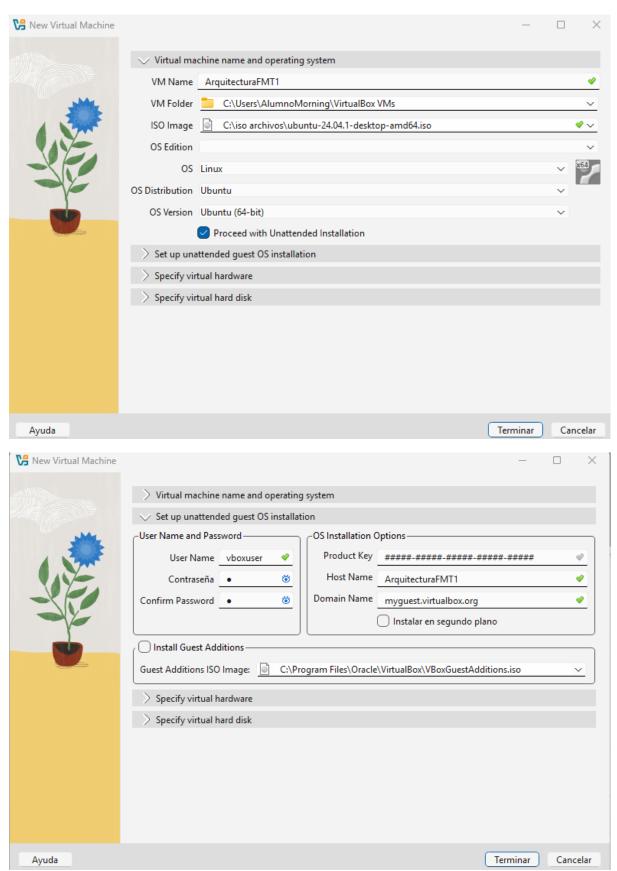
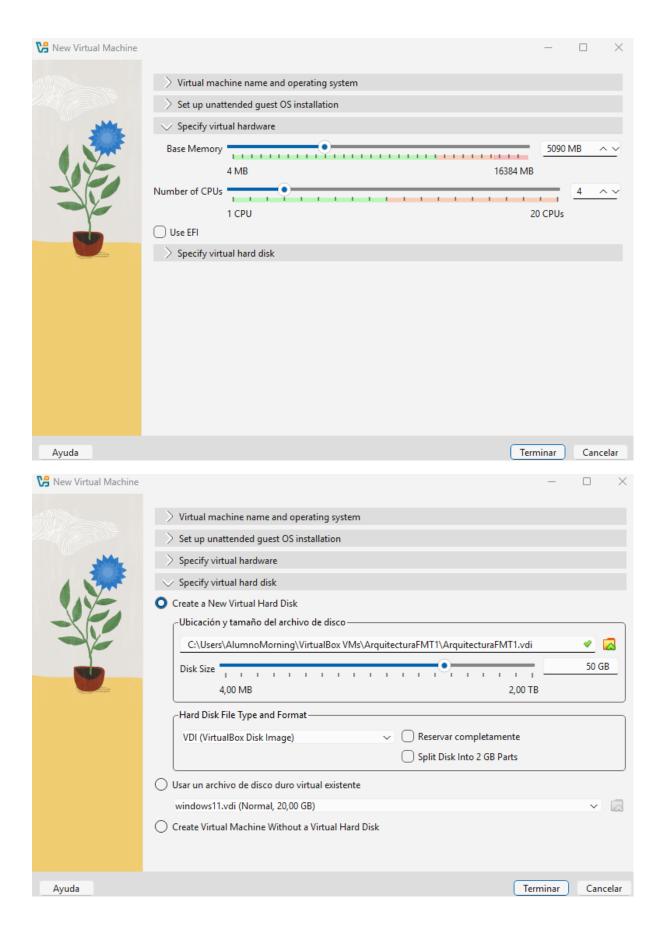
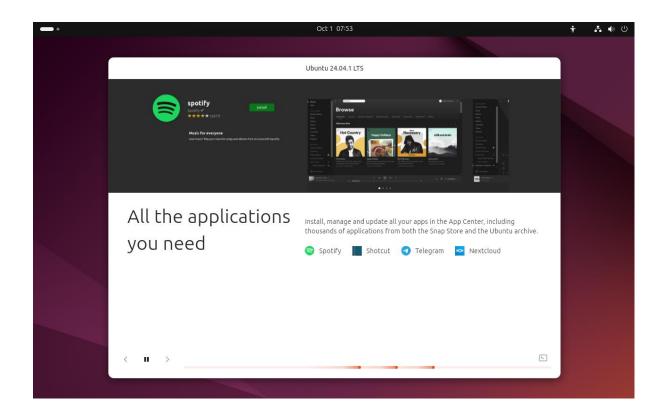
TRABAJO FRANCISCO MACHO TOLEDO

