

INSTALACIÓN E CONFIGURACIÓN DE NGINX



NGINX®

Created by:

Alina Cherednichenko

1. Instala o servidor nginx e comproba que podes acceder ao ficheiro por defecto.

Iniciar Nginx y Verificar el estado

```
● nginx.service - A high performance web server and a reverse proxy server
   Loaded: loaded (/lib/systemd/system/nginx.service; enabled; preset: enabled)
   Active: active (running) since Thu 2024-12-05 10:26:03 CET; 14s ago
     Docs: man:nginx(8)
  Process: 1521 ExecStartPre=/usr/sbin/nginx -t -q -g daemon on; master_process on; (code=exited, status=0/SUCCESS)
  Process: 1522 ExecStart=/usr/sbin/nginx -g daemon on; master_process on; (code=exited, status=0/SUCCESS)
 Main PID: 1523 (nginx)
    Tasks: 2 (limit: 2306)
   Memory: 1.6M
      CPU: 11ms
  CGroup: /system.slice/nginx.service
          └─1523 "nginx: master process /usr/sbin/nginx -g daemon on; master_process on;"
            └─1524 "nginx: worker process"

dic 05 10:26:03 userver-alina systemd[1]: Starting nginx.service - A high performance web server and a reverse proxy server...
dic 05 10:26:03 userver-alina systemd[1]: Started nginx.service - A high performance web server and a reverse proxy server.
```

