

Research on Enterprise Economic Management Mechanism Based on Decision Process

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Abstract: With the rapid development of China's market economy, the company's survival and competitive environment and the application level of the company's modern information technology have undergone fundamental changes. Only by quickly mastering information technology and making full use of information technology can we manage logistics in accordance with modern management methods. Information flow and capital flow. This paper first establishes a comprehensive multi-level security system, setting passwords and licenses. Only those who are registered in the accounting information system and have the correct password can enter the accounting information system. Secondly, in the problem solving process, continuous dialogue between decision makers and decision makers is needed, and the decision-making process is continuously involved, and the interaction between decision makers is gradually obtained. The preference structure of analysts and decision makers ultimately leads to the most satisfactory decision-making. . Finally, in the process of exchanging large texts, a large amount of data exchange is considered, and data exchange is performed simultaneously; when an abnormality occurs during data transmission, the system automatically resends the abnormal data group information. Therefore, in the process of implementing enterprise economic management informationization, timely discovering and resolving difficulties and problems encountered, and carefully analyzing and summarizing experience, can effectively guarantee the quality of enterprise economic management informationization and provide a powerful force for the company's development.

1. Introduction

With the rapid development of Chinese market economy, there has been a fundamental change in the survival and competitive environment, and the level of application of a company's modern information technology. It will become an important symbol of the strength of the company's competitiveness. Only by quickly mastering information technology and making good use of information technology, enterprises can manage their logistics, information flow, and capital flow according to modern management methods. To realize enterprise informatization, we can comprehensively improve the level of resource allocation of enterprises, improve the core competitiveness of enterprises, thereby improving the economic efficiency of enterprises and enabling enterprises to remain invincible in market competition. The information content is very extensive at present, and accounting information is an important aspect. The process of accounting informationization in China is still very slow. The low level of accounting information will directly affect the competitiveness of enterprises. If SMEs want to continue to survive, develop and maintain their advantages, they must carry out accounting informationization (Cheng, 2018). Therefore, it is of great practical significance to study the problems and countermeasures of accounting informationization in small and medium-sized enterprises. Informatization is an inevitable choice for accounting development Accounting is an economic management subject, mainly based on currency as the main unit of measurement, using the basic principles and special methods of accounting, and the economic business that has taken place in the enterprise. Conduct systematic, comprehensive and continuous reflection and supervision. Through the preparation of

financial accounting reports, financial information, operating results, and cash flow. None of these departments needs to obtain comprehensive and useful accounting information to aid scientific decision-making. Poor information in any link can lead to mistakes in decision-making, and in turn bring serious economic losses. This also explains the inevitability of accounting informationization (Zhou, 2016). Informatization is an important support for the continuous development. The development and extensive use of information technology has brought new opportunities to accounting, and has made great progress in the depth, breadth and height of accounting. The sustainable development of the economy is a process that has not terminated. All economic decision-making needs to obtain accounting information at any time and make necessary feedback and adjustment at any time.

The enterprise informatization plays a significant role in improving the competitiveness of enterprises to a certain extent, and accounting informationization undoubtedly satisfies the requirement of advancing with the times. Accounting informatization refers to the informatization of accounting. It requires the unit's accounting work to realize the networking and digitization of business processes, including the digitization of accounting information storage, the commercialization of accounting information products, and the standardization and real-time of accounting information transmission. It relies on the development of accounting information systems, emphasizing that accountants use computer, network and other information technologies to produce value-added accounting information. At the same time, it is established on the basis of accounting computerization, and conducts comprehensive management of the company's business, to make up for the inadequacy of information exchange under accounting computerization. Compared with the accounting data processing standardization, accounting information has emphasized. The emphasis is on its value-added nature. It also satisfies the needs of internal and external information users while improving accounting computerization. Talent is the key issue that restricts the construction of accounting informationization for small and medium-sized enterprises. The lack of human resources required for the informationization and the weak basic management of informationization restrict the development of enterprise informationization. The construction of enterprise informatization requires a large number of complex talents. They need to master modern information technology, have the ability to collect, sort and analyse information, and need to master the principles and methods of management, and have the ability to make decisions, coordinate, lead, communicate, etc. Due to the lack of complex talents in this area, enterprises cannot scientifically plan and build enterprise informatization, which naturally affects the development of enterprise informatization. Management internal factors that restrict the construction of enterprise information In the process of enterprise informationization, the management system and operating mechanism of the enterprise have not adjusted accordingly. Many enterprises engage in enterprise informatization. They only use information technology to simulate the original production and management model, and use computers instead of manual labour. Instead of using information, they actively promote the transformation of operating mechanisms, the innovation of enterprise systems, and technological progress. The introduction of information technology will change production methods, and the management methods and methods will be more scientific and effective. These new changes will put new demands on the production and operation management mechanism. Objectively, these mechanisms and systems need to be reformed. The management and improvement of production and operation of enterprises will open up the way. The lack of investment in accounting informationization construction is also an important reason for the lack of financial competitiveness. Small and medium-sized business owners pay less attention to the construction of accounting information technology. At present, a large part of the small and medium-sized enterprises do not pay enough attention to the construction of accounting information, which is also the basic reason for the limited investment of small and medium-sized enterprises in the construction of accounting information. In China, most small and medium-sized enterprises have their origins in family-owned enterprises. They are not sensitive to the changes in the external market environment. At the same time, they have not established a modern enterprise system. The attitude directly determines the degree of difficulty in advancing accounting

