# Treasures in the Windows System32 Directory

THERE'S A DIRECTORY ON ALL WINDOWS COMPUTERS THAT CONTAINS A LOT OF USEFUL UTILITIES. THEY MAY BE HIDDEN, BUT THEY'RE EASY TO FIND.

System32 has been a part of Windows for many years, starting with Windows 2000. The directory, which is inside the Windows directory, contains more than 4700 files and folders. About 600 files have EXE extensions and some of them can be quite helpful.
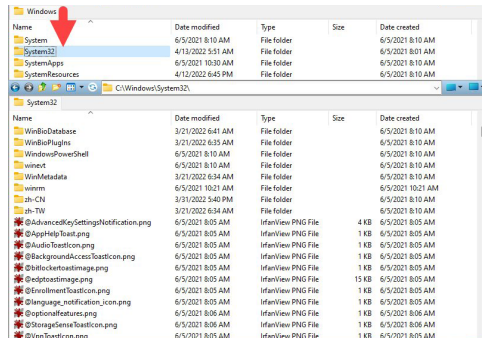
CHKDSK.EXE, used to analyze a disk for errors, and other familiar utilities are there. So is DIALER.EXE, the antique component that can dial a phone number if a phone line is connected to the computer. FONDUE.EXE won't cook a tasty meal for you, though. It's the Windows Features on Demand User Experience component.

Starting with the Basics

LET'S CONSIDER SOME OF THE MOST USEFUL COMPONENTS, PERHAPS FUNCTIONS YOU'VE USED TO RESOLVE A PBOELM OR ANSWER A QUESTION, BUT NEVER KNEW WHERE THEY WERE LOCATED.

PSR.EXE, the Problem Steps Recorder lets users share information when something goes wrong with the computer. An application such as Aero-Admin can share the screen with a helper, but PSR is still useful because it records screen shots for each action taken and bundles everything into a single compressed file that can be shared with a technician.

Many of the typefaces included with or added to Windows have more than the standard 255 ASCII characters. CHARMAP.EXE displays all available characters so they can be inserted into a document.
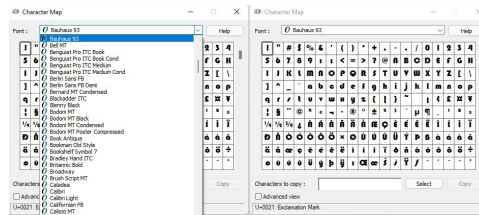
MDSCHED.EXE, a memory diagnostic, can locate problems that cause a computer to crash with a blue screen, hang, freeze, or reboot without warning. Once scheduled, the memory diagnostic will run the next time you start the computer and before Windows launches.

When you have two files that you need to compare to see if they're identical or, if not, what differences exist, use FC.EXE. This is a utility that must be run from the command line, and it has a lot of switches that you can see by typing `fc/?` at the command prompt.

DXDIAG.EXE collects information about DirectX devices to troubleshoot audio and video problems. DirectX was added in 1996 to provide low-level access to the computer's video and audio hardware and is primarily used by games.
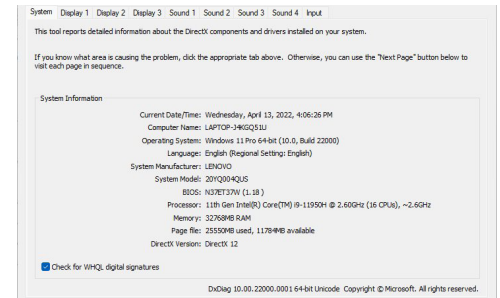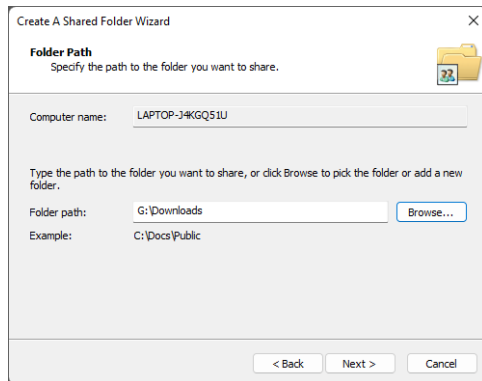

MSINFO32.EXE gathers information about the computer and displays a comprehensive summary of the hardware, system components, and software environment. This information is helpful in diagnosing problems. To share the results with a technician, export the information to an NFO or TXT file.

SIGVERIF.EXE, the File Signature Verification application, checks the validity of device drivers. The utility was added to Windows 7. It examines all device drivers and identifies ones that have no valid signatures. If you suspect a problem with drivers that have been installed by malware, this utility is a good starting point.

