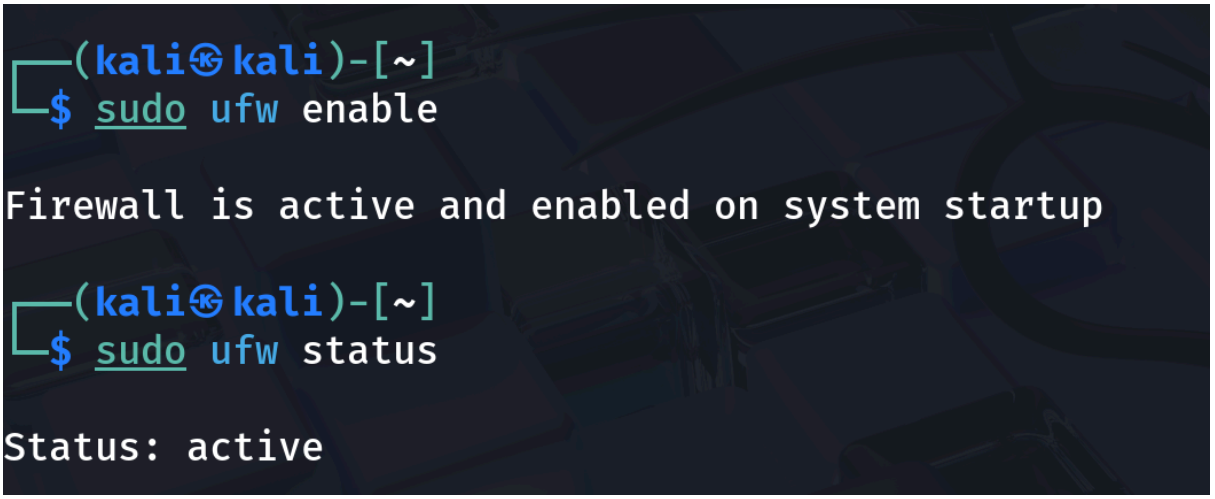
Task_4

Status	In progress

Task 4 : Setup and Use a Firewall on Windows/Linux

UFW **(Uncomplicated firewall)** is enabled.



Denied traffic on port 22

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

Status: active

┌──(kali㉿kali)-[~]
└─$ sudo ufw deny 22
Rule added
Rule added (v6)

┌──(kali㉿kali)-[~]
└─$ sudo ufw status numbered

Status: active

     To                         Action      From
     --                         ------      ----
[ 1] 22                         DENY IN     Anywhere
[ 2] 22 (v6)                    DENY IN     Anywhere (v6)
```

SSh status enabled

```
┌──(kali㉿kali)-[~]
└─$ sudo service ssh start

┌──(kali㉿kali)-[~]
└─$ sudo service ssh status
● ssh.service - OpenBSD Secure Shell server
     Loaded: loaded (/usr/lib/systemd/system/ssh.service; disabled; preset: disabled)
     Active: active (running) since Mon 2025-08-11 23:41:01 IST; 16s ago
 Invocation: 14403f4b921e46e78514bd9a67bebd77
       Docs: man:sshd(8)
             man:sshd_config(5)
    Process: 16430 ExecStartPre=/usr/sbin/sshd -t (code=exited, status=0/SUCCESS)
   Main PID: 16432 (sshd)
      Tasks: 1 (limit: 12058)
     Memory: 1.9M (peak: 2.6M)
        CPU: 57ms
     CGroup: /system.slice/ssh.service
             └─16432 "sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups"
```

kali linux machine ip : 192.168.29.38

```
┌──(kali㉿kali)-[~]
└─$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host noprefixroute
       valid_lft forever preferred_lft forever
2: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qle
1000
    link/ether [redacted] brd [redacted]
    inet 192.168.29.38/24 brd 192.168.29.255 scope global dynamic noprefixroute eth0
       valid_lft 6294sec preferred_lft 6294sec
    inet6 2405:201:5801:a031:41d9:4f41:8dc8:e9d1/64 scope global dynamic noprefixroute
       valid_lft 7467sec preferred_lft 7467sec
    inet6 fe80::9aa7:10f3:ebfc:1427/64 scope link noprefixroute
       valid_lft forever preferred_lft forever
```

It getting ping but not connecting to the ssh on its default port 22

```
Command Prompt
Microsoft Windows [Version 10.0.26100.4770]
(c) Microsoft Corporation. All rights reserved.

