



## Introducing Norton Registry Editor

Norton Registry Editor is a powerful tool for managing the Windows registry. In addition to letting you edit, search, import and export registry information, it allows you to track changes to the registry, undo changes and bookmark frequently visited places in the registry.

Every time you add software or hardware, the registry database is updated. Other registry settings are changed automatically when you make changes within application programs, such as changing settings in the Windows Control Panel. In most cases, it's easier and safer to make configuration changes this way and thereby avoid making changes directly to the registry.

However, some modifications can only be made directly in the registry, including some user interface and performance-enhancing customizations and hardware troubleshooting chores. Sometimes, you may want to have a look at the registry just to understand how your programs are configured.

Use Norton Registry Editor whenever you want information about the registry or your registry settings, or when you need to make changes to the registry or to INI files on your system. System administrators can use it to compare registries and INI files on remote networked PCs.

Always back up the registry before making any modifications. Norton Registry Editor makes this a painless, one-step process. You can also save portions of the registry to special files, and later merge these files back into the registry to restore the settings.



Occasionally an update may leave your computer behaving strangely or even prevent Windows, certain programs, or hardware components from operating properly. Using Norton Registry Editor in conjunction with Norton Registry Tracker lets you see exactly what has been changed, and helps you either make corrections in the registry or restore the registry to its state prior to the changes.



**Warning:** The registry is fundamental to the proper functioning of your system. You should only change registry entries if you know what you are doing, and are confident of the results. Improper use of Norton Registry Editor can cause problems with your system that may even result in your having to reinstall Windows. Always make a backup of your registry before you make any changes; from the File menu of Norton Registry Editor, choose Backup Entire Registry.



To edit the registry, [click here](#)



to start Norton Registry Editor.

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[{button ,AL\('Introducing Norton Registry Tracker;About registry files and Symantec Registry Archives;About the Windows registry;To add or delete registry keys',0,','\)} Related Topics](#)

## About the Norton Registry Editor window

The Norton Registry Editor screen has three viewing areas:

- The Key pane, at the upper left, displays the registry keys and INI file sections. These are roughly analogous to categories of stored information.
  - The Value pane, at the upper right, displays the values stored in the registry key or INI file section selected in the Key pane. You can display the values in any of four views.
  - Below the Key and Value panes are the information tabs. The tabs provide a display area for some of the Norton Registry Editor features. There are four information tabs:
    - **Bookmarks** lists any bookmarked registry keys and INI file sections, letting you quickly find and jump to specific areas of interest.
    - **Undo** records a history of edits made during the current Norton Registry Editor session. You can view the list of changes, and undo them.
    - **Find Results** lists results of the last Find operation you performed. You can instantly go to any of the items found.
    - **Tracker History** shows the history of changes to the item maintained by Norton Registry Tracker. Unlike the changes recorded by the Undo tab, those recorded by Norton Registry Tracker persist from one session to the next.
- You can change the relative sizes of the viewing areas by dragging the frame border that separates them.

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[{button ,AL\('About the Bookmark tab and registry shortcuts;About the Undo tab;About the Find Results tab and registry searches;About the Tracker History tab;About Value pane views;How values are represented in the registry;Expanded strings and multi-strings',0,'',''\)} Related Topics](#)

## About the Bookmarks tab and registry shortcuts

The Bookmarks tab provides one-stop access to all the registry keys and INI file sections you have bookmarked. The bookmarks appear in a hierarchical list that reflects the structure of the Key pane, but only includes those top branches of the hierarchy that contain bookmarked items.

To bookmark an item, right-click it in the Key pane, and choose Bookmark This from the context menu.

To instantly return to one of your bookmarked items, double-click it on the Bookmark tab.

To save your bookmarks from one session to the next, choose Save Bookmarks from the Bookmarks menu. To load your bookmarks during another Norton Registry Editor session, choose Load Bookmarks, and specify the bookmark file you want to load. You can save several sets of bookmarks for different types of Norton Registry Editor jobs, and load a different set whenever you want.

To create shortcuts to registry keys, right-click a key and choose Make Shortcut from the context menu. Like bookmarks, shortcuts speed access to registry keys of interest, especially those keys buried deep in the registry hierarchy. Shortcuts differ from bookmarks in that they are placed directly at the top level of the hierarchy, rather than on the Bookmarks tab. When expanded, shortcuts display all the subkeys and values of the original key.

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{button ,AL('About the Undo tab;About the Find Results tab and registry searches;About the Tracker History tab;To unload an INI file from Norton Registry Editor;To create a shortcut to a registry key;To back up the registry;To bookmark registry keys or to remove bookmarks;To save bookmarks to a file;To load saved bookmarks;To go to a bookmark;To view a list of bookmarks',0,'')} Related Topics

## About the Undo tab

The Undo tab lists any changes made to the registry from Norton Registry Editor during the current session. Whenever you add, modify, or delete registry or INI file items, the transaction is logged on the Undo tab.

The Action column lists the action that was performed, such as Create, Delete, Rename, and Modify. The Description column lists the items on which those actions were performed.

When you choose Undo from the Edit menu, the action at the bottom of the list is undone.



To undo changes that occurred outside of the current Norton Registry Editor session, use Norton Registry Tracker. It lets you track any changes that occur to selected registry keys and INI files. You can see a history of changes, compare the different "snapshots", or selectively restore the tracked items to previous states.

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[{button ,AL\(' About the Bookmark tab and registry shortcuts;About the Find Results tab and registry searches;About the Tracker History tab;To prevent Norton Registry Editor from changing the registry;Introducing Norton Registry Tracker',0,''\)} Related Topics](#)

## About the Find Results tab and registry searches

The Find Results tab lists the results of the most recent search operation Norton Registry Editor performed. Each of the results listed functions as a bookmark; right-click on any of the items found and choose Go Here from the context menu to display that item in the Key or Value pane.

