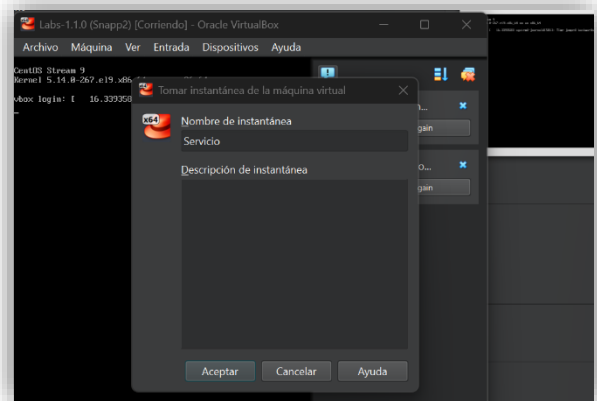
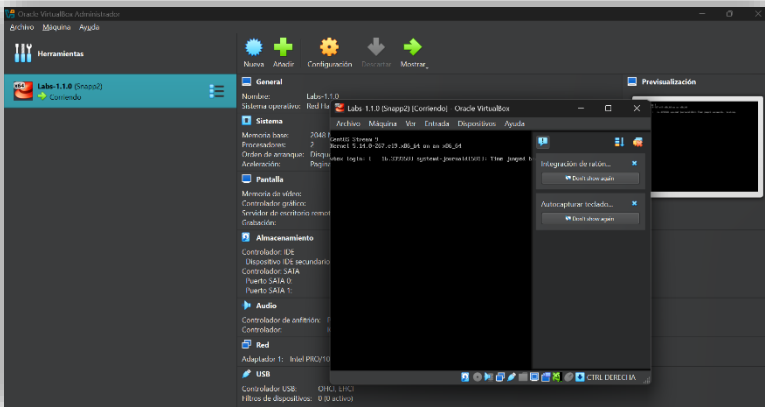


## LABORATORIO REPARAR UN SERVICIO DAÑADO

1. Lo primero es inicializar la máquina virtual CentOS en VirtualBox desde una instantánea limpia.
  - Esperar a que Linux termine de iniciarse
  - Desde la venta de VM en ejecución, hacemos clic en “Maquina” en la barra de menú.
  - Dar clic en “Tomar snapshot”...
  - Después de darle un nombre a la snapshot limpia, damos clic en aceptar.



2. Después Iniciamos sesión desde la terminal de Windows con el siguiente comando: **ssh centos@localhost**
  - Nos pide contraseña , en este caso colocamos la contraseña : **centos** y damos enter.

```
centos@vbox:~  
Microsoft Windows [Versión 10.0.26100.4946]  
(c) Microsoft Corporation. Todos los derechos reservados.  
  
C:\Users\Pc>ssh centos@localhost  
centos@localhost's password:  
Last login: Wed Aug 13 20:24:45 2025 from ::1  
[centos@vbox ~]$
```

3. Iniciamos el laboratorio con el siguiente comando: **startlab4**

```
centos@vbox:~  
(c) Microsoft Corporation. Todos los derechos reservados.  
C:\Users\Pc>ssh centos@localhost  
centos@localhost's password:  
Last login: Wed Aug 13 20:24:45 2025 from ::1  
[centos@vbox ~]$ startlab4  
  
PLAY [Prep learner machines] *****  
  
TASK [Gathering Facts] *****  
ok: [localhost]  
  
TASK [Open port 80] *****  
ok: [localhost]  
  
TASK [Install httpd] *****  
ok: [localhost]  
  
TASK [Break httpd] *****  
changed: [localhost]  
  
TASK [Stop httpd] *****  
ok: [localhost]  
  
PLAY RECAP *****  
localhost : ok=5 changed=1 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0  
  
[centos@vbox ~]$ |
```

