

Getting your backup

Andrew Ward tackles backing up and remote administration on your network.

In the March issue column, I wrote about the challenge of administering Windows NT systems remotely, and the various tools which would allow you to run a console session across the network in order to check on the status of a failed service and restart it if necessary. Of course, there are heavyweight management tools available to achieve the same thing, such as NetIQ's AppManager Suite 3, but there's also a cute little tool called Service Monitor which will do the job, too.

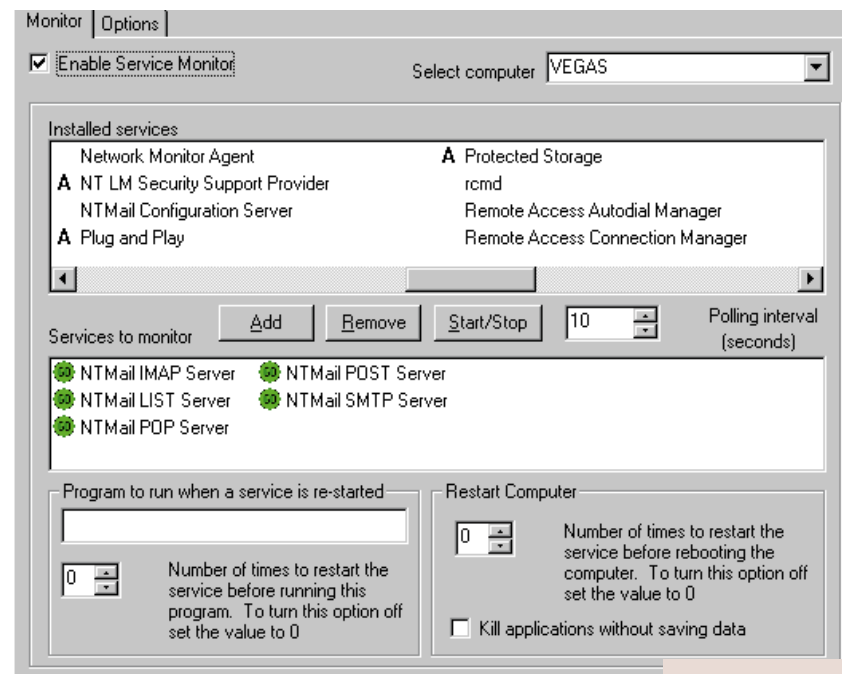
What Service Monitor does [Fig 1] is to poll Windows NT services at regular intervals and then take action should anything have failed. The most likely candidate for failure, of course, is Microsoft Internet Information Server, and without Service Monitor it might be some time before you become aware that IIS has failed.

When Service Monitor detects a failed service, it can restart it and/or take other actions such as issuing an email notification and running any program you specify. Usually, you will want the service restarted.

On a per-service basis you can specify the polling interval that Service Monitor uses. In cases where there is something more seriously wrong, though, restarting the service might not be adequate and potentially the system could become stuck in a loop, continually restarting itself. Therefore, Service Monitor allows you to specify the maximum number of times it is allowed to restart a service before it should run another program and/or reboot the system entirely.

When rebooting, you can specify whether or not data loss is allowed. If you try to preserve data and shut programs down in an orderly fashion, a hung task would prevent the system ever restarting. In those circumstances, data loss might be preferable. Service Monitor does not automatically monitor all services; just those you specify.

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▲ FIG 1 SETTING UP SERVICE MONITOR TO KEEP TABS ON NTMAIL SERVICES

Service Monitor has only recently been acquired by Vinca, whereas previously it was shareware. This is the same company which markets a standby server solution for Windows NT so as to achieve high availability.

Service Monitor can be downloaded for evaluation or purchased from www.vinca.com/util/smon.html. At the time of writing there is a special offer and Service

Monitor is only \$99, but by the time you read this it may have gone up to its

full price of \$299. I hope, too, that by that time it will have received a makeover from Vinca.

