

# Lab Report: Deploy a Pre-Built Kali Linux VM and Terminal Practice

GuYi

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## Objectives

This lab demonstrates deploying a pre-built Kali Linux virtual machine on VMware Workstation Pro 17 and verifying essential Linux terminal operations. The report only documents tasks that were completed and captured in screenshots.

## Environment

- Host: Windows with VMware Workstation Pro 17 (NAT networking).
- Guest: Kali Linux VM (default credentials used for login).
- Evidence: All figures are captured directly from the VM or host during the lab.

## Procedure and Evidence

### 1. Verify VMware Tools Status

After logging into Kali, the VMware Tools service state was checked to ensure optimized integration (shared clipboard, improved graphics, etc.).

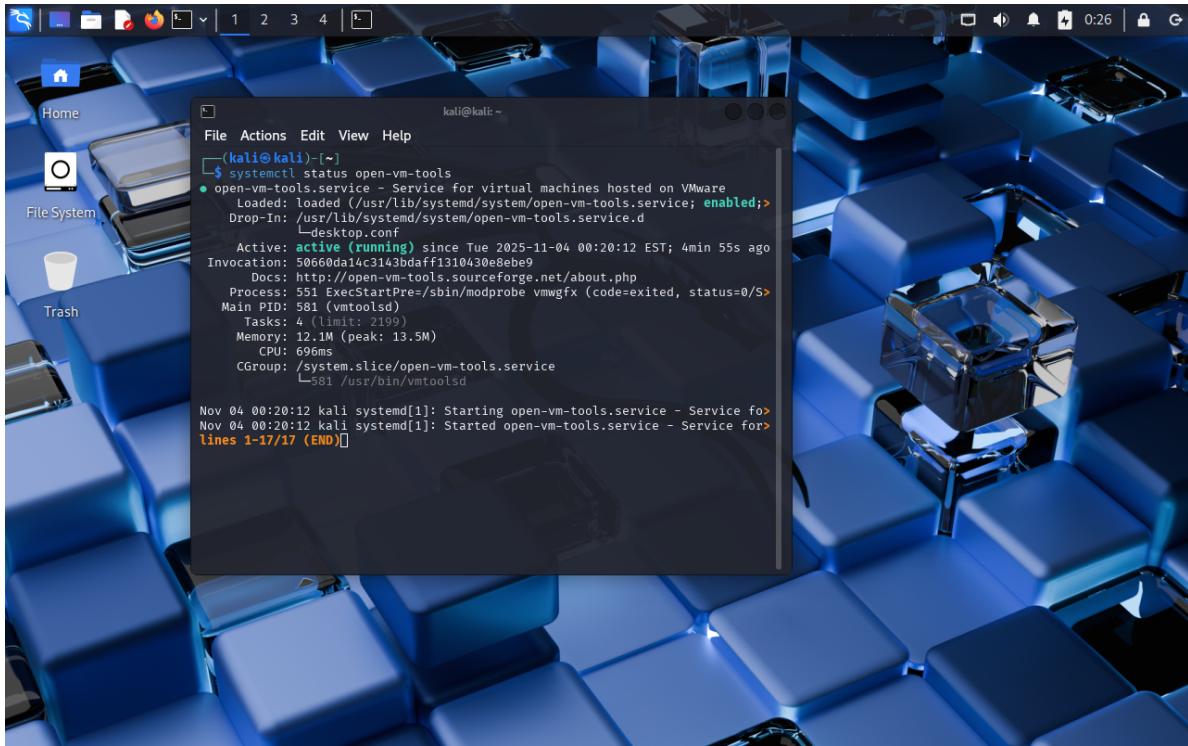


Figure 1: VMware Tools status shown in the Terminal.

## 2. Confirm Network Connectivity

System network status was verified from the desktop environment, and outbound web access was tested using Firefox to reach the official Kali site.

