

CLAIMS

What is claimed is:

1. An operation request allocation method, comprising:

obtaining, by a server, an operation request sent by a client device for a blockchain,
the operation specific to the blockchain comprising a read operation or a write operation;

obtaining attribute information of a user who logs in to the client device;

determining a node condition selected by the user based on the attribute information;

determining a target link node from a set of nodes keeping a persistent Transmission Control Protocol, TCP, link to the server based on the node condition; and

allocating the operation request of the read or write operation to the blockchain to the target link node.

2. The method according to claim 1, wherein the obtaining attribute information of a user who logs in to the client device specifically comprises:

obtaining at least one of login address information, nationality information, gender information, institution information, a previous link node, a most commonly used link node, and an automatically selected link node that are of the user who logs in to the client device.

3. The method according to claim 1, wherein the determining a target link node from a set of nodes keeping a persistent Transmission Control Protocol, TCP, link to the server based on the node condition specifically comprises:

obtaining attribute information of each node in the set of nodes keeping a persistent TCP link to the server;

matching the attribute information of each node with the node condition to determine a first node with a highest similarity value to the node condition; and

determining the target link node based on the first node.

4. The method according to claim 1, wherein the obtaining attribute information of a user who logs in to the client device specifically comprises:

presenting a plurality of nodes comprised in the set of nodes keeping a persistent TCP link to the server to the user; and

obtaining a first node selected by the user; and

the determining a target link node from a set of nodes keeping a persistent TCP link to the server based on the node condition specifically comprises:

determining the target link node based on the first node.

5. The method according to claim 3 or 4, wherein the determining the target link node based on the first node specifically comprises:

determining whether a system pressure of the first node exceeds a predetermined value to obtain a first determining result; and

determining the first node as the target link node when the first determining result indicates that the system pressure of the link node does not exceed the predetermined value; or

determining a second node as the target link node when the first determining result indicates that the system pressure of the link node exceeds the predetermined value, wherein a system pressure of the second node is less than the predetermined value.

6. The method according to claim 5, wherein the determining whether a system pressure of the first node exceeds a predetermined value specifically comprises at least one of the following:

determine whether a throughput of the first node is less than a predetermined throughput; or

determine whether a response time of the first node exceeds a predetermined response time.

7. The method according to claim 5, wherein the determining a second node as the target link node specifically comprises:

determining whether a node whose system pressure is less than the predetermined value exists in the node set to obtain a second determining result;

obtaining a server configuration parameter of a candidate node when the second determining result indicates that no node whose system pressure is less than the predetermined value exists in the node set;

performing identity verification on the candidate node using a consensus mechanism of the blockchain when the server configuration parameter satisfies a predetermined condition;

adding the candidate node to the blockchain when the identity verification on the candidate node succeeds; and

setting a persistent TCP link between the candidate node and the server.

8. The method according to claim 7, after the determining whether a node whose system pressure is less than the predetermined value exists in the node set to obtain a second determining result, further comprising:

determining a quantity of second nodes when the second determining result indicates that the node whose system pressure is less than the predetermined value exists in the node set, wherein the second node is the node whose system pressure is less than the predetermined value in the node set;

determining the second node as the target link node when there is one second node;

or

determining a similarity value between attribute information of each second node and the node condition when there are a plurality of second nodes; and

determining a second node with a highest similarity value to the node condition as the target link node.

9. An operation request allocation apparatus, comprising:

an operation request acquisition module, configured to obtain an operation request sent by a client device for a blockchain, the operation specific to the blockchain comprising a read operation or a write operation;

an attribute information acquisition module, configured to obtain attribute information of a user who logs in to the client device;

a node condition determining module, configured to determine a node condition selected by the user based on the attribute information;

a target link node determining module, configured to determine a target link node from a set of nodes keeping a persistent TCP link to the server based on the node condition; and

an operation request allocation module, configured to allocate the operation request of the read or write operation to the blockchain to the target link node.

10. The apparatus according to claim 9, wherein the attribute information acquisition module is specifically configured to obtain at least one of login address information, nationality information, gender information, institution information, a previous link node, a most commonly used link node, and an automatically selected link node that are of the user who logs in to the client device.

11. The apparatus according to claim 9, wherein the target link node determining module specifically comprises:

an attribute information acquisition submodule, configured to obtain attribute information of each node in the set of nodes keeping a persistent TCP link to the server;

a first node determining submodule, configured to match the attribute information of each node with the node condition to determine a first node with a highest similarity value to the node condition; and

a target link node determining submodule, configured to determine the target link node based on the first node.

12. The apparatus according to claim 9, wherein the attribute information acquisition module specifically comprises:

a node presenting submodule, configured to present a plurality of nodes comprised in the set of nodes keeping a persistent TCP link to the server to the user; and

a first node acquisition submodule, configured to obtain a first node selected by the user; and

the target link node determining module specifically comprises:

a target link node determining submodule, configured to determine the target link node based on the first node.

13. The apparatus according to claim 11 or 12, wherein the target link node determining submodule specifically comprises:

a first result determining unit, configured to determine whether a system pressure of the first node exceeds a predetermined value to obtain a first determining result;

a first target link node determining unit, configured to determine the first node as the target link node when the first determining result indicates that the system pressure of the link node does not exceed the predetermined value; and

a second target link node determining unit, configured to determine a second node as the target link node when the first determining result indicates that the system pressure of the link node exceeds the predetermined value.

14. The apparatus according to claim 13, wherein the first result determining unit is specifically configured to perform at least one of the following: determine whether a throughput of the first node is less than a predetermined throughput; or

determine whether a response time of the first node exceeds a predetermined response time.

15. The apparatus according to claim 13, wherein the second target link node determining unit specifically comprises:

a second result determining subunit, configured to determine whether a node whose system pressure is less than the predetermined value exists in the node set to obtain a second determining result;

a server configuration parameter acquisition subunit, configured to obtain a server configuration parameter of a candidate node when the second determining result indicates that no node whose system pressure is less than the predetermined value exists in the node set;

an identity verification subunit, configured to perform identity verification on the candidate node using a consensus mechanism of the blockchain when the server configuration parameter satisfies a predetermined condition;

a candidate node adding subunit, configured to add the candidate node to the blockchain when the identity verification on the candidate node succeeds; and

a persistent TCP link setting subunit, configured to set a persistent TCP link between the candidate node and the server.

16. The apparatus according to claim 15, wherein the second target link node determining unit further comprises:

a second node quantity determining subunit, configured to determine a quantity of second nodes when the second determining result indicates that the node whose system pressure is less than the predetermined value exists in the node set, wherein the second node is the node whose system pressure is less than the predetermined value in the node set;

a first target link node determining subunit, configured to determine the second node as the target link node when there is one second node;

a similarity value acquisition subunit, configured to determine a similarity value between attribute information of each second node and the node condition when there are a plurality of second nodes; and

a second target link node determining subunit, configured to determine a second node with a highest similarity value to the node condition as the target link node.

17. An operation request allocation device, comprising:

at least one processor; and

a memory communicating with and linking to the at least one processor; wherein the memory stores an instruction that can be executed by the at least one processor, and the instruction is executed by the at least one processor, so that the at least one processor can be configured to perform a method according to any one of claims 1 to 8.

~~obtain an operation request sent by a client device for a blockchain;~~
~~obtain attribute information of a user who logs in to the client device;~~
~~determine a node condition selected by the user based on the attribute information;~~
~~determine a target link node from a set of nodes keeping a persistent link to the~~
~~server based on the node condition; and~~
~~allocate the operation request to the target link node.~~