Servidor_ftp_con_TLS

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Seguridad
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Contenido

Instalamos el vsftpd

Actualizamos el sistema

```
root@ubuntu:~# apt-get update
Obj:1 http://security.ubuntu.com/ubuntu bionic-security InRelease
Obj:2 http://es.archive.ubuntu.com/ubuntu bionic InRelease
Obj:3 http://es.archive.ubuntu.com/ubuntu bionic-updates InRelease
Obj:4 http://es.archive.ubuntu.com/ubuntu bionic-backports InRelease
Leyendo lista de paquetes... 69%
```

Instalamos el programa vsftpd

```
root@ubuntu:~# apt-get install vsftpd
Leyendo lista de paquetes... Hecho
Creando árbol de dependencias
Leyendo la información de estado... Hecho
El paquete indicado a continuación se instaló de forma automática y ya no es necesario.
  libllvm6.0
Utilice «sudo apt autoremove» para eliminarlo.
Se instalarán los siguientes paquetes NUEVOS:
  vsftpd
0 actualizados, 1 nuevos se instalarán, 0 para eliminar y 0 no actualizados.
Se necesita descargar 115 kB de archivos.
Se utilizarán 334 kB de espacio de disco adicional después de esta operación.
Des:1 http://es.archive.ubuntu.com/ubuntu bionic/main amd64 vsftpd amd64 3.0.3-9build1 [115 kB
]
Descargados 115 kB en 0s (352 kB/s)
Preconfigurando paquetes ...
Seleccionando el paquete vsftpd previamente no seleccionado.
(Leyendo la base de datos ... 90%
```

Habilitamos el programa

```
root@ubuntu:~# systemctl enable vsftpd
Synchronizing state of vsftpd.service with SysV service script with /lib/systemd/systemd-sysv-
install.
Executing: /lib/systemd/systemd-sysv-install enable vsftpd
root@ubuntu:~#
```

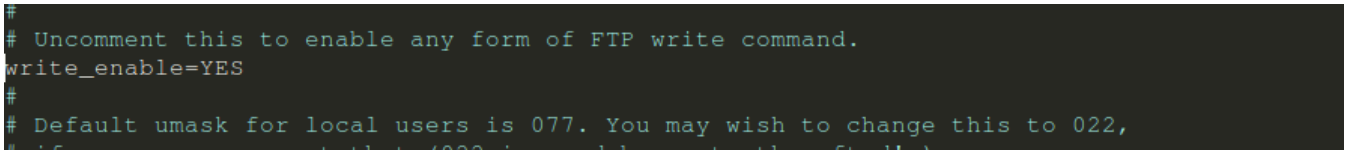
Arrancamos el programa

```
root@ubuntu:~# systemctl start vsftpd
root@ubuntu:~# systemctl status vsftpd
● vsftpd.service - vsftpd FTP server
     Loaded: loaded (/lib/systemd/system/vsftpd.service; enabled; vendor preset: enabled)
     Active: active (running) since Tue 2024-01-16 18:01:38 CET; 4min 22s ago
   Main PID: 2737 (vsftpd)
      Tasks: 1 (limit: 2333)
     CGroup: /system.slice/vsftpd.service
             └─2737 /usr/sbin/vsftpd /etc/vsftpd.conf

ene 16 18:01:38 ubuntu systemd[1]: Starting vsftpd FTP server...
ene 16 18:01:38 ubuntu systemd[1]: Started vsftpd FTP server.
root@ubuntu:~#
```

Vemos que esta corriendo el programa

Editamos el fichero vsftpd.conf

Descomentamos el write_enable



Descomentamos esto también

```
# (Warning! chroot'ing can be very dangerous. If using chroot, make sure that
# the user does not have write access to the top level directory within the
# chroot)
chroot_local_user=YES
#chroot_list_enable=YES
# (default follows)
#chroot_list_file=/etc/vsftpd.chroot_list
#
# You may activate the "-R" option to the builtin ls. This is disabled by
# default to avoid remote users being able to cause excessive I/O on large
# sites. However, some broken FTP clients such as "ncftp" and "mirror" assume
# the presence of the "-R" option, so there is a strong case for enabling it.
#ls_recurse_enable=YES
#
# Customization
#
```

