Application Analysis of Computer Network Security Technology in LAN Environment

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Abstract：In the twenty-one St Century, the network information technology has shown a trend of all-round development, promoting the rapid development of the information-based network age, providing people with more quality services, and changing people's life style, so as to promote the development of human civilization. But in the development of the Internet, there are some negative problems, such as the current computer network security has always affected the development of the computer network, resulting in strong limitations, especially the local area network security. Based on this, this paper starts with the application of computer network security technology under the background of local area network (Lan), carries out in-depth analysis, clarifies the existing problems, and puts forward reasonable development strategies for reference.

Keywords：LAN Environment; Computer; Network Security Technology

1. Problems in the application of computer network security technology under the background of local area network

1.1 Computer virus

Computer virus is one of the most common security problems on the internet today, referring to computer programs that hide illegal data or functional code that could be stolen, taking the data and confidential information stored by computer users in the computer, and destroying the integrity of the computer, causing serious consequences, not only resulting in the failure of computer functions, also may bring the serious economic loss for the user. The computer virus poses a serious threat to network security, and its destructive effects are obvious. For example, when a computer is invaded by a virus, it may show a large number of virus copies, thus causing the computer space to be occupied, the formation of the computer cottonwood, users can not issue, normal instructions, may lead to system failure. There are many kinds of viruses, different types of viruses, the impact of viruses are obviously different, but they will destroy data and information, and its update speed is faster, need to strengthen attention.

1.2 Network security awareness issues

The weak awareness of network security is also an important problem in the computer network under the current local area network environment. The popularity of the network has promoted the rapid growth of the current number of netizens, however, the overall level of Internet users' literacy has been growing slowly, showing an obvious disjointed situation, resulting in a large number of internet users having weak security awareness in the process of using computers, often showing, it is necessary to pay more attention to the situation of violating the network security Operation Standard, to lay hidden dangers for the computer network security, and to affect the stability and security of the network system, fundamentally reduce the probability of network security problems.

1.3 Security management system issues

At the present stage, the security management system under the LAN environment also has certain problems, the related

security management system is not perfect, can not give full play to the system's advantages, and then for the part, intentional users or criminals provide loopholes, and then affect the current computer network security, restrict the development of computer network security. At the same time, due to the lack of supervision of relevant systems, it is difficult to control the network security activities at the present stage, and illegal activities often occur, which have a negative impact on the computer network security and hinder the development of the security system, requires further innovation and maintenance.

1.4 Poor encryption

The effective application of encryption technology can promote the network security at the present stage, strengthen the security protection, of data and information, and then reduce the situation of information being destroyed or leaked, and provide high-quality service for people. However, at present, there are some backward technologies. For example, the encryption technology is still based on the traditional encryption, and the encryption form is also more traditional, which leads to the decrease of the overall encryption performance, the influence, and the overall security, need to pay attention to technological innovation.

2. Application Strategy of computer network security technology under LAN environment

2.1 Construct the perfect virus defense system actively

In the course of development, we should construct a safe and perfect virus defense system according to the actual situation, combine the local area network environment background, do a good job of computer network protection, in order to reduce the probability of network security problems, to meet the needs of the moment. For example, the flexible use of network virus intrusion protection system, system and firewall for security protection, do a good job of daily network security monitoring, once found problems, immediately deal with, the first time to remove security risks. Regular detection and virus detection of computers, regularly update virus library and anti-virus software, to ensure that the system can be found in a timely manner, new viruses, to avoid virus impact on the computer network. Strengthen the optimization of the whole technology, such as the application of artificial intelligence technology, optimize the existing mode, promote the upgrade of intelligent engine technology, lay a good foundation for virus detection and killing and scanning, provide sufficient driving force, optimize, virus cleaning efficiency, the different state of data protection, do a good job of computer protection as a whole, to provide people with quality services.

2.2 Overall enhancement of computer users' security awareness

Focus on control from the source, through improving the computer user's security awareness to ensure that the security of the computer network, to ensure that the computer security maintenance effect. Some users in the application of computing, computer process, because of their own operation and consciousness factors, vulnerable to the invasion of network viruses, increase the overall security risks, so can establish a correct security concept, to promote the importance of safety precaution to users, promote their overall safety awareness, optimize the existing model, create a new development system to meet the needs of the times. Can regularly carry out relevant security training, strengthen the user's own security awareness, gradually produce subtle influence, regular publicity, so that computer users can make clear their own operation of the computer, can form the hidden danger of security, especially for the enterprise, must guarantee the employee's Operation Security, in order to reduce the enterprise information leakage or the virus situation, in the daily work to guarantee the computer network, the network security, to meet the needs of the current stage of development. Relevant computer network security experts can be invited to give relevant lectures, publicize the dangers and characteristics of viruses, explain real cases, and urge, people to understand the serious consequences of computer network security, then reasonable operation of the computer to ensure the safe use of computer network to meet the needs of the current stage of development.

2.3 Develop a new network security management system and system

Formulate a sound network management system, identify the existing problems at the current stage, make targeted optimization, formulate a new security management system and system, eliminate the loopholes in the traditional system, and create a new model, and in-depth analysis, give full play to the advantages of the system to deal with to ensure computer network security. Do a good job of overall supervision, make use of the advantages of the system to deal with it, immediately handle any irregularities or abnormal situations, and make timely optimization, carry out comparisons strictly in accordance with, and deal with them in a targeted manner, improving network security. For computers, the security threats they encounter are various, and it is not good to rely solely on the network security system for maintenance.

2.4 Continuous innovation in data encryption technology

The application of encryption technology can effectively promote the security of computer network at the present stage, therefore, the optimization of data encryption technology should be carried out continuously, so as to give full play to its value and advantages and ensure the security of information data, reduce the probability of information leakage to meet the needs of the current stage. The application of encryption technology can not only effectively guarantee the security of stored information, but also effectively guarantee and guarantee the security of transmitted information, even if it is intercepted by illegal elements in transmission, the information is encrypted, the Secret Party can not open the data, but needs the corresponding individual key to open, which further guarantees the information security and provides the high-quality service for the people. The application of key technology promotes the current data information security upgrade, such as the combination of symmetric and asymmetric keys, then encryption, the mechanism can effectively enhance the overall security, avoid information leakage, reduce information leakage, to create a healthy and safe network environment.

3. Conclusion

Under the current background, the computer network security under the local area network environment background, the security technology application value enhancement, people gradually strengthen to the computer network security attention dynamics, optimize the existing model and concept, innovate the current system, flexibly use advanced technology, security protection, establish a sound local area network management system, overall management, timely elimination of security, security risks, to meet current needs. At the same time, develop a new model, focus on personnel, network security training, improve their own operational security, from the root of the security protection, reduce the probability of network security incidents, to find the security problems in time, meet the current development needs, promote the level of network security in China, to ensure the security of local area network.

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