aws re/start

FORGE FUNDACIÓN

| Lab 237

Managing File Permissions

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Bootcamp: Forge AWS re/Start UYMON5
Date: 2023

Objectives

In this lab, you will:

- Change all folder and file permissions to match the appropriate group structure
- Modify file permissions for a user
- Update the company folder structure

Accessing the AWS Management Console

1. At the top of these instructions, choose Start Lab to launch your lab. A **Start Lab** panel opens, and it displays the lab status.

   Tip: If you need more time to complete the lab, choose the Start Lab button again to restart the timer for the environment.

2. Wait until you see the message *Lab status: ready*, then close the **Start Lab** panel by choosing the **X**.
3. At the top of these instructions, choose AWS. This opens the AWS Management Console in a new browser tab. The system will automatically log you in.

   Tip: If a new browser tab does not open, a banner or icon is usually at the top of your browser with a message that your browser is preventing the site from opening pop-up windows. Choose the banner or icon and then choose **Allow pop ups**.

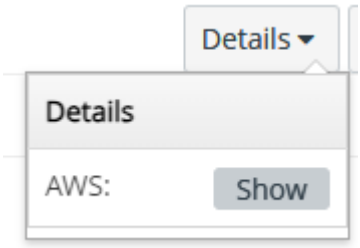
4. Arrange the AWS Management Console tab so that it displays alongside these instructions. Ideally, you will be able to see both browser tabs at the same time so that you can follow the lab steps more easily.

Task 1: Use SSH to connect to an Amazon Linux EC2 instance

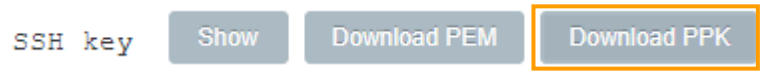
In this task, you will connect to a Amazon Linux EC2 instance. You will use an SSH utility to perform all of these operations.

Windows Users: Using SSH to Connect

1. Select the Details drop-down menu above these instructions you are currently reading, and then select Show. A Credentials window will be presented.



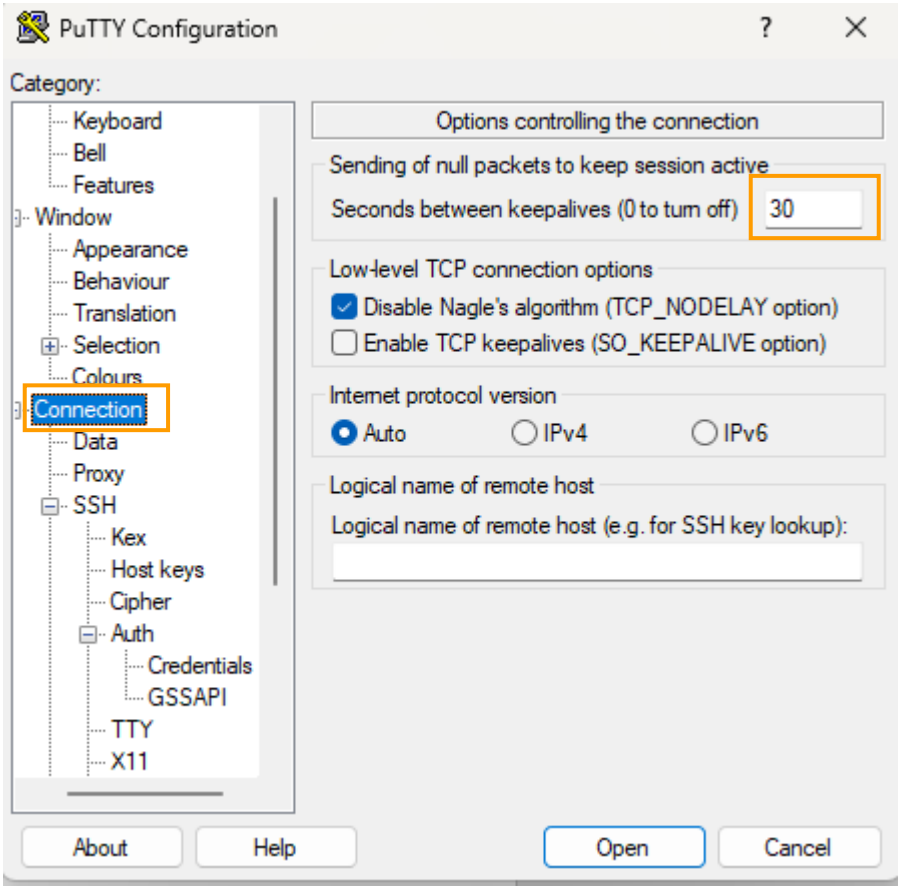
2. Select the **Download PPK** button and save the **labsuser.ppk** file.



