

## Create An Emergency Repair Disk



*The Windows 98  
Emergency Startup  
Disk is created from  
the Add/Remove  
Programs icon in the  
Control Panel.*

Your computer's Desktop and Windows OS (operating system) setup often take years of careful refinement, and you can lose it all in a terrible instant. Those rigorous backups of all of your data can become useless—if you can't boot your computer, you can't restore your data.

Over the years, Microsoft has offered a number of different emergency repair tools to help get your computer running again after disaster strikes. Some of these tools create a floppy diskette called an ERD (Emergency Repair Disk), whose purpose is to help recover the Windows configuration information your computer needs to run. Obviously, in order to create an ERD, your PC needs to be equipped with a floppy disk drive. Most of this critical information is stored on your hard drive in a set of files called the **Registry** (a database that contains user preferences and system configuration information). We'll show you how to establish a cheap insurance policy by creating an ERD in Windows 98/NT/2000/XP.

### ■ Windows 98

The Win98 ERD, which Microsoft calls a Startup Disk, provides just one function: It boots your computer when your Windows configuration runs amok. The ERD tool in Win98 does not back up any Registry information, such as Desktop layout or hardware configuration. After you boot your computer, you will have a Win98 command prompt and the option of reinstalling Windows from a CD or manually repairing Windows with command line tools such as sys.exe.

To create a Startup Disk in Win98, go to Start, Settings, and Control Panel. Double-click Add/Remove Programs and select the Startup Disk tab in the resulting dialog box. Click the Create Disk button and insert a floppy when you're prompted to do so.

### ■ Windows NT

WinNT is the only version of Windows to provide a tool that creates an ERD on a single floppy. This ERD joins forces with the WinNT CD or **boot floppies** (disks that contain the OS in a version ready to load onto the PC) to automatically restore your system settings.

To create an ERD in WinNT, go to the Start menu and click Run. In the Open field in the Run dialog box, type **RDisk.exe /S**. The /S option instructs **RDisk** (the utility WinNT uses to create an ERD) to immediately run, as well as save the SAM (Security Accounts Manager) and Security Registry data. If you omit the /S command line switch, the OS will not save the security information. You'll lose user account settings, including passwords, should you restore SAM. The RDisk command will run, and when it has completed its data backup, it will ask if you want to create the ERD. Insert a blank floppy and click Yes. Click OK when a



***The Windows NT RDisk program runs automatically until this dialog is displayed, which gives you the option to create an ERD.***

warning about erasing the floppy appears, and the OS will create the ERD.

## ■ Windows 2000

In Win2000, the Windows Backup program creates an ERD. The ERD floppy contains some boot information, as well as a list of system files installed on your computer. There is far too much Win2000 Registry information to fit on a floppy, so the ERD program saves critical Registry information to the hard drive instead. You can find this backup information in the C:\WINNT

\REPAIR\REGBACK subdirectory.

Make removable backup copies of the Repair and RegBack directories after you create an ERD because you will not be able to recover all of the system settings if these directories are corrupted. Saving multiple dated copies of the RegBack directory and ERDs can be a lifesaver if you need to restore Win2000 to an earlier date than the last ERD you created. Restoration can be accomplished manually or by using automated repair options.

To create an ERD in Win2000, go to Start and choose Programs. Select Accessories and then System Tools. Click Backup and then the Welcome tab in the resulting dialog box. Click the Emergency Repair Disk button. Insert a blank floppy, and the wizard will walk you through creating an ERD.

## ■ Windows XP

In WinXP, the term "ERD" is gone, but the function lives on in two separate but complementary tools: ASR (Automated System Recovery) and System Restore. Microsoft includes both of these tools in WinXP Professional. WinXP Home Edition only has System Restore; no ASR function is available for WinXP Home.



***The Windows 2000 ERD is created from this Welcome dialog box that appears when the Windows 2000 Backup program is run.***

ASR creates a recovery floppy and a full backup of the system drive that contains the OS. System Restore saves multiple restore points of your Windows configuration to protected hard drive space. These restore points give you the ability to dial back your Windows configuration to various dates and times. The combination of ASR and System Restore adds comprehensive emergency recovery capabilities to Windows.

In most cases, System Restore can roll back damage a bad software installation or other disaster caused. Even if a problem has left Windows unable to fully boot, you can still use System Restore to select a restore point. Choosing a prior restore point will often get you running again in minutes. For System Restore to be truly effective, create a new restore point before you

perform any risky operation, such as a software or hardware installation.

The System Restore tool automatically creates new restore points called checkpoints every 24 hours or each time you start your computer if more than 24 hours have elapsed. In addition, some installation programs automatically create Restore Points when you run them.