Añadimos estas líneas

```
allow_writeable_chroot=YES
ssl_enable=YES
allow_anon_ssl=NO
force_local_data_ssl=YES
force_local_logins_ssl=YES
ssl_tlsv1=YES
ssl_sslv2=NO
ssl_sslv3=NO
```

Generamos el certificado

```
root@ubuntu:~# openssl req -x509 -nodes -days 365 -newkey rsa:2048 -keyout /etc/ssl/private/vs
ftpd.pem -out /etc/ssl/private/vsftpd.pem
Can't load /root/.rnd into RNG
139729367527872:error:2406F079:random number generator:RAND_load_file:Cannot open file:../cryp
to/rand/randfile.c:88:Filename=/root/.rnd
Generating a RSA private key
.............+++++
....+++++
writing new private key to '/etc/ssl/private/vsftpd.pem'
-----
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]:75
State or Province Name (full name) [Some-State]:Madrid
Locality Name (eg, city) []:Andorra
Organization Name (eg, company) [Internet Widgits Pty Ltd]:pavel.com
Organizational Unit Name (eg, section) []:pavel.com
Common Name (e.g. server FQDN or YOUR name) []:
Email Address []:
root@ubuntu:~#
```

Vamos completando los campos que nos salen

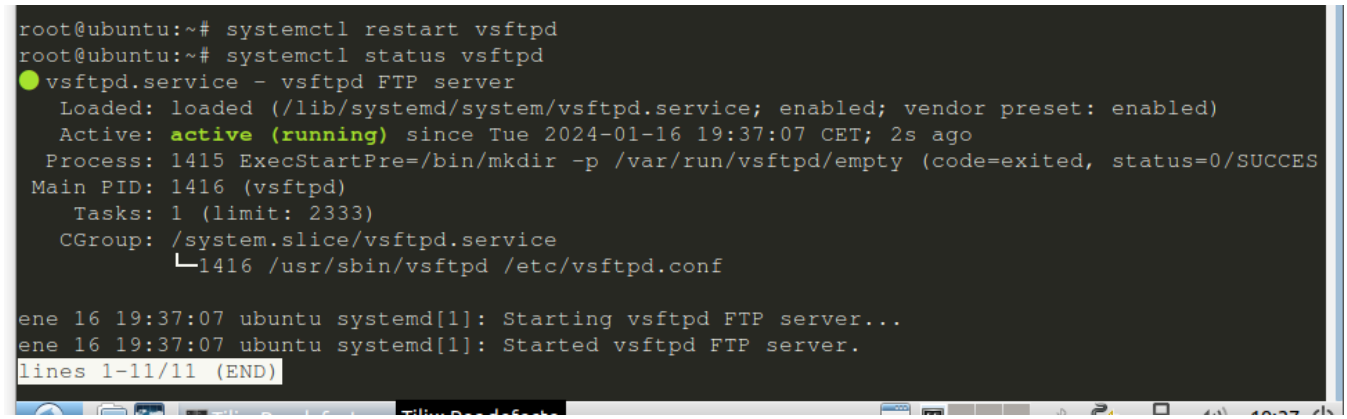
Verificamos el archivo

```
root@ubuntu:~# cat /etc/ssl/private/vsftpd.pem
-----BEGIN PRIVATE KEY-----
MIIEvwIBADANBgkqhkiG9w0BAQEFAASCBKkwggSlAgEAAoIBAQDAb+ZfzCYqUpnS
DfSpz9TsJPfIVwWO+TL9vZ15c8rczsSd+iYyE9ltHYWoCwP7qeV4mr4FmXthacJ4
rkAisActoujRmr+zAUnTZO2vZEGkHYyYjnYieSJu+sBGt9tkcBY/P6XfLy5SJxER
eQb57uZDVnfpfgNY4n8RIKaibCq1BQMySk5WeW0mwEBu4XbvSd8rwBFjcrXXzwGI
A9GXQdauj/WUAakHK44fPGDqspqG5os9skYSG6GxEfvKCObNhAfSuH3Rx/lyNNDf
qg3GKy/MbB4ULS8xNpES7vRayNN7sNq/2dbMycK0obkPxbeT516D1FblQxHxEmL9
RqyfPiKtAgMBAAECggEBAIiVI4qsyA3T8K8hDp0UEMjGeENuWFig0Ks90K4qHDra
WrzRlhiG9BQ5FustXldZv6/5DJPG2sZKHSgwbP7xtzaR4PMcBaGUcYSjpvuMifZk