To search the registry and/or INI files, choose Find from the Edit menu. You can search the registry, INI files, or both. You can limit the search to a single branch of the registry. You can search registry keys, value names, value data, or some combination of the three. You can even search registries of remote computers, if you are a network administrator.

Most new 32-bit applications written for Windows can be completely removed by using Add/Remove Programs from the Windows Control Panel. This removes program files and folders, and any registry entries created by and for the program. If you remove a program by manually deleting the program's files and folders, any registry entries created by the program are left in the registry, serving no useful purpose.

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[{button ,AL\(' About the Bookmark tab and registry shortcuts;About the Undo tab;About the Tracker History tab;To remove a shortcut to a registry key;To find and replace a registry key or value',0,'',''\)} Related Topics](#)

## About the Tracker History tab

The Tracker History tab works in conjunction with Norton Registry Tracker to display changes to tracked registry keys and INI file sections. Unlike the changes displayed on the Undo tab, the changes recorded on the Tracker History tab are not limited to changes made from Norton Registry Editor; any change made to a tracked item is listed on this tab as long as the item is being tracked. Furthermore, the log of changes to tracked items persists between Norton Registry Editor sessions.

Norton Registry Tracker lets you select which registry keys and INI file sections should be tracked. Whenever a change is made to a tracked item, the change is recorded in the Norton Registry Tracker Snapshot Log. If there are tracking snapshots available for the item currently selected in the Key pane, those snapshots appear in the Tracker History tab.

Changes to tracked items are indicated by the icons to the left of the items:



Indicates something that has been added.



Indicates something that has been removed.



Indicates a line in a text file that has been moved within a file.

The moved text is preceded by the line number from which the text was moved.



Indicates a line in a text file that has been moved within a file.

The moved text is preceded by the line number to which the text was moved.



Note that the Tracker History displayed for a particular item is only current if that item is being actively tracked from Norton Registry Tracker. If you disable an item's tracking from Norton Registry Tracker, or close Norton Registry Tracker and subsequently make changes to the item, the snapshot information displayed on the Tracker History tab will be obsolete.

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[{button ,AL\(' About the Bookmark tab and registry shortcuts;About the Undo tab;About the Find Results tab and registry searches;About registry backups;About registry files and Symantec Registry Archives;Introducing Norton Registry Tracker',0,'',''\)} Related Topics](#)

## About Value pane views

The View menu has four options for displaying the data in the Value pane:

- List View presents the value names arranged in columns. The value names are preceded by small icons representing the value type, and the value data is not shown.
- Report View presents the value names and value data in two columns. Click the Name column heading to sort the list by name; each time you click the column heading the sort order is reversed. The names are preceded by small icons representing the value type.
- Large Icon View presents the values as large labeled icons that represent the value types. The icons are arranged in rows.
- Small Icon View presents the values as small labeled icons that represent the value types. The icons are arranged in rows.

For each of the views, you can use View menu options to sort the display by value names or value types.

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[{button ,AL\('How values are represented in the registry;Expanded strings and multi-strings;To rename registry keys or values;To add or delete registry keys;To delete a registry key',0,','\)} Related Topics](#)



## About registry files and Symantec Registry Archives

You should make periodic backups of your registry, especially before making any changes to registry keys. A registry backup file can help you restore the registry to a known working state, in case you should inadvertently change registry items that make your system unstable.

With Norton Registry Editor, making backups is a simple process: choose Backup Entire Registry from the File menu. The Save As dialog box lets you specify a name and location for the registry backup file. Registry backup files are saved in a text format and given a REG file extension. Because backing up your entire registry can take some time, the registry backup runs as a separate process in the background and can be minimized so you can continue working.

In addition to saving the whole registry, you can also save individual branches of it. For example, if you are making changes within a specific branch of the registry, you can save just that portion of the registry. This process is faster, and takes less disk space than saving the entire registry (though you should always have at least one copy of the entire registry available for emergencies).

Portions of the registry can be saved in either of two formats, each of which serves a different purpose:

- Registry (REG) files are simple text files that can be exported from and imported to the registry, whether or not you are running Norton Registry Editor.
- Symantec Registry Archive (SRG) files are binary (non-viewable) format, and can only be used by Norton Registry Editor.

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[{button ,AL\('About registry \(REG\) files;Using REG files to delete registry items;About Symantec Registry Archives;About Symantec Registry Archives;To find and replace registry keys or values;To print the registry;To import or export registry files;To save a Symantec Registry Archive',0,''\)} Related Topics](#)

## About registry (REG) files

You can save individual branches of the registry by clicking a key and choosing Export Registry File from the File menu. This saves the selected key together with any values and subkeys it contains to a REG file. REG files are text files that describe keys and values stored in the registry. Because they are text files, you can view and edit REG files with any text editor.



Exporting does not change the registry structure at all. The registry items that are exported remain physically stored in the registry; the REG file is just a text copy of those items.

Large branches of the registry can take some time to export, so exports run as separate processes, which can be minimized so you can continue working. You can even have more than one branch exporting simultaneously (to different REG files).

Just as they can be exported, REG files can be "imported" into the registry. The registry items described by the REG file are created in the registry, or, if the items already exist in the registry, they are overwritten with the new information. This process is also called "merging" a REG file into the registry.


Importing REG files provides a simple way to change large numbers of registry items at one time, since each REG file can contain any number of different key and value descriptions. Because a REG file contains the full registry paths of the items it describes, importing a REG file always places the keys and values it describes in the same precise location within the registry hierarchy. This is in contrast to restoring registry items stored in a Symantec Registry Archive, where the precise placement of the registry items in the registry depends on the location to which you restore the items.