1. INSTALACION DE LA MAQUINA UBUNTU

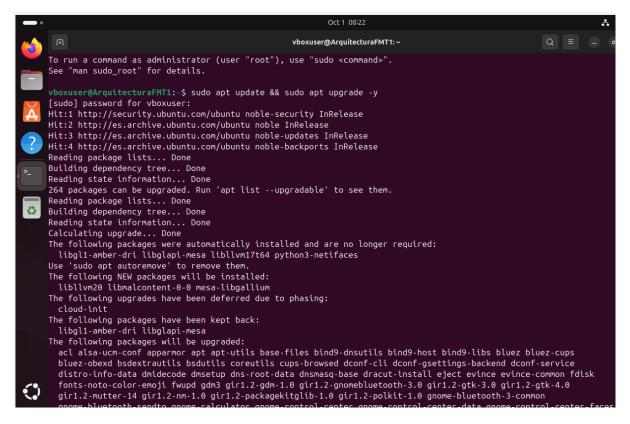






2. ACTUALIZAR EL SISTEMA

vboxuser@ArquitecturaFMT1:~\$ sudo apt update && sudo apt upgrade -y



3. INSTALAR APACHE2

vboxuser@ArquitecturaFMT1:~\$ sudo apt install apache2 -y

```
vboxuser@ArquitecturaFMT1:~$ sudo apt install apache2 -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages were automatically installed and are no longer required:
  libgl1-amber-dri libglapi-mesa libllvm17t64 python3-netifaces
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
  apache2-bin apache2-data apache2-utils libapr1t64 libaprutil1-dbd-sqlite3 libaprutil1-l
Suggested packages:
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom
The following NEW packages will be installed:
 apache2 apache2-bin apache2-data apache2-utils libapr1t64 libaprutil1-dbd-sqlite3 libap
0 upgraded, 8 newly installed, 0 to remove and 3 not upgraded.
Need to get 1,902 kB of archives.
After this operation, 7,451 kB of additional disk space will be used.
Get:1 http://es.archive.ubuntu.com/ubuntu noble-updates/main amd64 libapr1t64 amd64 1.7.2
Get:2 http://es.archive.ubuntu.com/ubuntu noble/main amd64 libaprutil1t64 amd64 1.6.3-1.1
Get:3 http://es.archive.ubuntu.com/ubuntu noble/main amd64 libaprutil1-dbd-sqlite3 amd64
Get:4 http://es.archive.ubuntu.com/ubuntu noble/main amd64 libaprutil1-ldap amd64 1.6.3-1
Get:5 http://es.archive.ubuntu.com/ubuntu noble-updates/main amd64 apache2-bin amd64 2.4.
Get:6 http://es.archive.ubuntu.com/ubuntu noble-updates/main amd64 apache2-data all 2.4.5
Get:7 http://es.archive.ubuntu.com/ubuntu noble-updates/main amd64 apache2-utils amd64 2.
Get:8 http://es.archive.ubuntu.com/ubuntu noble-updates/main amd64 apache2 amd64 2.4.58-1
Fetched 1,902 kB in 2s (1,141 kB/s)
Selecting previously unselected package libapr1t64:amd64.
(Reading database ... 150157 files and directories currently installed.)
Preparing to unpack .../0-libapr1t64_1.7.2-3.1ubuntu0.1_amd64.deb ...
Unpacking libapr1t64:amd64 (1.7.2-3.1ubuntu0.1) ...
Selecting previously unselected package libaprutil1t64:amd64.
Preparing to unpack .../1-libaprutil1t64_1.6.3-1.1ubuntu7_amd64.deb ...
Unpacking libaprutil1t64:amd64 (1.6.3-1.1ubuntu7) ...
Selecting previously unselected package libaprutil1-db
```

