

Basic Linux commands everyone needs to know

When using Linux, you should also learn basic Linux commands to make operations quicker and easier. Here are some basic commands on Linux you should know.

Just like the Windows operating system, when using Linux, you should also learn basic Linux commands to make operations quicker and easier. Here are some basic commands on Linux you should know.

With some of the commands below, you will see commands with simple explanations, specific examples to help you or the Linux users you are supporting using this operating system in general and the command line above. Linux in particular is more effective.

Basic Linux commands

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1. Some important notes about Linux Terminal

```
[195/208] Installing xf86-video-openchrome-0.3.3_4: 100%
[196/208] Installing xf86-video-nv-2.1.20_5: 100%
[197/208] Installing xf86-video-mach64-6.9.4_4: 100%
[198/208] Installing xf86-video-intel-2.21.15_5: 100%
[199/208] Installing xf86-video-ati-7.5.0: 100%
[200/208] Installing xf86-input-mouse-1.9.0_5: 100%
[201/208] Installing xf86-input-keyboard-1.8.0_6: 100%
[202/208] Installing xorg-libraries-7.7_1: 100%
[203/208] Installing xorg-docs-1.7.1: 100%
[204/208] Installing xorg-apps-7.7_1: 100%
[205/208] Installing xcursor-themes-1.0.4_1: 100%
[206/208] Installing xorg-fonts-7.7: 100%
[207/208] Installing xorg-drivers-7.7_2: 100%
[208/208] Installing xorg-7.7_1: 100%
root@PCsteps:/usr/home/pcsteps #
```

To quickly open the Terminal from the GUI, press **Ctrl + Alt + T**.

Split most Linux commands:

[sudo] command [optional switch] [t?p tin hay th? m?c]

Using **sudo** will run any command under Admin. Most Linux commands used to install / remove system files are a program, used to request sudo.

2. Get familiar with the account

These commands will help Linux users get used to their Linux accounts.

Command Function Example shows the current location in the file system. `pwd` whoami Display usernames - most useful if users switch with `su` command and need to be reminded about which account is using whoami `ls` Provide a file list. With the **-a** parameter, **ls** command displays the files whose name starts with a dot (eg `.bashrc`). With the **-l** parameter, **ls** command displays the right, the file size and the latest update date / time. `ls -a`
`ls -l env` Displays user environment settings (eg search path, saved history size, main directory, etc.) `env` `echo` Repeat the text that the user provides or display the value of some variables. `echo hello`
`echo $PATH` history Lists the commands given earlier. `history`
`history | tail -5` `passwd` Change password. Note that complex requirements can be enforced. `passwd`
`history | tail -5`

3. Create a new folder

`mkdir` is the basic directory manipulation command on Linux, which helps you create a new directory quickly. Syntax syntax:

```
mkdir folder
```

Note:

Folder is the name of the folder you want to create. For example, if you want to create a folder called backup, the syntax is:

```
mkdir / home / marin / backup
```

In case if you want to create a folder containing many subdirectories, you can use the **"-p" option**. Suppose, you have the foo folder and have access to it:

```
mkdir -p / foo / bar / baz
```

The above command will create a bar, baz folder located in the bar; bar and baz located in / foo already.

4. Search for the current directory

If you want to search your current directory, you can use the **pwd** command.

Eg:

```
marin @ [LinuxVeda]: [~ / work] $ pwd  
/ home / marin / work
```

5. Create and edit files

Linux systems provide commands to create files. Users can select the desired text editor. Some commands require users to be proficient before using, while others are quite simple.

