



Republic of the
Philippines
Bicol University
POLANGUI CAMPUS



SYSTEM ADMINISTRATION AND MAINTENANCE

LABORATORY # 2

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IT 123 – Week 2 Laboratory

Installing and Configuring Windows & Linux Virtual Machines in VirtualBox.

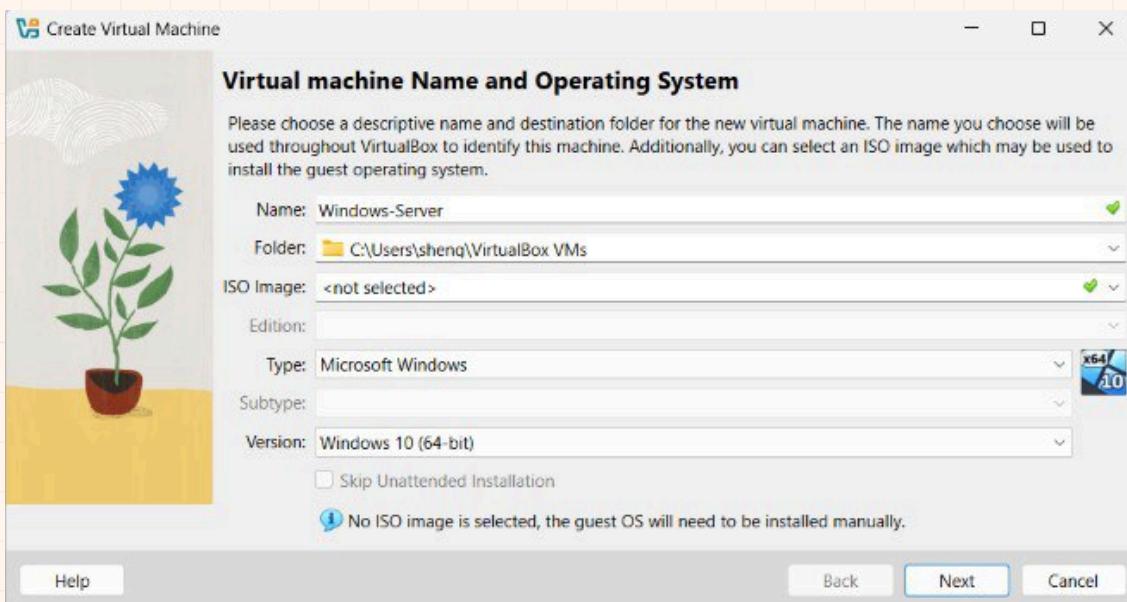
Lab Objectives

By the end of this lab, students will be able to:

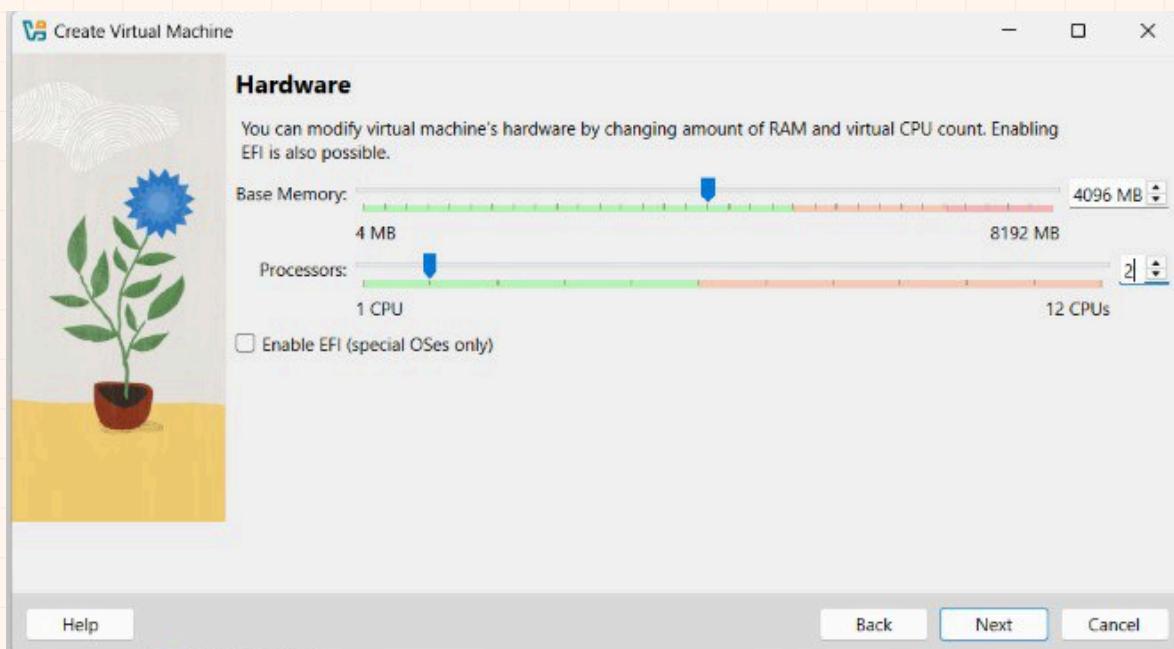
1. Install a Windows Server and a Linux Server virtual machine in VirtualBox.
2. Configure essential VM settings (RAM, CPU, storage, networking).
3. Organize VM folders and ISO files for future use.
4. Verify that both VMs are operational and ready for system administration tasks.

