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Research on Robustness of Financial Accounting Intelligent System Based on Offline Network Data Protection Algorithm

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Abstract:In cloud computing, user data storage and computing process are all carried out in the cloud, and the homomorphic encryption technology is used to realize end-to-end aggregation encryption. The objective requirements and development trends of the construction of financial and accounting information systems of banks in my country are discussed. Transaction and accounting Separated Yinqiao financial accounting information system. The primary task of BPM is to ensure that the business process of the enterprise should be oriented to customers and market demands, and then it studies the robustness of financial information systems, saving energy and bandwidth. At the same time, the track graph topology is constructed so that each node has multiple parent nodes, and when the link between the node and the main parent node fails, other parent nodes can repair the aggregated value.

Keywords: Financial Accounting, Intelligent System, Offline Network Data Protection, Robustness

1. INTRODUCTION

In essence, the so-called cloud computing big data privacy security is actually the security of data in the entire life cycle. In the cloud computing platform [1], the user's data storage and data computing all take place in the cloud, which leads to a more serious problem of user data privacy protection based on cloud computing [2] than that of previous Web applications, and higher requirements for data security protection. Due to the commercial value of user data, many criminals attack cloud platforms through illegal means. As an important part of the Internet of Things [3], wireless sensor networks (wireless sensor networks, WSNs) have been widely used in field monitoring, medical treatment, military reconnaissance and other civilian and military field [4].

WSNs are composed of a large number of sensor nodes, which have the characteristics of resource-limited [5], distributed, self-organized, multi-hop and wireless communication. In particular, the energy of sensor nodes is powered by batteries and is not replaceable [6], so how to save energy consumption and prolong the service life of WSNs is a key issue in WSNs research. At the same time, WSNs transmit information through multi-hop and wireless communication, making it easy for adversaries to capture [7] and listen to the transmitted information. Smart accounting has started and developed rapidly in the practice field of my country's accounting industry [8]. The most outstanding performance is that the development of "financial robots" has entered its initial stage, and its workflow can be described as "original document reader + accounting information processing system" [9], and the resulting accounting products are financial accounting statements. The financial accounting work will be gradually handed over to the "financial robot" (accounting information system platform) to complete [10], and the focus of accountants' work will be transferred to the field of management accounting [11]. You can purchase different types of virtual machines from Amazon according to your own needs. By configuring the CPU, memory, hard disk, and operating system of the virtual machine [12], you can obtain different computing power, and store the data that needs to be permanently saved through S3 [13]. The API interface is stored in the cloud storage provided by the S3 service. Microsoft's main business in cloud computing is its cloud computing operating system, an operating system called Windows Azure [14].

The server running this operating system exists as a PaaS[15] cloud computing platform, and developers can run their own applications on this platform. The 21st century is the age of information [16]. The society's demand for information drives the development of the information industry. With the optical fiberization of the core network, the access network connecting the core network and the user's premises is also developing towards the direction of broadband, interaction and comprehensive access [17]. Because the residents and small enterprises account for a large proportion of the users facing the access network, and for these users, the cost question is particularly important [18]. If the cost of a certain access network or access technology is too high, even if it can provide a variety of new services. It is also not acceptable for this part of the user [19].

On the other hand, due to the emergence of new services are developing towards the direction of broadband, digitization and interaction [20]. Therefore, it is required that access bute can be flexible and transparent in technology to transmit from low speed to high speed. Businesses with various quality requirements ranging from fixed bandwidth to variable bandwidth. However [21], the accounting information is not centralized, and different accounting entities such as each branch still generate their own report information, and then report it to the provincial branch layer by layer [22]. The stage of information system business integration began at the beginning of this century. In the process of completing big data centralization [23], my country's banking industry began to focus on promoting business concentration and application concentration. With the evolution of financial innovation, the level of integration between the banking industry and the Internet has been greatly improved [24], and the corresponding banking information systems have become more integrated, integrated, and intelligent, to adapt to the

diversity of market demand levels, business varieties, and banks. requirements of the future business landscape of the industry.

At the current time when new technologies such as "Big Intelligence Shifts to the Cloud and Things Area" are surging, the construction and operation of intelligent finance is an innovative.

2. THE PROPOSED METHODOLOGY

2.1 The Offline Network Data Protection Algorithm

Stealing user data and then reselling it for profit; some despicable cloud computing service providers conduct statistical analysis on user data without the user's permission, and illegally obtain user behavior data; in addition, some cloud computing service providers' employees will also guard themselves against theft, stealing user data in the cloud. Compared with traditional computer networks, cloud computing has the characteristics of versatility and sharing, and traditional user data privacy protection technologies are often not applicable. Data aggregation can greatly reduce communication bandwidth and energy consumption. Efficient data aggregation, especially the need to achieve end-to-end data privacy, is very difficult in WSNs.

