

# **Analysis of Computer Application under Network Information Security Technology Management**

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**Abstract:** with the Rapid Development and Widespread Application of Network Computer Technology, Various Production Activities of Human Beings Also Depend on Network Computer Technology to Varying Degrees. No Matter in the Process of People's Life, Study and Work, They Will Be Directly or Indirectly Connected with Network Computer Technology. the Development of Network Resources Also Has an Important Impact on the Development of Various Sectors of Society. in This Environment, Network Information Technology Has Had a Certain Impact on Social Security and Has Received Widespread Attention from the State and Society. Based on This, This Paper First Gives a Brief Introduction to the Basic Concepts and Characteristics of Network Information Technology, and Then Deeply Analyzes the Functions of Network Information Technology on Computers and Some Problems Existing in the Application of Network Information Technology in Computers. Finally, the Relative Strategies of Network Information Technology in Computer Application Are Put Forward, Hoping to Effectively Improve the Security of Current Computers in Our Country.

## **1. Introduction**

The application of network information technology represents the development and rapid progress of society and provides convenience for people's life and production. Computers are now widely used in all sectors of society. From domestic aviation and aerospace and national defense security, to telephone communications in people's lives and various mobile phone applications, it can be clearly seen that computer applications have entered every aspect of people's lives.

## **2. The Basic Concepts and Features of Network Information Technology**

### **2.1 The Basic Concept of Network Information Technology**

Network information technology is mainly used in the use of computer networks to prevent loopholes in computer applications, and to ensure that computer applications are not invaded by external criminals such as hackers, to prevent computer viruses from invading computer systems and causing computers to fail to work normally. The security development of network technology has brought many changes to the society. While providing a large amount of network information convenience, it also contains some potential dangers in use. For example, we often hear about hacker invasion, information loss, computer trojans, computer viruses and so on. This kind of problem is closely related to people's privacy, information and property safety. From this perspective, network information technology has a profound and important impact on computer applications.

### **2.2 Characteristics of Network Information Technology**

Network information technology has many characteristics in practical application. The first is the integrity of network information technology, mainly the protection and replication of network spatial information. Integrity, as the main feature of network information technology, fills in the gaps in information processing. At the same time, the network information technology can efficiently ensure that the information is transmitted to the outside as a whole in the transmission

process, and ensure the comprehensive integrity of the information in the transmission process. Only by copying and spreading based on this situation can a variety of data information be completely entered into other storage tools, or some network data information be completely copied and integrated into its own computer space. The second is confidentiality, which is also one of the main characteristics of network information technology in operation. The confidentiality of network information technology is mainly reflected in the confidential transmission of information to a certain recipient, without transmitting the information to some unauthorized users in the transmission process. Confidentiality takes the specific information in the computer network space as a whole, carries out confidentiality at the review level, and uses different forms to carry out comprehensive encryption of information data, thus finally ensuring the overall information security with high efficiency. The use of network information technology to ensure their own information system security, while having a higher and more convenient management, only in this way can the overall information show the characteristics of comprehensive protection. In the process of using the computer, use the network security system to avoid reducing the loss of users caused by the problem as much as possible when the problem occurs. The usability of network information technology is mainly reflected in the comprehensive access to other authorized entities in the use of network information. According to the relevant data information, the recovery and use of various composite information in the information dissemination is generated. When the network system of the computer is damaged by Trojan horse or virus, the information system is quickly guided and recovered, and the computer can still be used normally. The guarantee of this network information technology provides a very effective guarantee technology foundation for users.

### **3. The Effect of Network Information Technology on Computer**

#### **3.1 Using Network Information Technology to Effectively Prevent Network Security Risks**

If there are failures such as hardware damage or system interruption in the process of computer application, it will lead to data loss in the process of work, and the hardware has encountered some external influences, such as natural disasters such as rainstorm, lightning and so on, causing computer failures and short circuits, or various forms of unnatural accidents causing voltage instability, line termination and so on. This kind of problem is difficult for people to solve and deal with in time. If there are failures, it may cause certain losses to users. Therefore, the network information technology needs to be more vigorously promoted and widely applied, so as to build a healthy working environment for computer application and timely backup of relevant information, which is also one of the main requirements for computer application to realize network information technology.

