Kali Linux is a distribution of Linux operating systems specially designed for **Cybersecurity tasks** such as **penetration testing**, **ethical hacking**, **digital forensics**, etc. It is a powerful and versatile operating system that provides a wide range of tools and resources for security professionals, as well as individuals interested in Cybersecurity and ethical hacking.

There are various ways to install Kali Linux:

1. **Install Kali Linux on VMware.**
2. **Dual-boot installation of Kali Linux.**
3. **Replace the current OS with Kali Linux.**

I will show you the 3rd method of how to install Kali Linux on your computer in this comprehensive guide.

Requirements to Install Kali Linux

- A laptop or PC with at least **20GB** of storage space.
- A USB flash drive of **8 GB** or above.
- RAM **2GB.**
- A PC with **a 64-bit/32-bit/ARM64** processor of minimum **1GHz clock speed.**

What is Kali Linux?

Kali Linux is an **open-source distribution** of Linux designed for **Cybersecurity** purposes. It's a **Debian-based Linux** distribution that provides a wide range of tools and resources for ethical hackers, and security professionals. Kali Linux comes equipped with an extensive arsenal of security testing tools.

Moreover**, Kali Linux** undergoes development within a highly secure environment, where a limited number of trusted individuals have the privilege to contribute, and each package is authenticated through the developer's signature. In particular, Kali features a specialized **kernel** modified to support **injection**.

Install Kali Linux on Windows/MacOS

The process of **installing Kali Linux on Windows or any other OS** comprises **three essential steps**. This includes **downloading Kali Linux's ISO file,** making a **bootable device with the ISO file**, and finally, proceeding to **install Kali Linux.** Follow the below detailed steps to successfully install Kali Linux on your computer:

1. Back-up Your Data

While replacing your current OS with Kali Linux, make sure you have a **backup of your important files** to prevent data loss before proceeding to the installation steps.
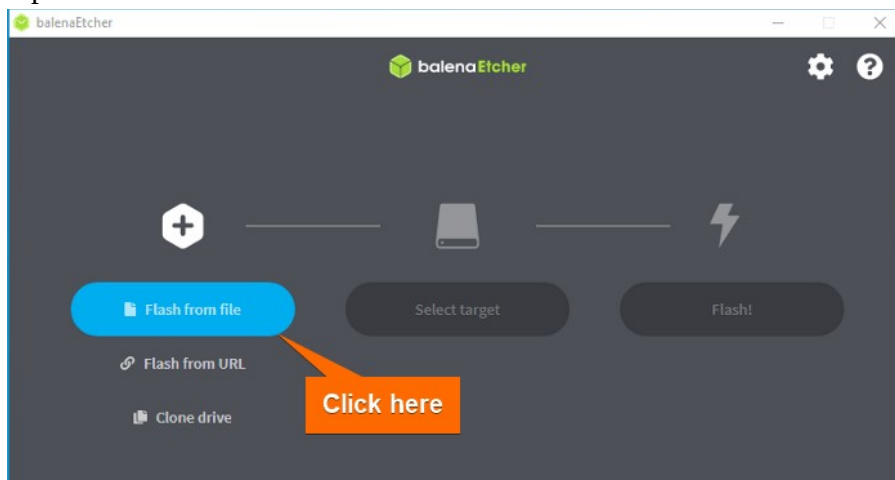
2. Download the ISO File

After backing up data, the next step of installing Kali Linux is to **download Kali Linux's iso file** from its official website. Choose the processor bit according to your PC hardware. I'm downloading a **64-bit installer** of **Kali Linux 2023.23 Changelog.**
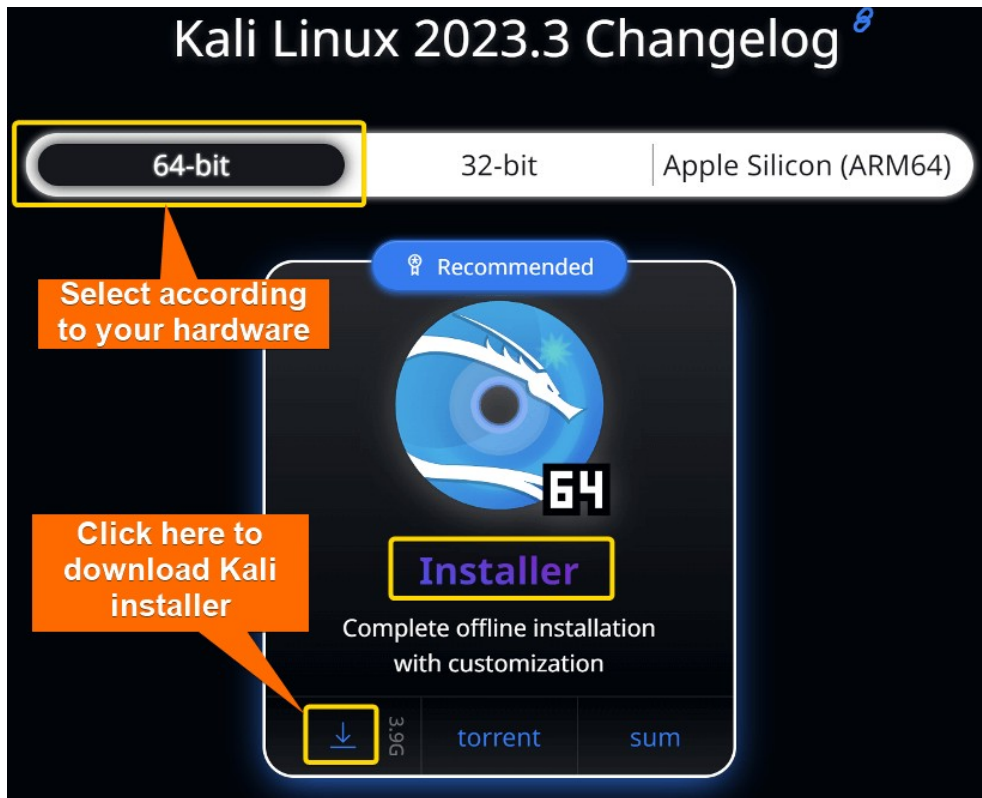

