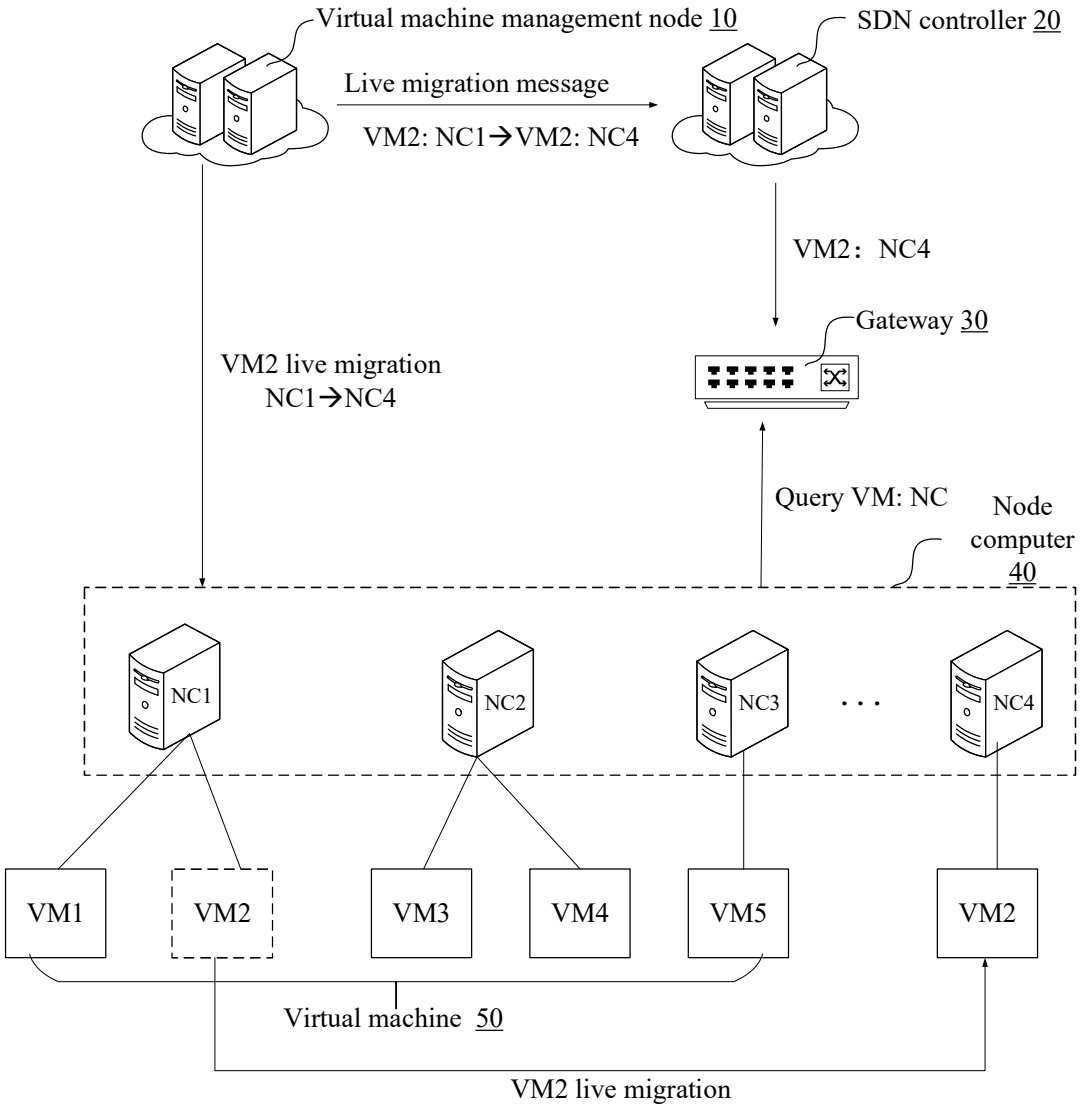
Virtual machine management node 10
SDN controller 20
Live migration message
VM2: NC1→VM2: NC4
VM2：NC4
Gateway 30
VM2 live migration
NC1→NC4
Query VM: NC
Node computer 40
NC1
NC2
NC3
NC4
VM1
VM2
VM3
VM4
VM5
VM2
Virtual machine 50
VM2 live migration

