

12.1.10 Windows Utilities Facts

This lesson covers the following topics:

- System information tools
- MSConfig
- System configuration tools

System Information Tools

Microsoft Windows contains several tools to view various details about computer hardware and software settings. The table below shows some of the tools used to view various settings:

Tool	Description
System Information (Msinfo32.exe)	<p>Use System Information to view hardware and configuration information for your computer. While much of this information is available through other tools, System Information provides a single location for viewing information such as:</p> <ul style="list-style-type: none"> ▪ Operating system version ▪ Computer manufacturer, processor type, available memory ▪ Installed devices and drivers used ▪ Running tasks ▪ Applications that run at system startup <p>You can only view, not modify, configuration settings in System Information.</p>
Event Viewer	<p>Use Event Viewer to view logs about programs, system events, and security. Each entry is listed as a warning, error, or information event. Events are added to the following logs:</p> <ul style="list-style-type: none"> ▪ The Application log contains a list of all application-related events such as application installations, un-installations, and application errors. ▪ The System log contains a list of all system-related events such as system modifications, malfunctions, and errors. ▪ The Security log contains a list of all security-related events such as security modifications and user login events. <p>Additional logs might be added by applications or services.</p>
Performance Monitor	<p>Performance Monitor displays statistics that tell you about the operation of your computer.</p> <ul style="list-style-type: none"> ▪ A counter identifies a specific statistic, such as % Processor Time or % Disk Free Space. ▪ You can add or remove counters to customize the statistics you can see. ▪ Real-time data are displayed in a graph. ▪ Performance Monitor by itself does not save any data. To save statistics over time, use a data collector set.
Reliability Monitor	<p>Reliability Monitor maintains historical data that describe the operating system's stability.</p> <ul style="list-style-type: none"> ▪ Overall system stability is given a stability index that ranges from 1 to 10 (10 being the most stable). The stability rating is affected by application, hardware, Windows, and other failures. ▪ Reliability Monitor shows an historical chart that identifies when software installs/uninstalls and failures have occurred. By clicking on a day, you can view the changes to the system that have affected its stability.
Windows Memory Diagnostics	<p>The Windows Memory Diagnostic tests the Random Access Memory (RAM) on your computer for errors. This utility is not included with Windows and must be downloaded from Microsoft's Online Crash Analysis website.</p>

MSConfig

Use the System Configuration Utility, or msconfig.exe, to configure your system to enable optimal troubleshooting and diagnosis of technical issues. System Configuration Utility has the following tabs:

Tool	Description
General	<p>The General tab is displayed by default when the System Configuration Utility is opened. There are three options under the General tab:</p> <ul style="list-style-type: none"> ▪ Normal Startup is used to load all device drivers and services when Windows starts up ▪ Diagnostic Startup will load only the basic devices and services and is similar to starting Windows in safe mode ▪ Selective Startup allows the user to choose in more detail what should start with Windows
Boot	<p>The Boot tab will show you the operating system that is installed on the computer. The tab contains some of the following options:</p>

	<ul style="list-style-type: none"> ▪ Boot Options allow the user to select options such as Safe boot along with some additional options ▪ Timeout specifies the amount of seconds that Windows will wait in the Boot menu before loading the operating system, with the default being 30 seconds
Services	The Services tab displays all the Services configured to start up, when the operating system boots up. Uncheck services that you do not want Windows to start.
Startup	With Windows 10, the Startup tab in System Configuration Utility displays a shortcut to the Startup tab in Task Manager.
Tools	The Tools tab will show you various utilities and tools that you can launch directly from the System Configuration Utility to the various tools available in Windows.

