

## Re: how to change out system disk?

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**From:** R. C. White (*RCWhite\_at\_msn.com*)

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Hi, Doug.

I also boot from a 9 GB SCSI drive, with two additional HDs, but my other drives are IDE, attached to the onboard RAID controller (but not using RAID). I have a couple of thoughts on your system.

Is it too late for you to back up and start over? Here's how I would do it. But first, let's be sure that we both are talking Microsoft's language about a few key terms. The "system partition" is generally the first primary partition on the first HD; this partition must be marked Active (bootable). The system partition MUST contain the "system files", which are usually only NTLDR, NTDETECT.COM and Boot.ini, and these must be in the Root of this partition (usually C:\). All the rest of WinXP goes into the "boot folder" (\Windows, by default in WinXP; \WinNT in Win2K) on WinXP's "boot volume" (often also C:, but J: in your existing system). This boot volume can be any primary partition or any logical drive in an extended partition on any HD in your computer. Yes, as many writers have pointed out, "We BOOT from the SYSTEM partition and keep our operating SYSTEM files in the BOOT volume." There is only one system partition, but each copy of Windows installed (Win2K and WinXP) should be in its own separate boot volume.

1. Physically add the new HD as Disk 2 and reboot into your existing system (with C: on Disk 0 as your system partition and J: on Disk 1 as your WinXP boot volume).
2. Use Disk Management to create partitions on Disk 2, assign drive letters, and format them. Create a primary partition at the beginning of the HD. It can be quite small; all the system files combined total much less than 1 MEGabyte (~280 KB for NTLDR, ~45 KB for NTDETECT.com; less than 1 KB for boot.ini). You may put other files in this partition, but these usually are all that are required. (My Drive C: is 715 MB and also holds some old DOS-based Norton and other utilities.) You can format this small partition as FAT16. The rest of Disk 2 can be included in a single extended partition, which will not be assigned a drive letter, of course. Within the extended partition, create logical drives to match your current "drives": D:, Y:, J: and K:, in whatever sizes you choose to use, and format them. Use Disk Management to assign temporary drive letters; you can reassign the

letters later.

3. Use Xcopy (or Ghost) to copy everything from the old J: to the volume that will become J: later. The contents of the other volumes (D, Y and K) can be copied either now or later. With Xcopy, use switches to be sure that you get all files, including system, hidden and read-only files. (As with most commands in the "DOS" window, just type xcopy /? to see a mini-Help file listing all the switches available.) I usually use:

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xcopy d:\ x:\ /c /h /e /r /k
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4. Reboot – into Win2K, NOT WinXP. Use Xcopy from here to copy WinXP's Registry files to the new HD. This step is necessary because Xcopy cannot copy Registry files to or from the current boot folder. When you are booted into Win2K, though, it can copy the WinXP files from J:\Windows\System32\Config. This would also be a good time to make sure that the new WinXP volume is assigned drive letter J:, to match the old configuration.

5. Unplug HDs 0 and 1; plug in your new 36 GB HD as HD 0. Removing the old Disk 0 is an important step, because if WinXP Setup detects an existing system partition, it will let that partition keep the drive letter C: and will assign a new letter to the first partition on the new first HD – and there's no easy way to change it later.

6. Boot from the WinXP CD-ROM and run the "in-place upgrade" as instructed in KB article 315341:

How to Perform an In-Place Upgrade (Reinstallation) of Windows XP

<http://support.microsoft.com/default.aspx?scid=KB:en-us;q315341>

This will take as long as a fresh install of WinXP, but, since you will have copied the WinXP Registry to your new Drive J:, using this in-place upgrade procedure (rather than a "clean install" of WinXP) will preserve your installed applications and data – and most of your tweaks. When Setup runs, it will detect the existing Win2K and WinXP installations and recreate C:\boot.ini to point to them by their NEW disk(#)partition(#) numbers. (As you know, HDs are numbered beginning with 0; volumes (called partitions here) are numbered beginning with 1 on each HD.)

7. Boot into your new WinXP, get your firewall and antivirus working again, then visit Windows Update to be sure you have the latest Service Pack and later Critical Updates.

8. Boot into WinXP and use Disk Management to reassign drive letters to suit your new lineup. When you are ready, you can add your original HDs and use Disk Management to create, delete and format volumes.

Simple, huh? :^}

There are a couple of other points that should be mentioned because they might be important in your system. First, WinXP installations on some SCSI systems use a system file called NTbootdd.sys and require a different

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parameter in C:\boot.ini. My Adaptec AHA-2930U2 SCSI system does not require this and I know nothing about it. Second, if the driver for your SCSI Host Adapter is not on the WinXP CD-ROM, you will need to have it on a floppy diskette before Step 6 and watch during the early part of Setup for the instruction to Press F6 to install SCSI or other third-party drivers; press F6 quickly and wait until Setup halts with instructions to install the drivers from the floppy. If you did not have to use this F6 procedure during your initial installation of WinXP, you probably won't need to do it now.

If you have questions, post back.

RC

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R. C. White, CPA
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Microsoft Windows MVP
"Doug Floer" <spam@localhost.com> wrote in message
news:uBLIuQqNEHA.1400@TK2MSFTNGP10.phx.gbl...
>I need some help changing out my system disk. Here's my config. I have 3
> disks:
>
> > Disk 0 (9 GB SCSI): c: (bootblock and boot.ini (old NT4)) and two data
> > partitions (t:, g:)
> > Disk 1 (18 GB SCSI): d: (W2K (unused)), y: (data), j: (XP), k: (Program
> > Files)
> > Disk 2 (36 GB SCSI): unallocated
> >
> > My main goal is to simply to move the partitions and contents of disk 1 to
> > larger partitions on disk 2. I'd like to remove disk 0 and just have disk
> > 2
> > as the boot disk, too, but this is secondary.
> >
> > I've used ghost to replicate the partitions and then removed disk 1 from
> > the
> > system and changed the SCSI ID of disk 2 to disk 1 but XP complained that
> > the license couldn't be verified.
> >
> > Can anyone out there advise how this can be done without reinstallation or
> > program/data loss?
> >
> > Thanks!
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