

TRANSACTION PROCESSING METHOD AND SYSTEM

The present application claims priority to Chinese Patent Application No. 201510320202.9 filed on June 11, 2015 and entitled "TRANSACTION PROCESSING METHOD AND SYSTEM", which is incorporated herein by reference in its entirety.

Technical Field

The present application relates to the technical field of Internet technologies, and in particular, to a transaction processing method and system.

Background Art

The coming of the Internet age results in broad applications of the Internet in people's daily study, work, and life. Various daily transactions of people may be presented via a network.

Generally, a network is provided with multiple nodes and node groups. A node group is a correlated group of multiple nodes, and a node group is correlated to nodes included therein. Moreover, a same node may establish the correlation with multiple node groups to participate in transaction interactions of the multiple node groups.

Transaction interactions of a node group may consume resources, and the consumed resources generally come from nodes that are correlated to the node group. In order to ensure sustainability of transaction interactions of a node group, it is necessary to apply for resources from correlated nodes according to resources consumed by each transaction interaction, which causes low efficiency in the transaction interactions of the node group.

Summary of the Invention

Embodiments of the present application provide a transaction processing method and system to solve the problem of low efficiency in transaction interactions of a node group in the prior art.

A transaction processing method provided in the embodiments of the present application includes:

receiving a correlation request for correlating an object node to a node group;

initiating a resource acquisition request preset by the node group to the object node;

querying creditable resources of the object node, and verifying whether the creditable resources include a target resource required by the resource acquisition request; and

when the verification result is yes, extracting the target resource from the creditable resources of the object node, and correlating the object node to the node group.

5 A transaction processing method provided in the embodiments of the present application includes:

 sending a correlation request to an object node, the correlation request including a resource acquisition request preset by a node group;

 querying creditable resources of the object node, and verifying whether the creditable resources
10 include a target resource required by the resource acquisition request; and

 when the verification result is yes, extracting the target resource from the creditable resources of the object node, and correlating the object node to the node group.

 A transaction processing method provided in the embodiments of the present application includes:

15 receiving a correlation request for correlating an object user to a user group;

 initiating a payment request preset by the user group to the object user;

 querying an available amount of money of an account of the object user, and verifying whether the available amount of money is greater than or equal to a target amount of money required by the payment request; and

20 when the verification result is yes, extracting the target amount of money from the available amount of money of the account of the object user, and correlating the object user to the user group.

 A transaction processing method provided in the embodiments of the present application includes:

 sending a correlation request to an object user, the correlation request including a payment
25 request preset by a user group;

 querying an available amount of money of an account of the object user, and verifying whether the available amount of money is greater than or equal to a target amount of money required by

the payment request; and

when the verification result is yes, extracting the target amount of money from the available amount of money of the account of the object user, and correlating the object user to the user group.

A transaction processing system provided in the embodiments of the present application
5 includes:

a receiving unit configured to receive a correlation request for correlating an object node to a node group;

a sending unit configured to initiate a resource acquisition request preset by the node group to the object node;

10 a verification unit configured to query creditable resources of the object node, and verify whether the creditable resources include a target resource required by the resource acquisition request; and

a correlation unit configured to, when the verification result is yes, extract the target resource from the creditable resources of the object node, and correlate the object node to the node group.

15 A transaction processing system provided in the embodiments of the present application includes:

a sending unit configured to send a correlation request to an object node, the correlation request including a resource acquisition request preset by a node group;

20 a verification unit configured to query creditable resources of the object node, and verify whether the creditable resources include a target resource required by the resource acquisition request; and

a correlation unit configured to, when the verification result is yes, extract the target resource from the creditable resources of the object node, and correlate the object node to the node group.

25 A transaction processing system provided in the embodiments of the present application includes:

a receiving unit configured to receive a correlation request for correlating an object user to a user group;

a sending unit configured to initiate a payment request preset by the user group to the object user;

a verification unit configured to query an available amount of money of an account of the object user, and verify whether the available amount of money is greater than or equal to a target amount
5 of money required by the payment request; and

a correlation unit configured to, when the verification result is yes, extract the target amount of money from the available amount of money of the account of the object user, and correlate the object user to the user group.

A transaction processing system provided in the embodiments of the present application
10 includes:

a sending unit configured to send a correlation request to an object user, the correlation request including a payment request preset by a user group;

a verification unit configured to query an available amount of money of an account of the object user, and verify whether the available amount of money is greater than or equal to a target amount
15 of money required by the payment request; and

a correlation unit configured to, when the verification result is yes, extract the target amount of money from the available amount of money of the account of the object user, and correlate the object user to the user group.

The embodiments of the present application provide a transaction processing method and
20 system. In the method, when a correlation request for correlating an object node to a node group is received, a resource acquisition request preset by the node group may be initiated to the object node, creditable resources of the object node are queried, and it is verified whether the creditable resources include a target resource required by the resource acquisition request. When the verification result is yes, the target resource is extracted from the creditable resources of the object
25 node, and the object node is correlated to the node group. In this way, when carrying out transaction interactions, a node group may use target resources extracted from correlated nodes, with no need to apply for resources from the correlated nodes, thus improving efficiency in transaction

interactions of the node group.