FIG. 1

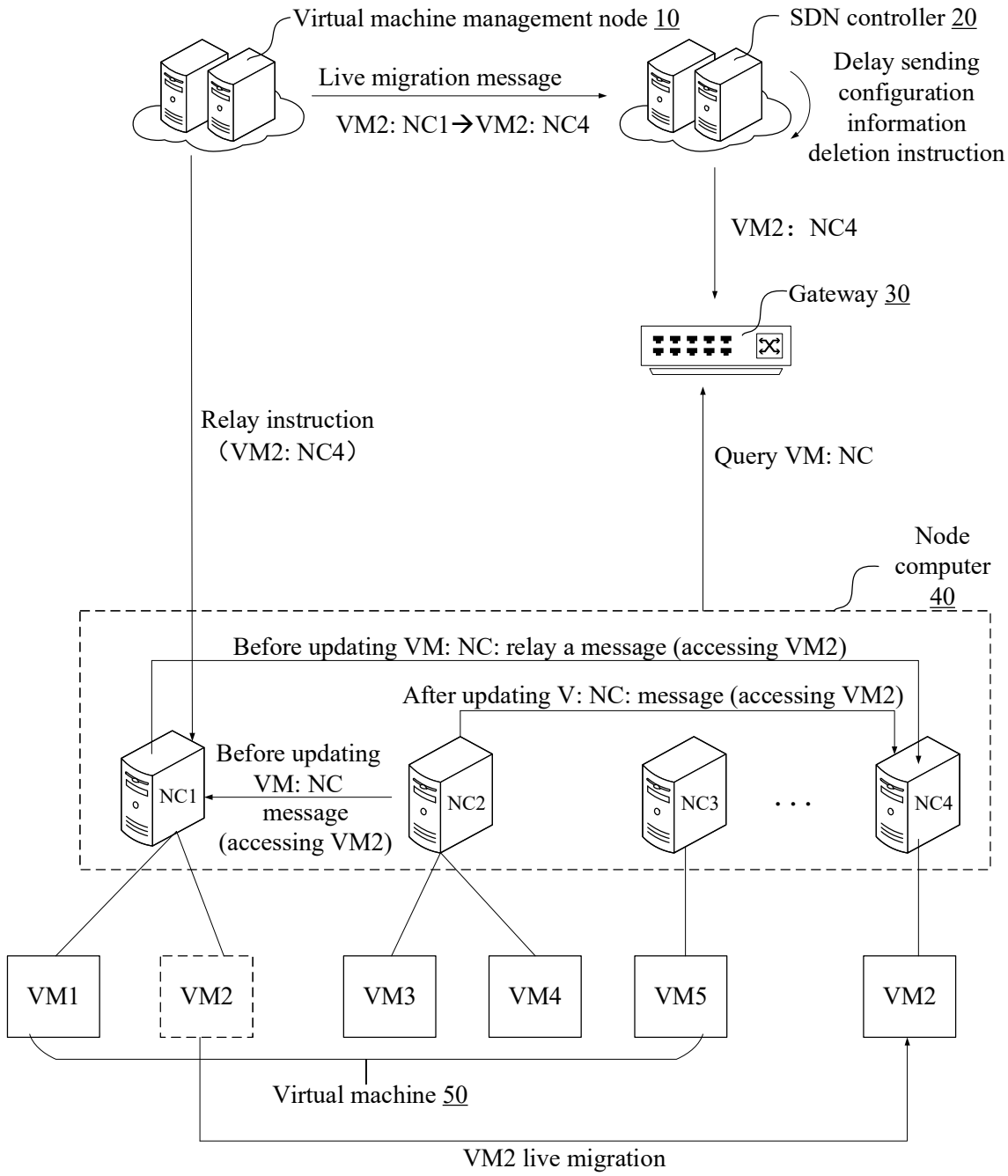
Virtual machine management node 10
SDN controller 20
Live migration message
VM2: NC1→VM2: NC4
Delay sending configuration information deletion instruction
VM2：NC4
Gateway 30
Relay instruction
（VM2: NC4）
Query VM: NC
Node computer 40
Before updating VM: NC: relay a message (accessing VM2)
After updating V: NC: message (accessing VM2)
Before updating VM: NC message (accessing VM2)
NC1
NC2
NC3
NC4
VM1
VM2
VM3
VM4
VM5
VM2
Virtual machine 50
VM2 live migration

