Analysis of E-commerce Development Mode under "Cloud Computing" Environment

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Abstract. As cloud computing technology appears and is applied, further development of e-commerce marketing mode is promoted to some degree. Meanwhile, deep development of e-commerce mode is positively facilitated. Under such background, this paper analyzes the content of cloud computing, states positive function of e-commerce in cloud computing environment and then proposes new development approaches of e-commerce for the problems existing in the development mode of e-commerce in cloud computing environment.

Introduction

Under the era background of network and information, internet and computer popularizes in an all-round way, which positively promotes comprehensive development of e-commerce. In current stage, man projects can be accomplished via network. E-commerce regards internet as important foundation. Internet deeply extends and penetrates in each field of social life, which overall promotes reform of e-commerce. Freedom and flexibility of e-commerce are very significant. However, high performance and security are still needed.

Overview of cloud computing

Based on resource sharing and network cooperative work, cloud computing mode effectively evades the impacts of computer terminal storage, load and operational capability so that utilization efficiency of network resources improves continuously. Meanwhile, computer operation efficiency also increases. The essence of cloud computing technology operation process develops on the basis of parallel and distributed computation as well as grid computation. Under the condition of fully utilizing computer network processing capacity, the program to be processed is automatically divided into several sub-programs, and the data are submitted to the system which consists of multiple servers for analysis, computation and search. Finally, processed data results are fed back to corresponding users.

Cloud computing technology emerged at the end of 2007. After it formed, it was applied in multiple fields soon[1]. The essence of cloud computing is computing platform or application program. Meanwhile, it also owns basic architecture. Through analysis of actual application situation of cloud computing, features of this technology can be summarized comprehensively.

Firstly, the foundation of cloud computing technology is internet. In network environment, cloud computing technology can offer computation, information management and storage services for users and make sure information resource allocation achieves dynamics. To apply cloud computing in e-commerce, it must be combined with consumers' demand dynamics, and different physical and virtual resources should be divided properly. In this way, reasonable match of resources available can increase effectively if the demand occurs, and the resources can be searched in a short time.

Secondly, the service object of cloud computing technology is user. When cloud computing technology is applied, data information formed can be stored in cloud so that users can visit data

information more conveniently, which ensures improvement of self-support degree of demand service. In addition, cloud computing service can make sure users choose resources by themselves. Simply speaking, users can skip dealers and achieve self-help selection.

Finally, the purpose of cloud computing technology is to process data information. In the process of applying cloud computing technology, data information processing is very important. Distributed data processing technology can effectively solve information content searching and storage problems, and positively improve data processing and use efficiency. Cloud computing regards network technology important support and better offers corresponding services for users. For different customer demand, scientific measurement method is applied to overall optimize resource allocation. Besides, customers can utilize multiple terminal devices to visit network so that the application scope of cloud computing expands.

Practical significance of cloud computing technology for e-commerce development

As e-commerce field continuously develops and makes progress, reasonable application of cloud computing technology can better provide a ne development platform for e-commerce enterprises. Meanwhile, most e-commerce enterprises (especially small and medium enterprises) are rationally applying cloud computing technology and service mode so that their operation resources increase gradually. Besides, more development opportunities are provided for their future development. It thus can be seen that the integration of cloud computing and e-commerce can positively promote sustainable development of e-commerce operation mode.

E-commerce activities are more flexible and free

Under the function and influence of rapid development of wireless communication network technology, wide-range application of mobile e-commerce mode is achieved for wireless telecom equipment. The most obvious manifestation is that people can complete e-commerce activities by mobile phone. In this process, the terminal of e-commerce should own certain information security, transfer and operation ability. If only traditional method is applied, it is very difficult to achieve this technical support[2]. However, the application of cloud computing technology can effective settle this problem and multiple demands such as information processing and transfer in the process of information processing. Furthermore, as cloud computing level improves, the terminal performance requirement of e-commerce will decrease. In this way, certain convenience can be provided for users. Users just need to simply operate mobile phone and other devices to complete online e-commerce activities fast. Thus, e-commerce activities are more flexible and free.

Save the cost of E-commerce activities are more flexible and free

The introduction of cloud computing technology in e-commerce can improve information processing, service, exchange and storage efficiency in specific activities, achieve dispersion of massive information and form small "cloud" units. e-commerce activities are carried out under the function of network server, which can reduce the pressure of software and hardware at the terminal. It thus can be seen that this method can save the cost of each link in e-commerce activities and reduce the investment in software and hardware devices of e-commerce. On this basis, the price of cloud service is low, and even free. It is easy to master, and it is unnecessary to train technical personnel. Thus, enterprise cost input is directly reduced.

Innovate secure storage mode of data

E-commerce enterprises will take multiple means and methods to guarantee data security in actual operation process. However, they still suffer certain attacks. Finally, transaction information is seriously disclosed or tampered and even lost. After cloud computing technology is applied, the data of e-commerce activities become more secure, and distributed storage of data information is achieved. This effectively enhances protection of information resources. On this basis, information data of e-commerce activities gradually present high dispersion and data administration concentration in

terms of storage under cloud computing background. Under the influence of highly virtual data service, information management work becomes more secure and effective[3].

