Kali Linux Virtualization

Contents

Time required: 60 minutes

NOTE: If you need a Kali Linux VM for more than one class, you can use the same one for all classes.

How to Create Screenshots: Please use the Windows Snip and Sketch Tool or the Snipping Tool. Paste a screenshot of just the program you are working on. If you are snipping a virtual machine, make sure your focus is outside the virtual machine before you snip.

1. Press and hold down the **Windows key** & **Shift**, then type **S.** This brings up the on-screen snipping tool.
2. Click and Drag your mouse around whatever you want to snip.
3. Release the mouse button. This places the snip into the Windows Clipboard.
4. Go into Word or wherever you want to paste the snip. Hold down **CTRL**, then type **V** to paste the snip.

Lab Description

Kali Linux is a free, advanced Linux based penetration and auditing tool. In this lab you will install Kali Linux in a virtual machine and do a simple network test.

NOTE: You will need at least 4 GB of RAM and 60 GB hard drive free space to do the activities in this Lab.

VirtualBox

VirtualBox is an open-source virtualization hypervisor that works on multiple operating systems.

Enable virtualization technology (VT) on your computer's processor by editing the BIOS settings at boot-up (many computer BIOS have VT disabled). You may have to research how to do this.

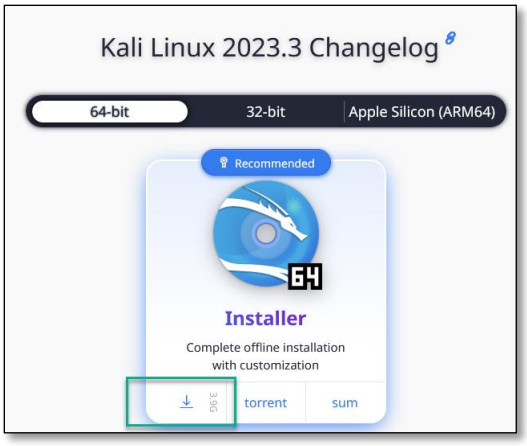
Install VirtualBox

1. Download the latest version of VirtualBox from www.virtualbox.org
2. Double Click the file you downloaded to start the VirtualBox installation.
3. If you receive an error that says install Microsoft Visual C++ 2019 Redistributable Package, download, and install the following.
   https://aka.ms/vs/17/release/vc_redist.x64.exe
4. Accept the default choices on the installation screens and prompts.

Download Kali Linux

NOTE: Kali Linux and most Linux distributions already have Python installed.

1. Go to http://www.kali.org/downloads → Go to **Installer Images**.

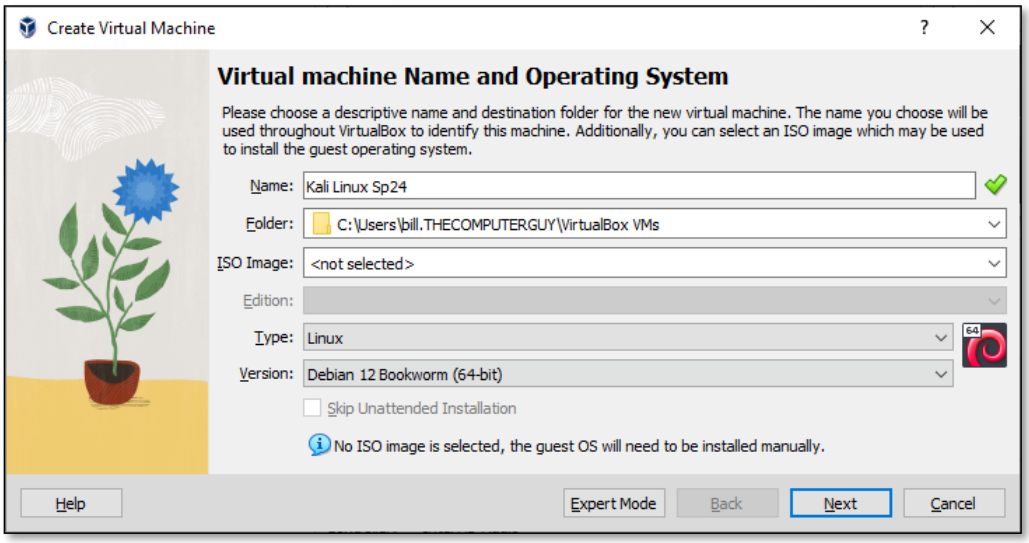


2. Download the **Kali Linux 64-bit Installer ISO** to a folder on your hard drive where you can find it. Your version may be newer than the screenshot below.