Part 1 – Creating a Windows Server VM

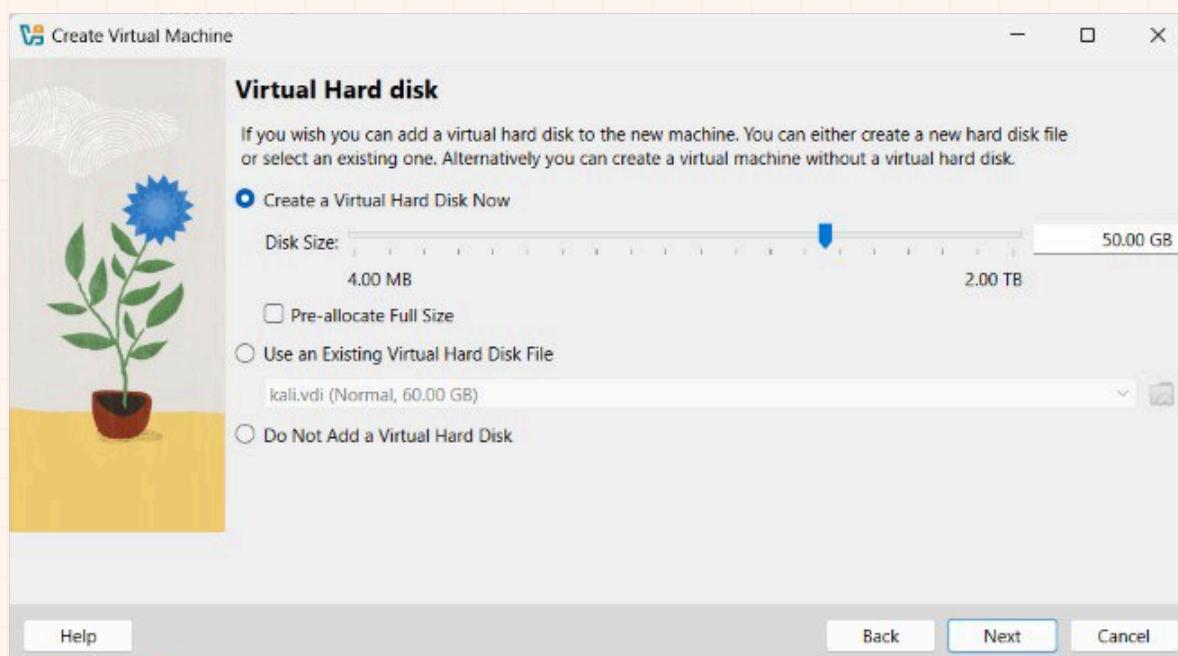
1. Open VirtualBox by selecting it from your desktop or application menu. Create a new virtual machine, click on "New," then enter the name "Windows_Server," and choose "Microsoft Windows" as the type. For the version, select either "Windows 2019 (64-bit)" or "Windows 2022 (64-bit)."



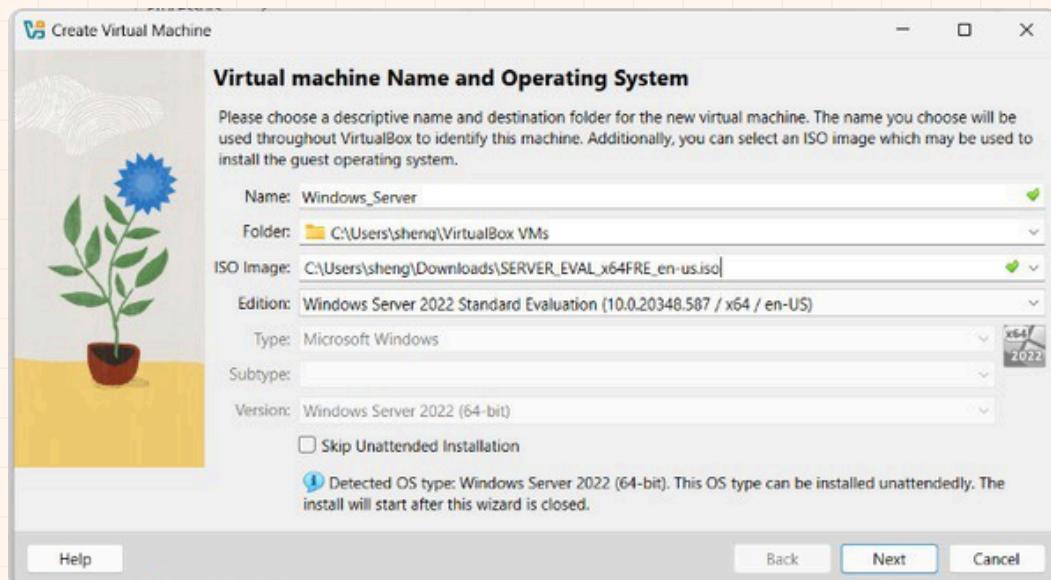
2. Allocate resources new virtual machine, set the RAM to a minimum of 4096 MB. Allocate 2 CPU cores for optimal performance. This configuration will help ensure that your Windows Server runs smoothly.



