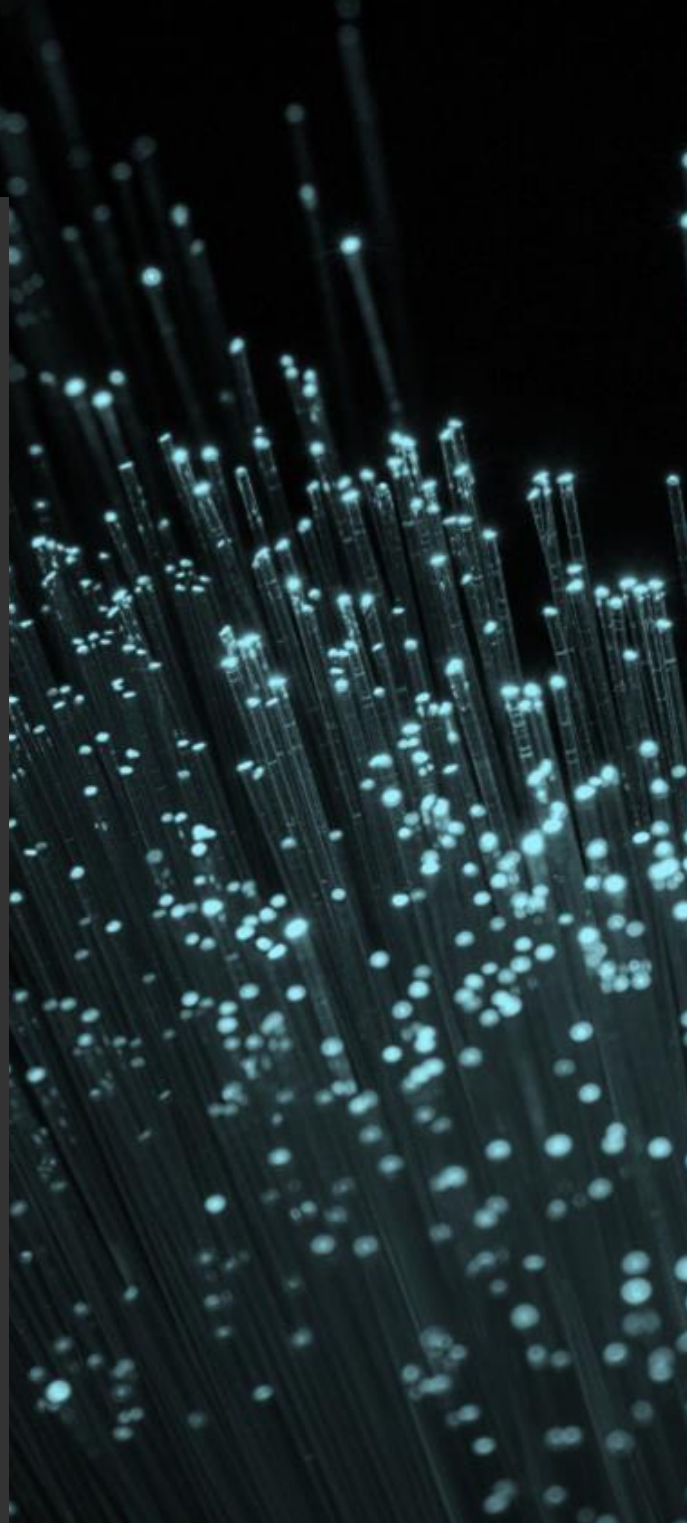


Administración de Sistemas y Redes

Práctica 7

31 MARZO

Autor: Eduardo Blanco Bielsa
UO: UO285176
Correo: UO285176@uniovi.es



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Servidores Web en Linux: Apache

1. Instalación

Comprobamos que la máquina Linux se llama linux.as.local con \$ **uname -a**:

```
[UO285176@linux ~]# uname -a
Linux linux.as.local 5.14.0-162
linux
```

Comprobamos que tenemos acceso a Internet con un ping a Google:

```
[UO285176@linux ~]# ping google.es
PING google.es (142.250.200.99) 56(84) bytes of data.
64 bytes from mad41s13-in-f3.1e100.net (142.250.200.99): icmp_seq=1 ttl=114 time=13.1 ms
64 bytes from mad41s13-in-f3.1e100.net (142.250.200.99): icmp_seq=2 ttl=114 time=12.5 ms
64 bytes from mad41s13-in-f3.1e100.net (142.250.200.99): icmp_seq=3 ttl=114 time=12.6 ms
^C
--- google.es ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2106ms
rtt min/avg/max/mdev = 12.530/12.746/13.141/0.279 ms
[UO285176@linux ~]#
```