Command Function An example editor An easy-to-use text editor that requires users to navigate through the file

with the arrow keys and provide control sequences to locate text, save changes, etc. micro myfile micro more sophisticated editing, allowing users to enter commands to find and change text, make overall changes, etc. vi myfile ex A text editor designed for programmers and both visual mode and command line. ex myfile touch Create a file if it does not already exist or update the timestamp if it has been created. touch newfile touch updatedfile> Create file by directing the output to them. > create a file while >> binds an existing file. cal> calendar ps> myprocs date >> date.log

6. Read some files

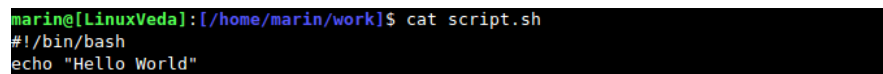
Usually you have to consider the content of many different files. Regularly reviewing different files is often quite complicated and time-consuming. So the simplest way to read their contents is to use the cat command. Command syntax is quite simple:

```
Cat FILE
```

Just change FILE with the file name you want to read. As a result, you will see the contents of the file appear at the end of the Terminal.

Eg:

```
cat script.sh
```



```
marin@LinuxVeda:~/home/marin/work]$ cat script.sh
#!/bin/bash
echo "Hello World"
```

Alternatively, you can use the cat command for multiple files at once:

```
cat FILE-1 FILE-2
```

The output of the command will display the contents of the files in the order of the contents of FILE - 1 and the content of FILE -2.

In addition, Linux provides several commands to review the content and nature of files. Here are some of the most useful commands.

Function FunctionExperts Displays the entire contents of a text file. cat .bashrc more Displays the contents of a text file. Press the spacebar to move to each additional segment. more .bash_history less Displays the contents of the text file, but allows you to go back using the up arrow key. less .bash_history file Specifies files by type (eg ASCII text, executable file, image, directory) myfile file

```
~/ .bashrc file
file / bin / echo
```

7. Copy or move the file

Copying or moving files in Linux terminal is quite simple and easy.

1. To copy a file, you can use the: **cp** command .
2. To move a file you use the command: **mv**folder.

Both use commands are quite simple. With **cp** command. To copy a file, enter the file name and enter a new copy file name. For example:

```
cp file1 file2
```

On the above command copy file1 and create file2 containing file1 contents. You can use **cp** to copy the directory. It is important to note that when you want to copy a directory you should use the **-r** option.

In other words, **cp -r** will copy the contents of a certain directory (and subdirectories) to the directory of your choice. Alternatively you can use cp with the full path:

```
cp -r / home / marin / work / / home / marin / backup
```

The above command will copy the content of the "work" folder to the new folder named "backup".

If you want to copy all the files and folders of a folder to another folder, you can use the **"*" character** . Characters are used to find appropriate ports (in this case files and folders). For example:

```
cp / home / marin / work / * / home / marin / backup /
```

Next is the **mv** command . Syntax syntax:

```
mv file1 file2
```

The above command changes first file1 to file2. The same goes for directories. However, if you specify a file and a folder, the file will be moved into the directory. Such as:

```
mv / home / marin / file1 / home / marin / work /
```

In the above command will move file1 from '/ home / marin /' to '/ home / marin / work /'. If you want to move all the files in one folder to another folder, you can use the **"*" character** :

```
mv / home / marin / work / * / home / marin / backup /
```

8. Delete files and folders

If you want to delete a folder or a file you can use the **rm** command. It is important to note that when using this command to delete a file or directory, these files cannot be restored. To delete a file you do:

```
rm /home/marin/useless-file.txt
```

You can use **rm** with many different options. Some important options like:

1. **-f**: force to delete files with reminder notifications
2. **-i**: prompt before deleting
3. **-r**: delete recursive directories
4. **-d**: delete empty directories

5. **-v**: explain what the mission is doing

9. Find the file

There are two commands that can help users find files on Linux, but they work very differently. A command searches the file system, while the other considers the database that was built earlier.

Order

Function

Example set Locate files based on the criteria provided (name, type, owner, permissions, file size, etc.). Unless provided a location to start the search, otherwise this command will only search in the current directory. `find /tmp -type d` locate Locate files using the contents of `/var/lib/mlocate/mlocate.db` updated with the `updateb` command running through cron. No start position required. `locate somefile`

`locate "*.html" -n 20`

Note: The `find` command details are in the section below.