FIG. 2

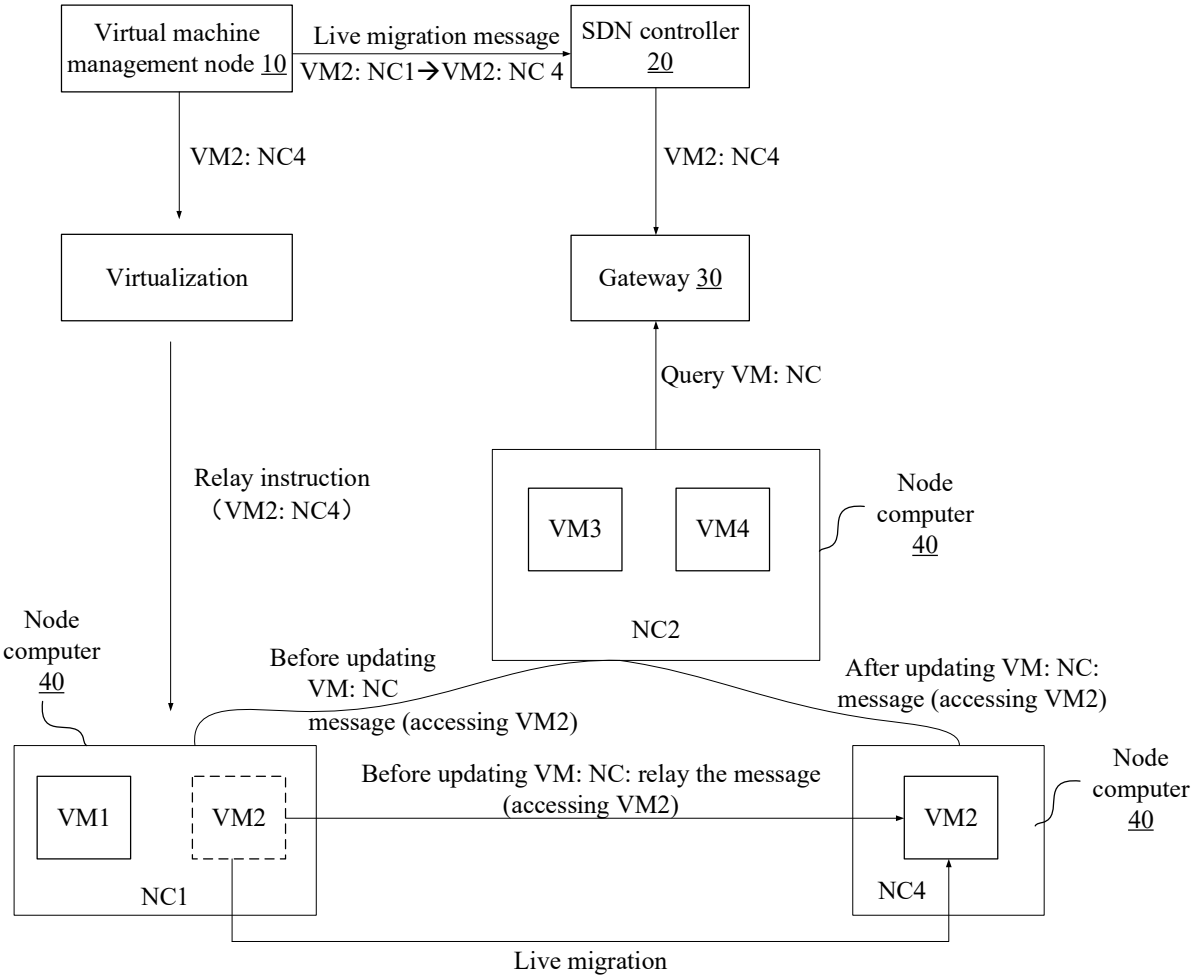
Virtual machine management node 10
Live migration message
VM2: NC1→VM2: NC 4
SDN controller 20
VM2: NC4
VM2: NC4
Virtualization
Gateway 30
Query VM: NC
Relay instruction
（VM2: NC4）
VM3
VM4
Node computer 40
NC2
Node computer 40
Before updating VM: NC message (accessing VM2)
After updating VM: NC: message (accessing VM2)
VM1
VM2
Before updating VM: NC: relay the message (accessing VM2)
VM2
Node computer 40
NC1
NC4
Live migration