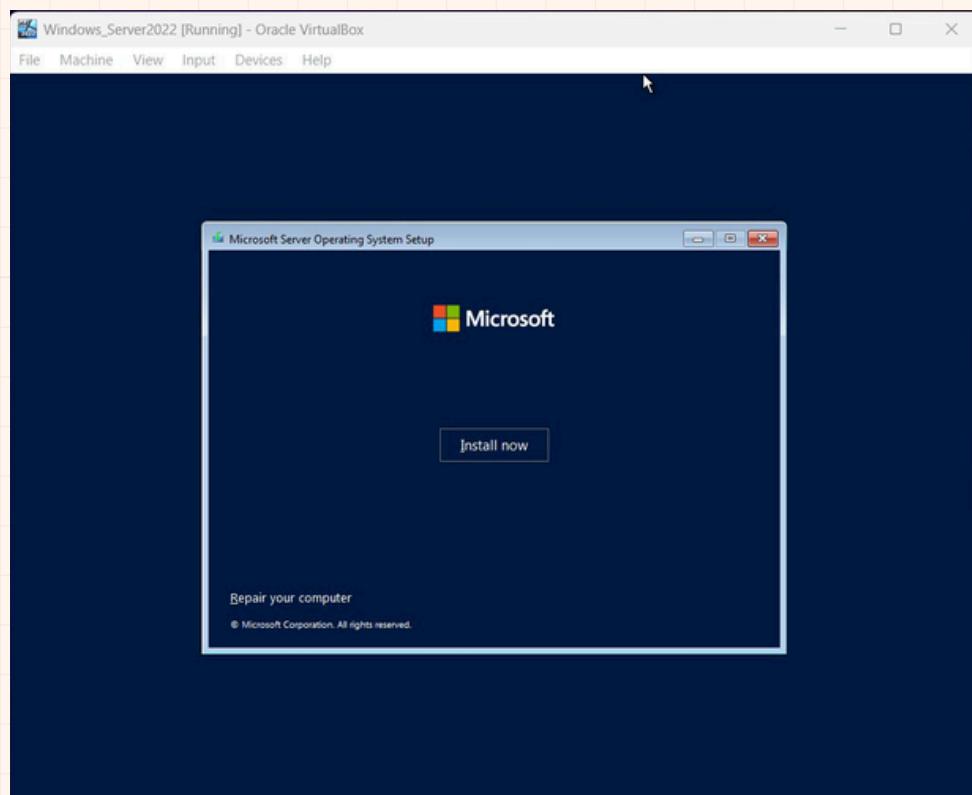
3. Create a virtual hard disk in VirtualBox, start by selecting the option for a new hard disk and choose VDI (VirtualBox Disk Image) as the format. Then, select Dynamically allocated to ensure the disk only uses space as needed, up to a maximum size. Set the size of the virtual hard disk to 50 GB to provide sufficient storage for your VM.

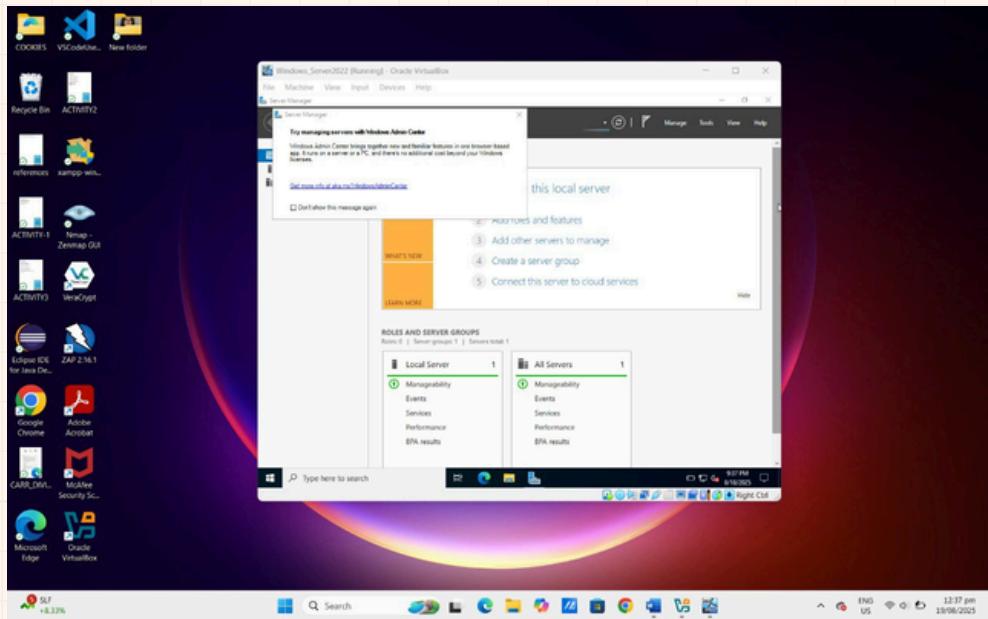
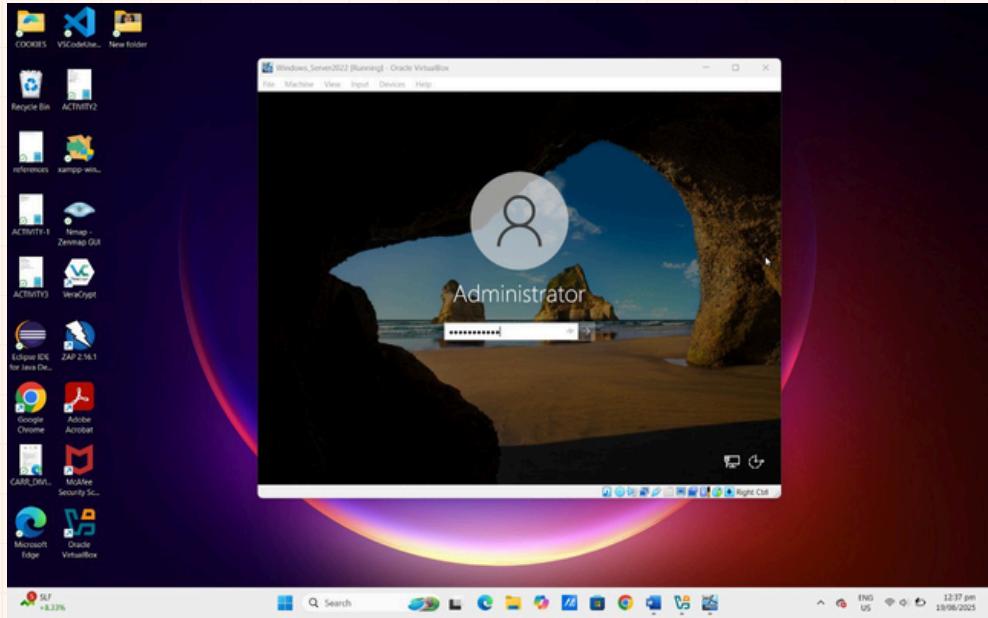


4. Attach the ISO file in VirtualBox, choose "Choose a disk file" to locate your Windows Server ISO file. This will allow the VM to boot from the ISO when it starts.



