

Packet Tracer Lab 23

Business Application Offline

Incident ID: INC-1023

Difficulty

Beginner

Estimated Time

15–30 Minutes

Skills Covered

- Infrastructure Troubleshooting
- End-to-End Connectivity Validation
- Server Reachability Testing
- Layer 3 Verification
- Gateway Validation
- Enterprise Troubleshooting Methodology
- Infrastructure Validation

Scenario

Following scheduled infrastructure maintenance performed earlier in the day, users across multiple departments have reported that the company's centralized document management application is unavailable.

Employees indicate they can continue accessing network resources, communicate with users in other departments, and reach other enterprise systems without issue. However, attempts to access files stored on the corporate file server consistently fail.

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You have been assigned to investigate the issue, restore application availability, and validate that the business service has been fully restored.

Customer Report

Reported By: Corporate IT Operations

Users Affected: Enterprise-wide

Business Impact:

- Corporate document management unavailable
- Shared file access unavailable
- Business operations impacted

Issue Started:

Shortly after scheduled infrastructure maintenance.

Priority:

Medium

Goal

- Identify the cause of the application outage.
- Restore connectivity to the corporate file server.
- Validate successful access to business services.
- Document your findings.

Environment

The lab environment includes:

- Headquarters Core Infrastructure
- Three Regional Branch Offices

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- Enterprise WAN
- OSPF Dynamic Routing
- Internal DNS Server
- Corporate File Server
- Layer 3 Core Switch
- Multiple Workstations

Known Variables

- Headquarters and branch office connectivity remain operational.
- OSPF neighbor relationships remain established.
- WAN interfaces remain operational.
- Users can successfully communicate with their local default gateways.
- Users can communicate with other departments and branch offices.
- The headquarters server network is **192.168.40.0/24**.
- DNS Server: **192.168.40.10**
- File Server: **192.168.40.20**
- DNS services remain operational.
- Scheduled infrastructure maintenance was completed before the incident began.
- Follow a structured troubleshooting methodology before making configuration changes.

Troubleshooting Mindset

During troubleshooting, think through the following questions:

- Does the issue affect one application or the entire network?
- Can users reach their default gateway?
- Is routing functioning correctly?

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- Can users communicate with other departments?
- Is the issue isolated to one server?
- Is the underlying infrastructure functioning properly?
- Has a recent infrastructure change affected server availability?

Focus on isolating the affected service before assuming a network failure.

Expected Outcome

By the end of this lab, users should successfully regain access to the corporate file server while confirming that enterprise network connectivity remained operational throughout the incident.

Users should also be able to explain the troubleshooting methodology 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.

1. Create an Initial Update

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

Example topics:

- Multiple departments reporting connectivity issues
- Internal applications inaccessible
- 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

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- What has been 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 has been restored, create a final resolution update summarizing:

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

Real-World Relevance

This issue simulates realistic troubleshooting commonly encountered in:

- Network Operations Centers (NOC)
- Infrastructure Support
- Enterprise IT
- Systems Administration
- Network Engineering

The purpose of this lab is to develop:

- Infrastructure troubleshooting skills
- Service validation

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- Operational thinking
- Application availability verification
- Enterprise communication

Deliverables

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

- Explain the issue.
- Describe the troubleshooting methodology.
- Restore application availability.
- Validate successful access to the corporate file server.
- Communicate findings clearly.

Hints

If you become stuck during troubleshooting, consider the following:

- Verify network connectivity before assuming an application failure.
- Compare successful and unsuccessful connectivity tests.
- Verify access to other enterprise resources.
- Determine whether only one service is affected.
- Follow a structured troubleshooting methodology instead of guessing.