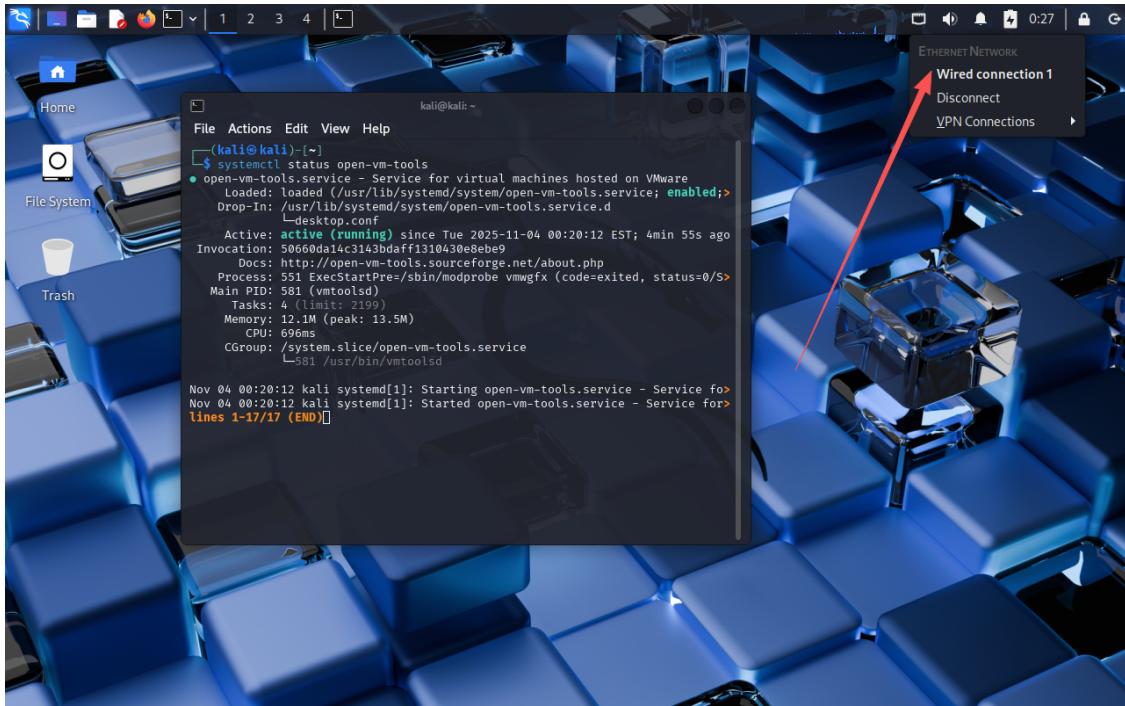


Figure 2: Network indicator showing the VM is connected.

