[命令大览 3](#_Toc455253744)

[目录管理命令 3](#_Toc1027202591)

[ ls - List directory contents 3](#_Toc2682630)

[ mkdir - Make directories 4](#_Toc927442549)

[ rmdir remove empty directories 4](#_Toc727578358)

[ cd - change directory 4](#_Toc1302563474)

[ mv - Move (rename) files 5](#_Toc1544974215)

[ rm - Remove the files or directories 5](#_Toc1229398148)

[ pwd - Print name of current/working directory 6](#_Toc568818229)

[ tree - List contents of directories in a tree-like format. 6](#_Toc558733687)

[ cp - Copy files and directories 6](#_Toc1778777446)

[ find - search for files in a directory hierarchy 7](#_Toc1374429080)

[文件管理命令 12](#_Toc2124542851)

[ diff: compare files line by line 12](#_Toc2109603872)

[ vimdiff: edit two or more file with Vim and show differences 13](#_Toc1918403778)

[ more: file perusal filter for crt viewing 13](#_Toc296599867)

[ less 13](#_Toc799751175)

[ head: output the first part of files 14](#_Toc617894307)

[ tail: output the last part of files 14](#_Toc1249991861)

[ cat: concatenate files and print on the standard output 14](#_Toc607055898)

[ xargs: build and execute command lines from standard input 15](#_Toc732582939)

[ seq: print a sequence of numbers 15](#_Toc1612032429)

[ cut: remove sections from each line of files 15](#_Toc140823600)

[ wc: print newline, word, and byte counts for each file 16](#_Toc264016624)

[ chattr: change file attributes 17](#_Toc2042498718)

[ lsattr: list file attributes on a Linux second extended file system 18](#_Toc1911276174)

[ Stat: display file or file system status 18](#_Toc418541616)

[ chgrp: change the group of each FILE to GROUP 19](#_Toc472891565)

[ chown: change file owner and group 20](#_Toc1215816893)

[ chmod: change file mode bits 20](#_Toc1731397491)

[ which: shows the full path of (shell) commands 20](#_Toc433487957)

[ whereis 20](#_Toc1671070637)

[ touch: Change file timestamps 21](#_Toc611116434)

[用户管理命令 21](#_Toc436170587)

[01. useradd - create a new user or update default new user information 21](#_Toc451029539)

[02. userdel - delete a user account and related files 22](#_Toc1338694793)

[03. passwd - update user's authentication tokens 23](#_Toc1738734062)

[04. id - print real and effective user and group IDs 23](#_Toc1996003754)

[05. whoami 查看当前用户 23](#_Toc420609293)

[06. sudo, sudoedit - execute a command as another user 23](#_Toc160068643)

[07. su - run a shell with substitute user and group IDs 23](#_Toc407253793)

[08. visudo - edit the sudoers file 23](#_Toc51903092)

[09. usermod - modify a user account 24](#_Toc1534497724)

[10. uname - print system information 24](#_Toc384312996)

[11. which - shows the full path of (shell) commands. 24](#_Toc14023316)

[12. hostname - show or set the system’s host name 25](#_Toc1305417854)

[系统管理 25](#_Toc680912863)

[其它 25](#_Toc813774491)

[Netstat (ss) 查看网络连接状态 –lntup 25](#_Toc1923312161)

[history Display the history list with line numbers 25](#_Toc1930904724)

[telnet 远程连接，探测远端端口是否开通 26](#_Toc1420830389)

[runlevel 26](#_Toc508411452)

[alias - Define or display aliases. 26](#_Toc1395453506)

[unalias: Remove each NAME from the list of defined aliases 26](#_Toc1561653990)

[Nesysv 26](#_Toc772428077)

[ps - report a snapshot of the current processes. 26](#_Toc1290468576)

[内核管理 27](#_Toc1325446516)

[sysctl configure kernel parameters at runtime 27](#_Toc1190969693)

[mount 查看 及设置挂载（目录 和设备建立联系，目录 作为设备的入口） 28](#_Toc1763360141)

[umount 批定挂载点 卸载 强制（umount –lf /mnt） 28](#_Toc393779761)

[df –h 查看分区设备使用情况 28](#_Toc774883536)

[basic info command keys 28](#_Toc49364451)

[POSIX 29](#_Toc2064850399)

# 命令大览

文件目录管理: [ls](#_ls_-_List) [cd](#_cd_-_change) [cp](#_cp_-_Copy) [find](#_find_-_search) [mkdir](#_mkdir_-_Make) [mv](#_mv_-_Move) [pwd](#_pwd_-_Print) rename [rm](#_rm_-_Remove) [rmdir](#_rmdir_remove_empty) [touch](#_touch_-_Change) [tree](#_tree_-_List) basename dirname [chattr](#_chattr_-_change) [lsattr](#_lsattr_-_list) file md5sum

文件管理: [cat](#_cat_-_Concatenate) tac [more](#_more_-_file) [less](#_less_-_opposite) [head](#_head_-_output) [tail](#_tail_-_Output) cut split paste sort uniq wc iconv dos2unix file [diff](#_diff_-_compare) [vimdiff](#_vimdiff_-_edit) [grep](#_grep,_Global_Regular) [egrep](#_grep,_Global_Regular) join vi/vim

