Analysis and Design of Human Resource Management Model of Retail Enterprises Under the Background of Big Data

Yuan Yuan(✉)

Guangdong Polytechnic of Industry & Commerce, Guangzhou 510515, Guangdong, China

Abstract. In this paper, ASP technology and SQL are used to realize the three-tier architecture of browser/Web/server for human resource management of retail enterprises in the web environment, and some key technologies in the system development are mainly studied. Through the effective combination of ASP and SQL/server, the standardization, standardization and informatization of human resource management in retail enterprises are realized.

Keywords: Human resource management in retail enterprises·ASP · SQL

1 Introduction

With the development of economy and the improvement of management level, human resource management system has become a very important part of many enterprise managements. As a computer tool of human resource management, human resource management in retail enterprises can manage almost all the information related to the most important asset in an enterprise, such as employee recruitment, post and organization setup, training, skills, salary and benefits, performance and resignation management, with a unified database, It effectively avoids the problems of information incompatibility, updating and sharing caused by the discrete storage of human resources related data, and makes the management of human resources in enterprises move towards standardization, scientization, digitalization and networking.

The traditional human resource management in retail enterprises is based on C/S (client/server) structure, but it has its shortcomings for large and complex enterprise applications: it can not be controlled centrally, its security performance is poor, the client load is heavy, its maintainability and reusability are poor. The system is based on B/S (Browser/server) structure, which can solve the above problems well, make full use of the company's network resources, give full play to the network efficiency and improve labor productivity.

2 System Analysis

A Japanese owned enterprise is a large-scale enterprise with scientific research and production as a whole, multiple varieties and complex institutions, with more than 4000

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employees. The traditional human resource management in retail enterprises based on client/server was originally adopted in the enterprise. With the continuous expansion of the enterprise scale and the rapid development of computer technology and network technology, it has been unable to meet the requirements of various aspects of the growing enterprise.

2.1 Functional Requirements of the System

(1) Realize dynamic management
As an information management system, human resource management system can reflect the actual parameters of affairs and society timely and accurately only by using dynamic management technology to manage the database dynamically. Therefore, the timeliness of data is the life of information, and only the flowing and constantly collecting information source has value.
(2) Auxiliary decision function
With the help of enterprise internal information network, a multi-level, fully functional and intelligent human resource management information and decision support system with computer and communication as the main means is established to collect, store, retrieve, process, analyze and output human resources, so as to serve the management of personnel departments at all levels and the scientific decision-making of leaders at all levels.

2.2 Data Requirements of the System

In the process of database design, the main and foreign key relationships between tables should be established with human as the object and the staff number as the clue, and other tables should be established based on the basic information of staff, along the three main lines of staff entering, changing and leaving the factory, so as to ensure the integrity, accuracy and uniqueness of the data of the whole system.

2.3 Database and Programming Selection of the System

Based on the function and data requirement of the system, we choose SQL Server 2000 which is suitable for large database development as the background database of the program, and use ASP (active server pages) to design and program the web page.

(1) ASP Technology
ASP (active server pages) is a server-side scripting environment, which is a text file, composed of HTML identifier and active server source program. It can send client-side source programs such as VB script and JavaScript to create and run dynamic and interactive web server applications. Using ASP, you can combine HTML pages, script commands and active components to create interactive web pages and powerful web-based applications, and applications written with ASP code are easy to develop and modify.

ASP not only depends on the request of client to produce dynamic HTML, but also can detect the ability of existing system, such as database, file detection

and COM based information server. The source code of ASP is the HTML code generated after the source code is interpreted by the server. Therefore, the source program of ASP will not be transferred to the client browser, which can avoid the source program being plagiarized by others and improve the security of the program.

