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Ericuse165 asked the Windows forum which is better: the 32- or 64-bit version of Windows 7. You can run today's versions of Windows on 32-bit processors—a standard that's been around for about 25 years—and on newer, backward-compatible 64-bit processors. Of course, everything has to have an acronym in this industry, so the Windows-compatible 64-bit standard is also known as x64. That's fine, but the 32-bit standard is abbreviated as x86. If you don't understand the history, that's just plain confusing. Because x64 processors are backwards-compatible, you can install and run 32-bit as well as 64bit versions of Windows onto them. Of course, if you bought an x64 computer from a major manufacturer, it almost certainly came with 64-bit Windows pre-installed. You cannot install or run 64-bit Windows on a 32-bit PC. The 64-bit version of Windows has certain advantages. While the 32-bit version is limited to 4GB of RAM—and can't really make use of all that—the 64-bit version can address up to 8TB. While you won't be able to actually install that much RAM (or afford it) for a long time to come, you can buy a 64-bit computer today with 12GB installed. Speaking of things that aren't quite there yet, 64-bit applications should run faster than their 32-bit equivalents. But as I write this, very few native 64-bit applications exist, and they're not necessarily improvements (most 32-bit applications run just fine in Windows x64). In fact, although Microsoft Office 2010 comes with 32- and 64-bit versions on the same DVD, Microsoft recommends you install only the 32-bit version. And, of course, 64-bit Windows has its disadvantages: While most 32-bit applications have no problem in a 64-bit environment, utilities—which tend to work close to the OS's core—are seldom as versatile. For instance, a program that inserts itself into Windows Explorer's context menu has to be rewritten to work with the x64 version of Explorer. More and more utilities today are getting rewritten to work properly in Windows x64. Another problem: Early, 16-bit Windows (and DOS) programs, written to be compatible with pre-Windows 95 Microsoft operating systems, will not work at all in the 64-bit environment. (They will work in a 32-bit version of Windows running on 64-bit hardware.) That's significant from a historical point of view—for the first time, we have Windows operating systems that won't run the original, IBM-PC version of VisiCalc. But for most people, that shouldn't be an issue. Read the original forum discussion. Add your comments to this article below. If you have other tech questions, email them to me at answer@pcworld.com, or post them to a community of helpful folks on the PCW Answer Line forum. Got a copy of Windows 7 you're looking to bend to your will? Then you'll want a copy of Windows 7 Manager, which lets you tweak, customize, master and improve just about every aspect of Windows 7. Whether you're looking to tweak security, improve optimization, clean your system, master your network or more, you'll find something here. Though it covers a lot of territory, everything is laid out cleanly in Windows 7 Manager. Click what you want to improve, such as Security, Network, Optimizer, and so on, and you'll come to a screen full of options. In some cases you won't need to know anything about the innards of Windows 7, because sets of wizards guide you through the task. In other instances, you'll need to have some technical background, because you have to make choices among check boxes—for example, if you want to accelerate your network connection, you'll need to understand terms and technologies such as Maximum Transmission Unit (TMU) size, TCP/IP Timeout Life (TTL), and "Enable SackOpts." The amount of control Windows 7 Manager gives you is extraordinary. Want to change the mouse hover time before a pop-up displays? You can do that. Want to manage what programs run at startup? You can do that as well. You can also repair hardware and software problems, optimize your broadband connection and more. The same developer makes a similar program for Windows Vista, called Windows Vista Manager, which looks and works very much like Windows 7 Manager. Anyone who used Windows Vista Manager will very easily make the switch to Windows 7 Manager; the interface and functions are very similar. The program doesn't come cheap, though. You'll most likely only want to pay for Windows 7 Manager if you want to do a great deal of customization. Note: This software comes in 32-bit and 64-bit versions. This is the 64-bit version, which is for 64-bit PCs running a 64-bit OS. If your PC is running a different supported OS, please download the 32-bit version instead. —Preston Gralla Microsoft still offers both 32-bit and 64-bit versions of Windows 10. But, whether you're installing Windows 10 or Windows 7, you should almost certainly skip the 32-bit version and get the 64-bit version instead. The 64-bit version of Windows is also known as the "x64" version of Windows, while the 32-bit version is also known as the "x86" version. Your PC is Almost Certainly 64-bit 64-bit PCs have been mainstream for a long time. Intel's first big 64-bit consumer CPU was the Core 2 Duo, which was released in 2006. AMD released the Athlon 64 in 2003. If you have a PC you purchased or built in the last decade, it's almost certainly a 64-bit PC. There are