

## Windows 10 and Windows Defender

- One question I am often asked, will Norton (or McAfee, or similar third-party security software) interfere with Windows Defender
  - Or vice versa, Windows Defender interfering with the third-party application.
- If you have Windows 10, you'll get the latest antivirus protection with Windows Defender.
  - When you start up Windows 10 for the first time, Windows Defender is on.
    - And actively protects your PC by periodically scanning for malware (malicious software), viruses, and security threats.
      - Scans also any downloaded file, or file transferred from another drive or device.
    - Windows Defender uses real-time protection to scan everything you download or run on your PC.
  - Windows Defender gets updates to program and definitions constantly through Windows Update.
  - Windows Defender runs scan regularly.
    - To schedule scans,
- Windows 10 version 1703 (current version 1709) added Windows Defender Security Center.
  - Which monitors both Windows Defender and any third-party security application installed.
  - It is located under the Apps in the "W" section.
    - Or open the Start menu and type **defender**.
- Advantages of Windows Defender
  - Less invasive/visible by handling threats in the background.
    - Without nagging.
  - Plays nicer with web browsers and other Windows apps.
  - Windows Defender Exploit Guard (**Controlled Folder Access**)
    - Protects against files in protected folders from being changed by suspicious apps.
      - Including Ransomware.
    - Must be sure to turn it on.
  - Cannot use this feature with third-party AV installed.

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### Using Windows Defender

- Open Windows Defender Security Center.
  - The Home page gives an overview of security status of each section.
  - The Virus & threat protection provides a scan history.
    - Once opening the scan history, you can see
      - Current threats
      - Quarantined threats-see full history
      - Allowed threats-items identified as threats but which you allowed-see full history.
    - Also perform a manual scan using the Quick scan button.
    - Click Advanced scan to select either
      - Full scan
      - Custom scan to select files or folders
      - Windows Defender Offline Scan, which scans the computer for threats before Windows loads.
        - Windows will restart to run this scan!
    - Virus and protections settings allows turned off Real-time protection temporarily.
    - Set (or remove) exclusions to avoid scanning a file you know is safe, even when identified by Windows Defender as a threat.
- Do a manual scan with a right-click on the file, folder, or disk.

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### What if you install another (third-party) Antivirus?

- Windows 10 automatically disables Windows Defender.
  - Windows Defender won't perform Real-time scans.
- You can still Use Windows Defender to run a manual scan or Offline scan.
  - Under Windows Defender Antivirus Options
    - Turn on Periodic scanning.
    - You will be warned of a conflict but ignore this.
    - Now the choices described above will be visible.
- Cannot take advantage Windows Defender's Control Folder Access with third-party AV.
  - To use, must uninstall third-party AV.
- When uninstalling the third-party antivirus, Windows Defender will automatically be turned back on (re-enabled).

## Windows 10 and Safe Mode

### Safe Mode Access

- Safe Mode remains a good method to troubleshoot PC problems.
  - And application conflicts.
  - Safe Mode loads Windows with:
    - Only basic and essential device drivers
      - Which means video appearance is degraded.
      - Most non-essential devices will not work while in Safe Mode.
      - Many of the modern Windows 8 and 10 apps will not work.
    - Startup programs
      - All programs set to load during Normal Startup do not load.
    - Unnecessary services
      - Antiviral services
      - Wireless Networking (because drivers are not loaded to prevent conflicts).
- Safe Mode does NOT take the place of a **clean boot**.
  - Sometimes necessary to successfully install an application.
  - Or test a malfunctioning application to rule out program conflicts.
- However, with the advent of Windows 8, Safe Mode can no longer be accessed by the previous tapping of F8 as the computer starts.
- Windows 8 and 10 introduced significant new recovery features.
- Safe Mode can only be accessed via either the Recovery Options
  - Or by using the Configuration Utility.
- Once in Safe Mode, you can run an antimalware product previously downloaded or installed.
- If connected to the Internet, can even download antimalware scans or software.
- Safe Mode with Networking currently rarely works with the wireless card.
  - Safe Mode does not load the wireless card driver.
- To have Internet connection, you need to be connected via an Ethernet cable.
  - That driver is loaded by default.

## Windows 10 and Safe Mode

- Start Safe Mode via Recovery Options
  - From the Start menu, choose Settings (gear above Power icon on the left).
  - Now choose Updates and Security.
  - In the column on the left, click Recovery, then Advanced startup.
  - On the screen which appears, choose Troubleshoot.
  - The next screen displays Advanced Options. Click on it.
  - On this new screen choose Startup Settings.
  - A Final screen appears. Click the Restart button.
  - Once the computer restarts, it displays a number to type:
    - 4 for Safe Mode
    - 5 for Safe Mode with networking
  - Now the computer restarts in Safe Mode.
  - Unfortunately, Safe Mode with Networking cannot use the wireless card.
  
- Start Safe Mode via the Configuration Utility
  - This is quicker, but at the same time more involved.
  - Open a Run box.
    - Either hold the Windows logo key and type "R".
      - Or right-click the Start button to choose Run.
    - In the Run box, type **msconfig**, and hit the ENTER key or click OK.
    - The System Configuration window will open, choose the Boot tab.
    - Near the bottom, place a check in Safe Mode, and the dot either in Minimal or Network.
      - Again, Network doesn't work with a wireless card.
      - Choose Network anyway, as some may work.
  - Now click OK, and then Restart on the command window.
  - The computer restarts, and you will be in Safe Mode.