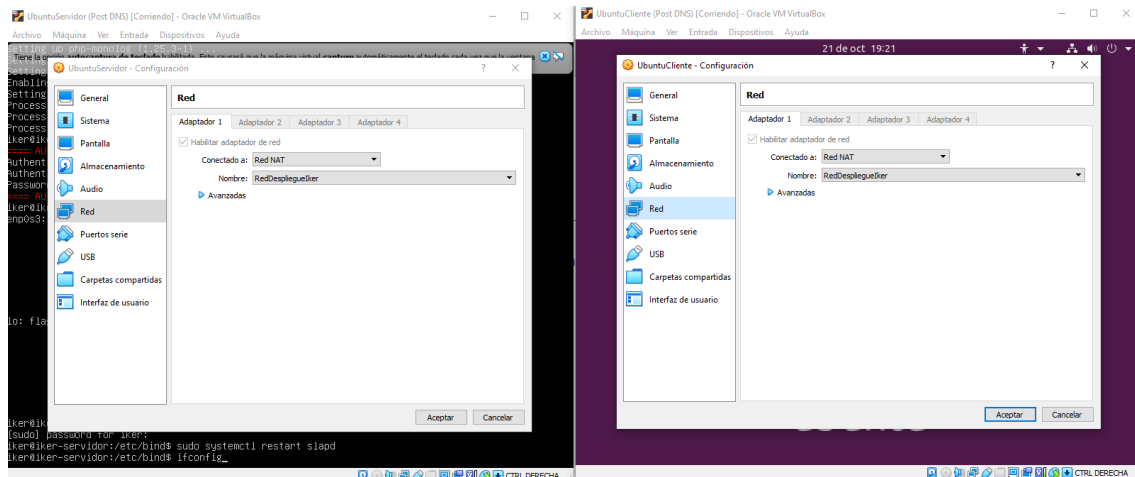


A) Tenemos este escenario inicial:

- Trabajaremos con un Ubuntu y un cliente Ubuntu (reutiliza los que ya tenías y adjunta captura).
- Las dos VM están conectadas entre sí mediante una red común (adjunta captura).



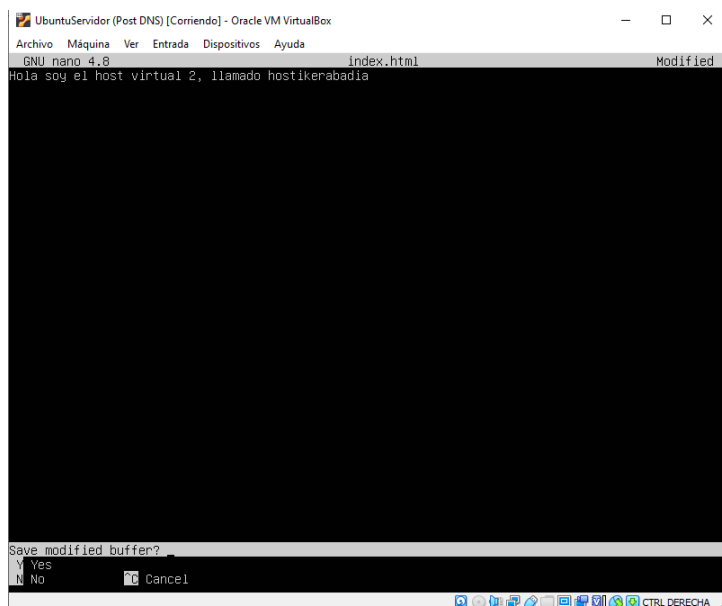
B) Vamos a crear un host virtual basado en nombre llamado host<ikerabadia>

- Crea un directorio bajo /var/www llamado “hostikerabadia”.

```
iker@iker-servidor:/var/www$ sudo mkdir hostikerabadia
[sudo] password for iker:
iker@iker-servidor:/var/www$
```

- Crea index.html dentro del nuevo directorio y escribe en él: “Hola, soy el host virtual 2, llamado “hostikerabadia”

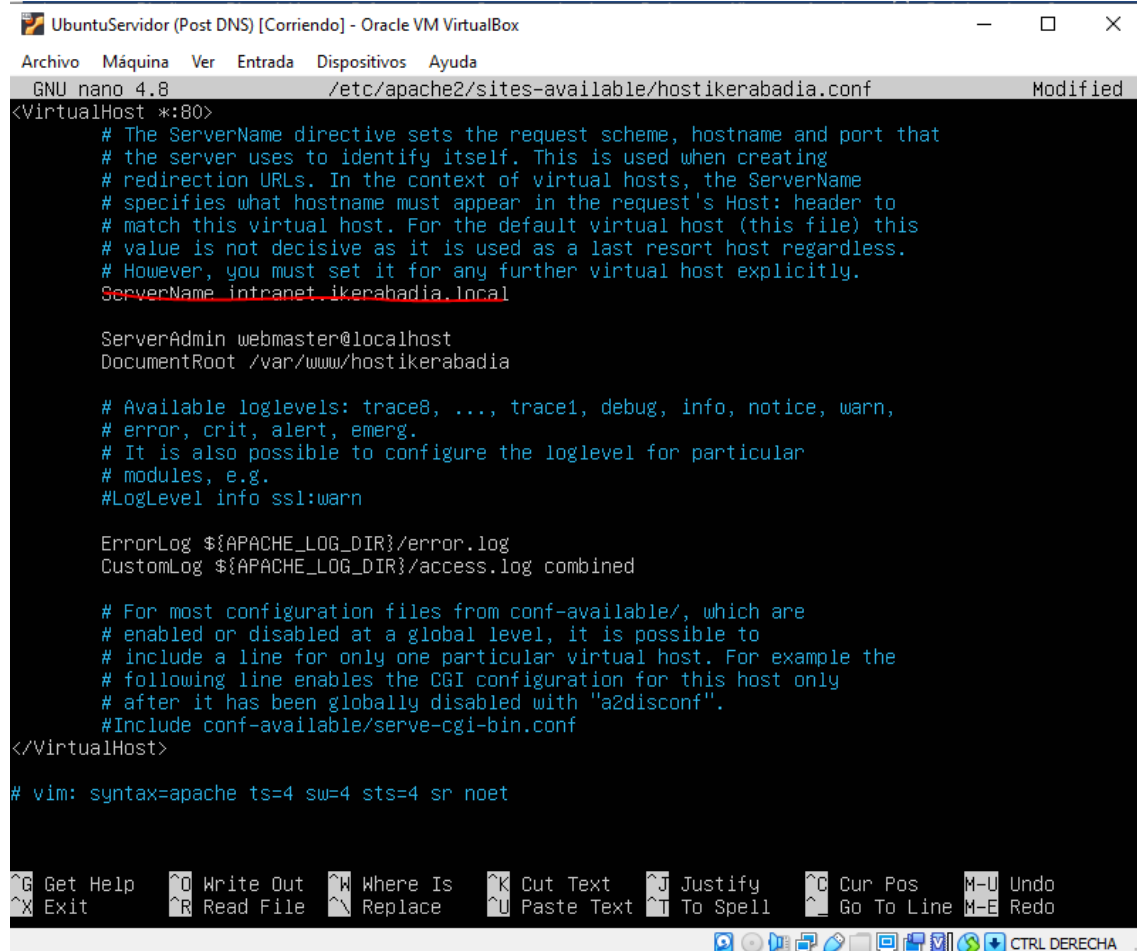
```
iker@iker-servidor:/var/www$ sudo nano index.html
```



c. Duplica el archivo por defecto /etc/apache2/sites-available/000-default.conf y llámalo hostikerabadia.conf

```
iker@iker-servidor:/etc/apache2/sites-available$ sudo cp 000-default.conf hostikerabadia.conf
iker@iker-servidor:/etc/apache2/sites-available$ ls
000-default.conf default-ssl.conf hostikerabadia.conf
iker@iker-servidor:/etc/apache2/sites-available$ _
```

d. Edita el nuevo archivo y actualiza DocumentRoot al directorio que aplica.



```
UbuntuServidor (Post DNS) [Corriendo] - Oracle VM VirtualBox
Archivo  Máquina  Ver  Entrada  Dispositivos  Ayuda
GNU nano 4.8 /etc/apache2/sites-available/hostikerabadia.conf Modified
<VirtualHost *:80>
# The ServerName directive sets the request scheme, hostname and port that
# the server uses to identify itself. This is used when creating
# redirection URLs. In the context of virtual hosts, the ServerName
# specifies what hostname must appear in the request's Host: header to
# match this virtual host. For the default virtual host (this file) this
# value is not decisive as it is used as a last resort host regardless.
# However, you must set it for any further virtual host explicitly.
ServerName intranet.ikerabadia.local

ServerAdmin webmaster@localhost
DocumentRoot /var/www/hostikerabadia

# Available loglevels: trace8, ..., trace1, debug, info, notice, warn,
# error, crit, alert, emerg.
# It is also possible to configure the loglevel for particular
# modules, e.g.
#LogLevel info ssl:warn

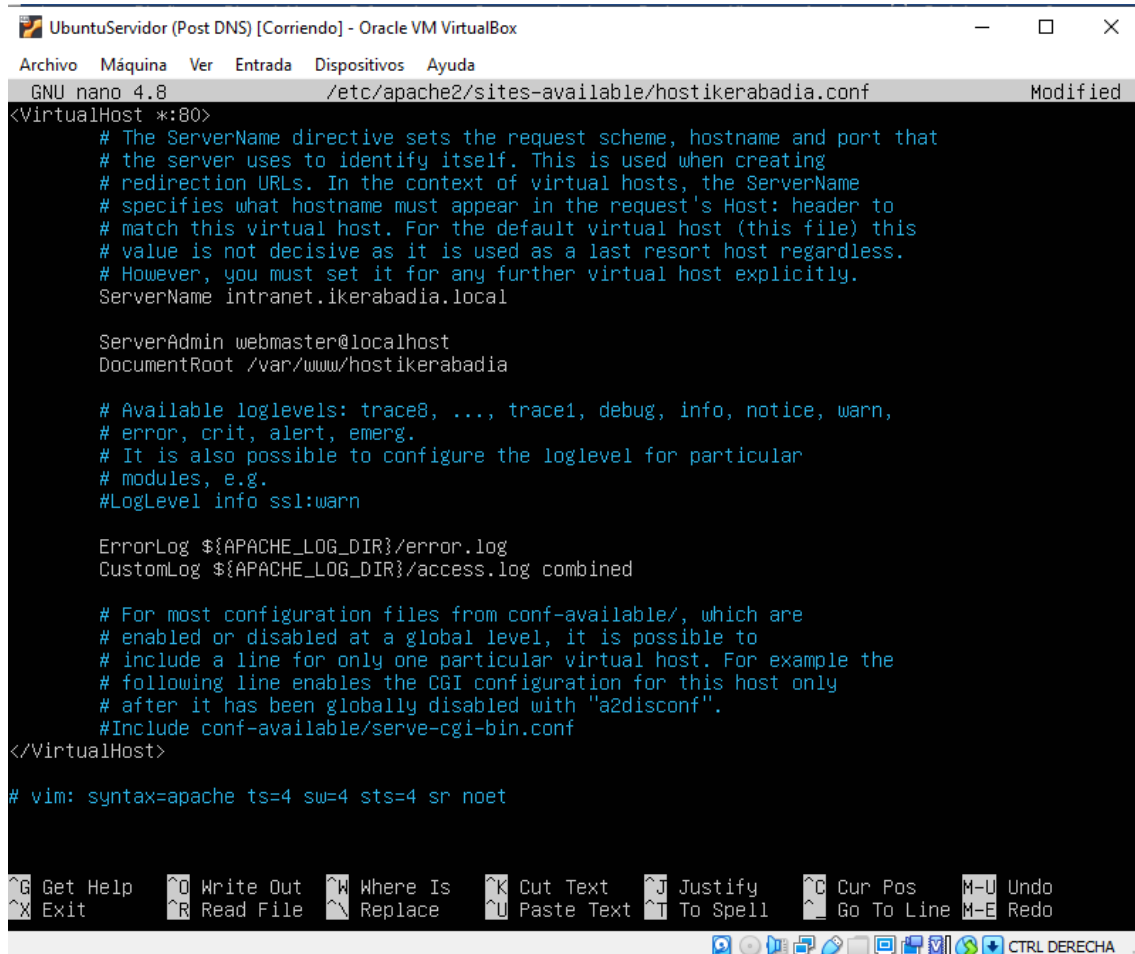
ErrorLog ${APACHE_LOG_DIR}/error.log
CustomLog ${APACHE_LOG_DIR}/access.log combined

# For most configuration files from conf-available/, which are
# enabled or disabled at a global level, it is possible to
# include a line for only one particular virtual host. For example the
# following line enables the CGI configuration for this host only
# after it has been globally disabled with "a2disconf".
#Include conf-available/serve-cgi-bin.conf
</VirtualHost>

# vim: syntax=apache ts=4 sw=4 sts=4 sr noet

^G Get Help  ^O Write Out  ^W Where Is   ^K Cut Text   ^J Justify    ^C Cur Pos    M-U Undo
^X Exit      ^R Read File  ^\ Replace    ^U Paste Text ^T To Spell   ^_ Go To Line  M-E Redo
CTRL DERECHA
```

e. En ServerName indica intranet.ikerabadia.local



```
UbuntuServidor (Post DNS) [Corriendo] - Oracle VM VirtualBox
Archivo  Máquina  Ver  Entrada  Dispositivos  Ayuda
GNU nano 4.8 /etc/apache2/sites-available/hostikerabadia.conf Modified
<VirtualHost *:80>
# The ServerName directive sets the request scheme, hostname and port that
# the server uses to identify itself. This is used when creating
# redirection URLs. In the context of virtual hosts, the ServerName
# specifies what hostname must appear in the request's Host: header to
# match this virtual host. For the default virtual host (this file) this
# value is not decisive as it is used as a last resort host regardless.
# However, you must set it for any further virtual host explicitly.
ServerName intranet.ikerabadia.local

ServerAdmin webmaster@localhost
DocumentRoot /var/www/hostikerabadia

# Available loglevels: trace8, ..., trace1, debug, info, notice, warn,
# error, crit, alert, emerg.
# It is also possible to configure the loglevel for particular
# modules, e.g.
#LogLevel info ssl:warn

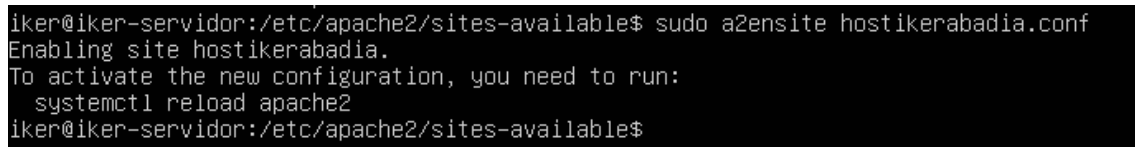
ErrorLog ${APACHE_LOG_DIR}/error.log
CustomLog ${APACHE_LOG_DIR}/access.log combined

# For most configuration files from conf-available/, which are
# enabled or disabled at a global level, it is possible to
# include a line for only one particular virtual host. For example the
# following line enables the CGI configuration for this host only
# after it has been globally disabled with "a2disconf".
#Include conf-available/serve-cgi-bin.conf
</VirtualHost>

# vim: syntax=apache ts=4 sw=4 sts=4 sr noet

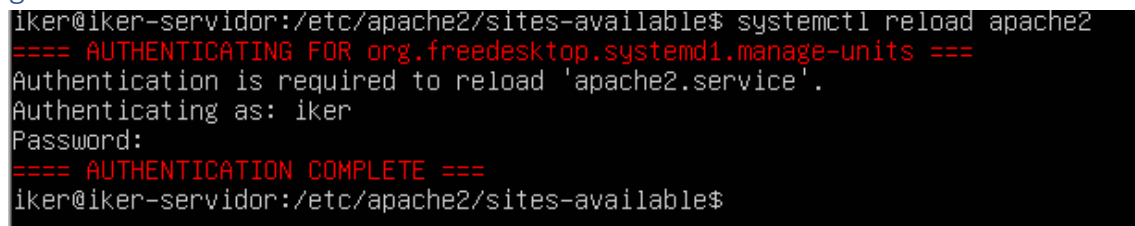
^G Get Help  ^O Write Out  ^W Where Is   ^K Cut Text   ^J Justify    ^C Cur Pos    M-U Undo
^X Exit      ^R Read File  ^N Replace    ^U Paste Text ^T To Spell   ^_ Go To Line   M-E Redo
CTRL DERECHA
```

f. Ejecuta “a2ensite hostikerabadia.conf”



```
iker@iker-servidor:/etc/apache2/sites-available$ sudo a2ensite hostikerabadia.conf
Enabling site hostikerabadia.
To activate the new configuration, you need to run:
  systemctl reload apache2
iker@iker-servidor:/etc/apache2/sites-available$
```

g. Reinicia el servicio.



```
iker@iker-servidor:/etc/apache2/sites-available$ systemctl reload apache2
==== AUTHENTICATING FOR org.freedesktop.systemd1.manage-units ====
Authentication is required to reload 'apache2.service'.
Authenticating as: iker
Password:
==== AUTHENTICATION COMPLETE ====
iker@iker-servidor:/etc/apache2/sites-available$
```

h. Crea una entrada DNS para el subdominio intranet.ikerabadia.local en el servicio Bind9

para ello lo primero que tengo que hacer es ir a /etc/bind

```
UbuntuServidor (Post DNS) [Corriendo] - Oracle VM VirtualBox
Archivo  Máquina  Ver  Entrada  Dispositivos  Ayuda
GNU nano 4.8      ikerabadia.local  Modified
;
; BIND data file for local loopback interface
;
$TTL      604800
@         IN      SOA      ikerabadia. root.ikerabadia.local. (
                        2      ; Serial
                        604800  ; Refresh
                        86400   ; Retry
                        2419200 ; Expire
                        604800 ) ; Negative Cache TTL
;
@         IN      NS       ikerabadia.local.
@         IN      A        127.0.0.1
@         IN      AAAA     ::1
ftp       IN      A        10.0.2.5
www       IN      A        10.0.2.5
cliente   IN      A        10.0.2.4
intranet  IN      A        10.0.2.5

^G Get Help  ^O Write Out  ^W Where Is   ^K Cut Text   ^J Justify    ^C Cur Pos    M-U Undo
^X Exit      ^R Read File  ^\ Replace    ^U Paste Text ^T To Spell   ^_ Go To Line  M-E Redo

CTRL DERECHA
```

