

250 Windows Problem-Fix Commands

A practical Windows 10/11 command reference for repair, diagnostics, networking, disks, accounts, updates, boot recovery, security, PowerShell, and system utilities

How to use this guide

INFO = primarily read-only diagnostics. FIX = changes system state but is commonly reversible. CAUTION = can affect boot, access, security, data availability, or policy and should be used only after verifying the target and having a recovery path.

Most commands are built into Windows 10/11. Some PowerShell cmdlets, optional tools, and GUI utilities can vary by edition, Windows build, installed features, or organizational policy. Commands using placeholders such as <username>, <service>, <rule>, <instance-id>, and <feature-name> must be customized before use.

Before high-impact repairs: back up important data, note BitLocker recovery information when applicable, and create a restore/recovery path. In Windows Recovery Environment, drive letters can differ from normal Windows.

Compiled September 2026 | Searchable PDF | Command Prompt + PowerShell + WinRE

Quick Repair Workflows

Windows system-file corruption: DISM /Online /Cleanup-Image /ScanHealth -> DISM /Online /Cleanup-Image /RestoreHealth -> sfc /scannow

DNS / TCP-IP reset: ipconfig /flushdns -> netsh winsock reset -> netsh int ip reset -> Restart Windows

Disk/file-system check: chkdsk C: /scan -> If repair is needed: chkdsk C: /f -> Use /r only when bad sectors/media problems are suspected

Windows Update / Store triage: Get-WindowsUpdateLog -> DISM /Online /Cleanup-Image /RestoreHealth -> sfc /scannow -> wsreset.exe

Boot/recovery triage: reagentc /info -> bcdedit /enum -> bootrec /scanos (WinRE) -> bcdboot ... only after verifying Windows and EFI partition letters

Malware / Defender health: Get-MpComputerStatus -> Update-MpSignature -> Start-MpScan -ScanType QuickScan -> Get-MpThreatDetection

Important: This is a troubleshooting reference, not an instruction to run every command. Use the least invasive command that answers the question first. Read-only diagnostics should normally come before resets, repairs, service changes, ACL changes, driver removal, or BCD operations.

1. System Repair and Windows Image Servicing

25 commands in this section

#	Command	Shell	Admin	Purpose / Notes
1	sfc /scannow	CMD	Yes	[FIX] Scan all protected Windows system files and repair incorrect or corrupted versions. A common first-line repair after DISM has repaired the component store.
2	sfc /verifyonly	CMD	Yes	[INFO] Verify protected system files without repairing them. Useful when you want a read-only integrity check.
3	sfc /scanfile=C:\Windows\System32\kernel32.dll	CMD	Yes	[FIX] Scan and repair one protected system file. Replace the example path with the exact protected file you need to check.
4	sfc /verifyfile=C:\Windows\System32\kernel32.dll	CMD	Yes	[INFO] Verify one protected system file without repairing it. Replace the example path as needed.
5	sfc /scannow /offbootdir=C:\ /offwindir=C:\Windows	WinRE/CMD	Yes	[FIX] Run System File Checker against an offline Windows installation. Drive letters can differ in Windows Recovery Environment; verify them first.
6	DISM /Online /Cleanup-Image /CheckHealth	CMD	Yes	[INFO] Check whether the running Windows image has already been flagged as corrupted. Fast check; it does not perform a full corruption scan.
7	DISM /Online /Cleanup-Image /ScanHealth	CMD	Yes	[INFO] Perform a deeper scan of the Windows component store for corruption. Can take several minutes.

#	Command	Shell	Admin	Purpose / Notes
8	DISM /Online /Cleanup-Image /RestoreHealth	CMD	Yes	[FIX] Scan the component store and repair detected corruption. <i>By default, DISM may use Windows Update as a repair source.</i>
9	DISM /Online /Cleanup-Image /RestoreHealth /Source:C:\RepairSource\Windows /LimitAccess	CMD	Yes	[FIX] Repair the Windows image using a known-good local repair source. <i>The repair source should match the installed Windows release/build as closely as practical.</i>
10	DISM /Online /Cleanup-Image /StartComponentCleanup	CMD	Yes	[FIX] Remove superseded component-store files that are no longer needed. <i>Can reduce WinSxS storage use.</i>
11	DISM /Online /Cleanup-Image /StartComponentCleanup /ResetBase	CMD	Yes	[CAUTION] Clean the component store and make current component versions the new baseline. <i>After ResetBase, installed updates incorporated into the baseline cannot be uninstalled individually.</i>
12	DISM /Online /Cleanup-Image /AnalyzeComponentStore	CMD	Yes	[INFO] Analyze WinSxS/component-store size and cleanup recommendations. <i>Read-only analysis.</i>
13	DISM /Online /Get-Features /Format:Table	CMD	Yes	[INFO] List optional Windows features and their current states. <i>Useful before enabling or disabling a feature.</i>
14	DISM /Online /Get-FeatureInfo /FeatureName:<feature-name>	CMD	Yes	[INFO] Show detailed information for a specific Windows optional feature. <i>Replace <feature-name> with a feature name from Get-Features.</i>
15	DISM /Online /Enable-Feature /FeatureName:<feature-name> /All	CMD	Yes	[FIX] Enable a Windows optional feature and required parent features. <i>A restart may be required.</i>

#	Command	Shell	Admin	Purpose / Notes
16	DISM /Online /Disable-Feature /FeatureName:<feature-name>	CMD	Yes	[FIX] Disable a Windows optional feature. <i>Verify application dependencies before disabling a feature.</i>
17	DISM /Online /Get-Packages	CMD	Yes	[INFO] List packages installed in the running Windows image. <i>Helpful for update/package troubleshooting.</i>
18	DISM /Online /Get-Drivers /Format:Table	CMD	Yes	[INFO] List third-party and inbox drivers known to the running Windows image. <i>Use with PnPUtl for driver troubleshooting.</i>
19	DISM /Online /Get-Capabilities	CMD	Yes	[INFO] List Windows capabilities and their installation state. <i>Examples include OpenSSH components and optional handwriting/language features.</i>
20	DISM /Online /Get-Intl	CMD	Yes	[INFO] Display language, locale, keyboard, and international settings. <i>Useful for locale or language-pack troubleshooting.</i>
21	DISM /Online /Get-CurrentEdition	CMD	Yes	[INFO] Display the current Windows edition. <i>Useful when diagnosing edition-specific feature availability.</i>
22	DISM /Online /Get-TargetEditions	CMD	Yes	[INFO] Show editions to which the current image can be upgraded. <i>Read-only.</i>
23	DISM /Cleanup-Mountpoints	CMD	Yes	[FIX] Clean up stale or corrupted DISM mount-point metadata. <i>Does not unmount images that can still be recovered.</i>

