Kali Linux VirtualBox with Introductory Linux Commands

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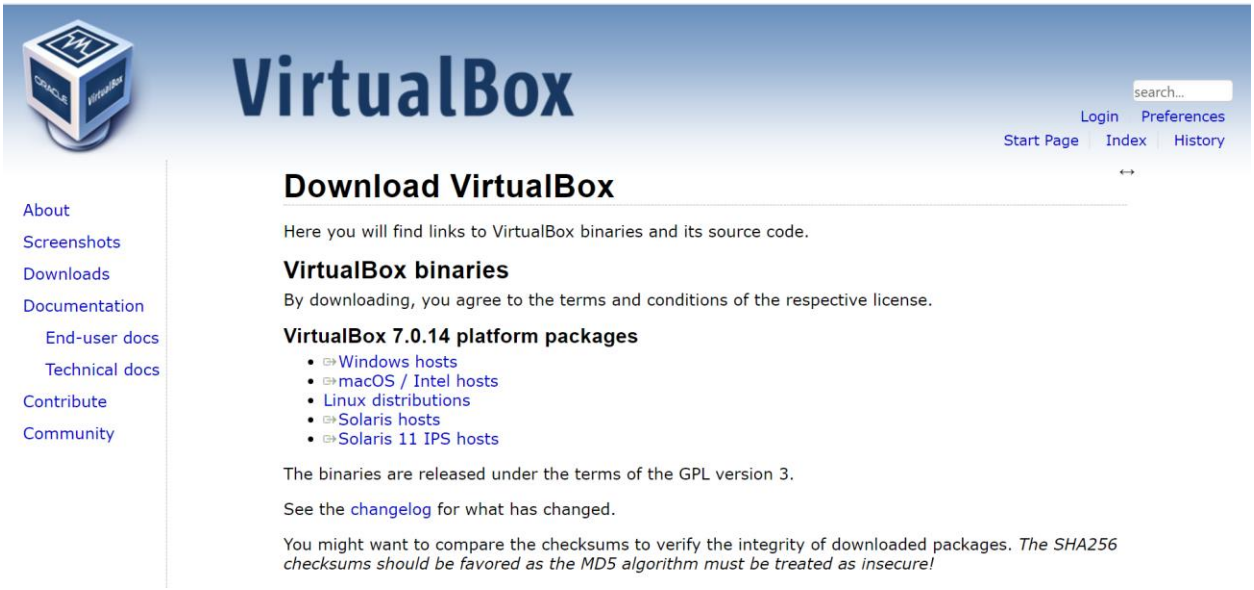
Table of Contents

Tasks 1 and 2: Creating a Kali Linux Virtual Machine and Initial Configuration & Login.