Esto (solo la última línea) va en ikerabadia.local

```
UbuntuServidor (Post DNS) [Corriendo] - Oracle VM VirtualBox
Archivo  Máquina  Ver  Entrada  Dispositivos  Ayuda
GNU nano 4.8 ikerabadia.10.0.2.5 Modified
;
; BIND reverse data file for local loopback interface
;
$TTL      604800
@         IN      SOA      ikerabadia.local root.ikerabadia.local (
                        1      ; Serial
                        604800  ; Refresh
                        86400   ; Retry
                        2419200 ; Expire
                        604800 ) ; Negative Cache TTL
;
@         IN      NS       ikerabadia.local.
1.0.0     IN      PTR      ikerabadia.local.
5         IN      PTR      www.ikerabadia.local
5         IN      PTR      ftp.ikerabadia.local
4         IN      PTR      cliente.ikerabadia.local
5         IN      PTR      intranet.ikerabadia.local.

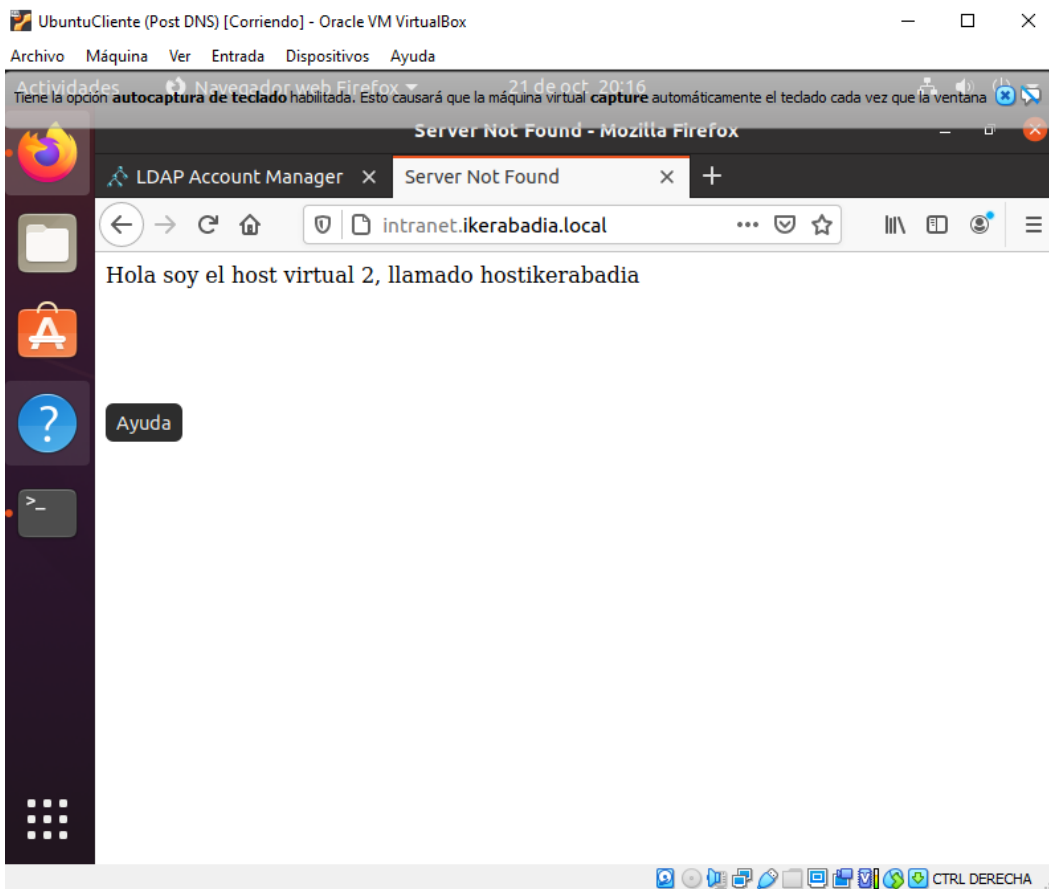
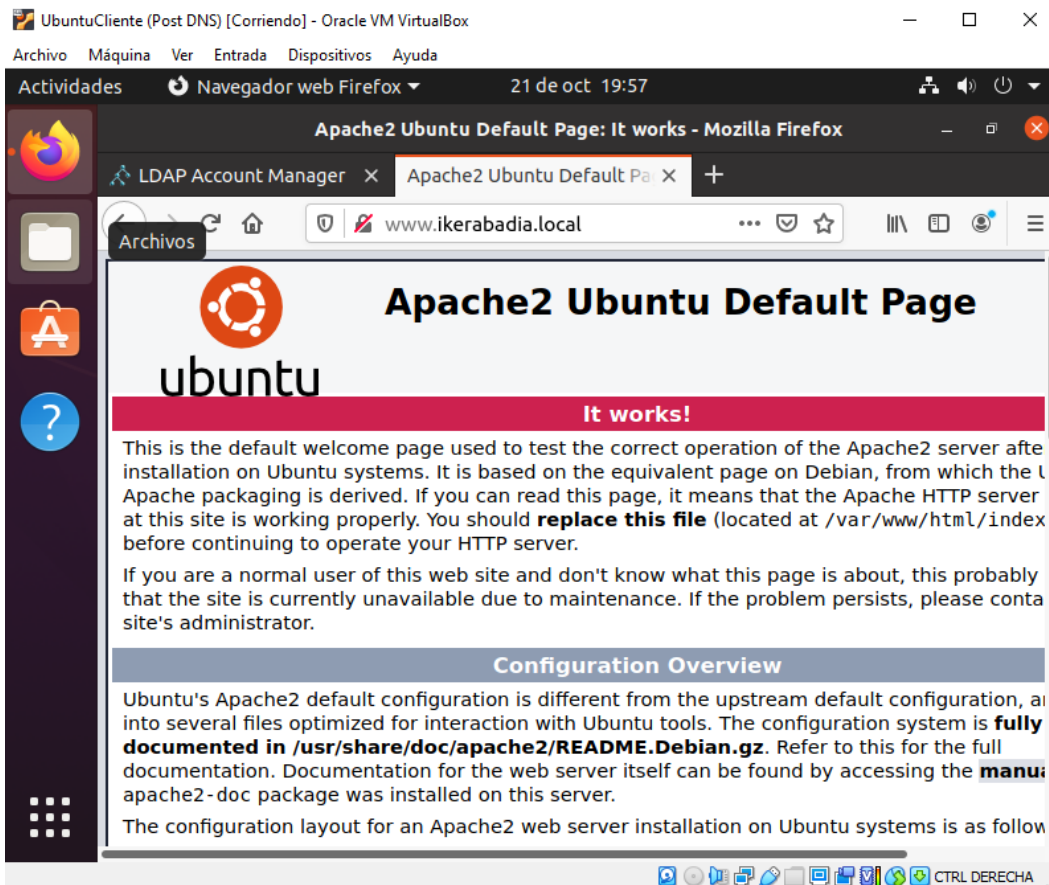
^G Get Help      ^O Write Out     ^W Where Is      ^K Cut Text      ^J Justify      ^C Cur Pos      M-U Undo
^X Exit          ^R Read File     ^_ Replace       ^U Paste Text    ^T To Spell     ^_ Go To Line    M-E Redo
CTRL DERECHA
```

Y esto en (solo la última línea) ikerabadia.10.0.2.5

i. Verifica desde el cliente, con el navegador web y por consola, que `www.ikerabadia.local` e `intranet.ikerabadia.local` están configurados y renderizan dos páginas web distintas. Es decir, tienes ya dos host virtuales basados en nombre.

PARA HACER ESTO TENGO QUE REINICIAR EL SERVICIO `systemctl restart bind9`

```
ker@iker-servidor:/etc/bind$ sudo systemctl restart bind9
ker@iker-servidor:/etc/bind$
```



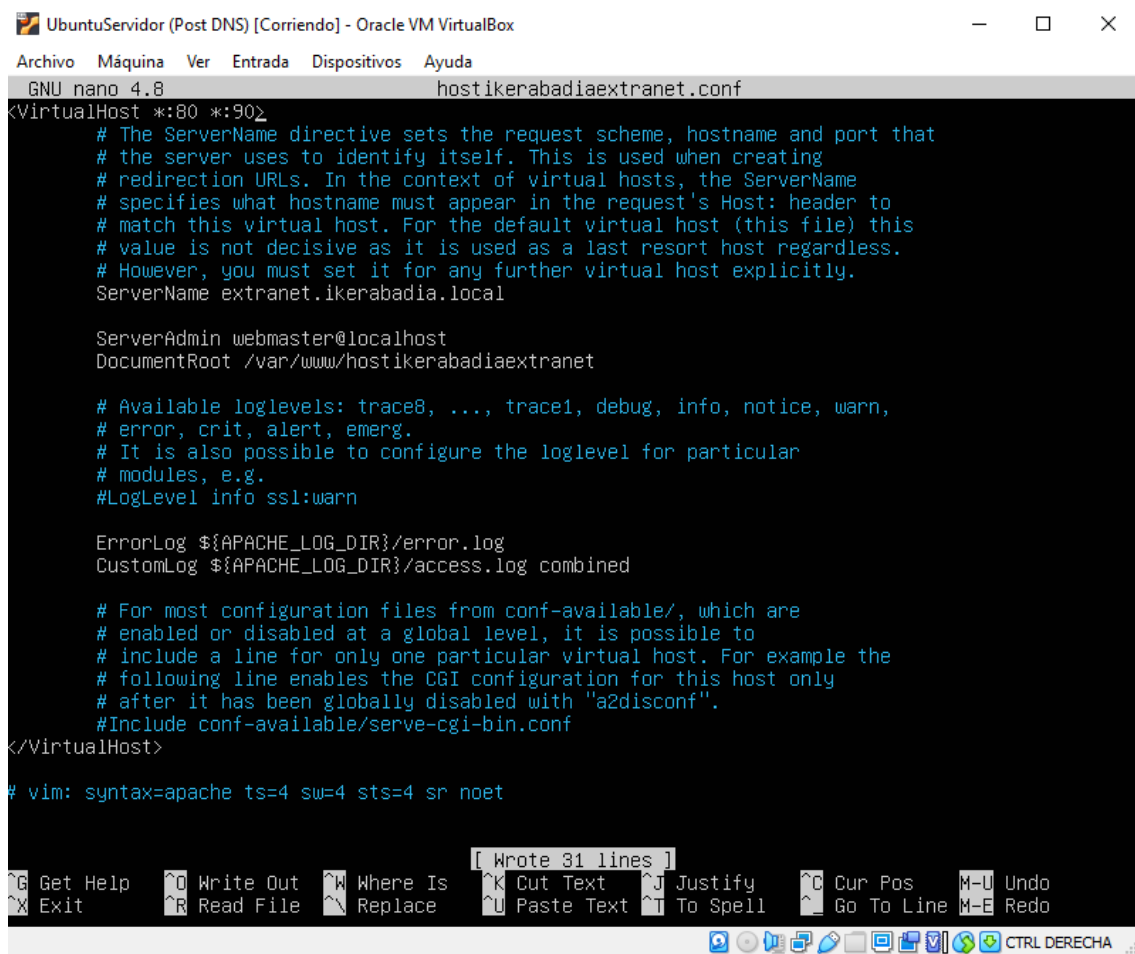
C) Crea un nuevo host virtual escuchando en el puerto 90 y en el puerto 80 para el subdominio denominado extranet.ikerabadia.local, genera un index.html con contenido diferenciado. Realiza las acciones pertinentes y demuestra que funciona todo verificando que renderizas la página web en cada puerto respectivo.

En la carpeta /var/www creo una carpeta hostikerabadiaextranet, después le creo un index.html dentro.

Voy al sites-available y copio hostikerabadia.conf para usarlo como plantilla

```
iker@iker-servidor:/var/www/hostikerabadiaextranet$ cd /etc/apache2/sites-available/
iker@iker-servidor:/etc/apache2/sites-available$ ls
000-default.conf default-ssl.conf hostikerabadia.conf
iker@iker-servidor:/etc/apache2/sites-available$ sudo cp ikerabadia.conf ikerabadiaextranet.conf
cp: cannot stat 'ikerabadia.conf': No such file or directory
iker@iker-servidor:/etc/apache2/sites-available$ sudo cp hostikerabadia.conf ikerabadiaextranet.conf
iker@iker-servidor:/etc/apache2/sites-available$ ls
000-default.conf default-ssl.conf hostikerabadia.conf ikerabadiaextranet.conf
iker@iker-servidor:/etc/apache2/sites-available$ mv ikerabadiaextranet.conf hostikerabadiaextranet.c
nf
mv: cannot move 'ikerabadiaextranet.conf' to 'hostikerabadiaextranet.conf': Permission denied
iker@iker-servidor:/etc/apache2/sites-available$ sudo mv ikerabadiaextranet.conf hostikerabadiaextra
net.conf
iker@iker-servidor:/etc/apache2/sites-available$ ls
000-default.conf default-ssl.conf hostikerabadia.conf hostikerabadiaextranet.conf
iker@iker-servidor:/etc/apache2/sites-available$
```

