

Windows PowerShell Commands and Cmdlets Cheat Sheet (PDF)

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Basics of Windows PowerShell

Below are some basic PowerShell terms and shortcut keys you should know, especially if you are a beginner. It is easy to launch this command-line tool but there are 17 ways to open PowerShell in Windows 10 and 11.

- **Alias:** An alternate or shorter name for a cmdlet, script, function, or executable file.
- **Cmdlet:** Commands built into shell written in .NET Framework.
- **Ctrl + C:** Cancel the current command.
- **F7:** Shortcut key to view command history in a window.
- **Functions:** Commands written in PowerShell language.
- **Home/End:** Shortcut key to move to the start/end of a line.
- **Insert:** Shortcut key to toggle between insert/overwrite mode.
- **Left/right arrow:** Navigate the cursor.
- **Ctrl + left/right arrow:** Navigate a word at a time.
- **Up/down arrow:** Move up and down through history.
- **Pipelines:** A series of commands connected by pipeline operators (|).
- **Parameter:** Arguments to a cmdlet/function/script.
- **Scripts:** Text files with ps1 extension.
- **Tab/Shift-Tab:** Shortcut key to complete commands as you type them.
- **Variable:** A unit of memory in which the data is stored. Variables usually start with a \$ sign and include spaces and special characters.

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List of PowerShell Commands and Cmdlets

Command name/Cmdlet	Alias	Description
Add-Content	ac	Adds content to the specified files. For instance, you can add words to a file.
Add-PSSnapIn	asnp	Adds PowerShell snap-ins to the current session.
Clear-Content	clc	Deletes the contents of a file while retaining the file.
Clear-History	clhy	Deletes specific entries from the command history.

Clear-Host	cls, clear	Removes all text (commands and output) from the current display.
Clear-ItemProperty	clp	Clears the value of a property.
Clear-Variable	clv	Clears the value of a variable.
Compare-Object	compare, dif	Compares two sets of objects directly by generating reports on the differences between the objects.
Connect-PSSession	cnsn	Reconnects to the disconnected sessions.
Copy-Item	copy, cp, cpi	Copies files and folders from a source file path to the destination file path.
Copy-ItemProperty	cpp	Copies the value of a property from a specified location to another location.
Disable-PSBreakpoint	dbp	Disables the breakpoints in the current PowerShell console.
Disconnect-PSSession	dnsn	Disconnects from a PowerShell session.
Enable-PSBreakpoint	ebp	Enables the breakpoints in the current PowerShell console.
Enter-PSSession	etsn	Starts a PowerShell session with a remote computer.
Exit-PSSession	exsn	Ends a PowerShell session with a remote computer.
Export-Alias	epal	Exports information about currently defined aliases to a file.
Export-Csv	epcsv	Converts objects into a series of character-separated values and saves the strings in a CSV file.
Export-PSSession	epsn	Exports cmdlets and functions from another session on a computer and saves them in a PowerShell module.
ForEach-Object	%, foreach	Performs modification or formatting on every item in a specified group of input objects (or items).
Format-Custom	fc	Uses a customized view to display objects while retaining their basic structure.
Format-List	fl	Formats the output of a command as a list of properties, showing each property on a new line.
Format-Table	ft	Formats the output into table form.

Get-Alias	gal	Gets the alias names for the cmdlets, functions, and scripts for the current session in PowerShell. If you want to find out or check the alias for a specific cmdlet, you can use <code>Get-Alias -Definition cmdlet-name</code> or <code>gal -d cmdlet-name</code> .
Get-ChildItem	gci, dir, ls	Gets the files and folders from one or more specified locations, such as a file system directory, registry hive, or certificate store.
Get-Command	gcm	Displays the list of all PowerShell commands and functions.
Get-Content	gc, type	Gets the contents from a file without opening it and returns each text file line as a string object.
Get-Date		Gets the current date and time.
Get-Help		Helps you to get to know all the PowerShell commands, their parameters, functions, scripts, workflows, etc.
Get-History	h, ghy, history	Displays the list of the previous commands used in the current session.
Get-HotFix		Gets hotfixes or updates that have been installed on either the local computer or remote computer.
Get-Item	gi	Gets files and folders at the specified location but doesn't get the contents of the item unless you use a wildcard (*).
Get-ItemProperty	gp	Gets the registry entries or values in the readable format in the console.
Get-Job	gjb	Gets the list of jobs running in the background, and those that have completed in the current session.
Get-Location	gl, pwd	Gets an object that represents the current directory within PowerShell.
Get-Member	gm	Displays the properties, methods, and different members of an object.
Get-Module	gmo	Displays the list of all the modules that are loaded behind the scene. You can use the cmdlet <code>Get-Module -ListAvailable</code> to view the list of all available modules. A module is a collection of cmdlets, variables, functions, and workflows.

