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Figure 2 illustrates the VM migration method through a series of steps and components:

- Components:**
 - 虚拟机控制节点 10 (Virtual Machine Control Node 10)
 - SDN控制器 20 (SDN Controller 20)
 - 网关 30 (Gateway 30)
 - 物理机 40 (Physical Machine 40)
 - 虚拟机 50 (Virtual Machine 50)
- Process Flow:**
 - AA:** 热迁移消息 (Hot migration message) sent from VM1 to VM2.
 - BB:** 延迟下发配置/信息删除指令 (Delay issuing configuration/information deletion instructions) from the SDN Controller to the Gateways.
 - CC:** 转发指令 (Forwarding instruction) sent from the Virtual Machine Control Node to the Gateways.
 - DD:** 查询VM: NC (Query VM: NC) sent from the Gateways to the Physical Machine.
 - EE:** VM: NC更新前: 转发报文 (访问VM2) (Before VM: NC update: Forward packet (access VM2)) sent from the Physical Machine to the Virtual Machine Control Node.
 - FF:** VM: NC更新后: 报文 (访问VM2) (After VM: NC update: Packet (access VM2)) sent from the Physical Machine to the Virtual Machine Control Node.
 - HH:** VM2热迁移 (VM2 hot migration) performed on the Virtual Machine.

(57) Abstract: Provided in the embodiments of the present application are a network configuration information processing method, an SDN controller, a system and a storage medium. In the embodiments of the present application, for a live migration process of a virtual machine, the function of delaying the deletion of a virtual machine on an original physical machine is realized in a network control plane. In this way, when a node in a network system sends a packet accessing a live migration virtual machine, even if the node does not obtain, by means of refreshing, a correspondence between the live migration virtual machine and a destination physical machine.

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the packet accessing the live migration virtual machine can still be sent to the original physical machine for relaying or processing; and during the live migration process of the virtual machine and within a certain period of time after the live migration of the virtual machine is completed, the packet loss probability of the packet accessing the live migration virtual machine can be reduced, thereby facilitating ensuring that a service provided by the live migration virtual machine is not damaged. In addition, the control of delaying the deletion of the virtual machine on the original physical machine is performed in the network control plane, such that there is no need to modify a network data plane, and therefore there is no need to additionally occupy CPU resources of the physical machine.

(57) 摘要: 本申请实施例提供一种网络配置信息处理方法、SDN控制器、系统及存储介质。在本申请实施例中, 针对虚拟机热迁移过程, 在网络控制面实现了延迟删除原物理机上的虚拟机的功能, 这样, 对于网络系统中的节点在发送访问热迁移虚拟机的报文时, 即便该节点未刷新到热迁移虚拟机与目的物理机之间的对应关系, 也可将访问热迁移虚拟机的报文发送给原物理机进行转发或处理, 在虚拟机热迁移过程中和虚拟机热迁移完成后的一定时间内, 可降低访问热迁移虚拟机的报文的丢包概率, 有利于保证热迁移虚拟机提供服务不受损。另一方面, 在网络控制面进行延迟删除原物理机上的虚拟机的控制, 不需要对网络数据面进行修改, 因此, 无需额外占用物理机的CPU资源。