

Managing Users

Exercise 1: Viewing Current Users and Groups

Objective: Learn how to view existing users and groups on the system.

1. List all the users on the system by examining the `/etc/passwd` file:

```
cat /etc/passwd | cut -d: -f1
```

2. List all the groups on the system by examining the `/etc/group` file:

```
cat /etc/group | cut -d: -f1
```

3. Use the `who` command to view currently logged-in users:

```
who
```

Exercise 2: Adding a New User

Objective: Create a new user account.

1. Use the following command to add a new user (replace `newuser` with a desired username):

```
sudo adduser newuser
```

2. Follow the prompts to set a password and provide additional information.

3. Confirm that the user has been created by checking the `/etc/passwd` file:

```
grep newuser /etc/passwd
```

Exercise 3: Modifying User Information

Objective: Modify user properties.

1. Change the home directory of `newuser` to `/home/newuser2` (you may need to create this directory first):

```
sudo mkdir /home/newuser2
```

```
sudo usermod -d /home/newuser2 newuser
```

2. Verify the change:

```
grep newuser /etc/passwd
```

Exercise 4: Deleting a User

Objective: Remove a user account.

1. Delete the user account you created in Exercise 2:

```
sudo userdel newuser
```

2. Optionally, remove the home directory with:

```
sudo rm -r /home/newuser2
```

3. Confirm that the user has been deleted:

```
grep newuser /etc/passwd
```

Exercise 5: Adding a New Group

Objective: Create and manage groups.

1. Create a new group called testgroup:

```
sudo groupadd testgroup
```

2. Verify that the group has been created:

```
grep testgroup /etc/group
```

Exercise 6: Adding Users to a Group

Objective: Add users to a group.

1. Add a user (e.g., your_username) to testgroup:

```
sudo usermod -aG testgroup your_username
```

2. Confirm that you have been added to the group:

```
groups your_username
```

Exercise 7: Changing Group Ownership of a File

Objective: Change the group ownership of a file.

1. Create a new file called group_file.txt:

```
touch group_file.txt
```

2. Change the group ownership of group_file.txt to testgroup:

```
sudo chown :testgroup group_file.txt
```

3. Confirm the change:

```
ls -l group_file.txt
```

Exercise 8: Removing a Group

Objective: Delete a group.

1. Remove the group testgroup:

```
sudo groupdel testgroup
```

2. Verify that the group has been deleted:

```
grep testgroup /etc/group
```

Exercise 9: User Permissions

Objective: Understand how user permissions work.

1. Create a new file called user_permissions.txt:

```
touch user_permissions.txt
```

2. Change the permissions of the file so that only the owner can read and write:

```
chmod 600 user_permissions.txt
```

3. Check the permissions:

```
ls -l user_permissions.txt
```

Exercise 10: Summary of User and Group Management

Objective: Summarize your understanding.

1. Write a brief note (in a file called user_group_summary.txt) explaining how to add, modify, and delete users and groups, and the significance of user permissions.

```
echo "To manage users, use useradd, userdel, and usermod. \  
To manage groups, use groupadd, groupdel, and usermod to add \  
users to groups. Permissions determine access to files." \  
> user_group_summary.txt
```

