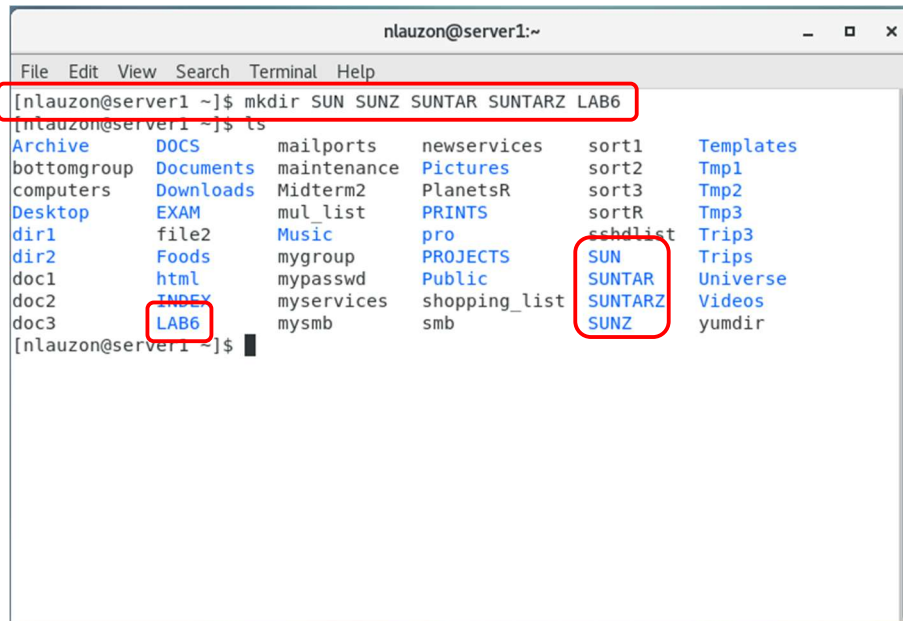


# Archive and Compression 1

## Nicolas Lauzon

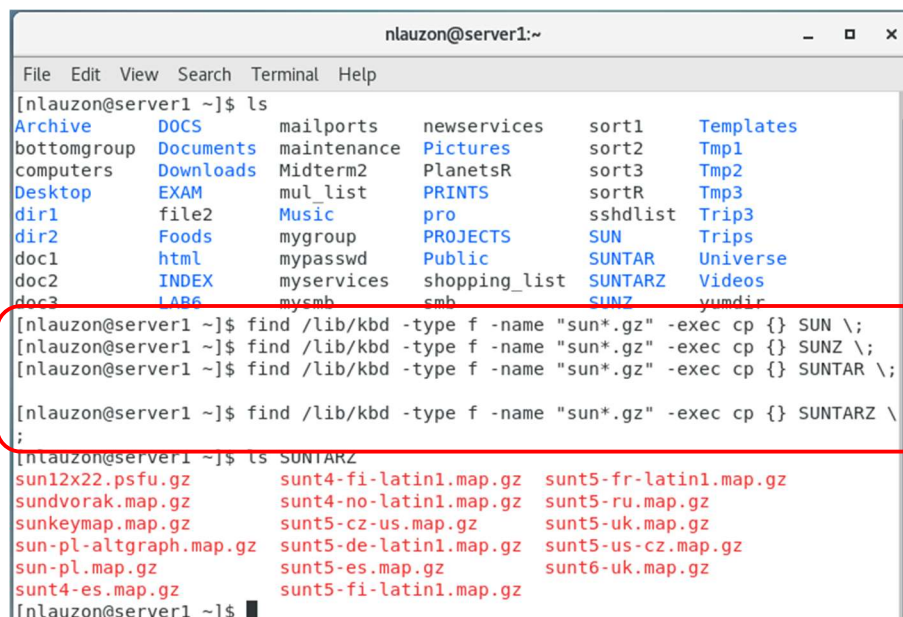
1. On your home directory, create 5 new directories named SUN, SUNZ, SUNTAR, SUNTARZ and LAB6



A terminal window titled 'nlauzon@server1:~' showing the execution of the command `mkdir SUN SUNZ SUNTAR SUNTARZ LAB6`. Below the command, the output of `ls` is displayed, showing a list of files and directories. The newly created directories `SUN`, `SUNTAR`, `SUNTARZ`, and `SUNZ` are highlighted with red boxes, as is the `LAB6` directory in the `ls` output.

```
nlauzon@server1:~$ mkdir SUN SUNZ SUNTAR SUNTARZ LAB6
nlauzon@server1:~$ ls
Archive  DOCS      mailports  newservices  sort1      Templates
bottomgroup Documents  maintenance Pictures      sort2      Tmp1
computers Downloads  Midterm2   PlanetsR     sort3      Tmp2
Desktop  EXAM      mul_list   PRINTS       sortR      Tmp3
dir1     file2     Music      pro           sshdlist   Trip3
dir2     Foods     mygroup    PROJECTS     SUN         Trips
doc1     html      mypasswd   Public        SUNTAR      Universe
doc2     INDEX     myservices shopping_list SUNTARZ     Videos
doc3     LAB6      mysmb      smb           SUNZ        yumdir
nlauzon@server1:~$
```

2. Find all the files starting with “sun” and ending in “.gz” under the /lib/kbd directory then copy them to your directories SUN, SUNZ, SUNTAR and SUNTARZ



