A REPORT ON SETTING UP PERSONAL LAB USING VIRTUALBOX.

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FROM:

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Introduction.

A session was organized by KamiLimu on 23 November 2022 from 5pm to 8m, moderate by Mr. Mwema and attended by 39 participants. The main aim of the session was to introduce the mentees to the foundation of their choice of track. It was also to elaborate to the mentees objective of each track.

The lead mentors to the cyber security team, Engineer Lawrence and Engineer Ted explicitly explained the objective of the track and their expectations from the mentees. They gave a task to the mentees, a task that was to be completed in a week time, and results to be submitted in report form.

The task entailed the following:

I. Setting up personal lab by installing VirtualBox.

ii. Installing two virtual machines, windows and Linux based operating system.

iii. Enabling networking profile to the virtual machines.

iv. Installing LAMP.

v.80% use of VirtualBox functionality.

The installation of the VirtualBox was quite easy for one who had followed the information shared on the YouTube channels by the lead mentors. It did not require much of effort though it needed attention based on the versions. The version required was 7.4, which is the latest version. By keeping every step as default making the installation less cumbersome.

The Linux version for the virtual installation was critical and need much attention as I was new to the new operating features and fundamental of Linux. The centOS version was clearly new to me and I had to do more research on the same. Following the tutorials which where of much benefits keenly, the allocation of resources to the virtual machine was taken care of. It involved allocation of Ram of not less than 2GB , creation of virtual disk ,system configuration in terms of networking and most importantly the iso file attachment for rebooting the system.

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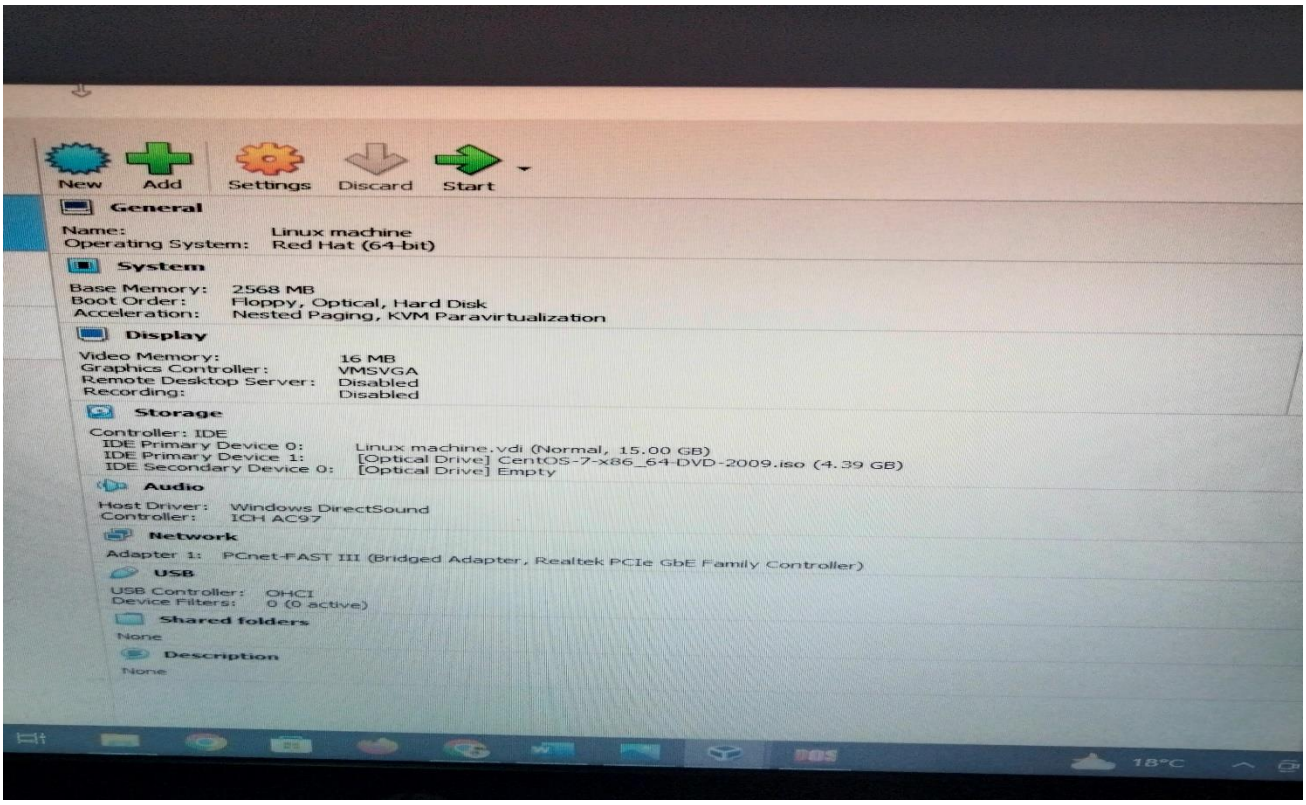


For the windows version, installation was a walk over as I have had a better understanding of the needed skills to navigate the windows system and the preferred tools.

