

# RHCSA EX200 - Managing Files LAB

creating a tar from /usr/share/doc directory

```
[csr@rhel-lab1 ~]$ du -sh /usr/share/doc
63M  /usr/share/doc
[csr@rhel-lab1 ~]$ tar -cf documentation.tar /usr/share/doc
tar: Removing leading `/' from member names
[csr@rhel-lab1 ~]$ ls
2 archives documentation.tar Desktop Documents Downloads Music output Pictures Public Templates
Videos
[csr@rhel-lab1 ~]$ ls -l
total 59748
-rw-r--r--. 1 csr csr 1328 Apr 11 18:55 2
drwxr-xr-x. 2 csr csr 26 Apr 9 18:32 archives
-rw-r--r--. 1 csr csr 61173760 Apr 15 18:33 documentation.tar
drwxr-xr-x. 2 csr csr 6 Apr 10 12:03 Desktop
drwxr-xr-x. 2 csr csr 72 Apr 11 18:04 Documents
drwxr-xr-x. 2 csr csr 6 Apr 10 12:03 Downloads
drwxr-xr-x. 2 csr csr 6 Apr 10 12:03 Music
-rw-r--r--. 1 csr csr 6 Apr 11 17:56 output
drwxr-xr-x. 2 csr csr 6 Apr 10 12:03 Pictures
drwxr-xr-x. 2 csr csr 6 Apr 10 12:03 Public
drwxr-xr-x. 2 csr csr 6 Apr 10 12:03 Templates
drwxr-xr-x. 2 csr csr 6 Apr 10 12:03 Videos
[csr@rhel-lab1 ~]$ du -sh *.tar
59M  ddocumentation.tar
```

listing content of a tar file - tar-tvf filename (t list the content, -v verbose, -f use file archive)

```
[csr@rhel-lab1 ~]$ tar -tvf documentation.tar | more
drwxr-xr-x root/root      0 2024-04-09 17:31 usr/share/doc/
drwxr-xr-x root/root      0 2024-04-08 14:55 usr/share/doc/hwdata/
-rw-r--r-- root/root    175 2023-08-21 01:22 usr/share/doc/hwdata/LICENSE
```

```
drwxr-xr-x root/root      0 2024-04-08 14:55 usr/share/doc/xkeyboard-config/
-rw-r--r-- root/root      510 2021-06-08 15:20 usr/share/doc/xkeyboard-config/AUTHORS
-rw-r--r-- root/root     9244 2021-06-08 15:20 usr/share/doc/xkeyboard-config/COPYING
-rw-r--r-- root/root      861 2021-06-08 15:20 usr/share/doc/xkeyboard-config/HOWTO.testing
-rw-r--r-- root/root     2303 2021-06-08 15:20 usr/share/doc/xkeyboard-config/HOWTO.transition
-rw-r--r-- root/root     5108 2021-06-08 15:20 usr/share/doc/xkeyboard-config/NEWS
-rw-r--r-- root/root     1627 2021-06-08 15:20 usr/share/doc/xkeyboard-config/README
-rw-r--r-- root/root     7515 2021-06-08 15:20 usr/share/doc/xkeyboard-config/README.config
-rw-r--r-- root/root    23948 2021-06-08 15:20 usr/share/doc/xkeyboard-config/README.enhancing
-rw-r--r-- root/root     1882 2021-06-08 15:20 usr/share/doc/xkeyboard-config/README.symbols
```

create the same but compressed using gz

```
[csr@rhel-lab1 ~]$ tar -czvf documentation.tar.gz /usr/share/doc | more
tar: Removing leading `/' from member names
/usr/share/doc/
/usr/share/doc/hwdata/
/usr/share/doc/hwdata/LICENSE
/usr/share/doc/xkeyboard-config/
/usr/share/doc/xkeyboard-config/AUTHORS
/usr/share/doc/xkeyboard-config/COPYING
/usr/share/doc/xkeyboard-config/HOWTO.testing
/usr/share/doc/xkeyboard-config/HOWTO.transition
/usr/share/doc/xkeyboard-config/NEWS
/usr/share/doc/xkeyboard-config/README
/usr/share/doc/xkeyboard-config/README.config
/usr/share/doc/xkeyboard-config/README.enhancing
/usr/share/doc/xkeyboard-config/README.symbols
/usr/share/doc/tzdata/
/usr/share/doc/tzdata/README
/usr/share/doc/tzdata/theory.html
/usr/share/doc/tzdata/tz-art.html
/usr/share/doc/tzdata/tz-link.html
[csr@rhel-lab1 ~]$ du -sh docu*.*
59M  documentation.tar
19M  documentation.tar.gz
```

