

CLAIMS

1. An automatic node adding method of a blockchain integrated station, comprising:

receiving, by the blockchain integrated station, a first configuration instruction after accessing a certificate authority network, initiating an authentication application to a certificate authority center according to a first network address indicated in the first configuration instruction, and receiving a digital certificate returned by the certificate authority center after the certificate authority center determines the authentication application passes verification, wherein the certificate authority network and the blockchain network are different networks;

receiving, by the blockchain integrated station, a second configuration instruction after accessing a blockchain network, and sending the digital certificate to a first blockchain node in the blockchain network according to a second network address indicated in the second configuration instruction, wherein the digital certificate is used to indicate the any blockchain node to initiate a transaction for adding a node in the blockchain network, wherein the transaction is executed after passing a consensus among all blockchain nodes in the blockchain network, such that the blockchain integrated station is added as a newly-added blockchain node in the blockchain network.

2. The method according to claim 1, wherein the certificate authority network and the blockchain network are different public networks.

3. The method according to claim 1, wherein the certificate authority center is deployed on a Blockchain-as-a-Service (BaaS) platform in the certificate authority network.

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

receiving, by the blockchain integrated station, inquiry information of a second blockchain node in the blockchain network, wherein the inquiry information is generated and sent by the second blockchain node after the second blockchain node automatically discovers the blockchain integrated station;

sending, by the blockchain integrated station, the digital certificate to the second blockchain node, wherein after the digital certificate is determined as passing verification by the second blockchain node in the blockchain network, the digital certificate is used to indicate the second blockchain node to initiate a transaction for adding a node in the blockchain network, wherein the transaction is executed after passing a consensus among all blockchain nodes in the blockchain network, such that the blockchain integrated station is

added as a newly-added blockchain node in the blockchain network.

5. The method according to claim 1, wherein the transaction comprises:

a Type field indicating that the transaction is of a node adding type; and

a Data field comprising information of the blockchain integrated station.

6. The method according to claim 1, wherein adding the blockchain integrated station as the newly-added blockchain node in the blockchain network comprises: adding, by all blockchain nodes in the blockchain network, information of the blockchain integrated station to node information lists maintained respectively by all blockchain nodes.

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

performing, by the blockchain integrated station, information synchronization for a node information list maintained by the blockchain integrated station according to a node information list maintained by any blockchain node in the blockchain network.

8. An automatic node adding apparatus of a blockchain integrated station, comprising:

a certificate applying unit, configured to enable the blockchain integrated station to receive a first configuration instruction after accessing a certificate authority network, initiate an authentication application to a certificate authority center according to a first network address indicated in the first configuration instruction, and receive a digital certificate returned by the certificate authority center after the certificate authority center determines the authentication application passes verification, wherein the certificate authority network and the blockchain network are different networks;

a certificate sending unit, configured to enable the blockchain integrated station to receive a second configuration instruction after accessing a blockchain network, and send the digital certificate to a first blockchain node in the blockchain network according to a second network address indicated in the second configuration instruction, wherein the digital certificate is sent for use by the first blockchain node in verifying the digital certificate and, after successful verification, initiating a transaction for adding a node in the blockchain network, wherein the transaction is executed after passing a consensus among all blockchain nodes in the blockchain network, such that the blockchain integrated station is added as a newly-added blockchain node in the blockchain network.

9. A blockchain integrated station, comprising:

a processor;

a memory for storing processor executable instructions;

wherein the processor implements a method according to any of claims 1-7 by running the executable instructions.

10. A computer readable storage medium having computer instructions stored thereon, wherein the instructions are executed by a processor to implement steps in a method according to any of claims 1-7.