Servei Web

Primer Instal·lem Apache2:

- sudo apt-get install apache2

Arrencar servei:

- sudo service apache2 reload (o restart)
- systemctl reload apache2

Deshabilitem pagina per defecte: (sempre)

- Anem a /etc/apache2/sites-available i escrivim «sudo a2dissite 000-default.conf». I també s'ha de deshabilitar la pàgina per defecte del ssl «sudo a2dissite default_ssl.conf»

Crear Virtual Hosts:

Primer de tot anem al fitxer de configuració de ports «sudo nano /etc/apache2/ports.conf».

```
  GNU nano 6.2                        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 8080
Listen 8008
```

Desprès copiem el fitxer 000-default.conf i l'anomenem de qualsevol manera.
Documentroot es on trobem la ruta on trobem el index.html de la nostre pàgina

```
  GNU nano 6.2                    172.16.23.197.conf
<VirtualHost 172.16.23.197:80>
        # The ServerName directive sets the request scheme, hostname and port t>
        # 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 www.example.com

        ServerAdmin webmaster@localhost
        DocumentRoot /var/www/dawid

        # 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
```
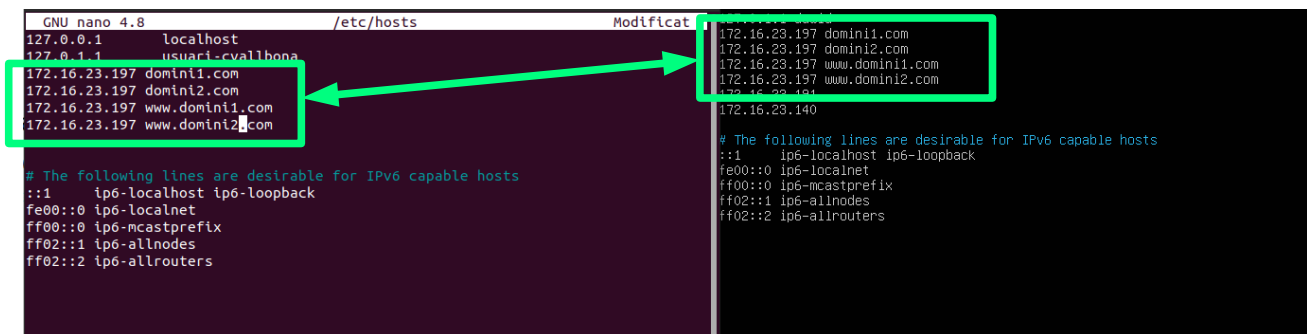
Creem el document root on posarem


```
dawid@dawid:~$ cd /var/www/
dawid@dawid:/var/www$ sudo mkdir dawid
dawid@dawid:/var/www$ cd dawid
dawid@dawid:/var/www/dawid$ sudo nano index.html
```



```
dawid@dawid:/var/www$ sudo a2ensite 172.16.23.197.conf
Enabling site 172.16.23.197.
To activate the new configuration, you need to run:
  systemctl reload apache2
dawid@dawid:/var/www$ sudo systemcttl reload apache2
sudo: systemcttl: command not found
dawid@dawid:/var/www$ sudo systemctl reload apache2
```

Posar el nom del server/pàgina

Primer entrem al «/etc/hosts». Ho escrivim en el servidor i en el client.

Eliminem el port i afegim la ip del domini. A més descomentem el «ServerName» i canviem el nom del domini

SSL

Primer de tot generem el nostre codi:

sudo openssl req -x509 -nodes -newkey rsa:2048 -keyout /etc/ssl/private/mysite.key -out /etc/ssl/certs/mysite.pem -days 365

(Per emplenar la informació posem qualsevol cosa però s'ha de omplir tot)

```
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]:Barcelona
Locality Name (eg, city) []:Grano
Organization Name (eg, company) [Internet Widgits Pty Ltd]:jaime
Organizational Unit Name (eg, section) []:jaime
Common Name (e.g. server FQDN or YOUR name) []:dawid
Email Address []:dawid@gmail.com
```

Desprès de generar el certificat activem el modul ssl.

```
dawid@dawid:/etc/apache2$ sudo a2enmod ssl
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 s
elf-signed certificates.
To activate the new configuration, you need to run:
  systemctl restart apache2
```