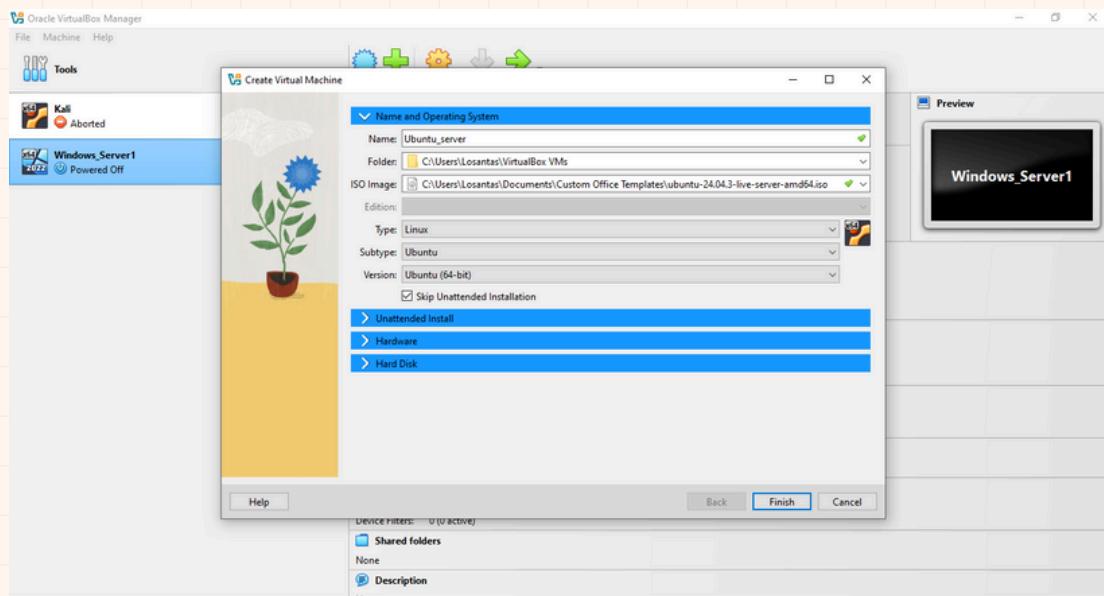
5. Start the VM and install Windows Server, select the VM in VirtualBox and click on the Start button. Follow the prompts in the Windows Server installation wizard, entering the required information as you go. When prompted for credentials, use Username: Admin and Password: P@ssw0rd123 to complete the setup.



