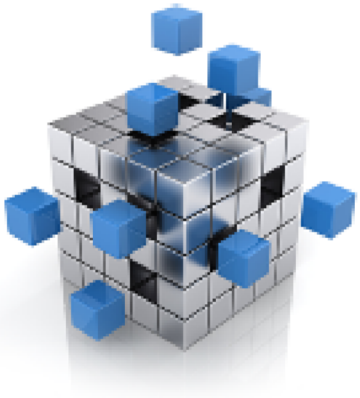
B1 - Networks and Systems Administration

B-NSA-100

My Web

Virtual Machines Administration



2.1

EPITECH.

The ASR company has given us a scope statement for the different requests to set up for a project called "My Web".
You must set up these requests with the help of virtual machines, all while complying with the company's system administrator's instructions.
The project consists of setting up two virtual machines:

- a Dual Boot *Archlinux* and *Debian* client machine, which should be set up with the help of **only ony** virtual machine named `my-client_${name}` (`${name}` corresponds to your name).
  You are free to define the size of this machine's random-access memory and virtual hard drive.
  This virtual machine's network interface controller will be configured in *"Bridged"*.
  The system administrator has given us technical characteristics for each operating system that you must comply with (*see below*).
- a server machine composed of a *Ubuntu Server* operating system.
  The virtual machine should be named `my-web_${name}` (`${name}` corresponds to your name).
  You are free to define the size of this machine's random-access memory and virtual hard drive.
  This virtual machine's network interface controller will be configured in *"Bridged""*.
  This second virtual machine will contain a Web server and **therefore, should not** have a graphic environment

Client machine

1. *Archilinux* operating system

Partitioning a hard drive
Your *Archlinux* operating system will be composed of a 15-Go primary partition and will use the LVM system to create 4 subpartitions:

- a 9 Go journalized *"root"* subpartition equivalent to "/"
- a 5 Go journalized *"home"* subpartition
- a 400 Mo non-journalized *"boot"* subpartition
- a 500 Mo *"swap"* subpartition

Graphic environment
Your *Archlinux* operating system must use the *XFCE* graphic environment and should have a graphic session manager of your choice.

Locales
Archlinux will be in English, the keyboard in your native language and the localization in your time zone.

Groups and users

You must create a *“leslie”* user, who belongs to the *“adm”* main group and to the *“epitech”* secondary group.
You must create a *“romain”* user, who belongs to the *“managers”* main group and to the *“epitech”* secondary group.

Permissions
The *“romain”* user should have the same *“sudo”* permissions as the *“root”* user.

OS access
The Debian operating system’s *“/home”* partition should be automatically accessible when Archlinux is started - either from the file explorer or the terminal.

The system administrator **forbids** you from using a graphic interface to automatically assemble the Debian partition.
You must modify the corresponding file and be able to explain it.

SSH Server
In order to make connections on your client machine from another machine easier, the system administrator has asked you to install an SSH server in your *“Archlinux”* operating system.
Your SSH server should listen on port 42.

2. *DEBIAN* OPERATING SYSTEM

Partitioning a hard drive
Your *Debian* operating system will be composed of 4 partitions:

- 10 Go journalized *"root"* partition equivalent to "/"
- 4.5 Go journalized *"home"* partition
- 500 Mo non-journalized *"boot"* partition
- 500 Mo *"swap"* partition

Graphic environment
Your *Debian* operating system must use the *Cinnamon* graphic environment.

Locales
Debian will be in French, the keyboard in French and the localization will be Shanghai.

Groups and users
You must create a *"hadrien"* user, who belongs to the *"pedago"* main group and to the *"epitech"* secondary group.
You must create a *"vincent"* user, who belongs to the *"pedago"* main group and to the *"epitech"* secondary group.
You must create a *"luc"* user, who belongs to the *"students"* main group and to the *"epitech"* secondary group.

Permissions
The *"hadrien"* user must be able to launch commands as *"vincent"* and vice versa.
SSH server
In order to make connections on your client machine from another machine easier, the system administrator has asked you to install an SSH server on your *Debian* operating system.
Your SSH server should listen on port 42.

Server machine - specifications

Web Server
You must set up a Web server that will contain:

- an HTTP server
- a database server
- a PHP module
- a database management application

You must create your two intranet sites for the ASR company on your Web server:

- **intra.asrlab.lan**
  This intranet is designed for Epitech students. Therefore, it should be accessible from both of the client machine's OS.
  The welcome page should have the following message appear: `Welcome to the Epitech students' intranet`
- **intra-adm.asrlab.lan**
  This intranet is designed for Epitech employees. Therefore, it should be accessible from both of the client machine's OS.
  The welcome page should have the following message appear: `"Welcome to Epitech's ADM intranet`

SSH Server
In order to make connections from your machine on another machine easier, the system administrator has asked you to install an SSH in your *Ubuntu Server* operating system.
Your SSH server should listen on port 42.

Bonus

In order to go a little further in this project, you can complete one or more bonuses from the following list.

The bonuses will **ONLY** be taken into account if the mandatory requirements are **completely** functional.

zsh
You must install the *zsh* shell in the *Archlinux and* Debian* operating systems.
You must replace the default Shell with *zsh* for all of the system users, as well as the *root* users.

prompt
You must modify the default prompt with `username@labasr.lan"` (*"username"* corresponds to the user name that is connected to the session)
Therefore, the prompt will be modified if we change the user.

clean
You must create a *"clean"* alias, which will recursively delete the `file~` and `#fichier#` type files.