Comprobación si se puede acceder al fichero por defecto

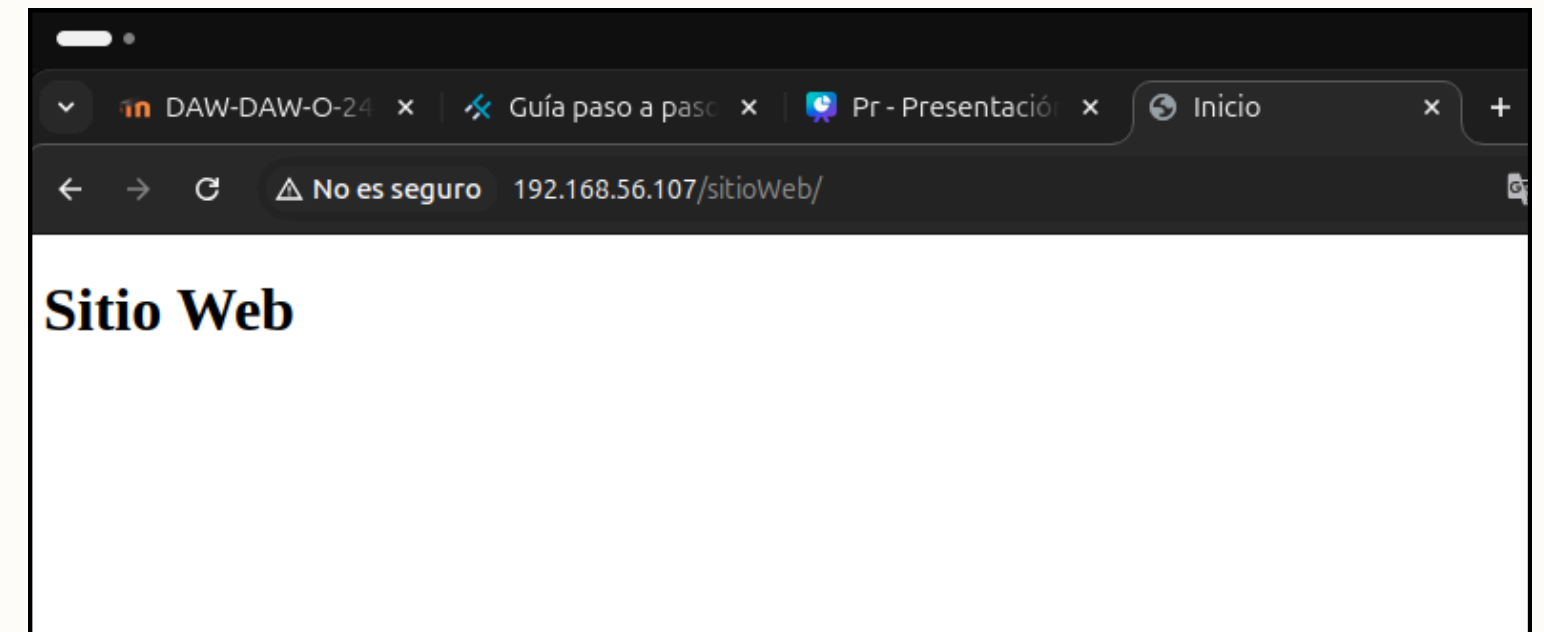


Instalar Nginx

```
root@userver-alina:~# apt install nginx
Leyendo lista de paquetes... Hecho
Creando árbol de dependencias... Hecho
Leyendo la información de estado... Hecho
Se instalarán los siguientes paquetes adicionales:
  nginx-common
Paquetes sugeridos:
  fcgiwrap nginx-doc
Se instalarán los siguientes paquetes NUEVOS:
  nginx nginx-common
0 actualizados, 2 nuevos se instalarán, 0 para eliminar y 0 no actualizados.
Se necesita descargar 640 kB de archivos.
Se utilizarán 1.696 kB de espacio de disco adicional después de esta operación.
¿Desea continuar? [S/n] S
Des:1 http://deb.debian.org/debian bookworm/main amd64 nginx-common all 1.22.1-9 [112 kB]
Des:2 http://deb.debian.org/debian bookworm/main amd64 nginx amd64 1.22.1-9 [527 kB]
Descargados 640 kB en 1s (917 kB/s)
Preconfigurando paquetes ...
Seleccionando el paquete nginx-common previamente no seleccionado.
(Leyendo la base de datos ... 26891 ficheros o directorios instalados actualmente.)
Preparando para desempaquetar .../nginx-common_1.22.1-9_all.deb ...
Desempaquetando nginx-common (1.22.1-9) ...
Seleccionando el paquete nginx previamente no seleccionado.
Preparando para desempaquetar .../nginx_1.22.1-9_amd64.deb ...
Desempaquetando nginx (1.22.1-9) ...
Configurando nginx-common (1.22.1-9) ...
Created symlink /etc/systemd/system/multi-user.target.wants/nginx.service → /lib
/systemd/system/nginx.service.
Could not execute systemctl: at /usr/bin/deb-systemd-invoke line 145.
Configurando nginx (1.22.1-9) ...
Not attempting to start NGINX, port 80 is already in use.
root@userver-alina:~#
```

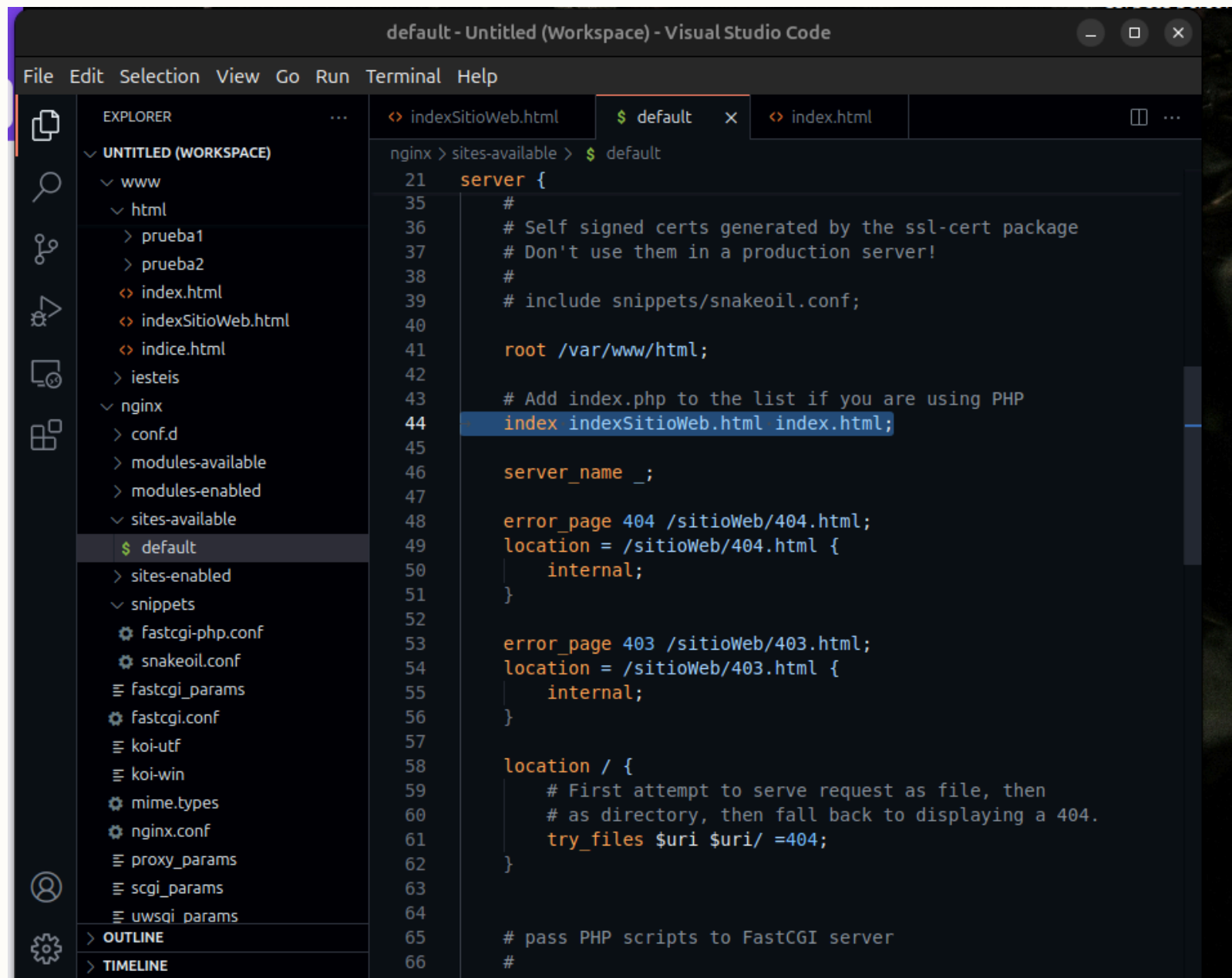
Sen tocar a configuración de nginx, localiza e cambia o contido deste ficheiro por defeco.

