



MULTIPLE METHOD TO SETUP **KALI LINUX**

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Abstract

In a world where technology is deeply ingrained in all aspects, the risks and threats are like never before. The exigency to weed out every threat and vanquish the vulnerabilities present in every network is dire. The first step towards carrying out the necessary precautions is obtaining the right set of tools and environment.

Kali Linux is an open-source security distribution designed by Linux for digital forensics, penetration testing and other security-related functionality. With over 600 inbuilt tools for various information security tasks, Kali Linux is truly one of its kind. Over the course of this publication, you will be provided with a roadmap of how to install Kali Linux on various platforms along with its features.

Introduction Of Kali Linux

Introduction of Kali Linux

"The quieter you become, the more can hear"

- Kali Linux

Do you know how to open the magical box of ethical hacking? Can you guess the name of the box? Okay, I will tell you. Its name is **KALI**.

As per my definition, Kali Linux is a magic box that contains multiple magic tools to play the magic. In technical terms, Kali Linux is an open-source, Debian based Linux distribution mainly for penetration testing, security auditing, computer Forensic, Security research, etc. it contains over 600 tools of information gathering(Amap, arp-scan, APT2, etc.), vulnerability analysis (Nmap, sqlmap, BBSQL, etc.,), wireless attack(Airbase-ng, Air crack-ng, airplay-ng, etc.), web applications(Brupsuite, zaproxy, Web Scarab), exploitation (Metasploit, Armitage, crackle), forensics (DFF, Capstone, Binwalk, etc.), etc.

It is developed, maintained and funded by Offensive Security, a leading information security training company.

Features of Kali

Free of cost

It is completely free of cost, you will never have to pay for it. All the development source code are freely available to you.

Over 600 tools available for different functionality e.g computer forensics, penetration testing, etc

Completely Customizable

It is easy to customize based on your needs and preferences.

Usable on a wide range of ARM devices.

Pre-requisites for Kali Linux Installation

Give me six hours to chop down a tree and I will spend the first four sharpening the axe.

- Abraham Lincoln

Kali OS software package required a minimum of 10 GB hard disk space for installation.

Minimum 512MB Ram is required for i386 and amd64 architectures.

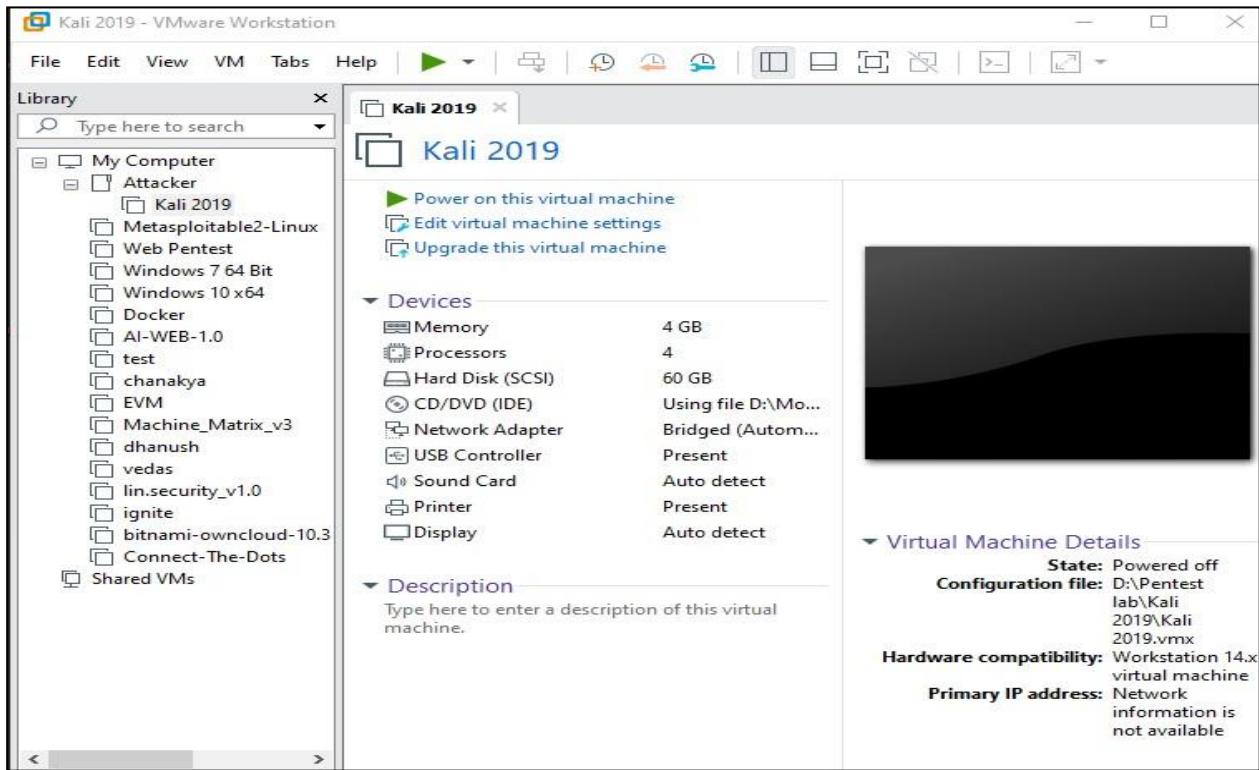
A bootable CD-DVD Drive or a USB stick.

Installation of Kali on Vmware

Installation of Kali on Vmware

Vmware Workstation enables users to set up virtual machines on a single physical machine and use them simultaneously along with the actual machine. A Virtual machine can be downloaded from www.vmware.com.

Download kali from <http://kali.org/downloads/> **64 bit or 32 bit** as per your computer capability.



Click on create a new virtual machine by selecting the **Installer disc image file (ISO)**, and review the configured virtual machine and then powered on the created kali virtual machine.

At the boot menu, many options are available so I am going to describe all boot menu options briefly:

Live (amd64)

Probably the one you're searching for. This one will boot you into Kali, but only in the Live mode. That means, that when you terminate/shutdown your laptop everything you've saved/edited in Kali is lost. So if you make a file on your desktop, that file will be lost when you restart.

This is possible because Kali only writes to RAM and not your HDD.

Live (forensic mode)

This is a special and interesting mode. In this mode, the internal HDD is never touched, and the auto-mounting of devices is disabled. You'll use this when performing forensics on a device (e.g. recovering sensitive files, getting evidence in crime scenes.)

Live USB Persistence

Use this if you want to install Kali on the USB you booted from, this way you can save what you've done, etc. If you now place a file on your desktop, it's saved on your USB and is again accessible when you boot from it.

Live USB Encrypted Persistence

Same as above. Along with this option, your USB is also encrypted with LUKS. If you choose USB Persistence, choose this one!

Graphical

- Install – If you want to install it on your HDD.
- Install with speech synthesis - Install it, the text from the installation-menu is read out to you

But through the down arrow key, you can select Graphical install.



After selection of Graphical install, you will get the multiple next windows of Preferred language selection- English (select as per your choice) then click continue Location – United States (select as per your choice) click continue Standard keymap – American English (select as per your choice) click on continue On the next screen you will ask to configure the network, select **Do not configure the network at this time** and hit the continue.

Now in a single word, you can provide the hostname e.g. Kali (any name as per your choice). Then click on continue.



Set the password for the root account. Don't forget the password you have set for the root account otherwise you have to install kali again.



