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(54) **Title:** VIRTUAL COMPONENT UPGRADE METHOD, VIRTUAL INSTANCE STATE PRESERVATION METHOD, PHYSICAL MACHINE, STORAGE MEDIUM AND PROGRAM PRODUCT

(54) 发明名称: 虚拟化组件升级与虚拟化实例状态保存方法、物理机、存储介质及程序产品

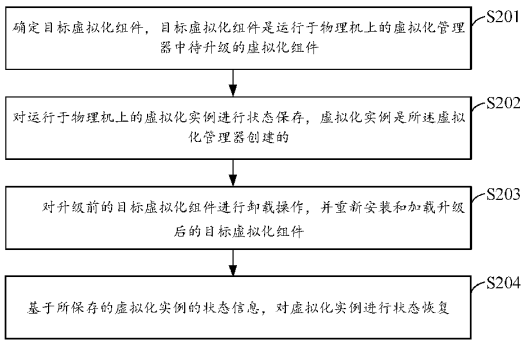

图 2

S201 DETERMINE A TARGET VIRTUAL COMPONENT, THE TARGET VIRTUAL COMPONENT BEING A VIRTUAL COMPONENT TO BE UPGRADED THAT RUNS IN A VIRTUAL MANAGER ON A PHYSICAL MACHINE

S202 PRESERVE THE STATE OF A VIRTUAL INSTANCE RUNNING ON THE PHYSICAL MACHINE, THE VIRTUAL INSTANCE BEING CREATED BY THE VIRTUAL MANAGER

S203 UNINSTALL THE TARGET VIRTUAL COMPONENT THAT HAS NOT BEEN UPGRADED, AND REINSTALL AND LOAD THE UPGRADED TARGET VIRTUAL COMPONENT

S204 ON THE BASIS OF PRESERVED STATE INFORMATION OF THE VIRTUAL INSTANCE, RESTORE THE STATE OF THE VIRTUAL INSTANCE

(57) **Abstract:** Provided in the embodiments of the present disclosure are a virtual component upgrade method, a virtual instance state preservation method, a physical machine, a storage medium and a program product. In the embodiments of the present disclosure, the virtual component upgrade method comprises: first preserving the state of a virtual instance; then uninstalling a virtual component to be upgraded, and reinstalling and loading the upgraded virtual component; and then restoring the state of the virtual instance. Uninstalling the virtual component and then reinstalling and loading the upgraded virtual component are an overall replacement of the grade of the virtual component, and are thus not subject to the complexity of the upgrade, meeting demands for upgrades of various complexity, and being suitable for upgrading various virtual components. Furthermore, during a state preservation process, means such as memory data residing in situ and uninstalling/loading optimization are used to shorten an upgrade time as much as possible, thereby achieving a hot-upgrade effect.

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本国际公布:
— 不包括国际检索报告，在收到该报告后将重新公布(细则48.2(g))。

(57) 摘要: 本公开实施例提供一种虚拟化组件升级与虚拟化实例状态保存方法、物理机、存储介质及程序产品。在本公开实施例中，针对虚拟化组件的升级，先对虚拟化实例进行状态保存，然后，卸载需要升级的虚拟化组件，并重新安装和加载升级后的虚拟化组件；再对虚拟化实例进行状态恢复。其中，通过卸载虚拟化组件，然后重新安装和加载升级后的虚拟化组件，是对虚拟化组件级别的整体替换，因此不会受限于升级复杂度，可以满足各种复杂度的升级需求，适用于对各种虚拟化组件进行升级。进一步，在状态保存过程采用内存数据驻留原地，以及卸载/加载优化等方式，尽量缩短升级耗时，达到热升级效果。