

Accessing Secret System Functions With RunDLL

With the information in this article you can:

- Use hidden operating system functions from the command line
- Create batch files which carry out operating system tasks
- Create shortcuts on your desktop to access operating system functions

Hidden away in the Windows operating system are a number of functions which you can use to your advantage, if you know where to find them. It was never Microsoft's intention that these be invoked directly, but, if you know what you are doing, you can use them to speed up your use of Windows. These functions can be run from the command line, so they can be incorporated within batch files and desktop shortcuts to automate common functions. So, for instance, you could create a handy shortcut which restarts your computer, or a batch file which opens your preferred programs and then cascades them on the screen. This article will show you some of the many functions available using RunDLL – some of which are very useful and others which are simply fun to play around with!

Mark Lewin:

"Use these undocumented commands to access important operating system functions quickly and easily. You do not have to be an expert to take advantage of these great time-saving features."

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DLL files contain functions used by other Windows programs.

RunDLL allows you to access these functions.

Using RunDLL to Access Secret Functions

To start with, let's consider what a DLL file is. A DLL, which stands for 'Dynamic Link Library', is a collection of program codes which is never invoked directly. Instead, it consists of a number of special functions which can be used by other programs.

The RunDLL program is designed specifically to run some of those buried utilities inside DLLs. Windows is awash with DLL files but many of them expect arcane memory addresses and other strange parameters, which we will probably never be able to use. Thankfully, however, there are a number of really useful DLL functions we *can* use.

There are two different versions of RunDLL and which you use depends on what kind of DLL files you want to access (either 16-bit or 32-bit). 16-bit DLLs are not available on Windows 2000/XP.

| Windows Version | Name of RunDLL executable | DLL Type |
|-----------------|---------------------------|----------|
| 98/Me | RunDLL.exe | 16-Bit |
| 98/Me/2000/XP | RunDLL32.exe | 32-Bit |



Take care to type the commands exactly as they are shown.

It's just the name of the RunDLL executable which differs between versions of Windows – the syntax and parameters are the same:

```
RunDLL [DLL path][DLLname],[entrypoint]
[optional arguments]
```

```
RunDLL32 [DLL path][DLLname],[entrypoint]
[optional arguments]
```

Example:

```
RunDLL32 Shell32.dll,Control_RunDLL
```

In this example, `Shell32.dll` is the DLL path and the DLL name, and `Control_RunDLL` is the entry point.

It is vital to pay careful attention to the spacing and syntax

of RunDLL commands:

- RunDLL/RunDLL32 should always be followed by a space (the .EXE suffix is optional)
- Parameters should be typed as shown – don't forget the commas and don't be tempted to put a space in between the comma, the 'dllname' and 'entrypoint'.

It is important that commands are typed correctly.

Pay careful attention to the capitalisation after the comma, e.g. Control_RunDLL.

If Windows does not recognise the syntax of your RunDLL command, then nothing will happen when you press the **Enter** key. If your parameters are valid but are being used incorrectly, you may well receive an error message.

RunDLL displays an error when incorrect parameters are used.

You can invoke the RunDLL commands:

- From a DOS (or command) prompt (Start > Programs > Accessories > Command Prompt)
- As part of a Batch file (.BAT file)
- From a desktop shortcut
- From the Start button's 'Run' option.

There are many ways to launch RunDLL commands.

How to launch a RunDLL function

As stated above there are four different ways that you can launch a RunDLL command. The simplest is to launch it via the Run option in the Start menu. To launch a command in this way, follow these steps:

1. Click Start > Run.
2. Type the name of the command that you want to run, for example:
`RunDLL32 Shell32.dll,Control_RunDLL`
3. Click OK.



Access a RunDLL function with a shortcut

Using the Start Menu's Run option is a quick way to launch a RunDLL command, but it means that each time you want to run the command you have to retype it. You can solve this problem by creating a shortcut icon to launch the command,

and then just double-click on the icon when you want to run it. You can create a shortcut icon by following these steps:



1. Right-click on a blank area of the desktop and select **New > Shortcut**.
2. In the Command line box type the command that you want to launch, for example:
`RunDLL32 Shell32.dll,Control_RunDLL`
3. Click **Next**. Enter a name for the shortcut and click **Finish**.



