

## 2 – Virtualization

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### INTRODUCTION

Virtual machines (VMs) are extremely useful tools to set up for cybersecurity professionals and tech individuals. They can be used to simulate specific environments, test certain specifications and even be used to check for malware/possibly dangerous code by opening it in an environment that is separate from the user's personal computer. This lab goes through the steps to set a virtual box machine with the Pop! operating system on it.

### BREAKPOINT 1

When I needed to verify my ability to run a VM I went to the task manager to see if my processor had it enabled and what did I know it did have it already enabled

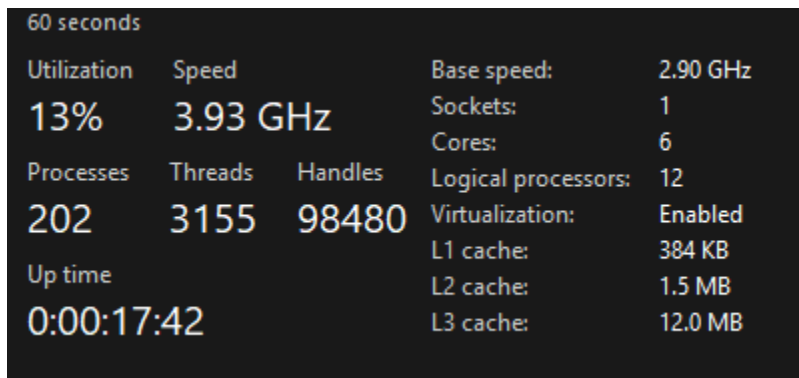


Figure 1 Virtualization Verification

### BREAKPOINT 2

This is confirmation of downloading the required files



 VirtualBox- 7.1.6-167084-Win	2/11/2025 10:08 PM	Application	120,134 KB
 pop-os_22.04_amd64_intel_49	2/11/2025 10:17 PM	Disc Image File	2,605,056 KB

Figure 2 Successful File Download

### BREAKPOINT 3

I found setting up the VM up to this point to be very easy. What I didn't know was the trouble shooting nightmare that would come next. In breakpoint 4 and 5.

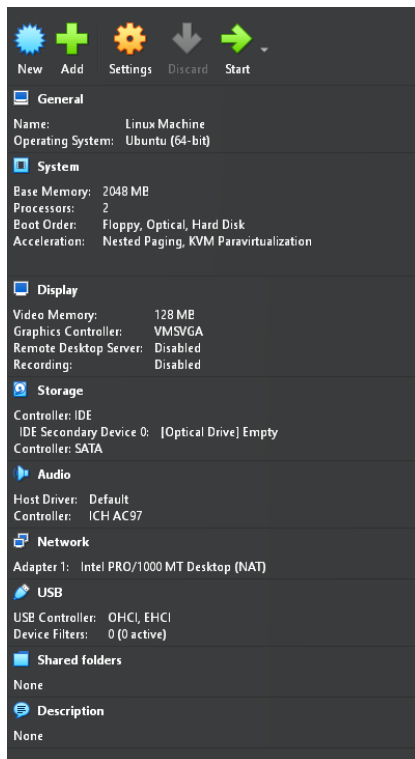


Figure 3 VM settings

## BREAKPOINT 4

So, as you could tell by the time. I ran into quite a bit of troubleshooting issues. Most of it being the fact that despite the amount of space I gave the VM from 20GB to 100GB. I was able to successfully fix after just doing a complete fresh install of Virtual box and the Pop! OS.

