A Study on Working with Cloud-Based Storage

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Abstract: Cloud computing is a computing paradigm, where a large pool of systems are connected in private or public networks, to provide dynamically scalable infrastructure for application, data and file storage. With the advent of this technology, the cost of computation, application hosting, content storage and delivery is reduced significantly. In this paper we have represented a Study on different working methodology related to Cloud-Based Storage.

Keywords- Cloud Computing, Provisioning Cloud Storage, Cloud Backup Solutions, Cloud Data Storage, Services of Cloud Storage.

I. INTRODUCTION

Cloud computing is a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources that can be rapidly provisioned and released with minimal management effort or service provider interaction.

A large percentage of that data either is already stored in the cloud, will be stored in the cloud, or will pass through the cloud during the data's lifecycle.

Cloud storage systems are among the most successful cloud computing applications in use today. This paper surveys the area of cloud storage systems, categorizes the

Different cloud storage system types, discusses File sharing and backup software
Systems and describes the methods being used to get cloud storage systems to interoperate.

Figure: 1 Cloud-Based Storage Devices

In the Fig: 1 represents the Cloud-Based
Storage devices like Mac, Tablet PC, Network Scanner, Smartphone, Cell Phone, PDA, Laptop, Windows PC, Servers, SAN/NAS and File Application Database Etc.,

Cloud storage providers are responsible for keeping the data available and accessible, and the physical environment protected and running. People and organizations buy or lease storage capacity from the providers to store user, organization, or application data.

II. LITERATURE SURVEY

2.1 Provisioning Cloud Storage

Cloud storage may be broadly categorized into two major classes of storage:
a. Unmanaged storage
b. Managed storage

a. Unmanaged storage

In unmanaged storage, the storage service provider makes storage capacity available to users, but defines the nature of the storage, how it may be used, and by what applications. The options a user has to manage this category of storage are severely limited. However, unmanaged storage is reliable, relatively cheap to use, and particularly easy to work with. Most of the user based applications that work with cloud storage are of this type.
Unmanaged cloud storage providers include the following:

- 4Shared
- Adrive
- Drop box
- Google Docs Storage
- Media Fire
- Rapid Share
- Skydive

b. Managed storage

Managed cloud storage is mainly meant for developers and to support applications built using Web services. Managed cloud storage is provisioned and provided as a raw disk. It is up to the user to partition and format the disk, attach or mount the disk, and make the storage assets available to applications and other users.
Managed cloud storage providers include the following:

- Amazon.com Simple Storage Service
- EMC Atmos
- Google Storage for Developers
- IBM Smart Business Storage Cloud
- Iron Mountain
- Nirvanix
- Rack space Cloud

Figure 2: Enterprise Cloud Storage

In the Fig: 2 represent the Enterprise Cloud Storage like Desktop, Laptop, Browser, API, Secure Storage, Mobile Client and

Server.

2.2 Exploring Cloud Backup Solutions

Cloud storage is uniquely positioned to serve as a last line of defence in a strong backup routine, and backing up to the cloud is one of the most successful applications of cloud computing. This area is a cornucopia of solutions, many inexpensive and feature rich.

Backups may be categorized as belonging to one of the following types

- ❖ Full system or image backups
- ❖ Point-in-time (PIT) backups or snapshots
- ❖ Differential and incremental backups
- ❖ Reverse Delta backup
- ❖ Continuous Data Protection (CDP) or mirroring
- ❖ Open file backup

A backup creates a copy of the data, whereas an archive removes older information that is no longer operational and saves it for long-term storage. We can't restore your current data set from an archive.

Cloud Storage Backup Solutions include the following:

- ➢ Back blaze
- ➢ Barracuda Backup Service
- ➢ Dell Data safe
- ➢ I Backup
- ➢ Unitrends Vault2Cloud
- ➢ Windows Live Mesh
- ➢ ZumoDrive

III. PROBLEM STATEMENT

3.1 CLOUD DATA STORAGE

Cloud storage is uniquely positioned to serve as a last line of defence in a strong backup routine, and backing up to the cloud is one of the most successful applications of cloud computing.

In cloud data storage system, users store their data in the cloud and no longer possess the data locally. Thus, the correctness and availability of the data files being stored on the distributed cloud servers must be guaranteed.

Table: 1 Unmanaged Cloud Storage

Service	Site	Storage Size	Maximum File Size
4Shared	http://www. 4shared.com/	10GB free t0 100GB paid	200MB
Adrive	http://www. adrive.com/	50GB free to 1 TB paid	2GB
Drop box	https://www. dropbox.com/	2GB free, up to 8GB	Unlimited

Table 1 lists some of the current file-sharing services offered on unmanaged cloud storage.

Table: 2 Cloud Storage Backup Solutions

Service	Site	Windows/ Linux/ Mac	Encryption
Back blaze	http://www. Back blaze. com/	Yes/No/Yes	Yes

Dell Data safe	http://www. dell data safe.com/	Yes/No/No	Yes
I Backup	https://www. ibackup.com/	Yes/Yes/Yes	Yes

Table 2 lists some of the current backup services offered on unmanaged cloud storage.

A backup creates a copy of the data, whereas an archive removes older information that is no longer operational and saves it for long-term storage.

The backup solutions described have been client or software-based solutions that are useful for an individual desktop or server.
However, some interesting hardware-based solutions are available for backing up your systems to cloud-based storage.

IV. CONCLUSION

In this paper, we have studied several approaches to data storage in cloud computing. Data services have, and will continue, to be built out of commodity components. The use of commodity components combined with issues related to the settings in which these components operate such as heat dissipations and scheduled down times imply that failures are a common occurrence and should be treated as such we investigated the problem of data size in cloud data storage, which is essentially a distributed storage system.

This paper is discussed various sections, Introduction of cloud computing, Literature survey and problem statement. The main purpose of this work is to study the recent research done on cloud as well as to solve the security issues faced by the data owners. By this study I conclude that much research has been done to services offered in data storage in cloud but for multi services that much of research is not done and still it has some storage issues like storage size and Maximum File size at the time of data retrieval in cloud. So, Cloud data storage needs more attention in area of Storage Size in cloud computing.

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