Lo edito y lo dejo de la siguiente manera:



```
UbuntuServidor (Post DNS) [Corriendo] - Oracle VM VirtualBox
Archivo  Máquina  Ver  Entrada  Dispositivos  Ayuda
GNU nano 4.8  hostikerabadiaextranet.conf
<VirtualHost *:80 *:90>
# The ServerName directive sets the request scheme, hostname and port that
# the server uses to identify itself. This is used when creating
# redirection URLs. In the context of virtual hosts, the ServerName
# specifies what hostname must appear in the request's Host: header to
# match this virtual host. For the default virtual host (this file) this
# value is not decisive as it is used as a last resort host regardless.
# However, you must set it for any further virtual host explicitly.
ServerName extranet.ikerabadia.local

ServerAdmin webmaster@localhost
DocumentRoot /var/www/hostikerabadiaextranet

# Available loglevels: trace8, ..., trace1, debug, info, notice, warn,
# error, crit, alert, emerg.
# It is also possible to configure the loglevel for particular
# modules, e.g.
#LogLevel info ssl:warn

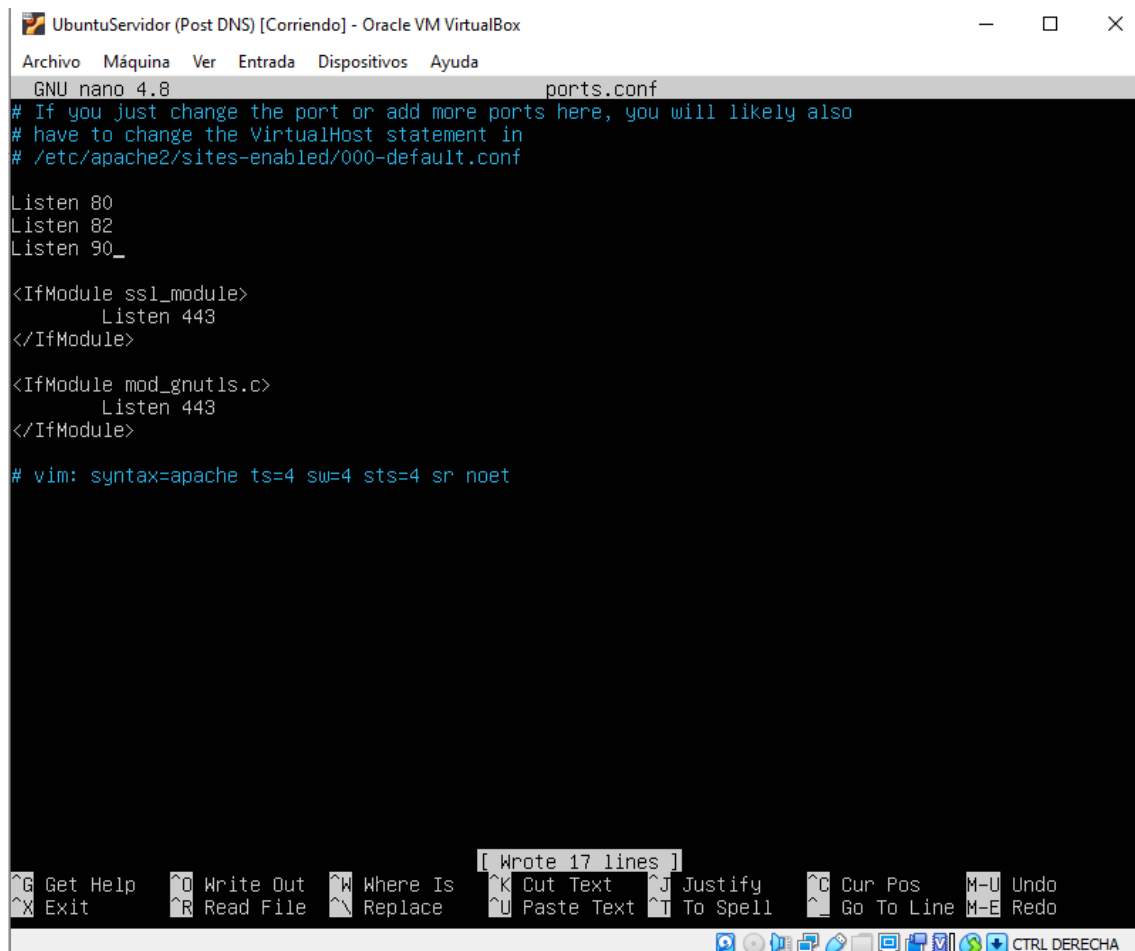
ErrorLog ${APACHE_LOG_DIR}/error.log
CustomLog ${APACHE_LOG_DIR}/access.log combined

# For most configuration files from conf-available/, which are
# enabled or disabled at a global level, it is possible to
# include a line for only one particular virtual host. For example the
# following line enables the CGI configuration for this host only
# after it has been globally disabled with "a2disconf".
#Include conf-available/serve-cgi-bin.conf
</VirtualHost>

# vim: syntax=apache ts=4 sw=4 sts=4 sr noet

[ Wrote 31 lines ]
^G Get Help  ^O Write Out  ^W Where Is   ^K Cut Text   ^J Justify    ^C Cur Pos    M-U Undo
^X Exit      ^R Read File  ^_ Replace    ^U Paste Text ^T To Spell   ^_ Go To Line  M-E Redo
CTRL DERECHA
```

Cambio el ports.conf en /etc/apache2 y le añado la escucha en un nuevo puerto



```
UbuntuServidor (Post DNS) [Corriendo] - Oracle VM VirtualBox
Archivo  Máquina  Ver  Entrada  Dispositivos  Ayuda
GNU nano 4.8 ports.conf
# If you just change the port or add more ports here, you will likely also
# have to change the VirtualHost statement in
# /etc/apache2/sites-enabled/000-default.conf

Listen 80
Listen 82
Listen 90_

<IfModule ssl_module>
    Listen 443
</IfModule>

<IfModule mod_gnutls.c>
    Listen 443
</IfModule>

# vim: syntax=apache ts=4 sw=4 sts=4 sr noet

[ Wrote 17 lines ]
^G Get Help  ^O Write Out  ^W Where Is   ^K Cut Text   ^J Justify    ^C Cur Pos    M-U Undo
^X Exit      ^R Read File  ^_ Replace    ^U Paste Text ^T To Spell   ^_ Go To Line  M-E Redo
CTRL DERECHA
```

Y ahora hay que ir a /etc/bind y editar el archivo ikerabadia.10.0.2.5 (zona inversa) y el ikerabadia.local (zona directa)

UbuntuServidor (Post DNS) [Corriendo] - Oracle VM VirtualBox

ArchivoMáquinaVerEntradaDispositivosAyuda

GNU nano 4.8ikerabadia.10.0.2.5Modified

```
;  
; BIND reverse data file for local loopback interface  
;  
$TTL      604800  
@         IN      SOA      ikerabadia.local root.ikerabadia.local (  
                        1      ; Serial  
                        604800  ; Refresh  
                        86400   ; Retry  
                        2419200 ; Expire  
                        604800 ) ; Negative Cache TTL  
;  
@         IN      NS       ikerabadia.local.  
1.0.0     IN      PTR      ikerabadia.local.  
5         IN      PTR      www.ikerabadia.local  
5         IN      PTR      ftp.ikerabadia.local  
4         IN      PTR      cliente.ikerabadia.local  
5         IN      PTR      intranet.ikerabadia.local.  
5         IN      PTR      extranet.ikerabadia.local.
```

Get Help

Exit

Write Out

Read File

Where Is

Replace

Cut Text

Paste Text

Justify

To Spell

Cur Pos

Go To Line

M-U Undo

M-E Redo

CTRL DERECHA

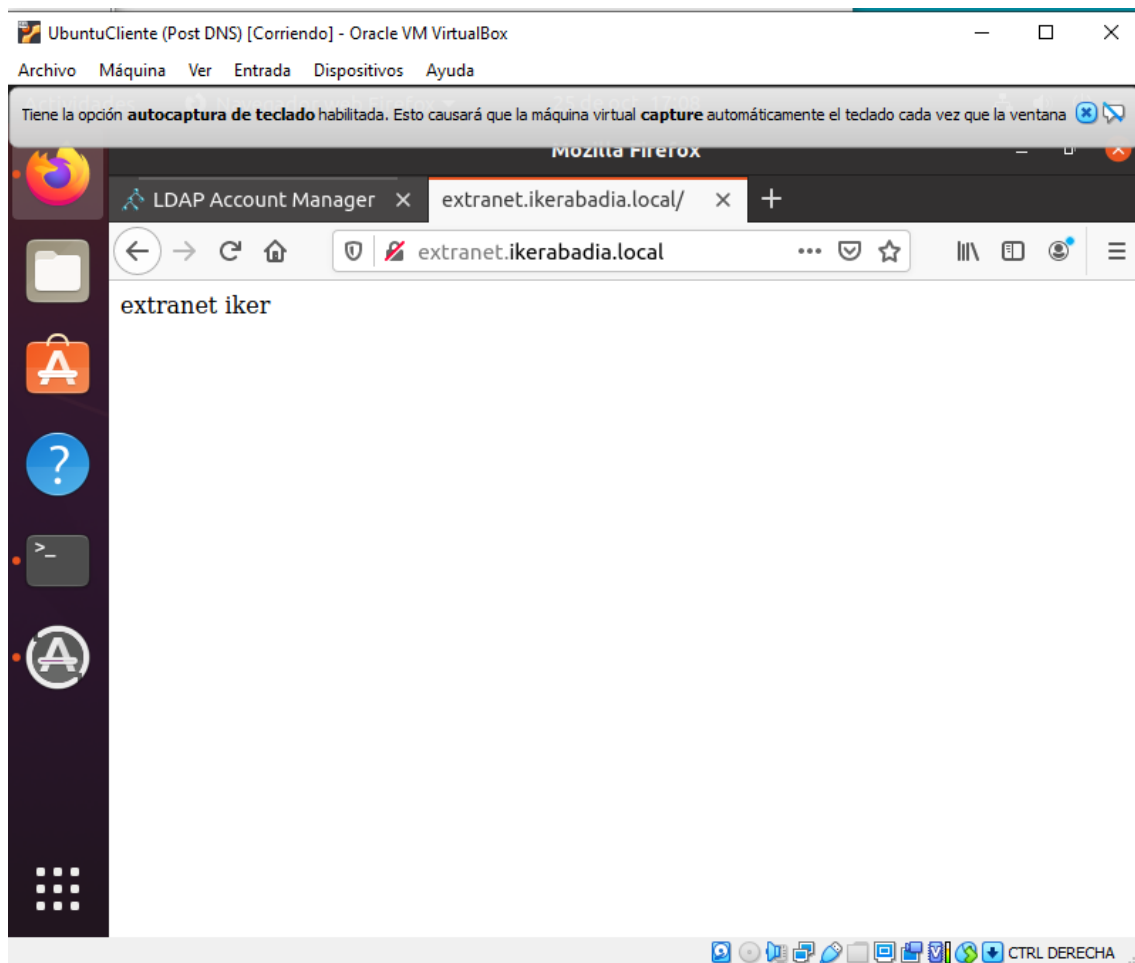
```
UbuntuServidor (Post DNS) [Corriendo] - Oracle VM VirtualBox
Archivo  Máquina  Ver  Entrada  Dispositivos  Ayuda
GNU nano 4.8                                ikerabadia.local  Modified
;
; BIND data file for local loopback interface
;
$TTL      604800
@         IN      SOA      ikerabadia. root.ikerabadia.local. (
                        2      ; Serial
                        604800   ; Refresh
                        86400    ; Retry
                        2419200  ; Expire
                        604800 ) ; Negative Cache TTL
;
@         IN      NS       ikerabadia.local.
@         IN      A        127.0.0.1
@         IN      AAAA     ::1
ftp       IN      A        10.0.2.5
www       IN      A        10.0.2.5
cliente   IN      A        10.0.2.4
intranet  IN      A        10.0.2.5
extranet  IN      A        10.0.2.5 _
^G Get Help      ^O Write Out     ^W Where Is      ^K Cut Text      ^J Justify       ^C Cur Pos       M-U Undo
^X Exit          ^R Read File     ^N Replace       ^U Paste Text    ^T To Spell      ^G Go To Line     M-E Redo
CTRL DERECHA
```

Ahora uso el comando a2ensite

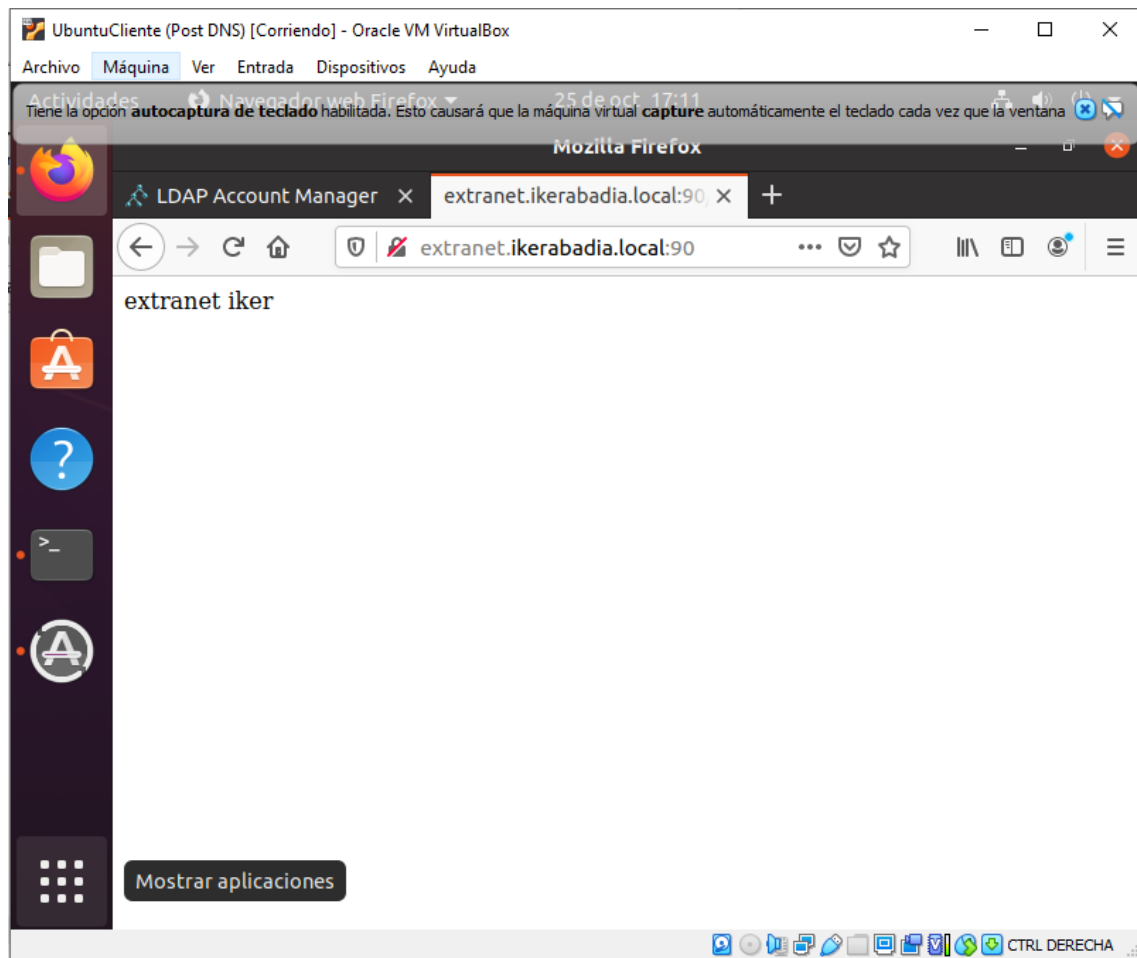
```
iker@iker-servidor:/etc/apache2$ sudo a2ensite hostikerabadiaextranet.conf
Enabling site hostikerabadiaextranet.
To activate the new configuration, you need to run:
    systemctl reload apache2
iker@iker-servidor:/etc/apache2$
```

Y reinicio los servicios

```
systemctl reload apache2
iker@iker-servidor:/etc/apache2$ sudo systemctl reload apache2
iker@iker-servidor:/etc/apache2$ sudo systemctl reload bind9
iker@iker-servidor:/etc/apache2$
```

