TRAINING DAY 6 REPORT:

- ## Downloading Kali Linux

  Today, I learned how to **download Kali Linux**, the most popular OS for ethical hacking and cybersecurity.

  ### Steps to Download Kali Linux:

  1. Go to the **official Kali Linux download page.**

  2. Scroll to **Installer Images**.

  3. Choose your version:

     - 64-bit Installer (recommended for most laptops/PCs).

     - Or **Kali Live** if you want to try it without installing.

  4. Click the **Download** button next to your chosen image.

  5. Save the downloaded **ISO file** (e.g., `kali-linux-2024.1-installer-amd64.iso`) to your computer.

     This file will be used to create a **virtual machine** or a **bootable USB** for installation.

     ### Important Tips:
     - Always download Kali Linux from the **official website** for safety.
     - The ISO file can be large (2-4 GB), so make sure you have enough disk space.
     - Verify the downloaded file's checksum if possible, to ensure it wasn't corrupted or tampered with.

- ## Configuring VirtualBox for Kali Linux

  ### Steps to Configure VirtualBox for Kali Linux:

  1. **Install VirtualBox**

     Install virtualbox on your system.

  2. **Create a New Virtual Machine**

- Open VirtualBox → Click **New.**

- Enter **Name** (e.g., "Kali Linux"), set **Type: Linux**, and **Version: Debian (64-bit)**.

- Click **Next**.

3. **Set Memory (RAM)**

- Allocate at least **2 GB (2048 MB)** of RAM.

- For better performance, 4 GB or more is recommended if your host system has enough RAM.

4. **Create Virtual Hard Disk**

- Select **Create a virtual hard disk now** → Click **Create**.

- Choose **VDI (VirtualBox Disk Image)** → Click **Next**.

- Choose **Dynamically allocated** → Click **Next**.

- Set disk size to at least **20 GB** → Click **Create**.

5. **Attach the Kali Linux ISO**

- Select your new VM → Click **Settings**.

- Go to **Storage** → Under **Controller: IDE**, click the empty disk icon.

- On the right, click the small disk icon → **Choose a disk file...**.

- Browse and select your **Kali Linux ISO** file → Click **OK**.

6. **Adjust Important Settings**
- **System** → **Processor**: Increase to **2 or more CPUs** if your system supports it.

- **Display** → **Video Memory**: Set to at least **64 MB**.

- **Network** → **Adapter 1**: Leave on **NAT** or switch to **Bridged Adapter** if you need Kali to appear on your local network.

7. **Start the VM**

- Select your VM → Click **Start**.

- Kali will boot from the ISO; follow the on-screen installation instructions (Graphical Install recommended).

- **Installing Kali Linux in VirtualBox**

Steps to Install Kali Linux in VirtualBox:

1. **Start the Virtual Machine**

   - In VirtualBox, select your **Kali Linux VM** → Click **Start**.

   - Kali will boot from the ISO you attached earlier.

2. **Choose Installation Type**

   - On the Kali boot menu, select **Graphical Install** → Press **Enter**.

3. **Select Language, Location & Keyboard**

   - Choose your preferred **language**, **country**, and **keyboard layout** → Click **Continue** after each step.

4. **Configure Network**

   - Enter a **hostname** (e.g., kali) → Continue.

   - You can leave the domain name blank → Continue.

5. **Set Up User Accounts**

   - Enter a **full name** for the new user → Continue.

   - Choose a **username** (e.g., kali) → Continue.

   - Create and confirm a **strong password** → Continue.

6. **Configure Clock**

   - Select your **time zone** → Continue.

7. **Partition Disks**

   - Choose **Guided – use entire disk** → Continue.

   - Select the virtual hard disk you created → Continue.

   - Choose **All files in one partition** → Continue.

   - Select **Finish partitioning and write changes to disk** → Continue.

   - Confirm **Write changes to disk** → **Yes** → Continue.

8. **Install the System**

   - The installer will copy files and install Kali. This may take **5–15 minutes** depending on your system.

9. **Install GRUB Boot Loader**

- Choose **Yes** to install GRUB.

- Select the device `/dev/sda` → Continue.

10. **Finish Installation**

- After installation completes, click **Continue** to reboot your VM.

- Kali will now boot into your new installed system.

Log in

- Use the username and password you created during setup.

- Once logged in, you'll see the **Kali Linux desktop** — installation is complete!

• Black Screen Error (VirtualBox/Kali Linux)

What is the Black Screen Error?

- The black screen error is when your virtual machine **starts but only shows a black or blank screen** instead of the login screen or desktop.

- This means your VM is **powered on but the display isn't rendering properly**, leaving you stuck.

Common Causes of Black Screen Error

1. **Display Issues** – VirtualBox settings like video memory or display acceleration may not be set correctly.

2. **Guest Additions Problems** – Incorrect or missing VirtualBox Guest Additions can cause display glitches.

3. **Virtual Machine Configuration** – Low RAM, too few CPU cores, or wrong OS version selected during VM creation.

4. **Graphics Compatibility** – Issues between your host system's GPU/graphics drivers and VirtualBox.

5. **Kernel/Driver Errors** – Problems during Kali Linux installation or updates can cause the desktop environment to fail to start.

How to Fix Black Screen Error

1. **Restart the VM** – Sometimes, a simple reboot fixes temporary glitches.

2. **Increase Video Memory** – Go to VirtualBox → **Settings** → **Display** → **Screen** → **Video Memory**, and set it to at least **64 MB**.

3. **Enable 3D Acceleration** – In the same Display settings tab, try checking **Enable 3D Acceleration**.

4. **Check System Resources** – Increase RAM or CPU cores in **Settings** → **System**.

5. **Reinstall Guest Additions** – Boot into Kali Linux recovery mode or terminal, and reinstall VirtualBox Guest Additions.

6. **Reconfigure Desktop Environment** – Log in to a virtual console by pressing **Ctrl+Alt+F1–F6**, then reinstall the desktop environment using:

```
sudo apt update

sudo apt install --reinstall kali-desktop-xfce
```

7. **Try a Different Display Controller** – In **Settings** → **Display** → **Graphics Controller**, switch between VBoxVGA, VMSVGA, or VBoxSVGA to find what works best.

If None of These Work

- **Reinstall Kali Linux in the VM** with recommended settings.

- Check the **VirtualBox version**—updating to the latest version often fixes bugs.

- Ensure your **host system's GPU drivers** are up to date.

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