Activity overview

In this lab activity, you’ll use Linux commands to modify a directory structure and the files it contains.

You’ll also use the nano text editor to add text to a file.

You previously learned that directories help you organize subdirectories and files in Linux. As a security analyst, creating, removing, and editing directories and files are core tasks you’ll need to perform to help you to manage data.

When data is well organized, you can more easily detect issues and keep data safe.

With that in mind, you’re now ready to practice what you've learned.

Scenario

In this scenario, you need to ensure that the `/home/analyst` directory is properly organized.

You have to make a few changes to the `/home/analyst` directory and the files it contains.

You also have to edit a file to record the changes or updates you make to the directory.

When you start, the `/home/analyst` directory contains the following subdirectories and files:

```
home
└── analyst
    ├── notes
    │   ├── Q3patches.txt
    │   └── tempnotes.txt
    ├── reports
    │   ├── Q1patches.txt
    │   └── Q2patches.txt
    └── temp
```

You need to modify the `/home/analyst` directory to the following directory and file structure:

```
home
└── analyst
    ├── logs
    ├── notes
    │   └── tasks.txt
    └── reports
        ├── Q1patches.txt
        └── Q2patches.txt
        └── Q3patches.txt
```

Here's how you'll do this: **First**, you'll create a new subdirectory called logs in the `/home/analyst` directory. **Next**, you'll remove the `temp` subdirectory. **Then**, you'll move the `Q3patches.txt` file to the `reports` subdirectory and delete the `tempnotes.txt` file. **Finally**, you'll create a new `.txt` file called `tasks` in the `notes` subdirectory and add a note to the file describing the tasks you've performed.

You'll need to use the commands learned in the video lesson to complete these steps.

This might sound like quite a number of tasks to perform, but you'll be guided on how to do this.

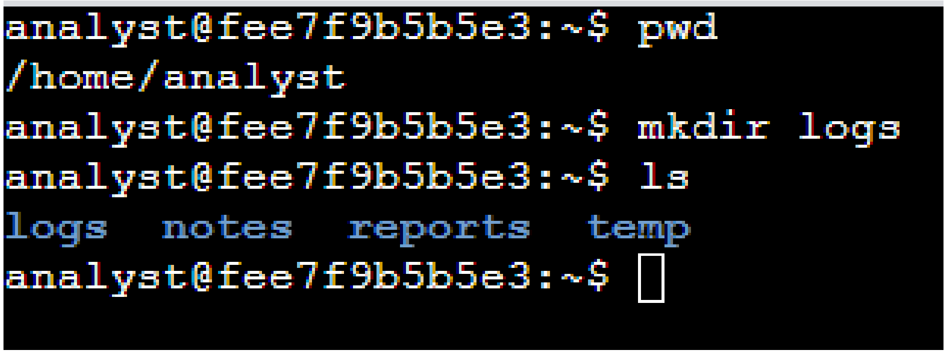
Task 1. Create a new directory

First, you must create a dedicated subdirectory called `logs`, which will be used to store all future log files.

1. Create a new subdirectory called `logs` in the `/home/analyst` directory.
2. List the contents of the `/home/analyst` directory to confirm that you've successfully created the new `logs` subdirectory.

The output should list the original three directories and the new `logs` subdirectory:

```
logs notes reports temp
```



```
analyst@fee7f9b5b5e3:~$ pwd
/home/analyst
analyst@fee7f9b5b5e3:~$ mkdir logs
analyst@fee7f9b5b5e3:~$ ls
logs  notes  reports  temp
analyst@fee7f9b5b5e3:~$ 
```

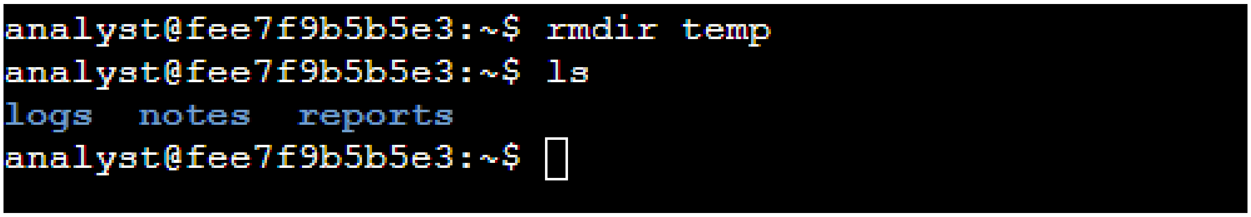
Task 2. Remove a directory

Next, you must remove the `temp` directory, as you’ll no longer be placing items in it.

1. Remove the `/home/analyst/temp` directory.
2. List the contents of the `/home/analyst` directory to confirm that you have removed the `temp` subdirectory.