informationization within itself. However, the development of accounting informatization by SME owners often serves as a problem of interlocutors rather than promoters. Accounting information is a choice that has forced by competitive pressures, and the level of understanding of accounting informationization is not high. This leads to There are problems in software purchase or follow-up personnel training. With such reliance, the effect of accounting informationization is inevitably unsatisfactory.

The enterprise management of informatization work is in a standstill state, and the informatization construction of other business systems has not carried out in time, or although part of the business system construction has carried out, but due to lack of overall. The plan does not use informationization concepts to guide this work. As a result, accounting informationization has not become an important part of the informationization of the entire enterprise. This will lead to the inability of information data sharing between internal and external, and the flow of information will not be smooth. The financial management function cannot meet the needs of modern enterprise management. Therefore, enterprise informatization includes the development of accounting informatization, and the development of accounting informatization is the embodiment of enterprise informatization in accounting. Without the development of enterprise informatization, there will be no development of accounting informatization, and we must accelerate the speed of enterprise informatization. To realize the integration of finance, business and production, achieve effective connection of logistics, information flow and capital flow, and advance the development of accounting informationization. Security measures have taken at all levels of the accounting information system to establish a comprehensive multi-level security system. Specific security precautions include setting passwords and permission to use. Only personnel registered in the accounting information system and having the correct password can enter the system. System administrators should distribute each system fairly according to the principle of internal control and the position needs. The operator's authority, only the operating authority of the person can call the appropriate function or close to the relevant file, the operating system password for the operating personnel should modify their own password; for the system of important programs, data, files. Services software platform and other advanced technologies, in order to prevent viruses, unsolicited or cannot use pirated software. External disks must test for viruses before they can use in computers (Cheng, 2017). Unsolicited e-mail messages have not opened. To regularly maintain and maintain the software and hardware, back up the financial data on a regular basis, and store no less than two sets of backups at a time and store them in two places to ensure the security of accounting information.

2. Interactive Data Method

Interactive decision-making methods generally have the following characteristics: In the problem solving process, such methods require continuous dialogue between decision makers and decision-makers, continuous participation in the decision-making process, and gradual access to the interaction between the decision makers and the analysts. The preference structure of decision makers finally leads to the most satisfactory decision. Because the specific ways of describing decision makers' preferences are different, for example, reference points and replacement rates can be used to form a variety of different decision-making methods. The data exchange platform is to provide client access software deployed on the front end of each application system, to realize the organic integration of the data exchange platform and various information systems, and to achieve automatic data extraction and conversion at the client access end, while supporting manual entry. With audit data, it is a platform for data exchange between different databases and different data formats. It needs to solve the problem that enterprises and government agencies cannot freely convert information data between different information bases. The mathematical model for setting up a linear multi-objective decision problem is as follows.

