# Managing File Permissions

Note

All labs rely on previous courseware and lab information.

# Scenario

This week, you approach Mr. X. You spent too much time and money in the mall last week. In conversation, you mention you are looking for some overtime, and oh boy does he have just the thing for you. On top of your current workload, he would like you to go back through and edit all the files and folders to ensure that the proper groups have the proper permissions. Also, he is in desperate need of making sure the CEO files are only viewable and modifiable by the CEO.

# Objectives

In this lab, you will:

* Change all folder and file permissions to match the appropriate group structure
* Modify file permissions for the CEO only files provided
* Update the company structure to include Shipping and Sales

## Exercise 1: Change File and Folder Ownership

It seems as though Mr. X has run into some time management problems this week and needs to get some additional work done. After you approached requesting for overtime, he excitedly obliged. Change all the file and folder permissions to match the appropriate group structure.

Helpful Hint

You may have to use **sudo** to complete this exercise if you are not root.

### TODO

1. Change the ownership of the entire **companyA** folder recursively to be owned by the **CEO** with the group ownership by **Personnel**.
2. Change the ownership of the **HR** folder to be the **HR Manager** with the group **HR**.
3. Change the ownership of the **Finance** Folder to be the **Finance Manager** with the group **Finance**.

### Steps

1. Validate that you are in the **/home/YOURUSERNAME/companyA** folder by typing **pwd** and pressing ENTER.
2. Change the ownership of the **companyA** folder structure to be owned by **emcbath** with a group ownership by **Personnel** by typing

**sudo chown -R emcbath:Personnel /home/YOURUSERNAME/companyA** and pressing ENTER.

Note

There is a space following the command followed by a period to represent the current location.

1. Change the ownership of the **HR** folder to the HR manager **ctee** by typing

**sudo chown -R ctee:HR HR** and pressing ENTER.

1. Change the ownership of the **HR/Finance** folder to the **Finance** manager by typing **sudo chown -R dolberdi:Finance HR/Finance** and pressing ENTER.
2. Validate your work by using the using the recursive feature of the **ls** command by typing **ls -laR** and pressing ENTER.

Ownership Permissions of the **companyA** Folder Structure

[labsuser@centos companyA]$ ls -laR

.:

total 32

drwxr-xr-x 1 emcbath Personnel 4096 Aug 24 23:10 .

drwxrwx--- 1 labsuser 48 4096 Aug 24 23:11 ..

drwxr-xr-x 1 emcbath Personnel 4096 Aug 24 23:10 .CEO

drwxr-xr-x 1 emcbath Personnel 4096 Aug 24 23:10 Employees

-rw-r--r-- 1 emcbath Personnel 2464 Aug 24 23:10 FolderListing.csv

drwxr-xr-x 1 ctee HR 4096 Aug 24 23:10 HR

drwxr-xr-x 1 emcbath Personnel 4096 Aug 24 23:10 Management

-rw-r--r-- 1 emcbath Personnel 0 Aug 24 23:10 Roster.csv

drwxr-xr-x 1 emcbath Personnel 4096 Aug 24 23:10 SharedFolders

./.CEO:

total 12

drwxr-xr-x 1 emcbath Personnel 4096 Aug 24 23:10 .

drwxr-xr-x 1 emcbath Personnel 4096 Aug 24 23:10 ..

-rw-r--r-- 1 emcbath Personnel 2680 Aug 24 23:10 CompanyAudit.csv

./Employees:

total 8

drwxr-xr-x 1 emcbath Personnel 4096 Aug 24 23:10 .

drwxr-xr-x 1 emcbath Personnel 4096 Aug 24 23:10 ..

./HR:

total 24

drwxr-xr-x 1 ctee HR 4096 Aug 24 23:10 .

drwxr-xr-x 1 emcbath Personnel 4096 Aug 24 23:10 ..

drwxr-xr-x 1 ctee HR 4096 Aug 24 23:10 Employees

drwxr-xr-x 1 dolberdi Finance 4096 Aug 24 23:10 Finance

drwxr-xr-x 1 ctee HR 4096 Aug 24 23:10 Management

drwxr-xr-x 1 ctee HR 4096 Aug 24 23:10 NewHires

./HR/Employees:

total 8

drwxr-xr-x 1 ctee HR 4096 Aug 24 23:10 .

drwxr-xr-x 1 ctee HR 4096 Aug 24 23:10 ..

-rw-r--r-- 1 ctee HR 0 Aug 24 23:10 Layoffs.csv

-rw-r--r-- 1 ctee HR 0 Aug 24 23:10 MonthlyAssessments.csv

-rw-r--r-- 1 ctee HR 0 Aug 24 23:10 YearlyAssessments.csv

./HR/Finance:

total 8

drwxr-xr-x 1 dolberdi Finance 4096 Aug 24 23:10 .

drwxr-xr-x 1 ctee HR 4096 Aug 24 23:10 ..

-rw-r--r-- 1 dolberdi Finance 0 Aug 24 23:10 Hourly.csv

-rw-r--r-- 1 dolberdi Finance 0 Aug 24 23:10 Income Generation.csv

-rw-r--r-- 1 dolberdi Finance 0 Aug 24 23:10 Profit And Loss Statements.csv

-rw-r--r-- 1 dolberdi Finance 0 Aug 24 23:10 Salary.csv

./HR/Management:

total 8

drwxr-xr-x 1 ctee HR 4096 Aug 24 23:10 .

drwxr-xr-x 1 ctee HR 4096 Aug 24 23:10 ..