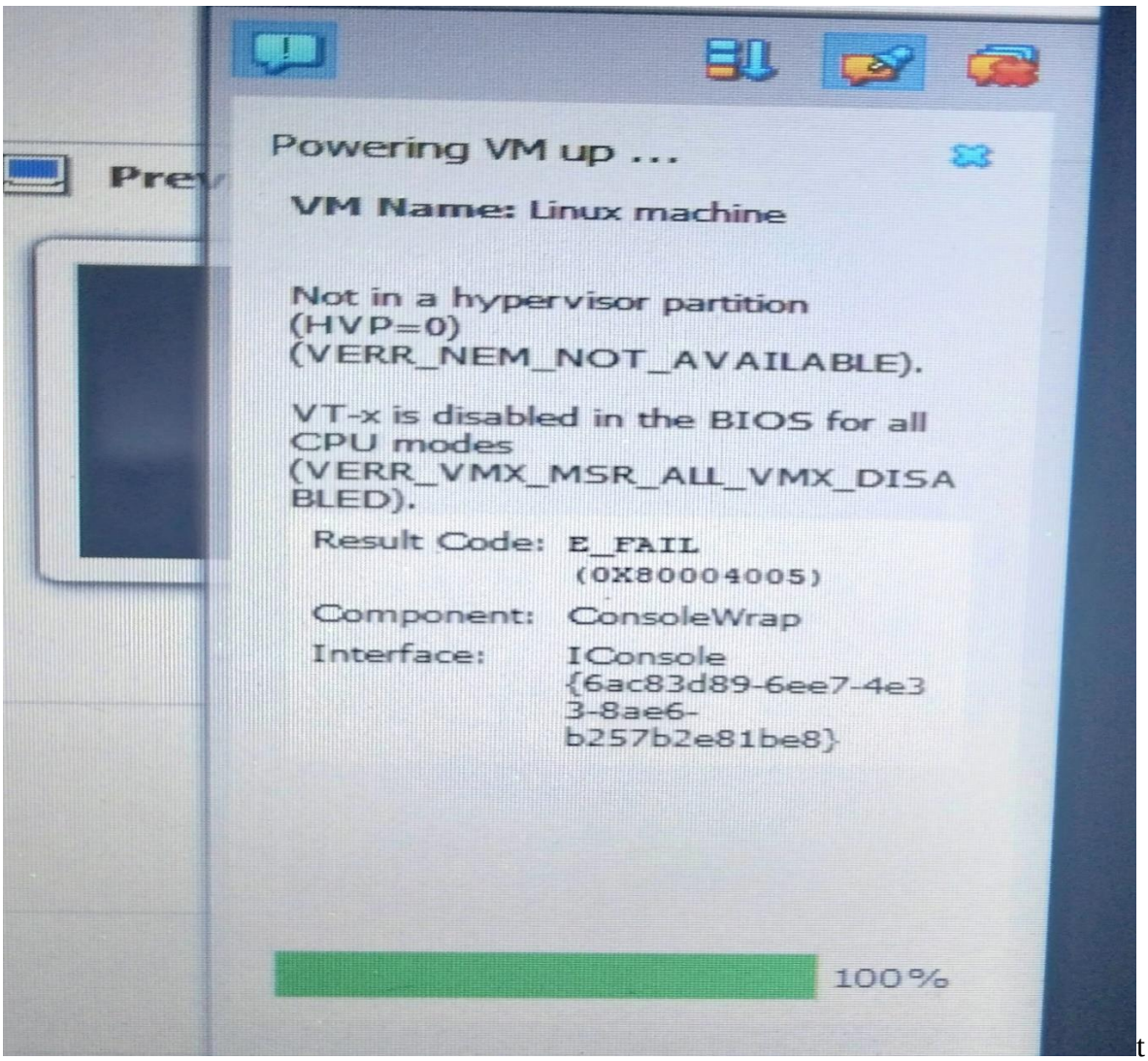
In networking profile in the VirtualBox mostly involved the networking protocols and topologies. The most used networking protocols involved are NAT, NAT Network and Bridge networking protocols. NAT is a default option and place the