Use ASR when disaster strikes and System Restore fails to get your PC running. ASR will

completely restore the system drive partition, the logical drive containing Windows (typically C:). This restoration will format the system drive partition, so any newer data not saved in the ASR backup will be erased. An ASR backup will require enough storage space to hold an image of your entire system partition, which can be many gigabytes in size. ASR is limited in the types of backup devices it can use. As a general rule, the backup device needs to be either an internal drive or tape drive; external devices such as USB (Universal Serial Bus) 2.0 hard drives or network shares will not work. For a rapid recovery option, save your backup to a different drive partition on the hard drive than the one containing Windows; for improved reliability, use a different physical hard drive. ASR backups and restores of 20GB can be completed in less than an hour when using a hard drive partition for backup. The ASR backup data and floppy are used with your WinXP Pro CD to automatically restore your entire Windows configuration.



**Create a Windows XP Professional ASR (Automated System Recovery) from this Welcome dialog box that appears when you run the WinXP Professional Backup program.**

To create an ASR backup (in WinXP Pro only), first make sure you have your backup device and a formatted floppy ready. Go to Start and then Programs. Select Accessories and System Tools. Click Backup and then Advanced Mode. Click Automated System Recovery Wizard and then Next. Select your backup device from the drop-down menu—if you're using a hard drive partition, just choose File—and choose the media name or enter a file name. Insert a blank floppy when you're prompted to do so. Click Next and then Finish. The program will go to work backing up your system drive. When the backup is complete, insert a blank floppy, which will become your ASR diskette.

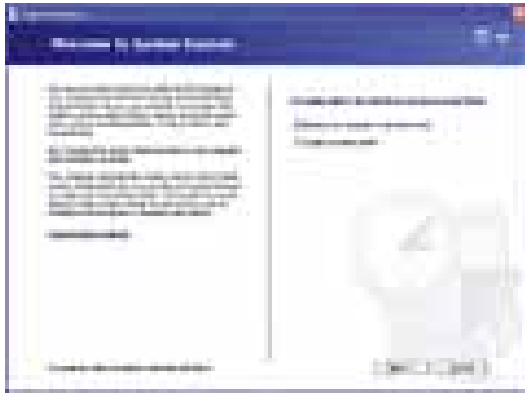
To ensure System Restore is enabled, right-click My Computer on your Desktop.

Select Properties from the pop-up menu and then click the System Restore tab from the resulting dialog box. Make sure the Turn Off System Restore option is not activated on the drive (usually C:) that contains the OS.

Creating restore points is a simple process that can reap huge benefits. Log on to your system as an administrator. Go to Start and then Programs. Select Accessories and then System Tools. Click System Restore and then the Create A Restore Point radio button. Click Next and enter a description, such as Upgraded Antivirus Software, for the restore point. Click Create. Keep in mind that restore points require quite a bit of drive space.

You can use System Restore to restore your PC to a previous configuration even when you can't fully boot WinXP. Start your system in Safe Mode With Command Prompt (to do so, repeatedly press F8 upon startup until the Windows Advanced Options Menu Appears and select Safe Mode With Command Prompt) and log on as an administrator.

At the command prompt, type **c:\system root\system32\restore\rstrui.exe**, where *system root* is usually either winnt or windows and press ENTER. Select Restore My Computer To An Earlier Time and click Next. Choose any bold date from the calendar: The restore points and checkpoints for that day will display. Either select the most recent System checkpoint (this marks the last time you rebooted the system) or a previous restore point. Click Next. If a message that details the configuration changes System Restore will make appears, click OK. In the Confirm dialog box, click Next. System Restore will go to work restoring the WinXP configuration you chose and restarting your computer. Log on as an administrator again, and when the Restoration Complete dialog box appears, click OK.



***The task of restoring or creating a restore point in Windows XP begins with this dialog box.***

If you don't have any problems booting, the instructions for using System Restore are similar. Log on to your system as an administrator. Go to Start, Programs, Accessories, and System Tools. Click System Restore. Select Restore My Computer To An Earlier Time and click Next. Choose any bolded date from the calendar, and the available restore points and checkpoints for that day appear. Select one of these options and click Next. Click OK if necessary. Click Next. System Restore will recover the previous configuration and restart your PC. Log on as an administrator and click OK when the Restoration Complete screen appears.

#### ■ **Better Safe Than Sorry**

Backing up your system and taking the appropriate steps to create an ERD (and then remembering where you stashed it when you need it) might not seem worthwhile, especially if you have the mentality that trouble will never beset you or your system. But taking these steps can ensure that you get on your feet all the sooner when disaster inevitably strikes. ■

*by Kevin Bohacz*