A terminal window titled 'nlauzon@server1:~' showing the execution of four `find` commands to copy files starting with 'sun' and ending in '.gz' from the `/lib/kbd` directory to the directories `SUN`, `SUNZ`, `SUNTAR`, and `SUNTARZ`. The commands are highlighted with a red box. Below the commands, the output of `ls SUNTARZ` is displayed, showing a list of files and directories.

```
nlauzon@server1:~$ ls
Archive  DOCS      mailports  newservices  sort1      Templates
bottomgroup Documents  maintenance Pictures      sort2      Tmp1
computers Downloads  Midterm2   PlanetsR     sort3      Tmp2
Desktop  EXAM      mul_list   PRINTS       sortR      Tmp3
dir1     file2     Music      pro           sshdlist   Trip3
dir2     Foods     mygroup    PROJECTS     SUN         Trips
doc1     html      mypasswd   Public        SUNTAR      Universe
doc2     INDEX     myservices shopping_list SUNTARZ     Videos
doc3     LAB6      mysmb      smb           SUNZ        yumdir
nlauzon@server1:~$ find /lib/kbd -type f -name "sun*.gz" -exec cp {} SUN \;
nlauzon@server1:~$ find /lib/kbd -type f -name "sun*.gz" -exec cp {} SUNZ \;
nlauzon@server1:~$ find /lib/kbd -type f -name "sun*.gz" -exec cp {} SUNTAR \;
nlauzon@server1:~$ find /lib/kbd -type f -name "sun*.gz" -exec cp {} SUNTARZ \;
nlauzon@server1:~$ ls SUNTARZ
sun12x22.psfu.gz      sunt4-fi-latin1.map.gz  sunt5-fr-latin1.map.gz
sundvorak.map.gz      sunt4-no-latin1.map.gz  sunt5-ru.map.gz
sunkeymap.map.gz       sunt5-cz-us.map.gz      sunt5-uk.map.gz
sun-pl-altgraph.map.gz sunt5-de-latin1.map.gz  sunt5-us-cz.map.gz
sun-pl.map.gz          sunt5-es.map.gz         sunt6-uk.map.gz
sunt4-es.map.gz        sunt5-fi-latin1.map.gz
nlauzon@server1:~$
```

### 3. Decompress all the files of the directories SUN, SUNTAR and SUNTARZ

```

nlaizon@server1:~/SUNTARZ
File Edit View Search Terminal Help
[nlaizon@server1 ~]$ find /lib/kbd -type f -name "sun*.gz" -exec cp {} SUNTAR \;
[nlaizon@server1 ~]$ find /lib/kbd -type f -name "sun*.gz" -exec cp {} SUNTARZ \;
[nlaizon@server1 ~]$ ls SUNTARZ
sun12x22.psfu.gz      sunt4-fi-latin1.map.gz  sunt5-fr-latin1.map.gz
sundvorak.map.gz     sunt4-no-latin1.map.gz  sunt5-ru.map.gz
sunkeymap.map.gz     sunt5-cz-us.map.gz      sunt5-uk.map.gz
sun-pl-altgraph.map.gz  sunt5-de-latin1.map.gz  sunt5-us-cz.map.gz
sun-pl.map.gz        sunt5-es.map.gz         sunt6-uk.map.gz
sunt4-es.map.gz      sunt5-fi-latin1.map.gz
[nlaizon@server1 ~]$ cd SUN
[nlaizon@server1 SUN]$ gunzip sun*
[nlaizon@server1 SUN]$ cd ~/SUNTAR
[nlaizon@server1 SUNTAR]$ gunzip sun*
[nlaizon@server1 SUNTAR]$ cd ~/SUNTARZ
[nlaizon@server1 SUNTARZ]$ gunzip sun*
[nlaizon@server1 SUNTARZ]$ ls
sun12x22.psfu      sunt4-es.map      sunt5-es.map      sunt5-us-cz.map
sundvorak.map     sunt4-fi-latin1.map  sunt5-fi-latin1.map  sunt6-uk.map
sunkeymap.map     sunt4-no-latin1.map  sunt5-fr-latin1.map
sun-pl-altgraph.map  sunt5-cz-us.map    sunt5-ru.map
sun-pl.map        sunt5-de-latin1.map  sunt5-uk.map
[nlaizon@server1 SUNTARZ]$

```

### 4. Compare the size of compressed files with the decompressed ones

The files are still compressed in SUNZ, so:

```

nlaizon@server1:~/SUNZ
File Edit View Search Terminal Help
sunkeymap.map      sunt4-no-latin1.map  sunt5-fr-latin1.map
sun-pl-altgraph.map  sunt5-cz-us.map      sunt5-ru.map
sun-pl.map         sunt5-de-latin1.map  sunt5-uk.map
[nlaizon@server1 SUNTARZ]$ cd ~/SUNZ
[nlaizon@server1 SUNZ]$ ls -lh
total 76K
-rw-r--r-- 1 nlaizon nlaizon 2.7K Mar 6 15:07 sun12x22.psfu.gz
-rw-r--r-- 1 nlaizon nlaizon 2.4K Mar 6 15:07 sundvorak.map.gz
-rw-r--r-- 1 nlaizon nlaizon 2.4K Mar 6 15:07 sunkeymap.map.gz
-rw-r--r-- 1 nlaizon nlaizon 3.0K Mar 6 15:07 sun-pl-altgraph.map.gz
-rw-r--r-- 1 nlaizon nlaizon 3.2K Mar 6 15:07 sun-pl.map.gz
-rw-r--r-- 1 nlaizon nlaizon 2.1K Mar 6 15:07 sunt4-es.map.gz
-rw-r--r-- 1 nlaizon nlaizon 2.2K Mar 6 15:07 sunt4-fi-latin1.map.gz
-rw-r--r-- 1 nlaizon nlaizon 2.1K Mar 6 15:07 sunt4-no-latin1.map.gz
-rw-r--r-- 1 nlaizon nlaizon 4.9K Mar 6 15:07 sunt5-cz-us.map.gz
-rw-r--r-- 1 nlaizon nlaizon 2.0K Mar 6 15:07 sunt5-de-latin1.map.gz
-rw-r--r-- 1 nlaizon nlaizon 2.1K Mar 6 15:07 sunt5-es.map.gz
-rw-r--r-- 1 nlaizon nlaizon 2.1K Mar 6 15:07 sunt5-fi-latin1.map.gz
-rw-r--r-- 1 nlaizon nlaizon 2.5K Mar 6 15:07 sunt5-fr-latin1.map.gz
-rw-r--r-- 1 nlaizon nlaizon 2.5K Mar 6 15:07 sunt5-ru.map.gz
-rw-r--r-- 1 nlaizon nlaizon 2.3K Mar 6 15:07 sunt5-uk.map.gz
-rw-r--r-- 1 nlaizon nlaizon 4.9K Mar 6 15:07 sunt5-us-cz.map.gz
-rw-r--r-- 1 nlaizon nlaizon 1.7K Mar 6 15:07 sunt6-uk.map.gz
[nlaizon@server1 SUNZ]$

