

BARE METAL RESTORE WINDOWS 2003 WITH AUTOMATED SYSTEM RECOVERY (ASR)

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The question is "What do you do if one of your hard disks fails catastrophically, and the system is unbootable?" The obvious solution is to replace the hard disk and then restore a backup. If you are using NTBACKUP, you have to install Windows before you can restore your backup. However, in Windows XP and Windows 2003, you actually can do a bare metal restore through a mechanism called Automated System Recovery.

There are several important issues you need to know.

1. You can't use Automated System Recovery unless you have specifically instructed Windows to create an Automated System Recovery backup.
2. You have to place the backup in a location where it will be accessible during the restoration. Automatic System Recovery is invoked during the early stages of Windows Setup. As such, network drives are completely inaccessible.
3. Your best bet is to use a locally attached tape or USB drive. However, the backup can be on the local hard drive, although this is discouraged because when you perform an Automatic System Recovery, Windows will completely erase all of the data from the volume containing Windows. Generally, other volumes are safe, but if you have selected other volumes to be restored or if Automatic System Recovery detects a problem with another volume, those volumes can be erased as well.
4. Automatic System Recovery is incompatible with FAT-16 partitions over 2.1 GB in size. FAT-16 partitions are natively limited to approximately 2 GB of disk space, but utilities exist that will allow you to create a 4 GB FAT-16 partition. Volumes on a Windows Server should really be running NTFS anyway, though.

Creating Automated System Recovery Backup

The first step in the process is you have to specifically tell NTBACKUP that you want to use Automated System Recovery.

When you open NTBACKUP, the Welcome tab is selected by default. The very last option on this tab is the Automated System Recovery Wizard. Click this button, followed by the Next button to bypass the wizard's Welcome screen. At this point, you will see a screen asking you what type of backup media you want to use and where you would like the backup to be saved. Make your selection and click Next, followed by Finish.

NTBACKUP will now backup your system files. When the backup completes, you will be prompted to insert a blank floppy disk. NTBACKUP will use the floppy disk to save some of the automated System Recovery information. That's all there is to it. Automated System Recovery has one job, and that's to return Windows to a functional state. You may have to restore other backups to get back your applications and data.

Restoring Automated System Recovery Backup

The first step in restoring a backup via Automated System Recovery is to gather the necessary materials. You will need the Automated System Recovery floppy disk, your most recent backup and your Windows Server 2003 installation CD.

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You begin the process by inserting the Windows Server 2003 installation CD and rebooting the system. When you see the message "Press Any Key To Boot From CD," press a key. If you never see this message, then your system isn't configured to boot from a CD. You can fix this problem by going into your computer's BIOS Setup and rearranging the boot device order.

When the Windows Server 2003 Setup program loads, it will ask you to press F6 to load any third-party drivers. Load any necessary drivers for your tape drive at this point. After doing so, you have to look quick, but Windows Setup will briefly display a prompt that says to press F2 to run Automated System Recovery. Press F2 and you will see a screen that prompts you to insert your Automated System Recovery disk and press a key to continue.

Insert your Automated System Recovery disk, and Windows will prompt you for the location of the backup media. After supplying this information, you will be prompted to enter the path to your Windows directory. Normally, this will be either C:\Windows or C:\WINNT. It's important that you supply Setup with the correct location because, otherwise, Windows may not be functional after it is restored. After you finish supplying the necessary information wait for the restoration to complete.