



VIRTUALBOX / NETWORKING LAB

LAB SUBMISSION



NETWORK INTERFACE CONFIGURATION

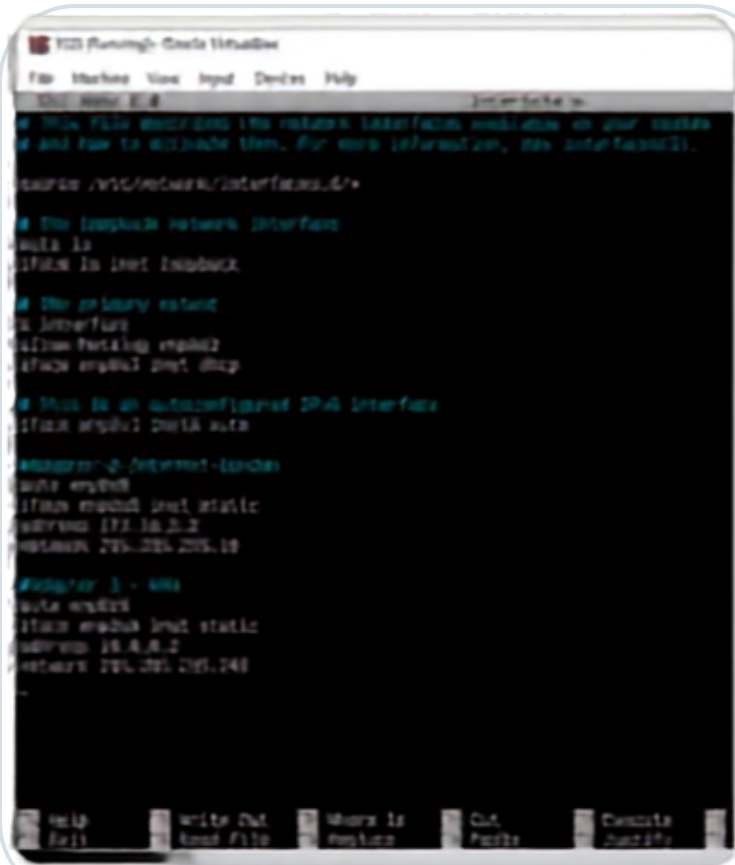
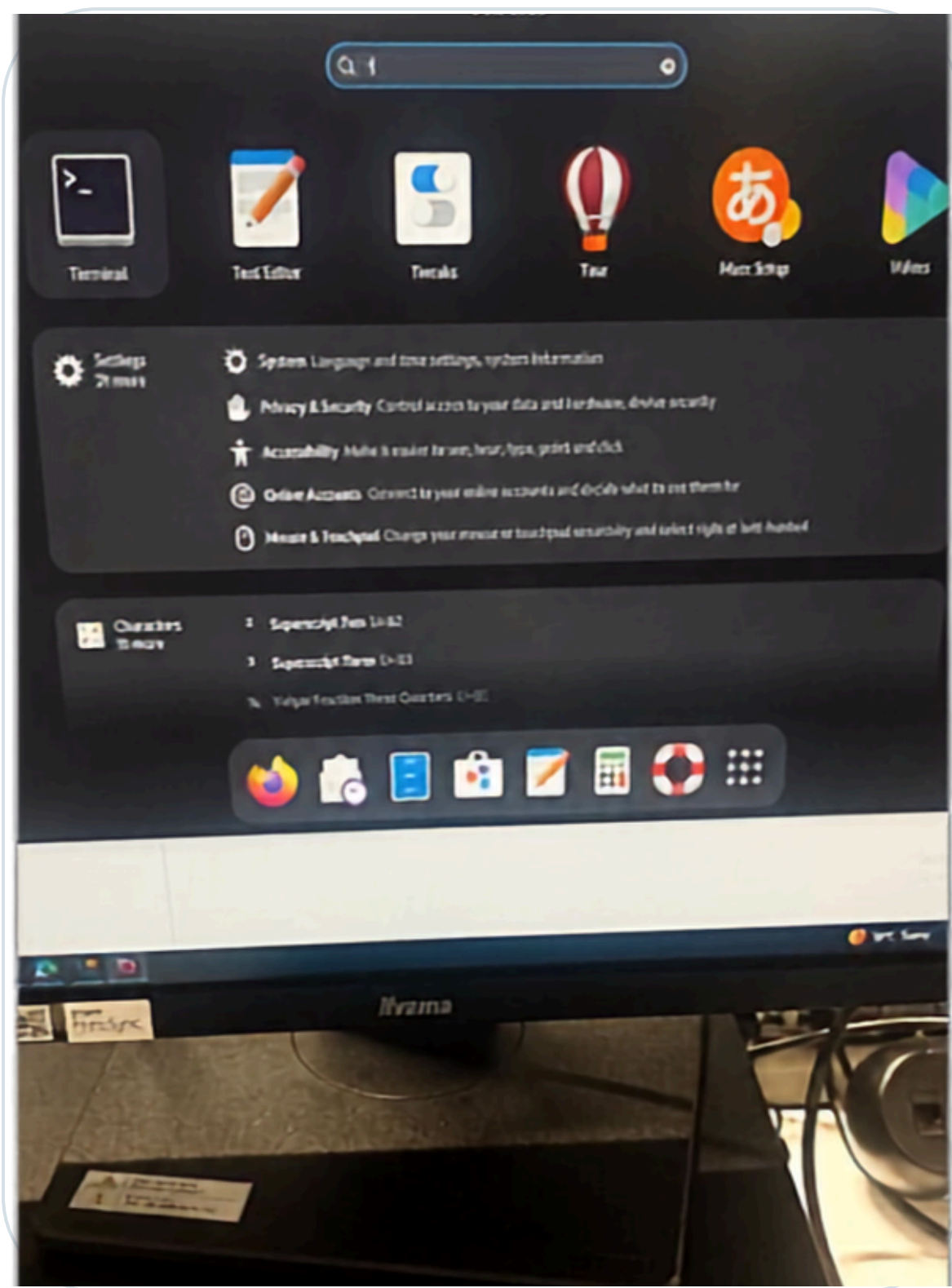


