Task 10: Firewall Configuration & Testing

Tools Used

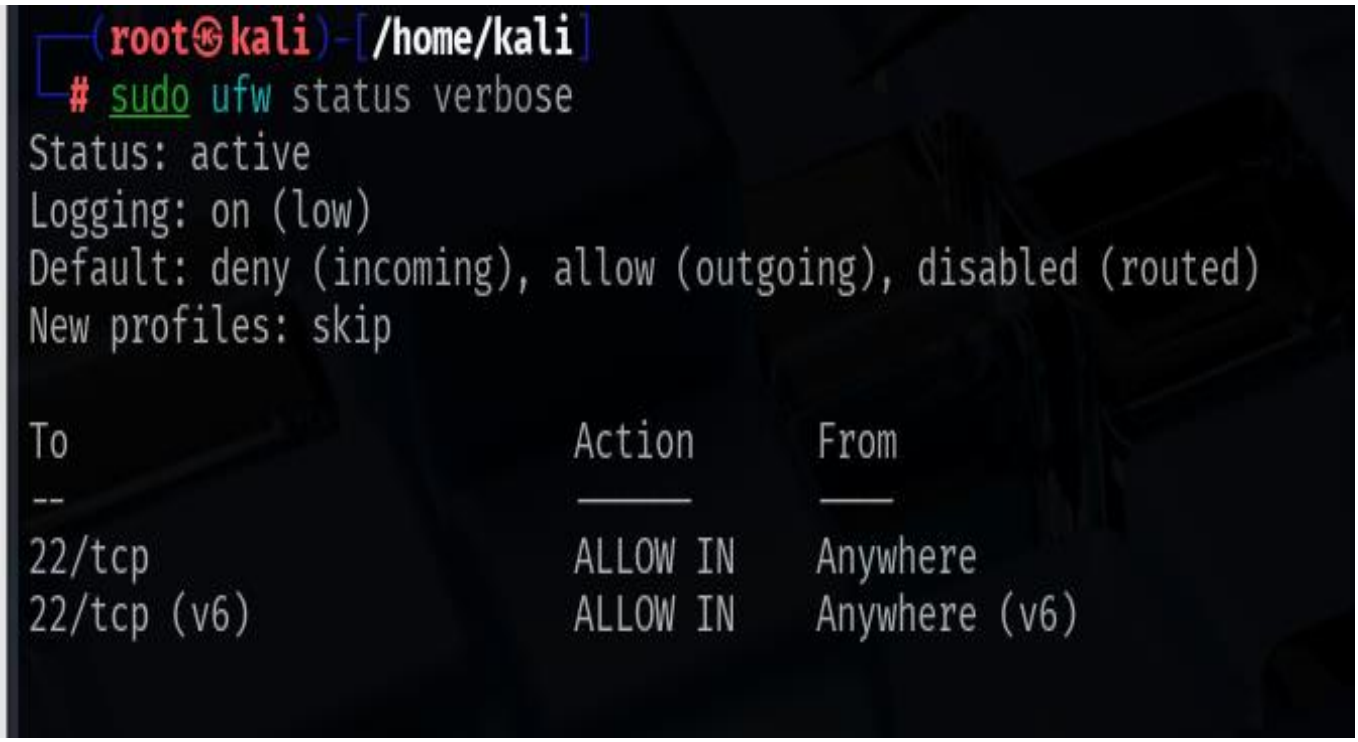
- Linux: UFW (Uncomplicated Firewall)
- Windows: Windows Defender Firewall

