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Double-Quality-Guaranteed (DQG) Renting Scheme in Cloud Computing

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Abstract: Cloud computing is rapidly becoming an effective and efficient way for computing resources. Cloud computing delivers hosted services across the Internet by centralized management for resources and services. Cloud computing is capable of providing the most cost-effective and energy-efficient way for computing resources management. By using the pay-peruse pricing model the cloud computing will turn the information technology into an ordinary commodities and utilities. Profit is regarded as most important factor obtained from the point of view of cloud service providers' and it is especially determined by the configuration for a cloud service platform under the given market demand. Usually, a single long-term renting scheme is used for configuring a cloud platform that cannot guarantee the quality of service but it may lead to serious resource waste. In this paper, firstly a double resource renting scheme is designed in which short-term renting and long-term renting were combined by aiming at the issues of existing one.

Keywords: DQG, SQU.

I. INTRODUCTION

Cloud computing is quickly turning into a successful and also effective method for figuring assets. By combining administration of assets and administrations together, Cloud computing will convey facilitated administrations across the Internet. Cloud computing is capable of giving the most practical and vitality effective method for processing administration assets. Cloud computing will transform data innovation into common wares and utilities with the utilization of pay-per-use evaluating model.An administration supplier rents the assets from the foundation sellers and constructs suitable multi server frameworks and then gives various administrations to clients. A buyer will present an administration solicitation for an administration supplier and gets the sought result taken from the administration supplier with certain administration level assention. In that point pays for the administration in view of their measure of the administration and their nature of the administration. An administration supplier is capable of assembling distinctive multi server frameworks for several application areas, so that the administration solicitations of various nature were sent to different multi server frameworks. Attributable for repetition of PC framework systems and also capacity framework cloud may not be solid for information as per the security score is concerned. In case of Cloud computing security is enormously enhanced because of prevalent innovation security framework that is currently effortlessly accessible and reasonable.

The Applications will no more keep running on the desktop yet the Personal Computer will keep running in the cloud. This implies that the PC will not require the preparing power or hard plate space as it is requested by customary desktop programming. The Effective servers and so forth were not required. The registering force for the cloud may be utilized to supplant or supplement inward figuring assets. The Associations were no more required to buy processing assets for handling the limit crests. Cloud computing is quickly turning into a viable and also a productive method for figuring assets. By combining administration of assets and administrations together, the Cloud computing will convey facilitated administrations across the Internet. Cloud computing is capable of giving the most financially savvy and vitality effective method for the purpose of registering assets administration. The Cloud computing will transform data innovation into conventional items and utilities with the utilization of the pay-per-use estimating model. An administration supplier rents assets from the framework sellers and fabricates suitable multi server frameworks and also gives various administrations to clients. A purchaser will present an administration solicitation for an administration supplier and gets the coveted result from the administration supplier with the certain administration level assention. In that point, the pays for the administration takes into consideration the measure of the administration and the nature of the administration.

An administration supplier is capable of assembling diverse multi server frameworks for several application spaces, so that administration solicitations for various nature were sent to different multi server frameworks. The Inferable from excess of PC framework systems and also capacity framework may not be solid for information as per the security score is concerned. In case of Cloud computing security is enormously enhanced in view of a prevalent innovation security framework, presently it is effectively accessible and moderate. The Applications will no more keep running on the desktop Personal Computer however they keep running in the cloud. This implies that the PC will not require the preparing power or hard circle space as it is requested by conventional desktop programming. The Effective servers and so forth were no more required. The figuring force for the cloud may be utilized to supplant or supplement interior registering assets. The Associations will no more require buying registering assets for handle the limit crests.

II. LITERATURE SURVEY

In the paper [2] they have discussed regarding pricing in cloud, aspects of pricing models and different types of pricing models such as pay-as-you go model, genetic model for pricing in cloud computing markets etc.

A. Pricing in Cloud

The Service provider will provide requested services for the customer. The Customer will pay to the service provider based on the amount and also the quality of the provided service. The Pricing process may be of two types: Fixed and Dynamic. In case of fixed pricing mechanism, every time same amount is charged for the customer. Fixed pricing mechanism also include pay per-use pricing model in which customers are charged based on their usage and consumption of a service. [2] Subscription is considered as another type of fixed pricing, in which the customer will pay a fixed amount of money for using the service for longer periods at any convenient time or amount. In case of dynamic pricing mechanism, the customer is charged based on real time market conditions and also the price of service is market dependent. The Factors such as initial cost, lease period, quality of service, age of resources, maintenance cost which will influence pricing in cloud computing were also discussed.

Aspects of Pricing Models In Cloud: There are three main parameters for the pricing model: Quality of Service, utilization period and pricing approach. The pricing approach will describe the process based on which the price is determined.

- The pricing approach may be any one of the following: The fixed price regardless of volume: In this, fixed price is charged for the customer regardless of their product utilization or volume of service.
- **The Fixed Price Plus Per-Unit:** In this case, the fixed price plus a unit rate is charged to the customer assured purchase.
- **Volume Plus Per-Unit Price Rate:** In this case,customer pays fixed charge for certain quantity.
- **Per-Unit Rate with a Ceiling:** In this case, the customer pays per unit rate up to a certain limit. The service provider may not charge the customer beyond that limit.
- **Price Per-Unit Approach:** In this approach, different price per unit is charged for the customer.
- **Quality of service (Qos):** Quality of service is the ability for providing different priority to different applications, users, or data flows, or to guarantee a certain level of performance. The Quality of service will also include on time delivery of service, providing security and privacy, scalability and integrity for the service provider. If all these requirements at high level are maintained by service provider then number of customers as well as customers loyalty towards service provider will increase.

