



## TECHNOLOGY INSIGHTS

# Rescuing files from a dead PC

## With LINUX Live CD

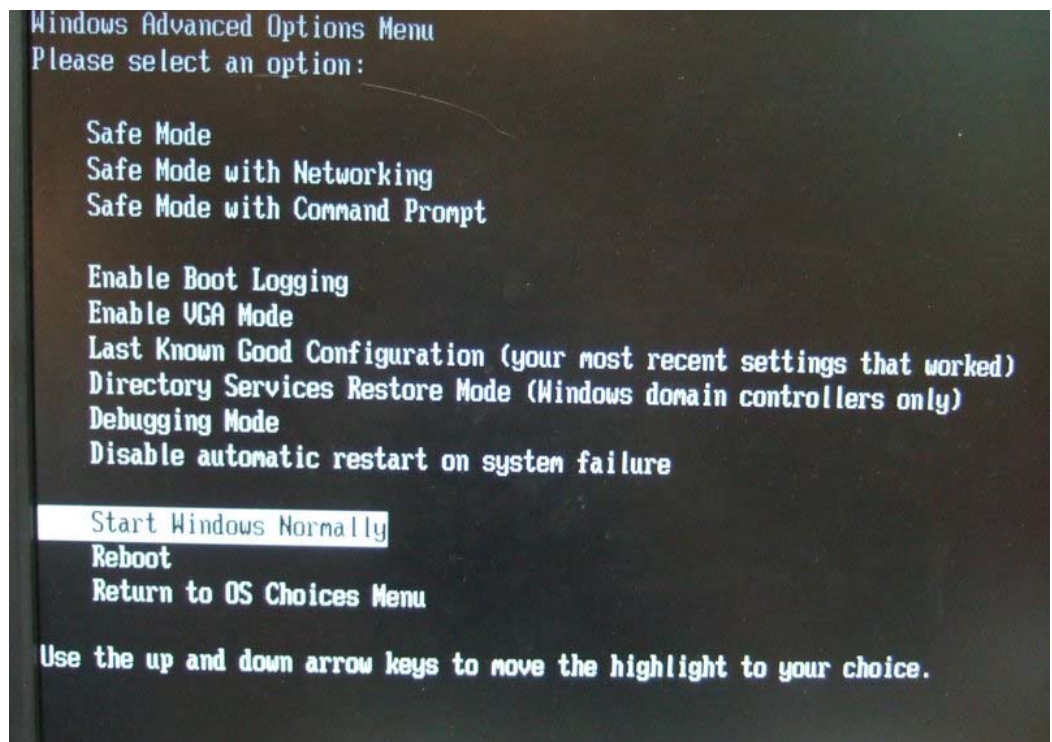
A 'think-outside-the-square' option that works when all else fails.

### The usual drill

One day recently, a friend booted up his PC and installed some updates from Microsoft. A message told him 'Windows Genuine Advantage has encountered a problem and needs to close. Sorry for the inconvenience'. Several reboots produced nothing more than long periods of darkness. He called me for help.

This happens, even to users who don't tinker with their PCs. And it so happened that, for unknown reasons, the file backup program on this particular PC had stopped doing its daily backup to the external drive 2 days earlier. The last disk image of the PC's hard drive was 3 days old, and the challenge was to retrieve all the files and emails that had changed since that date.

There is a simple drill for a Windows PC that won't boot up. Try booting up in Safe Mode by tapping F8 as soon as boot splash comes up on the screen. You only get a second or two so it may take a few attempts. In this reduced state, the PC may boot up and give you a number of options and some crude guidance.



Under these circumstances, the main thing to control is the initial tendency to panic at the sight of the barren screen. There's usually no point in Starting Windows normally or rebooting once more. Last Known Good Configuration is a tempting option but it's never worked for us. A better choice is Safe Mode with Networking.

The next screen will ask you if you want to troubleshoot Windows in Safe Mode or do a System Restore. Unless you're a PC tech or PC nerd, pass on the troubleshooting and opt for Restore. Pick the last restore point before disaster struck and it will fix the problem, more often than not. This turn-back-the-clock process doesn't lose any data, but will lose any programs installed or system changes made since the chosen restore point.

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T +61 2 9909 0246  
E [info@technoledge.com.au](mailto:info@technoledge.com.au)  
W [www.technoledge.com.au](http://www.technoledge.com.au)

## No Safe Mode

On this occasion, the menu overleaf came up alright but darkness returned with any of the options I selected. There was no way to get to restore points or to get at those recent files and emails—Windows was as impenetrable as Fort Knox. Windows contains a Recovery Console that provides a dark tunnel under the Fort's walls, but it's not an option for ordinary mortals.

