DAY 4 **DATE:02/05/2025**

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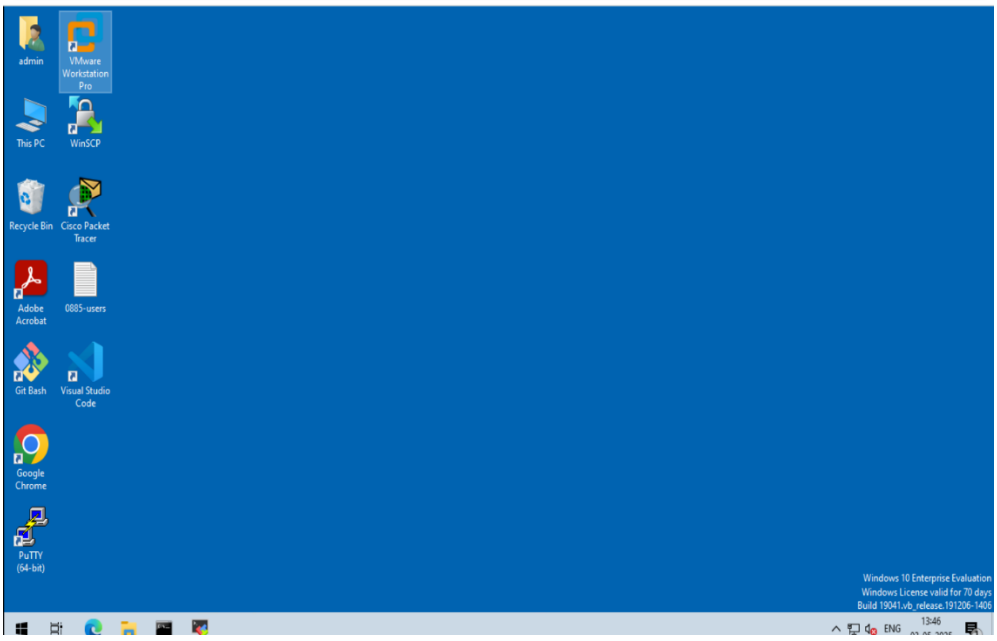
TITLE: WINDOWS INSTALLATION, UPGRADATION AND MIGRATION, BACKUP, DHCP, DNS

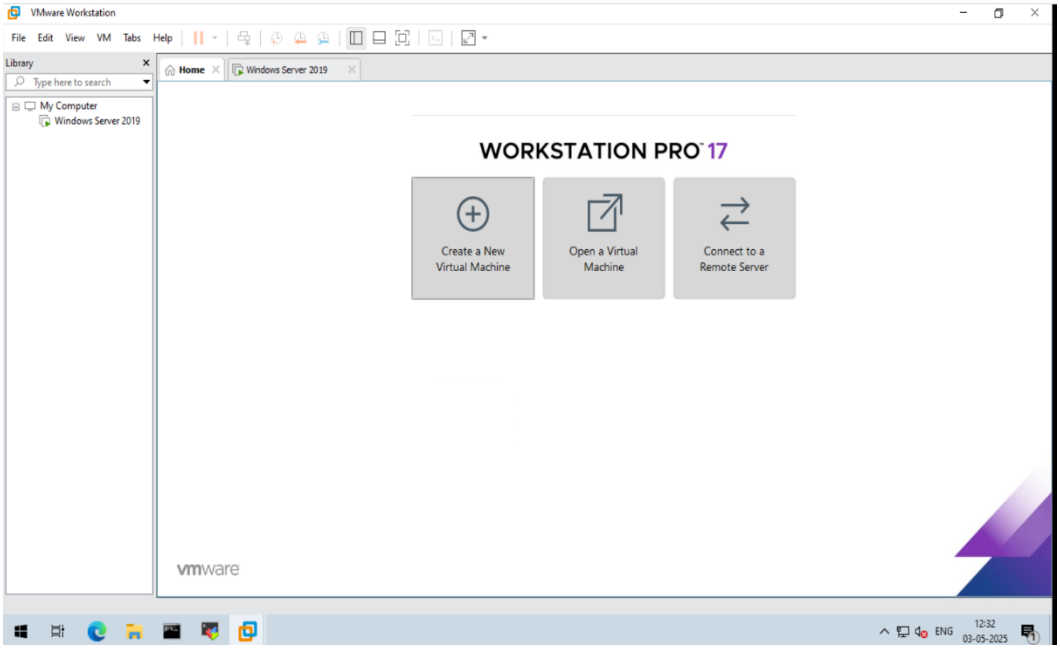
➢ Windows Installation

Installing Windows Server 2019 on VMware Workstation Pro 17

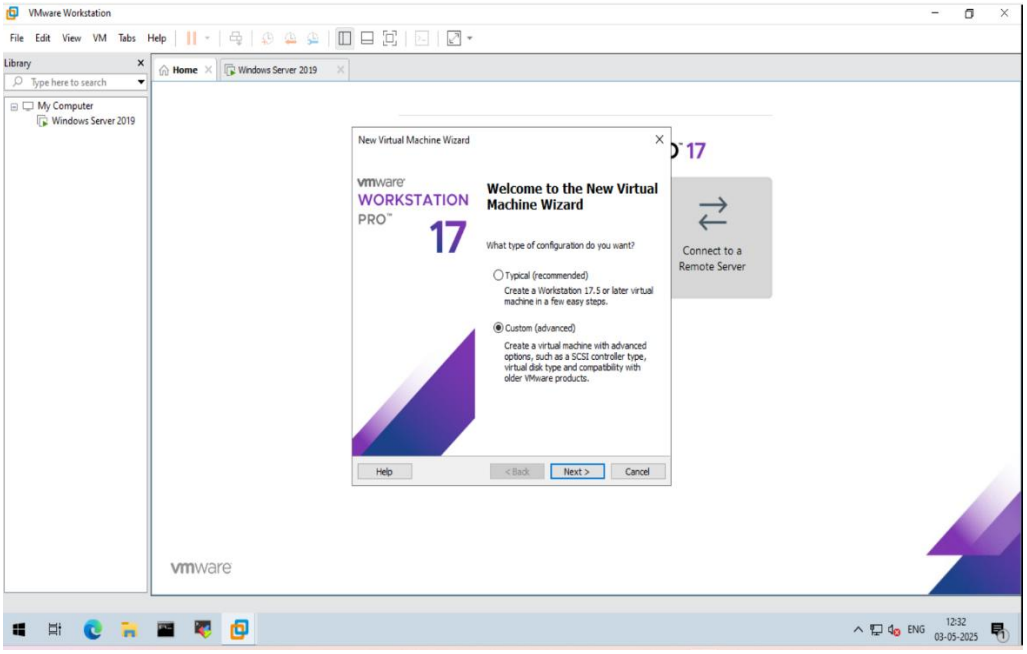
1. Prerequisites
   - VMware Workstation Pro 17 installed.
   - Windows Server 2019 ISO file.
   - Minimum 4 GB RAM and 60 GB free disk space recommended.
2. Steps to Create and Install Windows Server 2019 VM
   Step 1: Launch VMware Workstation Pro