4. Iniciamos la aplicación **httpd** con el siguiente comando, para verificar el estado del servicio:

**Sudo systemctl status httpd**

Se visualiza que el servicio de arranque de apache no funciona.

```
[centos@vbox ~]$ sudo systemctl status httpd  
* httpd.service - The Apache HTTP Server  
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; disabled; preset: disabled)  
   Active: failed (Result: exit-code) since Thu 2025-08-28 21:16:34 BST; 4min 4s ago  
     Docs: man:httpd.service(8)  
  Process: 1984 ExecStart=/usr/sbin/httpd $OPTIONS -DFOREGROUND (code=exited, status=1/FAILURE)  
 Main PID: 1984 (code=exited, status=1/FAILURE)  
   Status: "Reading configuration..."  
    CPU: 246ms  
  
Aug 28 21:16:33 vbox systemd[1]: Starting The Apache HTTP Server...  
Aug 28 21:16:34 vbox httpd[1984]: AH00526: Syntax error on line 47 of /etc/httpd/conf/httpd.conf:  
Aug 28 21:16:34 vbox httpd[1984]: Listen requires 1 or 2 arguments.  
Aug 28 21:16:34 vbox systemd[1]: httpd.service: Main process exited, code=exited, status=1/FAILURE  
Aug 28 21:16:34 vbox systemd[1]: httpd.service: Failed with result 'exit-code'.  
Aug 28 21:16:34 vbox systemd[1]: Failed to start The Apache HTTP Server.  
[centos@vbox ~]$ |
```

5. Utilizamos el siguiente comando para intentar iniciarlo

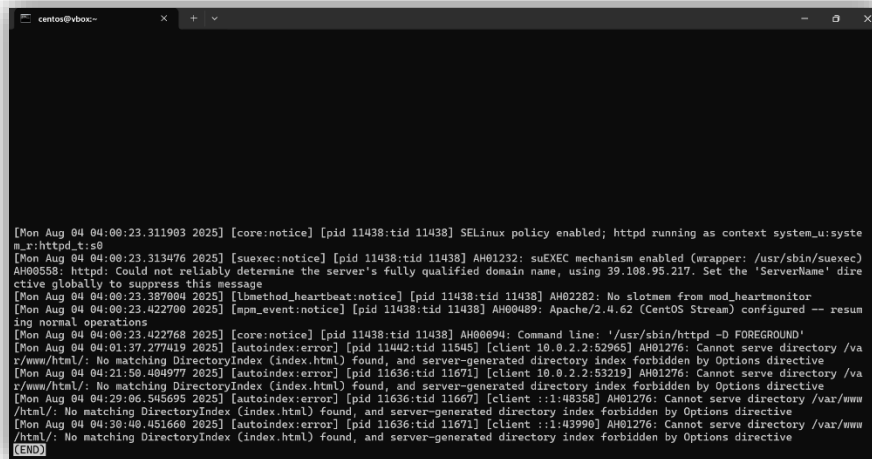
**Sudo systemctl start httpd**

```
[centos@vbox ~]$ sudo systemctl start httpd  
Job for httpd.service failed because the control process exited with error code.  
See "systemctl status httpd.service" and "journalctl -xeu httpd.service" for details.  
[centos@vbox ~]$ |
```

La máquina virtual está ejecutando httpd pero tiene un error de configuración.

6. Utilizamos el siguiente comando para verificar los errores de sintaxis en la configuración.

**sudo less /var/log/httpd/error\_log**

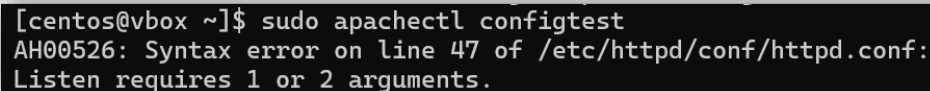


**Salimos con la tecla q**

7. Utilizamos el siguiente comando para validar la configuración de apache:

**sudo apachectl configtest**

Lo cual nos marca un error en la línea 47, sobre listen.

