A Retain Methods of Data in Cloud Computing

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Abstract: cloud computing is an emerging distributed technology which provides number of services to the users like platform as a service, infrastructure as a services and software as a service. To maintain the data in the cloud environments lot of techniques can be implemented for security reasons. The techniques which can handle the data by protecting and developing backup methods even the data is lost on the side of the cloud users. The cloud users can maintain the large amount of data every day, so the user requires solutions for every disaster happening on the cloud. This paper focusing on the factors like security and data recovery retain methods in the cloud environments.

Keywords

Remote server, Data backup, Central Repository

1. Introduction

The cloud computing is the origin in the network that represents the internet services. Cloud computing uses the time shared computing resources and applications refers to services to the users. The cloud computing environment provides different types of clouds like private, public and hybrid clouds. The IT organizations mostly prefer the private clouds for their security reasons. Security is essential approach for the data in the cloud. Now a day's many companies prefer the cloud computing environments and handling it so easy like Google maintains the private cloud and delivering the Google docs and text translations, Microsoft maintains the online services that allows the users to access it and salesforce.com runs it applications in the cloud only for its consumers.

Cloud computing has a variety of characteristics
• Shared Infrastructure — Uses a virtualized software model, enabling the sharing of physical services, storage, and networking capabilities. The cloud infrastructure, regardless of deployment model, seeks to make the most of the available infrastructure across a number of users.
• Dynamic Provisioning — Allows for the provision of services based on current demand requirements. This is done automatically using software automation, enabling the expansion and contraction of service capability, as needed. This dynamic scaling needs to be done while maintaining high levels of reliability and security.
• Network Access — Needs to be accessed across the internet from a broad range of devices such as PCs, laptops, and mobile devices, using standards-based APIs (for example, ones based on HTTP). Deployments of services in the cloud include everything from using business applications to the latest application on the newest smart phones.
• Managed Metering — uses metering for managing and optimizing the service and to provide reporting and billing information. In this way, consumers are billed for services according to how much they have actually used during the billing period.

2. Literature Review

The following sections explain the survey of various papers regarding this concern. Different methods that have been proposed for having data backup for Cloud Computing are given below.
In [1], Ms. Kruti Sharma has proposed a Seed Block Algorithm Architecture (SBA) and suggested a remote backup server. The remote Backup server is a replica of original cloud server which is physically situated at a remote location. This method is based on the concept of Exclusive-OR (XOR) operation of digital computing. The whole mechanism consists of three main parts 1.The Main Cloud Server 2.Clients of the Cloud and 3.The Remote Server. The SBA uses a random number and a unique client id associated with each client.In [2], Chi-won Song, Sungmin Park, Dong-wook Kim, Sooyong Kang, have proposed a novel data recovery service framework for cloud infrastructure, the Parity Cloud Service (PCS) provides a privacy-protected personal data recovery service. In this proposed framework user data is not required to be uploaded on to the server for data recovery. All the necessary server-side resources that provide the recovery services are within a reasonable bound. The advantages of Parity Cloud Service are that it provides a reliable data recovery at a low cost but the disadvantage is that its implementation complexity is higher. In [3], Vijaykumar Javaraiah introduced a mechanism for online data backup technique for cloud along with disaster recovery. In this approach the cost of having the backup for Cloud platform has been reduced and also it protects data from disaster at the same time the process of migration from one cloud service provider to another becomes easier and much

simpler. In this approach the consumers' are not dependent on the service provider and it also eliminates the associated data recovery cost. A simple hardware box is used that achieves all these at little cost. In [4], Yoichiro Ueno, Noriharu Miyaho, Shuichi Suzuki,Muzai Gakuendai, Inzai-shi, Chiba,Kazuo Ichihara, proposed the innovative file back-up concept HS-DRT, that makes use of an effective ultra-widely distributed data transfer mechanism and a high-speed encryption technology. This system consists of two sequences one is Backup sequence and other is Recovery sequence. The data to be backed-up is received In Backup sequence. The recovery sequence is used when there is a disaster or any data loss occurs the Supervisory Server (one of the components of the HSDRT) starts the recovery sequence. There are some limitations in this approach and due to which, this model cannot be declared as a perfect technique for Cloud back-up and recovery. Although this model can be used for movable clients such as laptops Smart phones etc. the data recovery cost is comparatively increased and also there is increased redundancy.

3. Proposed work

The retain method of data in cloud computing environment is a remote backup server is the replica of first cloud and converted as remote location server, the first cloud becomes the central repository and replica cloud becomes the remote repository. The disaster can happen due to any failures, the cloud data might have chances to lose in the cloud environments. The data security provides the assurance to the user's information in the cloud. The remote backup server maintains the backup facility for user information. The Data integrity is the property provide the entire structure of user's data and how it is arranged in the cloud and it confirms the information available on the remote server. The user can access the data simultaneously and anywhere in the world if server is available remotely. The user must satisfy with the remote backup server if it is providing data confidentiality. The data confidentiality is to handle the data securely and inaccessible to the unauthorized users. The remote backup server can be affected on cost efficiency because the cloud cannot be provide the services freely it follows the property such as pay per use.
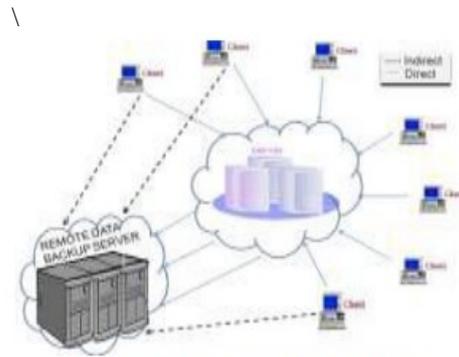
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Fig. 1 Remote Backup Server and its Architecture

The figure 1 represents the remote backup server and its architecture and also a direct and indirect connection in between the client and server. The remote backup server can maintains the components to check the user information before stored in to a cloud.

4. Workflow of the system

Figure 2 represents the user can access the data remotely by using any platform in the cloud environments. At the side of the cloud some workflow is required, the step is before going to store the data in the database validation and verification is necessary to have the advantages of flexibility, availability, portability and proper backup facility.
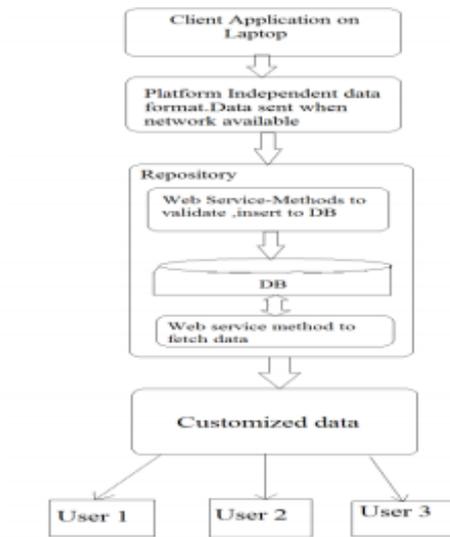

Figure 2: Workflow of the system

5. Conclusion & Future Scope

The remote repository is the approach to maintains the backup information and provide an assurance to the cloud users for their data. The system components play major roles for the recovery

of information i.e. the central repository and remote repository have to maintain the similar components including their sizes in the memory. This paper describes the retain method of data in cloud environment that is the remote backup server and the workflow of the system in the database. This is an essential concept to develop many techniques in the future for recovering data if the crashes happening in the cloud environments.

6. References

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