10. List directory contents

To list the directories, you can use the `ls` command:

```
marin@LinuxVeda:~/home/marin$ ls
bin  cloud  Desktop  Documents  Downloads  kdenlive  Lightworks  Music  Photos  Pictures  scripts  Videos  work
```

The "`ls`" command can take different parameters to help you change the output of the statement. For example, the "`-a`" parameter will display all files and folders, including hidden folders containing "`."`".

```
marin@LinuxVeda:~/home/marin$ ls -a
.          .cinnamon  .gnome          .lives-dir    scripts
..         cloud       .gnome2        .local        .ssh
.aptitude  .config    .gnome2_private .MCTranscodingSDK .themes
.atom      .dbus      .gstreamer-0.10 .mozilla      .thumbnails
.avidemux  Desktop    .ICEauthority  .mplayer      .thunderbird
.bash_history .dmrc     .icons         Music         Videos
.bash_logout Documents  .kde           .openshot_qt  .viminfo
.bashrc    Downloads  kdenlive      Photos        work
.bashrc.bak .DS_Store  Lightworks    Pictures       .Xauthority
.bcast     .face      .lightworks.thereCanBeOnlyOne .pki          .xsession-errors
.bin       .gconf     .linuxmint    .profile
.cache     .gksu.lock .lives        .purple
```

If you want the command output to display a list of detailed information for each file and folder, you can use the **'-l' (L) option** :

`ls -l` You can try different

```
marin@[LinuxVeda]:[/home/marin]$ ls -l
total 52
drwxrwxr-x  2 marin marin 4096 Feb 20 22:16 bin
drwxr-xr-x  2 marin marin 4096 Feb 18 12:18 cloud
drwxr-xr-x  3 marin marin 4096 Feb 22 18:38 Desktop
drwxr-xr-x  2 marin marin 4096 Feb  1 20:40 Documents
drwxr-xr-x  7 marin marin 4096 Dec 21 23:16 Downloads
drwxr-xr-x  5 marin marin 4096 Feb 22 18:34 kdenlive
drwxr-xr-x 10 marin marin 4096 Feb 22 18:36 Lightworks
drwxr-xr-x  9 marin marin 4096 Nov  1 20:32 Music
drwxr-xr-x  5 marin marin 4096 Feb 17 19:21 Photos
drwxr-xr-x  3 marin marin 4096 Feb 24 11:04 Pictures
drwxr-xr-x  3 marin marin 4096 Feb 20 11:49 scripts
drwxr-xr-x  2 marin marin 4096 Feb 18 16:00 Videos
drwxr-xr-x  2 marin marin 4096 Feb 24 10:45 work
marin@[LinuxVeda]:[/home/marin]$
```

In addition, you can combine parameters to display details of all files:

```
ls -al
```

```
marin@[LinuxVeda]:[/home/marin]$ ls -al
total 460
drwxr-xr-x 43 marin marin 4096 Feb 24 11:10 .
drwxr-xr-x  4 root  root 4096 Feb  1 20:34 ..
drwx----- 2 marin marin 4096 Feb 18 13:31 .aptitude
drwxr-xr-x  5 marin marin 4096 Feb 20 11:40 .atom
drwxr-xr-x  3 marin marin 4096 Feb 22 18:21 .avidemux
-rw-----  1 marin marin 12819 Feb 24 10:24 .bash_history
-rw-r--r--  1 marin marin  220 Feb  1 20:34 .bash_logout
-rw-r--r--  1 marin marin 1795 Feb 24 09:47 .bashrc
-rw-r--r--  1 marin marin  606 Feb  2 19:00 .bashrc.bak
drwx----- 2 marin marin 4096 Feb 18 16:01 .bcast
drwxrwxr-x  2 marin marin 4096 Feb 20 22:16 bin
drwx----- 16 marin marin 4096 Feb 20 11:40 cache
```

11. Search for previous Linux commands

Clicking **Up** will display the final Linux command you successfully used. No error statements are displayed here.