Sharing a Directory

Iꜰ ʏᴏᴜ ʜᴀᴠᴇ ᴀ ᴘʀᴏʙʟᴇᴍ sʜᴀʀɪɴɢ ᴀ ᴅʀɪᴠᴇ ᴏʀ ᴀ ꜰᴏʟᴅᴇʀ ᴏɴ ʏᴏᴜʀ ɴᴇᴛᴡᴏʀᴋ, ᴜsᴇ Sʜʀᴘᴜʙᴡ.ᴇxᴇ. Wʜᴇɴ sᴇᴛᴛɪɴɢ ᴜᴘ ᴀ sʜᴀʀᴇᴅ ᴅʀɪᴠᴇ ᴏʀ ꜰᴏʟᴅᴇʀ, ɪᴛ's ɴᴏᴛ ᴜɴᴄᴏᴍᴍᴏɴ ᴛᴏ ɢᴇᴛ sᴏᴍᴇ sᴇᴛᴛɪɴɢs ᴡʀᴏɴɢ.

The Sʜʀᴘᴜʙᴡ.ᴇxᴇ wizard will even take care of firewall settings, which is the most common cause of failures. The user needs to provide the location of the directory to share. If the directory specified doesn't yet exist, the utility will create it.
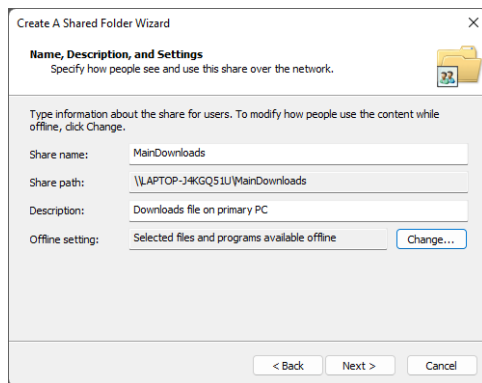
After filling in the name of the share and providing a description, the user specifies what permissions users will have: Read-only for everyone, full access for administrators and read-only access (or no access) for others, or customized permissions.

At the end of the process, you'll have a share path and this is what other users on the network will need to gain access to the directory.

To access the share path, users will must enter a user name and a password that has been defined on the computer where the shared directory is located.

Use Caution When Exploring System32

Avoid wandering through the System32 directory and randomly clicking executable files to see what they do. This would be like strolling through a big-box store, opening random containers, and drinking the contents. You might enjoy a tasty ale or apple juice, of course, but you also might find that you have consumed toilet bowl cleaner or furniture polish.

Every application in the System32 directory is fine when used properly, but the consequences may be severe if one is misused. Also, never rename, delete, or edit any of the files in the System32 directory.

To find out what an ᴇxᴇ file does, use Google or DuckDuckGo to ask what is "Xxx.ᴇxᴇ?" Let's say you've seen Aʟɢ.ᴇxᴇ and wonder what it is. Might it be an algebra tutor? Well, no. Aʟɢ.ᴇxᴇ is the Application Layer Gateway service, a Windows component. It is required if you use a third-party firewall or Internet Connection Sharing (ICS) to connect to the internet. This is not an application you'll want to run just to see what it does. It's unlikely to cause any harm, but it certainly won't be helpful.

An even better resource is *Microsoft's documentation site*, where you can search for the System32 applications. Not all applications are documented there, though, so a search engine is sometimes the only resource.

Some of the files, particularly the older ones, have no graphical user interface and must be run from the command line. Take Cʟɪᴘ.ᴇxᴇ for example: It redirects the command output from the command line to the Windows clipboard. It can be used to copy data directly into any application that can receive text from the clipboard. You can also paste the text output into other programs.

The name of a command doesn't always accurately describe what it does. In part this is because many of the older applications comply with the DOS 8.3 file naming convention where the name of the file is no longer than eight characters and the extension is three characters.

Look for the gems, but explore cautiously. Ω
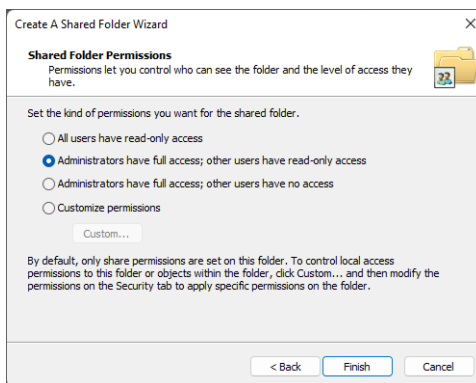
Clicking *Remember my credentials* will save the password so that future access will be automatic. It's also wise for the user to add the shared location to the Favorites section of the Windows File Explorer to avoid the need to type the long share path each time.
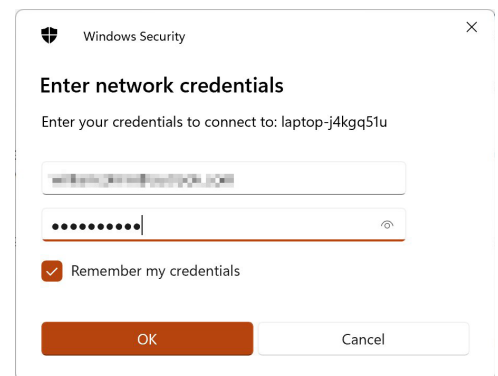
The Windows System32 directory houses lots of useful functions. To avoid problems, take care not to use any of the applications unless you know what they will do. Ω