#	Command	Shell	Admin	Purpose / Notes
24	chkntfs C:	CMD	No	[INFO] Show whether drive C: is scheduled for automatic checking at startup. <i>Useful when Windows repeatedly checks a volume at boot.</i>
25	findstr /c:"[SR]" %windir%\Logs\CBS\CBS.log > "%userprofile%\Desktop\sfc_results.txt"	CMD	No	[INFO] Extract System File Checker entries from CBS.log into a desktop text file. <i>Helpful when SFC reports files it could not repair.</i>

2. System Information and Diagnostics

25 commands in this section

#	Command	Shell	Admin	Purpose / Notes
26	systeminfo	CMD	No	[INFO] Display detailed operating-system, hardware, hotfix, boot-time, and memory information. <i>Good general inventory command.</i>
27	systeminfo /fo list	CMD	No	[INFO] Display system information in list format. <i>Easier to read or capture in support notes.</i>
28	hostname	CMD	No	[INFO] Display the local computer name. <i>Useful for remote, domain, and network troubleshooting.</i>
29	whoami	CMD	No	[INFO] Display the security identity of the current user. <i>Shows domain or local account context.</i>
30	whoami /all	CMD	No	[INFO] Display the current user SID, groups, privileges, claims, and logon information. <i>Useful for permissions and UAC troubleshooting.</i>

#	Command	Shell	Admin	Purpose / Notes
31	whoami /priv	CMD	No	[INFO] List privileges available in the current access token. <i>Useful for diagnosing privilege-related failures.</i>
32	ver	CMD	No	[INFO] Display the Windows command-shell version string. <i>Quick version check.</i>
33	winver	Run/CMD	No	[INFO] Open the About Windows dialog with edition and build information. <i>GUI utility.</i>
34	msinfo32	Run/CMD	No	[INFO] Open System Information. <i>Shows hardware resources, components, drivers, and software environment.</i>
35	dxdiag	Run/CMD	No	[INFO] Open the DirectX Diagnostic Tool. <i>Useful for graphics, sound, and DirectX troubleshooting.</i>
36	dxdiag /t "%userprofile%\Desktop\dxdiag.txt"	CMD	No	[INFO] Export DirectX diagnostic information to a text file. <i>Creates a support-friendly report.</i>
37	set	CMD	No	[INFO] List environment variables for the current command session. <i>Useful for PATH, TEMP, profile, and application troubleshooting.</i>
38	echo %PATH%	CMD	No	[INFO] Display the current executable search path. <i>Useful when commands or applications are not found.</i>
39	echo %TEMP%	CMD	No	[INFO] Display the current user temporary-folder path. <i>Helpful for installer and cleanup troubleshooting.</i>

#	Command	Shell	Admin	Purpose / Notes
40	where.exe cmd	CMD	No	[INFO] Show the file path used for cmd.exe . <i>Can reveal PATH conflicts or unexpected copies.</i>
41	where.exe powershell	CMD	No	[INFO] Show PowerShell executable locations found through PATH. <i>Useful on systems with multiple PowerShell installations.</i>
42	tasklist	CMD	No	[INFO] List running processes. <i>Quick process inventory.</i>
43	tasklist /svc	CMD	No	[INFO] List running processes and hosted Windows services. <i>Useful for svchost/service troubleshooting.</i>
44	tasklist /m	CMD	No	[INFO] List processes and loaded DLL modules. <i>Can help identify module conflicts.</i>
45	tasklist /fi "STATUS eq not responding"	CMD	No	[INFO] List processes currently reported as not responding. <i>Useful before using TaskKill.</i>
46	driverquery	CMD	No	[INFO] List installed device drivers. <i>Quick driver inventory.</i>
47	driverquery /v	CMD	No	[INFO] List installed drivers with verbose details. <i>Includes paths, start modes, and state details.</i>
48	driverquery /si	CMD	No	[INFO] List installed drivers with signature information. <i>Useful for driver trust/signature issues.</i>
49	powercfg /energy	CMD	Yes	[INFO] Run a timed power-efficiency diagnostic and generate an HTML report. <i>Run while the system is relatively idle for cleaner results.</i>

#	Command	Shell	Admin	Purpose / Notes
50	powercfg /batteryreport	CMD	No	[INFO] Generate a battery usage and capacity history report. <i>Especially useful on laptops and rugged/mobile systems.</i>

3. Network, TCP/IP, DNS, Wi-Fi, and Connectivity

35 commands in this section

#	Command	Shell	Admin	Purpose / Notes
51	ipconfig	CMD	No	[INFO] Display basic IPv4/IPv6 addressing for network adapters. <i>Quick connectivity check.</i>
52	ipconfig /all	CMD	No	[INFO] Display full adapter, DHCP, DNS, gateway, and MAC configuration. <i>One of the best first commands for network diagnosis.</i>
53	ipconfig /release	CMD	No	[FIX] Release DHCP-assigned IPv4 addresses. <i>Network connectivity drops until a new lease is acquired.</i>
54	ipconfig /renew	CMD	No	[FIX] Request new DHCP addressing. <i>Often paired with /release.</i>
55	ipconfig /flushdns	CMD	No	[FIX] Clear the local DNS resolver cache. <i>Useful for stale or incorrect DNS results.</i>
56	ipconfig /displaydns	CMD	No	[INFO] Display cached DNS resolver entries. <i>Useful for seeing what Windows has cached.</i>

