Linux Firewall Guide: UFW Installation & Configuration

What is UFW?

UFW (Uncomplicated Firewall) is a user-friendly frontend for managing iptables firewall rules on Linux systems. It simplifies the process of setting up a host-based firewall to control incoming and outgoing network traffic based on security rules. UFW supports both IPv4 and IPv6 and is the default firewall configuration tool on Ubuntu

Installation

On Ubuntu/Debian-based Systems

UFW usually comes preinstalled. If it is not installed, you can install it using

Sudo apt update
Sudo apt install ufw

Verify installation by checking the version:

Sudo ufw version

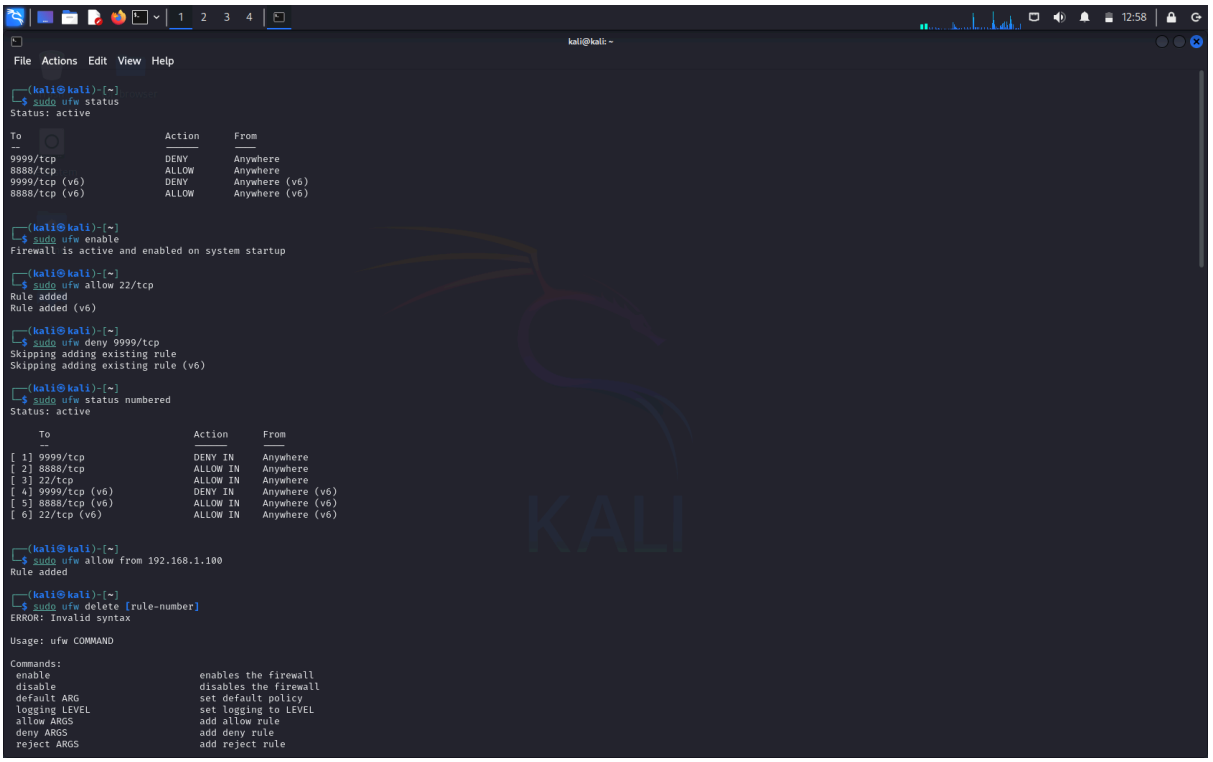
Basic Configuration

1. Set Default Policies

Before enabling UFW, define the default behavior for incoming and outgoing traffic:

Sudo ufw default deny incoming
Sudo ufw default allow outgoing

This configuration denies all incoming connections by default and allows all outgoing connections, which is a secure baseline



2. Allow Essential Services

It is critical to allow SSH connections before enabling UFW to avoid locking yourself out:

Sudo ufw allow ssh

If SSH runs on a non-standard port, specify the port number:

Sudo ufw allow <port_number>/tcp

You can allow or deny other services or ports similarly:

Sudo ufw allow 80/tcp
Sudo ufw deny 23/tcp

Managing UFW

Enable the Firewall

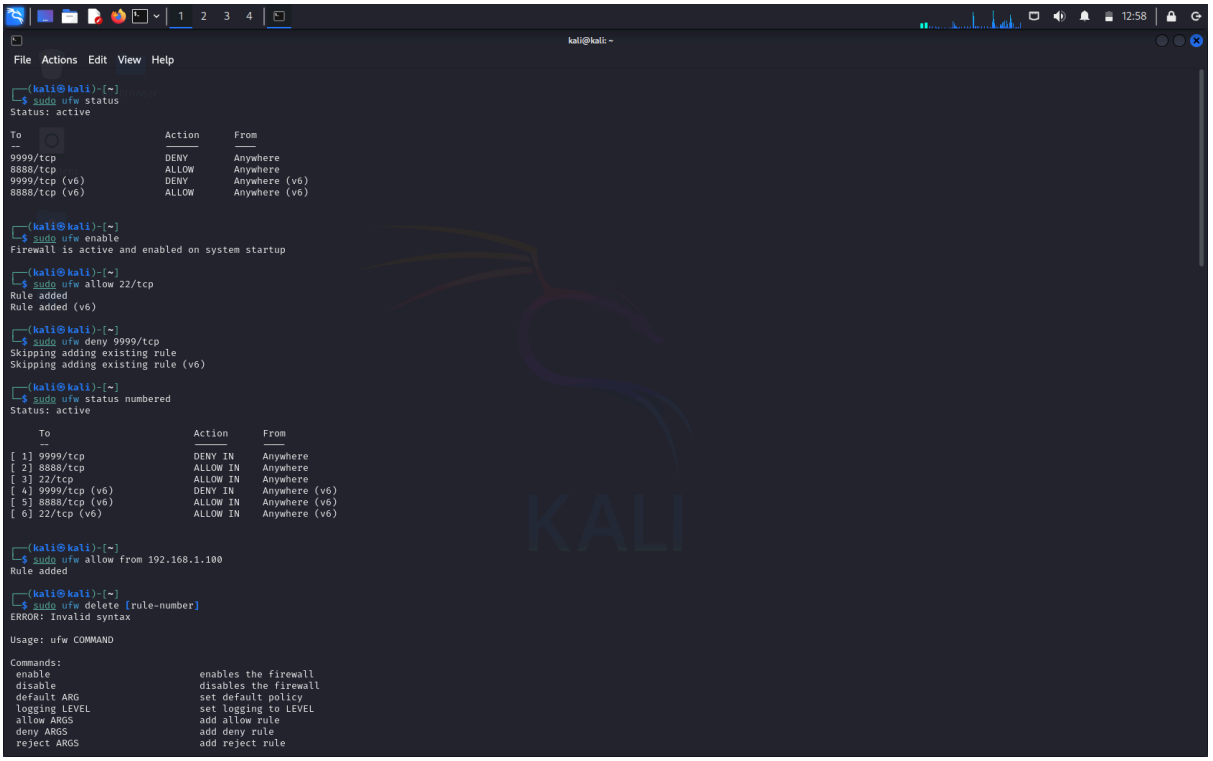
Sudo ufw enable

Disable the Firewall

Sudo ufw disable

Check Firewall Status and Rules

Sudo ufw status



Command	Description
`sudo ufw enable`	Enable UFW firewall

`sudo ufw disable`	Disable UFW firewall
`sudo ufw status verbose`	Show detailed firewall status
`sudo ufw default deny incoming`	Set default incoming policy to deny
`sudo ufw default allow outgoing`	Set default outgoing policy to allow
`sudo ufw allow ssh`	Allow SSH connections
`sudo ufw allow <port>/tcp`	Allow TCP traffic on a port
`sudo ufw deny <port>/tcp`	Deny TCP traffic on a port

DELETING THE RULES IN FIREWALL

- IF WE WANT TO DELETE THE RULES IN FIEWALL WE CAN USE THE FOLLOWING COMMAND:
- sudo ufw delete <rule-number>

ESETING THE UFW

- WE CAN USE THE COMMMAND TO RESET THE ALL UFW RULES
- sudo ufw reset.