Brief Description of the Drawings

The accompanying drawings described herein are used to provide further understanding of the present application, and constructs a part of the present application. Exemplary embodiments of the present application and illustrations thereof are used to explain the present application, and are not intended to form improper limitation on the present application. In the accompanying drawings:

FIG. 1a is an architectural diagram of an exemplary system to which an embodiment of the present application is applicable;

FIG. 1b is an architectural diagram of an exemplary system to which an embodiment of the present application is applicable;

FIG. 1 is a flowchart of a transaction processing method according to an embodiment of the present application;

FIG. 2 is a flowchart of a transaction processing method according to an embodiment of the present application;

FIG. 3 is a flowchart of a transaction processing method according to an embodiment of the present application;

FIG. 4 is a flowchart of a transaction processing method according to an embodiment of the present application;

FIG. 5 is a flowchart of a transaction processing method according to an embodiment of the present application;

FIG. 6 is a flowchart of a transaction processing method according to an embodiment of the present application;

FIG. 7 is a modular diagram of a transaction processing system according to an embodiment of the present application; and

FIG. 8 is a modular diagram of a transaction processing system according to an embodiment of the present application.

Detailed Description

To make objectives, technical solutions and advantages of the present application more comprehensible, technical solutions of the present application are described clearly and completely through specific embodiments of the present application and corresponding accompanying drawings. Apparently, the described embodiments are merely some of embodiments of the present application, instead of all embodiments. Based on the embodiments of the present application, all other embodiments derived by a person of ordinary skill in the art without any creative effort shall fall within the protection scope of the present application.

The method and system described in the text may enable network nodes to establish a group according to a resource attribute condition. Interactions among nodes in the group is based on a resource admittance threshold, and a consumption verification solution of resources in the group is achieved by means of resource authorization. Therefore, transaction interactions between nodes in the group and transaction interactions with a node out of the group or with another node group may be realized.

A network in the text may be a social network, a payment network, a network combining the two, or a structure that is formed after adaptive improvements or changes conducted on the basis of a conventional network such as the social network and the payment network and is applicable to network applications. Such a social network may be, for example, applicable to FACEBOOK, TWITTER, YOUTUBE, LINKEDIN, Wechat, Weibo, and so on, or other instant messaging networks. Such a payment network may be applicable to a payment network such as paypal, AlipayTM, etc. Moreover, functions of the payment network and the social network may be superimposed. The superimposition of functions may require superimposition and integration of data representing real world properties.

In an implementable application, for example, a network node has both a social attribute and a payment attribute. The social network may invest a node with basic description information including, for example, person-related basic attributes, specifically including, for example, person-related social relationship attributes between persons and between a person and an organization in addition to person-related basic natural attributes. The payment network may invest a node with

basic payment description information including, for example, an account and virtual currencies or an equivalent corresponding thereto, or even a direct coupon that represents real world currencies. The virtual currencies or equivalent may have a certain conversion relationship with the coupon, and therefore may represent its wealth attribute in a network world in a manner of being correlated to the network node. By integrating the social network and the payment network, a network node having a social relationship may be enabled to perform a virtual function of payment.

FIG. 1a shows exemplary system architecture applicable to the text.

In the system architecture 100, various network nodes may implement information communication via a network, thereby achieving interaction and data processing. The system architecture 100 may include an operation server 105 that performs data communication with one or more client terminals 106 via a network 112, and a database 115 that can be integrated in the operation server 105 or independent of the operation server 105. The operation server 105 may correspond to a service platform of a social network, or correspond to a service platform of a payment network. In some cases, for example, in a network that accomplishes payment by means of social network integration, such a social network platform and such a payment network platform may be integrated.

Each network 112 may include a wired or wireless telecommunication apparatus. A network apparatus on which the client terminal 106 is based may exchange data by using the wired or wireless telecommunication apparatus. For example, each network 112 may include a local area network ("LAN"), a wide area network ("WAN"), an intranet, the Internet, a mobile phone network, a virtual private network (VPN), a cellular or another mobile communication network, Bluetooth, NFC, or any combination thereof. In the discussion of an exemplary implementation, it should be appreciated that terms "data" and "information" may be interchanged in the text to refer to texts, images, audios, videos, or information of any other form existing in a computer-based environment.

A network apparatus on which each client terminal 106 is based may include an apparatus that has a communication module capable of sending and receiving data via the network 112. For

example, the network apparatus on which each client terminal 106 is based may include a server, a desktop computer, a laptop computer, a tablet computer, a smart phone, a hand-held computer, a personal digital assistant ("PDA"), or any other wired or wireless processor driver. In an exemplary implementation depicted in FIG. 1a, the network apparatus on which the client terminal 106 is based may be operated respectively by a final user or consumer, a possible counterparty user, a publisher of a social network system, and an operator waiting for payment.

A user (including an individual or an organization) may use an application such as a webpage browser application or an independent application, to view, download, upload, or access, in other manners, a file or web page via the network 112. The network includes a wired or wireless telecommunication system or apparatus. The network apparatuses (including the apparatuses 105 and 106) may exchange data by using the wired or wireless telecommunication apparatus. For example, the network 112 may include a local area network ("LAN"), a wide area network ("WAN"), an intranet, the Internet, a storage area network (SAN), a personal area network (PAN), a metropolitan area network (MAN), a wireless local area network (WLAN), a virtual private network (VPN), a cellular or another mobile communication network, Bluetooth, NFC or any combination thereof, or any other suitable architecture or system that contributes to communication of signals, data and/or messages. In the discussion of an exemplary implementation, it should be appreciated that terms "data" and "information" may be interchanged in the text to refer to texts, images, audios, videos, or information of any other form existing in a computer-based environment.