#	Command	Shell	Admin	Purpose / Notes
57	ipconfig /registerdns	CMD	Yes	[FIX] Refresh DHCP leases and re-register DNS names for configured adapters. <i>Most relevant on managed/domain networks.</i>
58	ping 1.1.1.1	CMD	No	[INFO] Test basic IP reachability to a public address. <i>If IP ping works but names fail, investigate DNS.</i>
59	ping -t 1.1.1.1	CMD	No	[INFO] Continuously ping a target until stopped with Ctrl+C. <i>Useful for intermittent packet loss.</i>
60	ping localhost	CMD	No	[INFO] Test the local TCP/IP stack and localhost name resolution. <i>Does not test the physical network.</i>
61	tracert 8.8.8.8	CMD	No	[INFO] Trace the IP hops between the PC and a destination. <i>Useful for locating routing delays or failures.</i>
62	pathping 8.8.8.8	CMD	No	[INFO] Combine route tracing with packet-loss statistics over time. <i>Slower than tracert but more diagnostic.</i>
63	nslookup example.com	CMD	No	[INFO] Query the configured DNS server for a name. <i>Useful for diagnosing name-resolution problems.</i>
64	nslookup example.com 8.8.8.8	CMD	No	[INFO] Query a specific DNS server for a name. <i>Helps compare local DNS behavior against another resolver.</i>
65	netstat -ano	CMD	No	[INFO] Show active connections/listeners with addresses, ports, and process IDs. <i>Use the PID with TaskList or Task Manager.</i>

#	Command	Shell	Admin	Purpose / Notes
66	netstat -abno	CMD	Yes	[INFO] Show connections/listeners, executable names, ports, and PIDs. <i>Can take longer and requires elevation for complete executable information.</i>
67	netstat -rn	CMD	No	[INFO] Display the IP routing table using netstat. <i>Equivalent to a routing-table view.</i>
68	netstat -e	CMD	No	[INFO] Display Ethernet interface statistics. <i>Useful for checking packet/error counters.</i>
69	arp -a	CMD	No	[INFO] Display the local ARP cache. <i>Useful for local-LAN IP-to-MAC troubleshooting.</i>
70	route print	CMD	No	[INFO] Display IPv4/IPv6 routing tables and interface indexes. <i>Check default routes and metrics.</i>
71	route print -4	CMD	No	[INFO] Display only IPv4 routes. <i>Useful on dual-stack systems.</i>
72	route print -6	CMD	No	[INFO] Display only IPv6 routes. <i>Useful for IPv6-specific issues.</i>
73	getmac /v /fo list	CMD	No	[INFO] Display MAC addresses and connection names in verbose list format. <i>Useful when identifying physical or virtual adapters.</i>
74	netsh interface show interface	CMD	No	[INFO] Show network interface names, administrative state, and connection state. <i>Good before scripting adapter changes.</i>

#	Command	Shell	Admin	Purpose / Notes
75	netsh interface ip show config	CMD	No	[INFO] Show IP configuration for network interfaces through Netsh. <i>Alternative view to ipconfig.</i>
76	netsh interface ipv4 show interfaces	CMD	No	[INFO] List IPv4 interfaces and interface indexes. <i>Useful for route/interface-specific commands.</i>
77	netsh winsock show catalog	CMD	Yes	[INFO] Display the Winsock provider catalog. <i>Useful when investigating damaged network providers or LSP entries.</i>
78	netsh winsock reset	CMD	Yes	[FIX] Reset the Winsock catalog to a clean state. <i>Restart Windows afterward.</i>
79	netsh int ip reset	CMD	Yes	[FIX] Reset TCP/IP configuration components to defaults. <i>Restart Windows afterward; custom static settings may need to be reapplied.</i>
80	netsh winhttp show proxy	CMD	No	[INFO] Display the system WinHTTP proxy configuration. <i>Important for Windows Update and service connectivity.</i>
81	netsh winhttp reset proxy	CMD	Yes	[FIX] Reset WinHTTP proxy configuration to direct access. <i>Do not use if your organization intentionally requires a proxy.</i>
82	netsh wlan show interfaces	CMD	No	[INFO] Show Wi-Fi connection state, SSID, signal, radio type, and interface details. <i>Useful for wireless troubleshooting.</i>

#	Command	Shell	Admin	Purpose / Notes
83	netsh wlan show drivers	CMD	No	[INFO] Show Wi-Fi driver capabilities and supported radio/authentication features. Useful for Wi-Fi 5/6/6E/7 capability checks.
84	netsh wlan show profiles	CMD	No	[INFO] List Wi-Fi profiles saved on the computer. Does not display passwords by itself.
85	netsh wlan show wlanreport	CMD	Yes	[INFO] Generate the Windows wireless network report. Creates an HTML report covering recent Wi-Fi sessions and failures.

4. Disk, Storage, File System, and Volume Repair

30 commands in this section

#	Command	Shell	Admin	Purpose / Notes
86	chkdsk C:	CMD	No	[INFO] Check the file system on drive C: and report errors without fixing them. Read-only check in its basic form.
87	chkdsk C: /scan	CMD	Yes	[INFO] Run an online NTFS scan while Windows remains running. Useful before deciding whether an offline repair is necessary.
88	chkdsk C: /f	CMD	Yes	[FIX] Fix logical file-system errors on drive C:. On the system drive, Windows may schedule the repair for next boot.

#	Command	Shell	Admin	Purpose / Notes
89	chkdsk C: /r	CMD	Yes	[CAUTION] Locate bad sectors, recover readable data, and repair file-system errors. <i>Can take a long time and is more intensive than /f.</i>
90	chkdsk C: /spotfix	CMD	Yes	[FIX] Perform a short offline fix for NTFS issues previously identified by online scanning. <i>Typically requires the volume to be briefly offline.</i>
91	fsutil fsinfo drives	CMD	Yes	[INFO] List drive letters recognized by the system. <i>Useful from recovery or scripting contexts.</i>
92	fsutil fsinfo volumeinfo C:	CMD	Yes	[INFO] Display volume label, serial number, file system, and feature information. <i>Read-only.</i>
93	fsutil dirty query C:	CMD	Yes	[INFO] Check whether a volume is marked dirty and may require Chkdsk. <i>Useful when Windows keeps scheduling disk checks.</i>
94	fsutil behavior query DisableDeleteNotify	CMD	Yes	[INFO] Check TRIM/Delete Notification status for supported storage. <i>A result of 0 generally indicates TRIM notifications are enabled.</i>
95	diskpart	CMD	Yes	[CAUTION] Open the DiskPart interactive storage-management shell. <i>DiskPart can destroy data if the wrong disk/volume is selected.</i>
96	diskpart -> list disk	DiskPart	Yes	[INFO] List physical disks visible to DiskPart. <i>Always identify the correct disk before any modifying operation.</i>