FIG. 3

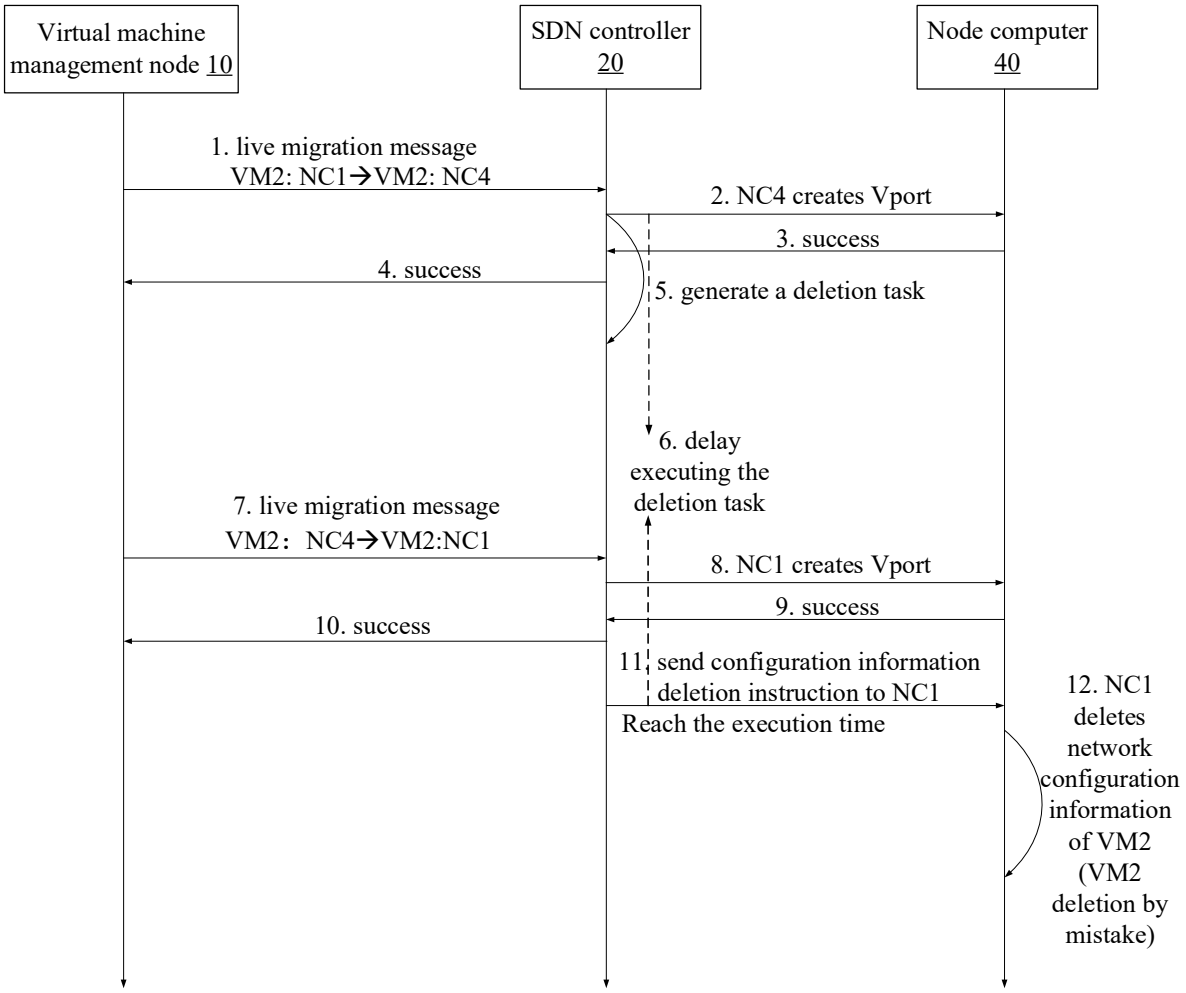
Virtual machine management node 10
SDN controller 20
Node computer 40
1. live migration message VM2: NC1→VM2: NC4
2. NC4 creates Vport
3. success
4. success
5. generate a deletion task
6. delay executing the deletion task
7. live migration message VM2： NC4→VM2:NC1
8. NC1 creates Vport
9. success
10. success
11. send configuration information deletion instruction to NC1
Reach the execution time
12. NC1 deletes network configuration information of VM2 (VM2 deletion by mistake)

