Python Implementation of Scientific Research Intelligent Management Information System and Intelligent Distributed System Construction

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Abstract:This paper builds an ecosystem of smart scientific research under the smart education system, and proposes a closed-loop model for smart perception, processing, analysis, evaluation, and push of smart scientific research, to help the development and progress of scientific research. It also discusses the basic requirements of the smart scientific research ecosystem for management talents. With the help of the Python language, this paper designs and implements a distributed log system that can be deployed only based on the Python built-in library. The log client and server only need to It can be implemented with very little code, and it has simple library dependencies. Using the distributed programming concept to build a file sharing network platform, this is a supplement to the traditional file sharing form, and it is also an innovation and attempt.

Keywords: Python Implementation, Scientific Research, Intelligent Management Information System, Intelligent Distributed System

1. INTRODUCTION

In the era of big data, the dissemination and sharing of information is a necessary condition for creating efficiency, and it is also an indispensable and optimal way for people to communicate and collaborate [1]. In this environment, each piece of information and the various media behind it are actually an important part of big data. Internal control refers to the prevention and control of risks in economic activities by formulating systems, implementing measures and implementing procedures. Management and control, in view of the current state of my country's economic development [2], the reform of administrative institutions has entered a critical period and a deep-water area. The theory of the origin of labor in education tells us that the needs of human society in the process of labor produce education, a unique social activity. It is conditioned on the development of human language and consciousness, and functions to transmit the production and life experience formed in the labor process [3].

In 2009, the Copenhagen World Climate Conference proposed that global greenhouse gas emissions should be reduced to half of 1990 in 2050, announcing that human beings have entered a new era of low-carbon development [4]. Python language has the characteristics of strong expression ability and rich third-party libraries. It is widely used in enterprise IT automation operation and maintenance system. Python usually exists in various business systems in the form of simple scripts. Finally, as the core of search engines, some famous Internet companies (Google, Baidu) have conducted in-depth research on distributed crawlers, but they cannot be open sourced as business secrets [5].

Therefore, this article is fast and efficient. The development of smart campuses in China has achieved certain results. Many scientific and technological scholars, educators and relevant national policies have made great contributions to the development of education in our country, making the informatization of national education [6]. The technical level has been greatly improved. In recent years, the Central Committee of the Communist Party of China has also clearly pointed out in the decision of the Central Committee of the Communist Party of China on several major issues of comprehensively promoting the rule of law [7], that it is necessary to implement job rotation for departments and positions with concentrated powers such as the allocation and use of financial funds, asset supervision, investment, procurement, transfer of public resources, and public works construction. etc., [8] so that internal control can be enhanced. Scientific institutions are an important part of institutions and the backbone of scientific and technological innovation in my country. The use and management of scientific research funds is the key to improving the scientific research and development capabilities of scientific institutions [9].

Therefore, the case of N scientific institutions is selected to study the improvement of the internal control system of scientific research funding management [10]. The internal control of public institutions in my country is in its infancy, and the state has begun to pay attention to the institutional construction of institutions. This is because whether it is for enterprises or institutions [11], whether the internal control is effective, and the degree of effectiveness of the internal control greatly determines the management level of the enterprise or unit. In the work, the transmission and exchange of various documents is a common and common phenomenon [12]. The general processing methods are nothing more than the following: transmission is carried out by means of the unit's OA system and instant messaging tools such as QQ [13].

At present, some scientific research institutions in my country have been transformed into enterprises and are subject to the "Accounting Standards for Business Enterprises" and the implemented internal control system of enterprises [14]. The remaining administrative scientific research institutions are subject to the Civil Service Law, and the relevant rules and regulations are relatively complete and mature [15]. The three revolutions occurred during the transition from agriculture to an industrial society, and the class teaching system appeared in the third revolution, which made the dissemination of

knowledge more systematic and continuous, and further met the needs of large-scale industrial production for talents [16]. In energy the whole process and each link of development, utilization, production and consumption integrates the unique wisdom of human beings, and establishes and improves the energy technology and energy system that meets the requirements of ecological civilization and sustainable development, thus presenting a new form of energy [17].

This phenomenon brings great challenges to enterprise operation and maintenance management and troubleshooting. Operation and maintenance personnel need a distributed logging system that can retrofit existing scripts at low cost, and can also be used stably in future scripts [18]. Usually, a website will ask to log in to the website or check whether the cookies contain user identity information before visiting. For example, Zhihu, CSDN articles, Netease Cloud and other websites need to log in before they can browse the web content [19].

2. THE PROPOSED METHODOLOGY

2.1 The Scientific Research Intelligent Management Information System

As a result, the internal control system is a mere formality; the system is relatively empty and cannot provide substantial technical support. The above problems can only be solved by reasonably distinguishing the core objectives of the internal control system of enterprises and administrative institutions. Smart education refers to education supported by information technology and aimed at developing students' intellectual abilities. Specifically, it is the use of information technology to complete intelligent learning. The creation of the environment (technological innovation), and the intelligent transformation of teaching methods (method innovation). The energy demander can manage the energy demand according to the situation and price of each dry leaf, energy supplier, dynamic Submit your request. As for the energy supply side, I rT is used to adjust the production supply according to the demand.