#	Command	Shell	Admin	Purpose / Notes
97	diskpart -> list volume	DiskPart	Yes	[INFO] List volumes and drive letters. <i>Useful in Windows Recovery Environment where letters may change.</i>
98	diskpart -> list partition	DiskPart	Yes	[INFO] List partitions on the currently selected disk. <i>Select the intended disk first.</i>
99	diskpart -> select disk 0	DiskPart	Yes	[CAUTION] Select disk 0 for subsequent DiskPart commands. <i>Selection alone does not modify data, but every following command applies to this disk.</i>
100	diskpart -> detail disk	DiskPart	Yes	[INFO] Display detailed information about the selected disk. <i>Use before making disk-level changes.</i>
101	diskpart -> select volume C	DiskPart	Yes	[CAUTION] Select the volume with drive letter C for subsequent DiskPart commands. <i>Verify the selected volume before any modifying operation.</i>
102	diskpart -> detail volume	DiskPart	Yes	[INFO] Display detailed information about the selected volume. <i>Useful for file-system, hidden, and mount information.</i>
103	diskpart -> rescan	DiskPart	Yes	[FIX] Rescan buses for newly attached disks or changed storage devices. <i>Non-destructive discovery operation.</i>
104	mountvol	CMD	Yes	[INFO] List volume GUIDs and current mount points. <i>Useful when troubleshooting drive-letter or mount-point issues.</i>

#	Command	Shell	Admin	Purpose / Notes
105	mountvol /?	CMD	No	[INFO] Display MountVol syntax and available operations. <i>Useful before changing volume mount points.</i>
106	defrag C: /A /V	CMD	Yes	[INFO] Analyze fragmentation/optimization state for drive C: and show verbose details. <i>Windows chooses appropriate optimization for HDDs vs SSDs.</i>
107	defrag C: /O /U /V	CMD	Yes	[FIX] Optimize drive C: using the proper method for the media type. <i>/O selects the appropriate optimization operation.</i>
108	compact /compactos:query	CMD	Yes	[INFO] Check whether Windows system binaries are using CompactOS compression. <i>Read-only.</i>
109	compact /compactos:always	CMD	Yes	[FIX] Compress Windows system binaries with CompactOS. <i>Can save disk space at the cost of some CPU overhead.</i>
110	compact /compactos:never	CMD	Yes	[FIX] Disable CompactOS and decompress Windows system binaries. <i>Requires enough free disk space.</i>
111	cipher /c C:\Path\File.ext	CMD	No	[INFO] Display EFS encryption information for a file. <i>Useful when access problems involve Encrypting File System.</i>
112	fsutil volume diskfree C:	CMD	Yes	[INFO] Display free and total byte counts for a volume. <i>Useful in scripts or low-space diagnosis.</i>

#	Command	Shell	Admin	Purpose / Notes
113	vssadmin list shadows	CMD	Yes	[INFO] List existing Volume Shadow Copy snapshots. <i>Useful for restore-point and backup troubleshooting.</i>
114	vssadmin list shadowstorage	CMD	Yes	[INFO] Show allocated, used, and maximum shadow-copy storage. <i>Useful when System Restore points disappear or VSS consumes space.</i>
115	mountvol C: /L	CMD	Yes	[INFO] Display the volume GUID name associated with drive C:. <i>Helpful for boot, recovery, and mount-point troubleshooting.</i>

5. User Accounts, Groups, Permissions, and Access

20 commands in this section

#	Command	Shell	Admin	Purpose / Notes
116	net user	CMD	No	[INFO] List local user accounts. <i>On a domain-joined PC this still focuses on the local machine unless otherwise specified.</i>
117	net user %username%	CMD	No	[INFO] Display details for the currently named local user account. <i>If the signed-in identity is a domain account, specify a local account explicitly.</i>
118	net user <username> *	CMD	Yes	[FIX] Set a local account password interactively without exposing the new password in the command line. <i>Use an elevated terminal.</i>

#	Command	Shell	Admin	Purpose / Notes
119	net user <username> /active:yes	CMD	Yes	[FIX] Enable a local user account. <i>Do not enable unused accounts without a reason.</i>
120	net user <username> /active:no	CMD	Yes	[FIX] Disable a local user account. <i>Confirm another administrator account remains available.</i>
121	net localgroup	CMD	No	[INFO] List local groups. <i>Useful for finding Administrators, Users, Remote Desktop Users, and other groups.</i>
122	net localgroup Administrators	CMD	No	[INFO] List members of the local Administrators group. <i>Useful for privilege auditing.</i>
123	net localgroup Administrators <username> /add	CMD	Yes	[CAUTION] Add a local or domain account to the local Administrators group. <i>Grants broad administrative privileges.</i>
124	net localgroup Administrators <username> /delete	CMD	Yes	[FIX] Remove an account from the local Administrators group. <i>Verify another admin remains before removing critical access.</i>
125	net accounts	CMD	No	[INFO] Display local password and lockout policy settings. <i>Useful for diagnosing unexpected lockouts or password restrictions.</i>
126	net accounts /minpwlen:12	CMD	Yes	[CAUTION] Set the minimum local-account password length to 12 characters. <i>Changes local security policy and may affect account creation/password changes.</i>

