

2.1 生成链接

```
[ese-jiangh@login03 ~]$ ln -s data_demo data_demo_link
[ese-jiangh@login03 ~]$ pwd
/work/ese-jiangh
[ese-jiangh@login03 ~]$ ls
billing_report data_demo data_demo_link exam test.R
```

2.2 生成空文件

```
[ese-jiangh@login03 ~]$ cd data_demo
[ese-jiangh@login03 data_demo]$ ls
creatures data log1 log2 molecules north-pacific-gyre notes.txt pizza.cfg section_1 solar.pdf subsection_1 thesis_backup writing
[ese-jiangh@login03 data_demo]$ cd data

[ese-jiangh@login03 data]$ touch planets.txt_1st
[ese-jiangh@login03 data]$ ls
amino-acids.txt animal-counts animals.txt elements morse.txt pdb planets.txt_1st salmon.txt sunspot.txt
```

2.3 打印主页

```
[ese-jiangh@login03 data]$ echo -n home
home[ese-jiangh@login03 data]$ echo ~
/work/ese-jiangh
```

2.4 查找文件数量

```
[ese-jiangh@login03 pdb]$ find . -type f |wc -l
52
```

2.5 计算文件中 C 的数目

```
[ese-jiangh@login03 pdb]$ grep C tnt.pdb
COMPND      2,4,6-TRINITROTOLUENE
AUTHOR      DAVE WOODCOCK  96 07 05
ATOM        1  C              1      1.183 -0.757 -0.174  1.00  0.00
ATOM        2  C              1      1.212  0.643 -0.175  1.00  0.00
ATOM        3  C              1      0.015  1.368 -0.204  1.00  0.00
ATOM        4  C              1     -1.211  0.693 -0.232  1.00  0.00
ATOM        5  C              1     -1.240 -0.706 -0.231  1.00  0.00
ATOM        6  C              1     -0.043 -1.431 -0.201  1.00  0.00
ATOM       16  C              1      0.047  2.894 -0.206  1.00  0.00
[ese-jiangh@login03 pdb]$ grep -o C tnt.pdb | wc -l
10
```

2.6 比较两个文件的差异

```
[ese-jiangh@login03 pdb]$ diff ethane.pdb ethanol.pdb
1,11c1,12
< COMPND          ETHANE
< AUTHOR          DAVE WOODCOCK   95 12 18
< ATOM            1  C              1    -0.752    0.001   -0.141    1.00    0.00
< ATOM            2  C              1     0.752   -0.001    0.141    1.00    0.00
< ATOM            3  H              1    -1.158    0.991    0.070    1.00    0.00
< ATOM            4  H              1    -1.240   -0.737    0.496    1.00    0.00
< ATOM            5  H              1    -0.924   -0.249   -1.188    1.00    0.00
< ATOM            6  H              1     1.158   -0.991   -0.070    1.00    0.00
< ATOM            7  H              1     0.924    0.249    1.188    1.00    0.00
< ATOM            8  H              1     1.240    0.737   -0.496    1.00    0.00
< TER             9
---
> COMPND          ETHANOL
> AUTHOR          DAVE WOODCOCK   96 01 03
> ATOM            1  C              1    -0.426   -0.115   -0.147    1.00    0.00
> ATOM            2  O              1    -0.599    1.244   -0.481    1.00    0.00
> ATOM            3  H              1    -0.750   -0.738   -0.981    1.00    0.00
> ATOM            4  H              1    -1.022   -0.351    0.735    1.00    0.00
> ATOM            5  H              1    -1.642    1.434   -0.689    1.00    0.00
> ATOM            6  C              1     1.047   -0.383    0.147    1.00    0.00
> ATOM            7  H              1     1.370    0.240    0.981    1.00    0.00
> ATOM            8  H              1     1.642   -0.147   -0.735    1.00    0.00
> ATOM            9  H              1     1.180   -1.434    0.405    1.00    0.00
> TER           10
```

2.7 查询文件夹的总字节

```
[ese-jiangh@login03 data_demo]$ pwd
/work/ese-jiangh/data_demo
[ese-jiangh@login03 data_demo]$ du
4      ./molecules
1      ./writing/tools/old
2      ./writing/tools
1281   ./writing/data
1      ./writing/thesis
1285   ./writing
1      ./subsection_1
2050   ./north-pacific-gyre/2012-07-03
2051   ./north-pacific-gyre
1      ./section_1
2      ./creatures
1      ./thesis_backup/chapter_1/section_1/subsection_1
1      ./thesis_backup/chapter_1/section_1
2      ./thesis_backup/chapter_1
3      ./thesis_backup
409    ./data/pdb
52     ./data/elements
1      ./data/animal-counts
593    ./data
4068   .
```

2.8 复制文件夹再压缩并解压缩

```
[ese-jiangh@login03 ~]$ cp -r data_demo data_demo_new
[ese-jiangh@login03 ~]$ ls
billing_report data_demo data_demo_link data_demo_new exam test.R
[ese-jiangh@login03 ~]$ zip -r data_demo_new.zip

zip error: Nothing to do! (data_demo_new.zip)
[ese-jiangh@login03 ~]$ zip -r data_demo_new.zip data_demo_new
adding: data_demo_new/ (stored 0%)
adding: data_demo_new/molecules/ (stored 0%)

[ese-jiangh@login03 ~]$ ls
billing_report data_demo_link data_demo_new.zip test.R
data_demo      data_demo_new exam
[ese-jiangh@login03 ~]$ unzip data_demo_new.zip
Archive: data_demo_new.zip
replace data_demo_new/molecules/methane.pdb? [y]es, [n]o, [A]ll, [N]one, [r]ename: y
```

2.9 更改文件夹权限

```
[ese-jiangh@login03 ~]$ chmod 750 data_demo_new
[ese-jiangh@login03 ~]$ ll
total 643
drwxr-xr-x  2 root      root      4096 Sep 26 15:19 billing_report
drwxr-xr-x 10 ese-jiangh ese-ouycc 4096 Nov 24 19:44 data_demo
lrwxrwxrwx  1 ese-jiangh ese-ouycc    9 Nov 30 18:31 data_demo_link -> data_demo
drwxr-x--- 10 ese-jiangh ese-ouycc 4096 Nov 30 19:18 data_demo_new
-rw-r--r--  1 ese-jiangh ese-ouycc 581201 Nov 30 19:16 data_demo_new.zip
drwxr-xr-x  2 ese-jiangh ese-ouycc 4096 Sep 12 11:01 exam
-rwxr-xr-x  1 ese-jiangh ese-ouycc    9 Nov 24 20:34 test.R
```

2.10 查看历史命令

```
[ese-jiangh@login03 ~]$ history 5
435  ls
436  chomd data_demo_new 710
437  chmod 750 data_demo_new
438  ll
439  history 5
[ese-jiangh@login03 ~]$
```