Fig. 1 — /etc/network/interfaces configuration (Nano editor)



For this lab, I configured three network interfaces inside a VirtualBox VM using Debian (Nano editor). empOs3 is set to DHCP for the primary network, while empOs8 (Internet-London) and empOs9 (WAN) are configured with static IP addresses. The setup enables multi-homing for routing and connectivity testing across different subnets.



Environment
VirtualBox + Debian

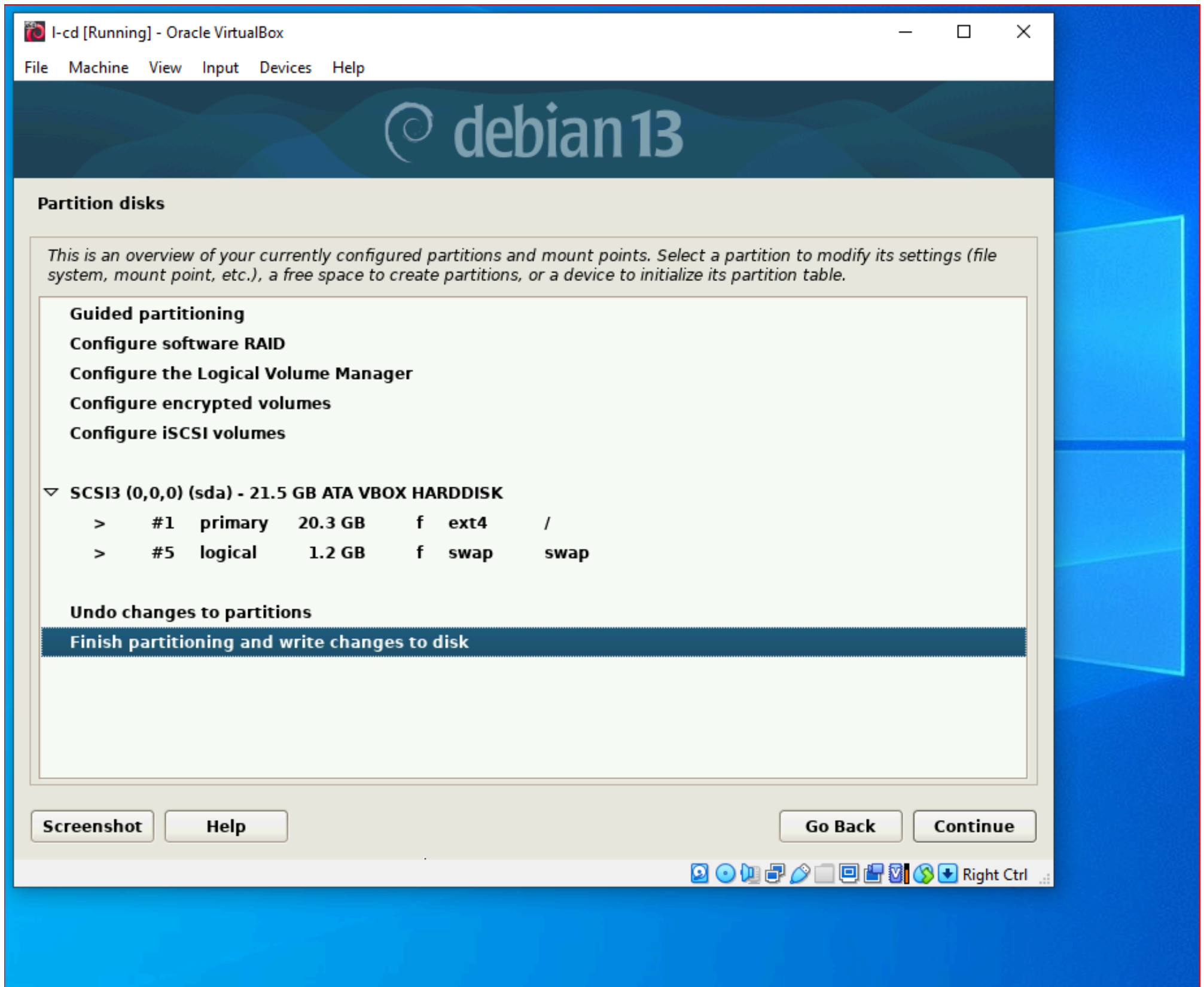


Task
Configure & Verify Network Interfaces



Date
8 July 2025

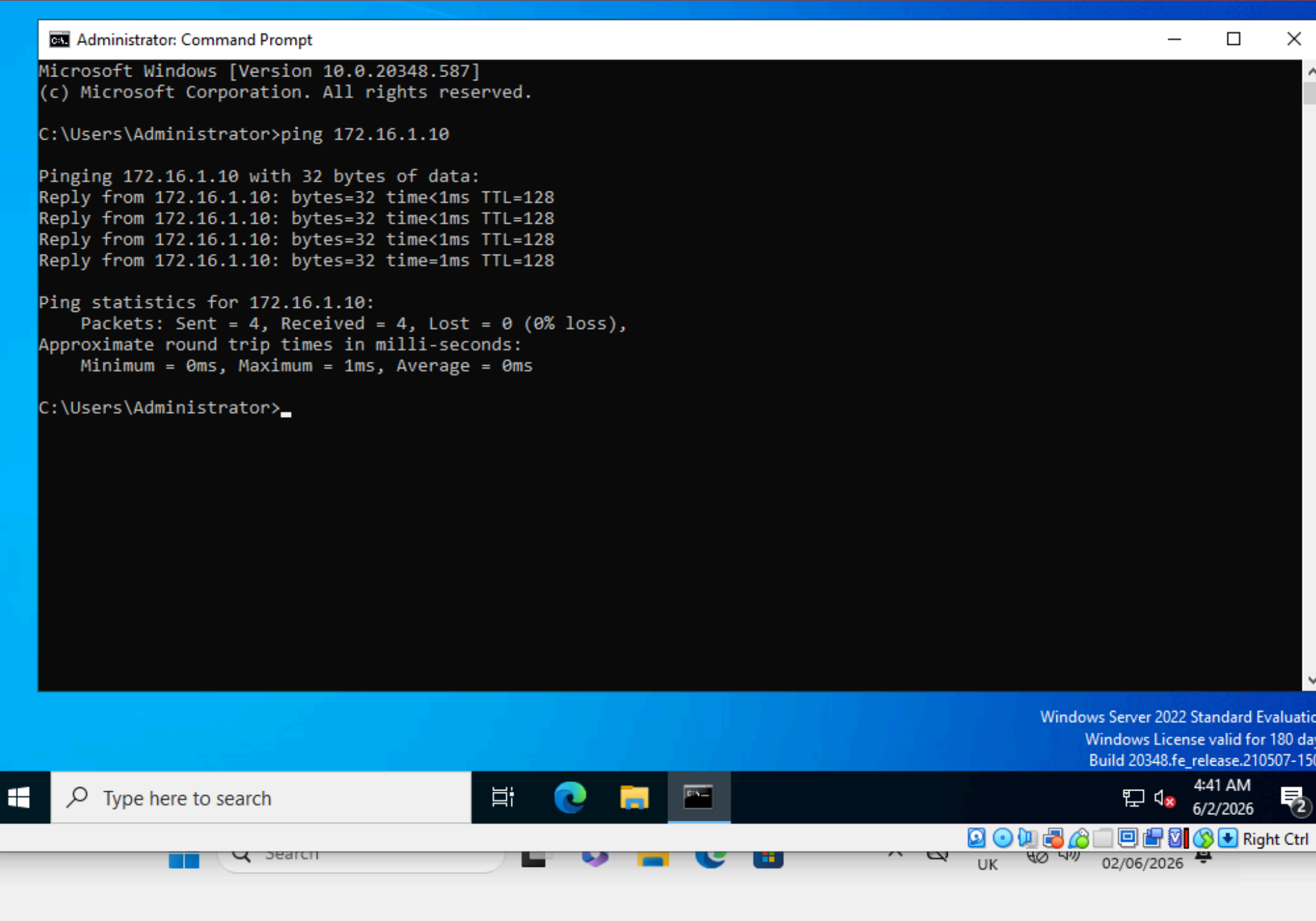
DEBIAN 13 — PARTITION DISKS



Debian 13 partition disks setup in Oracle VM VirtualBox.

INSTRUCTIONS

THE VIRTUALBOX NETWORKING LAB SETUP AND VERIFICATION.



Windows host successfully pinging 172.16.1.10 in Oracle VirtualBox — four replies received, 0% loss, confirming the host-only connection.

