

WHAT IS CLAIMED IS:

1. A resource transfer method applied to a switching device, the method comprising:

receiving a resource transfer-out request message sent by a server, the resource transfer-out request message comprising a resource transfer-out request identifier, transfer-out resource account information and a first resource transfer amount;

determining a transfer-out management subsystem according to the resource transfer-out request message, the transfer-out management subsystem comprising a management subsystem for a transfer-out resource account indicated by the transfer-out resource account information; and

sending the resource transfer-out request message to the transfer-out management subsystem, the resource transfer-out request message being configured to instruct the transfer-out management subsystem to freeze the first resource transfer amount of resources in the transfer-out resource account, and at least part of the frozen resources being unfrozen and transferred to a transfer-in resource account under a condition that the transfer-out management subsystem receives an account-out request message;

wherein the transfer-out resource account is a class I account and the transfer-in resource account is a class II account; and

wherein the switching device is used as a management and control device for a resource transfer process between the server and the transfer-out management subsystem, a transfer-in management subsystem, and resources are not deposited in the switching device.

2. The method of claim 1, further comprising:

receiving a resource transfer-out response message sent by the transfer-out management subsystem, the resource transfer-out response message being configured to indicate that the transfer-out management subsystem successfully freezes the first resource transfer amount of resources in the transfer-out resource account; and

sending the resource transfer-out response message to the server.

3. The method of claim 2, further comprising:

receiving a first reversal message sent by the server under a condition that the resource transfer-out response message is not received within a first preset time period;

sending, in response to the first reversal message, a resource freeze reversal message to the transfer-out management subsystem, the resource freeze reversal message being configured to instruct the transfer-out management subsystem to perform a freeze reversal comprising reversing the freeze of the first resource transfer amount of resources in the transfer-out resource account;

receiving a resource freeze reversal response message sent by the transfer-out management subsystem, the resource freeze reversal response message being configured to indicate that the freeze reversal is successful; and

sending the resource freeze reversal response message to the server.

4. The method of claim 2, further comprising:

sending, under a condition that the resource transfer-out response message is not received within a second preset time period, a resource freeze reversal message to the transfer-out management subsystem and a resource transfer-out failure response message to the server, the resource freeze reversal message being configured to instruct the transfer-out management subsystem to perform a freeze reversal comprising reversing the freeze of the first resource transfer amount of resources in the transfer-out resource account;

receiving a resource freeze reversal response message sent by the transfer-out management subsystem, the resource freeze reversal response message being configured to indicate that the freeze reversal is successful; and

sending the resource freeze reversal response message to the server.

5. The method of claim 1, further comprising:

receiving a resource transfer-in request message sent by the server, the resource transfer-in request message comprising the resource transfer-out request identifier, the transfer-out resource account information, transfer-in resource account information and a second resource

transfer amount;

determining the transfer-out management subsystem according to the resource transfer-in request message;

sending the account-out request message to the transfer-out management subsystem, the account-out request message comprising the resource transfer-out request identifier, the transfer-out resource account information, the transfer-in resource account information and the second resource transfer amount and being configured to instruct the transfer-out management subsystem to unfreeze the second resource transfer amount of resources in frozen resources corresponding to the resource transfer-out request identifier and transfer the unfrozen resources out of the transfer-out resource account; and

updating a stored frozen resource amount corresponding to the resource transfer-out request identifier in the transfer-out resource account.

6. The method of claim 5, further comprising:

receiving an account-out success response message sent by the transfer-out management subsystem, the account-out success response message being configured to indicate that the second resource transfer amount of resources that are unfrozen are successfully transferred out of the transfer-out resource account; and

sending, in response to the account-out success response message, an account-in request message to the transfer-in management subsystem comprising a management subsystem for the transfer-in resource account indicated by the transfer-in resource account information, the account-in request message comprising the resource transfer-out request identifier, the transfer-out resource account information, the transfer-in resource account information and the second resource transfer amount and being configured to instruct the transfer-in management subsystem to transfer the second resource transfer amount of resources that are transferred out of the transfer-out resource account to the transfer-in resource account.

7. The method of claim 6, further comprising:

rolling back, under a condition that the account-out success response message is not

received within a third preset time period, the stored frozen resource amount corresponding to the resource transfer-out request identifier in the transfer-out resource account;

sending a resource transfer-in failure message to the server and an account-out reversal message to the transfer-out management subsystem, the account-out reversal message being configured to instruct the transfer-out management subsystem to perform an account-out reversal comprising reversing the transfer of the second resource transfer amount of resources out of the transfer-out resource account and reversing the unfreeze of the second resource transfer amount of resources; and

receiving an account-out reversal response message sent by the transfer-out management subsystem, the account-out reversal response message being configured to indicate that the account-out reversal is successful.