Sen tocar a configuración de nginx, crea un novo directorio cun ficheiro dentro que teña un nome de arquivo que faga que se sirva por defecto nese directorio (terás que buscar a directiva que así o indica para sabelo e NON modificala)



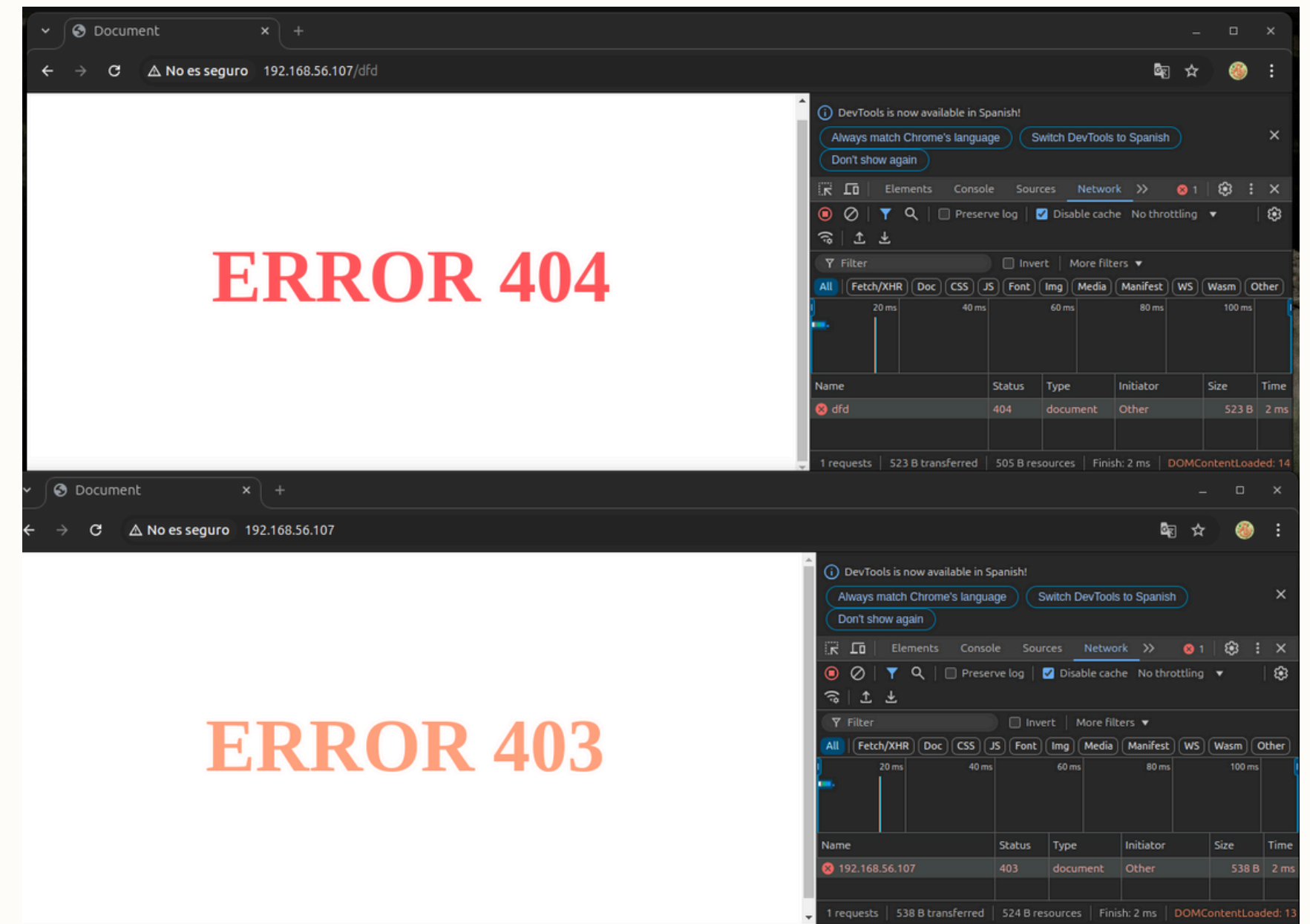
2. Modifica a configuración do sitio por defecto

- Cambia o ficheiro que se serve por defecto
/etc/nginx/sites-available
- Modifica as mensaxes que se amosan para os erros 403 e 404 (crea unha páxina web para cada un deles)

