

What a performance

Andrew Ward wonders whether NT's new routing capabilities can cut the mustard.

n the old days, when networks were simply there to save having to walk from one machine to another with a floppy disk, it was common to route between two IP networks using any old 286-based DOS machine, a couple of obsolete 8-bit network cards and freely-available routing software. Now, network performance is more critical than the speed of individual desktop systems and extremely high-performance dedicated network devices are essential for routing, bridging and switching functions.

Microsoft, however, would have us believe otherwise and continues to enhance the routing capabilities of Windows NT in the expectation that we will start to use NT machines instead of dedicated routers. But I've had so much trouble with NT's operation in a routed IP environment recently that I'm doubtful of its true abilities in this area.

Specifically, I have continual trouble with the NT machines on this network producing some sort of IP traffic that makes an off-network access, causing the ISDN router (which is not an NT box) to dial my ISP. It's long been necessary for manufacturers of such devices to have to ignore much of the network traffic generated in ever increasing volumes by each new version of network operating systems, but Microsoft and other PC software vendors appear to be able to continually outwit them.

I spotted long ago that the Remote Access Autodial Manager service causes a spurious access each time a user logs on, but that's easily solved by disabling the service (or rather, changing the startup mode from Automatic to Manual) within the Services control panel. The trouble is, I did that some time ago, and when the installation of Windows CE Services reinstalled RAS the other day, the service was of course re-enabled. I chose the same day to install the Freeserve Internet software on another system, which also causes an RAS installation. Coincidentally, another user installed RealNetworks' RealPlayer on yet a third machine on the network -

NETWORK SOUND AND VISION

🧰 burp.qt - Windows Media Player

<u>File View Play Favorites Go Help</u>

▼he new Windows Media Player for Windows NT 4.0 supports a huge range of different media types, including Windows Media formats (formerly known as NetShow), RealNetworks RealAudio and RealVideo (version 4.0 or less), AVI and Mpeg. Also included is Musical

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Instrument Digital
Interface (MIDI), Apple
QuickTime, Macintosh
AIFF Resource, Sun
Microsystems and
NeXT .au and .snd files,
as well as basic .wav files.

▼ Fig 2 In theory, you can carry out an online check for a later version of the Windows Media Player

Show:

Clip:
Author:
Copyright:

Windows Media Player | help m

Windows Media Player
www.microsoft
.com/windows/
mediaplayer/
download> has a couple
of nice features. Playlist
allows authors to create
entire shows of
different pieces of
content, and the codec
auto-download feature
does pretty much what

WINDOWS MEDIA
PLAYER
Windows Media Player

There was a problem checking for an upgrade:
Response from server: Server Error (0x80072F78)

◆ FIG 1
WINDOWS MEDIA
PLAYER WILL PLAY
QUICKTIME FILES
UNDER
WINDOWS NT

play a file which uses a codec you don't have, it will be automatically downloaded. There's another feature on the

help menu which is supposed to check for a later version of the Media Player itself: as you can see from Fig 2, this doesn't necessarily work. With the Windows Media Player, the video window can be resized as desired, even to as large as full-screen. Of course, this won't

increase image resolution, and your hardware almost certainly won't be able to play a video at this size and at full speed.

and this causes 12 spurious network accesses an hour. It took several hours of head-scratching and network monitoring to eliminate all these separate causes, after swelling BT's coffers considerably.

If you have a similar configuration, don't use RealPlayer at all (Microsoft has now released the Windows Media Player for Windows NT which will handle most multimedia data types you're likely to



come across — see panel, above) and whenever installing or re-installing RAS, go to the Services control panel and disable the Remote Access Autodial Manager. I am currently investigating the possibility that the Windows CE services themselves also generate off-network traffic, and I will report back in due course.

■ Changing drives

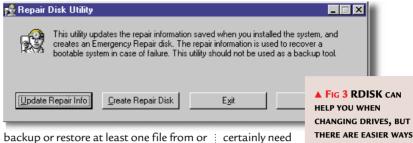
Linda Davies has asked what ought to be an easy question. How does she go about changing the hard drive on her system? It sounds easy, but there's no obvious way to go about this procedure under Windows NT.

