

Customer Satisfaction Aware Optimal Multi Server Configuration For Profit Maximization in Cloud Computing

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Abstract: Along with the development of cloud computing, an increasing number of enterprises start to adopt cloud service, which promotes the emergence of many cloud service providers. For cloud service providers, how to configure their cloud service platforms to obtain the maximum profit becomes increasingly the focus that they pay attention to. In this paper, we take customer satisfaction into consideration to address this problem. Customer satisfaction affects the profit of cloud service providers in two ways. On one hand, the cloud configuration affects the quality of service which is an important factor affecting customer satisfaction. On the other hand, the customer satisfaction affects the request arrival rate of a cloud service provider.

Keywords: Cloud computing, cloud service, customer satisfaction.

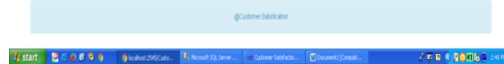
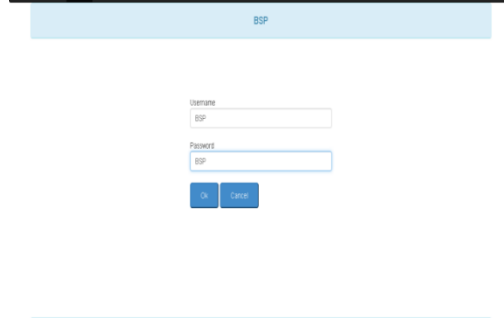
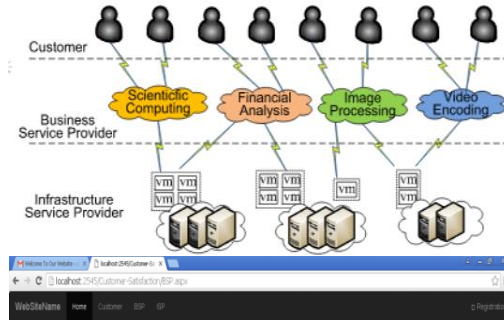
I. INTRODUCTION

Cloud computing is the delivery of resources and computing as a service rather than a product over the internet, such that accesses to shared hardware, software, databases, information, and all resources are provided to consumers on-demand. Customers use and pay for services on-demand without considering the upfront infrastructure costs and the subsequent maintenance cost. Due to such advantages, cloud computing is becoming more and more popular and has received considerable attention recently. Nowadays, there have been many cloud service providers, such as Amazon EC2, Microsoft Azure, and so forth.

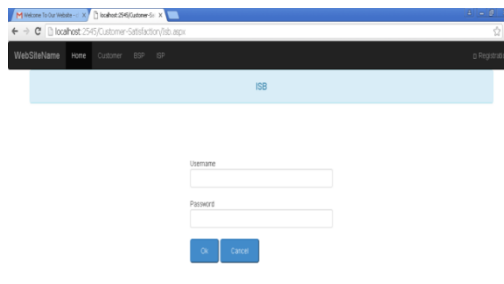
II. BUSINESS SERVICE PROVIDER

The administrator is a primary user called as cloud owner. He will manage the entire application and storage device. He can monitor the entire files and users stored on the server at any time. But he cannot download user files without user permission. He can view files and content at any time but he cannot download file without user acceptance. If he want to download the file he will send the request information to the user through this system. After the response from the user only he can download the file because of privacy.

We create a local Cloud and provide priced abundant storage services. The users can upload their data in the cloud. We develop this module, where the cloud storage can be made secure. However, the cloud is not fully trusted by users since the CSPs are very likely to be outside of the cloud users' trusted domain. Similar to we assume that the cloud server is honest but curious. That is, the cloud server will not maliciously delete or modify user data due to the protection of data auditing schemes, but will try to learn the content of the stored data and the identities of cloud users.