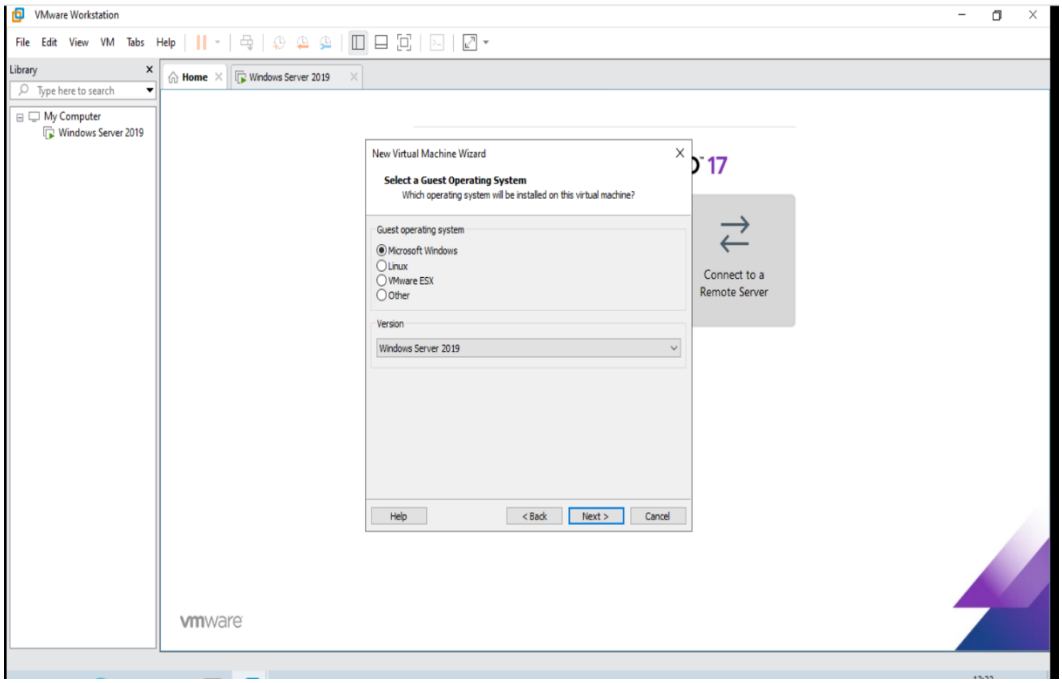
   - Open VMware Workstation Pro 17.
   - Click on Create a New Virtual Machine.



- Step 2: Choose Configuration
  Select custom(advanced) and click Next.



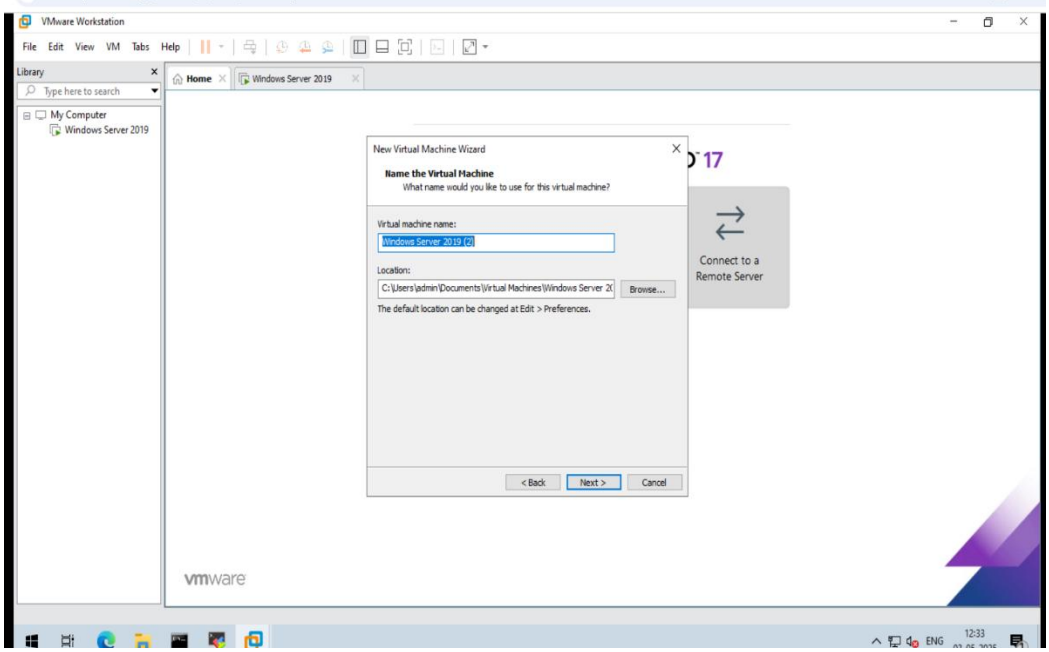
- Step 3: Operating system configuration
  I. Click on Next until you see this tab