Copiem el fitxer default-ssl.conf.

```
dawid@dawid:/etc/apache2/sites-available$ sudo cp default-ssl.conf eibin_ssl.conf
```

Quan modifiquem el fitxer hem de afegir el «ServerName» i canviar el DocumentRoot.

```
  GNU nano 6.2                    eibin_ssl.conf *
<IfModule mod_ssl.c>
        <VirtualHost _default_:443>
                ServerAdmin webmaster@localhost
                ServerName eibin.cat
                DocumentRoot /var/www/ssl
                Header always set Strict-Transport-Security "max-age=63072000; in>
                # Available loglevels: trace8, ..., trace1, debug, info, notice, >
                # 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 exampl>
                # following line enables the CGI configuration for this host only
```

I canviem la ruta del certificat del nom que hem posat en la primer comanda del ssl.

```
  GNU nano 6.2                      eibin_ssl.conf *
            #   SSL Engine Switch:
            #   Enable/Disable SSL for this virtual host.
            SSLEngine on

            #   A self-signed (snakeoil) certificate can be created by instal>
            #   the ssl-cert package. See
            #   /usr/share/doc/apache2/README.Debian.gz for more info.
            #   If both key and certificate are stored in the same file, only>
            #   SSLCertificateFile directive is needed.
            SSLCertificateFile      /etc/ssl/certs/eibin.pem
            SSLCertificateKeyFile /etc/ssl/private/eibin.key

            #   Server Certificate Chain:
            #   Point SSLCertificateChainFile at a file containing the
            #   concatenation of PEM encoded CA certificates which form the
            #   certificate chain for the server certificate. Alternatively
            #   the referenced file can be the same as SSLCertificateFile
            #   when the CA certificates are directly appended to the server
            #   certificate for convinience.
            #SSLCertificateChainFile /etc/apache2/ssl.crt/server-ca.crt
```

Creem la ruta del index.html del ssl en «/var/www». (jo e creat la carpeta ssl i dins e creat el index.html)

```
dawid@dawid:/var/www/ssl$ ls
index.html
```

Activem el site de la configuració ssl

```
dawid@dawid:~$ sudo a2ensite eibin_ssl.conf
Enabling site eibin_ssl.
To activate the new configuration, you need to run:
  systemctl reload apache2
```

Comprovació:

```
dawid@dawid:~$ curl https://eibin.cat -k
Estic a eibin.cat amb ssl
```

Redirreccionar:

Per rediccionar entrem a «/etc/apache2/sites-availab/eibin.conf» *(el eibin.conf es el fitxer copiat del 000-default.conf)*.

I afegim «Redirect permanent/ https://eibin.cat/».

```
  GNU nano 6.2                          eibin.conf
<VirtualHost *:80>
        # The ServerName directive sets the request scheme, hostname and port th>
        # 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 www.eibin.cat

        ServerAdmin webmaster@localhost
        DocumentRoot /var/www/eibin
        Redirect permanent / https://eibin.cat/
        # Available loglevels: trace8, ..., trace1, debug, info, notice, warn,
        # error, crit, alert, emerg.
        # It is also possible to configure the loglevel for particular
```
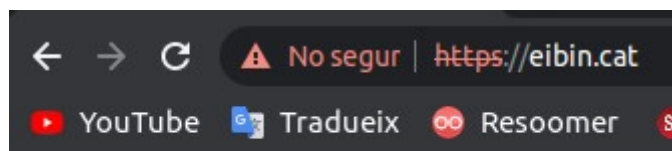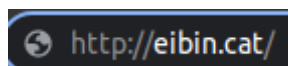
Fem un systemctl restart apache2.

```
dawid@dawid:/etc/apache2/sites-available$ sudo systemctl restart apache2
```

I si fem un «curl» ens diu que s'ha redireccionat.

```
dawid@dawid:/etc/apache2/sites-available$ curl http://eibin.cat
<!DOCTYPE HTML PUBLIC "-//IETF//DTD HTML 2.0//EN">
<html><head>
<title>301 Moved Permanently</title>
</head><body>
<h1>Moved Permanently</h1>
<p>The document has moved <a href="https://eibin.cat/">here</a>.</p>
<hr>
<address>Apache/2.4.52 (Ubuntu) Server at eibin.cat Port 80</address>
</body></html>
```