If you have the Windows XP install CDs, you can attempt a 'Repair' install, but most PCs these days only come with a recovery partition that allows you to restore Windows to the state it was in when it left the factory. That wasn't much help since this PC was over two years old – it would've taken days to reinstall all the programs, updates and data (not to mention 3 Windows Service packs). And the last 2 days of work would still be lost.

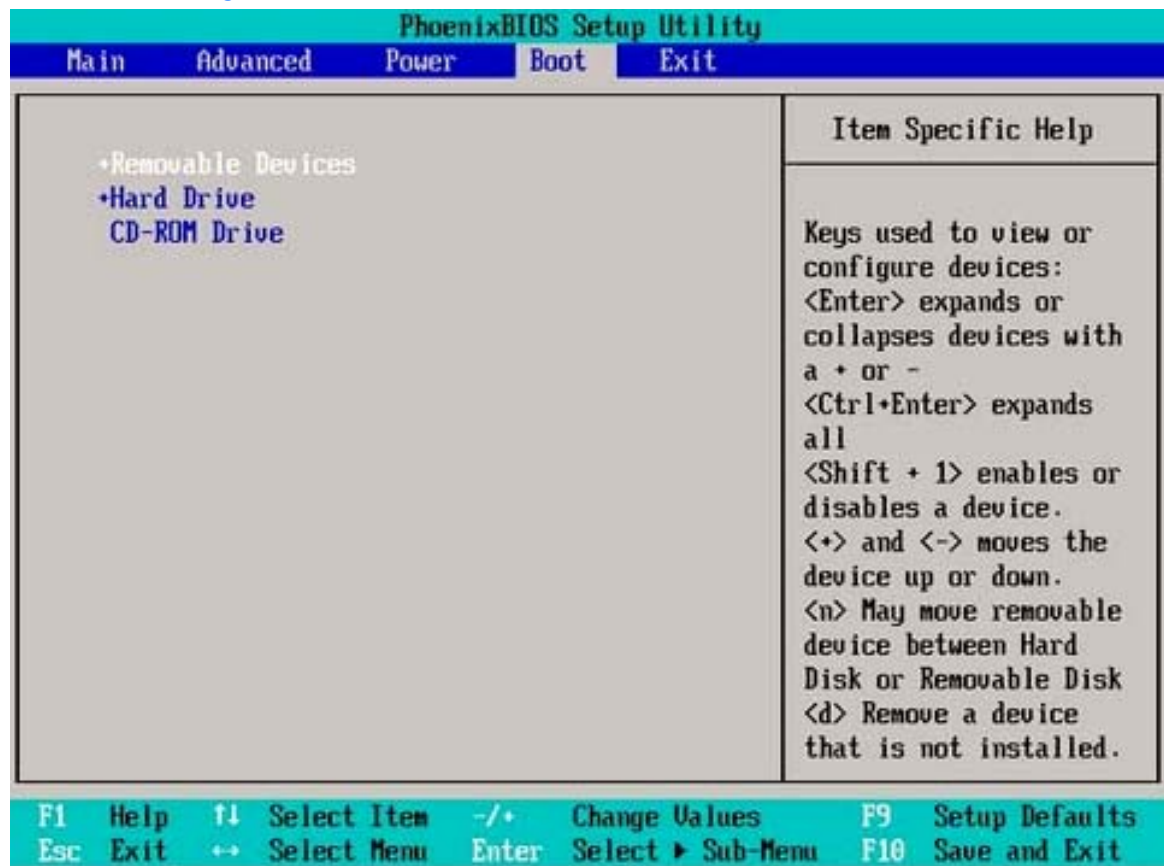
There are various rescue CDs you can use to retrieve data from dead PCs, but these require serious technical ability to use. That aside, it's clear that none of these options will work if the cause of the disaster is a broken hard disk.

## The Linux Live CD

You can download the Linux operating systems as ISO files and burn a bootable 'live' CD from them, as long as the PC's BIOS is set up to do that. Before you turn off, thinking 'this is not for me', just hold on a bit longer. The picture tutorial is a step-by-step guide to using the Linux CD: <http://lifel hacker.com/software/disk-recovery/geek-to-live--rescue-files-with-a-boot-cd-192982.php>.