文件压缩及解压命令: tar unzip gzip zip

搜索文件命令 which find whereis locate

用户管理命令: [useradd](#_useradd_-_create) [usermod](#_usermod_-_modify) [userdel](#_userdel_-_delete) groupadd [passwd](#_passwd_-_update) chage [id](#_id_-_print) [su](#_su_-_run) [visudo](#_visudo_-_edit) [sudo](#_sudo,_sudoedit_-) [whoami](#_whoami_查看当前用户)

网络命令 : telnet ssh scp wget ping route ifconfig ifup ifdown netstat nmap lsof route mail mutt nslookup dig host traceroute mount umount df du fsck dd dumpe2fs dump fdisk parted mkfs partprobe e2fsck mkswap swapon swapon sysnc resize2fs

系统管理及系统安全 : chmod chown chgrp chage passwd su sudo umask chattr lsattr uptime top free vmstat mpstat iostat sar chkconfig

## 目录管理命令

### ls - List directory contents

描述：列出目录里的内容的信息，默认是列出当前目录的信息，按字母排序，

语法：ls [OPTION]... [FILE]...

参数：

-a, --all do not ignore entries starting with。 显示隐藏文件

-l use a long listing format 使用长格式显示

-A, --almost-all do not list implied . and .. 列出所有文件但不包括（.与..）

-F, --classify append indicator (one of \*/=>@|) to entries 用特殊字符把文件分类

-r, --reverse reverse order while sorting 反向排序

-R, --recursive list subdirectories recursively 递归显示子目录内容

-t sort by modification time 按照修改时间排序

$ ls -ltr s\*

列出目前工作目录下所胡名名称是s开头的文件，越新的排越后面

$ ls –lR /bin

将/bin目录以下所胡目录及文件详细资料列出

$ ls –AF

列出目前工作目录下所胡文件及目录，目录名称后加”/”,可执行档后“\*”

### mkdir - Make directories

描述：如果该目录不存在，创建一个目录，

语法: mkdir [OPTION]... DIRECTORY...

参数：**-p, --parents** no error if existing, make parent directories as needed

-m, --mode=MODE set file mode (as in chmod), not a=rwx - umask

$ mkdir /data

在根目录下创建一个data文件。

$ mkdir -p /sandow/word

首先创建sandow文件然后再创建word文件

$ mkdir a b c

创建多个文件a b c

### rmdir remove empty directories

命令描述：删除空目录，

命令语法: rmdir [OPTION]... DIRECTORY...

命令参数：-p, --parents 递归删除目录

### cd - change directory

命令描述：更改当前工作目录，默认目录为家目录

命令语法: cd [-L|-P] [dir]

命令参数:

$ cd /

切换到根目录

$ cd ~

切换到home 目录

$ cd ../..

跳到目前目录的上上两层

### mv - Move (rename) files

命令描述：移动目录，或者更改文件名字

命令语法: mv [OPTION]... [-T] SOURCE DEST

mv [OPTION]... SOURCE... DIRECTORY

mv [OPTION]... -t DIRECTORY SOURCE...

命令参数：

-f, --force do not prompt before overwriting

-i, --interactive rompt before overwrite

$ mv aaa bbb

将文件aaa更名为bbb

$ mv /data /tmp/

把文件夹data移动到tmp下

$ mv /data/ /tmp/

把文件夹data里的内容移动到tmp下

$ mv /usr/student/\* .

把student下的所有文件移动到当前目录下

### rm - Remove the files or directories

命令描述：删除文件或者目录，取消链接

命令语法: rm [OPTION]... FILE...

命令参数：

-r, -R, --recursive remove directories and their contents recursively

-f, --force ignore nonexistent files, never prompt

-i prompt before every removal

$ rm –f test.txt

强制删除test.txt不做提示

$ rm –r homework

删除文件夹homework

**rm 删除文件或目录，默认会提示确认，用-f 强制删除文件， -r 删除目录 删除是危险动作，用mv或者用 find删除**

### pwd - Print name of current/working directory

SYNOPSIS **pwd [OPTION]...**

DESCRIPTION Print the full filename of the current working directory.

**-L, --logical** use PWD from environment, even if it contains symlinks

**-P, --physical** avoid all symlinks

### tree - List contents of directories in a tree-like format.

$ mkdir -p 1/2/3 1/3/5

$ ls

1 VMwareTools-9.9.3-2759765.tar.gz

$ tree

.

|-- 1

| |-- 2

| | `-- 3

| `-- 3

| `-- 5

`-- VMwareTools-9.9.3-2759765.tar.gz

5 directories, 1 file

### cp - Copy files and directories

SYNOPSIS

cp [OPTION]... [-T] SOURCE DEST  
  cp [OPTION]... SOURCE... DIRECTORY

  cp [OPTION]... -t DIRECTORY SOURCE...

DESCRIPTION Copy SOURCE to DEST, or multiple SOURCE(s) to DIRECTORY.

