

Linux CLI Labs:–

Database and Files Navigation, Linux Searching and Filtering, Users and Permissions Management

```

analyst@3b4b63eadce5:~$ cd reports
analyst@3b4b63eadce5:~/reports$ ls
users
analyst@3b4b63eadce5:~/reports$ cd /home/analyst/reports/users
analyst@3b4b63eadce5:~/reports/users$ ls
Q1_added_users.txt  Q1_deleted_users.txt
analyst@3b4b63eadce5:~/reports/users$ less Q1_added_users.txt
analyst@3b4b63eadce5:~/reports/users$ less Q1_added_users.txt
analyst@3b4b63eadce5:~/reports/users$ cat Q1_added_users.txt
employee_id  username  department
1001         kmoreno   Marketing
1026         apatel    Human Resources
1041         cgriffin  Sales
1104         mreed     Information Technology
1177         aezra     Human Resources
1188         noshiro   Finance
analyst@3b4b63eadce5:~/reports/users$ cd /home/analyst/logs
analyst@3b4b63eadce5:~/logs$ ls
server_logs.txt
analyst@3b4b63eadce5:~/logs$ head -n 10 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@3b4b63eadce5:~/logs$

```

End your lab

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Before you end the lab, make sure you're satisfied that you've completed all the tasks, and read the steps that follow:

1. Click **End Lab** and then click **Submit**. Ending the lab will remove your access to the Bash shell. You won't be able to access the work you've completed in it again.
2. After you end your lab, a **survey dialog** appears where you can rate the lab and provide feedback comments, if you choose to.
3. Close the **lab browser tab** to return to your course.
4. Refresh the **course browser tab** after you are done to mark this item as complete.

End Lab

Figure 1 - Database and Files Navigation

```

analyst@c268b1698ffa:~$ cd logs
analyst@c268b1698ffa:~/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
2022-09-28 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@c268b1698ffa:~/logs$ pwd
/home/analyst/logs
analyst@c268b1698ffa:~/logs$ cd /home/analyst/reports/users
analyst@c268b1698ffa:~/reports/users$ ls | grep Q1
Q1_access.txt
Q1_added_users.txt
Q1_deleted_users.txt
analyst@c268b1698ffa:~/reports/users$ ls | grep access
Q1_access.txt
Q2_access.txt
Q3_access.txt
Q4_access.txt
analyst@c268b1698ffa:~/reports/users$ ls /home/analyst/reports/users
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
analyst@c268b1698ffa:~/reports/users$ find Q4_added_users.txt
Q4_added_users.txt
analyst@c268b1698ffa:~/reports/users$ grep "Human Resources" Q4_added_users.txt
1181         jhill    Human Resources
1145         msosa   Human Resources
analyst@c268b1698ffa:~/reports/users$ grep jhill Q2_deleted_users.txt
1025         jhill    Sales
analyst@c268b1698ffa:~/reports/users$ []

```

Conclusion

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Great work!

You now have practical experience in using **grep** to:

- search for specific information contained in files, and
- find files containing specific strings that were piped into **grep**.

You're well on your way to using fundamental tools in Linux to filter the information you need.

End your lab

Figure 2 - Linux Searching and Filtering

```

rw-rw-r-- 1 researcher2 research_team 4096 Jun 7 16:59 project_m.txt
rw-rw-r-- 1 researcher2 research_team 4096 Jun 7 16:59 project_r.txt
-rw-r--r- 1 researcher2 research_team 4096 Jun 7 16:59 project_t.txt
researcher2@963f99a1c3d8:~/projects$ chmod g-w .project_x.txt
researcher2@963f99a1c3d8:~/projects$ ls -la
total 32
drwxr-xr-x 3 researcher2 research_team 4096 Jun 7 16:59 .
drwxr-xr-x 3 researcher2 research_team 4096 Jun 7 17:49 ..
-rw-r--r- 1 researcher2 research_team 4096 Jun 7 16:59 .project_x.txt
drwxr-xr-x 2 researcher2 research_team 4096 Jun 7 16:59 drafts
-rw-rw-r-- 1 researcher2 research_team 4096 Jun 7 16:59 project_k.txt
-rw-rw-r-- 1 researcher2 research_team 4096 Jun 7 16:59 project_m.txt
-rw-rw-r-- 1 researcher2 research_team 4096 Jun 7 16:59 project_r.txt
-rw-rw-r-- 1 researcher2 research_team 4096 Jun 7 16:59 project_t.txt
researcher2@963f99a1c3d8:~/projects$ cd /home/researcher2/projects/drafts
researcher2@963f99a1c3d8:~/projects/drafts$ ls -la
total 8
drwxr-xr-x 2 researcher2 research_team 4096 Jun 7 16:59 .
drwxr-xr-x 3 researcher2 research_team 4096 Jun 7 16:59 ..
researcher2@963f99a1c3d8:~/projects/drafts$ cd /home/researcher2/projects/
researcher2@963f99a1c3d8:~/projects$ ls -la
total 32
drwxr-xr-x 3 researcher2 research_team 4096 Jun 7 16:59 .
drwxr-xr-x 3 researcher2 research_team 4096 Jun 7 17:49 ..
-rw-r--r- 1 researcher2 research_team 4096 Jun 7 16:59 .project_x.txt
drwxr-xr-x 2 researcher2 research_team 4096 Jun 7 16:59 drafts
-rw-rw-r-- 1 researcher2 research_team 4096 Jun 7 16:59 project_k.txt
-rw-rw-r-- 1 researcher2 research_team 4096 Jun 7 16:59 project_m.txt
-rw-rw-r-- 1 researcher2 research_team 4096 Jun 7 16:59 project_r.txt
-rw-rw-r-- 1 researcher2 research_team 4096 Jun 7 16:59 project_t.txt
researcher2@963f99a1c3d8:~/projects$ chmod g-w drafts
researcher2@963f99a1c3d8:~/projects$ ls -la
total 32
drwxr-xr-x 3 researcher2 research_team 4096 Jun 7 16:59 .
drwxr-xr-x 3 researcher2 research_team 4096 Jun 7 17:49 ..
-rw-r--r- 1 researcher2 research_team 4096 Jun 7 16:59 .project_x.txt
drwxr-xr-x 2 researcher2 research_team 4096 Jun 7 16:59 drafts
-rw-rw-r-- 1 researcher2 research_team 4096 Jun 7 16:59 project_k.txt
-rw-rw-r-- 1 researcher2 research_team 4096 Jun 7 16:59 project_m.txt
-rw-rw-r-- 1 researcher2 research_team 4096 Jun 7 16:59 project_r.txt
-rw-rw-r-- 1 researcher2 research_team 4096 Jun 7 16:59 project_t.txt
researcher2@963f99a1c3d8:~/projects$ []

```

Change directory permissions

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Check my progress

You have completed this task and changed the permissions on the drafts directory.

Conclusion

Great work!

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

- examine file and directory permissions,
- change permissions on files, and
- change permissions on directories.

This is an important milestone on your journey toward managing authorization in Linux

Figure 3 - Users and Permissions Management