

## RAID½ Server Data Recovery

For small scale applications, servers can be a PC or even a website with several server applications which are accessed by various users and on a larger scale; there are big servers on industrial scale which require multiple computer systems for single applications. It all depends on the 'load' on the server.

### Types of Servers

They are named and typed depending on the purpose and the services they provide such as web servers, email servers, database servers, print servers, fax servers, video servers etc.

A web server is the one that runs applications on a website. It could refer only to the software or the whole system inclusive of hardware which runs the software depending on whether web serving is its exclusive function or not. It takes instructions from users and serves responses in the form of data such as documents and pictures etc. thus, when you click, it's the web server which displays the contents of a website in front of you.

A database server provides to the users the service of processing queries related to the database. A file server stores files of the users and email servers, also popularly known as Mail Transfer Agents are software programs that transfer emails on the internet or within a local network along with various other options such as sending mails to multiple users at a time plus the option of security. Companies and business houses usually set up their mail servers as they need very less manual directions.

### Hard Drive Setup and RAID

Redundant Array of Independent / Inexpensive Disks is the technology in which the same data is written across multiple drives so that the data is turned 'redundant'. This technology of using multiple disks clubbed together, yet appearing as one to the operating system, is frequently utilized by servers. It provides a combination of improved performance, lesser data failures and cost effectiveness. However, the user may have to compromise on one aspect in order to strengthen other depending upon the type of RAID.

Striping is a technique of spreading the data over multiple hard disks. For example, where there is no redundancy, as in RAID 0, the best performance may be shown. However, because multiple storage of data is not done, it has lower fault tolerance. In RAID 1, mirroring or duplexing is used, i.e. writing identical data on mirror hard disk, thus giving more protection against drive failures, i.e. the system keeps on functioning even if one of the components have failed.

Many other levels have evolved differing in terms of cost, performance and fault tolerance. Some of them recognize only hard drives of similar capacities such as RAID 5. The lowest capacity is recognized, incase unequal capacity hard drives are used and the rest of the space is wasted. A RAID controller which could be hardware or software is installed within or outside the system to control the array of disks. Although software controllers are less expensive, data loss risks are lesser with hardware controllers for the server.

### Server (RAID) Data Recovery

For a business house or a company, data loss consequent to RAID or server crash can be devastating. In view of an increasing usage of RAID compared to single drive systems because of the faster speed, better performance and better storage solutions the former provides, data recovery solutions for RAID are being constantly upgraded and modified. The problems could range from corruption of the array format or the RAID controller card to deletion of the files or partition tables. Crashing of Exchange servers can lead to cutting off of communication and emails which is lifeline of any business.

For recovering data from RAID, all the hard drives are needed along with the controller. The data recovery specialists can evaluate the drives and maybe able to give you a rough estimate of extent to which the lost data can be recovered and the likely expenditure. Because multiple drives are involved, RAID recovery is obviously expected to cost more and so is the repair and recovery of exchange server databases and mailboxes. However, data security is more. Even do-it-yourself RAID recovery software are available online or otherwise. They may however be only specific to certain RAID levels such as RAID 0 and 5.

Before you rope in data recovery specialists, here are a few precautions. Do not try to administer any 'First Aid' if you are unsure about what to do. Do not run disk checking utilities and keep your system cool and avoid moving or mishandling the array. And don't forget to use only read only software for data recovery. Last, but not the least, Back Up as Data loss from a server or RAID can potentially cripple your business.

### About the Author

James Walsh is a freelance writer and copy editor. If you are concerned about data loss and would like more information on [Data Recovery](#) see <http://www.fields-data-recovery.co.uk>

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