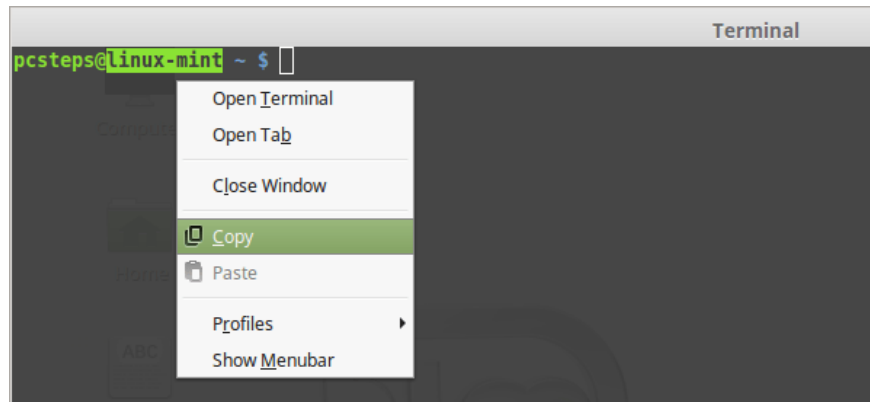
Alternatively, you can use the **history** command to see all the Linux commands you have used on Terminal.

12. Invisible password

```
Terminal
pcsteps@linux-mint ~ $ sudo su
[sudo] password for pcsteps:
linux-mint pcsteps #
```

When asked to enter a password, suppose in the case of using **sudo**, when you type in the password on the screen nothing will be displayed, no star or dot. After you enter the password, you Press Enter to finish.

13. Copy and paste the Linux command



To copy or paste the Terminal command, you cannot use the familiar key combination **Ctrl + C** and **Ctrl + V**.

Instead you can use **Ctrl + Shift + C** and **Ctrl + Shift + V** or right-click and select **Copy** or **Paste** from the Context Menu.

14. Display progress in Linux system

One of the tasks needed to administer Linux systems is to control the currently running processes. Once you know which processes are running, you can turn off processes that slow down the system. In addition, information about system processes tells us to turn off but the process makes the system unstable. Therefore it is important to know which processes are running on the system. Linux supports a variety of process testing methods, one of which is using the **ps** command. When using this command all information about running processes will be displayed. You just need to enter the following command syntax into the terminal window:

```
# ps aux | less
```

PID	%CPU	%MEM	VSZ	RSS	TTY	STAT	START	TIME	COMMAND
1	0.0	0.0	2064	652	?	Ss	10:28	0:00	init [5]
2	0.0	0.0	0	0	?	S<	10:28	0:00	[migration/0]
3	0.0	0.0	0	0	?	SN	10:28	0:00	[ksoftirqd/0]
4	0.0	0.0	0	0	?	S<	10:28	0:00	[watchdog/0]
5	0.0	0.0	0	0	?	S<	10:28	0:00	[events/0]
6	0.0	0.0	0	0	?	S<	10:28	0:00	[khelper]
7	0.0	0.0	0	0	?	S<	10:28	0:00	[kthread]
10	0.0	0.0	0	0	?	S<	10:28	0:00	[kblockd/0]
11	0.0	0.0	0	0	?	S<	10:28	0:00	[kacpid]
90	0.0	0.0	0	0	?	S<	10:28	0:00	[cqueue/0]
93	0.0	0.0	0	0	?	S<	10:28	0:00	[khubd]
95	0.0	0.0	0	0	?	S<	10:28	0:00	[kseriod]
153	0.0	0.0	0	0	?	S	10:28	0:00	[pdflush]
154	0.0	0.0	0	0	?	S	10:28	0:00	[pdflush]
155	0.0	0.0	0	0	?	S<	10:28	0:00	[kswapd0]
156	0.0	0.0	0	0	?	S<	10:28	0:00	[aio/0]
313	0.0	0.0	0	0	?	S<	10:28	0:00	[kpsmoused]

Figure 1: Process information running in the system.

