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Wifi-Based Advertising Push Method

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Abstract

The wifi-based advertising push method adopts the non-fixed password method associated with the user identity information, allowing the merchant to collect the registration information voluntarily disclosed by the customer by providing the opportunity of network access service, so that the merchant can provide targeted information and recommendation service. To achieve the needs of merchants and customers.

Keywords

Internet; wifi; advertising push; router.

1. INTRODUCTION

With the popularity of the Internet, people's attention to advertising has gradually increased. At the same time, advertising is also an effective means of information dissemination in the current era, and it is a form in which various businesses and media deliver targeted information.In China, the advertising culture began with the trading activities of 3000 AD. With the development of the times, the form and form of advertising have undergone great changes. At the same time, with the continuous increase of new media, the types of advertising more and more.

WiFi, also known as wireless broadband and wireless network, is a wireless networking technology that can connect terminals such as personal computers and mobile phones wirelessly. It is usually covered by radio waves of routers, and can be networked in an infinite fidelity manner within its range. It is the most widely used technology in today. It has been widely used in online media, handheld devices, daily leisure, passenger trains, shopping malls, etc., providing great convenience for people's lives.

In the era of increasing popularity of mobile Internet, mobile terminals such as mobile phones have become an irreplaceable product in people's lives, and more and more users use wifi services in public places.In order to increase the value of advertising and increase the user's acceptance of advertising, operators need to push the service for the environment, that is, push the advertisement to the wlan user in the characteristic environment at the right time and place.The advertising push service is an emerging industry born with the increase in the number of Internet users. The wifi-based precision advertisement push method is precisely for this demand.

2. CLOUD AUTHENTICATION SYSTEM AND WIFI ROUTER INTERACTION

2.1. User Terminal

(1) The user terminal device enters the wireless hotspot, scans the ssid of the wifi router, and performs a connection process;

(2) The user initiates an online request;

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(3) The terminal device of the user displays the login page of the cloud authentication system. The user can select the mobile phone number to verify the login, the WeChat registration login, and the qq number to log in multiple authentication modes.Among them, the mobile phone number, the micro-signal code, and the qq number are multiple authentication login methods, which refer to the good service associated with the cloud authentication system and the corresponding third-party service.The authenticity of these mobile phone numbers, micro-signal codes, and qq numbers is verified by using an authentication interface provided by a third party.

After receiving the verification result, the terminal operates according to the related prompts;

2.2. Cloud Authentication System

The cloud authentication system is the control and management platform of all wifi routers, including: management and control of the router, mainly to manage the key parameters of the terminal wifi router, upgrade the wifi router, restart the wifi router, and manage the blacklist whitelist on the Internet;

(1) After receiving the user request, the WIFI router redirects the user's access.The WIFI router forwards the user's access link to the user authentication login page of the cloud authentication system according to the predefined rules, and transmits the user's MAC address, IP address and other information to the cloud authentication system.WIFI router WIFI firmware built a series of services, using IPTABLE firewall to establish a set of filtering rules, according to internal functions, can block all intranet to external network access and open the internal network to the external network DNS, intranet to the authentication server and The domain name whitelist, intranet to external network port 80 access to the access to their own http services.

(2) According to the information sent by the user end, after the authenticity authentication succeeds, the WIFI router redirects the user's terminal, and returns the MAC address, port, mobile phone number and other parameters submitted according to the login interface to the authentication page of the built-in service of the WIFI router. With the token and url parameters.

(3) After receiving the authentication request, the built-in service of the WIFI router will initiate an authentication request to the authentication interface of the cloud authentication server, with an IP address, a MAC address, a token, and a status parameter.

(4)The request received by the authentication interface of the cloud authentication server depends on the internal logic to return whether the response is allowed, where 0 is rejected and 1 is allowed.

(5)If the access is denied, the information will be returned to the client, and the message interface of the authentication server will be redirected. With the access denied parameter, the client's Internet access will still return to the client; if access is allowed, the firewall rules will be changed and the client will be modified. Go online.

(6) The interaction between the cloud authentication system and the wifi router is based on the terminal and cloud interaction protocol described in the following table.

name	Types of	code	Description
Index id	String	id	
Endpoint index	int	i	
Endpoint index name	String	n	
value	Object	v	

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(7) The authentication interface of the authentication server performs other jumps or displays the advertising industry according to the service flow.According to the collected registration information of the customer, the targeted information and recommendation service are provided.

2.3. Business Advertising Management

The management of the business advertisement includes the image content of the advertisement push, the text content, the page information to be jumped after the terminal wifi user accesses the Internet, etc.; the black route management is mainly for the function of the wifi router without authorization access.

3. WIFI AD PUSH METHOD STEPS

1. The user enters the wireless hotline and initiates a request to access an external website. The wifidog built-in wifidog

Access to the intranet to external network port 80 is redirected to WIFIDOG's own http service (port 2060).In step 1, the WIFIDOG is a service built into the WIFI router. After running, it will create a set of rules for IPTABLE, which plays the following role:

(1) Blocking access from all intranets to extranets;

(2) Opening access to the internal network to the external network;

(3) Open the intranet to the authentication server and the whitelist of the domain name;

(4) Redirecting the access network to the built-in http service of the service;

2. The user's online request will be pointed to the http60's built-in wifidog http service, and other requests will be blocked.

3. When the wifidog service's http in the wifi router receives the web access request, it will be directed to the 404 page. The 404 page will redirect the user client to a return request, requesting the client to redirect access to the login page of the cloud authentication server.

4. The user's hand terminal device loads and displays the login page of the cloud authentication server. The user performs related authentication operations according to the content of the page (qq login, microblog login, WeChat attention, username and password login, mobile phone SMS login, etc.).), the principle is that only one authentication is unsuccessful, the user still stays in the authentication server to continue the authentication operation, and the authentication succeeds to return a 302 redirect to the client, and submits the parameters according to the login interface.

5. After receiving the /WIFIdog/auth request from the client client, the WIFIDOG web service will initiate an authentication request to the auth (authentication) interface of the authentication server with the parameters.

6. The authentication server (auth) interface receives the WIFIdog request, and depends on the internal logic to return whether the allowed reply Auth: 0 rejects Auth: 1 permission.

7.When WIFIDOG receives the verification result, if the access is denied, it will return 302 to the client and redirect to the gw_message interface of the authentication server.

8. The authentication interface of the authentication server displays the advertising industry or makes other jumps according to the business flow.

4. SUMMARY

The wifi-based advertising push method does not change the existing wifi authentication mechanism and process, as well as mobile phones and other devices, and can implement personalized and accurate advertisements for different wifi users at different times and in

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different places.The invention can sense the time and place of the wifi user, and can perceive the personal information and preferences of the wifi user, improve the timeliness and pertinence of the advertisement, enhance the user experience, and fundamentally solve the existing wifi advertisement pushing mechanism. The user experience is poor, the advertising effect is not obvious drawbacks and problems; the invention can also lay a foundation for further optimization and transformation of the future wifi advertising push service.

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