Lesson 6 Common Linux Command

In previous tutorials, we have introduced some basic commands. For Linux novice, remembering mountains of Linux commands is a huge challenge . This chapter will explain some commonly used commands, which helps you to master it easily.

Table 1 Linux common-used command

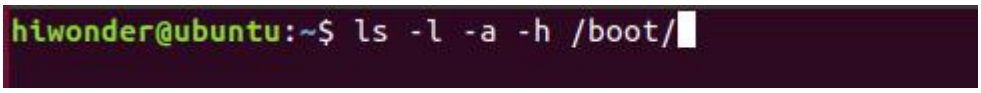
Command	Full name	Function
ls	List	List the files in the current directory
cd	Change Directory	Change path
pwd	Print Working Directory	Display the current directory
ping	Packet Internet Groper	Test the internet connection
shutdown	Shut down	Shut down
reboot	Reboot	Reboot
cp	Copy	Copy
rm	Remove	delete
mkdir	Make directory	Create a folder
man command	Manual	Display the command info
echo	Echo	Echo the input info to the terminal interface
sudo	Superuser do	Execute commands as system administrator
clear	Clear	Delete the text on terminal
find	Find	Search
mv	Move	Rename or cut
date	Date	Read the date/time of the system

Note: In Linux, it is strictly case-sensitive, so please strictly distinguish from lower case and upper case.

1. Linux Command Form

Linux command is in the form of "**command+option+operation object**". And for the command part, we need to input the command name, and the option defines the execution characteristics of the command, which involves two options, including long and short.

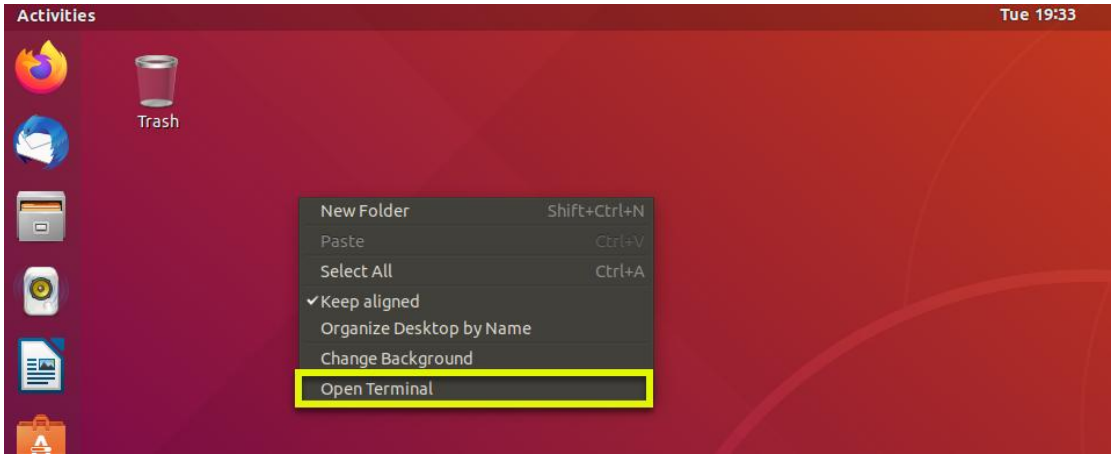
For example, long option uses the form of "**--** + **integrate word**", like **--help**. And short option adopts the form of "**-** + **individual character**", such as "**-a**". Note: we can combine several short options, for example -h -l -a == -hla, however we can't integrate the long options, like --help cannot be followed by other word.



Pay attention, command and option, option and option, option and operation object, as well as operation object and operation object must be separated by **Space**. /boot in the picture above refers to the operation object and there can be multiple operation objects.

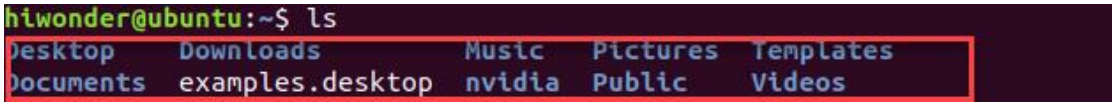
2. Practical Operation

1）Start the virtual machine, and press "**Ctrl+Alt+T**", or right click and select "**Open Terminal**" to enter the terminal interface.



2）Input the first command "**pwd**" which is used to print the current working directory, and then you will get the full path, like /home/hiwonder.

