

Administración de Sistemas y Redes - Práctica 7

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1. Instalación

- La máquina Linux debe llamarse linux.as.local, para ello hacemos:

```
# hostnamectl set-hostname linux.as.local
```

```
[U0287577@linux ~]# hostnamectl set-hostname linux.as.local  
[U0287577@linux ~]#
```

Comprobamos que el nombramiento de la máquina se ha realizado con éxito haciendo:

```
# uname -a
```

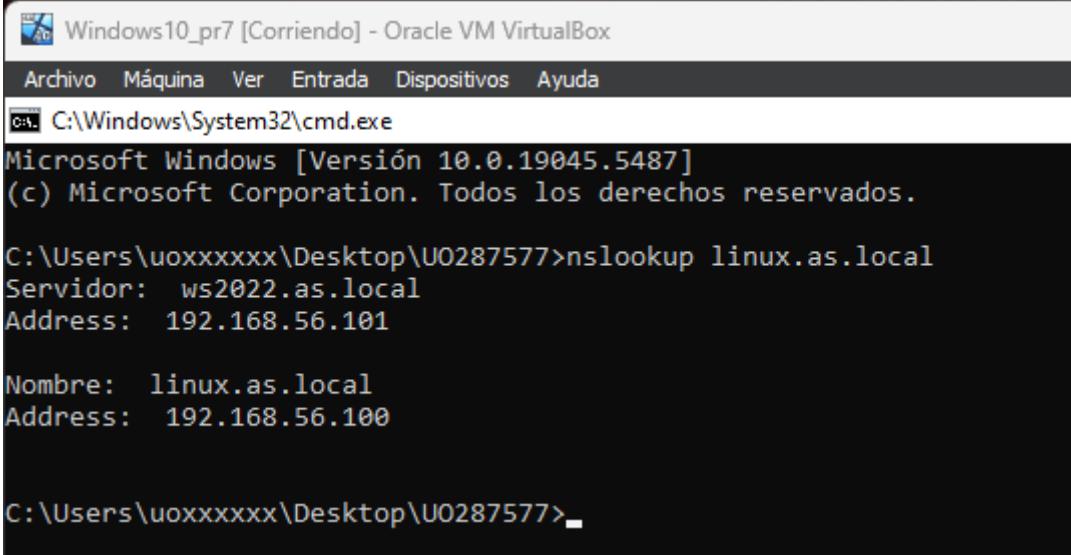
```
[U0287577@linux ~]# uname -a  
Linux linux.as.local 5.14.0-503.22.1.el9_5.x86_64 #1 SMP PREEMPT_DYNAMIC Fri Jan 24 03:  
55:12 EST 2025 x86_64 x86_64 x86_64 GNU/Linux  
[U0287577@linux ~]#
```

Comprobamos con ping que tenemos acceso a la red.

```
[U0287577@linux ~]# ping 8.8.8.8  
PING 8.8.8.8 (8.8.8.8) 56(84) bytes of data.  
64 bytes from 8.8.8.8: icmp_seq=1 ttl=117 time=59.6 ms  
64 bytes from 8.8.8.8: icmp_seq=3 ttl=117 time=256 ms  
64 bytes from 8.8.8.8: icmp_seq=4 ttl=117 time=69.0 ms  
64 bytes from 8.8.8.8: icmp_seq=5 ttl=117 time=80.7 ms  
64 bytes from 8.8.8.8: icmp_seq=6 ttl=117 time=96.9 ms  
64 bytes from 8.8.8.8: icmp_seq=7 ttl=117 time=67.3 ms  
64 bytes from 8.8.8.8: icmp_seq=8 ttl=117 time=69.8 ms  
64 bytes from 8.8.8.8: icmp_seq=9 ttl=117 time=58.0 ms  
64 bytes from 8.8.8.8: icmp_seq=10 ttl=117 time=83.8 ms  
64 bytes from 8.8.8.8: icmp_seq=11 ttl=117 time=84.6 ms  
64 bytes from 8.8.8.8: icmp_seq=12 ttl=117 time=84.6 ms  
64 bytes from 8.8.8.8: icmp_seq=13 ttl=117 time=63.4 ms  
64 bytes from 8.8.8.8: icmp_seq=14 ttl=117 time=86.5 ms  
64 bytes from 8.8.8.8: icmp_seq=15 ttl=117 time=48.1 ms  
64 bytes from 8.8.8.8: icmp_seq=16 ttl=117 time=64.8 ms  
^C  
--- 8.8.8.8 ping statistics ---  
16 packets transmitted, 15 received, 6.25% packet loss, time 15680ms  
rtt min/avg/max/mdev = 48.116/84.910/256.454/47.588 ms  
[U0287577@linux ~]#
```

- Arrancamos WS2022 y comprobamos que se resuelve la dirección linux.as.local desde las máquinas Linux y W10.

- W10:



Windows10_pr7 [Corriendo] - Oracle VM VirtualBox

Archivo Máquina Ver Entrada Dispositivos Ayuda

C:\Windows\System32\cmd.exe

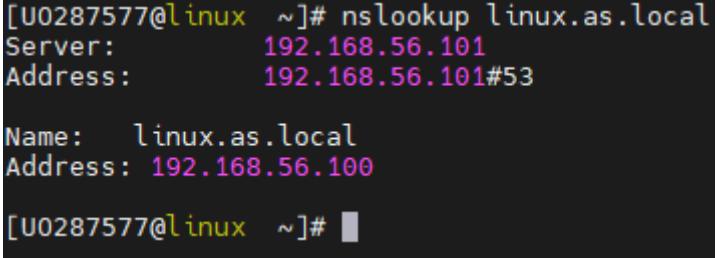
Microsoft Windows [Versión 10.0.19045.5487]
(c) Microsoft Corporation. Todos los derechos reservados.

C:\Users\uoxxxxxx\Desktop\U0287577>nslookup linux.as.local
Servidor: ws2022.as.local
Address: 192.168.56.101

Nombre: linux.as.local
Address: 192.168.56.100

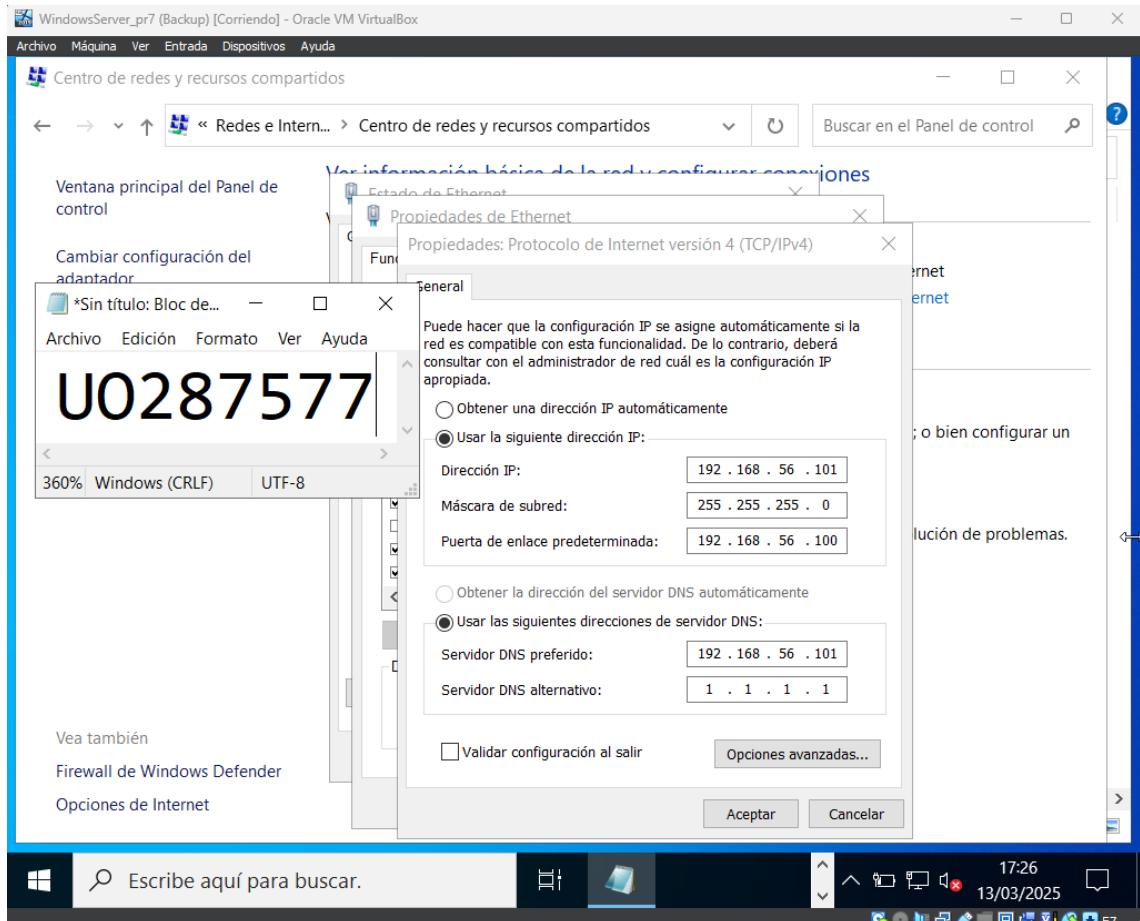
C:\Users\uoxxxxxx\Desktop\U0287577>

- Linux:



```
[U0287577@linux ~]# nslookup linux.as.local  
Server: 192.168.56.101  
Address: 192.168.56.101#53  
  
Name: linux.as.local  
Address: 192.168.56.100  
  
[U0287577@linux ~]#
```

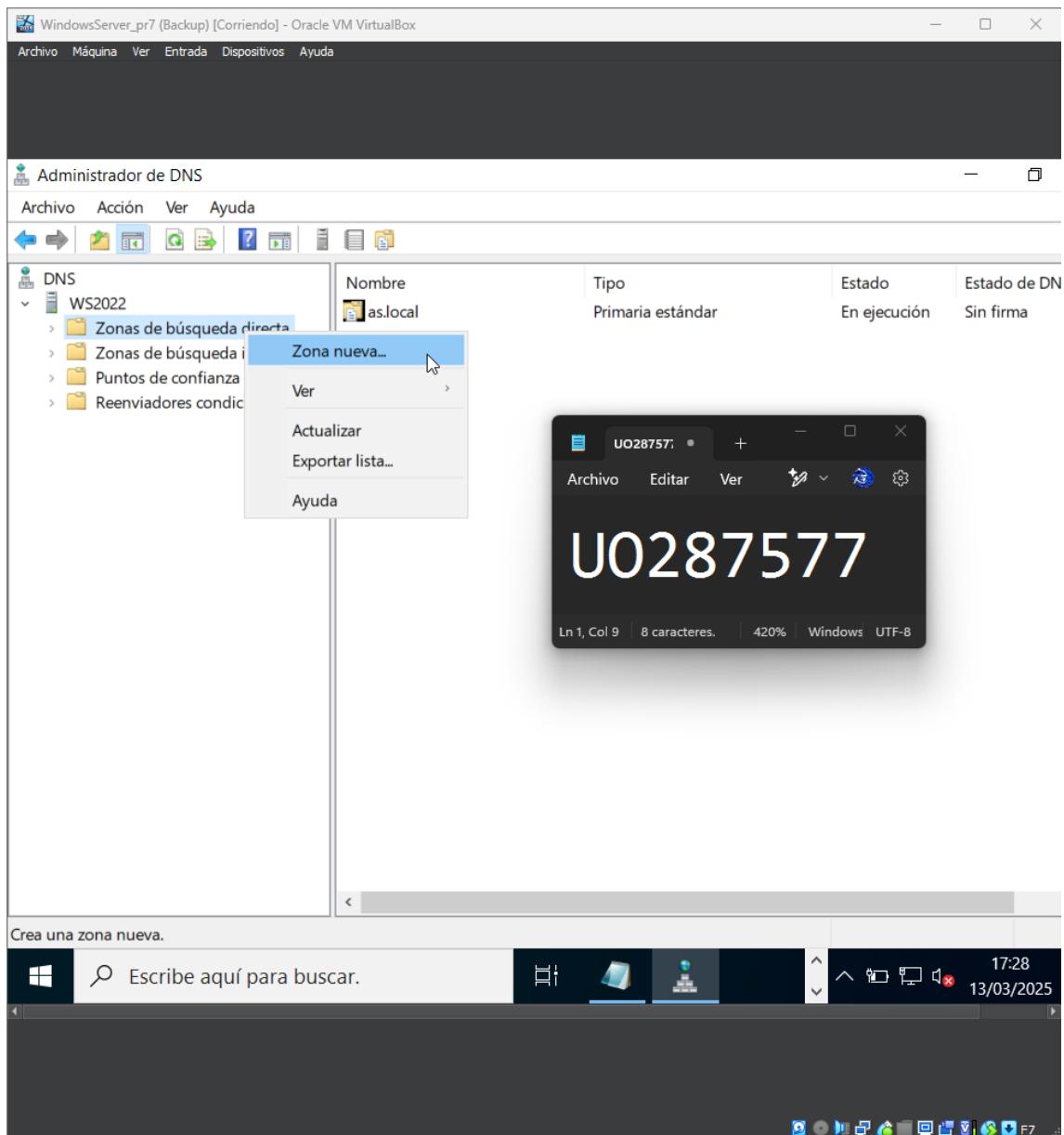
Analizamos y cambiamos lo necesario para que también se resuelva la dirección desde la propia WS2022.