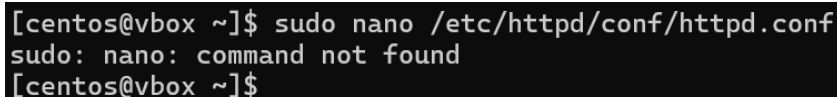


El error “**requires 1 or 2 arguments**” aparece porque:

- No se colocó ningún puerto.
- Se escribió algo inválido, como Listen solo o con texto incorrecto.

8. Para corregirlo abrimos el archivo de configuración:

**sudo nano /etc/httpd/conf/httpd.conf**



El mensaje que muestra significa que la herramienta **nano** no está instalada en el sistema **CentOS**.

9. Procedemos a instalar **nano** con el siguiente comando: **sudo yum install nano** y esperamos a que se complete la instalación.

```
centos@vbox:~$ sudo yum install nano
Last metadata expiration check: 0:42:43 ago on Thu 28 Aug 2025 21:21:16 BST.
Dependencies resolved.
=====
Package           Architecture Version      Repository    Size
=====
Installing:
 nano             x86_64      5.6.1-7.el9  baseos        711 k
=====
Transaction Summary
=====
Install 1 Package

Total download size: 711 k
Installed size: 2.7 M
Is this ok [y/N]: y
Downloading Packages:
 nano-5.6.1-7.el9.x86_64.rpm                                625 kB/s | 711 kB    00:01
-----
Total                                                    410 kB/s | 711 kB    00:01
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing                :
  Installing                : nano-5.6.1-7.el9.x86_64      1/1
  Running scriptlet: nano-5.6.1-7.el9.x86_64      1/1
  Verifying                 : nano-5.6.1-7.el9.x86_64      1/1
Installed:
 nano-5.6.1-7.el9.x86_64
Complete!
[centos@vbox ~]$
```

10. Despues volvemos a ejecutar el comando para abrir el archivo de configuración.

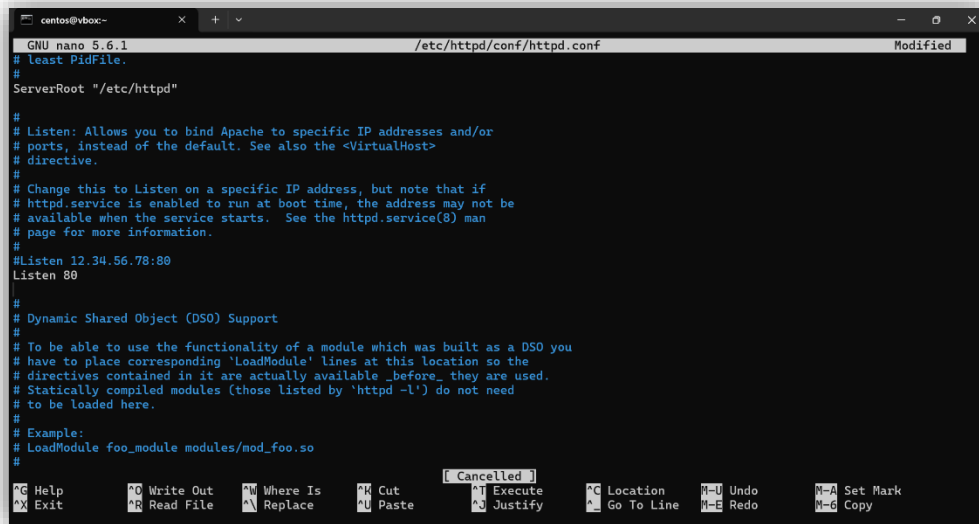
**sudo nano /etc/httpd/conf/httpd.conf**