```

While the files are decompressed in SUN, and are 3 to 4 times larger than the compressed format:

```

nlaizon@server1:~/SUN
File Edit View Search Terminal Help
-rw-r--r-- 1 nlaizon nlaizon 2.3K Mar 6 15:07 sunt5-uk.map.gz
-rw-r--r-- 1 nlaizon nlaizon 4.9K Mar 6 15:07 sunt5-us-cz.map.gz
-rw-r--r-- 1 nlaizon nlaizon 1.7K Mar 6 15:07 sunt6-uk.map.gz
[nlaizon@server1 SUN]$ cd ~/SUN
[nlaizon@server1 SUN]$ ls -lh
total 244K
-rw-r--r-- 1 nlaizon nlaizon 12K Mar 6 15:07 sun12x22.psfu
-rw-r--r-- 1 nlaizon nlaizon 12K Mar 6 15:07 sundvorak.map
-rw-r--r-- 1 nlaizon nlaizon 12K Mar 6 15:07 sunkeymap.map
-rw-r--r-- 1 nlaizon nlaizon 11K Mar 6 15:07 sun-pl-altgraph.map
-rw-r--r-- 1 nlaizon nlaizon 12K Mar 6 15:07 sun-pl.map
-rw-r--r-- 1 nlaizon nlaizon 8.6K Mar 6 15:07 sunt4-es.map
-rw-r--r-- 1 nlaizon nlaizon 9.7K Mar 6 15:07 sunt4-fi-latin1.map
-rw-r--r-- 1 nlaizon nlaizon 8.7K Mar 6 15:07 sunt4-no-latin1.map
-rw-r--r-- 1 nlaizon nlaizon 31K Mar 6 15:07 sunt5-cz-us.map
-rw-r--r-- 1 nlaizon nlaizon 8.8K Mar 6 15:07 sunt5-de-latin1.map
-rw-r--r-- 1 nlaizon nlaizon 8.9K Mar 6 15:07 sunt5-es.map
-rw-r--r-- 1 nlaizon nlaizon 8.7K Mar 6 15:07 sunt5-fi-latin1.map
-rw-r--r-- 1 nlaizon nlaizon 12K Mar 6 15:07 sunt5-fr-latin1.map
-rw-r--r-- 1 nlaizon nlaizon 14K Mar 6 15:07 sunt5-ru.map
-rw-r--r-- 1 nlaizon nlaizon 9.7K Mar 6 15:07 sunt5-uk.map
-rw-r--r-- 1 nlaizon nlaizon 31K Mar 6 15:07 sunt5-us-cz.map
-rw-r--r-- 1 nlaizon nlaizon 5.8K Mar 6 15:07 sunt6-uk.map
[nlaizon@server1 SUN]$

```

## 5. Archive all the files located in the directory SUNTAR to a file named sun.tar (inside of SUNTAR directory)

Of note, I also used the command **tar -tf sun.tar** to check the content of the archived file.

```

nlaizon@server1:~/SUNTAR
File Edit View Search Terminal Help
-rw-r--r-- 1 nlaizon nlaizon 14K Mar 6 15:07 sunt5-ru.map
-rw-r--r-- 1 nlaizon nlaizon 9.7K Mar 6 15:07 sunt5-uk.map
-rw-r--r-- 1 nlaizon nlaizon 31K Mar 6 15:07 sunt5-us-cz.map
-rw-r--r-- 1 nlaizon nlaizon 5.8K Mar 6 15:07 sunt6-uk.map
[nlaizon@server1 SUN]$ cd ~/SUNTAR
[nlaizon@server1 SUNTAR]$ tar -cvf sun.tar sun*
sun12x22.psfu
sundvorak.map
sunkeymap.map
sun-pl-altgraph.map
sun-pl.map
sunt4-es.map
sunt4-fi-latin1.map
sunt4-no-latin1.map
sunt5-cz-us.map
sunt5-de-latin1.map
sunt5-es.map
sunt5-fi-latin1.map
sunt5-fr-latin1.map
sunt5-ru.map
sunt5-uk.map
sunt5-us-cz.map
sunt6-uk.map
[nlaizon@server1 SUNTAR]$