3）Next, input the command "**ls**" which is used to list files in the current working directory, and we can input "**ls -l**" and "**ls -a**" to obtain the file permission, modify the date, etc.



4）Press "**PrtSC**" or "**PRTSCR**", you can capture the current screen. The photos are stored under this path, **/home/Pictures** and you can click "  " (file manager) to find this path.

5）Then back to LX interface, and input “**cd**” command to switch to other folder. In step 3, all files in the current working directory are listed, therefore we need to input “**cd**” command to switch to “**/Pictures**” folder.

Tips: in Linux system, commands, file name or file path can be implemented by “**Tab**” key. For example, when you want to switch to “/Pictures” directory, we can input “cd Pict” and press “Tab” key, and then the command will be automatically completed as "cd Pictures/". If there are no overlapping characters whenever you press "Tab" key, the complete file name will appear on the terminal. If there are overlapping name characters, all file named with these characters will show up.

```
hiwonder@ubuntu:~$ cd Pictures/
```

6）Now, we enter the directory where the screenshot is stored, and we can input “ls” command to check the files under this directory.

```
hiwonder@ubuntu:~/Pictures$ ls
'Screenshot from 2022-06-21 19-39-13.png'
'Screenshot from 2022-06-21 19-45-55.png'
'Screenshot from 2022-06-21 19-45-56.png'
'Screenshot from 2022-06-21 19-45-57.png'
```

7）In later project management, we can find the required project or file in this way.

3. Effective Way to Input Command

3.1 Help Command

1) We can input **'command' --help** to check the usage of some command. Take "**ls**" command for example.

2) Input "**ls --help**" in the terminal, and the content in yellow frame is the usage of "**ls**" command.

```
hiwonder@ubuntu:~$ 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      scale sizes by SIZE before printing them; e.g.,
                               '--block-size=M' prints sizes in units of
                               1,048,576 bytes; 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
```

3) For example, input "**ls -a**" in the terminal to check all files in the folder.

```
hiwonder@ubuntu:~$ ls -a
.               Desktop           .mozilla          Public
..              Documents         Music             .sudo_as_admin_successful
.bash_history   Downloads         nvidia            Templates
.bash_logout    examples.desktop  .nvsdkm           Videos
.bashrc         .gnupg            .pam_environment  .xinputrc
.cache          .ICEauthority     Pictures
.config         .local            .profile
```

4) Input "**ls -al**" to view the property of all the files.

```
hiwonder@ubuntu:~$ ls -al
total 108
drwxr-xr-x 17 hiwonder hiwonder 4096 Jun 21 19:39 .
drwxr-xr-x  3 root     root     4096 Jun 18 00:00 ..
-rw-------  1 hiwonder hiwonder  849 Jun 21 19:48 .bash_history
-rw-r--r--  1 hiwonder hiwonder  220 Jun 18 00:00 .bash_logout
-rw-r--r--  1 hiwonder hiwonder 3771 Jun 18 00:00 .bashrc
drwx------ 16 hiwonder hiwonder 4096 Jun 21 19:25 .cache
drwx------ 13 hiwonder hiwonder 4096 Jun 21 20:15 .config
drwxr-xr-x  3 hiwonder hiwonder 4096 Jun 21 20:18 Desktop
drwxr-xr-x  2 hiwonder hiwonder 4096 Jun 18 00:46 Documents
drwxr-xr-x  4 hiwonder hiwonder 4096 Jun 21 19:24 Downloads
-rw-r--r--  1 hiwonder hiwonder 8980 Jun 18 00:00 examples.desktop
```

3.2 “man” Command

Input “**man**” command, we can view the reference manuals of a command. “**man**” is short for manuel.

```
hiwonder@ubuntu:~$ man
What manual page do you want?
```

1) You can use the following shortcut keys to turn pages.

