Lab 02 – Virtualizing Your Machine

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INTRODUCTION

The goal of Lab 02 is to install and set up a virtual machine inside a virtual machine manager on my computer.

BREAKPOINT 1

To confirm that virtualization was enabled, I opened my task manager and checked under Performance > CPU. Below is a screenshot of my task manager and circled in red is the confirmation that it is enabled.
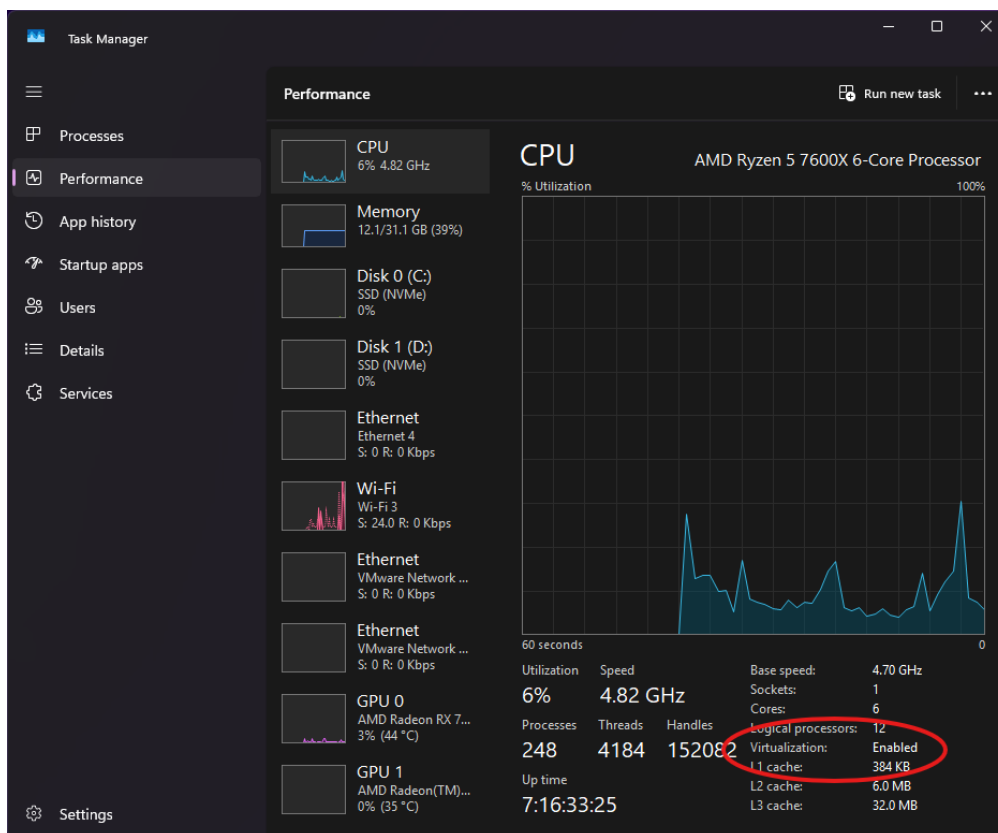

Figure 1 Checking task manager for virtualization

BREAKPOINT 2

Next, I downloaded both Pop!_OS and VirtualBox. I had a previous version of VirtualBox on my computer, but I replaced it with the 7.1.6 version. I did not run into any issues while downloading these files and below is a screenshot of the download confirmation.

| pop-os_22.04_amd64_intel_49 | 2/11/2025 1:48 PM | Disc Image File | 2,605,056 KB |
| VirtualBox-7.1.6-167084-Win | 2/10/2025 10:02 AM | Application | 120,134 KB |

