Research of the Application of Cloud Computing Technology in Electric Commerce Practice

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Abstract: With the rapid development of network technology and information technology, electric commerce has entered people's vision. Alibaba, Taobao, Jingdong and other online malls have been recognized by the public and have gained considerable wealth. In business operation, the advantage of electric commerce over traditional operations is quickly highlighted. Under the background, Dalian Wanda and many other companies have joined the electric commerce camp. Faced with such opportunities and challenges, how to develop in such an industrial revolution has become the problem that lots of enterprises need to solve. Small and medium sized enterprises have fewer resources, shortage of funds, and insufficient technology and talents when they face big enterprises. This paper studies the application of cloud computing technology in electrical commerce of enterprise, focuses on the promotion of cloud computing technology to electrical commerce of enterprise, and provides a solid theoretical basis and practical guidance for enterprises to carry out electrical commerce.

Keyword: Cloud Computing; Electrical Commerce; Application of Electrical Commerce

Introduction

In recent years, with the rapid development of computers, after the emergence of novel computing modes such as distributed computing, parallel computing and network computing, a new computing model has been proposed in the computer industry in recent years, which is cloud computing. Cloud computing is a way of computing based on the Internet based on technologies such as computers, networks, and communications. When it was just proposed by the scientific community, it caused the infinite expectation of the society. Nowadays, cloud computing technology has developed rapidly and has already been widely used in modern the electrical commerce technology. It's called cloud means more. Cloud computing is to accumulate and analyze the endless data, find out the relationship between data, and form new life-giving data with different data in different demand platforms. In the modern electrical commerce application, cloud computing technology has treated every user as a consumer to provide the largest demand for consumer entities and bring more sales opportunities for businesses through the calculation of astronomical figures. This paper makes some preliminary explorations on how to develop electric commerce based on cloud computing technology and promote the development of economic benefits based on investigation and research.

I. Cloud Computing Technology

The basic principle of cloud computing is to improve distributed processing, parallel processing and grid computer distributed database. Its predecessor is a grid computing solution that uses parallel computing to solve large problems and a public computing that provides computing resources as a measurable service. After the rapid development of Internet broadband technology and virtualization technology, cloud computing emerged.Cloud computing is a new computing model that aggregates IT resources, data and applications into services. The method to provide is the Internet. Also, cloud computing can be treated as a management methodology for the infrastructure.The IT resource pool is a collection of huge computing resources, and a dynamic virtual resource library is built for use by the vast number of users. The resource pool here is the cloud we are familiar with. And computing is a

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computing application in the market and industry, or all IT applications can be treated as computing. Various resources become network resources after the processing of the computer, and the users are provided with the required resources through the computer. When the users perform network retrieval on the resources, the users do not need to grasp the overall grasp of the cloud or understand the internal technology and structure, but can use directly. Cloud computing includes three aspects.Firstly, the provision of material resources. Secondly, he development and provision of new applications,which also means the supply of new services should be timely. Thirdly, Guarantee for software as well as data and security services. At the current stage, the Internet technology of cloud computing still has not formed a unified definition standard in the development and application of computer technology in the world,only a relatively broad concept exists to explain it. That is, cloud computing is a computing model, and the formation and development of this computing model is based on economic development. In the mean time, it can rely on computer technology and communication technology to conduct data analysis by using the Internet, analyze huge number of information data with various hardware devices.

II. The Necessity Analysis of Cloud Computing Technology Applied in Modern Electric Commerce

2.1 Save Cost of Enterprise Information Construction

User's demand for modern electric commerce is more and more complicated and humanized. Users don't want to see fixed information or services, but want the information is user oriented, close to their needs, scalable, extensible, customizable, and even users can get surprises. The advantage of cloud computing is its unified management of massive resources, rapid response, and ultimately meeting the requirement of providing users with multiple services and information. The application of cloud computing technology in modern electric commerce is the necessary result of the development of cloud computing technology, and it is also the inevitable requirement for the development of modern electric commerce technology. Electric commerce usually attracts netizen with ultra low discounts and rich products. There is a strong burst from the flow of electric commerce. If there is not enough technical preparation, the server will be blocked or even broken when lots of netizen at the same time.

