

2. Shell en Windows

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De manera general estamos acostumbrados a manejar el sistema operativo Windows a través de su interfaz gráfica, la cual es llamada Windows Shell. La mayoría de las interacciones con el SO a través de esta shell se dan a través del mouse y su experiencia de usuario a través del manejo de ventanas para las aplicaciones, ha sido característica de Windows desde Windows 1.0. Sin embargo, también podemos interactuar con ella a través de comandos, los cuales puedes conocer en la siguiente hoja.

Command Prompt (cmd)

Sin embargo, para funciones administrativas o más avanzadas del SO es más comúnmente usado el **Símbolo del Sistema, Command Prompt, CMD o Shell de comandos CMD**, la cual es una shell basada en texto de Windows.

A continuación se encuentran los principales comandos de cmd:

Essential Windows CMD Commands You Should Know			
ASSOC	Displays or modifies file extension associations	MD	Creates a directory
ATTRIB	Displays or changes file attributes	MKDIR	Creates a directory
BREAK	Sets or clears extended CTRL+C checking	MKLINK	Creates Symbolic Links and Hard Links
BCDBOOT	Used to copy critical files to the system partition and to create a new system BCD store	MODE	Configures a system device
BCDEDIT	Sets properties in boot database to control boot loading	MORE	Displays output one screen at a time
CACLS	Shows or changes access control lists (ACLs) of files	MOVE	Moves one or more files from one directory to another directory
CALL	Calls a batch program from another	NETSTAT	Returns a list of currently open ports and related IP addresses
CD	Shows the name of or changes to a current directory	OPENFILES	Queries, displays, or disconnects open files or files opened by network users
CHCP	Displays or sets the active code page number	PATH	Displays or sets a search path for executable files
CHDIR	Displays the name of or changes to the current directory	PATHPING	Advanced version of ping, used if there are multiple routers between your PC and the device you're testing
CHKDSK	Checks a disk and displays a status report	PAUSE	Suspends processing of a batch file
CHKNTFS	Displays or modifies the checking of disk at boot time	PING	Sends a series of test packets to the specified address
CHOICE	Batch file command that allows users to select from a set of options	POPD	Restores the previous value of the current directory saved by PUSH
CIPHER	Displays or alters the encryption of directories (files) on NTFS partitions	POWERCFG	Manages and tracks energy utilization and power consumption
CLIP	Redirects output off another command to the Windows clipboard	PRINT	Prints a text file
CLS	Clears the screen	PROMPT	Changes the Windows command prompt
CMD	Starts a new instance of the Windows command interpreter	PUSHD	Saves the current directory then changes it
CMDKEY	Creates, lists, and deletes stored user names and passwords or credentials	RD	Removes a directory
COLOR	Sets the default console colors	RECI	Configures the custom Windows recovery image
COMP	Compares the contents of two files or sets of files byte-by-byte	RECOVER	Recovers readable information from a bad or defective disk
COMPACT	Displays or alters the compression of files on NTFS partitions	REM	Designates comments (remarks) in batch files
CONVERT	Converts FAT volumes to NTFS. You cannot convert the current drive	REN	Renames a file or files
COPY	Copies one or more files to another location	RENAME	Renames a file or files
DATE	Displays or sets the date	REPLACE	Replaces files
DEFRAG	Disk defragment accessory	RMDIR	Removes a directory
DEL	Deletes one or more files	ROBOCOPY	Advanced utility to copy files and directory trees
DIR	Displays a list of files and sub-directories in a directory	SET	Displays, sets, or removes environment variables for current session
DISKCOMP	Compares the contents of two floppy disks	SETLOCAL	Begins localization of environment changes in a batch file
DISKCOPY	Copies the contents of one floppy disk to another	SETX	Sets environment variables
DISKPART	Displays or configures Disk Partition properties	SFC	Finds corrupt/missing files, replaces them with cached copies
DOSKEY	Edits command lines, recalls Windows commands, and creates macros	SC	Displays or configures services (background processes)
DRIVERQUERY	Displays current device driver status and properties	SCHTASKS	Schedules commands and programs to run on a computer
ECHO	Displays messages, or turns commands echoing on or off	SHIFT	Shifts the position of replaceable parameters in batch files
ENDLOCAL	Ends localization of environment changes in a batch file	SHUTDOWN	Allows proper local or remote shutdown of machine
ERASE	Deletes one or more files	SORT	Sorts input
EXIT	Quits and closes the command shell	START	Starts a separate window to run a specified programs or command
EXPAND	Expands compressed files	SUBST	Associates a path with a drive letter
FC	Compares two files or sets of files, and displays the differences between them	SYSTEMINFO	Displays machine specific properties and configuration
FIND	Searches for a text string in a file or files	TAKEOWN	Allows an administrator to take ownership of a file
FINDSTR	Searches for strings in files	TASKLIST	Displays all currently running tasks including services
FOR	Runs a specified command for each item in a set	TASKKILL	Kill running process or applications
FORFILES	Selects files in a folder for batch processing	TIME	Displays or sets the system time
FORMAT	Formats a disc for use with Windows	TIMEOUT	Pauses the command processor for the specified number of seconds
FSUTIL	Displays or configures the file system properties	TITLE	Sets the window title for a CMD.EXE session
FTYPE	Displays or modifies file types used in file extensions associations	TRACERT	Returns information about each step in the route between your PC and the target
GOTO	Directs the Windows command interpreter to a labeled line in a batch program	TREE	Graphically displays the directory structure of a drive or path
GPRESULT	Displays Group Policy Information for machine or user.	TYPE	Displays the contents of a text file
GRAFTABL	Enables Windows to display an extended character set in graphics mode	VER	Displays the Windows version
HELP	Provides help information for Windows commands	VERIFY	Tells Windows whether or verify that your files are written correctly to a disk
ICACLS	Display, modify, backup, or restore ACLs for files and directories	VOL	Displays a disk volume label and serial number
IF	Performs conditional processing in batch programs.	VSSADMIN	Volume Shadow Copy Service administration tool
IPCONFIG	Displays all current TCP/IP network configuration values	WHERE	Displays the locations of files that match a search pattern
LABEL	Creates, changes, or deletes the volume label of a disk	WMIC	Displays WMI information inside interactive command shell
		XCOPY	Copies files and directory trees