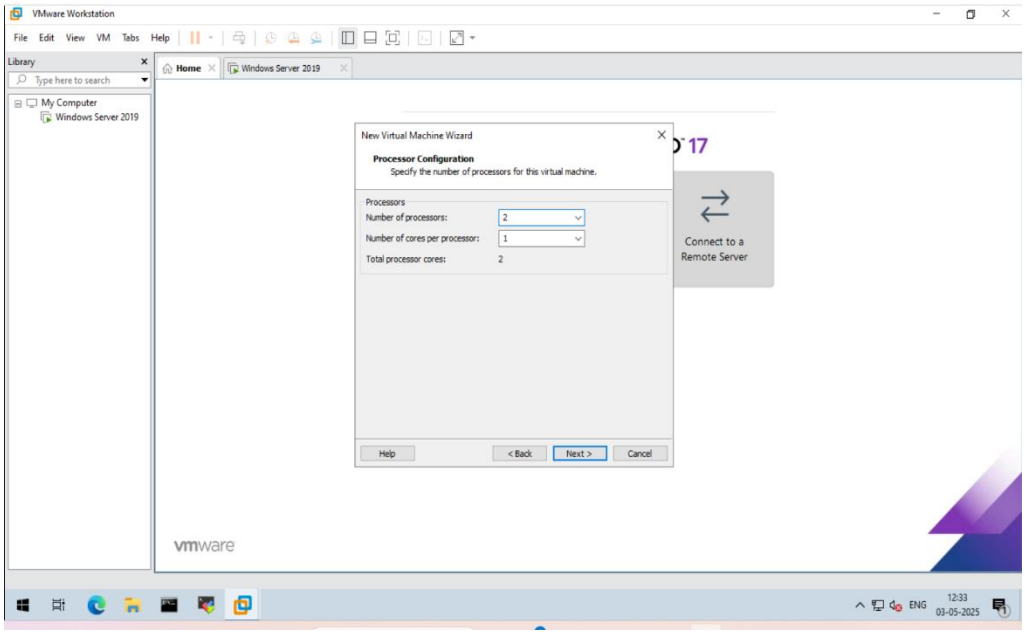
II. Here click on the radio button Microsoft windows and
Choose the version **Windows Server 2019.**

III. Click on Next.

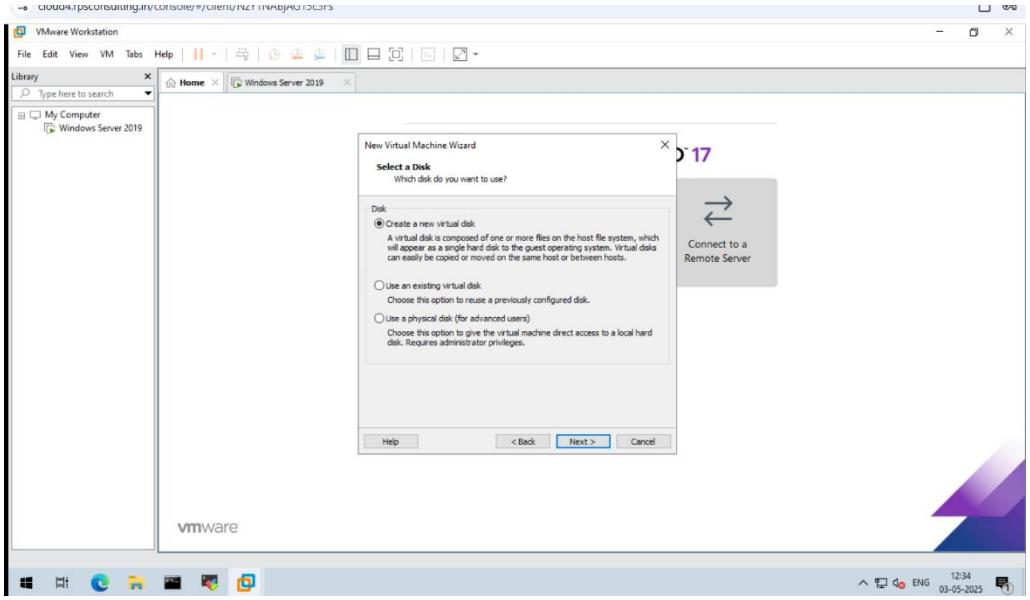
- Step 4: Name the VM & Location 1.
  Enter a name like 'Windows Server 2019'
  Click Next.



- Step 5: Processor configuration
    i. Click Next until you see this tab.

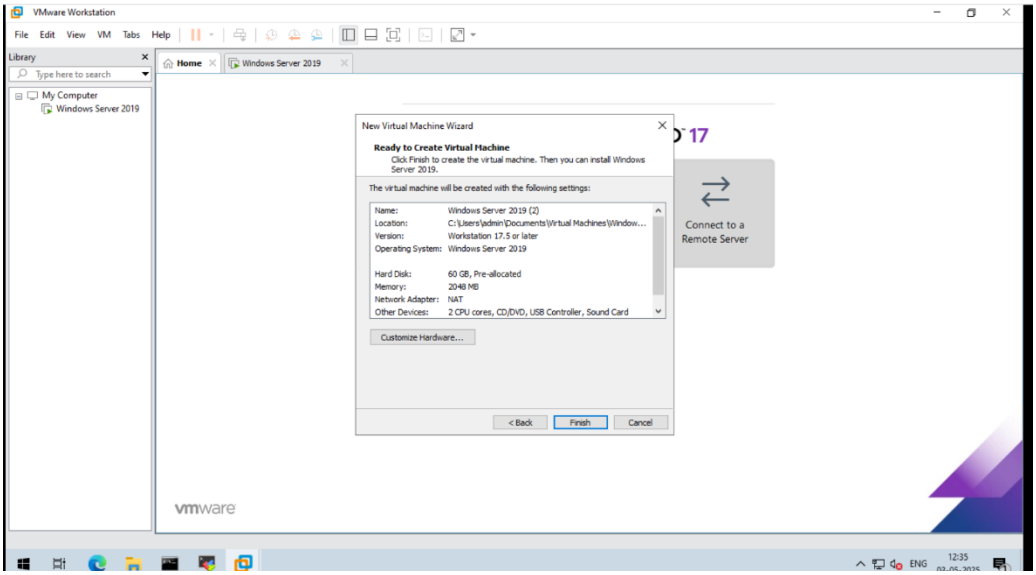


    ii. Here set number of processors as 2.
    iii. Click on Next.
- Step 6: Select a Disk
    i. Click Next until you see this tab.