rqx8uKZBGcpxGNVYm1PPJksf7qfYweS3K6seHnB4OmBi19sWgGOu5ocOiJbRdQJi
3w0FqsDASSB6UtUNw8aQj2BvT87s2aSDxOuikHuUi9v4s0VmOLB+PL3yDnDV/vEN
ogsc2VxjSUrXzA05GTuSuiHye2lEx7fyN1cAvMh+IRZNiNay8IrPg3+jgYN0hB9K
xA3OpALyS7B5qSO+R6oKyCisYMXlKbhwNyS1zgnBAnUCgYEA8rCgFHa/6b7M1aNI
N0FfIqKbRWf7PKoSgpO6Uik8Z5hyMSd3yiLuMEXGhkIhJ2NRLYkcgbmtcNHfuSyP
LUNUlWUszaoIPjkSiugnHGTOSAzCmQGN3WBrWRLyqDJapznAHLntkNEULMngSegT
3t8r3bFsAm8r6G2Jk0pceYQTDRsCgYEAyv25IY0cIgx03Zv+pHyso8DGnitEcNru
r7VbM8P1tS1qWqOC5amdomEZBGuebxldmPbOEPLhQw+APccBPMfMYj/GOlogv301
0lGHKOp4FwF3H2A8P3k1jsCbJaeq/tkyTJzfNAydXFsqK3sFvbyPxT7kPbU4/rKv
IpxtavnBc9cCgYEAlgnWXfBwg40/S9EPw4F51IrdHdLEQ2QN34Z/SW5O9ukLqBHz
gBeKVHO+4aAeqSBAvrsm0Zi+fqJyAyRmPCCFOXt8cIXvZLCaIyCVlXtJAMhKwpdw
Ym3K0B3jwVKoMvyEJf5YvhBUvb/tFyQQrNgiYYPf971NUvvtcw8lDsc1lAMCgYEA
kHXguq/hxZl30f6iSg0wD5mxv/6qxmYIV6OJNF3RDw8zES4siaUcOeNAGpU8O3Sh
16pNHGK9TSxK56wohUjre0BHol9hzuURdYvv1H6I2FaCoCGsvr9UDjOkNjgMyTFp
SnyZnEEd/AwlBqyWeWEoMAeCByhhV2Fyof8RH4B+3CECgYAF4z178nNKE4A/N6ql
2i4CRfScfemZ6YmqThvW2gg67rlCemJlN5KHZNblu0I6uiOdvnI0K710NdUkYk5e
hGU2t3kwhlERs7ig7GO7jIDpD29aMrVk0fBCt0tR/tNZwbd9MM1c0ZEwn3uaa2yW
6hlkKTPsW1qwRchdawEW+4NZIw==
-----END PRIVATE KEY-----
-----BEGIN CERTIFICATE-----
MIIDkTCCAnmgAwIBAgIUabPIGagl9eGmEi96aGJCwGRu0p0wDQYJKoZIhvcNAQEL
BQAwWDELMAkGA1UEBhMCNzUxDzANBgNVBAgMBk1hZHJpZDEQMA4GA1UEBwwHQW5k
b3JyYTESMBAGA1UECgwJcGF2ZWwuY29tMRIwEAYDVQQLDAlwYXZlbC5jb20wHhcN
MjQwMTE2MTcyNjQzWhcNMjUwMTE1MTcyNjQzWjBYMQswCQYDVQQGEwI3NTEPMA0G
A1UECAwGTWFkcmlkMRAwDgYDVQQHDAdBbmRvcnJhMRIwEAYDVQQKDAlwYXZlbC5j
b20xEjAQBgNVBAsMCXBhdmVsLmNvbTCCASIwDQYJKoZIhvcNAQEBBQADggEPADCC
AQoCggEBAMBv5l/MJipSmdIN9KnPlOwk98hXBY75Mv29nXlzytzOxJ36JjIT2W0d
```