3. Make a note of the **PublicIP** address.

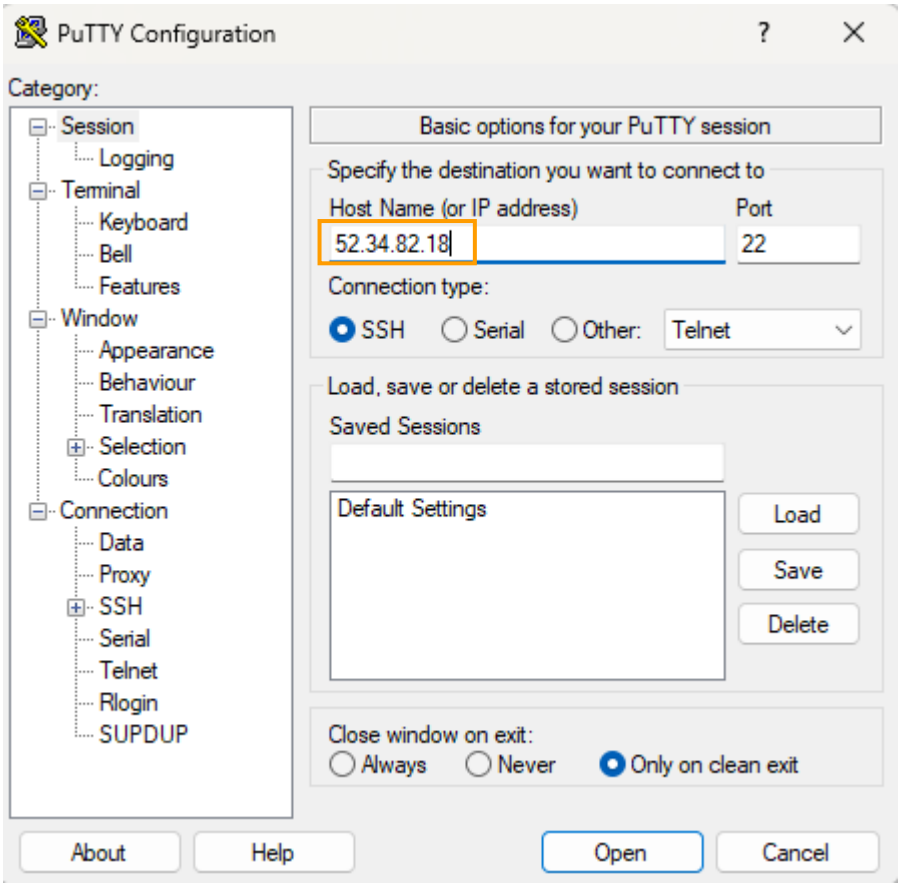
4. Then exit the Details panel by selecting the **X**.
5. Download **PuTTY** to SSH into the Amazon EC2 instance. If you do not have PuTTY installed on your computer.
6. Open **putty.exe**
7. Configure PuTTY timeout to keep the PuTTY session open for a longer period of time.:

- Select **Connection**
- Set **Seconds between keepalives** to `30`

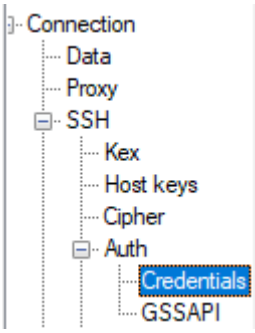


8. Configure your PuTTY session:
   - Select **Session**

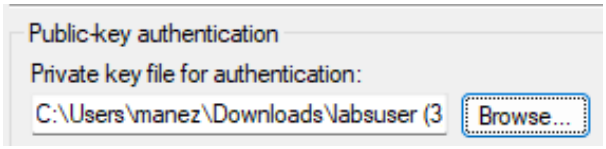
- **Host Name (or IP address):** Paste the **Public DNS or IPv4 address** of the instance you made a note of earlier. Alternatively, return to the EC2 Console and select **Instances**. Check the box next to the instance you want to connect to and in the *Description* tab copy the **IPv4 Public IP** value



