloud Sync, you can seamlessly synchronize files between a Synology NAS and multiple cloud storages. The client-side encryption equipped by Cloud Sync surpasses the traditional file synchronization in availability and confidentiality, and also offers an excellent solution to overcome safety concerns associated with public cloud storage services. Moreover, with its advanced configurable options, Cloud Sync meets the demands of almost all types of usage scenarios

### REFERENCES

- [1] Sandesh Uppoor, "Michail D. Flouris\*, and Angelos Bilas,"Cloud-based Synchronization of Distributed File System Hierarchies ",IEEE2010.
- [2] Sky Drive <https://onedrive.live.com>
- [3] A. Tridgell, "Efficient algorithms for sorting and synchronization," 2000.
- [4] B. C. Pierce, J. Vouillon, and J. Vouillon, "What's in unison? a formal specification and reference implementation of a file synchronizer" tech. 2004.
- [5] <http://code.google.com/p/syncbutler>.
- [6] [www.dropbox.com](http://www.dropbox.com).
- [7] <http://onesync.googlecode.com>.
- [8] <http://www.goodsync.com/support/manual>.
- [9] <https://www.sugarsync.com/>.

