

Packet Tracer Lab 1

Users Cannot Reach the Internet

Incident ID: INC-1001

Difficulty

Beginner

Estimated Time

15–30 Minutes

Skills Covered

- Ping Testing
- DHCP Troubleshooting
- Default Gateway Validation
- DNS Verification
- Router Interface Verification
- Basic Network Troubleshooting Methodology

Scenario

Users at a small office report they are unable to access external websites and internet resources following scheduled network changes completed earlier this morning.

Multiple users across the environment are affected.

You have been assigned as the technician responsible for identifying the issue, restoring connectivity, and validating that systems are functioning normally again.

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Customer Report

Reported By: HR Department

Users Affected: HR, Sales, Operations

Business Impact: Users cannot access internet resources or company websites.

Issue Started: Shortly after scheduled network maintenance.

Priority: Medium

Goal

- Identify the root cause of the connectivity issue
- Restore internet connectivity
- Validate network functionality
- Document your findings

Environment

The lab environment includes:

- Multiple user workstations
- Access switch
- Branch router
- ISP simulation router
- Web server
- DHCP services
- DNS services

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Troubleshooting Mindset

During troubleshooting, think through the following questions:

- Can devices communicate locally?
- Are valid IP addresses being assigned?
- Is the default gateway reachable?
- Can devices reach external resources?
- Is DNS functioning correctly?
- What information is DHCP assigning?

Focus on following a structured troubleshooting process rather than guessing.

Expected Outcome

By the end of this lab, users should successfully regain access to external resources and internet connectivity should be restored.

Users should also be able to explain the troubleshooting process used to identify and resolve the issue.

Optional BridgeOpsOne Workflow

This section is optional but recommended for users who want a more realistic operations-center experience.

Using BridgeOpsOne, simulate how operational teams communicate during active incidents.

1. Create an Initial Update

Create an initial customer-safe incident update describing the issue.

Example topics:

- Users reporting connectivity issues

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- Multiple systems affected
- Investigation in progress

Use the Generate feature if needed to clean and professionalize your update.

2. Save Timeline Updates

During troubleshooting, provide 2–3 operational updates describing:

- What you are investigating
- What you have ruled out
- Progress toward resolution

Add these updates to your incident timeline within the Command Center.

Focus on keeping updates:

- Professional
- Concise
- Customer safe

3. Create a Final Resolution Statement

Once connectivity is restored, create a final resolution update summarizing:

- What caused the issue
- Actions taken
- Current environment status
- Monitoring and validation steps

Real-World Relevance

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This issue simulates realistic troubleshooting commonly encountered in:

- Help Desk
- NOC Environments
- MSP Support
- Desktop Support
- Junior Network Support Roles

The purpose of this lab is to help develop:

- Troubleshooting confidence
- Structured thinking
- Communication skills
- Operational awareness

Deliverables

At the conclusion of this lab, users should be able to:

- Explain the issue
- Describe the troubleshooting process
- Demonstrate the fix
- Validate restored connectivity
- Communicate findings clearly

Hints

If you become stuck during troubleshooting, consider the following:

- Verify whether devices are receiving valid IP addressing information
- Test connectivity incrementally:

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- Local device communication
- Default gateway reachability
- External resource access

- Compare working versus non-working connectivity tests
- Review what information is being assigned through DHCP
- Remember that DNS issues and gateway issues can sometimes appear similar from the user perspective
- Focus on identifying where communication begins to fail

Avoid guessing. Follow a structured troubleshooting process.