An application of a web page browser application or independent application may interact with a web page server (or another server, such as a social platform and a payment platform) connected to the network 112.

The network apparatus on which each client terminal 106 is based may be provided with a digital wallet application module in the form of software, hardware, or even a combination of software and hardware. The digital wallet may cover any application, hardware, software, or process for helping the client terminal 106 accomplish a purchasing transaction. The digital wallet may be separated from and interact with the web page browser application, or may be specifically

implemented as a supporting application of the web page browser application. As a supporting application, the digital wallet is executed in the web page browser application. In other words, the digital wallet may be an application embedded in the web page browser application. If the digital wallet is separated from the web page browser application, the digital wallet may access the network 112 via any available communications technology.

The client terminal 106 may provide or acquire one or more contact applications according to user information carried. The contact application may be any program or application of a user contact list that is installed in the client terminal 106 and used for maintaining social network accessibility. An instance of the contact application may include, but is not limited to, an email application, a short message application, instant messaging, a calendar invitation list, or a contact database such as OUTLOOK or ACT, or a friend (or classified friend, stranger, blacklist, or the like) providing program/interface/list/menu of social software, which may include an online state, an offline state, an invisible state, a busy state, or even a managed state. Contacts in the contact application may be ranked according to priorities on the basis of various factors. The factors include, for example, a communication frequency or a social relationship with the user carried by the client terminal 106, the number of contact applications in which a particular contact appears, or any other priority ranking factor that can be extracted from the application.

In the system architecture 100, for example, in a network that accomplishes payment by means of social network integration, such a social network platform and such a payment network platform may be integrated. Then, the server 105 may have functions of a server in the social network. At this time, the social network server 105 may represent a computer-implemented system which is used by the social network system to manage a social website and use all configuration files and communities of the social website. The social network may represent any web page-based community that allows a user to interact, via the Internet, with other users generally having common interests or common relationships. An instance of a social network that the client terminal 106 may join or interact with is provided.

The social network server 105 may provide, to the client terminal 106, a member list of an

online community of a user of the client terminal. The social network system may rank, according to priorities, relationships between each community member and the user of the client terminal 106. This may be determined by factors of a structure applicable to each specific social network system. For example, a social network system such as FACEBOOK can classify community members into "friends" or "friends of friends", and LINKEDIN may classify members into first level contacts, second level contacts, or third level contacts.

The social network system server 105 may communicate with the client terminal 106 via any available technology. These technologies may include, but are not limited to, an Internet connection via the network 112, email, short message, instant messaging, or other suitable communications technologies. The social network system may include a data storage unit 115 accessible to the social network server 105. The data storage unit 115 may include one or more physical computer readable storage devices.

In the system architecture 100, for example, in a network that accomplishes payment by means of social network integration, such a social network platform and such a payment network platform may be integrated. Then, the server 105 may have functions of a server in the payment network. At this time, the payment network server 105 may represent a computer-implemented system which is used by the payment network system to manage a payment platform, and use all configuration files of the payment platform as well as storage of relationship data and payment data. The payment network may represent any web page-based community that allows a user to interact, via the Internet, with users generally having a common point in terms of payment/purchasing/concerned/favorite.

Different client terminals may be counterparties of each other. Any of the counterparties may represent an individual or organization. In this case, to-be-read data/relationship or to-be-executed processing that is involved in a transaction/payment process may need to be acquired from the connected database 115. To-be-written data/relationship or a processing result that is involved in the transaction/payment process is stored in the connected database 115.

In FIG. 1a, a computing device 103 is integrated with or separated from the operation server

105. Especially, in the latter situation, the computing device 103 and the operation server 105 may generally be connected via an intranet or a private network, or may be connected via an encrypted public network. Particularly, when the computing device 103 is integrated with the operation server 105, they may be connected by using an internal bus that is more efficient and has a faster transmission speed. The computing device 103, when being integrated or separated, can access the database 115 directly (not shown) or via the operation server 105.

The computing device 103 is properly programmed, and such an instruction can be used to control implementation of the method in the present application. Particularly, when the computing device 103 is integrated, a transaction processed by the computing device 103 may be considered as processing of the operation server 105, without the need of being particularly distinguished.

FIG. 1b shows system architecture in the separated social network and payment network. The system architecture 101 may include operation servers 107 and 109 that perform data communication with one or more client terminals 106 via the network 112, a computing environment 108 that can be integrated in or independent of the operation server 107, and a computing environment 110 that can be integrated in or independent of the operation server 109. In an instance, the operation server 107 may correspond to a service platform of the social network, and the operation server 109 may correspond to a service platform of the payment network. A corresponding database 117 may provide or store required social network data and operation data. A corresponding database 118 may provide or store required payment network data and operation data. Other attributes are similar to the above description corresponding to FIG. 1a, and are not repeated.

Referring to FIG. 1, an embodiment of a transaction processing method according to the present application is introduced in the following. In this embodiment, the transaction processing method may include the following steps:

S110: An initial node sends a group establishment request to a server, the group establishment request including a resource acquisition request.

The initial node may be any node in a network. That is, any node in the network may send a

group establishment request to the server. Correspondingly, the node sending the group establishment request may be used as an initial node that correlates with a corresponding node group first.

5 The resource acquisition request may be a request that is set by the initial node and needs to allow the server to extract resources from an established node group when the initial node is correlated with the node group. An object to which the resource acquisition request is oriented may include the initial node and other nodes applying for being correlated with the established node group.