4. INSTALAR PHP

vboxuser@ArquitecturaFMT1:~\$ sudo apt install php libapache2-mod-php -y

```
Vboxuser@ArquitecturaFNT1:-$ sudo apt install php libapache2-mod-php -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages were automatically installed and are no longer required:
    libgl1-amber-dri libglapi-mesa libllvm17t64 python3-netifaces
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
    libapache2-mod-php8.3 libsodium23 php-common php8.3 php8.3-cli php8.3-common php8.3-opc
Suggested packages:
    php-pear
The following NEW packages will be installed:
    libapache2-mod-php libapache2-mod-php8.3 libsodium23 php php-common php8.3 php8.3-readline
0 upgraded, 10 newly installed, 0 to remove and 3 not upgraded.
Need to get 5,084 kB of archives.
After this operation, 22.8 MB of additional disk space will be used.
Get:1 http://es.archive.ubuntu.com/ubuntu noble/main amd64 php-common all 2:93ubuntu2 [13
Get:2 http://es.archive.ubuntu.com/ubuntu noble-updates/main amd64 php8.3-opcache amd64 8.
Get:3 http://es.archive.ubuntu.com/ubuntu noble-updates/main amd64 php8.3-opcache amd64 1
Get:6 http://es.archive.ubuntu.com/ubuntu noble-updates/main amd64 php8.3-readline amd64 1
Get:5 http://es.archive.ubuntu.com/ubuntu noble-updates/main amd64 php8.3-readline amd64 1
Get:6 http://es.archive.ubuntu.com/ubuntu noble-updates/main amd64 php8.3-readline amd64 1
Get:7 http://es.archive.ubuntu.com/ubuntu noble-updates/main amd64 php8.3-readline amd64 1
Get:8 http://es.archive.ubuntu.com/ubuntu noble-updates/main amd64 php8.3-cli amd64 8.3.6
Get:9 http://es.archive.ubuntu.com/ubuntu noble-updates/main amd64 php8.3 all 8.3.6-0ubun
Get:9 http://es.archive.ubun
```

5. INICIAR APACHE

```
vboxuser@ArquitecturaFMT1:~$ sudo service apache2 start
```

```
vboxuser@ArquitecturaFMT1:~$ sudo service apache2 start
vboxuser@ArquitecturaFMT1:~$
```

6. VERIFICAR ESTADO DE APACHE

vboxuser@ArquitecturaFMT1:~\$ sudo systemctl status apache2

7. CREAR ARCHIVO PHP INFO

vboxuser@ArquitecturaFMT1:~\$

```
vboxuser@ArquitecturaFMT1:~$ echo "<?php phpinfo(); 2?>" | sudo tee /var/www/html/info.php
vboxuser@ArquitecturaFMT1:~$ echo "<?php phpinfo(); 2?>" | sudo tee /var/www/html/info.php
<?php phpinfo(); 2?>
vboxuser@ArquitecturaFMT1:~$ curl http://localhost/info.php
Command 'curl' not found, but can be installed with:
sudo snap install curl # version 8.16.0, or
sudo apt install curl # version 8.5.0-2ubuntu10.6
See 'snap info curl' for additional versions.
```

No se puede instalar porque debo instalar antes el curl.

vboxuser@ArquitecturaFMT1:~\$ sudo apt install curl

```
vboxuser@ArquitecturaFMT1:~$ sudo apt install curl
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages were automatically installed and are no longer required:
 libgl1-amber-dri libglapi-mesa libllvm17t64 python3-netifaces
Use 'sudo apt autoremove' to remove them.
The following NEW packages will be installed:
 curl
0 upgraded, 1 newly installed, 0 to remove and 3 not upgraded.
Need to get 226 kB of archives.
After this operation, 534 kB of additional disk space will be used.
Get:1 http://es.archive.ubuntu.com/ubuntu noble-updates/main amd64 curl amd64 8.5.0-2ubuntu10.6
Fetched 226 kB in 1s (297 kB/s)
Selecting previously unselected package curl.
(Reading database ... 151003 files and directories currently installed.)
Preparing to unpack .../curl_8.5.0-2ubuntu10.6_amd64.deb ...
Unpacking curl (8.5.0-2ubuntu10.6) ...
Setting up curl (8.5.0-2ubuntu10.6) ...
Processing triggers for man-db (2.12.0-4build2) ...
vboxuser@ArquitecturaFMT1:~$
```