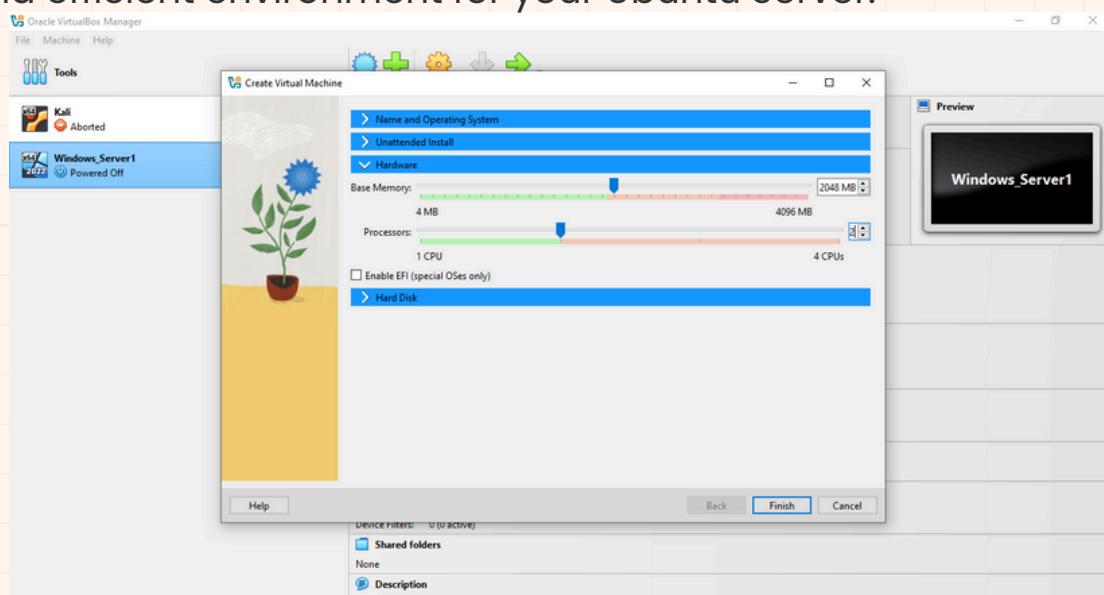


Part 2 – Creating an Ubuntu Server VM

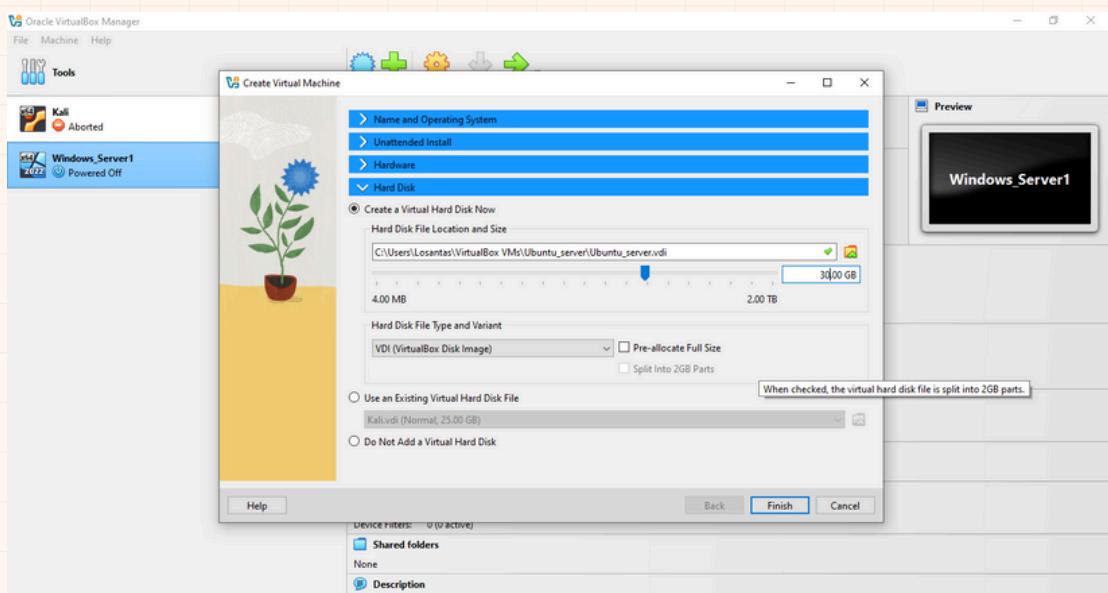
1. Create a new virtual machine for Ubuntu, click on "New" and enter the name "Ubuntu_Server." Select "Linux" as the type, and for the version, choose "Ubuntu (64-bit)." This setup will prepare your VM for running Ubuntu smoothly.



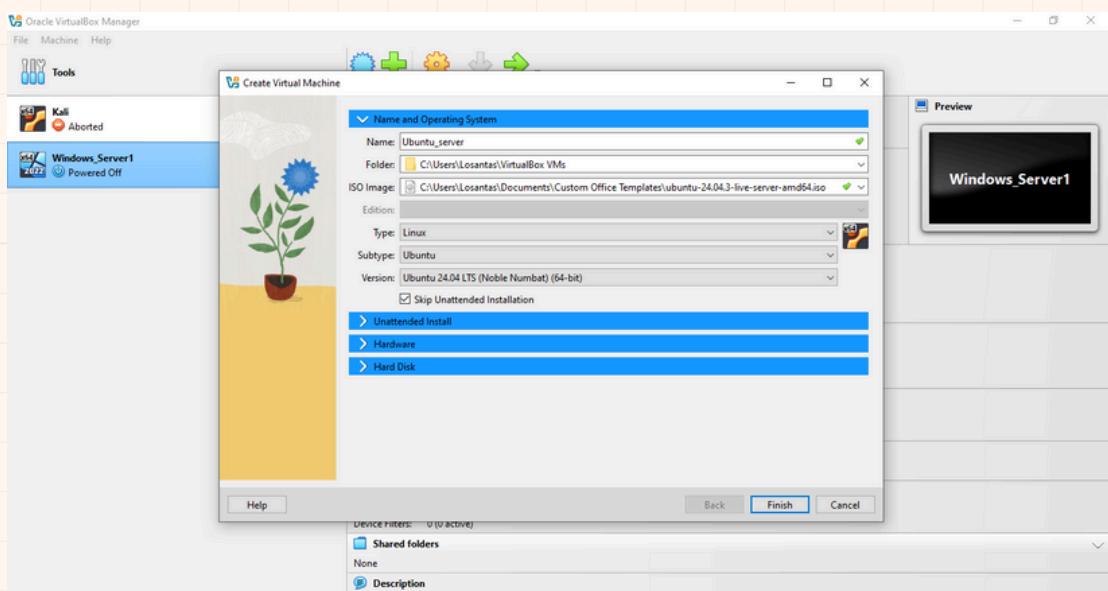
2. Allocate resources, set the RAM to a minimum of 2048 MB. Allocate 2 CPU cores to ensure the system has adequate processing power. This configuration will help provide a stable and efficient environment for your Ubuntu Server.



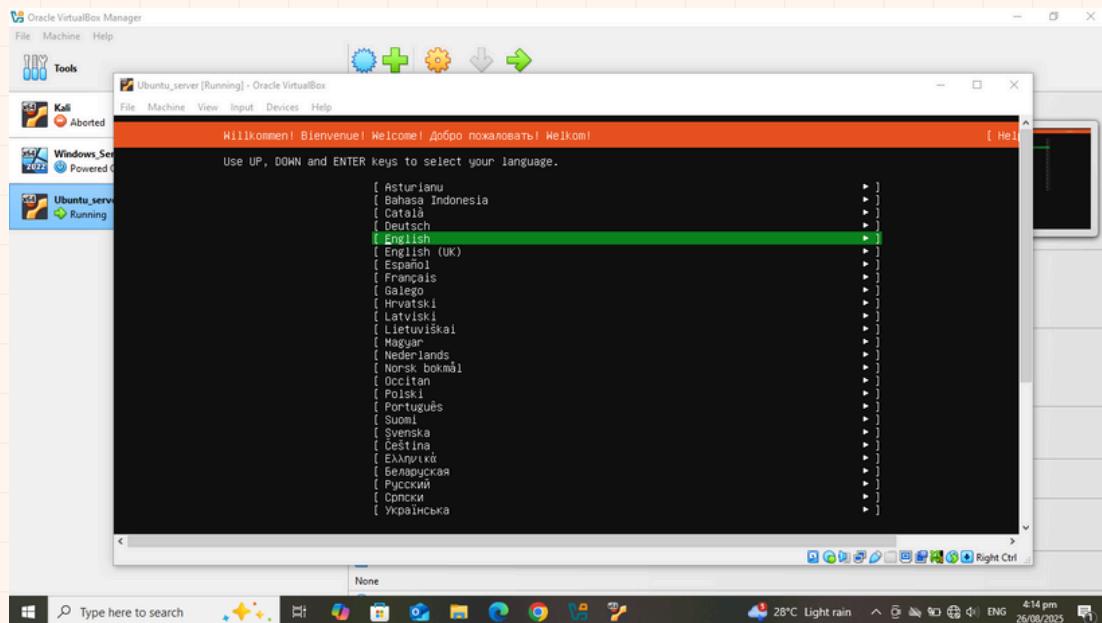
3. Create a virtual hard disk, choose the VDI (VirtualBox Disk Image) format. Select "Dynamically allocated" to allow the disk space to grow as needed. Set the size to 30 GB to provide sufficient storage for your operating system and applications. Then, click "FINISH".