At the same time, the data packet loss occurs in the process of sensor network transmission, which causes a large deviation in the data aggregation results. It is necessary to design an aggregation algorithm with a fault-tolerant mechanism to eliminate or reduce this deviation. Access control is a main measure to ensure that information is not illegally accessed and can be used correctly, and data confidentiality, data integrity, identity authentication and non-repudiation are called the five major functions of security services. Through a system access control policy, the information in the system that can be accessed by different subjects is specified, and the operations that the subject can do to the information are specified, so as to prevent the subject from illegally accessing the object. Aiming at the above situation, this chapter proposes a privacy-preserving data aggregation algorithm with fault-tolerant function. The main idea of the algorithm is: a) using the additive homomorphic encryption scheme to aggregate the data, and the data privacy has reached the end-to-end level; b) through the The multipath-like approach makes data aggregation highly fault-tolerant. Use the form of access control matrix to represent the access control method between the subject and the object.

In the access control matrix, the first row represents the object being accessed, and the first column represents the subject as the visitor. Therefore, the content of the column where the object is located and the row where the subject is located is the access control authority of the subject to the object. For example, use the lowercase letter r to indicate that the subject has the right to read the object.

2.2 The Financial Accounting Intelligent System

In the context of smart accounting, the informatization of accounting has also transformed some of the basic accounting skills that accountants must master to be replaced by informatization equipment or systems. Therefore, in the "Basic Accounting Skills" course of accounting vocational education, some basic accounting skills will be transformed from the teaching category of professional skills training to the category of accounting culture education. With the transformation of accounting culture and education, the content of the "Basic Accounting Skills" course project was adjusted accordingly, and the "Chinese Accounting Culture Education" course was set up. Through the definition of accounting information system, it can be seen that the main function of accounting information system is to complete daily accounting processing, solve accounting and management problems, and reflect relevant accounting and management information.

From the point of view of information processing, the accounting information system has the main functions of input, processing and output. Among them, the input function refers to recording the accounting information in the daily operation and transaction activities according to various pre-set accounting rules and methods, and confirming the relevant information that can be input into the accounting information system for processing. The processing function refers to the processing of accounting data from various business activities of the enterprise, including measurement, classification, summarization, adjustment and settlement. The purpose of sorting out the information system is to understand the current situation and needs of the information system, and lay the foundation for the overall design of the intelligent financial accounting sharing platform.

In order to do a good job in the design of the CTYB intelligent financial platform itself, as well as the integrated design with the surrounding systems, the research group started from the business categories of CTYB, considered the information system functions required by each type of business, and sorted out the information systems related to intelligent financial construction. , including 8 information system categories such as tobacco production and operation management related systems, and 44 specific information systems such as tobacco basic software. Adjust the "Basic Accounting Skills" course item, and change "Abacus", "Digital Writing", "Correction of Wrong Accounts", "Voucher Filling", etc. were adjusted from the basic accounting skills course content to the "Chinese Accounting Culture Education" course. The separation of transactions and accounting refers to the separation of business transactions and accounting in the construction of bank information systems. Make the bank's core business system more professional, in line with the business philosophy of "customer first".

2.3 The Robustness of Financial Accounting Intelligent System

Overloading is divided into segment overloading and frame overloading. In a certain section of the information about supporting the team recorded in Naan Shiyu. When the number of requests is larger than the amount allowed by the corresponding time of the period, the cells are scattered. The weak request should be granted priority before the next segment. In this case, the q segment is overloaded. When this happens on the last segment, the remaining requests are reserved until the first segment of the next frame is granted priority, which is called frame overloading. When a segment is overloaded, the band allocation algorithm used in the protocol will automatically adjust between segments. If the segment exceeds the root seriously, it will lead to the overload of the frame. The following description is for the frame Chaomin. At this stage, the bank-level data center, the head office-level general ledger system and the financial reporting system have not yet been built. The accounting information is reported by the internal information of each accounting subject. It is then aggregated into general ledger and financial reports at the head office level.

Accounting processing is performed by each separate business system when the business occurs, and the accounting of each business is completed. within each accounting entity. It can be seen from Table 5 that the construction of the intelligent financial sharing platform needs to complete the integration of 11 systems in 7 categories. All 11 systems need to complete the automatic docking of accounting, and the logistics management platform, procurement management system, infrastructure construction management system, and billing management system need to complete the automatic docking of budget preparation, the feedback docking of budget approvals, and the automatic docking of business-end budget control. While sorting out the integration requirements of the intelligent financial sharing platform and 11 business systems, the research group sorted out the optimization needs of these 11 business systems in terms of performance and application of new technologies. Curriculum system.

The management accounting course consists of two course modules, one is the basic course of management accounting, the main content of which is the basic theory, basic knowledge and basic technology of management accounting; The characteristic course of education is the most basic professional course for cultivating high-quality technical and skilled accounting talents for front-line work in small, medium, and micro enterprises and institutions.

3. CONCLUSION

This paper is based on the theory of business process management (BPM), the historical background, current situation analysis and future construction direction of my country's bank financial accounting information system as the main line, and the separation of transaction and accounting as the core. The form of the problem is discussed. A multi-keyword secure sorting search algorithm supporting dynamic data is proposed. The algorithm effectively solves the problem that the TF-IDF framework used by the common retrieval algorithm cannot calculate the dynamic data index.

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