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PowerShell

PowerShell hace referencia a dos cosas:


- Una shell de línea de comandos, instalada por default en todas las versiones de Windows (7 o posterior)

- Lenguaje de scripting

Además de Windows, PowerShell también está disponible para su uso en Linux y macOS.



Para consultar como abrir PowerShell en tu computadora o, en su defecto, instalarlo en Linux o macOS, puedes revisar la guía: [Starting Windows PowerShell](#). Para aquellos familiarizados con la cmd, los comandos son también aceptados en PowerShell.

CMD vs. PowerShell





PowerShell vs CMD



#1. Definition

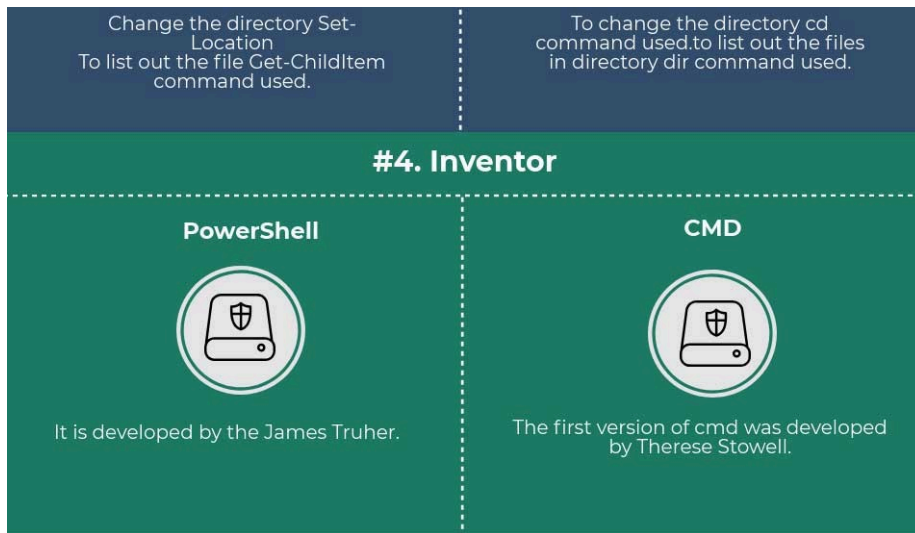
PowerShell	CMD
 <p>PowerShell is scripting language and object-oriented automation engine. It is designed specially for the system administrators. It is similar to Linux Bash Scripting and built on the top of .NET Framework.</p>	 <p>CMD is command line interface to interact with operating system, it is command based.</p>

#2. Usage

PowerShell	CMD
 <p>it is used to control the applications and windows operating system on windows servers. It used to control & automate the administration of the Window OS and other applications by the administrators.</p>	 <p>It is used to execute the given command on the console, can be used to debug the problem.</p>

#3. Commands

PowerShell	CMD
	



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Diferencias principales entre cmd y PowerShell

1. PowerShell es un lenguaje de shell y programación nuevo y muy mejorado que se hizo accesible por primera vez en los sistemas operativos Windows. Anteriormente era considerado solo como un complemento. Está diseñado especialmente para los administradores del sistema. Es similar a Linux Bash Scripting y se basa en la parte superior de .NET Framework.
2. Mientras que CMD es una interfaz de línea de comandos que interactúa con el sistema operativo a través de un comando, hay muchos comandos que interactúan con el sistema. El control de flujo no es fácil de controlar en cmd en comparación con PowerShell, debido a que CMD posee menos características en comparación con PowerShell.
3. PowerShell es un superconjunto CMD con una gran cantidad de características en comparación con CMD, el cual cuenta con características restringidas que lo limitan, mientras que PowerShell puede llamar a un programa externo o un programa nuevo. Tiene acceso directo a todos los .NET, fácil acceso a COM, C, F y otros lenguajes .NET. PowerShell puede pasar y devolver objetos como estructura de datos con métodos, eventos y propiedades a otro comando.
4. CMD tiene como salida el formato de texto simple.
5. PowerShell está orientado a objetos, con todas las características de un lenguaje orientado a objetos, como polimorfismo, encapsulación, herencia, abstracción.
6. PowerShell está integrado con el Framework .NET para que todas las clases del Framework .NET estén disponibles en PowerShell. Esta característica ayuda al administrador del sistema y al desarrollador a realizar la automatización de forma más eficaz mediante .NET.
7. Sin acceso al Framework .NET, CMD requiere más esfuerzo para realizar automatización de procesos.

Referencias:

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- <https://infographic.tv/visual-essential-windows-cmd-command-you-should-know/>
- <https://www.educba.com/powershell-vs-cmd/>