S111: The server generates a group identifier in response to the group establishment request,
10 and correlates the generated group identifier with the resource acquisition request.

The group identifier may be used for identifying a correlation relationship between a node and a corresponding node group. In some embodiments, different node groups in the network may have different group identifiers, to identify node groups correlated with the nodes in the network.

After the server correlates the group identifier with the resource acquisition request, the
15 resource acquisition request may be uniquely corresponding to the group identifier. In other words, it is equivalent to that the resource acquisition request is preset by a node group corresponding to the group identifier.

S112: An object node sends, to the server, a correlation request for correlating to the node group.

The object node may be any node in the network except for the initial node.

20 S113: The server receives the correlation request for correlating the object node to the node group.

S114: The server initiates a preset resource acquisition request to the object node.

After receiving the correlation request for correlating the object node to the node group, the server may call the resource acquisition request correlated with the node group, and request to
25 extract resources from the object node.

S115: The server queries creditable resources of the object node, and verifies whether the creditable resources include a target resource required by the resource acquisition request.

S116: When the verification result is yes, the server extracts the target resource from the creditable resources of the object node, and correlates the object node to the node group.

In this embodiment, when correlating the object node to the node group, the server may correspondingly inject the target resource extracted from the object node into a shared resource pool of the node group. The shared resource pool may refer to a resource pool corresponding to the node establishing the group, for example, the above initial node. That is, resources acquired by nodes in all correlation requests are injected into the resource pool of the initial node, or a resource pool of an intermediate node, for example, an intermediate user established temporarily.

The initial node may store use information of resources in the shared resource pool, for being queried by nodes correlated to the node group.

The initial node may further initiate a resource acquisition request to the nodes correlated to the node group. For example, when remaining resources in the shared resource pool are less than a set threshold, a primary node may further initiate a resource acquisition request to the nodes correlated to the node group.

The initial node may further open or transfer, to other nodes correlated to the node group, the privilege of storing the use information of resources in the shared resource pool and the privilege of further initiating a resource acquisition request to the nodes correlated to the node group.

In this embodiment, the initial node and the object node may be both instant messaging nodes. The established node group may be an instant messaging group. Requests such as the correlation request and the resource acquisition request may be transmitted between the initial node and the server and between the object node and the server by using instant messages.

Specifically, in an implementation, for example, in an instant messaging system, an instant messaging server may, based on the above steps, carry out operations such as establishing a group and allowing users to join the group. Specifically, in steps S110 and S111, the instant messaging server may receive a group establishment operation of a user, supposing a user A (corresponding to the above initial node), on a client terminal thereof. The group establishment operation may include an operation of acquiring funds of the user A (corresponding to the above resource

acquisition, which may be considered as a condition of joining the group). The instant messaging server may establish a group for the user A, generate a group ID, and generate a corresponding QR code or other information. Suppose that the group is a group 1 (that is, the above node group). In steps S112 to S116, other users may join the group 1 by, for example, inputting the group ID or scanning the group QR code. For example, a user B may join the group 1 by scanning the QR code (that is, sending a correlation request to the server). In this way, the instant messaging server requests for acquiring funds from the user B based on the correlation request and based on the fund operation of the group 1. After the user B agrees with the fund acquisition, the instant messaging server may extract corresponding funds from funds corresponding to the user B, and add the user B into the group 1.

Referring to FIG. 2, an embodiment of a transaction processing method according to the present application is introduced. The embodiment of this method may be executed by a server. In this embodiment, the method includes the following steps:

- S120: A correlation request for correlating an object node to a node group is received.
- S121: A resource acquisition request preset by the node group is initiated to the object node.
- S122: Creditable resources of the object node are queried, and it is verified whether the creditable resources include a target resource required by the resource acquisition request.

S123: When the verification result is yes, the target resource is extracted from the creditable resources of the object node, and the object node is correlated to the node group.

In this embodiment, the transaction processing method further includes injecting the target resource extracted from the creditable resources of the object node into a shared resource pool of the node group.

Referring to FIG. 3, an embodiment of a transaction processing method 1 in combination with a specific application scenario according to the present application is introduced. This method embodiment may be executed by a server. In this embodiment, the method includes the following steps:

- S130: A correlation request for correlating an object user to a user group is received.

The user group may be established by a server in response to a group establishment request of a user. The user may be used as an initial user correlated with the user group first.

The object user may be any user, except for the initial user, applying for being correlated to the user group.

5 In this embodiment, the object user may be, for example, an instant messaging user, and the user group may be, for example, an instant messaging group. The instant messaging user may be correlated to the instant messaging group by sending an instant message to the server.

S131: A payment request preset by the user group is initiated to the object user.

When the initial user sends the group establishment request to the server, the group
10 establishment request includes a payment request set by the initial user. When responding to the group establishment request and generating a group identifier corresponding to the established user group, the server may further correlate the group identifier with the payment request set by the initial user. In this way, it is equivalent to that the payment request is preset by the user group.

In this embodiment, after receiving the correlation request sent by the instant messaging user
15 by using an instant message, the server may further initiate, by using an instant message, the payment request preset by the instant messaging group to the instant messaging user.

S132: An available amount of money of an account of the object user is queried, and it is verified whether the available amount of money is greater than or equal to a target amount of money required by the payment request.

20 S133: When the verification result is yes, the target amount of money is extracted from the available amount of money of the account of the object user, and the object user is correlated to the user group.