```

## 6. Archive and compress all the files located in the directory SUNTARZ to a file named sun.tar.gz

Of note, I also used the command **tar -tf sun.tar.gz** to check the content of the compressed archive file.

```

nlaizon@server1:~/SUNTARZ
File Edit View Search Terminal Help
[~] [nlaizon@server1 SUNTARZ]$ cd ~/SUNTARZ
[nlaizon@server1 SUNTARZ]$ tar -czf sun.tar.gz sun*
[nlaizon@server1 SUNTARZ]$ ls -lh
total 276K
-rw-r--r-- 1 nlaizon nlaizon 12K Mar  6 15:07 sun12x22.psfu
-rw-r--r-- 1 nlaizon nlaizon 12K Mar  6 15:07 sundvorak.map
-rw-r--r-- 1 nlaizon nlaizon 12K Mar  6 15:07 sunkeymap.map
-rw-r--r-- 1 nlaizon nlaizon 11K Mar  6 15:07 sun-pl-altgraph.map
-rw-r--r-- 1 nlaizon nlaizon 12K Mar  6 15:07 sun-pl.map
-rw-r--r-- 1 nlaizon nlaizon 8.6K Mar  6 15:07 sunt4-es.map
-rw-r--r-- 1 nlaizon nlaizon 9.7K Mar  6 15:07 sunt4-fi-latin1.map
-rw-r--r-- 1 nlaizon nlaizon 8.7K Mar  6 15:07 sunt4-no-latin1.map
-rw-r--r-- 1 nlaizon nlaizon 31K Mar  6 15:07 sunt5-cz-us.map
-rw-r--r-- 1 nlaizon nlaizon 8.8K Mar  6 15:07 sunt5-de-latin1.map
-rw-r--r-- 1 nlaizon nlaizon 8.9K Mar  6 15:07 sunt5-es.map
-rw-r--r-- 1 nlaizon nlaizon 8.7K Mar  6 15:07 sunt5-fi-latin1.map
-rw-r--r-- 1 nlaizon nlaizon 12K Mar  6 15:07 sunt5-fr-latin1.map
-rw-r--r-- 1 nlaizon nlaizon 14K Mar  6 15:07 sunt5-ru.map
-rw-r--r-- 1 nlaizon nlaizon 9.7K Mar  6 15:07 sunt5-uk.map
-rw-r--r-- 1 nlaizon nlaizon 31K Mar  6 15:07 sunt5-us-cz.map
-rw-r--r-- 1 nlaizon nlaizon 5.8K Mar  6 15:07 sunt6-uk.map
-rw-rw-r-- 1 nlaizon nlaizon 30K Mar  6 15:33 sun.tar.gz
[nlaizon@server1 SUNTARZ]$

```

## 7. Create a new directory named newSUN under SUNZ directory (SUNZ/newSUN) Copy the new file sun.tar.gz to the new directory newSUN then extract it.

First, let's create the directory and copy the file:

```

nlaizon@server1:~/SUNZ
File Edit View Search Terminal Help
sunt5-fi-latin1.map
sunt5-fr-latin1.map
sunt5-ru.map
sunt5-uk.map
sunt5-us-cz.map
sunt6-uk.map
[nlaizon@server1 SUNTARZ]$ cd ~/SUNZ
bash: cd: ~/SUNZ: No such file or directory
[nlaizon@server1 SUNTARZ]$ cd ~/SUNZ
[nlaizon@server1 SUNZ]$ ls
sun12x22.psfu.gz      sunt4-fi-latin1.map.gz  sunt5-fr-latin1.map.gz
sundvorak.map.gz     sunt4-no-latin1.map.gz  sunt5-ru.map.gz
sunkeymap.map.gz     sunt5-cz-us.map.gz      sunt5-uk.map.gz
sun-pl-altgraph.map.gz  sunt5-de-latin1.map.gz  sunt5-us-cz.map.gz
sun-pl.map.gz        sunt5-es.map.gz         sunt6-uk.map.gz
sunt4-es.map.gz      sunt5-fi-latin1.map.gz
[nlaizon@server1 SUNZ]$ mkdir newSUN
[nlaizon@server1 SUNZ]$ cp ~/SUNTARZ/sun.tar.gz ~/SUNZ/new/SUN
cp: cannot create regular file '/home/nlaizon/SUNZ/new/SUN': No such file or directory
[nlaizon@server1 SUNZ]$ cp ~/SUNTARZ/sun.tar.gz ~/SUNZ/newSUN
[nlaizon@server1 SUNZ]$ ls newSUN
sun.tar.gz
[nlaizon@server1 SUNZ]$

```



Then let's extract the files in the compressed archive file:

```

nlaizon@server1:~/SUNZ/newSUN
File Edit View Search Terminal Help
tar: Error is not recoverable: exiting now
[nlaizon@server1 SUNZ]$ cd newSUN
[nlaizon@server1 newSUN]$ tar -xzf sun.tar.gz
[nlaizon@server1 newSUN]$ ls -lh
total 276K
-rw-r--r-- 1 nlaizon nlaizon 12K Mar  6 15:07 sun12x22.psfu
-rw-r--r-- 1 nlaizon nlaizon 12K Mar  6 15:07 sundvorak.map
-rw-r--r-- 1 nlaizon nlaizon 12K Mar  6 15:07 sunkeymap.map
-rw-r--r-- 1 nlaizon nlaizon 11K Mar  6 15:07 sun-pl-altgraph.map
-rw-r--r-- 1 nlaizon nlaizon 12K Mar  6 15:07 sun-pl.map
-rw-r--r-- 1 nlaizon nlaizon 8.6K Mar  6 15:07 sunt4-es.map
-rw-r--r-- 1 nlaizon nlaizon 9.7K Mar  6 15:07 sunt4-fi-latin1.map
-rw-r--r-- 1 nlaizon nlaizon 8.7K Mar  6 15:07 sunt4-no-latin1.map
-rw-r--r-- 1 nlaizon nlaizon 31K Mar  6 15:07 sunt5-cz-us.map
-rw-r--r-- 1 nlaizon nlaizon 8.8K Mar  6 15:07 sunt5-de-latin1.map
-rw-r--r-- 1 nlaizon nlaizon 8.9K Mar  6 15:07 sunt5-es.map
-rw-r--r-- 1 nlaizon nlaizon 8.7K Mar  6 15:07 sunt5-fi-latin1.map
-rw-r--r-- 1 nlaizon nlaizon 12K Mar  6 15:07 sunt5-fr-latin1.map
-rw-r--r-- 1 nlaizon nlaizon 14K Mar  6 15:07 sunt5-ru.map
-rw-r--r-- 1 nlaizon nlaizon 9.7K Mar  6 15:07 sunt5-uk.map
-rw-r--r-- 1 nlaizon nlaizon 31K Mar  6 15:07 sunt5-us-cz.map
-rw-r--r-- 1 nlaizon nlaizon 5.8K Mar  6 15:07 sunt6-uk.map
-rw-rw-r-- 1 nlaizon nlaizon 30K Mar  6 15:43 sun.tar.gz
[nlaizon@server1 newSUN]$

