CONTOSO

PC Troubleshooting FAQs

1. PC Won't Power On
Issue: The computer doesn’t turn on when the power button is pressed.
Resolution:

1. **Check power connections:**
    - **How to do it:** Ensure the power cable is plugged into both the computer and the wall outlet properly. Check for any power strip or surge protector that may be turned off.
    - **Tip:** Test the wall socket with another device (like a phone charger) to confirm it's working.
2. **Inspect power supply:**
    - **How to do it:** Find the switch on the back of the power supply unit (PSU) and ensure it's turned on. There should be a "I" marking (on) and an "O" marking (off).
3. **Verify PSU function:**
    - **How to do it:** Turn on the computer and check if the PSU fan spins or lights on the motherboard turn on. If there's no response, the PSU might be faulty.
    - **Tip:** Use a PSU tester if available, or swap in a known good PSU to test.
4. **Test the power button:**
    - **How to do it:** Open the PC case and find the motherboard power pins. Disconnect the front panel power button connector and briefly short the two power pins with a metal object (like a screwdriver). If the PC turns on, the power button or its wiring is faulty.
5. **Examine power cables:**
    - **How to do it:** Open the case and ensure the 24-pin and 8-pin motherboard power connectors are firmly seated. These are the large connectors coming from the PSU into the motherboard.

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2. No Display on Monitor
Issue: The computer powers on, but there is no display output to the monitor.
Resolution:

1. **Check monitor cables:**
    - **How to do it:** Double-check that the HDMI, DVI, DisplayPort, or VGA cable is plugged into both the monitor and the back of the PC securely.
    - **Tip:** Inspect the cable for any visible damage or bent pins.
2. **Verify input source:**
    - **How to do it:** Press the monitor's menu button and navigate to the input source setting. Ensure it is set to the correct port (e.g., HDMI, DisplayPort).
3. **Test with another monitor:**
    - **How to do it:** Connect a different monitor or use a different cable to determine whether the monitor or cable is faulty. You could also test the PC on a TV with an HDMI input.
4. **Reseat the GPU:**
    - **How to do it:** Open the case and carefully remove the graphics card from the PCIe slot by releasing the clip and pulling the card straight out. Reseat it firmly into the slot and reconnect any power cables.
5. **Clear CMOS:**
    - **How to do it:** Turn off the PC, disconnect the power, and remove the small round battery (CMOS battery) on the motherboard. Wait 1-2 minutes, then reinstall the battery and try turning on the PC again. This resets BIOS settings to defaults.

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3. Random System Reboots
Issue: The PC restarts unexpectedly without warning.
Resolution:

1. **Check for overheating:**
    - **How to do it:** Download and install software like HWMonitor, CoreTemp, or SpeedFan to monitor CPU, GPU, and system temperatures. If temperatures are consistently high (above 85°C for CPUs), you may have a cooling issue.
2. **Update drivers:**
    - **How to do it:** Open **Device Manager** (press Win + X, select Device Manager), right-click on the GPU, network adapter, and chipset devices, and choose **Update driver**. You can also visit the manufacturer's website to download the latest drivers.
3. **Test RAM:**
    - **How to do it:** Press **Win + R**, type "mdsched.exe", and press **Enter**. Follow the prompts to restart and run the Windows Memory Diagnostic. The system will automatically check the RAM for errors during the reboot.
4. **Inspect power supply:**
    - **How to do it:** Use a PSU tester, or swap your PSU with a known working unit to see if power stability is the issue. PSU instability is a common cause of random reboots.
5. **Check event logs:**
    - **How to do it:** Press **Win + X**, select **Event Viewer**, navigate to **Windows Logs > System**, and look for any critical errors around the time the reboots occurred. This can give clues about the source of the problem.

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4. PC Freezes or Hangs
Issue: The system becomes unresponsive during use, forcing a restart.
Resolution:

1. **Check for software issues:**
    - **How to do it:** Run antivirus or malware scans using software like Malwarebytes or Windows Defender. If threats are found, quarantine and remove them.
2. **Update all drivers:**
    - **How to do it:** Use a driver update tool or manually check drivers via Device Manager. Pay special attention to graphics, storage (SSD/HDD), and chipset drivers.
3. **Test hardware components:**
    - **How to do it:** For hard drives, open a Command Prompt (as Administrator) and type **chkdsk /f** to check for errors. Run **sfc /scannow** to scan for system file corruption.
4. **Monitor temperatures:**
    - **How to do it:** Use HWMonitor or similar software to monitor internal temperatures and ensure the CPU or GPU is not overheating. Temps above 85°C may cause system instability.
5. **Replace faulty components:**
    - **How to do it:** If RAM tests fail or the hard drive shows bad sectors, replace these components. Use Memtest86 for a more thorough RAM test.

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5. Overheating and Shutdowns
Issue: The PC shuts down automatically due to high temperatures.
Resolution:

1. **Clean internal components:**
    - **How to do it:** Turn off the PC, unplug it, and use compressed air to blow dust out of fans, heatsinks, and vents. Ensure all components are free from dust buildup.
2. **Reapply thermal paste:**
    - **How to do it:** Remove the CPU cooler by unscrewing it and lifting it off. Clean off the old thermal paste with isopropyl alcohol and apply a small dot of fresh thermal paste on the CPU. Reinstall the cooler.
3. **Improve airflow:**
    - **How to do it:** Arrange cables neatly inside the case to reduce air blockages. Install additional case fans if possible, ensuring there is a balance between intake and exhaust fans for optimal airflow.
4. **Upgrade cooling solutions:**
    - **How to do it:** Consider replacing the stock CPU cooler with an aftermarket air cooler or liquid cooling system for better temperature control, especially if you're running high-performance components.
5. **Monitor temperatures:**
    - **How to do it:** Keep an eye on CPU, GPU, and case temperatures using monitoring software. If temperatures remain high even with improved cooling, check for hardware faults or consider undervolting the CPU.