using J for compression

```
[csr@rhel-lab1 ~]$ tar -cjvf documentation.tar.bz2 /usr/share/doc | more
```

```
tar: Removing leading `/' from member names
```

```
/usr/share/doc/
```

```
/usr/share/doc/hwdata/
```

```
/usr/share/doc/hwdata/LICENSE
```

```
/usr/share/doc/xkeyboard-config/
```

```
/usr/share/doc/xkeyboard-config/AUTHORS
```

```
/usr/share/doc/xkeyboard-config/COPYING
```

```
/usr/share/doc/xkeyboard-config/HOWTO.testing
```

```
/usr/share/doc/xkeyboard-config/HOWTO.transition
```

```
/usr/share/doc/xkeyboard-config/NEWS
```

```
/usr/share/doc/xkeyboard-config/README
```

```
/usr/share/doc/xkeyboard-config/README.config
```

```
/usr/share/doc/xkeyboard-config/README.enhancing
```

```
/usr/share/doc/xkeyboard-config/README.symbols
```

```
/usr/share/doc/tzdata/
```

```
[csr@rhel-lab1 ~]$ du -sh docu*.*
```

```
59M  documentation.tar
```

```
16M  documentation.tar.bz2
```

```
19M  documentation.tar.gz
```

## Listing the gz file content

```
[csr@rhel-lab1 ~]$ tar -ttzvf documentation.tar.gz | more
```

```
drwxr-xr-x root/root    0 2024-04-09 17:31 usr/share/doc/
```

```
drwxr-xr-x root/root    0 2024-04-08 14:55 usr/share/doc/hwdata/
```

```
-rw-r--r-- root/root   175 2023-08-21 01:22 usr/share/doc/hwdata/LICENSE
```

```
drwxr-xr-x root/root    0 2024-04-08 14:55 usr/share/doc/xkeyboard-config/
```

```
-rw-r--r-- root/root   510 2021-06-08 15:20 usr/share/doc/xkeyboard-config/AUTHORS
```

```
-rw-r--r-- root/root  9244 2021-06-08 15:20 usr/share/doc/xkeyboard-config/COPYING
```

```
-rw-r--r-- root/root   861 2021-06-08 15:20 usr/share/doc/xkeyboard-config/HOWTO.testing
```

```
-rw-r--r-- root/root  2303 2021-06-08 15:20 usr/share/doc/xkeyboard-config/HOWTO.transition
```

```
-rw-r--r-- root/root  5108 2021-06-08 15:20 usr/share/doc/xkeyboard-config/NEWS
```

```
-rw-r--r-- root/root  1627 2021-06-08 15:20 usr/share/doc/xkeyboard-config/READ
```

## untar file and view the content using tree

```
[csr@rhel-lab1 ~]$ mkdir doctests
[csr@rhel-lab1 ~]$ mv documentation.tar* /doctests/
mv: target '/doctests/' is not a directory
[csr@rhel-lab1 ~]$ mv documentation.tar* ~/doctests/
[csr@rhel-lab1 ~]$ cd doctests/
[csr@rhel-lab1 doctests]$ ls
documentation.tar documentation.tar.bz2 documentation.tar.gz
[csr@rhel-lab1 doctests]$ tar -xzvf documentation.tar.gz
[csr@rhel-lab1 doctests]$ ls -la
total 93816
drwxr-xr-x. 3 csr csr   99 Apr 15 18:51 .
drwx----- 17 csr csr 4096 Apr 15 18:49 ..
-rw-r--r--. 1 csr csr 61173760 Apr 15 18:33 documentation.tar
-rw-r--r--. 1 csr csr 15930018 Apr 15 18:44 documentation.tar.bz2
-rw-r--r--. 1 csr csr 18954095 Apr 15 18:42 documentation.tar.gz
drwxr-xr-x. 3 csr csr   19 Apr 15 18:51 usr
[csr@rhel-lab1 doctests]$ tree usr | more
usr
├── share
│   └── doc
│       ├── abattis-cantarell-fonts
│       │   ├── NEWS
│       │   └── README.md
│       ├── accountsservice
│       │   ├── AUTHORS
│       │   └── README.md
│       ├── adcli
│       │   ├── AUTHORS
│       │   ├── ChangeLog
│       │   ├── COPYING
│       │   ├── NEWS
│       │   └── README
│       ├── adobe-mappings-cmap
│       │   ├── README.md
│       │   └── VERSIONS.txt
│       ├── adobe-mappings-pdf
│       │   └── README.md
│       ├── adobe-source-code-pro-fonts
│       │   └── README.md
│       └── alsa-lib
```