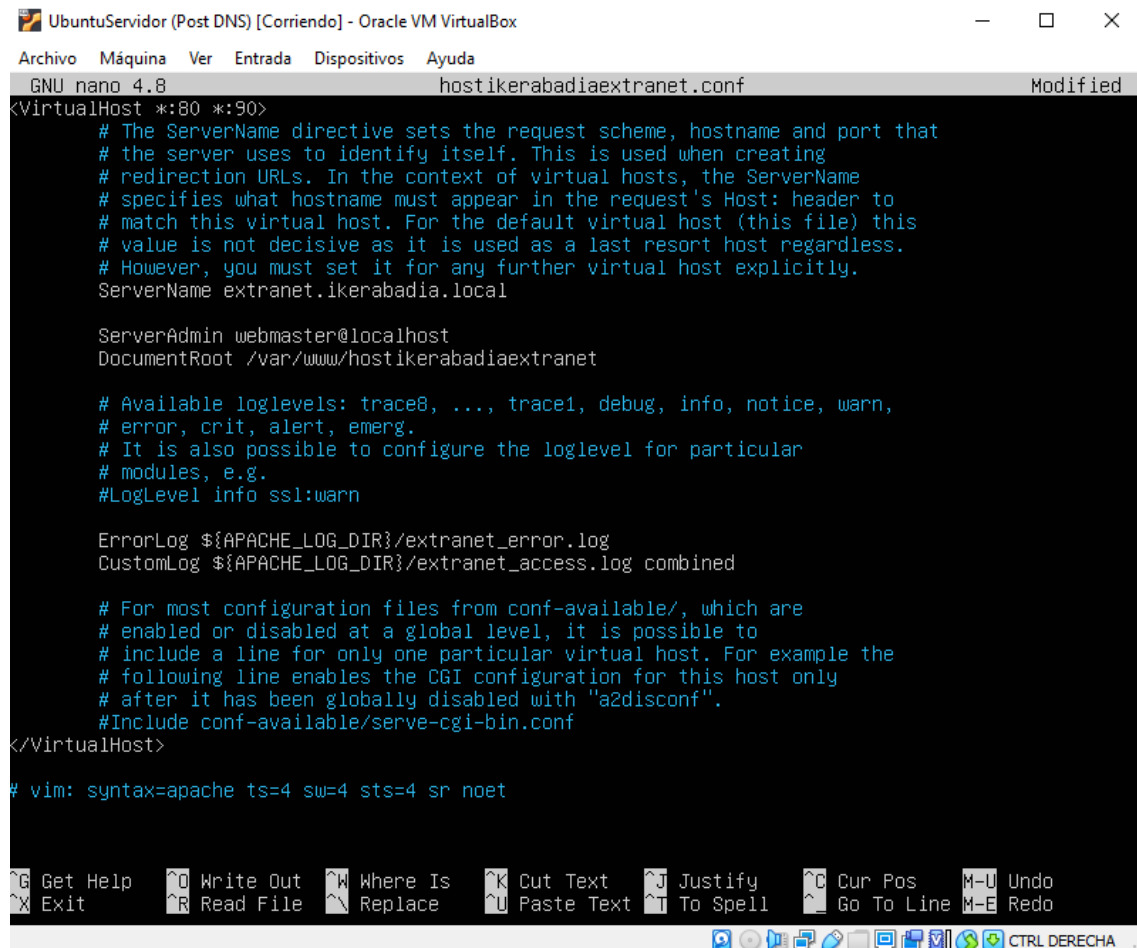


Aquí está el puerto 80



Y aquí el puerto 90

D) Para el host virtual de la extranet, customiza el log de acceso y el log de errores llamándolos extranet_error.log y extranet_access.log respectivamente. Prueba que, en efecto, los logs se alimentan correctamente cuando se producen accesos y cuando se produce un error de ejecución.



```
UbuntuServidor (Post DNS) [Corriendo] - Oracle VM VirtualBox
Archivo  Máquina  Ver  Entrada  Dispositivos  Ayuda
GNU nano 4.8  hostikerabadiaextranet.conf  Modified
<VirtualHost *:80 *:90>
# The ServerName directive sets the request scheme, hostname and port that
# the server uses to identify itself. This is used when creating
# redirection URLs. In the context of virtual hosts, the ServerName
# specifies what hostname must appear in the request's Host: header to
# match this virtual host. For the default virtual host (this file) this
# value is not decisive as it is used as a last resort host regardless.
# However, you must set it for any further virtual host explicitly.
ServerName extranet.ikerabadia.local

ServerAdmin webmaster@localhost
DocumentRoot /var/www/hostikerabadiaextranet

# Available loglevels: trace8, ..., trace1, debug, info, notice, warn,
# error, crit, alert, emerg.
# It is also possible to configure the loglevel for particular
# modules, e.g.
#LogLevel info ssl:warn

ErrorLog ${APACHE_LOG_DIR}/extranet_error.log
CustomLog ${APACHE_LOG_DIR}/extranet_access.log combined

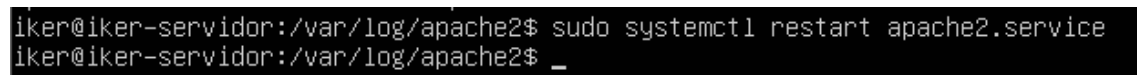
# For most configuration files from conf-available/, which are
# enabled or disabled at a global level, it is possible to
# include a line for only one particular virtual host. For example the
# following line enables the CGI configuration for this host only
# after it has been globally disabled with "a2disconf".
#Include conf-available/serve-cgi-bin.conf
</VirtualHost>

# vim: syntax=apache ts=4 sw=4 sts=4 sr noet

^G Get Help  ^O Write Out  ^W Where Is   ^K Cut Text   ^J Justify    ^C Cur Pos    M-U Undo
^X Exit      ^R Read File  ^N Replace    ^U Paste Text ^T To Spell   ^_ Go To Line   M-E Redo
CTRL DERECHA
```

Edito el fichero de configuración del host que se encuentra en /etc/apache2/sites-available/(hostikerabadiaextranet.conf) y lo dejo como en la captura anterior.

Y reinicio el servicio



```
iker@iker-servidor:/var/log/apache2$ sudo systemctl restart apache2.service
iker@iker-servidor:/var/log/apache2$ _
```

Ahora para comprobar que funcionan voy a /var/www/hostikerabadiaextranet y creo un script.php que de fallo.

```
UbuntuServidor (Post DNS) [Corriendo] - Oracle VM VirtualBox
Archivo  Máquina  Ver  Entrada  Dispositivos  Ayuda
GNU nano 4.8 script.php Modified
<?php
    phpinfo:)
```

[New File]

Get Help Write Out Where Is Cut Text Justify Cur Pos Undo
Exit Read File Replace Paste Text To Spell Go To Line Redo

CTRL DERECHA

```
iker@iker-servidor:/var/www/html$ cd /var/log/apache2/
iker@iker-servidor:/var/log/apache2$ ls
access.log      error.log      error.log.6.gz  other_vhosts_access.log
access.log.1    error.log.1    error.log.7.gz  other_vhosts_access.log.1
access.log.2.gz error.log.2.gz error.log.8.gz  other_vhosts_access.log.2.gz
access.log.3.gz error.log.3.gz error.log.9.gz
access.log.4.gz error.log.4.gz extranet_access.log
access.log.5.gz error.log.5.gz extranet_error.log
iker@iker-servidor:/var/log/apache2$ cat extranet_error.log
[Mon Oct 25 15:42:44.885032 2021] [php7:error] [pid 31433] [client 10.0.2.4:36388] script '/var/www/hostikerabadiaextranet/script.php' not found or unable to stat
[Mon Oct 25 15:46:16.024344 2021] [php7:error] [pid 31434] [client 10.0.2.4:36392] PHP Parse error: syntax error, unexpected ')', expecting end of file in /var/www/hostikerabadiaextranet/script.php on line 2
[Mon Oct 25 15:47:16.656253 2021] [php7:error] [pid 31436] [client 10.0.2.4:36394] PHP Parse error: syntax error, unexpected ')', expecting end of file in /var/www/hostikerabadiaextranet/script.php on line 2
[Mon Oct 25 15:47:17.278649 2021] [php7:error] [pid 31432] [client 10.0.2.4:36396] PHP Parse error: syntax error, unexpected ')', expecting end of file in /var/www/hostikerabadiaextranet/script.php on line 2
[Mon Oct 25 15:47:17.464428 2021] [php7:error] [pid 31440] [client 10.0.2.4:36398] PHP Parse error: syntax error, unexpected ')', expecting end of file in /var/www/hostikerabadiaextranet/script.php on line 2
[Mon Oct 25 15:47:17.647632 2021] [php7:error] [pid 31435] [client 10.0.2.4:36400] PHP Parse error: syntax error, unexpected ')', expecting end of file in /var/www/hostikerabadiaextranet/script.php on line 2
iker@iker-servidor:/var/log/apache2$ _
```

Aquí los errores

```

ux x86_64; rv:79.0) Gecko/20100101 Firefox/79.0"
0.0.2.4 - - [25/Oct/2021:15:37:47 +0000] "GET / HTTP/1.1" 304 178 "-" "Mozilla/5.0 (X11; Ubuntu; Li
ux x86_64; rv:79.0) Gecko/20100101 Firefox/79.0"
0.0.2.4 - - [25/Oct/2021:15:37:48 +0000] "GET / HTTP/1.1" 304 178 "-" "Mozilla/5.0 (X11; Ubuntu; Li
ux x86_64; rv:79.0) Gecko/20100101 Firefox/79.0"
0.0.2.4 - - [25/Oct/2021:15:37:48 +0000] "GET / HTTP/1.1" 304 178 "-" "Mozilla/5.0 (X11; Ubuntu; Li
ux x86_64; rv:79.0) Gecko/20100101 Firefox/79.0"
0.0.2.4 - - [25/Oct/2021:15:37:48 +0000] "GET / HTTP/1.1" 304 178 "-" "Mozilla/5.0 (X11; Ubuntu; Li
ux x86_64; rv:79.0) Gecko/20100101 Firefox/79.0"
0.0.2.4 - - [25/Oct/2021:15:37:48 +0000] "GET / HTTP/1.1" 304 178 "-" "Mozilla/5.0 (X11; Ubuntu; Li
ux x86_64; rv:79.0) Gecko/20100101 Firefox/79.0"
0.0.2.4 - - [25/Oct/2021:15:37:48 +0000] "GET / HTTP/1.1" 304 178 "-" "Mozilla/5.0 (X11; Ubuntu; Li
ux x86_64; rv:79.0) Gecko/20100101 Firefox/79.0"
0.0.2.4 - - [25/Oct/2021:15:37:48 +0000] "GET / HTTP/1.1" 304 178 "-" "Mozilla/5.0 (X11; Ubuntu; Li
ux x86_64; rv:79.0) Gecko/20100101 Firefox/79.0"
0.0.2.4 - - [25/Oct/2021:15:37:48 +0000] "GET / HTTP/1.1" 304 178 "-" "Mozilla/5.0 (X11; Ubuntu; Li
ux x86_64; rv:79.0) Gecko/20100101 Firefox/79.0"
0.0.2.4 - - [25/Oct/2021:15:37:49 +0000] "GET / HTTP/1.1" 304 178 "-" "Mozilla/5.0 (X11; Ubuntu; Li
ux x86_64; rv:79.0) Gecko/20100101 Firefox/79.0"
0.0.2.4 - - [25/Oct/2021:15:37:49 +0000] "GET / HTTP/1.1" 304 178 "-" "Mozilla/5.0 (X11; Ubuntu; Li
ux x86_64; rv:79.0) Gecko/20100101 Firefox/79.0"
0.0.2.4 - - [25/Oct/2021:15:42:44 +0000] "GET /script.php HTTP/1.1" 404 504 "-" "Mozilla/5.0 (X11;
buntu; Linux x86_64; rv:79.0) Gecko/20100101 Firefox/79.0"
0.0.2.4 - - [25/Oct/2021:15:46:16 +0000] "GET /script.php HTTP/1.1" 500 185 "-" "Mozilla/5.0 (X11;
buntu; Linux x86_64; rv:79.0) Gecko/20100101 Firefox/79.0"
0.0.2.4 - - [25/Oct/2021:15:47:16 +0000] "GET /script.php HTTP/1.1" 500 185 "-" "Mozilla/5.0 (X11;
buntu; Linux x86_64; rv:79.0) Gecko/20100101 Firefox/79.0"
0.0.2.4 - - [25/Oct/2021:15:47:17 +0000] "GET /script.php HTTP/1.1" 500 185 "-" "Mozilla/5.0 (X11;
buntu; Linux x86_64; rv:79.0) Gecko/20100101 Firefox/79.0"
0.0.2.4 - - [25/Oct/2021:15:47:17 +0000] "GET /script.php HTTP/1.1" 500 185 "-" "Mozilla/5.0 (X11;
buntu; Linux x86_64; rv:79.0) Gecko/20100101 Firefox/79.0"
0.0.2.4 - - [25/Oct/2021:15:47:17 +0000] "GET /script.php HTTP/1.1" 500 185 "-" "Mozilla/5.0 (X11;
buntu; Linux x86_64; rv:79.0) Gecko/20100101 Firefox/79.0"
iker@iker-servidor:/var/log/apache2$ cat extranet_access.log _

```

Y aquí los accesos

E) Autenticación básica:

a. Dentro del host virtual intranet crea un directorio llamado privado.

```

iker@iker-servidor:/var/www/hostikerabadia$ sudo mkdir privado
iker@iker-servidor:/var/www/hostikerabadia$ ls
index.html  privado
iker@iker-servidor:/var/www/hostikerabadia$ _

```

b. Crea un archivo .htaccess dentro del directorio “privado” de este estilo:

```

AuthType Basic
AuthName "Documentos de Empresa"
AuthUserFile "/etc/apache2/etc/.usuarios"
Require user admin

```

NOTA: cambiar /etc/apache2/etc/.usuarios por /var/www/.usuarios

```

Archivo  Máquina  Ver  Entrada  Dispositivos  Ay
GNU nano 4.8
AuthType Basic
AuthName "Documentos de empresa"
AuthUserFile "/var/www/.usuarios"
Require user admin

```

c. Para crear el archivo de usuario ejecuta:

```
#htpasswd -c /etc/apache2/etc/.usuarios admin
```

NOTA: cambiar /etc/apache2/etc/.usuarios por /var/www/.usuarios


```

iker@iker-servidor:/var/www/hostikerabadia$ sudo htpasswd -c /var/www/.usuarios admin
New password:
Re-type new password:
Adding password for user admin
iker@iker-servidor:/var/www/hostikerabadia$ _

```

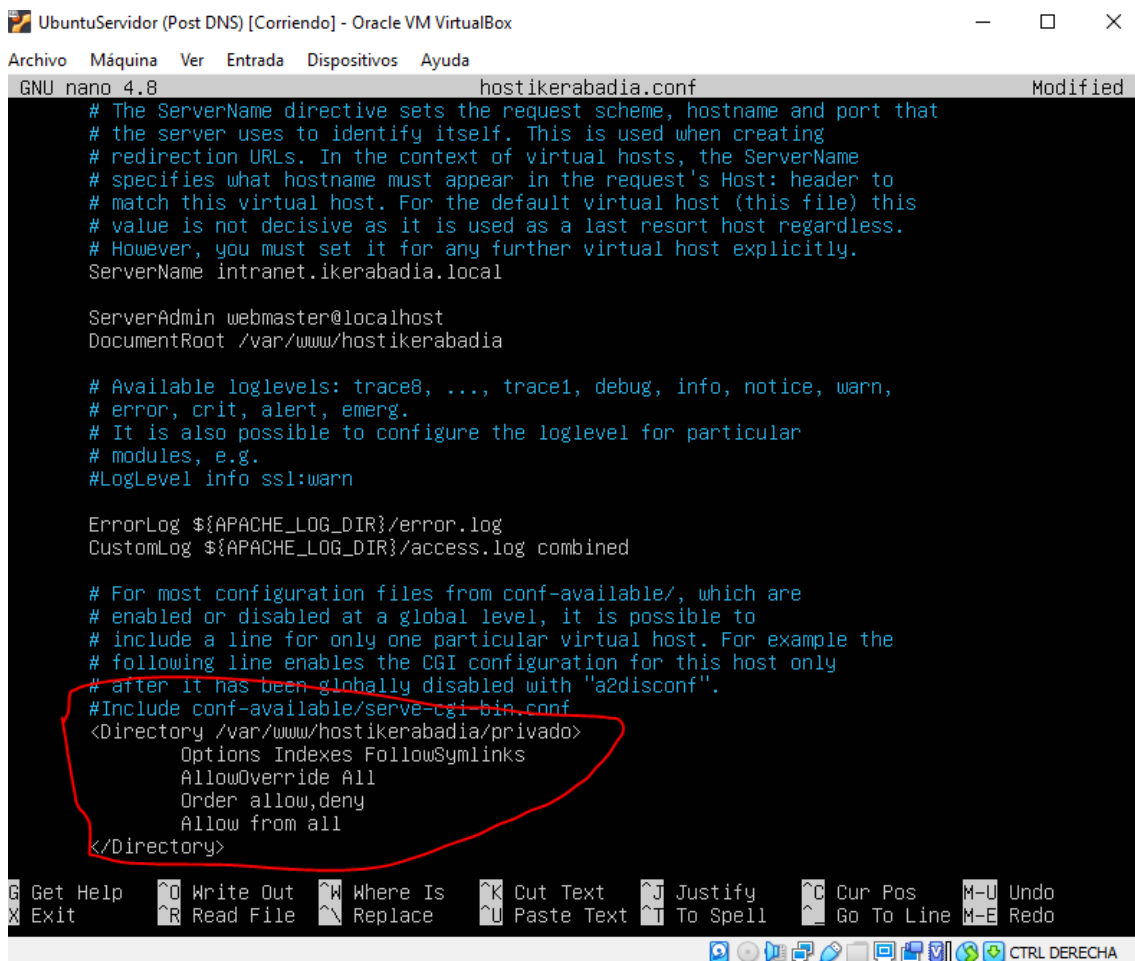
d. Configuraremos en el host virtual el acceso al directorio:

```

<Directory /var/www/empresa-internet/rrhh>
Options Indexes FollowSymlinks
AllowOverride All
Order allow,deny
Allow from all
</Directory>