Comprobamos que podemos resolver **linux.as.local** desde todas las máquinas:

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

Nombre: linux.as.local
Address: 192.168.56.100

C:\Users\Administrador>UO285176_
```

```
C:\Users\blanc>nslookup linux.as.local
Servidor: ws2022.as.local
Address: 192.168.56.101

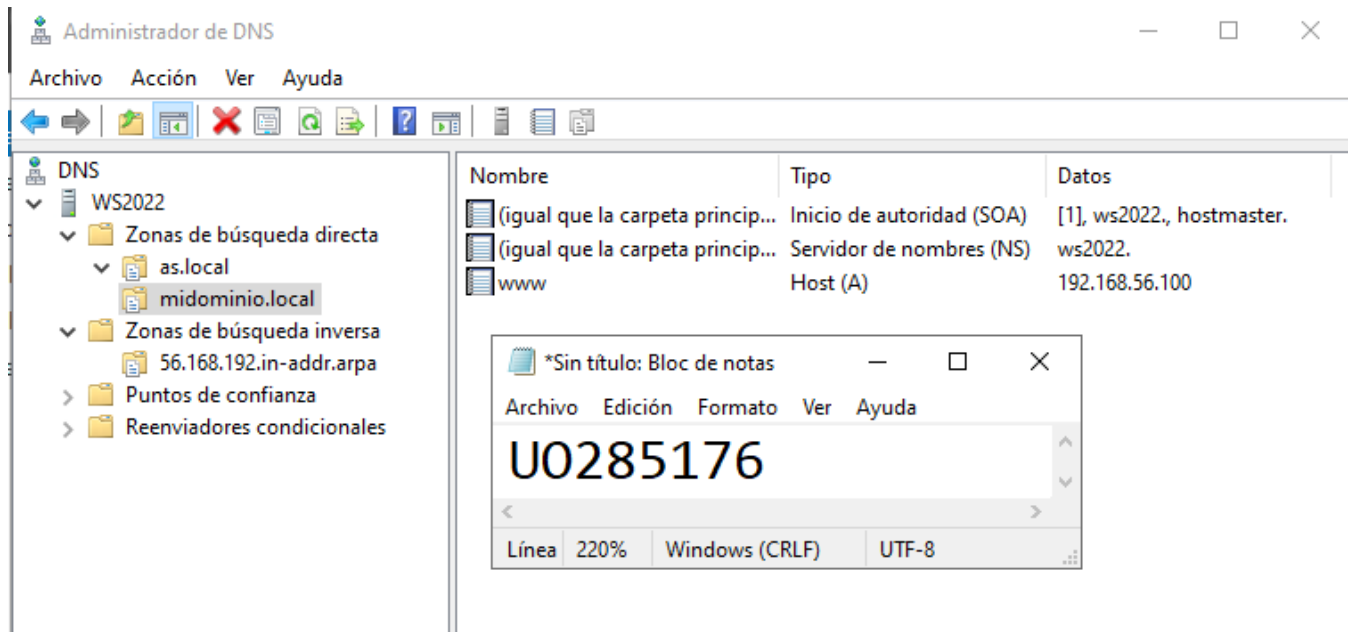
Nombre: linux.as.local
Address: 192.168.56.100

C:\Users\blanc>UO285176
```

```
[UO285176@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
```

Añadimos una nueva zona llamada **midominio.local** con la misma ip que la máquina Linux:



Vemos que podemos resolverlo desde Linux y W10:

```
[U0285176@linux~]-12: nslookup www.midominio.local
Server:          192.168.56.101
Address:         192.168.56.101#53

Name:   www.midominio.local
Address: 192.168.56.100

[U0285176@linux~]-13:
```

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

Nombre:    www.midominio.local
Address:   192.168.56.100

C:\Users\blanc>U0285176
```