extract a single file from the tar document

```
[csr@rhel-lab1 doctests]$ tar -xzvf documentation.tar.gz usr/share/doc/gdisk/gdisk_test.sh
usr/share/doc/gdisk/gdisk_test.sh
[csr@rhel-lab1 doctests]$
[csr@rhel-lab1 doctests]$ tree usr
usr
├─ share
│   └─ doc
│       └─ gdisk
│           └─ gdisk_test.sh
```

using gunzip

```
cloud_user@server1: ~ $ ls
audit build init_pass mariadb_repo_setup Public Templates wget-1.19.5-8.el8_1.1.x86_64.rpm
cloud_user@server1: ~ $ gzip wget-1.19.5-8.el8_1.1.x86_64.rpm
cloud_user@server1: ~ $ ll
total 740
drwxrwxr-x. 2 cloud_user cloud_user  74 Sep  8 2020 audit
drwxrwxr-x. 2 cloud_user cloud_user  55 Sep  8 2020 build
-rw-r--r--. 1 cloud_user cloud_user   1 Apr 30 2021 init_pass
-rwxrwxr-x. 1 cloud_user cloud_user 19519 Sep  9 2020 mariadb_repo_setup
drwxr-xr-x. 2 cloud_user cloud_user   6 May  8 2019 Public
drwxr-xr-x. 2 cloud_user cloud_user   6 May  8 2019 Templates
-rw-r--r--. 1 cloud_user cloud_user 729756 Sep  9 2020 wget-1.19.5-8.el8_1.1.x86_64.rpm.gz
```

unzip it

```
cloud_user@server1: ~ $ gunzip wget-1.19.5-8.el8_1.1.x86_64.rpm.gz
cloud_user@server1: ~ $ ll
total 760
drwxrwxr-x. 2 cloud_user cloud_user  74 Sep  8 2020 audit
drwxrwxr-x. 2 cloud_user cloud_user  55 Sep  8 2020 build
```

```
-rw-r--r--. 1 cloud_user cloud_user    1 Apr 30 2021 init_pass
-rwxrwxr-x. 1 cloud_user cloud_user 19519 Sep  9 2020 mariadb_repo_setup
drwxr-xr-x. 2 cloud_user cloud_user    6 May  8 2019 Public
drwxr-xr-x. 2 cloud_user cloud_user    6 May  8 2019 Templates
-rw-r--r--. 1 cloud_user cloud_user 752504 Sep  9 2020 wget-1.19.5-8.el8_1.1.x86_64.rpm
cloud_user@server1: ~ $
```

same apply to bzip

```
cloud_user@server1: ~ $ bzip2 wget-1.19.5-8.el8_1.1.x86_64.rpm
cloud_user@server1: ~ $ ll
total 744
drwxrwxr-x. 2 cloud_user cloud_user    74 Sep  8 2020 audit
drwxrwxr-x. 2 cloud_user cloud_user    55 Sep  8 2020 build
-rw-r--r--. 1 cloud_user cloud_user    1 Apr 30 2021 init_pass
-rwxrwxr-x. 1 cloud_user cloud_user 19519 Sep  9 2020 mariadb_repo_setup
drwxr-xr-x. 2 cloud_user cloud_user    6 May  8 2019 Public
drwxr-xr-x. 2 cloud_user cloud_user    6 May  8 2019 Templates
-rw-r--r--. 1 cloud_user cloud_user 736128 Sep  9 2020 wget-1.19.5-8.el8_1.1.x86_64.rpm.bz2
cloud_user@server1: ~ $ bunzip2 wget-1.19.5-8.el8_1.1.x86_64.rpm.bz2
cloud_user@server1: ~ $ ll
total 760
drwxrwxr-x. 2 cloud_user cloud_user    74 Sep  8 2020 audit
drwxrwxr-x. 2 cloud_user cloud_user    55 Sep  8 2020 build
-rw-r--r--. 1 cloud_user cloud_user    1 Apr 30 2021 init_pass
-rwxrwxr-x. 1 cloud_user cloud_user 19519 Sep  9 2020 mariadb_repo_setup
drwxr-xr-x. 2 cloud_user cloud_user    6 May  8 2019 Public
drwxr-xr-x. 2 cloud_user cloud_user    6 May  8 2019 Templates
-rw-r--r--. 1 cloud_user cloud_user 752504 Sep  9 2020 wget-1.19.5-8.el8_1.1.x86_64.rpm
cloud_user@server1: ~ $
```

