

By Greg Shultz

The Windows registry is essentially a database of all the configuration settings in the Windows operating system. It contains profiles for every user who has an account on the local system, information about all internal and external hardware connected to the computer, information about all of the applications installed in the operating system, and the details about every configuration setting made throughout the operating system.

Because the Windows registry is like the brain of the operating system, you need to be extremely careful anytime you make a change to it. To help you work effectively with the registry and avoid the potentially dire consequences of an editing mistake, we've put together this list of things you should know when working with the Windows registry.

1 The lay of the registry

Before you begin any journey, a map is a helpful tool. Not only will it help you plan your route, but it will also help you to get a feel for the environment you're about to encounter. The same thing can be said for the Windows registry.

The Windows registry is made up of five main sections, called *keys*, each containing specific types of information about the operating system. Microsoft also uses the term *hives* to refer to these five sections. Regardless of which name you use, each section resembles a nested folder structure containing files of settings called *values*. These are the five main keys in the Windows registry:

- HKEY_CLASSES_ROOT – This key represents information about file types.
- HKEY_CURRENT_USER – This key contains copies of data stored in HKEY_USERS about the user who is currently logged on.
- HKEY_LOCAL_MACHINE – This key represents information about all the hardware and software installed on the computer.
- HKEY_USERS – This key represents information about all the users who have accounts on the system.
- HKEY_CURRENT_CONFIG – This key essentially contains copies of the information from all the other root keys that pertain to the currently running session.

2 Backing up the registry

Before you ever make any changes to the registry, you should make a backup copy of it. That way, should you make a critical mistake, you have a way to return the system to a viable state. Here are several methods that you can use to backup the registry:

- Use Windows XP's Backup Utility and select System State.
- Create a Restore Point.
- Launch the Registry Editor, select the key you plan to edit, pull down the File menu, and choose the Export command.

3 The Registry Editor

To manually view and modify the registry, you can use the Registry Editor. You launch the Registry Editor by accessing the Run dialog box (Start | Run), typing Regedit in the Open text box, and clicking OK. When using the Registry Editor, be careful that you don't change a key or value not related to the change you want to make.

4 Using REG files

If the registry edit you want to make is a fairly common one, and you don't want to manually edit the registry with the Registry Editor, perform a Google search for a REG file that will perform the edit for you. (Be careful that the site you choose is a reputable one.) A REG file is a special text file, exported from the Registry Editor, that contains the commands to perform the registry edit. You simply double-click the REG file, and it will automatically import the edit into your registry.

5 Using a GUI tool

Since the registry is the main repository for the majority of the configuration settings in the operating system, chances are good that there is a GUI tool you can use to make your registry changes. Of course, just about all of the tools in the Control Panel make changes to the registry. Another native operating system tool you can use to make registry changes is the Group Policy editor. (Just type *Gpedit.msc* in the Run dialog box.) To make changes to the registry that are not found in native tools, you can download the [Microsoft TweakUI PowerToy](#).

6 Searching the registry

If you know the name of the subkey or value you want to edit in the registry, but you don't know exactly where it's located, keep in mind that the Registry Editor has a nice little Find tool. To access it from within the Registry Editor, just press [Ctrl]F. When you see the Find dialog box, type the name of the subkey or value you want to search for in the text box and then select or clear any of the check boxes in the Look At panel (Keys, Values, or Data) to better target your search.

7 Taking advantage of Favorites

If you find yourself regularly editing the registry from within the Registry Editor, you can use the Registry Editor's Favorites menu to save yourself time tracking down a deeply nested subkey you edited previously. As with Internet Explorer, the Registry Editor's Favorites menu allows you to bookmark locations—but in this case, those locations are in the registry. When you make a registry change you'll want to return to at a later date, just pull down the Favorites menu and select the Add To Favorites command. Then, you can use the Favorites menu to quickly return to that exact subkey whenever you need to.

8 Working around the Registry Editor's LastKey feature

The Registry Editor comes with a feature called LastKey. This feature saves the path to the key that's open when you close the Registry Editor. The next time you launch the Registry Editor, it automatically displays that key. Although this feature is designed to make it easier for you to make changes to a specific key without having to drill down through the registry tree each time, it can be annoying when you need to edit a different key. You're forced to close all the open branches before you can drill down to the new key.

To work around this feature when it's inconvenient, you can use the [RegEd Launcher](#), which is available as a free TechRepublic download. When you run the RegEd Launcher, it displays a dialog box that asks you whether you want to open the Registry Editor at the last edited key or start a new editing session.

9 Cleaning the registry

Over time, the registry can become bloated with orphaned or corrupt keys and values, yet still function. However, this bloat can make the registry inefficient and slow. Microsoft used to provide a tool called RegClean that was specifically designed to analyze the registry and remove orphaned and corrupt keys and values. Unfortunately, the tool was never updated to run with Windows XP. However, there are many commercial and shareware registry cleaners out there that perform admirably. Here are a few to investigate:

- [Registry Clean Pro](#)
- [Registry Mechanic](#)
- [TweakNow RegCleaner](#)

10 Monitoring registry activity

When you install a new application, the installation procedure can make a multitude of changes to the registry—all behind the scenes. If you want to keep track of how the registry is altered, you need to investigate RegMon, a freeware utility from [Systems Internals](#). RegMon is designed to run in the background and track registry I/O operations. It will then provide a report on the status of those operations, which can come in handy should you ever have to troubleshoot registry problems that you think are related to the application.



Greg Shultz has been using PCs since 1986, when he acquired a Kaypro 16 "luggable" running MS-DOS 2.11 and began programming in Microsoft BASIC and Turbo Pascal. He began his career in the publishing industry as a technical editor for PCM magazine, a publication focused on Tandy computers. He later became a technical journal writer, specializing in the Windows operating system, at The Cobb Group (which later became ZD Journals and then Element K Journals). Greg is now a freelance technical writer who regularly writes articles for ZDNet and TechProGuild. You can visit his Web site at www.thewinwiz.com/.

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