BUSINESS SERVICE PROVIDER



INFRASTRUCTURE SERVICE PROVIDER

III. SECURITY

Password mechanism has been used to provide system Security only authorized persons can access the system. The most commonly used implementation methods are pilot and parallel. They are:

Pilot Running:

Processing the current data by one user at a time called the pilot running process. When one user is accessing the data at one system, the system is sets to be engaged and connected in network. This process is useful only in system where more than one user is restricted.

Parallel Running:

Processing the current data by more than one user at a time simultaneously is said to be parallel running. This same system can be viewed and accessing by more than one user at the time. Hence the implementation method used in the system is a pilot type of implementation

IV. SYSTEM MAINTENANCE

The maintenance phase focuses on the change that is associated with error correction, adaptations required as the software environment evolves and changes due to the environment evolves and changes due to the enhancements Brought about by changing customer requirements. Provision must be made for environment changes, which may affect their computer or other parts of computer based systems. Such activity is normally called maintenance.

Maintenance activities include the enhancement of capabilities, adaptation of the software to the new processing environments, and correction of software bugs. The enhancement includes providing new functional capabilities, improving user displays and modes of attraction, upgrading performance characteristics and the adaptation of software to the new machine for performance. Problem correction involves modification and revalidation of software to correct errors

Correction

Even with the best Quality assurance activities, it is likely that the user will undergo defects in the software; correct maintenance changes the software to correct defects.

Adaptation

Over time, the original environment for which the software is developed is likely to change. Adaptive maintenance results in modification to the software to a accommodate changes to it external environment.



CLOUD STORAGE

V.CUSTOMER INTEGRITY

One of the important concerns that need to be addressed is to assure the customer of the integrity i.e. correctness of his data in the cloud. As the data is physically not accessible to the user the cloud should provide a way for the user to check if the integrity of his data is maintained or is compromised. In this paper we provide a scheme which gives a proof of data integrity in the cloud which the customer can employ to check the correctness of his data in the cloud.

This proof can be agreed upon by both the cloud and the customer and can be incorporated in the Service level agreement (SLA). It is important to note that our proof of data integrity protocol just checks the integrity of data i.e. if the data has been illegally modified or deleted.

ADVANTAGES:

- ❖ Apart from reduction in storage costs data outsourcing to the cloud also helps in reducing the maintenance.
- ❖ Avoiding local storage of data.
- ❖ By reducing the costs of storage, maintenance and personnel.



- ❖ It reduces the chance of losing data by hardware failures.
- ❖ Not cheating the owner.

VI.FUTURE DEVELOPMENT

This system is very flexible so that the maintenance and further amendments based on the changing environment and requirements can be made easily. Any change that leads to the system failures is prevented with security measures.

This paper can be extended in future to provide additional facilities

- ❖ In Future, more security features will be added in future when detecting beacon Movement.
- ❖ This paper done with detailed analysis of existing system and a careful design. So that future modification can be done in efficient manner with minimum disturbance to the system.

VII.CONCLUSION

In this paper consider customer satisfaction in solving optimal configuration problem with profit maximization. Because the existing works do not give a proper definition and calculation formula for customer satisfaction, hence, this project first give a definition of customer satisfaction leveraged from economics and develop a formula for measuring customer satisfaction in cloud.

Based on the affection of customer satisfaction on workload, we analyze the interaction between the market demand and the customer satisfaction, and give the calculation of the actual task arrival rate under different configurations. In addition, we study an optimal configuration problem of profit maximization. The optimal solutions are solved by a discrete hill climbing algorithm. Lastly, a series of calculations are conducted to analyze the changing trend of profit.

Moreover, a group of calculations are conducted to compare the profit and optimal configuration of two situations with and without considering the affection of customer satisfaction on customer demand. The results show that when considering customer satisfaction, our model performs better in overall.

This system satisfies all the requirements of the company and the application is developed by advanced software **ASP.Net** which is widely used in all applications.

The system was tested with all possible samples of data and the performance of the system proves much effective and the data maintenance and manipulation is achieved practically.

VIII. REFERENCES

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