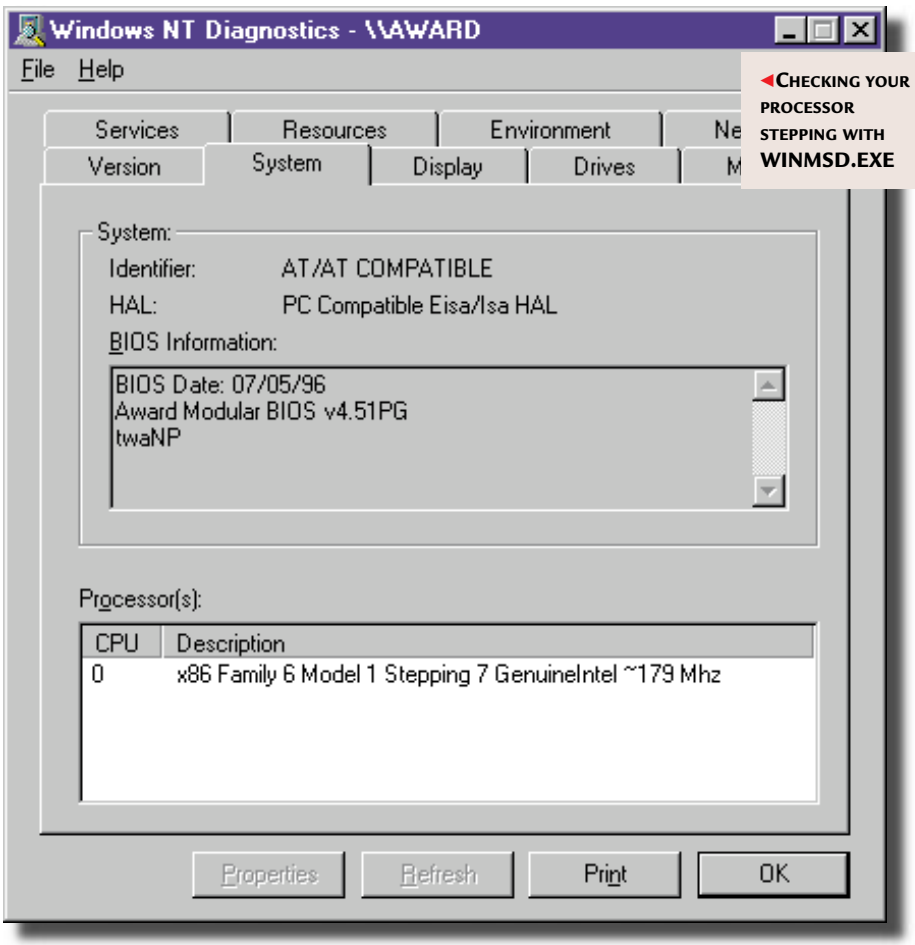
Getting in step

Multiple processors can mess up your system. Andrew Ward takes steps to ensure a full recovery.

Laurens Leurs writes from Belgium following on from the various items on the subject of multiprocessor systems, to report that a while ago his company installed a dual-processor 200MHz Pentium Pro system which gave repeated problems with blue screens and applications failing to shut down properly. Only after replacing virtually everything within the system did the vendor suggest checking the processor steppings and, unsurprisingly, they were different. After replacing the processors with two of the same steppings, the system worked fine. So, this provides us with firm evidence that ensuring the steppings are the same in multiple-processor systems isn't just an old wives tale, but sound advice from Intel.



◀CHECKING YOUR PROCESSOR STEPPING WITH WINMSD.EXE

Home run

Andrew Foulsham has written in about home directories. If you follow the recommended procedure of setting up a single share to a directory called USERS (or similar), and then create individual home directories beneath that, there are two problems. The first is that users will see a long list of other directories, which is harmless but unnecessarily confusing. If the permissions are set correctly, they can't access them, but they can still see them.

The second problem is that the default directory that people log into is not their home directory, but the level above (USERS or whatever you've called it). Applications thus can't be configured to automatically use whatever you've chosen as the network drive letter — Z: is the usual choice — as the data directory, since Z: would point to USERS rather than to the individual directory.

A third but less severe problem is that home directories created automatically have security permissions set such that only the creator-owner (the user) has access. One implication of this is that an administrator can't even look to see who's responsible for the rapidly disappearing server disk space, for example. A workaround is to look at the backup logs. One thing is certain — there are no easy answers. If, for example, you want Z: to be the home directory, you need to create a lot of shares, which is an administrative headache, to say the least. But you can solve the first problem, and hide the shares from appearing in a browse list, by appending a dollar sign when you create the shares (thus creating them as `\\server\%username%$`) Depending on the permissions you set when you create the shares, you can solve the third problem too, and allow administrators access. Which method you choose entirely depends on your willingness to accept the administrative burden of creating and maintaining all those shares.