- Back in PuTTY, in the **Connection** list, expand **SSH** and select **Auth** *(don't expand it)*

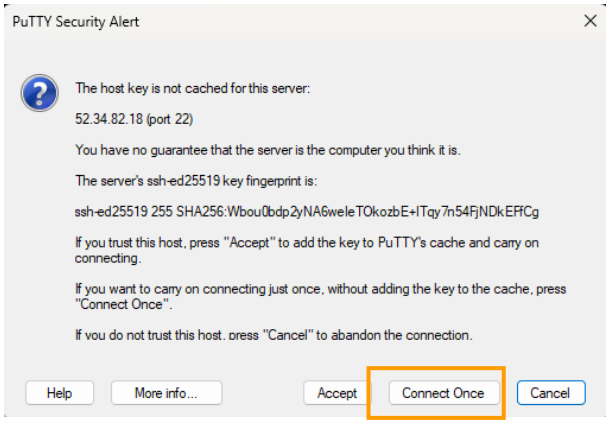


- Select **Browse** and select the lab#.ppk file that you downloaded

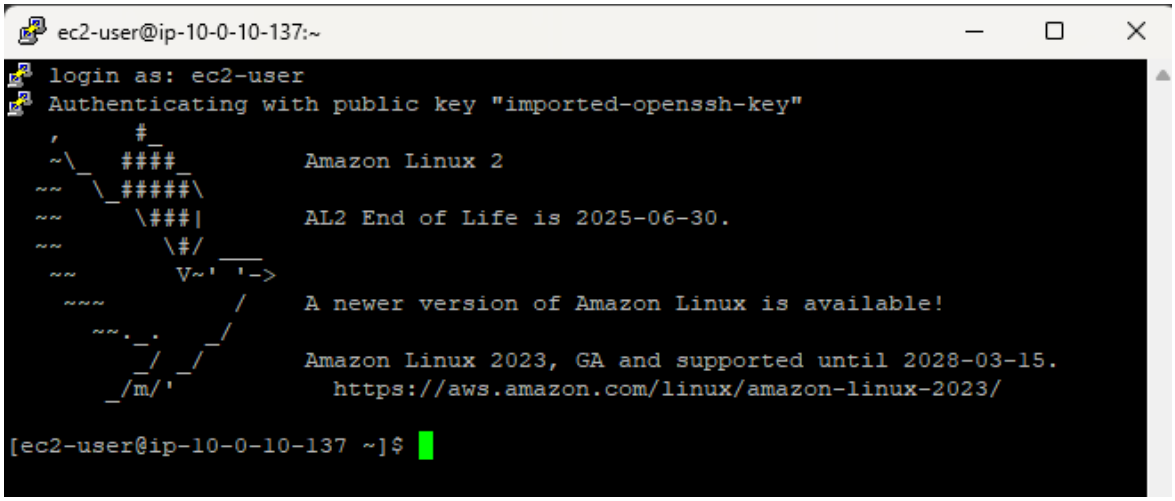


- Select **Open** to select it and then select **Open** again.

9. Select **Yes**, to trust and connect to the host.



10. When prompted **login as**, enter: `ec2-user` This will connect you to the EC2 instance.



Task 2: Change file and folder ownership

In this exercise, you will change the following ownership:

24. companyA folder ownership to the CEO and group ownership to Personnel

25. HR folder ownership to the HR manager and group ownership to HR
26. Finance folder ownership to the finance manager and group ownership to Finance

27. To validate that you are in the **/home/ec2-user/companyA** folder, enter `pwd` and press Enter.

```
[ec2-user@ip-10-0-10-192 ~]$ pwd
/home/ec2-user
[ec2-user@ip-10-0-10-192 ~]$
```

If you are not in this folder, enter `cd companyA` and press Enter.

```
[ec2-user@ip-10-0-10-192 ~]$ cd companyA
[ec2-user@ip-10-0-10-192 companyA]$ pwd
/home/ec2-user/companyA
[ec2-user@ip-10-0-10-192 companyA]$
```

