

Filter with Grep in Linux

Scenario

In this scenario, you need to obtain information contained in server log and user data files. You also need to find files with specific names.

Here's how you'll do this: **First**, you'll navigate to the logs directory and return the error messages in the server_logs.txt file. **Next**, you'll navigate to the users directory and search for files that contain a specific string in their names. **Finally**, you'll search for information contained in user files.

Task 1. Search for error messages in a log file

Navigate to the /home/analyst/logs directory.

```
analyst@33933f739d38:~$ cd logs
analyst@33933f739d38:~/logs$ pwd
/home/analyst/logs
```

Use grep to filter the server_logs.txt file, and return all lines containing the text string error

```
analyst@33933f739d38:~/logs$ grep error server_logs.txt
2022-09-28 13:56:22 error    The password is incorrect
2022-09-28 15:56:22 error    The username is incorrect
2022-09-28 16:56:22 error    The password is incorrect
2022-09-29 13:56:22 error    An unexpected error occurred
2022-09-29 15:56:22 error    Unauthorized access
2022-09-29 16:56:22 error    Unauthorized access
```

Task 2. Find files containing specific strings

Navigate to the /home/analyst/reports/users directory.

```
analyst@33933f739d38:~/logs$ cd /home/analyst/reports/users
analyst@33933f739d38:~/reports/users$ \
```

Using the pipe character (|), pipe the output of the ls command to the grep command to list only the files containing the string Q1 in their names.

```
analyst@33933f739d38:~/reports/users$ ls | grep Q1
Q1_access.txt
Q1_added_users.txt
Q1_deleted_users.txt
```

List the files that contain the word access in their names.

```
analyst@33933f739d38:~/reports/users$ ls | grep access
Q1_access.txt
Q2_access.txt
Q3_access.txt
Q4_access.txt
```

Task 3. Search more file contents

Display the files in the /home/analyst/reports/users directory.

```
analyst@33933f739d38:~/reports/users$ ls
Q1_access.txt      Q1_deleted_users.txt  Q2_added_users.txt  Q3_access.txt      Q3_deleted_users.txt  Q4_added_users.txt
Q1_added_users.txt Q2_access.txt         Q2_deleted_users.txt Q3_added_users.txt  Q4_access.txt         Q4_deleted_users.txt
```

Search the Q2_deleted_users.txt file for the username jhill.

```
analyst@33933f739d38:~/reports/users$ grep jhill Q2_deleted_users.txt
1025          jhill      Sales
```

Search the Q4_added_users.txt file to list the users who were added to the Human Resources department

```
analyst@33933f739d38:~/reports/users$ grep "Human Resources" Q4_added_users.txt
1151          sshah      Human Resources
1145          msosa      Human Resources
```