In addition, this command can be used in combination with some other parameters such as:

ps -A : Check every process in the system.

ps -U root -u root -N : Checks all processes except system processes.

ps -u username : Check the processes performed by a certain user.

Or you can use the # **top** command to see the processes running on the system in real time.

15. Check Socket information and TCP / UDP network information

After configuring the network services of the Linux system, you need to keep the tabs of the ports that are actually receiving the signal on the network interface of the system. This is very important because the system can be compromised through open ports. There are a number of Linux management tools that tell you information about open ports and access open ports on the network. One of the simplest and most reliable methods is to use the **ss** command to check the Socket information, in addition to displaying more TCP information and status information than other tools. This **ss** command provides information about:

1. All TCP Socket.
2. All UDP Socket.
3. All connections ssh / ftp / http / https.
4. All local processes are connected to the X server.
5. All TCP Socket in FIN-WAIT-1 state.

Here are some **ss** commands:

1. # **ss -s** : Displays the total number of Socket.

```
Total: 375 (kernel 378)
TCP: 9 (estab 2, closed 1, orphaned 0, synrecv 0, timewait 0/0), ports 8

Transport Total      IP      IPv6
*          378      -      -
RAW         0         0         0
UDP         6         6         0
TCP         8         8         0
INET        14        14        0
FRAG        0         0         0
```

Figure 2: Output information when running # ss -s command.

1. # **ss -l** : Shows all open ports.

```

ss -l
Recv-Q Send-Q          Local Address:Port          Peer Address:Port
0 0          127.0.0.1:smux
0 0          127.0.0.1:10024
0 0          127.0.0.1:10025
0 0          *:3306
0 0          *:http
0 0          *:4949
0 0          *:domain
0 0          *:ssh
0 0          *:smtp
0 0          127.0.0.1:mdc
0 0          127.0.0.1:6010
0 0          *:https

```

Figure 3: Output information when running # ss -l.

1. # ss -pl : Check the open socket process name using the following command:
2. # ss -lp | grep : Check that the user is working with the Socket open.
3. # ss -t -a : Displaying all TCP Socket.
4. # ss -u -a : Displays all UDP Socket.

16. Track Average CPU Load and Disk Activity

If you are a Linux system administrator, you need to know how to maintain a reasonable balance in the process of loading input and output between physical drives. You can change the system configuration to perform this task. However, a much simpler method is to use the isostat command to manage the input and output loading system in Linux by monitoring the uptime and average transfer rates of devices. This command will inform CPU information (Central Processing Unit), input and output information for devices, partitions and network file system (NFS).

When running the isostat command the output information is of the form:

```

Linux 2.6.18-128.1.14.el5 (www03.nixcraft.in) 06/26/2009

avg-cpu:  %user   %nice %system %iowait  %steal   %idle
           3.50    0.09   0.51   0.03   0.00   95.86

Device:            tps   Blk_read/s   Blk_wrtn/s   Blk_read   Blk_wrtn
sda                 22.04       31.88       512.03    16193351   260102868
sda1                 0.00         0.00         0.00         2166       180
sda2                 22.04       31.87       512.03    16189010   260102688
sda3                 0.00         0.00         0.00         1615         0

```

Figure 4: Information displayed when running the isostat command.

To get NFS directory information, use the following command:

```
# iostat -n
```

17. Check the Memory Map of processes in Linux

When working in a Linux system you may need to check the amount of memory used in the system. Linux integrates many commands to check the amount of memory occupied. There is a simple command that displays the total information of the occupied and unused space of the physical memory and the total memory capacity is the **free** command.