```

## 8. Archive the directory SUN to a file named dsuntar.tar located under SUNTAR (SUNTAR/dsuntar.tar)

```

nlaizon@server1:~
File Edit View Search Terminal Help
-rw-r--r-- 1 nlaizon nlaizon 14K Mar  6 15:07 sunt5-ru.map
-rw-r--r-- 1 nlaizon nlaizon 9.7K Mar  6 15:07 sunt5-uk.map
-rw-r--r-- 1 nlaizon nlaizon 31K Mar  6 15:07 sunt5-us-cz.map
-rw-r--r-- 1 nlaizon nlaizon 5.8K Mar  6 15:07 sunt6-uk.map
-rw-rw-r-- 1 nlaizon nlaizon 30K Mar  6 15:43 sun.tar.gz
[nlaizon@server1 newSUN]$ cd ~
[nlaizon@server1 ~]$ ls
Archive      DOCS      mailports  newservices  sort1      Templates
bottomgroup  Documents  maintenance Pictures      sort2      Tmp1
computers    Downloads  Midterm2   PlanetsR     sort3      Tmp2
Desktop      EXAM       mul_list   PRINTS       sortR      Tmp3
dir1         file2      Music      pro          sshdlist   Trip3
dir2         Foods      mygroup    PROJECTS     SUN        Trips
doc1         html       mypasswd   Public       SUNTAR     Universe
doc2         INDEX      myservices shopping_list SUNTARZ     Videos
doc3         LAB6       mysmb      smb          SUNZ       yumdir
[nlaizon@server1 ~]$ tar cf SUNTAR/dsuntar.tar SUN
[nlaizon@server1 ~]$ ls SUNTAR
dsuntar.tar  sun-pl.map      sunt5-de-latin1.map  sunt5-uk.map
sun12x22.psfu  sun4-es.map     sunt5-es.map         sunt5-us-cz.map
sundvorak.map  sun4-fi-latin1.map  sunt5-fi-latin1.map  sunt6-uk.map
sunkeymap.map  sun4-no-latin1.map  sunt5-fr-latin1.map  sun.tar
sun-pl-altgraph.map  sun5-cz-us.map     sunt5-ru.map
[nlaizon@server1 ~]$

```

**9. Archive and compress the directory SUN to a file named dsuntar.tar.gz located under SUNTARZ (SUNTARZ/dsuntar.tar.gz)**

```

nlaizon@server1:~
File Edit View Search Terminal Help
Archive DOCS mailports newservices sort1 Templates
bottomgroup Documents maintenance Pictures sort2 Tmp1
computers Downloads Midterm2 PlanetsR sort3 Tmp2
Desktop EXAM mul_list PRINTS sortR Tmp3
dir1 file2 Music pro sshdlist Trip3
dir2 Foods mygroup PROJECTS SUN Trips
doc1 html mypasswd Public SUNTAR Universe
doc2 INDEX myservices shopping_list SUNTARZ Videos
doc3 LAB6 mysmb smb SUNZ yumdir

[nlaizon@server1 ~]$ tar cf SUNTAR/dsuntar.tar SUN
[nlaizon@server1 ~]$ ls SUNTAR
dsuntar.tar sun-pl.map sun5-de-latin1.map sun5-uk.map
sun12x22.psfu sun4-es.map sun5-es.map sun5-us-cz.map
sundvorak.map sun4-fi-latin1.map sun5-fi-latin1.map sun6-uk.map
sunkeymap.map sun4-no-latin1.map sun5-fr-latin1.map sun.tar
sun-pl-altgraph.map sun5-cz-us.map sun5-ru.map
[nlaizon@server1 ~]$ tar czf SUNTARZ/dsuntar.tar.gz SUN
[nlaizon@server1 ~]$ ls SUNTARZ
dsuntar.tar.gz sun-pl.map sun5-de-latin1.map sun5-uk.map
sun12x22.psfu sun4-es.map sun5-es.map sun5-us-cz.map
sundvorak.map sun4-fi-latin1.map sun5-fi-latin1.map sun6-uk.map
sunkeymap.map sun4-no-latin1.map sun5-fr-latin1.map sun.tar.gz
sun-pl-altgraph.map sun5-cz-us.map sun5-ru.map
[nlaizon@server1 ~]$

```

**10. Copy the new file SUNTARZ/dsuntar.tar.gz to the directory SUN then extract it.**

By doing that a directory SUN and its files within will be added into the SUN directory.  
The command to achieve the results are below:

```

nlaizon@server1:~/SUN
File Edit View Search Terminal Help
dsuntar.tar sun-pl.map sun5-de-latin1.map sun5-uk.map
sun12x22.psfu sun4-es.map sun5-es.map sun5-us-cz.map
sundvorak.map sun4-fi-latin1.map sun5-fi-latin1.map sun6-uk.map
sunkeymap.map sun4-no-latin1.map sun5-fr-latin1.map sun.tar
sun-pl-altgraph.map sun5-cz-us.map sun5-ru.map
[nlaizon@server1 ~]$ tar czf SUNTARZ/dsuntar.tar.gz SUN
[nlaizon@server1 ~]$ ls SUNTARZ
dsuntar.tar.gz sun-pl.map sun5-de-latin1.map sun5-uk.map
sun12x22.psfu sun4-es.map sun5-es.map sun5-us-cz.map
sundvorak.map sun4-fi-latin1.map sun5-fi-latin1.map sun6-uk.map
sunkeymap.map sun4-no-latin1.map sun5-fr-latin1.map sun.tar.gz
sun-pl-altgraph.map sun5-cz-us.map sun5-ru.map
[nlaizon@server1 ~]$ cp SUNTARZ/dsuntar.tar.gz SUN
[nlaizon@server1 ~]$ ls SUN
dsuntar.tar.gz sun-pl.map sun5-de-latin1.map sun5-uk.map
sun12x22.psfu sun4-es.map sun5-es.map sun5-us-cz.map
sundvorak.map sun4-fi-latin1.map sun5-fi-latin1.map sun6-uk.map
sunkeymap.map sun4-no-latin1.map sun5-fr-latin1.map
sun-pl-altgraph.map sun5-cz-us.map sun5-ru.map
[nlaizon@server1 ~]$ cd SUN
[nlaizon@server1 SUN]$ cd ~
[nlaizon@server1 ~]$ cd SUN
[nlaizon@server1 SUN]$ tar -xzf dsuntar.tar.gz
[nlaizon@server1 SUN]$