#	Command	Shell	Admin	Purpose / Notes
127	net accounts /lockoutthreshold:5	CMD	Yes	[CAUTION] Set local-account lockout threshold to five failed attempts. <i>Use policy values appropriate to your environment.</i>
128	whoami /groups	CMD	No	[INFO] Show security groups and integrity level for the current token. <i>Useful for permissions/UAC diagnosis.</i>
129	whoami /user	CMD	No	[INFO] Display the current user name and SID. <i>Useful when matching ACL entries to SIDs.</i>
130	icacls C:\Path	CMD	No	[INFO] Display NTFS permissions for a file or folder. <i>Read-only unless additional switches are used.</i>
131	icacls C:\Path /verify	CMD	No	[INFO] Verify ACL structure and find non-canonical or inconsistent entries. <i>Helpful after permission corruption.</i>
132	icacls C:\Path /save "%userprofile%\Desktop\acl.txt" /t	CMD	Yes	[INFO] Back up NTFS ACLs for a folder tree to a file. <i>Back up permissions before making bulk ACL changes.</i>
133	icacls C:\Path /reset /t /c	CMD	Yes	[CAUTION] Reset ACLs in a folder tree to inherited/default permissions where applicable. <i>Can break application-specific permissions; use only when you understand the expected inheritance.</i>
134	takeown /f C:\Path /r /d y	CMD	Yes	[CAUTION] Take ownership of a file/folder tree as the current administrator. <i>Ownership changes do not automatically grant every required permission.</i>

#	Command	Shell	Admin	Purpose / Notes
135	runas /user:Administrator cmd	CMD	No	[FIX] Launch Command Prompt under another account after interactive credential entry. <i>The built-in Administrator account may be disabled by default.</i>

6. Processes, Services, Drivers, Devices, and Performance

25 commands in this section

#	Command	Shell	Admin	Purpose / Notes
136	sc query	CMD	No	[INFO] Display active service/driver entries. <i>Quick Service Control Manager view.</i>
137	sc queryex type= service state= all	CMD	No	[INFO] List all services with extended information including process IDs. <i>Spaces after equals signs are required by sc.exe syntax.</i>
138	sc qc wuauserv	CMD	No	[INFO] Show configuration of the Windows Update service. <i>Displays binary path, start type, dependencies, and account.</i>
139	sc query wuauserv	CMD	No	[INFO] Show current state of the Windows Update service. <i>Useful when updates appear stuck.</i>
140	sc start wuauserv	CMD	Yes	[FIX] Start the Windows Update service. <i>Service policy/dependencies can still prevent startup.</i>
141	sc stop wuauserv	CMD	Yes	[FIX] Stop the Windows Update service. <i>Useful during update-cache maintenance; restart it afterward.</i>

#	Command	Shell	Admin	Purpose / Notes
142	sc config <service> start= demand	CMD	Yes	[CAUTION] Set a service to Manual start. <i>Changing essential service start modes can destabilize Windows.</i>
143	net start	CMD	No	[INFO] List currently started Windows services. <i>Simple alternative to service-management tools.</i>
144	net start wuauserv	CMD	Yes	[FIX] Start the Windows Update service using Net.exe. <i>Equivalent administrative intent to sc start.</i>
145	net stop wuauserv	CMD	Yes	[FIX] Stop the Windows Update service using Net.exe. <i>Used in some Windows Update reset workflows.</i>
146	taskkill /pid <PID> /f	CMD	Yes	[CAUTION] Force-terminate a process by process ID. <i>Unsaved application data can be lost.</i>
147	taskkill /im <process.exe> /f	CMD	Yes	[CAUTION] Force-terminate processes by executable image name. <i>Can terminate multiple matching processes.</i>
148	tasklist /fi "PID eq <PID>"	CMD	No	[INFO] Show the process associated with a specific PID. <i>Useful before terminating a process.</i>
149	pnputil /enum-devices /problem	CMD	Yes	[INFO] List Plug and Play devices reporting problems. <i>Excellent first command for Device Manager error troubleshooting.</i>
150	pnputil /enum-drivers	CMD	Yes	[INFO] List third-party driver packages in the driver store. <i>Shows Published Name values such as oem42.inf.</i>

#	Command	Shell	Admin	Purpose / Notes
151	pnputil /enum-devices /connected	CMD	Yes	[INFO] List currently connected Plug and Play devices. <i>Useful for hardware inventory and troubleshooting.</i>
152	pnputil /scan-devices	CMD	Yes	[FIX] Scan for hardware changes. <i>Command-line equivalent of Device Manager scanning for changes.</i>
153	pnputil /restart-device "<instance-id>"	CMD	Yes	[FIX] Restart a Plug and Play device by instance ID. <i>The device will briefly disconnect/reinitialize.</i>
154	pnputil /disable-device "<instance-id>"	CMD	Yes	[CAUTION] Disable a Plug and Play device by instance ID. <i>Avoid disabling input, boot-critical, storage, or network devices unless you have a recovery path.</i>
155	pnputil /enable-device "<instance-id>"	CMD	Yes	[FIX] Enable a previously disabled Plug and Play device. <i>Use the exact instance ID.</i>
156	pnputil /delete-driver oem##.inf /uninstall	CMD	Yes	[CAUTION] Uninstall a driver package and remove it from the driver store when possible. <i>Verify the Published Name and keep a replacement driver available.</i>
157	devmgmt.msc	Run/CMD	Yes	[INFO] Open Device Manager. <i>Useful for GUI device status, properties, rollback, and driver actions.</i>
158	services.msc	Run/CMD	Yes	[INFO] Open the Services management console. <i>Useful for startup type, dependency, and recovery settings.</i>

#	Command	Shell	Admin	Purpose / Notes
159	cleanmgr	Run/CMD	No	[FIX] Open Disk Cleanup where available. Some cleanup functions have moved to Windows Settings on newer versions.
160	resmon	Run/CMD	No	[INFO] Open Resource Monitor. Provides live CPU, memory, disk, and network activity by process.

7. Windows Update, Store Apps, Capabilities, and Installer Repair

15 commands in this section

#	Command	Shell	Admin	Purpose / Notes
161	Get-WindowsUpdateLog	PowerShell	No	[INFO] Convert Windows Update ETL traces into a readable WindowsUpdate.log file. Useful for deep Windows Update troubleshooting.
162	Get-HotFix	PowerShell	No	[INFO] List installed hotfixes reported through the legacy Win32_QuickFixEngineering interface. Not every servicing package is represented here.
163	Get-HotFix Sort-Object InstalledOn -Descending	PowerShell	No	[INFO] List reported hotfixes with newest installations first. Useful when an issue began after a recent update.
164	DISM /Online /Get-Packages /Format:Table findstr /i "Package_for_RollupFix"	CMD	Yes	[INFO] Filter DISM package output for cumulative/rollup package entries. Useful when Get-HotFix does not show the package you need.

