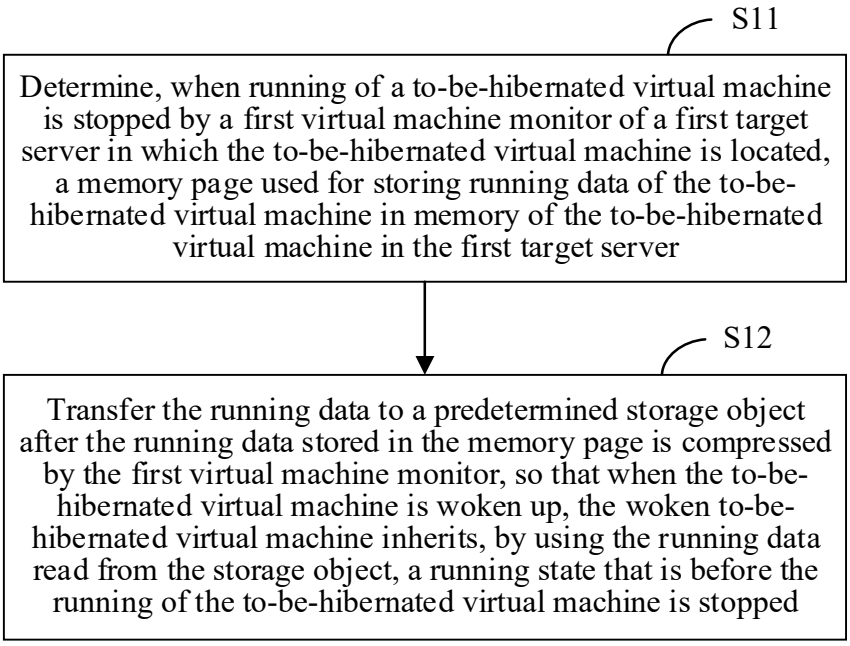
S11
Determine, when running of a to-be-hibernated virtual machine is stopped by a first virtual machine monitor of a first target server in which the to-be-hibernated virtual machine is located, a memory page used for storing running data of the to-be-hibernated virtual machine in memory of the to-be-hibernated virtual machine in the first target server
S12
Transfer the running data to a predetermined storage object after the running data stored in the memory page is compressed by the first virtual machine monitor, so that when the to-be-hibernated virtual machine is woken up, the woken to-be-hibernated virtual machine inherits, by using the running data read from the storage object, a running state that is before the running of the to-be-hibernated virtual machine is stopped

FIG. 1

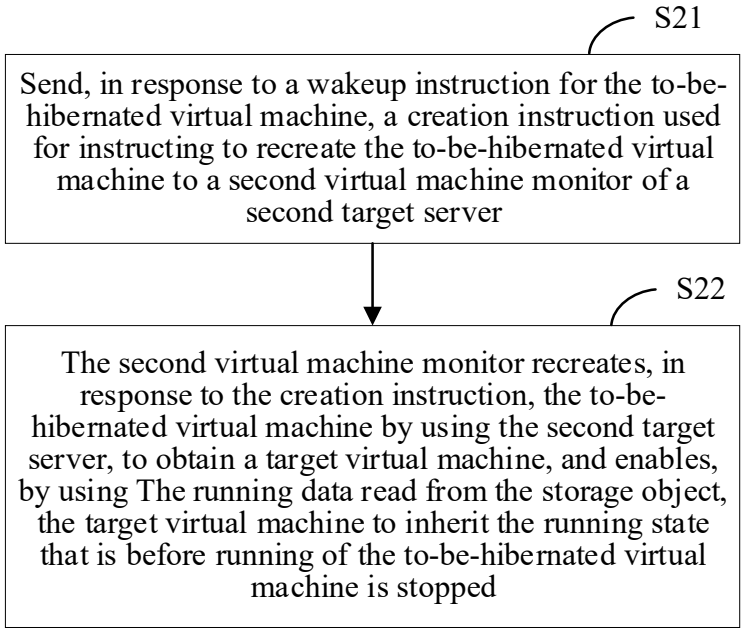
S21
Send, in response to a wakeup instruction for the to-be-hibernated virtual machine, a creation instruction used for instructing to recreate the to-be-hibernated virtual machine to a second virtual machine monitor of a second target server
S22
The second virtual machine monitor recreates, in response to the creation instruction, the to-be-hibernated virtual machine by using the second target server, to obtain a target virtual machine, and enables, by using The running data read from the storage object, the target virtual machine to inherit the running state that is before running of the to-be-hibernated virtual machine is stopped