把原文件（可以是多个）copy到目标文件

-a, --archive same as -dR --preserve=all 在复制目录时使用，保留链接，文件属性，并复制目录下的所有内容

-d same as --no-dereference --preserve=links 复制时保留链接（windows快捷方式）

-f, --force if an existing destination file cannot be opened, remove it and try again (redundant if the -n option is used)

-i, --interactive prompt before overwrite (overrides a previous -n option)

-p same as --preserve=mode,ownership,timestamps 复制内容，修改时间和访问权限

-R, -r, --recursive copy directories recursively

-l, --link link files instead of copying

-u, --update copy only when the SOURCE file is newer than the destination file or when the destination file is missing

$ cp –r test /newtest/file1

将file复制到目录/newtest下并改名为file1

**复制而不显示提示**

touch /mnt/test.txt /tmp/test.txt

\cp /mnt/test.txt /tmp/

/bin/cp /mnt/test.txt /tmp

**% 加全径**

### find - search for files in a directory hierarchy

SYNOPSIS find [-H] [-L] [-P] [-D debugopts] [-Olevel] [path...] [expression]

DESCRIPTION

find searches the directory tree rooted at each given file name by evaluating the given expression from left to right, according to the rules of precedence (see section OPERATORS), until the outcome is known (the left hand side is false for and operations, true for or), at which point find moves on to the next file name. more useful source of information.

-type c

File is of type c:

b block (buffered) special

c character (unbuffered) special

d directory

p named pipe (FIFO)

f regular file

l symbolic link; this is never true if the -L option or the -follow option is in effect, unless the symbolic link is broken.If you want to search for symbolic links when -L is in effect, use -xtype.

s socket

D door (Solaris)

#### ACTIONS

**-delete**

Delete files; true if removal succeeded. If the removal failed, an error message is issued. If -delete fails, find's exit status will be nonzero (when it eventually exits). Use of -delete automatically turns on the '-depth' option.

**-exec command;**

Execute command; true if 0 status is returned. All following arguments to find are taken to be arguments to the command until an argument consisting of ';' is encountered. The string '{}' is replaced by the current file name being processed everywhere it occurs in the arguments to the command, not just in arguments where it is alone, as in some versions of find. Both of these constructions might need to be escaped (with a '\') or quoted to protect them from expansion by the shell. See the EXAMPLES section for examples of the use of the -exec option. The specified command is run once for each matched file. The command is executed in the starting directory. There are unavoidable security problems surrounding use of the -exec action; you should use the -execdir option instead.

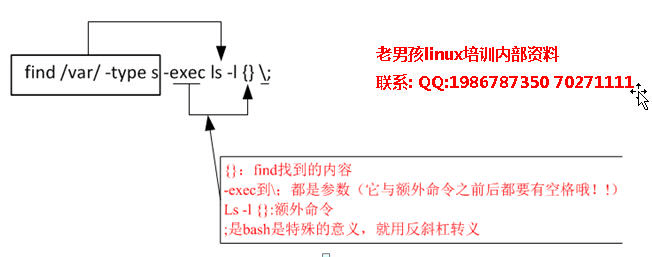
**-exec command {} +**

This variant of the -exec action runs the specified command on the selected files, but the command line is built by appending each selected file name at the end; the total number of invocations of the command will be much less than the number of matched files.The command line is built in much the same way that xargs builds its command lines. Only one instance of '{}' is allowed within the command. The command is executed in the starting directory.

-exec 参数后面跟的是command命令，它的终止是以;为结束标志的，所以这句命令后面的分号是不可缺少的，考虑到各个系统中分号会有不同的意义，所以前面加反斜杠。

{} 花括号代表前面find查找出来的文件名。

exec选项后面跟随着所要执行的命令或脚本，然后是一对儿 {}，一个空格和一个\，最后是一个分号。



$ ls

dependency\_links.txt entry\_points.txt not-zip-safe pbr.json PKG-INFO requires.txt SOURCES.txt top\_level.txt

$ find . -type f -exec ls -l {} \;

-rw-r--r--. 1 501 games 9533 Aug 23 06:47 ./SOURCES.txt

-rw-r--r--. 1 501 games 1 Aug 23 06:47 ./not-zip-safe

-rw-r--r--. 1 501 games 68 Aug 23 06:47 ./entry\_points.txt

-rw-r--r--. 1 501 games 1961 Aug 23 06:47 ./PKG-INFO

-rw-r--r--. 1 501 games 1 Aug 23 06:47 ./dependency\_links.txt

-rw-r--r--. 1 501 games 46 Aug 23 06:47 ./pbr.json

-rw-r--r--. 1 501 games 4 Aug 23 06:47 ./top\_level.txt

-rw-r--r--. 1 501 games 56 Aug 23 06:47 ./requires.txt

$ find /etc -name “passwd” -exec grep “root” {} \;

%找到名这passwd的文件然后执行grep 查看这些文件中是否存在一个root用户

$ find /etc -name "passwd" -exec grep "root" {} \;

root:x:0:0:root:/root:/bin/bash

operator:x:11:0:operator:/root:/sbin/nologin

$ find . -name "\*.txt" -exec cp {} /Data/pip-7.1.2/abc \;

**找到后缀名为txt的文件复制到abc里(原abc为空)**

$ find . -name "\*.txt" -exec cp {} /Data/pip-7.1.2/abc/ \;

$ cd /Data/pip-7.1.2/abc/

$ ls

dependency\_links.txt entry\_points.txt requires.txt SOURCES.txt top\_level.txt

find . -name "\*.log" -exec mv {} .. \;

**%找到后缀名为log的文件移动到上一级目录**

$ ls

abc AUTHORS.txt build CHANGES.txt docs LICENSE.txt MANIFEST.in pip pip.egg-info PKG-INFO README.rst setup.cfg setup.py

$ cd pip.egg-info/

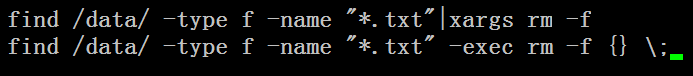
$ find . -name "\*.txt" -exec cp {} .. \;

$ cd ..

