Hardware and software issues pdf

Your pc seems to be out of order — it's slow, programs are crashing, or Windows is scanning blue. Is your computer's hardware failing or having problems with software that you can fix yourself? That can be a little tricky to figure out. Hardware problems and software problems can cause the same symptoms — for example, common blue death screens can be caused by software or hardware problems. The computer is Slow We've all heard stories – someone's computer slows down with time because it installs too much software that runs at startup or is infected with malware. A person assumes that their computer is slowing down because it's old, so they replace it. But they're wrong. If your computer is slowing down, it has software problems that can be fixed. Hardware problems should not cause your computer to slow down. There are some rare exceptions to this – the CPU may be overheading and locking itself, running slower to keep it colder – but most of the slowness is due to software problems. Blue Screens RELATED: Everything you need to know about the blue death screen Modern versions of Windows are much more stable than older versions of Windows. If used with reliable hardware with good programming drivers, a typical Windows PC should not have a blue screen at all. If you're facing frequent blue death screens, there's a chance your computer's hardware may fail. Blue screens could also be caused by poor firmware drivers. If you've installed or upgraded hardware drivers and blue screens, try uninstalling drivers or restoring your system — there might be something wrong with the drivers. If you haven't done anything with drivers recently and blue screens start, there's a very good chance you're having a hardware problem. YOUR COMPUTER WON'T START RELATED: What to do when Windows doesn't start If your computer doesn't start, you might have a software problem or a hardware problem. Is Windows trying to start and not working partially through the startup process or does your computer no longer recognize your hard disk or not work at all? For more information, see our guide to troubleshooting startup problems. When the hardware starts to give up... Here are some common components that can fail and problems that can be caused by their errors: hard disk: If your hard disk starts to fail, files on your hard disk can become corrupted. Long delays may occur when you try to access files or save files to your hard disk. Windows can stop running completely. CPU: A failed CPU may cause the computer to start. If the CPU is overloaded, your computer may be on the blue screen when you load it— for example, when you're playing a challenging game or video encoding. RAM: Apps write data into your RAM and use it for short-term storage. If your RAM starts to cancel, the app can data into part of the RAM, then read it back later and get the wrong value. This may result in applications crashes, blue screens, and a corrupted file. Video card: Video card problems can cause graphic errors while displaying 3D content, or even just while you're displaying your desktop. If your video card overloads, it can crash the video driver or freeze your computer during load— for example, when playing complex 3D games. Fans: If any of the fans fail on your computer, the components may warm up and you can see the above cpu or video card problems. Your computer may also suddenly turn off so that it doesn't warm forward and get damaged. Motherboard: Problems with the motherboard can be extremely difficult to diagnose. You may see occasional blue screens or similar problems. Power supply: A faulty power supply is also difficult to diagnose – it can cause too much energy to the component, give birth and cause damage. If the power supply dies completely, the computer won't turn on, and when you press the power button, nothing will happen. Other common problems — such as a computer that slows down — may be software problems. It's also possible that software problems can cause many of the above symptoms — malware that's going deep into your Windows core, for example, can cause your PC to appear on the blue screen. The only way to know for sure we tried to give you some idea of the difference between common software problems and hardware problems with the above examples. But it is often difficult to know for sure, and troubleshooting is usually a trial process and error. This is especially true if you have a broken problem, such as a screen on your computer's blue screen a few times a week. Try scanning your computer for malware and starting System Restore to restore your computer's system software back to its previous working state, but it's not a guaranteed way to fix software problems. The best way to determine if the problem you have is software or hardware is to bite the bullet and restore your computer's software back to its default state. This means reinstalling Windows or using Refresh or Reset in Windows 8. Check to see if the problem persists when you restore your operating system to its default state. If you still see the same problem— for example, if your PC is on a blue screen and continues with a blue screen after you reinstall Windows— you know you have a hardware problem and you need to fix or replace your PC. If your computer crashes or freezes during Windows reinstallment, you definitely have a hardware problem. This isn't a perfect method either — for example, you can reinstall Windows and then install the same hardware drivers. If hardware drivers are poorly programmed, blue screens can continue. RELATED: Beginner Geek: How to Reinstall Windows on your PC Blue Death Screens aren't as common in Windows these days— if they often encounter them, you're having hardware problems. Most blue screen displays hardware problems. On the other hand, there are other common complaints, such as my computer has slowed down to easily fix problems with the software. When in doubt, create files and reinstall Windows. Image Credit: Anders Sandberg on Flickr, comedy_nose on Flickr When you're trying to solve a computer problem, you should first try to determine if there's a problem with your hardware or software. How you define it depends on the problem you're experiencing, but often involves excluding one or the other through testing. No matter how you get that answer, there's often a lot of confusion when it comes to hardware versus software. It becomes even more confusing when the firmware is inflamed into the mix. Andrew Brookes/Getty Images Here's more on how each of these wares differs, something you need to know to troubleshoot any of your tech devices: Hardware is the right thing to see with your eyes and touch your fingers. And because it's a physical thing, you can even feel it when she dies, or you can hear it physically decaying in the last few days. Because hardware is part of the real world, it all comes down to it over time. Being a physical thing can also be broken, drowned, warmed up and exposed to elements. Here are some examples of hardware: SmartphoneTabletLaptopDesktop computerPrinterFlash driveRouter While the smartphone is a piece of hardware, it also contains software and firmware (more on those below). Machine devices are also made up of other machine devices; for example, a tablet or computer contains individual components such as motherboard, processor, memory bars, and more. Although it's not always that easy, using one of your five senses – except taste; please don't taste any part of your computer system – it's often your best way to tell if your hardware is the cause of the problem. What's he smoking? Is it cracked? A piece missing? If so, the hardware is probably the source of the problem. As sensitive as we've made hardware, that in what you've just read, one great thing about hardware is that it's usually easy to replace. The software you lose may be interchangeable, but most of the hardware is stupid - replacing is often as valuable as the original. See this list of computer hardware devices for more information about some common parts of your computer system and what they're used for. The software is all about the computer, which is not hardware. Here are some examples of software: Since software is information and not a physical thing, there are few obstacles to it. For example, one physical hard drive can take two kilograms of materials to create, meaning 3,000 hard drives make 6,000 lbs of materials. One program, on the other hand, can be duplicated 3,000 or 300,000 times, through so many devices, but in fact there are no more physical resources. The software is interacting with you, the hardware that you and hardware that exists elsewhere. Photo sharing software, for example, on your computer or phone works with you and the photo hardware and then communicates with servers and other devices on the Internet to display this photo on your friend's devices. The software is also extremely customizable, allowing constant updating and modification. While you certainly wouldn't expect your wireless router to grow another antenna or smartphone to get a bigger screen than it's charged on the night closet, expect your software to regularly gain features and grow in size as it's updated. Another great thing about software is its potential to last indefinitely. As long as the software is copied to newer hardware before the current device fails, only the information could exist until the universe does. It is just as amazing that the software can be destroyed. If there are no copies and the software is deleted, it is gone forever. You can't run into a store and pick up refunds for information that never existed anywhere else. Troubleshooting software is usually more complicated than working with your hardware. Hardware errors are often easy — something is corrupt or not and may need to be replaced. The steps needed to solve the software problem depend on what information you received about the error, which other software is running, on which hardware the software is running software, etc. Most software problems start with an error message or another character. Here you need to start the troubleshooting process. Find an error or symptom online and find a good troubleshooting guide to guide you through the problem. Although not as common as hardware or software, the firmware is everywhere — on your smartphone, on the computer's control panel, even on the TV remote control. Firmware is just a special type of software that serves a very narrow purpose for a piece of hardware. While you can regularly install and uninstall software on your computer or smartphone, you can update the firmware on your device rarely, and you would probably do so only if requested by the manufacturer, likely to fix the problem. Wetware refers to life – you, me, dogs, cats, cows, trees – and is usually only used in connection with the technology of connected warehouses we spoke of as hardware and software. This term wetware is still most commonly used in science fiction, but it is becoming an increasingly popular phrase, especially as the technology of the interface of human machines progresses. Progresses.