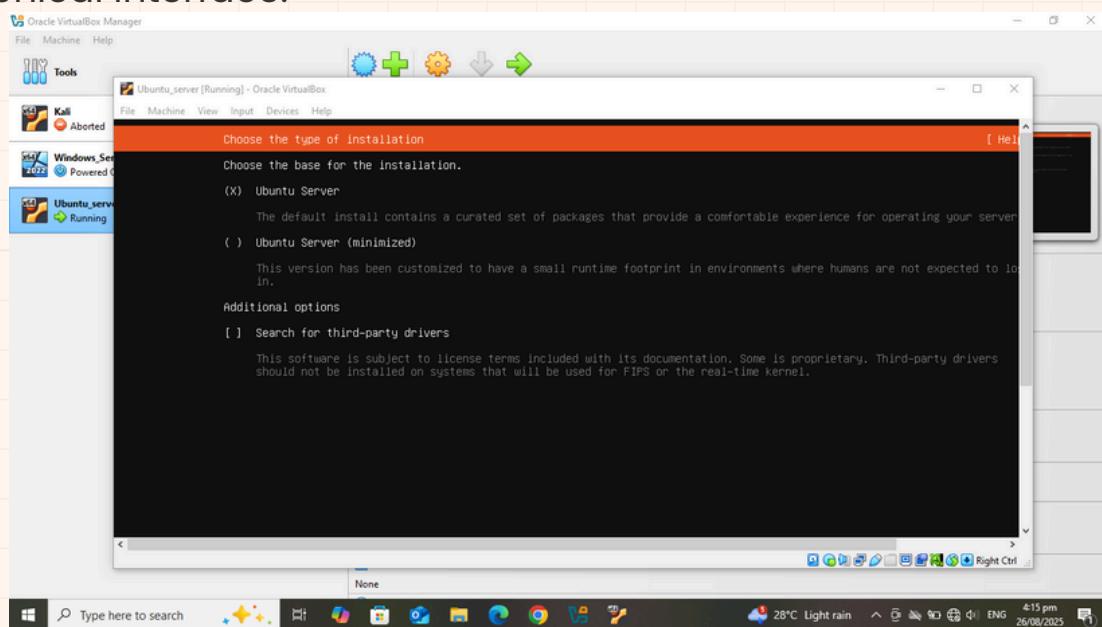
4. Also ensure that the ISO file is attached for your Ubuntu installation, go to the VM's settings, choose a file, and locate the ubuntu-22.04-live-server-amd64.iso. This will prepare your VM to boot from the ISO for installation.