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6. Slow Performance
Issue: The computer takes longer than usual to start or run applications.
Resolution:

1. **Check for malware:**
    - **How to do it:** Run a full system scan with Windows Defender or a third-party antivirus program. Quarantine and remove any detected malware or viruses.
2. **Upgrade storage:**
    - **How to do it:** If you're using a traditional hard drive, consider replacing it with an SSD. Follow installation instructions or clone your current drive onto the SSD using software like Macrium Reflect.
3. **Upgrade RAM:**
    - **How to do it:** Check your system's RAM usage in Task Manager (press **Ctrl + Shift + Esc**) under the **Performance** tab. If your RAM usage is consistently high, add more RAM. Make sure you match your motherboard's specifications.
4. **Defragment HDD:**
    - **How to do it:** Press **Win + S**, type "Defragment", and select **Defragment and Optimize Drives**. Choose the hard drive (HDD) and click **Optimize** to start the defragmentation process.
5. **Disable startup programs:**
    - **How to do it:** Press **Ctrl + Shift + Esc** to open Task Manager. Go to the **Startup** tab, right-click unnecessary programs, and select **Disable**.

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7. USB Devices Not Recognized
Issue: USB devices (e.g., keyboard, mouse) are not detected by the PC.
Resolution:

1. **Check the USB ports:**
    - **How to do it:** Plug the device into different USB ports. Test both front and back panel ports to see if the problem is with one specific port.
2. **Inspect device drivers:**
    - **How to do it:** Open **Device Manager** (press **Win + X**), expand **Universal Serial Bus controllers**, and look for any yellow exclamation marks. Right-click the problematic device and choose **Update driver**.
3. **Use another device:**
    - **How to do it:** Plug the USB device into another computer to confirm whether the issue lies with the device or the PC. If the device works elsewhere, the problem may be with the PC's USB drivers.
4. **Reset BIOS:**
    - **How to do it:** Enter BIOS settings by pressing a key during boot (usually **Del** or **F2**). Reset the BIOS to default settings, often found in the **Exit** menu or labeled as **Load Setup Defaults**.
5. **Disable USB selective suspend:**
    - **How to do it:** Open **Control Panel**, navigate to **Power Options**, and click **Change plan settings** for your active plan. Click **Change advanced power settings**, expand **USB settings**, and set **USB selective suspend setting** to **Disabled**.

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8. Hard Drive Not Detected
Issue: The PC does not recognize the hard drive during startup.
Resolution:

1. **Check connections:**
    - **How to do it:** Open the case and check if the SATA cable and power cable are properly connected to the hard drive and motherboard. Reseat the cables if necessary.
2. **Test with another cable:**
    - **How to do it:** Swap out the SATA cable with a known working one to rule out a faulty cable.
3. **Check BIOS settings:**
    - **How to do it:** Restart the computer and enter the BIOS (press **Del** or **F2**). Look for the hard drive under the **Storage** or **SATA Configuration** menu. If it's not detected, try enabling AHCI mode.
4. **Run a drive diagnostic tool:**
    - **How to do it:** Download and run the drive manufacturer's diagnostic tool (e.g., SeaTools for Seagate drives or Western Digital's Data Lifeguard Diagnostic). This will check for any errors or issues with the drive.
5. **Replace the drive:**
    - **How to do it:** If the drive is failing and cannot be repaired, back up any important data and replace it with a new one.

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9. Blue Screen of Death (BSOD)
Issue: The computer crashes and displays a blue screen with error codes.
Resolution:

1. **Note the error code:**
    - **How to do it:** Write down or take a picture of the error code (e.g., "STOP: 0x0000007B"). This will help identify the problem.
2. **Update drivers:**
    - **How to do it:** Use **Device Manager** to update drivers or visit the manufacturer's website to manually download and install the latest versions.
3. **Run memory diagnostics:**
    - **How to do it:** Open the Windows Memory Diagnostic tool by pressing **Win + R**, typing **mdsched.exe**, and pressing **Enter**. Follow the prompts to restart and scan for memory issues.
4. **Check for hardware conflicts:**
    - **How to do it:** Remove any newly installed hardware components or devices that were added around the time the BSODs started. Boot the system without them to see if it resolves the issue.
5. **Perform a system restore:**
    - **How to do it:** Open **Control Panel**, go to **Recovery**, and select **Open System Restore**. Choose a restore point from a time before the BSOD started, and follow the prompts to restore your system.

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10. Computer Makes Unusual Noises
Issue: The PC produces loud or strange noises, such as grinding or clicking.
Resolution:

1. **Check for loose components:**
    - **How to do it:** Open the PC case and ensure that all screws holding the motherboard, graphics card, and storage drives are tight. Check that fans are properly mounted and not loose.
2. **Clean fans and drives:**
    - **How to do it:** Use compressed air to clean dust from fans and drives. Make sure nothing is obstructing the movement of the fans.
3. **Inspect for failing hard drives:**
    - **How to do it:** A clicking sound is often a sign of a failing hard drive. Backup important data immediately and use the manufacturer's diagnostic tool to confirm the failure.
4. **Replace noisy fans:**
    - **How to do it:** If a fan is making grinding or rattling sounds, it may need to be replaced. Purchase a compatible fan and install it by unscrewing the old fan, plugging in the new one, and securing it in place.
5. **Check for coil whine:**
    - **How to do it:** High-pitched noises (coil whine) often come from the graphics card or power supply. While this noise isn't harmful, you can try adjusting power settings or replacing the component to reduce or eliminate the sound.