8. The method of claim 6, further comprising:

receiving an account-in success response message sent by the transfer-in management subsystem, the account-in success response message being configured to indicate that the second resource transfer amount of resources are successfully transferred to the transfer-in resource account; and

sending, in response to the account-in success response message, a resource transfer-in success message to the server.

9. The method of claim 6, further comprising:

receiving an account-in failure response message sent by the transfer-in management subsystem, the account-in failure response message being configured to indicate that the second resource transfer amount of resources are not successfully transferred to the transfer-in resource account;

rolling back, in response to the account-in failure response message, the stored frozen resource amount corresponding to the resource transfer-out request identifier in the transfer-out resource account;

sending a resource transfer-in failure message to the server and an account-out reversal

message to the transfer-out management subsystem, the account-out reversal message being configured to instruct the transfer-out management subsystem to perform an account-out reversal comprising reversing the transfer of the second resource transfer amount of resources to the transfer-in resource account and reversing the unfreeze of the second resource transfer amount of resources; and

receiving an account-out reversal response message sent by the transfer-out management subsystem, the account-out reversal response message being configured to indicate that the account-out reversal is successful.

10. The method of claim 8, further comprising:

sending, under a condition that the account-in success response message is not received within a fourth preset time period, the resource transfer-in success message to the server and an account-in confirmation message to the transfer-in management subsystem, the account-in confirmation message being configured to transfer the second resource transfer amount of resources to the transfer-in resource account.

11. The method of claim 1, further comprising:

receiving a resource unfreeze request message sent by the server under a condition that a frozen time period of at least part of resources in the transfer-out resource account exceeds a frozen timeout period, the resource unfreeze request message comprising the resource transfer-out request identifier and the transfer-out resource account information;

sending the resource unfreeze request message to the transfer-out management subsystem, the resource unfreeze request message being configured to instruct the transfer-out management subsystem to unfreeze frozen resources corresponding to the resource transfer-out request identifier;

receiving a resource unfreeze response message sent by the transfer-out management subsystem, the resource unfreeze response message being configured to indicate that the frozen resources corresponding to the resource transfer-out request identifier are successfully unfrozen; and

sending the resource unfreeze response message to the server.

12. The method of claim 1, wherein

the resource transfer-out request message further comprises one or more of the following:
a resource transfer-out request time and a server identifier.

13. The method of claim 5, wherein

the resource transfer-in request message further comprises one or more of the following:
a resource transfer-out request time, a server identifier, a resource transfer-in request time and
a resource transfer-in request identifier; and

the account-out request message further comprises one or more of the following: the
resource transfer-out request time, the server identifier, the resource transfer-in request time,
the resource transfer-in request identifier and a settlement time.

14. The method of claim 6, wherein

the account-in request message further comprises one or more of the following: a resource
transfer-out request time, a server identifier, a resource transfer-in request time, a resource
transfer-in request identifier and a settlement time.

15. The method of claim 11, wherein

the resource unfreeze request message further comprises one or more of the following: a
resource transfer-out request time, a server identifier, a resource unfreeze request time, a
resource unfreeze request identifier and a resource amount not transferred out.

16. A resource transfer method applied to a server, the method comprising:

sending a resource transfer-out request message to a switching device, the resource
transfer-out request message comprising a resource transfer-out request identifier, transfer-out
resource account information and a first resource transfer amount and being configured to
instruct a transfer-out management subsystem to freeze the first resource transfer amount of

resources in a transfer-out resource account, and at least part of the frozen resources being unfrozen and transferred to a transfer-in resource account under a condition that the transfer-out management subsystem receives an account-out request message; and

updating a stored first resource transfer state to a resource transfer-out request state, and the first resource transfer state comprising a transfer state of the first resource transfer amount of resources;

wherein the switching device is used as a management and control device for a resource transfer process between the server and the transfer-out management subsystem, a transfer-in management subsystem, and resources are not deposited in the switching device.

17. The method of claim 16, further comprising:

receiving a resource transfer-out response message sent by the switching device, the resource transfer-out response message being configured to indicate that the transfer-out management subsystem successfully freezes the first resource transfer amount of resources in the transfer-out resource account; and

updating, in response to the resource transfer-out response message, the first resource transfer state to a resource-to-be-transferred-in state.

18. The method of claim 17, further comprising:

sending, under a condition that the resource transfer-out response message is not received within a first preset time period, a first reversal message to the switching device, the first reversal message being configured to instruct the transfer-out management subsystem to perform a freeze reversal comprising reversing the freeze of the first resource transfer amount of resources in the transfer-out resource account; and

updating the first resource transfer state to a resource transfer-out timeout state.

19. The method of claim 18, further comprising:

receiving a resource freeze reversal response message sent by the switching device, the resource freeze reversal response message being configured to indicate that the freeze reversal

is successful; and

updating, in response to the resource freeze reversal response message, the first resource transfer state to a resource transfer-out failure state.