$ ls

abc build dependency\_links.txt entry\_points.txt MANIFEST.in pip.egg-info README.rst setup.cfg SOURCES.txt AUTHORS.txt CHANGES.txt docs LICENSE.txt pip PKG-INFO requires.txt setup.py top\_level.txt

$find / -type f -name "hosts" -exec rm -f {} \:



$ find /data –type f ! –name "8"|xargs rm –f

$ find /data –type f|grep –v 8|xargs rm -f

$find /root/data  -type f ! -name "oldboy.txt" |xargs rm -f  
-type：表示文件类型  
-name：表示文件名称  
!表示取反，用在参数前面  
$ find ./ -type f -o -name "\*.txt"  
-o或者，相当于or  
-a并且，相当于and  
$ find /oldboy/test/ -type f -name "access\*.log" -mtime +7|xargs rm –f  
-mtime 按修改时间  
+7  7天以前  
-7  最近7天

7   7天前

find /tmp -type f -name  "\*.txt" |xargs

find /tmp -type f -name  "\*.txt" |xargs -n 3

-fls file

True; like -ls but write to file like -fprint. The output file is always created, even if the predicate is never matched. See the UNUSUAL FILENAMES section for information about how unusual characters in filenames are handled.

-fprint file

True; print the full file name into file file. If file does not exist when find is run, it is created; if it does exist, it is truncated. The file names '/dev/stdout' and '/dev/stderr' are handled specially; they refer to the standard output and standard error output, respectively. The output file is always created, even if the predicate is never matched. See the UNUSUAL FILENAMES section for information about how unusual characters in filenames are handled.

-fprint0 file

True; like -print0 but write to file like -fprint. The output file is always created, even if the predicate is never matched. See the UNUSUAL FILENAMES section for information about how unusual characters in filenames are handled.

-fprintf file format

True; like -printf but write to file like -fprint. The output file is always created, even if the predicate is never matched. See the UNUSUAL FILENAMES section for information about how unusual characters in filenames are handled.

-ls True; list current file in ls -dils format on standard output. The block counts are of 1K

-print True; print the full file name on the standard output, followed by a newline. If you are piping the output of find into another program and there is the faintest possibility that the files which you are searching for might contain a newline, then you should seriously consider using the -print0 option instead of -print. See the UNUSUAL FILENAMES section for information about how unusual characters in filenames are handled.

-print0

True; print the full file name on the standard output, followed by a null character (instead of the newline character that -print uses). This allows file names that contain newlines or other types of white space to be correctly interpreted by programs that process the find output. This option corresponds to the -0 option of xargs.

-printf format

True; print format on the standard output, interpreting '\' escapes and '%' directives. Field widths and precisions can be specified as with the 'printf' C function. Please note that many of the fields are printed as %s rather than %d, and this may mean that flags don't work as you might expect. This also means that the '-' flag does work (it forces fields to be left-aligned). Unlike -print, -printf does not add a newline at the end of the string. The escapes

and directives are:

\a Alarm bell.

\b Backspace.

\c Stop printing from this format immediately and flush the output.

\f Form feed.

\n Newline.

\r Carriage return.

\t Horizontal tab.

\v Vertical tab.

\0 ASCII NUL.

\\ A literal backslash ('\').

* tar

描述: tar命令可以为linux的文件和目录创建档案。利用tar，可以为某一特定文件创建档案（备份文件），也可以在档案中改变文件，或者向档案中加入新的文件

参数:

## 文件管理命令

### diff: compare files line by line

**描述**：以逐行的方式比较给定的两个文本文件的不同处

$ diff a.txt b.txt

1c1

< 123456

---> 123457

**参数**：

-b, –ignore-space-change 不检查空格字符的不同

-B, –ignore-blank-lines 不检查空白行

-i, –ignore-case 不检查大小写的不同

-I, –ignore-matching-lines=RE 忽略RE的匹配

-w, –ignore-all-space 忽略全部空格字符

**语法：**

diff [OPTION]... FILES

### vimdiff: edit two or more file with Vim and show differences

**描述**： 用vim编辑器同时打开两到四个不同版本的文件，并且在不同之处高亮显示

**语法**

vimdiff [options] file1 file2 [file3 [file4]]

### more: file perusal filter for crt viewing

**描述**： . 用来查看一个文本文件的内容，当填满一屏后停下，可以用快捷键来控制显示内容

**快捷键**：

|  |  |
| --- | --- |
| <空格键> 或 f | 显示下一屏文本 |
| <回车键> | 显示下 1 行文本 |
| d 或 ctrl-D | 滚动 k 行 初始 |
| b 或 ctrl-B | 跳过上面 1 屏文本 |
| ’ | 转到上次搜索开始处 |
| = | 显示当前行号 |
| /<正则表达式> | 搜索正则表达式第 1 次出现处 less下会高亮显示 |
| n | 搜索前一正则表达式下次出现处 |
| !<cmd> 或 :!<cmd> | 在子 shell 中执行 命令 |
| v | 在当前行启动 /usr/bin/vi |
| . | 重复前一命令 |

