The Books Management System under the Cloud Model Research

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Abstract. With the development of science and information technology, gradually to the books in the library information management intensification. Since the concept of the cloud computing is proposed that this rate has been greatly accelerated. Based on cloud computing service platform as a kind of suitable for library application architecture model, can be together scattered digital information resources integration, realize the intensification of the digital library, as the co-construction and sharing of digital resources provides a new solution.

Keywords: Cloud computing; Books management; System research

1   Introduction

In recent years the development of information technology's influence on library increasingly far-reaching, the application of new technology has caused significant changes of the library services. Cloud computing since its concept put forward by the attention of library science, the influence of cloud computing services for libraries and library science heated discussion hotspot issues, related to the academic research and application of practice is to promote the practical application of cloud computing in the library service. Along with our country to develop the public cultural services, the state investment in the library is also increasing, in recent years great changes have taken place in library's internal and external environment. Any library is my house in special environment, and must be in a certain environment to the survival and development. Therefore, in a sense, the development of the library is a constantly adapt to environmental change, adjust and reform its service mode and management process [1-4].

2   Cloud computing theory

Cloud computing is the mix of technologies, including grid technology, storage technology, computing power and so on. With the development of network information technology, the application of cloud computing is the library profession attaches great importance to. Cloud computing is distributed processing, parallel processing and the new development of grid computing, or the commercial

implementation of the concept of computer science. Informally to the basic principle of cloud computing is, in the cloud, the user of the processing of data stored in the Internet rather than stored in the data center in the local computer, the application is running according to user's requirements in the mass of the Internet server in the cluster instead of running in the user's personal computer, mobile terminal equipment, etc. Cloud computing data center service provider is responsible for the management and maintenance of normal operation, to provide users with enough storage space and computing power is strong enough; And users only need access to the Internet, you can through the terminal equipment such as computers, mobile phones at any location convenient use of data and services, achieve low configuration equipment enjoy high performance computing services [5-7].

3   Library cloud theory

Service is the library survival skills, also is the focus of library science research problems. All library business, adopting standard flow, is all about the library service. In ancient China, the library is the ancient library's opening to the outside world, the establishment of it is in the service of the ruling class, so the results only geared to the needs of the ruling class, the bridge seem to be very narrow. Bridge widening gradually, into the modern society, information and knowledge gradually improve, new technology out one after another, the library service also has a huge change, have the user in academic, personalized service, delivery service, the birth of the reference service, and so on, highlights the library services this bridge is becoming more and more important role [8-9].

Library should set up their own cloud services, to combine the characteristics of the library and cloud computing technology capacity to build the library services in the cloud, it should follow the following principles:

(1) The user oriented principle. In the process of constructing library services in the cloud, to fully consider the library users, to do the reader investigation in advance, including the readers use the library's basic situation, demand of readers, and readers' satisfaction survey, the overall analysis of the reader behavior and demand of cloud services building on the basis of the library. At the same time, the cloud service in the library running stage, still have to focus on the reader behavior and the change of demand, adjust the strategy and the tactics of the library services in the cloud.

(2) Systemic principle. The construction of library services in the cloud should follow the principle of systematic, from the macro on the whole, the library of cloud services as a system composed of many related factors, from the cloud service object, content, evaluation, and other aspects of the overall system design.

4   The construction of library services in the cloud model

4.1   The overall architecture of the cloud service model

Cloud computing environment for the library in the final analysis is a kind of technological change environment, internal external libraries under the environment with changes to make the transition from traditional service to cloud services. In particular, need to the corresponding library services in the cloud model, the library of cloud services to efficient operation. To this end, the author builds the library services in the cloud model, the overall architecture as shown in figure1.
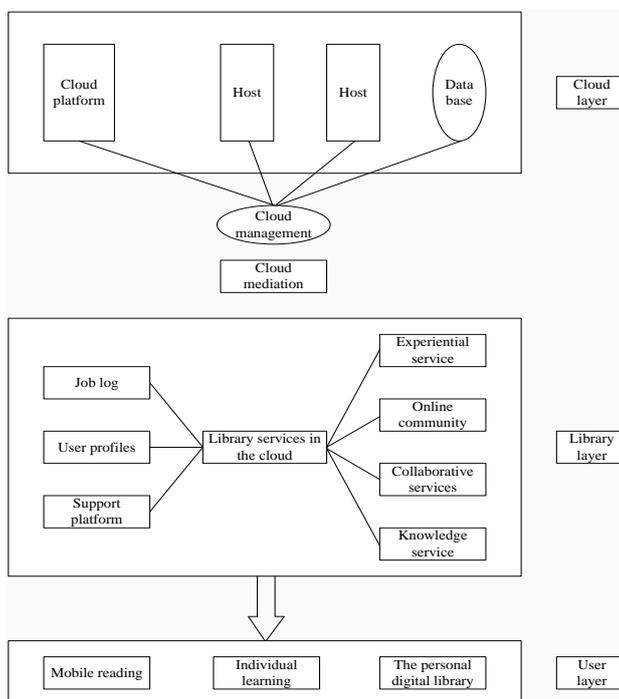

