



**UNIVERSIDAD AUTONOMA DE NUEVO LEON**  
**FACULTAD DE CIENCIAS FISICO MATEMATICAS**



# **LABORATORIO DE PROGRAMACION PARA CIBERSEGURIDAD**

Evidencia de Practica: Scripting en Bash

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## PASO 3

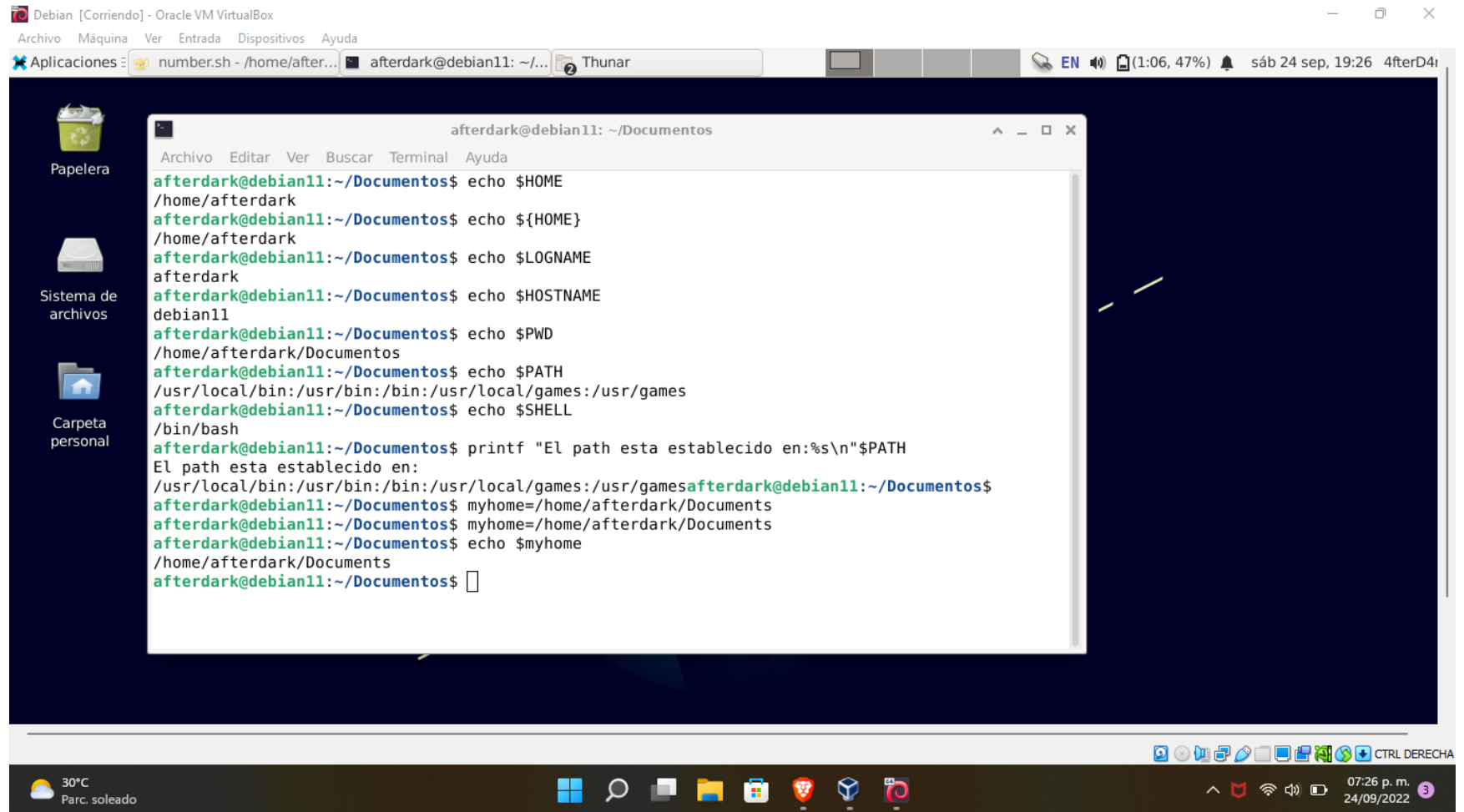
The screenshot shows a Debian VM desktop environment. The desktop background is dark blue. On the left side, there are icons for 'Papelera', 'Sistema de archivos', and 'Carpeta personal'. The top panel shows the window title 'Debian [Corriendo] - Oracle VM VirtualBox' and a menu bar with 'Archivo', 'Máquina', 'Ver', 'Entrada', 'Dispositivos', and 'Ayuda'. The top status bar displays 'Aplicaciones', a file manager window titled 'number.sh - /home/after...', a terminal window titled 'afterdark@debian11: ~', and system status icons including language (EN), volume, network, and battery (1:08, 46%). The date and time are 'sáb 24 sep, 19:28'.

The terminal window, titled 'afterdark@debian11: ~', shows the following commands and output:

```
afterdark@debian11:~/Documentos$ cd /home
afterdark@debian11:/home$ ls
afterdark  lost+found
afterdark@debian11:/home$ cd /home/afterdark
afterdark@debian11:~$ ls
Descargas Documentos Escritorio Imágenes lpc63 Música Plantillas Público Vídeos
afterdark@debian11:~$ /home/afterdark/Documentos/welcome.sh
Hola afterdark
Hoy es sáb 24 sep 2022 19:28:13 CDT
Usuarios actuales conectados, y sus procesos:
19:28:13 up 1:39, 1 user, load average: 0.06, 0.09, 0.09
USER      TTY      FROM            LOGIN@   IDLE   JCPU   PCPU WHAT
afterdar  tty7     :0               00:24    19:03m 1:38    1.44s xfce4-session
afterdark@debian11:~$
```

The bottom panel shows the system tray with weather information (30°C, Parc. soleado), application icons (Windows, Search, Files, Calendar, Firefox, Docker, VS Code), and system status icons (network, volume, battery). The date and time are '07:28 p. m. 24/09/2022'.