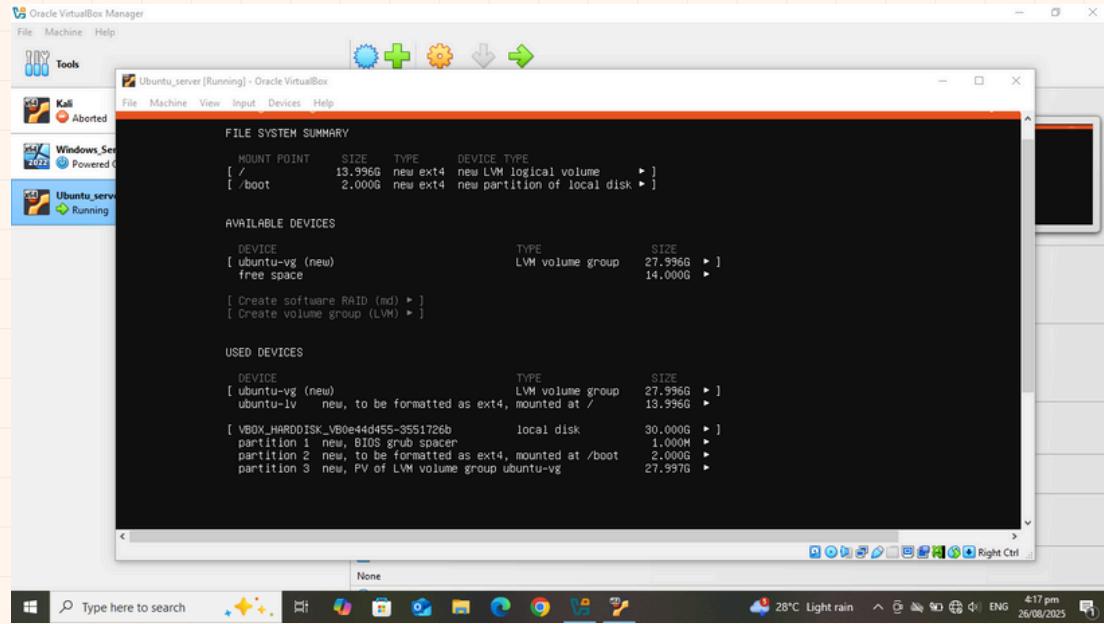


5. Select Language: When prompted, choose "English" as the language.



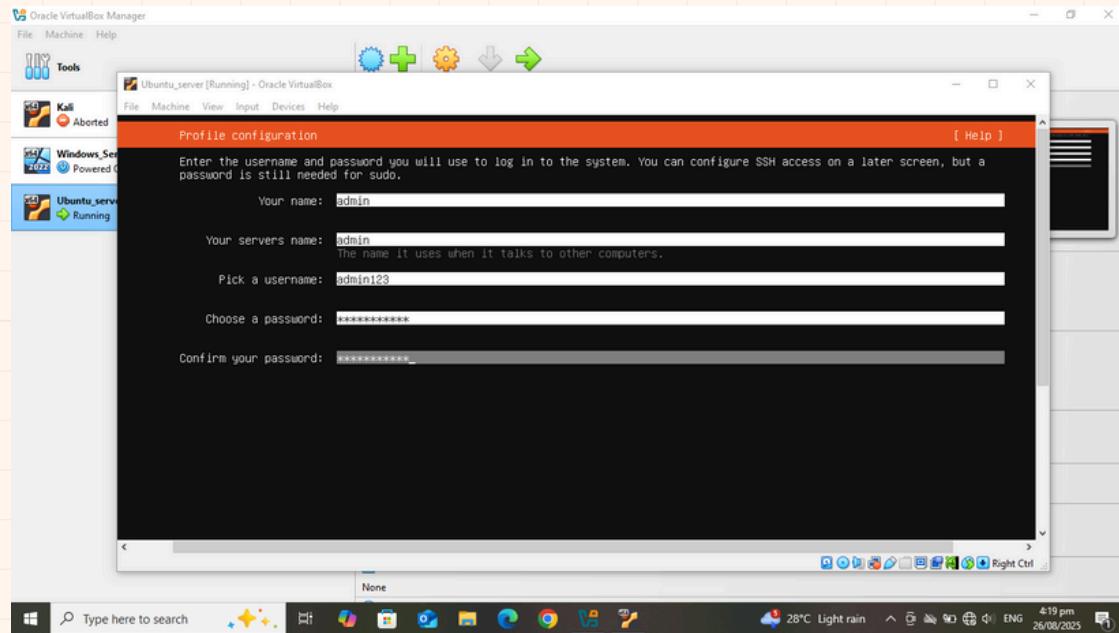
options for the type of installation, offering "Ubuntu Server" for a minimal server environment and "Ubuntu (Desktop)" for a full graphical interface.



