Bahir Dar University

Software engineering department

Report on Puppy Linux installation

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Course: Operating system and system programming

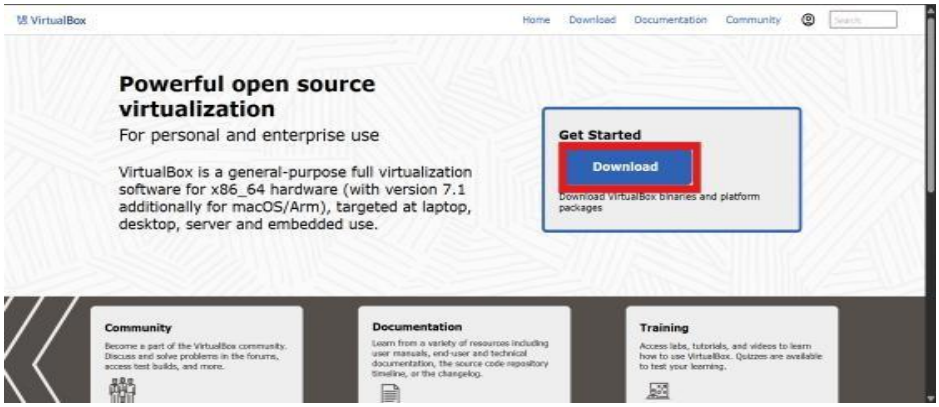
Submission To: Wendimu B.

1. Installation Steps

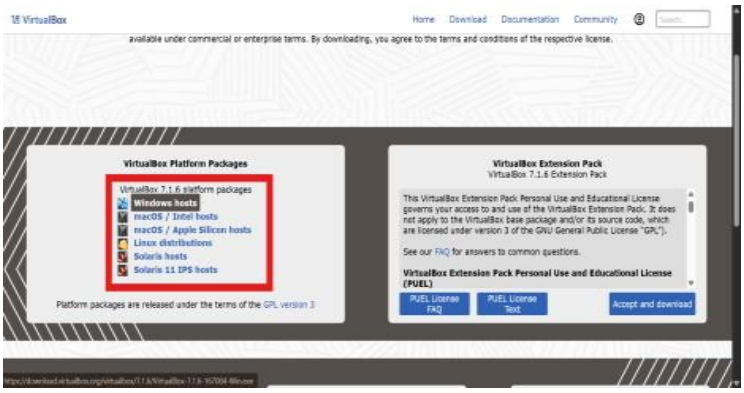
Step1: install a virtual machine of your choice(in my case I am downloading oracle virtual Box

Here are the simple steps to download **Oracle VirtualBox**:

1. Go to the Official Website:
    a. https://www.virtualbox.org
2. Click on "Downloads" (on the left sidebar or top menu).



3. Choose Your Host Operating System:
    a. Click the link that matches your system:
        i. Windows hosts
        ii. macOS hosts
        iii. Linux distributions
        iv. Solaris hosts
4. Download the Installer:



a. Your browser will start downloading the .exe (for Windows) or .dmg (for macOS), etc.

How to Install Oracle VirtualBox (Windows Version Example)

1. Run the Installer

- Double-click the downloaded VirtualBox-x.x.x-xxxxx-Win.exe file.
- Click "Next" through the setup wizard.

2. Choose Installation Options

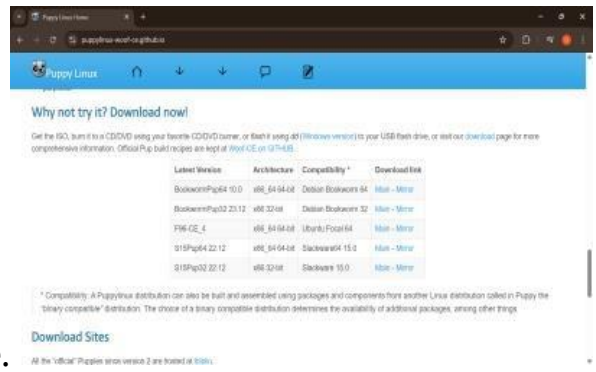
- Leave defaults unless you have specific needs.
- Click Next and then Yes if prompted for network interfaces.
- Click Install.
- If Windows asks for permission to install device software, click Install or Allow.