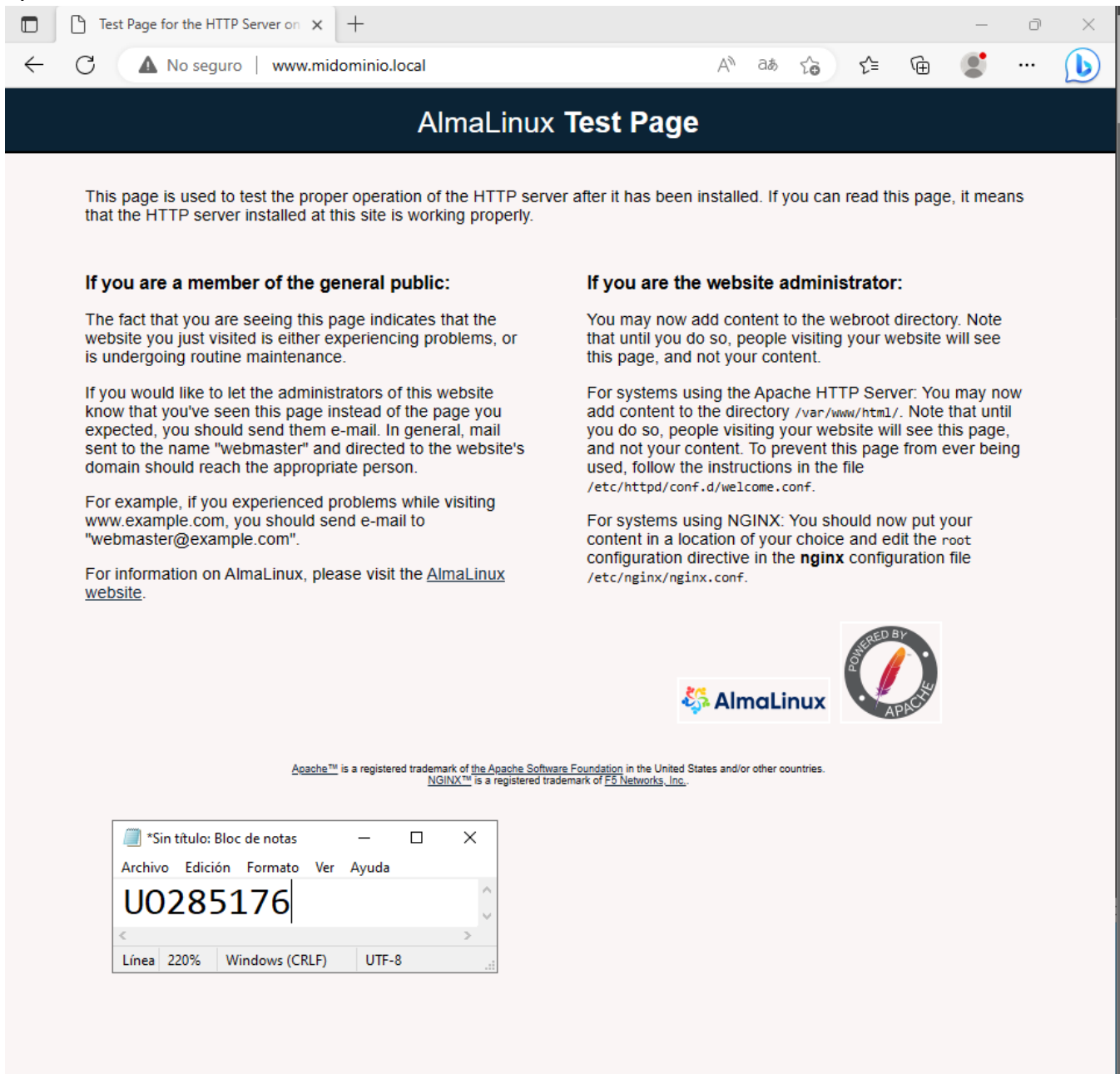
Instalamos el servicio apache con `$ dnf install httpd`. Arrancamos el firewall y el httpd:

```
[U0285176@linux~]-18: systemctl start httpd
[U0285176@linux~]-19: systemctl status httpd
● httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; disabled; vendor preset: disabled)
   Active: active (running) since Wed 2023-03-29 09:32:52 CEST; 6s ago
     Docs: man:httpd.service(8)
   Main PID: 2010 (httpd)
    Status: "Started, listening on: port 80"
   Tasks: 213 (limit: 10996)
  Memory: 27.5M
    CPU: 38ms
   CGroup: /system.slice/httpd.service
           └─2010 /usr/sbin/httpd -DFOREGROUND
             └─2011 /usr/sbin/httpd -DFOREGROUND
               └─2012 /usr/sbin/httpd -DFOREGROUND
                 └─2013 /usr/sbin/httpd -DFOREGROUND
                   └─2015 /usr/sbin/httpd -DFOREGROUND

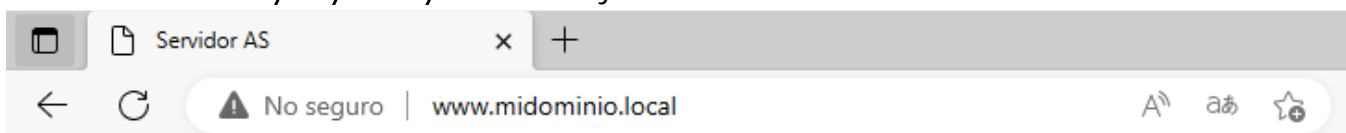
mar 29 09:32:52 linux.as.local systemd[1]: Starting The Apache HTTP Server...
mar 29 09:32:52 linux.as.local systemd[1]: Started The Apache HTTP Server.
mar 29 09:32:52 linux.as.local httpd[2010]: Server configured, listening on: port 80
[U0285176@linux~]-20: systemctl enable httpd
Created symlink /etc/systemd/system/multi-user.target.wants/httpd.service → /usr/lib/systemd/system/httpd.service.
[ 1931.126971] systemd-rc-local-generator[2239]: /etc/rc.d/rc.local is not marked executable, skipping.
[U0285176@linux~]-21:
```

```
[U0285176@linux~]-16: firewall-cmd --zone=internal --permanent --add-service=http
success
[U0285176@linux~]-17: firewall-cmd --reload
success
[U0285176@linux~]-18:
```