Normally, REG files are used to change existing registry entries or add new ones. The import feature of Norton Registry Editor also lets you use REG files to delete keys and values from the registry.




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[{button ,AL\(' About registry files and Symantec Registry Archives;Using REG files to delete registry items;To find and replace registry keys or values;To print the registry;To import or export registry files;To save a Symantec Registry Archive',0,"",""\)}](#) Related Topics

## Using REG files to delete registry items

 **Warning:** The registry is fundamental to the proper functioning of your system. You should only change registry entries if you know what you are doing, and are confident of the results. Importing REG files you have edited or created changes the structure of your registry, just as editing the registry directly does. Always make a backup of your registry before you make any changes; from the File menu of Norton Registry Editor, choose Backup Entire Registry.

Norton Registry Editor lets you use imported REG files to delete registry items, in addition to adding new items or changing the values of existing ones. By adding the following special notation to a REG file, you can have Norton Registry Editor automatically delete registry items when the REG file is imported:

-  To delete a registry key and its subkeys, add a tilde (~) character before the key.
-  To delete a registry value, specify a tilde as the value's data.
-  To delete all values under a key, without deleting the key itself or its subkeys, include a minus sign (-) before the key.

For example, say you import the following REG file that creates a key containing two values and one subkey:

```
[HKEY_CURRENT_USER\My_New_Key]
@="My default value"
"My String"="Some string data"
[HKEY_CURRENT_USER\My_New_Key\My_New_Subkey]
```

To delete the My\_New\_Key and all the values and subkeys it contains, you could create and import a REG file having this line:

```
~[HKEY_CURRENT_USER\My_New_Key]
```

To delete either the default (signified by an @ symbol) or My String value, you could create and import a REG file having either of these lines:

```
@=~
```

or

```
"My String"=~
```

(Note that there should be no quotation marks around the tilde.)

To delete both values, without affecting the subkey, My\_New\_Subkey, you could create and import a REG file having this line:

```
-[HKEY_CURRENT_USER\My_New_Key]
```

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[button ,AL\(' About registry \(REG\) files;About registry files and Symantec Registry Archives;About Symantec Registry Archives;To find and replace registry keys or values;To print the registry;To import or export registry files;To save a Symantec Registry Archive',0,','\)}\)](#) [Related Topics](#)

## About Symantec Registry Archives

You can save individual branches of the registry by clicking a key and choosing Save Symantec Registry Archive from the File menu. This saves the selected key together with any values and subkeys it contains to a Symantec Registry Archive file, which is given a file extension of SRG. Like REG files, SRG files describe keys and values stored in the registry. Unlike REG files, however, SRG files have a binary rather than text format; they cannot be edited or viewed.

☛ Saving a branch of the registry to a Symantec Registry Archive does not change the registry structure at all. The registry items that are archived remain physically stored in the registry; the SRG file is just a binary representation of those items.

SRG files also differ from REG files in the way that their stored items are replaced into the registry when you choose Restore Symantec Registry Archive (also on the File menu). You must have an existing registry key highlighted before you can restore from an archive. The items represented in the archive are recreated in the registry **under the currently selected key**. Because of this behavior, you should be careful when restoring from an archive, and be sure that you have the key selected under which you want all archived items to be created.

Archives provide a convenient way of grafting entire branches of the registry to new locations.

☛ You cannot use Symantec Registry Archives to delete items from the registry, as you can with text-based REG files.

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[{button ,AL\('About registry \(REG\) files;Using REG files to delete registry items;About registry files and Symantec Registry Archives;To find and replace registry keys or values;To print the registry;To import or export registry files;To save a Symantec Registry Archive',0,'',''\)} Related Topics](#)

## About registry backups

Registry data is stored in two hidden files on your system. SYSTEM.DAT stores global hardware and software information. USER.DAT stores user-specific hardware and software settings. Every time you start your system successfully, these files are backed up to SYSTEM.DA0 and USER.DA0, respectively (the backup extensions end with the number zero, not the letter "O").

If there is a problem with your registry, you can restart your computer in DOS mode and rename the backup files to return your computer to the state it was in the last time it was successfully started. This may not be enough, however, especially if you tend to leave your computer running for long periods of time; the last time the computer was successfully started may have been days or weeks ago.

Norton Registry Editor lets you make backups of your registry as often as you like. Simply choose Backup Entire Registry from the File menu. The file is stored as a text file with a REG extension. Should you ever need to restore the registry from your backup, double-click the backup REG file to merge it back into the registry. You should always make a backup of the registry before you make any changes using Norton Registry Editor.

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{button ,AL('About registry (REG) files;About registry files and Symantec Registry Archives;About Symantec Registry Archives;To find and replace registry keys or values;To print the registry;To import or export registry files;To save a Symantec Registry Archive',0,'','')} [Related Topics](#)

## About the Windows registry

The Windows registry is a centralized database used by Windows and newer Windows applications to store configuration information. It contains settings for system hardware, software, and network applications. Programs can freely modify and retrieve this information as necessary.

In earlier versions of Windows, configuration information was often stored in text files, such as initialization (INI) files, AUTOEXEC.BAT, and CONFIG.SYS. These files are still supported by Windows for compatibility with older applications, but Windows and most new applications now make extensive use of the registry instead.

The registry stores two basic types of information: global information, and user-specific information. The global information is necessary for the basic operation of the hardware and software on your computer. The user-specific information includes user customized settings, such as the layout of the Windows desktop and the options you have selected for Windows and for your Windows applications.

The registry provides a number of benefits that are not available under previous versions of Windows. For example, if you have a portable computer, you can have one configuration for use in the office and another for use elsewhere. Other benefits of the registry are support for Plug-and-Play devices, better cleanup when you remove applications, easier recovery from system failures, and remote capabilities for network administration.

