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## Dynamic Disks

The dynamic disk is useful for those people who have more than one hard drive installed, It also servers to simplify the number of units that we are going to see in our scan.

A dynamic disk consists of expanding the storage drive or partition into an extended volume that is capable of supporting one or more physcal hard drives on itself.

One of the differences between dynamic disks and basic disks are composed of noncontiguous extents that are within one or more physical disks, while basic disks are also composed of non-contiguous extents, but the difference is that the basic disks are within a single disk.

Distributed partitioning divides and distributes data across many storage devices. This serves to improve the performance, scalability and availability that the storage system can have.

Some of the advantages of distributed dynamic disk partitioning are:

- **Improved performance:** By distributing data across many devices, better performance can be achieved by reading and writing simultaneously in multiple locations.
- **Scalability:** It is easier to add more storage capacity by adding more devices to the distributed system.
- **Fault tolerance:** Data distribution can also improve fault tolerance, since the loss of a device does not imply the total loss of data.

Striped partitioning is a partitioning where the available disk space is divided into different stripes of the same size. Striped partitioning does not offer us fault tolerance, which means that the entire volume of our disk will fail even if only one of the disks fails.

A mirrored volume is a volume that is fault tolerant that provides us with data redundancy through two copies of the volume in order to duplicate the data stored on the volume. All data that is written to the mirror volume will be written to both disks, they are on separate physical disks. If an error occurs on one of the physical disks we have, the data on the disk with errors will not be available, but the system will continue to work with the unaffected disk.