some exceptions, of course. Early versions of the very underpowered Intel Atom CPU line were just 32-bit CPUs. But those were so slow when they were released that it's very unlikely many people are still using those discount netbooks and tablets today. Computers with 64-bit CPUs can run 32-bit operating systems, but there's really no reason for them to do so anymore. Even on a 64-bit operating system, you can still run 32-bit applications just fine. Why You Should Install the 64-bit Edition 32-bit versions of Windows are limited to 4 GB of RAM, which is a small amount these days when even budget PCs these days usually have 8 GB or more. If you want to actually use more than 4 GB of RAM—and you probably do—you'll need a 64-bit version of Windows. RELATED: How To Upgrade Or Replace Your PC's RAM In addition, 32-bit programs (even if they're running on a 64-bit Windows operating system) can only access 2 GB of RAM each. Modern demanding games and professional tools can easily use more than 2 GB of RAM. Given that limitation, it's no surprise that many applications now require a 64-bit operating system. For example, if you want to play the PC version of Grand Theft Auto V and many other PC games released in the last few years, you'll need a 64-bit version of Windows. ZBrush, a 3D modelling tool, discontinued its 32-bit version. Even NVIDIA has stopped working on its 32-bit graphics drivers, so you'll need a 64-bit operating system to get new graphics drivers for NVIDIA hardware. 64-bit versions also have a number of useful security features that 32-bit versions of Windows just don't. For example, an expanded address space allows Address Space Layout Randomization (ASLR) to better protect against attacks on programs. Drivers must be signed unless they're installed in a special boot mode, Kernel Patch Protection prevents applications from patching the Windows kernel in memory on 64-bit versions of Windows, and Data Execution Prevention (DEP) has more restrictive settings on the 64-bit edition. Why Would You Want 32-bit Windows? There are some valid reasons why you might want to run a 32-bit version of Windows. If you're using a very old computer with a 32-bit processor, you don't have a choice. Some manufacturers may only offer 32-bit drivers for particularly ancient hardware devices, and you'd need a 32-bit version of Windows to run those. The 32-bit version of Windows also allows you to run 16-bit software written for Windows 3.1, which is a feature not found in 64-bit Windows. However, you can always run 16-bit software in DOSBox. Some older programs may also only run on 32-bit versions of Windows if they used dangerous techniques, such as kernel patching, that have now been blocked on 64-bit versions of Windows for security reasons. 32-bit versions of Windows should only be used for legacy compatibility purposes. That's all a 32-bit operating system is really necessary for: old CPUs, ancient hardware devices, Windows 3.1 applications, and other applications that need updating to run on a modern version of Windows. How to Check Whether You're Using 64-bit or 32-bit Windows If you're not sure whether your computer has a 64-bit version of Windows—or even a 64-bit CPU—you can check from within Windows. On Windows 10, head to Settings > System > About. Look to the right of the "System type" entry. If you see "64-bit operating system, x64-based processor," your computer is running a 64-bit operating system. If you see "32-bit operating system, x64-based processor," your computer is running a 32-bit operating system but is capable of running a 64-bit operating system. RELATED: How Do I Know if I'm Running 32-bit or 64-bit Windows? On Windows 7, head to Control Panel > System and Security > System. Look at "System type" to see if you're running a 32-bit or 64-bit operating system. Windows 7's Control Panel doesn't show whether your CPU is 64-bit capable, so you'll want to perform an online search for the processor name—displayed on the System screen—to find out whether it's a 64-bit CPU if you're currently running 32-bit Windows. How to Upgrade to 64-bit Windows If you're using a 32-bit version of Windows on a 64-bit capable processor, there's good and bad news. The good news is that you can upgrade to a 64-bit operating system for free. Your current Windows license can be used to install either a 64-bit or 32-bit version of Windows. The bad news is that you'll need to reinstall your Windows operating system to make the change. RELATED: How to Switch From 32-bit Windows 10 to 64-bit Windows 10 On Windows 10, you can upgrade to 64-bit by getting 64-bit Windows installation media and performing a clean install. On Windows 7, the process is similar—just download 64-bit Windows installation media from Microsoft. Microsoft Should Make 32-bit Windows Harder to Find We think Microsoft should make the 32-bit version of Windows harder to access. Some people might need it, but average Windows users shouldn't be able to accidentally install a version of Windows 10 (or even Windows 7) that has so many limitations with modern hardware and software. Backblaze, for example, has noted that many of its customers who use a 32-bit version of Windows seem to have installed it accidentally without realizing the downsides. So, when installing Windows in the future, be sure to go for the 64-bit version. 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