

## **What is Desktop Troubleshooting**

Ans: **Desktop troubleshooting** refers to the process of identifying, diagnosing, and resolving problems that occur with a desktop computer or its components. It involves both hardware and software issues and is a key skill in IT support and technical roles.

### **Common Areas of Desktop Troubleshooting:**

#### **1. Hardware Issues**

- **No power / won't turn on**
- **Overheating**
- **Peripheral devices not working (mouse, keyboard, printer)**
- **Hard drive or SSD failure**
- **No display / monitor issues**
- **RAM issues (random reboots, blue screens)**

#### **2. Software Issues**

- **Operating system errors (e.g., Windows not booting)**
- **Driver conflicts or outdated drivers**
- **Application crashes or freezes**
- **Virus or malware infections**
- **System performance issues (slow computer)**

#### **3. Network Problems**

- **No internet connection**
- **Slow or intermittent connectivity**
- **Network adapter issues**

#### **4. User-Related Issues**

- **Forgotten passwords**
- **Accidental file deletion**
- **Misconfigured settings**

## **Basic Steps in Desktop Troubleshooting:**

### **1. Identify the Problem**

- Ask the user what happened and when it started.
- Observe any error messages or symptoms.

### **2. Check the Basics**

- Is the power connected?
- Are cables and peripherals properly connected?
- Are there any obvious physical damages?

### **3. Isolate the Cause**

- Is it hardware or software?
- Does the issue occur in Safe Mode?
- Try using another device to test peripherals or network.

### **4. Apply a Fix**

- Restart the system.
- Update drivers or software.
- Replace faulty components.
- Run antivirus or system repair tools.

### **5. Test and Confirm**

- Make sure the issue is resolved.
- Check that everything is functioning normally.

### **6. Document the Solution**

- Record what the problem was and how it was fixed for future reference.

## **For Desktop Troubleshooting, What do we have to learn?**

Ans: **Troubleshooting Topics Covered:**

### **1. Devices:**

- Desktop
- Laptop
- Servers / Workstations

## 2. Operating System (O.S.) Installation & Related Tasks:

- OS Installation
- Application Installation
- Drivers Installation

## 3. Boot Process:

- BIOS
- POST (Power-On Self-Test)
- Motherboard-related issues

## 4. Disk Management:

- SAN (Storage Area Network), NAS (Network Attached Storage)
- Disk configuration
- File Allocation Table (FAT) system

## 5. RAM:

- Likely refers to RAM troubleshooting (e.g., memory issues, upgrade, failure detection)

## 6. RAID System:

- **RAID (Redundant Array of Independent Disks)**

Used for data redundancy or performance improvement.

- **Types:**

- **Hardware RAID** – Managed by a physical RAID controller.
- **Software RAID** – Managed by the operating system.

## 6. BSOD (Blue Screen of Death):

- Critical system crash in Windows, often due to:
  - Faulty drivers
  - Hardware failure (RAM, HDD, etc.)
  - Corrupt system files
  - Solutions typically involve:
    - Checking error codes
    - Updating/removing drivers

- Running memory and disk checks
- Restoring or reinstalling the OS

## 7. System Slow Performance:

- Common causes:
  - Too many startup programs
  - Low RAM
  - Disk fragmentation or nearing capacity
  - Malware
  - Outdated drivers or OS
- Solutions may include:
  - Task Manager optimization
  - RAM upgrade
  - Disk cleanup and defragmentation
  - Malware scan
  - OS and driver updates

## 8. Patching (Software, OS):

- Involves updating:
  - **Operating system** (e.g., Windows Updates)
  - **Software applications** (e.g., browsers, antivirus)
- **Purpose:**
  - Fix bugs
  - Improve performance
  - Address security vulnerabilities

## 9. Basic of Networking:

- Understanding essential concepts such as:
  - **IP address, subnet, gateway**
  - **LAN vs. WAN**
  - **Ping, traceroute**
  - **Network adapters**
  - Troubleshooting tools like `ipconfig`, `ping`, `nslookup`

## 10. Printer Management:

- Includes:
  - Installing and configuring printers (local/network)
  - Managing print queues
  - Troubleshooting issues (e.g., offline printer, driver errors)
  - Sharing printers over a network