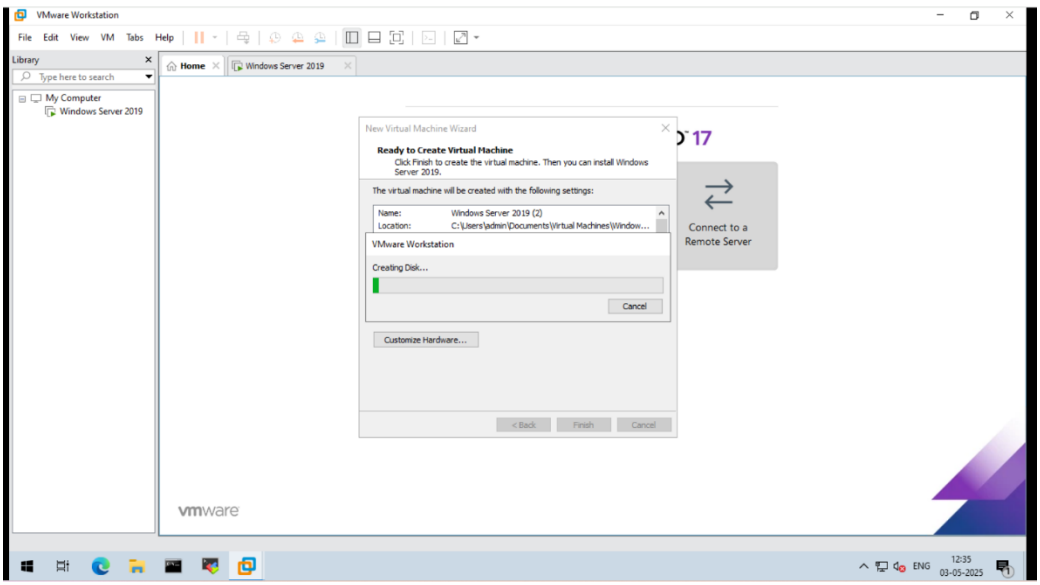


ii. Select the radio button create a new virtual disk.
iii. Click next.

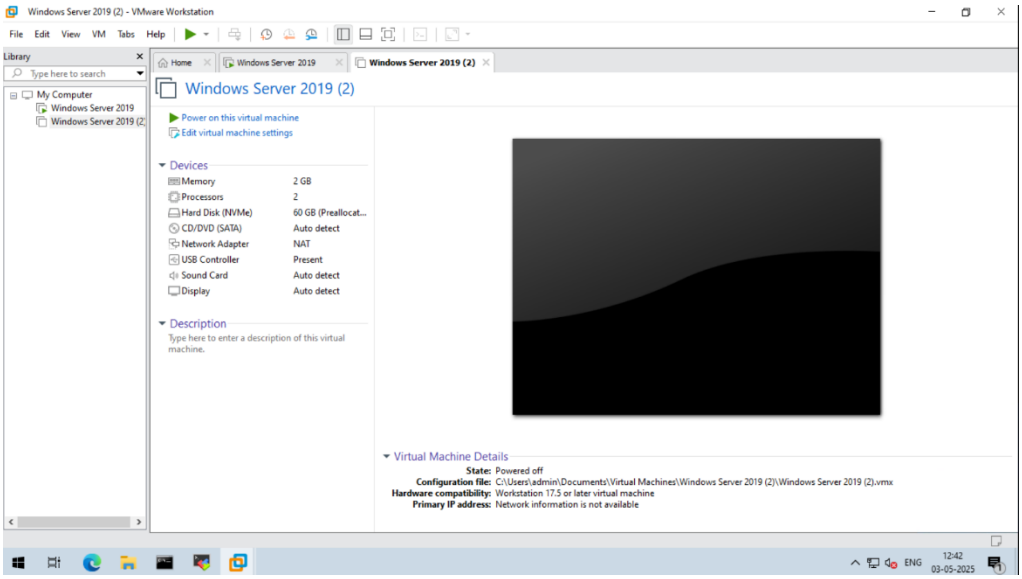
- Step 7: Specify Disk Capacity
  i. Select the checkbox – Allocate all disk space now.
  ii. And radio button -Store virtual disk as a single file.
  iii. Click on Next.
- Step 8: Ready to create virtual machine
  i. Click finish.



