

CLAIMS

What is claimed is:

1. A transaction method based on centralized settlement and blockchain attestation, wherein a blockchain network comprises a plurality of member nodes, a virtual resource account is registered by a user with a designated member node, the designated member node comprises a service logic execution module, a database management module, and a blockchain function module, and the method comprises:

receiving, by the service logic execution module, a transaction request comprising a paying user identifier of a paying user, a designated resource amount, and a receiving user identifier of a receiving user, the paying user being a user paying the designated resource amount, and the receiving user being a user receiving the designated resource amount, wherein the designated member node is one of a plurality of member nodes of a blockchain network;

prior to the blockchain network performing consensus verification on the transaction request, performing, by the service logic execution module, transaction feasibility verification off the blockchain network according to the transaction request, and sending an account balance modification instruction to the database management module ~~after of~~ the designated member node in response to the transaction feasibility verification is being successful;

performing, by the database management module, an account balance modification operation in a database off the blockchain network according to the account balance modification instruction, the account balance modification operation being deducting the designated resource amount from a virtual resource account corresponding to the paying user identifier and adding the designated resource amount to a virtual resource account corresponding to the receiving user identifier;

prior to the blockchain network performing the consensus verification on the transaction request, generating, by the service logic execution module, a log file ~~used for recording a history of software operations of~~ the account balance modification operation, and sending the log file to the blockchain function module of the designated member node, wherein the history of software operations of the account balance modification operation comprises: history of software operations of a windows system, a service logic processing system, or a database management system;

generating, by the blockchain function module, a log file summary by applying a hash algorithm to the log file; and

broadcasting, by the blockchain function module, a blockchain transaction comprising the log file and the log file summary to the blockchain network, ~~such that for the member nodes to~~

publish the blockchain transaction comprising the log file and the log file summary to a blockchain based on a consensus mechanism.

~~2. The method according to claim 1, wherein the generating, by the service logic execution module, a log file used for recording the account balance modification operation comprises:
generating, by the service logic execution module, the log file used for recording the account balance modification operation and recording other transaction related information.~~

~~3. The method according to claim 1, wherein the method further comprises:
returning, by the database management module, a modification success notification to the service logic execution module after performing the account balance modification operation;
and~~

~~wherein the generating, by the service logic execution module, a log file used for recording the account balance modification operation comprises:
generating, by the service logic execution module after receiving the modification success notification, the log file used for recording the account balance modification operation.~~

~~4. The method according to claim 1, wherein the broadcasting, by the blockchain function module, the log file to the blockchain network comprises:~~

~~generating, by the blockchain function module, a log file summary corresponding to the log file according to the log file by using a hash algorithm; and~~

~~broadcasting, by the blockchain function module, the log file and the log file summary to the blockchain network, for the member nodes to publish the log file and the log file summary to the blockchain based on the consensus mechanism; and~~

the method further comprises:

sending, by the blockchain function module, the log file summary to the service logic execution module; and

sending, by the service logic execution module, the log file summary to one or more devices associated with the paying user and/or the receiving user, for the one or more devices associated with the paying user and/or the receiving user to query the blockchain for the log file by using the log file summary.

~~5. The method according to claim 4, wherein the sending, by the blockchain function module, the log file summary to the service logic execution module comprises:~~

sending, by the blockchain function module, the log file summary to the service logic execution module if it is determined that the log file is published to the blockchain.

56. A transaction device based on centralized settlement and blockchain attestation, wherein a blockchain network comprises a plurality of member nodes, the device is any of the member nodes, a virtual resource account is registered by a user with the device, and the device comprises a service logic execution module, a database management module, and a blockchain function module, wherein

the service logic execution module receives a transaction request comprising a paying user identifier of a paying user, a designated resource amount, and a receiving user identifier of a receiving user, the paying user being a user paying the designated resource amount, and the receiving user being a user receiving the designated resource amount, wherein the designated member node is one of a plurality of member nodes of a blockchain network; prior to the blockchain network performing consensus verification on the transaction request, performs transaction feasibility verification off the blockchain network according to the transaction request, and sends an account balance modification instruction to the database management module after of the designated member node in response to the transaction feasibility verification is being successful; and generates a log file used for recording a history of software operations of an account balance modification operation, and sends the log file to the blockchain function module of the designated member node, wherein the history of software operations of the account balance modification operation comprises: history of software operations of a windows system, a service logic processing system, or a database management system, the account balance modification operation being deducting the designated resource amount from a virtual resource account corresponding to the paying user identifier and adding the designated resource amount to a virtual resource account corresponding to the receiving user identifier;

the database management module performs the account balance modification operation according to the account balance modification instruction; and

the blockchain function module generates a log file summary by applying a hash algorithm to the log file and broadcasts the log file and the log file summary to the blockchain network, for such that the member nodes to publish the blockchain transaction comprising the log file and the log file summary to a blockchain based on a consensus mechanism.

~~7. The device according to claim 6, wherein the service logic execution module generates~~

~~the log file used for recording the account balance modification operation and recording other transaction related information.~~

68. The device according to claim 56, wherein the database management module returns a modification success notification to the service logic execution module after performing the account balance modification operation; and

the service logic execution module generates, after receiving the modification success notification, the log file used for recording the account balance modification operation.

79. The device according to claim 56, wherein the blockchain function module ~~generates a log file summary corresponding to the log file according to the log file by using a hash algorithm; broadcasts the log file and the log file summary to the blockchain network, for the member nodes to publish the log file and the log file summary to the blockchain based on the consensus mechanism; and sends the log file summary to the service logic execution module; and~~

the service logic execution module sends the log file summary to one or more devices associated with the paying user and/or the receiving user, for the one or more devices associated with the paying user and/or the receiving user to query the blockchain for the log file by using the log file summary.

~~840~~. The device according to claim 79, wherein the blockchain function module sends the log file summary to the service logic execution module if it is determined that the log file is published to the blockchain.

~~944~~. A transaction system based on centralized settlement and blockchain attestation, comprising a blockchain network formed by a plurality of member nodes, wherein each member node comprises the device according to any one of claims ~~6-5~~ to 840.