

CLAIMS

What is claimed is:

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

receiving, by a node in a blockchain network, a plurality of pieces of service data
 5 generated in a specified time period, wherein each of one or more of the plurality of
 pieces of service data comprises label information used to represent a processing
 priority of the piece of service data;

determining, by the node when a new block is generated, respective throughputs
 that correspond to the label information based on a predetermined mapping
 10 relationship between the label information and the respective throughputs;

obtaining, by the node, one or more selected pieces of service data that satisfy
 the respective throughputs and that comprise the label information from a data
 processing set based on the respective throughputs, wherein the plurality of pieces of
 service data are stored in the data processing set; and

15 storing the one or more selected pieces of service data in the new block.

2. The data processing method according to claim 1, wherein establishing the
 predetermined mapping relationship between the label information and the respective
 throughputs comprises:

20 determining processing priorities of service data of different services;
 determining mapping relationships between different processing priorities
 and label information;

determining throughputs that correspond to the processing priorities based
 on the processing priorities; and

25 establishing mapping relationships between the label information that
 corresponds to the processing priorities and the respective throughputs.

3. The data processing method according to claim 2, wherein throughputs of the
 same service data are different in different time periods.

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4. The data processing method according to claim 1, wherein the obtaining one
 or more selected pieces of service data that satisfy the respective throughputs and that

comprise the label information from a data processing set based on the respective throughputs comprises:

- determining an amount of selected pieces of service data that comprises the label information based on the respective throughputs and a storage capacity of the new block; and

obtaining the selected pieces of service data of the amount that comprises the label information from the data processing set.

5. The data processing method according to any one of claims 1 to 4, wherein the obtaining one or more selected pieces of service data that satisfy the respective throughputs and that comprise the label information from a data processing set based on the respective throughputs comprises:

in response to determining that the piece of service data does not comprise label information, obtaining, based on an idle capacity of the new block, a selected piece of service data that satisfies the idle capacity and does not comprise label information from the data processing set; or

in response to determining that a throughput that corresponds to the label information is null, obtaining, based on an idle capacity of the new block, a selected piece of service data that satisfies the idle capacity and comprises the label information from the data processing set.

6. The data processing method according to claim 1, wherein when the node receives the plurality of pieces of service data generated in the specified time period, the method further comprises:

determining the data processing set that corresponds to the label information based on the label information comprised in the plurality of pieces of service data; and storing the plurality of pieces of service data in the determined data processing set.

7. The data processing method according to claim 6, wherein the obtaining one or more selected pieces of service data that satisfy the respective throughputs and that comprise the label information from a data processing set based on the respective throughputs comprises:

obtaining a selected piece of service data that satisfies the throughput based

on the throughput and a timestamp of the selected piece of service data from the data processing set that corresponds to the label information.

8. The data processing method according to claim 6, wherein the obtaining one
5 or more selected pieces of service data that satisfy the respective throughputs and that comprise the label information from a data processing set based on the throughputs comprises:

in response to determining that an amount of the plurality of pieces of
service data stored in the data processing set that corresponds to the label information
10 is less than the throughput, obtaining the selected piece of service data from the data processing set based on the amount of the plurality of pieces of service data stored in the data processing set.

9. The data processing method according to claim 1, wherein the determining, by
15 the node when a new block is generated, respective throughputs that correspond to the label information based on a predetermined mapping relationship between label information and the respective throughputs comprises:

when the new block is generated, in response to determining that the
plurality of pieces of service data correspond to at least two different processing
20 priorities, determining respective throughputs that correspond to label information of different processing priorities, wherein a sum of the respective throughputs that correspond to different label information is less than or equal to a storage capacity of the new block.

25 10. A blockchain-based data processing device, comprising:

a receiving unit, configured to receive a plurality of pieces of service data generated in a specified time period, wherein each of one or more of the plurality of pieces of service data comprises label information used to represent a processing priority of the piece of service data;

30 a determining unit, configured to determine, when a new block is generated, respective throughputs that correspond to the label information based on a predetermined mapping relationship between the label information and the respective throughputs;

an acquisition unit, configured to obtain one or more selected pieces of service

data that satisfy the respective throughputs and that comprise the label information from a data processing set based on the respective throughputs, wherein the plurality of pieces of service data are stored in the data processing set; and

5 a processing unit, configured to store the one or more selected pieces of service data in the new block.

11. The data processing device according to claim 10, wherein the data processing device further comprises an establishment unit, wherein

10 that the establishment unit establishes the predetermined mapping relationship between the label information and the respective throughputs comprises:

determining processing priorities of service data of different services;

determining mapping relationships between different processing priorities and label information;

15 determining throughputs that correspond to the processing priorities based on the processing priorities; and

establishing mapping relationships between the label information that corresponds to the processing priorities and the respective throughputs.

20 12. The data processing device according to claim 11, wherein throughputs of the same service data are different in different time periods.

13. The data processing device according to claim 10, wherein that the acquisition unit obtains one or more selected pieces of service data that satisfy the respective throughputs and that comprises the label information from a data processing set based on the respective throughputs comprises:

determining an amount of selected pieces of service data that comprises the label information based on the respective throughputs and a storage capacity of the new block; and

30 obtaining the selected pieces of service data of the amount that comprises the label information from the data processing set.

14. The data processing device according to any one of claims 10 to 13, wherein that the acquisition unit obtains one or more selected pieces of service data that satisfy the respective throughputs and that comprise the label information from a data

processing set based on the respective throughputs comprises:

in response to determining that the piece of service data does not comprise label information, obtaining, based on an idle capacity of the new block, a selected piece of service data that satisfies the idle capacity and does not comprise label

5 information from the data processing set; or

in response to determining that a throughput that corresponds to the label information is null, obtaining, based on an idle capacity of the new block, a selected piece of service data that satisfies the idle capacity and comprises the label information from the data processing set.

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15. The data processing device according to claim 10, wherein when the receiving unit receives the plurality of pieces of service data generated in the specified time period, a storage unit in the data processing device is configured to:

determining the data processing set that corresponds to the label information based on the label information comprised in the plurality of pieces of service data; and

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storing the plurality of pieces of service data in the determined data processing set.

16. The data processing device according to claim 15, wherein that the acquisition unit obtains one or more selected pieces of service data that satisfy the respective throughputs and that comprise the label information from a data processing set based on the respective throughputs comprises:

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obtaining a selected piece of service data that satisfies the throughput based on the throughput and a timestamp of the selected piece of service data from the data processing set that corresponds to the label information.

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17. The data processing device according to claim 15, wherein that the acquisition unit obtains one or more selected pieces of service data that satisfy the respective throughputs and that comprise the label information from a data processing set based on the throughputs comprises:

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in response to determining that an amount of the plurality of pieces of service data stored in the data processing set that corresponds to the label information is less than the throughput, obtaining the selected piece of service data from the data processing set based on the amount of the plurality of pieces of service data stored in

the data processing set.

18. The data processing device according to claim 10, wherein that the determining unit determines, when a new block is generated, respective throughputs
5 that correspond to the label information based on a predetermined mapping relationship between label information and the respective throughputs comprises:

when the new block is generated, in response to determining that the plurality of pieces of service data correspond to at least two different processing priorities, determining respective throughputs that correspond to label information of
10 different processing priorities, wherein a sum of the respective throughputs that correspond to different label information is less than or equal to a storage capacity of the new block.