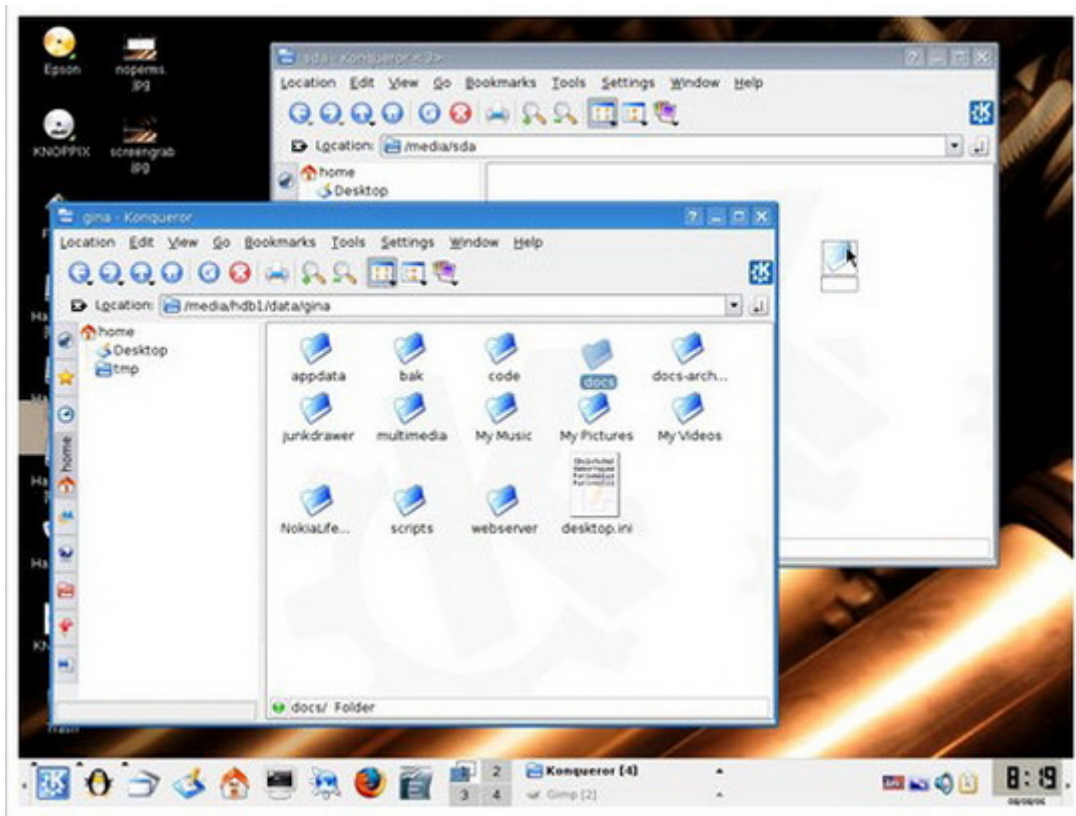
This PC offered me a range of boot option icons right on the screen at boot-up time, including a CD. Selecting it with the arrow key and hitting enter was all I had to do (after loading the CD before the last reboot).

On some PCs, you may need to change the boot order in the BIOS, which isn't nearly as hard as it sounds. To get to the BIOS, you reboot and tap F2 repeatedly as soon as the boot splash comes up. The panel below opens and now it's a matter of using the tabs and arrows to make the change in the boot order. Here's another step-by-step guide: <http://pcsupport.about.com/od/fixtheproblem/ss/bootorderchange.htm>



## Fort Knox opens wide

When the Knoppix Live CD is up and running, one click on the hard disk icon on the desktop opens the file browser. Another click on 'media' or the 'Home' folder will reveal all, but the lingo is a little different - media>hda1>NFTS leads to the Windows file system. Once that opens, with the usual tree structure on the left of the file browser, you can dive into the folders you want to rescue and drag them to the second open browser for the USB hard drive. In Linux-speak, the hard drive is hda1 and the USB drive sda1.



It worked like a charm with the first folder. The second was 1.5 gb in size and Knoppix threw in the towel halfway through, declaring that the external hard drive was corrupt. I unplugged it and tried it with a 4gb USB stick I had handy, and all the files hopped across the barrier like well-trained horses in a show jump.

The last hurdle was the Outlook.pst file, which contained the last ten days' emails. Finding this thing requires a bit of cross-country riding down the tree structure, even in Windows: My Computer> Local Disk (C:)>Documents & Settings>User name>Local Settings> Application Data>Microsoft>Outlook>Outlook.pst.

