CLAIMS

1. A data reporting method, comprising:

step 1: generating a data uploading token by a main network node;

step 2: each network node being going to upload data determining whether the network node being going to upload data has a data uploading qualification; and

step 3: network nodes with the data uploading qualification competing for the data uploading token, and executing a data uploading operation by a network node that obtains the data uploading token;

wherein the step 2 comprises:

acquiring, by each network node, the integrity of data to be uploaded stored thereon, and determining that the network node has the data uploading qualification when the integrity is determined to be greater than or equal to a set threshold;

wherein acquiring, by each network node, the integrity of data to be uploaded stored thereon comprises:

acquiring, by each network node, meta-information related to the data to be uploaded, and synchronizing the meta-information with other network nodes; and

selecting a maximum value from the meta-information of each network node, and using a ratio of the meta-information of the network node to the maximum value as the integrity of the data to be uploaded by the network node；

wherein the meta-information is a sum of bandwidths of the network nodes stored on each network node.

2. The data reporting method according to claim 1, wherein the step 3 comprises:

transmitting, by a network node with the data uploading qualification, a request for acquiring the data uploading token to the main network node; and

determining, by the main network node, whether the data uploading token is in a released state, and issuing the data uploading token to a network node that first requests for the data uploading token and then setting the data uploading token to be in an occupied state if the data uploading token is in the released state.

3. The data reporting method according to claim 1, after the step 3, further comprising:

releasing the data uploading token after the network node that obtains the data uploading token has uploaded data, determining whether data is uploaded successfully, and notifying other network nodes of stopping competition for the data uploading token if the data is uploaded successfully.

4. The data reporting method according to claim 2, wherein the step 3 further comprises:

upon transmitting, to the main network node, a request for acquiring the data uploading token, by the network node, transmitting, to the main network node, a time threshold for releasing the data uploading token; and

after the main network node issues the data uploading token to the network node that first requests for the data uploading token, performing timing, and setting, by the main network node, the data uploading token to be in a released state if the timing time reaches the time threshold transmitted by the network node that obtains the data uploading token.

5. A data reporting system which is located on a network node, the system comprising:

a token generation module configured to generate a data uploading token when the network node is a main network node;

a qualification determination module configured to determine whether the network node has a data uploading qualification;

a token competition module configured to compete for the data uploading token; and

a data uploading module configured to execute a data uploading operation when the data uploading token is obtained;

wherein the qualification determination module is further configured to:

acquire the integrity of data to be uploaded stored thereon, and determine to have a data uploading qualification when the integrity is determined to be greater than or equal to a set threshold;

and wherein the qualification determination module is further configured to:

acquire meta-information related to the data to be uploaded, and synchronize the meta-information with other network nodes; and

select a maximum value from the meta-information of each network node, and use a ratio of the meta-information of the network node to the maximum value as the integrity of the data to be uploaded by the network node;

wherein the meta-information is a sum of bandwidths of the network nodes stored on each network node.

6. The data reporting system according to claim 5, wherein the token competition module is further configured to:

transmit, to the main network node, a request for acquiring the data uploading token; and

the system further comprises a token management module configured to determine whether the data uploading token is in a released state, and issue the data uploading token to a network node that first requests for the data uploading token and then set the data uploading token to be in an occupied state if the data uploading token is in the released state.

7. The data reporting system according to claim 5, further comprising:

an uploading management module configured to release the data

uploading token after data uploading, determine whether data is uploaded successfully, and notify other network nodes of stopping competition for the data uploading token if the data is uploaded successfully.

8. The data reporting system according to claim 6, wherein the token competition module is further configured to:

upon transmitting, to the main network node, a request for acquiring the data uploading token, transmit, to the main network node, a time threshold for releasing the data uploading token; and

the token management module is further configured to: after issuing the data uploading token to the network node that first requests for the data uploading token, perform timing, and set, by the main network node, the data uploading token to be in the released state if the timing time reaches the time threshold transmitted by the network node that obtains the data uploading token.