### less

**描述**： less 和more非常像，但是less支持用户向前向后浏览文件，可以用pageup，pagedown 来上下翻页。

**快捷键**

|  |  |
| --- | --- |
| /pattern | Search forward for (N-th) matching line 向后搜索 |
| ?pattern | Search backward for (N-th) matching line 向前搜索 |
| &pattern | Display only matching lines 只显示匹配到的行 |
| n | Repeat previous search (for N-th occurrence) 重复前面的搜索（向后搜） |
| N | Repeat previous search in reverse direction 重复前面的搜索（向前搜） |
| -N | 显示行号 |
| -i | 搜索时忽略大小写 |

### head: output the first part of files

**描述**： , 打印出文件的前10（默认）行内容

**参数**：

-c, –bytes=[-]K 打印出前K字节

-n, –lines=[-]K 打印出前K行

**语法**

head [OPTION]... [FILE]...

### tail: output the last part of files

**描述**： , 打印文件最后10行的内容

**参数**： 同head  
**语法**

tail [OPTION]... [FILE]...

### cat: concatenate files and print on the standard output

**描述**： 连接文件并打印到标准输出设备上，用来显示文件的内容，内容会全部显示。

**参数**：

-n 从1开始显示行号

**语法**

cat [OPTION]... [FILE]...

cat 也可以用来进行输入内容到指定文件，事实上这是”<, «, », >”的功能，

$ cat >>/data/boy/oldboy.txt <<EOFI

am study linux；

EOF

两个EOF可以被两个其它任意内容替换第一个EOF前的\在命令行内需要删除，但是必须相同。上面命令的意思是把I am study linux输入到oldboy.txt里

### xargs: build and execute command lines from standard input

**描述**： 将标准输入数据转换成命令行参数。 也可能将单行或者多行文件输入转换成其它格式。

**参数**：

-n 指定每一行显示的内容的数量

-d 指定以什么为分隔符

**举例**

$ echo "nameXnameXnameXname" | xargs -dX -n2

name name name name

$ find /tmp -name core -type f -print | xargs /bin/rm -f

### seq: print a sequence of numbers

**描述**：打印从first到last步找为increment连续的整数

**参数**：

-f, –format=FORMAT 使用printf样式的浮点格式

-s, –separator=STRING 指定分隔符 (default: \n)

-w, –equal-width 在前面添加0,使得数字宽度相同

**语法**

$ seq [OPTION]... LAST seq [OPTION]... FIRST LAST seq [OPTION]... FIRST INCREMENT LAST

**举例**

$ seq -s '< ' 10 $ seq -s '< ' 10 |xargs -n 3

### cut: remove sections from each line of files

**描述：删除行中的指定部分，还可以连接文件 cut f1 f2 >f3 便是把f1, f2的内容连接起来输入到f3**

参数：

-b: 仅显示行中指定范围字节(bytes)

-c: 仅显示行中指定范围的字符(characters)

-d: 指定分隔符(delimiter)，用指定分隔符来替换TAB(默认）

-f: 只选择指定的范围，

**语法**

cut OPTION... [FILE]...

**举例**

$ who

sandow pts/0 2015-10-21 09:36 (10.0.0.1)

sandow pts/1 2015-10-21 11:27 (10.0.0.1)

$ who |cut -b -5,10

sandop sandop

可以看到-5就是从开关显示到第五，同理5-, 在取英文的时候 -b -c都一样，但是取中文的话只能用-c，用-b便会出现乱码，因为中文一个字占两个字节。

$ cat /etc/passwd|head -5

root:x:0:0:root:/root:/bin/bash

bin:x:1:1:bin:/bin:/sbin/nologin

daemon:x:2:2:daemon:/sbin:/sbin/nologin

adm:x:3:4:adm:/var/adm:/sbin/nologin

lp:x:4:7:lp:/var/spool/lpd:/sbin/nologin

$ cat /etc/passwd|head -5|cut -d : -f 1

root bin daemon adm lp

用-d来指定分隔符后便可以用-f来取出指定范围的内容了，事实上就是取第几列，其中1也可以用上面的情况比如-3 ; 2-4 ; 5- ; 4,7。

### wc: print newline, word, and byte counts for each file

**描述**： 统计指定文件中的行数，字数，字节数，并将结果显示输出。如果文件名为“-”那么会从标准输入设备读取数据。

参数：

-l 只显示行数，

-w 只显示字数

-c 只显示字节数 （bytes)

-m 只显示字符数 (character)

**语法**

wc [OPTION]... [FILE]... wc [OPTION]... --files0-from=F

**举例**

$ cat /etc/passwd |wc

26 38 1154

$ cat /etc/passwd |wc -l

26

$ cat /etc/passwd |wc -w

38

$ cat /etc/passwd |wc -c

1154

### chattr: change file attributes

**描述**：修改linux文件系统里的文件属性   
**语法**:

chattr [ -RVf ] +-=[acdeijstuADST] [ -v version ] [ mode ] files...

+是给文件增加属性，-是移除文件属性，=是更新指定属性 ‘acdeijstuADST’ 的各自意思是 append only (a), compressed (c), no dump (d), extent format (e), immutable (i), data journalling (j), secure deletion (s), no tail-merging (t), undeletable (u), no atime updates (A), synchronous directory updates (D), synchronous updates (S), and top of directory hierarchy(T).