-rw-r--r-- 1 ctee HR 0 Aug 24 23:10 Losses.csv

-rw-r--r-- 1 ctee HR 0 Aug 24 23:10 Managers.csv

-rw-r--r-- 1 ctee HR 0 Aug 24 23:10 Orders.csv

-rw-r--r-- 1 ctee HR 0 Aug 24 23:10 Profits.csv

-rw-r--r-- 1 ctee HR 0 Aug 24 23:10 Repairs.csv

-rw-r--r-- 1 ctee HR 0 Aug 24 23:10 Schedule.csv

-rw-r--r-- 1 ctee HR 0 Aug 24 23:10 Sections.csv

./HR/NewHires:

total 8

drwxr-xr-x 1 ctee HR 4096 Aug 24 23:10 .

drwxr-xr-x 1 ctee HR 4096 Aug 24 23:10 ..

-rw-r--r-- 1 ctee HR 0 Aug 24 23:10 Assessments.csv

-rw-r--r-- 1 ctee HR 0 Aug 24 23:10 TrialPeriod.csv

./Management:

total 8

drwxr-xr-x 1 emcbath Personnel 4096 Aug 24 23:10 .

drwxr-xr-x 1 emcbath Personnel 4096 Aug 24 23:10 ..

./SharedFolders:

total 16

drwxr-xr-x 1 emcbath Personnel 4096 Aug 24 23:10 .

drwxr-xr-x 1 emcbath Personnel 4096 Aug 24 23:10 ..

-rw-r--r-- 1 emcbath Personnel 1780 Aug 24 23:10 CompanyAudit.csv

-rw-r--r-- 1 emcbath Personnel 2444 Aug 24 23:10 logins.csv

## Exercise 2: Change Password and Ownership

Mr. X has been a little bit stressed lately. He has been asking a few unnerving questions to all the current employees. During lunch, as you're enjoying your maple bacon donut, the CEO walks up to your desk. He asks that you ensure that he is the only one with access to his folder **.CEO** and that the **CompanyAudit.csv** file is only accessible from the **CEO** group members. The CEO also asks that you change the password of the **CEO** group to **ImAbout2AuditMrXForWastingMyMoney**.

Helpful Hint

You may have to use **sudo** to complete this exercise if you are not root.

### TODO

1. Create/change the CEO group password to **ImAbout2AuditMrXForWastingMyMoney**.
2. Change the group ownership of the folder and all subitems in **companyA/.CEO** to be owned by the **CEO** and group **CEO.**
3. Validate that only the CEO has permissions to the **.CEO** folder and all its subfolders/files.

### Steps

1. Validate that you are in the **/home/YOURUSERNAME/companyA folder** by typing **pwd** and pressing ENTER.
2. Change the current group password for the CEO group by typing s**udo gpasswd CEO** and pressing ENTER.
3. Type the password **ImAbout2AuditMrXForWastingMyMoney** and press ENTER.
4. Confirm the password by repeating step 3.
5. Change the ownership of the **.CEO** folder to be owned by the current CEO and CEO group by typing

**sudo chown -R emcbath:CEO /home/YOURUSERNAME/companyA/.CEO** and press ENTER.

1. At the password prompt, type your password and press ENTER.
2. Validate the ownership has been changed by typing **ls -laR .CEO** and comparing it to the following results.

[labsuser@centos companyA]$ sudo gpasswd CEO

Changing the password for group CEO

New Password:

Re-enter new password:

[labsuser@centos companyA]$ sudo chown -R emcbath:CEO /home/labsuser/companyA/.CEO

[labsuser@centos companyA]$ ls -laR .CEO

.CEO:

total 12

drwxr-xr-x 1 emcbath CEO 4096 Aug 24 23:10 .

drwxr-xr-x 1 emcbath Personnel 4096 Aug 24 23:10 ..

-rw-r--r-- 1 emcbath CEO 2680 Aug 24 23:10 CompanyAudit.csv

## Exercise 3: Create New Folders and Assign Permissions\*\*

Just because the CEO came to your desk, doesn’t mean that you do not need to accomplish the tasks that were set aside for you to complete. Create the new folders and assign appropriate permissions.

Helpful Hint

You may have to use sudo to complete this exercise if you are not root.

## TODO

1. Add the **Shipping** and **Sales** folders under the company folder structure, and ensure the proper personnel have been assigned appropriate permissions.

## Steps

1. Validate that you are in the **/home/YOURUSERNAME/companyA** folder by typing **pwd** and pressing ENTER.
2. Using the **mkdir** command, create the folders **Shipping** and **Sales** by typing **sudo mkdir Shipping Sales** and pressing ENTER.
3. At the password prompt, type your password and press ENTER.
4. Modify the ownership of the **Shipping** folder to be **eleonard**, the current **Shipping** manager, and the group to be Shipping. You can do this by typing

**sudo chown -R eleonard:Shipping Shipping** and pressing ENTER.

1. Repeat step 4 for the **Sales** folder with the username **isteinke** being the **Sales** manager.
2. Validate your work by using the **ls** command on the folders you just created. Type **ls -laR Shipping** and ls **-laR Sales**; then press ENTER.

[labsuser@centos companyA]$ ls -laR Shipping

Shipping:

total 8

drwxr-xr-x 2 eleonard Shipping 4096 Aug 24 23:41 .

drwxr-xr-x 1 emcbath Personnel 4096 Aug 24 23:41 ..

[labsuser@centos companyA]$ ls -laR Sales

Sales:

total 8

drwxr-xr-x 2 isteinke Sales 4096 Aug 24 23:41 .

drwxr-xr-x 1 emcbath Personnel 4096 Aug 24 23:41 ..

[labsuser@centos companyA]$

## STOP

You have successfully completed this lab.