**CLOUD STORAGE MONITORING SYSTEM**

**ANALYZING THROUGH FILE ACCESS PATTERN**

**ABSTRACT**

Cloud computing is an important technology on current demanding business requirements and it has been emerged as unavoidable technology. The usage of IaaS Service storage for Cloud Computing is being expanding exponential every year. The cloud storages are used by the cloud user due to its economy compared with other storage methods. The replications of files helps user for easy access with high availability which reduces the overall access time of the files, but

at the same time it occupies more storage space and result in high storage cost. The cloud user holds multiple times of the storage than what he is actually needed. It is a dire need of system to find unwanted files in the cloud and also optimize the storage space by evaluating through file access frequency.

This paper propose Cloud Storage Monitoring (CSM) system, which monitor the IaaS storage usage and analyze the file access patterns by various parameters to identify the frequency of

access, size, future access prediction, replication of files in the cloud storage. This allocates a ranking for each file which also predicts future access pattern. This generates a recommendation

dashboard to the user who can decide on the operations such as reorganize, delete or archive the files and eliminate duplicate files in the cloud storage which can increase the space for future use. We implement this project using java technology with deduplication concept. The ranking algorithm technique applied on frequency distribution shows that increase in the storage space upto 10.91% higher than the normal system. It also helps to forecast towards future files usability prediction and prevents the duplicate entries.

**SYSTEM ANALYSIS**

**EXISTING SYSTEM**

Nowadays most organizations understand the benefits of migrating data to a cloud storage service but at the same time cloud services also having its own risks and drawbacks. In future

cloud storage services will replace the storage network in the data center, mostly due to high sensitive transactional applications, data-intensive, low-response time, and deals with critical data.

Most of use cases are related to organizations and companies having substantial on-premise storage requirements related to cloud storage from various vendors in a Public/Private/Hybrid

model deployment. The organization is making difficult on enforcing cloud storage data management policies and best practices on storage optimization features.

Security on public cloud is not more secure than in-house storage; Most of IT managers aren't comfortable when dealing with sensitive data on public environment. The sensitive data has

been shared to cloud provider which is having multi-tenancy infrastructure which is accessed by public.

**DISADVANTAGES**

* Lot of duplicate data may occupy cloud space due to which customers have to pay for large cloud space.
* Public cloud does not provide much security for data, hence it can be easily hacked.
* Older files which are not in use from long time may occupy much storage space.

**PROPOSED SYSTEM**

A prediction and ranking based system is proposed to handle the de-duplication in cloud storage with the following design objectives.

• Identify the frequency on access pattern

• Provide prediction on file access

• Identify the duplication of files on cloud storage

• Build storage efficient system.

• Increase efficiency of the system.

• Improve search experience

• Block duplication of files in future

The proposed research work, CSM system rank the files based on their popularity and the frequency of access. The system generates ranking dashboard which helps to optimize the storage space and availability. The CMS system reduces the storage space by de-duplication and increase the availability by having the files ready for access.

**ADVANTAGES**

* Prevents duplication of files.
* Files will be displayed based on access pattern ie. Most accesses file will beon top of list.
* Rank is generated for files based on access pattern of file.
* Files are secured by CSM using encryption and compression technique while uploading file.
* Last access date of file is displayed to customer so that unwanted files can be deleted to free storage space.

**SYSTEM REQUIREMENTS SPECIFICATION**

**Hardware requirements:**

* Processor : Any Processor above 1.8 GHz.
* Ram : 2 GB.
* Hard Disk : 20 Gb.
* Input device : Standard Keyboard and Mouse.
* Output device : VGA and High Resolution Monitor

**Software requirements:**

* Operating System : Windows Family.
* Language : Java
* Front End : Java AWT/Swings
* Tools : JDK 8, Netbeans IDE 8.0, Heidisql
* Back End : Mysql 5.0 server

**SYSTEM ARCHITECTURE**