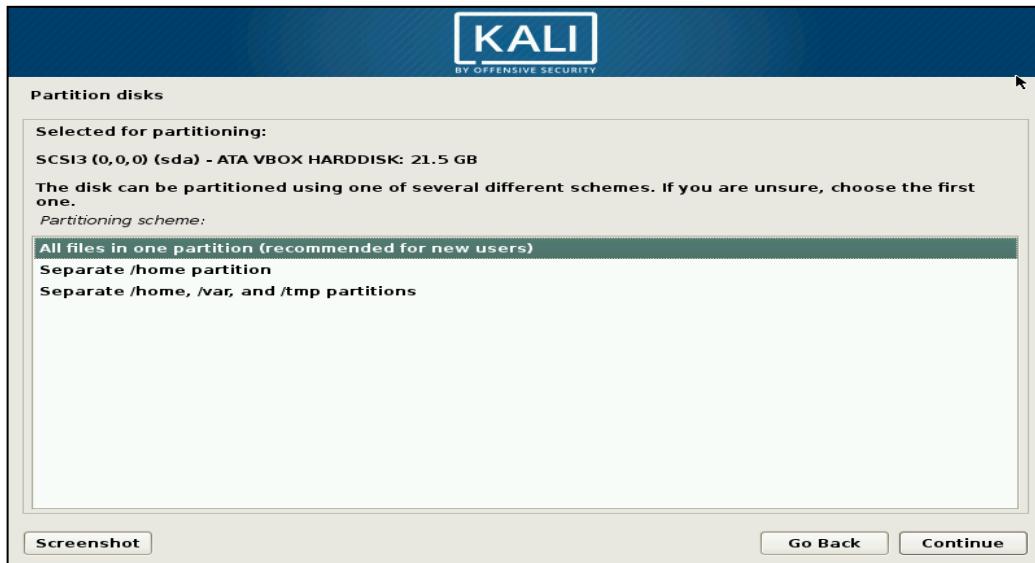
On the next screen, select the time zone and click continue.



Kali detects the disk partitions. Select **guided-use entire disk** then click continue.
Installer confirms that partition you are going to use. Click continue.



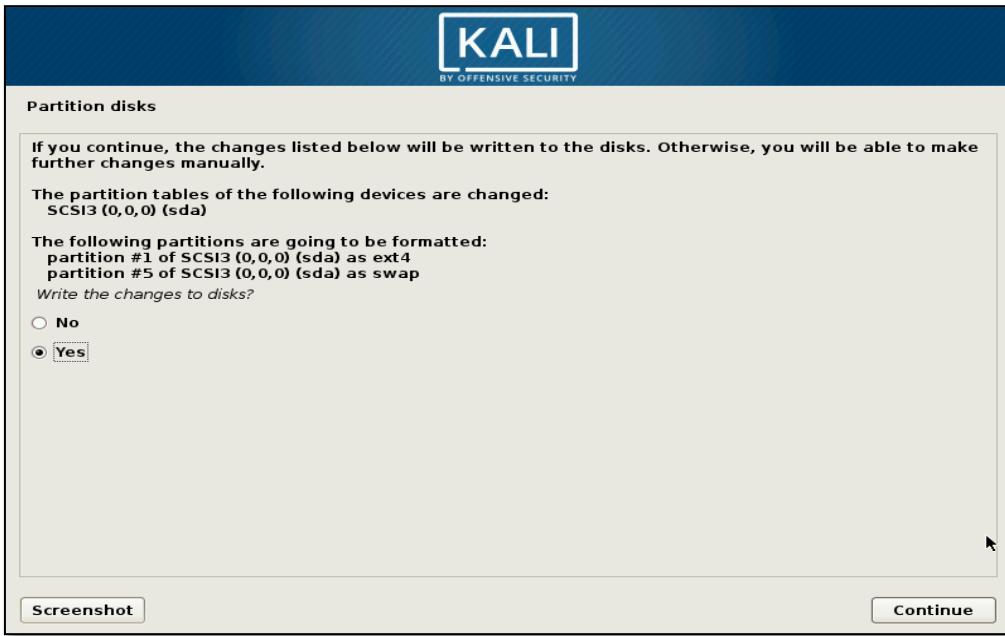
Select the **All files in one partition** and click on continue.



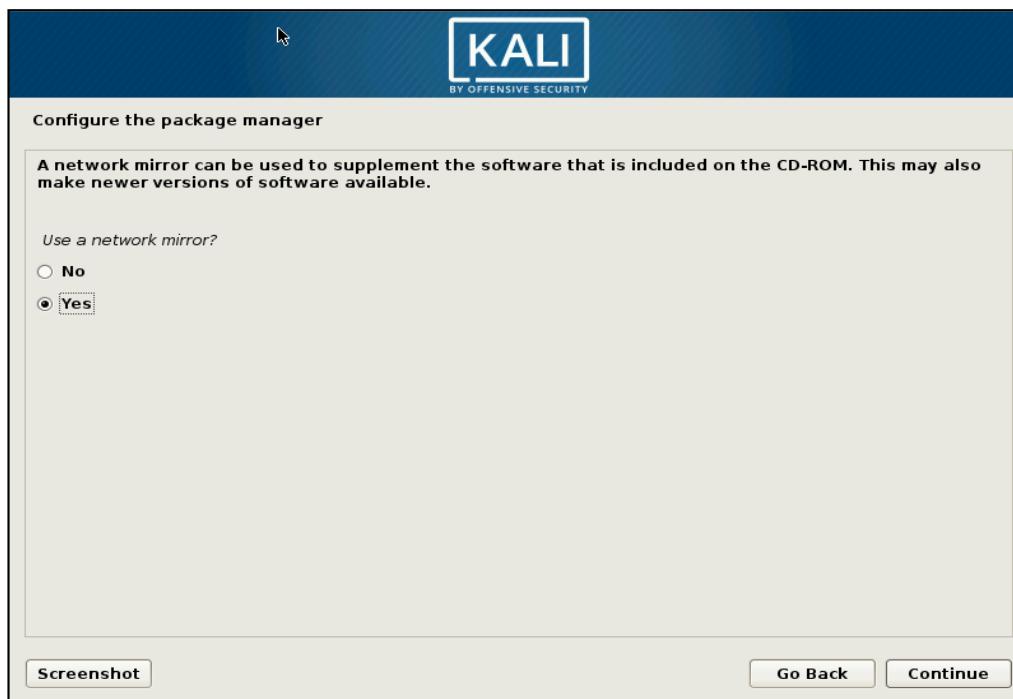
Selection of disk partition has been done, you can see the overview of partition disk you currently configured, and select the **Finish partitioning and write changes to disk**. After that click on continue.



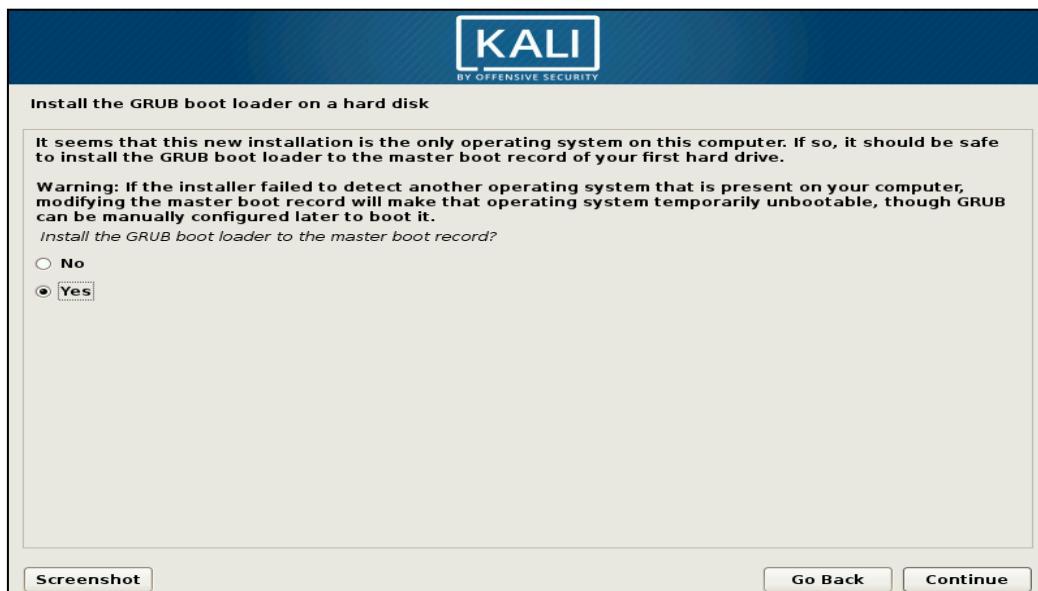
Click on yes to make the changes to disk as per the selected partition changes. Then click on continue.