The most obvious answer seems to be to remove the old drive, insert the new one, install Windows NT and recover all data and applications from backup. There are two problems with this. Firstly, it means having the system out of action for a considerable period of time while Windows NT is reinstalled; and secondly, the system is not equipped with a tape drive. Why is that important?

Megabytes of system, user and application configuration information are stored in the registry, so it is vital to recover the system registry as well as the other disk files. The NTBackup program supplied with Windows NT

will only copy the registry to and from the local machine. Here, Linda's machine is backed up across the network by a system elsewhere on the network, which has a SCSI tape drive.

When attempting to backup or recover the registry from tape using NTBackup, note that you have to also



backup or restore at least one file from or to the system drive (the drive where the registry files are stored by Windows NT). Otherwise, NTBackup doesn't even show the dialog box where you get the chance to restore the registry. Seagate Backup Exec leads you to believe that it is possible to back up the registry, and it says nothing about not being able to carry out this operation across the network. But of course, it can't, so neither is that a solution.

By the way, if you ever do need to reinstall Windows NT before recovering from backup, make sure you also install the latest service pack, too. There have been instances in the past where changes

made in a service pack have rendered tapes written after the service pack was installed (that is, when you took the backup) unreadable by

a system without the service pack (that is, when you have just reinstalled NT on the new hard drive). If you use a third-party product like Seagate Backup Exec, that may well require a minimum service pack level, anyway. So, while the restore operation obviously will bring you up to the latest service-pack level, you almost

certainly need to apply it first

in order for the restore to happen successfully. There are a few ways to back up the registry across the network. The first uses RDISK [Fig 3]. When you run the RDISK utility, which is intended for creating emergency repair disks, one of the options backs up your registry information to the hard drive. Select Update Repair Info, and RDISK will store compressed copies of your registry in the \repair folder in your Windows directory. These can then be copied across the network onto another drive, just like any other files, or backed up across the network onto a tape. Indeed, a normal full tape backup operation would copy these files automatically.

Alternatively, you can actually make an emergency repair disk, boot from the Setup disks, select the Repair option and then choose the menu option to restore the registry. This only works if your registry is actually small enough to fit on a floppy disk (mine certainly isn't). The first step, whichever approach you take, is to ensure that the repair files are up to date, by running RDISK. This operation should be part of your regular system maintenance anyway. Note that RDISK does not, by default, back up user account information. If you want this backed up, you need to run RDISK with the undocumented /s option. However, if you use the command RDISK /s then RDISK runs immediately.

But using this technique, you still face the problem of recovering the registry from the files that RDISK saved. There's no easy way to do this. Expanding the files requires the use of the program EXPNDW32.EXE, which only comes with the Resource Kit. Once expanded, you will need to copy the files to where Windows stores the registry files, which is in the folder:

%systemroot%\system32\config
And in any case, you cannot do that

SUMMERTIME BLUES

ary Powell poses an interesting question. When does Windows NT actually implement British Summer Time? Does it follow the rules, and actually change at 0200 in the morning? If so, Gary wonders what happens if you have set the scheduler to run a task at exactly that time. Does it run twice when the clocks go back? Does it get omitted altogether?

If you ever need to

before recovering

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the latest service pack

reinstall Windows NT

A very interesting question, Gary, but I'm not sure I want to stay up until 2am at the end of October to find out the answer. Does anyone else know what happens? What beats me, incidentally, is how citizens of the USA manage to use the scheduler at all, since it uses the 24-hour clock.