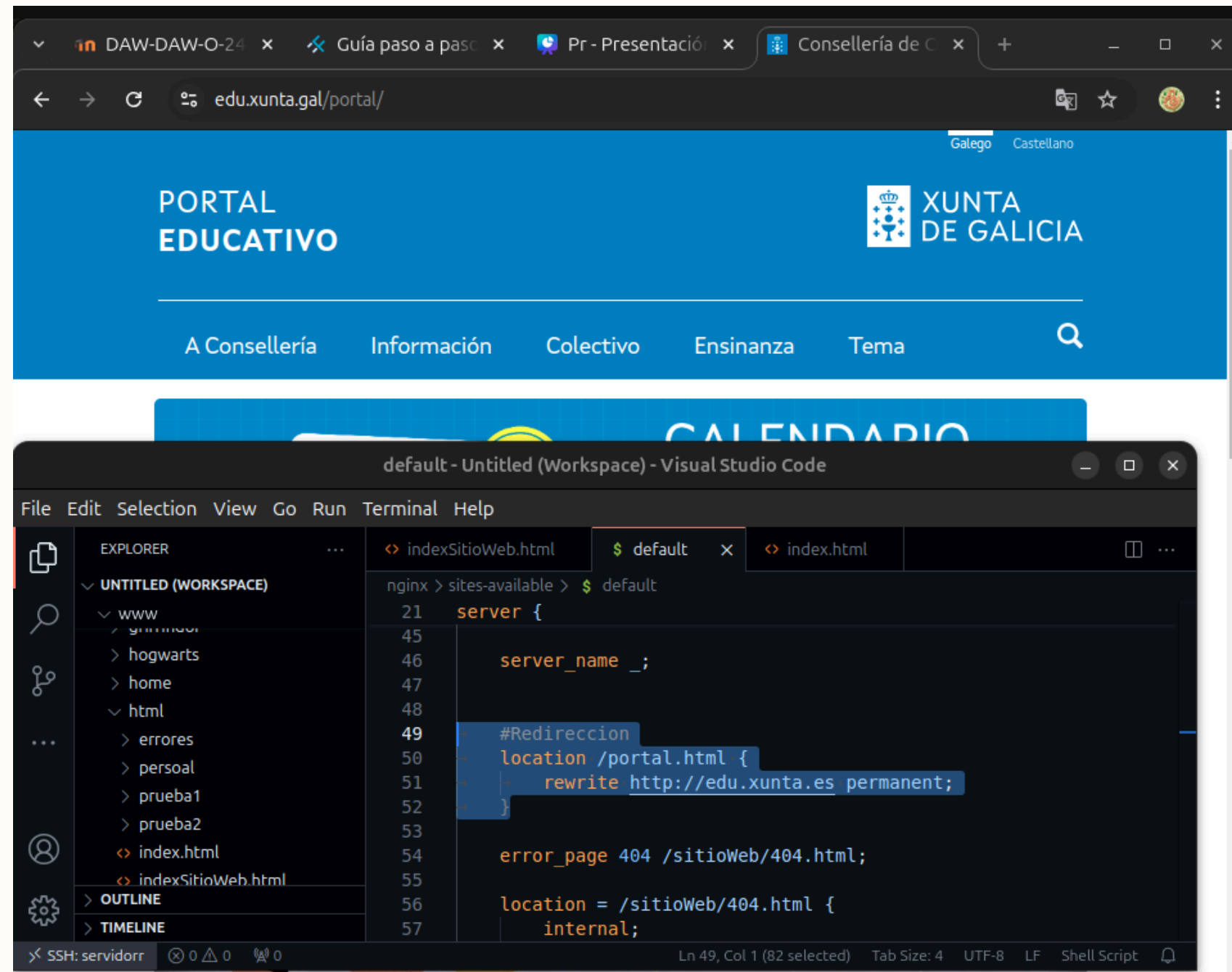


The screenshot shows the Visual Studio Code editor with the file `indexSitioweb.html` open in the `default` workspace. The file is located in the `/etc/nginx/sites-available` directory. The code is an nginx configuration snippet for a server named `_`. It includes comments about self-signed certificates and the `ssl-cert` package. The `root` is set to `/var/www/html`. The `error_page` directive is configured to serve `/sitioweb/404.html` for 404 errors and `/sitioweb/403.html` for 403 errors. The `location /` block is configured to serve files or directories, falling back to displaying a 404 error if the file is not found. The `try_files` directive is used to check for the existence of the file or directory.