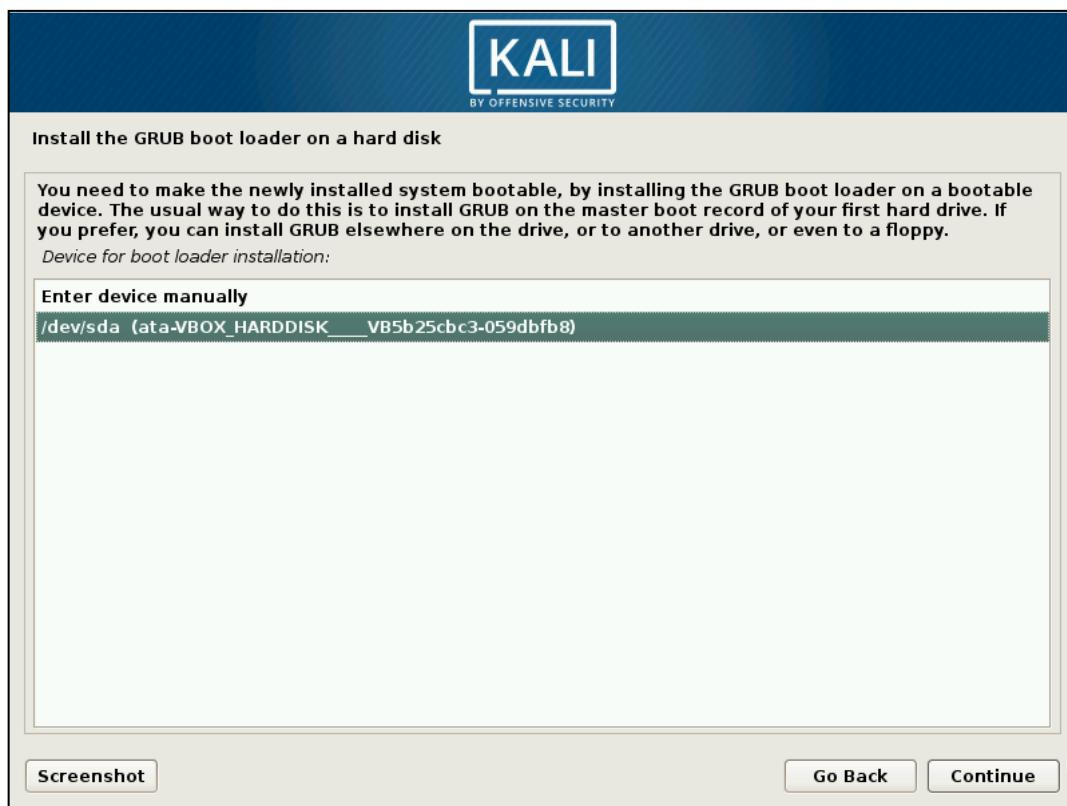
After partition, now Kali will start installing, you have to around 30 minutes for installation.
After Kali installation, on the next screen, you will get the network mirror option. You need to select **No** and click on continue.



You get the option to install the GRUB boot loader as it should be safe to install it to the master boot record of your first hard drive. Select yes and click on continue.



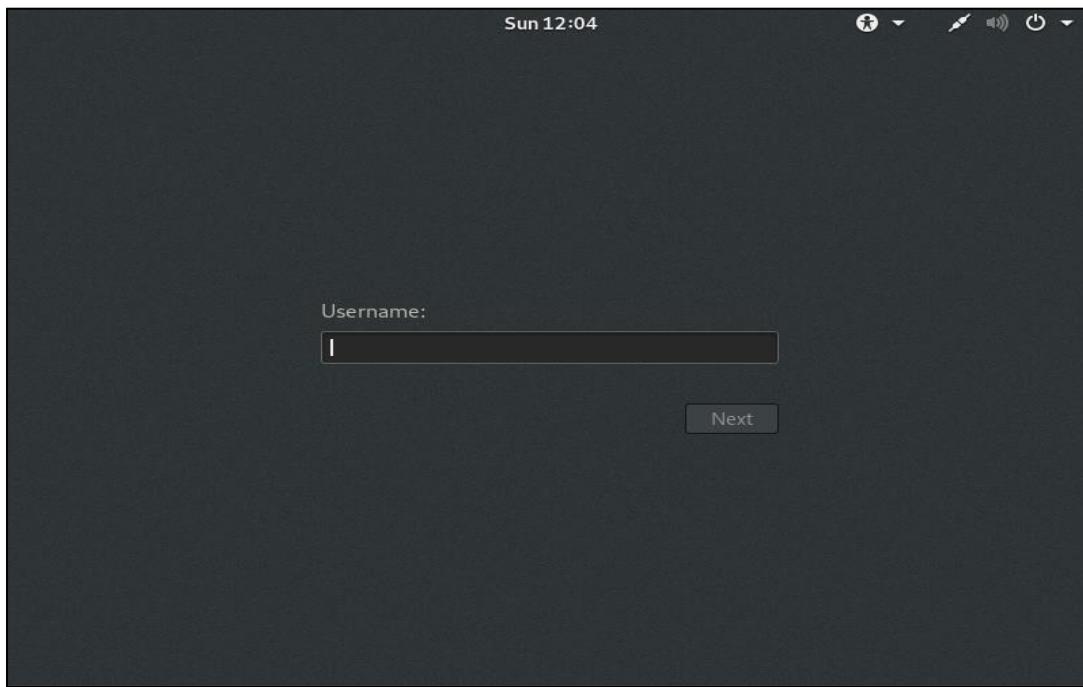
Select the boot loader device for GRUB installation. Select /dev/sda and click Continue.



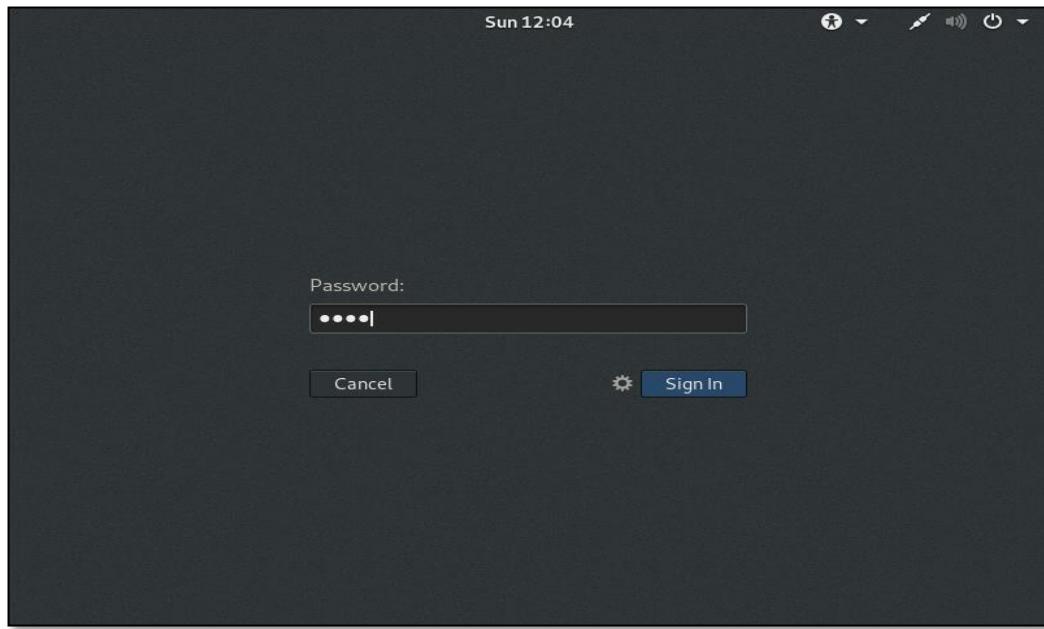
Now you will see the installation complete dialog box. Click to continue to finalize the installation and wait for the VM to reboot. After reboot, you will see the login screen. Log in with your username or root user and provide your password. You will then see the Kali Linux desktop.



Once the VM reboots, you will see the Kali Linux login screen.



Login with username: root, Password: toor, what you entered during the installation process earlier.



Successfully, Kali installation has been done, now you can start working on Kali Linux.



Installation of Kali Linux on Virtual Box

Installation of Kali Linux on Virtual Box

VirtualBox is a software system for virtualizing the x86 computing design. It acts as a hypervisor, making a VM (virtual machine) within which the user will run another OS (operating system).

The OS within which VirtualBox runs is named the “host” OS. The OS running within the VM is named the “guest” OS. VirtualBox supports Windows, Linux, or macOS as its host OS.

