

CLAIMS

1. A data processing method, comprising:

obtaining (101), by a node in a blockchain network, a piece of service data generated by a
 5 first service in a predetermined time period, wherein the piece of service data comprises a first
 processing level corresponding to the first service;

storing (102), by the node, the piece of service data in a first data processing queue from
 a plurality of data processing queues, wherein the first data processing queue matches the first
 processing level of the piece of service data, and wherein the plurality of data processing queues
 10 stores pieces of service data generated by different services, wherein each of the plurality of data
 processing queues corresponds to a different processing level, and wherein each of the data
 processing queues stores service data matching the corresponding processing level;

when a new block is generated by the node,

a) reading(103), by the node, a plurality of pieces of service data stored in the
 15 plurality of data processing queues, wherein reading the plurality of pieces of service data
 comprises

determining predetermined conditions for storing corresponding pieces of
 service data from each of the plurality of data processing queues associated with the different
 processing levels in the new block, wherein each of the predetermined conditions defines a
 20 corresponding ratio of a total quantity of pieces of service data corresponding to a storage
 capacity of the new block,

based on the predetermined conditions, calculating corresponding
 processing quantities of pieces of service data from each of the plurality of data processing
 queues for storage in the new block, wherein each of the corresponding processing quantities of
 25 service data from each of the plurality of data processing queues satisfies each corresponding
 ratio of pieces of service data to the total quantity of pieces of service data at the new block, and

reading a corresponding quantity of pieces of service data from each of the
 plurality of data processing queues corresponding to the calculated corresponding quantities to
 form the plurality of pieces of service data for storage in the new block, and

b) storing (103), by the node, the read plurality of pieces of service data in the new block.

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

determining, by the node, the first processing level of the obtained piece of service data by reading a processing level field in the piece of service data.

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3. The data processing method according to any one of the preceding claims, wherein storing the piece of service

data in the first data processing queue further comprises:

determining that the first data processing queue corresponds to the first processing level based on a pre-stored mapping relationship between a plurality of processing levels and a plurality of identifiers of the plurality of data processing queues.

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4. The data processing method according to any one of the preceding claims, further comprising:

determining service priorities for the different services, wherein each of the service priorities corresponds to a processing level of service data generated by a service of the different services.

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5. The data processing method according to any one of the preceding claims, further comprising:

arranging stored pieces of service data in the first processing queue based on processing times of the stored pieces of the service data or based on service attributes comprised in the stored pieces of the service data.

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6. The data processing method according to any one of the preceding claims, wherein reading, by the node, the plurality of pieces of service data stored correspondingly in the plurality of data processing queues comprises:

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determining processing levels that correspond to the plurality of data processing queues.

7. The data processing method according to claim 6, wherein reading, by the node, the plurality of pieces of service data stored correspondingly in the plurality of data processing queues, further comprises:

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in response to determining that the processing level of the first processing queue comprises the first processing level, determining a processing ratio for storing a quantity of pieces of service data comprising the first processing level to quantity of pieces of service data comprising a second processing level, wherein the first processing level is different from the second processing level;

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determining a first processing quantity of pieces of service data with the first processing

level based on the determined processing ratio and the storage capacity of the block; and
sequentially reading the pieces of service data that satisfy the first processing quantity
from the first data processing queue.

- 5 8. The data processing method according to claim 7, wherein sequentially reading the

pieces of service data that satisfy the first processing quantity from the first data processing queue based on the first processing quantity comprises:

in response to determining that a stored quantity of pieces of service data in the first data processing queue is less than the first processing quantity, sequentially reading the stored
5 quantity of the service data stored in the first data processing queue.

9. The data processing method according to claim 8, further comprising:

determining a second processing quantity of service data to be read from a second data processing queue based on the processing quantity of the service data stored in the first data
10 processing queue and the storage capacity of the block; and

sequentially reading pieces of service data from the second data processing queue based on the determined second processing quantity of the service data read from the second data processing queue.

15 10. The data processing method according to claim 6, further comprising:

determining a processing ratio for storing pieces of service data comprising a second processing level in response to determining that the processing level comprises the second processing level;

determining a second processing quantity of the pieces of service data with the second
20 processing level based on the processing ratio and the storage capacity of the block; and

sequentially reading the pieces of service data that satisfies the second processing quantity from the first data processing queue.

11. The data processing method according to any one of claims 7 to 10, wherein
25 sequentially reading the pieces of service data that satisfies the first processing quantity from the first data processing queue comprises:

reading the pieces of service data that satisfies the first processing quantity from the first data processing queue based on an order of corresponding processing times of the pieces of service data; and

30 storing the read pieces of service data in the block based on the order of the corresponding processing times of the pieces of service data.

12. The data processing method according to any one of the preceding claims, further comprising:

5 creating the plurality of data processing queues in advance based on processing levels of services generating service data to be stored.

13. The data processing method according to claim 1, wherein reading, by the node, the pieces of service data that satisfies the predetermined condition from the plurality of data processing queues comprises:

10 determining the first processing level to match the first data processing queue, and obtaining the predetermined processing ratios for storing the pieces of service data corresponding to the different processing levels;

 determining processing quantities of pieces of service data for storage at the block based on the determined processing ratios and the storage capacity of the block; and

15 reading the pieces of service data that satisfy a processing quantity for storing service data from the first data processing queue.

14. A device for data processing, wherein the device is implemented by software and hardware, and the device is configured to perform the method of any one of claims 1 to 13.