C[redacted]>ping  192.168.29.38

Pinging 192.168.29.38 with 32 bytes of data:
Reply from 192.168.29.38: bytes=32 time=1ms TTL=64
Reply from 192.168.29.38: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.29.38:
    Packets: Sent = 2, Received = 2, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
Control-C
^C
C:[redacted]>ssh kali@192.168.29.38
ssh: connect to host 192.168.29.38 port 22: Connection timed out

C[redacted]
```

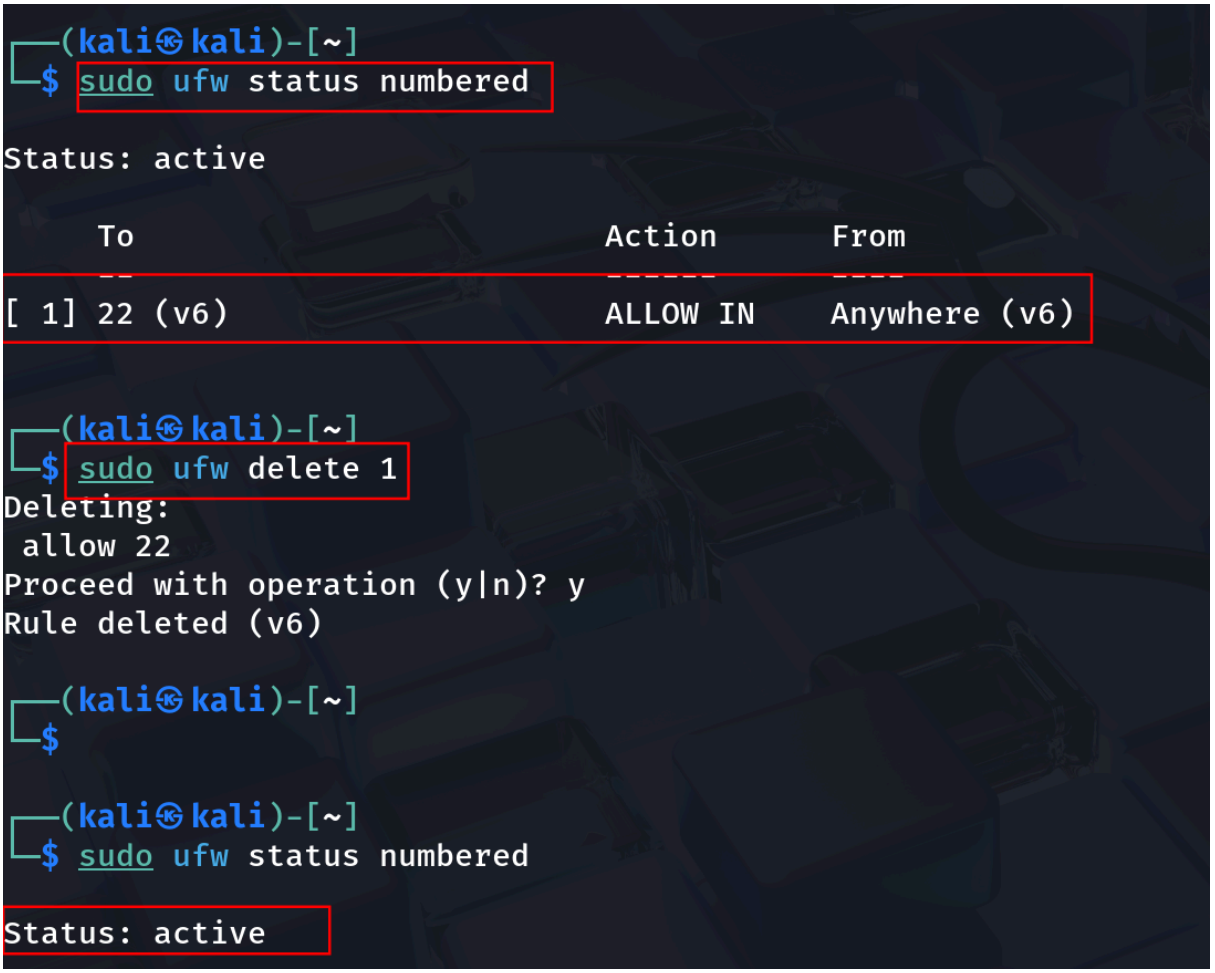
when it is allowed then

```
┌──(kali㉿kali)-[~]
└─$ sudo ufw allow 22

Rule updated
Rule updated (v6)

┌──(kali㉿kali)-[~]
└─$ sudo ufw status numbered

Status: active

     To                         Action      From
     --                         ------      ----
[ 1] 22                         ALLOW IN    Anywhere
[ 2] 22 (v6)                    ALLOW IN    Anywhere (v6)
```

it is able to connect to the ssh on the same port

```
kali@kali: ~
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
Control-C
^C
C:\Users\[redacted]>ssh kali@192.168.29.38
ssh: connect to host 192.168.29.38 port 22: Connection timed out

C:\Users\[redacted]>ssh kali@192.168.29.38
The authenticity of host '192.168.29.38 (192.168.29.38)' can't be established.
ED25519 key fingerprint is SHA256:03CC8pZHJVxAlCZXnYhSOlhQCCevA2D7pDMCyZtuRaw.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '192.168.29.38' (ED25519) to the list of known hosts.
kali@192.168.29.38's password:
Linux kali 6.12.33+kali-amd64 #1 SMP PREEMPT_DYNAMIC Kali 6.12.33-1kali1 (2025-06-25) 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.
┌──(kali㉿kali)-[~]
└─$

┌──(kali㉿kali)-[~]
└─$

┌──(kali㉿kali)-[~]
└─$
```

active firewall and its deletion part.



here is a very simple demo/process to use the firewall on any port, IP address or Protocol(TCP/UDP)