During a specific payment process, the server may query the available amount of money of an account of the instant messaging user, and verify whether the available amount of money is
25 sufficient for paying the target amount of money required by the payment request. When the verification result is yes, the server extracts the target amount of money from the account of the instant messaging user, and correlates the instant messaging user to the instant messaging group.

In this embodiment, the transaction processing method further includes injecting the target amount of money extracted from the available amount of money of the account of the object user into a shared account of the node group. The shared account may be an account of the initial user or an account established temporarily.

5 For the shared account of the user group, the initial user may edit and store use information of the amount of money in the shared account, for users correlated to the user group to query.

The initial user may further initiate a payment request to the users correlated to the user group. For example, when the remaining amount of money in the shared account is less than a set threshold, the initial user may further initiate a payment request to the users correlated to the user group.

10 The initial user may further open or transfer, to other users correlated to the user group, the privilege of editing and storing the use information of the amount of money in the shared account and the privilege of further initiating a payment request to the users correlated to the user group. It can be appreciated that the above steps may be implemented in a server, that is, implemented in a network architecture. In another manner, the steps may also be implemented between different
15 network architectures.

For example, in an instant messaging application, a user A may start a group joining interface by triggering a group joining button (which, for example, may be integrated in a chat input item). The user A may select, in the group joining interface, an instant messaging application number of a user group to which the user A expects to join, and send a generated group joining request to the
20 server. After receiving the request, the server may send, to the user A, payment request information (for example, a request for extracting 200 Yuan from an account of the user A) preset by the user group. During payment, the server may query the available amount of money in the account of the user A, and judge whether the balance is greater than 200 Yuan. If yes, the server extracts 200 Yuan from the account of the user A, and accepts the group joining request of the user A.

25 The group joining interface may use a separated server that can be correlated to a server of the instant messaging application and a server for acquiring the account funds of the user (definitely, the server may be the same server as the server of the instant messaging application and the server

of the account funds). The server (for example, a group server) may implement operations such as adding the user to a user, verification on whether the user is authorized, and fund payment. The process may be considered as being accomplished by cooperation of the instant messaging application server, the group server, and the account fund server. That is, sending and receiving of the request may be implemented in the instant messaging server, verification on whether the user is authorized, and adding the user to a group may be implemented in the group server, and deduction of funds from the user account may be implemented in the account fund server.

It can be seen that in different network architectures or different implementations, the network architecture where the network node is located may implement operations such as processing a transaction processing request. That is, the network architecture may implement all of the above method steps separately. Definitely, the network architecture may also be docked with another network architecture platform. For example, a part of processing on the transaction processing request may be docked to another system for being processed, or another system may be called for processing, and the network architecture may implement a connection function and the like. The above steps can be executed, regardless of which network architecture is used.

Referring to FIG. 4, an embodiment of a transaction processing method according to the present application is introduced. In this embodiment, the transaction processing method may include the following steps:

S210: An initial node sends a group establishment request to a server, the group establishment request including a resource acquisition request.

S211: The server generates a group identifier in response to the group establishment request, and correlates the generated group identifier with the resource acquisition request.

S212: The server sends a correlation request to an object node, the correlation request including a resource acquisition request preset by a node group.

When sending the correlation request to the object node, the server may encapsulate the resource acquisition request preset by the node group into the correlation request, and send to the object node together.

S213: The object node receives the correlation request sent by the server.

S214: The server queries creditable resources of the object node, and verifies whether the creditable resources include a target resource required by the resource acquisition request.

S215: When the verification result is yes, the server extracts the target resource from the
5 creditable resources of the object node, and correlates the object node to the node group.

In this embodiment, when correlating the object node to the node group, the server may correspondingly inject the target resource extracted from the object node into a shared resource pool of the node group.

The initial node may store use information of resources in the shared resource pool, for being
10 queried by nodes correlated to the node group.

The initial node may further initiate a resource acquisition request to the nodes correlated to the node group. For example, when remaining resources in the shared resource pool are less than a set threshold, a primary node may further initiate a resource acquisition request to the nodes correlated to the node group.

15 The initial node may further open or transfer, to other nodes correlated to the node group, the privilege of storing the use information of resources in the shared resource pool and the privilege of further initiating a resource acquisition request to the nodes correlated to the node group.

In this embodiment, the initial node and the object node may be both instant messaging nodes. The established node group may be an instant messaging group. Requests such as the correlation
20 request and the resource acquisition request may be transmitted between the initial node and the server and between the object node and the server by using instant messages.

Specifically, in an implementation, for example, in an instant messaging system, an instant messaging server may, based on the above steps, carry out operations such as establishing a group and allowing users to join the group. Specifically, in steps S210 and S211, the instant messaging
25 server may receive a group establishment operation of a user, supposing a user A (corresponding to the above initial node), on a client terminal thereof. The group establishment operation may include an operation of acquiring funds of the user A (corresponding to the above resource

acquisition, which may be considered as a condition of joining the group). The instant messaging server may establish a group for the user A, generate a group ID, and generate a corresponding QR code or other information. Suppose that the group is a group 1 (that is, the above node group). In steps S212 to S215, the user A may, for example, invite a user B to join the group 1, and also
5 request for acquiring funds from the user B while inviting the user B to join the group. After the user B agrees with the fund acquisition, the instant messaging server may extract corresponding funds from funds corresponding to the user B, and add the user B into the group 1.