#	Command	Shell	Admin	Purpose / Notes
165	Get-AppxPackage -AllUsers	PowerShell	Yes	[INFO] List installed AppX/MSIX packages for all users. <i>Useful for Store-app registration troubleshooting.</i>
166	Get-AppxPackage -AllUsers Select-Object Name,PackageFullName	PowerShell	Yes	[INFO] Display a concise list of AppX/MSIX package names and full package identities. <i>Useful before package-specific repair actions.</i>
167	Get-AppxPackage Microsoft.WindowsStore Reset-AppxPackage	PowerShell	No	[FIX] Reset the Microsoft Store app package where Reset-AppxPackage is available. <i>If unsupported on your build, use Settings > Apps > Installed apps > Microsoft Store > Advanced options.</i>
168	wsreset.exe	Run/CMD	No	[FIX] Reset the Microsoft Store cache and reopen the Store. <i>Does not uninstall Store apps.</i>
169	start ms-settings:windowsupdate	CMD	No	[INFO] Open the Windows Update page in Settings. <i>Useful after command-line repair steps.</i>
170	DISM /Online /Get-Capabilities /Format:Table findstr /i "Not Present"	CMD	Yes	[INFO] List Windows capabilities that are not currently installed. <i>Useful for feature-on-demand troubleshooting.</i>
171	DISM /Online /Add-Capability /CapabilityName:<capability-name>	CMD	Yes	[FIX] Install a Windows capability by its exact capability identity. <i>May use Windows Update unless a source/policy says otherwise.</i>
172	DISM /Online /Remove-Capability /CapabilityName:<capability-name>	CMD	Yes	[CAUTION] Remove an installed Windows capability. <i>Verify dependent workflows before removal.</i>

#	Command	Shell	Admin	Purpose / Notes
173	DISM /Online /Get-ProvisionedAppxPackages	CMD	Yes	[INFO] List provisioned AppX packages that can be staged for new user profiles. <i>Useful for default-app provisioning issues.</i>
174	msiexec /unregister	CMD	Yes	[FIX] Unregister the Windows Installer service interface. <i>Normally followed immediately by msiexec /regserver.</i>
175	msiexec /regserver	CMD	Yes	[FIX] Re-register the Windows Installer service interface. <i>Can fix some MSI installer registration problems.</i>

8. Boot, BCD, Windows Recovery Environment, and Startup

20 commands in this section

#	Command	Shell	Admin	Purpose / Notes
176	reagentc /info	CMD	Yes	[INFO] Display Windows Recovery Environment status and configured recovery-image locations. <i>Use before changing WinRE settings.</i>
177	reagentc /enable	CMD	Yes	[FIX] Enable Windows Recovery Environment. <i>Requires a valid WinRE configuration/image.</i>
178	reagentc /disable	CMD	Yes	[CAUTION] Disable Windows Recovery Environment. <i>Do this only for troubleshooting or maintenance; re-enable it afterward.</i>
179	bcdedit /enum	CMD	Yes	[INFO] Display active Boot Configuration Data entries. <i>Read-only enumeration.</i>

#	Command	Shell	Admin	Purpose / Notes
180	bcdedit /enum all	CMD	Yes	[INFO] Display all Boot Configuration Data objects and settings. <i>Useful for deeper boot diagnosis.</i>
181	bcdedit /export C:\bcd-backup	CMD	Yes	[INFO] Back up the system BCD store to a file. <i>Create a backup before modifying BCD settings.</i>
182	bcdedit /import C:\bcd-backup	WinRE/CMD	Yes	[CAUTION] Restore the system BCD store from an exported backup. <i>Overwrites the current system store; use only with the correct backup.</i>
183	bcdedit /set {current} safeboot minimal	CMD	Yes	[CAUTION] Configure the current Windows loader to boot into minimal Safe Mode. <i>Remember to remove the safeboot value afterward or Windows will keep booting Safe Mode.</i>
184	bcdedit /deletevalue {current} safeboot	CMD	Yes	[FIX] Remove the forced Safe Mode setting from the current boot entry. <i>Use after Safe Mode troubleshooting.</i>
185	bcdedit /set {current} bootlog Yes	CMD	Yes	[FIX] Enable driver boot logging for the current Windows loader. <i>Windows writes ntbtlog.txt in the Windows folder.</i>
186	bcdedit /set {current} bootlog No	CMD	Yes	[FIX] Disable driver boot logging. <i>Use after collecting the needed boot log.</i>
187	bcdedit /timeout 10	CMD	Yes	[FIX] Set boot-menu timeout to 10 seconds. <i>Only relevant when a boot menu is shown.</i>
188	bcdedit /set {bootmgr} displaybootmenu yes	CMD	Yes	[FIX] Force Windows Boot Manager to display the boot menu. <i>Useful during multi-boot or recovery work.</i>

#	Command	Shell	Admin	Purpose / Notes
189	bcdedit /set {bootmgr} displaybootmenu no	CMD	Yes	[FIX] Stop forcing the boot menu to display. Restores normal boot-manager behavior.
190	bootrec /scanos	WinRE/CMD	Yes	[INFO] Scan disks for Windows installations not currently listed in BCD. Run from Windows Recovery Environment.
191	bootrec /rebuildbcd	WinRE/CMD	Yes	[CAUTION] Scan for Windows installations and rebuild/add BCD entries. Run from WinRE; review detected installations carefully.
192	bootrec /fixmbr	WinRE/CMD	Yes	[CAUTION] Write a Windows-compatible master boot record to the system disk. Most relevant to legacy BIOS/MBR boot problems.
193	bootrec /fixboot	WinRE/CMD	Yes	[CAUTION] Write a new boot sector to the system partition. On some UEFI systems this can return Access is denied; BCDBoot is often the more relevant UEFI repair tool.
194	bcdboot C:\Windows /s S: /f UEFI	WinRE/CMD	Yes	[CAUTION] Create/rebuild UEFI boot files from a Windows installation onto EFI partition S:. In WinRE, confirm both the Windows and EFI partition drive letters before running.
195	shutdown /r /o /t 0	CMD	No	[FIX] Restart directly into Windows advanced startup/recovery options. Save open work first.

