Operating Systems 1
Lecture 5

Lecturer
  Mouhsen Ibrahim

Contents

- Add Users
- Modify Users
- Groups Management
- Permissions
- Change Permissions
- Exercise

Add Users

- To add a user we can use the adduser command, which takes the user's name as an argument.

- This command adds an entry for the user to passwd and shadow files, creates a home directory for the user and copies files from "/etc/skel" to the home directory.

- We can switch to the new user using su <user_name>.

Modify Users

- We can use usermod command to modify a user.

- usermod -l new_name old_name changes the user's name.

- usermod -d home user_name changes the home directory of the user.

- usermod -c TEXT user_name changes the user's description.

Modify Users

- usermod -G groups user_name makes the user a member of the groups specified, if the user is already a member of a group which is not listed then he is removed from that group.

- usermod -aG groups user_name adds the user to the groups specified.

- passwd user_name is used to change the user's password.

- userdel user_name deletes a user from the system.

- userdel -r user_name deletes a user from the system and its home directory.

• Groups Managment

- To add a new group use groupadd group_name command.

- To change the group's name use groupmod -n new_name old_name.

- To delete a group use groupdel group_name

Permissions

- There are three kinds of permissions

- Read permissions are used to read a file or a directory.

- Write permissions are used to write to a file or a directory.

- Execute permissions are used to execute a file as a program or "cd" to a directory.

Permissions

- Permissions can be applied to either the file's/directorie's owner, the group or other users.

- To view the permissions associated with a file or directory use the ls command with -l option.

- ls -l .

- drwxr-xr-x 2 mouhsenibrahim mouhsenibrahim 4096 Nov 8 13:13 Desktop

Permissions

- d means a directory. (- means a file)

- rwxr-xr-x permissions for folder's owner, group and other.

- 2 number of links to the file.

- mouhsenibrahim the folder's owner.

- mouhsenibrahim the folder's group.

- 4096 folder's size in bytes.

- Nov 8 13:13 folder's last modification time.

- Desktop folder's name

•Change Permissions

- To change permissions we use chmod and chown commands.

- chown is used to change the owner or the group of a file or directory.

- chown user:group <file_name>

- chmod command can be used in one of two forms

- Symbolic: Where new permissions are showed using symbols

- u for the owner, g for the group, o for other users, a for all.

- r for read, w for write and x for execute.

Change Permissions

- Add or delete permissions using + and – signs along with the required permission.

- u+x add execute permission for the owner.

- g-w remove write permission from group.

- o+r add read permission to other users.

- Octal form use a three digit number to specify permissions for owner, group and other.

Change Permissions

- These three digits range from 0 to 7.

- 0 means no permissions, 2 means only write permission, 7 means all permissions.

- Convert the digit to binary form to get the permissions, 0 means no for a permission and 1 mean yes to a permission with this order rwx.

- 2 = 010 "-w-"

- 5 = 101 "r-x"

- chmod 644 dir.

Exercise

- Create a new user called sami.

- Create a directory called /sami.

- Make the user sami the owner of this directory.

- Change his home directory to /sami.

- Create a group called os1 and add user sami to it.

- Swicth to user sami and create a test directory in his home directory.

- Change the group of this directory to os1 and give the group users full permissions on the directory.

GOOD LUCK