28. To change the ownership of the **companyA** folder structure to the CEO mjackson and the group ownership to Personnel, enter `sudo chown -R mjackson:Personnel /home/ec2-user/companyA` and press Enter.

```
[ec2-user@ip-10-0-10-192 companyA]$ sudo chown -R mjackson:Personnel /home/ec2-u
ser/companyA
[ec2-user@ip-10-0-10-192 companyA]$
```

29. To change the ownership of the HR folder to the HR manager ljuan, enter `sudo chown -R ljuan:HR HR` and press Enter.

```
[ec2-user@ip-10-0-10-192 companyA]$ sudo chown -R ljuan:HR HR
[ec2-user@ip-10-0-10-192 companyA]$
```

30. To change the ownership of the HR/Finance folder to the finance manager, enter `sudo chown -R mmajor:Finance HR/Finance` and press Enter.

```
[ec2-user@ip-10-0-10-192 companyA]$ sudo chown -R mmajor:Finance HR/Finance
[ec2-user@ip-10-0-10-192 companyA]$
```

31. To validate your work by using the recursive feature of the **ls** command, enter `ls -laR` and press Enter.

Figure: When using the command ls -laR the output shows the ownership permissions of the entire companyA folder structure. This folder strcutre includes the following: Documents, Employees, HR, Management, Roster.csv, Sales, SharedFolders, and Shipping.

```
[ec2-user@ip-10-0-10-192 companyA]$ sudo chown -R mmajor:Finance HR/Finance
[ec2-user@ip-10-0-10-192 companyA]$ ls -laR
.:
total 0
drwxr-xr-x 10 mjackson Personnel 147 Oct 27 21:21 .
drwx------  4 ec2-user ec2-user   90 Oct 27 21:21 ..
drwxr-xr-x  2 mjackson Personnel   6 Oct 27 21:21 CEO
drwxr-xr-x  2 mjackson Personnel   6 Oct 27 21:21 Documents
drwxr-xr-x  2 mjackson Personnel   6 Oct 27 21:21 Employees
drwxr-xr-x  6 ljuan    HR         72 Oct 27 21:21 HR
drwxr-xr-x  2 mjackson Personnel   6 Oct 27 21:21 Management
-rw-r--r--  1 mjackson Personnel   0 Oct 27 21:21 Roster.csv
drwxr-xr-x  2 mjackson Personnel   6 Oct 27 21:21 Sales
drwxr-xr-x  2 mjackson Personnel  24 Oct 27 21:21 SharedFolders
drwxr-xr-x  2 mjackson Personnel   6 Oct 27 21:21 Shipping

./CEO:
total 0
drwxr-xr-x  2 mjackson Personnel   6 Oct 27 21:21 .
drwxr-xr-x 10 mjackson Personnel 147 Oct 27 21:21 ..

./Documents:
total 0
drwxr-xr-x  2 mjackson Personnel   6 Oct 27 21:21 .
drwxr-xr-x 10 mjackson Personnel 147 Oct 27 21:21 ..

./Employees:
total 0
drwxr-xr-x  2 mjackson Personnel   6 Oct 27 21:21 .
drwxr-xr-x 10 mjackson Personnel 147 Oct 27 21:21 ..

./HR:
total 0
drwxr-xr-x  6 ljuan    HR         72 Oct 27 21:21 .
drwxr-xr-x 10 mjackson Personnel 147 Oct 27 21:21 ..
drwxr-xr-x  2 ljuan    HR         84 Oct 27 21:21 Employees
drwxr-xr-x  2 mmajor   Finance   105 Oct 27 21:21 Finance
drwxr-xr-x  2 ljuan    HR        140 Oct 27 21:21 Management
drwxr-xr-x  2 ljuan    HR         52 Oct 27 21:21 NewHires
```

