

iSCSI Storage

Tags: [iscsi](#) [iscsi booting configuration](#) [microsoft iscsi](#) [mpio](#)

iSCSI storage enables efficient use of a disk space while ensuring data safety and increased performance. Moreover, centralized storage management utilizing iSCSI and RAID technology makes administration more comfortable and reduces downtime in case of a hard drive failure.

From a technical perspective, iSCSI storage is a set of hardware and software designed to serve LUNs (Logical Unit Numbers) over a network. Such a server, designed for simultaneous access of multiple users, must meet the highest standards in terms of performance, reliability and redundancy.

Hardware

A dedicated hardware for iSCSI storage solutions should meet certain conditions to provide good performance, capacity and to guarantee safety. Here are the general hardware requirements:

- Server platform with two quad-core CPUs for high performance
- H/W RAID controller with support for RAID5 or RAID6 for data safety and good performance
- Enterprise class SATA drives for high speed drive transfers and data reliability
- 10GbE NIC for high speed network connection or multiple 1GbE NICs for iSCSI MPIO network connection
- A large number of SATA/ATA/SAS drives for large capacity
- Redundant power supply for system reliability

Software

The general requirements for the software are similar to those, defined for hardware - this means: manageability (usability and flexibility), network security (backup and data leakage prevention) and high performance (enabling full use of the hardware capabilities). Additional, but important criterion for iSCSI implementations is a low price of the software.

Below are the general requirements for software:

- Support for iSCSI Multipath I/O (MPIO) to [iSCSI target](#) – allowing multiple connections to one target, which increases performance and reliability
- Support for iSCSI CHAP – allowing CHAP users to be assigned to a specific iSCSI target
- Support for IP address restrictions for an iSCSI target - allowing administrators to set up a range of IP addresses which have access to targets
- Support for SAS/SATA RAID Controllers for large capacity and data safety
- Built-in, SNMP Based Monitoring System and E-mail notification for system monitoring

We recommend [Open-E DSS V7](#) as a software solution for the iSCSI storages. It meets all the requirements presented above, guaranteeing both high performance and a low price.

Related content

Solutions

- [How to Connect to a DSS V6 iSCSI Target volume from a Microsoft Windows*](#)
- [How to Configure DSS V6 MPIO with Windows 2008 Server*](#)
- [How to Connect a DSS V6 to another DSS V6 with an iSCSI Target Volume*](#)

Blog posts

- [How to boot an operating system from a remote iSCSI disk?*](#)
- [A few practical tips about Iometer](#)
- [Bonding versus mpio explained](#)

Case studies

- [Financial Services - VBRB Mangfalltal-Rosenheim eG \(German version\)*](#)
- [Streamline IT Infrastructure and reduce Storage Costs with ibc and Open-E*](#)
- [Protection against fall not only for mountain climbers*](#)
- [Handelshof: Centralized IT Services on ES-8700 Cluster*](#)
- [Eine Erfolgsgeschichte aus der Lebensmittelindustrie \(German version\)*](#)

Webinars

- [Setup a Ubuntu Server with iSCSI and MPIO to connect to an iSCSI Target in Open-E DSS V7](#)
- [Storage Solutions with iSCSI Auto Failover to install your Virtual Machine](#)
- [Typical Administrator tasks done while iSCSI Failover is running | German version](#)
- [Accessing iSCSI volumes without downtime when Failover is disabled](#)
- [All the possible ways to increase Volume Groups and Logical Volumes](#)
- [Open-E DSS V7 Quickstart | German version](#)

*Content refers to Open-E DSS V6. [Open-E DSS V7](#) includes the features mentioned in this referral.