Level 1 Tickets

Instructions:

Select two of the five scenarios to troubleshoot.

One template has been created for each of the two tickets you need to choose.

Make one to two slides for each scenario for the solution(s) you researched.

Add audio explaining the steps you took, including your recommended solution.

Ticket Number: 1001

Scenario: My Printer. Ink is Smearing

Identify the problem.

- Printout is smearing.
- Cyan (blue) toner appears to be leaking.
- Likely issue with toner cartridge, fuser unit, or incorrect paper.

Establish a theory of probable cause.

- Toner cartridge might be defective, improperly seated, or leaking.
- Fuser unit (responsible for heating toner onto paper) may be malfunctioning.
- Using the wrong paper type or humidity in the room may also cause smearing.

Evaluate the theory to determine the actual cause.

- Remove and inspect the cyan toner cartridge for physical damage or leakage.
- Try printing a test page with black text only to isolate if the issue is color-specific.
- Try a different sheet of plain paper to rule out improper paper type.

Establish a plan of action to resolve the problem and implement the solution.

- Replace the cyan cartridge with a known working one.
- Clean any excess toner inside the printer carefully.
- If issue persists, check or replace the fuser unit.
- Consider having a backup printer available for urgent print jobs.

Ticket Number: 1002

Scenario: Mouse not working

Identify the problem.

- The mouse is not functioning (no response from cursor).
- Device Manager does not show the mouse system isn't recognizing it at all.
- Could be a hardware connection, USB port, driver, or mouse failure.

Establish a theory of probable cause.

- The mouse may not be properly connected (loose or unplugged).
- The USB port might be faulty.
- The mouse itself may be broken, or its internal driver is missing/corrupt.
- Battery (for wireless) might be dead, or wireless receiver is not detected.

Evaluate the theory to determine the actual cause.

- Try the mouse in a different USB port.
- Try a different mouse in the same port.
- Plug the current mouse into another computer to confirm if it still works.
- Check Device Manager again and click Scan for hardware changes.

Establish a plan of action to resolve the problem and implement the solution.

- If the mouse works in a different port/computer, the issue is with the PC or port.
- If no mouse works, consider restarting the computer and/or reinstalling USB drivers.
- Document steps and escalate if the issue remains unresolved.

Level 2 Tickets

Instructions:

Select two of the five scenarios to troubleshoot.

One template has been created for each of the two tickets you need to choose.

Make one to two slides for each scenario for the solution(s) you researched.

Add audio explaining the steps you took, including your recommended solution.

Ticket Number: 2002

Scenario: Dell Machine Making Clicking Sound, not Connecting to Windows Desktop

Identify the problem.

- System is not reaching the Windows desktop.
- Produces audible beeps in sequence: 1 - 3 - 2.
- This is a BIOS-level diagnostic code, typically signaling hardware errors.

Establish a theory of probable cause.

- Beep codes are the BIOS/UEFI's way of saying something is wrong.
- On Dell systems, this specific 1-3-2 pattern usually means a memory issue 1-3-2 Memory not properly seated or memory failure
- Could also be motherboard communication failure with RAM modules.

Evaluate the theory to determine the actual cause.

- Power down and open the system case.
- Remove and reseat the RAM modules (ensure they're clicked in firmly).
- If issue continues, try one RAM stick at a time in different slots.
- Use known-good RAM if available to rule out bad memory sticks.

Establish a plan of action to resolve the problem and implement the solution.

- Document that beep code 1-3-2 was identified.
- Re-secure memory modules.
- If reseating doesn't resolve it, test with alternate memory.
- If memory still fails, escalate to hardware repair or motherboard diagnostics.

Ticket Number: 2005

Scenario: Can’t Connect to Online Shared Drive

Identify the problem.

- User cannot access network resources (shared drive).
- Blake’s computer reports an IP address of 169.254.x.x, which is not part of the company’s 10.20.30.x network range.
- 169.254.x.x is a self-assigned APIPA address, indicating the system could not reach the DHCP server.

Establish a theory of probable cause.

- Disconnected Ethernet cable or bad port
- Disabled or malfunctioning NIC (Network Interface Card)
- DHCP server down, or DHCP lease process failed
- Switch/Router issues in local subnet

Evaluate the theory to determine the actual cause.

- Physically check Ethernet cable connection
- Restart PC and see if a valid IP address is assigned
- Release/Renew IP address via CMD:
  - ipconfig /release
  - ipconfig /renew
- Check NIC status in Device Manager
- Try plugging into another Ethernet port, if available

Establish a plan of action to resolve the problem and implement the solution.