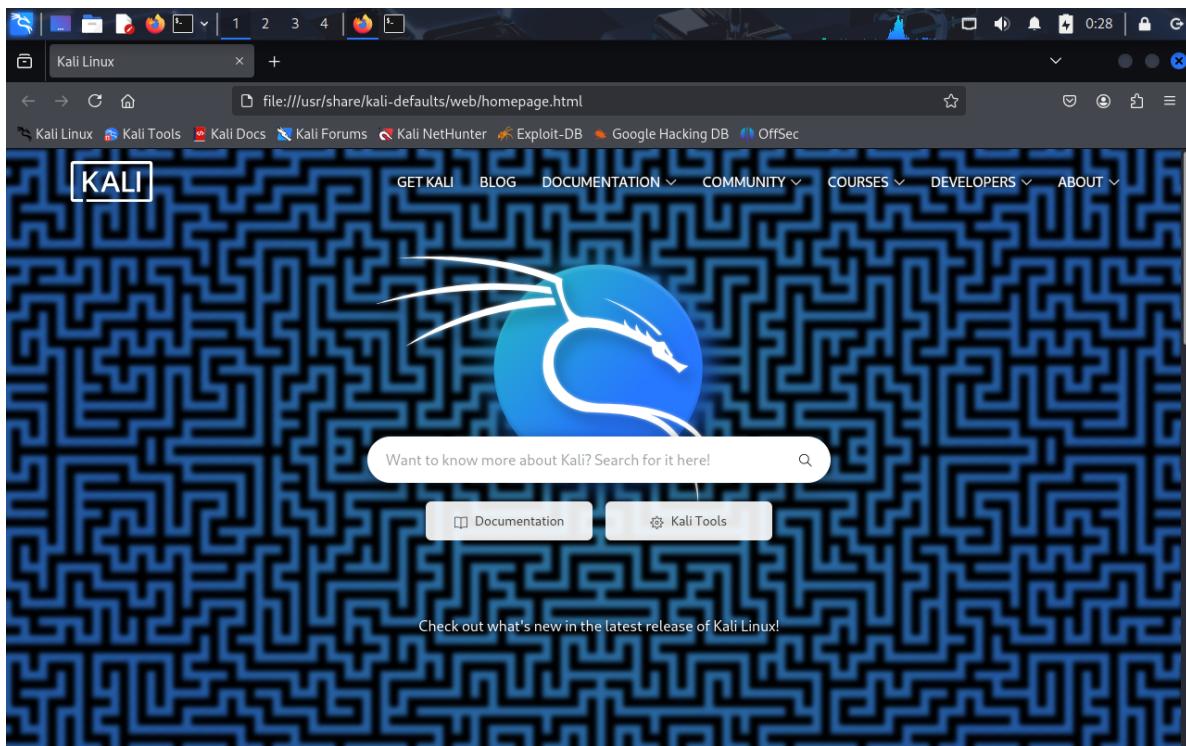


Figure 3: Firefox successfully loading https://www.kali.org.

### 3. Validate Non-Privileged Editing Restrictions

Attempting to edit the sudoers configuration without elevated privileges demonstrated the expected permission protection in Kali.