## PASO 6 – 9



The screenshot shows a Debian VM window titled "Debian [Corriendo] - Oracle VM VirtualBox". The window has a menu bar with "Archivo", "Máquina", "Ver", "Entrada", "Dispositivos", and "Ayuda". Below the menu bar is a taskbar with "Aplicaciones", "number.sh - /home/after...", "afterdark@debian11: ~/...", and "Thunar". The main area displays a terminal window titled "afterdark@debian11: ~/Documentos" with a menu bar "Archivo", "Editar", "Ver", "Buscar", "Terminal", and "Ayuda". The terminal shows the following commands and output:

```
afterdark@debian11:~/Documentos$ echo $HOME
/home/afterdark
afterdark@debian11:~/Documentos$ echo ${HOME}
/home/afterdark
afterdark@debian11:~/Documentos$ echo $LOGNAME
afterdark
afterdark@debian11:~/Documentos$ echo $HOSTNAME
debian11
afterdark@debian11:~/Documentos$ echo $PWD
/home/afterdark/Documents
afterdark@debian11:~/Documentos$ echo $PATH
/usr/local/bin:/usr/bin:/bin:/usr/local/games:/usr/games
afterdark@debian11:~/Documentos$ echo $SHELL
/bin/bash
afterdark@debian11:~/Documentos$ printf "El path esta establecido en:%s\n"$PATH
El path esta establecido en:
/usr/local/bin:/usr/bin:/bin:/usr/local/games:/usr/gamesafterdark@debian11:~/Documentos$
afterdark@debian11:~/Documentos$ myhome=/home/afterdark/Documents
afterdark@debian11:~/Documentos$ myhome=/home/afterdark/Documents
afterdark@debian11:~/Documentos$ echo $myhome
/home/afterdark/Documents
afterdark@debian11:~/Documentos$
```

The desktop background is dark blue. On the left side, there are icons for "Papelera", "Sistema de archivos", and "Carpeta personal". The bottom status bar shows "30°C", "Parc. soleado", a taskbar with icons for Windows, search, and other applications, and a system tray with "07:26 p. m.", "24/09/2022", and a notification icon.

## PASO 11

The screenshot shows a Debian VM window titled "Debian [Corriendo] - Oracle VM VirtualBox". The top menu bar includes "Archivo", "Máquina", "Ver", "Entrada", "Dispositivos", and "Ayuda". The taskbar shows "Aplicaciones", "Mousepad", and "afterdark@debian11: ~/...".

Two Mousepad windows are open:

- ~/Documentos/bro.sh - Mousepad**:

```
#!/bin/bash
#Script bro.sh
#24-09-2022 Brayan Osvaldo Ortiz Mendez

read -p "Escribe tu nombre: " nombre
echo "Hola, $nombre. Seamos amigos!"
```
- ~/Documentos/number.sh - Mousepad**:

```
#!/bin/bash
#Script number.sh
#24-09-2022 Brayan Osvaldo Ortiz Mendez

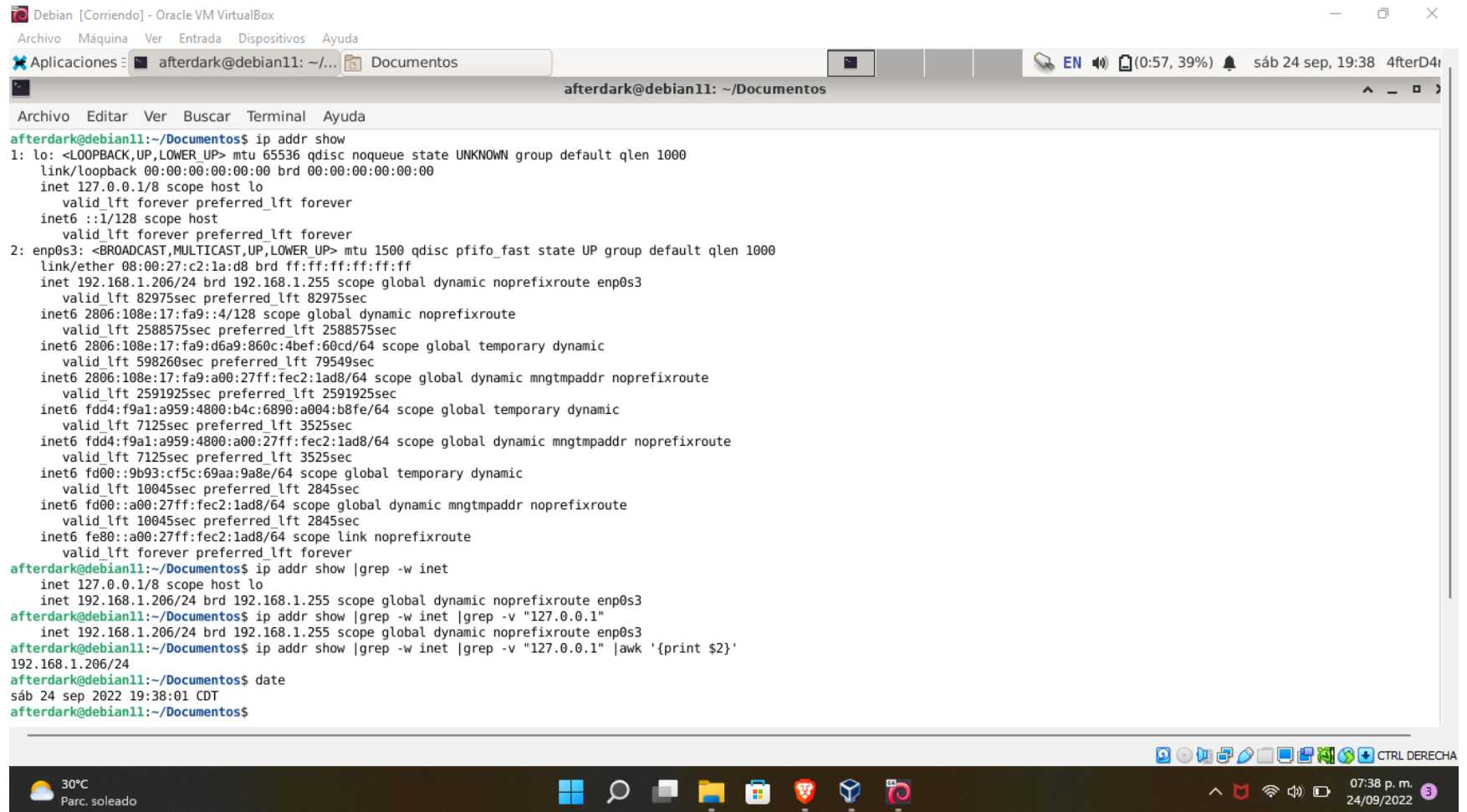
# Leer 3 numeros asignados a 3 variables
read -p "Proporciona un numero para variable 1:" n1
read -p "Proporciona un numero para variable 2:" n2
read -p "Proporciona un numero para variable 3:" n3
#
# Despliega los 3 numeros proporcionados por el usuario
echo "Numero 1 - $n1"
echo "Numero 2 - $n2"
echo "Numero 3 - $n3"
```

