

Windows

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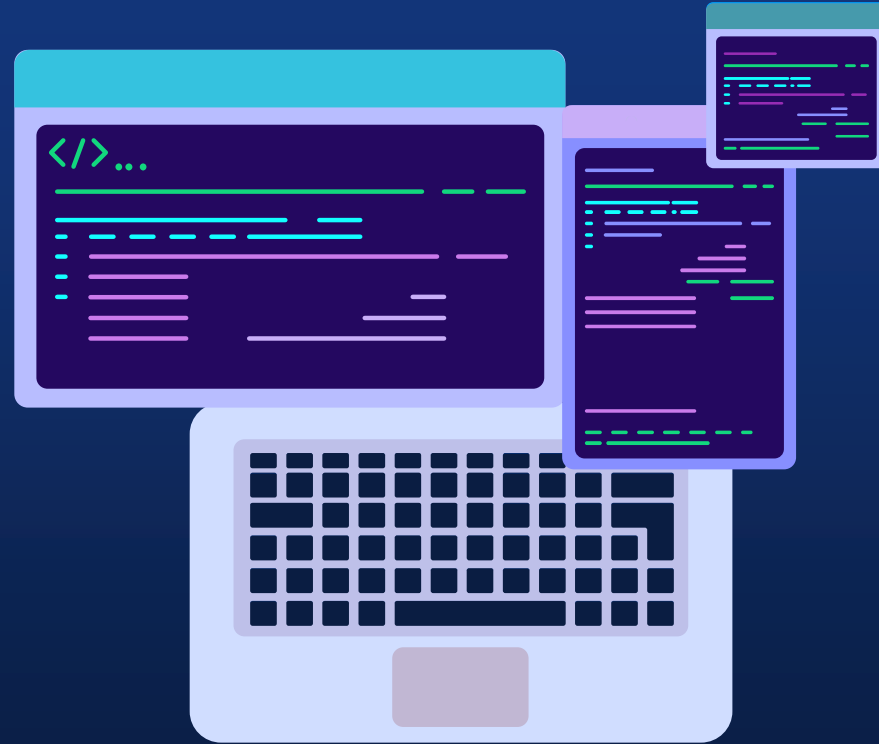


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Why is it different than cmd
and what is it used for?





01

Windows OS Basics



Windows OS basics



Interface

Desktop , Task Bar
Start menu



File Management

File Explorer , Creating and
Organizing folders



Customizing Settings

Themes , Desktop
Backgrounds , System
Settings



Some Info:

- **Directory** is a file system cataloging structure which contains references to other computer files
- **Command-line interface (CLI)** is a means of interacting with a computer program by inputting lines of text called command-lines.



CMD

is a command-line interpreter application that allows users to interact with the operating system through text-based commands



Windows Registry and types of windows files

- The Windows Registry is a collection of databases of configuration settings for Microsoft Windows operating systems.
- This part of Windows stores much of the information and settings for software programs
- The registry can be thought of as a kind of DNA for the Windows operating system
- Files :
- Csv docx exe gif mp4 mp3 pdf txt wav zip
- DLL is a library that contains code and data that can be used by more than one program at the same time





02

Internet Safety & Security





Some Info:

- A firewall is a network security device that monitors and controls incoming and outgoing network traffic based on predetermined security rules.
- Phishing is a type of cyberattack where attackers deceive individuals into providing sensitive information, such as usernames, passwords



Antivirus

Windows Security

- Windows Defender, is a built-in security solution that provides comprehensive protection against various threat
- Real-Time Protection: It actively scans files and processes to detect and neutralize threats
- Microsoft Defender SmartScreen: This feature helps protect you from phishing and malware websites and applications.
- Firewall & Network Protection: Windows Defender includes a robust firewall that monitors and controls incoming and outgoing network traffic based on predetermined security rules.



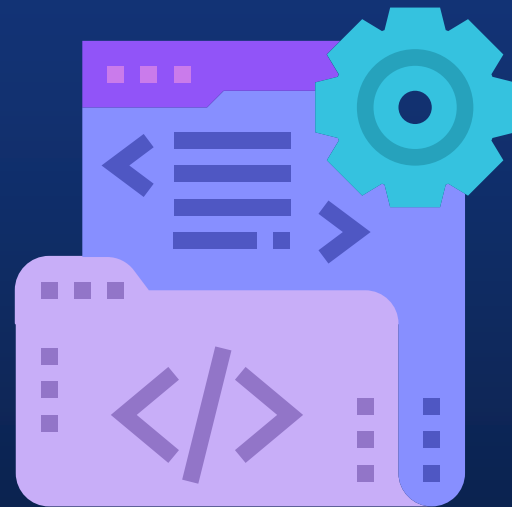
Using cmd for Protection

- Using Command Prompt (CMD) can be a powerful way to enhance your internet safety and security on Windows.
- 1. Check Internet Connection
- 2. Trace Network Path
- 3. View Network Configuration
- 4. Renew IP Address
- 5. Check Open Ports
- 6. Scan for Malware