Figure 2 Confirming downloads of PopOS and VirtualBox

Figure 3 My VirtualBox interface

BREAKPOINT 3

Pictured below is a screenshot of the summary page for my Pop OS system. The system is equipped with a base memory of 2048 MBs, 1 CPU processor, storage of 25 MBs, and video memory of 128 MBs. I did not run into any issues while configuring this virtual machine.
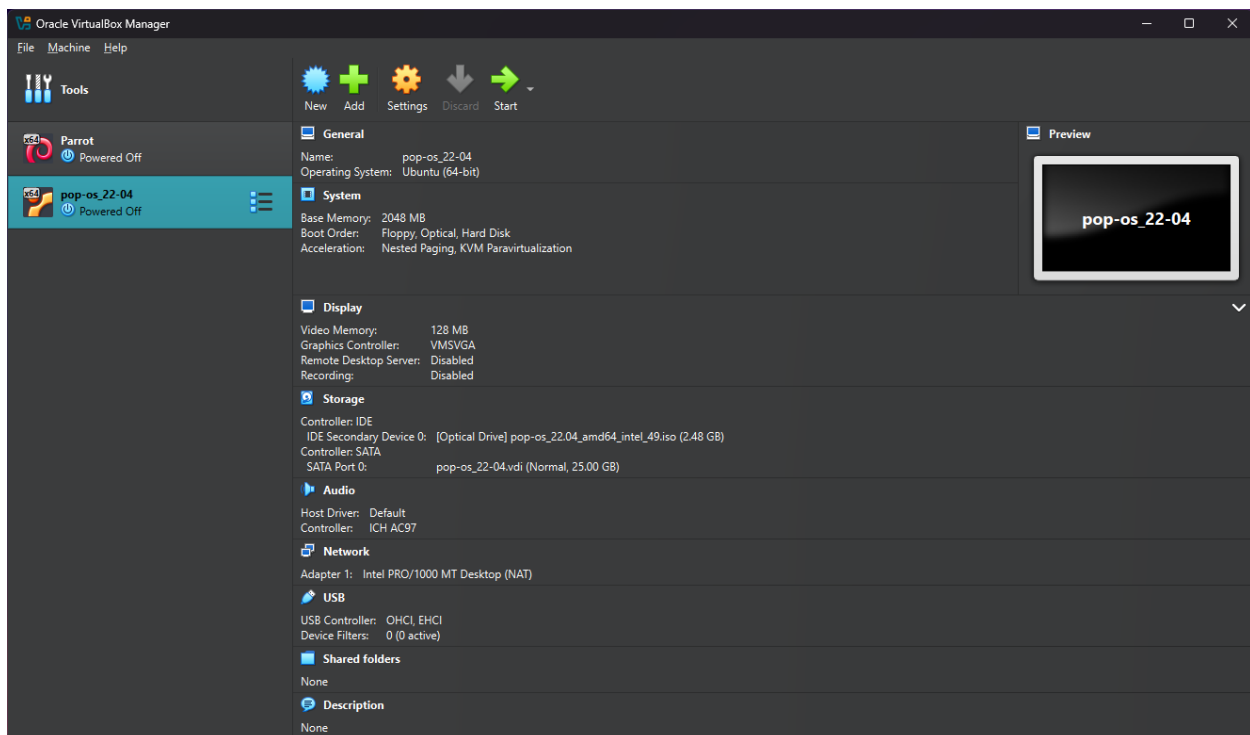

Figure 4 Pop OS VirtualBox Settings

BREAKPOINT 4

After booting up my virtual machine and loading in to the desktop, I received an error message saying that Pop-OS was not responding and it asked me to either force close or wait. I force closed and proceeded to do a clean install. I created my username and password as well as an encryption password and waited for the install to finish. When it was done, I set my display preferences and below is a screenshot of my desktop.

Figure 5 My Pop OS desktop

BREAKPOINT 5

The last step in this lab was to install guest additions. First, I updated and upgraded the software by using the commands **sudo apt update** and **sudo apt upgrade** in the terminal. The next step was to insert the **Guest Additions CD image** from the devices menu in the VirtualBox window. I ran into an issue with opening the external drive, so I restarted the machine and that seemed to fix the issue.

