

## OVERVIEW:

In this lab, I installed and configured an FTP server on the web server I had set up previously, allowing me to upload and modify files remotely. I also created an FTP user account for secure access and used the SSL certificate to secure the server's communications. This lab helped me become familiar with the process of installing, configuring, and securing an FTP server, which will be a useful skill if I need to manage an FTP server in the future.

## ANALYSIS:

The first step was to install vsftpd, which was done using the following command:

```
sudo apt install vsftpd
```

Once the installation was complete, I edited the configuration file to adjust settings for a secure FTP setup. To do this, I ran:

```
sudo vim /etc/vsftpd.conf
```

I made the following changes to the configuration file to ensure the FTP server used our Apache self-signed certificate for secure communication:

- `anonymous_enable=NO`
- `local_enable=YES`
- `write_enable=YES`
- `chroot_local_user=YES`
- `allow_anon_ssl=NO`
- `force_local_data_ssl=YES`
- `force_local_logins_ssl=YES`

- `ssl_tlsv1=YES`
- `ssl_sslv2=NO`
- `ssl_sslv3=NO`
- `require_ssl_reuse=NO`
- `ssl_ciphers=HIGH`

I also uncommented and updated the paths to the SSL certificate files to ensure proper encryption:

- `rsa_cert_file=/etc/ssl/certs/apache-selfsigned.pem`
- `rsa_private_key_file=/etc/ssl/private/apache-selfsigned.key`

After saving the changes, I restarted the vsftpd service with:

`sudo systemctl restart vsftpd`


The next step was to create the FTP user for accessing the server.

```
root@web:~# useradd -m -d /var/www/wordpress/ wpFTPadmin
root@web:~# useradd -m -d /var/www/wordpress/ wpFTPadmin
useradd: warning: the home directory /var/www/wordpress/ already exists.
useradd: Not copying any file from skel directory into it.
root@web:~# passwd wpFTPadmin
New password:
Retype new password:
passwd: password updated successfully
root@web:~# |
```

```
root@web:~# usermod -a -G www-data wpFTPadmin
```

After making the necessary configuration changes and creating the FTP user, I proceeded to test access via WinSCP. I logged in using the newly created FTP user credentials.

Warning



The server's certificate is not known. You have no guarantee that the server is the computer you think it is.

Server's certificate details follow:

Issuer:

- Organization: CIT, web.jsimpson.fail, jsimpson@jsimpson.fail
- Location: US, Indiana, IUPUI

Subject:

- Organization: CIT, web.jsimpson.fail, jsimpson@jsimpson.fail
- Location: US, Indiana, IUPUI

Valid: 9/11/2023 5:39:21 PM – 9/10/2024 5:39:21 PM

Fingerprints:

- SHA-256: 6c:46:7e:ee:be:e2:96:7a:ba:e9:37:17:73:c1:a7:6d:17:c5:93:34:ce:29:ca:ee:50:59:66:97:b6:2b:46:15
- SHA-1: f1:a6:c5:5c:6f:6d:52:8a:fb:d9:93:42:d3:a6:11:05:8c:e0:78:ff

Summary: Self-signed certificate. The error occurred at a depth of 1 in the certificate chain.

If you trust this certificate, press Yes. To connect without storing certificate, press No. To abandon the connection press Cancel.

Continue connecting and store the certificate?

[Copy certificate fingerprint to clipboard](#)

Login

New Site

Session

File protocol:

FTP

Encryption:

TLS/SSL Explicit encryption

Host name:

web.jsimpson.fail

Port number:

21

User name:

wpFTPadmin

Password:

••••••••

☐ Anonymous login

Save

Advanced...

Tools

Manage

Login

Close

Help

☒ Show Login dialog on startup and when the last session is closed

Upon successfully logging in, I confirmed that the connection was secured, as WinSCP clearly displayed that it was using the self-signed certificate we created earlier. This verified that the FTP server was configured properly and was functioning securely with the SSL/TLS settings we applied.

