Direct Access Storage Device (DASD)

Definition - What does *Direct Access Storage Device (DASD)* mean?

A direct-access storage device (DASD) is another name for secondary storage devices that store data in discrete locations with a unique address, such as hard disk drives, optical drives and most magnetic storage devices.

It is a technology and term coined for storage devices that IBM developed for use with mainframe computers and some microcomputers. These developed into the modern hard disk and its variants like the optical disk, which today we would simply call secondary storage.

Techopedia explains *Direct Access Storage Device (DASD)*

Direct-access storage devices allow the host computer to access data directly from wherever it is stored within the storage device because each data chunk is saved in a discrete and separate location from other chunks, complete with a unique address. This allows the computer to directly point to that location to get the data. Access methods include indexed, sequential and direct (incorrectly referred as random access).

Even if the exact location of the data is known, the speed of access is largely dependent on the capability of the storage device; for example, even if the exact data location within a tape drive is known, the only access method is sequential access because of the inherent design of the tape, which means it must go through all of the locations preceding the one that is needed. Additionally, the tape cannot run very fast. This is in contrast to a direct access disk, which can quickly spin the disk and move the read/write head to the correct track and sector in fractions of a second.

Modern DASDs are internal and external hard disk drives that connect directly to the host computer via an IDE, SATA, eSATA, USB or FireWire interface. Unlike network-attached storage (NAS), DASDs become inaccessible once the device they are connected to goes offline.

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