Get-PSBreakpoint	gbp	Retrieves all current breakpoints that are set in the current session. This cmdlet can help you debug PowerShell.
Get-PSCallStack	gcs	Displays the call stack or all commands executed in the current session. With this cmdlet, you can see a history of all commands run as part of a single execution step.
Get-PSDrive	gdr	Displays the variety of drives exposed by Windows PowerShell in the current session.
Get-PSSession	gsn	Displays the sessions created in the current Windows PowerShell session on local and remote computers.
Get-PSSnapIn	gsnp	Displays the Windows PowerShell snap-in.
Get-Process	ps, gps	Retrieves the list of all running applications and processes on a local or remote computer. It shows the process owner, the process ID, or even where on disk the process is located.
Get-Service	gsv	Displays the list of all installed services, their status (such as running or stopped), and startup type on a local or remote computer. You can use parameters to include or exclude services.
Get-Unique	gu	Returns unique items from a sorted list. PowerShell cmdlet <code>Select-Object -Unique</code> does the same job but it's a bit different because it does not require objects to be pre-sorted.
Get-Variable	gv	Displays the names and the values of the PowerShell variables in the current console.
Get-WmiObject	gwmi	Searches for different WMI (Windows Management Instrumentation) classes on a system. Using this cmdlet, you can get any information about a Windows computer and its components.
Group-Object	group	Groups similar objects together based on common properties.
Import-Alias	ipal	Imports an alias list from a specified file in PowerShell.
Import-Csv	ipcsv	Fetch the information contained in a CSV file and create a table-like structure.

Import-Module	ipmo	Imports modules to the current session.
Import-PSSession	ipsn	Imports command from a remote computer into the current session.
Invoke-Command	icm	Runs a command or a script and returns the results as an expression on a local or remote computer.
Invoke-Expression	iex	Runs a specified string as a command on the local computer.
Invoke-History	r, ihy	Runs commands from the command history in the current session.
Invoke-Item	ii	Runs or opens the specified item (depending on the file type) in the program associated with the file type.
Invoke-RestMethod	irm	Sends HTTP or HTTPS requests using various HTTP methods to REST API endpoints. It is an alternative to Invoke-WebRequest.
Invoke-WMIMethod	iwmi	Launches a create process WMI(Windows Management Instrumentation) method of the WIN32_Process class.
Invoke-WebRequest	curl, iwr, wget	Sends HTTP, HTTPS, FTP, and FILE requests to a web page or web service on the Internet.
mkdir	md	Creates a new directory.
Measure-Object	measure	Measures how large an object is by calculating the numeric properties of the object in terms of characters, words, and lines.
Move-Item	mi, mv, move	Moves a file, folder, or registry along with its properties, contents, and child items from one location to another location.
Move-ItemProperty	mp	Moves the property of an item from one place to another.
New-Alias	nal	Creates a new alias.
New-Item	ni	Creates a new item.
New-Module	nmo	Creates a dynamic module from a script block.