Arrancamos el navegador en WS2022 y vemos que se muestra la página por defecto de apache:



Creamos el fichero `/var/www/index.html` y lo visualizamos:



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2. Configuración de las páginas web de los usuarios

Comprobamos que el usuario **asuser** existe:

```
postfix:x:89:89::/var/spool/postfix:/sbin/nologin
dhcpd:x:177:177:DHCP server:/:/sbin/nologin
asuser:x:1001:1001::/home/asuser:/bin/bash
apache:x:48:48:Apache:/usr/share/httpd:/sbin/nologin
```

Modificamos el fichero `/etc/httpd/config.d/userdir.conf`:

```
# Otherwise, the client will only receive a "403 Forbidden" message.
#
<IfModule mod_userdir.c>
    #
    # UserDir is disabled by default since it can confirm the presence
    # of a username on the system (depending on home directory
    # permissions).
    #
    #UserDir disabled

    #
    # To enable requests to ~/user/ to serve the user's public_html
    # directory, remove the "UserDir disabled" line above, and uncomment
    # the following line instead:
    #
    UserDir public_html
</IfModule>

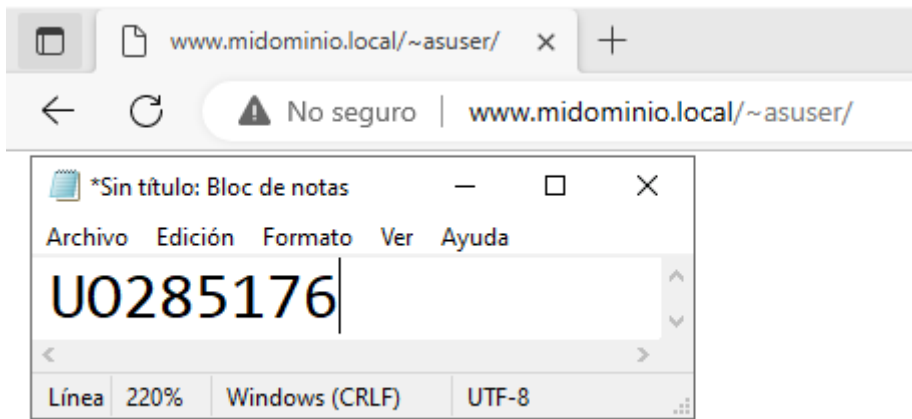
#
# Control access to UserDir directories. The following is an example
# for a site where these directories are restricted to read-only.
#
<Directory "/home/*/public_html">
    AllowOverride FileInfo AuthConfig Limit Indexes
    Options MultiViews Indexes SymLinksIfOwnerMatch IncludesNoExec
    Require method GET POST OPTIONS
</Directory>
```

Ejecutamos los siguientes comandos:

```
$ chmod 711 /home/asuser/
$ setsebool -P httpd_read_user_content on
$ setsebool -P httpd_enable_homedirs on
```

Ahora entramos en session como **asuser**. Creamos la carpeta `/public_html` y el fichero `index.html` y le modificamos los permisos con `755` al nuevo directorio.