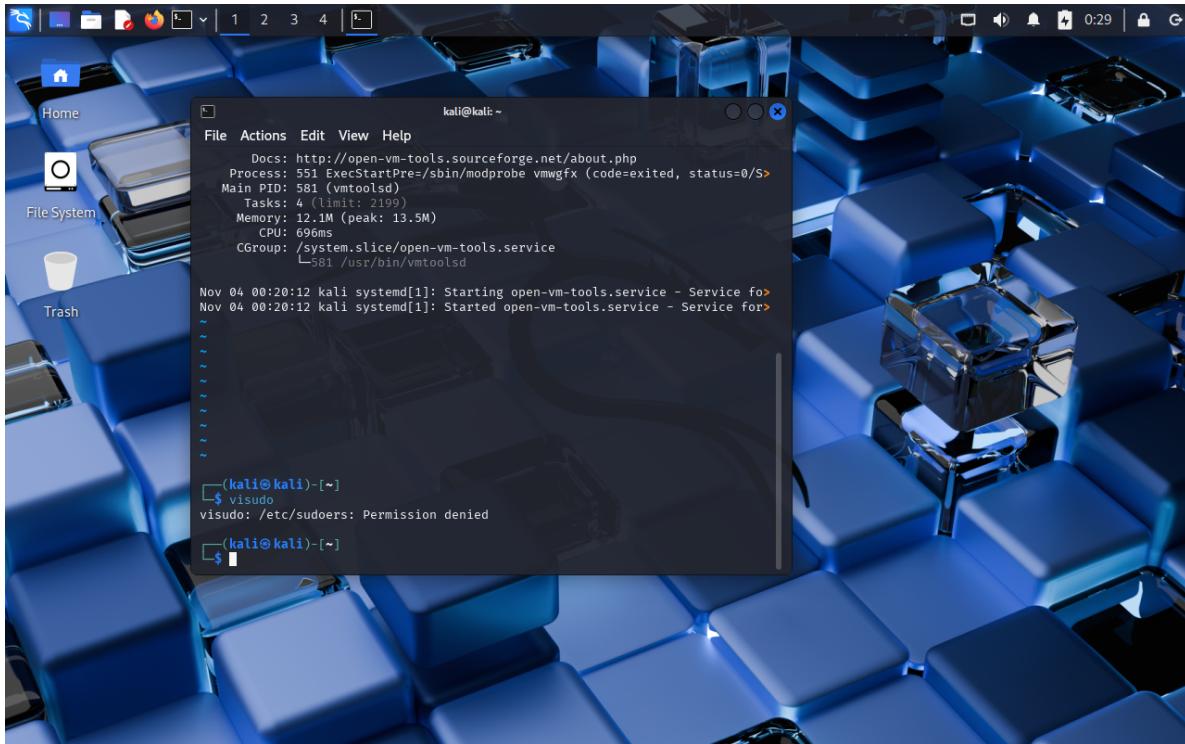


Figure 4: Attempt to open sudoers without privileges resulted in permission denial.

### 4. Review sudoers with Administrative Access

The sudoers file was opened with administrative privileges to inspect group-based permissions policy.

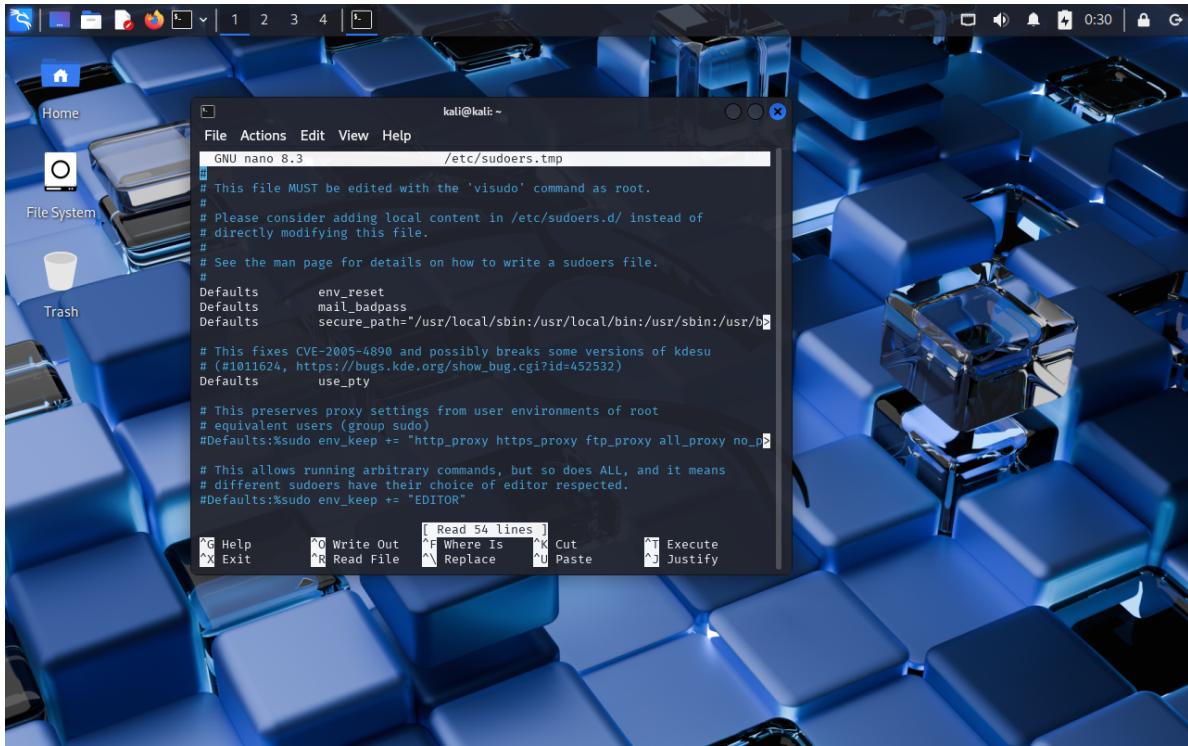


Figure 5: sudoers file opened with elevated privileges for inspection.

