METHOD AND APPARATUS FOR EXECUTING INFORMATION PUSHING TASK, AND COMPUTER DEVICE AND STORAGE MEDIUM

This application claims priority to the Chinese Patent Application submitted to the National Intellectual Property Administration, PRC on July 24, 2017, Application No. 201710608515.3, and entitled “Method and Apparatus for Executing Information Pushing Task, and Computer Device and Storage Medium”, which is incorporated herein by reference in its entirety.

TECHNICAL FIELD

This application relates to information processing technologies, and particularly relates to a method and apparatus for executing an information pushing task, and a computer device and a storage medium.

BACKGROUND

The rapid development of the Internet technology is accompanied with endless emerging of various e-commerce platforms through which users can purchase various commodities, and consumption notifications are pushed to user terminals by Internet in the purchasing process. The contents in traditional consumption notifications pushed to the user terminals are constant. However, due to the fact that the consumption information of users is of different types, such consumption notifications are not targeted. If the contents in the consumption notifications remain constant, inaccurate consumption notifications may be pushed to different users, which in turn results in low information pushing accuracy.

SUMMARY

In view of this, it is necessary to provide a method and apparatus for executing an information pushing task, and a computer device and a storage medium to solve the problem of low information

pushing accuracy.

A method for executing an information pushing task comprises:

Monitoring an information pushing task, added by a service server, in a task message queue, wherein the information pushing task is generated by the service server according to user consumption information;

Extracting the user consumption information from the monitored information pushing task;

Querying an information pushing scheme matching the extracted user consumption information;

Acquiring a message pushing template corresponding to the queried information pushing scheme;

Generating a pushing message body according to the extracted user consumption information and the acquired message pushing template; and

Pushing the generated pushing message body to a terminal which is logged into by means of a user account included in the extracted user consumption information.

An apparatus for executing an information pushing task comprises:

A queue monitoring module used for monitoring an information pushing task, added by a service server, in a task message queue, wherein the information pushing task is generated by the service server according to user consumption information;

An information extraction module used for extracting the user consumption information from the monitored information pushing task;

A scheme query module used for querying an information pushing scheme matching the extracted user consumption information;

A template acquisition module used for acquiring a message pushing template corresponding to the queried information pushing scheme;

A message body generation module used for generating a pushing message body according to the extracted user consumption information and the acquired message pushing template; and

A message body pushing module used for pushing the generated pushing message body to a terminal which is logged into by means of a user account included in the extracted user consumption information.

A computer device comprises a memory, a processor, and a computer program which is stored in the memory and is to be run on the processor, wherein the processor executes the computer program to implement the following steps:

Monitoring an information pushing task, added by a service server, in a task message queue, wherein the information pushing task is generated by the service server according to user consumption information;

Extracting the user consumption information from the monitored information pushing task;

Querying an information pushing scheme matching the extracted user consumption information;

Acquiring a message pushing template corresponding to the queried information pushing scheme;

Generating a pushing message body according to the extracted user consumption information and the acquired message pushing template; and

Pushing the generated pushing message body to a terminal which is logged into by means of a user account included in the extracted user consumption information.

One or more storage media have a computer executable instruction stored therein, wherein the computer executable instruction is executed by one or more processors to implement the following steps:

Monitoring an information pushing task, added by a service server, in a task message queue, wherein the information pushing task is generated by the service server according to user

consumption information;

Extracting the user consumption information from the monitored information pushing task;

Querying an information pushing scheme matching the extracted user consumption information;

Acquiring a message pushing template corresponding to the queried information pushing scheme;

Generating a pushing message body according to the extracted user consumption information and the acquired message pushing template; and

Pushing the generated pushing message body to a terminal which is logged into by means of a user account included in the extracted user consumption information.

By means of the method and apparatus for executing an information pushing task, and the computer device and the storage medium, it is ensured that information is pushed according to a matching information pushing scheme; a pushing message body is generated according to extracted user consumption information and an acquired message pushing template, so that the generated pushing message body is targeted; and it is ensured that the pushed pushing message body matches the user consumption information, thus improving the accuracy of information pushing.

BRIEF DESCRIPTION OF DRAWINGS

To illustrate the technical solutions according to the embodiments of the present invention or in the prior art more clearly, the accompanying drawings used for describing the embodiments are introduced below. Clearly, the drawings in the following description are only used for illustrating some embodiments of this application, and those ordinarily skilled in the art can obtain other drawings according to the following ones without creative labor.