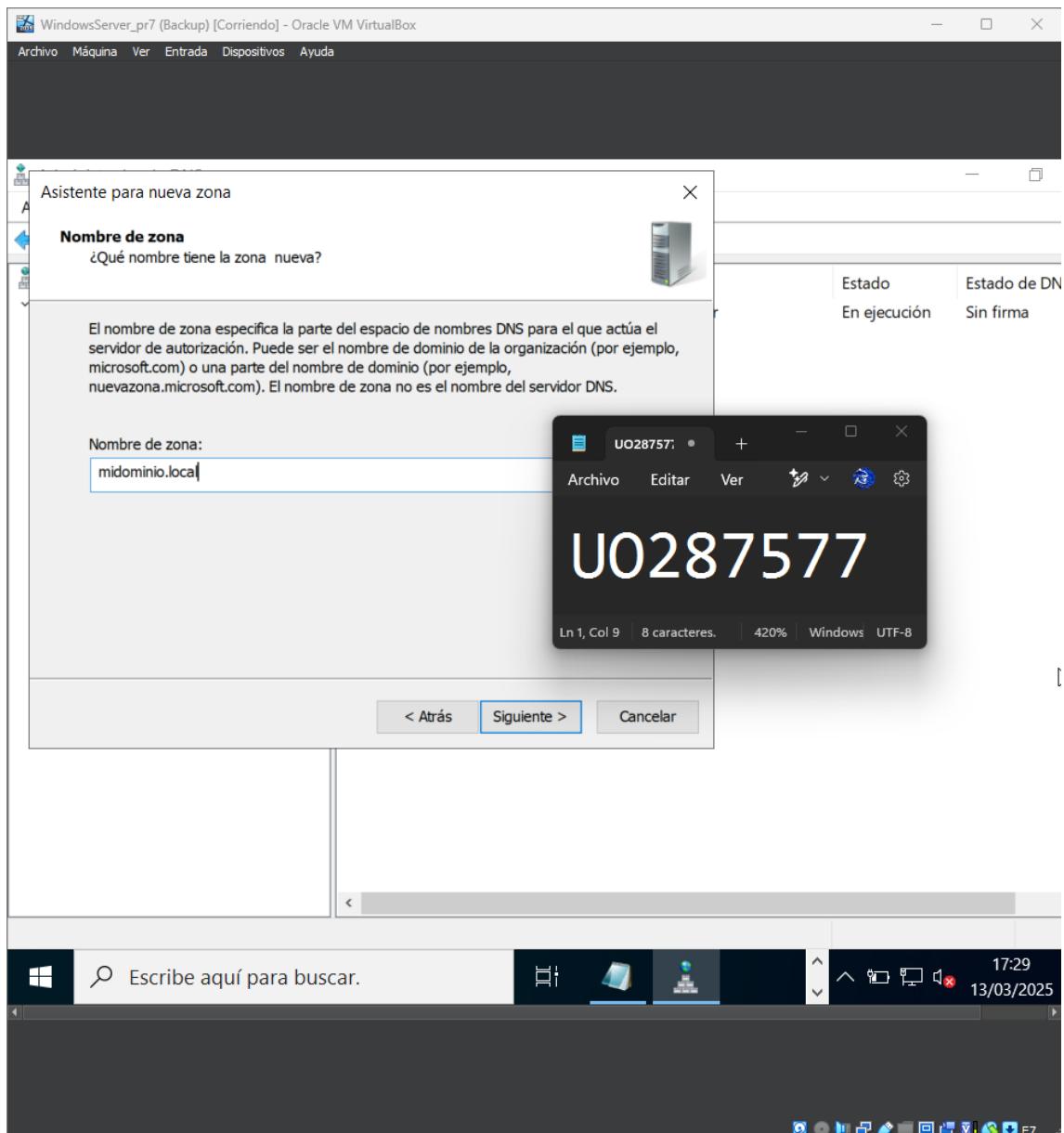


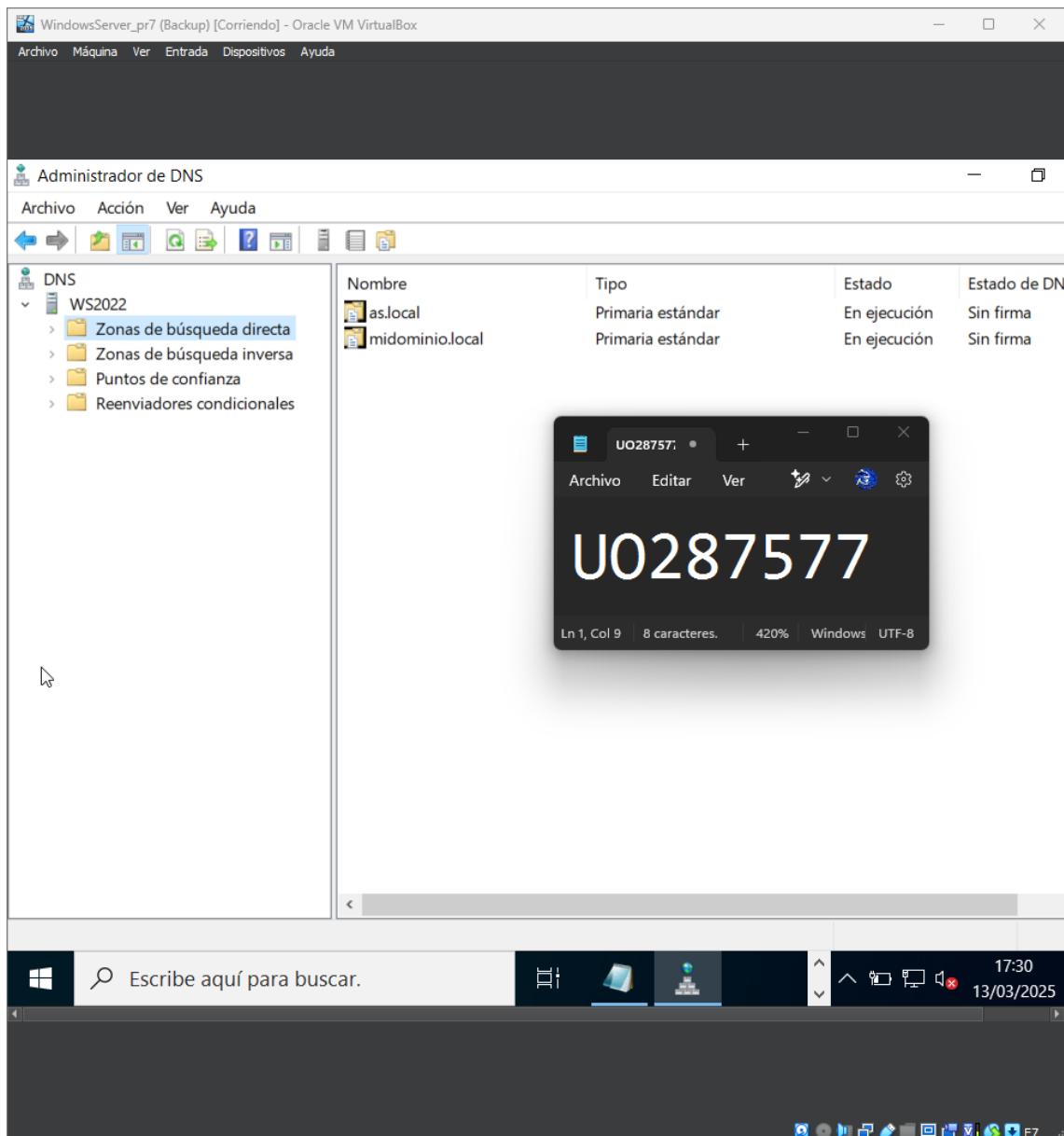
```
C:\Users\Administrador\Desktop\U0287577>nslookup linux.as.local
Servidor:  ws2022.as.local
Address:  192.168.56.101

Nombre:  linux.as.local
Address: 192.168.56.100
```

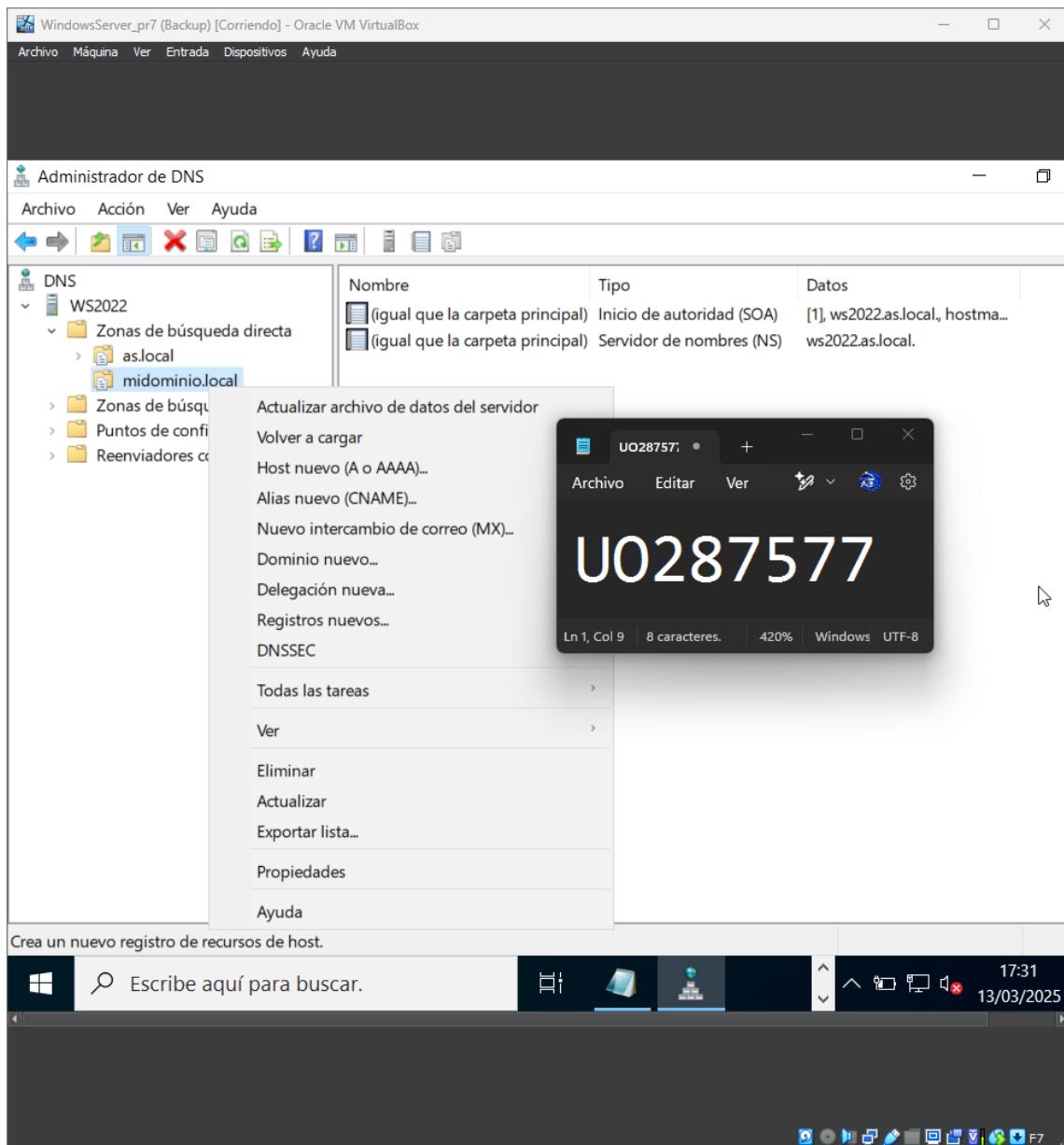
- En la zona del servidor DNS añadimos www.midominio.local con la misma dirección IP que la máquina Linux (debemos crear una nueva zona midominio.local).

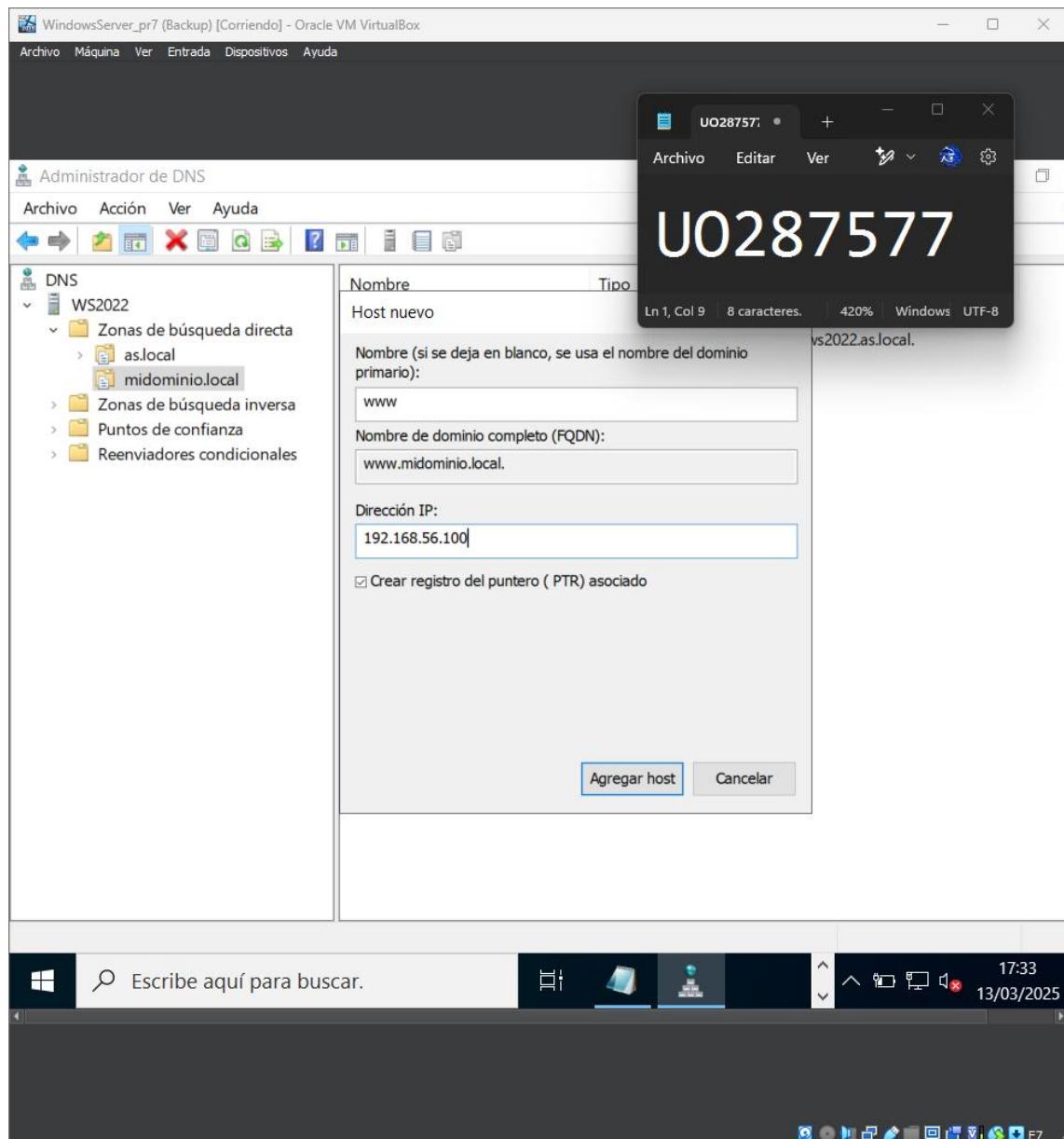


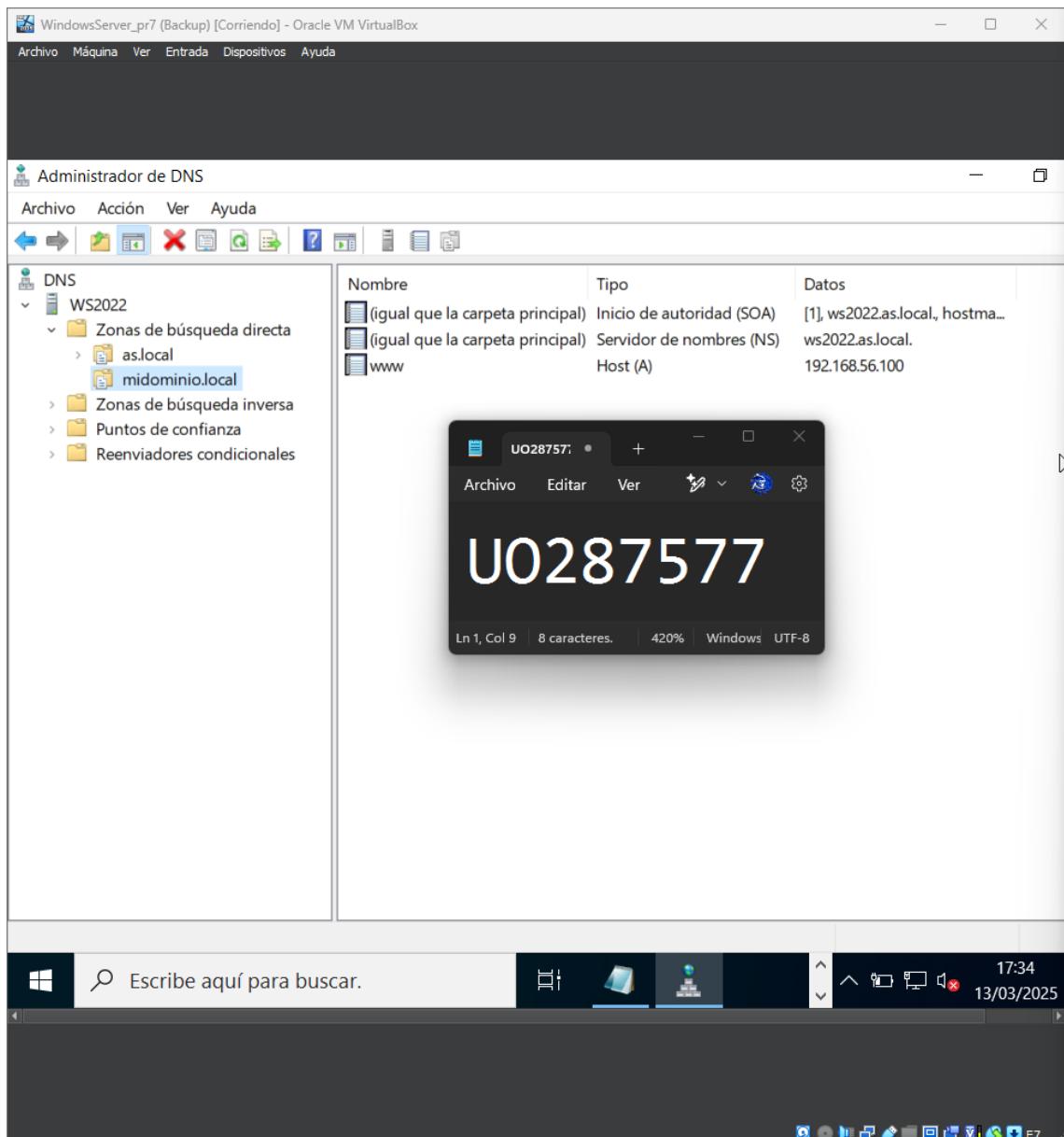




Añadimos un nuevo host con la dirección IP de la MV Linux.







Comprobamos que tanto la máquina Linux como W10 resuelven correctamente la dirección asignada a www.midominio.local (si toman del WS2022 la dirección del servidor DNS y está todo bien configurado, ya debería ser así).

- W10:

```
C:\Users\uoxxxxxx\Desktop\U0287577>nslookup www.midominio.local
Servidor:  ws2022.as.local
Address:  192.168.56.101

Nombre:  www.midominio.local
Address:  192.168.56.100

C:\Users\uoxxxxxx\Desktop\U0287577>
```

- Linux:

```
[U0287577@linux ~]# nslookup www.midominio.local
Server:      192.168.56.101
Address:     192.168.56.101#53

Name:   www.midominio.local
Address: 192.168.56.100

[U0287577@linux ~]#
```

