Introduction

- **Kali Linux** is a Debian-derived Linux distribution that is maintained by Offensive Security.
- Kali Linux is a specially designed OS for network analysts, Penetration testers, or in simple words.
- It gained its popularity when it was practically used in Mr. Robot Series.

Advantages

- It has 600+ Penetration testing and network security tools pre-installed.
- It is completely free and open source. So you can use it for free and even contribute for its development.
- It supports many languages.
- Great for those who are intermediate in linux and have their hands on linux commands
- Could be easily used with Raspberry Pi.

Why kali linux ?

- If you are interested in penetration testing or cybersecurity stuff you need some specific tools to perform some tasks which come pre-installed and settled up in Kali Linux so you may directly use them without doing any configuration.
- Or in case if one wants to check the vulnerabilities on a website or want to know security-related bugs in any application then it is great to go with Kali Linux.
- Many people think that Kali is a tool for hacking or cracking social accounts or web servers.
- Kali Linux is just another Debian distribution with a bunch of networking and security tools. It is a weapon to train or defend yourself not to attack anyone.
- Kali Linux was designed mainly for professionals.
- It is for those who want to get their hands in Penetration Testing, Cyber Security, or Ethical Hacking.
- It is a powerful tool and in case, not used properly, it may lead to losses even.

Commands in kali linux

- whoami
- pwd
- ls
    - ls -a
    - ls -l
    - ls -la
    - ls --help
    - ls -h
    - ls -lh
- cd
    - cd .
    - cd . .
- mkdir
    - -v
- man ls
- which ls
- whatis ls
- where ls

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whoami

- whoami command is nothing but the concatenation of "who," "am," and "i" and displays the details of the current user once the command is applied.
- It is used to see the activities of the current users that are logged in.

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pwd

- In Kali Linux, the **'Pwd'** command is used to **print working directory.** It gives us information about the directory we are now in.
- This is especially useful if we need to access the directory while in the middle of a complicated process.

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ls

- One of the most useful commands in Kali Linux is the **'ls'** command. The **ls** command lists the directory contents of files and directories.
- With the help of the **ls** command, we can easily list out every hidden file of a directory with the **-a** attribute, and for more detailed output, we can use the **-l** attribute.

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ls -a

- With the help of the **ls** command, we can easily list out every hidden file of a directory with the **-a** attribute, and for more detailed output, we can use the **-l** attribute.

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ls -l

- When executed without any arguments, it displays the names of files and directories in the current working directory.

```
┌──(kali⬡kali)-[~]
└─$ ls -l
total 40
drwxr-xr-x 2 kali kali 4096 Jun 16 05:09 Desktop
drwxr-xr-x 2 kali kali 4096 Jun 16 05:09 Documents
drwxr-xr-x 3 kali kali 4096 Jun 16 05:57 Downloads
drwxrwxr-x 2 kali kali 4096 Jun 16 05:52 gui
drwxr-xr-x 2 kali kali 4096 Jun 16 05:09 Music
drwxr-xr-x 2 kali kali 4096 Jun 16 05:09 Pictures
drwxr-xr-x 2 kali kali 4096 Jun 16 05:09 Public
drwxrwxr-x 2 kali kali 4096 Jun 16 06:10 sd
drwxr-xr-x 2 kali kali 4096 Jun 16 05:09 Templates
drwxr-xr-x 2 kali kali 4096 Jun 16 05:09 Videos
```

