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Sommario/riassunto	More and more enterprises are moving beyond server virtualization to desktop virtualization in recent years. In virtualization environments,

centralized shared storage systems are generally used to take advantage of virtualization features such as VM migration. Network file system (NFS) is considered to be the best choice in small or medium sized LANs due to its flexibility and low cost. But it becomes the bottleneck when many clients access the server simultaneously, especially when multiple virtual machines access a large amount of data at the same time, such as operation save and restore. In this paper, we present a new method named ComIO to quickly save and restore virtual machines using page compression. Based on the analysis of virtual machines' memory characteristics, we design a fast enhanced characteristic-based compression (ECBC) algorithm. Combined with multi-threaded techniques, the compression tasks are parallelized for significantly shortened compresssion time. Page boundary alignment is proposed to enable wanted page data to be directly extracted from the compressed block. The experimental results demonstrate that compared with Xen, our method ComIO not only greatly reduces the time spent on saving and restoring virtual machines on average, but also indirectly augments the effective storage space.