- Comprobamos que el Apache está instalado en la máquina Linux, y si no es así lo instalamos con dnf install httpd.

```
[U0287577@linux ~]# dnf install httpd
AlmaLinux 9 - AppStream                               5.2 kB/s | 4.2 kB    00:00
AlmaLinux 9 - AppStream                               677 kB/s | 14 MB    00:20
AlmaLinux 9 - BaseOS                                4.9 kB/s | 3.8 kB    00:00
AlmaLinux 9 - BaseOS                                532 kB/s | 14 MB    00:26
AlmaLinux 9 - Extras                                4.5 kB/s | 3.3 kB    00:00
AlmaLinux 9 - Extras                                13 kB/s | 13 kB    00:01
Última comprobación de caducidad de metadatos hecha hace 0:00:01, el jue 13 mar 2025 17
:37:16.
Dependencias resueltas.
=====
Paquete          Arquitectura Versión       Repositorio Tam.
=====
Instalando:
httpd           x86_64      2.4.62-1.el9_5.2   appstream    45 k
Instalando dependencias:
almalinux-logos-httpd    noarch    90.5.1-1.1.el9   appstream    18 k
apr              x86_64      1.7.0-12.el9_3   appstream    122 k
apr-util         x86_64      1.6.1-23.el9    appstream    94 k
apr-util-bdb     x86_64      1.6.1-23.el9    appstream    12 k
httpd-core       x86_64      2.4.62-1.el9_5.2  appstream    1.4 M
httpd-filesystem  noarch    2.4.62-1.el9_5.2  appstream    12 k
httpd-tools      x86_64      2.4.62-1.el9_5.2  appstream    79 k
mailcap          noarch    2.1.49-5.el9    baseos      32 k
Instalando dependencias débiles:
apr-util-openssl x86_64      1.6.1-23.el9    appstream    14 k
mod_http2        x86_64      2.0.26-2.el9_4.1  appstream    162 k
mod_lua          x86_64      2.4.62-1.el9_5.2  appstream    58 k
Resumen de la transacción
=====
Instalar 12 Paquetes

Tamaño total de la descarga: 2.0 M
Tamaño instalado: 6.1 M
¿Está de acuerdo [s/N]?:
```

```

Descargando paquetes:
(1/12): almalinux-logos-httdp-90.5.1-1.1.el9.noarch.rpm   30 kB/s | 18 kB    00:00
(2/12): apr-util-bdb-1.6.1-23.el9.x86_64.rpm             55 kB/s | 12 kB    00:00
(3/12): apr-1.7.0-12.el9_3.x86_64.rpm                   108 kB/s | 122 kB   00:01
(4/12): apr-util-openssl-1.6.1-23.el9.x86_64.rpm        44 kB/s | 14 kB    00:00
(5/12): httpd-2.4.62-1.el9_5.2.x86_64.rpm            186 kB/s | 45 kB    00:00
(6/12): apr-util-1.6.1-23.el9.x86_64.rpm              59 kB/s | 94 kB    00:01
(7/12): httpd-filesystem-2.4.62-1.el9_5.2.noarch.rpm   52 kB/s | 12 kB    00:00
(8/12): httpd-tools-2.4.62-1.el9_5.2.x86_64.rpm       291 kB/s | 79 kB    00:00
(9/12): mod_http2-2.0.26-2.el9_4.1.x86_64.rpm        460 kB/s | 162 kB   00:00
(10/12): mod_lua-2.4.62-1.el9_5.2.x86_64.rpm         316 kB/s | 58 kB    00:00
(11/12): mailcap-2.1.49-5.el9.noarch.rpm            139 kB/s | 32 kB    00:00
(12/12): httpd-core-2.4.62-1.el9_5.2.x86_64.rpm      687 kB/s | 1.4 MB   00:02
-----
Total                                         461 kB/s | 2.0 MB   00:04

Ejecutando verificación de operación
Verificación de operación exitosa.
Ejecutando prueba de operaciones
Prueba de operación exitosa.
Ejecutando operación
Preparando :                                         1/1
Instalando : apr-1.7.0-12.el9_3.x86_64           1/12
Instalando : apr-util-bdb-1.6.1-23.el9.x86_64     2/12
Instalando : apr-util-openssl-1.6.1-23.el9.x86_64   3/12
Instalando : apr-util-1.6.1-23.el9.x86_64          4/12
Instalando : httpd-tools-2.4.62-1.el9_5.2.x86_64    5/12
Instalando : mailcap-2.1.49-5.el9.noarch          6/12
Ejecutando scriptlet: httpd-filesystem-2.4.62-1.el9_5.2.noarch 7/12
Instalando : httpd-filesystem-2.4.62-1.el9_5.2.noarch 7/12
Instalando : httpd-core-2.4.62-1.el9_5.2.x86_64      8/12
Instalando : mod_lua-2.4.62-1.el9_5.2.x86_64        9/12
Instalando : almalinux-logos-httdp-90.5.1-1.1.el9.noarch 10/12
Instalando : mod_http2-2.0.26-2.el9_4.1.x86_64       11/12
Instalando : httpd-2.4.62-1.el9_5.2.x86_64          12/12
Ejecutando scriptlet: httpd-2.4.62-1.el9_5.2.x86_64 12/12
Verificando : almalinux-logos-httdp-90.5.1-1.1.el9.noarch 1/12
Verificando : apr-1.7.0-12.el9_3.x86_64            2/12
Verificando : apr-util-1.6.1-23.el9.x86_64          3/12
Verificando : apr-util-bdb-1.6.1-23.el9.x86_64        4/12
Verificando : apr-util-openssl-1.6.1-23.el9.x86_64    5/12
Verificando : httpd-2.4.62-1.el9_5.2.x86_64          6/12
Verificando : httpd-core-2.4.62-1.el9_5.2.x86_64      7/12
Verificando : httpd-filesystem-2.4.62-1.el9_5.2.noarch 8/12
Verificando : httpd-tools-2.4.62-1.el9_5.2.x86_64      9/12
Verificando : mod_http2-2.0.26-2.el9_4.1.x86_64       10/12
Verificando : mod_lua-2.4.62-1.el9_5.2.x86_64        11/12
Verificando : mailcap-2.1.49-5.el9.noarch          12/12

Instalado:
almalinux-logos-httdp-90.5.1-1.1.el9.noarch  apr-1.7.0-12.el9_3.x86_64
apr-util-1.6.1-23.el9.x86_64                  apr-util-bdb-1.6.1-23.el9.x86_64
apr-util-openssl-1.6.1-23.el9.x86_64          httpd-2.4.62-1.el9_5.2.x86_64
httpd-core-2.4.62-1.el9_5.2.x86_64          httpd-filesystem-2.4.62-1.el9_5.2.noarch
httpd-tools-2.4.62-1.el9_5.2.x86_64          mailcap-2.1.49-5.el9.noarch
mod_http2-2.0.26-2.el9_4.1.x86_64          mod_lua-2.4.62-1.el9_5.2.x86_64

iListo!
[U0287577@linux ~]# 

```

Arrancamos el servicio httpd en la máquina Linux.

```
[U0287577@linux ~]# systemctl start httpd
[U0287577@linux ~]# systemctl status https
Unit https.service could not be found.
[U0287577@linux ~]# 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 2025-03-13 17:38:07 CET; 8s ago
     Docs: man:httpd.service(8)
     Main PID: 1800 (httpd)
       Status: "Started, listening on: port 80"
        Tasks: 177 (limit: 10992)
      Memory: 21.7M
        CPU: 61ms
      CGroup: /system.slice/httpd.service
              └─1800 /usr/sbin/httpd -DFOREGROUND
                  ├─1801 /usr/sbin/httpd -DFOREGROUND
                  ├─1802 /usr/sbin/httpd -DFOREGROUND
                  ├─1803 /usr/sbin/httpd -DFOREGROUND
                  └─1804 /usr/sbin/httpd -DFOREGROUND

mar 13 17:38:07 linux.as.local systemd[1]: Starting The Apache HTTP Server...
mar 13 17:38:07 linux.as.local systemd[1]: Started The Apache HTTP Server.
mar 13 17:38:07 linux.as.local httpd[1800]: Server configured, listening on: port 80
[U0287577@linux ~]# █
```

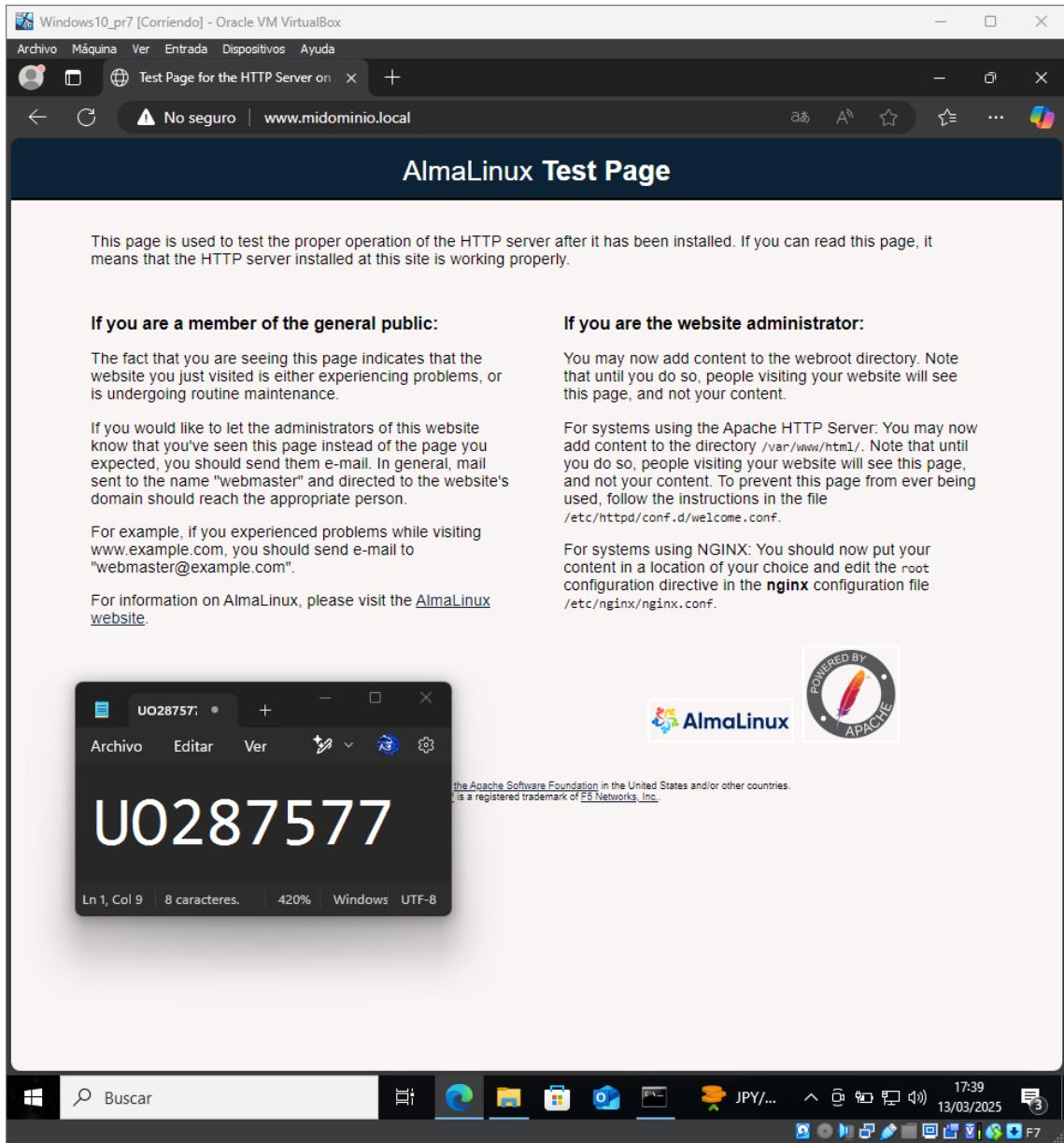
Añadimos una nueva regla al firewall para permitir las conexiones http:

```
# firewall-cmd --zone=internal --permanent --add-service=http

# firewall-cmd --reload

[U0287577@linux ~]# firewall-cmd --zone=internal --permanent --add-service=http
success
[U0287577@linux ~]# firewall-cmd --reload
success
[U0287577@linux ~]# █
```

- Lanzamos un navegador en WS2022 (o W10) y accedemos a <http://www.midominio.local>



Esta es la página de prueba, esto significa que hemos realizado correctamente los anteriores pasos.

- Creamos dentro del directorio /var/www/html un archivo index.html con el siguiente contenido y comprobamos que podemos visualizarlo correctamente desde <http://www.midominio.local>

```
<!DOCTYPE html>

<head>

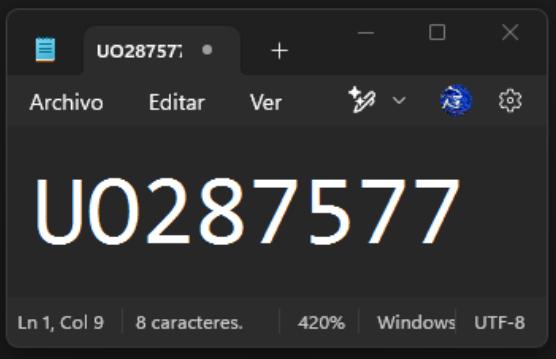
<meta charset="utf-8" />

<title>Servidor AS</title>

</head>
```

```
<body>  
    <h1>Administración de Sistemas</h1>  
</body>  
</html>
```

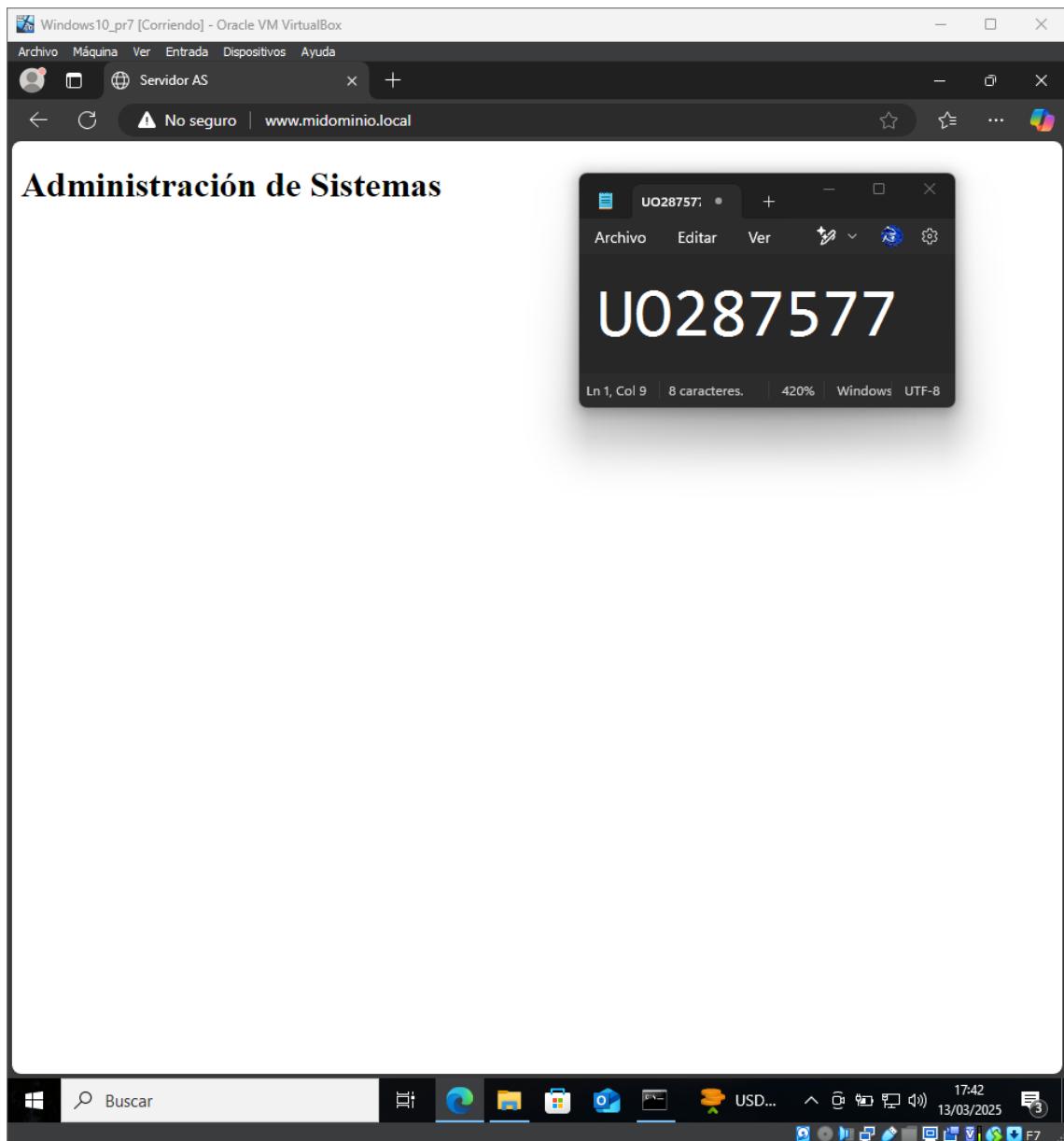
```
[U0287577@linux ~]# nano /var/www/html/index.html
```



The screenshot shows the nano text editor window. The title bar reads "GNU nano 5.6.1 /var/www/html/index.html Modificado". The main area contains the following HTML code:

```
GNU nano 5.6.1          /var/www/html/index.html          Modificado  
<!DOCTYPE html>  
<head>  
  <meta charset="utf-8" />  
  <title>Servidor AS</title>  
</head>  
<body>  
  <h1>Administración de Sistemas</h1>  
</body>  
</html>
```

The status bar at the bottom right shows "Ln 1, Col 9 | 8 caracteres. | 420% | Windows | UTF-8".



2. Configuración de las páginas web de los usuarios

- Creamos, si no lo hemos hecho ya, el usuario asuser.

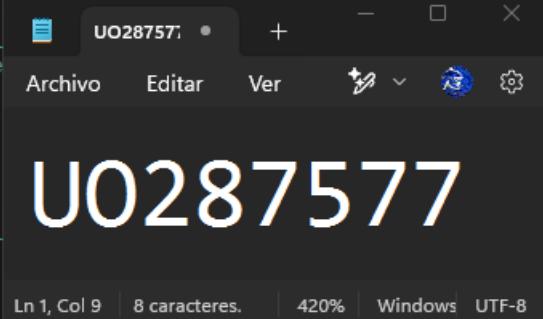
```
[U0287577@linux ~]# useradd asuser  
useradd: el usuario «asuser» ya existe  
[U0287577@linux ~]#
```

- Editamos el fichero /etc/httpd/conf.d/userdir.conf

Comentamos la línea (añadiendo # al principio) 'UserDir disabled'.