3. Create a Bootable Drive

To create a bootable USB flash drive with the ISO file, I'll use **Etcher** which is a free and open-source application. First, **Install Etcher on Windows** or **MacOS**. Then, follow these steps to learn how to use **Etcher** to create a bootable drive for installing **Kali Linux:**
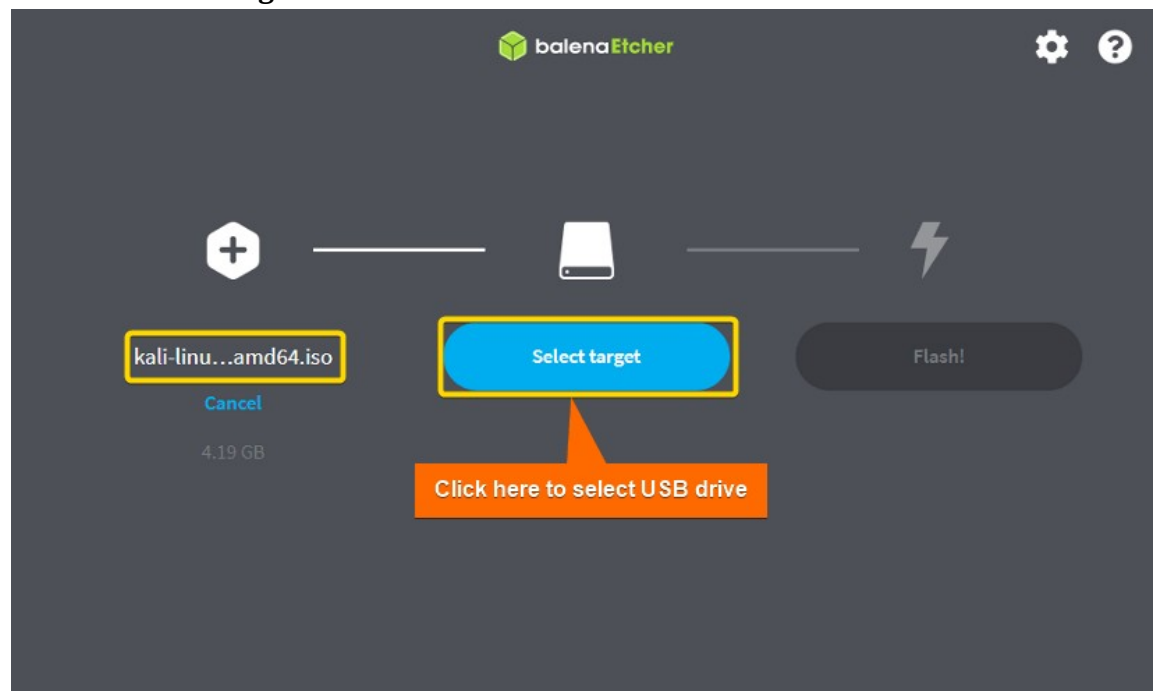
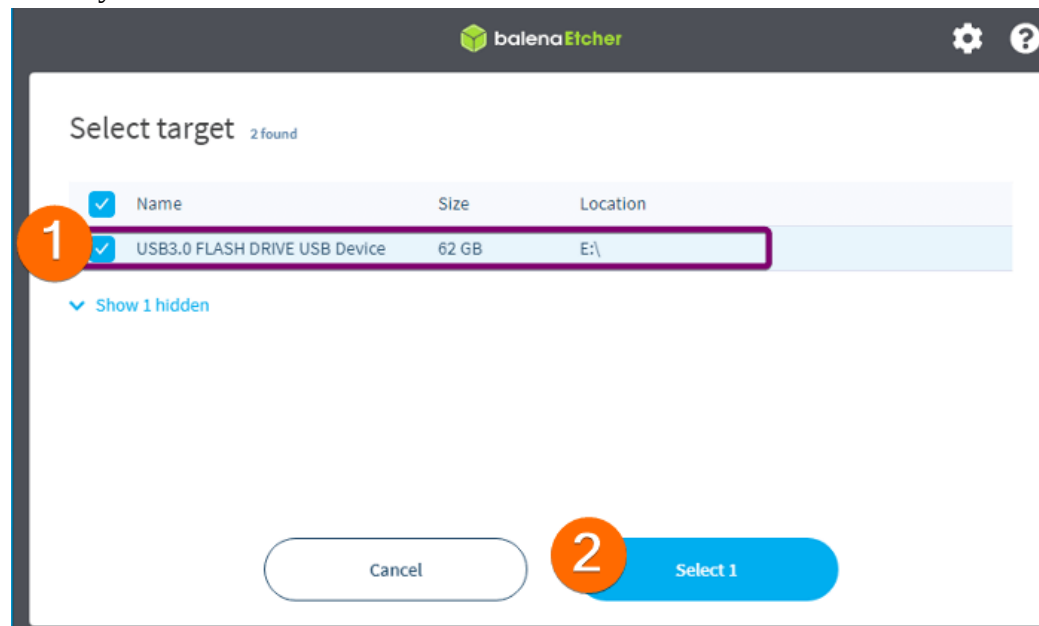1. Open Etcher and select "Flash from File".

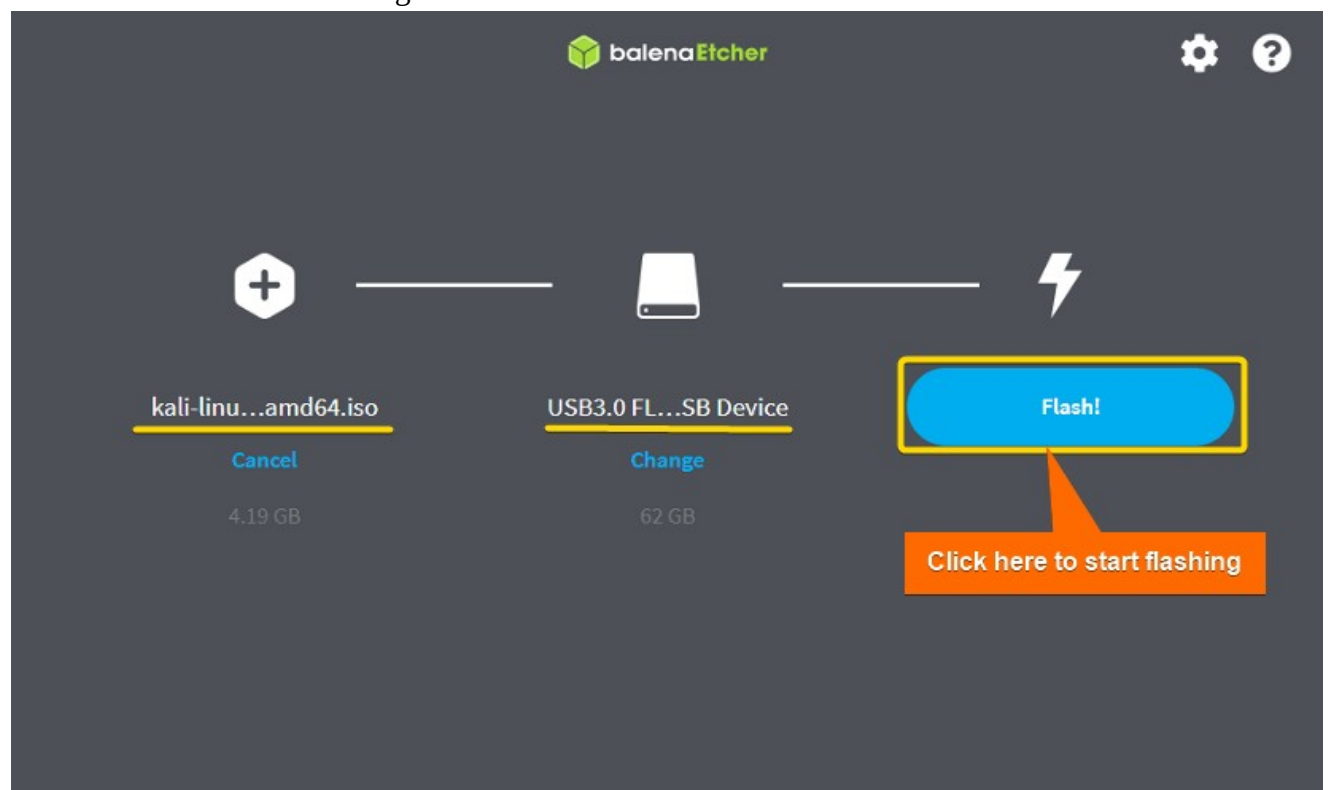2. Select the **ISO file** from the location you've downloaded.
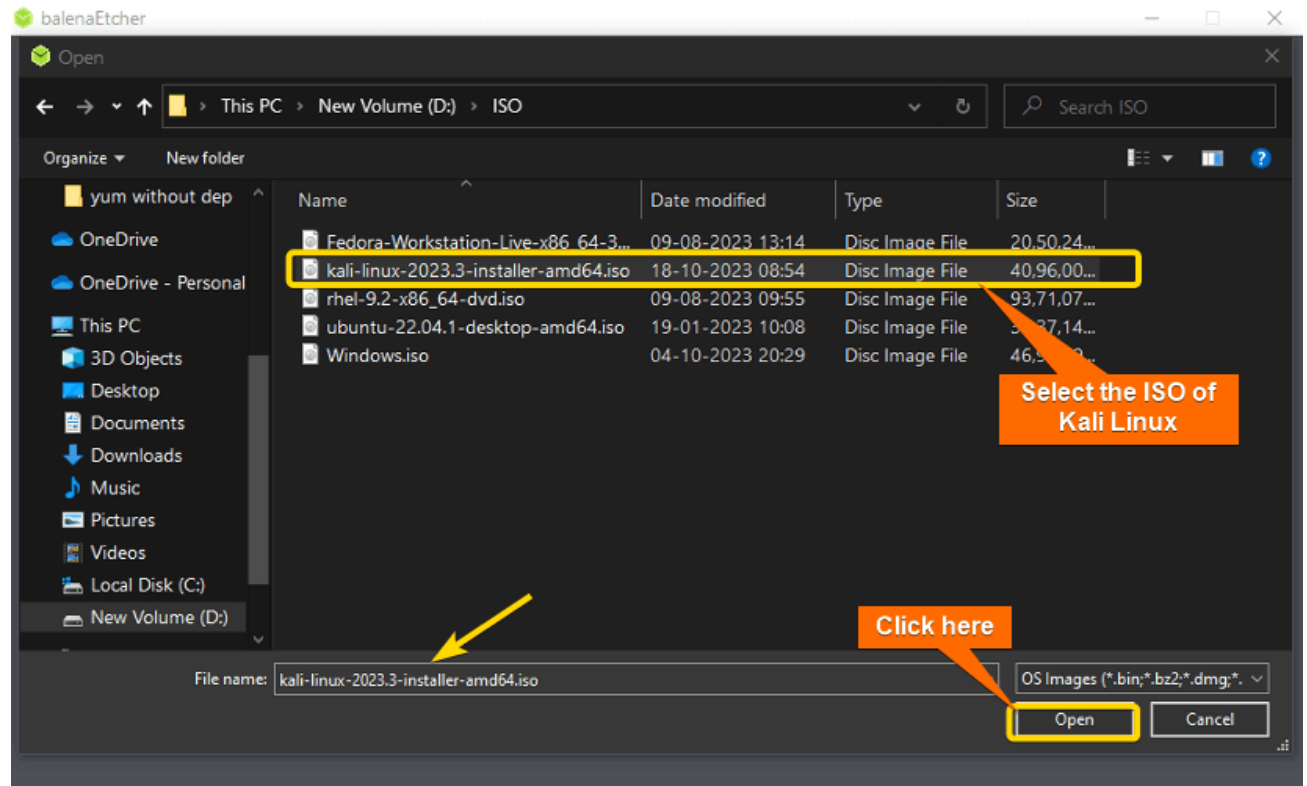
3. Plug in your USB pen drive to the PC.
4. Click on **Select target.**