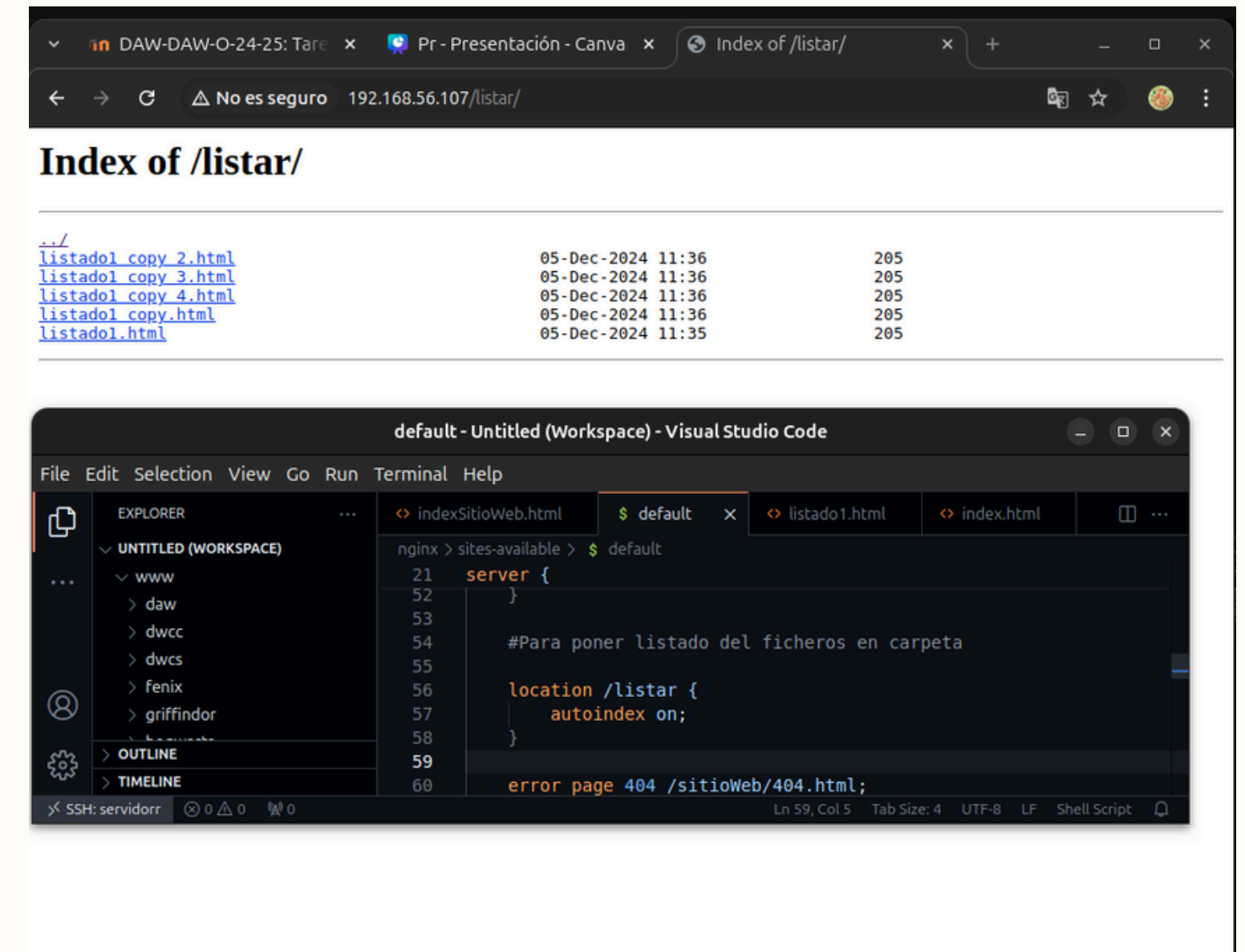
```
nginx > sites-available > $ default
21  server {
22      #
23      # Self signed certs generated by the ssl-cert package
24      # Don't use them in a production server!
25      #
26      # include snippets/snakeoil.conf;
27
28      root /var/www/html;
29
30      # Add index.php to the list if you are using PHP
31      index indexSitioweb.html index.html;
32
33      server_name _;
34
35      error_page 404 /sitioweb/404.html;
36      location = /sitioweb/404.html {
37          internal;
38      }
39
40      error_page 403 /sitioweb/403.html;
41      location = /sitioweb/403.html {
42          internal;
43      }
44
45      location / {
46          # First attempt to serve request as file, then
47          # as directory, then fall back to displaying a 404.
48          try_files $uri $uri/ =404;
49      }
50
51      # pass PHP scripts to FastCGI server
52      #
53  }
```



- Crea unha redirección para o arquivo portal.html para que vaia a <http://edu.xunta.es>



- Configura que o directorio listar amose o listado de arquivos.

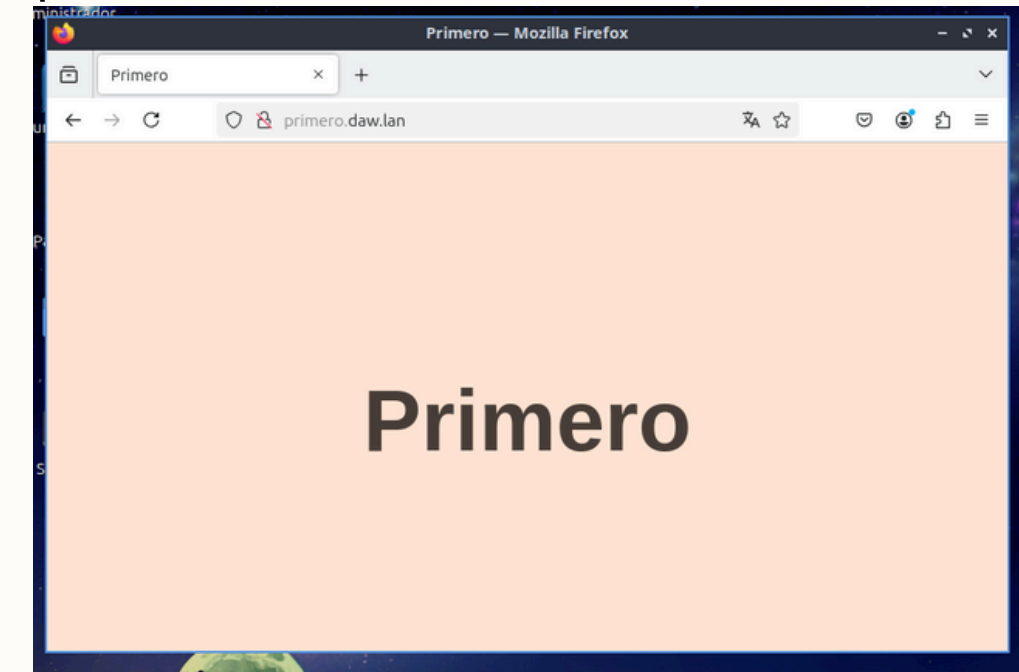


Crea dous bloques de servidor (o equivalente a sitios virtuais en Apache), do seguinte xeito

