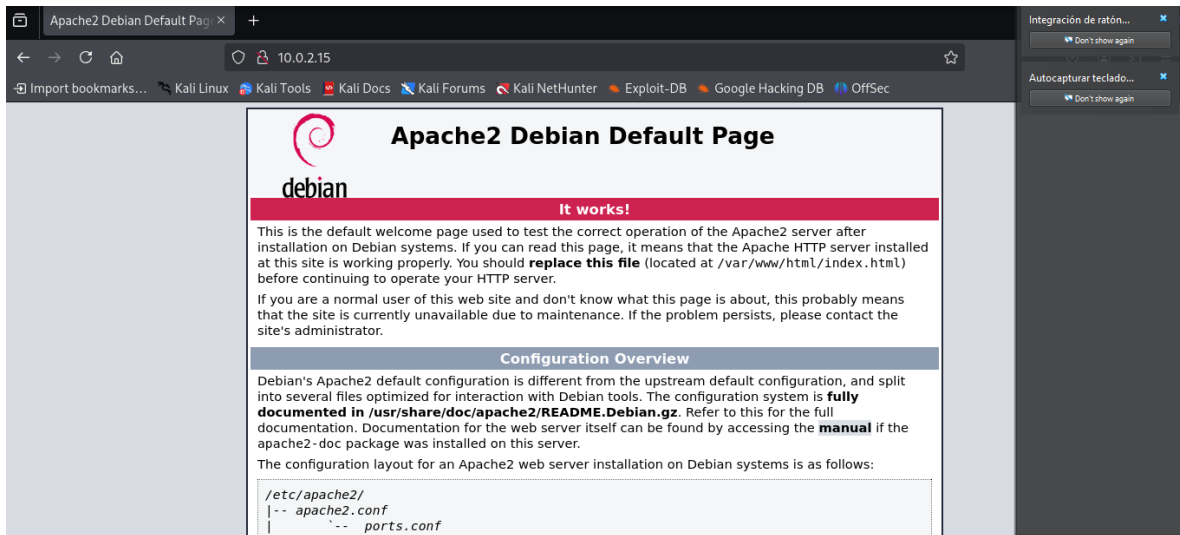
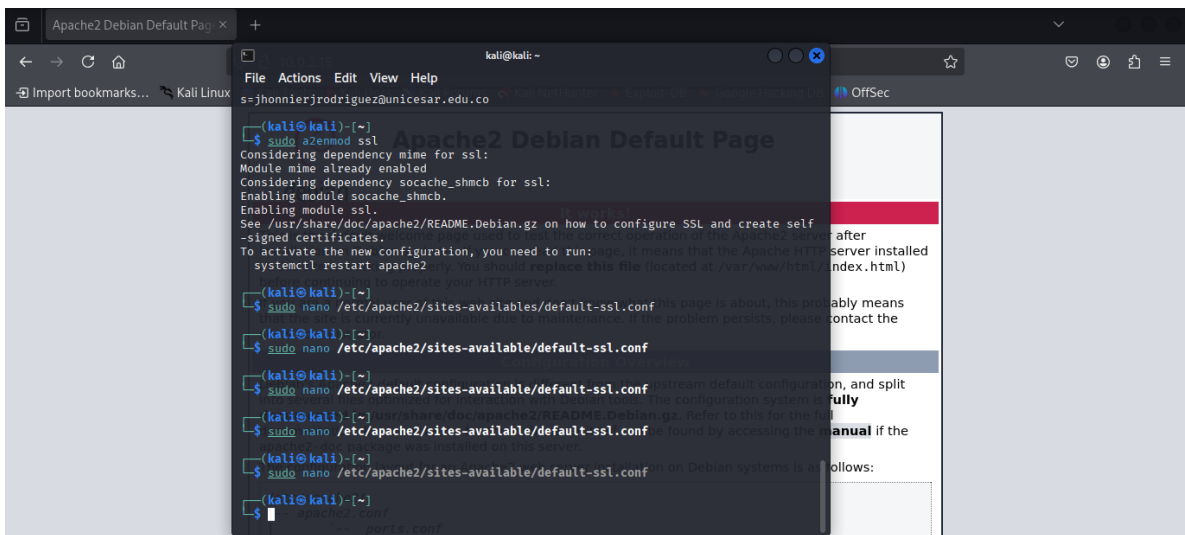
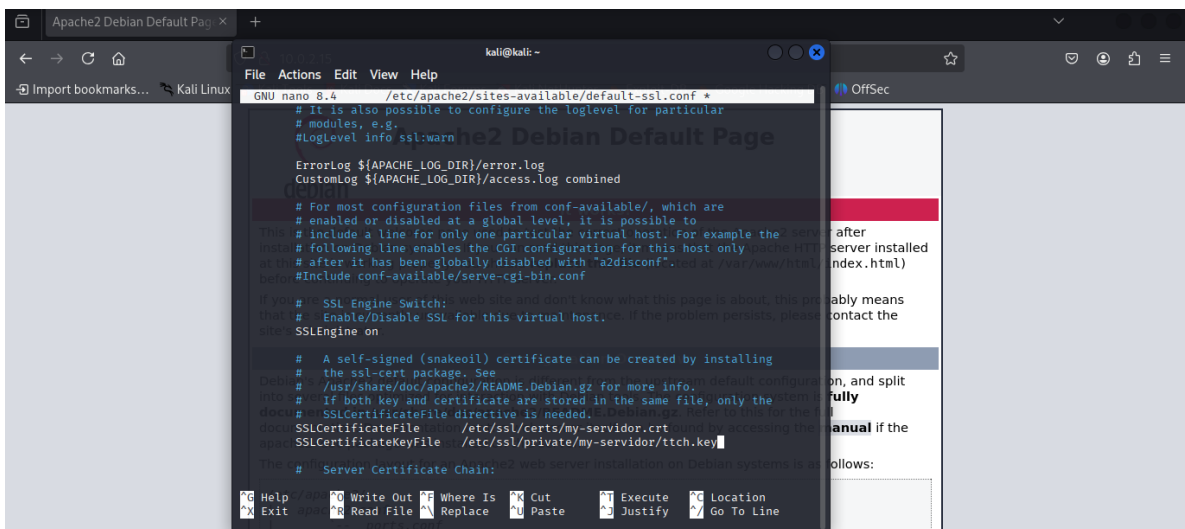
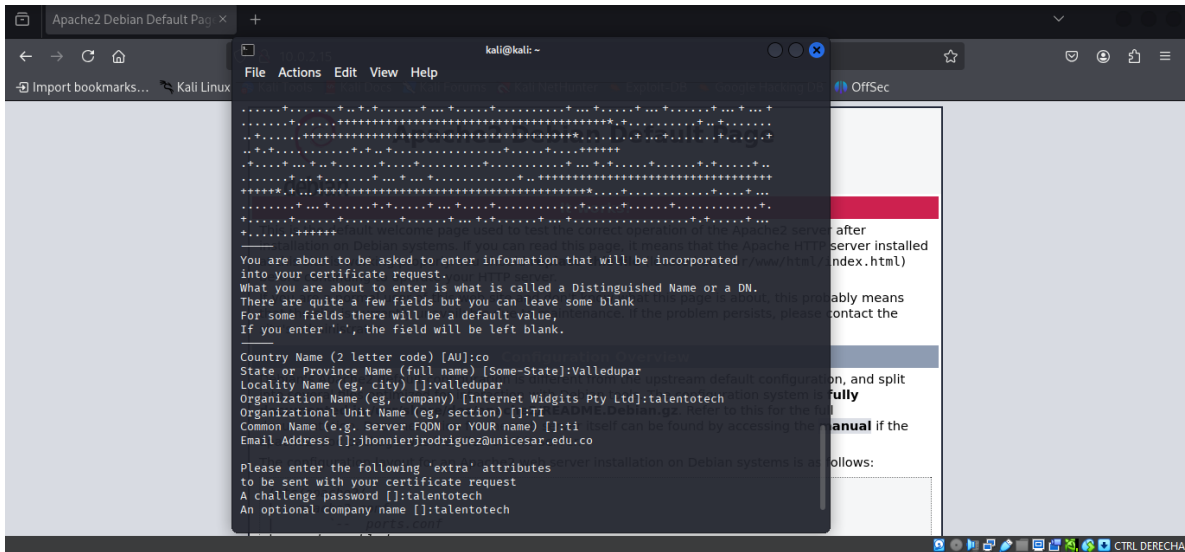


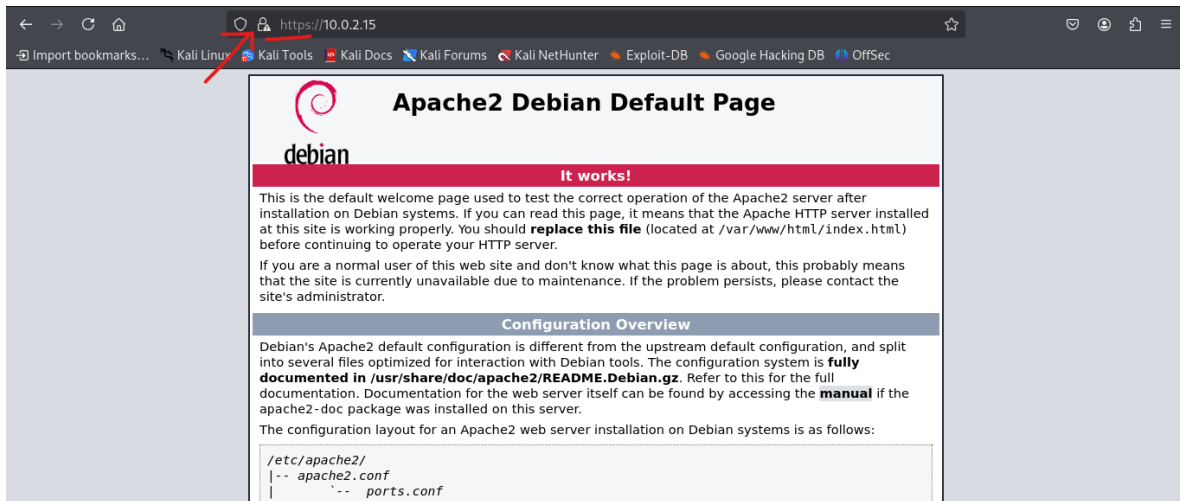
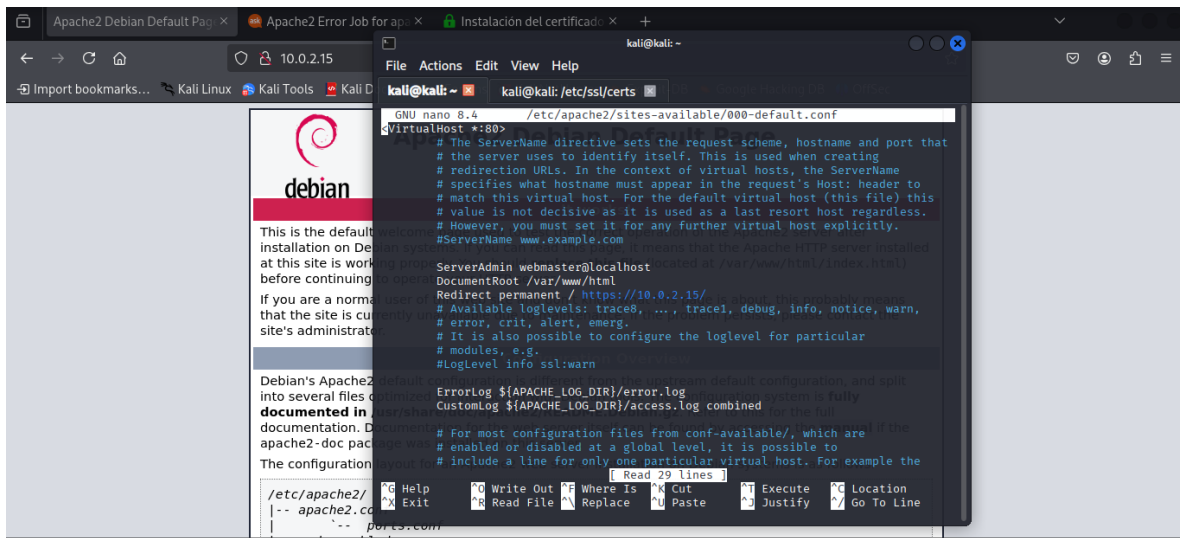
```
kali@kali: ~  
File Actions Edit View Help  
(kali@kali)-[~]  
$ sudo apt update && sudo apt upgrade -y  
[sudo] password for kali:  
Get:1 http://kali.mirror.rafal.ca/kali kali-rolling InRelease [41.5 kB]  
Get:2 http://kali.mirror.rafal.ca/kali kali-rolling/main amd64 Packages [21.0 MB]  
19% [2 Packages 4,543 kB/21.0 MB 22%] 204 kB/s 5min 41s^  
27% [2 Packages 11.6 MB/21.0 MB 55%] 187 kB/s 5min 33s
```

```
(kali@kali)-[~]  
$ sudo apt install apache2 -y  
[sudo] password for kali:  
apache2 is already the newest version (2.4.63-1).  
