

Experiment No: 07 Creating and Managing a Root User in Linux

Date:

Roll no:

Aim

To create a root user in a Linux environment, manage its permissions, and evaluate the security measures necessary to protect the system from unauthorized access.


Theory

In Linux, the root user is the superuser with unrestricted access to all commands and files on the system. Proper management of the root user is crucial for system security and integrity. This experiment involves creating a root user, managing permissions, and understanding the implications of root access.

Procedure

1. **Log in as a Regular User:** Ensure you are logged into a Linux system as a regular user with sudo privileges.
2. **Open Terminal:** Launch the terminal application.
3. **Create a Root User:** Use the following command to create a new user with root privileges:


```
bash
```

 Copy code

```
sudo adduser newuser
```

4. **Grant Root Privileges:** Add the new user to the `sudo` group to allow root access:

```
bash
```

 Copy code

```
sudo usermod -aG sudo newuser
```

5. **Verify User Creation:** Check if the user has been added and granted sudo access:

```
bash Copy code  
  
id newuser
```

6. **Switch to New User:** Switch to the new user account:

```
bash Copy code  
  
su - newuser
```

7. **Execute a Root Command:** Try executing a command that requires root privileges:

```
bash Copy code  
  
sudo apt update
```

8. **Manage Permissions:** Experiment with changing file permissions using `chmod` and ownership using `chown`. *Example:*

```
bash Copy code  
  
sudo chown newuser:newuser /path/to/file
```

9. **Log Activities:** Monitor activities using log files, specifically `/var/log/auth.log`, to see sudo commands executed by the new user:

```
bash Copy code  
  
sudo tail -f /var/log/auth.log
```

10. **Remove Root User Access:** To practice management, remove the new user from the sudo group:

```
bash Copy code  
  
sudo deluser newuser sudo
```

Conclusion:

The experiment successfully demonstrated the process of creating and managing a root user in a Linux environment.