Application and Development of Cloud Computing Technology in Computer Data Processing

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Abstract. In recent years, cloud computing technology has been extensively employed in various industries of society. Many enterprises generally use cloud computing technology to store data in computer hard disk and mobile hard disk. Cloud computing technology has grown the pace of local computer and data processing, and put forward the function of distributed storage for data storage, which speeds up the transformation of computer Internet mode. It is an instant service. Through the unique fixed matching mode, different client data and resources are sorted out and transmitted to the cloud to realize the calculation of big message and ensure the accuracy of the consequences. Cloud computing has its own characteristics, its computing power is not limited by the device itself, for example, through the Internet will need to provide services to request, through cloud computing will be presented in the mobile device terminal. Therefore, cloud technology has caused great changes to national life and production mode, and has greatly improved national level of scientific and technological development. At present, there are still some loopholes in computer data processing, so in order to further improve the perfection of data processing, it is necessary for relevant personnel to adopt reasonable technology for cloud computing application, perfect cloud computing technology analysis and research work, and then promote the quality of computer data processing, make sure the safety of computer information data, and ensure the scope and effectiveness of cloud computing in computer data progression.

Keywords: Computer Data Processing, Cloud Computing Technology, Storage Data

1. A brief description of cloud computing technology
Cloud computing technology is based on computer technology and the Internet as the center. It integrates computing resources and allocates resources to other devices through actual use requirements. The cloud in cloud computing originally combines the characteristics of cloud drift and boundary ambiguity in reality to describe the diffuse nature of the computer Internet. But with the development of network technology, the cloud has become a more abstract concept, which refers to the dynamic state of computer data processing and infrastructure. Moreover, our so-called cloud computing realizes the virtual and dynamic connection of resources. Cloud computing used to be a metaphor for Internet trends. Nowadays, the concept of cloud computing has formed a dynamic abstract concept of computer data processing. Cloud computing can greatly meet people's computing
and living needs for the development of science and technology, and even simulate the weather and financial trends. And through the collection and processing of people's data, people travel and live in a great place, making data processing more scientific and accurate. At present, cloud technology collects and processes data and resources in different fields through different data processing modes. By using the powerful computing power, the computer software and mobile devices used by people can complete the access and calculation function of big data, and facilitate the information acquisition and transmission of people. But because the whole cloud service system is not perfect enough, the development of cloud computing technology has a great future and will achieve higher achievements [1].

As shown in Figure 1.

![Figure 1. Features of cloud computing technology.](image)

2. Analysis on the development of cloud computing technology
In recent years, under the background of the rapid development of modern social economy, China's information technology and cloud computing technology have made remarkable achievements, and applied it to the process of computer data transmission and data operation. Give full play to the advantages of cloud computing technology, conducive to the realization of resource sharing. The combination of traditional resources and hardware and software technology can continuously improve computer processing technology and promote the further development of computer technology. With the help of cloud computing technology, it can make the network environment of the vast number of computer users more secure and reliable, improve the quality and efficiency of computer data processing, and fundamentally solve the problem of defects in the process of obtaining data. Compared with the traditional computer data processing mode, cloud computing technology has established structure and framework in Internet system, and has quickly occupied an important position in downloading computer processing technology. And for the future development and improvement of cloud computing technology laid a strong foundation [2]. At present, cloud computing technology has a great impact on people's life and development, and its efficient computing power and service system greatly facilitates people's life. At the same time, the powerful data processing ability and data security of cloud computing ensure the accuracy of people's access to information in life and protect people's privacy. Therefore, cloud computing technology is very concerned, and its own technical value is more attractive to the development and utilization of technicians. As shown in the diagram, cloud computing is related to the composition.
3. The importance of cloud computing technology in computer data processing

