

# What is a DLL file, and how does this file work?

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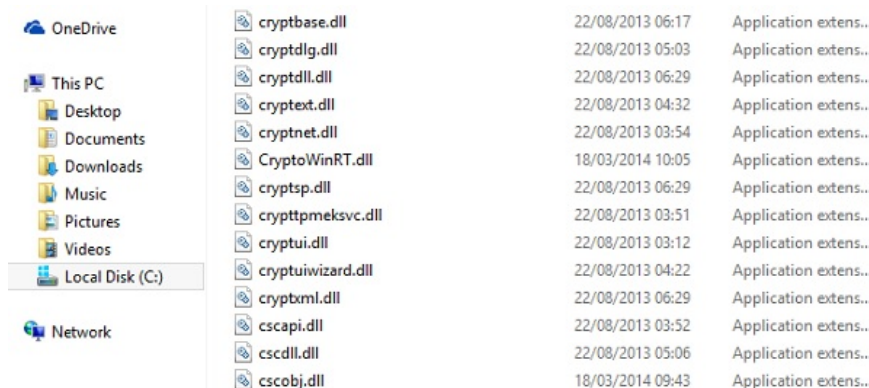
```

ListDlls v3.1 - List loaded DLLs
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Sysinternals - www.sysinternals.com

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taskhost.exe pid: 3276
Command line: "taskhost.exe"

Base      Size      Path
0x00270000 0xf000  C:\Windows\system32\taskhost.exe
0x77740000 0x3e000  C:\Windows\SYSTEM32\ntd11.dll
0x778d0000 0x44000  C:\Windows\system32\kernel32.dll
0x75970000 0x4b000  C:\Windows\system32\KERNELBASE.dll
0x76bf0000 0xac000  C:\Windows\system32\msocrt.dll
0x76ed0000 0x15c000  C:\Windows\system32\ole32.dll
0x76d50000 0x4e000  C:\Windows\system32\GDI32.dll
0x76da0000 0xc9000  C:\Windows\system32\USER32.dll
0x76d40000 0xe000  C:\Windows\system32\LPK.dll
0x770b0000 0x9d000  C:\Windows\system32\USP10.dll
0x771b0000 0xa2000  C:\Windows\system32\RPCRT4.dll
0x75ee0000 0x8f000  C:\Windows\system32\OLEAUT32.dll
0x77190000 0x1f000  C:\Windows\system32\IMM32.DLL
0x776b0000 0xcc000  C:\Windows\system32\MSCVF.dll
    
```

## 1. What is a DLL file?



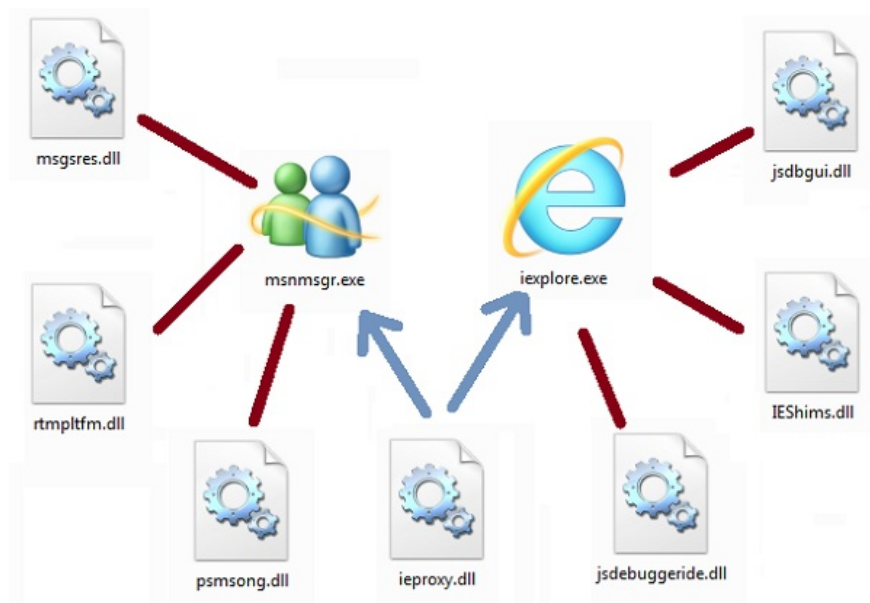
DLL stands for Dynamic Link Library. DLL file contains instructions that other programs can call to do a certain task.

Basically, DLLs are the same as EXEs, but these files are named differently during the linking process.

DLL files are just tools developed to use shared code and data, which allow to upgrade functions without having to re-link or re-compile applications.

In other words, DLL files contain code and data used by many different applications. Many different programs can share the same dll file. The most common DLL file problem is the hal.dll file.

## 2. How does the DLL file work?



Imagine you have 2 separate files, "example.exe" - a common executable file, and "library.dll" - the DLL file is used to execute.

How are these files connected by the operating system when running the file "example.exe"?

When the "example.exe" file runs, the operating system will download the file, find the data table inside the file and provide the information (not with text) "This program uses the following list of functions from the DLL file library.dll "(this program uses the list of functions below from the library.dll DLL file".

That technique is called "imports" or "imported functions" from the "library.dll" DLL in the "example.exe" program.

Then, the loader code will look for "library.dll", and if it finds "library.dll" then the files will be loaded.

Inside this DLL file contains another list called "export list", this list connects specific addresses for each function inside the DLL file. From this point, when "example.exe" needs to call a function from "library.dll", "example.exe" just uses that address.

## 3. How to retrieve and store DLL files?



When a software lacks a DLL file, the first way that users think about it is to search the file online and save it to the hard drive.

If you want the software to work, you must store the DLL in the software's directory.

As explained above, many software need a DLL file to work. Therefore the best way is to store the DLL file where all the software can find the file. Usually DLL files are stored in the "**system 32**" folder (**C: WindowsSystem32**).

If using a 64-bit Windows operating system, you should copy the DLL file to "**C: WindowsSysWOW64**".

**Note** : Make a copy of the DLL file on both 32-bit Windows and 64-bit Windows under Admin.

However, this method is not recommended, the simple reason is that this method can cause some risks for users, such as obsolete DLLs, virus infected DLLs, .

### **Refer to some of the following articles:**

1. What is Pagefile.sys? Can pagefile.sys be deleted?
1. Instructions for changing Pagefile.sys size and location on Windows
1. How to reduce the size of Outlook data files (.PST and .OST)

### **Good luck!**

You finished reading the article "**What is a DLL file, and how does this file work?**" edited by the [TipsMake](#) team. We hope this article has provided you with many useful tech tips and tricks. You can search for similar articles on tips and guides. Thank you for reading and for following us regularly.