[FIG 4]

Output for creating NT users

NET USER triley password01 /ADD /COMMENT: "Information Services" /COUNTRYCODE: 0→ /EXPIRES:NEVER /FULLNAME: "Toby Riley" /HOMEDIR:\\SERVER\TRILEY\$ /PASSWORDCHG:YES-/SCRIPTPATH:NETLOGON_FILE.BAT

NET USER ajones password01 /ADD /COMMENT:"Collections" /COUNTRYCODE:0 /EXPIRES:NEVER-/FULLNAME: "Andy Jones" /HOMEDIR:\\SERVER\AJONES\$ /PASSWORDCHG:YES /SCRIPTPATH:→ NETLOGON FILE.BAT

NET USER jbloggs password01 /ADD /COMMENT:"Underwriting" /COUNTRYCODE:0 /EXPIRES:→ NEVER /FULLNAME: "Joe Bloggs" /HOMEDIR:\\SERVER\JBLOGGS\$ /PASSWORDCHG:YES→

/SCRIPTPATH:NETLOGON_FILE.BAT

NET LOCALGROUP "Information Services" triley /ADD

NET LOCALGROUP "Collections" ajones /ADD

NET LOCALGROUP "Underwriting" jbloggs /ADD

MD D:\HOME\Triley

MD D:\HOME\Ajones

MD D:\HOME\Jbloggs

NET SHARE triley\$=D:\HOME\TRILEY /UNLIMITED /REMARK:"Toby Riley's Home Directory" /Y NET SHARE ajones\$=D:\HOME\AJONES /UNLIMITED /REMARK:"Andy Jones's Home Directory" /Y NET SHARE jblogqs\$=D:\HOME\JBLOGGS /UNLIMITED /REMARK:"Joe Blogqs's Home Directory" /Y

CACLS D:\HOME\TRILEY /E /R EVERYONE

CACLS D:\HOME\AJONES /E /R EVERYONE

CACLS D:\HOME\JBLOGGS /E /R EVERYONE

CACLS D:\HOME\TRILEY /E /G ADMINISTRATORS:F

CACLS D:\HOME\AJONES /E /G ADMINISTRATORS:F

CACLS D:\HOME\JBLOGGS /E /G ADMINISTRATORS:F

CACLS D:\HOME\TRILEY /E /G TRILEY:C

CACLS D:\HOME\AJONES /E /G AJONES:C

CACLS D:\HOME\JBLOGGS /E /G JBLOGGS:C

COPY "D:\HOME\LOGINSCRIPTS\Information Services*.*" "D:\HOME\Triley"

COPY "D:\HOME\LOGINSCRIPTS\Collections*.*" "D:\HOME\Ajones"

COPY "D:\HOME\LOGINSCRIPTS\Underwriting*.*" "D:\HOME\Jbloggs"

→ Denotes that the line of code continues

FIG 4 SAMPLE SCRIPT CREATED BY TOBY RILEY'S EXCEL MACRO

while Windows NT is running: you have to install a second copy of NT, boot from that and restore the files. Indeed, another way of backing up the registry is by installing a second copy of Windows NT on the same drive but in a different directory. When you boot from the second copy, the registry files of the first copy are accessible just like any other files. This is probably the easiest solution and the least likely to go wrong, although it might not be the quickest.

In summary, our procedure will look like this:

Install a second copy of Windows NT to the hard drive.

Backup the entire system (including the registry files but excluding the second copy of Windows NT) across the network to a tape drive or hard drive.

3 Fit the new hard drive. Install a copy of Windows NT but to a different directory name than was used previously.

Then use this copy of Windows NT to restore from the backup that you took earlier.

■ Automating new users

Toby Riley has very kindly sent me an Excel macro which he uses to automatically generate all the commands you need in a script to set up a new-user account. This greatly simplifies the work needed to set up new accounts. I have put the spreadsheet on our covermounted CD-ROM this month and you will find it under "Create NT Users.xls". An example of what the output looks like is shown above [Fig 4]. You can, of course, tune this to your own requirements.

This spreadsheet may well be what P. McLaughlin is looking for. He (or she) wants to know whether there is a utility to export and import the user account information from the SAM (Security

Accounts Manager), so it can check the names against an existing database of users. Well, not as far as I know, although someone might have written a third-party add-on. However, using a macro such as this, the existing database can be used to populate a spreadsheet and hence a script file.

All you have to do when adding a new user is to type in the user's name and department and the Excel table is then automatically populated with the individual script lines. In Toby's version, clicking on a button drives a macro which then copies all these lines into a spare Excel sheet in a format ready for cutting and pasting into a script file.

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