Referring to FIG. 5, an embodiment of a transaction processing method according to the present application is introduced. This method embodiment may be executed by a server. In this
10 embodiment, the method includes the following steps:

S220: A correlation request is sent to an object node, the correlation request including a resource acquisition request preset by a node group.

S221: Creditable resources of the object node are queried, and it is verified whether the creditable resources include a target resource required by the resource acquisition request.

15 S222: When the verification result is yes, the target resource is extracted from the creditable resources of the object node, and the object node is correlated to the node group.

In this embodiment, the transaction processing method further includes injecting the target resource extracted from the creditable resources of the object node into a shared resource pool of the node group.

20 Referring to FIG. 6, an embodiment of a transaction processing method in combination with a specific application scenario according to the present application is introduced. This method embodiment may be executed by a server. In this embodiment, the method includes the following steps:

S230: A correlation request is sent to an object user, the correlation request including a payment
25 request preset by a user group.

In this embodiment, the object user may be, for example, an instant messaging user, and the user group may be, for example, an instant messaging group. The server may apply for correlation

of an instant messaging user with an instant messaging group by sending an instant message to the instant messaging user. The instant message includes a payment request preset by the instant messaging group.

S231: An available amount of money of an account of the object user is queried, and it is
5 verified whether the available amount of money is greater than or equal to a target amount of money required by the payment request.

S232: When the verification result is yes, the target amount of money is extracted from the available amount of money of the account of the object user, and the object user is correlated to the user group.

10 In this embodiment, after receiving the instant message, the instant messaging user may respond to the payment request in the instant message. The server may further query the available amount of money of an account of the instant messaging user, and verify whether the available amount of money is sufficient for paying the target amount of money required by the payment request. When the verification result is yes, the server extracts the target amount of money from
15 the account of the instant messaging user, and correlates the instant messaging user to the instant messaging group.

In this embodiment, the transaction processing method further includes injecting the target amount of money extracted from the available amount of money of the account of the object user into a shared account of the user group.

20 For the shared account of the user group, the initial user may edit and store use information of the amount of money in the shared account, for users correlated to the user group to query.

The initial user may further initiate a payment request to the users correlated to the user group. For example, when the remaining resources in the shared account are less than a set threshold, the initial user may further initiate a payment request to the users correlated to the user group.

25 The initial user may further open or transfer, to other nodes correlated to the user group, the privilege of editing and storing the use information of the amount of money in the shared account and the privilege of further initiating a payment request to the users correlated to the user group.

It can be appreciated that the above steps may be implemented in a server, that is, implemented in a network architecture. In another manner, the steps may also be implemented between different network architectures.

For example, in an instant messaging application, a user A in the user group may start a group joining interface by triggering a group joining invitation button (which, for example, may be integrated in a chat input item). The user A may select, in the group joining interface, an instant messaging application number of a user B whom the user A expects to invite to join the group, and send a generated group joining request to the user B through the server. The group joining request includes payment request information (for example, a request for extracting 200 Yuan from an account of the user B) preset by the user group.

During payment, the server may query the available amount of money in the account of the user B, and judge whether the balance is greater than 200 Yuan. If yes, the server extracts 200 Yuan from the account of the user B, and adds the user B into the user group.

The group adding interface may use a separated server that can be correlated to a server of the instant messaging application and a server for acquiring the account funds of the user (definitely, the server may be the same server as the server of the instant messaging application and the server of the account funds). The server (for example, a group server) may implement operations such as adding the user to a group, verification on whether the user is authorized, and fund payment. The process may be considered as being accomplished by cooperation of the instant messaging application server, the group server, and the account fund server. That is, sending and receiving of the request may be implemented in the instant messaging server, verification on whether the user is authorized, and adding the user to a group may be implemented in the group server, and deduction of funds from the user account may be implemented in the account fund server.

It can be seen that in different network architectures or different implementations, the network architecture where the network node is located may implement operations such as processing a transaction processing request. That is, the network architecture may implement all of the above method steps separately. Definitely, the network architecture may also be docked with another

network architecture platform. For example, a part of processing on the transaction processing request may be docked to another system for being processed, or another system may be called for processing, and the network architecture may implement a connection function and the like. The above steps can be executed, regardless of which network architecture is used.

5 It can be appreciated that the above methods may be applied to group establishment and group joining of instant messaging. Moreover, during group establishment, a group establishment condition may be set. For example, resources such as funds of a group member joining the group may be acquired. In this way, only users who provide corresponding resources can join the group.

Referring to FIG. 7, an embodiment of a transaction processing system according to the present
10 application is introduced. In this embodiment, the transaction processing system includes:

a receiving unit 310 configured to receive a correlation request for correlating an object node to a node group;

a sending unit 311 configured to initiate a resource acquisition request preset by the node group to the object node;

15 a verification unit 312 configured to query creditable resources of the object node, and verify whether the creditable resources include a target resource required by the resource acquisition request; and

a correlation unit 313 configured to, when the verification result is yes, extract the target resource from the creditable resources of the object node, and correlate the object node to the node
20 group.

In this embodiment, the system further includes a resource combination unit 314 configured to inject the target resource extracted from the creditable resources of the object node into a shared resource pool of the node group.