```

NOTA : el directorio es “privado”, no “rrhh”



```

UbuntuServidor (Post DNS) [Corriendo] - Oracle VM VirtualBox
Archivo  Máquina  Ver  Entrada  Dispositivos  Ayuda
GNU nano 4.8  hostikerabadia.conf  Modified
# The ServerName directive sets the request scheme, hostname and port that
# the server uses to identify itself. This is used when creating
# redirection URLs. In the context of virtual hosts, the ServerName
# specifies what hostname must appear in the request's Host: header to
# match this virtual host. For the default virtual host (this file) this
# value is not decisive as it is used as a last resort host regardless.
# However, you must set it for any further virtual host explicitly.
ServerName intranet.ikerabadia.local

ServerAdmin webmaster@localhost
DocumentRoot /var/www/hostikerabadia

# Available loglevels: trace8, ..., trace1, debug, info, notice, warn,
# error, crit, alert, emerg.
# It is also possible to configure the loglevel for particular
# modules, e.g.
#LogLevel info ssl:warn

ErrorLog ${APACHE_LOG_DIR}/error.log
CustomLog ${APACHE_LOG_DIR}/access.log combined

# For most configuration files from conf-available/, which are
# enabled or disabled at a global level, it is possible to
# include a line for only one particular virtual host. For example the
# following line enables the CGI configuration for this host only
# after it has been globally disabled with "a2disconf".
#Include conf-available/serve-cgi-bin.conf
<Directory /var/www/hostikerabadia/privado>
Options Indexes FollowSymlinks
AllowOverride All
Order allow,deny
Allow from all
</Directory>
G Get Help  W Write Out  W Where Is  K Cut Text  J Justify  C Cur Pos  M-U Undo
X Exit  R Read File  R Replace  ^ Paste Text  T To Spell  _ Go To Line  M-E Redo
CTRL DERECHA

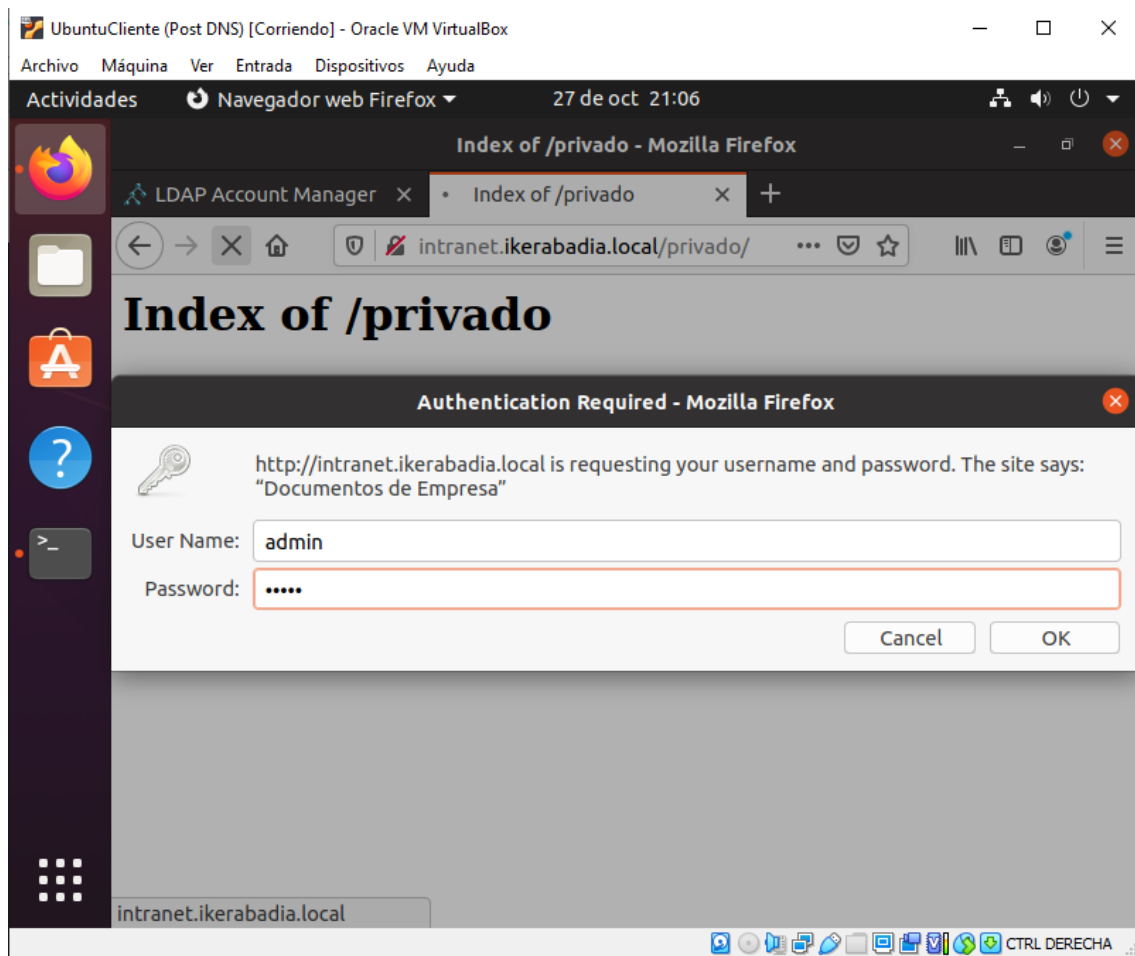
```

e. Reinicia el servicio y verifica que puedes acceder al directorio con el usuario indicado desde el navegador web del cliente.

```

iker@iker-servidor:/etc/apache2/sites-available$ sudo systemctl restart apache2.service
iker@iker-servidor:/etc/apache2/sites-available$ _

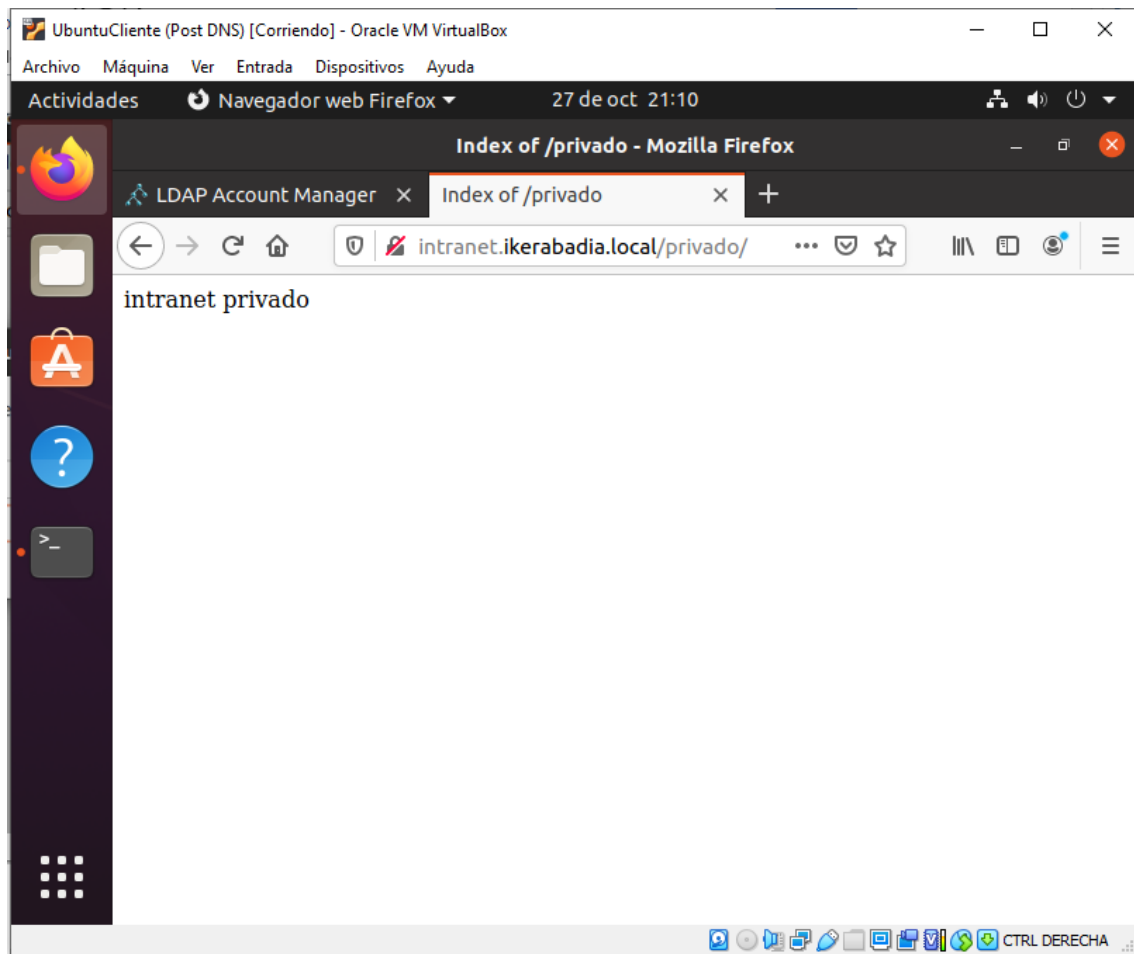
```



EN ESTE CASO USER->ADMIN PASSWORD->ADMIN

Para que se vea algo tras el logueo he creado un index.html en
/var/www/hostikerabadia/privado

```
iker@iker-servidor:/var/www/hostikerabadia/privado$ sudo systemctl restart apache2.service
iker@iker-servidor:/var/www/hostikerabadia/privado$
```



F) Autenticación mediante LDAP:

a. Dentro del host de la extranet crea un directorio llamado ldap

```
iker@iker-servidor:/var/www/hostikerabadiaextranet$ sudo mkdir ldap
iker@iker-servidor:/var/www/hostikerabadiaextranet$ _
```

b. Habilita el módulo ldap con: a2enmod ldap

```
iker@iker-servidor:/var/www/hostikerabadiaextranet$ sudo a2enmod ldap
Enabling module ldap.
To activate the new configuration, you need to run:
  systemctl restart apache2
iker@iker-servidor:/var/www/hostikerabadiaextranet$ systemctl restart apache2
==== AUTHENTICATING FOR org.freedesktop.systemd1.manage-units ====
Authentication is required to restart 'apache2.service'.
Authenticating as: iker
Password:
==== AUTHENTICATION COMPLETE ====
iker@iker-servidor:/var/www/hostikerabadiaextranet$
```

c. Habilita el módulo authnz_ldap con: a2enmod con authnz_ldap

```
iker@iker-servidor:/var/www/hostikerabadiaextranet$ sudo a2enmod con authnz_ldap
ERROR: Module con does not exist!
Considering dependency ldap for authnz_ldap:
Module ldap already enabled
Enabling module authnz_ldap.
To activate the new configuration, you need to run:
    systemctl restart apache2
iker@iker-servidor:/var/www/hostikerabadiaextranet$ systemctl restart apache2
==== AUTHENTICATING FOR org.freedesktop.systemd1.manage-units ====
Authentication is required to restart 'apache2.service'.
Authenticating as: iker
Password:
==== AUTHENTICATION COMPLETE ====
iker@iker-servidor:/var/www/hostikerabadiaextranet$
```

d. Configura en el host de la extranet un nuevo directorio similar a lo siguiente:

```
<Directory /var/www/empresa-internet/rrhh>
AuthName "Area para administración"
AuthType Basic
AuthBasicProvider ldap
AuthLDAPBindAuthoritative Off
AuthLDAPURL "ldap://10.0.2.15:389/ou=usuarios,dc=cursolinux,dc=com"
Require valid-user
</Directory>
```

<Directory /var/www/hostikerabadiaextranet/ldap>

AuthName "Area para administracion"

AuthType Basic

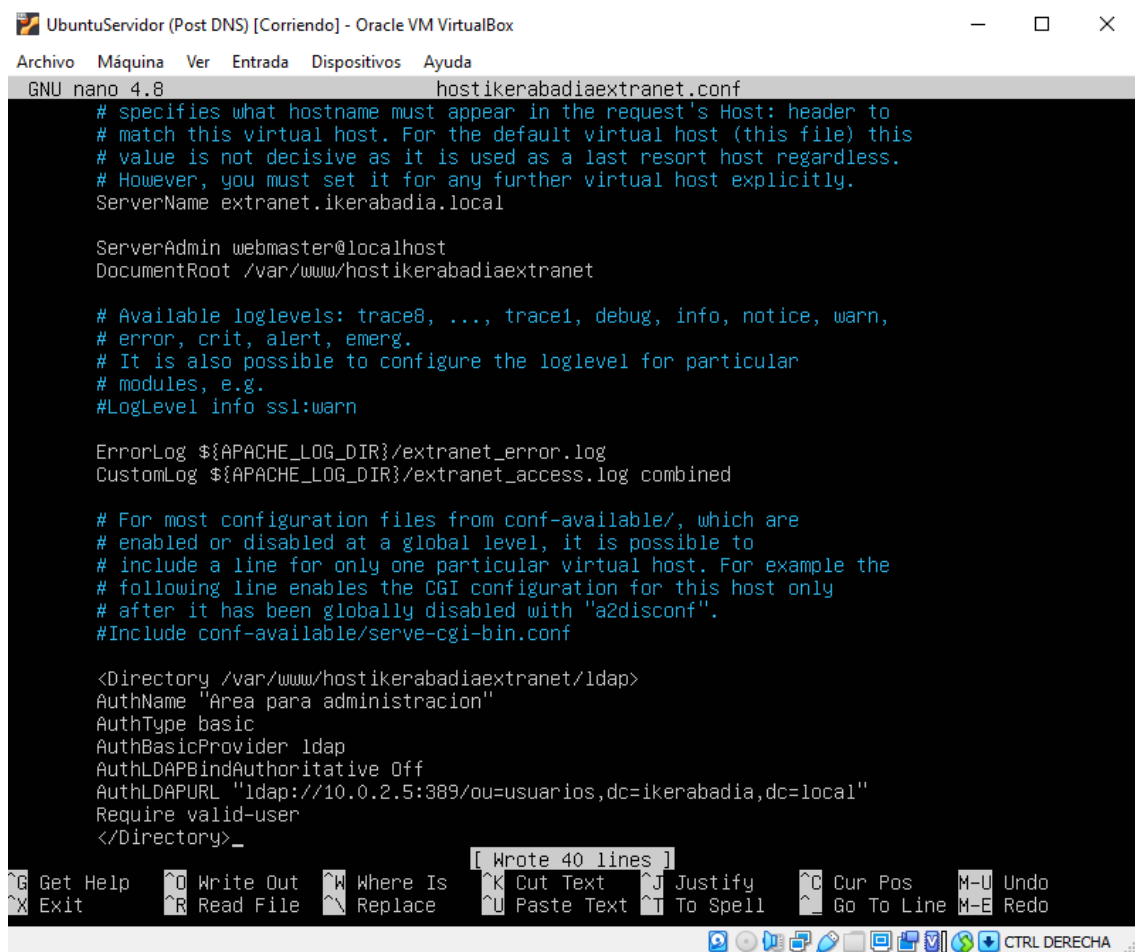
AuthBasicProvider ldap

AuthLDAPBindAuthoritative Off

AuthLDAPURL "ldap://10.0.2.5:389/ou=usuarios,dc=ikerabadia,dc=local"