ls -la

- With the help of the **ls** command, we can easily list out every hidden file of a directory with the **-a** attribute, and for more detailed output, we can use the **-l** attribute.

```
┌──(kali㊀kali)-[~]
└─$ ls -la
total 184
drwx────── 17 kali kali  4096 Jun 19 09:49 .
drwxr-xr-x  3 root root  4096 May 27 15:18 ..
-rw-r--r--  1 kali kali   220 May 27 15:18 .bash_logout
-rw-r--r--  1 kali kali  5551 May 27 15:18 .bashrc
-rw-r--r--  1 kali kali  3526 May 27 15:18 .bashrc.original
drwxrwxr-x  7 kali kali  4096 Jun 19 09:49 .cache
drwxr-xr-x 12 kali kali  4096 Jun 16 05:35 .config
drwxr-xr-x  2 kali kali  4096 Jun 16 05:09 Desktop
-rw-r--r--  1 kali kali    35 Jun 16 05:09 .dmrc
drwxr-xr-x  2 kali kali  4096 Jun 16 05:09 Documents
drwxr-xr-x  3 kali kali  4096 Jun 16 05:57 Downloads
-rw-r--r--  1 kali kali 11759 May 27 15:18 .face
lrwxrwxrwx  1 kali kali     5 May 27 15:18 .face.icon → .face
drwx──────  3 kali kali  4096 Jun 16 05:09 .gnupg
drwxrwxr-x  2 kali kali  4096 Jun 16 05:52 gui
-rw───────  1 kali kali     0 Jun 16 05:09 .ICEauthority
drwxr-xr-x  3 kali kali  4096 May 27 15:18 .java
drwxr-xr-x  4 kali kali  4096 Jun 16 05:09 .local
drwxr-xr-x  2 kali kali  4096 Jun 16 05:09 Music
drwxr-xr-x  2 kali kali  4096 Jun 16 05:09 Pictures
```

ls --help

- To list all ls command options, type ls --help . The system lists all available options. Note: Next, learn how to create files in Linux text editors, such as Vim.

```
┌──(kali㊗kali)-[~]
└─$ ls --help
Usage: ls [OPTION]... [FILE]...
List information about the FILEs (the current directory by default).
Sort entries alphabetically if none of -cftuvSUX nor --sort is specified.

Mandatory arguments to long options are mandatory for short options too.
  -a, --all                  do not ignore entries starting with .
  -A, --almost-all           do not list implied . and ..
      --author               with -l, print the author of each file
  -b, --escape               print C-style escapes for nongraphic characters
      --block-size=SIZE      with -l, scale sizes by SIZE when printing them;
                               e.g., '--block-size=M'; see SIZE format below

  -B, --ignore-backups       do not list implied entries ending with ~
  -c                         with -lt: sort by, and show, ctime (time of last
                               change of file status information);
                               with -l: show ctime and sort by name;
                               otherwise: sort by ctime, newest first

  -C                         list entries by columns
      --color[=WHEN]         color the output WHEN; more info below
  -d, --directory            list directories themselves, not their contents
  -D, --dired                generate output designed for Emacs' dired mode
  -f                         list all entries in directory order
  -F, --classify[=WHEN]      append indicator (one of */⇒@|) to entries WHEN
      --file-type            likewise, except do not append '*'
      --format=WORD          across -x, commas -m, horizontal -x, long -l,
```

ls -h

- The ls command **writes to standard output the contents of each specified Directory or the name of each specified File, along with any other information you ask for with the flags**.

```
┌──(kali㊗kali)-[~]
└─$ ls -h
Desktop  Documents  Downloads  gui  Music  Pictures  Public  sd  Templates  Videos
```

ls -lh

- One of the most useful commands in Kali Linux is the 'ls' command. The ls command **lists the directory contents of files and directories**.

```
┌──(kali㉿kali)-[~]
└─$ ls -lh
total 40K
drwxr-xr-x 2 kali kali 4.0K Jun 16 05:09 Desktop
drwxr-xr-x 2 kali kali 4.0K Jun 16 05:09 Documents
drwxr-xr-x 3 kali kali 4.0K Jun 16 05:57 Downloads
drwxrwxr-x 2 kali kali 4.0K Jun 16 05:52 gui
drwxr-xr-x 2 kali kali 4.0K Jun 16 05:09 Music
drwxr-xr-x 2 kali kali 4.0K Jun 16 05:09 Pictures
drwxr-xr-x 2 kali kali 4.0K Jun 16 05:09 Public
drwxrwxr-x 2 kali kali 4.0K Jun 16 06:10 sd
drwxr-xr-x 2 kali kali 4.0K Jun 16 05:09 Templates
drwxr-xr-x 2 kali kali 4.0K Jun 16 05:09 Videos
```

cd

- The **'cd'** command is also called **chdir** (Change Directory). We used this command to **change** or **switch** the current working directory.

```
┌──(kali㉿kali)-[~]
└─$ cd Downloads

┌──(kali㉿kali)-[~/Downloads]
└─$
```

cd.