```

The screen below shows the content of directory SUN and SUN/SUN:

```

nlaizon@server1:~
File Edit View Search Terminal Help
[nlaizon@server1 ~]$ ls SUN
dsuntar.tar.gz      sun-pl.map          sunt5-de-latin1.map  sunt5-uk.map
sun12x22.psfu       sun4-es.map         sunt5-es.map         sunt5-us-cz.map
sundvorak.map       sun4-fi-latin1.map  sunt5-fi-latin1.map  sunt6-uk.map
sunkeymap.map       sun4-no-latin1.map  sunt5-fr-latin1.map
sun-pl-altgraph.map sunt5-cz-us.map     sunt5-ru.map
[nlaizon@server1 ~]$ cd SUN
[nlaizon@server1 SUN]$ cd ~
[nlaizon@server1 ~]$ cd SUN
[nlaizon@server1 SUN]$ tar -xzf dsuntar.tar.gz
[nlaizon@server1 SUN]$ cd
[nlaizon@server1 ~]$ ls SUN
dsuntar.tar.gz      sun-pl-altgraph.map  sunt5-cz-us.map     sunt5-ru.map
SUN                 sun-pl.map          sunt5-de-latin1.map  sunt5-uk.map
sun12x22.psfu       sun4-es.map         sunt5-es.map         sunt5-us-cz.map
sundvorak.map       sun4-fi-latin1.map  sunt5-fi-latin1.map  sunt6-uk.map
sunkeymap.map       sun4-no-latin1.map  sunt5-fr-latin1.map
[nlaizon@server1 ~]$ ls SUN/SUN
sun12x22.psfu       sun4-es.map         sunt5-es.map         sunt5-us-cz.map
sundvorak.map       sun4-fi-latin1.map  sunt5-fi-latin1.map  sunt6-uk.map
sunkeymap.map       sun4-no-latin1.map  sunt5-fr-latin1.map
sun-pl-altgraph.map sunt5-cz-us.map     sunt5-ru.map
sun-pl.map          sunt5-de-latin1.map  sunt5-uk.map
[nlaizon@server1 ~]$

```

**11. Make two copies of the file /usr/share/magic to your home directory. Name the first copy magic1 and the second one magic2**

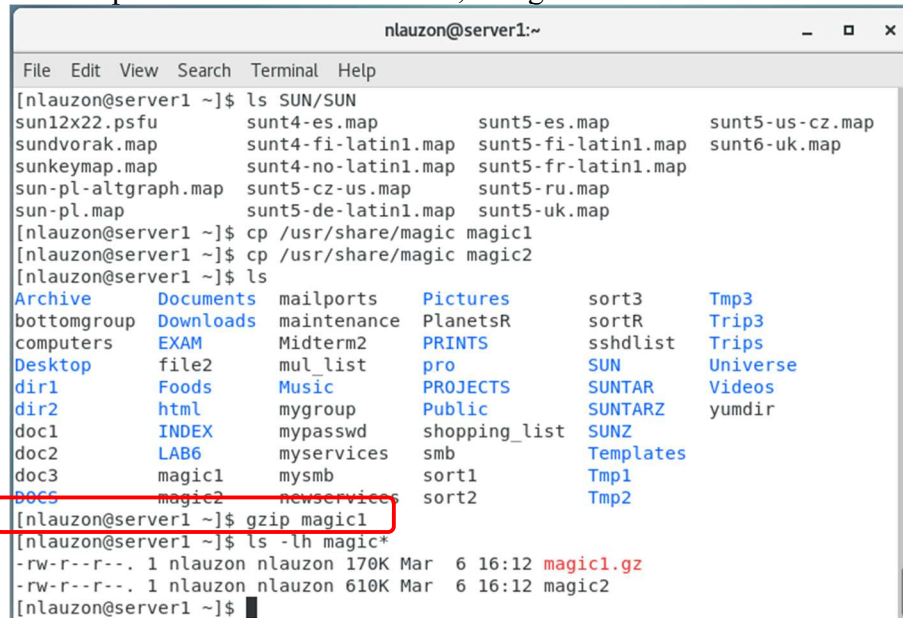
```

nlaizon@server1:~
File Edit View Search Terminal Help
SUN                 sun-pl.map          sunt5-de-latin1.map  sunt5-uk.map
sun12x22.psfu       sun4-es.map         sunt5-es.map         sunt5-us-cz.map
sundvorak.map       sun4-fi-latin1.map  sunt5-fi-latin1.map  sunt6-uk.map
sunkeymap.map       sun4-no-latin1.map  sunt5-fr-latin1.map
[nlaizon@server1 ~]$ ls SUN/SUN
sun12x22.psfu       sun4-es.map         sunt5-es.map         sunt5-us-cz.map
sundvorak.map       sun4-fi-latin1.map  sunt5-fi-latin1.map  sunt6-uk.map
sunkeymap.map       sun4-no-latin1.map  sunt5-fr-latin1.map
sun-pl-altgraph.map sunt5-cz-us.map     sunt5-ru.map
sun-pl.map          sunt5-de-latin1.map  sunt5-uk.map
[nlaizon@server1 ~]$ cp /usr/share/magic magic1
[nlaizon@server1 ~]$ cp /usr/share/magic magic2
[nlaizon@server1 ~]$ ls
Archive      Documents  mailports  Pictures    sort3      Tmp3
bottomgroup  Downloads  maintenance PlanetsR    sortR      Trip3
computers    EXAM       Midterm2   PRINTS     sshdlist   Trips
Desktop      file2      mul_list   pro         SUN         Universe
dir1         Foods      Music      PROJECTS    SUNTAR      Videos
dir2         html       mygroup    Public      SUNTARZ     yumdir
doc1         INDEX      mypasswd   shopping_list SUNZ
doc2         LAB6       myservices smb          Templates
doc3         magic1     mysmb      sort1       Tmp1
DOCS         magic2     newservices sort2       Tmp2
[nlaizon@server1 ~]$