Next, I ran **sudo ./VBoxLinuxAdditions.run** in the terminal to run the *VirtualBox Guest Additions* installer and then **sudo /sbin/rcvboxadd quicksetup all** to install the missing files. After that installation, I rebooted the machine and was able to change the screen size to fit the window and enable the *Shared Clipboard* settings to be bidirectional. This is shown below by copying and pasting text from the About Us section on the UTSA website to my host computer notepad.
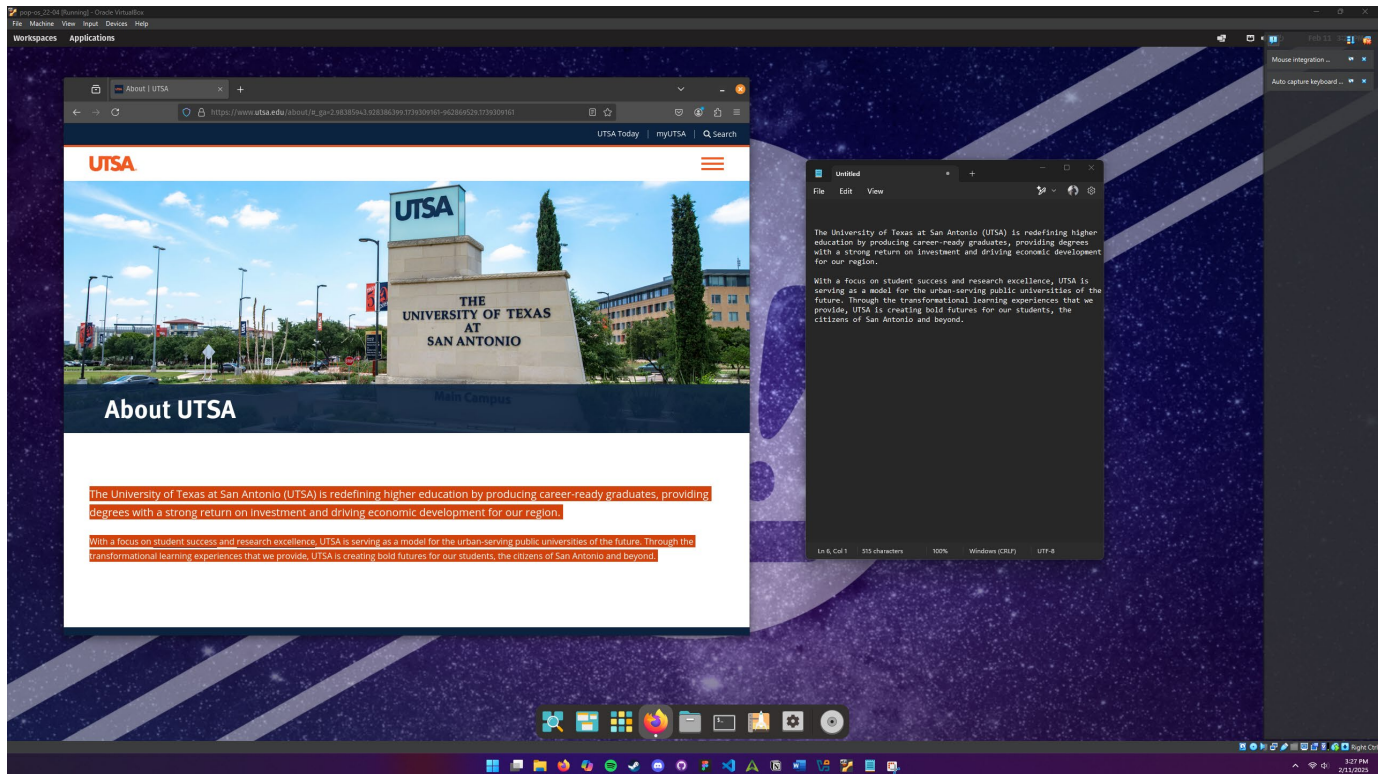
Figure 6 Bidirectional copy between host and guest

CONCLUSION

After completing this lab, I feel more confident in installing an ISO and configuring a virtual machine. I ran into a couple of issues but nothing that halted my progress in completing it. The issues were simple and required little to no troubleshooting, I started with the easiest solution and went from there. I will use the skills I learned in this lab going forward when I need to install a virtual machine with any OS needed and for when I am playing Hack the Box.

REFERENCES

R. Mitra, "*Lab 02: Virtualizing Your Machine*," The University of Texas at San Antonio (2025). Last accessed: *02/11/2025*.

COLLABORATION

I worked solely on this lab with the instruction of Professor Mitra.