

**MAINTENANCE OF CLOUD DATA FOR VERIFICATION OF
CONSISTENCY****Divya Sree Embar¹, K.Krishna Reddy²**¹M.Tech Student, Dept of CSE, Holy Mary Institute of Technology & Science, Hyderabad, T.S, India²Associate Professor, Dept of CSE, Holy Mary Institute of Technology & Science, Hyderabad, T.S, India**ABSTRACT:**

A cloud is basically a significant distributed system in which the data is replicated on numerous geographically distributed servers to attain high accessibility and high performance. In our work we propose a new consistency as a service representation which consists of a huge data cloud and numerous small audit clouds. In the proposed system, the data cloud is continuous by means of a cloud service provider, as well as a group of users that comprise an audit cloud can confirm whether data cloud provides promised level of constancy or not. We carry out a two-level auditing structure in which each user can execute local auditing separately by means of a local trace of operations; at regular intervals, an auditor is chosen from audit cloud to execute global auditing by means of a global trace of operations. The system of two-level auditing arrangement, which only requires a loosely synchronized clock intended for ordering functions in an audit cloud. We build up a heuristic auditing scheme to make known as many violations as achievable. A service level agreement will be employed among data cloud as well as the audit cloud, which will specify level of consistency that has to be provided by cloud, and the quantity that has to be charged when the data cloud violates service level agreement.

Keywords: Consistency as a service, Service level agreement, Cloud system, Cloud service provider, Heuristic auditing.

1. INTRODUCTION:

Cloud computing has turn out to be popular, since it promises to assurance scalability, flexibility, and high accessibility at a small cost. Services of cloud storage can be considered as a typical provision in cloud computing, that involves delivery of data storage as a service, comprising database-like services as well as network attached storage, regularly billed on the basis of utility computing. To meet up assurance of ubiquitous access, the provider of cloud service stores data replicas on numerous geographically distributed servers [1]. The functioning of data cloud is difficult to all users because of virtualization technique. Consequently, it is tough for users to confirm whether each replica in data cloud is most recent one or not. By means of cloud storage services, customers can make an access towards data that is stored in a cloud at anytime and anywhere by means of any device, devoid of caring regarding a huge amount of capital investment when positioning underlying hardware infrastructure. In our work we put forward a novel consistency as a service representation which consists of a huge data cloud and numerous small audit clouds. The data cloud is preserved by a cloud service provider, and

an audit cloud that consists of a collection of users that assist on a job. We put forward a two-level auditing arrangement, which only requires a loosely synchronized clock intended for ordering functions in an audit cloud [2]. We develop a heuristic auditing scheme to make known as many violations as achievable. A service level agreement will be engaged among data cloud as well as the audit cloud, which will specify level of consistency that has to be provided by cloud, and the quantity that has to be charged when the data cloud violates service level agreement.

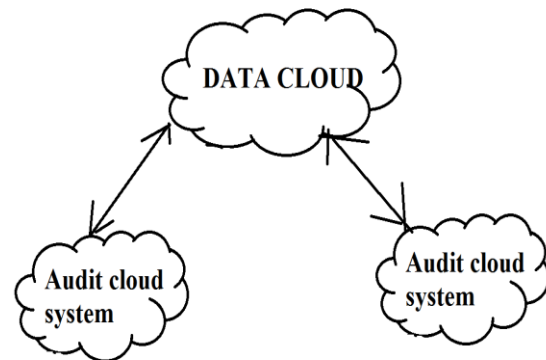


Fig1: An overview of consistency as a service representation.

2. METHODOLOGY:

In a cloud the data is replicated on numerous distributed servers to attain high accessibility and high performance. Traditional commercial clouds typically control strong consistency assurance to

minute datasets, or else give only eventual consistency. A loosely synchronized clock is appropriate for our solution. Exclusively, we necessitate each user to uphold a logical vector in support of partial ordering of operations, and we implement a two-level auditing structure: in which each user can execute local auditing separately by means of a local trace of operations; at regular intervals, an auditor is chosen from audit cloud to execute global auditing by means of a global trace of operations [3][4]. Local auditing mainly focuses on read-your-write and monotonic-read consistencies, which are performed by an online algorithm of light-weight. Local auditing can be implemented independently by means of each user by own user operation table. Global auditing most importantly focuses on causal constancy, which is carried out by means of constructing a directed graph. In our work we present novel consistency as a service representation which consists of a huge data cloud and numerous small audit clouds. In the consistency as a service representation, a data cloud is continued by a cloud service provider, as well as a group of users that comprise an audit cloud can confirm whether data cloud provides promised level of constancy or not [5]. The consistency as