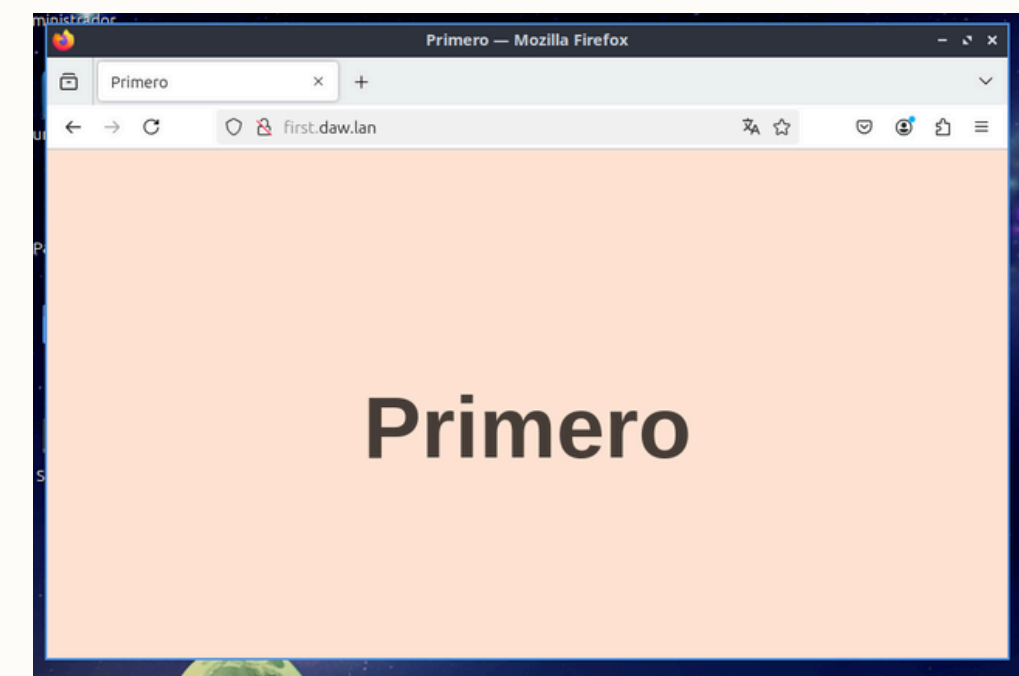
- O nome de dominio do primeiro será primeiro.daw.lan, o seu directorio base será /var/www/primeiro e conterá unha páxina chamada primeiro.html, que será a que se servirá por defecto. Terá un alias first.daw.lan.

```
$ primeiro x $ default < primo.html
nginx > sites-available > $ primeiro
1  # Virtual Host configuration for example.com
2  #
3  # You can move that to a different file under sites-available/ and symlin
4  # to sites-enabled/ to enable it.
5
6  server {
7      listen 80;
8      listen [::]:80;
9
10     server_name primeiro.daw.lan first.daw.lan;
11
12     root /var/www/primeiro;
13     index primeiro.html;
14
15     location / {
16         try_files $uri $uri/ =404;
17     }
18 }
```