Buscamos la línea 47 para corregir el puerto.

```
GNU nano 5.6.1 /etc/httpd/conf/httpd.conf
# same ServerRoot for multiple httpd daemons, you will need to change at
# least PidFile.
#
ServerRoot "/etc/httpd"
#
# Listen: Allows you to bind Apache to specific IP addresses and/or
# ports, instead of the default. See also the <VirtualHost>
# directive.
#
# Change this to Listen on a specific IP address, but note that if
# httpd.service is enabled to run at boot time, the address may not be
# available when the service starts. See the httpd.service(8) man
# page for more information.
#Listen 12.34.56.78:80
Listen to the music
#
# Dynamic Shared Object (DSO) Support
#
# To be able to use the functionality of a module which was built as a DSO you
# have to place corresponding 'LoadModule' lines at this location so the
# directives contained in it are actually available _before_ they are used.
# Statically compiled modules (those listed by 'httpd -l') do not need
# to be loaded here.
#
# Example:
# LoadModule foo_module modules/mod_foo.so

^G Help      ^O Write Out ^W Where Is  ^X Cut       ^T Execute   ^C Location  ^U Undo      ^_A Set Mark
^X Exit      ^R Read File ^_ Replace   ^U Paste     ^_ Justify   ^_ Go To Line ^_E Redo     ^_C Copy
```

Guardamos los cambios con Ctrl + C y damos enter.

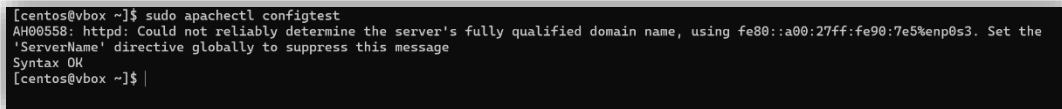


```
centos@vbox:~$ nano /etc/httpd/conf/httpd.conf
GNU nano 5.6.1 /etc/httpd/conf/httpd.conf Modified
# least PidFile.
#
ServerRoot "/etc/httpd"
#
# Listen: Allows you to bind Apache to specific IP addresses and/or
# ports, instead of the default. See also the <VirtualHost>
# directive.
#
# Change this to Listen on a specific IP address, but note that if
# httpd.service is enabled to run at boot time, the address may not be
# available when the service starts. See the httpd.service(8) man
# page for more information.
#
#Listen 12.34.56.78:80
Listen 80
#
# Dynamic Shared Object (DSO) Support
#
# To be able to use the functionality of a module which was built as a DSO you
# have to place corresponding 'LoadModule' lines at this location so the
# directives contained in it are actually available _before_ they are used.
# Statically compiled modules (those listed by 'httpd -l') do not need
# to be loaded here.
#
# Example:
# LoadModule foo_module modules/mod_foo.so
#
[Cancelled]
```

11. Verificamos la configuración con el siguiente comando:

**sudo apachectl configtest**

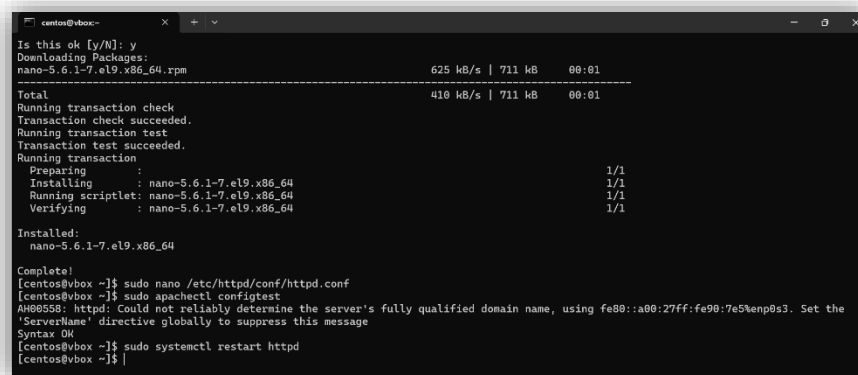
y debe mostrar Syntax OK



```
[centos@vbox ~]$ sudo apachectl configtest
AH00558: httpd: Could not reliably determine the server's fully qualified domain name, using fe80::a00:27ff:fe90:7e5%enp0s3. Set the
'ServerName' directive globally to suppress this message
Syntax OK
[centos@vbox ~]$
```

