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Securecoding

Lab-1

HOW TO DUALBOOT WINDOWS 10 USING LINUXVARIANT

LINUX VARIANT: UBUNTU 20.04 LTS

STEPS:

STEP-1:

Download ubuntu latest version from the link from your favourite browser

And next up you need to go to rufus website and download the rufus tool which helps in creating a bootable disk pin to linux

Lastly go to this link and download SD formatter it helps to format and prepare the drive for creating a bootable media go ahead and download zip file and install it in your laptop or windows pc

STEP-2: CREATING A BOOTABLE DISK

After downloading the all the files place them in a order so that u can easily navigate them and now go ahead connect your pendrive to your laptop.

Now open SD Formatter and choose the drive letter of your pendrive and form it

Once its done Formatting now its time to import image in to pendrive using rufus. Right click on rufus and run as administrator Now inside rufus choose the drive letter of your pendrive and under the boot section click on the select option to import the ISO image file .

Now go ahead and look for ubuntu image file in your system and if u notice that the patition scheme is set to MBR it means rufus has detected your pc is using bios and ambere combination

STEP-3: CREATING A NEW PARTITION

Assuming tat you have a fresh system, the first thing we need to do is to make a partition to install Linux. The 256 GB in my system was already had several partitions from manufacturer but mainly for backup and other purposes. Main partition was C drive, of around 220 GB, where Windows 8.1 was installed.

If you have just one partition like this, you need to make some free space out of it for Linux. If you have several partitions of considerable size, use any of them except C drive because it may erase the data.

To make a partition in Windows 8, go to Disk Management tool. You can find disk management tool by searching for 'disk' in Control Panel.

In the Disk Management tool, right click on the drive which you want to partition and select **shrink volume**. In my case, I shrank the C drive to make some free space:

STEP-4: Disable fast startup in Windows [optional]

Windows 8 introduced a new feature called "fast startup" for quick boot. While it is not mandatory, it would be better to have it disabled.

Go to **Control Panel** > **Hardware and Sound** > **Power Options** > **System Settings** > **Choose what the power buttons do** and uncheck the **Turn on fast startup box**.

STEP-5: Disable secureboot in Windows 10 and 8.1

This is the most important step. The new **secure boot** feature of Windows 8, originally intended for security feature for rootkit viruses, prevents dual booting of Windows with Linux. To dual boot Windows 8 with Linux, we must disable secure boot in UEFI

Open the settings charms in Windows by pressing **Windows+I** keys. At the bottom, you'll see the option of **Change PC settings**. Click on it.

you need to go to General PC settings and select **Advanced startup** and then click on **Restart now**

go to **Update and recovery** from left sidebar:

Then click **Restart now** under **Advanced startup:**

After you have clicked Restart now button, you will be presented with some options to choose from in the next screen. Select **Troubleshoot** here

In **Troubleshoot** menu, select **Advanced options**:

In Advanced options menu, choose **UEFI Firmware settings**:

Next, click on **Restart** button to reboot your system in UEFI settings which 'may' seem to have similar interface as BIOS.

By this time you must have been booted in to UEFI utility. You can change various settings here but all we want to do right now is to disable secure boot option to allow dual booting of Ubuntu or any other Linux

Move to Boot tab, there you'll find **Secure Boot** option which is set to enabled. Use the arrow key to go to Secure Boot option and then press **enter** to select it. **Use + or – to change its value**. Confirm it when prompted. Press **F10 to save the changes** and exit the UEFI settings.

Step 6: Installing Ubuntu along with Windows 10, 8.1

Once you have disabled secure boot, it's time to install Ubuntu. I hope you already created the live USB as mentioned in step 2. Plug in the USB and boot the system from it.

To boot from USB, will have to choose boot from USB option from within Windows itself. Either with PC Setting (like for UEFI) or pressing shift key while clicking on Restart.

Once you have booted in the live USB, you will be presented with option to try or install Ubuntu. Click on install. You will be presented with few screen

options to choose the language. It will then do some checks on available space, power and internet connection etc. Just click on **Continue**.

The main screen which you should pay attention to is **Installation Type**. Choose **Something else** here

Remember we had created some free space beforehand? We shall use the free space to create Root, Swap and Home. Select the free space and click on the + sign.

It will provide you with option to create Linux partition. We are creating the Root partition. Any thing above 20 GB is more than sufficient for it. Choose the size, select Ext 4 as file type and / (means root) as the mount point.

Clicking on OK in previous step will bring you to the partition screen. Next we will create swap. Like previously, click on the + sign again. This time use the file type as Swap area. Suggestible swap size is double of RAM.

Once you are ready with Root, Swap and Home, click on **Install Now**:

Once the installation is completed, restart the computer, you should be welcomed by a purple grub screen.