$$\begin{aligned} & \max \left\{ \sum_{i=1}^m c_{1i}x_i, \dots, \sum_{i=1}^m c_{2i}x_i, \sum_{i=1}^m c_{ni}x_i \right\} \\ & \text{s.t. } \sum_{i=1}^m a_{ki}x_i \leq b_k \quad k = 1, \dots, N \\ & \quad x_i \geq 0 \quad i = 1, \dots, m \end{aligned} \quad (1)$$

$$\max f_j(x) = \sum_{i=1}^m c_{ij}x_i$$

If expressed in vector form, it is s.t. $\sum_{i=1}^m a_{ki}x_i \leq b_k \quad k = 1, \dots, N$. The optimal solutions obtained $x_i \geq 0 \quad i = 1, \dots, m$

by solving the problems are respectively denoted as $x^j, j = 1, \dots, n$, and their corresponding objective function values $f_j^*, j = 1, \dots, n$. The results are listed in figure 1 of the data exchange $f_{ij} = f_j(x^j)$.

	f_1	L	f_j	L	f_n
x^1	f_1^*	L	f_{1j}	L	f_{1n}
M	M	M	M	M	M
x^j	f_{j1}	L	f_j^*	L	f_{jn}
M	M	M	M	M	M
x^n	f_{n1}	L	f_{nj}	L	f_n^*

Figure 1. Common data interaction Table

3. Model Construction and Results Analysis

3.1 Functional Structure of Economic Management Data Exchange Platform

According to the data interaction and function described above, in the above-mentioned structure of the economic management of data interaction platform, the “data interaction management” subsystem serves as the management core of the platform, and mobilizes the subsystems to work collaboratively to jointly accomplish specific data interaction services. Figure 1 shows the Financial Management of interaction data.

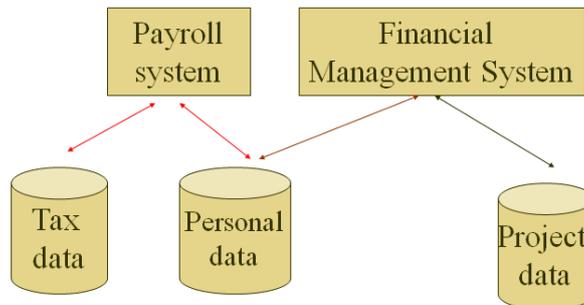


Figure 2. Financial Management of interaction data

The collaborative work process of the functional modules of the economic management data exchange platform is as follows (Li, 2017). (1). The data interaction subsystem first defines the data interaction service, and describes information such as exchange mechanism, exchange data source, and exchange trigger according to the SOA model. (2). The data exchange adapter management

subsystem configures the data adapter of the source data object and the target data object according to the actual conditions of the exchanged data source, and can expand the required data adapter if necessary. (3). The data exchange standard management subsystem defines data elements and data dictionaries, and the source and the destination of the exchanges understand in accordance with the described data interaction service, and form a data directory required for exchange. (4). The data exchange system management subsystem configures and manages user rights for performing exchanges, describes user and user group account attributes, and assigns roles and operation rights to authorize users. (5). Data interaction pipeline processing subsystem according to the exchange of data objects and target data object data items and exchange process user data processing requirements, in a pipeline plug-in configuration of data processing, such as data items merge, Data item splitting, data transformation, content filtering, security encryption, etc. (6). The data interaction task scheduling subsystem configures the scheduling parameters of the data interaction service according to the user's exchange execution mode requirements, such as origination mode, time, frequency, and batch size. (7). The data interaction subsystem automatically performs data interaction operations based on pre-described and configured data interaction tasks.

3.2 System Architecture of Economic Management Data Exchange Platform

In the overall architecture design of the economic management data exchange platform, the entire platform is divided into a lightweight architecture (Guo, 2017), a data interaction engine, an organization structure and rights configuration interface, a visual data interaction process definition tool, a data adapter interface, a monitoring management interface, and an application. The system architecture of the economic management data exchange platform is shown below. Figure 3 shows the data exchange architecture.

