

DOCSTASH- Personal Storage Solution

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Abstract— Cloud computing provides a huge amount of virtual storage to the users. Cloud storage helps to small and medium scale industries to reduce their cost of buying the whole hardware infrastructure and cost required for maintenance of storage servers. Cloud storage is efficient for data storage. As user's data is stored in network of computers which results in security and fast access to the data. Security of cloud storage is ensured through confidentiality and integrity parameters. Encryption is the most common method to ensure confidentiality. To have efficient cloud storage, based on the application and kind of data being uploaded on cloud, the encryption technique is applied. The most reliable encryption technique is AES in which whole data is encrypted and then it is divided into chunks or blocks of small sizes and stored on different cloud servers.

Key words: Cloud Computing, Data Storage

I. INTRODUCTION

Cloud Storage is a network of computing power, the physical storage spans multiple servers (and often locations), and this processing power can be accessed virtually and based on the requirement hosting company can manipulate the amount of computing power. Cloud storage services can be accessed through a web service application programming interface (API). The idea of developing this application is that it will ensure data integrity and security of user files and causing ease for users to store and share their files..

"Docstash" Application handles and manages the day to day data storage activities. It is a cloud storage solution provided to user where data can be stored in the cloud environment. Stored data is encrypted and compressed where users can access from anywhere. User can modify his data in Docstash without having the actual data in his physical device. This project aims at providing a generic platform for cloud storage solution. DOCSTASH is a platform using latest technologies to provide a cloud environment that managed data integrity and security.

II. LITERATURE SURVEY

Prof Feige, U., Fiat, A. & Shamir in their paper introduced to the concept of zero knowledge which was further implemented by Springer Inc. It gives maximum protection to users data by client-side encryption technology to secure users file in their own devices with some high-grade encryption and the files cannot be decrypted in a cloud. Digital Rights Management was introduced by Tresorit Inc in their paper where they explain the process of file sharing in collaboration process. The DRM defines which user have right to modify the file or just read the file so that users with permission can only change the content of files while sharing.

Using different types of storage system as per need is described by Prof Arun Teneja. File and block storage might provide better performance, but granular metadata and

near-infinite scalability make object storage equally beneficial. Use cases for each storage system is described in his papers "Google Drive" is a cloud storage solution by Google. In Drive users get their storage when they sign in for a new account. Drive also has some unique features that integrate different third party software in it. This software helps us in editing and managing our files and folders online. It help in editing those file in collaboration mode so multiple users can edit simultaneously. Dropbox is another such cloud storage provider with unique features where users can download the native desktop application and the files and folder in specific location will automatically be synchronized. They also provide enterprise support for storage of company's large amount of data. Dropbox users as of March 2016. As of that month, the cloud-storage service had 500 million registered users, up from 300 million in May 2014.

III. PROPOSED SYSTEM

SaaS (SOFTWARE AS A SERVICE) is a delivery model in which software is licensed on a subscription basis and is centrally hosted. It is sometimes referred to as "on-demand software". SaaS is typically accessed by users using a thin client via a web browser. SOFTWARE AS A SERVICE (SaaS) has gained momentum because Historically, companies were required to buy, build, and maintain their IT infrastructures despite exponential costs. SaaS gives companies an alternative. Now, they can plug in and subscribe to services built on shared infrastructure via the Internet. DOCSTASH is the application of the Storage as a service where any user can sign up and make use of free cloud storage space. Currently, Google Drive and One drive have developed commercial SaaS platforms to store data on cloud storage. Web applications are made user-friendly so that more users can take advantage of it. Data security is the main concern of cloud storage, the previous developments were short in providing encryption after storing files which can be exploit users data. This project presents the development of a SaaS based web application through which users can store their important data on cloud environment without carrying it in their physical storage devices. Users will just need a smartphone or anything that has web browser with internet connectivity and they get an access to their cloud data storage..

IV. PROPOSED METHODOLOGY

Docstash is SaaS based cloud storage platform to solve the lack of physical storage space in devices. It will ensure data integrity and security of user files. It allow user to view edit and download their files from any devices.

