ISSN (ONLINE): 2454-9762
ISSN (PRINT): 2454-9762
Available online at www.ijarmate.com

International Journal of Advanced Research in Management, Architecture, Technology and Engineering (IJARMATE) Vol. 5, Issue 4, April 2019

GUARANTEED QUALITY OF SERVICE IN MULTI SERVER SYSTEM BY USING CLOUD

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ABSTRACT

To reduce your cloud costs, you must identify waste by uncovering in efficient use of cloud resources. Cloud cost optimization is not a once-and-done process, but you can immediately start saving money on your cloud infrastructure costs. The results show that the proposed Double-Quality-Guaranteed (DQG) renting scheme can achieve more profit in the premise of guaranteeing the service quality completely. This double renting scheme can effectively guarantee the quality of service of all applications and reduce the resource waste greatly. A double resource renting scheme is originated in which short-term renting and long-term renting are combined aiming at the managing problems. A profit maximization problem is proposed for the double renting scheme and the optimized formation of a cloud platform is acquired by solving the profit maximization problem. The results display that our scheme can not only guarantee the service quality of all requests, but also procure more profit than the latter.

Keywords:cloudstorage,costoptimization, Double-Quality-Guaranteed(DQG),Double Resource Renting Scheme, profit maximization

INTRODUCTION

Cloud computing is internet based computing in which huge groups of remote servers are networked to allow the centralized data storage, and online access to computer services or resources.In this Double-quality-guaranteed (DQG) renting scheme is used to solving the existing problems. A double resource scheme is divided in to short-term renting and long-term renting schemes are combined to existing the problems. A profit maximization problems is proposed for the double renting scheme. Double renting scheme can effectively guarantee the quality of service of all demands. Also, a Randomized online algorithm is proposed based on Fixed Receding Horizon Control (FRHC) to conduct
Migration objects. The DQG can be migrating the data in fast and secure and it also gives more profit.

LITRETURE SURVEY

1) Optimal multi-server configuration for profit maximization in cloud computing

AUTHORS: J. Cao, K. Hwang, K. Li, and A. Y. Zomaya

As cloud computing becomes more and more popular, understanding the economics of cloud computing becomes critically important. To maximize the profit, a service provider should understand both service charges and business costs, and how they are determined by the characteristics of the applications and the configuration of a multi-server system. The problem of optimal multi-server configuration for profit maximization in a cloud computing environment is studied. Our approach is to treat a multi-server system as an M/M/m queuing model, such that our optimization problem can be formulated and solved analytically. Two server speed and power consumption models are considered, namely, the idle-speed model and the constant-speed model. The probability density function of the waiting time of a newly arrived service request is derived. The expected service charge to a service request is calculated.

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2) Cloud computing and emerging it platforms: Vision, hype, and reality for delivering computing as the 5th utility

AUTHORS: R. Buyya, C. S. Yeo, S. Venugopal, J. Broberg, and I. Brandic

With the significant advances in Information and Communications Technology (ICT) over the last half century, there is an increasingly perceived vision that computing will one day be the 5th utility (after water, electricity, gas, and telephony). To deliver this vision, a number of computing paradigms have been proposed, of which the latest one is known as Cloud computing. We also provide insights on market-based resource management strategies that encompass both customer-driven service management and computational risk management to sustain Service Level Agreement (SLA)-oriented resource allocation. In addition, we reveal our early thoughts on interconnecting Clouds for dynamically creating global Cloud exchanges and markets. We also describe a meta-negotiation infrastructure to establish global Cloud exchanges and markets, and illustrate a case study of harnessing 'Storage Clouds' for high performance content delivery. Finally, we conclude with the need for convergence of competing IT paradigms to deliver our 21st century vision.

3) Trade-offs between profit and customer satisfaction for service provisioning in the cloud

AUTHORS: J. Chen, C. Wang, B. B. Zhou, L. Sun, Y. C. Lee, and A. Y. Zomaya

The recent cloud computing paradigm represents a trend of moving business applications to platforms run by parties located in different administrative domains. A cloud platform is often highly scalable and cost-effective through its pay-as-you-go pricing model. However, being shared by a large number of users, the running of applications in the platform faces higher performance uncertainty compared to a dedicated platform. Existing Service Level Agreements (SLAs) cannot sufficiently address the performance variation issue. In this paper, we use utility theory leveraged from economics and develop a new utility model for measuring customer satisfaction in the cloud. Particularly, we investigate the interaction of service profit and customer satisfaction. Our experimental results demonstrate that the algorithms perform well across the metrics of profit, customer satisfaction and instance utilization.

4) Energyaware preemptive scheduling algorithm for sporadic tasks on dvs platform

AUTHORS: J. Mei, K. Li, J. Hu, S. Yin, and E. H.-M. Sha

Dynamic Voltage Scaling (DVS) is a key technique for embedded systems to exploit multiple voltage and frequency levels to reduce energy consumption and to extend battery life. There are many DVS-based algorithms proposed for periodic and aperiodic task models. However, there are few algorithms that support the sporadic task model. Introducing DVS with EDF, CC-DVSST scales down the voltage of a processor when tasks are completed earlier than they are expected, so that the slack time can be reused for other tasks, hence saving energy. Experimental results show that CC-DVSST can reduce the total amount of energy consumption up to 46% compared to DVSST while retaining the quality of service by meeting the deadlines.