After running this command, you will see the total occupied and unused space of the physical memory and the total amount of memory in the system. In addition, it displays caching information that individuals use.

```
              total      used      free      shared  buffers   cached
Mem:          767820      749648      17372         0        29920    201644
-/+ buffers/cache:  518084      248936
Swap:        1052248           8      1052240
```

Figure 5: Information displayed after running the free command

18. Check the operating time of the system

Do you want to know how long the server has been running? If you want, you just need to use the uptime command to check the time that the system is running. This simple command not only tells you how long the system is running but also indicates how many users have logged into the system in the previous period.

```
17:28:51 up 7:00, 2 users, load average: 2.54, 2.09, 1.84
```

Figure 6: Uptime command result.

19. Check user login

In addition to Linux management tools, you can use a command to check which users have logged into the system and what they have done. This command will show the current time, the time the system has run, the number of users logged in.

This command also displays the average load in every 1, 5 and 15 minutes. This command is useful for system administrators who want to use average load information to plan capacity.

To check who logged in to the system and what tasks they have performed, just run the following command:

```
# w username
```

```
USER      TTY      FROM          LOGIN@  IDLE   JCPU   PCPU WHAT
root     :0      -             10:30  ?xdm?  21:41  0.37s /usr/bin/gnome-
root     pts/0   _:0.0        13:28  0.00s  0.04s  0.00s w
```

Figure 7: Information displayed after running the # w username command.

20. Control system behavior, hardware and system information in Linux

For many Linux users, system control is a complex task. Most Linux distributions integrate a lot of control tools. These control tools provide methods that can be applied to check system behavior information. Controlling the system allows users to monitor the cause of the system's performance being hindered. One of the essential tasks of the system control process is to look up information about system behavior, hardware and memory information. There is a simple command that displays information about the progress, memory, record page, IO group, error and CPU behavior that is the **vmstat** command.

You only need to enter the following command in the terminal window:

```
# vmstat 3
```

```
procs -----memory----- ---swap-- -----io----- --system-- -----cpu-----
r b  swpd  free  buff  cache  si  so  bi  bo  in  cs  us  sy  id  wa  st
0 0    0  15816 35400 372092 0  0  77  37 1324 585 16  2 78  4  0
0 0    0  15816 35408 372092 0  0  0  24 1138 411  1  1 96  2  0
0 0    0  15864 35408 372092 0  0  0  0 1141 429  2  1 97  0  0
0 0    0  15912 35408 372092 0  0  0  0 1158 444  2  1 98  0  0
0 0    0  15912 35416 372092 0  0  0  7 1063 276  1  0 99  0  0
0 0    0  15912 35416 372092 0  0  0  0 1062 291  1  0 99  0  0
0 0    0  15960 35424 372092 0  0  0  19 1062 322  1  0 96  3  0
0 0    0  15968 35424 372092 0  0  0  1 1064 290  1  0 99  0  0
0 0    0  15960 35432 372084 0  0  0  7 1063 285  1  0 99  0  0
0 0    0  15960 35432 372092 0  0  0  0 1064 298  1  0 99  0  0
0 0    0  15960 35440 372084 0  0  0  9 1065 284  1  0 97  2  0
0 0    0  16000 35440 372092 0  0  0  0 1070 302  1  0 99  0  0
0 0    0  15992 35440 372092 0  0  0  17 1156 420  2  1 97  0  0
0 0    0  15976 35448 372092 0  0  0  7 1176 460  2  1 97  0  0
0 0    0  15976 35448 372092 0  0  0  0 1128 364  2  0 98  0  0
```

Figure 8: Output information of # vmstat 3 command.