03

CMD Basics



List of comands

```
1 dir:
2 Example: dir C:\Users
3 cd:
4 Example: cd C:\Program Files
5 mkdir:
6 Example: mkdir NewFolder
7 rmdir:
8 Example: rmdir /S NewFolder
9 copy:
10 Example: copy file.txt D:\Backup
11 xcopy:
12 Example: xcopy C:\Source D:\Destination
    /E /I
13 move:
14 Example: move file.txt D:\Documents
15 del:
16 Example: del file.txt
17 ipconfig:
18 Example: ipconfig /all
19 systeminfo :
20 tasklist:
21 ping:
22 Example: ping google.com
23 tracert:
24 Example: tracert google.com
25 netstat:
26 Example: netstat -a
27 nslookup:
28 Example: nslookup google.com
29 chkdsk: Checks a disk for errors.
30 Example: chkdsk C:
31 net user:
32 Example: net user username /add
33 shutdown:
34 Example: shutdown /r /t 0 (restarts
    immediately)
35 whoami: Displays the currently logged-in
    user.
36 cls: Clears the Command Prompt screen.
37 echo: Displays messages or turns command
    echoing on or off.
38 exit:
```

This Contains Basic
Commands plus
Network and
management
commands

04

Bash Script and ps1 files





What are Bash script files?

- A Bash script is a plain text file which contains a series of commands. These commands are a mixture of commands we would normally type ourselves on the command line
- It allows users to execute commands, navigate the file system, and run scripts that can automate repetitive tasks



Comparing .sh and .ps1 files



.sh files

Works very well for in
Unix environements
And has cross platform
limitations



.ps1 files

Originally designed for
windows and therefore
has a better use in
wondows



05

Windows Powershell





Powershell vs cmd

cmd


Works with text streams
So it is less efficient and
more error prone

Limited to basic
commands

Powershell


Uses objects therefore it
is better for data
manipulation

Has cmdlets and
modules




Powershell commands

A set of Basic Commands
used in windows
Powershell

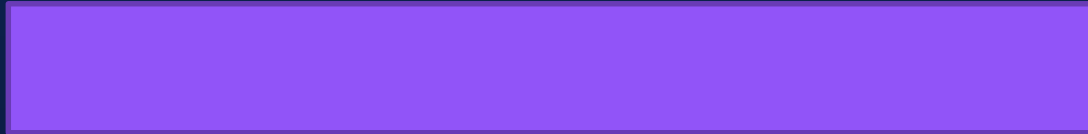


```
1 Get-Help:
2 Example: Get-Help Get-Process
3 Get-Command
4 : Retrieves all available commands.
5 Example: Get-Command
6 Get-Process
7 : Retrieves a list of processes running
  on your machine.
8 Example: Get-Process
9 Get-ChildItem
10 : Lists files and directories in
   a specified location (similar to ls in
   linux).
11 Example: Get-ChildItem C:\Users
12 Set-Location: (cd).
13 Example: Set-Location C:\Program Files
14 New-Item:
15 Example: New-Item -Path "
   C:\Example Folder" -ItemType Directory
16 Remove-Item:
17 Example: Remove-Item "C:\Example Folder"
   -Recurse -Force
18 Copy-Item:
19 Example: Copy-Item "C:\source\file.txt"
   "D:\destination\file.txt"
20 Move-Item: Moves files or directories.
21 Example: Move-Item "C:\source\file.txt"
   "D:\destination\file.txt"
22 Get-ComputerInfo
23 : Provides detailed information about th
   e computer.
24 Example: Get-ComputerInfo
25 Test-Connection:
26 Get-NetIPAddress:
27 Get-NetAdapter:
28 Get-LocalUser
29 : Lists local user accounts.
30 Example: Get-LocalUser
31 Shutdown: Shuts down or restarts the mac
   hine.
32 Example: Stop-Computer
33 Clear-Host
34 : Clears the PowerShell screen.
35 Out-File: Sends output to a file.
36 Example: Get-Process | Out-File "
   C:\processes.txt"
37 Select-String:
38 Example: Select-String -Path "
   C:\file.txt" -Pattern "search term"
```



THANKS

Do you have any questions?





RESOURCES

<https://www.itechguides.com/windows-powershell-vs-cmd/>

<https://www.fortinet.com/resources/cyberglossary/firewall>

<https://www.microsoft.com/en-us/windows/comprehensive-security?r=1>

<https://www.howtogeek.com/717570/how-to-use-microsoft-defender-antivirus-from-command-prompt-on-windows-10/>

<https://support.microsoft.com/en-us/windows/common-file-name-extensions-in-windows-da4a4430-8e76-89c5-59f7-1cdbbc75cb01>

