

12.15.8 Startup Error Facts

The following table contains a description of common startup errors:

Error	Description
System Does not Power on	<p>If the system does not power on:</p> <ul style="list-style-type: none"> Make sure the system is plugged in and the power strip or UPS is turned on. Check the power switch and the power type (110 or 220 volts) on the back of the power supply. If your computer is a notebook or tablet, make sure the battery is installed. Ensure that the AC adapter is plugged in. If you have just installed a new system, make sure the system case power switch is connected to the motherboard. <p>When you turn on the computer, you should hear both the power supply fan and the CPU fan start to spin.</p>
System Powers on, but No Display Is Visible	<p>If the system powers on but there is nothing on the display, check the following:</p> <ul style="list-style-type: none"> Verify that the monitor is connected to the computer, plugged in, and turned on. Verify that the BIOS/UEFI is configured to use the correct video adapter. Most motherboards can be configured to use either the integrated video adapter or a PCIe video adapter installed in an expansion slot. To display startup information on the screen, the computer needs at a minimum the CPU, memory, and a video card. Other components are not necessary. Verify that these three components are properly installed. If necessary, reduce the system to the three components listed above and try starting the system. If that does not work, swap out components to identify the failed component. <p>Some computers will use a series of beeps to indicate specific problems when those messages cannot be shown on the screen. In this case, consult the motherboard documentation for the meaning of the audible messages.</p>
Corrupt MBR or Partition Table	<p>The master boot record (MBR) is responsible for locating the system (active) partition and loading the volume boot record (VBR). A corrupt or missing master boot record or a corrupt partition table prevents the system from loading the boot record code, finding the volume boot record, and loading the boot loader program. Symptoms of a corrupt MBR or partition table include:</p> <ul style="list-style-type: none"> The system hangs immediately after the BIOS information is shown. Any of the following errors: <ul style="list-style-type: none"> MBR corrupt Invalid partition table Error loading operating system Missing operating system <p>To fix the problem, boot the system from the installation disc and repair the system.</p> <ol style="list-style-type: none"> Boot from the installation DVD (or the recovery USB). At the Welcome screen, select Repair your computer. Select Troubleshoot. Select Command Prompt. When the Command Prompt loads, type the following command: bootrec /FixMbr (The /FixMbr option causes the bootrec command to rewrite the master boot record without overwriting the existing partition table on the disk.)
Corrupt Boot Sector	<p>The boot sector (also called the volume boot record or volume boot code) is responsible for loading the operating system boot loader program (BOOTMGR). At this point in the process, the MBR has loaded, located an active partition, but there is a problem in loading the VBR, the VBR does not specify a boot loader program, or the boot loader specified in the VBR is missing or corrupt. Symptoms of a corrupt or missing boot sector include:</p>