A terminal window titled "afterdark@debian11: ~/Documentos" is open, showing the execution of the `number.sh` script:

```
afterdark@debian11:~/Documentos$ bash number.sh
Proporciona un numero para variable 1:5
Proporciona un numero para variable 2:10
Proporciona un numero para variable 3:15
Numero 1 - 5
Numero 2 - 10
Numero 3 - 15
afterdark@debian11:~/Documentos$
```

The bottom status bar shows the system tray with icons for network, volume, and battery, along with the date and time: "07:31 p. m. 24/09/2022".

## PASO 12



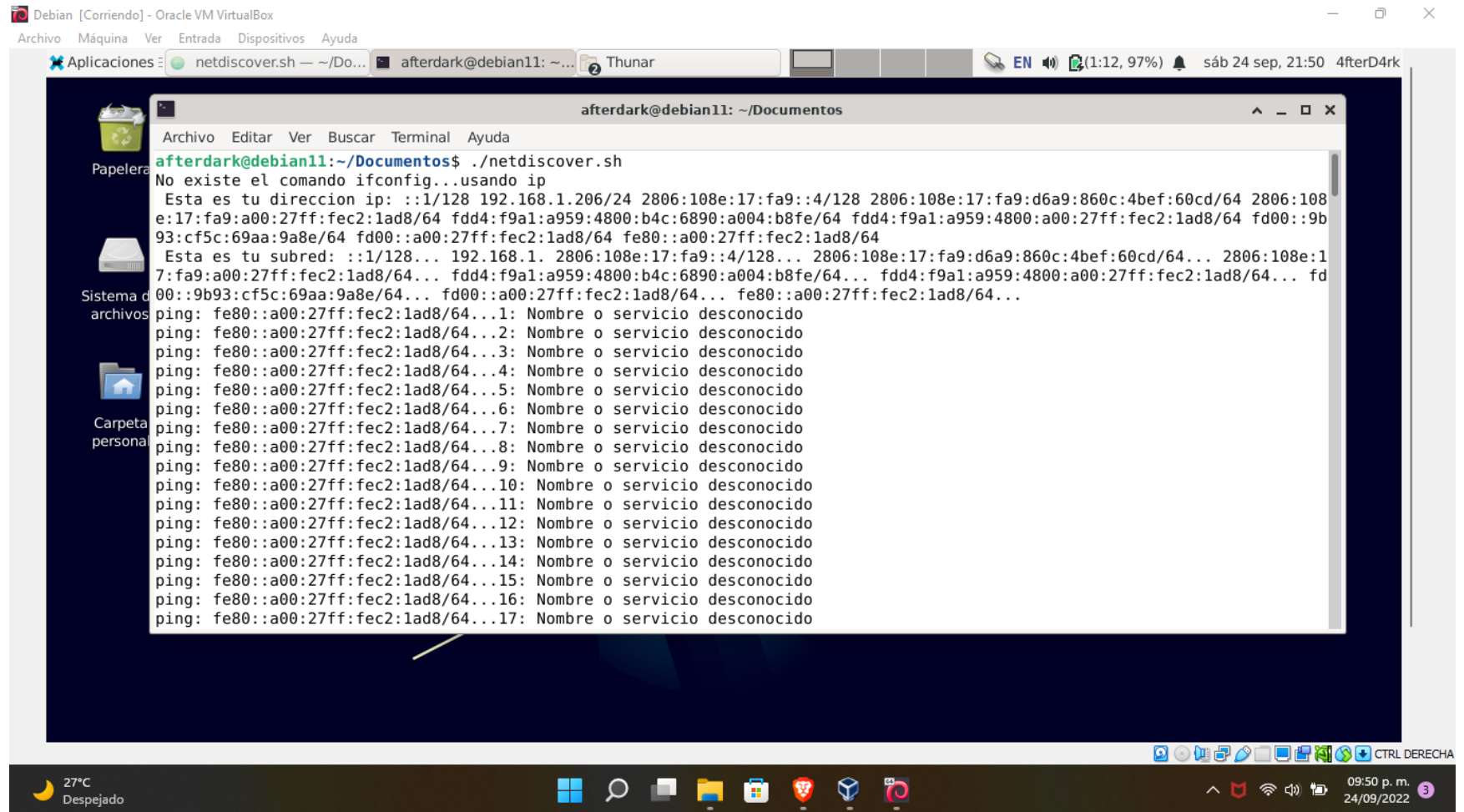
```

Debian [Corriendo] - Oracle VM VirtualBox
Archivo Máquina Ver Entrada Dispositivos Ayuda
Aplicaciones afterdark@debian11: ~/... Documentos
afterdark@debian11: ~/Documentos
Archivo Editar Ver Buscar Terminal Ayuda
afterdark@debian11:~/Documentos$ ip addr show
1: lo: <LOOPBACK,UP,LOWER UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid lft forever preferred_lft forever
    inet6 ::1/128 scope host
        valid lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER UP> mtu 1500 qdisc pfifo_fast state UP group default qlen 1000
    link/ether 08:00:27:c2:1a:d8 brd ff:ff:ff:ff:ff:ff
    inet 192.168.1.206/24 brd 192.168.1.255 scope global dynamic noprefixroute enp0s3
        valid lft 82975sec preferred_lft 82975sec
    inet6 2806:108e:17:fa9::4/128 scope global dynamic noprefixroute
        valid lft 2588575sec preferred_lft 2588575sec
    inet6 2806:108e:17:fa9:d6a9:860c:4bef:60cd/64 scope global temporary dynamic
        valid lft 598260sec preferred_lft 79549sec
    inet6 2806:108e:17:fa9:a00:27ff:fec2:1ad8/64 scope global dynamic mngtmpaddr noprefixroute
        valid lft 2591925sec preferred_lft 2591925sec
    inet6 fdd4:f9a1:a959:4800:b4c:6890:a004:b8fe/64 scope global temporary dynamic
        valid lft 7125sec preferred_lft 3525sec
    inet6 fdd4:f9a1:a959:4800:a00:27ff:fec2:1ad8/64 scope global dynamic mngtmpaddr noprefixroute
        valid lft 7125sec preferred_lft 3525sec
    inet6 fd00::9b93:cf5c:69aa:9a8e/64 scope global temporary dynamic
        valid lft 10045sec preferred_lft 2845sec
    inet6 fd00::a00:27ff:fec2:1ad8/64 scope global dynamic mngtmpaddr noprefixroute
        valid lft 10045sec preferred_lft 2845sec
    inet6 fe80::a00:27ff:fec2:1ad8/64 scope link noprefixroute
        valid lft forever preferred_lft forever
afterdark@debian11:~/Documentos$ ip addr show |grep -w inet
    inet 127.0.0.1/8 scope host lo
    inet 192.168.1.206/24 brd 192.168.1.255 scope global dynamic noprefixroute enp0s3
afterdark@debian11:~/Documentos$ ip addr show |grep -w inet |grep -v "127.0.0.1"
    inet 192.168.1.206/24 brd 192.168.1.255 scope global dynamic noprefixroute enp0s3
afterdark@debian11:~/Documentos$ ip addr show |grep -w inet |grep -v "127.0.0.1" |awk '{print $2}'
192.168.1.206/24
afterdark@debian11:~/Documentos$ date
sáb 24 sep 2022 19:38:01 CDT
afterdark@debian11:~/Documentos$
  