With the rapid development of social economy in China, the scope of computer data processing is gradually expanded, and the demand for computer data processing is becoming higher and higher. The traditional data processing methods and concepts will interfere with the efficiency and quality of data processing, hinder the progress of data processing, and have a negative impact on the development of social economy. Cloud computing technology is special. In the process of practical application, cloud computing processing can increase the scope of computer processing, make it provide all kinds of services for users in the same time, and increase the actual income of enterprises. Computer data processing is mainly supported by computer system, in which hardware system plays an important role in the stable operation of computer, and it is necessary for enterprises to improve the configuration of network hardware system. In order to avoid other factors in data processing, cloud computing technology can be used to assist processing, which can not only effectively process cloud data information. It can also use the network to log in on multiple clients to improve the efficiency of data information processing and promote the development of enterprises. Enterprises should keep up with the times, use science and technology reasonably to further improve the efficiency of data processing, strengthen the effect of data optimization, and ensure the reliability and stability of computer data processing. With the use of information technology, the use of cloud computing technology can make data processing more efficient, in data mining and screening can shorten the processing time, improve the ability of data processing, make the data more valuable [3].

4. Application of cloud computing technology in data processing

4.1. Ensuring security of data transmission

Cloud computing technology greatly ensures the security of data transmission. Cloud security technology is a new concept, its origin is the process of data processing through cloud computing technology. Cloud computing technology can greatly ensure the privacy of users. During the data transmission, only the users who can correctly complete the authentication can download or process the data. So cloud computing technology can greatly reduce the harm of user data leakage. Cloud security is actually with cloud computing to move the original security technology to the cloud, cloud security with convenient, fast, low price and other characteristics applied to computer data protection. In the past, people's inherent concept of data security is that the more users, the higher the risk coefficient of data information being tampered with or stolen. But cloud security breaks this solidified understanding, and its security is proportional to the number of users. The number of users increases, the range of computer data is wide, the dead angle is small, if the virus infects the computer, it can...
intercept quickly and ensure the data security efficiently. Cloud computing technology also has a very good function, that is, mail service, as long as the user login, cloud computing data platform will immediately send email to the user, the abnormal situation will be informed, remind users to take timely measures. The more cloud computing users, the greater the security of users. Once the client's data is destroyed by the computer Trojan, the client will protect the data when using the client to log on to the cloud storage. And through cloud computing powerful data processing ability to help users kill Trojan virus. When user data is destroyed or lost, data backup and download can be carried out through cloud service to reduce user loss [4]. Moreover, the data transmission mode of cloud computing technology is adjusted traditional data transmission mode, encryption of different users and different data resources, and encryption methods are different, which can greatly increase the difficulty of hackers to obtain information. Even if there is illegal analysis to obtain encrypted data without corresponding data algorithms, data cannot be extracted. Therefore, cloud computing technology greatly ensures the security of user information and protects the privacy of users. Cloud computing technology can also monitor its own messages through its specific channels, such as abnormal login of its cloud account, or login and download trend, which can be used for SMS verification. When the data changes, cloud computing technology can inform users in time, strengthen the monitoring of data, and greatly ensure the data security.

4.2. Provide data-processing services platform
Cloud computing technology provides a powerful platform for computer data extraction and processing. Users can download or use public data resources online, select their own data by filtering and achieve their own purpose in further operation and calculation. There are two main services provided by cloud computing technology according to the similarities and differences of user groups. One is the platform infrastructure service, which uses virtualization technology to enable users to optimize infrastructure through the network, such as CPU processing performance, storage capacity expansion, network interconnection extension improvement, and the rational planning and effective application of system software and applications to provide diversified services. The simple understanding is to build a large infrastructure resource pool that can provide dynamic and extensible services to more users. The other is platform infrastructure level service. The target user group of the service is enterprises and organizations with certain R &amp; D capabilities. It develops and encapsulates the server and running environment provided by cloud computing. Users can directly use encapsulated modules to develop and arrange applications. With the development of cloud computing technology, big data is linked together. The more users, the greater the amount of data and information, the more secure the user's data, and the more scientific and accurate the algorithm and calculation results of cloud computing technology. Therefore, the research and development of cloud computing technology has greatly promoted the development of human society and pushed technology to a new peak [5]. As shown in Table 1 below, the market share and development speed of computer cloud computing are growing rapidly.

