

# Filter a File in Linux

## Project description

Using grep command and piping to search for files and return specific information.

## Search for error messages in a log file

The following code demonstrates how I used Linux commands to search for an error string in a file.

```
analyst@bd10c2708afc:~$ pwd
/home/analyst
analyst@bd10c2708afc:~$ cd /home/analyst/logs
analyst@bd10c2708afc:~/logs$ ls
server_logs.txt
analyst@bd10c2708afc:~/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
analyst@bd10c2708afc:~/logs$
```

The first line of the screenshot displays the command I entered, and the other lines display the output. I used the `grep` command to search for an error string in the `server_logs.txt` file. The output of my command indicated that error strings occurred six times in the `server_logs.txt` file.

## Find files containing specific strings

The following code demonstrates how I used Linux commands to search for an Q1 and access string in a directory.

```
analyst@bd10c2708afc:~/logs$ cd /home/analyst/reports/users
analyst@bd10c2708afc:~/reports/users$ ls
Q1_access.txt      Q2_access.txt      Q3_access.txt      Q4_access.txt
Q1_added_users.txt Q2_added_users.txt Q3_added_users.txt Q4_added_users.txt
Q1_deleted_users.txt Q2_deleted_users.txt Q3_deleted_users.txt Q4_deleted_users.txt
analyst@bd10c2708afc:~/reports/users$ ls /home/analyst/reports/users | grep "Q1"
Q1_access.txt
Q1_added_users.txt
Q1_deleted_users.txt
analyst@bd10c2708afc:~/reports/users$ ls /home/analyst/reports/users | grep "access"
Q1_access.txt
Q2_access.txt
Q3_access.txt
Q4_access.txt
analyst@bd10c2708afc:~/reports/users$
```

The first line of the screenshot displays the command I entered, and the other lines display the output. I used `pipe` command with `grep` command to search for users directory for a filename consisting Q1 and access. The output of my command indicated that the directory contained three files whose filename consists of Q1 and four files with filename consisting of access.

## Search more file contents

The following code demonstrates how I used Linux commands to search for an 2 words string in a file.

```
analyst@bd10c2708afc:~/reports/users$ grep "jhill" Q2_deleted_users.txt
1025      jhill      Sales
analyst@bd10c2708afc:~/reports/users$ grep "Human Resources" Q4_added_users.txt
1151      sshah      Human Resources
1145      msosa      Human Resources
analyst@bd10c2708afc:~/reports/users$
```

The first line of the screenshot displays the command I entered, and the other lines display the output. I used the `grep` command to search for two word strings in a file. The output of my command displays the result.