I haurem de entrar a google i provar posar «http://eibin.cat» i veure que ens redirecciona.

```
🌐 http://eibin.cat/
```

```
←  →  C   ⚠ No segur | https://eibin.cat
▶ YouTube  🔠 Tradueix  ⚬⚬ Resoomer
```
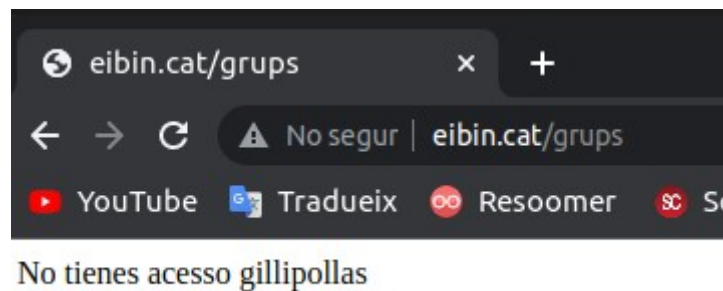
Estic a eibin.cat amb ssl

Mensaje de error:

Per crear el missatge d'error hem de entrar al fitxer de configuració que hem copiat del 000-default.conf.

```
        ServerName www.eibin.cat

        ServerAdmin webmaster@localhost
        DocumentRoot /var/www/eibin
#       Redirect permanent / https://eibin.cat/
        <Directory "/var/www/eibin/grups">
                Options -Indexes
                AuthType Basic
                AuthName "Aquesta zona està restringida, es requereix usuari i pass>
                AuthBasicProvider file
                AuthUserFile "/etc/apache2/secret"
                AuthGroupFile "/etc/apache2/grups"
                Require group profe
                ErrorDocument 500 "servidor no funciona, kurwa"
                ErrorDocument 401 "No tienes acesso gillipollas"

        </Directory>
```

Resultat:

```
eibin.cat/grups          ×    +

←  →  C    ⚠ No segur | eibin.cat/grups

▶ YouTube   Tradueix   ∞ Resoomer   sc Sc
```

No tienes acesso gillipollas

El missatge d'error són: (ho poso al document per a que sigui més fàcil en copiar)

```
ErrorDocument 500 "Sorry, our script crashed. Oh dear"
ErrorDocument 500 /cgi-bin/crash-recover
ErrorDocument 500 http://error.example.com/server_error.html
ErrorDocument 404 /errors/not_found.html
ErrorDocument 401 /subscription/how_to_subscribe.htm
```

Autoritzar un directori:

Entrem al «/etc/apache2» i fem un «sudo htpasswd -c secret nom_usuari» per crear contrasenyas en un arxiu anomenat secret.

```
dawid@dawid:~$ cd /etc/apache2
dawid@dawid:/etc/apache2$ sudo htpasswd -c secret jordi
```

```
dawid@dawid:/etc/apache2$ cat secret
jordi:$apr1$3Z/sZSf0$GNPylAcdrfAzJF58pV2kW.
```

Seguidament ho farem per altres usuaris però sense el «-c».

```
dawid@dawid:/etc/apache2$ sudo htpasswd secret vanesa
New password:
Re-type new password:
Adding password for user vanesa
```

```
dawid@dawid:/etc/apache2$ cat secret
jordi:$apr1$3Z/sZSf0$GNPylAcdrfAzJF58pV2kW.
vanesa:$apr1$X6tAm7h0$/P/e6uTRyNosklf/JSsNM1
pau:$apr1$ZRwAb/.z$2qDmnfI//ojb0S9soFSJ9.
```

Activem el modul dels grups

```
dawid@dawid:/etc/apache2$ sudo a2enmod authz_groupfile
Considering dependency authz_core for authz_groupfile:
Module authz_core already enabled
Enabling module authz_groupfile.
To activate the new configuration, you need to run:
  systemctl restart apache2
```

En el mateix directori «/etc/apache2» creem un arxiu anomenat grups on posarem el grups que poden accedir.

```
dawid@dawid:/etc/apache2$ sudo nano grups
```

```
  GNU nano 6.2                              grups *
profe: jordi vanesa
```

Creem un directori i un arxiu index.html.

```
dawid@dawid:/var/www/eibin$ sudo mkdir grups
```

```
dawid@dawid:/var/www/eibin/grups$ sudo nano index.html
```