9. Windows Security, Microsoft Defender, Firewall, and BitLocker

25 commands in this section

#	Command	Shell	Admin	Purpose / Notes
196	Get-MpComputerStatus	PowerShell	No	[INFO] Display Microsoft Defender Antivirus engine, protection, signature, and scan status. <i>Useful for verifying real-time protection and definition health.</i>
197	Update-MpSignature	PowerShell	Yes	[FIX] Request an update of Microsoft Defender security intelligence. <i>Requires Defender Antivirus to be available and permitted by policy.</i>
198	Start-MpScan -ScanType QuickScan	PowerShell	Yes	[FIX] Start a Defender quick scan. <i>Targets common malware persistence and active locations.</i>
199	Start-MpScan -ScanType FullScan	PowerShell	Yes	[FIX] Start a Defender full scan. <i>Can take a long time on large drives.</i>
200	Start-MpScan -ScanPath C:\	PowerShell	Yes	[FIX] Start a custom Defender scan of drive C:. <i>Use a narrower path for faster targeted scans.</i>
201	Get-MpThreat	PowerShell	Yes	[INFO] Display threats known to Microsoft Defender on the computer. <i>Useful for current and historical threat context.</i>
202	Get-MpThreatDetection	PowerShell	Yes	[INFO] Display Defender threat-detection events and details. <i>Useful for identifying affected paths and detection times.</i>
203	Remove-MpThreat	PowerShell	Yes	[FIX] Remove active Defender threats according to Defender actions. <i>Review detection details first when possible.</i>

#	Command	Shell	Admin	Purpose / Notes
204	Get-MpPreference	PowerShell	Yes	[INFO] Display Microsoft Defender preference settings. <i>Useful for checking exclusions and protection configuration.</i>
205	Set-MpPreference -DisableRealtimeMonitoring \$false	PowerShell	Yes	[FIX] Ensure Microsoft Defender real-time monitoring is enabled when policy allows it. <i>Group Policy or another antivirus product can override availability.</i>
206	Set-MpPreference -PUAProtection Enabled	PowerShell	Yes	[FIX] Enable potentially unwanted application protection in Defender. <i>Can improve protection against bundled/adware-style software.</i>
207	Add-MpPreference -ExclusionPath "C: \Path"	PowerShell	Yes	[CAUTION] Add a Defender path exclusion. <i>Exclusions reduce malware scanning coverage; use only for a justified compatibility case.</i>
208	Remove-MpPreference -ExclusionPath "C:\Path"	PowerShell	Yes	[FIX] Remove a Defender path exclusion. <i>Helps restore normal scanning coverage.</i>
209	"%ProgramFiles%\Windows Defender\MpCmdRun.exe" -SignatureUpdate	CMD	Yes	[FIX] Update Defender security intelligence using MpCmdRun. <i>Useful when PowerShell cmdlets are unavailable.</i>
210	"%ProgramFiles%\Windows Defender\MpCmdRun.exe" -Scan -ScanType 1	CMD	Yes	[FIX] Start a Defender quick scan using MpCmdRun. <i>ScanType 1 is Quick Scan.</i>
211	netsh advfirewall show allprofiles	CMD	Yes	[INFO] Display Windows Defender Firewall settings for all profiles. <i>Check Domain, Private, and Public profile state.</i>

#	Command	Shell	Admin	Purpose / Notes
212	netsh advfirewall set allprofiles state on	CMD	Yes	[FIX] Enable Windows Defender Firewall on all profiles. <i>Existing firewall rules remain in place.</i>
213	netsh advfirewall reset	CMD	Yes	[CAUTION] Reset Windows Defender Firewall policy to defaults. <i>Custom firewall rules can be lost; export or document them first in managed environments.</i>
214	Get-NetFirewallProfile	PowerShell	No	[INFO] Display firewall profile configuration. <i>PowerShell alternative to Netsh.</i>
215	Get-NetFirewallRule -Enabled True	PowerShell	Yes	[INFO] List enabled firewall rules. <i>Can produce a large result set.</i>
216	Get-NetFirewallRule -DisplayName "<rule>"	PowerShell	Yes	[INFO] Display a specific firewall rule by display name. <i>Use wildcards when appropriate.</i>
217	Enable-NetFirewallRule -DisplayName "<rule>"	PowerShell	Yes	[FIX] Enable a named Windows Firewall rule. <i>Confirm the rule scope and profile before enabling it.</i>
218	Disable-NetFirewallRule -DisplayName "<rule>"	PowerShell	Yes	[FIX] Disable a named Windows Firewall rule. <i>May immediately block an application or service.</i>
219	Get-BitLockerVolume	PowerShell	Yes	[INFO] Display BitLocker protection and encryption status for volumes. <i>Useful before firmware, TPM, or boot-repair work.</i>
220	manage-bde -status	CMD	Yes	[INFO] Display BitLocker status, encryption percentage, protectors, and lock state. <i>Read-only status check.</i>

10. PowerShell Administrative Troubleshooting

20 commands in this section

#	Command	Shell	Admin	Purpose / Notes
221	Get-ComputerInfo	PowerShell	No	[INFO] Display broad operating-system, firmware, hardware, and Windows configuration information. <i>Can return a large amount of data.</i>
222	Get-CimInstance Win32_OperatingSystem	PowerShell	No	[INFO] Display OS build, boot time, memory, and other operating-system data through CIM. <i>Modern replacement for many WMIC queries.</i>
223	Get-CimInstance Win32_ComputerSystem	PowerShell	No	[INFO] Display computer manufacturer, model, memory, domain/workgroup, and system type. <i>Useful for support inventory.</i>
224	Get-CimInstance Win32_BIOS	PowerShell	No	[INFO] Display BIOS/UEFI vendor, version, serial information, and release data. <i>Useful for firmware troubleshooting.</i>
225	Get-Volume	PowerShell	No	[INFO] List volumes, drive letters, file systems, health status, and free space. <i>Modern storage view.</i>
226	Get-Disk	PowerShell	No	[INFO] List physical disks and partitioning/operational state. <i>Useful before storage changes.</i>
227	Get-Partition	PowerShell	No	[INFO] List disk partitions and drive-letter mappings. <i>Useful in recovery and storage diagnosis.</i>
228	Repair-Volume -DriveLetter C -Scan	PowerShell	Yes	[INFO] Scan volume C: for file-system problems without forcing an offline repair. <i>PowerShell equivalent to an online repair scan.</i>