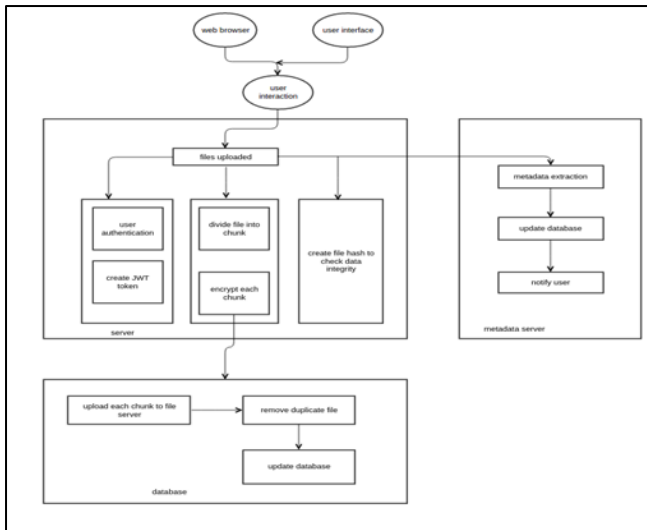


Fig. 1: Architecture

User can login with 3rd party service like Google to extend their storage. All files will be encrypted with industry grade AES-256 Algorithm and stored and served with compression enabled.

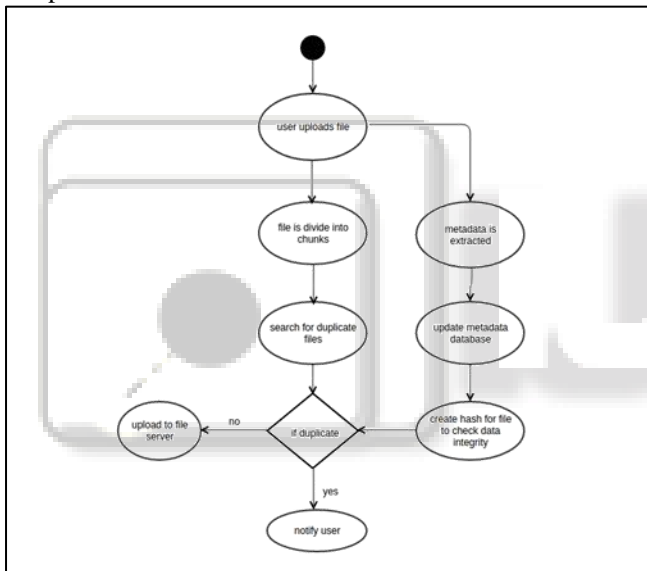


Fig. 2: Activity Diagram

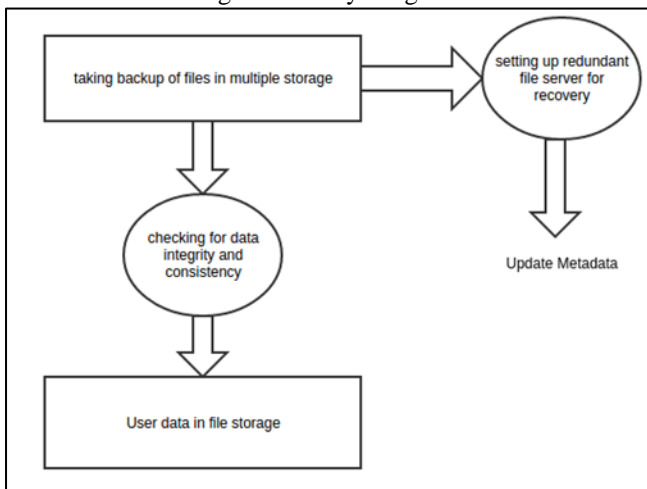


Fig. 3: Data Flow Diagram Level 1

Users can have access to social media platform like Youtube, Twitter even if there ISP has restricted access to such websites.

Docstash will provide assistance to a user with user-friendly bot always present to help. User and can interact with another user through a chat interface and share. link to friends which is shortened via link shortner built into docstash. Docstash will be built upon new and cutting edge software stack that will enable it to scale easily.