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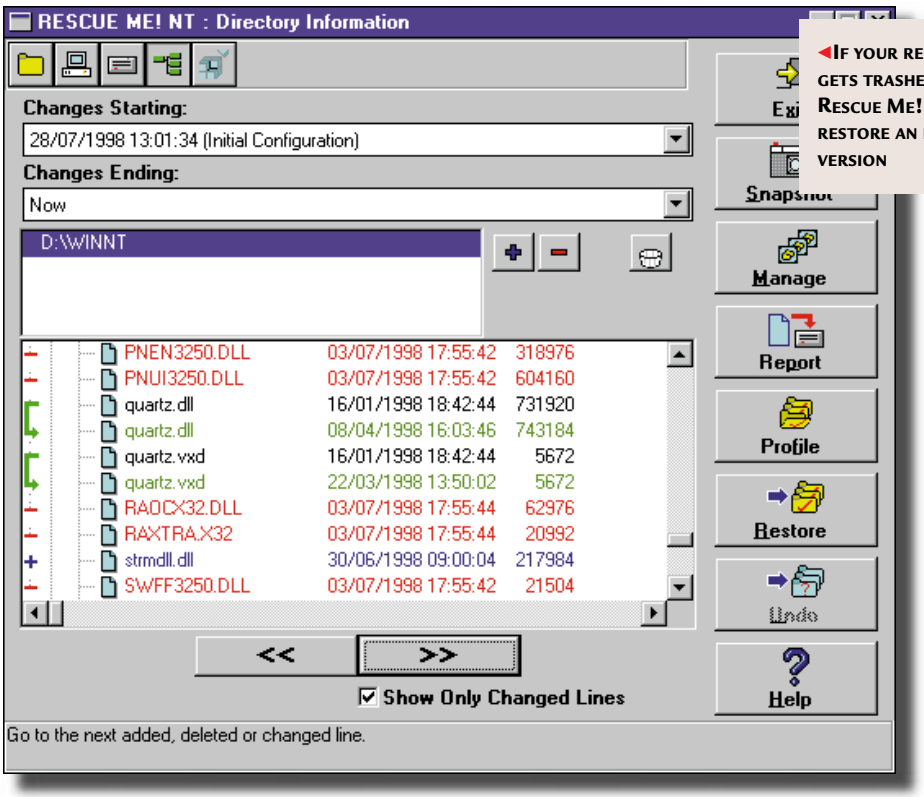
Giving NT the boot

There appears to be some confusion over whether it's possible to boot Windows NT from the new high-capacity 120Mb LS-120 floppy drives. Bill Jones hasn't been able to get it to



◀IF YOUR REGISTRY GETS TRASHED, RESCUE ME! CAN RESTORE AN EARLIER VERSION

work on an HP Vectra 7 system. Well, the best information I can find is that you can only expect to boot from one of these drives if your system BIOS specifically offers it as a boot device. Usually, such a BIOS would also be able to boot from CD-ROM and perhaps even the network. Simply replacing the floppy drive with a LS-120 drive and installing the appropriate controller doesn't appear to be enough. If anyone can throw any further light on this subject, it would be very much appreciated.

Plug and pray

Mark Ovens points out that contrary to popular opinion, Windows NT 4.0 does indeed support Plug and Play ISA devices. If you remember, Plug and Play was a stopgap measure to overcome the problem of configuring adapter cards that was adopted before PCI became widely available. In theory, Windows NT 4.0 doesn't support Plug and Play, but Windows 95 and 98 do. In fact, if you hunt around on the Windows NT 4.0 CD-ROM, then in \drvlib\pnpisa\x86 you'll find two files, pnpisa.inf and pnpisa.sys. This driver really can be pretty useful, because there's no other way to install certain Plug and Play sound cards and internal modem cards. According to Microsoft, this Plug and Play enabler "may allow the detection and installation of Plug and Play devices in Windows NT 4.0". To install it, right-click the pnpisa.inf file, select Install on the menu that appears, and then restart your computer. After you restart, "you may receive a message that Windows NT has detected your Plug and Play device(s)," says Microsoft.

Plug and Play isn't officially supported by Microsoft, so if you choose to use it, you're on your own — literally

There are a few potential problems with the Plug and Play driver. The first is that it isn't officially supported by Microsoft, so if you choose to use it, you're on your own — literally. It really is a case of Plug and Pray. The file \drvlib\audio\sbpnp\ readme.txt on the Windows NT CD-ROM gives further information on installation and possible problems. One apparently improbable effect is that you see the message "Windows NT did not find any modems attached to your computer" when you try to detect a modem in the Remote Access Service (RAS) setup, or "Cannot load the Remote Access Connection Manager service" when trying to start the Remote Access Connection Manager service or Dial-up Networking. Furthermore, you may find that if you try to open the Modem Control Panel, nothing happens. These are due to having the Plug and Play service installed, but stopped or disabled. The answer is to go into the Control Panel and click Services, select the Plug and Play service, and change the Startup mode to automatic.