## Task 2

Using brackets and how to create multiple files

```
cloud_user@server1: ~ $ mkdir -p ~/code/ursula/{cloudform,xml} ~/code/mortimer/json
cloud_user@server1: ~ $ tree code
code
├─ mortimer
```

```
| └─ json
└─ ursula
  └─ cloudform
    └─ xml
```

5 directories, 0 files

cloud\_user@server1: ~ \$

cloud\_user@server1: ~ \$ touch ~/code/ursula/{file1,file2,file3}.json ~/code/ursula/file{1,2,3}.xml

cloud\_user@server1: ~ \$ tree code

```
code
└─ mortimer
  | └─ json
  └─ ursula
    └─ cloudform
      └─ file1.json
      └─ file1.xml
      └─ file2.json
      └─ file2.xml
      └─ file3.json
      └─ file3.xml
    └─ xml
```

5 directories, 6 files

cloud\_user@server1: ~ \$ touch ~/code/mortimer/{file1,file2,file3}.cf

cloud\_user@server1: ~ \$ tree

```
.
└─ audit
  | └─ devsys05-account-audit.log
  | └─ devsys08-account-audit.log
  └─ build
    | └─ devsys12-account-audit.log
    | └─ dnf.log
    └─ code
      | └─ mortimer
      | | └─ file1.cf
      | | └─ file2.cf
      | | └─ file3.cf
      | └─ json
```

```
| └─ ursula
|   └─ cloudform
|     └─ file1.json
|       └─ file1.xml
|         └─ file2.json
|           └─ file2.xml
|             └─ file3.json
|               └─ file3.xml
|                 └─ xml
└─ init_pass
└─ mariadb_repo_setup
└─ Public
└─ Templates
└─ wget-1.19.5-8.el8_1.1.x86_64.rpm
```

## moving files around

```
cloud_user@server1: ~ $ mv ~/code/ursula/*.xml ~/code/ursula/xml/
cloud_user@server1: ~ $ tree
.
└─ audit
  | └─ devsys05-account-audit.log
  |   └─ devsys08-account-audit.log
└─ build
  | └─ devsys12-account-audit.log
  |   └─ dnf.log
└─ code
  | └─ mortimer
  |   | └─ file1.cf
  |   | └─ file2.cf
  |   | └─ file3.cf
  |   | └─ json
  |   └─ ursula
  |     └─ cloudform
  |       └─ file1.json
  |         └─ file2.json
  |           └─ file3.json
  |             └─ xml
  |               └─ file1.xml
  |                 └─ file2.xml
```

```
|   └─ file3.xml
├─ init_pass
├─ mariadb_repo_setup
├─ Public
├─ Templates
└─ wget-1.19.5-8.el8_1.1.x86_64.rpm
```

10 directories, 16 files

cloud\_user@server1: ~ \$

cloud\_user@server1: ~ \$ mv ~/code/ursula/\*.json ~/code/mortimer/json/

cloud\_user@server1: ~ \$ tree code

code

```
├─ mortimer
|  └─ file1.cf
|  └─ file2.cf
|  └─ file3.cf
|  └─ json
|     └─ file1.json
|     └─ file2.json
|     └─ file3.json
└─ ursula
   └─ cloudform
      └─ xml
         └─ file1.xml
         └─ file2.xml
         └─ file3.xml
```

