One-Stop RV Travel Open System Based on SAAS

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ABSTRACT

In order to solve the lack of comprehensive travel service standard system for the vertical field of RV in the Internet OTA industry, it is proposed a one-stop RV travel open system based on SAAS platform ‘RV-Booking’, integrating RV vehicle, RV camp or hotel and travel resources for upstream and downstream suppliers in RV travel industry, providing massive UGC/PGC RV travel personalized travel strategy and social fan aggregation. The system is a content sharing platform for RV game Raiders and Friends of the United States. It is a vertical social platform for RV fans to make friends, and is also a trading platform for RV rental, group travel, and reservation camps.

INTRODUCTION

In the Internet OTA industry, there is no comprehensive travel service standard system for the vertical field of RV in the Internet OTA industry, which can integrate RV vehicle, RV camp or hotel and travel resources for upstream and downstream suppliers in RV travel industry, and provide massive UGC/PGC RV travel personalized travel strategy and social fan aggregation. The existing travel content platforms lack the real landing of online and offline travel product trading business, and can’t provide a B-end system to integrate the resources of the upstream and downstream industry chain of RV travel. The existing OTA platforms lack.

A one-stop RV travel service open system is proposed in this paper. It is a content sharing system for RV travel notes, mini-videos and photos. It is a vertical social system for RV fans. It is also a car rental, group tour, camp reservation service

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system. With this system, the bite of travel can be recorded, the feelings of RV travel can be exchanged, and a beautiful travel life can be created. This system solves the painful point for C-end user RV which is lack of travel raiders, meets the social needs of C-end user which is content sharing, fan interaction, meets the rental demand for RV rental, camp reservation, and group tour products. The proposed system also provides travel resources share distribution capacity to B-end institutions, establish a one-stop car travel SAAS open system, and promote the integration of the industry chain of RV travel.[1]

SYSTEM SOLUTION

The proposed system is an open platform for one-stop RV travel services, including the C-terminal system RV Wireless Center and the ‘RV-Booking’ B-end SAAS system. The RV Wireless Center is a C-end user service system that carries user drainage. “RV-Booking” is an open system for the distribution of RV travel service resource, and it carries the mission of integrating the upstream and downstream industry chain of the RV tourism industry.

"RV Wireless Center" is composed of mobile Internet front-end portal APP, WeChat, M-site for RV travel content sharing and product reservation. "RV-Booking" includes CMS, CRM, order distribution, channel management and SAAS service capabilities.

The RV Wireless Center includes a C-end user service portal and a business management back. The C-end portal includes an APP portal, a WeChat portal, an M-station portal, a PC website portal, etc., and carries functions such as user socialization, content sharing, online car rental, camp reservation, travel reservation, and online customer service. The business management background includes CMS content management, CRM user management, membership system and point management, supplier management, order management, product management, price and promotion management, channel and distribution management, reconciliation settlement management, and customer service work order management.

The relationship between "RV wireless center" and external system is: "RV wireless center" connects "RV-Booking" with the system coupling mode, to achieve self-operated and cooperative product entry. The distribution channels were introduced into distribution management module of the RV Wireless Center with API, and complete the distribution business of the RV transaction products. The cooperative supplier of the non-SAAS mode connects to the "RV Wireless Center" supplier module with API to realize the cooperation product access.
RV-Booking, the B-end SAAS system of RV, is a standardized business function system for B-end merchants such as product suppliers, clubs and camp hotels in the RV industry chain, providing product management, price management, order management, etc. “RV-Booking” includes the car rental SAAS platform, the camp SAAS platform, and the RV travel SAAS platform. “RV-Booking” carries functional modules such as inventory management, price management, store management, order management, coupon management, and reconciliation management. Self-operated travel products and cooperative travel products can be entered into the RV home platform with the “RV-Booking” system.

“RV-Booking” system is based on the Spring Cloud [2] microservices framework [3] and is deployed in the docker container environment. The system disassembles the original complex single application into multiple simple applications. Each small application only focuses on a specific function, which simplifies development and facilitates parallel development and testing. At the same time, they are all independent deployments, they are very fast to maintain and upgrade. The release of a single micro service can minimize the impact on other services. The "RV-Booking" micro services architecture enables each service to be independently extended and can be differentiated horizontally according to the load requirements of different services. "RV-Booking" Spring Cloud provides a simple development method for configuration management, service management, circuit breakers, intelligent routing, micro-proxy, control bus, global lock, decision-making campaign, distributed session and cluster state management involved in the micro-service architecture.

First, "RV-Booking" Spring Cloud provides Service Registration and Discovery Center Consul, a REST-based service for registration and location services to enable cloud load balancing and mid-tier server failover.
Second, "RV-Booking" Spring Cloud provides the fuse Hystrix. Hystrix can help isolate each service, so that the response of a single service fails does not affect the response of the entire request. Even, the response after a single service failure can be predefined. With Hystrix's fault-tolerant fuse mechanism, the reliability of the entire service can be greatly improved.

Third, "RV-Booking" Spring Cloud also provides a distributed configuration center that supports configuration services in the memory of the configuration service (ie local), also supports placement in remote Git repositories. With Spring Cloud Bus, the hot modification of the configuration can be implemented.

Fourth, "RV-Booking" Spring Cloud provides the gateway Zuul, which solves the problem that the micro-service is too dispersed and there is no unified gateway for traffic management. When using Microservices to build an entire API service, there are usually many applications with different responsibilities running. These applications will require some common functions, such as authentication, flow control, monitoring, and log statistics. In traditional single-application applications, these functions are typically embedded in the application and run as a component. However, in the micro-service mode, there may be dozens or even hundreds of different types of applications running independently. Continued use of this method will result in very high management and distribution costs. Therefore, it is necessary to abstract a unified traffic entry in these applications to complete the implementation of these functions.

RESULT

1. Industrial standardization effect
   A set of standard software systems and platforms suitable for the upstream and downstream of the RV travel industry chain have been constructed, integrating the C-end users of the RV and the B-side merchant resources of the RV, standardizing the system, modularization and portability of the real estate travel platform.

   A standard life cycle for RV content sharing and social networking is established, and a standard functional flow for RV travel trading products is established.

2. Production data effect
   1) User data
      Since the system was launched, cumulative user data has been accumulated:
      New media fan data:
      New media such as WeChat, Weibo and Today's headlines have accumulated 1.4 million fans.
      Number of registered users on the platform: 470,000 registered users.
      APP download, activation and ranking data:
      The download volume exceeded 900,000 and the activation amount exceeded 620,000. APP has been online for 100 days and successfully climbed the top 100 in
free iOS application market, ranking 51, listed before the industry giants Avis and yongche.com.

2) Content data
Since the launch of the system, there are over 1,300 original PGCs and over 3,820 UGCs. The total PV of content in medias has exceeded 21.5 million, and the amount of RV travel notes has exceeded 42,000. It is accumulated 483 RV related questions, and 1455 RV related answers. It is accumulated 8000+ external fans, 7 million+ reading, 3900+ comments, 4600+ forwarding, and dozens of homepage recommendations in Wukong Q&A.

3) Order data
Since the launch of the system, more than 3,000 car rental orders have been completed. The real content is transformed into orders.

4) Economic benefit data
It is estimated that the system will bring more than 10,000 car rental orders in 2018 and 20 million RMB income.

REFERENCES