

IT *tips &* TRENDS

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RAID Level 5 Server Technology

For most businesses, the network file server is central to the functioning of the enterprise. The most common *complaint* about a network is that it is “running slowly” and the greatest *risk* is file server failure. The prime mover in both of these issues is the file server's hard disk subsystem. It is exactly this issue that the RAID Level 5 standard addresses.

The first thing to say is that *all* disks are by definition the slowest devices in any computer system. This is mainly because they are partly mechanical rather than wholly electronic. Secondly, the fact they *are* partly mechanical and because, in file servers, the demand on hard disks is so great, also makes hard disks the component that is most vulnerable to failure.

How Does RAID 5 Help?

RAID 5 consists, among other things, of an array of (usually) three hard disks with a fourth that kicks in in the event of the failure of any of its colleagues. But RAID 5 is much cleverer (*sic*) than just a spare hard disk. What happens is:

1. Data is written concurrently in stripes to three hard disks so that the inherently slow task of writing (and reading) data is shared across three devices rather than just one. This makes the file server's slowest subsystem, near as damn it, three times faster. All other things being equal, this is translated into a dramatic improvement in user experience of network performance. Brilliant but the goodies do not end with improved network performance.
2. What also happens is that as files are written in stripes to the three hard disks, each disk is told *and remembers* what the total is for each. One way to understand this is:

$$\text{Disk 1} + \text{Disk 2} + \text{Disk 3} = 100$$

The clever bit is that each disk *knows* that the total is 100. So, if one disk fails or is removed the missing data (part of the equation) is automatically recreated by the network operating system on the fourth spare hard disk! Really brilliant! Better still, the lost data is recreated *on the fly* without need to restart the server or users experiencing any downtime.

Why do you care? Will low cost do?

Well the good news is that a RAID 5 Server and the operating system software that supports it can be incredibly inexpensive. A RAID 5 server can start from a little less than £3,000+VAT or as little £23.31+VAT per week on a three-year lease.

Wasted Web Sites

We all know of course about the e-commerce boom and bust. Some of us have comforted ourselves with this fact and have put the e-commerce decision on the back burner. That will be the right decision for some and the wrong decision for others. It is however now very rare for a business not to have a web site. Many companies have spent considerable sums of money on ensuring that they look good on the Web. The most common complaint is that a site that may have cost literally thousands of

pounds is not generating either telephone enquiries or enquiry forms from the Web Site.

What's The Answer?

Mainly that there are two quite separate design issues:

- ☞ Aesthetic Design
- ☞ Design for Search Engines

What is worse, the two approaches to design can be at odds with one another. So often the people who are attracted to the work of creating attractive web sites are from the graphic design community. Many do a fine job for their clients by producing sites that are pleasing to the eye and easy to navigate. Too often the way in which the various search engines index the site is treated as a subsidiary or unimportant issue. This is not an option because:

Over 80% of Web Traffic comes from the Leading Search Engines (between 40% and 60% of this is from Google)

That right! Internet users hardly ever type the full URL (web address) of a site into their web browser. Most of the time they put a query into their favourite search engine or catalogue (Google, Dogpile, All the Web, Excite, AltaVista, LookSmart, Lycos, Yahoo!, MSN, AOL etc.) and it produces a list of relevant sites. The trick is to get onto the first pages of the list that each search returns and as near to the top as possible. The problem is that each search engine and each catalogue has a different way of indexing the pages of the site. More importantly, the old chestnut of inserting keywords is of no longer of importance with most of the leading engines and of only marginal importance with the rest.

What to Do if Your Site is not Generating New Business

Simple, you get someone who really knows what they are doing in search engine positioning to:

- ☞ Review & redesign your existing site;
- ☞ Register the individual pages of your revised site with the leading search engines;
- ☞ Give you reports on positioning;
- ☞ Provide ranking reports against close competitors;
- ☞ Reregister the site every two months;
- ☞ Provide regular reports on traffic volumes and referring engines.

Now if I were you I might be a little bit suspicious – try this. Go into www.google.com and type the query Tenerife Golf Holidays and you will find www.tenerifegolfholidays.co.uk listed at number one and www.atwplc.co.uk/newtenerife also listed on the first page. Each of these sites frequently gets 200 hits a day and we can do the same for you. Try the same in AOL or MSN or many other search engines. Our positioning services start from as little as £35+VAT per month.

For help call Charles Clark or Sue Bungard at ATW Information Technology Systems plc in Chichester on 01243 839160 or email me at charles@atwplc.co.uk