4. Finish

- After installation, leave "Start Oracle VM VirtualBox after installation" checked.
- Click Finish

Step 2: Download Puppy Linux ISO

1. Visit the official Puppy Linux website.

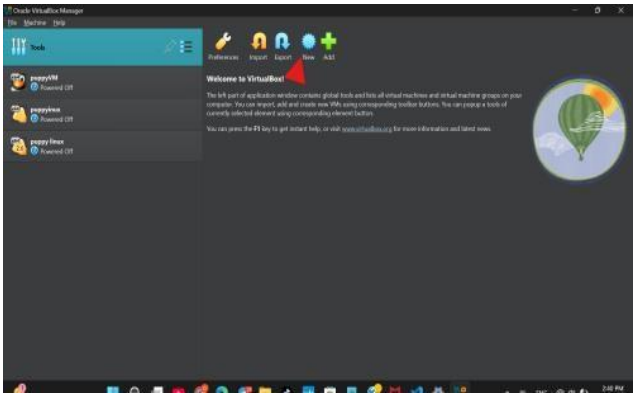


2. Download the latest stable ISO file.

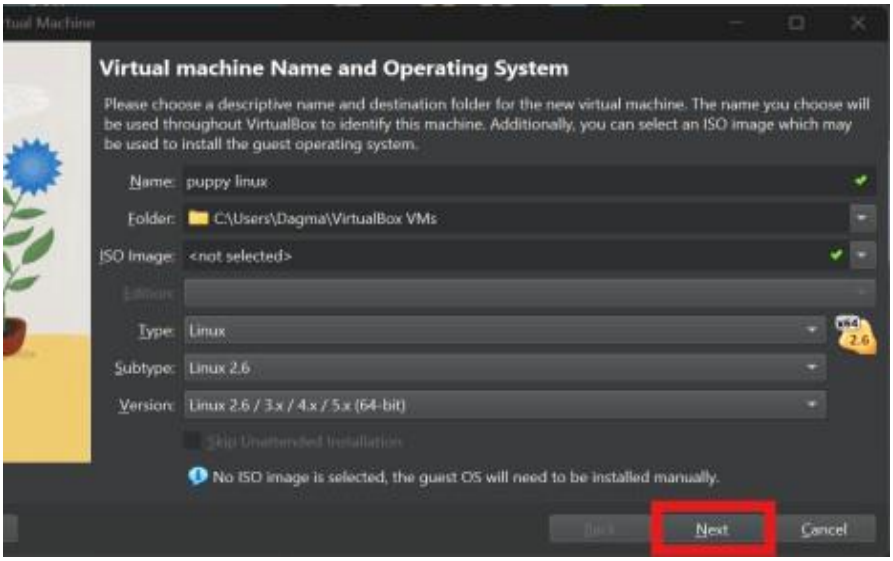
I will be downloading BookwormPup64 10.0. BookwormPup64 10.0 was chosen for its stability, compatibility, and performance. Based on Debian Bookworm (Debian 12), it provides long-term support and access to a vast software repository. As a 64-bit system, it ensures optimal performance on modern hardware. Its strong compatibility with VMware Workstation makes it ideal for virtualization, offering a lightweight yet efficient computing environment.