8. VERIFICAR EN NAVEGADOR

Volvemos a intentarlo:

```
tecturaFMT1:~$ curl http://localhost/info.php
<!DOCTYPE html PUBLIC "-//W3C//OTD XHTML 1.0 Transitional//EN" "DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml"><head>
 <style type="text/css">
 body {background-color: #fff; color: #222; font-family: sans-serif;}
pre {margin: 0; font-family: monospace;}
a:link {color: #009; text-decoration: none; background-color: #fff;}
 a:hover {text-decoration: underline;}
 table {border-collapse: collapse; border: 0; width: 934px; box-shadow: 1px 2px 3px rgba(0, 0, 0, 0.2);}
 .center {text-align: center;}
 .center table {margin: 1em auto; text-align: left;}
.center th {text-align: center !important;}
td, th {border: 1px solid #666; font-size: 75%; vertical-align: baseline; padding: 4px 5px;} th {position: sticky; top: 0; background: inherit;}
h1 {font-size: 150%;}
h2 {font-size: 125%;}
h2 a:link, h2 a:visited{color: inherit; background: inherit;}
.p {text-align: left;}
.e {background-color: #ccf; width: 300px; font-weight: bold;}
h {background-color: #00c: font weight: bold;}
 .h {background-color: #99c; font-weight: bold;}
 .v {background-color: #ddd; max-width: 300px; overflow-x: auto; word-wrap: break-word;}
.v {Background-color: #ddd; Max-wtdth: 'Soopx, over tow-x. ddto, word wrop, wreak in a.g.,
.v i {color: #999;}
img {float: right; border: 0;}
hr {width: 934px; background-color: #ccc; border: 0; height: 1px;}
:root {--php-dark-grey: #333; --php-dark-blue: #4F5B93; --php-medium-blue: #8892BF; --php-light-blue: #E2E4EF; --php-acc
ent-purple: #793862}@media (prefers-color-scheme: dark) {
   body {background: var(--php-dark-grey); color: var(--php-light-blue)}
   .h td, td.e, th {border-color: #606A90}
    td {border-color: #505153}
   tu {border-color: #303133}
.e {background-color: #404A77}
.h {background-color: var(--php-dark-blue)}
.v {background-color: #505153}
```

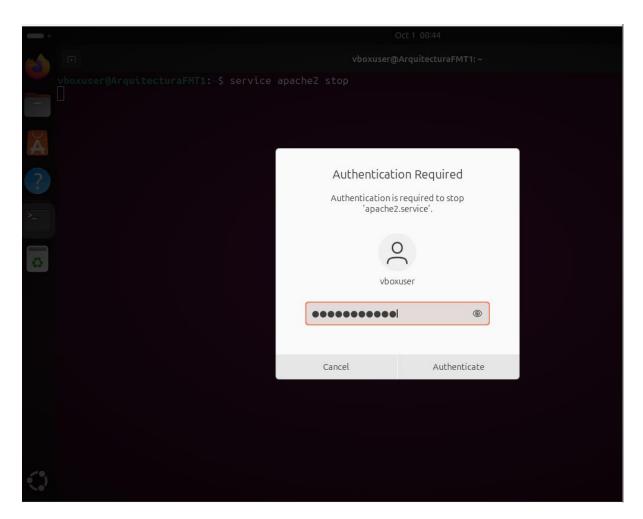


VAMOS AHORA CON EL NGINX

Primero paramos el servicio apache para que nginx funciones

vboxuser@ArquitecturaFMT1:~\$ service apache2 stop

```
vboxuser@ArquitecturaFMT1:~$ service apache2 stop
vboxuser@ArquitecturaFMT1:~$
```



