

CLAIMS

What is claimed is:

1. A method for processing blockchain-based data, the method comprising:
determining a first identifier of each block in a blockchain network (101);
5 determining a second identifier of service data stored in each block (103);
establishing a mapping relationship between the first identifier of the block and the
second identifier of the service data stored in the block for each block; and
storing the mapping relationship in a relational database (105).
- 10 2. The method according to claim 1, wherein determining an identifier of each block in a
blockchain network comprises:
performing the following step for each block in the blockchain network:
obtaining the identifier of the block based on digest information of the block.
- 15 3. The method according to claim 2, wherein the method further comprises:
obtaining a state value of the block based on the service data stored in the block; and
the establishing a mapping relationship between the identifier of the block and the
identifier of the service data stored in the block comprises:
establishing a mapping relationship among the identifier of the block, the state
20 value, and the identifier of the service data stored in the block.
4. The method according to claim 3, wherein the method further comprises:
establishing a first mapping relationship among the identifier of the block, the state
value, and an identifier of a previous block after the state value of the block is obtained; and
25 storing the first mapping relationship in a block data table.
5. The method according to claim 2, wherein the determining an identifier of service
data stored in each block comprises:
performing the following step for the service data stored in the block:
30 determining the identifier of the service data based on a hash value of the
service data.

6. The method according to claim 5, wherein the method further comprises:
establishing a second mapping relationship between the identifier of the service data
and the identifier of the block with the service data after the identifier of the service data is
obtained; and
5 storing the second mapping relationship in a service data table.
7. The method according to claim 4 or 6, wherein the establishing a mapping
relationship between the identifier of the block and the identifier of the service data stored in
the block comprises:
10 establishing a mapping relationship between the identifier of the block and the
identifier of the service data stored in the block based on the first mapping relationship
comprised in the block data table and the second mapping relationship comprised in the
service data table.
- 15 8. The method according to any one of claims 4 to 7, wherein the method further
comprises:
determining an identifier of a newly generated block when the new block is generated;
and
synchronously updating the block data table and/or the relational database based on
20 the identifier of the newly generated block.
9. The method according to any one of claims 4 to 8, wherein the block data table
further comprises: a version number of each block, a generation time of each block, and a
height value of each block.
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10. The method according to any one of claims 4 to 8, further comprising:
converting non-relational data to relational data by using the block identifier
as an index in the block data table.
- 30 11. The method according to any one of claims 1 to 9, wherein the method further
comprises:
determining an identifier of newly generated service data when the new service data is

generated;

establishing a mapping relationship between the identifier of the newly generated service data and an identifier of a block with the new service data once the new service data is stored in the block; and

- 5 synchronously updating the service data table and/or the relational database based on the mapping relationship.

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

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