FIG. 4

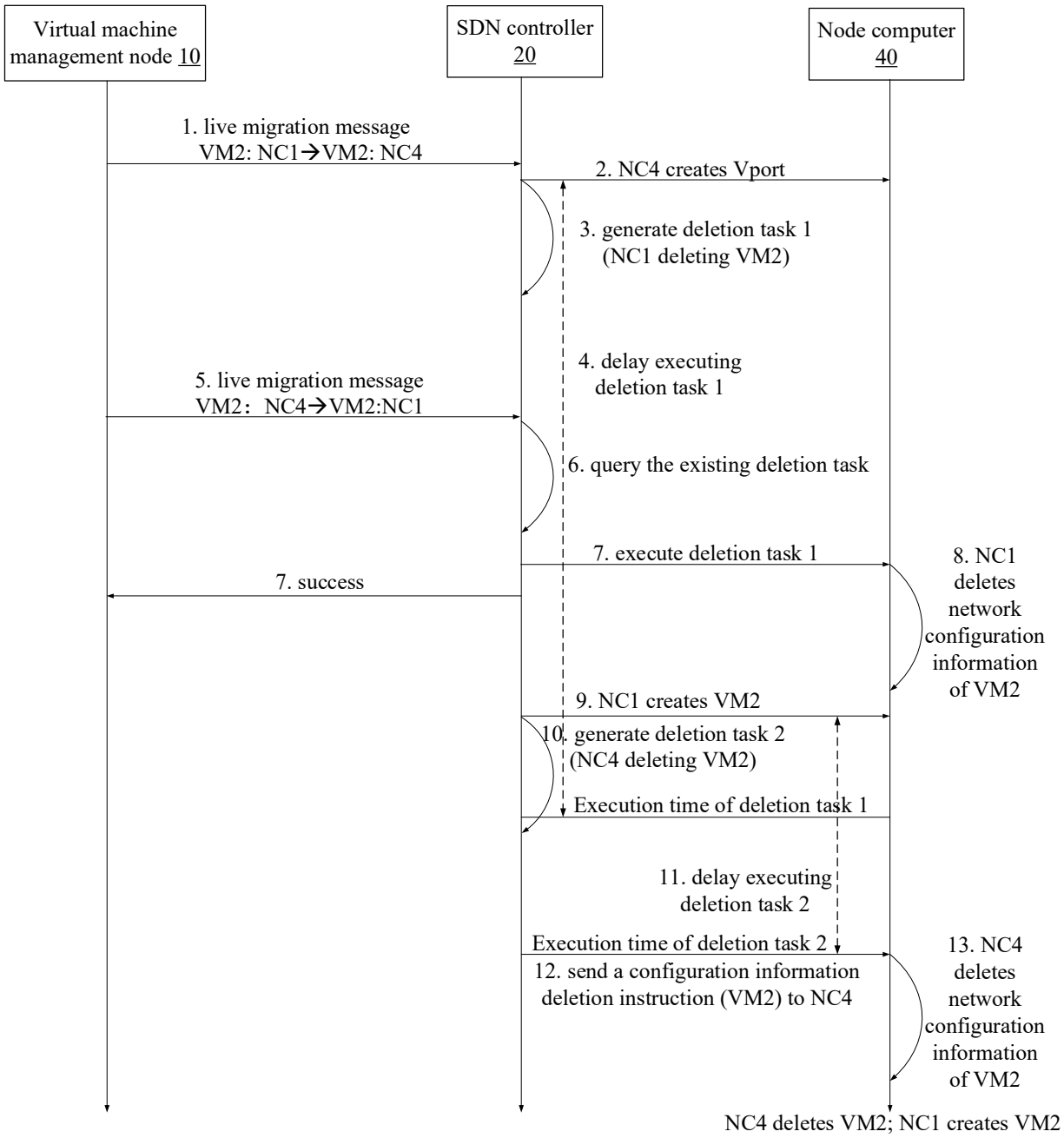
Virtual machine management node 10
SDN controller 20
Node computer 40
1. live migration message VM2: NC1→VM2: NC4
2. NC4 creates Vport
3. generate deletion task 1 (NC1 deleting VM2)
4. delay executing deletion task 1
5. live migration message VM2： NC4→VM2:NC1
6. query the existing deletion task
7. execute deletion task 1
7. success
8. NC1 deletes network configuration information of VM2
9. NC1 creates VM2
10. generate deletion task 2 (NC4 deleting VM2)
Execution time of deletion task 1
11. delay executing deletion task 2
Execution time of deletion task 2
12. send a configuration information deletion instruction (VM2) to NC4
13. NC4 deletes network configuration information of VM2
NC4 deletes VM2; NC1 creates VM2

