Claims

1. A method for operating a device, which is applicable to a cluster system, wherein the cluster system comprises a first cluster and a second cluster, the first cluster comprises a plurality of first nodes, the second cluster comprises a plurality of second nodes, and the method comprises:

obtaining, by at least two first nodes in the first cluster respectively, at least two data operation requests for a target communication device;

performing competition, between the at least two first nodes, for a first distributed lock that is preset for the target communication device;

storing the obtained data operation request by a first node that obtains the first distributed lock through competition;

performing competition, between the second nodes in the second cluster, for a second distributed lock preset for the target communication device;

obtaining, by a second node that obtains the second distributed lock through competition, a data operation request from stored data operation requests according to storage time information of the stored data operation requests, so as to perform a data operation on the target communication device.

2. The method for operating a device of claim 1, wherein,

the data operation requests comprise identification information of the target communication device;

performing competition, between the at least two first nodes, for a first distributed lock preset for the target communication device comprises:

determining, by the at least two first nodes, a first distributed lock corresponding to the target communication device according to the identification information of the target communication device, and performing competition for the first distributed lock.

3. The method for operating a device of any one of claims 1-2, wherein the method further comprises:

releasing the first distributed lock by the first node that obtains the first distributed lock through competition, such that other first nodes obtaining data operation requests start to compete for the first distributed lock.

4. The method for operating a device of any one of claims 1-3, wherein obtaining, by a second node that obtains the second distributed lock through competition, a data operation request from stored data operation requests according to storage time information of the stored data operation requests comprises:

obtaining, by the second node that obtains the second distributed lock through competition, a data operation request with the earliest storage time from the stored data operation requests.

5. The method for operating a device of any one of claims 1-4, wherein the method further comprises:

releasing, by the second node that obtains the second distributed lock through competition, the second distributed lock, and deleting, from the stored data operation requests, the data operation request obtained by the second node that obtains the second distributed lock through competition.

6. The method for operating a device of any one of claims 1-5, wherein the method further comprises:

generating and sending, by the first node that obtains the first distributed lock through competition, a notification message to the second cluster to instruct the second nodes in the second cluster to perform data operations on the target communication device.

7. The method for operating a device of any one of claims 1-6, wherein the target communication device is a switch, and the data operation request is a configuration request for configuring the switch.

8. The method for operating a device of any one of claims 1-7, wherein storing the obtained data operation request by a first node that obtains the first distributed lock through competition comprises:

storing the data operation request in a manner of increasing ID automatically;

wherein obtaining, by a second node that obtains the second distributed lock through competition, a data operation request from stored data operation requests according to storage time information of the stored data operation requests comprises:

obtaining a data operation request with the smallest ID from the stored data operation requests.

9. The method for operating a device of claim 2, wherein, the identification information comprises an IP address or a pre-configured device identifier of the target communication device.

10. A cluster system, comprising a first cluster and a second cluster, the first cluster comprising a plurality of first nodes, and the second cluster comprising a plurality of second nodes, wherein,

at least two first nodes in the first cluster respectively obtain at least two data operation requests for a target communication device;

the at least two first nodes compete for a first distributed lock that is preset for the target communication device;

a first node that obtains the first distributed lock through competition stores the obtained data operation request;

the second nodes in the second cluster compete for a second distributed lock that is preset for the target communication device;

a second node that obtains the second distributed lock through competition obtains a data operation request from stored data operation requests according to storage time information of the stored data operation requests, so as to perform a data operation on the target communication device.

11. The cluster system of claim 10, wherein the data operation requests comprise identification information of the target communication device;

the at least two first nodes are configured for:

determining a first distributed lock corresponding to the target communication device according to the identification information of the target communication device, and competing for the first distributed lock.

12. The cluster system of any one of claims 10-11, wherein,

the first node that obtains the first distributed lock through competition is configured for releasing the first distributed lock after storing the obtained data operation request, such that other first nodes obtaining data operation requests start to compete for the first distributed lock.

13. The cluster system of any one of claims 10-12, wherein the second node that obtains the second distributed lock through competition is configured for:

obtaining a data operation request with the earliest storage time from the stored data operation requests.

14. The cluster system of any one of claims 10-13, wherein the second node that obtains the second distributed lock through competition is configured for releasing the second distributed lock, and deleting, from the stored data operation requests, the data operation request obtained by the second node that obtains the second distributed lock through competition.

15. The cluster system of any one of claims 10-14, wherein the first node that obtains the first distributed lock through competition is configured for generating and sending a notification message to the second cluster to instruct the second nodes in the second cluster to perform data operations on the target communication device.

16. The cluster system of any one of claims 10-15, wherein the target communication device is a switch, and the data operation request is a configuration request for configuring the switch.

17. The cluster system of any one of claims 10-16, wherein the first node that obtains the first distributed lock through competition is configured for:

storing the data operation request in a manner of increasing ID automatically;

wherein the second node that obtains the second distributed lock through competition is configured for:

obtaining a data operation request with the smallest ID from the stored data operation requests.

18. The cluster system of claim 11, wherein, the identification information comprises an IP address or a pre-configured device identifier of the target communication device.

19. A readable storage medium, wherein the readable storage medium stores first instructions, when the first instructions are executed on a computer, the computer carries out steps performed by the first node in the method of any one of claims 1-9, and/or, the readable storage medium stores second instructions, when the second instructions are executed on a computer, the computer carries out steps performed by the second node in the method of any one of claims 1-9.

20. An electronic device, comprising a memory and a processor, wherein,

the memory is configured for storing first executable program codes, and the processor is configured for reading the first executable program codes stored in the memory to carry out steps performed by the first node in the method of any one of claims 1-9, and/or the memory is configured for storing second executable program codes, and the processor is configured for reading the second executable program codes stored in the memory to carry out steps performed by the second node in the method of any one of claims 1-9.