FIG. 2

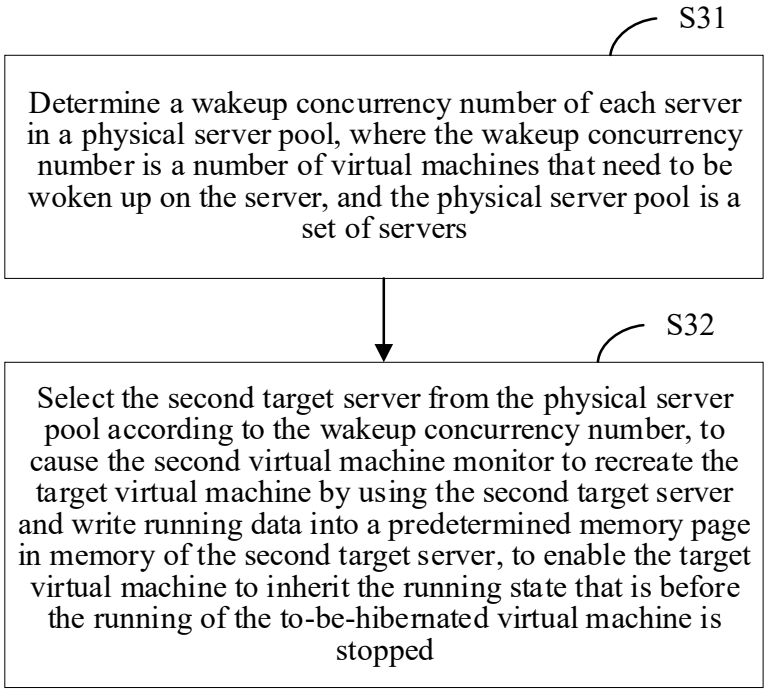
S31
Determine a wakeup concurrency number of each server in a physical server pool, where the wakeup concurrency number is a number of virtual machines that need to be woken up on the server, and the physical server pool is a set of servers
S32
Select the second target server from the physical server pool according to the wakeup concurrency number, to cause the second virtual machine monitor to recreate the target virtual machine by using the second target server and write running data into a predetermined memory page in memory of the second target server, to enable the target virtual machine to inherit the running state that is before the running of the to-be-hibernated virtual machine is stopped

