

# Research on the Security Protection Mechanism of Computer File Management Information System

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**Abstract.** Computer-aided archives management has been widely popularized and applied in the modernization of archives management in China, and has gradually played its management advantage. However, due to the file management system itself is often affected by interference and computer virus infection, and even some criminal man-made damage, resulting in computer management system paralysis, data loss, to enterprises, institutions caused huge losses. Therefore, the computer management information system security protection is very important. The security of computer-aided archives management information system generally includes the following aspects: theft and destruction of computer information by criminals and saboteurs; destruction of computer information systems by natural disasters and other physical environment changes; computer viruses. Therefore, different measures should be taken for different situations.

## Introduction

Recently, the school archives management gradually into the network, information management, archival information has gradually become digital, which is the traditional university archives management is undoubtedly a great challenge, especially the archives information management system security protection. The computer file management information system is a database application system characterized by data storage and query. The security protection requirements can be summarized as the protection of the integrity and security of the database system, so that it has the function of normal operation at any time to prevent the leakage of confidential data.

In the archives management work, all kinds of information there is a logical dependency relationship, that is, the relevant content should be consistent, such as file and warehouse management, coding and practical meaning, the total number of pieces and the number of pieces. These relationships into the computer system into a database, between the data field between the run between the logical relationship between the program. Logical relations and information data entities together constitute the computer data sequence. So the logical relationship between the maintenance of the database in the operation is related to the entire database security issues. This relationship is not only refers to the index relationship within the database, the most important is the file management system between the various constraints of data, is the key to database design, and sometimes very complex. Some of the relationship is the business system requirements, and some are based on the requirements of the computer software system by the software design and development staff to establish. The most disturbing situation is that the computer is running unexpectedly. This time is likely to lead to a complete process is interrupted, the data will be a logical contradiction, the authenticity of the information may have been partially destroyed. Because the operator is difficult to fully understand the software design and structure, the accident is not clear what kind of information on what kind of damage, so this error is very easy to be ignored. In fact, the computer crashes, power down, misuse, etc. Although the probability is small, it is not negligible. File management system in the use and maintenance, in the event of errors, mainly by the user to assume maintenance and adjustment. To solve the gap between design developers and users, the positive approach is to strengthen communication between users and developers, on the one hand the user more involved in the system design, including system function design and database design; the other hand Software developers to provide users with as much as possible system help, according to the user's technical ability to provide different levels of system maintenance tools. Archivists should be aware of the inherent interrelationships between the

databases and initiate inspection and maintenance procedures in a timely manner when an integrity error occurs.

### **Electronic Copy Of The Backup Design**

In actual operation, the electronic data is fairly fragile, always under various threats of intentional or unintentional damage, for example, the operator's negligence caused by the entry and deletion and data file coverage, expired data as the current data introduction, the authority design is not Reasonable to cause the general visitors to obtain different levels of privilege to be ultra vires, malicious hackers crack the system security defense after the invasion, tampering and delete the data, the user or the staff for the dissatisfaction with the data storage media or computer violence, and so on, Many types. Therefore, in the file system, usually to design a set of data backup program, regular data dump, for contingencies. Computer backup and traditional carry forward is a different concept, not only regularly generate a database with accumulated nature, mainly to prevent the system of various damage. Pay attention to recovery plan. Technically, there are multiple implementations of data protection, but increased reliability means that equipment costs and manpower costs increase synchronously, and some advanced backup technologies may be difficult to implement at the grassroots level. At all levels of archives management departments can be based on their own conditions and the importance of data design sub-type, sub-level of the backup program to prevent the threat of various types of data damage. The current data backup technology generally has the following categories:

Simple data copy. There are hard disk preservation method, tape preservation, CD save. The computer database system and the relevant file system part or all copied to the above medium, save the media storage and isolation in the application environment relative to the place. This approach is technically easy and cost-effective to meet the needs of small archives. But the shortcomings of such protection is also obvious, one is not suitable for large and medium-sized archives of the information capacity, and second, management technology to stay in the artificial and automatic combination, and the artificial model, regardless of backup, preservation and recovery are complex, The third is the data can not be dynamically updated, can only get the interval of the backup, which is the most important shortcomings. In the large and medium-sized file system, every moment there may be a lot of information, if at some point in the crash and other failures, not only the data at that time must be void, more serious is not clear computer information The system in the end in that state, what work has been completed, what information has not yet entered the computer, which put forward the idea of dynamic tracking system.