Quitamos el comentario (#) a la línea 'UserDir public_html'

```
[U0287577@linux ~]# nano /etc/httpd/conf.d/userdir.conf
```



```
GNU nano 5.6.1          /etc/httpd/conf.d/userdir.conf          Modificado  
#  
# UserDir: The name of the directory that is appended onto a user's home  
# directory if a ~user request is received.  
#  
# The path to the end user account 'public_html' directory must be  
# accessible to the webserver userid. This usually means that ~userid  
# must have permissions of 711, ~userid/public_html must have permissions  
# of 755, and documents contained therein must be world-readable.  
# Otherwise, the client will only receive a "403 Forbidden" message.  
#  
<IfModule mod_userdir.c>  
#  
# UserDir is disabled by default since  
# of a username on the system (depends  
# permissions).  
#  
#UserDir disabled  
  
#  
# To enable requests to ~/user/ to  
# directory, remove the "UserDir di  
# the following line instead:  
#  
#       UserDir public_html  
</IfModule>  
  
#  
# Control access to UserDir directories. The following is an example  
# for a site where these directories are restricted to read-only.  
#  
<Directory "/home/*/*public_html">  
    AllowOverride FileInfo AuthConfig Limit Indexes  
    Options MultiViews Indexes SymLinksIfOwnerMatch IncludesNoExec  
    Require method GET POST OPTIONS  
</Directory>
```

- Aplicamos los permisos al directorio del usuario asuser

```
# chmod 711 /home/asuser
```

```
[U0287577@linux ~]# chmod 711 /home/asuser  
[U0287577@linux ~]#
```

- Ejecutamos el siguiente comando para permitir que Apache pueda leer contenidos localizados en los directorios de inicio de los usuarios locales:

```
# setsebool -P httpd_read_user_content on  
[U0287577@linux ~]# setsebool -P httpd_read_user_content on  
[U0287577@linux ~]#
```

- Ejecutamos el comando siguiente para habilitar el uso de los directorios ~/public_html de los usuarios:

```
# setsebool -P httpd_enable_homedirs on  
[U0287577@linux ~]# setsebool -P httpd_enable_homedirs on  
[U0287577@linux ~]#
```

- Entramos en una terminal como usuario asuser y creamos en su directorio la carpeta public_html y en ella un fichero básico index.html.

```
[U0287577@linux ~]# su - asuser  
[asuser@linux ~]$ mkdir public_html  
[asuser@linux ~]$ nano ./public_html/index.html
```

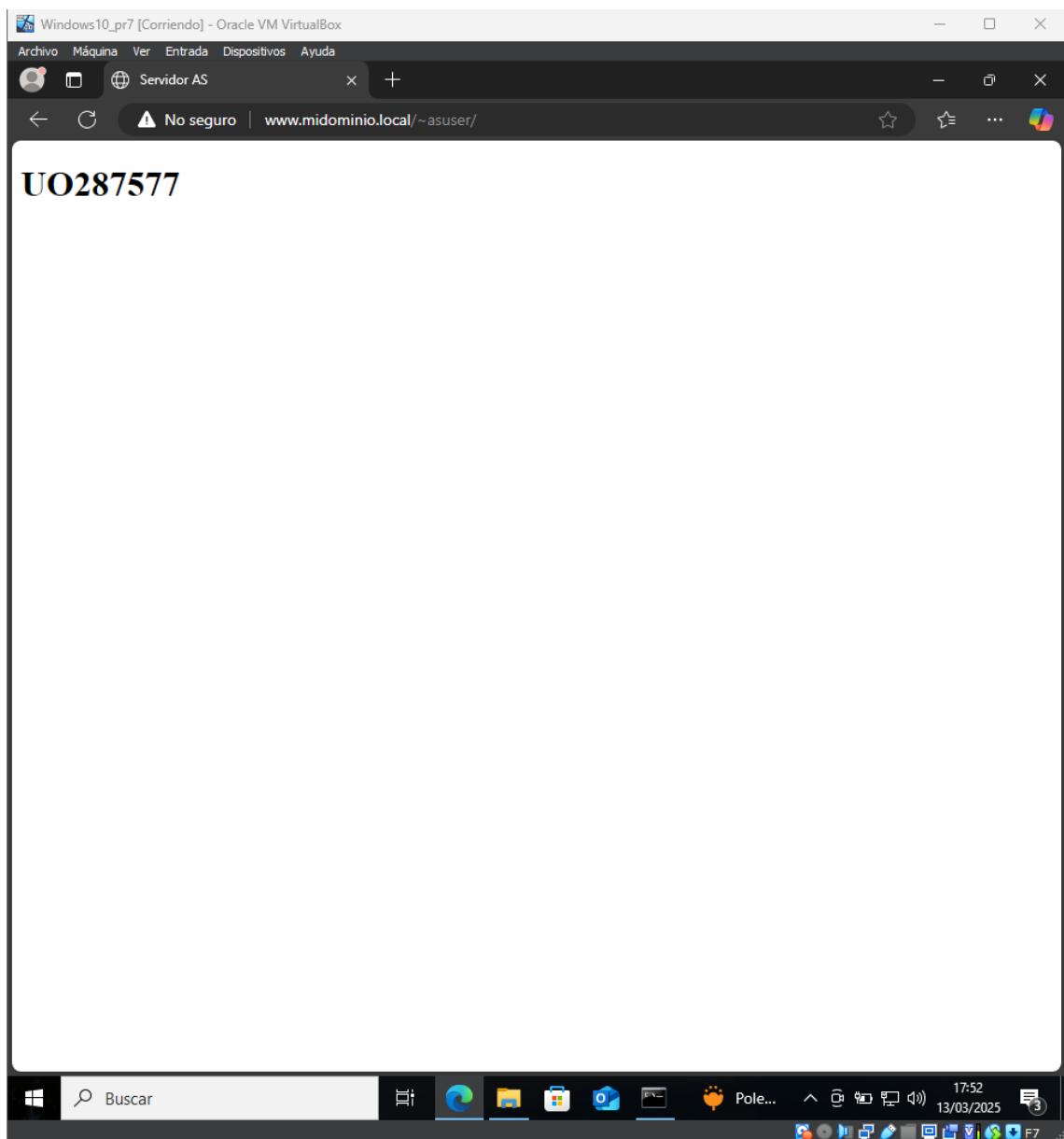
```
GNU nano 5.6.1          ./public_html/index.html      Modificado  
<!DOCTYPE html>  
<head>  
  <meta charset="utf-8" />  
  <title>Servidor AS</title>  
</head>  
<body>  
  <h1>U0287577</h1>  
</body>  
</html>
```

Aplicamos los permisos de acceso adecuados a la carpeta public_html

```
# chmod 755 -R public_html.  
[asuser@linux ~]$ chmod 755 -R public_html  
[asuser@linux ~]$ U0287577
```

- Reiniciamos el servicio httpd y miramos a ver si somos capaces de acceder desde la máquina W10 a http://www.midominio.local/~asuser.

```
[asuser@linux ~]$ systemctl restart httpd  
===== AUTHENTICATING FOR org.freedesktop.systemd1.manage-units =====  
Necesita autenticarse para reiniciar «httpd.service».  
Authenticating as: U0287577  
Password:  
===== AUTHENTICATION COMPLETE =====  
[asuser@linux ~]$ U0287577
```



3. Configuración del servidor Apache

3.a Ubicación

- Crearemos una nueva ubicación para la página web: creamos la carpeta /as/web y copiamos en ella el fichero index.html.

```
[asuser@linux ~]$ exit  
cerrar sesión  
[U0287577@linux ~]# mkdir /as/web  
mkdir: no se puede crear el directorio «/as/web»: No existe el fichero o el directorio  
[U0287577@linux ~]# mkdir /as  
[U0287577@linux ~]# mkdir /as/web  
[U0287577@linux ~]# cp /var/www/html/index.html /as/web  
[U0287577@linux ~]#
```

```
[U0287577@linux ~]# nano /as/web/index.html
```

```
GNU nano 5.6.1                               /as/web/index.html  
<!DOCTYPE html>  
<head>  
  <meta charset="utf-8" />  
  <title>Servidor AS</title>  
</head>  
<body>  
  <h1>Administración de Sistemas</h1>  
  <h2>Index de /as/web</h2>  
  <h3>U0287577</h3>  
</body>  
</html>
```

En el archivo de configuración que está en /etc/httpd/conf/httpd.conf modificamos la directiva DocumentRoot para que busque los documentos en el nuevo directorio /as/web

```
[U0287577@linux ~]# nano /etc/httpd/conf/httpd.conf
```

```

GNU nano 5.6.1           /etc/httpd/conf/httpd.conf      Modificado
# All of these directives may appear inside <VirtualHost> containers,
# in which case these default settings will be overridden for the
# virtual host being defined.
#
#
# ServerAdmin: Your address, where problems with the server should be
# e-mailed. This address appears on some server-generated pages, such
# as error documents. e.g. admin@your-domain.com
#
# ServerAdmin root@localhost
#
# ServerName gives the name and port that the server uses to identify itself.
# This can often be determined automatically, but we recommend you specify
# it explicitly to prevent problems during startup.
#
# If your host doesn't have a registered DNS name, enter its IP address here.
#
#ServerName www.example.com:80
#
# Deny access to the entirety of your server's filesystem. You must
# explicitly permit access to web content directories in other
# <Directory> blocks below.
#
<Directory >
    AllowOverride none
    Require all denied
</Directory>
#
# Note that from this point forward you must specifically allow
# particular features to be enabled - so if something's not working as
# you might expect, make sure that you have specifically enabled it
# below.
#
#
# DocumentRoot: The directory out
# documents. By default, all requests
# symbolic links and aliases may b
#
DocumentRoot "/as/web"
#
# Relax access to content within /
#
<Directory "/var/www">
    AllowOverride None
    # Allow open access:
    Require all granted
</Directory>

^G Ayuda      ^O Guardar      ^W Buscar      ^K Cortar      ^T Ejecutar      ^C Ubicación
^X Salir      ^R Leer fich.  ^Y Reemplazar  ^U Pegar       ^J Justificar  ^_ Ir a línea

```

- Sustituimos la sección <Directory "/var/www"> por la sección que sigue:

```

<Directory "/as/web">

    Options FollowSymLinks

    AllowOverride None

    Require all granted

</Directory>

```

```

GNU nano 5.6.1          /etc/httpd/conf/httpd.conf          Modificado
#
# ServerAdmin: Your address, where problems with the server should be
# e-mailed. This address appears on some server-generated pages, such
# as error documents. e.g. admin@your-domain.com
#
#ServerAdmin root@localhost
#
# ServerName gives the name and port that the server uses to identify itself.
# This can often be determined automatically, but we recommend you specify
# it explicitly to prevent problems during startup.
#
# If your host doesn't have a registered DNS name, enter its IP address here.
#
#ServerName www.example.com:80
#
# Deny access to the entirety of your server's filesystem. You must
# explicitly permit access to web content directories in other
# <Directory> blocks below.
#
<Directory />
    AllowOverride none
    Require all denied
</Directory>
#
# Note that from this point forward you must specifically allow
# particular features to be enabled - so if something's not working as
# you might expect, make sure that you have specifically enabled it
# below.
#
#
# DocumentRoot: The directory out
# documents. By default, all requ
# symbolic links and aliases may b
#
DocumentRoot "/as/web"
#
# Relax access to content within /
#
<Directory "/as/web">
    Options FollowSymLinks
    AllowOverride None
    Require all granted
</Directory>
#
# Further relax access to the default document root:
<Directory "/var/www/html">
    #
    # Possible values for the Options directive are "None", "All",

```

U0287577

Ln 1, Col 9 | 8 caracteres. | 420% | Windows | UTF-8

Ayuda **Guardar** **Buscar** **Cortar** **Ejecutar** **Ubicación**
Salir **Leer fich.** **Reemplazar** **Pegar** **Justificar** **Ir a línea**

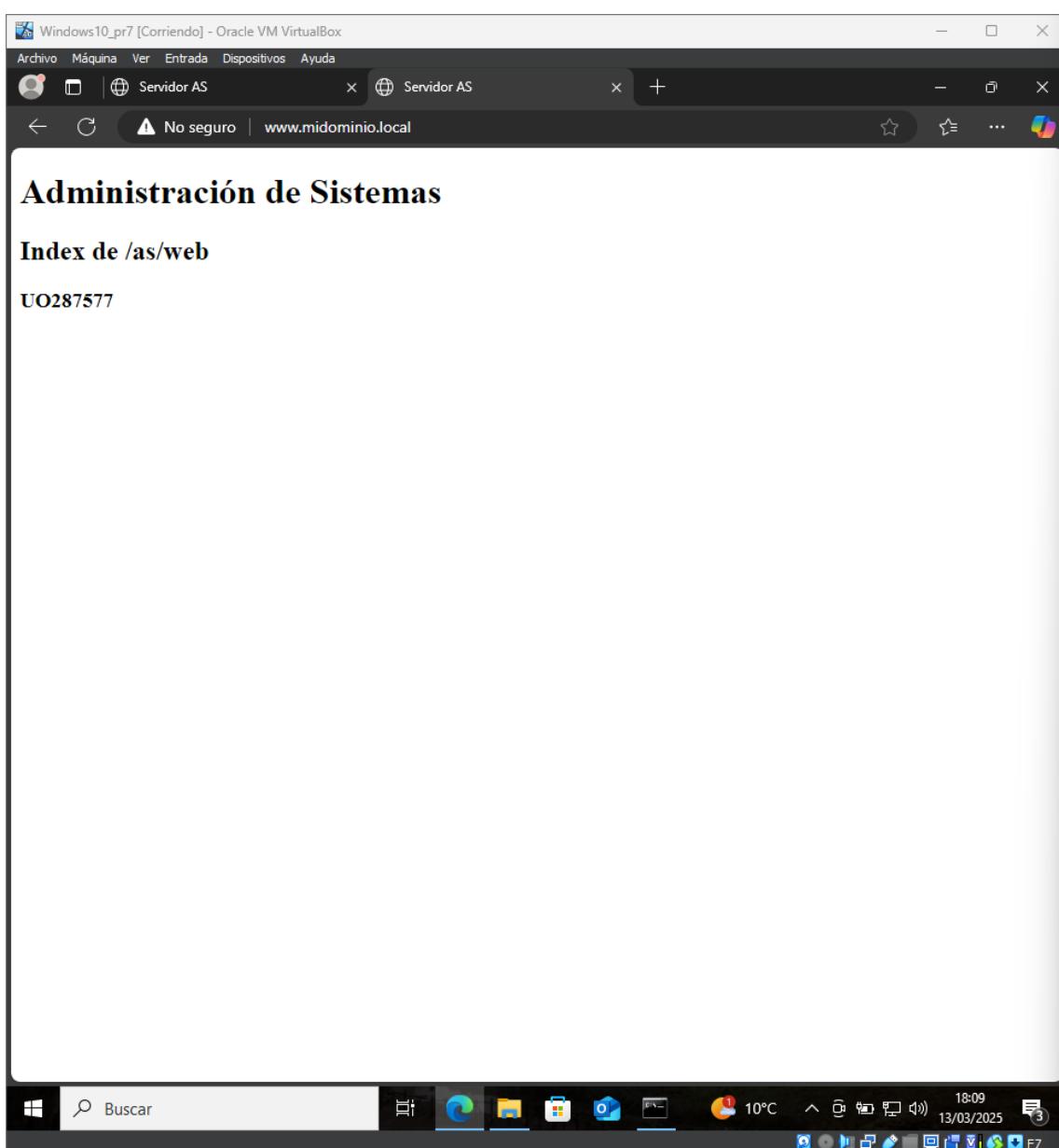
- Restauramos el servicio httpd.

```
[U0287577@linux ~]# systemctl restart httpd
[U0287577@linux ~]#
```

Asignamos el contexto httpd_sys_content_t a través de chcon y comprobamos que la página www.midominio.local ha cambiado.

```
# chcon -R -h -t httpd_sys_content_t /as/web
```

```
[U0287577@linux ~]# chcon -R -h -t httpd_sys_content_t /as/web  
[U0287577@linux ~]#
```



3.b ServerName

- Modificamos las directivas ServerAdmin y ServerName de acuerdo con nuestro email y con el nombre www.midominio.local.

```
[U0287577@linux ~]# nano /etc/httpd/conf/httpd.conf
```

```

# Virtual host being defined.
#
#
# ServerAdmin: Your address, where problems with the server should be
# e-mailed. This address appears on some server-generated pages, such
# as error documents. e.g. admin@your-domain.com
#
ServerAdmin uo287577@uniovi.es

#
# ServerName gives the name and port that the server uses to identify itself.
# This can often be determined automatically, but we recommend you specify
# it explicitly to prevent problems during startup.
#
# If your host doesn't have a registered DNS name, enter its IP address here.
#
# Deny access to the entirety of your server's filesystem. You must
# 
```

- Hacemos que el servidor escuche en el puerto 9999. Para ello:

Cambiamos el puerto 80 a 9999 en la directiva Listen

```

GNU nano 5.6.1                               /etc/httpd/conf/httpd.conf
#
ServerRoot "/etc/httpd"

#
# Listen: Allows you to bind Apache to specific IP addresses and
# ports, instead of the default. See also the <VirtualHost>
# directive.
#
# Change this to Listen on a specific IP address, but note that
# httpd.service is enabled to run at boot time, the address may
# available when the service starts. See the httpd.service(8) m
# page for more information.
#
#Listen 12.34.56.78:80
Listen 9999
# U0287577

#
# Dynamic Shared Object (DSO) Support
# 
```

Cambiamos el nombre del servidor a www.midominio.local:9999 en la directiva
ServerName

```

# 
# ServerAdmin: Your address, where problems with the server should be
# e-mailed. This address appears on some server-generated pages, such
# as error documents. e.g. admin@your-domain.com
#
ServerAdmin uo287577@uniovi.es

#
# ServerName gives the name and port that the server uses to identify itself.
# This can often be determined automatically, but we recommend you specify
# it explicitly to prevent problems during startup.
#
# If your host doesn't have a registered DNS name, enter its IP address here.
#
ServerName www.midominio.local:9999

#
# Deny access to the entirety of your server's filesystem. You must
# explicitly permit access to web content directories in other
# <Directory> blocks below.
#
<Directory />

```

- Comprobamos que ahora con <http://www.midominio.local:9999> podemos visualizar la página. Añadimos una nueva regla al firewall si es necesario.