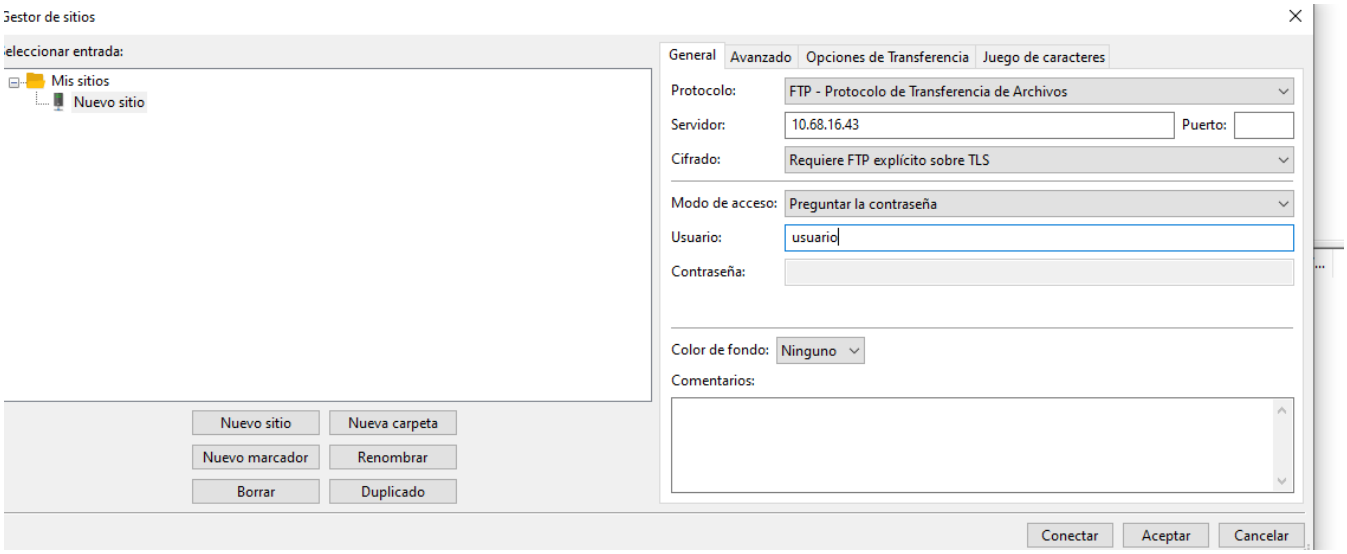
Vemos que también esta en la configuración del servicio

