

Hands-on Lab

User Groups and Accounts Tasks



Linux Academy



Cloud Assessments

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This lab covers how to create user groups and then manage those groups by assigning them account tasks, folders, and other privileges.

Setting Up Password Parameters

Log in to the provided lab instance using the credentials provided on the Hands-on Lab page and make yourself the `root` user using `sudo su -`.

Once we sign in to the instance, we need to change some of the login information, specifically the password information. To do so, use your preferred text editor.

```
[root@linuxacademy ~]# $EDITOR /etc/login.defs
```

Change the maximum amount of days a password can be used, the minimum amount of days allowed between password changes, the minimum password length, and the number of days that a warning is provided before the password expires. To do this, we'll be using the `i` command to insert the new values. We'll be changing the `MAX` to 60, length to 10, and `WARN` to 10. Note that you can make these whatever you want, we're just using these numbers for this example.

```
PASS_MAX_DAYS      60
PASS_MAX_DAYS      0
PASS_MIN_LEN       10
PASS_WARN_AGE      10
```

Once finished, save and quit and file.

Adding Users

With the password parameters set, we will now move on to adding our new users. For our example, we are using usernames that are only five characters long. Usernames can be longer or shorter than this, but we will only be using five. While adding the users, we will use the comment field, `-c`, when adding the user's name.

```
[root@linuxacademy ~]# useradd -c "Sam Browne" sbrow
[root@linuxacademy ~]# useradd -c "Caius Marco" cmarc
[root@linuxacademy ~]# useradd -c "Usko Stylianos" ustyl
[root@linuxacademy ~]# useradd -c "Duane Aleksandrop" dalek
```

We can make sure the users have been added by doing the following command:

```
[root@linuxacademy ~]# cat /etc/passwd
```

The users will appear at the bottom of the screen.

Now that we have confirmed our users have been added, we need to provide each user with a password. Make sure to copy down these passwords for yourself as you will need them later in the lab. Note that if we try to use simple passwords like `password`, it will not be accepted.

```
[root@linuxacademy ~]# passwd sbrow
Changing password for user sbrow.
New password: $PASSWORD
Retype new password: $PASSWORD
passwd: all authentication tokens updated successfully
[root@linuxacademy ~]# passwd cmarc
Changing password for user cmarc.
New password: $PASSWORD
Retype new password: $PASSWORD
passwd: all authentication tokens updated successfully
[root@linuxacademy ~]# passwd ustyl
Changing password for user ustyl.
New password: $PASSWORD
Retype new password: $PASSWORD
passwd: all authentication tokens updated successfully
[root@linuxacademy ~]# passwd dalek
Changing password for user dalek.
New password: $PASSWORD
Retype new password: $PASSWORD
passwd: all authentication tokens updated successfully
```

To check that passwords have been added to each user, we're going to use `tail` to review the `/etc/shadow` file:

```
[root@linuxacademy ~]# tail /etc/shadow
```

The usernames will appear along with their encrypted passwords.

Adding Groups

With our users added it's time to create groups for them. We will be adding three different groups; marketing, sales, and creative.

```
[root@linuxacademy ~]# groupadd marketing
[root@linuxacademy ~]# groupadd sales
[root@linuxacademy ~]# groupadd creative
```

To check on our groups, we'll do the following:

```
[root@linuxacademy ~]# tail /etc/group
```

The groups will appear under the user names.

Create Folders

Now that we have groups we need folders for those groups. We'll be making three folders, one for each group.

```
[root@linuxacademy ~]# mkdir /groups
[root@linuxacademy ~]# mkdir /groups/marketing
[root@linuxacademy ~]# mkdir /groups/sales
[root@linuxacademy ~]# mkdir /groups/creative
```

Once created, we can view the folders:

```
[root@linuxacademy ~]# ll /groups/
```

The groups will appear.

Group Ownership

Now that we have the groups, we want to make sure that the groups own their corresponding files. To check who owns what, we need to look at the group's directory:

```
[root@linuxacademy ~]# cd /groups/
[root@linuxacademy ~]# ll
```

All folders will show that they are owned by `root`. To have them owned by the correct group, we'll make use of the recursion flag, `-R`:

```
[root@linuxacademy ~]# chgrp -R creative creative
[root@linuxacademy ~]# chgrp -R marketing marketing
[root@linuxacademy ~]# chgrp -R sales sales
```

Once everything is set, use `ll` to check that ownership is now set to the corresponding group instead of `root`:

```
[root@linuxacademy ~]# ll
drwxr-xr-x. 2 root creative $DATE $TIME creative
drwxr-xr-x. 2 root creative $DATE $TIME marketing
drwxr-xr-x. 2 root creative $DATE $TIME sales
```

File Ownership

Now that the folders are completed, we want to make sure that any files made in the folders keep the same ownership as the folder:

```
[root@linuxacademy ~]# chmod g+srw creative
[root@linuxacademy ~]# chmod g+srw marketing
[root@linuxacademy ~]# chmod g+srw sales
```

Review the folders to see that the `drwxr-xr-x` is now `drwxr-rwsr-x`:

```
[root@linuxacademy ~]# ll
drwx-rwsr-x. 2 root creative $DATE $TIME creative
```

Add Users to Groups

With all of our folders set up, it is time to add our users to the groups. We'll add `sbrow` and `cmarc` to marketing, `ustyl` to sales, and `dalek` to creative:

```
[root@linuxacademy ~]# usermod -G marketing cmarc
[root@linuxacademy ~]# usermod -G marketing sbrow
[root@linuxacademy ~]# usermod -G sales ustyl
[root@linuxacademy ~]# usermod -G creative dalek
```

After adding them, review that they have been added to the correct groups:

```
[root@linuxacademy ~]# tail /etc/group
```

With everyone set in their groups, it's time to go poke around in the folders and check that everyone has the correct permissions. To do that, we'll need to log in as a user. For now, let's practice with the username `ustyl`:

```
[root@linuxacademy ~]# su - ustyl
[ustyl@linuxacademy ~]$ pwd
/home/ustyle
[ustyl@linuxacademy ~]$ cd /groups/sales/
[ustyl@linuxacademy sales]$ pwd
groups/sales
[ustyl@linuxacademy sales]$ touch testfile
[ustyl@linuxacademy sales]$ ll
total 0
-rw-rw-r--. 1 ustyl sales 0 $DATE $TIME testfile
```

We can now see that `ustyl` is the owner and that they are in the `sales` folder. Now have `ustyl` try and create a file in another folder.

```
[ustyl@linuxacademy ~sales]$ cd ../marketing/  
[ustyl@linuxacademy marketing]$ touch testfile
```

`ustyl` should get a message that he cannot create the file. This lets us know that we have set the file permissions up correctly. You can repeat this with one of the other users as well just to be sure.

Removing a User

Before removing a user, make sure to use `exit` to logout and return to the `root` user. Once you're root again, then we can begin removing a user. Again, we'll use `ustyl` as our example. We will delete and then review our users to make sure that `ustyl` was removed.

```
[root@linuxacademy ~]# userdel -r ustyl  
[root@linuxacademy ~]# ll /home/
```

The `ustyl` username should no longer be present.

Review

After completing this lab, you are now able to add users, groups, folders, and then connect those folders back to the users and groups created; as well as delete users. Congratulations on completing this lab!