FIG. 5

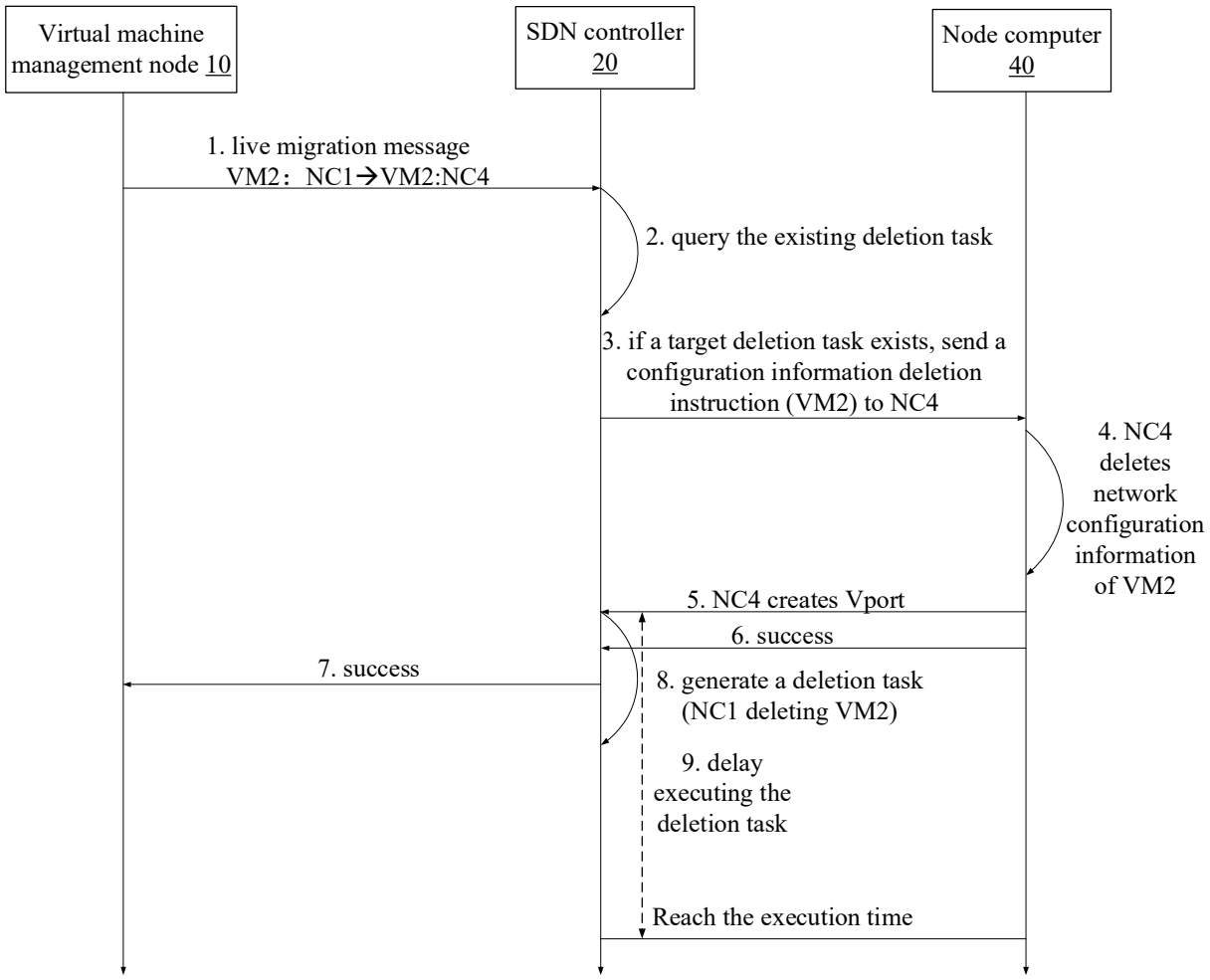
Virtual machine management node 10
SDN controller 20
Node computer 40
1. live migration message VM2：NC1→VM2:NC4
2. query the existing deletion task
3. if a target deletion task exists, send a configuration information deletion instruction (VM2) to NC4
4. NC4 deletes network configuration information of VM2
5. NC4 creates Vport
6. success
7. success
8. generate a deletion task (NC1 deleting VM2)
9. delay executing the deletion task
Reach the execution time