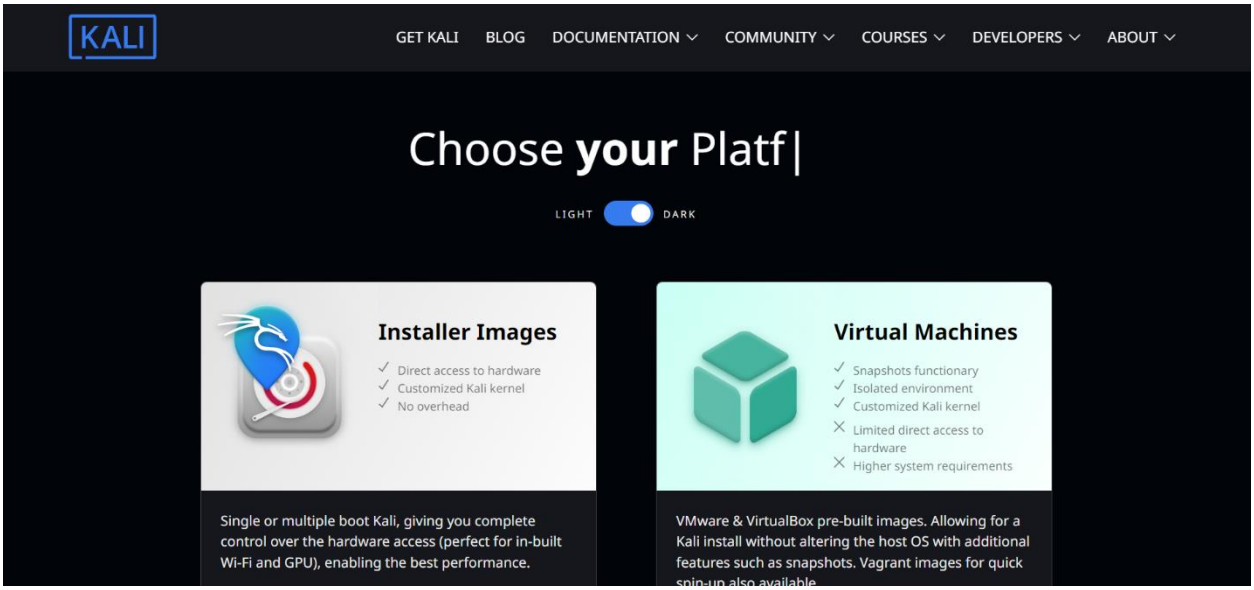
Step 1: Download and Install VirtualBox



Begin by downloading VirtualBox from the official website at https://www.virtualbox.org/. Once the download is complete, follow the installation instructions provided to install VirtualBox on your system.

Step 2: Download Kali Linux ISO

Next, visit the official Kali Linux website at https://www.kali.org/downloads/ and download the ISO file for your preferred version of Kali Linux.



Step 3: Open VirtualBox

After installing VirtualBox, launch the application to begin setting up your virtual machine.

Step 4: Create a New Virtual Machine

In VirtualBox, click the "New" button to create a new virtual machine.

Step 5: Name and Operating System

Provide a name for your virtual machine, such as "Kali Linux". Select "Linux" as the Type and "Debian (64-bit)" as the Version.

Step 6: Memory Allocation

Allocate at least 2GB of RAM to the virtual machine.

Step 7: Hard Disk Creation

Choose "Create a virtual hard disk now" and proceed with creating a new virtual hard disk.

Step 8: Hard Disk Type

Select "VDI (VirtualBox Disk Image)" as the type of virtual hard disk.

Step 9: Hard Disk Allocation

Choose "Dynamically allocated" for the disk storage option.

Step 10: File Location and Size

Specify a name and size for the virtual hard disk. The default size should be sufficient for most purposes.

Step 11: Configure Settings

Click on "Settings" to configure additional options such as network settings and display resolution.

Step 12: Add Kali Linux ISO

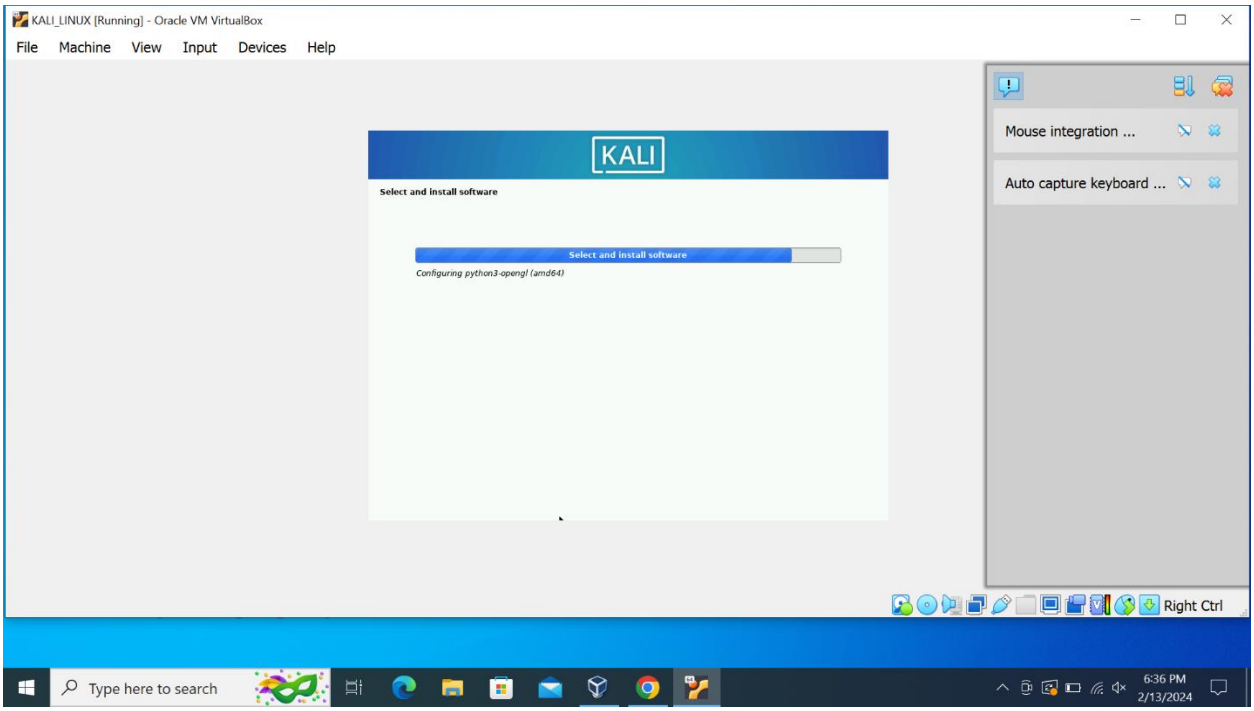
In the Settings window, navigate to the "Storage" tab and add the Kali Linux ISO file as a virtual optical disk.

