

this implementation of the present application, an example in which execution of this solution is triggered when a blockchain node receives a service processing request is used for description.

5 **[0049]** Step 201: A blockchain node receives a service processing request, and obtains service data from the service processing request.

[0050] Step 202: The blockchain node determines an attribute value of the service data.

[0051] The attribute value here can be a serial number of the service data, a hash value of the service data, etc. This is not specifically limited.

10 **[0052]** Step 203: The blockchain node determines, by using the attribute value of the service data, whether the service data is service data that has been processed; and if it is determined that the service data is the service data that has not been processed, performs step 204, otherwise, performs step 206.

15 **[0053]** In this implementation of the present application, that the blockchain node determines whether the service data is service data that has been processed includes but is not limited to the following: determining, by the blockchain node based on stored attribute values of second service data that has been processed and an attribute value of first service data, whether the first service data has been processed.

20 **[0054]** For a specific implementation, reference can be made to step 102 described above. Details are omitted here for simplicity.

[0055] Step 204: The blockchain node processes the service data.

[0056] Step 205: The blockchain node broadcasts the service data to another blockchain node in a blockchain network.

[0057] Step 206: The blockchain node discards the service data.

25 **[0058]** Based on the same inventive concept, FIG. 3 is a schematic structural diagram illustrating a blockchain-based data processing device, according to an implementation of the present application. The data processing device includes an acquisition unit 301, a determining unit 302, and a processing unit 303.

30 **[0059]** The acquisition unit 301 is configured to obtain first service data, and determine an attribute value of the first service data, where the attribute value is used to represent uniqueness of the first service data.

[0060] The determining unit 302 is configured to determine, based on stored attribute values of second service data that has been processed and the attribute value of the first service data, whether the first service data has been processed.

CLAIMS

1. A method for blockchain-based data processing, the method comprising:

obtaining, (101) by a blockchain node of a blockchain network, first service data;

determining (101, 202) an attribute value of the first service data, wherein the attribute value

5 is used to represent uniqueness of the first service data;

determining (102, 203), by the blockchain node, based on (i) attribute values stored in a processed database of second service data that has been processed and (ii) the attribute value of the first service data, whether the first service data has been processed; and

in response to determining that the first service data has been processed:

10 broadcasting, by the blockchain node, information that the first service data has been processed to at least one additional blockchain node of the blockchain network, wherein the at least one additional blockchain node discards processing of the first service data upon receiving the information from the blockchain node; and

discarding processing of the first service data; and

15 in response to determining that the first service data has not been processed:

storing, by the blockchain node, the attribute value of the first service data in the processed database, wherein the processed database stores attribute values of service data that has been processed;

20 broadcasting (205) the first service data to another blockchain node in the blockchain network;

obtaining, by the blockchain node, a predetermined amount of stored service data comprising the first service data; and

triggering, by the blockchain node, a consensus operation on the predetermined amount of service data.

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2. The method according to claim 1, further comprising:

discarding, by the blockchain node, processing of the first service data in response to determining that the first service data has been processed.

3. The method according to claim 1, wherein determining whether the first service data has been processed comprises:

querying, by the blockchain node in the stored attribute values of the second service data that has been processed, for whether there is an attribute value that is same as the attribute value of the first service data; and

determining, by the blockchain node based on a query result of the querying, whether the first service data has been processed.

4. The method according to claim 3, wherein determining, by the blockchain node, that the first service data has not been processed comprises:

determining, by the blockchain node, that the first service data has not been processed in response to determining that no attribute value is found to be same as the attribute value of the first service data from the stored attribute values of the second service data that has been processed.

5. The method according to claim 3, wherein determining, by the blockchain node, that the first service data has been processed comprises:

determining, by the blockchain node, that the first service data has been processed in response to determining that the attribute value is found to be same as the attribute value of the first service data from the stored attribute values of the second service data that has been processed; and

determining that the first service data is invalid service data.

6. The method according to claim 1, further comprising:

storing, by the blockchain node, the attribute value of the first service data.

7. The method according to claim 1, wherein:

the processed database can be accessed by any blockchain node in the blockchain network, whereby the processed database is shared in the blockchain network; and

the method further comprises:

determining, by the blockchain node, when storing the attribute value of the first service data in the processed database, a query index of the attribute value of the first service data;

establishing a mapping relationship between the query index and the attribute value of the first service data; and

using the mapping relationship and query index to lookup the attribute value in the processed database.

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8. The method according to any one of claims 1 to 7, wherein the processed database is a relational database or a key-value database.

9. The method according to any one of claims 1 to 8, wherein the attribute value is obtained
10 when the first service data is generated.

10. The method according to any one of claims 1 to 8, wherein the attribute value comprises one or more of a hash value of the first service data and a serial number of the first service data.

15 11. The method according to claim 1, wherein the attribute value comprises an encrypted data.

12. A device for blockchain-based data processing, the device comprising a plurality of modules configured to perform the method of any one of claims 1 to 11.