```

30°C  
Parc. soleado

07:38 p. m.  
24/09/2022

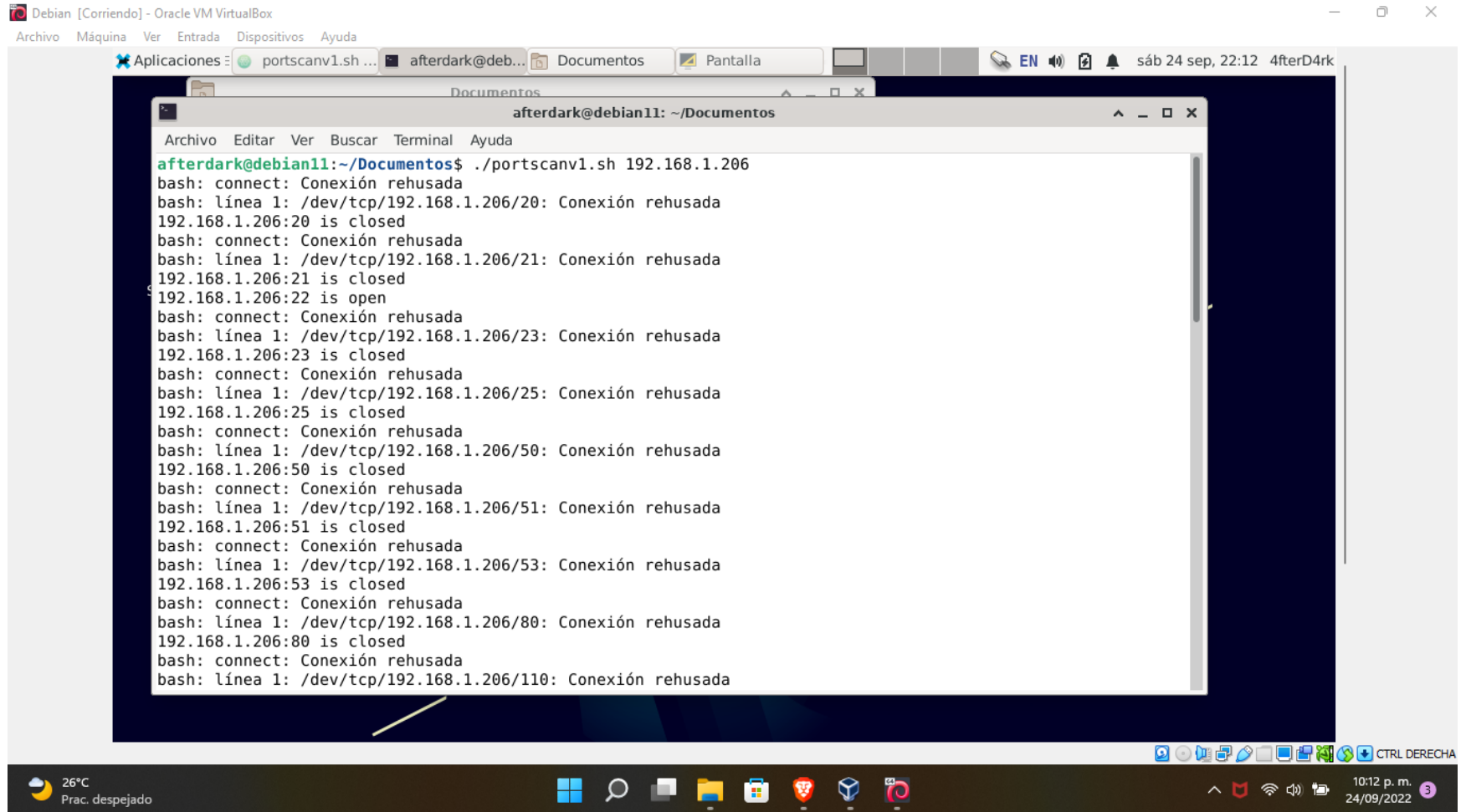
## PASO 15



The screenshot shows a Debian VM window titled "Debian [Corriendo] - Oracle VM VirtualBox". The window has a menu bar with "Archivo", "Máquina", "Ver", "Entrada", "Dispositivos", and "Ayuda". Below the menu bar is a toolbar with icons for "Aplicaciones", "netdiscover.sh", and "afterdark@debian11: ~...". The main area of the window displays a terminal window titled "afterdark@debian11: ~/Documentos". The terminal window has a menu bar with "Archivo", "Editar", "Ver", "Buscar", "Terminal", and "Ayuda". The terminal output shows the execution of the netdiscover.sh script, which displays the user's IP address, subnet, and a list of discovered hosts with their MAC addresses and IP addresses. The output is as follows:

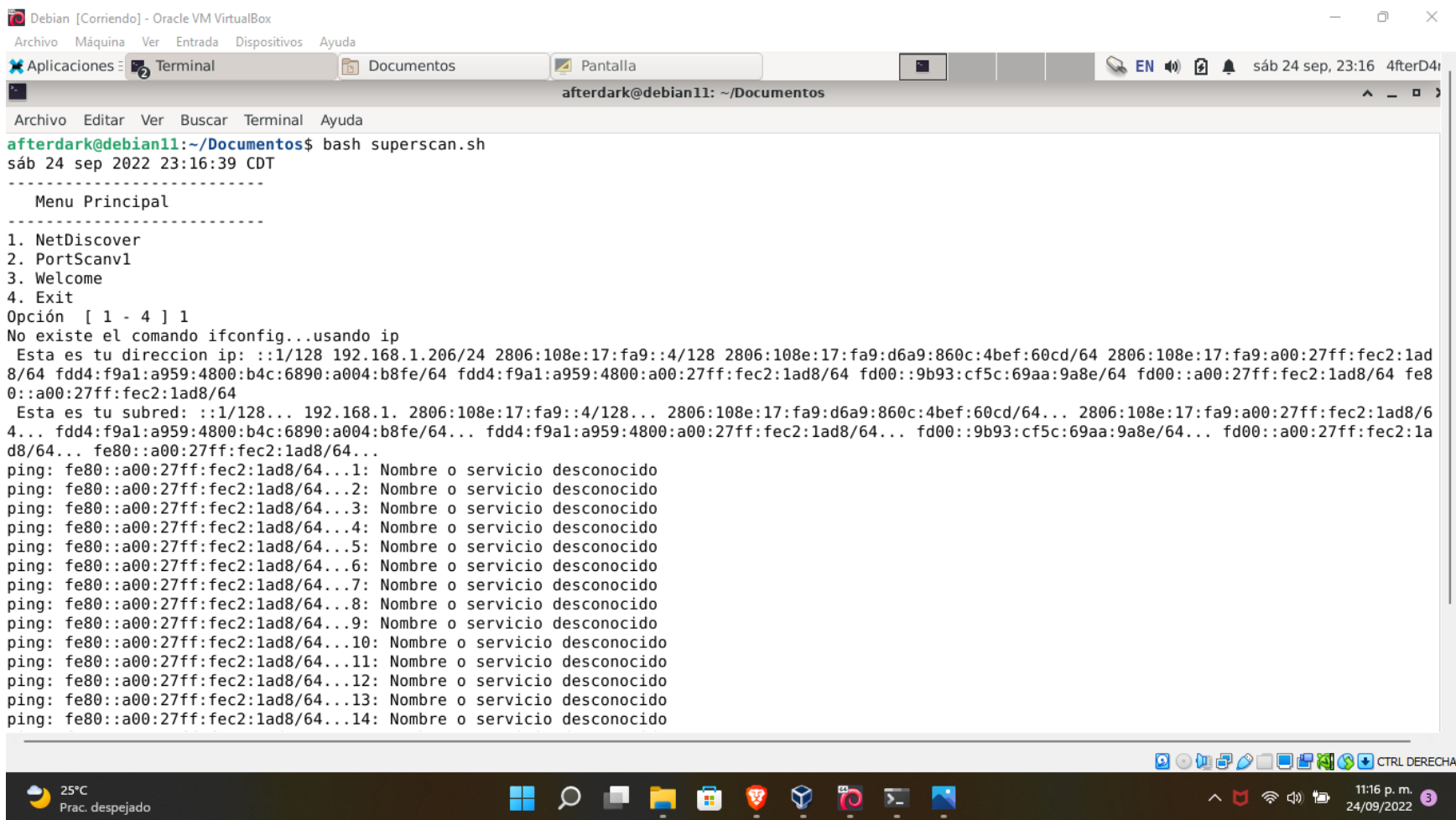
```
afterdark@debian11:~/Documentos$ ./netdiscover.sh
No existe el comando ifconfig...usando ip
Esta es tu direccion ip: ::1/128 192.168.1.206/24 2806:108e:17:fa9::4/128 2806:108e:17:fa9:d6a9:860c:4bef:60cd/64 2806:108e:17:fa9:a00:27ff:fec2:1ad8/64 fdd4:f9a1:a959:4800:b4c:6890:a004:b8fe/64 fdd4:f9a1:a959:4800:a00:27ff:fec2:1ad8/64 fd00::9b93:cf5c:69aa:9a8e/64 fd00::a00:27ff:fec2:1ad8/64 fe80::a00:27ff:fec2:1ad8/64
