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Security Enhanced Service Level Agreement for Cloud Storage Services

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Abstract - The cloud computing has been evolved in recent day that allow the customers to utilize the cloud computing technologies. The project work due to many issues that have coincided with the vast growth of the cloud computing technologies. The cloud security concern has become one of the important issues in cloud computing. The main components of cloud services is the service level agreement (SLA) that works as a contractual document between the cloud service providers and customers that states some metrics and parameters that must be enforced by the cloud providers or consumers. This research tends to perform secured SLA based analysis in cloud computing environments. Moreover, it evaluates different SLA parameters such the storage space factor, the response time factor, and the service cost factor. This paper also designates the importance of considering secured SLA parameter between the provider and the consumer. However, it looks for the relation between those SLA metrics associated with the cloud storage services.

Keywords –SLA, metrics, SLA factor

I . INTRODUCTION

1.1 SERVICE LEVEL AGREEMENT

The cloud provider uses service level management to make decisions about its infrastructure; for example, if throughput isn't always meeting a customer's requirements,and provider can reallocate the Bandwidth or add hardware. Or decide to make one customer happy at the expense of another one. For providers, SLM is designed to help make the best decisions based on business objectives and technical realities. The cloud consumer uses SLA to decide how he wants to use cloud services; like whether or not to add in more virtual machines and at what price point that option becomes too expensive to justify the return. For consumers, SLM helps them make decisions on the way they use the cloud.

II. EXISTING METHOD

One of the main components of using cloud services is the service level agreement (SLA) that works as a contractual document between the cloud providers and their customers. Cloud SLA states some metrics and parameters that must be enforced by the cloud providers or consumers.

But those parameters are not well defined for customers. The customer are faces some of problems while choosing the service providers for cloud storage services. This Service Level Agreement provides assurance to the customer for accessing cloud storage service providers. In existing system the service provider does not provide the secured SLA for the consumer. There is no common security model based on SLA (Service Level Agreement).Consumer faces the risk because of untrustworthy service providers. Most of the service providers do not represent and reflect some essential characteristic of security.

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III. PROPOSED SYSTEM

To design a Security enhanced Service Level Agreement for cloud storage services to overcome security breach. Selecting the web services for storage based on secured SLA over the Internet.

The present document proposes the use of a framework for service metrics, applicable to cloud services. A set of SLA Characteristics of cloud services will be defined for accessing cloud storage environment. Each SLA Characteristic will then be defined according to a set of SLA Parameters appropriate to the specific service types identified. The standardization of SLA Metrics to allow the unambiguous evaluation of SLA Parameters will require technical consensus and robust specification so that results are reproducible and can support independent audit and certification of key aspects of service behavior.

Secured SLA (SSLA) is important, which is a representation of the metrics shared by the parties to the SLA (and defines a reference point), and the use that each party makes of this context in its own operations throughout the SLA lifecycle. The SLA needs to provide a complete description of the service for both Consumer and Provider to avoid uncertainty and disputes which benefit neither.

This SLA serves as the foundation for the expected level of service between the consumer and the provider. The QoS attributes that are generally part of an SLA (such as response time and throughput) however change constantly and to enforce the agreement, these parameters need to be closely monitored.

The QoS attributes that are generally part of an SLA (such as response time and throughput) however change constantly and to enforce the agreement, these parameters need to be closely monitored. A cloud storage service level agreement is a contract between a cloud storage service provider and customer. It defines the availability, uptime, redundancy and other service delivery assurances warranted to a customer by a provider. A cloud storage SLA is critical because storage is delivered as a service from a remote location, which presents potential security, privacy and data loss risks. A storage service provider (SSP) is a type of service provider that builds, operates, manages and delivers a storage to store third party data. A SSP is classified as an online storage service provider, virtual storage service provider or cloud storage service provider.

SSP has a facility that consists of a very large storage infrastructure or storage area network (SAN) that is assigned and distributed across one or more end users or enterprise. In this project we are creating the secured SLA metrics for

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customers in Cloud Environment. The SLA metrics are analyzed based on some criteria in the Cloud Environment. The customer are uses that SLA for secure and reliable service.

IV. CONCLUSION

The paper recommends that SLA Characteristics and SLA Parameters should be specified in a document. This can be used to integrate specific cloud storage providers.SLA Metrics should be specified separately and linked to existing SLA Parameters. In this way, it will be possible to start with a top level concern for a particular type of cloud service and identify appropriate parameters and metrics that can express in a formal way the expectations of the behavior of specific services as required for an effective SLA. We can select the web services for storage based on secured SLA over the Internet.

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