On the development of computer network management technology in the new era

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Abstract: with the development of science and technology in China, network technology has been used in various fields of society, and plays an important role. With the development of the times, it has gradually become an important part of people's life and production process. However, in the new era, there are still many problems that are difficult to solve in the process of computer network management in China. In view of this, this paper analyzes the development of computer network management technology in the new era in detail, hoping to provide some valuable references for teachers and friends.

Key words: New era; Computer; Network management technology

Introduction

Computer is a combination of computer technology and communication technology. Computer network management mainly refers to initialization and monitoring of an activity. By collecting relevant information in the network system, and then analyzing and processing it, the existing problems are found and handled in this way. Its main role is to provide strong protection for the network, improve network efficiency, provide a more secure and reliable network environment, and deepen user experience. Nowadays, with the development of the times, the level of science and technology has been developed by leaps and bounds, and the related concepts and technologies of network management have undergone earth shaking changes. So far, the world has not yet formed a unified definition of network management. Many scientists have defined it differently and given it different roles. Their research is still in the process.

1 Basic concepts of computer network management technology

1. The meaning of network management protocol

In the computer network management technology, there is a most basic principle: if you want to manage related objects, you must add some software or hardware to it to realize management. But this must meet the corresponding standards, that is, the impact on the original object must be reduced. The protocol SNMP is designed strictly according to this basic principle. SNMP has powerful functions, such as monitoring the network and analyzing network errors. In the normal working process of the network, the functions of configuration, testing and statistics can be realized by relying on SNMP. When there are some problems or failures in the network, we can detect various problems and recover them to make them have the original functions. Although SNMP is a network management protocol based on TCP/IP, it can also be applied to other types of devices, but the whole SNMP system must have an important prerequisite, it needs a management station. In fact, it plays the role of network control center. During the management process, sometimes, the network protocol cannot effectively control some network elements. For example, a certain network element uses other network management protocols. In this case, it cannot be controlled by it, which requires the use of a principal-agent. It can provide the collection function of filtering operation and protocol conversion, and can realize the management and control of certain elements through the principal-agent.

2. The meaning of computer management system

Nowadays, with the continuous progress of network management technology, the composition of the system is extremely complex, and various network devices are widely used, but this can not 100% ensure its reliability. Therefore, in order to ensure the security and reliability of the computer network, it needs a powerful safeguard tool to scientifically control these network resources, so as to ensure a strong network environment for the majority of network users. The emergence of network management system can solve the problem of query. Nowadays, there are a variety of network management products that have been widely used. They can be divided into three categories: simple system, LAN management system and enterprise management system. The first type is mainly to provide solutions for specific problems, which is relatively low cost and can completely solve specific problems. The second category has a relatively wide range of functions, including system management and network management. It has a certain degree of integration and scalability, and has the functions of problem management and automatic detection. The third type can realize the management of operating system, database and other aspects on the unified management platform.

2 Several aspects of network management

In general, it is necessary to carry out network management in many aspects, such as performance management, security management, fault management and so on. Among them, fault management is particularly important. Every user wants to have a safe and reliable network. However, when a part of the network fails and loses its function, the network management system needs to play a role to find and solve the fault in the shortest time. Fault management includes fault detection, fault isolation and fault correction. Simple faults will be found and handled in time, and usually recorded in the fault log. If a serious fault is found, it needs to be handled by the staff, which plays an alarm role in this process. In the actual network management process, the main faults are handled according to the fault information. When the faults are relatively complex, the network management system can analyze, diagnose and detect them, and find the cause of the fault. Billing

management is mainly used to record and detect the use of network resources in order to control the cost of network operation. For some public networks, billing management is very important. It can estimate the cost that users may need to use network resources, and analyze the occupied resources. Configuration management is equally important for the normal operation of the network system. It initializes the network, configures the network, and provides network services in this way. Configuration management also has multiple functions. It is composed of a group of identification, definition, monitoring and control. The main purpose is to optimize a function and network performance to achieve the best. Performance management is mainly about the detailed analysis and statistics of communication efficiency and system resource operation. Its capabilities are very diverse. For example, it can analyze and monitor the network and understand the performance mechanism of the network. The results of performance analysis will have a serious impact on a test process. Security management, in the network, security has always been a weak link. With the development of the times, users' requirements for network security are also gradually increasing. Therefore, network security management is very important. There are many security problems in the network, including the privacy of network data, access control and authorization. At the same time, network security management is mainly the management of access control, encryption, authorization mechanism and encryption keywords. In addition, it is also necessary to maintain and check the security log.