New-PSDrive	ndr, mount	Creates a new temporary or persistent drive with various Windows PowerShell provider types. To create a new PSDrive you'll need to provide a drive name, the provider, and the location.
New-PSSession	nsn	Creates a persistent connection to a local or remote computer.
New-PSSessionConfigurationFile	npssc	Creates a persistent PowerShell connection to a local or remote host.
New-Variable	nv	Creates a new variable by simply assigning it a value.
Out-GridView	ogv	Displays data as an interactive table (the GUI format) that can be filtered or sorted based on different criteria.
Out-Host	oh	Sends output to the Windows PowerShell host for display.
Out-Printer	lp	Sends output to the connected printer.
Pop-Location	popd	Changes the current location to the path at the top of the directory stack.
Push-Location	pushd	Pushes or adds the current location to the top of a location stack called 'Paths' and sets the C:\Program Files\PowerShell\ directory as the current directory.
Receive-Job	rcjb	Fetches the results of Windows PowerShell background jobs, such as those started by using the Start-Job cmdlet.
Receive-PSSession	rcsn	Fetches the results of PowerShell sessions that were disconnected intentionally using the Disconnect-PSSession cmdlet.
Remove-Item	del, erase, rd, ri, rm, rmdir	Deletes items from specific locations like files, folders, registry keys, variables, and functions. You can use parameters to include or exclude items. You can use this command to delete files with very long names using PowerShell .
Remove-ItemProperty	rp	Deletes registry values and stored data of an item.
Remove-Job	rjb	Deletes a Windows PowerShell background job. Deletes n stopped or completed background job in PowerShell, You need to mention the '-id n' or '-name xxx' to specify the job you want to remove.

Remove-Module	rmo	Deletes module objects (cmdlets and functions) from the PowerShell session.
Remove-PSBreakpoint	rbp	Disables the breakpoint from the current console so they are not hit when the script runs.
Remove-PSDrive	rdr	Removes temporary PowerShell drives created with New-PSDrive. To remove multiple drives together, you should separate them using a comma (,).
Remove-PSSession	rsn	Closes PowerShell sessions, stops any running commands in the current session, ends the PSSession, and also closes the connection between the local and remote computers.
Remove-PSSnapin	rsnp	Unloads a snap-in from the current PowerShell session.
Remove-Variable	rv	Removes the variable and its value defined in PowerShell.
Remove-WMIObject	rwmi	Removes a WMI (Windows Management Instrumentation) class.
Rename-Item	ren, rni	Renames items such as files and directories in a PowerShell provider namespace.
Rename-ItemProperty	rnp	Renames an item's property without changing its value.
Resolve-Path	rvpa	Resolves the wildcard characters in a path and displays the items and containers at the location specified by the path.
Resume-Job	rujb	Resumes a suspended job.
Select-Object	select	Selects specific properties from an object or dataset.
Select-String	sls	Searches for text and text patterns in input strings and files.
Set-Alias	sal	Creates or changes an alias (alternate name) for a cmdlet or other command element in the current PowerShell session.
Set-Content	sc	Writes or replaces the content in an item with new content.
Set-Item	si	Changes the value of an item to the value specified in the command.

Set-ItemProperty	sp	Sets the value of the property of the specified object.
Set-Location	cd, chdir, sl	Changes the current directory or location to a location you specify.
Set-PSBreakpoint	sbp	Sets the line breakpoint in the script.
Set-Variable	set, sv	Assigns a value to a variable or changes the current value. If the specified variable doesn't exist, the cmdlet will create it.
Show-Command	shcm	Lets you find the parameters and syntax of other PowerShell cmdlets graphically.
Sort-Object	sort	Sorts objects in ascending or descending order based on the values of properties.
Start-Job	sajb	Starts a Windows PowerShell background job without interacting with the current session.
Start-Process	saps, start	Starts single or multiple processes on the local computer.
Start-Service	sasv	Start one or more stopped services on the system.
Start-Sleep	sleep	Suspends the activity in a script or session for a certain period of time.
Stop-Job	spjb	Stops all or stop selected jobs based on their name, ID, instance ID, or state.
Stop-Process	kill	Forcibly kills or stops the running processes.
Suspend-Job	sujb	Suspends workflow jobs by temporarily interrupting or pausing them.
Wait-Job	wjb	Suspends the command prompt until the PowerShell background tasks running in the session are complete.
Where-Object	?, where	Filters objects based on their property values.
Write-Output	echo, write	Sends any object or data type, such as strings, integers, arrays, and complex objects to the next command in the pipeline.