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[{button ,AL\('How the registry is organized;How values are represented in the registry;About INI files versus the registry;HKEY Users and HKEY Current User;HKEY Dynamic Data',0,','\)} Related Topics](#)

## How the registry is organized

The registry is organized into six broad categories of information called "root keys." The root keys are like data containers, each storing information related to a specific aspect of your system. The root keys can contain data values and can also contain keys of their own, or "subkeys," which help to more finely organize the registry data.

The hierarchical registry structure that results is similar to that of the folder organization on your disk, where any folder can contain other folders as well as files. Consequently, the registry structure in Norton Registry Editor resembles the representation of your disk structure in the Windows explorer. Keys are represented as folders, and those containing subkeys can be expanded (by clicking the plus signs to their left) to reveal the subkeys they contain.

The registry's root keys are:

- HKEY\_CLASSES\_ROOT
- HKEY\_CURRENT\_CONFIG
- HKEY\_CURRENT\_USER
- HKEY\_DYN\_DATA
- HKEY\_LOCAL\_MACHINE
- HKEY\_USERS

The HKEY prefix identifies the key as a programming "handle" used by applications to gain access to the registry. Applications and operating system modules use the handles to retrieve stored configuration data, as well as to add, delete, or change settings.

HKEY\_USERS, HKEY\_LOCAL\_MACHINE, and HKEY\_DYN\_DATA are the most important root keys; the other root keys just point to subkeys of these.

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{button ,AL('About the Windows registry;How the registry is organized;HKEY Local Machine;HKEY Users and HKEY Current User;HKEY Dynamic Data;How values are represented in the registry;About INI files versus the registry;If your machine is configured for multiple users',0,',')} [Related Topics](#)

## **HKEY\_LOCAL\_MACHINE, HKEY\_CLASSES\_ROOT, and HKEY\_CURRENT\_CONFIG**

HKEY\_LOCAL\_MACHINE stores global (non-user-specific) settings that relate to the hardware, software, and network resources available to the machine. Two of the other root keys reflect subkeys of HKEY\_LOCAL\_MACHINE.

The HKEY\_LOCAL\_MACHINE\Config subkey shares a relationship with HKEY\_CURRENT\_CONFIG that is similar to the relationship shared by HKEY\_USERS and HKEY\_CURRENT\_USER.

Just as the registry can store multiple sets of user preferences, it can also store multiple sets of hardware configuration profiles. This comes in handy, for example, if you use a notebook computer that can be docked. When using the notebook as a standalone machine, you would want it configured with a minimal set of hardware drivers, to conserve system resources. When using the notebook in its docking station, however, you would need a different hardware configuration that includes appropriate drivers for the printer, monitor, and other peripherals to which the docking station is attached.

Windows can usually recognize which hardware configuration to use on startup, and loads the appropriate profile automatically. If it can't, it prompts you to select one from a list of all profiles that have been defined. Windows loads only those device drivers necessary for the hardware devices listed in the profile you select. (For more information about Windows hardware profiles, see the Windows Help.)

Each hardware profile defined for your system is assigned its own numbered subkey under HKEY\_LOCAL\_MACHINE\Config. HKEY\_CURRENT\_CONFIG reflects the subkey under HKEY\_LOCAL\_MACHINE\Config that is currently in effect.

HKEY\_CLASSES\_ROOT reflects the subkeys under HKEY\_LOCAL\_MACHINE\SOFTWARE\Classes. This key stores the file associations that allow you to double-click a file to have Windows automatically launch the appropriate application to view or edit the file. Each file extension that has a program association is listed under these keys. This area of the registry also contains support data for OLE applications and objects.

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## HKEY\_USERS and HKEY\_CURRENT\_USER

HKEY\_USERS, as the name implies, stores user-specific settings—settings customized for the person logged on to the machine. These settings include things like the Windows desktop layout and options you have set in your application. Because these user preferences are stored in the registry, you won't need to reset them every time you restart Windows or your Windows applications.

If Windows is configured to allow different users to customize their individual preferences and desktop settings, settings specific to each user are stored in corresponding keys under HKEY\_USERS\*username*, where *username* is the name each user uses to log on to the system. This way, each individual user of a single computer can have personalized settings for network connections, desktop appearance, printer configuration, and much more. HKEY\_CURRENT\_USER reflects the information for the current user that is stored under the HKEY\_USERS\*username* subkey currently in effect.

Another benefit to keeping multiple user profiles under HKEY\_USERS is that the user settings and data can be stored in the registry of a network server. Then when a user logs on to any computer on the network, the computer can use that user's personal settings.

If your machine is configured for multiple users, there are special considerations when accessing these keys in the registry.

 To configure Windows to support multiple user profiles, click Passwords in the Windows Control Panel, and choose the User Profiles tab.

If Windows is set up for only a single user, HKEY\_CURRENT\_USER reflects the HKEY\_USERS\Default subkey.

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## HKEY\_DYN\_DATA

HKEY\_DYN\_DATA holds information that is dynamic in nature; it is continually updated by the operating system. The uses for this data require that it always be as current as possible.

Plug-and-Play devices are smart components that communicate with the operating system and BIOS to simplify configuration. Much of the work of configuring these devices to avoid conflicts is coordinated through the registry. When you start Windows, the current system configuration, including the status of Plug-and-Play devices is stored in RAM and tracked using the HKEY\_DYN\_DATA key.

Windows also stores virtual device driver data and system performance statistics under this key.

☛ The information under HKEY\_DYN\_DATA is constantly being refreshed by Windows and should not be changed manually.

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## How values are represented in the registry

The fundamental function of the registry is to store data. While the data is organized under the various registry keys, the data itself consists of stored values. It is usually these values that are accessed by Windows and by applications.