Fig. 1. The library of cloud services model

4.2   The main content of library services in the cloud model

The library to provide users with cloud services, the inside of the library should make corresponding adjustment. So this article design of library services in the cloud model including internal factors including library of external factors. From a cloud provider to library cloud services to users, are involved in the whole process of cloud services. Library has its unique culture and information resources. The strong premise of cloud services environment is constructed. Cloud service object is the library users, therefore in the construction of the library cloud services when they need to consider

the user's personal practice, to facilitate users to use the library services. At the same time can't ignore the user's own needs and cloud computing environment is constantly changing, even change [10-13].

(1) The library with the user's interaction; The user to the use of the library has its own characteristics, by the user's own learning constantly change their knowledge structure, but also exert a subtle influence on changing their habits. Its relationship with the user interaction is shown in figure 2.
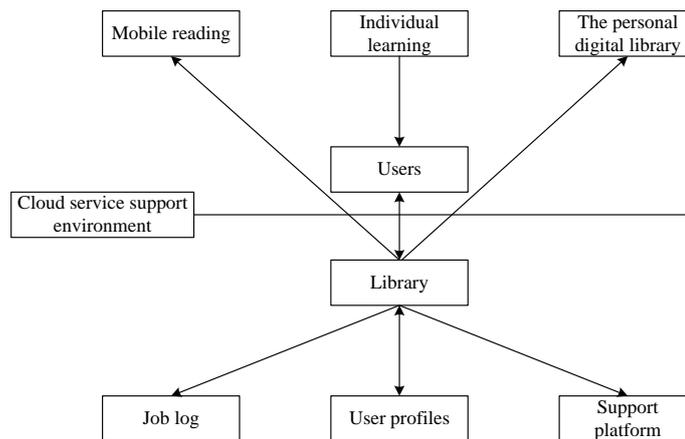

Fig. 2. Library and user interaction diagrams

In cloud computing environment, the library can collect the user's personalized information, establish individual files, for the user preferences based on users use the library work log, user profiles. Based on the personalized behavior records, sorting, analysis, to provide users with personalized service. Can be personalized for users construction platform, integrated web Blog, RSS technology construction, BBS etc. Provide special services.

(2) The function of the library cloud service integration; The library under new environment of cloud computing, to provide users with services have to its service integration. Cloud computing is proposed and its application in library, make library have more service resources, also make the library don't have to spend enormous resources to purchase hardware facilities, software function, can be to focus on the library service with cloud computing service to the service integration, to provide library cloud services to meet the needs of users.

Cloud computing environment, the library service should also integrate the most advanced service mode, the advantages of cloud computing technology is the virtual technology, the extensive use of cloud computing data center. Software service idea, community service has strong expansibility, can according to the needs of users design resources, increase the user experience design module and participation, under the new environment of information technology, network community service design is a trend of library development of the network service [14-15].

4.3 Library services in the cloud model of user layer

The users of the information age requires a personalized service environment, users need to study in such an environment, creating, sharing and use of digital information and services. User this kind of research and learning behavior, prompted us to establish the user archives. The establishment of user files, can provide users with the standard and efficient service, can provide users with high satisfaction of the service. Through the contents of digital log, feedback of user information. The cloud computing environment, the user layer network demands are taken into account, the user is not limited by time, space and equipment could gain the library information resources.

5   Conclusion

Are faced with the problem, this article analyzes the library service development mainly includes the plight of personalized service, the library integrated system, the lack of after-sales service, redundancy of the collection resources construction and sharing. Library services in the cloud model is constructed. Analyzes on the advantages of the library of cloud services, library services in the cloud model is put forward, including the cloud layer, library and user layer three levels. Will be distributed digital information resources integration in together, realize the intensification of the digital library, as the co-construction and sharing of digital resources provides a new solution

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