■ ServerMagic

In previous columns I've written about the challenge of upgrading a hard drive on a Windows NT system. Although there are plenty of ways to copy over the operating system and registry in order to preserve all settings, they are all a bit of a fiddle. For NetWare systems, administrators have been able to use ServerMagic from PowerQuest to do this

sort of thing fairly painlessly. Now, with version 2.0, ServerMagic is at last available in a Windows NT version.

ServerMagic allows you to do all sorts of wonderful things with partitions, such as resize them [Fig 2] but the feature that allows you to upgrade a hard drive is the ability to copy a partition entirely. Note that if you are copying the Windows NT partition then this operation, like most others, won't take place immediately because files will be in use: you'll have to reboot the system, and the copy will take place when it restarts.

Other things you can do are create, move and resize partitions — all operations that would otherwise involve long, tedious processes — and another use of the copy partition feature is to back up or restore data more quickly than you could with a file-based copy program.

It will also let you create rescue diskettes from which to boot and run ServerMagic in an emergency. The rescue disk contains a copy of DOS — actually, Caldera OpenDOS — and a DOS version



of ServerMagic. It still works with NTFS partitions, though.

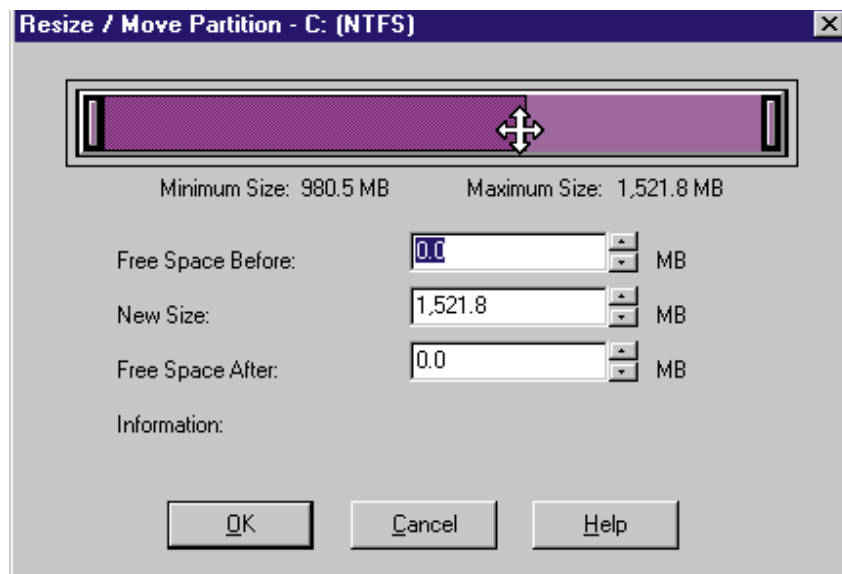
Using the rescue disk is actually the easiest way to carry out a hard drive replacement. You achieve this as follows: first of all, backup the existing hard drive but then turn off the power and install the new drive as the primary, with the old one being repositioned as the secondary drive; then, simply boot from the rescue disk and copy the partition(s) over and resize them if desired; turn off, remove the old drive, and reboot.

There is a catch, though. It would be just as useful to do all these things on a workstation as it is on a server but, somewhat unusually for a non-Microsoft product, ServerMagic actually does require Windows NT Server. It just refuses to install on a system loaded with Workstation.

ServerMagic costs \$495 list price and you can download it from www.powerquest.com and although it states that this applies to US residents only, it still works. Or, from the Software Warehouse at www.software-warehouse.co.uk it's £309.95, which works out at about the same price.

■ Roaming around

Ryszard Sommefeldt has written in to ask for a guide to roaming profiles, so here it



▲ **FIG 2 RESIZING A PARTITION WITH SERVERMAGIC**

is. But before I go on, I've said it before and I'll say it again: about the best way to administer a network of Windows NT workstations is to use Novell Directory Services running on NetWare 4.1, along with NDS for NT [Fig 3] and Z.E.N.works. In particular, Z.E.N.works solves the problem of roaming users by splitting out the data relevant to the user, the PC and the organisation, and maintaining it all in the appropriate

places: specifically, user data is stored on the network so you can log in from anywhere.