Volvemos a dejar el servidor escuchando en el puerto 80.

```

GNU nano 5.6.1          /etc/httpd/conf/httpd.conf      Modificado
#
# 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
# U0287577

#
# Dynamic Shared Object (DSO) Support

```

```
# e-mailed. This address appears on some server-generated pages, such
# as error documents. e.g. admin@your-domain.com
#
ServerAdmin uo287577@uniovi.es

#
# ServerName gives the name and port that the server uses to identify itself
# This can often be determined automatically, but we recommend you specify
# it explicitly to prevent problems during startup.
#
# If your host doesn't have a registered DNS name, enter its IP address here
#
ServerName www.midominio.local:80

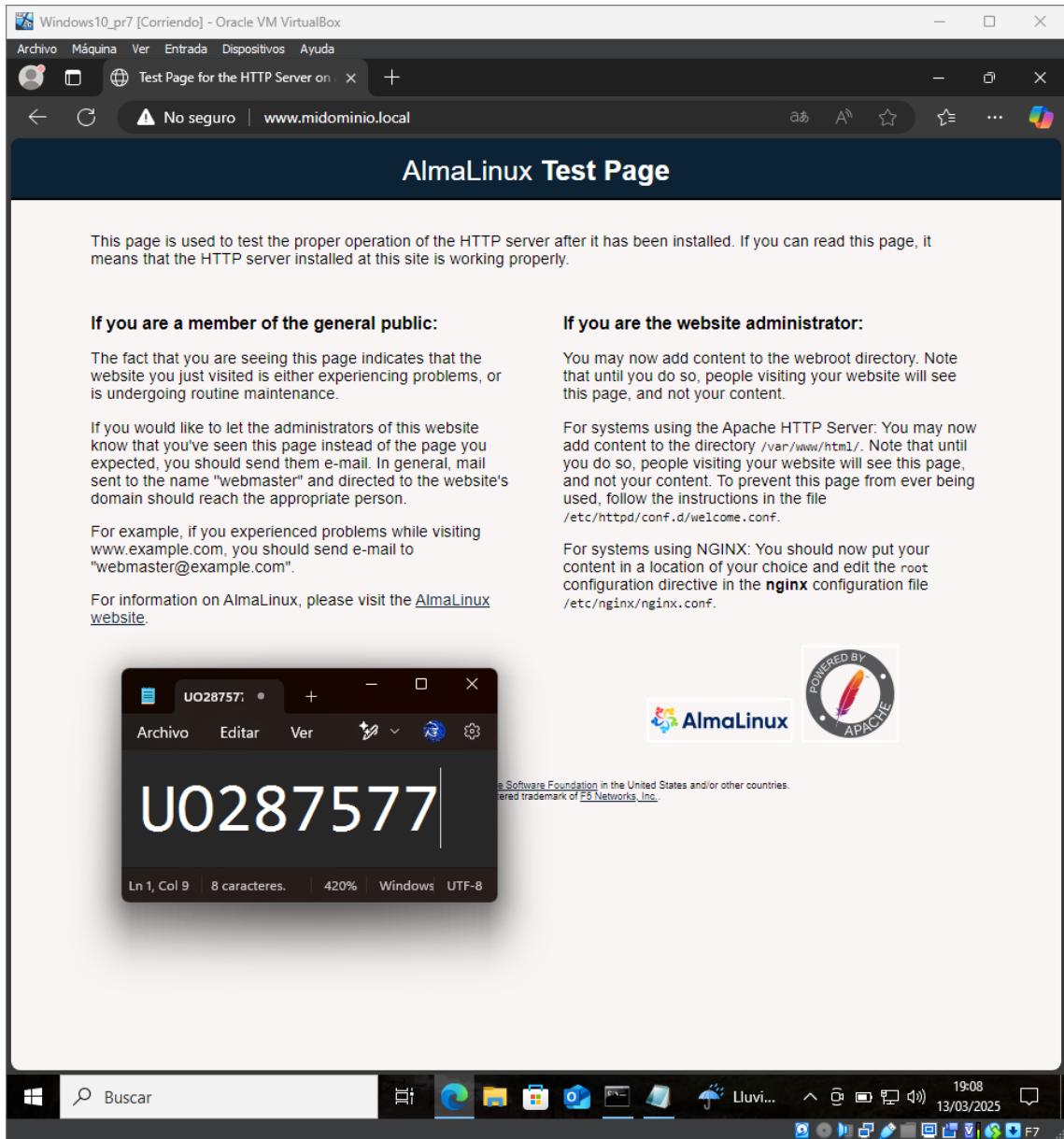
#
# Deny access to the entirety of your server's filesystem. You must
# explicitly permit access to web content directories in other
# locations below, otherwise they will not be served.
```

3.c Repositorios

- Renombramos el archivo index.html a índice.html.

```
[U0287577@linux ~]# cd /as/web
[U0287577@linux ~]# mv index.html indice.html
[U0287577@linux ~]# ls
indice.html
[U0287577@linux ~]#
```

Recargamos la página para que se borre la cache y consultamos de nuevo la dirección www.midominio.local ¿Qué ocurre?



Nos redirige a la página de prueba.

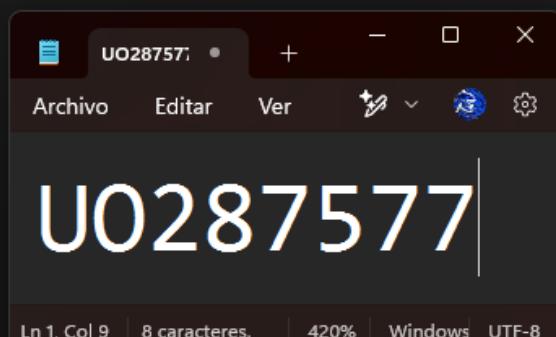
- Editamos el fichero /etc/httpd/conf.d/welcome.conf y comentamos todas las líneas (añadiendo # al principio de todas ellas). Con ello desactivamos la presentación de la página de "Almalinux Test Page" para el caso que no encuentre el fichero index.html.

```
[U0287577@linux ~]# nano /etc/httpd/conf.d/welcome.conf
```

```
GNU nano 5.6.1          /etc/httpd/conf.d/welcome.conf      Modificado
#
# This configuration file enables the default "Welcome" page if there
# is no default index page present for the root URL. To disable the
# Welcome page, comment out all the lines below.
#
# NOTE: if this file is removed, it will be restored on upgrades.
#
#<LocationMatch "^/+$">
#    Options -Indexes
#    ErrorDocument 403 ./noindex.html
#</LocationMatch>

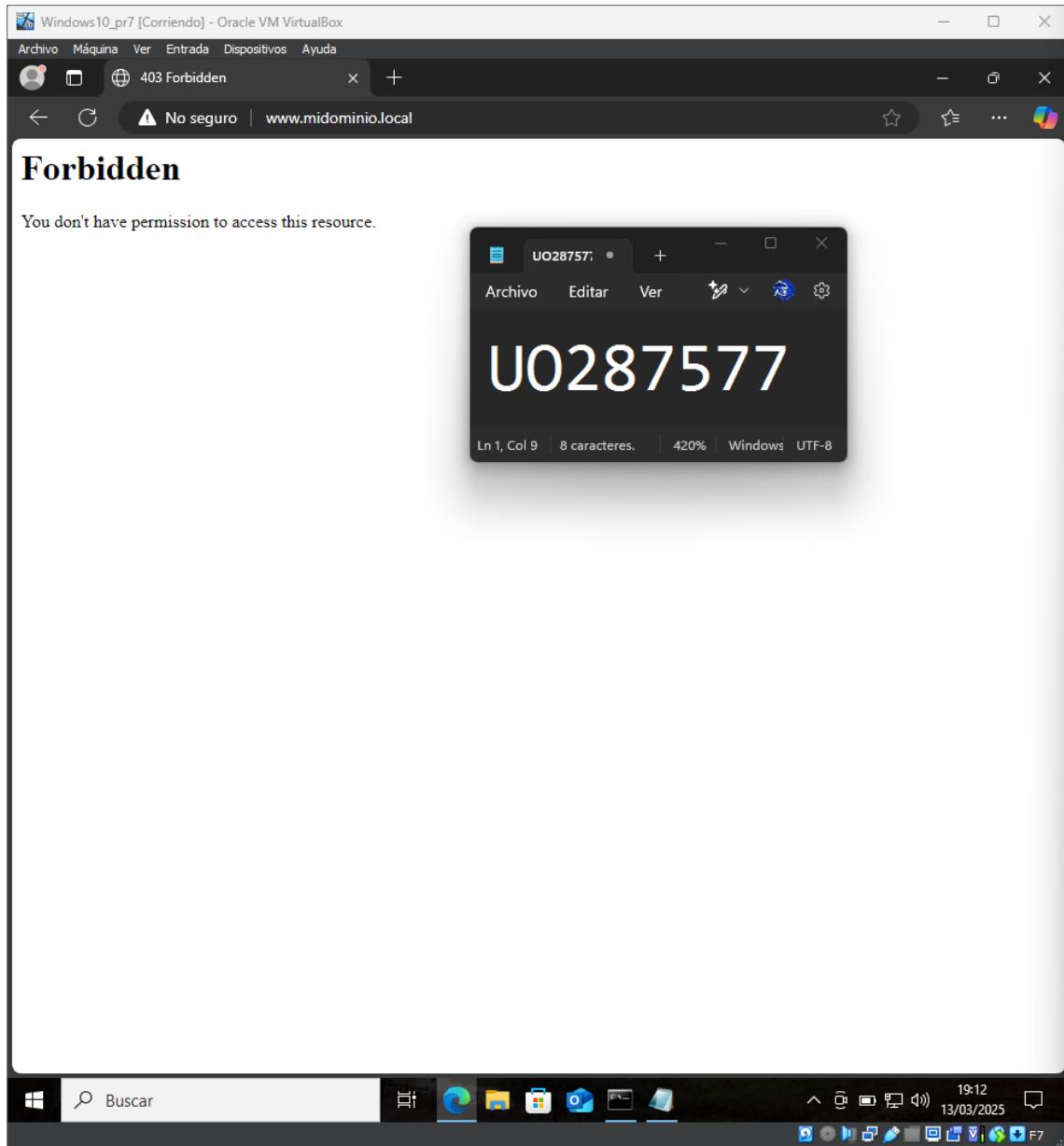
#<Directory /usr/share/httpd/noindex>
#    AllowOverride None
#    Require all granted
#</Directory>

#Alias ./noindex.html /usr/share/httpd/noindex/index.html
#Alias /poweredby.png /usr/share/httpd/icons/apache_pb3.png
#Alias /system_noindex_logo.png /usr/share/httpd/icons/system_noindex_logo.png
```



Restauramos el servicio httpd y volvemos a recargar la página. ¿Qué ocurre?

```
[U0287577@linux ~]# systemctl restart httpd
[U0287577@linux ~]#
```



Ocurre que nos prohíbe el acceso.

- Modificamos la sección que creamos anteriormente para as/web:

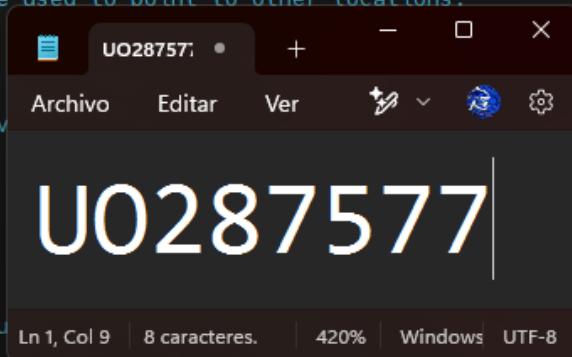
```
<Directory "/as/web">  
    Options Indexes FollowSymLinks  
    AllowOverride None  
    Require all granted  
</Directory>
```

```
[U0287577@linux ~]# nano /etc/httpd/conf/httpd.conf
```

```

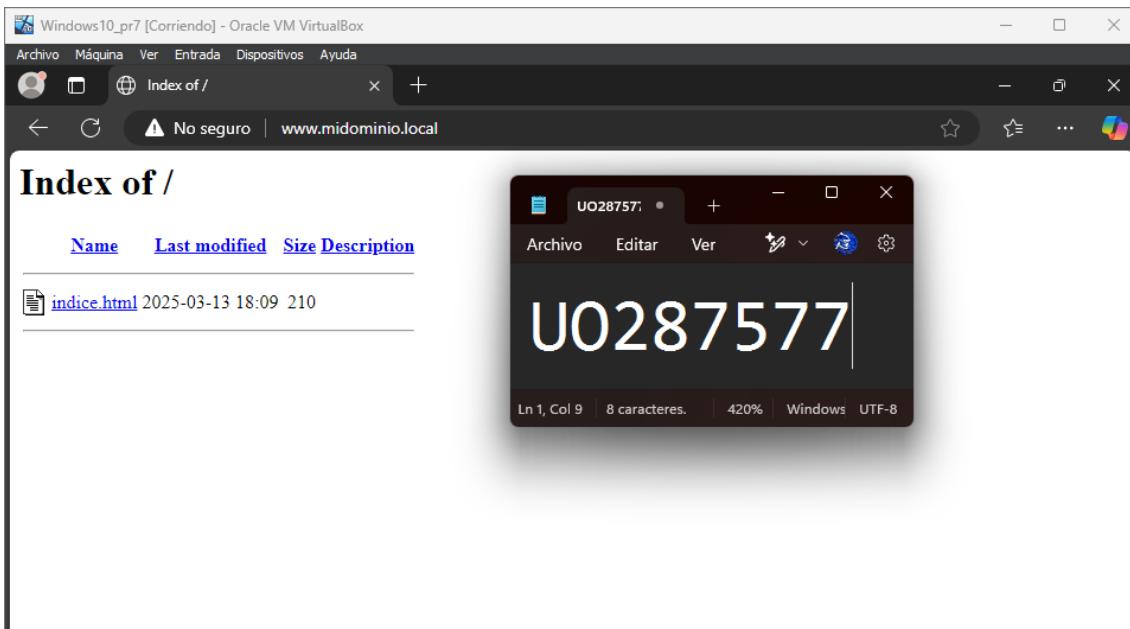
#
# Note that from this point forward you must specifically allow
# particular features to be enabled - so if something's not working as
# you might expect, make sure that you have specifically enabled it
# below.
#
#
# DocumentRoot: The directory out of which you will serve your
# documents. By default, all requests are taken from this directory, but
# symbolic links and aliases may be used to point to other locations.
#
DocumentRoot "/as/web"
#
# Relax access to content within /v
#
<Directory "/as/web">
    Options Indexes FollowSymLinks
    AllowOverride None
    Require all granted
</Directory>
#
# Further relax access to the default
<Directory "/var/www/html">
    #
    # Possible values for the Options directive are "None", "All",

```

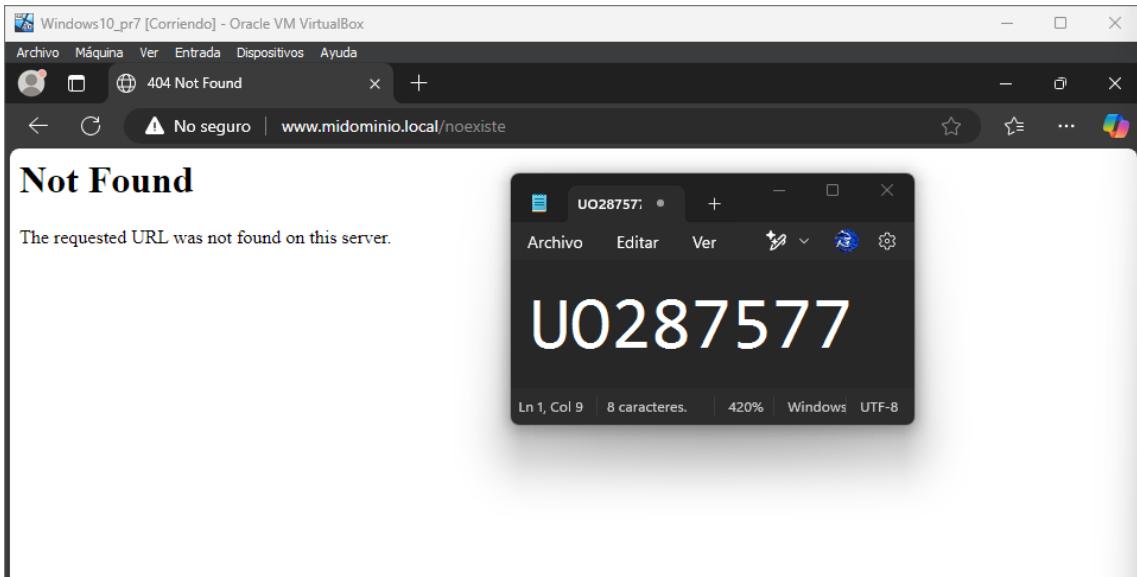


- Volvemos a restaurar el servicio, recargamos la página y comprobamos que ahora ya podemos visualizar el contenido de los directorios.

```
[U0287577@linux ~]# systemctl restart httpd
[U0287577@linux ~]#
```



- Hacemos un acceso a una página no existente y comprobamos qué ocurre en /var/log/httpd/access_log.



```
[U0287577@linux ~]# nano /var/log/httpd/access_log
[U0287577@linux ~]#
```