If you have already got put in VirtualBox then well smart otherwise install the newest version and install it from <https://www.virtualbox.org/wiki/Downloads>

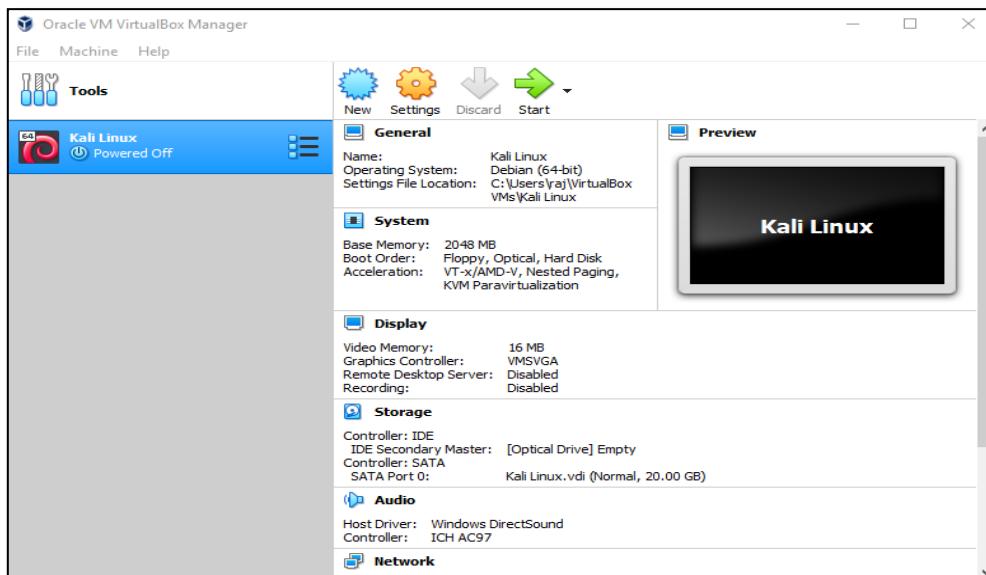
Prerequisites

- VirtualBox installed in your Linux system
- the image of Kali Linux present in your system
- at least 4GB of RAM
- at least 20-30GB of free disk space
- network to have a system updated
- a processor with the virtualization features enabled (often activated by default)

In virtualization, the **guest OS** is the virtualized system (so our Kali Linux) and the **host OS** is our Linux system. You can summarize the configuration that was created by you.

Installation

Launch the installation by clicking the green arrow button to start.



On the next screen, you will see the installer options, select Graphical install.



After the selection of Graphical install, you have to follow all the steps the same as you have done at the time of installation of Kali Linux on VMware.

Installation of Kali Linux on AWS

Installation of Kali Linux on AWS

Amazon Web Services (AWS) is a subsidiary of Amazon that provides on-demand cloud computing platforms and APIs to individuals, companies, and governments, on a metered pay-as-you-go basis. In aggregate, these cloud computing web services provide a set of primitive abstract technical infrastructure and distributed computing building blocks and tools. One of these services is Amazon Elastic Compute Cloud, which allows users to have at their disposal a virtual cluster of computers, available all the time, through the Internet.

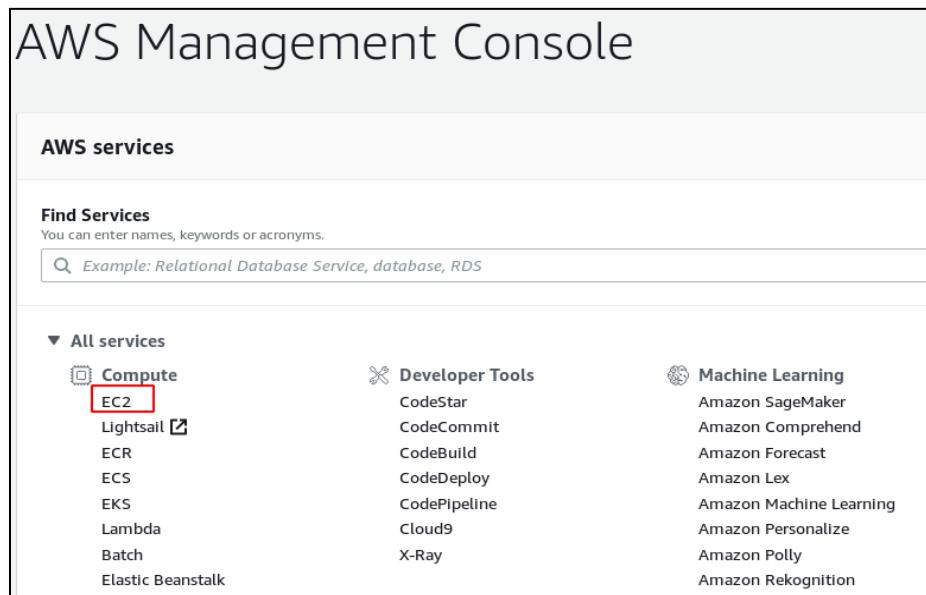
For more detail description refer https://en.wikipedia.org/wiki/Amazon_Web_Services

Prerequisites

- An Aws account
- Minimum 2 GB RAM (to run Metasploit)

Installation

Login to <https://aws.amazon.com/console/> to navigate web services. From the compute services, select EC2 (Elastic Compute Cloud) and click on Launch Instance.



The screenshot shows the AWS EC2 Dashboard. On the left sidebar, under the 'INSTANCES' section, 'Instances' is selected. In the main content area, the 'Create Instance' section is visible, featuring a large blue 'Launch Instance' button which is highlighted with a red rectangle. Below the button, a note states: 'Note: Your instances will launch in the US East (Ohio) region'.

Click on AWS Marketplace, to search the AMI (Machine Image of Kali Linux).

The screenshot shows the 'Step 1: Choose an Amazon Machine Image (AMI)' page. A search bar at the top contains the text 'Search for an AMI by entering a search term e.g. "Windows"'. On the left, a sidebar titled 'Quick Start' includes options for 'My AMIs', 'AWS Marketplace' (which is highlighted with a red rectangle), 'Community AMIs', and a checkbox for 'Free tier only'. The main content area displays two AMI results:

- Amazon Linux 2 AMI (HVM), SSD Volume Type**
Amazon Linux 2 comes with five years support. Root device type: ebs Virtualization type: hvm
- Amazon Linux AMI 2018.03.0 (HVM)**
The Amazon Linux AMI is an EBS-backed AMI. It includes all the latest packages. Root device type: ebs Virtualization type: hvm

In the search, tab writes Kali Linux, to the Kali AMI and then click on select.

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags

Step 1: Choose an Amazon Machine Image (AMI)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or the AWS Marketplace; or you can select one of your own AMIs.

kali linux X

Quick Start (0)	1 to 1 of 1 Products		
My AMIs (0)			
AWS Marketplace (1)	Kali Linux	Select	
Community AMIs (5)	\$0.00/hr for software + AWS usage fees		
	Linux/Unix, Other 2019.3 64-bit (x86)		
	Amazon Machine Image (AMI) Updated:		
	9/6/19		
<small>Kali Linux is a Debian-based Linux.</small>			

After selection, you can see the summary of all the instances types, software, amount available for Kali Linux. (As per your requirement you can choose, also free tier instance is also available). Then click on continue.