#### **3.2 Repairing Network Protocol Vulnerabilities by Using Network Information Technology**

In the network service of computer application, it is necessary to sign corresponding information protocols, and efficient and safe information protocols can improve the security and reliability of computer application. If there are some problems and defects in the network protocol, it will easily lead to hacker attacks, which will increase the probability of computer security problems, resulting in computer failure. It should be noted that the network protocol intelligently ensures the security in a certain period of time, instead of being in a security period forever. Therefore, the timely use of network information technology to repair computer application network vulnerabilities and other issues is to enhance network security, but also to strengthen network information technology is one of the important ways to promote the development of network information technology also has a more positive role.

#### **3.3 Resist Hacker's Network Attack**

Hackers are criminals who illegally invade computer networks, steal information and destroy computers by exploiting network information technology vulnerabilities and computer application vulnerabilities. At the current stage, hacker attacks on computer applications will pose a huge threat

to the stable operation of the entire network operating system. Therefore, no matter any industry, as long as it uses the network, it is likely to be attacked by hackers. Hackers use tampering, attacks, forgery, terminals and other methods to attack the network system, affecting the comprehensive development and security of the computer network.

### **3.4 Network Information Technology Prevents Computer Applications from Being Infected with Viruses**

If a computer is infected with a virus in specific application practice, it will destroy the data and hardware of the information system in the whole computer network, and lead to the abnormal operation of the computer system or directly destroy the computer, making the computer unable to work normally. If there are viruses in the computer network, they will damage the data information and programs of the network system, affect the privacy and security of the contents in the data information, cause the leakage of user information, and cause certain losses to users. For example, Trojan horse virus, which is common in the network, uses the loopholes of network information technology to paralyze the computer operating system. Therefore, in order to improve the safe operation of the computer system, the network information technology should continuously promote the development and prevent viruses and Trojan horses from being implanted in the computer, which has also become one of the main tasks of the current network information technology development.

## **4. Analysis of the Problems Existing in the Application of Network Information Technology in Computer**

### **4.1 There Are Loopholes in Computer System Protection Technology**

In the traditional computer sequence, the chip will be pre-installed in the computer during the user's use of the computer. This chip can identify the comprehensive serial number of the user's information. The computer has its own unique serial number, and this serial number will not change. If the chip is installed in the computer, any operation of the user during the use process will produce traces. If there are some errors in the storage of information in the computer system, it is easy to cause criminals and hackers to tamper with the information. The application of network information technology can effectively prevent this and prevent the theft of network information and computer information in related applications. The lack of corresponding computer management personnel has affected the plugging of loopholes. In the development and progress of network information technology, a large number of technical personnel are required to provide technical operations. This kind of network talents are very scarce. If the country lacks relevant talents in network technology, it is difficult to achieve further breakthroughs in the development of network information technology, and there are many technical guarantee problems in dealing with foreign hacker attacks and related virus invasions. At present, there are some gaps between the comprehensive level of domestic network information technology and the international advanced level. In the process of computer application, from the perspective of network information security, it has always been at a disadvantage.

### **4.2 The Public Awareness of Computer Protection Needs to Be Improved, and Criminals Steal Computer Application Information**

