



Basic Navigation & File Management

Command Prompt (CMD) - Navigation

<code>cd directory</code>	Change directory to the specified directory.
<code>cd ..</code>	Move up one directory level.
<code>cd \</code>	Change to the root directory.
<code>dir</code>	List files and subdirectories in the current directory.
<code>tree</code>	Display the directory structure graphically.
<code>pushd directory</code>	Saves the current directory for use later and changes to specified directory.
<code>popd</code>	Returns to the directory most recently saved by the <code>pushd</code> command.

PowerShell - Navigation

<code>Set-Location directory</code>	Change directory to the specified directory.
<code>Set-Location ..</code>	Move up one directory level.
<code>Get-ChildItem</code>	List files and subdirectories in the current directory (alias: <code>ls</code> , <code>dir</code>).
<code>Push-Location directory</code>	Saves the current location to a stack and changes to the specified location.
<code>Pop-Location</code>	Retrieves the last location from the location stack.
<code>Get-Location</code>	Displays the current directory.

File Management (CMD)

<code>mkdir directory</code>	Create a new directory.
<code>rmdir directory</code>	Remove an empty directory.
<code>del filename</code>	Delete a file.
<code>copy source destination</code>	Copy a file.
<code>ren oldname newname</code>	Rename a file.

File Management & System Info

File Management (PowerShell)

<code>New-Item directory -ItemType Directory</code>	Create a new directory.
<code>Remove-Item directory</code>	Remove a directory (can also remove files).
<code>Copy-Item source destination</code>	Copy a file or directory.
<code>Rename-Item oldname newname</code>	Rename a file or directory.
<code>Move-Item source destination</code>	Move a file or directory.
<code>New-Item filename -ItemType File</code>	Creates a new file.

System Information (CMD)

<code>systeminfo</code>	Display detailed system configuration information.
<code>tasklist</code>	Display a list of currently running processes.
<code>ipconfig</code>	Display IP configuration information.
<code>hostname</code>	Displays the hostname of the machine.

System Information (PowerShell)

<code>Get-ComputerInfo</code>	Display comprehensive computer information.
<code>Get-Process</code>	Display a list of currently running processes.
<code>Get-NetIPConfiguration</code>	Display IP configuration information.
<code>Get-Host</code>	Displays information about the current PowerShell host.
<code>Test-Path path</code>	Check if the specified path exists.

Process Management & Networking

Process Management (CMD)

<code>taskkill /IM processname.exe /F</code>	Forcefully terminate a process by image name.
<code>taskkill /PID processID /F</code>	Forcefully terminate a process by process ID.
<code>start program</code>	Start a program.

Process Management (PowerShell)

<code>Stop-Process -Name processname -Force</code>	Forcefully terminate a process by name.
<code>Stop-Process -Id processID -Force</code>	Forcefully terminate a process by process ID.
<code>Start-Process program</code>	Start a program.
<code>Get-Service</code>	Get a list of the services available on the computer.
<code>Stop-Service servicename</code>	Stop a service.
<code>Start-Service servicename</code>	Start a service.

Networking (CMD)

<code>ping hostname</code>	Ping a hostname or IP address.
<code>tracert hostname</code>	Trace route to a hostname.
<code>netstat -a</code>	Display active TCP connections, listening ports, etc.

Advanced Commands & Scripting

Networking (PowerShell)

<code>Test-Connection</code> <code>hostname</code>	Ping a hostname or IP address.
<code>Test-Path -Path</code> <code>'TCP:hostname:port'</code>	Test a specific TCP port.
<code>Get-NetTCPConnection</code>	Get active TCP connections.
<code>Resolve-DnsName</code> <code>hostname</code>	Query DNS for hostname.

CMD Scripting

<code>@echo off</code>	- Disable command echoing.
<code>echo message</code>	- Display a message.
<code>set variable=value</code>	- Define a variable.
<code>%variable%</code>	- Access a variable.
<code>if condition (commands) else (commands)</code>	- Conditional execution.
<code>for %i in (set) do (command)</code>	- Loop through a set of items.

PowerShell Scripting

<code>\$variable = value</code>	- Define a variable.
<code>\$variable</code>	- Access a variable.
<code>if (condition) { commands } elseif (condition) { commands } else { commands }</code>	- Conditional execution.
<code>foreach (\$i in \$collection) { commands }</code>	- Loop through a collection.
<code>function functionName { commands }</code>	- Define a function.
<code>Write-Host message</code>	- Display a message.
<code>Get-Help command</code>	- Get help for a command.