VILNIUS GEDIMINAS
TECHNICAL UNIVERSITY
FACULTY OF ELECTRONICS
DEPARTMENT OF ELECTRONIC SYSTEMS

Practical Task

Syed Imran Syed Imam, EKSfmc-15 group student

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What Is a Virtual Machine?

A virtual machine is a software computer that, like a physical computer, runs an operating system and applications. The virtual machine is comprised of a set of specification and configuration files and is backed by the physical resources of a host. Every virtual machine has virtual devices that provide the same functionality as physical hardware and have additional benefits in terms of portability, manageability, and security.

A virtual machine consists of several types of files that you store on a supported storage device. The key files that make up a virtual machine are the configuration file, virtual disk file, NVRAM setting file, and the log file. You configure virtual machine settings through the vSphere Web Client or the vSphere Client. You do not need to touch the key files.

A virtual machine can have more files if one or more snapshots exist or if you add Raw Device Mappings (RDMs).

How to installed virtual machine?

Installation Process

The first thing i have to do is obtain Virtual Box. Visit the VirtualBox website's download page. https://www.virtualbox.org/wiki/Downloads Install it the same way you would any normal Windows program.

License: The **VirtualBox** sources are available free of charge under the terms and conditions of the GNU General Public License, Version 2.

I Follow these instructions to get a Ubuntu disk image (.iso file).

Step by step description:

Step:1 After launch Virtual Box from the Windows Start menu, click on **New** to create a new virtual machine. When the New Virtual Machine Wizard appears, click next.

Step:2 I can call the machine whatever you want. I installing Ubuntu, it makes sense to call it **Ubuntu**, that the operating system is **Linux**, click next.

Step:3 Virtual Box will try to guess how much of your memory (or RAM) to allocate for the virtual machine. If have 1 GB or less of RAM, I would advise you stick with the recommendation. If, however, you have over 1 GB, about a quarter your RAM or less should be fine,Click next.

Step:5 This is my first time using Virtual Box (which it probably is if you need a tutorial on how to use it), then i want to (*Create new hard disk*) click next.

Step:6 This wizard will help me to create a new virtual disk in virtual machine.so i click VDI (virtualbox disk image) click next.

Step:7 A dynamically expanding virtual hard drive is best, because it'll take up only what you actually use. So click dynamic allocated, click next.

Step:8 This step install git server.I downloaded from this link http://www.ubuntu.com/download/server.

Step:9 The next thing to do to make the (currently blank) virtual hard drive useful is to add the downloaded Ubuntu disk image (the.iso) boot on your virtual machine. Click on **Settings** and **Storage**. Then, under *CD/DVD Device*, next to *Empty*, I'll see a little folder icon. Click that.

Step:10 Selected the Ubuntu .iso downloaded earlier.

Step:11 Once it's started up, just follow the regular installation procedure as if you were installing Ubuntu on a real hard drive (instead of a virtual one).

GIT server installation open operating system Steps

Step:12 The *git* version control system is installed with the following command

```
sudo apt install git
```

step:13 In this tearm you install Git then creates a connection github website,

```
Git config–global  user.name `syedimran´

Git config --global user.email  `imrankevin3@gmail.com´
```

Advantages of virtual installation

- The size of the installation doesn't have to be predetermined. It can be a dynamically resized virtual hard drive.
- You do not need to reboot in order to switch between Ubuntu and Windows.
- The virtual machine will use your Windows internet connection, so you don't have to worry about Ubuntu not detecting your wireless card, if you have one.
- The virtual machine will set up its own video configuration, so you don't have to worry about installing proprietary graphics drivers to get a reasonable screen resolution.
- You *always* have Windows to fall back on in case there are any problems. All you have to do is press the right Control key instead of rebooting your entire computer.
- For troubleshooting purposes, you can easily take screenshots of any part of Ubuntu (including the boot menu or the login screen).

Disadvantages of virtual installation

- In order to get any kind of decent performance, you need at least 512 MB of RAM, because you are running an entire operating system (Ubuntu) inside another entire operating system (Windows). The more memory, the better. I would recommend at least 1 GB of RAM.
- Every time you want to use Ubuntu, you have to wait for two boot times (the time it takes to boot Windows, and then the time it takes to boot Ubuntu within Windows).