12.7.2 Troubleshooting Methodology Facts

Good troubleshooting is a process that combines knowledge, experience, and intuition.

This lesson presents an effective troubleshooting process

Troubleshooting Process

The following process has proven effective in a variety of situations:

Step	Explanation
1. Identify the symptoms and potential causes	When identifying the problem and potential causes: ▪ Ask the user to describe the problem. ▪ Check for error messages. ▪ Recreate the problem. ▪ Identify the affected area. ▪ Determine how large the problem is. For example, fixes for one client workstation would likely be very different than fixes for an entire network segment.
2. Establish what has changed	Ask questions to discover what might have changed that could have caused the problem. Problems are frequently caused by a change to the system, such as: ▪ Adding new hardware ▪ Installing new software ▪ Making configuration changes
3. Create a hypothesis	Create a hypothesis by reviewing the list of potential causes and selecting the most probable cause. Look for common errors or solutions that can be tried quickly.
4. Create an action plan	Create an action plan and account for side effects of the proposed plan. The plan might require purchases that need approval before proceeding. In addition, the plan might involve taking services offline for a period of time. Identifying the effects ahead of time helps put measures into place to eliminate or reduce any potential negative consequences.
5. Implement the fix	Implement the fix, and then make sure that the solution has fully fixed the issue and has not caused any other problems. If necessary, implement additional steps to correct the problem if the first solution did not work.
6. Ensure user satisfaction	Ensuring user satisfaction may include educating the user, such as explaining what the problem was, the solution, and how to avoid the problem in the future.
7. Document the solution	Document the solution to the problem. If problems occur in the future, check the documentation first to see what has changed or to recall the solution to common problems.

Remember, troubleshooting is a process of both deduction and induction. Field experience is critical to developing troubleshooting skills.