5. Select your USB drive.

6. Click on **Flash** to start flashing the ISO file into the USB drive.

After that, Etcher will flash the ISO file into your USB drive and make it bootable.

4. Boot Kali Linux From USB Drive

To boot Kali Linux from the USB drive, at first **plug the bootable USB drive into the PC** where you want to install Debian. Then, **turn on/Restart** the PC. It will automatically launch the boot window like   this.

Sel ect "**Graphical install**" and press **ENTER**.

If the window doesn't appear, restart your PC and press the **BIOS** key **according to your device**. **F12** is the most common BIOS key, but **ESC**, **F2,** and **F10** are alternatives for some devices. For macOS, hold down the **COMMAND(⌘) + R** or **OPTION (⌥)** key immediately after turning the power on. Keep "Removable Devices" at the top in Boot menu using **+ key** .

After configuring the boot serial as above, press **F10** to save and exit.

5. Select Language

Select a **language** according to your preference and click on **Continue**. I'm selecting **English**.
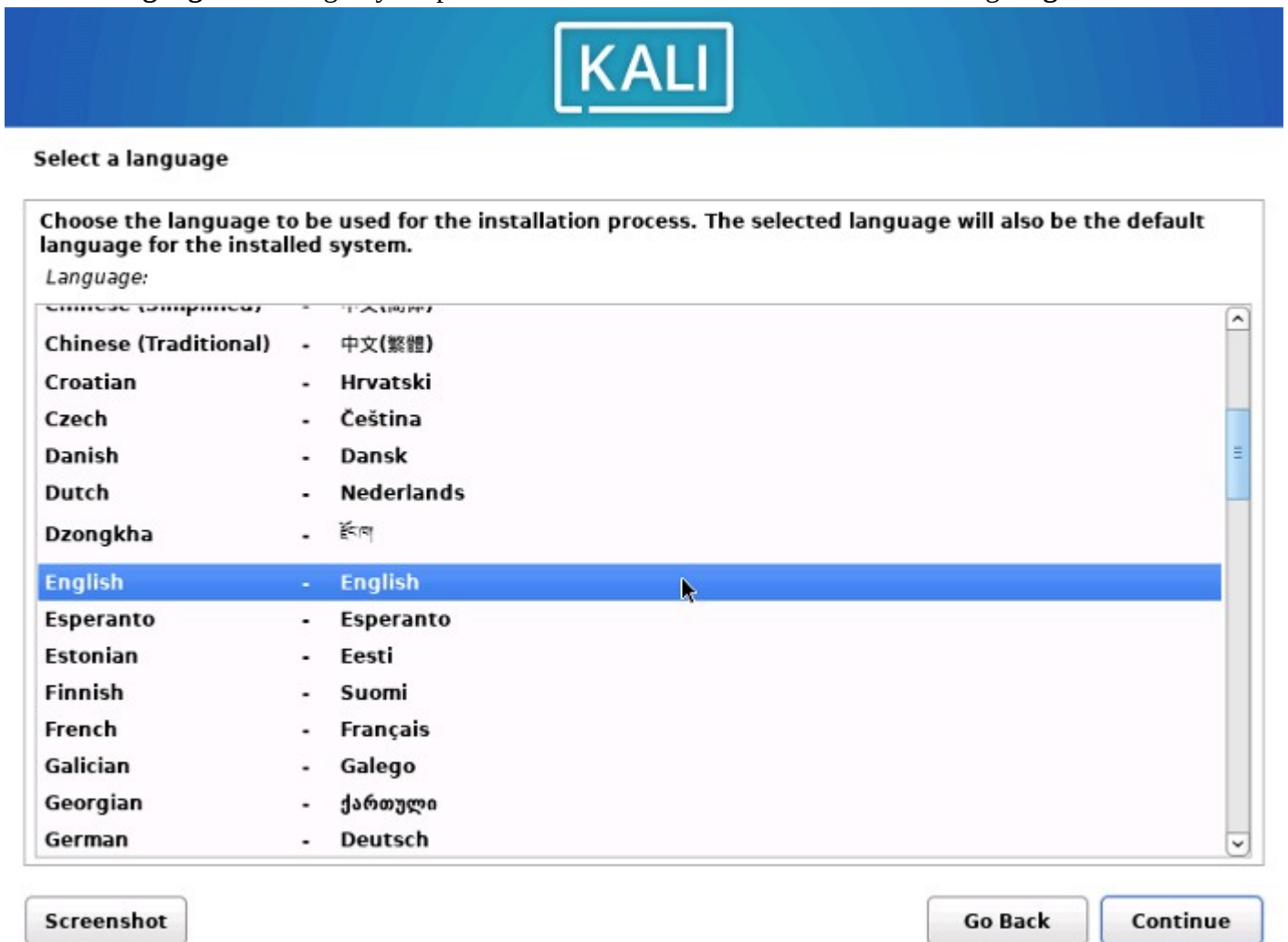
6. Set Location

Select your **location.**

Note: You can select "United States" if you don't see your country in the list.