Alternatively, you can use the # **vmstat -m** command to check memory information, and the # **vmstat -a** command to display the active and inactive memory page information.

```
procs -----memory----- ---swap-- -----io----- --system-- -----cpu-----
r b  swpd  free  inact active  si  so  bi  bo  in  cs  us  sy  id  wa  st
0 0    0  7672 296144 379556 0  0  81  39 1335 582 17  2 77  4  0
```

Figure 9: Information displayed after running # vmstat -a.

21. Check hardware information of Linux system

For some Linux users, checking hardware information is not easy. Linux is a complex system, but it includes a number of tools to get detailed information about the hardware, for example we can use a fairly simple command to check the hard disk information on that system. is the **hdparm** command. This command provides a command-line interface for managing multiple types of hard disks supported by the ATA / IDE device driver subsystem. It

provides a command to display verification information such as capacity, details, etc. directly from the drive. This information is saved in a new extension format. You only need to log in as root user and use the following command:

```
# hdparm -I / dev / sda
```

Or use the command:

```
$ sudo hdparm -I / dev / sda
```

Then the system hard disk information will immediately display.

```
ATA device, with non-removable media
  Model Number:      ST380215A
  Serial Number:    9RA4M8T9
  Firmware Revision: 3.AAD
Standards:
  Supported: 7 6 5 4
  Likely used: 7
Configuration:
Logical          max      current
cylinders       16383  16383
heads           16       16
sectors/track   63       63
--
CHS current addressable sectors: 16514064
LBA  user addressable sectors: 156301488
LBA48 user addressable sectors: 156301488
device size with M = 1024*1024: 76319 MBytes
device size with M = 1000*1000: 80026 MBytes (80 GB)
```

Figure 10: Details of the hard disk.

22. The commands to process files on Linux

The command to navigate around the Linux file system is ls, but there are many variations.

Linux command Command task will do ls List current directory contents ls -al List directory contents including hidden files cd dir Move from current directory to dir cd directory Transfer from current directory Go to the private directory (usually [User Name] at Home) cd . Move up (to /) a folder from the current location. CD

Take the user to the specified location. If the position starts with /, it is considered relative to the root and current location. ~ Character represents the Home directory. For example:

```
cd / tmp
cd Documents
cd ~ / Documents
```

pwd Show current directory mkdir quantrimang Create new folder named quantrimang rm filemuonxoa Delete file named filemuonxoa rm -r thumuccanxoa Delete folder named quantrimang rm -f filecanxoa Start deleting file named filecanxoa rm -rf thumuccanxoa Remove directory named thumuccanxoa cp file1 file2 Copy file1 to

file2 cp -r dir1 dir2 Copy directory dir1 to dir2 and create dir2 if not yet dir2 mv file1 file2 Move file1 to file2 or rename file1 to file2 . If file2 is available, move file1 to file2 ln -s tenfile link Create symbol link named link to file named tenfile touch filecantao Create or update filecantao cat file> tenfile Import from keyboard (standard input - standard input to the new tenfile file more tenfile Show the file content named tenfile head tenfile Show the first 10 lines of the file tenfile tail tenfile Show the last 10 lines of the file tenfile tail -f tenfile Show the contents of the file tenfile and continuously updated in real time tail -f -n N tenfile Show the content of the tenfile file and update continuously, the N-line limit

23. Network commands on Linux

TipsMake.com has a pretty detailed tutorial about the commands that work with the network on Linux, you are interested to consult.

24. Start, stop and list services

These commands allow users to display services as well as start and stop them.

Command Function Systemctl command Systemctl command can start, stop, restart and reload the service, admin permission is required. sudo systemctl stop apache2.service
sudo systemctl restart apache2.service
sudo systemctl reload apache2.service service List services and indicate whether they are running. service --status-all

25. Determine the operating system version

The table below lists the commands that will show details about the Linux operating system running on the system.

