

TRAINING LABORATORY

Windows Server / Active Directory Training Lab

A hands-on IT project for building a complete training environment covering Windows Server, Active Directory, and network infrastructure. The ideal tool for IT training, reskilling programs, and Windows administration education.

What Is This Lab About?

Practical Focus

This project demonstrates the ability to prepare a complete training environment for Windows Server and Active Directory. The emphasis is on **hands-on experience**, not just theoretical knowledge – every participant configures a real simulated corporate network.

Who Is It For?

- **IT Training & Courses** – Structured programs for IT specialists
- **Reskilling** – Transition into IT with practical skills
- **Administration Education** – Manage Windows environments in controlled conditions

What the Lab Covers

The laboratory covers all key areas of Windows Server administration – from basic network services to permissions management and troubleshooting.



Windows Server

Installation, configuration, and management of the server operating system



Active Directory DS

Domain Services, domain management, and AD tree structure



Accounts & Groups

Creating and managing user accounts, groups, and roles



DNS & DHCP

Name resolution configuration and dynamic IP address assignment



Group Policy

Centralized management of computer and user settings via GPO

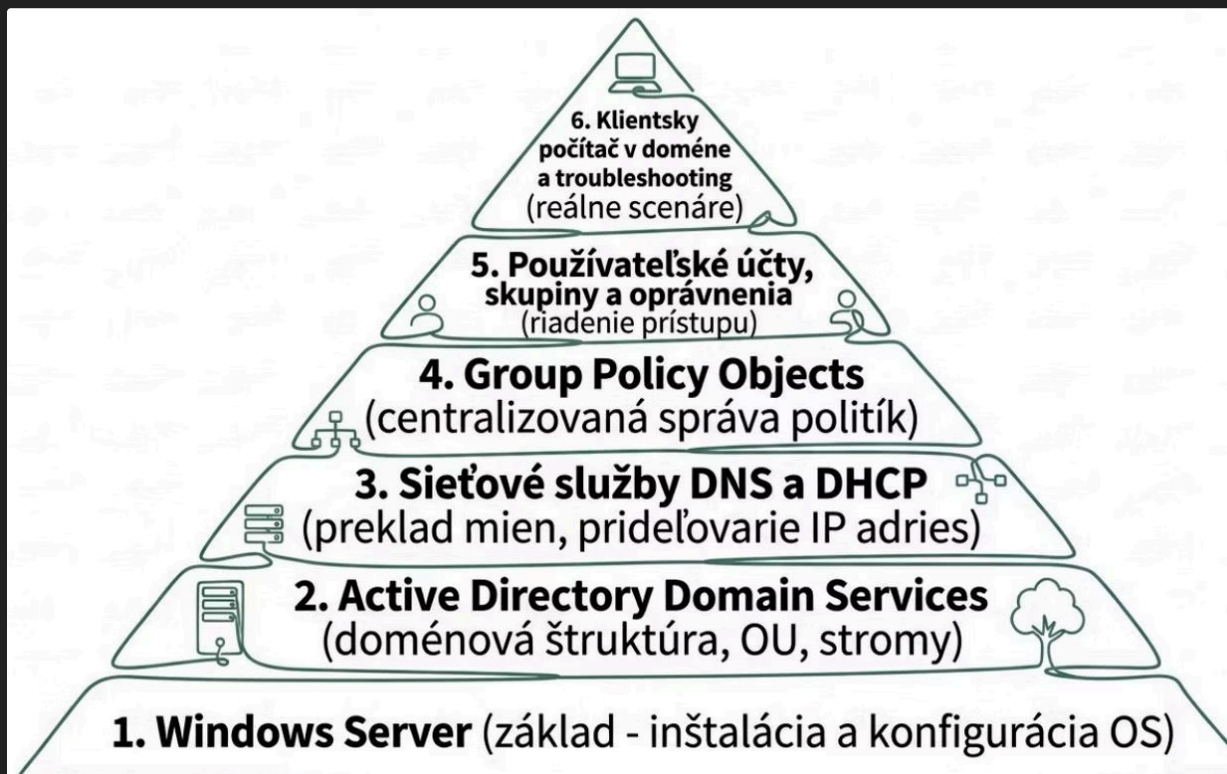


Shared Folders & Permissions

File sharing setup and access rights management

Lab Architecture

The laboratory is designed to simulate a real corporate environment. Each layer builds upon the previous one, forming a fully functional integrated whole — from server infrastructure through domain services to client workstations.



Six-Layer Architecture

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1. Windows Server

OS installation and configuration – the foundation

2

2. Active Directory DS

Domain structure, OUs, and AD trees

3

3. DNS & DHCP

Name resolution and IP address assignment

4

4. Group Policy Objects

Centralized policy management

5

5. User Accounts & Permissions

Access control and role management

6

6. Client PC & Troubleshooting

Real-world scenarios and diagnostics

Client Workstation & Domain Integration

The lab includes a **client computer joined to the Windows domain**. Participants experience the full process – from adding a machine to the domain, logging in with domain accounts, to applying Group Policy on the client side.

Domain Join

Connecting a PC to the AD domain

Domain Login

Signing in with domain user accounts

GPO Verification

Checking applied Group Policies

Network Drives

Mapping network drives and printers



Troubleshooting Scenarios

The lab includes real-world diagnostic scenarios that IT support professionals encounter every day. Participants gain confidence in resolving production issues.

→ Domain Login Issues

Diagnosing and resolving authentication failures

→ Incorrect Permissions

Identifying and correcting access rights problems

→ DNS & DHCP Errors

Fixing misconfigured name resolution and IP assignment

→ Windows Diagnostics

Using built-in Windows tools for system diagnostics

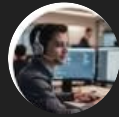
📘 Troubleshooting is an inseparable part of real IT practice. The lab simulates typical error states so participants gain confidence in resolving production issues.

Who Is the Lab Designed For?

The training laboratory is designed for a wide range of learners — from students to experienced professionals transitioning into the IT sector.

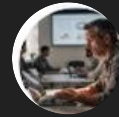
IT Students

Ideal for secondary and university students in IT fields who want practical skills beyond textbooks.



Junior IT Support Technicians

Support techs who need to understand domain infrastructure and solve everyday Windows environment problems.



Reskilling Programs & Schools

Educational centers and reskilling programs that need a structured, practical lab environment for their participants.



Junior System Administrators

Aspiring sysadmins who want to get familiar with Windows Server configuration before starting a real job.



Why This Lab Stands Out

Real-World Simulation

Every scenario mirrors actual corporate IT environments – not just isolated exercises, but an integrated, layered system.

End-to-End Coverage

From OS installation to client troubleshooting – the full Windows administration lifecycle in one environment.

Practical Confidence

Participants leave with hands-on experience they can immediately apply in production environments.

Ready to Build Your Skills?

Learn by Doing.

The Windows Server / Active Directory Training Lab provides everything needed to master Windows administration — from server setup to real-world troubleshooting. Structured, practical, and built for the modern IT professional.

Windows Server

Installation & configuration

Active Directory

Domain services & structure

Network Services

DNS, DHCP & GPO

Troubleshooting

Real-world diagnostics