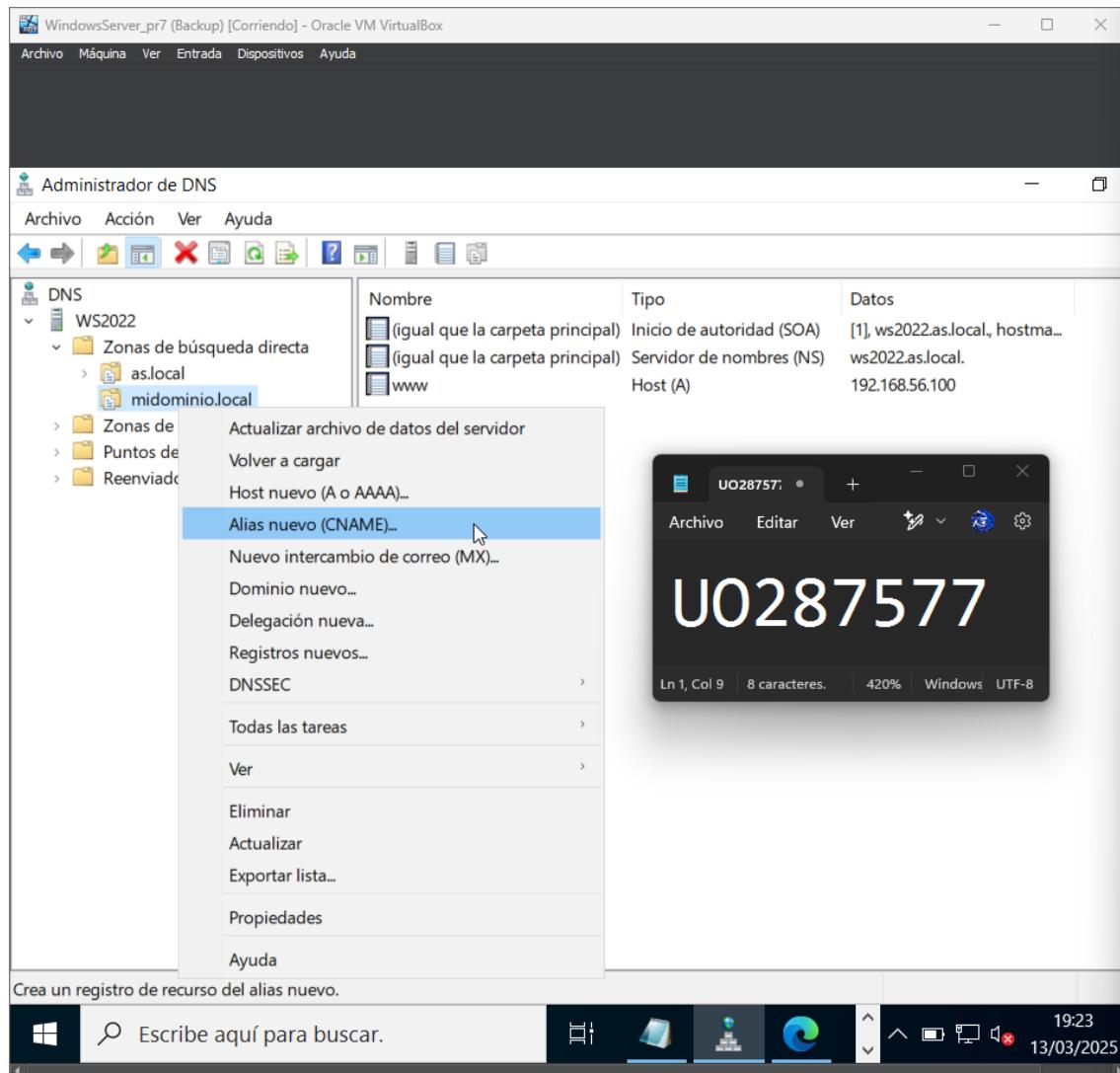
```
192.168.56.110 - [13/Mar/2025:18:06:47 +0100] "GET / HTTP/1.1" 304 "-" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/131.0.0.0 Safari/537.36 Edg/131.0.0.0"
192.168.56.110 - [13/Mar/2025:18:06:50 +0100] "GET /~asusver/ HTTP/1.1" 200 "-" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/131.0.0.0 Safari/537.36 Edg/131.0.0.0"
192.168.56.110 - [13/Mar/2025:18:09:17 +0100] "GET / HTTP/1.1" 200 "-" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/131.0.0.0 Safari/537.36 Edg/131.0.0.0"
192.168.56.110 - [13/Mar/2025:18:10:09 +0100] "- 408 - - -" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/131.0.0.0 Safari/537.36 Edg/131.0.0.0"
192.168.56.110 - [13/Mar/2025:18:17:36 +0100] "- 408 - - -" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/131.0.0.0 Safari/537.36 Edg/131.0.0.0"
192.168.56.110 - [13/Mar/2025:18:17:37 +0100] "- 408 - - -" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/131.0.0.0 Safari/537.36 Edg/131.0.0.0"
192.168.56.110 - [13/Mar/2025:18:20:37 +0100] "- 408 - - -" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/131.0.0.0 Safari/537.36 Edg/131.0.0.0"
192.168.56.110 - [13/Mar/2025:18:22:49 +0100] "- 408 - - -" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/131.0.0.0 Safari/537.36 Edg/131.0.0.0"
192.168.56.110 - [13/Mar/2025:18:22:52 +0100] "GET / HTTP/1.1" 200 "-" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/131.0.0.0 Safari/537.36 Edg/131.0.0.0"
192.168.56.110 - [13/Mar/2025:19:02:58 +0100] "- 408 - - -" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/131.0.0.0 Safari/537.36 Edg/131.0.0.0"
192.168.56.110 - [13/Mar/2025:19:08:44 +0100] "GET / HTTP/1.1" 403 "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/131.0.0.0 Safari/537.36 Edg/131.0.0.0"
192.168.56.110 - [13/Mar/2025:19:09:38 +0100] "- 408 - - -" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/131.0.0.0 Safari/537.36 Edg/131.0.0.0"
192.168.56.110 - [13/Mar/2025:19:13:36 +0100] "GET / HTTP/1.1" 403 "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/131.0.0.0 Safari/537.36 Edg/131.0.0.0"
192.168.56.110 - [13/Mar/2025:19:17:31 +0100] "GET /~asusver/ HTTP/1.1" 200 693 "-" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/131.0.0.0 Safari/537.36 Edg/131.0.0.0"
192.168.56.110 - [13/Mar/2025:19:17:31 +0100] "GET /icons/blank.gif HTTP/1.1" 200 148 "-" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/131.0.0.0 Safari/537.36 Edg/131.0.0.0"
192.168.56.110 - [13/Mar/2025:19:17:31 +0100] "GET /~asusver/ HTTP/1.1" 200 693 "-" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/131.0.0.0 Safari/537.36 Edg/131.0.0.0"
192.168.56.110 - [13/Mar/2025:19:18:15 +0100] "GET /noexiste HTTP/1.1" 404 196 "-" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/131.0.0.0 Safari/537.36 Edg/131.0.0.0"
```

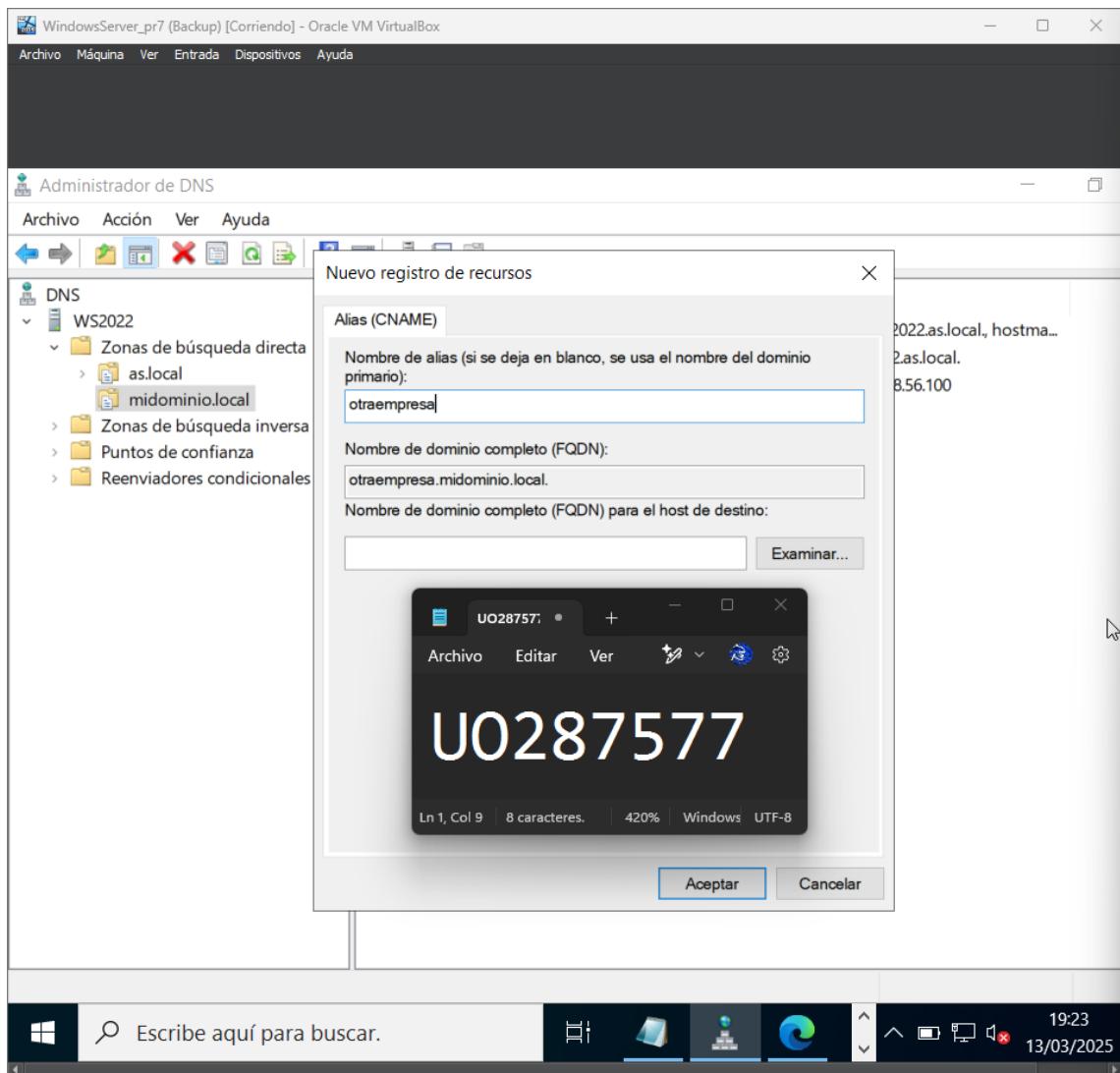
Vuelco su contenido por falta de legibilidad:

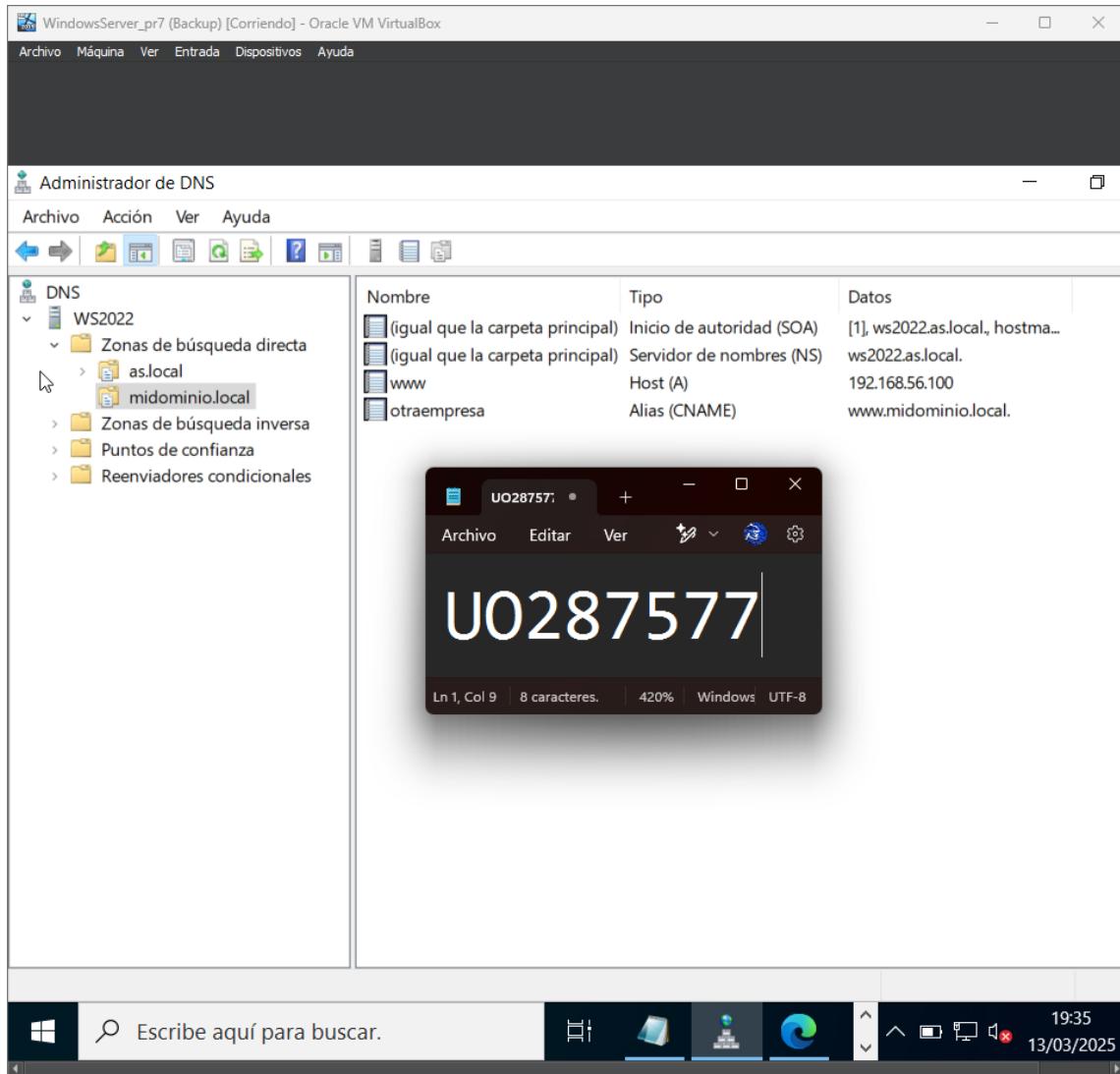
```
192.168.56.110 - - [13/Mar/2025:19:18:15 +0100] "GET /noexiste HTTP/1.1" 404 196 "-"
"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko)
Chrome/131.0.0.0 Safari/537.36 Edg/131.0.0.0"
```

4. Hosts Virtuales (opcional)

- Damos de alta en el servidor DNS un nuevo alias para www.midominio.local llamado otraempresa.midominio.local







Creamos dos hosts virtuales, uno para www.midominio.local y otro para otraempresa.midominio.local con directorios raíz respectivos /as/web/www y /as/web/otraempresa; lo indicamos en las directivas correspondientes.

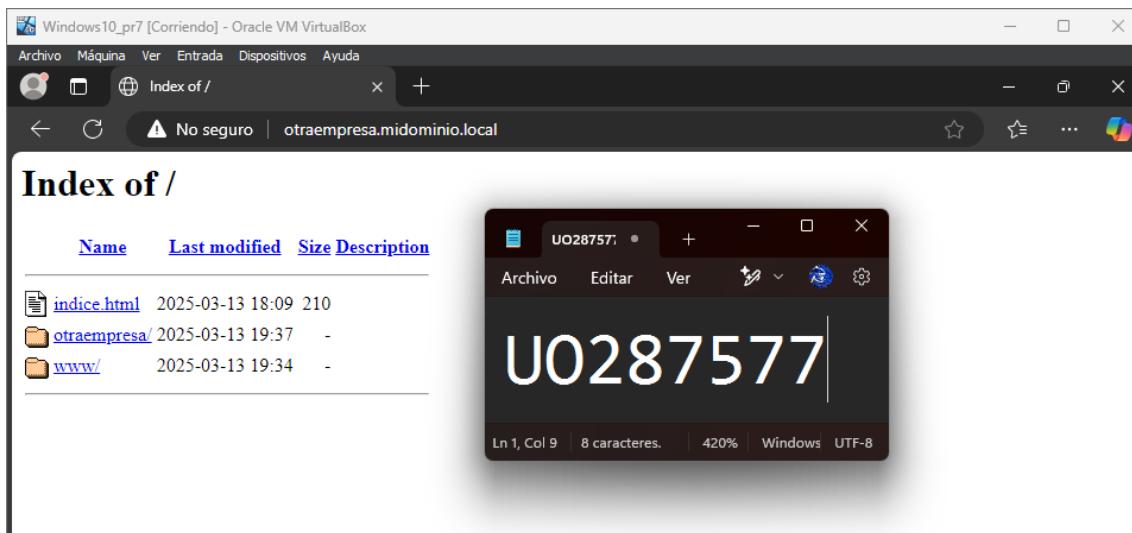
```
[U0287577@linux ~]# mkdir /as/web/otraempresa
[U0287577@linux ~]# ls /as/web
indice.html  otraempresa
[U0287577@linux ~]# mkdir /as/web/www
[U0287577@linux ~]# ls /as/web
indice.html  otraempresa  www
[U0287577@linux ~]#
```

Copiamos el index.html anterior y cambiamos su contenido (el cuerpo del html) para que se muestre “Pagina de Otra Empresa”.

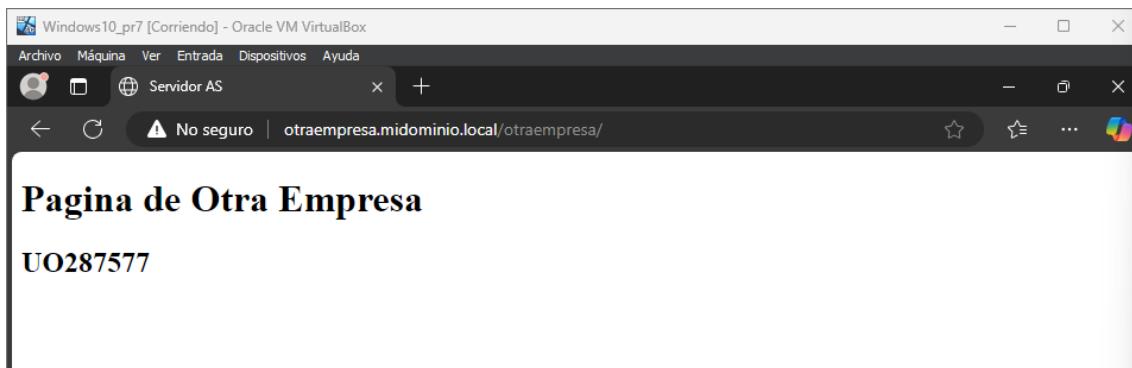
```
[U0287577@linux ~]# cp /as/web/indice.html /as/web/otraempresa/index.html
[U0287577@linux ~]# ls /as/web/otraempresa/
index.html
[U0287577@linux ~]# nano /as/web/otraempresa/index.html
```

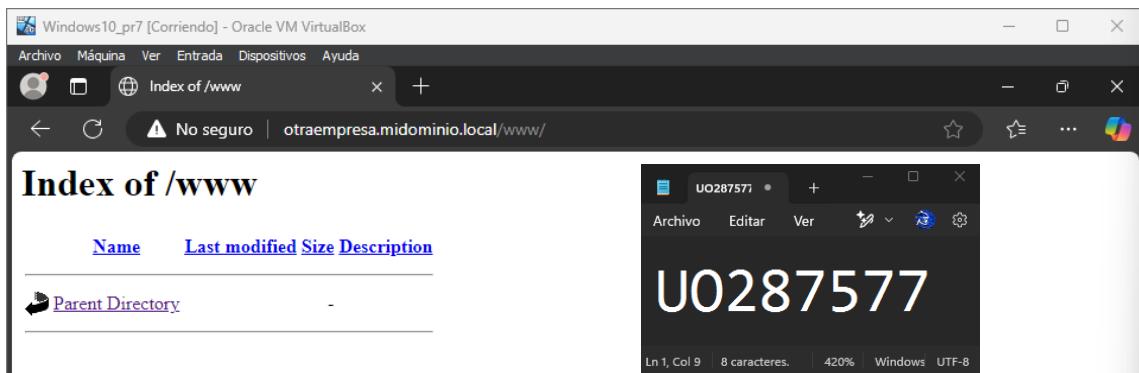
```
GNU nano 5.6.1                               /as/web/otraempresa/index.html
<!DOCTYPE html>
<head>
  <meta charset="utf-8" />
  <title>Servidor AS</title>
</head>
<body>
  <h1>Pagina de Otra Empresa</h1>
  <h2>U0287577</h2>
</body>
</html>
```

Accedemos a la página otraempresa.midominio.local. ¿Qué aparece en el navegador?