Step 13: Start the Virtual Machine

Start the virtual machine, and the Kali Linux ISO will boot, allowing you to proceed with the installation.

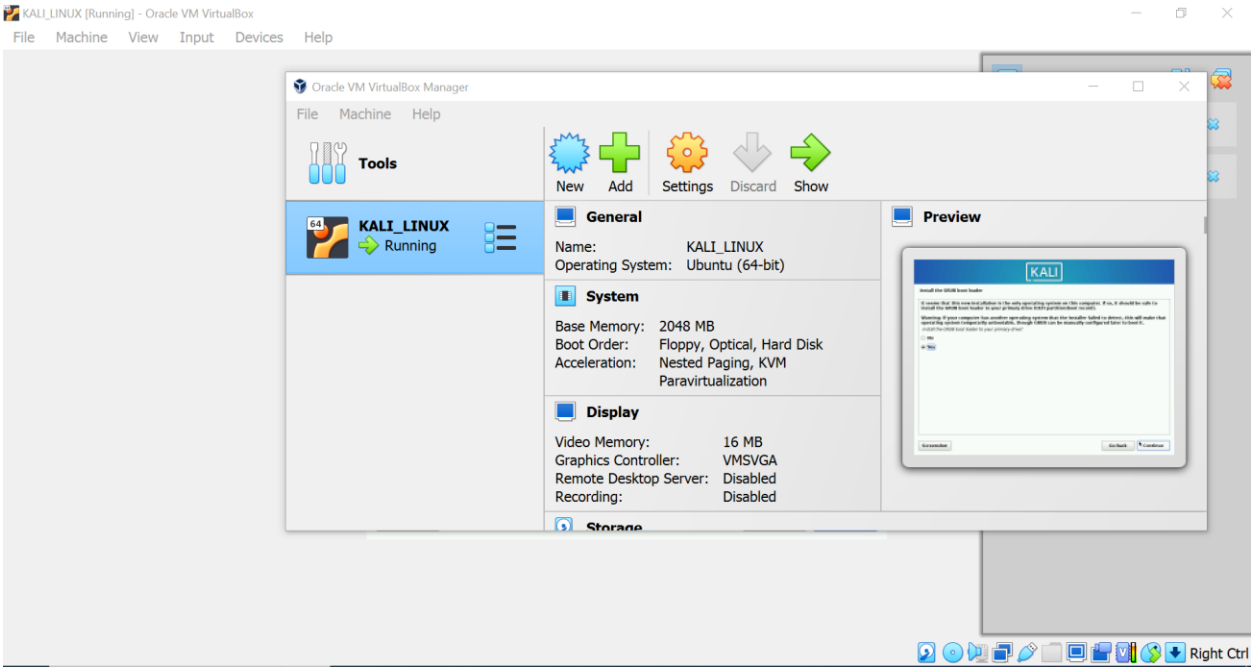
Step 14: Install Kali Linux

Follow the on-screen instructions to install Kali Linux on the virtual hard disk. Customize the installation settings as needed.