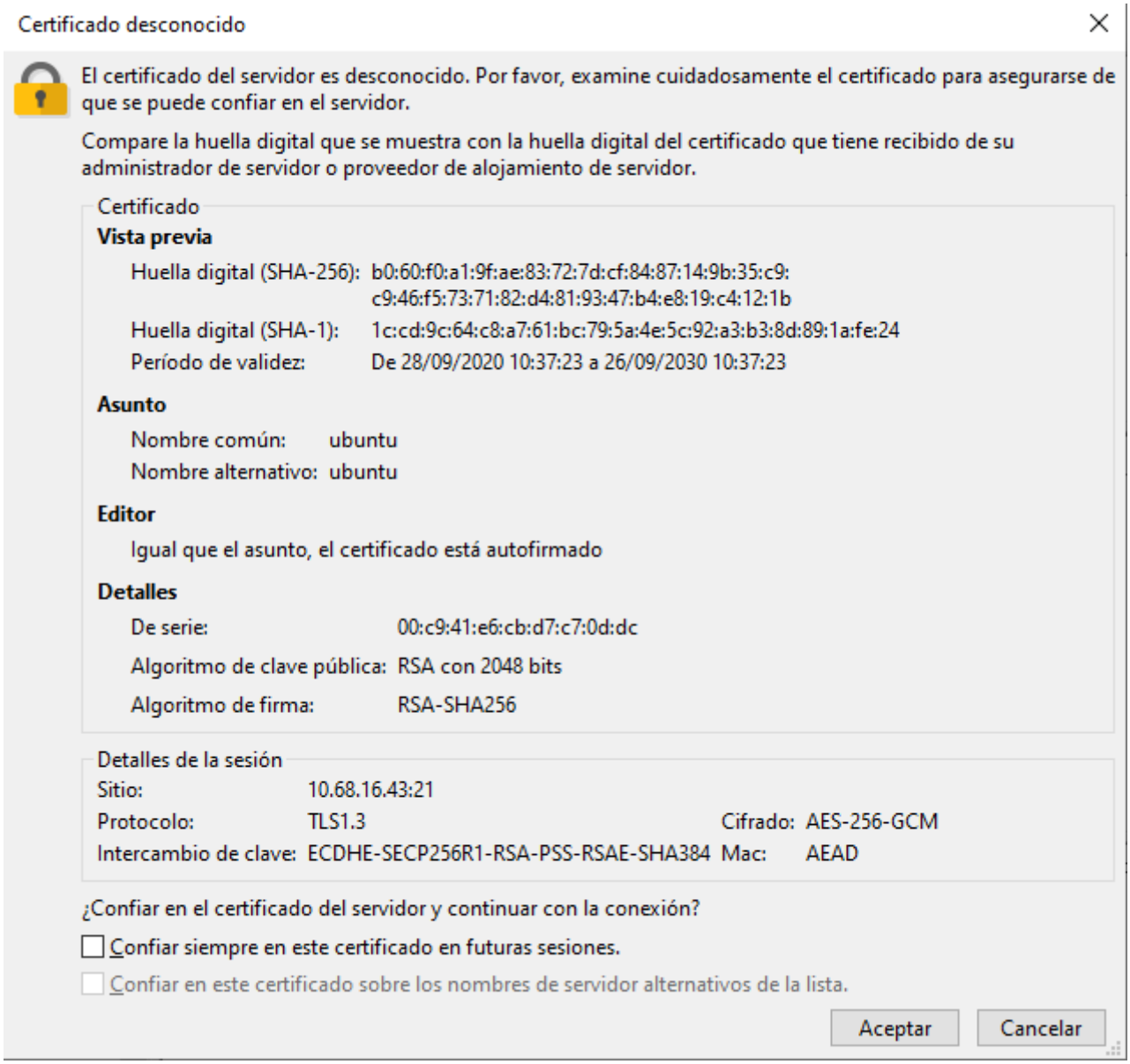
```
# This string is the name of the PAM service vsftpd will use.
pam_service_name=vsftpd
#
# This option specifies the location of the RSA certificate to use for SSL
# encrypted connections.
rsa_cert_file=/etc/ssl/certs/ssl-cert-snakeoil.pem
rsa_private_key_file=/etc/ssl/private/ssl-cert-snakeoil.key
ssl_enable=NO

#
# Uncomment this to indicate that vsftpd use a utf8 filesystem.
#utf8_filesystem=YES
```

Reniciamos el servicio



Ponemos la configuración de filezilla





El certificado

Y nos conectamos por ftp