

5. Linux common commands and the use of vim editor

1. Some basic common

1) View the version of operating system

`cat /proc/version`

2) View the version of mainboard

`cat /proc/cpuinfo`

3) View the remaining space of the SD card.

`df -h`

4) View IP address

`ifconfig`

5) Condense: `tar -zcvf filename.tar.gz dirname`

Decompress: `tar -zxvf filename.tar.gz`

6) apt(Advanced Package Tool) is used to install software.

`sudo apt-get install xxx`

install xxx software.

`sudo apt-get update`

update software.

`sudo apt-get upgrade`

Update the installed

software.

`sudo apt-get remove xxx`

remove xxx software.

Some tutorial for linux commands:

<http://www.runoob.com/linux/linux-command-manual.html>

2. Introduction and configuration of the vim editor

Linux comes with editors nano and vi. Vim editor is an upgraded version of the vi editor, which has a better experience.

The following steps will teach you how to install and configure vim editor in the Raspberry Pi system

1) You need to input: `sudo apt-get update`

2) You need to input: `sudo apt-get install vim`

You will see the following interface:

```
pi@raspberrypi: ~
root:x:0:0:root:/root:/bin/bash
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:/var/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
systemd-timesync:x:100:103:systemd Time Synchronization,,,:/run/systemd:/bin/false
systemd-network:x:101:104:systemd Network Management,,,:/run/systemd/netif:/bin/false
/etc/passwd" 32 lines, 1701 characters
```

3) You need to input: **su** and input the password for your root account.

```
pi@raspberrypi:~$ su
Password:
root@raspberrypi:/home/pi#
```

4) You need to input: **sudo tar xvf vimconfig.tar.gz**

```
pi@raspberrypi: ~
root@raspberrypi:/home/pi/workdir# ls
vimconfig.tar.gz
root@raspberrypi:/home/pi/workdir# tar xvf vimconfig.tar.gz
```

5) You need to input: **cd vimconfig**

You need to input: **./config.sh**

```
root@raspberrypi:/home/pi/workdir# ls
vimconfig vimconfig.tar.gz
root@raspberrypi:/home/pi/workdir# cd vimconfig
root@raspberrypi:/home/pi/workdir/vimconfig# ls
config.sh ctags ReadMe
root@raspberrypi:/home/pi/workdir/vimconfig# ./config.sh
```

You may see the interface shown below.

```
root@raspberrypi:/home/pi/workdir/vimconfig# ./config.sh
Bakup your vimconfig file...
cp: cannot stat '/root/.vim': No such file or directory
cp: cannot stat '/root/.vimrc': No such file or directory
Config your vim now !
Make tags in /usr/include
/bin/ctags: 1: /bin/ctags: Syntax error: word unexpected (expecting ")")
```

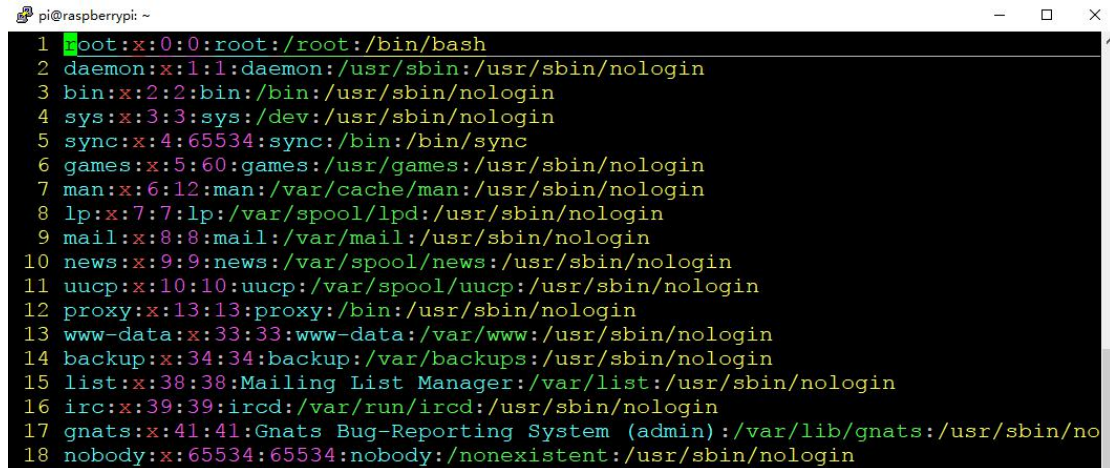
6) You need to input: **touch /root/.vim /root/.vimrc**

```
root@raspberrypi:/home/pi/workdir/vimconfig# touch /root/.vim /root/.vimrc
```

7) You need to input: **apt-get install ctags**

```
root@raspberrypi:/home/pi/workdir/vimconfig# apt-get install ctags
```

After the above steps is completed, the vim editor becomes will become as shown below.



```
pi@raspberrypi: ~
1 root:x:0:0:root:/root:/bin/bash
2 daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
3 bin:x:2:2:bin:/bin:/usr/sbin/nologin
4 sys:x:3:3:sys:/dev:/usr/sbin/nologin
5 sync:x:4:65534:sync:/bin:/bin/sync
6 games:x:5:60:games:/usr/games:/usr/sbin/nologin
7 man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
8 lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
9 mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
10 news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
11 uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
12 proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
13 www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
14 backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
15 list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin
16 irc:x:39:39:ircd:/var/run/ircd:/usr/sbin/nologin
17 gnats:x:41:41:Gnats Bug-Reporting System (admin)/var/lib/gnats:/usr/sbin/nologin
18 nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
```

The editor possess 3 modes: Enter mode, Command mode, Low line mode.

Enter mode: In this mode, you can enter characters, and pressing ESC will return to command mode.

Command mode: You can move the cursor, delete characters, and so on.

Low line mode: You can save files, exit editor, set editor, find, etc. (low line mode be regarded as in command mode)

① These instructions are used in Command mode:

vi filename/vim filename	//Open the filename file
:w	//Save file
:q	//Exit editor(The file has not been modified)
:q!	//Exit editor without save
:wq	//Exit editor and save

② These instructions are used in Command mode. After these commands are executed, you can enter the Enter mode. (pressing ESC will return to command mode)

a	//Add text to the right of the current cursor position
i	//Add text to the left of the current cursor position
A	//Add text at the end of the current line
I	//Add text at the beginning of the current line (the beginning of a line that is not a null character)

O //Create a new line above the current line
o //Create a new line below the current line
R //Replace (overwrite) the current cursor position and several
 texts that follow

③ These instructions are used in Command mode:

x //Delete current character
nx //Delete n characters from the cursor
dd //Delete current line
u //Undo the previous step
U //Undo all operations on the current line

④ These instructions are used in Command mode:

yy //Copy the current line to the buffer
yw //Copy the characters from the cursor to the end of the word
y^ //Copy the content from the cursor to the beginning of the
 line
y\$ //Copy the content from the cursor to the end of the line
p //Paste the contents of the clipboard behind the cursor
P //Paste the contents of the clipboard in front of the cursor

⑤ These instructions are used in Command mode:

:set nu //Display the number of line
:set nonu //Undisplay the number of line