## 5. Exit Without Saving Changes

The editor was closed without saving to preserve the original configuration according to best practices for observational labs.

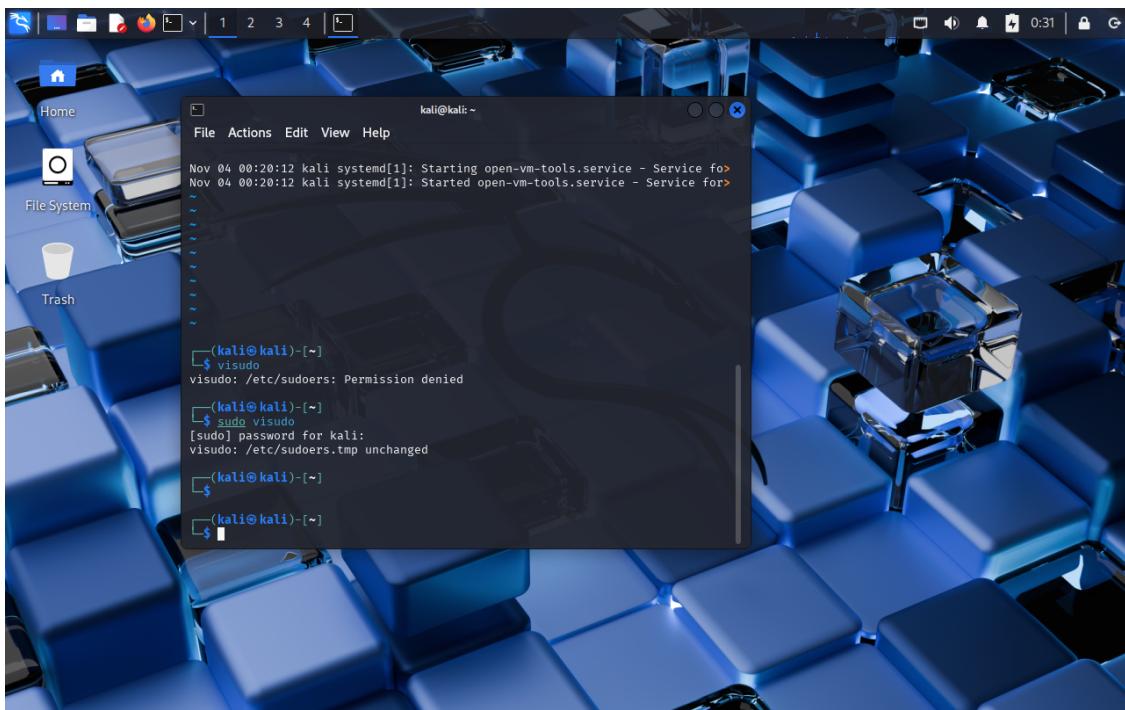


Figure 6: Exit prompt confirming the configuration was closed without saving.

