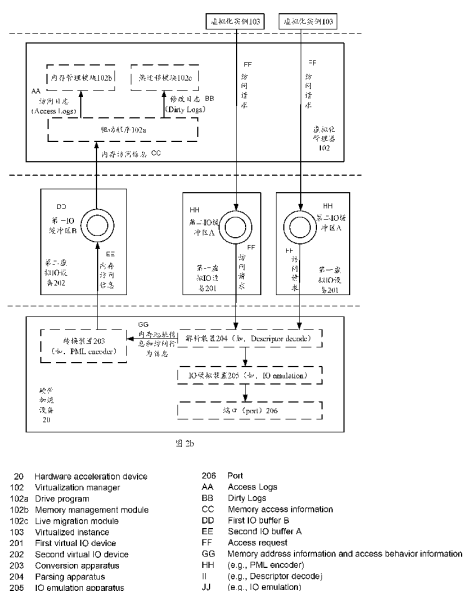


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(57) Abstract: The embodiments of the present disclosure provide a memory access information processing method, devices, a storage medium and a program product. In an embodiment of the present disclosure, a virtualization technique is used to emulate a virtual IO device on a hardware acceleration device, and a virtualized instance executes an access request for the virtual IO device by means of a virtualization manager. During the process, the hardware acceleration device parses the access request into memory address information and access behavior information of the virtual IO device. The virtual IO device is controlled to perform direct memory access; in addition, the memory address information and the access behavior information are converted into memory access information at the virtual IO device dimension, and the memory access information is provided to the virtualization manager, such that the virtualization manager perceives the memory access information of the virtual IO device. Furthermore, compatibility with hardware resources of various versions can be realized without the need to modify page tables of IOMMUs, and the number of memory accesses by each virtual IO device can also be accurately acquired without the need to scan a page table.



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本国际公布:

— 包括国际检索报告(条约第21条(3))。

(57) 摘要: 本公开实施例提供一种内存访问信息处理方法、设备、存储介质及程序产品。在本公开实施例中,采用虚拟化技术,在硬件加速设备上模拟虚拟 IO 设备,虚拟化实例经过虚拟化管理器执行针对虚拟 IO 设备的访问请求,在该过程中,硬件加速设备将访问请求解析成虚拟 IO 设备的内存地址信息和访问行为信息,一方面控制虚拟 IO 设备进行直接内存访问,另一方面,将内存地址信息和访问行为信息转换成虚拟 IO 设备维度的内存访问信息,并提供给虚拟化管理器,使得虚拟化管理器感知虚拟 IO 设备的内存访问信息。进一步,无需对 IOMMU 页表进行修改,可以兼容各种版本的硬件资源,也无需扫描页表,准确获取每个虚拟 IO 设备对内存的访问次数。