A 文件或者目录的atime不可修改，这是预防手提电脑I/O错误的发生  
c 设定文件是否通过内核自动压缩后储存  
d 设定文件不能成为dump程序的备份目标  
i 设定文件不允许被修改删除，设定链接。  
u 预防意外删除文件，虽然删除但还是在磁盘中 s 保密性删除文件或目录， 硬盘空间被全部收回

**参数：**

-R 递归创建文件属性

**举例**

chattr +i /etc/passwd /etc/shadow /etc/group /etc/gshadow /etc/inittab lsattr /etc/passwd

----i--------e- /etc/passwd

### lsattr: list file attributes on a Linux second extended file system

**描述**： 列出linux EXT2文件系统的属性   
**语法**：

lsattr [ -RVadv ] [ files... ]

**参数：**

-R Recursively list attributes of directories and their contents.递归显示目录以及其包含内容的属性

-V Display the program version.显示程序版本

-a List all files in directories, including files that start with ‘.’ 列出所有目录下的文件，包括以.开头的文件

**举例**

$ lsattr a.txt

-------A-----e- a.txt

### Stat: display file or file system status

**描述**： 显示文件或者文件系统的状态，包括I-node里的所有信息。

$ stat a.txt

File: "a.txt" Size: 21 Blocks: 8 IO Block: 4096 普通文件

Device: 803h/2051d Inode: 162831 Links: 1

Access: (0645/-rw-r--r-x) Uid: ( 501/ sandow) Gid: ( 501/ sandow)

Access: 2015-10-21 11:26:22.160688313 +0800

Modify: 2015-10-21 11:26:17.751689045 +0800

Change: 2015-10-21 13:02:52.982024877 +0800

**参数：**

-L follow links 支持符号链接

-f display file system status instead of file status显示文件系统而不是文件状态

-c 指定需要显示的信息

-t 以简洁方式输出信息

**语法**

stat [OPTION]… FILE…

**举例**

$ stat -c %a a.txt

645

-c后面的格式 %a access rights in octal 用数字来显示文件的权限（645）  
%A access rights in human readable form(-rw-r–r-x)  
%b number of blocks allocated (see %B)  
%B the size in bytes of each block reported by %b  
%C SELinux security context string  
%d device number in decimal (2051)  
%D device number in hex (803)  
%F file type (普通文件)  
%g group ID of owner(组ID)  
%G group name of owner(组名)  
%h number of hard links  
%i inode number  
%N quoted file name with dereference if symbolic link  
%s total size, in bytes  
%u user ID of owner  
%U user name of owner  
%w time of file birth, human-readable; - if unknown  
%W time of file birth, seconds since Epoch; 0 if unknown  
%x time of last access, human-readable  
%X time of last access, seconds since Epoch  
%y time of last data modification, human-readable  
%Z time of last status change, seconds since Epoch

### chgrp: change the group of each FILE to GROUP

**描述**：. 更改每个文件的GROUP

**参数：**

-c, –changes like verbose but report only when a change is made

**语法**

chgrp [OPTION]... GROUP FILE... chgrp [OPTION]... --reference=RFILE FILE...

**举例**

chgrp staff /u

#Change the group of /u to "staff".

chgrp -hR staff /u

#Change the group of /u and subfiles to "staff".

### chown: change file owner and group

**描述**： 更改文件的所有者以及文件所属组

用法用chgrp类似

### chmod: change file mode bits

**描述**：更改文件的权限，文件有读取写入，执行3种权限（rwx），用stat -c %A a.txt 命令里的所看到的内容，第一个字符是文件类型，2-4字符为所有者的权限，5-7是所属组的权限，8-10为其它用户的权限。各缩写必须能够记住 u(user), g(group), o(other), a(all), r(read, 4), w(write, 2), x(execute, 1) -(无权限，0）

**参数：**

-c, –changes 效果类似 -v ，但仅回报更改的部分

-v，–verbose 显示指令执行过程

-R, –recursive

-reference=(参考文件或目录) 把指定文件或目录的所属组全部设定和参考文件或目录的所属组相同

**语法**

chmod [OPTION]... MODE[,MODE]... FILE..

.chmod [OPTION]... OCTAL-MODE FILE...

chmod [OPTION]... --reference=RFILE FILE...

### which: shows the full path of (shell) commands

**描述**： 显示命令的绝对路径

**语法**

which [options] [--] programname [...]

### whereis

**描述**： whereis 只能用于程序名的搜索， 会从数据库中查找数据，find是遍历硬盘来查找。

**语法**

whereis [-bmsu] [-BMS directory... -f] filename...

### touch: Change file timestamps

**描述**：更改文件的时间戳，若不加参数-c -h，文件不存在便会创建一个文件。   
**语法**:

touch [OPTION]... FILE..