Rescue Me!

Following a system crash, John MacLoed now has an empty Hardware Profiles description line. Although there's a knowledge-based article on this subject (Q155974), it hasn't solved the problem for him. I can't tell him how to fix it, but I can suggest a tool that can be of help in restoring corrupt registries and other system problems. **Rescue Me! NT** is one of those programs that keeps tabs on your system configuration so that if anything should go wrong — most often, this happens when you install a dodgy piece of software — you can wind back to a working configuration. Rescue Me! tracks changes to the configuration files, the registry, the Windows directory and even drive mappings. Certain specific files, directories and registry keys are monitored by default, and you can add additional ones to the list if they're important in the context of your system. You can take a system snapshot at any time, and typically would do so just prior to installing a piece of new

software. The default installation takes a snapshot each time Windows starts — or more accurately, each time you log on — and you can schedule regular snapshots, perhaps once a day, or once a week. Beware, however, that there is an adjustable figure for the maximum number of snapshots you can take. And if you take snapshots too frequently, you might quickly reach this number, and the one you want to go back to will drop off the end. But bear in mind that each snapshot can potentially take up a lot of space: it may be only 1K on a Windows 3.1x system, but it's more like 8Mb on NT. Yes, that's right: keep ten snapshots, and you're consuming 80Mb of hard-drive space.

The differences between any two snapshots, or between any one snapshot and the current configuration, are readily viewable. Rescue Me! will show you exactly which registry keys and files have been added, removed and changed. It's also possible to display or print a full report, although unfortunately, in the version I tried (4.01.10), producing a report of drive configuration changes caused Rescue Me! to crash, following the removal of a network drive.

Rescue Me! is a bit strange all round; the documentation doesn't quite match

Rescue Me! will show you exactly which registry keys and files have been added, removed and changed

the program, and the installation routine is very outdated — it doesn't allow you to browse to a desired install directory, and doesn't like long directory names or ones with spaces in them. Furthermore, it doesn't appear on the task bar when running. It appears to be a rebadged version of ConfigSafe. Nevertheless, it does seem to do the job.

One feature not covered by the documentation is the ability to create your own profiles. When a snapshot is taken, it is for a specific profile — and the profile specifies which registry keys, files and directories are monitored. For example, you might want to create a profile that just tracks registry changes, or just changes to the Windows directory. If a problem with your system does occur, perhaps due to installation of a new piece of software, you can use Rescue Me! to restore an earlier system configuration. If that actually makes things worse, you can undo the restoration — but there is only a single level of undo offered. Rescue Me! will restore registry information and configuration files, but won't replace files (such as DLLs) that were removed or changed during software installation. Rescue Me! costs around £50 and is available from major retailers such as PC World, as well as software resellers like Software Warehouse and Action.

DISAPPEARING FILENAMES

A few people have written in over the months to report disappearing filenames in Explorer. Dr William Boaden describes the effect thus: **"When I double-click on a filename to edit or rename it, the filename vanishes. The icon is still there and, in fact, you can still edit the filename —without seeing it. One more click and it returns."** Whenever readers have reported this problem, I've suggested that it might be a video driver problem, but further research by Dr Boaden has unearthed the real cause. It's actually nothing to do with the video card or driver at all. Apparently, the problem relates to the Iomega Zip drive (what, again?) and is caused by the Iomega Icons application in the startup group. This leaves the process imgicon.exe running, and ending this manually — or better still, taking the program out of the startup group entirely — cures the phantom disappearing filenames. Thanks for that most useful information, Dr Boaden.

Andrew Foulsham takes me to task for repeating the official advice that hardware mirroring should be used for best security on the boot device. His experiences with an Adaptec RAID controller for the system partition were, he says, fraught. In fact, every time he attempted to set it up in hardware (on a Siemens Nixdorf Scenic Pro with Adaptec AAA-133 controller), the system would crash after half an hour. After the usual hassles of changing every bit of hardware in sight — and haven't we all done that — and loading on the latest service pack, drivers and updates, the problem still wasn't cured. Andrew has decided that any loss in performance and security by having a single boot device is more than made up for by the gain in reliability and availability.

A common complaint is the length of time it takes to shut down systems running NT. This is especially true of servers running Microsoft Exchange. Reports of many minutes are common. One way to speed the process is to manually stop the Exchange services running, and there are two ways of doing this. One is via the Services control panel. Select the Microsoft Exchange System Attendant service and stop it. You'll be asked if you also want to stop several other services that are dependent on it — of course, say yes. The other way is via the command line, using the net stop command. In theory, you can just stop the System Attendant service and this will cause the other services to stop too, but this isn't reliable. It's better to create a batch file to stop all the services one by one, as follows:

- net stop "microsoft exchange Internet mail service"
- net stop "microsoft exchange information store"
- net stop "microsoft exchange message transfer agent"
- net stop "microsoft exchange directory"
- net stop "microsoft exchange system attendant"

PCW CONTACTS

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