Require valid-user

</Directory>



The screenshot shows a terminal window titled "UbuntuServidor (Post DNS) [Corriendo] - Oracle VM VirtualBox". Inside, the nano text editor is open, editing the file "hostikerabadiaextranet.conf". The configuration includes comments about the ServerName, ServerAdmin, DocumentRoot, LogLevel, ErrorLog, CustomLog, and Include directives. It also shows a <Directory> block for "/var/www/hostikerabadiaextranet/ldap" with authentication settings. The bottom of the window shows the nano editor's command palette with options like Get Help, Write Out, Where Is, Cut Text, Justify, Cur Pos, Undo, Exit, Read File, Replace, Paste Text, To Spell, Go To Line, and Redo. A status bar at the bottom right indicates "CTRL DERECHA".

```
GNU nano 4.8 hostikerabadiaextranet.conf
# specifies what hostname must appear in the request's Host: header to
# match this virtual host. For the default virtual host (this file) this
# value is not decisive as it is used as a last resort host regardless.
# However, you must set it for any further virtual host explicitly.
ServerName extranet.ikerabadia.local

ServerAdmin webmaster@localhost
DocumentRoot /var/www/hostikerabadiaextranet

# Available loglevels: trace8, ..., trace1, debug, info, notice, warn,
# error, crit, alert, emerg.
# It is also possible to configure the loglevel for particular
# modules, e.g.
#LogLevel info ssl:warn

ErrorLog ${APACHE_LOG_DIR}/extranet_error.log
CustomLog ${APACHE_LOG_DIR}/extranet_access.log combined

# For most configuration files from conf-available/, which are
# enabled or disabled at a global level, it is possible to
# include a line for only one particular virtual host. For example the
# following line enables the CGI configuration for this host only
# after it has been globally disabled with "a2disconf".
#Include conf-available/serve-cgi-bin.conf

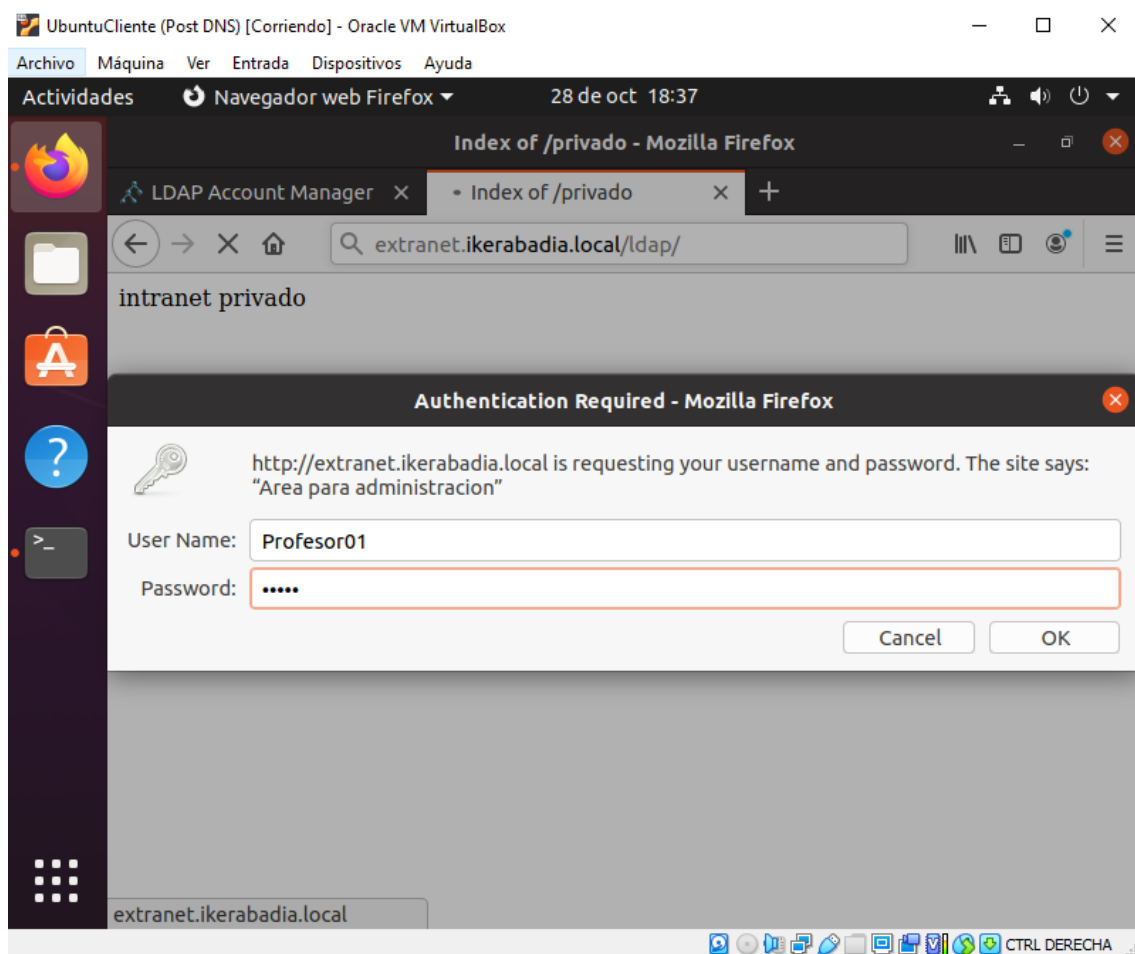
<Directory /var/www/hostikerabadiaextranet/ldap>
AuthName "Area para administracion"
AuthType basic
AuthBasicProvider ldap
AuthLDAPBindAuthoritative Off
AuthLDAPURL "ldap://10.0.2.5:389/ou=usuarios,dc=ikerabadia,dc=local"
Require valid-user
</Directory>_

[ Wrote 40 lines ]
Get Help  Write Out  Where Is  Cut Text  Justify  Cur Pos  M-U Undo
Exit      Read File  Replace   Paste Text To Spell  Go To Line M-E Redo
CTRL DERECHA
```

e. Verifica que puedes entrar con cualquier usuario LDAP registrado en la unidad organizativa usuarios, vía autenticación básica en el navegador web del cliente.

NOTA: ANTES DE NADA REINICIAR EL SERVICIO DE APACHE

```
iker@iker-servidor:/etc/apache2/sites-available$ sudo systemctl restart apache2
iker@iker-servidor:/etc/apache2/sites-available$ _
```

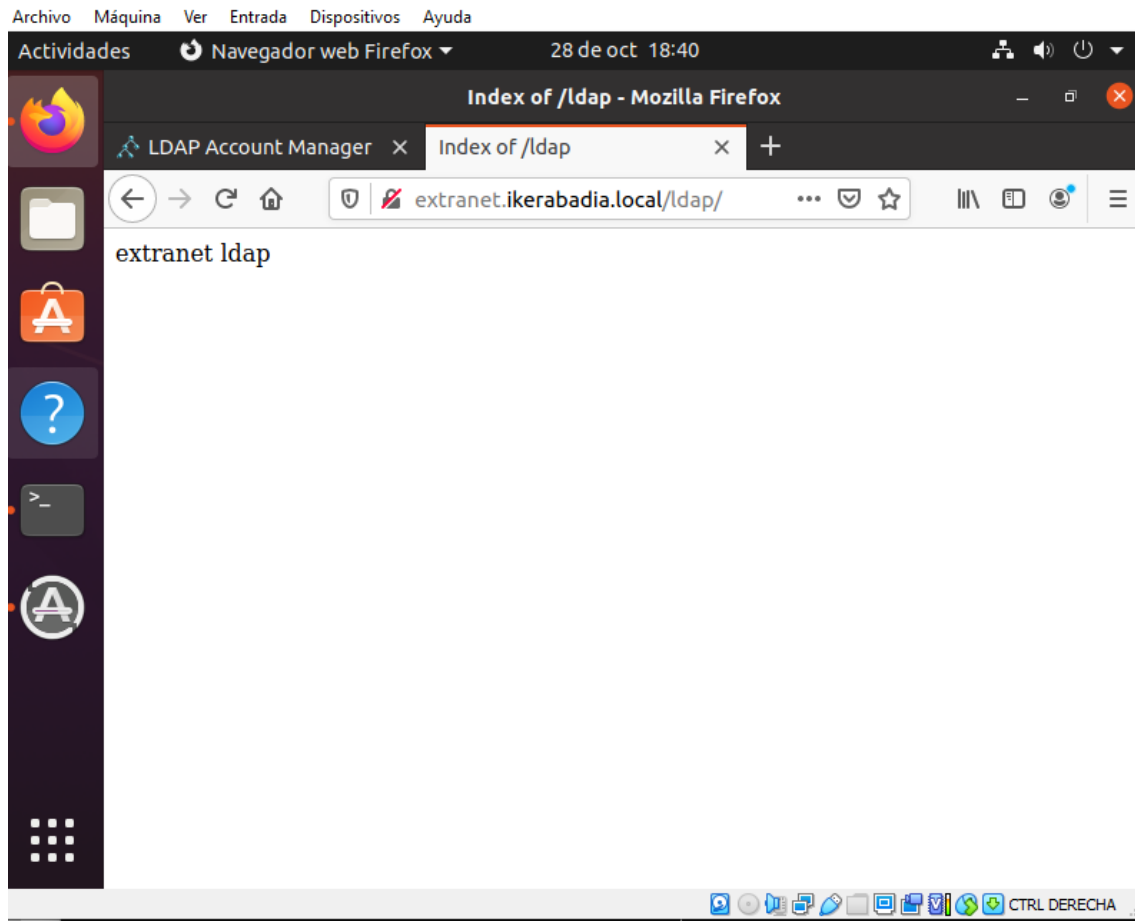


Cuando funcione le creo un index para que se vea al loguearme:

```
iker@iker-servidor:/var/www/hostikerabadiaextranet/ldap$ sudo nano index.html_
```

Reinicio

```
iker@iker-servidor:/var/www/hostikerabadiaextranet/ldap$ sudo systemctl restart apache2
iker@iker-servidor:/var/www/hostikerabadiaextranet/ldap$
```



Perfecto

G) Host Virtual seguro mediante HTTPS:

a. Activamos el módulo ssl mediante: a2enmod ssl

```
iker@iker-servidor:/var/www/hostikerabadiaextranet/ldap$ sudo a2enmod ssl
[sudo] password for iker:
Considering dependency setenvif for ssl:
Module setenvif already enabled
Considering dependency mime for ssl:
Module mime already enabled
Considering dependency socache_shmcb for ssl:
Enabling module socache_shmcb.
Enabling module ssl.
See /usr/share/doc/apache2/README.Debian.gz on how to configure SSL and create self-signed certificates.
To activate the new configuration, you need to run:
  systemctl restart apache2
iker@iker-servidor:/var/www/hostikerabadiaextranet/ldap$ systemctl restart apache2
==== AUTHENTICATING FOR org.freedesktop.systemd1.manage-units ====
Authentication is required to restart 'apache2.service'.
Authenticating as: iker
Password:
==== AUTHENTICATION COMPLETE ====
iker@iker-servidor:/var/www/hostikerabadiaextranet/ldap$
```

b. Creamos un directorio /ssl bajo /var/www/extranet/

```
iker@iker-servidor:/var/www/hostikerabadiaextranet$ sudo mkdir ssl
iker@iker-servidor:/var/www/hostikerabadiaextranet$ ks
ks: command not found
iker@iker-servidor:/var/www/hostikerabadiaextranet$ ls
index.html  ldap  script.php  ssl
iker@iker-servidor:/var/www/hostikerabadiaextranet$ _
```

c. Ubícate en el directorio anterior y genera los certificados:

HAY QUE HACERLO EN LA CARPETA SSL NO EN LA DE IKERABADIAEXTRANET COMO SE VE EN LAS CAPTURAS

openssl genrsa -des3 -out key 2048

Genera un certificado clave SSL de 2048 bits de longitud. Pedirá un password para usarlo a futuro.

```
iker@iker-servidor:/var/www/hostikerabadiaextranet$ sudo openssl genrsa -des3 -out key 2048
Generating RSA private key, 2048 bit long modulus (2 primes)
.....+++++
.....+++++
e is 65537 (0x010001)
Enter pass phrase for key:
Verifying - Enter pass phrase for key:
iker@iker-servidor:/var/www/hostikerabadiaextranet$
```

Openssl req -new -key key -out empresa.csr

Genera el certificado CSR (Certificate Signing Request) a partir de la clave anterior. Pedirá el password y una serie de campos

```
iker@iker-servidor:/var/www/hostikerabadiaextranet$ openssl req -new -key key -out empresa.csr
Can't open key for reading, Permission denied
140540891718976:error:0200100D:system library:fopen:Permission denied:../crypto/bio/bss_file.c:69:fo
open('key','r')
140540891718976:error:2006D002:BIIO routines:BIIO_new_file:system lib:../crypto/bio/bss_file.c:78:
Unable to load Private Key
iker@iker-servidor:/var/www/hostikerabadiaextranet$ sudo openssl req -new -key key -out empresa.csr
Enter pass phrase for key:
You are about to be asked to enter information that will be incorporated
into your certificate request.
What you are about to enter is what is called a Distinguished Name or a DN.
There are quite a few fields but you can leave some blank
For some fields there will be a default value,
If you enter '.', the field will be left blank.
-----
Country Name (2 letter code) [AU]:ES
State or Province Name (full name) [Some-State]:Rioja
Locality Name (eg, city) []:Logroño
Organization Name (eg, company) [Internet Widgits Pty Ltd]:
Organizational Unit Name (eg, section) []:
Common Name (e.g. server FQDN or YOUR name) []:ikerabadia
Email Address []:

Please enter the following 'extra' attributes
to be sent with your certificate request
A challenge password []:admin
An optional company name []:
iker@iker-servidor:/var/www/hostikerabadiaextranet$ _
```

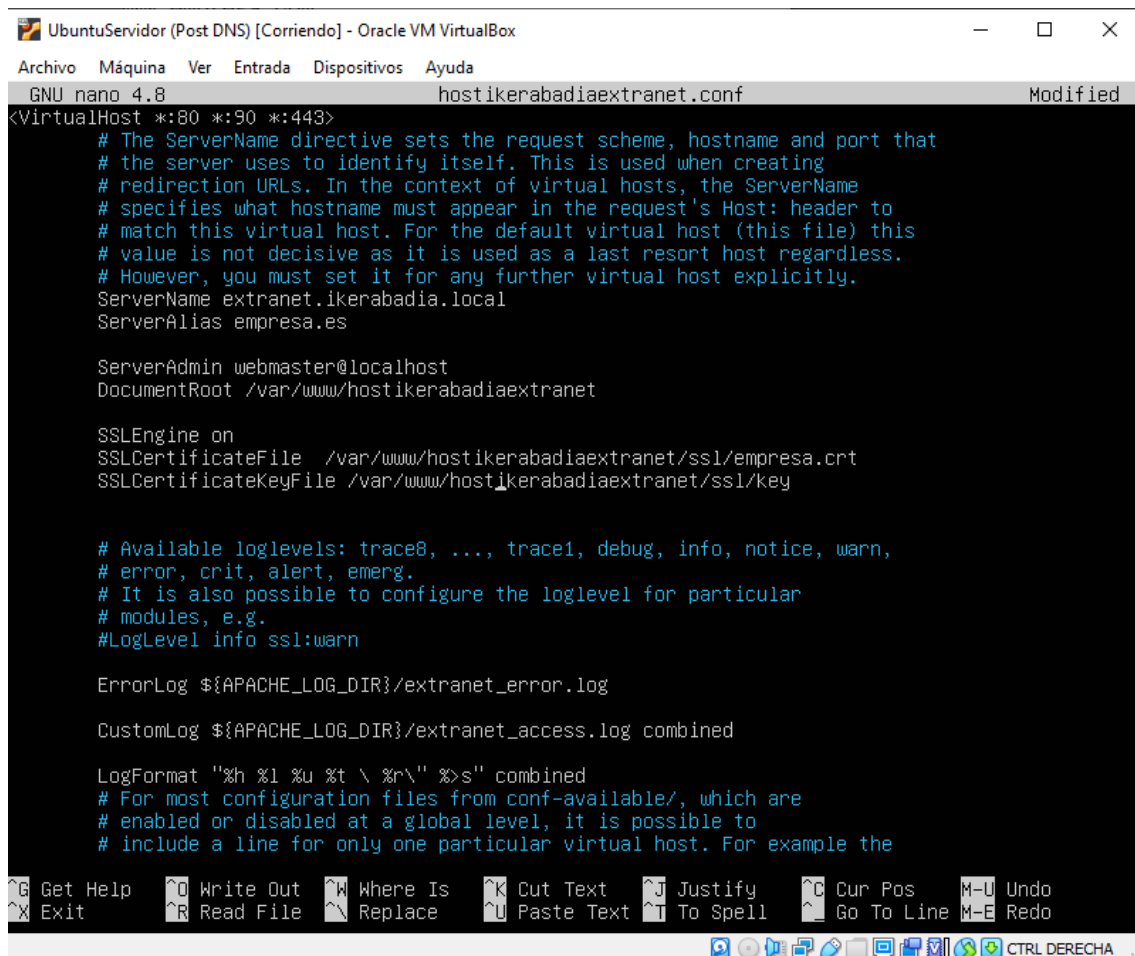
Openssl x509 -req -sha256 -days 365 -in empresa.csr -signkey key -out empresa.crt

