

7) Raid 0: No parity, can't error correct.

Any error will cause failure, only requires 2 hard disks, increases performance slightly

Raid 1: provides fault tolerance up to single different failure, allows for multithreaded reading no performance increase, while writing 2 hard disks minimum.

Raid 2: comparable to raid 1. Writing is extremely slow requires min of 2 drives, can't service multiple requests simultaneously, can tolerate up to  $\frac{1}{2}$  of data being corrupted has error correction.

Raid 3: minimum of 3 disk drives, can't service multiple request simultaneously has error correction, high transfer rates for reading large files very slow for small files

Raid 4: min of 3 drives, can handle errors (on all but its parity drive) good performance on random reads & not random writes

Raid 5: highest read data rate, avg write data rate. Drive failure requires replacement but doesn't have any other effects user won't notice any drive failures requires min of 3 hard disks

b) normal use as long as no more than 1 drive fails. upon failure of a single drive, data of that drive can be calculated error the parity dist. across other drives. If noticing drive failure process is to copy result of parity to a new drive.

c) Raid 10 because it can handle half of drives failing & replacement of a single drive is quick & easy.