Kali Linux

Kali Linux		Pricing Details																																																																											
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Kali Linux is a Debian-based Linux distribution aimed at advanced Penetration Testing and Security Auditing. Kali contains several hundred tools targeted towards various information security tasks, such as Penetration Testing, Forensics, and Reverse Engineering. Kali is developed, funded, and maintained by Offensive Security, a leading ...		Hourly Fees <table border="1"> <thead> <tr> <th>Instance Type</th> <th>Software</th> <th>EC2</th> <th>Total</th> </tr> </thead> <tbody> <tr><td>t2.nano</td><td>\$0.00</td><td>\$0.006</td><td>\$0.006/hr</td></tr> <tr><td>t2.micro</td><td>\$0.00</td><td>\$0.012</td><td>\$0.012/hr</td></tr> <tr><td>t2.small</td><td>\$0.00</td><td>\$0.023</td><td>\$0.023/hr</td></tr> <tr><td>t2.medium</td><td>\$0.00</td><td>\$0.046</td><td>\$0.046/hr</td></tr> <tr><td>t2.large</td><td>\$0.00</td><td>\$0.093</td><td>\$0.093/hr</td></tr> <tr><td>t2.xlarge</td><td>\$0.00</td><td>\$0.186</td><td>\$0.186/hr</td></tr> <tr><td>t2.2xlarge</td><td>\$0.00</td><td>\$0.371</td><td>\$0.371/hr</td></tr> <tr><td>m4.large</td><td>\$0.00</td><td>\$0.10</td><td>\$0.10/hr</td></tr> <tr><td>m4.xlarge</td><td>\$0.00</td><td>\$0.20</td><td>\$0.20/hr</td></tr> <tr><td>m4.2xlarge</td><td>\$0.00</td><td>\$0.40</td><td>\$0.40/hr</td></tr> <tr><td>m4.4xlarge</td><td>\$0.00</td><td>\$0.80</td><td>\$0.80/hr</td></tr> <tr><td>m4.10xlarge</td><td>\$0.00</td><td>\$2.00</td><td>\$2.00/hr</td></tr> <tr><td>m4.16xlarge</td><td>\$0.00</td><td>\$3.20</td><td>\$3.20/hr</td></tr> <tr><td>c4.large</td><td>\$0.00</td><td>\$0.10</td><td>\$0.10/hr</td></tr> <tr><td>c4.xlarge</td><td>\$0.00</td><td>\$0.199</td><td>\$0.199/hr</td></tr> <tr><td>c4.2xlarge</td><td>\$0.00</td><td>\$0.398</td><td>\$0.398/hr</td></tr> <tr><td>c4.4xlarge</td><td>\$0.00</td><td>\$0.796</td><td>\$0.796/hr</td></tr> </tbody> </table>				Instance Type	Software	EC2	Total	t2.nano	\$0.00	\$0.006	\$0.006/hr	t2.micro	\$0.00	\$0.012	\$0.012/hr	t2.small	\$0.00	\$0.023	\$0.023/hr	t2.medium	\$0.00	\$0.046	\$0.046/hr	t2.large	\$0.00	\$0.093	\$0.093/hr	t2.xlarge	\$0.00	\$0.186	\$0.186/hr	t2.2xlarge	\$0.00	\$0.371	\$0.371/hr	m4.large	\$0.00	\$0.10	\$0.10/hr	m4.xlarge	\$0.00	\$0.20	\$0.20/hr	m4.2xlarge	\$0.00	\$0.40	\$0.40/hr	m4.4xlarge	\$0.00	\$0.80	\$0.80/hr	m4.10xlarge	\$0.00	\$2.00	\$2.00/hr	m4.16xlarge	\$0.00	\$3.20	\$3.20/hr	c4.large	\$0.00	\$0.10	\$0.10/hr	c4.xlarge	\$0.00	\$0.199	\$0.199/hr	c4.2xlarge	\$0.00	\$0.398	\$0.398/hr	c4.4xlarge	\$0.00	\$0.796	\$0.796/hr
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Product Details																																																																													
By Kali Linux Customer Rating ★★★★☆ (5) Latest Version Kali Linux 2019.3 Base Operating System Linux/Unix, Other 2019.3 Delivery Method 64-bit (x86) Amazon Machine Image (AMI) License Agreement End User License Agreement On Marketplace Since 10/18/16 AWS Services Required Amazon EBS, Amazon EC2																																																																													
Highlights																																																																													
<ul style="list-style-type: none"> ■ Advanced penetration testing platform ■ Hundreds of security tools included 																																																																													
Cancel Continue																																																																													

Now you can choose instance type as per your budget, you can select t2micro along with vcpu 1,2.5GHz, Intel Xeon Family,1GiB memory, EBS only). But to run the Metasploit to need a minimum of 2 GB RAM, you can opt t2 small or t2 medium.

Step 2: Choose an Instance Type

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that provide computing resources for your applications. [Learn more](#) about instance types and how they can meet your computing needs.

Filter by: All instance types ▾ Current generation ▾ Show/Hide Columns

Currently selected: t2.micro (Variable ECUs, 1 vCPUs, 2.5 GHz, Intel Xeon Family, 1 GiB memory, EBS only)

Note: The vendor recommends using a t2.medium instance (or larger) for the best experience with this product.

	Family	Type	vCPUs ⓘ	
<input type="checkbox"/>	General purpose	t2.nano	1	
<input checked="" type="checkbox"/>	General purpose	t2.micro <small>Free tier eligible</small>	1	
<input type="checkbox"/>	General purpose	t2.small	1	
<input type="checkbox"/>	General purpose	t2.medium	2	

Review the selected instance and click on the launch.

Step 7: Review Instance Launch

Please review your instance launch details. You can go back to edit changes for each section. Click **Launch** to assign a key pair to your instance and complete the launch process.

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags

▼ AMI Details [Edit AMI](#)

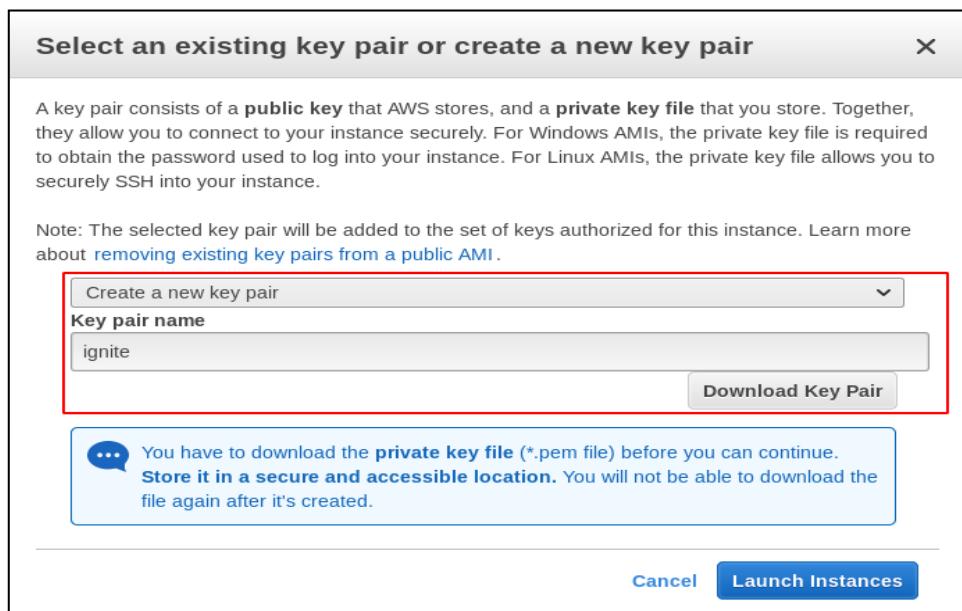
Kali Linux
Kali Linux 2019.3
Root Device Type: ebs Virtualization type: hvm
Free tier eligible

Hourly Software Fees: \$0.00 per hour on t2.micro instance. Additional taxes or fees may apply. Software charges will begin once you launch this AMI and continue until you terminate the instance.

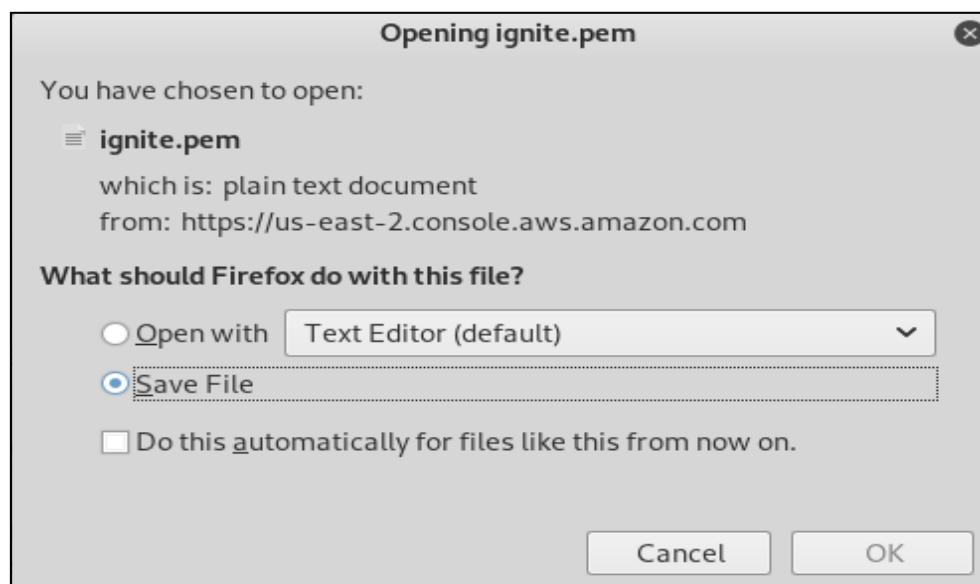
By launching this product, you will be subscribed to this software and agree that your use of this software is subject to the pricing terms and the seller's [End User License Agreement](#)

[Cancel](#) [Previous](#) [Launch](#)

Here, you need to create a new key pair and give a name to the key. Click on download key pair as you will not be able to download the file again after it's created. Then click on Launch Instances.