Nos aseguramos de que es posible navegar en ambos nombres mostrándose distintos contenidos sin alterar ninguna configuración del servidor web.





5. Autenticación (opcional)

- Configuramos un acceso autorizado para la web “otraempresa.midominio.local”. Para eso, debemos añadir la directiva “AllowOverride AuthConfig” en la sección Directory de /as/web/otraempresa, y crear en el directorio raíz de ese mismo host (/as/web/otraempresa) un archivo llamado .htaccess con el siguiente contenido:

```
AuthType Basic  
AuthName "Area Restringida"  
AuthUserFile /etc/httpd/password.file  
AuthGroupFile /dev/null  
Require valid-user
```

```
[U0287577@linux ~]# nano /etc/httpd/conf/httpd.conf
```

```
#<Directory "/as/web">  
    Options Indexes FollowSymLinks  
    AllowOverride None  
    Require all granted  
</Directory>  
  
<Directory "/as/web/otraempresa">  
    AllowOverride AuthConfig  
</Directory>
```

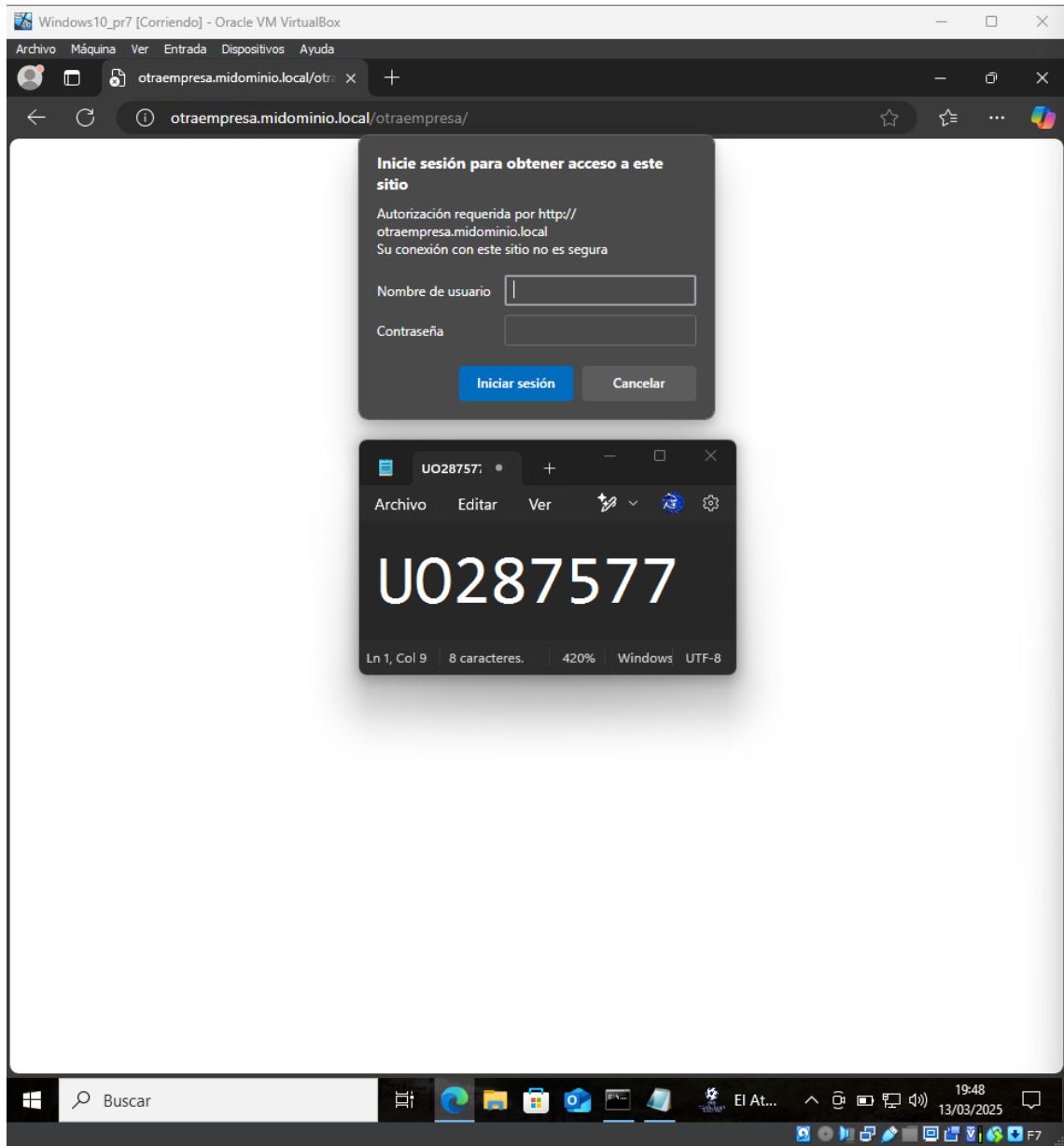
```
#U0287577
```

```
[U0287577@linux ~]# nano /as/web/otraempresa/.htaccess
```

GNU nano 5.6.1	/as/web/otraempresa/.htaccess	Modificado
AuthType Basic		
AuthName "Area Restringida"		
AuthUserFile /etc/httpd/password.file		
AuthGroupFile /dev/null		
Require valid-user		
# U0287577		

```
[U0287577@linux ~]# systemctl restart httpd  
[U0287577@linux ~]#
```

Comprobamos que nos pide usuario y contraseña para acceder a la página.



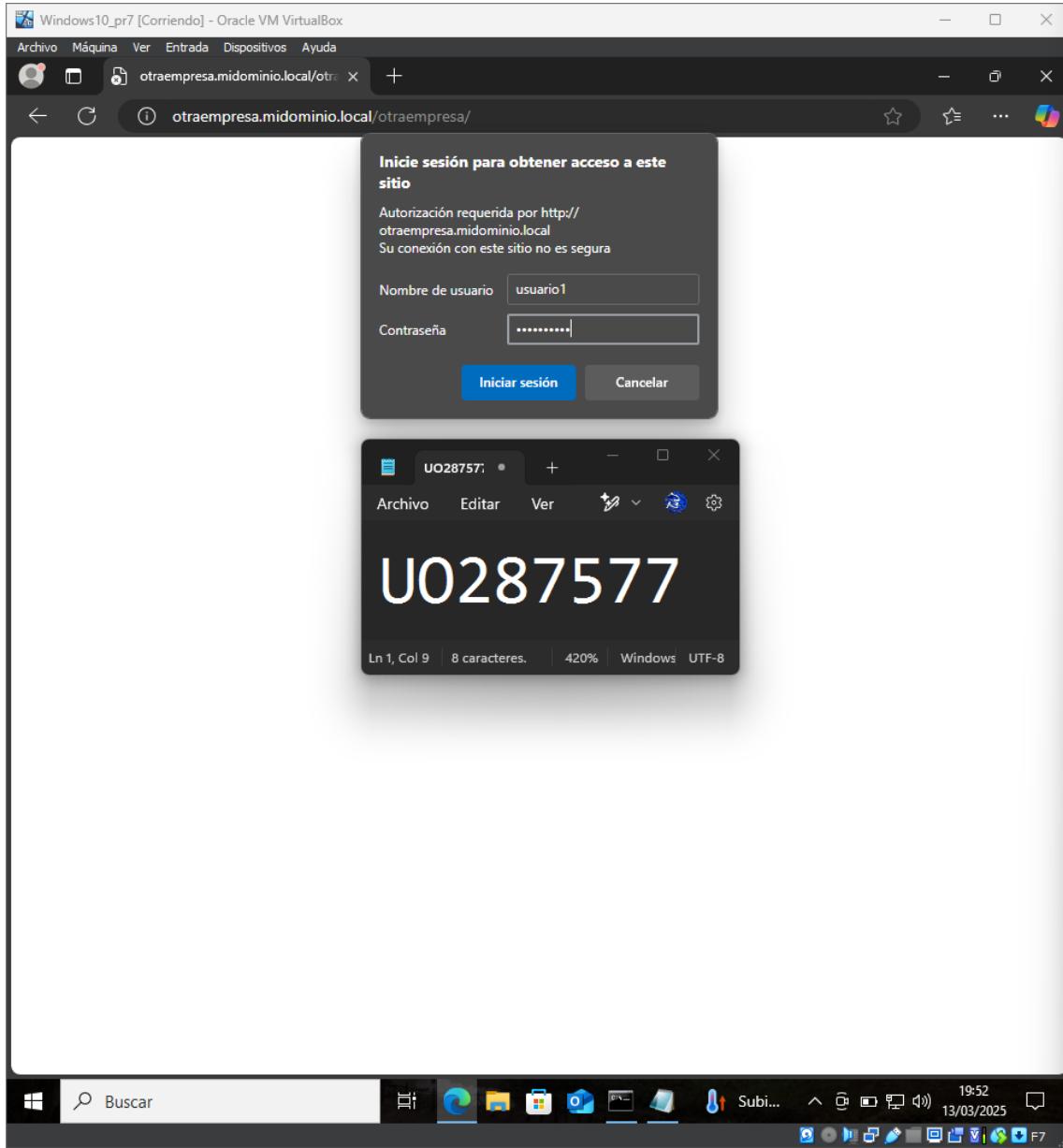
Creamos un par de usuarios con:

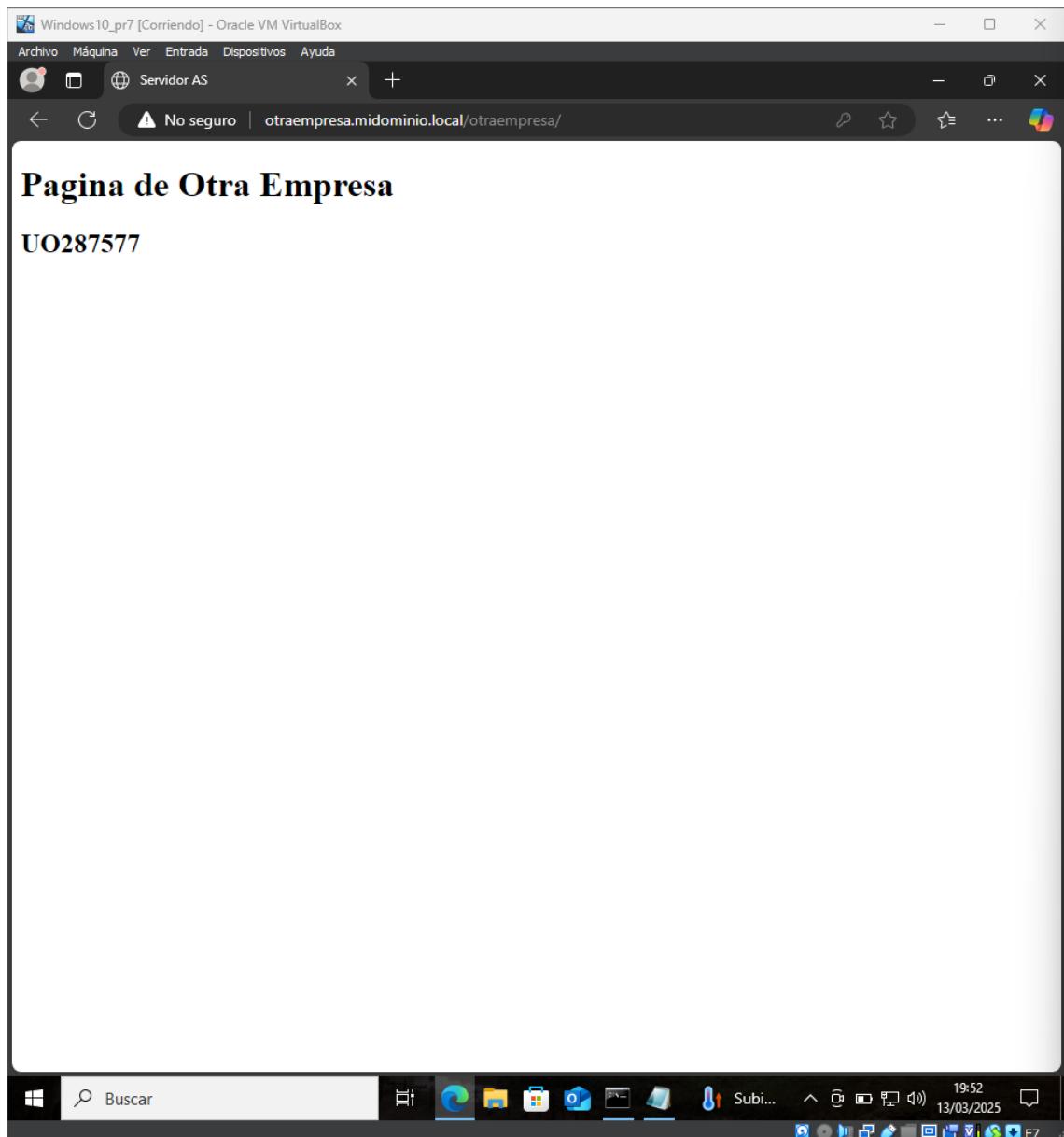
```
# htpasswd -c /etc/httpd/password.file usuario1
```

```
# htpasswd /etc/httpd/password.file usuario2
```

```
[U0287577@linux ~]# htpasswd -c /etc/httpd/password.file usuario1
New password:
Re-type new password:
Adding password for user usuario1
[U0287577@linux ~]# htpasswd /etc/httpd/password.file usuario2
New password:
Re-type new password:
Adding password for user usuario2
[U0287577@linux ~]# systemctl restart httpd
[U0287577@linux ~]#
```

Tratamos de acceder de nuevo, con la clave correspondiente (una vez autorizado no vuelve a preguntar la contraseña, si se quieren realizar nuevas pruebas accedemos con una ventana privada del navegador).





6. Servidor Proxy - squid (opcional)

Instalamos squid mediante

```
# dnf install squid
```

```
[u0287577@linux ~]# dnf install squid
Última comprobación de caducidad de metadatos hecha hace 2:13:10, el jue 13 mar 2025 17:40:39.
Dependencias resueltas.
=====
Paquete          Arq.      Versión           Repositorio   Tam.
=====
Instalando:
squid           x86_64    7:5.5-14.el9_5.3  appstream     3.3 M
Instalando dependencias:
libcap           x86_64    1.0.1-10.el9      appstream     25 k
libtool-ltdl     x86_64    2.4.6-46.el9      appstream     34 k
perl-AutoLoader  noarch    5.74-481.el9      appstream     20 k
perl-B            x86_64    1.80-481.el9      appstream     178 k
perl-Carp         noarch    1.50-460.el9      appstream     29 k
perl-Class-Struct noarch    0.66-481.el9      appstream     21 k
perl-DBI          x86_64    1.643-9.el9       appstream     700 k
perl-Data-Dumper  x86_64    2.174-462.el9      appstream     55 k
perl-Digest       noarch    1.19-4.el9       appstream     25 k
perl-Digest-MD5  x86_64    2.58-4.el9       appstream     36 k
perl-Digest-SHA  x86_64    1:6.02-461.el9      appstream     61 k
perl-DynaLoader   x86_64    1.47-481.el9      appstream     24 k
perl-Encode        x86_64    4:3.08-462.el9      appstream     1.7 M
perl-English       noarch    1.11-481.el9      appstream     12 k
perl-Erno          x86_64    1.30-481.el9      appstream     13 k
perl-Exporter      noarch    5.74-461.el9      appstream     31 k
perl-Fcntl         x86_64    1.13-481.el9      appstream     19 k
perl-File-Basename noarch    2.85-481.el9      appstream     16 k
perl-File-Path     noarch    2.18-4.el9       appstream     35 k
perl-File-Temp     noarch    1:0.231.100-4.el9    appstream     59 k
perl-File-stat     noarch    1.09-481.el9      appstream     16 k
perl-FileHandle    noarch    2.03-481.el9      appstream     14 k
perl-Getopt-Long   noarch    1:2.52-4.el9       appstream     59 k
perl-Getopt-Std    noarch    1.12-481.el9      appstream     14 k
perl-HTTP-Tiny     noarch    0.076-462.el9      appstream     53 k
perl-IO             x86_64    1.43-481.el9      appstream     85 k
perl-IO-Socket-IP noarch    0.41-5.el9       appstream     42 k
perl-IO-Socket-SSL noarch    2.073-2.el9       appstream     214 k
perl-IPC-Open3     noarch    1.21-481.el9      appstream     21 k
perl-MIME-Base64   x86_64    3.16-4.el9       appstream     30 k
perl-Math-BigInt  noarch    1:1.9998.18-460.el9    appstream     188 k
perl-Math-Complex  noarch    1.59-481.el9      appstream     45 k
perl-Mozilla-CA   noarch    20200520-6.el9      appstream     12 k
perl-Net-SSLeay    x86_64    1.94-1.el9       appstream     391 k
perl-POSIX          x86_64    1.94-481.el9      appstream     95 k
perl-PathTools     x86_64    3.78-461.el9      appstream     85 k
perl-Pod-Escapes   noarch    1:1.07-460.el9      appstream     20 k
perl-Pod-Perldoc   noarch    3.28.01-461.el9    appstream     83 k
perl-Pod-Simple    noarch    1:3.42-4.el9       appstream     215 k
perl-Pod-Usage     noarch    4:2.01-4.el9       appstream     40 k
perl-Scalar-List-Utils x86_64    4:1.56-462.el9      appstream     70 k
perl-SelectSaver   noarch    1.02-481.el9      appstream     10 k
perl-Socket         x86_64    4:2.031-4.el9      appstream     54 k
perl-Storable       x86_64    1:3.21-460.el9      appstream     95 k
perl-Symbol         noarch    1.08-481.el9      appstream     13 k
perl-Term-ANSIColor noarch    5.01-461.el9      appstream     48 k
perl-Term-Cap       noarch    1.17-460.el9      appstream     22 k
perl-Text-ParseWords noarch    3.30-460.el9      appstream     16 k
```

```

perl-DynaLoader-1.47-481.el9.x86_64
perl-Encode-4:3.08-462.el9.x86_64
perl-English-1.11-481.el9.noarch
perl-Errno-1.30-481.el9.x86_64
perl-Exporter-5.74-461.el9.noarch
perl-Fcntl-1.13-481.el9.x86_64
perl-File-Basename-2.85-481.el9.noarch
perl-File-Path-2.18-4.el9.noarch
perl-File-Temp-1:0.231.100-4.el9.noarch
perl-File-stat-1.09-481.el9.noarch
perl-FileHandle-2.03-481.el9.noarch
perl-Getopt-Long-1:2.52-4.el9.noarch
perl-Getopt-Std-1.12-481.el9.noarch
perl-HTTP-Tiny-0.076-462.el9.noarch
perl-IO-1.43-481.el9.x86_64
perl-IO-Socket-IP-0.41-5.el9.noarch
perl-IO-Socket-SSL-2.073-2.el9.noarch
perl-IPC-Open3-1.21-481.el9.noarch
perl-MIME-Base64-3.16-4.el9.x86_64
perl-Math-BigInt-1:1.9998.18-460.el9.noarch
perl-Math-Complex-1.59-481.el9.noarch
perl-Mozilla-CA-20200520-6.el9.noarch
perl-NDBM_File-1.15-481.el9.x86_64
perl-Net-SSLeay-1.94-1.el9.x86_64
perl-POSIX-1.94-481.el9.x86_64
perl-PathTools-3.78-461.el9.x86_64
perl-Pod-Escapes-1:1.07-460.el9.noarch
perl-Pod-Perldoc-3.28.01-461.el9.noarch
perl-Pod-Simple-1:3.42-4.el9.noarch
perl-Pod-Usage-4:2.01-4.el9.noarch
perl-Scalar-List-Utils-4:1.56-462.el9.x86_64
perl-SelectSaver-1.02-481.el9.noarch
perl-Socket-4:2.031-4.el9.x86_64
perl-Storable-1:3.21-460.el9.x86_64
perl-Symbol-1.08-481.el9.noarch
perl-Term-ANSIColor-5.01-461.el9.noarch
perl-Term-Cap-1.17-460.el9.noarch
perl-Text-ParseWords-3.30-460.el9.noarch
perl-Text-Tabs+Wrap-2013.0523-460.el9.noarch
perl-Time-Local-2:1.300-7.el9.noarch
perl-URI-5.09-3.el9.noarch
perl-base-2.27-481.el9.noarch
perl-constant-1.33-461.el9.noarch
perl-if-0.60.800-481.el9.noarch
perl-interpreter-4:5.32.1-481.el9.x86_64
perl-libnet-3.13-4.el9.noarch
perl-libs-4:5.32.1-481.el9.x86_64
perl-mro-1.23-481.el9.x86_64
perl-overload-1.31-481.el9.noarch
perl-overloading-0.02-481.el9.noarch
perl-parent-1:0.238-460.el9.noarch
perl-podlators-1:4.14-460.el9.noarch
perl-subs-1.03-481.el9.noarch
perl-vars-1.05-481.el9.noarch
squid-7:5.5-14.el9_5.3.x86_64

iListo!
[U0287577@linux ~]# █
```