12. Procedemos a reiniciar el servicio con el siguiente comando:

**sudo systemctl restart httpd**



```
centos@vbox:~$ sudo systemctl restart httpd
Is this ok [y/N]: y
Downloading Packages:
nano-5.6.1-7.el9.x86_64.rpm                                625 kB/s | 711 kB | 00:01
-----
Total                                                    410 kB/s | 711 kB | 00:01
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing      : nano-5.6.1-7.el9.x86_64                  1/1
  Installing     : nano-5.6.1-7.el9.x86_64                  1/1
  Running scriptlet: nano-5.6.1-7.el9.x86_64                  1/1
  Verifying      : nano-5.6.1-7.el9.x86_64                  1/1

Installed:
nano-5.6.1-7.el9.x86_64

Complete!
[centos@vbox ~]$ sudo nano /etc/httpd/conf/httpd.conf
[centos@vbox ~]$ sudo apachectl configtest
AH00558: httpd: Could not reliably determine the server's fully qualified domain name, using fe80::a00:27ff:fe90:7e5%enp0s3. Set the
'ServerName' directive globally to suppress this message
Syntax OK
[centos@vbox ~]$ sudo systemctl restart httpd
[centos@vbox ~]$
```

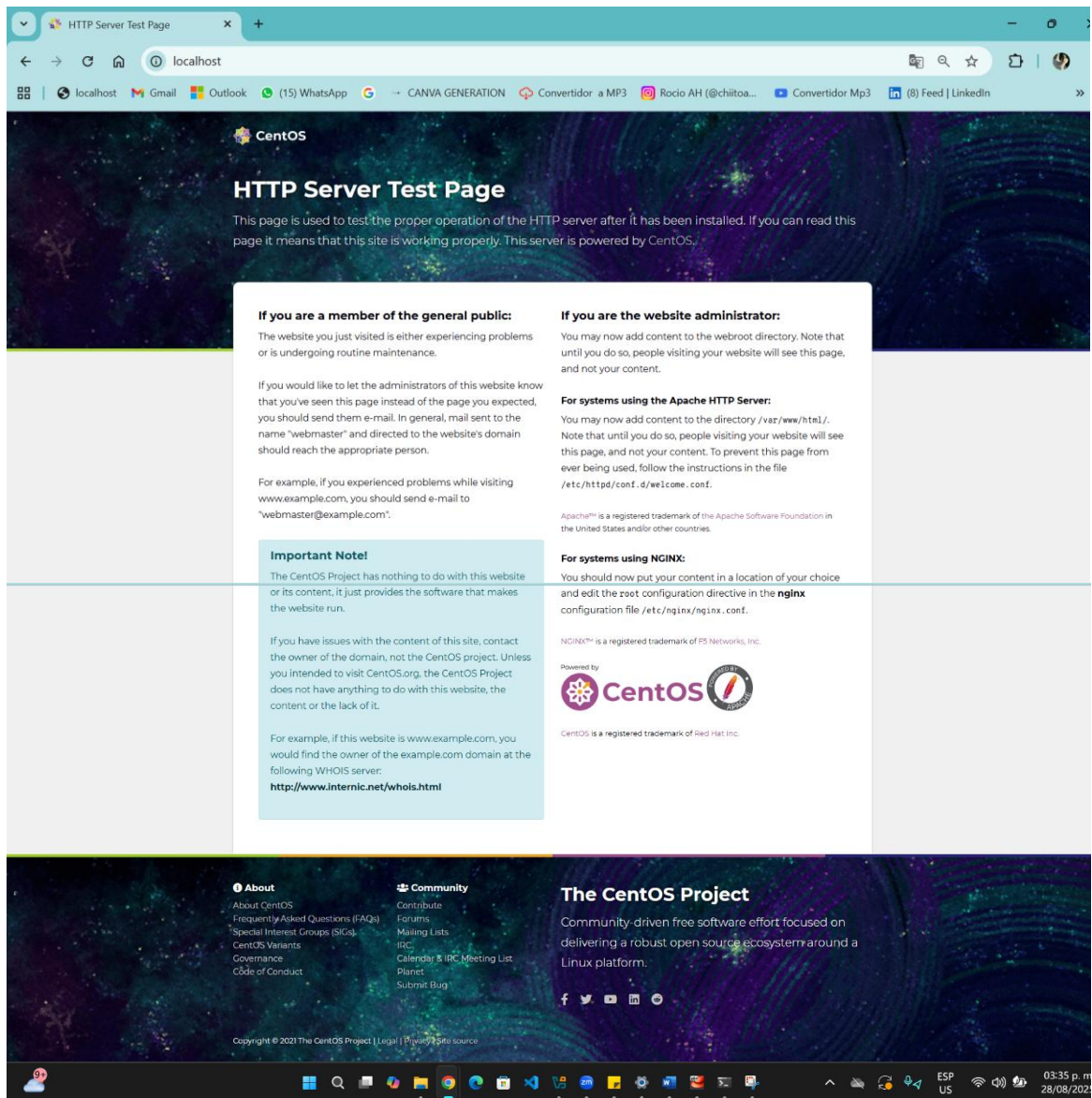
13. Utilizamos el comando **sudo systemctl status httpd**, para verificar que el estado este activo, y salimos con CTRL + C.