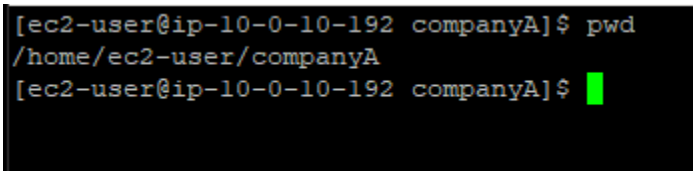
```
./HR/Employees:
total 0
drwxr-xr-x 2 ljuan HR 84 Oct 27 21:21 .
drwxr-xr-x 6 ljuan HR 72 Oct 27 21:21 ..
-rw-r--r-- 1 ljuan HR  0 Oct 27 21:21 Layoffs.csv
-rw-r--r-- 1 ljuan HR  0 Oct 27 21:21 MonthlyAssessments.csv
-rw-r--r-- 1 ljuan HR  0 Oct 27 21:21 YearlyAssessments.csv

./HR/Finance:
total 0
drwxr-xr-x 2 mmajor Finance 105 Oct 27 21:21 .
drwxr-xr-x 6 ljuan  HR       72 Oct 27 21:21 ..
-rw-r--r-- 1 mmajor Finance   0 Oct 27 21:21 Hourly.csv
-rw-r--r-- 1 mmajor Finance   0 Oct 27 21:21 IncomeGeneration.csv
-rw-r--r-- 1 mmajor Finance   0 Oct 27 21:21 ProfitAndLossStatements.csv
-rw-r--r-- 1 mmajor Finance   0 Oct 27 21:21 Salary.csv

./HR/Management:
total 0
drwxr-xr-x 2 ljuan HR 140 Oct 27 21:21 .
drwxr-xr-x 6 ljuan HR  72 Oct 27 21:21 ..
-rw-r--r-- 1 ljuan HR   0 Oct 27 21:21 Losses.csv
-rw-r--r-- 1 ljuan HR   0 Oct 27 21:21 Managers.csv
-rw-r--r-- 1 ljuan HR   0 Oct 27 21:21 Orders.csv
-rw-r--r-- 1 ljuan HR   0 Oct 27 21:21 Profits.csv
-rw-r--r-- 1 ljuan HR   0 Oct 27 21:21 Repairs.csv
-rw-r--r-- 1 ljuan HR   0 Oct 27 21:21 Schedule.csv
-rw-r--r-- 1 ljuan HR   0 Oct 27 21:21 Sections.csv

./HR/NewHires:
total 0
drwxr-xr-x 2 ljuan HR 52 Oct 27 21:21 .
drwxr-xr-x 6 ljuan HR 72 Oct 27 21:21 ..
-rw-r--r-- 1 ljuan HR  0 Oct 27 21:21 Assessments.csv
-rw-r--r-- 1 ljuan HR  0 Oct 27 21:21 TrialPeriod.csv

./Management:
total 0
drwxr-xr-x  2 mjackson Personnel   6 Oct 27 21:21 .
drwxr-xr-x 10 mjackson Personnel 147 Oct 27 21:21 ..
```

Task 3: Change permission modes

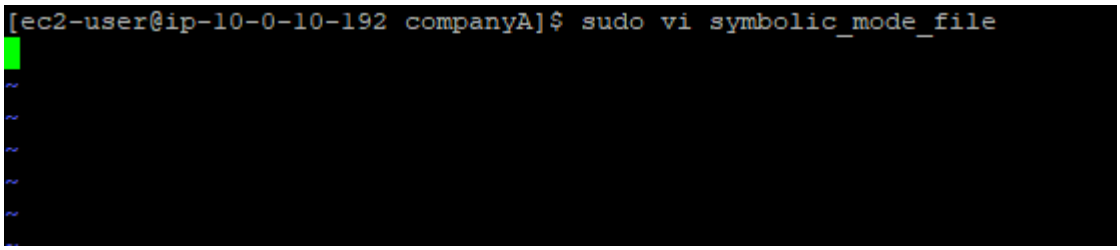
In this task, you change permission modes. You create and change permissions using the **chomd** command.

Recall that the **chmod** command changes the permissions of your files. There are two modes: symbolic and absolute. Symbolic mode uses both letters and symbols to manipulate permissions, and absolute mode uses only numbers to represent permissions.

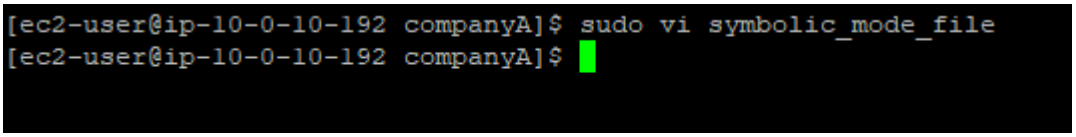
32. To validate that you are in the **/home/ec2-uer/companyA** folder, enter `pwd` and press Enter.