(2) SOL Server 2000
Microsoft SQL Server 2000 is a relational data management system based on client and server. It is a reliable and easy to manage database and analysis system. SQL (Structured Query Language) is a structured query language, which is used to define, add, delete, modify and manage data, and to control the database with tables, indexes, keywords, rows and columns storing data, as well as the control of database access rights. Microsoft SQL server uses sq statement to transfer request and reply between client and server, and uses client/server structure to decompose workload to execute task on server and client respectively. A client application can run on one or more clients, or on a server, providing data to users. The server is responsible for the management and allocation of server resources, and the client does not need to add the function of managing data locally; at the same time, the server does not need to spend the processing capacity on the display data, only return the data required by the application program, thus optimizing the network traffic.

3 Design and Implementation of the System

The system structure of human resource management system should not only conform to the management system of enterprise production and operation, but also conform to the characteristics of computer software itself. Therefore, it should be comprehensively considered from the following aspects:

Considering the requirements of various functional departments under the current management system of the enterprise, some functions that are closely related, have the shortest path of data collection, exchange, processing and analysis, and have relatively independent business are classified into one subsystem.

Fully consider the business division of the enterprise management department, and try to make each functional subsystem belong to the jurisdiction of one function, so as to facilitate the management and maintenance of each subsystem in the future.

It is conducive to the development, design and maintenance of subsystems, which should be relatively independent and stable.

3.1 Overall Structure of the System

This system adopts the B/S Browser/Web/server) three-tier architecture model (Fig. 1), forming the overall network structure of the system (Fig. 2).

The process of ASP running on the server is that when the browser requests the ASP file from the WCB server, the web server calls ASP, ASP reads the requested file completely, executes all script commands, and transmits the web page to the browser. Because the script runs on the server rather than the client, the web page delivered to

the browser is generated on the web server; do not worry about whether the browser can handle the script, the web server has completed the processing of all scripts and transferred the standard himl to the browser. Because only the result of the script is returned to the browser, the user can not see the script command being browsed, so the server-side script command is not easy to copy and view, ensuring the security of the system.

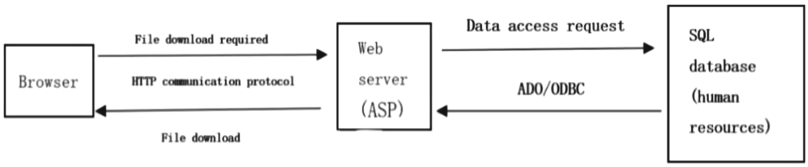

Fig. 1. B/S model

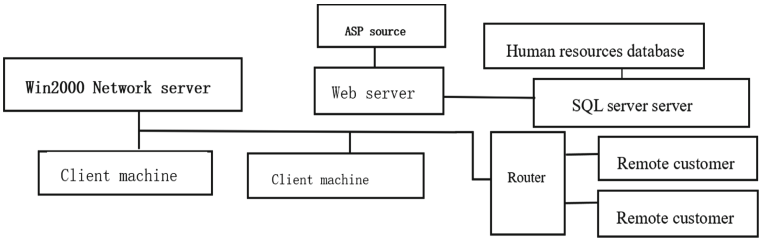

Fig. 2. Overall system model

3.2 Functional Module Structure of the System

Considering the system structure and division of business of human resource management, the human resource management system is divided into:

(1) Human planning subsystem. According to the needs of the company's business, make a period plan according to the future demand development of human resources, including human resource demand forecast, personnel recruitment plan, personnel training plan, and human resource utilization plan.
(2) Performance test subsystem. It is the basic work of enterprise management and the important basis of salary and bonus, labor insurance and welfare.
(3) Employee reward and punishment subsystem. Formulate reward and punishment standards according to the needs of the company, and display the rewards and punishments of employees in a timely manner.
(4) Personnel transfer subsystem. Transfer and promotion, appointment, dismissal and resignation of employees
(5) Salary award gold system. Set up salary and bonus standards at all levels of the company.

(6) Employee insurance subsystem. Employee endowment insurance, medical insurance, unemployment insurance, housing fund, enterprise accident compensation, etc.
(7) Personnel file subsystem. Personnel information, work performance files and training files.