FIG. 3

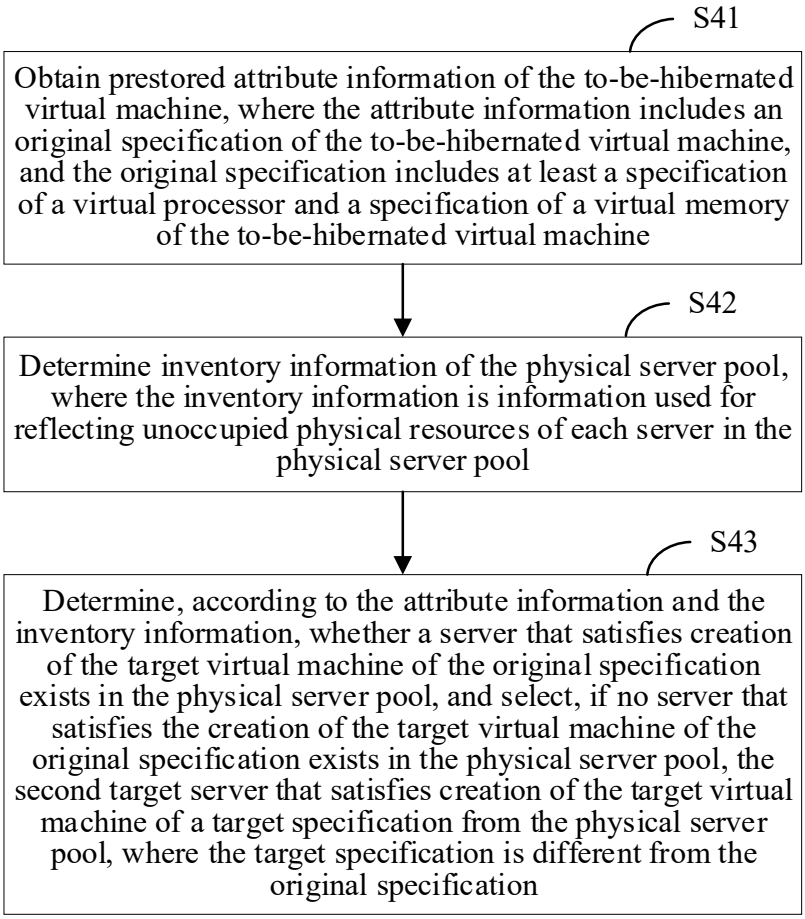
S41
Obtain prestored attribute information of the to-be-hibernated virtual machine, where the attribute information includes an original specification of the to-be-hibernated virtual machine, and the original specification includes at least a specification of a virtual processor and a specification of a virtual memory of the to-be-hibernated virtual machine
S42
Determine inventory information of the physical server pool, where the inventory information is information used for reflecting unoccupied physical resources of each server in the physical server pool
S43
Determine, according to the attribute information and the inventory information, whether a server that satisfies creation of the target virtual machine of the original specification exists in the physical server pool, and select, if no server that satisfies the creation of the target virtual machine of the original specification exists in the physical server pool, the second target server that satisfies creation of the target virtual machine of a target specification from the physical server pool, where the target specification is different from the original specification

FIG. 4

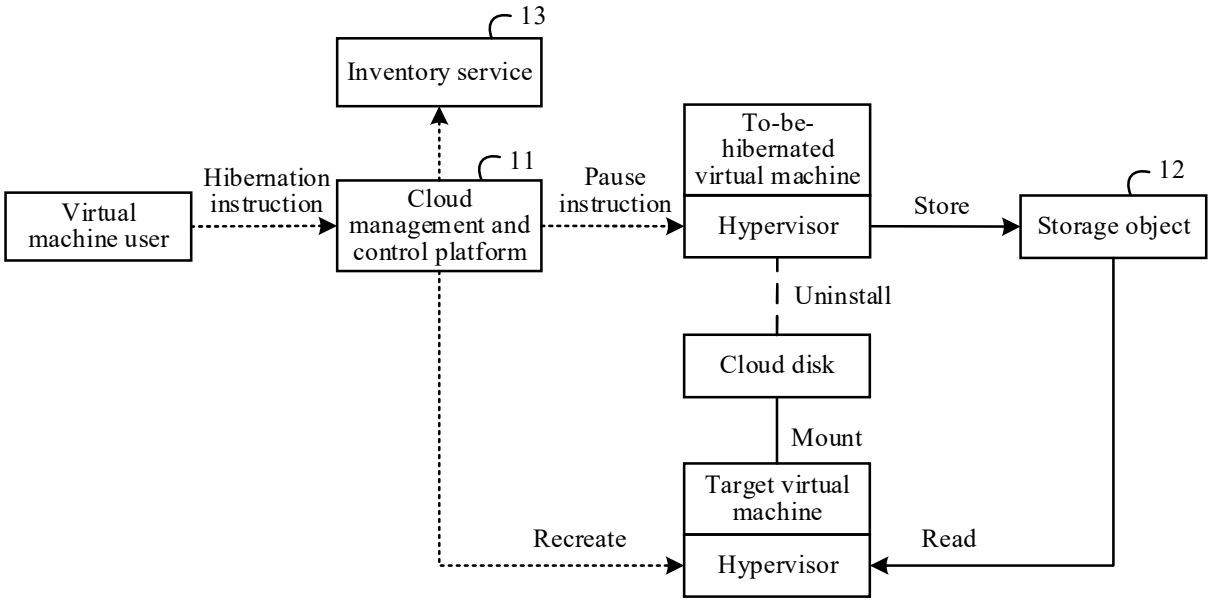
13
Inventory service
11
Hibernation instruction
Virtual machine user
Cloud management and control platform
Pause instruction
To-be-hibernated virtual machine
Hypervisor
Store
12
Storage object
Uninstall
Cloud disk
Mount
Target virtual machine
Hypervisor
Recreate
Read