5 directories, 9 files

cloud\_user@server1: ~ \$

cloud\_user@server1: mortimer \$ mv \*.cf ../ursula/cloudform/

cloud\_user@server1: mortimer \$ cd

cloud\_user@server1: ~ \$ tree code

code

```
├─ mortimer
|  └─ json
|     └─ file1.json
|     └─ file2.json
|     └─ file3.json
└─ ursula
   └─ cloudform
```

```
| └─ file1.cf
| └─ file2.cf
| └─ file3.cf
└─ xml
    └─ file1.xml
    └─ file2.xml
    └─ file3.xml
```

5 directories, 9 files

cloud\_user@server1: ~ \$

cloud\_user@server1: ~ \$ cp ~/code/ursula/cloudform/ ~/code/mortimer/ -r

cloud\_user@server1: ~ \$ tree code

```
code
└─ mortimer
  │ └─ cloudform
  │ │ └─ file1.cf
  │ │ └─ file2.cf
  │ │ └─ file3.cf
  │ └─ json
  │   └─ file1.json
  │   └─ file2.json
  │   └─ file3.json
└─ ursula
  └─ cloudform
    │ └─ file1.cf
    │ └─ file2.cf
    │ └─ file3.cf
    └─ xml
        └─ file1.xml
        └─ file2.xml
        └─ file3.xml
```

6 directories, 12 files

cloud\_user@server1: ~ \$ rm -rf ~/code/ursula/cloudform/

cloud\_user@server1: ~ \$ tree code

```
code
└─ mortimer
  │ └─ cloudform
  │ │ └─ file1.cf
  │ │ └─ file2.cf
```

```
| | └─ file3.cf
| └─ json
|   └─ file1.json
|   └─ file2.json
|   └─ file3.json
└─ ursula
    └─ xml
        └─ file1.xml
        └─ file2.xml
        └─ file3.xml
```

5 directories, 9 files

cloud\_user@server1: ~ \$

### task 3 creating softlinks and hardlinks

I

```
cloud_user@server1: links $ ll
total 0
cloud_user@server1: links $ touch original
cloud_user@server1: links $ ll -i #Use -i to show the inode number
total 0
12583416 -rw-rw-r--. 1 cloud_user cloud_user 0 Apr 16 01:20 original
cloud_user@server1: links $
```

### creating a softlink

```
cloud_user@server1: links $ ln -s original softlink
cloud_user@server1: links $ ll -i
total 0
12583416 -rw-rw-r--. 1 cloud_user cloud_user 0 Apr 16 01:20 original
12583419 lrwxrwxrwx. 1 cloud_user cloud_user 8 Apr 16 01:22 softlink -> original
```

### creating a softlink to a folder, we can notice they have different inode numbers

```
cloud_user@server1: links $ mkdir directory
cloud_user@server1: links $ ln -s directory/ otherdirectory
cloud_user@server1: links $ ls -li
```

```
total 0
33560168 drwxrwxr-x. 2 cloud_user cloud_user 6 Apr 16 01:22 directory
12583416 -rw-rw-r--. 1 cloud_user cloud_user 0 Apr 16 01:20 original
12583420 lrwxrwxrwx. 1 cloud_user cloud_user 10 Apr 16 01:22 otherdirectory -> directory/
12583419 lrwxrwxrwx. 1 cloud_user cloud_user 8 Apr 16 01:22 softlink -> original
```

creating a hardlink we can notice the inode is the same

```
cloud_user@server1: links $ ln original hardlink
cloud_user@server1: links $ ls -li
total 0
33560168 drwxrwxr-x. 2 cloud_user cloud_user 6 Apr 16 01:22 directory
12583416 -rw-rw-r--. 2 cloud_user cloud_user 0 Apr 16 01:20 hardlink
12583416 -rw-rw-r--. 2 cloud_user cloud_user 0 Apr 16 01:20 original
12583420 lrwxrwxrwx. 1 cloud_user cloud_user 10 Apr 16 01:22 otherdirectory -> directory/
12583419 lrwxrwxrwx. 1 cloud_user cloud_user 8 Apr 16 01:22 softlink -> original
```

creating a softlink to fstab

```
cloud_user@server1: links $ ln -s /etc/fstab softtab
cloud_user@server1: links $ ll -i
total 0
33560168 drwxrwxr-x. 2 cloud_user cloud_user 6 Apr 16 01:22 directory
12583416 -rw-rw-r--. 2 cloud_user cloud_user 0 Apr 16 01:20 hardlink
12583416 -rw-rw-r--. 2 cloud_user cloud_user 0 Apr 16 01:20 original
12583420 lrwxrwxrwx. 1 cloud_user cloud_user 10 Apr 16 01:22 otherdirectory -> directory/
12583419 lrwxrwxrwx. 1 cloud_user cloud_user 8 Apr 16 01:22 softlink -> original
12583421 lrwxrwxrwx. 1 cloud_user cloud_user 10 Apr 16 01:25 softtab -> /etc/fstab
```