V. RESULT AND DISCUSSION



Fig. 4: Docstash Landing Page

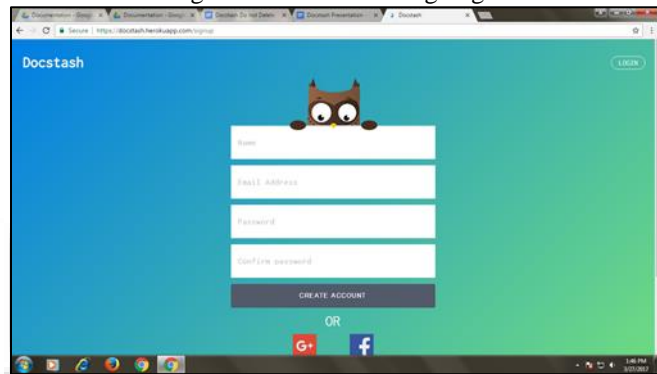


Fig. 5: Signup Page

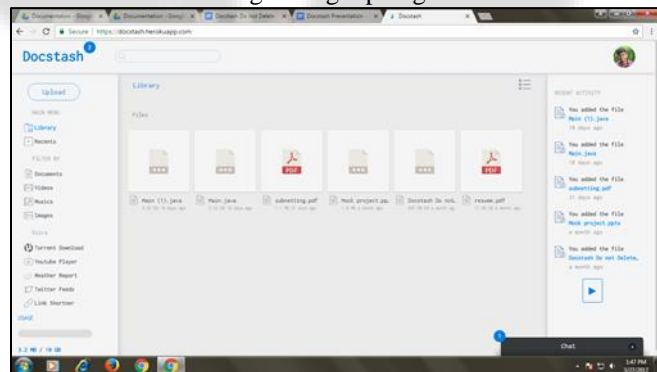


Fig. 6: HomePage

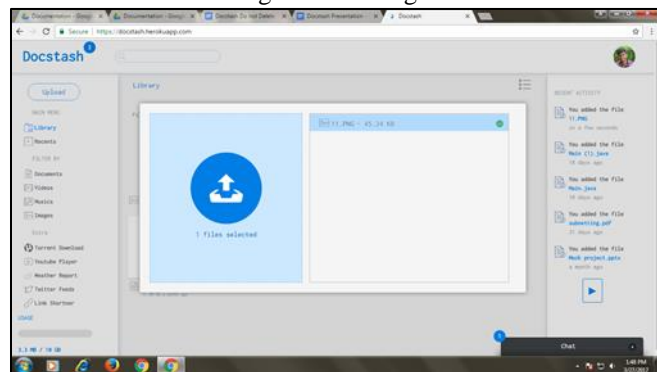


Fig. 7: Upload Modal

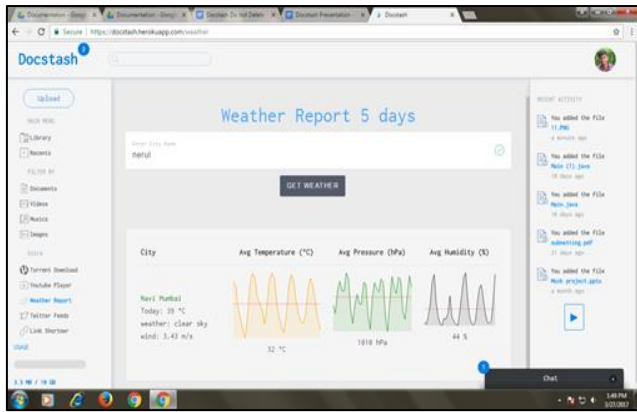


Fig. 8: Weather Report

VI. CONCLUSION

Designing Cloud Storage (Docstash) is a challenging task, not least due to the evolving nature of the technology but also from the perspective of how to authenticate users with one of the best encryption technique and provide better interface experiences. We have resolved the problem of the storage solution for any person. Docstash, which makes use of latest techniques to enhance existing features and facilities in the market provided by the good storage providers.

Docstash is a SaaS platform with increasing competitiveness that provides an enormous amount of storage through greater flexibility and optimal resource utilization to the user through authenticating itself in a very secure environment.

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