FIG. 5

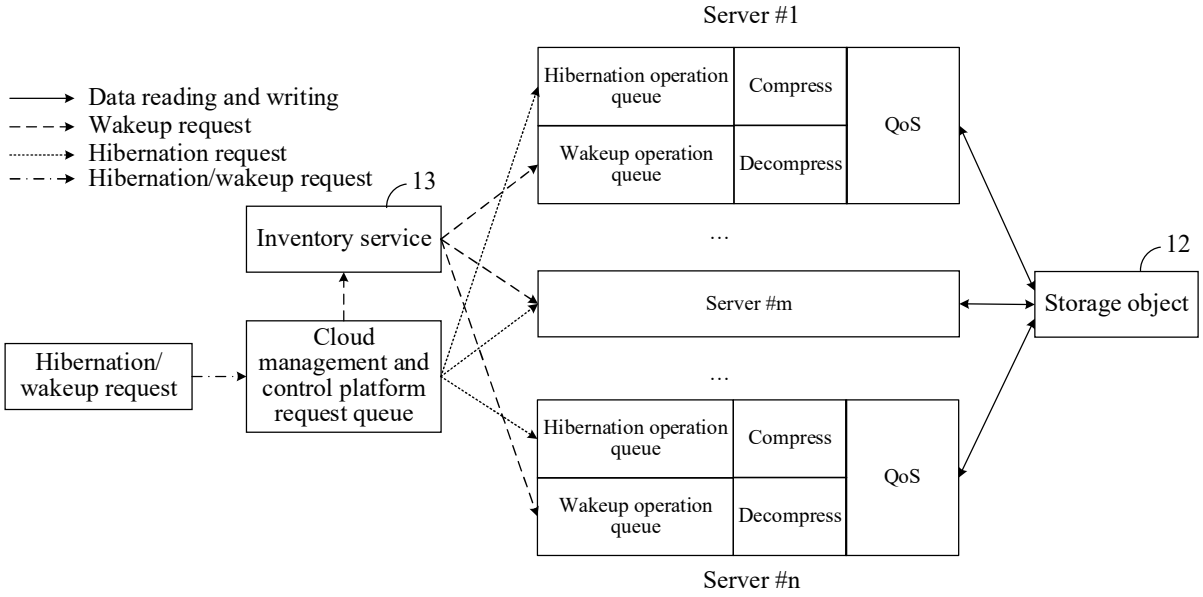
Server #1
Data reading and writing
Wakeup request
Hibernation request
Hibernation/wakeup request
13
Inventory service
Hibernation operation queue
Compress
QoS
Wakeup operation queue
Decompress
...
12
Server #m
Storage object
Hibernation/ wakeup request
Cloud management and control platform request queue
...
Hibernation operation queue
Compress
QoS
Wakeup operation queue
Decompress
Server #n