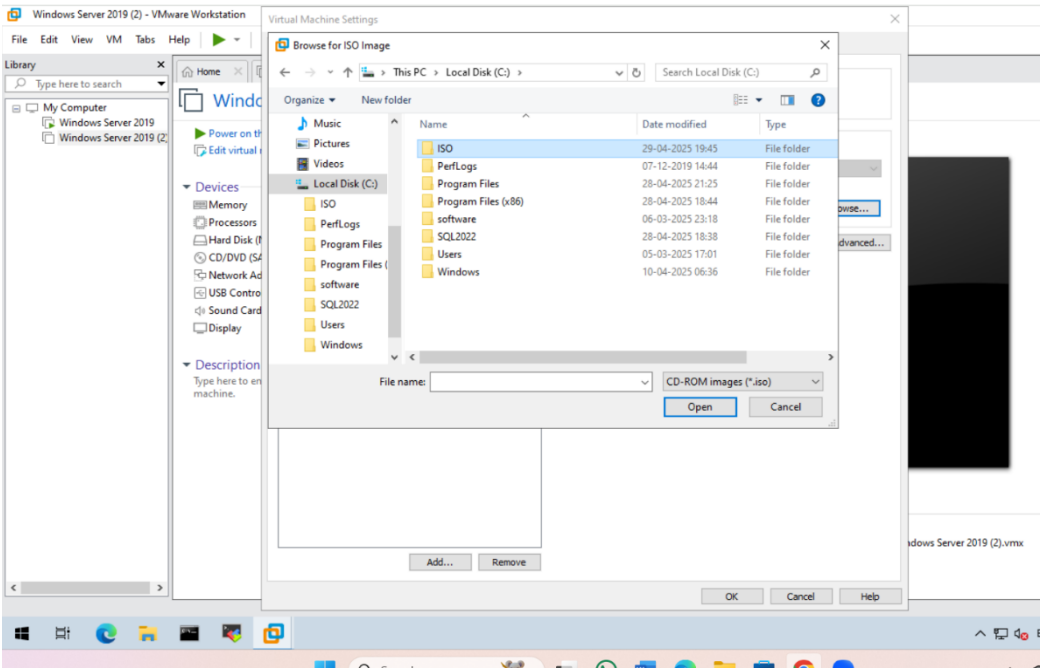
ii. It will create a separate disk.

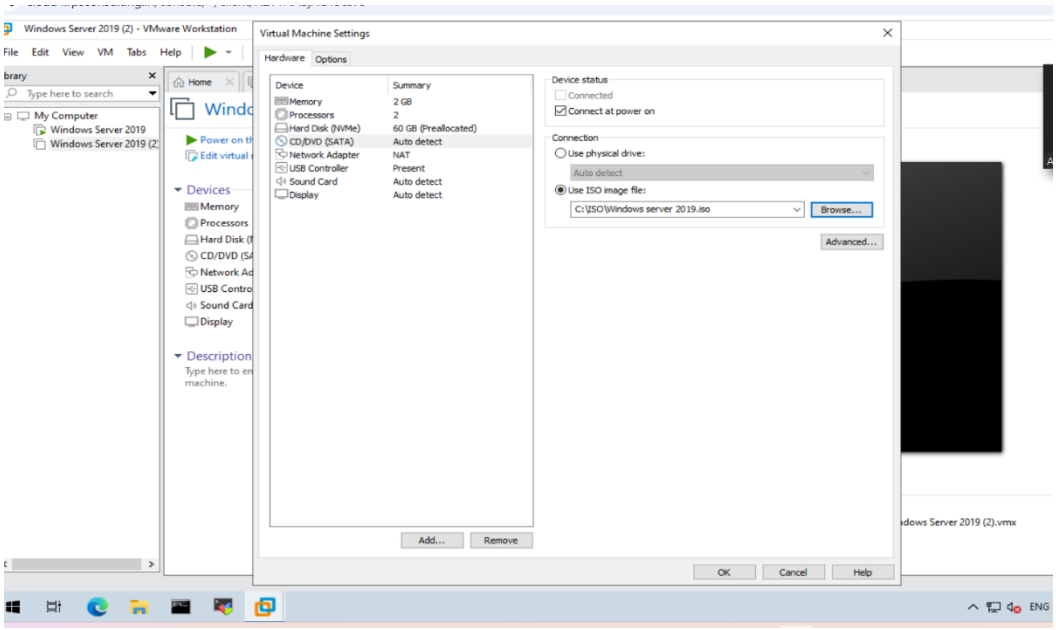


- Step 9: Edit Virtual Machine settings.
    1. Click 'Edit virtual Machine settings’.



    2. Click on CD/DVD(SATA) -> choose the radio button use ISO image file -> Browse Windows Server 2019 from ISO file in local disk C -> Click ok.