Step 2: open VirtualBox & create a new VM

1. Open Oracle VirtualBox
2. Click "**New**".

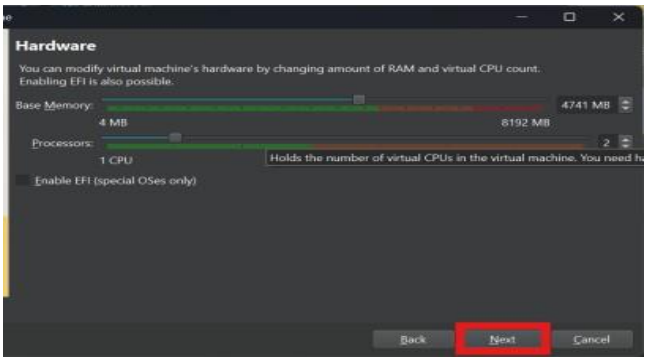


3. Set:
    a. Name: Puppy Linux
    b. Type: Linux
    c. Version: Other Linux (64-bit)
4. Click Next



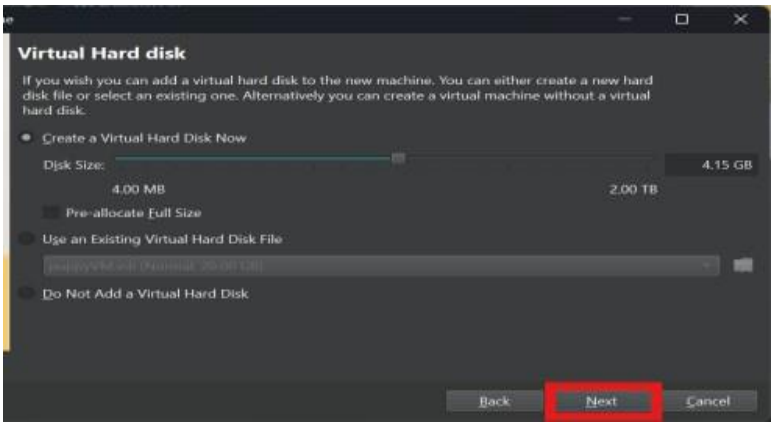
Step 3: Set Memory Size

- Allocate at least 512 MB – 1 GB RAM (1024 MB recommended).
- CPU(s): 1 is usually enough for Puppy Linux since it's lightweight.
- If you have a multi-core CPU and want snappier performance, you can use 2 CPUs.
- Click Next.

