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A PHP Implementation of a Smart Tourism Management System under A Cloud Computing Platform

Niu Wei[1,2]
1. International Business College, Global Institute of Software Technology
Suzhou, Jiangsu, China, 215163
2. Social Sciences College, Soochow University, Suzhou, Jiangsu, China, 215123

Abstract:This paper collects and analyzes the use of cloud computing technology in the tourism industry at home and abroad, combines its advantages and disadvantages, uses PHP language for web design, service modeling and data modeling, and then proposes a tourism cloud service architecture. According to the characteristics of tourism business, the system construction of the tourism cloud platform is divided into three parts: private tourism cloud, tourism exclusive cloud, and tourism public cloud. In addition, specific and detailed planning and design of the tourism private cloud platform have been carried out, and the efficiency has increased by 7.12%. And in response to the rapid growth of tourism data, this article also proposes a recommendation algorithm based on tourist and scenic spot information.

Keywords: PHP, Smart Tourism, Management System, Cloud Computing

1. INTRODUCTION

In recent years, the state has attached great importance to the development of tourism in various regions and has continuously introduced new development measures. Combining regional advantages, a city actively advocates the development of smart tourism. After continuous development planning, the city has launched a rural tourism development with obvious regional characteristics. As a part of smart tourism, rural characteristic tourism has become an important part of supporting the economy. In order to do a better job of tourism, the city actively seeks development ideas, and launches township and even village-level characteristic tourism projects with counties as a unit, trying to promote the overall situation through the region and the characteristics of the economy to form a smart tourism industry chain. Continue to launch projects such as rural characteristic tourism, characteristic tourism one-stop and characteristic tourism rural culture [1-6].

Through the continuous development of tourism, some shortcomings in developing smart tourism in the countryside have also been reflected: foreign projects related to smart tourism started very early, such as: Korea's "mobile information service project"; Europe's "personalized mobile travel service" Projects; the radio frequency wristband system in the United States; the "i-mode" mobile service project in Japan, etc. Many countries in the world are currently developing telematics technology in an all-round way and establishing dedicated wireless data communication networks, focusing on travel digital information service systems and vehicle control systems. In recent years, the country has also initiated the creation of smart tourism. Since 2010, the National Tourism Administration has formulated pilot projects for "smart tourism cities", and Yangzhou, Beijing, Chongqing, Nanjing, Wenzhou, and Suzhou have successively formulated the construction of "smart tourism cities". "City" strategic goal. At the beginning of the 21st century, under the auspices of the European Union, two companies in the United Kingdom and Germany collaborated on the development of a new type of travel-related software, based on "virtual reality" technology, which allows passengers to walk through sound, light and images, and thus walk into a piece of history. middle. When a passenger arrives at a scenic spot, he can use the camera of the smart terminal to aim at the specific historical relics in front of him, and then the GPS positioning system and related image identification software in the smart terminal can make a correct judgment. The prosperous scene of this historic site is displayed on the mobile terminal, and incomplete parts of the remains can be filled virtually [7-14].

For example, when a passenger arrives at the ancient Roman Arena, he can see a picture of a gladiator fighting through a mobile phone terminal. As the passenger walks around, the image on the mobile phone can be continuously updated, as if returning to ancient Rome. The software not only allows passengers to enter historical memories, but also has a route query function. Through this query function, passengers can customize their personal travel plans to help passengers avoid blocked roads. It also has a free mobile guide. For my country's smart tourism, many experts and scholars have put forward some of their own research results and constructive suggestions. Among them, Bao Yuhong believes through research on smart tourism that my country's smart tourism should be based on the Internet and cloud computing technology, combined with Internet-related technologies, so as to provide more travel information for tourists. Intelligent perception of tourist attractions and timely release of tourist information should be formed to make it more convenient for the people. The same scholar Jin Weidong also expressed the same view, and believed that this tour should use advanced high-tech technology to realize the tourism information service for the vast number of tourists, and at the same time, it should also provide management services for the tourism management department [15-21].

These systems can use computers and smart terminals. Make a visit. And with the continuous development of people-oriented tourism, some experts have also put forward personalized tourism services in response to the needs of tourists, creating research content that focuses on people's satisfaction with tourism services. The purpose is to rely on the continuous development of network technology and information technology. Realize personalized service to tourists and give full play to the maximum value of tourism resources. Also for smart tourism scholars Ding Fengqin and

Huang Yinong, etc., they also put forward their own research results [22-24].

