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(54) Title: SECURITY SCANNING METHOD FOR CLOUD COMPUTING, RELATED DEVICE AND STORAGE MEDIUM

(54) 发明名称: 用于云计算的安全扫描方法、相关设备及存储介质

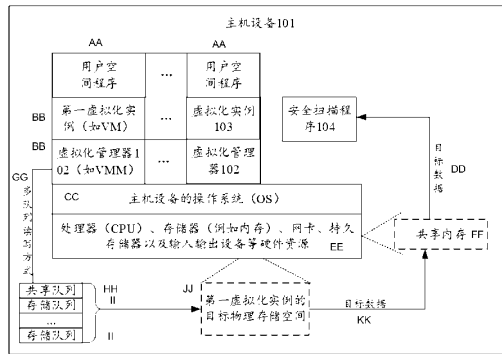


图 1a

AA User space program
BB First virtualization instance (such as a VM)
CC Operating system (OS) of host device
DD Target data
EE Hardware resources such as processor (CPU), storage (such as memory), network interface card, persistent storage and input and output devices
FF Shared memory
GG Multi-queue read-write mode
HH Shared queue
II Storage queue
JJ Target physical storage space of first virtualization instance
KK Target data
101 Host device
102 Virtualization manager
103 Virtualization instance
104 Security scanning program

(57) Abstract: Provided in the embodiments of the present disclosure are a security scanning method for cloud computing, a related device and a storage medium. In the embodiments of the present disclosure, the physical storage space of a virtualization instance supports read and write operations on same by a virtualization manager using a multi-queue read-write mode. On this basis, in addition to creating for the virtualization instance a storage queue required for the read and write operations on the physical storage space, the virtualization manager can also create a shared queue and a shared memory for a security scanning program located outside the virtualization instance, such that the data in the physical storage space of the virtualization instance can be provided, on the basis of the shared queue and the shared memory, for the security scanning program outside the virtualization instance for host security scanning by the security scanning program. On one hand, the method is less susceptible to intrusion interference from an internal process of the virtualization instance, and will not occupy computing resources of the virtualization instance. On the other hand, the method can implement real-time and efficient scanning, and rapidly respond to immediate intrusion behaviors, thus achieving relatively high timeliness.

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TD, TG)。

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用于云计算的安全扫描方法、相关设备及存储介质。在本公开实施例中, 虚拟化实例的物理存储空间支持虚拟化管理器以多队列读写方式对其进行读写操作, 基于此, 虚拟化管理器除了为虚拟化实例创建对物理存储空间进行读写操作所需的存储队列之外, 还能够为位于虚拟化实例外部的安全扫描程序创建共享队列和共享内存, 进而基于共享队列和共享内存能够将虚拟化实例的物理存储空间中的数据提供给虚拟化实例外部的安全扫描程序, 供其进行主机安全扫描。一方面不易受到虚拟化实例内部进程的入侵干扰, 也不会占用虚拟化实例的计算资源; 另一方面能够做到实时、高效的扫描, 能够对即时发生的入侵行为进行快速响应, 具有较高的时效性。