30MINUTES NEW LEARNING

What is RAID structure in OS?

RAID (Redundant Arrays of Independent Disks) is a method used to store data on Multiple hard disks therefore it is considered as data storage virtualization technology that combines multiple hard disks.

It simply balances data protection, system performance, storage space, etc. It is used to improve the overall performance and reliability of data storage.

It also increases the storage capacity of the system and its main purpose is to achieve data redundancy to reduce data loss.

Different levels of RAID

- RAID 0 - Non-redundant striping: used to increase the performance of the server.
- RAID 1 - Mirroring and duplexing: also known as disk mirroring and is considered the simplest way to implement fault tolerance.
- RAID 2 - Memory-style error-correcting codes: This level generally uses dedicated hamming code parity of error correction code.
- RAID 3 - Bit-interleaved Parity: This level requires a dedicated parity drive to store parity information.
- RAID 4 - Block-interleaved Parity: This level is similar to RAID 5 but the only difference is that this level confines all parity data to a single drive.
- RAID 5 - Block-interleaved distributed Parity: This level provides far better performance than disk mirroring and fault tolerance.
- RAID 6 - P+Q Redundancy: This level generally provides fault tolerance for two drive failures