Save the Downloaded .pem file.



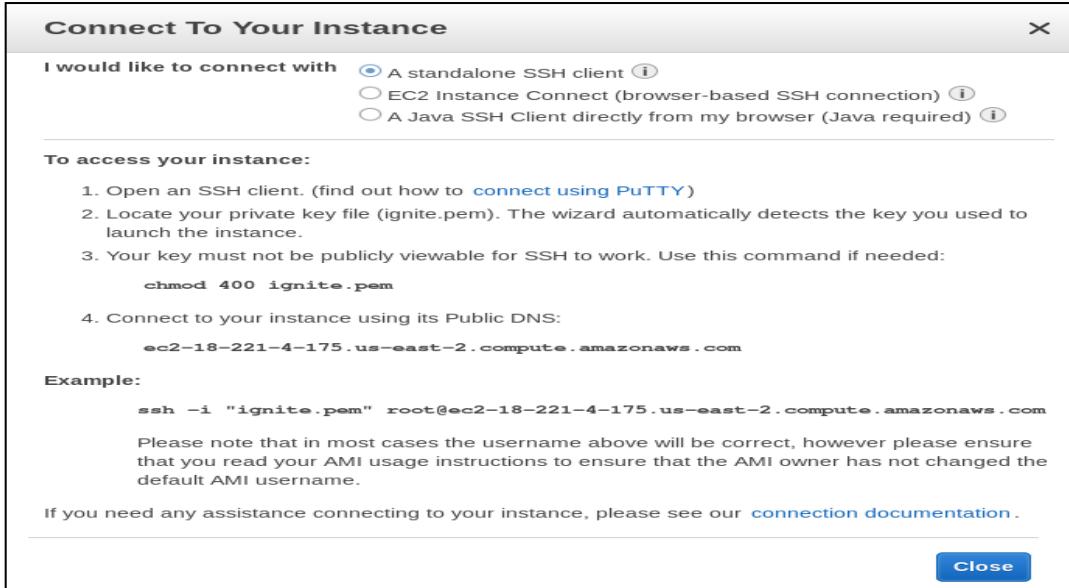
Click on Launch Instances

The screenshot shows the AWS Launch Status page. At the top, there are links for Services, Resource Groups, and a notification bell. The user is signed in as Komal from Ohio. The main content area is titled "Launch Status" and contains sections for "Getting started with your software" and "Helpful resources". It also includes links for creating status check alarms, attaching EBS volumes, and managing security groups. A prominent blue button at the bottom right is labeled "View Instances", which is highlighted with a red box.

After Launch instance, you can see the instance is running even you can provide the name to your created instance. Click on connect to get access to SSH with other information on public DNS.

The screenshot shows the AWS Instances page. At the top, there are buttons for "Launch Instance", "Connect" (which is highlighted with a red box), and "Actions". Below is a search bar with a magnifying glass icon. The main table lists instances based on Name, Instance ID, Instance Type, Availability Zone, and Instance State. One instance is shown as "running" (indicated by a green circle and the word "running" highlighted with a red box).

Name	Instance ID	Instance Type	Availability Zone	Instance State
Nisha Kali LI...	i-086fdcfa2b9bd25ee	t2.micro	us-east-2b	terminated
	i-0f312242a5620803b	t2.micro	us-east-2a	running



Linux users:

You can access the Kali AWS from a Linux machine. Set the permissions and connect the SSH server: Login with username ec2-user.

```
chmod 400 ignite.pem
ssh -i ignite.pem root@ec2-18-221-4-175.us-east-2.compute.amazonaws.com
```

```
root@kali:~/Downloads# chmod 400 ignite.pem
root@kali:~/Downloads# ssh -i ignite.pem root@ec2-18-221-4-175.us-east-2.compute.amazonaws.com
Please login as the user "ec2-user" rather than the user "root".
```

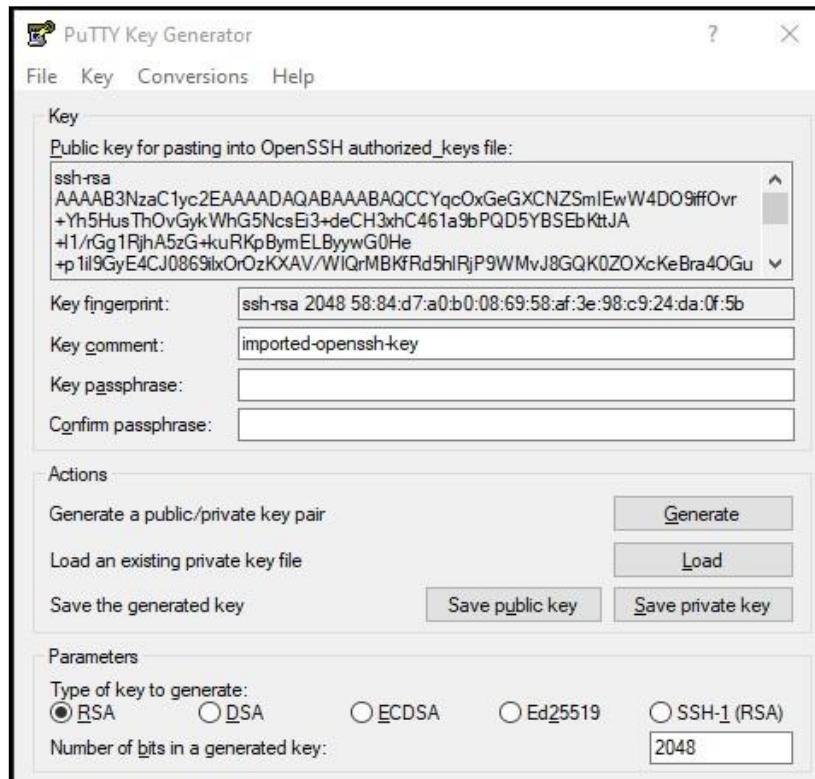
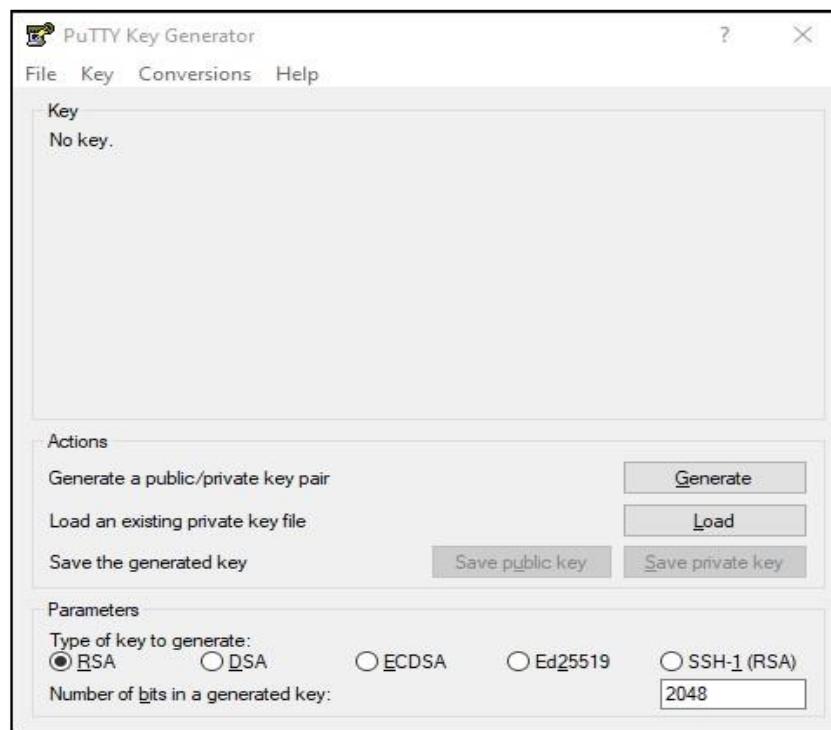
```
Connection to ec2-18-221-4-175.us-east-2.compute.amazonaws.com closed.
root@kali:~/Downloads# ssh -i ignite.pem ec2-user@ec2-18-221-4-175.us-east-2.compute.amazonaws.com
Linux kali 5.2.0-kali2-amd64 #1 SMP Debian 5.2.9-2kali1 (2019-08-22) x86_64
```

```
The programs included with the Kali GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*copyright.
```

```
Kali GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
ec2-user@kali:~$ whoami
ec2-user
ec2-user@kali:~$ sudo bash
root@kali:/home/ec2-user# id
uid=0(root) gid=0(root) groups=0(root)
```