Data reliability (R, Reliability) and speed (S, Speed) have always been important research directions. Data reliability and speed play a key role in the security of information technology in various fields. Information technology Since the long-term development, methods and theories of data reliability and usability suitable for different application scenarios have been proposed. The 9 technical research institutes are: Equipment System Research Institute, System Simulation Research Institute, Intelligent Equipment Technology Research Institute, Unmanned Platform Institute of Technology, Institute of High Beirong Applied Technology, Institute of New Materials and Advanced Manufacturing, Institute of Optoelectronic Information Technology, Institute of Bioengineering Technology, and Institute of Tactical Communication Technology. With the support of the national ministries and commissions, N science institutions attach great importance to the transformation of scientific and technological achievements and have established market-oriented subsidiaries with high-level professional technical teams. Coordinated development, dispatched technicians to various provinces and cities for technical support.

The control contents of Unit A include personnel management, financial management, procurement management, intellectual property protection, construction project management, contract management, scientific research management, state-owned asset management, and administrative management, among which budget, procurement business, and state-owned asset management.

And from education, health, civil affairs, transportation, politics and law, townships and other different industries and departments selected 10 representative administrative institutions for comprehensive evaluation, and constructed the internal control evaluation model of district and county administrative institutions. System. In terms of human resource policies, there is a lack of a reasonable incentive mechanism. Incentive is the core of management, which refers to the use of means for specific goals to affect employees' internal needs, strengthen motivation, and guide employees' behavior. When employees' spiritual or material needs When satisfied, it increases motivation at work.

2.2 The Python Implementation of Management Information System

The main function of the server side of the system is to collect the directory index sent by each client, save it in a unified folder, and provide users with a search interface for file retrieval. , The theory of internal control and The development of practice is relatively lagging behind. Scientific and technological innovation is the decisive force for the prosperity and revival of a country. A reasonable system design of scientific research units can provide high-quality scientific and technological supply and strive to support the construction of a modern economic system.

Education informatization has achieved new development. The technological form has been transformed from digital to intelligent. The transformation from digital education to smart education has triggered a revolution in the education system. Smart education has become a leader in educational informatization innovation. The architecture is at the front end of the log It avoids the use of third-party systems such as message queues, and effectively controls the transformation cost of existing scripts. In addition, the server uses ThreadingTCPServer to speed up the reading speed. In a distributed system, the status information of each node is very important, so each node needs to maintain communication, that is, to grasp the information of the node in real time. For example, it is necessary to know the number of links captured by node A and the number of tasks completed by node B. A The institute should optimize the existing control process based on the principle of mutual exclusion of positions. Separate "mutually exclusive" tasks and handle them by employees belonging to different positions, so as to achieve "separation of approval and execution, and separation of execution and supervision".

Take the storage and use of the official seal of Research Institute A as an example. Optimize the internal control process of fund management. Coordinating and organizing various departments to jointly improve the internal control system for issues such as responsibilities, business processes, major decisions, and major risks in the process of project research and development. Use the select model on sockets to implement port multiplexing, and use non-blocking functions to improve I/O efficiency. The handler for reading the socket specified by the socketserver is written as follows. Jeong, Kim & Yoo proposed a smart education system using cloud architecture, which can perform various tasks including video, pictures, three-dimensional objects, and augmented reality and virtual reality scenes. Enhanced educational content for sharing and delivery.

2.3 The Python Implementation and Intelligent Distributed System Construction

Although the amount of social science projects undertaken by Unit A is small, the number is large. A project often needs to be reported in many times before the account is completed. The financial work related to the project accounts for about 70%, resulting in the same amount of financial allocation as the same level of administrative agencies. There is a serious shortage of personnel. In general, the popularization of smart education concepts and the construction of smart education cloud platforms are major issues in the field of smart education. The above research explains these two issues. Pipe network optimization and energy-saving control system: On the basis of the dynamic collection and prediction of end-user energy consumption, through the hydrodynamic analysis of the cold and hot water pipe network and the research on the intelligent control model of the energy supply pump.

Use the built-in pickle module to load the read bytes for deserialization, and then restore the received remote log records through makeLogRecord. After that, set the specified logger through the name attribute of the record on the server side, and record the log information. The cloud environment experimental platform built in this paper uses 6 servers as storage and computing nodes in the cloud environment. The hardware configuration of each server is 32G physical memory and 8-core 2.3 GHz processor. Research Institute A lacks scientific risk identification tools. Risk identification relies on the relevant experience of senior employees and management. Strictly speaking, such a risk identification mechanism is better than nothing, and it cannot even be regarded as a real risk identification. It is just a test for the sensitivity of risk identification. 256G solid-state storage hard disk, cloud service network environment is that all 6 servers are in the same Under the network of a network segment, the IP addresses between them are consecutive in sequence.

The budget and final accounts review and summary post of the Finance Department shall report the budget preparation requirements to the leader in a timely manner in accordance with the requirements of the "Notice on the Preparation of Budgets on the First Year of XX Years", and convey them to the project leader, and at the same time send a copy to the relevant functional departments; each functional department The budget management post of the department fully communicated with the department heads on the departmental budget matters involved. The achievements of the integrity risk mechanism have been consolidated, and the assessment and identification of risks have played a good role. The risk is sorted out only from the perspective of building a clean government, and it does not play an all-round role in the risk prevention and control of the entire unit.

3. CONCLUSIONS

This paper introduces the method of building a distributed log service using only the Python native library, so that only about ten lines of code can be introduced to modify the existing script to realize the function of writing logs on the log server. From the perspective of COSO framework, the rationalization suggestions put forward mainly include raising awareness of internal control—organizing employee training, strengthening human resources construction—optimizing salary incentive system, establishing risk assessment mechanism, improving incompatible post separation mechanism, optimizing control activities, improving Information system, strengthen information communication.

4. REFERENCES

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