Still referring to FIG. 7, an embodiment of a transaction processing system according to the
25 present application is introduced. In this embodiment, the transaction processing system includes:

a receiving unit 310 configured to receive a correlation request for correlating an object user to a user group;

a sending unit 311 configured to initiate a payment request preset by the user group to the object user;

a verification unit 312 configured to query an available amount of money of an account of the object user, and verify whether the available amount of money is greater than or equal to a target
5 amount of money required by the payment request; and

a correlation unit 313 configured to, when the verification result is yes, extract the target amount of money from the available amount of money of the account of the object user, and correlate the object user to the user group.

In this embodiment, the system further includes a resource combination unit 314 configured to
10 inject the target amount of money extracted from the available amount of money of the account of the object user into a shared account of the user group.

In this embodiment, the object user is an instant messaging user;

the user group is an instant messaging group; and

the correlation request and the payment request are transmitted by using instant messages.

15 Referring to FIG. 8, an embodiment of a transaction processing system according to the present application is introduced. In this embodiment, the transaction processing system includes:

a sending unit 320 configured to send a correlation request to an object node, the correlation request including a resource acquisition request preset by a node group;

a verification unit 321 configured to query creditable resources of the object node, and verify
20 whether the creditable resources include a target resource required by the resource acquisition request; and

a correlation unit 322 configured to, when the verification result is yes, extract the target resource from the creditable resources of the object node, and correlate the object node to the node group.

25 In this embodiment, the system further includes a resource combination unit 323 configured to inject the target resource extracted from the creditable resources of the object node into a shared resource pool of the node group.

Still referring to FIG. 8, an embodiment of a transaction processing system according to the present application is introduced. In this embodiment, the transaction processing system includes:

a sending unit 320 configured to send a correlation request to an object user, the correlation request including a payment request preset by a user group;

5 a verification unit 321 configured to query an available amount of money of an account of the object user, and verify whether the available amount of money is greater than or equal to a target amount of money required by the payment request; and

a correlation unit 322 configured to, when the verification result is yes, extract the target amount of money from the available amount of money of the account of the object user, and
10 correlate the object user to the user group.

In this embodiment, the system further includes a resource combination unit 323 configured to inject the target amount of money extracted from the available amount of money of the account of the object user into a shared account of the user group.

In this embodiment, the object user is an instant messaging user;

15 the user group is an instant messaging group; and

the correlation request and the payment request are transmitted by using instant messages.

The embodiments of the present application provide a transaction processing method and system. In the method, when a correlation request for correlating an object node to a node group is received, a resource acquisition request preset by the node group may be initiated to the object
20 node, creditable resources of the object node are queried, and it is verified whether the creditable resources include a target resource required by the resource acquisition request. When the verification result is yes, the target resource is extracted from the creditable resources of the object node, and the object node is correlated to the node group. In this way, when carrying out transaction interactions, the node group may use target resources extracted from correlated nodes, and it is
25 unnecessary to apply for resources from the correlated nodes, thus improving efficiency in transaction interactions of the node group.

The present invention is described with reference to the method and device (system) according

to the embodiments of the present invention. It should be understood that a computer program instruction in combination with an information sensing device may be used to implement each process and/or block in the flowcharts and/or block diagrams and combinations of processes and/or blocks in the flowcharts and/or block diagrams. These computer program instructions may be provided for a general-purpose computer, a special-purpose computer, an embedded processor, or a processor of any other programmable data processing device to generate a machine, so that the instructions executed by a computer or a processor of any other programmable data processing device in combination with the information sensing device generate an apparatus for implementing a specified function in one or more processes in the flowcharts and/or in one or more blocks in the block diagrams.

These computer program instructions may also be stored in a computer readable memory that can instruct the computer or another programmable data processing device to work in a particular manner, such that the instructions stored in the computer readable memory generate an artifact that includes an instruction apparatus. The instruction apparatus implements a specified function in one or more processes in the flowcharts and/or in one or more blocks in the block diagrams.

These computer program instructions may also be loaded onto a computer or another programmable data processing device, such that a series of operations and steps are performed on the computer or another programmable device, thereby generating computer-implemented processing. Therefore, the instructions executed on the computer or another programmable device provide steps for implementing a specified function in one or more processes in the flowcharts and/or in one or more blocks in the block diagrams.

In a typical configuration, a computing device includes one or more processors (CPU), an input/output interface, a network interface, and a memory.

The memory may include a volatile memory, a random access memory (RAM) and/or a non-volatile memory or the like in a computer readable medium, for example, a read-only memory (ROM) or a flash RAM. The memory is an example of the computer readable medium.

The computer readable medium includes non-volatile and volatile media as well as movable

and non-movable media, and can implement information storage by means of any method or technology. Information may be a computer readable instruction, a data structure, and a module of a program or other data. A storage medium of a computer includes, for example, but is not limited to, a phase change memory (PRAM), a static random access memory (SRAM), a dynamic random access memory (DRAM), other types of RAMs, a ROM, an electrically erasable programmable read-only memory (EEPROM), a flash memory or other memory technologies, a compact disk read-only memory (CD-ROM), a digital versatile disc (DVD) or other optical storages, a cassette tape, a magnetic tape/magnetic disk storage or other magnetic storage devices, or any other non-transmission medium, and can be used to store information accessed by the computing device.

10 According to the definition of this text, the computer readable medium does not include transitory media, such as a modulated data signal and a carrier.

It should be further noted that the term "include", "comprise" or other variations thereof are intended to cover non-exclusive inclusion, so that a process, method, commodity or device including a series of elements not only includes the elements, but also includes other elements not clearly listed, or further includes inherent elements of the process, method, commodity or device.