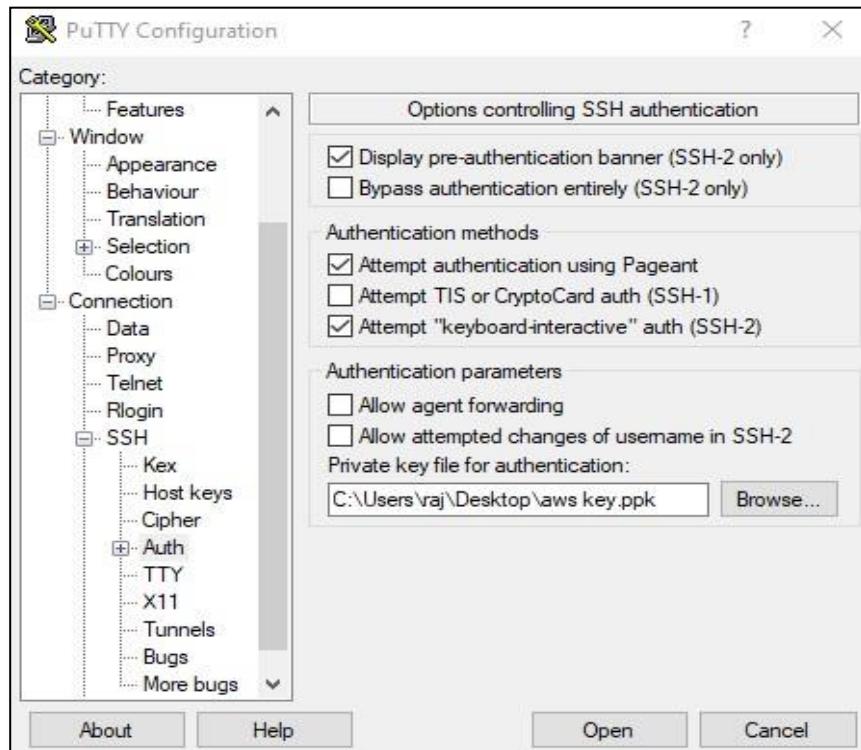
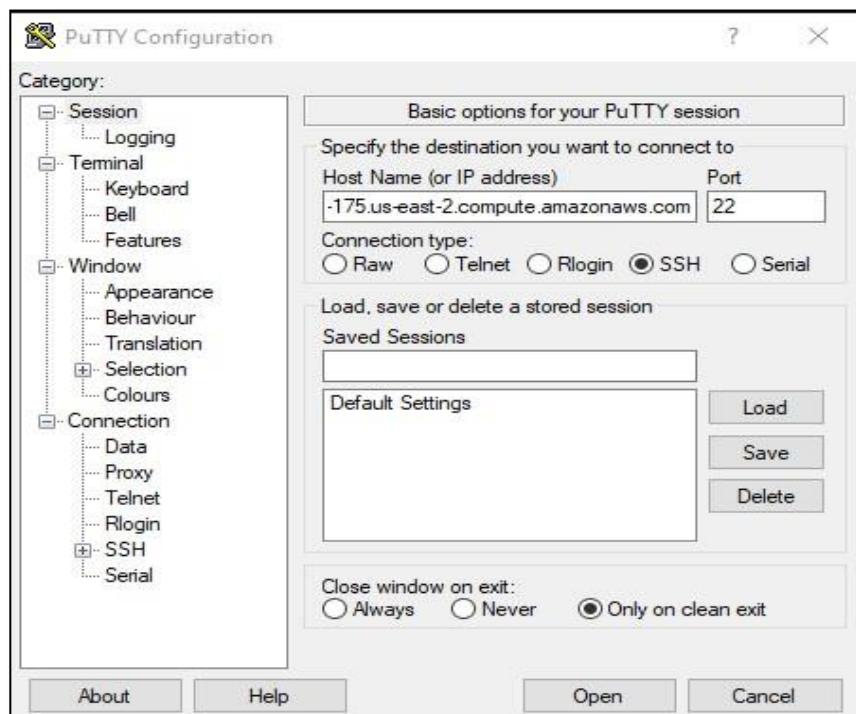
For Window Users:

Open the puttygen and load the previously downloaded private key to convert it into a putty supported format.



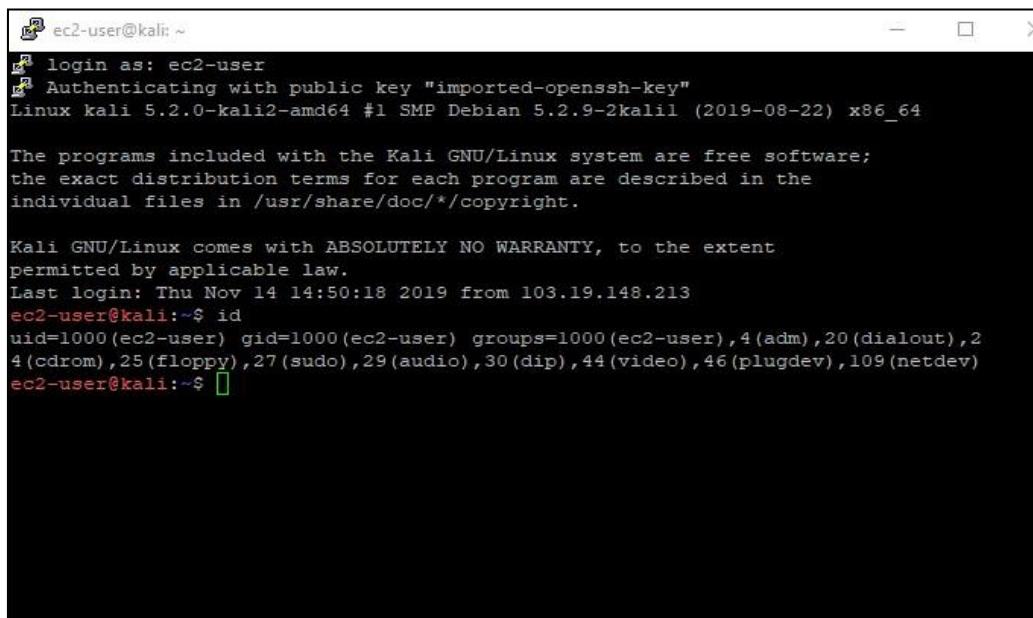
Save the private key and close the Puttygen program. Open the Putty program to connect it with Kali Linux, in hostname put the public DNS details and load the private key in the Auth tab under the SSH navigation.

Then click on open



Login with username ec2-user and your kali Linux from the cloud is ready. As this is minimal installation, to get all the tools run the command **apt-get install kali-Linux-full**

Note: You should not go over the usage limit otherwise you will be charged and need to pay the bill.



The screenshot shows a terminal window titled "ec2-user@kali: ~". The window contains the following text:

```
login as: ec2-user
Authenticating with public key "imported-openssh-key"
Linux kali 5.2.0-kali2-amd64 #1 SMP Debian 5.2.9-2kali1 (2019-08-22) x86_64

The programs included with the Kali GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/*copyright.

Kali GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Thu Nov 14 14:50:18 2019 from 103.19.148.213
ec2-user@kali:~$ id
uid=1000(ec2-user) gid=1000(ec2-user) groups=1000(ec2-user),4(adm),20(dialout),2
4(cdrom),25(floppy),27(sudo),29(audio),30(dip),44(video),46(plugdev),109(netdev)
ec2-user@kali:~$
```

Installation of Kali Linux on Raspberry Pi

Installation of Kali Linux on Raspberry Pi

The Raspberry Pi is a low-cost, credit-card-sized ARM computer. Despite being a good bit less powerful than a laptop or desktop PC, its affordability makes it an excellent option for a tiny Linux system and it can do far more than act as a media hub.