apache2 set to manually installed.  
The following packages were automatically installed and are no longer required:  
  icu-devtools  libglapi-mesa  libpython3.12-minimal  python3.12-tk  
  libflac12t64  libicu-dev  libpython3.12-stdlib  ruby-zeitwerk  
  libfuse3-3  liblbfgsb0  libpython3.12t64  strongswan  
  libgeos3.13.0  libpoppler145  python3-setproctitle  
Use 'sudo apt autoremove' to remove them.  
  
Summary:  
  Upgrading: 0, Installing: 0, Removing: 0, Not Upgrading: 7  
  
(kali@kali)-[~]  
$
```

```
kali@kali: ~  
File Actions Edit View Help  
ab  
accessdb  
activate-global-python-argcomplete  
acyclic  
(kali@kali)-[~]  
$ sudo systemctl status apache2  
● apache2.service - The Apache HTTP Server  
   Loaded: loaded (/usr/lib/systemd/system/apache2.service; enabled; prese  
   Active: active (running) since Wed 2025-04-30 15:57:45 EDT; 4min 3s ago  
  Invocation: d7abfa1d40054aaa8792ce7d6ef0d2f3  
     Docs: https://httpd.apache.org/docs/2.4/  
  Process: 3619 ExecStart=/usr/sbin/apachectl start (code=exited, status=0  
 Main PID: 3636 (apache2)  
    Tasks: 6 (limit: 2216)  
  Memory: 21.3M (peak: 21.7M)  
     CPU: 220ms  
   CGroup: /system.slice/apache2.service  
           └─3636 /usr/sbin/apache2 -k start  
             └─3647 /usr/sbin/apache2 -k start  
               └─3648 /usr/sbin/apache2 -k start  
                 └─3649 /usr/sbin/apache2 -k start  
                   └─3650 /usr/sbin/apache2 -k start  
                     └─3651 /usr/sbin/apache2 -k start  
  
Apr 30 15:57:44 kali systemd[1]: Starting apache2.service - The Apache HTTP  
Apr 30 15:57:45 kali apachectl[3635]: AH00558: apache2: Could not reliably d  
Apr 30 15:57:45 kali systemd[1]: Started apache2.service - The Apache HTTP S  
lines 1-21/21 (END)
```







A lo largo del laboratorio, se enfrentaron varios retos técnicos relacionados con la configuración de certificados SSL y la redirección de HTTP a HTTPS. Aunque al principio hubo dificultades con la ubicación correcta de los archivos y la sintaxis en la configuración de Apache, con paciencia y pruebas constantes se logró implementar satisfactoriamente el certificado en el dominio. Además, se configuró la redirección automática del tráfico para que todo acceso al sitio se realice de forma segura mediante HTTPS. Esta experiencia permitió comprender la importancia de asegurar un sitio web y familiarizarse con los componentes clave que intervienen en la protección de la información en línea.