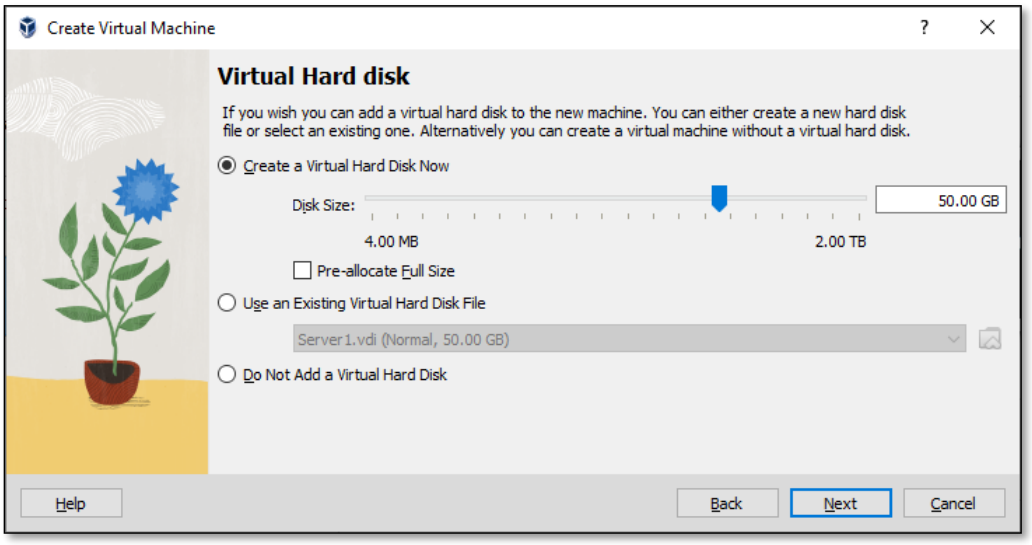
Create the Kali Linux Virtual Machine

These directions are based on the directions from kali.org:
https://www.kali.org/docs/virtualization/install-virtualbox-guest-vm/

1. Start VirtualBox.
2. Click **New** → **Next** in the Welcome to the New Virtual Machine Wizard.
3. Enter **Kali Linux** for the **Name**.
    a. Type: **Linux**
    b. Version: **Debian 12 Bookworm (64-bit)**



4. Click **Next** → **Hardware** → Click **Next**.
5. Set Disk Size at **50 GB.**



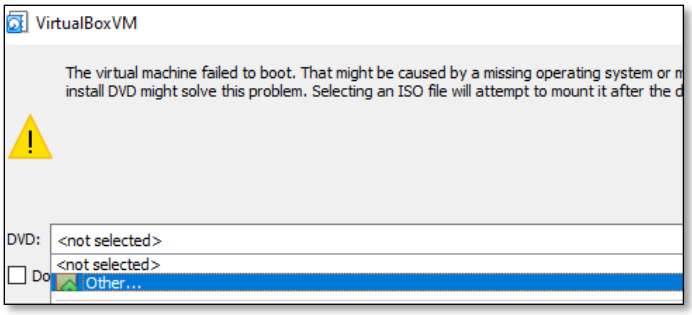
6. Click **Next** → Confirm your settings → Click **Finish**.

Optimize VirtualBox for Kali Linux

1. In VirtualBox Manager → Right Click **Kali Linux** → **Settings**.
2. **System** → **Processor**: Enable PAE/NX
3. **Display** → **Screen** → **Video Memory**: 128MB
4. Click OK.

Install Kali Linux

1. Click **Start** on your new virtual machine.
2. Click the drop-down menu next to **DVD** → Select **Other** → Browse for your Kali Linux ISO.



3. Click **Mount and Retry Boot**.
4. The Kali launch screen should show up. Press **Enter** to choose **Graphical Install**.
5. Select **English** → Continue.
6. Select **United States** → Continue.
7. Select **American English** → Continue.
8. Enter a hostname: **kalifirstname** (Example: **kalibill)** → Continue.
9. Domain name: **dpod.local** (use your workgroup name if you are doing this at home.) → Continue.
10. Full name for the new user: **user**
11. Set your **username: user**
12. Use **Password01** as your password. → Continue.
13. Time Zone: **Mountain** (or whatever your time zone is). → Continue.
14. Partition Disks: **Guided - use entire disk**. → Continue.
15. Your virtual disk should be the only choice. → Continue.
16. Partitioning scheme: **All files in one partition**. → Continue.
17. Finish partitioning and write changes to disk. → Continue.
18. Choose **Yes** in the confirmation screen. → Continue.
19. The operating system will install for a while. While you are waiting, do homework for another class ;')
20. **Software selection:** leave the default settings. → Continue. → Continue with your homework.
21. Install the GRUB bootloader? **Yes**. → Continue.

22. Choose **/dev/sda** . . . → Continue.
23. Installation complete. → Continue. → Kali will reboot. This may take a few minutes, be patient. Keep working on your homework.
24. Logon with your username and password.

Disable Desktop Screen Lock in Kali Linux

1. Click the Kali icon at the top left of the task bar on the top of the screen.
2. Search for **Settings Manager**.
3. Click **Power Manager** → Click **Display** tab. Drag the **Blank after** and other sliders to the left to **Never**.
4. Click the **Security** tab → **Automatically lock the session: Never**.

Update Kali

1. Open **Terminal**. (Look in the top toolbar.) Run the following commands. These commands will update Kali.
2. **sudo apt update**
   A password will be requested. The sudo password is the same as your user's password. (This command gets the lists of updates and upgrades. If you receive an error on this step, restart Kali.)
3. **sudo apt upgrade -y**
   This command installs the updates and upgrades. This may take some time.
4. There may be some screens of information, press Enter until the upgrade process continues and completes.
5. If either command fails, reboot Kali, and try it again.
6. Restart Kali at the end of the update process. Kali may take longer than usual to start, be patient.

Assignment Submission

1. Take a screenshot of your desktop showing your virtual machine running.
2. Paste the screenshot into a new Word document.

3. Attach and submit the Word document to the assignment in Blackboard.