In the information system, the most threatening failure is a disk failure. Disk array technology is the preferred solution to prevent permanent damage to disk damage. The disk array is a computer that configures multiple disks to form mass storage, which solves the problem of capacity. The stored procedure is managed automatically by the computer, where some of the disks can be assigned to each other to store key information. When important information is stored in the computer, the disk array stores the information separately into the two disks, so that at any one time, the computer has a backup of the current state of the latest state. Computer on the disk array real-time monitoring, one. Found that there are different levels of disk failure, it will report the fault management, timely processing, so as to avoid data damage. As the monitoring by the computer management, the fault point is very clear, the information recovery process will be more simple data loss is also relatively small.

### **Computer File Management Information System Security Protection Measures**

For the file management work, each link is closely linked and different types of information even if the content is different, but there are logically interdependent relationship. When these information is entered into the computer file management information system, they formed a number of different databases, the same need for multiple database operation logic relationship to support the operation of the entire computer management system. It can be said that the computer file

management information system is a complete whole, to strengthen its security, the first is the integrity of information management system protection.

Data backup is an effective measure to improve the security of the computer database system information. When the computer system encounters the power failure during the operation, the operator's mistake will cause some data to be lost or damaged, and some information is lost. It can not be restored, so the way through the backup information can be saved, when the accident will not cause data loss. Computer data backup technology is a period of time will be all the information in the database copy to save, form a copy, when the computer encountered unexpected data loss occurs, you can find a copy of the saved information. In the computer file management information system used in the backup technology in many different forms, according to different backup requirements and information storage, select the appropriate backup technology.

Computer technology instead of the traditional paper archives management, is a great change in modern file management. The application of computer technology has significantly improved the efficiency of file management, but also because of the openness of the Internet itself, making the file information in the network of this open environment, vulnerable to loss of tampering and other threats, the archives management work seriously influences. Therefore, in order to ensure the safe operation of computer file management information system, need to strengthen network security protection. First, in the Internet environment, to actively build a secure network environment, the computer network may exist in the security vulnerabilities to troubleshoot, to prevent the invasion of the virus; Second, to strengthen the network access control, the different operators of the Permissions are clearly defined to ensure that different management staff have different levels of authority, to avoid the staff of the information on the unauthorized tampering to ensure the safety of data information. Third, to the computer network environment on a regular basis to conduct a comprehensive inspection, the use of anti-virus software for a comprehensive scan, the timely detection of computer viruses and its handling, to prevent hacker's invasion. Fourth, to strengthen the real-time monitoring of the network environment for the operator's behavior Network running a comprehensive monitoring and found that abnormal circumstances can take timely and effective measures to minimize the impact of the problem, the maximum guarantee file information The security of the.

Data leakage is an important factor affecting the security of computer file management information system. Information disclosure may also bring serious security threats to file management. Therefore, we should pay attention to the application of data leakage. Data anti-leakage technology mainly involves: First, strengthen the system internal security management. In the Internet environment, the computer file management information system is difficult to avoid the supply of hackers, and hackers caused by the opportunity to invade, it is the system itself, security vulnerabilities. Therefore, to strengthen the internal management system security protection, for the management system vulnerabilities to timely patches, expired accounts in time to clear, and the purchase of the corresponding firewall and other security products, through the strengthening of internal management system to reduce the risk of data leakage. Second, strengthen the importance of the virus. File management information in the process of transmission, vulnerable to computer viruses, and with the development of network technology, computer viruses are evolving, in the virus characteristics of the transmission and the form of infringement has shown a diversification trend, so to Pay attention to the protection of the virus, the virus changes in a timely manner to deal with the prevention of virus damage caused by data leakage. Third, strengthen the control of network access. In the computer file management information system, the management interface and the application interface to be strictly differentiated, and according to the use of different information needs to access the access to ensure that different operators can only get access to their own authority. File management information system in the provision of services at the same time, the system will automatically record the time and content of the service, generate the system management log, so if you encounter hacking or access beyond the permissions will leave traces in the system.

In recent years, the rapid development of Internet technology, network information security on

the laws and regulations of the system is also constantly building and improving the process, through the improvement of the relevant legal system, network data information security work can provide more basis. In addition to the corresponding security protection measures, it also needs to have the accompanying laws and regulations system, supervise the network operation behavior, strengthen the security and standardization of the network information, and provide the computer system management system for the computer protection system. Run to create a good network environment. At the same time, through the binding system of laws and regulations, but also can effectively reduce the probability of network damage behavior. In the aspect of standardizing the security of network information, the relevant laws and regulations can be used to combat the network violations and ensure that the operation of the computer file management information system is in a safe environment.

## **Conclusion**

To fully enhance the security level of the archives database system is a difficult process involving a lot of aspects, the need for management departments to invest a lot of manpower and resources. In some respects, for example, the reliability of equipment, disaster prevention and other aspects, mainly related to the intensity of investment: to prevent artificial damage, such as leakage, stealing password, computer viruses, hackers, mainly rely on management system Security special technology. But in the database consistency, integrity issues, the archives management itself plays a decisive role.

## **References**

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