a service representation consists of a data cloud as well as numerous audit clouds. From the auditing procedure in consistency as a service representation, we observe that only reads can make known violations by means of their values. As a result, the fundamental idea of heuristic auditing scheme (HAS) is to append appropriate reads in support of revealing as several violations as possible. Heuristic auditing scheme divides physical time as time slices. Each time slice is connected by a state, which can be noticeable with moreover normal or abnormal. A normal state describes that there is no consistency contravention, and an abnormal state describes that there is one violation in time slice. Under consistency as a service consistency becomes a part of service level agreement; users can obtain proportional compensation from provider of cloud service, by means of disclosing constancy violations. We consider that consistency as a service representation will help cloud service provider and the users implement consistency as an essential feature of cloud services offerings.

3. MODELLING OF PROPOSED SYSTEM:

With the consistency as a service representation, the users can assess quality of cloud services and prefer a right cloud service provider among a variety of candidates, for instance the least expensive one that still make available satisfactory consistency for applications of user. In the system of consistency as a service, a data cloud is continued by a cloud service provider, as well as a group of users that comprise an audit cloud can confirm whether data cloud provides promised level of constancy or not. The consistency as a service representation consists of a data cloud as well as numerous audit clouds. The data cloud that is maintained by provider of cloud service is a key-value data storage system in which each piece of information is recognized by means of a unique key. To make available always-on services, cloud service provider replicates all of data on numerous geographically distributed cloud servers. An audit cloud comprises of a group of users that assist on a job. We suppose that each user within audit cloud is recognized by a unique ID. Earlier than outsourcing the job towards data cloud, audit cloud as well as the data cloud will take on in a service

level agreement, which stipulates assured level of constancy that have to be provided by data cloud. The audit cloud exists to confirm violation of service level agreement by the data cloud and to quantify severity of violations. In our system we implement a two-level auditing structure: in which each user can execute local auditing separately by means of a local trace of operations; at regular intervals, an auditor is chosen from audit cloud to execute global auditing by means of a global trace of operations. Two-level auditing arrangement, which only requires a loosely synchronized clock intended for ordering functions in an audit cloud. In two-level auditing structure each user records his operations within a user operation table, which is known as a local trace of operations. Local auditing can be executed independently by means of each user by own user operation table; at regular intervals, an auditor is chosen from audit cloud. In this situation, the entire other users will forward their user operation table towards the auditor, which will carry out global auditing by means of a global trace of operations. Each user upholds a user operation table for recording local procedures. Each record in user operation table is described by means of three

elements such as operation, logical vector, as well as physical vector [6]. While issuing a function, a user will trace this operation, and his existing logical vector and physical vector, in his user operation table.

4. CONCLUSION:

Traditional commercial clouds normally manage strong consistency assurance to minute datasets, or else give only eventual consistency. We introduce a novel consistency as a service representation which consists of a huge data cloud and numerous small audit clouds. Data cloud is preserved by a cloud service provider, and an audit cloud that consists of a collection of users. Here the data cloud is sustained by means of a cloud service provider, as well as a group of users that comprise an audit cloud can confirm whether data cloud provides promised level of reliability. A service level agreement will be maintained among data cloud as well as the audit cloud, which will specify level of consistency that has to be provided by cloud, and the quantity that has to be charged when the data cloud violates service level agreement. We build up a heuristic auditing system to make known as many violations as achievable. We believe that the proposed system of Consistency as a

service will assist cloud service provider and the users put into practice consistency as an essential feature of cloud services offerings. We employ a two-level auditing arrangement in which each user can execute local auditing separately by means of a local trace of operations; at regular intervals, an auditor is chosen from audit cloud to execute global auditing by means of a global trace of operations. In this structure only a loosely synchronized clock was necessary which is intended for ordering functions in an audit cloud.

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