FIG. 1 is an application environment diagram of a method for executing an information pushing task in one embodiment;

FIG. 2 is a structural diagram of a pushing server in a system for executing an information

pushing task in one embodiment;

FIG. 3 is flow diagram of the method for executing an information pushing task in one embodiment;

FIG. 4 is a flow diagram of the step of monitoring a task message queue in one embodiment;

FIG. 5 is a flow diagram of the step of querying an information pushing scheme in one embodiment;

FIG. 6 is a flow diagram of the step of generating a pushing message body in one embodiment;

FIG. 7 is a structural diagram of an apparatus for executing an information pushing task in one embodiment;

FIG. 8 is a structural diagram of a queue monitoring module in one embodiment;

FIG. 9 is a structural diagram of a scheme query module in one embodiment;

FIG. 10 is a structural diagram of a message body generation module in one embodiment.

DESCRIPTION OF EMBODIMENTS

For the sake of a clearer understanding of the objectives, technical solutions and advantages of this application, this application is further expounded below in combination with the accompanying drawings and embodiments. It should be understood that the embodiments in the following description are only used for explaining this application, and are not intended to limit this application.

FIG. 1 is an application environment diagram of a method for executing an information pushing task in one embodiment. Referring to FIG. 1, the method for executing an information pushing task is applied to a system for executing an information pushing task. The system for executing an information pushing task comprises a terminal 110, a pushing server 120, a service server 130, a queue server 140, and a terminal 150, wherein the terminal 110 and the terminal 150 are connected with the pushing server 120, the service sever 130 and the queue server 140 through networks, and the pushing server 120, the service server 130 and the queue server 140 are connected through networks.

The terminal 110 and the terminal 150 are fixed terminals or mobile terminals, wherein the fixed terminals are at least one selected from printers, scanners and monitors, and the mobile terminals are at least one selected from tablet computers, smartphones, personal data assistants and digital cameras.

FIG. 2 is an internal structural diagram of the pushing server 120 in the system for executing an information pushing task in FIG. 1 in one embodiment. As shown in FIG. 2, the pushing server 120 comprises a processor, a nonvolatile storage medium, an internal memory and a network interface which are connected through a system bus. The processor of the pushing server 120 is used for calculation and control to support running of the whole pushing server 120. The memory is used for storing data, code instructions, and the like. The network interface is used for network communication with the terminal 110, the queue server 130, the service server 140, and the terminal 150. At least one computer executable instruction is stored in the memory, and the computer executable instruction is executed by the processor to implement the method for executing an information pushing task suitable for the pushing server 120 in the embodiments of this application. The memory comprises a nonvolatile storage medium such as a disk, a CD or a read-only memory (ROM), or comprises a random access memory (RAM). For instance, in one embodiment, the memory comprises a nonvolatile storage medium and an internal memory, wherein an operating system, a database and a computer executable instruction are stored in the nonvolatile storage medium; multiple information pushing schemes and message pushing templates corresponding to the information pushing schemes are stored in the database; the computer executable instruction is executed by the processor to implement the method for executing an information pushing task; and the internal memory provides a cache operating environment for the operating system and the computer executable instruction in the nonvolatile storage medium.

As shown in FIG. 3, a method for executing an information pushing task is provided in one embodiment. In this embodiment, the method is explained, as an example, in the case where the method is applied to the pushing server 120 shown in FIG. 1. Particularly, the method comprises:

S302: an information pushing task, added by a service server, in a task message queue is monitored, wherein the information pushing task is generated by the service server according to user

consumption information.

Particularly, the terminal 150 accesses the service server 140 by means of a browser or an installed service application. The service server 140 provides a business service for the terminal 150 by means of the browser or the service application. A user inputs a user account in the browser or the installed service application of the terminal 150 to log into a business transaction page provided by the service server 140. The user purchases a product on the business transaction page which is logged into by means of the terminal 150; and after the user successfully purchases the product, the service server 140 acquires purchased product information and the user account of the user, and user consumption information is generated according to the acquired product information and the user account. Wherein, the user consumption information includes a product identifier, an order number of the purchased product, the amount of consumption, and the user account and may further include an application identifier, and the product identifier includes a product name and a product number.

The service server 140 generates an information pushing task according to the user consumption information, adds the information pushing task to a task message queue corresponding to the service. The pushing server 120 monitors whether there is, in the task message queue, an information pushing task. Wherein, the task message queue is set in any one of the pushing server 120, the queue server 130, and the service server 140.

In one embodiment, the service server 140 acquires a configured queue identifier, queries a task message queue corresponding to the acquired queue identifier in the queue server 130, and adds the generated information pushing task to the queried task message queue.

In step S304: the user consumption information is extracted from the monitored information pushing task.

Particularly, after monitoring that there is, in the task message queue, the information pushing task added by the service server 140, the pushing server 120 acquires the monitored information pushing task from the task message queue and then extracts the user consumption information from the acquired information pushing task.

In step S306: an information pushing scheme matching the extracted user consumption information is queried.

