CLAIMS

1. A method for executing a smart contract, comprising:

starting, by a blockchain node of a blockchain network after a smart contract has been deployed and consensus has been reached in the blockchain network, to compile a bytecode of the smart contract into a machine code by using ahead of time, AoT, compilation and storing the machine code; and

interpreting and executing, by the blockchain node in executing the smart contract that has been deployed, the bytecode corresponding to an invoked function in the smart contract in response to the machine code of the smart contract not being locally stored in the blockchain node, the interpreting and executing comprising:

querying, by the blockchain node in executing the smart contract that has been deployed, a current AoT compilation status of the bytecode of the smart contract in response to the machine code of the smart contract not being locally stored in the blockchain node;

in response to that the bytecode is in AoT compilation, interpreting and executing the bytecode of the smart contract; and

in response to that the bytecode is not in AoT compilation, starting AoT compilation to interpret and execute the bytecode of the smart contract.

2. The method according to claim 1, wherein the starting, by the blockchain node after completing deployment and consensus of the smart contract, to compile the bytecode of the smart contract into the machine code by using AoT compilation includes: starting, by the blockchain node after the smart contract has been deployed and consensus has been reached, AoT compilation on the bytecode of the smart contract.

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

in the executing the smart contract that has been deployed and consensus has been reached, executing, by the blockchain node, the machine code of the smart contract in response to the machine code being locally stored in the blockchain node.

4. The method according to claim 3, wherein the executing, by the blockchain node, the machine code includes:

executing, by the blockchain node, the stored machine code corresponding to an invoked function in the smart contract.

5. The method according to any one of claims 1, 3, or 4, wherein the storing is caching.

6. The method according to claim 1, further comprising receiving, by the blockchain node, a request for creating the smart contract, the request including the bytecode of the smart contract.

7. A blockchain node for executing a smart contract, comprising:

a processor; and

a memory storing a program, wherein when the processor executes the program, the method according to any one of claims 1 to 6 is performed.

8. A storage medium, configured to store a program, wherein the program performs an operation according to any one of claims 1 to 6 when being executed.