Many of the registry values are created during Windows installation by the setup program. Additional values are added when you make hardware changes or install applications. Registry values vary significantly from one machine to another depending on the devices attached to the PC, whether the PC is attached to a network, and whether or not Windows 95 was installed on top of an earlier version of Windows.

- Some registry keys store no values. These might be structural elements used to help organize the registry hierarchy, in which case the keys contain subkeys that likely store values. Other valueless keys are used as flags; some programs look for the mere presence or absence of these keys.

Each value consists of two parts: the value name and the value data. The value name identifies the value, the value data is the stored information of interest. All values are stored in binary form in SYSTEM.DAT and USER.DAT, the files that actually store the registry information. These values can be entered and displayed in a number of different formats:

- String values hold alphanumeric text data such as the path to an application on disk.
- Numeric ("DWORD") values are 32-bit values that can be entered in Norton Registry Editor as integers, hexadecimal digits, or binary.
- Binary values can be any length, and are represented using hexadecimal digits.

Norton Registry Editor also lets advanced users view and enter binary values as expanded strings and multi-strings.

Use Norton Registry Editor to explore your registry and look at some of the values stored there. While some registry values are comprehensible—a driver name, a program path, a software switch

—many of the stored values are not user friendly. Such entries only make sense to the applications or devices that access them.

- To display the value data, Norton Registry Editor must be set to Report View. This is the default. If you cannot see the value data in the Value (right) pane of Norton Registry Editor, choose Report View from the View menu.

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## About Expanded strings and multi-strings

It is frequently convenient for programmers to store special string data as binary registry values. Norton Registry Editor allows you view and edit these types of values as strings, rather than as the hexadecimal digits displayed by Microsoft's regedit program. Two string representations of this binary data are supported by Norton Registry Editor: "expanded strings" and "multi-strings."

The expanded string value type is used for string data that includes environment variables within the string. Expanded strings flag environment variables by enclosing them in a pair of percent (%) symbols. If a program is written to recognize expanded strings, the program can "expand" the environment variable to substitute the current value of the environment variable. Thus, if an expanded string value looked like this:

"The path for temporary file storage is %TEMP%"

a program using this value would expand %TEMP% to the current value, resulting in:

"The path for temporary file storage is C:\WINDOWS\TEMP"

Multi-strings are binary values that comprise more than one string value. These can be used to store several string values, such as a list of file extensions, together in a single registry entry. Norton Registry Editor lets you view and enter these as regular text, rather than as hexadecimal digits. Individual strings in the multi-string value should be separated by carriage returns.

There are several reasons a programmer might want to use these special string types:

- Efficiency
  - Multi-strings can store several text strings in a single binary registry value.
- Organization
  - Expanded strings can be stored as distinct from regular strings, and programs can be written to recognize that only expanded string data requires expansion.
- Security
  - Both multi-strings and expanded strings appear as hexadecimal notation when viewed with Microsoft's regedit that is included with Windows. This protects the data from casually prying eyes.

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## About INI files versus the registry

Under earlier versions of Windows, tracking settings or troubleshooting could involve quite a bit of detective work. Your hardware, operating system, network, and application settings were scattered—some settings were in application INI (initialization) files, some in the various Windows INI files, and still others in AUTOEXEC.BAT and CONFIG.SYS. By moving all these settings to the registry, Windows provides a global, centralized place to store configuration information for the operating system, hardware, and applications. The registry provides these advantages over INI files:

- INI files are simple ASCII text files, but the registry is a binary file. Programs and system processes that use information from the registry don't have the additional overhead of translating text data into machine-readable form.
- INI files are limited in size to 64K, but the registry has no size limit. This unlimited registry size allows for future growth and greatly increases the potential for supported system resources.
- INI files have a flat, two-tiered organization with sections and section entries, but the registry is a true hierarchical database. Although the registry can grow to be quite large, its multilevel branching arrangement enables Windows and other programs to access configuration data efficiently and quickly. The operating system uses the registry's root keys to process only the portion of the database necessary to get the information it needs. To retrieve data from an INI file, the text must be processed from the top down, which is relatively slow.

Windows still supports the use of INI files in order to maintain compatibility with applications written for earlier versions of Windows. For unusual hardware and pre-Windows 95 software, the CONFIG.SYS, AUTOEXEC.BAT, and individual INI files still provide some configuration information.


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### **If your machine is configured for multiple users...**

If Windows is configured to allow different users to customize their individual preferences and desktop settings, system administrators should bear in mind the special relationship between HKEY\_USERS and HKEY\_CURRENT\_USER when inspecting or editing these branches of the registry.

In this case, the values under HKEY\_USERS\Default may not reflect the current system settings, as they may have been user-customized. To gain access to the settings for a specific user, system administrators should be certain they are in the appropriate user-specific subkey under HKEY\_USERS.

 To configure Windows to support multiple user profiles, click Passwords in the Windows Control Panel, and choose the User Profiles tab.

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[{button ,AL\('HKEY Users and HKEY Current User;How the registry is organized',0,'',''\)} Related Topics](#)



### To rename registry keys or values


Click here  to open Norton Registry Editor.

### To rename registry keys

- 1 Right-click the key you want to rename.
- 2 Choose Rename from the context menu.
- 3 Type a new name for the key.

### To rename registry values

- 1 Click the key that contains the value you want to rename.
- 2 In the Value pane, right-click the value you want to rename.
- 3 Choose Rename from the context menu.
- 4 Type the new name for the value.

 **Warning:** The registry is fundamental to the proper functioning of your system. Only change registry entries if you know what you are doing, and are confident of the results. Improper use of Norton Registry Editor can cause problems with your system that may even result in your having to reinstall Windows. Always make a backup of your registry before you make any changes; from the File menu of Norton Registry Editor, choose Backup Entire Registry.