Particularly, the pushing server 120 acquires an application identifier and a scheme matching value from the extracted user consumption information, queries a corresponding information pushing scheme in the database according to the application identifier, and detects whether a scheme matching value in the queried information pushing scheme matches the acquired scheme matching value; if yes, the queried information pushing scheme is available; or if not, the queried information pushing scheme infeasible.

In one embodiment, the user consumption information includes various types of consumption information. The pushing server 120 acquires a consumption information type identifier in the extracted user consumption information and queries a matching information pushing scheme according to the acquired consumption information type identifier.

In one embodiment, the pushing server 120 extracts an application identifier and a service type in the user consumption information and queries an information pushing scheme matching the application identifier and the service type.

S308: a message pushing template corresponding to the queried information pushing scheme is acquired.

Particularly, after querying the information pushing scheme matching the extracted user consumption information, the pushing server 120 extracts a message pushing template identifier from the queried information pushing scheme and queries a message pushing template corresponding to the message pushing template identifier in the database.

S310: a pushing message body is generated according to the extracted user consumption information and the acquired message pushing template.

Particularly, the pushing server 120 queries to-be-pushed information in the extracted user consumption information and fills in the acquired message pushing template with the to-be-pushed

information to generate a pushing message body.

S312: the generated pushing message body is pushed to a terminal which is logged into by means of a user account included in the extracted user consumption information.

Particularly, the pushing server 120 acquires a user account from the extracted user consumption information, queries a terminal which is logged into by means of the user account, and sends the pushing message body to the queried terminal. The user can check the contents in the received pushing message body by means of the application installed on the terminal or the browser.

In one embodiment, S312 particularly comprises: a pushing channel type corresponding to the queried information pushing scheme is acquired; and the generated pushing message body is pushed to the terminal which is logged into by means of the user account included in the extracted user consumption information via a pushing channel corresponding to the acquired pushing channel type.

Particularly, the pushing server 120 extracts a corresponding pushing channel type from the queried information pushing scheme, wherein the pushing channel type includes at least one of a text message type and an application type. The pushing server 120 acquires a user account matching the extracted pushing channel type from the extracted user consumption information and pushes the pushing message body to a terminal which is logged into by means of the acquired user account via a pushing channel corresponding to the extracted pushing channel type. Wherein, if the extracted pushing channel type is the text message type, a user account matching the text message type is a phone number; and if the extracted pushing channel type is the application type, a user account matching the application type is a user account used for logging into an application.

In this embodiment, when it is monitored that there is, in the task message queue, an information pushing task added by the service server, user consumption information is extracted from the monitored information pushing task, and an information pushing scheme matching the extracted user consumption information is queried, thus ensuring that information is pushed according to a matching information pushing scheme. When the matching information pushing scheme is queried, a message pushing template corresponding to the queried information pushing scheme is acquired, and a

pushing message body is generated according to the extracted user consumption information and the acquired message pushing template, so that the generated pushing message body is targeted. A user account is acquired from the extracted user consumption information, and the targeted pushing message body is sent to a corresponding terminal which is logged into by means of the user account to ensure that the pushed pushing message body matches the user consumption information, thus improving the accuracy of information pushing.

As shown in FIG. 4, in one embodiment, S302 particularly comprises a step of monitoring a task message queue, and this step particularly comprises:

S402: a queue monitoring instruction uploaded by a terminal which is logged into by means of a pushing administrator account is received.

Particularly, a pushing administrator logs into a queue monitoring configuration page provided by the pushing server 120 by inputting a pushing administrator account to the terminal 110 and then inputs queue monitoring configuration information to the queue monitoring configuration page. Wherein, the queue monitoring configuration information includes a queue identifier, and at least one of analysis format identifiers of a service type, a queue server address and the information pushing task. The terminal 110 acquires the queue monitoring configuration information input to the queue monitoring configuration page, generates a queue monitoring instruction according to the queue monitoring configuration information, and sends the queue monitoring instruction to the pushing server 120. The pushing server 120 receives the queue monitoring instruction uploaded by the terminal 110.

S404: the queue identifier in the queue monitoring instruction is extracted.

Particularly, after receiving the queue monitoring instruction uploaded by the terminal 110, the pushing server 120 analyzes the queue monitoring instruction, extracts the queue monitoring configuration information in the queue monitoring instruction by analysis, and extracts the queue identifier from the queue monitoring configuration information.

S406: a task message queue corresponding to the extracted queue identifier is queried in the

queue server.

Particularly, multiple task message queues are established in the queue server 130, one application corresponds to one or more task message queues, and one task message queue corresponds to one application. The pushing server 120 extracts a queue server address in the queue monitoring configuration information and accesses the queue server 130 according to the queue server address. The pushing server 120 queries the task message queue in the queue server 130 according to the extracted queue identifier.

S408: an information pushing task, added by the service server, in the queried task message queue is monitored.