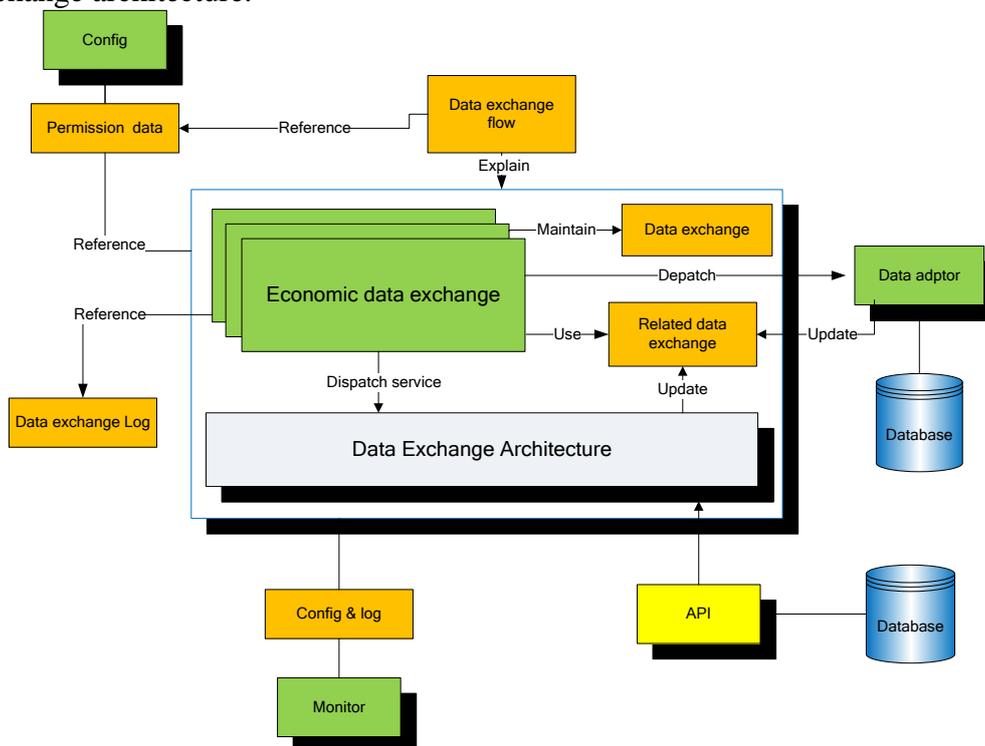


Figure 3. Data exchange architecture

The lightweight architecture uses the current popular, lightweight, open source to implement service registration, configuration, and management. The service runtime environment provides the deployment, operation, and management capabilities of services, supports service programming models, ensures system security and performance, and other quality factors; service buses provide service intermediary capabilities that enable service users to be transparent Access to services in a transparent manner and in a location. The service registry supports the storage and access of service

description information. It is an important foundation for service brokers and management services. The service assembly engine assembles services into service processes to complete a business process. Service gateways have used to translate services such as security at the boundaries of different service computing environments.

The data interaction engine is the core of the entire economic management data exchange platform, and its performance directly affects the performance of the economic management data exchange platform. Therefore, the Kettle, the most lightweight and high-performance open source data interaction has encapsulated into various data interaction service and registered in the service pool through the data interaction engine. The interaction configuration tool defines the exchange process, and instantiates data interaction processes, and runs data interaction processes. When multiple economic management data exchange platforms coordinate and exchange with each other, corresponding exchange routes can be configured. Addresses, process names, node names, etc. of the remote economic management data exchange platform are configured in the exchange route, and different economic management data exchange platforms are implemented. For the definition of the scheduled data interaction process, the data interaction engine provides the definition of the scheduling function to enable the data interaction process to start. When the data interaction process is started passively, the process invokes its own service component to start the exchange process. For the data interaction process triggered by the application service component, the application service component invokes the corresponding data interaction process by calling the service interface provided by the ESB and the service interface published by the data interaction engine to realize data initiative.

The organizational structure and rights configuration interface is to achieve unified management of permissions with other application systems. In the data interaction engine, different user interactions can be granted to different data interaction processes. Only authorized users can start the operation of the process; or they can be data publishing interfaces. Only authorized users can access the authorized users. The visual data interaction process is a tool for configuring the data interaction process. It provides users with a very convenient configuration means and simplifies the management of the data interaction process through an easy-to-use and visualized tool. The data adapter interface can be configured directly with various types of data sources or target data sources. When data needs to access during data interaction, the data adapter interface can be used to directly load or output data. For an application system providing a data access service interface, the application service interface may configure to read the required data or output data from the interface to the application service interface.

The data interaction directory interface is to provide data interaction metadata involved in data interaction. These metadata structures can provide the directory structure that meets the conditions through the external system, and can directly configure the data interactive directory data through the directory management functions provided by the economic management data exchange platform. In the data interaction, the corresponding relationship between each data source and the target can be defined through the data interaction directory structure. The application service interface is an access method that provides a variety of application systems access to economic management data interaction. It integrates various application systems into economic management data interaction platforms by registering application services, and through data interaction configuration tools, The application service interface is introduced into the data exchange process as a node to implement data exchange between various application systems.

