

Electronic Business Model Innovation Under Cloud Computing Environment

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Abstract

This paper studies the innovation of e-commerce mode under cloud computing mode. Firstly, the concept, development and characteristics of cloud computing are introduced. Then it analyzes the impact of cloud computing technology on the development of e-commerce from the perspective of reducing operating costs, providing quality of service, improving security and expanding the use of terminals. Next, it analyzes the new e-commerce model in the cloud computing environment, puts forward the cloud e-commerce platform model, and analyzes the assumption of the "cloud supply chain" and "mobile cloud" e-commerce model.

Keywords

Cloud computing; e-commerce; business mode; cloud storag.

1. Introduction

With the continuous development of network related technology, e-commerce trading mode is also constantly innovating. In recent years, the rapid development of cloud computing technology is exerting a tremendous impact on the IT industry, but also for the development of e-commerce to provide new opportunities for innovation.

2. Cloud Computing Technology

With cloud computing, you eliminate those headaches that come with storing your own data, because you're not managing hardware and software — that becomes the responsibility of an experienced vendor like Sales force. The shared infrastructure means it works like a utility: You only pay for what you need, upgrades are automatic, and scaling up or down is easy.

Cloud-based apps can be up and running in days or weeks, and they cost less. With a cloud app, you just open a browser, log in, customize the app, and start using it.

Businesses are running all kinds of apps in the cloud, like customer relationship management (CRM), HR, accounting, and much more. Some of the world's largest companies moved their applications to the cloud with Sales force after rigorously testing the security and reliability of our infrastructure.

As cloud computing grows in popularity, thousands of companies are simply rebranding their non-cloud products and services as "cloud computing." Always dig deeper when evaluating cloud offerings and keep in mind that if you have to buy and manage hardware and software, what you're looking at isn't really cloud computing but a false cloud.

3. The Impact of Cloud Computing Technology on the Development of E-Commerce

3.1. Reducing the Operation Cost of E-Commerce

At present, the development of e-commerce, whether it is to establish their own e-commerce sites, or relying on e-commerce platform, need to configure computer and other hardware equipment, it is possible to build a computer network. At the same time, all kinds of system software and application software are also essential. Buying and maintaining the investment of these hardware and software equipment is the cost of developing e-commerce. With the development of e-commerce, transaction data flow, customer information, management costs are also increasing, computer software and hardware often need to be updated and upgraded, which has caused a great burden on e-commerce enterprises.

Under the cloud computing model, the infrastructure and applications needed to develop e-commerce can be obtained by leasing according to the needs of the enterprise. Because cloud computing emphasizes the sharing of large-scale resource pools, and improves the reuse rate of resources by sharing, it realizes economies of scale, so it can reduce the cost of operation. Enterprises no longer need to worry about building e-commerce software and hardware environment, nor need to invest huge funds, human and material resources to complete the construction of the system, daily maintenance does not need to spend a lot of energy. Cloud computing service providers will provide a variety of customizable services, enterprises need to put forward requirements, service providers can create e-commerce environment to meet the needs of enterprises. In this way, enterprises can not only reduce costs, but also focus more on their core businesses.

3.2. Improving the Quality of E-Commerce Services

Comparing with the e-commerce enterprises that build and maintain their own sites, the enterprises that adopt cloud computing technology do not need to consider the computing power, storage capacity and load capacity of the terminals, but hand over these tasks to the super-large-scale "cloud" in the network to achieve resource sharing and network collaboration. Cloud computing uses a low cost, high bandwidth, high reliable connection mode, which greatly improves the utilization of network resources, but also improves the processing capacity.

The current operation of a cloud computing e-commerce pilot processing capacity is: super online transaction processing capacity, can easily carry tens of millions of clicks a day, millions of simultaneous online traffic, 100,000 orders processing capacity. The continuous and faultless service for 5 consecutive years fully reflects the high availability and feasibility of the system.

3.3. Increasing Security

In the e-commerce activities of enterprises, transaction security involves network security, system security, data security and other aspects. If the enterprise maintains the electronic commerce website itself, the virus and the hacker attack and so on bring the enormous challenge to the enterprise. At the same time, with the expansion of enterprise scale, enterprise data accumulates continuously. Sales data, customer information, payment information and other important data security assurance also put forward a high level of enterprise information technology and hardware and software input requirements.