The `temp` directory should no longer be listed:

```
logs notes reports
```



```
analyst@fee7f9b5b5e3:~$ rmdir temp
analyst@fee7f9b5b5e3:~$ ls
logs  notes  reports
analyst@fee7f9b5b5e3:~$ 
```

Task 3. Move a file

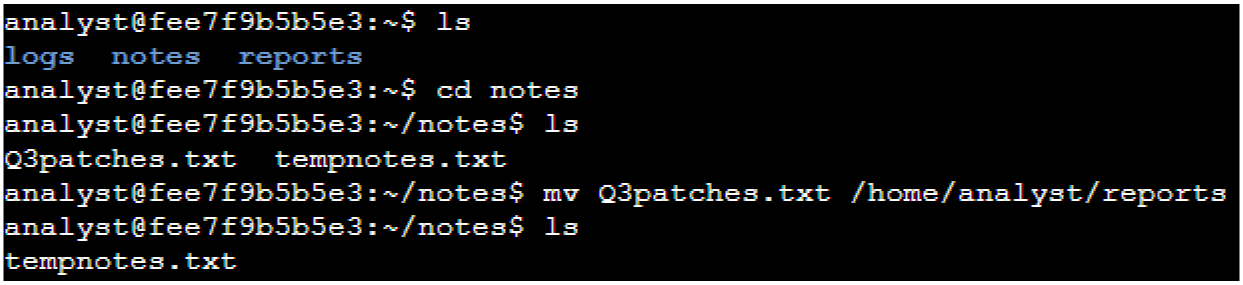
The `Q3patches.txt` file contains notes taken on third-quarter patches and is now in the correct reporting format.

You must move the `Q3patches.txt` file from the `notes` directory to the `reports` directory.

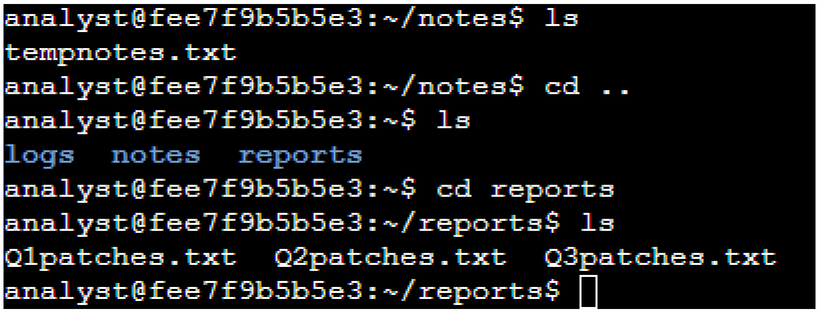
1. Navigate to the `/home/analyst/notes` directory.
2. Move the `Q3patches.txt` file from the `/home/analyst/notes` directory to the `/home/analyst/reports` directory.
3. List the contents of the `/home/analyst/reports` directory to confirm that you have moved the file successfully.

When you list the contents of the `reports` directory, it should show that three quarterly report files are now in the `reports` directory:

```
Q1patches.txt Q2patches.txt Q3patches.txt
```



```
analyst@fee7f9b5b5e3:~$ ls
logs  notes  reports
analyst@fee7f9b5b5e3:~$ cd notes
analyst@fee7f9b5b5e3:~/notes$ ls
Q3patches.txt  tempnotes.txt
analyst@fee7f9b5b5e3:~/notes$ mv Q3patches.txt /home/analyst/reports
analyst@fee7f9b5b5e3:~/notes$ ls
tempnotes.txt
```