In the operation of the computer, because a lot of information will be protected by network information technology, it is relatively safe in most cases, but there are also some network data information that lacks relevant technical protection, making it difficult for people to protect information data in the process of information transmission using the network. Information is transmitted in cyberspace and free space without relevant limitations. Related criminals use the loopholes of network information technology to intercept user information through network loopholes and so on. In the dissemination and construction of information, it is often necessary to carry out comprehensive debugging of data during transmission. In this theft of network

information, network criminals will not immediately invade the system, but will hide in the computer to steal user information continuously, realizing the integration and docking of network computer resources, and stealing user's comprehensive data in the network system security. Computer systems have strong data application and processing capabilities and related quality assurance advantages, and have been widely promoted in a variety of industries. In the previous related enterprises and construction, from the perspective of the government, in the face of massive data information and archives, the processing and collection of comprehensive data should be realized in a short period of time so as to facilitate the subsequent management work to improve the speed and quality of execution. However, starting from the launch of the specific platform for network management, the data and files in computer network security have great economic significance. If the data and information are stolen, it will lead to a large number of losses for enterprises and government agencies, and even panic in the society. This kind of problem causes a large number of obstacles to the application of information technology. In addition, after the personal information security leaks, the relevant personal information will also have a profound impact on people's life and production. Therefore, it is necessary to carry out comprehensive management and politics on the national network information security, establish an efficient and perfect protection platform, and realize the management of network space in the technology of network information technology.

#### **4.3 Computer Software and Hardware Are Vulnerable to Tampering with Network Information Data**

After obtaining the relevant data information of computer users, criminals will use various means to tamper with the information and transmit some tampered data to other fields. In the dissemination of a variety of information, it is highly efficient and arbitrarily modified. This behavior makes the network information technology merge and tamper with user information under the influence of many factors. Internet criminals use the loopholes and problems existing in the network information technology to tamper with and generate related threats in the management of network information security. This threat has corresponding technical and legal disputes from the domestic economic construction. Relevant units are allowed to realize the comprehensive guidance of various computer information through the network data platform. After stealing the corresponding data information, they also tamper with and damage the network data according to their own needs, making the information data of the entire enterprise in a favorable state for themselves. Therefore, it can be seen from this kind of problem that the technical guarantee of network information technology needs automation and intelligent technology to provide basic guarantee. However, in actual application and practice, the guarantee of network information technology can further improve the comprehensive quality of network and system construction and prevent the occurrence of threats and influences from being used by people or even the network economy. In addition, in the management and construction of network information security, starting from the operation of relevant enterprises, it is clearly protected in the network development of enterprises. The comprehensive protection and construction of a variety of data information also means that in the current network information dissemination, there are still some illegal elements tampering with network data information and other phenomena. This is also a comprehensive problem in the application and development of the current system, and it is also a problem in the implementation of technical protection.

#### **4.4 There is a Lack of a Complete Legal Guarantee System to Provide Legal Support for Network Information Technology**

In the dissemination and construction of network information, the operation should be guaranteed by relevant laws and regulations. For example, in traditional computer applications, a large number of websites, domain names, IP protocols, etc. are more controlled by the United States. Therefore, the United States has corresponding information hegemony in the use of the network. In the dissemination of network data ports and network information, it presents guidance and control on network security. At present, China has also enacted laws on network information technology to

ensure that network information technology can be promoted and evolved from the legal level. For example, in our country's contract law, the legal effect of some network electronic contracts has been clearly defined, but the specific system needs to be improved and sorted out.

## **5. Application Strategy of Network Information Technology in Computer**

### **5.1 Strengthen the Application and Development of Firewall and Antivirus Software in Network Information Technology**

In the rapid development of network technology, network information technology has been widely concerned by the society. We should strengthen the application and development of network information technology, resist hacker attacks from the technical level, and realize the comprehensive processing of virus and other data. In the domestic network security management, the network information technology has strengthened the investment management for the project content through authentication, information confidentiality, network detection and other different means and applications, guiding the relevant funds into the comprehensive system development. Under this situation, the computer management security personnel use the relevant technical equipment and applications to provide research and development for the current domestic computer security, and finally realize a relatively independent network information technology development team. Domestic network information technology needs to be protected by social resources in its development. From the perspective of social development, the rapid promotion of network information technology can also prevent society from presenting more problems due to network security problems. Network information technology provides relevant protection for users' usage information, and uses network information technology to build a network early warning mechanism. Prevent the invasion of some illegal elements and viruses in the process of users using computers. Therefore, from the perspective of this kind of user information, for the use of computer applications, the network information technology is integrated into the computer network security construction in the form of services and patches from the computer network, so as to establish a strong network information security system in the technology of network information technology.

