Chapter 21

Network Troubleshooting

Episode 21.01

Episode title: **Network Troubleshooting Theory**

Objective: **5.1 Explain the network troubleshooting methodology**

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CompTIA's 7-Step Network Troubleshooting Theory

1. Identify the problem
   - Gather information
   - Question users
   - Identify symptoms
   - Determine if anything has changed
   - Duplicate the problem, if possible
   - Approach multiple problems individually

2. Establish a theory of probable cause
   - Question the obvious
   - Consider multiple approaches
     - Top-to-bottom/bottom-to-top OSI model
     - Divide and conquer

3. Test the theory to determine the cause
   - If the theory is confirmed, determine the next steps to resolve the problem
   - If the theory is not confirmed, reestablish a new theory or escalate

4. Establish a plan of action to resolve the problem and identify potential effects

5. Implement the solution or escalate as necessary

6. Verify full system functionality and, if applicable, implement preventive measures

7. Document findings, actions, outcomes, and lessons learned

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Quick Review

- To find the problem, gather information, identify the symptoms of the problem, question users, and see if there have been changes
- Establish the theory of probable cause, use the OSI model to help identify location and problem, and consider future prevention methods
- Test the theory, isolate variables, establish a plan of action, plan out steps, implement, verify, and test