Vemos que ahora desde **W10** se resuelve:



3. Configuración del servidor apache

a) Ubicación

Modificamos la sección correspondiente /var/www:

```
#
# Relax access to content within /var/www.
#
<Directory "/as/web">
    Options FollowSymLinks
    AllowOverride None
    Require all granted
</Directory>

# Further relax access to the default document root
<Directory "/usr/share/doc/html">
```

Introducimos el siguiente comando:

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

Vemos que ha cambiado:



b) ServerName

Modificamos los parámetros ServerAdmin y ServerName en el conf.d:

```

##
# 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 uo285176@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

```

Cambiamos el puerto 80 al 9999 y vemos que se visualiza:



Retornamos el puerto 80.

c) Repositorios

Si cambiamos el nombre vuelve a salir la página por defecto de apache:

AlmaLinux Test Page

This page is used to test the proper operation of the HTTP server after it has been installed. If you can read this page, it means that the HTTP server installed at this site is working properly.

<p>If you are a member of the general public:</p> <p>The fact that you are seeing this page indicates that the website you just visited is either experiencing problems, or is undergoing routine maintenance.</p> <p>If you would like to let the administrators of this website know that you've seen this page instead of the page you expected, you should send them e-mail. In general, mail sent to the name "webmaster" and directed to the website's domain should reach the appropriate person.</p> <p>For example, if you experienced problems while visiting www.example.com, you should send e-mail to "webmaster@example.com".</p> <p>For information on AlmaLinux, please visit the AlmaLinux website.</p>	<p>If you are the website administrator:</p> <p>You may now add content to the webroot directory. Note that until you do so, people visiting your website will see this page, and not your content.</p> <p>For systems using the Apache HTTP Server: You may now add content to the directory <code>/var/www/html/</code>. Note that until you do so, people visiting your website will see this page, and not your content. To prevent this page from ever being used, follow the instructions in the file <code>/etc/httpd/conf.d/welcome.conf</code>.</p> <p>For systems using NGINX: You should now put your content in a location of your choice and edit the root configuration directive in the nginx configuration file <code>/etc/nginx/nginx.conf</code>.</p>
---	---

Apache™ is a registered trademark of the Apache Software Foundation in the United States and/or other countries.
 NGINX™ is a registered trademark of FS Networks, Inc.

Comentamos todas las líneas del welcome.conf y comprobamos la página de nuevo:



No se tiene acceso para el servicio.

Si ahora añadimos lo siguiente y restauramos:

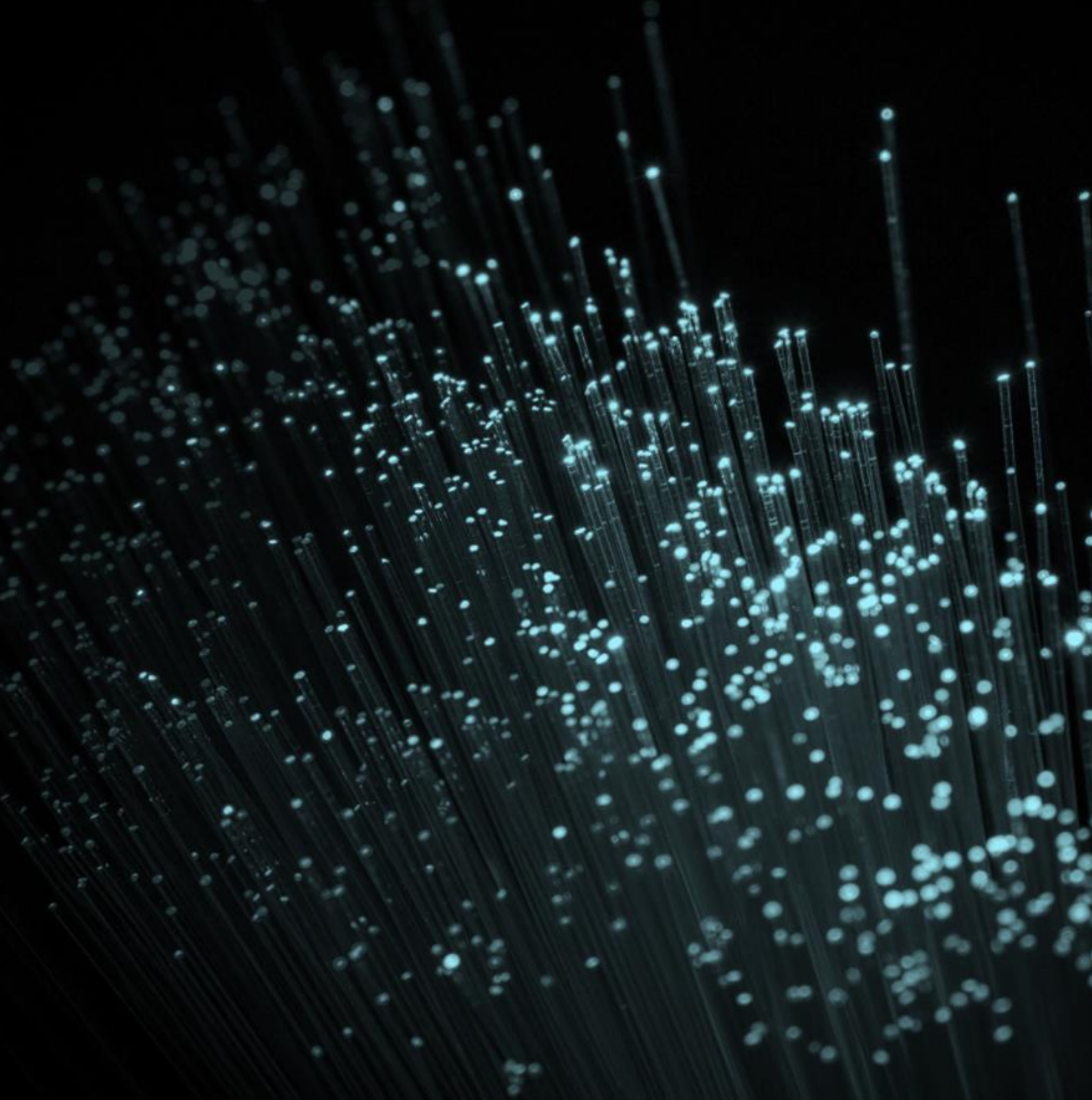
```
#
# Relax access to content within /var/www.
#
<Directory "/as/web">
  Options Indexes FollowSymLinks
  AllowOverride None
  Require all granted
</Directory>
```



Vemos que nos muestra un índice del contenido de /as/web

Si buscamos una dirección que no existe y miramos el log de accesos vemos el usuario que lo ha buscado, la fecha, la petición, el resultado de la petición, el navegador y el sistema operativo:

```
Kit/537.36 (KHTML, like Gecko) Chrome/111.0.0.0 Safari/537.36 Edg/111.0.1661.54"
192.168.56.101 - - [29/Mar/2023:10:38:04 +0200] "GET / HTTP/1.1" 200 698 "-" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWeb
Kit/537.36 (KHTML, like Gecko) Chrome/111.0.0.0 Safari/537.36 Edg/111.0.1661.54"
192.168.56.101 - - [29/Mar/2023:10:38:04 +0200] "GET /icons/blank.gif HTTP/1.1" 200 148 "http://www.midominio.local/" "Mozilla/5
.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/111.0.0.0 Safari/537.36 Edg/111.0.1661.54"
192.168.56.101 - - [29/Mar/2023:10:38:04 +0200] "GET /icons/text.gif HTTP/1.1" 200 229 "http://www.midominio.local/" "Mozilla/5
0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/111.0.0.0 Safari/537.36 Edg/111.0.1661.54"
192.168.56.101 - - [29/Mar/2023:10:39:03 +0200] "GET /noexiste HTTP/1.1" 404 196 "-" "Mozilla/5.0 (Windows NT 10.0; Win64; x64)
AppleWebKit/537.36 (KHTML, like Gecko) Chrome/111.0.0.0 Safari/537.36 Edg/111.0.1661.54"
```



Escuela de
Ingeniería
Informática
Universidad de Oviedo