Particularly, after querying the task message queue, the pushing server 120 monitors whether there is, in the queried task message queue, an information pushing task added by the service server 140, wherein the information pushing task is generated by the service server 140 according to the user consumption information.

In this embodiment, the queried task message queue is monitored to ensure that a correct task message queue is monitored, thus improving the accuracy of queue monitoring.

As shown in FIG. 5, in one embodiment, S306 particularly comprises a step of querying an information pushing scheme, and this step particularly comprises:

S502: an application identifier and a message type identifier corresponding to various types of consumption information in the user consumption information are extracted.

Particularly, the user consumption information includes an application identifier and various types of consumption information, wherein the various types of consumption information are stored corresponding to a matching message type identifier. The pushing server 120 extracts the application identifier and the message type identifier corresponding to the various types of consumption information from the user consumption information.

S504: an information pushing scheme set corresponding to the application identifier is acquired.

Particularly, information pushing schemes and application identifiers are stored in the database of the pushing server 120, the information pushing schemes correspond to the application identifiers, one information pushing scheme corresponds to one application identifier, and one application identifier corresponds to one or more information pushing schemes. The pushing server 120 queries multiple information pushing schemes corresponding to the extracted application identifier in the database to obtain an information pushing scheme set corresponding to the extracted application identifier.

S506: an information pushing scheme matching the extracted message type identifier is queried in the acquired information pushing scheme set.

Particularly, different information pushing schemes correspond to different message type identifiers. The pushing server 120 queries the information pushing scheme matching the extracted message type identifier in the acquired information pushing scheme set.

In this embodiment, the information pushing scheme set is acquired according to the application identifier, so that the query scope of the information pushing scheme is narrowed. The information pushing scheme matching the message type identifier is queried in the acquired information pushing scheme set, so that the querying accuracy of the information pushing scheme is improved.

As shown in FIG. 6, in one embodiment, S310 particularly comprises a step of generating a pushing message body, and this step particularly comprises:

S602: an information identifier of to-be-added information is extracted from the acquired message pushing template.

Particularly, the message pushing template includes fixed information and an information identifier of to-be-added information. The pushing server 120 extracts the information identifier of the to-be-added information from the acquired message pushing template.

S604: to-be-added information matching the extracted information identifier is queried in the extracted user consumption information.

Particularly, after extracting the information identifier of the to-be-added information from the message pushing template, the pushing server 120 queries matching to-be-added information in the extracted user consumption information according to the extracted information identifier.

S606: the queried to-be-added information is added to the acquired message pushing template to generate a pushing message body.

Particularly, the pushing server 120 adds the queried to-be-added information to a position, corresponding to the information identifier, in the message pushing template, and after the queried to-be-added information is added to the message pushing template, a complete pushing message body is generated according to the added information and the fixed information in the message pushing template.

In this embodiment, to-be-added information corresponding to the information identifier is queried in the user consumption information according to the information identifier of to-be-added information in the message pushing template, and the queried to-be-added information is added to the message pushing template to generate a complete pushing message body to ensure that the pushing message body matches the user consumption information, thus improving the accuracy of the pushing message body and making the pushing message body more targeted.

In one embodiment, a pushing administrator inputs a pushing administrator account to the terminal 110 to log into a queue monitoring configuration page of the pushing server 120 and then inputs monitoring configuration information to the queue monitoring configuration page to send a queue monitoring instruction to the pushing server 120.

After receiving the queue monitoring instruction, the pushing server 120 extracts a queue identifier in the queue monitoring instruction and monitors a task message queue, corresponding to the extracted queue identifier, in the queue server 130 to determine whether there is, in the task message queue, an information pushing task added by the service server 140, wherein the information pushing task is generated by the service server 140 according to the user consumption information.

For instance, the user input the user account to the terminal 150 to log into a business transaction

page provided by the service server 140; and if the user purchases a product in the business transaction page, the service server 140 generates corresponding user consumption information, wherein the user consumption information includes an application identifier, an order number, the amount of consumption, a scheme matching value, the user account, a product identifier, and the like.

When monitoring that there is an information pushing task in the task message queue, the pushing server 120 extracts the user consumption information in the monitored information pushing task, the application identifier, the product identifier and the scheme matching value in the user consumption information are extracted, a corresponding information pushing scheme is queried in the database according to the application identifier and the product identifier, and whether the scheme matching value in the user consumption information is consistent with a scheme matching value in the information pushing scheme is checked.

When checking that the scheme matching value in the user consumption information is consistent with the scheme matching value in the information pushing scheme, the pushing server 120 extracts a message pushing template identifier in the information pushing scheme and acquires a message pushing template from the database according to the message pushing template identifier. The pushing server 120 extracts an information identifier of to-be-added information in the message pushing template, queries, in the user consumption information, to-be-added information corresponding to the information identifier, and adds the queried to-be-added information to the message pushing template to obtain a pushing message body. For instance, the information identifier of the to-be-added information is an order number, a user account, the amount of consumption, or the like. The pushing server 120 extracts the user account in the user consumption information and pushes the pushing message body to a terminal which is logged into by means of the extracted user account.