When I got there, the Outlook folder was empty and my heart sank. Then again, it was asking a lot of Linux to read proprietary Microsoft files or even recognize them as such.

### If at first you don't succeed...

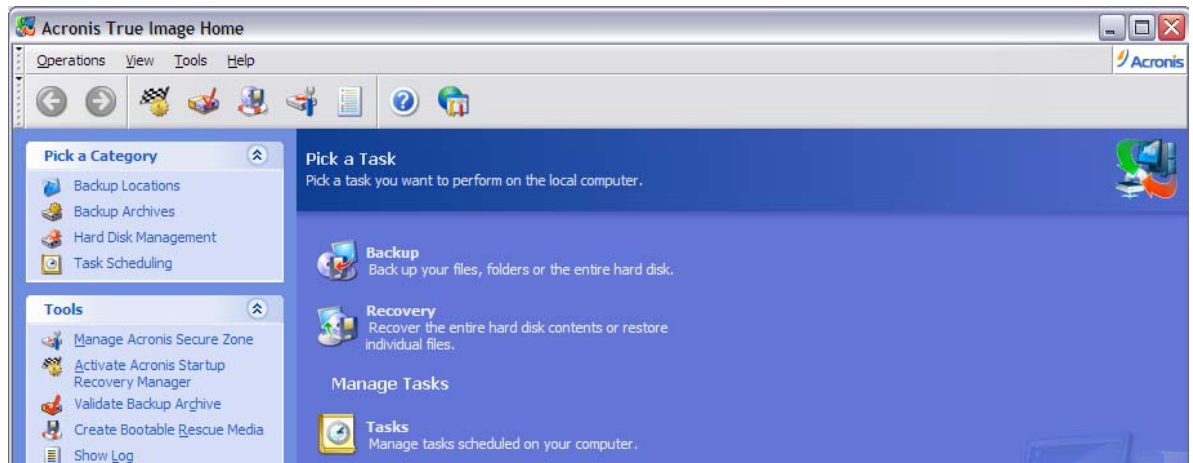
It's a motto I learnt in a training course decades ago and have followed ever since. I'm more familiar with Ubuntu than Knoppix, and I happened to have a CD with 7.10 'Gutsy Gibbon' handy. It was worth a try and would only take a few minutes to find out.

Once the Live CD was up and running, Ubuntu saw the NFTS files without problems and, to my great surprise, even recognized the Outlook.pst file (MS logo and all). I dragged it across to the USB stick and across it came, all 1.3gb of it.

Outlook files are Microsoft specials and shrouded in great mystery but they're as easy to copy and restore as any others (make sure Outlook isn't running when you do this, though). Once we had the PC working again, all I had to do was to drag the .pst files back to the same folder.

## Raising Windows from the dead

We now had the files we needed on the USB stick, which had taken almost an hour, but we still had a PC that wouldn't boot or run in Safe Mode. We use a program called **Acronis True Image** to take regular disk image backups [http://www.technoledge.com.au/pdfs/seagate\\_disc\\_wizard.pdf](http://www.technoledge.com.au/pdfs/seagate_disc_wizard.pdf).



You can restore your entire system from a disk image in less than an hour, including all programs, data and settings, by booting the PC from the Acronis TI boot disk (which you are urged to make when you first use the program). All you have to do is select 'restore entire partition' (C drive/NTFS in this case), pick the last image from your backup drive and hit the go button.

I soon had a working Windows PC - for a brief moment, that is. By now I'd forgotten what had caused the problem in the first place: Windows Genuine Advantage, a probe Microsoft inserts into the bowels of your PC every month to check if you're running a genuine copy of Windows.

## Genuine Advantage or a poisoned pill?

WGA had caused the crash in the first place and, before I could dive in and turn Windows Updates off, it managed to do it again. Icons lost their faces on the desktop, programs wouldn't start or would simply crash as soon as they opened up.

This happens from time to time with WGA on some PCs, as Google proved after a quick search. I found what looked like a helping hand from Microsoft, an item headed: 'Talk to us at Microsoft', but it was merely a Microsoft forum where desperate souls trade advice on how to solve the problem. It was no help other than for the sake of completeness: <http://forums.microsoft.com/genuine/showpost.aspx?postid=1822647&siteid=25&sb=0&d=1&at=7&ft=11&tf=0&pageid=2>

I searched high and low for a solution but found none that did not involve surgery beyond my limited skills. Suing Microsoft for damaging our PCs with its spyware was a tempting idea, but that would've been even more futile than suing the government.