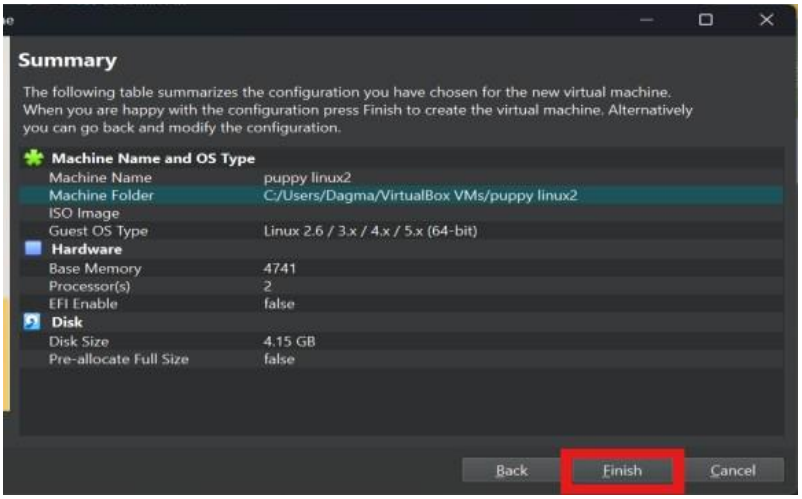


Step 4: Create a Virtual Hard Disk

1. Choose "Create a virtual hard disk now" → Click Create.
2. Choose VDI (VirtualBox Disk Image) → Click Next.

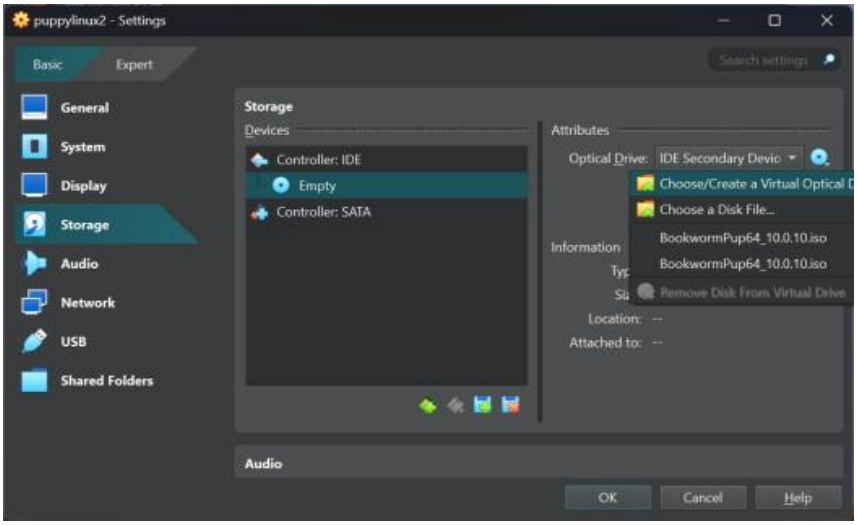


3. Choose Dynamically allocated → Click Next.
4. Set disk size to 4 GB or more → Click Create.



Step 5: Attach the Puppy Linux ISO

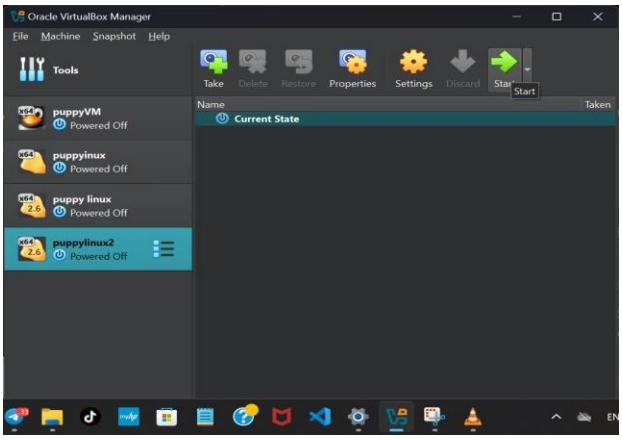
1. Select your VM → Click Settings.
2. Go to Storage tab.
3. Under Controller: IDE, click the empty disk icon.
4. On the right side, click the CD icon → Choose a disk file.
5. Select the Puppy Linux ISO you downloaded.



Step 6: Boot & Run Puppy Linux

1. Click Start to boot the VM.
2. Puppy Linux will load into RAM (live mode).
3. You'll see a setup screen — follow the prompts (keyboard, time Zone, resolution).

4. You can run Puppy without installing (I didn't know this at first and I will be telling you the obstacles I encountered)



Issues (Problem Faced)

Initially, I was unaware that Puppy Linux could be run in live mode without

requiring full installation. I assumed that downloading the ISO and booting it would automatically install the operating system to the virtual machine. Because of this misunderstanding, I proceeded to use the terminal and attempted to create and save files, thinking they would be permanently stored.

However, after shutting down the system and booting it again, I noticed that the files I had created were missing. This led to confusion, as I couldn't locate any of my previous work. Upon further investigation, I realized that I had been running Puppy Linux in Live Mode, which loads the OS into RAM and does not retain changes after shutdown unless explicitly configured to do so.Once I understood this, I proceeded to perform a proper installation of Puppy Linux to the virtual hard drive. After installation, I was able to save files and retain changes across sessions, resolving the issue.