2.2 Guarantee the Secure Trading Environment

At present, the development of proprietary cloud is rapid, it’s one of the important measures to guarantee the security of electric commerce applications. The proprietary cloud is the proprietary storage space and data belonging to electric commerce enterprises. The proprietary cloud of different enterprises can only be accessed by the corresponding internal enterprises, other enterprises are not allowed. Therefore, electric commerce enterprises can place data in a proprietary cloud, so that they can enjoy the convenience and speed that cloud computing brings, and also protect their data and information at the same time .

2.3 Complete the Process of Electronic Trading Business

The transaction module of cloud computing technology mainly completes the establishment of security control system, which is responsible for ensuring the security of electronic transaction. It stipulates the process of information processing in the electronic transaction process, and controls the fault tolerance of data service processing, fund payment and information transmission of small and medium enterprises within a reasonable and scientific scope. Moreover, cloud computing technology also provides users with a variety of electronic payment services, such as online banking, Alipay, WeChat payment, SimplePay, DevPay, and some other services.

III. The Application of Cloud Computing Technology in Electric Commerce

Under the new situation, the relevant personnel in the electric commerce industry should closely follow the trend of the times, commit themselves to reform and innovate, strengthen the introduction of advanced technologies at home and abroad, and actively promote the safe and orderly development of electric commerce. The following content can be used as an entry point on how to further promote the scientific and rational application of cloud computing technology in electric commerce.

3.1 Secure and Reliable User Authentication Model

Right now, the number of electric commerce enterprises relying on cloud computing services is gradually increasing. When logging in the cloud platform, it is required to effectively verify the login users to ensure the security of enterprise information data and not be attacked by criminals. At the same time, it is necessary to carry out inspection and maintenance on the list of legitimate users of the cloud platform in a timely manner, delete the users whose usage rights are overdue, and carry out the work of changing the user rights. At this stage, the common user authentication modes of cloud services include account password verification mode, secret security card or U shield hardware verification mode, fingerprint verification mode, and retina verification mode.

3.2 Encryption Algorithm

In the process of using the cloud platform service, the traditional security precautions usually control the user access rights. On the cloud computing platform, the cloud service provider grasps various permissions, and thus can access all the data on the cloud platform. Enterprises also have some security risks when using cloud computing, such as files being confused, files being maliciously encrypted or used. So, corresponding preventive solutions will be needed for these problems. In this way, not only can protect the files of enterprise, but also enjoy the convenience brought by the cloud to enterprises. Enterprises can also improve the security performance of their storage technologies, back up and manage important data on a regular basis. Also, they need to install mirrored devices to prevent accidents. Once the cloud is damaged by disaster or the device has abnormality, the data can be immediately transferred to the mirror device, which can protect important information from being destroyed and does not affect the normal operation of the enterprise. It is obviously unsafe for enterprises. Therefore, enterprises should use different methods from the traditional modes when storing data. At this stage, the most common method is using cryptography to encrypt data. The encryption method includes a method of selecting a secure and reliable key and encryption algorithm combined with data features to convert enterprise related data into cipher text.

3.3 Advance Real Time Monitoring of User’s Data in Cloud Services

After establishing the cloud service platform, the cloud service provider should simultaneously build a cloud computing monitoring platform to monitor the platform status, network operation and applied software usage, and provide reliable protection for the safety and orderly operation of the cloud service platform. If the cloud service platform fails, the cloud monitoring platform can quickly identify the problems and transmit warning information to the management personnel to ensure that the management personnel can carry out timely maintenance, that will effectively reduce the time of platform maintenance and improve the efficiency of platform operation.In addition, the cloud monitoring platform can also monitor the running speed of electric commerce websites in real time to ensure the orderly operation of the website. It is especially important during the period when the electric commerce website is overloaded during important times.

Conclusion

From the reality, cloud computing brings us many advantages in lots of aspects, such as greatly

improving the utilization of the system, which can further reduce investment risks and continuously improve the flexibility of the IT industry. Besides, cloud computing has high reliability and strong expansibility. The new cloud electric commerce is a novel and unique kind of Internet economy model. Although its birth is quiet, due to its vitality and competitiveness based on the public interest, enterprises can create their own electric commerce model without using too much manpower, financial resources and material resources under the premise of using cloud computing technology, and then the system can be stored in the cloud, so that enterprises can get more opportunities and challenges.By taking this method, enterprises can shift their focus to how to improve product quality and how to get more customers, thus improve the quality of service to customers, so that enterprises can achieve better and faster development, thereby improving their economic benefit.

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