LESSON – 11

MANAGING FILE OWNERSHIP

Royal University of Bhutan

Learning Outcomes

- Use command to display file ownership
- Set user ownership and group ownership of the file
- Change user and group owners of the file

MANAGING FILE OWNERSHIP

Introduction:

- Every file is owned by a UID and a GID
- Every process run under the authority of a particular user and one or more groups.
- When user access a file, the security context of the process is matched against the owner and group of a file

File Ownership:

- Every file and every directory has file ownership: **user, group and other**.
- On file creation, the user who creates the file becomes owner and the primary group of that user becomes the group owner

MANAGING FILE OWNERSHIP

Displaying Ownership:

- To determine whether you as a user have permissions to a file or a directory, the shell checks ownership in the following order:

  1. The shell checks whether you are the owner of the file you want to access (i.e user). If you are the user, you get the permission that are set for the user, and the shell looks no further.

  2. If you are not the user owner, the shell checks for group owner. If you are member of group, you get the group permissions and the shell looks no further.

  3. If you are neither the user, nor the group owner, you get permissions of others.

MANAGING FILE OWNERSHIP

Displaying Ownership:

[root@localhost home]# ls -l

-rw-r--r-- 1 root root 128 Sep 20 05:26 dzongkhag

-rw-r--r-- 1 root root 208 Sep 20 05:32 employee.txt

MANAGING FILE OWNERSHIP

CHANGING OWNERSHIP OF FILE:

- To apply appropriate permissions, the first thing to consider is ownership:

1. CHANGE OWNERSHIP: **chown**

- It allows you to change the ownership of a file to someone else

    chown [-R] username filename

    [root@Server1 ~]#chown jiwan myfile
    [root@Server1 ~]#chown -R jiwan MyDirectory

MANAGING FILE OWNERSHIP

2.   CHANGE GROUP: **chgrp**

- This command is use to change the group settings of a file

chgrp [-R] groupname filename

[root@Server1 ~]#chgrp mygroup myfile

If you want to use chown command, use a . or : infront of the group name.

[root@Server1 ~]#chown .mygroup myfile
[root@Server1 ~]#chown :mygroup myfile
[root@Server1 ~]#chown apache:apache /var/www/html

ACTIVITY I:

Creating users and groups

1. In the terminal, switch to the root user
2. Create users; user1, user2 and groups; group1 and group2
3. Add user1 to group 1 and user2 to group2
4. Create a directory Dir1 and Dir2
5. Assign user ownership of Dir1 to user1 and Dir2 to user2
6. Assign group ownership of Dir1 to group1 and Dir2 to group2

SUMMARY

- The file user ownership can be assigned using chown and group ownership chgrp

- The chown can also use to assign group ownership to files