Two Debian servers pinging each other over the host-only network in Oracle VM VirtualBox — successful replies received in both directions with 0% packet loss, confirming bidirectional connectivity between the virtual machines.



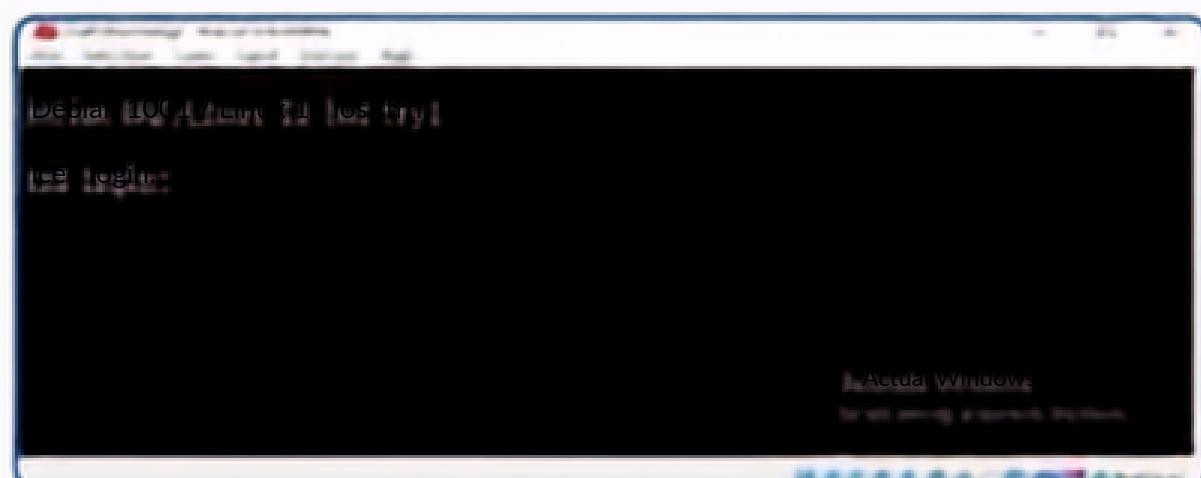
1



CONFIGURE THE PACKAGE MANAGER

The installer is scanning the mirror and configuring apt.

