

Storage for virtualization

Virtualization as the process of creating virtual instances of network, storage or operating system, is used to centralize administrative tasks while improving scalability and usage of existing hardware resources. Usually, many virtual machines are created on one set of physical hardware; each of these machines is used by a huge number of users. Virtualization system and storage it uses should ensure high availability, data safety and good performance.

Storage for Virtualization is a set of physical devices managed with software, where virtual machine images and user data are actually stored. As storage is a foundation of virtualization solutions, hardware and software used for such implementations must meet the high standards.

Hardware

Storage for virtualization requires hardware that provides good performance, guarantees data safety and offers large capacity. General requirements for hardware are:

- A server platform with two quad- or six-core CPUs for high performance
- H/W RAID controller with support for RAID5 or RAID6 for data safety
- SAS/SATA drives for high speed drive transfers and reliability
- One or more 10GbE NICs or multiple 1GbE interfaces for high speed network connection

Software

Software supporting hardware has to be scalable and reliable, but also easy to manage and administer. It should offer high performance and, at the very least, allow for efficient data management. General software requirements for virtualization storage implementations include:

- iSCSI Target share for easy management
- Active-Active iSCSI Failover for high availability
- Support for SAS/SATA RAID Controllers ensuring high performance, large capacity and data safety
- Support for 10 GbE NICs or bonding for efficient network connectivity

We recommend [Open-E DSS V7](#) as a comprehensive storage software solution for the virtualization purposes.