

Task 4 – Firewall Setup and Testing (Linux UFW)

Q1. Open firewall configuration tool (Windows Firewall or terminal for UFW)

Enabled UFW and checked status - Firewall was inactive initially, now active with no rules.

```
(kali㉿ kali)-[~]
$ sudo ufw status
Status: inactive

(kali㉿ kali)-[~]
$ sudo ufw enable
Firewall is active and enabled on system startup

(kali㉿ kali)-[~]
$ sudo ufw status numbered
Status: active

(kali㉿ kali)-[~]
$ sudo ufw deny 23/tcp
Rule added
Rule added (v6)
```

Q2. List current firewall rules.

Q3. Add a rule to block inbound traffic on a specific port (e.g., 23 for Telnet)

Blocked Telnet (port 23) using `ufw deny 23/tcp` and verified with status.

```
(kali㉿ kali)-[~]
$ sudo ufw allow 22/tcp
Rule added
Rule added (v6)

(kali㉿ kali)-[~]
$ sudo ufw status numbered
Status: active

  To Action From
  --
[ 1] 23/tcp DENY IN Anywhere
[ 2] 22/tcp ALLOW IN Anywhere
[ 3] 23/tcp (v6) DENY IN Anywhere (v6)
[ 4] 22/tcp (v6) ALLOW IN Anywhere (v6)
```

Q4. Test the rule by attempting to connect to that port locally or remotely

Attempted Telnet connection after blocking - Connection refused, confirming the block.

```
(kali㉿ kali)-[~]  
$ telnet localhost 23  
Trying ::1...  
Connection failed: Connection refused  
Trying 127.0.0.1...  
telnet: Unable to connect to remote host: Connection refused
```

Allowed SSH - Verified.

```
(kali㉿ kali)-[~]  
$ ssh localhost  
kali@localhost's password:  
Linux kali 6.11.2-amd64 #1 SMP PREEMPT_DYNAMIC Kali (2024-10-15) x86_64  
  
The programs included with the Kali GNU/Linux system are free software;  
the exact distribution terms for each program are described in the  
individual files in /usr/share/doc/*/copyright.  
  
Kali GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent  
permitted by applicable law.  
You have new mail.  
Last login: Fri Aug 8 00:19:09 2025 from ::1  
(kali㉿ kali)-[~]  
$ |
```

Q5.Add rule to allow SSH (port 22) if on Linux.

Q6.Remove the test block rule to restore original state.

Deleted and added new rules by allowing port 23 and blocked the port 22

```
(kali㉿ kali)-[~]  
$ sudo ufw delete deny 23/tcp  
sudo ufw delete allow 22/tcp
```

[sudo] password for kali:

Rule deleted

Rule deleted (v6)

Rule deleted

Rule deleted (v6)

```
(kali㉿ kali)-[~]  
$ sudo ufw allow 23/tcp  
sudo ufw deny 22/tcp
```

Rule added

Rule added (v6)

Rule added

Rule added (v6)

```
(kali㉿ kali)-[~]  
$ sudo ufw status numbered
```

Status: active

To	Action	From
[1] 23/tcp	ALLOW IN	Anywhere
[2] 22/tcp	DENY IN	Anywhere
[3] 23/tcp (v6)	ALLOW IN	Anywhere (v6)
[4] 22/tcp (v6)	DENY IN	Anywhere (v6)

Telnet connection allowed - Successfully connected and prompted for login.

```
(kali@kali)~$ telnet localhost 23
```

Trying ::1...

Connection failed: Connection refused

Trying 127.0.0.1...

Connected to localhost.

Escape character is '^]'.

Linux 6.11.2-amd64 (kali) (pts/3)

kali login: kavish5

Password:

Login incorrect

kali login: kali

Password: