

CLAIMS

1. A computer-implemented method, comprising:
 - receiving, by a cross-chain interaction end provided between a subscription client corresponding to a first blockchain and a publishing client corresponding to a second blockchain, a subscription request;
 - determining, based on a queue status of a message queue, that the message queue does not comprise a message satisfying subscription conditions indicated in the subscription request;
 - sending, by the cross-chain interaction end to the publishing client, the subscription request; and
 - obtaining, by the cross-chain interaction end, a message published by the publishing client that satisfies the subscription conditions indicated in the subscription request.
2. The computer-implemented method of claim 1, wherein the queue status of the message queue is maintained by the subscription client.
3. The computer-implemented method of claim 1, wherein the subscription conditions indicated in the subscription request comprise a one-to-one mapping relationship between subscription clients corresponding to the first blockchain and blockchain nodes of the first blockchain.
4. The computer-implemented method of claim 1, wherein the publishing client performs an operation related to the message obtained by the cross-chain interaction end that includes initiating a contract operation related to the message obtained by the cross-chain interaction end.
5. The computer-implemented method of claim 1, wherein obtaining the message comprises:
 - sending, by the subscription client, the queue status to the cross-chain interaction end, so that the cross-chain interaction end obtains a message that is published in the second blockchain and satisfies the subscription conditions when the cross-chain interaction end determines, based on the queue status, that the message queue does not comprise a message satisfying the

subscription conditions.

6. The computer-implemented method of claim 1, wherein the second blockchain comprises a plurality of publishing clients.

7. A non-transitory, computer-readable medium storing one or more instructions executable by a computer system to perform operations comprising:

receiving, by a cross-chain interaction end provided between a subscription client corresponding to a first blockchain and a publishing client corresponding to a second blockchain, a subscription request;

determining, based on a queue status of a message queue, that the message queue does not comprise a message satisfying subscription conditions indicated in the subscription request;

sending, by the cross-chain interaction end to the publishing client, the subscription request; and

obtaining, by the cross-chain interaction end, a message published by the publishing client that satisfies the subscription conditions indicated in the subscription request.

8. The non-transitory, computer-readable medium of claim 7, wherein the queue status of the message queue is maintained by the subscription client.

9. The non-transitory, computer-readable medium of claim 7, wherein the subscription conditions indicated in the subscription request comprise a one-to-one mapping relationship between subscription clients corresponding to the first blockchain and blockchain nodes of the first blockchain.

10. The non-transitory, computer-readable medium of claim 7, wherein the publishing client performs an operation related to the message obtained by the cross-chain interaction end that includes initiating a contract operation related to the message obtained by the cross-chain interaction end.

11. The non-transitory, computer-readable medium of claim 7, wherein obtaining the message comprises operations of:

sending, by the subscription client, the queue status to the cross-chain interaction end, so that the cross-chain interaction end obtains a message that is published in the second blockchain and satisfies the subscription conditions when the cross-chain interaction end determines, based on the queue status, that the message queue does not comprise a message satisfying the subscription conditions.

12. The non-transitory, computer-readable medium of claim 7, wherein the second blockchain comprises a plurality of publishing clients.

13. A computer-implemented 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 one or more operations comprising:

receiving, by a cross-chain interaction end provided between a subscription client corresponding to a first blockchain and a publishing client corresponding to a second blockchain, a subscription request;

determining, based on a queue status of a message queue, that the message queue does not comprise a message satisfying subscription conditions indicated in the subscription request;

sending, by the cross-chain interaction end to the publishing client, the subscription request; and

obtaining, by the cross-chain interaction end, a message published by the publishing client that satisfies the subscription conditions indicated in the subscription request.

14. The non-transitory, computer-readable medium of claim 13, wherein the queue status of the message queue is maintained by the subscription client.

15. The computer-implemented system of claim 13, wherein the queue status of the message queue is maintained by the subscription client.

16. The computer-implemented system of claim 13, wherein the subscription conditions indicated in the subscription request comprise a one-to-one mapping relationship between subscription clients corresponding to the first blockchain and blockchain nodes of the first blockchain.

17. The computer-implemented system of claim 13, wherein the publishing client performs an operation related to the message obtained by the cross-chain interaction end that includes initiating a contract operation related to the message obtained by the cross-chain interaction end.

18. The computer-implemented system of claim 13, wherein obtaining the message comprises operations of:

sending, by the subscription client, the queue status to the cross-chain interaction end, so that the cross-chain interaction end obtains a message that is published in the second blockchain and satisfies the subscription conditions when the cross-chain interaction end determines, based on the queue status, that the message queue does not comprise a message satisfying the subscription conditions.

19. The computer-implemented system of claim 13, wherein the second blockchain comprises a plurality of publishing clients.

20. The computer-implemented system of claim 13, comprising operations of:
maintaining, by the subscription client, a consumption status of each message in the message queue.