

CLAIMS

1. A resource scheduling method, comprising:
 - receiving a first Input/Output (I/O) request sent by a client device;
 - assigning a request number to the first I/O request based on a first number interval obtained from a central server;
 - determining a tag of the first I/O request based on the request number of the first I/O request; and
 - scheduling the first I/O request based on the tag of the first I/O request.
2. The method according to claim 1, wherein assigning the request number to the first I/O request based on the first number interval obtained from the central server comprises:
 - determining whether there exists an idle number that is not assigned in the first number interval; and
 - in response to the presence of at least one idle number in the first number interval, taking the smallest number in the at least one idle number as the request number of the first I/O request.
3. The method according to claim 1 or 2, wherein assigning the request number to the first I/O request based on the first number interval obtained from the central server comprises:
 - in response to the absence of the idle number in the first number interval, sending a number request to the central server for requesting a new number interval; and
 - receiving a second number interval sent based on the number request by the central server, wherein the second number interval is spaced from the first number interval by at least one number interval.
4. The method according to any one of claims 1 to 3, wherein assigning the request number to the first I/O request based on the first number interval obtained from the central server comprises:
 - in response to the absence of the idle number in the first number interval, determining the request number of the first I/O request based on the largest number in the first number interval.
5. The method according to any one of claims 1 to 4, wherein determining the tag of the first I/O request based on the request number of the first I/O request comprises:

determining the tag of the first I/O request based on a difference between the request number of the first I/O request and the request number of a second I/O request, wherein the second I/O request is a previous I/O request sent by the client device corresponding to the first I/O request.

6. The method according to claim 5, wherein determining the tag of the first I/O request based on the difference between the request number of the first I/O request and the request number of the second I/O request comprises:

determining the tag of the first I/O request based on the difference between the request number of the first I/O request and the request number of the second I/O request, a tag of the second I/O request, as well as a current time.

7. The method according to any one of claims 1 to 6, wherein scheduling the first I/O request based on the tag of the first I/O request comprises:

determining an order of the first I/O request in an I/O request queue based on the tag of the first I/O request; and

scheduling the first I/O request based on the order of the first I/O request in the I/O request queue.

8. A resource scheduling device, comprising:

a request receiving unit, configured to receive a first I/O request sent by a client device;

a number interval obtaining unit, configured to assign a request number to the first I/O request based on a first number interval obtained from a central server;

a tag determining unit, configured to determine a tag of the first I/O request based on the request number of the first I/O request; and

a resource scheduling unit, configured to schedule the first I/O request based on the tag of the first I/O request.

9. A server, comprising:

a request receiving unit, configured to receive a first number request sent by a first resource scheduling device, wherein the first number request is used for requesting a number interval for a client device;

a number interval issuing unit, configured to issue a first number interval to the first resource scheduling device based on a third number interval assigned to a second number

request, wherein the second number request is a previous number request received by the server for the client device that is sent by a second resource scheduling device, and the first number interval is a number interval after the third number interval.

10. A resource scheduling system, comprising: multiple resource scheduling devices and a central server, wherein

the resource scheduling device is configured to send out a first number request for requesting a number interval for a client device to the central server;

the central server is configured to send a first number interval to the resource scheduling device based on the first number request and a previous third number interval issued for the client device, wherein the first number interval is a number interval after the third number interval.

11. The system according to claim 10, wherein the resource scheduling device is further configured to:

receive a first I/O request sent by the client device; assign a request number to the first I/O request based on the first number interval; and schedule the first I/O request based on the request number of the first I/O request.

12. The system according to claim 11, wherein the resource scheduling device is configured to determine a tag of the first I/O request based on the request number of the first I/O request; and schedule the first I/O request based on the tag of the first I/O request.

13. The system according to claim 12, wherein the resource scheduling device is configured to determine the tag of the first I/O request based on a difference between the request number of the first I/O request and the request number of a second I/O request, wherein the second I/O is a previous I/O request sent by the client device corresponding to the first I/O request.

14. The system according to claim 13, wherein the resource scheduling device is further configured to determine the tag of the first I/O request based on the difference between the request number of the first I/O request and the request number of the second I/O request, the tag of the second I/O request, as well as a current time.

15. The system according to any one of claims 11 to 14, wherein the resource scheduling device is configured to determine whether there exists an idle number that is not assigned in the first

number interval; and in response to the presence of at least one idle number in the first number interval, take the smallest number in the at least one idle number as the request number of the first I/O request.

16. The system according to any one of claims 10 to 15, wherein the resource scheduling device is configured to, in response to the absence of the idle number in the first number interval, send a second number request to the central server for requesting a new number interval; and receive a second number interval sent based on the second number request by the central server, wherein the second number interval is spaced from the first number interval by at least one number interval.

17. The system according to claim 15 or 16, wherein the resource scheduling device is configured to, in response to the absence of the idle number in the first number interval, determine the request number of the first I/O request based on the largest number in the first number interval.

18. The system according to any one of claims 19 to 26, wherein the resource scheduling device is a gateway instance.

19. An electronic device, comprising:

- a memory, configured to store executable instructions; and
- a processor, configured to communicate with the memory to execute the executable instructions so as to complete the operations of the resource scheduling method according to any one of claims 1 to 7.

20. A computer readable storage medium, configured to store computer readable instructions, wherein when the instructions are executed, the operations of the resource scheduling method according to any one of claims 1 to 7 are performed.

21. A computer program, wherein a device is caused by the computer program to execute the resource scheduling method according to any one of claims 1 to 7.