![Figure 3. Market share and growth rate of computer cloud computing.](image-url)
5. Development of cloud computing technology in computer data processing

5.1. Strengthening cloud computing mobile development and monitoring systems
With the improvement of computer data internet, mobile devices tend to diversify gradually, which has a certain impact on people's life and work. These mobile devices can connect with the Internet and provide convenience for the public life. At present, the application of cloud computing services in mobile devices belongs to the mainstream development direction of society and has been widely paid attention to. Compared with traditional devices, cloud computing technology has made some progress, and the compatibility range of new devices is large, which enhances the performance of network devices and makes them more and more mature in the application of mobile clients and the development of mobile clients. In order to make cloud computing technology play its due role in computer data processing, enterprises can provide people with a better use experience through personnel training, so that data information can be transmitted stably. If there is no perfect management system for the application of cloud computing technology in computer data processing, it will cause problems in the progression of using cloud computing technology, which will directly affect the security of data information. The establishment of cloud computing technology supervision system in enterprises needs to be realized through the use of monitoring technology to avoid the destruction and leakage of information data further enhance the function of virus detection and intrusion detection and maintain data information security. Enterprises can also set up a technical model to alarm some intrusion behavior in time, and lay a basis for the security of enterprise network system [6].

5.2. Improving cloud computing security
Any technology is not flawless, cloud computing technology is no exception, some malicious people will use loopholes to illegally operate the data, want to protect the data, fundamentally eliminate the possible hidden dangers need to be implemented from the following two points. One is that we must not relax the development of encryption technology, to introduce a new encryption upgrade technology. At the same time, in most cases, there are inherent data information protection measures within the network, but these protection measures are weak, which can enhance the quality of data protection through the use of external application software. Automatically lock the user login password when multiple input errors, thus providing protection for computer data. When the internal software of the computer is invaded by the virus, the virus will be hidden in the software and cannot be found in time, which lays a hidden danger for the subsequent operation. If the virus is not completely cleared, the information security will be reduced. The enterprise should deeply study cloud computing technology, effectively avoid the theft of user information, strengthen data protection, and improve the relevant security protocols. In the development of data encryption technology, technicians need to strictly follow the use of data encryption standards and regulations. We should do a good job of preparing ahead of time, make the safety plan in advance, and prevent the occurrence of safety risks without countermeasures. Another point is the security protocol. So as to promote the safety and reliability of cloud computing technology, it is important for technicians to master the operation of encryption and to be familiar with the use of all kinds of encryption passwords.

5.3. Strengthening development of hybrid cloud computing technologies
Cloud computing technology can be segmented into two categories, private cloud computing technology and public cloud computing technology. In the actual use process, in order to optimize the allocation of sources, the two can achieve mixed operations. However, there are some difficulties in the progression of mixed management, such as security problem, billing problem, resource allocation problem and so on. For example, in simple security problems, there will be some leakage hazards in the process of data conversion. Therefore, we must strengthen the research and development of cloud computing technology, improve the core processing technology of cloud computing so that users have
a more perfect experience in the process of use. In coordination and balance to achieve better use, public data and private data stored separately, flexible processing of user needs. In addition, the hybrid cloud can automate resources and reduce data processing costs by reducing operating costs, bringing users a more affordable technical experience.

6. Conclusion
In a word, with the progress of science and technology, beneath the circumstances of the quick improvement of up-to-date information technology, with the help of the advantages of cloud computing technology, combined with computer data progression, can be aimed at the security of data storage and transmission. Greatly promote the quality and efficiency of computer data progression. In addition, the hybrid cloud can automate resources and reduce data processing costs by reducing operating costs, bringing users a more affordable technical experience.

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