Cloud computing, by contrast, has an advantage in security: data is decomposed into scattered states on a cluster, and even servers don't understand them, making it very difficult to decipher and restore data. The uses of cloud technology to store enterprise data in the cloud ensures the professional, efficient and secure data storage, thus eliminating the worry of data loss caused by various security problems. "Cloud security" technology has very prominent protective Trojan horse, spyware, malicious program attack effect. From the actual use, the products

integrated with cloud security technology can reduce the cost of management and maintenance and manpower consumption because they have been prevented before the network threat intrudes.

"Cloud computing" allows e-commerce enterprise core data can be more properly, more complete, more secure preservation, the use of all corners of the world's "cloud", the core data will be dispersed, secure preservation, and can be extracted and used whenever necessary. Cloud computing also provides cloud storage services of different levels for e-commerce. The so-called cloud storage is based on WAN, cross-domain / routing to achieve data ubiquitous, no download, no installation can be directly run, to achieve another cloud computing architecture, cloud storage with high performance, large capacity and other characteristics. Cloud storage will provide personal cloud storage applications and online document editing services. Enterprise-level cloud storage applications will become the future trend, it will provide e-commerce enterprise users with space leasing services and remote data backup and disaster recovery services.

4. New e-Business Mode

Cloud computing technology will bring about the change of e-business mode, which is manifested in the following aspects.

4.1. E-commerce Platform Based on "Cloud Platform"

In the process of e-commerce implementation, enterprises are faced with a series of e-commerce support services, such as electronic payment, security, credit, logistics and so on. Compared with the existing Internet model, cloud computing provides a more convenient, reliable and rapid solution for the realization of these e-commerce support services. E-commerce enterprises will form cloud e-commerce platform. In this mode, the use of "cloud platform" to provide secure and reliable data storage services and computing processing, greatly reducing the requirements for customer terminal equipment. Cloud resource pool can easily realize data sharing, knowledge sharing, knowledge reasoning and resource allocation for all users. Cloud storage can provide almost unlimited space and services in time when customers need it. The application interface is a service registration interface, a service scheduling interface, a network interface, a model interface and a variety of general interfaces provided by cloud service providers. Enterprises can realize the demand publishing and service matching business. E-commerce enterprises on this basis to achieve online sales, electronic payment, enterprise promotion, business information, search engines, security certification, business communication and business community and a series of functions. Cloud platform is the foundation for e-commerce enterprises to integrate resources and provide quality services.

4.2. The Whole E-Business Mode Solution Based on "Cloud Supply Chain"

Using the "cloud" distributed in all corners of the world, we can build a huge "cloud supply chain" system, using this system, we can realize the whole process of e-commerce mode with supply chain management as the core. Enterprises in the supply chain can adopt a hybrid cloud approach. The core data that enterprises must keep secret is processed by private cloud, and the data and operations related to supply chain coordination are processed by public cloud. The database shared by all supply chain members is established on public cloud, and a good interface between private cloud and public cloud is established to coordinate the data flow in supply chain.

Due to the use of public clouds, cloud supply chain systems share more data than traditional supply chain systems, which can effectively weaken the "bullwhip effect" and enhance the coordination between producers and sellers in the formulation of sales plans and

replenishment plans. Product demand forecasting will also be more scientific, accurate and clear, and enhance the integrity of the supply chain.

4.3. Electronic Commerce Terminal Based on "Mobile Cloud"

With the development of cloud computing, the mode of mobile e-commerce will develop rapidly. Cloud computing technology has brought about a great improvement in the information processing ability and computing efficiency of e-commerce system, and the popularization of 3G has brought about a new mobile terminal, providing a high-speed mobile terminal Internet experience. In the "mobile cloud" mode, there is no need to worry about the information security, information processing and data transmission of mobile e-commerce services. The e-commerce model based on "mobile cloud" can solve the mobile terminal, the convenience of website access, and the efficiency of online order.

For users, the use of mobile phones and other mobile terminals can access e-commerce sites, without other hardware requirements, as long as a simple cross-system platform can successfully connect to the "cloud", and security and access timeliness can be guaranteed. For e-commerce enterprises, they do not need to build their own complex mobile e-commerce platform, but only need to apply for a lease from cloud computing service providers, they can obtain the corresponding "cloud services", so as to quickly achieve a variety of mobile e-commerce functions.

"Cloud computing" e-commerce model will provide enterprises with e-commerce transactions and e-commerce services integrated platform. Cloud computing technology will certainly promote the upgrading of e-commerce service model, users will get a better online shopping experience. Finally, cloud computing technology will lead the new mode of e-commerce to open the public computing era.

5. References

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