1. INSTALAR NGINX

vboxuser@ArquitecturaFMT1:~\$ sudo apt install nginx -y

```
vboxuser@ArquitecturaFMT1:~$ sudo apt install nginx -v
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages were automatically installed and are no longer required:
 libgl1-amber-dri libglapi-mesa libllvm17t64 python3-netifaces
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
 nginx-common
Suggested packages:
 fcgiwrap nginx-doc
The following NEW packages will be installed:
 nginx nginx-common
0 upgraded, 2 newly installed, 0 to remove and 3 not upgraded.
Need to get 564 kB of archives.
After this operation, 1,596 kB of additional disk space will be used.
Get:1 http://es.archive.ubuntu.com/ubuntu noble-updates/main amd64 nginx-common all 1.24.0-2ubu
Get:2 http://es.archive.ubuntu.com/ubuntu noble-updates/main amd64 nginx amd64 1.24.0-2ubuntu7.
Fetched 564 kB in 1s (816 kB/s)
Preconfiguring packages ...
Selecting previously unselected package nginx-common.
(Reading database ... 151010 files and directories currently installed.)
Preparing to unpack .../nginx-common_1.24.0-2ubuntu7.5_all.deb ...
Unpacking nginx-common (1.24.0-2ubuntu7.5) ...
Selecting previously unselected package nginx.
Preparing to unpack .../nginx_1.24.0-2ubuntu7.5_amd64.deb ...
Unpacking nginx (1.24.0-2ubuntu7.5) ...
Setting up nginx-common (1.24.0-2ubuntu7.5) ...
Created symlink /etc/systemd/system/multi-user.target.wants/nginx.service 
ightarrow /usr/lib/systemd/sy
Could not execute systemctl: at /usr/bin/deb-systemd-invoke line 148.
Setting up nginx (1.24.0-2ubuntu7.5) ...
Not attempting to start NGINX, port 80 is already in use.
   essing triggers for
                       man-dh
                               (2 12 0.
                                       4hui 1d2)
```

2. INICIAR NGINX Y VERIFICAMOS EL ESTADO DE NGINX

vboxuser@ArquitecturaFMT1:~\$ sudo service nginx start

vboxuser@ArquitecturaFMT1:~\$ sudo systemctl status nginx

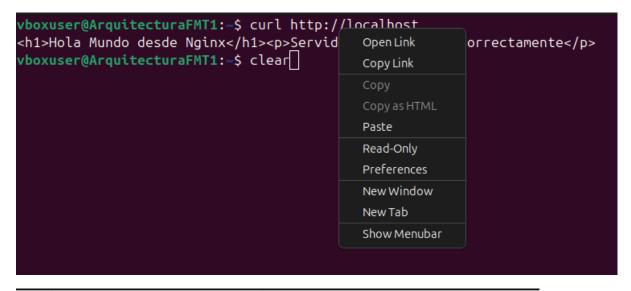
```
/boxuser@ArquitecturaFMT1:~$ sudo systemctl status nginx
nginx.service - A high performance web server and a reverse proxy server
     Loaded: loaded (/usr/lib/systemd/system/nginx.service; enabled; preset: enabled)
Active: active (running) since Wed 2025-10-01 08:45:47 UTC; 26s ago
       Docs: man:nginx(8)
    Process: 34747 ExecStartPre=/usr/sbin/nginx -t -q -g daemon on; master_process on; (code=exited, status=0/SUCCESS)
    Process: 34749 ExecStart=/usr/sbin/nginx -g daemon on; master_process on; (code=exited, status=0/SUCCESS)
   Main PID: 34750 (nginx)
      Tasks: 5 (limit: 5770)
     Memory: 3.7M (peak: 4.4M)
        CPU: 18ms
     CGroup: /system.slice/nginx.service
               —34750 "nginx: master process /usr/sbin/nginx -g daemon on; master_process on;"
—34751 "nginx: worker process"
               —34753 "nginx: worker process'
—34754 "nginx: worker process'
Oct 01 08:45:47 ArquitecturaFMT1 systemd[1]: Starting nginx.service - A high performance web server and a reverse proxy>
Oct 01 08:45:47 ArquitecturaFMT1 systemd[1]: Started nginx.service - A high performance web server and a reverse proxy
lines 1-19/19 (END)
```