The Raspberry Pi provides an SD card slot for mass storage and will attempt to boot off that device when the board is powered on.



By default, the Kali Linux Raspberry Pi image has been streamlined with the minimum tools, similar to all the other ARM images. If you wish to upgrade the installation to a standard desktop installation, you can include the extra tools by installing the **kali-Linux-full** meta-package.

For more details please refer <https://github.com/thehacking sage/HackPi>.

Prerequisites

- Kali Linux Raspberry 2,3, 4 ARM images.
- SD card (minimum size 8 GB but can use 16GB Or even 32 Gb)
- Bootable Kali

Installation

First, download the Kali Linux 2 or more image file for a raspberry file from [here](#).

I need to write it to the SD card. Choose the Kali Linux ISO file to be imaged with “select image” and verify that the USB drive to be overwritten is the correct one. Click the “Flash!” button once ready.

Once Etcher alerts you that the image has been flashed, you can safely remove the USB drive and proceed to boot into Kali with it.

Now, you can have a plugged raspberry pi device with the bootable SD card into the monitor. After powering up the raspberry pi 3 b, it will go through a bootup process and the screen will go blank for a few seconds.

For the final step, a login prompt will appear asking for a username and a password. The default should be ‘root’ and ‘toor’ respectively.

Installation of Kali Linux on Windows

Installation of Kali Linux on Windows

One of the most commonly used operating systems in the world is Windows, developed by Microsoft. Designed for both personal and professional functioning, Windows aims to make life easier for its users. It is designed to run on standard x86 hardware like AMD and Intel processors.

If you are a beginner to the world of ethical hacking and are still learning the ropes, it might seem a little difficult to work on a Kali OS all of a sudden. If you wish to work with Kali while still working with Windows OS, there are three methods that are commonly used:

- Using a Virtual Machine.
- Dual Booting.
- Using two separate laptops

But recently, a new way has been introduced by Microsoft in which you can install a Kali subsystem on your Windows computer. **Windows Subsystem for Linux or WSL** lets users access their required Linux distributions from the comfort of their Windows 10 without the hassle of having to dual-boot or installing a virtual machine.

Prerequisites

1. The computer must be running the Windows 10 version 1607 or above.
2. WSL is supported only by 64-bit versions of Windows 10.

Installation

Initially, run PowerShell as an administrator and then enable the optional feature by running the command given below.

```
Enable-WindowsOptionalFeature -Online -FeatureName Microsoft-Windows-Subsystem-Linux
```

On running, you will be sent a prompt to restart the computer, enter Y and allow it to reboot.

After that, download the “Kali Linux” application from the Microsoft Store.

Once installed, press the Launch button to activate Kali. You will be prompted to input your username and password.

Once logged into Kali, update your Linux OS by running the following commands;

```
sudo apt-get update  
sudo apt-get dist-upgrade
```

Since Windows will identify the majority of Kali’s repositories as viruses, it is better to be proactive and add a Windows Defender exclusion for the Kali Linux folder.

Find the folder and copy the folder location.

Navigate to Windows Defender Security Center, go to Virus & threat protection and click on “Add an exclusion”, then click on the folder and paste the directory of the Kali folder that you copied.

Installation of Kali Linux on Hyper-V

Installation of Kali Linux on Hyper-V

A virtualization software offered by Microsoft, **Hyper-V** is also known as Viridian, is a native hypervisor that enables you to run multiple Operating systems on your Windows machine. The working of Hyper-V is similar to that of any other virtual machine like VMware Workstation or Oracle VirtualBox. The only difference being Hyper-V is available for free for almost all versions of Windows except Home.

Prerequisites

Since Windows OS comes pre-installed with Hyper-V, no separate installation is required. But since the default setting of Hyper-V is disabled, it needs to be enabled before it can be used.

In order to enable Hyper-V, the following criteria must be satisfied:

- The system must be running Windows 10 Enterprise, Professional or Education
- 64-bit Processor with Second Level Address Translation (SLAT)
- CPU Support for VM Monitor Mode Extension (VT-c on Intel CPU's)
- Minimum 4 GB RAM
- The system must have Virtualization Technology Enabled in BIOS.

Installation

First of all, we need to enable Hyper-V. Once you are sure that your system meets all the stated requirements then move ahead to the next step.

Go to Start Menu, click on Settings. In the dialog box that opens, go to Apps. When the Apps and Features dialog opens, scroll until you find **Programs and Features** under Related Settings.

In the Programs and Features dialog box, on the left side panel, you will see an option for **Turn Windows features on or off**. Click on it.

Search for Hyper-V option and check the boxes.

Once the process is complete, the system will reboot.

On rebooting, you should now be able to see the Hyper-V manager in Start Menu under Windows Administrative Tools.

Then download, the Kali Linux ISO image from <https://www.kali.org/downloads/>.

Next, we have to create a network connection switch. In order to do that, first, open Hyper-V Manager. Select Virtual Switch Manager under the Actions panel on the right pane.

Choose External and then click on Create Virtual Switch.

In the Virtual Switch properties dialog, mention the name of your virtual switch choice and select External Network -> your system's Ethernet card under Connection Type. Hit Ok to complete the process.

Now that, Hyper-V is successfully installed, let us install Kali.

Open Hyper-V Manager, click on New -> Virtual Machine on the right-side panel.

Once the Virtual machine wizard is launched, click next. Then, fill in the following information:

Specify Name and Location -> Kali-Linux (or your preference) and location can be left as the default option or you can change it.

Specify Generation -> **Generation 1**

Assign Memory -> By default, it is 1 GB, 2 GB is usually the recommended setting. Also, check the **Use Dynamic Memory for this Virtual Machine** box.

Configure Network -> Virtual Switch (automatic)

Connect Virtual Hard Disk -> Choose **Create a virtual hard disk**, assign it a name and specify the size(recommended setting is 60 GB)

Installation option – Select Install an operating system from bootable CD/DVD-ROM -> Image File and then browse to where you have saved the Kali ISO image.

Finish the process. Once created, the machine will be visible under Virtual Machines.

Now, start the installation process by right-clicking on the machine and selecting Connect.

Hit Start in the new Window that opens.

After this, follow all the same steps as the ones in the VMWare Installation process.

Installation of Kali Linux on Docker

Installation of Kali Linux on Docker

A set of PaaS products that make use of OS-level virtualization to deliver software in packages called containers is known as Docker. The software hosting this service is called **Docker Engine**. This service offers both free and premium levels.

Prerequisites

- The system must have Hyper-V enabled.
- Internet connection
- Minimum 4 GB RAM

Installation

First of all, we will need to enable the use of containers on Windows 10.

Go to Start Menu, click on Settings. In the dialog box that opens, go to Apps. When the Apps and Features dialog opens, scroll until you find **Programs and Features** under Related Settings. In the Programs and Features dialog box, on the left side panel, you will see an option for **Turn Windows features on or off**. Click on it. Search for **Containers** and check the boxes next to it.

Then, browse to <https://www.docker.com/> and then Docker for Windows Community Edition. Then, install Docker. It may prompt you to log out of your account and back in, and login back as an administrator to ensure a smooth installation.

Once Docker is running, open your preferred command prompt and run the command below,

```
docker pull Kali Linux/kali-Linux-docker
```

This command will download the official Kali Linux Docker image to your computer. After the download is complete, run the command below to run the container:

```
docker run -it kali Linux/kali-Linux-
```

The command prompt of the Kali instance will then appear on your screen. After this, you will have to then install any tools that you require as this instance is the base version and has no tools pre-installed.

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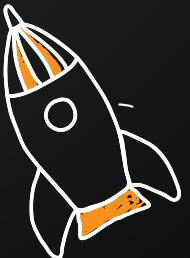
Ethical Hacking

Bug Bounty

Network Security Essentials

Network Pentest

Wireless Pentest



ADVANCED

Burp Suite Pro

Web Services-API

Pro Infrastructure VAPT

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- Windows
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