**参数**：

-a change only the access time 改变档案的读取时间记录

-m change only the modification time 改变档案的修改时间记录

-c, –no-create do not create any files

-d, –date=STRING parse STRING and use it instead of current time

-r, –reference=FILE use this file times instead of current time

-t STAMP use [[CC]YY]MMDDhhmm[.ss] instead of current time

**举例**

$ touch testfile

修改文件的时间属性(若不存在)； 创建名为”testfile”的新空白文件

$ touch /tmp/stu{1..12}.txt

批量创建多个文件

## 用户管理命令

### useradd - create a new user or update default new user information

When invoked without the -D option, the useradd command creates a new user account using the values specified on the command line plus the default values from the system.Depending on command line options, the useradd command will update system files and may also create the new user's home directory and copy initial files. By default, a group will also be created for the new user如果没有-D参数，那么就创建一个新用户，并创建家目录

OPTIONS:

**-c**, --comment COMMENT Any text string. It is generally a short description of the login, and is currently used as the field for the user's full name.对该用户注释，可以在passwd文件里查看到注释信息

$useradd oldgirl -c 'this is a test'

$tail -1 /etc/passwd

oldgirl:x:500:500:this is a test:/home/oldgirl:/bin/bash

**-d**, --home HOME\_DIR The new user will be created using HOME\_DIR as the value for the user's login directory. The default is to append the LOGIN name to BASE\_DIR and use that as the login directory name. The parent directory of HOME\_DI must exist otherwise the home directory cannot be created.

**-D**, --defaults See below, the subsection "Changing the default values".

**-e**, --expiredate EXPIRE\_DATE The date on which the user account will be disabled. The date is specified in the format YYYY-MM-DD. If not specified, useradd will use the default expiry date specified by the EXPIRE variable in /etc/default/useradd, or an empty string (no expiry) by default.

-m, --create-home Create the user's home directory if it does not exist. The files and directories contained in the skeleton directory (which can be defined with the -k option) will be copied to the home directory. useradd will create the home directory unless CREATE\_HOME in /etc/login.defs is set to no.

-M Do not create the user's home directory, even if the system wide setting from /etc/login.defs (CREATE\_HOME) is set to yes.

$ cat /etc/default/useradd

# useradd defaults file

GROUP=100

HOME=/home

INACTIVE=-1

EXPIRE=

SHELL=/bin/bash

SKEL=/etc/skel

CREATE\_MAIL\_SPOOL=yes

**-f**, --inactive INACTIVE The number of days after a password expires until the account is permanently disabled. A value of 0 disables the account as soon as the password has expired, and a value of -1 disables the feature. If not specified, useradd will use the default inactivity period specified by the INACTIVE variable in /etc/default/useradd, or -1 by default.

-s：指定用户登入后所使用的shell；

-g<群组>：指定用户所属的群组；

-G<群组>：指定用户所属的附加群组；

### userdel - delete a user account and related files

-f, --force This option forces the removal of the user account, even if the user is still logged in. It also forces userdel to remove the user‘s home directory and mail spool, even if another user uses the same home directory or if the mail spool is not owned by the specified user. If USERGROUPS\_ENAB is defined to yes in /etc/login.defs and if a group exists with the same name as the deleted user, then this group will be removed, even if it is still the primary group of another user. 强制删除用户，即使该用户现在在登录中，而且会删除该用户的家目录和邮件

-r, --remove Files in the user’s home directory will be removed along with the home directory itself and the user‘s mail spool. Files located in other file systems will have to be searched for and deleted manually.删除该用户的家目录和邮件

### passwd - update user's authentication tokens

opption

--stdin This option is used to indicate that passwd should read the new password from standard input, which can be a pipe.

不加参数是给当前用户更改密码

$ echo 123456|passwd --stdin oldgirl

Changing password for user oldgirl.

passwd: all authentication tokens updated successfully.

### id - print real and effective user and group IDs

$ id oldgirl

uid=500(oldgirl) gid=500(oldgirl) groups=500(oldgirl)

### whoami 查看当前用户

$ whoami

oldgirl

### sudo, sudoedit - execute a command as another user

sudo allows a permitted user to execute a command as the superuser or another user, as specified by the security policy. sudo supports a plugin architecture for security policies and input/output logging. Third parties can develop and distribute their own policy and I/O logging plugins to work seamlessly with the sudo front end. The default security policy is sudoers, which is configured via the file /etc/sudoers, or via LDAP. See the PLUGINS section for more information.

### su - run a shell with substitute user and group IDs

切换到odlgirl用户

$ su - oldgirl

### visudo - edit the sudoers file

SYNOPSIS visudo [-chqsV] [-f sudoers]

DESCRIPTION visudo edits the sudoers file in a safe fashion, analogous to vipw(8). visudo locks the sudoers file against multiple simultaneous edits, provides basic sanity checks, and checks for parse errors. If the sudoers file is currently being edited you will receive a message to try again later.

visudo the same as vi /etc/sudoers

oldboy ALL=(ALL) /bin/ls

用户 用户管理的机器=（临时拥有的用户使用的权限） 执行的命令

用户在ALL这个机器上 执行 命令时/bin/ls 包含 (ALL)的权限 命令要用全路径which 查看多个命令用“，”隔开

### usermod - modify a user account

usermod [options] LOGIN

The usermod command modifies the system account files to reflect the changes that are specified on the command line.