KALI

Select your location

The selected location will be used to set your time zone and also for example to help select the system locale. Normally this should be the country where you live.

This is a shortlist of locations based on the language you selected. Choose "other" if your location is not listed.

Country, territory or area:

- India
- Ireland
- Israel
- New Zealand
- Nigeria
- Philippines
- Seychelles
- Singapore
- South Africa
- United Kingdom
- **United States**
- Zambia
- Zimbabwe
- other

1 Select location
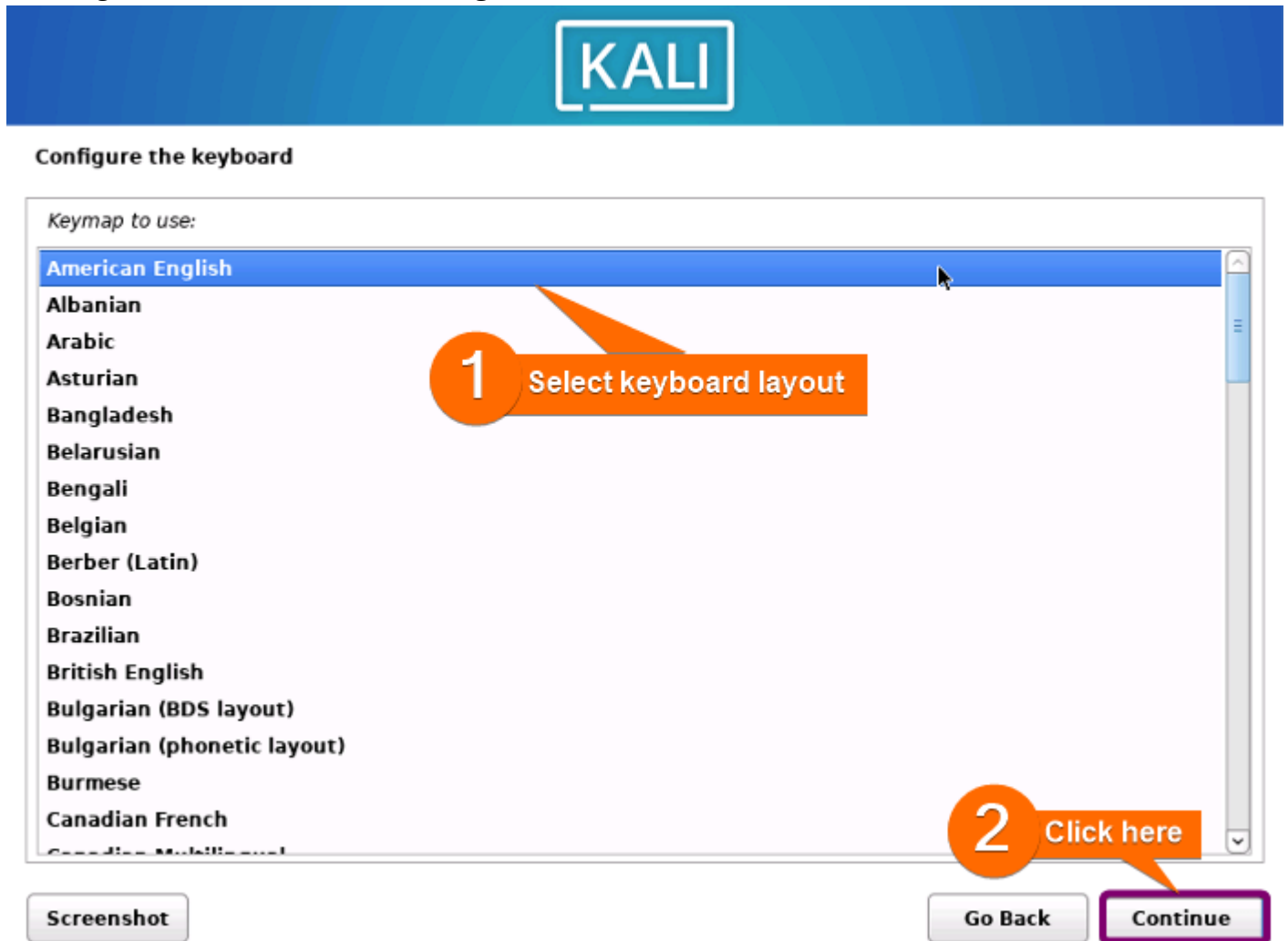
2 Click here

Screenshot   Go Back   Continue

7. Select Keyboard Layout

From the Configure Keyboard window, select the **keyboard layout** according to your preference. I'm selecting **American English.** Then click on **Continue**.

8. Configure the Network

Type a **hostname** for your Kali Linux system and click on **Continue**.

Note: Hostname should be a **single word**. However, if it doesn't accept the single-word hostname you type, type "kali" as default.

KALI

Configure the network

Please enter the hostname for this system.

The hostname is a single word that identifies your system to the network. If you don't know what your hostname should be, consult your network administrator. If you are setting up your own home network, you can make something up here.

Hostname:

linuxsimply`

1 Enter a network hostname

2 Click here

Screenshot   Go Back   Continue

Now, type a **domain name** for the network. It is the **part of your internet address** that appears at the

right of your hostname. Click on **Continue** to move to the next step.

9. Create User Credentials

At this stage, you have to create a user account. First, **enter your full name** and click on **Continue**.

Then, type a **short username** for your system. By default, it will take the **first name** from your full name. However, you can keep that or edit it. After that, click on **Continue**.

Set up users and passwords

Select a username for the new account. Your first name is a reasonable choice. The username should start with a lower-case letter, which can be followed by any combination of numbers and more lower-case letters.

Username for your account:

ashik

1 Type a short username

2 Click here

Screenshot   Go Back   Continue

Now, you have to **create a password**. This password will be **required every time you turn on the**

PC. So, use a strong and mnemonic password. Finally, click on **Continue** to move to the next step.

KALI

Set up users and passwords

A good password will contain a mixture of letters, numbers and punctuation and should be changed at regular intervals.

Choose a password for the new user:

●●●●●

☐ Show Password in Clear

Please enter the same user password again to verify you have typed it correctly.
Re-enter password to verify:

●●●●●

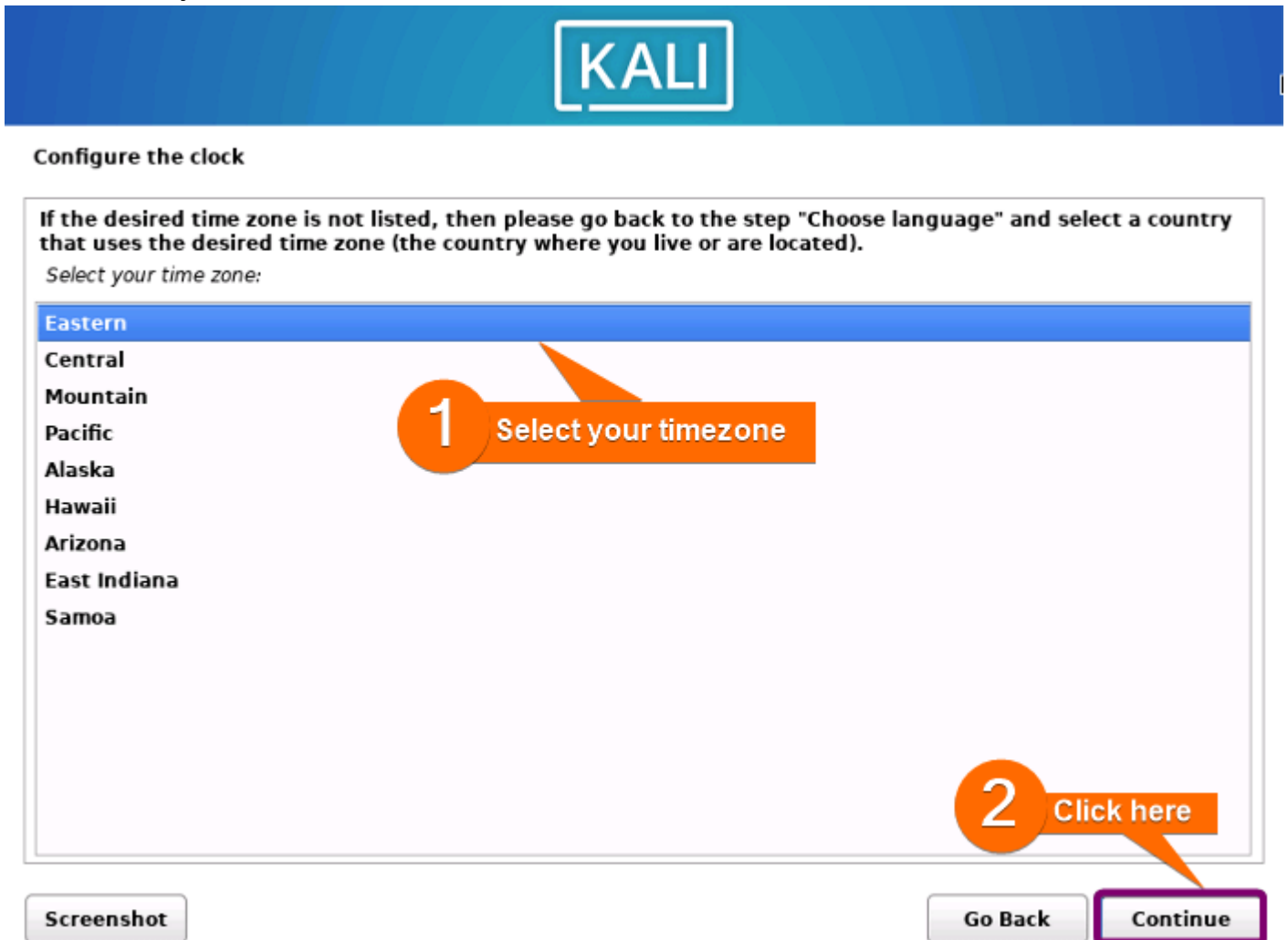☐ Show Password in Clear

Enter and re-type a password

Click here

Screenshot   Go Back   Continue

10. Select Time Zone

Select your time zone and click on **Continue**.

11. Set up the Disk Partition

When installing **Kali Linux**, it's important to create appropriate **disk partitions** to ensure the operating system functions **smoothly**. Follow the steps below to partition the disk most easily:

1. To partition the disk, select "Guided partitioning" as shown below.
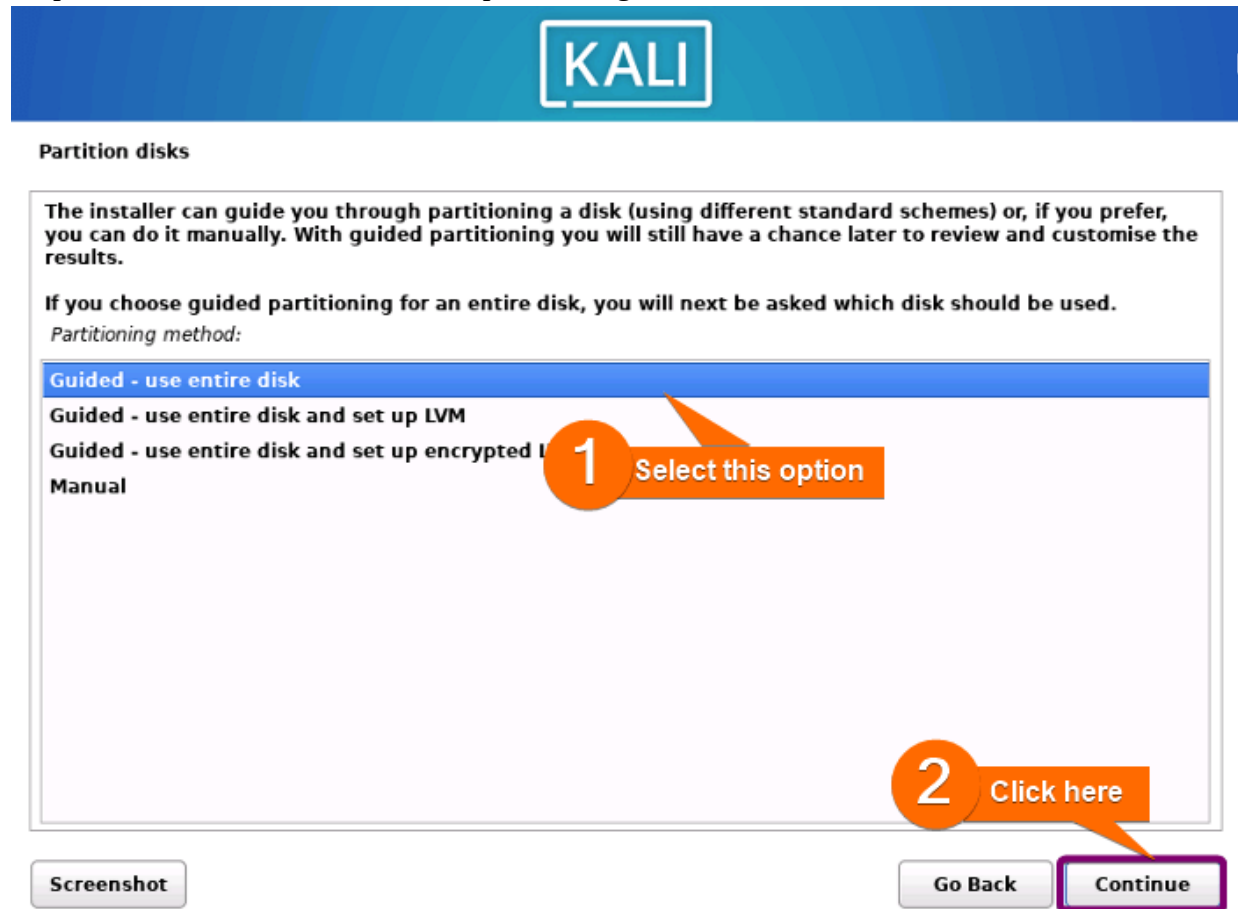
2. Select the disk that appears for partitioning and click on **Continue.**
   Warning: It will erase the disk of your current system and install **Kali** in your system. Make sure you have a **backup of your important files** before proceeding to the next step.

Partition disks

Note that all data on the disk you select will be erased, but not before you have confirmed that you really
want to make the changes.

