

TECH TURBULENCE: Anticipating Disaster

By Matthew Liebowitz

The current economic crisis has been difficult for legal IT departments across the country. Budgets are being cut, scheduled projects are on hold, yet attorneys still expect 24/7 availability of systems and recoverability in the event of a disaster.

Unfortunately for both firms and their administrators, disasters don't take a break during recessions. In fact, a disaster that leads to a major system outage can be even more devastating during tough economic times as firms already are struggling to maintain profitability.

So how, when faced with difficult economic times and limited budgets, can firms create and maintain reliable disaster recovery systems? The rise in popularity of virtualization technology makes it possible for even small firms to adopt DR systems at significantly reduced costs compared to traditional systems.

The cost savings and return on investment will be even greater for firms that have already budgeted for hardware systems upgrades.

Server virtualization software allows multiple virtual servers, called virtual machines, to run on a single piece of physical server hardware. Each virtual machine is a self-contained server with its own virtual hardware, operating system files, and installed applications. It runs completely isolated from other virtual machines.

Firms have seen a reduction in total servers by as much as 70% after they have completed a virtualization project.

There are many benefits that make virtualization an attractive technology to use in disaster recovery systems. Virtualization encapsulates an entire server into a single virtual machine disk file. This allows the IT staff to copy one file to the disaster recovery site to recover the entire server.

That, combined with the ability to deploy new servers quickly, makes it a key component of today's disaster recovery systems.

Virtual machines are not tied to the physical hardware that they run on, and so they do not require like-for-like hardware in a DR site.

For example, a firm can use Hewlett Packard Co. equipment in its main office and use Dell Inc. or IBM hardware in a DR site — and their virtual machines can run successfully on all of them. This represents a significant cost savings to firms looking to repurpose older hardware that hasn't reached the end of its useful life.

Disaster recovery means different things to different firms depending on their size, what they view as their most important programs, and ultimately their budget. To that end, there are several different approaches to virtualization, depending on the needs of the firm.

Simple systems typically are designed to recover from localized disasters, such as a server failure or an office outage. More complex options typically involve secondary data centers and systems that minimize downtime in the event of a disaster.

Here are several ideas to help protect your firm against disasters:

- ***Start Small***

A tape can be taken offsite and stored in a safe location so it is available in the event of a disaster.

Firms that are in the path of an impending disaster, such as a hurricane, can copy virtual machines to external USB hard drives and take them offsite. While not an ideal backup, this method provides a quick means of getting critical system data offsite and out of harm's way.

- ***Use What You Have***

Small- and medium-sized firms with multiple offices are wellpositioned to implement complex disaster recovery systems. These firms can purchase thirdparty software, or use software provided by their storage vendor, to replicate virtual machines to their other offices and keep their systems running in the event of a disaster.

In addition, they can run less expensive hardware and fewer total servers in a DR site, only powering up virtual machines that are deemed essential. This can provide real disaster recovery without the expense of leasing space in a co-location facility.

Many firms are already using virtualization technology for server consolidation, so they can leverage their existing investment to provide a path to disaster recovery.

Those firms that have not yet experimented with virtualization can do so with no significant investment as several leading vendors offer free versions of their virtualization platforms.

- ***Don't Forget the Desktops***

Most IT administrators don't think of desktop computers as systems that require disaster recovery. When a disaster strikes, it isn't enough for IT administrators to get critical systems back up and running.

They also need to help users access these systems to continue doing their jobs.

Using desktop virtualization technology, desktops can quickly and easily be provisioned during a disaster, which can help to get users working quickly once critical systems are brought back online.

- ***Consider Third Party Options***

The rise in popularity of virtualization has produced a vast ecosystem of third-party vendors, with software that can automate and manage the recovery of virtual machines. Evaluate these products as part of any DR project.

TEST FOR SUCCESS

A disaster recovery system is not worth anything if it fails to function. Routinely test any disaster recovery system, ideally on a quarterly basis. This can greatly reduce the confusion and extended downtime that typically accompanies a disaster.

DR is even more important in tough economic times. Firms that are already experiencing reduced profits are disproportionately impacted by extended outages caused by server failures, power failures, or natural disasters. Virtualization provides a means for firms of all sizes to install cost-effective disaster recovery systems. DR is not a project that can or should be postponed or delayed due to budget cutbacks. A fully functioning and tested disaster recovery system can be a life saver for law firms in tough economic times, and it may even help you sleep better at night.

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