Esta es tu subred: ::1/128... 192.168.1. 2806:108e:17:fa9::4/128... 2806:108e:17:fa9:d6a9:860c:4bef:60cd/64... 2806:108e:17:fa9:a00:27ff:fec2:1ad8/64... fdd4:f9a1:a959:4800:b4c:6890:a004:b8fe/64... fdd4:f9a1:a959:4800:a00:27ff:fec2:1ad8/64... fd00::9b93:cf5c:69aa:9a8e/64... fd00::a00:27ff:fec2:1ad8/64... fe80::a00:27ff:fec2:1ad8/64...
ping: fe80::a00:27ff:fec2:1ad8/64...1: Nombre o servicio desconocido
ping: fe80::a00:27ff:fec2:1ad8/64...2: Nombre o servicio desconocido
ping: fe80::a00:27ff:fec2:1ad8/64...3: Nombre o servicio desconocido
ping: fe80::a00:27ff:fec2:1ad8/64...4: Nombre o servicio desconocido
ping: fe80::a00:27ff:fec2:1ad8/64...5: Nombre o servicio desconocido
ping: fe80::a00:27ff:fec2:1ad8/64...6: Nombre o servicio desconocido
ping: fe80::a00:27ff:fec2:1ad8/64...7: Nombre o servicio desconocido
ping: fe80::a00:27ff:fec2:1ad8/64...8: Nombre o servicio desconocido
ping: fe80::a00:27ff:fec2:1ad8/64...9: Nombre o servicio desconocido
ping: fe80::a00:27ff:fec2:1ad8/64...10: Nombre o servicio desconocido
ping: fe80::a00:27ff:fec2:1ad8/64...11: Nombre o servicio desconocido
ping: fe80::a00:27ff:fec2:1ad8/64...12: Nombre o servicio desconocido
ping: fe80::a00:27ff:fec2:1ad8/64...13: Nombre o servicio desconocido
ping: fe80::a00:27ff:fec2:1ad8/64...14: Nombre o servicio desconocido
ping: fe80::a00:27ff:fec2:1ad8/64...15: Nombre o servicio desconocido
ping: fe80::a00:27ff:fec2:1ad8/64...16: Nombre o servicio desconocido
ping: fe80::a00:27ff:fec2:1ad8/64...17: Nombre o servicio desconocido
```