Select disk to partition:

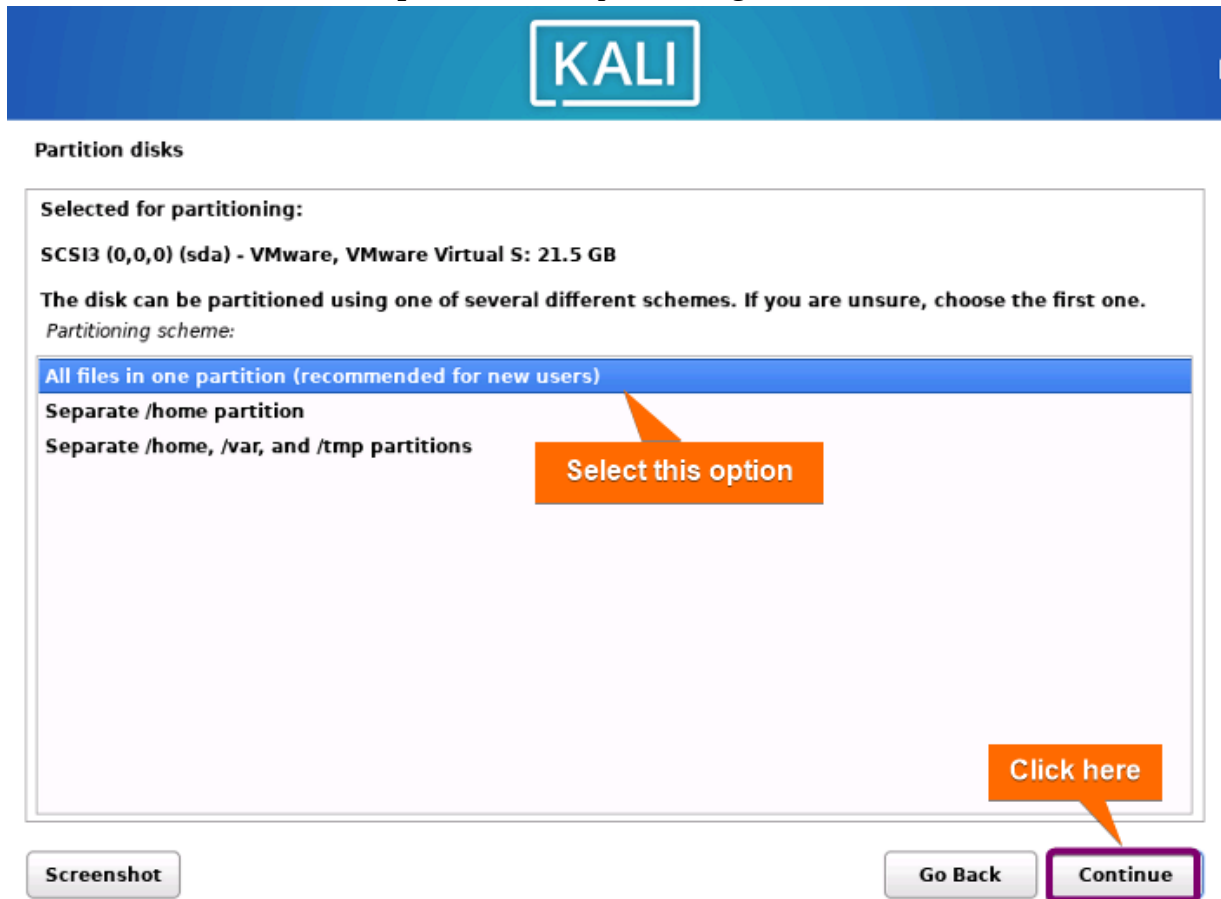SCSI3 (0,0,0) (sda) - 21.5 GB VMware, VMware Virtual S
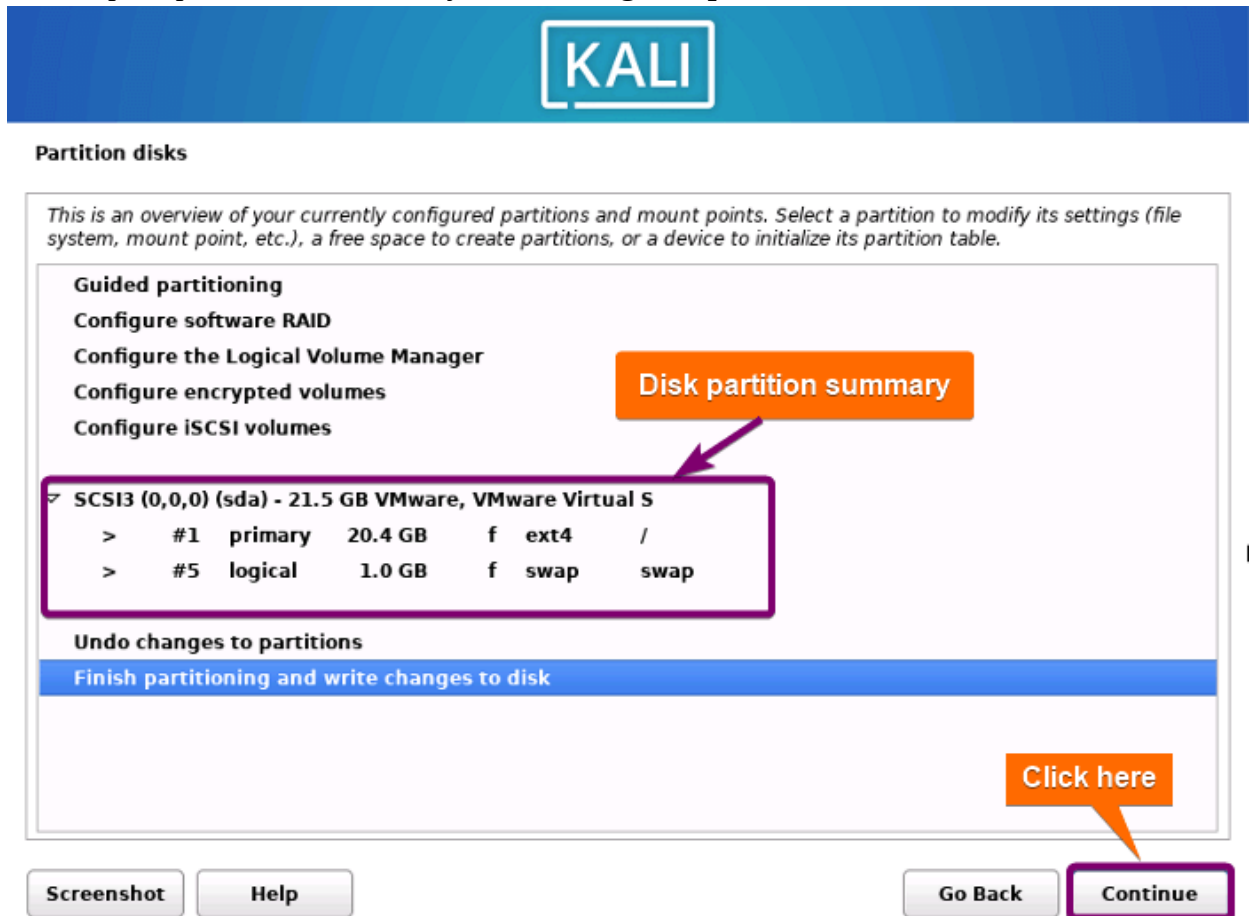
Selected disk

Click here

Screenshot   Go Back   Continue

3. Now, choose "**All files in one partition**" as a partitioning scheme.

4. Here, a prompt shows the summary of the **configured partition.** Click on **Continue**.

Partition disks

This is an overview of your currently configured partitions and mount points. Select a partition to modify its settings (file system, mount point, etc.), a free space to create partitions, or a device to initialize its partition table.