#	Command	Shell	Admin	Purpose / Notes
229	Repair-Volume -DriveLetter C -OfflineScanAndFix	PowerShell	Yes	[FIX] Take the volume offline when possible, scan it, and fix file-system errors. <i>On the system volume this generally requires boot-time/recovery handling.</i>
230	Get-PhysicalDisk	PowerShell	No	[INFO] List physical disks exposed through the Storage module with health/media information. <i>Especially useful with Storage Spaces-capable systems.</i>
231	Get-PhysicalDisk Get-StorageReliabilityCounter	PowerShell	Yes	[INFO] Display available storage reliability counters such as temperature and wear/error data. <i>Not every drive/controller exposes every counter.</i>
232	Get-NetAdapter	PowerShell	No	[INFO] List network adapters, link status, speed, and MAC addresses. <i>Useful before resetting or restarting an adapter.</i>
233	Get-NetIPConfiguration	PowerShell	No	[INFO] Display adapter IP addresses, gateways, and DNS server information. <i>Structured PowerShell alternative to ipconfig /all.</i>
234	Test-NetConnection 1.1.1.1	PowerShell	No	[INFO] Test reachability and report ping/route information. <i>PowerShell alternative to Ping.</i>
235	Test-NetConnection example.com -Port 443	PowerShell	No	[INFO] Test TCP connectivity to a specific host and port. <i>Excellent for distinguishing network reachability from application problems.</i>
236	Resolve-DnsName example.com	PowerShell	No	[INFO] Query DNS and return structured name-resolution records. <i>PowerShell alternative to Nslookup.</i>

#	Command	Shell	Admin	Purpose / Notes
237	Clear-DnsClientCache	PowerShell	Yes	[FIX] Clear the local DNS client resolver cache. <i>PowerShell alternative to ipconfig /flushdns.</i>
238	Restart-NetAdapter -Name "Ethernet"	PowerShell	Yes	[FIX] Restart a named network adapter. <i>The connection drops briefly; avoid on remote sessions unless you have alternate access.</i>
239	Get-Service Where-Object Status -eq 'Stopped'	PowerShell	No	[INFO] List services currently in the Stopped state. <i>A stopped service is not automatically a problem; check expected start type.</i>
240	Restart-Service -Name wuauserv	PowerShell	Yes	[FIX] Restart the Windows Update service. <i>Useful for transient update-service failures.</i>

11. Event Logs, Group Policy, Time, and Useful System Utilities

10 commands in this section

#	Command	Shell	Admin	Purpose / Notes
241	eventvwr.msc	Run/CMD	No	[INFO] Open Event Viewer. <i>Review System and Application logs around the time a problem occurred.</i>
242	perfmon	Run/CMD	No	[INFO] Open Performance Monitor. <i>Useful for counters, data-collector sets, and performance diagnosis.</i>
243	perfmon /rel	Run/CMD	No	[INFO] Open Reliability Monitor. <i>Excellent visual timeline of crashes, update failures, and application faults.</i>

#	Command	Shell	Admin	Purpose / Notes
244	msconfig	Run/CMD	Yes	[CAUTION] Open System Configuration. <i>Useful for diagnostic boot options; avoid leaving the system in Selective Startup unintentionally.</i>
245	regedit	Run/CMD	Yes	[CAUTION] Open Registry Editor. <i>Back up relevant keys or create a restore point before modifying the registry.</i>
246	gpupdate /force	CMD	Yes	[FIX] Force refresh of computer and user Group Policy. <i>Managed settings may be reapplied immediately.</i>
247	gpresult /r	CMD	No	[INFO] Display a summary of applied Group Policy objects for the current context. <i>Run elevated to see computer policy details.</i>
248	wevtutil el	CMD	No	[INFO] List registered Windows event logs. <i>Useful before querying a specific log.</i>
249	wevtutil qe System /c:20 /rd:true /f:text	CMD	Yes	[INFO] Display the 20 newest System log events as text. <i>Add /q with an XPath filter for targeted troubleshooting.</i>
250	w32tm /query /status	CMD	No	[INFO] Display Windows Time service synchronization status and current source. <i>Useful for clock drift, authentication, certificate, and domain issues.</i>

Microsoft Reference Sources

Primary references used to validate the major command families in this guide. Microsoft documentation can change as Windows evolves; check the current page when working on a production or managed system.

Windows commands reference

<https://learn.microsoft.com/windows-server/administration/windows-commands/windows-commands>

System File Checker (sfc)

<https://learn.microsoft.com/windows-server/administration/windows-commands/sfc>

Repair a Windows image with DISM

<https://learn.microsoft.com/windows-hardware/manufacture/desktop/repair-a-windows-image>

DISM reference

<https://learn.microsoft.com/windows-hardware/manufacture/desktop/dism-reference--deployment-image-servicing-and-management>

BCDEdit command reference

<https://learn.microsoft.com/windows-server/administration/windows-commands/bcdedit>

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<https://learn.microsoft.com/windows-hardware/manufacture/desktop/bcdedit-command-line-options>

Netsh Winsock

<https://learn.microsoft.com/windows-server/administration/windows-commands/netsh-winsock>

Microsoft Defender PowerShell - Get-MpComputerStatus

<https://learn.microsoft.com/powershell/module/defender/get-mpcomputerstatus>

Microsoft Defender PowerShell - Start-MpScan

<https://learn.microsoft.com/powershell/module/defender/start-mpscan>

Repair-WindowsImage PowerShell cmdlet

<https://learn.microsoft.com/powershell/module/dism/repair-windowsimage>

Fix Windows Update corruptions and installation failures

<https://learn.microsoft.com/troubleshoot/windows-server/installing-updates-features-roles/fix-windows-update-errors>

Scope note: This guide emphasizes Windows 10/11 client troubleshooting. Some commands also apply to Windows Server. Availability can differ by Windows edition, installed optional features, hardware, Microsoft Defender state, and enterprise policy. Legacy or environment-specific behavior should always be verified before automation or fleet-wide deployment.