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[{button ,AL\('To rename registry keys or values;To add or delete registry keys;To prevent Norton Registry Editor from changing the registry;Introducing Norton Registry Editor;About the Norton Registry Editor window;About the Windows registry',0,';',''\)} Related Topics](#)



### To add or delete registry keys


Click here  to open Norton Registry Editor.

#### To add registry keys

- 1 Right-click a key to contain the new key.
- 2 Choose New from the context menu.
- 3 Choose Key from the cascading menu.
- 4 Type a name for the new key.
- 5 Press Enter.

#### To delete registry keys

- 1 Right-click the key you want to delete.
- 2 Choose Delete from the context menu. This deletes all subkeys and values it contains.

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[{button ,AL\("Using REG files to delete registry items",0,"",""\)}](#) Related Topics

### To add, change, or delete registry values

Click here  to open Norton Registry Editor.

#### To add registry values

- 1 Right-click a key to contain the new value.
- 2 Choose New from the context menu.
- 3 Choose the appropriate value type from the cascading menu.
- 4 Type a name for the value and press the Enter key.
- 5 Double-click the new value name or press Enter.
- 6 Type the data for the new value in the Modify Value dialog box.


#### To change registry values

- 1 Click the key for which you want to change the value.
- 2 In the Value pane, double-click the name of the value you want to change.

Type the new data for the value in the Modify Value dialog box.

#### To delete registry values


- 1 Click the key that contains the value you want to delete.
- 1 Right-click the value you want to delete in the Value pane.
- 1 Choose Delete from the context menu.

 **Warning:** The registry is fundamental to the proper functioning of your system. You should only change registry entries if you know what you are doing, and are confident of the results. Improper use of Norton Registry Editor can cause problems with your system that may even result in your having to reinstall Windows. Always make a backup of your registry before you make any changes; from the File menu of Norton Registry Editor, choose Backup Entire Registry.

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[{button ,AL\("About Value pane views;How values are represented in the registry;Using REG files to delete registry items",0,";"\)}](#) [Related Topics](#)

### To refresh the registry display

- 1 Click here  to open Norton Registry Editor.
- 2 Press the F5 key or choose Refresh from the View menu.

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[{button ,AL\('Introducing Norton Registry Editor;About the Norton Registry Editor window',0,'',''\)} Related Topics](#)

### To expand or collapse registry tree branches

1 Click here  to open Norton Registry Editor.

2 To expand a key and show its contents, click the plus sign next to a key.

Or,

To collapse a key and hide its contents, click the minus sign next to a key.


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[{button ,AL\('Introducing Norton Registry Editor;About the Norton Registry Editor window;About the Windows registry',0,''\)} Related Topics](#)



### **To track registry keys and INI files and to view snapshots of tracked items**

Click here  to open Norton Registry Editor.

### **To specify registry keys and INI files to track**

- 1 Choose Settings from the Norton Registry Tracker Options menu.
  - 2 Click the tab for the type of item you want to track. INI files are Text Files, binary files are Data Files.
  - 3 Click Add.
  - 4 Select the specific item you want Norton Registry Tracker to start monitoring.
  - 5 Click Open.
-  When you return to the Norton Registry Editor Tracker Info tab, press F5 to refresh the display.


### **To view snapshots of tracked items**

-  Click the Tracker History tab. This tab displays the Snapshot Log of items that are currently being tracked.
-  Use Norton Registry Tracker to specify items to be tracked.

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[{button ,AL\('Introducing Norton Registry Tracker;About tracked items;About Norton Registry Tracker snapshots;To remove items from tracking;To exclude items from tracking;Excluding items from tracking;About the Tracker History tab',0,'',''\)} Related Topics](#)


### **To connect to or disconnect from another computer's registry**

Click here  to open Norton Registry Editor.


### **To connect to another computer's registry**

**1** From the Registry menu, choose Connect Network Registry.

**2** Type in the name of a remote computer on your network, or click Browse.

 To access registries on remote computers, you must have set up network administrator options when you installed Windows. For more information, see the Windows 95 Resource Kit.

### **To disconnect from another computer's registry**

 From the Registry menu, choose Disconnect Network Registry.

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[{button ,AL\('Introducing Norton Registry Editor',0,''\)} Related Topics](#)

## To print the registry

1 Click here  to open Norton Registry Editor.

1 From the File menu, choose Print.

By default, Norton Registry Editor prints only the branch of the registry currently selected in the Key pane. If you want to print the entire registry, click All in the Print Registry File dialog box.

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[{button ,AL\('Introducing Norton Registry Editor',0,'',''\)}](#) Related Topics

### To import or export registry files

Click [here](#)  to open Norton Registry Editor.

### To import a registry file

- 1 From the File menu, choose Import Registry File.
- 2 Specify the registry (REG) file you want to import.

 **Warning:** The registry is fundamental to the proper functioning of your system. You should only change registry entries if you know what you are doing, and are confident of the results. Improper use of Norton Registry Editor can cause problems with your system that may even result in your having to reinstall Windows. Always make a backup of your registry before you make any changes; from the File menu of Norton Registry Editor, choose Backup Entire Registry.

### To export a registry file

- 1 Click the key to be exported.
- 2 From the File menu, click Export Registry File.
- 3 Specify the name and location of the REG file that should be created.

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[{button ,AL\(' To print the registry;To save or restore a Symantec Registry Archive;About registry files and Symantec Registry Archives;About registry \(REG\) files',0,'',''\)} Related Topics](#)



## To save or restore a Symantec Registry Archive


Click here  to open Norton Registry Editor.