- The **'cd'** command is also called **chdir** (Change Directory). We used this command to **change** or **switch** the current working directory to the previous directory.

```
┌──(kali㉿kali)-[~/Downloads]
└─$ cd .

┌──(kali㉿kali)-[~/Downloads]
└─$ cd ..

┌──(kali㉿kali)-[~]
└─$ cd .
```

cd ..

- The **'cd'** command is also called **chdir** (Change Directory). We used this command to **change** or **switch** the current working directory to the parent directory.

```
┌──(kali㉿kali)-[~/Downloads]
└─$ cd .

┌──(kali㉿kali)-[~/Downloads]
└─$ cd ..

┌──(kali㉿kali)-[~]
└─$ cd .
```

mkdir

- The **'mkdir'** command is used to **create directories.** For example, if we wish to create a directory named **'Penetration testing'** under the **'Documents'** directory, then we have to open a terminal and enter the below command:

```
┌──(kali㉿kali)-[~]
└─$ mkdir notes

┌──(kali㉿kali)-[~]
└─$ ls
Desktop  Documents  Downloads  gui  Music  notes  Pictures  Public  sd  Templates  Videos
```

mkdir -v

- The mkdir command in Kali Linux is **used to create directories or folders**.
- It allows users to quickly and easily create a new directory within the current working directory or at a specified path.

```
┌──(kali㉿kali)-[~]
└─$ mkdir -v ad
mkdir: created directory 'ad'

┌──(kali㉿kali)-[~]
└─$ ls
ad  Desktop  Documents  Downloads  gui  Music  notes  Pictures  Public  sd  Templates  Videos
```

man ls

- For example, if you wanted to learn about "ls" command, you would type "man ls" into command line.
- This would **bring up a detailed manual page for ls command, including information on its syntax, options, and arguments**.

```
File  Actions  Edit  View  Help
LS(1)                                          User Commands                                          LS(1)

NAME
       ls - list directory contents

SYNOPSIS
       ls [OPTION]... [FILE]...

DESCRIPTION
       List  information  about  the FILEs (the current directory by default).  Sort entries alphabetically if none of -cftuvSUX nor --sort is
       specified.

       Mandatory arguments to long options are mandatory for short options too.

       -a, --all
              do not ignore entries starting with .

       -A, --almost-all
              do not list implied . and ..

       --author
              with -l, print the author of each file

       -b, --escape
              print C-style escapes for nongraphic characters

       --block-size=SIZE
              with -l, scale sizes by SIZE when printing them; e.g., '--block-size=M'; see SIZE format below
Manual page ls(1) line 1 (press h for help or q to quit)
```

which ls

- The ls command line utility **lists all the files and directories under a specified directory**.

whatis ls

- The ls command line utility **lists all the files and directories under a specified directory**.
- By default, ls uses the current directory and lists files and directories in alphabetical order by name.

```
┌──(kali㊉kali)-[~]
└─$ whatis ls
ls (1)                    - list directory contents
```

---

where ls

- The ls command line utility **lists all the files and directories under a specified directory**.
- By default, ls uses the current directory and lists files and directories in alphabetical order by name.

```
┌──(kali㊉kali)-[~]
└─$ where ls
ls: aliased to ls --color=auto
/usr/bin/ls
/bin/ls
```

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link for ls file

[github](GitHub - coreutils/coreutils: upstream mirror)