Research on Computer Information Network Security Technology and Security Precaution Measures Based on Computer

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Abstract. At present, with the continuous development of science and network technology, the development of network brings great convenience to our production and life. Network technology has been widely used in various fields of society, promoting the development and progress of various industries. It can be said that the popularization and development of the Internet has become an indispensable part of our lives. However, under the condition of rapid development and wide application, Internet also brings great troubles. The security of computer information network is concerned by the public, how to better guarantee the security of information. At present, the main reasons affecting the security of computer network are lack of core software technology and lack of security assessment system. It is these factors that make the computer information network can not be used properly. This paper will analyze the security situation of computer information network and put forward corresponding measures.

Keywords: Computers, Information Networks, Security, Measures

1. Introduction

The rapid development and popularization of the Internet has become an indispensable part of people's life. However, as an open information system, the Destruction and theft of information will occur in the process of information exchange and dissemination. For some secret files in the computer, if it cannot be effectively prevented, it is easy to be attacked by hackers or the invasion of viruses, which will lead to the theft of some confidential files in the computer and affect the development of enterprises. So computer network technology to bring convenience to people at the same time also bring a lot of trouble, we must pay great attention to the security of the computer. Take appropriate security precautions for some important files in your computer[1]

2. Computer information network security technology overview

Computer information network is a general term of computer system equipment in which several computers use the same geographical location but each has its own independent function. All kinds of network communication can maintain the connection between each other, through the network
operating system let all kinds of network management software to achieve common management resource sharing, in order to transfer network information to each other[2]. After the combination of the external characteristics and the intrinsic meaning of the computer information network, a huge computer network system is formed. The system is also known as the Internet. Network computers are connected to each other by routers. This interconnected network system is also known as the Internet. With the rapid development of science and technology, the application of computer network is becoming more and more extensive. The influence of the global computer network ushered in the "global integration economy", and then reached the network information and data resources transmission and sharing. That is to say, the computer can collect computer resource data from various regions. Through data screening and sorting, the useful information will be integrated together, the useless information will be screened out. Finally, accurate feedback will be given to the data content required by the user information, thus enhancing the application value of network data and enhancing the information transmission[3].

Computer information network security pass has three basic attributes :(1) confidentiality, prohibit information leakage to users without authorization; (2) Controllability, strictly control the contents uploaded on the network and provide high-quality guarantee services for those allowed to be uploaded (3) Integrity, which means network information data cannot be changed without authorization.

3. The main reason that affects computer network security

The main reasons affecting computer network security are shown in the following figure. Weak safety awareness

![Diagram](attachment:image.png)

**Figure 1.** Factors affecting network security.

3.1. **Lack of core software technology**

At present, China lacks independent technology in computer information network security, which leads to three security vulnerabilities in modern network environment. These security technologies need to be imported from abroad, resulting in China's computer information network security rate there are huge hidden dangers. Due to the lack of independent research and development technology in China, computer information network security has been in a passive situation. Research and development of computer information network security technology is a long and arduous task for China. Therefore, research and development efforts should be made in this area to break the passive situation[4].
3.2. No safety assessment system has been established
Whether the computer information network can resist hacker intrusion is the evaluation criterion of information security. The quality of security evaluation mainly depends on whether to build a scientific and accurate network information security prevention evaluation system. Then conduct a feasibility assessment based on these strategies. However, China has not established a complete security assessment system in computer information network technology. Unable to scan the entire network, hackers often exploit these black holes to steal information. To steal classified information from our country. Therefore, in order to prevent hackers from attacking, it is necessary to fully integrate and utilize relevant information data to improve the security of the entire security information system. Once the computer information network security vulnerability is found, it should be dealt with in time so as to improve the reliability of the whole network information system.

3.3. Lack of preventive systems
Due to the lack of core technology and the lack of safety assessment system, many Chinese enterprises fail to build a good scientific and reasonable prevention system. In this computer information network environment, network criminals often take advantage of the enterprise network security management loopholes to steal corporate secrets. That is to say, it is the lack of network security management system in the process of operation and management that leads to the occurrence of these undesirable situations. Make the internal personnel of the enterprise because of certain interests and take risks, violate the relevant laws of the country. In addition, part of the current laws in China are too outdated to adapt to the rapid development of network technology. In particular, there are many gaps in network management, which allow network criminals to take advantage of the opportunity to commit network crimes without leaving any trace in a very short time, which increases the difficulty of network case detection.

3.4. Weak safety awareness
In daily life, people often like to use computers and mobile phones for study, entertainment, work and so on. These activities are inseparable from the Internet. However, in the practical application, people lack correct cognition of network information security. Even if the network itself has some protection measures, but these protection measures are too simple, belongs to the basic protection. It has no effect on the actual situation of more complex network attacks. Although some network operators pay attention to network management, they fail to invest more money and management in network security, which results in the current computer information network security precautions. Can not meet the real needs of real life.

4. Computer network information security precautions
The specific security measures are shown in the table below.

| Table 1. security precautions. |
|------------------------------|
| **Strengthen the management of network information** | This needs to popularize computer user safety education and build computer management function. We will establish a computer information network security administration organization and establish a Computer network Security Law to strengthen network security law enforcement capabilities. |
| **Set up a firewall** | Once the suspected information intrusion is found, firewall technology shall ask the system management personnel for instructions and ask whether to allow further access |
| **Update software frequently** | Each network designer needs according to their own network vulnerabilities, constantly upgrade the web program. |
Enhance network security awareness

Network users need to download and use network software with hidden security risks, so that they can form good use habits and get used to using browsers and software with high security coefficient.

5. Conclusion
To sum up, computer network has become an indispensable part of people's life and work. With the continuous development of computer technology, the scope of its application will be more and more extensive. In the application of network technology, we must do a good job in network security maintenance. Avoid economic losses caused by network security issues. Therefore, users need to make reasonable use of computer network security technology and improve the security of computer network through data encryption technology. Enhance the security awareness of network users. Increase the research and development of network security management, improve the level of computer network information security prevention.

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