File permissions in Linux

Project description

In this project, I use Linux commands to configure authorization.  
Authorization is the concept of granting access to specific resources in a system. It's important because without authorization any user could access and modify all files belonging to other users or system files. This would certainly be a security risk.

In Linux, file and directory permissions are used to specify who has access to specific files and directories. I explore file and directory permissions and change the ownership of a file and a directory to limit who can access them.

As a security analyst, setting appropriate access permissions is critical to protecting sensitive information and maintaining the overall security of a system.

Check file and directory details

ls -la

This command displays permissions to files and directories, including hidden files.

Describe the permissions string

[In Linux, permissions are represented with a 10-character string. Permissions include:

• read: for files, this is the ability to read the file contents; for directories, this is the ability to read all contents in the directory including both files and subdirectories

• write: for files, this is the ability to make modifications on the file contents; for directories, this is the ability to create new files in the directory

• execute: for files, this is the ability to execute the file if it’s a program; for directories, this is the ability to enter the directory and access its files

These permissions are given to these types of owners:

• user: the owner of the file

• group: a larger group that the owner is a part of

• other: all other users on the system]

Change file permissions

*chmod o-w project\_k.txt*

The chmod command changes permissions on files and directories.

The chmod command requires two arguments. The first argument indicates how to change permissions, and the second argument indicates the file or directory that you want to change permissions for. For example, the following command would add all permissions to login\_sessions.txt: chmod u+rwx,g+rwx,o+rwx login\_sessions.txt

Change file permissions on a hidden file

[chmod u-w,g-w,g+r .project\_x.txt]

Change directory permissions

[chmod g-x drafts]

Summary

I 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.