

# Windows 11 Essential IT Troubleshooting

The IT Help Desk team handles a wide range of technical support requests every day. While some issues require deep investigation, many common problems can be resolved quickly with straightforward troubleshooting steps. This guide outlines effective methods for diagnosing and resolving frequent issues on Windows 11.

## Slow computer performance

Performance can suffer from excessive background applications or limited disk space. Constantly maintain your system by closing unused programs, clearing temporary files, and running disk cleanup.

For Windows 11, proceed to disable startup add. Proceed to open **Task Manager > Startup tab > Disable unneeded programs**.

**Adjust Visual Effects:** Go to **System Properties → Advanced → Performance Settings → Select Adjust for best performance**.

A **refresh install of Windows 11** once a year can also help remove accumulated clutter and restore system stability.

## Checks the integrity of Windows file system

**System File Checker (SFC)** helps replace corrupted files with cached copies. Run this command via Command Prompt as Administrator

```
sfc /scannow
```

**Deployment Imaging Service and Management Tool (DISM)** is Used to fix Windows image and servicing problems. Run this command after SFC does not fix the issue. It connects to Windows Update to replace corrupted files

```
DISM /Online /Cleanup-Image /RestoreHealth
```

## Internet Connectivity Issues

Restarting the router and checking if the device is connected to the right network. Verify the IP configuration. Basic troubleshooting for internet connectivity should include restarting the router and checking the cables.

In Windows 11, use the **netsh winsock reset** command when experiencing network connectivity issues that cannot be resolved through standard troubleshooting steps.

A few common scenarios are malware infection, network configuration issues, and VPN issues. **Winsock reset** command restarts the communication required between your device and the network. (Run Command Prompt as Administrator).

1. Type **netsh winsock reset** and select **Enter**
2. Type **netsh int ip reset** and select **Enter**.
3. Type **ipconfig /release** and select **Enter**.
4. Type **ipconfig /renew** and select **Enter**.
5. Type **ipconfig /flushdns** and select **Enter**.

If you experience persistent internet problems, go to **Settings > Network & Internet > Advanced network settings > Network reset**, then restart your computer.

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Consider running an Internet speed test in order to verify upload and download speeds. Try [speedtest](#) and [internet speed test](#). A good internet speed for home use is 100 Mbps upload and download speed. For an office environment, the ideal internet speed will depend on the number of staff members in the office.

## Forgotten Password

Password resets are a common task for helpdesk teams. Implementing self-service password reset tools can simplify this process and minimize downtime. Encourage users to enable two-factor authentication for enhanced security and use password managers to prevent forgotten passwords. Tools like [LastPass](#) and [Bitwarden](#) are excellent options.

## Printer Not Working

Network printer issues can be a daily concern for help desk teams. Here are a few troubleshooting steps.

- Verify if the printer and the computer are connected to the right network.
- Proceed to update printer drivers. On some occasions, remove and readd the printer.
- Check printer paper tray and toner levels.
- Occasionally a computer restart can resolve the issue.

For local printers, ensure that the printer cable is properly connected. Check out Microsoft Support for [Add or Install a Printer in Windows 11](#) and [How to download and install the latest printer drivers](#).

## Software Crashes or Freezes

Instruct the user to close and reopen the application or restart their computer. If the issue persists, proceed to assist with updating software updates or reinstalling the application. For Windows 11, consider updating drivers via Device Manager. Check out [How to install Windows Updates](#).

## Quick Fixes

- **Restart the computer:** A simple restart often resolves many temporary glitches and performance issues by refreshing system processes and clearing cached data.
- **Use troubleshooters:** Use troubleshooters: **Go to Settings > System > Troubleshoot > Other troubleshooters** to find and run automated tools for common problems like audio, network, or Windows Update issues.
- **Install the latest updates.** To check for updates, select **Start > Settings > Windows Update**, then select Check for updates.
- **Check Storage:** Be sure that you have at least 10-15% of free space on your hard drive, as a lack of space can cause performance issue. You can free up space by running **Disk Cleanup** or navigating to **Settings > System > Storage > Cleanup recommendations** to remove temporary and unused files.
- **Update Device Drivers:** Outdated or incompatible drivers can lead to hardware malfunctions. Go to **Settings > Windows Update > Advanced options > Optional updates** and install any available driver updates, or use **Device Manager** to check manually.

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## Microsoft PC Manager

**Microsoft PC Manager** is designed to be lightweight, user-friendly, and effective across a wide range of hardware configurations. It is now available for download via the [Microsoft Store](#). Key Features:

1. **One-Click Performance Boost:** Instantly enhance your PC's performance by cleaning up temporary files and optimizing memory usage.
2. **Storage Optimization:** Reclaim storage space by organizing large files, uninstalling rarely used apps, and enabling storage sense to automatically clear temporary files.
3. **File Organization:** Simplify file and folder management with user-friendly, built-in tools.
4. **Enhanced Security:** Safeguard your default settings from unauthorized changes and perform threat scans with a single-click security check.
5. **Pop-Up Control:** Minimize ads and app pop-ups for a seamless, distraction-free experience.
6. **Comprehensive Health Check:** Detect and resolve system issues efficiently with an all-in-one health check.