In the development and practice of network information technology, there are many types of technologies that continue to be promoted. For example, firewall technology is used as a screening system between network platform and computer. In the process of use, network data is used to realize the comprehensive guarantee of communication, and this way is used to promote data communication and comprehensive information quality. It can also realize the comprehensive monitoring of a variety of data information, and reduce hacker intrusion and virus intrusion records in this way. In this process, the firewall technology and the server carry out comprehensive exercises. Only in this way can the security of data source and transmission be guaranteed and the computer be more efficient and easy to manage in the transmission process.

Computer virus software in network information technology realizes comprehensive prevention and control of various threat types in the guarantee of network information security. From the viruses that have been included in the database, it can be seen that viruses generally have comprehensive characteristics such as transmissibility, replication and destructiveness. According to the data network and content, the viruses cover and spread to multiple computer systems. With the strengthening and destruction of data, the network data can be passed through more efficient operators to computers such as relevant data, and stable comprehensive guidance and obstacles can be provided to relevant government agencies and units. Therefore, from the management process of network information security, the protection of reliable information is realized, and according to the comprehensive measures in the process of computer prevention, the goal of using antivirus software and other equipment to improve the reliability of network information technology is realized. From multiple levels and angles, to ensure the safety of information management, to provide it with a more stable and perfect integrated operating system, so that enterprises can be fully satisfied in the functional system and economic construction.

## **5.2 To Enable the Public to Understand and Understand the Comprehensive Management of Network Information Security**

Under the background of the current outbreak of information development, network information has been spread rapidly. In the process of the gradual application of network information technology, along with the gradual entry of network technology into social and economic development and construction, the development of national economy has been promoted from various angles. However, the development of this kind of computer network has also brought some bad information, such as anti-science and pseudo-science and other contents, which have a negative impact on people's ideological health. If there is misleading information to the public, the network information technology cannot be used. The reason is that the bad information of this network is not a corresponding technology, but a distorted use of network communication technology. The reason for these problems is that these people do not fully understand the network information security and network information technology, and the network managers have not extended the network information technology to more netizens. To strengthen the comprehensive understanding of the use of network technology, to do a good job in the study of computer management and security concepts, to understand the network hackers and criminals of network intrusion will produce more serious damage. At the same time, the country started from the first related measures and policies to enhance the sense of social responsibility and safety awareness and build up network information management information. To enhance people's understanding of network information technology.

## **5.3 Maintain and Manage All Kinds of Software and Hardware Equipment of Computer Application Network**

The application of network information technology relies on the application of computer software and hardware equipment. At the same time, in the application of software and hardware in network communication, various forms of content are comprehensively sorted out. In hardware management, timely guarantee is emphasized. In software, comprehensive guidance and politics are carried out. While making good use of network life and production, network equipment and network nodes are regularly checked. In addition, various anti-virus equipment are used to scan the network space regularly, and security patches are installed in time to prevent the occurrence of comprehensive access and management measures due to loopholes and network security. Timely management and purchase of firewalls and anti-virus hardware and software equipment, and comprehensive application of gateways, network routers, hardware, network operation and maintenance systems in network transmission. In this technology, the comprehensive management and loophole filling of various contents in network operation are realized, the activity filling of network information security management is deepened, the starting system for network process processing is established and perfected, and some problems existing in network informatization technology are discovered in time. If loopholes in the network information technology are reported in a timely manner, in the process of using the network to disseminate important information, multi-dimensional comprehensive guidance is carried out through vulnerability detection, so as to prevent a large number of hazards such as information disclosure and user privacy disclosure, prevent the comprehensive maintenance of hardware and software by infrastructure, and avoid greater losses caused by the inadequacy of the network information technology. In the specific use and management of network hardware, the hardware equipment shall be checked and dealt with regularly to prevent information leakage caused by management loopholes. For example, the most common one is the application of various brands of antivirus software. Antivirus software can effectively prevent Trojan horses and viruses from invading the system, intercept potentially dangerous links or software applications, and repair systems that have been damaged by viruses and Trojan horses. In order to ensure the safety and integrity of the computer.