**sudo systemctl status httpd**

```
[centos@vbox ~]$ sudo systemctl status httpd
● httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; disabled; preset: disabled)
   Active: active (running) since Thu 2025-08-28 22:23:04 BST; 50s ago
     Docs: man:httpd.service(8)
   Main PID: 11673 (httpd)
    Status: "Total requests: 0; Idle/Busy workers 100/0; Requests/sec: 0; Bytes served/sec: 0 B/sec"
   Tasks: 177 (limit: 11113)
  Memory: 33.8M
    CPU: 334ms
   CGroup: /system.slice/httpd.service
           └─11673 /usr/sbin/httpd -DFOREGROUND
             └─11674 /usr/sbin/httpd -DFOREGROUND
               └─11675 /usr/sbin/httpd -DFOREGROUND
                 └─11676 /usr/sbin/httpd -DFOREGROUND
                   └─11677 /usr/sbin/httpd -DFOREGROUND

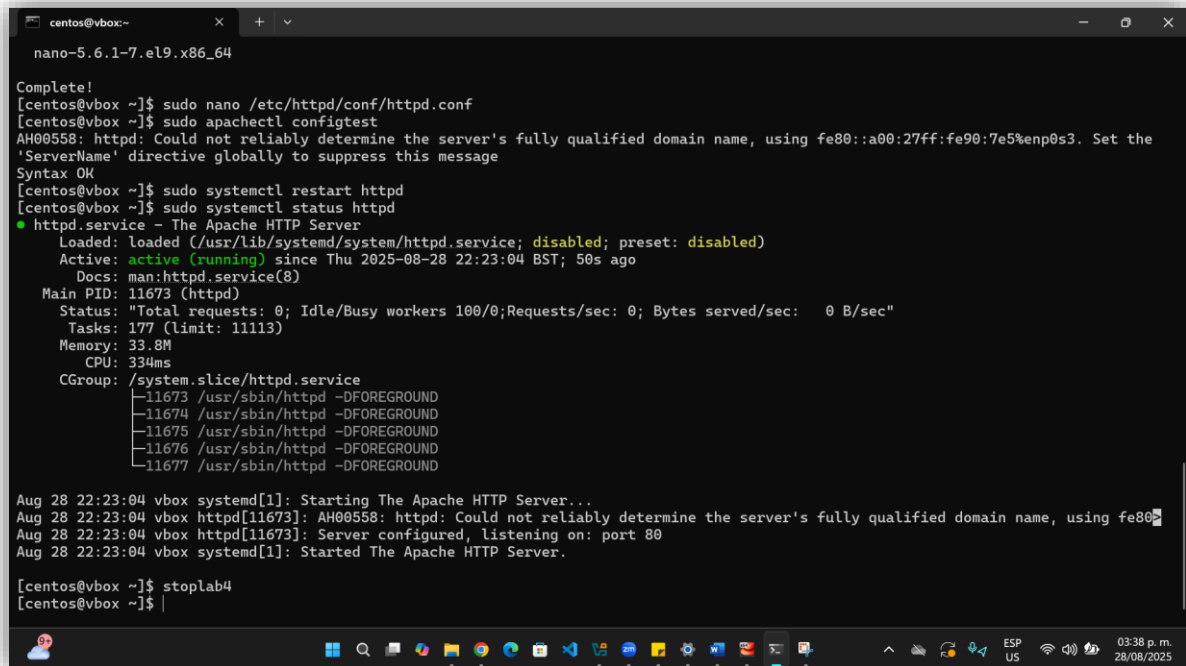
Aug 28 22:23:04 vbox systemd[1]: Starting The Apache HTTP Server...
Aug 28 22:23:04 vbox httpd[11673]: AH00558: httpd: Could not reliably determine the server's fully qualified domain name, using fe80:
Aug 28 22:23:04 vbox httpd[11673]: Server configured, listening on: port 80
Aug 28 22:23:04 vbox systemd[1]: Started The Apache HTTP Server.
lines 1-20/20 (END)
```