The Functions You can Access with RunDLL

Because of the huge number of functions available, we have classified them according to what they do in the table below. The table also indicates whether the command works in Windows 98/Me, Windows 2000/XP or both.

| Useful Windows functions | | | |
|--|---|-------|---------|
| Function | Command | 98/Me | 2000/XP |
| Exit Windows | RunDLL32 User,ExitWindows | Yes | No |
| Log off current user | RunDLL32 Shell32.dll,SHExitWindowsEx | Yes | No |
| Exit Windows | RunDLL32 Shell32.dll,SHExitWindowsEx 1 | Yes | No |
| Re-boot Windows | RunDLL32 Shell32.dll,SHExitWindowsEx 2 | Yes | No |
| Exit Windows immediately (no saving options or confirmation dialogues) | RunDLL32 Krnl386.exe,ExitKernel | Yes | No |
| Make Windows crash | RunDLL32 User,DisableOEMLayer | Yes | No |

| Function | Command | 98/Me | 2000/XP |
|--|---|-------|---------|
| Start standby mode | RunDLL32 Kernel32.dll,SetSystemPowerState 1,0 | Yes | No |
| Open 'About' page (%1 = text to be entered) | RunDLL32 Shell32.dll,ShellAboutA %1 | Yes | Yes |
| Default beep sound | RunDLL32 User,MessageBeep | Yes | No |
| Install screen saver (%1 = screen saver file name) | RunDLL32 Desk.cpl,InstallScreenSaver %1 | Yes | Yes |
| Tile all windows (one beneath the other) | RunDLL32 User,TileChildWindows | Yes | No |
| Cascade all windows (one behind the other) | RunDLL32 User,CascadeChildWindows | Yes | No |
| Refresh the screen (same as F5 in an Explorer window) | RunDLL32 User,RepaintScreen | Yes | No |
| Re-set Control Panel (reload icons that have gone missing) | RunDLL32 Shell32.dll, Control_FillCache_RunDLL | Yes | Yes |
| Open Explorer window | RunDLL32 Shell,ShellExecute | Yes | No |
| Swap mouse buttons (irreversible without a restart) | RunDLL32 User,SwapMouseButton | Yes | No |
| Disable the mouse (irreversible without a restart) | RunDLL32 Mouse,Disable | Yes | No |
| Disable keyboard (irreversible without a restart) | RunDLL32 Keyboard,Disable | Yes | No |

| Function | Command | 98/Me | 2000/XP |
|---|---|-------|---------|
| Copy disk | RunDLL32 DiskCopy.dll,DiskCopyRunDLL | Yes | Yes |
| Format disk | RunDLL32 Shell32.dll,SHFormatDrive | Yes | Yes |
| About Briefcase | RunDLL32 SyncUI.dll,Briefcase_Intro | Yes | Yes |
| Create new Briefcase | RunDLL32 SyncUI.dll,Briefcase_Create | Yes | Yes |
| Open the 'Open with...' dialogue box (%1 = C:\Path\File name) | RunDLL32 Shell32.dll,OpenAs_RunDLL %1 | Yes | Yes |
| Open the 'Map network drives' dialogue box | RunDLL32 User,WNetConnectDialog | Yes | No |
| Open the 'Unmap network drives' dialogue box | RunDLL32 User,WNetDisConnectDialog | Yes | No |
| Start the Dial-up network connection Wizard (/1 = without welcome page) | RunDLL32 Rnaui.dll,RnaWizard /1 | Yes | No |
| Open email program (Replace %1 with the recipients email address) | RunDLL32 url.dll,MailToProtocolHandler %1 | Yes | No |
| Displays URL %1 | RunDLL32 url.dll,FileProtocolHandler %1 | Yes | Yes |
| Print test page (with option to choose printer) | RunDLL32 MsPrint2.dll,runDLL_PrintTestPage | Yes | No |

| Regional Settings | | | |
|---------------------------------------|---|-------|---------|
| Function | Command | 98/Me | 2000/XP |
| Open the General properties dialogue | RunDLL32 Shell32.dll, Control_RunDLL Intl.cpl,,0 | Yes | Yes |
| Open the Numbers properties dialogue | RunDLL32 Shell32.dll, Control_RunDLL Intl.cpl,,1 | Yes | Yes |
| Open the Currency properties dialogue | RunDLL32 Shell32.dll, Control_RunDLL Intl.cpl,,2 | Yes | Yes |
| Open the Time properties dialogue | RunDLL32 Shell32.dll, Control_RunDLL Intl.cpl,,3 | Yes | Yes |
| Open the Date properties dialogue | RunDLL32 Shell32.dll, Control_RunDLL Intl.cpl,,4 | Yes | Yes |

| Internet Settings (Internet Explorer 6) | | | |
|---|--|-------|---------|
| Function | Command | 98/Me | 2000/XP |
| Open the Network Configuration dialogue | RunDLL32 Shell32.dll, Control_RunDLL Netcpl.cpl | Yes | No |
| Open the General dialogue | RunDLL32 Shell32.dll, Control_RunDLL Inetcpl.cpl,,0 | Yes | Yes |
| Open the Security dialogue | RunDLL32 Shell32.dll, Control_RunDLL Inetcpl.cpl,,1 | Yes | Yes |
| Open the Privacy dialogue | RunDLL32 Shell32.dll, Control_RunDLL Inetcpl.cpl,,2 | Yes | Yes |
| Open the Content dialogue | RunDLL32 Shell32.dll, Control_RunDLL Inetcpl.cpl,,3 | Yes | Yes |
| Open the Connections dialogue | RunDLL32 Shell32.dll, Control_RunDLL Inetcpl.cpl,,4 | Yes | Yes |
| Open the Programs dialogue | RunDLL32 Shell32.dll, Control_RunDLL Inetcpl.cpl,,5 | Yes | Yes |