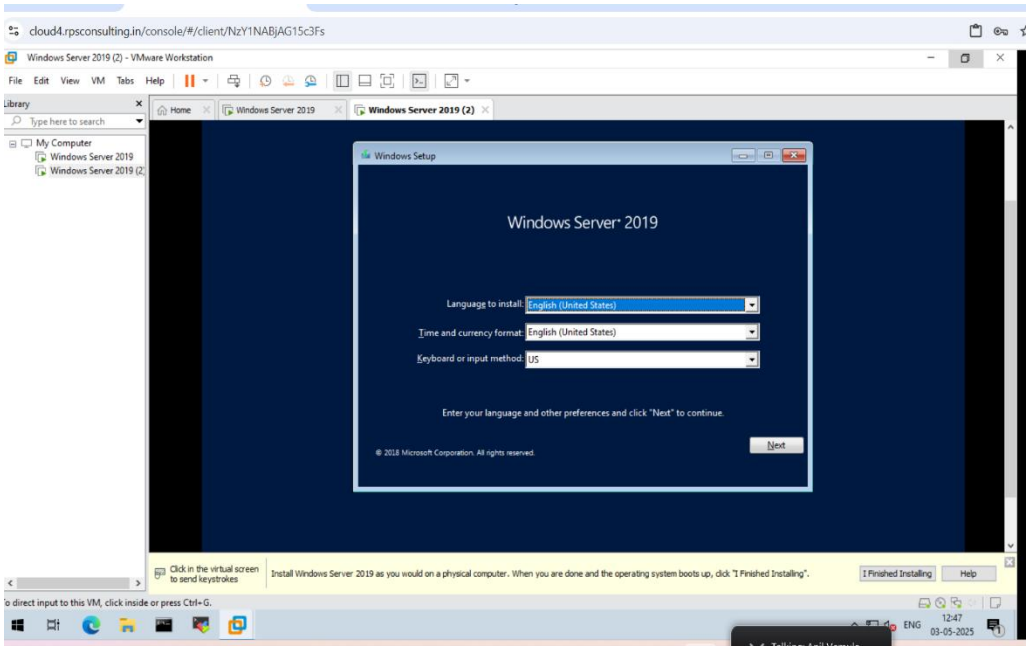


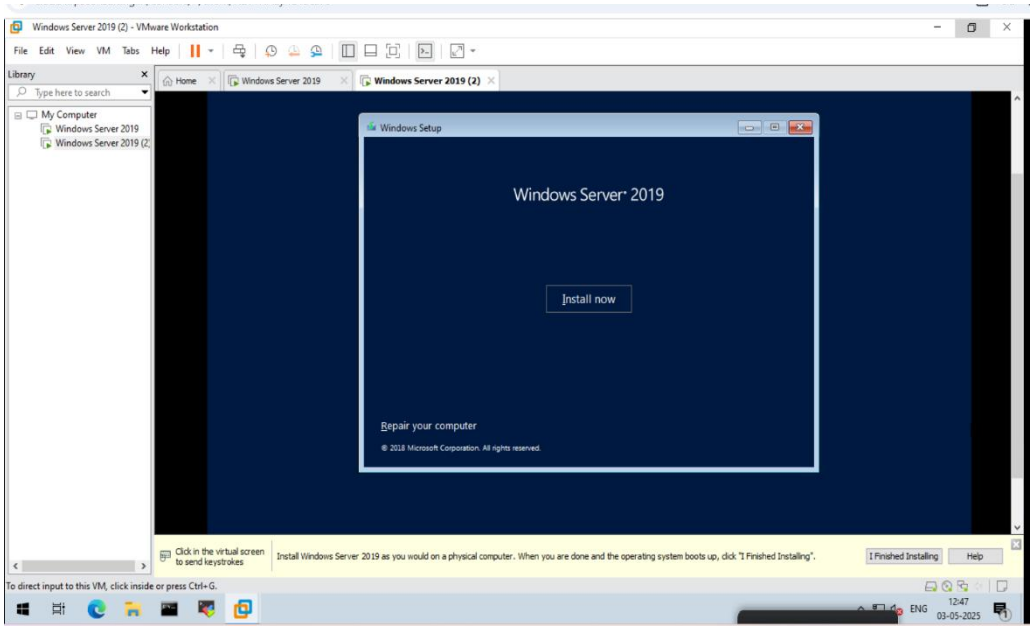


- Step 10: Windows Server 2019 Installation Click Boot Normally

Note: After clicking boot normally the screen turns black and press any key as soon as possible.

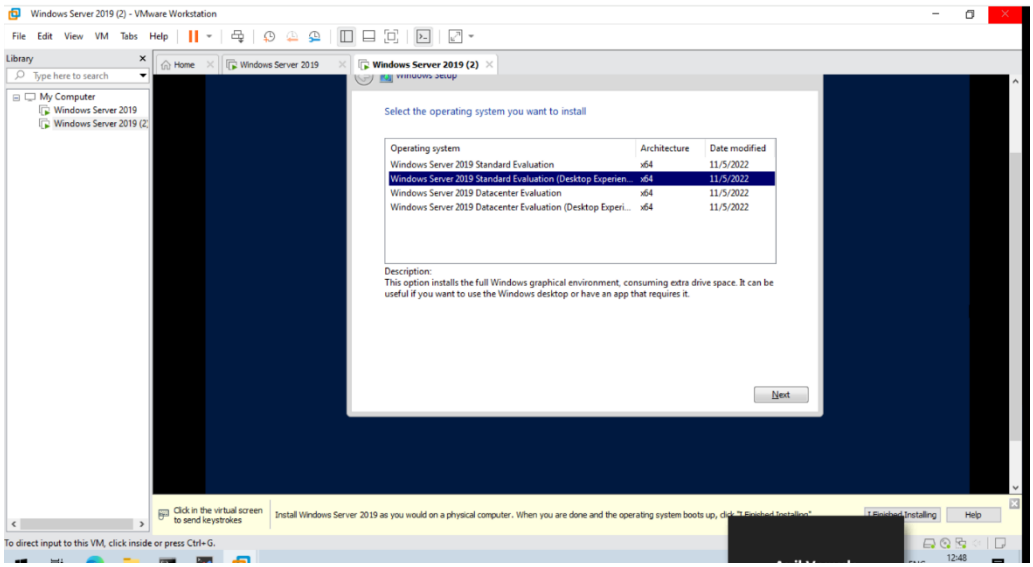
  - Choose Language, Time, and Keyboard → click Next
  - Click 'Install Now'



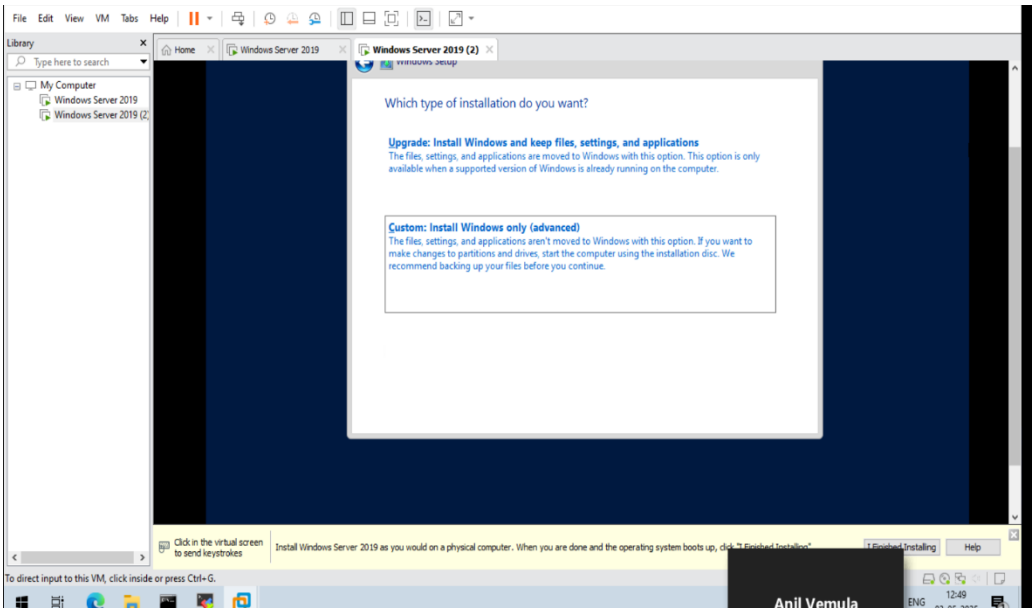


- Select the operating system you want to install (e.g., Standard Evaluation - Desktop Experience)