Step 1: Open Firewall Configuration Tool

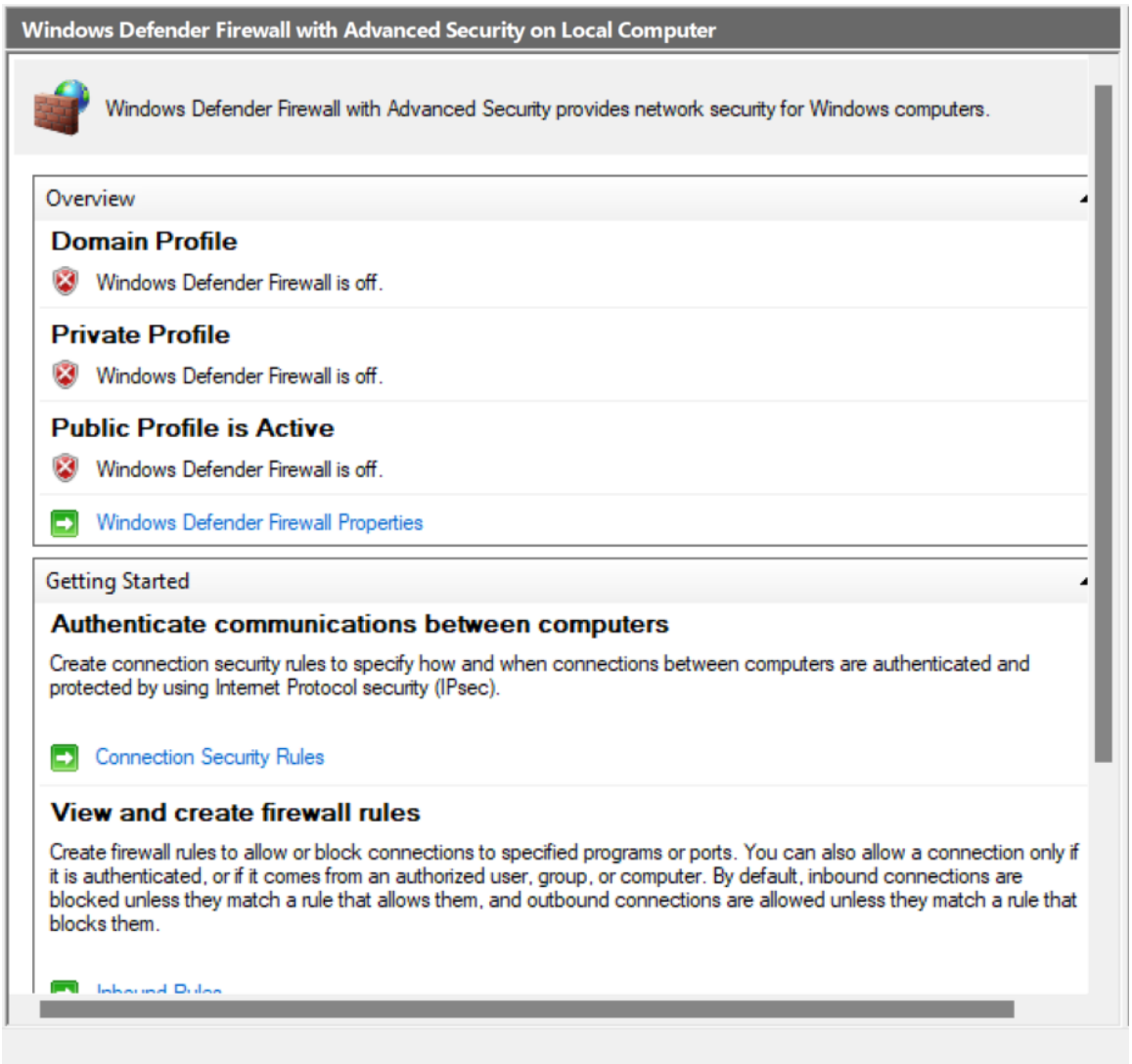
Linux:

Command:

sudo ufw status verbose



Windows:
Open Windows Defender Firewall with Advanced Security.



Step 2: List Current Firewall Rules

Linux:

sudo ufw status numbered

```
┌──(root㉿kali)-[/home/kali]
└─# sudo ufw status numbered
Status: active

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

Windows:

View Inbound Rules list.

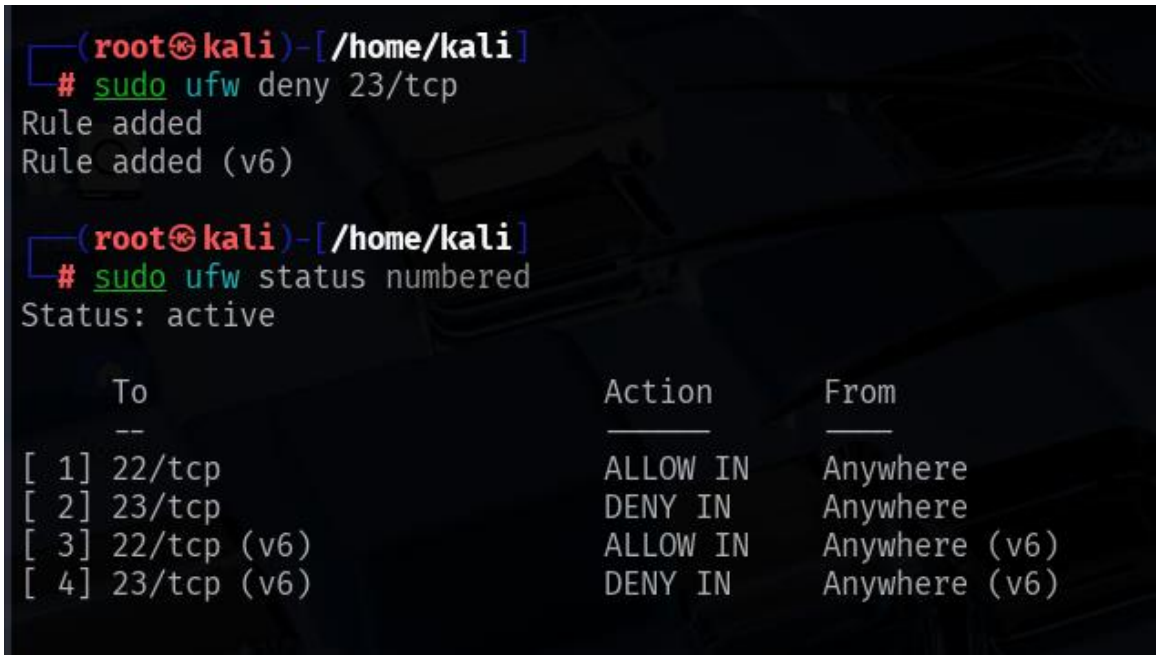
Inbound Rules

Name	Group	Profile	Enabled	Action
AnyDesk		Public	Yes	Allow
AnyDesk		Private	Yes	Allow
AnyDesk		Private	Yes	Allow
AnyDesk		Domain	Yes	Allow
AnyDesk		Public	Yes	Allow
AnyDesk		Domain	Yes	Allow
Firefox (C:\Program Files\Mozilla Firefox)		Private	Yes	Allow
Google Chrome		Public	Yes	Block
Google Chrome		Public	Yes	Block
Microsoft Teams		Public	Yes	Block
Microsoft Teams		Public	Yes	Block
腾讯手游助手下载器组件		Public	Yes	Allow
腾讯手游助手下载器组件		Domain	Yes	Allow
腾讯手游助手下载器组件		Private	Yes	Allow
腾讯手游助手下载器组件		Domain	Yes	Allow
腾讯手游助手下载器组件		Private	Yes	Allow
腾讯手游助手下载器组件		Public	Yes	Allow
@{MicrosoftWindows.LKG.DesktopSpotlig...	@{MicrosoftWindows.LKG.De...	Domai...	Yes	Allow
Microsoft Teams	{78E1CD88-49E3-476E-B926-...	All	Yes	Allow
Microsoft Teams	{78E1CD88-49E3-476E-B926-...	All	Yes	Allow
Microsoft Teams (personal)	{78E1CD88-49E3-476E-B926-...	All	Yes	Allow
Microsoft Teams (personal)	{78E1CD88-49E3-476E-B926-...	All	Yes	Allow
AllJoyn Router (TCP-In)	AllJoyn Router	Domai...	Yes	Allow
AllJoyn Router (UDP-In)	AllJoyn Router	Domai...	Yes	Allow
Amazon Alexa	Amazon Alexa	Domai...	Yes	Allow
App Installer	App Installer	Domai...	Yes	Allow

Step 3: Add Rule to Block Port 23 (Telnet)

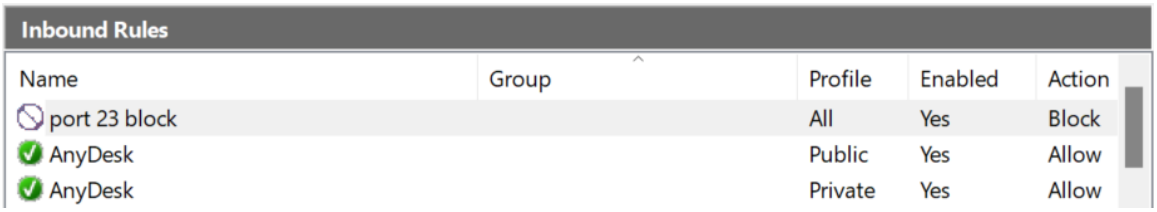
Linux:

sudo ufw deny 23/tcp
sudo ufw status numbered



Windows:

Inbound Rules → New Rule → Port → TCP → Port 23 → Block.



Step 4: Test the Block Rule

Linux:

telnet localhost 23

