

What is troubleshooting?

Troubleshooting is a systematic approach to problem-solving that is often used to find and correct issues with complex machines, electronics, computers and software systems. The first step in most troubleshooting methods is gathering information on the issue, such as an undesired behavior or a lack of expected functionality.

How does troubleshooting work?

Computer problems that troubleshooters address can show up in any number of places. Examples of places troubleshooters find themselves working include the following:

- operating systems
- applications
- central processing units or CPUs
- firewalls
- hard drives
- solid-state drives
- servers

General tips to keep in mind

There are many different things that could cause a problem with your computer.

- Write down your steps: Once you start troubleshooting, you may want to write down each step you take. This way, you'll be able to remember exactly what you've done and can avoid repeating the same mistakes
- Take notes about error messages: If your computer gives you an error message, be sure to write down as much information as possible. You may be able to use this information later to find out if other people are having the same error.
- Always check the cables: If you're having trouble with a specific piece of computer hardware, such as your monitor or keyboard, an easy first step is to check all related cables to make sure they're properly connected cables
- Restart the computer: When all else fails, restarting the computer is a good thing to try. This can solve a lot of basic issues you may experience with your computer.

Why troubleshooting Important :

- Keeps computers running smoothly.
- Saves time and money by avoiding repairs.
- Helps build skills you can use in tech jobs.

Simple solutions to common problems

Problem: Power button will not start computer

Solution 1: If your computer does not start, begin by checking the power cord to confirm that it is plugged securely into the back of the computer case and the power outlet.

Solution 2: If it is plugged into an outlet, make sure it is a working outlet. To check your outlet, you can plug in another electrical device, such as a lamp.

Solution 3: If you are using a laptop, the battery may not be charged. Plug the AC adapter into the wall, then try to turn on the laptop. If it still doesn't start up, you may need to wait a few minutes and try again.

Problem: An application is running slowly

- Solution 1: Close and reopen the application.
- Solution 2: Update the application. To do this, click the Help menu and look for an option to check for Updates. If you don't find this option, another idea is to run an online search for application updates.

Problem: An application is frozen

- Solution 1: Force quit the application. On a PC, you can press (and hold) Ctrl+Alt+Delete (the Control, Alt, and Delete keys) on your keyboard to open the Task Manager. On a Mac, press and hold Command+Option+Esc. You can then select the unresponsive application and click End task (or Force Quit on a Mac) to close it.
- Solution 2: Restart the computer. If you are unable to force quit an application, restarting your computer will close all open apps.

Problem: All programs on the computer run slowly

- Solution 1: Run a virus scanner. You may have malware running in the background that is slowing things down.
- Solution 2: Your computer may be running out of hard drive space. Try deleting any files or programs you don't need.
- Solution 3: If you're using a PC, you can run Disk Defragmenter.

Problem: The computer is frozen

- Solution 1 (Windows only): Restart Windows Explorer. To do this, press and hold Ctrl+Alt+Delete on your keyboard to open the Task Manager. Next, locate and select Windows Explorer from the Processes tab and click Restart. You may need to click More Details at the bottom of the window to see the Processes tab.
- Solution 2: Press and hold the Power button. The Power button is usually located on the front or side of the computer, typically indicated by the power symbol. Press and hold the Power button for 5 to 10 seconds to force the computer to shut down.
- Solution 3: If the computer still won't shut down, you can unplug the power cable from the electrical outlet. If you're using a laptop, you may be able to remove the battery to force the computer to turn off. Note: This solution should be your last resort after trying the other suggestions above.

Problem: The mouse or keyboard has stopped working

- Solution 1: If you're using a wired mouse or keyboard, make sure it's correctly plugged into the computer.
- Solution 2: If you're using a wireless mouse or keyboard, make sure it's turned on and that its batteries are charged.

Problem: The sound isn't working

- Solution 1: Check the volume level. Click the audio button in the top- right or bottom-right corner of the screen to make sure the sound is turned on and that the volume is up.
- Solution 2: Check the audio player controls. Many audio and video players will have their own separate audio controls. Make sure the sound is turned on and that the volume is turned up in the player.
- Solution 3: Check the cables. Make sure external speakers are plugged in, turned on, and connected to the correct audio port or a USB port. If your computer has color-coded ports, the audio output port will usually be green.
- Solution 4: Connect headphones to the computer to find out if you can hear sound through the headphones.

Problem: The screen is blank

- Solution 1: The computer may be in Sleep mode. Click the mouse or press any key on the keyboard to wake it.
- Solution 2: Make sure the monitor is plugged in and turned on.
- Solution 3: Make sure the computer is plugged in and turned on.
- Solution 4: If you're using a desktop, make sure the monitor cable is properly connected to the computer tower and the monitor.

Problem: The printer is not working

- Check if the printer is turned on.
- Check if the printer has paper.
- Check if the printer has a paper jam.
- Ensure that all printer cables are properly connected.
- Turn off the printer and turn on again.
- Check to see if a new printer driver is needed.
- Seek assistance from your system administrator before installing any drivers.

