CLAIMS

What is claimed is:

1. A method, comprising:

adding, to an instruction set of a blockchain virtual machine associated with a blockchain network, a transaction hash acquisition instruction for performing a transaction hash acquisition operation to obtain a transaction hash of a service initiation transaction that has been broadcasted to the blockchain network, wherein the transaction hash acquisition operation is unsupported by the blockchain virtual machine by default;

deploying, in the blockchain virtual machine, transaction hash acquisition logic corresponding to the transaction hash acquisition instruction;

adding, to an instruction set of a smart contract compiler, the transaction hash acquisition instruction;

generating, by using the smart contract compiler, a service smart contract that comprises the transaction hash acquisition instruction;

deploying, in the blockchain network, the service smart contract that comprises the transaction hash acquisition instruction;

invoking, by using the blockchain virtual machine of a blockchain node in the blockchain network, the service smart contract;

triggering, by using the blockchain virtual machine, execution of the transaction hash acquisition logic based on the transaction hash acquisition instruction in the service smart contract; and

obtaining, by using the blockchain virtual machine, the transaction hash of the service initiation transaction that has been broadcasted to the blockchain network.

2. The method according to claim 1, wherein the method further comprises:

before invoking the service smart contract, initializing, by the node in the blockchain network, a context of the blockchain virtual machine, and writing the transaction hash of the service initiation transaction into the context; and

the triggering the execution of the transaction hash acquisition logic based on the transaction hash acquisition instruction in the service smart contract comprises:

obtaining, by the blockchain node, the transaction hash of the service initiation transaction from the context.

3. A method, comprising:

adding, to an instruction set of a blockchain virtual machine associated with a blockchain network, a transaction hash acquisition instruction for performing a transaction hash acquisition operation to obtain a transaction hash of a service initiation transaction that has been broadcasted to the blockchain network, wherein the transaction hash acquisition operation is unsupported by the blockchain virtual machine by default;

deploying, in the blockchain virtual machine, transaction hash acquisition logic corresponding to the transaction hash acquisition instruction;

adding, to an instruction set of a smart contract compiler, the transaction hash acquisition instruction;

generating, by using the smart contract compiler, a service smart contract that comprises a contract identifier of a transaction hash acquisition smart contract, wherein the transaction hash acquisition smart contract is pre-deployed in the blockchain network;

deploying, in the blockchain network, the service smart contract that comprises the contract identifier of the transaction hash acquisition smart contract;

invoking, by using the blockchain virtual machine of a blockchain node in the blockchain network, the service smart contract;

invoking, by using the blockchain virtual machine, the transaction hash acquisition smart contract based on the contract identifier of the transaction hash acquisition smart contract in the service smart contract;

triggering, by using the blockchain virtual machine, execution of the transaction hash acquisition logic based on the transaction hash acquisition instruction in the transaction hash acquisition smart contract; and

obtaining, by using the blockchain virtual machine, the transaction hash of the service initiation transaction that has been broadcasted to the blockchain network.

4. A blockchain virtual machine, configured to implement the method according to any one of claims 1 to 3, wherein

an instruction set of the blockchain virtual machine comprises a transaction hash acquisition instruction, and a service smart contract compiled by using the smart contract compiler comprises the transaction hash acquisition instruction.

5. The blockchain virtual machine according to claim 4, wherein the instruction set of the blockchain virtual machine further comprises at least one Ethereum instruction, and the Ethereum instruction is an instruction in an instruction set of an Ethereum virtual machine; and relevant logic corresponding to each Ethereum instruction comprised in the instruction set of the blockchain virtual machine is deployed in the blockchain virtual machine.

6. A smart contract compiler, configured to implement the method according to claim 1 or 2, wherein

an instruction set of the smart contract compiler comprises a transaction hash acquisition instruction, and a service smart contract compiled by using the smart contract compiler comprises the transaction hash acquisition instruction.

7. The smart contract compiler according to claim 6, wherein the instruction set of the smart contract compiler further comprises at least one Ethereum instruction, and the Ethereum instruction is an instruction in an instruction set of an Ethereum virtual machine.

8. A smart contract compiler, configured to implement the method according to claim 3, wherein

an instruction set of the smart contract compiler comprises a transaction hash acquisition instruction, a service smart contract compiled by using the smart contract compiler comprises a contract identifier of a transaction hash acquisition smart contract, and the transaction hash acquisition smart contract is a smart contract pre-deployed in a blockchain network.

9. A blockchain system, comprising

one or more computers; and

one or more computer memory devices interoperably coupled with the one or more computers and having tangible, non-transitory, machine-readable media storing one or more instructions that, when executed by the one or more computers, perform operations comprising:

adding, to an instruction set of a blockchain virtual machine associated with a blockchain network, a transaction hash acquisition instruction for performing a transaction hash acquisition operation to obtain a transaction hash of a service initiation transaction that has been broadcasted to the blockchain network, wherein the transaction hash acquisition operation is unsupported by the blockchain virtual machine by default;

deploying, in the blockchain virtual machine, transaction hash acquisition logic corresponding to the transaction hash acquisition instruction;

adding, to an instruction set of a smart contract compiler, the transaction hash acquisition instruction;

generating, by using the smart contract compiler, a service smart contract that comprises the transaction hash acquisition instruction;

deploying, in the blockchain network, the service smart contract that comprises the transaction hash acquisition instruction;

invoking, by using the blockchain virtual machine of a blockchain node in the blockchain network the service initiation transaction;

triggering, by using the blockchain virtual machine, execution of the transaction hash acquisition logic based on the transaction hash acquisition instruction in the service smart contract; and

obtaining, by using the blockchain virtual machine, the transaction hash of the service initiation transaction that has been broadcasted to the blockchain network.

10. A blockchain system, comprising:

one or more computers; and

one or more computer memory devices interoperably coupled with the one or more computers and having tangible, non-transitory, machine-readable media storing one or more instructions that, when executed by the one or more computers, perform operations comprising:

adding, to an instruction set of a blockchain virtual machine associated with a blockchain network, a transaction hash acquisition instruction for performing a transaction hash acquisition operation to obtain a transaction hash of a service initiation transaction that has been broadcasted to the blockchain network, wherein the transaction hash acquisition operation is unsupported by the blockchain virtual machine by default;

deploying, in the blockchain virtual machine, transaction hash acquisition logic corresponding to the transaction hash acquisition instruction;

adding, to an instruction set of a smart contract compiler, the transaction hash acquisition instruction;

generating, by using the smart contract compiler, a service smart contract that comprises a contract identifier of a transaction hash acquisition smart contract, wherein the transaction hash acquisition smart contract is pre-deployed in the blockchain network;

deploying, in the blockchain network, the service smart contract that comprises the contract identifier of the transaction hash acquisition smart contract;

invoking, by using the blockchain virtual machine of a blockchain node in the blockchain network, the service smart contract;

invoking, by using the blockchain virtual machine, the transaction hash acquisition smart contract based on the contract identifier of the transaction hash acquisition smart contract in the service smart contract;

triggering, by using the blockchain virtual machine, execution of the transaction hash acquisition logic based on the transaction hash acquisition instruction in the transaction hash acquisition smart contract; and

obtaining, by using the blockchain virtual machine, the transaction hash of the service initiation transaction that has been broadcasted to the blockchain network.

11. A computer device, comprising a memory, a processor, and a computer program that is stored in the memory and that can run on the processor, wherein when executing the program, the processor implements the method according to any one of claims 1 and 3.