	<ul style="list-style-type: none"> System hangs following the BIOS information screen. Any of the following errors: <ul style="list-style-type: none"> Non-system disk or disk error Remove disks or other media Invalid system disk Invalid media type Disk Boot failure A disk read error occurred BOOTMGR is missing Missing GRUB/LILO <p>To correct the problem you can check the following:</p> <ul style="list-style-type: none"> Check the boot order in the BIOS/UEFI to make sure the system is booting from the correct storage device. <p>If the device is a removable media device, the drive should be empty (so the drive is skipped when checking for a boot disk), or the drive must have media that includes a bootable partition (for the system to boot from that drive). For example, leaving a USB device plugged in is a common cause of the non-system disk error. These errors can be avoided by disabling the USB Device option in the boot sequence or to set the integrated USB controller to No Boot.</p> <p>Boot the system from the installation disc and repair the system.</p> <ol style="list-style-type: none"> Boot from the installation DVD (or the recovery USB). At the Welcome screen, select Repair your computer. Select Troubleshoot. Select Command Prompt. When the Command Prompt loads, type the following command: bootrec /FixMbr (The /FixBoot option causes the bootrec command to write a new boot sector in the system partition.)
Inaccessible Boot Disk	<p>The boot loader program uses the boot configuration database (BCD) to locate valid Windows installations to start. If the database points to a location that does not include any operating system files, you will see a message similar to the following:</p> <p>Windows could not start because of a computer disk hardware configuration problem. Could not read from the selected boot disk. Check boot path and disk hardware.</p> <p>To correct the problem, boot the system from the installation disc and repair the system.</p> <ol style="list-style-type: none"> Boot from the installation DVD (or the recovery USB). At the Welcome screen, select Repair your computer. Select Troubleshoot. Select Command Prompt. When the Command Prompt loads, type the following command: bootrec /RebuildBcd (The /RebuildBcd option causes the bootrec command to scan all storage devices for operating systems and add them to the BCD database.)
Missing or Corrupt File	<p>If the boot manager cannot locate needed operating system files on the selected boot partition, you might see the following errors occur:</p> <ul style="list-style-type: none"> Windows could not start because the following file is missing or corrupt: <filename> Please re-install a copy of the above file. A blue screen error that describes a corrupt or missing file. <p>This problem is caused either by a corrupt disk, corrupt files, or missing files. To correct the problem, boot the system from the installation disc and repair the system.</p> <ol style="list-style-type: none"> Boot from the installation DVD (or the recovery USB). At the Welcome screen, select Repair your computer. Select Troubleshoot.

	<p>4. Select Advanced Options.</p> <p>5. Select Startup Repair.</p> <p>Alternatively, you can select the Command Prompt option and then use the copy command to replace the file referenced by the error message with a known good copy.</p>
Blue Screen or System Hangs After Windows Splash Screen is Displayed	<p>The most common cause of the errors at this stage are bad drivers or corrupt registry settings. To correct the problem, try the following (in this order):</p> <ul style="list-style-type: none"> ▪ If the error includes any error codes or messages, check the Microsoft website for troubleshooting information. ▪ Boot the system into Safe Mode. In Safe Mode, rollback drivers, remove drivers, or restore to a restore point. ▪ To identify which driver is causing the problem, enable boot logging, then read the Ntbtlog.txt file to identify the last driver that the system tried to load. ▪ If you cannot boot into Safe Mode, boot into the Recovery Environment and use System Restore to restore to a restore point that was created when the system was working correctly.
Service Fails to Start	<p>If a service fails to start, you will see a message such as:</p> <p>At least one service or driver failed during system startup. Use Event Viewer to examine the event log for details.</p> <p>Use Event Viewer to view details about the service that did not start, then try starting the service manually. If necessary, re-enable or re-install the service.</p>
Corrupt or Missing DLL or System File	<p>If you see errors about corrupt or missing DLLs or system files, either during startup or after Windows starts, boot the system from the installation disc and repair the system. To do this:</p> <ol style="list-style-type: none"> 1. Boot from the installation DVD (or the recovery USB). 2. At the Welcome screen, select Repair your computer. 3. Select Troubleshoot. 4. Select Advanced Options. 5. Select Startup Repair. <p>Alternatively, you can select Command Prompt and use the sfc command to run the System File Checker utility. The syntax to use with sfc is as follows:</p> <ul style="list-style-type: none"> ▪ Use sfc /scannow to scan the integrity of all protected system files and repair any file that has problems. ▪ Use sfc /verifyonly to scan the integrity of all protected system files, but not repair them. ▪ Use sfc /scanfile to scan the integrity of a specific file and repair it if it has problems. ▪ Use sfc /verifyfile to scan the integrity of a specific file, but not repair it.
Device Fails to Start	<p>This message indicates that a hardware device could not be started. Begin by checking Device Manager for information about the device. If necessary, update the driver or disable the device.</p>

If the system experiences a blue screen error during startup or after the system has started, the default behavior is to restart Windows automatically after displaying the error. With the default configuration, the system could restart, experience the same error, restart automatically, and enter a constant cycle of error and restart. To configure the system to display the blue screen error until you manually continue, access the advanced startup options menu and select **Disable automatic restart on system failure** to stop the automatic reboot cycle.