```

## 12. Compress the file magic1

No compression level is demanded, so I go with the default:

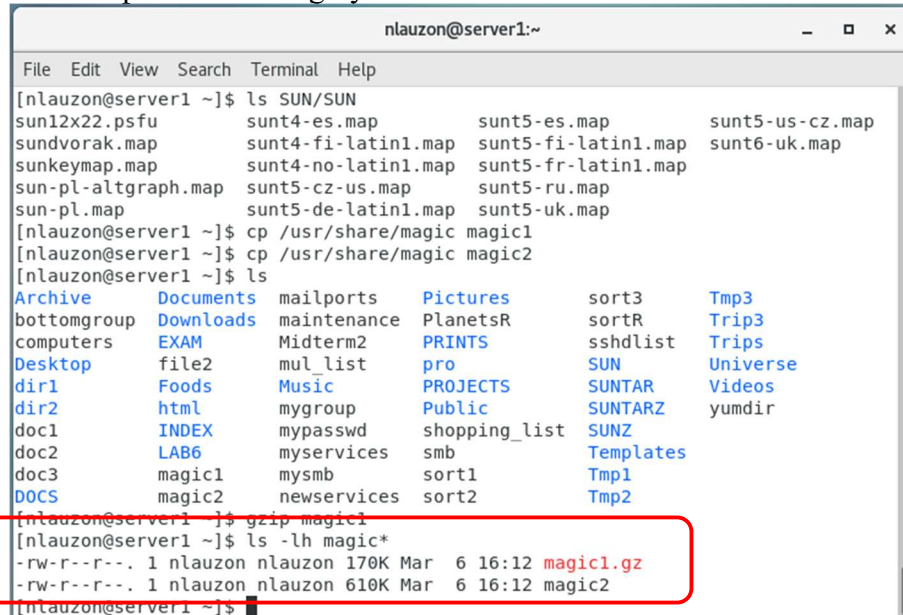


```

nlaizon@server1:~
File Edit View Search Terminal Help
[nlaizon@server1 ~]$ ls SUN/SUN
sun12x22.psfu      sunt4-es.map          sunt5-es.map          sunt5-us-cz.map
sundvorak.map      sunt4-fi-latin1.map   sunt5-fi-latin1.map   sunt6-uk.map
sunkeymap.map      sunt4-no-latin1.map   sunt5-fr-latin1.map
sun-pl-altgraph.map sunt5-cz-us.map        sunt5-ru.map
sun-pl.map          sunt5-de-latin1.map   sunt5-uk.map
[nlaizon@server1 ~]$ cp /usr/share/magic magic1
[nlaizon@server1 ~]$ cp /usr/share/magic magic2
[nlaizon@server1 ~]$ ls
Archive    Documents  mailports  Pictures    sort3      Tmp3
bottomgroup Downloads  maintenance PlanetsR    sortR      Trip3
computers  EXAM       Midterm2   PRINTS     sshdlist   Trips
Desktop    file2      mul_list   pro         SUN         Universe
dir1       Foods      Music      PROJECTS    SUNTAR      Videos
dir2       html       mygroup    Public       SUNTARZ     yumdir
doc1       INDEX      mypasswd   shopping_list SUNZ
doc2       LAB6       myservices smb          Templates
doc3       magic1     mysmb      sort1        Tmp1
DOCS       magic2     newservices sort2        Tmp2
[nlaizon@server1 ~]$ gzip magic1
[nlaizon@server1 ~]$ ls -lh magic*
-rw-r--r-- 1 nlaizon nlaizon 170K Mar  6 16:12 magic1.gz
-rw-r--r-- 1 nlaizon nlaizon 610K Mar  6 16:12 magic2
[nlaizon@server1 ~]$
  
```

## 13. Compare the sizes of magic2 and the compressed file of magic1

The compression is roughly 3.5 to 1:



```

nlaizon@server1:~
File Edit View Search Terminal Help
[nlaizon@server1 ~]$ ls SUN/SUN
sun12x22.psfu      sunt4-es.map          sunt5-es.map          sunt5-us-cz.map
sundvorak.map      sunt4-fi-latin1.map   sunt5-fi-latin1.map   sunt6-uk.map
sunkeymap.map      sunt4-no-latin1.map   sunt5-fr-latin1.map
sun-pl-altgraph.map sunt5-cz-us.map        sunt5-ru.map
sun-pl.map          sunt5-de-latin1.map   sunt5-uk.map
[nlaizon@server1 ~]$ cp /usr/share/magic magic1
[nlaizon@server1 ~]$ cp /usr/share/magic magic2
[nlaizon@server1 ~]$ ls
Archive    Documents  mailports  Pictures    sort3      Tmp3
bottomgroup Downloads  maintenance PlanetsR    sortR      Trip3
computers  EXAM       Midterm2   PRINTS     sshdlist   Trips
Desktop    file2      mul_list   pro         SUN         Universe
dir1       Foods      Music      PROJECTS    SUNTAR      Videos
dir2       html       mygroup    Public       SUNTARZ     yumdir
doc1       INDEX      mypasswd   shopping_list SUNZ
doc2       LAB6       myservices smb          Templates
doc3       magic1     mysmb      sort1        Tmp1
DOCS       magic2     newservices sort2        Tmp2
[nlaizon@server1 ~]$ gzip magic1
[nlaizon@server1 ~]$ ls -lh magic*
-rw-r--r-- 1 nlaizon nlaizon 170K Mar  6 16:12 magic1.gz
-rw-r--r-- 1 nlaizon nlaizon 610K Mar  6 16:12 magic2
[nlaizon@server1 ~]$
  
