Activity: Find files with Linux commands

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.

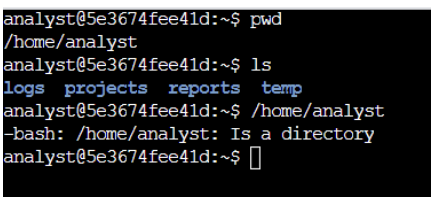
Here's how you'll do this: **First**, you'll get the information of the current working directory you're in and display the contents of the directory. **Second**, you'll navigate to the reports directory and list the subdirectories it contains. **Third**, you'll navigate to the users subdirectory and 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.



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@5e3674fee41d:~$ pwd
/home/analyst
analyst@5e3674fee41d:~$ ls
logs  projects  reports  temp
analyst@5e3674fee41d:~$ /home/analyst
-bash: /home/analyst: Is a directory
analyst@5e3674fee41d:~$ /home/analyst/reports
-bash: /home/analyst/reports: Is a directory
analyst@5e3674fee41d:~$ /home/analyst/reports/logs
-bash: /home/analyst/reports/logs: No such file or directory
analyst@5e3674fee41d:~$ cd /home/analyst/reports
analyst@5e3674fee41d:~/reports$ ls
users
analyst@5e3674fee41d:~/reports$
```

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.

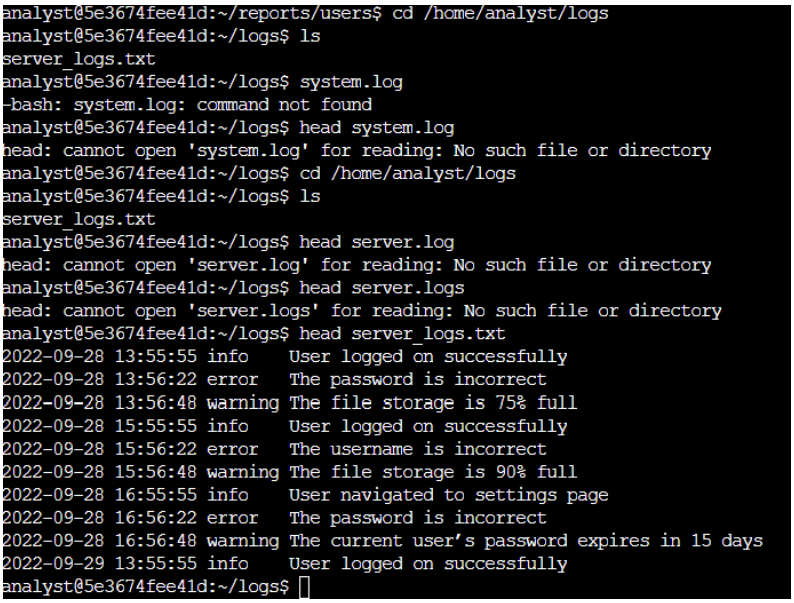
1. Navigate to the /home/analyst/reports/users directory.
2. List the files in the current directory.
3. Display the contents of the Q1_added_users.txt file.

```
analyst@5e3674fee41d:~$ pwd
/home/analyst
analyst@5e3674fee41d:~$ ls
logs  projects  reports  temp
analyst@5e3674fee41d:~$ /home/analyst
-bash: /home/analyst: Is a directory
analyst@5e3674fee41d:~$ /home/analyst/reports
-bash: /home/analyst/reports: Is a directory
analyst@5e3674fee41d:~$ /home/analyst/reports/logs
-bash: /home/analyst/reports/logs: No such file or directory
analyst@5e3674fee41d:~$ cd /home/analyst/reports
analyst@5e3674fee41d:~/reports$ ls
users
analyst@5e3674fee41d:~/reports$ cd /home/analyst/reports/users
analyst@5e3674fee41d:~/reports/users$ ls
Q1_added_users.txt  Q1_deleted_users.txt
analyst@5e3674fee41d:~/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
analyst@5e3674fee41d:~/reports/users$
```

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.



Lab Summary: Find Files with Linux Commands

Objective

This lab focused on navigating the Linux file system, locating files and directories, and displaying file contents using basic shell commands. These tasks are essential for investigating activity on a Linux system and retrieving relevant data.

Tasks Completed

Task 1: Get the Current Directory Information

- Used pwd to confirm the current working directory as /home/analyst.
- Used ls to list the contents of the directory, which included: logs, projects, reports, and temp.

Task 2: Change Directory and List the Subdirectories

- Navigated to /home/analyst/reports using cd.
- Used ls to list its contents and confirmed that the subdirectory is users.

Task 3: Locate and Read the Contents of a File

- Navigated to /home/analyst/reports/users using cd.
- Listed the files in the directory using ls.
- Displayed the contents of Q1_added_users.txt using cat.

Task 4: Navigate to a Directory and Locate a File

- Navigated to /home/analyst/logs.
- Used ls to view the file server_logs.txt.
- Used head server_logs.txt to display the first 10 lines of the file.

Summary

This lab demonstrated how to navigate the Linux directory structure and locate files using basic shell commands. Understanding how to identify directories, open files, and display their contents is a critical skill when working in a Linux environment. These commands are foundational for performing audits, verifying system status, and retrieving log or user data as part of a cybersecurity investigation.