15 In a case without any more limitations, an element defined by "including a/an..." does not exclude that the process, method, commodity or device including the element further has other identical elements.

The above descriptions are merely embodiments of the present application, and are not intended to limit the present application. For persons skilled in the art, the present application may have various modifications and variations. Any modification, equivalent replacement, improvement or the like made within the spirit and principle of the present application should all fall within the scope of claims of the present application.

20

CLAIMS

1. A computer-implemented method for transaction processing, comprising:

receiving, by a server, a group establishment request from an initial node for establishing an online social networking group, the group establishment request comprising a condition of acquiring a predetermined resource from each member of the online social networking group;

receiving, by the server, the predetermined resource from the initial node, the predetermined resource being placed into a shared resource pool that is accessible to each member of the online social networking group;

generating, by the server, the online social networking group that includes the initial node as a first member;

receiving, by the server, a correlation request from an object node to join the online social networking group;

initiating, by the server, a resource acquisition request preset by the condition of joining the online social networking group to the object node;

querying, by the server, creditable resources of the object node, and verifying whether the creditable resources comprise the predetermined resource required by the resource acquisition request to provide a verification result; and

when the verification result is yes,

extracting, by the server, the predetermined resource from the creditable resources of the object node,

injecting, by the server, the predetermined resource extracted from the creditable resources of the object node into the shared resource pool of the online social networking group, and

adding, by the server, the object node to the online social networking group as a second member, wherein after joining the online social networking group, the object node is capable of accessing resources in the shared resource pool.

2. The computer-implemented method of claim 1, wherein the group establishment request includes the resource acquisition request.

3. The computer-implemented method of claim 1, further comprising:

generating, by the server, a group identifier in response to receiving the group establishment request from the initial node; and
correlating, by the server, the group identifier with the resource acquisition request.

4. The computer-implemented method of claim 3, wherein the group identifier identifies a correlation relationship between a node and a corresponding node group.

5. The computer-implemented method of claim 1, wherein the initial node is a first instant messaging node and the object node is a second instant messaging node.

6. A computer-implemented system for transaction processing, comprising one or more computers, and one or more computer memory devices interoperably coupled with the one or more computers and having tangible, non-transitory, machine-readable media storing instructions that, when executed by the one or more computers, perform operations comprising:

receiving, by a server, a group establishment request from an initial node for establishing an online social networking group, the group establishment request comprising a condition of acquiring a predetermined resource from each member of the online social networking group;

receiving, by the server, the predetermined resource from the initial node, the predetermined resource being placed into a shared resource pool that is accessible to each member of the online social networking group;

generating, by the server, the online social networking group that includes the initial node as a first member;

receiving, by the server, a correlation request from an object node to join the online social networking group;

initiating, by the server, a resource acquisition request preset by the condition of joining the online social networking group to the object node;

querying, by the server, creditable resources of the object node, and verifying whether the creditable resources comprise the predetermined resource required by the resource acquisition request to provide a verification result; and

when the verification result is yes,

extracting, by the server, the predetermined resource from the creditable resources of the object node,

injecting, by the server, the predetermined resource extracted from the creditable resources of the object node into the shared resource pool of the online social networking group, and

adding, by the server, the object node to the online social networking group as a second member, wherein after joining the online social networking group, the object node is capable of accessing resources in the shared resource pool.

7. The computer-implemented system of claim 6, wherein the group establishment request includes the resource acquisition request.

8. The computer-implemented system of claim 6, wherein the operations further comprise:

generating, by the server, a group identifier in response to receiving the group establishment request from the initial node; and

correlating, by the server, the group identifier with the resource acquisition request.

9. The computer-implemented system of claim 8, wherein the group identifier identifies a correlation relationship between a node and a corresponding node group.

10. The computer-implemented system of claim 6, wherein the initial node is a first instant messaging node and the object node is a second instant messaging node.

11. A computer-implemented method for transaction processing, comprising:
receiving, by a server, a group establishment request from an initial node for establishing an online social networking group, the group establishment request comprising a condition of acquiring a predetermined resource from each member of the online social networking group;
receiving, by the server, the predetermined resource from the initial node, the predetermined resource being placed into a shared resource pool that is accessible to each member of the online social networking group;

generating, by the server, the online social networking group that includes the initial node as a first member;

transmitting, by the server, a correlation request to an object node, the correlation request comprising a resource acquisition request preset by the condition of joining the online social networking group;

querying, by the server, creditable resources of the object node, and verifying whether the creditable resources comprise the predetermined resource required by the resource acquisition request to provide a verification result; and

when the verification result is yes,

extracting, by the server, the predetermined resource from the creditable resources of the object node,

injecting, by the server, the predetermined resource extracted from the creditable resources of the object node into the shared resource pool of the online social networking group, and

adding, by the server, the object node to the online social networking group as a second member, wherein after joining the online social networking group, the object node is capable of accessing resources in the shared resource pool.

12. The computer-implemented method of claim 11, wherein the group establishment request includes the resource acquisition request.

13. The computer-implemented method of claim 11, further comprising:
generating, by the server, a group identifier in response to receiving the group establishment request from the initial node; and
correlating, by the server, the group identifier with the resource acquisition request.

14. The computer-implemented method of claim 13, wherein the group identifier identifies a correlation relationship between a node and a corresponding node group.

15. The computer-implemented method of claim 11, wherein the initial node is a first instant messaging node and the object node is a second instant messaging node.