Current situation of traditional e-commerce

In the development process of e-commerce, new industrial development direction gradually forms and tends to be sound and mature. In current stage, the development of e-commerce is in the critical period, and also suffers many problems as follows:

Firstly, talent bottleneck. Based on e-commerce development, a large group of talents are attracted actively, and relevant professional teaching is set in universities. However, traditional knowledge is hard to meet the demand of rapid change of era. Under the background of rapid business expansion, comprehensive knowledge is required to better cope with challenges.

Secondly, e-commerce operators are in price seesaw battle for a long time, so serious problems and especially cost problem are accumulated. The benefit improves by high input mode. In current era background, e-commerce cannot continue to be implemented.

Thirdly, mobile terminal development depth is insufficient. Even if e-commerce has gained comprehensive development in mobile internet, and payment mode becomes fast, current operation mode is not complete all the time. Besides, cooperation efficiency is not high.

E-commerce development mode under "cloud computing" environment

Under the influence and action of economic activities, the development mode of e-commerce also presents new changes. To better combine e-commerce activities and cloud computing, it is required to deeply study development environment of e-commerce, actively construct new e-commerce development mode and better offer the platform for enterprise marketing strategy and management mode innovation. In e-commerce activities, the application of cloud computing technology can reform activities, and innovate development mode of e-commerce activities. Through making the best of cloud computing features, cloud computing advantages can be fully exerted, and information resource is integrated organically. Enterprise operating cost is saved. Comprehensive competitive power is enhanced. The information of e-commerce activities can be better exchanged and interacted. Besides, resource sharing is achieved.

Whole-process e-commerce mode based on supply chain cloud

Based on supply chain cloud, whole-process e-commerce mode is to make the most of cloud system in a large range and then construct supply chain cloud of application system. During using application cloud system, e-commerce activities can better promote development of whole-process e-commerce mode of supply chain management. Such management mode can effectively utilize cloud computing technology, then better offer secure and reliable data storage service and operation processing function and reduce performance requirement of client terminal equipment in e-commerce activities. Besides, cloud computing service can actively provide material guarantee and environment maintenance function in e-commerce activities so that data information resource and management procedure are overall optimized[4]. It thus can be seen that the application of cloud computing technology in whole-process e-commerce activities can overall integrate resources and better offer operation services. This is exactly the important development direction of e-commerce activities in the later period.

Mobile e-commerce mode based on mobile cloud

Based on rapid development and progress of mobile cloud computing and three-network integration technology, mobile e-commerce mode also changes greatly. Under the action of distributed cloudy system, mobile e-commerce activities can overall promote further development of e-commerce service mode through information processing capacity and operation efficiency, and better solve the problems in mobile e-commerce development. Effective combination of mobile cloud computing and

mobile e-commerce can make mobile e-commerce activities securer, and overall settle problems about information data processing and transmission. On this basis, the requirements for software and hardware of mobile terminal can be reduced to make sure the implementation of e-commerce activities more efficient and convenient. Under the background of all-round development of mobile cloud computing.. the functions of mobile cloud such as information processing, operation and sharing can better offer larger space for development of mobile e-commerce activities.

Discussion on e-commerce development trend under "cloud computing" environment

Mass storage

In cloud computing environment, e-commerce has no restriction of hard dive capacity. Thus, users can use cloud data, without the need of changing personal hard disk. However, traditional e-commerce is greatly restricted by large-volume files. But, cloud computing effectively settles this problem. cloud computing is taken for example. To enhance adverting definition, large capacity is required. After cloud computing technology is applied, the advertising with high definition is stored at the cloud, which better enhances user experience effect[5].

In e-commerce, e-commerce is an important constituent part, so cloud computing can better achieve over-large attachments. In cloud computing, resources will not be stored locally, but can be stored at the cloud. Meanwhile, the speed of cloud computing is fast, and the functions are relatively sound. It will take short time to download an overlarge attachment.

Distributed computation

Distributed computation refers to simultaneous computation by several computers and then uniform return of results. But, traditional computation is usually executed by single computer. Thus, higher computer performance is required, and it will consume much time. Once operation is relatively complex, the operation difficulty is large, even if the computer has good performance. In the process of applying cloud computing technology, computing technology cooperative computing is achieved, the workload of a computer can be allocated to several computers so as to better carry out complex operation.

Software upgrade convenience

Because manufacturers' e-commerce system contains several kinds of software, and the software needs regular upgrade. Usually, emailing upgraded file, door-to-door service or online downloading upgrade package can be adopted. But, any method will have the problem of upgrade abnormality or non-ideal data line connection, which increases the work difficulty of system maintenance personnel. But, when manufacturers upgrade software, many problems which cannot be solved may appear easily. However, if the software is not upgraded, it cannot meet market demand. Through applying cloud computing technology, it is unnecessary to consider the above problem, because the software at the cloud is always up to date. As long as users utilize internet and are connect with cloud, they can apply the latest software to save expenditure and time.

Conclusion

In conclusion, computer networking technology is widely applied and penetrates in e-commerce operation while network information technology develops. After e-commerce emerges, commercial activities become more flexible and free and break through restrictions of time and space conditions. However, cloud computing is needed as important support to better promote further development of e-commerce.

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