primeiro.daw.lan

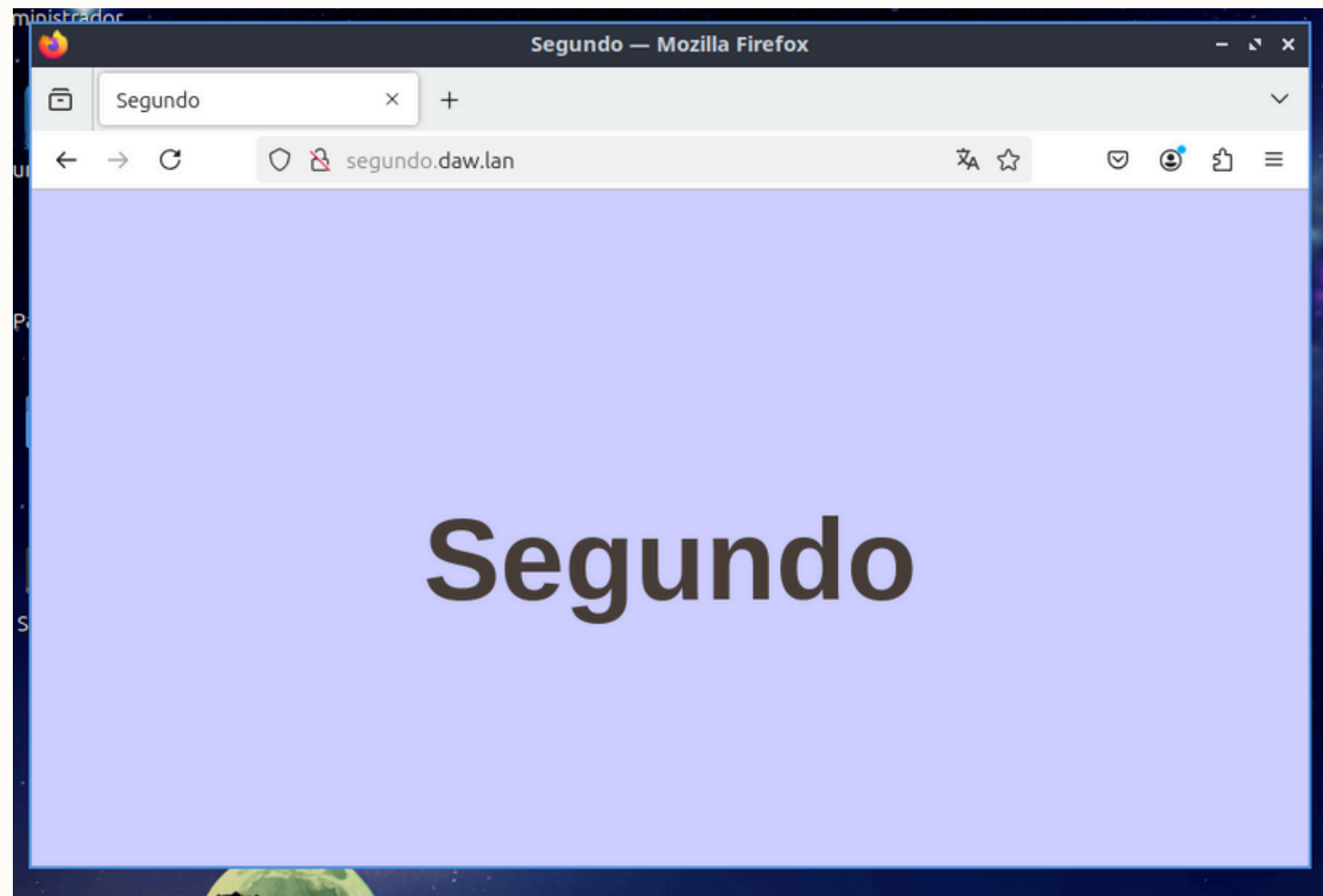


first.daw.lan

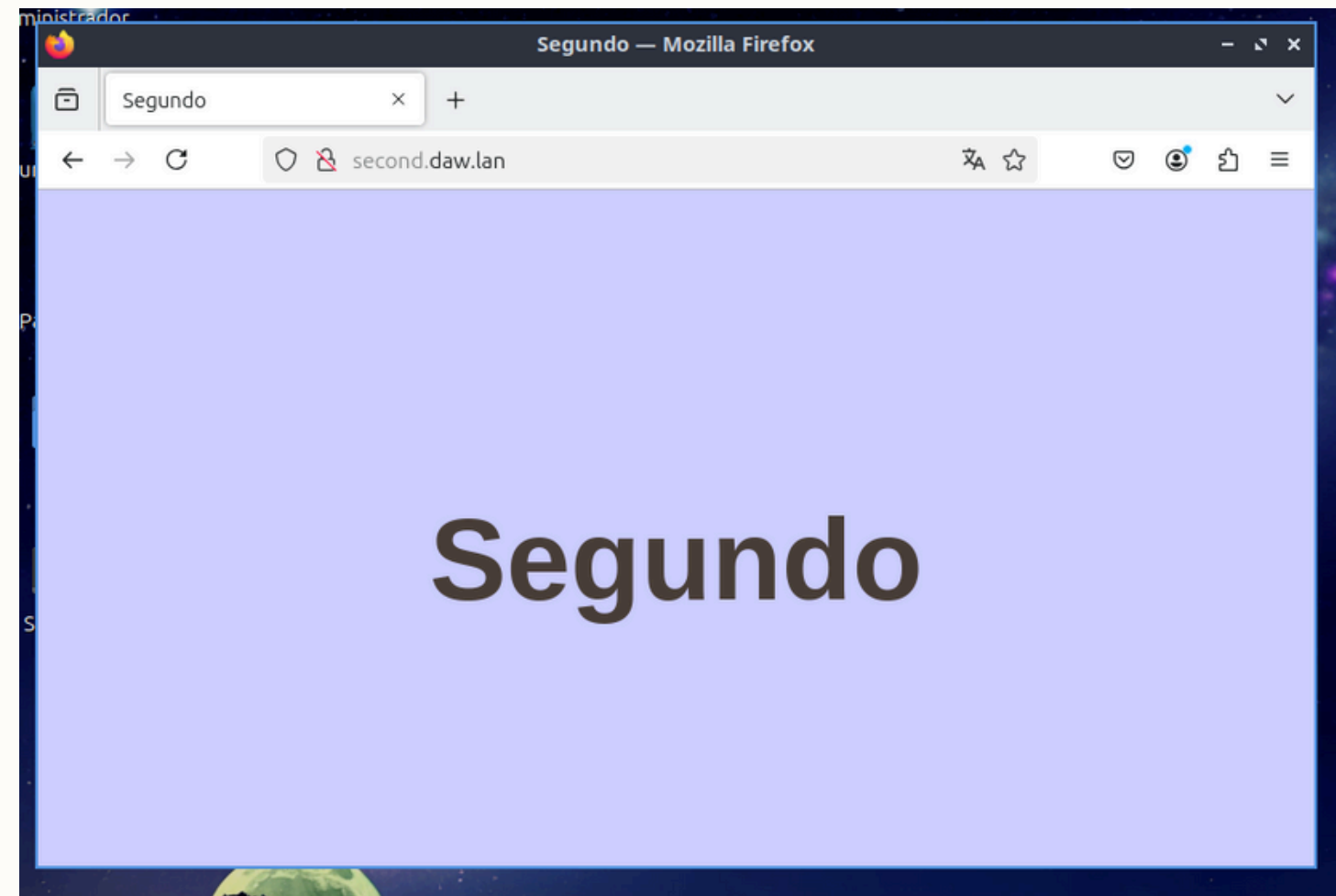


- O nome de dominio do segundo será segundo.daw.lan, o seu directorio base será /var/www/segundo e conterá unha páxina chamada segundo.html, que será a que se servirá por defecto. Terá un alias second.daw.lan.

segundo.daw.lan



second.daw.lan



/*Antes de realizar este apartado, configura o DNS para que relacione os enderezos simbólicos primeiro.daw.lan, first.daw.lan, segundo.daw.lan e second.daw.lan coa IP 10.0.2.12.*/*

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS bash - bind + - [ ] [ ] ... ^ X