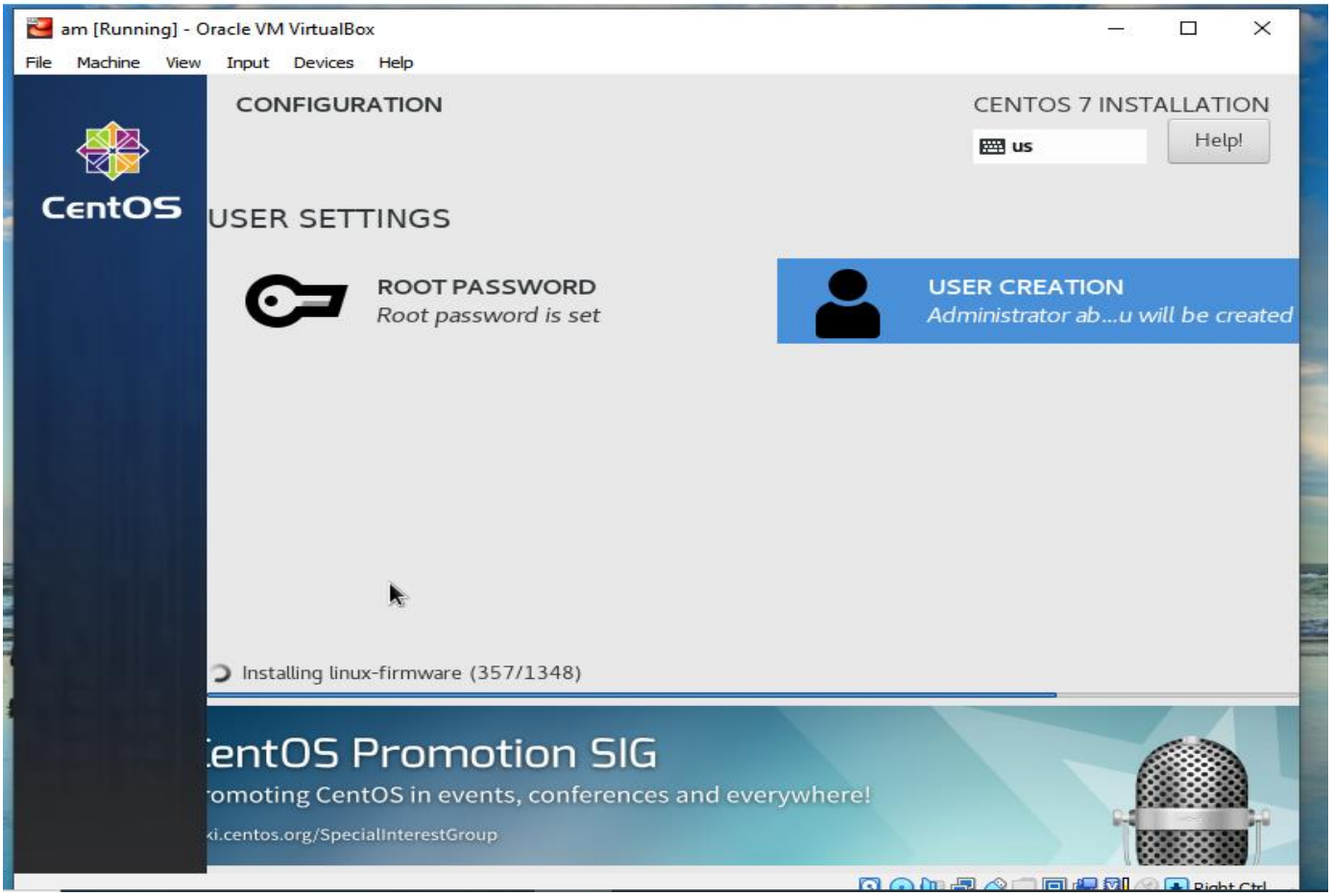
machine behind virtual router, that is a generally standalone network. For NAT Network the virtual machine is visible to other virtual machines and it can access the host machine through one way and it also expose the virtual machine to the eternal world.

PROBLEM FACED.

At the initial stage of the installation of the first virtual machine , it was not possible to install the virtual machine since the VT-x in my machine was not enabled. It a dead end as the function key which is known for windows F10 was not enabling the Bios setting. I did intensive research with no fruit as my functional key was shifted to F8 though at the end I figured it out by trying every functional key.

The most pressing problem is installation of LAMP that has not been a familiar protocol to me. The basic are new and all need a scratch start up. Have been able to install it though am not still able to run it successfully.


Powering VM up ...
VM Name: Linux machine
Not in a hypervisor partition
(HVP=0)
(VERR_NEM_NOT_AVAILABLE).
VT-x is disabled in the BIOS for all
CPU modes
(VERR_VMX_MSR_ALL_VMX_DISA
BLED).
Result Code: E_FAIL
(0X80004005)
Component: ConsoleWrap
Interface: IConsole
{6ac83d89-6ee7-4e3
3-8ae6-
b257b2e81be8}
100%



CONCLUTION.

The entire process of virtual machine installation has been a learning experience. It makes one push harder and spend more time learning and research for more ideas to overcome the errors that one run into. It has kept me on toes to be flexible and ready to adapt in new concepts.