Guided partitioning
Configure software RAID
Configure the Logical Volume Manager
Configure encrypted volumes
Configure iSCSI volumes

Disk partition summary

✓ SCSI3 (0,0,0) (sda) - 21.5 GB VMware, VMware Virtual S
>   #1   primary   20.4 GB   f   ext4   /
>   #5   logical   1.0 GB   f   swap   swap

Undo changes to partitions
Finish partitioning and write changes to disk

Click here

Screenshot   Help   Go Back   Continue

5. Check the "Yes" option and click on **Continue** to confirm **writing the changes to the disks** mentioned in the prompt.
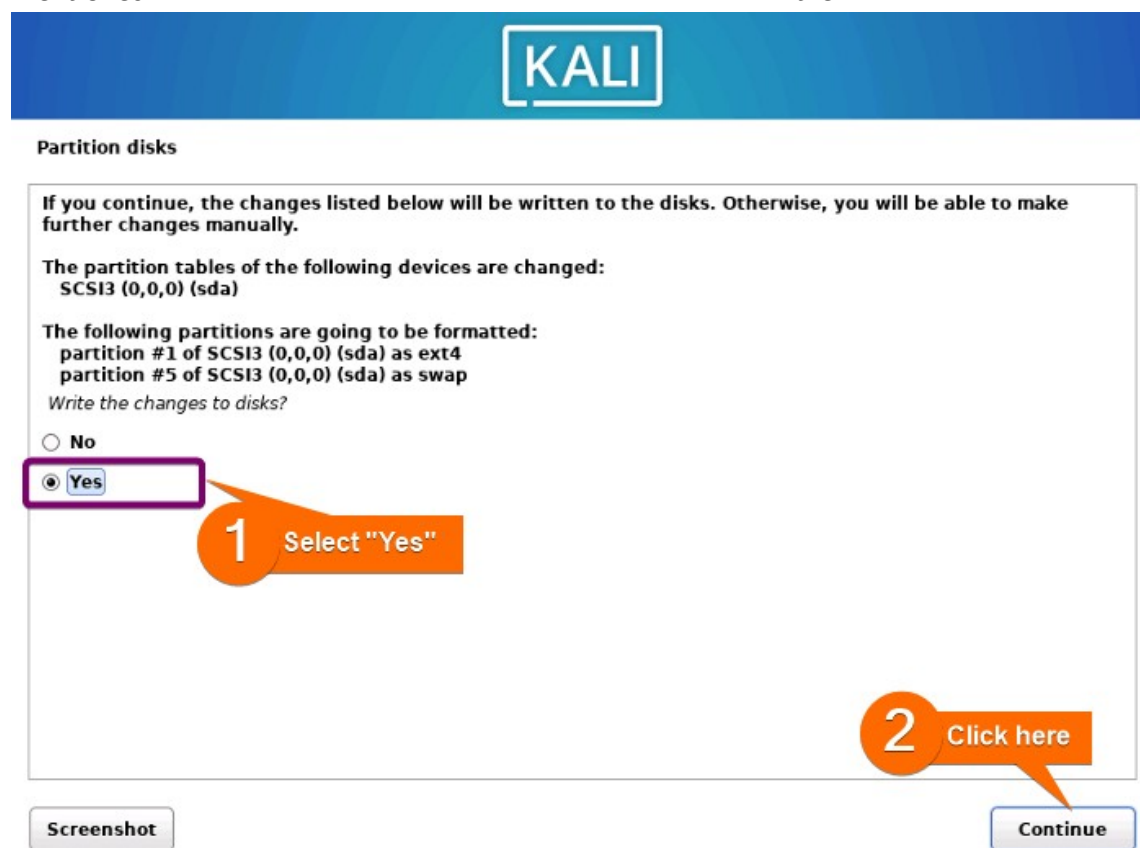
6. Then **installation of the base system** starts and the screen appears like the image below. It will take some time. So wait for a while.

12. Software Selection for Installation

At this point, select the **software** you want to **install** while installing **Kali Linux**. I've selected the software for installation as the below image shows.

After a little time, all the checked software will be installed in your Kali Linux system.

13. Install the GRUB Bootloader

Now, follow the below steps to install the **GRUB** bootloader:

1. Check the "Yes" option and click on **Continue**.

2. Select '/dev/sda' as the **boot loader device** to install **GRUB** and click on **Continue**.

After that, it installs GRUB and starts to finish the OS installation.

3. Click on **continue** after finishing the installation to **reboot your computer.**

Finish the installation

Installation complete
Installation is complete, so it is time to boot into your new system. Make sure to remove the installation media, so that you boot into the new system rather than restarting the installation.

Please choose <Continue> to reboot.

Click here

Screenshot   Go Back   Continue
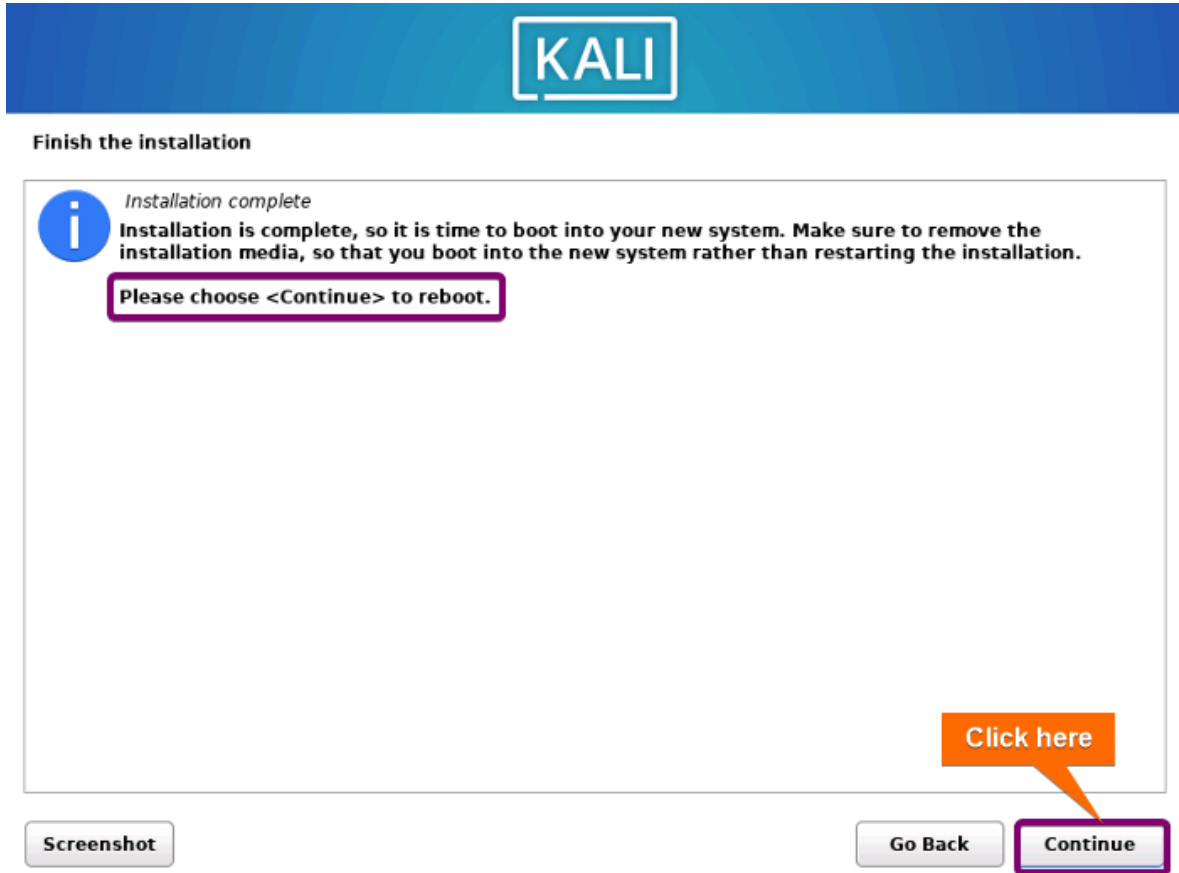
14. Start Using Kali