## PASO 18



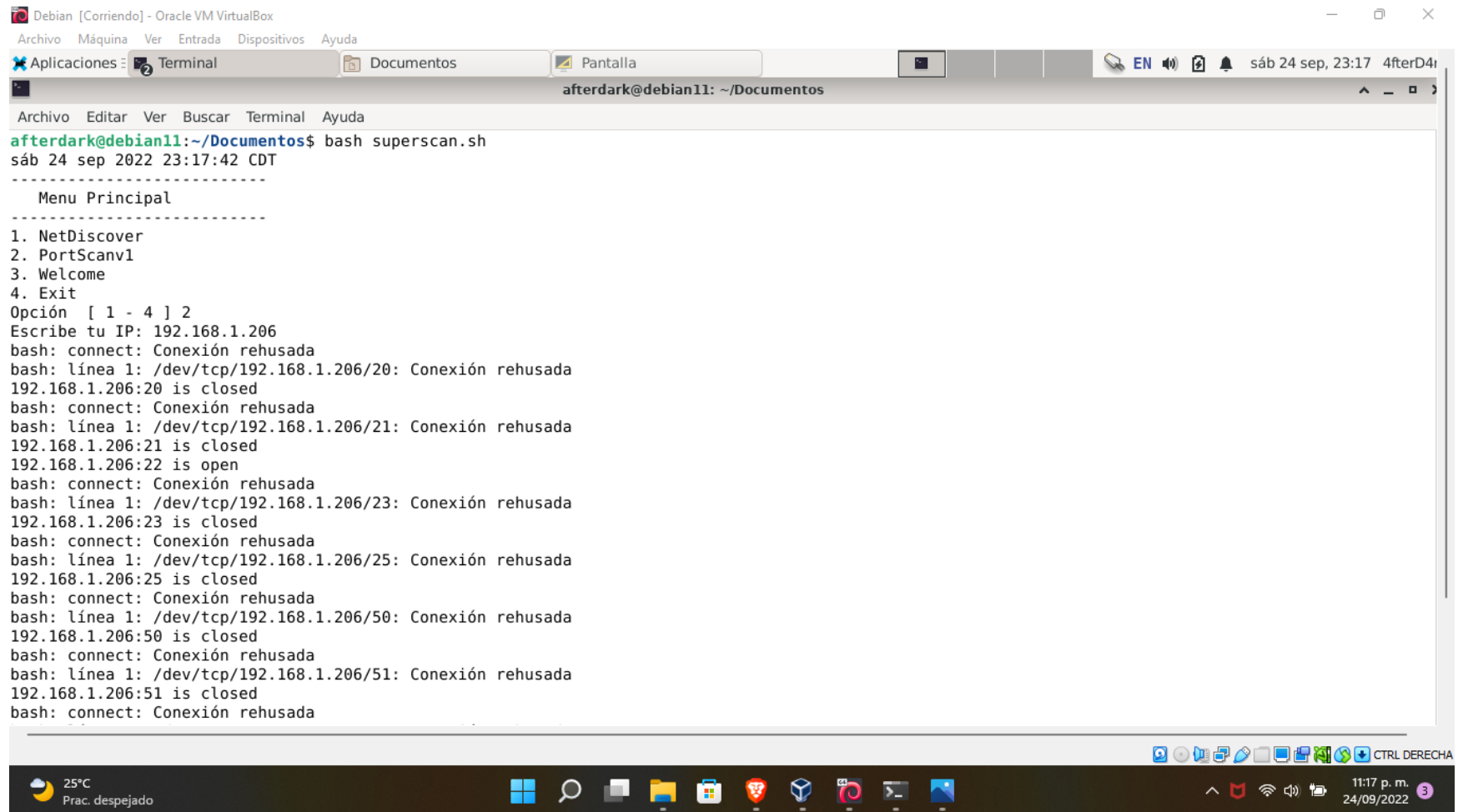
```
afterdark@debian11: ~/Documentos
Archivo  Editar  Ver  Buscar  Terminal  Ayuda
afterdark@debian11:~/Documentos$ ./portscanv1.sh 192.168.1.206
bash: connect: Conexión rehusada
bash: línea 1: /dev/tcp/192.168.1.206/20: Conexión rehusada
192.168.1.206:20 is closed
bash: connect: Conexión rehusada
bash: línea 1: /dev/tcp/192.168.1.206/21: Conexión rehusada
192.168.1.206:21 is closed
192.168.1.206:22 is open
bash: connect: Conexión rehusada
bash: línea 1: /dev/tcp/192.168.1.206/23: Conexión rehusada
192.168.1.206:23 is closed
bash: connect: Conexión rehusada
bash: línea 1: /dev/tcp/192.168.1.206/25: Conexión rehusada
192.168.1.206:25 is closed
bash: connect: Conexión rehusada
bash: línea 1: /dev/tcp/192.168.1.206/50: Conexión rehusada
192.168.1.206:50 is closed
bash: connect: Conexión rehusada
bash: línea 1: /dev/tcp/192.168.1.206/51: Conexión rehusada
192.168.1.206:51 is closed
bash: connect: Conexión rehusada
bash: línea 1: /dev/tcp/192.168.1.206/53: Conexión rehusada
192.168.1.206:53 is closed
bash: connect: Conexión rehusada
bash: línea 1: /dev/tcp/192.168.1.206/80: Conexión rehusada
192.168.1.206:80 is closed
bash: connect: Conexión rehusada
bash: línea 1: /dev/tcp/192.168.1.206/110: Conexión rehusada
```