33. Use vim to create a file called **symbolic_mode_file**. To create this file, enter `sudo vi symbolic_mode_file` and press Enter.



34. To save and close the file, press ESC. Then enter `:wq` and press Enter.



35. To use the symbolic mode for **chmod** to change the file permissions, enter `sudo chmod g+w symbolic_mode_file` and press Enter. You just gave the group owner write permissions to **symbolic_mode_file**.

```
[ec2-user@ip-10-0-10-192 companyA]$ sudo chmod g+w symbolic_mode_file
[ec2-user@ip-10-0-10-192 companyA]$
```

36. Use vim to create a file called **absolute_mode_file**. To create this file, enter `sudo vi absolute_mode_file` and press Enter.

37. To save and close the file, press ESC. Then enter `:wq` and press Enter.

```
[ec2-user@ip-10-0-10-192 companyA]$ sudo vi absolute_mode_file
[ec2-user@ip-10-0-10-192 companyA]$
```

38. To use the absolute mode for **chmod** to change the file permissions, enter `sudo chmod 764 absolute_mode_file` and press Enter.

    764 means that the user has read, write, and execute permissions on the absolute_mode_file.

```
[ec2-user@ip-10-0-10-192 companyA]$ sudo chmod 764 absolute_mode_file
[ec2-user@ip-10-0-10-192 companyA]$
```

39. To confirm this information, enter the `ls -l` command and press Enter. You should see the two files that you created with the correlating read, write, and execute permissions.

```
[ec2-user@ip-10-0-10-192 companyA]$ ls -l
total 0
-rwxrw-r-- 1 root     root       0 Oct 27 22:16 absolute_mode_file
drwxr-xr-x 2 mjackson Personnel  6 Oct 27 21:21 CEO
drwxr-xr-x 2 mjackson Personnel  6 Oct 27 21:21 Documents
drwxr-xr-x 2 mjackson Personnel  6 Oct 27 21:21 Employees
drwxr-xr-x 6 ljuan    HR        72 Oct 27 21:21 HR
drwxr-xr-x 2 mjackson Personnel  6 Oct 27 21:21 Management
-rw-r--r-- 1 mjackson Personnel  0 Oct 27 21:21 Roster.csv
drwxr-xr-x 2 mjackson Personnel  6 Oct 27 21:21 Sales
drwxr-xr-x 2 mjackson Personnel 24 Oct 27 21:21 SharedFolders
drwxr-xr-x 2 mjackson Personnel  6 Oct 27 21:21 Shipping
-rw-rw-r-- 1 root     root       0 Oct 27 22:13 symbolic_mode_file
[ec2-user@ip-10-0-10-192 companyA]$
```

Figure: When using the command sudo chmod 764 absolute_mode_file, the user in the file will have read, write, and execute permissions for the absolute_mode_file. This is confirmed by running the command ls -l which lists the read, write, and execute permissions of the user.

Task 4: Assign permissions

In this exercise, you assign the appropriate permissions to the **Shipping** and **Sales** folders.

40. To validate that you are in the **/home/ec2-user/companyA** folder, enter `pwd` and press Enter.

```
[ec2-user@ip-10-0-10-192 companyA]$ pwd
/home/ec2-user/companyA
[ec2-user@ip-10-0-10-192 companyA]$
```

41. To change the ownership of the **Shipping** folder to eowusu, the current shipping manager, and the group ownership to Shipping, enter `sudo chown -R eowusu:Shipping Shipping` and press Enter.

```
[ec2-user@ip-10-0-10-192 companyA]$ sudo chown -R eowusu:Shipping Shipping
[ec2-user@ip-10-0-10-192 companyA]$
```

42. To change the ownership of the **Sales** folder to nwolf, the current sales manager, and the group ownership to Sales, enter `sudo chown -R nwolf:Sales Sales` and press Enter.

```
[ec2-user@ip-10-0-10-192 companyA]$ sudo chown -R nwolf:Sales Sales
[ec2-user@ip-10-0-10-192 companyA]$
```

43. To validate your work, use the **ls** command on the folders that you just created.
    - To validate the changes to the **Shipping** folder, enter `ls -laR Shipping` and press Enter.