3 Development trend of computer network management technology

With the gradual development and progress of science and technology, computer network management technology is also constantly optimized and upgraded. It is used in various fields and plays an important role and value. In the past management process, SNMP technology was mainly used. However, with the development of network technology, people's requirements and standards for computer network management technology are also rising. In order to provide users with a more humanized experience, it is necessary for staff to optimize and upgrade it, and try to use r1mon2 technology. At present, the computer network management technology will be developed in the following aspects.

1. Integrated computer network management technology

Nowadays, it has entered the information age. With the continuous development of computer network technology, the management technology in the form of web is widely used

It can not only transmit relevant information more quickly in the management process, but also make it constitute the network management monitoring protocol. At the same time, by using this technology, managers can more easily use the browser to increase their use experience. The main function of this technology is to embed in network devices. Using this management mode, network devices and management software can be integrated to form a unified management system, so that data transmission can be carried out according to hypertext protocol to a certain extent.

2. Realize distributed network management

The distributed network system is mainly good at solving problems such as interaction and cross platform connection. It formulates a lot of distributed management processes, and within a certain range, it will only be responsible for the projects it is responsible for. In this way, it is not necessary to separate them in the management process, so that they can keep in touch with each other, so as to provide convenience for management. Distributed network management has obvious advantages. On the one hand, it can reduce the load of the central pipe network and reduce the pressure on it. On the other hand, it can transmit network management information more quickly and reduce the delay, so that the management level can be effectively carried out. Therefore, in the process of development, distributed network management technology is the core, and has been paid more and more attention.

3. Implementation of intelligent and integrated network management

To better realize comprehensive, efficient and intelligent network management, we need to pay attention to improving the clarity of the management system. At the same time, we also need to use one machine as multiple machines. In this way, we can fully realize its functions. In this case, it can help managers find faults in time and solve them as soon as possible. In the integrated network management system, they are not only independent but also interrelated. With the help of the system, they are interrelated and give full play to their respective functions and roles. Therefore, this will be an important trend in the development of computer network management in the future.

4 Application of computer network management technology

1. Effective application in college LAN

In the LAN of colleges and universities, the application of computer network management technology can provide a lot of convenience for students' study and life, and provide a solid foundation for their healthy growth and future development. Nowadays, many colleges and universities have established their own LAN system, which greatly improves the security of the university network and makes the computer equipment in the campus stable and reliable. With the support of computer network management technology, colleges and universities adopt the form of campus card, which provides great convenience for college students to achieve fast and convenient consumption on campus. All in one card is the embodiment of network management technology. The wide application of all in one card can bring great convenience to students' learning and life, make it more convenient for colleges and universities to effectively manage students, and greatly reduce the waste of human resources and improve management efficiency.

2. Application of network security management technology in

Computer network security management technology is very important, and it is an important guarantee for the security and reliability of

the network environment. Therefore, it is necessary to actively use this technology to protect the network environment. This technology can be divided into many types in the actual application process. For example, firewall technology, data technology and detection technology. By using this technology, the network data can be well preserved and the legitimate rights and interests of users can be safeguarded. Once attacked by the outside world, it will respond, provide users with a good and safe network environment and give users a new use experience.

3. Application in hospital

With the development of the times, the computer network management technology can also be applied in the hospital, which is a subversion of the traditional hospital treatment, which can not only provide great convenience for the majority of patients, but also make the hospital management orderly. Nowadays, hospitals begin to use the way of medical treatment cards in the process of medical treatment. Patients go to the hospital for treatment by handling medical treatment cards. Doctors diagnose relevant patients according to the information of patients' medical treatment cards as a reference, and give patients corresponding drugs. After the diagnosis, they can take drugs by presenting their medical treatment cards, These technologies can be successfully completed with the support of computer network management technology. Patients can also query their own inquiry records through the computer, which greatly improves the efficiency of the hospital.

Epilogue

In short, in the new era, the development of computer network management technology has a great impact on people's life and production mode, and has an important impact on China's comprehensive national strength and science and technology. Therefore, in order to enhance China's comprehensive national strength and protect China's network from external aggression, it is necessary for China to strengthen its ability of independent innovation and independent research and development in computer network management technology, so as to reduce the dependence on foreign equipment and foreign technology, concentrate resources, carry out research and development on core technologies, and strengthen the supervision and control of the network environment, So as to better improve the security and reliability of the network environment and enhance the overall level of China's information industry.

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