FIG. 6

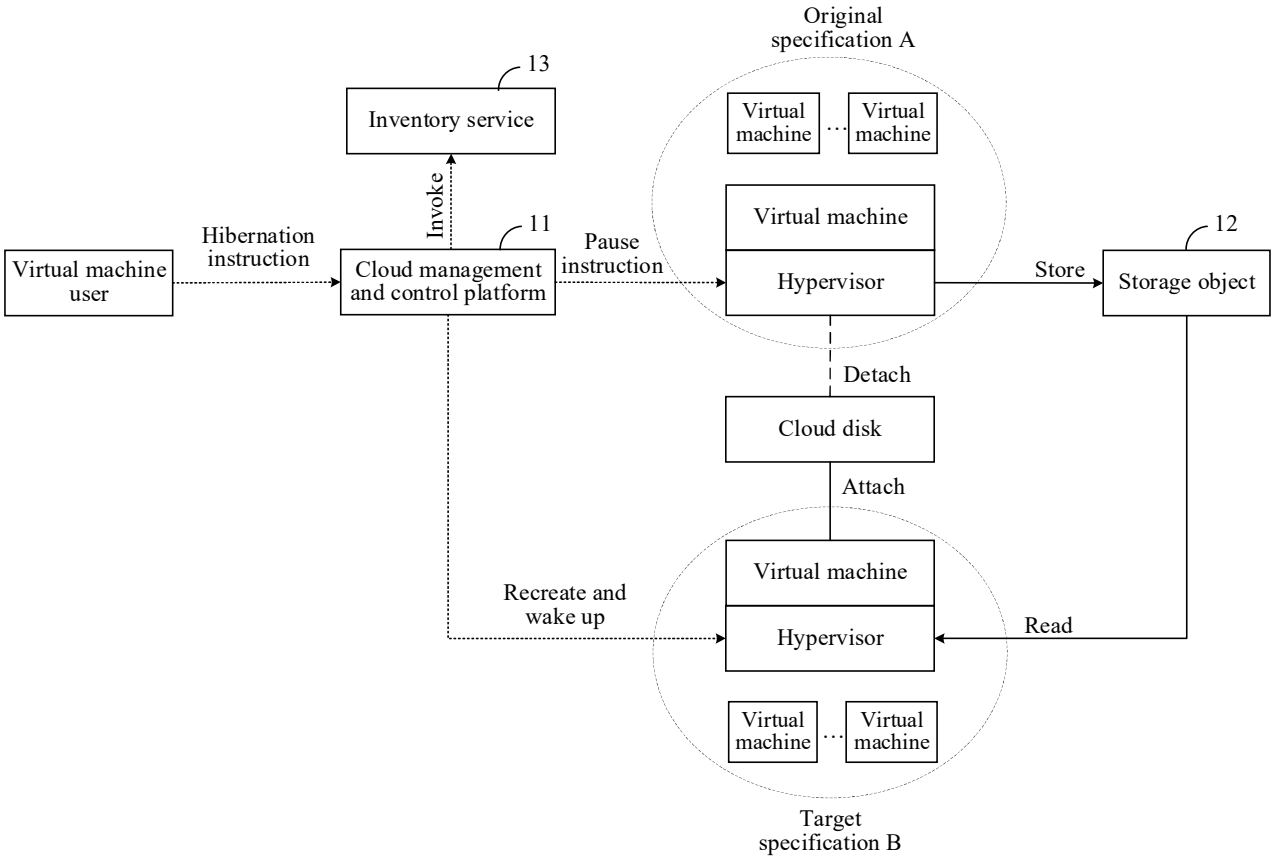
Original specification A
13
Inventory service
Virtual machine
Virtual machine
Invoke
11
Hibernation instruction
Virtual machine user
Cloud management and control platform
Pause instruction
Virtual machine
Hypervisor
Store
12
Storage object
Detach
Cloud disk
Attach
Virtual machine
Recreate and wake up
Hypervisor
Read
Virtual machine
Virtual machine
Target specification B

FIG. 7

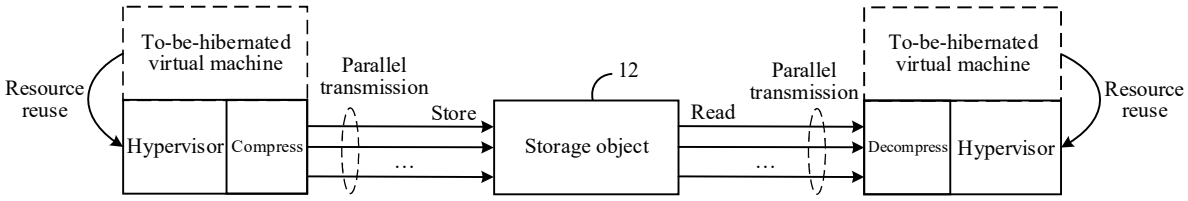
To-be-hibernated virtual machine
Resource reuse
Hypervisor
Compress
Parallel transmission
Store
12
Storage object
Read
Parallel transmission
To-be-hibernated virtual machine
Decompress
Hypervisor
Resource reuse

FIG. 8