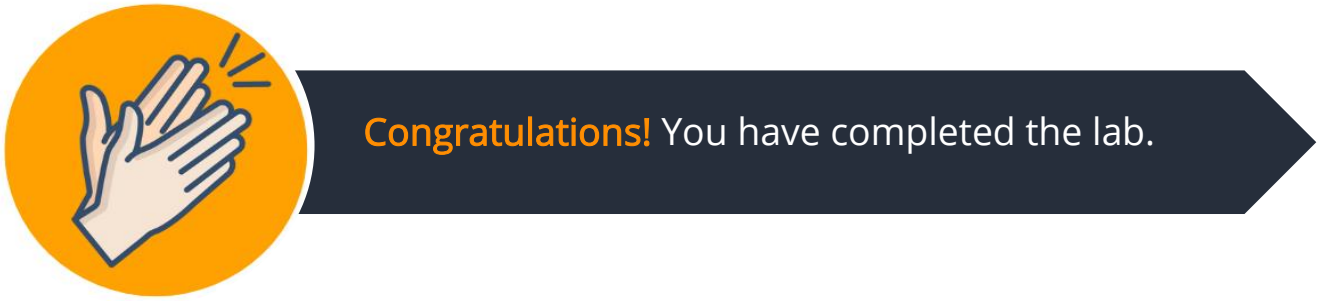
```
[ec2-user@ip-10-0-10-192 companyA]$ ls -laR Shipping
Shipping:
total 0
drwxr-xr-x  2 eowusu   Shipping    6 Oct 27 21:21 .
drwxr-xr-x 10 mjackson Personnel 199 Oct 27 22:16 ..
[ec2-user@ip-10-0-10-192 companyA]$
```

- To validate the changes to the **Sales** folder, enter and `ls -laR Sales` and press Enter.

```
[ec2-user@ip-10-0-10-192 companyA]$ ls -laR Sales
Sales:
total 0
drwxr-xr-x  2 nwolf    Sales       6 Oct 27 21:21 .
drwxr-xr-x 10 mjackson Personnel 199 Oct 27 22:16 ..
[ec2-user@ip-10-0-10-192 companyA]$
```

Figure: The command prompt shows the output of changing the ownership of the Shipping folder and its group to the user eleonard. This is confirmed by using the ls command. The same change of ownership is done for the Sales folder and its group to the user isteinke.

Lab Complete



44. Choose **End Lab** at the top of this page, and then select Yes to confirm that you want to end the lab.

    A panel indicates that *DELETE has been initiated... You may close this message box now.*

45. A message *Ended AWS Lab Successfully* is briefly displayed, indicating that the lab has ended.

Commands Used:

On this lab we used several commands to perform different tasks. Here is a summary of the commands used:

Command	*Description*
sudo chown -R mjackson:Personnel /home/ec2-user/companyA	Changes the ownership of the companyA folder structure to the user mjackson and the group Personnel.
sudo chown -R ljuan:HR HR	Changes the ownership of the HR folder to the user ljuan and the group HR.
sudo chown -R mmajor:Finance HR/Finance	Changes the ownership of the HR/Finance folder to the user mmajor and the group Finance.
ls -laR	Displays the ownership permissions of the entire companyA folder structure.
sudo vi symbolic_mode_file	Creates a file named symbolic_mode_file using the vim editor.
sudo chmod g+w symbolic_mode_file	Gives the group owner write permissions to the file symbolic_mode_file.
sudo vi absolute_mode_file	Creates a file named absolute_mode_file using the vim editor.
sudo chmod 764 absolute_mode_file	Gives the user read, write, and execute permissions on the file absolute_mode_file.
ls -l	Lists the read, write, and execute permissions of the files symbolic_mode_file and absolute_mode_file.
sudo chown -R eowusu:Shipping Shipping	Changes the ownership of the Shipping folder to the user eowusu and the group Shipping.
sudo chown -R nwolf:Sales Sales	Changes the ownership of the Sales folder to the user nwolf and the group Sales.
ls -laR Shipping	Displays the ownership permissions of the Shipping folder.
ls -laR Sales	Displays the ownership permissions of the Sales folder.