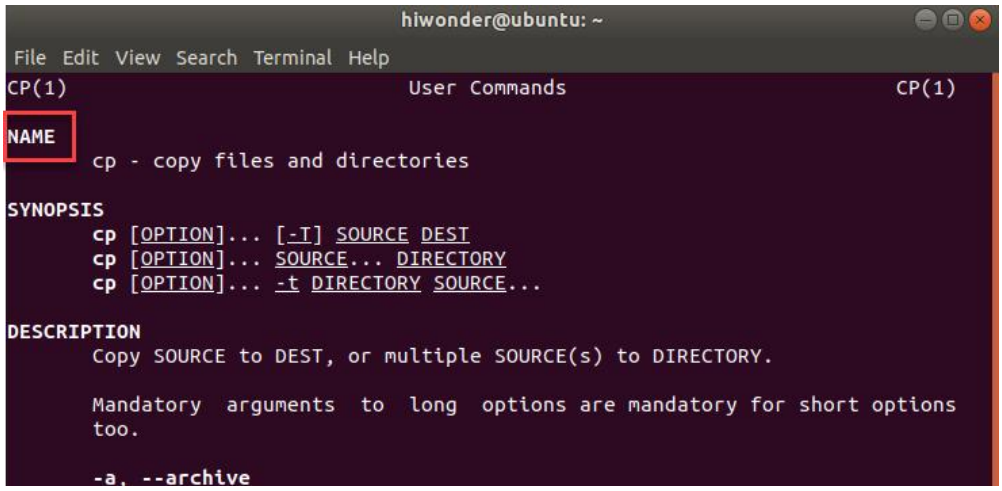
Function	Shortcut
Next page	SPACE
Last page	B
Next line	ENTER
Last line	K
Back to terminal	:Q

2) In addition to the above commands and buttons, there are some special control buttons in the Linux system.

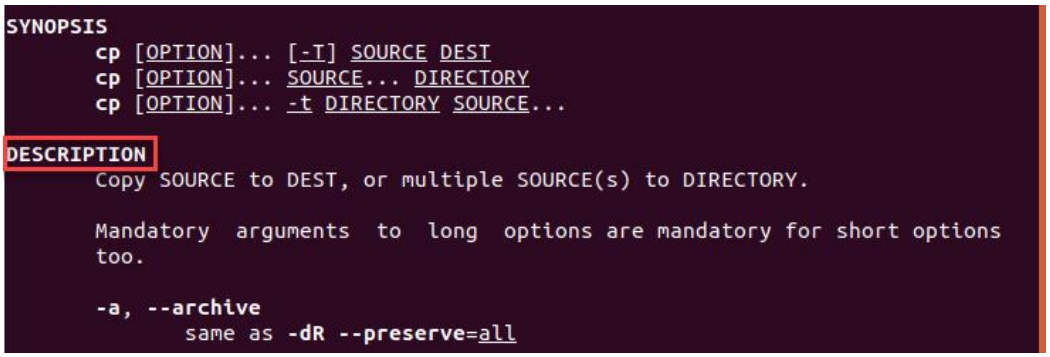
Ket	Function
↑	Command history
Tab	Complete command
Ctrl+C	Stop the running programming
Ctrl+D	Exit terminal interface
Ctrl+A	Switch the pointer to the beginning of the line

Ctrl+X	Switch the pointer to the end of the line

3) If you want to check the meaning of "**cp**" command, we can input "**man cp**" command and press Enter. The content printed in "**NAME**" area is its meaning.



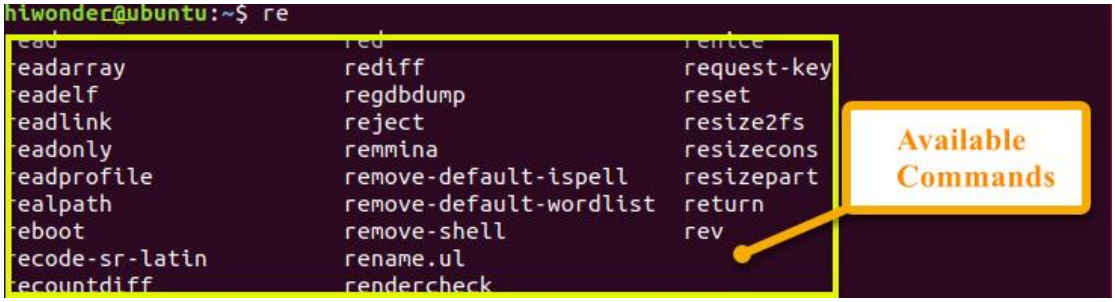
4) Move down, detailed instruction of "**cp**" command is listed in "**DESCRPTION**" area.



3.3 Tab Key Complementation

1) For example, we can input "**re**" and press "**Tab**" key. The terminal

will list all the commands starting with "**re**".



2) Input "**cd D**" and press "Tab" key. Then files starting with "**D**" under this path will appear.

3) When inputting the file name, press "**Tab**" key, the file name will be automatically complemented.