2. THE PROPOSED METHODOLOGY

2.1 The Cloud Computing Platform

At present, the application of cloud services in my country has gradually expanded. For example, enterprises obtain cloud services through leasing and do not need to invest in building their own central computer room. Everyone knows that for the purchasing power of servers, it is a huge investment, and if it is not operated, the economic loss to the enterprise is obvious. At the same time, in terms of the maintenance of some software developed by the enterprise, the upgrade becomes more convenient. Since the server side used by the user is in the cloud, the rapid upgrade work can be completed only on the server side, thereby ensuring that all users can use it. To the latest software, reducing maintenance costs. In addition, for some large and expensive software, it can be installed on the cloud server to ensure that all employees of the user company can access and use it, and can also carry out flexible permission control when necessary. There is no need for enterprises to invest in data storage, and there is enough storage space in the cloud.

In general, the higher the price of cloud computing resources, the stronger its computing power, that is, the price of computing resources is positively correlated with its computing power. Cloud computing can be divided into three types according to operating modes, namely, public cloud, private cloud and hybrid cloud. Public clouds provide services directly to end users. Users obtain cloud resource services through Internet access, but they do not own cloud resources. At present, they have built public clouds and directly provide services to users through their own infrastructure. Private cloud companies build their own "cloud"-based data center infrastructure to provide cloud computing services to internal users or external customers. Enterprises have the autonomy of infrastructure, and can improve services and carry out independent innovation based on their own needs.

2.2 The Smart Tourism Management System

As early as the National Tourism Industry Management Conference held in April 2000, the development of tourism informatization was taken as a means to improve the international competitiveness of China's tourism industry. The 2015 National Tourism Conference put forward the "515 Strategy", that is, focusing on the five goals of "civilization, orderliness, safety, convenience, and enriching the people and strengthening the country", it launched 10 tourism activities and carried out 52 measures to accelerate the modernization, informatization, and development of the tourism industry. Internationalization process. On March 7, 2017, the National Tourism Administration issued the “Thirteenth Five-Year Plan for National Tourism Informationization”, proposing to accelerate the application of a new generation of information technology in the tourism industry during the “Thirteenth Five-Year Plan” period.

Throughout the development history of human civilization, it is a process from understanding the real world to creating an information world, going through the initial understanding of the world in primitive society, to using information to assist human memory, and recording and inheriting in the form of information, and then to using language, Text, etc. to exchange and disseminate information. From Oracle to modern cloud computing and storage technologies, they abstractly summarize the real world in the form of text, language and other data information, and then further promote communication and dissemination. For tourism big data, mining and storing data is the basis of tourism big data.

2.3 The PHP Implementation of Smart Tourism Management System

PHP is an open source language with abundant resources and free of charge. PHP embeds the program into an HTML document for execution, and its execution efficiency is much higher than that of CGI that completely generates HTML tags . PHP can execute the compiled code, and the compilation can achieve encryption and optimized code running, making the code run faster. PHP supports almost all popular databases and operating systems. The most important thing is that PHP can be extended with C and C++.

The intelligent terminal of the smart tourism system uses mobile communication technology, the Internet, the Internet of Things, big data, cloud computing, high-performance processors and other technologies to actively perceive tourism-related information through the characteristics of the smart terminal and arrange and adjust the travel plan in time to allow tourists to interact with Real-time interaction on the Internet allows travel to enter the era of touch, and allows tourism services to incorporate more high-tech means such as artificial intelligence and sensor technology, so that tourism services move towards a real sense of intelligence. As the unique identifier for login, there cannot be two identical user names in the system. Therefore, when the user registration is submitted, it is necessary to check whether the user name already exists in the database. If the user name has been registered, a prompt message will be returned to request the user Re-register; if the user name does not exist and other registration information is verified correctly, the user registration process is completed and the registration is successful.

The submission of data is to transfer data in the form of data collection using the Web Service method. The verification code defines a proofreading process. When the registration request is called, the system will verify the registration information one by one. If illegal content is found, it will automatically throw an error message. The design of information management services can be based on the perspective of the users of the service. The users of the service system include the users of the system and the administrators of the system. The users of the system are mainly tourists, travel companies, and peripheral manufacturers; the administrator of the system is the system administrator. In this service, tourists can inquire about the basic information of the scenic spot by registering an account on the client side and gaining authority: including: scenic spot introduction, tour group information, surrounding manufacturer information, etc.

3. CONCLUSIONS

This paper proposes and designs a smart tourism cloud solution, and implements a tourism smart navigation system based on the PHP platform on the basis of the tourism cloud. The thesis first studies the system planning of the tourism cloud platform, and analyzes the specific architecture of the tourism private cloud platform. Then, referring to the development guidelines of software engineering, a complete intelligent tourism system integrating information management service, tour guide service, tour strategy service, and statistical analysis service of information was designed and implemented.

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