## PASO 19

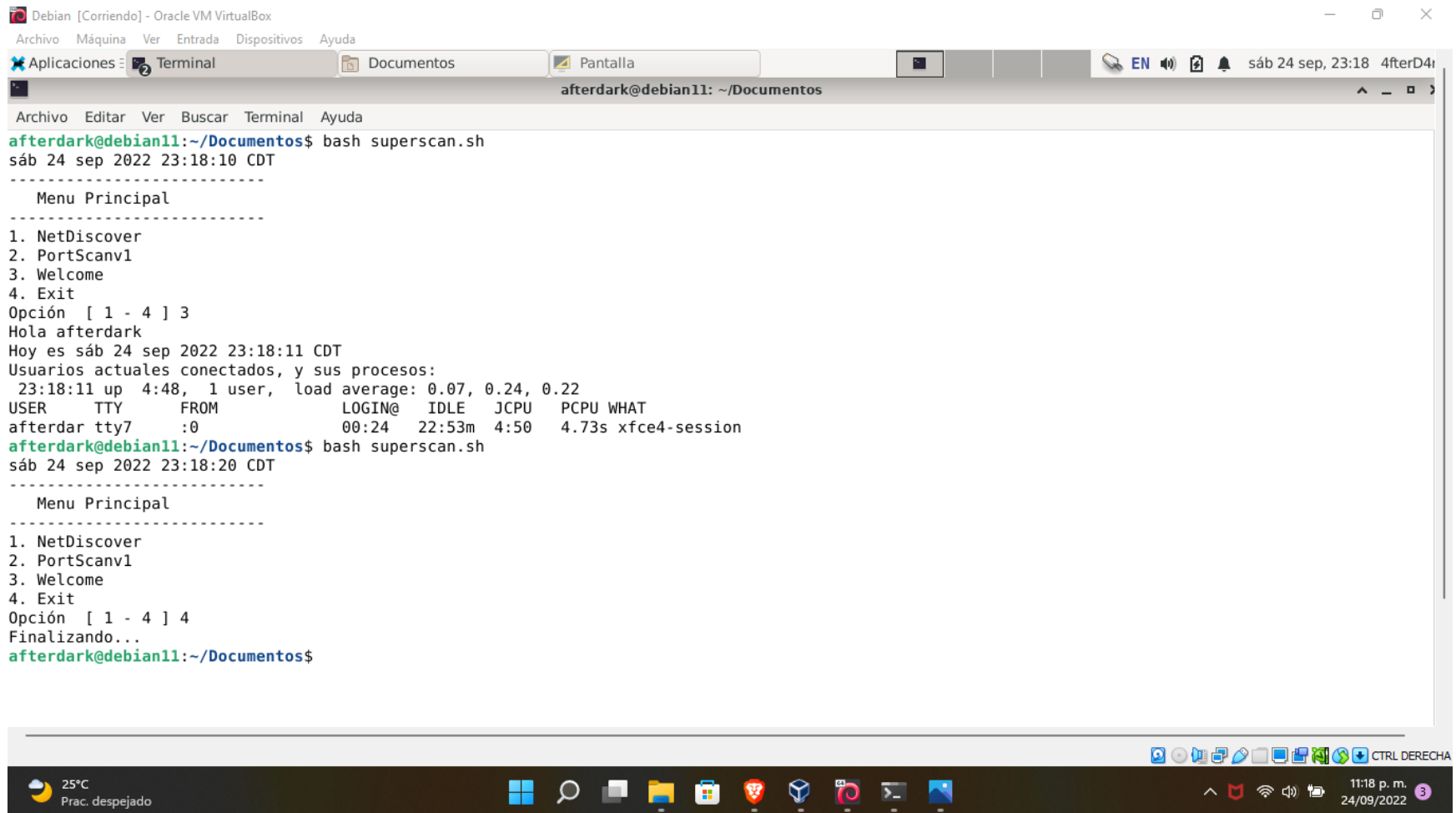


```
Debian [Corriendo] - Oracle VM VirtualBox
Archivo Máquina Ver Entrada Dispositivos Ayuda
Aplicaciones Terminal Documentos Pantalla
afterdark@debian11: ~/Documentos
Archivo Editar Ver Buscar Terminal Ayuda
afterdark@debian11:~/Documentos$ bash superscan.sh
sáb 24 sep 2022 23:16:39 CDT
-----
Menu Principal
-----
1. NetDiscover
2. PortScanv1
3. Welcome
4. Exit
Opción [ 1 - 4 ] 1
No existe el comando ifconfig...usando ip
Esta es tu direccion ip: ::1/128 192.168.1.206/24 2806:108e:17:fa9::4/128 2806:108e:17:fa9:d6a9:860c:4bef:60cd/64 2806:108e:17:fa9:a00:27ff:fec2:1ad8/64 fdd4:f9a1:a959:4800:b4c:6890:a004:b8fe/64 fdd4:f9a1:a959:4800:a00:27ff:fec2:1ad8/64 fd00::9b93:cf5c:69aa:9a8e/64 fd00::a00:27ff:fec2:1ad8/64 fe80::a00:27ff:fec2:1ad8/64
Esta es tu subred: ::1/128... 192.168.1. 2806:108e:17:fa9::4/128... 2806:108e:17:fa9:d6a9:860c:4bef:60cd/64... 2806:108e:17:fa9:a00:27ff:fec2:1ad8/64... fdd4:f9a1:a959:4800:b4c:6890:a004:b8fe/64... fdd4:f9a1:a959:4800:a00:27ff:fec2:1ad8/64... fd00::9b93:cf5c:69aa:9a8e/64... fd00::a00:27ff:fec2:1ad8/64... fe80::a00:27ff:fec2:1ad8/64...
ping: fe80::a00:27ff:fec2:1ad8/64...1: Nombre o servicio desconocido
ping: fe80::a00:27ff:fec2:1ad8/64...2: Nombre o servicio desconocido
ping: fe80::a00:27ff:fec2:1ad8/64...3: Nombre o servicio desconocido
ping: fe80::a00:27ff:fec2:1ad8/64...4: Nombre o servicio desconocido
ping: fe80::a00:27ff:fec2:1ad8/64...5: Nombre o servicio desconocido
ping: fe80::a00:27ff:fec2:1ad8/64...6: Nombre o servicio desconocido
ping: fe80::a00:27ff:fec2:1ad8/64...7: Nombre o servicio desconocido
ping: fe80::a00:27ff:fec2:1ad8/64...8: Nombre o servicio desconocido
ping: fe80::a00:27ff:fec2:1ad8/64...9: Nombre o servicio desconocido
ping: fe80::a00:27ff:fec2:1ad8/64...10: Nombre o servicio desconocido
ping: fe80::a00:27ff:fec2:1ad8/64...11: Nombre o servicio desconocido
ping: fe80::a00:27ff:fec2:1ad8/64...12: Nombre o servicio desconocido
ping: fe80::a00:27ff:fec2:1ad8/64...13: Nombre o servicio desconocido
ping: fe80::a00:27ff:fec2:1ad8/64...14: Nombre o servicio desconocido
```





```
Debian [Corriendo] - Oracle VM VirtualBox
Archivo Máquina Ver Entrada Dispositivos Ayuda
Aplicaciones Terminal Documentos Pantalla
afterdark@debian11: ~/Documentos
Archivo Editar Ver Buscar Terminal Ayuda
afterdark@debian11:~/Documentos$ bash superscan.sh
sáb 24 sep 2022 23:17:42 CDT
-----
Menu Principal
-----
1. NetDiscover
2. PortScanv1
3. Welcome
4. Exit
Opción [ 1 - 4 ] 2
Escribe tu IP: 192.168.1.206
bash: connect: Conexión rehusada
bash: línea 1: /dev/tcp/192.168.1.206/20: Conexión rehusada
192.168.1.206:20 is closed
bash: connect: Conexión rehusada
bash: línea 1: /dev/tcp/192.168.1.206/21: Conexión rehusada
192.168.1.206:21 is closed
192.168.1.206:22 is open
bash: connect: Conexión rehusada
bash: línea 1: /dev/tcp/192.168.1.206/23: Conexión rehusada
192.168.1.206:23 is closed
bash: connect: Conexión rehusada
bash: línea 1: /dev/tcp/192.168.1.206/25: Conexión rehusada
192.168.1.206:25 is closed
bash: connect: Conexión rehusada
bash: línea 1: /dev/tcp/192.168.1.206/50: Conexión rehusada
192.168.1.206:50 is closed
bash: connect: Conexión rehusada
bash: línea 1: /dev/tcp/192.168.1.206/51: Conexión rehusada
192.168.1.206:51 is closed
bash: connect: Conexión rehusada
```