20. The method of claim 16, further comprising:

sending a resource transfer-in request message to the switching device, the resource transfer-in request message comprising the resource transfer-out request identifier, the transfer-out resource account information, transfer-in resource account information and a second resource transfer amount and being configured to instruct the transfer-out management subsystem to unfreeze the second resource transfer amount of resources in frozen resources corresponding to the resource transfer-out request identifier and transfer the unfrozen resources to the transfer-in resource account indicated by the transfer-in resource account information; and

updating a stored second resource transfer state from an initial state to a resource-being-transferred-in state, the second resource transfer state comprising a transfer state of the second resource transfer amount of resources, and the initial state of the second resource transfer state being the same as the first resource transfer state.

21. The method of claim 20, further comprising:

receiving a resource transfer-in success message sent by the switching device, the resource transfer-in success message being configured to indicate that the second resource transfer amount of resources are successfully transferred to the transfer-in resource account; and

updating, in response to the resource transfer-in success message, the second resource transfer state to a resource transfer-in success state.

22. The method of claim 20, further comprising:

receiving a resource transfer-in failure message sent by the switching device, the resource transfer-in failure message being configured to indicate that the second resource transfer amount of resources are not successfully transferred to the transfer-in resource account; and

updating, in response to the resource transfer-in failure message, the second resource transfer state to a resource-to-be-transferred-in state.

23. The method of claim 16, further comprising:

sending, under a condition that a frozen time period of at least part of resources in the transfer-out resource account exceeds a frozen timeout period, a resource unfreeze request message to the switching device, the resource unfreeze request message comprising the resource transfer-out request identifier and the transfer-out resource account information and being configured to instruct the transfer-out management subsystem to unfreeze frozen resources corresponding to the resource transfer-out request identifier; and

updating the first resource transfer state to a resource transfer timeout state.

24. The method of claim 16, wherein

the resource transfer-out request message further comprises one or more of the following: a resource transfer-out request time and a server identifier.

25. The method of claim 20, wherein

the resource transfer-in request message further comprises one or more of the following: a resource transfer-out request time, a server identifier, a resource transfer-in request time and a resource transfer-in request identifier.

26. The method of claim 23, wherein

the resource unfreeze request message further comprises one or more of the following: a resource transfer-out request time, a server identifier, a resource unfreeze request time, a resource unfreeze request identifier and a resource amount not transferred out.

27. A switching device comprising:

a receiving module configured to receive a resource transfer-out request message sent by a server, the resource transfer-out request message comprising a resource transfer-out request

identifier, transfer-out resource account information and a first resource transfer amount;

a determining module configured to determine a transfer-out management subsystem according to the resource transfer-out request message, the transfer-out management subsystem comprising a management subsystem for a transfer-out resource account indicated by the transfer-out resource account information; and

a sending module configured to send the resource transfer-out request message to the transfer-out management subsystem, the resource transfer-out request message being configured to instruct the transfer-out management subsystem to freeze the first resource transfer amount of resources in the transfer-out resource account, and at least part of the frozen resources being unfrozen and transferred to a transfer-in resource account under a condition that the transfer-out management subsystem receives an account-out request message;

wherein the switching device is used as a management and control device for a resource transfer process between the server and the transfer-out management subsystem, a transfer-in management subsystem, and resources are not deposited in the switching device.

28. A server comprising:

a sending module configured to send a resource transfer-out request message to a switching device, the resource transfer-out request message comprising a resource transfer-out request identifier, transfer-out resource account information and a first resource transfer amount and being configured to instruct a transfer-out management subsystem to freeze the first resource transfer amount of resources in a transfer-out resource account, and at least part of the frozen resources being unfrozen and transferred to a transfer-in resource account under a condition that the transfer-out management subsystem receives an account-out request message; and

a state storing module configured to update a stored first resource transfer state to a resource transfer-out request state, and the first resource transfer state comprising a transfer state of the first resource transfer amount of resources;

wherein the switching device is used as a management and control device for a resource transfer process between the server and the transfer-out management subsystem, a transfer-in

management subsystem, and resources are not deposited in the switching device.

29. A switching device comprising: a processor and a memory storing computer program instructions, wherein

the processor, when executing the computer program instructions, implements the resource transfer method of any one of claims 1 to 15.

30. A server comprising: a processor and a memory storing computer program instructions, wherein

the processor, when executing the computer program instructions, implements the resource transfer method of any one of claims 16 to 26.

31. A resource transfer system comprising the switching device of claim 29 and the server of claim 30.

32. A computer storage medium storing computer program instructions thereon which, when executed by a processor, implement the resource transfer method of any one of claims 1 to 26.