```



**14. List the contents of the directory SUN and redirect the output to a file named suncont under LAB6 directory (LAB6/suncont), then verify the file suncont.**

```
nlauzon@server1:~  
File Edit View Search Terminal Help  
sun-pl.map sun5-de-latin1.map sun5-uk.map  
[nlauzon@server1 ~]$ ls -R SUN > LAB6/suncont  
[nlauzon@server1 ~]$ cat LAB6/suncont  
SUN:  
dsuntar.tar.gz  
SUN  
sun12x22.psfu  
sundvorak.map  
sunkeymap.map  
sun-pl-altgraph.map  
sun-pl.map  
sunt4-es.map  
sunt4-fi-latin1.map  
sunt4-no-latin1.map  
sunt5-cz-us.map  
sunt5-de-latin1.map  
sunt5-es.map  
sunt5-fi-latin1.map  
sunt5-fr-latin1.map  
sunt5-ru.map  
sunt5-uk.map  
sunt5-us-cz.map  
sunt6-uk.map  
  
SUN/SUN:  
sun12x22.psfu  
sundvorak.map  
sunkeymap.map  
sun-pl-altgraph.map  
sun-pl.map  
sunt4-es.map  
sunt4-fi-latin1.map  
sunt4-no-latin1.map  
sunt5-cz-us.map  
sunt5-de-latin1.map
```

- 15. List the contents of the directory SUNZ and redirect the output to a file named sunzcont under LAB6 directory (LAB6/sunzcont), then verify the file sunzcont.**

```
nlaizon@server1:~  
File Edit View Search Terminal Help  
[nlaizon@server1 ~]$ ls -R SUNZ > LAB6/sunzcont  
[nlaizon@server1 ~]$ cat LAB6/sunzcont  
SUNZ:  
newSUN  
sun12x22.psfu.gz  
sundvorak.map.gz  
sunkeymap.map.gz  
sun-pl-altgraph.map.gz  
sun-pl.map.gz  
sunt4-es.map.gz  
sunt4-fi-latin1.map.gz  
sunt4-no-latin1.map.gz  
sunt5-cz-us.map.gz  
sunt5-de-latin1.map.gz  
sunt5-es.map.gz  
sunt5-fi-latin1.map.gz  
sunt5-fr-latin1.map.gz  
sunt5-ru.map.gz  
sunt5-uk.map.gz  
sunt5-us-cz.map.gz  
sunt6-uk.map.gz  
  
SUNZ/newSUN:  
sun12x22.psfu  
sundvorak.map  
sunkeymap.map  
sun-pl-altgraph.map  
sun-pl.map  
sunt4-es.map  
sunt4-fi-latin1.map  
sunt4-no-latin1.map  
sunt5-cz-us.map  
sunt5-de-latin1.map  
sunt5-es.map
```

16. List the contents of the directory **SUNTAR** and redirect the output to a file named **suntarcont** under **LAB6** directory (**LAB6/suntarcont**), then verify the file **suntarcont**.

```
nlaizon@server1:~  
File Edit View Search Terminal Help  
sunt4-no-latin1.map  
sunt5-cz-us.map  
sunt5-de-latin1.map  
sunt5-es.map  
sunt5-fi-latin1.map  
sunt5-fr-latin1.map  
sunt5-ru.map  
sunt5-uk.map  
sunt5-us-cz.map  
sunt6-uk.map  
sun.tar.gz  
[nlaizon@server1 ~]$ ls -R SUNTAR > LAB6/suntarcont  
[nlaizon@server1 ~]$ cat LAB6/suntarcont  
SUNTAR:  
dsuntar.tar  
sun12x22.psfu  
sundvorak.map  
sunkeymap.map  
sun-pl-altgraph.map  
sun-pl.map  
sunt4-es.map  
sunt4-fi-latin1.map  
sunt4-no-latin1.map  
sunt5-cz-us.map  
sunt5-de-latin1.map  
sunt5-es.map  
sunt5-fi-latin1.map  
sunt5-fr-latin1.map  
sunt5-ru.map  
sunt5-uk.map  
sunt5-us-cz.map  
sunt6-uk.map  
sun.tar  
[nlaizon@server1 ~]$
```

- 17. List the contents of the directory SUNTARZ and redirect the output to a file named `suntarzcont` under LAB6 directory (LAB6/suntarzcont), then verify the file `suntarzcont`.**

```
nlauzon@server1:~  
File Edit View Search Terminal Help  
sunt4-no-latin1.map  
sunt5-cz-us.map  
sunt5-de-latin1.map  
sunt5-es.map  
sunt5-fi-latin1.map  
sunt5-fr-latin1.map  
sunt5-ru.map  
sunt5-uk.map  
sunt5-us-cz.map  
sunt6-uk.map  
sun.tar  
[nlauzon@server1 ~]$ ls -R SUNTARZ > LAB6/suntarzcont  
[nlauzon@server1 ~]$ cat LAB6/suntarzcont  
SUNTARZ:  
dsuntar.tar.gz  
sun12x22.psfu  
sundvorak.map  
sunkeymap.map  
sun-pl-altgraph.map  
sun-pl.map  
sunt4-es.map  
sunt4-fi-latin1.map  
sunt4-no-latin1.map  
sunt5-cz-us.map  
sunt5-de-latin1.map  
sunt5-es.map  
sunt5-fi-latin1.map  
sunt5-fr-latin1.map  
sunt5-ru.map  
sunt5-uk.map  
sunt5-us-cz.map  
sunt6-uk.map  
sun.tar.gz  
[nlauzon@server1 ~]$
```