Practical work n°1

During this practical work, you will :

- **Discover VirtualBox**
- **Install your first Linux inside virtualBox**
- **Create the image you will use for future Practical Work**
- **Experiment hardware commands presented during the lesson**

Installing Linux on VirtualBox

Get the Linux image of your choice during the presentation.

You can either choose :

- **Debian : Self guided installer. It is the better option for beginners.**
- **ArchLinux : If you already have installed Linux before, then it is time for a new challenge. Installing Linux without installer. However installation is still guided here (https://wiki.archlinux.org/index.php/installation_guide).**

Step 1

- 1. **Create a new Virtual machine**
- 2. **Give a name to your virtual machine. Select Linux version Debian (or any applicable choice for archlinux)**
- 3. **Select RAM quantity that can be used by your virtual machine.**
- 4. **Create a new virtual disk. Size should be at least 2 Go. Select variable size. Give a name to your disk.**

Congratulation, you have created your virtual machine !

It's now time to launch it !

- 1. **Configure a CD reader. Enter VM configuration. In storage, on IDE controler, create a CD reader. Click then on the folder next to your CD reader. Use it to select your image (Debian or Archlinux).**

We will now use the BIOS to start on the recently configured CD reader.

- 1. **Start your Virtual Machine**
- 2. **Follow instalation instruction.**

Here are requirements for your installation :

- **Give a unique hostname to your machine**
- **It should be server based. No graphical interface installed.**
- **You should be able to access it via SSH. Please do not install any other server software.**
- **Separate / from /home on two partitions of 2 Giga each.**
- **Use httpredir repository to speed installation up. For ArchLinux select repositories in Vietnam.**
- **Install Grub**

Question :

- **Could you explain to your neightbour :**
  - **What were the different steps of the installation ?**
  - **What is being done at each step ?**

Step 2

We will use a lot of VirtualMachines this semester. Every time we will do something risky, every time we will install something, we will do it from a virtual machine. As you have seen it in previous step, installing a Virtual Machine takes time. We would like not to do it all the time.

- 1. **Export your Virtual Machine as OVA file. Keep it preciously.**
- 2. **Give your OVA file to your neightbour. He should be able to start your virtual machine. You can recognise it is still yours by looking at the hostname used.**

Step 3

Now it is time to answer these questions. Use only the command line.

- **How many processor does your Virtual Machine have access to ? How many RAM ?**
- **What is plugged on PCI ports ?**
- **How many modules are loaded in your Kernel ?**
- **What is the frequency of your processor ?**
- **What is the load of your computer ?**
- **What are the Mac addresses of your computer ? Their MTU ?**

Now :

- 1. **Stop your SSH server**
- 2. **Verify your SSH server is not running anymore**
- 3. **Switch of your Virtual Machine using command line**
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