Configuració per a que només entri un usuari:

```
GNU nano 6.2                          eibin.conf
        # 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 www.eibin.cat

        ServerAdmin webmaster@localhost
        DocumentRoot /var/www/eibin
#       Redirect permanent / https://eibin.cat/
        <Directory "/var/www/eibin/grups">
                Options -Indexes
                AuthType Basic
                AuthName "Aquesta zona està restringida, es requereix usuari i pass>
                AuthBasicProvider file
                AuthUserFile "/etc/apache2/secret"
                Require user jordi
        </Directory>
```

Configuració per a que només entri un grup:

```
GNU nano 6.2                          eibin.conf
        # 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 www.eibin.cat

        ServerAdmin webmaster@localhost
        DocumentRoot /var/www/eibin
#       Redirect permanent / https://eibin.cat/
        <Directory "/var/www/eibin/grups">
                Options -Indexes
                AuthType Basic
                AuthName "Aquesta zona està restringida, es requereix usuari i pass>
                AuthBasicProvider file
                AuthUserFile "/etc/apache2/secret"
                AuthGroupFile "/etc/apache2/grups"
                Require group profe
        </Directory>
```

Configuració de ip (https://httpd.apache.org/docs/2.4/howto/auth.html).

El uso de estos proveedores se especifica a través de la directiva Require. La directiva registra los proveedores de autorización que serán llamados durante la solicitud de la fase del proceso de autorización. Por ejemplo:

```
Require ip address
```

Donde *address* es una dirección IP (o una dirección IP parcial) o bien:

```
Require host domain_name
```

Donde *domain_name* es el nombre completamente cualificado de un nombre de dominio (FQDN) (o un nombre parcial del dominio); puede proporcionar múltiples direcciones o nombres de dominio, si se desea.

Por ejemplo, si alguien envía spam a su tablón de mensajes y desea mantenerlos alejados, podría hacer lo siguiente:

```
<RequireAll>
    Require all granted
    Require not ip 10.252.46.165
</RequireAll>
```

Visitantes que vengan desde esa IP no serán capaces de ver el contenido que cubre esta directiva. Si, en cambio, lo que se tiene es el nombre de la máquina, en vez de la dirección IP, podría usar:

```
<RequireAll>
    Require all granted
    Require not host host.example.com
</RequireAll>
```

Y, si lo que se quiere es bloquear el acceso desde un determinado dominio (bloquear el acceso desde el dominio entero), puede especificar parte de la dirección o del propio dominio a bloquear:

```
<RequireAll>
    Require all granted
    Require not ip 192.168.205
    Require not host phishers.example.com moreidiots.example
    Require not host ke
</RequireAll>
```

Unaltres referencies:
1.- https://tutobasico.com/
2.- https://sites.google.com/

Espais web personals: (userdir)

Primer activem el modul. **Es moolt important sinó no ens funcionara.**

Creem una carpeta public_html en el /etc/skel. *Recordatori: sempre s'ha de crear primer la carpeta.*

Creem el usuaris que ens faci falta. *Recordatori: per saber si funcionara el /etc/skel del usuari ens sortira aquest missatge en crear el usuari «Coping files from '/etc/skel' ... ».*

Fem un «sudo su» i ens anem a les home que hem creat.

Seguidament el que farem es posar que el propietari sigui el «www-data» de les carpetes home i public_html. (S'ha de fer de tots els usuaris que hem creat).

Crear index.html en public_html per cada usuari.

```
root@dawid:/home# nano /home/jordi/public_html/index.html

  GNU nano 6.2              /home/jordi/public_html/index.html *
Usuari Jordi
```

Comprovar si ha funcionat.

```
root@dawid:/home# curl http://localhost/~pau/
Usuari Pau
root@dawid:/home# curl http://localhost/~vanesa/
Usuari Vanesa
root@dawid:/home# curl http://localhost/~jordi/
Usuari Jordi
```

Així es veu amb el domini.

```
dawid@dawid:~$ curl http://eibin.cat/~jordi/
Usuari Jordi
dawid@dawid:~$ curl http://eibin.cat/~vanesa/
Usuari Vanesa
dawid@dawid:~$ curl http://eibin.cat/~pau/
Usuari Pau
```