# Windows Maintenance and Backup Commands

## 1. Commands for Checking Files for Viruses and Fixing Corrupt Files

### Check for Viruses

1. Run Windows Defender (Microsoft Defender):

- Open the Start Menu and type 'Windows Security', then press Enter.

- Navigate to Virus & threat protection.

- Click on Quick Scan or Scan Options > choose Full Scan and click Scan Now.

2. Run a Custom Scan:

- In the same Scan Options, choose Custom Scan and select the specific folder or file to scan.

3. Update Definitions (optional):

- Before scanning, ensure virus definitions are up-to-date by clicking on Virus & threat protection updates > Check for updates.

### Fix Corrupt System Files

1. Use System File Checker (SFC):

- Open Command Prompt as an administrator:

- Press 'Win + S', type 'cmd', and right-click on Command Prompt > Run as administrator.

- Run the command:

sfc /scannow

- This will scan all protected system files and replace corrupt files with cached copies.

2. Use Deployment Image Servicing and Management (DISM):

- If sfc /scannow finds issues it can't fix, run these commands sequentially in the same Command Prompt:

DISM /Online /Cleanup-Image /CheckHealth

DISM /Online /Cleanup-Image /ScanHealth

DISM /Online /Cleanup-Image /RestoreHealth

- This will repair the Windows image and allow sfc /scannow to fix any remaining issues.

### Combine Actions in Command Prompt

To scan for viruses and fix system files in a streamlined process:

1. Open Command Prompt as an administrator.

2. Run these commands sequentially:

MpCmdRun.exe -Scan -ScanType 2 (Quick Scan with Microsoft Defender)

sfc /scannow

DISM /Online /Cleanup-Image /RestoreHealth

## 2. Commands to Clear Unused and Temp Files

1. Delete Temporary Files:

del /s /q %temp%\\* & rmdir /s /q %temp%

2. Clear the Windows Prefetch Folder (optional):

del /s /q C:\Windows\Prefetch\\*

3. Use Disk Cleanup Tool:

cleanmgr /sagerun:1

- Use `cleanmgr /sageset:1` to configure cleanup options first.

4. Clear Windows Update Cache (optional):

net stop wuauserv

del /s /q C:\Windows\SoftwareDistribution\Download\\*

net start wuauserv

5. Clear Recycle Bin:

rd /s /q C:\$Recycle.Bin

## 3. Commands to Set Up and Run Backups

### Set Up a Backup Schedule

Use the following command to set up a daily backup schedule:

wbadmin enable backup -addtarget:<DriveLetter>: -include:<DrivesToBackup> -schedule:<Time>

Example:

wbadmin enable backup -addtarget:D: -include:C: -schedule:20:00

### Run a Manual Backup

To perform a one-time backup:

wbadmin start backup -backuptarget:<DriveLetter>: -include:<DrivesToBackup> -quiet

Example:

wbadmin start backup -backuptarget:D: -include:C: -quiet

### Create a System Image Backup

To create a system image backup:

wbadmin start backup -backupTarget:<DriveLetter>: -include:C: -allCritical -quiet

Example:

wbadmin start backup -backupTarget:E: -include:C: -allCritical -quiet

### Restore Files from Backup

1. List available backups:

wbadmin get versions

2. Restore specific files or the entire backup:

wbadmin start recovery -version:<VersionIdentifier> -itemType:<Type> -items:<Path> -recoveryTarget:<TargetDrive>

## 4. Commands for Network Troubleshooting

### Check Network Configuration

1. Display IP Configuration:

ipconfig /all

- Shows detailed network configuration, including IP address, DNS servers, and MAC address.

2. Release and Renew IP Address:

ipconfig /release

ipconfig /renew

- Releases the current IP and requests a new one from the DHCP server.

3. Flush DNS Cache:

ipconfig /flushdns

- Clears the DNS cache to resolve domain-related issues.

4. Test Network Connectivity:

ping <hostname or IP address>

- Sends packets to a host to check connectivity.

Example:

ping google.com

5. Trace the Path to a Host:

tracert <hostname or IP address>

- Traces the route packets take to reach a host.