| Function | Command | 98/Me | 2000/XP |
|-------------------------------------|---|-------|---------|
| Open the Advanced dialogue | RunDLL32 Shell32.dll, Control_RunDLL Inetcpl.cpl,,6 | Yes | Yes |
| Open the Dialling properties window | RunDLL32 Shell32.dll, Control_RunDLL Telephon.cpl | Yes | No |

| Settings | | | |
|---|---|-------|---------|
| Function | Command | 98/Me | 2000/XP |
| Displays Fonts Folder | RunDLL32.exe Shell32.dll, SHHelpShortcuts_RunDLL FontsFolder | Yes | Yes |
| Displays Printer Folder | RunDLL32.exe Shell32.dll, SHHelpShortcuts_RunDLL PrintersFolder | Yes | Yes |
| Starts the Control Panel | RunDLL32 Shell32.dll,Control_RunDLL | Yes | Yes |
| Open the Date/Time dialogue | RunDLL32 Shell32.dll,Control_RunDLL Timedate.cpl,@0,0 | Yes | Yes |
| Open the Passwords/User Profiles dialogue | RunDLL32 Shell32.dll,Control_RunDLL Password.cpl,,0 | Yes | No |
| Open the System Properties dialogue | RunDLL32 Shell32.dll,Control_RunDLL Sysdm.cpl,@0,0 | Yes | Yes |
| Open the Power Management dialogue | RunDLL32 Shell32.dll,Control_RunDLL Powercfg.cpl,@0,0 | Yes | Yes |

| Hardware | | | |
|---------------------|---|-------|---------|
| Function | Command | 98/Me | 2000/XP |
| Mouse Properties | RunDLL32 Shell32.dll,Control_RunDLL Main.cpl,@0,0 | Yes | Yes |
| Keyboard Properties | RunDLL32 Shell32.dll,Control_RunDLL Main.cpl,@1,0 | Yes | Yes |

| Control Panel | | | |
|-------------------------------|---|-------|---------|
| Function | Command | 98/Me | 2000/XP |
| Modem Properties | RunDLL32 Shell32.dll,Control_RunDLL Modem.cpl,@0 | Yes | Yes |
| Add Printer Wizard | RunDLL32 Shell32.dll, SHHelpShortcuts_RunDLL AddPrinter | Yes | Yes |
| Hardware Profiles | RunDLL32 Shell32.dll, Control_RunDLL Sysdm.cpl,@0,2 | Yes | Yes |
| Add New Hardware Assistant | RunDLL32 Shell32.dll, Control_RunDLL Sysdm.cpl,@1,0 | Yes | No |

| Software | | | |
|----------------------------------|---|-------|---------|
| Function | Command | 98/Me | 2000/XP |
| Add/Remove Windows Components | RunDLL32 Shell32.dll, Control_RunDLL Appwiz.cpl,,2 | Yes | Yes |
| Add/ Remove Programs | RunDLL32 Shell32.dll, Control_RunDLL Appwiz.cpl,,1 | Yes | Yes |
| Create Startup Disk | RunDLL32 Shell32.dll, Control_RunDLL Appwiz.cpl,,3 | Yes | No |



There are more RunDLLs than we can list here – here's how to find them!



Finding Other Hidden RunDLLs

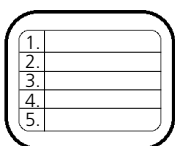
If the above list hasn't sated your curiosity for the hidden wonders of the Windows operating system, then you will be pleased to learn that there are many, many more DLL functions than we can list in this article.

To find the others, you need to look at the contents of the registry:

1. Go to **Start > Run**.
2. Type `regedit` and press **Enter**.
3. Within the Registry Editor, select the **Edit > Find** menu option.
4. Type `RunDLL` into the **Find what:** dialogue box and click **Find Next**.
5. Use **F3** to move from entry to entry, taking note of any useful or interesting RunDLL commands and their parameters as you go.

Once you have found one, copy and paste it into your favourite search engine and doubtless you will find sites telling you which parameters this particular .DLL takes and what it does.

In fact, the web is a very good place to search for new RunDLLs. This site lists lots of useful RunDLLs: <http://www.robvanderwoude.com/index.html>



Playing with RunDLLs will give you a real insight into the workings of the Windows operating system. It's fun to look 'under the bonnet' and every now and then you might find something which you can use in a batch file or desktop shortcut to make you more productive and efficient!