3.3 Application Deployment Mode of Economic Management Data Exchange Platform

The general deployment pattern of the economic management data exchange platform is shown in the figure below.

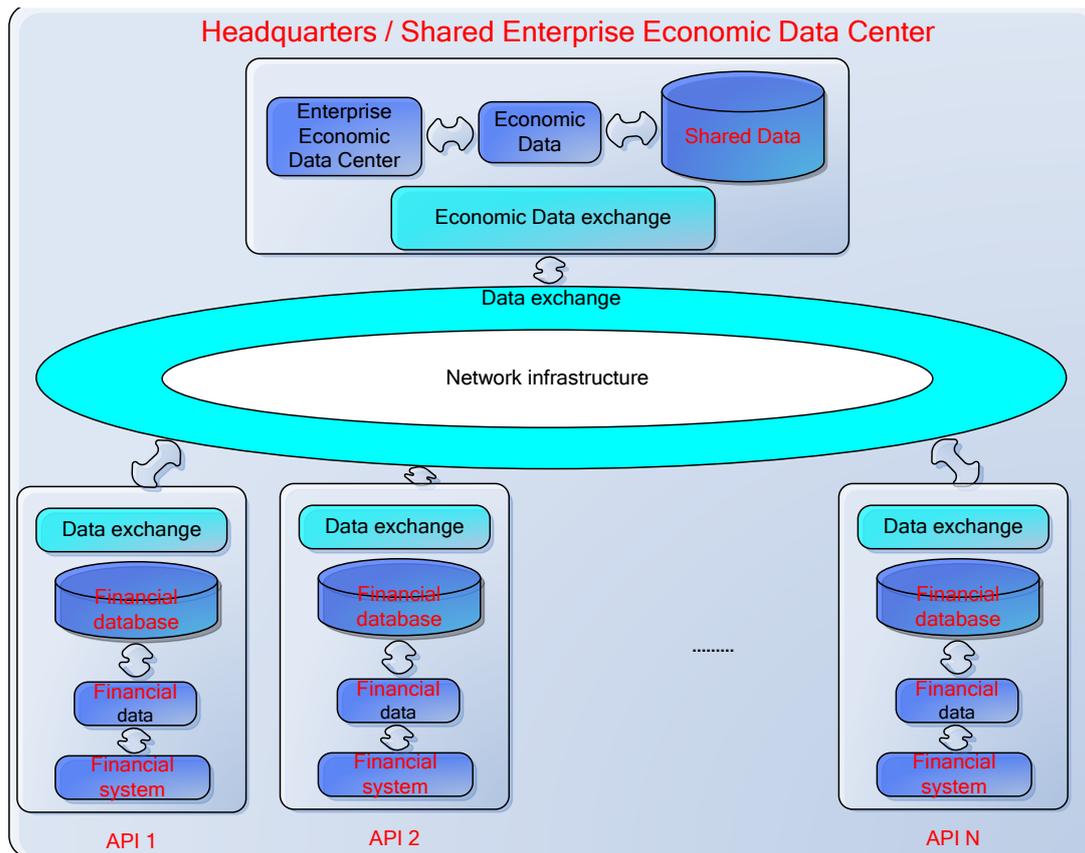


Figure 4. The application of financial data exchange

It can be seen from the figure that the economic management data interaction platform follows consistent data exchange standards, and data exchange among different organizations and between branches and centers can be realized through the network (Fan, 2017). According to the scope of application, economic management data exchange platform can have the following basic deployment modes:

(1) Deployment of internal data interaction

This model is mainly adapted to the data exchange between different application systems within the same organization (government departments, schools, enterprises, etc.) to solve the problem of isolated information islands and realize data governance. Due to various reasons, an organization may purchase multiple application systems in succession. These systems may have different sources, different development platforms, different database systems, and different work modes, making it difficult to interact with data between systems, causing data duplication and data. Using the economic management data exchange platform, data integration of various application systems within the organization has realized to solve the problem of isolated information islands.

