

Analysis of Computer Network Security and Countermeasure Based on Big Data

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Abstract: At present, in the case of large-scale data in China, there are many constraints in the construction of computer network information security, and there are many constraints in the practicality of large data technology. Firstly, through the analysis of information security issues in the context of large data, devoted to the development and innovation of China's information technology, has studied the common computer network information security countermeasures under large-scale data.

1. Introduction

With the deepening of the practicality of China's multi-industry computer technology, the actual impact of China's multi-industry on computer networks has also been expanded. At present, in the field of computer network technology in China, the speed of development and innovation is relatively fast, many industrial areas of computing. The application value of cloud computing and big data technology is reflected. When most industries realize the convenience of big data technology, they choose to introduce big data technology and apply this technology type to their own enterprise project construction. However, for the practical background of large-scale data technology, China's practical application of large-scale data technology has the problem of insufficient experience and information security. Because of the unique virtue and openness of big data technology, when users apply specific big data computing network information technology, they are more vulnerable to information security risks. As a result, their own information leaks and losses. From this point of view, there are many irresistible gaps in the computer network technology based on big data, so the requirement of building information security is very high [1].

2. Summary of Information Security in the Background of Big Data

At present, the application of big data technology has become an inevitable trend in China's multi-industry development and innovation. At present, with the increase of public demand for information resources, the content of information resources and the public demand for the transmission [2], acquisition and accumulation of information resources in China's social environment are gradually reflected. Among them, for the explosive growth of information, people in the information society and the information age have a rich demand for practical information [3].

With the increasing demand for information in daily life, public enterprises and enterprises must have a better technological foundation in order to meet the actual needs of information technology. As one of the technologies dealing with high-speed information resources, the high-speed processing of data information is a big data technology. At the same time, due to the application of big data technology, most of the traditional industries have grown up in the work of self-construction system. Convenience. By using larger data technologies, enterprises can store and process relevant information more easily within the enterprise itself. If you use computers[4], individuals can also break through the boundaries of traditional computer technology and easily search for information. As the main topic of the current development of information technology in China, the development of information technology in the context of large data has a certain high-speed development in the actual process.

2.1. Hidden troubles of information security in big data environment

The problem of information security triggering large data background is one of the main problems faced by the development and innovation of computer network technology in China under large data environment. Because of the actual impact on information security, there is a danger of being hidden by reality. As we all know, as a new data set processing technology, large data technology has the characteristics of rapidity and diversity in current applications. Among them, the management tools and modeling tools related to large-scale data are more open, so there are information security risks in the application process of large-scale data-related technologies [5].

At present, China's related industries and enterprises that apply computer network technology related to large-scale data cover all industries in traditional fields such as transportation, aerospace, industrial manufacturing, military, school management, etc. The high quality interchangeability in the application of big data technology and the superior performance embodied in the application of big data technology have changed the information structure of traditional industries and the work content of traditional industries. As far as the big data environment is concerned, the integration level of social system construction and big data technology in China is still at a high level. For information security issues in large data environments [6], the company believes that the main issues are related to the importance of information security, and the actual impact of information disclosure in large data environments is great. At present, the development and innovation of big data technology has a certain degree of depth and depth. However, in the application of big data, the integration with the actual information technology needs in many fields is still not satisfactory. In this context, most enterprises want to run applications of this technology with lower technology. Unlike traditional information technology, there are many new computer and Internet technologies in China. Therefore, users must fully recognize the characteristics and application value skills of new technologies in the application process [7].

In this regard, the information security risk of Chinese users in the current big data environment is related to the lack of awareness of new technology types in the context of larger data. At the same time, because the decision-making management process of some Chinese enterprises is not perfect, they store enterprise information and establish a management system in large-scale data environment is more scientific. In this way, enterprises will not pay attention to the accumulation and encryption of their own information, enterprises will be attacked because of information leakage and their own development process.

2.2. Its own problems

In order to realize the exchange and sharing of various data and information, computer networks usually have a specific openness, which is bound to face various security risks and threats. In the context of large data, a large amount of data information is stored in the limited storage area of the computer. Moreover, it tends to spam. In addition, data redundancy results. And some spam messages hide unpredictable threats. At the same time, the information deleted in the computer is stored in the recycling library, and the recycling library itself is not safe for the use of criminals. In addition, part of the users of computer network information ignore the maintenance of computer network security in use, lack of awareness of computer network security maintenance, and then, according to the computer, the memory of network data management is not strict network information. Security will pose a serious threat [8].