FIG. 6

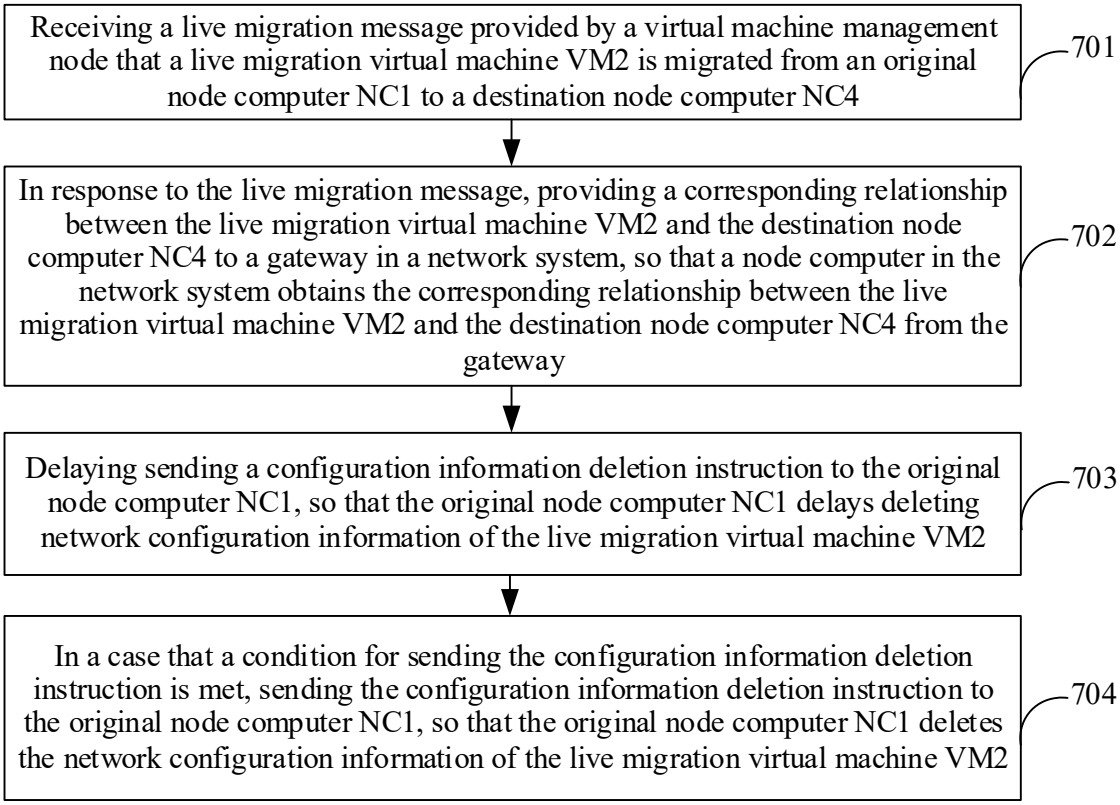
Receiving a live migration message provided by a virtual machine management node that a live migration virtual machine VM2 is migrated from an original node computer NC1 to a destination node computer NC4
701
In response to the live migration message, providing a corresponding relationship between the live migration virtual machine VM2 and the destination node computer NC4 to a gateway in a network system, so that a node computer in the network system obtains the corresponding relationship between the live migration virtual machine VM2 and the destination node computer NC4 from the gateway
702