As shown in FIG. 7, an apparatus 700 for executing an information pushing task is provided in on embodiment. The apparatus particularly comprises a queue monitoring module 702, an information extraction module 704, a scheme query module 706, a template acquisition module 708, a message body generation module 710, and a message body pushing module 712.

The queue monitoring module 702 is used for monitoring an information pushing task, added by a service server, in a task message queue, wherein the information pushing task is generated by the service server according to user consumption information.

The information extraction module 704 is used for extracting the user consumption information from the monitored information pushing task.

The scheme query module 706 is used for querying an information pushing scheme matching the extracted user consumption information.

The template acquisition module 708 is used for acquiring a message pushing template corresponding to the queried information pushing scheme.

The message body generation module 710 is used for generating a pushing message body according to the extracted user consumption information and the acquired message pushing template.

The message body pushing module 712 is used for pushing the generated pushing message body to a terminal which is logged into by means of a user account included in the extracted user consumption information.

In one embodiment, the message body pushing module 712 is also used for acquiring a pushing channel type corresponding to the queried information pushing scheme and pushing the generated pushing message body to the terminal which is logged into by means of the user account included in the extracted user consumption information via a pushing channel corresponding to the acquired pushing channel type.

In this embodiment, when it is monitored that there is, in the task message queue, an information pushing task added by a service server, user consumption information is extracted from the monitored information pushing task, and an information pushing scheme matching the extracted user consumption information is queried, thus ensuring that information is pushed according to a matching information pushing scheme. When the matching information pushing scheme is queried, a message pushing template corresponding to the queried information pushing scheme is acquired, and a

pushing message body is generated according to the extracted user consumption information and the acquired message pushing template, so that the generated pushing message body is targeted. A user account is acquired from the extracted user consumption information, and the targeted pushing message body is sent to a corresponding terminal which is logged into by means of the user account to ensure that the pushed pushing message body matches the user consumption information, thus improving the accuracy of information pushing.

As shown in FIG. 8, in one embodiment, the queue monitoring module 702 particularly comprises a monitoring instruction reception module 702a, a queue identifier extraction module 702b, a task queue query module 702c, and a pushing task monitoring module 702d.

The monitoring instruction reception module 702a is used for receiving a queue monitoring instruction uploaded by a terminal which is logged into by means of a pushing administrator account.

The queue identifier extraction module 702b is used for extracting a queue identifier in the queue monitoring instruction.

The task queue query module 702c is used for querying, in a queue server, a task message queue corresponding to the extracted queue identifier.

The pushing task monitoring module 702d is used for monitoring an information pushing task, added by the service server, in the acquired task message queue.

In this embodiment, when a queue monitoring instruction uploaded by the terminal is received, a task message queue is queried in the queue server according to a queue identifier carried by the queue monitoring instruction, and the queried task message queue is monitored, thus, ensuring that a correct task message queue is monitored, and improving the accuracy of queue monitoring.

As shown in FIG. 9, in one embodiment, the scheme query module 706 particularly comprises a type identifier extraction module 706a, a pushing scheme acquisition module 706b, and a pushing scheme query module 706c.

The type identifier extraction module 706a is used for extracting an application identifier and a

message type identifier corresponding to various types of consumption information in the user consumption information.

The pushing scheme acquisition module 706b is used for acquiring an information pushing scheme set corresponding to the application identifier.

The pushing scheme query module 706c is used for querying, in the acquired information pushing scheme set, an information pushing scheme matching the extracted message type identifier.

In this embodiment, an application identifier and a message type identifier corresponding to various types of consumption information in the user consumption information are extracted, and an information pushing scheme set is acquired according to the application identifier, so that the query scope of the information pushing scheme is narrowed. An information pushing scheme matching the message type identifier is queried in the acquired information pushing scheme set, so that the querying accuracy of the information pushing scheme is improved.

As shown in FIG. 10, in one embodiment, the message body generation module 710 particularly comprises an identifier extraction module 710a, an information query module 710b, and an information adding module 710c.

The identifier extraction module 710a is used for extracting an information identifier of to-be-added information from the acquired message pushing template.

The information query module 701b is used for querying, in the extracted user consumption information, to-be-added information matching the extracted information identifier.

The information adding module 710c is used for adding the queried to-be-added information to the acquired message pushing template to generate a pushing message body.

In this embodiment, to-be-added information corresponding to an information identifier of to-be-added information in the message pushing template is queried in the user consumption information, the queried to-be-added information is added to the message pushing template, and a complete pushing message body is generated according to added information and fixed information

in the message pushing template to ensure that the pushing message body matches the user consumption information, thus improving the accuracy of the pushing message body and making the pushing message body more targeted.