## 6. Confirm Membership in the sudo Group

Group membership for the current user was inspected to confirm administrative capabilities via the sudo group.

```
(kali㉿kali)-[~]
$ visudo
visudo: /etc/sudoers: Permission denied

(kali㉿kali)-[~]
$ sudo visudo
[sudo] password for kali:
visudo: /etc/sudoers.tmp unchanged

(kali㉿kali)-[~]
$ 

(kali㉿kali)-[~]
$ sudo /etc/group-
sudo: /etc/group-: command not found

(kali㉿kali)-[~]
$ grep sudo /etc/group
sudo:x:27:kali

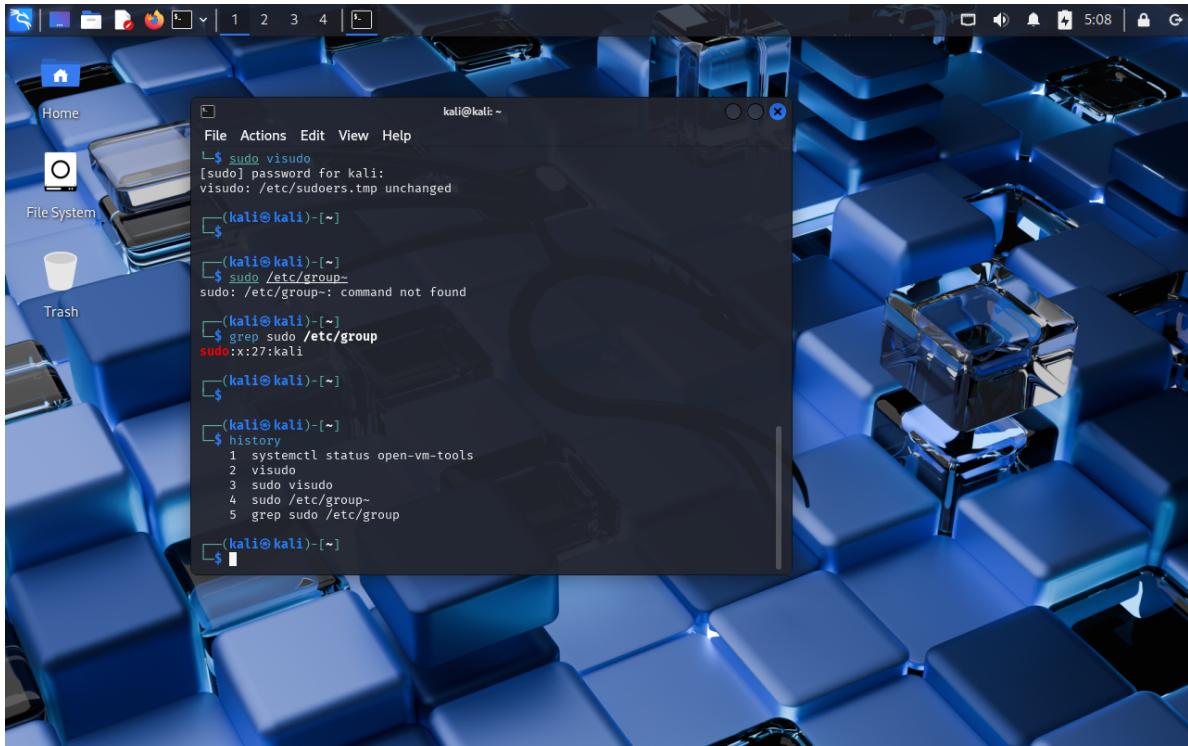
(kali㉿kali)-[~]
$ 

(kali㉿kali)-[~]
$ 
```

Figure 7: Output showing the user is included in the sudo group.

## 7. Terminal History and Shortcuts

Recent commands history and command recall features were demonstrated to improve productivity during system administration.