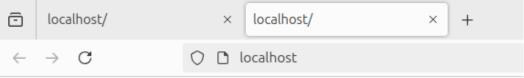
3.CREAR ARCHIVO HTML Y VERIFICACIÓN EN NAVEGADOR

```
vboxuser@ArquitecturaFMT1:-$ echo "<h1>Hola Mundo desde Nginx</h1>Servidor funcionando correctamente" | sudo tee
/var/www/html/index.html
```

vboxuser@ArquitecturaFMT1:~\$ curl http://localhost

```
vboxuser@ArquitecturaFMT1:-$ echo "<h1>Hola Mundo desde Nginx</h1>Servidor funcionando correctamente" | sudo tee
/var/www/html/index.html
<h1>Hola Mundo desde Nginx</h1>Servidor funcionando correctamente
vboxuser@ArquitecturaFMT1:-$ curl http://localhost
<h1>Hola Mundo desde Nginx</h1>Servidor funcionando correctamente
vboxuser@ArquitecturaFMT1:-$ curl http://localhost
HTTP/1.1 200 OK
Server: nginx/1.24.0 (Ubuntu)
Date: Wed, 01 Oct 2025 08:56:28 GMT
Content-Type: text/html
Content-Length: 73
Last-Modified: Wed, 01 Oct 2025 08:56:01 GMT
Connection: keep-alive
ETag: "68dceca1-49"
Accept-Ranges: bytes
<h1>Hola Mundo desde Nginx</h1>Servidor funcionando correctamente
vboxuser@ArquitecturaFMT1:-$
```





Hola Mundo desde Nginx

Servidor funcionando correctamente

6. VER IP DE WSL (SI APLICA)

```
vboxuser@ArquitecturaFMT1:~$ ip addr show eth0 | grep inet
Device "eth0" does not exist.
vboxuser@ArquitecturaFMT1:~$
```

VEMOS QUE DA ERROR, INSTALAMOS TOOLS

```
vboxuser@ArquitecturaFMT1:~$ sudo apt install net-tools
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages were automatically installed and are no longer required:
libgl1-amber-dri libglapi-mesa libllvm17t64 python3-netifaces
Use 'sudo apt autoremove' to remove them.
The following NEW packages will be installed:
 net-tools
0 upgraded, 1 newly installed, 0 to remove and 3 not upgraded.
Need to get 204 kB of archives.
After this operation, 811 kB of additional disk space will be used.
Get:1 http://es.archive.ubuntu.com/ubuntu noble-updates/main amd64 net-tools amd64 2.10-0
Fetched 204 kB in 0s (437 kB/s)
Selecting previously unselected package net-tools.
(Reading database ... 151057 files and directories currently installed.)
Preparing to unpack .../net-tools_2.10-0.1ubuntu4.4_amd64.deb ...
Unpacking net-tools (2.10-0.1ubuntu4.4) ...
Setting up net-tools (2.10-0.1ubuntu4.4) \dots
Processing triggers for man-db (2.12.0-4build2) ...
```

COMPROBAMOS IFCONFIG

```
vboxuser@ArquitecturaFMT1:~$ ifconfig
inet 10.0.2.15 netmask 255.255.255.0 broadcast 10.0.2.255
       inet6 fd17:625c:f037:2:a00:27ff:fe09:de06 prefixlen 64 scopeid 0x0<global>
       inet6 fe80::a00:27ff:fe09:de06 prefixlen 64 scopeid 0x20<link>
       inet6 fd17:625c:f037:2:a960:3cb7:7808:b77 prefixlen 64 scopeid 0x0<global>
       ether 08:00:27:09:de:06 txqueuelen 1000 (Ethernet)
       RX packets 271821 bytes 223522129 (223.5 MB)
       RX errors 0 dropped 0 overruns 0 frame 0
       TX packets 123948 bytes 8000096 (8.0 MB)
       TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
       inet 127.0.0.1 netmask 255.0.0.0
       inet6 ::1 prefixlen 128 scopeid 0x10<host>
       loop txqueuelen 1000 (Local Loopback)
       RX packets 1435 bytes 412850 (412.8 KB)
       RX errors 0 dropped 0 overruns 0 frame 0
       TX packets 1435 bytes 412850 (412.8 KB)
       TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
/boxuser@ArquitecturaFMT1:~$
```

CAMBIAMOS eth0 por enp0s3

```
vboxuser@ArquitecturaFMT1:~$ ip addr show enp0s3 | grep inet
   inet 10.0.2.15/24 brd 10.0.2.255 scope global dynamic noprefixroute enp0s3
   inet6 fd17:625c:f037:2:a960:3cb7:7808:b77/64 scope global temporary dynamic
   inet6 fd17:625c:f037:2:a00:27ff:fe09:de06/64 scope global dynamic mngtmpaddr
   inet6 fe80::a00:27ff:fe09:de06/64 scope link
vboxuser@ArquitecturaFMT1:~$
```