## **5.4 Promote the Application of Network Information Security Encryption Technology**

Due to the rapid development of network information technology in recent years, it provides relevant technical guarantee for the whole network security. However, various forms of network

data tampering and network information theft occur from time to time, affecting the application and security in network applications and information dissemination. In the development of network information technology, information security has received extensive attention, especially the encryption technology has achieved a high level of development. Network encryption technology uses a relatively safe information management approach to provide effective security for computer applications. Under this network environment, computer users can use various information contents such as network transactions and real-name authentication independently, and it is the concealment and security for network user information currently applied. In most cases, the network technology has realized the comprehensive protection of information and content through encryption methods. By making good use of this composite level of technical protection, the application of network information technology in actual operation is promoted. Network information technology can realize more efficient and faster information dissemination, concealment and security of mass information by upgrading the encryption technology module. In the process of real-name transaction, various information contents and different information guidance processes are realized by using relevant methods of network encryption. Judging from the encryption process, users of this information guarantee will not simply decode it. Therefore, the encryption technology in the network information technology realizes the encryption of the comprehensive data and has an efficient protection effect on some data with higher sensitivity.

Through information encryption measures for network data, this technology reflects the application of traditional information encryption technology in the network era in information dissemination. In the application of relevant technologies in practice, network information is comprehensively and multidimensional encrypted by high-performance and high-level computers to realize the protection of information. If information is changed and used, the correct account number and password must be used. To ensure the security of data and information in information security processing. This method can effectively promote the network information security. After hackers invade the computer network, they can guide the data of the computer to protect themselves. Through the screening and examination of the data, the reliability of the data information can be improved. At the same time, the controllability of the information security in the information management process can be realized, so that the overall information data can be managed in a more convenient way. In the process of formulating the information, the management quality in the comprehensive data security can be improved by using the relevant grades and authorities.

## 6. Conclusion

To sum up, in the management security of network information, as a condition to ensure electronic information activities, network management departments are required to promote the better and faster development of network information technology, and use network information technology to ensure the security of network information and computer applications, so as to efficiently solve the related problems existing in network communication. Provide network users with an efficient, stable and secure comprehensive network use environment. This is closely related to the development of network technology. At the same time, it has an intuitive impact on the domestic network information security and economic development and construction. Only under the protection of advanced network information technology can computer applications develop more rapidly and healthily. The understanding of network information technology requires every member of the society to have a clear understanding, to know how to use network information technology to ensure their own information security in the network information dissemination, and to prevent the occurrence of problems affected and infected by criminals and computer viruses.

## References

- [1] Zou Kai, Hou Lan, Jiang Zhiyi, Gao Kai. (2019). Research on Three-dimensional Structure Framework and Identification of Influencing Factors of Information Security Risk in Smart Cities [J]. *Modern Intelligence*, vol. 39, no. 10, pp. 15-23.

- [2] Gu Suishan, Liu Shanshan. (2019). Research on the Construction of Information Security Management System and Countermeasures [J]. Information Science, vol. 37, no. 08, pp. 108-113+151.
- [3] Huang Lidong. (2019). Discussion on Security Management of Campus Computer Network Information [J]. Educational Theory and Practice,
- [4] vol. 39, no. 11, pp. 25-26.
- [5] Wang Bing, Wu Chao, Sun Sheng. (2019). Speculation on Basic Issues of Safety Information Oriented to Safety Management-Connotation, Nature and Function [J]. journal of information, vol. 38, no. 05, pp. 22-28.
- [6] Wang Yajuan, Xin Li, (2017). “internet plus” Era, How to Guarantee Information Security [J]. People's Forum, no. 03, pp. 74-75.