**Windows Server 2022/2025 with Windows 10 Client — Active Directory Project**

Date/Time: 5 hrs

Project Objective

To install and configure Windows Server 2022/2025 as a Domain Controller and connect a Windows 10 client to the same domain using VMware Workstation Pro.  
This project demonstrates an understanding of Active Directory setup, DNS configuration, IP management, and domain joining.

**Tools and Resources**

* Virtualization Platform: VMware Workstation Pro
* Server OS: Windows Server 2022  
  🔗 [Download Link](https://www.microsoft.com/en-us/evalcenter/download-windows-server-2025)
* Client OS: Windows 10 (2022 Update)  
  🔗 [Download Link](https://www.microsoft.com/en-us/software-download/windows10)
* Domain Name: ITechjoy.com
* Reference Videos:
  + [Install Windows Server 2025 on VMware | Full Tutorial](https://www.youtube.com/watch?v=7be423KU5HQ)
  + [How to Install Windows 10 on VMware Workstation Pro](https://www.youtube.com/watch?v=53P7AL1bLz4)
  + [Create a Domain in Windows Server 2025 and Connect Windows 10 Client](https://www.youtube.com/watch?v=teJMyb-in5o)
  + [Install and Configure Active Directory Domain Services (AD DS)](https://www.youtube.com/watch?v=-q2l48Ap3s8)

**Part 1: Install and Configure Windows Server 2022**

1. Create a New Virtual Machine → Typical (Recommended) → “I will install OS later” → Choose Windows Server 2022 (x64).
2. Allocate 60–80 GB disk, 4 GB RAM, 2 cores, NAT network → Finish and power on.
3. Install Windows Server → set Administrator password (e.g., P@ssw0rd).
4. In Server Manager, click Add Roles and Features → select Active Directory Domain Services (AD DS) → Install.
5. Click Promote this server to a domain controller → Add a new forest → enter domain: ITechjoy.com → set DSRM password → Install.
6. Configure static IP:
   * Run ncpa.cpl → Ethernet → Properties → IPv4 → Set:
   * IP: 192.168.80.129
   * Subnet: 255.255.255.0
   * Gateway: 192.168.80.2
   * Preferred DNS: 192.168.80.129
   * Alternate DNS: 8.8.8.8
7. Create users in Active Directory Users and Computers:
   * Right-click ITechjoy.com → New → User → e.g., user1, user2 → set passwords.

**📁 Screenshot Folder: screenshots/server/**

**Part 2: Install Windows 10 Client and Join Domain**

1. Create a New VM → Typical → “I will install OS later” → Choose Windows 10 (x64).
2. Allocate 60 GB disk, 3–4 GB RAM, 2 cores, and connect to Host-only (VMnet1) network.
3. Install Windows 10 → complete setup.
4. Set static IP:
5. IP: 192.168.80.133
6. Subnet: 255.255.255.0
7. Gateway: 192.168.80.129
8. DNS: 192.168.56.1
9. Join Domain:
   * Run sysdm.cpl → Computer Name → Change → Domain: ITechjoy.com
   * Enter domain admin credentials → Restart.
10. Log in with domain user (ITechjoy\user1).
11. Verify domain resources and connectivity.

**📁 Screenshot Folder: screenshots/client/**

**Troubleshooting Notes**

* If domain join fails, ensure client DNS = Server IP.
* Both VMs must use same Host-only network for domain communication.
* If no Internet, verify NAT adapter on Server and enable Internet Connection Sharing (ICS) to Host-only adapter.
* Reference video for network fix: [EFU Network Unsuccessful](https://www.youtube.com/watch?v=SBPtT5p_JcY)

**Project Completion Summary**

✅ Installed and configured Windows Server 2022 as Domain Controller (ITechjoy.com).  
✅ Set up Active Directory, Users, and Organizational Units.  
✅ Configured Static IP, DNS, and DHCP.  
✅ Installed Windows 10 client and successfully joined it to the domain.  
✅ Verified authentication and communication between server and client.