OPTIONS the same as useradd

### uname - print system information

-a, --all print all information, in the following order, except omit -p and -i if unknown:

-n, --nodename print the network node hostname

-r, --kernel-release print the kernel release

-m, --machine print the machine hardware name

$ uname -a

Linux sandow 2.6.32-573.el6.x86\_64 #1 SMP Thu Jul 23 15:44:03 UTC 2015 x86\_64 x86\_64 x86\_64 GNU/Linux

$ uname -r

2.6.32-573.el6.x86\_64

$ uname -n

sandow

$ uname -m

x86\_64

### which - shows the full path of (shell) commands.

Which takes one or more arguments. For each of its arguments it prints to stdout the full path of the executables that would have been executed when this argument had been entered at the shell prompt. It does this by searching for an executable or script in the directories listed in the environment variable PATH using the same algorithm as bash(1).

查看命令路径 which commands, whereis –b commands, locate commands, find / -type f –name commands,

### hostname - show or set the system’s host name

$ hostname

sandow

## 系统管理

Chmod

Chown

Chgrp

Chage

umask

Uptime

Top

free

vmstat

mpstat

iostat

sar

chkconfig

## 其它

### Netstat (ss) 查看网络连接状态 –lntup

Listening number tcp udp program

### history Display the history list with line numbers

Options:

-c clear the history list by deleting all of the entries

-d offset delete the history entry at offset OFFSET.

-a append history lines from this session to the history file

-n read all history lines not already read from the history file

-r read the history file and append the contents to the history list

-w write the current history to the history file and append them to the history list

-p perform history expansion on each ARG and display the result without storing it in the history list

-s append the ARGs to the history list as a single entry

Sort –n a.txt 按数字排序a.txt

Uniq –c 显示重复的次数，因为只会统计相邻的行，所以需要 先用sort排序然后就

### telnet 远程连接，探测远端端口是否开通

### runlevel

### alias - Define or display aliases.

alias [-p] [name[=value] ... ]

Without arguments, `alias' prints the list of aliases in the reusable form `alias NAME=VALUE' on standard output. Otherwise, an alias is defined for each NAME whose VALUE is given. A trailing space in VALUE causes the next word to be checked for alias substitution when the alias is expanded.

Options:

-p Print all defined aliases in a reusable format

/etc/profile 设置alias全局生效

~/.bashre 当前用户

通过给危险的命令加一些保护参数，防止人为误操作;把很多复杂的字符串或命令变成一个简单的字符串或命令. 定义别名永久生效：

### unalias: Remove each NAME from the list of defined aliases

unalias [-a] name [name ...]

Options:

-a remove all alias definitions.

### Nesysv

### ps - report a snapshot of the current processes.

SYNOPSIS ps [options]

DESCRIPTION ps displays information about a selection of the active processes. If you want a repetitive update of the selection and the displayed information, use top(1) instead.

## 内核管理

**lsmod 显示已加载内核模块**

**insmod添加内核模块**

**modprobe 添加内核模块**

**modinfo 显示内核模块信息**

**rmmod 移除内核模块**

### sysctl configure kernel parameters at runtime

命令描述：在内核运行时动态的个性内核的运行参数

命令语法: sysctl [-n] [-e] [-q] -w variable=value

命令参数：参数存放在/proc/sys中，包含一些TCP/IP和虚拟内存系统的高级选项

variable=value

(如果值里包含引用或者shell的分部程序那么valuse最好用双引号，还要使用-w)

-n 用这个参数来打印出variable对应的值

# sysctl -n abi.vsyscall32

1

-e 用这个参数可以忽略掉未知variable的错误

-N 只打印variable 而不打印值，这这参数可能在shell里更有用

-w 使用这个参数用来修改sysctl的设定

-p 用配置文件/etc/sysctl.conf来加载内核参数的设置，if none given Specifying - as filename means reading data from standard input.

-a 显示所有当前的variable和value

/sbin/sysctl -a

net.ipv6.conf.eth0.accept\_ra\_rtr\_pref = 1

net.ipv6.conf.eth0.router\_probe\_interval = 60

net.ipv6.conf.eth0.accept\_ra\_rt\_info\_max\_plen = 0

………

# /sbin/sysctl -n kernel.hostname

sandow

/sbin/sysctl -w kernel.domainname="exam-ple.com"

/sbin/sysctl -p /etc/sysctl.conf

Free –m 查看内存

Cat /proc/loaddavg

cat /proc/meminfo   #<==内存信息  
cat /proc/cpuinfo    #<==cpu信息  
cat /proc/mounts    #<==挂载信息

rsyslog 控制 mess secure 的信息每周删除一个文件

## mount 查看 及设置挂载（目录 和设备建立联系，目录 作为设备的入口）

## umount 批定挂载点 卸载 强制（umount –lf /mnt）

## df –h 查看分区设备使用情况

du 查看文件大小

要注意 buffers 和cached

Cat /proc/sys/net/ipv4/ip\_forward

# basic info command keys

x Close this help window.  
q Quit Info altogether.  
H Invoke the Info tutorial.  
Up Move up one line.  
Down Move down one line.  
DEL Scroll backward one screenful.  
SPC Scroll forward one screenful.  
M-< Go to the beginning of this node.  
M-> Go to the end of this node.  
TAB Skip to the next hypertext link.  
RET Follow the hypertext link under the cursor.  
l Go back to the last node seen in this window.  
  
[ Go to the previous node in the document.  
] Go to the next node in the document.  
p Go to the previous node on this level.  
n Go to the next node on this level.

U Go up one level.

# POSIX

chattr + i /etc/passwd /etc/shadow /etc/group /etc/gshadow /etc/inittab

lsattr /etc/passwd

----i--------e- /etc/passwd