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~~, and the method comprises:

receiving, by ~~the~~ a designated member node of the plurality of member nodes, 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;

prior to a start of a consensus mechanism, performing, by the designated member node, transaction feasibility verification on~~according to~~ the transaction request off the blockchain network, and performing, by the designated member node, an account balance modification operation off the blockchain network in a database after the verification is successful, the account balance modification operation comprising~~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, wherein the transaction feasibility verification comprises verifying whether a balance of the virtual resource account of the paying user is sufficient to provide the designated resource amount and whether the paying user has authorization; and

generating, by the designated member node, a log file ~~used for~~ recording the account balance modification operation performed off the blockchain network in the database, and broadcasting the log file to the blockchain network, for the member nodes to publish the log file to a blockchain based on ~~a~~ the consensus mechanism.

2. The method according to claim 1, wherein the broadcasting the log file to the blockchain network comprises:

generating a log file summary corresponding to the log file according to the log file by using a hash algorithm; and

broadcasting 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 the log file summary to the paying user and/or the receiving user, for the paying user and/or the receiving user to query the blockchain for the log file by using the log file summary.

3. The method according to claim 2, wherein the sending the log file summary to the paying user and/or the receiving user comprises:

sending the log file summary to the paying user and/or the receiving user if it is determined that the log file is published to the blockchain.

4. A transaction apparatus based on centralized settlement and blockchain attestation, wherein a blockchain network comprises a plurality of member nodes, the apparatus is ~~any of the~~a designated member node of the plurality of member node~~s, a virtual resource account is registered by a user with the apparatus~~, and the apparatus comprises:

a receiving module, configured to receive 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;

a settlement module, configured to: prior to a start of a consensus mechanism, perform transaction feasibility verification ~~according to~~on the transaction request off the blockchain network, and perform an account balance modification operation off the blockchain network in a database after the verification is successful, 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, wherein the transaction feasibility verification comprises verifying whether a balance of the virtual resource account of the paying user is sufficient to provide the designated resource amount and whether the paying user has authorization; and

an attestation module, configured to generate a log file ~~used for~~ recording the account balance modification operation performed off the blockchain network in the database, and broadcast the log file to the blockchain network, for the member nodes to publish the log file to a blockchain based on ~~a~~ the consensus mechanism.

5. The apparatus according to claim 4, wherein the attestation module generates a log file summary corresponding to the log file according to the log file by using a hash algorithm;

and 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

the apparatus further comprises:

a sending module, configured to send the log file summary to the paying user and/or the receiving user, for the paying user and/or the receiving user to query the blockchain for the log file by using the log file summary.

6. The apparatus according to claim 5, wherein the sending module sends the log file summary to the paying user and/or the receiving user if it is determined that the log file is published to the blockchain.

7. A transaction system based on centralized settlement and blockchain attestation, comprising a blockchain network formed by a plurality of member nodes~~, wherein a user can register a virtual resource account with a designated member node~~, wherein

~~the~~ a designated member node of the plurality of member nodes 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; prior to a start of a consensus mechanism, performs transaction feasibility verification ~~according to~~on the transaction request, and performs an account balance modification operation off the blockchain network in a database after the verification is successful, 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, wherein the transaction feasibility verification comprises verifying whether a balance of the virtual resource account of the paying user is sufficient to provide the designated resource amount and whether the paying user has authorization; and generates a log file ~~used for~~ recording the account balance modification operation performed off the blockchain network in a database, and broadcasts the log file to the blockchain network; and

other member nodes and the designated member node publish the log file to a blockchain based on ~~a~~ the consensus mechanism.

8. The system according to claim 7, wherein the designated member node generates a

log file summary corresponding to the log file according to the log file by using a hash algorithm; and 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 paying user and/or the receiving user, for the paying user and/or the receiving user to query the blockchain for the log file by using the log file summary.

9. The system according to claim 8, wherein the designated member node sends the log file summary to the paying user and/or the receiving user if it is determined that the log file is published to the blockchain.

10. A computer device, wherein a blockchain network comprises a plurality of member nodes, the device is ~~any of the~~a designated member node~~s~~ of the plurality of member nodes, ~~and a virtual resource account is registered by a user with the device,~~ wherein

the device comprises a memory, a processor, and a computer program stored on the memory and executable on the processor, when executing the program, the processor implementing the method according to any of claims 1 to 3.