III. PROPOSED MECHANISM

In this, we first propose the Double-Quality- Guaranteed (called DQG) resource renting scheme that combines long-term renting with short-term renting. The main computing capacity is provided by the long-term rented servers because of their low price. The short-term rented servers will provide the extra capacity in peak period as shown in Fig.1.

Advantages: In proposed system we are using the Double-Quality-Guaranteed (called DQG) renting scheme that can achieve more profit compared to the compared Single-Quality-Unguaranteed (called SQU) renting scheme in the premise of completely guaranteeing the service quality.

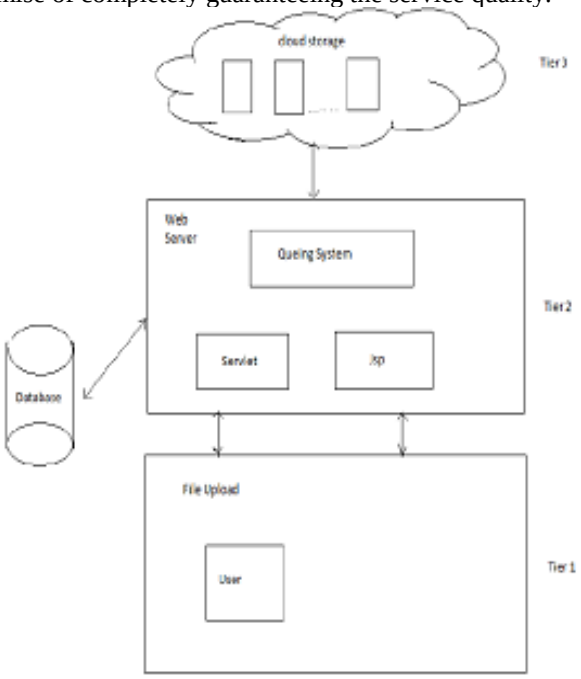

Fig.1. Architecture.

IV. IMPLEMENTATION RESULTS

Implementation results for this system showed a great way for maximizing the profit. Here are several results of the System which provides a better way for visualizing the system as shown in Figs.2 and 3.

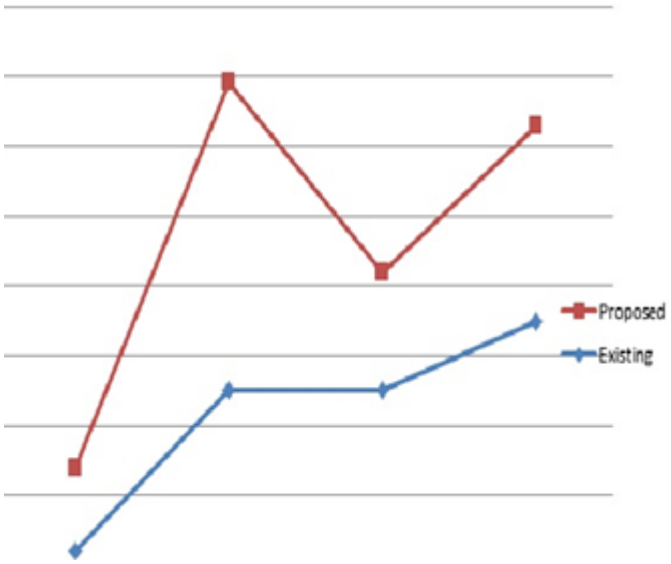

Fig.2. Throughput Analysis.

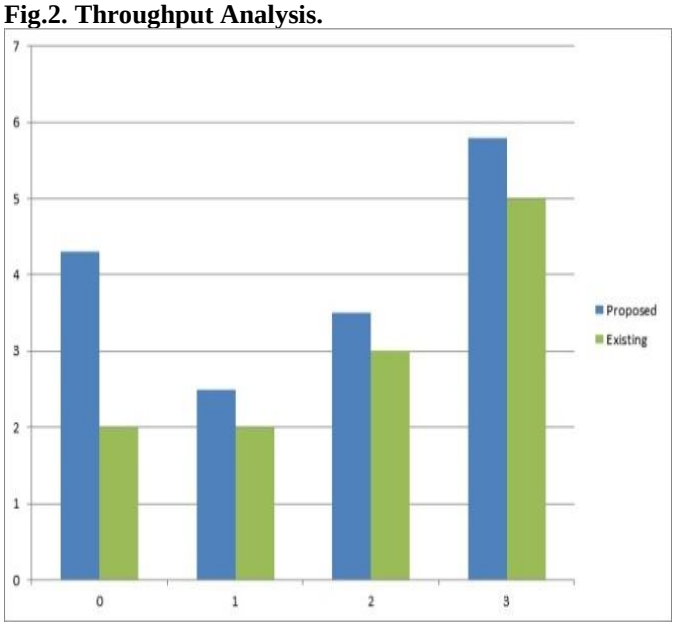

Fig.3. Profit Maximization.

V. CONCLUSION

A novel double quality guaranteed renting scheme is proposed that guarantee the Qos for the customers and also it maximizes the profit of the service providers. M/m/m+D queuing model is used for multi-server system that takes several factors into account request workload, SLA, rental cost of servers etc . This paper presents a concept of Cloud Computing along with load balancing that consists of several factors like Cost effectiveness, scalability, flexibility and priority.

VI. REFERENCES

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