Command Function Example shows the operating system version information in a text line. uname -a
uname -r lsb_release On Debian-based systems, this command displays information about the operating system including codename and distributor ID. lsb_release -a hostnamectl Displays information on the system including server name, chassis type (operating system), operating system, kernel and structure. hostnamectl

26. Measure system performance

The following are some useful tools for checking system performance.

Command Function Example Displays running processes along with resource usage and system performance data. Processes can be displayed for a selected user or all users. Processes can be organized according to different criteria (by default, CPU usage). top
top jdoe atop Similar to the above command, but more towards system performance than individual processes. Free atop Displays memory and exchanges total memory, used and free space. free df Displays the use of the system disk space of the file. DF
df -h

27. Manage users and groups

Commands to create and delete user accounts and groups are quite simple.

Command Function Example **add** Add a new user account to the system. Username is required. Other fields (user descriptions, shells, initial passwords, etc.) may be specified. The main directory will default to / home / username. `useradd -c "John Doe" jdoe`
`useradd -c "Jane Doe" -g admin -s / bin / bash jbdoe` **userdel** Delete user accounts from the system. The `-f` option is stronger, deleting main files and other user files even if the user is still logged in. `userdel jbdoe`
`userdel -f jbdoe` **groupadd** Add a new user group to the system, update / **etc** / **group** . `groupadd developers`
`groupdel` Delete user groups from the system. `groupdel developers`

28. Set up and run scheduled processes

Tasks can be scheduled to run periodically using the commands listed below.

Command Function Ar **crontab** Set up and manage scheduled processes. With the `-l` option , recurring jobs are listed. With `-e` option , recurring jobs can be set to run at selected time intervals. `crontab -l`
`crontab -l -u username`
`crontab -e` **anacron** Allows users to run only scheduled tasks. If the system is turned off when a job is scheduled to run, it will run when the system starts. `sudo vi / etc / anacrontab`

29. Update, install and list applications

The commands to install and update applications depend on the version of Linux in use, specifically based on Debian or RPM.

Commands Function Example **apt update** On Debian-based systems, this command updates the list of available packages and their versions, but does not install or upgrade any `sudo apt update` **apt upgrade** on Debian, this command installs newer versions of existing packages. `sudo apt upgrade` **apt list** List all packages installed on Debian-based systems. With the `--upgradable` option , it only displays packages with an upgrade. `apt list`
`apt list --installed`
`apt list --upgradable` **apt install** On Debian-based systems, this command installs the required package. `sudo apt install apache2` **yum update** On RPM-based systems, this command updates all or specified packages. `sudo yum update`
`yum update mysql` **yum list** On RPM-based systems, this command lists the packages. `sudo yum update mysql`
`yum install` On RPM-based systems, this command installs the required package. `sudo yum -y install firefox`
`yum list` On RPM-based systems, this command lists known and installed packages. `sudo yum list`
`sudo yum list --installed`

30. Turn off and restart

The commands to shut down and restart the Linux system require admin rights. Options like `+15` are the number of minutes that the command will wait before the shutdown request is made.

Command Function Example **shutdown** Turns off the system at the time of the request. `-H` option pauses the

system, and the **-P** option turns off the power. sudo shutdown -H now
shutdown -H +15
shutdown -P +5 halt Turn off the system at the time of the request. sudo halt
sudo halt -p
sudo halt --reboot poweroff Disconnect power from the system at the time of request. sudo shutdown -H now
sudo shutdown -H +15
sudo shutdown -P +5

31. Linux security command

I have synthesized 20+ essential Linux security commands, essential for security issues on Linux, you need to consult.

Refer to some of the following articles:

1. Ubuntu Bash tutorial on Windows 10
2. Certain deadly commands never run on Linux
3. How to access Linux partitions on Windows?

Good luck!

You finished reading the article "**Basic Linux commands everyone needs to know**" edited by the [TipsMake](#) team. We hope this article has provided you with many useful tech tips and tricks. You can search for similar articles on tips and guides. Thank you for reading and for following us regularly.