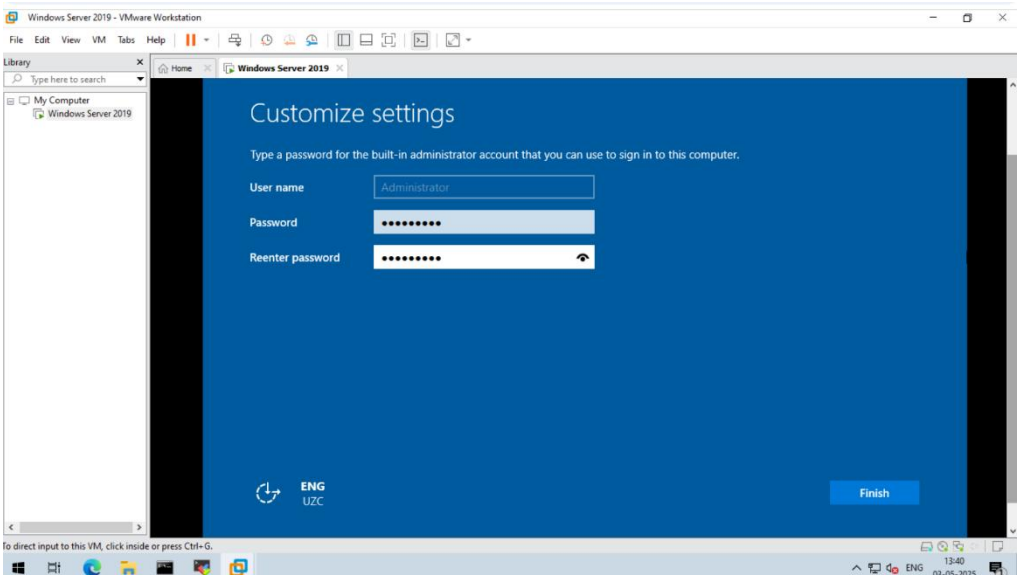
- Accept license terms → click Next



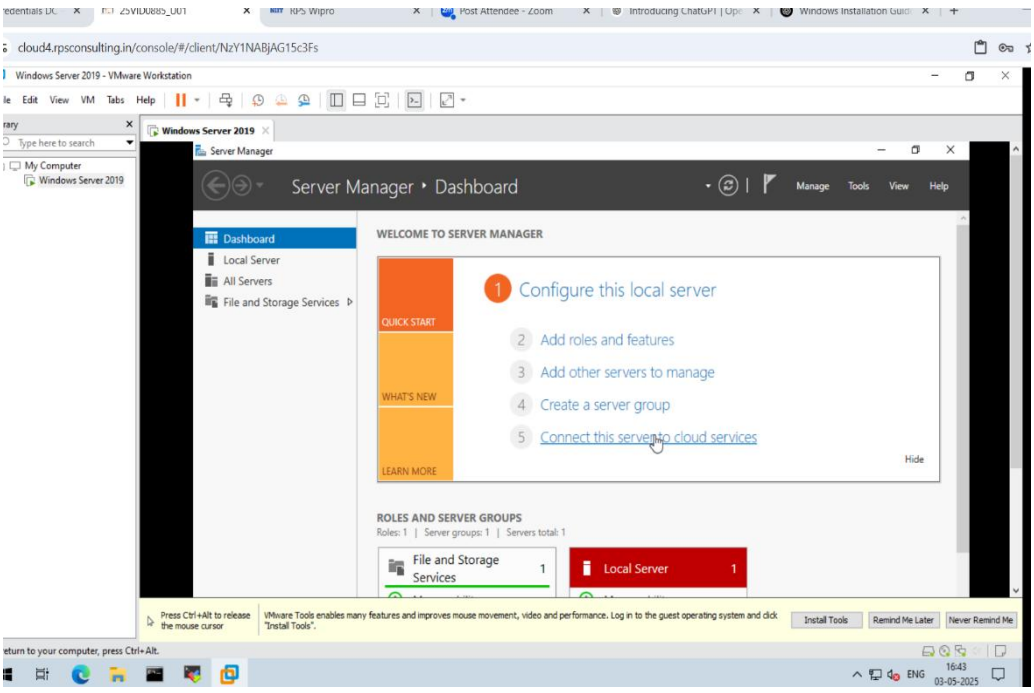
- Choose 'Custom: Install Windows only (advanced)'
- Select the virtual drive → click Next.



- Step 9: Complete Setup Windows will copy files and installing takes place (takes 10-15 minutes).
  - After reboot: - Set Administrator password



- Right click on the bar windows server 2019 - > Ctrl+Alt+Insert to log in. That's all windows server 2019 installed.



- **Task Manager** is a utility program in operating systems, like Windows, that allows users to monitor and manage processes and applications running on their computer.

- The **Windows Task Schedule**r is a utility that automates task execution at specific times or events. It allows users to schedule programs, scripts, and other actions to run automatically. The Task Scheduler icon can be found in the taskbar or accessed through the Control Panel.
- The **taskbar** is a horizontal bar, typically located at the bottom of the Windows desktop, that provides quick access to frequently used applications, the Start menu, and system notifications. It also shows which applications are currently open.

- **Upgradation:**

  This process typically involves updating existing software to a newer version, potentially adding new features, enhancing security, or improving performance. For example, upgrading from one version of an operating system to another, such as Windows 10 to Windows 11.