A computer device comprises a memory, a processor, and a computer program which is stored in the memory and is to be run on the processor. The processor executes the computer program to implement the following steps: monitoring an information pushing task, added by a service server, in a task message queue, wherein the information pushing task is generated by the service server according to user consumption information; extracting the user consumption information from the monitored information pushing task; querying an information pushing scheme matching the extracted user consumption information; acquiring a message pushing template corresponding to the queried information pushing scheme; generating a pushing message body according to the extracted user consumption information and the acquired message pushing template; and pushing the generated pushing message body to a terminal which is logged into by means of a user account included in the extracted user consumption information.

In one embodiment, the step of monitoring an information pushing task, added by a service server, in the task message queue comprises: receiving a queue monitoring instruction uploaded by a terminal which is logged into by means of a pushing administrator account; extracting a queue identifier in the queue monitoring instruction; querying, in a queue server, a task message queue corresponding to the extracted queue identifier; and monitoring an information pushing task, added by the service server, in the queried task message queue.

In one embodiment, the step of querying an information pushing scheme matching the extracted user consumption information comprises: extracting an application identifier and a message type identifier corresponding to various types of consumption information in the user consumption information; acquiring an information pushing scheme set corresponding to the application identifier; and querying, in the acquired information pushing scheme set, an information pushing scheme matching the extracted message type identifier.

In one embodiment, the step of generating a pushing message body according to the extracted user consumption information and the acquired message pushing template comprises: extracting an information identifier of to-be-added information from the acquired message pushing template; querying, in the extracted user consumption information, to-be-added information matching the extracted information identifier; and adding the queried to-be-added information to the message pushing template to generate a pushing message body.

In one embodiment, the step of pushing the generated pushing message body to a terminal which is logged into by means of a user account included in the extracted user consumption information comprises: acquiring a pushing channel type corresponding to the queried information pushing scheme; and pushing the generated pushing message body to the terminal which is logged into by means of the user account included in the extracted user consumption information via a pushing channel corresponding to the acquired pushing channel.

In this embodiment, when it is monitored that there is, in the task message queue, an information pushing task added by a service server, user consumption information is extracted from the monitored information pushing task, and an information pushing scheme matching the extracted user consumption information is queried, thus ensuring that information is pushed according to a matching information pushing scheme. When the matching information pushing scheme is queried, a message pushing template corresponding to the queried information pushing scheme is acquired, and a pushing message body is generated according to the extracted user consumption information and the acquired message pushing template, so that the generated pushing message body is targeted. A user account is acquired from the extracted user consumption information, and the targeted pushing message body is sent to a corresponding terminal which is logged into by means of the user account to ensure that the pushed pushing message body matches the user consumption information, thus improving the accuracy of information pushing.

One or more storage media have a computer executable instruction stored therein, wherein the computer executable instruction is executed by one or more processors to implement the following steps: monitoring an information pushing task, added by a service server, in a task message queue,

wherein the information pushing task is generated by the service server according to user consumption information; extracting the user consumption information from the monitored information pushing task; querying an information pushing scheme matching the extracted user consumption information; acquiring a message pushing template corresponding to the queried information pushing scheme; generating a pushing message body according to the extracted user consumption information and the acquired message pushing template; and pushing the generated pushing message body to a terminal which is logged into by means of a user account included in the extracted user consumption information.

In one embodiment, the step of monitoring an information pushing task, added by a service server, in a task message queue comprises: receiving a queue monitoring instruction uploaded by a terminal which is logged into by means of a pushing administrator account; extracting a queue identifier in the queue monitoring instruction; querying, in a queue server, a task message queue corresponding to the extracted queue identifier; and monitoring an information pushing task, added by the service server, in the queried task message queue.

In one embodiment, the step of querying an information pushing scheme matching the extracted user consumption information comprises: extracting an application identifier and a message type identifier corresponding to various types of consumption information in the user consumption information; acquiring an information pushing scheme set corresponding to the application identifier; and querying, in the acquired information pushing scheme set, an information pushing scheme matching the extracted message type identifier.

In one embodiment, the step of generating a pushing message body according to the extracted user consumption information and the acquired message pushing template comprises: extracting an information identifier of to-be-added information from the acquired message pushing template; querying, in the extracted user consumption information, to-be-added information matching the extracted information identifier; and adding the queried to-be-added information to the message pushing template to generate a pushing message body.

In one embodiment, the step of pushing the generated pushing message body to a terminal which is logged into by means of a user account included in the extracted user consumption information comprises: acquiring a pushing channel type corresponding to the queried information pushing scheme; and pushing the generated pushing message body to the terminal which is logged into by means of the user account included in the extracted user consumption information via a pushing channel corresponding to the acquired pushing channel.