now a hardlink to fstab

```
cloud_user@server1: links $ ln /etc/fstab hardtab
ln: failed to create hard link 'hardtab' => '/etc/fstab': Operation not permitted
cloud_user@server1: links $ sudo ln /etc/fstab hardtab
[sudo] password for cloud_user:
cloud_user@server1: links $ ll -i
total 4
33560168 drwxrwxr-x. 2 cloud_user cloud_user 6 Apr 16 01:22 directory
12583416 -rw-rw-r--. 2 cloud_user cloud_user 0 Apr 16 01:20 hardlink
71951 -rw-r--r--. 2 root root 475 May 8 2019 hardtab
12583416 -rw-rw-r--. 2 cloud_user cloud_user 0 Apr 16 01:20 original
```

```
12583420 lrwxrwxrwx. 1 cloud_user cloud_user 10 Apr 16 01:22 otherdirectory -> directory/
12583419 lrwxrwxrwx. 1 cloud_user cloud_user 8 Apr 16 01:22 softlink -> original
12583421 lrwxrwxrwx. 1 cloud_user cloud_user 10 Apr 16 01:25 softtab -> /etc/fstab
```

finding where a hardlink belongs using the inode to search

```
cloud_user@server1: links $ find / -inum 71951 2> /dev/null
/proc/2428/oom_adj
/etc/fstab
/home/cloud_user/links/hardtab
```

Now we are going to find by inode number and also execute an ls -li

```
cloud_user@server1: links $ find / -inum 71951 -exec ls -li {} \; 2> /dev/null
71951 -rw-r--r--. 1 root root 0 Apr 16 01:27 /proc/2428/oom_adj
71951 -rw-r--r--. 2 root root 475 May 8 2019 /etc/fstab
71951 -rw-r--r--. 2 root root 475 May 8 2019 /home/cloud_user/links/hardtab
cloud_user@server1: links $
```

```
cloud_user@server1: links $ find ./ -inum 12583416
./original
./hardlink
cloud_user@server1: links $
```

## Task 4

share directory for tree users

creating a working folder

```
cloud_user@server1: ~ $ sudo -i
[sudo] password for cloud_user:
root@server1: ~ # mkdir /project-phoenix
root@server1: ~ # ls
anaconda-ks.cfg aws-cfn-bootstrap-1.4 original-ks.cfg
root@server1: ~ # pwd
/root
root@server1: ~ # cd ..
root@server1: / # ls
bin boot data dev etc home lib lib64 media mnt opt proc project-phoenix root run sbin srv swapfile
```

```
sys tmp usr var
root@server1: / # cd /home/
root@server1: home # ls -ld /project-phoenix/
drwxr-xr-x. 2 root root 6 Apr 16 02:11 /project-phoenix/
```