### To save a Symantec Registry Archive

- 1 Click the key to be archived.
- 2 From the File menu, choose Save Symantec Registry Archive.
- 3 Specify the name and location of the archive (SRG) file to be created.

### To restore a Symantec Registry Archive

- 1 Select the key under which you want the archived information to be restored.
- 2 From the File menu, choose Restore Symantec Registry Archive.
- 3 Specify the location and name of the SRG file to be restored.
- 4 Click Open.

 The keys and values from the archive are placed **under the currently selected key**, even if that key is not the original location from which the information was archived. If you wish to restore the information back to its original location, be sure the original key is selected, or use the export and import feature of REG files, rather than restoring from a Symantec Registry Archive.

 **Warning:** The registry is fundamental to the proper functioning of your system. You should only change registry entries if you know what you are doing, and are confident of the results. Improper use of Norton Registry Editor can cause problems with your system that may even result in your having to reinstall Windows. Always make a backup of your registry before you make any changes; from the File menu of Norton Registry Editor, choose Backup Entire Registry.

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[{button ,AL\(' To print the registry;To import or export registry files;To find and replace registry keys or values;About registry files and Symantec Registry Archives',0,'',''\)} Related Topics](#)

### To create, load, or unload INI files

Click here  to open Norton Registry Editor.

#### To create INI files

- 1 From the File menu, choose Create New INI File.
- 2 Specify a name and location for the new INI file.
- 3 Click Save.

 The new file is added to the INI Files branch in Norton Registry Editor.


#### To load INI files

- 1 From the File menu, choose Load INI File.
- 2 Specify the name and location of the INI file you want to open.
- 3 Click Open.

 The file is added to the INI Files branch in Norton Registry Editor.

#### To unload INI files

- 1 From the File menu, click Unload INI File.
- 2 Click the name of the INI file to be unloaded in the Unload INI Files dialog box.

 Not all INI files can be unloaded from Norton Registry Editor. Certain INI files, such as WIN.INI and SYSTEM.INI, are standard under Windows, and are always displayed by Norton Registry Editor.

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[{button ,AL\('About INI files versus the registry',0,'',''\)} Related Topics](#)

### **To create or remove a shortcut to a registry key**

Click here  to open Norton Registry Editor.

### **To create a shortcut to a registry key**

**1** Right-click the key.

**2** Click Make Shortcut.

 Shortcut icons look like folders with a small arrow at their lower left edge.

### **To remove a shortcut to a registry key**

**1** Right-click the shortcut.

**2** Click Remove Shortcut.

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[{button ,AL\('About the Bookmark tab and registry shortcuts',0,'',''\)} Related Topics](#)

### To find and replace registry keys or values

Click here  to open Norton Registry Editor.


#### To find registry keys or values

- 1 From the Edit menu, choose Find.
- 2 Type the text that you want to find in the Find What text box.
- 3 Click the Match Whole Strings Only to find only complete text strings.
- 4 Click the down arrow in the Find Where box to choose where to search.
- 5 Choose other search options from the Advanced tab of the Find dialog box.
- 6 Click Find Now to begin the search.

 The results of the search appear on the Find Results tab. Right-click one of the listed search results and choose Go Here from the context menu to display that item above in the Key pane.

#### To find and replace registry keys or values



- 1 From the Edit menu, choose Replace.
- 2 Type the text to find in the Find What box.
- 3 Type the new text in the Replace With box.
- 4 Click the Find Where box to choose where to search.
- 5 Choose other search options from the Advanced tab of the Find dialog box.
- 6 Click Replace to begin the search.

 The results of the search appear on the Find Results tab. As Norton Registry Editor finds entries that match your criteria, it highlights them in the Key pane (the left pane) and asks you to confirm the replacement. Click Yes to replace the highlighted key or value with the text you have specified; click No if you do not want to replace the highlighted key or value.

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[{button ,AL\('About the Find Results tab and registry searches',0,''\)} Related Topics](#)

### To back up the registry

- 1 Click here  to open Norton Registry Editor.
  - 2 From the File menu, choose Backup Entire Registry.
  - 3 Specify the name and location for the backup registry (REG) file.
  - 4 Click Save.
-  While the registry is being exported, you can continue to work on other things. You can even export individual branches of the registry to different REG files while the entire registry is being backed up.

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[{button ,AL\('To import or export registry files;About registry files and Symantec Registry Archives',0,''\)} Related Topics](#)

## To bookmark registry keys or to remove bookmarks

Click here  to open Norton Registry Editor.

### To bookmark registry keys

- 1 Right-click the key that you want to bookmark.
- 2 Choose Bookmark This from the context menu.

 A red dot on a folder in the Key pane indicates that the corresponding registry key is bookmarked. Top-level registry keys cannot be bookmarked.

### To remove a bookmark

- 1 On the Bookmarks tab, right-click the bookmark you want to remove.
- 2 Choose Delete from the context menu.

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[{button ,AL\('To back up the registry;To bookmark registry keys or to remove bookmarks;To save bookmarks to a file;To load saved bookmarks;To go to a bookmark;About the Bookmark tab and registry shortcuts',0,','\)}](#)

[Related Topics](#)

### **To save bookmarks to a file and load saved bookmarks**

Click here  to open Norton Registry Editor.

#### **To save bookmarks to a file**

- 1 From the Bookmarks menu, click Save Bookmarks.
- 2 Specify a name and location for the bookmark file.
- 3 Click Save.


#### **To load saved bookmarks**

- 1 From the Bookmarks menu, click Load Bookmarks.
- 2 Specify the name and location of the bookmark file to load.
- 3 Click Open.

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[{button ,AL\(' To back up the registry;To load saved bookmarks;To go to a bookmark;To view a list of bookmarks>About the Bookmark tab and registry shortcuts',0,';',''\)}](#) [Related Topics](#)

### To go to a bookmark


- 1 Click here  to open Norton Registry Editor.
- 2 Double-click the bookmark on the Bookmarks tab.

