

UNIT 11.COMPUTER NETWORKS

Activities II. Solutions

Computer Systems
CFGS DAW

Vicent Bosch
vicente.bosch@ceedcv.es

2020/2021
Versión:210317.0916

Licencia



Reconocimiento - NoComercial - CompartirIgual (by-nc-sa): No se permite un uso comercial de la obra original ni de las posibles obras derivadas, la distribución de las cuales se debe hacer con una licencia igual a la que regula la obra original.

Nomenclatura

A lo largo de este tema se utilizarán distintos símbolos para distinguir elementos importantes dentro del contenido. Estos símbolos son:

🔔 Actividad opcional. Normalmente hace referencia a un contenido que se ha comentado en la documentación por encima o que no se ha hecho, pero es interesante que le alumno investigue y practique. Son tipos de actividades que no entran para examen

👁 Atención. Hace referencia a un tipo de actividad donde los alumnos suelen cometer equivocaciones.

UD11. COMPUTER NETWORKS

Activities II. Solutions

1.0 Before doing these activities

Read all the class notes, yes, all, all the pages please, yes yes.

Install Ubuntu 18 or 20 (if you do not have it installed already).

1.1 Activity 1

Install Ubuntu 18 or 20 (if you do not have it installed already)

🔧 With Ubuntu 20, check these links to configure an static IP:

<https://linuxconfig.org/how-to-configure-static-ip-address-on-ubuntu-20-04-focal-fossa-desktop-server>

<https://linuxize.com/post/how-to-configure-static-ip-address-on-ubuntu-20-04/>

With Ubuntu 18:

- a) Check the file `/etc/network/interfaces`.

```
cat etc/network/interfaces
```

- b) Edit the file and configure the network adapter to be dynamic.

```
gedit /etc/network/interfaces
```

type:

```
iface eth0 inet dhcp
```

NOTE: eth0 is the name of the network adapter

- c) Restart the networking service.

```
/etc/init.d/networking restart
```

or

```
systemctl restart networking
```

- d) Execute `ifconfig` to check the new configuration.

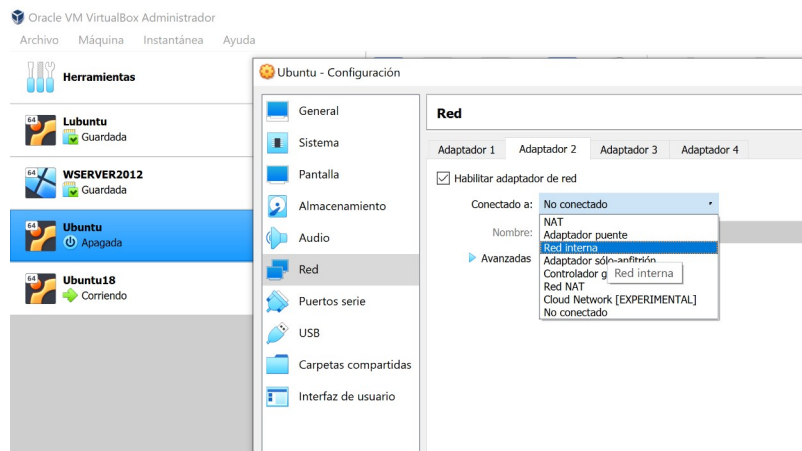
Type ifconfig and find the network adapter. You can use it together with grep.

If you do not have "ifconfig" install it using:

```
sudo apt install net-tools
```

- e) Shutdown Ubuntu.

- f) Add a new network adapter and configure it in “internal network”.



- g) Check the file `/etc/interfaces`.
 h) Edit the file and configure the network adapter to be static.

```
iface enp0s8 inet static
    address 192.168.0.20
    netmask 255.255.255.0
    broadcast 192.168.0.255
    gateway 192.168.0.1
    dns-nameservers 192.168.0.1
```

- i) Restart the networking service.
 j) Execute `ifconfig` to check the new configuration.
 k) Deactivate the second network adapter.

```
ifconfig enp0s8 down
```

1.2 Activity 2

For this activity you will new to virtual machines (VM) running at the same time such as Ubuntu and Lubuntu, also Windows and Ubuntu.

- Before starting the Vms, change the configuration of their network adapters and select “internal network”.
- Start both VM.
- Change the IP configuration so that both VM are in the same network.

You can do it using the file *interfaces* or the graphic interface. Check the notes.

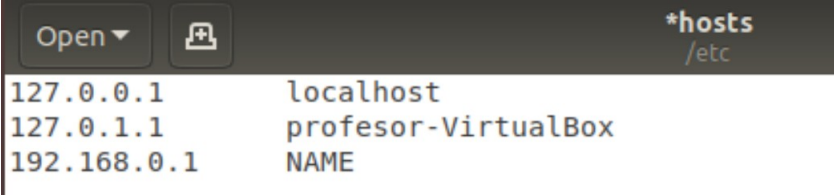
- Use the command *ping* (check the information in the manual, remember command man) to check if both hosts are reachable.

```
ping 192.168.0.1
```

- Change the hostname of one of the VM.

Edit the file */etc/hosts*

Add the line: *Ip address of the machine name.*



```
*hosts
/etc
127.0.0.1    localhost
127.0.1.1    profesor-VirtualBox
192.168.0.1  NAME
```

- Use the command *ping* with the new hostname instead of the IP to check if the new hostname is reachable.

```
ping NAME
```