The screenshot shows a terminal window titled "Debian [Corriendo] - Oracle VM VirtualBox" with a menu bar (Archivo, Máquina, Ver, Entrada, Dispositivos, Ayuda) and a toolbar (Aplicaciones, Terminal, Documentos, Pantalla). The terminal content shows the execution of the "superscan.sh" script. The script displays a "Menu Principal" with options 1 (NetDiscover), 2 (PortScanv1), 3 (Welcome), and 4 (Exit). The user selects option 3, and the script displays system information including the date, time, and user load average. It then shows a table of active users and processes. The user selects option 4, and the script displays "Finalizando...". The terminal window has a status bar at the bottom showing the system clock (11:18 p. m., 24/09/2022) and system status (25°C, Prac. despejado).

```
afterdark@debian11: ~/Documentos
afterdark@debian11:~/Documentos$ bash superscan.sh
sáb 24 sep 2022 23:18:10 CDT
-----
Menu Principal
-----
1. NetDiscover
2. PortScanv1
3. Welcome
4. Exit
Opción [ 1 - 4 ] 3
Hola afterdark
Hoy es sáb 24 sep 2022 23:18:11 CDT
Usuarios actuales conectados, y sus procesos:
 23:18:11 up 4:48, 1 user, load average: 0.07, 0.24, 0.22
USER      TTY      FROM            LOGIN@   IDLE   JCPU   PCPU WHAT
afterdar tty7        :0            00:24   22:53m  4:50   4.73s xfce4-session
afterdark@debian11:~/Documentos$ bash superscan.sh
sáb 24 sep 2022 23:18:20 CDT
-----
Menu Principal
-----
1. NetDiscover
2. PortScanv1
3. Welcome
4. Exit
Opción [ 1 - 4 ] 4
Finalizando...
afterdark@debian11:~/Documentos$
```