## Common Windows 11 Command Lines

For ease of reference, here is a basic Windows 11 command line provides a deeper appreciation for the capabilities behind this popular operating system. This command line cheatsheet serves as a valuable resource, providing advanced functions that can be extremely useful as a swift reference for improving your command line expertise.

## Windows 11 Command Line

System Diagnostics & Repair	
whoami	Show current username
ver	Shows the current Windows version
systeminfo	Detailed system specs
hostname	Show computer name
chkdsk C: /f	Scan and fix disk errors
sfc /scannow	Scan and fix system files
cleanmgr	Launch Disk Cleanup
Resetting Network Adapter	
Winsock reset command restarts the communication required between your device and the network. (Run as administrator in Command Prompt (CMD))	
1. Type netsh winsock reset and select Enter.	
2. Type netsh int ip reset and select Enter.	
3. Type ipconfig /release and select Enter.	
4. Type ipconfig /renew and select Enter.	
5. Type ipconfig /flushdns and select Enter.	
Ipconfig	
Ipconfig displays all current TCP/IP network configuration, including DHCP and DNS settings refresh. Without parameters, it displays IPv4 & IPv6 addresses, subnet mask, and default gateway for all adapters. It also flushes and resets the DNS client resolver cache.	
ipconfig	To display the basic TCP/IP configuration
ipconfig /all	To display the full TCP/IP configuration
ipconfig /flushdns	To flush the DNS resolver cache
ipconfig /release & ipconfig /renew	To release and renew IP address
ipconfig /displaydns	To display DNS settings
ipconfig /registerdns	To resolve DNS conflicts
Route	
The <a href="#">route</a> command is primarily used to configure and manage IP routing tables which determine how data packets are forwarded between different networks.	
route print	To display the entire contents of the IP routing table
route add -p 0.0.0.0 mask 255.255.255.0 192.168.1.1	To add a default route with the default gateway address of 192.168.1.1 The -p makes the route persistent.
route change	Modify an existing route.
route delete -p	Delete a route associated with a specific interface.

Power & Battery Tools	
powercfg /energy	Generate power efficiency report
powercfg /batteryreport	Battery health report
How to ping a website	
Ping allows a user to test and verify if a particular destination IP address exists and can accept requests in computer network administration.	
ping google.com	Ping Google website
ping 8.8.8.8	Ping Google website (via IP address)
Tracert Diagnostic Utility	
The TRACERT diagnostic utility determines the route to a destination by sending Internet Control Message Protocol (ICMP) echo packets to the destination.	
tracert -d google.com	
tracert /4/d <a href="#">www.microsoft.com</a>	
DiskPart	
The <a href="#">diskpart</a> command helps one manage computer's drive (disk, partitions, volumes, or virtual hard disks. <a href="#">Here</a> is the Microsoft link.	
Windows Package Manager (Winget)	
The <a href="#">winget</a> command-line tool is a power tool for managing software packages. For more information, visit Microsoft <a href="#">here</a> . Winget normally comes preinstalled on Windows 11. It can be downloaded via the Microsoft Store or <a href="#">Github</a> .	
winget list	Shows list of all applications
winget search <app_name>	Search for an application
winget install <app_name>	Install an application
winget uninstall <app_name>	Uninstall an application
winget upgrade <app_name>	Upgrade an application
winget upgrade -all	Upgrade all applications
Task & Process Management	
tasklist	List running processes
taskkill /IM processname.exe /F	Force kill a process
shutdown /r /t 0	Immediate shutdown
shutdown /r /t 0	Immediate restart
shutdown /r /fw /t 0	Restarts into BIOS
Name Server Lookup	
Nslookup is used to obtain domain name or IP address information	
nslookup <a href="#">www.example.com</a>	Query a domain
nslookup 8.8.8.8	Query an IP address
nslookup <a href="#">www.example.com</a> 8.8.4.4	Set DNS Server

TECH TIPS

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## Disclaimer

Use Windows Terminal commands at your own risk. While every effort has been made to ensure the accuracy of this guide, improper use can lead to system issues or data loss. Always back up important data before running commands. If you are unsure about any step or its potential consequences, consult a qualified IT professional before proceeding.

## Final Thoughts

In IT helpdesk support, many technical issues can be resolved through quick and effective troubleshooting. Empowering users to address basic problems on their own not only speeds up resolution times but also creates a more efficient and proactive support environment. Building a well-structured knowledge base with clear, concise reference guides can significantly enhance incident management and overall help desk performance.