● root@userver-alina:/etc/bind# cat db.daw.lan
; BIND reverse data file for empty rfc1918 zone
;
; DO NOT EDIT THIS FILE - it is used for multiple zones.
; Instead, copy it, edit named.conf, and use that copy.
;
$TTL      86400
@         IN      SOA      daw.lan. root.daw.lan. (
                        1      ; Serial
                        604800   ; Refresh
                        86400    ; Retry
                        2419200  ; Expire
                        86400 )  ; Negative Cache TTL
;
@         IN      NS       servidordebian.daw.lan.
@         IN      A        10.0.2.12
servidordebian  IN      A        10.0.2.12
clienteubuntu  IN      A        10.0.2.11
servidor       IN      CNAME   servidordebian.daw.lan.
cliente        IN      CNAME   clienteubuntu.daw.lan.
dwcs           IN      CNAME   servidordebian.daw.lan.
contornoservidor IN      CNAME   servidordebian.daw.lan.
dwcc           IN      CNAME   servidordebian.daw.lan.
contornocliente IN      CNAME   servidordebian.daw.lan.
hogwarts       IN      CNAME   servidordebian.daw.lan.
griffindor     IN      CNAME   servidordebian.daw.lan.
leons          IN      CNAME   servidordebian.daw.lan.
iesteis        IN      CNAME   servidordebian.daw.lan.
fenix          IN      CNAME   servidordebian.daw.lan.
primero        IN      CNAME   servidordebian.daw.lan.
first          IN      CNAME   servidordebian.daw.lan.
segundo        IN      CNAME   servidordebian.daw.lan.
second         IN      CNAME   servidordebian.daw.lan.
```

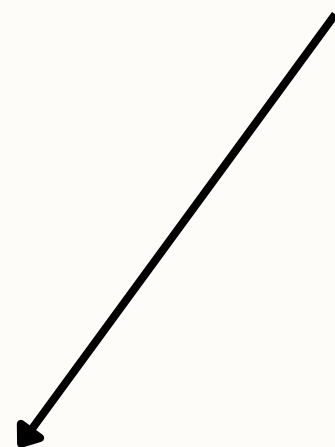

4. Crea un sitio virtual seguro (https) chamado seguro.daw.lan, o seu directorio base será /var/www/seguro. Inclúe a configuración necesaria para que o tráfico http non seguro (porto 80) se redirixa ao porto 443 mediante o protocolo https. Podes crear o certificado e clave como o fixeches para Apache. Recorda incluír este novo enderezo simbólico no DNS.

Generamos clave y certificado

```
root@userver-alina:/etc/ssl/private# openssl x509 -req -days 365 -in solitudine.csr -signkey claveSegura.key -out certificadoSeguro.crt
Certificate request self-signature ok
subject=C = ES, ST = Pontevedra, L = Vigo, O = SitioSeguro, OU = SitioSeguro, CN = seguro.daw.lan
root@userver-alina:/etc/ssl/private#
```

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS nano-bind + - [ ] [ ] ... ^ x
GNU nano 7.2 db.daw.lan *
; DO NOT EDIT THIS FILE - it is used for multiple zones.
; Instead, copy it, edit named.conf, and use that copy.
;
$TTL      86400
@         IN      SOA      daw.lan. root.daw.lan. (
        1          ; Serial
        604800     ; Refresh
        86400      ; Retry
        2419200    ; Expire
        86400 )     ; Negative Cache TTL
;
@         IN      NS       servidordebian.daw.lan.
@         IN      A        10.0.2.12
servidordebian IN A        10.0.2.12
clienteubuntu IN A        10.0.2.11
servidor     IN      CNAME   servidordebian.daw.lan.
cliente      IN      CNAME   clienteubuntu.daw.lan.
dwcs         IN      CNAME   servidordebian.daw.lan.
contornoservidor IN CNAME   servidordebian.daw.lan.
dwcc         IN      CNAME   servidordebian.daw.lan.
contornocliente IN CNAME   servidordebian.daw.lan.
hogwarts     IN      CNAME   servidordebian.daw.lan.
griffindor   IN      CNAME   servidordebian.daw.lan.
leons        IN      CNAME   servidordebian.daw.lan.
iesteis      IN      CNAME   servidordebian.daw.lan.
fenix        IN      CNAME   servidordebian.daw.lan.
primero      IN      CNAME   servidordebian.daw.lan.
first        IN      CNAME   servidordebian.daw.lan.
segundo      IN      CNAME   servidordebian.daw.lan.
second       IN      CNAME   servidordebian.daw.lan.
seguro       IN      CNAME   servidordebian.daw.lan.
```

Incluimos esta nueva dirección simbólica en DNS



Configuración de la página segura

```
paginaSegura.html  $ seguro x
nginx > sites-available > $ seguro
1  server {
2      listen 80;
3      listen [::]:80;
4      server_name seguro.daw.lan;
5
6      return 301 https://$host$request_uri;
7  }
8
9  server {
10     listen 443 ssl default_server;
11     listen [::]:443 ssl default_server;
12     server_name seguro.daw.lan;
13
14     ssl_certificate /etc/ssl/certs/certificadoSeguro.crt;
15     ssl_certificate_key /etc/ssl/private/claveSegura.key;
16
17     root /var/www/seguro;
18     index paginaSegura.html;
19
20     location / {
21         try_files $uri $uri/ =404;
22     }
23 }
24
```