Genera el certificado para nuestro sitio web. Pediré el password también.


```
iker@iker-servidor:/var/www/hostikerabadiaextranet$ sudo openssl x509 -req -sha256 -days 365 -in empresa.csr -signkey key -out empresa.crt
Signature ok
subject=C = ES, ST = Rioja, L = Logroño\C3\B3\C2\B1o, O = Internet Widges Pty Ltd, CN = ikerabadia
Getting Private key
Enter pass phrase for key:
iker@iker-servidor:/var/www/hostikerabadiaextranet$ _
```

d. Configura el host virtual análogamente a la siguiente captura, cambiando los parámetros necesarios (recuerda que a la extranet se puede acceder por dos puertos, ahora accederás por el tercero, el 443):

```
<VirtualHost 10.0.2.15:443>
ServerAdmin admin@empresa.com
DocumentRoot /var/www/empresa-internet
ServerName www.empresa.com
ServerAlias empresa.es
SSLEngine on
SSLCertificateFile /etc/apache2/empresa/ssl/empresa.crt
SSLCertificateKeyFile /etc/apache2/empresa/ssl/key
ErrorFile ${APACHE_LOG_DIR}/empresa-error-ssl.log
CustomLogFile ${APACHE_LOG_DIR}/empresa-access-ssl.log
LogFormat "%h %l %u %t \ %r\" %>s" combined
</VirtualHost>
```



```

GNU nano 4.8 hostikerabadiaextranet.conf Modified
<VirtualHost *:80 *:90 *:443>
# The ServerName directive sets the request scheme, hostname and port that
# the server uses to identify itself. This is used when creating
# redirection URLs. In the context of virtual hosts, the ServerName
# specifies what hostname must appear in the request's Host: header to
# match this virtual host. For the default virtual host (this file) this
# value is not decisive as it is used as a last resort host regardless.
# However, you must set it for any further virtual host explicitly.
ServerName extranet.ikerabadia.local
ServerAlias empresa.es

ServerAdmin webmaster@localhost
DocumentRoot /var/www/hostikerabadiaextranet

SSLEngine on
SSLCertificateFile /var/www/hostikerabadiaextranet/ssl/empresa.crt
SSLCertificateKeyFile /var/www/hostikerabadiaextranet/ssl/key

# Available loglevels: trace8, ..., trace1, debug, info, notice, warn,
# error, crit, alert, emerg.
# It is also possible to configure the loglevel for particular
# modules, e.g.
#LogLevel info ssl:warn

ErrorLog ${APACHE_LOG_DIR}/extranet_error.log

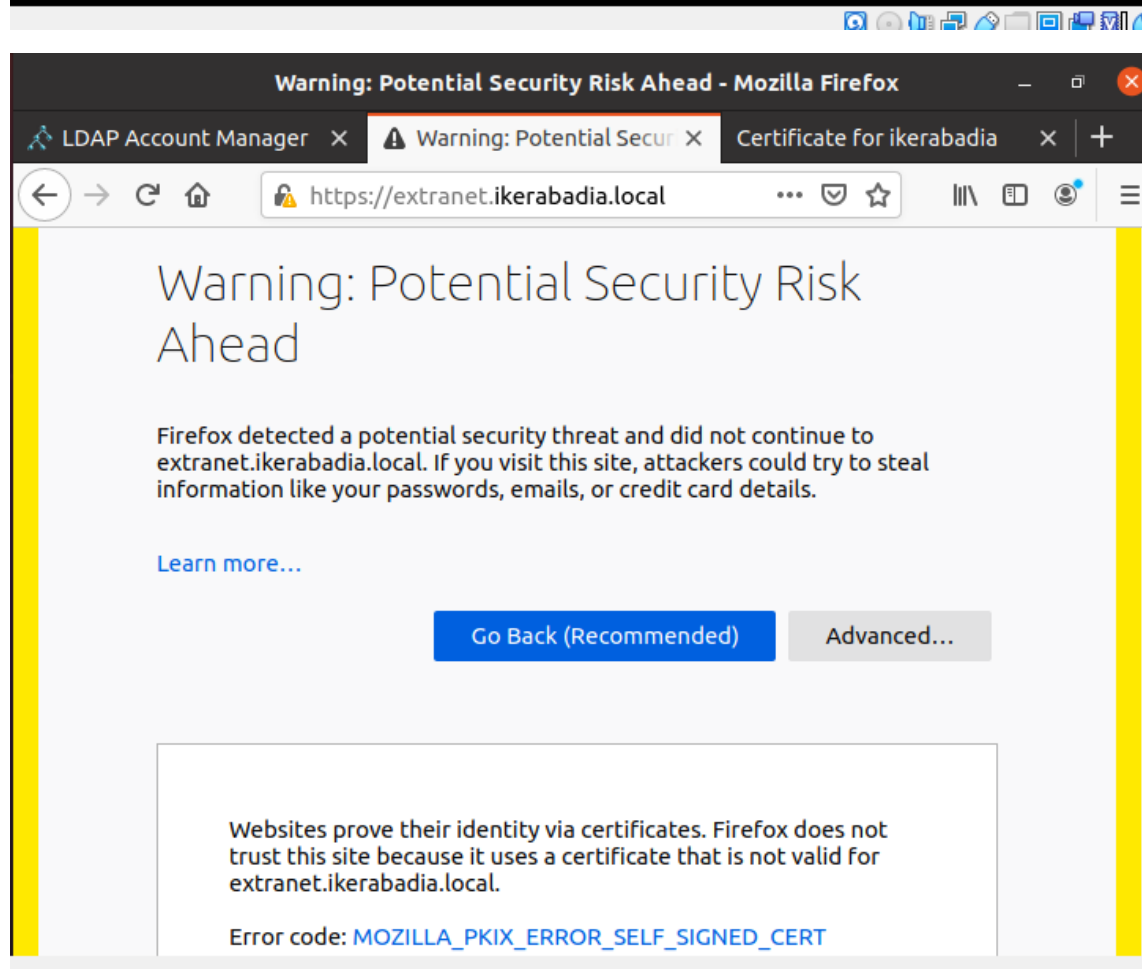
CustomLog ${APACHE_LOG_DIR}/extranet_access.log combined

LogFormat "%h %l %u %t \ %r\" %>s" combined
# For most configuration files from conf-available/, which are
# enabled or disabled at a global level, it is possible to
# include a line for only one particular virtual host. For example the

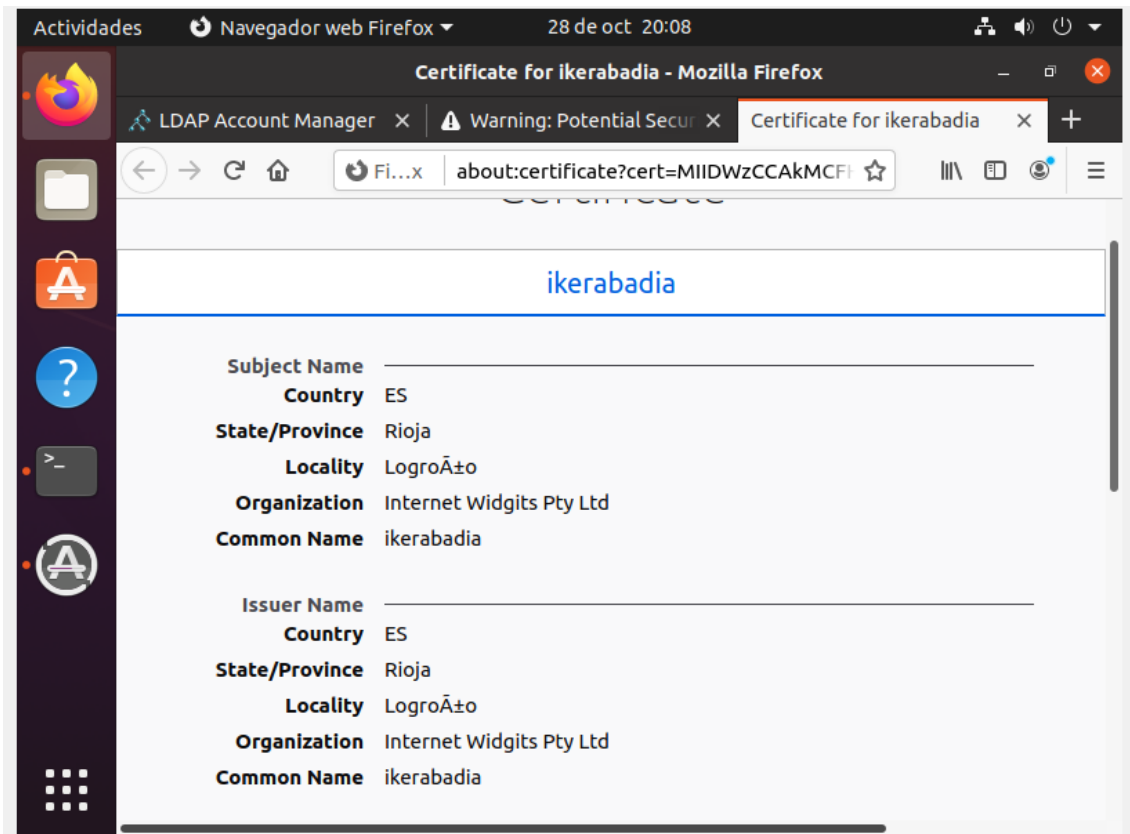
```

e. Reinicia el servicio y verifica que el acceso a la extranet ya es seguro mediante https. Comprobarás que en Firefox se te avisa que aún así la conexión no es segura por ser un certificado autofirmado. Captura el certificado en el enlace que te ofrece el navegador.

```
iker@iker-servidor:/var/www/hostikerabadiaextranet$ sudo systemctl restart apache2
Enter passphrase for SSL/TLS keys for extranet.ikerabadia.local:443 (RSA): ****
iker@iker-servidor:/var/www/hostikerabadiaextranet$
```

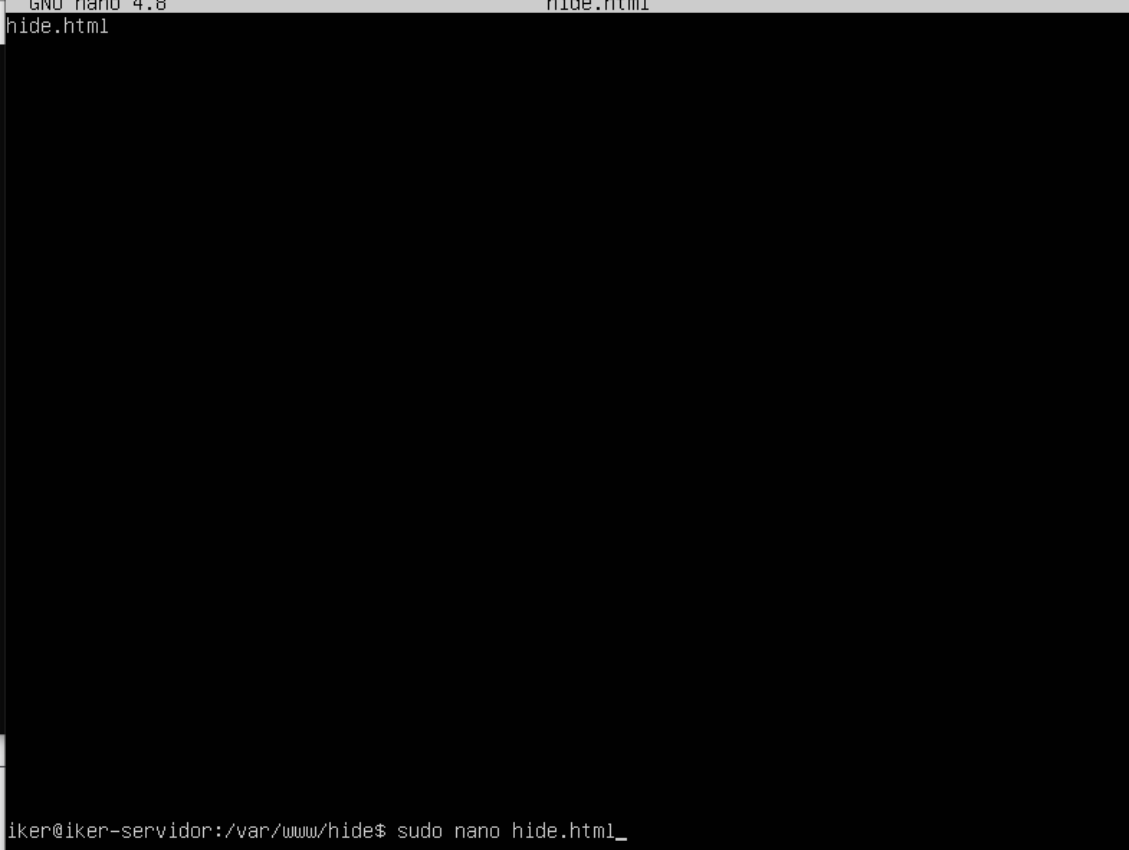


NOTA: DEBES PONER EL HTTPS EN LA URL MANUALMENTE



H) Directorios y archivos de configuración:

a. Genera un alias /oculto/ para una página web llamada hide.html ubicada en /var/www/hide/hide.html y demuestra que se renderiza vía URL en un navegador web.



```
GNU nano 4.8 hide.html
hide.html

iker@iker-servidor:/var/www/hide$ sudo nano hide.html_
```

```
GNU nano 4.8 apache2.conf
# Note that the use of %{X-Forwarded-For}i instead of %h is not recommended.
# Use mod_remoteip instead.
#
LogFormat "%v:%p %h %l %u %t \"%r\" %>s %O \"%{Referer}i\" \"%{User-Agent}i\""" vhost_combined
LogFormat "%h %l %u %t \"%r\" %>s %O \"%{Referer}i\" \"%{User-Agent}i\""" combined
LogFormat "%h %l %u %t \"%r\" %>s %O" common
LogFormat "%{Referer}i -> %U" referer
LogFormat "%{User-agent}i" agent

# Include of directories ignores editors' and dpkg's backup files,
# see README.Debian for details.

# Include generic snippets of statements
IncludeOptional conf-enabled/*.conf

# Include the virtual host configurations:
IncludeOptional sites-enabled/*.conf

# vim: syntax=apache ts=4 sw=4 sts=4 sr noet
<ifModule php7_module>
    AddType application/x-httpd-php .php
    AddType application/x-httpd-php-source .phps
    <ifModule dir_module>
        DirectoryIndex index.html index.php
    </IfModule>
</IfModule>

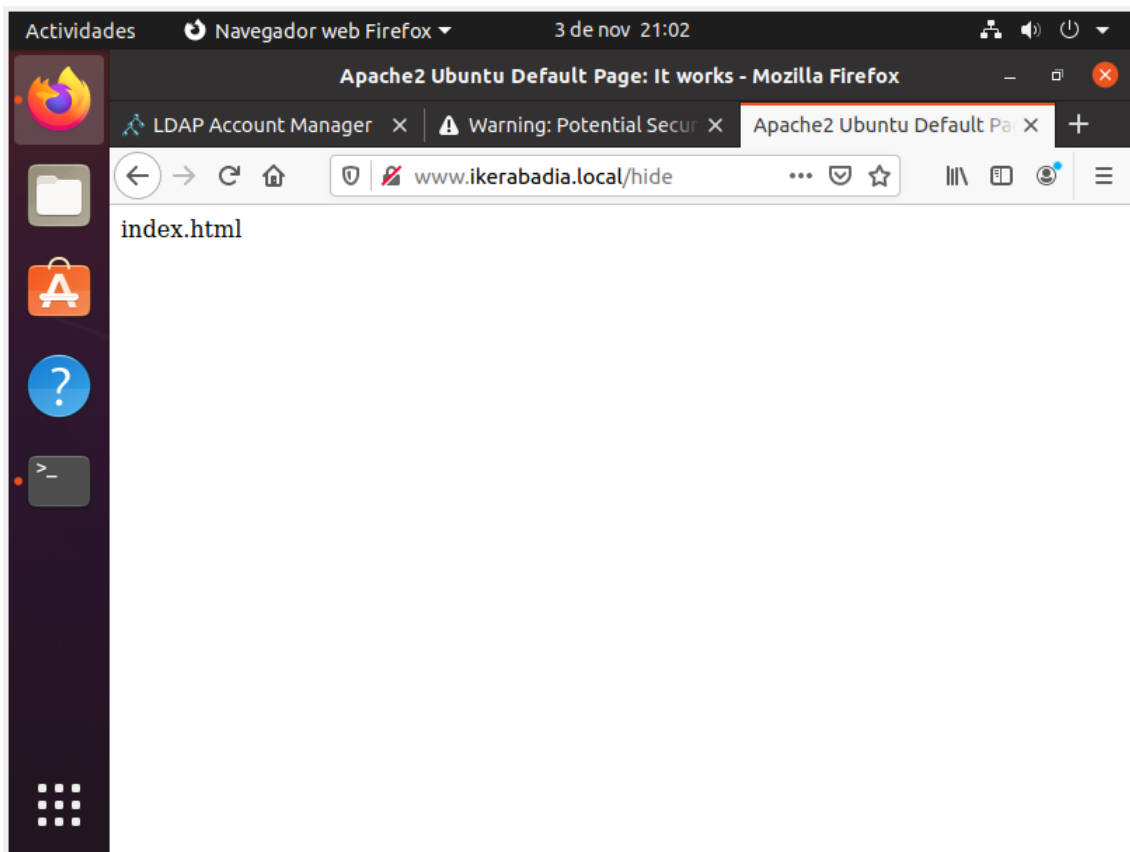
Alias /hide "/var/www/html/hide.html"
```

ESTE ARCHIVO ES APACHE2.CONF:

```
iker@iker-servidor:/etc/apache2$ sudo nano apache2.conf
```

Reinicio:

```
Enter passphrase for SSL/TLS keys for extranet.ikerabadia.local:443 (RSA): ****
iker@iker-servidor:/etc/apache2$ _
```



b. Consigue el siguiente efecto (usa la directiva adecuada): crea el archivo web index2.html con el contenido: "SOY INDEX2" en el directorio de publicación principal y al indicar http://IP ó http://dominioprincipal debe salir directamente dicho contenido.