2.3. Human problems

Firstly, it is the problem of human operation. In the context of big data, most of the information people use comes from the Internet. It must be realized through network technology. The operator of computer technology is people, but the extraction of information and data mainly depends on computer technology. It is inevitable that subjective consciousness is affected in work. At the same time, in the process of using computer network password and password, password and password settings are too simple, but they leave artificial security vulnerabilities. In the context of large data, the operation of human beings is likely to lead to the loss of information and data, and even bring

huge economic losses to criminals. Secondly, virus attacks, hackers and other issues, in the context of the data age, computer networks are often faced with threats such as virus attacks, hacker intrusions and so on. Under normal circumstances, hackers will use improper means to steal all kinds of data stored in computers, destroy or leak important information, and cause unrecoverable losses to users. At the same time, the computer network system has a specific openness, therefore, in the process of operation, the potential ability of computer virus is very strong, so it is inevitable malicious virus and other torture bar by the threat of virus attack, computer network, and then, as long as the computer network system paralyzes, important data information is lost. Therefore, virus attacks and intrusions will pose a threat to computer network security [9].

3. Common Risk Types of Network Information Security in Large Data Environment

Network users in large data environments are no longer limited by traditional network technology, and there is a big gap between the age of users and users'needs. At the same time, the data environment has a great impact on China's social system construction. Most individuals and businesses rely on large data environments in their work and life. Therefore, from the author's point of view, the common types of network information security risks in China's large-scale data environment mainly exist in the following aspects:

At present, the popularity of China's big data environment has begun to take shape. The development of China's Internet technology and the construction of a networked social system have increased the number of Internet users in China. The results show that the growth of personal users brings privacy protection, and the demand for information security has become the big data in China. China's current efforts in the field of mobile networks are still warming up in technology application. The application value in the field of mobile network is the convenience of computer interconnection network in this field. It reflects that smart phones and PDA of network terminals are transplanted to smart phones. While users enjoy the most convenience in the network, the openness of information has an impact on the overall performance of big data technology. Thirdly, most enterprises and individuals in China will be affected by the traditional network technology application habits when they adopt large-scale data technology. In the large-scale data network environment, the use of personal information and the registration of personal accounts are common. The construction of Internet financing and Internet trading platform is very common in China, so the operation of the Internet will inevitably lead to more personal information when users use the Internet.

At present, large enterprises in China apply big data related technology and accumulate important data. The loss of enterprise intelligence will also have a great impact on enterprises, and even lead to economic losses. For the new network environment, the large data environment has many defects in the construction of this information security risk response mechanism. In this regard, the security of computer network information against the background of large-scale data in China should be one of the major problems to be solved.

4. Common Computer Network Information Security Protection Measures in the View of Big Data

With the increase of the information security conditions of computer network users in China, the information security of computer network is facing the Countermeasures of construction, which will redeem the large-scale data effectively at the same time. The necessity of various information types and privacy protection of computer network users is facing continuous improvement. It is necessary.

From the point of view of large data, network security technology means that through Internet related technologies, it can solve the problems of information processing, collection, accumulation and security risks in large data environment. In view of the continuous strengthening of users'needs, Chinese researchers need to strengthen the following three points for the specific construction of computer network information security protection.

First, we should strengthen the practical mention of network security protection technology. As an important part of network security technology, network security protection technology is the main type of technology to meet the security requirements of information transmission from network technology. Network security protection technology in large-scale data environment can cover the main information security protection in large-scale data environment, such as firewall technology, intrusion information detection technology. This is of great synergistic value to China's relevant information protection needs. Secondly, we need to improve the encryption technology system in large data environment. Because the number of users in large data environment is totally different from their own information, the actual information security requirements of users must be improved at the strict and encryption level of traditional encryption technology. Thirdly, the establishment of networking system should be fully understood by relevant builders and relevant research methods in order to achieve the actual impact of risk. See Tab.1.

Table 1 General thought of security protection for big data platform

Safety management system	Big Data Security Laws and Regulations			Management + Technology
	Information Security Management System	Information Security Supervision	Talents and Core Technology	
Platform safety management	Safety Management of Big Data Platform			
	Data privilege control	Data desensitization and privacy protection	Data trustworthiness	
Basic safety	Terminal security	network security	Cloud Security	
	Safety of physical facilities			

5. Conclusion

The current big data environment has a great impact on China's computer network environment, and the information security problem in the big data environment is also limited by the construction process. Building related personnel, big data strengthens the understanding of the specific environment. In order to build a computer network in China, we must innovate in the development of information security related technologies based on the actual technology type of big data[10].

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