```
┌──(root㉿kali)-[/home/kali]
└─# telnet localhost 23
Trying ::1...
Connection failed: Connection refused
Trying 127.0.0.1...
telnet: Unable to connect to remote host: Connection refused
```

Windows:

Attempt Telnet on port 23.

Step 5: Add Rule to Allow SSH (Port 22)

Linux:

sudo ufw allow 22/tcp
sudo ufw status numbered

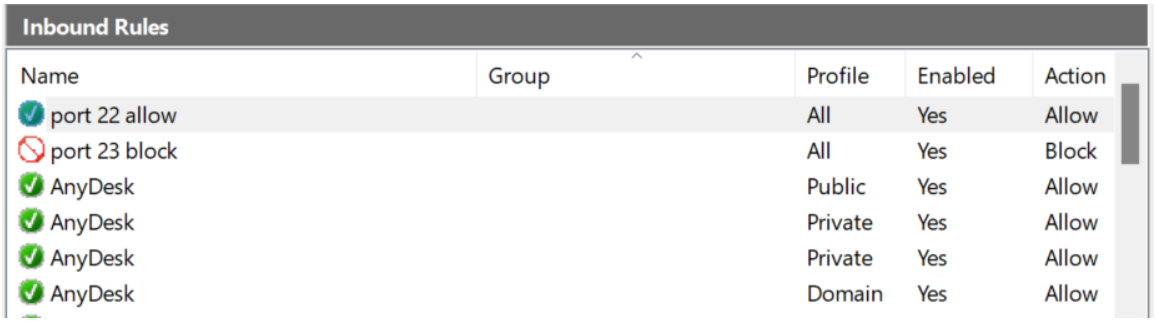
```
┌──(root㉿kali)-[/home/kali]
└─# sudo ufw allow 22/tcp
Skipping adding existing rule
Skipping adding existing rule (v6)

┌──(root㉿kali)-[/home/kali]
└─# sudo ufw status numbered
Status: active

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

Windows:

Inbound Rules → New Rule → Port → TCP → Port 22 → Allow.



Step 6: Remove Test Block Rule

Linux:

sudo ufw delete <rule-number>

sudo ufw status numbered

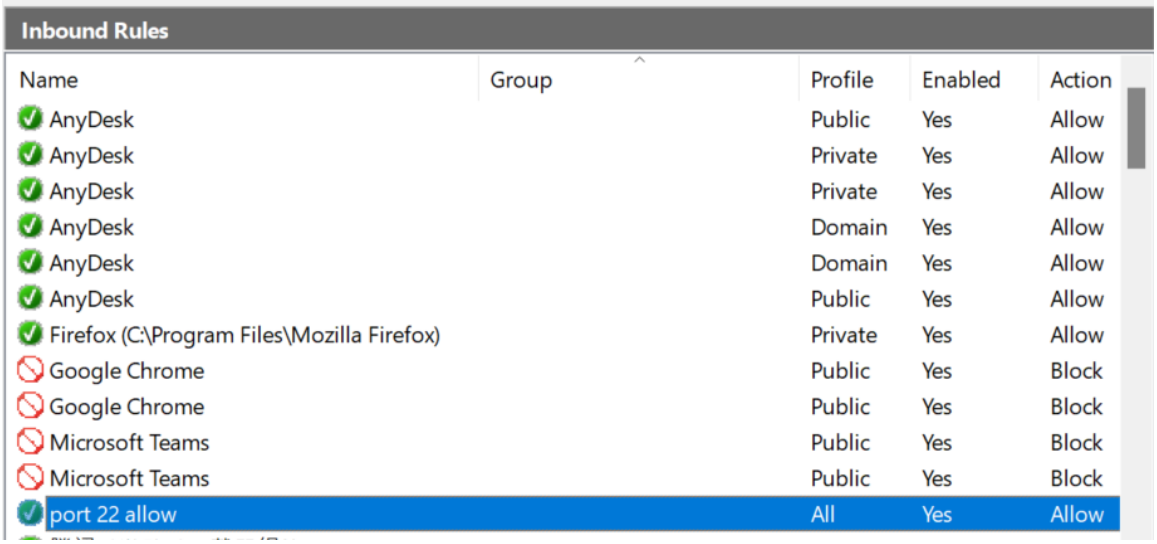
```
┌──(root㉿kali)-[/home/kali]
└─# sudo ufw delete allow 22/tcp
Rule deleted
Rule deleted (v6)

┌──(root㉿kali)-[/home/kali]
└─# sudo ufw status numbered
Status: active

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

Windows:

Right-click “Block Telnet 23” → Delete.



Commands / GUI Steps

Linux (UFW):

sudo apt install ufw
sudo ufw status verbose
sudo ufw deny 23/tcp
sudo ufw allow 22/tcp
sudo ufw delete “allow 22/tcp”

Windows Firewall:

- Open Windows Defender Firewall with Advanced Security
- Create inbound rule for blocking port 23
- Create inbound rule for allowing port 22
- Delete the test block rule

Summary – How Firewall Filters Traffic

A firewall inspects incoming and outgoing network packets and decides whether to allow or block traffic based on configured rules.

- Example: SSH (22) is allowed for remote management.
- Example: Telnet (23) is blocked because it is insecure.

This ensures only authorized traffic reaches the system, reducing the attack surface and improving security.