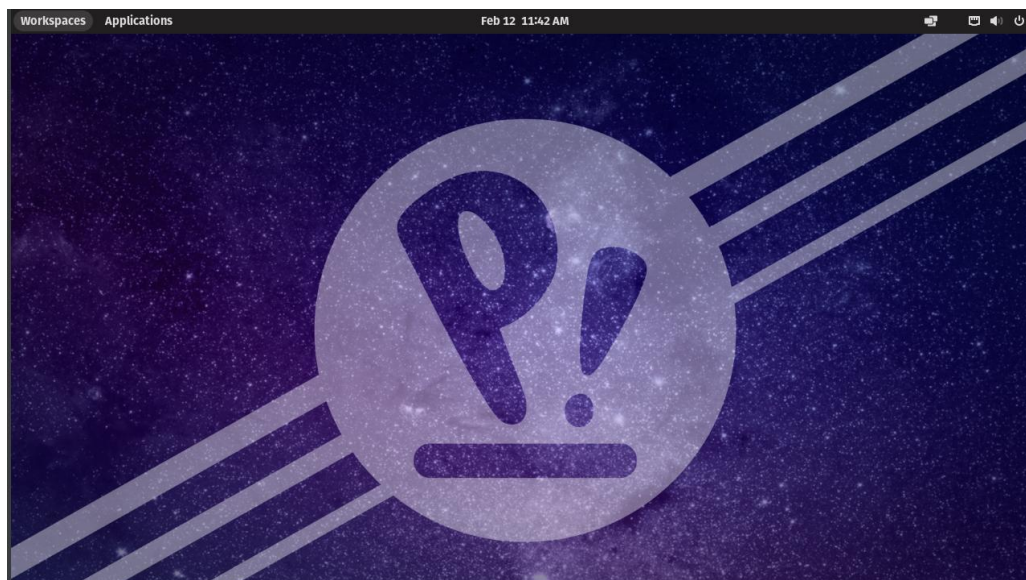
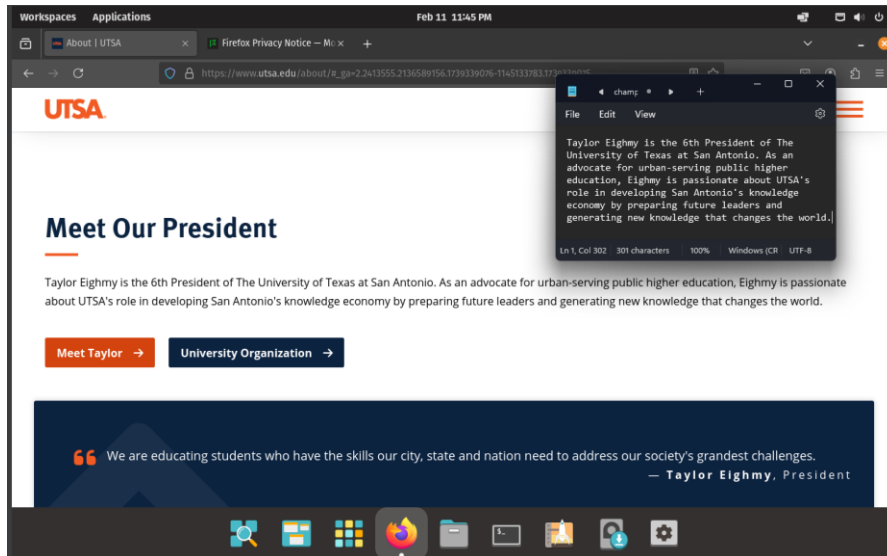


Figure 4 VM screen post install

## BREAKPOINT 5

This was the most difficult breakpoint. The addon, while useful, was the most annoying to install. I think that's in-part to the fact that my VM lacked the space to get it installed. So it was a process of reinstalling a new instance of a VM and pop to give it the right amount of space. I much prefer having a second PC to do all of this than a VM just out of the fact that it is a lot easier to do that. I do also understand the down and ups of having either a VM or an entirely different machine for work/code.



## CONCLUSION

As addressed in the breakpoints, the most annoying thing about this lab was space allocation for the necessary add-ons and making sure the OS was up to the right version. I will likely switch off of Pop! to a different flavor like Red Hat since I prefer those more than Pop! OS. But overall, minus all the set back in space setting up the VM was really easy. I thankfully did not have to do additional research but I am going to spend some time outside of assignments getting this VM set properly so I do not need to worry about this again.

## REFERENCES

R. Mitra, "Lab 2: Virtualization," The University of Texas at San Antonio (2024). Last accessed: (Feb. 11, 2025)

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## COLLABORATION

I worked on this alone.