Finally, a login prompt appears. Type your **username and password** and click on **Log In**.
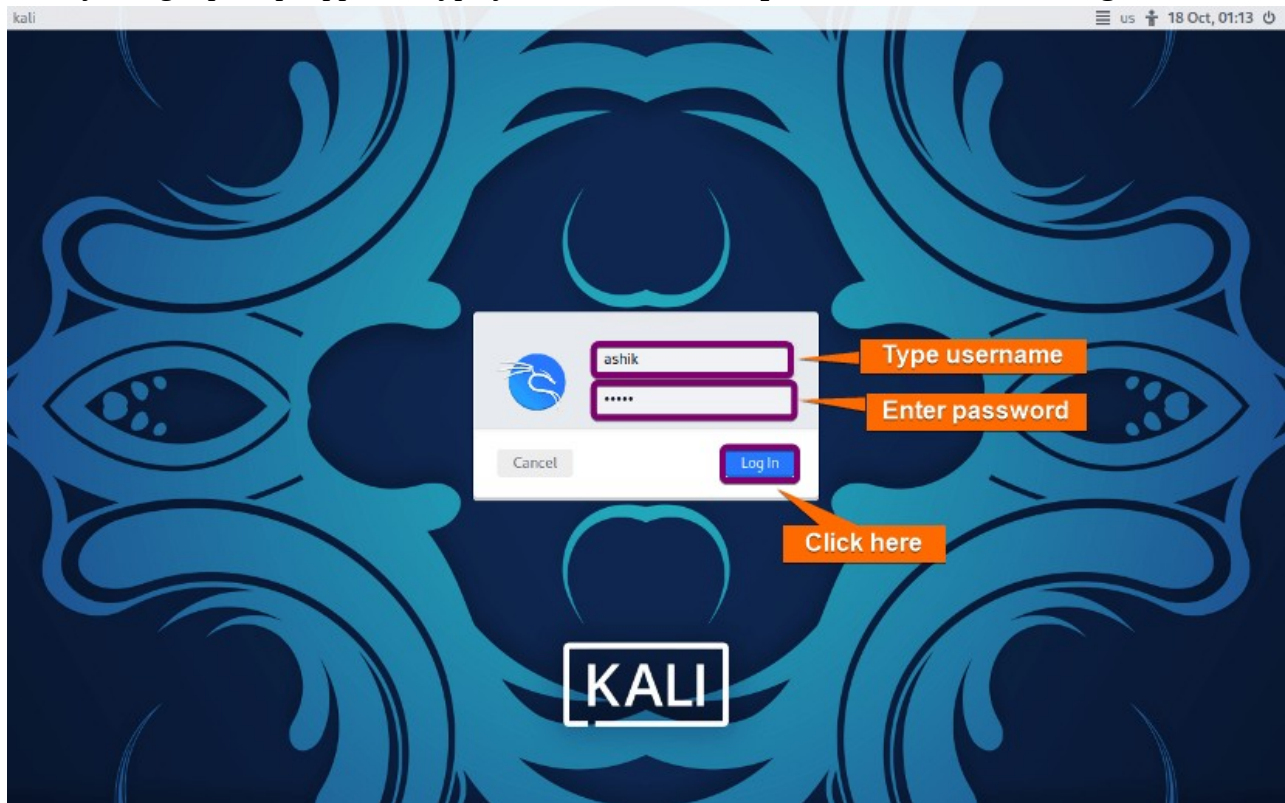
After logging in, the Kali Linux desktop appears on your screen.

Congratulations! You have successfully installed Kali Linux on your computer.

Advantages of Installing Kali Linux

Some advantages of installing Kali Linux are:

- **Tools:** Kali Linux comes with a vast array of security assessment tools pre-installed. These include **port scanning (Namp)**, testing wireless LANs (**Aircrack-ng**), web application security scanners (**Burp Suite),** and many other **vulnerability assessment**, **password cracking**, and **forensic analysis**
- **Customization:** Kali Linux is **highly customizable** and allows users to tailor the installation to their specific needs. This means you **can install only the necessary tools**, reducing the system's footprint.
- **Security and Privacy:** Kali Linux is designed with security in mind, with features like **full-disk encryption**, strong **password policies**, and **secure development** It also supports anonymity through tools like "Tor" and "VPNs".
- **Updates:** Kali Linux maintains and **receives regular updates** to ensure the latest security tools and improvements.
- **Virtualization and Container Support:** Kali Linux is suitable for running within **virtual machines** and containers, making it a versatile choice for various environments.
- **Community and Support:** Kali Linux has a large and active community of users and developers. Users can seek help, share knowledge, and find solutions through forums, mailing lists, and other community resources.

These benefits, combined with the active community have contributed to Kali's widespread popularity and adoption across various use cases.

Conclusion

Kali Linux is a specialized distribution intended for ethical hacking and penetration testing. By following this guide, you can set up **Kali Linux** on your PC quickly and easily. Use it responsibly and within the bounds of the law, adhering to ethical hacking and responsible disclosure practices.

People Also Ask

How to setup Kali Linux?

Setting up Kali Linux involves several steps, from downloading the ISO file to configuring the system after installation. Follow the below steps to setup Kali Linux:

1. Download the ISO File.
2. Create a Bootable Drive.
3. Boot Kali From USB DriveStart Installation.
4. Start Installation and Set Following Installation Options:
   - Select Language.
   - Set Location.
   - Select Keyboard Layout.
   - Configure the Network.
   - Create User Credentials.
   - Select Time Zone.
   - Set up the Disk Partition.
   - Software Selection for Installation.
5. Install the GRUB Bootloader.
6. Complete Installation and Reboot.

What are the applications of Kali Linux?

Kali Linux stands out as a top choice for conducting Cybersecurity and information security tasks. Users choose Kali Linux due to its powerful security assurance. If you have an interest in ethical hacking or desire to learn the art, you've undoubtedly come across Kali Linux. This operating system,

- Includes 600+ essential penetration testing tools for ethical hacking, vulnerability assessment, and security testing tasks.
- Is highly customizable for diverse Cybersecurity tasks; users can modify tools, configurations, and scripts to suit their needs.
- Is multilingual, offering global accessibility for users from diverse regions.
- Supports various wireless devices, which is ideal for Wi-Fi security assessments like penetration testing and monitoring.
- Prioritizes security and reliability, developed in a secure environment, and features packages signed by trusted developers for authenticity.
- Supports vital wireless security tests with easy packet injection.

Can I run Kali Linux from a USB pen drive?

Yes, you can run Kali Linux from USB by **pressing the live boot option key (F12)** and selecting the USB drive from the list. But it is easier to infect your system with malware if you use an untrusted USB drive for running Kali Linux.

Can I download Kali Linux for free?

Yes, Kali Linux is an **open-source and free-to-use** distribution of Linux operating systems. It is totally free to download, use and modify. However, only verified authors can directly contribute to the Kali Linux system.

Is Kali Linux safe?

Yes, Kali Linux is very safe if you use it with official verified software. It is recommended to **follow the official documentation**. Overall, it is safe and useful if you use it responsibly and within the bounds of the law, adhering to ethical hacking and responsible disclosure practices.

What is Kali Linux used for?

Kali Linux is used for **Cybersecurity and digital forensic** purposes generally. It comes equipped with an extensive arsenal of more than **a thousand** testing tools for **vulnerabilities** and **penetration testing**. Also, Kali Linux is used for web **servers**, **desktop OS,** and **development** purposes.