System Configuration Tools

Microsoft Windows contains the following tools to configure various options:

Tool	Description
Microsoft Registry Editor (Regedit.exe)	<p><i>Microsoft Registry Editor</i> is a tool for modifying entries in the Windows registry. The registry is a database that holds hardware, software, and user configuration settings.</p> <ul style="list-style-type: none"> ▪ Whenever a change is made to preferences, software, hardware, and user-settings, those changes are stored and reflected in the registry. ▪ The preferred method of modifying the registry is to use the applications or management tools that write to the registry. For example, many Control Panel applets make changes to registry settings. ▪ There will be some advanced settings that can be made only by directly editing the registry.
DirectX Diagnostic Tool (DxDiag)	<p><i>DxDiag</i> is a tool that shows information related to DirectX operation. DirectX is a set of programming interfaces for multimedia (video and audio). DxDiag displays information such as:</p> <ul style="list-style-type: none"> ▪ Operating system version ▪ Processor and memory information ▪ DirectX version ▪ Settings and drivers used by display devices ▪ Audio drivers ▪ Input devices (mouse, keyboard, USB)
Command Prompt	<p>Use the Command Prompt to execute command-line commands. To open a command prompt,</p> <ul style="list-style-type: none"> ▪ On the taskbar, type CMD into the Search box. ▪ From the Start menu, go to Windows System and select Command Prompt. <p>Some commands launched from the command line require elevated privileges to run. If this is the case, run Command Prompt as Administrator.</p>
Services	<p>A <i>service</i> is a program that processes requests from other applications or users. Services can start automatically and stay constantly running in the background, waiting for service requests. Use the Services snap-in to view and manage running services. The service startup behavior determines how the service is started.</p> <ul style="list-style-type: none"> ▪ When set to Automatic, the service is started automatically by Windows when the system boots. ▪ When set to Manual, the service must be manually started. ▪ When Disabled, the service will not run.
MSTSC	The <i>Microsoft Terminal Services Client</i> is a remote management service. Mstsc.exe is the executable file that opens the Microsoft Terminal Services Client. The Microsoft Terminal Services Client, which is Remote Desktop Services, is a component of Microsoft Windows that allows users to take control of remote computers over a network connection. The three Windows components that use RDS are Windows Remote Assistance, Remote Desktop Connection, and Fast User Switching.
Notepad	<i>Notepad</i> is a simple text editor for Microsoft Windows and a basic text-editing program which enables computer users to create documents. Notepad can be launched from the Start button, Windows Accessories, and selecting Notepad.
Explorer	<i>Explorer</i> , or called File Explorer and formerly Windows Explorer, is a file manager application that comes with Microsoft Windows. File Explorer's main purpose is to let you view, open, copy, move, and otherwise manage your files and folders.
Disk Defragmenter	<i>Disk Defragmenter</i> is a utility in Microsoft Windows designed to increase access speed by rearranging files stored on a disk to occupy contiguous storage locations. The process of doing this is called defragmentation.

System Restore	<i>System Restore</i> is a recovery tool for Microsoft Windows that allows you to reverse certain changes made to the operating system. System Restore is used to return important Windows files and settings which might include drivers, registry keys, system files, and installed programs back to previous settings and versions.
Windows Update	<i>Windows Update</i> is a Microsoft service for Windows. It automates downloading and installing software updates over a network or the internet.
Microsoft Register Server (Regsvr32.exe)	<i>Microsoft Register Server</i> is a command-line tool that registers .dll files as command components in the registry.
Data Sources	<p>You use the ODBC (Open Database Connectivity) Data Source Administrator to create and manage ODBC data sources. To open the ODBC Data Source Administrator in Windows 10, do the following:</p> <ol style="list-style-type: none"> 1. Select Start. 2. Select Windows System. 3. Select Control Panel. 4. In Control Panel, select System and Security. 5. Select Administrative Tools. 6. In Administrative Tools, select Data Sources (ODBC).
Advanced Security	<p>Everyday configuration tasks for the Windows Firewall are completed using the Windows Firewall applet in Control Panel. However, advanced firewall configuration tasks can be performed using an MMC snap-in called <i>Windows Firewall with Advanced Security</i>.</p> <p>Windows Firewall with Advanced Security supports a more granular firewall configuration than can be created using the Windows Firewall applet in Control Panel. For example, it can filter traffic based on parameters such as:</p> <ul style="list-style-type: none"> ■ Source IP address ■ Destination IP address ■ Port number ■ ICMP protocol