How to Install Puppy Linux to the Virtual Hard Drive in VirtualBox Rather than just using the live mode

Step 1: Boot into Live Mode

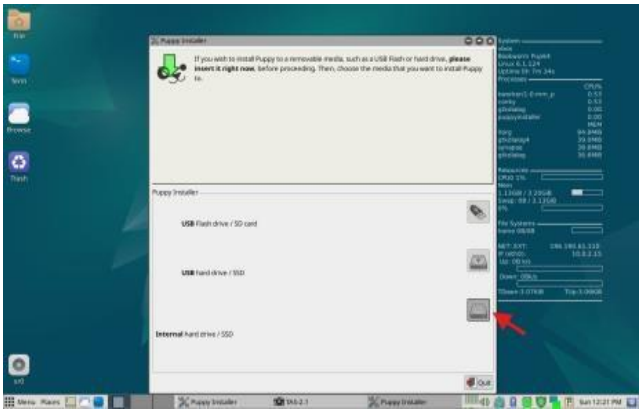
- Puppy is running entirely from RAM at this point.
- You'll see an "Install" icon on the desktop.

Step 2: Click the “Install” Icon

1. Double-click Install on the desktop.
2. A window will pop up with several installation options.
3. Choose “Universal Installer.”

Step 3: Select Installation Type

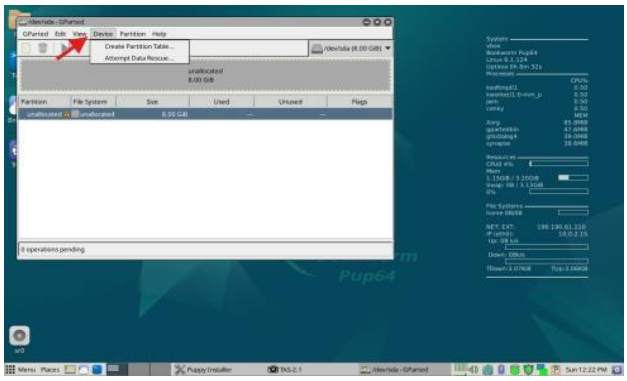
1. In the Universal Installer, choose “internal (IDE or SATA) hard drive”.
2. It will list available drives like sda — that’s your virtual hard drive.
3. Select sda and click OK.



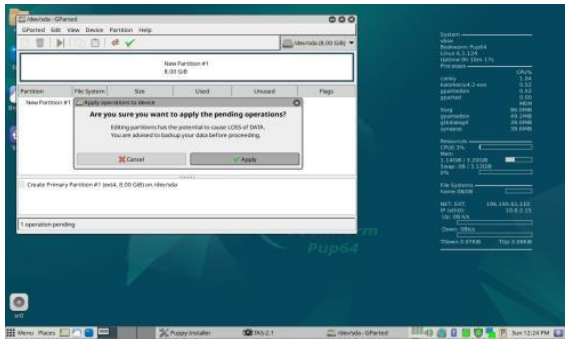
Step 4: Partition the Drive (If needed)

If no partitions exist, you'll be asked to run GParted:

1. In GParted:
    a. Select your virtual drive (usually /dev/sda)
    b. Go to Device → Create Partition Table (choose msdos)
    c. Right-click the unallocated space → New



        i. Set:
            1. Filesystem: ext4
            2. Size: use the full space
            3. Label: optional
        ii. Click Add
    d. Click Apply (green check mark)