2



LOGIN SCREEN

Debian GNU/Linux 13 login prompt is displayed.

3



SELECT A LANGUAGE

Choose the language for the installation process. The selected language will also be the default for the installed system.

4



PARTITION DISKS – METHOD

Choose how you want to partition the disk. Guided options provide flexibility, or you can select manual partitioning.

5



PARTITION DISKS – OVERVIEW

Review the current partition layout and settings. Proceed to finish partitioning and write changes to disk.

6



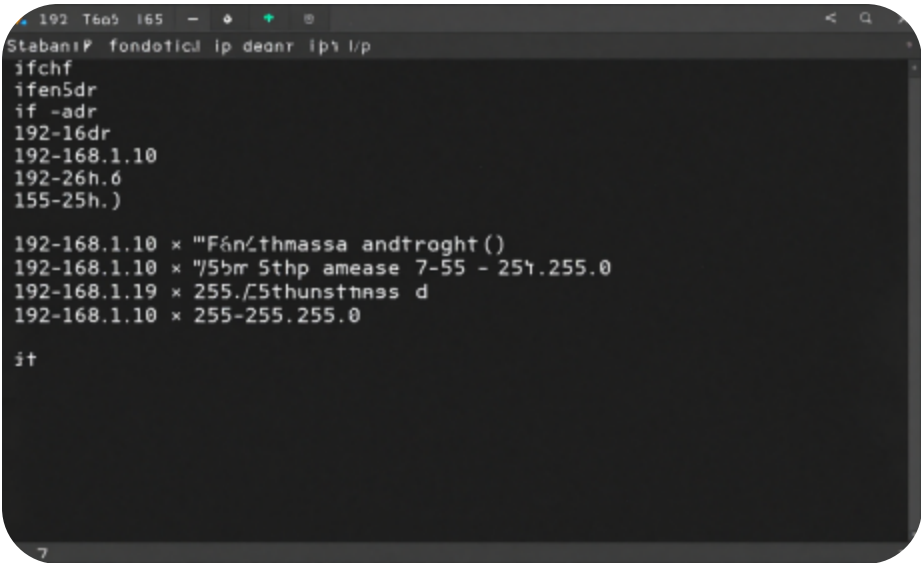
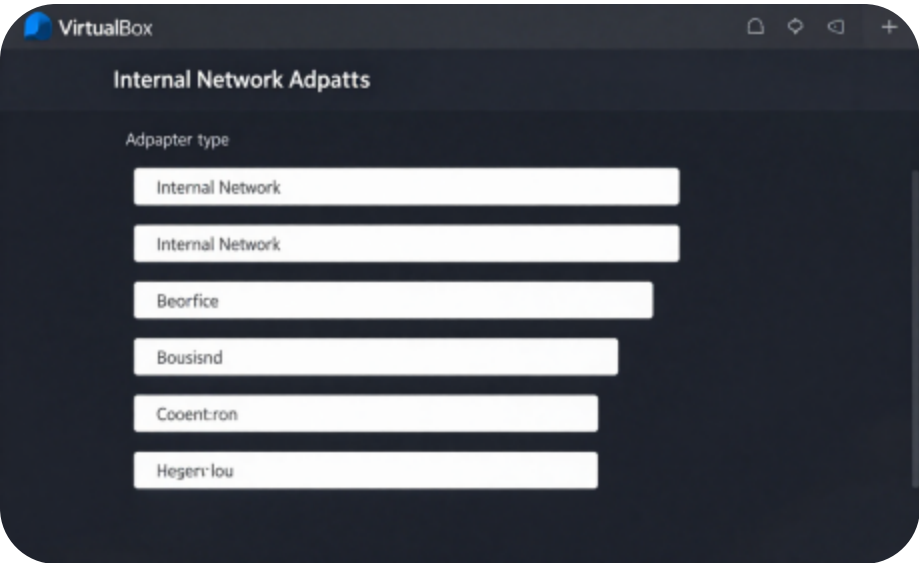