Ahora iniciamos squid y configuramos el arranque automático.

```
# systemctl start squid
```

```
# systemctl enable squid
```

```
[U0287577@linux ~]# systemctl start squid
[U0287577@linux ~]# systemctl enable squid
Created symlink /etc/systemd/system/multi-user.target.wants/squid.service → /usr/lib/systemd/system/squid.service.
[U0287577@linux ~]# █
```

Editamos el fichero de configuración /etc/squid/squid.conf. La sección acl localnet define los rangos ip de las posibles redes locales en los que se puede encontrar el servidor.
Comprobamos que existe una como la que sigue (o mejor):

```
acl localnet src 192.168.56.0/24
```

```
[U0287577@linux ~]# nano /etc/squid/squid.conf
```

```
# Example rule allowing access from your local networks.
# Adapt to list your (internal) IP networks from where browsing
# should be allowed
acl localnet src 0.0.0.1-0.255.255.255 # RFC 1122 "this" network (LAN)
acl localnet src 10.0.0.0/8 # RFC 1918 local private network (LAN)
acl localnet src 100.64.0.0/10 # RFC 6598 shared address space (CGN)
acl localnet src 169.254.0.0/16 # RFC 3927 link-local (directly plugged) ma
acl localnet src 172.16.0.0/12 # RFC 1918 local private network (LAN)
acl localnet src 192.168.0.0/16 # RFC 1918 local private network (LAN)
acl localnet src fc00::/7 # RFC 4193 local private network range
acl localnet src fe80::/10 # RFC 4291 link-local (directly plugged) ma
acl localnet src 192.168.56.0/24
# U0287577
```

Descomentamos la línea donde se define el almacenamiento de la memoria caché cache_dir.

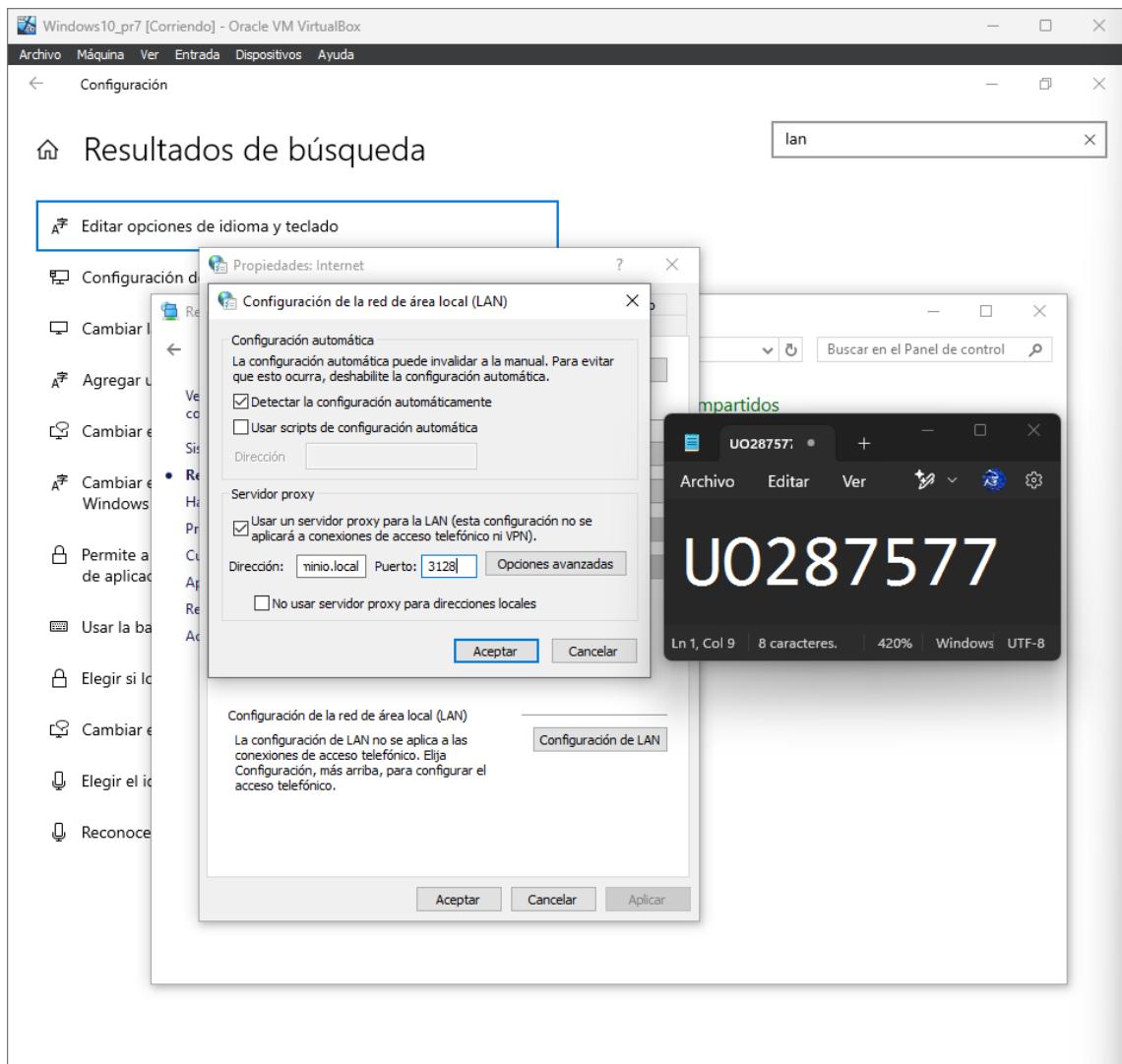
```
# Uncomment and adjust the following to add a disk cache directory.
cache_dir ufs /var/spool/squid 100 16 256
# U0287577
```

Y por último reiniciamos el servicio squid y se lo añadimos al cortafuegos

```
# firewall-cmd --zone=internal --add-service=squid
```

```
[U0287577@linux ~]# firewall-cmd --zone=internal --add-service=squid
success
[U0287577@linux ~]#
```

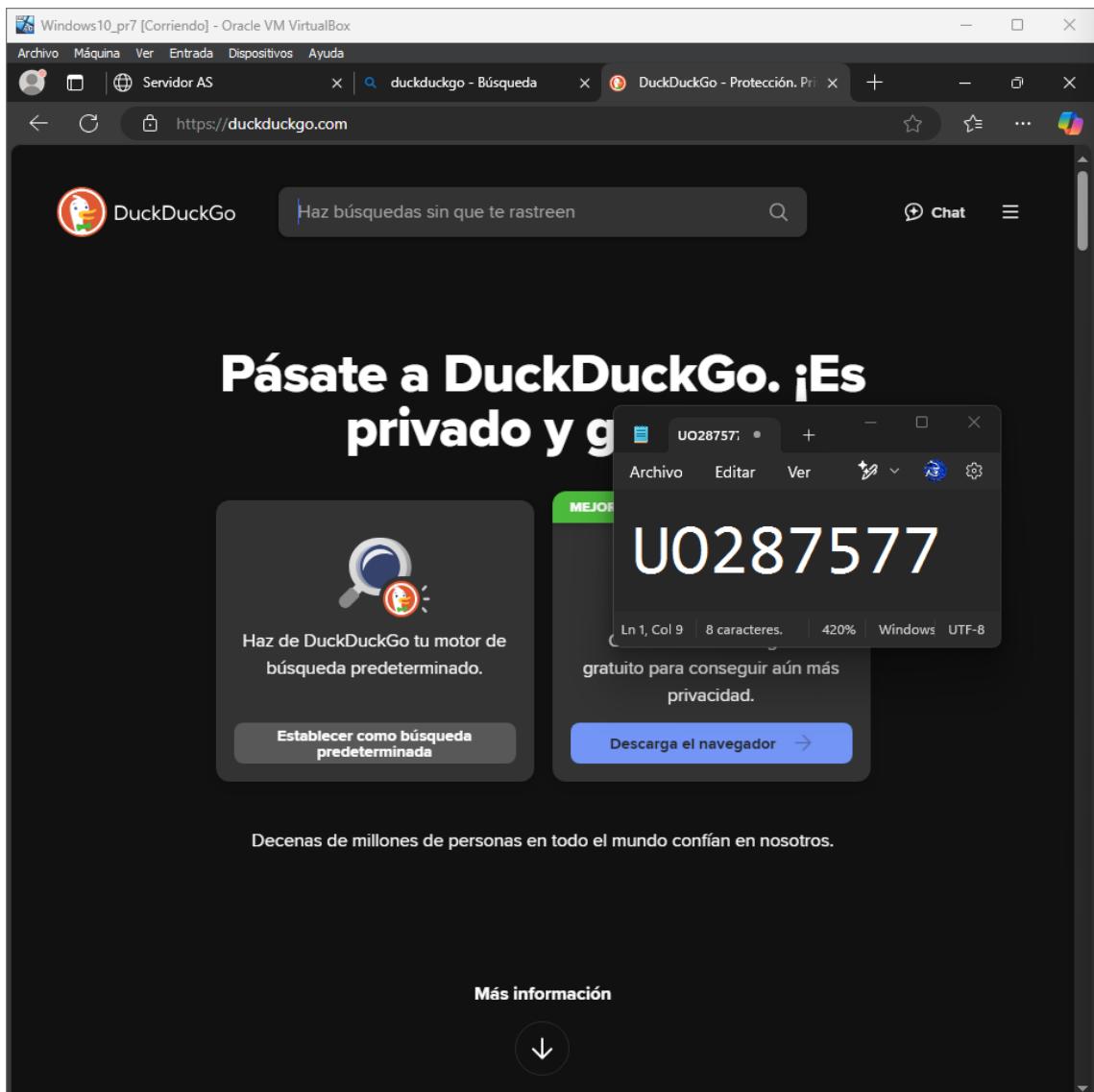
Configuramos el navegador de Windows (Configuración > Opciones de Internet > Configuración de LAN) para conectarse a través del nuevo proxy de Linux (Dirección: www.midominio.local, puerto 3128).



Y comprobamos en el servidor que las conexiones se realizan ahora a través del proxy con:

```
# tail -f /var/log/squid/access.log
```

```
[U0287577@linux ~]# tail -f /var/log/squid/access.log
1741892564.563 63 192.168.56.110 TCP_MISS/503 4038 GET http://ipv6.msftconnecttest.com/connecttest.txt - HIER_DIRECT/2a01:807:ffff:f601::d491:2973 text/html
1741892564.577 77 192.168.56.110 TCP_MISS/200 306 GET http://www.msftconnecttest.com/connecttest.txt - HIER_DIRECT/212.145.209.42 text/plain
```



```
[U0287577@linux ~]# tail -f /var/log/squid/access.log
1741892564.563    63 192.168.56.110 TCP_MISS/503 4038 GET http://ipv6.msftconnecttest.com/connecttest.txt - HIER_DIRECT/2a01:807:ffff:f601::d491:2973 text/html
1741892564.577    77 192.168.56.110 TCP_MISS/200 306 GET http://www.msftconnecttest.com/connecttest.txt - HIER_DIRECT/212.145.209.42 text/plain
1741892616.899    4 192.168.56.110 TCP_MISS/304 338 GET http://otraempresa.midominio.local/otraempresa/ - HIER_DIRECT/192.168.56.100 -
1741892620.880   183 192.168.56.110 TCP_TUNNEL/200 2943 CONNECT th.bing.com:443 - HIER_DIRECT/2.17.112.80 -
1741892620.880   182 192.168.56.110 TCP_TUNNEL/200 303 CONNECT th.bing.com:443 - HIER_DIRECT/2.17.112.80 -
1741892620.880   181 192.168.56.110 TCP_TUNNEL/200 2959 CONNECT th.bing.com:443 - HIER_DIRECT/2.17.112.80 -
1741892620.880   506 192.168.56.110 TCP_TUNNEL/200 39 CONNECT th.bing.com:443 - HIER_DIRECT/2.17.112.80 -
1741892621.691   161 192.168.56.110 TCP_TUNNEL/200 2724 CONNECT ams3-ib.adnxs-simple.com:443 - HIER_DIRECT/185.89.210.46 -
1741892627.585    0 192.168.56.110 NONE_NONE/000 0 - error:transaction-end-before-headers - HIER_NONE/-
1741892627.656    24 192.168.56.110 TCP_TUNNEL/200 39 CONNECT th.bing.com:443 - HIER_DIRECT/2.17.112.80 -
1741892627.656    25 192.168.56.110 TCP_TUNNEL/200 39 CONNECT th.bing.com:443 - HIER_DIRECT/2.17.112.80 -
1741892627.656    25 192.168.56.110 TCP_TUNNEL/200 39 CONNECT th.bing.com:443 - HIER_DIRECT/2.17.112.80 -
1741892627.659    25 192.168.56.110 TCP_TUNNEL/200 39 CONNECT th.bing.com:443 - HIER_DIRECT/2.17.112.80 -
1741892627.662    28 192.168.56.110 TCP_TUNNEL/200 39 CONNECT th.bing.com:443 - HIER_DIRECT/2.17.112.80 -
1741892632.396  13362 192.168.56.110 TCP_TUNNEL/200 6716 CONNECT api.msn.com:443 - HIER_DIRECT/204.79.197.203 -
1741892633.011  11917 192.168.56.110 TCP_TUNNEL/200 9585 CONNECT ams3-ib.adnxs-simple.com:443 - HIER_DIRECT/185.89.210.46 -
1741892637.121  14578 192.168.56.110 TCP_TUNNEL/200 4405 CONNECT img-s-msn-com.akamaized.net:443 - HIER_DIRECT/212.145.209.18 -
1741892637.121  16749 192.168.56.110 TCP_TUNNEL/200 669 CONNECT img-s-msn-com.akamaized.net:443 - HIER_DIRECT/212.145.209.18 -
1741892637.127  16431 192.168.56.110 TCP_TUNNEL/200 4422 CONNECT img-s-msn-com.akamaized.net:443 - HIER_DIRECT/212.145.209.18 -
1741892637.127  16430 192.168.56.110 TCP_TUNNEL/200 4391 CONNECT img-s-msn-com.akamaized.net:443 - HIER_DIRECT/212.145.209.18 -
1741892637.127  16370 192.168.56.110 TCP_TUNNEL/200 4422 CONNECT img-s-msn-com.akamaized.net:443 - HIER_DIRECT/212.145.209.18 -
1741892637.127  14584 192.168.56.110 TCP_TUNNEL/200 653 CONNECT img-s-msn-com.akamaized.net:443 - HIER_DIRECT/212.145.209.18 -
1741892650.835  20242 192.168.56.110 TCP_TUNNEL/200 7112 CONNECT improving.duckduckgo.com:443 - HIER_DIRECT/52.142.124.215 -
1741892653.301  24180 192.168.56.110 TCP_TUNNEL/200 2944498 CONNECT duckduckgo.com:443 - HIER_DIRECT/52.142.124.215 -
1741892659.345  30179 192.168.56.110 TCP_TUNNEL/200 5714 CONNECT duckduckgo.com:443 - HIER_DIRECT/52.142.124.215 -
■
```