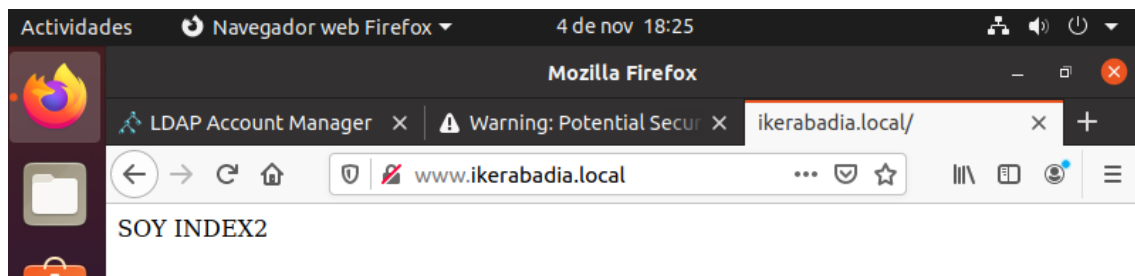
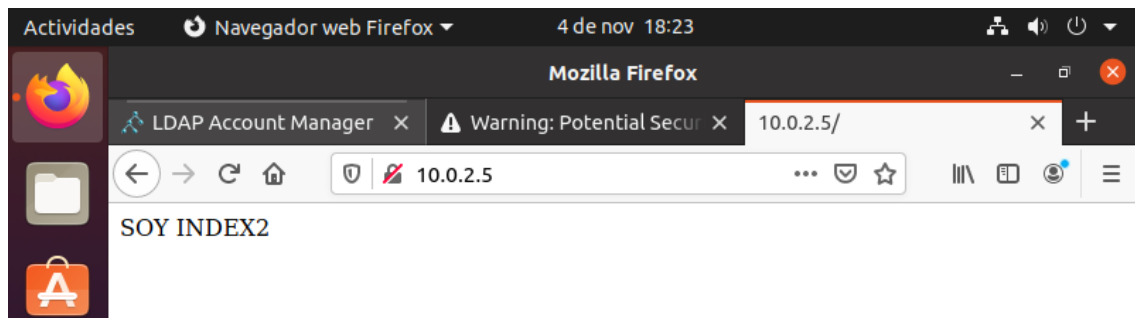
```
GNU nano 4.8 index2.html
SOY INDEX2

iker@iker-servidor:/var/www/html$ sudo nano index2.html
```

```
iker@iker-servidor:/etc/apache2/mods-available$ sudo nano dir.conf _
```

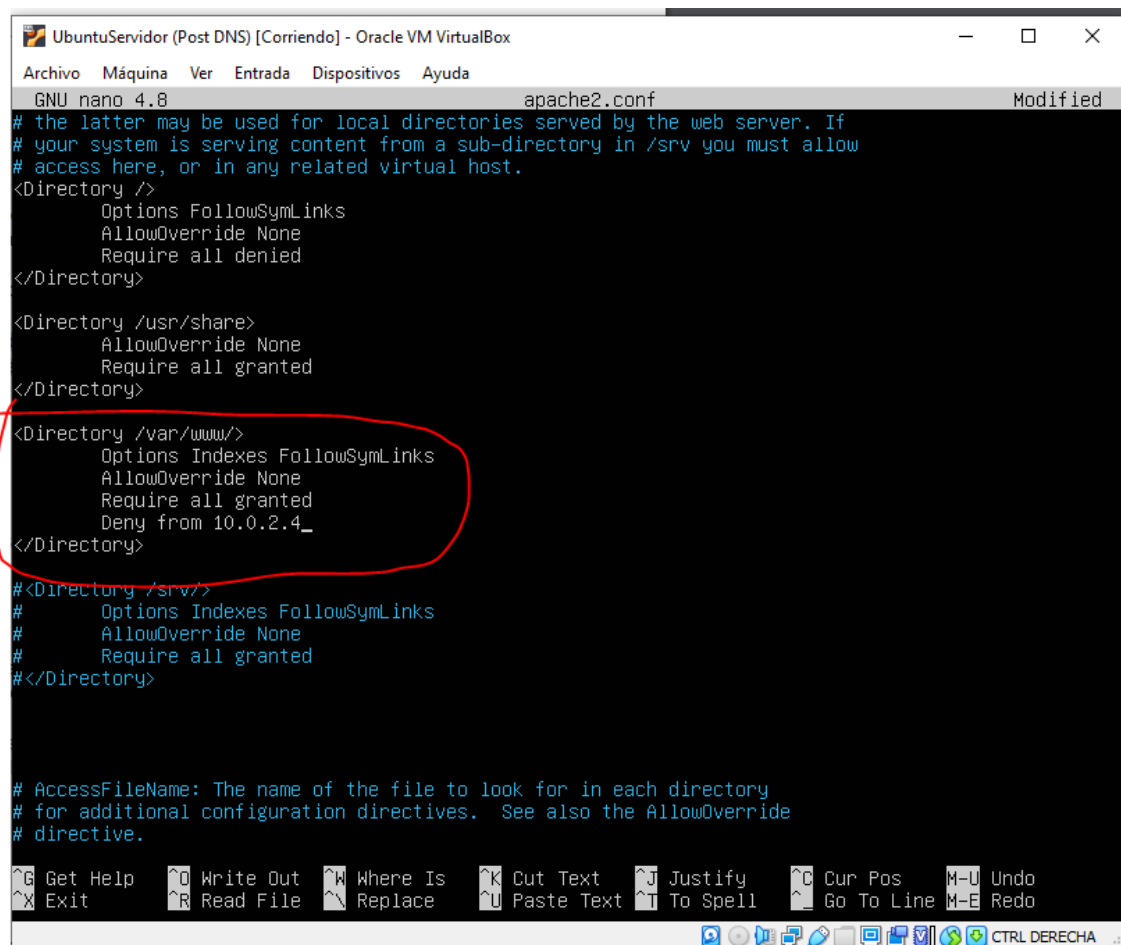
```
UbuntuServidor (Post DNS) [Corriendo] - Oracle VM VirtualBox
Archivo  Máquina  Ver  Entrada  Dispositivos  Ayuda
GNU nano 4.8 dir.conf Modified
<IfModule mod_dir.c>
  DirectoryIndex index2.html index.html index.cgi index.pl index.php index.xhtml index.htm
</IfModule>
# vim: syntax=apache ts=4 sw=4 sts=4 sr noet
```

```
iker@iker-servidor:/etc/apache2/mods-available$ sudo systemctl restart apache2
Enter passphrase for SSL/TLS keys for extranet.ikerabadia.local:443 (RSA): ****
```



c. Prohíbe el acceso al cliente basándote en su IP. Utiliza la directiva adecuada para el directory “/var/www”

```
iker@iker-servidor:/etc/apache2$ sudo nano apache2.conf_
```





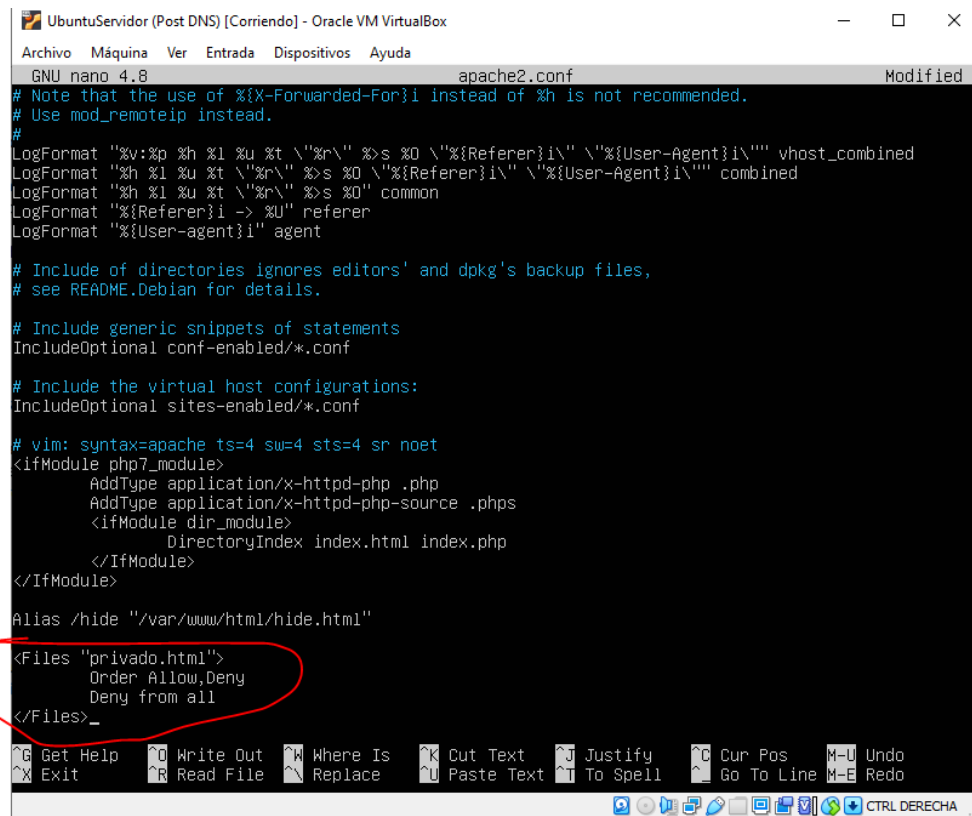
d. Consigue que ningún archivo llamado privado.html pueda ser renderizado mediante en una directiva Files

Creo el archivo

```
iker@iker-servidor:/var/www/html$ ls  
hide.html index2.html privado.html  
iker@iker-servidor:/var/www/html$
```

Añado la directiva a /etc/apache2/apache2.conf

```
iker@iker-servidor:/etc/apache2$ sudo nano apache2.conf
```



```
GNU nano 4.8 apache2.conf Modified
# Note that the use of %{X-Forwarded-For}i instead of %h is not recommended.
# Use mod_remoteip instead.
#
LogFormat "%v:%p %h %l %u %t \"%r\" %s %D \"%{Referer}i\" \"%{User-Agent}i\"" vhost_combined
LogFormat "%h %l %u %t \"%r\" %s %D \"%{Referer}i\" \"%{User-Agent}i\"" combined
LogFormat "%h %l %u %t \"%r\" %s %D" common
LogFormat "%{Referer}i -> %U" referer
LogFormat "%{User-agent}i" agent

# Include of directories ignores editors' and dpkg's backup files,
# see README.Debian for details.

# Include generic snippets of statements
IncludeOptional conf-enabled/*.conf

# Include the virtual host configurations:
IncludeOptional sites-enabled/*.conf

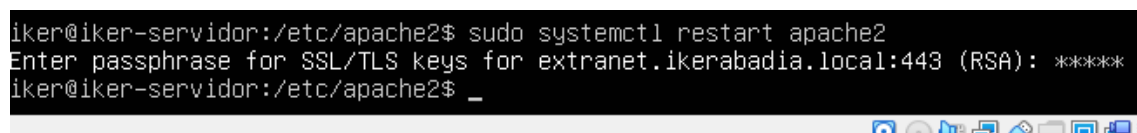
# vim: syntax=apache ts=4 sw=4 sts=4 sr noet
<IfModule php7_module>
    AddType application/x-httpd-php .php
    AddType application/x-httpd-php-source .phps
</IfModule>
    DirectoryIndex index.html index.php
</IfModule>

Alias /hide "/var/www/html/hidden.html"

<Files "privado.html">
    Order Allow,Deny
    Deny from all
</Files>_

G Get Help  W Write Out  W Where Is  K Cut Text  J Justify  C Cur Pos  M-U Undo
X Exit      R Read File  N Replace  U Paste Text T To Spell  G Go To Line M-E Redo
CTRL DERECHA
```

Por último, reinicio el servicio



```
iker@iker-servidor:/etc/apache2$ sudo systemctl restart apache2
Enter passphrase for SSL/TLS keys for extranet.ikerabadia.local:443 (RSA): ****
iker@iker-servidor:/etc/apache2$ _
```



e. /var/log/apache2/error.log -> Se registra cada solicitud a su servidor web en este archivo de registro, a menos que Apache esté configurado para hacer algo diferente. Verifica que dicho log crece con cada solicitud.
Ejecuta tail -f /var/log/apache2/*.log

```
iker@iker-servidor:/etc/apache2$ tail -f /var/log/apache2/error.log
[Thu Nov 04 18:19:33.141539 2021] [mpm_prefork:notice] [pid 52618] AH00169: caught SIGTERM, shutting
down
[Thu Nov 04 18:19:35.873871 2021] [mpm_prefork:notice] [pid 52663] AH00163: Apache/2.4.41 (Ubuntu) O
penSSL/1.1.1f configured -- resuming normal operations
[Thu Nov 04 18:19:35.873889 2021] [core:notice] [pid 52663] AH00094: Command line: '/usr/sbin/apache
2'
[Thu Nov 04 18:21:39.988895 2021] [mpm_prefork:notice] [pid 52663] AH00169: caught SIGTERM, shutting
down
[Thu Nov 04 18:21:42.801705 2021] [mpm_prefork:notice] [pid 52726] AH00163: Apache/2.4.41 (Ubuntu) O
penSSL/1.1.1f configured -- resuming normal operations
[Thu Nov 04 18:21:42.801724 2021] [core:notice] [pid 52726] AH00094: Command line: '/usr/sbin/apache
2'
[Thu Nov 04 18:25:37.799209 2021] [mpm_prefork:notice] [pid 52726] AH00169: caught SIGTERM, shutting
down
[Thu Nov 04 18:25:40.234502 2021] [mpm_prefork:notice] [pid 52780] AH00163: Apache/2.4.41 (Ubuntu) O
penSSL/1.1.1f configured -- resuming normal operations
[Thu Nov 04 18:25:40.234517 2021] [core:notice] [pid 52780] AH00094: Command line: '/usr/sbin/apache
2'
[Thu Nov 04 18:26:11.197827 2021] [access_compat:error] [pid 52783] [client 10.0.2.4:51742] AH01797:
client denied by server configuration: /var/www/html/privado.html
```

```
iker@iker-servidor:/etc/apache2$ tail -f /var/log/apache2/error.log
[Thu Nov 04 18:25:37.799209 2021] [mpm_prefork:notice] [pid 52726] AH00169: caught SIGTERM, shutting
down
[Thu Nov 04 18:25:40.234502 2021] [mpm_prefork:notice] [pid 52780] AH00163: Apache/2.4.41 (Ubuntu) O
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[Thu Nov 04 18:25:40.234517 2021] [core:notice] [pid 52780] AH00094: Command line: '/usr/sbin/apache
2'
[Thu Nov 04 18:26:11.197827 2021] [access_compat:error] [pid 52783] [client 10.0.2.4:51742] AH01797:
client denied by server configuration: /var/www/html/privado.html
[Thu Nov 04 18:31:42.408618 2021] [access_compat:error] [pid 52784] [client 10.0.2.4:51748] AH01797:
client denied by server configuration: /var/www/html/privado.html
[Thu Nov 04 18:31:43.099483 2021] [access_compat:error] [pid 52784] [client 10.0.2.4:51748] AH01797:
client denied by server configuration: /var/www/html/privado.html
[Thu Nov 04 18:31:43.418065 2021] [access_compat:error] [pid 52784] [client 10.0.2.4:51748] AH01797:
client denied by server configuration: /var/www/html/privado.html
iker@iker-servidor:/etc/apache2$ tail -f /var/log/apache2/error.log
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[Thu Nov 04 18:25:40.234502 2021] [mpm_prefork:notice] [pid 52780] AH00163: Apache/2.4.41 (Ubuntu) O
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[Thu Nov 04 18:25:40.234517 2021] [core:notice] [pid 52780] AH00094: Command line: '/usr/sbin/apache
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client denied by server configuration: /var/www/html/privado.html
```