- First: check hardware connectivity and renew IP
- If unsuccessful, escalate to network support to check DHCP server and switch port
- Provide temporary access via another PC if deadline is pressing

Level 3 Tickets

Instructions:

Select two of the five scenarios to troubleshoot.

One template has been created for each of the two tickets you need to choose.

Make one to two slides for each scenario for the solution(s) you researched.

Add audio explaining the steps you took, including your recommended solution.

Ticket Number: 3001

Scenario: No Internet Connection

Identify the problem.

- User cannot access the internet.
- Manual IPv4 settings are entered, possibly incorrectly.
- Screenshot shows: IP Address: 192.168.1.172, Subnet Mask: 255.255.255.0, Default Gateway: *empty,* DNS Server: 192.168.1.1

Establish a theory of probable cause.

- The manual configuration is missing a default gateway, which is required to route traffic to the internet.
- This will prevent internet access even if the local connection appears active.
- The DNS server is fine, but without a gateway, external websites like Pinterest won't load.

Evaluate the theory to determine the actual cause.

- The manual configuration is missing a default gateway, which is required to route traffic to the internet.
- This will prevent internet access even if the local connection appears active.
- The DNS server is fine, but without a gateway, external websites like Pinterest won't load.

Establish a plan of action to resolve the problem and implement the solution.

- Add a proper default gateway (usually 192.168.1.1).
- Or switch settings to "Obtain IP address automatically" to use DHCP.
- Try pinging a website (e.g., ping www.google.com) after adjustment to test connectivity.

Ticket Number: 3003

Scenario: Frozen Computer

Identify the problem.

- Applications are lagging and freezing
- Saving files is delayed or causes errors
- Task Manager shows Disk 1 (C:) SSD at 100% usage indicating the drive is being overwhelmed or failing
- This suggests a failing SSD, software read/write issues, or background process overuse

Establish a theory of probable cause.

- SSD is nearing the end of life or has bad sectors, causing delays
- A background process (e.g., Windows indexing or antivirus scanning) could be maxing disk
- Corrupted file system or outdated drivers

Evaluate the theory to determine the actual cause.

- Run chkdsk to check drive health
- Check SMART data using CrystalDiskInfo or similar tool
- Disable Windows Search or Antivirus temporarily to test performance impact
- Boot in Safe Mode to test system behavior without background apps

Establish a plan of action to resolve the problem and implement the solution.

- Back up important data immediately
- Run hardware diagnostics on SSD
- If failing, plan for SSD replacement
- If issue is software-based, perform cleanup and optimization (disable background tasks, update drivers)

Summary

One part of the assignment that I actually found exciting was the ticket about the incorrect IP configuration. At first, I wasn't sure what was wrong, but once I looked at the IPv4 settings and noticed the missing default gateway, it all started to click. It was interesting to see how just one missing number can stop the whole internet from working. It made me realize how every part of the IP setup matters, and how easy it is to overlook something small that has a big impact. I enjoyed figuring it out and seeing how things like IP addresses, DNS, and gateways work together, it made networking feel more real to me, not just something I read in a book. A challenge I ran into was staying organized while applying the troubleshooting steps. It's easy to get ahead of yourself and jump to conclusions before properly documenting what you've done. I had to slow down and stick to the CompTIA process by especially when dealing with the booting issue that involved beep codes. I've never had to interpret BIOS beep patterns before, so figuring out that 1-3-2 pointed to a memory problem was both challenging and eye-opening.

References

1. Diagnosing Laser Printer Smudges and Smears, PrinterCoach, 2019.
https://printercoach.com/diagnosing-laser-printer-smudges-and-smears/

2. APIPA IP Address 169.254.x.x (DHCP Failure)
https://www.cbtnuggets.com/blog/technology/networking/what-is-automatic-private-ip-addressing-apipa?utm_source=chatgpt.com

3. 100% disk usage on SSD," Microsoft Q&A, 2023.
https://learn.microsoft.com/en-us/answers/questions/1308352/my-ssd-is-showing-as-100-usage?utm_source=chatgpt.com

4. Beep Codes on Boot (Dell OptiPlex 1-3-2 = Memory Failure)
https://www.dell.com/support/kbdoc/en-ca/000126021/a-reference-guide-to-the-dell-optiplex-diagnostic-indicators?utm_source=chatgpt.com