In one embodiment, when it is monitored that there is, in the task message queue, an information pushing task added by a service server, user consumption information is extracted from the monitored information pushing task, and an information pushing scheme matching the extracted user consumption information is queried, thus ensuring that information is pushed according to a matching information pushing scheme. When the matching information pushing scheme is queried, a message pushing template corresponding to the queried information pushing scheme is acquired, and a pushing message body is generated according to the extracted user consumption information and the acquired message pushing template, so that the generated pushing message body is targeted. A user account is acquired from the extracted user consumption information, and the targeted pushing message body is sent to a corresponding terminal which is logged into by means of the user account to ensure that the pushed pushing message body matches the user consumption information, thus improving the accuracy of information pushing.

Those ordinarily skilled in the art would appreciate that part or all of the procedures in above embodiments of the method can be implemented by means of related hardware instructed by the computer program which is stored in a computer readable storage medium. When the computer program is executed, the procedures in all the above embodiments of the method can be implemented. Wherein, the aforementioned storage medium is a nonvolatile storage medium such as a disk, a CD, or a read-only memory (ROM), or is a random access memory (RAM).

The technical characteristics of the above-mentioned embodiments can be freely combined. For the sake of a brief description, not all possible combinations of the technical characteristics in the above-mentioned embodiments are illustrated. Clearly, all possible combinations of these technical

characteristics achieved without causing contradictions should fall within the scope of this specification.

The above-mentioned embodiments which are specifically described in detail are only several illustrative ones of this application, and should not be regarded as limitations of the patent scope of the invention. It should be noted that various transformations and improvements can be made by those ordinarily skilled in the art without deviating from the concept of this application, and all these transformations and improvements should also fall within the protection scope of this application. Therefore, the patent protection scope of this application should be subject to the appended claims.

CLAIMS

1. A method for executing an information pushing task, comprising:

monitoring an information pushing task, added by a service server, in a task message queue, wherein the information pushing task is generated by the service server according to user consumption information;

extracting the user consumption information from the monitored information pushing task;

querying an information pushing scheme matching the extracted user consumption information;

acquiring a message pushing template corresponding to the queried information pushing scheme;

generating a pushing message body according to the extracted user consumption information and the acquired message pushing template; and

pushing the generated pushing message body to a terminal which is logged into by means of a user account included in the extracted user consumption information.

2. The method according to Claim 1, wherein the step of monitoring an information pushing task, added by a service server, in a task message queue comprises: receiving a queue monitoring instruction uploaded by a terminal which is logged into by means of a pushing administrator account; extracting a queue identifier in the queue monitoring instruction; querying, in a queue server, a task message queue corresponding to the extracted queue identifier; and monitoring an information pushing task, added by the service server, in the queried task message queue.

3. The method according to Claim 1, wherein the step of querying an information pushing scheme matching the extracted user consumption information comprises: extracting an application identifier and a message type identifier corresponding to various types of consumption information in the user consumption information; acquiring an information pushing scheme set corresponding to the application identifier; and querying, in the acquired information pushing scheme set, an information pushing scheme matching the extracted message type identifier.

4. The method according to Claim 1, wherein the step of generating a pushing message body according to the extracted user consumption information and the acquired message pushing template comprises: extracting an information identifier of to-be-added information from the acquired message pushing template; querying, in the extracted user consumption information, to-be-added information matching the extracted information identifier; and adding the queried to-be-added information to the message pushing template to generate a pushing message body.

5. The method according to Claim 1, wherein the step of pushing the generated pushing message body to a terminal which is logged into by means of a user account included in the extracted user consumption information comprises: acquiring a pushing channel type corresponding to the queried information pushing scheme; and pushing the generated pushing message body to the terminal which is logged into by means of the user account included in the extracted user consumption information via a pushing channel corresponding to the acquired pushing channel.

6. An apparatus for executing an information pushing task, comprising:

a queue monitoring module used for monitoring an information pushing task, added by a service server, in a task message queue, wherein the information pushing task is generated by the service server according to user consumption information;

an information extraction module used for extracting the user consumption information from the monitored information pushing task;

a scheme query module used for querying an information pushing scheme matching the extracted user consumption information;

a template acquisition module used for acquiring a message pushing template corresponding to the queried information pushing scheme;

a message body generation module used for generating a pushing message body according to the extracted user consumption information and the acquired message pushing template; and

a message body pushing module used for pushing the generated pushing message body to a

terminal which is logged into by means of a user account included in the extracted user consumption information.

7. The apparatus according to Claim 6, wherein the queue monitoring module comprises:

a monitoring instruction reception module used for receiving a queue monitoring instruction uploaded by a terminal which is logged into by means of a pushing administrator account; a queue identifier extraction module used for extracting a queue identifier in the queue monitoring instruction;

a task queue query module used for querying, in a queue server, a task message queue corresponding to the extracted queue identifier; and

a pushing task monitoring module used for monitoring an information pushing task, added by the service server, in the queried task message queue.

