

Project Title: Firewall Configuration and Testing on Kali Linux

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Date: 2025-09-26

1. Introduction

Briefly describe the purpose of this project.

Example:

This project demonstrates the configuration and testing of a firewall using UFW on Kali Linux. The goal is to understand how to list rules, block/allow specific ports, and verify firewall functionality.

2. Objectives

To configure firewall rules on Kali Linux.

To test blocking and allowing ports.

To document firewall commands and outputs.

To understand how firewall filters network traffic.

3. Tools and Requirements

Operating System: Kali Linux

Firewall Tool: UFW (Uncomplicated Firewall)

Testing Tool: Netcat (nc)

Internet connection and administrator privileges

4. Procedure

Step 1: Install and enable UFW

```
sudo apt update
```

```
sudo apt install ufw -y
```

```
sudo ufw enable
```

Step 2: List current firewall rules

```
sudo ufw status numbered
```

Step 3: Block inbound traffic on port 23 (Telnet)

```
sudo ufw deny 23/tcp
```

Step 4: Test blocked port

```
nc -vz localhost 23
```

Step 5: Allow SSH on port 22

```
sudo ufw allow 22/tcp
```

Step 6: Remove test block rule

```
sudo ufw status numbered
```

```
sudo ufw delete [rule_number]
```

5. Observations

Port 23 (Telnet) was successfully blocked.

SSH (Port 22) remained accessible.

Firewall rules were correctly added and removed.

6. Screenshots

Screenshots have been included in separate Folder

7. Conclusion

This project demonstrated the use of UFW for firewall management. Rules were added, tested, and removed successfully. It was observed that the firewall filters traffic based on defined inbound and outbound rules, enhancing system security.

8. References

UFW official documentation

Kali Linux manuals

Course materials