

Secondary Storage

What is secondary storage?

Secondary storage is persistent storage for non-critical data that doesn't need to be accessed as frequently as data in primary storage or that doesn't have the same performance or availability requirements. Primary storage typically requires costly high-performance storage systems. Data that doesn't require primary storage can be migrated to secondary storage devices to free up space and improve performance on primary storage devices, while lowering overall storage costs. Organizations typically use secondary storage for back up and disaster recovery (DR) data, archival data or non-critical active data. Secondary storage is also referred to as auxiliary storage.

The term secondary storage has had different meanings. It referred to a class of non-volatile media that could store data without always being connected to power. Secondary storage might include hard disk drives (HDDs), solid state drives (SSDs), optical disks, USB flash drives,



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Floppy disks or other devices, secondary storage has also been distinguished from primary storage based on whether it was external to the computer, as opposed to being an internal component. Any type of memory within the computer was considered primary and everything connected externally to the computer was considered secondary. The term secondary storage has also been used to describe external storage device not connected directly to production servers.

3 types of secondary storage: Data sets stored on secondary storage. It include backup data, test and development data, reference data archived data and older operational data no longer requires daily access. Secondary storage is commonly used to store backup data that comes from primary storage.

Secondary Storage to support 3 primary use case:

- 1) Backup and DR
- 2) Archival
- 3) noncritical active data.

Benefit of Secondary Storage:

- 1) Free capacity on primary storage
- 2) Lower overall storage costs
- 3) Computing network to provide an additional layer of security.
- 4) Lower cost - higher capacity storage
- 5) Backup appliances and cloud services can store vast amount of data

Cloud as a secondary storage tier:

The rise of the software as a service (SaaS) model makes it possible to use cloud storage for secondary or tertiary storage. When organizations use public cloud platforms, they're accessing data stored on physical service via the internet. This enables users and applications to access data from any device in any location although customers may charges above the monthly cloud subscription for ingress and egress and for running operations on the data.



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Examples of secondary storage

devices: External HDDs are commonly used as secondary storage devices, often to support consumer storage requirements. An external HDD is a portable device that attaches directly to a computer via a standard USB port. The HDD can serve as secondary computer storage or as a network drive. In a business environment an older network-attached storage (NAS) box. Storage are network (SAN) or tape library can potentially serve as secondary storage. More recently, object storage device have been used for secondary storage to lessen the demands on primary storage arrays.