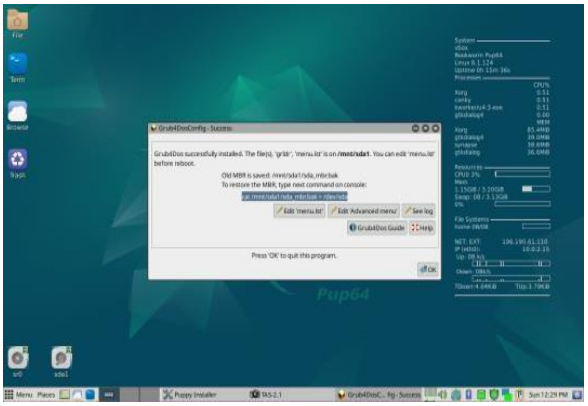


2. Close GParted and go back to the installer.
3. Select the new partition (like /dev/sda1).

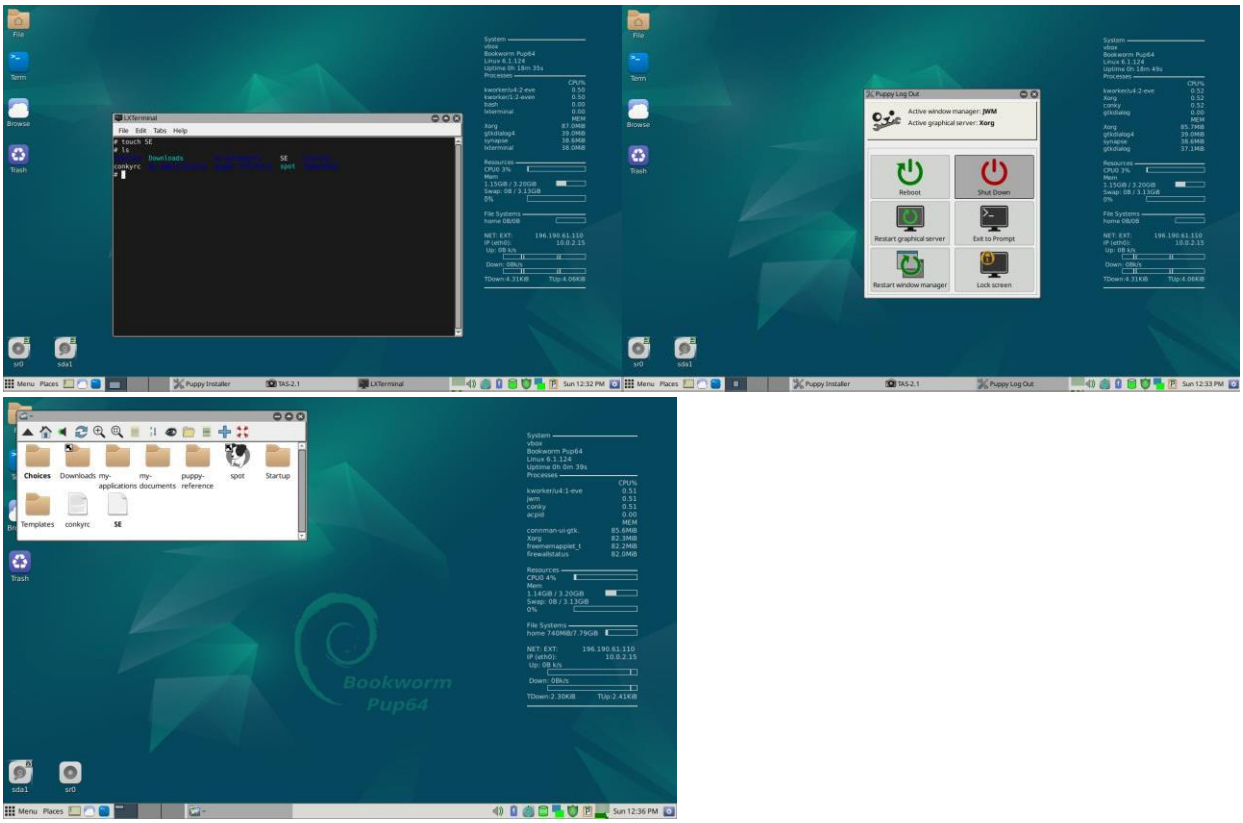
- It will copy necessary files and prompt to install GRUB bootloader.

Step 6: Install GRUB Bootloader

1. Say Yes to install GRUB.
2. Choose GRUB4DOS (it works well with Puppy).
3. Confirm installation to the MBR of the virtual disk.
4. When done, close all windows.



Now that we have installed our OS successfully just to make sure we are still not using the live mode we will be creating a text file and shut down our OS. After we run it again if the text file, we have created it still there we have successfully downloaded our puppy Linux.



We have successfully downloaded our puppy linux.

5. Conclusion

This setup allows you to explore and test Puppy Linux in a safe, virtualized environment without modifying your primary operating system. Puppy Linux is a great option for lightweight computing and can be used for educational and experimental purposes.