- **Migration:**

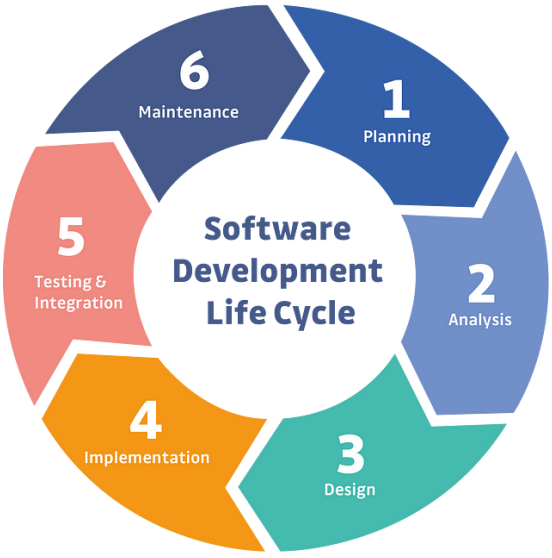
  This process involves moving data, applications, or systems from one environment to another, often to improve scalability, reliability, or cost-effectiveness. For instance, migrating an application from on-premises servers to a cloud provider.

  - Data Migration: This refers to the transfer of data from one location to another. It can involve moving data between different storage systems, formats, or computer systems. Data migration can be triggered by various reasons, including server upgrades, cloud migrations, or consolidating data centres.
  - Server Migration: This involves moving entire server systems and their associated applications and services to a new location. This could be from one physical server to another, from an on-premises environment to a cloud, or even between different cloud providers.

- **Network downtime** refers to periods when a network or its services are unavailable, interrupting communication and data exchange. This can be due to planned maintenance, unplanned failures, or various other issues. Downtime impacts businesses by causing productivity losses, customer dissatisfaction, and revenue loss.
- **Backups** are copies of data stored separately to ensure data can be recovered if the original is lost or damaged. The three main types of backups are full, incremental, and differential.

- **Types of Backups:**
    i. Full Backup:-Creates a complete copy of all selected data, regardless of changes. It's the most comprehensive but takes the longest time and uses the most storage.
    ii. Incremental Backup:-Copies only the data that has changed since the last backup (full, incremental, or differential). This is faster and requires less storage than full backups, but restoring data requires the full backup and all incremental backups.
    iii. Differential Backup:-Backs up all changes made since the last full backup. It requires less storage than full backups but more than incremental backups, and restores are simpler than incremental backups, requiring only the full backup and the last differential backup.

➢ **SDLC stands for Software Development Life Cycle,** a structured process used to guide software development from initial planning to deployment and maintenance. It provides a framework for building high-quality software efficiently and cost-effectively.

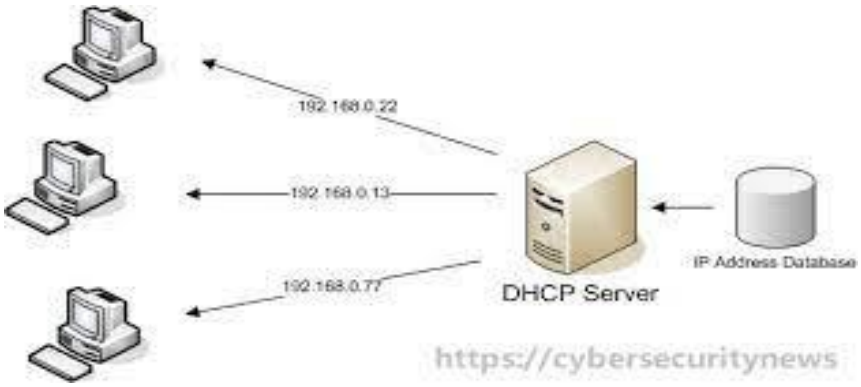


- **Phases:**
    - SDLC typically involves phases like:
    - **Planning:** Defining project goals, scope, and requirements.
    - **Analysis:** Understanding user needs and system requirements.
    - **Design:** Creating the software architecture and overall structure.
    - **Development:** Writing the actual code.

- **Testing:** Ensuring the software functions correctly and meets quality standards.
- **Deployment:** Releasing the software to users.
- **Maintenance:** Addressing issues, making improvements, and ensuring long-term viability.

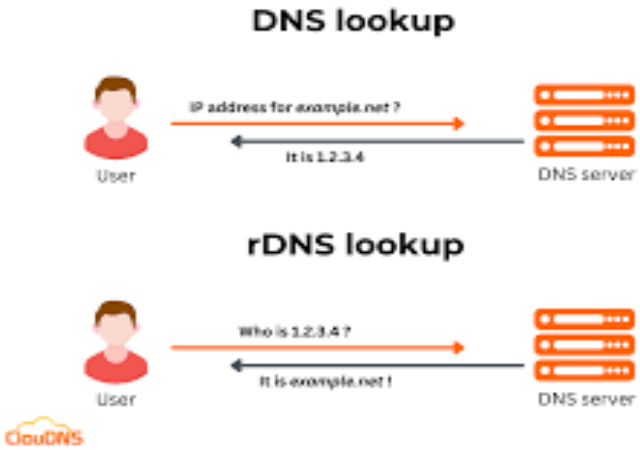
➢ An **Active Directory server** is a central database and a set of services that manages and organizes network resources within a Windows environment. It's a core part of Microsoft's Windows Server operating system, providing features like centralized authentication, authorization, and security policy management.

➢ A **DHCP** server is a network device that dynamically assigns IP addresses and other network configuration parameters to client devices.



➢ A **DNS (Domain Name System)** server acts as a directory for the internet, translating human-readable domain names (like google.com) into IP addresses (like 172.217.160.142), which are numerical addresses that computers use to communicate.

- A DNS server's forward lookup zone translates domain names (like "www.example.com") into IP addresses (like "192.168.1.1"), while its reverse lookup zone performs the opposite translation, mapping IP addresses to their corresponding domain names.


DNS lookup
IP address for example.net ?
It is 1.2.3.4
User
DNS server
rDNS lookup
Who is 1.2.3.4 ?
It is example.net !
User
DNS server
ClouDNS