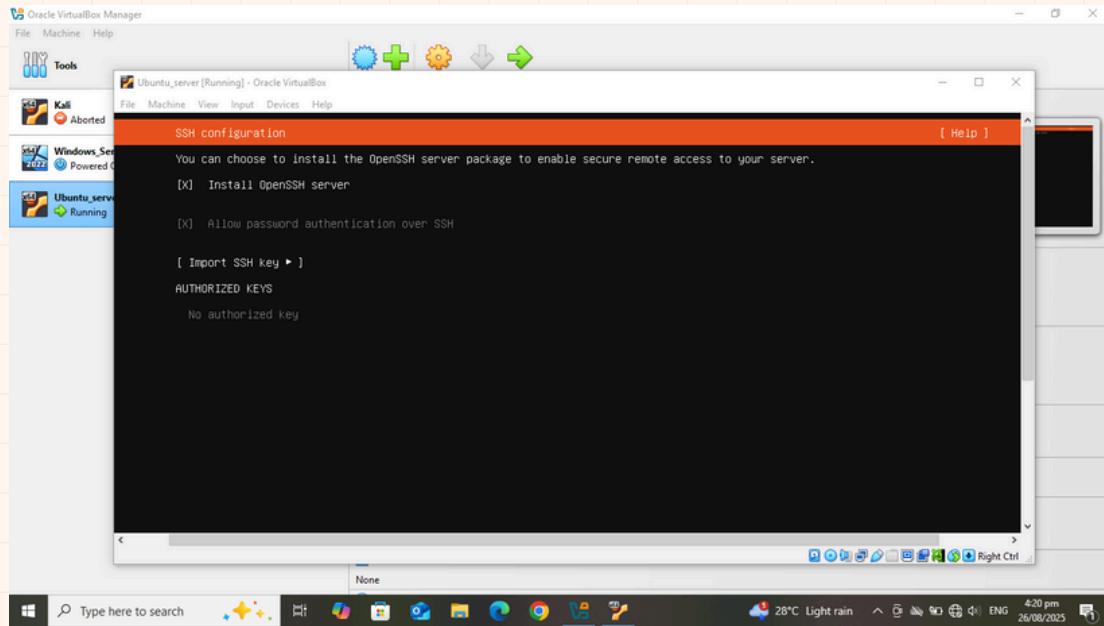


6. Create User:

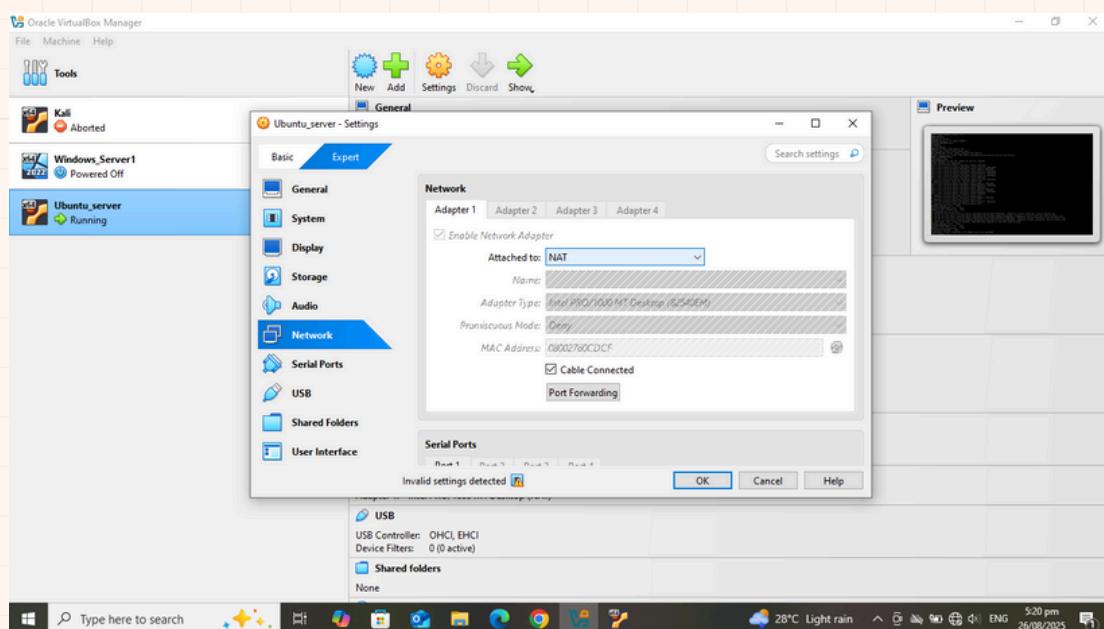
- Username: Enter admin.
- Password: Set the password as P@ssw0rd123



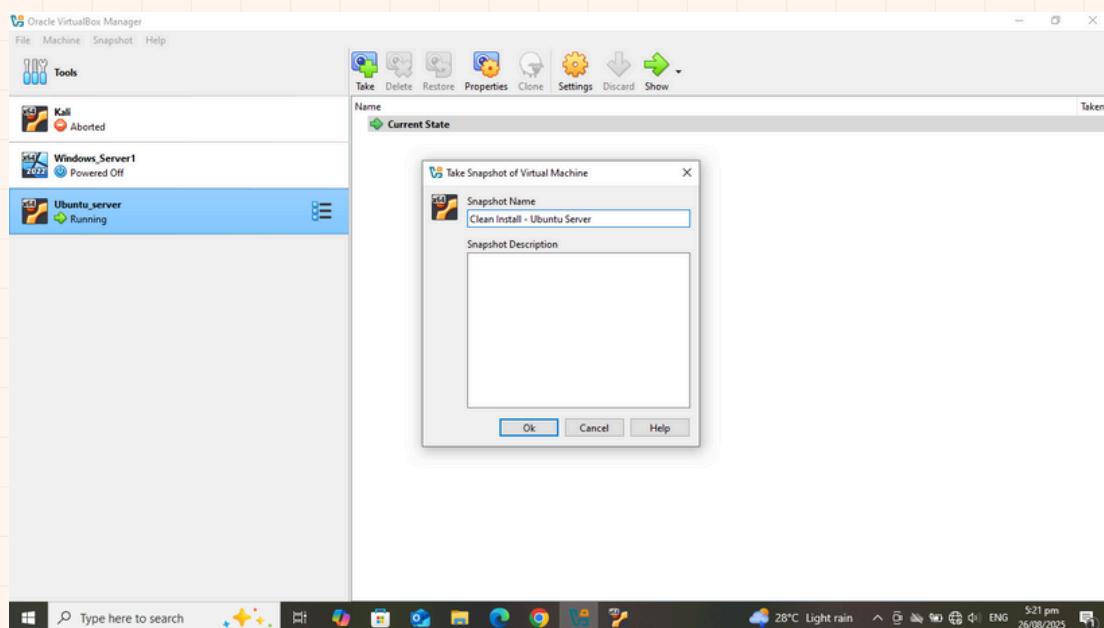
7. Install OpenSSH Server: During the installation process, make sure to select the option to install the OpenSSH Server, as it will be useful for remote access in future labs.



8. To enable network connectivity in your VirtualBox VM, access the settings for the selected VM and navigate to the "Network" tab. Here, you can configure Adapter 1 as either a Bridged Adapter, which connects the VM directly to the physical network, or as NAT (Network Address Translation), which allows internet access while keeping the VM isolated from the local network. Choosing the right option depends on your specific networking needs for the VM.



9. To take a snapshot in VirtualBox, select the desired VM and navigate to the "Snapshots" section. Click the camera icon or "Take" option, and name the snapshot "Clean Install -- Windows Server" to easily identify it later. This snapshot will capture the current state of the VM, allowing for easy restoration if needed in the future.



Summary of VM Configurations

For the Windows Server VM, configure the following settings: allocate 4096 MB of RAM and assign 2 CPU cores. Create a 50 GB dynamically allocated VirtualBox Disk Image (VDI) for storage. For network settings, choose either a Bridged Adapter or NAT. After installing, use the credentials Username: Admin and Password: P@ssw0rd123.

For the Ubuntu Server VM, allocate 2048 MB of RAM and also assign 2 CPU cores. Set up a 30 GB dynamically allocated VDI for storage. Use the same network configuration method as the Windows VM. During installation, set the username to admin and the password to P@ssw0rd123.

Both VMs should have snapshots taken post-installation, named Clean Install -- Windows Server and Clean Install -- Ubuntu Server, respectively. These configurations ensure that both VMs are adequately resourced for their intended functions and facilitate smooth operation in future labs.