8. The apparatus according to Claim 6, wherein the scheme query module comprises:

a type identifier extraction module used for extracting an application identifier and a message type identifier corresponding to various types of consumption information in the user consumption information;

a pushing scheme acquisition module used for acquiring an information pushing scheme set corresponding to the application identifier; and

a pushing scheme query module used for querying, in the acquired information pushing scheme set, an information pushing scheme matching the extracted message type identifier.

9. A computer device, comprising a memory, a processor, and a computer program which is stored in the memory and is to be run on the processor, and the processor executes the computer program to implement the following steps:

monitoring an information pushing task, added by a service server, in a task message queue, wherein the information pushing task is generated by the service server according to user

consumption information;

extracting the user consumption information from the monitored information pushing task;

querying an information pushing scheme matching the extracted user consumption information;

acquiring a message pushing template corresponding to the queried information pushing scheme;

generating a pushing message body according to the extracted user consumption information and the acquired message pushing template; and

pushing the generated pushing message body to a terminal which is logged into by means of a user account included in the extracted user consumption information.

10. The computer device according to Claim 9, wherein the step of monitoring an information pushing task, added by a service server, in a task message queue comprises: receiving a queue monitoring instruction uploaded by a terminal which is logged into by means of a pushing administrator account; extracting a queue identifier in the queue monitoring instruction; querying, in a queue server, a task message queue corresponding to the extracted queue identifier; and monitoring an information pushing task, added by the service server, in the queried task message queue.

11. The computer device according to Claim 9, wherein the step of querying an information pushing scheme matching the extracted user consumption information comprises: extracting an application identifier and a message type identifier corresponding to various types of consumption information in the user consumption information; acquiring an information pushing scheme set corresponding to the application identifier; and querying, in the acquired information pushing scheme set, an information pushing scheme matching the extracted message type identifier.

12. The computer device according to Claim 9, wherein the step of generating a pushing message body according to the extracted user consumption information and the acquired message pushing template comprises: extracting an information identifier of to-be-added information from the acquired message pushing template; querying, in the extracted user consumption information,

to-be-added information matching the extracted information identifier; and adding the queried to-be-added information to the message pushing template to generate a pushing message body.

13. The computer device according to Claim 9, wherein the step of pushing the generated pushing message body to a terminal which is logged into by means of a user account included in the extracted user consumption information comprises: acquiring a pushing channel type corresponding to the queried information pushing scheme; and pushing the generated pushing message body to the terminal which is logged into by means of the user account included in the extracted user consumption information via a pushing channel corresponding to the acquired pushing channel.

14. One or more storage media, having a computer executable instruction stored therein, wherein the computer executable instruction is executed by one or more processors to implement the following steps:

monitoring an information pushing task, added by a service server, in a task message queue, wherein the information pushing task is generated by the service server according to user consumption information;

extracting the user consumption information from the monitored information pushing task;

querying an information pushing scheme matching the extracted user consumption information;

acquiring a message pushing template corresponding to the queried information pushing scheme;

generating a pushing message body according to the extracted user consumption information and the acquired message pushing template; and

pushing the generated pushing message body to a terminal which is logged into by means of a user account included in the extracted user consumption information.

15. The storage medium according to Claim 14, wherein the step of monitoring an information pushing task, added by a service server, in a task message queue comprises: receiving a queue monitoring instruction uploaded by a terminal which is logged into by means of a pushing

administrator account; extracting a queue identifier in the queue monitoring instruction; querying, in a queue server, a task message queue corresponding to the extracted queue identifier; and monitoring an information pushing task, added by the service server, in the queried task message queue.

16. The storage medium according to Claim 14, wherein the step of querying an information pushing scheme matching the extracted user consumption information comprises: extracting an application identifier and a message type identifier corresponding to various type of consumption information in the user consumption information; acquiring an information pushing scheme set corresponding to the application identifier; and querying, in the acquired information pushing scheme set, an information pushing scheme matching the extracted message type identifier.

17. The storage medium according to Claim 14, wherein the step of generating a pushing message body according to the extracted user consumption information and the acquired message pushing template comprises: extracting an information identifier of to-be-added information from the acquired message pushing template; querying, in the extracted user consumption information, to-be-added information matching the extracted information identifier; and adding the queried to-be-added information to the message pushing template to generate a pushing message body.

18. The storage medium according to Claim 14, wherein the step of pushing the generated pushing message body to a terminal which is logged into by means of a user account included in the extracted user consumption information comprises: acquiring a pushing channel type corresponding to the queried information pushing scheme; and pushing the generated pushing message body to the terminal which is logged into by means of the user account included in the extracted user consumption information via a pushing channel corresponding to the acquired pushing channel.