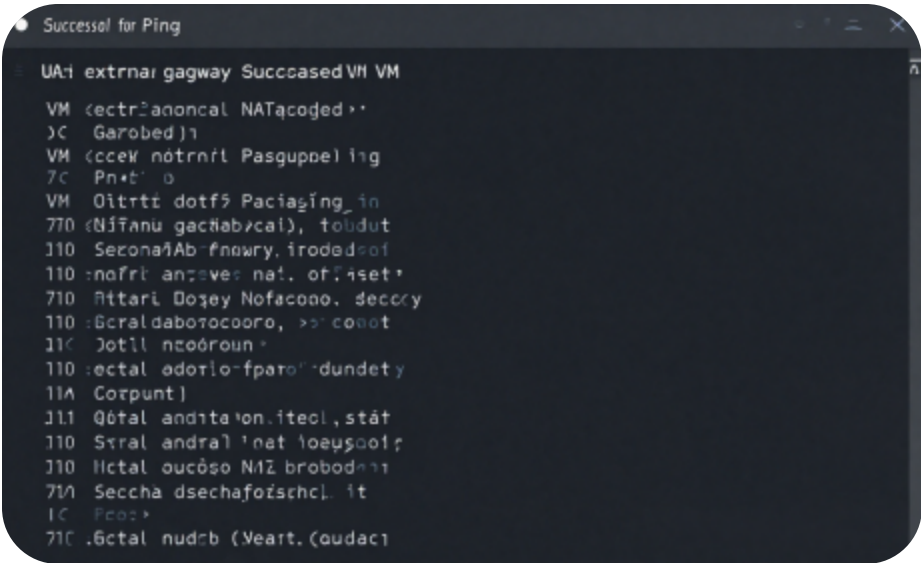
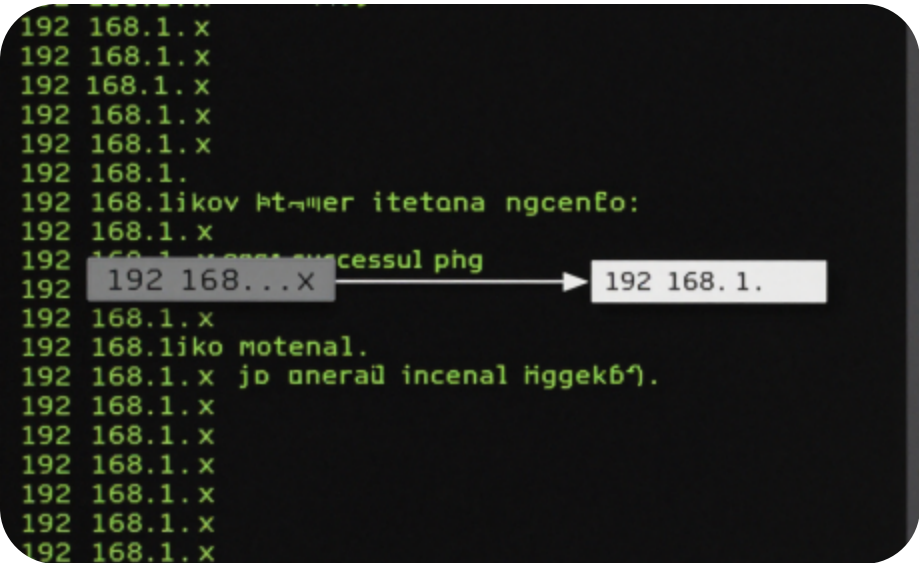
LAB INSTRUCTIONS

Follow the provided instructions to complete the VirtualBox networking lab setup and verification.

WIRED NETWORK SETTINGS

Assessment Evidence

Successful ping tests between VMs confirm correct network configuration across internal and NAT adapters.



Key Lab Facts

- Platform:** Oracle VM VirtualBox 7.x
- Guest OS:** Debian 12 (Bookworm)
- Network Modes:** Internal Network + NAT
- Static IP:** 192.168.1.10/24
- Gateway:** 192.168.1.1
- Verification:** Bidirectional ping between VM1 and VM2 confirmed