Delaying sending a configuration information deletion instruction to the original node computer NC1, so that the original node computer NC1 delays deleting network configuration information of the live migration virtual machine VM2
703
In a case that a condition for sending the configuration information deletion instruction is met, sending the configuration information deletion instruction to the original node computer NC1, so that the original node computer NC1 deletes the network configuration information of the live migration virtual machine VM2
704

FIG. 7

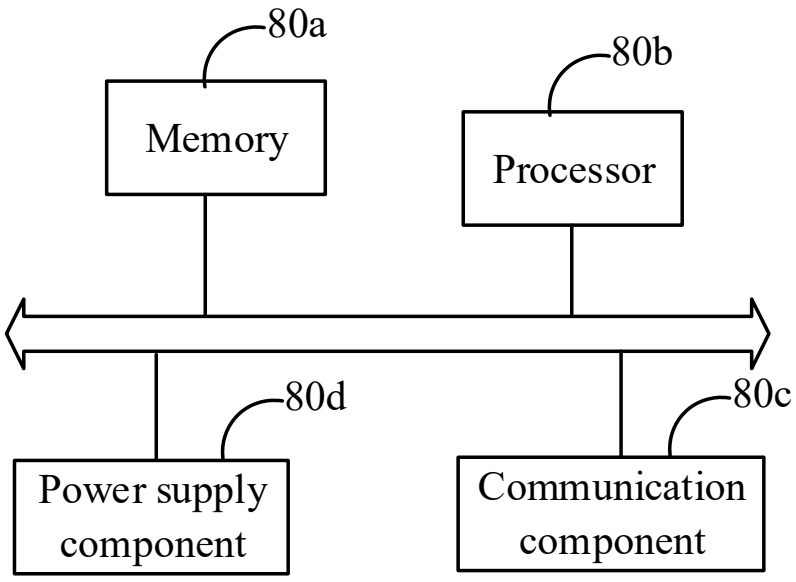
80a
Memory
80b
Processor
80d
Power supply component
80c
Communication component

FIG. 8