4 Key Technologies of the System

ASP accesses the database through a set of object modules called ADO (ActiveX data objects). No matter what database the server uses, as long as the database has the corresponding ODBC or OLE DB driver, ADO objects can be accessed, as shown in Fig. 3.

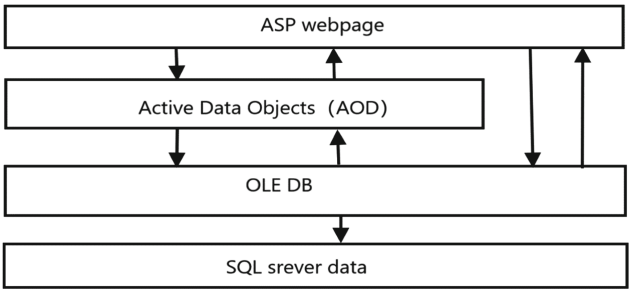

Fig. 3. The process of ASP accessing SQL Server

The specific connection commands are:

```
<%
set RS = Server . Createobiect ( " ADODB . Recodset " )
RS Activeconnection = " DSN dsname;UID = uidname;PWD = pass-
word;"
RS . SoRS Open=str
SQL
RS.Open()
%>
```

Where, dsname: data source name; uidname; user name; password: password; strsol; sol operation command.

This allows you to connect to the database and share resources in the database using the appropriate table action commands.

5 System Maintenance and Safety

5.1 User Management Mark and Identification

This system is a multi-user system, and the identification of authorized user mark is the most important part of the security control mechanism and the first link of the security defense line. The identification here refers to the user's own identification presented to the system. The easiest way is to enter userld and password. In the HUMAN RESOURCE MANAGEMENT IN RETAIL ENTERPRISES system based on ASP technology, the form form can be used to submit the user's account and password, and match with the corresponding fields in the user logo database.

5.2 Access Control

The definition of access control mechanism is to control the access right of one object to another 8. The most important task of database security is to ensure that only qualified users can be authorized to access the data in the database, and can prove/test the reliability of this guarantee in a convincing way; at the same time, all unauthorized personnel cannot open the database. For example, in this system based on ASP technology, the database can be strictly divided by departments and professional businesses, and the subsystems should be logically isolated as much as possible. In this way, the authority of different roles in the system can be clearly defined: the system administrator has the authority to add users, delete users and set the initial password; the department head controls and manages whether the user has the operation authority of the corresponding database in the system authority setting module of each subsystem.

The implementation method is to use session technology of ASP for system isolation protection and user authentication mark keeping. The process is as follows: the user's identity information in this system is composed of employee number, name, login name, password, authority type, identity description, locking and other fields. These fields are a data table in the database. Each time the user logs in, he accesses the data table through the database to identify the identity mark.

Pages in the system are attached with page types, such as <% page type = "HR"% >. When users enter the system for the first time, they are required to enter their own user account and login password. After submitting, the system will open the user database for data matching. If the data matches, the authentication tag is given to a session object, and the user needs to compare whether the authentication tag matches the preset value every time the page is converted. The procedure is as follows:

```
<%
If session ( " MM_userName " ) = " " then
Response . Redirect " Errorinfo . asp "
Elseif
trim(session("MM_userType "))< > "Administrator "then
If
instr(trim(session("MM_userType ")),pageType)=0 then
Response.Redirect "ErrorInfo.asp "
End if
End if
End if
% >
```

6 Conclusion

This paper puts forward the application of ASP technology and SQL to realize the establishment of human resource management in retail enterprises with browser/Web/server three-tier architecture under the environment of WB, and focuses on some key technologies in the development of human resource management in retail enterprises. The application of this system can grasp the situation of human resources and organization resources in time, accurately and comprehensively. It can exchange data with other business systems, realize resource sharing, and provide decision support for senior management of enterprises. The data and operation functions of the system are clear, convenient and flexible. By using this system, the human resource department can get rid of the tedious and repetitive daily work of human resource management, such as files and attendance, improve the working efficiency, and ensure the correctness and reliability.

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