

Activity overview

Previously, you learned about Linux and how to communicate with the OS through the shell. You also learned how to use some of the core commands to navigate the Linux file system and read content from files it contains.

These are essential skills. For example, when investigating unauthorized access, you might navigate to and then read a user access report.

In this lab activity, you'll navigate a Linux file structure, locate files, and read the contents of files. You'll also need to answer a few multiple-choice questions based on the information contained in these files.

As a security analyst, it's key that you know how to navigate, manage, and analyze files remotely via a Linux shell without a graphical user interface.

Scenario

In this scenario, you have to locate and analyze the information of certain files located in the `/home/analyst` directory.

Here's how you'll do this: **First**, you'll get the information of the current working directory you're in and display the contents of the directory. **Second**, you'll navigate to the `reports` directory and list the subdirectories it contains. **Third**, you'll navigate to the `users` subdirectory and display the contents of the `Q1_added_users.txt` file. **Finally**, you'll navigate to the `logs` directory and display the first 10 lines of a file it contains.

To complete these tasks, you'll need to use commands that you've previously learned in this course. Well, it's time to practice what you've learned. Let's do this!

Task 1. Get the current directory information

In this task, you must use the commands you learned about to check the current working directory and list its contents.

1. Display your working directory.
2. Display the names of the files and directories in the current working directory.

```
analyst@57e1da910547:~$ clearpwd
-bash: clearpwd: command not found
analyst@57e1da910547:~$ ls
logs  projects  reports  temp
analyst@57e1da910547:~$ pwd
```

Task 2. Change directory and list the subdirectories

In this task, you must navigate to a new directory and determine the subdirectories it contains.

1. Navigate to the /home/analyst/reports directory.
2. Display the files and subdirectories in the /home/analyst/reports directory.

```
analyst@57e1da910547:~$ pwd
/home/analyst
analyst@57e1da910547:~$ cd reports
analyst@57e1da910547:~/reports$ ls
users
```

Task 3. Locate and read the contents of a file

In this task, you must navigate to a subdirectory and read the contents of a file it contains.

1. Navigate to the `/home/analyst/reports/users` directory.
2. List the files in the current directory.
3. Display the contents of the `Q1_added_users.txt` file.

```
analyst@57e1da910547:~$ pwd
/home/analyst
analyst@57e1da910547:~$ cd reports
analyst@57e1da910547:~/reports$ ls
users
analyst@57e1da910547:~/reports$ cd users
analyst@57e1da910547:~/reports/users$ ls
Q1_added_users.txt  Q1_deleted_users.txt
analyst@57e1da910547:~/reports/users$ pwd
/home/analyst/reports/users
analyst@57e1da910547:~/reports/users$ ls
Q1_added_users.txt  Q1_deleted_users.txt
analyst@57e1da910547:~/reports/users$ cat Q1_added_users.txt
employee_id  username  department
1001         bmoreno  Marketing
1026         apatel   Human Resources
1041         cgriffin Sales
1104         mreed    Information Technology
1177         aezra    Human Resources
1188         noshiro  Finance
```

Task 4. Navigate to a directory and locate a file

In this task, you must navigate to a new directory, locate a file, and examine the contents of the file.

1. Navigate to the `/home/analyst/logs` directory.
2. Display the name of the file it contains.
3. Display the first **10** lines of this file.

```
analyst@57e1da910547:~$ ls
logs  projects  reports  temp
analyst@57e1da910547:~$ cd logs
analyst@57e1da910547:~/logs$ ls
server_logs.txt
analyst@57e1da910547:~/logs$ head server_logs.txt
2022-09-28 13:55:55 info      User logged on successfully
2022-09-28 13:56:22 error     The password is incorrect
2022-09-28 13:56:48 warning   The file storage is 75% full
2022-09-28 15:55:55 info      User logged on successfully
2022-09-28 15:56:22 error     The username is incorrect
2022-09-28 15:56:48 warning   The file storage is 90% full
2022-09-28 16:55:55 info      User navigated to settings page
2022-09-28 16:56:22 error     The password is incorrect
2022-09-28 16:56:48 warning   The current user's password expires in 15 days
2022-09-29 13:55:55 info      User logged on successfully
analyst@57e1da910547:~/logs$
```

Conclusion

Great work!

You now have practical experience in using basic Linux Bash shell commands to

- navigate directory structures with the `cd` command,
- display the current working directory with the `pwd` command,
- list the contents of a directory with the `ls` command, and
- display the contents of files with the `cat` and `head` commands.

Navigating through directories and reading file contents are fundamental skills that you'll often use when communicating through the shell.