EXISTING SYSTEM

Evaluate the cost performance of the proposed algorithms in the forms of CR that shows how much cost in the worst case the online algorithms contract as compared to the offline algorithm. To implements this problem, cloud users are required to storage class from which CSP should host the object. And when the object should probably be drifted from a storage class to another owned by the similar or different CSPs. Recently, several studies utilizing dynamic programming, formulate offline cost optimization problem in which the optimal cost of storage.

LIMITATIONS OF THE EXISTINGSYSTEM

Maximizes the residential cost such that objects are not allowed to migrate during their lifetime. Went one step further by optimizing replica placement problem.Low band width and end to end Delay.

PROPOSED SYSTEM

The proposed system, uses a notion called revocable-storage identity-based encryption (RS-

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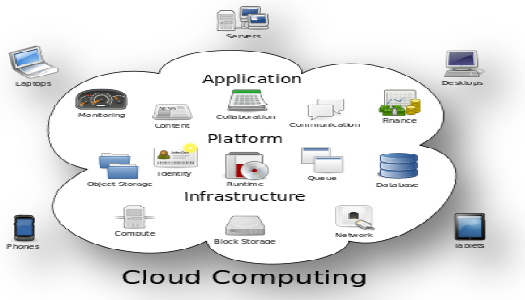
IBE). Furthermore, presents a concrete construction of RS-IBE, and prove its security in the defined security model. The performance comparisons indicate that the proposed RS-IBEscheme has advantages in terms of functionality and efficiency, and thus is feasible for a practical and cost-effective data-sharing system. In the proposed system, the construction of a powerful Thrice key Auditing Algorithm for support efficient handling of multiple auditing tasks, where TPA can perform multiple auditing tasks by using this algorithm very fast and safe. The proposed system is going to find out the check fill attack vulnerabilities and it can be solved efficiently.

ADVANTAGES

- The proposed system is going to reduce the cost, increase the time efficiency and security efficiency by using triple key technique.
- A data sharing system can provideConfidentiality and backward secret.
- Communication and computation cost, and thus is cumbersome and undesirable for cloud users with low capacity of computation and storage.



MODULES

1.Service providers module
2.Infrastructureproviders module
3.Customers module.
4.Queuing model.
5.Double Renting Scheme.

MODULES DESCRIPTION:

1.Service providers module:

A service provider rents resources from infrastructure providers and prepares a set of services in the form of virtual machine (VM). Infrastructure providers provide two kinds of resource renting schemes, e.g., long-term renting and short-term renting. In general, the rental price of long-term renting is much cheaper than that of short-term renting. A customer submits a service request to a service provider which delivers services on demand. The customer receives the desired result from the service provider with certain service-level agreement.

2.Infrastructure provider's module:

In an actual cloud computing platform such as Amazon EC2, IBM blue cloud, and private clouds, there are many work nodes managed by the cloud managers such as Eucalyptus, Open Nebula, and Nimbus. The clouds provide resources for jobs in the form of virtual machine (VM). In addition, the users submit their jobs to the cloud in which a job queuing system such as SGE, PBS, or Condor is used. Iaas refers to online services that abstract user from the detail of infrastructure like physical computing resources, location, data partitioning, scaling, security, backup etc.

3.Customers module:

A customer submits a service request to a service provider which delivers services on demand. The customer receives the desired result from the service provider with certain service-level agreement.. However, to satisfy the quality-of-service requirements, the waiting time of each service request should be limited within a certain range which is determined by the SLA. The SLA is widely used by many types of businesses, and it adopts a price compensation mechanism to guarantee service quality and customer satisfaction.

4.Queing Model:

When the incoming service requests cannot be processed immediately after they arrive, they are firstly placed in the queue until they can be handled by any available server. The first-come-first-served (FCFS) queuing discipline is adopted. Because the fixed computing capacity of the service system is limited, some requests would wait for a long time before they are served. According to

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the queuing theory, we have the following theorem about the waiting time in an M/M/m queuing system.

5.Double Renting Scheme:

It combines long-term renting with short-term renting, which can not only satisfy quality-of-service requirements under the varying system workload, but also reduce the resource waste greatly. The Double-Quality Guaranteed (DQG) resource renting scheme which combines long-term renting with short-term renting. The main computing capacity is provided by the long-term rented servers due to their low price. The short-term rented servers provide the extra capacity in peak period. The requests are assigned and executed on the long-term rented servers in the order of arrival times.

CONCLUSION

In this Project, the concept of recognized data de-duplication was proposed to protect the data security by including differential benefits of users in the duplicate check. We also presented several new de-duplication constructions hold up certified duplicate check in hybrid cloud architecture, in which the duplicate-check tokens of files are generated by the private cloud server with private keys. Thrice key Auditing Algorithm for support efficient handling of multiple auditing tasks, where TPA can perform multiple auditing tasks by using this algorithm very fast and safe. The proposed system is going to find out the check fill attack vulnerabilities and it can be solved efficiently.

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International Journal of Advanced Research in Management, Architecture, Technology and Engineering (IJARMATE) Vol. 5, Issue 4, April 2019

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