

## RAID Level 1: Disk Mirroring



- Multiple copies of data are simultaneously written to **multiple drives**
- Provides data redundancy by **duplicating the drive data** to multiple drives
- If one drive fails, **data recovery** is possible
- Requires a minimum of **two drives**

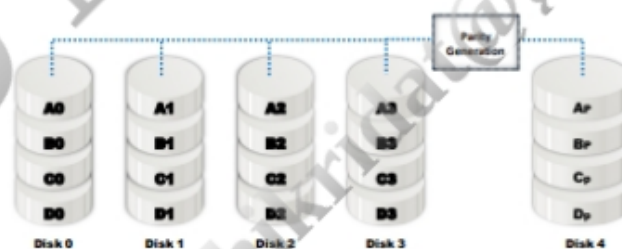


Copyright © by EC-Council. All Rights Reserved. Reproduction is Strictly Prohibited.

## RAID Level 3: Disk Striping with Parity



- Data is striped at the **byte level** across multiple drives. One drive per set is taken up for parity information
- If a drive fails, **data recovery and error correction** are possible using the parity drive in the set
- The **parity drive** stores the information on multiple drives



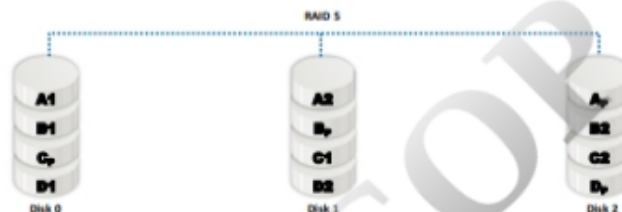
Copyright © by EC-Council. All Rights Reserved. Reproduction is Strictly Prohibited.

Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## RAID Level 5: Block Interleaved Distributed Parity



- The data is striped at the byte level across multiple drives and the parity information is distributed among all the member drives
- The **data writing** process is slow
- This level requires a minimum of **three drives**

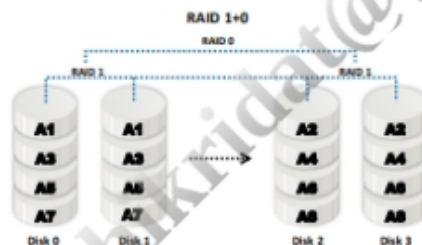


Copyright © by EC-Council. All Rights Reserved. Reproduction is Strictly Prohibited.

## RAID Level 10: Blocks Striped and Mirrored



- RAID 10 is a combination of RAID 0 (Striping Volume Data) and RAID 1 (Disk Mirroring) and requires at least **four drives to implement**
- It has the same **fault tolerance as RAID level 1** and the same overhead for mirroring as Raid 0
- It stripes the data across **mirrored pairs**. The mirroring provides redundancy and improved performance. The data striping provides **maximum performance**



Copyright © by EC-Council. All Rights Reserved. Reproduction is Strictly Prohibited.

Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_