## creating users

```
root@server1: home #
root@server1: home # useradd -m -g users -G devops snuffy ; passwd snuffy
Changing password for user snuffy.
New password:
Retype new password:
passwd: all authentication tokens updated successfully.
root@server1: home # useradd -m -g devops -G users ursula ; passwd ursula
Changing password for user ursula.
New password:
Retype new password:
Sorry, passwords do not match.
passwd: Authentication token manipulation error
root@server1: home # passwd ursula
Changing password for user ursula.
New password:
Retype new password:
Sorry, passwords do not match.
^[[Apasswd: Authentication token manipulation error
root@server1: home # passwd ursula
Changing password for user ursula.
New password:
Retype new password:
passwd: all authentication tokens updated successfully.
root@server1: home # useradd -m -g sysadmins -G users mortimer ; passwd mortimer
Changing password for user mortimer.
New password:
Retype new password:
passwd: all authentication tokens updated successfully.
root@server1: home # cat /etc/passwd
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  
sync:x:5:0:sync:/sbin:/bin/sync  
shutdown:x:6:0:shutdown:/sbin:/sbin/shutdown  
halt:x:7:0:halt:/sbin:/sbin/halt  
mail:x:8:12:mail:/var/spool/mail:/sbin/nologin  
operator:x:11:0:operator:/root:/sbin/nologin  
games:x:12:100:games:/usr/games:/sbin/nologin  
ftp:x:14:50:FTP User:/var/ftp:/sbin/nologin  
nobody:x:65534:65534:Kernel Overflow User:/:/sbin/nologin  
dbus:x:81:81:System message bus:/:/sbin/nologin  
systemd-coredump:x:999:997:systemd Core Dumper:/:/sbin/nologin  
systemd-resolve:x:193:193:systemd Resolver:/:/sbin/nologin  
tss:x:59:59:Account used by the trousers package to sandbox the tcsd daemon:/dev/null:/sbin/nologin  
polkitd:x:998:996:User for polkitd:/:/sbin/nologin  
unbound:x:997:995:Unbound DNS resolver:/etc/unbound:/sbin/nologin  
sssd:x:996:993:User for sssd:/:/sbin/nologin  
insights:x:995:992:Red Hat Insights:/var/lib/insights:/sbin/nologin  
sshd:x:74:74:Privilege-separated SSH:/var/empty/ssh:/sbin/nologin  
chrony:x:994:991:/:/var/lib/chrony:/sbin/nologin  
cloud\_user:x:1001:1001:/:/home/cloud\_user:/bin/bash  
ssm-user:x:1002:1002:/:/home/ssm-user:/bin/bash  
qemu:x:107:107:qemu user:/:/sbin/nologin  
rtkit:x:172:172:RealtimeKit:/proc:/sbin/nologin  
pulse:x:171:171:PulseAudio System Daemon:/var/run/pulse:/sbin/nologin  
usbmuxd:x:113:113:usbmuxd user:/:/sbin/nologin  
gluster:x:993:986:GlusterFS daemons:/run/gluster:/sbin/nologin  
sasauth:x:992:76:Sasauthd user:/run/sasauthd:/sbin/nologin  
geoclue:x:991:985:User for geoclue:/var/lib/geoclue:/sbin/nologin  
rpc:x:32:32:Rpcbind Daemon:/var/lib/rpcbind:/sbin/nologin  
rpcuser:x:29:29:RPC Service User:/var/lib/nfs:/sbin/nologin  
dnsmasq:x:984:984:Dnsmasq DHCP and DNS server:/var/lib/dnsmasq:/sbin/nologin  
pipewire:x:983:982:PipeWire System Daemon:/var/run/pipewire:/sbin/nologin  
colord:x:982:981:User for colord:/var/lib/colord:/sbin/nologin  
gdm:x:42:42:/:/var/lib/gdm:/sbin/nologin  
radvd:x:75:75:radvd user:/:/sbin/nologin  
gnome-initial-setup:x:981:980:/:/run/gnome-initial-setup:/sbin/nologin  
avahi:x:70:70:Avahi mDNS/DNS-SD Stack:/var/run/avahi-daemon:/sbin/nologin  
setroubleshoot:x:980:979:/:/var/lib/setroubleshoot:/sbin/nologin  
flatpak:x:979:978:User for flatpak system helper:/:/sbin/nologin  
devops:x:1003:1003:DevOps Admin Service Account:/home/devops:/bin/bash

```
mysql:x:977:976:MySQL server:/var/lib/mysql:/sbin/nologin
snuffy:x:1004:100::/home/snuffy:/bin/bash
ursula:x:1005:1003::/home/ursula:/bin/bash
mortimer:x:1006:49999::/home/mortimer:/bin/bash
```

## Set folder permissions

set the group to users and change permissions to folder

```
root@server1: home #
root@server1: home # ls -ld /project-phoenix/
drwxr-xr-x. 2 root root 6 Apr 16 02:11 /project-phoenix/
root@server1: home # chown .users /project-phoenix/
root@server1: home # ls -ld /project-phoenix/
drwxr-xr-x. 2 root users 6 Apr 16 02:11 /project-phoenix/
root@server1: home # chmod g+w /project-phoenix/
root@server1: home # ls -ld /project-phoenix/
drwxrwxr-x. 2 root users 6 Apr 16 02:11 /project-phoenix/
root@server1: home #
```

## test permissions

