

RAID 0 – Striping

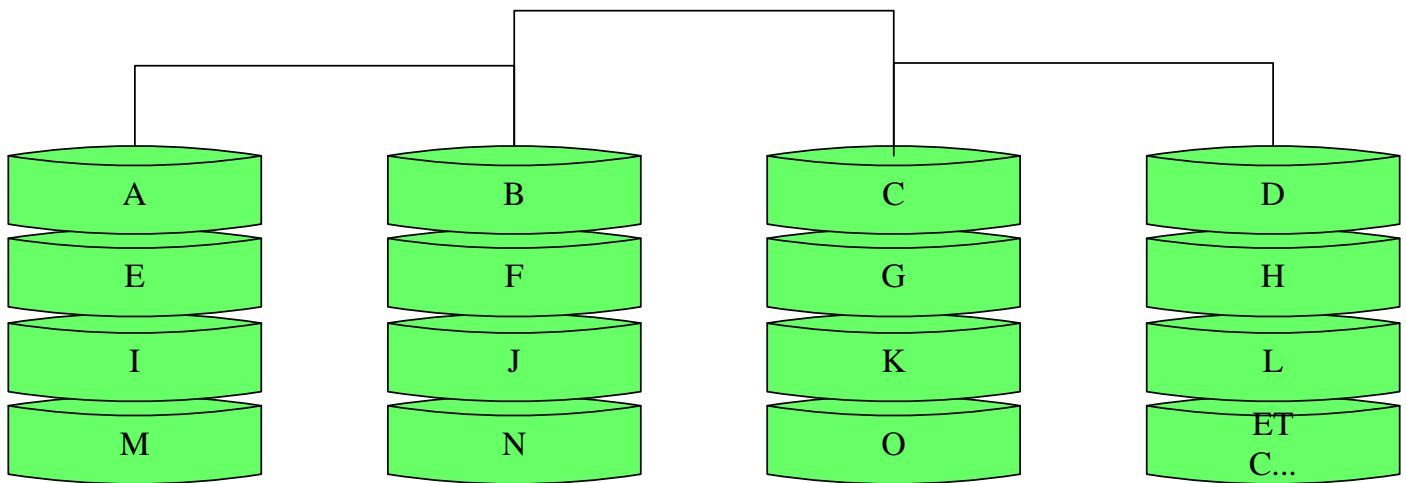
No redundancy

- No fault tolerance

High I/O performance

- Parallel I/O

RAID Level 0 – Striped Disk Array Without Fault Tolerance



RAID Level 0 + 1: Striping and Mirroring

Also called RAID Level 10

- Combines mirroring and striping
 - Data is striped over the data disks
- Parallel I/O for high throughput (full disk array bandwidth)
 - Each data disk is copied into a mirror disk
- Writes require 2 I/Os – (original disk + mirror disk)
- Blocks can be read from either original disk or mirror disk
- Better performance since more parallelism can be achieved
 - No need to wait for busy disk, just go to its mirror disk!
 - Space utilization is 50% (half data and half copies)
- RAID Level 1+0 is better than RAID 1 because of striping
- RAID Level 1+0 is good for workloads with small data sets, where cost of mirroring is not an issue.
- Also good for workloads with high percentages of writes, since a write is always 2 I/Os to unloaded disks (specially the mirrors)