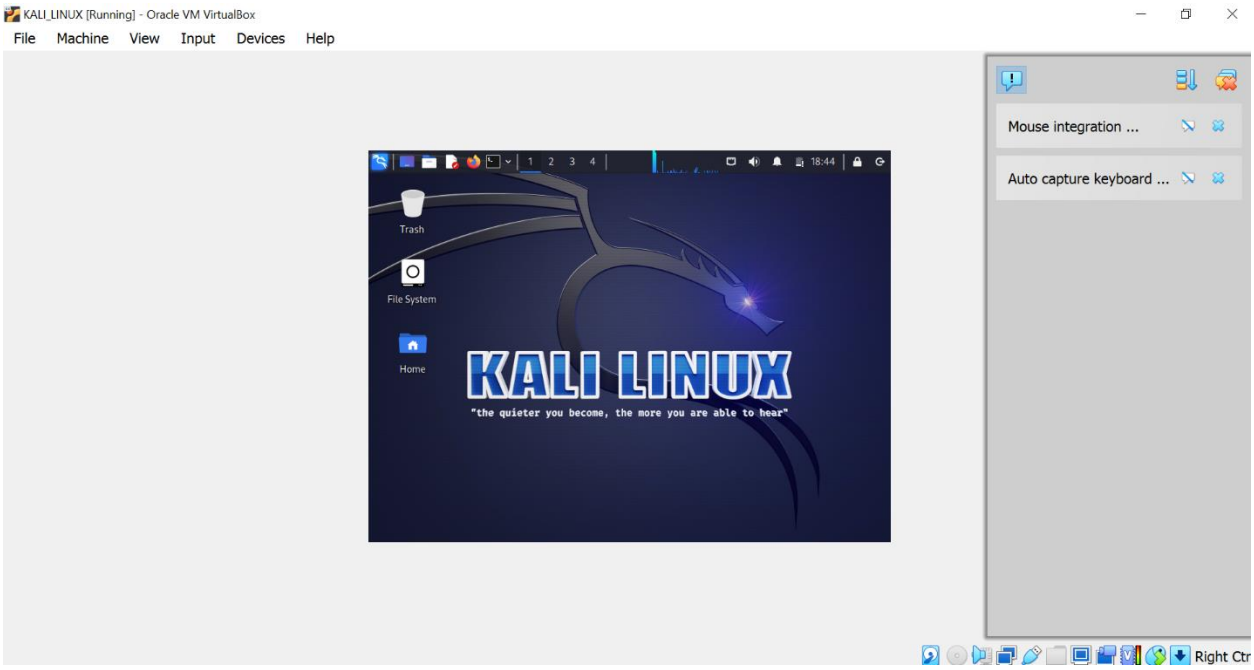
Step 15: Configure Kali Linux

Once the installation is complete, log in to your Kali Linux virtual machine and configure it according to your preferences.



Step 16: Finalization

Congratulations! You have successfully created a Kali Linux virtual machine using VirtualBox. Save any changes and configurations before exiting the virtual machine.



Task 3: Introduction to Linux Terminal

Step 1: Open the Linux Terminal within your Kali Linux VM

- Launch your Kali Linux virtual machine.
- Once the desktop environment loads, locate and open the terminal application. This can usually be found in the applications menu or by searching for "Terminal".

Step 2: Execute the introductory Linux commands.

pwd (Print the current working directory)

Purpose: This command prints the absolute path of the current working directory.

Syntax: pwd

Example: pwd

ls (List files and directories in the current directory)

Purpose: Lists the names of files and directories in the current directory.

Syntax: ls [options] [directory]

Example: ls -l

cd (Change the current directory)

Purpose: Changes the current working directory.

Syntax: cd [directory]

Example: cd Documents

mkdir (Create a new directory)

Purpose: Creates a new directory with the specified name.

Syntax: mkdir [directory_name]

Example: mkdir new_directory

touch (Create an empty file)

Purpose: Creates an empty file with the specified name.

Syntax: touch [file_name]

Example: touch new_file.txt

Nano or vim (Open a text editor to create or edit a file)

1. Nano:

Purpose: Opens the Nano text editor to create or edit a file.

Syntax: nano [file_name]

Example: nano example.txt

2. Vim:

Purpose: Opens the Vim text editor to create or edit a file.

