Crash Course

by Lisa Plendl

Keeping The Trusted Hard Drive More reliable Than Ever

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You like to think it's the most reliable tool in your network. Indeed, today's hard drives are impressive, with annualized failure rates of less than one percent, according to manufacturers. But when the stalwart hard drive — especially the network's shared drive — does crash, the damage can be immense.

A recent query of nearly 1,300 IT managers and business executives by Survey.com revealed disk failure as the culprit in 30 percent of system crashes lasting more than 24 hours. Moreover, less than 10 percent off respondents said they received warning of imminent disk failure.

There are other problems to grapple with, as well. Overburdening shared drives can also endanger valuable files.

A little diligence, common sense and a few new rules can help prevent disk overload, disk failure and related data loss.

Fran Murello, certified sales engineer for Ingram micro, offers a few tips for monitoring use of space on the drive and guarding against crashes.

Q. What is the primary cause of disk failure?

A. Disk Failure is caused primarily by mechanical wear. Most drives are built to last about 40,000 hours. So, for example, if your customer uses a drive 8,000 hours per year, which is typical, he can expect to replace it in about five years. He may really get 10 years out of a disk, but after five years, he should keep a closer watch on it. As the drive gets older, he should check for bad data blocks on the drive and begin backing up data more diligently. Even when companies back up data at the server level, the shared drive space for some specialized workstations can be overlooked. Your customer would be wise to personally ensure that data is safe.

Q. How can you tell if a disk is about to fail?

A. It's standard for every hard drive to have bad data blocks on it. For instance, with newer disks, approximately 0.01 percent of the blocks are faulty. But when you start to see a significant increase in bad data blocks (i.e., one or two percent), the drive is on its way out. Advise your customer to back up everything, pull the hard drive and install a new one.

Q. Can disk failures be prevented?

A. With close monitoring and a little common sense, most disk crashes are preventable. Early-warning software solutions, such as Executive Software's DiskAlert, notify users when unexpected spikes, bad data blocks and related

problems, such as changes in disk temperature, are detect3d. Your customers can also use the software to block or limit employee access to the shared drive.

More recent hard drives with built-in Active SMART (Self-Monitoring Analysis and Reporting Technology) software alert users if something's wrong. They also can predict the potential date of drive failure fusing advanced algorithms.

Q. Is there any way to repair a failed disk?

A. Software utilities, such as Symantec's Disk Doctor, monitor hard-drive health and repair problems as they arise. Other diagnostic tools, including Seagate Technology's SeaTools, repair failed disks or explain ho you can do it yourself.

If the disk can't be repaired, companies specializing in data extraction can retrieve all or some of its contents. It's expensive, but your customers might decide that paying $2,000 or so is reasonable to retrieve invaluable data.

Q. Employee use can spike shared drive usage throughout the day. What's a smart strategy to patrol that usage?

A. First, your customers should set disk quotas. An employee might download a movie or several MP3s off the Internet overnight. That's one way disk space can be eaten up without the IT staff's knowledge. And that is a problem if the user forgets to remove those large files from the hard drive — especially when the system is configured to run resource-draining applications during off-hours.

Determine how much space clients can use on a shared system drive. Each worker might be allotted 10MB. Then, help your customers set up rules for exceptions. For instance, employees must go through the proper channels to receive more disk space for special projects. Utilizing filtering software that blocks access to inappropriate Web sites is another good tactic.

A little extra attention to your hard drive and its usage can keep your valuable data safer for longer.