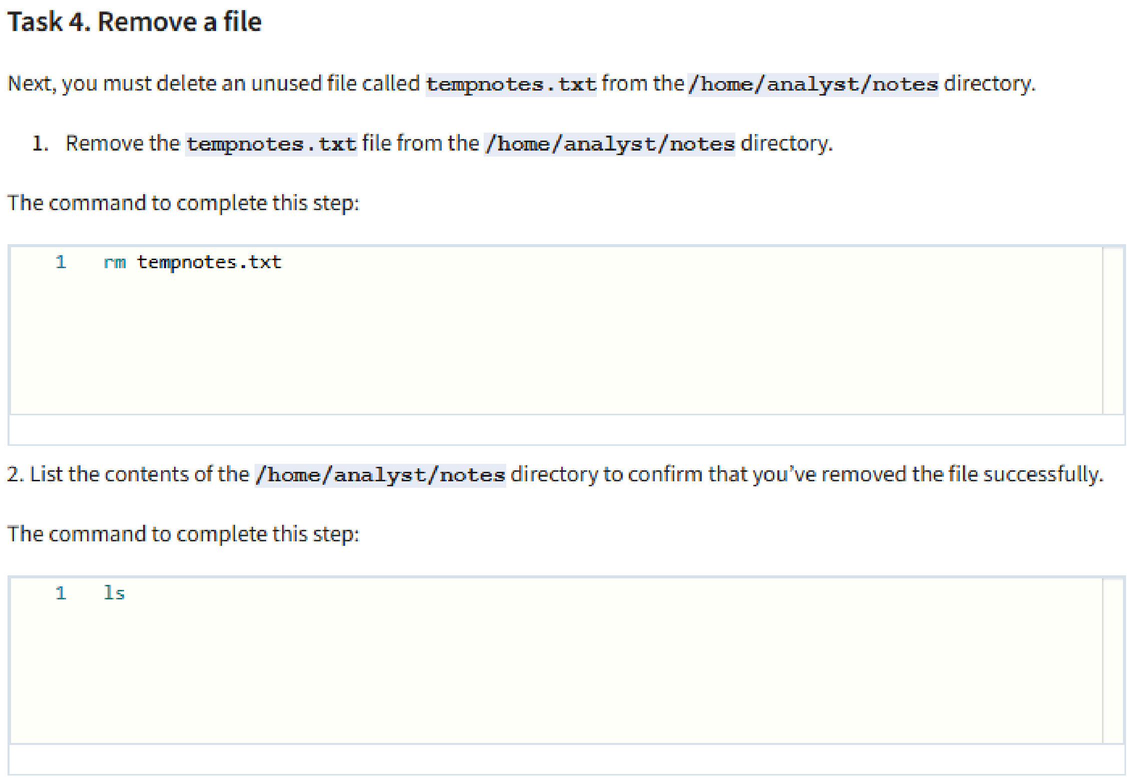
```
analyst@fee7f9b5b5e3:~/notes$ ls
tempnotes.txt
analyst@fee7f9b5b5e3:~/notes$ cd ..
analyst@fee7f9b5b5e3:~$ ls
logs  notes  reports
analyst@fee7f9b5b5e3:~$ cd reports
analyst@fee7f9b5b5e3:~/reports$ ls
Q1patches.txt  Q2patches.txt  Q3patches.txt
analyst@fee7f9b5b5e3:~/reports$ 
```

Task 4. Remove a file

Next, you must delete an unused file called `tempnotes.txt` from the `/home/analyst/notes` directory.

1. Remove the `tempnotes.txt` file from the `/home/analyst/notes` directory.
2. List the contents of the `/home/analyst/notes` directory to confirm that you've removed the file successfully.

No files should be listed in the `notes` directory.



Task 4. Remove a file

Next, you must delete an unused file called `tempnotes.txt` from the `/home/analyst/notes` directory.

1. Remove the `tempnotes.txt` file from the `/home/analyst/notes` directory.

The command to complete this step:

```
rm tempnotes.txt
```

2. List the contents of the `/home/analyst/notes` directory to confirm that you've removed the file successfully.

The command to complete this step:

```
ls
```

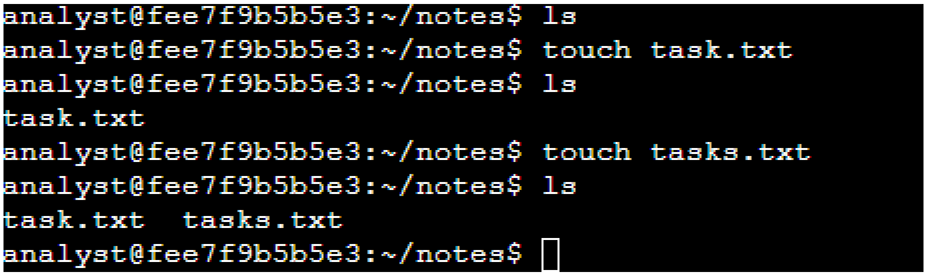
Task 5. Create a new file

Now, you must create a file named `tasks.txt` in the `/home/analyst/notes` directory that you'll use to document completed tasks.

1. **Use the `touch` command to create an empty file called `tasks.txt` in the `/home/analyst/notes` directory.**
2. **List the contents of the `/home/analyst/notes` directory to confirm that you have created a new file.**

A file called `tasks.txt` should now exist in the `notes` directory:

```
tasks.txt
```



```
analyst@fee7f9b5b5e3:~/notes$ ls
analyst@fee7f9b5b5e3:~/notes$ touch task.txt
analyst@fee7f9b5b5e3:~/notes$ ls
task.txt
analyst@fee7f9b5b5e3:~/notes$ touch tasks.txt
analyst@fee7f9b5b5e3:~/notes$ ls
task.txt  tasks.txt
analyst@fee7f9b5b5e3:~/notes$ 
```