However, if your network is not big enough to make NDS worthwhile, or if you are involved in a job-creation scheme and do not want to cut down on the management work, you will be stuck with the NT equivalent, which means roaming profiles.

Usually, profiles are stored in a directory on the local PC, which by default is %SYSTEMROOM%\profiles. In today's NT environment, your NT workstation profile contains far more than just a few desktop settings. It will have your IE4 history folder, application-specific data such as Outlook signature files, your personal Send To settings, recently-used documents and maybe even your Temporary Internet Files folder (unless you've moved it). It also stores all user-specific registry settings.

Log on at a different PC, and you have lost all that. So, unless you are chained to a desk, you need some way of storing this information on the network, so wherever you log on, all your personal settings are to hand.

To set up roaming profiles, the administrator must first of all decide on a network share where they'll be stored [Fig 4]. Clearly, it helps if this share is available from anywhere that people might want to log on. If you want to hide it from the browse list, append a \$ to the

QUICK TIPS

➔ **Here's a tip** for those using the built-in NTBACKUP software to backup onto tape. Generally, if you run into limitations with this product, it's time to go out and buy a grown-up third-party tape backup solution like Seagate Backup Exec. But there are one or two registry tweaks which can overcome some of drawbacks of NTBACKUP. In particular, there's one which solves the 30-second wait which NTBACKUP suffers every time it hits an open file.

Run the registry editor and go to: HKEY_CURRENT_USER\Software\Microsoft\Ntbackup\User Interface. Find Skip Open Files and set it to 1. Then, open files will be skipped altogether. Alternatively, you could change the value for Wait Time.

➔ **A bigger splash**

Following my item *Making A Splash* (February issue), reader Justin Hyde notes that if you want to change the Windows NT splash screen, then instead of renaming your own file

to WINNT256.BMP or whatever, you can tweak the registry to specify the file you want loaded. **Those who prefer to avoid playing with the registry; don't read what follows!**

Navigate to the key HKEY_USERS\DEFAULT\Control Panel\Desktop and change the wallpaper value to the name of your new splash-screen file (note the full stop preceding 'DEFAULT'). You can also change the screensaver when no-one is logged on — effectively in the same sort of way.

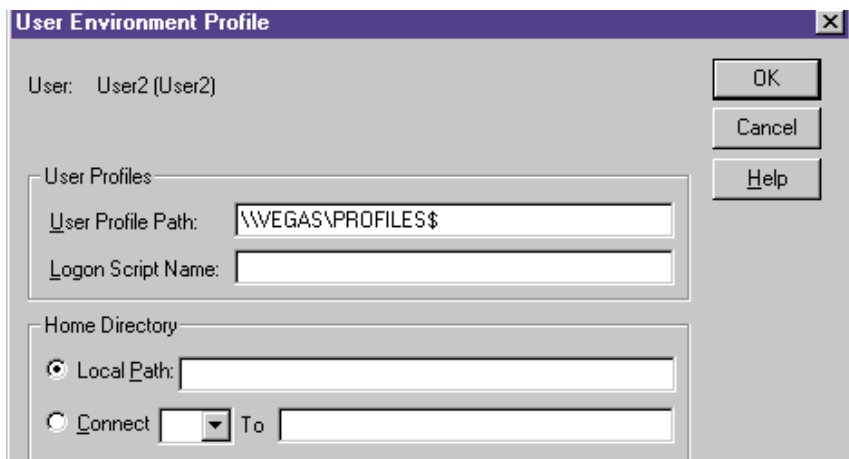


FIG 4 SPECIFYING A SHARE WHERE THE USER PROFILE IS STORED

System Control Panel, select the User Profiles tab and then delete away. Mandatory profiles do not

suffer from this problem because a local copy is not stored.

■ Booting

One of the questions people frequently ask is about booting from removable media such as CD-ROMs, floppies and Iomega drives like Jaz and Zip. Specifically, reader Alan Smith wants to know how to make a bootable CD-ROM with a Windows NT image, to be used in emergencies to access a system where the operating system has been trashed.