```
root@server1: home # su snuffy
snuffy@server1: home $ touch /project-phoenix/snuffy.file1
snuffy@server1: home $ exit
exit
root@server1: home # sudo - ursula
sudo: -: command not found
root@server1: home # su - ursula
[ursula@server1 ~]$ touch /project-phoenix/ursula.file1
[ursula@server1 ~]$ exit
logout
root@server1: home # su - mortimer
[mortimer@server1 ~]$ touch /project-phoenix/mortimer.file1
[mortimer@server1 ~]$ logout
root@server1: home # ls -l /project-phoenix/
total 0
-rw-r--r--. 1 mortimer sysadmins 0 Apr 16 02:18 mortimer.file1
-rw-r--r--. 1 snuffy users 0 Apr 16 02:18 snuffy.file1
-rw-r--r--. 1 ursula devops 0 Apr 16 02:18 ursula.file1
root@server1: home #
```

## Change so all users has the same ownership

```
root@server1: home # ls -ld /project-phoenix/ ; ls -l /project-phoenix/
drwxrwxr-x. 2 root users 68 Apr 16 02:18 /project-phoenix/
total 0
-rw-r--r--. 1 mortimer sysadmins 0 Apr 16 02:18 mortimer.file1
-rw-r--r--. 1 snuffy  users   0 Apr 16 02:18 snuffy.file1
-rw-r--r--. 1 ursula  devops  0 Apr 16 02:18 ursula.file1
root@server1: home # chmod g+s /project-phoenix/
root@server1: home # ls -ld /project-phoenix/
drwxrwsr-x. 2 root users 68 Apr 16 02:18 /project-phoenix/
root@server1: home # su - snuffy
Last login: Tue Apr 16 02:17:55 UTC 2024 on pts/0
[snuffy@server1 ~]$ touch /project-phoenix/snuffy.file2
[snuffy@server1 ~]$ exxit
bash: exxit: command not found...
e^C
[snuffy@server1 ~]$ exit
logout
root@server1: home # su - ursula
Last login: Tue Apr 16 02:18:22 UTC 2024 on pts/0
[ursula@server1 ~]$ touch /project-phoenix/ursula.file2
[ursula@server1 ~]$ exit
logout
root@server1: home # su - mortimer
Last login: Tue Apr 16 02:18:36 UTC 2024 on pts/0
[mortimer@server1 ~]$ touch /project-phoenix/mortimer.file2
[mortimer@server1 ~]$ exit
logout
root@server1: home # ls -ld /project-phoenix/
drwxrwsr-x. 2 root users 130 Apr 16 02:20 /project-phoenix/
root@server1: home # ls -l /project-phoenix/
total 0
-rw-r--r--. 1 mortimer sysadmins 0 Apr 16 02:18 mortimer.file1
-rw-r--r--. 1 mortimer users     0 Apr 16 02:20 mortimer.file2
-rw-r--r--. 1 snuffy  users     0 Apr 16 02:18 snuffy.file1
-rw-r--r--. 1 snuffy  users     0 Apr 16 02:20 snuffy.file2
-rw-r--r--. 1 ursula  devops   0 Apr 16 02:18 ursula.file1
```

```
-rw-r--r--. 1 ursula users 0 Apr 16 02:20 ursula.file2
```

make another change to make sure users cannot delete files from other users

```
root@server1: home # chmod +t /project-phoenix/
root@server1: home # ls -ld /project-phoenix/
drwxrwsr-t. 2 root users 130 Apr 16 02:20 /project-phoenix/ # Notice there is a t at the end of the permissions
root@server1: home #
root@server1: home # chown .users /project-phoenix/*.* # change all file groups to users
root@server1: home # ls -l /project-phoenix/
total 0
-rw-r--r--. 1 mortimer users 0 Apr 16 02:18 mortimer.file1
-rw-r--r--. 1 mortimer users 0 Apr 16 02:20 mortimer.file2
-rw-r--r--. 1 snuffy users 0 Apr 16 02:18 snuffy.file1
-rw-r--r--. 1 snuffy users 0 Apr 16 02:20 snuffy.file2
-rw-r--r--. 1 ursula users 0 Apr 16 02:18 ursula.file1
-rw-r--r--. 1 ursula users 0 Apr 16 02:20 ursula.file2
```

Revision #2

Created 16 April 2024 00:34:29 by Cesar Gzz

Updated 16 April 2024 02:27:46 by Cesar Gzz