Syntax: vim [file_name]

Example: vim example.txt

cat (Display the contents of a file)

Purpose: Concatenates and displays the contents of one or more files.

Syntax: cat [file_name]

Example: cat example.txt

Task 4: Basic File Operations(Assignment Practice)

Step 1: Creation of LabFolder Directory

- Open the Linux terminal within the Kali Linux virtual machine.
- Execute the command mkdir LabFolder to create a new directory named "LabFolder."

Step 2: Navigation to LabFolder Directory

- Change the current directory to "LabFolder" using the command cd LabFolder.

Step 3: Creation of hello.txt File

- Create a text file named "hello.txt" within the "LabFolder" directory using the command touch hello.txt.

Step 4: Editing hello.txt with a Greeting Message

- Open the "hello.txt" file for editing using either Nano or Vim text editor.

  For Nano: Execute nano hello.txt.

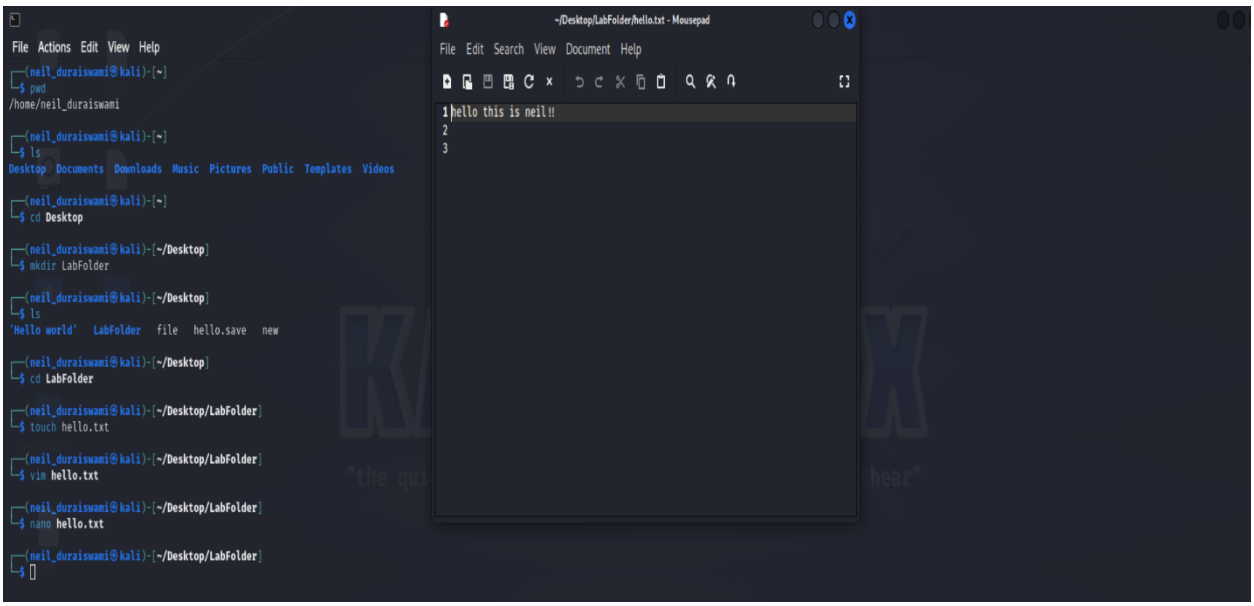
  For Vim: Execute vim hello.txt.

- Write a greeting message within the text editor.

Step 5: Save the changes and exit the text editor.

For Nano: Press Ctrl + O to save, press Enter to confirm the file name, and press Ctrl + X to exit.

For Vim: Press Esc to ensure you are in command mode, type :wq, and press Enter.



My experience with VM and Kali Linux

Installing Kali Linux on VirtualBox and becoming acquainted with fundamental Linux commands like pwd, ls, cd, mkdir, touch, nano, vim, and cat were the tasks assigned for Prof. Bhrigu Celly's CSC 581 Adv. Software Engineering course. Even though I was lost at first, I looked at YouTube videos and online searches for help. I eventually became proficient with these commands via practice and investigation, which gave

me more assurance when navigating the Linux environment. This task offered a practical introduction to Linux while highlighting the value of self-directed learning and problem-solving abilities.