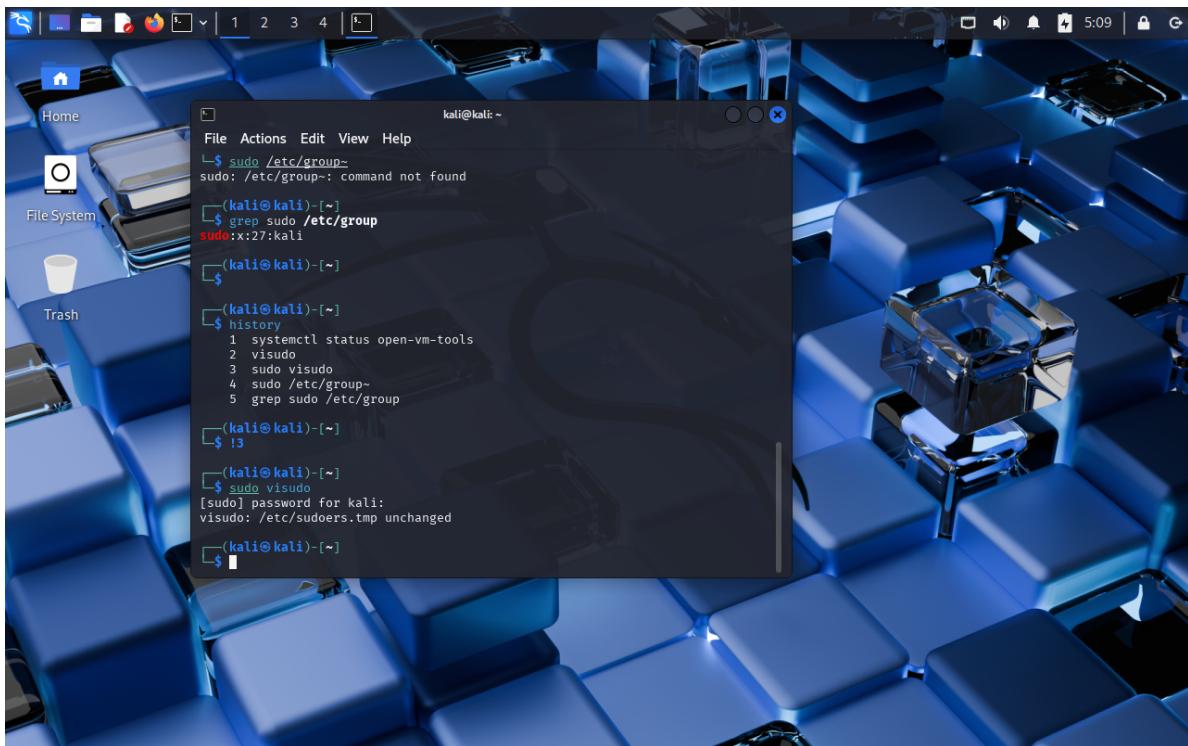


A screenshot of a terminal window titled "kali@kali: ~". The window displays a command history list with numbered entries. The entries are:

- 1 sudo visudo
- 2 visudo: /etc/sudoers.tmp unchanged
- 3 (kali㉿kali)-[~]
- 4 sudo /etc/group
- 5 sudo: /etc/group: command not found
- 6 (kali㉿kali)-[~]
- 7 grep sudo /etc/group
- 8 sudo:x:27:kali
- 9 (kali㉿kali)-[~]
- 10 history
- 11 1 systemctl status open-vm-tools
- 12 2 visudo
- 13 3 sudo visudo
- 14 4 sudo /etc/group
- 15 5 grep sudo /etc/group

The terminal window has a dark background and light-colored text. The desktop environment includes icons for Home, File System, and Trash, and a taskbar at the top.

Figure 8: Recent command history list with numbered entries.



A screenshot of a terminal window titled "kali@kali: ~". The window displays a command history list with numbered entries. The entries are:

- 1 sudo /etc/group
- 2 sudo: /etc/group: command not found
- 3 (kali㉿kali)-[~]
- 4 grep sudo /etc/group
- 5 sudo:x:27:kali
- 6 (kali㉿kali)-[~]
- 7 history
- 8 1 systemctl status open-vm-tools
- 9 2 visudo
- 10 3 sudo visudo
- 11 4 sudo /etc/group
- 12 5 grep sudo /etc/group
- 13 (kali㉿kali)-[~]
- 14 sudo visudo
- 15 [sudo] password for kali:
- 16 visudo: /etc/sudoers.tmp unchanged
- 17 (kali㉿kali)-[~]

The terminal window has a dark background and light-colored text. The desktop environment includes icons for Home, File System, and Trash, and a taskbar at the top.

Figure 9: Executing a previous command via bang notation for quick recall.

## **Results and Reflection**

The VM was successfully operated with verified networking and administrative workflows in the terminal. The evidence confirms: (1) integration with VMware Tools; (2) stable network connectivity; (3) correct permission model preventing unauthorized edits; and (4) effective use of terminal features such as history and recall to accelerate tasks. No configuration changes were persisted in sudoers during observation.

## **References**

- Kali Linux Documentation: <https://www.kali.org/docs/>
- VMware Workstation Pro 17 User Guide.