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Research Brief

HP USB Tape Drives + OBDR = A Simple DR Solution

Tape backup has long been essential for most small to medium-sized businesses, but it just became easier. HP now offers DAT tape drives that plug into USB ports. The USB interface has become a standard for servers and workstations due to its simplicity and low cost. Devices plugged into the interface are automatically detected. There is no need to purchase additional host bus adapters or resolve addressing conflicts that may arise with SCSI-based devices. And don't make the mistake of thinking that the USB interface is only for external devices. HP ProLiant servers, among others, now come with internal USB ports as well as external USB ports, allowing USB internal tape drives to be installed inside the server, as is typical for DAT drives.

HP is the first vendor to offer USB-based DAT drives. The two new models, DAT 40 USB and DAT 72 USB, have a USB 2.0 interface and require no hardware configuration. The drives are detected when they are plugged into the server's USB port. The new DAT USB drives are true DDS drives in every way. Each DDS-4 cartridge for the DAT 40 drive will store 20 GB of data (40 GB with 2:1 compression) while the DAT 72 cartridge will store 36 GB (or 72 GB with 2:1 compression). Both drives can write about 23 GB/hr at 2:1 compression. In fact, the performance of the DAT USB drives is the same as that of the DAT 40 and DAT 72 SCSI drives.

DAT's two-generation backward compatibility is also the same for the USB drives, meaning that customers with older DDS media can use it with these drives. The DAT 40 USB drive will read and write DDS-4, DDS-3 and DDS-2 cartridges, while the DAT 72 USB drive will read and write DAT 72, DDS-4 and DDS-3 media. Both drives are available in internal and desktop models.

Backing Up Data Is Not Enough

For businesses that use HP ProLiant servers, the good news doesn't stop there. HP has developed an innovative approach to doing a complete system restore with the One-Button Disaster Recovery (OBDR) feature included in its tape drives, including the two USB models mentioned above. This feature is not new. In fact, it has been available for about six years.

While small to medium-sized business know the importance of protecting their data by backing it up regularly, many of these same businesses do not adequately protect their servers. This becomes painfully clear when they have to recover from a server disaster, such as a disk crash, theft, or destruction. They have to reinstall the operating system, reconfigure the server, reinstall the applications, and finally restore their data. It's a

time-consuming task even if all of the installation CDs and backup tapes are readily available and have been kept up to date with the latest configuration changes. It can be an impossible task if the disks and tapes cannot be located.

However, this rebuilding process can be simplified through bare-metal restore products, and that's what HP has built into its tape drives with its OBDR feature. Disaster recovery on a ProLiant server with OBDR requires an HP tape drive—such as DAT 24, 40, or 72, or Ultrium 232, 448, 460, or 960—and a compatible backup application with a disaster recovery option, such as CA ARCserve, HP Data Protector, Veritas Backup Exec, or Yosemite TapeWare XE. (The DAT 40 USB and DAT 72 USB drives, ship with Yosemite TapeWare XE, including the disaster recovery option.) But remember, HP's OBDR *only* works with ProLiant servers.

How It Works

OBDR makes a disaster recovery plan simple to implement. First, the backup application is set up to use the disaster recovery option. Then each time a full backup is done, OBDR saves not only the normal data one expects with a backup, but also a copy of the operating system, any application software, and configuration information. In effect, this cartridge contains everything needed for a bare-metal restore of the server and all of its data. Every time a full backup is taken, a complete copy of the system is written to a special place on the tape. This ensures that the last full backup contains the most recent operating system and configuration changes, something that is almost impossible to do with a manual system.

Restoring the contents of the server is just as simple. Just power up the repaired or replacement server, holding in the eject button on the tape drive until the LED lights on the drive start blinking. The OBDR firmware in the tape drive allows the device to appear as a CD-ROM device. The server boots from the tape drive, restores the operating system, applications, and configuration, and then begins restoring the data.

OBDR can also help an IT administrator to configure new servers. Once the standard configuration is set up on one server, the administrator makes a full backup using OBDR, and then only needs to plug the tape drive into each identical "clone" server, boot from tape, and load the operating systems and applications. Other vendors have similar products to ease the setup of new servers. Norton Ghost is a popular alternative, but it only supports Windows, while OBDR also supports Linux.

Companies with small remote offices usually do not have IT personnel at every location. That's where HP's OBDR solution has a significant advantage over Norton Ghost. ProLiant servers can be managed remotely through the Remote Insight Lights-Out Edition (RILOE). A person in the remote office only needs to place the bootable tape cartridge in the drive of a compromised server. The IT administrator in the central location can then re-boot and restore the server using RILOE and OBDR. This saves a lot of time and money.

A Complete Solution

For any business, installing tape backup will be a lot easier with HP's DAT 40 USB and DAT 72 USB tape drives**.** But for businesses that use HP ProLiant servers and need a way to implement an effective disaster recovery plan for their servers, HP has provided a complete solution. The DAT 40 USB or DAT 72 USB tape drives, with the Yosemite TapeWare XE backup software, make it easy to install the drives and easy to back up and restore data—or the entire server, if necessary—locally or remotely. Priced between $600 and $950, this is convenience many small and medium-sized businesses can afford. ■