Task 6. Edit a file

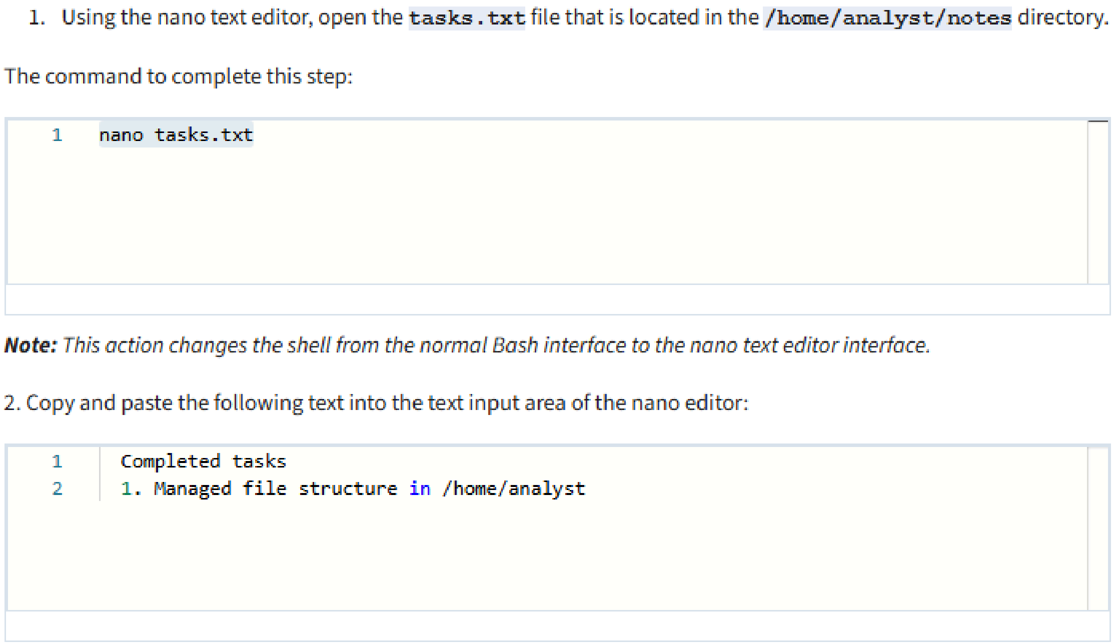
Finally, you must use the nano text editor to edit the `tasks.txt` file and add a note describing the tasks you've completed.

1. Using the nano text editor, open the `tasks.txt` file that is located in the `/home/analyst/notes` directory.
2. Copy and paste the following text into the text input area of the nano editor:
3. Press **CTRL+X** to exit the nano text editor.
4. Press **Y** to confirm that you want to save the new data to your file. (Answering "no" will **discard** changes.)
5. Press **ENTER** to confirm that **File Name to Write** is `tasks.txt`.
6. Use the `clear` command to clear the Bash shell window and remove any traces of the nano text input area.
7. Display the contents of the `tasks.txt` file to confirm that it contains the updated task details.

This file should now contain the contents of the `tasks.txt` file that you added and saved in previous steps:

```
Completed tasks
```

```
  1. Managed file structure in /home/analyst
```



1. Using the nano text editor, open the `tasks.txt` file that is located in the `/home/analyst/notes` directory.

The command to complete this step:

```
nano tasks.txt
```

Note: *This action changes the shell from the normal Bash interface to the nano text editor interface.*

2. Copy and paste the following text into the text input area of the nano editor:

```
Completed tasks
1. Managed file structure in /home/analyst
```

3. Press **CTRL+X** to exit the nano text editor.

This triggers a prompt asking **Save modified bufferer?**

4. Press **Y** to confirm that you want to save the new data to your file. (Answering "no" will **discard** changes.)

5. Press **ENTER** to confirm that **File Name to Write** is tasks.txt.

Note: *The recommended sequence of commands for saving a file with the nano text editor is to use* ***CTRL+O*** *to tell nano to save the file and then use* ***CTRL+X*** *to exit immediately.*

In this web-based lab environment, the ***CTRL+O*** *command is intercepted by your web browser and is interpreted as a request to save the web page. The sequence used here is a commonly used alternative that achieves the same end result.*

6. Use the `clear` command to clear the Bash shell window and remove any traces of the nano text input area.

The command to complete this step:

Note: *Most Bash shells typically handle the screen cleanup after you exit nano. In this lab environment, nano sometimes leaves some text clutter around the edges of the screen that the* `clear` *command cleans up for you.*

7. Display the contents of the `tasks.txt` file to confirm that it contains the updated task details.

```
cat tasks.txt
```

This file should now contain the contents of the `tasks.txt` file that you added and saved in previous steps:

```
Completed tasks
 1. Managed file structure in /home/analyst
```