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[{button ,AL\('To back up the registry;To bookmark registry keys or to remove bookmarks;To save bookmarks to a file;To view a list of bookmarks;About the Bookmark tab and registry shortcuts;To unload an INI file from Norton Registry Editor',0,"",""\)}](#) [Related Topics](#)





### To view a list of bookmarks

- 1 Click here  to open Norton Registry Editor.
- 2 Click the Bookmarks tab.
- 3 Click the plus sign next to a listed key to expand it and show the bookmarks defined for it.

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[{button ,AL\(' About the Bookmark tab and registry shortcuts;To bookmark registry keys or to remove bookmarks;To go to a bookmark;To save bookmarks to a file and load saved bookmarks',0,''\)} Related Topics](#)



### To prevent Norton Registry Editor from changing the registry

- 1 Click here  to open Norton Registry Editor.
- 2 Check Read Only on the Registry menu.  
 Clicking Read Only toggles the check mark on and off. A check by the Read Only menu choice indicates that the registry is protected from changes. The status line shows "Read Only" at the lower right.

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[{button ,AL\('Introducing Norton Registry Editor',0,"",""\)}](#) Related Topics

### To undo an action

- 1 Click here  to open Norton Registry Editor.
- 2 From the Edit menu, choose Undo.
-  The edits you performed during the current session of Norton Registry Editor are listed on the Undo tab. When you click Undo, the bottom action on this list is undone.

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[{button ,AL\('About the Undo tab;Introducing Norton Registry Editor',0,'',''\)} Related Topics](#)



Shows the registry key tree (hierarchy) and lists INI files. When you click a registry key in this pane, its values are displayed in the Value pane to the right. When you open the folder for an INI file, the sections it contains are displayed; click on a section folder to display its values in the Value pane to the right.



You can add new INI files to the display by choosing Open INI File from the File menu.

Shows the values of the registry key or INI file section selected in the Key pane to the left.

This column lists the names of the values associated with the registry key or INI file section selected in the Key pane to the left. Click this column heading to reverse the order in which value names are displayed.

This column lists the data stored in the values associated with the registry key or INI file section selected in the Key pane to the left.




Shows the keys you have bookmarked. To go directly to a bookmarked key, right-click it on this tab, then choose Go To Bookmark from the context menu.


- Top-level registry keys, such as HKEY\_LOCAL\_MACHINE, cannot be bookmarked.

Shows the results of searches initiated using Find from the Edit menu.

If the registry key or INI file selected in the Key pane above has been monitored by Norton Registry Tracker, the Tracker Info tab lists the stored snapshots of that item. Each snapshot shows any changes that were made to the registry key or INI file since the previous snapshot was taken.

Pressing the F5 key refreshes the display to show any snapshots taken while this tab was open.

 Use Norton Registry Tracker to specify registry keys and INI files to be tracked. Norton Registry Tracker automatically takes "snapshots" of registry keys and INI files you specify whenever the information they contain changes.

Click here  to start Norton Registry Tracker.

Lists any changes made to the registry, such as adding and deleting keys and values, during the current session. To reverse a change, right-click its Action and choose Undo This from the context menu.

This column lists the types of changes made during the current Norton Registry Editor session. To reverse a change, right-click its Action and choose Undo This from the context menu.

This column describes actual changes made during the current Norton Registry Editor session. To reverse a change, right-click its Action and choose Undo This from the context menu.

Specify the text to search for by typing it in the box provided.

Specify the new text by typing it in the box provided.



Click this and choose from the list of places to search.

Limits search to finding only those keys, value names, or data that contain only the text you entered above. If this box is unchecked, the search finds instances where the text you entered is part of a larger string.

[Click this to search the entire registry.](#)

Click this and specify a registry key in the box below to limit the search to one branch of the registry.

Check this to include registry keys in the search.

Check this to include value names in the search.

Check this to include value data in the search.

Cancels the search currently in progress.



Enter the new value data in the text box provided.

Enter the new value data in the text box provided. Individual strings in the multi-string value should be separated by carriage returns.

Enter the new value data in the text box provided. Flag environment variables in the expanded string by enclosing them in a pair of percent (%) symbols.

Enter the new value data in the text box provided. You may enter the data in either binary, decimal, or hexadecimal format by clicking the appropriate base from the group at the right.

Enter the new value data in the text box provided. Binary data must be entered in hexadecimal notation.

Click this and choose an item from the list to be printed.

Click this to print out the entire registry.



This can be a time-consuming and paper-consuming task.

Click this and enter a registry key to limit printing to one branch of the registry.



Select the print quality or resolution from the drop-down list. Higher-quality choices may take longer to print.

The resolutions or print qualities available depend on your printer's capabilities.

Enter the number of copies you want to print in the box to the right.

Organizes pages when you print multiple copies of a document so that complete copies of the document are printed sequentially. If you do not check this option, your printer will print all necessary copies of page one before it begins printing all copies of page two, and so forth.

Shows your current printer settings and allows you to set printer options.

Presents a list of registries to which you have access and from which you can export REG files.

[Click this to export the entire registry.](#)

Click this and enter a registry key to limit the export to one branch of the registry.

### To open Norton Registry Editor

You can open any of the Norton Utilities programs from Norton Utilities Integrator.

#### To open Norton Registry Editor:

- 1 Double-click Norton Utilities Integrator on the Windows desktop.
- 2 Click Registry Management in the left pane.
- 3 Click Norton Registry Editor in the right pane.



Or click here



to open Norton Registry Editor now.

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[{button ,AL\('Introducing Norton Registry Editor',0,'',''\)} Related Topics](#)



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