## Safe at last

This was the essential difference after the second crash: Windows allowed me to work in Safe Mode and now I could turn the MS Updates off and do a System Restore. It only takes a few minutes and it usually works, and this time was no exception.

All that was left to do was to restore the files I'd saved. I'd saved the entire client files the user had worked on in the last 2 days. Now I checked them in Windows, found them intact, and simply used Windows Explorer to replace the existing files.

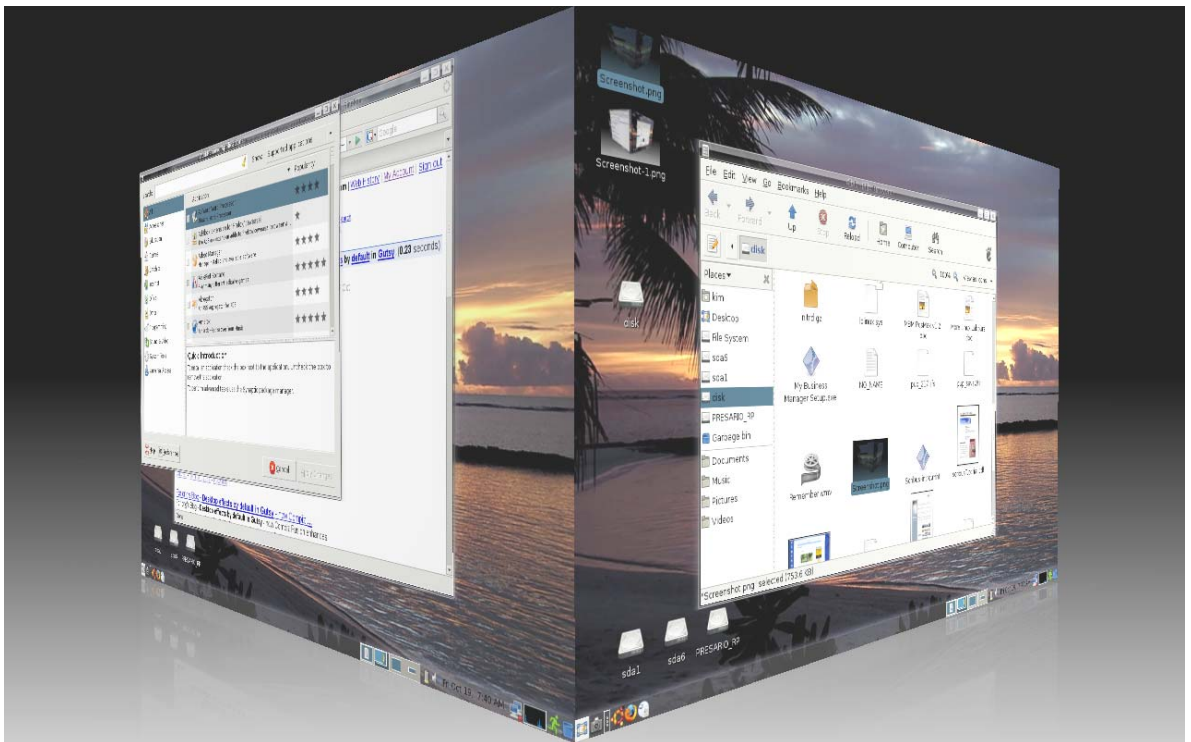
When it was done, I cranked Outlook up and all the recent emails were there, along with the rest. I'm still surprised that the Ubuntu Live CD managed to rescue Outlook files, but it goes to show that you never know until you have a go.

You can find current versions of Ubuntu on the DVDs attached to PC magazines or you can download it from <http://www.ubuntu.com/> . They'll even ship you a CD for free if you prefer. If you download it, be aware that it's an ISO image file but most CD burners know what to do with those by now.

The Live CD leaves no traces once you remove it, but Windows senses that someone's meddled with its file system and insists on running a disk check, which is no big deal. After that, it settles down and lets you get back to work.

The other option is to install Ubuntu on your PC. It's an adventure that brings its own rewards—see [13 Reasons why Linux should be on your Desktop](http://www.technoledge.com.au/resources-straight-talk.htm) <http://www.technoledge.com.au/resources-straight-talk.htm> .

If you feel like exploring new territory, you can now install Ubuntu as a folder on any Windows system (which does away with the need to set up a dual-booting arrangement) but we'd suggest you use a spare PC to check out if Linux is your cup of tea before you do anything else.



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