(2) Peer-to-peer system data interaction

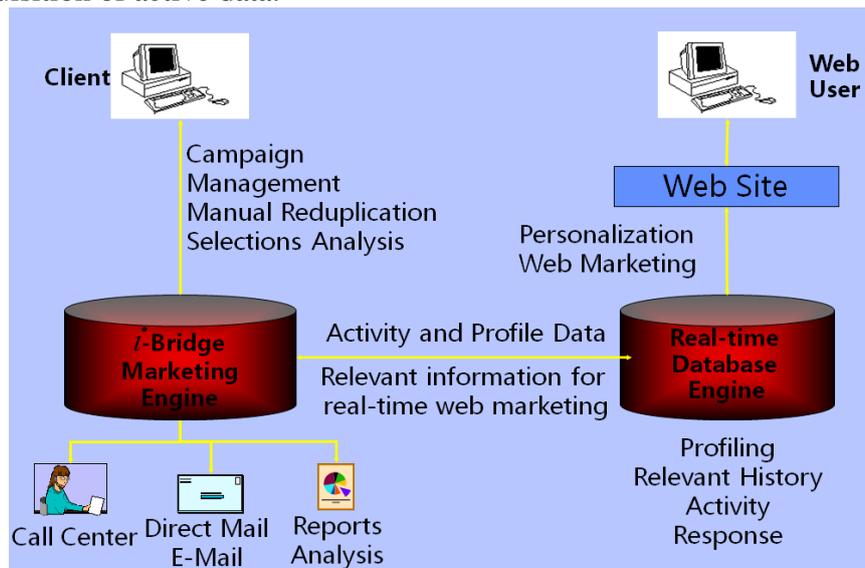
This model is mainly adapted to the data exchange between application systems among more peer organizations with business contacts, by realizing the correlation of key business data and improving the efficiency of associated business processing. The systems of various agencies generally have different roles, different functions, different development platforms, and different database systems. Data exchange between systems generally requires an interface system to solve them. Examples of such data interactions are e-commerce; electronic data interchange, file exchange, and resource sharing.

(3) Interactive data deployment between upper and lower levels

This mode is mainly suitable for data interaction between upper and lower organizations that have data associations to achieve scheduled work service data reporting or downstream transmission and improve work efficiency. The upper and lower levels have usually constructed one after another, with different system development platforms, different database systems, and

different information formats. The economic management data exchange platform can be used as an effective bridge. Examples of such data interactions include the reporting of statistics, the issuance of documents, and so on.

The economic management data interaction supports active and passive data exchange between two modes. In the active mode, the data demand side actively collects the required shared data from the data source. In the passive mode, the data demand side passively accepts the data flow triggered by the data provider. During the data collection process, the economic management data exchange platform can customize the data collection process, from which configured client collects data to the server, and then outputs the data to the target data source through the process configuration. In the active mode of the economic management data interaction, the corresponding scheduling management functions have customized under the management console, and the triggering time of the data collection has customized (Li, 2017). The scheduling rules can be customized in terms of years, months, days, hours, minutes, seconds, etc. When the scheduling rules start, the data collection is started automatically, and custom incremental/partial data is collected from the source database into the target database. Realize the acquisition of active data. In the passive mode of the economic management data interaction, the corresponding scheduling management functions have customized under the management console, and the triggering time of the data collection has customized. The scheduling rules can customize according to years, months, days, hours, minutes, seconds, etc. When the scheduling rules start, the data collection process has automatically started, and customized incremental/all data has collected from the source database into the target database. Realize the acquisition of active data.



4. Conclusion

The realization of the interactive informatization of enterprise economic management data is an important symbol of enterprise management informatization and scientificization. It is a necessary way to promote the modernization of scientific and technological management informatization. It will be for management departments to improve the level of enterprise management, management efficiency, and make scientific management decisions. Play an important role. With the changes in the economic environment and the ever-increasing renewal of information technology, the interactive informationization of economic and management data of enterprises will also continue to develop. Only in the process of implementing the informatization of enterprise economic management data exchanges and exploration, discovering and resolving difficulties and problems encountered in a timely manner, and earnestly analyzing and summarizing experience can we effectively ensure the quality of work for the informatization of corporate economic management data and continuously improve the enterprise economy. The level of information exchange for management data management provides a powerful guarantee for the development of the company.

Based on conventional data interaction, the platform can also support data exchange between large data and streaming data to meet special data exchange requirements. In the process of exchanging large texts, a large amount of data exchange is considered, and the source data of a large amount of data has divided into a group. Each group includes a small amount of data and identifies them. When data is exchanged, multithreading is used. The data exchange has performed at the same time; each data group exchanged has cached. When an exception occurs in the data transfer process, the system automatically resends the abnormal data group information.

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