14. Para **comprobar su funcionamiento** abrimos el navegador de Windows e ingresamos la dirección: <http://localhost>



15. Para detener el laboratorio utilizamos el siguiente comando: **stoplab4**

Si no se obtiene ninguna salida, ¡todas las tareas se han completado!



```
centos@vbox:~  
nano-5.6.1-7.el9.x86_64  
  
Complete!  
[centos@vbox ~]$ sudo nano /etc/httpd/conf/httpd.conf  
[centos@vbox ~]$ sudo apachectl configtest  
AH00558: httpd: Could not reliably determine the server's fully qualified domain name, using fe80::a00:27ff:fe90:7e5%enp0s3. Set the  
'ServerName' directive globally to suppress this message  
Syntax OK  
[centos@vbox ~]$ sudo systemctl restart httpd  
[centos@vbox ~]$ sudo systemctl status httpd  
● httpd.service - The Apache HTTP Server  
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; disabled; preset: disabled)  
   Active: active (running) since Thu 2025-08-28 22:23:04 BST; 50s ago  
     Docs: man:httpd.service(8)  
  Main PID: 11673 (httpd)  
    Status: "Total requests: 0; Idle/Busy workers 100/0; Requests/sec: 0; Bytes served/sec: 0 B/sec"  
    Tasks: 177 (limit: 11113)  
  Memory: 33.8M  
    CPU: 334ms  
   CGroup: /system.slice/httpd.service  
           └─11673 /usr/sbin/httpd -DFOREGROUND  
             └─11674 /usr/sbin/httpd -DFOREGROUND  
               └─11675 /usr/sbin/httpd -DFOREGROUND  
                 └─11676 /usr/sbin/httpd -DFOREGROUND  
                   └─11677 /usr/sbin/httpd -DFOREGROUND  
  
Aug 28 22:23:04 vbox systemd[1]: Starting The Apache HTTP Server...  
Aug 28 22:23:04 vbox httpd[11673]: AH00558: httpd: Could not reliably determine the server's fully qualified domain name, using fe80::  
Aug 28 22:23:04 vbox httpd[11673]: Server configured, listening on: port 80  
Aug 28 22:23:04 vbox systemd[1]: Started The Apache HTTP Server.  
  
[centos@vbox ~]$ stoplab4  
[centos@vbox ~]$
```