6. Test Open Ports:

telnet <hostname or IP address> <port>

- Tests if a specific port is open on a host. Requires Telnet client installation.

7. Check Active Network Connections:

netstat -an

- Displays active connections and listening ports.

### Repair Network Issues

1. Reset TCP/IP Stack:

netsh int ip reset

- Resets TCP/IP settings to default.

2. Reset Winsock:

netsh winsock reset

- Resets the Winsock catalog to resolve socket errors.

3. Disable and Enable Network Adapter:

netsh interface set interface "<Adapter Name>" disable

netsh interface set interface "<Adapter Name>" enable

## 5. Commands for Hardware Troubleshooting and Repair

### Check and Repair Hard Drive Issues

1. Check Disk for Errors:

chkdsk <DriveLetter>: /f

- Scans and fixes errors on the specified drive.

2. Scan and Recover Bad Sectors:

chkdsk <DriveLetter>: /r

- Locates bad sectors and attempts to recover readable information.

3. Check Drive Health (SMART Data):

wmic diskdrive get status

- Displays the health status of the hard drive.

4. Format a Drive:

format <DriveLetter>: /q

- Performs a quick format of the specified drive.

### Diagnose and Repair System Components

1. Run Hardware Diagnostics:

mdsched.exe

- Launches the Windows Memory Diagnostic Tool.

2. Check for Missing or Corrupted Drivers:

devmgmt.msc

- Opens Device Manager to identify issues with hardware drivers.

3. Update Drivers:

pnputil /add-driver <driver-path> /install

- Installs or updates a driver for hardware.

## 6. Additional Useful Commands

### General System Maintenance

1. Check System Uptime:

systeminfo | find "System Boot Time"

- Displays when the system was last booted.

2. View System Information:

systeminfo

- Provides a detailed summary of system specifications and configuration.

3. List Installed Programs:

wmic product get name,version

- Lists all installed programs and their versions.

4. Terminate a Process:

taskkill /im <process\_name> /f

- Forcibly ends a running process. Replace <process\_name> with the name of the process.

### Advanced Disk Management

1. Check Available Disk Space:

dir <DriveLetter>:

- Displays free and used space on the specified drive.

2. Convert File System to NTFS:

convert <DriveLetter>: /fs:ntfs

- Converts a drive to the NTFS file system without data loss.

### Advanced Network Tools

1. Network Diagnostics:

netsh diag gui

- Opens a graphical tool for diagnosing network problems.

2. Show Wi-Fi Passwords:

netsh wlan show profile name="<WiFi-Name>" key=clear

- Reveals the saved password for a specified Wi-Fi network. Replace <WiFi-Name> with the network name.

### Startup Troubleshooting

1. View Startup Programs:

taskmgr

- Opens Task Manager, where you can manage startup programs.

2. Enable Safe Mode (Next Reboot):

bcdedit /set {default} safeboot minimal

- Enables Safe Mode for the next boot. Reset with:

bcdedit /deletevalue {default} safeboot

## 7. Commands to Reset a Windows PC

### Reset PC via Command Line

1. Open Command Prompt or PowerShell as Administrator.

2. Use the following command to reset the PC:

systemreset -factoryreset

- Opens the reset menu with options to keep your files or remove everything.

3. To keep your files and perform a clean reset:

systemreset -cleanpc

4. For a fully automated full reset (removes all personal files, settings, and applications):

systemreset -factoryreset -full

### Reset Options for Legacy Systems (Windows 7 or Older)

On older systems, resetting might not be supported via `systemreset`. Instead:

- Use recovery options available during boot by pressing the respective key (e.g., F8, F12, or Esc).

- Reinstall the operating system using installation media.

Important Notes:

- Ensure all critical data is backed up before resetting your PC.

- If the `systemreset` command does not work, boot into Windows Recovery Mode to manually reset the PC.

### Normal Reset Command

1. Open Command Prompt or PowerShell as Administrator.

2. Use the following command to open the Reset this PC interface:

systemreset

- This opens the reset interface with two options:

- Keep my files: Resets the system while preserving personal files.

- Remove everything: Resets the system and removes all files, apps, and settings.