2nd Modification

**A Case for RAID 3**

**Submitted: 4/9/2009 2:20:47 PM**

**Release: All**

**Category: Other**

**Description:**

RAID-3 combines striping and parity, but it puts all the parity information on a separate parity disk. The result is an array that is especially poor at random writes and only so-so on random reads. This means RAID-3 is poorly suited for transactional applications.

Where RAID-3 shines is in sequential reads and, to a lesser extent, in sequential writes. In fact, it's actually faster than RAID-5 on sequential reads and writes, and nearly as fast as RAID-0 (striping), with the advantage of data protection. This means that in applications where large files comprise all of the workload, RAID-3 is a good choice.

Not surprisingly, RAID-3 is most common in applications like streaming media, graphics and video editing, in which the files are very large and the storage medium must keep up with system speed.

A RAID-3 array tolerates the loss of any single drive and most modern RAID-3 systems support hot spares and automatic rebuilding. While performance doesn't degrade much in the event of a single-disk failure, rebuilding the array can take hours, as the blocks are checked and the bad ones reconstructed.

RAID-3 requires at least three disks (two for data and one for parity) and at least a medium level controller.

Generally speaking, any application that reads and writes large files sequentially is a good candidate for RAID-3.