There is an easy option, which is simply to install a second (minimal) copy of NT onto the hard drive. Put it into a different directory like WINNT.spare, or something like that. You may need to change the BOOT.INI folder, since NT will usually make the most recent installation the default. So, do this the nice way via the System Control Panel and the Startup/Shutdown tab, rather than by editing the file directly. But if you want nice names for your entries, like 'normal startup' and 'emergency spare', you'll have to lift the read-only attribute from BOOT.INI and edit it manually — ideally, back it up first. Then, if you have a problem with your standard NT you can boot from the spare copy.

If you want to make a bootable Jaz or Zip disk, you can use a similar procedure: install a new copy of Windows NT onto a disk using the winnt32.exe installation program. Again, you will need to change BOOT.INI afterwards so that your default startup drive is the normal one.

Neither of these procedures will help you if the basic boot information on the hard drive is mangled. To overcome that you'll need to make an emergency spare rescue diskette. To do this, format a floppy from within Windows NT, which puts a boot sector on it, and then copy over NTLDR, NTDETECT.COM and BOOT.INI. This floppy will only work on a system with an IDE drive, or a SCSI drive if you have a controller with a BIOS.

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end of the share name so you have a directory, PROFILES, and a share name, PROFILES\$. When you set up user accounts with the User Manager, click on the Profile button and specify the UNC path to the PROFILES\$ share in the User Profile Path box.

That all sounds pretty easy, doesn't it? But if your users have not previously been using roaming profiles, they will

If you are using roaming profiles, remember what I warned you of last month: the phantom router problem. All shortcuts, such as icons on the desktop, must be either relative (i.e. local) or point to a server that is always going to be available wherever the user chooses to log on, without bringing up an ISDN line to China. Since users themselves can create desktop icons (if that is what

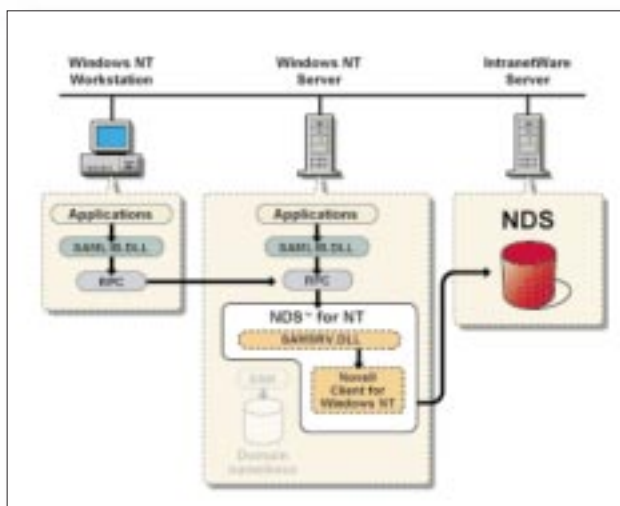


FIG 3 ONE WAY OF SOLVING USER PROFILE PROBLEMS IS TO USE NOVELL NDS FOR NT

you allow), this restriction is not easy to enforce. Also remember to store the roaming profile on a server on the LAN, rather than across the WAN link.

By now, you will have spotted another weakness

already have local profiles set up. Windows NT takes care of this: the next time the user logs on, the local profile will be copied to the path for the roaming profile — actually, the copy takes place when they log off again. And Windows NT will always maintain two copies, the local copy and the network copy, in case the network profile should become unavailable. This gives you a measure of fault tolerance, although if you cannot get to the profile across the network it is unlikely you will be able to access user data, either.

in this scheme. If all 2,000 users at work log in from my PC at one point or another I will have 2,000 local profiles copied to my hard drive. My profile is 195Mb, so if everyone's is that big, not only would they be waiting for ages each time they were to log on to a new machine but I would also need a 390Gb hard drive, which is somewhat impractical.

Of course, if you are reading this in a few years' time, I dare say your watch will have a larger hard drive than that! Anyway, to overcome this go to the